Prepared for:
Wyoming County

Prepared by:
AECOM
Amherst, New York
60623657
Revised October 21,2021

PERIODIC REVIEW REPORT

Wyoming County Fire Training Center
3651 Wethersfield Road
Wethersfield, New York
Voluntary Cleanup (Site v-00604-9)

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Prepared By: Colin Wasteneys, P.G.

Reviewed By: Kevin Connare, P.G.

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Executive Summary

This biennial (every two years) Periodic Review Report (PRR) is being provided to the New York State Department of Environmental Conservation (NYSDEC) as required by the June 2011 Site Management Plan (SMP) for the Wyoming County Fire Training Center (WCFTC or Site). The report covers the period from September 5, 2019 through September 5, 2021.

The WCFTC is located at 3651 Wethersfield Road in the Town of Wethersfield, Wyoming County, New York (**Figure 1**). Flammable liquids consisting of solvents, petroleum products, paint thinners, degreasers, etc. were brought to the WCFTC and stored in an on-site aboveground storage tank (AST) and in drums. Liquids from the AST were conveyed to two sub-grade concrete-lined fire pits, then ignited, and subsequently extinguished during fire training exercises. The AST, fire pits, underground piping and drum storage area were all located on approximately one acre in the eastern portion of the WCFTC facility.

A series of Remedial Investigations (RI) were performed from 2001 to 2005 to characterize the nature and extent of contamination at the Site. Investigation data showed that soil in four areas; the former AST area, the former north and south fire pit areas, and the former drum storage area were impacted by volatile organic compounds (VOCs). Groundwater on Site and at two adjacent County-owned parcels located immediately east of the WCFTC had also been impacted by VOCs.

The County entered into a Voluntary Cleanup Agreement (VCA) #B9-0623-02-09, Site #V-00604-9, with the NYSDEC on October 24, 2002 to remediate the Site.

Remedial activities consisting of drum removal, AST removal, contaminated soil excavation, in-situ chemical oxidation in VOC source areas, and installation of two permeable reactive walls (PRWs; **Figure 2**) were conducted by AECOM (formerly URS) in accordance with NYSDEC-approved work plans. Initial remedial activities were completed in November 2006. A supplemental remedial action consisting of the emplacement of additional zero valent iron (ZVI)/sand in the north PRW was completed in May 2009, at the request of the NYSDEC.

Following submission of a SMP, a Final Engineering Report, and filing of a Declaration of Covenants and Restrictions, NYSDEC issued a ”release and covenant not to sue” to the County for the Site on February 19, 2014.

A quarterly groundwater monitoring program was initiated following remedy implementation (i.e., January 2007) to monitor the progress and effectiveness of the remedial actions in achieving the Remedial Action Objectives (RAOs). Frequency of groundwater monitoring was changed to annually following acceptance of the SMP in 2011. Following submittal of the 2015 PRR, the NYSDEC agreed to the current biennial (i.e., every two years) groundwater sampling schedule. The currently approved biennial monitoring well sampling program includes wells MW-02, MW-07, MW-12, and MW-15. The SMP monitoring program also includes annual sampling of a nearby surface water/spring location and water sampling of two nearby potable residential wells (i.e., Becker and Schell residences).

Groundwater sampling for this reporting period was completed on August 18, 2021. Total VOC concentrations in MW-02 decreased during this reporting period when compared to results from seven previous events. However, the August 18, 2021 VOC concentrations were within the historical range of values. Total VOC concentrations in MW-07 and MW-15 were within the historical ranges for these

wells. Site-related total VOC concentrations in MW-12 were slightly higher than the historical range of VOCs.

Residential well and surface water/spring sampling was performed on August 20, 2020 and May 12, 2021. Results of potable well samples showed only the presence of a very low level concentration (i.e., 1.4 micrograms per liter (ug/L)) of t-butanol in a residential well sample collected in August 2020. t-Butanol is not considered a Site contaminant and it was not detected in the sample from the same residential well collected in May 2021. NYSDEC does not list a groundwater quality standard or guidance value for t-Butanol. The results for the May 2021 samples were within the historical range of results.

A site-wide inspection, including inspection of the engineering control systems (i.e., north and south PRWs) was performed on August 18, 2021. All elements of the remedial program were found to be in good condition. The outer casing of monitoring well MW-18, that was found to be broken in 2019, was repaired in February 2020.

Based on results of monitoring and inspection conducted during this reporting period and consistent with the SMP, the remedial program at the Site continues to be protective of human health and the environment. All applicable components of the SMP have been complied with during this reporting period. No changes in the remedial program or monitoring plans are recommended at this time.

1.0 INTRODUCTION

AECOM Technical Services, Inc. (AECOM; formerly URS) was contracted by Wyoming County to perform routine monitoring and prepare a Periodic Review Report (PRR) for the Wyoming County Fire Training Facility (WCFTC) located at 3651 Wethersfield Road, Wethersfield, New York (hereinafter referred to as the "Site"). This PRR presents the results of routine monitoring and inspections for the period from September 5, 2019 through September 5, 2021.

1.1 Site Location, Description and History

The WCFTC is located at 3651 Wethersfield Road in the Town of Wethersfield, Wyoming County, New York (**Figure 1**). The facility is located on the north side of Wethersfield Road approximately one-half mile east of the intersection with Poplar Tree Road.

The WCFTC was operated by Wyoming County commencing in the 1970s. Flammable liquids, consisting of solvents, petroleum products, paint thinners, degreasers, etc., were brought to the WCFTC and stored in an on-site aboveground storage tank (AST) and in drums. Liquids from the AST were conveyed to two sub-grade concrete-lined fire pits (i.e., north and south pits) via an underground steel piping/valve system. The flammable liquids were ignited and subsequently extinguished during fire training exercises. The AST, fire pits, underground piping and drum storage area were located on about one acre in the eastern portion of the WCFTC.

A series of Remedial Investigations (RI) were performed from 2001 to 2005 to characterize the nature and extent of contamination at the Site. Investigation data showed that soil in four areas; the former AST area, the former north and south fire pit areas, and the former drum storage area was impacted by volatile organic compounds (VOCs). Groundwater on Site and at two adjacent County-owned parcels located immediately east of the WCFTC had also been impacted by VOCs.

The County subsequently entered into a Voluntary Cleanup Agreement (VCA) #B9-0623-02-09, Site #V-00604-9, with the NYSDEC on October 24, 2002 to remediate the Site. The Remedial Action Objectives (RAOs) of the remedial action (RA) were to remove on-site contaminated soils and containers to reduce/eliminate the source of VOCs and to treat contaminated groundwater such that:

- contaminant levels in soils do not exceed the soil cleanup objectives (SCOs) for Commercial/Industrial use sites as outlined in 6 NYCRR Part 375, and
- contaminant levels in groundwater at the property boundaries do not exceed the Standards, Criteria and Guidance values (SCGs) outlined in the NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1: Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, June 1998.

Remedial activities consisting of drum removal, AST removal, contaminated soil excavation, in-situ chemical oxidation in VOC source areas, and installation of two permeable reactive walls (PRWs; **Figure 2**) were conducted by AECOM in accordance with NYSDEC-approved work plans. Initial remedial activities were completed in November 2006. A supplemental RA, consisting of the emplacement of additional zero valent iron (ZVI)/sand in the north PRW, was completed in May 2009 at the request of the NYSDEC.

A more detailed description of the Site history and previous investigation/remediation activities is presented in the *Final Site Management Plan for the Wyoming County Fire Training Area, Wethersfield, New York,* URS June 2011 and the, *Final Engineering Report for the Wyoming County Fire Training Area, Wethersfield, New York,* URS February 2012.

2.0 REMEDY PERFORMANCE, EFFECTIVENESS AND PROTECTIVENESS

2.1 Soils

Following completion of the contaminated soils excavation conducted as part of the RA, confirmatory samples showed that VOC concentrations in the remaining on-site soils did not exceed the Part 375 SCOs for Commercial/Industrial use sites, thereby meeting the soil RAOs for the Site.

2.2 Groundwater

VOCs

Following implementation of the RA, groundwater in some areas of the Site, and in a surface water/spring located on the south side of Wethersfield Road approximately 60 feet east of MW-13 (**Figures 1 and 2**), exhibited some VOC concentrations exceeding the SCGs. Consequently, post-RA groundwater monitoring of VOCs was implemented beginning in January 2007 to evaluate the long-term effectiveness of the RA. The results of historical VOC monitoring are summarized in **Table 1**.

An evaluation of the August 2021 results indicates that VOC concentrations in three wells, MW-02, -07, and -15, are within historical concentration ranges with results for MW-12 being slightly higher than the historical concentration range.

Sampling analytical results indicate that VOC concentrations have stabilized over the past several years. Prior to and since the implementation of the RA, no Site-related VOCs have been detected in the potable water supplies from the Becker and Schell residences. However, on a few occasions non site-related compounds (i.e., acetone), likely associated with laboratory contamination, have been detected at concentrations less than approximately 20 times lower than the NYSDEC SCG.

PFAS

In June 2017, as part of NYSDEC's emerging contaminants monitoring initiative, monitoring well MW-02 was sampled for the 1,4-dioxane and Per-and Polyfluoroalkyl Substances (PFAS). One compound, perfluorooctanoic acid (PFOA), was detected at 33 nanograms per liter (ng/L) - above NYSDEC screening guidance. Based on the elevated PFOA concentration in MW-02, NYSDEC requested that PFAS analysis be added to the routine (biennial) sampling program for well MW-02 going forward.

2.3 Conclusions

Based on the groundwater monitoring results, the RA continues to be effective in maintaining VOC concentrations within historical limits, and continues to be protective of human health and the environment.

3.0 IC/EC PLAN COMPLIANCE

3.1 Institutional Controls

In accordance with NYSDEC SMP guidance, a series of Institutional Controls (ICs) in the form of Site restrictions, excavation plans and monitoring plans are required by the SMP to ensure that:

- All Engineering Controls (ECs) are operated and maintained as specified by the SMP;
- All ECs on the Site are inspected and certified at a frequency and in a manner defined in the SMP;
- Groundwater, soil vapor, and other environmental or public health monitoring are performed as defined in the SMP;
- Data and information pertinent to Site Management for the Controlled Property (Property) are reported at the frequency and in a manner defined in the SMP;
- On-site environmental monitoring devices, including but not limited to, groundwater monitoring wells and soil vapor probes, are maintained as necessary to ensure continued functioning in the manner specified in the SMP.

In addition, the Declaration of Covenants and Restrictions places certain restrictions on the property:

- Vegetable gardens and farming on the Property are prohibited;
- Use of groundwater underlying the Property is prohibited without treatment rendering it safe for the intended use or as otherwise approved by the relevant agency;
- All future activities on the property that would disturb remaining contaminated material must be conducted in accordance with the Excavation Work Plan included in the SMP;
- The potential for vapor intrusion must be evaluated for any future buildings developed on the Site, and any potential impacts that are identified must be mitigated;
- The Property may be used for restricted commercial/industrial use, provided that the long-term ECs and ICs described in the SMP remain in use.

3.2 Engineering Controls

ECs at the Controlled Property consist of two PRWs installed at the locations shown on **Figure 2**. The PRWs were installed to treat groundwater leaving the Site. A description of these PRWs is provided below:

<u>North Permeable Reactive Wall</u>

In accordance with the Remedial Design/ Remedial Action (RD/RA) Work Plan, a 170-foot long PRW was installed in the southeast corner of the Site. The PRW extends from about 25 feet southwest of MW-15 east to MW-14, parallel to Wethersfield Road. The trench is approximately 2 feet wide and 10 feet deep and is backfilled from 10 feet to within about 2 feet of the ground

surface with a mixture of zero valent iron (ZVI) and coarse sand. Approximately 100 cubic yards of the ZVI/sand mixture was emplaced (i.e., 9,872 pounds of ZVI).

Initial construction occurred in September/November 2006. The presence of boulders in this area necessitated that the trenches be widened to 2 feet instead of the design-specified 1-foot width. Considering the fixed quantity of ZVI and sand available, it was only possible to fill half as much of the trench as originally planned. As discussed and agreed with the NYSDEC, the ZVI/sand mixture was emplaced in the 7- to 10-foot interval instead of the design-specified 4- to 10-foot interval. At the request of the NYSDEC, the PRW was enhanced in May of 2009. The PRW trench was re-excavated to a depth of 7 feet to expose the top of the ZVI/sand mixture. Additional ZVI/sand mixture was emplaced until the trench was filled to within about 2 feet of the ground surface (i.e., 2 – 10 feet below ground surface (bgs)). The remainder of the trench was backfilled with the excavated soil.

South Permeable Reactive Wall

In accordance with the RD/RA Work Plan, a 69-foot long trench located approximately 50 feet east of MW-13 and oriented perpendicular to Wethersfield Road was excavated to a maximum depth of 10 feet bgs. Bedrock was encountered at a depth of about 4 feet at the northern end of the trench. The depth to bedrock gradually increased to the south, such that the full 10-foot depth could be excavated after approximately the first 40 feet. The trench also was widened to 2 feet due to the presence of boulders. As agreed with the NYSDEC, a 3-foot thick layer of the ZVI/sand mixture was emplaced above the bedrock in the northern half of the trench. In the remaining portion, the ZVI/sand mixture was emplaced in the 7- to 10-foot interval. A total of 16 cubic yards of the ZVI/sand mixture was emplaced (i.e., 1,688 pounds of ZVI). The excavated soil was placed in lifts about one-foot thick and compacted with the excavator. The backfill was mounded up above the trench, with the excess soil being spread and graded around the trench.

3.3 IC/EC Certification

These IC/ECs are designed to:

- Prevent ingestion/direct contact with contaminated soil;
- Prevent inhalation of, or exposure to, contaminants volatilizing from contaminated soil;
- Prevent ingestion of groundwater with contaminant levels that exceed drinking water standards;
- Prevent contact with, or inhalation of, volatiles from contaminated groundwater;
- Restore groundwater to pre-disposal/pre-release conditions, to the extent practicable;
- Prevent the discharge of contaminants to surface water;
- Prevent contaminated groundwater from migrating off-site; and
- Prevent migration of contaminants that would result in off-site groundwater or surface water contamination.

A visual inspection of the two PRWs is required by the SMP to be conducted during the biennial groundwater monitoring and Site inspection program (see Section 4.1). The PRWs are monitored for signs of seepage, subsidence, surface erosion, and other signs of damage. A complete list of items to be checked is provided on the Engineering Control Systems Inspection Form. Damage

observed to the PRWs is to be repaired immediately. The biennial inspection, and any necessary repairs, of the PRWs provide the supporting documentation for the Certification of these ECs.

The PRWs were inspected on August 18, 2021. The inspection consisted of walking the areas of the PRWs and looking for evidence of subsidence, depressions, cracks, soil erosion, and other damage indicators listed on the Inspection Form. The inspections did not reveal any signs of damage to the PRWs. Based on the inspections, the PRWs are believed to be sound and functioning as originally designed and constructed. Copies of the Engineering Control Systems Inspection Form, Site-Wide Inspection Form, and Site Photographs depicting current conditions are provided in **Appendix A**.

The ICs required by the Declaration of Covenants and Restrictions remain unchanged as approved by the NYSDEC. In addition, there have not been any changes to the physical condition of the Site, nor to activities at or use of the Site, since the assignable release for the Site was issued by the NYSDEC. A signed Institutional and Engineering Controls Certification Form is provided in **Appendix B**.

4.0 MONITORING PLAN COMPLIANCE

4.1 Monitoring Program

VOCs

A monitoring program is provided in the SMP to assess the performance of the remedy and overall reduction in contamination on-site and off-site and is specified to be conducted for two years following issuance of the 'release and covenant not to sue' by the NYSDEC for the Site. The monitoring program originally consisted of the following media sampling and frequency:

- Annual groundwater sampling from monitoring wells MW-02, MW-07, MW-12, MW-14 and MW-15. Sampling was to be conducted in the spring (i.e., April/May) one year and the summer (July/August) the following year.
- Semi-annual sampling of the potable water supply wells for the Becker and Schell residences and the surface water/spring location.
- Samples were to be analyzed for VOCs using Method SW8260B for groundwater samples and Method E502.2 for potable water samples.

In the 2015 PRR, the following changes to the monitoring program were recommended. In a letter dated January 21, 2016, the NYSDEC agreed with these recommendations.

- Groundwater monitoring would be conducted biennially in the four on-site monitoring wells that have continued to show detectable levels of VOCs (i.e., MW-02, -07, -12, and -15). Monitoring of MW-14, which has never shown any detectable levels of Site-related VOCs, would be discontinued. The sampling would alternate from the spring (i.e., April/May) to the summer (i.e., July/August) during consecutive events.
- Monitoring of the potable water supplies for both the Becker and Schell residences and the surface water/spring location would be conducted annually. The sampling would alternate from the spring (i.e., April/May) one year to the summer (i.e., July/August) the following year.

PFAS

In a letter dated June 10, 2019 (**Appendix C**), NYSDEC requested that the County further evaluate current conditions at or near the Site to determine if the PFAS, identified in previous on-site sampling in excess of screening levels, may be impacting nearby drinking water wells. To address NYSDEC's request, the County proposed that water samples be collected from the two nearby residential wells (i.e., the Schell and Becker residences) to evaluate the possible presence of PFAS compounds. These wells are located approximately 600 and 950 feet east-southeast of the Site and are sampled annually for VOCs as part of routine post-closure monitoring requirements detailed in the SMP. In an email dated August 19, 2019, the NYSDEC stated that the proposal to sample the two residential wells was acceptable.

In a letter dated September 18, 2020 (**Appendix C**), NYSDEC stated that no further emergent contaminant sampling is warranted off-site due to the private water supply well results being below applicable screening levels. The letter requested that PFAS analysis for Site monitoring

well MW-02 be added to the biennial monitoring program going forward due to elevated PFAS levels detected in a groundwater sample from that well collected on June 29, 2017.

Current Reporting Period Monitoring Activities

Four sampling events were completed during the current reporting period:

- One-time sampling of the Becker and Schell residential water supply wells for PFAS was performed on February 19, 2020. Residential PFAS sampling results are presented on **Table 3** and were forwarded to NYSDEC and the property owners.

- Routine (annual) sampling of the Becker and Schell residential water supply wells and the surface water/spring for VOCs was performed on August 20, 2020 and May 12, 2021. Results for these sampling events are included on **Table 1** and were transmitted to the property owners via US Mail in letters dated September 2, 2020 and June, 9, 2021, respectively.

- Biennial sampling for VOCs of monitoring wells MW-02, MW-07, MW-12, and MW-15 (**Figure 2**) was performed on August 18, 2021 (**Table 1**). The sample collected from well MW-02 was also analyzed for PFAS during this event (**Table 4**). Prior to sampling, a round of water levels was obtained from all Site monitoring wells.

Copies of the Low Flow Groundwater Sampling Logs are provided in **Appendix D**. Copies of the Residential Tap Water Sampling Logs are provided in **Appendix E** and copies of the Surface Water Sampling Logs are provided in **Appendix F**. A summary of the groundwater level measurements collected on August 18, 2021 is presented in **Table 2. G**roundwater elevation contours using the August 18, 2021 data are plotted on **Figure 3**.

Analytical data for all sampling conducted during this monitoring period are tabulated in **Tables 1, 3, and 4**. Post-remedial action total VOC concentrations from January 2007 through August 2021 are presented in Figure 4. Laboratory analytical reports for events conducted during the current reporting period are presented in **Appendix G**.

4.2 Sampling Results

The surface water/spring and groundwater (including residential well samples) analytical results were compared to the following SCGs for VOCs:

Volatile Compounds	**SCG (µg/L)***
1,1-Dichloroethane (1,1-DCA)	5
1,1-Dichloroethene (1,1-DCE)	5
1,2-Dichloroethene (1,2-DCE)	5
1,1,1-Trichloroethane (1,1,1-TCA)	5
1,1,2-trichloro-1,2,2-trifluoroethane	5
Tetrachloroethene (PCE)	5
Trichloroethene (TCE)	5
Vinyl Chloride (VC)	2

* µg/L = micrograms per liter.

PFAS sampling results were compared to guidance values presented in the NYSDEC Sampling, Analysis, and Assessment of Per-and Polyfluoroalkyl Substances (PFAS) Under NYSDEC's Part 375 Remedial Programs, dated January 2021.

Evaluation of monitoring results indicated the following:

- Groundwater flow directions have remained unchanged, with flow being from west to east across the Site (**Figure 3**).
- Post-remedial action total VOC concentrations versus time for monitoring wells MW-02, MW-07, MW-12, MW-14, and the surface water/spring location for the period between January 2007 and August 2021 are plotted in **Figure 4**.
- Potable groundwater quality for both the Becker and Schell residences has remained unchanged. There were no detectable concentrations of VOCs, with the exception of t-Butanol, in the samples collected from either residence during this reporting period. t-Butanol was detected in the sample from the Becker well on August 20, 2020, at a concentration of 1.4 ug/L. NYSDEC does not list a groundwater quality standard or guidance value for t-Butanol.
- Site-related VOCs were generally consistent with historical concentration ranges except in well MW-12 with total VOCs of 113.6 ug/L which is slightly above the historical high concentration of 105.6 ug/L.
- Total VOC concentrations in MW-02 decreased during this reporting period when compared to results from seven previous events, and were within the historical range of values.
- Total VOC concentrations in MW-07 and MW-15 are within the historical ranges for these wells and are trending downward.
- The total VOC concentrations in the samples collected from the surface water/spring (**Table 1**) over the last 10 years have remained consistent, and within a very narrow range of values (125.6 to 180.3 ug/L). Results during this reporting period (132.3 ug/L) were no exception.
- PFAS results in residential well samples (**Table 3**) were below laboratory detection levels with the exception of perfluorobutanoic acid (PFBA). PFBA was detected in the Becker residential well at a concentration of 0.87 ng/L – well below the NYSDEC screening level of 100 ng/L.
- PFAS results in the groundwater sample collected from MW-02 **(Table 4)** were similar to results from the previous sampling event in June 2017. All compounds were below NYSDEC guidance values with the exception of perfluorooctanoic acid (PFOA) which was detected at 36 ng/L, above the guidance value of 10 ng/L.

4.3 Monitoring Well Maintenance

The results of the previous site-wide inspection conducted on June 28, 2019, noted that the 3-inch polyvinyl chloride (PVC) protective outer well casing of well MW-18 was damaged above grade and the 3-inch outer aluminum well cap was missing. The inner 1-inch PVC casing was intact. Well MW-18 is not actively sampled as part of this monitoring program. The 3-inch outer PVC well casing was repaired and the cap replaced during the subsequent Site visit on February 19, 2020 (see photos **Appendix A**).

4.4 Conclusions

Based on the groundwater monitoring results, the RA continues to be effective in maintaining VOC concentrations within historical limits, and continues to be protective of human health and the environment. Additionally, the PRWs are functioning as designed and off-site contamination has not increased.

5.0 O&M PLAN COMPLIANCE

5.1 O&M Program

The Site remedy does not rely on any mechanical systems to protect public health and the environment. Therefore, the operation and maintenance of such components is not required. However, since the Site remedy does rely on the integrity of the PRWs to protect public health and the environment, maintenance of the PRWs is required.

5.2 O&M Performed

Based on the annual inspections of the PRWs, no repairs have been necessary.

5.3 Conclusions and Recommendations

The PRWs should be effective and continue to perform as designed/expected. No changes are recommended at this time.

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Compliance with SMP

All the requirements of the SMP for the IC/ECs, the Monitoring Plan and the O&M Plan were met during this reporting period.

6.2 Performance and Effectiveness

Based on the groundwater monitoring results, the remedial program at the Site has been effective in maintaining impacts to groundwater associated with the Site within historical limits. It is anticipated that VOC concentrations will continue to decline over time, and that the remedy should ultimately achieve the RAOs for the Site.

6.3 Future Submittals

- The next PRR will be submitted by October 5, 2023.
- Site monitoring will continue in accordance with the currently approved program and reports will be timely submitted.

TABLES

Table 1
Historical Analytical Results
Groundwater
Wyoming County Fire Training Center

Monitoring Well MW-02

Volatile Compounds	Units	Jun-04	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09	Oct-09	Jan-10	May-10	Jul-11	May-12	Jul-13	May-14	Jul-15	Jun-17	May-19	Aug-21
1,1,1-Trichloroethane	UG/L	9 J	U	NS	12	NS	U	NS	U	NS	U	NS	U	NS	11	5.7	8.9	4.2	U	U	U	U	U	4.9
1,1-Dichloroethane	UG/L	2 J	U	NS	U	NS	U	NS	U	NS	U	NS	U	NS	U	U	2.7	1.2	U	U	U	U	U	1.3 J
1,1-Dichloroethene	UG/L	U	U	NS	U	NS	U	NS	U	NS	U	NS	U	NS	U	U	U	U	U	U	U	U	U	U
1,2-Dichloroethene (total)	UG/L	23	400	NS	450 E	NS	67	NS	56	NS	55	NS	63	NS	42	57	243 D	192.5 D	260	660	290	290	410 F1	120
Methylene Chloride	UG/L	U	U	NS	U	NS	U	NS	U	NS	U	NS	U	NS	U	U	U	U	U	U	U	6.0 J	U	U
Tetrachloroethene	UG/L	15	U	NS	60	NS	16	NS	16	NS	11	NS	25	NS	51	26	50	22	18	34	17	79	230	38
Toluene	UG/L	U	U	NS	U	NS	U	NS	U	NS	U	NS	7	NS	U	U	U	U	U	U	U	U	U	U
Trichloroethene	UG/L	2 J	79	NS	150	NS	43	NS	49	NS	26	NS	39	NS	18	38	140 D	120	110	440	110	240	360	61
Vinyl Chloride	UG/L	3 J	U	NS	U	NS	U	NS	U	NS	U	NS	U	NS	U	U	9.8	1.6	U	U	U	U	U	5.1
Total VOCs	UG/L	54	479	NS	672	NS	126	NS	121	NS	92	NS	134	NS	122	126.7	454.4	341.5	388	1134	417	615	1,000	230.3

Monitoring Well MW-07

Volatile Compounds	Units	Jun-04	Feb-05	Jan-07	Apr-07	Jul-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09	Oct-09	Jan-10	May-10	Jul-11	May-12	Jul-13	May-14	Jul-15	Jun-17	May-19	Aug-21
1,1,1-Trichloroethane	UG/L	1,300 D	1000	380	NS	220	63	NS	210	NS	20	NS	120	NS	66	56	64	85	110	36	44 J	110	30	84
1,1,2-trichloro-1,2,2-trifluoroethane	UG/L	U	U	U	NS	U	U	NS	U	NS	U	NS	U	NS	U	U	1.9	1.6	U	U	1.0 J	1.8	1.2	1.8
1,1-Dichloroethane	UG/L	69	66 J	U	NS	U	U	NS	U	NS	U	NS	26	NS	U	14	17	14	15	4.6	5.5	13	3.6	11
1,1-Dichloroethene	UG/L	14	U	U	NS	U	U	NS	U	NS	U	NS	U	NS	U	U	2.6	1.9	17	U	1.4 J	3.8	0.50 J	2.6
1,2-Dichloroethene (total)	UG/L	730 D	1,100	350	NS	250	99	NS	U	NS	21	NS	130	NS	60	57	67	110 D	120	37	30	210 D	17	150
Benzene	UG/L	U	U	U	NS	U	U	NS	U	NS	U	NS	U	NS	U	U	0.99 J	0.80 J	U	U	U	U	U	U
Chloroethane	UG/L	23 J	U	U	NS	U	U	NS	U	NS	U	NS	U	NS	U	U	0.80 J	U	U	U	U	U	U	U
Methylene Chloride	UG/L	U	U	U	NS	U	110	NS	U	NS	26	NS	U	NS	U	U	U	U	U	U	U	1.5 J	U	U
Tetrachloroethene	UG/L	1,800 D	2,200E	1,500	NS	1,500	350	NS	1200	NS	180	NS	830	NS	570	440	450 D	290	270	85	140 J	140	65	130
Toluene	UG/L	U	U	U	NS	U	U	NS	U	NS	U	NS	U	NS	U	U	U	U	U	U	U	U	U	U
Trichloroethene	UG/L	49	65 J	U	NS	U	U	NS	62	NS	U	NS	48	NS	U	16	20	78	93	30	28	23	5.0	14.0
Vinyl chloride	UG/L	U	U	U	NS	U	U	NS	U	NS	U	NS	U	NS	U	U	5.9	2.6	U	U	U	2.0	U	1.6
Total VOCs	UG/L	3,985	3,531	2,230	NS	1,970	622	NS	1,472	NS	247	NS	1,154	NS	696	583	630.19	583.9	625	192.6	249.9	505.1	122.3	395

Notes:
VOC analysis by EPA Method 8260
UG/L = micrograms per liter
U = not detected above the quantitation limit
D = Result from a sample dilution
NS = Not sampled
J = Analyte detected above method detection limit but below quantitation limits
E = Value above quantitation range
F1 = MS and/or MSD Recovery is outside acceptance limits.

Table 1
Historical Analytical Results
Groundwater
Wyoming County Fire Training Center

Monitoring Well MW-12

Volatile Compounds	Units	Jun-04	Feb-05	Jan-07	Apr-07	Jul-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09	Oct-09	Jan-10	May-10	Jul-11	May-12	Jul-13	May-14	Jul-15	Jun-17	May-19	Aug-21
1,1,1-Trichloroethane	UG/L	31	34	24	NS	38	10	NS	19	NS	10	NS	26	NS	7.5	30	41	17	22	1.1	1.9	36	U	36
1,1-Dichloroethane	UG/L	4 J	U	U	NS	5.3	U	NS	U	NS	U	NS	U	NS	U	U	4.6	2.2	2.3	U	U	3.7	U	3.9
1,1-Dichloroethene	UG/L	U	U	U	NS	U	U	NS	U	NS	U	NS	U	NS	U	U	1.7	1.8	3.7	U	U	4.4	U	U
1,2-Dichloroethene (total)	UG/L	20	18	15	NS	33	12	NS	19	NS	7.5	NS	20	NS	6	25	38	20	23	0.96	1.9	39	U	50
Chloroethane	UG/L	U	U	U	NS	U	U	NS	U	NS	U	NS	U	NS	U	U	0.46 J	U	U	U	U	U	U	U
Tetrachloroethene	UG/L	8 J	U	U	NS	12	U	NS	8.7	NS	U	NS	16	NS	U	12	17	11	11	1.2	1.6	17	U	19
Toluene	UG/L	U	95	U	NS	U	U	NS	U	NS	U	NS	U	NS	U	U	U	U	U	U	U	U	U	U
Trichloroethene	UG/L	U	U	U	NS	U	U	NS	U	NS	U	NS	U	NS	U	U	2.8	1.8	2.3	U	U	4.6	U	4.7
Vinyl Chloride	UG/L	U	U	U	NS	U	U	NS	U	NS	U	NS	U	NS	U	U	U	U	U	U	U	U	U	U
Total VOCs	UG/L	63	61	39	NS	88.3	22	NS	46.7	NS	17.5	NS	62	NS	13.5	67	105.56	53.8	64.3	3.26	5.4	104.7	0.0	113.6

Monitoring Well MW-15

Volatile Compounds	Units	Jun-04	Feb-05	Jan-07	Apr-07	Jul-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09	Oct-09	Jan-10	May-10	Jul-11	May-12	Jul-13	May-14	Jul-15	Jun-17	May-19	Aug-21
1,1,1-Trichloroethane	UG/L	210 D	150	420 E	NS	280	300	NS	270	NS	7.2	NS	240	NS	210	180	190	100 D	120	70	86	79	43	62
1,1-Dichloroethane	UG/L	22	17	42	NS	36	33	NS	30	NS	U	NS	29	NS	19	18	15	14	14	7.6	9.8	10	4.5	6.8
1,1-Dichloroethene	UG/L	2 J	U	11	NS	U	U	NS	U	NS	U	NS	U	NS	U	U	5	2	19	47	U	0.87 J	U	U
1,2-Dichloroethene (total)	UG/L	150	93	410 E	NS	310	280	NS	240	NS	U	NS	U	NS	140	130	110 D	82	85	U	63	60	29	44
Chloroethane	UG/L	7 J	U	U	NS	U	U	NS	U	NS	U	NS	U	NS	U	U	0.93 J	U	U	U	U	U	U	U
Methylene Chloride	UG/L	U	U	U	NS	U	40	NS	U	NS	5.2	NS	U	NS	U	U	U	U	U	1.0 J	0.99 J	1.3 J	U	U
Tetrachloroethene	UG/L	100	84	170	NS	180	200	NS	220	NS	12	NS	240	NS	260	250	280 D	260 D	230	130	190	170	97	160
Toluene	UG/L	U	U	U	NS	U	U	NS	U	NS	U	NS	U	NS	U	U	U	U	U	U	U	U	U	U
Trichloroethene	UG/L	7 J	6 J	13	NS	U	U	NS	11	NS	U	NS	12	NS	11	11	12	10	10	6.2	9.9	10	5.3	7.4
Total VOCs	UG/L	498	350	1066	NS	806	853	NS	771	NS	24.4	NS	521	NS	640	589	612.93	468	478	261.8	359.7	331.2	178.8	280.2

Notes:

VOC analysis by EPA Method 8260

UG/L = micrograms per liter

U = not detected above the quantitation limit

D = Result from a sample dilution

NS = Not sampled

J = Analyte detected above method detection limit but below quantitation limits

E = Value above quantitation range

F1 = MS and/or MSD Recovery is outside acceptance limits.

Table 1
Historical Analytical Results
Surface Water
Wyoming County Fire Training Center

Spring

Volatile Compounds	Units	Nov-03	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09 (1)	Apr-09	Jul-09	Oct-09	Jan-10	May-10	Jul-11
1,1,1-Trichloroethane	UG/L	13	U	NS	21	34	54	64	70	54	U	65	88	87	50	68	69
Chloroethane	UG/L	2.7	U	NS	U	U	U	U	U	U	U	U	U	U	U	U	0.61 J
Methyl-tert-Butyl Ether	UG/L	1.5	U	NS	U	U	U	U	U	U	U	U	U	U	U	U	U
Tetrachloroethene	UG/L	9.3	U	NS	U	5.6	13	14	20	16	U	19	31	31	16	24	30
Trichloroethene	UG/L	1.9	U	NS	U	U	U	U	U	U	U	U	U	U	U	U	3.7
1,1-Dichloroethane	UG/L	9	U	NS	U	U	7.8	8.2	9.8	6.3	U	11	13	11	6.2	9.3	8.8
1,1-Dichloroethene	UG/L	3.9	U	NS	U	U	U	U	U	U	U	U	U	U	U	U	4.6
1,2-Dichloroethene (total)	UG/L	39	U	NS	17	25	17	51	59	36	U	54	73	67	37	58	57
Methylene Chloride	UG/L	U	U	NS	U	U	21	U	U	U	U	U	U	U	U	U	U
Total VOCs	UG/L	80.3	U	NS	38	64.6	112.8	137.2	158.8	112.3	U	149	205	196	109.2	159.3	173.71

Volatile Compounds	Units	Jan-12	May-12	Nov-12	May-13	Dec-13 (2)	May-14	Dec-14 (3)	Aug-15	Jul-16	Jun-17	Jul-18 (4)	May-19	Aug-20	May-21
1,1,1-Trichloroethane	UG/L	55	60	44	62	NS	62	NS	57	59	52	NS	47	44	39
Chloroethane	UG/L	U	U	U	U	NS	U	NS	U	U	U	NS	U	U	U
Methyl-tert-Butyl Ether	UG/L	U	U	U	U	NS	U	NS	U	U	U	NS	U	U	U
Tetrachloroethene	UG/L	29	35	26	35	NS	34	NS	45	51	41	NS	35	45	40
Trichloroethene	UG/L	3.3	3.9	3.2	4.6	NS	4.7	NS	5.3	5.9	6.0	NS	4.7	7.5	5.6
1,1-Dichloroethane	UG/L	6.9	7.4	6.4	7.7	NS	6.9	NS	6.4	7.4	6.1	NS	4.6	6.4	4.6
1,1-Dichloroethene	UG/L	2.3	1.6	1	1.2	NS	1.3	NS	2.4	0.97J	1.7	NS	1.4	1.0	0.72
1,2-Dichloroethene (total)	UG/L	50	51	45	53	NS	52	NS	54	56	51	NS	42	52.6	42.4 J
Methylene Chloride	UG/L	U	U	U	U	NS	U	NS	U	U	U	NS	U	U	U
Vinyl Chloride	UG/L	U	U	U	U	NS	U	NS	U	U	U	NS	U	0.26 J	U
Total VOCs	UG/L	146.5	158.9	125.6	163.5	NS	160.9	NS	170.1	180.27	157.8	NS	134.7	156.8	132.3

Notes:

Spring VOC analysis by EPA Method 8260 or New York State Department of Health Method 524.2

UG/L = micrograms per liter

U = not detected above the quantitation limit

J = analyte detected above method detection limit below quantitation limits

NS = not sampled

(1) Sample was collected 150' downstream of normal sampling location (snow drifts blocked access)

(2) Spring not sampled in December 2013 due to being buried under deep snow.

(3) Spring not sampled in December 2014 due to discharge pipe being submerged in water.

(4) Spring not sampled in July 2018. Discharge pipe could not be found, likely submerged in water.

Table 1
Historical Analytical Results
Potable Well Water
Wyoming County Fire Training Center

Becker Tap Water

Volatile Compounds	Units	Jun-04	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09	Oct-09	Jan-10	May-10	Jul-11
Acetone	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,1,1-Trichloroethane	UG/L	3 J	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Toluene	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Tetrachloroethene	UG/L	9 J	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Trichloroethene	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethane	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethene	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,2-Dichloroethene (total)	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Vinyl Chloride	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Total VOCs	UG/L	12	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U

Volatile Compounds	Units	Jan-12	May-12	Nov-12	May-13	Dec-13	May-14	Dec-14	Jul-15	Jul-16	Jun-17	Jul-18	May-19	Aug-20 (1)	May-21
Acetone	UG/L	U	U	U	0.54 J	0.75 J	U	U	0.91 J	U	U	2.4 J	1.1 J	U	U
t-Butanol	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	1.4 J	U
1,1,1-Trichloroethane	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Toluene	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Tetrachloroethene	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Trichloroethene	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethane	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethene	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,2-Dichloroethene (total)	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Vinyl Chloride	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Total VOCs	UG/L	U	U	U	0.54	0.75	U	U	0.91	U	U	2.4	1.1	1.4 J	U

Notes:

Becker Tap Water VOC analysis by New York State Department of Health Method 502.2 (through May 2010) and Method 524.2 (beginning July 2011)

UG/L = micrograms per liter

U = not detected above the quantitation limit

J = analyte detected above method detection limit below quantitation limits

(1) t-Butanol not detected in primary water sample but detected at an estimated 1.4 ug/L in the field duplicate sample.

Table 1
Historical Analytical Results
Potable Well Water
Wyoming County Fire Training Center

Schell Tap Water

Volatile Compounds	Units	Jun-04	Jan-07	Apr-07	Jul-07	Oct-07	Jan-08	Apr-08	Jul-08	Oct-08	Feb-09	Apr-09	Jul-09	Oct-09	Jan-10	May-10	Jul-11
Acetone	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,1,1-Trichloroethane	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Toluene	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Tetrachloroethene	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Trichloroethene	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethane	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethene	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,2-Dichloroethene (total)	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Vinyl Chloride	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Total VOCs	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U	U

Volatile Compounds	Units	Jan-12	May-12	Nov-12	May-13	Dec-13	May-14	Dec-14	Jul-15	Jul-16	Jun-17	Jul-18	May-19	Aug-20	May-21
Acetone	UG/L	U	U	U	U	0.78 J	U	U	U	U	U	1.4 J	1.7 J	U	U
1,1,1-Trichloroethane	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Toluene	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Tetrachloroethene	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Trichloroethene	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethane	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,1-Dichloroethene	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U
1,2-Dichloroethene (total)	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Vinyl Chloride	UG/L	U	U	U	U	U	U	U	U	U	U	U	U	U	U
Total VOCs	UG/L	U	U	U	U	0.78	U	U	U	U	U	1.4	1.7	U	U

Notes:

Schell Tap Water VOC analysis by New York State Department of Health Method 502.2 (through May 2010) and Method 524.2 (beginning July 2011)

UG/L = micrograms per liter

U = not detected above the quantitation limit

J = analyte detected above method detection limit but below quantitation limits

TABLE 2
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft) From Gnd.	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MW-02	978931.2427	592314.1629	2023.95	NA	2025.64	A		0					
MNW							6/4/2004 1621		1.06	2022.89	0.00	2,022.89	
MNW							6/7/2004 1150		2.27	2021.68	0.00	2,021.68	
MNW							6/14/2004 0830		2.74	2021.21	0.00	2,021.21	
MNW							6/14/2004 1558		2.82	2021.13	0.00	2,021.13	
MNW							6/25/2004 0839		2.97	2020.98	0.00	2,020.98	
MNW							8/8/2004 0853		2.59	2021.36	0.00	2,021.36	
MNW							2/9/2005 0000		0.97	2022.98	0.00	2,022.98	
MNW							1/11/2007 0000		1.62	2022.33	0.00	2,022.33	
MNW							4/5/2007 0000		1.63	2022.32	0.00	2,022.32	
MNW							7/11/2007 0000		3.27	2020.68	0.00	2,020.68	
MNW							10/11/2007 0000		4.13	2019.82	0.00	2,019.82	
MNW							1/8/2008 0000		1.43	2022.52	0.00	2,022.52	
MNW							4/16/2008 0000		1.75	2022.20	0.00	2,022.20	
MNW							7/10/2008 0000		2.66	2021.29	0.00	2,021.29	
MNW							10/16/2008 0000		2.94	2021.01	0.00	2,021.01	
MNW							2/12/2009 0000		1.15	2022.80	0.00	2,022.80	
MNW							4/9/2009 0000		1.15	2022.80	0.00	2,022.80	
MNW							7/9/2009 0000		2.29	2021.66	0.00	2,021.66	
MNW							10/29/2009 0000		2.15	2021.80	0.00	2,021.80	
MNW							1/21/2010 0000		NM	-	NM	-	
MNW							5/27/2010 0000		2.29	2021.66	0.00	2,021.66	
MNW							7/25/2011 0000		3.19	2020.76	0.00	2,020.76	
MNW							5/31/2012 0000		2.42	2021.53	0.00	2,021.53	
MNW							7/3/2013 0000		2.65	2021.30	0.00	2,021.30	
MNW							5/18/2014 0000		1.42	2022.53	0.00	2,022.53	
MNW							7/15/2015 0000		0.97	2022.98	0.00	2,022.98	
MNW							6/28/2017 0000		2.81	2021.14	0.00	2,021.14	

NM - No Measurement

Type:
MNW Monitoring Well

The value noted in the column labeled Specific Gravity is an assumed value for free product, if found.

TABLE 2
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft) From Gnd.	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							5/1/2019 0000		0.86	2023.09	0.00	2,023.09	
MNW							8/18/2021 0937		2.71	2021.24	0.00	2,021.24	
MW-03	978828.2168	592202.3606	2032.93	NA	2035.79	A		0					
MNW							11/6/2001 0000		11.98	2020.95	0.00	2,020.95	
MNW							6/4/2004 1618		9.1	2023.83	0.00	2,023.83	
MNW							6/7/2004 1145		9.77	2023.16	0.00	2,023.16	
MNW							6/11/2004 1500		9.92	2023.01	0.00	2,023.01	
MNW							6/14/2004 1556		10.17	2022.76	0.00	2,022.76	
MNW							6/25/2004 0837		10.52	2022.41	0.00	2,022.41	
MNW							8/8/2004 0855		10.11	2022.82	0.00	2,022.82	
MNW							2/9/2005 0000		NM	-	NM	-	Obstruction at 2.85'
MNW							1/11/2007 0000		NM	-	NM	-	Destroyed
MNW							4/5/2007 0000		NM	-	NM	-	DESTROYED
MNW							10/11/2007 0000		NM	-	NM	-	
MNW							1/8/2008 0000		9.39	2023.54	0.00	2,023.54	
MNW							4/16/2008 0000		9.28	2023.65	0.00	2,023.65	
MNW							7/10/2008 0000		10.58	2022.35	0.00	2,022.35	
MNW							10/16/2008 0000		11.17	2021.76	0.00	2,021.76	
MNW							2/12/2009 0000		8.63	2024.30	0.00	2,024.30	
MNW							4/9/2009 0000		8.58	2024.35	0.00	2,024.35	
MNW							7/9/2009 0000		10.01	2022.92	0.00	2,022.92	
MNW							10/29/2009 0000		9.93	2023.00	0.00	2,023.00	
MNW							1/21/2010 0000		9.79	2023.14	0.00	2,023.14	
MNW							5/27/2010 0000		9.61	2023.32	0.00	2,023.32	
MNW							7/25/2011 0000		10.87	2022.06	0.00	2,022.06	
MNW							5/31/2012 0000		9.75	2023.18	0.00	2,023.18	
MNW							7/3/2013 0000		10.07	2022.86	0.00	2,022.86	

NM - No Measurement

Type:
MNW Monitoring Well

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TABLE 2
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft) From Gnd.	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							5/18/2014 0000		8.53	2024.40	0.00	2,024.40	
MNW							7/15/2015 0000		8.84	2024.09	0.00	2,024.09	
MNW							6/28/2017 0000		10.46	2022.47	0.00	2,022.47	
MNW							8/18/2021 0939		10.21	2022.72	0.00	2,022.72	
MW-04	978686.2916	592234.1593	2034.25	NA	2036.40	A		0					
MNW							11/6/2001 0000		7.78	2026.47	0.00	2,026.47	
MNW							6/4/2004 1615		2.08	2032.17	0.00	2,032.17	
MNW							6/7/2004 1144		3.07	2031.18	0.00	2,031.18	
MNW							6/14/2004 0800		3.83	2030.42	0.00	2,030.42	
MNW							6/14/2004 1554		3.82	2030.43	0.00	2,030.43	
MNW							6/25/2004 0835		4.63	2029.62	0.00	2,029.62	
MNW							8/8/2004 0851		3.93	2030.32	0.00	2,030.32	
MNW							2/9/2005 0000		1.96	2032.29	0.00	2,032.29	
MNW							1/11/2007 0000		1.34	2032.91	0.00	2,032.91	
MNW							4/5/2007 0000		2.03	2032.22	0.00	2,032.22	
MNW							7/11/2007 0000		5.83	2028.42	0.00	2,028.42	
MNW							10/11/2007 0000		8.17	2026.08	0.00	2,026.08	
MNW							1/8/2008 0000		2.01	2032.24	0.00	2,032.24	
MNW							4/16/2008 0000		1.6	2032.65	0.00	2,032.65	
MNW							6/10/2008 0000		4.67	2029.58	0.00	2,029.58	
MNW							7/10/2008 0000		3.66	2030.59	0.00	2,030.59	
MNW							10/16/2008 0000		5.4	2028.85	0.00	2,028.85	
MNW							2/12/2009 0000		1.34	2032.91	0.00	2,032.91	
MNW							4/9/2009 0000		1.16	2033.09	0.00	2,033.09	
MNW							7/9/2009 0000		3.2	2031.05	0.00	2,031.05	
MNW							10/29/2009 0000		4.33	2029.92	0.00	2,029.92	
MNW							1/21/2010 0000		1.59	2032.66	0.00	2,032.66	

NM - No Measurement

Type:
MNW Monitoring Well

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TABLE 2
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft) From Gnd.	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							5/27/2010 0000		1.55	2032.70	0.00	2,032.70	
MNW							7/25/2011 0000		4.26	2029.99	0.00	2,029.99	
MNW							5/31/2012 0000		1.4	2032.85	0.00	2,032.85	
MNW							7/3/2013 0000		2.04	2032.21	0.00	2,032.21	
MNW							5/18/2014 0000		-0.37	2034.62	0.00	2,034.62	
MNW							7/15/2015 0000		0.37	2033.88	0.00	2,033.88	
MNW							6/28/2017 0000		2.54	2031.71	0.00	2,031.71	
MNW							8/18/2021 0943		2.33	2031.92	0.00	2,031.92	
MW-05	979063.4391	592223.0659	2023.11	NA	2026.00	A		0					
MNW							11/6/2001 0000		2.64	2020.47	0.00	2,020.47	
MNW							6/4/2004 1626		1.98	2021.13	0.00	2,021.13	
MNW							6/7/2004 1148		2.27	2020.84	0.00	2,020.84	
MNW							6/11/2004 1430		2.42	2020.69	0.00	2,020.69	
MNW							6/14/2004 1600		2.38	2020.73	0.00	2,020.73	
MNW							6/25/2004 0841		2.53	2020.58	0.00	2,020.58	
MNW							8/8/2004 0853		2.26	2020.85	0.00	2,020.85	
MNW							2/9/2005 0000		1.64	2021.47	0.00	2,021.47	
MNW							1/11/2007 0000		1.82	2021.29	0.00	2,021.29	
MNW							4/5/2007 0000		2.07	2021.04	0.00	2,021.04	
MNW							7/11/2007 0000		2.85	2020.26	0.00	2,020.26	
MNW							10/11/2007 0000		3.4	2019.71	0.00	2,019.71	
MNW							1/8/2008 0000		2.19	2020.92	0.00	2,020.92	
MNW							4/16/2008 0000		1.74	2021.37	0.00	2,021.37	
MNW							7/10/2008 0000		2.24	2020.87	0.00	2,020.87	
MNW							10/16/2008 0000		2.2	2020.91	0.00	2,020.91	
MNW							2/12/2009 0000		1.25	2021.86	0.00	2,021.86	
MNW							4/9/2009 0000		1.27	2021.84	0.00	2,021.84	

NM - No Measurement

Type:
MNW Monitoring Well

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TABLE 2
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft) From Gnd.	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							7/9/2009 0000		1.89	2021.22	0.00	2,021.22	
MNW							10/29/2009 0000		1.84	2021.27	0.00	2,021.27	
MNW							1/21/2010 0000		1.99	2021.12	0.00	2,021.12	
MNW							5/27/2010 0000		2	2021.11	0.00	2,021.11	
MNW							7/25/2011 0000		2.7	2020.41	0.00	2,020.41	
MNW							5/31/2012 0000		2.16	2020.95	0.00	2,020.95	
MNW							7/3/2013 0000		2.42	2020.69	0.00	2,020.69	
MNW							5/18/2014 0000		1.79	2021.32	0.00	2,021.32	
MNW							7/15/2015 0000		1.55	2021.56	0.00	2,021.56	
MNW							6/28/2017 0000		2.57	2020.54	0.00	2,020.54	
MNW							8/18/2021 0934		2.36	2020.75	0.00	2,020.75	
MW-06	978973.2045	592468.4489	2018.62	NA	2020.28	A		0					
MNW							11/7/2001 0000		3.48	2015.14	0.00	2,015.14	
MNW							6/4/2004 1453		2.69	2015.93	0.00	2,015.93	
MNW							6/7/2004 1102		3.42	2015.20	0.00	2,015.20	
MNW							6/14/2004 0930		4.37	2014.25	0.00	2,014.25	
MNW							6/14/2004 1511		4.45	2014.17	0.00	2,014.17	
MNW							6/25/2004 0729		4.88	2013.74	0.00	2,013.74	
MNW							8/8/2004 0818		4	2014.62	0.00	2,014.62	
MNW							2/9/2005 0000		0.69	2017.93	0.00	2,017.93	
MNW							1/11/2007 0000		1.79	2016.83	0.00	2,016.83	
MNW							4/5/2007 0000		2.34	2016.28	0.00	2,016.28	
MNW							7/11/2007 0000		5.12	2013.50	0.00	2,013.50	
MNW							10/11/2007 0000		6.07	2012.55	0.00	2,012.55	
MNW							1/8/2008 0000		0.48	2018.14	0.00	2,018.14	
MNW							4/16/2008 0000		0.05	2018.57	0.00	2,018.57	
MNW							7/10/2008 0000		3.49	2015.13	0.00	2,015.13	

NM - No Measurement

Type:
MNW Monitoring Well

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TABLE 2
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft) From Gnd.	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							10/16/2008 0000		0.62	2018.00	0.00	2,018.00	
MNW							2/12/2009 0000		0.21	2018.41	0.00	2,018.41	
MNW							4/9/2009 0000		0.13	2018.49	0.00	2,018.49	
MNW							7/9/2009 0000		2.4	2016.22	0.00	2,016.22	
MNW							10/29/2009 0000		1.19	2017.43	0.00	2,017.43	
MNW							1/21/2010 0000		2.64	2015.98	0.00	2,015.98	
MNW							5/27/2010 0000		2.16	2016.46	0.00	2,016.46	
MNW							7/25/2011 0000		5.47	2013.15	0.00	2,013.15	
MNW							5/31/2012 0000		3.33	2015.29	0.00	2,015.29	
MNW							7/3/2013 0000		3.92	2014.70	0.00	2,014.70	
MNW							5/18/2014 0000		1.79	2016.83	0.00	2,016.83	
MNW							7/15/2015 0000		1.86	2016.76	0.00	2,016.76	
MNW							6/28/2017 0000		5.1	2013.52	0.00	2,013.52	
MNW							8/18/2021 1032		5.1	2013.52	0.00	2,013.52	
MW-07	978803.3993	592454.4238	2024.24	NA	2026.14	A		0					
MNW							11/7/2001 0000		3.68	2020.56	0.00	2,020.56	
MNW							6/4/2004 1459		2.37	2021.87	0.00	2,021.87	
MNW							6/7/2004 1104		2.78	2021.46	0.00	2,021.46	
MNW							6/14/2004 1100		3.08	2021.16	0.00	2,021.16	
MNW							6/14/2004 1512		3.08	2021.16	0.00	2,021.16	
MNW							6/25/2004 0732		3.32	2020.92	0.00	2,020.92	
MNW							8/8/2004 0820		3.02	2021.22	0.00	2,021.22	
MNW							2/9/2005 0000		2.17	2022.07	0.00	2,022.07	
MNW							1/11/2007 0000		1.79	2022.45	0.00	2,022.45	
MNW							4/5/2007 0000		2.23	2022.01	0.00	2,022.01	
MNW							7/11/2007 0000		3.59	2020.65	0.00	2,020.65	
MNW							10/11/2007 0000		4.24	2020.00	0.00	2,020.00	

NM - No Measurement

Type:
MNW Monitoring Well

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TABLE 2
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft) From Gnd.	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							1/8/2008 0000		1.08	2023.16	0.00	2,023.16	
MNW							4/16/2008 0000		1.5	2022.74	0.00	2,022.74	
MNW							7/10/2008 0000		2.24	2022.00	0.00	2,022.00	
MNW							10/16/2008 0000		2.69	2021.55	0.00	2,021.55	
MNW							2/12/2009 0000		0.21	2024.03	0.00	2,024.03	
MNW							4/9/2009 0000		0.91	2023.33	0.00	2,023.33	
MNW							7/9/2009 0000		1.92	2022.32	0.00	2,022.32	
MNW							10/29/2009 0000		1.69	2022.55	0.00	2,022.55	
MNW							1/21/2010 0000		4.77	2019.47	0.00	2,019.47	
MNW							5/27/2010 0000		4.4	2019.84	0.00	2,019.84	
MNW							7/25/2011 0000		5.45	2018.79	0.00	2,018.79	
MNW							5/31/2012 0000		5.77	2018.47	0.00	2,018.47	
MNW							7/3/2013 0000		5.15	2019.09	0.00	2,019.09	
MNW							5/18/2014 0000		3.6	2020.64	0.00	2,020.64	
MNW							7/15/2015 0000		3.74	2020.50	0.00	2,020.50	
MNW							6/28/2017 0000		5.27	2018.97	0.00	2,018.97	
MNW							5/1/2019 0000		3.71	2020.53	0.00	2,020.53	
MNW							8/18/2021 1048		4.94	2019.30	0.00	2,019.30	
MW-08	978912.8311	592533.1998	2017.14	NA	2018.28	A		0					
MNW							11/7/2001 0000		4.56	2012.58	0.00	2,012.58	
MNW							6/4/2004 1455		3.23	2013.91	0.00	2,013.91	
MNW							6/7/2004 1105		3.84	2013.30	0.00	2,013.30	
MNW							6/14/2004 1015		4.51	2012.63	0.00	2,012.63	
MNW							6/14/2004 1509		4.52	2012.62	0.00	2,012.62	
MNW							6/25/2004 0731		5.76	2011.38	0.00	2,011.38	
MNW							8/8/2004 0816		4.33	2012.81	0.00	2,012.81	
MNW							2/9/2005 0000		2.48	2014.66	0.00	2,014.66	

NM - No Measurement

Type:
MNW Monitoring Well

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TABLE 2
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft) From Gnd.	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							1/11/2007 0000		NM	-	NM	-	
MNW							4/5/2007 0000		2.87	2014.27	0.00	2,014.27	
MNW							7/11/2007 0000		5.62	2011.52	0.00	2,011.52	
MNW							10/11/2007 0000		7.45	2009.69	0.00	2,009.69	
MNW							1/8/2008 0000		1.04	2016.10	0.00	2,016.10	
MNW							4/16/2008 0000		2.55	2014.59	0.00	2,014.59	
MNW							7/10/2008 0000		4.2	2012.94	0.00	2,012.94	
MNW							10/16/2008 0000		4.39	2012.75	0.00	2,012.75	
MNW							2/12/2009 0000		NM	-	NM	-	Snow Covered
MNW							4/9/2009 0000		2.4	2014.74	0.00	2,014.74	
MNW							7/9/2009 0000		3.69	2013.45	0.00	2,013.45	
MNW							10/29/2009 0000		3.03	2014.11	0.00	2,014.11	
MNW							1/21/2010 0000		3.87	2013.27	0.00	2,013.27	
MNW							5/27/2010 0000		3.81	2013.33	0.00	2,013.33	
MNW							7/25/2011 0000		6.16	2010.98	0.00	2,010.98	
MNW							5/31/2012 0000		3.69	2013.45	0.00	2,013.45	
MNW							7/3/2013 0000		4.07	2013.07	0.00	2,013.07	
MNW							5/18/2014 0000		2.71	2014.43	0.00	2,014.43	
MNW							7/15/2015 0000		2.86	2014.28	0.00	2,014.28	
MNW							6/28/2017 0000		4.84	2012.30	0.00	2,012.30	
MNW							8/18/2021 1005		5.04	2012.10	0.00	2,012.10	
MW-10	978535.9216	592744.4241	2006.26	NA	2007.95	A		0					
MNW							6/4/2004 1547		1.13	2005.13	0.00	2,005.13	
MNW							6/7/2004 1154		2.11	2004.15	0.00	2,004.15	
MNW							6/14/2004 1145		3.5	2002.76	0.00	2,002.76	
MNW							6/14/2004 1521		4.96	2001.30	0.00	2,001.30	
MNW							6/25/2004 0807		4.55	2001.71	0.00	2,001.71	

NM - No Measurement

Type:
MNW Monitoring Well

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TABLE 2
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft) From Gnd.	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							8/8/2004 0832		2.82	2003.44	0.00	2,003.44	
MNW							2/9/2005 0000		0.03	2006.23	0.00	2,006.23	
MNW							1/11/2007 0000		-0.02	2006.28	0.00	2,006.28	
MNW							4/5/2007 0000		0.53	2005.73	0.00	2,005.73	
MNW							7/11/2007 0000		6.4	1999.86	0.00	1,999.86	
MNW							10/11/2007 0000		9.25	1997.01	0.00	1,997.01	
MNW							1/8/2008 0000		0.92	2005.34	0.00	2,005.34	
MNW							4/16/2008 0000		0.7	2005.56	0.00	2,005.56	
MNW							6/10/2008 0000		5.42	2000.84	0.00	2,000.84	
MNW							7/10/2008 0000		3.82	2002.44	0.00	2,002.44	
MNW							9/11/2008 0000		5.74	2000.52	0.00	2,000.52	
MNW							10/16/2008 0000		5.69	2000.57	0.00	2,000.57	
MNW							11/25/2008 0000		1.14	2005.12	0.00	2,005.12	
MNW							2/12/2009 0000		0.19	2006.07	0.00	2,006.07	
MNW							4/9/2009 0000		0.18	2006.08	0.00	2,006.08	
MNW							7/9/2009 0000		3.09	2003.17	0.00	2,003.17	
MNW							10/29/2009 0000		1.4	2004.86	0.00	2,004.86	
MNW							1/21/2010 0000		0.76	2005.50	0.00	2,005.50	
MNW							5/27/2010 0000		3.17	2003.09	0.00	2,003.09	
MNW							7/25/2011 0000		6.33	1999.93	0.00	1,999.93	
MNW							5/31/2012 0000		1.88	2004.38	0.00	2,004.38	
MNW							7/3/2013 0000		4.3	2001.96	0.00	2,001.96	
MNW							5/18/2014 0000		0.79	2005.47	0.00	2,005.47	
MNW							7/15/2015 0000		1.83	2004.43	0.00	2,004.43	
MNW							6/28/2017 0000		5.6	2000.66	0.00	2,000.66	
MNW							8/18/2021 1112		5.8	2000.46	0.00	2,000.46	

NM - No Measurement

Type:
MNW Monitoring Well

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TABLE 2
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft) From Gnd.	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MW-11	978340.5964	592466.9970	2024.01	2027.08	2026.92	A		0					
MNW							6/4/2004 1559		0.6	2023.41	0.00	2,023.41	
MNW							6/7/2004 1132		1.18	2022.83	0.00	2,022.83	
MNW							6/10/2004 1000		1.74	2022.27	0.00	2,022.27	
MNW							6/14/2004 1529		2.21	2021.80	0.00	2,021.80	
MNW							6/25/2004 0820		2.77	2021.24	0.00	2,021.24	
MNW							8/8/2004 0840		1.73	2022.28	0.00	2,022.28	
MNW							2/9/2005 0000		0.16	2023.85	0.00	2,023.85	
MNW							1/11/2007 0000		0.26	2023.75	0.00	2,023.75	
MNW							4/5/2007 0000		0.41	2023.60	0.00	2,023.60	
MNW							7/11/2007 0000		3.35	2020.66	0.00	2,020.66	
MNW							10/11/2007 0000		6.38	2017.63	0.00	2,017.63	
MNW							1/8/2008 0000		0.71	2023.30	0.00	2,023.30	
MNW							4/16/2008 0000		0.92	2023.09	0.00	2,023.09	
MNW							6/10/2008 0000		3.04	2020.97	0.00	2,020.97	
MNW							7/10/2008 0000		1.78	2022.23	0.00	2,022.23	
MNW							9/11/2008 0000		3.38	2020.63	0.00	2,020.63	
MNW							10/16/2008 0000		1.39	2022.62	0.00	2,022.62	
MNW							11/25/2008 0000		0.76	2023.25	0.00	2,023.25	
MNW							2/12/2009 0000		0.02	2023.99	0.00	2,023.99	
MNW							4/9/2009 0000		0.38	2023.63	0.00	2,023.63	
MNW							7/9/2009 0000		1.47	2022.54	0.00	2,022.54	
MNW							10/29/2009 0000		0.51	2023.50	0.00	2,023.50	
MNW							1/21/2010 0000		0.89	2023.12	0.00	2,023.12	
MNW							5/27/2010 0000		1.75	2022.26	0.00	2,022.26	
MNW							7/25/2011 0000		3.84	2020.17	0.00	2,020.17	
MNW							5/31/2012 0000		0.87	2023.14	0.00	2,023.14	
MNW							7/3/2013 0000		0.99	2023.02	0.00	2,023.02	

NM - No Measurement

Type:
MNW Monitoring Well

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TABLE 2
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft) From Gnd.	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							5/18/2014 0000		5.09	2018.92	0.00	2,018.92	
MNW							7/15/2015 0000		0.02	2023.99	0.00	2,023.99	
MNW							6/28/2017 0000		2.67	2021.34	0.00	2,021.34	
MNW							8/18/2021 1123		2.58	2021.43	0.00	2,021.43	
MW-12	978338.5912	592597.3441	2015.67	2018.84	2018.68	A		0					
MNW							6/4/2004 1602		3.85	2011.82	0.00	2,011.82	
MNW							6/7/2004 1134		5	2010.67	0.00	2,010.67	
MNW							6/10/2004 0900		5.26	2010.41	0.00	2,010.41	
MNW							6/14/2004 1543		5.83	2009.84	0.00	2,009.84	
MNW							6/25/2004 0816		6.3	2009.37	0.00	2,009.37	
MNW							8/8/2004 0842		5.96	2009.71	0.00	2,009.71	
MNW							2/9/2005 0000		3.74	2011.93	0.00	2,011.93	
MNW							1/11/2007 0000		4.5	2011.17	0.00	2,011.17	
MNW							4/5/2007 0000		4.08	2011.59	0.00	2,011.59	
MNW							7/11/2007 0000		6.93	2008.74	0.00	2,008.74	
MNW							10/11/2007 0000		8.57	2007.10	0.00	2,007.10	
MNW							1/8/2008 0000		3.89	2011.78	0.00	2,011.78	
MNW							4/16/2008 0000		4.27	2011.40	0.00	2,011.40	
MNW							6/10/2008 0000		6.56	2009.11	0.00	2,009.11	
MNW							7/10/2008 0000		6.24	2009.43	0.00	2,009.43	
MNW							9/11/2008 0000		6.95	2008.72	0.00	2,008.72	
MNW							10/16/2008 0000		6.53	2009.14	0.00	2,009.14	
MNW							11/25/2008 0000		5.44	2010.23	0.00	2,010.23	
MNW							2/12/2009 0000		3.27	2012.40	0.00	2,012.40	
MNW							4/9/2009 0000		3.79	2011.88	0.00	2,011.88	
MNW							7/9/2009 0000		5.95	2009.72	0.00	2,009.72	
MNW							10/29/2009 0000		5.57	2010.10	0.00	2,010.10	

NM - No Measurement

Type:
MNW Monitoring Well

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TABLE 2
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft) From Gnd.	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							1/21/2010 0000		5.51	2010.16	0.00	2,010.16	
MNW							5/27/2010 0000		5.6	2010.07	0.00	2,010.07	
MNW							7/25/2011 0000		7.23	2008.44	0.00	2,008.44	
MNW							5/31/2012 0000		5.78	2009.89	0.00	2,009.89	
MNW							7/3/2013 0000		6.01	2009.66	0.00	2,009.66	
MNW							5/18/2014 0000		4.71	2010.96	0.00	2,010.96	
MNW							7/15/2015 0000		4.91	2010.76	0.00	2,010.76	
MNW							6/28/2017 0000		6.81	2008.86	0.00	2,008.86	
MNW							5/1/2019 0000		4.73	2010.94	0.00	2,010.94	
MNW							8/18/2021 1125		6.67	2009.00	0.00	2,009.00	
MW-13	978334.5807	592741.7286	2007.13	2010.23	2010.06	A		0					
MNW							6/4/2004 1604		3.64	2003.49	0.00	2,003.49	
MNW							6/7/2004 1136		3.83	2003.30	0.00	2,003.30	
MNW							6/9/2004 0800		3.82	2003.31	0.00	2,003.31	
MNW							6/14/2004 1545		4.17	2002.96	0.00	2,002.96	
MNW							6/25/2004 0812		4.39	2002.74	0.00	2,002.74	
MNW							8/8/2004 0846		4.05	2003.08	0.00	2,003.08	
MNW							2/9/2005 0000		1.99	2005.14	0.00	2,005.14	
MNW							1/11/2007 0000		1.45	2005.68	0.00	2,005.68	
MNW							4/5/2007 0000		2.41	2004.72	0.00	2,004.72	
MNW							7/11/2007 0000		4.75	2002.38	0.00	2,002.38	
MNW							10/11/2007 0000		5.68	2001.45	0.00	2,001.45	
MNW							1/8/2008 0000		0.46	2006.67	0.00	2,006.67	
MNW							4/16/2008 0000		3.32	2003.81	0.00	2,003.81	
MNW							6/10/2008 0000		5.06	2002.07	0.00	2,002.07	
MNW							7/10/2008 0000		4.68	2002.45	0.00	2,002.45	
MNW							9/11/2008 0000		4.88	2002.25	0.00	2,002.25	

NM - No Measurement

Type:
MNW Monitoring Well

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TABLE 2
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft) From Gnd.	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							10/16/2008 0000		1.1	2006.03	0.00	2,006.03	
MNW							11/25/2008 0000		3.62	2003.51	0.00	2,003.51	
MNW							2/12/2009 0000		0.39	2006.74	0.00	2,006.74	
MNW							4/9/2009 0000		0.7	2006.43	0.00	2,006.43	
MNW							7/9/2009 0000		4.32	2002.81	0.00	2,002.81	
MNW							10/29/2009 0000		6.05	2001.08	0.00	2,001.08	
MNW							1/21/2010 0000		3.29	2003.84	0.00	2,003.84	
MNW							5/27/2010 0000		4.7	2002.43	0.00	2,002.43	
MNW							7/25/2011 0000		5.53	2001.60	0.00	2,001.60	
MNW							5/31/2012 0000		2.85	2004.28	0.00	2,004.28	
MNW							7/3/2013 0000		4.82	2002.31	0.00	2,002.31	
MNW							5/18/2014 0000		2.18	2004.95	0.00	2,004.95	
MNW							7/15/2015 0000		1.58	2005.55	0.00	2,005.55	
MNW							6/28/2017 0000		5.1	2002.03	0.00	2,002.03	
MNW							8/18/2021 1127		5.02	2002.11	0.00	2,002.11	
MW-14	978464.9225	592765.7927	2005.22	2008.34	2008.16	A		0					
MNW							6/4/2004 1550		1.87	2003.35	0.00	2,003.35	
MNW							6/7/2004 1117		2.5	2002.72	0.00	2,002.72	
MNW							6/10/2004 0950		2.91	2002.31	0.00	2,002.31	
MNW							6/14/2004 1523		3.86	2001.36	0.00	2,001.36	
MNW							6/25/2004 0804		5.29	1999.93	0.00	1,999.93	
MNW							8/8/2004 0834		3.28	2001.94	0.00	2,001.94	
MNW							2/9/2005 0000		0.41	2004.81	0.00	2,004.81	
MNW							1/11/2007 0000		0.5	2004.72	0.00	2,004.72	
MNW							4/5/2007 0000		1.17	2004.05	0.00	2,004.05	
MNW							7/11/2007 0000		4.02	2001.20	0.00	2,001.20	
MNW							10/11/2007 0000		6.89	1998.33	0.00	1,998.33	

NM - No Measurement

Type:
MNW Monitoring Well

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TABLE 2
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft) From Gnd.	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							1/8/2008 0000		0.87	2004.35	0.00	2,004.35	
MNW							4/16/2008 0000		1.78	2003.44	0.00	2,003.44	
MNW							6/10/2008 0000		3.77	2001.45	0.00	2,001.45	
MNW							7/10/2008 0000		3.36	2001.86	0.00	2,001.86	
MNW							9/11/2008 0000		3.78	2001.44	0.00	2,001.44	
MNW							10/16/2008 0000		4.22	2001.00	0.00	2,001.00	
MNW							11/25/2008 0000		2.3	2002.92	0.00	2,002.92	
MNW							2/12/2009 0000		0.27	2004.95	0.00	2,004.95	
MNW							4/9/2009 0000		0.65	2004.57	0.00	2,004.57	
MNW							7/9/2009 0000		2.74	2002.48	0.00	2,002.48	
MNW							10/29/2009 0000		1.33	2003.89	0.00	2,003.89	
MNW							1/21/2010 0000		1.18	2004.04	0.00	2,004.04	
MNW							5/27/2010 0000		2.42	2002.80	0.00	2,002.80	
MNW							7/25/2011 0000		4.46	2000.76	0.00	2,000.76	
MNW							5/31/2012 0000		2.7	2002.52	0.00	2,002.52	
MNW							7/3/2013 0000		3.47	2001.75	0.00	2,001.75	
MNW							5/18/2014 0000		1.08	2004.14	0.00	2,004.14	
MNW							7/15/2015 0000		1.46	2003.76	0.00	2,003.76	
MNW							6/28/2017 0000		4.29	2000.93	0.00	2,000.93	
MNW							8/18/2021 1114		5.06	2000.16	0.00	2,000.16	
MW-15	978457.9041	592600.3521	2016.62	2019.75	2019.59	A		0					
MNW							6/4/2004 1553		4.88	2011.74	0.00	2,011.74	
MNW							6/7/2004 1119		5.35	2011.27	0.00	2,011.27	
MNW							6/10/2004 1215		5.57	2011.05	0.00	2,011.05	
MNW							6/14/2004 1525		6.12	2010.50	0.00	2,010.50	
MNW							6/25/2004 0800		6.6	2010.02	0.00	2,010.02	
MNW							8/8/2004 0836		6.3	2010.32	0.00	2,010.32	

NM - No Measurement

Type:
MNW Monitoring Well

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TABLE 2
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft) From Gnd.	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							2/9/2005 0000		3.89	2012.73	0.00	2,012.73	
MNW							1/11/2007 0000		4.67	2011.95	0.00	2,011.95	
MNW							4/5/2007 0000		4.34	2012.28	0.00	2,012.28	
MNW							7/11/2007 0000		7.33	2009.29	0.00	2,009.29	
MNW							10/11/2007 0000		9.02	2007.60	0.00	2,007.60	
MNW							1/8/2008 0000		4.21	2012.41	0.00	2,012.41	
MNW							4/16/2008 0000		4.55	2012.07	0.00	2,012.07	
MNW							6/10/2008 0000		6.86	2009.76	0.00	2,009.76	
MNW							7/10/2008 0000		6.58	2010.04	0.00	2,010.04	
MNW							9/11/2008 0000		7.33	2009.29	0.00	2,009.29	
MNW							10/16/2008 0000		7.04	2009.58	0.00	2,009.58	
MNW							11/25/2008 0000		5.84	2010.78	0.00	2,010.78	
MNW							2/12/2009 0000		3.45	2013.17	0.00	2,013.17	
MNW							4/9/2009 0000		4.2	2012.42	0.00	2,012.42	
MNW							7/9/2009 0000		6.34	2010.28	0.00	2,010.28	
MNW							10/29/2009 0000		2.2	2014.42	0.00	2,014.42	
MNW							1/21/2010 0000		5.94	2010.68	0.00	2,010.68	
MNW							5/27/2010 0000		5.94	2010.68	0.00	2,010.68	
MNW							7/25/2011 0000		7.61	2009.01	0.00	2,009.01	
MNW							5/31/2012 0000		6.13	2010.49	0.00	2,010.49	
MNW							7/3/2013 0000		6.35	2010.27	0.00	2,010.27	
MNW							5/18/2014 0000		5.21	2011.41	0.00	2,011.41	
MNW							7/15/2015 0000		2.37	2014.25	0.00	2,014.25	
MNW							6/28/2017 0000		7.32	2009.30	0.00	2,009.30	
MNW							5/1/2019 0000		2.37	2014.25	0.00	2,014.25	
MNW							8/18/2021 1117		6.91	2009.71	0.00	2,009.71	

NM - No Measurement

Type:
MNW Monitoring Well

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GROUNDWATER LEVEL MEASUREMENTS

TABLE 2
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft) From Gnd.	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MW-16	978467.9303	592445.9410	2026.75	2029.83	2029.66	A		0					
MNW							6/4/2004 1556		5.2	2021.55	0.00	2,021.55	
MNW							6/7/2004 1121		5.82	2020.93	0.00	2,020.93	
MNW							6/10/2004 1420		6.17	2020.58	0.00	2,020.58	
MNW							6/14/2004 1522		7.26	2019.49	0.00	2,019.49	
MNW							6/25/2004 0755		7.95	2018.80	0.00	2,018.80	
MNW							8/8/2004 0838		7.88	2018.87	0.00	2,018.87	
MNW							2/9/2005 0000		4.5	2022.25	0.00	2,022.25	
MNW							1/11/2007 0000		5.05	2021.70	0.00	2,021.70	
MNW							4/5/2007 0000		5	2021.75	0.00	2,021.75	
MNW							7/11/2007 0000		9.24	2017.51	0.00	2,017.51	
MNW							10/11/2007 0000		14.2	2012.55	0.00	2,012.55	
MNW							1/8/2008 0000		3.81	2022.94	0.00	2,022.94	
MNW							4/16/2008 0000		5.38	2021.37	0.00	2,021.37	
MNW							6/10/2008 0000		8.08	2018.67	0.00	2,018.67	
MNW							7/10/2008 0000		7.86	2018.89	0.00	2,018.89	
MNW							9/11/2008 0000		8.72	2018.03	0.00	2,018.03	
MNW							10/16/2008 0000		9.21	2017.54	0.00	2,017.54	
MNW							11/25/2008 0000		7	2019.75	0.00	2,019.75	
MNW							2/12/2009 0000		3.9	2022.85	0.00	2,022.85	
MNW							4/9/2009 0000		4.82	2021.93	0.00	2,021.93	
MNW							7/9/2009 0000		7.17	2019.58	0.00	2,019.58	
MNW							10/29/2009 0000		7.53	2019.22	0.00	2,019.22	
MNW							1/21/2010 0000		6.14	2020.61	0.00	2,020.61	
MNW							5/27/2010 0000		6.58	2020.17	0.00	2,020.17	
MNW							7/25/2011 0000		9.74	2017.01	0.00	2,017.01	
MNW							5/31/2012 0000		6.51	2020.24	0.00	2,020.24	
MNW							7/3/2013 0000		6.92	2019.83	0.00	2,019.83	

NM - No Measurement

Type:
MNW Monitoring Well

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TABLE 2
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft) From Gnd.	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							5/18/2014 0000		4.74	2022.01	0.00	2,022.01	
MNW							7/15/2015 0000		5.42	2021.33	0.00	2,021.33	
MNW							6/28/2017 0000		7.83	2018.92	0.00	2,018.92	
MNW							8/18/2021 1121		7.6	2019.15	0.00	2,019.15	
MW-17	978446.8751	592377.7594	2029.76	2032.83	2032.67	A		0					
MNW							6/4/2004 1610		5.39	2024.37	0.00	2,024.37	
MNW							6/7/2004 1140		6.22	2023.54	0.00	2,023.54	
MNW							6/11/2004 1240		7.01	2022.75	0.00	2,022.75	
MNW							6/14/2004 1552		6.6	2023.16	0.00	2,023.16	
MNW							6/25/2004 0827		7.7	2022.06	0.00	2,022.06	
MNW							8/8/2004 0842		6.77	2022.99	0.00	2,022.99	
MNW							2/9/2005 0000		1.39	2028.37	0.00	2,028.37	
MNW							1/11/2007 0000		3	2026.76	0.00	2,026.76	
MNW							4/5/2007 0000		4.93	2024.83	0.00	2,024.83	
MNW							7/11/2007 0000		8.85	2020.91	0.00	2,020.91	
MNW							10/11/2007 0000		10.5	2019.26	0.00	2,019.26	
MNW							1/8/2008 0000		2.16	2027.60	0.00	2,027.60	
MNW							4/16/2008 0000		3.51	2026.25	0.00	2,026.25	
MNW							6/10/2008 0000		8.1	2021.66	0.00	2,021.66	
MNW							7/10/2008 0000		7.25	2022.51	0.00	2,022.51	
MNW							9/11/2008 0000		8.11	2021.65	0.00	2,021.65	
MNW							10/16/2008 0000		8.12	2021.64	0.00	2,021.64	
MNW							11/25/2008 0000		3.18	2026.58	0.00	2,026.58	
MNW							2/12/2009 0000		1.48	2028.28	0.00	2,028.28	
MNW							4/9/2009 0000		2.49	2027.27	0.00	2,027.27	
MNW							7/9/2009 0000		6.54	2023.22	0.00	2,023.22	
MNW							10/29/2009 0000		2.46	2027.30	0.00	2,027.30	

NM - No Measurement

Type:
MNW Monitoring Well

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TABLE 2
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft) From Gnd.	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							1/21/2010 0000		4.65	2025.11	0.00	2,025.11	
MNW							5/27/2010 0000		5.98	2023.78	0.00	2,023.78	
MNW							7/25/2011 0000		8.81	2020.95	0.00	2,020.95	
MNW							5/31/2012 0000		5.69	2024.07	0.00	2,024.07	
MNW							7/3/2013 0000		6.69	2023.07	0.00	2,023.07	
MNW							5/18/2014 0000		2.31	2027.45	0.00	2,027.45	
MNW							7/15/2015 0000		3.16	2026.60	0.00	2,026.60	
MNW							6/28/2017 0000		7.23	2022.53	0.00	2,022.53	
MNW							8/18/2021 0952		7.34	2022.42	0.00	2,022.42	
MW-18	978548.1407	592379.7648	2031.86	2034.93	2034.81	A		0					
MNW							6/4/2004 1612		4.96	2026.90	0.00	2,026.90	
MNW							6/7/2004 1142		6.25	2025.61	0.00	2,025.61	
MNW							6/11/2004 1325		7.07	2024.79	0.00	2,024.79	
MNW							6/14/2004 1550		7.81	2024.05	0.00	2,024.05	
MNW							6/25/2004 0833		9.14	2022.72	0.00	2,022.72	
MNW							8/8/2004 0850		7.12	2024.74	0.00	2,024.74	
MNW							2/9/2005 0000		2.55	2029.31	0.00	2,029.31	
MNW							1/11/2007 0000		2.44	2029.42	0.00	2,029.42	
MNW							4/5/2007 0000		3.5	2028.36	0.00	2,028.36	
MNW							7/11/2007 0000		9.66	2022.20	0.00	2,022.20	
MNW							10/11/2007 0000		11.19	2020.67	0.00	2,020.67	
MNW							1/8/2008 0000		3.69	2028.17	0.00	2,028.17	
MNW							4/16/2008 0000		3	2028.86	0.00	2,028.86	
MNW							6/10/2008 0000		9.19	2022.67	0.00	2,022.67	
MNW							7/10/2008 0000		7.33	2024.53	0.00	2,024.53	
MNW							9/11/2008 0000		9.14	2022.72	0.00	2,022.72	
MNW							10/16/2008 0000		9.17	2022.69	0.00	2,022.69	

NM - No Measurement

Type:
MNW Monitoring Well

The value noted in the column labeled Specific Gravity is an assumed value for free product, if found.

TABLE 2
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft) From Gnd.	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							11/25/2008 0000		2.91	2028.95	0.00	2,028.95	
MNW							2/12/2009 0000		2.01	2029.85	0.00	2,029.85	
MNW							4/9/2009 0000		2.36	2029.50	0.00	2,029.50	
MNW							7/9/2009 0000		3.72	2028.14	0.00	2,028.14	
MNW							10/29/2009 0000		2.33	2029.53	0.00	2,029.53	
MNW							1/21/2010 0000		2.95	2028.91	0.00	2,028.91	
MNW							5/27/2010 0000		4.04	2027.82	0.00	2,027.82	
MNW							7/25/2011 0000		8.56	2023.30	0.00	2,023.30	
MNW							5/31/2012 0000		2.56	2029.30	0.00	2,029.30	
MNW							7/3/2013 0000		4.89	2026.97	0.00	2,026.97	
MNW							5/18/2014 0000		1.43	2030.43	0.00	2,030.43	
MNW							7/15/2015 0000		2.02	2029.84	0.00	2,029.84	
MNW							6/28/2017 0000		7.83	2024.03	0.00	2,024.03	
MNW							8/18/2021 0950		8.37	2023.49	0.00	2,023.49	
MW-19	978683.0834	592632.8136	2018.78	2021.78	2021.63	A		0					
MNW							6/4/2004 0000		NM	-	0.00	-	
MNW							6/7/2004 1114		7.46	2011.32	0.00	2,011.32	
MNW							6/8/2004 1330		7.49	2011.29	0.00	2,011.29	
MNW							6/14/2004 1539		8.64	2010.14	0.00	2,010.14	
MNW							6/25/2004 0750		9.99	2008.79	0.00	2,008.79	
MNW							8/8/2004 0823		9.78	2009.00	0.00	2,009.00	
MNW							2/9/2005 0000		8.42	2010.36	0.00	2,010.36	
MNW							1/11/2007 0000		6.19	2012.59	0.00	2,012.59	
MNW							4/5/2007 0000		6.33	2012.45	0.00	2,012.45	
MNW							7/11/2007 0000		11.28	2007.50	0.00	2,007.50	
MNW							10/11/2007 0000		12.91	2005.87	0.00	2,005.87	
MNW							1/8/2008 0000		4.96	2013.82	0.00	2,013.82	

NM - No Measurement

Type:
MNW Monitoring Well

The value noted in the column labeled Specific Gravity is an assumed value for free product, if found.

TABLE 2
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft) From Gnd.	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							4/16/2008 0000		6.13	2012.65	0.00	2,012.65	
MNW							6/10/2008 0000		10.43	2008.35	0.00	2,008.35	
MNW							7/10/2008 0000		10.53	2008.25	0.00	2,008.25	
MNW							10/16/2008 0000		11.54	2007.24	0.00	2,007.24	
MNW							2/12/2009 0000		5.07	2013.71	0.00	2,013.71	
MNW							4/9/2009 0000		5.92	2012.86	0.00	2,012.86	
MNW							7/9/2009 0000		10.12	2008.66	0.00	2,008.66	
MNW							10/29/2009 0000		10.43	2008.35	0.00	2,008.35	
MNW							1/21/2010 0000		8.37	2010.41	0.00	2,010.41	
MNW							5/27/2010 0000		7.74	2011.04	0.00	2,011.04	
MNW							7/25/2011 0000		11.43	2007.35	0.00	2,007.35	
MNW							5/31/2012 0000		8.98	2009.80	0.00	2,009.80	
MNW							7/3/2013 0000		8.65	2010.13	0.00	2,010.13	
MNW							5/18/2014 0000		6.47	2012.31	0.00	2,012.31	
MNW							7/15/2015 0000		7.37	2011.41	0.00	2,011.41	
MNW							6/28/2017 0000		10.01	2008.77	0.00	2,008.77	
MNW							8/18/2021 1100		10.32	2008.46	0.00	2,008.46	
MW-20	978782.8374	592761.2151	1999.67	2002.65	2002.47	A		0					
MNW							6/4/2004 1507		0.28	1999.39	0.00	1,999.39	
MNW							6/7/2004 1111		0.34	1999.33	0.00	1,999.33	
MNW							6/11/2004 1155		0.32	1999.35	0.00	1,999.35	
MNW							6/14/2004 1516		0.5	1999.17	0.00	1,999.17	
MNW							6/25/2004 0742		0.83	1998.84	0.00	1,998.84	
MNW							8/8/2004 0826		1.06	1998.61	0.00	1,998.61	
MNW							2/9/2005 0000		0.35	1999.32	0.00	1,999.32	
MNW							1/11/2007 0000		NM	-	NM	-	
MNW							4/5/2007 0000		0.16	1999.51	0.00	1,999.51	

NM - No Measurement

Type:
MNW Monitoring Well

The value noted in the column labeled Specific Gravity is an assumed value for free product, if found.

TABLE 2
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft) From Gnd.	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							7/11/2007 0000		0.49	1999.18	0.00	1,999.18	
MNW							10/11/2007 0000		6.3	1993.37	0.00	1,993.37	
MNW							1/8/2008 0000		0.41	1999.26	0.00	1,999.26	
MNW							4/16/2008 0000		0.16	1999.51	0.00	1,999.51	
MNW							7/10/2008 0000		0.65	1999.02	0.00	1,999.02	
MNW							10/16/2008 0000		0.13	1999.54	0.00	1,999.54	
MNW							2/12/2009 0000		0.04	1999.63	0.00	1,999.63	
MNW							4/9/2009 0000		0.07	1999.60	0.00	1,999.60	
MNW							7/9/2009 0000		0.89	1998.78	0.00	1,998.78	
MNW							10/29/2009 0000		0.19	1999.48	0.00	1,999.48	
MNW							1/21/2010 0000		0.26	1999.41	0.00	1,999.41	
MNW							5/27/2010 0000		0.76	1998.91	0.00	1,998.91	
MNW							7/25/2011 0000		3.01	1996.66	0.00	1,996.66	
MNW							5/31/2012 0000		0.23	1999.44	0.00	1,999.44	
MNW							7/3/2013 0000		0.23	1999.44	0.00	1,999.44	
MNW							5/18/2014 0000		0.13	1999.54	0.00	1,999.54	
MNW							7/15/2015 0000		0.03	1999.64	0.00	1,999.64	
MNW							6/28/2017 0000		0.5	1999.17	0.00	1,999.17	
MNW							8/18/2021 1057		0.54	1999.13	0.00	1,999.13	
MW-21	978790.7387	592569.6006	2022.22	2025.21	2025.10	A		0					
MNW							6/4/2004 1502		10.32	2011.90	0.00	2,011.90	
MNW							6/7/2004 1108		10.65	2011.57	0.00	2,011.57	
MNW							6/8/2004 1450		10.77	2011.45	0.00	2,011.45	
MNW							6/14/2004 1517		10.99	2011.23	0.00	2,011.23	
MNW							6/25/2004 0737		11.17	2011.05	0.00	2,011.05	
MNW							8/8/2004 0824		10.61	2011.61	0.00	2,011.61	
MNW							2/9/2005 0000		10.99	2011.23	0.00	2,011.23	

NM - No Measurement

Type:
MNW Monitoring Well

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TABLE 2
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft) From Gnd.	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							1/11/2007 0000		9.81	2012.41	0.00	2,012.41	
MNW							4/5/2007 0000		9.74	2012.48	0.00	2,012.48	
MNW							7/11/2007 0000		11.82	2010.40	0.00	2,010.40	
MNW							10/11/2007 0000		13.16	2009.06	0.00	2,009.06	
MNW							1/8/2008 0000		9.21	2013.01	0.00	2,013.01	
MNW							4/16/2008 0000		9.76	2012.46	0.00	2,012.46	
MNW							7/10/2008 0000		10.75	2011.47	0.00	2,011.47	
MNW							10/16/2008 0000		11.69	2010.53	0.00	2,010.53	
MNW							2/12/2009 0000		8.77	2013.45	0.00	2,013.45	
MNW							4/9/2009 0000		9.6	2012.62	0.00	2,012.62	
MNW							7/9/2009 0000		10.48	2011.74	0.00	2,011.74	
MNW							10/29/2009 0000		11.39	2010.83	0.00	2,010.83	
MNW							1/21/2010 0000		11.02	2011.20	0.00	2,011.20	
MNW							5/27/2010 0000		10.72	2011.50	0.00	2,011.50	
MNW							7/25/2011 0000		11.44	2010.78	0.00	2,010.78	
MNW							5/31/2012 0000		10.68	2011.54	0.00	2,011.54	
MNW							7/3/2013 0000		11.15	2011.07	0.00	2,011.07	
MNW							5/18/2014 0000		9.99	2012.23	0.00	2,012.23	
MNW							7/15/2015 0000		10.52	2011.70	0.00	2,011.70	
MNW							6/28/2017 0000		11.1	2011.12	0.00	2,011.12	
MNW							8/18/2021 1052		11.09	2011.13	0.00	2,011.13	
MW-22	978974.0795	592610.2009	2009.99	2013.08	2012.96	A		0					
MNW							6/4/2004 1450		13.94	1996.05	0.00	1,996.05	
MNW							6/7/2004 1101		14	1995.99	0.00	1,995.99	
MNW							6/11/2004 1055		14.06	1995.93	0.00	1,995.93	
MNW							6/14/2004 1508		14.14	1995.85	0.00	1,995.85	
MNW							6/25/2004 0726		14.18	1995.81	0.00	1,995.81	

NM - No Measurement

Type:
MNW Monitoring Well

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TABLE 2
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft) From Gnd.	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							8/8/2004 0830		14.15	1995.84	0.00	1,995.84	
MNW							2/9/2005 0000		13.68	1996.31	0.00	1,996.31	
MNW							1/11/2007 0000		13.25	1996.74	0.00	1,996.74	
MNW							4/5/2007 0000		12.52	1997.47	0.00	1,997.47	
MNW							7/11/2007 0000		14.21	1995.78	0.00	1,995.78	
MNW							10/11/2007 0000		14.37	1995.62	0.00	1,995.62	
MNW							1/8/2008 0000		13.25	1996.74	0.00	1,996.74	
MNW							4/16/2008 0000		11.12	1998.87	0.00	1,998.87	
MNW							7/10/2008 0000		14.12	1995.87	0.00	1,995.87	
MNW							10/16/2008 0000		13.94	1996.05	0.00	1,996.05	
MNW							2/12/2009 0000		13.47	1996.52	0.00	1,996.52	
MNW							4/9/2009 0000		11.04	1998.95	0.00	1,998.95	
MNW							7/9/2009 0000		13.55	1996.44	0.00	1,996.44	
MNW							10/29/2009 0000		13.42	1996.57	0.00	1,996.57	
MNW							1/21/2010 0000		13.24	1996.75	0.00	1,996.75	
MNW							5/27/2010 0000		9.19	2000.80	0.00	2,000.80	
MNW							7/25/2011 0000		9.38	2000.61	0.00	2,000.61	
MNW							5/31/2012 0000		3.73	2006.26	0.00	2,006.26	
MNW							7/3/2013 0000		3.88	2006.11	0.00	2,006.11	
MNW							5/18/2014 0000		2.22	2007.77	0.00	2,007.77	
MNW							7/15/2015 0000		4.24	2005.75	0.00	2,005.75	
MNW							6/28/2017 0000		9.95	2000.04	0.00	2,000.04	
MNW							8/18/2021 1043		5.13	2004.86	0.00	2,004.86	
MW-23	979083.4516	592505.1994	2014.78	2017.75	2017.57	A		0					
MNW							6/4/2004 1445		2.61	2012.17	0.00	2,012.17	
MNW							6/7/2004 1439		3.1	2011.68	0.00	2,011.68	
MNW							6/14/2004 1505		4.82	2009.96	0.00	2,009.96	

NM - No Measurement

Type:
MNW Monitoring Well

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TABLE 2
GROUNDWATER LEVEL MEASUREMENTS
WYOMING COUNTY FIRE TRAINING CENTER

Location ID / Type	Northing	Easting	Ground Elevation (ft)	Casing Elevation (ft)	Meas.point (Riser)Elev.(ft)	Geol. Zone	Date / Time	Specific Gravity	Depth to Water (ft) From Gnd.	Water Elev. (ft)	Product Thick. (ft)	Corrected Water Elev. (ft)	Remark
MNW							6/25/2004 0718		8.07	2006.71	0.00	2,006.71	
MNW							8/8/2004 0811		4.85	2009.93	0.00	2,009.93	
MNW							2/9/2005 0000		1.03	2013.75	0.00	2,013.75	
MNW							1/11/2007 0000		1.89	2012.89	0.00	2,012.89	
MNW							4/5/2007 0000		2.46	2012.32	0.00	2,012.32	
MNW							7/11/2007 0000		7.55	2007.23	0.00	2,007.23	
MNW							10/11/2007 0000		12.39	2002.39	0.00	2,002.39	
MNW							1/8/2008 0000		3.72	2011.06	0.00	2,011.06	
MNW							4/16/2008 0000		3.82	2010.96	0.00	2,010.96	
MNW							7/10/2008 0000		7.23	2007.55	0.00	2,007.55	
MNW							10/16/2008 0000		9.15	2005.63	0.00	2,005.63	
MNW							2/12/2009 0000		0.87	2013.91	0.00	2,013.91	
MNW							4/9/2009 0000		1.24	2013.54	0.00	2,013.54	
MNW							7/9/2009 0000		3.07	2011.71	0.00	2,011.71	
MNW							10/29/2009 0000		2.97	2011.81	0.00	2,011.81	
MNW							1/21/2010 0000		2.2	2012.58	0.00	2,012.58	
MNW							5/27/2010 0000		2.54	2012.24	0.00	2,012.24	
MNW							7/25/2011 0000		9.82	2004.96	0.00	2,004.96	
MNW							5/31/2012 0000		2.95	2011.83	0.00	2,011.83	
MNW							7/3/2013 0000		4	2010.78	0.00	2,010.78	
MNW							5/18/2014 0000		1.34	2013.44	0.00	2,013.44	
MNW							7/15/2015 0000		2.56	2012.22	0.00	2,012.22	
MNW							6/28/2017 0000		7.77	2007.01	0.00	2,007.01	
MNW							8/18/2021 0959		4.59	2010.19	0.00	2,010.19	

NM - No Measurement

Type:
MNW Monitoring Well

The value noted in the column labeled Specific Gravity is an assumed value for free product, if found.

GROUNDWATER LEVEL MEASUREMENTS

Table 3
Residential Water Well PFAS Analytical Results
Samples Collected February 19, 2020
Wyoming County Fire Training Center
Site v-00604-9

Group	EPA 537 Modified, Per-and Polyfluoroalkyl Substances (PFAS)	Units	NYSDEC Screening Level[1]	BW-01-021920-EC	SW-01-021920-EC
Perfluoroalkyl sulfonates	Perfluorobutanesulfonic acid (PFBS)	ng/L	100	1.7 U	1.8 U
	Perfluorohexanesulfonic acid (PFHxS)	ng/L	100	1.7 U	1.8 U
	Perfluoroheptanesulfonic Acid (PFHpS)	ng/L	100	1.7 U	1.8 U
	Perfluorooctanesulfonic acid (PFOS)	ng/L	10	1.7 U	1.8 U
	Perfluorodecanesulfonic acid (PFDS)	ng/L	100	1.7 U	1.8 U
Perfluoroalkyl carboxylates	Perfluorobutanoic acid (PFBA)	ng/L	100	0.87 J	1.8 U
	Perfluoropentanoic acid (PFPeA)	ng/L	100	1.7 U	1.8 U
	Perfluorohexanoic acid (PFHxA)	ng/L	100	1.7 U	1.8 U
	Perfluoroheptanoic acid (PFHpA)	ng/L	100	1.7 U	1.8 U
	Perfluorooctanoic acid (PFOA)	ng/L	10	1.7 U	1.8 U
	Perfluorononanoic acid (PFNA)	ng/L	100	1.7 U	1.8 U
	Perfluorodecanoic acid (PFDA)	ng/L	100	1.7 U	1.8 U
	Perfluoroundecanoic acid (PFUnA)	ng/L	100	1.7 U	1.8 U
	Perfluorododecanoic acid(PFDoA)	ng/L	100	1.7 U	1.8 U
	Perfluorotridecanoic acid (PFTriA)	ng/L	100	1.7 U	1.8 U
	Perfluorotetradecanoic acid (PFTeA)	ng/L	100	1.7 U	1.8 U
Fluorinated Telomer Sulfonates	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ng/L	100	17 U	18 U
	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ng/L	100	17 U	18 U
Perfluorooctane-sulfonamides	Perfluorooctanesulfonamide (PFOSA)	ng/L	100	8.7 U	8.8 U
Perfluorooctanesulfonamidoacetic acids	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ng/L	100	17 U	18 U
	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ng/L	100	17 U	18 U
	Sum of PFAS Concentrations	ng/L	500	0.87 J	1.8 U

Notes:

1 - NYSDEC Sampling, Analysis, and Assessment of Per-and Polyfluoroalkyl Substances (PFAS)Under NYSDEC's Part 375 Remedial Programs, January 2021

ng/L - nanograms per liter (parts per trillion)

J - Result is less than the reporting limit (RL) but greater than or equal to the Method Detection Limit (MDL) and the concentration is an approximate value.

U - Not detected. The value shown is the practical quantitation limit.

Table 4
MW-02 Groundwater PFAS Analytical Results
Wyoming County Fire Training Center
Site v-00604-9

Group	EPA 537 Modified, Per-and Polyfluoroalkyl Substances (PFAS)	Units	NYSDEC Screening Level[1]	6/29/2017	8/18/2021
Perfluoroalkyl sulfonates	Perfluorobutanesulfonic acid (PFBS)	ng/L	100	2.0 U	0.88 J
	Perfluorohexanesulfonic acid (PFHxS)	ng/L	100	1.6 J	1.1 J
	Perfluoroheptanesulfonic Acid (PFHpS)	ng/L	100	2.0 U	1.8 U
	Perfluorooctanesulfonic acid (PFOS)	ng/L	10	1.7 J	1.8 U
	Perfluorodecanesulfonic acid (PFDS)	ng/L	100	2.0 U	1.8 U
Perfluoroalkyl carboxylates	Perfluorobutanoic acid (PFBA)	ng/L	100	35	33
	Perfluoropentanoic acid (PFPeA)	ng/L	100	150	97
	Perfluorohexanoic acid (PFHxA)	ng/L	100	84	47
	Perfluoroheptanoic acid (PFHpA)	ng/L	100	46	28
	Perfluorooctanoic acid (PFOA)	ng/L	10	**33**	**36**
	Perfluorononanoic acid (PFNA)	ng/L	100	2	2
	Perfluorodecanoic acid (PFDA)	ng/L	100	2.0 U	1.8 U
	Perfluoroundecanoic acid (PFUnA)	ng/L	100	2.0 U	1.8 U
	Perfluorododecanoic acid(PFDoA)	ng/L	100	2.0 U	1.8 U
	Perfluorotridecanoic acid (PFTriA)	ng/L	100	2.0 U	1.8 U
	Perfluorotetradecanoic acid (PFTeA)	ng/L	100	0.36 J	1.8 U
Fluorinated Telomer Sulfonates	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ng/L	100	NR	4.5 U
	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ng/L	100	NR	1.8 U
Perfluorooctane-sulfonamides	Perfluorooctanesulfonamide (PFOSA)	ng/L	100	0.65 J	1.8 U
Perfluorooctanesulfonamidoacetic acids	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ng/L	100	NR	4.5 U
	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ng/L	100	NR	4.5 U
	Sum of PFAS Concentrations	ng/L	500	354.3	245.0

Notes:

1 - NYSDEC Sampling, Analysis, and Assessment of Per-and Polyfluoroalkyl Substances (PFAS)Under NYSDEC's Part 375 Remedial Programs, January 2021

U - Not detected. The value shown is the practical quantitation limit.

J - Concentration greater than the method detection limit but less than the quantitation limit

ng/L - nanograms per liter (parts per trillion)

NR - Not Reported

Bold - Result exceeds NYSDEC guidance value.

FIGURES

N

NORTH POND

WYOMING COUNTY FIRE TRAINING CENTER FACILITY

FORMER ARGO PROPERTY

RANGE BUILDING

EARTHEN BERM

FIRING RANGE

REAR POND

APPROXIMATE SITE LIMITS

SCHELL POND

FORMER NORTH FIRE PIT

FORMER DRUM STORAGE AREA

FORMER SOUTH FIRE PIT

FORMER AIRPLANE FUSELAGE

FORMER AST

AGRO-1

FORMER WEBER PROPERTY

WEBER WELL

MAIN BUILDING

FRONT POND

SCHELL RESIDENCE

RESIDENCE

SPRING

WETHERSFIELD ROAD

BECKER RESIDENCE

CHAIN LINK FENCE

BECKER WELL

BECKER POND

OVERVIEW

SITE LOCATION

Legend

- Spring Location
- Residential Pumping Well
- Property Line

250 0 250 Feet

WYOMING COUNTY FIRE TRANING CENTER SITE PLAN

AECOM

FIGURE 1

J:\Projects\11172991.00000\DB\GIS\ArcMap\SITE PLAN.mxd 9/25/2015

N

NORTH POND

WYOMING COUNTY FIRE TRAINING CENTER

FORMER AGRO PROPERTY

LIMITS OF COUNTY PROPERTY

SHOOTING RANGE BUILDING

MW-05

REAR POND

MW-23

ROCK WELL2

SED-01/SW-01

MW-06

MW-22

MW-02

MW-01 (DESTROYED)

MW-08

SCHELL POND

SED-02/SW-02

CINDER BLOCK TRAINING CENTER

SB-03

SB-02

SB-04

SB-01

MW-03

MW-07

MW-21

MW-20

MW-04

MW-19

AGRO-1

MAIN BUILDING

DRIVEWAY

FRONT POND

MW-18

ROCK WELL1

MW-09 (DESTROYED)

FORMER WEBER PROPERTY

RESW-01

WEBER WELL

MW-10

SCHELL HOUSE

MW-16

MW-15

FORMER WEBER HOUSE

MW-14

SEEP

DITCH

MW-17

WETHERSFIELD ROAD

MW-11

MW-12

MW-13

SPRING

FORMER SUPPLY FROM SPRING

BECKER RESIDENCE

UNDERGROUND PIPE

BECKER WELL

POND INLET

BECKER POND

Legend

- Existing Monitoring Well
- Surface Water / Sediment Sample Location
- Spring Location
- Existing Water Supply Well
- Former Supply From Spring (Abandoned)
- Soil Boring Location
- Permeable Reactive Wall Location

200 0 200 Feet

WYOMING COUNTY FIRE TRAINING CENTER
MONITORING WELL, SURFACE WATER, SEDIMENT
AND GROUNDWATER SUPPLY LOCATION PLAN

AECOM

FIGURE 2

J:\Projects\11172991.00000\DB\GIS\ArcMap\MW_SURFACE WATER SAMPLING LOCATIONS (REVISED).mxd 9/24/2015

C:\Wyoming County\GW CONTOUR MAP 081821.mxd 8/19/2021

N

WYOMING COUNTY FIRE TRAINING CENTER

SHOOTING RANGE BUILDING

CINDER BLOCK TRAINING CENTER

MAIN BUILDING

DRIVEWAY

WETHERSFIELD ROAD

REAR POND

FRONT POND

MW-05, 2,020.75

MW-02, 2,021.24

MW-03, 2,022.72

MW-04, 2,031.92

MW-18, 2,023.49

MW-17, 2,022.42

MW-23, 2,010.19

MW-06, 2,013.52

MW-22, 2,004.86

MW-08, 2,012.10

MW-07, 2,019.30

MW-21, 2,011.13

MW-20, 1,999.13

MW-19, 2,008.46

MW-10, 2,000.46

MW-16, 2,019.15

MW-15, 2,009.71

MW-14, 2,000.16

MW-11, 2,021.43

MW-12, 2,009.00

MW-13, 2,002.11

Legend

- Monitoring Well
- Groundwater Flow Direction
- 2028 Groundwater Elevation Contour
- 2028 Topographic Elevation Contour
- Permeable Reactive Wall Location
- MW-11, 2,021.43 (Well Location / Groundwater Elevation (ft))

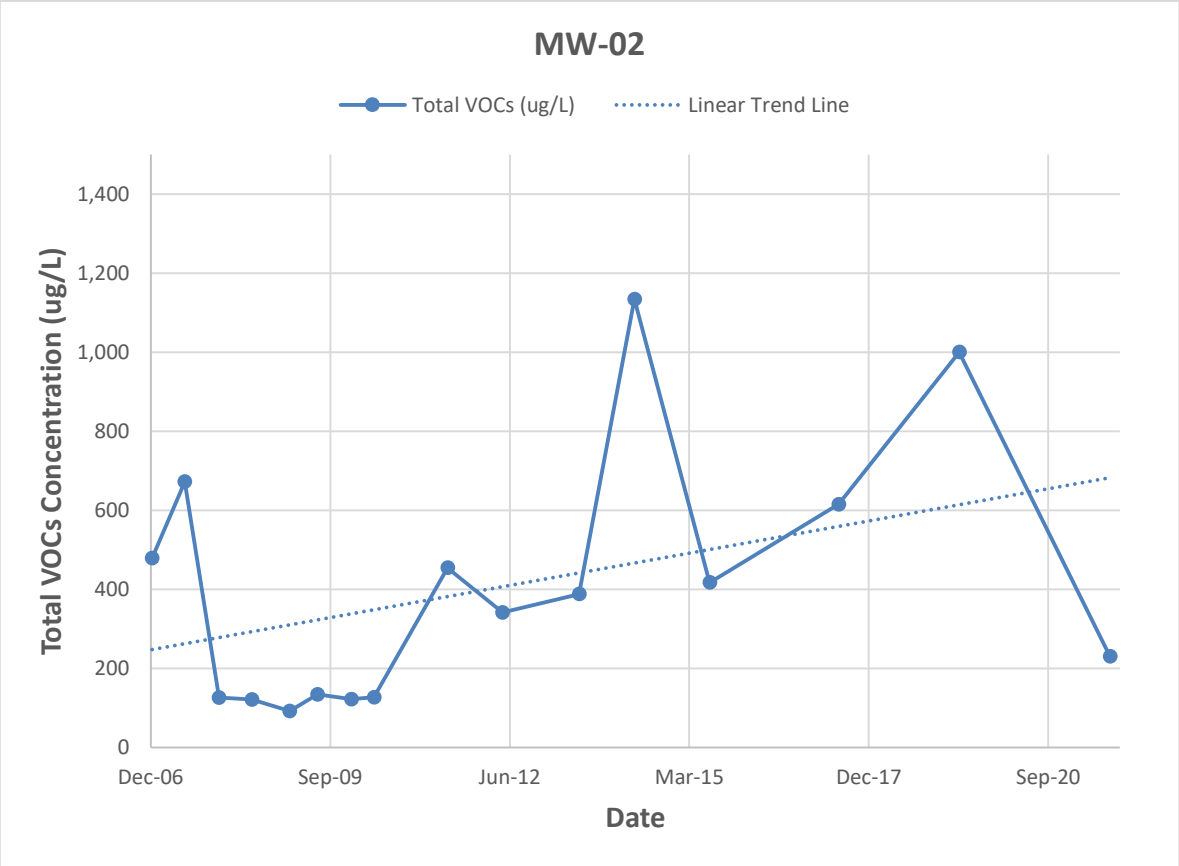
90 0 90 Feet

AECOM

WYOMING COUNTY FIRE TRAINING CENTER
GROUNDWATER ELEVATION CONTOUR MAP (08/18/21)

FIGURE 3

Figure 4
Total VOCs in Groundwater vs. Time
Wyoming County Fire Training Center
January 2007 - August 2021



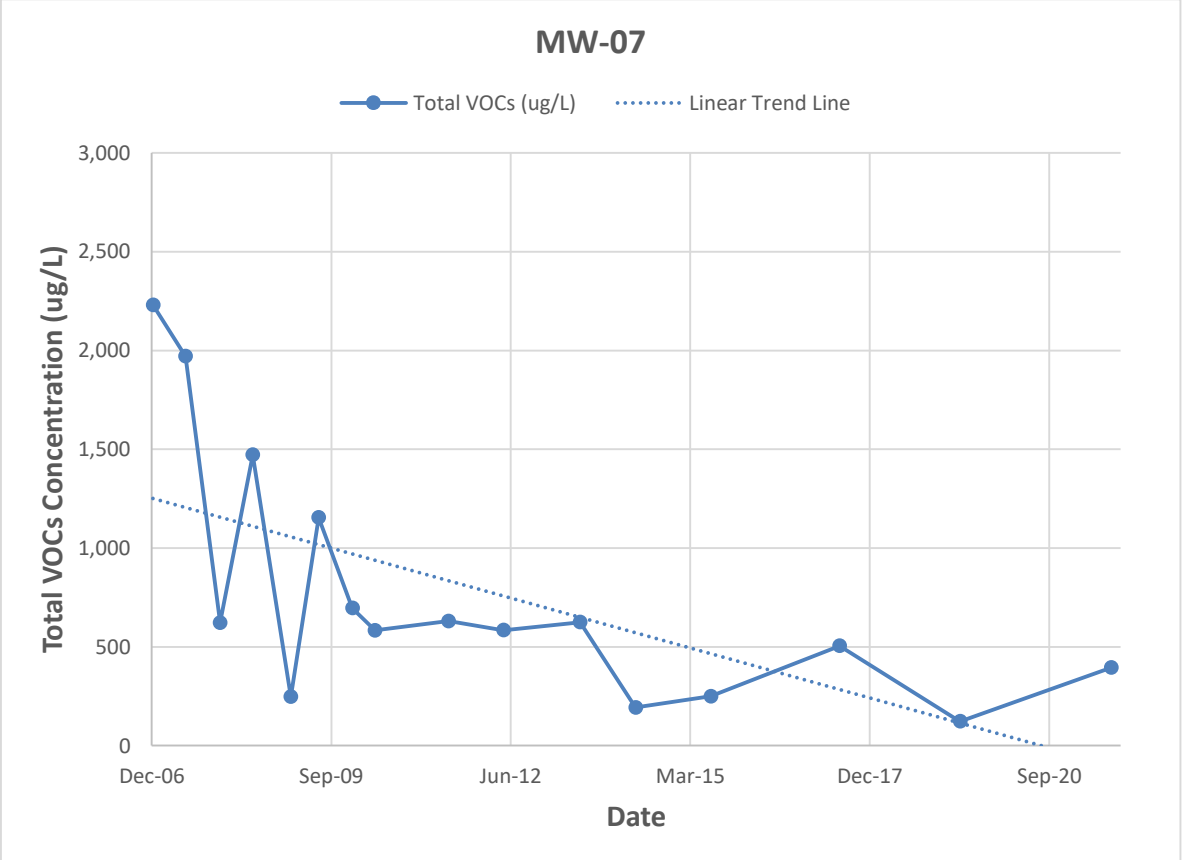
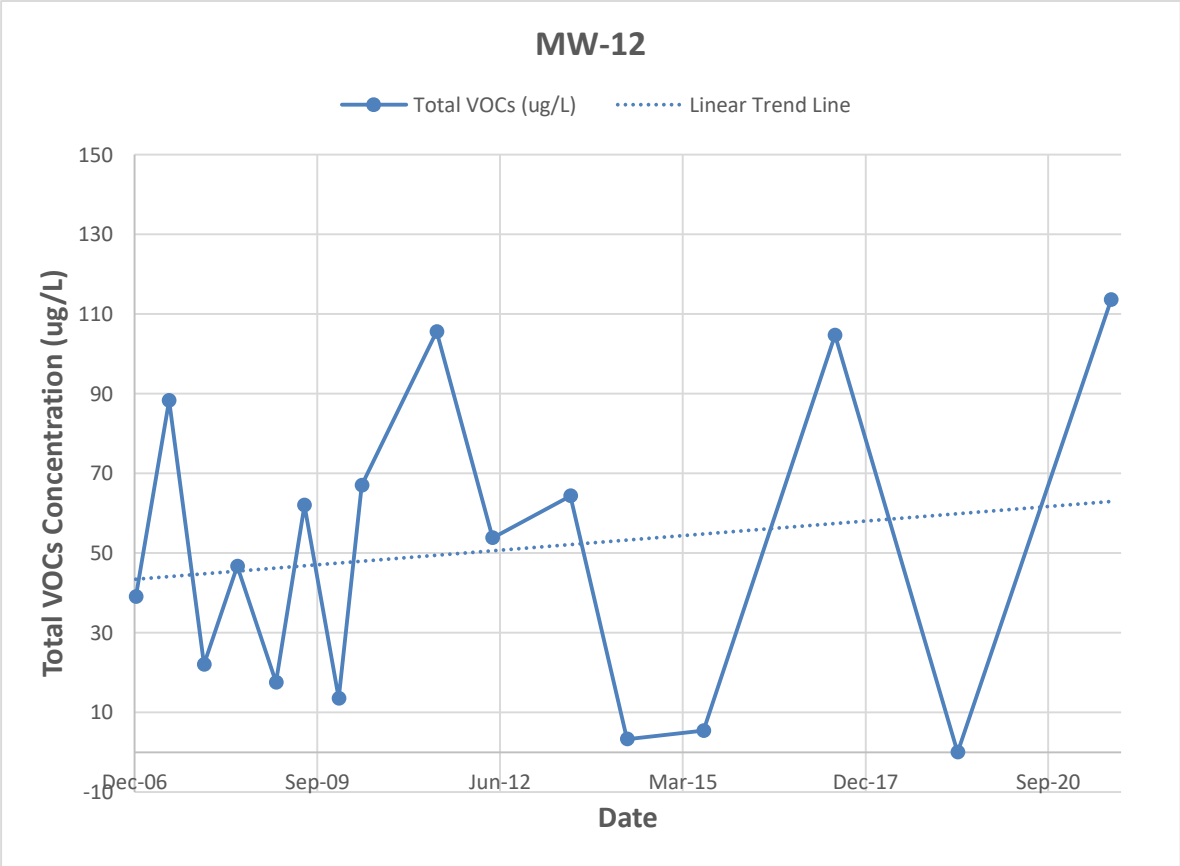


Figure 4
Total VOCs in Groundwater vs. Time
Wyoming County Fire Training Center
January 2007 - August 2021



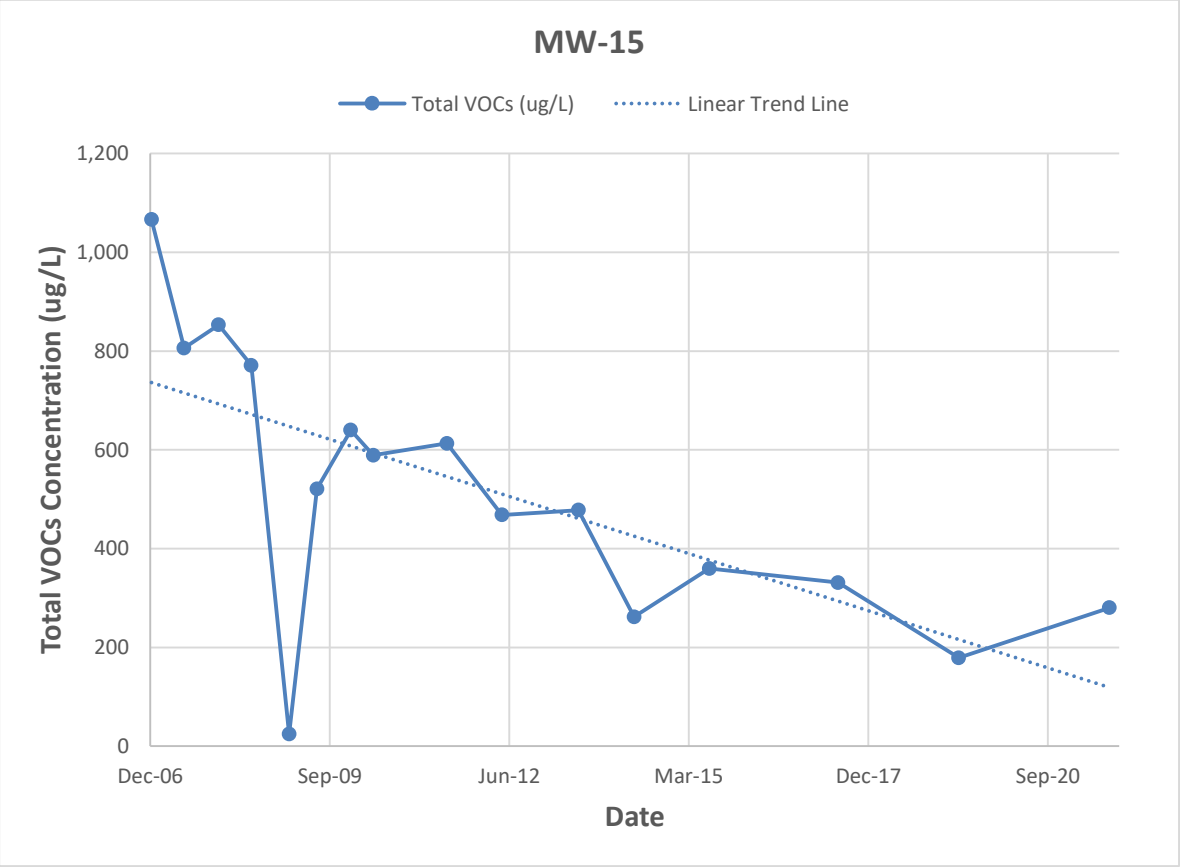
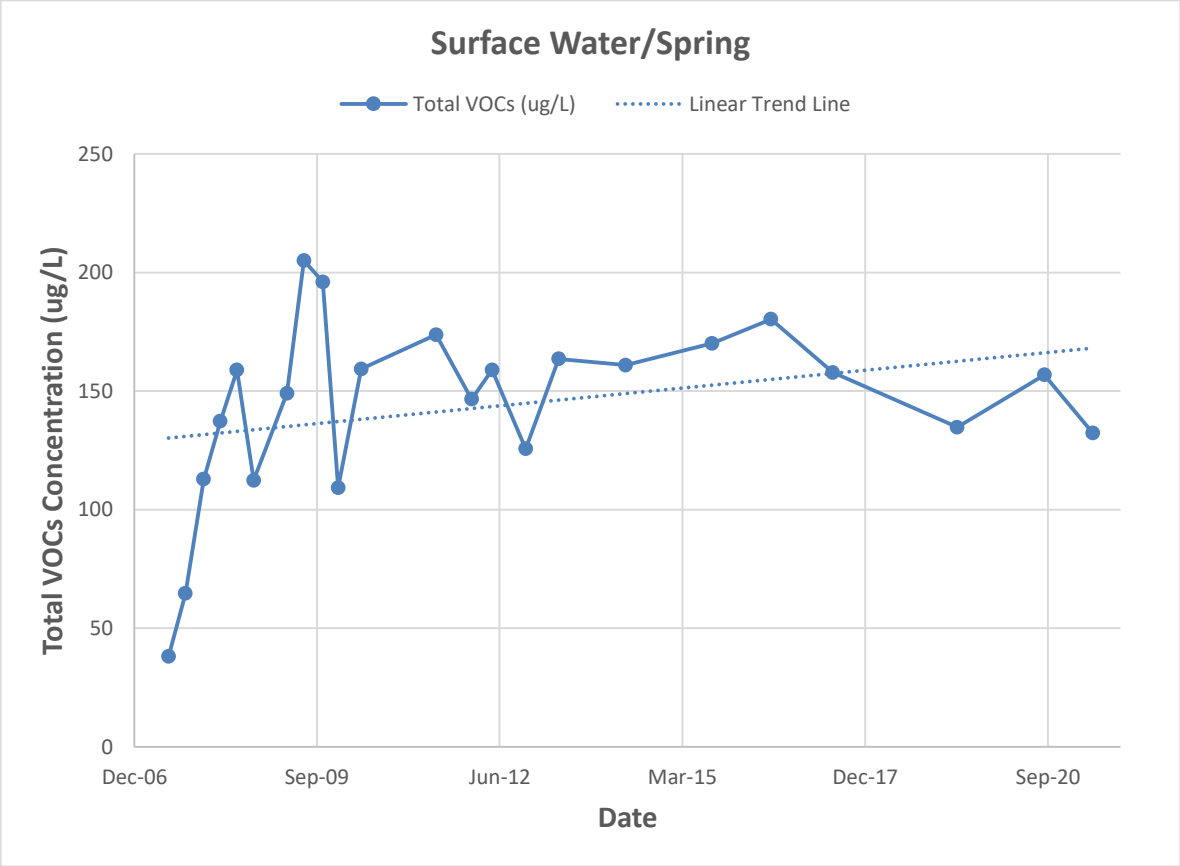


Figure 4
Total VOCs in Groundwater vs. Time
Wyoming County Fire Training Center
January 2007 - August 2021



APPENDIX A

SITE-WIDE INSPECTION FORMS,

ENGINEERING CONTROL SYSTEMS INSPECTION

FORMS,

AND SITE PHOTOGRAPHS

APPENDIX C

WYOMING COUNTY FIRE TRAINING CENTER – SITE MANAGEMENT PLAN

NYSDEC SITE NO. V-00604-9

SITE-WIDE INSPECTION FORM

Date: 8/18/21 **Inspector:** ROBERT J. MURPHY

Weather: CLOUDY, RAIN **Signature:** Robert J Murphy

Temperature: 74°F **Company:** AECOM

Quarter: First Second Third Fourth Annual (Biennial) (Circle One)
(every two years)

Item Inspected	Maintenance Needed (Y/N)	Comments
General Site Access	N	PAVEMENT IN EXCELLENT CONDITION AREA IS WELL MAINTAINED
Soil Cover/Grass Cover	N	WELL MAINTAINED, NO BARE SPOTS.
Monitoring Wells	N	ALL WELLS WERE OK, NO DAMAGE NOTED.
Treated Soil Disposal Area	N	HEAVY VEGETATION COVER, NO BARE SPOTS
Drainage Swales/Channels	N	SWALES CLEAR OF DEBRIS, NO EROSION OR BLOCKAGES
North Permeable Reactive Wall	N	GOOD CONDITION – NO REPAIRS NEEDED
South Permeable Reactive Wall	N	GOOD CONDITION – NO REPAIRS NEEDED

APPENDIX G

WYOMING COUNTY FIRE TRAINING CENTER – SITE MANAGEMENT PLAN

NYSDEC SITE NO. V-00604-9

ENGINEERING CONTROL SYSTEMS INSPECTION FORM

Component	Item	Condition
North Permeable Reactive Wall	Obvious subsidence, depressions or cracks Evidence of ponded water Stressed or missing vegetation Soil erosion due to surface runoff Animal burrows Piezometers Stone erosion control blanket (east end) Groundwater seepage from PRW Other:	- NO DEPRESSIONS, CRACKS, OR PONDED WATER - VEGETATION IS ABUNDANT/THICK. - NO EROSION OR ANIMAL BURROWS OBSERVED - NO GROUNDWATER SEEPAGE VISIBLE - APPEARS IN GOOD CONDITION
South Permeable Reactive Wall	Obvious subsidence, depressions or cracks Evidence of ponded water Stressed or missing vegetation Soil erosion due to surface runoff Animal burrows Groundwater seepage from PRW Other:	CONDITION IS GOOD NO DEPRESSIONS, CRACKS, OR PONDED WATER VERY THICK VEGETATION. NO ANIMAL BURROWS NO VISIBLE GROUNDWATER SEEPAGE

Date: 8/18/21 **Inspector:** ROBERT J. MURPHY

WYOMING COUNTY FIRE TRAINING CENTER PHOTOGRAPHIC LOG – MONITORING WELL MW-18 REPAIRS (FEBRUARY 19, 2021)



Photo 1: MW-18 damaged outer 3” PVC casing and inner 1” riser.



Photo 2: MW-18 repaired outer casing and new locking well cap.

WYOMING COUNTY FIRE TRAINING CENTER PHOTOGRAPHIC LOG – PERIODIC INSPECTION (AUGUST 18, 2021)



Photo 3: Main entrance to site (looking north).



Photo 4: General view of Front Pond and current Fire Training Facility (looking north).

WYOMING COUNTY FIRE TRAINING CENTER PHOTOGRAPHIC LOG – PERIODIC INSPECTION (AUGUST 18, 2021)



Photo 5: Treated Soil Disposal Area (looking north-northeast).



Photo 6: Former North and South Fire Pit Area (looking north-northeast).

WYOMING COUNTY FIRE TRAINING CENTER PHOTOGRAPHIC LOG – PERIODIC INSPECTION (AUGUST 18, 2021)



Photo 7: North Permeable Reactive Wall (looking west).



Photo 8: Gravel Drainage Area at East End of North Permeable Reactive Wall (looking north).

APPENDIX B

INSTITUTIONAL AND ENGINEERING CONTROLS CERTIFICATION FORM

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

Site Details **Box 1**

Site No. V00604

Site Name Wyoming County Fire Training Center

Site Address: 3651 Wethersfield Road Zip Code: 14469-
City/Town: Wethersfield
County: Wyoming
Site Acreage: 1.390

Reporting Period: September 05, 2019 to September 05, 2021

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

Box 2

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

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

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

Signature of Owner, Remedial Party or Designated Representative Date

SITE NO. V00604 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
107-2-3	County of Wyoming	Soil Management Plan Site Management Plan O&M Plan Ground Water Use Restriction Monitoring Plan Landuse Restriction

Since remaining contamination is present at this site, Engineering Controls and Institutional Controls have been implemented (Site Monitoring Plan) to protect public health and the environment for the applicable future use. Two Permeable Reactive Walls (North and South) are located offsite of the Controlled Property. The site remedy requires that a Declaration of Covenants and Restrictions be placed on the property that will limit groundwater and land use, implement, maintain and monitor Engineering Controls, and prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination and limiting the future use and development of the site to commercial.

107-2-4.1	County of Wyoming	Building Use Restriction Ground Water Use Restriction

Area is identified as "Restricted Area Former Argo Property". Controls require that any future owner will carry out no activities which will interfere with any program at the adjacent Voluntary Site, adhere to groundwater and building restrictions, and will not interference with County's compliance with the Site Management Plan for the Voluntary site or with the groundwater monitoring wells present on this property.

107-2-4.2	County of Wyoming	Ground Water Use Restriction Building Use Restriction

Area is identified as "Restricted Area Former Weber Property". Controls require that any future owner will carry out no activities which will interfere with any program at the adjacent Voluntary Site, adhere to groundwater and building restrictions, and will not interference with County's compliance with the Site Management Plan for the Voluntary site or with the groundwater monitoring wells and North Permeable Reactive Wall present on this property.

Box 4

Description of Engineering Controls

107-2-4.2	Subsurface Barriers

Box 5

Periodic Review Report (PRR) Certification Statements

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

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

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

YES	NO
X	

2. For each Engineering control listed in Box 4, I certify by checking "YES" below that all of the following statements are true:

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

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

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

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

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

YES	NO
X	

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

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

_____ _____

Signature of Owner, Remedial Party or Designated Representative — Date

IC CERTIFICATIONS
SITE NO. V00604

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

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

I Colin Wasteneys (print name) at AECOM Technical Services, Inc. One John James Audubon Pkwy, Buffalo, NY 14228, (print business address)

am certifying as Qualified Environmental Professional (Owner or Remedial Party)

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

Colin Wasteneys
Signature of Owner, Remedial Party, or Designated Representative Rendering Certification

9/14/2021
Date

EC CERTIFICATIONS

Box 7

Qualified Environmental Professional Signature

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

I Colin Wasteneys (print name) at AECOM Technical Services, Inc. One John James Audubon Pkwy, Buffalo, NY 14228 (print business address),

am certifying as a Qualified Environmental Professional for the County of Wyoming (Owner or Remedial Party)

Colin Wasteneys

Signature of Qualified Environmental Professional, for the Owner or Remedial Party, Rendering Certification

Stamp (Required for PE)

9/14/2021

Date

APPENDIX C

NYSDEC CORRESPONDENCE

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Region 9
270 Michigan Avenue, Buffalo, NY 14203-2915
P: (716) 851-7220 | F: (716) 851-7226
www.dec.ny.gov

June 10, 2019

Douglas Berwanger
County of Wyoming
143 N. Main Street Center
Warsaw, New York 14569

Dear Mr. Berwanger:

Wyoming County Fire Training Center
Site No. V00604
Wethersfield, New York 14469

The most recent groundwater sampling event at the Wyoming County Fire Training Center reported emergent contaminants, specifically PFAS compounds, at concentrations exceeding current screening criteria. This raises concerns regarding the extent of PFAS impacts as well as the potential for PFAS impact to nearby drinking water supplies. Therefore, the Department is requesting that you further evaluate current conditions at or near the site to determine if the identified PFAS contamination may be impacting local water supplies.

PFAS have historically not been evaluated at remediation sites at the levels that are now thought to represent a health concern. This initiative is being undertaken because of these "emerging contaminants" having been found in drinking water supplies in New York. Accordingly, the DEC is requiring that you further assess site groundwater for these chemicals.

The attached guidance provides information on the analytical methods and reporting requirements. A second guidance document describes special precautions that need to be considered when sampling for PFAS.

In addition, you must demonstrate the site remedy is full protective of public health. In order to assess the protectiveness of the remedy given the new information regarding the presence of emerging contaminants on the site in excess of current screening values, the Department requests that you confirm the location of the nearest public or private water wells downgradient of the site. To accomplish this a GIS map of local potable wells (verified by the local health department) must be submitted.

Please prepare a letter work plan that identifies the wells proposed for sampling, a brief description of the sampling methods, and anticipated sampling date within the next 60 days. Preparation of a Data Usability Summary Report (DUSR) and data upload to the Department's EQUIS environmental data tracking database will need to be included as a requirement of the workplan. The GIS map of local potable wells is to be provided as attachment to the work plan.

If you wish to discuss the scope of the requested water testing, please contact me at 716-851-7220 or david.szymanski@dec.ny.gov.

Sincerely,

David Szymanski
Environmental Program Specialist -1
Region 9 Div. of Environmental Remediation

ec: Chad Staniszewski – NYSDEC
Colin Wasteneys – AECOM

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation
270 Michigan Avenue, Buffalo, NY 14203-2915
P: (716) 851-7220| F: (716) 851-7226
www.dec.ny.gov

September 18, 2020

Jerry Davis
County of Wyoming
143 N. Main Street Center
Warsaw, New York 14569

Re: Site Management (SM)
Emergent Contaminant Sampling
Wyoming County Fire Training Center
Wethersfield, Wyoming County, Site No.: **V00604**

Dear Mr. Davis (as the Certifying Party):

The Department has reviewed the Wyoming County Fire Training Center emergent contaminant results for MW-02 and the offsite private water supply wells. Due to the private water supply well results being below Drinking Water Quality Council maximum contaminant levels, no further emergent contaminant sampling is warranted offsite.

Due to the high levels of PFAS detected onsite, the Department requests that MW-02 be sampled for PFAS biennially to track concentrations. If you have any questions, please contact me at 716-851-7220 or email: megan.kuczka@dec.ny.gov.

Sincerely,

Damianos Skaros
Environmental Engineer 1

ec: Megan Kuczka – NYSDEC
Steven Karpinski – NYSDOH
Colin Wasteneys - AECOM

APPENDIX D

LOW FLOW GROUNDWATER PURGING/SAMPLING LOGS

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60623657 **Site:** Wyoming County Fire Training Center **Well I.D.:** MW-02

Date: 8/18/21 **Sampling Personnel:** Rob Murphy **Company:** AECOM

Purging/Sampling Device: Low Flow Peristaltic Pump Tubing Type: LDPE and Silicone Pump/Tubing Inlet Location: Midpoint of Screen

Measuring Point: TOIC Initial Depth to Water: 4.41 Depth to Well Bottom: 12.40 Well Diameter: One-Inch Screen Length: 10 feet

Casing Type: PVC Volume in 1 Well Casing (liters): 1.23 Estimated Purge Volume (liters): 8.0

Sample ID: MW-02 Sample Time: 1505 QA/QC: ~~None~~ FD-081821

Sample Parameters: TCL VOCs (Method 8260)
PFAS (per- and polyfluoroalkyl substances)

PURGE PARAMETERS

TIME	pH	TEMP (°C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
1420	9.40	14.28	0.701	5.19	107.0	68.7	200	4.41
1425	9.79	14.50	0.709	2.42	140	33.8	200	7.32
1430	9.93	14.17	0.713	2.41	72	32.4	200	7.50
1435	9.91	14.20	0.719	2.34	65.4	28.0	200	7.62
1440	9.79	14.07	0.731	2.29	43.0	31.4	160	7.25
1445	9.77	14.24	0.753	2.31	22.6	32.6	160	7.10
1450	9.54	14.26	0.764	2.30	11.16	26.4	160	7.08
1455	9.42	14.20	0.764	2.24	7.45	21.1	160	7.10
1500	9.41	14.32	0.764	2.18	6.27	21.9	160	7.14
1505	9.42	14.31	0.768	2.21	7.45	16.9	160	7.16
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---	

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

Comments:
1. No protective casing present around well.
2. PVC cap intact and in-place on PVC well riser.
3. Pump on at 1418

EB-081821 @ 1525

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60623657 Site: Wyoming County Fire Training Center Well I.D.: MW-07

Date: 8/18/21 Sampling Personnel: Rob Murphy Company: AECOM

Purging/Sampling Device: Low Flow Peristaltic Pump Tubing Type: LDPE and Silicone Pump/Tubing Inlet Location: Midpoint of Screen

Measuring Point: TOIC Initial Depth to Water: 6.91 Depth to Well Bottom: ~~15.77~~ 14.82 Well Diameter: One-Inch Screen Length: 10 feet

Casing Type: PVC Volume in 1 Well Casing (liters): 1.22 Estimated Purge Volume (liters): 10.8

Sample ID: MW-07 Sample Time: 13:40 QA/QC: NONE

Sample Parameters: TCL VOCs (Method 8260)

PURGE PARAMETERS

TIME	pH	TEMP (°C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
12:50	8.42	12.02	0.682	4.08	83.0	170.2	280	6.91
12:55	8.99	11.73	0.699	3.77	93.0	161.8	280	12.04
13:00	9.36	11.90	0.705	3.25	100.5	156.0	200	11.76
13:05	9.95	11.82	0.723	3.31	52.0	150.3	200	11.59
13:10	10.63	11.78	0.742	3.22	31.0	147.9	200	11.59
13:15	11.17	11.80	0.757	3.07	19.1	143.6	200	11.60
13:20	11.54	11.84	0.776	2.94	13.0	140.8	200	11.64
13:25	11.75	11.80	0.782	2.89	11.2	139.6	200	11.67
13:30	12.00	11.75	0.793	2.84	9.41	135.2	200	11.69
13:35	12.14	11.71	0.804	2.81	7.39	132.1	200	11.70
13:40	12.34	11.72	0.819	2.72	3.51	135.9	200	11.69
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---	

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

Comments:
1. Protective casing intact and secured. pH reading very high.
2. J-plug intact and in place.
3. Pump on at 1248 recal'd after sampling.

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60623657 **Site:** Wyoming County Fire Training Center **Well I.D.:** MW-12

Date: 8/18/21 **Sampling Personnel:** Rob Murphy **Company:** AECOM

Purging/Sampling Device: Low Flow Peristaltic Pump Tubing Type: LDPE and Silicone Pump/Tubing Inlet Location: Midpoint of Screen

Measuring Point: TOIC Initial Depth to Water: 9.57 Depth to Well Bottom: 16.95 Well Diameter: One-Inch Screen Length: 10 feet

Casing Type: PVC Volume in 1 Well Casing (liters): 1.14 Estimated Purge Volume (liters): 7.2

Sample ID: MW-12 Sample Time: 1625 QA/QC: none

Sample Parameters: TCL VOCs (Method 8260)

PURGE PARAMETERS

TIME	pH	TEMP (°C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
15:45	8.61	15.17	0.895	5.33	107	84.4	180	9.57
15:50	8.87	15.22	0.907	3.33	135	73.2	180	9.65
15:55	8.89	15.01	0.932	2.85	74	57.7	180	9.67
1600	9.10	14.96	0.954	2.55	71.4	46.1	180	9.67
1605	9.23	14.84	0.974	2.39	36.8	38.0	180	9.67
1610	9.24	14.93	0.984	2.34	24.2	42.5	180	9.67
1615	9.15	14.89	0.999	2.38	12.2	51.5	180	9.70
1620	9.15	14.76	1.002	2.36	9.24	50.8	180	9.72
1625	9.17	14.82	1.007	2.42	6.63	50.9	180	9.70
Tolerance:	**0.1**	**---**	**3%**	**10%**	**10%**	**+ or - 10**	**---**	

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

Comments: 1. PVC cap intact and in place on well riser.
2. Pump on at 1543

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60623657 **Site:** Wyoming County Fire Training Center **Well I.D.:** MW-15

Date: 8/15/21 **Sampling Personnel:** Rob Murphy **Company:** AECOM

Purging/Sampling Device: Low Flow Peristaltic Pump Tubing Type: LDPE and Silicone Pump/Tubing Inlet Location: Midpoint of Screen

Measuring Point: TOIC Initial Depth to Water: 9.98 Depth to Well Bottom: 16.00 Well Diameter: One-Inch Screen Length: 10 feet

Casing Type: PVC Volume in 1 Well Casing (liters): 0.95 Estimated Purge Volume (liters): 4.8

Sample ID: MW-15 Sample Time: ~~1510~~ 1710 QA/QC: none

Sample Parameters: TCL VOCs (Method 8260)

PURGE PARAMETERS

TIME	meter broken pH	TEMP (°C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
1640	17.44	13.76	0.718	12.44	1593	66.59	160	9.80
1645	NA	13.78	0.711	8.57	882	42.8	160	9.82
1650	NA	13.79	0.705	3.41	612	27.7	160	9.82
1655	NA	13.54	0.704	3.16	978	23.6	160	9.82
1700 ~~1505~~	NA	13.37	0.703	3.08	48.6	24.7	160	9.82
1705 ~~1505~~	NA	13.11	0.705	3.00	27.6	23.2	160	9.82
1710 ~~1510~~	NA	13.30	0.705	3.06	24.2	28.6	160	9.82
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---	

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

Comments:
1. PVC cap intact and in place on well riser.
2. Pump on at 1638

APPENDIX E

RESIDENTIALTAP WATER SAMPLING LOGS

RESIDENTIAL TAP WATER SAMPLING LOG

Project: 60623657 **Site:** Wyoming County Fire Training Center **Location I.D.:** Schell Tap

Date: 02/19/20 **Sampling Personnel:** Rob Murphy **Company:** AECOM

Sampling Device: 250 ml Plastic Material of Construction: HDPE Pump/Tubing Inlet Location: NA

Measuring Point: NA Initial Depth to Water: NA Depth to Well Bottom: NA Well Diameter: NA Screen Length: NA

Casing Type: NA Volume in 1 Well Casing (gallons): NA Estimated Purge Volume (gallons): NA

Sample ID: SW-01-021920-EC Sample Time: 0820 QA/QC: MS/MSD

Sample Parameters: Method 537 (modified) - PFAS, Standard List (21 analytes)

SAMPLE PARAMETERS

TIME	pH	TEMP (^{0}C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	SALINITY (%)	Appearance
0820	NM	NM	NM	NM	NM	NM	Clear
Tolerance:	**0.1**	**---**	**3%**	**10%**	**10%**	**+ or - 0.02**	

Information: 0.17 gallons per foot in 2-inch diameter well
0.66 gallons per foot in 4-inch diameter well

Comments:

1. Residential tap water grab sample.
2. The water sample was collected from the kitchen sink tap with the aerator removed and the water softener system disconnected.
The tap was run for 15 minutes before the sample was collected.
3. Collected a field blank (FB-021920) in the kitchen immediately after collecting the sample.
4. NM=Not measured.

RESIDENTIAL TAP WATER SAMPLING LOG

Project: 60623657 **Site:** Wyoming County Fire Training Center **Location I.D.:** Becker Tap

Date: 02/19/20 **Sampling Personnel:** Rob Murphy **Company:** AECOM

Sampling Device: 250 ml Plastic Material of Construction: HDPE Pump/Tubing Inlet Location: NA

Measuring Point: NA Initial Depth to Water: NA Depth to Well Bottom: NA Well Diameter: NA Screen Length: NA

Casing Type: NA Volume in 1 Well Casing (gallons): NA Estimated Purge Volume (gallons): NA

Sample ID: BW-01-021920-EC Sample Time: 1310 QA/QC: Duplicate (FD-021920)

Sample Parameters: Method 537 (modified) - PFAS, Standard List (21 analytes)

SAMPLE PARAMETERS

TIME	pH	TEMP (^{0}C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	SALINITY (%)	Appearance
1310	NM	NM	NM	NM	NM	NM	Clear
Tolerance:	**0.1**	**---**	**3%**	**10%**	**10%**	**+ or - 0.02**	

Information: 0.17 gallons per foot in 2-inch diameter well
0.66 gallons per foot in 4-inch diameter well

Comments:

1. Residential tap water grab sample.
2. Sample collected from a tap in the basement of the residence.
3. Resident ran water from well for 60 minutes before sample was collected. Sample collected from basement spigot after an additional 5 minutes.
4. NM=Not measured.

RESIDENTIAL TAP WATER SAMPLING LOG

Project: 60623657 **Site:** Wyoming County Fire Training Center **Location I.D.:** Schell Tap

Date: 08/20/20 **Sampling Personnel:** Rob Murphy **Company:** AECOM

Sampling Device: 40 ml VOA Vial Material of Construction: Glass Pump/Tubing Inlet Location: NA

Measuring Point: NA Initial Depth to Water: NA Depth to Well Bottom: NA Well Diameter: NA Screen Length: NA

Casing Type: NA Volume in 1 Well Casing (gallons): NA Estimated Purge Volume (gallons): NA

Sample ID: SW-01-082020 Sample Time: 1545 QA/QC: None

Sample Parameters: TCL VOCs (Method 524.2)

SAMPLE PARAMETERS

TIME	pH	TEMP (^{0}C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	SALINITY (%)	Appearance
1545	NM	NM	NM	NM	NM	NM	Clear
Tolerance:	**0.1**	**---**	**3%**	**10%**	**10%**	**+ or - 0.02**	

Information: 0.17 gallons per foot in 2-inch diameter well
0.66 gallons per foot in 4-inch diameter well

Comments:

1. Residential tap water grab sample.
2. The water sample was collected from the kitchen sink tap with the aerator removed and the water softener system disconnected.
The tap was run for 15 minutes before the sample was collected.
3. NM=Not measured.

RESIDENTIAL TAP WATER SAMPLING LOG

Project: 60623657 **Site:** Wyoming County Fire Training Center **Location I.D.:** Becker Tap

Date: 08/20/20 **Sampling Personnel:** Rob Murphy **Company:** AECOM

Sampling Device: 40 ml VOA Vial Material of Construction: Glass Pump/Tubing Inlet Location: NA

Measuring Point: NA Initial Depth to Water: NA Depth to Well Bottom: NA Well Diameter: NA Screen Length: NA

Casing Type: NA Volume in 1 Well Casing (gallons): NA Estimated Purge Volume (gallons): NA

Sample ID: BW-01-082020 Sample Time: 1405 QA/QC: FD-082020

Sample Parameters: TCL VOCs (Method 524.2)

SAMPLE PARAMETERS

TIME	pH	TEMP (^{0}C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	SALINITY (%)	Appearance
1405	NM	NM	NM	NM	NM	NM	Clear
Tolerance:	**0.1**	**---**	**3%**	**10%**	**10%**	**+ or - 0.02**	

Information: 0.17 gallons per foot in 2-inch diameter well
0.66 gallons per foot in 4-inch diameter well

Comments:

1. Residential tap water grab sample.
2. Sample collected from outside spigot.
3. Water run for 30 minutes before sample was collected.
4. NM=Not measured.

RESIDENTIAL TAP WATER SAMPLING LOG

Project: 60623657 **Site:** Wyoming County Fire Training Center **Location I.D.:** Schell Tap

Date: 05/12/21 **Sampling Personnel:** Rob Murphy **Company:** AECOM

Sampling Device: 40 ml VOA Vial Material of Construction: Glass Pump/Tubing Inlet Location: NA

Measuring Point: NA Initial Depth to Water: NA Depth to Well Bottom: NA Well Diameter: NA Screen Length: NA

Casing Type: NA Volume in 1 Well Casing (gallons): NA Estimated Purge Volume (gallons): NA

Sample ID: SW-01-051221 Sample Time: 1445 QA/QC: FD-051221

Sample Parameters: TCL VOCs (Method 524.2)

SAMPLE PARAMETERS

TIME	pH	TEMP (^{0}C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	SALINITY (%)	Appearance
1445	NM	NM	NM	NM	NM	NM	Clear
Tolerance:	**0.1**	**---**	**3%**	**10%**	**10%**	**+ or - 0.02**	

Information: 0.17 gallons per foot in 2-inch diameter well
0.66 gallons per foot in 4-inch diameter well

Comments:

1. Residential tap water grab sample.
2. The water sample was collected from the kitchen sink tap with the aerator removed and the water softener system disconnected.
The tap was run for 15 minutes before the sample was collected.
3. NM=Not measured.

RESIDENTIAL TAP WATER SAMPLING LOG

Project: 60623657 **Site:** Wyoming County Fire Training Center **Location I.D.:** Becker Tap

Date: 05/12/21 **Sampling Personnel:** Rob Murphy **Company:** AECOM

Sampling Device: 40 ml VOA Vial Material of Construction: Glass Pump/Tubing Inlet Location: NA

Measuring Point: NA Initial Depth to Water: NA Depth to Well Bottom: NA Well Diameter: NA Screen Length: NA

Casing Type: NA Volume in 1 Well Casing (gallons): NA Estimated Purge Volume (gallons): NA

Sample ID: BW-01-051221 Sample Time: 1310 QA/QC: None

Sample Parameters: TCL VOCs (Method 524.2)

SAMPLE PARAMETERS

TIME	pH	TEMP (^{0}C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	SALINITY (%)	Appearance
1310	NM	NM	NM	NM	NM	NM	Clear
Tolerance:	**0.1**	**---**	**3%**	**10%**	**10%**	**+ or - 0.02**	

Information: 0.17 gallons per foot in 2-inch diameter well
0.66 gallons per foot in 4-inch diameter well

Comments:

1. Residential tap water grab sample.
2. Sample collected from outside spigot.
3. Water run for 30 minutes before sample was collected.
4. NM=Not measured.

APPENDIX F

SURFACE WATER SAMPLING LOGS

SURFACE WATER SAMPLING LOG

Project: 60623657 **Site:** Wyoming County Fire Training Center **Location I.D.:** Spring

Date: 08/20/20 **Sampling Personnel:** Rob Murphy **Company:** AECOM

Sampling Device: Flow directed to sample container

Material of Construction: Metal pipe draining into a concrete box.

Pump/Tubing Inlet Location: NA

Measuring Point: NA

Initial Depth to Water: NA

Depth to Well Bottom: NA

Well Diameter: NA

Screen Length: NA

Casing Type: NA

Volume in 1 Well Casing (gallons): NA

Estimated Purge Volume (gallons): NA

Sample ID: Spring - 082020 Sample Time: 1450 QA/QC: None

Sample Parameters: VOCs (524.2).

SAMPLE PARAMETERS

TIME	pH	TEMP (^{0}C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	SALINITY (%)	Appearance
1455	NM	NM	NM	NM	NM	NM	Clear
Tolerance:	**0.1**	**---**	**3%**	**10%**	**10%**	**+ or - 0.02**	

Information: 0.17 gallons per foot in 2-inch diameter well
0.66 gallons per foot in 4-inch diameter well

Comments:

SURFACE WATER SAMPLING LOG

Project: 60623657 **Site:** Wyoming County Fire Training Center **Location I.D.:** Spring

Date: 05/12/21 **Sampling Personnel:** Rob Murphy **Company:** AECOM

Sampling Device: Flow directed to sample container

Material of Construction: Metal pipe draining into a concrete box.

Pump/Tubing Inlet Location: NA

Measuring Point: NA

Initial Depth to Water: NA

Depth to Well Bottom: NA

Well Diameter: NA

Screen Length: NA

Casing Type: NA

Volume in 1 Well Casing (gallons): NA

Estimated Purge Volume (gallons): NA

Sample ID: Spring - 051221 Sample Time: 1450 QA/QC: None

Sample Parameters: VOCs (524.2).

SAMPLE PARAMETERS

TIME	pH	TEMP (^{0}C)	COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	SALINITY (%)	Appearance
1455	NM	NM	NM	NM	NM	NM	Clear
Tolerance:	**0.1**	**---**	**3%**	**10%**	**10%**	**+ or - 0.02**	

Information: 0.17 gallons per foot in 2-inch diameter well
0.66 gallons per foot in 4-inch diameter well

Comments:

APPENDIX G

ANALYTICAL DATA

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ANALYTICAL REPORT

Job Number: 480-166551-1

Job Description: Residential PFAS Water Analysis

Contract Number: No Number Assigned

For:
AECOM
257 West Genesee Street
Suite 400
Buffalo, NY 14202-2657

Attention: Ms. Ann Marie Kropovitch



Approved for release.
Alexander C Gilbert
Project Management Assistant I
2/28/2020 9:39 AM

Designee for
John R Schove, Project Manager II
10 Hazelwood Drive, Amherst, NY, 14228-2298
(716)504-9838
john.schove@testamericainc.com
02/28/2020

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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Job Narrative
480-166551-1

Comments
No additional comments.

Receipt
The samples were received on 2/19/2020 3:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.2º C.

LCMS
Method 537 (modified): The method blank for preparation batch 200-152665 and analytical batch 200-152696 contained Perfluorooctanesulfonic acid (PFOS), Perfluorooctanoic acid (PFOA), Perfluorononanoic acid (PFNA), Perfluorobutanoic acid (PFBA), Perfluorododecanoic acid (PFDoA), Perfluorotridecanoic acid (PFTriA), Perfluorotetradecanoic acid (PFTeA) and Perfluoroundecanoic acid (PFUnA) above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-extraction and/or re-analysis of samples was not performed.

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

Sample Summary

Client: AECOM
Job ID: 480-166551-1
Project/Site: Residential PFAS Water Analysis

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-166551-1	SW-01-021920-EC	Water	02/19/20 08:20	02/19/20 15:50	
480-166551-2	FB-021920	Water	02/19/20 08:22	02/19/20 15:50	
480-166551-3	BW-01-021920-EC	Water	02/19/20 13:10	02/19/20 15:50	
480-166551-4	FD-021920	Water	02/19/20 00:00	02/19/20 15:50	

Detection Summary

Client: AECOM
Job ID: 480-166551-1
Project/Site: Residential PFAS Water Analysis

Client Sample ID: SW-01-021920-EC
Lab Sample ID: 480-166551-1

No Detections.

Client Sample ID: FB-021920
Lab Sample ID: 480-166551-2

No Detections.

Client Sample ID: BW-01-021920-EC
Lab Sample ID: 480-166551-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.87	J	1.7	0.87	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.49	J B	1.7	0.42	ng/L	1		537 (modified)	Total/NA

Client Sample ID: FD-021920
Lab Sample ID: 480-166551-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	0.56	J B	1.7	0.42	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: AECOM
Job ID: 480-166551-1
Project/Site: Residential PFAS Water Analysis

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL BUR
3535	Solid-Phase Extraction (SPE)	SW846	TAL BUR

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

TAL BUR = Eurofins TestAmerica, Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Client Sample ID: SW-01-021920-EC
Lab Sample ID: 480-166551-1

Date Collected: 02/19/20 08:20
Matrix: Water

Date Received: 02/19/20 15:50

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		1.8	0.88	ng/L		02/24/20 13:43	02/25/20 21:16	1
Perfluoropentanoic acid (PFPeA)	ND		1.8	0.55	ng/L		02/24/20 13:43	02/25/20 21:16	1
Perfluorohexanoic acid (PFHxA)	ND		1.8	0.67	ng/L		02/24/20 13:43	02/25/20 21:16	1
Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.80	ng/L		02/24/20 13:43	02/25/20 21:16	1
Perfluorooctanoic acid (PFOA)	ND		1.8	0.71	ng/L		02/24/20 13:43	02/25/20 21:16	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.24	ng/L		02/24/20 13:43	02/25/20 21:16	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.67	ng/L		02/24/20 13:43	02/25/20 21:16	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.68	ng/L		02/24/20 13:43	02/25/20 21:16	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.52	ng/L		02/24/20 13:43	02/25/20 21:16	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8	0.53	ng/L		02/24/20 13:43	02/25/20 21:16	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.81	ng/L		02/24/20 13:43	02/25/20 21:16	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.43	ng/L		02/24/20 13:43	02/25/20 21:16	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.8	0.70	ng/L		02/24/20 13:43	02/25/20 21:16	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.83	ng/L		02/24/20 13:43	02/25/20 21:16	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.53	ng/L		02/24/20 13:43	02/25/20 21:16	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.79	ng/L		02/24/20 13:43	02/25/20 21:16	1
Perfluorooctanesulfonamide (PFOSA)	ND		8.8	8.8	ng/L		02/24/20 13:43	02/25/20 21:16	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		18	1.5	ng/L		02/24/20 13:43	02/25/20 21:16	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		18	1.3	ng/L		02/24/20 13:43	02/25/20 21:16	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		18	4.8	ng/L		02/24/20 13:43	02/25/20 21:16	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		18	2.5	ng/L		02/24/20 13:43	02/25/20 21:16	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
18O2 PFHxS	*106*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:16*	*1*
13C4 PFHpA	*100*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:16*	*1*
13C4 PFOA	*104*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:16*	*1*
13C4 PFOS	*112*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:16*	*1*
13C5 PFNA	*107*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:16*	*1*
13C4 PFBA	*109*		*25 - 150*	*02/24/20 13:43*	*02/25/20 21:16*	*1*
13C2 PFHxA	*103*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:16*	*1*
13C2 PFDA	*102*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:16*	*1*
13C2 PFUnA	*95*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:16*	*1*
13C2 PFDoA	*94*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:16*	*1*
13C8 FOSA	*103*		*25 - 150*	*02/24/20 13:43*	*02/25/20 21:16*	*1*
13C5 PFPeA	*112*		*25 - 150*	*02/24/20 13:43*	*02/25/20 21:16*	*1*
13C2 PFTeDA	*97*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:16*	*1*
d3-NMeFOSAA	*103*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:16*	*1*
d5-NEtFOSAA	*111*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:16*	*1*
M2-6:2 FTS	*109*		*25 - 150*	*02/24/20 13:43*	*02/25/20 21:16*	*1*
M2-8:2 FTS	*113*		*25 - 150*	*02/24/20 13:43*	*02/25/20 21:16*	*1*
13C3 PFBS	*97*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:16*	*1*

Client Sample ID: FB-021920
Lab Sample ID: 480-166551-2

Date Collected: 02/19/20 08:22
Matrix: Water

Date Received: 02/19/20 15:50

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		1.7	0.87	ng/L		02/24/20 13:43	02/25/20 21:40	1
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.55	ng/L		02/24/20 13:43	02/25/20 21:40	1
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.66	ng/L		02/24/20 13:43	02/25/20 21:40	1
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.79	ng/L		02/24/20 13:43	02/25/20 21:40	1
Perfluorooctanoic acid (PFOA)	ND		1.7	0.70	ng/L		02/24/20 13:43	02/25/20 21:40	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.23	ng/L		02/24/20 13:43	02/25/20 21:40	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.67	ng/L		02/24/20 13:43	02/25/20 21:40	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.68	ng/L		02/24/20 13:43	02/25/20 21:40	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.51	ng/L		02/24/20 13:43	02/25/20 21:40	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7	0.52	ng/L		02/24/20 13:43	02/25/20 21:40	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.80	ng/L		02/24/20 13:43	02/25/20 21:40	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.43	ng/L		02/24/20 13:43	02/25/20 21:40	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.7	0.70	ng/L		02/24/20 13:43	02/25/20 21:40	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.83	ng/L		02/24/20 13:43	02/25/20 21:40	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.53	ng/L		02/24/20 13:43	02/25/20 21:40	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.78	ng/L		02/24/20 13:43	02/25/20 21:40	1
Perfluorooctanesulfonamide (PFOSA)	ND		8.7	8.7	ng/L		02/24/20 13:43	02/25/20 21:40	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		17	1.5	ng/L		02/24/20 13:43	02/25/20 21:40	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		17	1.3	ng/L		02/24/20 13:43	02/25/20 21:40	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	4.8	ng/L		02/24/20 13:43	02/25/20 21:40	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	2.5	ng/L		02/24/20 13:43	02/25/20 21:40	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
18O2 PFHxS	*106*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:40*	*1*
13C4 PFHpA	*100*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:40*	*1*
13C4 PFOA	*103*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:40*	*1*
13C4 PFOS	*113*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:40*	*1*
13C5 PFNA	*102*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:40*	*1*
13C4 PFBA	*102*		*25 - 150*	*02/24/20 13:43*	*02/25/20 21:40*	*1*
13C2 PFHxA	*99*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:40*	*1*
13C2 PFDA	*107*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:40*	*1*
13C2 PFUnA	*99*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:40*	*1*
13C2 PFDoA	*95*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:40*	*1*
13C8 FOSA	*94*		*25 - 150*	*02/24/20 13:43*	*02/25/20 21:40*	*1*
13C5 PFPeA	*111*		*25 - 150*	*02/24/20 13:43*	*02/25/20 21:40*	*1*
13C2 PFTeDA	*87*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:40*	*1*
d3-NMeFOSAA	*111*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:40*	*1*
d5-NEtFOSAA	*93*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:40*	*1*
M2-6:2 FTS	*106*		*25 - 150*	*02/24/20 13:43*	*02/25/20 21:40*	*1*
M2-8:2 FTS	*121*		*25 - 150*	*02/24/20 13:43*	*02/25/20 21:40*	*1*
13C3 PFBS	*101*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:40*	*1*

Client Sample ID: BW-01-021920-EC
Lab Sample ID: 480-166551-3

Date Collected: 02/19/20 13:10
Matrix: Water

Date Received: 02/19/20 15:50

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.87**	**J**	1.7	0.87	ng/L		02/24/20 13:43	02/25/20 21:49	1
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.55	ng/L		02/24/20 13:43	02/25/20 21:49	1
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.66	ng/L		02/24/20 13:43	02/25/20 21:49	1
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.79	ng/L		02/24/20 13:43	02/25/20 21:49	1
Perfluorooctanoic acid (PFOA)	ND		1.7	0.70	ng/L		02/24/20 13:43	02/25/20 21:49	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.23	ng/L		02/24/20 13:43	02/25/20 21:49	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.67	ng/L		02/24/20 13:43	02/25/20 21:49	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.68	ng/L		02/24/20 13:43	02/25/20 21:49	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.51	ng/L		02/24/20 13:43	02/25/20 21:49	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7	0.52	ng/L		02/24/20 13:43	02/25/20 21:49	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.80	ng/L		02/24/20 13:43	02/25/20 21:49	1
Perfluorobutanesulfonic acid (PFBS)	**0.49**	**J B**	1.7	0.42	ng/L		02/24/20 13:43	02/25/20 21:49	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.7	0.69	ng/L		02/24/20 13:43	02/25/20 21:49	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.82	ng/L		02/24/20 13:43	02/25/20 21:49	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.53	ng/L		02/24/20 13:43	02/25/20 21:49	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.78	ng/L		02/24/20 13:43	02/25/20 21:49	1
Perfluorooctanesulfonamide (PFOSA)	ND		8.7	8.7	ng/L		02/24/20 13:43	02/25/20 21:49	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		17	1.5	ng/L		02/24/20 13:43	02/25/20 21:49	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		17	1.3	ng/L		02/24/20 13:43	02/25/20 21:49	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	4.8	ng/L		02/24/20 13:43	02/25/20 21:49	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	2.5	ng/L		02/24/20 13:43	02/25/20 21:49	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
18O2 PFHxS	*101*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:49*	*1*
13C4 PFHpA	*103*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:49*	*1*
13C4 PFOA	*101*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:49*	*1*
13C4 PFOS	*110*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:49*	*1*
13C5 PFNA	*103*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:49*	*1*
13C4 PFBA	*108*		*25 - 150*	*02/24/20 13:43*	*02/25/20 21:49*	*1*
13C2 PFHxA	*97*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:49*	*1*
13C2 PFDA	*106*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:49*	*1*
13C2 PFUnA	*94*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:49*	*1*
13C2 PFDoA	*96*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:49*	*1*
13C8 FOSA	*101*		*25 - 150*	*02/24/20 13:43*	*02/25/20 21:49*	*1*
13C5 PFPeA	*118*		*25 - 150*	*02/24/20 13:43*	*02/25/20 21:49*	*1*
13C2 PFTeDA	*95*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:49*	*1*
d3-NMeFOSAA	*107*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:49*	*1*
d5-NEtFOSAA	*101*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:49*	*1*
M2-6:2 FTS	*121*		*25 - 150*	*02/24/20 13:43*	*02/25/20 21:49*	*1*
M2-8:2 FTS	*96*		*25 - 150*	*02/24/20 13:43*	*02/25/20 21:49*	*1*
13C3 PFBS	*100*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:49*	*1*

Client Sample ID: FD-021920
Lab Sample ID: 480-166551-4

Date Collected: 02/19/20 00:00
Matrix: Water

Date Received: 02/19/20 15:50

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		1.7	0.86	ng/L		02/24/20 13:43	02/25/20 21:57	1
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.54	ng/L		02/24/20 13:43	02/25/20 21:57	1
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.65	ng/L		02/24/20 13:43	02/25/20 21:57	1
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.78	ng/L		02/24/20 13:43	02/25/20 21:57	1
Perfluorooctanoic acid (PFOA)	ND		1.7	0.69	ng/L		02/24/20 13:43	02/25/20 21:57	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.23	ng/L		02/24/20 13:43	02/25/20 21:57	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.66	ng/L		02/24/20 13:43	02/25/20 21:57	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.67	ng/L		02/24/20 13:43	02/25/20 21:57	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.51	ng/L		02/24/20 13:43	02/25/20 21:57	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7	0.51	ng/L		02/24/20 13:43	02/25/20 21:57	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.79	ng/L		02/24/20 13:43	02/25/20 21:57	1
Perfluorobutanesulfonic acid (PFBS)	**0.56**	**J B**	1.7	0.42	ng/L		02/24/20 13:43	02/25/20 21:57	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.7	0.69	ng/L		02/24/20 13:43	02/25/20 21:57	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.81	ng/L		02/24/20 13:43	02/25/20 21:57	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.52	ng/L		02/24/20 13:43	02/25/20 21:57	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.77	ng/L		02/24/20 13:43	02/25/20 21:57	1
Perfluorooctanesulfonamide (PFOSA)	ND		8.6	8.6	ng/L		02/24/20 13:43	02/25/20 21:57	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		17	1.5	ng/L		02/24/20 13:43	02/25/20 21:57	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		17	1.3	ng/L		02/24/20 13:43	02/25/20 21:57	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	4.7	ng/L		02/24/20 13:43	02/25/20 21:57	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	2.5	ng/L		02/24/20 13:43	02/25/20 21:57	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
18O2 PFHxS	*105*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:57*	*1*
13C4 PFHpA	*106*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:57*	*1*
13C4 PFOA	*107*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:57*	*1*
13C4 PFOS	*113*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:57*	*1*
13C5 PFNA	*109*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:57*	*1*
13C4 PFBA	*110*		*25 - 150*	*02/24/20 13:43*	*02/25/20 21:57*	*1*
13C2 PFHxA	*103*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:57*	*1*
13C2 PFDA	*109*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:57*	*1*
13C2 PFUnA	*90*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:57*	*1*
13C2 PFDoA	*96*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:57*	*1*
13C8 FOSA	*108*		*25 - 150*	*02/24/20 13:43*	*02/25/20 21:57*	*1*
13C5 PFPeA	*119*		*25 - 150*	*02/24/20 13:43*	*02/25/20 21:57*	*1*
13C2 PFTeDA	*99*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:57*	*1*
d3-NMeFOSAA	*125*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:57*	*1*
d5-NEtFOSAA	*104*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:57*	*1*
M2-6:2 FTS	*109*		*25 - 150*	*02/24/20 13:43*	*02/25/20 21:57*	*1*
M2-8:2 FTS	*111*		*25 - 150*	*02/24/20 13:43*	*02/25/20 21:57*	*1*
13C3 PFBS	*97*		*50 - 150*	*02/24/20 13:43*	*02/25/20 21:57*	*1*

Isotope Dilution Summary

Client: AECOM
Job ID: 480-166551-1
Project/Site: Residential PFAS Water Analysis

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFHxS	PFHpA	PFOA	PFOS	PFNA	PFBA	PFHxA	PFDA
Lab Sample ID	Client Sample ID	(50-150)	(50-150)	(50-150)	(50-150)	(50-150)	(25-150)	(50-150)	(50-150)
480-166551-1	SW-01-021920-EC	106	100	104	112	107	109	103	102
480-166551-1 MS	SW-01-021920-EC-MS	103	105	101	107	95	104	93	101
480-166551-1 MSD	SW-01-021920-EC-MSD	107	106	105	111	106	112	104	102
480-166551-2	FB-021920	106	100	103	113	102	102	99	107
480-166551-3	BW-01-021920-EC	101	103	101	110	103	108	97	106
480-166551-4	FD-021920	105	106	107	113	109	110	103	109
LCS 200-152665/2-A	Lab Control Sample	95	97	90	93	88	96	81	89
MB 200-152665/1-A	Method Blank	98	97	91	94	88	100	91	94

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFUnA	PFDoA	PFOSA	PFPeA	PFTDA	-NMeFOS/	-NEtFOS/	M262FTS
Lab Sample ID	Client Sample ID	(50-150)	(50-150)	(25-150)	(25-150)	(50-150)	(50-150)	(50-150)	(25-150)
480-166551-1	SW-01-021920-EC	95	94	103	112	97	103	111	109
480-166551-1 MS	SW-01-021920-EC-MS	94	92	94	102	96	104	121	100
480-166551-1 MSD	SW-01-021920-EC-MSD	104	95	102	112	102	119	113	112
480-166551-2	FB-021920	99	95	94	111	87	111	93	106
480-166551-3	BW-01-021920-EC	94	96	101	118	95	107	101	121
480-166551-4	FD-021920	90	96	108	119	99	125	104	109
LCS 200-152665/2-A	Lab Control Sample	78	65	60	97	69	96	94	94
MB 200-152665/1-A	Method Blank	79	73	62	100	68	95	82	93

		Percent Isotope Dilution Recovery (Acceptance Limits)	
		M282FTS	3C3-PFBS
Lab Sample ID	Client Sample ID	(25-150)	(50-150)
480-166551-1	SW-01-021920-EC	113	97
480-166551-1 MS	SW-01-021920-EC-MS	113	94
480-166551-1 MSD	SW-01-021920-EC-MSD	122	104
480-166551-2	FB-021920	121	101
480-166551-3	BW-01-021920-EC	96	100
480-166551-4	FD-021920	111	97
LCS 200-152665/2-A	Lab Control Sample	98	85
MB 200-152665/1-A	Method Blank	92	84

Surrogate Legend

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

Isotope Dilution Summary

Client: AECOM
Job ID: 480-166551-1
Project/Site: Residential PFAS Water Analysis

13C3-PFBS = 13C3 PFBS

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 200-152665/1-A
Matrix: Water
Analysis Batch: 152696

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 152665

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		2.0	1.0	ng/L		02/24/20 13:43	02/25/20 19:03	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.63	ng/L		02/24/20 13:43	02/25/20 19:03	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.76	ng/L		02/24/20 13:43	02/25/20 19:03	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.91	ng/L		02/24/20 13:43	02/25/20 19:03	1
Perfluorooctanoic acid (PFOA)	0.961	J	2.0	0.81	ng/L		02/24/20 13:43	02/25/20 19:03	1
Perfluorononanoic acid (PFNA)	0.578	J	2.0	0.27	ng/L		02/24/20 13:43	02/25/20 19:03	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.77	ng/L		02/24/20 13:43	02/25/20 19:03	1
Perfluoroundecanoic acid (PFUnA)	0.981	J	2.0	0.78	ng/L		02/24/20 13:43	02/25/20 19:03	1
Perfluorododecanoic acid (PFDoA)	0.863	J	2.0	0.59	ng/L		02/24/20 13:43	02/25/20 19:03	1
Perfluorotridecanoic acid (PFTriA)	0.737	J	2.0	0.60	ng/L		02/24/20 13:43	02/25/20 19:03	1
Perfluorotetradecanoic acid (PFTeA)	1.01	J	2.0	0.92	ng/L		02/24/20 13:43	02/25/20 19:03	1
Perfluorobutanesulfonic acid (PFBS)	0.749	J	2.0	0.49	ng/L		02/24/20 13:43	02/25/20 19:03	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.80	ng/L		02/24/20 13:43	02/25/20 19:03	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0	0.95	ng/L		02/24/20 13:43	02/25/20 19:03	1
Perfluorooctanesulfonic acid (PFOS)	0.697	J	2.0	0.61	ng/L		02/24/20 13:43	02/25/20 19:03	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.90	ng/L		02/24/20 13:43	02/25/20 19:03	1
Perfluorooctanesulfonamide (PFOSA)	ND		10	10	ng/L		02/24/20 13:43	02/25/20 19:03	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		20	1.7	ng/L		02/24/20 13:43	02/25/20 19:03	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		20	1.5	ng/L		02/24/20 13:43	02/25/20 19:03	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		20	5.5	ng/L		02/24/20 13:43	02/25/20 19:03	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		20	2.9	ng/L		02/24/20 13:43	02/25/20 19:03	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
18O2 PFHxS	*98*		*50 - 150*	*02/24/20 13:43*	*02/25/20 19:03*	*1*
13C4 PFHpA	*97*		*50 - 150*	*02/24/20 13:43*	*02/25/20 19:03*	*1*
13C4 PFOA	*91*		*50 - 150*	*02/24/20 13:43*	*02/25/20 19:03*	*1*
13C4 PFOS	*94*		*50 - 150*	*02/24/20 13:43*	*02/25/20 19:03*	*1*
13C5 PFNA	*88*		*50 - 150*	*02/24/20 13:43*	*02/25/20 19:03*	*1*
13C4 PFBA	*100*		*25 - 150*	*02/24/20 13:43*	*02/25/20 19:03*	*1*
13C2 PFHxA	*91*		*50 - 150*	*02/24/20 13:43*	*02/25/20 19:03*	*1*
13C2 PFDA	*94*		*50 - 150*	*02/24/20 13:43*	*02/25/20 19:03*	*1*
13C2 PFUnA	*79*		*50 - 150*	*02/24/20 13:43*	*02/25/20 19:03*	*1*
13C2 PFDoA	*73*		*50 - 150*	*02/24/20 13:43*	*02/25/20 19:03*	*1*
13C8 FOSA	*62*		*25 - 150*	*02/24/20 13:43*	*02/25/20 19:03*	*1*
13C5 PFPeA	*100*		*25 - 150*	*02/24/20 13:43*	*02/25/20 19:03*	*1*
13C2 PFTeDA	*68*		*50 - 150*	*02/24/20 13:43*	*02/25/20 19:03*	*1*
d3-NMeFOSAA	*95*		*50 - 150*	*02/24/20 13:43*	*02/25/20 19:03*	*1*
d5-NEtFOSAA	*82*		*50 - 150*	*02/24/20 13:43*	*02/25/20 19:03*	*1*
M2-6:2 FTS	*93*		*25 - 150*	*02/24/20 13:43*	*02/25/20 19:03*	*1*
M2-8:2 FTS	*92*		*25 - 150*	*02/24/20 13:43*	*02/25/20 19:03*	*1*
13C3 PFBS	*84*		*50 - 150*	*02/24/20 13:43*	*02/25/20 19:03*	*1*

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

Lab Sample ID: LCS 200-152665/2-A
Matrix: Water
Analysis Batch: 152696

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 152665

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	40.0	45.6		ng/L		114	50 - 150
Perfluoropentanoic acid (PFPeA)	40.0	38.0		ng/L		95	50 - 150
Perfluorohexanoic acid (PFHxA)	40.0	42.5		ng/L		106	70 - 130
Perfluoroheptanoic acid (PFHpA)	40.0	37.7		ng/L		94	70 - 130
Perfluorooctanoic acid (PFOA)	40.0	44.2		ng/L		110	70 - 130
Perfluorononanoic acid (PFNA)	40.0	36.8		ng/L		92	70 - 130
Perfluorodecanoic acid (PFDA)	40.0	41.2		ng/L		103	70 - 130
Perfluoroundecanoic acid (PFUnA)	40.0	39.3		ng/L		98	70 - 130
Perfluorododecanoic acid (PFDoA)	40.0	43.3		ng/L		108	70 - 130
Perfluorotridecanoic acid (PFTriA)	40.0	34.9		ng/L		87	70 - 130
Perfluorotetradecanoic acid (PFTeA)	40.0	42.5		ng/L		106	70 - 130
Perfluorobutanesulfonic acid (PFBS)	35.4	36.4		ng/L		103	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	36.4	32.8		ng/L		90	70 - 130
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	40.0		ng/L		105	50 - 150
Perfluorooctanesulfonic acid (PFOS)	37.1	36.1		ng/L		97	70 - 130
Perfluorodecanesulfonic acid (PFDS)	38.6	29.6		ng/L		77	50 - 150
Perfluorooctanesulfonamide (PFOSA)	40.0	35.2		ng/L		88	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	44.8		ng/L		112	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	42.3		ng/L		106	70 - 130
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	37.9	33.0		ng/L		87	50 - 150
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	38.3	34.6		ng/L		90	50 - 150

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
18O2 PFHxS	*95*		*50 - 150*
13C4 PFHpA	*97*		*50 - 150*
13C4 PFOA	*90*		*50 - 150*
13C4 PFOS	*93*		*50 - 150*
13C5 PFNA	*88*		*50 - 150*
13C4 PFBA	*96*		*25 - 150*
13C2 PFHxA	*81*		*50 - 150*
13C2 PFDA	*89*		*50 - 150*
13C2 PFUnA	*78*		*50 - 150*
13C2 PFDoA	*65*		*50 - 150*
13C8 FOSA	*60*		*25 - 150*
13C5 PFPeA	*97*		*25 - 150*
13C2 PFTeDA	*69*		*50 - 150*
d3-NMeFOSAA	*96*		*50 - 150*
d5-NEtFOSAA	*94*		*50 - 150*

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

Lab Sample ID: LCS 200-152665/2-A
Matrix: Water
Analysis Batch: 152696

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 152665

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
M2-6:2 FTS	94		25 - 150
M2-8:2 FTS	98		25 - 150
13C3 PFBS	85		50 - 150

Lab Sample ID: 480-166551-1 MS
Matrix: Water
Analysis Batch: 152696

Client Sample ID: SW-01-021920-EC-MS
Prep Type: Total/NA
Prep Batch: 152665

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	ND		35.3	34.7		ng/L		98	40 - 160
Perfluoropentanoic acid (PFPeA)	ND		35.3	31.3		ng/L		89	40 - 160
Perfluorohexanoic acid (PFHxA)	ND		35.3	38.3		ng/L		108	40 - 160
Perfluoroheptanoic acid (PFHpA)	ND		35.3	34.4		ng/L		97	40 - 160
Perfluorooctanoic acid (PFOA)	ND		35.3	38.9		ng/L		110	40 - 160
Perfluorononanoic acid (PFNA)	ND		35.3	31.0		ng/L		88	40 - 160
Perfluorodecanoic acid (PFDA)	ND		35.3	34.7		ng/L		98	40 - 160
Perfluoroundecanoic acid (PFUnA)	ND		35.3	33.2		ng/L		94	40 - 160
Perfluorododecanoic acid (PFDoA)	ND		35.3	35.4		ng/L		100	40 - 160
Perfluorotridecanoic acid (PFTriA)	ND		35.3	33.6		ng/L		95	40 - 160
Perfluorotetradecanoic acid (PFTeA)	ND		35.3	36.7		ng/L		104	40 - 160
Perfluorobutanesulfonic acid (PFBS)	ND		31.2	31.2		ng/L		100	40 - 160
Perfluorohexanesulfonic acid (PFHxS)	ND		32.1	31.4		ng/L		98	40 - 160
Perfluoroheptanesulfonic Acid (PFHpS)	ND		33.6	32.3		ng/L		96	40 - 160
Perfluorooctanesulfonic acid (PFOS)	ND		32.8	31.6		ng/L		97	40 - 160
Perfluorodecanesulfonic acid (PFDS)	ND		34.0	29.2		ng/L		86	40 - 160
Perfluorooctanesulfonamide (PFOSA)	ND		35.3	35.5		ng/L		101	40 - 160
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		35.3	38.0		ng/L		108	40 - 160
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		35.3	33.4		ng/L		95	40 - 160
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		33.5	30.8		ng/L		92	40 - 160
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		33.8	25.2		ng/L		75	40 - 160

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
18O2 PFHxS	103		50 - 150
13C4 PFHpA	105		50 - 150
13C4 PFOA	101		50 - 150
13C4 PFOS	107		50 - 150
13C5 PFNA	95		50 - 150
13C4 PFBA	104		25 - 150

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

Lab Sample ID: 480-166551-1 MS
Matrix: Water
Analysis Batch: 152696

Client Sample ID: SW-01-021920-EC-MS
Prep Type: Total/NA
Prep Batch: 152665

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C2 PFHxA	93		50 - 150
13C2 PFDA	101		50 - 150
13C2 PFUnA	94		50 - 150
13C2 PFDoA	92		50 - 150
13C8 FOSA	94		25 - 150
13C5 PFPeA	102		25 - 150
13C2 PFTeDA	96		50 - 150
d3-NMeFOSAA	104		50 - 150
d5-NEtFOSAA	121		50 - 150
M2-6:2 FTS	100		25 - 150
M2-8:2 FTS	113		25 - 150
13C3 PFBS	94		50 - 150

Lab Sample ID: 480-166551-1 MSD
Matrix: Water
Analysis Batch: 152696

Client Sample ID: SW-01-021920-EC-MSD
Prep Type: Total/NA
Prep Batch: 152665

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	ND		36.1	34.3		ng/L		95	40 - 160	1	30
Perfluoropentanoic acid (PFPeA)	ND		36.1	32.8		ng/L		91	40 - 160	5	30
Perfluorohexanoic acid (PFHxA)	ND		36.1	34.3		ng/L		95	40 - 160	11	20
Perfluoroheptanoic acid (PFHpA)	ND		36.1	34.2		ng/L		95	40 - 160	1	20
Perfluorooctanoic acid (PFOA)	ND		36.1	38.3		ng/L		106	40 - 160	2	20
Perfluorononanoic acid (PFNA)	ND		36.1	28.1		ng/L		78	40 - 160	10	20
Perfluorodecanoic acid (PFDA)	ND		36.1	35.5		ng/L		98	40 - 160	2	20
Perfluoroundecanoic acid (PFUnA)	ND		36.1	33.5		ng/L		93	40 - 160	1	20
Perfluorododecanoic acid (PFDoA)	ND		36.1	36.8		ng/L		102	40 - 160	4	20
Perfluorotridecanoic acid (PFTriA)	ND		36.1	34.8		ng/L		96	40 - 160	4	20
Perfluorotetradecanoic acid (PFTeA)	ND		36.1	37.4		ng/L		104	40 - 160	2	20
Perfluorobutanesulfonic acid (PFBS)	ND		31.9	32.3		ng/L		101	40 - 160	3	20
Perfluorohexanesulfonic acid (PFHxS)	ND		32.9	25.7		ng/L		78	40 - 160	20	20
Perfluoroheptanesulfonic Acid (PFHpS)	ND		34.4	34.1		ng/L		99	40 - 160	5	30
Perfluorooctanesulfonic acid (PFOS)	ND		33.5	33.6		ng/L		100	40 - 160	6	20
Perfluorodecanesulfonic acid (PFDS)	ND		34.8	34.6		ng/L		99	40 - 160	17	30
Perfluorooctanesulfonamide (PFOSA)	ND		36.1	34.3		ng/L		95	40 - 160	4	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		36.1	36.9		ng/L		102	40 - 160	3	20
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		36.1	36.5		ng/L		101	40 - 160	9	20
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		34.2	30.1		ng/L		88	40 - 160	2	30

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

Lab Sample ID: 480-166551-1 MSD
Client Sample ID: SW-01-021920-EC-MSD
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 152696
Prep Batch: 152665

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		34.6	26.7		ng/L		77	40 - 160	6	30

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
18O2 PFHxS	*107*		*50 - 150*
13C4 PFHpA	*106*		*50 - 150*
13C4 PFOA	*105*		*50 - 150*
13C4 PFOS	*111*		*50 - 150*
13C5 PFNA	*106*		*50 - 150*
13C4 PFBA	*112*		*25 - 150*
13C2 PFHxA	*104*		*50 - 150*
13C2 PFDA	*102*		*50 - 150*
13C2 PFUnA	*104*		*50 - 150*
13C2 PFDoA	*95*		*50 - 150*
13C8 FOSA	*102*		*25 - 150*
13C5 PFPeA	*112*		*25 - 150*
13C2 PFTeDA	*102*		*50 - 150*
d3-NMeFOSAA	*119*		*50 - 150*
d5-NEtFOSAA	*113*		*50 - 150*
M2-6:2 FTS	*112*		*25 - 150*
M2-8:2 FTS	*122*		*25 - 150*
13C3 PFBS	*104*		*50 - 150*

Qualifiers

LCMS

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

QC Association Summary

Client: AECOM
Job ID: 480-166551-1
Project/Site: Residential PFAS Water Analysis

LCMS

Prep Batch: 152665

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-166551-1	SW-01-021920-EC	Total/NA	Water	3535	
480-166551-2	FB-021920	Total/NA	Water	3535	
480-166551-3	BW-01-021920-EC	Total/NA	Water	3535	
480-166551-4	FD-021920	Total/NA	Water	3535	
MB 200-152665/1-A	Method Blank	Total/NA	Water	3535	
LCS 200-152665/2-A	Lab Control Sample	Total/NA	Water	3535	
480-166551-1 MS	SW-01-021920-EC-MS	Total/NA	Water	3535	
480-166551-1 MSD	SW-01-021920-EC-MSD	Total/NA	Water	3535	

Analysis Batch: 152696

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-166551-1	SW-01-021920-EC	Total/NA	Water	537 (modified)	152665
480-166551-2	FB-021920	Total/NA	Water	537 (modified)	152665
480-166551-3	BW-01-021920-EC	Total/NA	Water	537 (modified)	152665
480-166551-4	FD-021920	Total/NA	Water	537 (modified)	152665
MB 200-152665/1-A	Method Blank	Total/NA	Water	537 (modified)	152665
LCS 200-152665/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	152665
480-166551-1 MS	SW-01-021920-EC-MS	Total/NA	Water	537 (modified)	152665
480-166551-1 MSD	SW-01-021920-EC-MSD	Total/NA	Water	537 (modified)	152665

Lab Chronicle

Client: AECOM
Job ID: 480-166551-1
Project/Site: Residential PFAS Water Analysis

Client Sample ID: SW-01-021920-EC
Lab Sample ID: 480-166551-1
Date Collected: 02/19/20 08:20
Matrix: Water
Date Received: 02/19/20 15:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			152665	02/24/20 13:43	ND	TAL BUR
Total/NA	Analysis	537 (modified)		1	152696	02/25/20 21:16	JM1	TAL BUR

Client Sample ID: FB-021920
Lab Sample ID: 480-166551-2
Date Collected: 02/19/20 08:22
Matrix: Water
Date Received: 02/19/20 15:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			152665	02/24/20 13:43	ND	TAL BUR
Total/NA	Analysis	537 (modified)		1	152696	02/25/20 21:40	JM1	TAL BUR

Client Sample ID: BW-01-021920-EC
Lab Sample ID: 480-166551-3
Date Collected: 02/19/20 13:10
Matrix: Water
Date Received: 02/19/20 15:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			152665	02/24/20 13:43	ND	TAL BUR
Total/NA	Analysis	537 (modified)		1	152696	02/25/20 21:49	JM1	TAL BUR

Client Sample ID: FD-021920
Lab Sample ID: 480-166551-4
Date Collected: 02/19/20 00:00
Matrix: Water
Date Received: 02/19/20 15:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			152665	02/24/20 13:43	ND	TAL BUR
Total/NA	Analysis	537 (modified)		1	152696	02/25/20 21:57	JM1	TAL BUR

Laboratory References:

TAL BUR = Eurofins TestAmerica, Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Accreditation/Certification Summary

Client: AECOM
Job ID: 480-166551-1
Project/Site: Residential PFAS Water Analysis

Laboratory: Eurofins TestAmerica, Buffalo

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	04-01-20 *

Laboratory: Eurofins TestAmerica, Burlington

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

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10391	03-31-20

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
537 (modified)	3535	Water	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)
537 (modified)	3535	Water	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)
537 (modified)	3535	Water	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)
537 (modified)	3535	Water	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)
537 (modified)	3535	Water	Perfluorobutanesulfonic acid (PFBS)
537 (modified)	3535	Water	Perfluorobutanoic acid (PFBA)
537 (modified)	3535	Water	Perfluorodecanesulfonic acid (PFDS)
537 (modified)	3535	Water	Perfluorodecanoic acid (PFDA)
537 (modified)	3535	Water	Perfluorododecanoic acid (PFDoA)
537 (modified)	3535	Water	Perfluoroheptanesulfonic Acid (PFHpS)
537 (modified)	3535	Water	Perfluoroheptanoic acid (PFHpA)
537 (modified)	3535	Water	Perfluorohexanesulfonic acid (PFHxS)
537 (modified)	3535	Water	Perfluorohexanoic acid (PFHxA)
537 (modified)	3535	Water	Perfluorononanoic acid (PFNA)
537 (modified)	3535	Water	Perfluorooctanesulfonamide (PFOSA)
537 (modified)	3535	Water	Perfluorooctanesulfonic acid (PFOS)
537 (modified)	3535	Water	Perfluorooctanoic acid (PFOA)
537 (modified)	3535	Water	Perfluoropentanoic acid (PFPeA)
537 (modified)	3535	Water	Perfluorotetradecanoic acid (PFTeA)
537 (modified)	3535	Water	Perfluorotridecanoic acid (PFTriA)
537 (modified)	3535	Water	Perfluoroundecanoic acid (PFUnA)

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

PFC_IDA

Fluorinated Alkyl Substances

FORM II
LCMS SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): C-18 ID: 4.6 (mm)

Client Sample ID	Lab Sample ID	PFBA #	PFPeA #	PFBS #	PFHxA #	PFHpA #	PFHxS #	M262FTS #	PFOA #
SW-01-021920-EC	480-166551-1	109	112	97	103	100	106	109	104
FB-021920	480-166551-2	102	111	101	99	100	106	106	103
BW-01-021920-EC	480-166551-3	108	118	100	97	103	101	121	101
FD-021920	480-166551-4	110	119	97	103	106	105	109	107
	MB 200-152665/1-A	100	100	84	91	97	98	93	91
	LCS 200-152665/2-A	96	97	85	81	97	95	94	90
SW-01-021920-EC-MS MS	480-166551-1 MS	104	102	94	93	105	103	100	101
SW-01-021920-EC-MS D MSD	480-166551-1 MSD	112	112	104	104	106	107	112	105

	QC LIMITS
PFBA = 13C4 PFBA	25-150
PFPeA = 13C5 PFPeA	25-150
PFBS = 13C3 PFBS	50-150
PFHxA = 13C2 PFHxA	50-150
PFHxS = 18O2 PFHxS	50-150
PFHpA = 13C4 PFHpA	50-150
M262FTS = M2-6:2 FTS	25-150
PFOA = 13C4 PFOA	50-150

Column to be used to flag recovery values

FORM II 537 (modified)

FORM II
LCMS SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): C-18 ID: 4.6 (mm)

Client Sample ID	Lab Sample ID	PFOS #	PFNA #	PFDA #	M282FTS #	PFOSA #	d3NMFOS #	d5NEFOS #	PFUnA #
SW-01-021920-EC	480-166551-1	112	107	102	113	103	103	111	95
FB-021920	480-166551-2	113	102	107	121	94	111	93	99
BW-01-021920-EC	480-166551-3	110	103	106	96	101	107	101	94
FD-021920	480-166551-4	113	109	109	111	108	125	104	90
	MB 200-152665/1-A	94	88	94	92	62	95	82	79
	LCS 200-152665/2-A	93	88	89	98	60	96	94	78
SW-01-021920-EC-MS MS	480-166551-1 MS	107	95	101	113	94	104	121	94
SW-01-021920-EC-MS D MSD	480-166551-1 MSD	111	106	102	122	102	119	113	104

	QC LIMITS
PFOS = 13C4 PFOS	50-150
PFNA = 13C5 PFNA	50-150
PFDA = 13C2 PFDA	50-150
M282FTS = M2-8:2 FTS	25-150
PFOSA = 13C8 FOSA	25-150
d3NMFOS = d3-NMeFOSAA	50-150
d5NEFOS = d5-NEtFOSAA	50-150
PFUnA = 13C2 PFUnA	50-150

Column to be used to flag recovery values

FORM II 537 (modified)

FORM II
LCMS SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): C-18 ID: 4.6 (mm)

Client Sample ID	Lab Sample ID	PFDoA #	PFTDA #
SW-01-021920-EC	480-166551-1	94	97
FB-021920	480-166551-2	95	87
BW-01-021920-EC	480-166551-3	96	95
FD-021920	480-166551-4	96	99
	MB 200-152665/1-A	73	68
	LCS 200-152665/2-A	65	69
SW-01-021920-EC-MS MS	480-166551-1 MS	92	96
SW-01-021920-EC-MS D MSD	480-166551-1 MSD	95	102

	QC LIMITS
PFDoA = 13C2 PFDoA	50-150
PFTDA = 13C2 PFTeDA	50-150

Column to be used to flag recovery values

FORM II 537 (modified)

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Matrix: Water Level: Low Lab File ID: SC022520C03.d

Lab ID: LCS 200-152665/2-A Client ID:

COMPOUND	SPIKE ADDED (ng/L)	LCS CONCENTRATION (ng/L)	LCS % REC	QC LIMITS REC	#
Perfluorobutanoic acid (PFBA)	40.0	45.6	114	50-150	
Perfluoropentanoic acid (PFPeA)	40.0	38.0	95	50-150	
Perfluorohexanoic acid (PFHxA)	40.0	42.5	106	70-130	
Perfluoroheptanoic acid (PFHpA)	40.0	37.7	94	70-130	
Perfluorooctanoic acid (PFOA)	40.0	44.2	110	70-130	
Perfluorononanoic acid (PFNA)	40.0	36.8	92	70-130	
Perfluorodecanoic acid (PFDA)	40.0	41.2	103	70-130	
Perfluoroundecanoic acid (PFUnA)	40.0	39.3	98	70-130	
Perfluorododecanoic acid (PFDoA)	40.0	43.3	108	70-130	
Perfluorotridecanoic acid (PFTriA)	40.0	34.9	87	70-130	
Perfluorotetradecanoic acid (PFTeA)	40.0	42.5	106	70-130	
Perfluorobutanesulfonic acid (PFBS)	35.4	36.4	103	70-130	
Perfluorohexanesulfonic acid (PFHxS)	36.4	32.8	90	70-130	
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	40.0	105	50-150	
Perfluorooctanesulfonic acid (PFOS)	37.1	36.1	97	70-130	
Perfluorodecanesulfonic acid (PFDS)	38.6	29.6	77	50-150	
Perfluorooctanesulfonamide (PFOSA)	40.0	35.2	88	50-150	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	44.8	112	70-130	
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	42.3	106	70-130	
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	37.9	33.0	87	50-150	
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	38.3	34.6	90	50-150	
18O2 PFHxS	94.6	90.0	95	50-150	
13C4 PFHpA	100	97.0	97	50-150	
13C4 PFOA	100	89.6	90	50-150	
13C4 PFOS	95.6	88.9	93	50-150	
13C5 PFNA	100	87.7	88	50-150	
13C4 PFBA	100	95.6	96	25-150	
13C2 PFHxA	100	81.4	81	50-150	
13C2 PFDA	100	89.1	89	50-150	
13C2 PFUnA	100	78.3	78	50-150	

Column to be used to flag recovery and RPD values

FORM III 537 (modified)

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Matrix: Water Level: Low Lab File ID: SC022520C03.d

Lab ID: LCS 200-152665/2-A Client ID:

COMPOUND	SPIKE ADDED (ng/L)	LCS CONCENTRATION (ng/L)	LCS % REC	QC LIMITS REC	#
13C2 PFDoA	100	65.1	65	50-150	
13C8 FOSA	100	59.5	60	25-150	
13C5 PFPeA	100	96.6	97	25-150	
13C2 PFTeDA	100	68.7	69	50-150	
d3-NMeFOSAA	100	96.0	96	50-150	
d5-NEtFOSAA	100	94.1	94	50-150	
M2-6:2 FTS	95.0	88.9	94	25-150	
M2-8:2 FTS	95.8	93.6	98	25-150	
13C3 PFBS	93.0	79.1	85	50-150	

Column to be used to flag recovery and RPD values

FORM III 537 (modified)

FORM III
LCMS MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Matrix: Water Level: Low Lab File ID: SC022520C19.d

Lab ID: 480-166551-1 MS Client ID: SW-01-021920-EC-MS MS

COMPOUND	SPIKE ADDED (ng/L)	SAMPLE CONCENTRATION (ng/L)	MS CONCENTRATION (ng/L)	MS % REC	QC LIMITS REC	#
Perfluorobutanoic acid (PFBA)	35.3	ND	34.7	98	40-160	
Perfluoropentanoic acid (PFPeA)	35.3	ND	31.3	89	40-160	
Perfluorohexanoic acid (PFHxA)	35.3	ND	38.3	108	40-160	
Perfluoroheptanoic acid (PFHpA)	35.3	ND	34.4	97	40-160	
Perfluorooctanoic acid (PFOA)	35.3	ND	38.9	110	40-160	
Perfluorononanoic acid (PFNA)	35.3	ND	31.0	88	40-160	
Perfluorodecanoic acid (PFDA)	35.3	ND	34.7	98	40-160	
Perfluoroundecanoic acid (PFUnA)	35.3	ND	33.2	94	40-160	
Perfluorododecanoic acid (PFDoA)	35.3	ND	35.4	100	40-160	
Perfluorotridecanoic acid (PFTriA)	35.3	ND	33.6	95	40-160	
Perfluorotetradecanoic acid (PFTeA)	35.3	ND	36.7	104	40-160	
Perfluorobutanesulfonic acid (PFBS)	31.2	ND	31.2	100	40-160	
Perfluorohexanesulfonic acid (PFHxS)	32.1	ND	31.4	98	40-160	
Perfluoroheptanesulfonic Acid (PFHpS)	33.6	ND	32.3	96	40-160	
Perfluorooctanesulfonic acid (PFOS)	32.8	ND	31.6	97	40-160	
Perfluorodecanesulfonic acid (PFDS)	34.0	ND	29.2	86	40-160	
Perfluorooctanesulfonamide (PFOSA)	35.3	ND	35.5	101	40-160	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	35.3	ND	38.0	108	40-160	
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	35.3	ND	33.4	95	40-160	
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	33.5	ND	30.8	92	40-160	
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	33.8	ND	25.2	75	40-160	
18O2 PFHxS	83.5	88	86.1	103	50-150	
13C4 PFHpA	88.2	88	92.9	105	50-150	
13C4 PFOA	88.2	91	89.5	101	50-150	
13C4 PFOS	84.4	94	90.1	107	50-150	
13C5 PFNA	88.2	94	83.6	95	50-150	
13C4 PFBA	88.2	96	91.9	104	25-150	
13C2 PFHxA	88.2	90	82.0	93	50-150	
13C2 PFDA	88.2	89	89.3	101	50-150	
13C2 PFUnA	88.2	83	82.6	94	50-150	

Column to be used to flag recovery and RPD values

FORM III 537 (modified)

FORM III
LCMS MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Matrix: Water Level: Low Lab File ID: SC022520C19.d

Lab ID: 480-166551-1 MS Client ID: SW-01-021920-EC-MS MS

COMPOUND	SPIKE ADDED (ng/L)	SAMPLE CONCENTRATION (ng/L)	MS CONCENTRATION (ng/L)	MS % REC	QC LIMITS REC	#
13C2 PFDoA	88.2	83	81.1	92	50-150	
13C8 FOSA	88.2	91	82.9	94	25-150	
13C5 PFPeA	88.2	98	90.3	102	25-150	
13C2 PFTeDA	88.2	85	84.8	96	50-150	
d3-NMeFOSAA	88.2	90	91.9	104	50-150	
d5-NEtFOSAA	88.2	97	107	121	50-150	
M2-6:2 FTS	83.8	91	83.7	100	25-150	
M2-8:2 FTS	84.5	95	95.6	113	25-150	
13C3 PFBS	82.1	79	76.9	94	50-150	

Column to be used to flag recovery and RPD values

FORM III 537 (modified)

FORM III
LCMS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Matrix: Water Level: Low Lab File ID: SC022520C20.d

Lab ID: 480-166551-1 MSD Client ID: SW-01-021920-EC-MSD MSD

COMPOUND	SPIKE ADDED (ng/L)	MSD CONCENTRATION (ng/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Perfluorobutanoic acid (PFBA)	36.1	34.3	95	1	30	40-160	
Perfluoropentanoic acid (PFPeA)	36.1	32.8	91	5	30	40-160	
Perfluorohexanoic acid (PFHxA)	36.1	34.3	95	11	20	40-160	
Perfluoroheptanoic acid (PFHpA)	36.1	34.2	95	1	20	40-160	
Perfluorooctanoic acid (PFOA)	36.1	38.3	106	2	20	40-160	
Perfluorononanoic acid (PFNA)	36.1	28.1	78	10	20	40-160	
Perfluorodecanoic acid (PFDA)	36.1	35.5	98	2	20	40-160	
Perfluoroundecanoic acid (PFUnA)	36.1	33.5	93	1	20	40-160	
Perfluorododecanoic acid (PFDoA)	36.1	36.8	102	4	20	40-160	
Perfluorotridecanoic acid (PFTriA)	36.1	34.8	96	4	20	40-160	
Perfluorotetradecanoic acid (PFTeA)	36.1	37.4	104	2	20	40-160	
Perfluorobutanesulfonic acid (PFBS)	31.9	32.3	101	3	20	40-160	
Perfluorohexanesulfonic acid (PFHxS)	32.9	25.7	78	20	20	40-160	
Perfluoroheptanesulfonic Acid (PFHpS)	34.4	34.1	99	5	30	40-160	
Perfluorooctanesulfonic acid (PFOS)	33.5	33.6	100	6	20	40-160	
Perfluorodecanesulfonic acid (PFDS)	34.8	34.6	99	17	30	40-160	
Perfluorooctanesulfonamide (PFOSA)	36.1	34.3	95	4	30	40-160	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	36.1	36.9	102	3	20	40-160	
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	36.1	36.5	101	9	20	40-160	
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	34.2	30.1	88	2	30	40-160	
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	34.6	26.7	77	6	30	40-160	
18O2 PFHxS	85.4	91.2	107			50-150	
13C4 PFHpA	90.3	95.6	106			50-150	
13C4 PFOA	90.3	94.6	105			50-150	
13C4 PFOS	86.3	95.4	111			50-150	
13C5 PFNA	90.3	95.9	106			50-150	
13C4 PFBA	90.3	101	112			25-150	
13C2 PFHxA	90.3	93.5	104			50-150	
13C2 PFDA	90.3	91.9	102			50-150	
13C2 PFUnA	90.3	94.0	104			50-150	

Column to be used to flag recovery and RPD values

FORM III 537 (modified)

FORM III
LCMS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Matrix: Water Level: Low Lab File ID: SC022520C20.d

Lab ID: 480-166551-1 MSD Client ID: SW-01-021920-EC-MSD MSD

COMPOUND	SPIKE ADDED (ng/L)	MSD CONCENTRATION (ng/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
13C2 PFDoA	90.3	86.1	95			50-150	
13C8 FOSA	90.3	91.9	102			25-150	
13C5 PFPeA	90.3	101	112			25-150	
13C2 PFTeDA	90.3	91.7	102			50-150	
d3-NMeFOSAA	90.3	108	119			50-150	
d5-NEtFOSAA	90.3	102	113			50-150	
M2-6:2 FTS	85.7	95.7	112			25-150	
M2-8:2 FTS	86.5	105	122			25-150	
13C3 PFBS	83.9	86.9	104			50-150	

Column to be used to flag recovery and RPD values

FORM III 537 (modified)

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Lab File ID: SC022520C02.d Lab Sample ID: MB 200-152665/1-A

Matrix: Water Date Extracted: 02/24/2020 13:43

Instrument ID: LC812 Date Analyzed: 02/25/2020 19:03

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 200-152665/2-A	SC022520C03.d	02/25/2020 19:11
SW-01-021920-EC	480-166551-1	SC022520C18.d	02/25/2020 21:16
SW-01-021920-EC-MS MS	480-166551-1 MS	SC022520C19.d	02/25/2020 21:24
SW-01-021920-EC-MSD MSD	480-166551-1 MSD	SC022520C20.d	02/25/2020 21:32
FB-021920	480-166551-2	SC022520C21.d	02/25/2020 21:40
BW-01-021920-EC	480-166551-3	SC022520C22.d	02/25/2020 21:49
FD-021920	480-166551-4	SC022520C23.d	02/25/2020 21:57

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Sample No.: ICIS 200-152172/8 Date Analyzed: 02/10/2020 12:13

Instrument ID: LC812 GC Column: C-18 ID: 4.6(mm)

Lab File ID (Standard): SC021020ICAL008.d Heated Purge: (Y/N) N

Calibration ID: 43029

		13PFOA					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		2075649	3.43				
UPPER LIMIT		3113474	3.63				
LOWER LIMIT		1037825	3.23				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 200-152172/12		2375371	3.43				
CCVL 200-152693/5		2150552	3.64				
CCVIS 200-152693/6		2104973	3.64				

13PFOA = 13C2 PFOA

Area Limit = 50%-150% of internal standard area
RT Limit = ± 0.2 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 537 (MODIFIED)

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Sample No.: CCVIS 200-152693/6 Date Analyzed: 02/25/2020 13:32

Instrument ID: LC812 GC Column: C-18 ID: 4.6(mm)

Lab File ID (Standard): SC022520A06.d Heated Purge: (Y/N) N

Calibration ID: 43029

		13PFOA					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		2104973	3.64				
UPPER LIMIT		3157460	3.84				
LOWER LIMIT		1052487	3.44				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 200-152696/1		2235668	3.62				
MB 200-152665/1-A		2379278	3.61				
LCS 200-152665/2-A		2368227	3.61				
CCV 200-152696/17		2064475	3.61				
480-166551-1	SW-01-021920-EC	2027994	3.60				
480-166551-1 MS	SW-01-021920-EC-MS MS	2038011	3.60				
480-166551-1 MSD	SW-01-021920-EC-MSD MSD	1178647	3.59				
480-166551-2	FB-021920	1971245	3.60				
480-166551-3	BW-01-021920-EC	1896106	3.59				
480-166551-4	FD-021920	1337147	3.60				
CCV 200-152696/26		1800498	3.60				

13PFOA = 13C2 PFOA

Area Limit = 50%-150% of internal standard area
RT Limit = ± 0.2 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 537 (MODIFIED)

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Client Sample ID: SW-01-021920-EC Lab Sample ID: 480-166551-1

Matrix: Water Lab File ID: SC022520C18.d

Analysis Method: 537 (modified) Date Collected: 02/19/2020 08:20

Extraction Method: 3535 Date Extracted: 02/24/2020 13:43

Sample wt/vol: 285.7(mL) Date Analyzed: 02/25/2020 21:16

Con. Extract Vol.: 10(mL) Dilution Factor: 1

Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 152696 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	ND		1.8	0.88
2706-90-3	Perfluoropentanoic acid (PFPeA)	ND		1.8	0.55
307-24-4	Perfluorohexanoic acid (PFHxA)	ND		1.8	0.67
375-85-9	Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.80
335-67-1	Perfluorooctanoic acid (PFOA)	ND		1.8	0.71
375-95-1	Perfluorononanoic acid (PFNA)	ND		1.8	0.24
335-76-2	Perfluorodecanoic acid (PFDA)	ND		1.8	0.67
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.68
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		1.8	0.52
72629-94-8	Perfluorotridecanoic acid (PFTriA)	ND		1.8	0.53
376-06-7	Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.81
375-73-5	Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.43
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	ND		1.8	0.70
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.83
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.53
335-77-3	Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.79
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND		8.8	8.8
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		18	1.5
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		18	1.3
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		18	4.8
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		18	2.5

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Client Sample ID: SW-01-021920-EC Lab Sample ID: 480-166551-1

Matrix: Water Lab File ID: SC022520C18.d

Analysis Method: 537 (modified) Date Collected: 02/19/2020 08:20

Extraction Method: 3535 Date Extracted: 02/24/2020 13:43

Sample wt/vol: 285.7(mL) Date Analyzed: 02/25/2020 21:16

Con. Extract Vol.: 10(mL) Dilution Factor: 1

Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 152696 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	106		50-150
STL01892	13C4 PFHpA	100		50-150
STL00990	13C4 PFOA	104		50-150
STL00991	13C4 PFOS	112		50-150
STL00995	13C5 PFNA	107		50-150
STL00992	13C4 PFBA	109		25-150
STL00993	13C2 PFHxA	103		50-150
STL00996	13C2 PFDA	102		50-150
STL00997	13C2 PFUnA	95		50-150
STL00998	13C2 PFDoA	94		50-150
STL01056	13C8 FOSA	103		25-150
STL01893	13C5 PFPeA	112		25-150
STL02116	13C2 PFTeDA	97		50-150
STL02118	d3-NMeFOSAA	103		50-150
STL02117	d5-NEtFOSAA	111		50-150
STL02279	M2-6:2 FTS	109		25-150
STL02280	M2-8:2 FTS	113		25-150
STL02337	13C3 PFBS	97		50-150

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C18.d
Lims ID: 480-166551-A-1-A
Client ID: SW-01-021920-EC
Sample Type: Client
Inject. Date: 25-Feb-2020 21:16:03 ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 480-166551-A-1-A
Misc. Info.: 200-0040162-018 Plate: 1 Rack: 2
Operator ID: lc812tech Instrument ID: LC812

Method: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\PFC_LC812.m
Limit Group: LC_PFC_ICAL
Last Update: 26-Feb-2020 17:13:38 Calib Date: 10-Feb-2020 12:29:33
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL010.d

Column 1 : C-18 (4.60 mm) Det: EXP1
Process Host: CTX0323

First Level Reviewer: murrayjw Date: 26-Feb-2020 10:46:02
Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										
217.00 > 172.00	1.898	1.917	-0.019	0.527	2305073	2.73		109	20173	
2 Perfluorobutanoic acid										M
212.90 > 169.00	1.898	1.917	-0.019	1.000	20940	0.0239			2.6	M
D 3 13C5 PFPeA										
267.90 > 223.00	2.244	2.257	-0.013	0.623	1842851	2.81		112	2254	
4 Perfluoropentanoic acid										M
262.90 > 219.00	2.244	2.271	-0.027	1.000	10505	0.0132			0.9	M
D 47 13C3 PFBS										
301.90 > 80.00	2.258	2.284	-0.026	0.627	1999960	2.26		97.4	786946	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.258	2.284	-0.026	1.000	8443	0.009621	Target=2.19		25.0	
298.90 > 99.00	2.271	2.284	-0.013	1.006	4407		1.92(1.09-3.28)		6.6	
61 1H,1H,2H,2H-perfluorohexanesulfoni										M
327.00 > 307.00	2.586	2.623	-0.037	0.995	1141	0.008806			23.5	M
D 60 M2-4:2 FTS										
329.00 > 81.00	2.598	2.623	-0.025	0.722	156022	2.42		103	219	
D 7 13C2 PFHxA										
315.00 > 270.00	2.636	2.673	-0.037	0.732	1984871	2.58		103	6583	
6 Perfluorohexanoic acid										M
313.00 > 269.00	2.636	2.673	-0.037	1.000	6657	0.008468	Target=12.51		2.8	M
313.00 > 119.00	2.636	2.673	-0.037	1.000	1064		6.26(6.25-18.76)		2.8	M
70 Perfluoropentanesulfonic acid										M
349.00 > 80.00	2.648	2.685	-0.037	0.848	4016	0.004791	Target=3.29		23.2	M
349.00 > 99.00	2.648	2.685	-0.037	0.848	1461		2.75(1.64-4.93)		4.9	M
D 64 13C3 HFPO-DA										
332.10 > 287.00	2.776	2.815	-0.039	0.771	164796	2.71		108	1088	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 11 18O2 PFHxS										
403.00 > 84.00	3.125	3.168	-0.043	0.868	1561979	2.50		106	7804	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.125	3.168	-0.043	1.000	8209	0.0105	Target=4.33		36.0	M
399.00 > 99.00	3.125	3.168	-0.043	1.000	2045		4.01(2.17-6.50)		7.8	M
D 9 13C4 PFHpA										
367.00 > 322.00	3.125	3.168	-0.043	0.868	1853149	2.51		100	6185	
10 Perfluoroheptanoic acid										M
363.00 > 319.00	3.125	3.168	-0.043	1.000	5007	0.006602	Target=3.79		2.7	M
363.00 > 169.00	3.133	3.168	-0.035	1.003	1829		2.74(1.89-5.68)		7.6	M
77 DONA										
377.00 > 251.00	3.187	3.225	-0.038	0.802	8058	0.004205	Target=2.43		10.5	
377.00 > 85.00	3.187	3.225	-0.038	0.802	2858		2.82(1.22-3.65)		7.0	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.584	3.624	-0.040	1.000	5705	0.0544			91.4	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.584	3.624	-0.040	0.996	221619	2.59		109	1514	
D 14 13C4 PFOA										
417.00 > 372.00	3.599	3.640	-0.041	1.000	1983150	2.59		104	10967	
* 62 13C2 PFOA										
415.00 > 370.00	3.599	3.640	-0.041		2027994	2.50			17186	
15 Perfluorooctanoic acid										M
413.00 > 369.00	3.599	3.640	-0.041	1.000	11916	0.0144	Target=2.66		5.7	M
413.00 > 169.00	3.599	3.640	-0.041	1.000	4329		2.75(1.33-3.99)		35.8	M
D 18 13C4 PFOS										
503.00 > 80.00	3.973	4.005	-0.032	1.104	1246046	2.68		112	9992	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.973	4.005	-0.032	1.000	7165	0.0125	Target=5.29		47.4	M
499.00 > 99.00	3.973	4.005	-0.032	1.000	1288		5.56(2.65-7.94)		10.2	M
D 19 13C5 PFNA										
468.00 > 423.00	3.994	4.027	-0.033	1.110	1969756	2.69		107	20269	
20 Perfluorononanoic acid										M
463.00 > 419.00	3.994	4.027	-0.033	1.000	4622	0.005704	Target=7.73		2.5	M
463.00 > 169.00	3.984	4.027	-0.043	0.997	597		7.74(3.87-11.60)		10.2	M
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	4.129	4.164	-0.035	1.039	2700	0.003703			17.5	
D 23 13C2 PFDA										
515.00 > 470.00	4.283	4.305	-0.022	1.190	2035911	2.55		102	13146	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.294	4.317	-0.023	1.193	327517	2.71		113	1858	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.328	4.340	-0.012	1.000	4146	0.004781			32.0	
D 21 13C8 FOSA										
506.00 > 78.00	4.328	4.340	-0.012	1.202	2115581	2.59		103	5025	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.409	4.431	-0.022	1.225	161326	2.57		103	3023	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 N-methylperfluorooctanesulfonamido										M
570.00 > 419.00	4.420	4.443	-0.023	1.003	204	0.003690			4.6	M
D 30 13C2 PFUnA										
565.00 > 520.00	4.524	4.537	-0.013	1.257	1655843	2.38		95.3	5779	
31 Perfluoroundecanoic acid										M
563.00 > 519.00	4.524	4.551	-0.027	1.000	6826	0.0114	Target=7.31		6.6	
563.00 > 169.00	4.510	4.551	-0.041	0.997	767		8.90(3.66-10.97)		9.7	M
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.524	4.551	-0.027	1.257	199143	2.78		111	1328	
33 N-ethylperfluorooctanesulfonamidoa										M
584.00 > 419.00	4.537	4.563	-0.026	1.003	470	0.007405			3.2	M
66 11-Chloroeicosafluoro-3-oxaundecan										
631.00 > 451.00	4.602	4.626	-0.024	1.158	3265	0.003940			24.8	
D 36 13C2 PFDoA										
615.00 > 570.00	4.724	4.744	-0.020	1.312	1837305	2.36		94.5	7274	
74 1H,1H,2H,2H-perfluorododecanesulfo										M
627.00 > 607.00	4.724	4.764	-0.040	1.100	121	0.002665			2.2	M
D 43 13C2 PFTeDA										
715.00 > 670.00	5.076	5.108	-0.032	1.410	1614598	2.42		96.7	8580	
42 Perfluorotetradecanoic acid										M
713.00 > 169.00	5.076	5.120	-0.044	1.000	897	0.008927	Target=1.15		14.6	M
713.00 > 219.00	5.067	5.120	-0.053	0.998	881		1.02(0.58-1.73)		16.8	M
D 44 13C2 PFHxDA										
815.00 > 770.00	5.413	5.465	-0.052	1.504	1546229	2.13		85.2	4670	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.413	5.465	-0.052	1.000	15190	-0.003069	Target=4.36		5.3	
813.00 > 169.00	5.413	5.465	-0.052	1.000	4234		3.59(2.18-6.53)		88.4	

QC Flag Legend

Review Flags

M - Manually Integrated

Report Date: 26-Feb-2020 17:13:41 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C18.d

Injection Date: 25-Feb-2020 21:16:03 Instrument ID: LC812

Lims ID: 480-166551-A-1-A Lab Sample ID: 200-166551-1

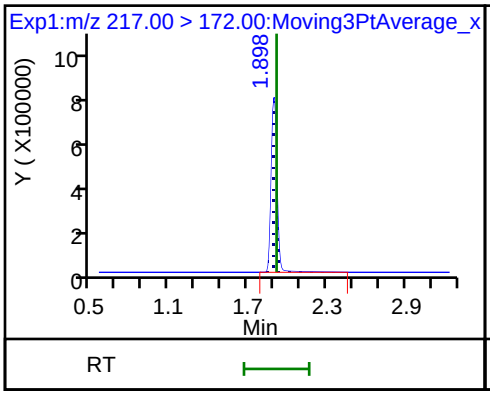
Client ID: SW-01-021920-EC

Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18

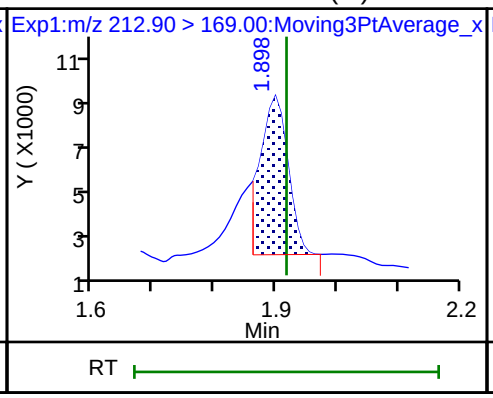
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFC_LC812 Limit Group: LC_PFC_ICAL

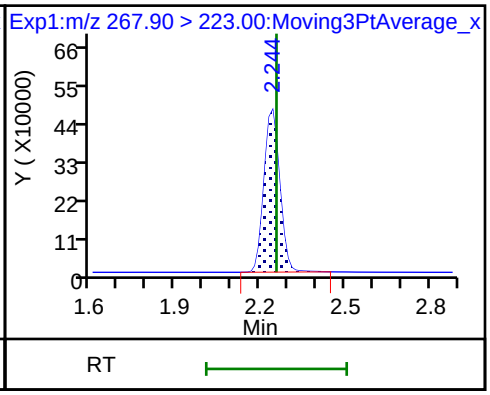
D 1 13C4 PFBA



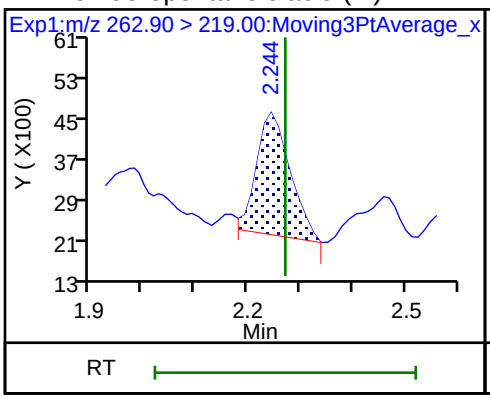
2 Perfluorobutanoic acid (M)



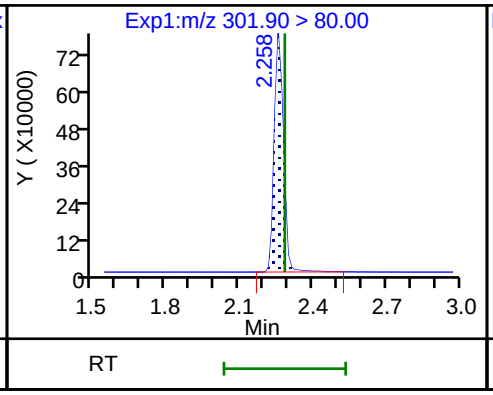
D 3 13C5 PFPeA



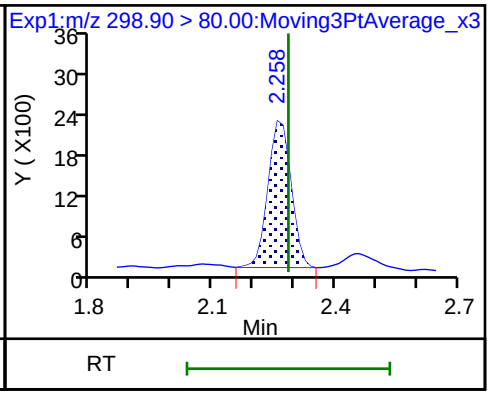
4 Perfluoropentanoic acid (M)



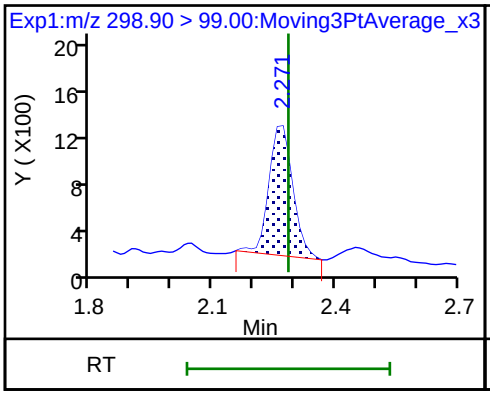
D 47 13C3 PFBS



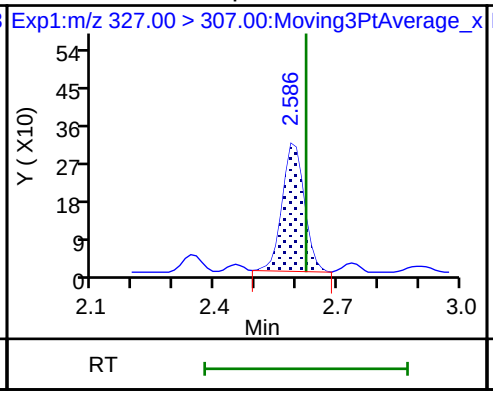
5 Perfluorobutanesulfonic acid



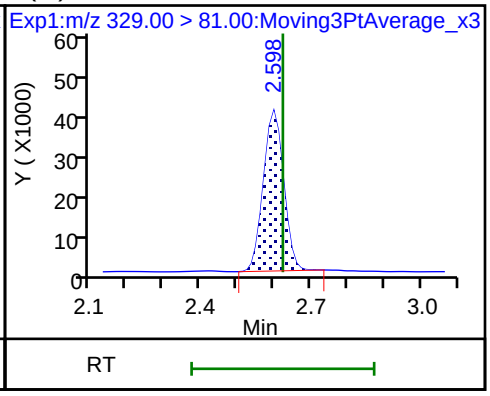
5 Perfluorobutanesulfonic acid



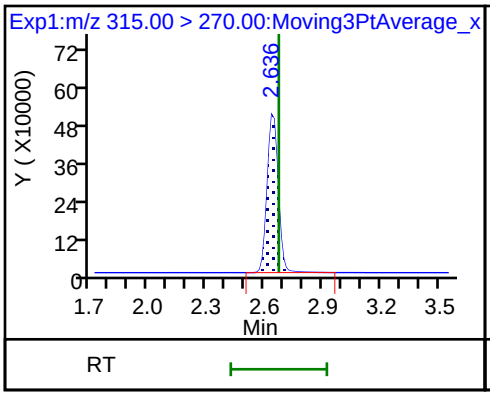
61 1H,1H,2H,2H-perfluorohexanesulfonic (M)



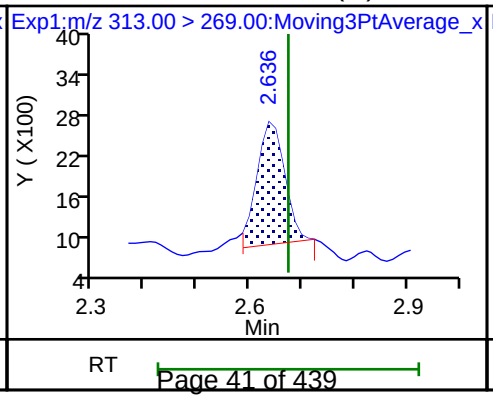
D 60 M2-4:2 FTS



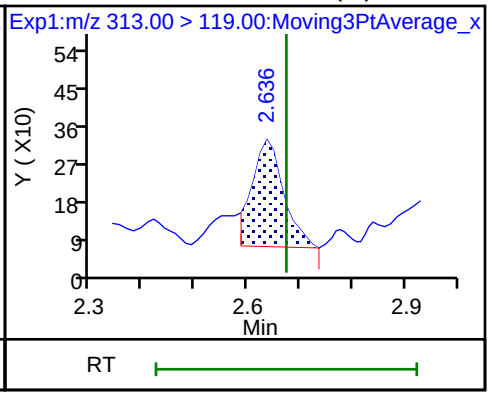
D 7 13C2 PFHxA



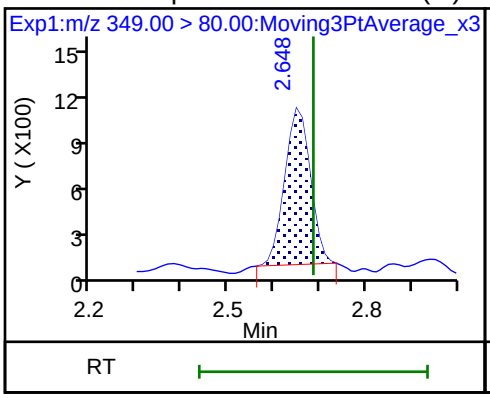
6 Perfluorohexanoic acid (M)



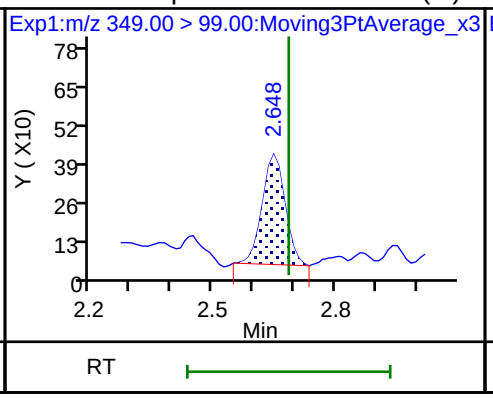
6 Perfluorohexanoic acid (M)



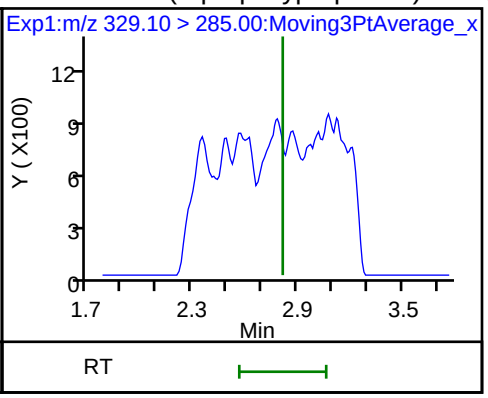
70 Perfluoropentanesulfonic acid (M)



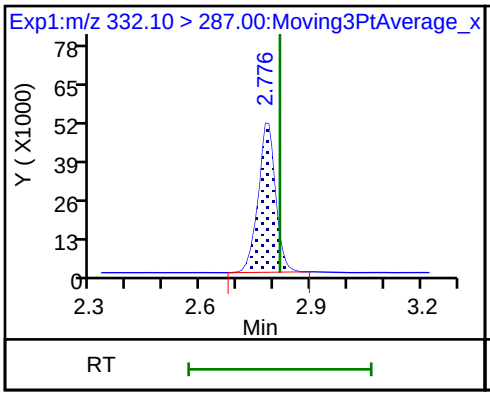
70 Perfluoropentanesulfonic acid (M)



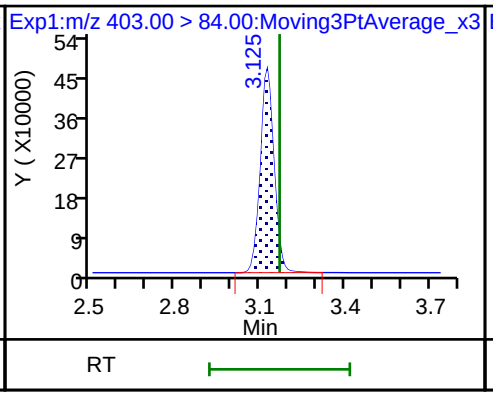
67 Perfluoro(2-propoxypropanoic) acid (ND)



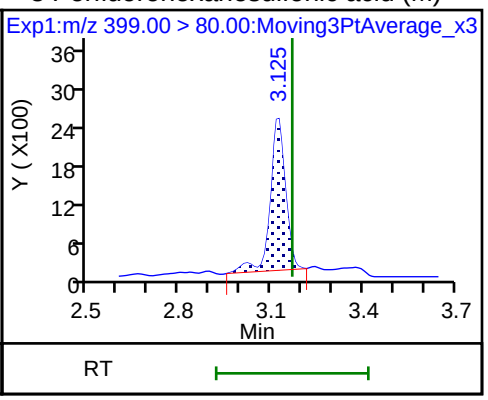
D 64 13C3 HFPO-DA



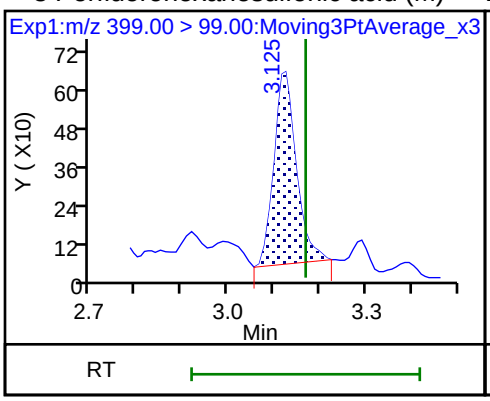
D 11 18O2 PFHxS



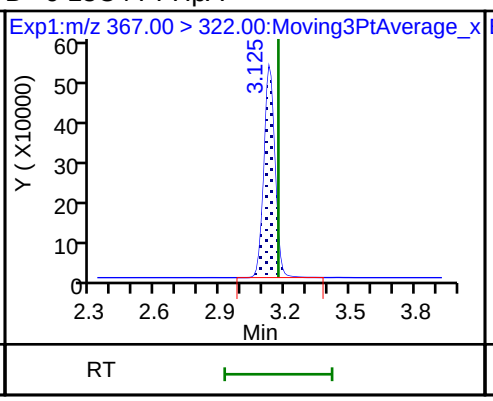
8 Perfluorohexanesulfonic acid (M)



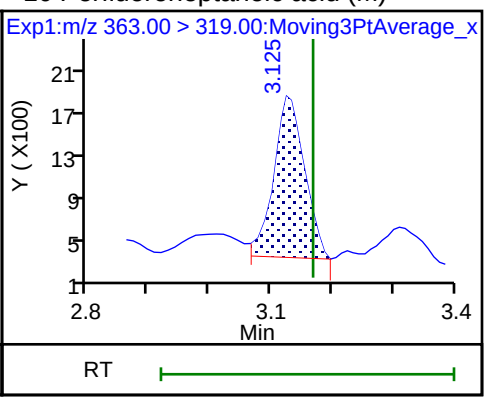
8 Perfluorohexanesulfonic acid (M)



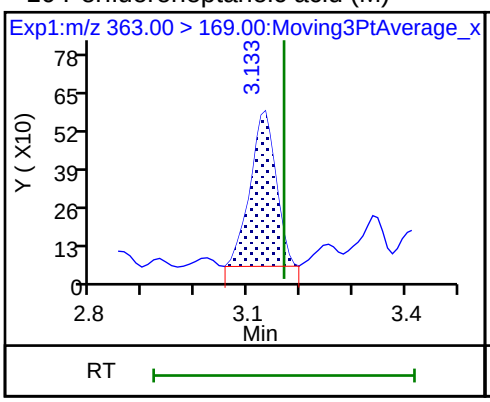
D 9 13C4 PFHpA



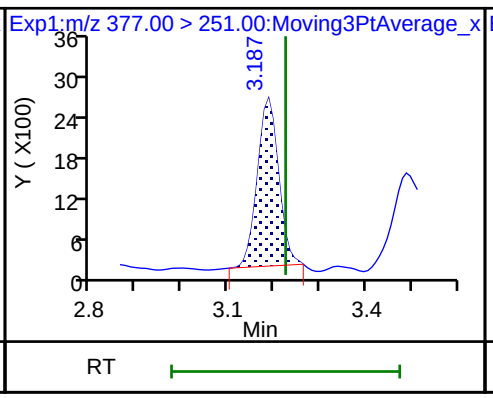
10 Perfluoroheptanoic acid (M)



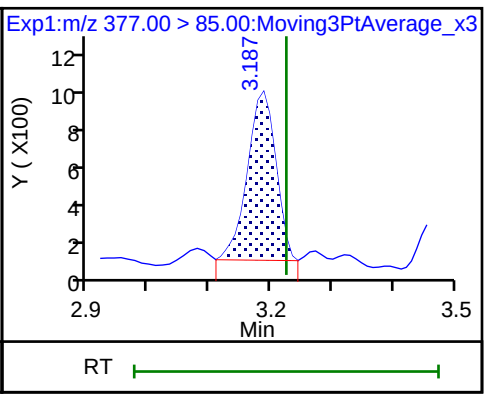
10 Perfluoroheptanoic acid (M)



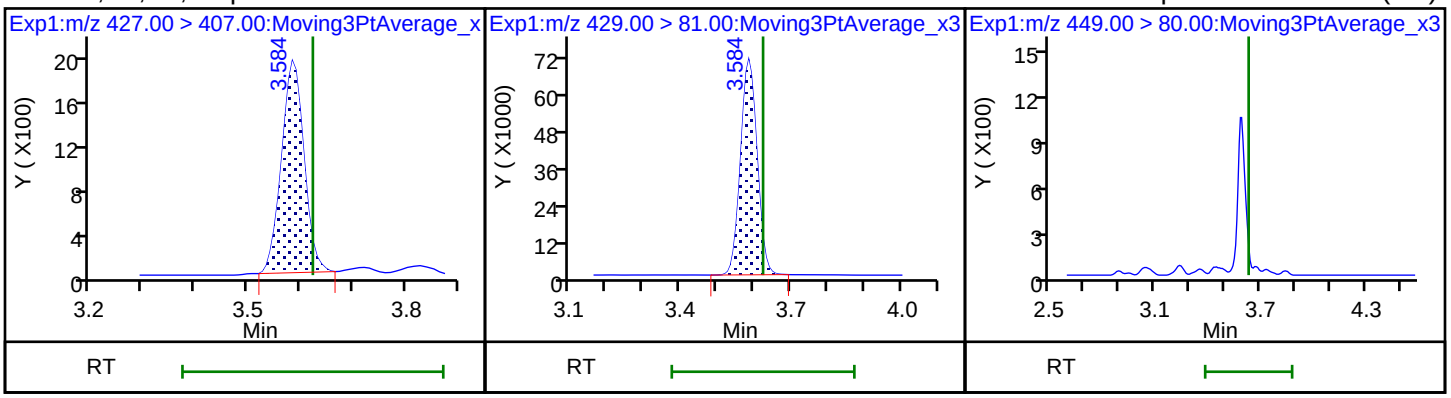
77 DONA



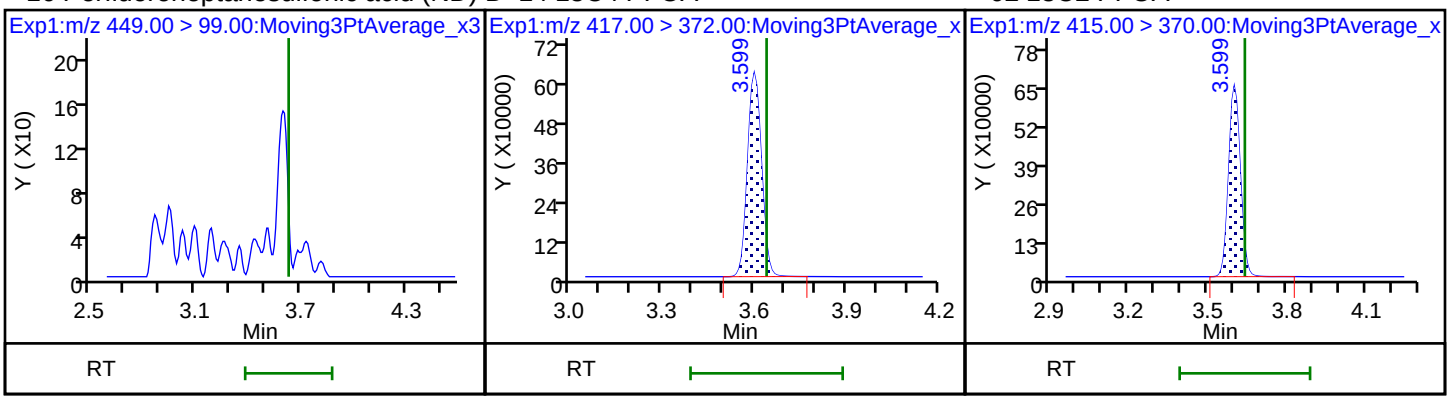
77 DONA



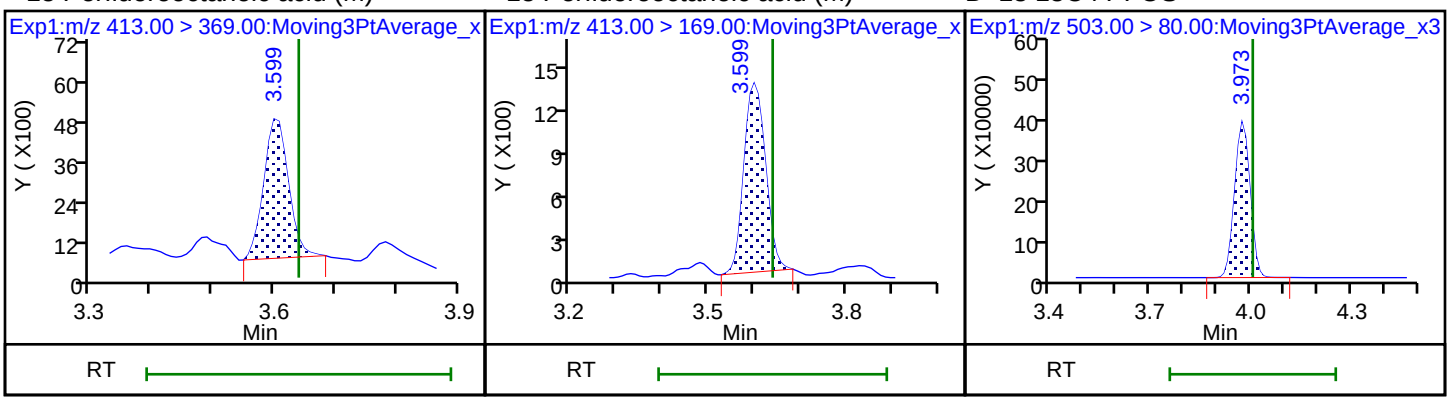
13 1H,1H,2H,2H-perfluorooctanesulfonD 12 M2-6:2 FTS 16 Perfluoroheptanesulfonic acid (ND)



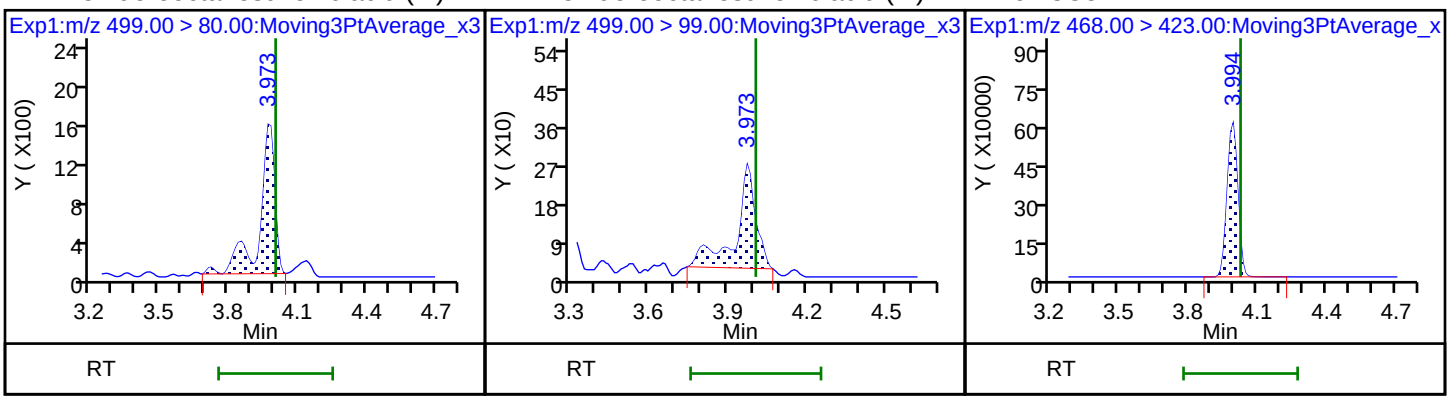
16 Perfluoroheptanesulfonic acid (ND) D 14 13C4 PFOA * 62 13C2 PFOA



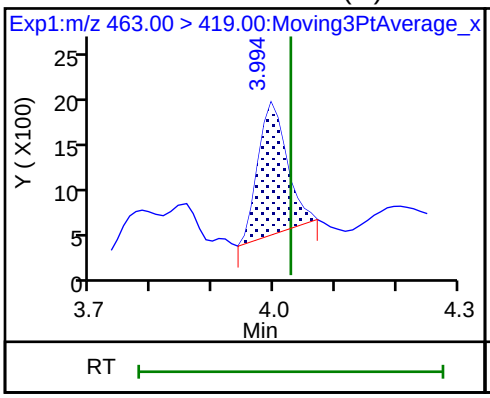
15 Perfluorooctanoic acid (M) 15 Perfluorooctanoic acid (M) D 18 13C4 PFOS



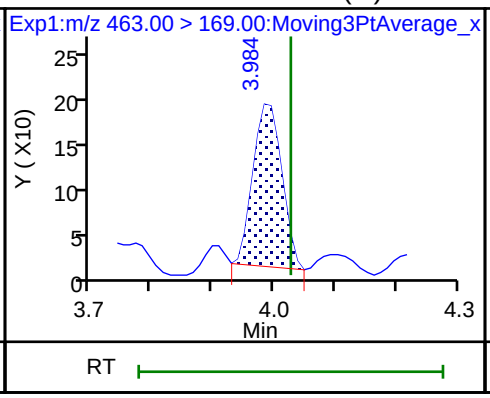
17 Perfluorooctanesulfonic acid (M) 17 Perfluorooctanesulfonic acid (M) D 19 13C5 PFNA



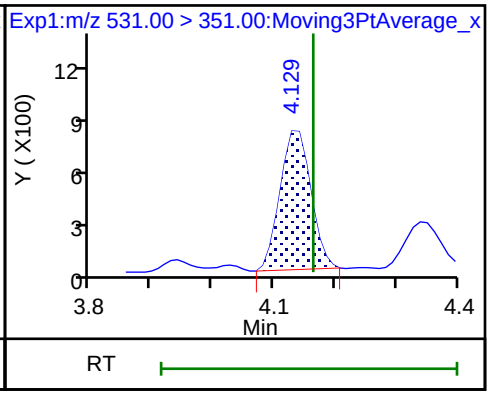
20 Perfluorononanoic acid (M)



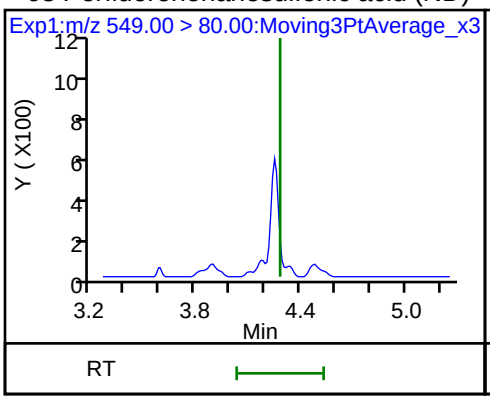
20 Perfluorononanoic acid (M)



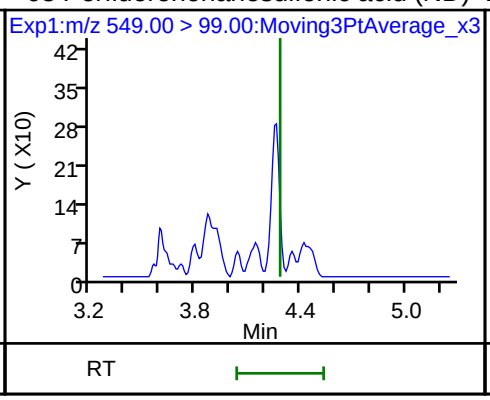
69 9-Chlorohexadecafluoro-3-oxanonane



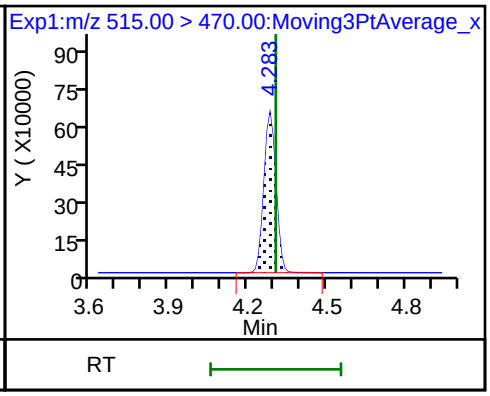
68 Perfluorononanesulfonic acid (ND)



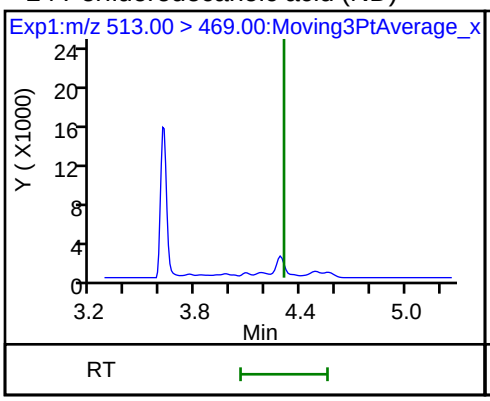
68 Perfluorononanesulfonic acid (ND)



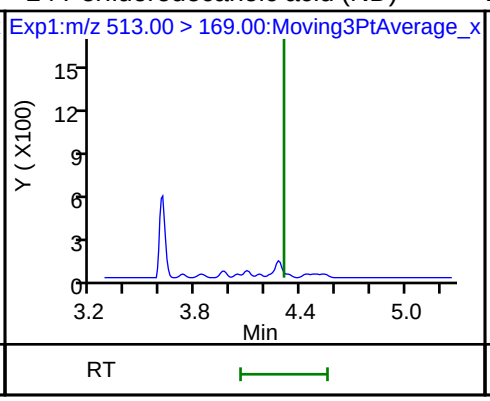
D 23 13C2 PFDA



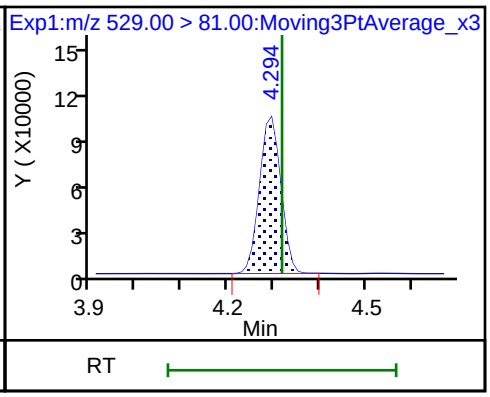
24 Perfluorodecanoic acid (ND)



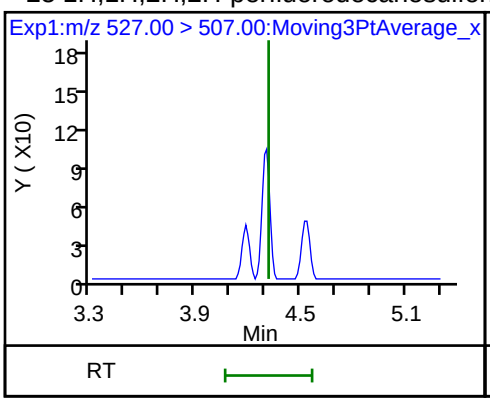
24 Perfluorodecanoic acid (ND)



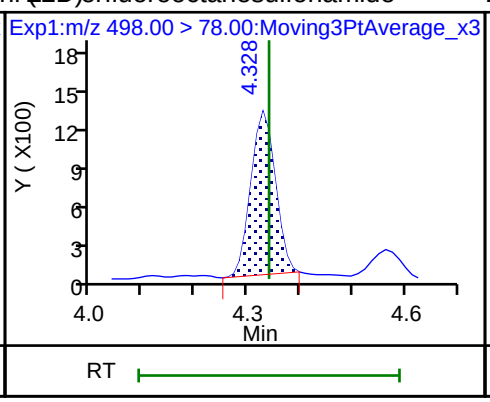
D 26 M2-8:2 FTS



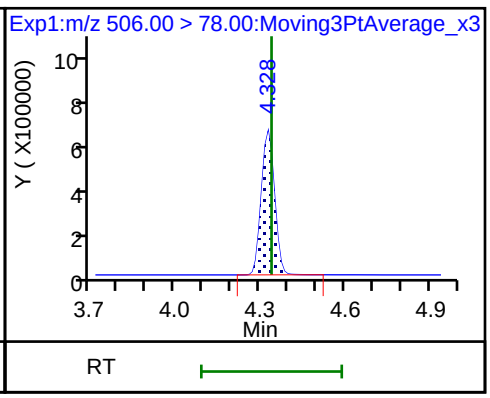
25 1H,1H,2H,2H-perfluorodecanesulfoni



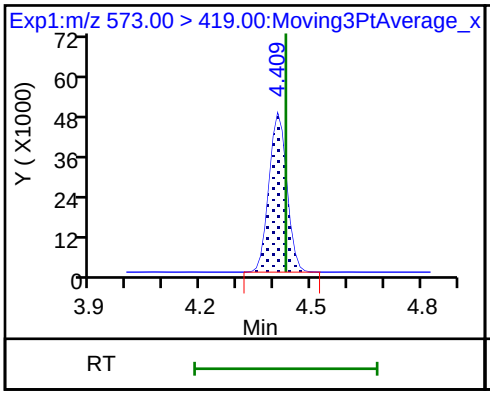
(2D) Perfluorooctanesulfonamide



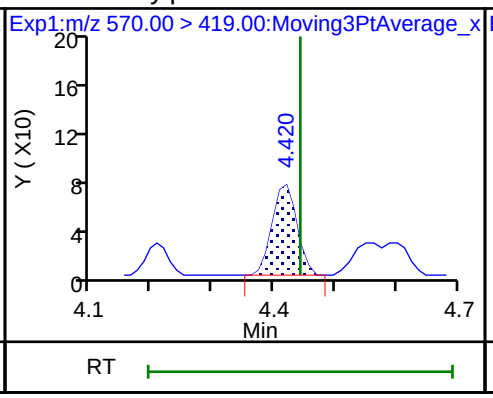
D 21 13C8 FOSA



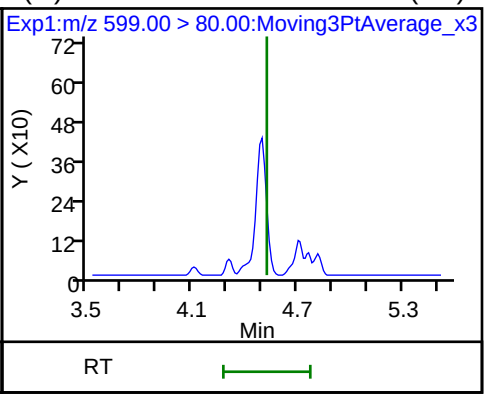
D 27 d3-NMeFOSAA



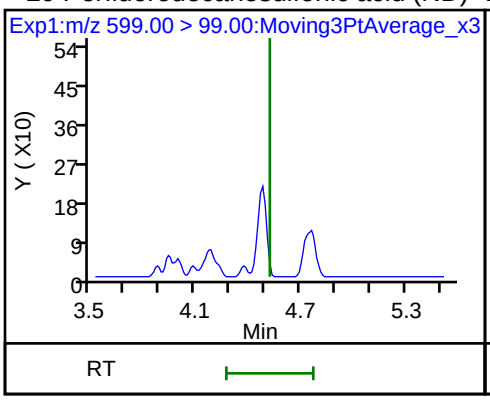
28 N-methylperfluorooctanesulfonamido (M)



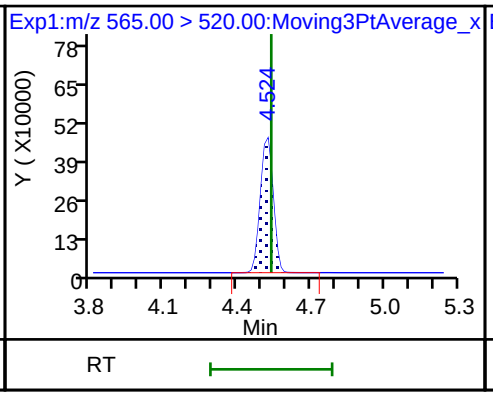
29 Perfluorodecanesulfonic acid (ND)



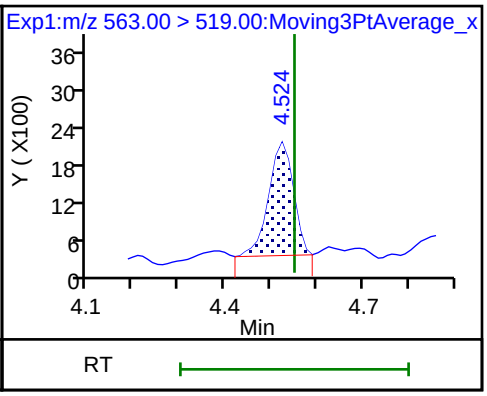
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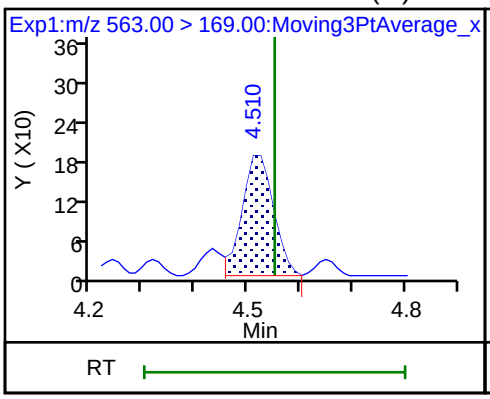
D 30 13C2 PFUnA



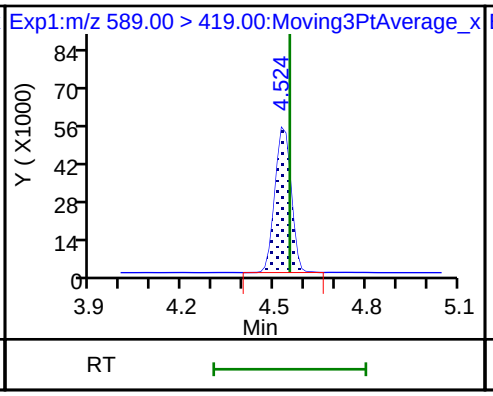
31 Perfluoroundecanoic acid



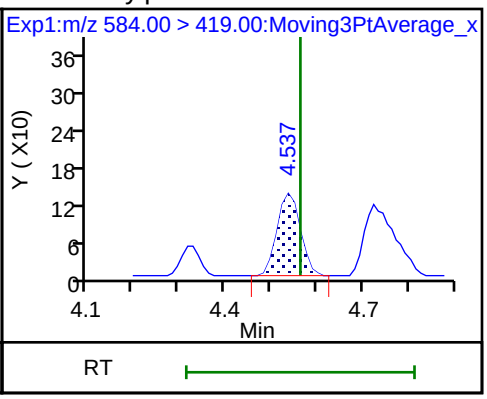
31 Perfluoroundecanoic acid (M)



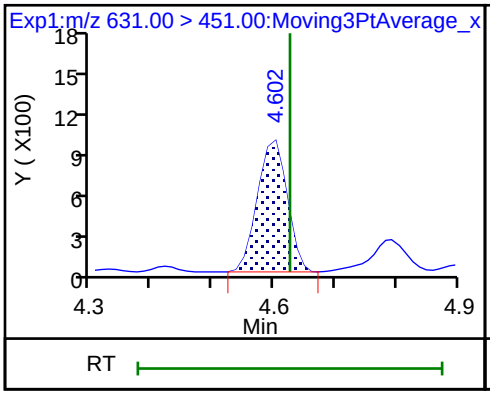
D 32 d5-NEtFOSAA



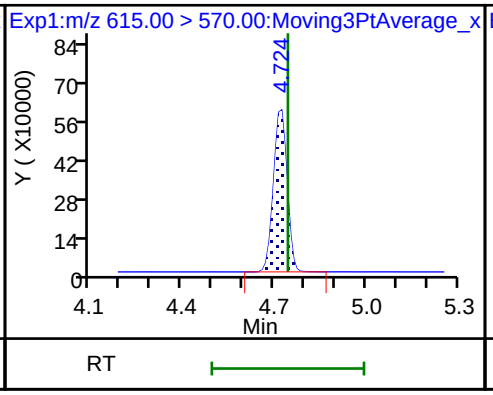
33 N-ethylperfluorooctanesulfonamidoa (M)



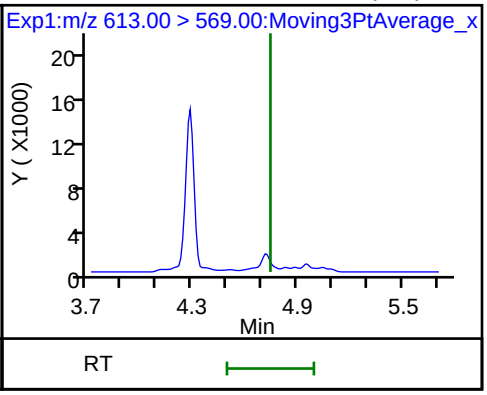
66 11-Chloroeicosafluoro-3-oxaundecan



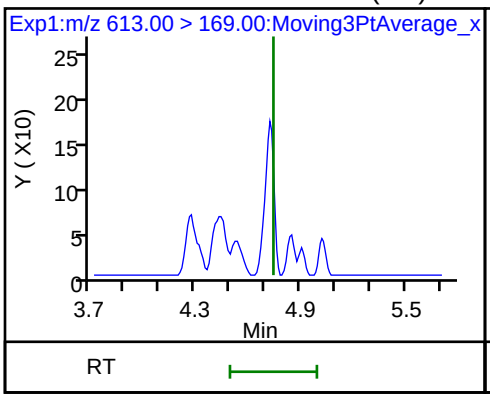
D 36 13C2 PFDoA



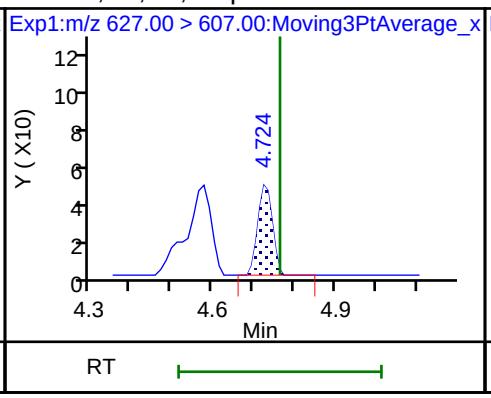
37 Perfluorododecanoic acid (ND)



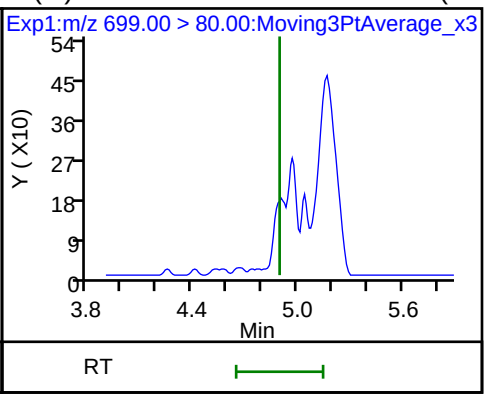
37 Perfluorododecanoic acid (ND)



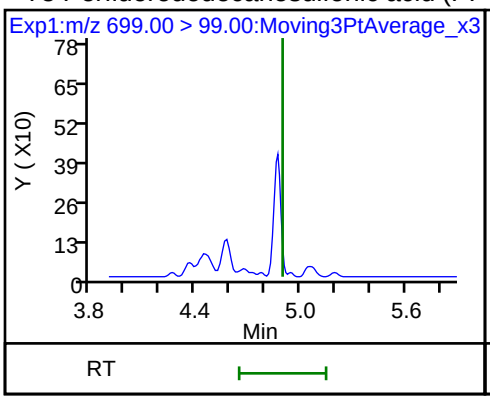
74 1H,1H,2H,2H-perfluorododecanesulfonic acid (M)



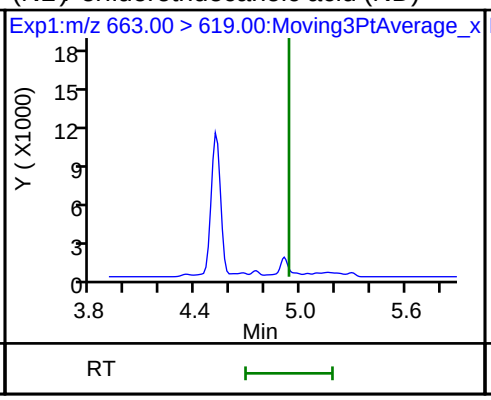
75 Perfluorododecanesulfonic acid (PF (ND)



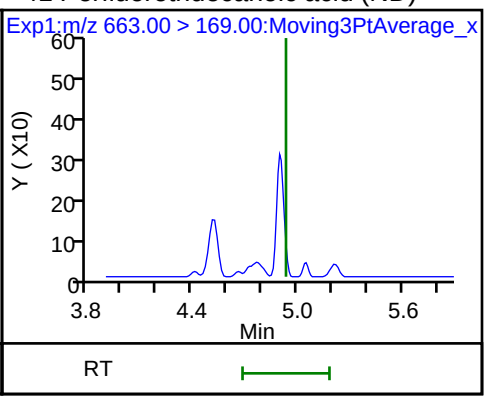
75 Perfluorododecanesulfonic acid (PF (ND)



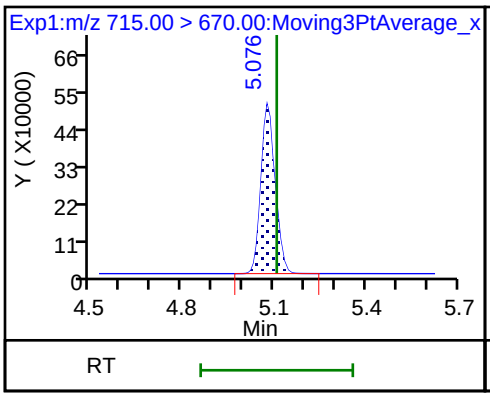
41 Perfluorotridecanoic acid (ND)



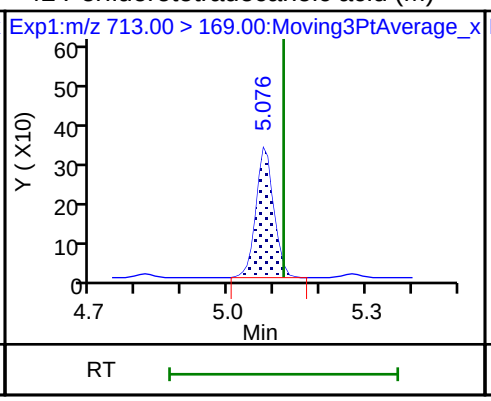
41 Perfluorotridecanoic acid (ND)



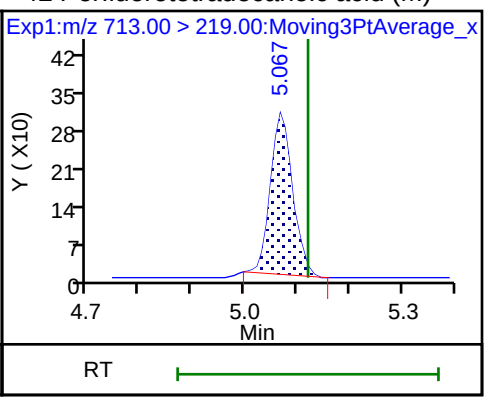
D 43 13C2 PFTeDA



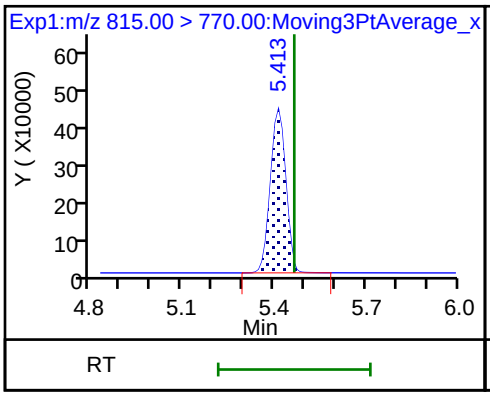
42 Perfluorotetradecanoic acid (M)



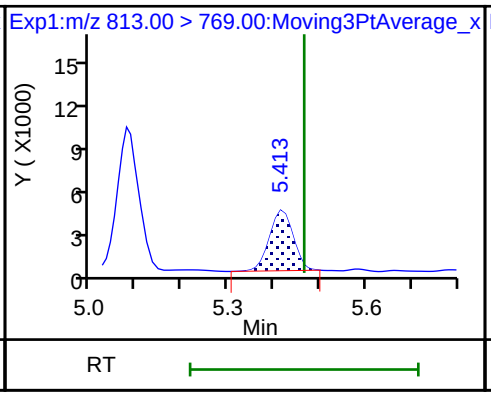
42 Perfluorotetradecanoic acid (M)



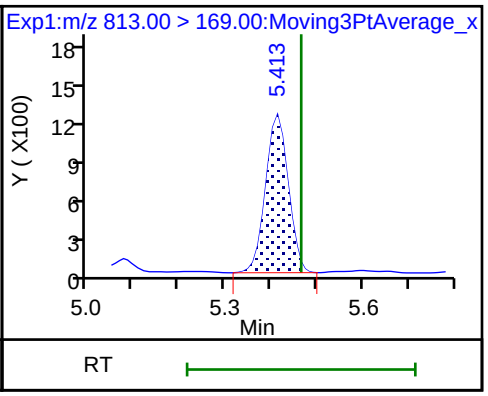
D 44 13C2 PFHxDA



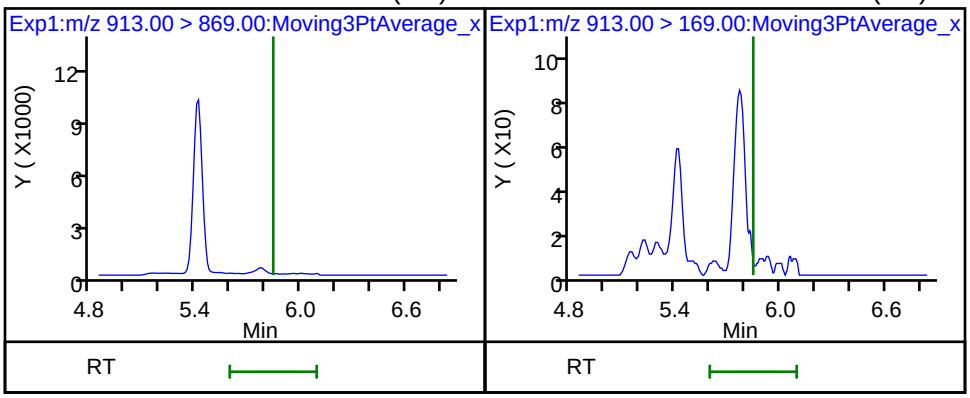
45 Perfluorohexadecanoic acid



45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid (ND) 46 Perfluorooctadecanoic acid (ND)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

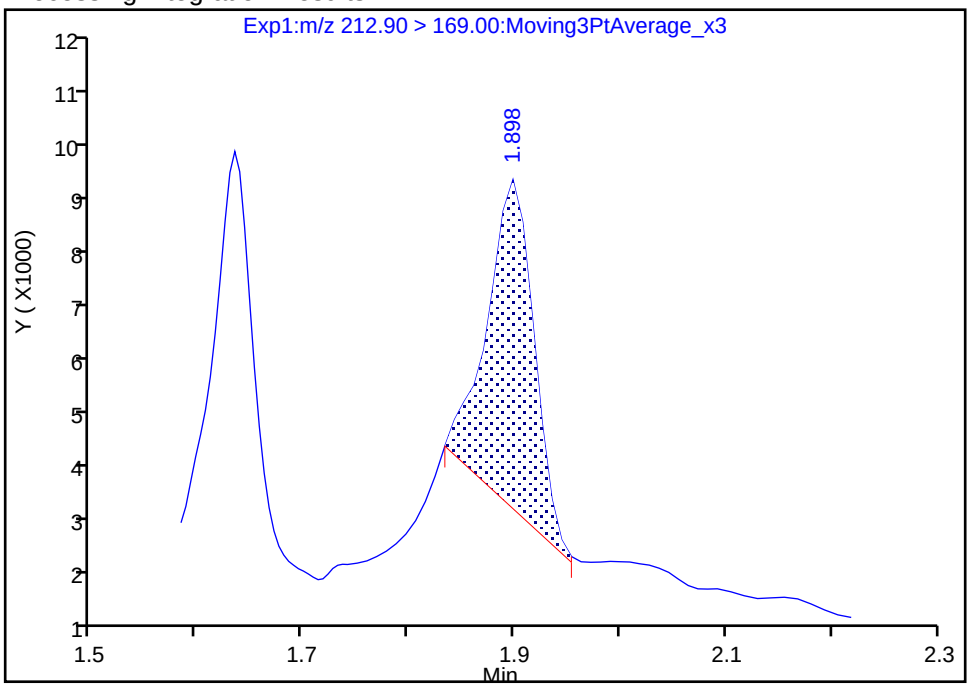
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C18.d				
Injection Date:	25-Feb-2020 21:16:03	Instrument ID:	LC812		
Lims ID:	480-166551-A-1-A	Lab Sample ID:	200-166551-1		
Client ID:	SW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

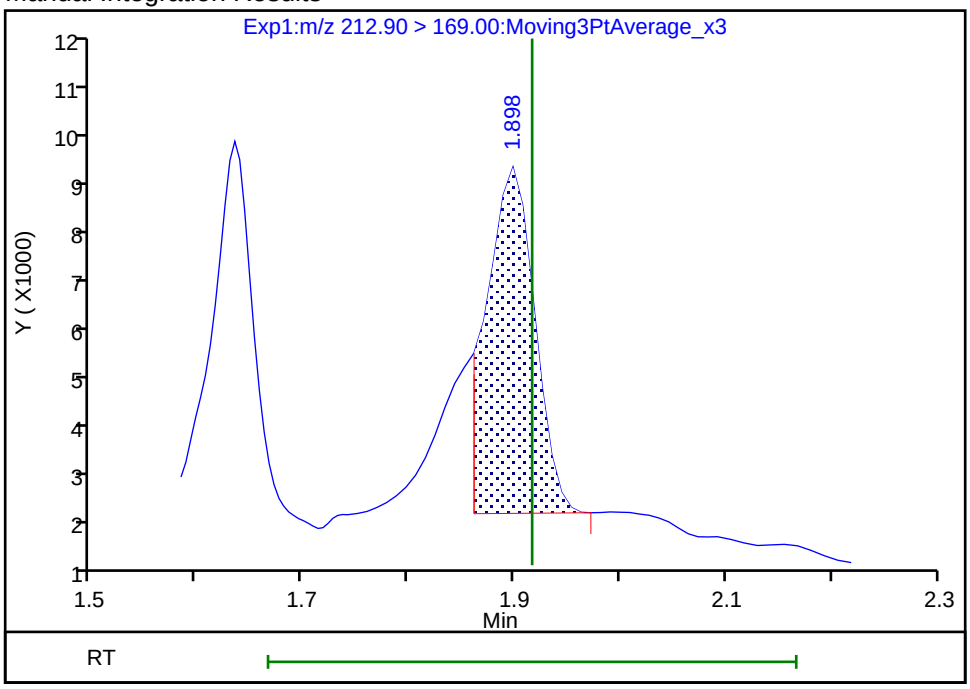
Processing Integration Results

RT: 1.90
Area: 17855
Amount: 0.020357
Amount Units: ng/ml



Manual Integration Results

RT: 1.90
Area: 20940
Amount: 0.023874
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 10:38:59

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

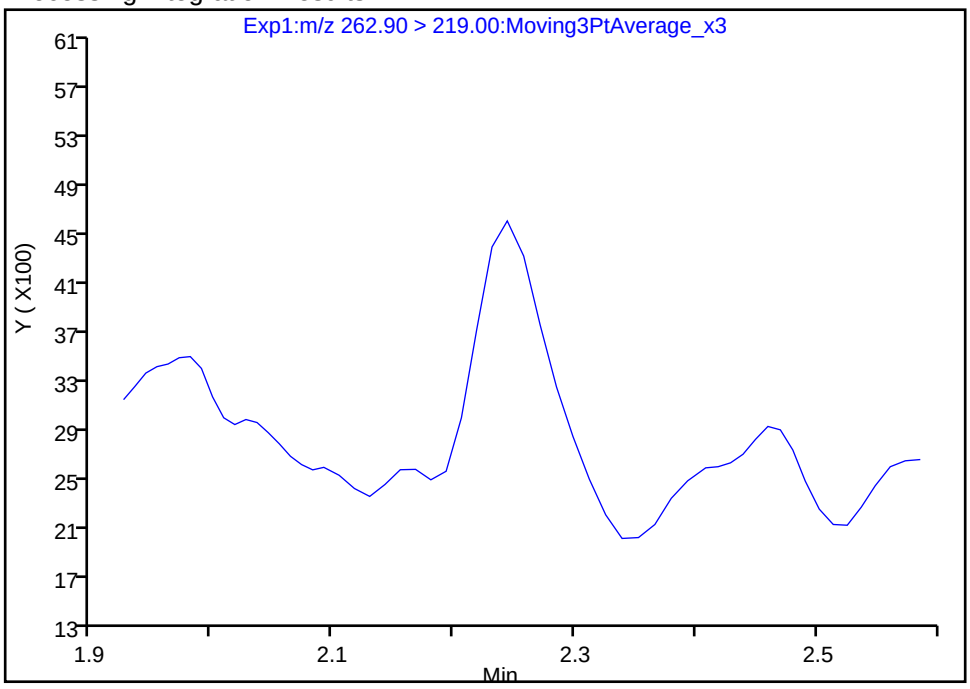
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Injection Date:	25-Feb-2020 21:16:03	Instrument ID:	LC812		
Lims ID:	480-166551-A-1-A	Lab Sample ID:	200-166551-1		
Client ID:	SW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

4 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

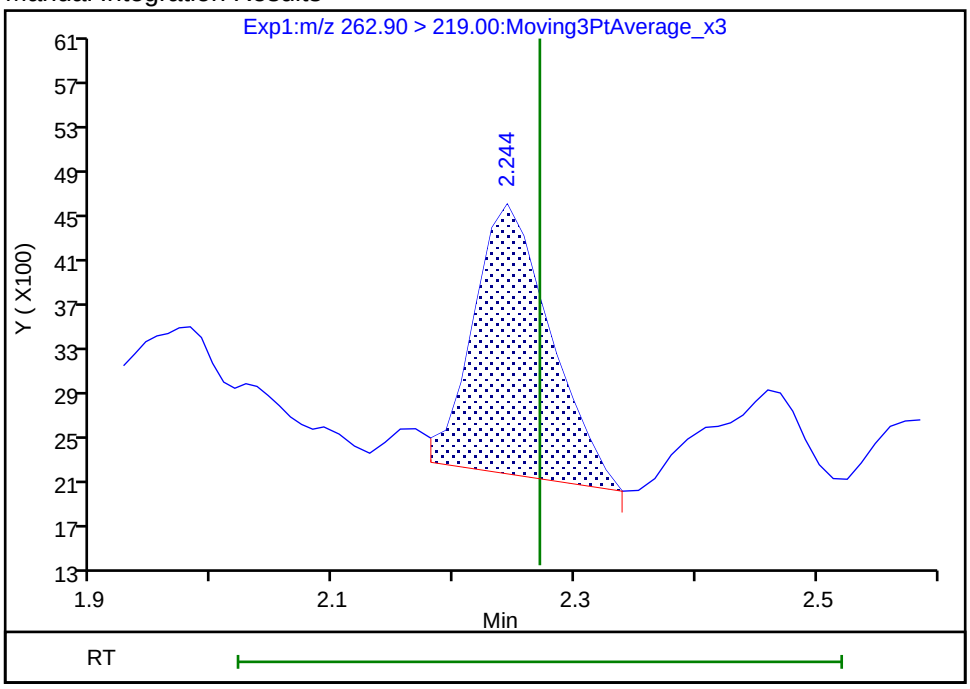
Not Detected
Expected RT: 2.27

Processing Integration Results



Manual Integration Results

RT: 2.24
Area: 10505
Amount: 0.013209
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 10:39:25
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

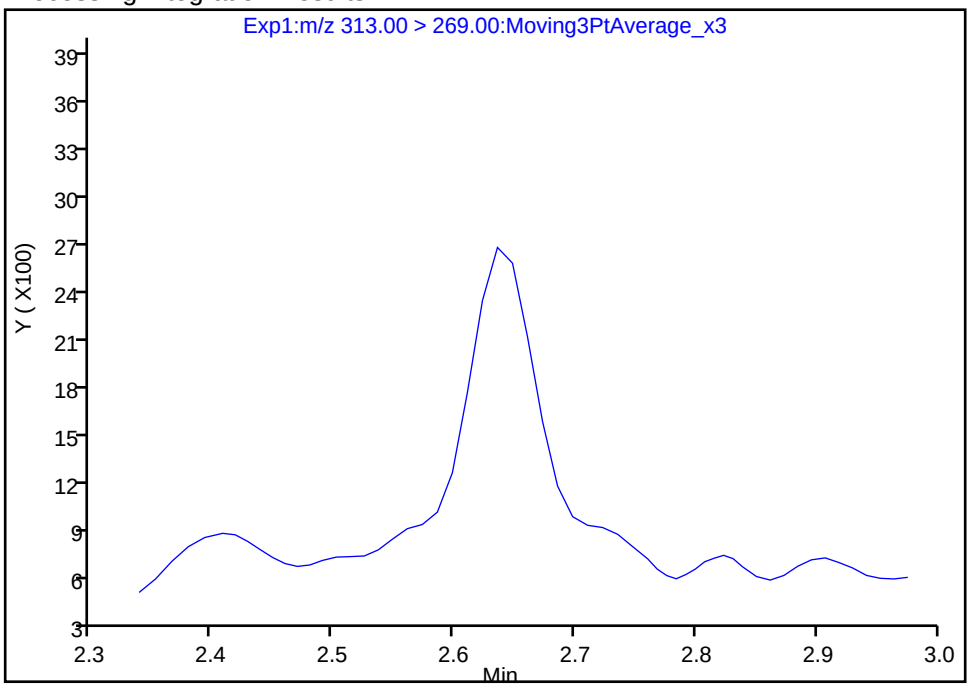
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Injection Date:	25-Feb-2020 21:16:03	Instrument ID:	LC812		
Lims ID:	480-166551-A-1-A	Lab Sample ID:	200-166551-1		
Client ID:	SW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

6 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

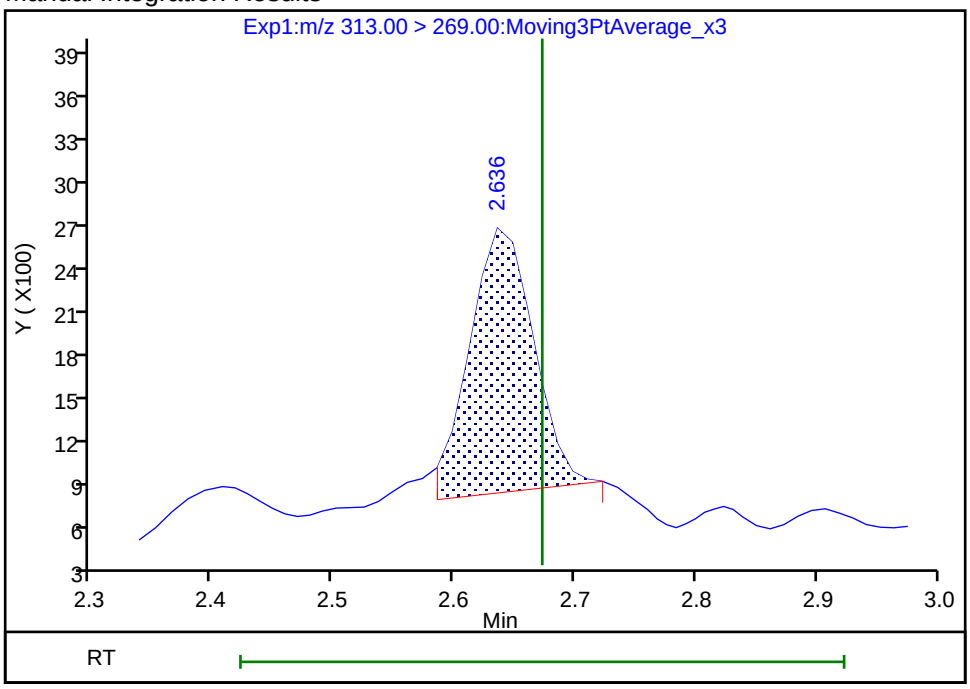
Not Detected
Expected RT: 2.67

Processing Integration Results



Manual Integration Results

RT: 2.64
Area: 6657
Amount: 0.008468
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 10:40:37
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

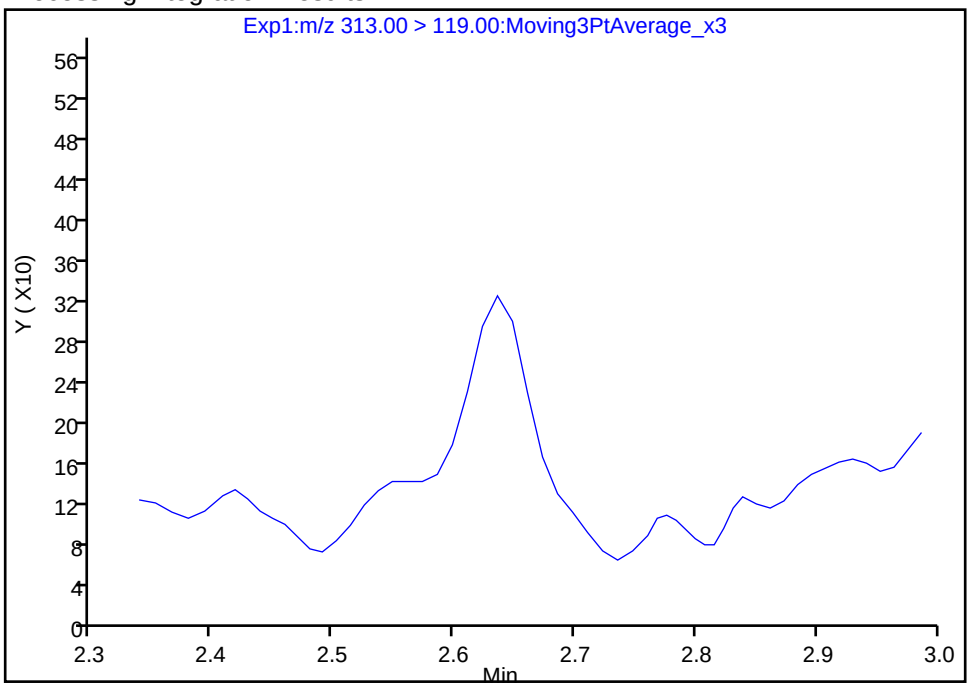
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C18.d				
Injection Date:	25-Feb-2020 21:16:03	Instrument ID:	LC812		
Lims ID:	480-166551-A-1-A	Lab Sample ID:	200-166551-1		
Client ID:	SW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

6 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 2

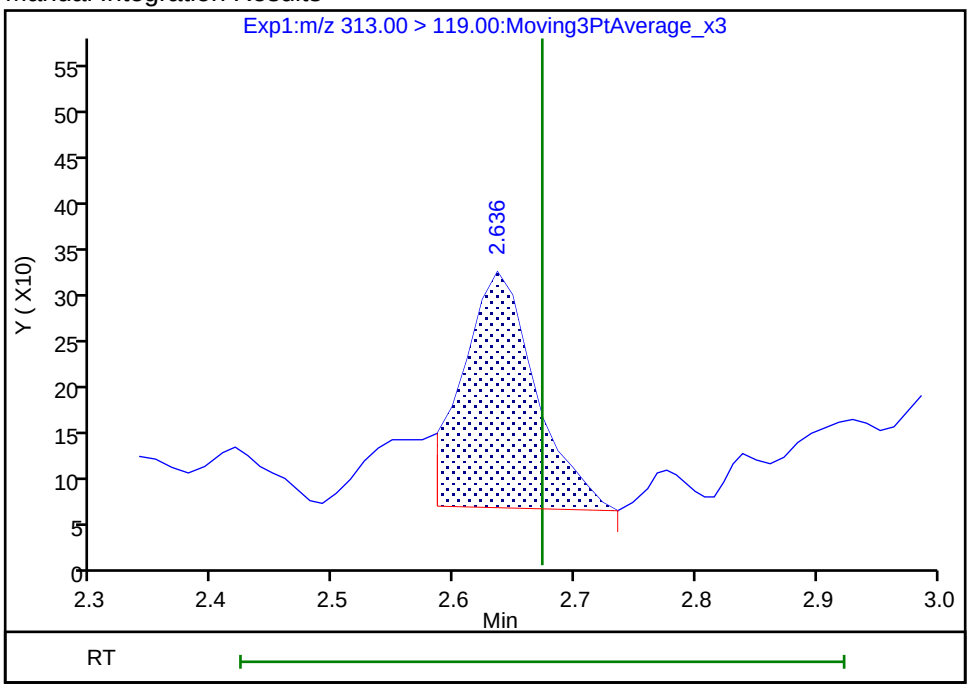
Not Detected
Expected RT: 2.67

Processing Integration Results



Manual Integration Results

RT: 2.64
Area: 1064
Amount: 0.008468
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 10:40:41
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

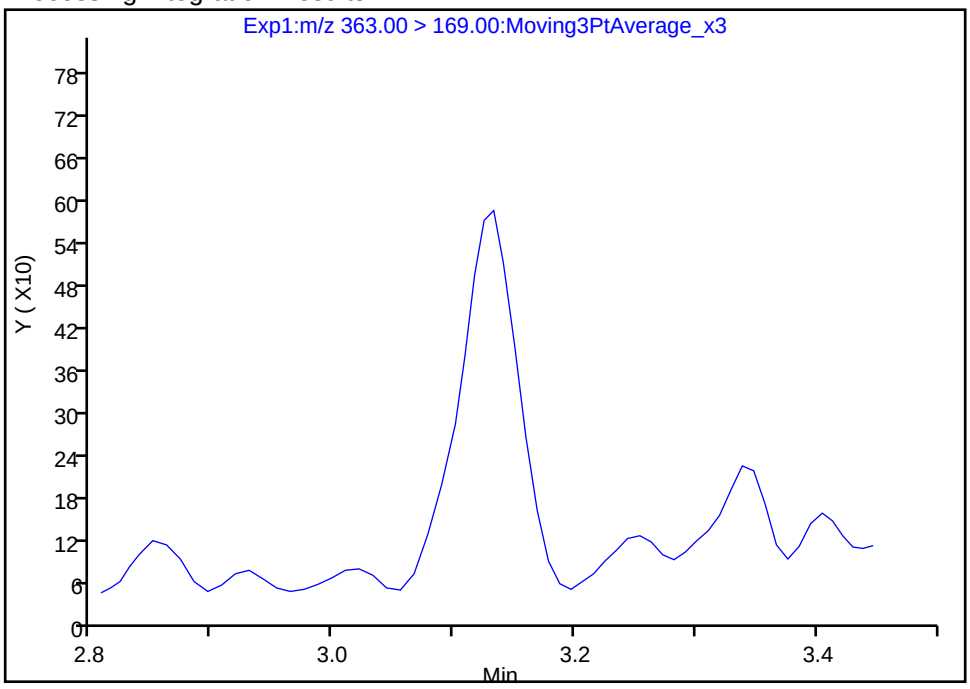
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C18.d				
Injection Date:	25-Feb-2020 21:16:03	Instrument ID:	LC812		
Lims ID:	480-166551-A-1-A	Lab Sample ID:	200-166551-1		
Client ID:	SW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

10 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 2

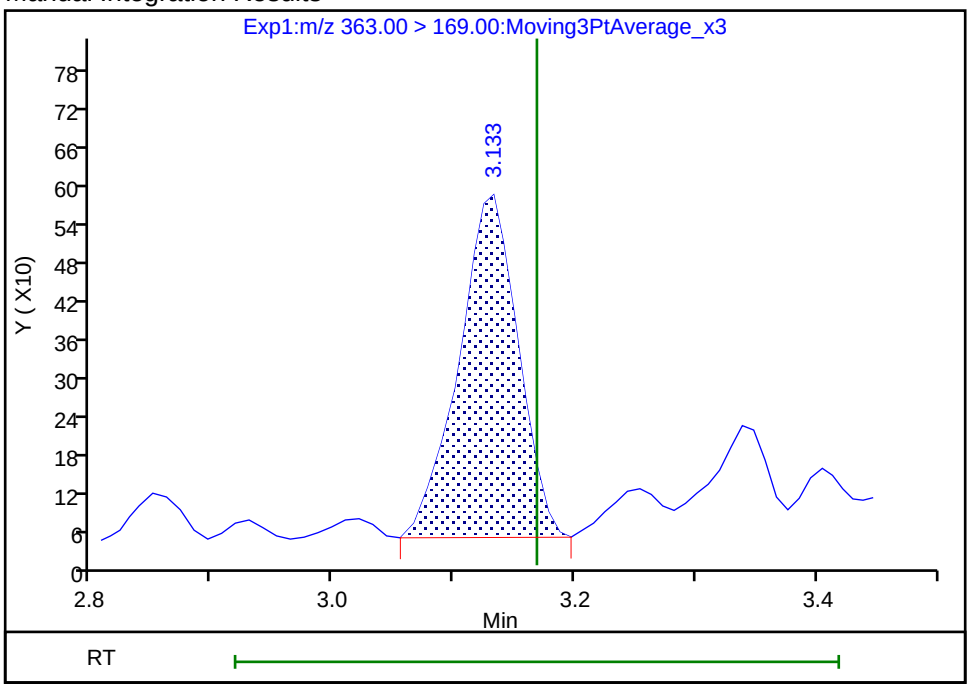
Not Detected
Expected RT: 3.17

Processing Integration Results



Manual Integration Results

RT: 3.13
Area: 1829
Amount: 0.006602
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 10:42:02
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

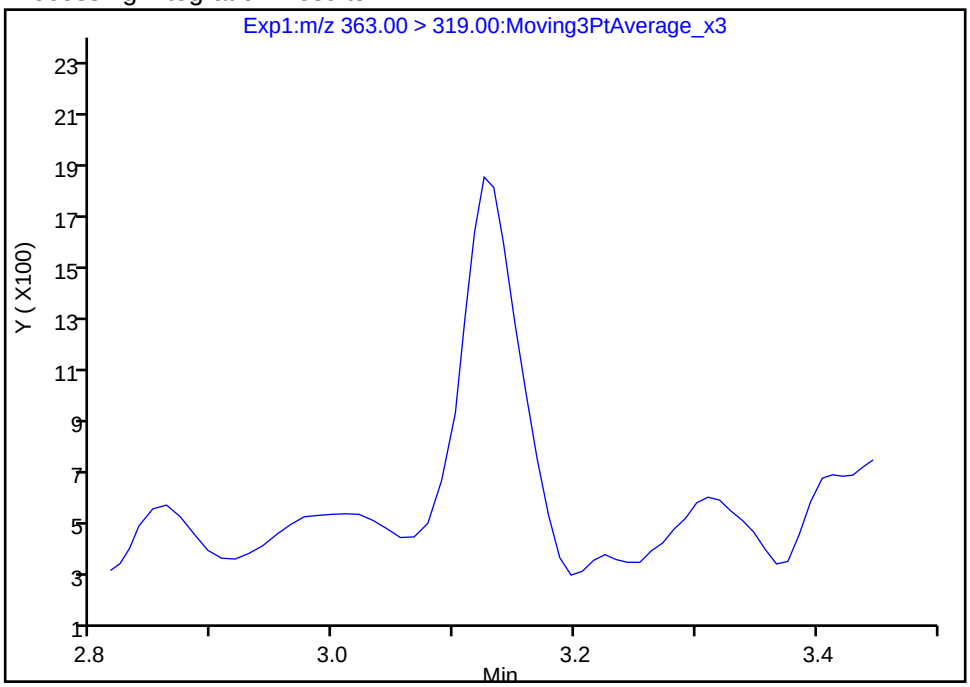
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C18.d				
Injection Date:	25-Feb-2020 21:16:03	Instrument ID:	LC812		
Lims ID:	480-166551-A-1-A	Lab Sample ID:	200-166551-1		
Client ID:	SW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

10 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

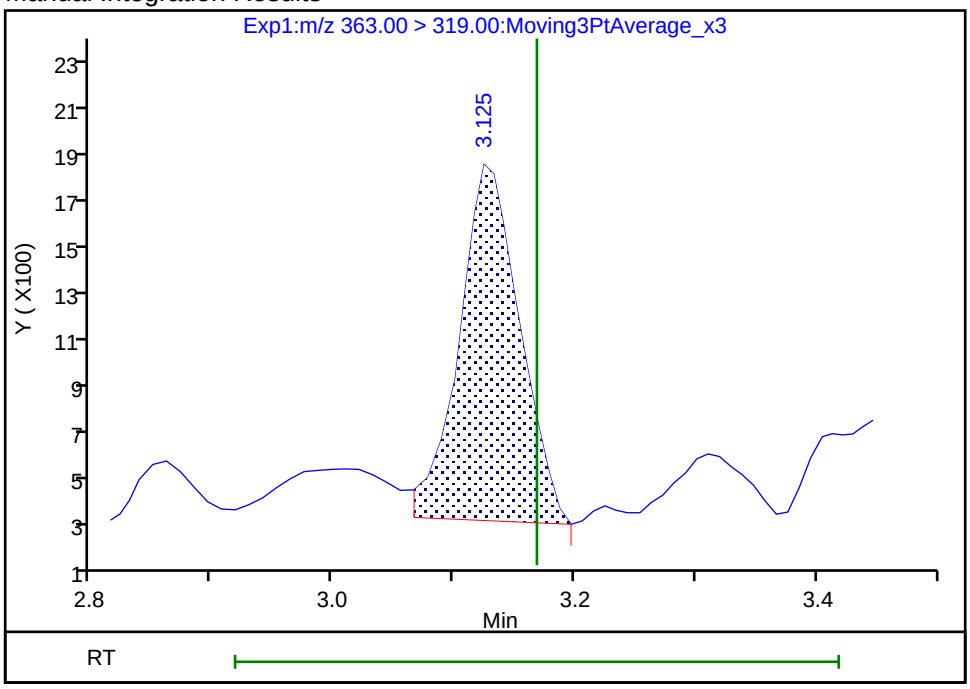
Not Detected
Expected RT: 3.17

Processing Integration Results



Manual Integration Results

RT: 3.12
Area: 5007
Amount: 0.006602
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 10:42:07
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

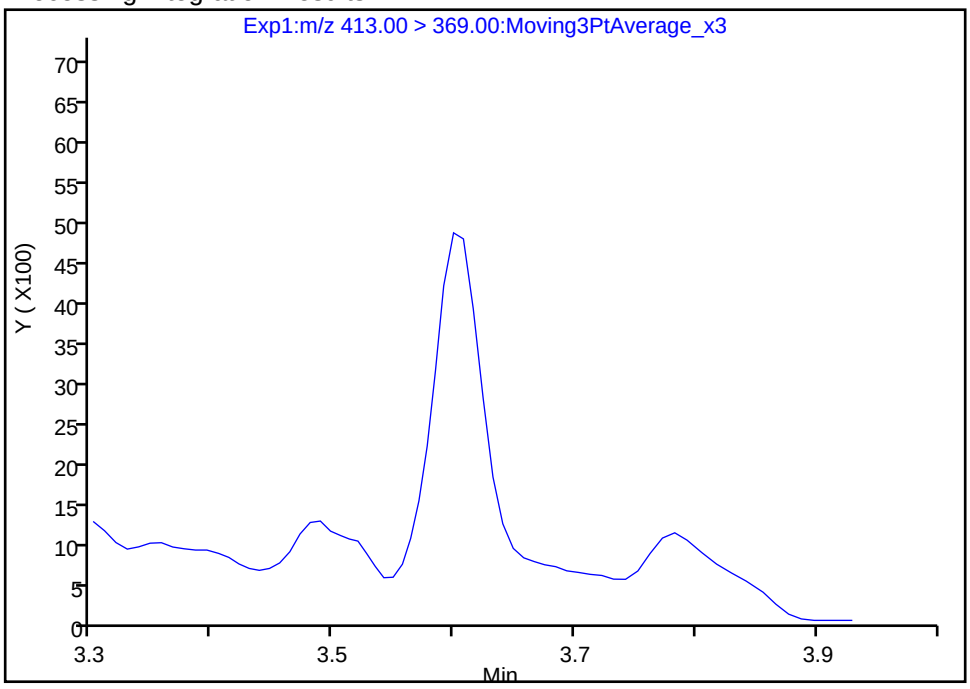
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C18.d				
Injection Date:	25-Feb-2020 21:16:03	Instrument ID:	LC812		
Lims ID:	480-166551-A-1-A	Lab Sample ID:	200-166551-1		
Client ID:	SW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

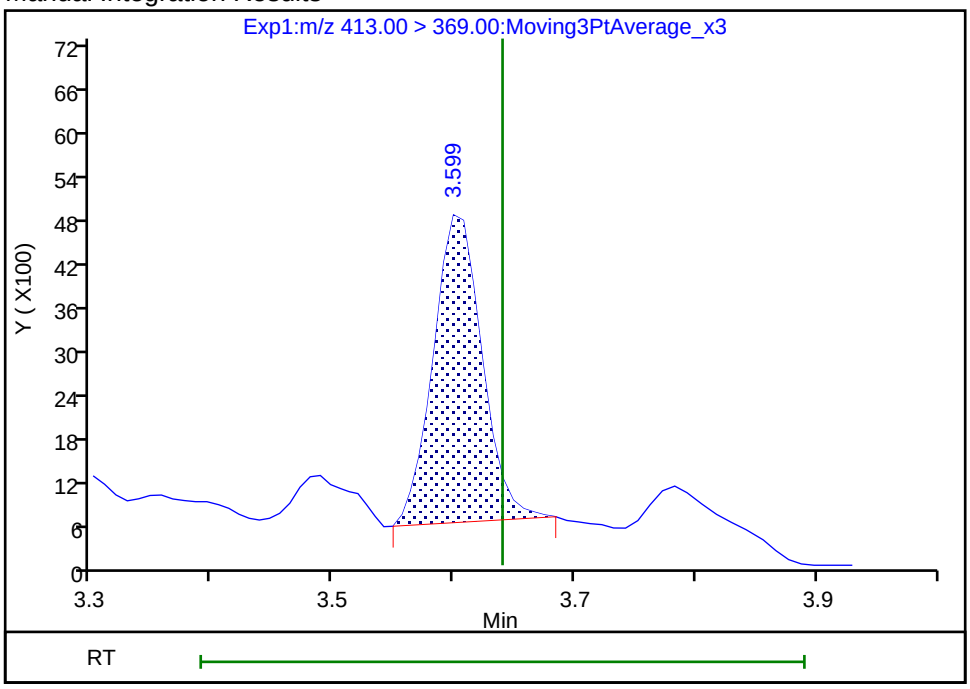
Not Detected
Expected RT: 3.64

Processing Integration Results



Manual Integration Results

RT: 3.60
Area: 11916
Amount: 0.014424
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 10:42:35
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

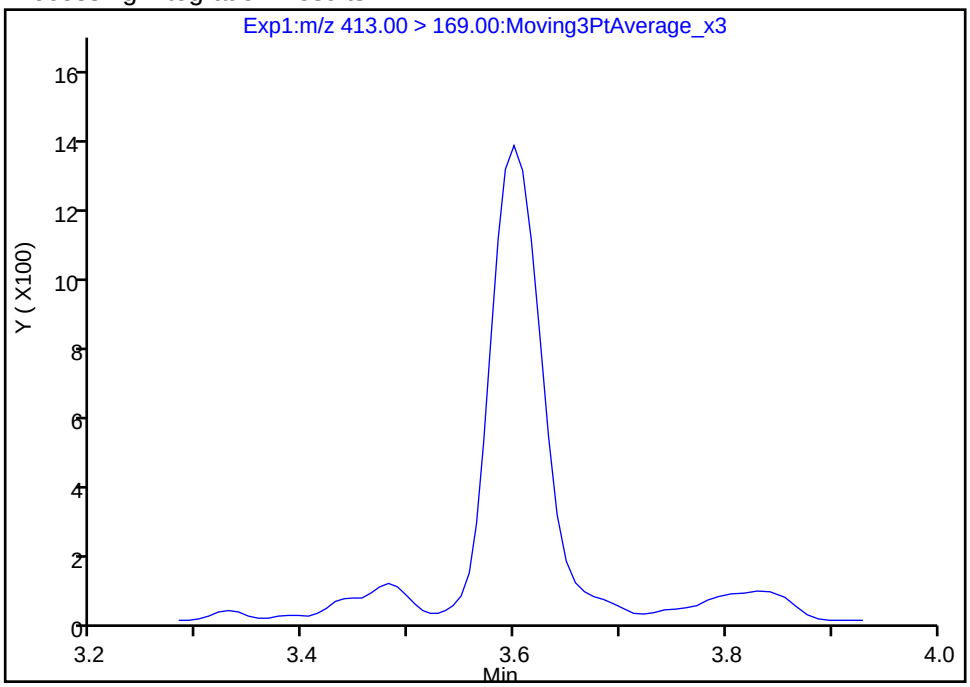
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C18.d				
Injection Date:	25-Feb-2020 21:16:03	Instrument ID:	LC812		
Lims ID:	480-166551-A-1-A	Lab Sample ID:	200-166551-1		
Client ID:	SW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

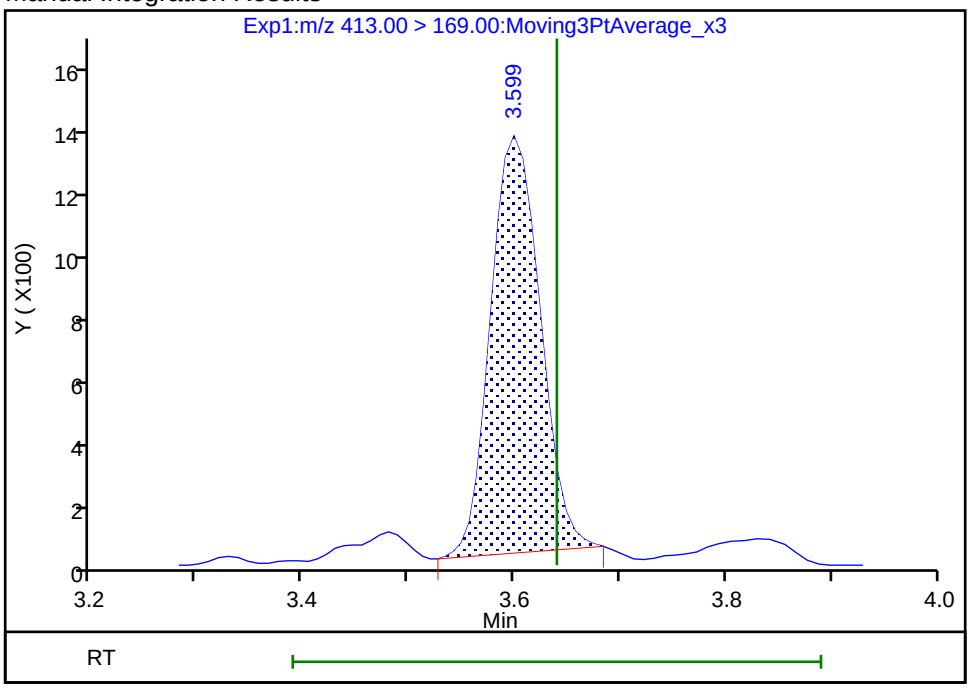
Processing Integration Results

Not Detected
Expected RT: 3.64



Manual Integration Results

RT: 3.60
Area: 4329
Amount: 0.014424
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 10:42:40
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

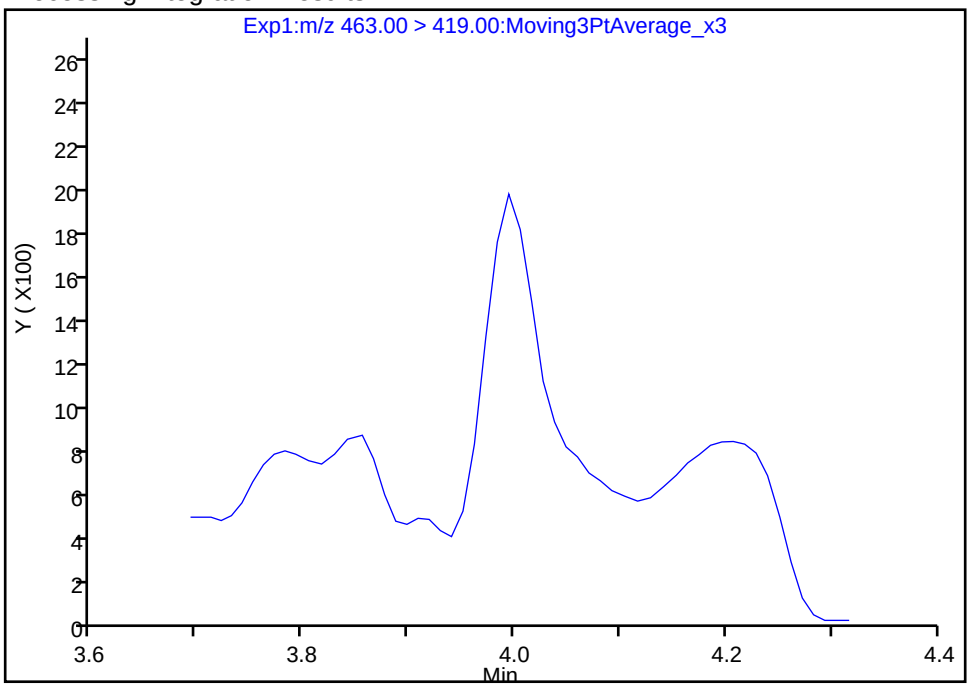
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C18.d				
Injection Date:	25-Feb-2020 21:16:03	Instrument ID:	LC812		
Lims ID:	480-166551-A-1-A	Lab Sample ID:	200-166551-1		
Client ID:	SW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

20 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

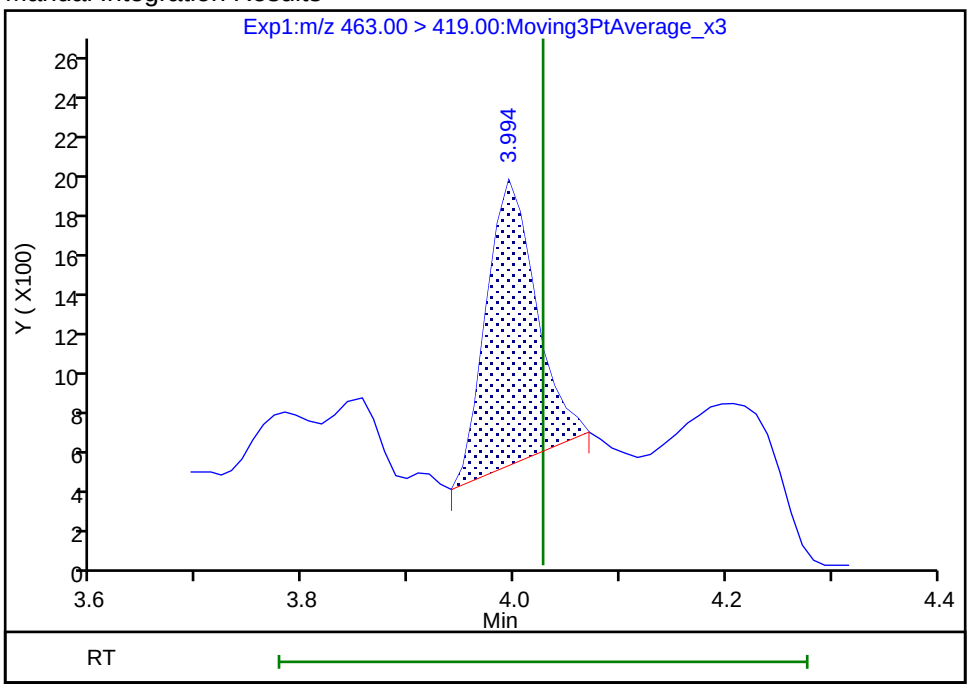
Not Detected
Expected RT: 4.03

Processing Integration Results



Manual Integration Results

RT: 3.99
Area: 4622
Amount: 0.005704
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 10:43:33
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

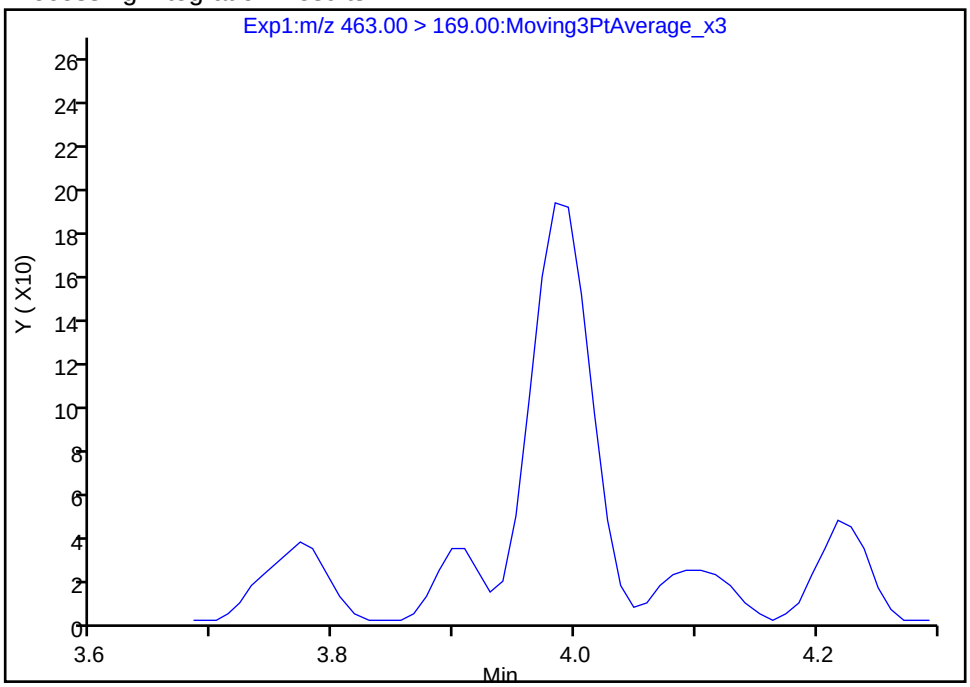
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C18.d				
Injection Date:	25-Feb-2020 21:16:03	Instrument ID:	LC812		
Lims ID:	480-166551-A-1-A	Lab Sample ID:	200-166551-1		
Client ID:	SW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

20 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

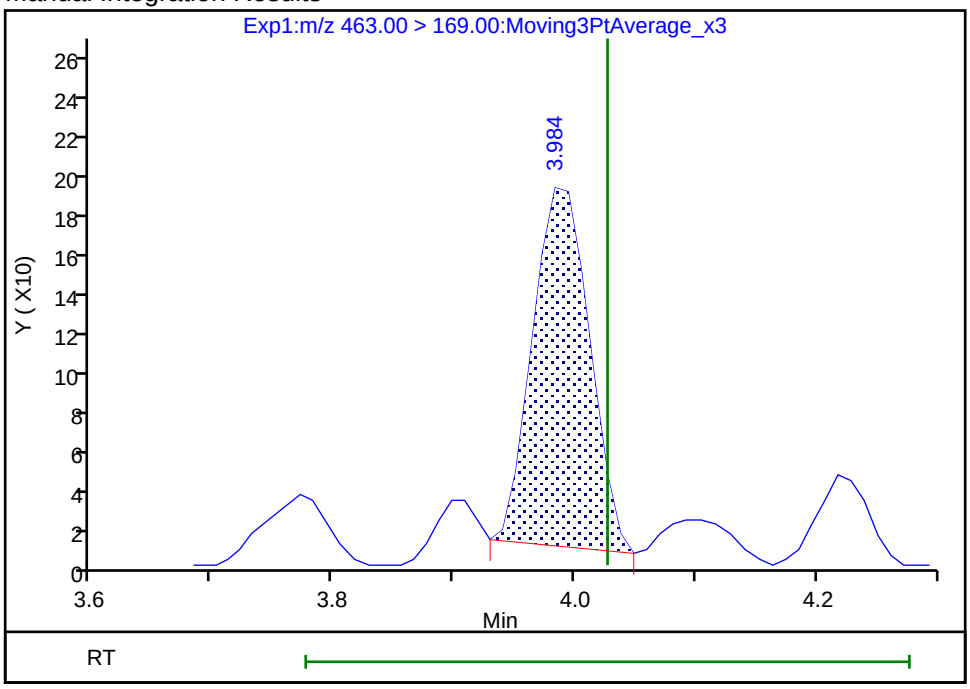
Not Detected
Expected RT: 4.03

Processing Integration Results



Manual Integration Results

RT: 3.98
Area: 597
Amount: 0.005704
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 10:43:38
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

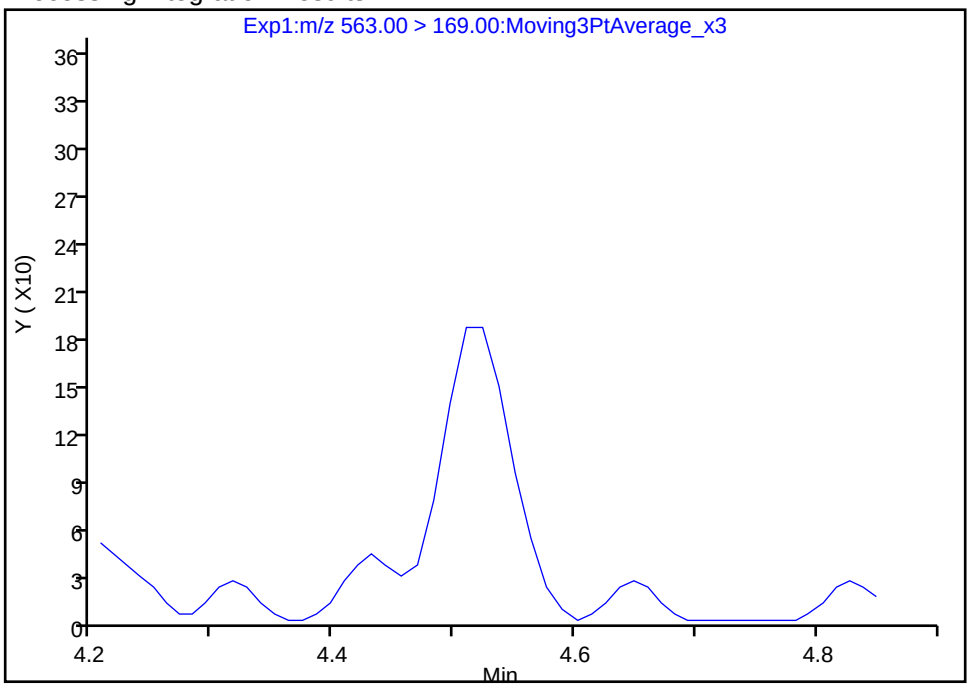
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C18.d				
Injection Date:	25-Feb-2020 21:16:03	Instrument ID:	LC812		
Lims ID:	480-166551-A-1-A	Lab Sample ID:	200-166551-1		
Client ID:	SW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 2

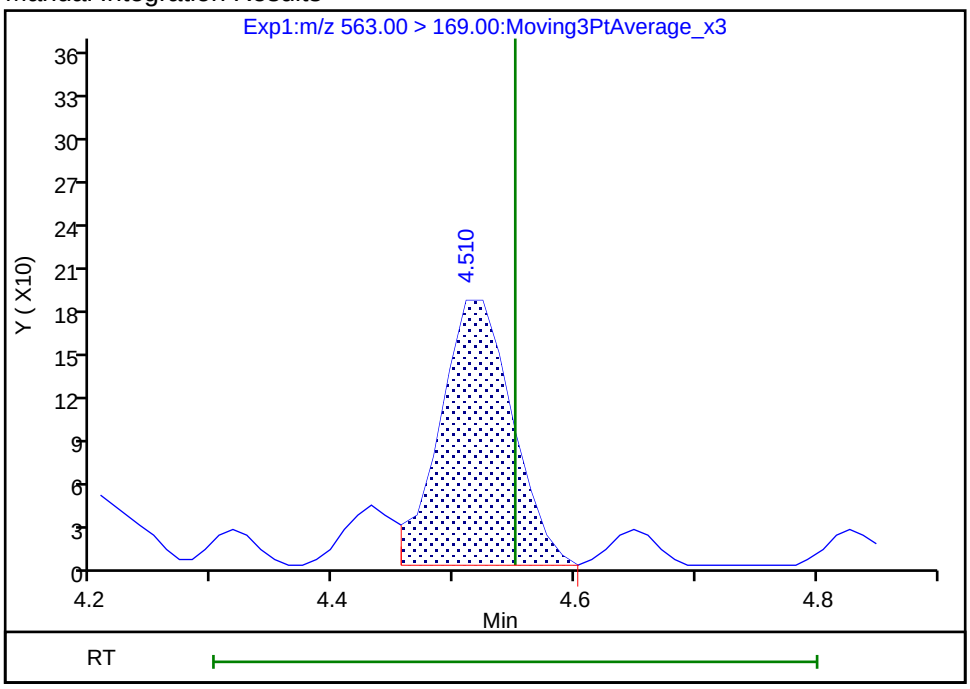
Not Detected
Expected RT: 4.55

Processing Integration Results



Manual Integration Results

RT: 4.51
Area: 767
Amount: 0.011368
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 10:44:44
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

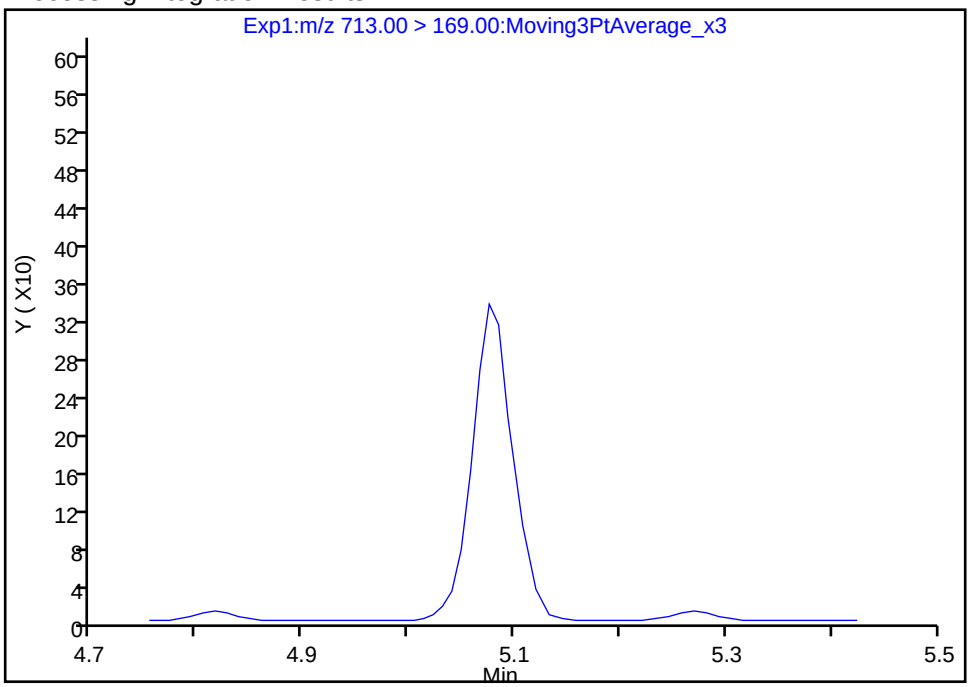
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C18.d				
Injection Date:	25-Feb-2020 21:16:03	Instrument ID:	LC812		
Lims ID:	480-166551-A-1-A	Lab Sample ID:	200-166551-1		
Client ID:	SW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 1

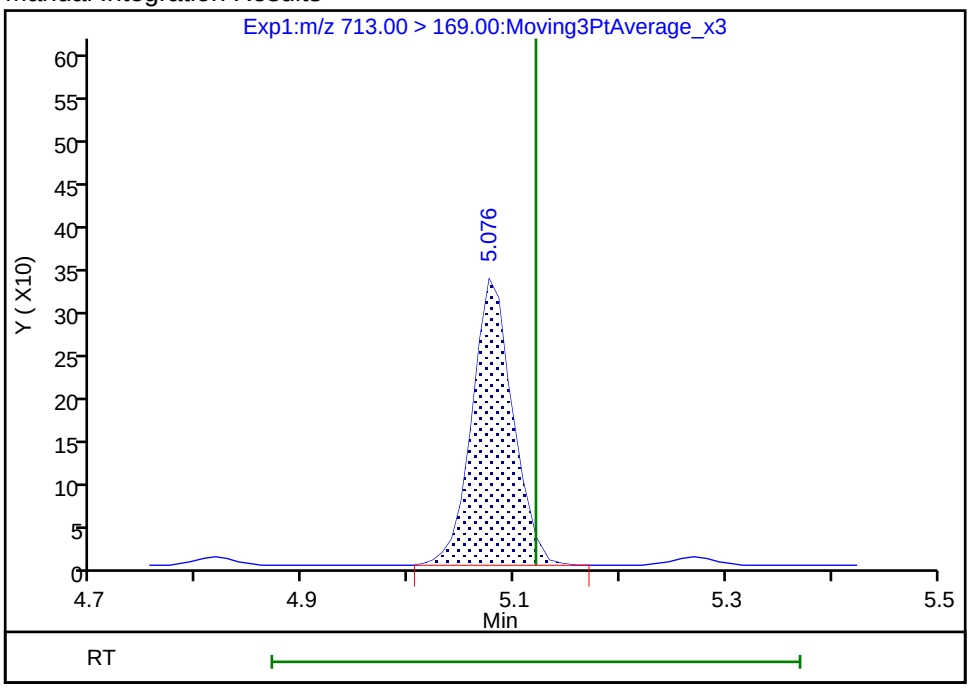
Not Detected
Expected RT: 5.12

Processing Integration Results



Manual Integration Results

RT: 5.08
Area: 897
Amount: 0.008927
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 10:45:42
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

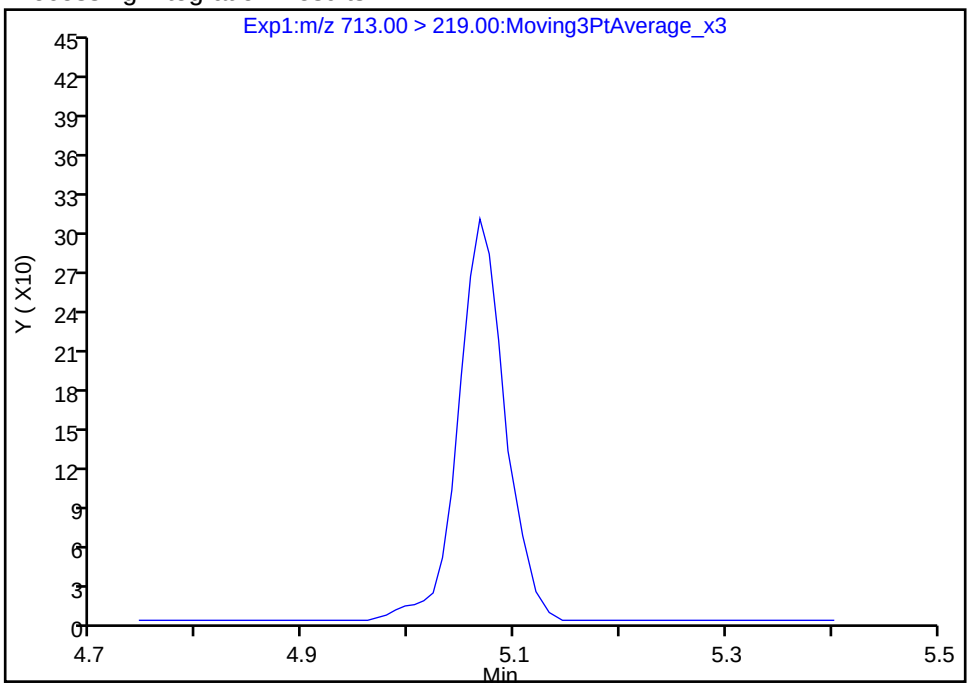
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C18.d				
Injection Date:	25-Feb-2020 21:16:03	Instrument ID:	LC812		
Lims ID:	480-166551-A-1-A	Lab Sample ID:	200-166551-1		
Client ID:	SW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 2

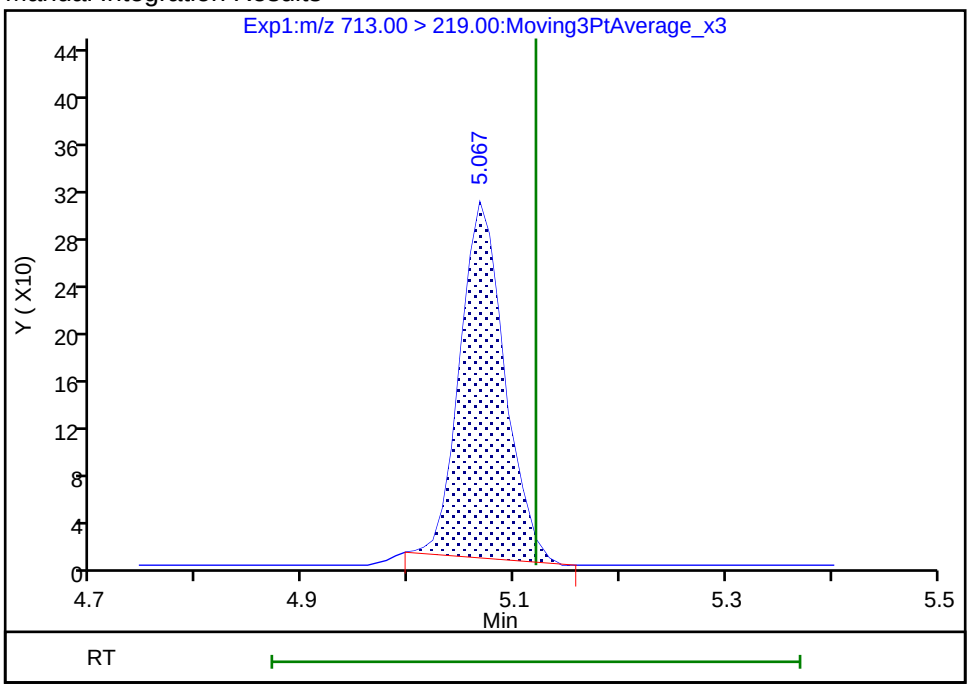
Not Detected
Expected RT: 5.12

Processing Integration Results



Manual Integration Results

RT: 5.07
Area: 881
Amount: 0.008927
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 10:45:48
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

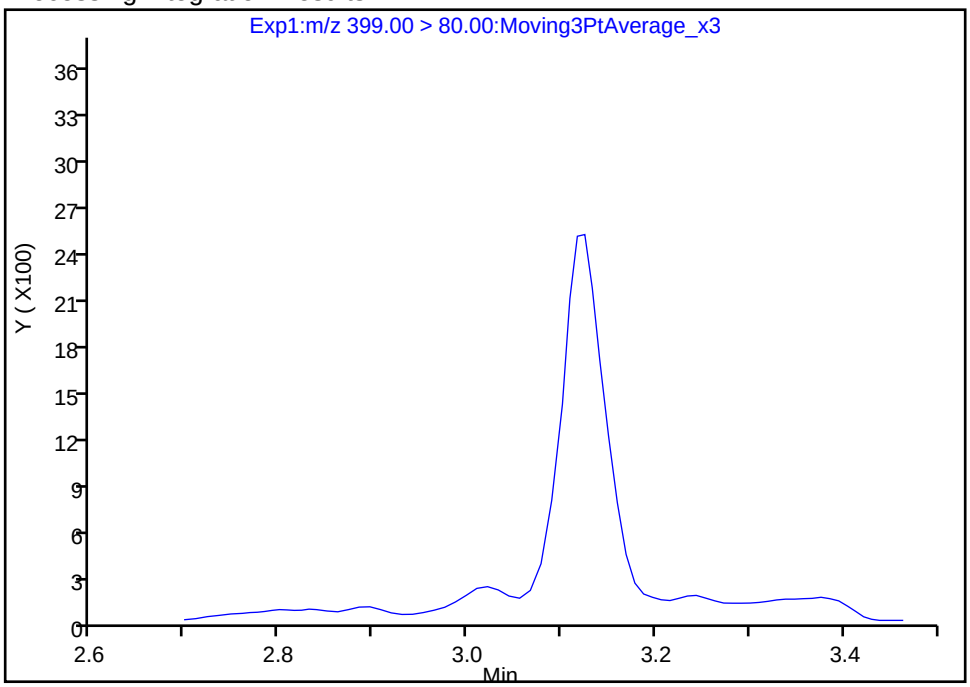
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C18.d				
Injection Date:	25-Feb-2020 21:16:03	Instrument ID:	LC812		
Lims ID:	480-166551-A-1-A	Lab Sample ID:	200-166551-1		
Client ID:	SW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

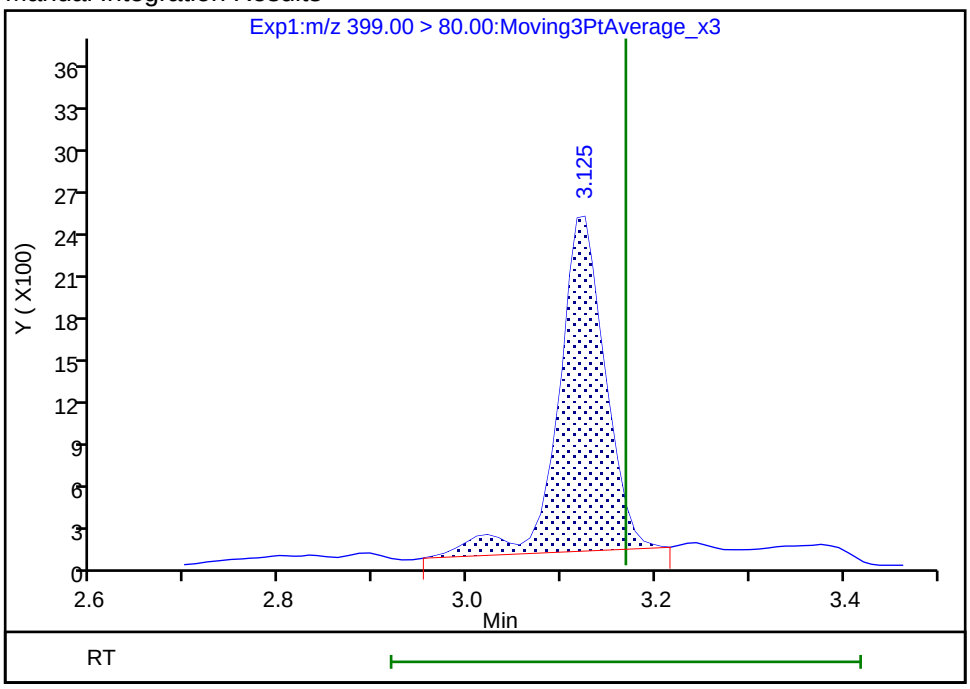
Not Detected
Expected RT: 3.17

Processing Integration Results



Manual Integration Results

RT: 3.12
Area: 8209
Amount: 0.010532
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 10:41:27
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

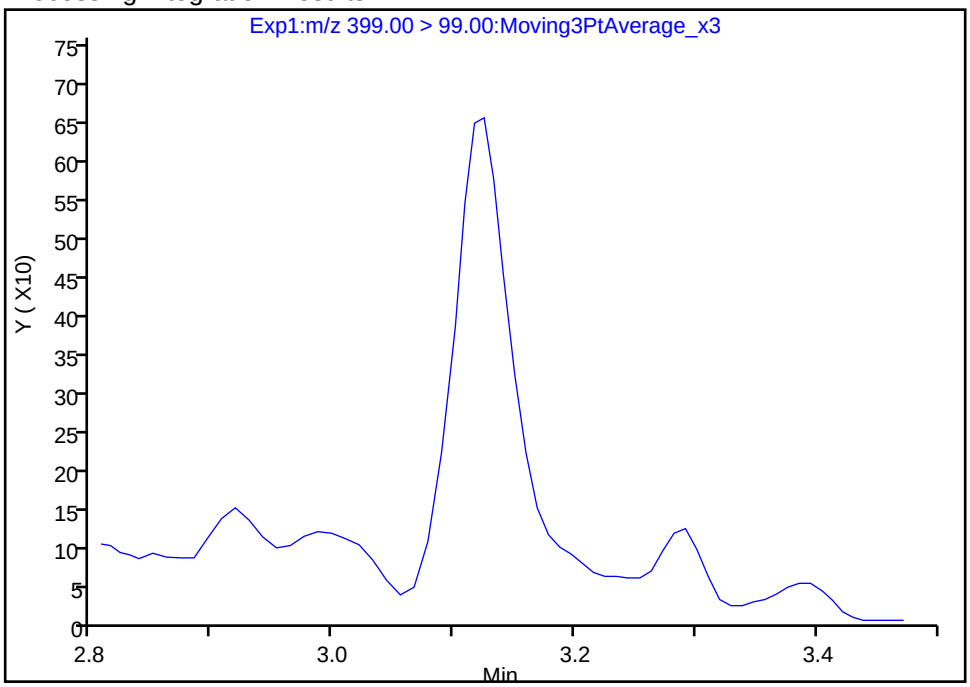
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C18.d				
Injection Date:	25-Feb-2020 21:16:03	Instrument ID:	LC812		
Lims ID:	480-166551-A-1-A	Lab Sample ID:	200-166551-1		
Client ID:	SW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

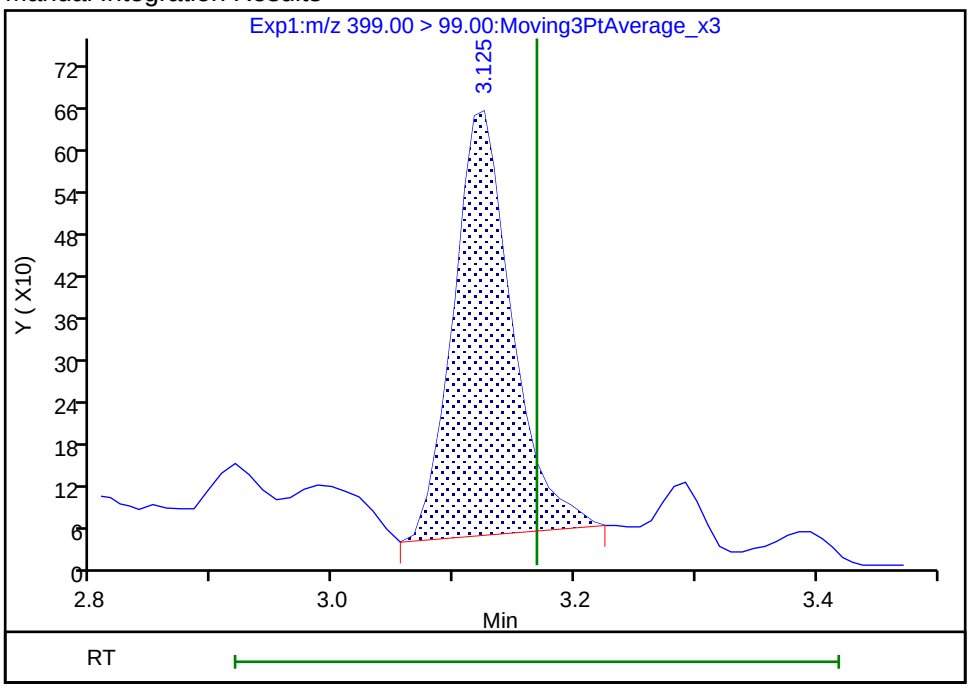
Not Detected
Expected RT: 3.17

Processing Integration Results



Manual Integration Results

RT: 3.12
Area: 2045
Amount: 0.010532
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 10:41:34
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

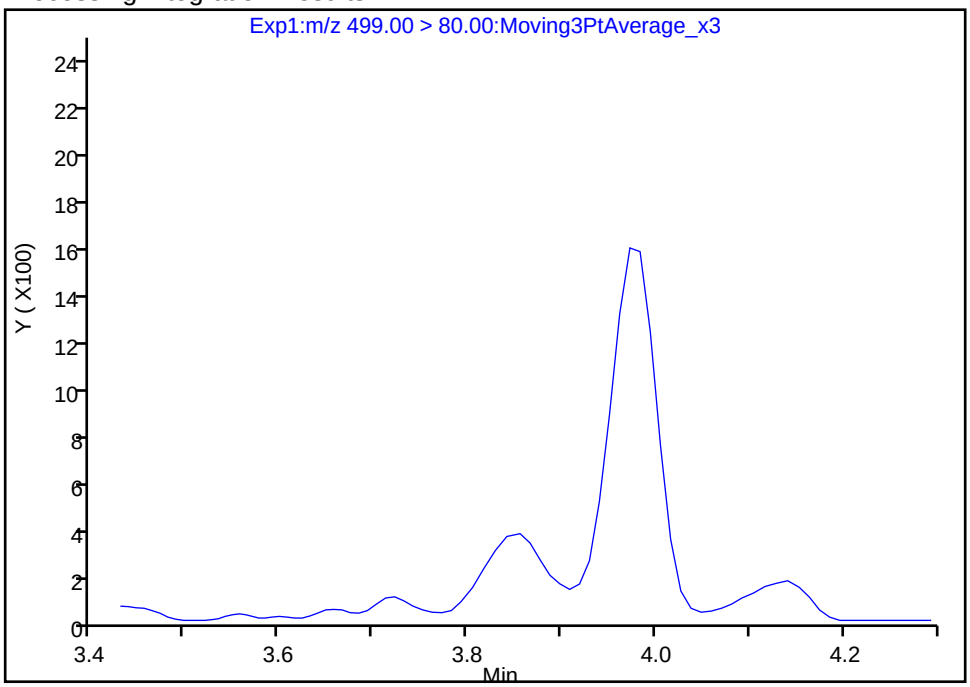
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C18.d				
Injection Date:	25-Feb-2020 21:16:03	Instrument ID:	LC812		
Lims ID:	480-166551-A-1-A	Lab Sample ID:	200-166551-1		
Client ID:	SW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

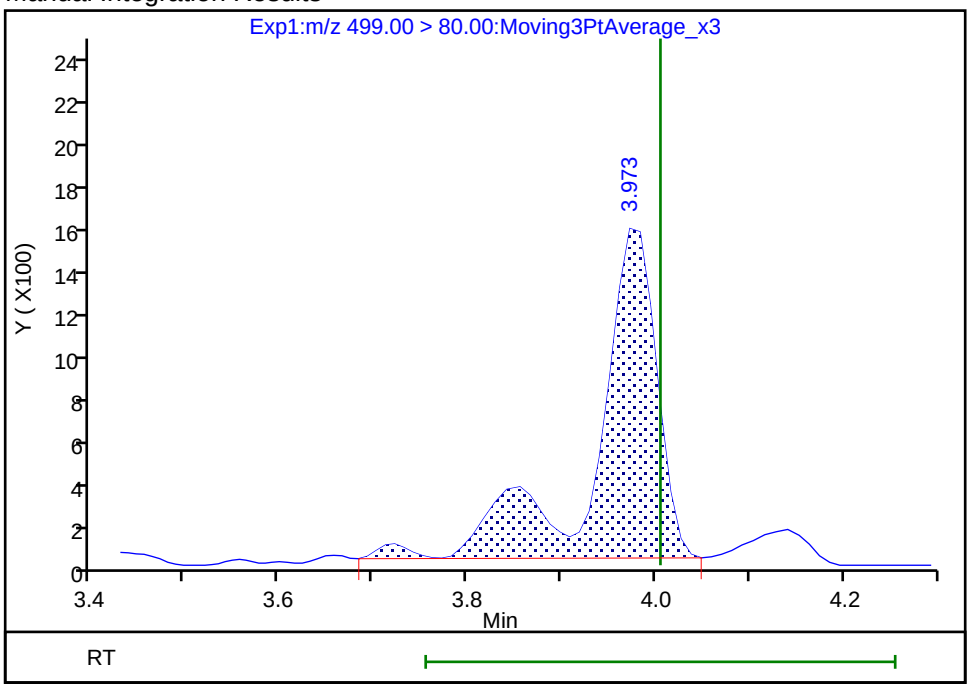
Not Detected
Expected RT: 4.01

Processing Integration Results



Manual Integration Results

RT: 3.97
Area: 7165
Amount: 0.012514
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 10:42:57
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

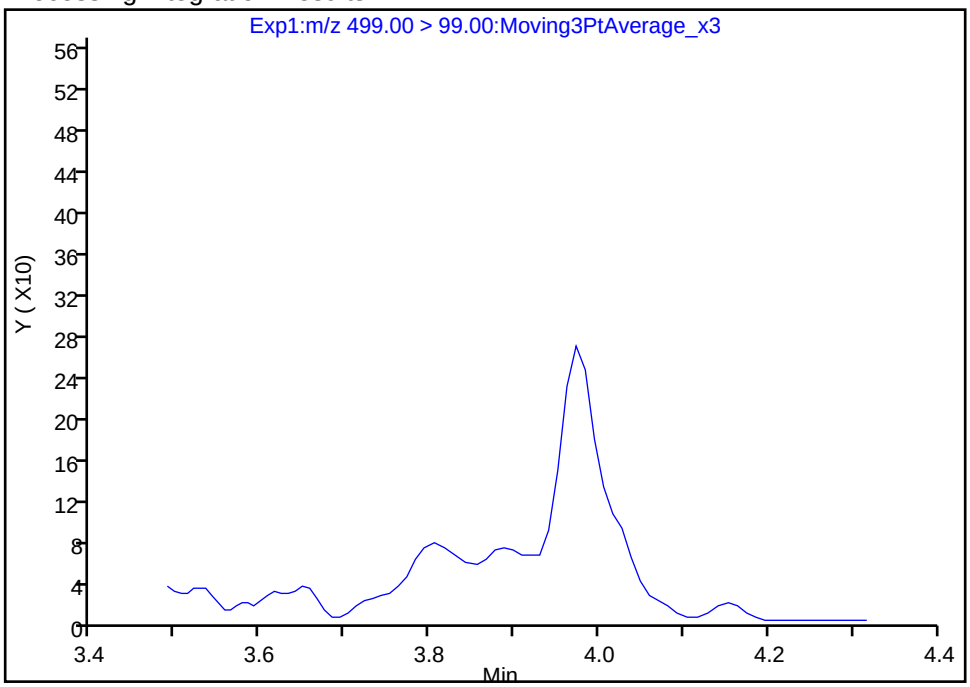
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C18.d				
Injection Date:	25-Feb-2020 21:16:03	Instrument ID:	LC812		
Lims ID:	480-166551-A-1-A	Lab Sample ID:	200-166551-1		
Client ID:	SW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

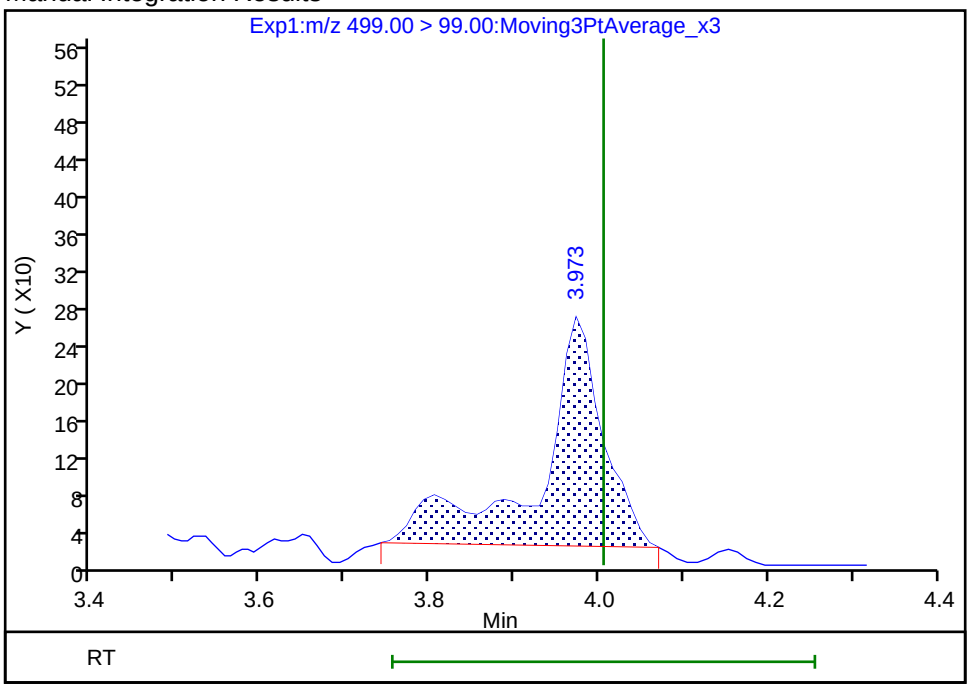
Not Detected
Expected RT: 4.01

Processing Integration Results



Manual Integration Results

RT: 3.97
Area: 1288
Amount: 0.012514
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 10:43:06
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

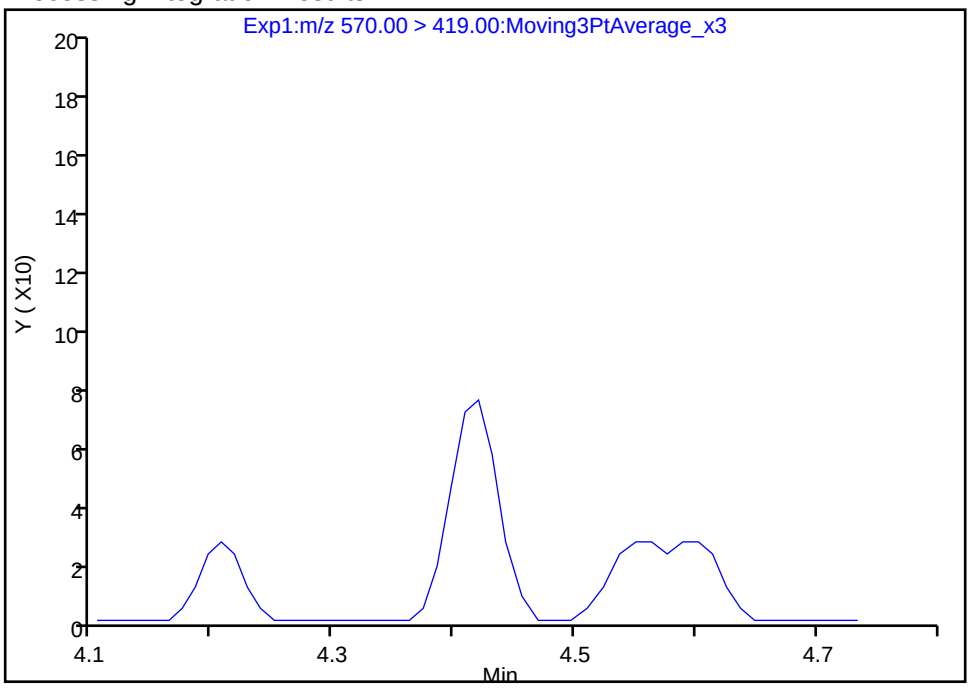
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C18.d				
Injection Date:	25-Feb-2020 21:16:03	Instrument ID:	LC812		
Lims ID:	480-166551-A-1-A	Lab Sample ID:	200-166551-1		
Client ID:	SW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

28 N-methylperfluorooctanesulfonamidoacetic aci, CAS: 2355-31-9

Signal: 1

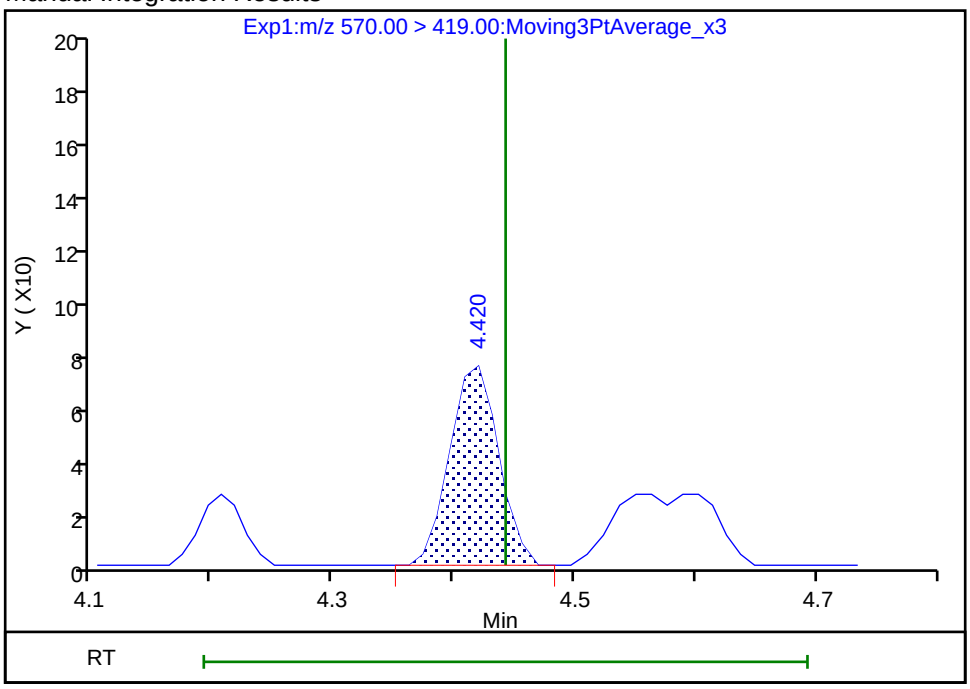
Processing Integration Results

Not Detected
Expected RT: 4.44



Manual Integration Results

RT: 4.42
Area: 204
Amount: 0.003690
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 10:44:01
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

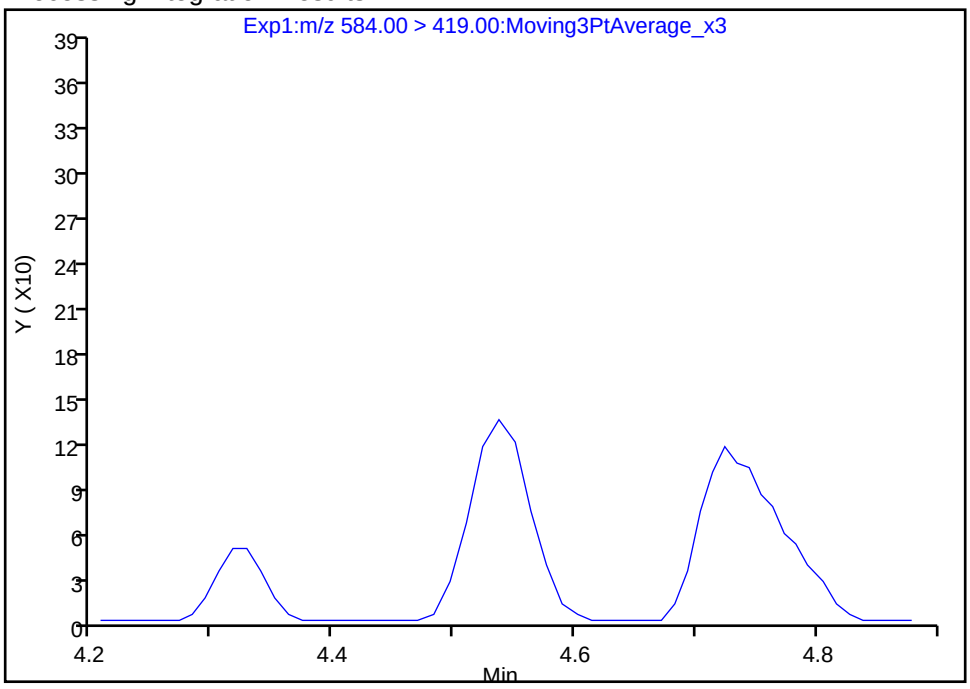
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C18.d				
Injection Date:	25-Feb-2020 21:16:03	Instrument ID:	LC812		
Lims ID:	480-166551-A-1-A	Lab Sample ID:	200-166551-1		
Client ID:	SW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	18	Worklist Smp#:	18
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

33 N-ethylperfluorooctanesulfonamidoacetic acid, CAS: 2991-50-6

Signal: 1

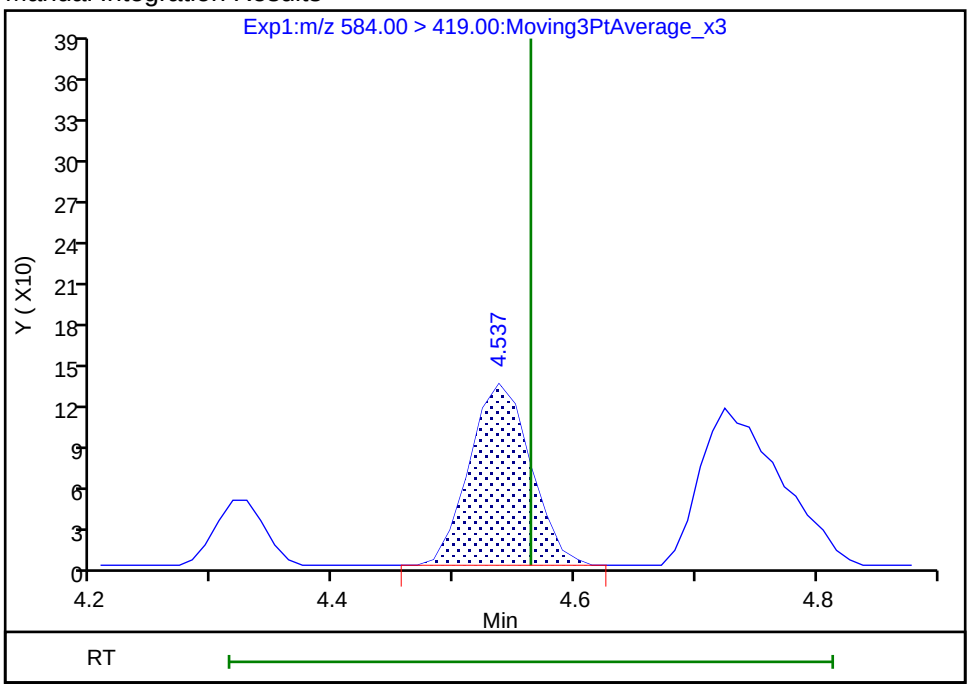
Not Detected
Expected RT: 4.56

Processing Integration Results



Manual Integration Results

RT: 4.54
Area: 470
Amount: 0.007405
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 10:45:04
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Client Sample ID: FB-021920 Lab Sample ID: 480-166551-2

Matrix: Water Lab File ID: SC022520C21.d

Analysis Method: 537 (modified) Date Collected: 02/19/2020 08:22

Extraction Method: 3535 Date Extracted: 02/24/2020 13:43

Sample wt/vol: 287.7(mL) Date Analyzed: 02/25/2020 21:40

Con. Extract Vol.: 10(mL) Dilution Factor: 1

Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 152696 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	ND		1.7	0.87
2706-90-3	Perfluoropentanoic acid (PFPeA)	ND		1.7	0.55
307-24-4	Perfluorohexanoic acid (PFHxA)	ND		1.7	0.66
375-85-9	Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.79
335-67-1	Perfluorooctanoic acid (PFOA)	ND		1.7	0.70
375-95-1	Perfluorononanoic acid (PFNA)	ND		1.7	0.23
335-76-2	Perfluorodecanoic acid (PFDA)	ND		1.7	0.67
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.68
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		1.7	0.51
72629-94-8	Perfluorotridecanoic acid (PFTriA)	ND		1.7	0.52
376-06-7	Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.80
375-73-5	Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.43
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	ND		1.7	0.70
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.83
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.53
335-77-3	Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.78
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND		8.7	8.7
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		17	1.5
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		17	1.3
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	4.8
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	2.5

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Client Sample ID: FB-021920 Lab Sample ID: 480-166551-2

Matrix: Water Lab File ID: SC022520C21.d

Analysis Method: 537 (modified) Date Collected: 02/19/2020 08:22

Extraction Method: 3535 Date Extracted: 02/24/2020 13:43

Sample wt/vol: 287.7(mL) Date Analyzed: 02/25/2020 21:40

Con. Extract Vol.: 10(mL) Dilution Factor: 1

Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 152696 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	106		50-150
STL01892	13C4 PFHpA	100		50-150
STL00990	13C4 PFOA	103		50-150
STL00991	13C4 PFOS	113		50-150
STL00995	13C5 PFNA	102		50-150
STL00992	13C4 PFBA	102		25-150
STL00993	13C2 PFHxA	99		50-150
STL00996	13C2 PFDA	107		50-150
STL00997	13C2 PFUnA	99		50-150
STL00998	13C2 PFDoA	95		50-150
STL01056	13C8 FOSA	94		25-150
STL01893	13C5 PFPeA	111		25-150
STL02116	13C2 PFTeDA	87		50-150
STL02118	d3-NMeFOSAA	111		50-150
STL02117	d5-NEtFOSAA	93		50-150
STL02279	M2-6:2 FTS	106		25-150
STL02280	M2-8:2 FTS	121		25-150
STL02337	13C3 PFBS	101		50-150

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C21.d
Lims ID: 480-166551-A-2-A
Client ID: FB-021920-EC
Sample Type: Client
Inject. Date: 25-Feb-2020 21:40:55 ALS Bottle#: 21 Worklist Smp#: 21
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 480-166551-A-2-A
Misc. Info.: 200-0040162-021 Plate: 1 Rack: 2
Operator ID: lc812tech Instrument ID: LC812

Method: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\PFC_LC812.m
Limit Group: LC_PFC_ICAL
Last Update: 26-Feb-2020 17:13:38 Calib Date: 10-Feb-2020 12:29:33
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL010.d

Column 1 : C-18 (4.60 mm) Det: EXP1
Process Host: CTX0323

First Level Reviewer: murrayjw Date: 26-Feb-2020 11:29:35
Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										M
217.00 > 172.00	1.898	1.917	-0.019	0.527	2099924	2.56		102	1749	M
2 Perfluorobutanoic acid										M
212.90 > 169.00	1.889	1.917	-0.028	0.995	19387	0.0243			2.4	M
D 3 13C5 PFPeA										
267.90 > 223.00	2.231	2.257	-0.026	0.620	1770670	2.77		111	2253	
4 Perfluoropentanoic acid										M
262.90 > 219.00	2.231	2.271	-0.040	1.000	7574	0.0099			0.6	M
D 47 13C3 PFBS										
301.90 > 80.00	2.257	2.284	-0.027	0.627	2010411	2.34		101	832882	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.257	2.284	-0.027	1.000	7078	0.008024	Target=2.19		19.9	
298.90 > 99.00	2.257	2.284	-0.027	1.000	3905		1.81(1.09-3.28)		3.4	
D 7 13C2 PFHxA										
315.00 > 270.00	2.636	2.673	-0.037	0.732	1841464	2.47		98.6	8642	
6 Perfluorohexanoic acid										M
313.00 > 269.00	2.636	2.673	-0.037	1.000	5965	0.008179	Target=12.51		1.8	M
313.00 > 119.00	2.636	2.673	-0.037	1.000	533		11.19(6.25-18.76)		1.6	M
D 11 18O2 PFHxS										
403.00 > 84.00	3.125	3.168	-0.043	0.868	1518715	2.50		106	7660	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.125	3.168	-0.043	1.000	6843	0.009030	Target=4.33		36.7	M
399.00 > 99.00	3.117	3.168	-0.051	0.997	1908		3.59(2.17-6.50)		6.5	M
D 9 13C4 PFHpA										
367.00 > 322.00	3.125	3.168	-0.043	0.868	1800964	2.51		100	5166	
10 Perfluoroheptanoic acid										M
363.00 > 319.00	3.125	3.168	-0.043	1.000	4810	0.006526	Target=3.79		3.1	M
363.00 > 169.00	3.125	3.168	-0.043	1.000	1196		4.02(1.89-5.68)		4.6	M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.571	3.624	-0.053	0.998	1948	0.0196			35.6	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.578	3.624	-0.046	0.994	210295	2.53		106	1595	
D 14 13C4 PFOA										
417.00 > 372.00	3.599	3.640	-0.041	1.000	1915304	2.58		103	7878	
* 62 13C2 PFOA										
415.00 > 370.00	3.599	3.640	-0.041		1971245	2.50			10221	
15 Perfluorooctanoic acid										M
413.00 > 369.00	3.599	3.640	-0.041	1.000	11095	0.0139	Target=2.66		4.0	M
413.00 > 169.00	3.599	3.640	-0.041	1.000	3457		3.21(1.33-3.99)		29.6	M
D 18 13C4 PFOS										
503.00 > 80.00	3.973	4.005	-0.032	1.104	1216511	2.69		113	8888	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.973	4.005	-0.032	1.000	3780	0.006762	Target=5.29		34.1	M
499.00 > 99.00	3.973	4.005	-0.032	1.000	833		4.54(2.65-7.94)		6.3	M
D 19 13C5 PFNA										
468.00 > 423.00	3.984	4.027	-0.043	1.107	1822789	2.56		102	17652	
D 23 13C2 PFDA										
515.00 > 470.00	4.283	4.305	-0.022	1.190	2074407	2.68		107	10448	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.283	4.317	-0.034	1.190	339763	2.89		121	1976	
22 Perfluorooctanesulfonamide										M
498.00 > 78.00	4.328	4.340	-0.012	1.000	2960	0.003845			29.4	M
D 21 13C8 FOSA										
506.00 > 78.00	4.328	4.340	-0.012	1.202	1877811	2.36		94.5	5979	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.409	4.431	-0.022	1.225	170052	2.78		111	2384	
28 N-methylperfluorooctanesulfonamido										M
570.00 > 419.00	4.397	4.443	-0.046	0.997	336	0.005766			6.0	M
D 30 13C2 PFUnA										
565.00 > 520.00	4.510	4.537	-0.027	1.253	1666297	2.47		98.7	7486	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.524	4.551	-0.027	1.257	162397	2.33		93.3	1243	
33 N-ethylperfluorooctanesulfonamidoa										M
584.00 > 419.00	4.537	4.563	-0.026	1.003	283	0.005467			3.6	M
D 36 13C2 PFDoA										
615.00 > 570.00	4.714	4.744	-0.030	1.310	1802312	2.38		95.4	6853	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.076	5.108	-0.032	1.410	1405120	2.17		86.6	7405	

QC Flag Legend

Review Flags

M - Manually Integrated

Report Date: 26-Feb-2020 17:13:47 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C21.d

Injection Date: 25-Feb-2020 21:40:55 Instrument ID: LC812

Lims ID: 480-166551-A-2-A Lab Sample ID: 200-166551-2

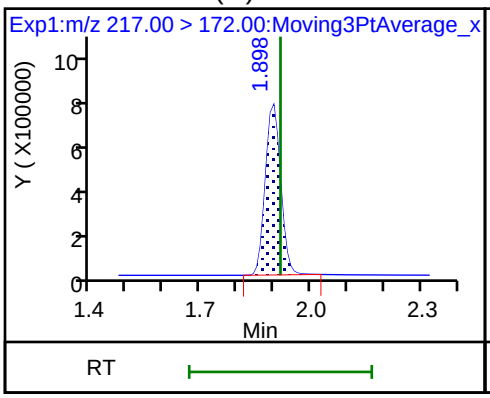
Client ID: FB-021920-EC

Operator ID: lc812tech ALS Bottle#: 21 Worklist Smp#: 21

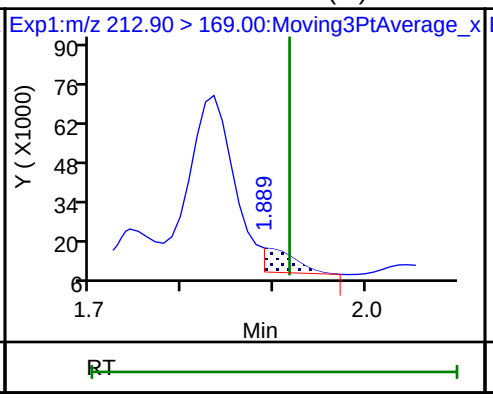
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFC_LC812 Limit Group: LC_PFC_ICAL

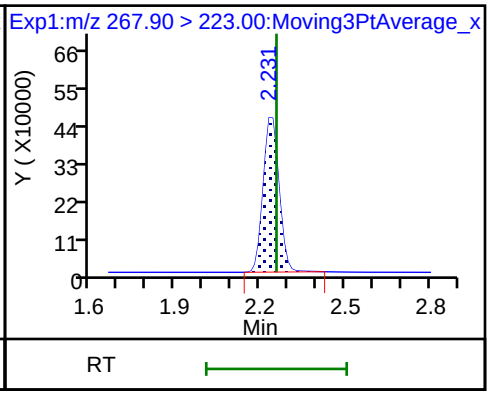
D 1 13C4 PFBA (M)



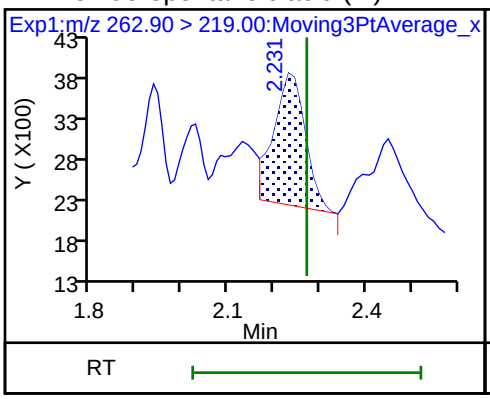
2 Perfluorobutanoic acid (M)



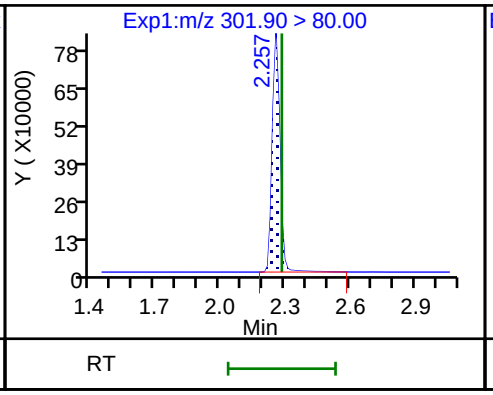
D 3 13C5 PFPeA



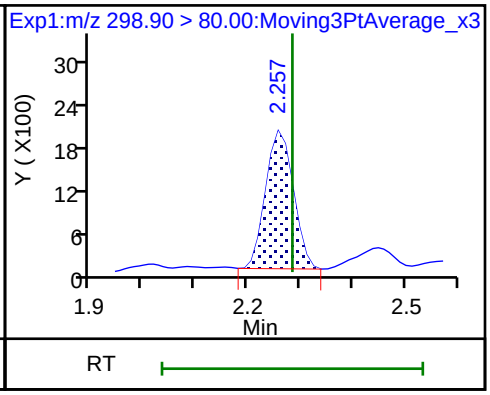
4 Perfluoropentanoic acid (M)



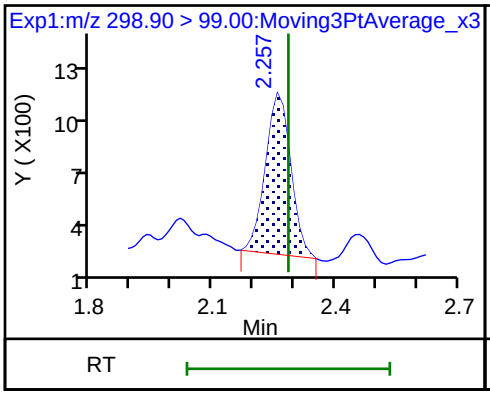
D 47 13C3 PFBS



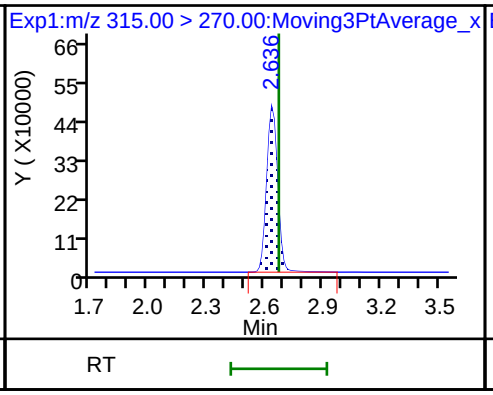
5 Perfluorobutanesulfonic acid



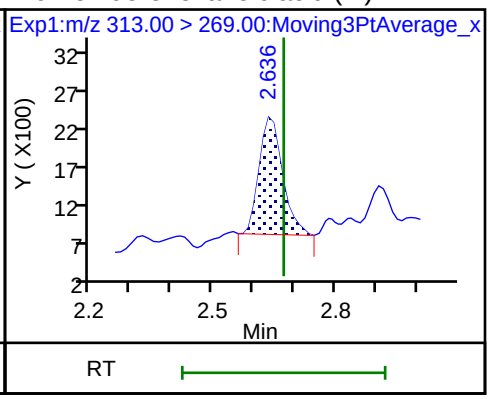
5 Perfluorobutanesulfonic acid



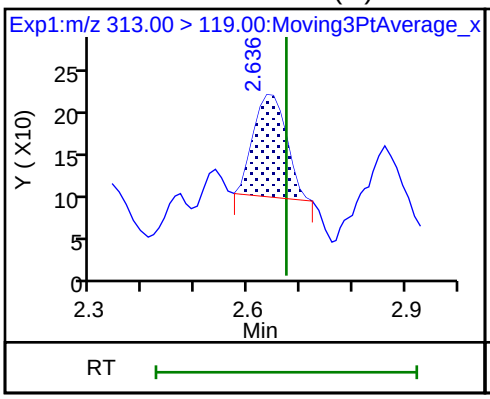
D 7 13C2 PFHxA



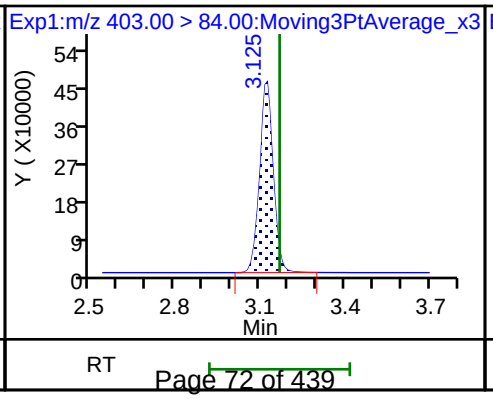
6 Perfluorohexanoic acid (M)



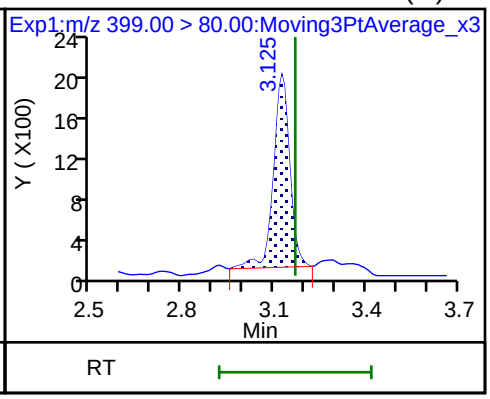
6 Perfluorohexanoic acid (M)



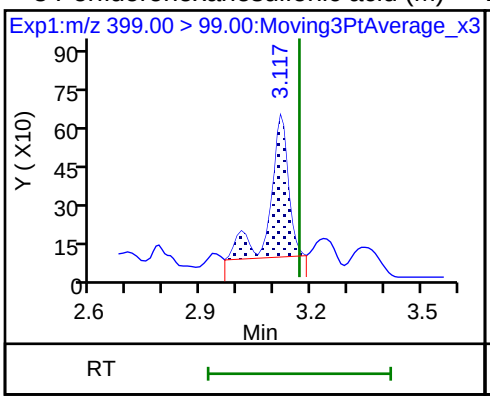
D 11 18O2 PFHxS



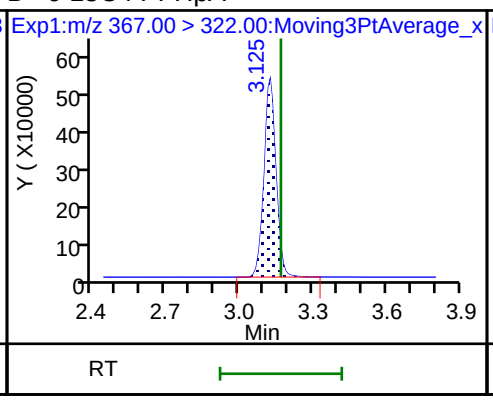
8 Perfluorohexanesulfonic acid (M)



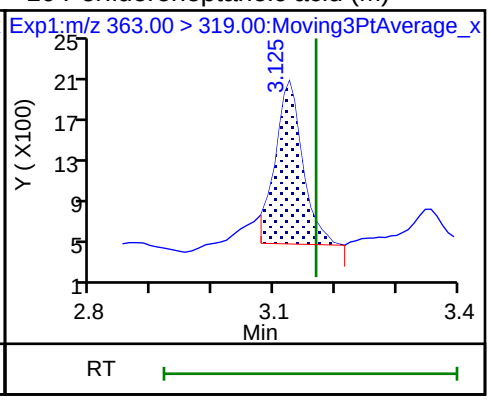
8 Perfluorohexanesulfonic acid (M)



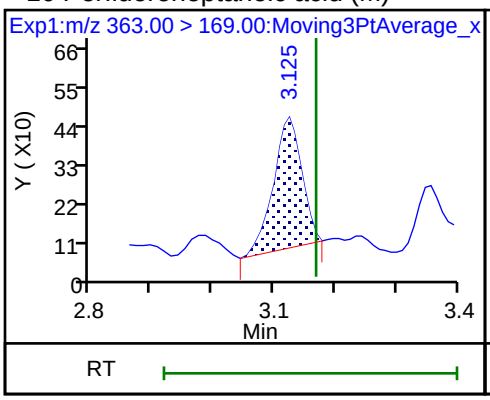
D 9 13C4 PFHpA



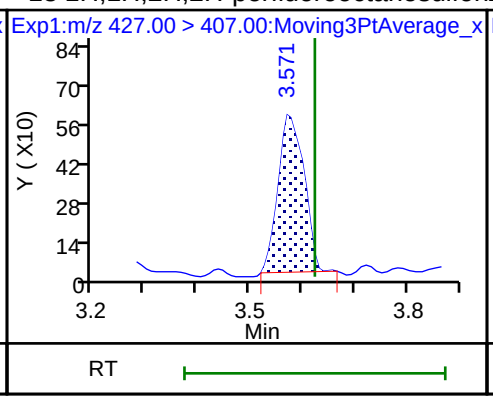
10 Perfluoroheptanoic acid (M)



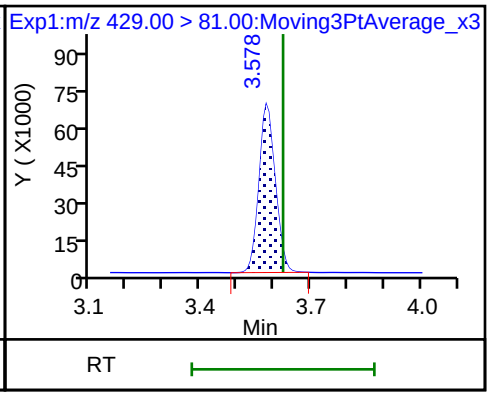
10 Perfluoroheptanoic acid (M)



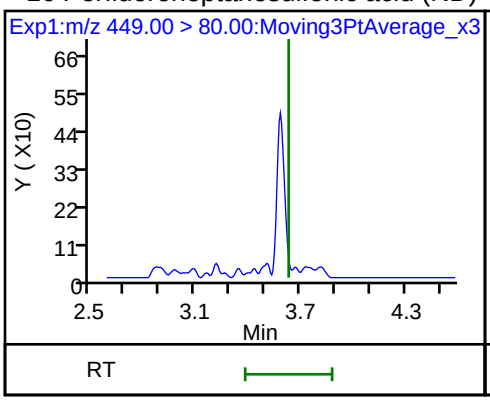
13 1H,1H,2H,2H-perfluorooctanesulfon



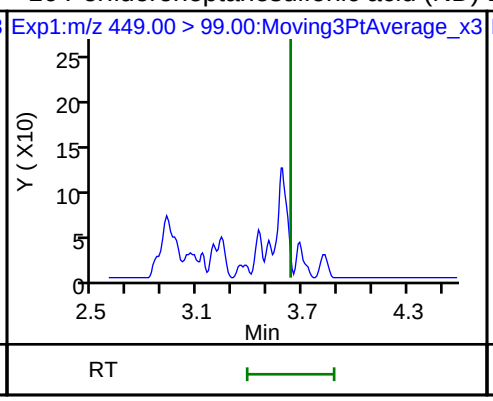
D 12 M2-6:2 FTS

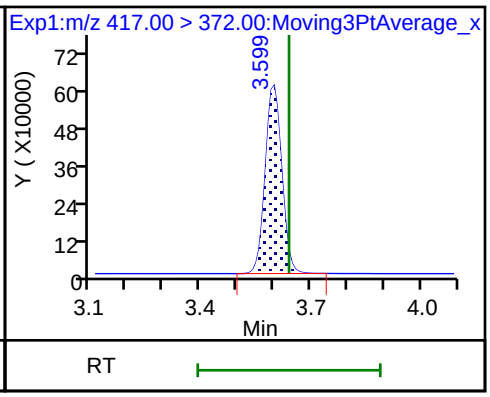


16 Perfluoroheptanesulfonic acid (ND)

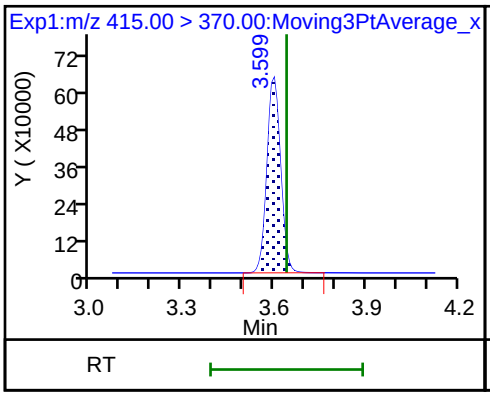


16 Perfluoroheptanesulfonic acid (ND) D 14 13C4 PFOA

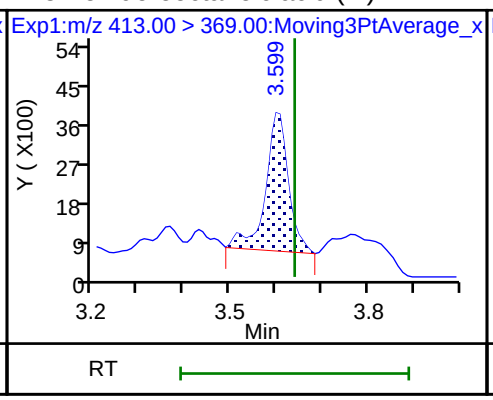




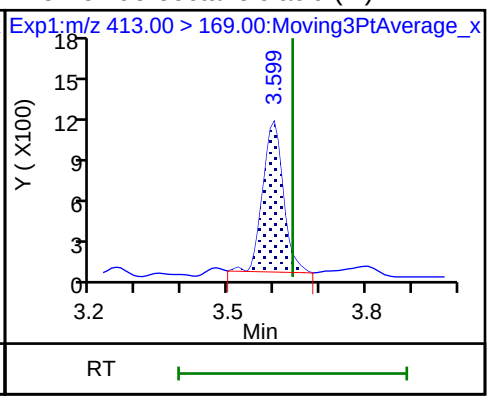
* 62 13C2 PFOA



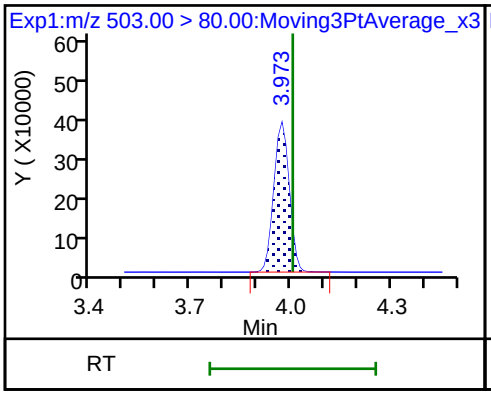
15 Perfluorooctanoic acid (M)



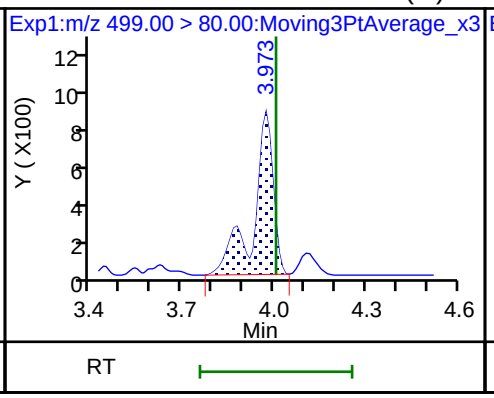
15 Perfluorooctanoic acid (M)



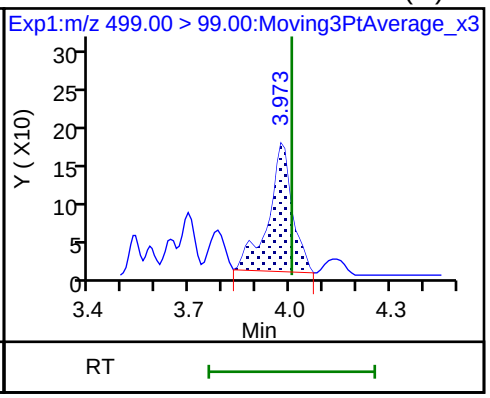
D 18 13C4 PFOS



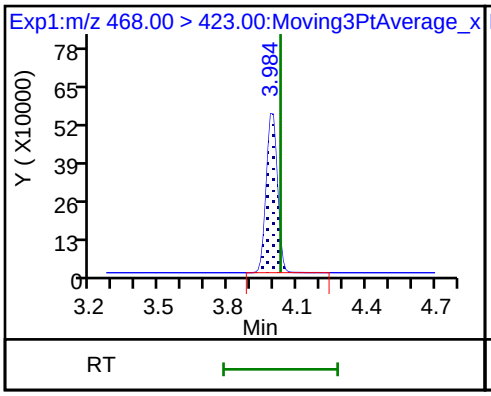
17 Perfluorooctanesulfonic acid (M)



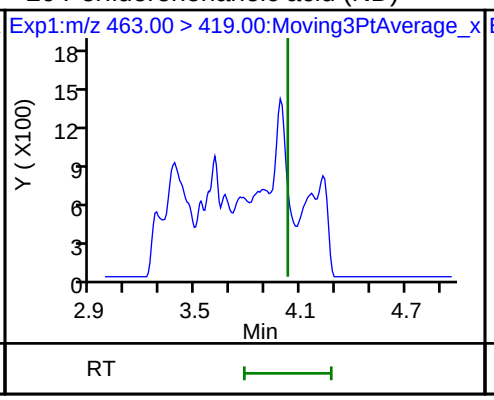
17 Perfluorooctanesulfonic acid (M)



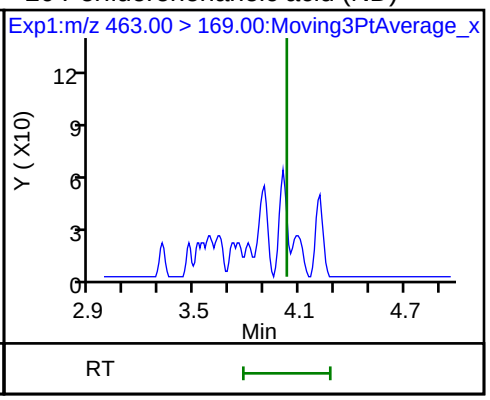
D 19 13C5 PFNA



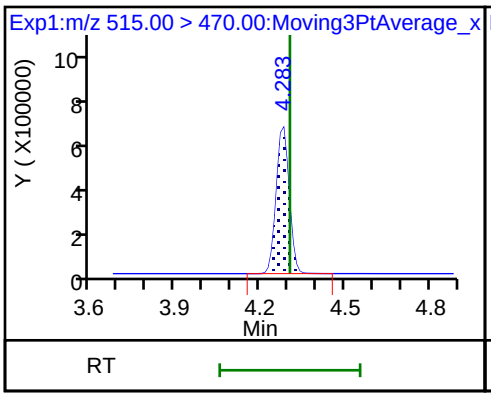
20 Perfluorononanoic acid (ND)



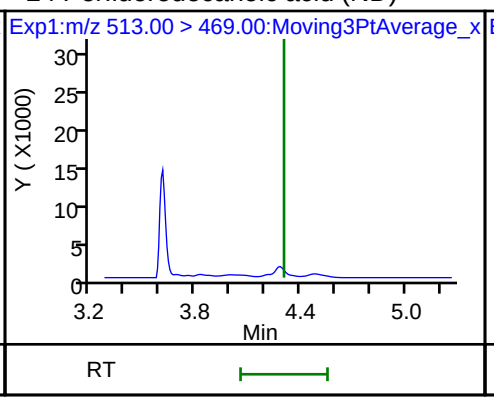
20 Perfluorononanoic acid (ND)



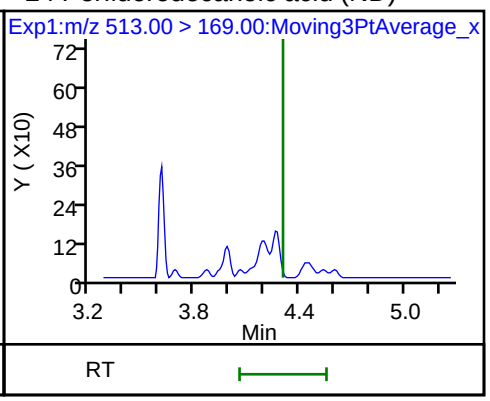
D 23 13C2 PFDA



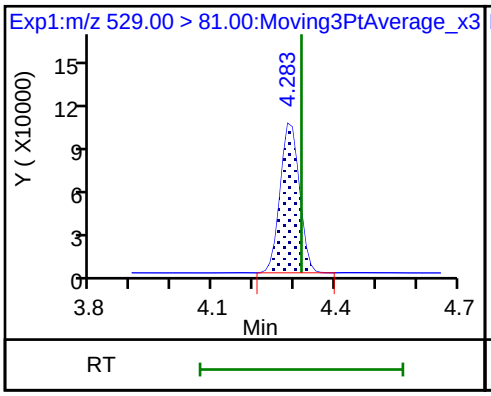
24 Perfluorodecanoic acid (ND)



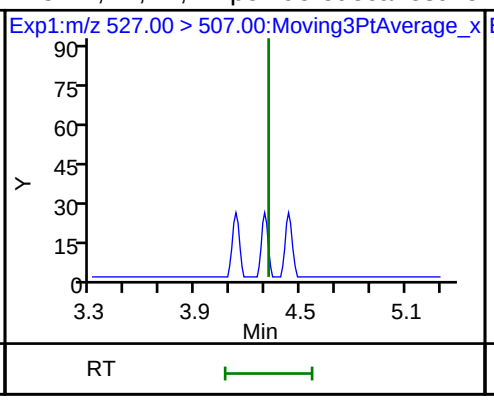
24 Perfluorodecanoic acid (ND)



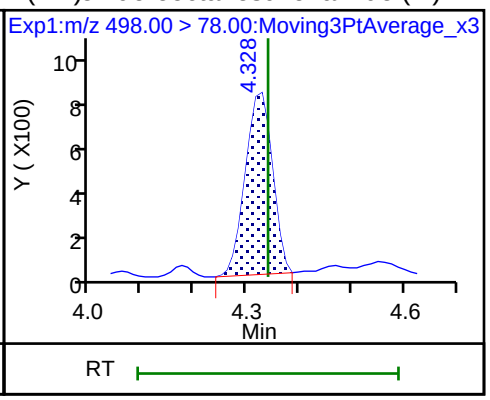
D 26 M2-8:2 FTS



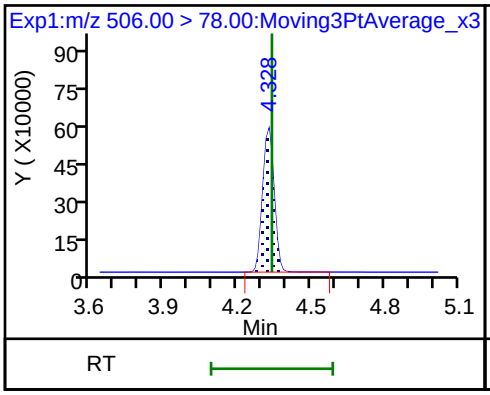
25 1H,1H,2H,2H-perfluorodecanesulfoni



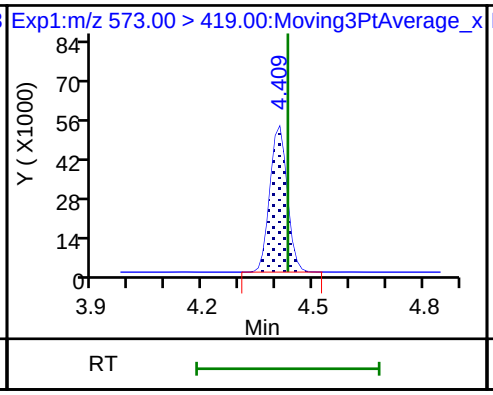
(2D) erfluorooctanesulfonamide (M)



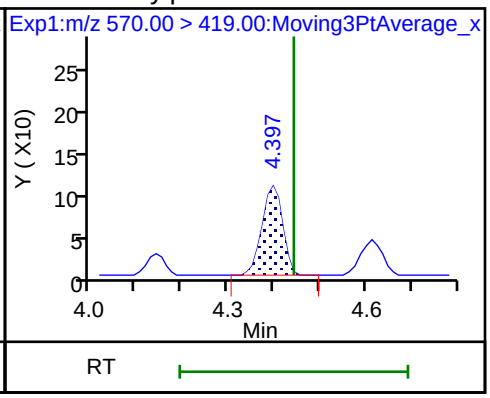
D 21 13C8 FOSA



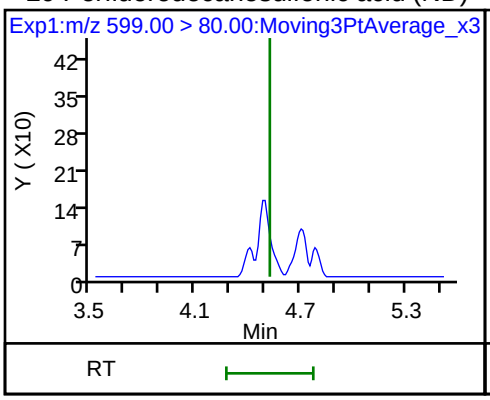
D 27 d3-NMeFOSAA



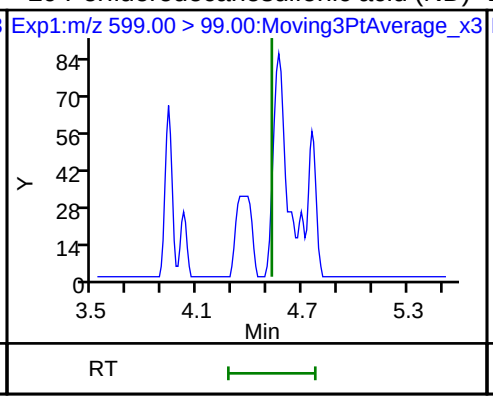
28 N-methylperfluorooctanesulfonamido (M)



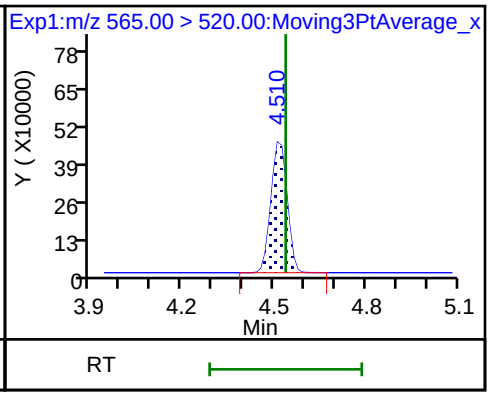
29 Perfluorodecanesulfonic acid (ND)



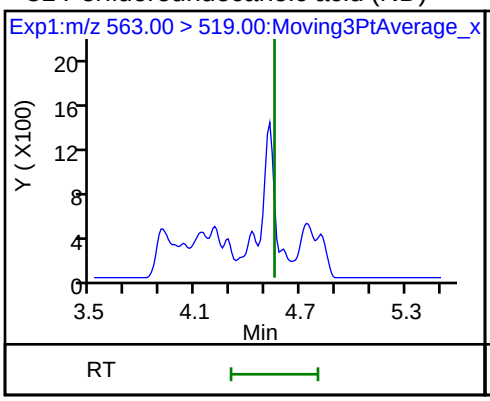
29 Perfluorodecanesulfonic acid (ND)



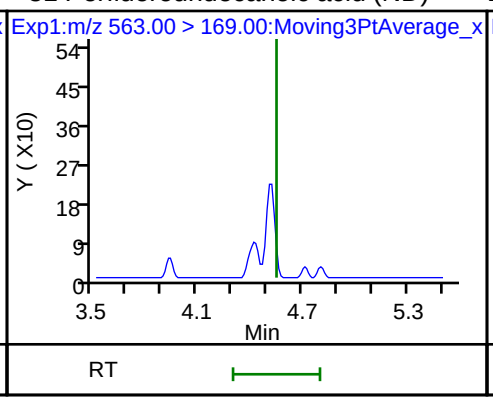
D 30 13C2 PFUnA



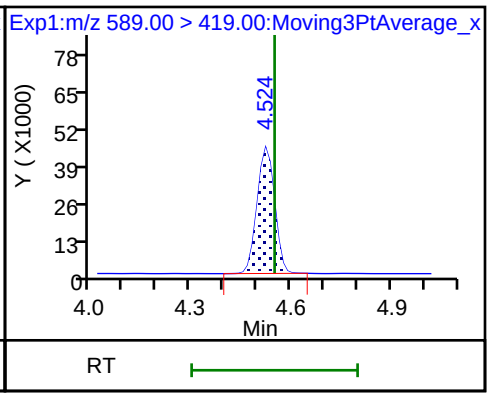
31 Perfluoroundecanoic acid (ND)



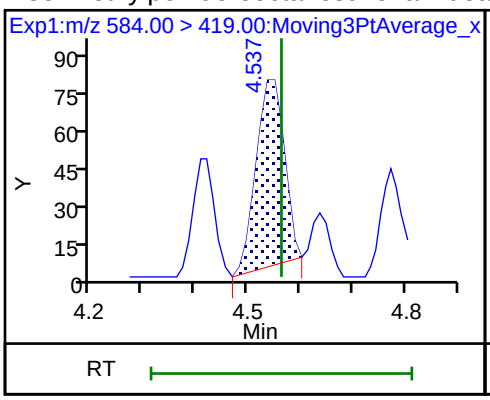
31 Perfluoroundecanoic acid (ND)



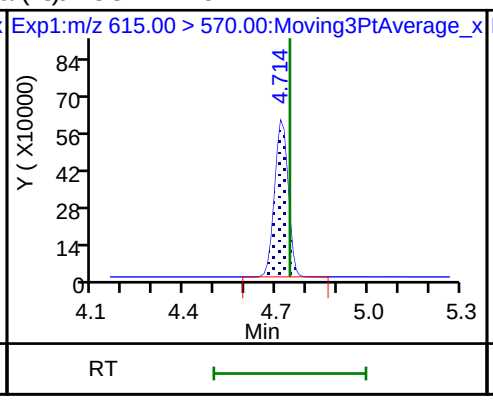
D 32 d5-NEtFOSAA



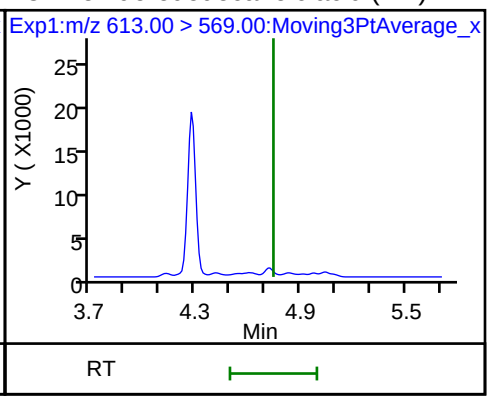
33 N-ethylperfluorooctanesulfonamidoa(M)



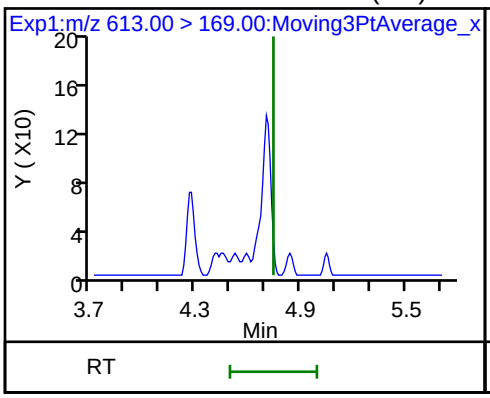
D 36 13C2 PFDoA



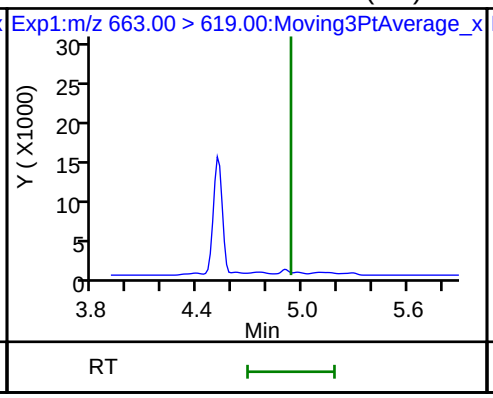
37 Perfluorododecanoic acid (ND)



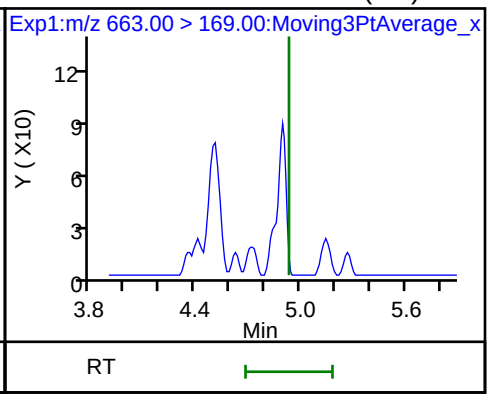
37 Perfluorododecanoic acid (ND)



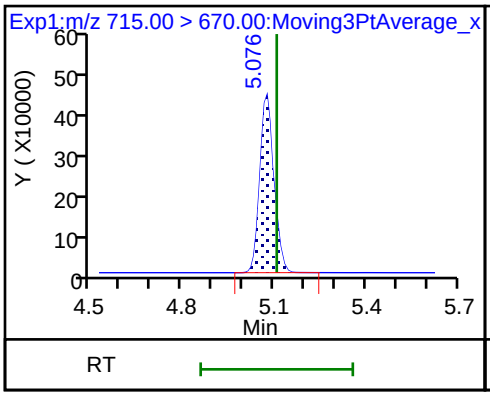
41 Perfluorotridecanoic acid (ND)



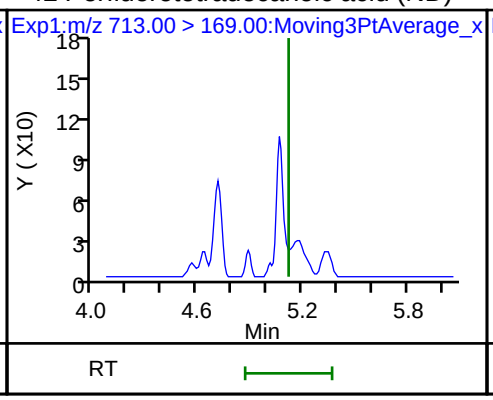
41 Perfluorotridecanoic acid (ND)



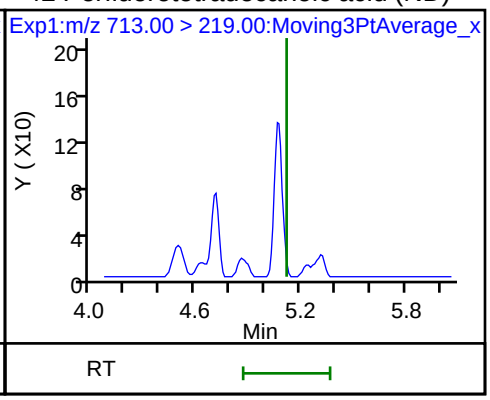
D 43 13C2 PFTeDA



42 Perfluorotetradecanoic acid (ND)



42 Perfluorotetradecanoic acid (ND)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

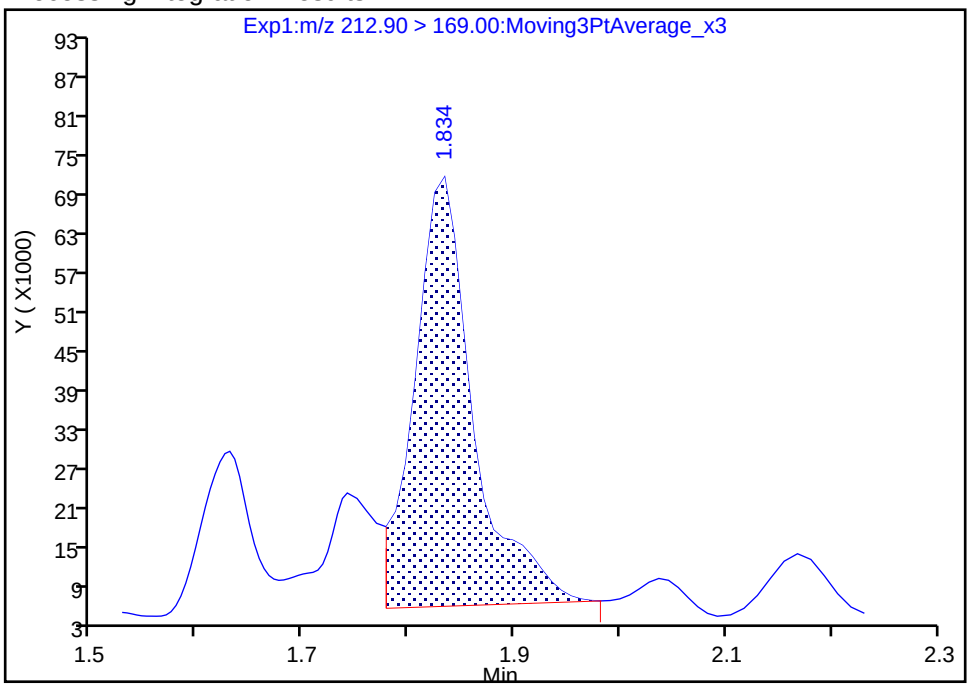
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C21.d				
Injection Date:	25-Feb-2020 21:40:55	Instrument ID:	LC812		
Lims ID:	480-166551-A-2-A	Lab Sample ID:	200-166551-2		
Client ID:	FB-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	21	Worklist Smp#:	21
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

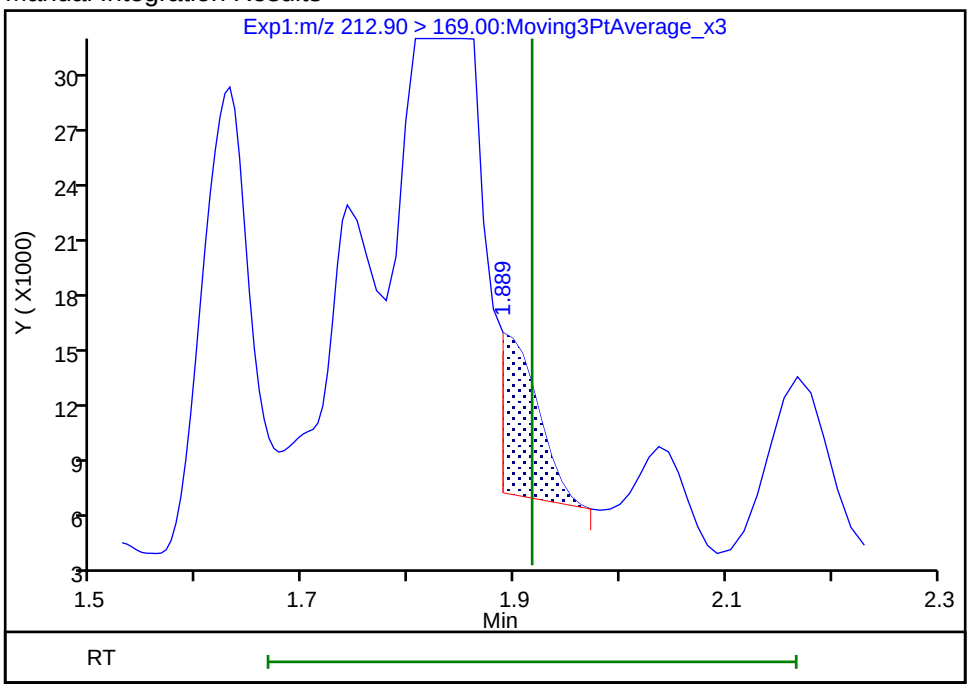
Processing Integration Results

RT: 1.83
Area: 252053
Amount: 0.307408
Amount Units: ng/ml



Manual Integration Results

RT: 1.89
Area: 19387
Amount: 0.024263
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:25:33

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

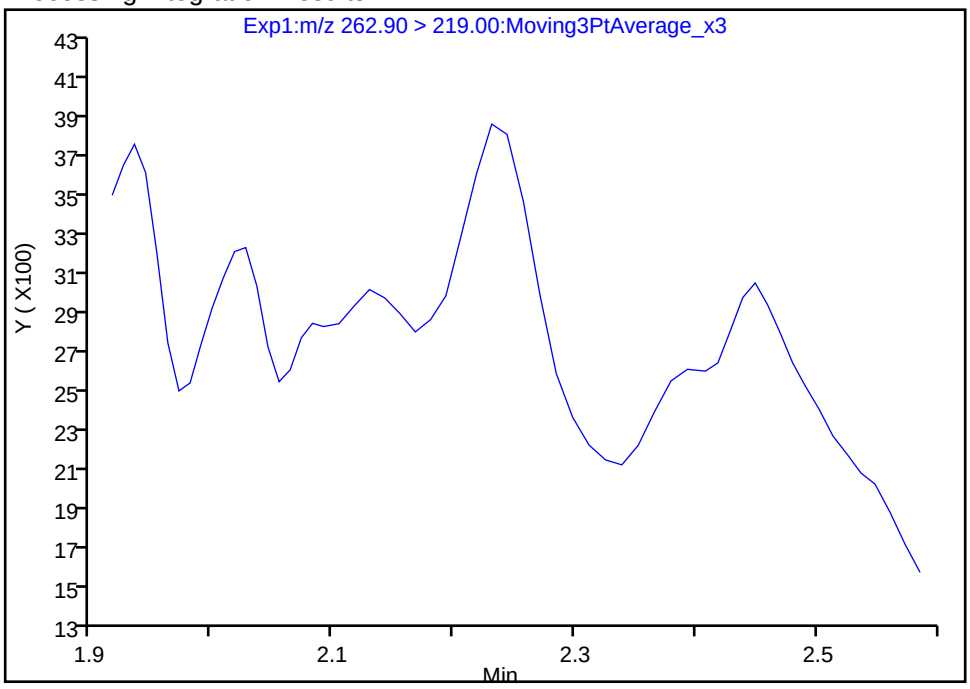
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Injection Date:	25-Feb-2020 21:40:55	Instrument ID:	LC812		
Lims ID:	480-166551-A-2-A	Lab Sample ID:	200-166551-2		
Client ID:	FB-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	21	Worklist Smp#:	21
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

4 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

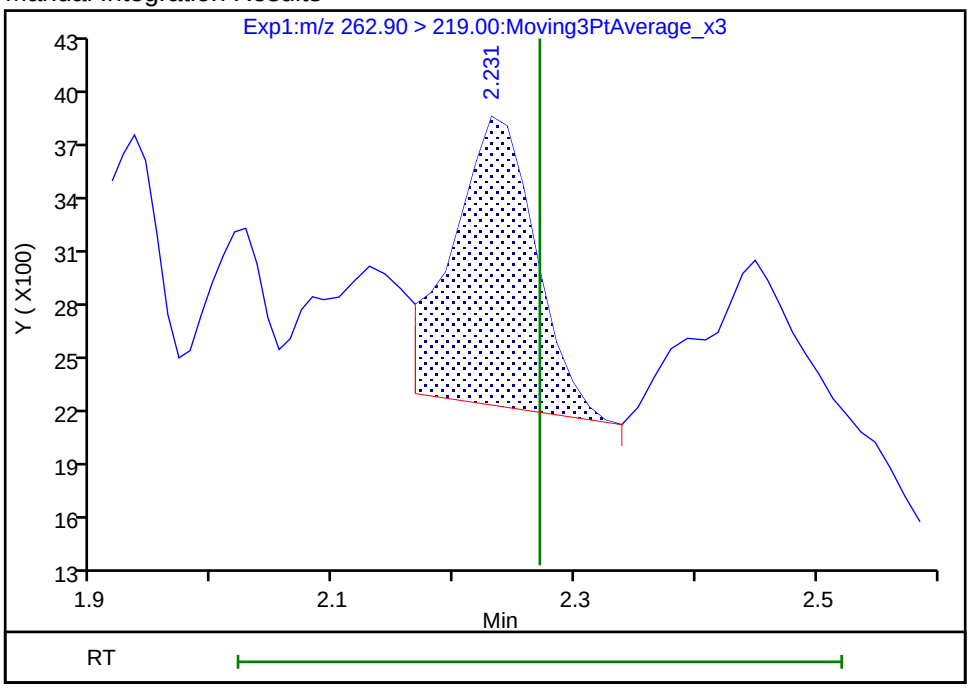
Not Detected
Expected RT: 2.27

Processing Integration Results



Manual Integration Results

RT: 2.23
Area: 7574
Amount: 0.009912
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:26:08
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

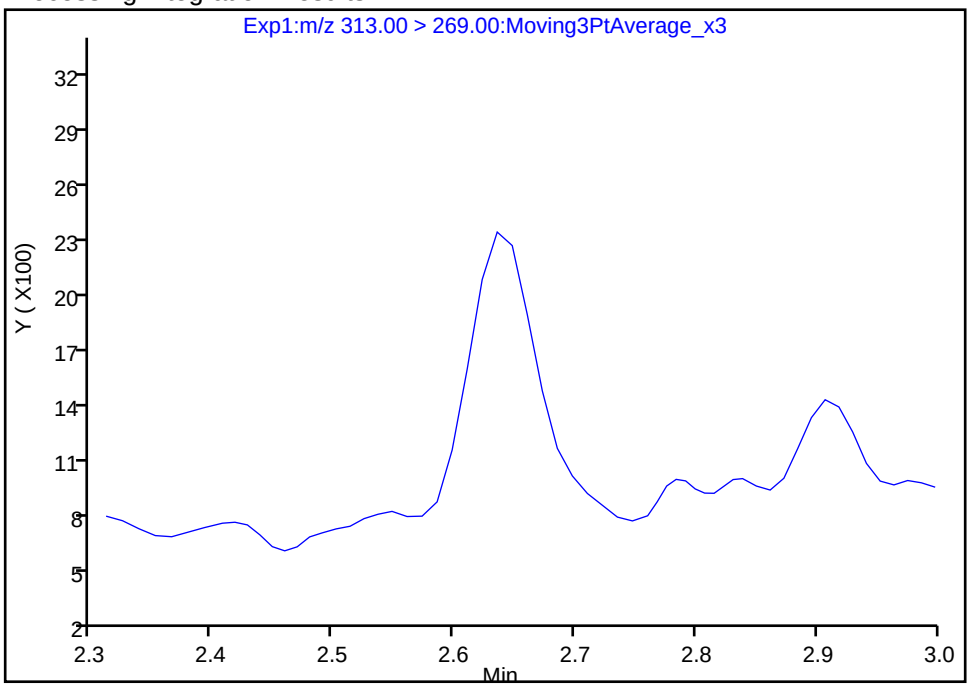
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C21.d				
Injection Date:	25-Feb-2020 21:40:55	Instrument ID:	LC812		
Lims ID:	480-166551-A-2-A	Lab Sample ID:	200-166551-2		
Client ID:	FB-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	21	Worklist Smp#:	21
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

6 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

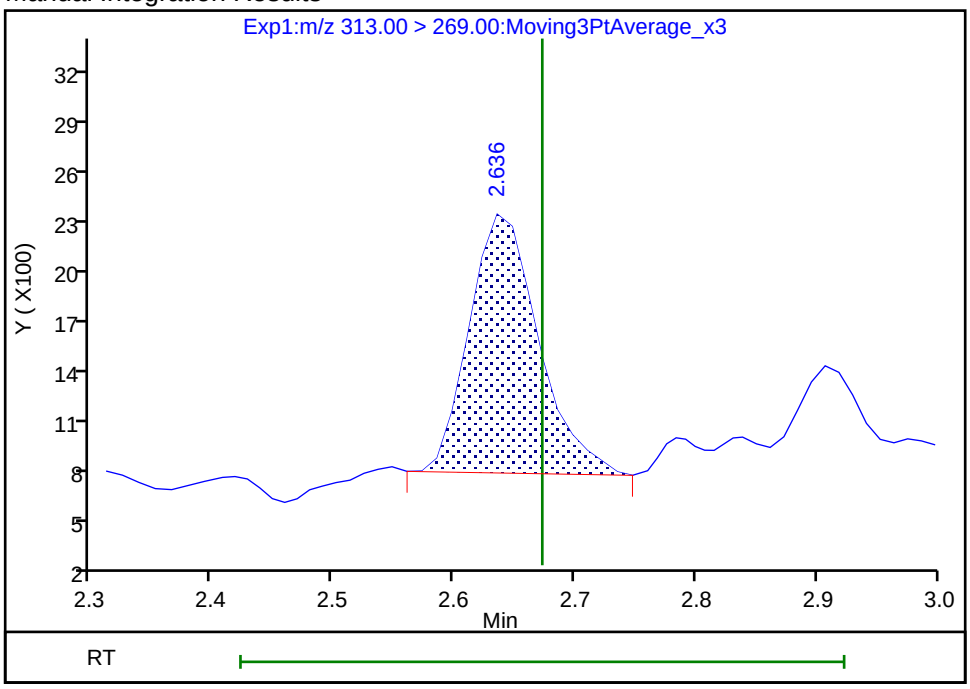
Not Detected
Expected RT: 2.67

Processing Integration Results



Manual Integration Results

RT: 2.64
Area: 5965
Amount: 0.008179
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:26:26
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

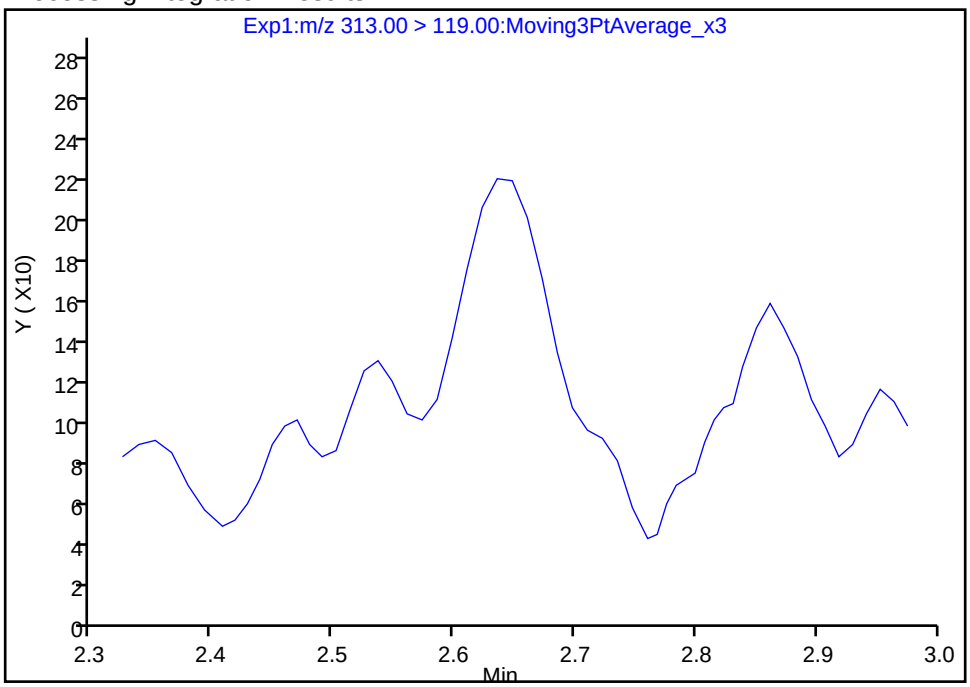
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C21.d				
Injection Date:	25-Feb-2020 21:40:55	Instrument ID:	LC812		
Lims ID:	480-166551-A-2-A	Lab Sample ID:	200-166551-2		
Client ID:	FB-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	21	Worklist Smp#:	21
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

6 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 2

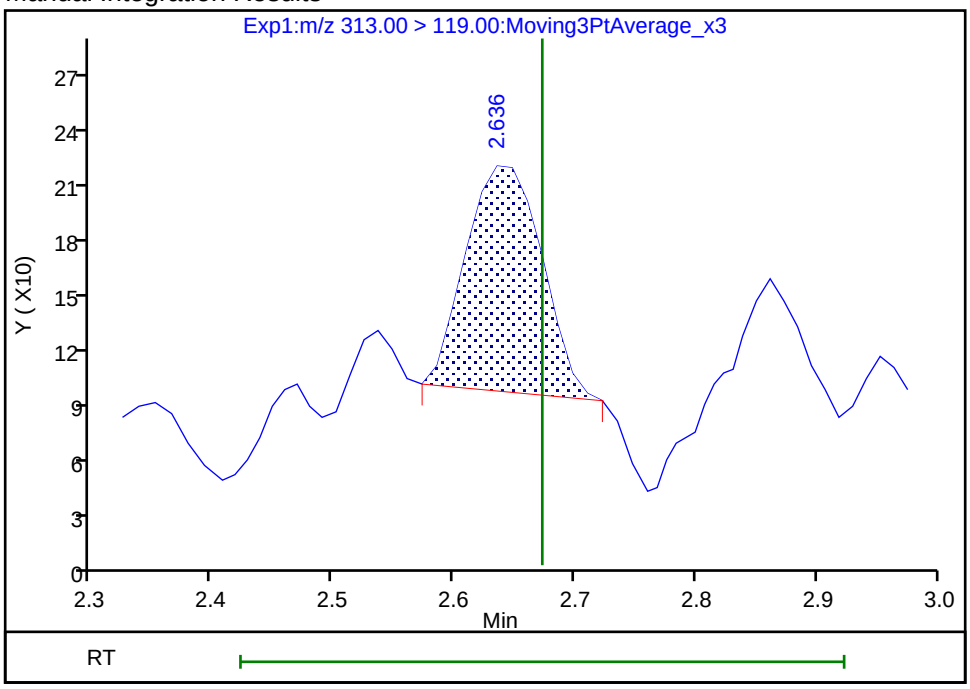
Not Detected
Expected RT: 2.67

Processing Integration Results



Manual Integration Results

RT: 2.64
Area: 533
Amount: 0.008179
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:26:31
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

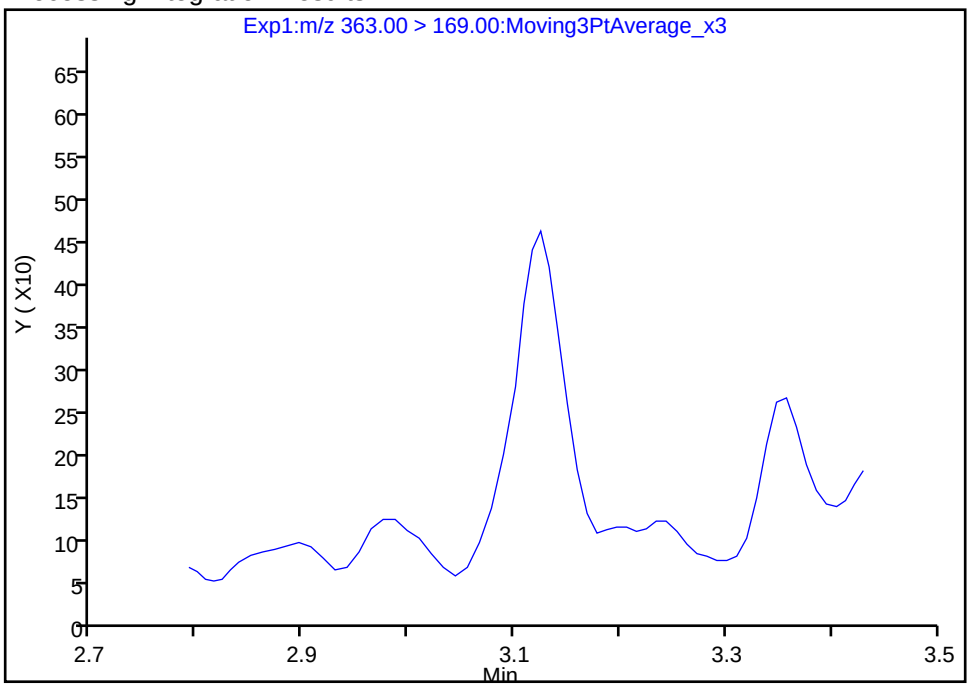
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C21.d				
Injection Date:	25-Feb-2020 21:40:55	Instrument ID:	LC812		
Lims ID:	480-166551-A-2-A	Lab Sample ID:	200-166551-2		
Client ID:	FB-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	21	Worklist Smp#:	21
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

10 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 2

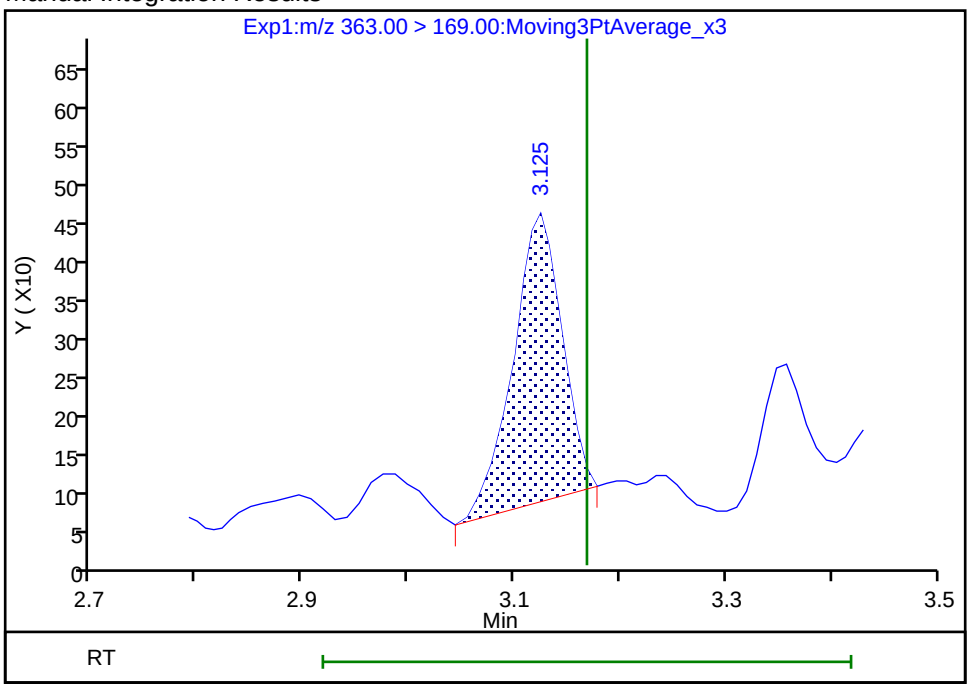
Not Detected
Expected RT: 3.17

Processing Integration Results



Manual Integration Results

RT: 3.12
Area: 1196
Amount: 0.006526
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:27:32
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

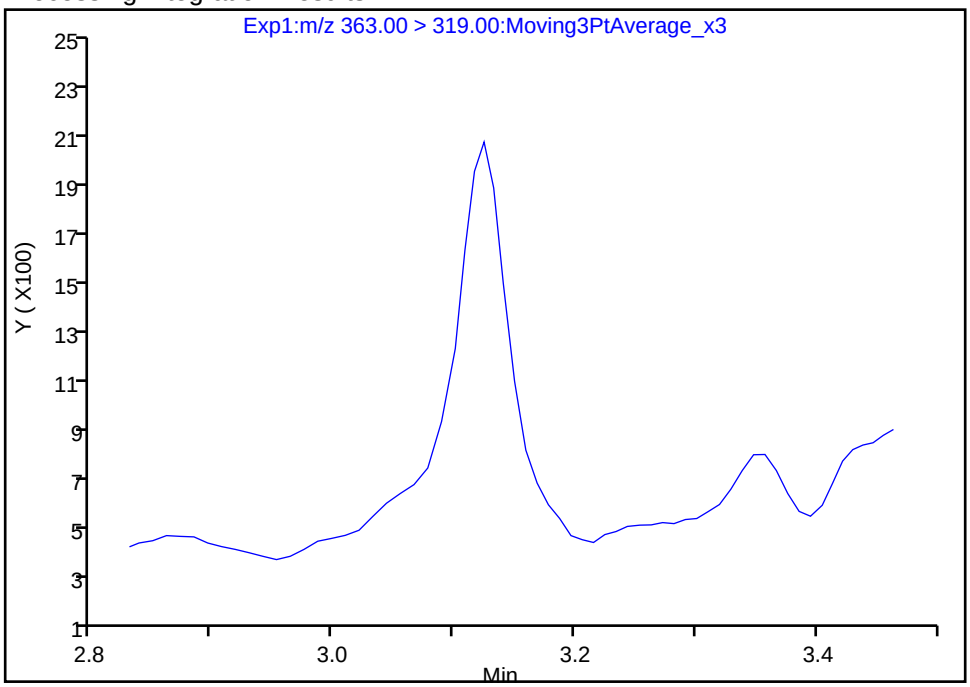
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C21.d				
Injection Date:	25-Feb-2020 21:40:55	Instrument ID:	LC812		
Lims ID:	480-166551-A-2-A	Lab Sample ID:	200-166551-2		
Client ID:	FB-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	21	Worklist Smp#:	21
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

10 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

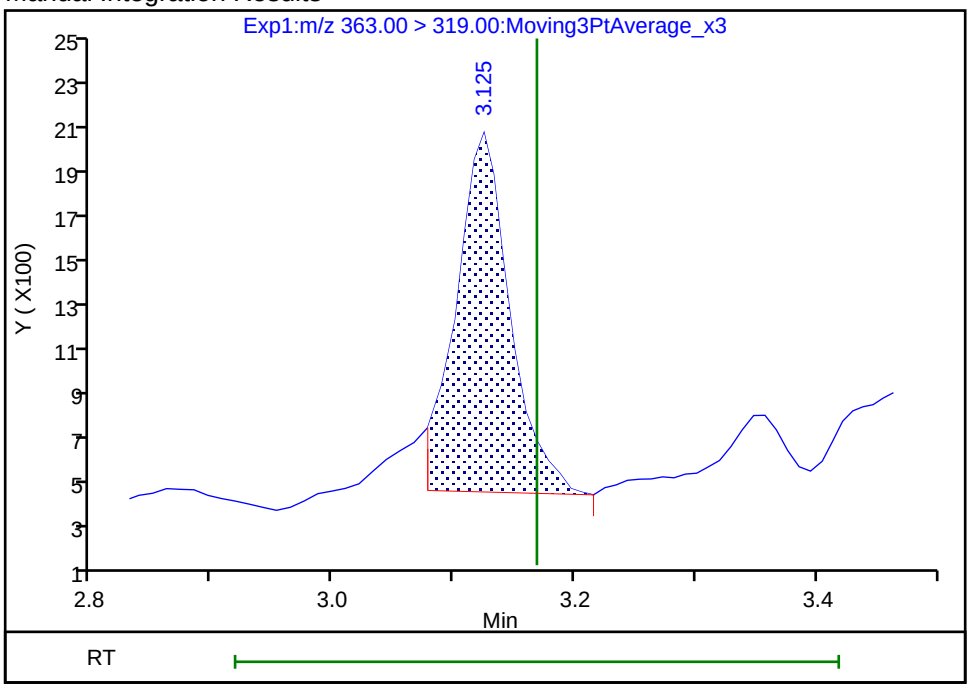
Not Detected
Expected RT: 3.17

Processing Integration Results



Manual Integration Results

RT: 3.12
Area: 4810
Amount: 0.006526
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:27:37
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

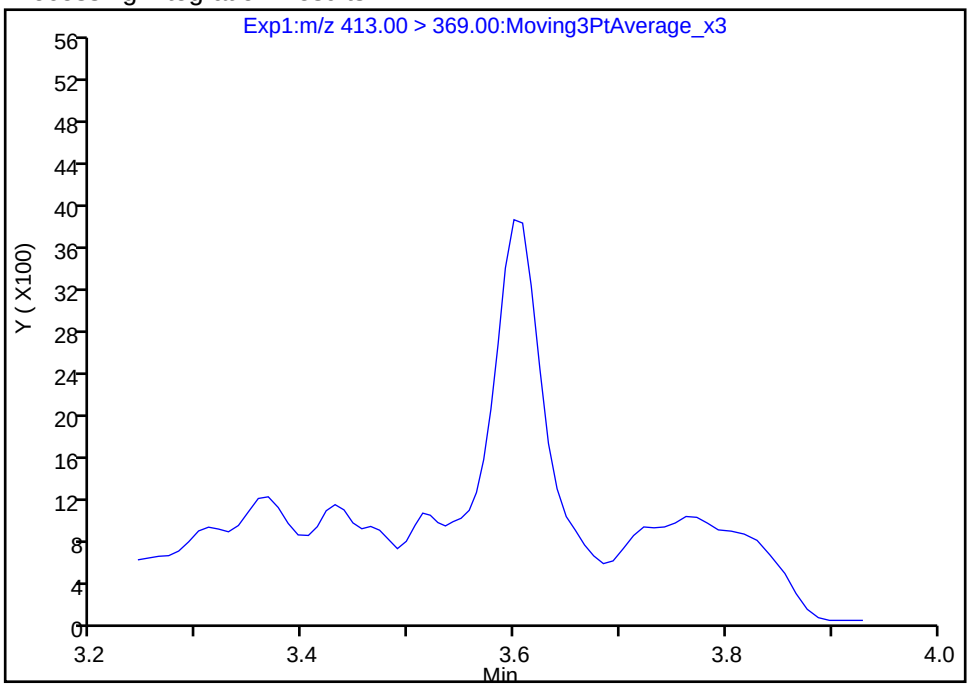
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C21.d				
Injection Date:	25-Feb-2020 21:40:55	Instrument ID:	LC812		
Lims ID:	480-166551-A-2-A	Lab Sample ID:	200-166551-2		
Client ID:	FB-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	21	Worklist Smp#:	21
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

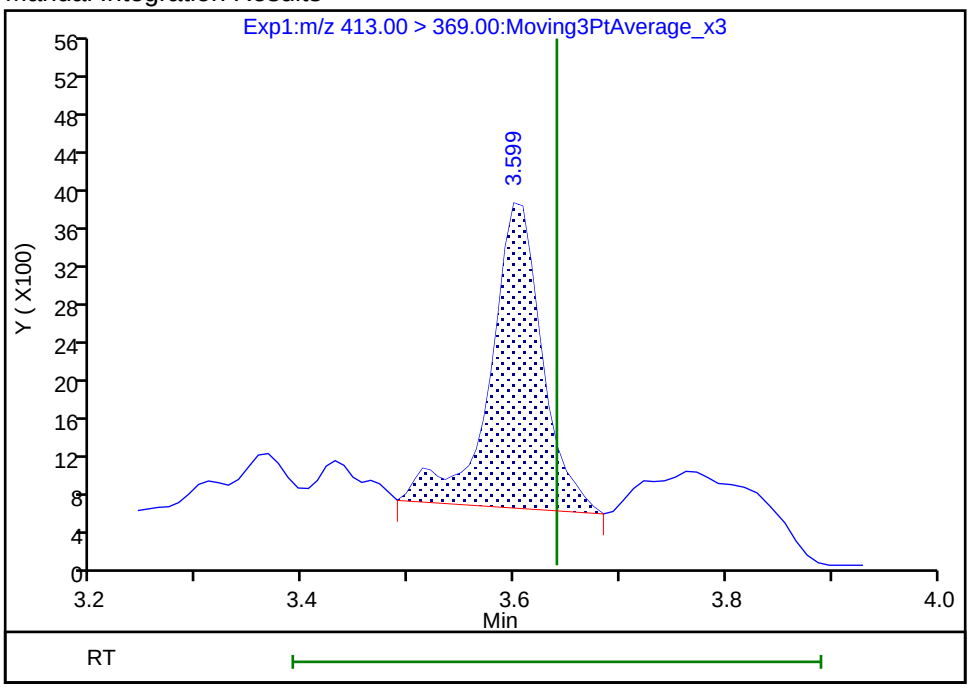
Not Detected
Expected RT: 3.64

Processing Integration Results



Manual Integration Results

RT: 3.60
Area: 11095
Amount: 0.013906
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:28:01
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

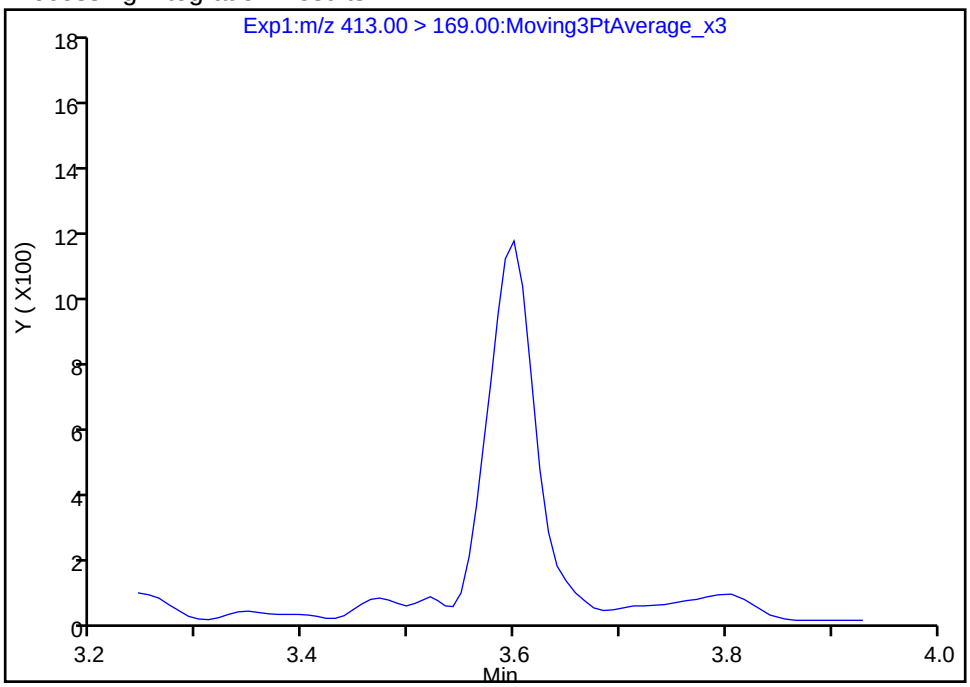
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C21.d				
Injection Date:	25-Feb-2020 21:40:55	Instrument ID:	LC812		
Lims ID:	480-166551-A-2-A	Lab Sample ID:	200-166551-2		
Client ID:	FB-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	21	Worklist Smp#:	21
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

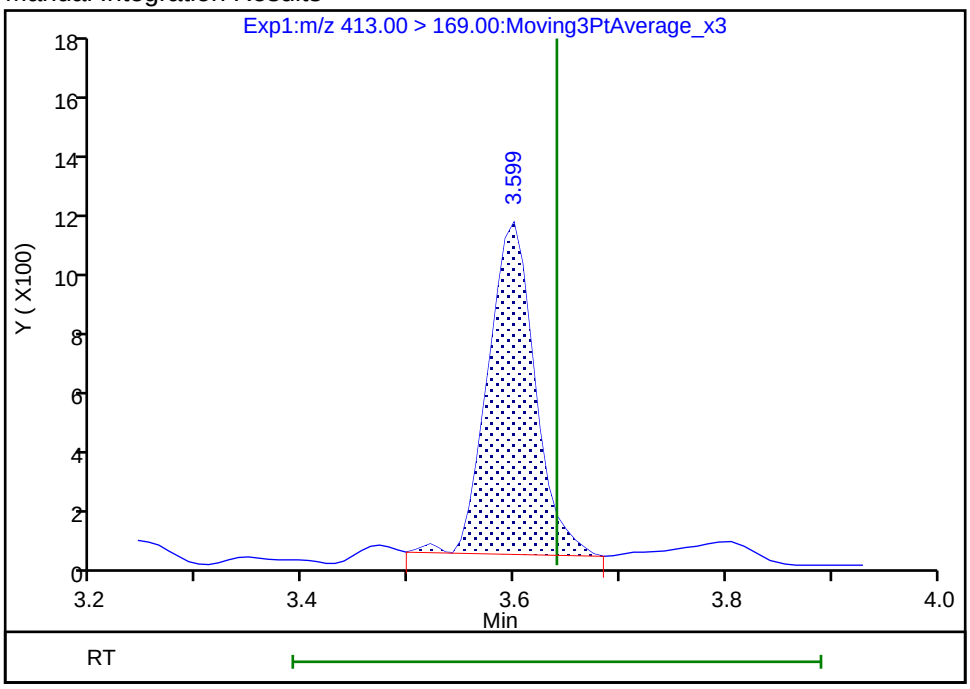
Not Detected
Expected RT: 3.64

Processing Integration Results



Manual Integration Results

RT: 3.60
Area: 3457
Amount: 0.013906
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:28:07
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

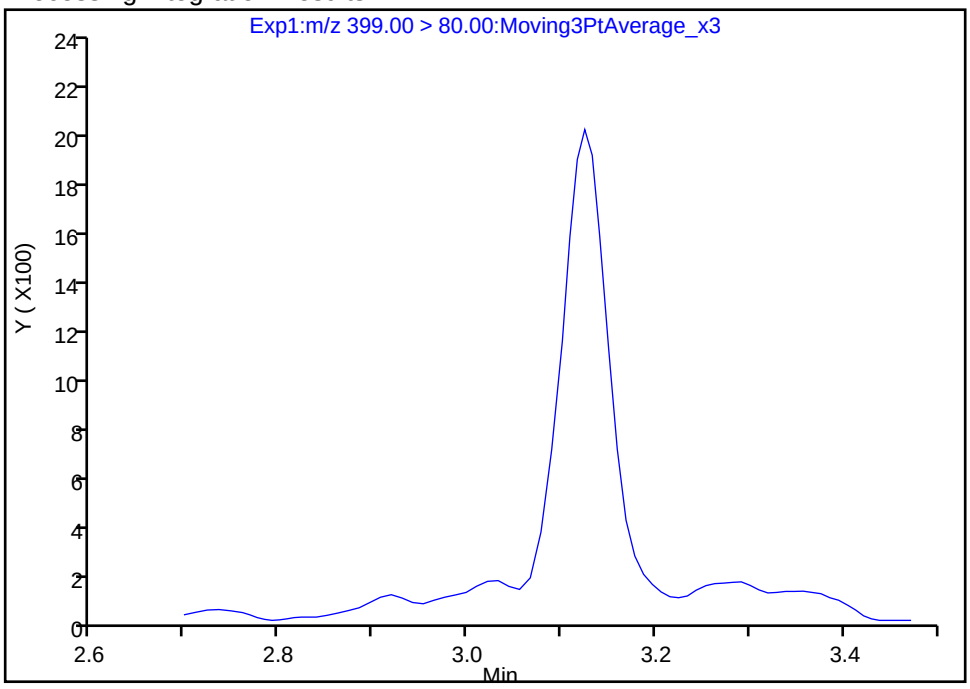
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C21.d				
Injection Date:	25-Feb-2020 21:40:55	Instrument ID:	LC812		
Lims ID:	480-166551-A-2-A	Lab Sample ID:	200-166551-2		
Client ID:	FB-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	21	Worklist Smp#:	21
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

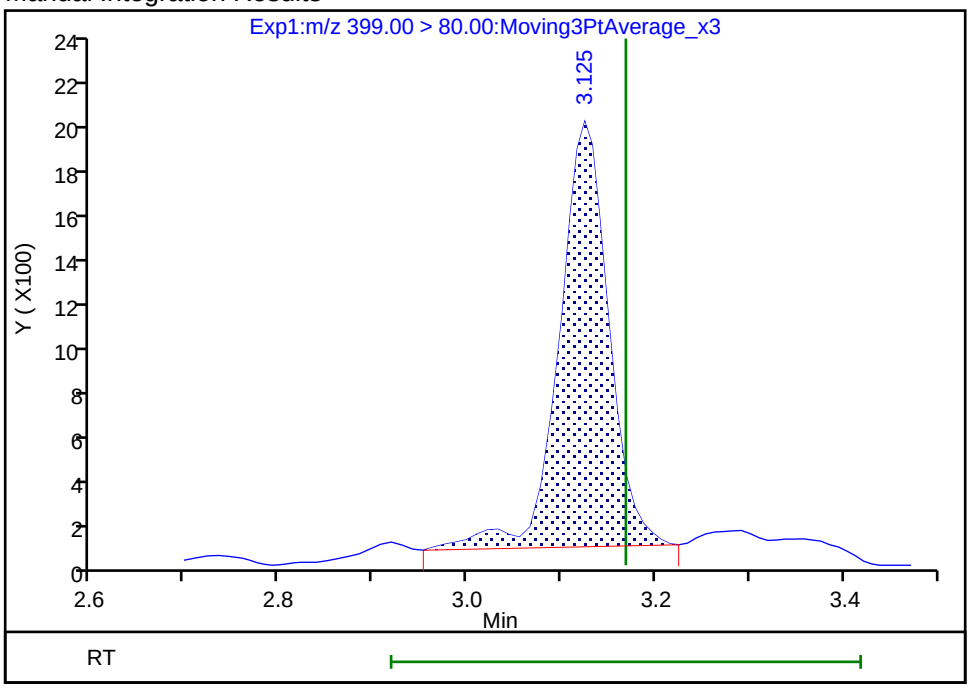
Not Detected
Expected RT: 3.17

Processing Integration Results



Manual Integration Results

RT: 3.12
Area: 6843
Amount: 0.009030
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:26:44
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

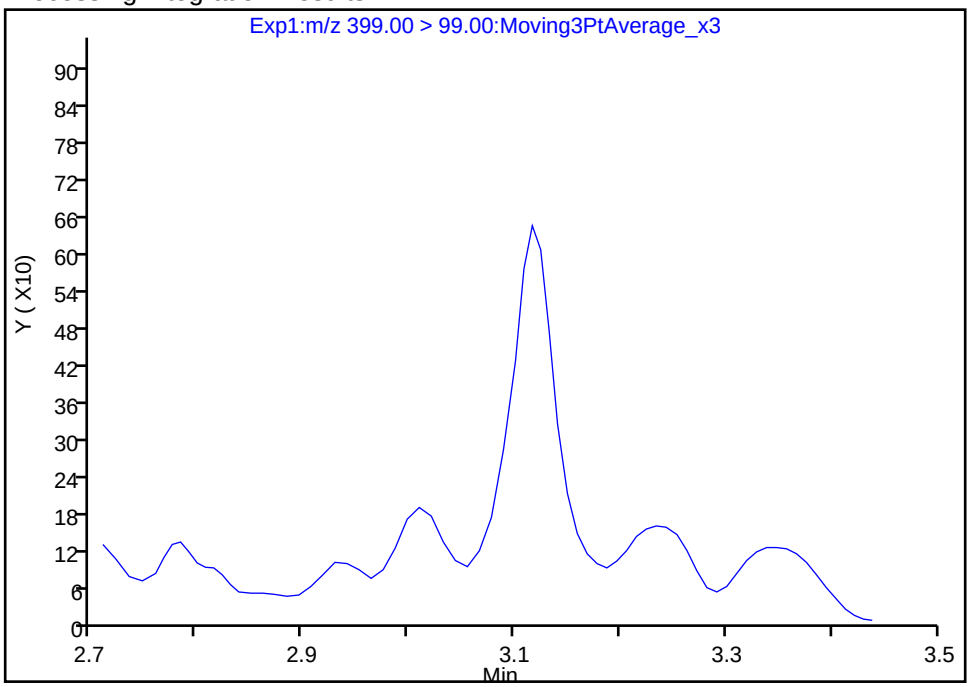
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Injection Date:	25-Feb-2020 21:40:55	Instrument ID:	LC812		
Lims ID:	480-166551-A-2-A	Lab Sample ID:	200-166551-2		
Client ID:	FB-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	21	Worklist Smp#:	21
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

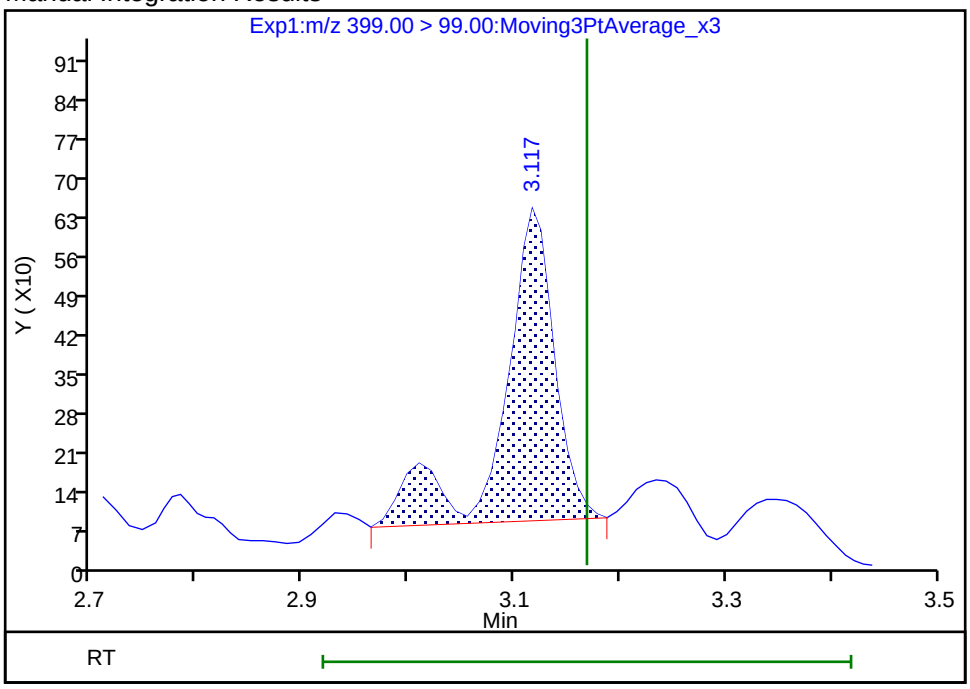
Processing Integration Results

Not Detected
Expected RT: 3.17



Manual Integration Results

RT: 3.12
Area: 1908
Amount: 0.009030
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:26:51
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

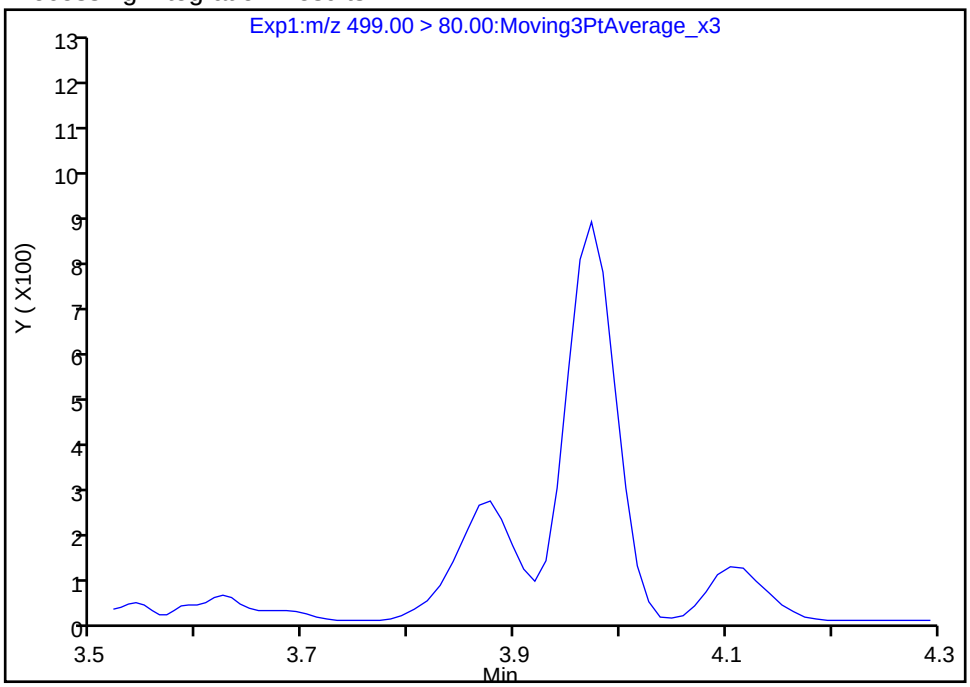
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Injection Date:	25-Feb-2020 21:40:55	Instrument ID:	LC812		
Lims ID:	480-166551-A-2-A	Lab Sample ID:	200-166551-2		
Client ID:	FB-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	21	Worklist Smp#:	21
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

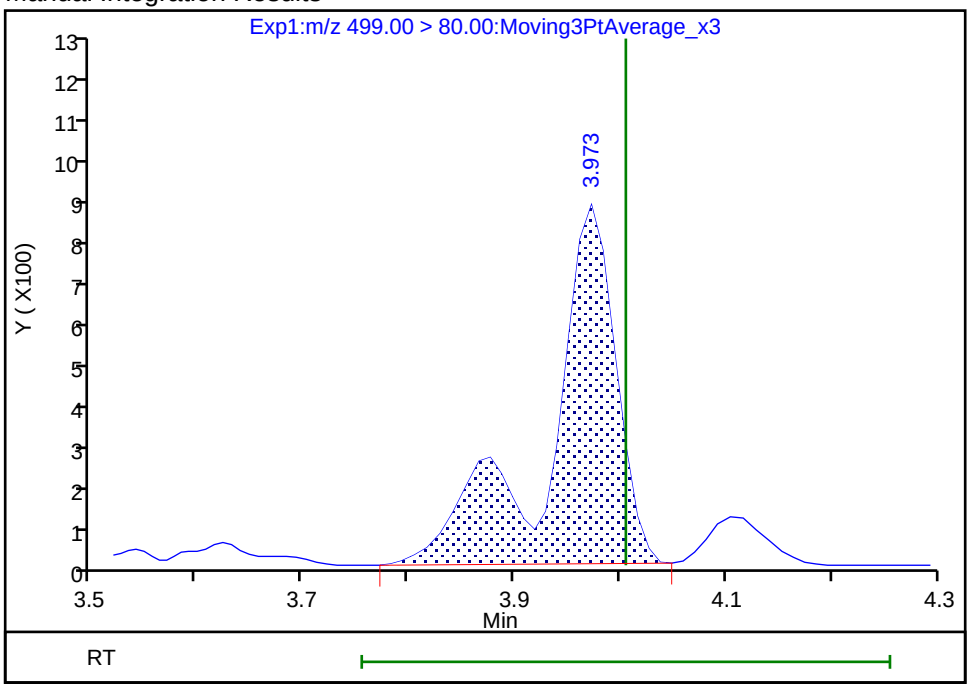
Not Detected
Expected RT: 4.01

Processing Integration Results



Manual Integration Results

RT: 3.97
Area: 3780
Amount: 0.006762
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:28:23
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

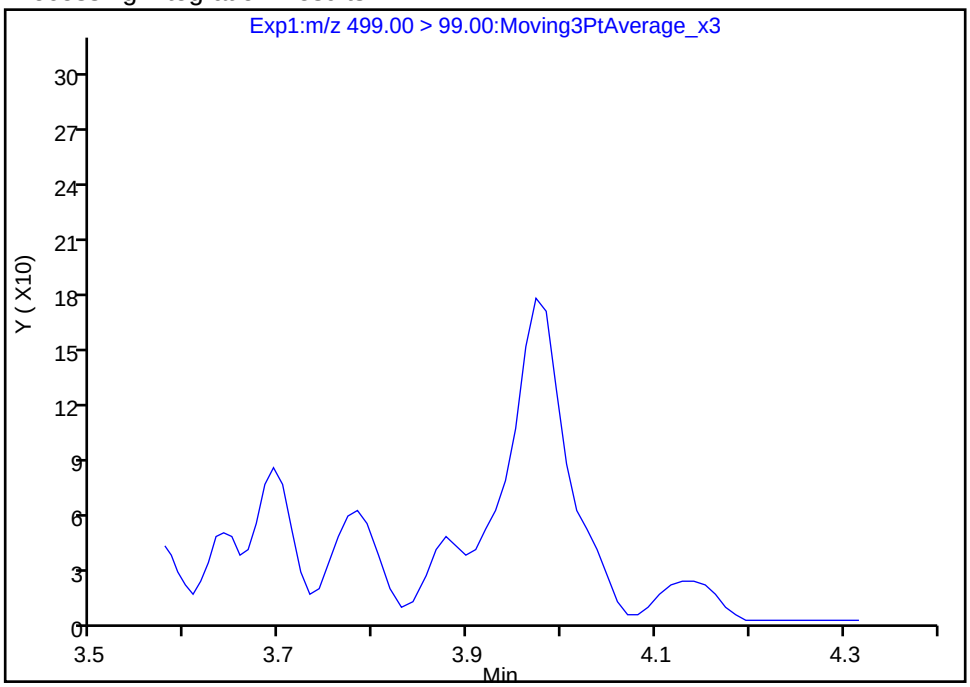
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C21.d				
Injection Date:	25-Feb-2020 21:40:55	Instrument ID:	LC812		
Lims ID:	480-166551-A-2-A	Lab Sample ID:	200-166551-2		
Client ID:	FB-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	21	Worklist Smp#:	21
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

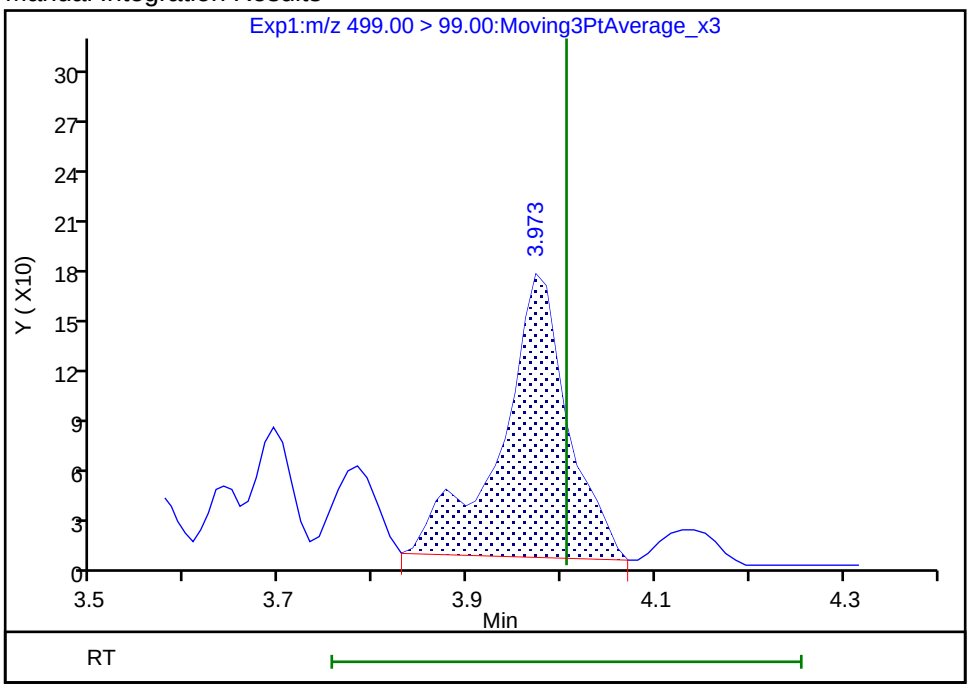
Not Detected
Expected RT: 4.01

Processing Integration Results



Manual Integration Results

RT: 3.97
Area: 833
Amount: 0.006762
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:28:32
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

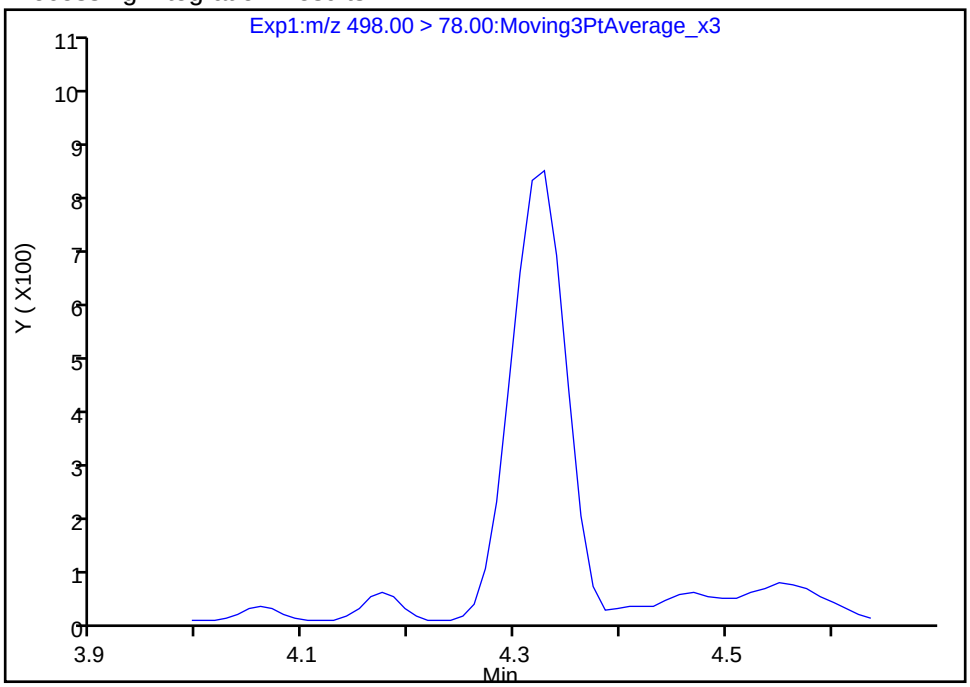
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Lims ID:	480-166551-A-2-A	Lab Sample ID:	200-166551-2		
Client ID:	FB-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	21	Worklist Smp#:	21
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

22 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

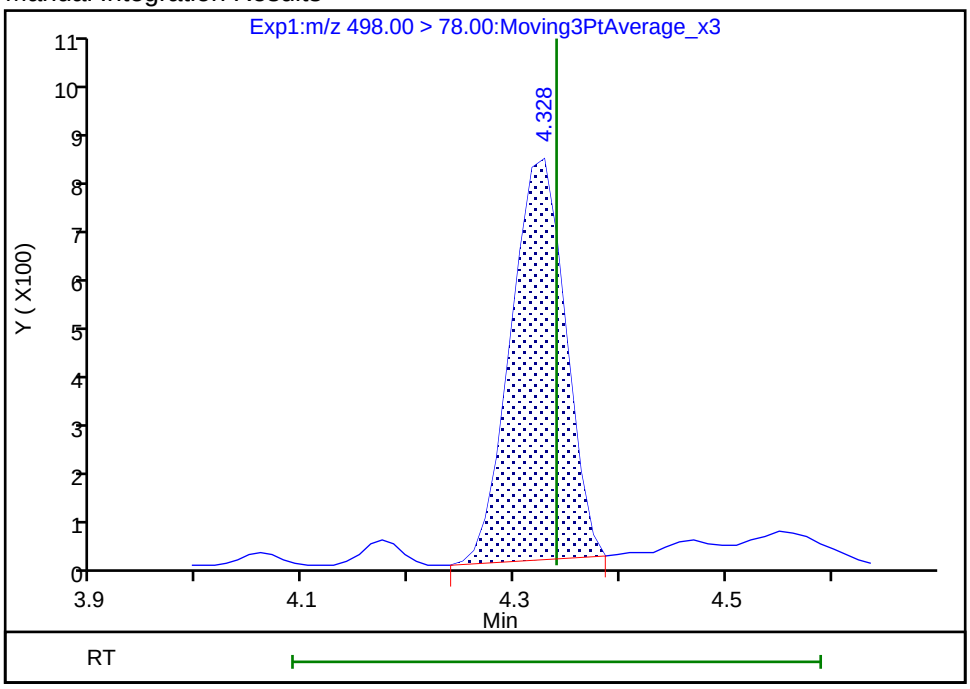
Not Detected
Expected RT: 4.34

Processing Integration Results



Manual Integration Results

RT: 4.33
Area: 2960
Amount: 0.003845
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:28:56
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

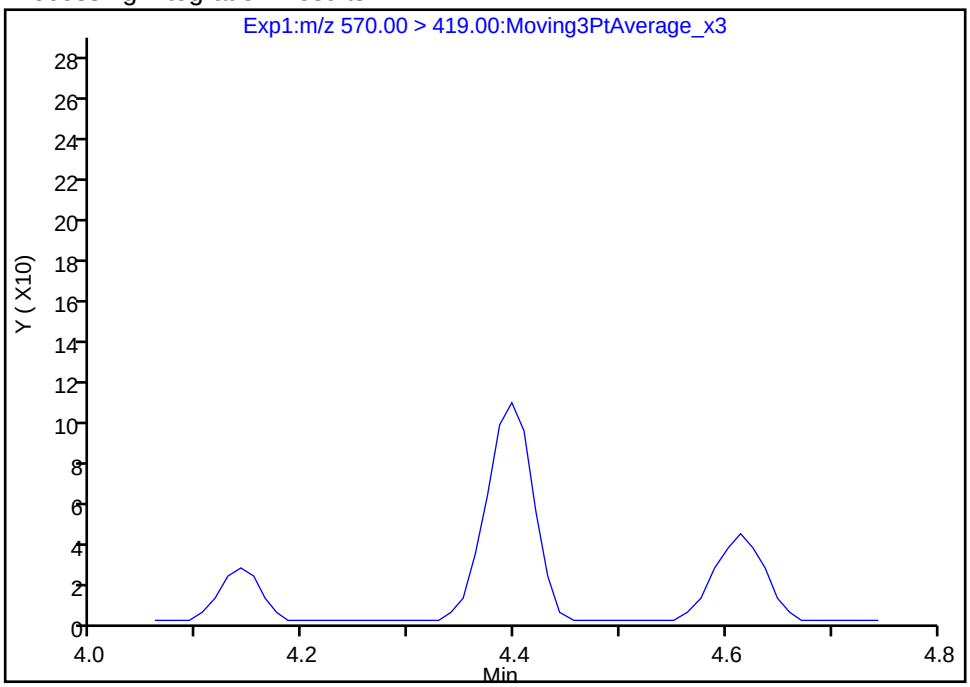
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Injection Date:	25-Feb-2020 21:40:55	Instrument ID:	LC812		
Lims ID:	480-166551-A-2-A	Lab Sample ID:	200-166551-2		
Client ID:	FB-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	21	Worklist Smp#:	21
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

28 N-methylperfluorooctanesulfonamidoacetic aci, CAS: 2355-31-9

Signal: 1

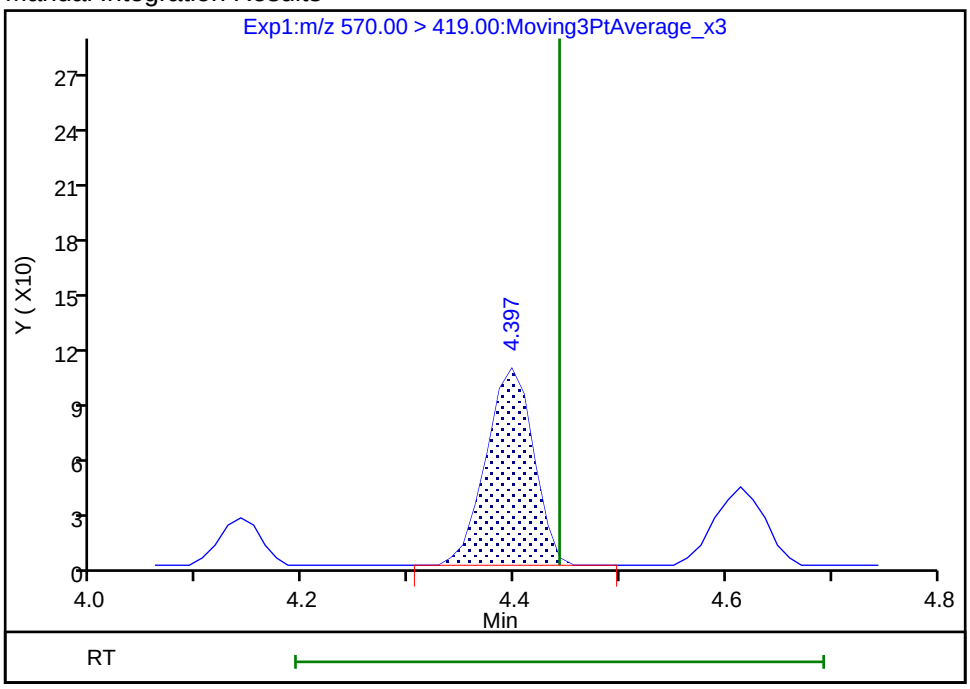
Not Detected
Expected RT: 4.44

Processing Integration Results



Manual Integration Results

RT: 4.40
Area: 336
Amount: 0.005766
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:29:06
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

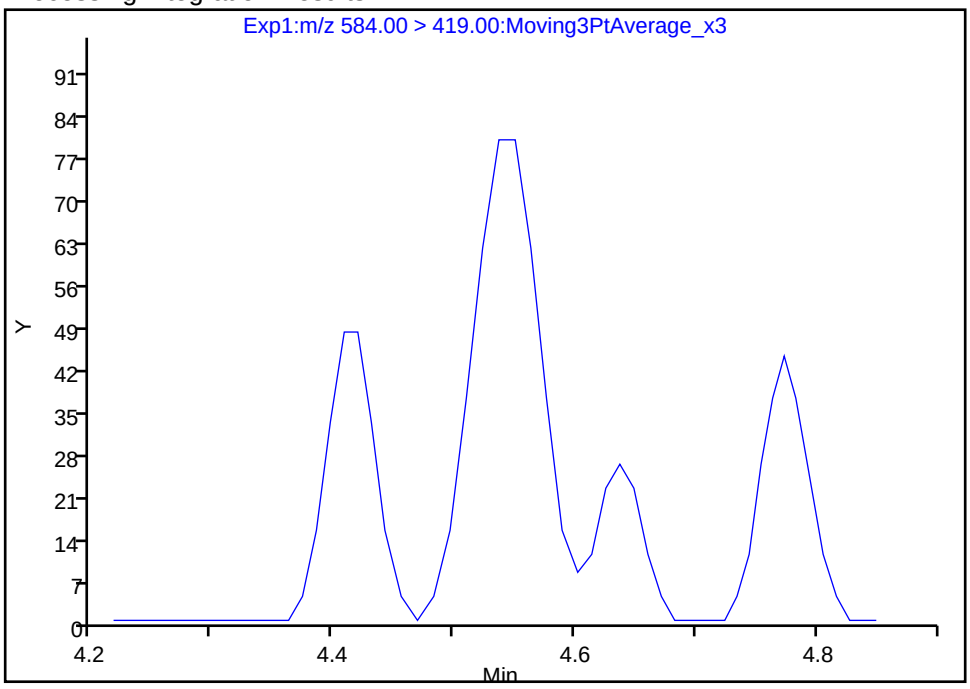
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Injection Date:	25-Feb-2020 21:40:55	Instrument ID:	LC812		
Lims ID:	480-166551-A-2-A	Lab Sample ID:	200-166551-2		
Client ID:	FB-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	21	Worklist Smp#:	21
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

33 N-ethylperfluorooctanesulfonamidoacetic acid, CAS: 2991-50-6

Signal: 1

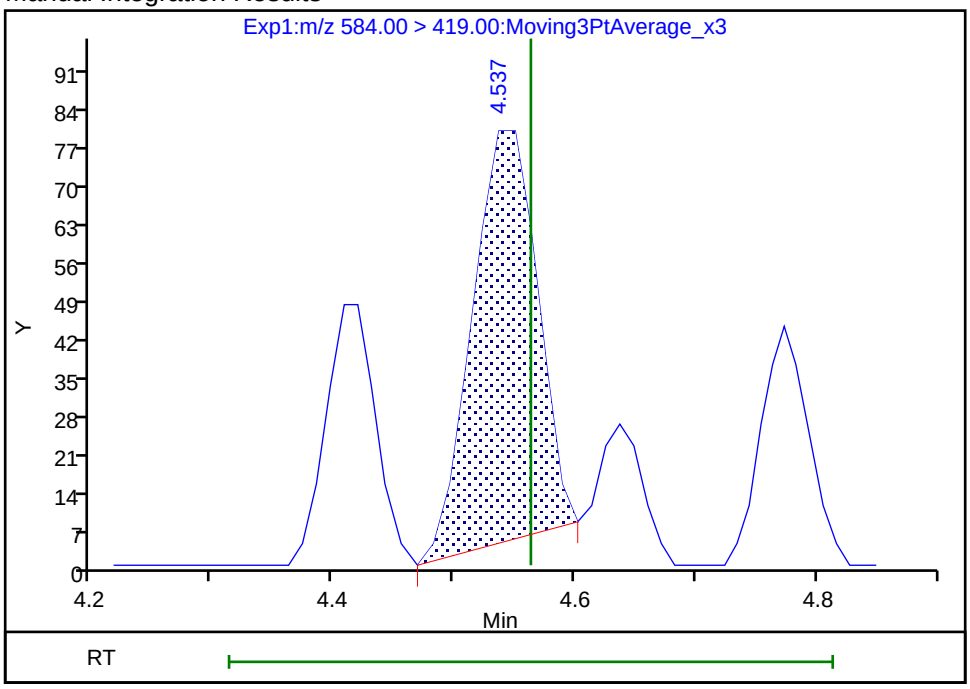
Not Detected
Expected RT: 4.56

Processing Integration Results



Manual Integration Results

RT: 4.54
Area: 283
Amount: 0.005467
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:29:26
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

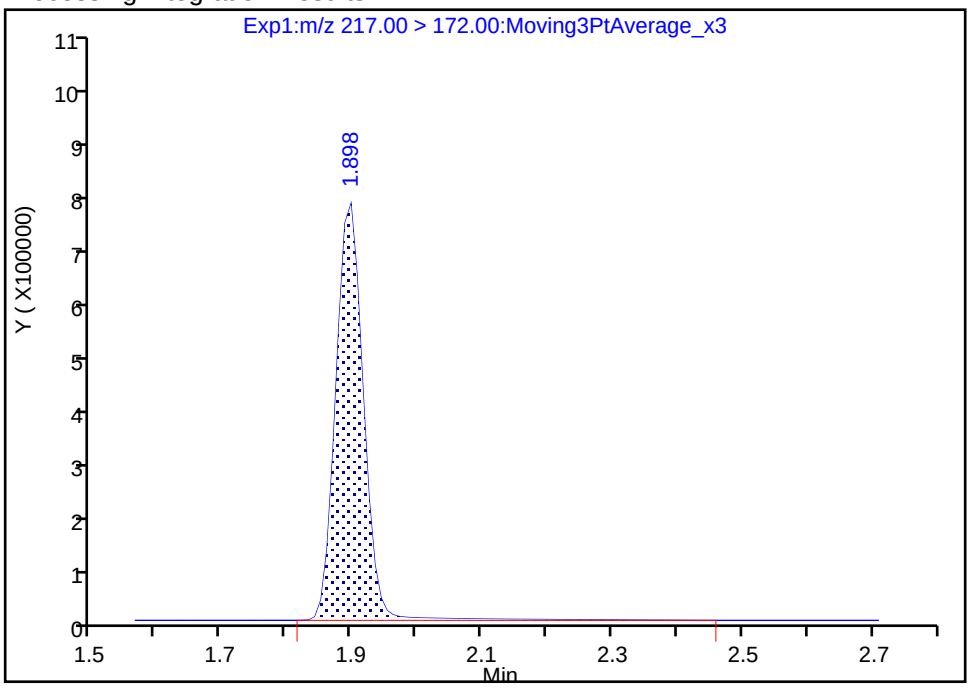
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C21.d				
Injection Date:	25-Feb-2020 21:40:55	Instrument ID:	LC812		
Lims ID:	480-166551-A-2-A	Lab Sample ID:	200-166551-2		
Client ID:	FB-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	21	Worklist Smp#:	21
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

D 1 13C4 PFBA, CAS: STL00992

Signal: 1

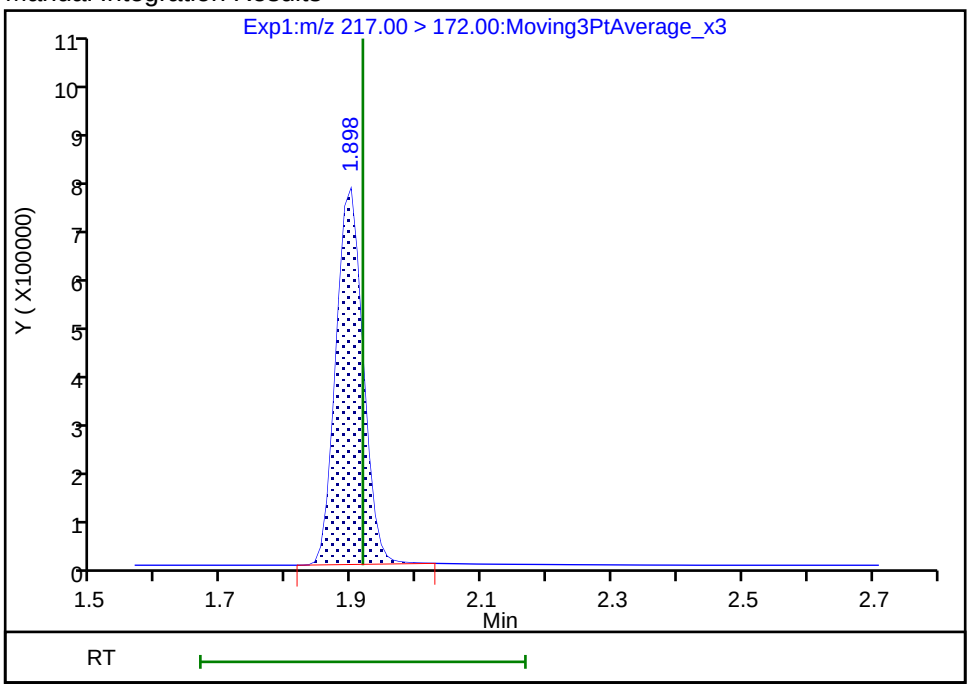
Processing Integration Results

RT: 1.90
Area: 2154834
Amount: 2.626876
Amount Units: ng/ml



Manual Integration Results

RT: 1.90
Area: 2099924
Amount: 2.559937
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:25:44

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Client Sample ID: BW-01-021920-EC Lab Sample ID: 480-166551-3

Matrix: Water Lab File ID: SC022520C22.d

Analysis Method: 537 (modified) Date Collected: 02/19/2020 13:10

Extraction Method: 3535 Date Extracted: 02/24/2020 13:43

Sample wt/vol: 288.6(mL) Date Analyzed: 02/25/2020 21:49

Con. Extract Vol.: 10(mL) Dilution Factor: 1

Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 152696 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	0.87	J	1.7	0.87
2706-90-3	Perfluoropentanoic acid (PFPeA)	ND		1.7	0.55
307-24-4	Perfluorohexanoic acid (PFHxA)	ND		1.7	0.66
375-85-9	Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.79
335-67-1	Perfluorooctanoic acid (PFOA)	ND		1.7	0.70
375-95-1	Perfluorononanoic acid (PFNA)	ND		1.7	0.23
335-76-2	Perfluorodecanoic acid (PFDA)	ND		1.7	0.67
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.68
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		1.7	0.51
72629-94-8	Perfluorotridecanoic acid (PFTriA)	ND		1.7	0.52
376-06-7	Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.80
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.49	J B	1.7	0.42
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	ND		1.7	0.69
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.82
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.53
335-77-3	Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.78
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND		8.7	8.7
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		17	1.5
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		17	1.3
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	4.8
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	2.5

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Client Sample ID: BW-01-021920-EC Lab Sample ID: 480-166551-3

Matrix: Water Lab File ID: SC022520C22.d

Analysis Method: 537 (modified) Date Collected: 02/19/2020 13:10

Extraction Method: 3535 Date Extracted: 02/24/2020 13:43

Sample wt/vol: 288.6(mL) Date Analyzed: 02/25/2020 21:49

Con. Extract Vol.: 10(mL) Dilution Factor: 1

Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 152696 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	101		50-150
STL01892	13C4 PFHpA	103		50-150
STL00990	13C4 PFOA	101		50-150
STL00991	13C4 PFOS	110		50-150
STL00995	13C5 PFNA	103		50-150
STL00992	13C4 PFBA	108		25-150
STL00993	13C2 PFHxA	97		50-150
STL00996	13C2 PFDA	106		50-150
STL00997	13C2 PFUnA	94		50-150
STL00998	13C2 PFDoA	96		50-150
STL01056	13C8 FOSA	101		25-150
STL01893	13C5 PFPeA	118		25-150
STL02116	13C2 PFTeDA	95		50-150
STL02118	d3-NMeFOSAA	107		50-150
STL02117	d5-NEtFOSAA	101		50-150
STL02279	M2-6:2 FTS	121		25-150
STL02280	M2-8:2 FTS	96		25-150
STL02337	13C3 PFBS	100		50-150

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C22.d
Lims ID: 480-166551-A-3-A
Client ID: BW-01-021920-EC
Sample Type: Client
Inject. Date: 25-Feb-2020 21:49:12 ALS Bottle#: 22 Worklist Smp#: 22
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 480-166551-A-3-A
Misc. Info.: 200-0040162-022 Plate: 1 Rack: 2
Operator ID: lc812tech Instrument ID: LC812

Method: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\PFC_LC812.m
Limit Group: LC_PFC_ICAL
Last Update: 26-Feb-2020 17:13:38 Calib Date: 10-Feb-2020 12:29:33
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL010.d

Column 1 : C-18 (4.60 mm) Det: EXP1
Process Host: CTX0323

First Level Reviewer: murrayjw Date: 26-Feb-2020 11:33:40
Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										M
217.00 > 172.00	1.889	1.917	-0.028	0.526	2127261	2.70		108	5384	M
2 Perfluorobutanoic acid										M
212.90 > 169.00	1.889	1.917	-0.028	1.000	20369	0.0252			2.6	M
D 3 13C5 PFPeA										
267.90 > 223.00	2.231	2.257	-0.026	0.621	1813722	2.95		118	2929	
4 Perfluoropentanoic acid										M
262.90 > 219.00	2.231	2.271	-0.040	1.000	4193	0.005357			0.5	M
D 47 13C3 PFBS										
301.90 > 80.00	2.257	2.284	-0.027	0.629	1910743	2.31		99.5	366420	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.257	2.284	-0.027	1.000	11973	0.0143	Target=2.19		31.9	
298.90 > 99.00	2.257	2.284	-0.027	1.000	6140		1.95(1.09-3.28)		8.5	
D 7 13C2 PFHxA										
315.00 > 270.00	2.636	2.673	-0.037	0.734	1737533	2.42		96.8	5994	
D 11 18O2 PFHxS										
403.00 > 84.00	3.117	3.168	-0.051	0.868	1388898	2.38		101	13804	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.125	3.168	-0.043	1.003	5131	0.007403	Target=4.33		21.0	M
399.00 > 99.00	3.109	3.168	-0.059	0.997	1327		3.87(2.17-6.50)		4.6	M
D 9 13C4 PFHpA										
367.00 > 322.00	3.117	3.168	-0.051	0.868	1771542	2.57		103	5565	
13 1H,1H,2H,2H-perfluorooctanesulfoni										M
427.00 > 407.00	3.578	3.624	-0.046	1.000	464	0.004268			12.4	M
D 12 M2-6:2 FTS										
429.00 > 81.00	3.578	3.624	-0.046	0.996	229774	2.87		121	1586	
D 14 13C4 PFOA										
417.00 > 372.00	3.591	3.640	-0.049	1.000	1808982	2.53		101	13655	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 62 13C2 PFOA										
415.00 > 370.00	3.591	3.640	-0.049		1896106	2.50			15798	
15 Perfluorooctanoic acid										M
413.00 > 369.00	3.591	3.640	-0.049	1.000	7216	0.009576	Target=2.66		2.3	M
413.00 > 169.00	3.591	3.640	-0.049	1.000	2219		3.25(1.33-3.99)		16.4	M
D 18 13C4 PFOS										
503.00 > 80.00	3.962	4.005	-0.043	1.103	1143475	2.63		110	16830	
17 Perfluorooctanesulfonic acid										RM
499.00 > 80.00	3.842	4.005	-0.163	0.970	2811	0.005350	Target=5.29		16.5	RM
499.00 > 99.00	3.973	4.005	-0.032	1.003	324		8.68(2.65-7.94)		2.4	M
D 19 13C5 PFNA										
468.00 > 423.00	3.984	4.027	-0.043	1.109	1760484	2.57		103	11473	
D 23 13C2 PFDA										
515.00 > 470.00	4.272	4.305	-0.033	1.190	1966495	2.64		106	6649	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.283	4.317	-0.034	1.193	260059	2.30		96.2	1667	
22 Perfluorooctanesulfonamide										M
498.00 > 78.00	4.317	4.340	-0.023	1.000	1848	0.002328			26.4	M
D 21 13C8 FOSA										
506.00 > 78.00	4.317	4.340	-0.023	1.202	1936593	2.53		101	4125	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.397	4.431	-0.034	1.224	156798	2.67		107	2127	
28 N-methylperfluorooctanesulfonamido										M
570.00 > 419.00	4.443	4.443	0.0	1.010	147	0.002736			3.6	M
D 30 13C2 PFUnA										
565.00 > 520.00	4.510	4.537	-0.027	1.256	1526446	2.35		94.0	6533	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.524	4.551	-0.027	1.260	168817	2.52		101	1676	
D 36 13C2 PFDoA										
615.00 > 570.00	4.714	4.744	-0.030	1.313	1751893	2.41		96.4	6563	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.067	5.108	-0.041	1.411	1485056	2.38		95.2	6453	
42 Perfluorotetradecanoic acid										M
713.00 > 169.00	5.076	5.120	-0.044	1.002	279	0.003019	Target=1.15		5.1	M
713.00 > 219.00	5.067	5.120	-0.053	1.000	330		0.85(0.58-1.73)		16.0	M

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Review Flags

M - Manually Integrated

Report Date: 26-Feb-2020 17:13:49 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C22.d

Injection Date: 25-Feb-2020 21:49:12 Instrument ID: LC812

Lims ID: 480-166551-A-3-A Lab Sample ID: 200-166551-3

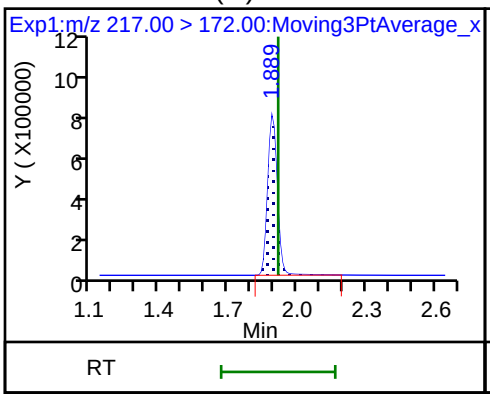
Client ID: BW-01-021920-EC

Operator ID: lc812tech ALS Bottle#: 22 Worklist Smp#: 22

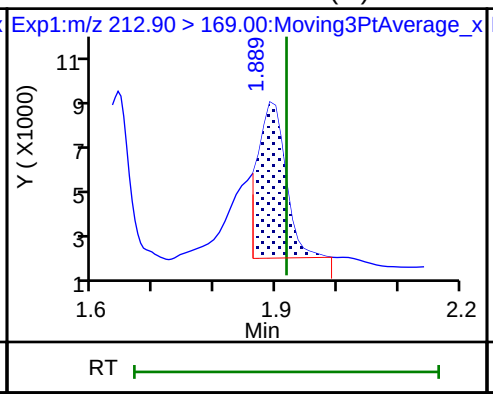
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFC_LC812 Limit Group: LC_PFC_ICAL

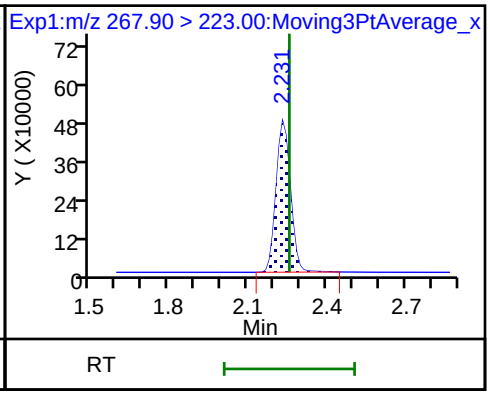
D 1 13C4 PFBA (M)



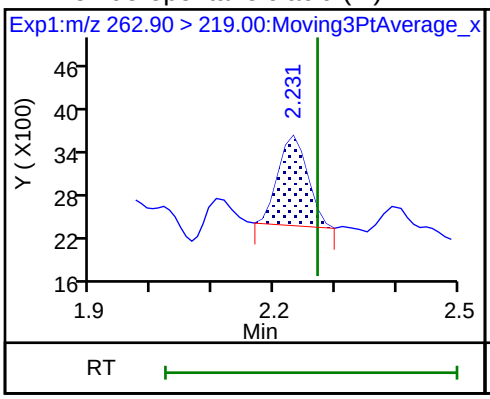
2 Perfluorobutanoic acid (M)



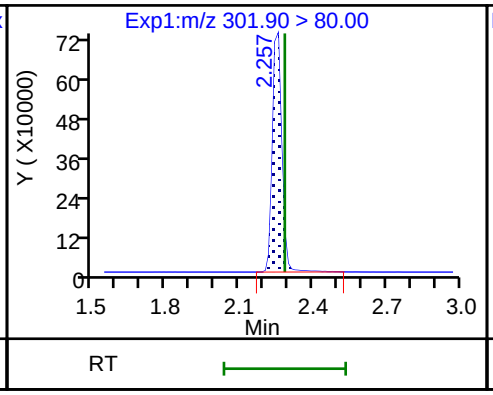
D 3 13C5 PFPeA



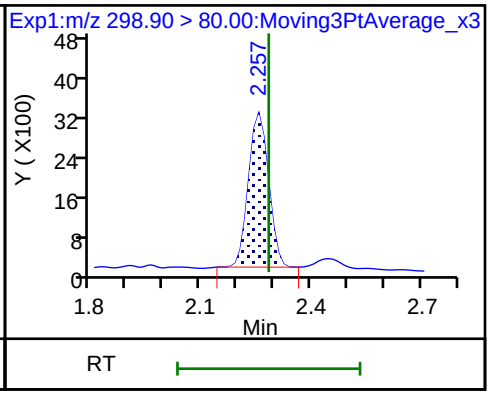
4 Perfluoropentanoic acid (M)



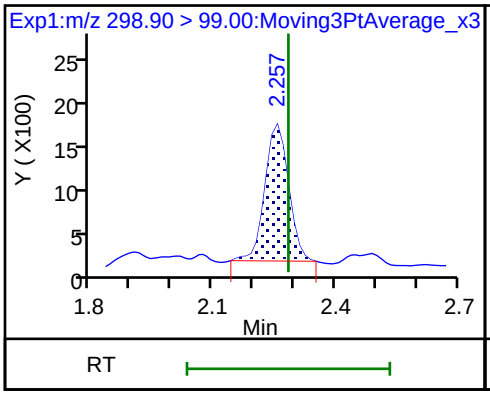
D 47 13C3 PFBS



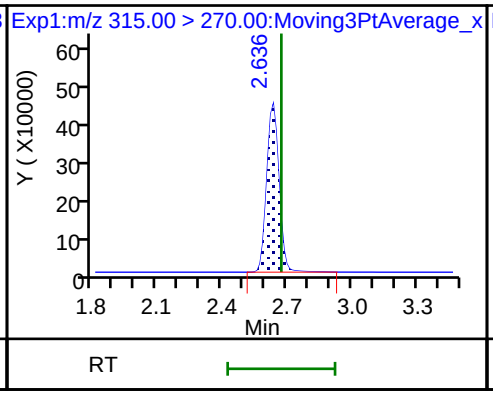
5 Perfluorobutanesulfonic acid



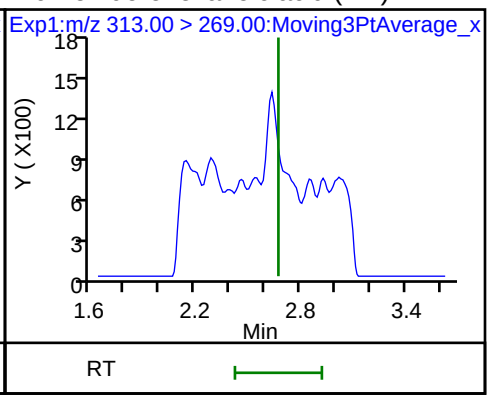
5 Perfluorobutanesulfonic acid



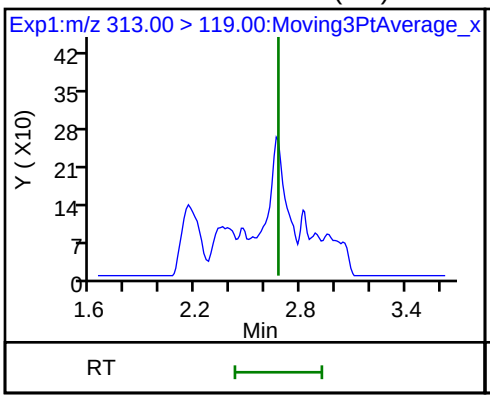
D 7 13C2 PFHxA



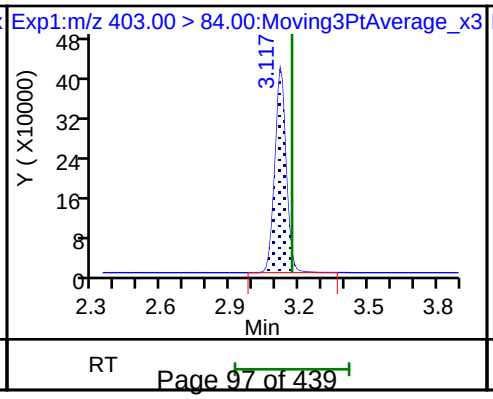
6 Perfluorohexanoic acid (ND)



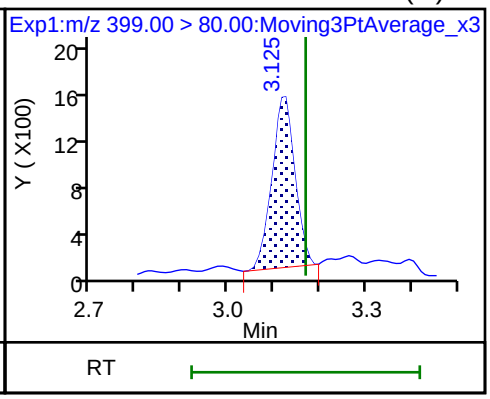
6 Perfluorohexanoic acid (ND)



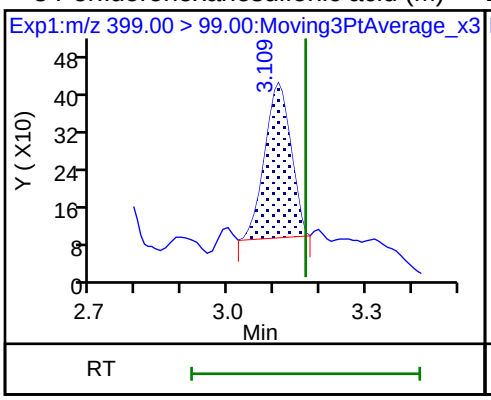
D 11 18O2 PFHxS



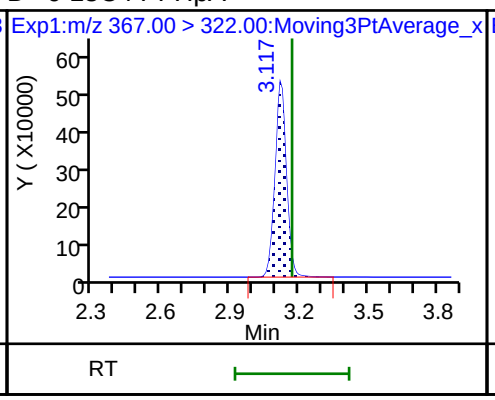
8 Perfluorohexanesulfonic acid (M)



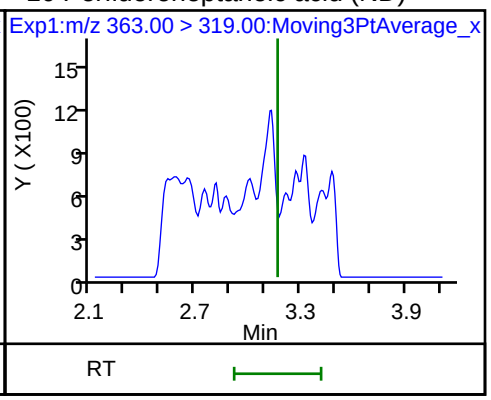
8 Perfluorohexanesulfonic acid (M)



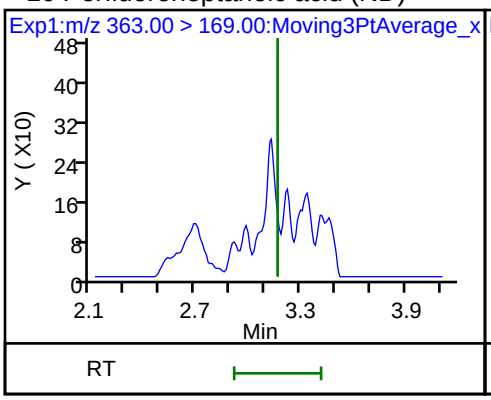
D 9 13C4 PFHpA



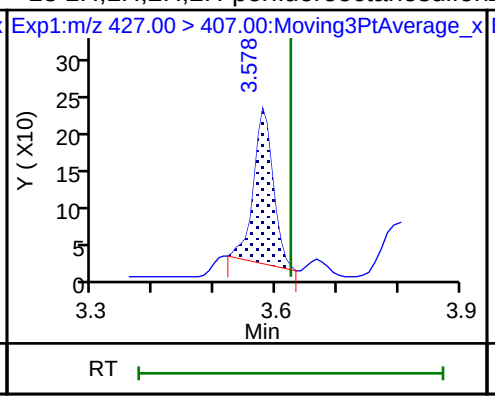
10 Perfluoroheptanoic acid (ND)



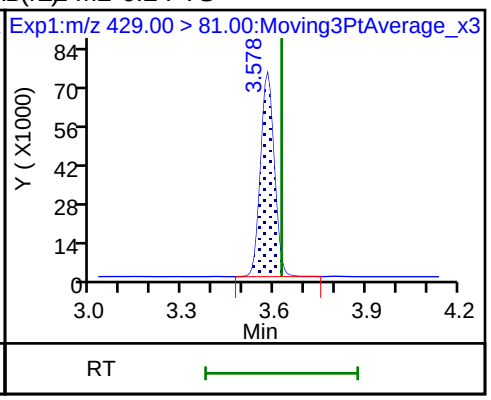
10 Perfluoroheptanoic acid (ND)



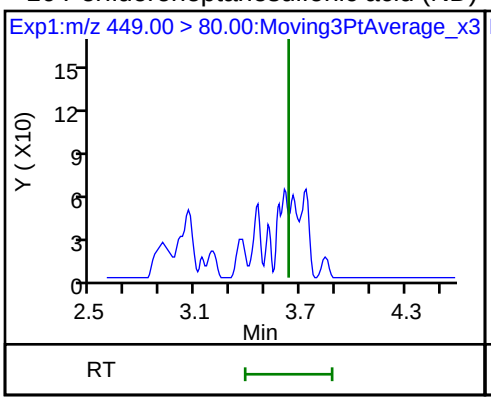
13 1H,1H,2H,2H-perfluorooctanesulfonic (M)



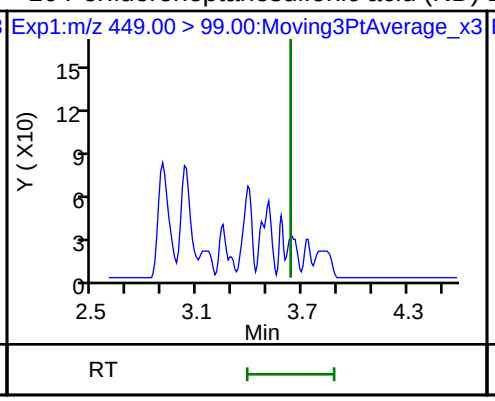
D 11 M2-6:2 FTS



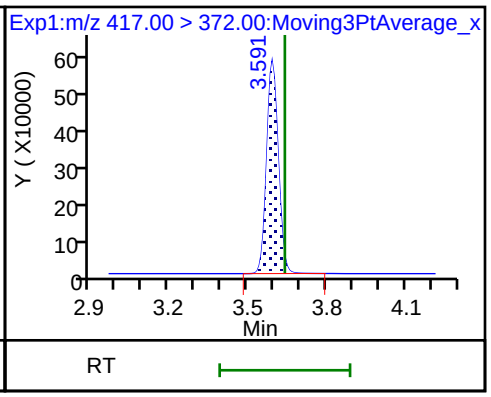
16 Perfluoroheptanesulfonic acid (ND)



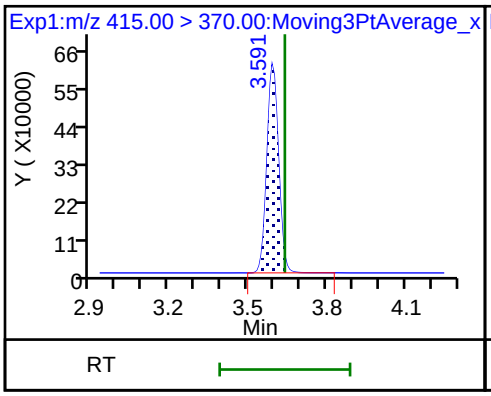
16 Perfluoroheptanesulfonic acid (ND)



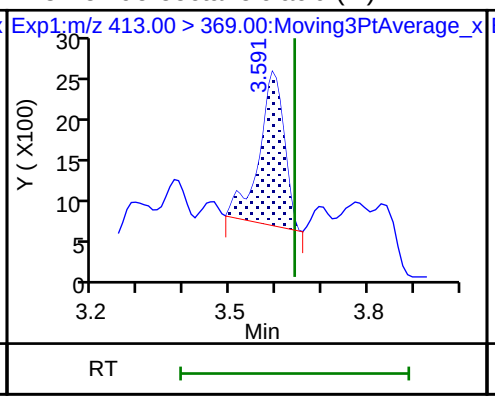
D 14 13C4 PFOA



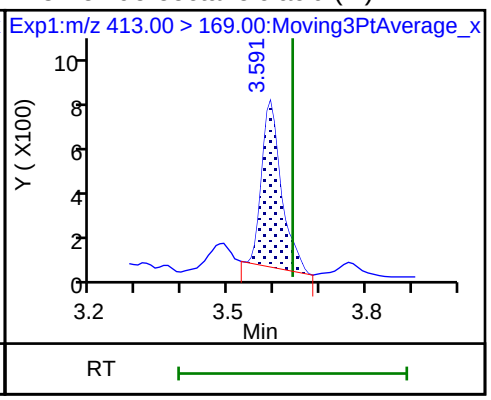
* 62 13C2 PFOA



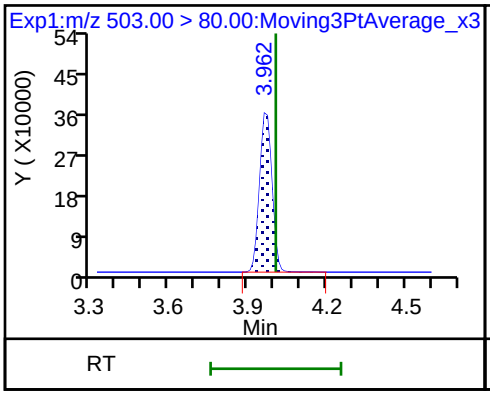
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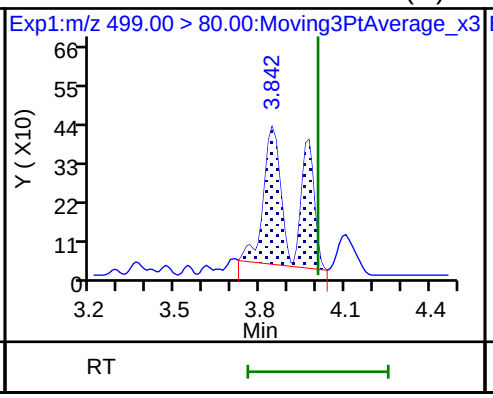
15 Perfluorooctanoic acid (M)



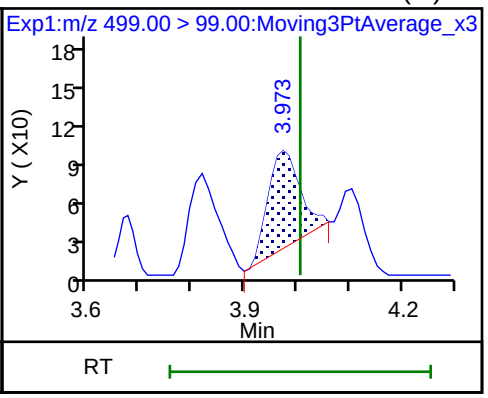
D 18 13C4 PFOS



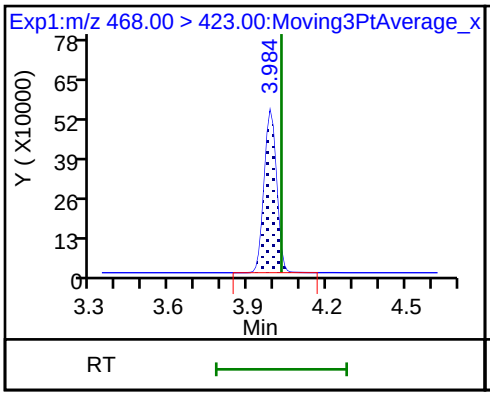
17 Perfluorooctanesulfonic acid (M)



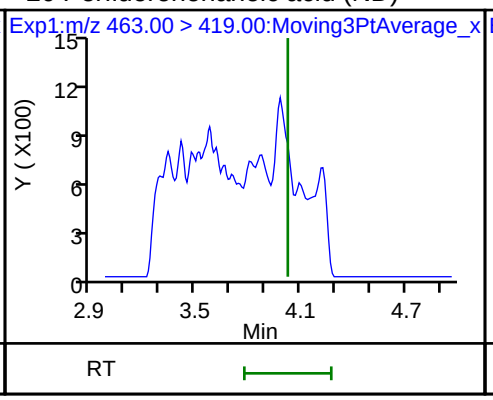
17 Perfluorooctanesulfonic acid (M)



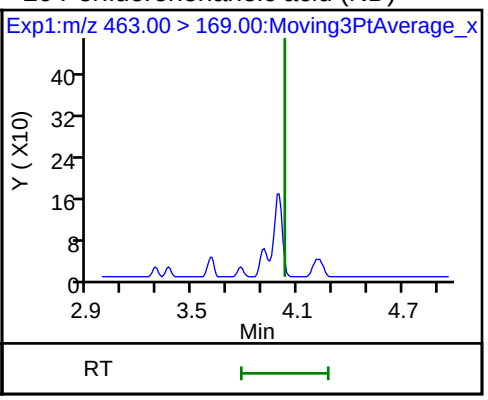
D 19 13C5 PFNA



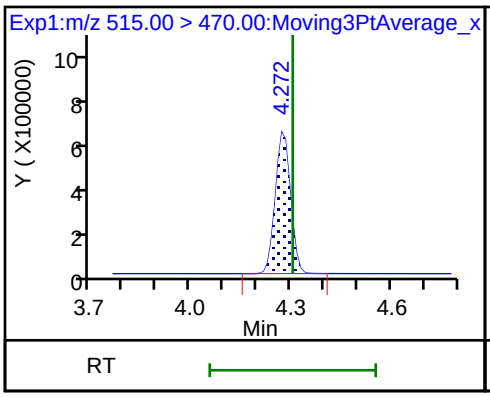
20 Perfluorononanoic acid (ND)



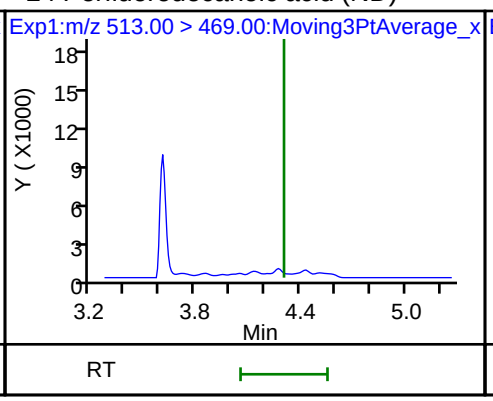
20 Perfluorononanoic acid (ND)



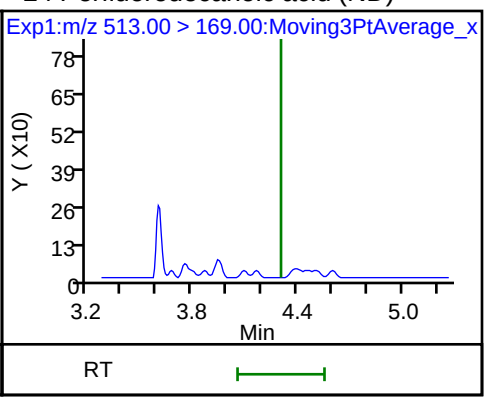
D 23 13C2 PFDA



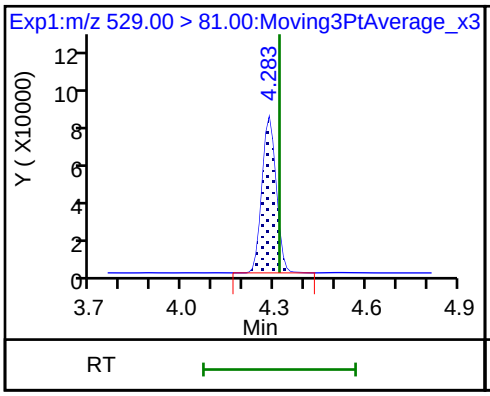
24 Perfluorodecanoic acid (ND)



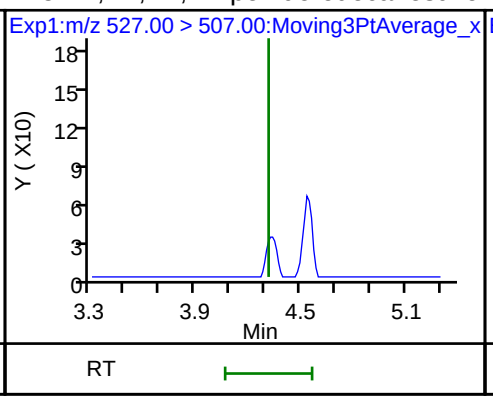
24 Perfluorodecanoic acid (ND)



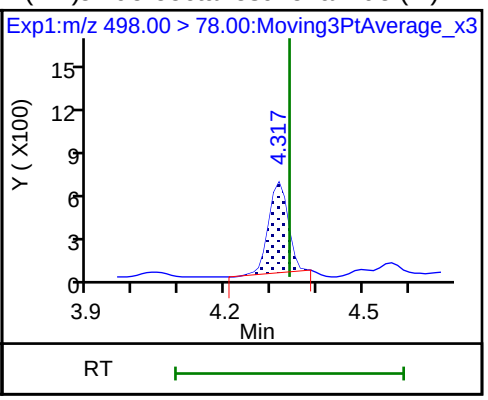
D 26 M2-8:2 FTS



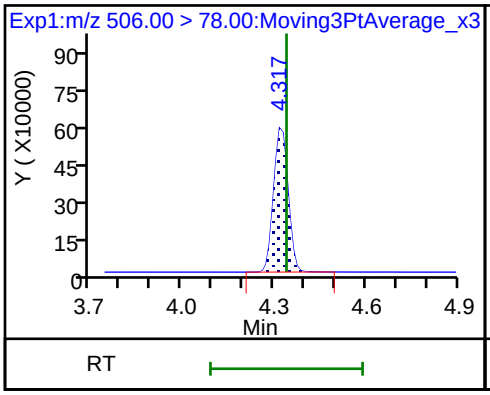
25 1H,1H,2H,2H-perfluorodecanesulfoni



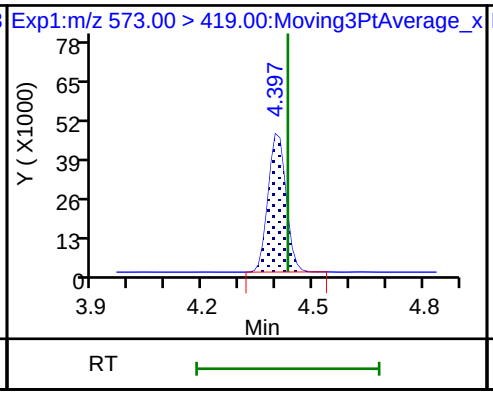
(2D) erfluorooctanesulfonamide (M)



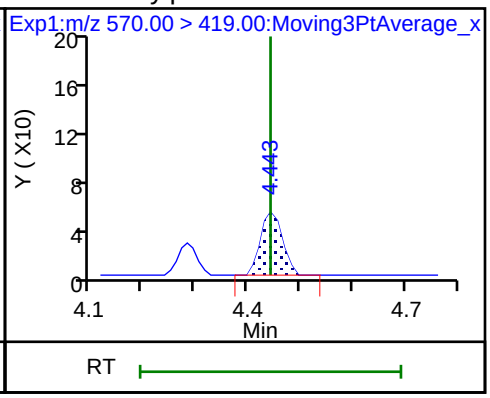
D 21 13C8 FOSA



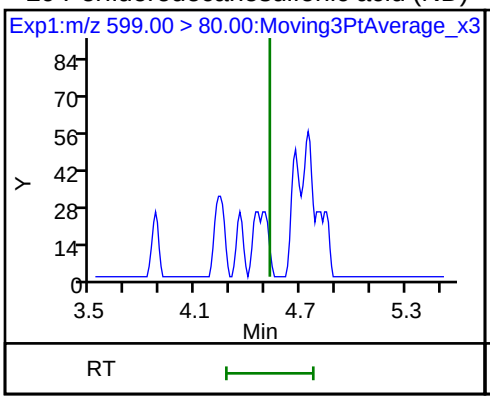
D 27 d3-NMeFOSAA



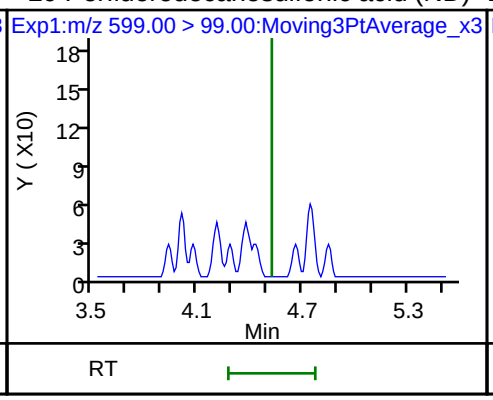
28 N-methylperfluorooctanesulfonamido (M)



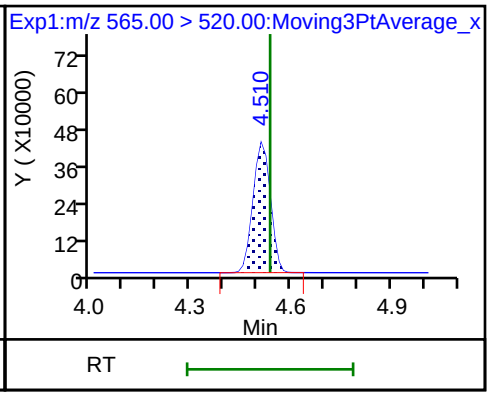
29 Perfluorodecanesulfonic acid (ND)



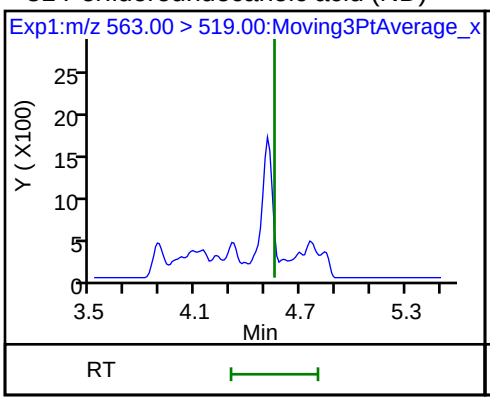
29 Perfluorodecanesulfonic acid (ND)



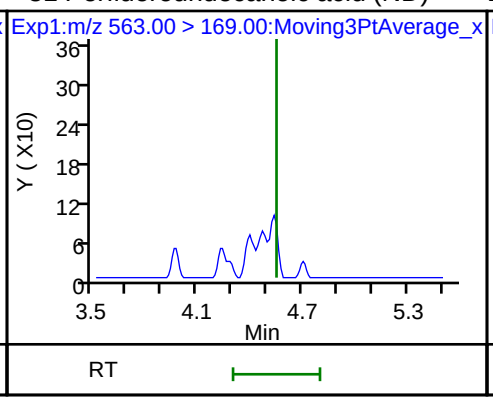
D 30 13C2 PFUnA



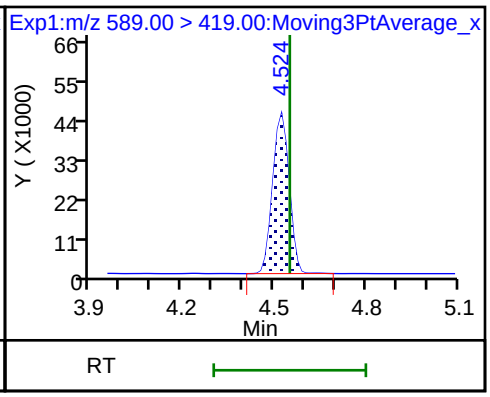
31 Perfluoroundecanoic acid (ND)



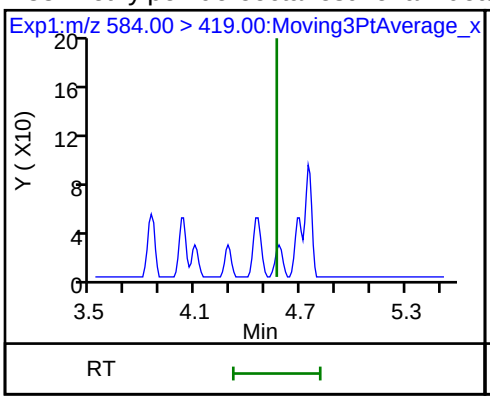
31 Perfluoroundecanoic acid (ND)



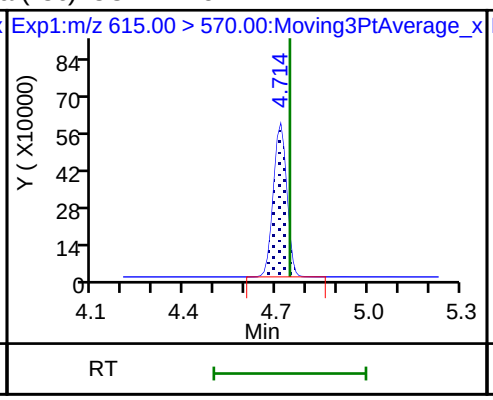
D 32 d5-NEtFOSAA



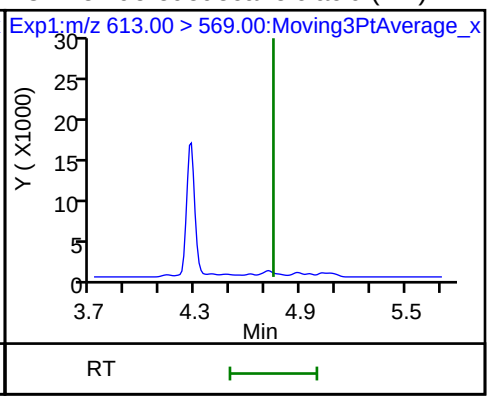
33 N-ethylperfluorooctanesulfonamidoa(N6)



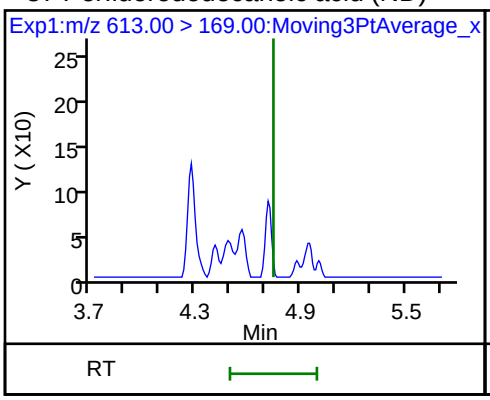
D 36 13C2 PFDoA



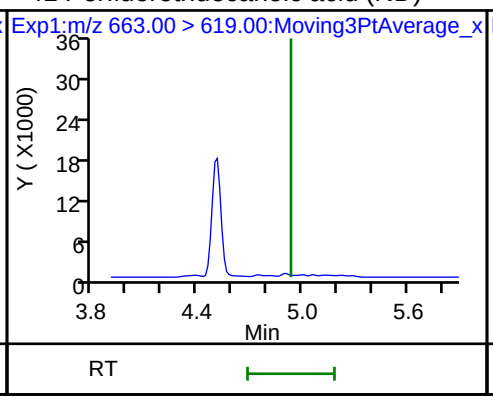
37 Perfluorododecanoic acid (ND)



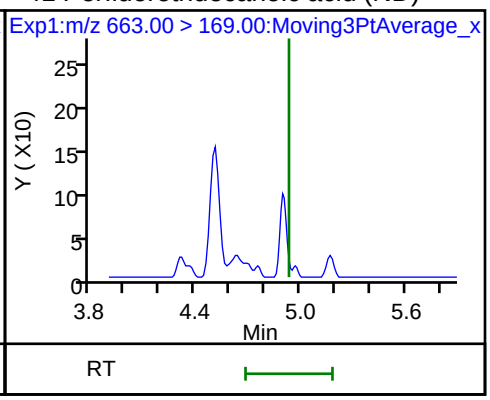
37 Perfluorododecanoic acid (ND)



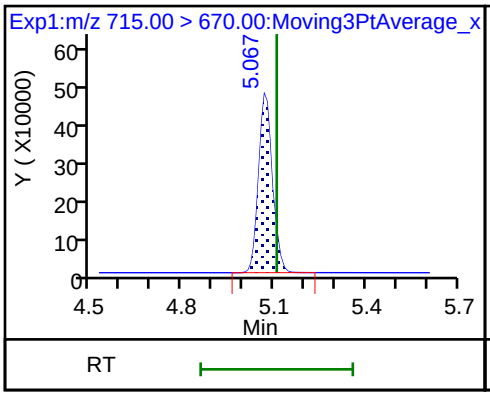
41 Perfluorotridecanoic acid (ND)



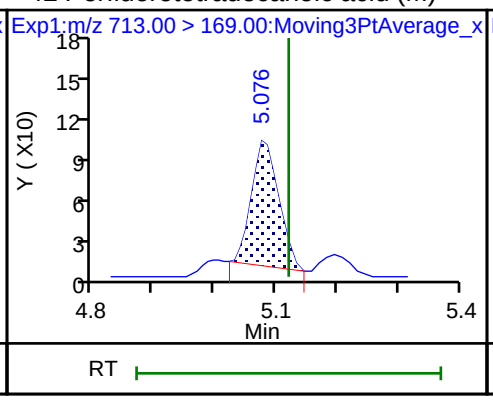
41 Perfluorotridecanoic acid (ND)



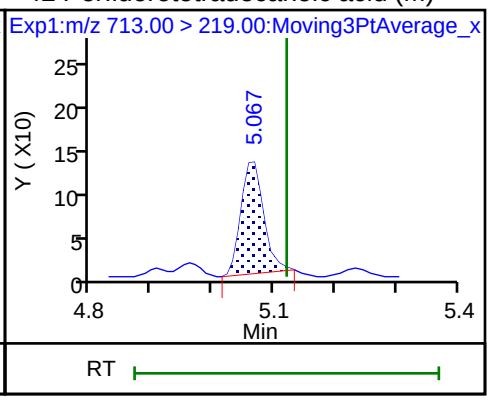
D 43 13C2 PFTeDA



42 Perfluorotetradecanoic acid (M)



42 Perfluorotetradecanoic acid (M)



Eurofins TestAmerica, Burlington

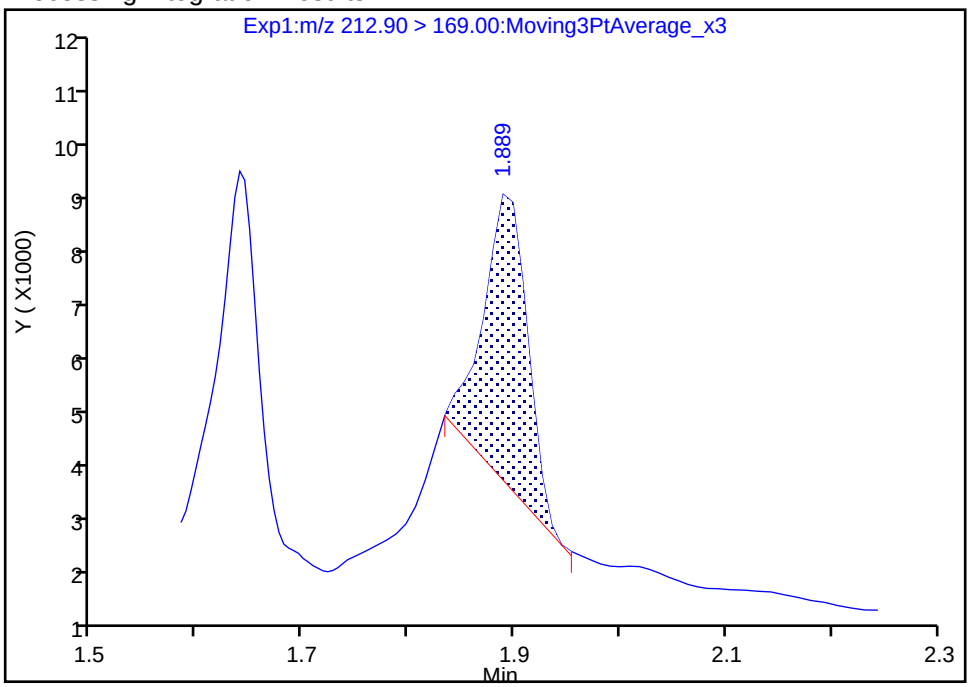
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Injection Date:	25-Feb-2020 21:49:12	Instrument ID:	LC812		
Lims ID:	480-166551-A-3-A	Lab Sample ID:	200-166551-3		
Client ID:	BW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	22	Worklist Smp#:	22
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

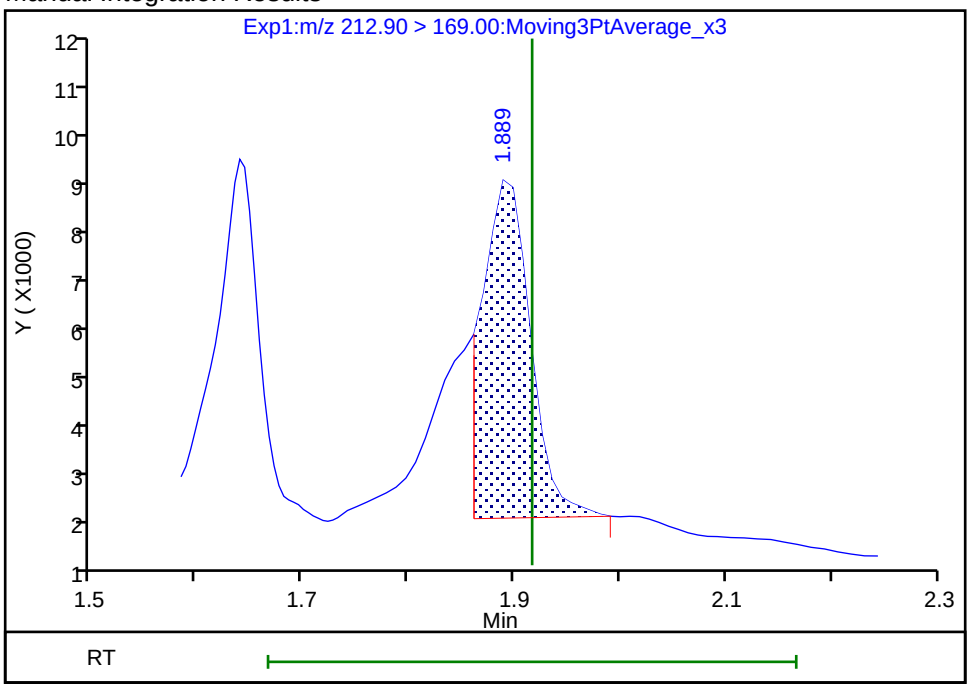
Processing Integration Results

RT: 1.89
Area: 14864
Amount: 0.018159
Amount Units: ng/ml



Manual Integration Results

RT: 1.89
Area: 20369
Amount: 0.025164
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:30:08
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

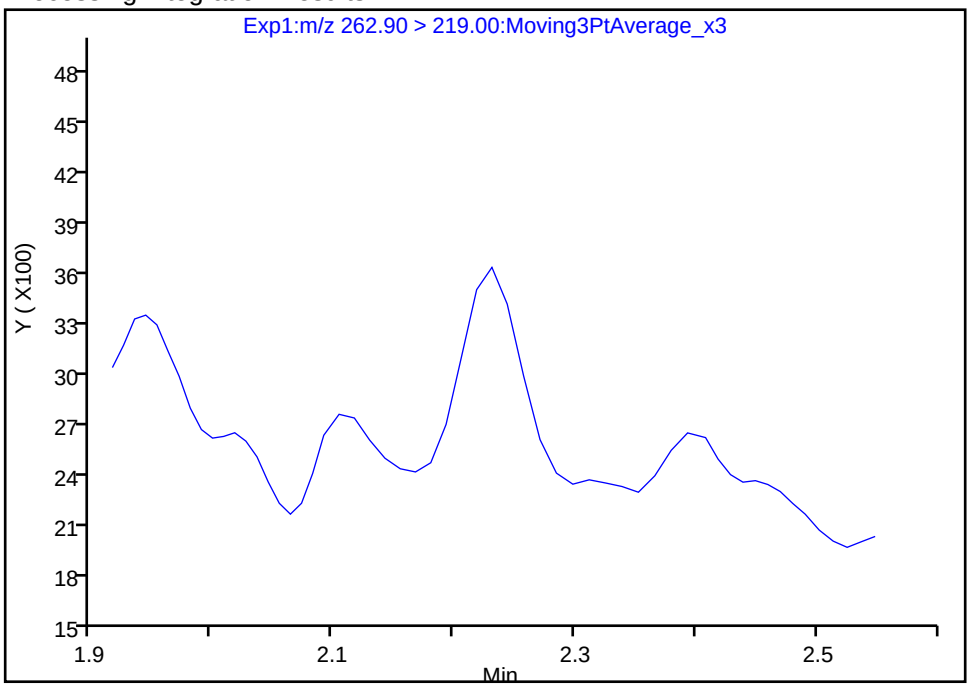
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Injection Date:	25-Feb-2020 21:49:12	Instrument ID:	LC812		
Lims ID:	480-166551-A-3-A	Lab Sample ID:	200-166551-3		
Client ID:	BW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	22	Worklist Smp#:	22
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

4 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

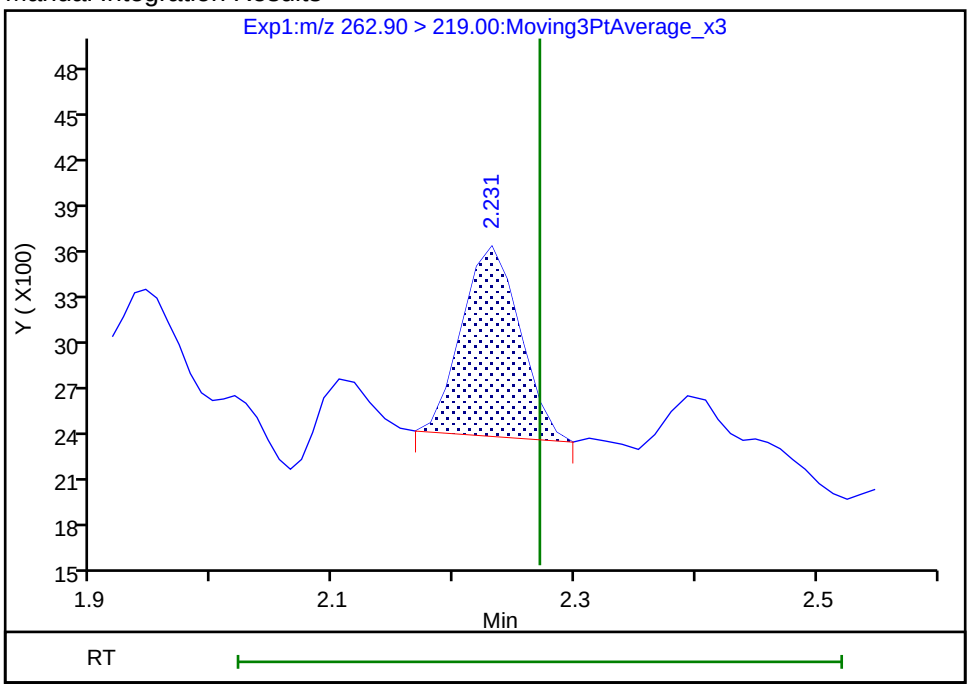
Not Detected
Expected RT: 2.27

Processing Integration Results



Manual Integration Results

RT: 2.23
Area: 4193
Amount: 0.005357
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:30:42
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

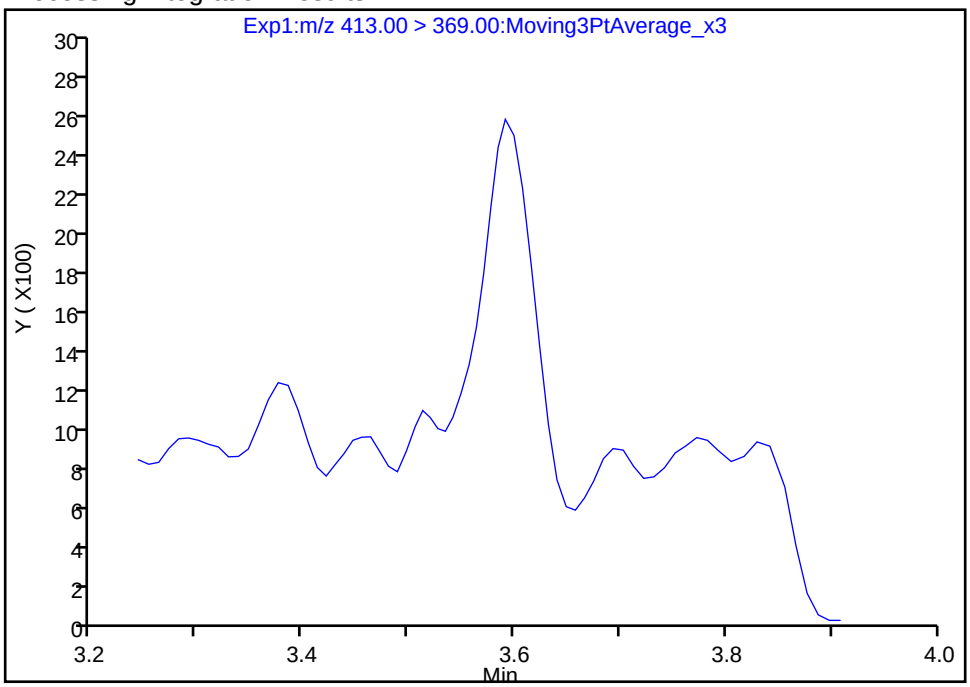
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C22.d				
Injection Date:	25-Feb-2020 21:49:12	Instrument ID:	LC812		
Lims ID:	480-166551-A-3-A	Lab Sample ID:	200-166551-3		
Client ID:	BW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	22	Worklist Smp#:	22
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

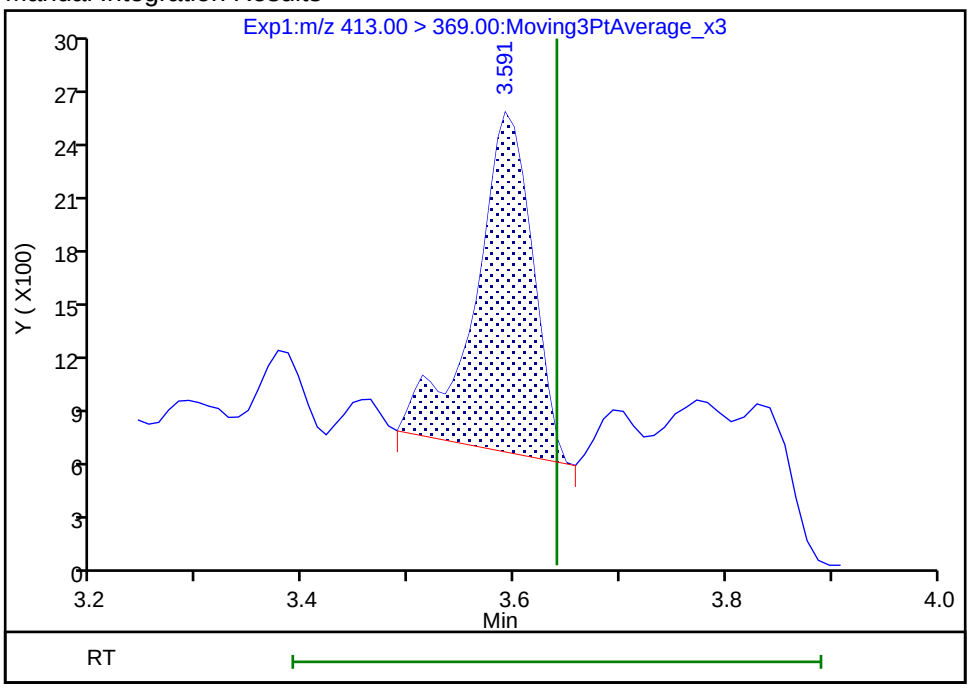
Not Detected
Expected RT: 3.64

Processing Integration Results



Manual Integration Results

RT: 3.59
Area: 7216
Amount: 0.009576
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:32:01
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

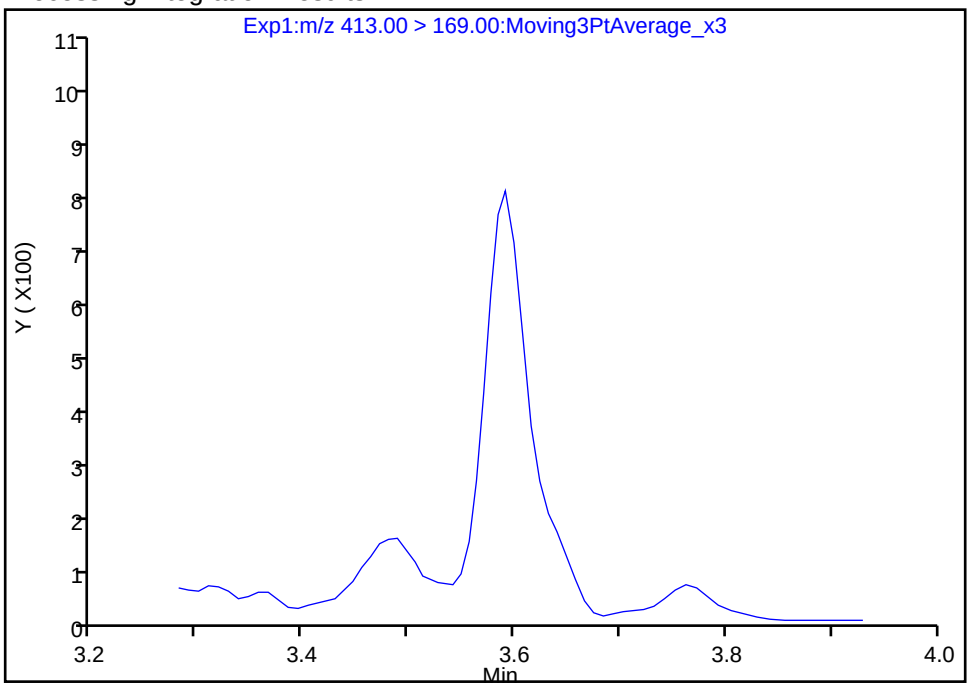
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C22.d				
Injection Date:	25-Feb-2020 21:49:12	Instrument ID:	LC812		
Lims ID:	480-166551-A-3-A	Lab Sample ID:	200-166551-3		
Client ID:	BW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	22	Worklist Smp#:	22
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

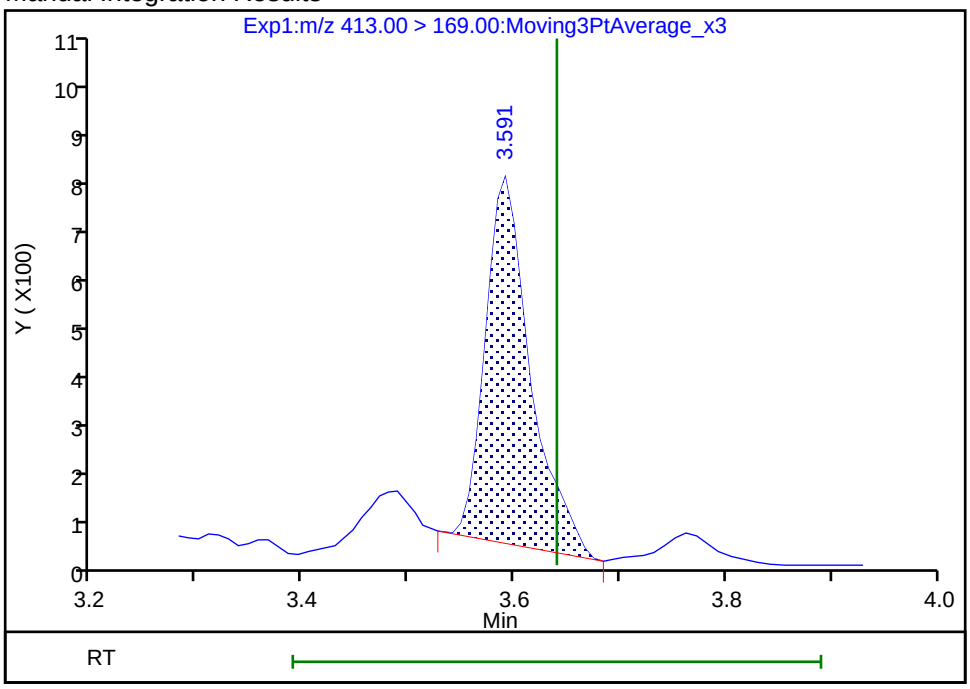
Not Detected
Expected RT: 3.64

Processing Integration Results



Manual Integration Results

RT: 3.59
Area: 2219
Amount: 0.009576
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:32:06
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

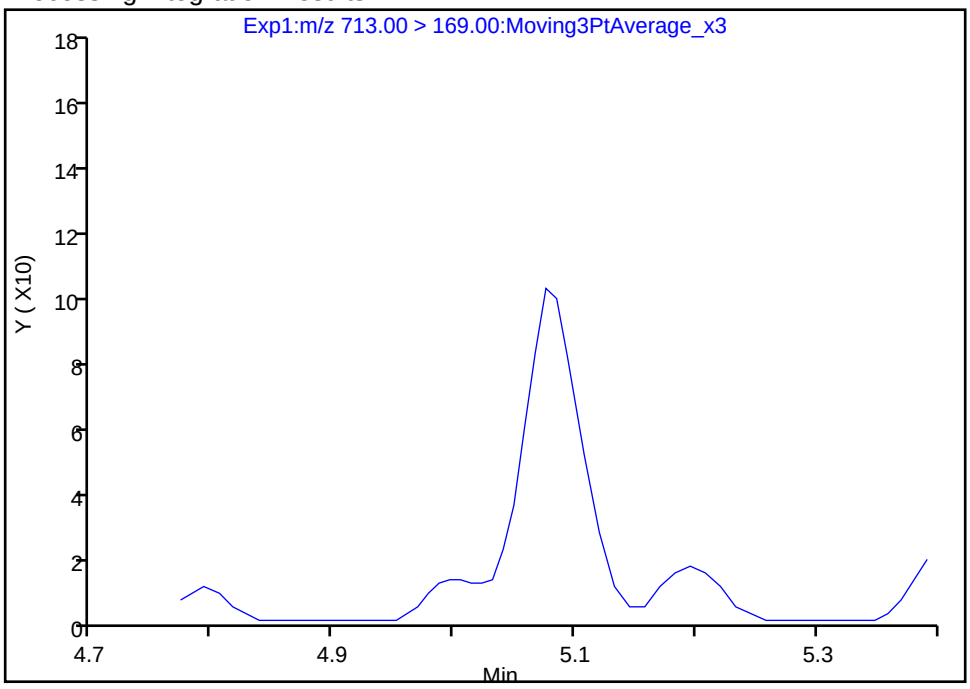
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C22.d				
Injection Date:	25-Feb-2020 21:49:12	Instrument ID:	LC812		
Lims ID:	480-166551-A-3-A	Lab Sample ID:	200-166551-3		
Client ID:	BW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	22	Worklist Smp#:	22
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 1

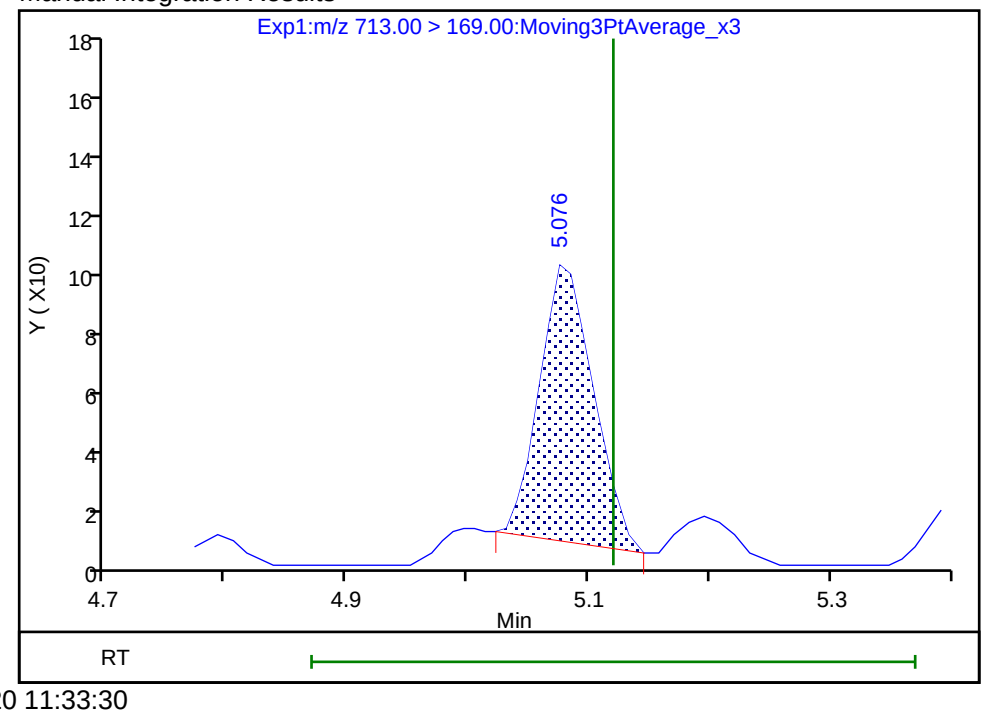
Not Detected
Expected RT: 5.12

Processing Integration Results



Manual Integration Results

RT: 5.08
Area: 279
Amount: 0.003019
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:33:30
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

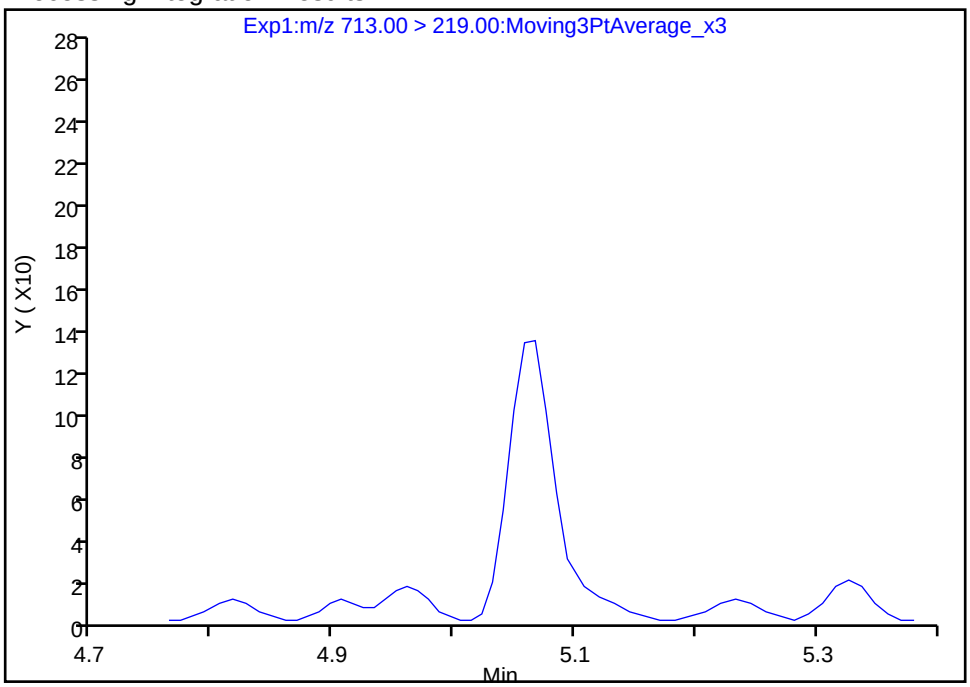
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C22.d				
Injection Date:	25-Feb-2020 21:49:12	Instrument ID:	LC812		
Lims ID:	480-166551-A-3-A	Lab Sample ID:	200-166551-3		
Client ID:	BW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	22	Worklist Smp#:	22
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 2

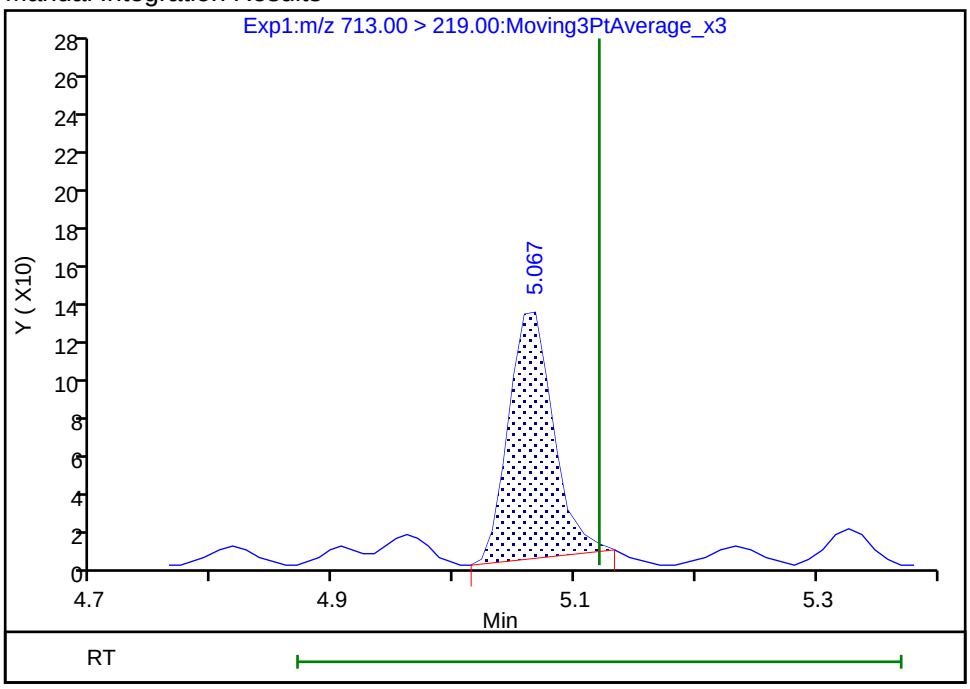
Not Detected
Expected RT: 5.12

Processing Integration Results



Manual Integration Results

RT: 5.07
Area: 330
Amount: 0.003019
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:33:34
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

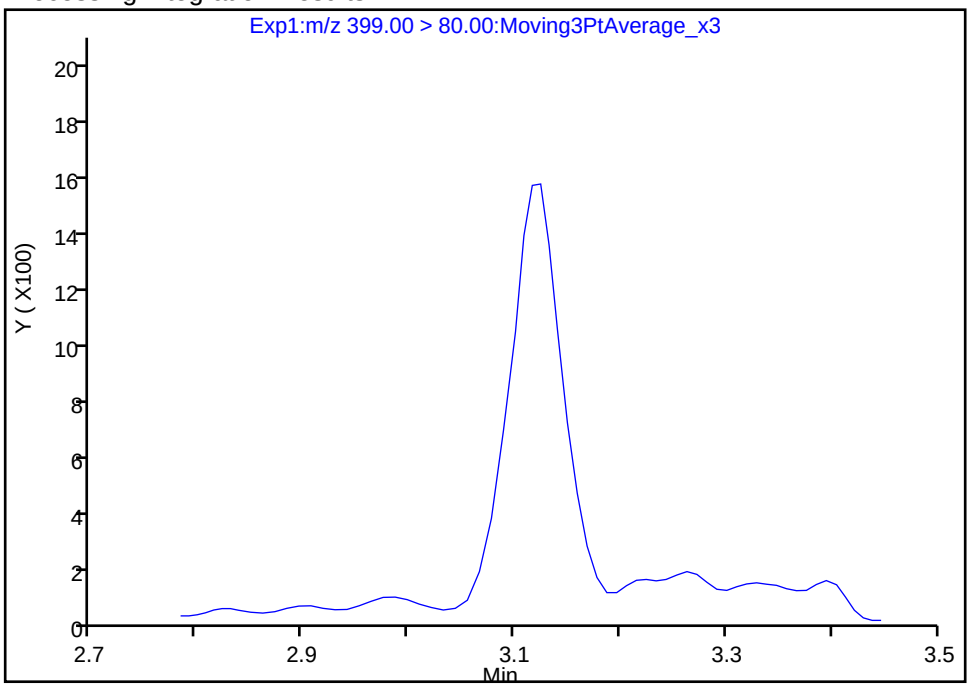
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C22.d				
Injection Date:	25-Feb-2020 21:49:12	Instrument ID:	LC812		
Lims ID:	480-166551-A-3-A	Lab Sample ID:	200-166551-3		
Client ID:	BW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	22	Worklist Smp#:	22
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

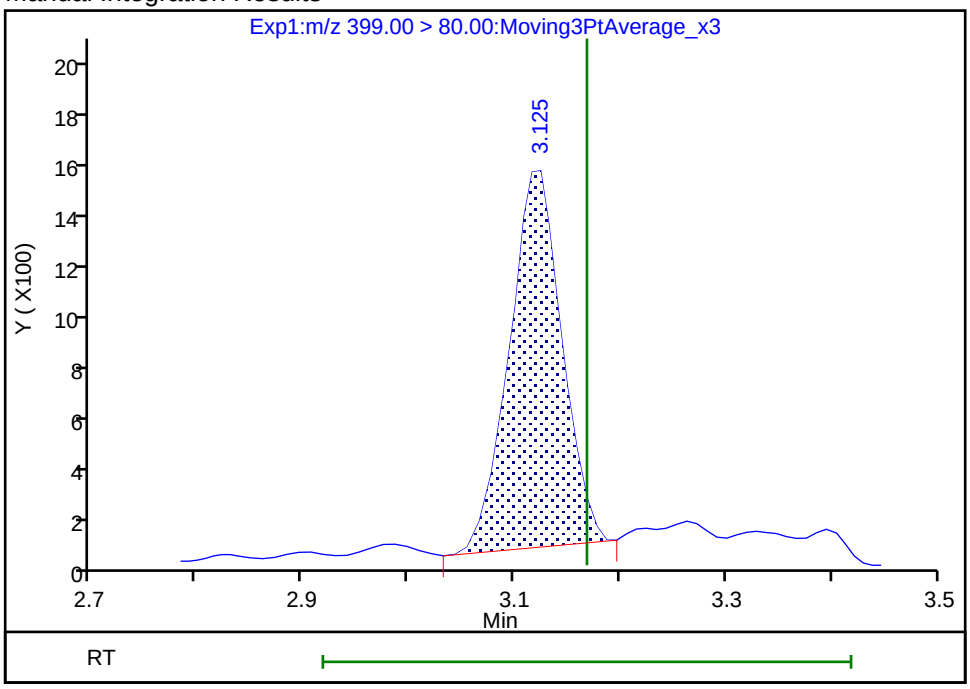
Not Detected
Expected RT: 3.17

Processing Integration Results



Manual Integration Results

RT: 3.12
Area: 5131
Amount: 0.007403
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:31:18
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

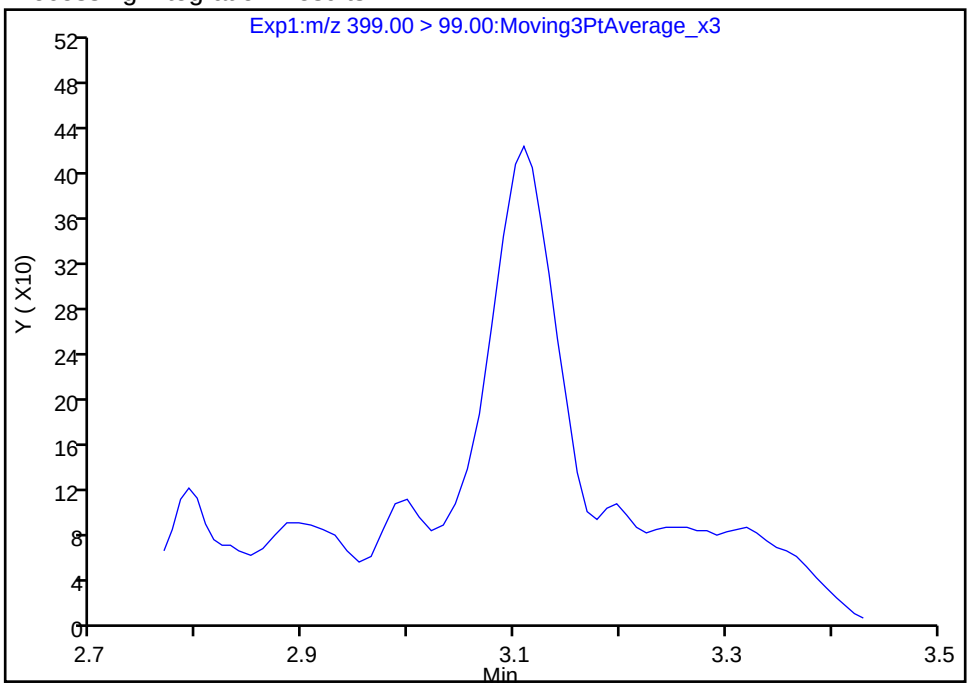
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C22.d				
Injection Date:	25-Feb-2020 21:49:12	Instrument ID:	LC812		
Lims ID:	480-166551-A-3-A	Lab Sample ID:	200-166551-3		
Client ID:	BW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	22	Worklist Smp#:	22
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

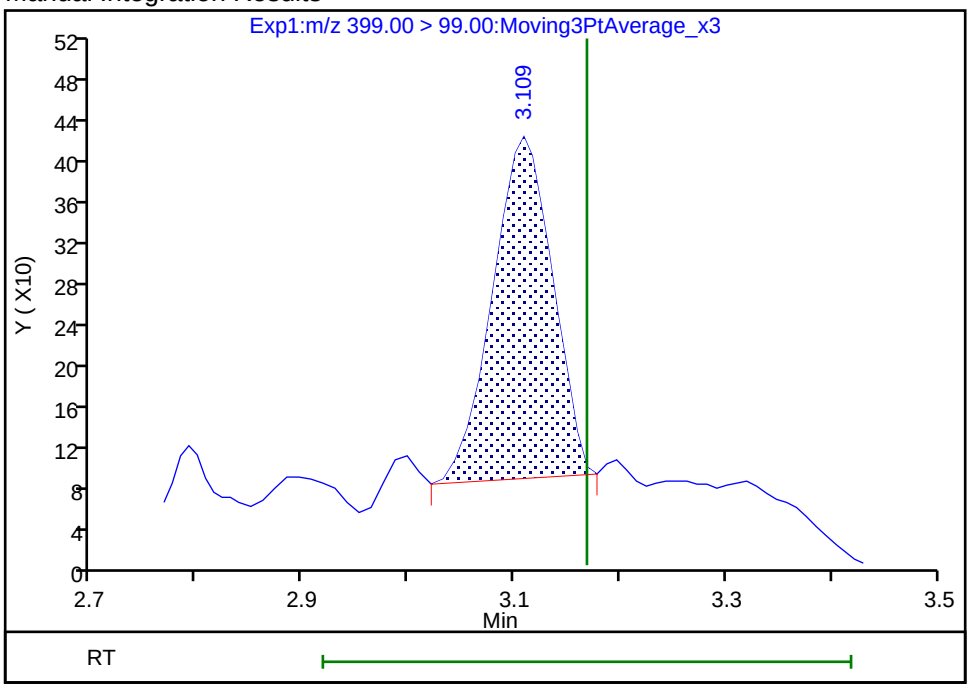
Not Detected
Expected RT: 3.17

Processing Integration Results



Manual Integration Results

RT: 3.11
Area: 1327
Amount: 0.007403
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:31:22
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

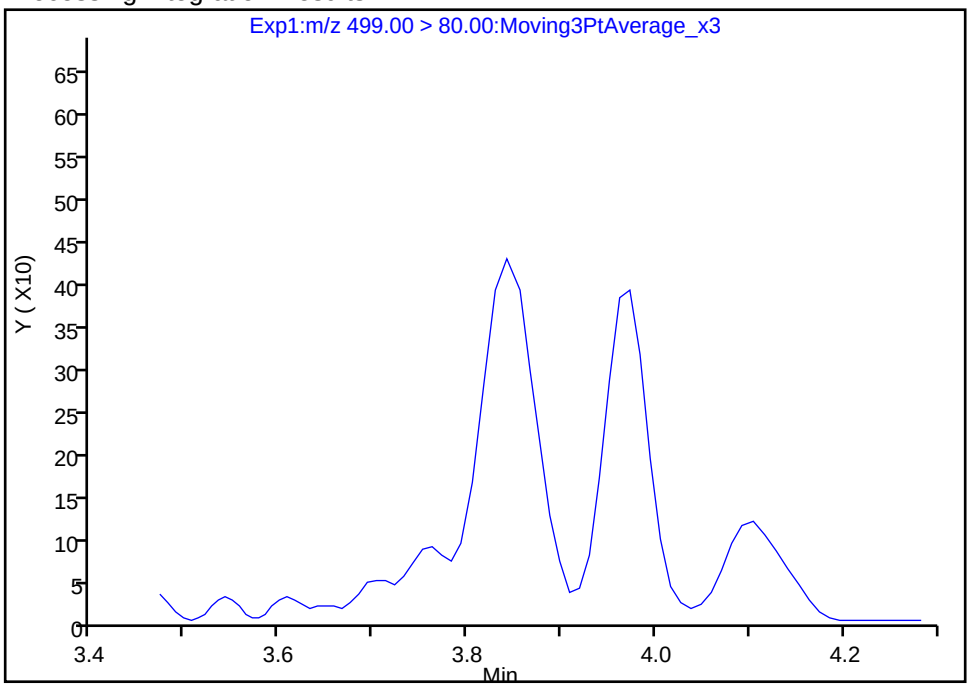
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C22.d				
Injection Date:	25-Feb-2020 21:49:12	Instrument ID:	LC812		
Lims ID:	480-166551-A-3-A	Lab Sample ID:	200-166551-3		
Client ID:	BW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	22	Worklist Smp#:	22
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

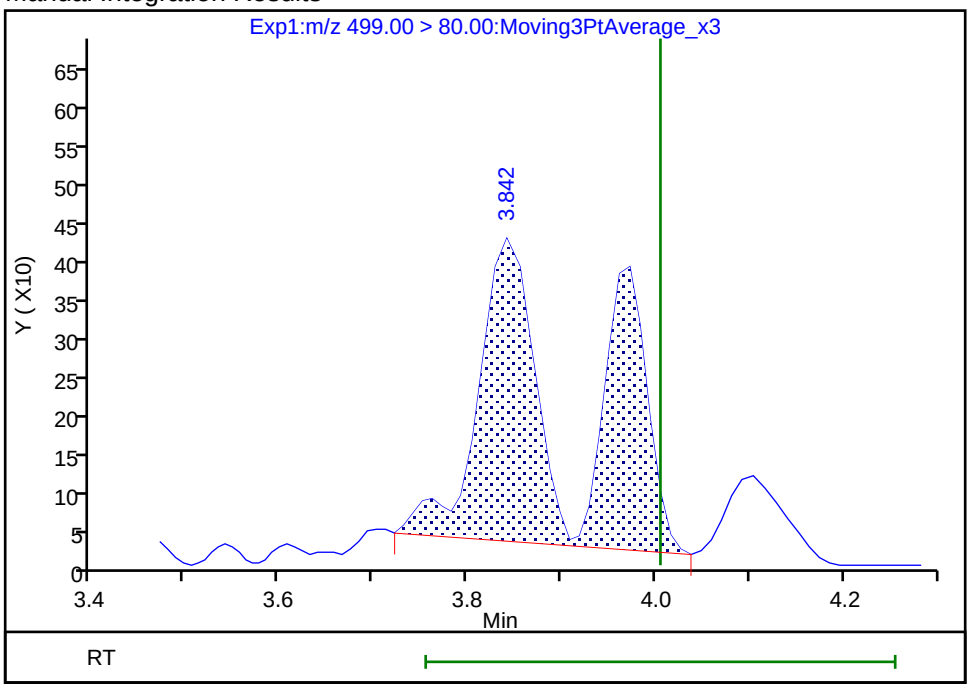
Not Detected
Expected RT: 4.01

Processing Integration Results



Manual Integration Results

RT: 3.84
Area: 2811
Amount: 0.005350
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:32:22
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

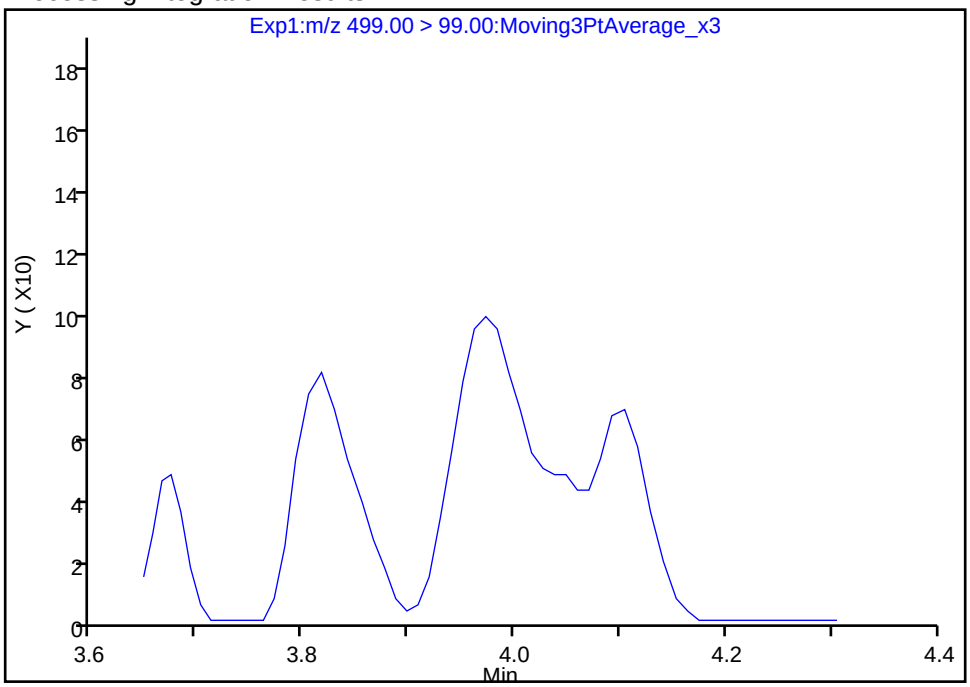
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Injection Date:	25-Feb-2020 21:49:12	Instrument ID:	LC812		
Lims ID:	480-166551-A-3-A	Lab Sample ID:	200-166551-3		
Client ID:	BW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	22	Worklist Smp#:	22
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

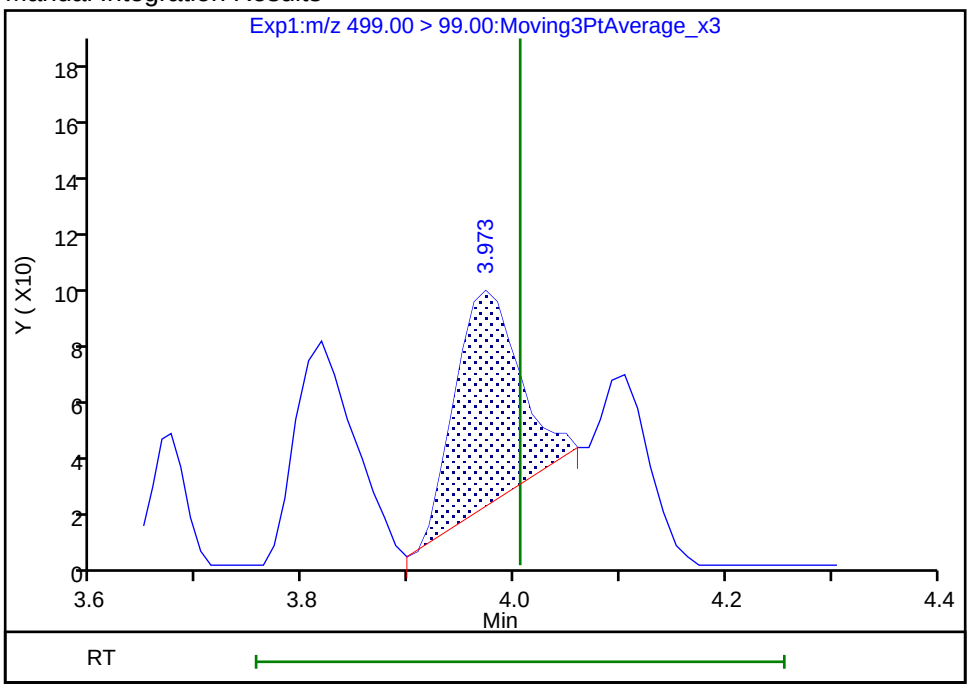
Not Detected
Expected RT: 4.01

Processing Integration Results



Manual Integration Results

RT: 3.97
Area: 324
Amount: 0.005350
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:32:32
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

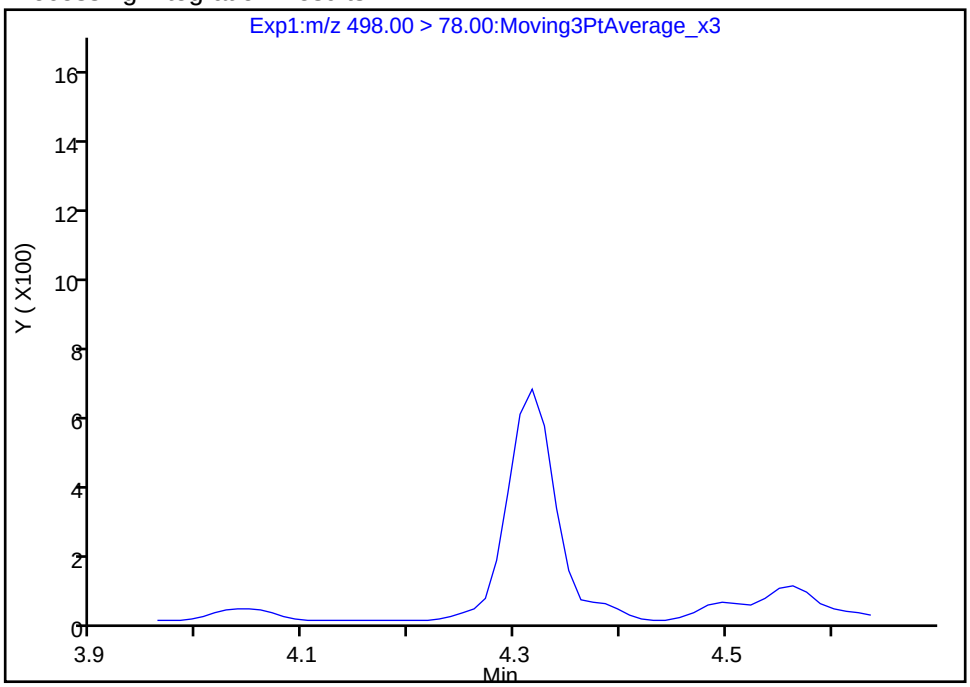
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C22.d				
Injection Date:	25-Feb-2020 21:49:12	Instrument ID:	LC812		
Lims ID:	480-166551-A-3-A	Lab Sample ID:	200-166551-3		
Client ID:	BW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	22	Worklist Smp#:	22
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

22 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

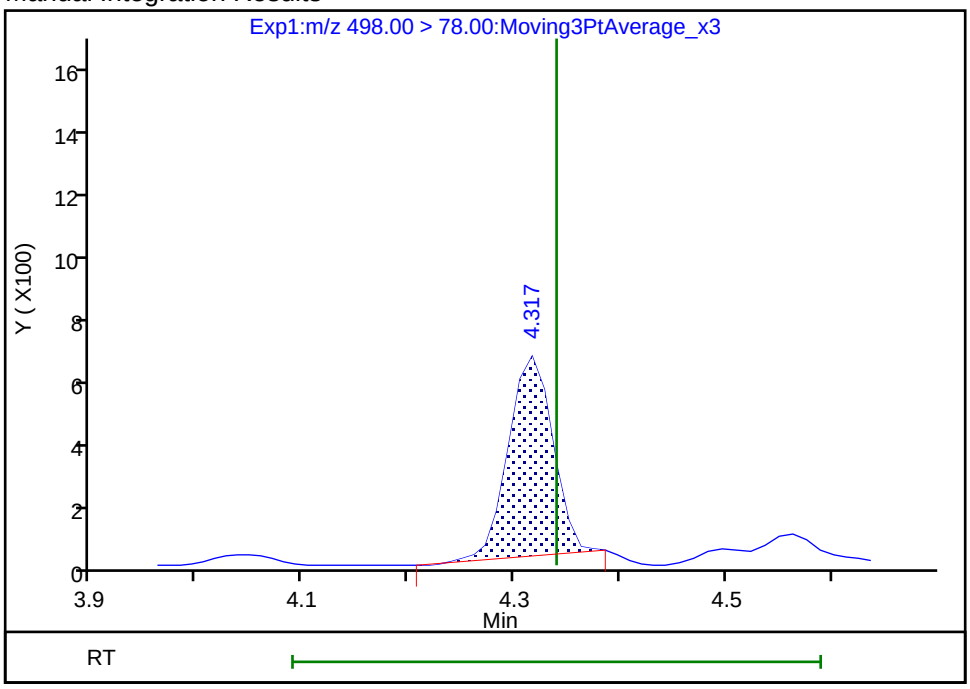
Not Detected
Expected RT: 4.34

Processing Integration Results



Manual Integration Results

RT: 4.32
Area: 1848
Amount: 0.002328
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:32:53
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

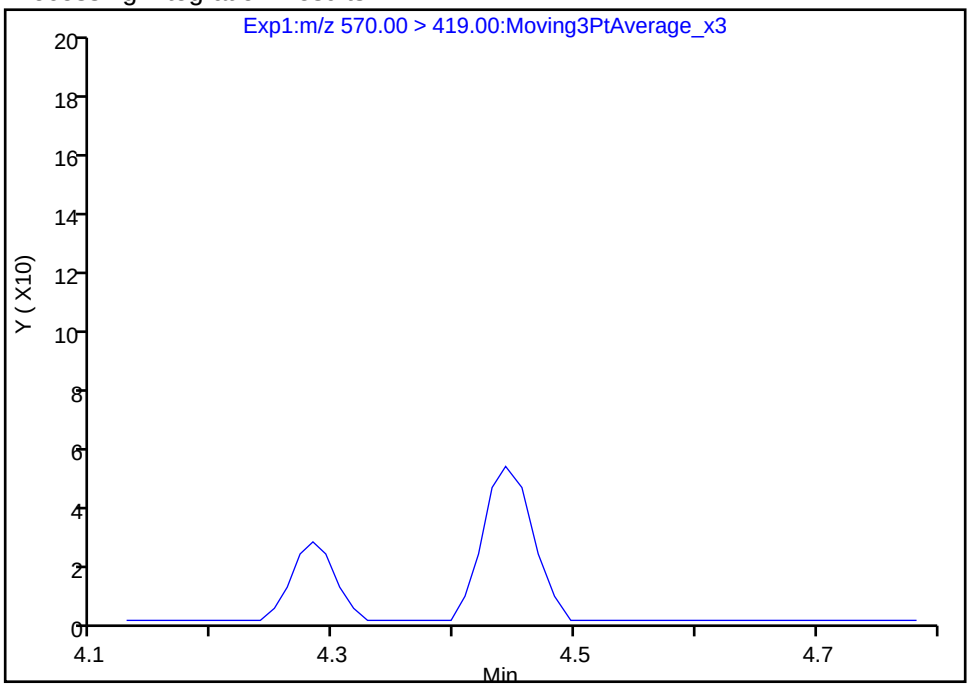
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C22.d				
Injection Date:	25-Feb-2020 21:49:12	Instrument ID:	LC812		
Lims ID:	480-166551-A-3-A	Lab Sample ID:	200-166551-3		
Client ID:	BW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	22	Worklist Smp#:	22
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

28 N-methylperfluorooctanesulfonamidoacetic aci, CAS: 2355-31-9

Signal: 1

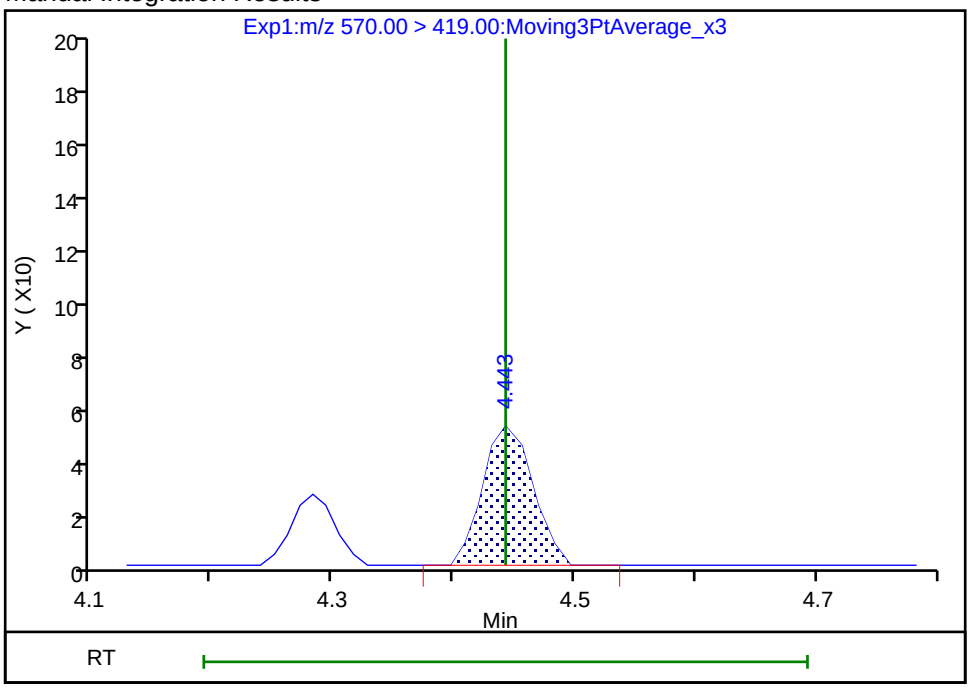
Not Detected
Expected RT: 4.44

Processing Integration Results



Manual Integration Results

RT: 4.44
Area: 147
Amount: 0.002736
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:33:01
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

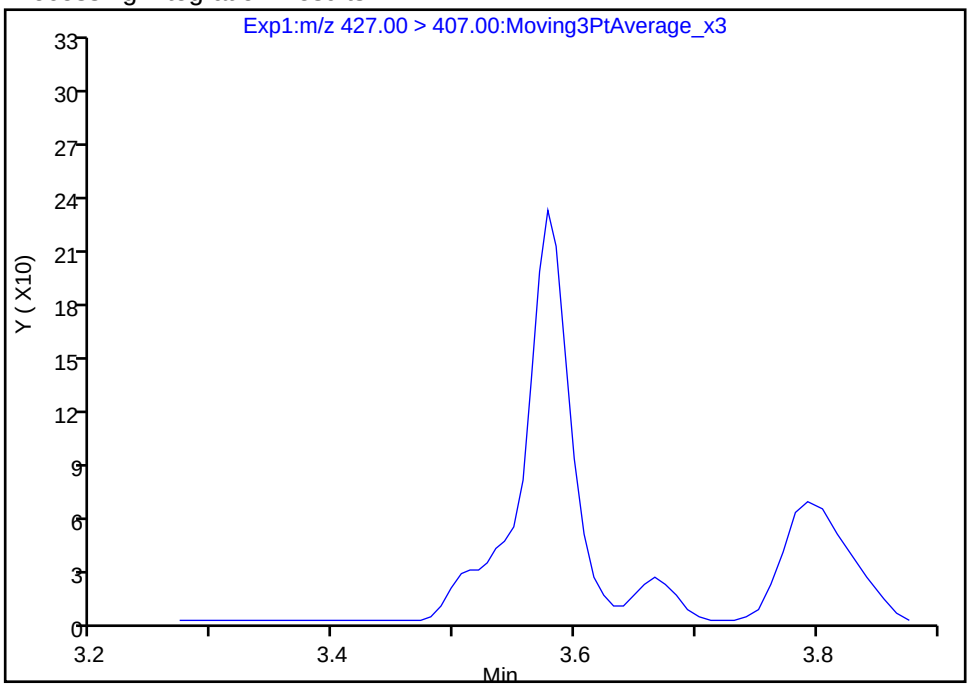
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C22.d				
Injection Date:	25-Feb-2020 21:49:12	Instrument ID:	LC812		
Lims ID:	480-166551-A-3-A	Lab Sample ID:	200-166551-3		
Client ID:	BW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	22	Worklist Smp#:	22
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

13 1H,1H,2H,2H-perfluorooctanesulfonic acid (6:, CAS: 27619-97-2

Signal: 1

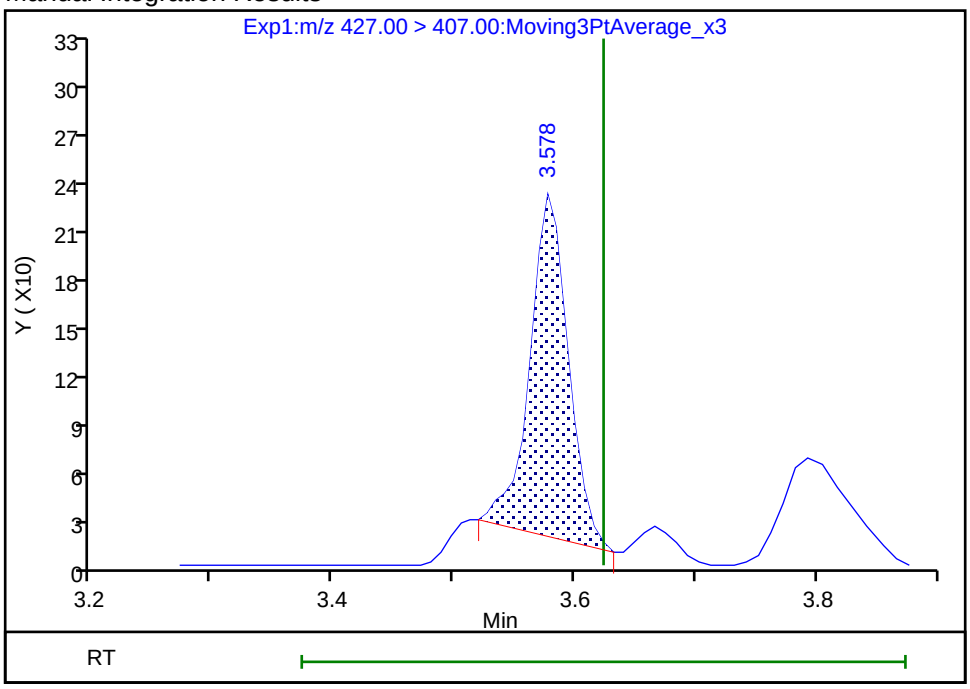
Not Detected
Expected RT: 3.62

Processing Integration Results



Manual Integration Results

RT: 3.58
Area: 464
Amount: 0.004268
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:31:37
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

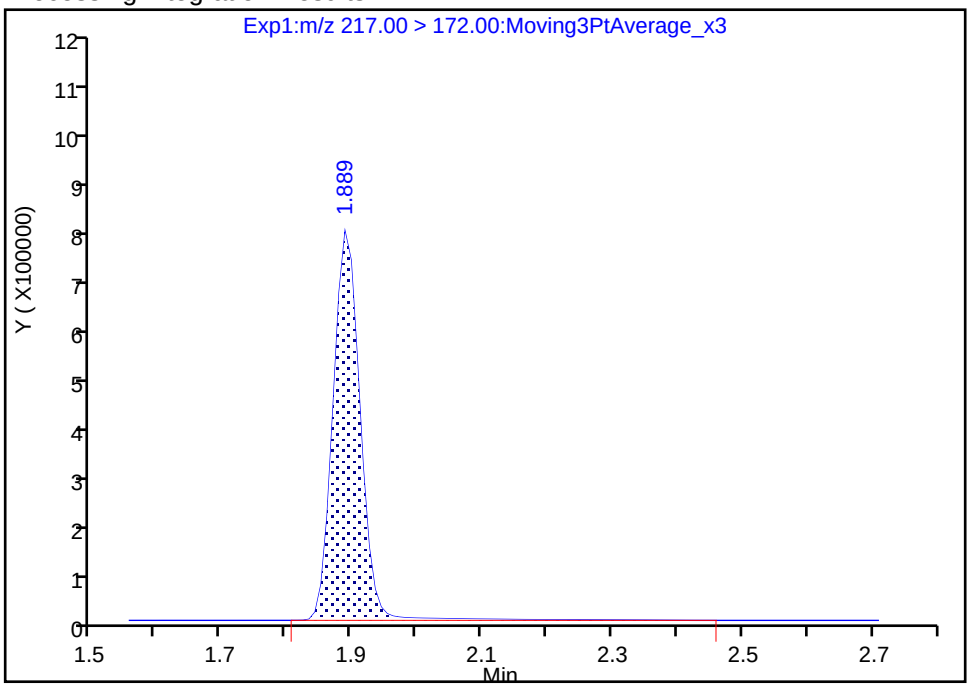
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C22.d				
Injection Date:	25-Feb-2020 21:49:12	Instrument ID:	LC812		
Lims ID:	480-166551-A-3-A	Lab Sample ID:	200-166551-3		
Client ID:	BW-01-021920-EC				
Operator ID:	lc812tech	ALS Bottle#:	22	Worklist Smp#:	22
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

D 1 13C4 PFBA, CAS: STL00992

Signal: 1

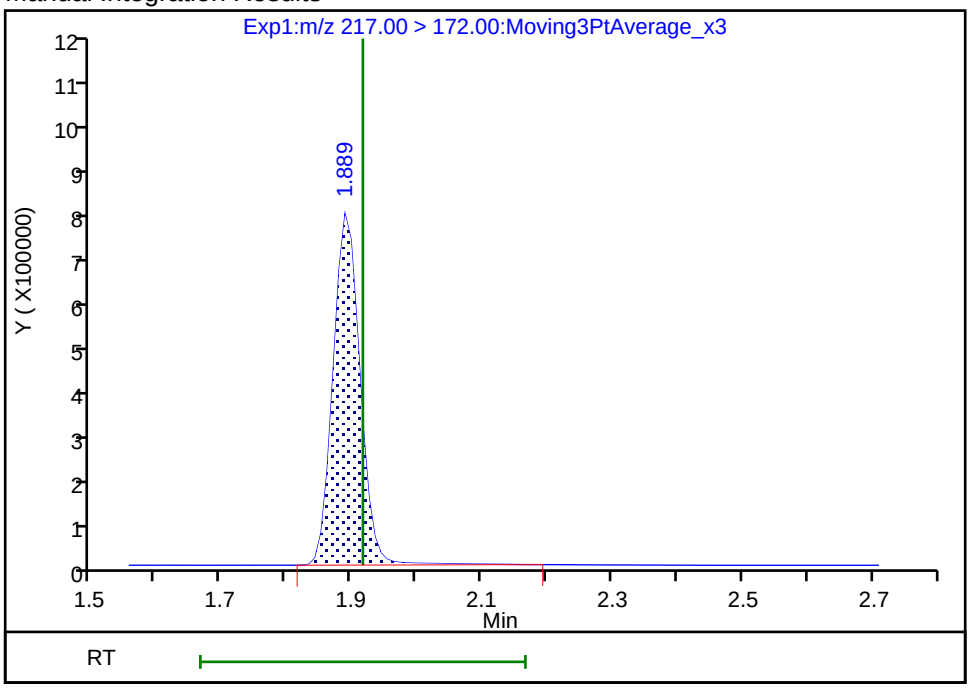
Processing Integration Results

RT: 1.89
Area: 2151240
Amount: 2.726419
Amount Units: ng/ml



Manual Integration Results

RT: 1.89
Area: 2127261
Amount: 2.696029
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:30:28

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Client Sample ID: FD-021920 Lab Sample ID: 480-166551-4

Matrix: Water Lab File ID: SC022520C23.d

Analysis Method: 537 (modified) Date Collected: 02/19/2020 00:00

Extraction Method: 3535 Date Extracted: 02/24/2020 13:43

Sample wt/vol: 291.7(mL) Date Analyzed: 02/25/2020 21:57

Con. Extract Vol.: 10(mL) Dilution Factor: 1

Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 152696 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	ND		1.7	0.86
2706-90-3	Perfluoropentanoic acid (PFPeA)	ND		1.7	0.54
307-24-4	Perfluorohexanoic acid (PFHxA)	ND		1.7	0.65
375-85-9	Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.78
335-67-1	Perfluorooctanoic acid (PFOA)	ND		1.7	0.69
375-95-1	Perfluorononanoic acid (PFNA)	ND		1.7	0.23
335-76-2	Perfluorodecanoic acid (PFDA)	ND		1.7	0.66
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.67
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		1.7	0.51
72629-94-8	Perfluorotridecanoic acid (PFTriA)	ND		1.7	0.51
376-06-7	Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.79
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.56	J B	1.7	0.42
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	ND		1.7	0.69
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.81
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.52
335-77-3	Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.77
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND		8.6	8.6
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		17	1.5
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		17	1.3
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	4.7
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	2.5

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Client Sample ID: FD-021920 Lab Sample ID: 480-166551-4

Matrix: Water Lab File ID: SC022520C23.d

Analysis Method: 537 (modified) Date Collected: 02/19/2020 00:00

Extraction Method: 3535 Date Extracted: 02/24/2020 13:43

Sample wt/vol: 291.7(mL) Date Analyzed: 02/25/2020 21:57

Con. Extract Vol.: 10(mL) Dilution Factor: 1

Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 152696 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	105		50-150
STL01892	13C4 PFHpA	106		50-150
STL00990	13C4 PFOA	107		50-150
STL00991	13C4 PFOS	113		50-150
STL00995	13C5 PFNA	109		50-150
STL00992	13C4 PFBA	110		25-150
STL00993	13C2 PFHxA	103		50-150
STL00996	13C2 PFDA	109		50-150
STL00997	13C2 PFUnA	90		50-150
STL00998	13C2 PFDoA	96		50-150
STL01056	13C8 FOSA	108		25-150
STL01893	13C5 PFPeA	119		25-150
STL02116	13C2 PFTeDA	99		50-150
STL02118	d3-NMeFOSAA	125		50-150
STL02117	d5-NEtFOSAA	104		50-150
STL02279	M2-6:2 FTS	109		25-150
STL02280	M2-8:2 FTS	111		25-150
STL02337	13C3 PFBS	97		50-150

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C23.d
Lims ID: 480-166551-A-4-A
Client ID: FD-021920
Sample Type: Client
Inject. Date: 25-Feb-2020 21:57:30 ALS Bottle#: 23 Worklist Smp#: 23
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 480-166551-A-4-A
Misc. Info.: 200-0040162-023 Plate: 1 Rack: 2
Operator ID: lc812tech Instrument ID: LC812

Method: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\PFC_LC812.m
Limit Group: LC_PFC_ICAL
Last Update: 26-Feb-2020 17:13:38 Calib Date: 10-Feb-2020 12:29:33
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL010.d

Column 1 : C-18 (4.60 mm) Det: EXP1
Process Host: CTX0323

First Level Reviewer: murrayjw Date: 26-Feb-2020 11:40:32
Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										M
217.00 > 172.00	1.898	1.917	-0.019	0.527	1532523	2.75		110	4965	M
2 Perfluorobutanoic acid										M
212.90 > 169.00	1.898	1.917	-0.019	1.000	12909	0.0221			1.8	M
D 3 13C5 PFPeA										
267.90 > 223.00	2.244	2.257	-0.013	0.623	1283119	2.96		119	3359	
D 47 13C3 PFBS										
301.90 > 80.00	2.257	2.284	-0.027	0.627	1313987	2.26		97.0	516859	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.257	2.284	-0.027	1.000	9430	0.0164	Target=2.19		27.7	
298.90 > 99.00	2.257	2.284	-0.027	1.000	3912		2.41(1.09-3.28)		6.4	
D 7 13C2 PFHxA										
315.00 > 270.00	2.636	2.673	-0.037	0.732	1298799	2.56		103	4764	
D 11 18O2 PFHxS										
403.00 > 84.00	3.125	3.168	-0.043	0.868	1022983	2.49		105	7999	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.133	3.168	-0.035	1.003	3492	0.006841	Target=4.33		16.7	M
399.00 > 99.00	3.133	3.168	-0.035	1.003	1378		2.53(2.17-6.50)		4.2	M
D 9 13C4 PFHpA										
367.00 > 322.00	3.125	3.168	-0.043	0.868	1292780	2.65		106	5288	
13 1H,1H,2H,2H-perfluorooctanesulfoni										M
427.00 > 407.00	3.584	3.624	-0.040	1.000	523	0.007563			16.7	M
D 12 M2-6:2 FTS										
429.00 > 81.00	3.584	3.624	-0.040	0.996	146171	2.59		109	1098	
D 14 13C4 PFOA										
417.00 > 372.00	3.599	3.640	-0.041	1.000	1346263	2.67		107	8033	
* 62 13C2 PFOA										
415.00 > 370.00	3.599	3.640	-0.041		1337147	2.50			8766	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
15 Perfluorooctanoic acid										RM
413.00 > 369.00	3.608	3.640	-0.032	1.002	7496	0.0134	Target=2.66		2.1	RM
413.00 > 169.00	3.599	3.640	-0.041	1.000	1508		4.97(1.33-3.99)		10.9	M
D 18 13C4 PFOS										
503.00 > 80.00	3.973	4.005	-0.032	1.104	824635	2.69		113	8959	
D 19 13C5 PFNA										
468.00 > 423.00	3.994	4.027	-0.033	1.110	1313102	2.72		109	10310	
D 23 13C2 PFDA										
515.00 > 470.00	4.283	4.305	-0.022	1.190	1437558	2.74		109	9170	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.294	4.317	-0.023	1.193	211986	2.66		111	1282	
22 Perfluorooctanesulfonamide										M
498.00 > 78.00	4.317	4.340	-0.023	0.997	681	0.001145			8.6	M
D 21 13C8 FOSA										
506.00 > 78.00	4.328	4.340	-0.012	1.202	1450348	2.69		108	8309	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.409	4.431	-0.022	1.225	130062	3.14		125	3180	
D 30 13C2 PFUnA										
565.00 > 520.00	4.523	4.537	-0.014	1.257	1025975	2.24		89.6	7137	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.523	4.551	-0.028	1.257	122463	2.59		104	805	
D 36 13C2 PFDoA										
615.00 > 570.00	4.714	4.744	-0.030	1.310	1228986	2.40		95.9	5355	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.076	5.108	-0.032	1.410	1086202	2.47		98.7	8778	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Review Flags

M - Manually Integrated

Report Date: 26-Feb-2020 17:13:51 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C23.d

Injection Date: 25-Feb-2020 21:57:30 Instrument ID: LC812

Lims ID: 480-166551-A-4-A Lab Sample ID: 200-166551-4

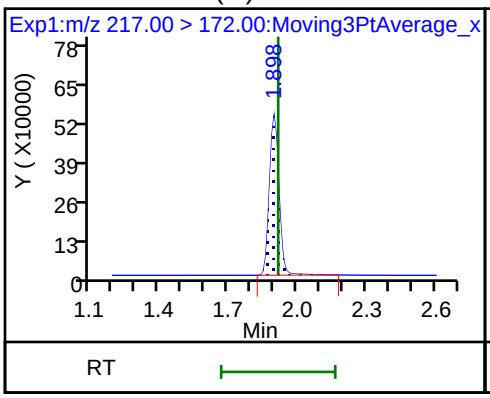
Client ID: FD-021920

Operator ID: lc812tech ALS Bottle#: 23 Worklist Smp#: 23

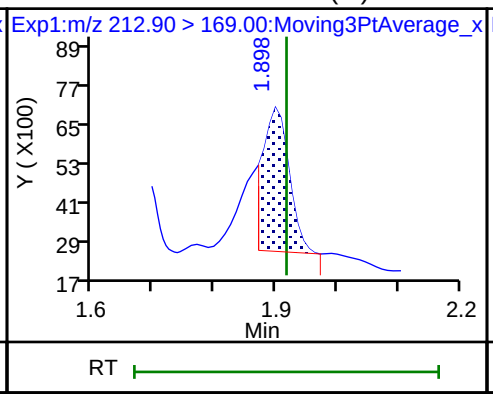
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFC_LC812 Limit Group: LC_PFC_ICAL

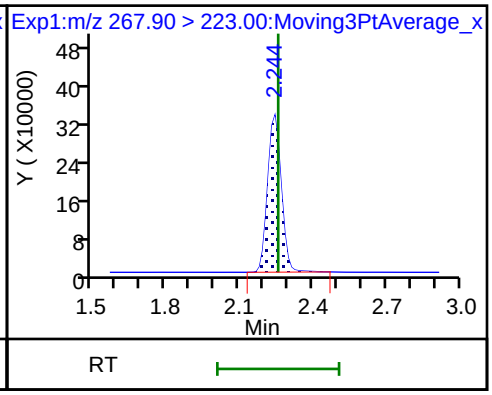
D 1 13C4 PFBA (M)



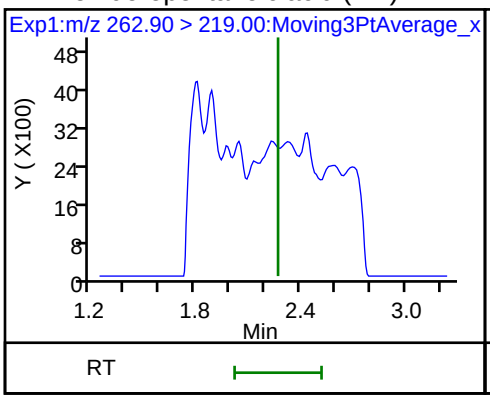
2 Perfluorobutanoic acid (M)



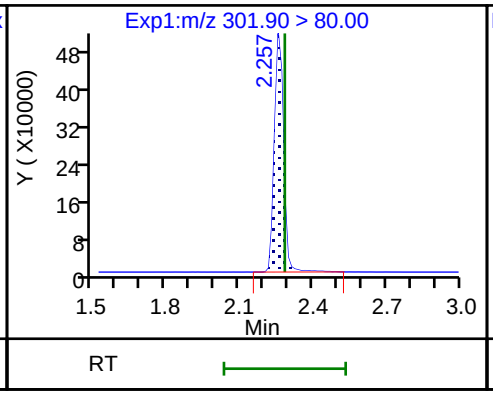
D 3 13C5 PFPeA



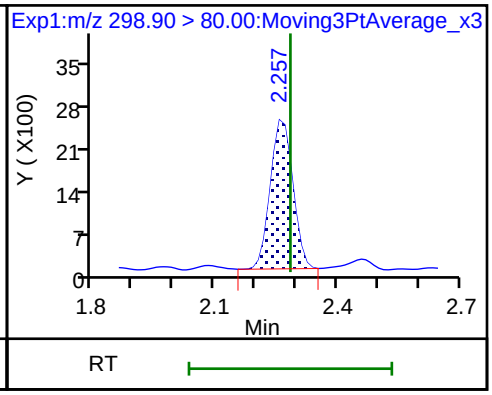
4 Perfluoropentanoic acid (ND)



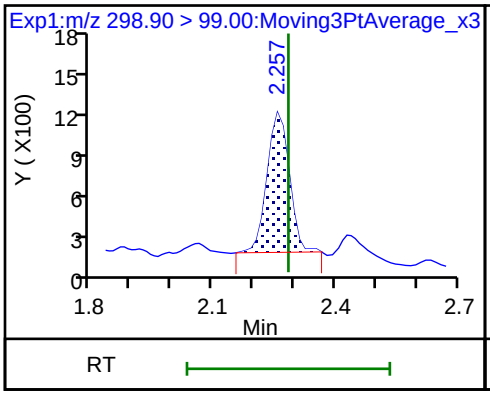
D 47 13C3 PFBS



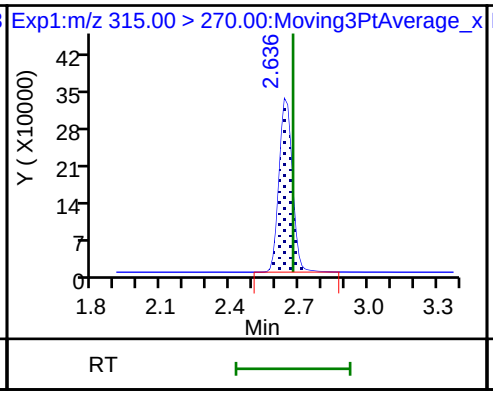
5 Perfluorobutanesulfonic acid



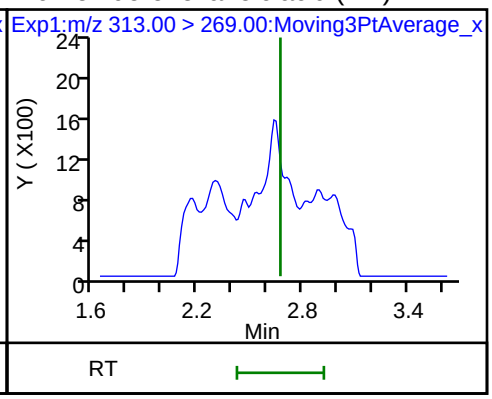
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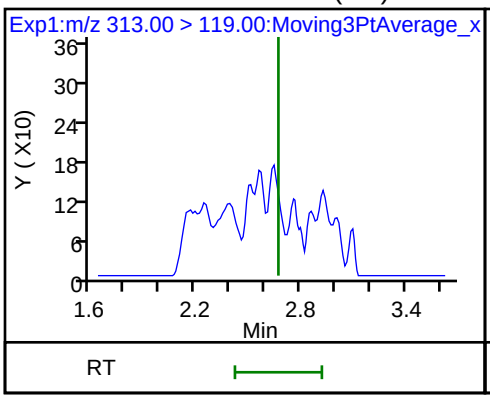
D 7 13C2 PFHxA



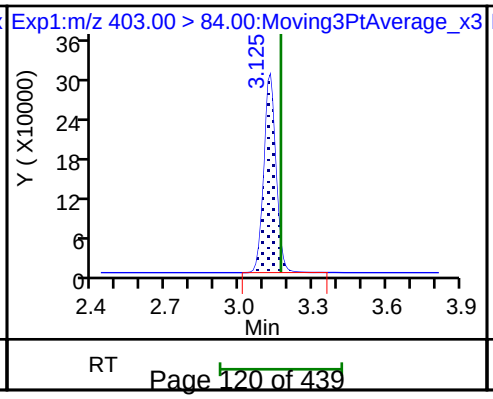
6 Perfluorohexanoic acid (ND)



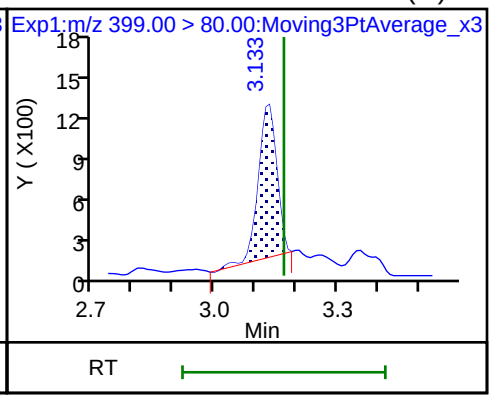
6 Perfluorohexanoic acid (ND)



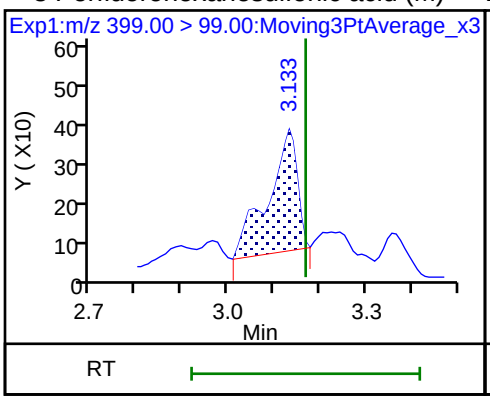
D 11 18O2 PFHxS



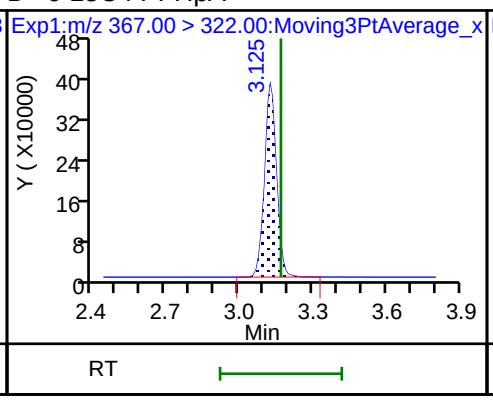
8 Perfluorohexanesulfonic acid (M)



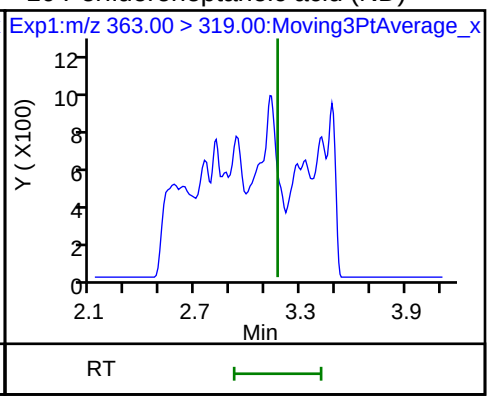
8 Perfluorohexanesulfonic acid (M)



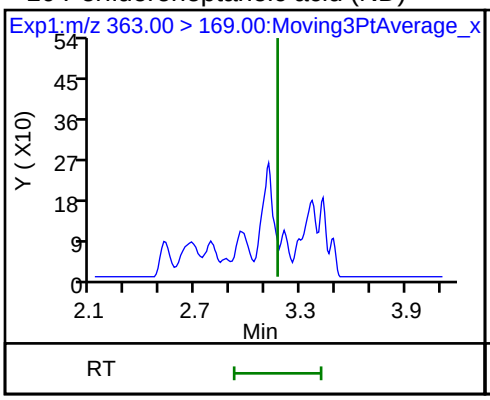
D 9 13C4 PFHpA



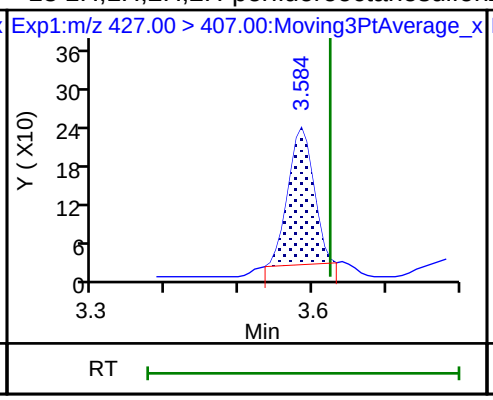
10 Perfluoroheptanoic acid (ND)



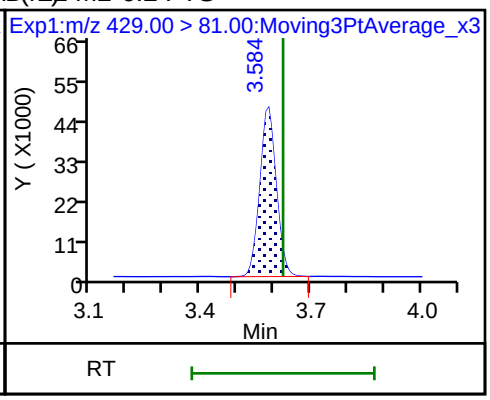
10 Perfluoroheptanoic acid (ND)



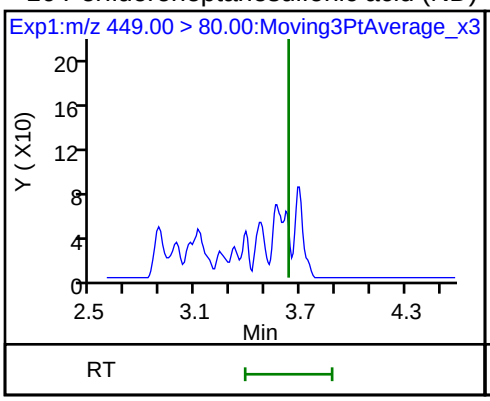
13 1H,1H,2H,2H-perfluorooctanesulfonic (M)



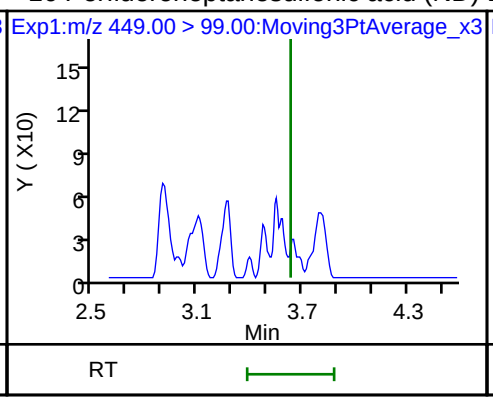
D 11 M2-6:2 FTS



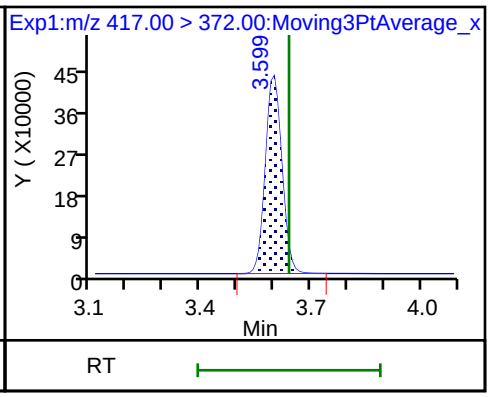
16 Perfluoroheptanesulfonic acid (ND)



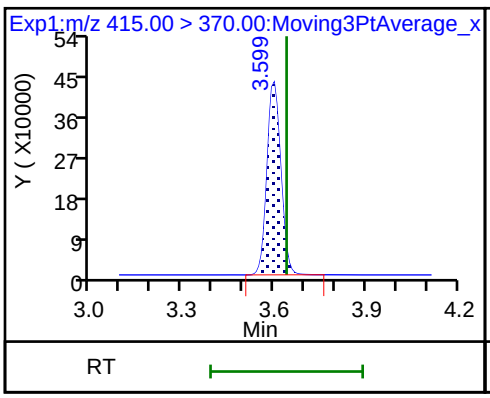
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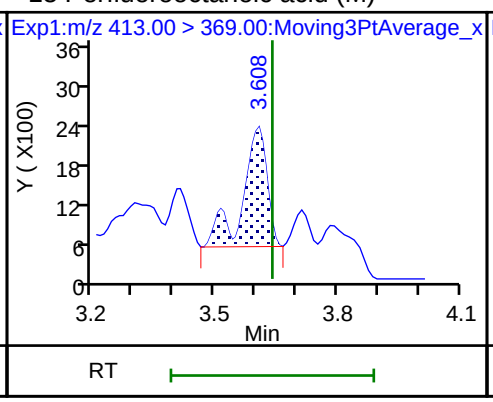
D 14 13C4 PFOA



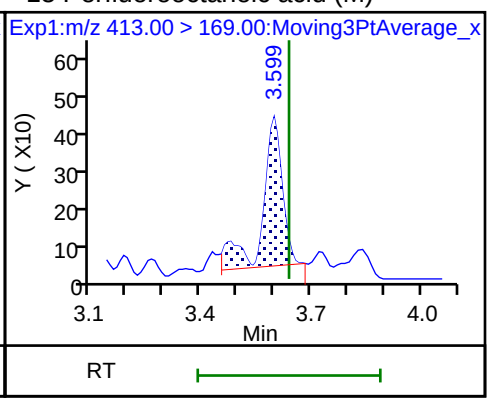
* 62 13C2 PFOA



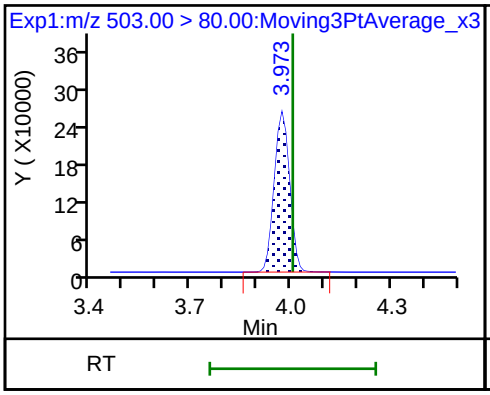
15 Perfluorooctanoic acid (M)



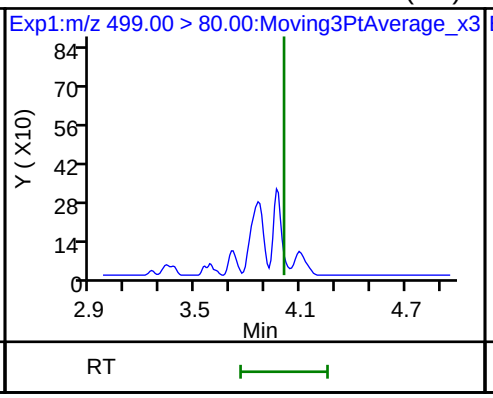
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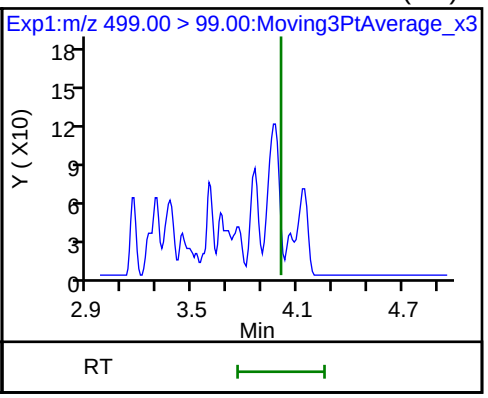
D 18 13C4 PFOS



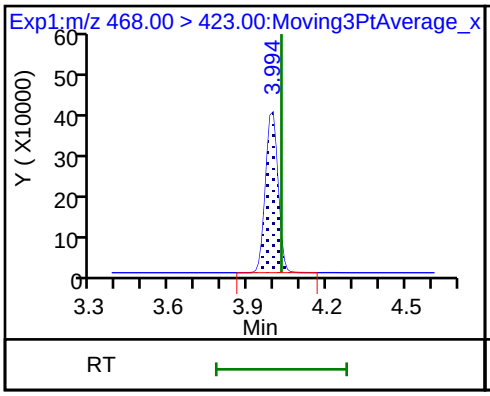
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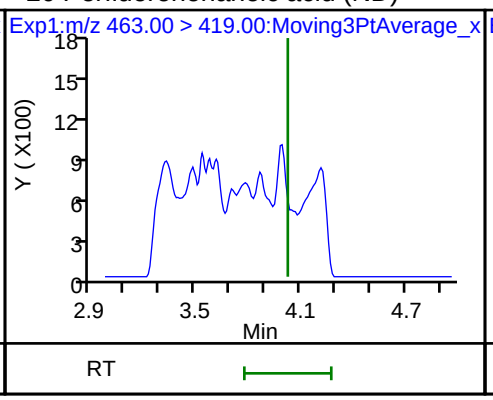
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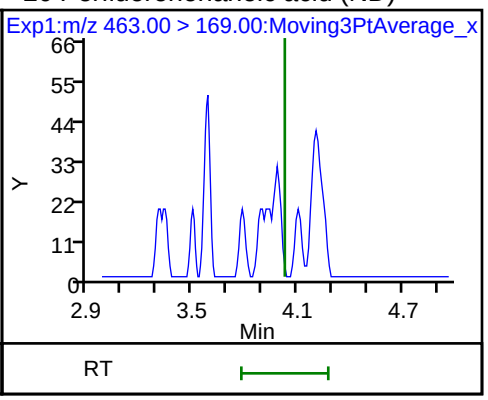
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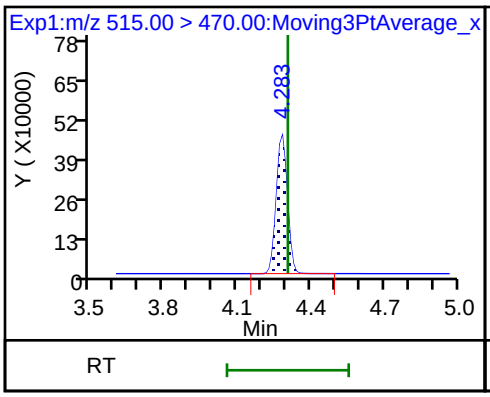
20 Perfluorononanoic acid (ND)



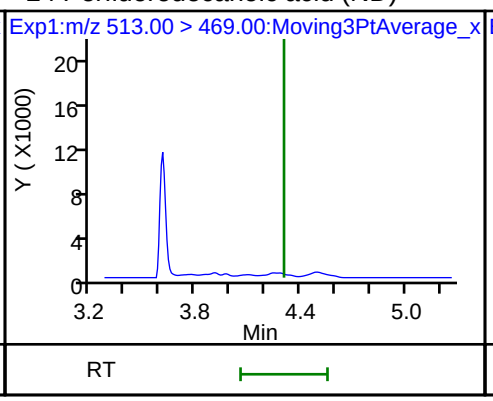
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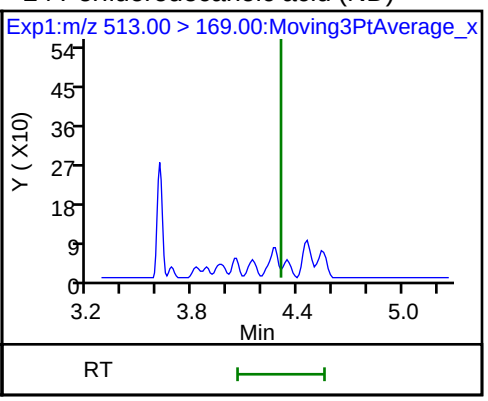
D 23 13C2 PFDA



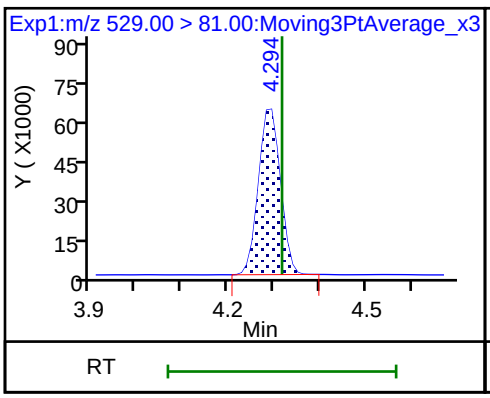
24 Perfluorodecanoic acid (ND)



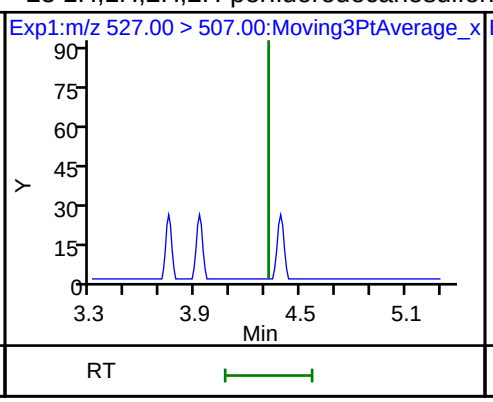
24 Perfluorodecanoic acid (ND)



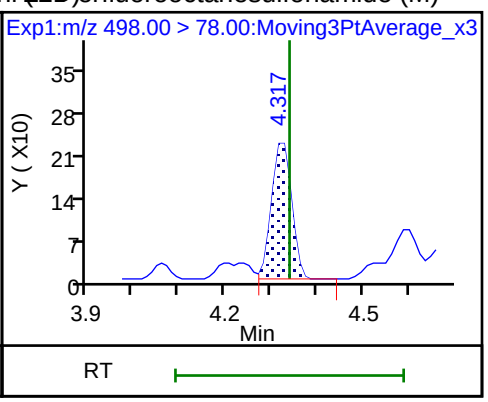
D 26 M2-8:2 FTS



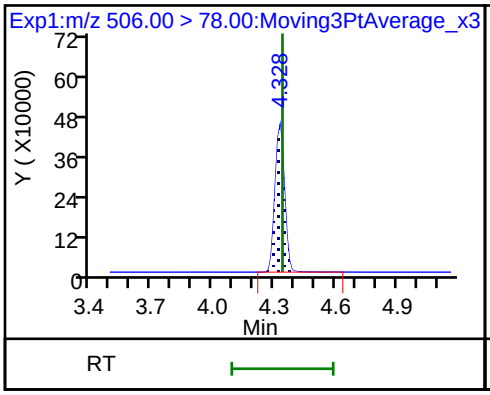
25 1H,1H,2H,2H-perfluorodecanesulfoni



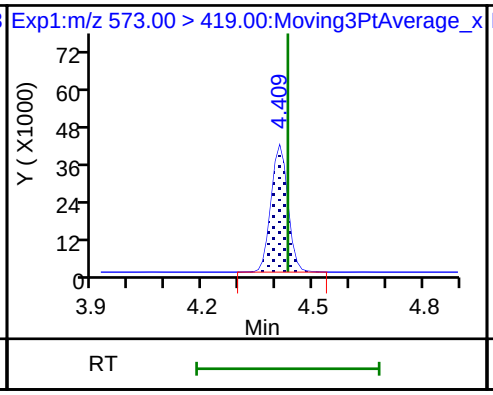
(2D) erfluorooctanesulfonamide (M)



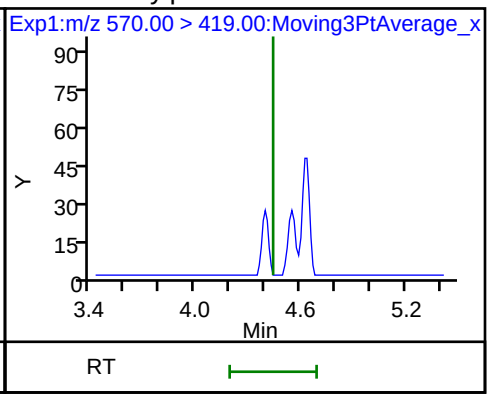
D 21 13C8 FOSA



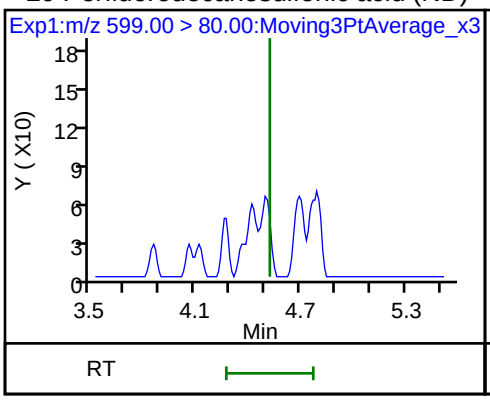
D 27 d3-NMeFOSAA



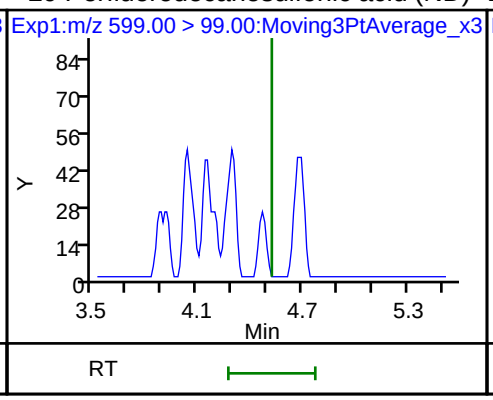
28 N-methylperfluorooctanesulfonamido (ND)



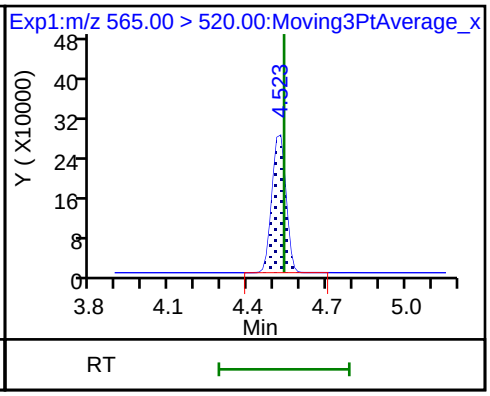
29 Perfluorodecanesulfonic acid (ND)



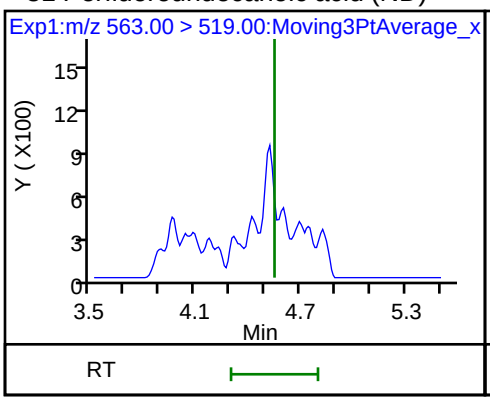
29 Perfluorodecanesulfonic acid (ND)



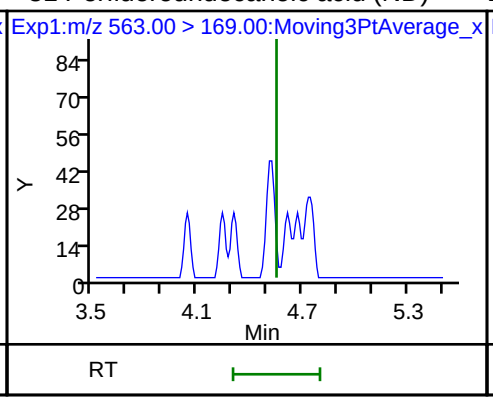
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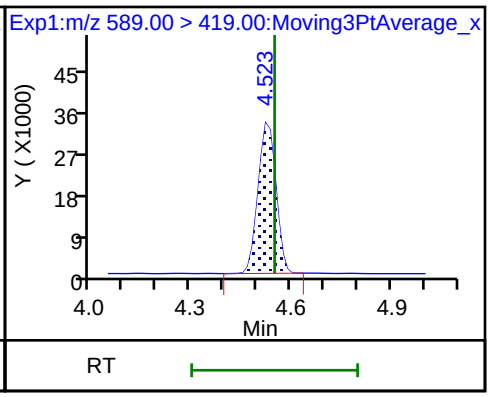
31 Perfluoroundecanoic acid (ND)



31 Perfluoroundecanoic acid (ND)



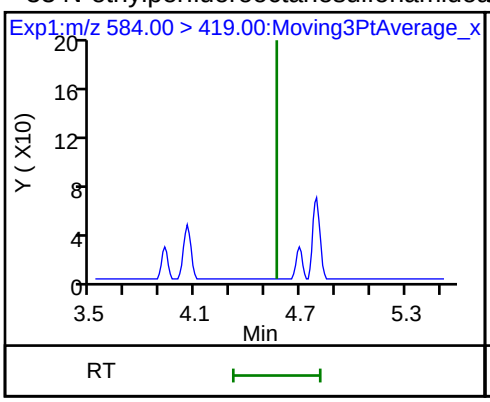
D 32 d5-NEtFOSAA

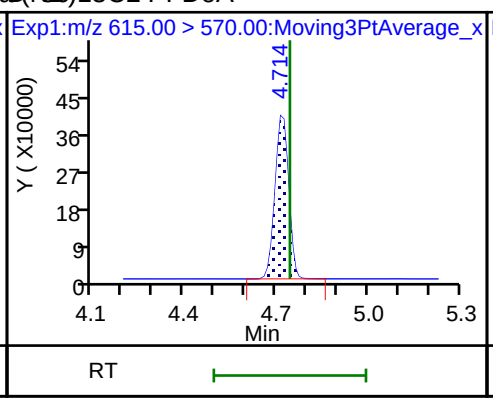


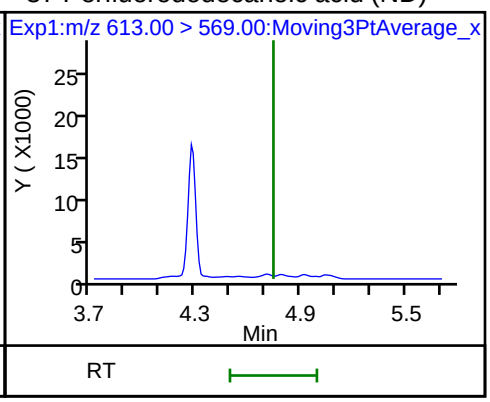
33 N-ethylperfluorooctanesulfonamidoa

D (ND) 36 13C2 PFDoA

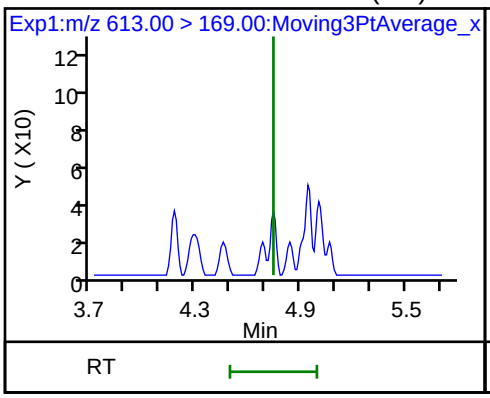
37 Perfluorododecanoic acid (ND)



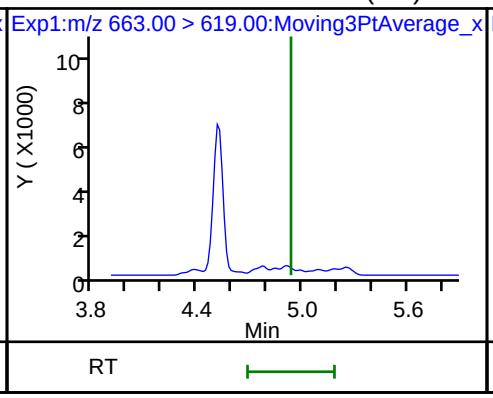




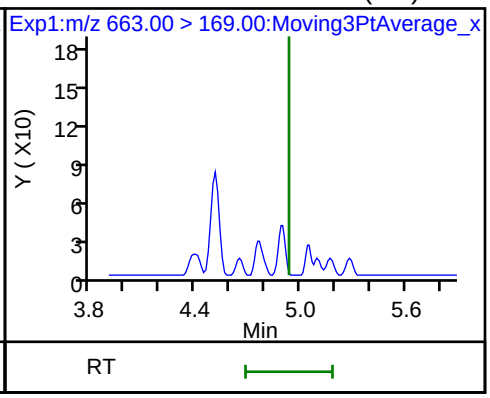
37 Perfluorododecanoic acid (ND)



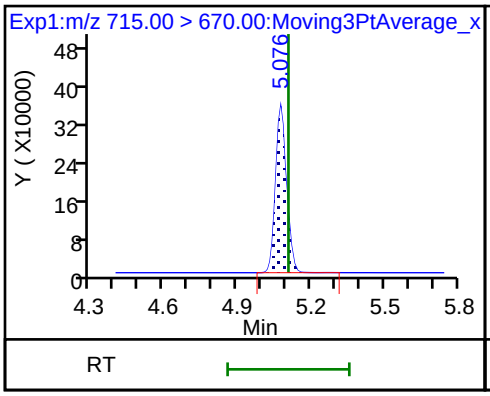
41 Perfluorotridecanoic acid (ND)



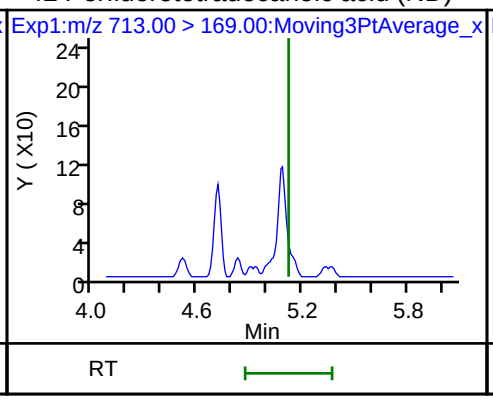
41 Perfluorotridecanoic acid (ND)



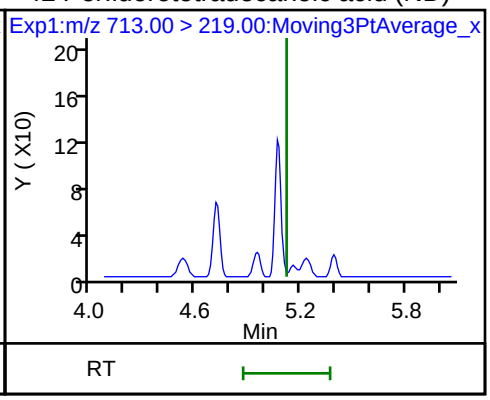
D 43 13C2 PFTeDA



42 Perfluorotetradecanoic acid (ND)



42 Perfluorotetradecanoic acid (ND)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

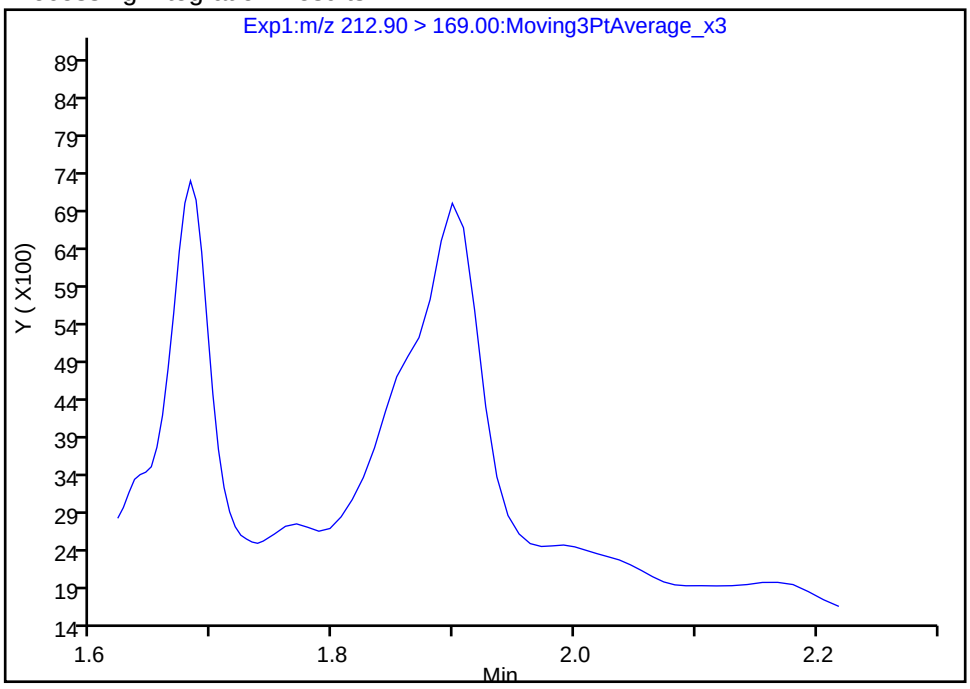
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Injection Date:	25-Feb-2020 21:57:30	Instrument ID:	LC812		
Lims ID:	480-166551-A-4-A	Lab Sample ID:	200-166551-4		
Client ID:	FD-021920				
Operator ID:	lc812tech	ALS Bottle#:	23	Worklist Smp#:	23
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

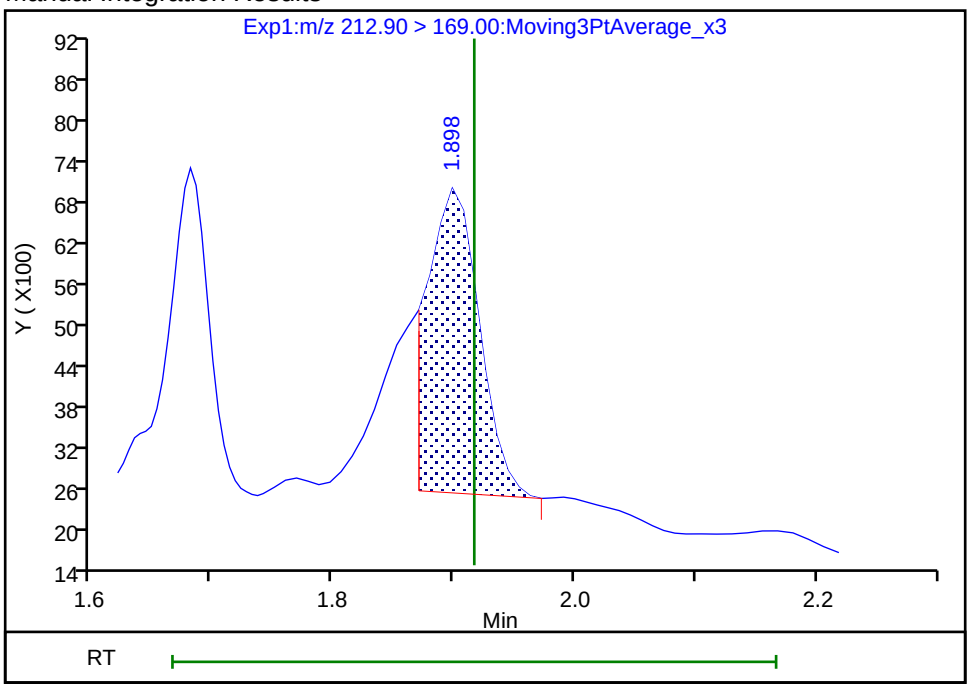
Not Detected
Expected RT: 1.92

Processing Integration Results



Manual Integration Results

RT: 1.90
Area: 12909
Amount: 0.022137
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:34:32
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

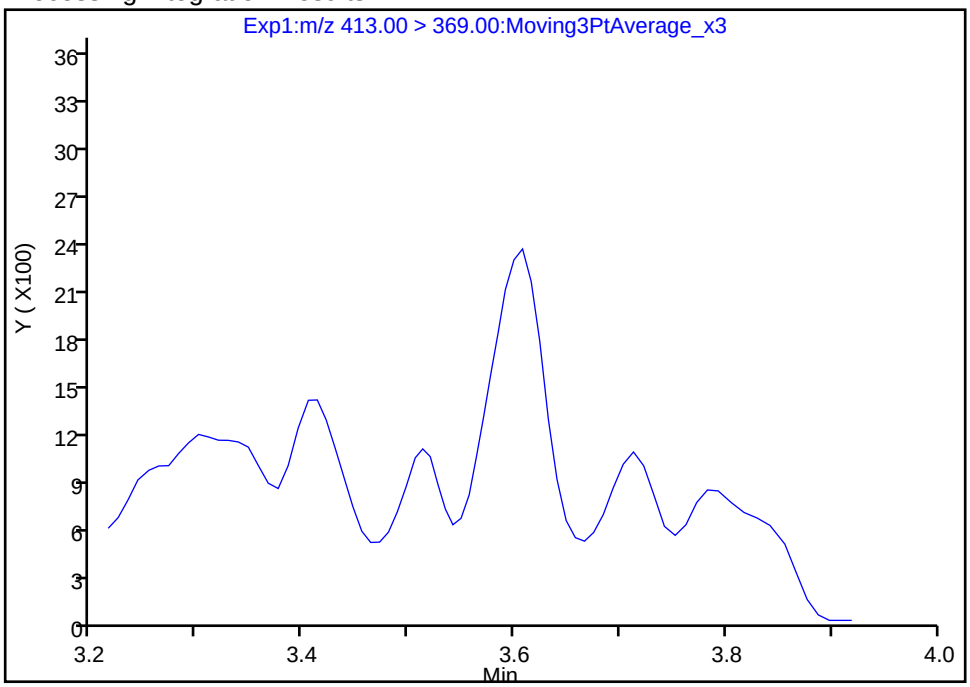
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C23.d				
Injection Date:	25-Feb-2020 21:57:30	Instrument ID:	LC812		
Lims ID:	480-166551-A-4-A	Lab Sample ID:	200-166551-4		
Client ID:	FD-021920				
Operator ID:	lc812tech	ALS Bottle#:	23	Worklist Smp#:	23
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

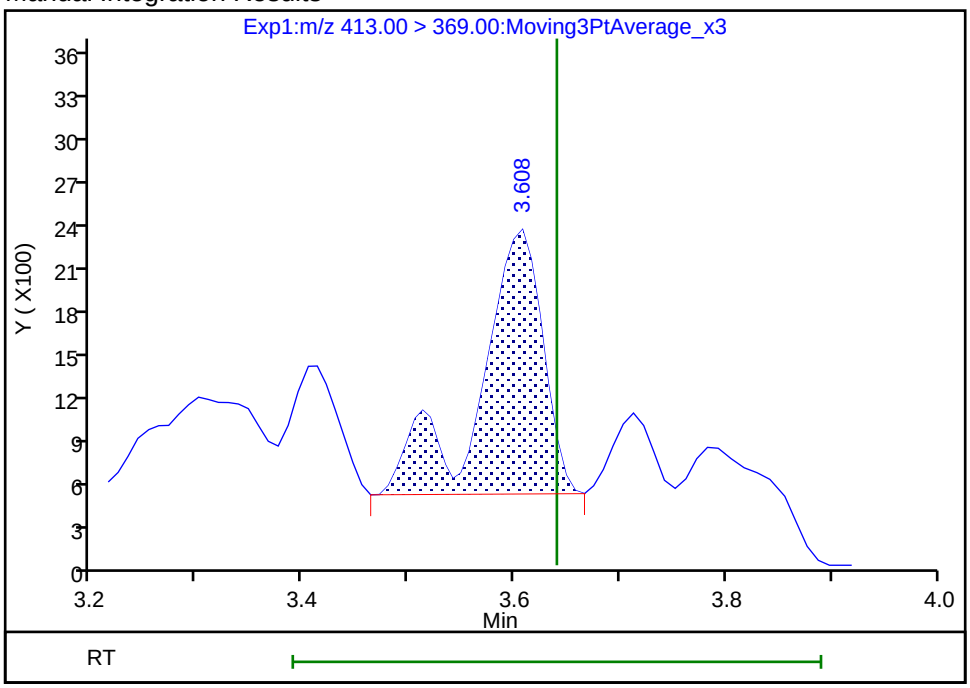
Not Detected
Expected RT: 3.64

Processing Integration Results



Manual Integration Results

RT: 3.61
Area: 7496
Amount: 0.013366
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:39:39
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

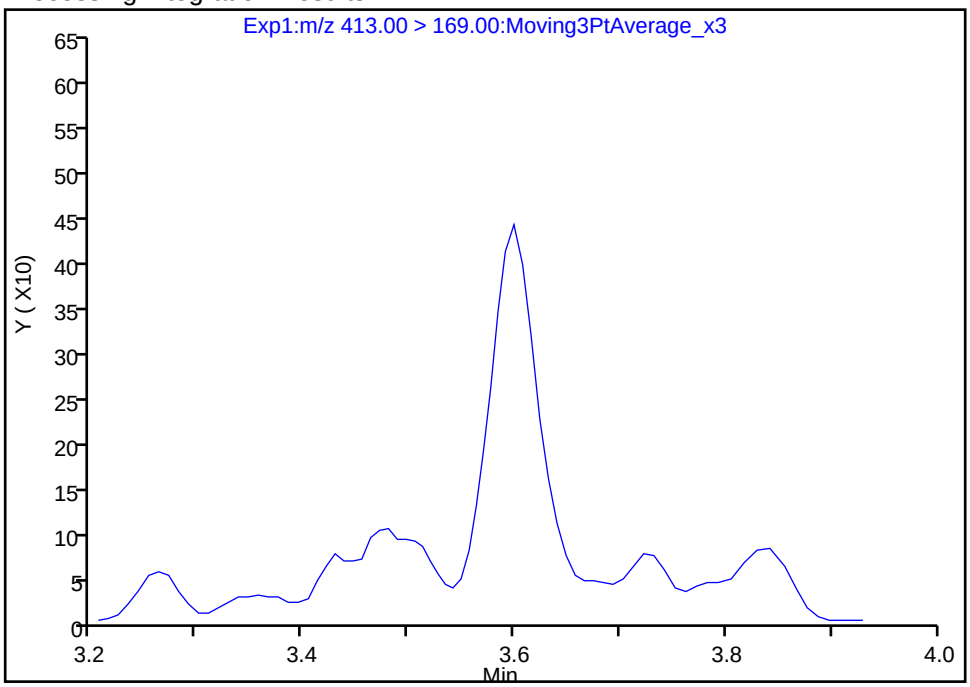
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C23.d				
Injection Date:	25-Feb-2020 21:57:30	Instrument ID:	LC812		
Lims ID:	480-166551-A-4-A	Lab Sample ID:	200-166551-4		
Client ID:	FD-021920				
Operator ID:	lc812tech	ALS Bottle#:	23	Worklist Smp#:	23
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

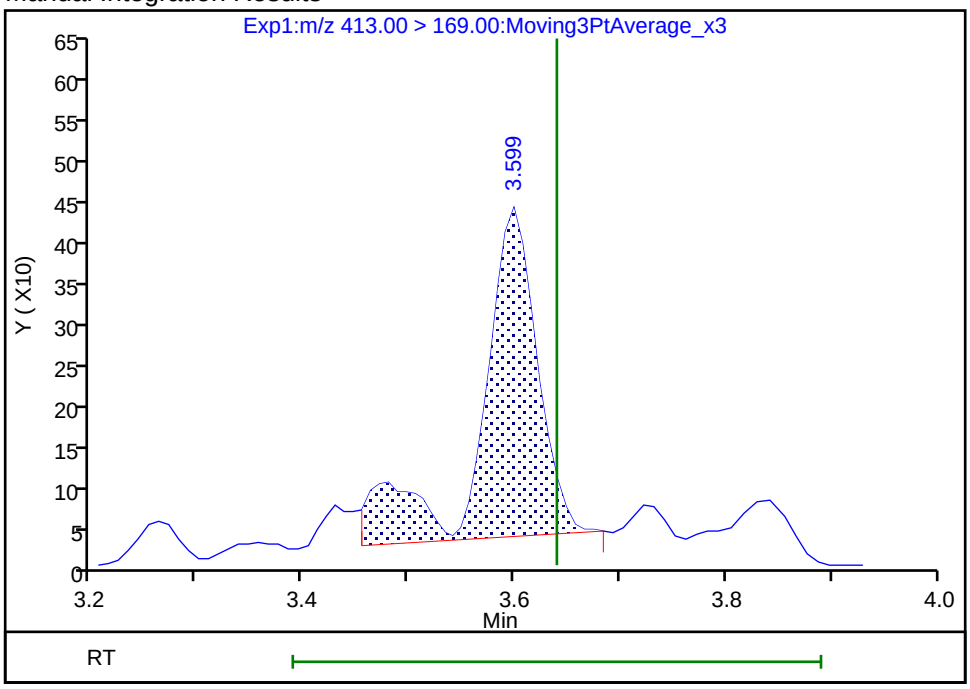
Not Detected
Expected RT: 3.64

Processing Integration Results



Manual Integration Results

RT: 3.60
Area: 1508
Amount: 0.013366
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:39:51
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

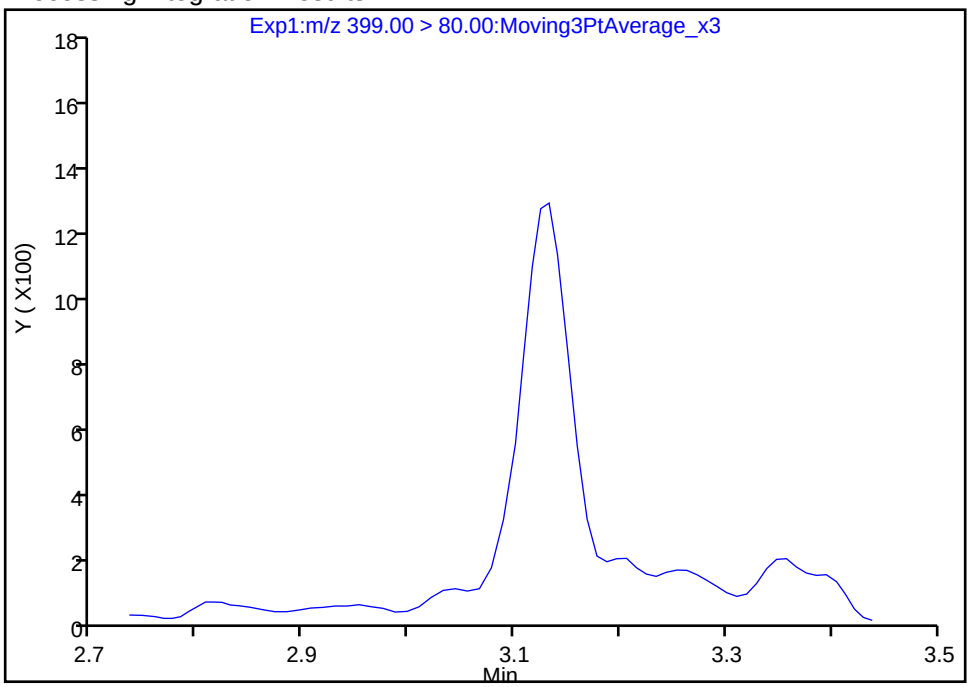
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C23.d				
Injection Date:	25-Feb-2020 21:57:30	Instrument ID:	LC812		
Lims ID:	480-166551-A-4-A	Lab Sample ID:	200-166551-4		
Client ID:	FD-021920				
Operator ID:	lc812tech	ALS Bottle#:	23	Worklist Smp#:	23
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

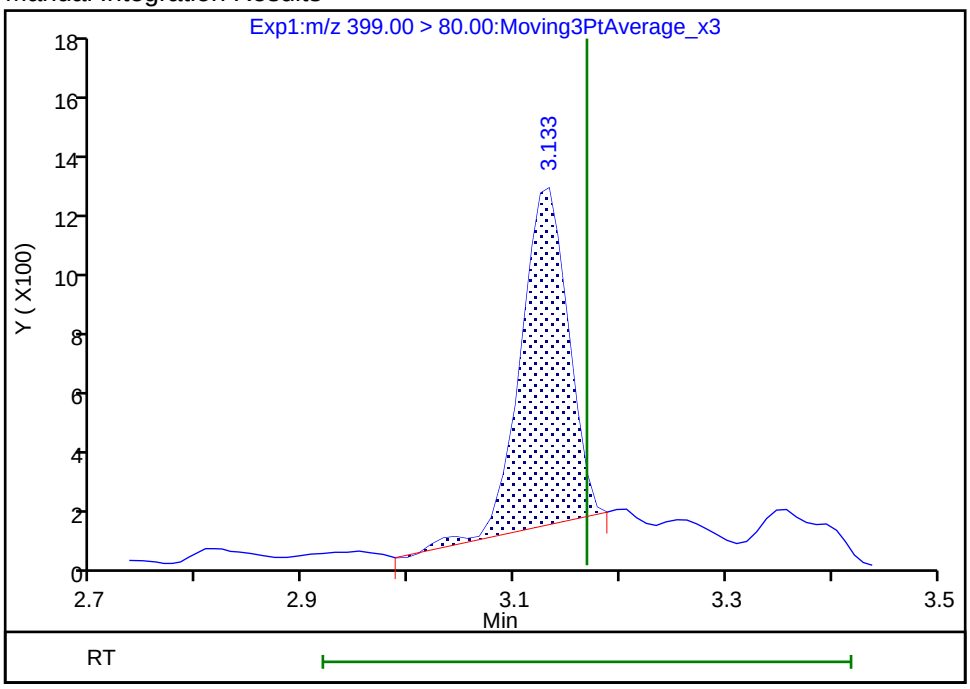
Not Detected
Expected RT: 3.17

Processing Integration Results



Manual Integration Results

RT: 3.13
Area: 3492
Amount: 0.006841
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:34:54
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

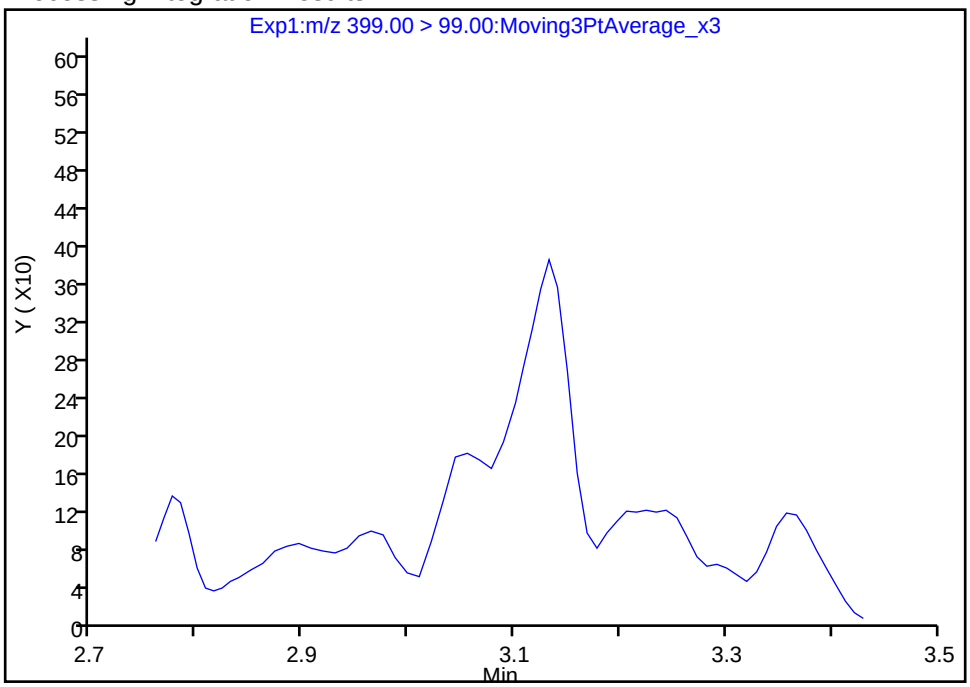
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C23.d				
Injection Date:	25-Feb-2020 21:57:30	Instrument ID:	LC812		
Lims ID:	480-166551-A-4-A	Lab Sample ID:	200-166551-4		
Client ID:	FD-021920				
Operator ID:	lc812tech	ALS Bottle#:	23	Worklist Smp#:	23
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

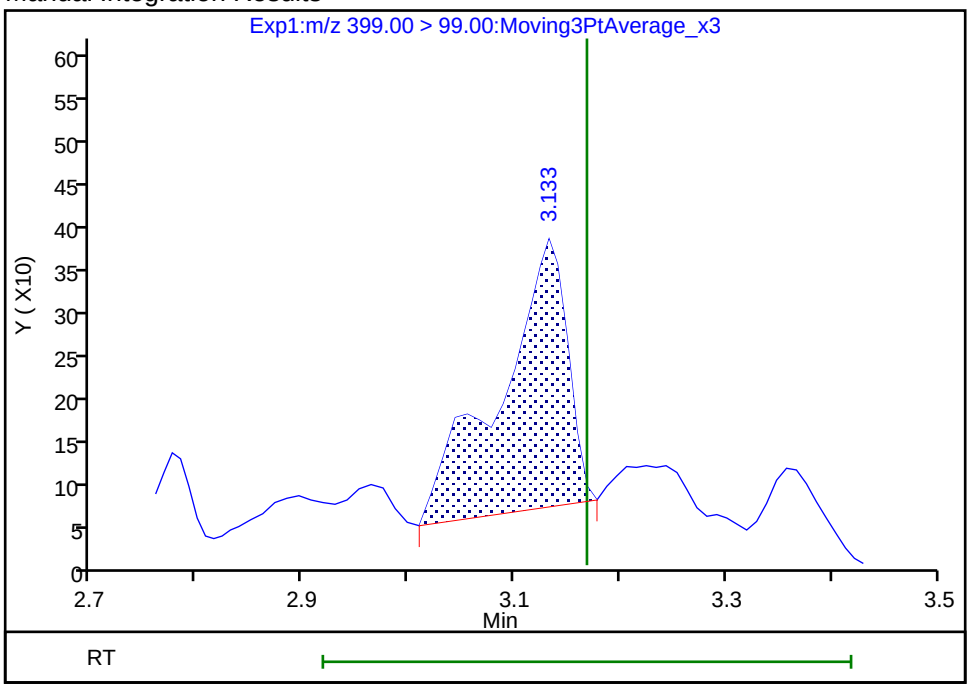
Not Detected
Expected RT: 3.17

Processing Integration Results



Manual Integration Results

RT: 3.13
Area: 1378
Amount: 0.006841
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:38:55
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

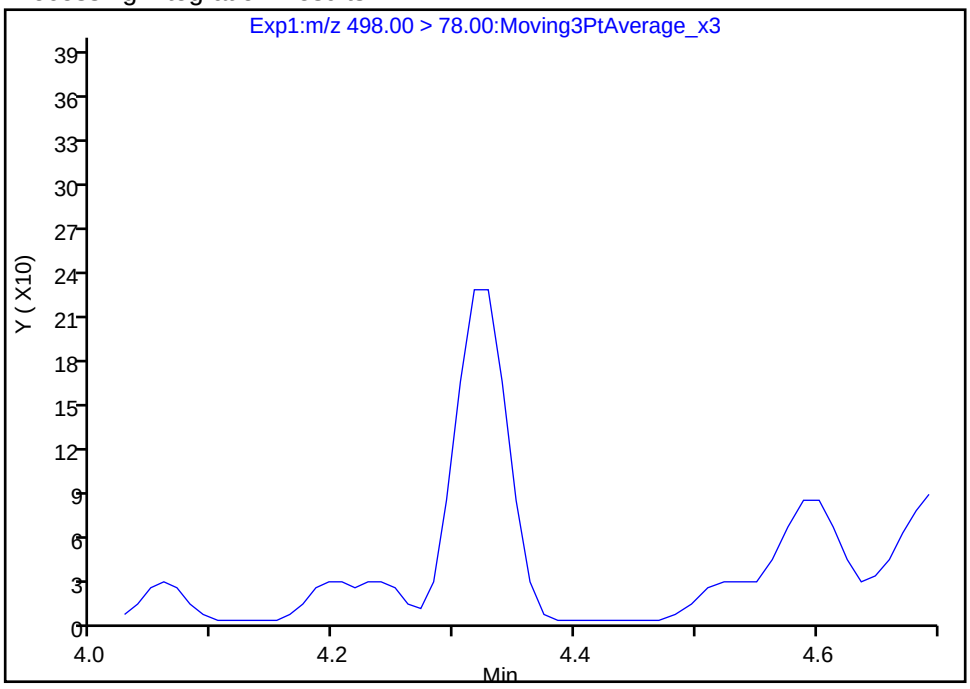
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C23.d				
Injection Date:	25-Feb-2020 21:57:30	Instrument ID:	LC812		
Lims ID:	480-166551-A-4-A	Lab Sample ID:	200-166551-4		
Client ID:	FD-021920				
Operator ID:	lc812tech	ALS Bottle#:	23	Worklist Smp#:	23
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

22 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

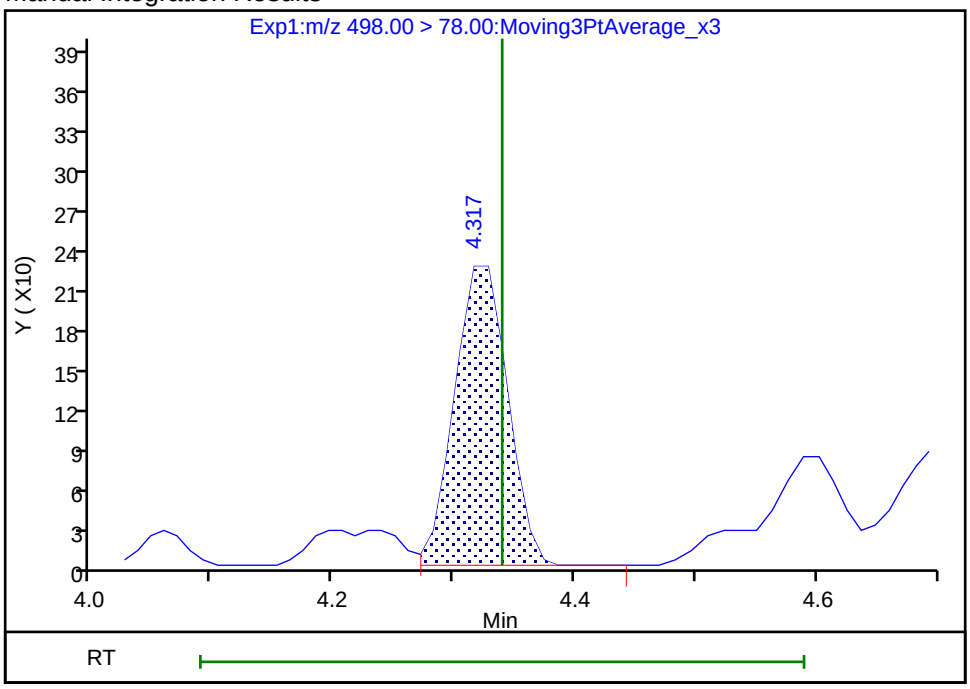
Not Detected
Expected RT: 4.34

Processing Integration Results



Manual Integration Results

RT: 4.32
Area: 681
Amount: 0.001145
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:40:18
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

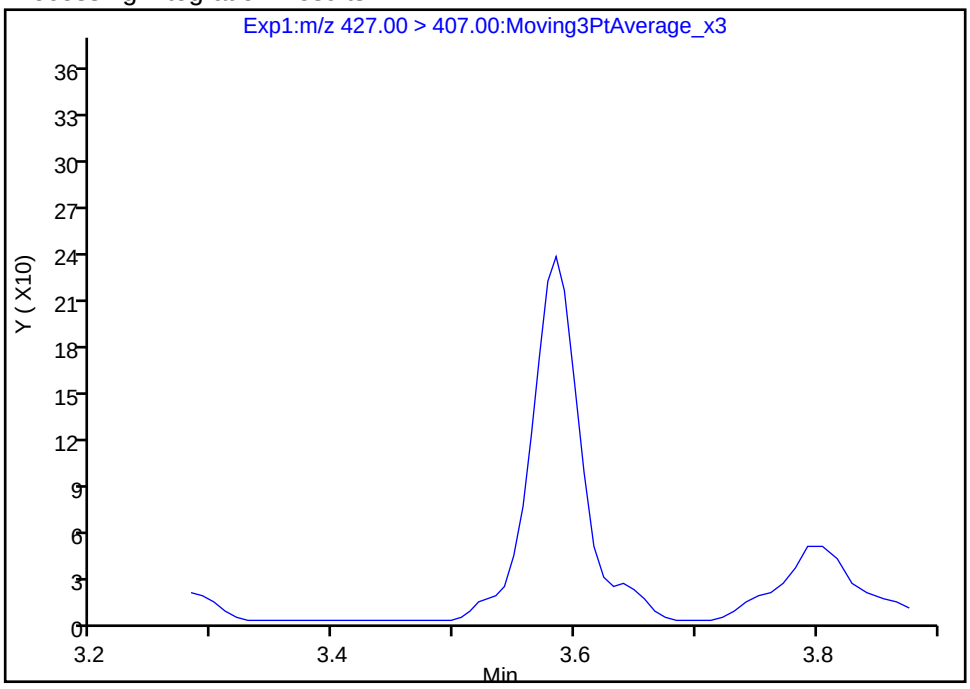
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C23.d				
Injection Date:	25-Feb-2020 21:57:30	Instrument ID:	LC812		
Lims ID:	480-166551-A-4-A	Lab Sample ID:	200-166551-4		
Client ID:	FD-021920				
Operator ID:	lc812tech	ALS Bottle#:	23	Worklist Smp#:	23
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

13 1H,1H,2H,2H-perfluorooctanesulfonic acid (6:, CAS: 27619-97-2

Signal: 1

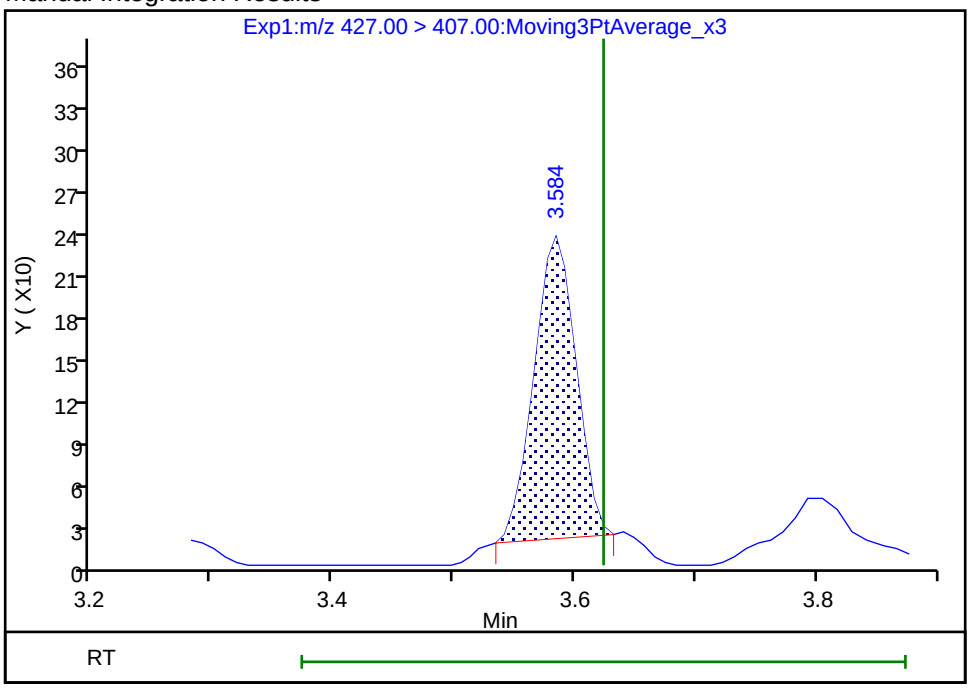
Not Detected
Expected RT: 3.62

Processing Integration Results



Manual Integration Results

RT: 3.58
Area: 523
Amount: 0.007563
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:39:23
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

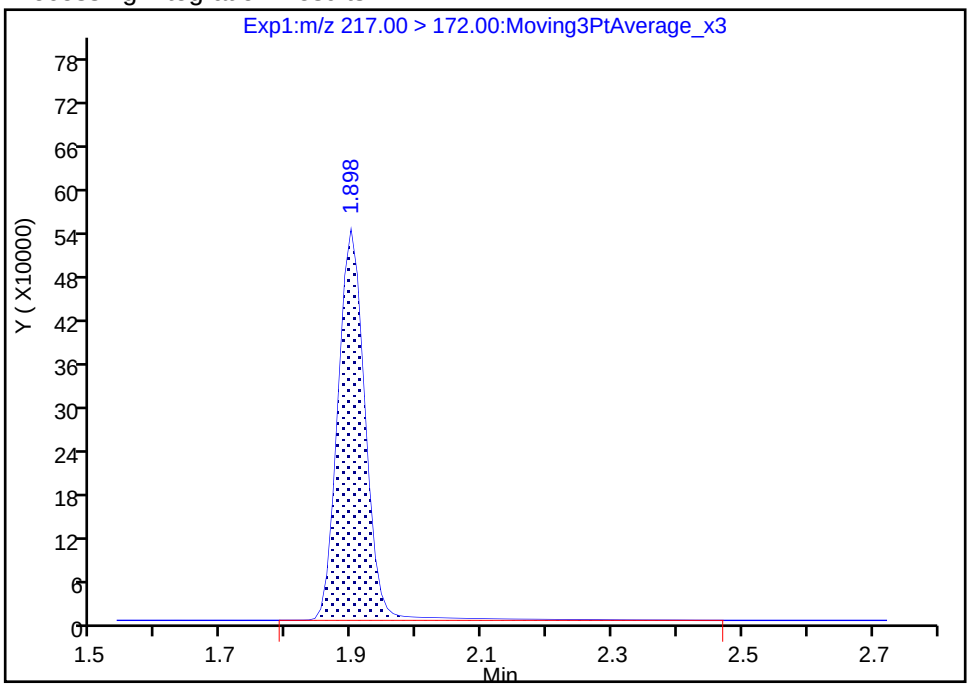
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C23.d				
Injection Date:	25-Feb-2020 21:57:30	Instrument ID:	LC812		
Lims ID:	480-166551-A-4-A	Lab Sample ID:	200-166551-4		
Client ID:	FD-021920				
Operator ID:	lc812tech	ALS Bottle#:	23	Worklist Smp#:	23
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

D 1 13C4 PFBA, CAS: STL00992

Signal: 1

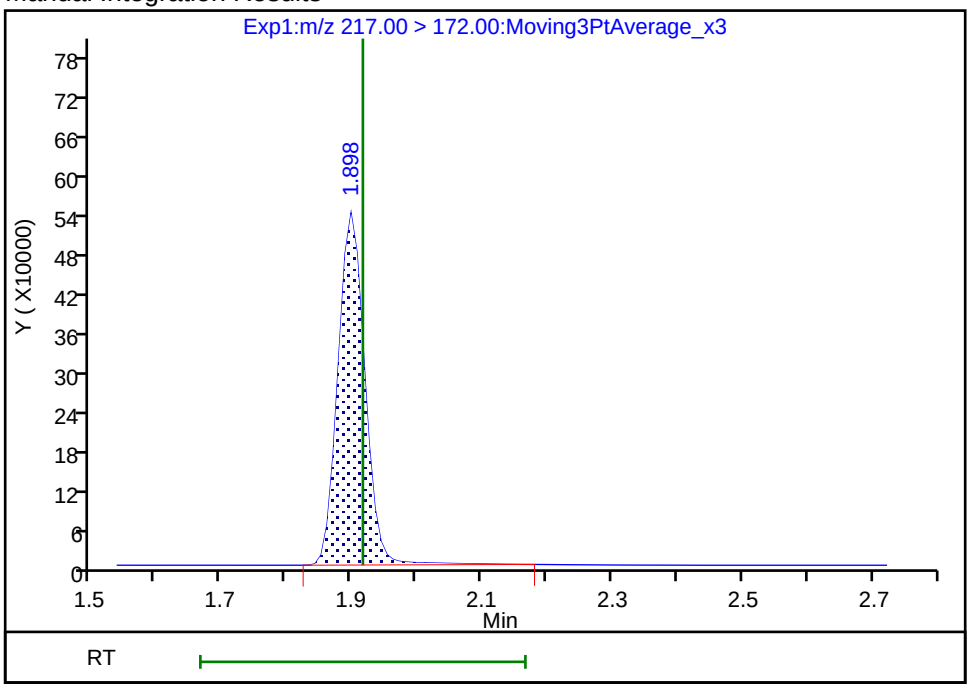
Processing Integration Results

RT: 1.90
Area: 1552957
Amount: 2.790915
Amount Units: ng/ml



Manual Integration Results

RT: 1.90
Area: 1532523
Amount: 2.754192
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:34:13

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1 Analy Batch No.: 152172

SDG No.:

Instrument ID: LC812 GC Column: C-18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2020 11:48 Calibration End Date: 02/10/2020 12:29 Calibration ID: 43029

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 200-152172/5	SC021020ICAL005.d
Level 2	IC 200-152172/6	SC021020ICAL006.d
Level 3	IC 200-152172/7	SC021020ICAL007.d
Level 4	ICIS 200-152172/8	SC021020ICAL008.d
Level 5	IC 200-152172/9	SC021020ICAL009.d
Level 6	IC 200-152172/10	SC021020ICAL010.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Perfluorobutanoic acid (PFBA)	1.0225 0.9133	1.0675	0.9285	0.9077	0.8681	AveID		0.9513				8.1		35.0			
Perfluoropentanoic acid (PFPeA)	1.3256 1.0276	1.0828	1.0404	0.9395	1.0574	AveID		1.0789				12.1		35.0			
Perfluorobutanesulfonic acid (PFBS)	1.0242 1.0741	1.0933	0.9919	0.9342	1.0034	AveID		1.0202				5.7		35.0			
1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2)	1.9072 1.9231	1.9826	2.0394	1.9368	1.8457	AveID		1.9391				3.4		50.0			
Perfluorohexanoic acid (PFHxA)	1.1495 1.0072	0.9899	0.9693	0.9224	0.9024	AveID		0.9901				8.9		35.0			
Perfluoropentanesulfonic acid	1.2687 1.2641	1.3331	1.2340	1.2152	1.2992	AveID		1.2691				3.4		50.0			
HFPO-DA	1.9102 2.5494	2.4127	2.4910	1.9010	2.7877	AveID		2.3420				15.4		35.0			
Perfluorohexanesulfonic acid (PFHxS)	1.3741 1.1093	1.2726	1.1556	1.0616	1.1076	AveID		1.1801				10.1		35.0			
Perfluoroheptanoic acid (PFHpA)	1.0674 1.0026	1.0163	1.0108	1.0557	0.9856	AveID		1.0231				3.1		35.0			
DONA	4.0512 3.6953	3.6821	3.7370	3.5306	3.3589	AveID		3.6758				6.3		50.0			
Perfluoroheptanesulfonic Acid (PFHpS)	1.2461 1.2789	1.2986	1.1583	1.1642	1.1520	AveID		1.2163				5.4		50.0			
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	1.1660 1.0761	1.1926	1.1046	1.1063	1.0961	AveID		1.1236				4.0		35.0			
Perfluorooctanoic acid (PFOA)	1.2460 0.9961	0.9773	1.0507	0.9981	0.9805	AveID		1.0414				9.9		35.0			
Perfluorooctanesulfonic acid (PFOS)	1.2080 1.1076	1.1265	1.0994	1.0440	1.0036	AveID		1.0982				6.4		35.0			
Perfluorononanoic acid (PFNA)	1.0544 0.9621	1.1129	1.0629	1.0222	0.9557	AveID		1.0283				6.0		35.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1 Analy Batch No.: 152172

SDG No.:

Instrument ID: LC812 GC Column: C-18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2020 11:48 Calibration End Date: 02/10/2020 12:29 Calibration ID: 43029

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	1.3975 1.4495	1.3419	1.4219	1.3477	1.4327	AveID		1.3985				3.2		50.0			
Perfluorononanesulfonic acid	0.9281 0.9171	0.9184	0.8943	0.8449	0.8104	AveID		0.8855				5.4		50.0			
Perfluorodecanoic acid (PFDA)	0.9822 0.9519	1.1115	1.0849	1.0798	0.9337	AveID		1.0240				7.5		35.0			
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	0.6749 0.6336	0.6059	0.5899	0.6000	0.6200	AveID		0.6207				4.9		35.0			
Perfluorooctanesulfonamide (PFOSA)	1.1531 1.0564	0.9702	1.0235	0.9940	0.9517	AveID		1.0248				7.1		35.0			
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.8229 0.8973	0.7223	0.9601	0.8601	0.8778	AveID		0.8567				9.3		35.0			
Perfluorodecanesulfonic acid (PFDS)	0.8828 0.7702	0.8176	0.7365	0.7077	0.7573	AveID		0.7787				8.1		50.0			
Perfluoroundecanoic acid (PFUnA)	1.0241 0.9267	0.9827	0.8914	0.8008	0.8136	AveID		0.9066				9.9		35.0			
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.6066 0.7534	0.8949	0.8313	0.9466	0.7482	AveID		0.7968				15.2		35.0			
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	1.7016 1.6163	1.6373	1.6185	1.4627	1.4998	AveID		1.5894				5.7		50.0			
Perfluorododecanoic acid (PFDoA)	1.0563 0.9701	0.9443	0.9641	0.9574	0.9292	AveID		0.9702				4.6		35.0			
10:2 FTS	0.3670 0.3379	0.3719	0.3037	0.2966	0.3152	AveID		0.3321				9.7		50.0			
Perfluorododecanesulfonic acid (PFDoS)	0.3084 0.2579	0.2583	0.2774	0.2549	0.2646	AveID		0.2703				7.5		50.0			
Perfluorotridecanoic acid (PFTriA)	0.9183 0.8814	0.8416	0.8487	0.9291	0.8807	AveID		0.8833				4.0		50.0			
Perfluorotetradecanoic acid (PFTeA)	0.1782 0.1472	0.1608	0.1492	0.1555	0.1426	AveID		0.1556				8.2		35.0			
Perfluoro-n-hexadecanoic acid (PFHxDA)	1.4093 0.8948	1.2011	0.9554	0.8920	0.8712	L1ID	0.0273	0.8850							1.0000		0.9900
Perfluoro-n-octadecanoic acid (PFODA)	0.6625 0.5958	0.6720	0.6400	0.5807	0.5860	AveID		0.6228				6.5		50.0			
13C4 PFBA	1.0557 0.9828	0.9451	0.9504	1.1458	1.1623	Ave		1.0403				9.3		30.0			
13C5 PFPeA	0.8192 0.7874	0.7220	0.7385	0.9096	0.8820	Ave		0.8098				9.3		30.0			
13C3 PFBS	1.1279 1.0228	0.9812	1.0185	1.2256	1.1575	Ave		1.0889				8.8		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1 Analy Batch No.: 152172

SDG No.:

Instrument ID: LC812 GC Column: C-18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2020 11:48 Calibration End Date: 02/10/2020 12:29 Calibration ID: 43029

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
M2-4:2 FTS	0.0843 0.0757	0.0736	0.0700	0.0843	0.0897	Ave		0.0796				9.5		30.0			
13C2 PFHxA	0.9508 0.8885	0.8691	0.8877	1.0509	1.0356	Ave		0.9471				8.4		30.0			
13C3 HFPO-DA	0.1087 0.0566	0.0651	0.0664	0.0885	0.0651	Ave		0.0751				26.2		30.0			
18O2 PFHxS	0.7908 0.7238	0.7117	0.7188	0.8756	0.7970	Ave		0.7696				8.3		30.0			
13C4 PFHpA	0.9136 0.8348	0.8512	0.8849	0.9859	0.9930	Ave		0.9106				7.4		30.0			
M2-6:2 FTS	0.1063 0.1013	0.0985	0.0959	0.1137	0.1170	Ave		0.1054				8.1		30.0			
13C4 PFOA	0.9451 0.8902	0.8864	0.8784	1.0605	0.9938	Ave		0.9424				7.7		30.0			
13C4 PFOS	0.5758 0.5419	0.5299	0.5299	0.6311	0.6293	Ave		0.5730				8.3		30.0			
13C5 PFNA	0.9022 0.8837	0.8114	0.8283	1.0150	0.9838	Ave		0.9041				9.0		30.0			
13C2 PFDA	1.0870 0.8808	0.8787	0.8839	1.0582	1.1053	Ave		0.9823				11.4		30.0			
M2-8:2 FTS	0.1438 0.1397	0.1445	0.1384	0.1678	0.1592	Ave		0.1489				8.0		30.0			
13C8 FOSA	1.0102 0.9296	0.9164	0.9414	1.1531	1.0994	Ave		1.0083				9.8		30.0			
d3-NMeFOSAA	0.0770 0.0745	0.0773	0.0657	0.0904	0.0802	Ave		0.0775				10.4		30.0			
13C2 PFUnA	0.9407 0.7754	0.7881	0.8048	0.9643	0.8675	Ave		0.8568				9.4		30.0			
d5-NEtFOSAA	0.0990 0.0856	0.0744	0.0793	0.0876	0.1041	Ave		0.0883				12.9		30.0			
13C2 PFDoA	1.0432 0.8978	0.9017	0.8888	0.9992	1.0222	Ave		0.9588				7.3		30.0			
13C2 PFTeDA	0.8302 0.8255	0.7453	0.7772	0.8897	0.8707	Ave		0.8231				6.6		30.0			
13C2 PFHxDA	0.9393 0.8534	0.7962	0.8513	0.9743	0.9549	Ave		0.8949				7.9		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1 Analy Batch No.: 152172

SDG No.:

Instrument ID: LC812 GC Column: C-18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2020 11:48 Calibration End Date: 02/10/2020 12:29 Calibration ID: 43029

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 200-152172/5	SC021020ICAL005.d
Level 2	IC 200-152172/6	SC021020ICAL006.d
Level 3	IC 200-152172/7	SC021020ICAL007.d
Level 4	ICIS 200-152172/8	SC021020ICAL008.d
Level 5	IC 200-152172/9	SC021020ICAL009.d
Level 6	IC 200-152172/10	SC021020ICAL010.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Perfluorobutanoic acid (PFBA)		AveID	55346 8040027	98242	523198	863531	2208883	0.0500 10.0	0.100	0.500	1.00	2.50
Perfluoropentanoic acid (PFPeA)		AveID	55675 7248787	76132	455525	709525	2041758	0.0500 10.0	0.100	0.500	1.00	2.50
Perfluorobutanesulfonic acid (PFBS)		AveID	52363 8699125	92342	529501	840348	2247611	0.0442 8.84	0.0884	0.442	0.884	2.21
1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2)		AveID	7702 1218431	13276	79112	126654	338461	0.0467 9.34	0.0934	0.467	0.934	2.34
Perfluorohexanoic acid (PFHxA)		AveID	56040 8016357	83774	510181	804760	2045810	0.0500 10.0	0.100	0.500	1.00	2.50
Perfluoropentanesulfonic acid		AveID	48249 7687926	86657	493319	828672	2126257	0.0469 9.38	0.0938	0.469	0.938	2.35
HFPO-DA		AveID	10650 1291907	15306	98071	139731	397504	0.0500 10.0	0.100	0.500	1.00	2.50
Perfluorohexanesulfonic acid (PFHxS)		AveID	50697 6545076	80254	448177	702279	1758590	0.0455 9.10	0.0910	0.455	0.910	2.28
Perfluoroheptanoic acid (PFHpA)		AveID	49997 7497842	84242	530308	864157	2142656	0.0500 10.0	0.100	0.500	1.00	2.50
DONA		AveID	112674 16898147	178978	1106077	1742727	4359208	0.0471 9.42	0.0942	0.471	0.942	2.36
Perfluoroheptanesulfonic Acid (PFHpS)		AveID	35026 5910488	63792	346479	580737	1510899	0.0476 9.52	0.0952	0.476	0.952	2.38
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)		AveID	6024 926020	10841	59517	99002	266228	0.0474 9.48	0.0948	0.474	0.948	2.37
Perfluorooctanoic acid (PFOA)		AveID	60376 7943146	84355	547194	878778	2133114	0.0500 10.0	0.100	0.500	1.00	2.50
Perfluorooctanesulfonic acid (PFOS)		AveID	33097 4989818	53945	320574	507649	1283094	0.0464 9.28	0.0928	0.464	0.928	2.32
Perfluorononanoic acid (PFNA)		AveID	48774 7616280	87932	521973	861360	2058216	0.0500 10.0	0.100	0.500	1.00	2.50
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid		AveID	38455 6558043	64535	416392	658195	1839595	0.0466 9.32	0.0932	0.466	0.932	2.33

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1 Analy Batch No.: 152172

SDG No.:

Instrument ID: LC812 GC Column: C-18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2020 11:48 Calibration End Date: 02/10/2020 12:29 Calibration ID: 43029

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Perfluorononanesulfonic acid		AveID	26306 4273868	45493	269745	424996	1071835	0.0480 9.60	0.0960	0.480	0.960	2.40
Perfluorodecanoic acid (PFDA)		AveID	54741 7510380	95104	568567	948645	2259338	0.0500 10.0	0.100	0.500	1.00	2.50
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)		AveID	4766 759595	8169	46384	80078	206966	0.0479 9.58	0.0958	0.479	0.958	2.40
Perfluorooctanesulfonamide (PFOSA)		AveID	59723 8797149	86574	571298	951647	2290638	0.0500 10.0	0.100	0.500	1.00	2.50
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)		AveID	3247 599098	5438	37380	64538	154106	0.0500 10.0	0.100	0.500	1.00	2.50
Perfluorodecanesulfonic acid (PFDS)		AveID	25127 3604144	40668	223081	357482	1005822	0.0482 9.64	0.0964	0.482	0.964	2.41
Perfluoroundecanoic acid (PFUnA)		AveID	49396 6437039	75412	425403	641096	1545025	0.0500 10.0	0.100	0.500	1.00	2.50
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)		AveID	3078 577937	6482	39109	68848	170590	0.0500 10.0	0.100	0.500	1.00	2.50
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid		AveID	47325 7391322	79585	479039	721990	1946429	0.0471 9.42	0.0942	0.471	0.942	2.36
Perfluorododecanoic acid (PFDoA)		AveID	56500 7802036	82909	508047	794277	2079486	0.0500 10.0	0.100	0.500	1.00	2.50
10:2 FTS		AveID	2608 407659	5045	24029	39828	105893	0.0482 9.64	0.0964	0.482	0.964	2.41
Perfluorododecanesulfonic acid (PFDoS)		AveID	8815 1212025	12901	84384	129272	352923	0.0484 9.68	0.0968	0.484	0.968	2.42
Perfluorotridecanoic acid (PFTriA)		AveID	49120 7088974	73894	447216	770725	1970931	0.0500 10.0	0.100	0.500	1.00	2.50
Perfluorotetradecanoic acid (PFTeA)		AveID	7583 1088759	11670	68742	114867	271852	0.0500 10.0	0.100	0.500	1.00	2.50
Perfluoro-n-hexadecanoic acid (PFHxDA)		L1ID	67877 6840759	93122	482227	721496	1821268	0.0500 10.0	0.100	0.500	1.00	2.50
Perfluoro-n-octadecanoic acid (PFODA)		AveID	31906 4554489	52097	323024	469765	1225093	0.0500 10.0	0.100	0.500	1.00	2.50
13C4 PFBA	13PFOA	Ave	2706331 2200894	2300786	2817441	2378309	2544477	2.50 2.50	2.50	2.50	2.50	2.50
13C5 PFPeA	13PFOA	Ave	2100022 1763442	1757680	2189206	1887966	1930943	2.50 2.50	2.50	2.50	2.50	2.50
13C3 PFBS	13PFOA	Ave	2689200 2130139	2221503	2808014	2365817	2356620	2.33 2.33	2.33	2.33	2.33	2.33
M2-4:2 FTS	13PFOA	Ave	201917 158394	167405	193962	163483	183379	2.34 2.34	2.34	2.34	2.34	2.34
13C2 PFHxA	13PFOA	Ave	2437597 1989787	2115777	2631690	2181253	2267062	2.50 2.50	2.50	2.50	2.50	2.50

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1 Analy Batch No.: 152172

SDG No.:

Instrument ID: LC812 GC Column: C-18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2020 11:48 Calibration End Date: 02/10/2020 12:29 Calibration ID: 43029

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
13C3 HFPO-DA	13PF OA	Ave	278764 126685	158601	196847	183761	142590	2.50 2.50	2.50	2.50	2.50	2.50
18O2 PFHxS	13PF OA	Ave	1917731 1533357	1638907	2015921	1719306	1650530	2.37 2.37	2.37	2.37	2.37	2.37
13C4 PFHpA	13PF OA	Ave	2342019 1869509	2072204	2623291	2046344	2173926	2.50 2.50	2.50	2.50	2.50	2.50
M2-6:2 FTS	13PF OA	Ave	258865 215578	227729	269980	224190	243397	2.38 2.38	2.38	2.38	2.38	2.38
13C4 PFOA	13PF OA	Ave	2422828 1993608	2157848	2604032	2201126	2175540	2.50 2.50	2.50	2.50	2.50	2.50
13C4 PFOS	13PF OA	Ave	1411290 1160213	1233255	1501895	1252356	1317111	2.39 2.39	2.39	2.39	2.39	2.39
13C5 PFNA	13PF OA	Ave	2312934 1979125	1975239	2455431	2106715	2153728	2.50 2.50	2.50	2.50	2.50	2.50
13C2 PFDA	13PF OA	Ave	2786571 1972429	2139154	2620275	2196359	2419821	2.50 2.50	2.50	2.50	2.50	2.50
M2-8:2 FTS	13PF OA	Ave	353065 299706	337051	393131	333646	333820	2.40 2.40	2.40	2.40	2.40	2.40
13C8 FOSA	13PF OA	Ave	2589649 2081783	2230862	2790942	2393414	2406787	2.50 2.50	2.50	2.50	2.50	2.50
d3-NMeFOSAA	13PF OA	Ave	197302 166908	188226	194675	187585	175561	2.50 2.50	2.50	2.50	2.50	2.50
13C2 PFUnA	13PF OA	Ave	2411562 1736515	1918562	2386035	2001446	1899074	2.50 2.50	2.50	2.50	2.50	2.50
d5-NEtFOSAA	13PF OA	Ave	253715 191771	181082	235229	181828	227994	2.50 2.50	2.50	2.50	2.50	2.50
13C2 PFDoA	13PF OA	Ave	2674379 2010629	2195049	2634828	2073947	2237849	2.50 2.50	2.50	2.50	2.50	2.50
13C2 PFTeDA	13PF OA	Ave	2128257 1848671	1814422	2303985	1846613	1906213	2.50 2.50	2.50	2.50	2.50	2.50
13C2 PFHxDA	13PF OA	Ave	2408099 1911167	1938226	2523805	2022237	2090446	2.50 2.50	2.50	2.50	2.50	2.50

Curve Type Legend:

Ave = Average ISTD
AveID = Average isotope dilution
L1ID = Linear 1/conc IsoDil

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL005.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 10-Feb-2020 11:48:38 ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: IC 1
Misc. Info.: 200-0039917-005 Plate: 1 Rack: 1
Operator ID: lc812tech Instrument ID: LC812
Sublist: chrom-PFC_LC812*sub3

Method: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\PFC_LC812.m
Limit Group: LC_PFC_ICAL
Last Update: 10-Feb-2020 13:09:31 Calib Date: 10-Feb-2020 12:29:33
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL010.d

Column 1 : C-18 (4.60 mm) Det: EXP1
Process Host: CTX0302

First Level Reviewer: chirgwinb Date: 10-Feb-2020 12:35:16
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										M
212.90 > 169.00	1.917	1.917	0.0	1.000	55346	0.0537		107	8.5	M
D 1 13C4 PFBA										M
217.00 > 172.00	1.917	1.917	0.0	0.559	2706331	2.54		101	6416	M
D 3 13C5 PFPeA										
267.90 > 223.00	2.271	2.271	0.0	0.662	2100022	2.53		101	940	
4 Perfluoropentanoic acid										
262.90 > 219.00	2.271	2.271	0.0	1.000	55675	0.0614		123	6.5	
D 47 13C3 PFBS										
301.90 > 80.00	2.285	2.284	0.001	0.666	2689200	2.41		104	12542	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.285	2.284	0.001	1.000	52363	0.0444	Target=2.20	100	60.3	
298.90 > 99.00	2.285	2.284	0.001	1.000	25385		2.06(1.10-3.31)	100	28.8	
61 1H,1H,2H,2H-perfluorohexanesulfoni										
327.00 > 307.00	2.623	2.623	0.0	1.000	7702	0.0459		98.4	163	
D 60 M2-4:2 FTS										
329.00 > 81.00	2.623	2.623	0.0	0.765	201917	2.47		106	169	
70 Perfluoropentanesulfonic acid										
349.00 > 80.00	2.661	2.660	0.001	0.874	48249	0.0469	Target=3.28	100.0	161	
349.00 > 99.00	2.661	2.660	0.001	0.874	15651		3.08(1.64-4.91)	100.0	85.8	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.661	2.660	0.001	1.000	56040	0.0580	Target=12.10	116	20.6	
313.00 > 119.00	2.661	2.660	0.001	1.000	5026		11.15(6.05-18.16)	116	8.3	
D 7 13C2 PFHxA										
315.00 > 270.00	2.661	2.660	0.001	0.776	2437597	2.51		100	7604	
D 64 13C3 HFPO-DA										M
332.10 > 287.00	2.768	2.776	-0.008	0.807	278764	3.62		145	1919	M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
67 Perfluoro(2-propoxypropanoic) acid										M
329.10 > 285.00	2.776	2.776	0.0	1.003	10650	0.0408		81.6	4.4	M
D 11 18O2 PFHxS										
403.00 > 84.00	3.044	3.044	0.0	0.887	1917731	2.43		103	7751	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.044	3.044	0.0	1.000	50697	0.0530	Target=4.10	116	102	M
399.00 > 99.00	3.044	3.044	0.0	1.000	13985		3.63(2.05-6.15)	116	36.7	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.055	3.055	0.0	1.000	49997	0.0522	Target=3.67	104	20.2	
363.00 > 169.00	3.044	3.055	-0.011	0.996	12651		3.95(1.83-5.50)	104	33.2	
D 9 13C4 PFHpA										
367.00 > 322.00	3.055	3.055	0.0	0.891	2342019	2.51		100	6568	
77 DONA										
377.00 > 251.00	3.089	3.089	0.0	0.812	112674	0.0519	Target=2.51	110	298	
377.00 > 85.00	3.089	3.089	0.0	0.812	40680		2.77(1.26-3.77)	110	164	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.422	3.413	0.009	0.899	35026	0.0488	Target=5.96	102	360	
449.00 > 99.00	3.422	3.413	0.009	0.899	6167		5.68(2.98-8.94)	102	66.6	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.422	3.421	0.001	0.998	258865	2.39		101	1133	
13 1H,1H,2H,2H-perfluorooctanesulfoni										M
427.00 > 407.00	3.422	3.421	0.001	1.000	6024	0.0492		104	72.0	M
D 14 13C4 PFOA										
417.00 > 372.00	3.430	3.430	0.0	1.000	2422828	2.51		100	5844	
* 62 13C2 PFOA										
415.00 > 370.00	3.430	3.430	0.0		2563604	2.50			6111	
15 Perfluorooctanoic acid										M
413.00 > 369.00	3.438	3.430	0.008	1.002	60376	0.0598	Target=2.57	120	17.5	M
413.00 > 169.00	3.438	3.430	0.008	1.002	22394		2.70(1.28-3.85)	120	81.1	M
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.805	3.805	0.0	1.000	33097	0.0510	Target=5.37	110	109	M
499.00 > 99.00	3.805	3.805	0.0	1.000	6238		5.31(2.69-8.06)	110	50.6	M
D 18 13C4 PFOS										
503.00 > 80.00	3.805	3.805	0.0	1.109	1411290	2.40		100	5362	
20 Perfluorononanoic acid										M
463.00 > 419.00	3.829	3.829	0.0	1.000	48774	0.0513	Target=7.44	103	13.7	M
463.00 > 169.00	3.829	3.829	0.0	1.000	6043		8.07(3.72-11.15)	103	70.9	
D 19 13C5 PFNA										
468.00 > 423.00	3.829	3.829	0.0	1.116	2312934	2.49		99.8	5177	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.994	3.994	0.0	1.050	38455	0.0466		99.9	114	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.141	4.141	0.0	1.088	26306	0.0503	Target=2.85	105	162	
549.00 > 99.00	4.141	4.141	0.0	1.088	10741		2.45(1.43-4.28)	105	64.6	
D 23 13C2 PFDA										
515.00 > 470.00	4.175	4.164	0.010	1.217	2786571	2.77		111	11350	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
24 Perfluorodecanoic acid										
513.00 > 469.00	4.175	4.164	0.010	1.000	54741	0.0480	Target=9.04	95.9	45.4	
513.00 > 169.00	4.175	4.164	0.010	1.000	6870		7.97(4.52-13.56)	95.9	58.6	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.175	4.174	0.0	1.217	353065	2.31		96.6	1628	
25 1H,1H,2H,2H-perfluorodecanesulfoni										
527.00 > 507.00	4.175	4.174	0.0	1.000	4766	0.0521		109	98.3	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.218	4.218	0.0	1.000	59723	0.0563		113	220	
D 21 13C8 FOSA										
506.00 > 78.00	4.218	4.218	0.0	1.230	2589649	2.50		100	7147	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.317	4.316	0.001	1.258	197302	2.48		99.3	1386	
28 N-methylperfluorooctanesulfonamido										M
570.00 > 419.00	4.328	4.328	0.0	1.003	3247	0.0480		96.0	45.9	M
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.420	4.420	0.0	1.162	25127	0.0546	Target=2.69	113	230	
599.00 > 99.00	4.420	4.420	0.0	1.162	9436		2.66(1.34-4.03)	113	155	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.456	4.456	0.0	1.000	49396	0.0565	Target=7.95	113	35.4	
563.00 > 169.00	4.456	4.456	0.0	1.000	5539		8.92(3.98-11.93)	113	56.9	
D 30 13C2 PFUnA										
565.00 > 520.00	4.456	4.456	0.0	1.299	2411562	2.74		110	7119	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.469	4.456	0.013	1.303	253715	2.80		112	1427	
33 N-ethylperfluorooctanesulfonamidoa										M
584.00 > 419.00	4.469	4.469	0.0	1.000	3078	0.0381		76.1	19.7	M
66 11-Chloroeicosafluoro-3-oxaundecan										
631.00 > 451.00	4.550	4.550	0.0	1.196	47325	0.0504		107	235	
D 36 13C2 PFDoA										
615.00 > 570.00	4.693	4.693	0.0	1.368	2674379	2.72		109	10007	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.693	4.693	0.0	1.000	56500	0.0544	Target=7.12	109	10.0	
613.00 > 169.00	4.693	4.693	0.0	1.000	7325		7.71(3.56-10.68)	109	107	
74 1H,1H,2H,2H-perfluorododecanesulfo										
627.00 > 607.00	4.714	4.714	0.0	1.129	2608	0.0533		111		
75 Perfluorododecanesulfonic acid (PF										M
699.00 > 80.00	4.879	4.879	0.0	1.282	8815	0.0552	Target=0.50	114	18.1	M
699.00 > 99.00	4.879	4.879	0.0	1.282	16376		0.54(0.25-0.74)	114	260	
41 Perfluorotridecanoic acid										M
663.00 > 619.00	4.915	4.915	0.0	1.047	49120	0.0520	Target=4.73	104	15.7	M
663.00 > 169.00	4.915	4.915	0.0	1.047	10650		4.61(2.36-7.09)	104	101	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.120	5.120	0.0	1.000	7583	0.0573	Target=1.08	115	106	
713.00 > 219.00	5.107	5.120	-0.013	0.998	6772		1.12(0.54-1.62)	115	109	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.120	5.120	0.0	1.493	2128257	2.52		101	14003	

Report Date: 10-Feb-2020 13:09:32 Chrom Revision: 2.3 14-Jan-2020 22:23:42
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL005.d
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.500	5.499	0.001	1.000	67877	0.0488	Target=4.40	97.6	22.7	
813.00 > 169.00	5.500	5.499	0.001	1.000	14938		4.54(2.20-6.60)	97.6	125	
D 44 13C2 PFHxDA										
815.00 > 770.00	5.500	5.499	0.001	1.603	2408099	2.62		105	13438	
46 Perfluorooctadecanoic acid										M
913.00 > 869.00	5.899	5.894	0.005	1.073	31906	0.0532	Target=4.01	106	7.8	M
913.00 > 169.00	5.894	5.894	0.0	1.072	8139		3.92(2.01-6.02)	106	138	M

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

PFAS32NCIC1_00003 Amount Added: 100.00 Units: uL

Report Date: 10-Feb-2020 13:09:32 Chrom Revision: 2.3 14-Jan-2020 22:23:42

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL005.d

Injection Date: 10-Feb-2020 11:48:38 Instrument ID: LC812

Lims ID: IC

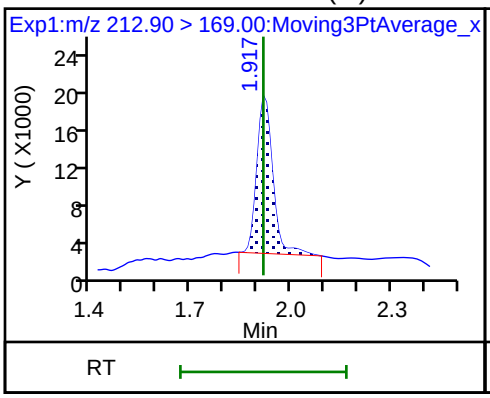
Client ID:

Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5

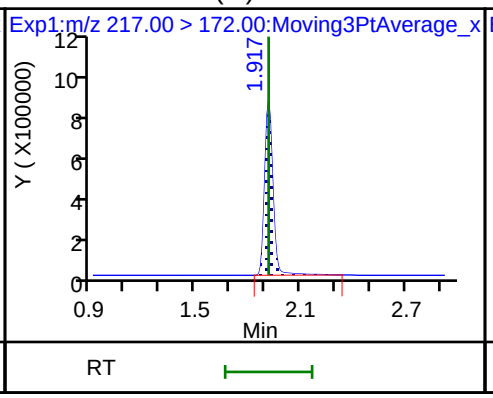
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFC_LC812 Limit Group: LC_PFC_ICAL

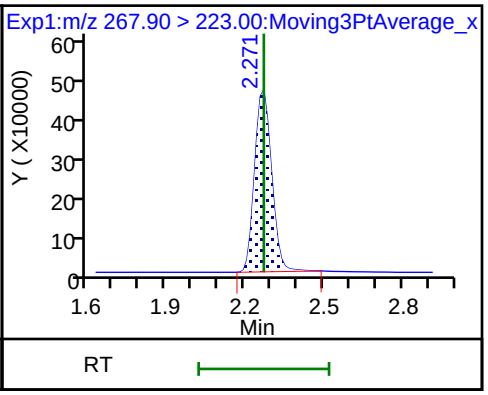
2 Perfluorobutanoic acid (M)



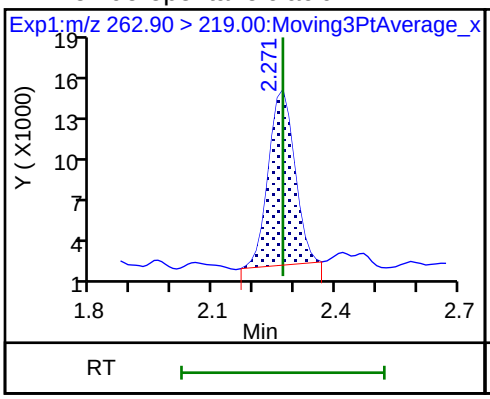
D 1 13C4 PFBA (M)



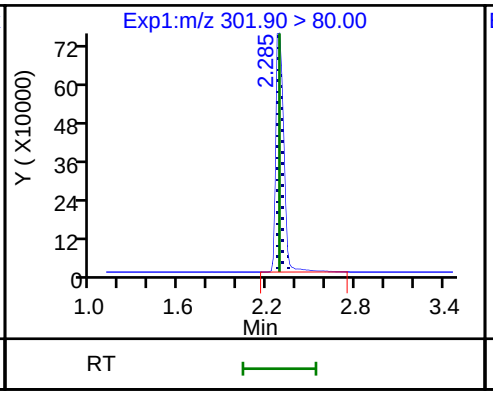
D 3 13C5 PFPeA



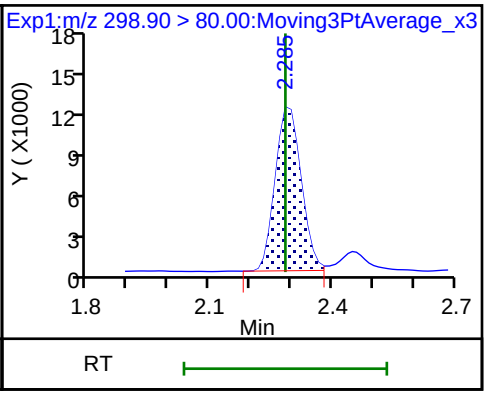
4 Perfluoropentanoic acid



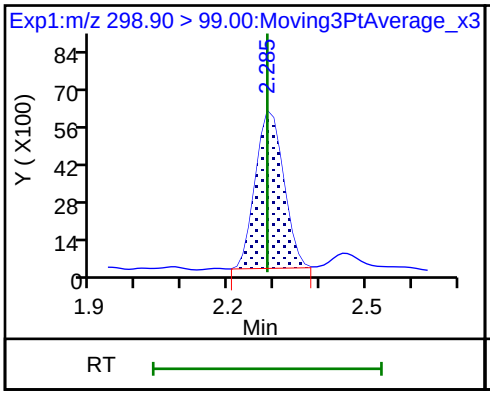
D 47 13C3 PFBS



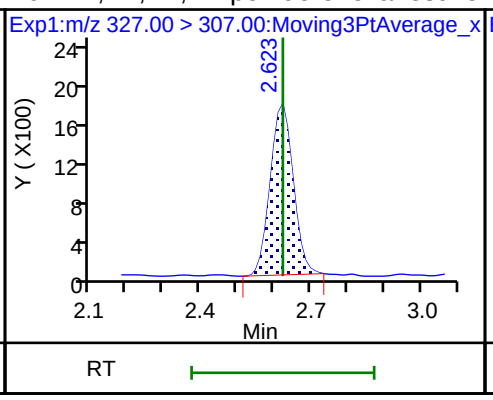
5 Perfluorobutanesulfonic acid



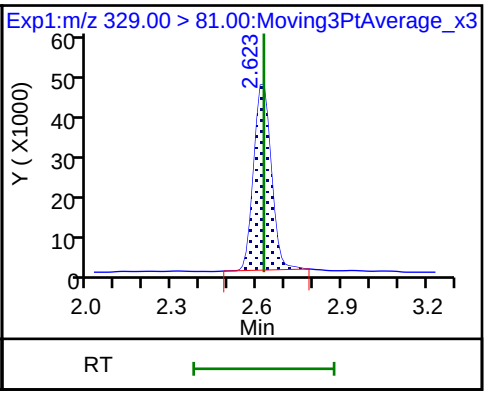
5 Perfluorobutanesulfonic acid



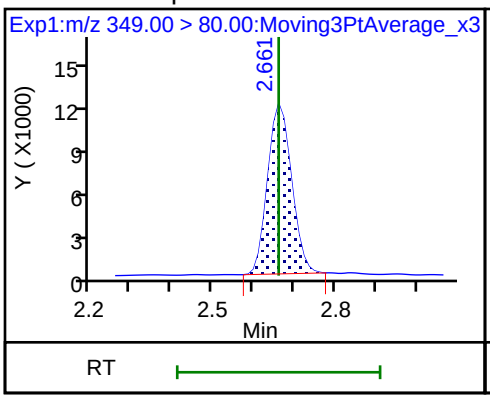
61 1H,1H,2H,2H-perfluorohexanesulfon



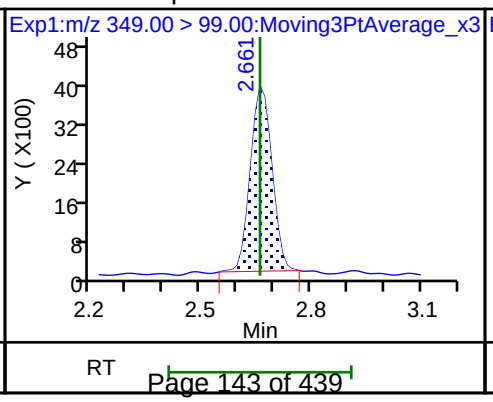
D 60 M2-4:2 FTS



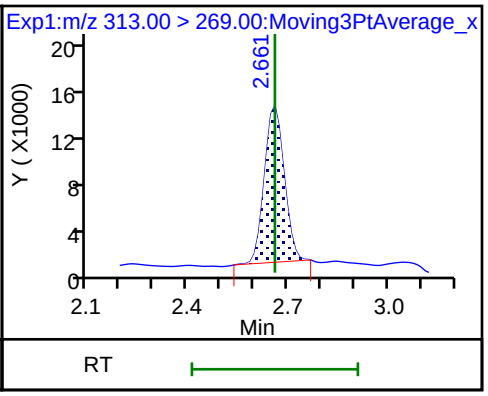
70 Perfluoropentanesulfonic acid



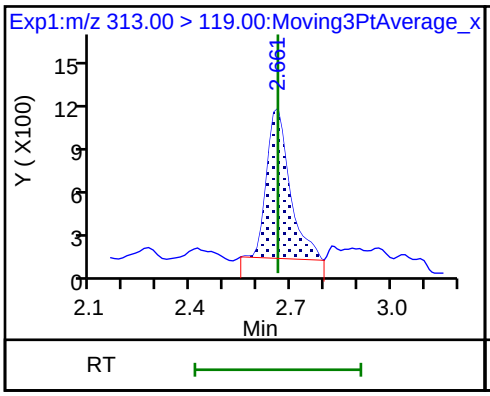
70 Perfluoropentanesulfonic acid



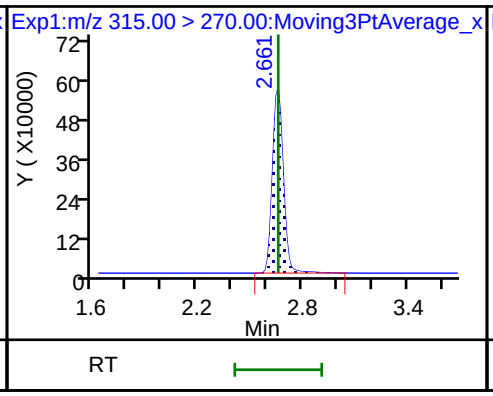
6 Perfluorohexanoic acid



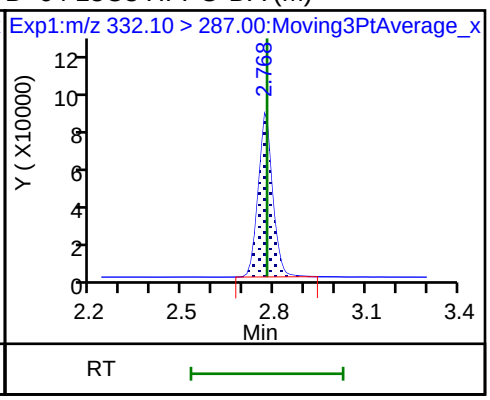
6 Perfluorohexanoic acid



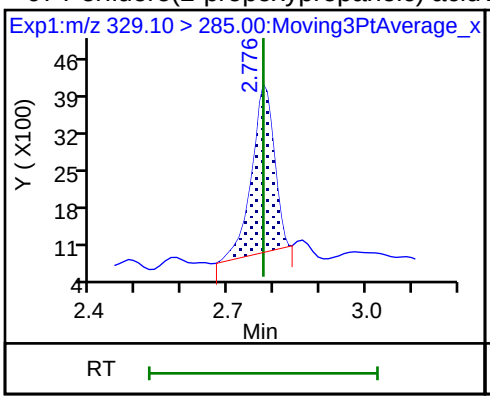
D 7 13C2 PFHxA



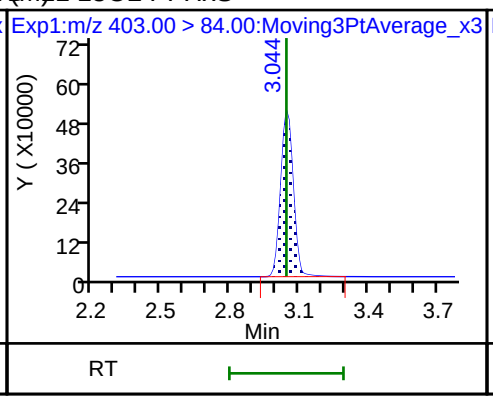
D 64 13C3 HFPO-DA (M)



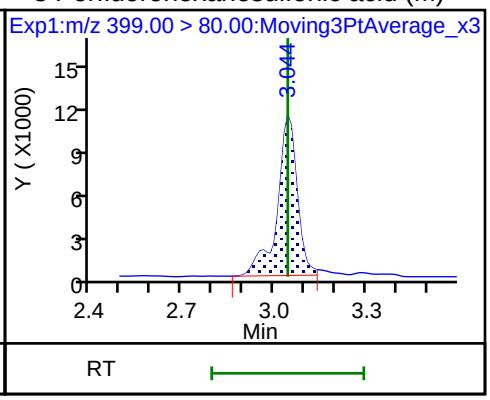
67 Perfluoro(2-propoxypropanoic) acid (M)



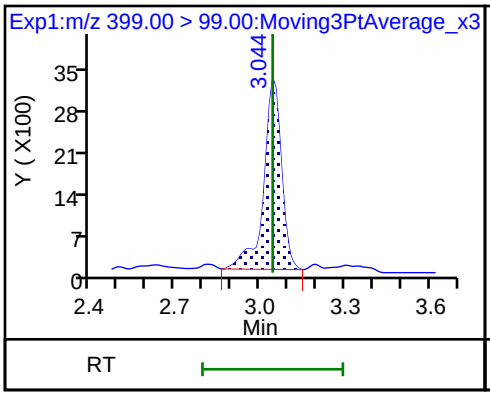
D 11 18O2 PFHxS



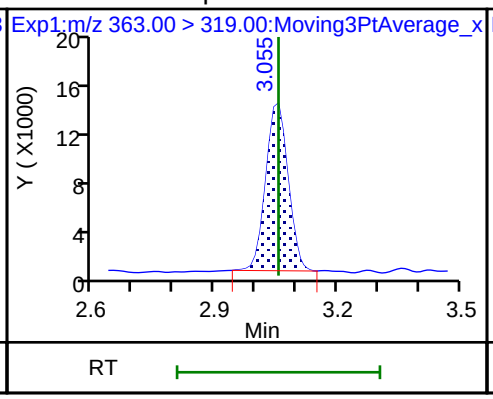
8 Perfluorohexanesulfonic acid (M)



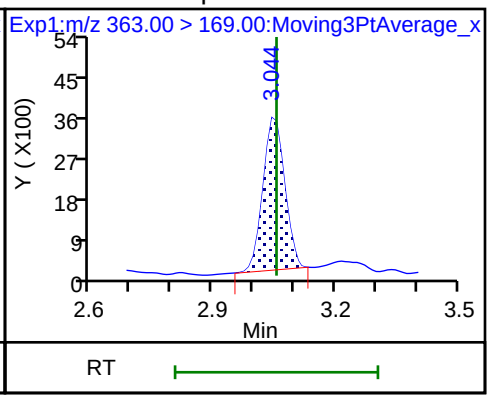
8 Perfluorohexanesulfonic acid



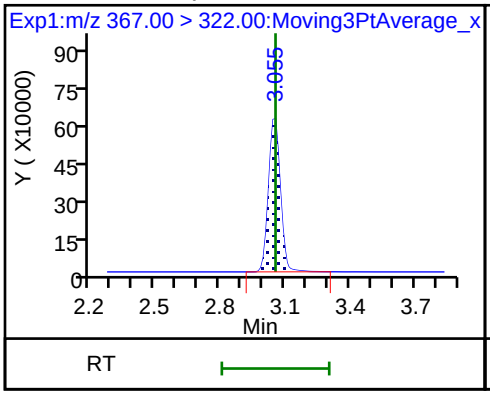
10 Perfluoroheptanoic acid



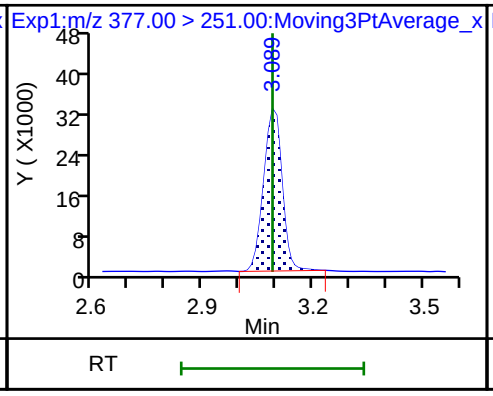
10 Perfluoroheptanoic acid



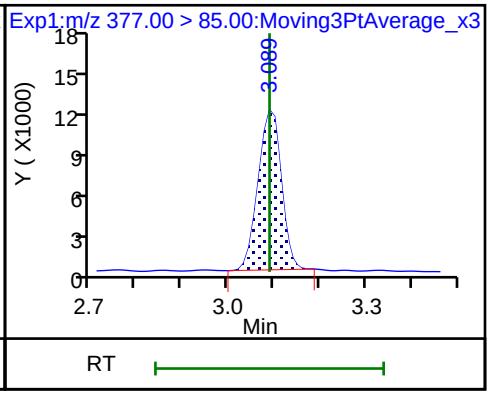
D 9 13C4 PFHpA



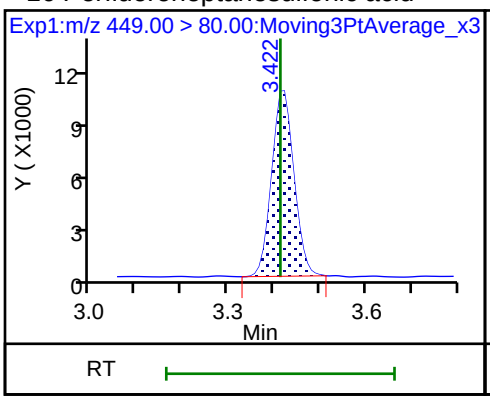
77 DONA



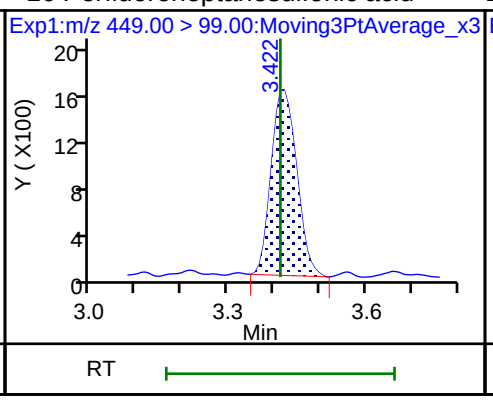
77 DONA



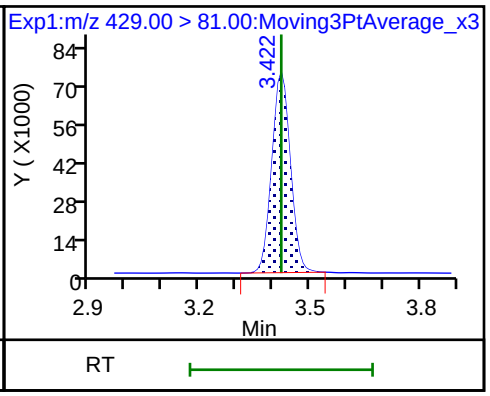
16 Perfluoroheptanesulfonic acid



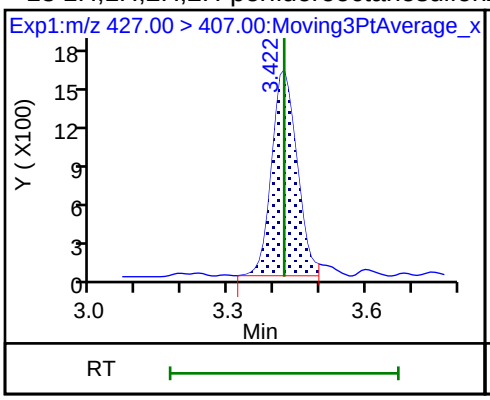
16 Perfluoroheptanesulfonic acid



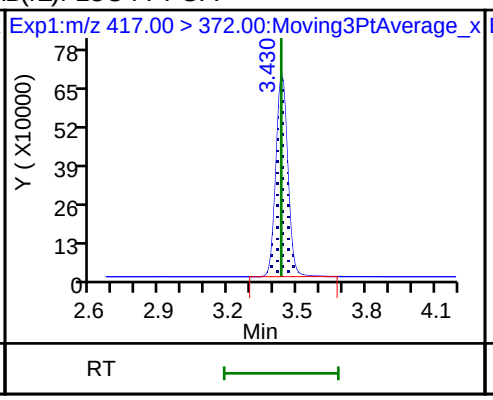
D 12 M2-6:2 FTS



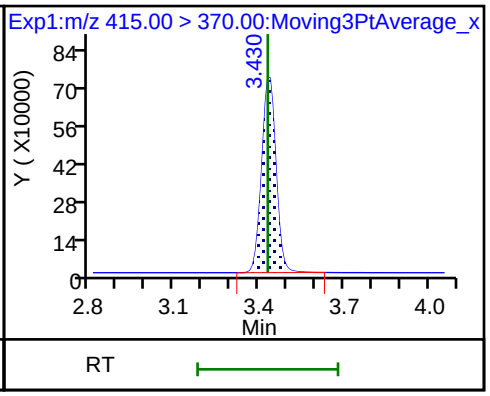
13 1H,1H,2H,2H-perfluorooctanesulfonic(M)



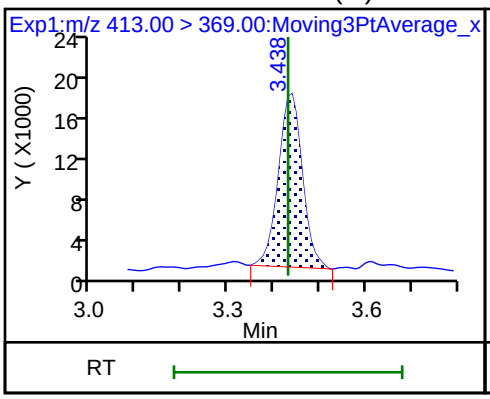
D 14 13C4 PFOA



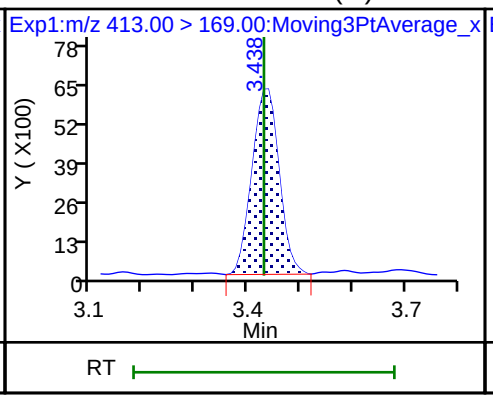
* 62 13C2 PFOA



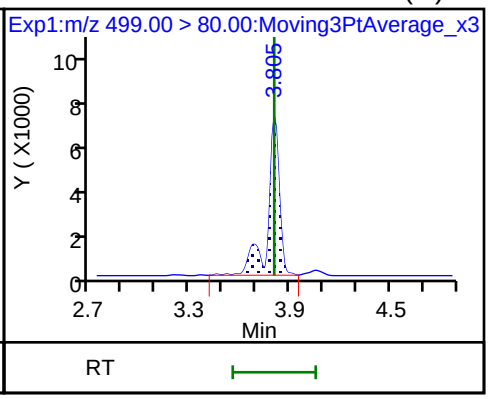
15 Perfluorooctanoic acid (M)



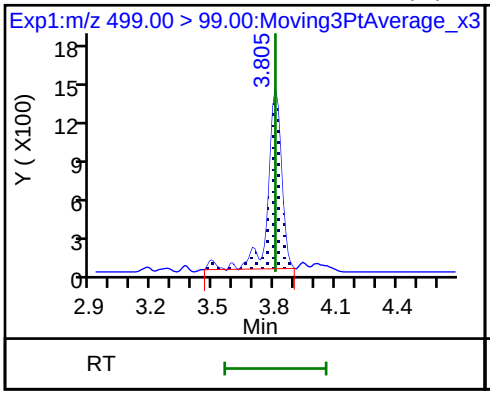
15 Perfluorooctanoic acid (M)



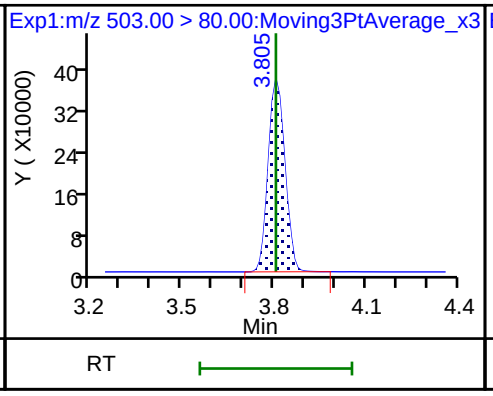
17 Perfluorooctanesulfonic acid (M)



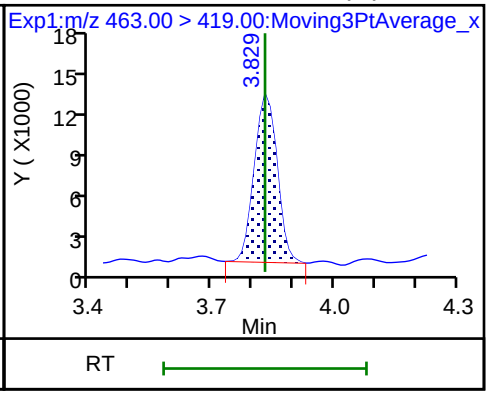
17 Perfluorooctanesulfonic acid (M)



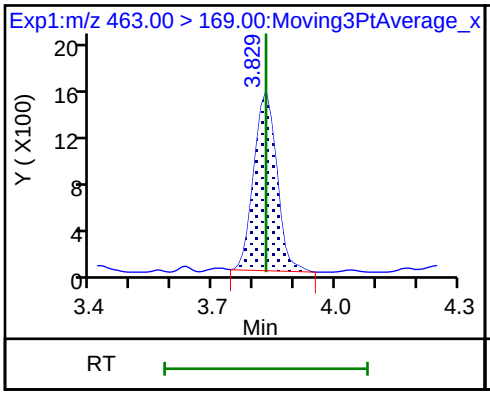
D 18 13C4 PFOS



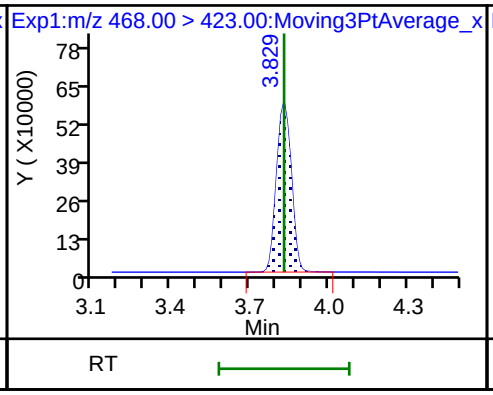
20 Perfluorononanoic acid (M)



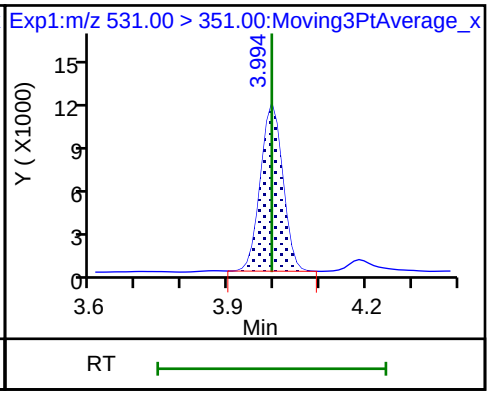
20 Perfluorononanoic acid



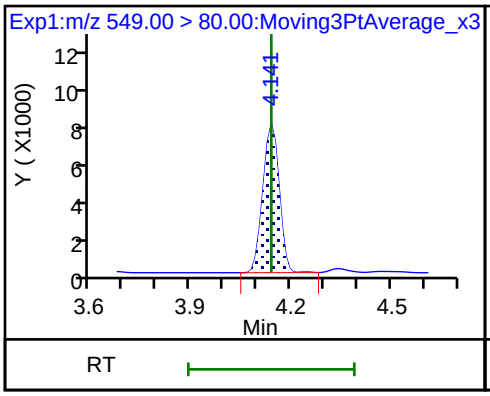
D 19 13C5 PFNA



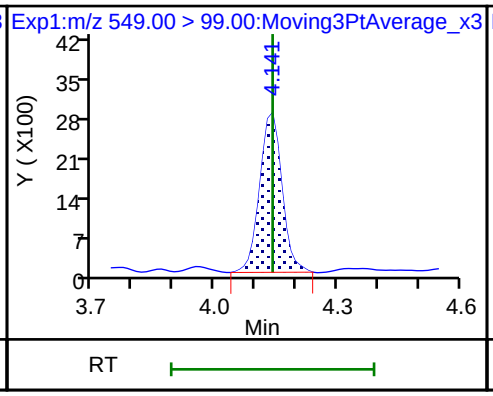
69 9-Chlorohexadecafluoro-3-oxanonane



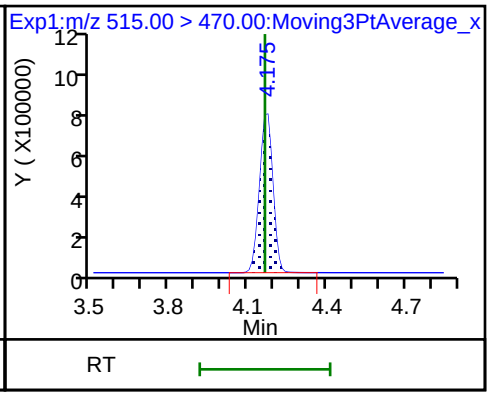
68 Perfluorononanesulfonic acid



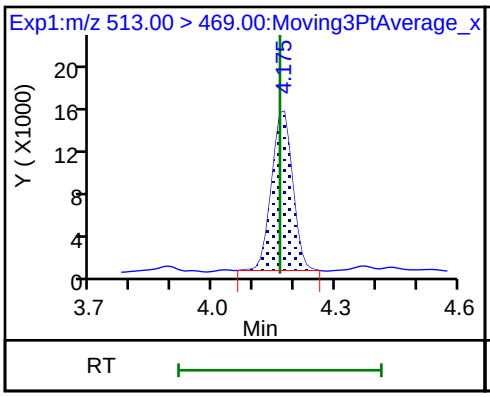
68 Perfluorononanesulfonic acid



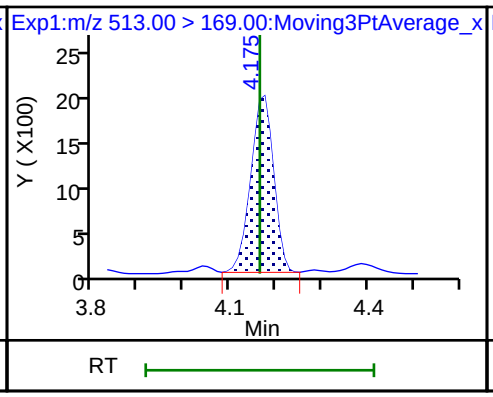
D 23 13C2 PFDA



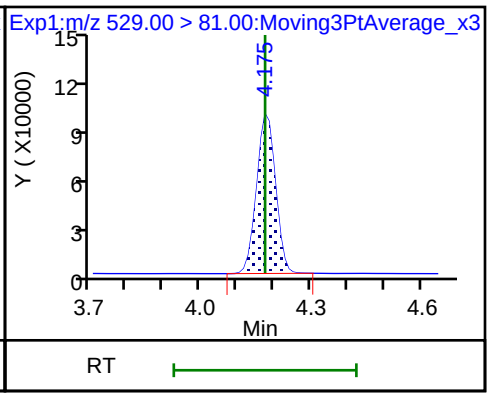
24 Perfluorodecanoic acid



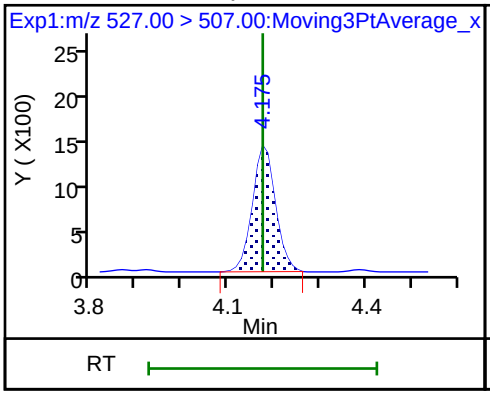
24 Perfluorodecanoic acid



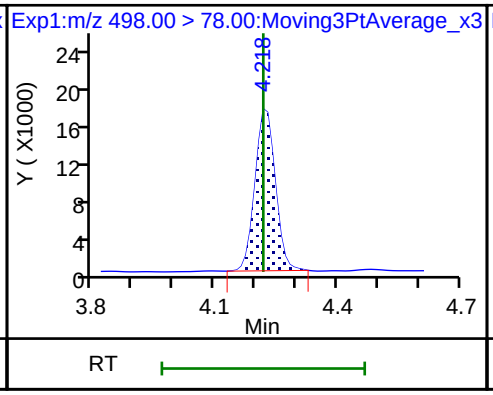
D 26 M2-8:2 FTS



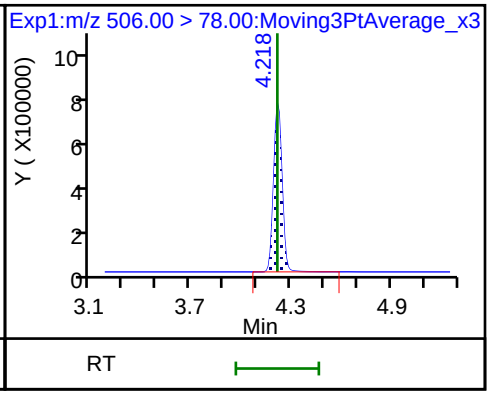
25 1H,1H,2H,2H-perfluorodecanesulfoni



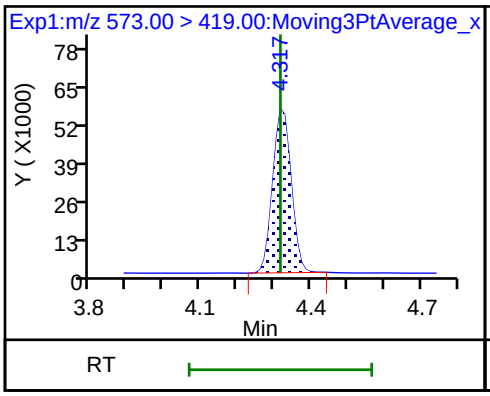
22 Perfluorooctanesulfonamide



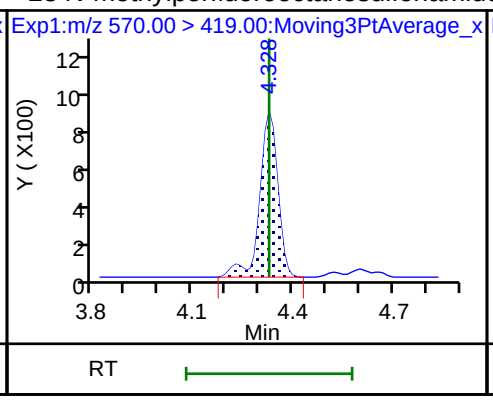
D 21 13C8 FOSA



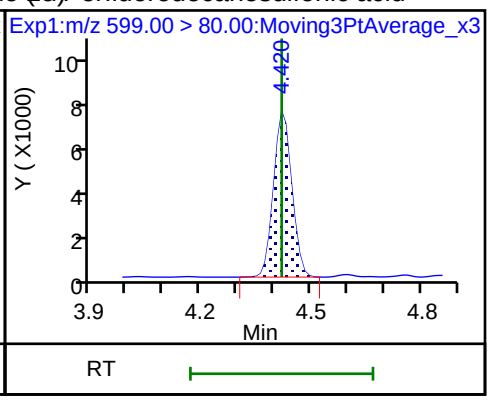
D 27 d3-NMeFOSAA



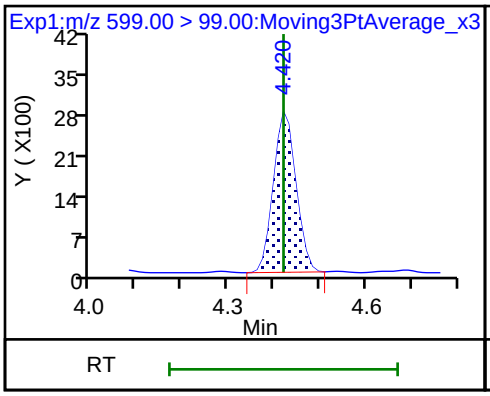
28 N-methylperfluorooctanesulfonamido (M)



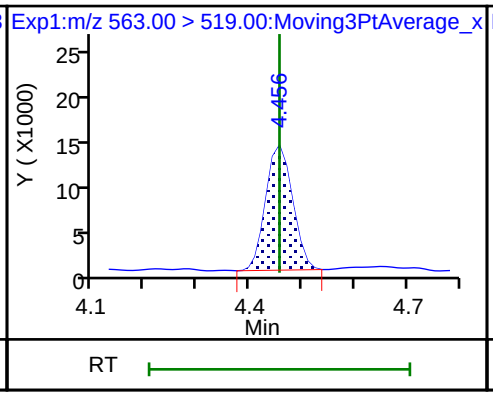
29 Perfluorodecanesulfonic acid



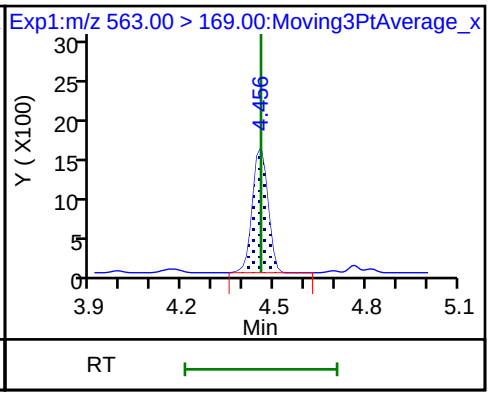
29 Perfluorodecanesulfonic acid



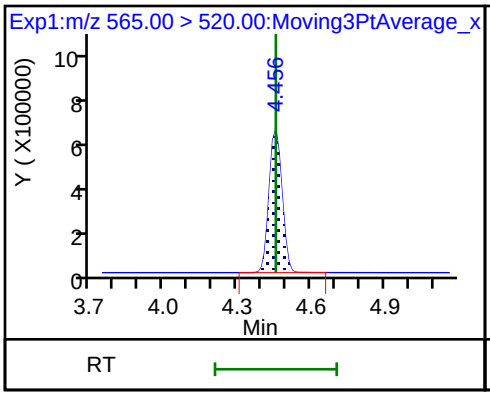
31 Perfluoroundecanoic acid



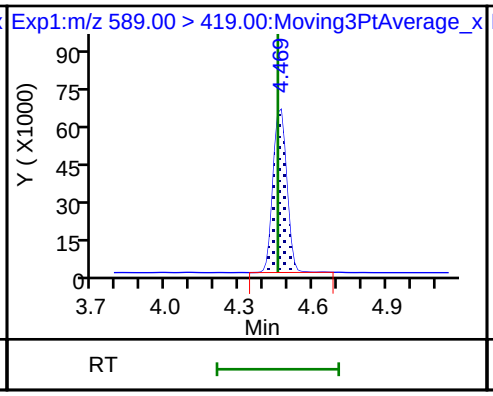
31 Perfluoroundecanoic acid



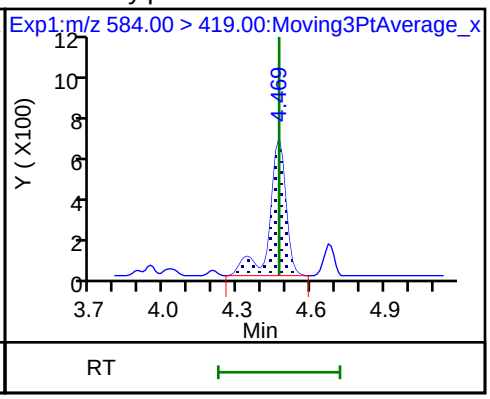
D 30 13C2 PFUnA



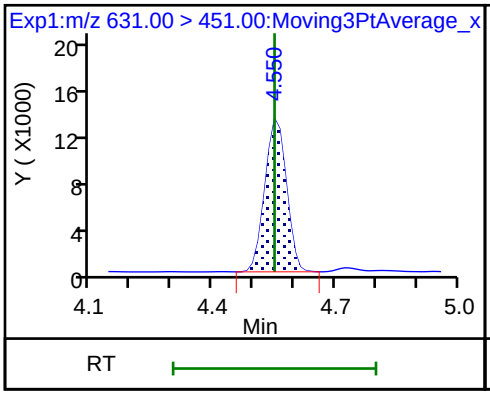
D 32 d5-NEtFOSAA



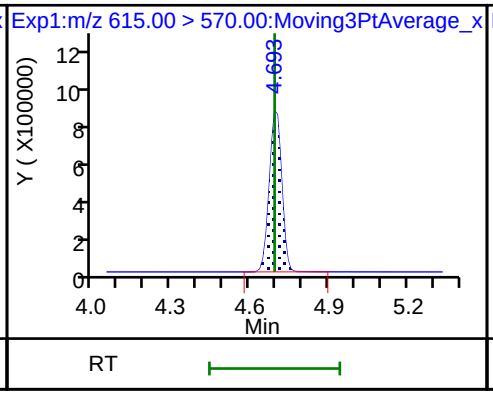
33 N-ethylperfluorooctanesulfonamidoa (M)



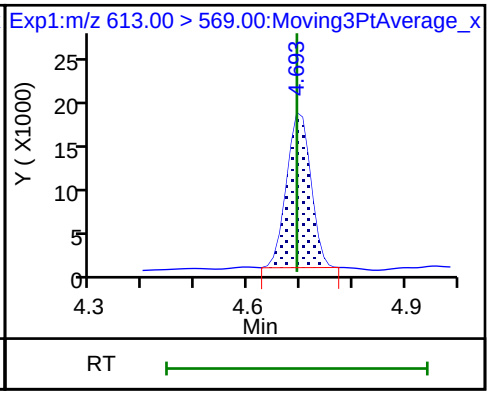
66 11-Chloroeicosafluoro-3-oxaundecan



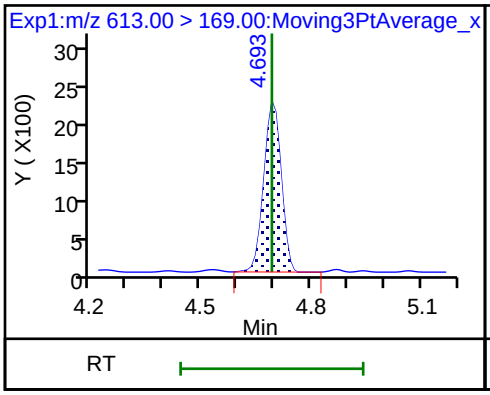
D 36 13C2 PFDoA



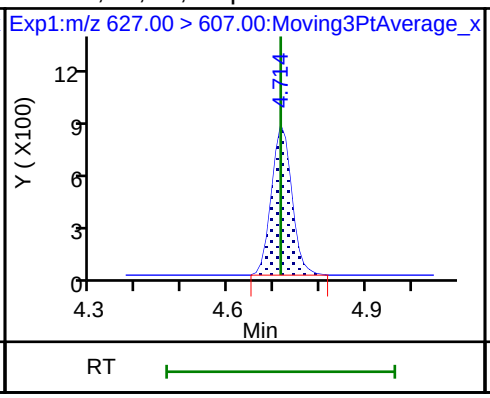
37 Perfluorododecanoic acid



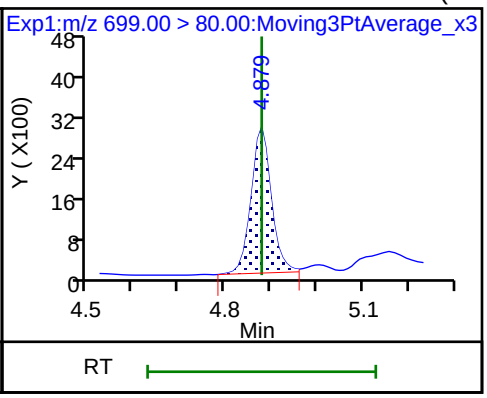
37 Perfluorododecanoic acid



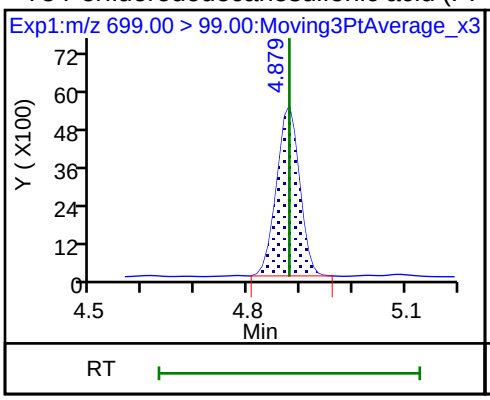
74 1H,1H,2H,2H-perfluorododecanesulfo



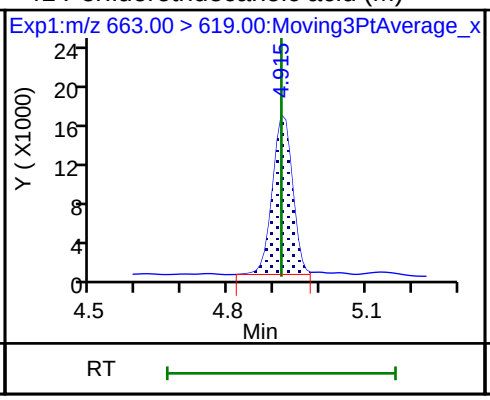
75 Perfluorododecanesulfonic acid (PF (M)



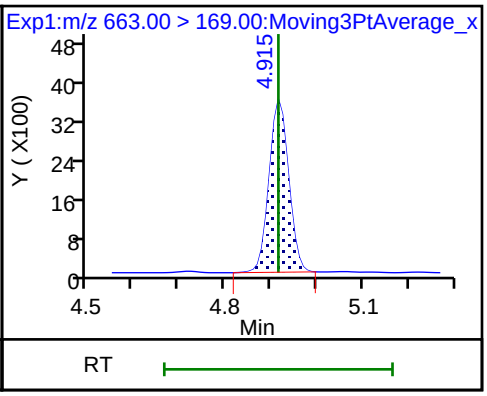
75 Perfluorododecanesulfonic acid (PF



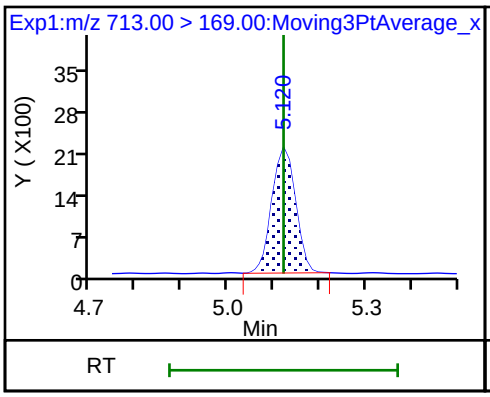
41 Perfluorotridecanoic acid (M)



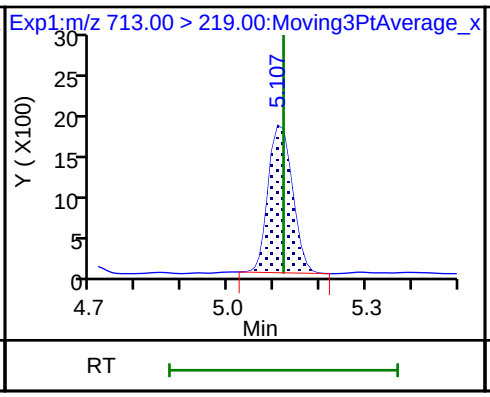
41 Perfluorotridecanoic acid



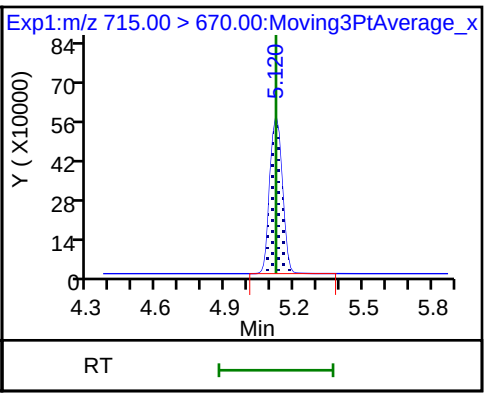
42 Perfluorotetradecanoic acid



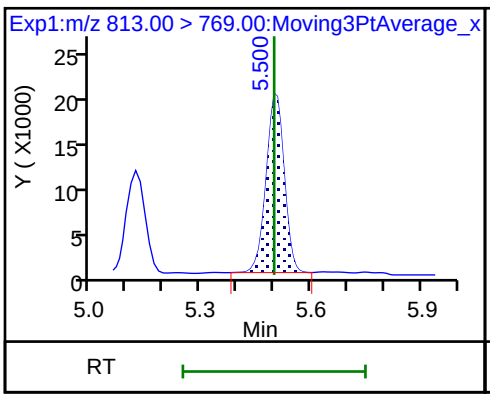
42 Perfluorotetradecanoic acid



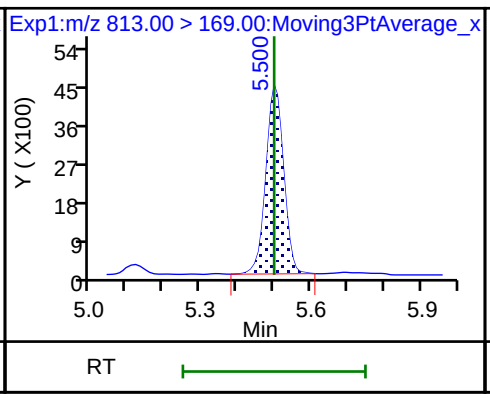
D 43 13C2 PFTeDA



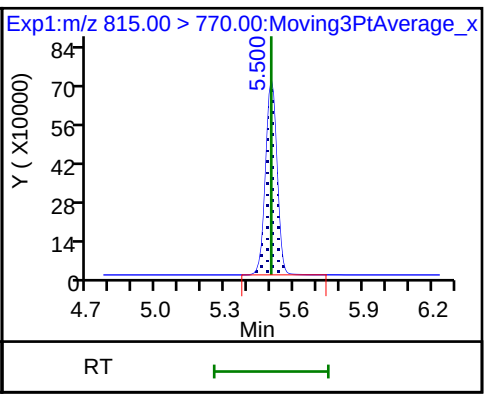
45 Perfluorohexadecanoic acid



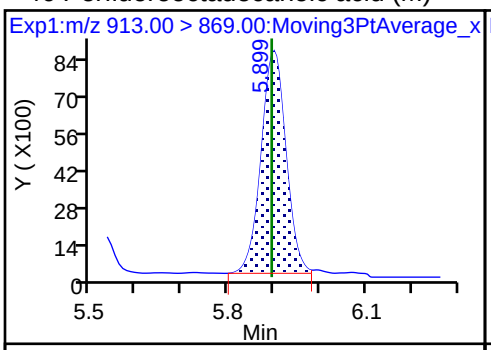
45 Perfluorohexadecanoic acid



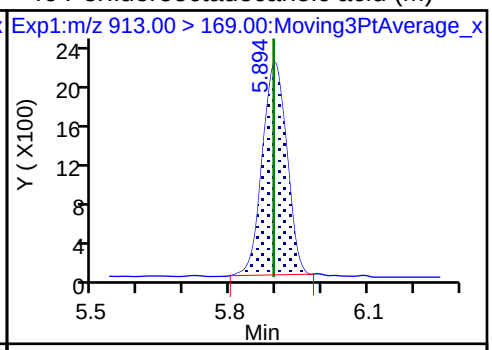
D 44 13C2 PFHxDA



46 Perfluorooctadecanoic acid (M)



46 Perfluorooctadecanoic acid (M)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

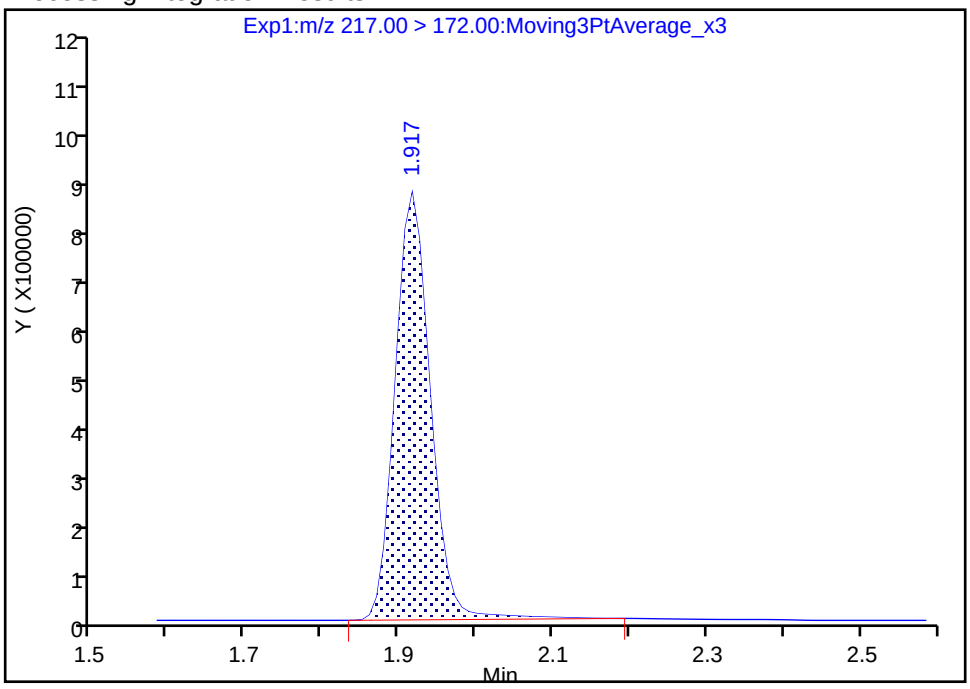
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Injection Date: 10-Feb-2020 11:48:38 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

D 1 13C4 PFBA, CAS: STL00992

Signal: 1

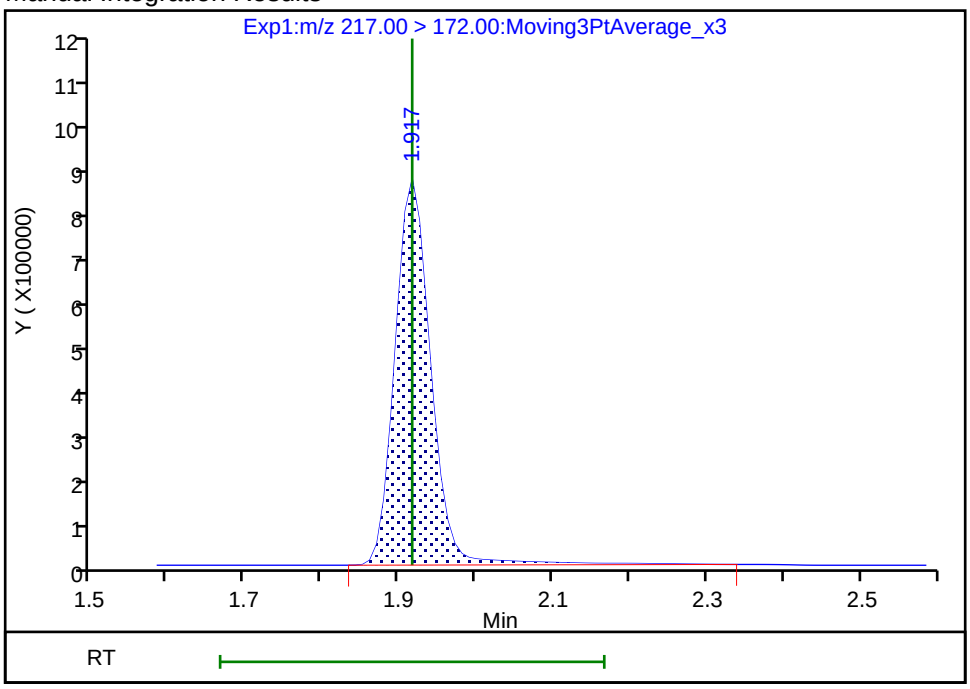
Processing Integration Results

RT: 1.92
Area: 2668228
Amount: 2.507112
Amount Units: ng/ml



Manual Integration Results

RT: 1.92
Area: 2706331
Amount: 2.536859
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:53:55
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

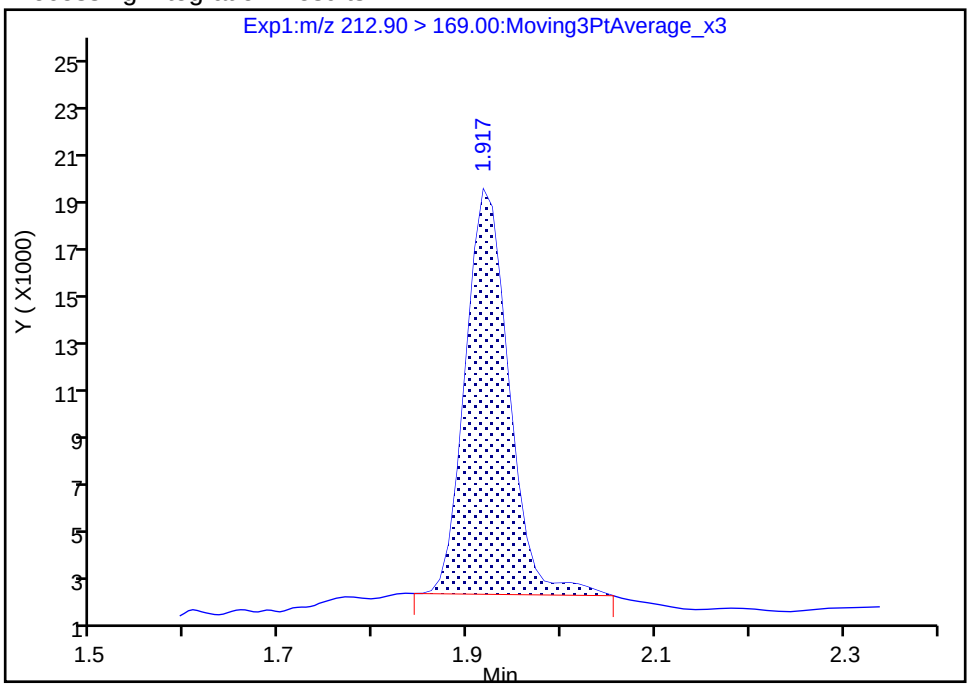
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Injection Date: 10-Feb-2020 11:48:38 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

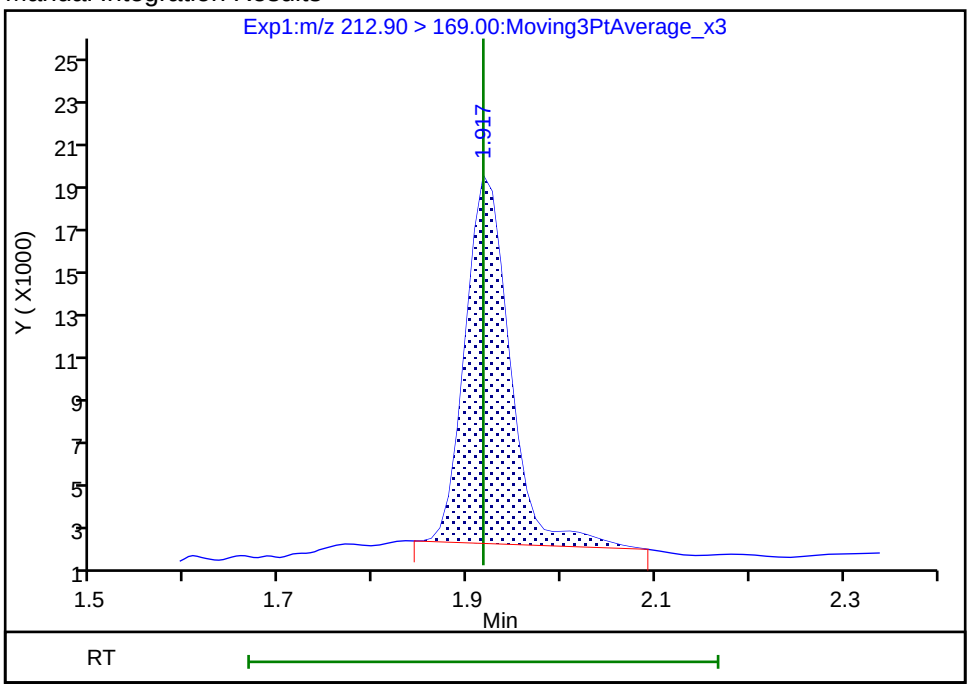
Processing Integration Results

RT: 1.92
Area: 53652
Amount: 0.052323
Amount Units: ng/ml



Manual Integration Results

RT: 1.92
Area: 55346
Amount: 0.053746
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:52:29
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

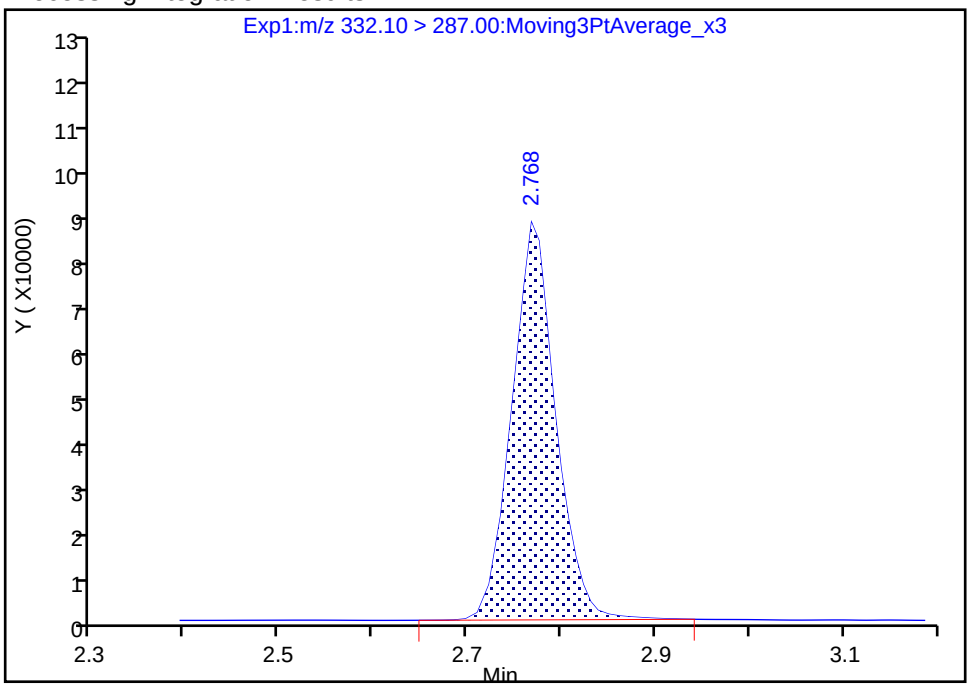
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Injection Date: 10-Feb-2020 11:48:38 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

D 64 13C3 HFPO-DA, CAS: STL02255

Signal: 1

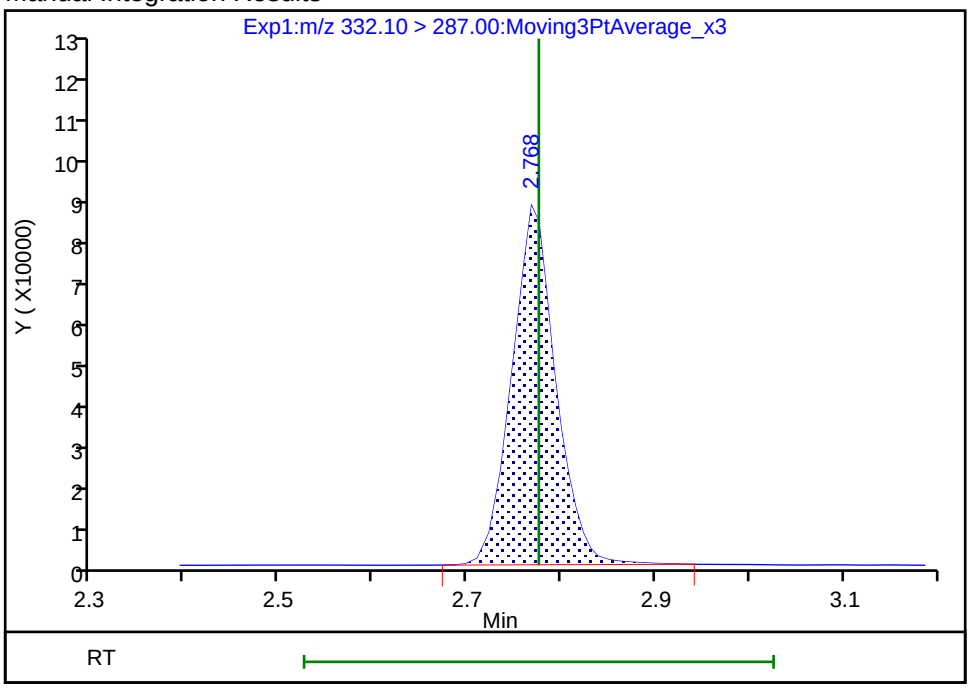
Processing Integration Results

RT: 2.77
Area: 278839
Amount: 3.621175
Amount Units: ng/ml



Manual Integration Results

RT: 2.77
Area: 278764
Amount: 3.620436
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:58:38
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

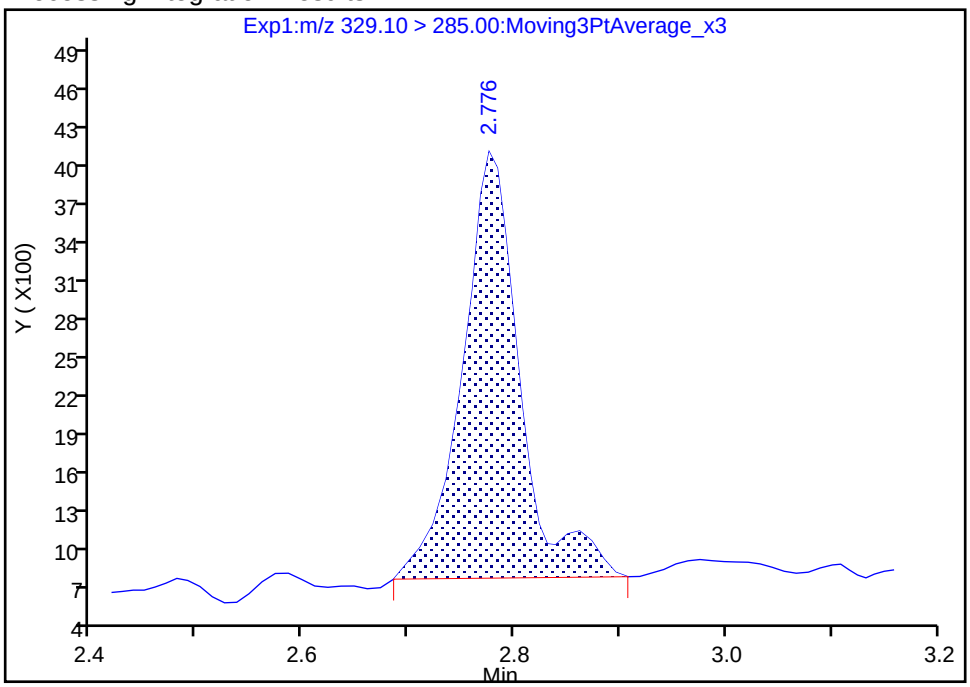
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Injection Date: 10-Feb-2020 11:48:38 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

67 Perfluoro(2-propoxypropanoic) acid, CAS: 13252-13-6

Signal: 1

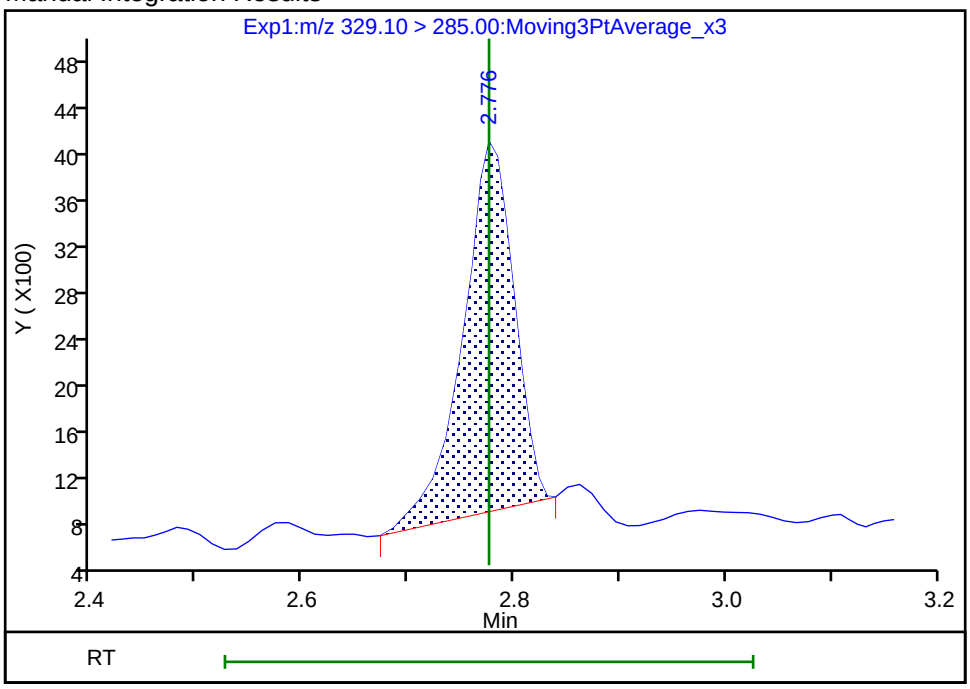
Processing Integration Results

RT: 2.78
Area: 12477
Amount: 0.046996
Amount Units: ng/ml



Manual Integration Results

RT: 2.78
Area: 10650
Amount: 0.040781
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:58:57
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

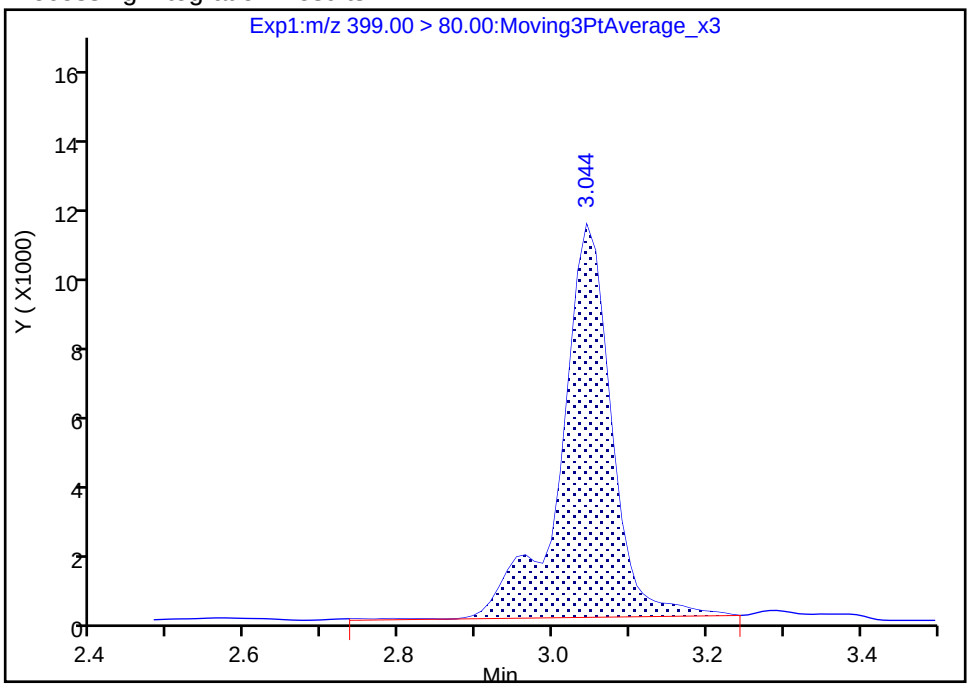
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL005.d
Injection Date: 10-Feb-2020 11:48:38 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

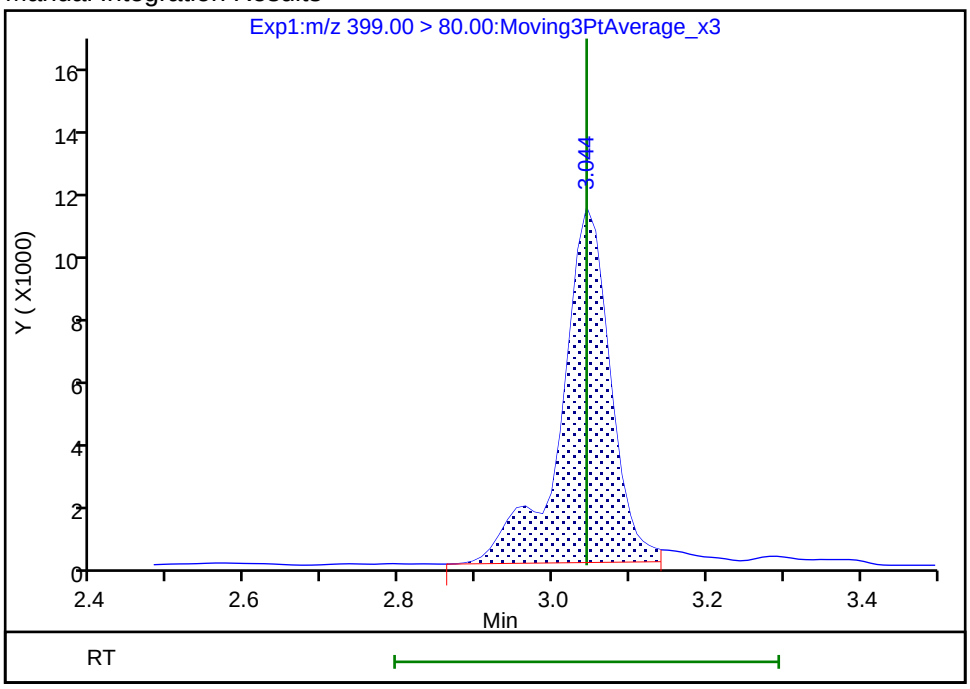
Processing Integration Results

RT: 3.04
Area: 51997
Amount: 0.049934
Amount Units: ng/ml



Manual Integration Results

RT: 3.04
Area: 50697
Amount: 0.052978
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:38:48
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

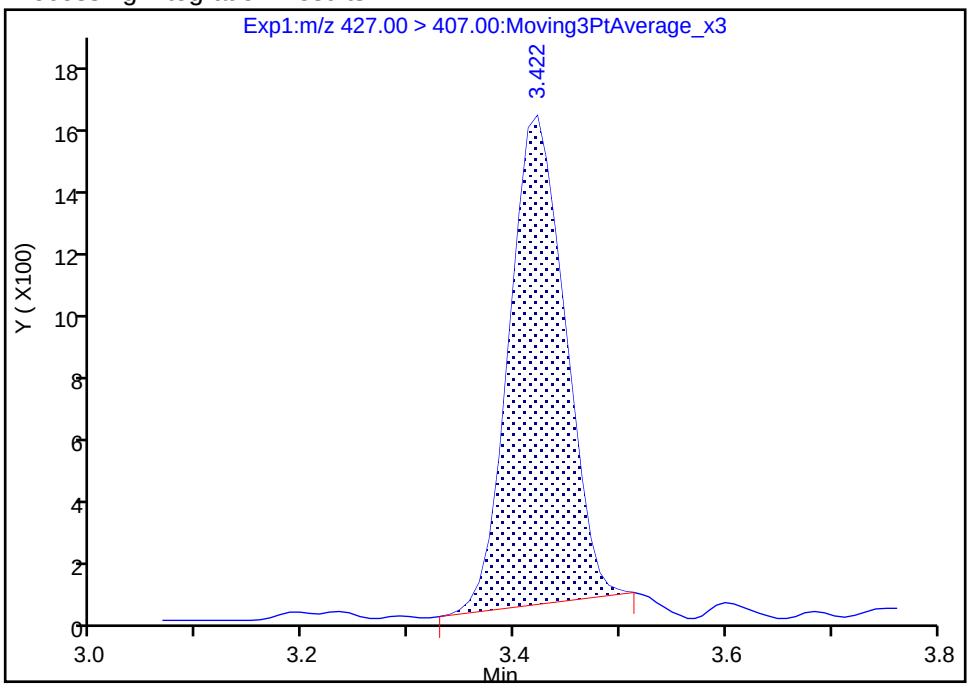
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Injection Date: 10-Feb-2020 11:48:38 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

13 1H,1H,2H,2H-perfluorooctanesulfonic acid (6:, CAS: 27619-97-2

Signal: 1

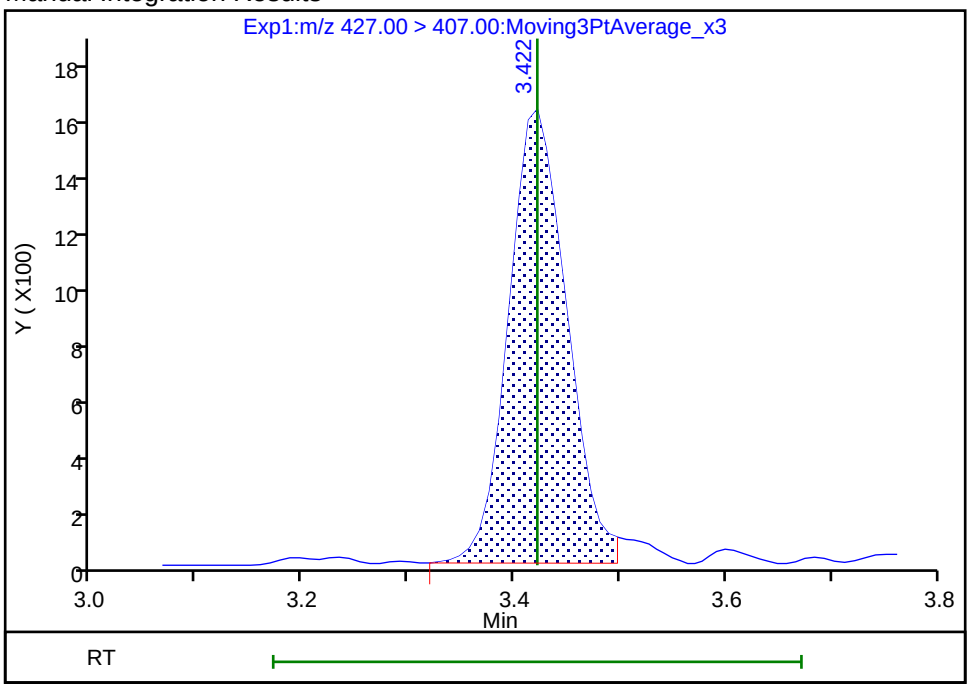
Processing Integration Results

RT: 3.42
Area: 5632
Amount: 0.045763
Amount Units: ng/ml



Manual Integration Results

RT: 3.42
Area: 6024
Amount: 0.049187
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:39:05
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

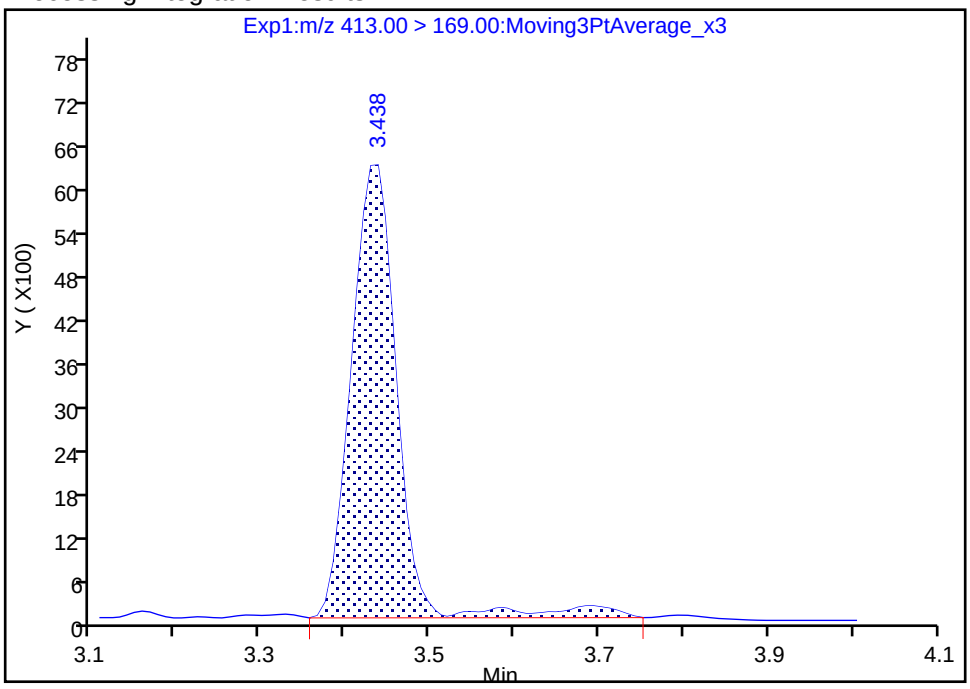
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL005.d
Injection Date: 10-Feb-2020 11:48:38 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

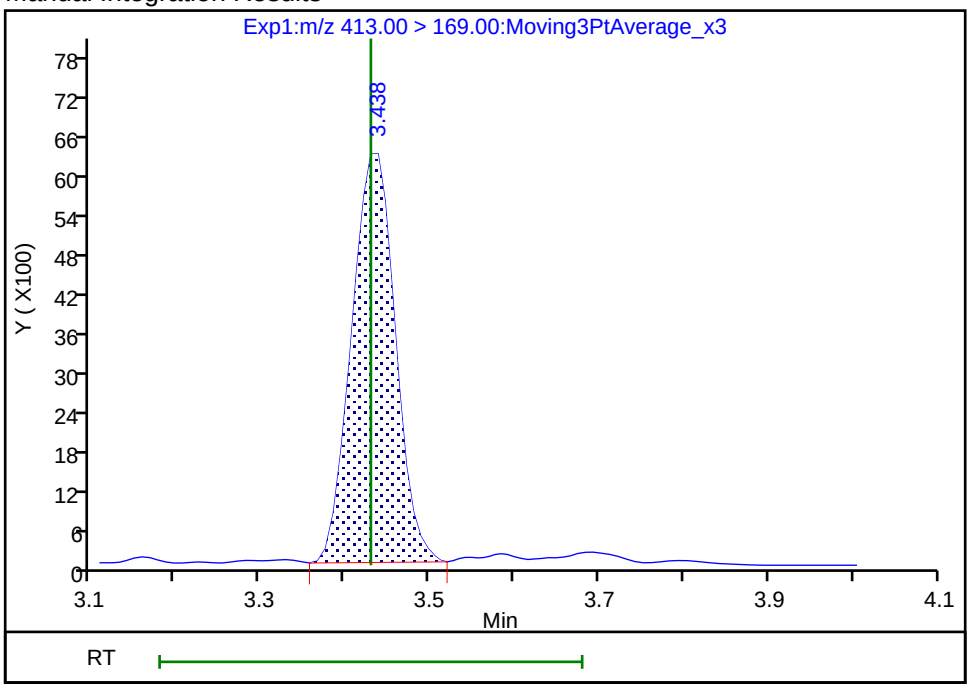
Processing Integration Results

RT: 3.44
Area: 23743
Amount: 0.061406
Amount Units: ng/ml



Manual Integration Results

RT: 3.44
Area: 22394
Amount: 0.059820
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:59:22
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

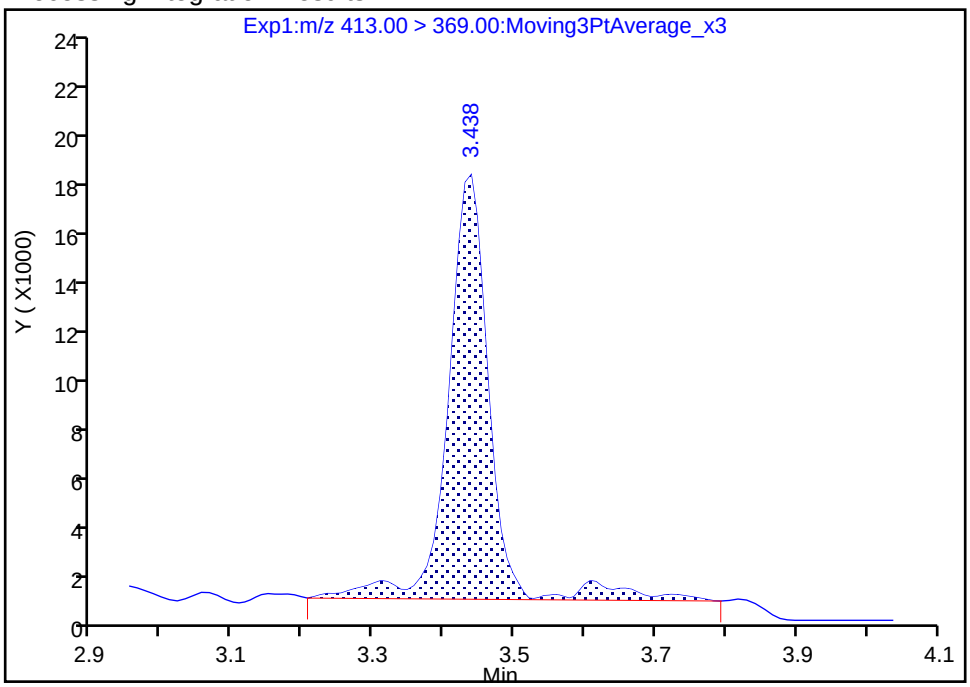
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL005.d
Injection Date: 10-Feb-2020 11:48:38 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

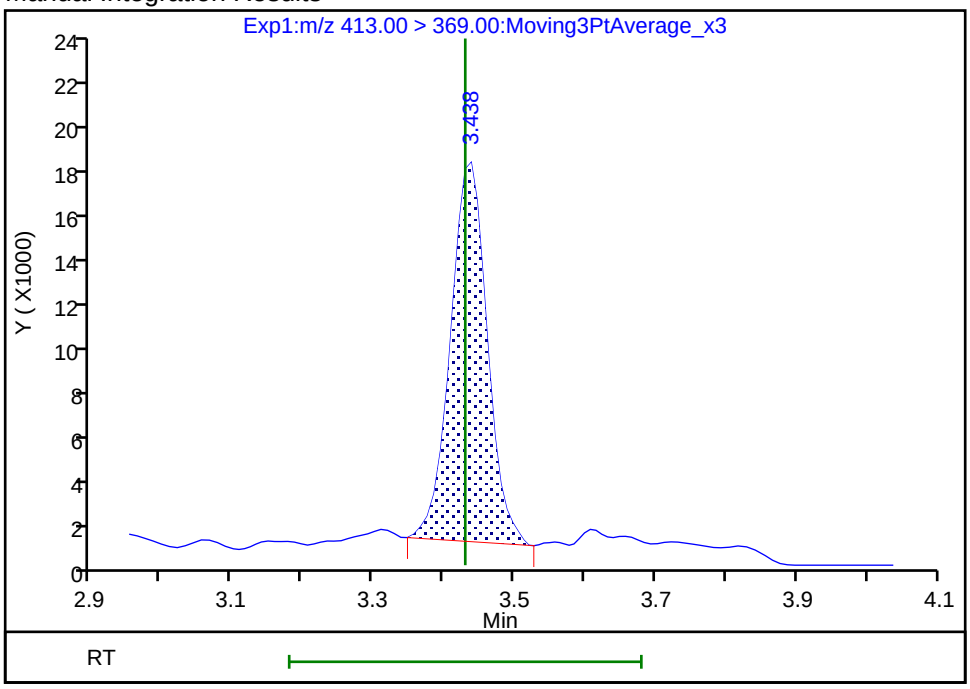
Processing Integration Results

RT: 3.44
Area: 69944
Amount: 0.061406
Amount Units: ng/ml



Manual Integration Results

RT: 3.44
Area: 60376
Amount: 0.059820
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:59:44
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

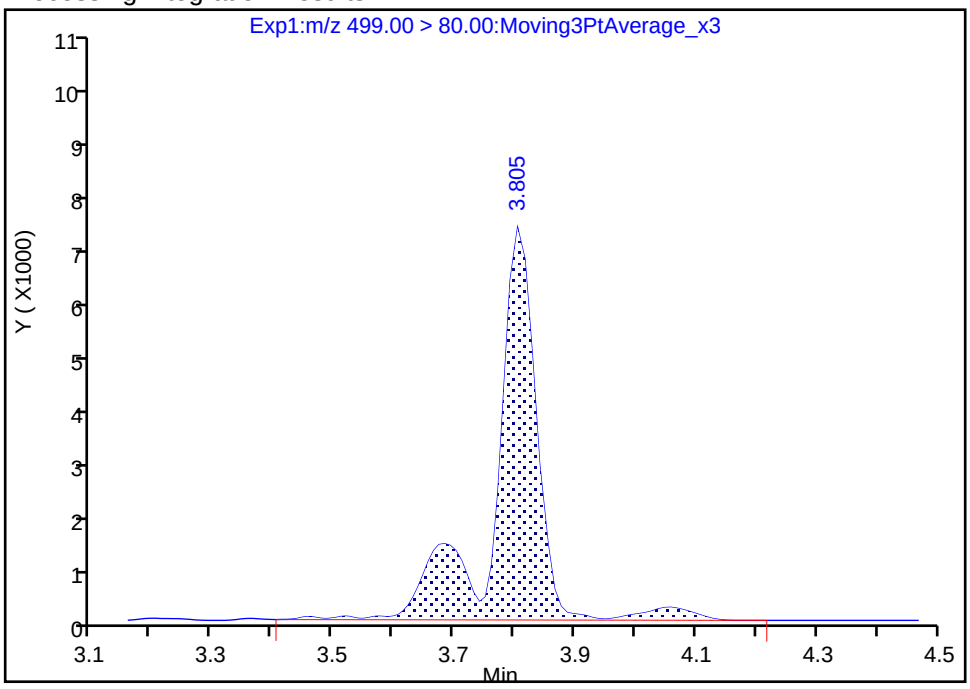
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL005.d
Injection Date: 10-Feb-2020 11:48:38 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

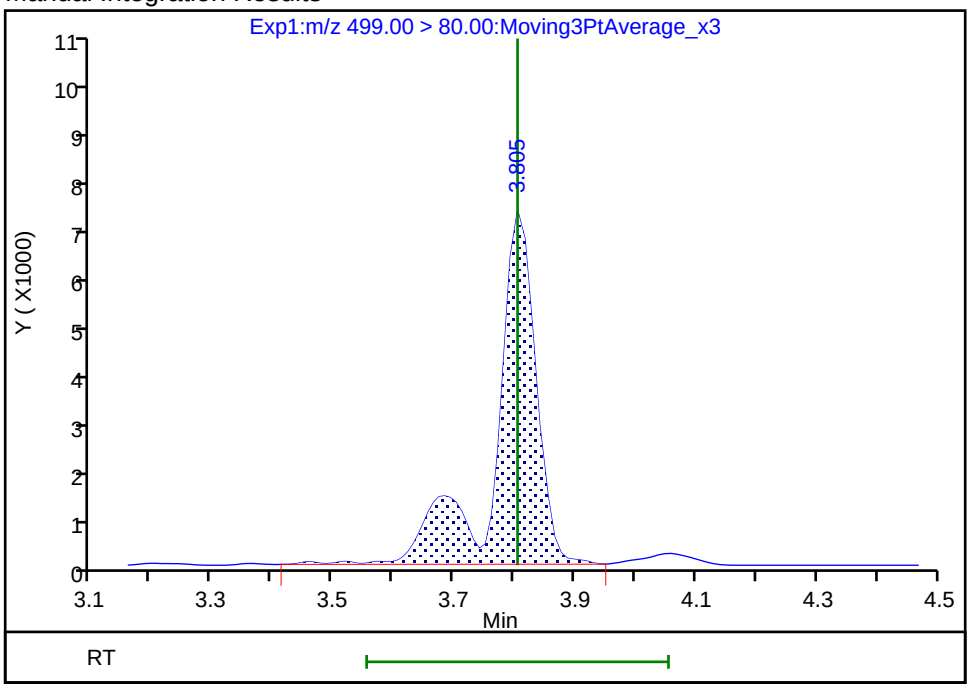
Processing Integration Results

RT: 3.80
Area: 34793
Amount: 0.049362
Amount Units: ng/ml



Manual Integration Results

RT: 3.80
Area: 33097
Amount: 0.051038
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:39:43
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

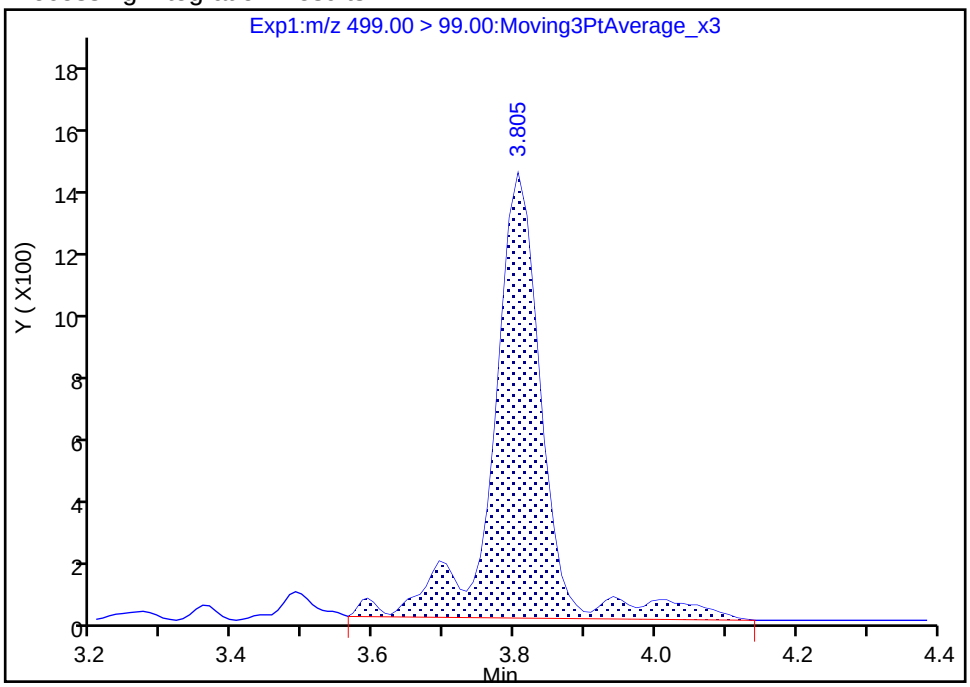
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL005.d				
Injection Date:	10-Feb-2020 11:48:38	Instrument ID:	LC812		
Lims ID:	IC				
Client ID:					
Operator ID:	lc812tech	ALS Bottle#:	2	Worklist Smp#:	5
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

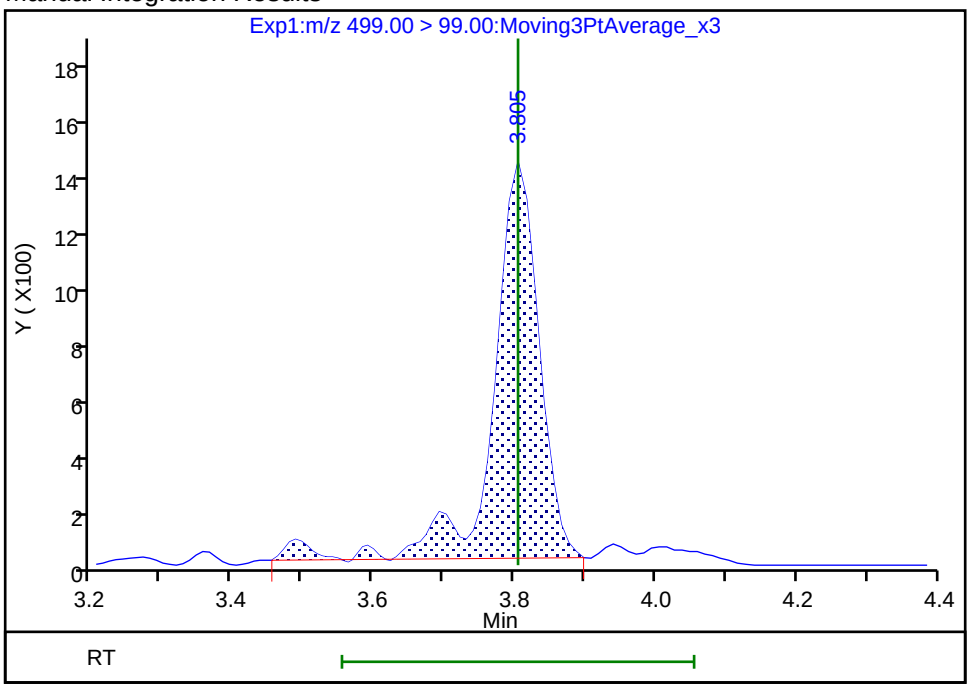
Processing Integration Results

RT: 3.80
Area: 6890
Amount: 0.049362
Amount Units: ng/ml



Manual Integration Results

RT: 3.80
Area: 6238
Amount: 0.051038
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:39:48

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

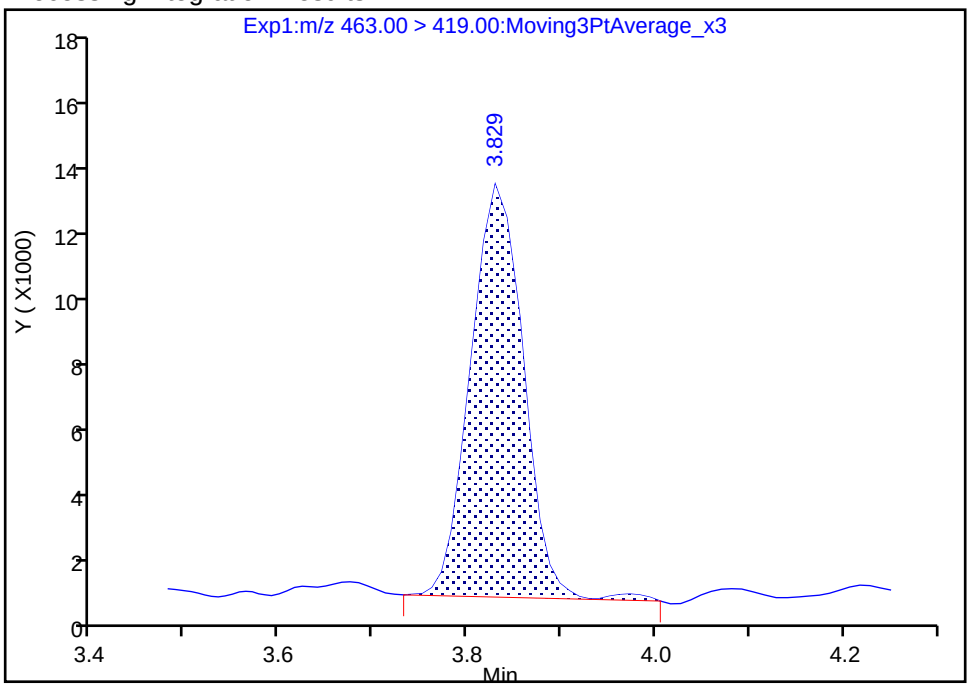
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL005.d
Injection Date: 10-Feb-2020 11:48:38 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

20 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

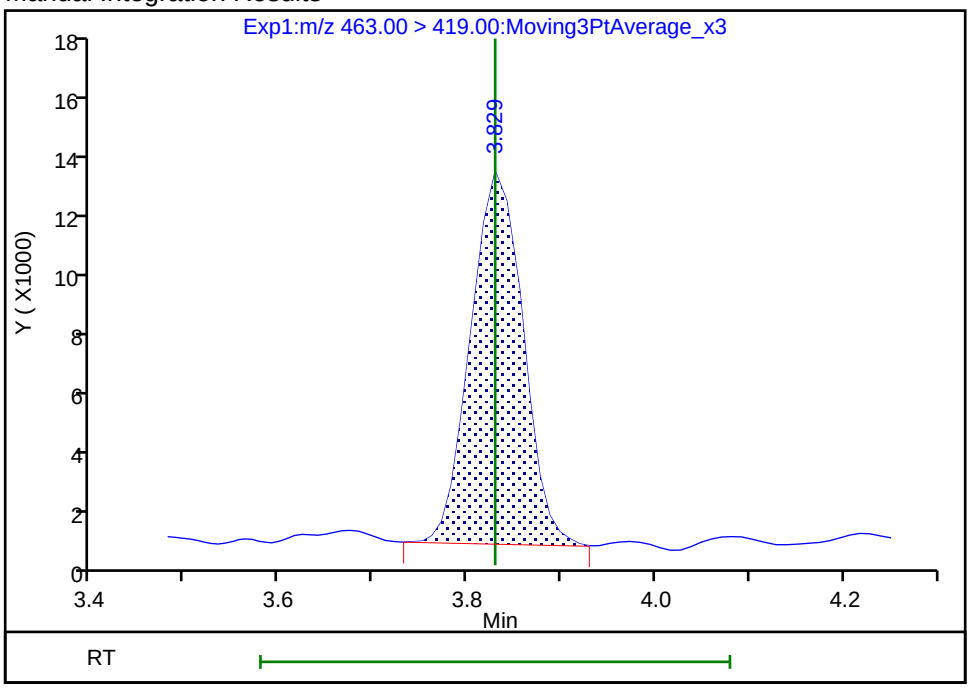
Processing Integration Results

RT: 3.83
Area: 49270
Amount: 0.049296
Amount Units: ng/ml



Manual Integration Results

RT: 3.83
Area: 48774
Amount: 0.051265
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:40:00
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

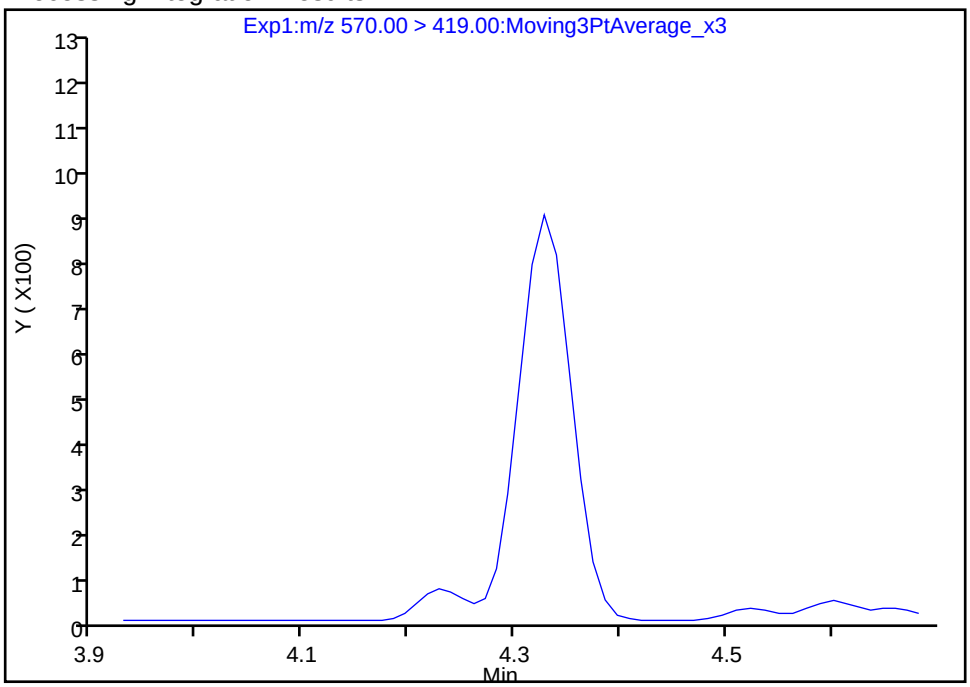
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL005.d
Injection Date: 10-Feb-2020 11:48:38 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

28 N-methylperfluorooctanesulfonamidoacetic aci, CAS: 2355-31-9

Signal: 1

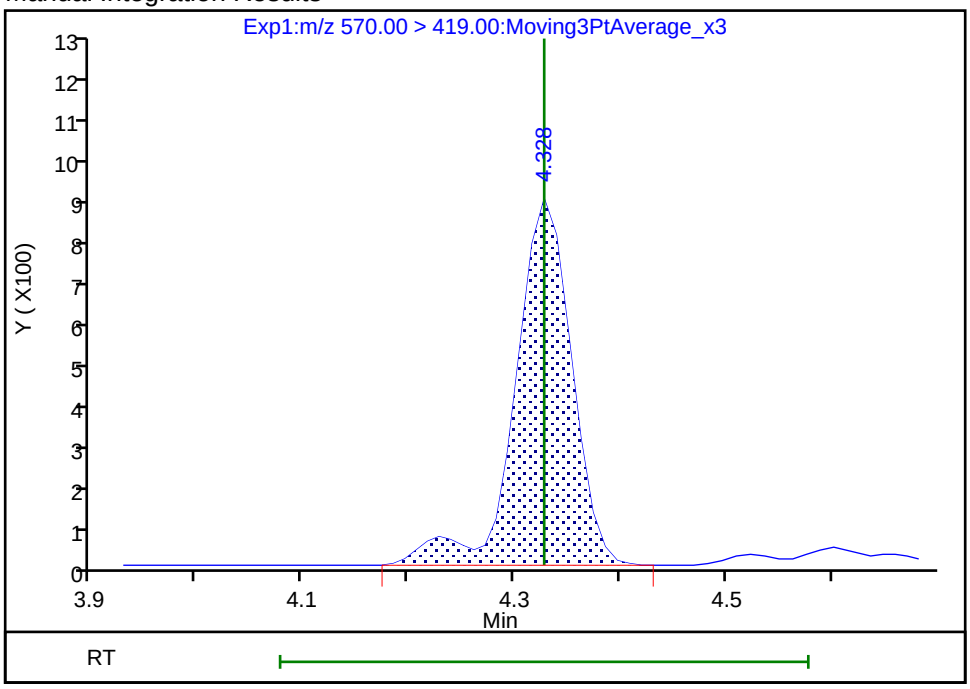
Not Detected
Expected RT: 4.33

Processing Integration Results



Manual Integration Results

RT: 4.33
Area: 3247
Amount: 0.048022
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:37:08
Audit Action: Manually Integrated Audit Reason: Missed Peak

Eurofins TestAmerica, Burlington

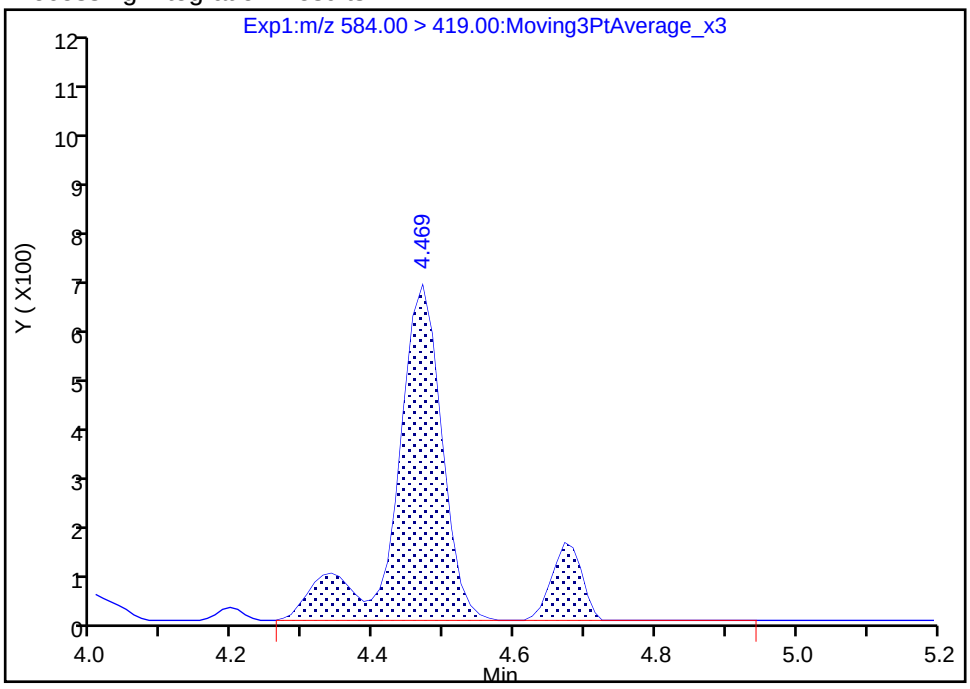
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL005.d
Injection Date: 10-Feb-2020 11:48:38 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

33 N-ethylperfluorooctanesulfonamidoacetic acid, CAS: 2991-50-6

Signal: 1

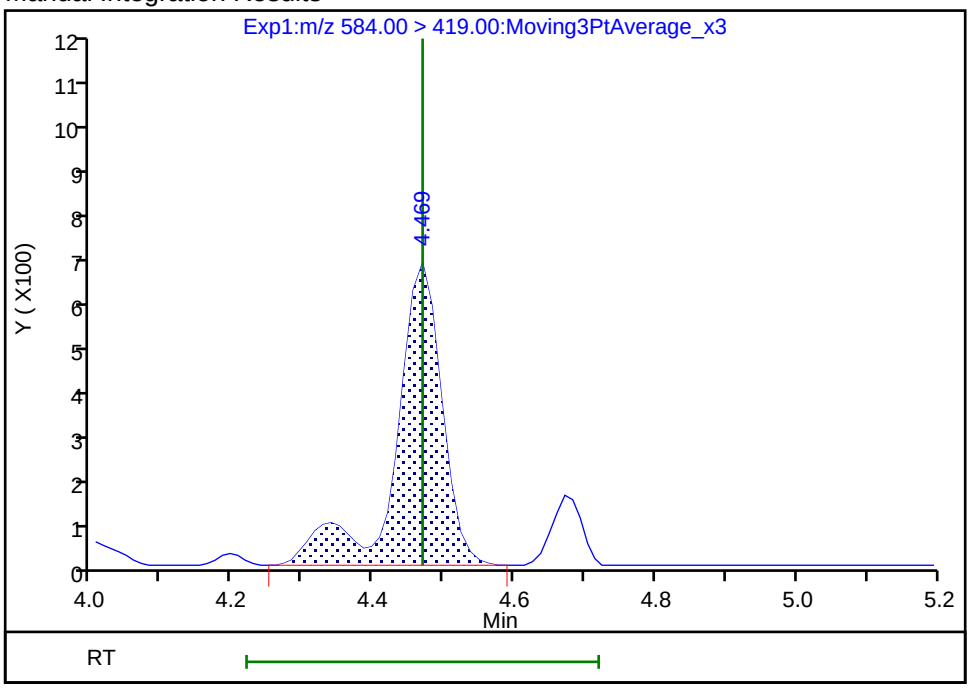
Processing Integration Results

RT: 4.47
Area: 3533
Amount: 0.042394
Amount Units: ng/ml



Manual Integration Results

RT: 4.47
Area: 3078
Amount: 0.038062
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:40:20
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

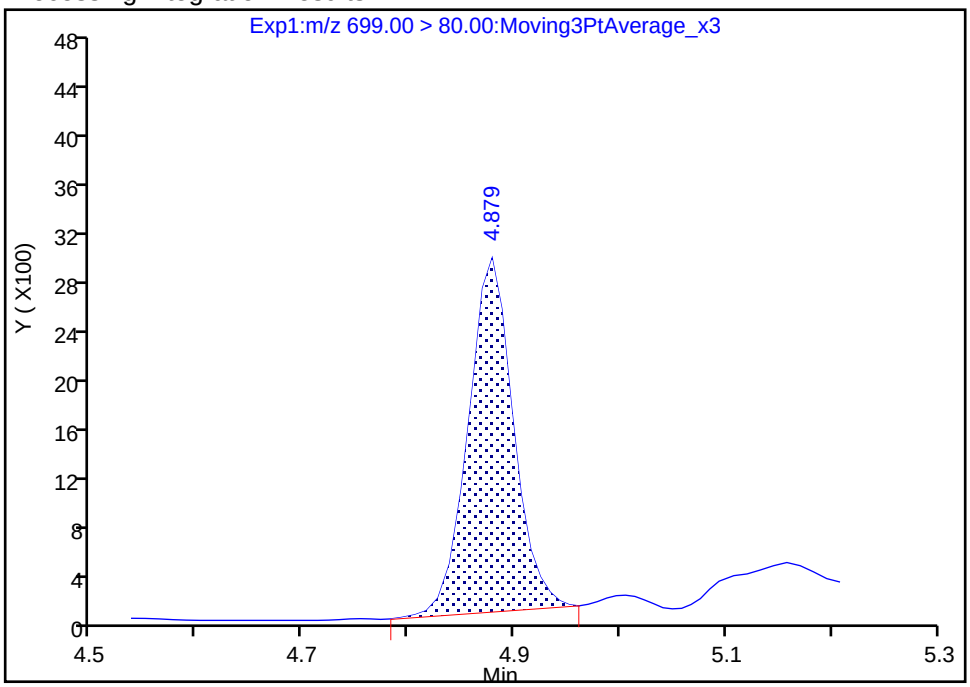
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL005.d
Injection Date: 10-Feb-2020 11:48:38 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

75 Perfluorododecanesulfonic acid (PFDoS), CAS: 79780-39-5

Signal: 1

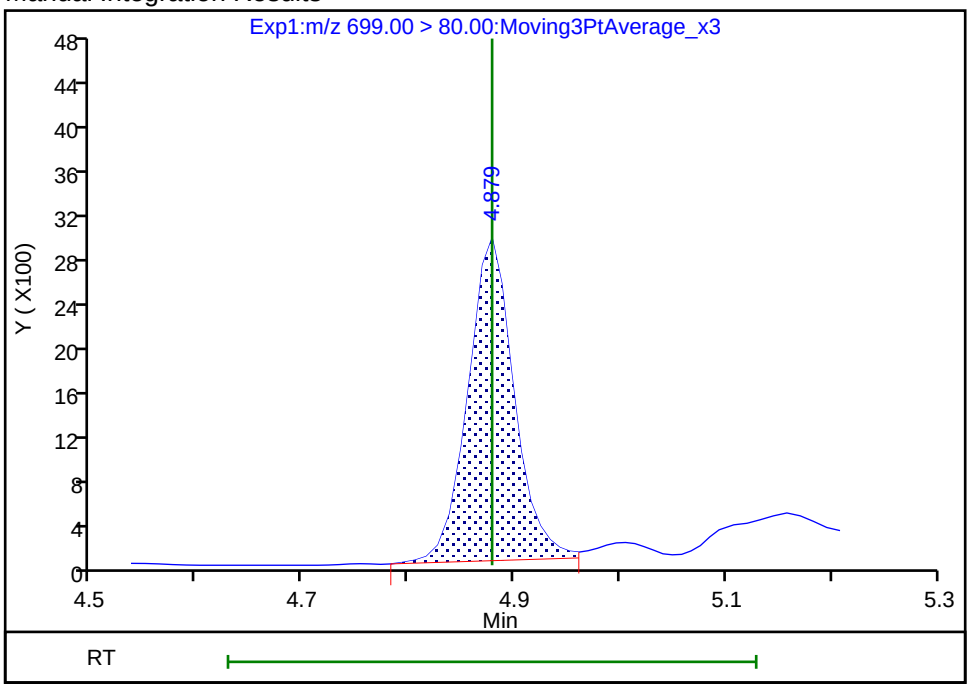
Processing Integration Results

RT: 4.88
Area: 8558
Amount: 0.051626
Amount Units: ng/ml



Manual Integration Results

RT: 4.88
Area: 8815
Amount: 0.055236
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:40:36
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

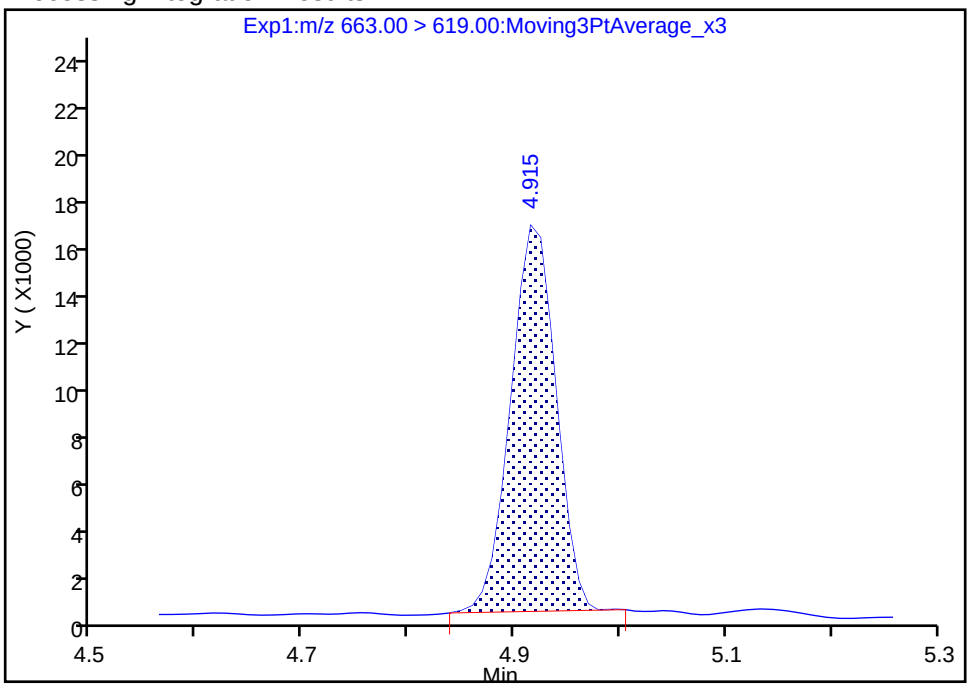
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL005.d				
Injection Date:	10-Feb-2020 11:48:38	Instrument ID:	LC812		
Lims ID:	IC				
Client ID:					
Operator ID:	lc812tech	ALS Bottle#:	2	Worklist Smp#:	5
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

41 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 1

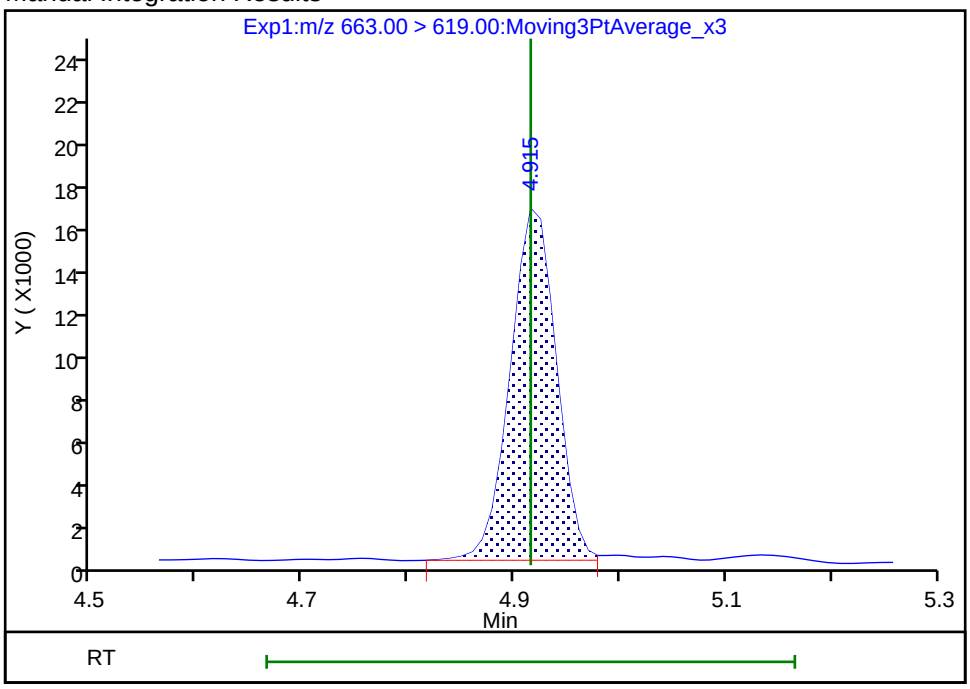
Processing Integration Results

RT: 4.92
Area: 47955
Amount: 0.051988
Amount Units: ng/ml



Manual Integration Results

RT: 4.92
Area: 49120
Amount: 0.051983
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:40:52
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

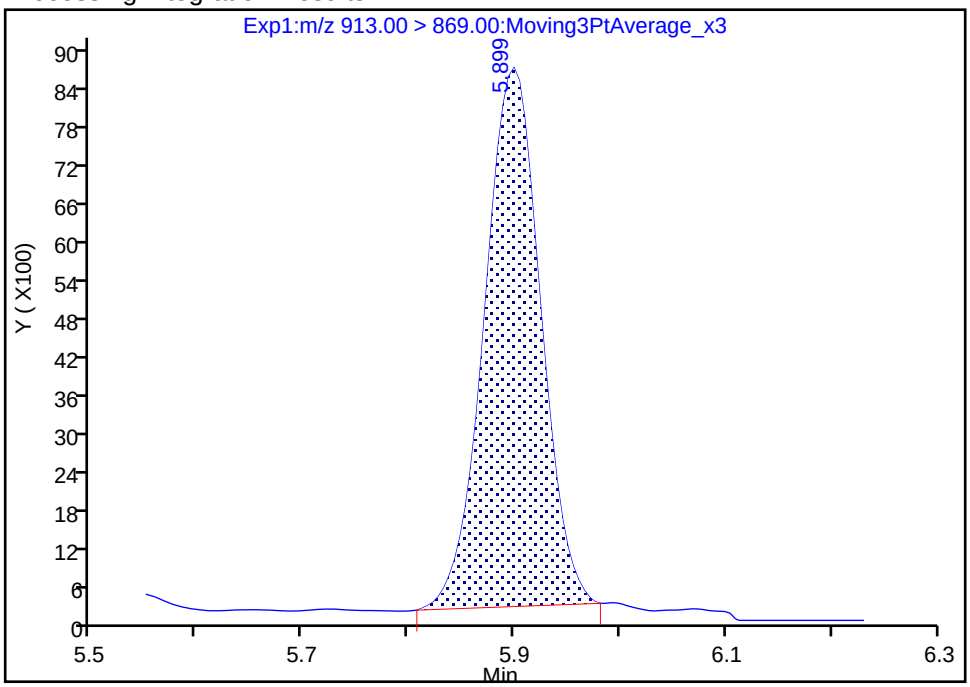
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL005.d
Injection Date: 10-Feb-2020 11:48:38 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

46 Perfluorooctadecanoic acid, CAS: 16517-11-6

Signal: 1

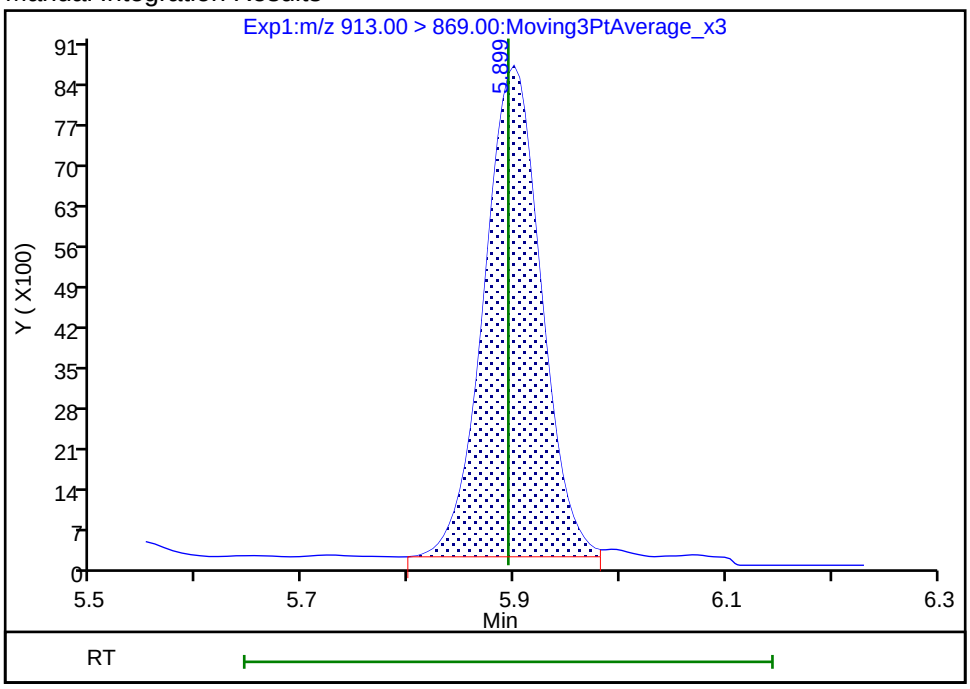
Processing Integration Results

RT: 5.90
Area: 31204
Amount: 0.050020
Amount Units: ng/ml



Manual Integration Results

RT: 5.90
Area: 31906
Amount: 0.053183
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:41:07
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

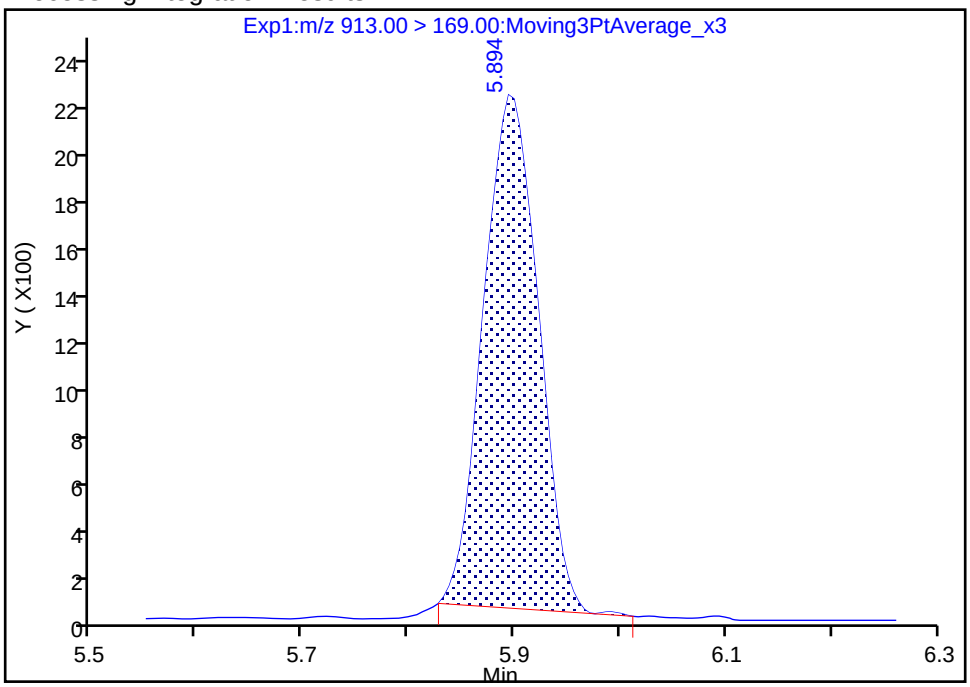
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL005.d
Injection Date: 10-Feb-2020 11:48:38 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

46 Perfluorooctadecanoic acid, CAS: 16517-11-6

Signal: 2

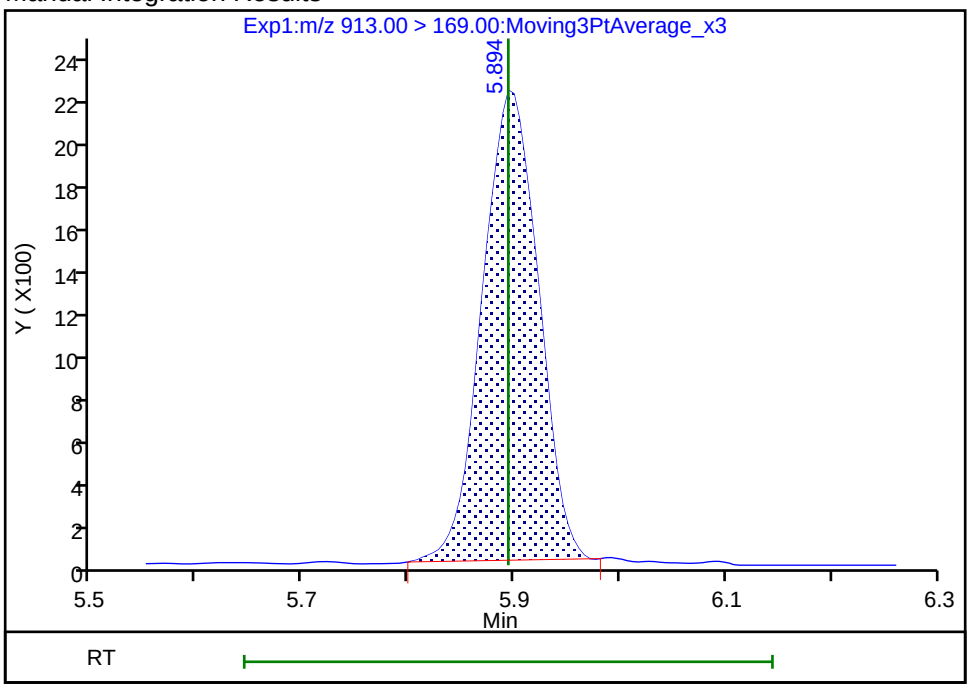
Processing Integration Results

RT: 5.89
Area: 7886
Amount: 0.050020
Amount Units: ng/ml



Manual Integration Results

RT: 5.89
Area: 8139
Amount: 0.053183
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:41:12
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL006.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 10-Feb-2020 11:56:49 ALS Bottle#: 3 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: IC 2
Misc. Info.: 200-0039917-006 Plate: 1 Rack: 1
Operator ID: lc812tech Instrument ID: LC812
Sublist: chrom-PFC_LC812*sub3

Method: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\PFC_LC812.m
Limit Group: LC_PFC_ICAL
Last Update: 10-Feb-2020 13:09:34 Calib Date: 10-Feb-2020 12:29:33
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL010.d

Column 1 : C-18 (4.60 mm) Det: EXP1
Process Host: CTX0302

First Level Reviewer: chirgwinb Date: 10-Feb-2020 12:44:13
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										M
212.90 > 169.00	1.926	1.917	0.009	1.005	98242	0.1122		112	14.1	M
D 1 13C4 PFBA										M
217.00 > 172.00	1.917	1.917	0.0	0.557	2300786	2.27		90.8	7752	M
D 3 13C5 PFPeA										
267.90 > 223.00	2.271	2.271	0.0	0.660	1757680	2.23		89.2	750	
4 Perfluoropentanoic acid										
262.90 > 219.00	2.271	2.271	0.0	1.000	76132	0.1004		100	8.1	
D 47 13C3 PFBS										
301.90 > 80.00	2.284	2.284	0.0	0.664	2221503	2.10		90.1	700429	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.298	2.284	0.014	1.006	92342	0.0947	Target=2.20	107	95.3	
298.90 > 99.00	2.298	2.284	0.014	1.006	39947		2.31(1.10-3.31)	107	45.9	
61 1H,1H,2H,2H-perfluorohexanesulfoni										
327.00 > 307.00	2.623	2.623	0.0	1.000	13276	0.0955		102	159	
D 60 M2-4:2 FTS										
329.00 > 81.00	2.623	2.623	0.0	0.763	167405	2.16		92.5	144	
70 Perfluoropentanesulfonic acid										
349.00 > 80.00	2.673	2.660	0.013	0.875	86657	0.0985	Target=3.28	105	323	
349.00 > 99.00	2.673	2.660	0.013	0.875	23387		3.71(1.64-4.91)	105	94.6	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.660	2.660	0.0	1.000	83774	0.1000	Target=12.10	100.0	30.5	
313.00 > 119.00	2.660	2.660	0.0	1.000	7792		10.75(6.05-18.16)	100.0	14.6	
D 7 13C2 PFHxA										
315.00 > 270.00	2.660	2.660	0.0	0.774	2115777	2.29		91.8	6304	
D 64 13C3 HFPO-DA										
332.10 > 287.00	2.768	2.776	-0.008	0.805	158601	2.17		86.8	1164	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.776	2.776	0.0	1.003	15306	0.1030		103	6.4	
D 11 18O2 PFHxS										
403.00 > 84.00	3.055	3.044	0.011	0.889	1638907	2.19		92.5	8757	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.055	3.044	0.011	1.000	80254	0.0981	Target=4.10	108	186	M
399.00 > 99.00	3.055	3.044	0.011	1.000	19016		4.22(2.05-6.15)	108	45.5	M
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.055	3.055	0.0	1.000	84242	0.0993	Target=3.67	99.3	35.2	
363.00 > 169.00	3.055	3.055	0.0	1.000	23710		3.55(1.83-5.50)	99.3	61.4	
D 9 13C4 PFHpA										
367.00 > 322.00	3.055	3.055	0.0	0.889	2072204	2.34		93.5	5115	
77 DONA										
377.00 > 251.00	3.101	3.089	0.012	0.812	178978	0.0944	Target=2.51	100	397	
377.00 > 85.00	3.101	3.089	0.012	0.812	70417		2.54(1.26-3.77)	100	275	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.421	3.413	0.008	0.896	63792	0.1016	Target=5.96	107	982	
449.00 > 99.00	3.421	3.413	0.008	0.896	10303		6.19(2.98-8.94)	107	123	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.430	3.421	0.009	0.998	227729	2.22		93.4	836	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.421	3.421	0.0	0.998	10841	0.1006		106	159	
D 14 13C4 PFOA										
417.00 > 372.00	3.438	3.430	0.008	1.000	2157848	2.35		94.1	6483	
* 62 13C2 PFOA										
415.00 > 370.00	3.438	3.430	0.008		2434404	2.50			13383	
15 Perfluorooctanoic acid										M
413.00 > 369.00	3.438	3.430	0.008	1.000	84355	0.0938	Target=2.57	93.8	27.7	M
413.00 > 169.00	3.438	3.430	0.008	1.000	34196		2.47(1.28-3.85)	93.8	128	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.817	3.805	0.012	1.000	53945	0.0952	Target=5.37	103	179	M
499.00 > 99.00	3.805	3.805	0.0	0.997	9807		5.50(2.69-8.06)	103	52.7	M
D 18 13C4 PFOS										
503.00 > 80.00	3.817	3.805	0.012	1.110	1233255	2.21		92.5	4809	
20 Perfluorononanoic acid										
463.00 > 419.00	3.841	3.829	0.012	1.003	87932	0.1082	Target=7.44	108	24.4	
463.00 > 169.00	3.841	3.829	0.012	1.003	13005		6.76(3.72-11.15)	108	197	
D 19 13C5 PFNA										
468.00 > 423.00	3.829	3.829	0.0	1.114	1975239	2.24		89.7	6240	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.994	3.994	0.0	1.046	64535	0.0894		96.0	173	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.141	4.141	0.0	1.085	45493	0.0996	Target=2.85	104	345	
549.00 > 99.00	4.141	4.141	0.0	1.085	14306		3.18(1.43-4.28)	104	98.3	
D 23 13C2 PFDA										
515.00 > 470.00	4.174	4.164	0.010	1.214	2139154	2.24		89.5	4837	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
24 Perfluorodecanoic acid										
513.00 > 469.00	4.174	4.164	0.010	1.000	95104	0.1085	Target=9.04	109	74.5	
513.00 > 169.00	4.174	4.164	0.010	1.000	9710		9.79(4.52-13.56)	109	54.0	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.185	4.174	0.011	1.217	337051	2.32		97.1	1593	
25 1H,1H,2H,2H-perfluorodecanesulfoni										
527.00 > 507.00	4.185	4.174	0.011	1.000	8169	0.0935		97.6	178	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.228	4.218	0.010	1.000	86574	0.0947		94.7	321	
D 21 13C8 FOSA										
506.00 > 78.00	4.228	4.218	0.010	1.230	2230862	2.27		90.9	4455	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.328	4.316	0.012	1.259	188226	2.49		99.8	1998	
28 N-methylperfluorooctanesulfonamido										M
570.00 > 419.00	4.339	4.328	0.011	1.003	5438	0.0843		84.3	103	M
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.431	4.420	0.011	1.161	40668	0.1012	Target=2.69	105	275	
599.00 > 99.00	4.431	4.420	0.011	1.161	15738		2.58(1.34-4.03)	105	175	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.456	4.456	0.0	1.000	75412	0.1084	Target=7.95	108	64.8	
563.00 > 169.00	4.456	4.456	0.0	1.000	8221		9.17(3.98-11.93)	108	113	
D 30 13C2 PFUnA										
565.00 > 520.00	4.456	4.456	0.0	1.296	1918562	2.30		92.0	3997	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.469	4.456	0.013	1.300	181082	2.10		84.2	935	
33 N-ethylperfluorooctanesulfonamidoa										M
584.00 > 419.00	4.469	4.469	0.0	1.000	6482	0.1123		112	61.0	M
66 11-Chloroeicosafluoro-3-oxaundecan										
631.00 > 451.00	4.563	4.550	0.013	1.195	79585	0.0970		103	405	
D 36 13C2 PFDoA										
615.00 > 570.00	4.704	4.693	0.011	1.368	2195049	2.35		94.0	7305	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.704	4.693	0.011	1.000	82909	0.0973	Target=7.12	97.3	19.6	
613.00 > 169.00	4.704	4.693	0.011	1.000	11019		7.52(3.56-10.68)	97.3	149	
74 1H,1H,2H,2H-perfluorododecanesulfo										
627.00 > 607.00	4.724	4.714	0.010	1.129	5045	0.1080		112	143	
75 Perfluorododecanesulfonic acid (PF										M
699.00 > 80.00	4.879	4.879	0.0	1.278	12901	0.0925	Target=0.50	95.6	34.4	M
699.00 > 99.00	4.879	4.879	0.0	1.278	26783		0.48(0.25-0.74)	95.6	383	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.924	4.915	0.009	1.047	73894	0.0953	Target=4.73	95.3	17.1	
663.00 > 169.00	4.924	4.915	0.009	1.047	17391		4.25(2.36-7.09)	95.3	179	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.132	5.120	0.012	1.000	11670	0.1034	Target=1.08	103	147	
713.00 > 219.00	5.120	5.120	0.0	0.998	11006		1.06(0.54-1.62)	103	186	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.132	5.120	0.012	1.493	1814422	2.26		90.6	6506	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.508	5.499	0.009	1.000	93122	0.1049	Target=4.40	105	33.1	
813.00 > 169.00	5.508	5.499	0.009	1.000	21715		4.29(2.20-6.60)	105	347	
D 44 13C2 PFHxDA										
815.00 > 770.00	5.508	5.499	0.009	1.602	1938226	2.22		89.0	8025	
46 Perfluorooctadecanoic acid										M
913.00 > 869.00	5.904	5.894	0.010	1.072	52097	0.1079	Target=4.01	108	15.1	M
913.00 > 169.00	5.899	5.894	0.005	1.071	12845		4.06(2.01-6.02)	108	220	M

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

PFAS32NCIC2_00003 Amount Added: 100.00 Units: uL

Report Date: 10-Feb-2020 13:09:35 Chrom Revision: 2.3 14-Jan-2020 22:23:42

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL006.d

Injection Date: 10-Feb-2020 11:56:49 Instrument ID: LC812

Lims ID: IC

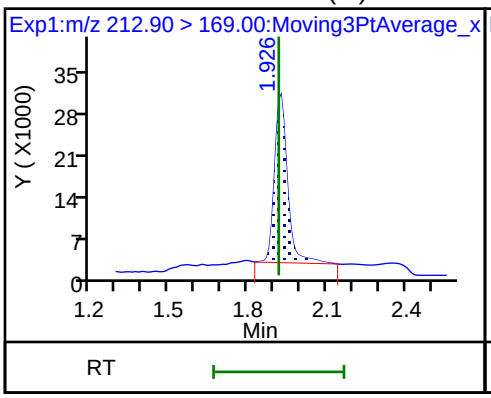
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Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 6

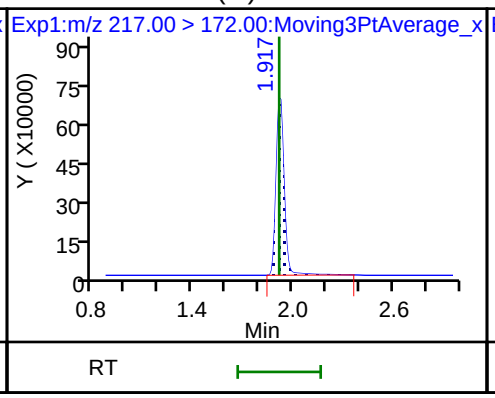
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFC_LC812 Limit Group: LC_PFC_ICAL

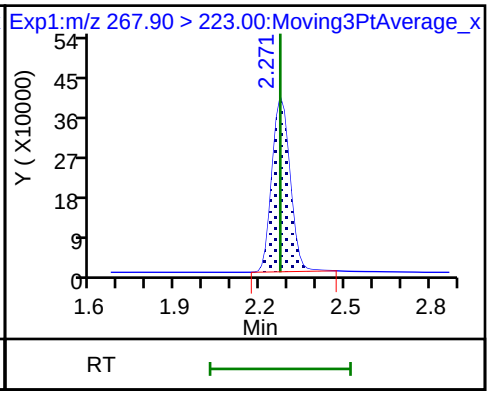
2 Perfluorobutanoic acid (M)



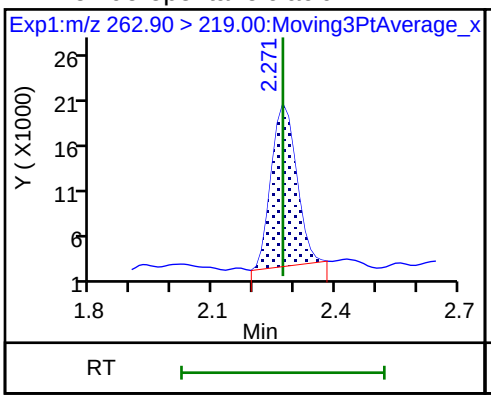
D 1 13C4 PFBA (M)



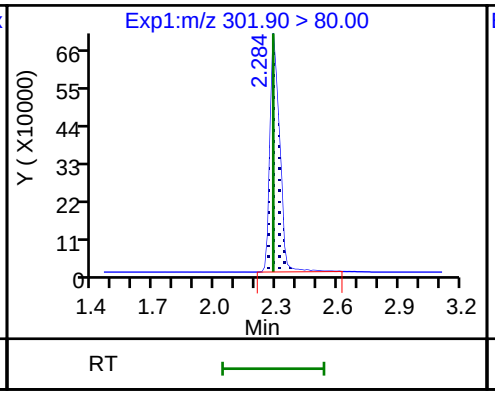
D 3 13C5 PFPeA



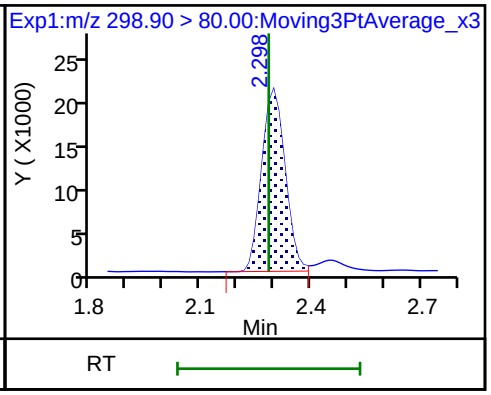
4 Perfluoropentanoic acid



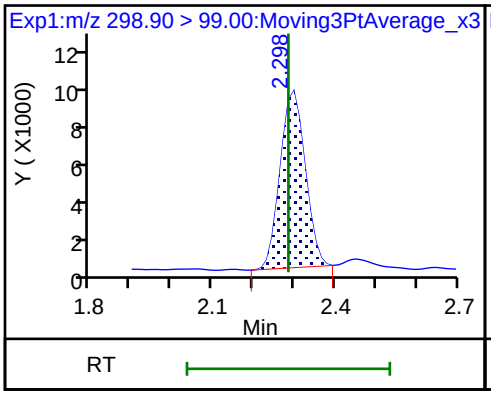
D 47 13C3 PFBS



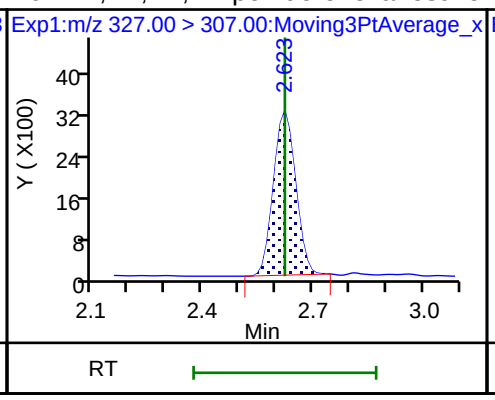
5 Perfluorobutanesulfonic acid



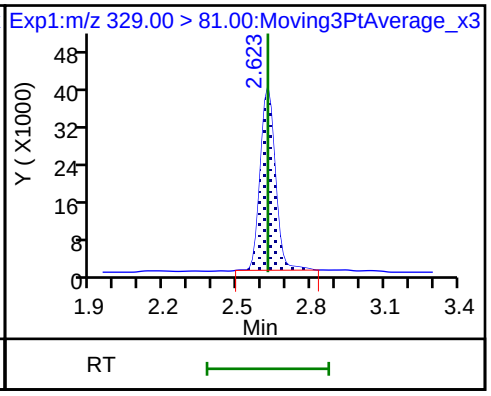
5 Perfluorobutanesulfonic acid



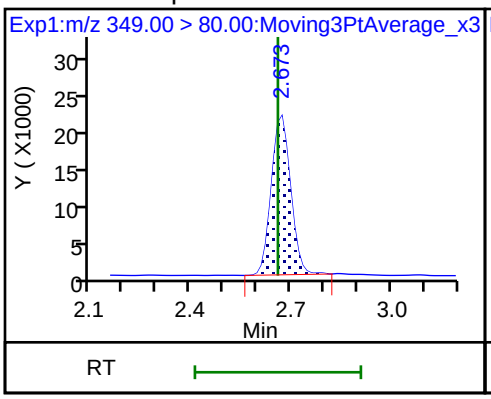
61 1H,1H,2H,2H-perfluorohexanesulfon



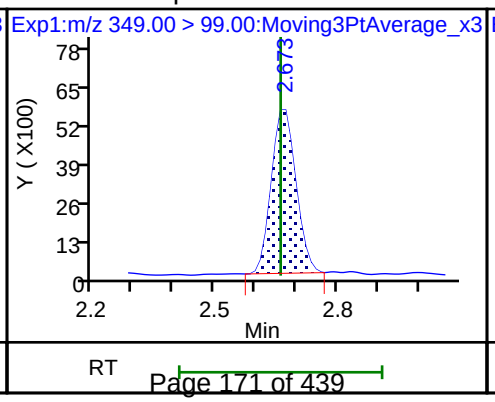
D 60 M2-4:2 FTS



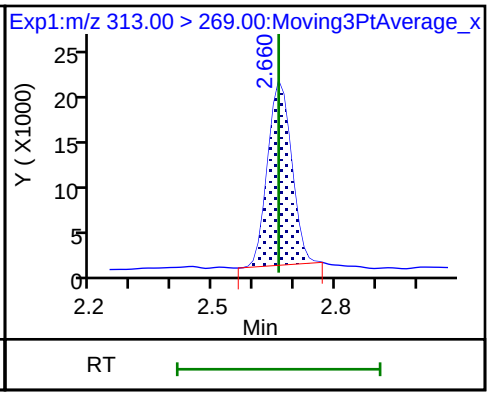
70 Perfluoropentanesulfonic acid



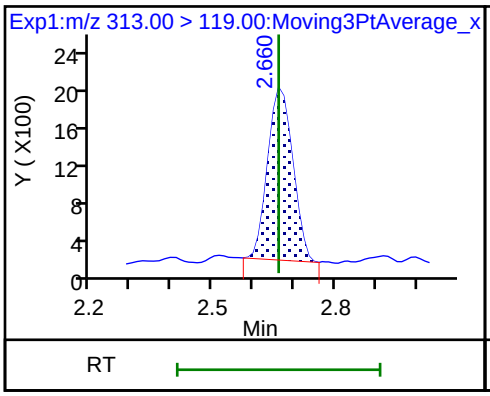
70 Perfluoropentanesulfonic acid



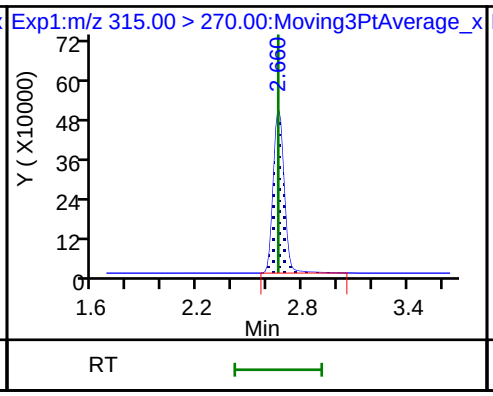
6 Perfluorohexanoic acid



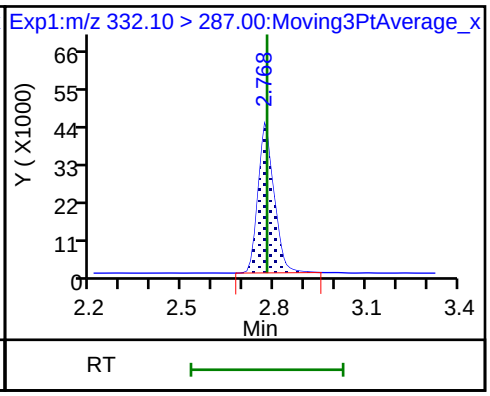
6 Perfluorohexanoic acid



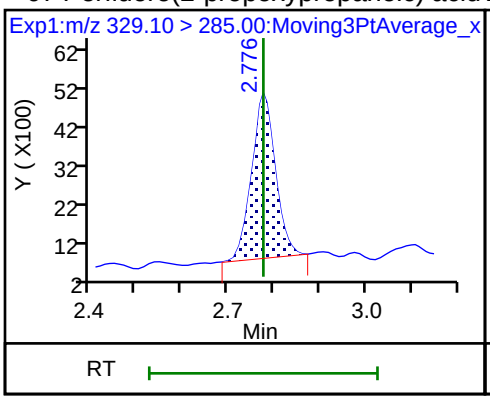
D 7 13C2 PFHxA



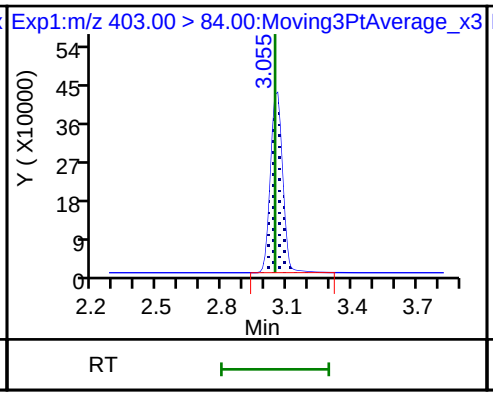
D 64 13C3 HFPO-DA



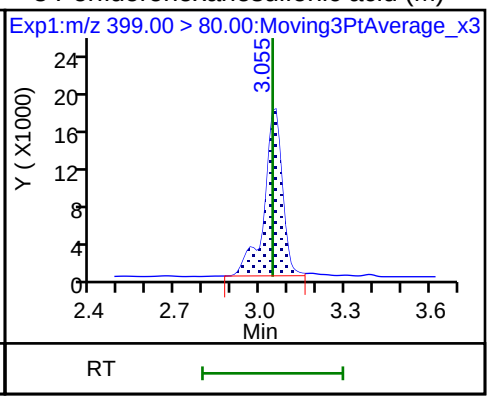
67 Perfluoro(2-propoxypropanoic) acid



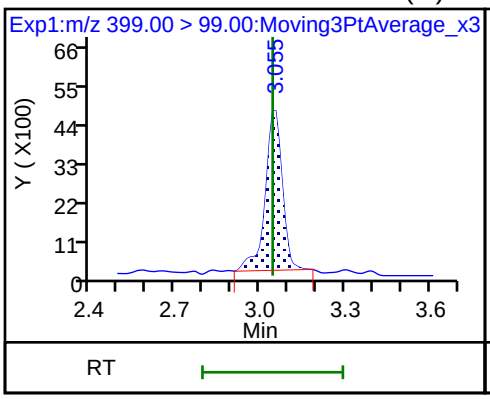
D 11 18O2 PFHxS



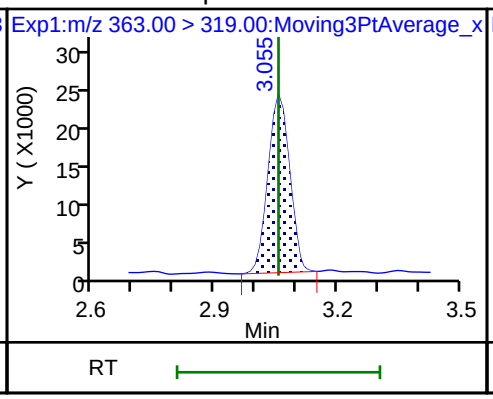
8 Perfluorohexanesulfonic acid (M)



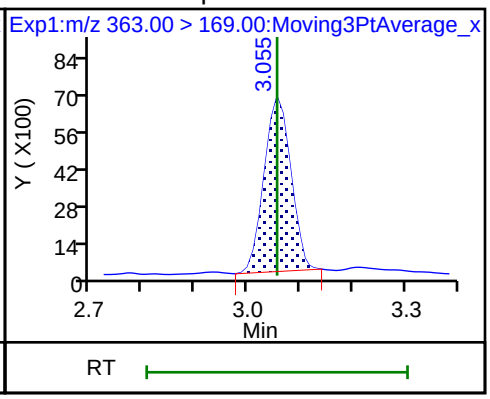
8 Perfluorohexanesulfonic acid (M)



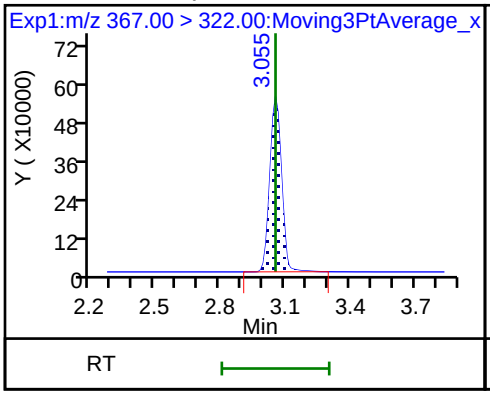
10 Perfluoroheptanoic acid



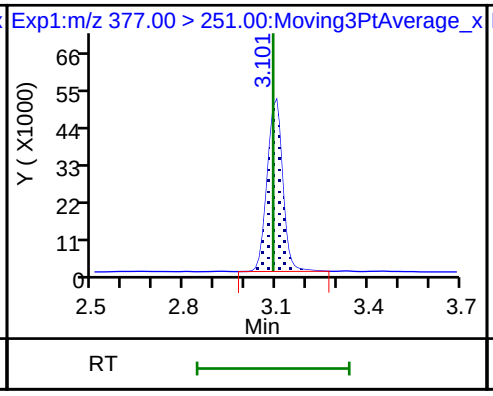
10 Perfluoroheptanoic acid



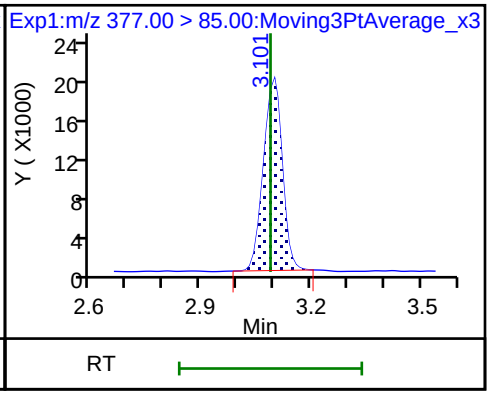
D 9 13C4 PFHpA



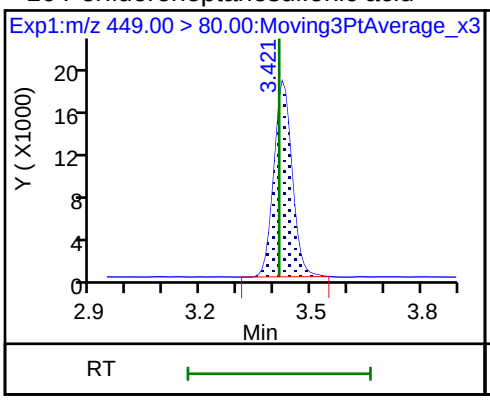
77 DONA



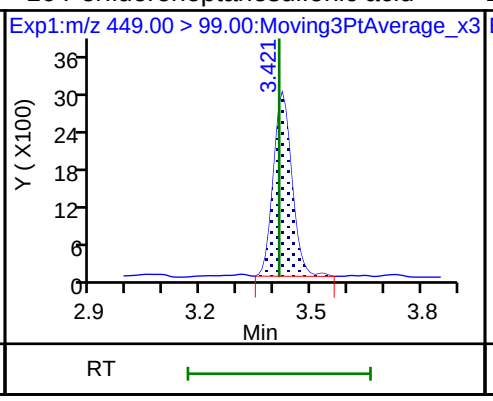
77 DONA



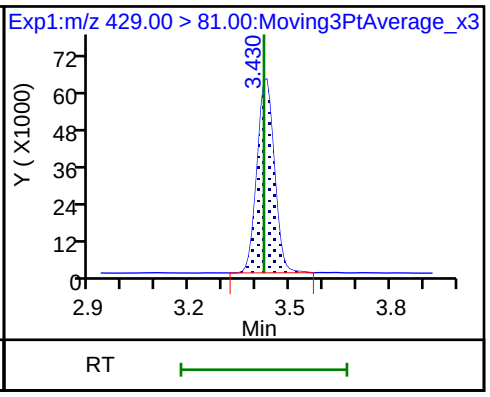
16 Perfluoroheptanesulfonic acid



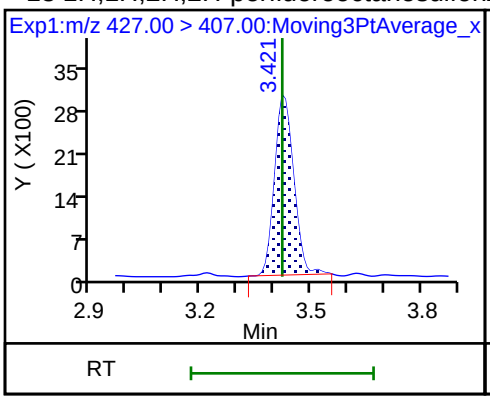
16 Perfluoroheptanesulfonic acid



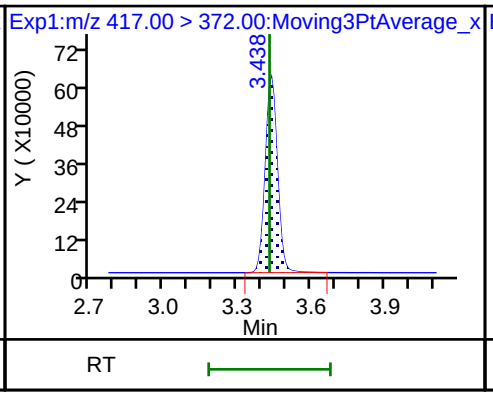
D 12 M2-6:2 FTS



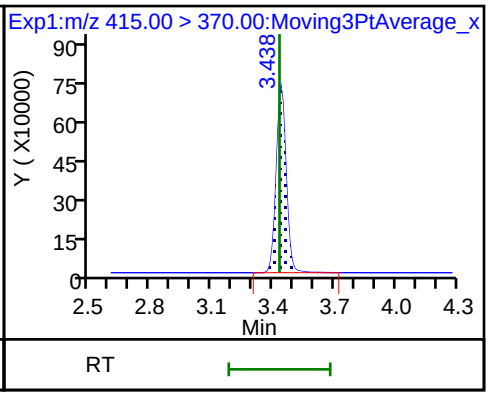
13 1H,1H,2H,2H-perfluorooctanesulfon



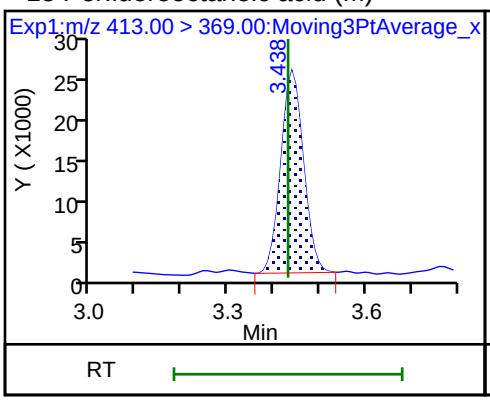
D 14 13C4 PFOA



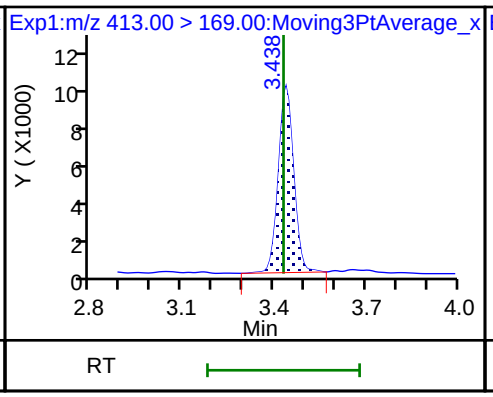
* 62 13C2 PFOA



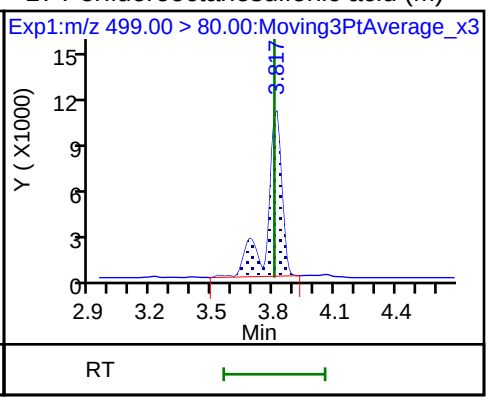
15 Perfluorooctanoic acid (M)



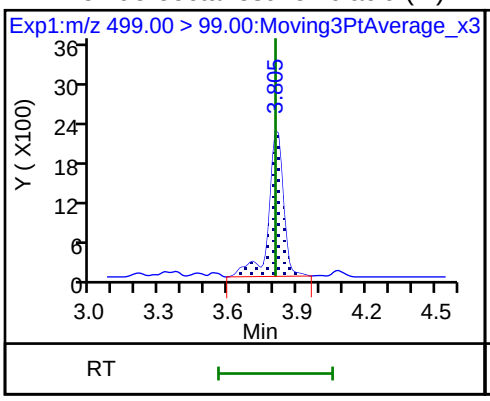
15 Perfluorooctanoic acid



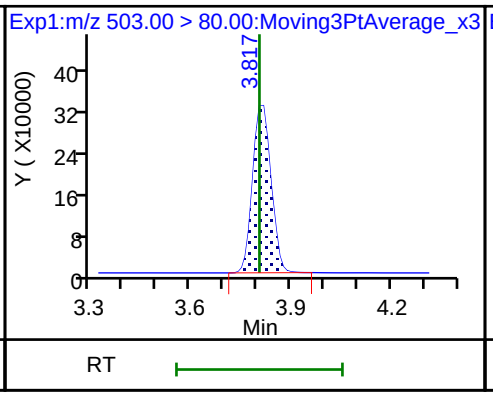
17 Perfluorooctanesulfonic acid (M)



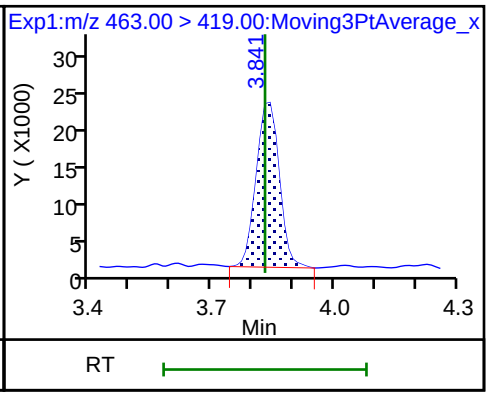
17 Perfluorooctanesulfonic acid (M)



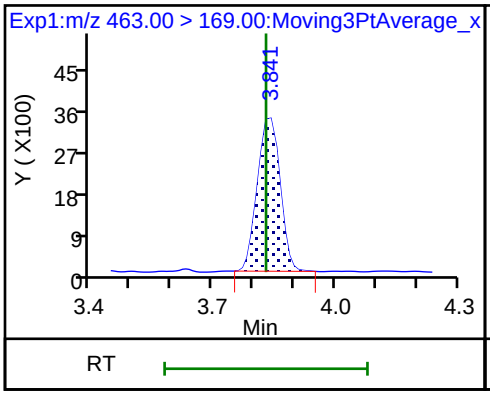
D 18 13C4 PFOS



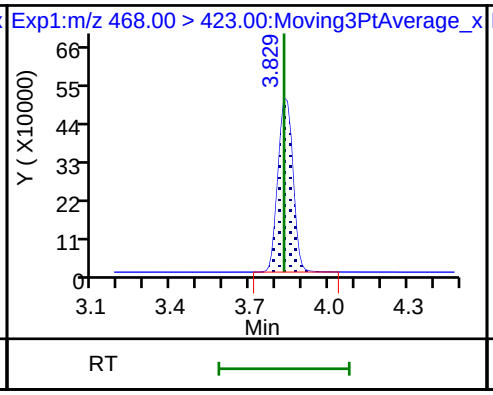
20 Perfluorononanoic acid



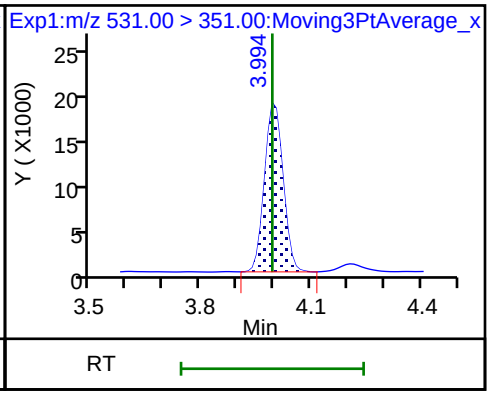
20 Perfluorononanoic acid



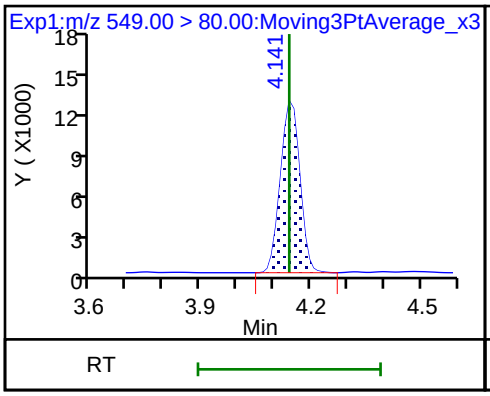
D 19 13C5 PFNA



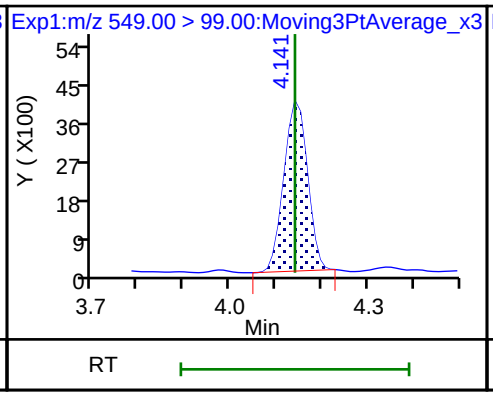
69 9-Chlorohexadecafluoro-3-oxanonane



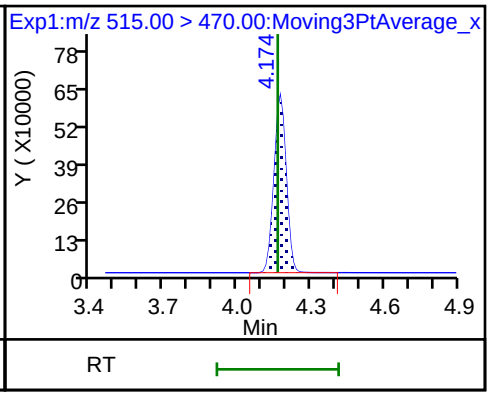
68 Perfluorononanesulfonic acid



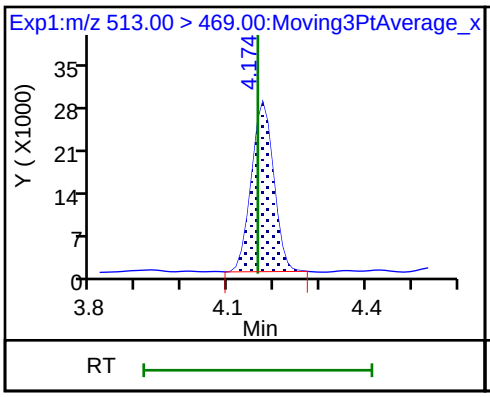
68 Perfluorononanesulfonic acid



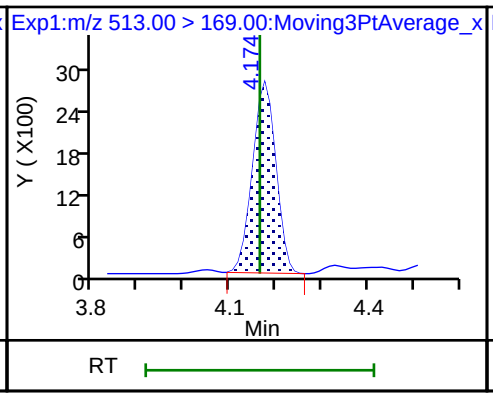
D 23 13C2 PFDA



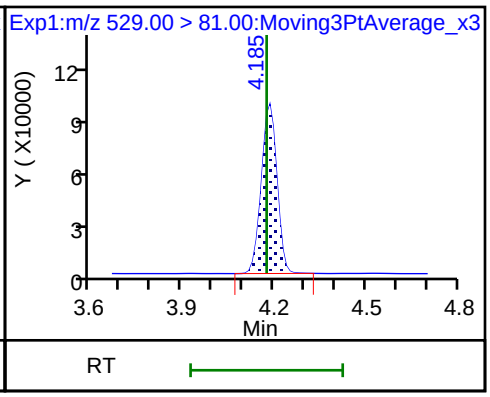
24 Perfluorodecanoic acid



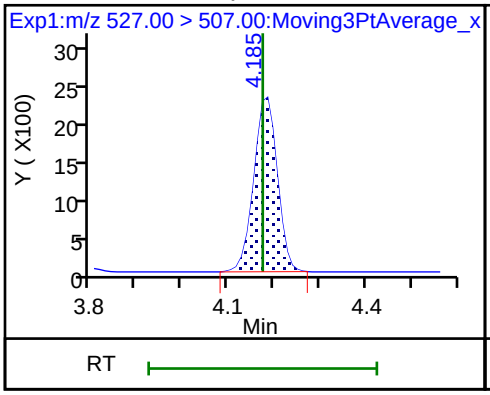
24 Perfluorodecanoic acid



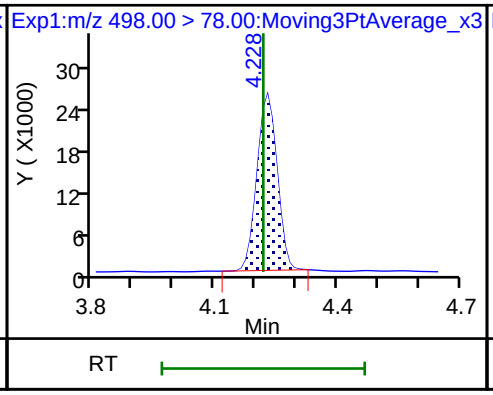
D 26 M2-8:2 FTS



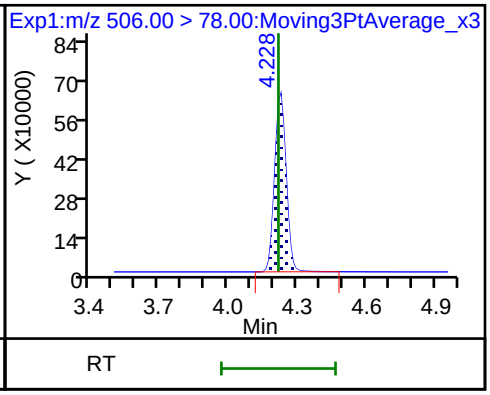
25 1H,1H,2H,2H-perfluorodecanesulfoni



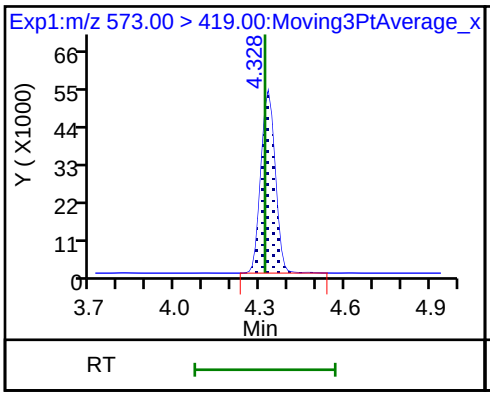
22 Perfluorooctanesulfonamide



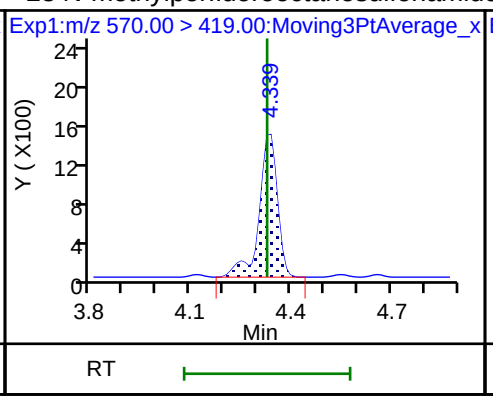
D 21 13C8 FOSA



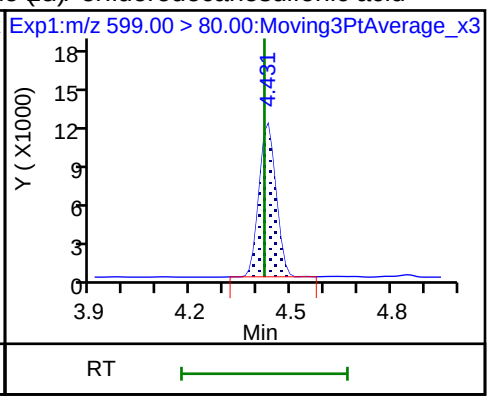
D 27 d3-NMeFOSAA



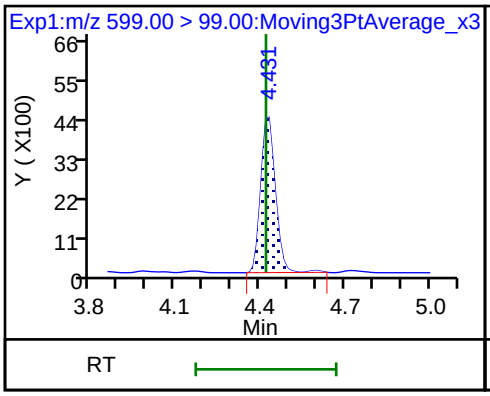
28 N-methylperfluorooctanesulfonamido (M)



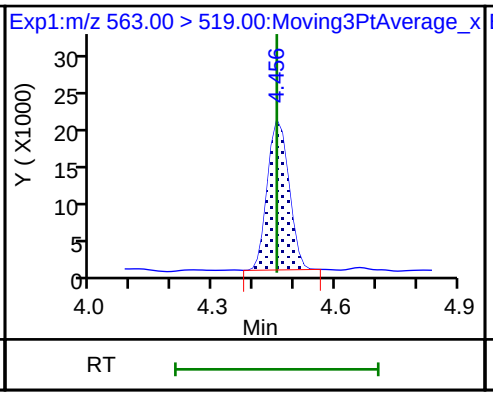
29 Perfluorodecanesulfonic acid



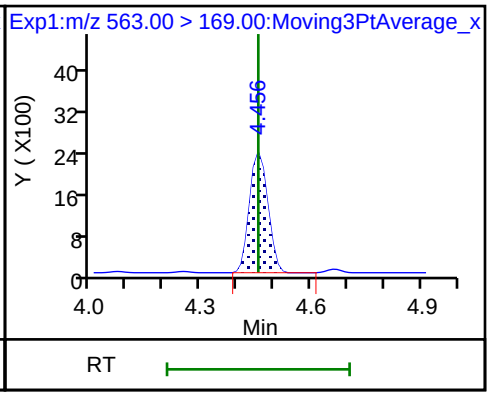
29 Perfluorodecanesulfonic acid



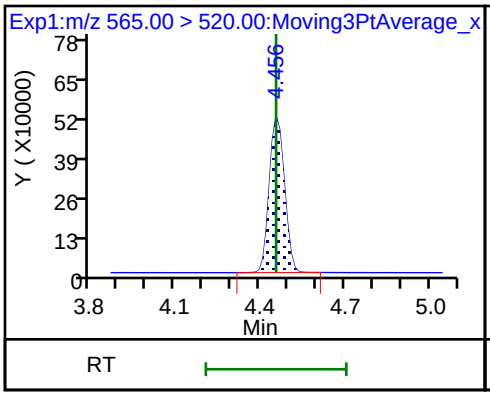
31 Perfluoroundecanoic acid



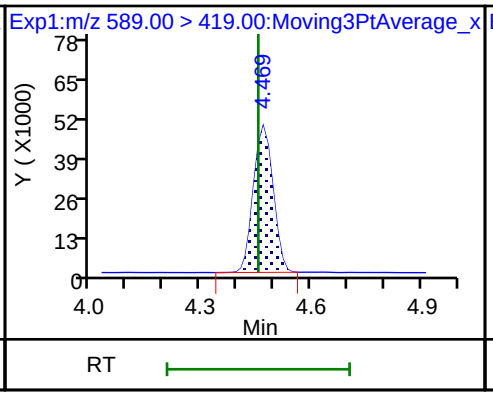
31 Perfluoroundecanoic acid



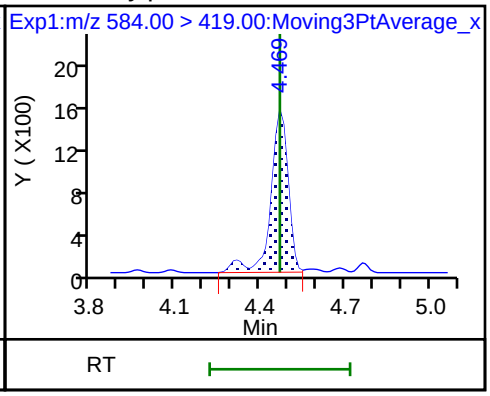
D 30 13C2 PFUnA



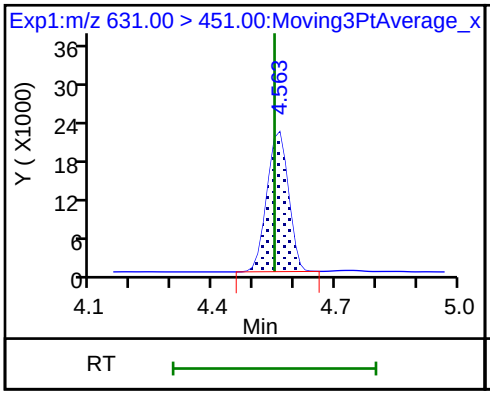
D 32 d5-NEtFOSAA



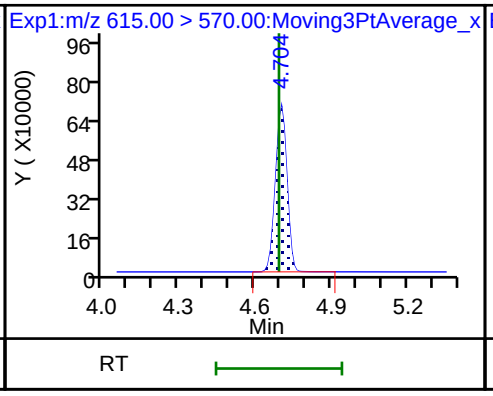
33 N-ethylperfluorooctanesulfonamidoa (M)



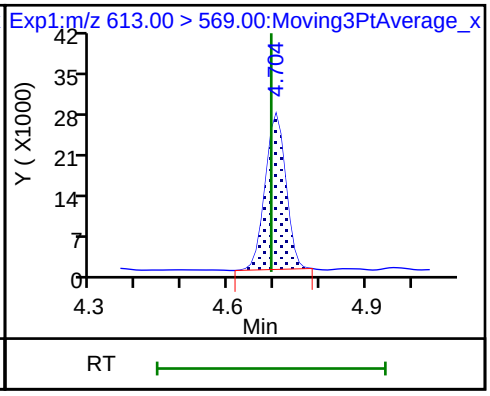
66 11-Chloroeicosafluoro-3-oxaundecan



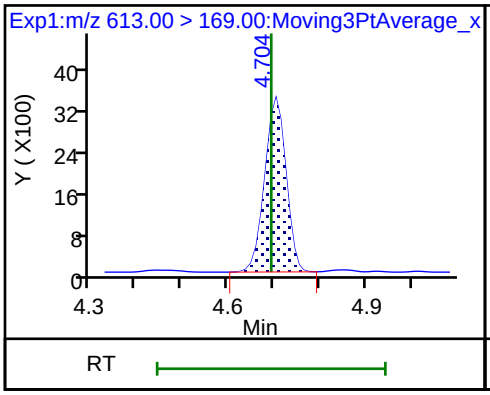
D 36 13C2 PFDoA



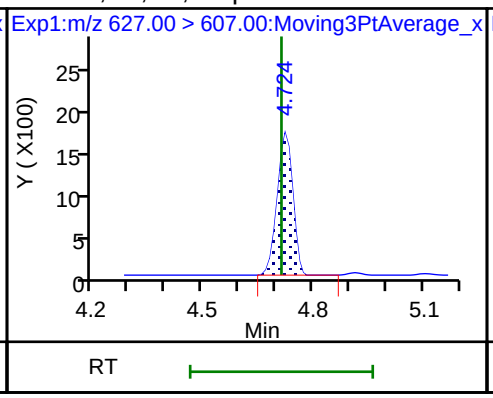
37 Perfluorododecanoic acid



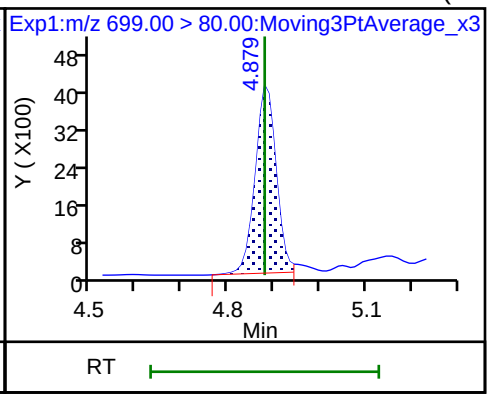
37 Perfluorododecanoic acid



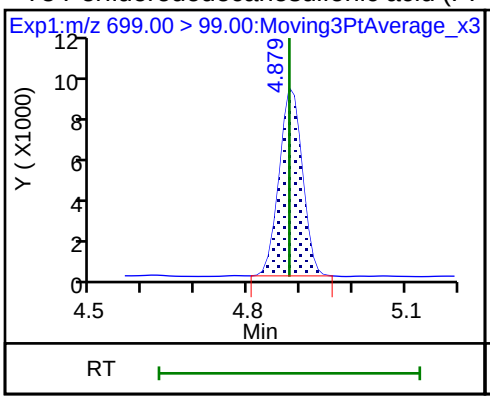
74 1H,1H,2H,2H-perfluorododecanesulfo



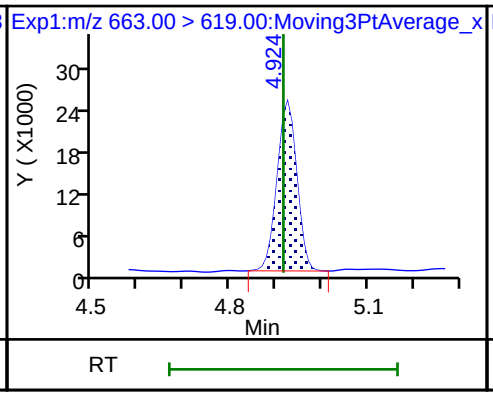
75 Perfluorododecanesulfonic acid (PF (M)



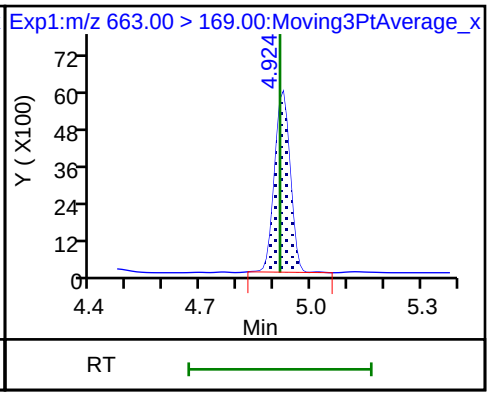
75 Perfluorododecanesulfonic acid (PF



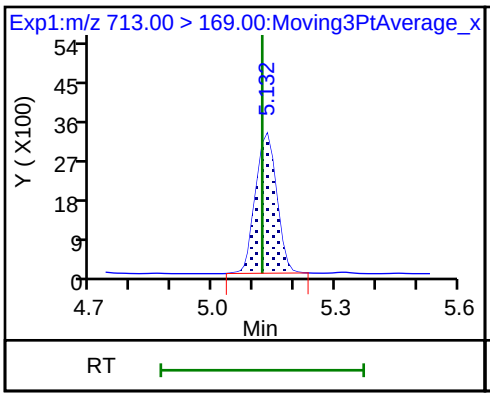
41 Perfluorotridecanoic acid



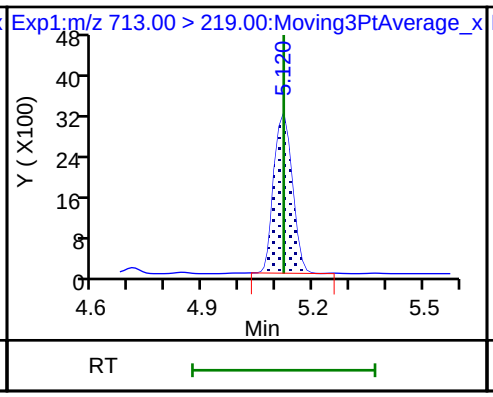
41 Perfluorotridecanoic acid



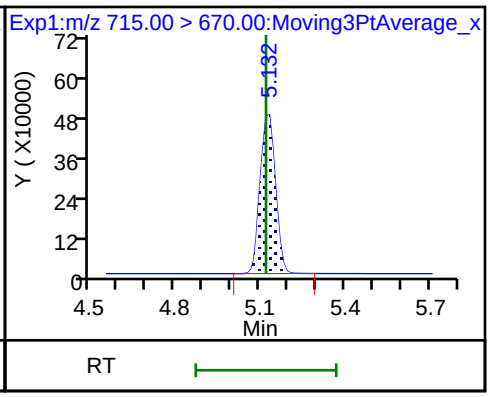
42 Perfluorotetradecanoic acid



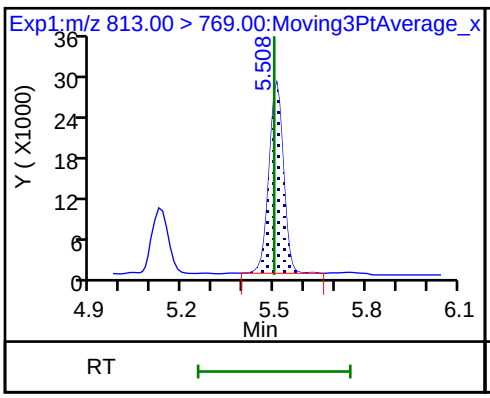
42 Perfluorotetradecanoic acid



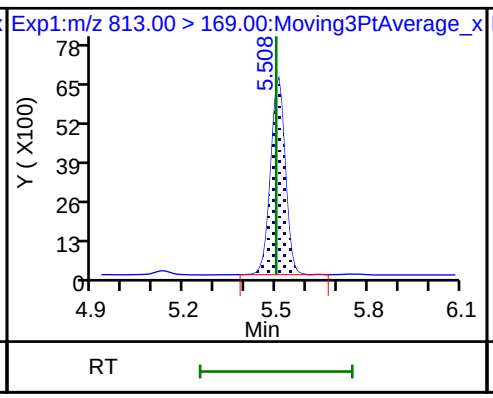
D 43 13C2 PFTeDA



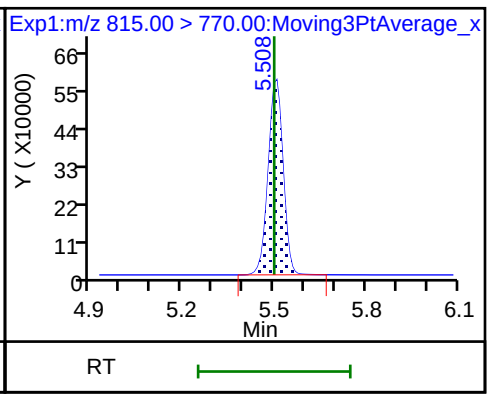
45 Perfluorohexadecanoic acid



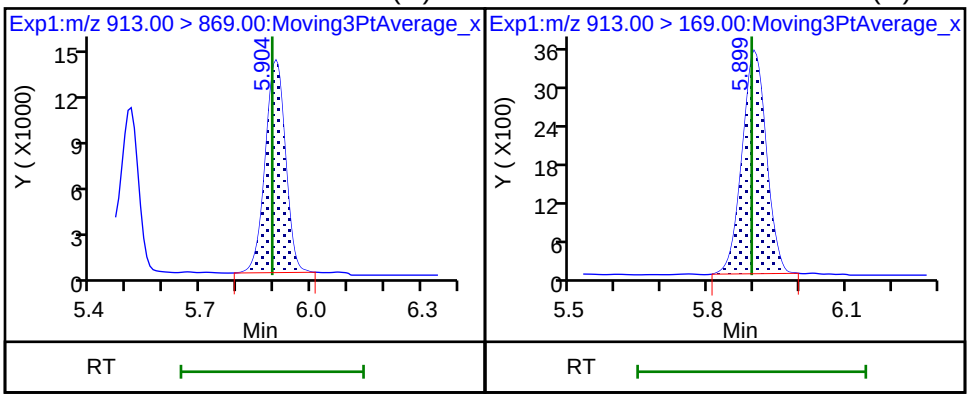
45 Perfluorohexadecanoic acid



D 44 13C2 PFHxDA



46 Perfluorooctadecanoic acid (M) 46 Perfluorooctadecanoic acid (M)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

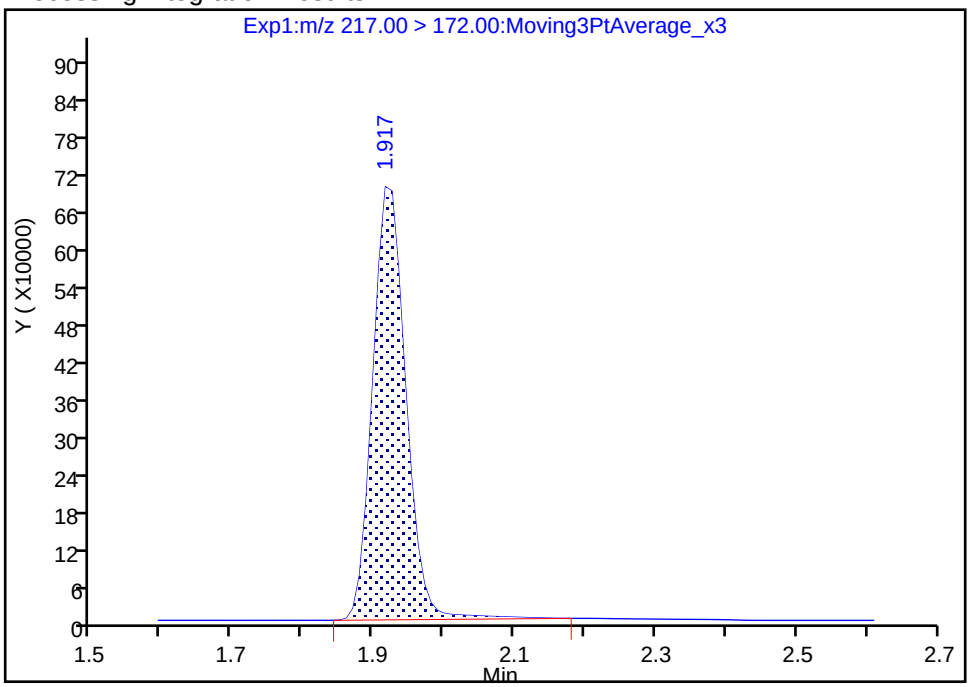
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Injection Date: 10-Feb-2020 11:56:49 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

D 1 13C4 PFBA, CAS: STL00992

Signal: 1

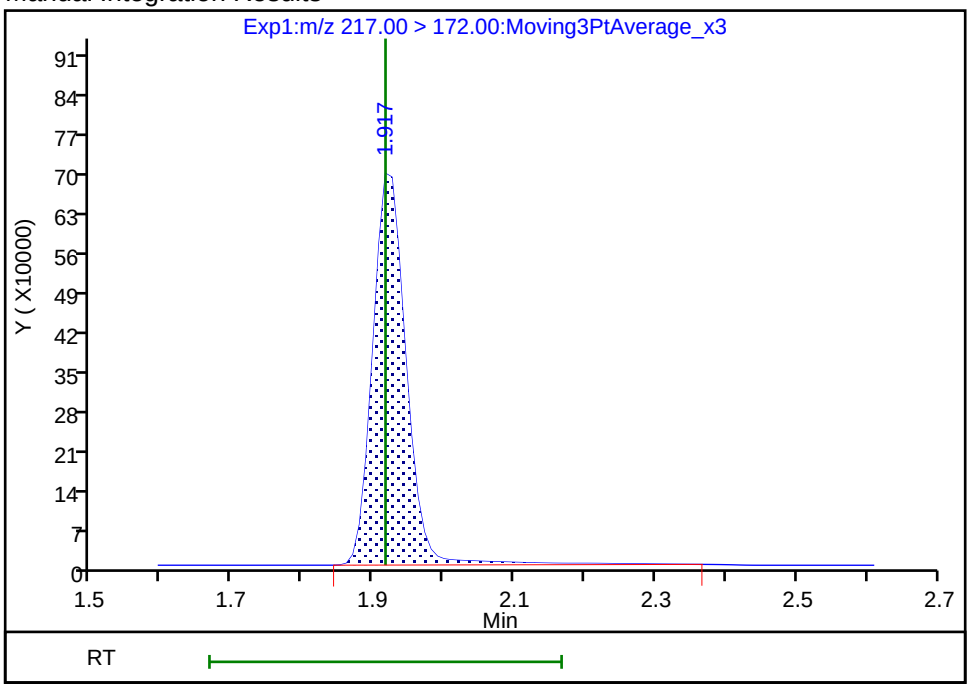
Processing Integration Results

RT: 1.92
Area: 2266225
Amount: 2.247519
Amount Units: ng/ml



Manual Integration Results

RT: 1.92
Area: 2300786
Amount: 2.271171
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:53:40
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

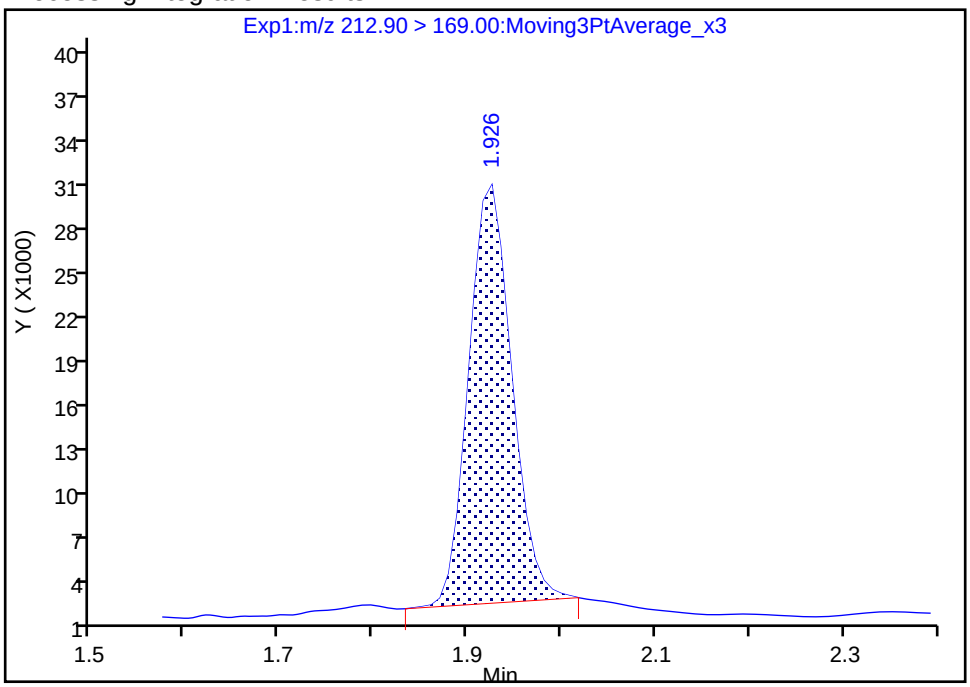
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Injection Date: 10-Feb-2020 11:56:49 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

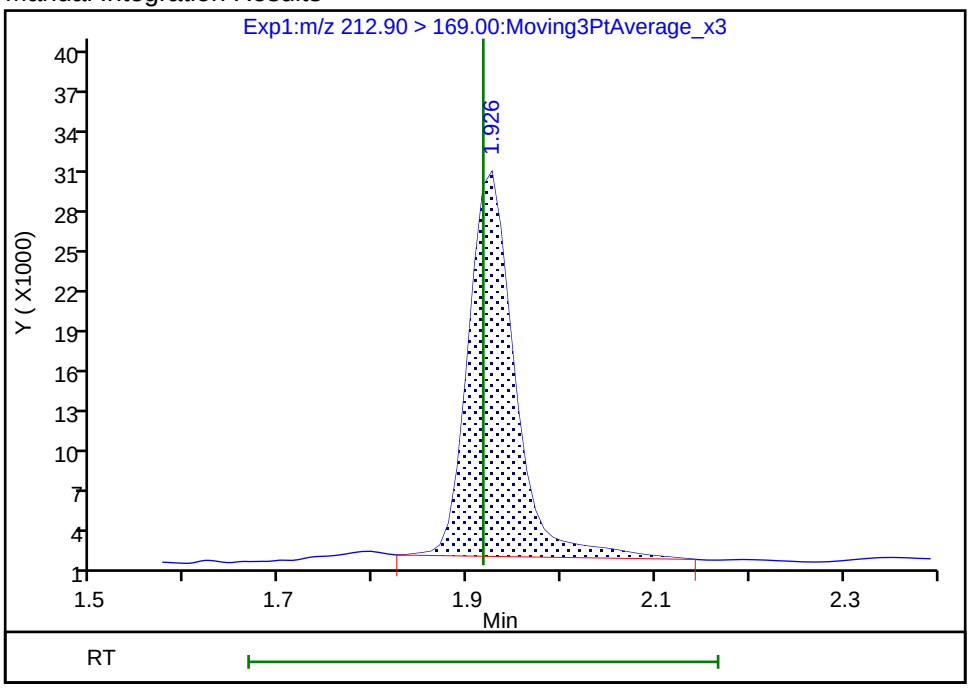
Processing Integration Results

RT: 1.93
Area: 89521
Amount: 0.102890
Amount Units: ng/ml



Manual Integration Results

RT: 1.93
Area: 98242
Amount: 0.112217
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:52:50
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

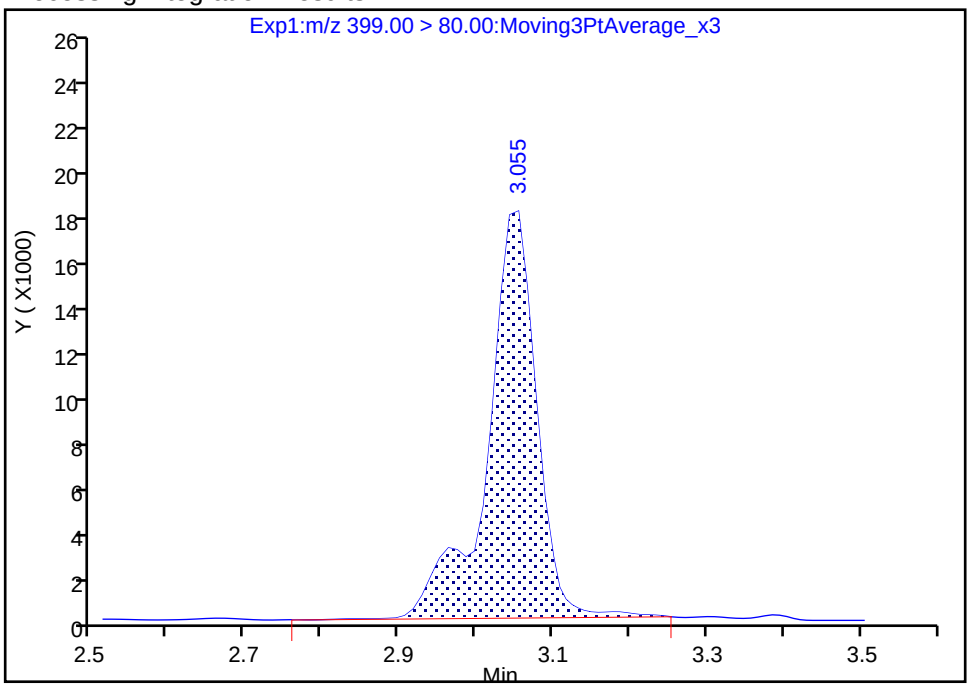
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Injection Date: 10-Feb-2020 11:56:49 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

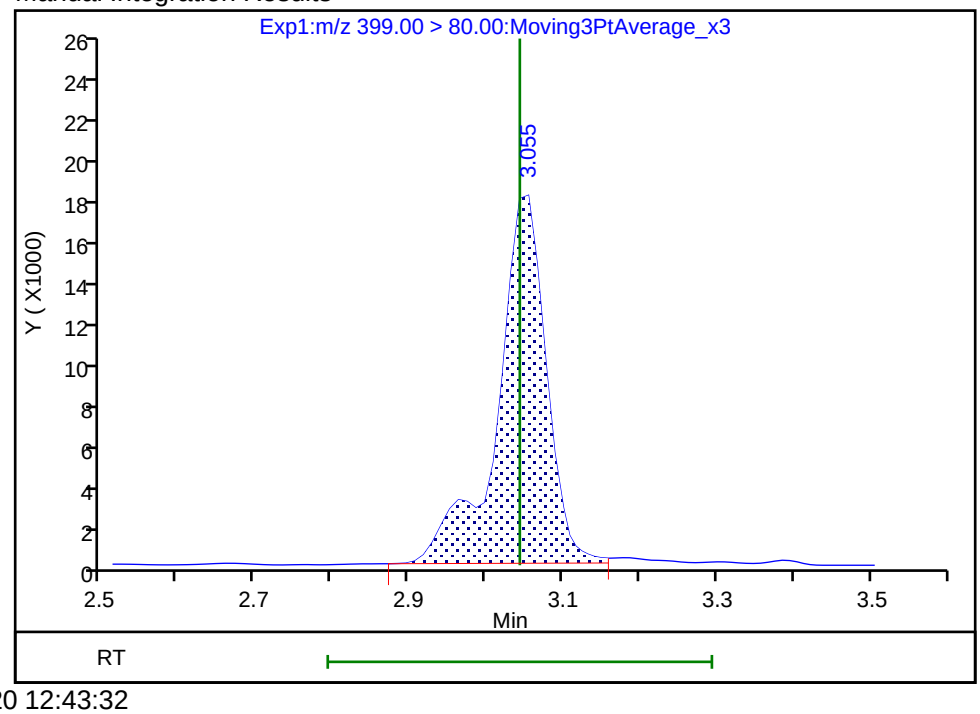
Processing Integration Results

RT: 3.06
Area: 81201
Amount: 0.092088
Amount Units: ng/ml



Manual Integration Results

RT: 3.06
Area: 80254
Amount: 0.098132
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:43:32
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

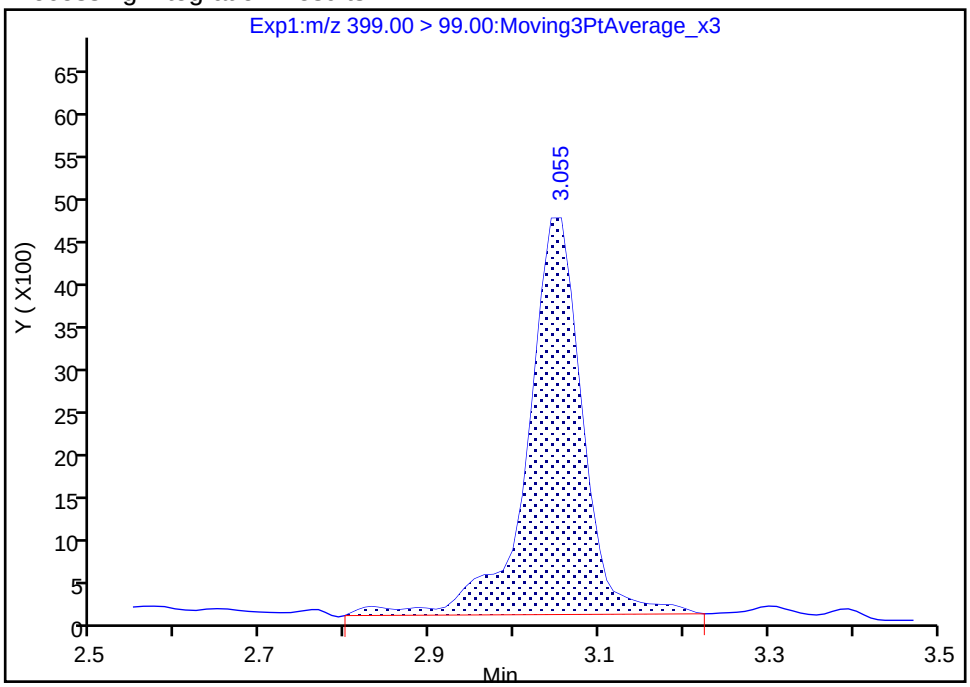
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL006.d
Injection Date: 10-Feb-2020 11:56:49 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

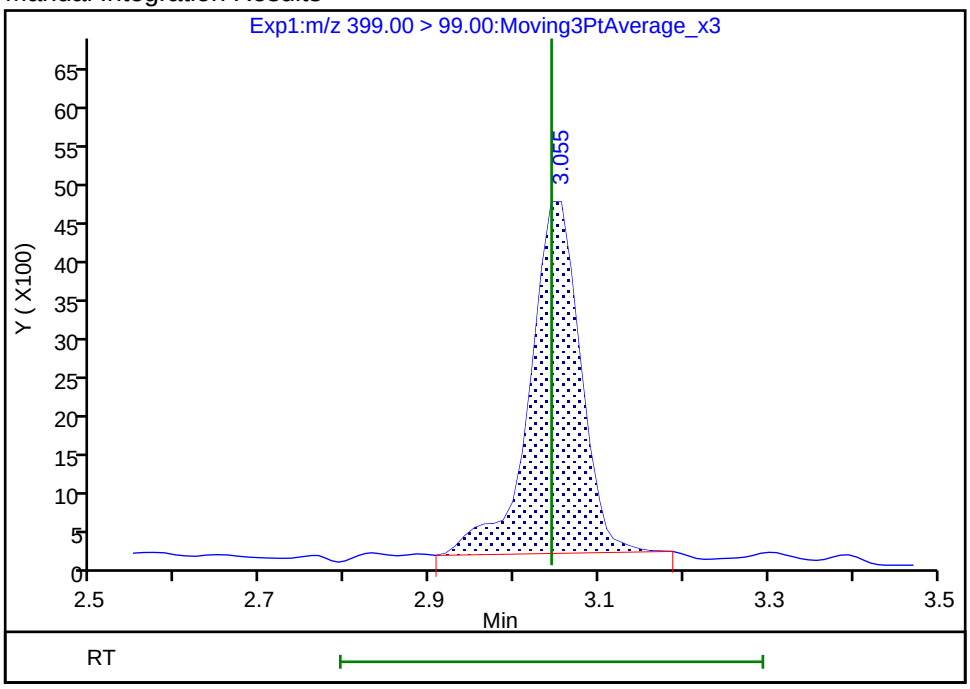
Processing Integration Results

RT: 3.06
Area: 21021
Amount: 0.092088
Amount Units: ng/ml



Manual Integration Results

RT: 3.06
Area: 19016
Amount: 0.098132
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:43:41
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

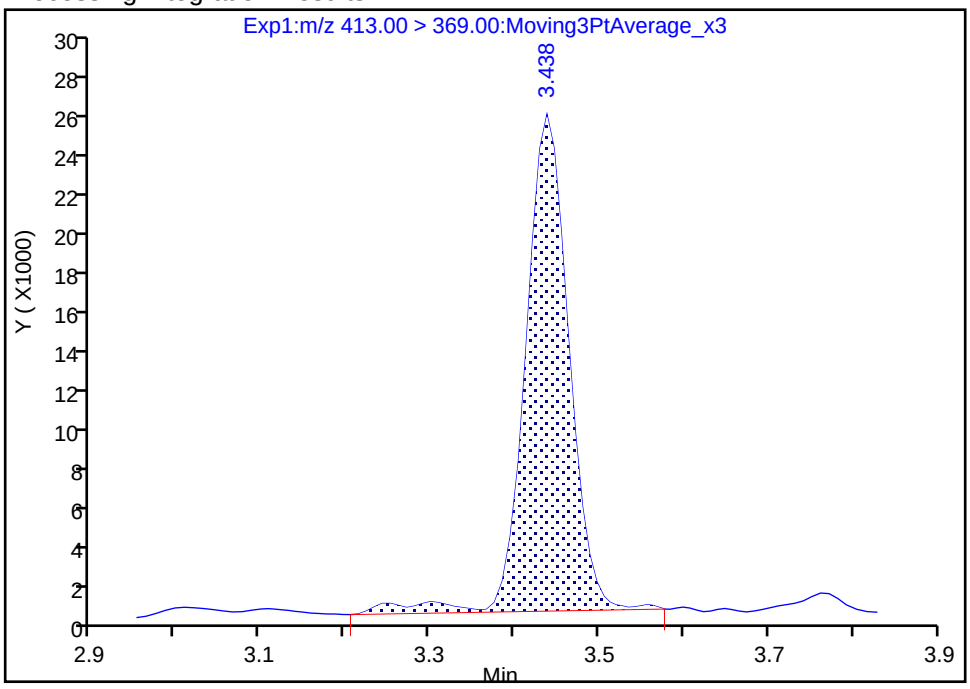
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL006.d
Injection Date: 10-Feb-2020 11:56:49 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

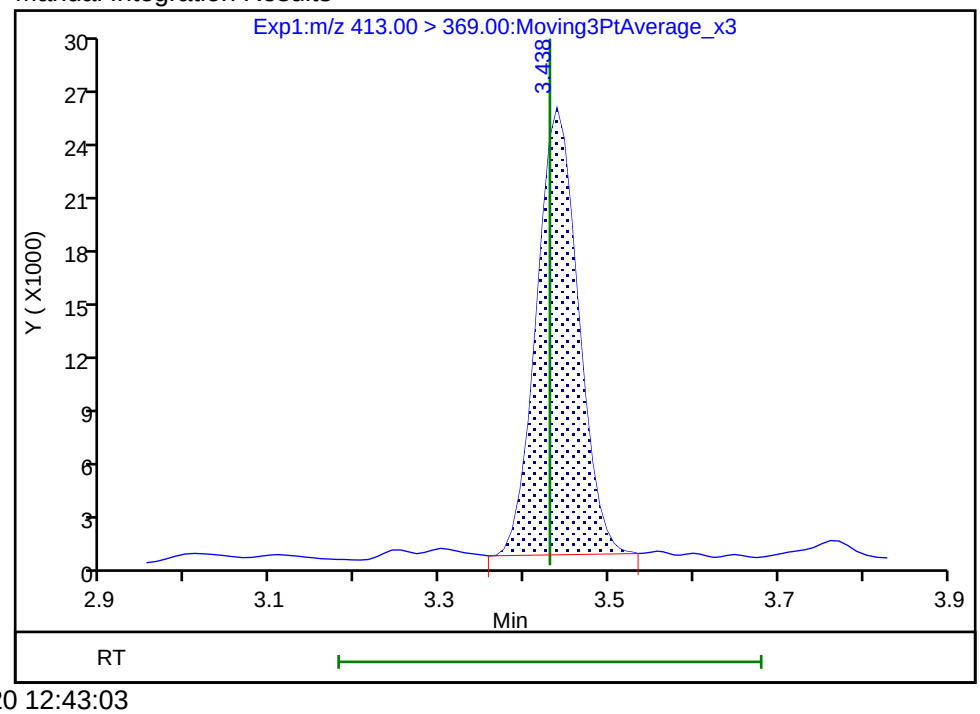
Processing Integration Results

RT: 3.44
Area: 89065
Amount: 0.090273
Amount Units: ng/ml



Manual Integration Results

RT: 3.44
Area: 84355
Amount: 0.093842
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:43:03
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

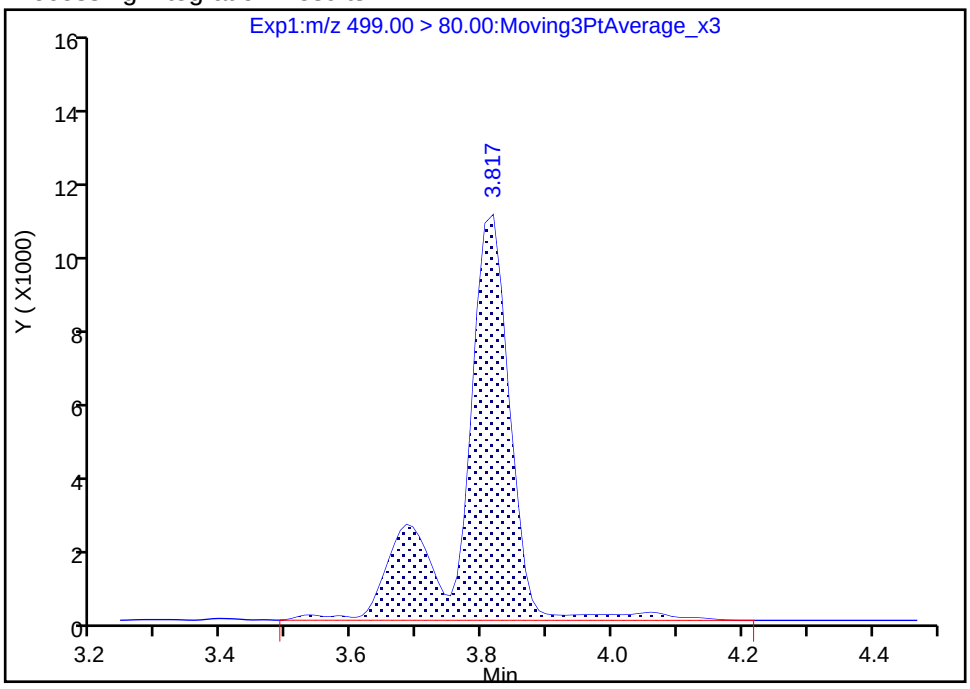
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL006.d
Injection Date: 10-Feb-2020 11:56:49 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

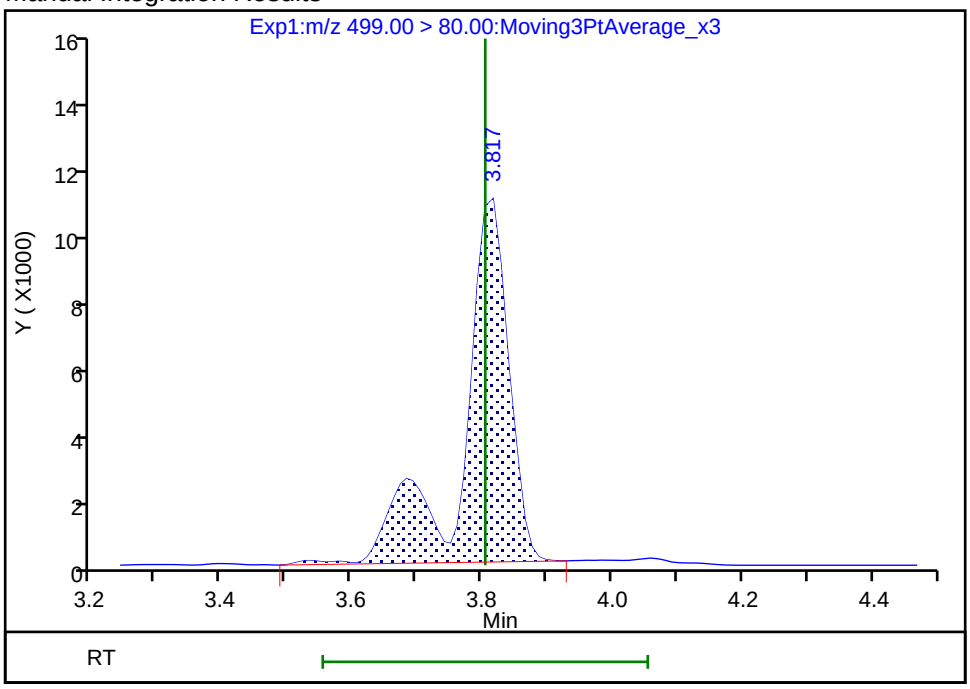
Processing Integration Results

RT: 3.82
Area: 57448
Amount: 0.094911
Amount Units: ng/ml



Manual Integration Results

RT: 3.82
Area: 53945
Amount: 0.095197
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:42:48
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

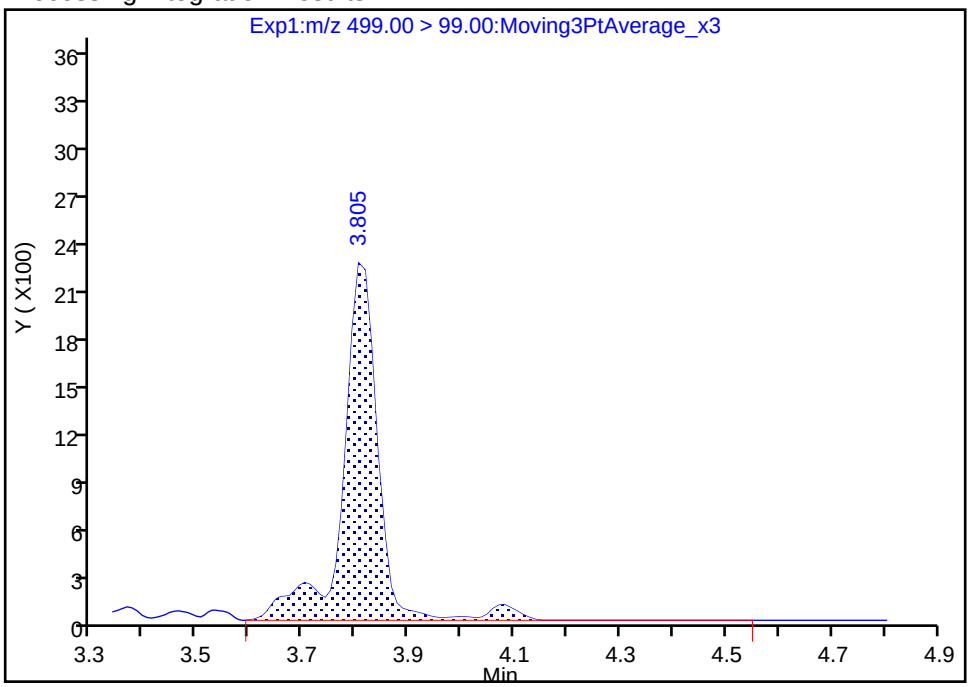
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL006.d
Injection Date: 10-Feb-2020 11:56:49 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

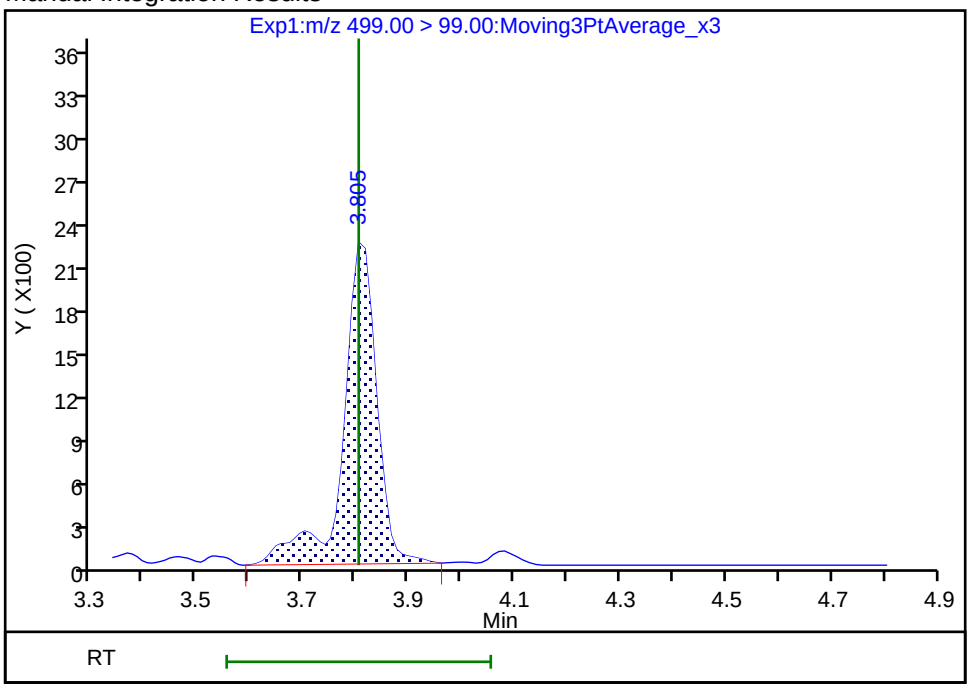
Processing Integration Results

RT: 3.80
Area: 10389
Amount: 0.094911
Amount Units: ng/ml



Manual Integration Results

RT: 3.80
Area: 9807
Amount: 0.095197
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:42:53
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

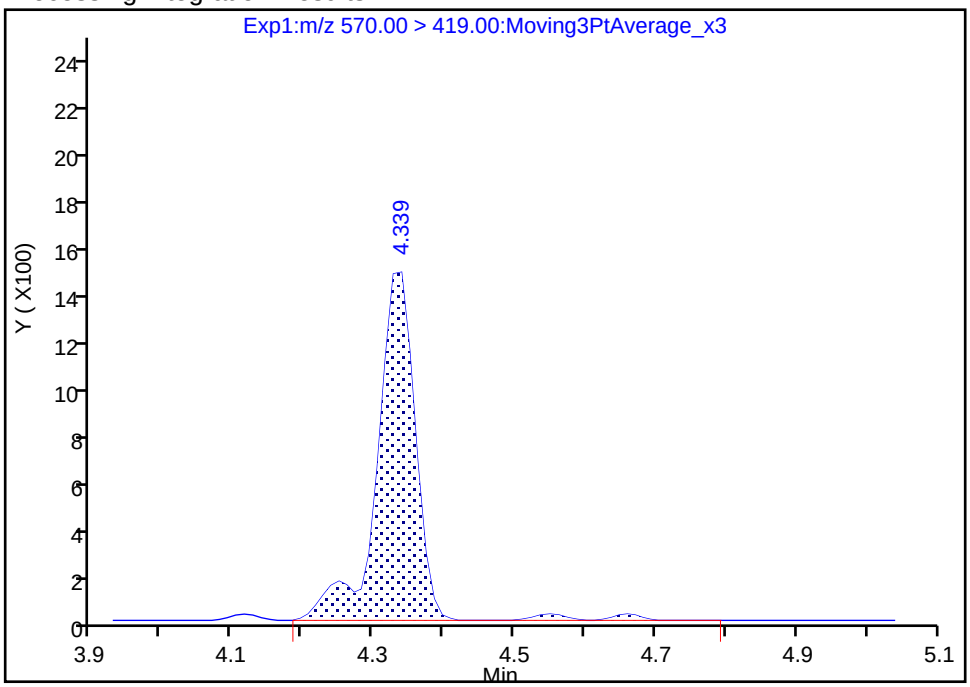
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL006.d
Injection Date: 10-Feb-2020 11:56:49 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

28 N-methylperfluorooctanesulfonamidoacetic aci, CAS: 2355-31-9

Signal: 1

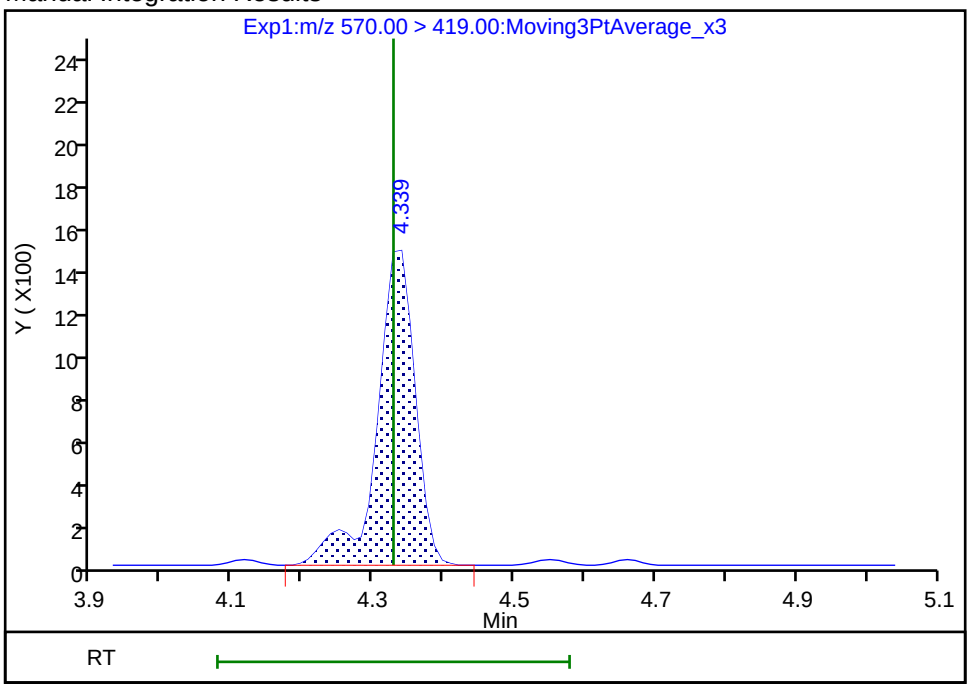
Processing Integration Results

RT: 4.34
Area: 5585
Amount: 0.088144
Amount Units: ng/ml



Manual Integration Results

RT: 4.34
Area: 5438
Amount: 0.084304
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:42:29
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

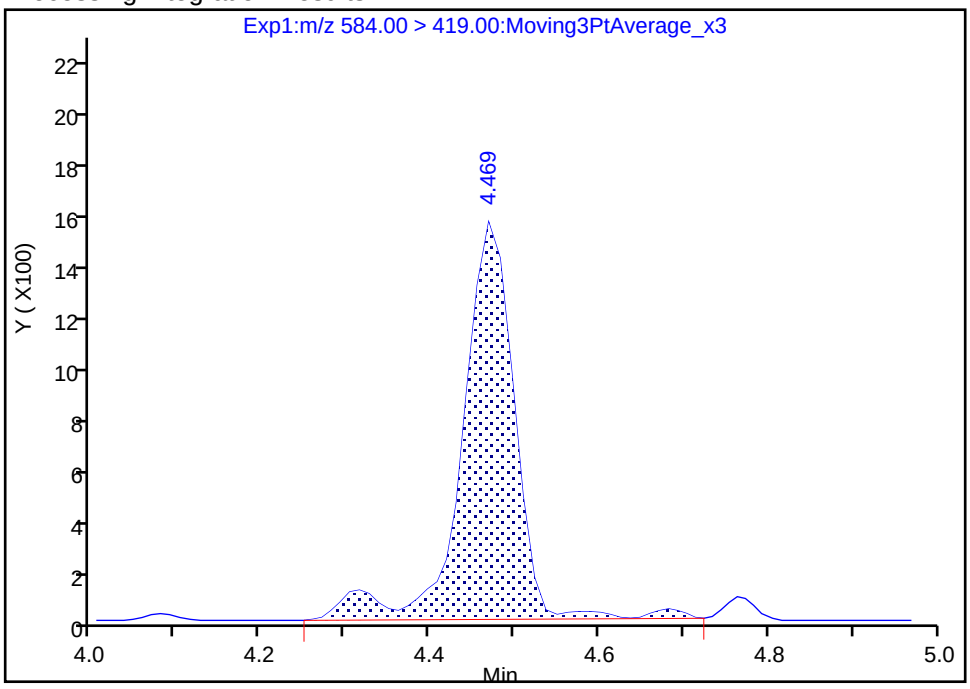
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL006.d
Injection Date: 10-Feb-2020 11:56:49 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

33 N-ethylperfluorooctanesulfonamidoacetic acid, CAS: 2991-50-6

Signal: 1

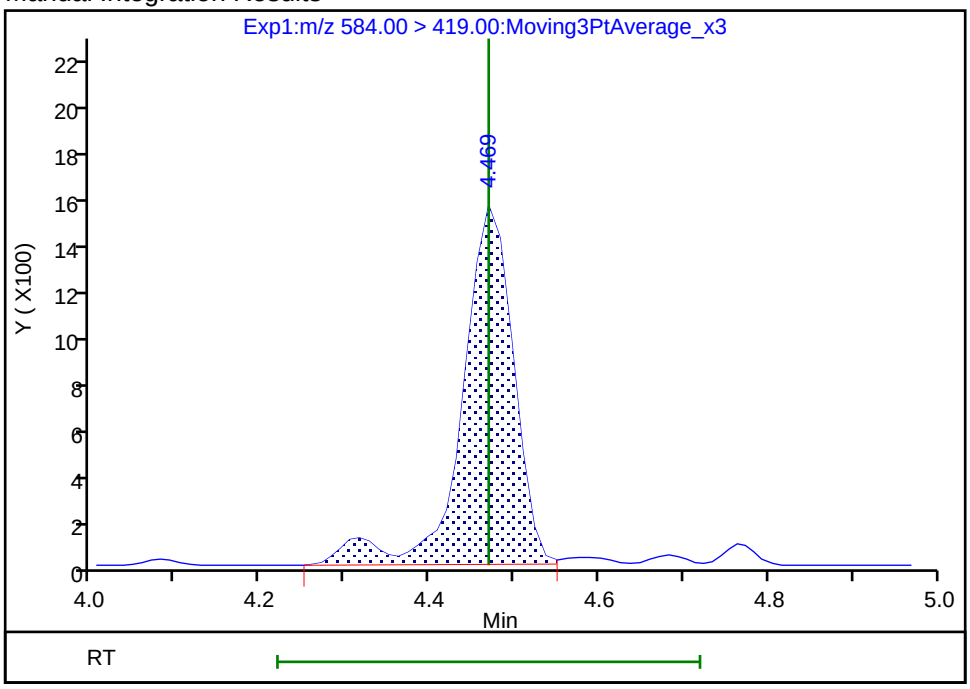
Processing Integration Results

RT: 4.47
Area: 6675
Amount: 0.116464
Amount Units: ng/ml



Manual Integration Results

RT: 4.47
Area: 6482
Amount: 0.112306
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:42:15
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

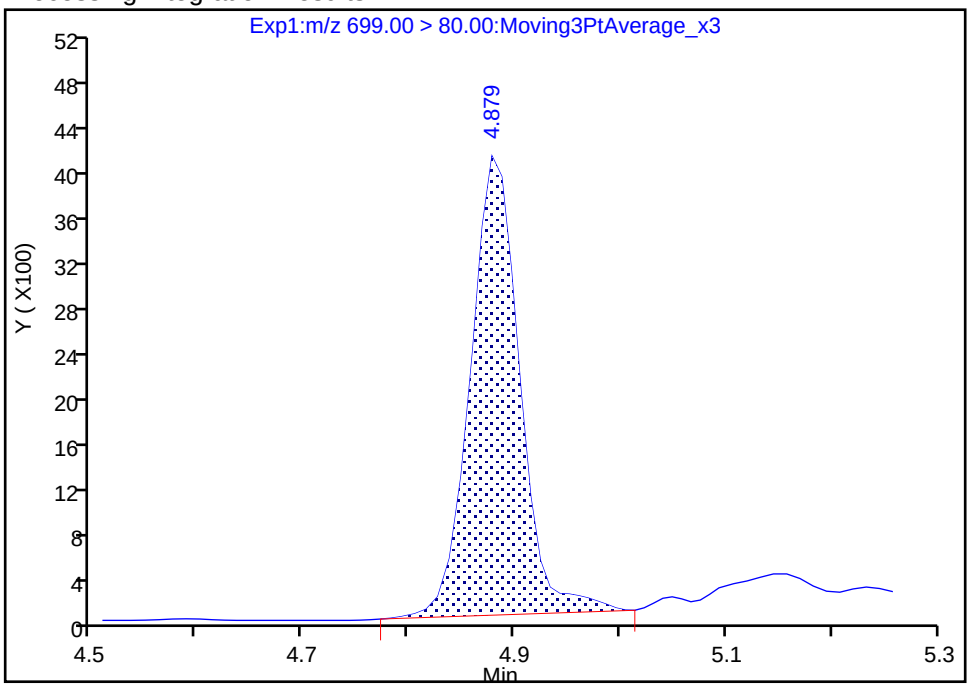
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL006.d
Injection Date: 10-Feb-2020 11:56:49 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

75 Perfluorododecanesulfonic acid (PFDoS), CAS: 79780-39-5

Signal: 1

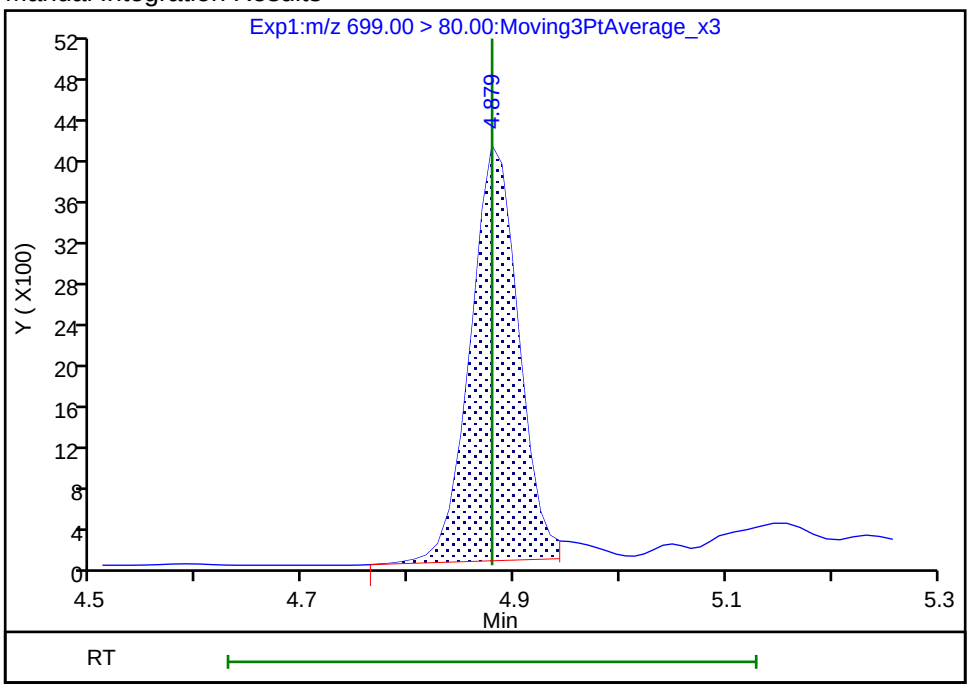
Processing Integration Results

RT: 4.88
Area: 13252
Amount: 0.090516
Amount Units: ng/ml



Manual Integration Results

RT: 4.88
Area: 12901
Amount: 0.092509
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:41:59
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

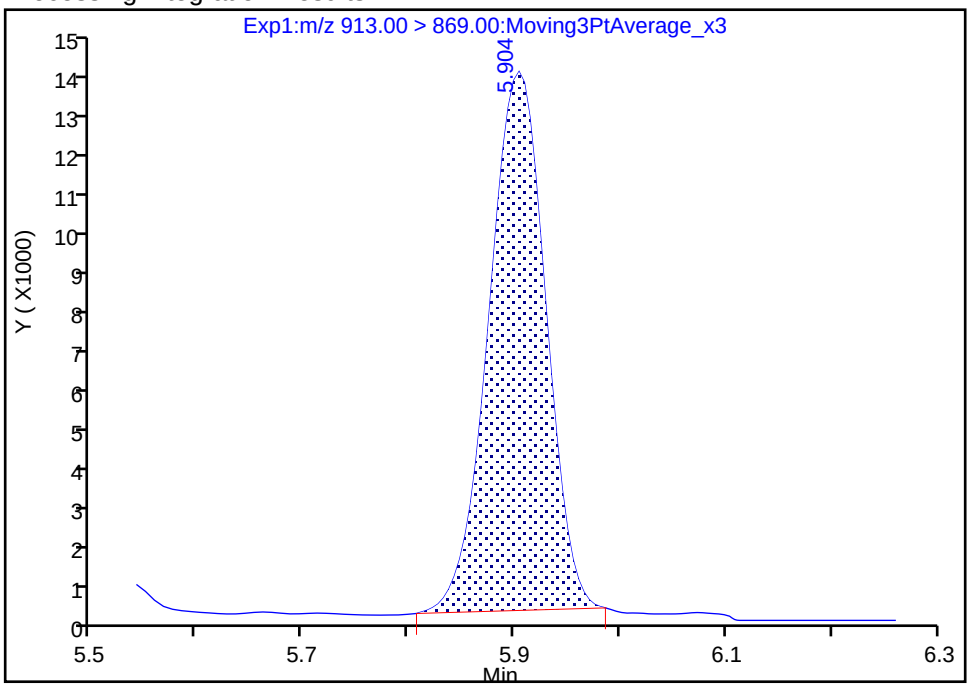
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL006.d
Injection Date: 10-Feb-2020 11:56:49 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

46 Perfluorooctadecanoic acid, CAS: 16517-11-6

Signal: 1

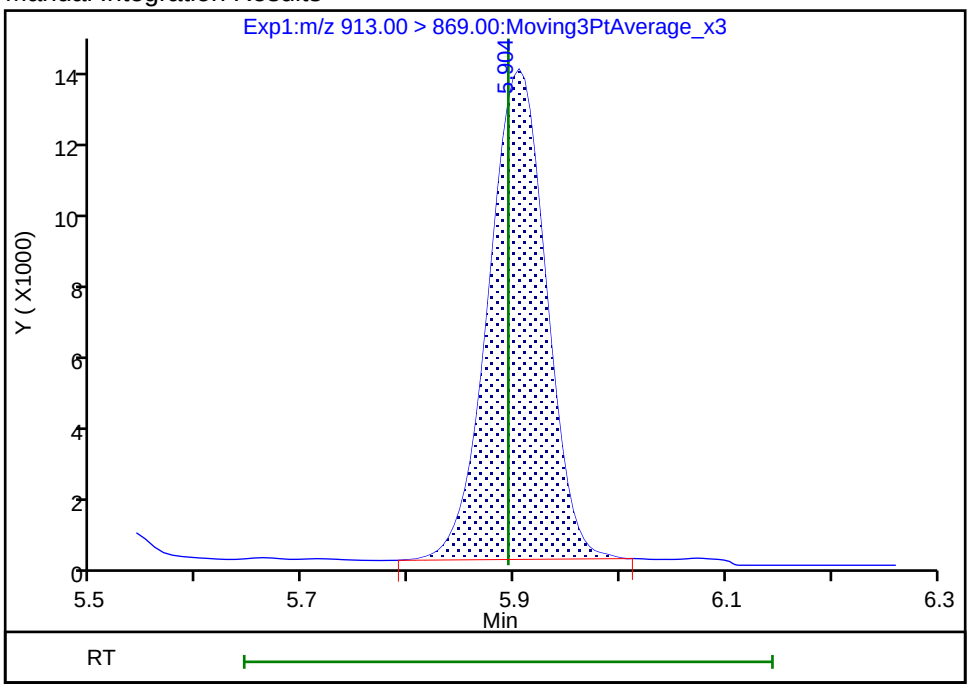
Processing Integration Results

RT: 5.90
Area: 51113
Amount: 0.101039
Amount Units: ng/ml



Manual Integration Results

RT: 5.90
Area: 52097
Amount: 0.107890
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:41:35
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

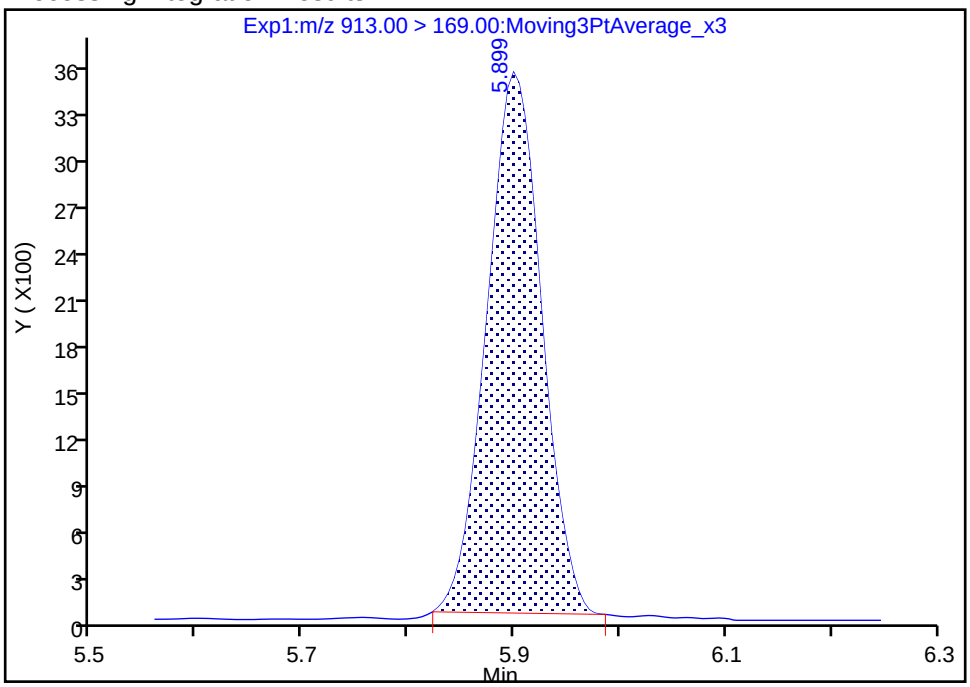
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL006.d
Injection Date: 10-Feb-2020 11:56:49 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

46 Perfluorooctadecanoic acid, CAS: 16517-11-6

Signal: 2

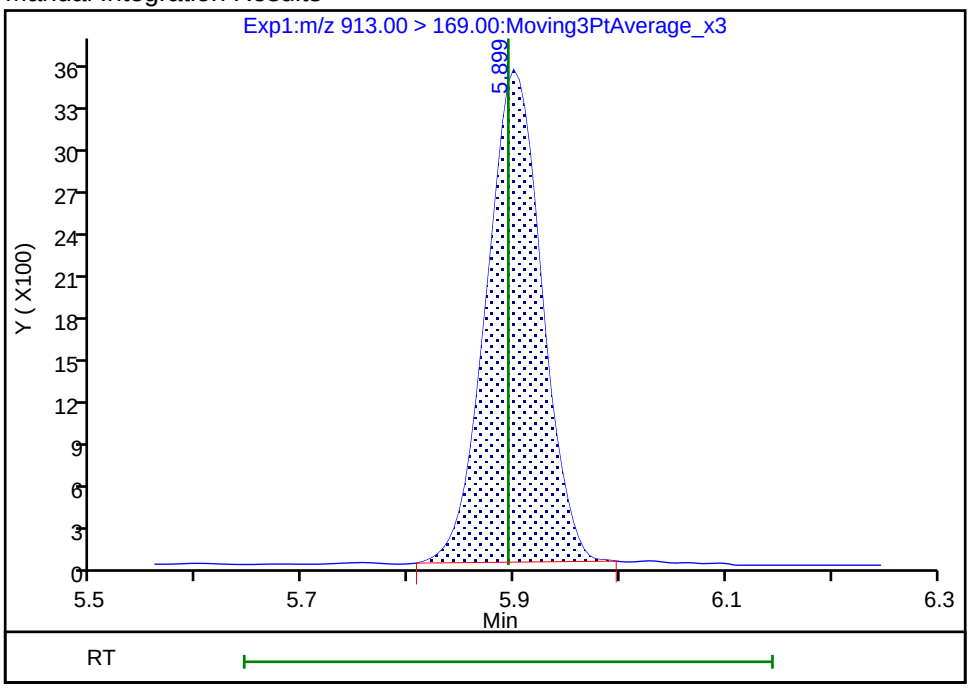
Processing Integration Results

RT: 5.90
Area: 12588
Amount: 0.101039
Amount Units: ng/ml



Manual Integration Results

RT: 5.90
Area: 12845
Amount: 0.107890
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:41:39
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL007.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 10-Feb-2020 12:04:59 ALS Bottle#: 4 Worklist Smp#: 7
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: IC 3
Misc. Info.: 200-0039917-007 Plate: 1 Rack: 1
Operator ID: lc812tech Instrument ID: LC812
Sublist: chrom-PFC_LC812*sub3

Method: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\PFC_LC812.m
Limit Group: LC_PFC_ICAL
Last Update: 10-Feb-2020 13:09:38 Calib Date: 10-Feb-2020 12:29:33
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL010.d

Column 1 : C-18 (4.60 mm) Det: EXP1
Process Host: CTX0302

First Level Reviewer: chirgwinb Date: 10-Feb-2020 12:46:13
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										M
212.90 > 169.00	1.926	1.917	0.009	1.005	523198	0.4880		97.6	68.3	M
D 1 13C4 PFBA										M
217.00 > 172.00	1.917	1.917	0.0	0.557	2817441	2.28		91.4	5434	M
D 3 13C5 PFPeA										
267.90 > 223.00	2.271	2.271	0.0	0.660	2189206	2.28		91.2	1784	
4 Perfluoropentanoic acid										
262.90 > 219.00	2.271	2.271	0.0	1.000	455525	0.4822		96.4	47.2	
D 47 13C3 PFBS										
301.90 > 80.00	2.284	2.284	0.0	0.664	2808014	2.17		93.5	869017	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.298	2.284	0.014	1.006	529501	0.4297	Target=2.20	97.2	559	
298.90 > 99.00	2.298	2.284	0.014	1.006	241776		2.19(1.10-3.31)	97.2	281	
61 1H,1H,2H,2H-perfluorohexanesulfoni										
327.00 > 307.00	2.623	2.623	0.0	1.000	79112	0.4911		105	580	
D 60 M2-4:2 FTS										
329.00 > 81.00	2.623	2.623	0.0	0.763	193962	2.05		88.0	130	
70 Perfluoropentanesulfonic acid										
349.00 > 80.00	2.673	2.660	0.013	0.875	493319	0.4560	Target=3.28	97.2	847	
349.00 > 99.00	2.673	2.660	0.013	0.875	149905		3.29(1.64-4.91)	97.2	477	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.660	2.660	0.0	1.000	510181	0.4895	Target=12.10	97.9	148	
313.00 > 119.00	2.660	2.660	0.0	1.000	40438		12.62(6.05-18.16)	97.9	72.2	
D 7 13C2 PFHxA										
315.00 > 270.00	2.660	2.660	0.0	0.774	2631690	2.34		93.7	9187	
D 64 13C3 HFPO-DA										
332.10 > 287.00	2.776	2.776	0.0	0.807	196847	2.21		88.4	1277	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.776	2.776	0.0	1.000	98071	0.5318		106	42.0	
D 11 18O2 PFHxS										
403.00 > 84.00	3.055	3.044	0.011	0.889	2015921	2.21		93.4	10934	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.055	3.044	0.011	1.000	448177	0.4455	Target=4.10	97.9	1235	
399.00 > 99.00	3.044	3.044	0.0	0.996	107050		4.19(2.05-6.15)	97.9	220	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.055	3.055	0.0	1.000	530308	0.4940	Target=3.67	98.8	212	
363.00 > 169.00	3.055	3.055	0.0	1.000	144509		3.67(1.83-5.50)	98.8	439	
D 9 13C4 PFHpA										
367.00 > 322.00	3.055	3.055	0.0	0.889	2623291	2.43		97.2	6270	
77 DONA										
377.00 > 251.00	3.101	3.089	0.012	0.815	1106077	0.4788	Target=2.51	102	2498	
377.00 > 85.00	3.101	3.089	0.012	0.815	467485		2.37(1.26-3.77)	102	1650	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.422	3.413	0.009	0.899	346479	0.4533	Target=5.96	95.2	1706	
449.00 > 99.00	3.422	3.413	0.009	0.899	59176		5.86(2.98-8.94)	95.2	694	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.422	3.421	0.001	0.995	269980	2.16		90.9	1003	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.430	3.421	0.009	1.002	59517	0.4660		98.3	481	
D 14 13C4 PFOA										
417.00 > 372.00	3.438	3.430	0.008	1.000	2604032	2.33		93.2	6969	
* 62 13C2 PFOA										
415.00 > 370.00	3.438	3.430	0.008		2964585	2.50			10420	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.438	3.430	0.008	1.000	547194	0.5044	Target=2.57	101	183	
413.00 > 169.00	3.438	3.430	0.008	1.000	208375		2.63(1.28-3.85)	101	656	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.817	3.805	0.012	1.003	320574	0.4645	Target=5.37	100	1169	M
499.00 > 99.00	3.805	3.805	0.0	1.000	62639		5.12(2.69-8.06)	100	491	M
D 18 13C4 PFOS										
503.00 > 80.00	3.805	3.805	0.0	1.107	1501895	2.21		92.5	5299	
20 Perfluorononanoic acid										
463.00 > 419.00	3.829	3.829	0.0	1.000	521973	0.5168	Target=7.44	103	138	
463.00 > 169.00	3.829	3.829	0.0	1.000	68742		7.59(3.72-11.15)	103	574	
D 19 13C5 PFNA										
468.00 > 423.00	3.829	3.829	0.0	1.114	2455431	2.29		91.6	7491	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.994	3.994	0.0	1.050	416392	0.4738		102	984	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.141	4.141	0.0	1.088	269745	0.4847	Target=2.85	101	1858	
549.00 > 99.00	4.141	4.141	0.0	1.088	91211		2.96(1.43-4.28)	101	593	
D 23 13C2 PFDA										
515.00 > 470.00	4.175	4.164	0.011	1.214	2620275	2.25		90.0	5886	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
24 Perfluorodecanoic acid										
513.00 > 469.00	4.175	4.164	0.011	1.000	568567	0.5298	Target=9.04	106	423	
513.00 > 169.00	4.175	4.164	0.011	1.000	62421		9.11(4.52-13.56)	106	512	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.185	4.174	0.011	1.217	393131	2.23		93.0	1759	
25 1H,1H,2H,2H-perfluorodecanesulfoni										
527.00 > 507.00	4.185	4.174	0.011	1.000	46384	0.4552		95.0	483	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.229	4.218	0.011	1.000	571298	0.4993		99.9	1344	
D 21 13C8 FOSA										
506.00 > 78.00	4.229	4.218	0.011	1.230	2790942	2.33		93.4	6128	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.328	4.316	0.012	1.259	194675	2.12		84.7	751	
28 N-methylperfluorooctanesulfonamido										
570.00 > 419.00	4.328	4.328	0.0	1.000	37380	0.5603		112	326	
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.431	4.420	0.011	1.165	223081	0.4559	Target=2.69	94.6	949	
599.00 > 99.00	4.420	4.420	0.0	1.162	83408		2.67(1.34-4.03)	94.6	907	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.456	4.456	0.0	1.000	425403	0.4917	Target=7.95	98.3	320	
563.00 > 169.00	4.456	4.456	0.0	1.000	57381		7.41(3.98-11.93)	98.3	682	
D 30 13C2 PFUnA										
565.00 > 520.00	4.456	4.456	0.0	1.296	2386035	2.35		93.9	14080	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.469	4.456	0.013	1.300	235229	2.25		89.8	1163	
33 N-ethylperfluorooctanesulfonamidoa										M
584.00 > 419.00	4.469	4.469	0.0	1.000	39109	0.5216		104	279	M
66 11-Chloroeicosafluoro-3-oxaundecan										
631.00 > 451.00	4.563	4.550	0.013	1.199	479039	0.4796		102	1608	
D 36 13C2 PFDoA										
615.00 > 570.00	4.704	4.693	0.011	1.368	2634828	2.32		92.7	8002	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.704	4.693	0.011	1.000	508047	0.4968	Target=7.12	99.4	91.0	
613.00 > 169.00	4.704	4.693	0.011	1.000	75767		6.71(3.56-10.68)	99.4	1268	
74 1H,1H,2H,2H-perfluorododecanesulfo										
627.00 > 607.00	4.724	4.714	0.010	1.129	24029	0.4408		91.5	459	
75 Perfluorododecanesulfonic acid (PF										
699.00 > 80.00	4.879	4.879	0.0	1.282	84384	0.4969	Target=0.50	103	327	
699.00 > 99.00	4.879	4.879	0.0	1.282	164739		0.51(0.25-0.74)	103	1815	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.925	4.915	0.010	1.047	447216	0.4804	Target=4.73	96.1	96.3	
663.00 > 169.00	4.925	4.915	0.010	1.047	98061		4.56(2.36-7.09)	96.1	691	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.120	5.120	0.0	1.000	68742	0.4794	Target=1.08	95.9	557	
713.00 > 219.00	5.120	5.120	0.0	1.000	66699		1.03(0.54-1.62)	95.9	732	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.120	5.120	0.0	1.489	2303985	2.36		94.4	10376	

Report Date: 10-Feb-2020 13:09:38 Chrom Revision: 2.3 14-Jan-2020 22:23:42
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL007.d
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.508	5.499	0.009	1.002	482227	0.5089	Target=4.40	102	155	
813.00 > 169.00	5.499	5.499	0.0	1.000	107258		4.50(2.20-6.60)	102	1475	
D 44 13C2 PFHxDA										
815.00 > 770.00	5.499	5.499	0.0	1.599	2523805	2.38		95.1	9675	
46 Perfluorooctadecanoic acid										M
913.00 > 869.00	5.899	5.894	0.005	1.073	323024	0.5137	Target=4.01	103	64.6	M
913.00 > 169.00	5.894	5.894	0.0	1.072	80036		4.04(2.01-6.02)	103	1127	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

PFAS32NCIC3_00003 Amount Added: 100.00 Units: uL

Report Date: 10-Feb-2020 13:09:38 Chrom Revision: 2.3 14-Jan-2020 22:23:42

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL007.d

Injection Date: 10-Feb-2020 12:04:59 Instrument ID: LC812

Lims ID: IC

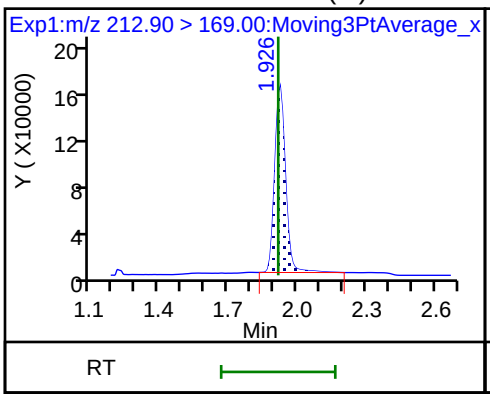
Client ID:

Operator ID: lc812tech ALS Bottle#: 4 Worklist Smp#: 7

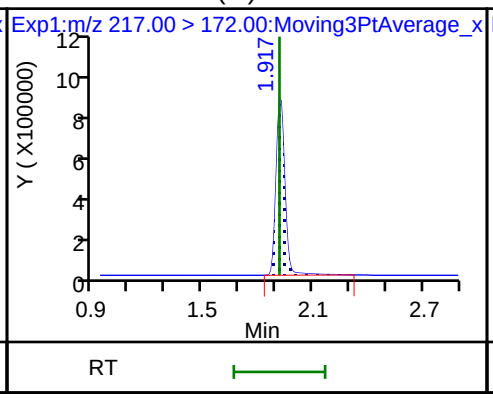
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFC_LC812 Limit Group: LC_PFC_ICAL

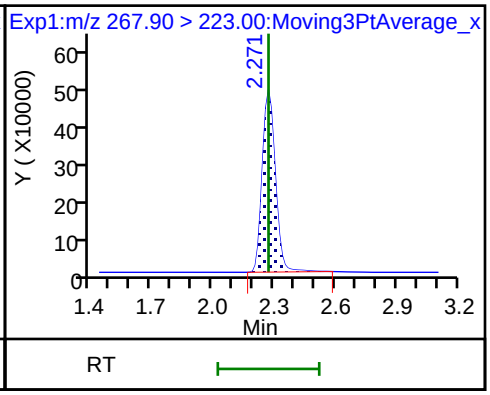
2 Perfluorobutanoic acid (M)



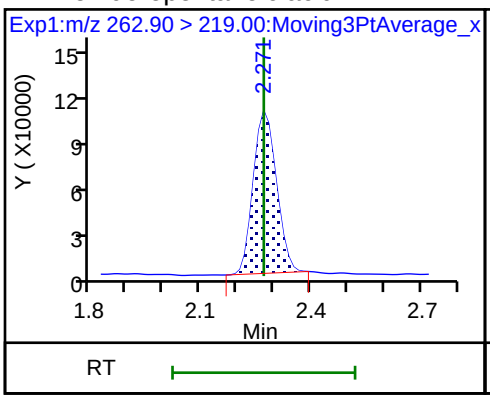
D 1 13C4 PFBA (M)



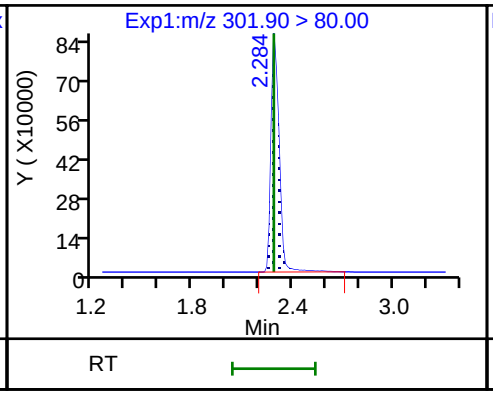
D 3 13C5 PFPeA



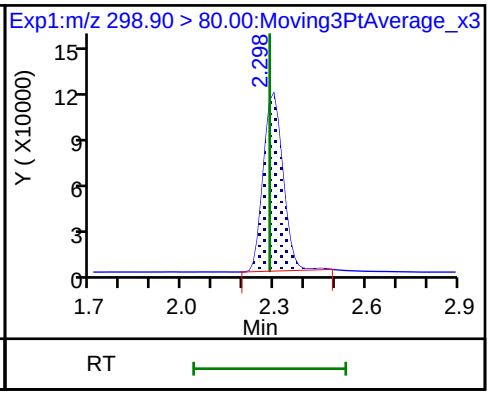
4 Perfluoropentanoic acid



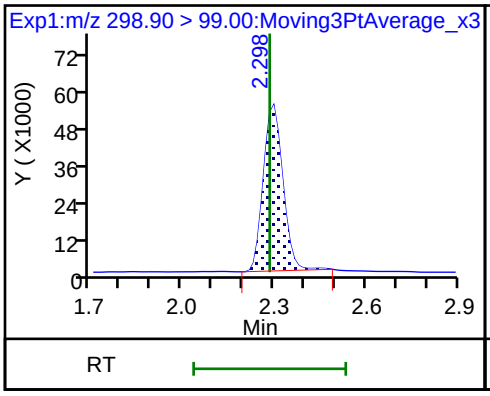
D 47 13C3 PFBS



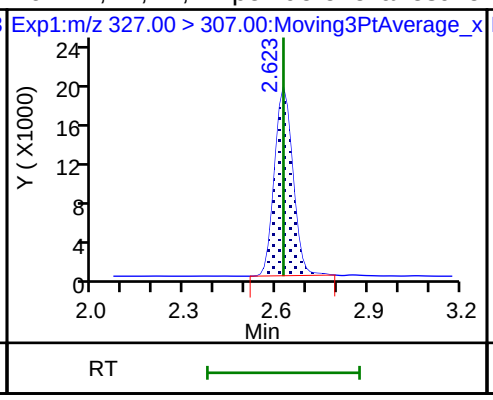
5 Perfluorobutanesulfonic acid



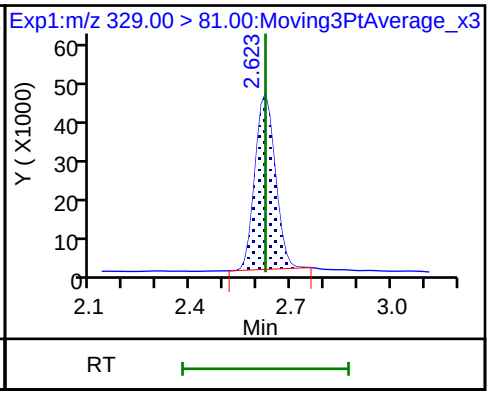
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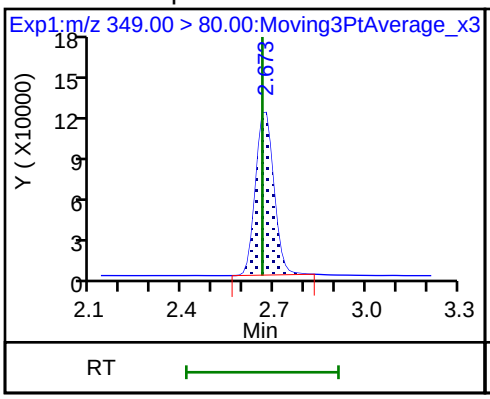
61 1H,1H,2H,2H-perfluorohexanesulfon



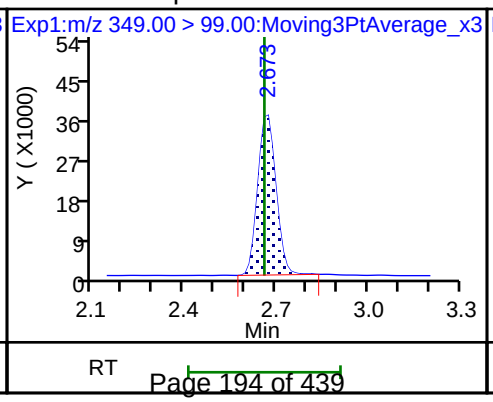
D 60 M2-4:2 FTS



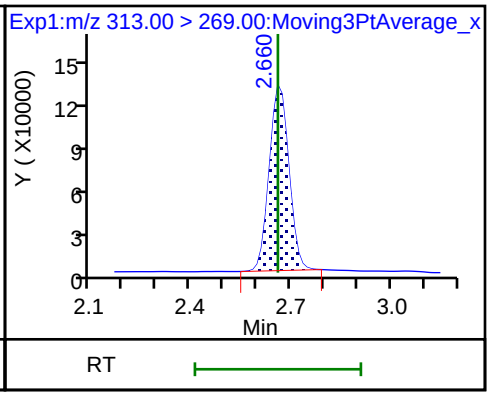
70 Perfluoropentanesulfonic acid



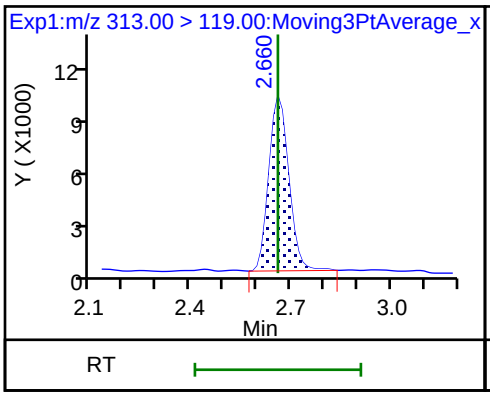
70 Perfluoropentanesulfonic acid



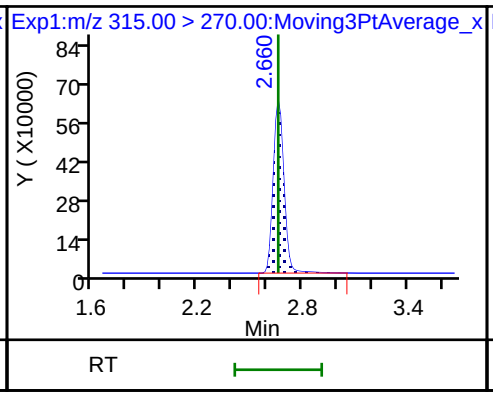
6 Perfluorohexanoic acid



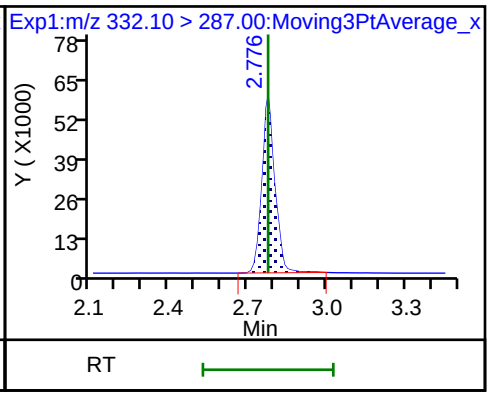
6 Perfluorohexanoic acid



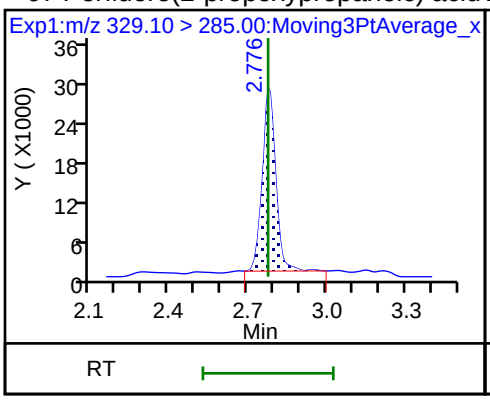
D 7 13C2 PFHxA



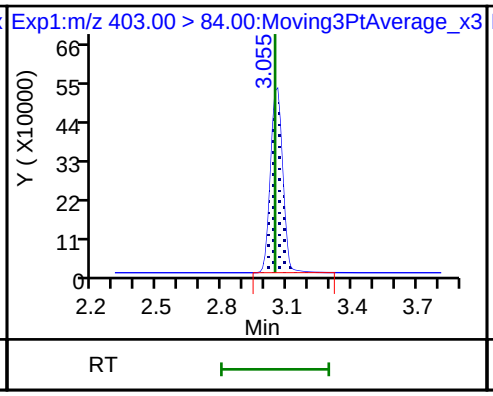
D 64 13C3 HFPO-DA



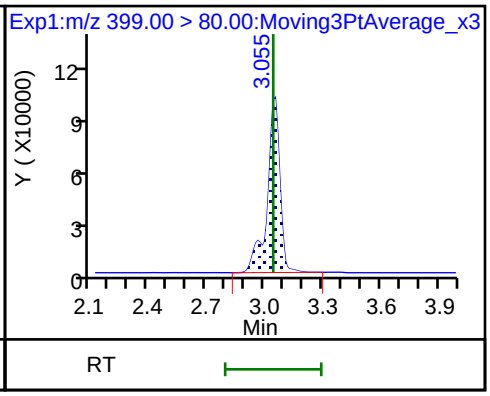
67 Perfluoro(2-propoxypropanoic) acid



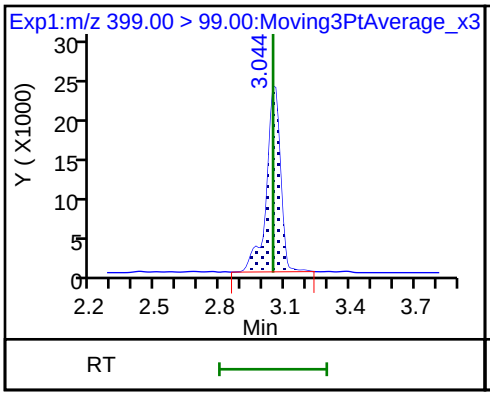
D 11 18O2 PFHxS



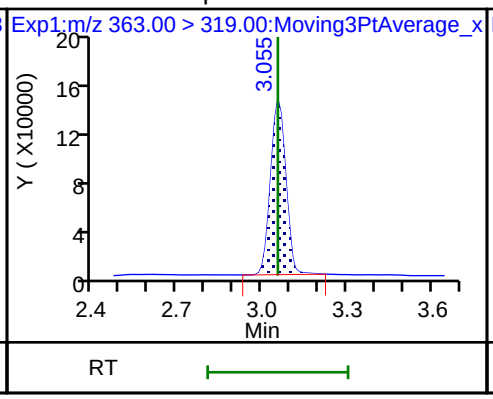
8 Perfluorohexanesulfonic acid



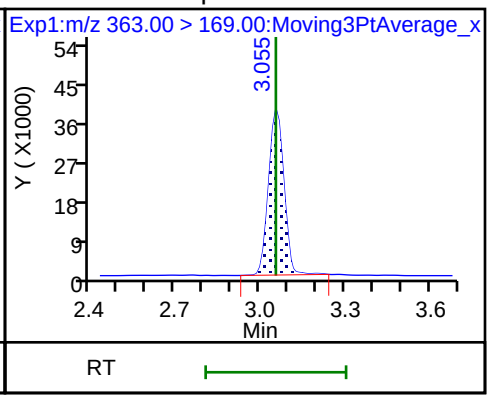
8 Perfluorohexanesulfonic acid



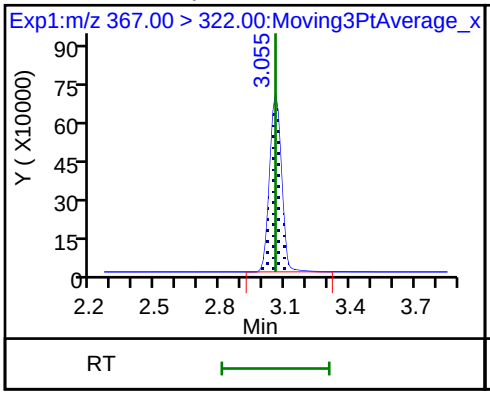
10 Perfluoroheptanoic acid



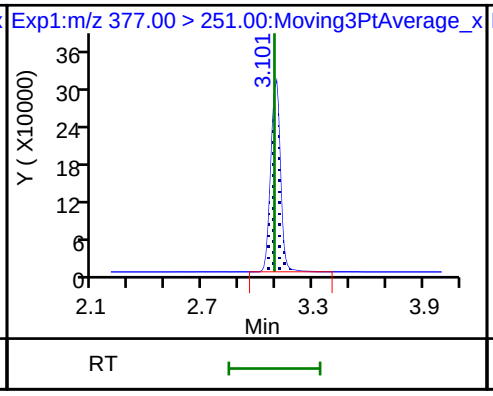
10 Perfluoroheptanoic acid



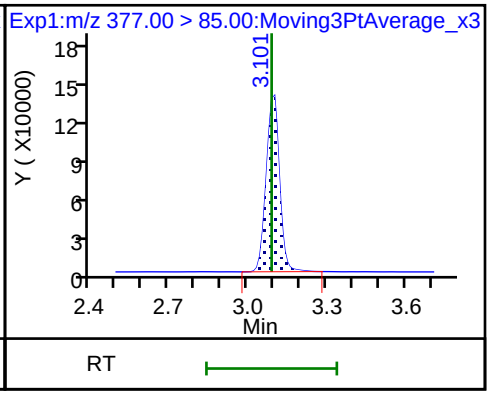
D 9 13C4 PFHpA



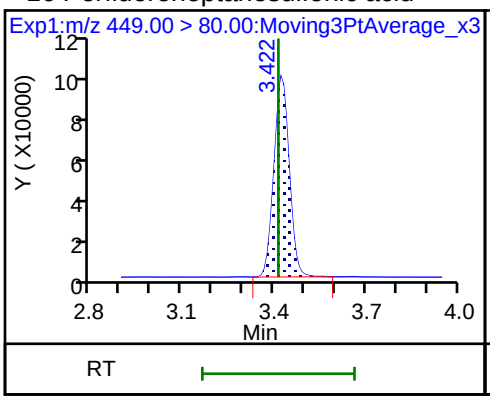
77 DONA



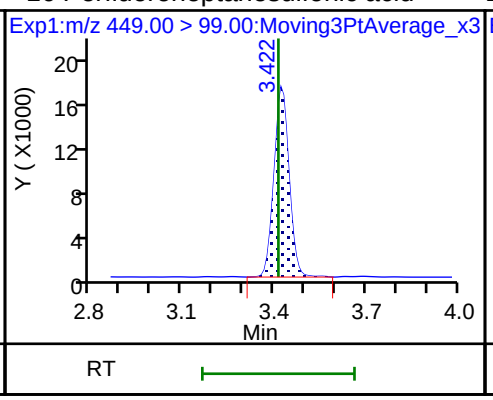
77 DONA



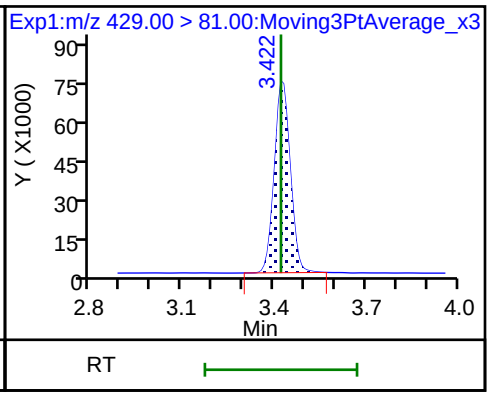
16 Perfluoroheptanesulfonic acid



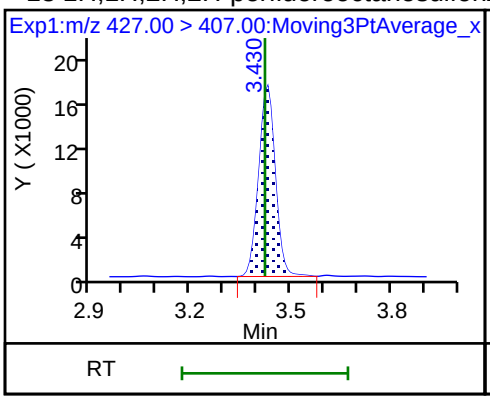
16 Perfluoroheptanesulfonic acid



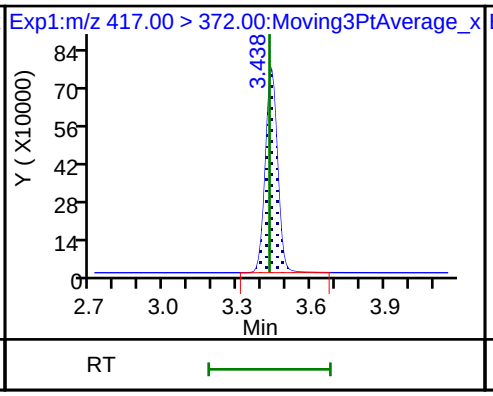
D 12 M2-6:2 FTS



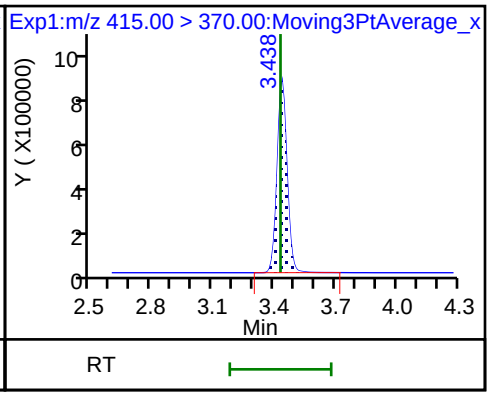
13 1H,1H,2H,2H-perfluorooctanesulfon



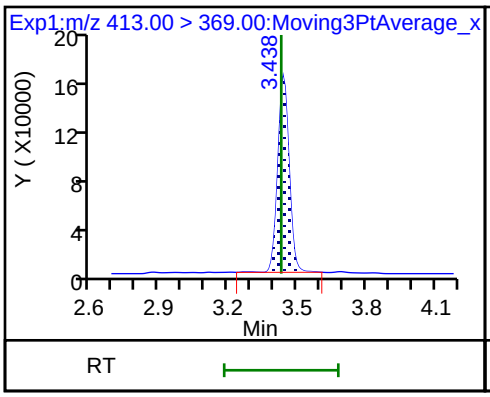
D 14 13C4 PFOA



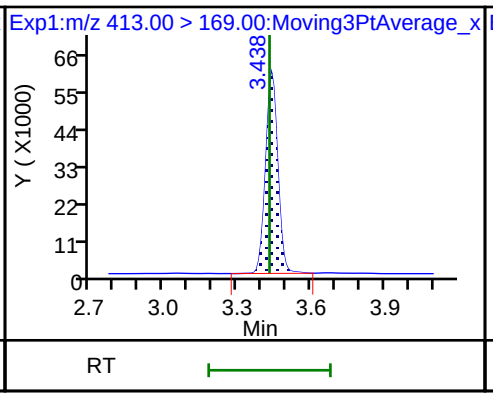
* 62 13C2 PFOA



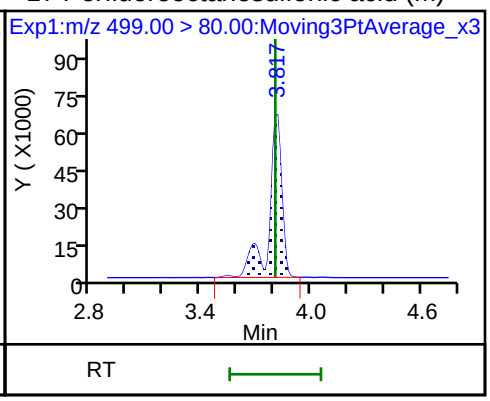
15 Perfluorooctanoic acid



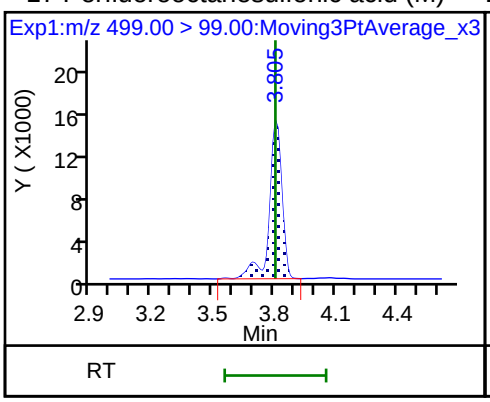
15 Perfluorooctanoic acid



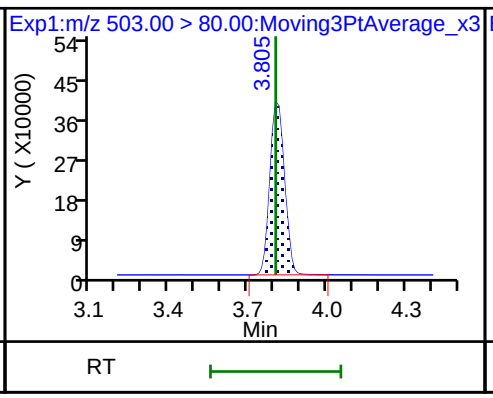
17 Perfluorooctanesulfonic acid (M)



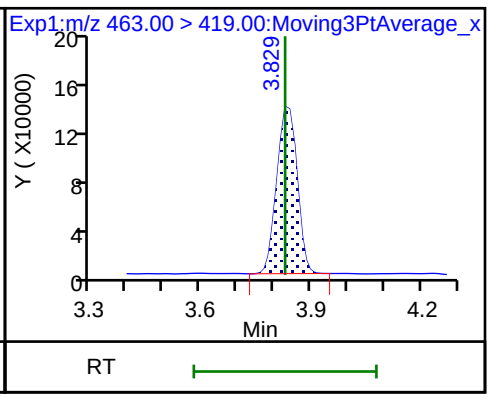
17 Perfluorooctanesulfonic acid (M)



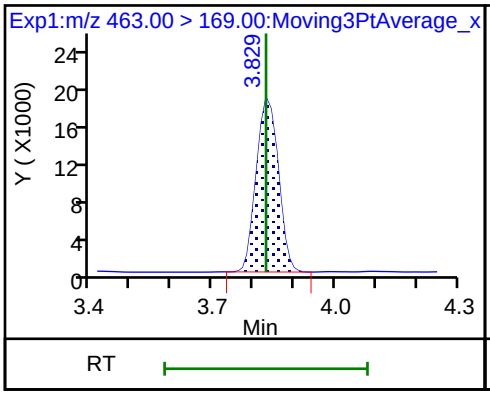
D 18 13C4 PFOS



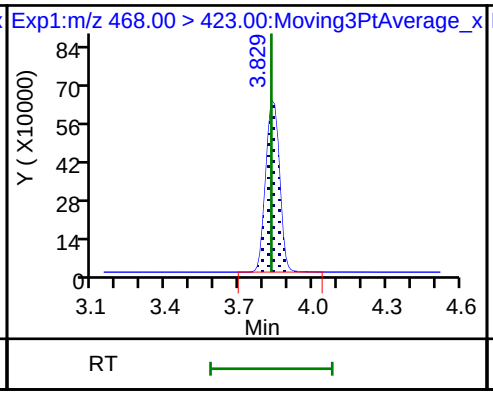
20 Perfluorononanoic acid



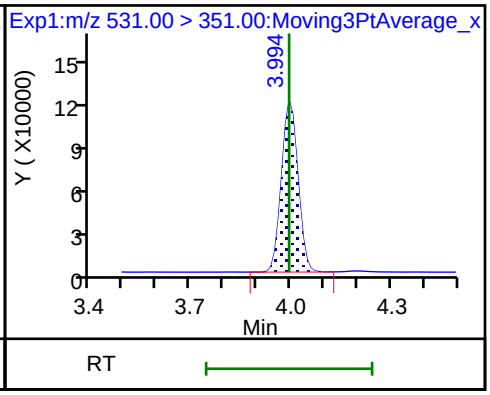
20 Perfluorononanoic acid



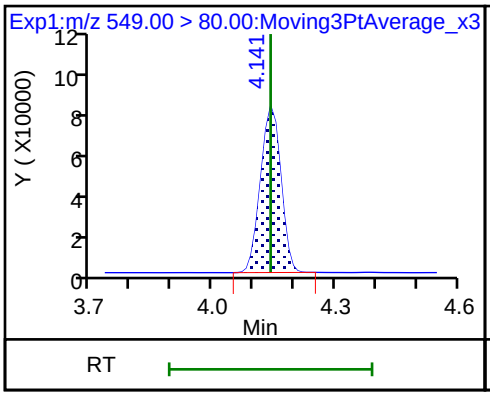
D 19 13C5 PFNA



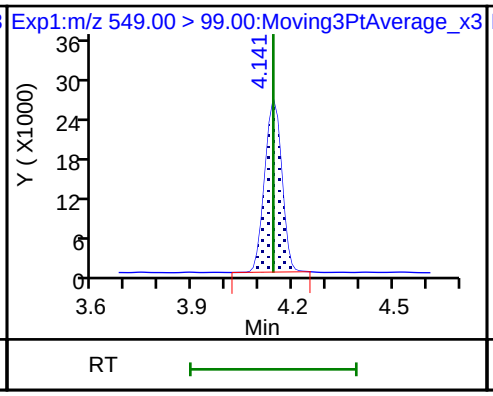
69 9-Chlorohexadecafluoro-3-oxanonane



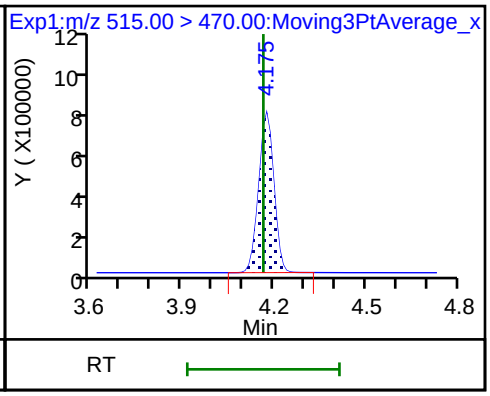
68 Perfluorononanesulfonic acid



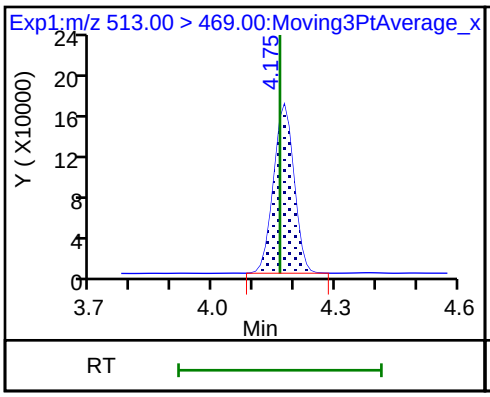
68 Perfluorononanesulfonic acid



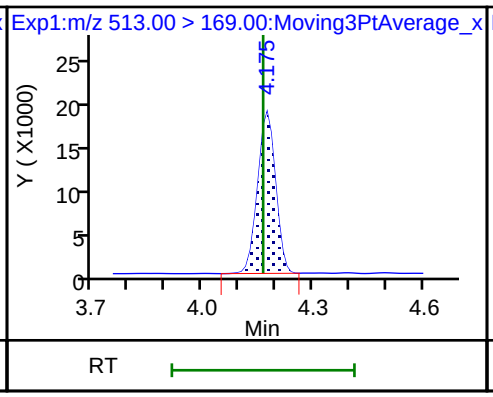
D 23 13C2 PFDA



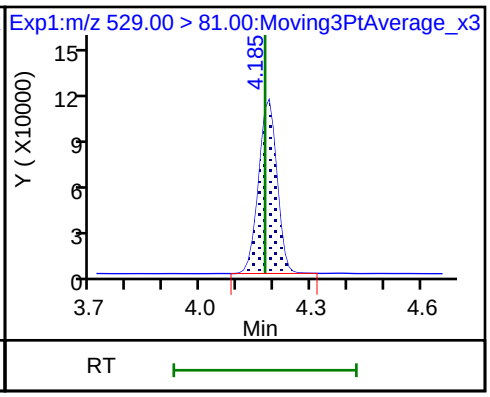
24 Perfluorodecanoic acid



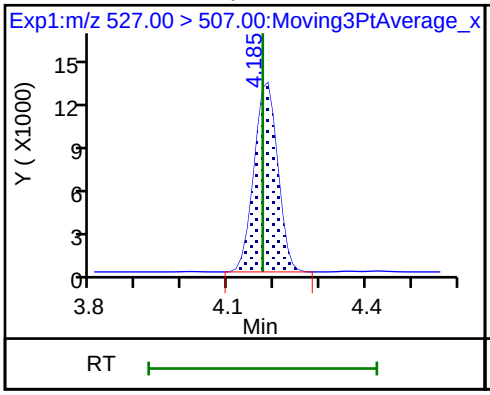
24 Perfluorodecanoic acid



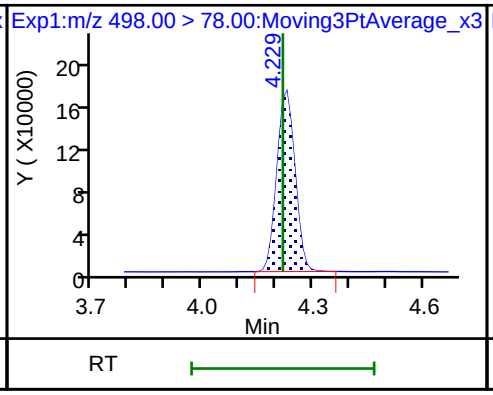
D 26 M2-8:2 FTS



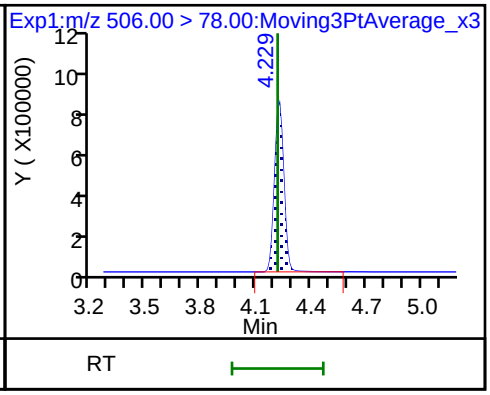
25 1H,1H,2H,2H-perfluorodecanesulfoni



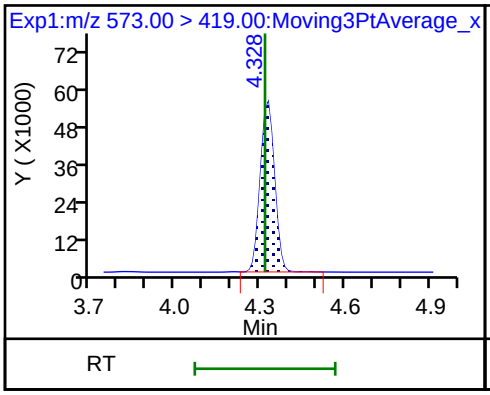
22 Perfluorooctanesulfonamide



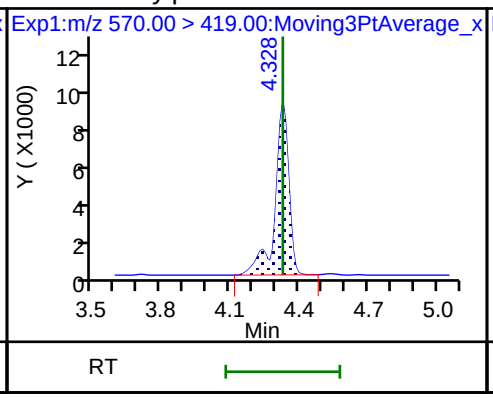
D 21 13C8 FOSA



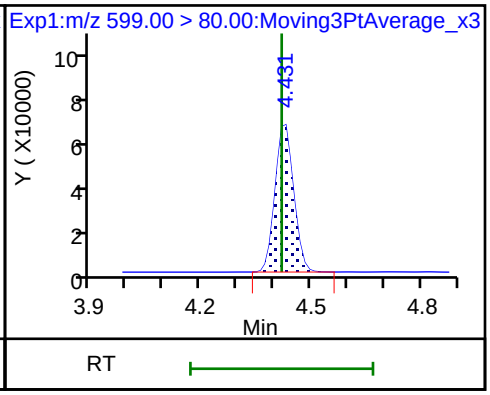
D 27 d3-NMeFOSAA



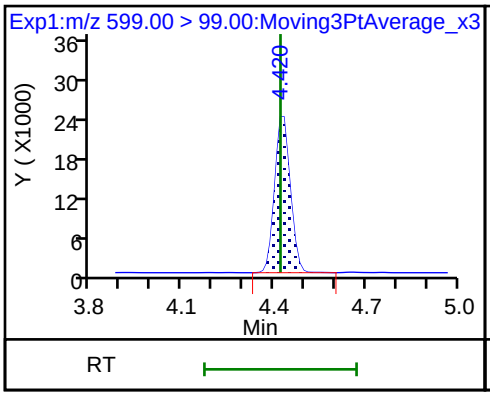
28 N-methylperfluorooctanesulfonamido



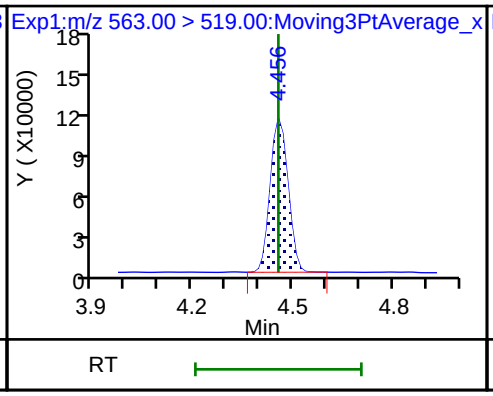
29 Perfluorodecanesulfonic acid



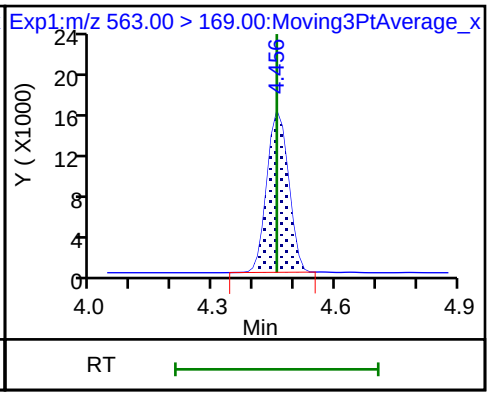
29 Perfluorodecanesulfonic acid



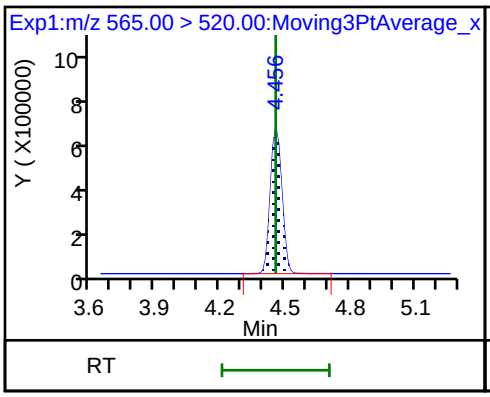
31 Perfluoroundecanoic acid



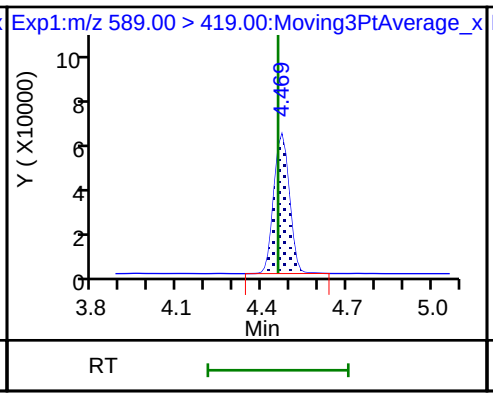
31 Perfluoroundecanoic acid



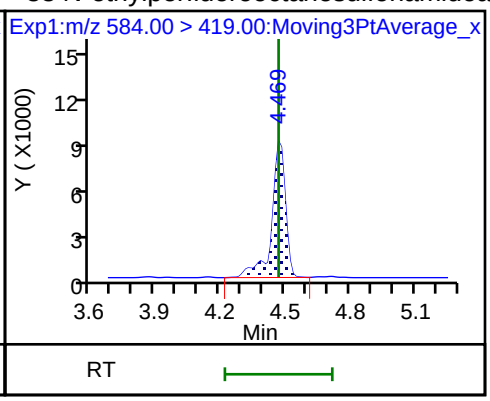
D 30 13C2 PFUnA



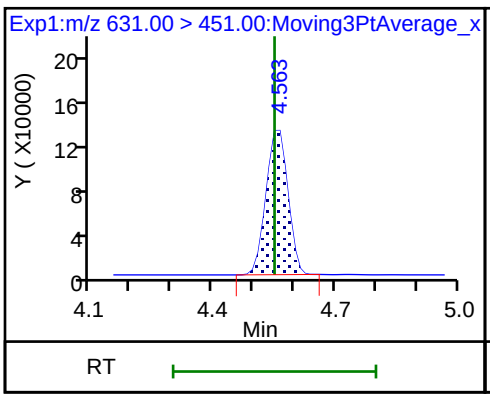
D 32 d5-NEtFOSAA



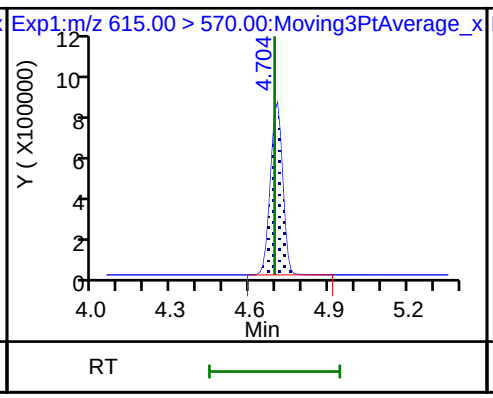
33 N-ethylperfluorooctanesulfonamidoa (M)



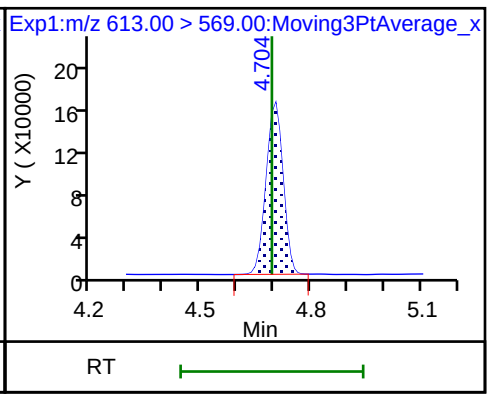
66 11-Chloroeicosafluoro-3-oxaundecan



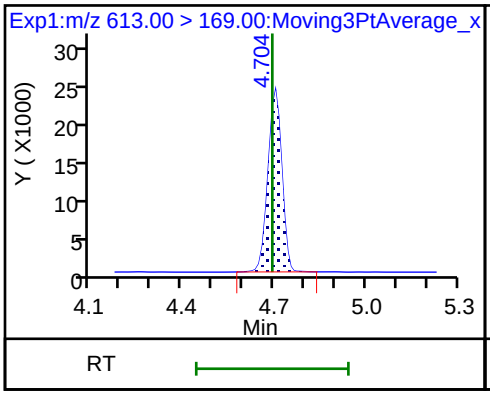
D 36 13C2 PFDoA



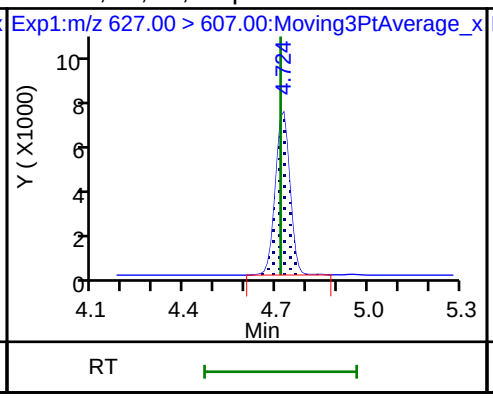
37 Perfluorododecanoic acid



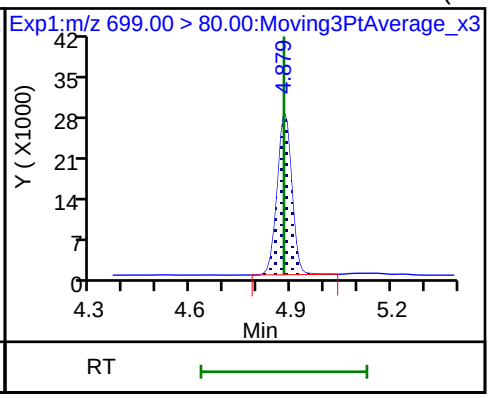
37 Perfluorododecanoic acid



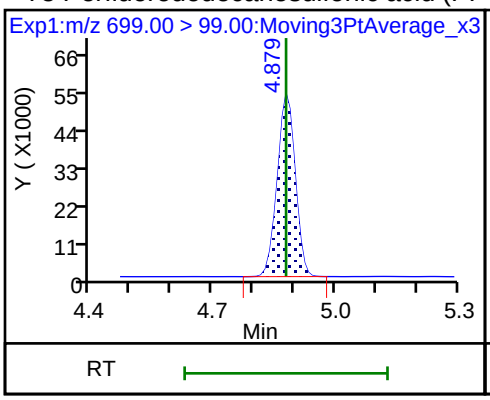
74 1H,1H,2H,2H-perfluorododecanesulfo



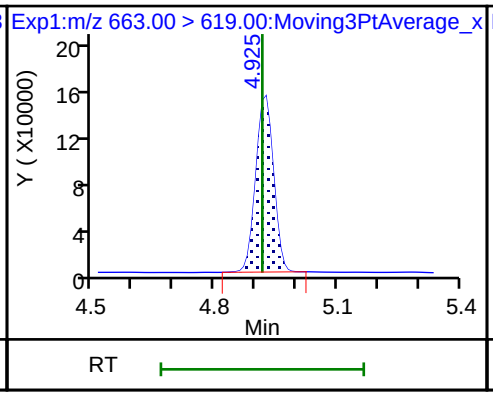
75 Perfluorododecanesulfonic acid (PF



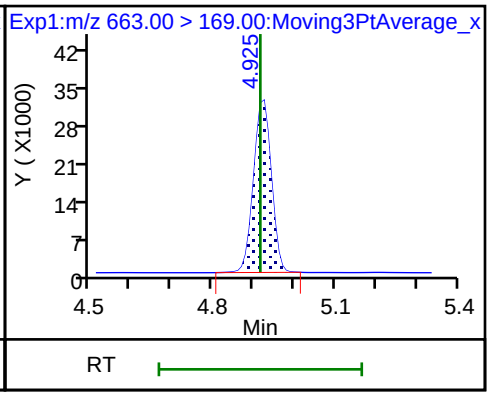
75 Perfluorododecanesulfonic acid (PF



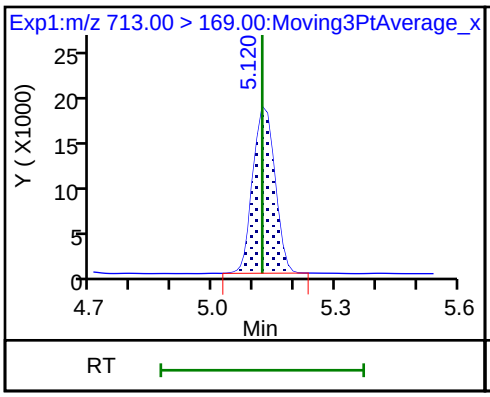
41 Perfluorotridecanoic acid



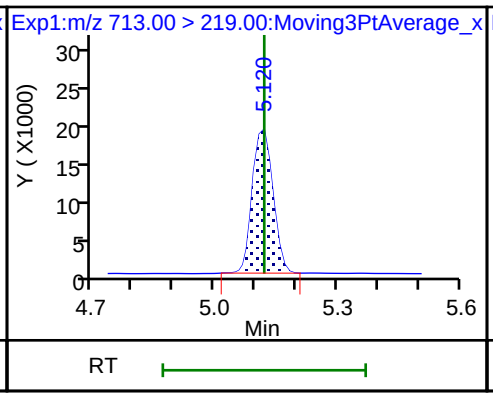
41 Perfluorotridecanoic acid



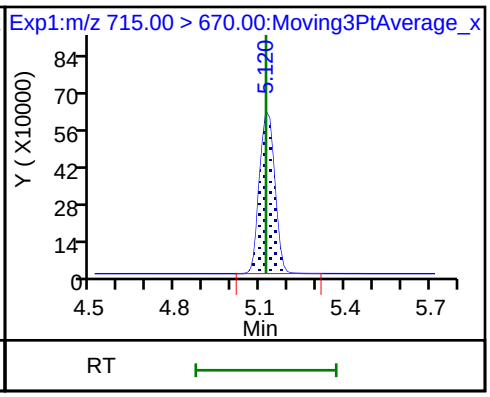
42 Perfluorotetradecanoic acid



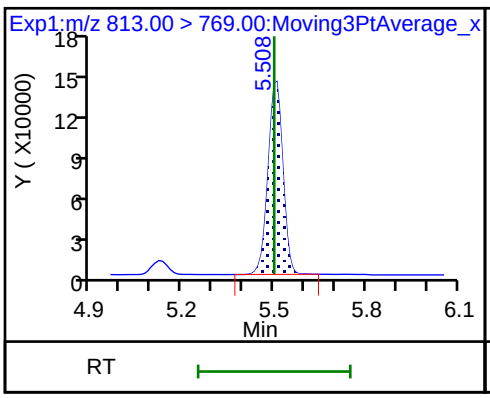
42 Perfluorotetradecanoic acid



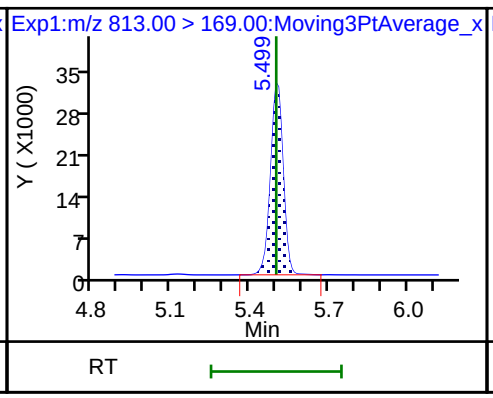
D 43 13C2 PFTeDA



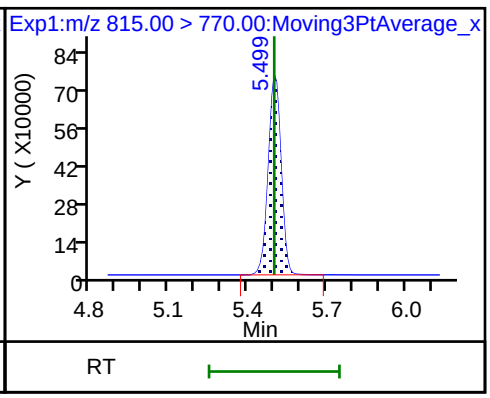
45 Perfluorohexadecanoic acid



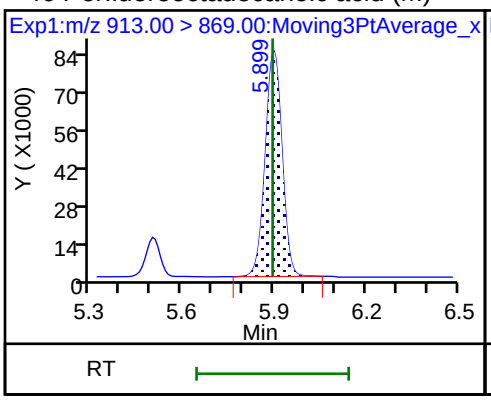
45 Perfluorohexadecanoic acid



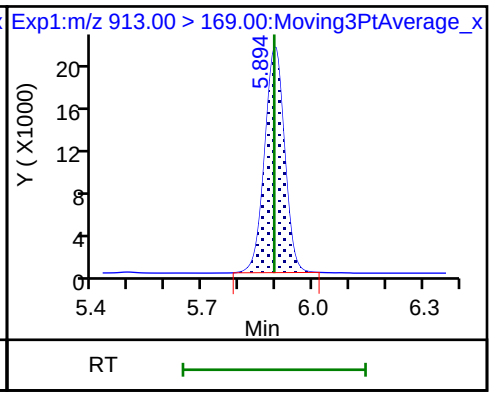
D 44 13C2 PFHxDA



46 Perfluorooctadecanoic acid (M)



46 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

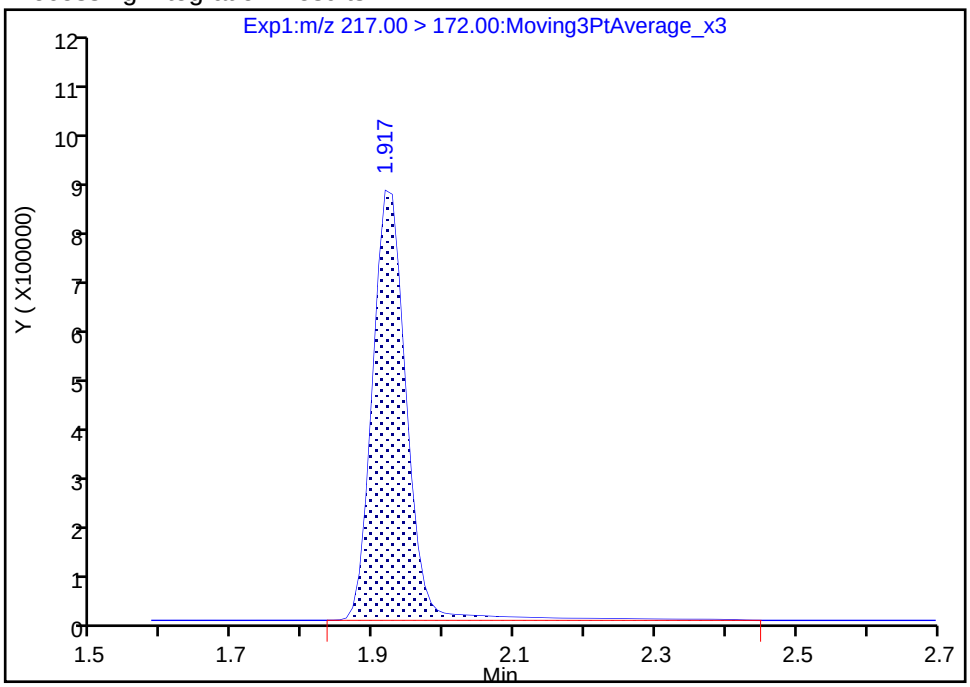
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL007.d
Injection Date: 10-Feb-2020 12:04:59 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 4 Worklist Smp#: 7
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

D 1 13C4 PFBA, CAS: STL00992

Signal: 1

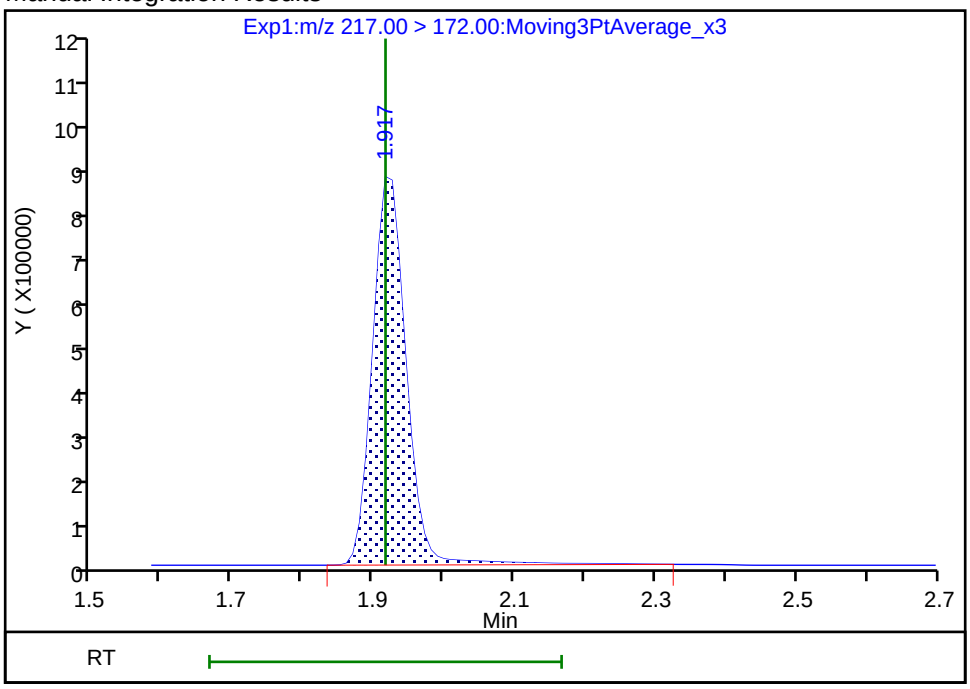
Processing Integration Results

RT: 1.92
Area: 2854709
Amount: 2.460939
Amount Units: ng/ml



Manual Integration Results

RT: 1.92
Area: 2817441
Amount: 2.283796
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:44:51
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

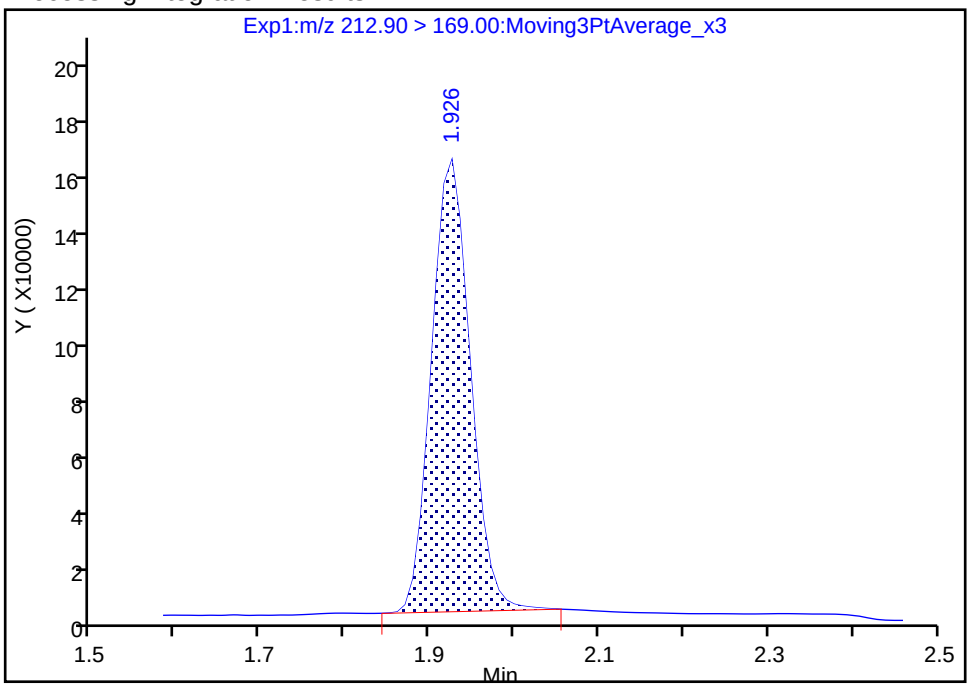
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Injection Date: 10-Feb-2020 12:04:59 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 4 Worklist Smp#: 7
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

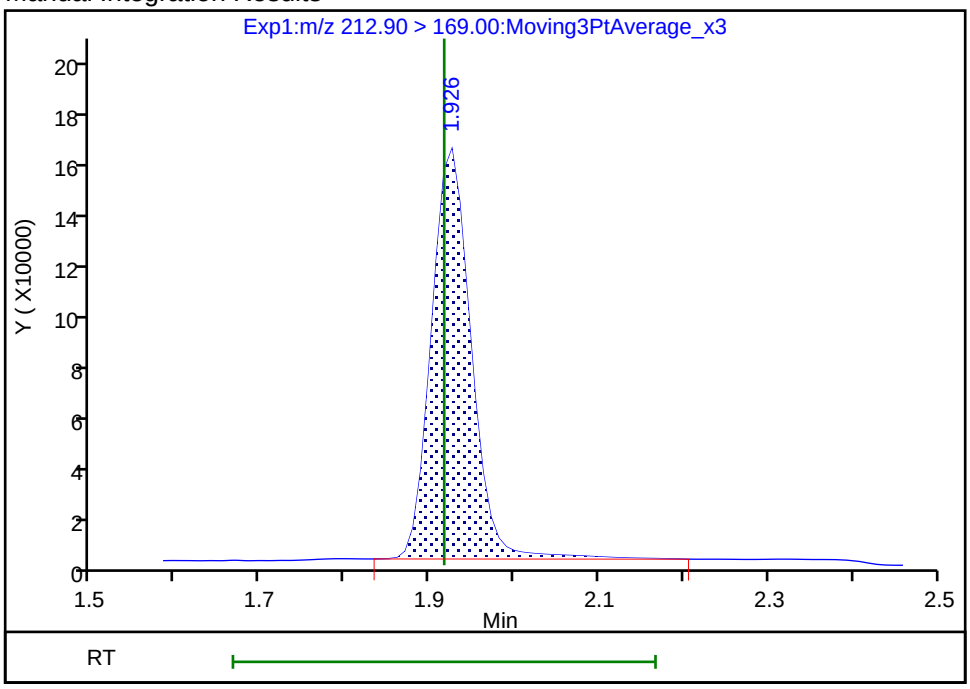
Processing Integration Results

RT: 1.93
Area: 507732
Amount: 0.456759
Amount Units: ng/ml



Manual Integration Results

RT: 1.93
Area: 523198
Amount: 0.488033
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:51:52
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

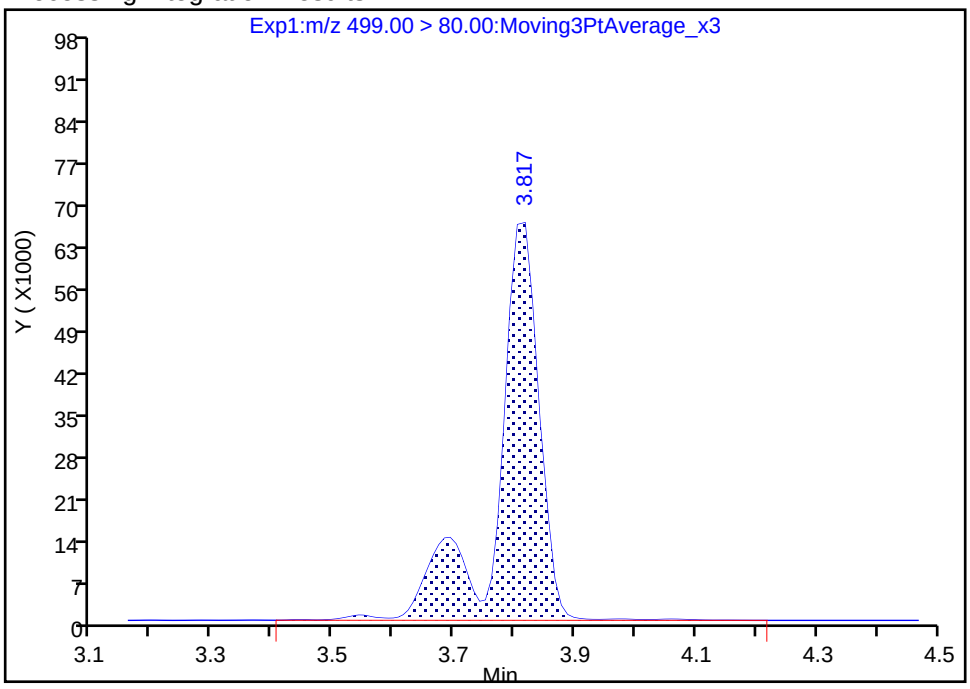
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL007.d
Injection Date: 10-Feb-2020 12:04:59 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 4 Worklist Smp#: 7
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

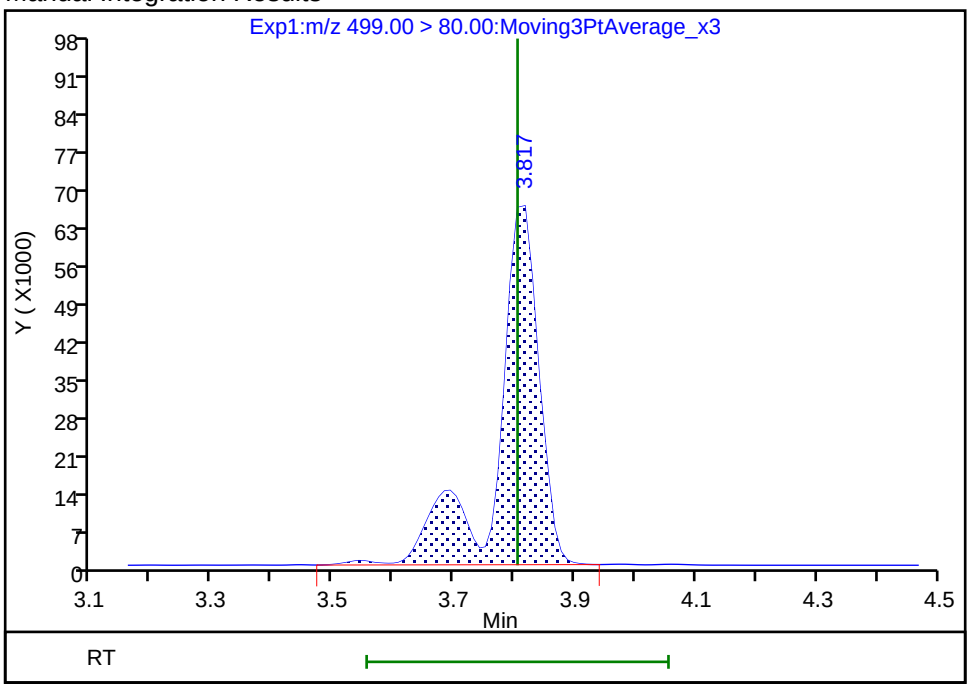
Processing Integration Results

RT: 3.82
Area: 324062
Amount: 0.448957
Amount Units: ng/ml



Manual Integration Results

RT: 3.82
Area: 320574
Amount: 0.464528
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:45:21
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

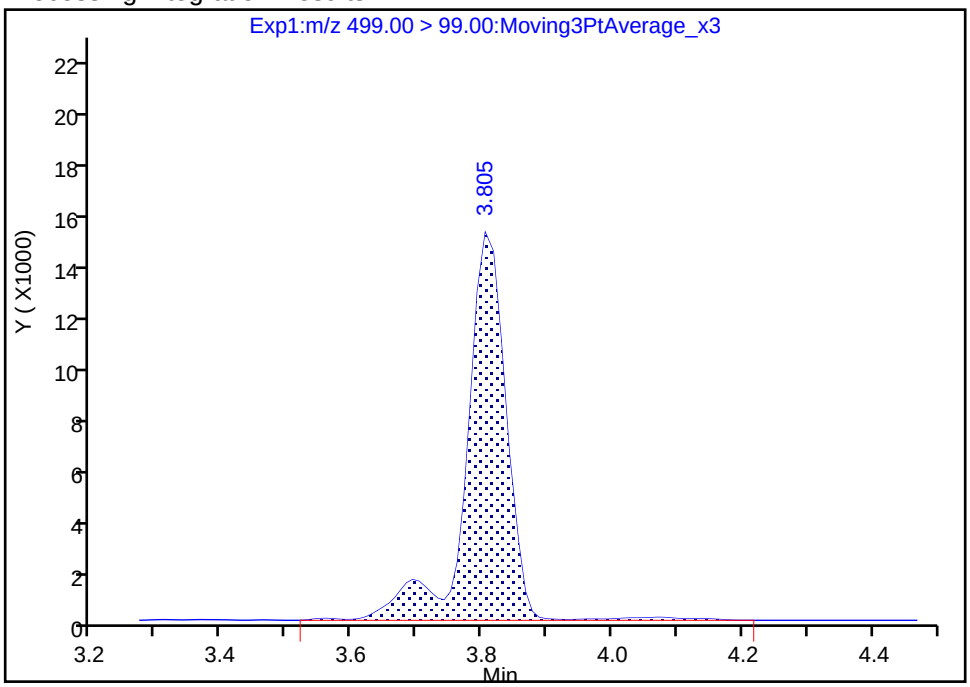
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Injection Date:	10-Feb-2020 12:04:59	Instrument ID:	LC812		
Lims ID:	IC				
Client ID:					
Operator ID:	lc812tech	ALS Bottle#:	4	Worklist Smp#:	7
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

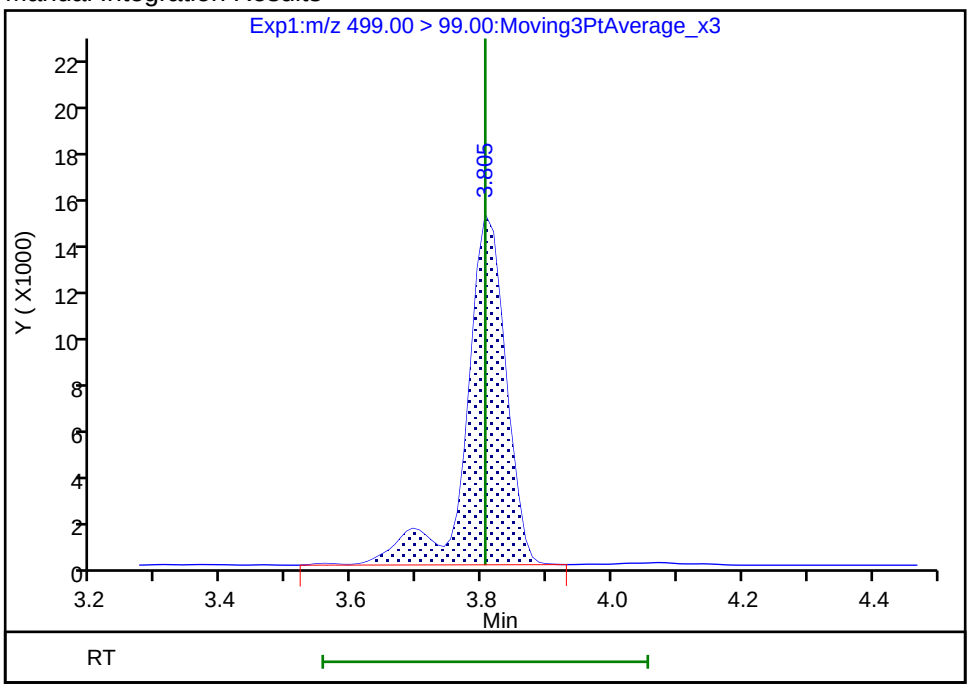
Processing Integration Results

RT: 3.80
Area: 63829
Amount: 0.448957
Amount Units: ng/ml



Manual Integration Results

RT: 3.80
Area: 62639
Amount: 0.464528
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:45:29

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

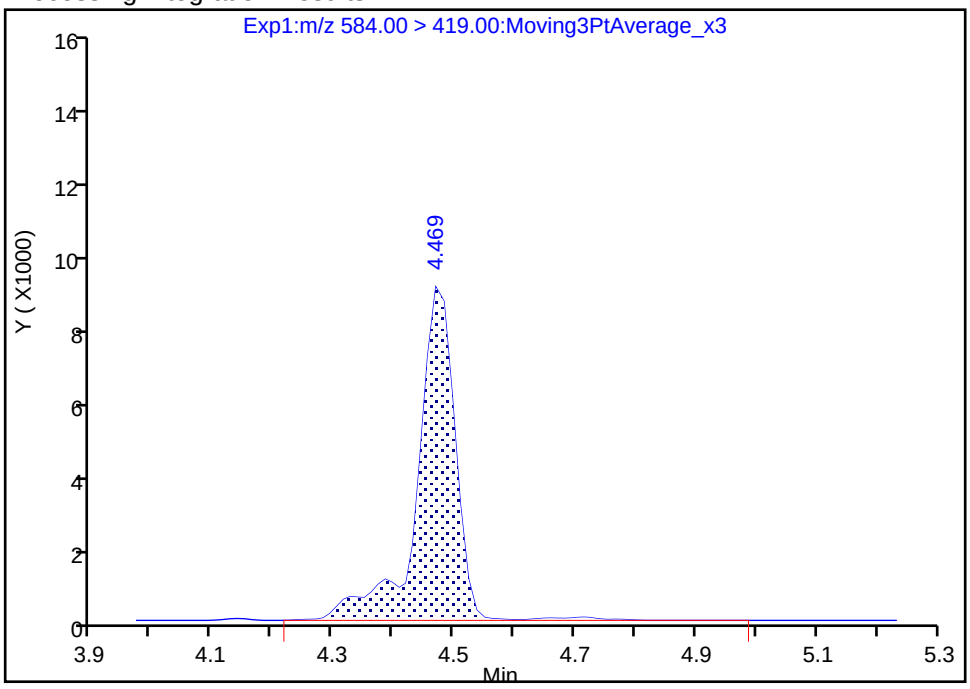
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL007.d
Injection Date: 10-Feb-2020 12:04:59 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 4 Worklist Smp#: 7
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

33 N-ethylperfluorooctanesulfonamidoacetic acid, CAS: 2991-50-6

Signal: 1

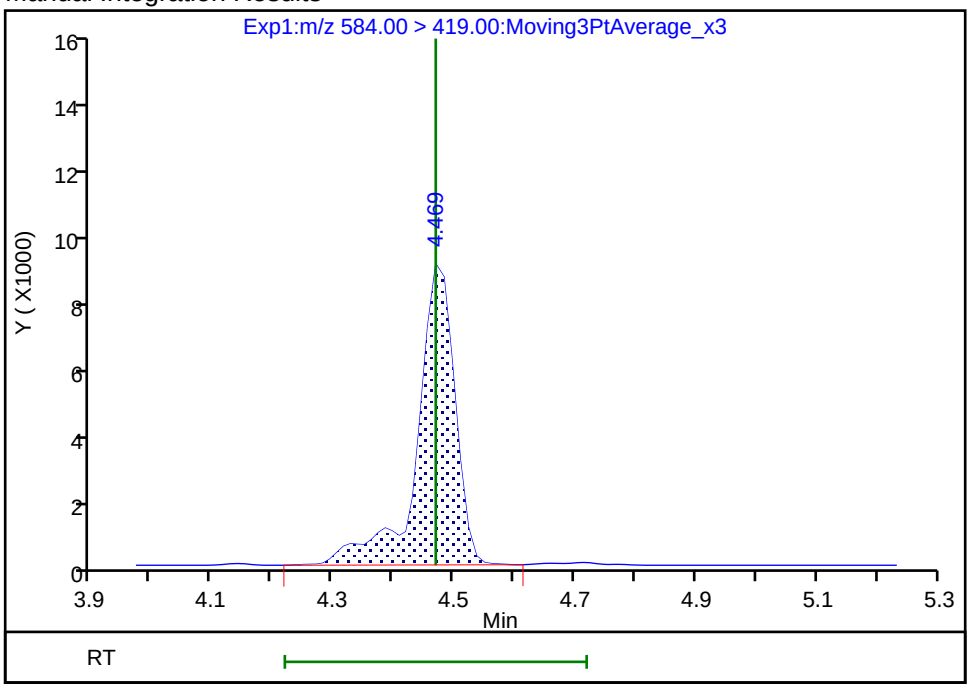
Processing Integration Results

RT: 4.47
Area: 39786
Amount: 0.540451
Amount Units: ng/ml



Manual Integration Results

RT: 4.47
Area: 39109
Amount: 0.521621
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:45:49
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

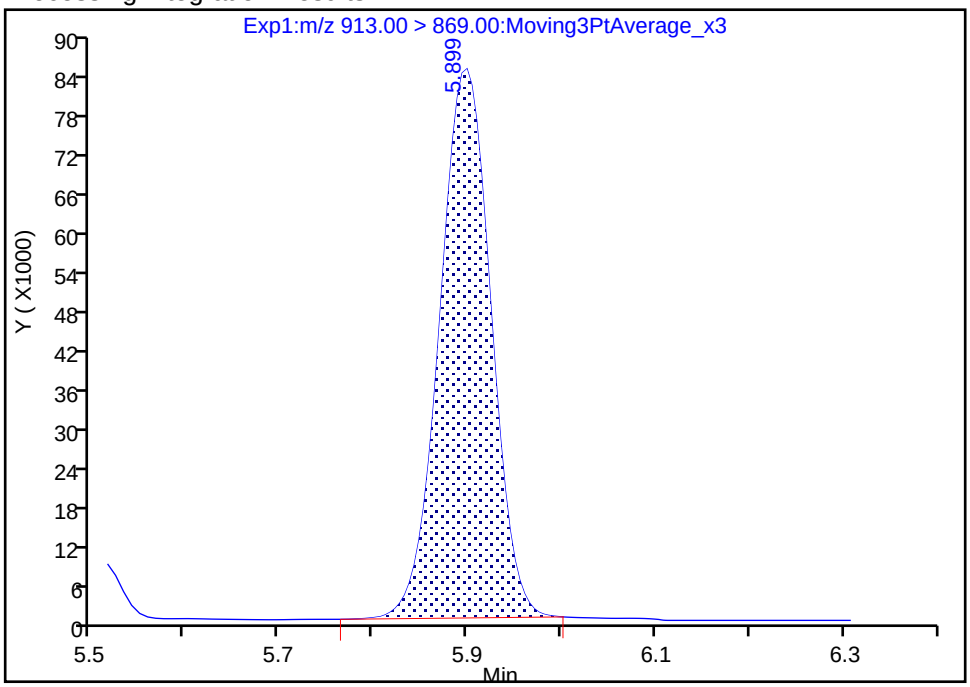
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Injection Date: 10-Feb-2020 12:04:59 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 4 Worklist Smp#: 7
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

46 Perfluorooctadecanoic acid, CAS: 16517-11-6

Signal: 1

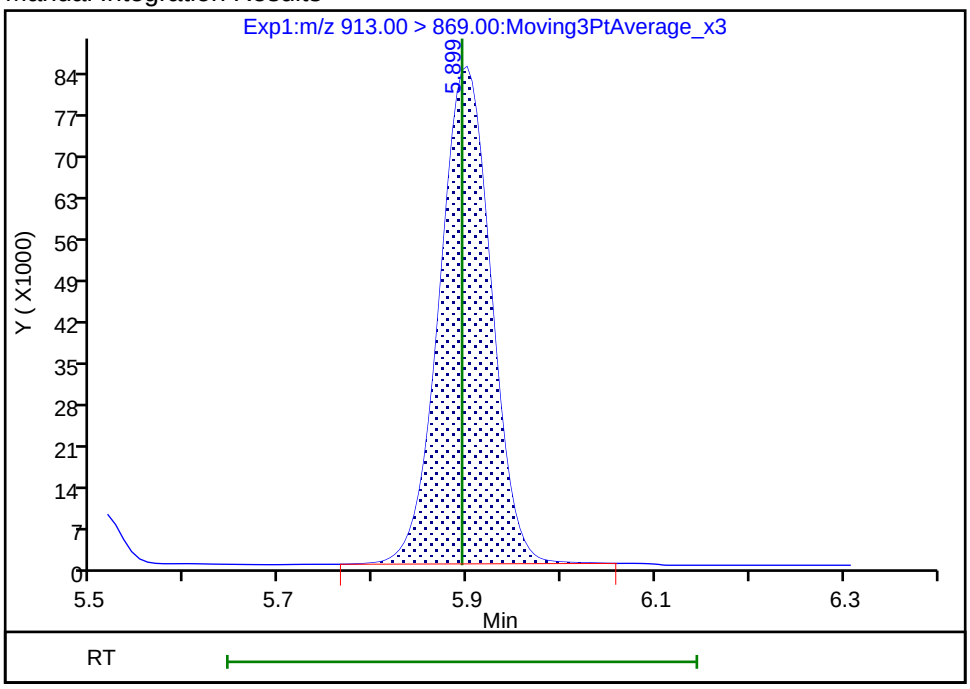
Processing Integration Results

RT: 5.90
Area: 320901
Amount: 0.484026
Amount Units: ng/ml



Manual Integration Results

RT: 5.90
Area: 323024
Amount: 0.513750
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:46:03
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL008.d
Lims ID: ICIS
Client ID:
Sample Type: ICIS Calib Level: 4
Inject. Date: 10-Feb-2020 12:13:09 ALS Bottle#: 5 Worklist Smp#: 8
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: ICIS
Misc. Info.: 200-0039917-008 Plate: 1 Rack: 1
Operator ID: lc812tech Instrument ID: LC812
Sublist: chrom-PFC_LC812*sub3

Method: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\PFC_LC812.m
Limit Group: LC_PFC_ICAL
Last Update: 10-Feb-2020 13:09:40 Calib Date: 10-Feb-2020 12:29:33
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL010.d

Column 1 : C-18 (4.60 mm) Det: EXP1
Process Host: CTX0302

First Level Reviewer: chirgwinb Date: 10-Feb-2020 12:48:03
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										M
212.90 > 169.00	1.917	1.917	0.0	1.000	863531	0.9542		95.4	91.6	M
D 1 13C4 PFBA										M
217.00 > 172.00	1.917	1.917	0.0	0.559	2378309	2.75		110	6023	M
D 3 13C5 PFPeA										
267.90 > 223.00	2.271	2.271	0.0	0.662	1887966	2.81		112	1361	
4 Perfluoropentanoic acid										
262.90 > 219.00	2.271	2.271	0.0	1.000	709525	0.8708		87.1	66.6	
D 47 13C3 PFBS										
301.90 > 80.00	2.284	2.284	0.0	0.666	2365817	2.62		113	696934	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.284	2.284	0.0	1.000	840348	0.8095	Target=2.20	91.6	397	
298.90 > 99.00	2.284	2.284	0.0	1.000	384168		2.19(1.10-3.31)	91.6	234	
61 1H,1H,2H,2H-perfluorohexanesulfoni										
327.00 > 307.00	2.623	2.623	0.0	1.000	126654	0.9329		99.9	466	
D 60 M2-4:2 FTS										
329.00 > 81.00	2.623	2.623	0.0	0.765	163483	2.47		106	125	
70 Perfluoropentanesulfonic acid										
349.00 > 80.00	2.660	2.660	0.0	0.874	828672	0.8982	Target=3.28	95.8	1689	
349.00 > 99.00	2.660	2.660	0.0	0.874	251977		3.29(1.64-4.91)	95.8	888	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.660	2.660	0.0	1.000	804760	0.9316	Target=12.10	93.2	234	
313.00 > 119.00	2.660	2.660	0.0	1.000	64353		12.51(6.05-18.16)	93.2	116	
D 7 13C2 PFHxA										
315.00 > 270.00	2.660	2.660	0.0	0.776	2181253	2.77		111	4731	
D 64 13C3 HFPO-DA										
332.10 > 287.00	2.776	2.776	0.0	0.809	183761	2.95		118	1291	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.776	2.776	0.0	1.000	139731	0.8117		81.2	55.6	
D 11 18O2 PFHxS										
403.00 > 84.00	3.044	3.044	0.0	0.887	1719306	2.69		114	11838	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.044	3.044	0.0	1.000	702279	0.8186	Target=4.10	90.0	2094	
399.00 > 99.00	3.044	3.044	0.0	1.000	162087		4.33(2.05-6.15)	90.0	337	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.055	3.055	0.0	1.000	864157	1.03	Target=3.67	103	344	
363.00 > 169.00	3.055	3.055	0.0	1.000	228243		3.79(1.83-5.50)	103	744	
D 9 13C4 PFHpA										
367.00 > 322.00	3.055	3.055	0.0	0.891	2046344	2.71		108	4768	
77 DONA										
377.00 > 251.00	3.089	3.089	0.0	0.812	1742727	0.9048	Target=2.51	96.0	3238	
377.00 > 85.00	3.089	3.089	0.0	0.812	716309		2.43(1.26-3.77)	96.0	2103	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.413	3.413	0.0	0.897	580737	0.9112	Target=5.96	95.7	2784	
449.00 > 99.00	3.413	3.413	0.0	0.897	96619		6.01(2.98-8.94)	95.7	1047	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.421	3.421	0.0	0.998	224190	2.56		108	830	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.421	3.421	0.0	1.000	99002	0.9334		98.5	758	
D 14 13C4 PFOA										
417.00 > 372.00	3.430	3.430	0.0	1.000	2201126	2.81		113	9611	
* 62 13C2 PFOA										
415.00 > 370.00	3.430	3.430	0.0		2075649	2.50			5979	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.430	3.430	0.0	1.000	878778	0.9584	Target=2.57	95.8	235	
413.00 > 169.00	3.430	3.430	0.0	1.000	330300		2.66(1.28-3.85)	95.8	1196	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.805	3.805	0.0	1.000	507649	0.8822	Target=5.37	95.1	1466	M
499.00 > 99.00	3.805	3.805	0.0	1.000	95922		5.29(2.69-8.06)	95.1	508	M
D 18 13C4 PFOS										
503.00 > 80.00	3.805	3.805	0.0	1.109	1252356	2.63		110	3875	
20 Perfluorononanoic acid										
463.00 > 419.00	3.829	3.829	0.0	1.000	861360	0.99	Target=7.44	99.4	241	
463.00 > 169.00	3.829	3.829	0.0	1.000	111384		7.73(3.72-11.15)	99.4	1132	
D 19 13C5 PFNA										
468.00 > 423.00	3.829	3.829	0.0	1.116	2106715	2.81		112	6849	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.994	3.994	0.0	1.050	658195	0.8982		96.4	1350	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.141	4.141	0.0	1.088	424996	0.9159	Target=2.85	95.4	2424	
549.00 > 99.00	4.141	4.141	0.0	1.088	153036		2.78(1.43-4.28)	95.4	778	
D 23 13C2 PFDA										
515.00 > 470.00	4.164	4.164	0.0	1.214	2196359	2.69		108	6949	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
24 Perfluorodecanoic acid										
513.00 > 469.00	4.164	4.164	0.0	1.000	948645	1.05	Target=9.04	105	698	
513.00 > 169.00	4.164	4.164	0.0	1.000	97278		9.75(4.52-13.56)	105	783	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.174	4.174	0.0	1.217	333646	2.70		113	1545	
25 1H,1H,2H,2H-perfluorodecanesulfoni										
527.00 > 507.00	4.174	4.174	0.0	1.000	80078	0.9260		96.7	1767	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.218	4.218	0.0	1.000	951647	0.9699		97.0	1476	
D 21 13C8 FOSA										
506.00 > 78.00	4.218	4.218	0.0	1.230	2393414	2.86		114	6446	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.316	4.316	0.0	1.258	187585	2.92		117	412	
28 N-methylperfluorooctanesulfonamido										
570.00 > 419.00	4.328	4.328	0.0	1.003	64538	1.00		100	351	
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.420	4.420	0.0	1.162	357482	0.8761	Target=2.69	90.9	2656	
599.00 > 99.00	4.420	4.420	0.0	1.162	135893		2.63(1.34-4.03)	90.9	1722	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.456	4.456	0.0	1.000	641096	0.8833	Target=7.95	88.3	602	
563.00 > 169.00	4.456	4.456	0.0	1.000	87678		7.31(3.98-11.93)	88.3	1069	
D 30 13C2 PFUnA										
565.00 > 520.00	4.456	4.456	0.0	1.299	2001446	2.81		113	9638	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.456	4.456	0.0	1.299	181828	2.48		99.2	1043	
33 N-ethylperfluorooctanesulfonamidoa										
584.00 > 419.00	4.469	4.469	0.0	1.003	68848	1.19		119	901	
66 11-Chloroeicosafluoro-3-oxaundecan										
631.00 > 451.00	4.550	4.550	0.0	1.196	721990	0.8669		92.0	2077	
D 36 13C2 PFDoA										
615.00 > 570.00	4.693	4.693	0.0	1.368	2073947	2.61		104	6755	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.693	4.693	0.0	1.000	794277	0.9868	Target=7.12	98.7	152	
613.00 > 169.00	4.693	4.693	0.0	1.000	114114		6.96(3.56-10.68)	98.7	1364	
74 1H,1H,2H,2H-perfluorododecanesulfo										
627.00 > 607.00	4.714	4.714	0.0	1.129	39828	0.8610		89.3	1040	
75 Perfluorododecanesulfonic acid (PF										
699.00 > 80.00	4.879	4.879	0.0	1.282	129272	0.9128	Target=0.50	94.3	422	
699.00 > 99.00	4.879	4.879	0.0	1.282	273471		0.47(0.25-0.74)	94.3	3362	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.915	4.915	0.0	1.047	770725	1.05	Target=4.73	105	154	
663.00 > 169.00	4.915	4.915	0.0	1.047	159278		4.84(2.36-7.09)	105	1696	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.120	5.120	0.0	1.000	114867	1.00	Target=1.08	100.0	1347	
713.00 > 219.00	5.107	5.120	-0.013	0.998	99601		1.15(0.54-1.62)	100.0	1492	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.120	5.120	0.0	1.493	1846613	2.70		108	8014	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.499	5.499	0.0	1.000	721496	0.9770	Target=4.40	97.7	224	
813.00 > 169.00	5.499	5.499	0.0	1.000	165638		4.36(2.20-6.60)	97.7	1959	
D 44 13C2 PFHxDA										
815.00 > 770.00	5.499	5.499	0.0	1.603	2022237	2.72		109	6693	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.894	5.894	0.0	1.072	469765	0.9324	Target=4.01	93.2	124	
913.00 > 169.00	5.889	5.894	-0.005	1.071	117257		4.01(2.01-6.02)	93.2	1183	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

PFAS32NCIC4_00005 Amount Added: 100.00 Units: uL

Report Date: 10-Feb-2020 13:09:41 Chrom Revision: 2.3 14-Jan-2020 22:23:42

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL008.d

Injection Date: 10-Feb-2020 12:13:09 Instrument ID: LC812

Lims ID: ICIS

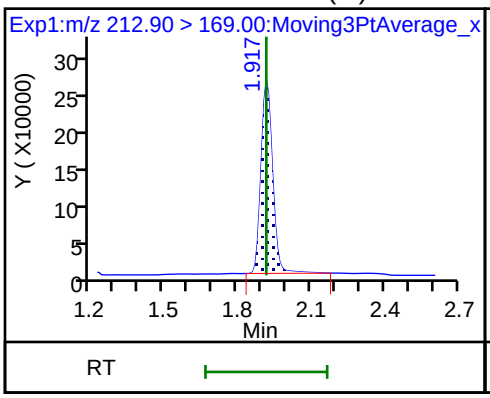
Client ID:

Operator ID: lc812tech ALS Bottle#: 5 Worklist Smp#: 8

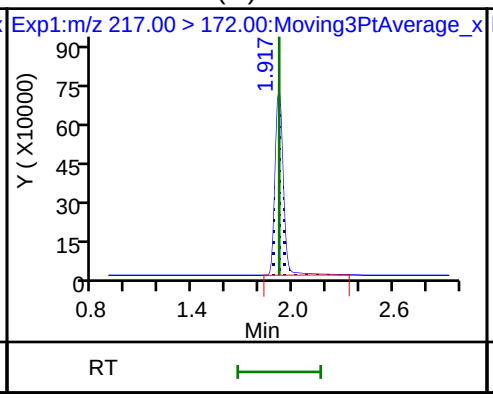
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFC_LC812 Limit Group: LC_PFC_ICAL

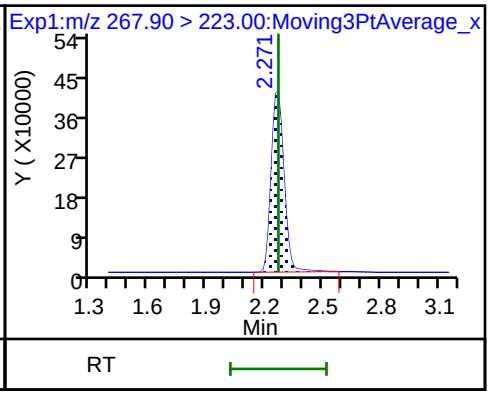
2 Perfluorobutanoic acid (M)



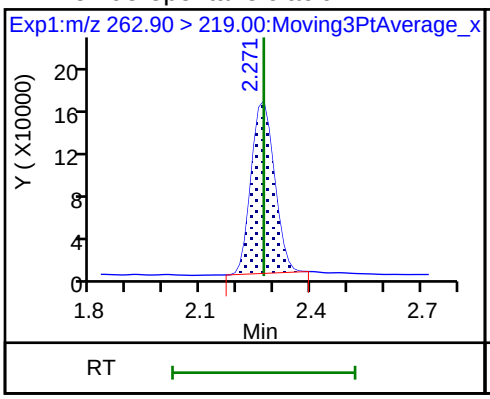
D 1 13C4 PFBA (M)



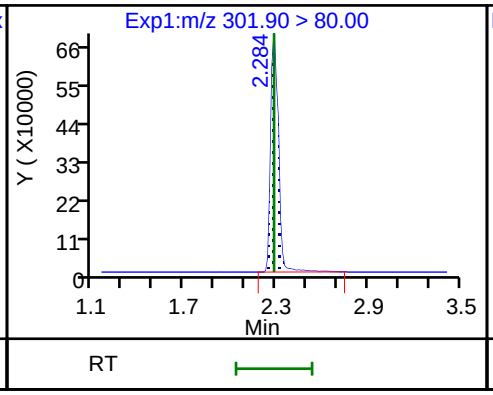
D 3 13C5 PFPeA



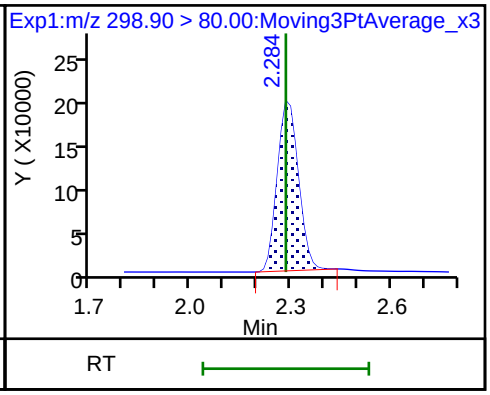
4 Perfluoropentanoic acid



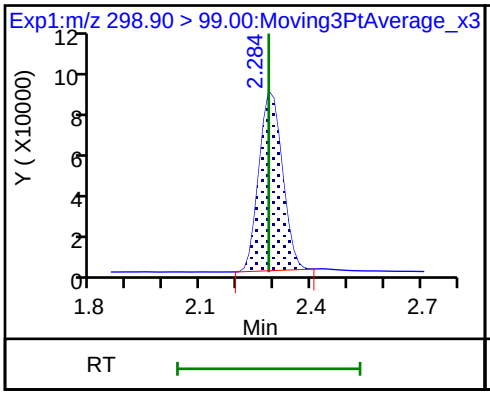
D 47 13C3 PFBS



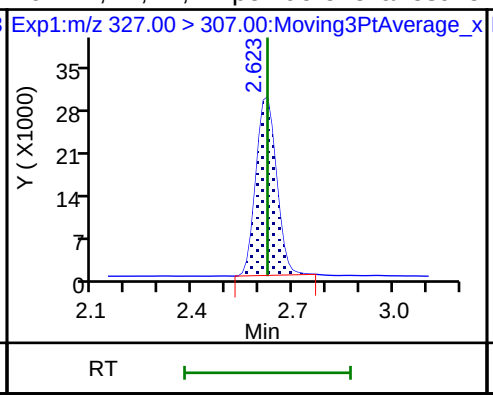
5 Perfluorobutanesulfonic acid



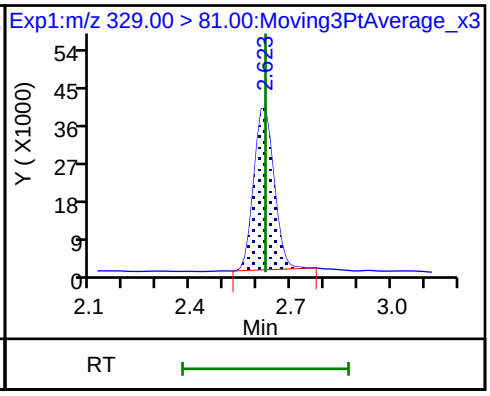
5 Perfluorobutanesulfonic acid



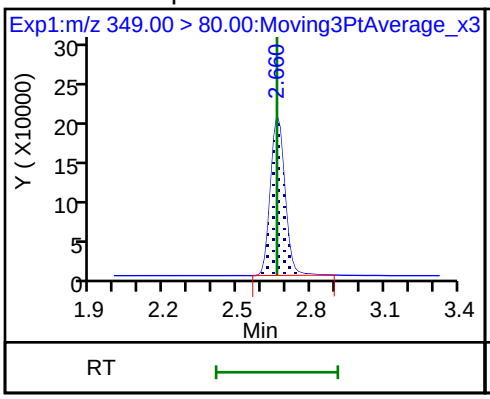
61 1H,1H,2H,2H-perfluorohexanesulfon



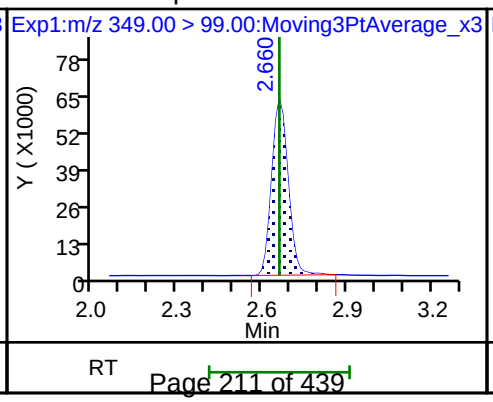
D 60 M2-4:2 FTS



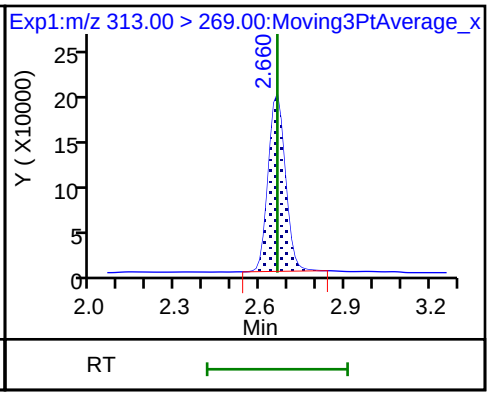
70 Perfluoropentanesulfonic acid



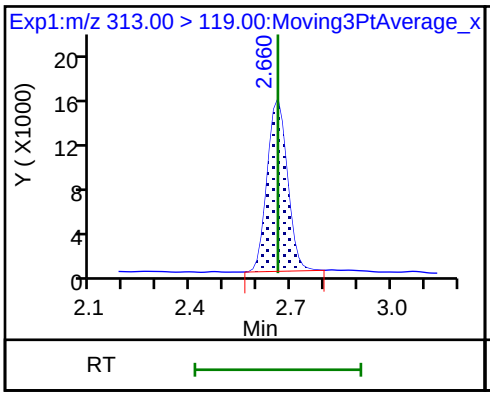
70 Perfluoropentanesulfonic acid



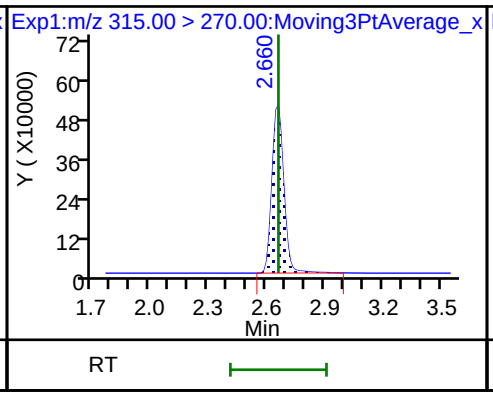
6 Perfluorohexanoic acid



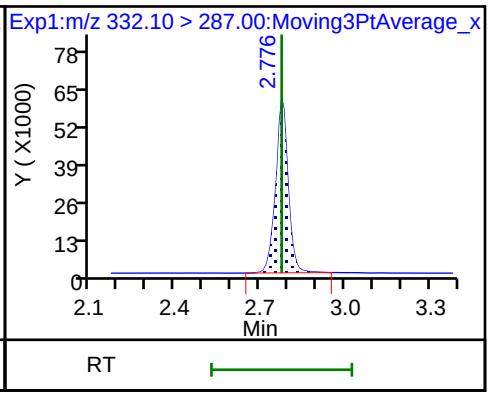
6 Perfluorohexanoic acid



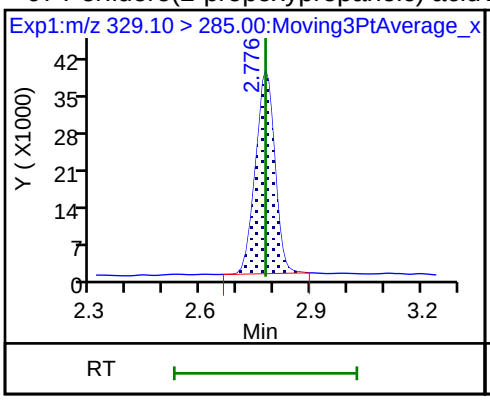
D 7 13C2 PFHxA



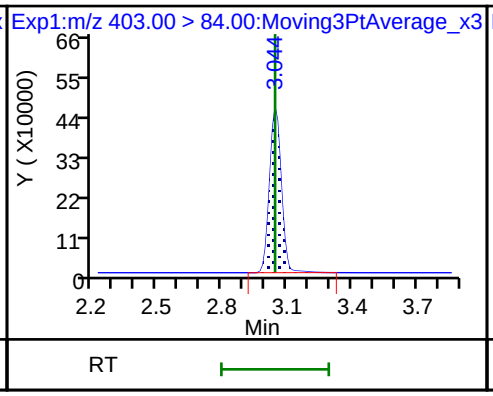
D 64 13C3 HFPO-DA



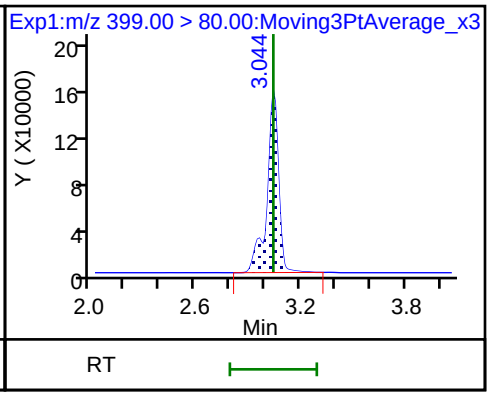
67 Perfluoro(2-propoxypropanoic) acid



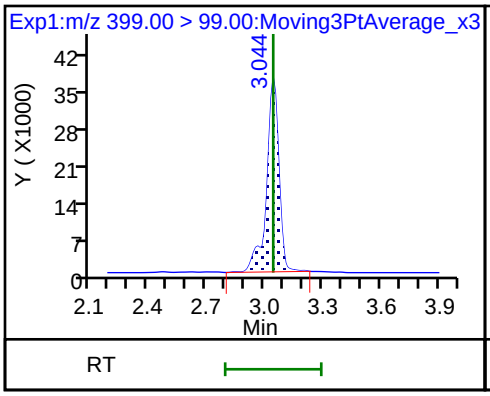
D 11 18O2 PFHxS



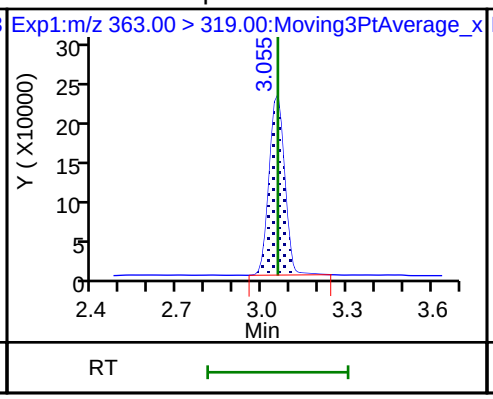
8 Perfluorohexanesulfonic acid



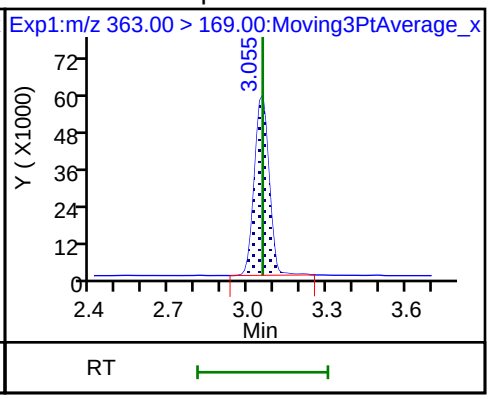
8 Perfluorohexanesulfonic acid



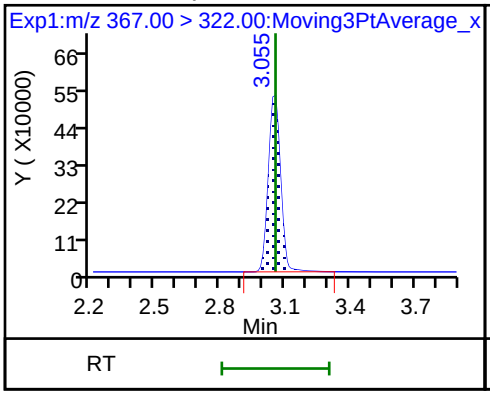
10 Perfluoroheptanoic acid



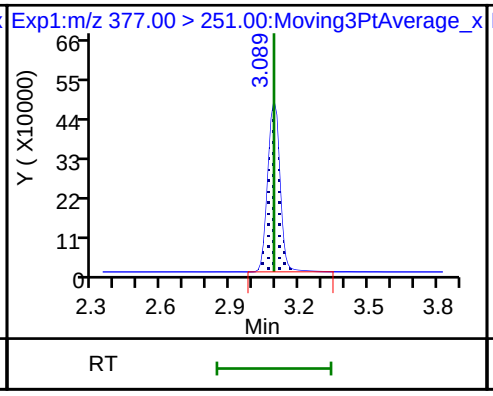
10 Perfluoroheptanoic acid



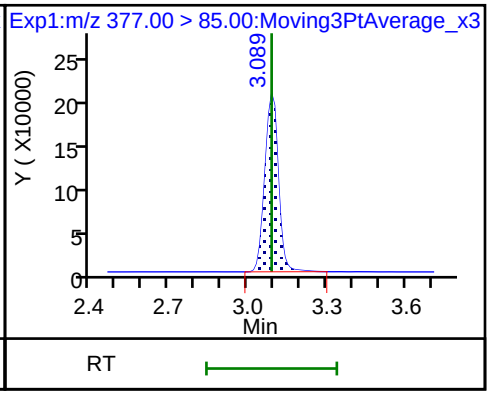
D 9 13C4 PFHpA



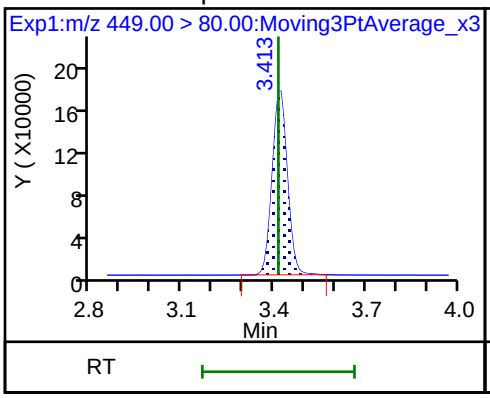
77 DONA



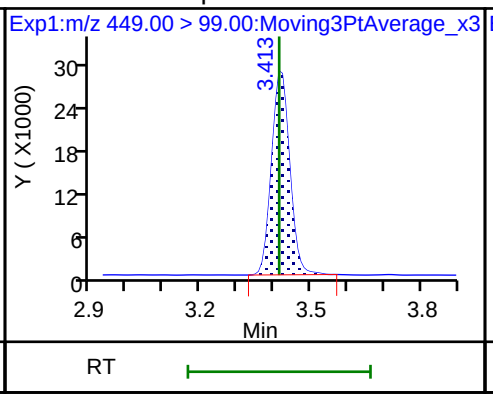
77 DONA



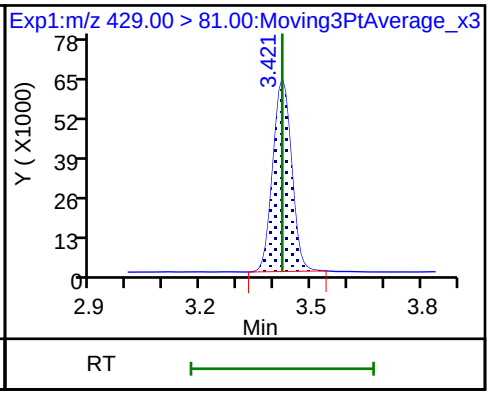
16 Perfluoroheptanesulfonic acid



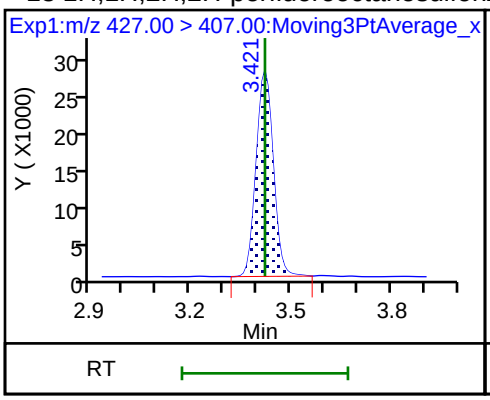
16 Perfluoroheptanesulfonic acid



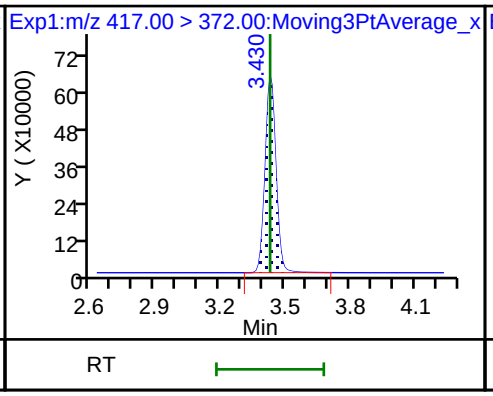
D 12 M2-6:2 FTS



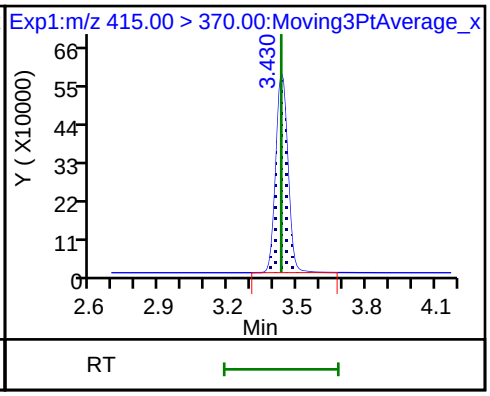
13 1H,1H,2H,2H-perfluorooctanesulfonI



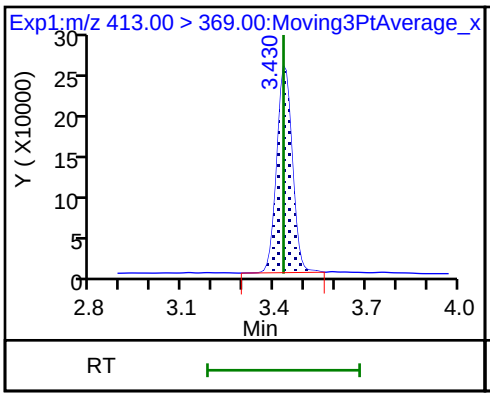
D 14 13C4 PFOA



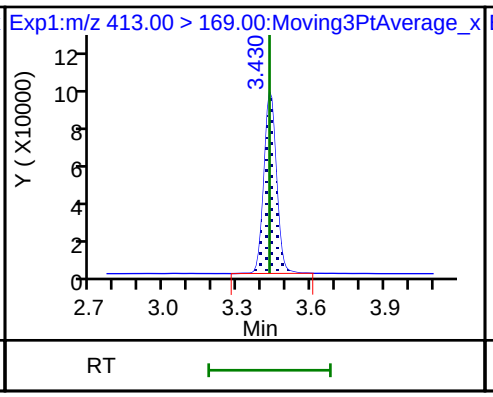
* 62 13C2 PFOA



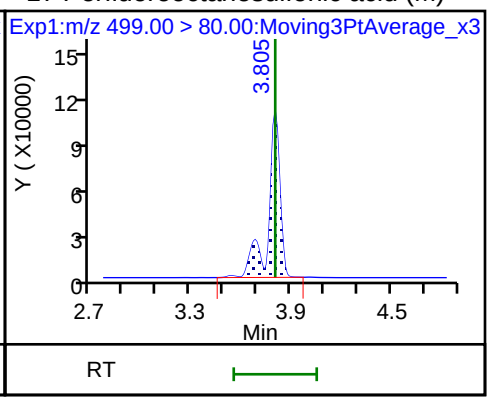
15 Perfluorooctanoic acid



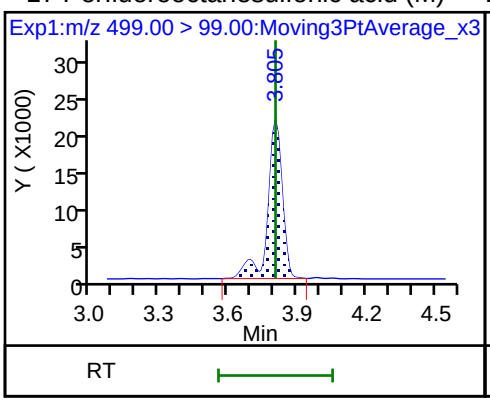
15 Perfluorooctanoic acid



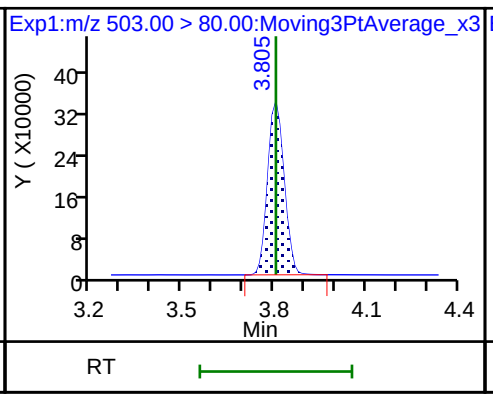
17 Perfluorooctanesulfonic acid (M)



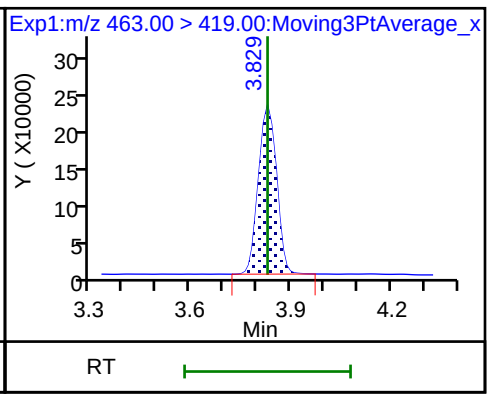
17 Perfluorooctanesulfonic acid (M)



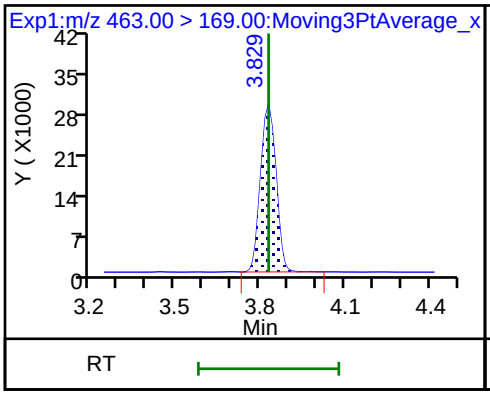
D 18 13C4 PFOS



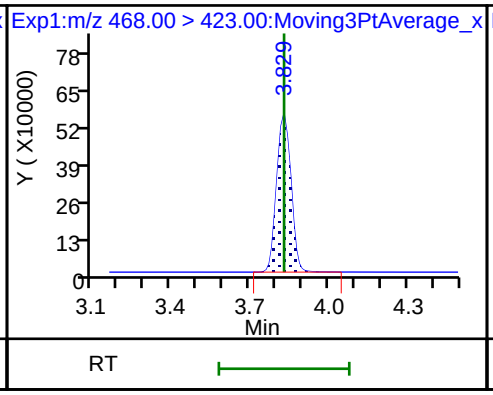
20 Perfluorononanoic acid



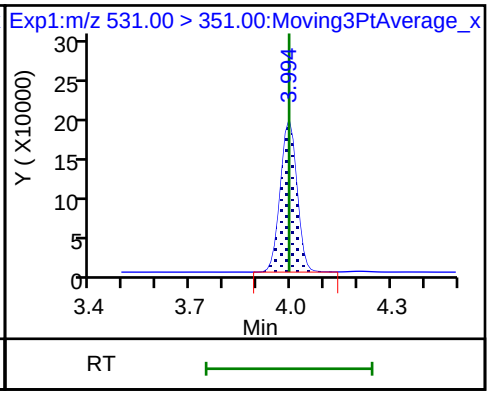
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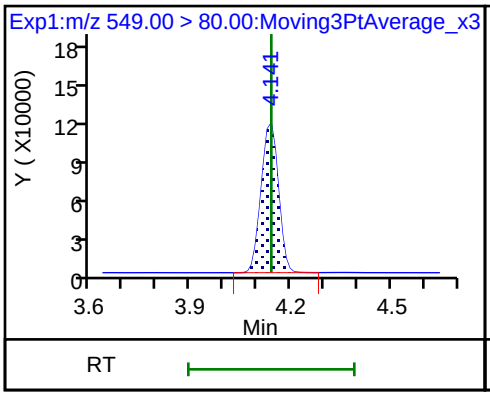
D 19 13C5 PFNA



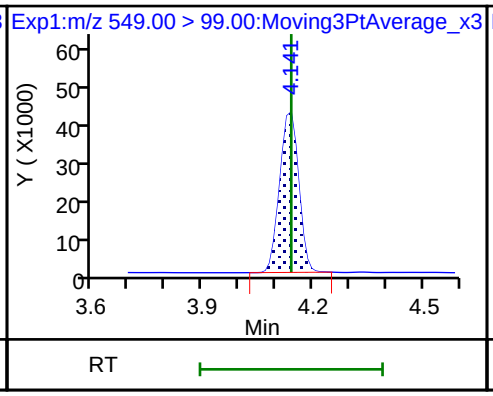
69 9-Chlorohexadecafluoro-3-oxanonane



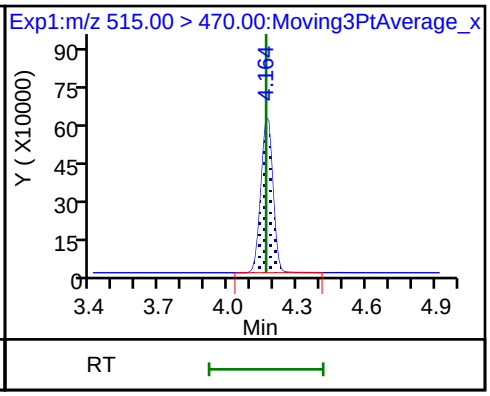
68 Perfluorononanesulfonic acid



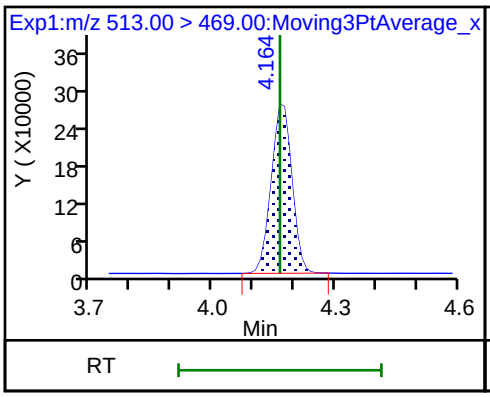
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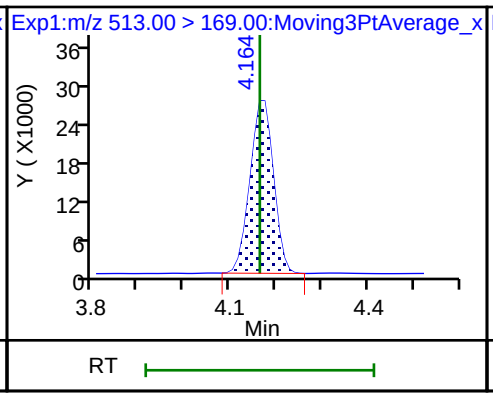
D 23 13C2 PFDA



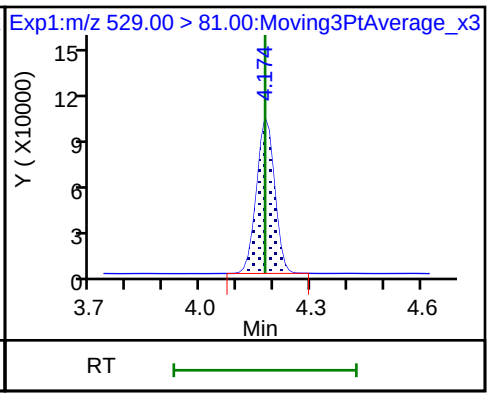
24 Perfluorodecanoic acid



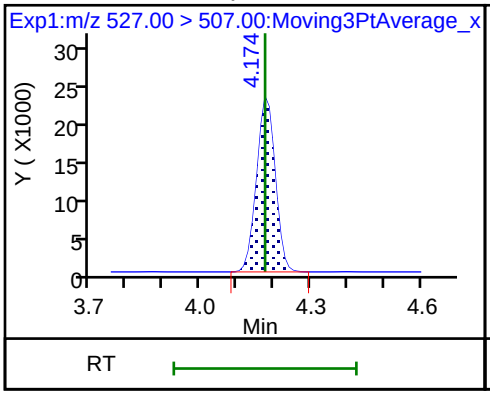
24 Perfluorodecanoic acid



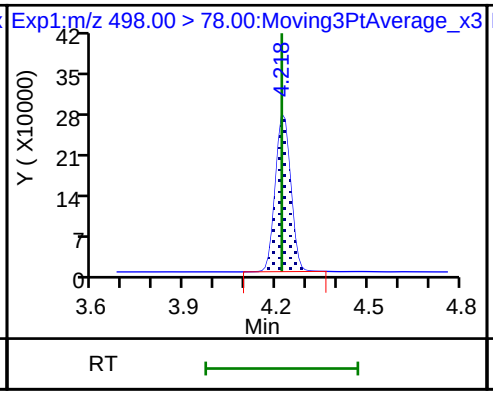
D 26 M2-8:2 FTS



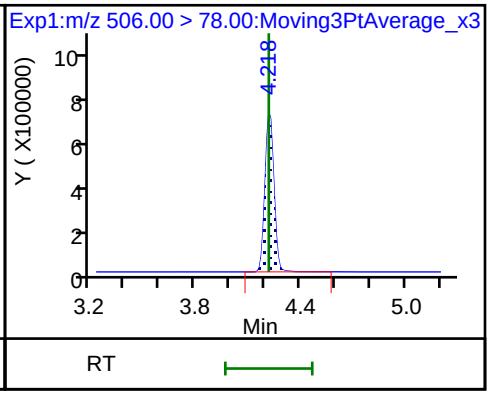
25 1H,1H,2H,2H-perfluorodecanesulfoni



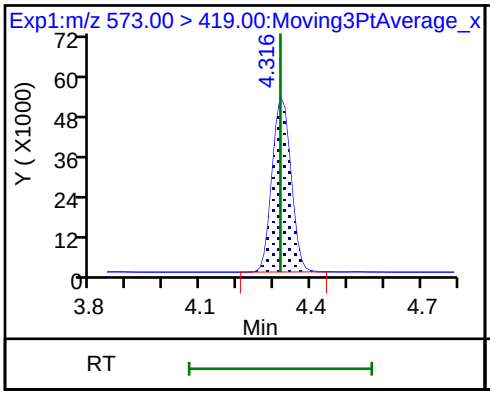
22 Perfluorooctanesulfonamide



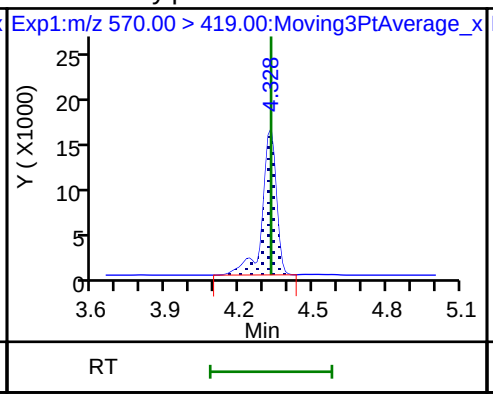
D 21 13C8 FOSA



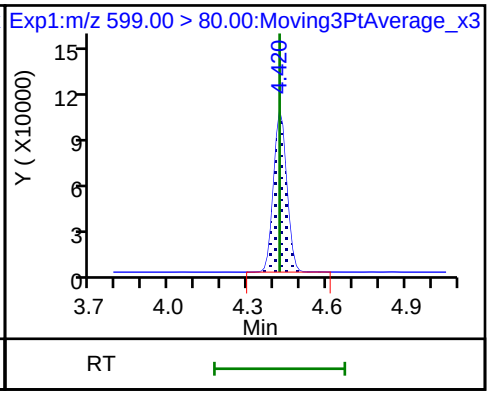
D 27 d3-NMeFOSAA



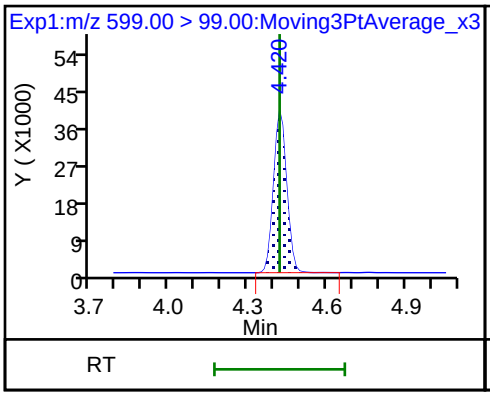
28 N-methylperfluorooctanesulfonamido



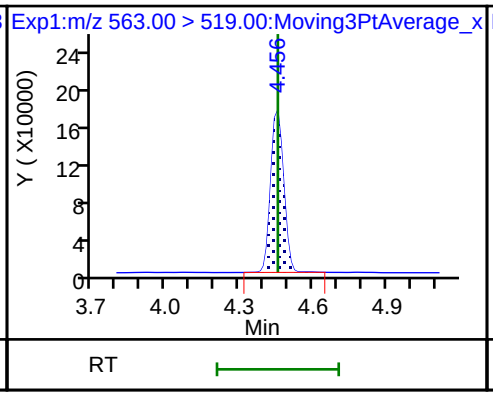
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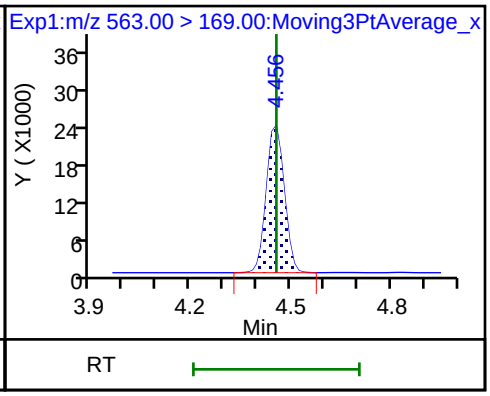
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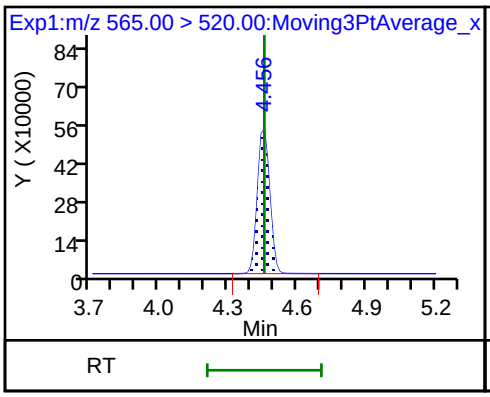
31 Perfluoroundecanoic acid



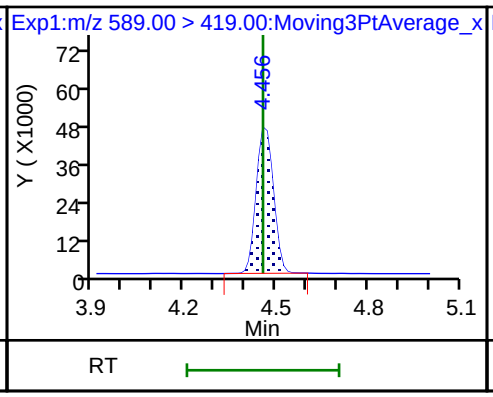
31 Perfluoroundecanoic acid



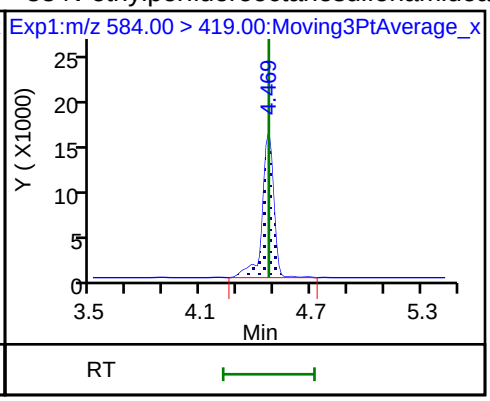
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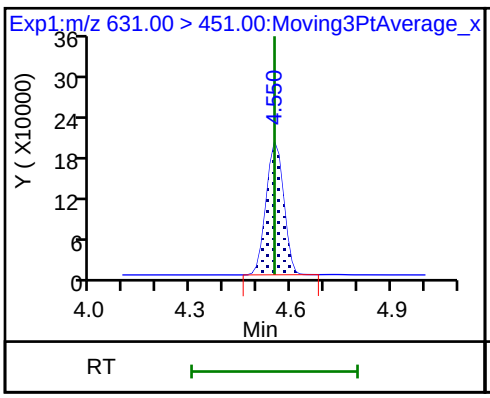
D 32 d5-NEtFOSAA



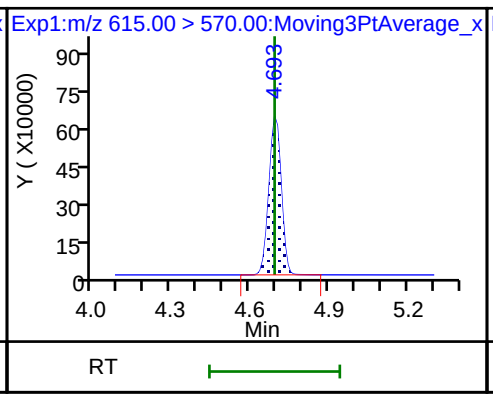
33 N-ethylperfluorooctanesulfonamidoa



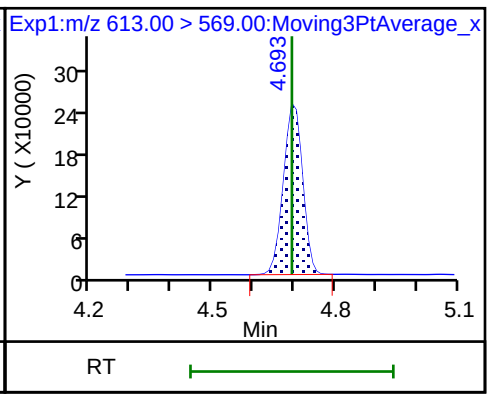
66 11-Chloroeicosafluoro-3-oxaundecan



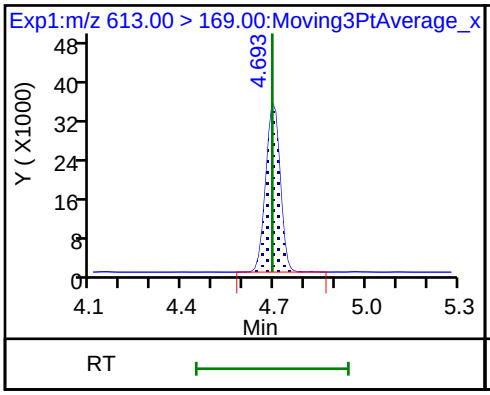
D 36 13C2 PFDoA



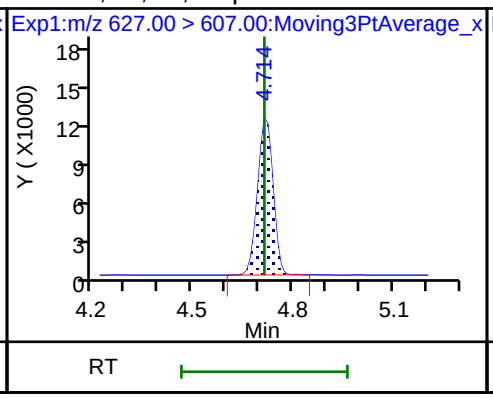
37 Perfluorododecanoic acid



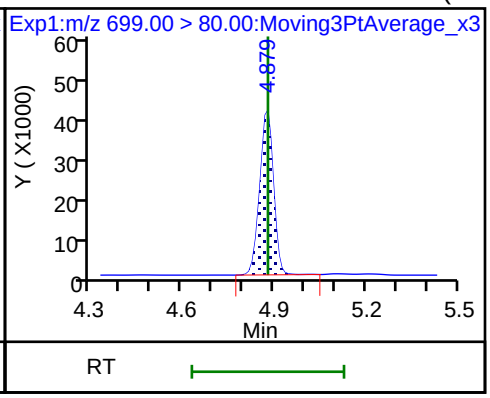
37 Perfluorododecanoic acid



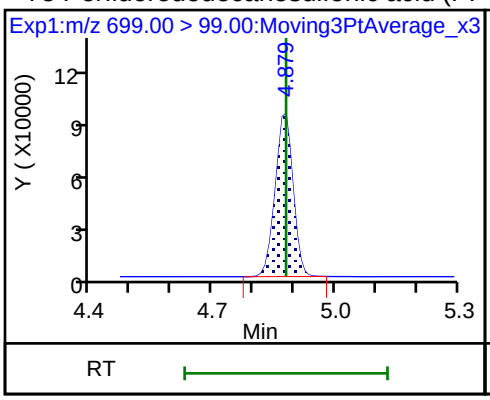
74 1H,1H,2H,2H-perfluorododecanesulfo



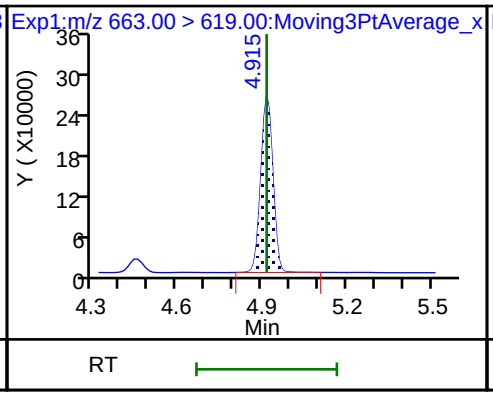
75 Perfluorododecanesulfonic acid (PF



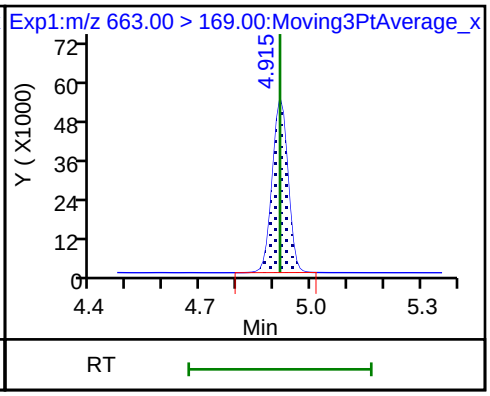
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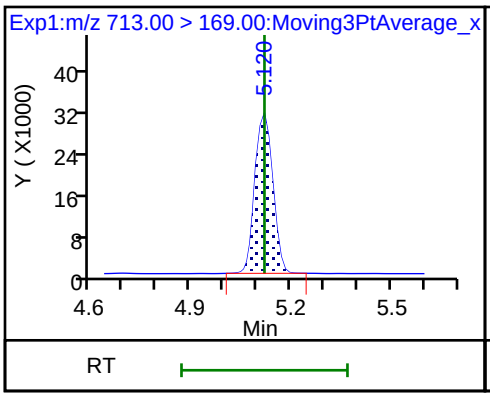
41 Perfluorotridecanoic acid



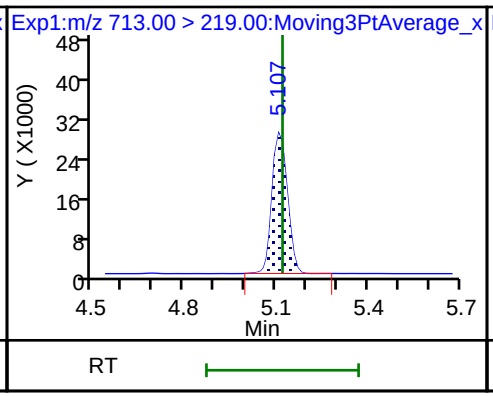
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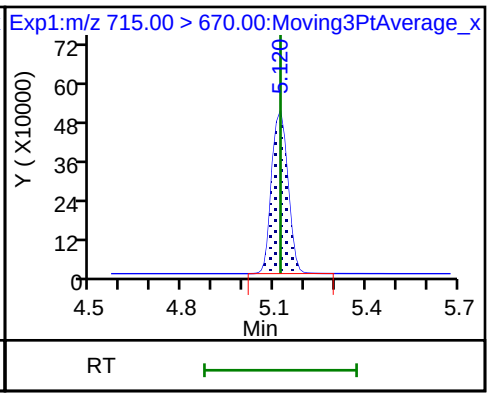
42 Perfluorotetradecanoic acid



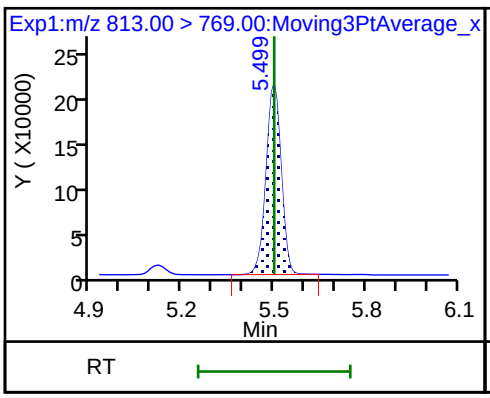
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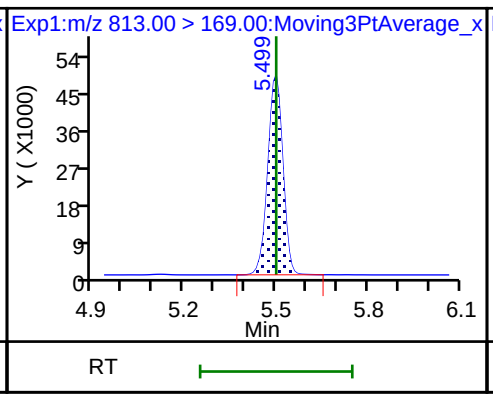
D 43 13C2 PFTeDA



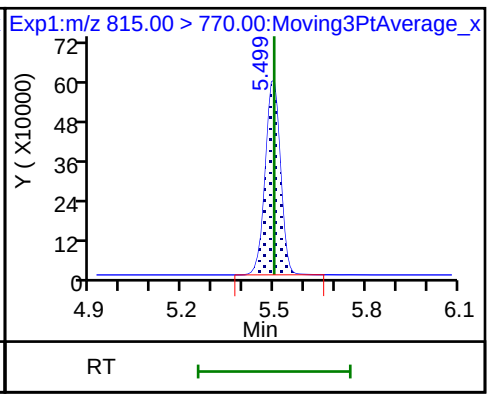
45 Perfluorohexadecanoic acid



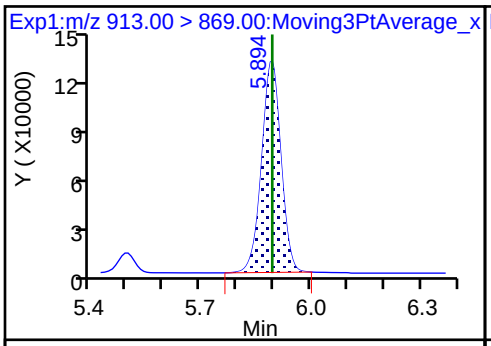
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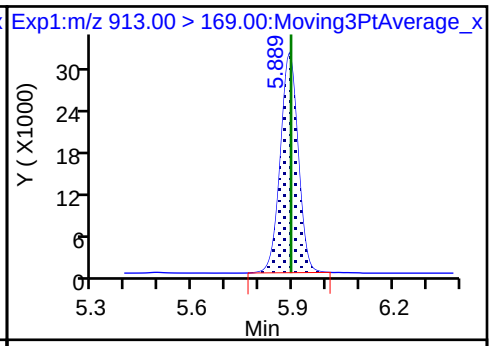
D 44 13C2 PFHxDA



46 Perfluorooctadecanoic acid



46 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

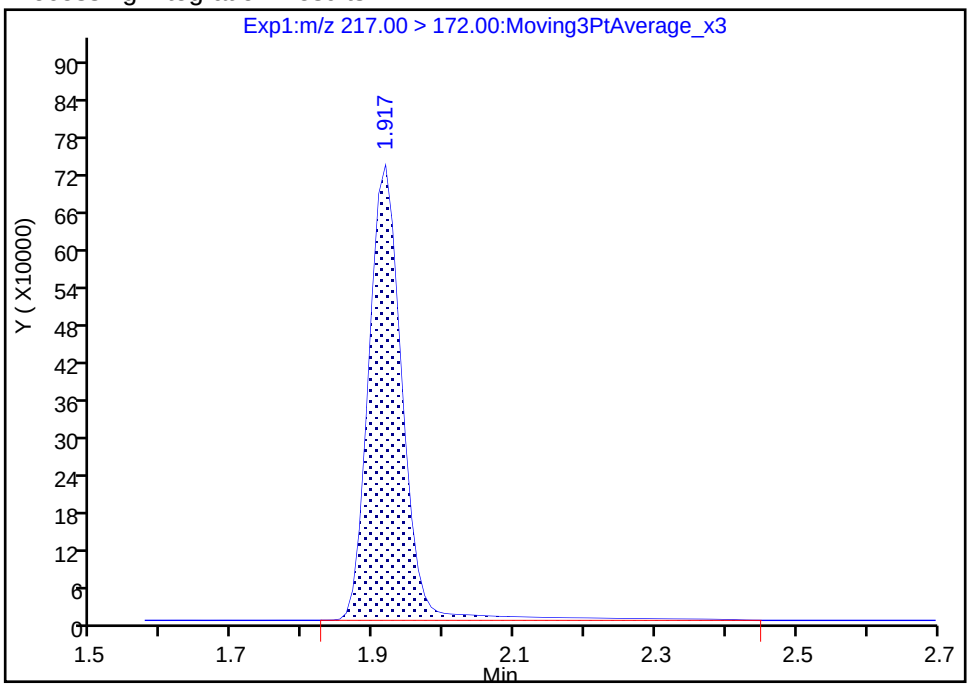
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Lims ID: ICIS
Client ID:
Operator ID: lc812tech ALS Bottle#: 5 Worklist Smp#: 8
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

D 1 13C4 PFBA, CAS: STL00992

Signal: 1

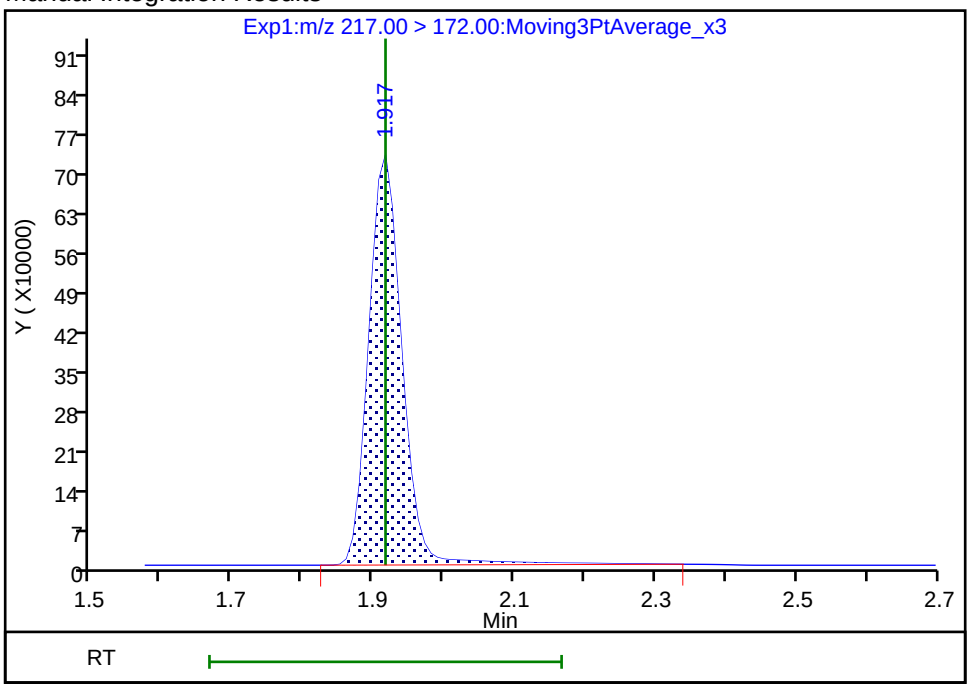
Processing Integration Results

RT: 1.92
Area: 2412404
Amount: 2.845607
Amount Units: ng/ml



Manual Integration Results

RT: 1.92
Area: 2378309
Amount: 2.753472
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:47:06
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

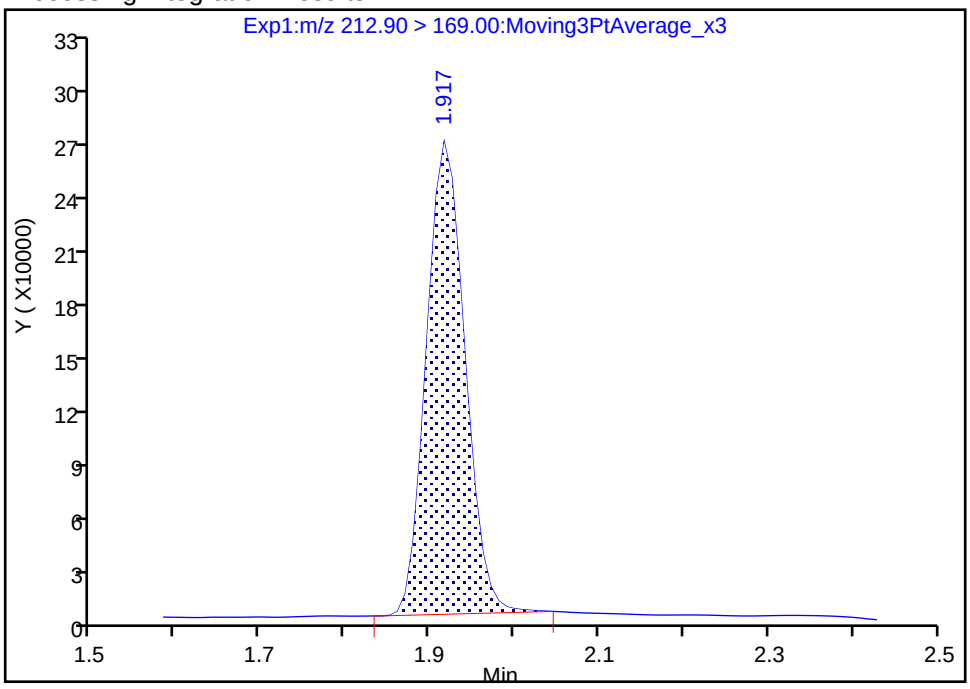
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL008.d
Injection Date: 10-Feb-2020 12:13:09 Instrument ID: LC812
Lims ID: ICIS
Client ID:
Operator ID: lc812tech ALS Bottle#: 5 Worklist Smp#: 8
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

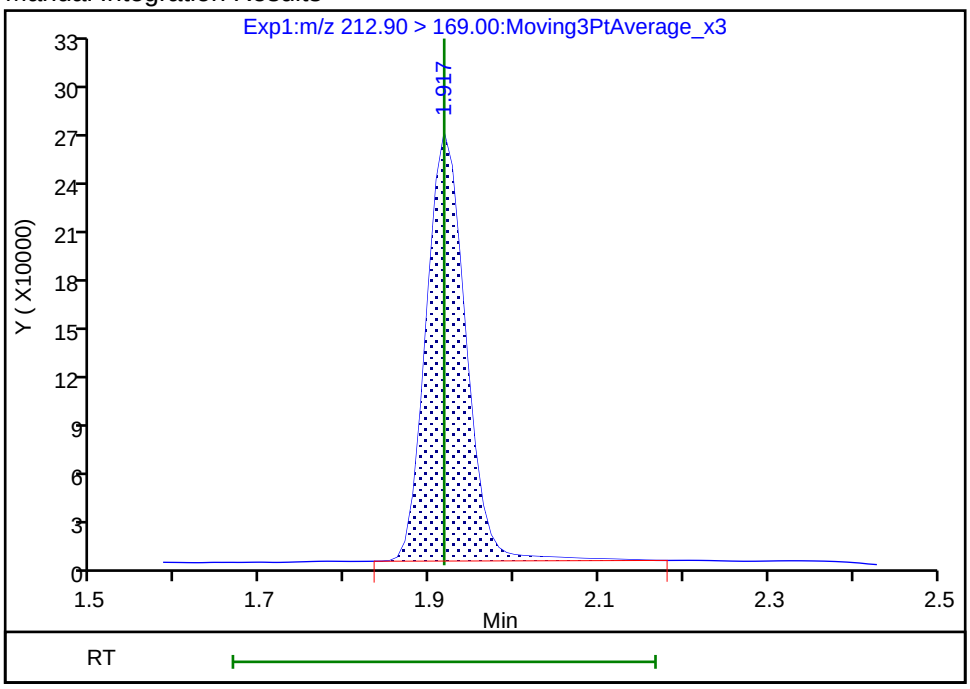
Processing Integration Results

RT: 1.92
Area: 842266
Amount: 0.914138
Amount Units: ng/ml



Manual Integration Results

RT: 1.92
Area: 863531
Amount: 0.954217
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:51:35
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

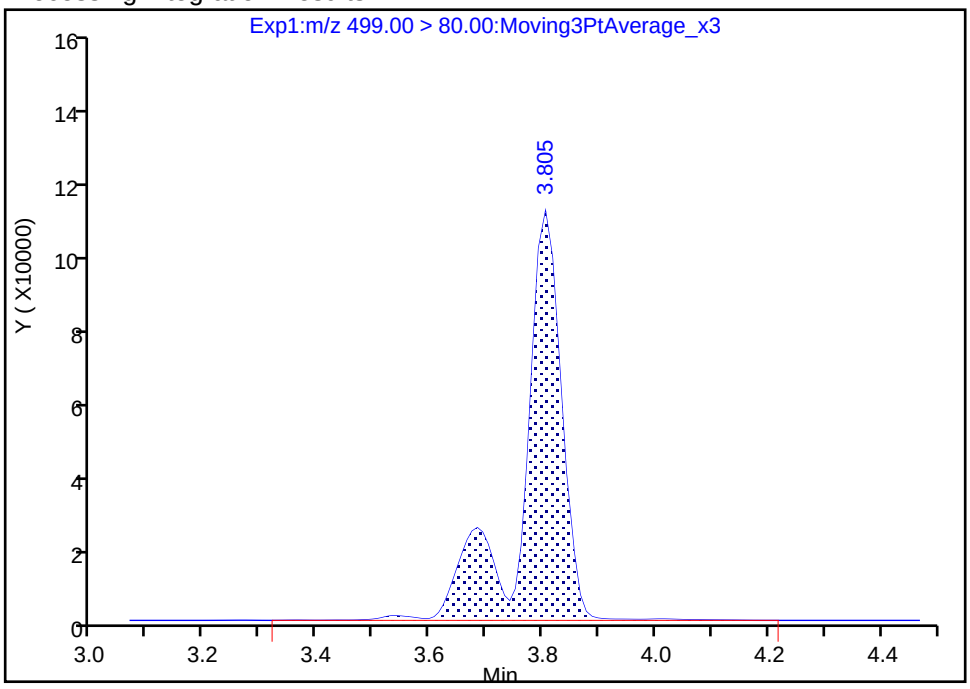
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Injection Date:	10-Feb-2020 12:13:09	Instrument ID:	LC812		
Lims ID:	ICIS				
Client ID:					
Operator ID:	lc812tech	ALS Bottle#:	5	Worklist Smp#:	8
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

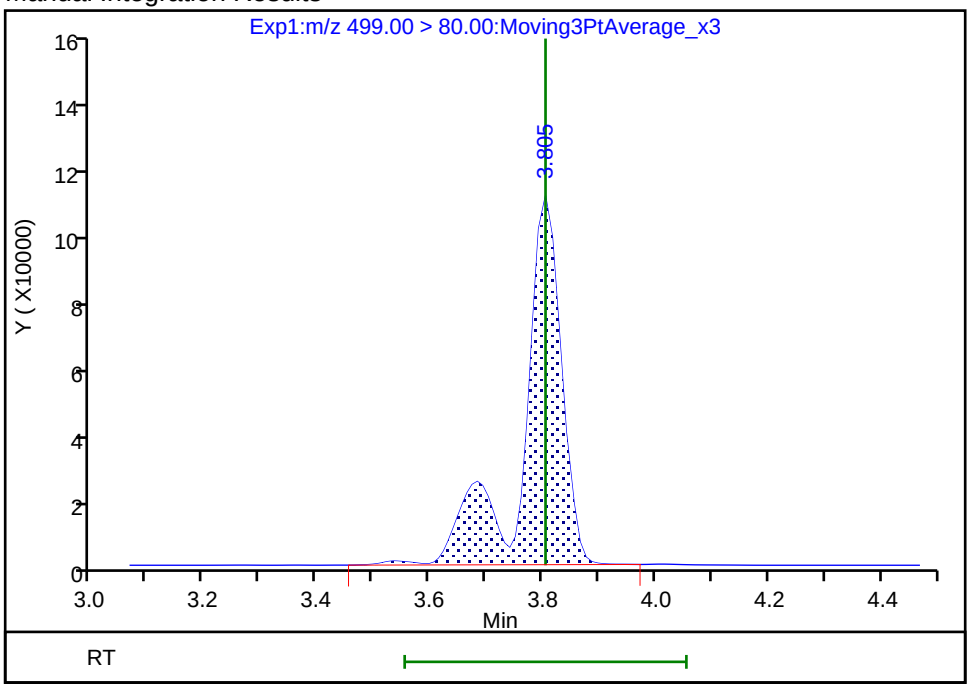
Processing Integration Results

RT: 3.80
Area: 513654
Amount: 0.873233
Amount Units: ng/ml



Manual Integration Results

RT: 3.80
Area: 507649
Amount: 0.882183
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:47:33

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

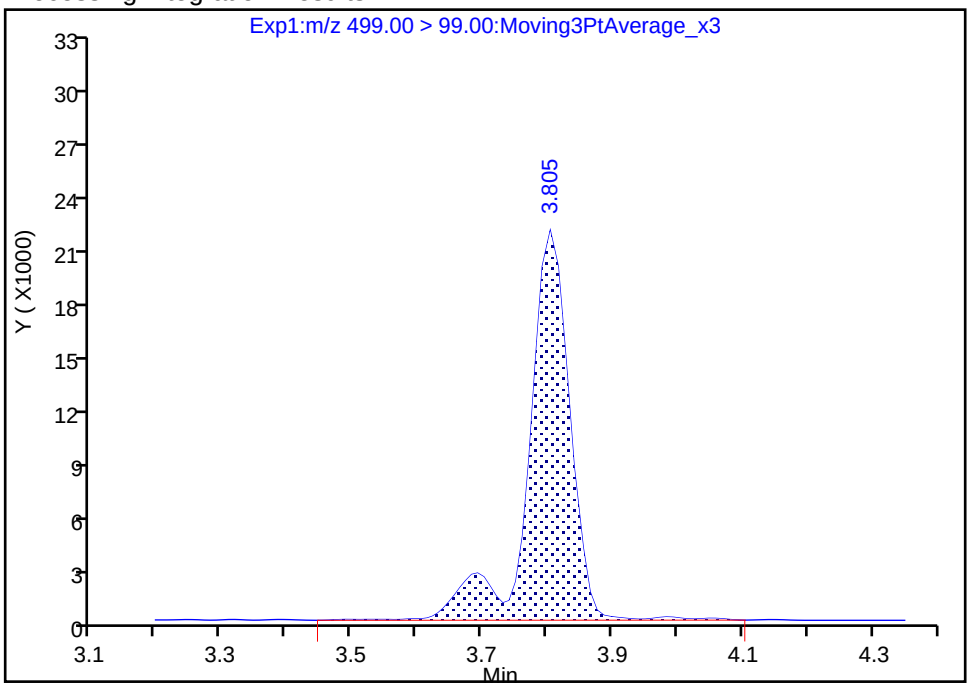
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Injection Date:	10-Feb-2020 12:13:09	Instrument ID:	LC812		
Lims ID:	ICIS				
Client ID:					
Operator ID:	lc812tech	ALS Bottle#:	5	Worklist Smp#:	8
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

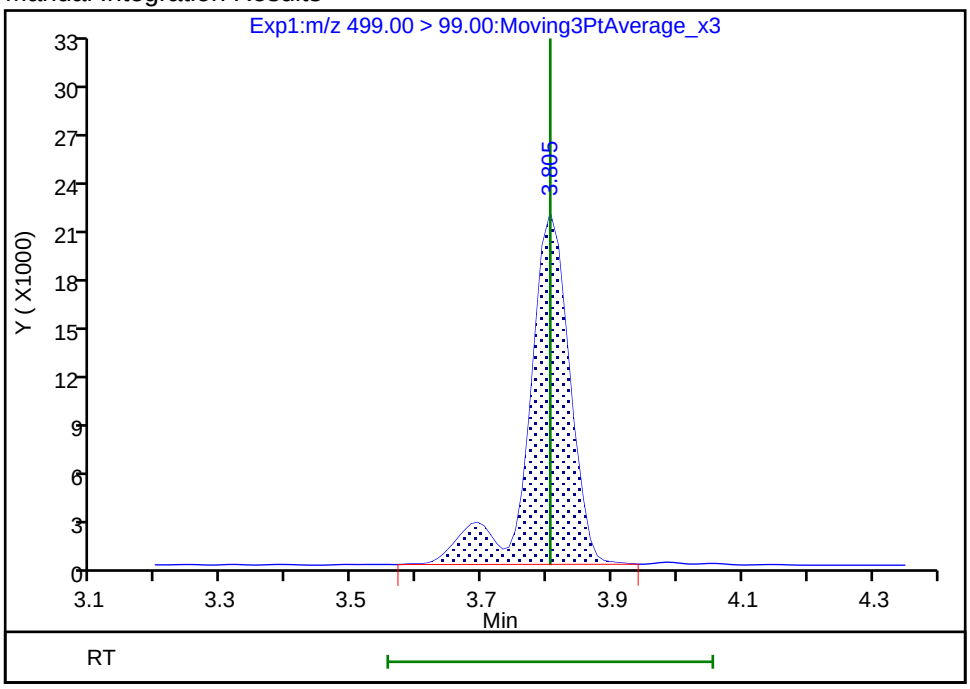
Processing Integration Results

RT: 3.80
Area: 98012
Amount: 0.873233
Amount Units: ng/ml



Manual Integration Results

RT: 3.80
Area: 95922
Amount: 0.882183
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:47:40

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL009.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 10-Feb-2020 12:21:22 ALS Bottle#: 6 Worklist Smp#: 9
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: IC 5
Misc. Info.: 200-0039917-009 Plate: 1 Rack: 1
Operator ID: lc812tech Instrument ID: LC812
Sublist: chrom-PFC_LC812*sub3

Method: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\PFC_LC812.m
Limit Group: LC_PFC_ICAL
Last Update: 10-Feb-2020 13:09:43 Calib Date: 10-Feb-2020 12:29:33
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL010.d

Column 1 : C-18 (4.60 mm) Det: EXP1
Process Host: CTX0302

First Level Reviewer: chirgwinb Date: 10-Feb-2020 12:49:42
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										
212.90 > 169.00	1.926	1.917	0.009	1.000	2208883	2.28		91.3	252	
D 1 13C4 PFBA										M
217.00 > 172.00	1.926	1.917	0.009	0.560	2544477	2.79		112	7024	M
D 3 13C5 PFPeA										
267.90 > 223.00	2.271	2.271	0.0	0.660	1930943	2.72		109	703	
4 Perfluoropentanoic acid										
262.90 > 219.00	2.271	2.271	0.0	1.000	2041758	2.45		98.0	170	
D 47 13C3 PFBS										
301.90 > 80.00	2.285	2.284	0.001	0.664	2356620	2.47		106	721070	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.298	2.284	0.014	1.006	2247611	2.17	Target=2.20	98.4	753	
298.90 > 99.00	2.298	2.284	0.014	1.006	1018804		2.21(1.10-3.31)	98.4	936	
61 1H,1H,2H,2H-perfluorohexanesulfoni										
327.00 > 307.00	2.623	2.623	0.0	1.000	338461	2.22		95.2	1000	
D 60 M2-4:2 FTS										
329.00 > 81.00	2.623	2.623	0.0	0.763	183379	2.63		113	131	
70 Perfluoropentanesulfonic acid										
349.00 > 80.00	2.673	2.660	0.013	0.875	2126257	2.40	Target=3.28	102	9488	
349.00 > 99.00	2.673	2.660	0.013	0.875	660716		3.22(1.64-4.91)	102	2268	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.661	2.660	0.001	1.000	2045810	2.28	Target=12.10	91.1	636	
313.00 > 119.00	2.661	2.660	0.001	1.000	160476		12.75(6.05-18.16)	91.1	297	
D 7 13C2 PFHxA										
315.00 > 270.00	2.661	2.660	0.001	0.774	2267062	2.73		109	9413	
D 64 13C3 HFPO-DA										M
332.10 > 287.00	2.784	2.776	0.008	0.810	142590	2.17		86.7	1650	M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.784	2.776	0.008	1.000	397504	2.98		119	144	
D 11 18O2 PFHxS										
403.00 > 84.00	3.055	3.044	0.011	0.889	1650530	2.45		104	5919	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.055	3.044	0.011	1.000	1758590	2.14	Target=4.10	93.9	3250	M
399.00 > 99.00	3.055	3.044	0.011	1.000	433798		4.05(2.05-6.15)	93.9	1044	M
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.055	3.055	0.0	1.000	2142656	2.41	Target=3.67	96.3	848	
363.00 > 169.00	3.055	3.055	0.0	1.000	608738		3.52(1.83-5.50)	96.3	1723	
D 9 13C4 PFHpA										
367.00 > 322.00	3.055	3.055	0.0	0.889	2173926	2.73		109	8522	
77 DONA										
377.00 > 251.00	3.101	3.089	0.012	0.812	4359208	2.15	Target=2.51	91.4	9777	
377.00 > 85.00	3.101	3.089	0.012	0.812	1755092		2.48(1.26-3.77)	91.4	3393	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.422	3.413	0.009	0.896	1510899	2.25	Target=5.96	94.7	5500	
449.00 > 99.00	3.422	3.413	0.009	0.896	251351		6.01(2.98-8.94)	94.7	2316	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.430	3.421	0.009	0.998	243397	2.64		111	910	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.430	3.421	0.009	1.000	266228	2.31		97.6	1286	
D 14 13C4 PFOA										
417.00 > 372.00	3.438	3.430	0.008	1.000	2175540	2.64		105	6738	
* 62 13C2 PFOA										
415.00 > 370.00	3.438	3.430	0.008		2189215	2.50			5559	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.438	3.430	0.008	1.000	2133114	2.35	Target=2.57	94.1	612	
413.00 > 169.00	3.438	3.430	0.008	1.000	848002		2.52(1.28-3.85)	94.1	2848	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.817	3.805	0.012	1.000	1283094	2.12	Target=5.37	91.4	2080	M
499.00 > 99.00	3.805	3.805	0.0	0.997	237130		5.41(2.69-8.06)	91.4	1208	M
D 18 13C4 PFOS										
503.00 > 80.00	3.817	3.805	0.012	1.110	1317111	2.62		110	3228	
20 Perfluorononanoic acid										
463.00 > 419.00	3.829	3.829	0.0	1.000	2058216	2.32	Target=7.44	92.9	526	
463.00 > 169.00	3.842	3.829	0.013	1.003	287490		7.16(3.72-11.15)	92.9	3191	
D 19 13C5 PFNA										
468.00 > 423.00	3.829	3.829	0.0	1.114	2153728	2.72		109	7359	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.994	3.994	0.0	1.046	1839595	2.39		102	3782	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.141	4.141	0.0	1.085	1071835	2.20	Target=2.85	91.5	5963	
549.00 > 99.00	4.141	4.141	0.0	1.085	379635		2.82(1.43-4.28)	91.5	2153	
D 23 13C2 PFDA										
515.00 > 470.00	4.175	4.164	0.011	1.214	2419821	2.81		113	7752	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
24 Perfluorodecanoic acid										
513.00 > 469.00	4.175	4.164	0.011	1.000	2259338	2.28	Target=9.04	91.2	1611	
513.00 > 169.00	4.175	4.164	0.011	1.000	247601		9.12(4.52-13.56)	91.2	2598	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.185	4.174	0.011	1.217	333820	2.56		107	1633	
25 1H,1H,2H,2H-perfluorodecanesulfoni										
527.00 > 507.00	4.185	4.174	0.011	1.000	206966	2.39		99.9	2763	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.229	4.218	0.011	1.000	2290638	2.32		92.9	3773	
D 21 13C8 FOSA										
506.00 > 78.00	4.229	4.218	0.011	1.230	2406787	2.73		109	4346	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.328	4.316	0.012	1.259	175561	2.59		103	238	
28 N-methylperfluorooctanesulfonamido										
570.00 > 419.00	4.328	4.328	0.0	1.000	154106	2.56		102	1922	
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.431	4.420	0.011	1.161	1005822	2.34	Target=2.69	97.3	3247	
599.00 > 99.00	4.431	4.420	0.011	1.161	351712		2.86(1.34-4.03)	97.3	3750	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.456	4.456	0.0	1.000	1545025	2.24	Target=7.95	89.7	1223	
563.00 > 169.00	4.456	4.456	0.0	1.000	225054		6.87(3.98-11.93)	89.7	2914	
D 30 13C2 PFUnA										
565.00 > 520.00	4.456	4.456	0.0	1.296	1899074	2.53		101	6133	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.469	4.456	0.013	1.300	227994	2.95		118	1256	
33 N-ethylperfluorooctanesulfonamidoa										
584.00 > 419.00	4.469	4.469	0.0	1.000	170590	2.35		93.9	1373	
66 11-Chloroeicosafluoro-3-oxaundecan										
631.00 > 451.00	4.563	4.550	0.013	1.195	1946429	2.22		94.4	7034	
D 36 13C2 PFDoA										
615.00 > 570.00	4.704	4.693	0.011	1.368	2237849	2.67		107	7283	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.704	4.693	0.011	1.000	2079486	2.39	Target=7.12	95.8	459	
613.00 > 169.00	4.704	4.693	0.011	1.000	290881		7.15(3.56-10.68)	95.8	3261	
74 1H,1H,2H,2H-perfluorododecanesulfo										
627.00 > 607.00	4.724	4.714	0.010	1.129	105893	2.29		94.9	2003	
75 Perfluorododecanesulfonic acid (PF										
699.00 > 80.00	4.879	4.879	0.0	1.278	352923	2.37	Target=0.50	97.9	1132	
699.00 > 99.00	4.879	4.879	0.0	1.278	714691		0.49(0.25-0.74)	97.9	3889	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.924	4.915	0.009	1.047	1970931	2.49	Target=4.73	99.7	494	
663.00 > 169.00	4.924	4.915	0.009	1.047	397100		4.96(2.36-7.09)	99.7	2873	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.120	5.120	0.0	1.000	271852	2.29	Target=1.08	91.7	2588	
713.00 > 219.00	5.120	5.120	0.0	1.000	264687		1.03(0.54-1.62)	91.7	2753	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.120	5.120	0.0	1.489	1906213	2.64		106	11182	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.499	5.499	0.0	1.000	1821268	2.43	Target=4.40	97.2	607	
813.00 > 169.00	5.499	5.499	0.0	1.000	415283		4.39(2.20-6.60)	97.2	3634	
D 44 13C2 PFHxDA										
815.00 > 770.00	5.499	5.499	0.0	1.599	2090446	2.67		107	9119	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.894	5.894	0.0	1.072	1225093	2.35	Target=4.01	94.1	274	
913.00 > 169.00	5.894	5.894	0.0	1.072	307490		3.98(2.01-6.02)	94.1	3346	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

PFAS32NCIC5_00005 Amount Added: 100.00 Units: uL

Report Date: 10-Feb-2020 13:09:43 Chrom Revision: 2.3 14-Jan-2020 22:23:42

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL009.d

Injection Date: 10-Feb-2020 12:21:22 Instrument ID: LC812

Lims ID: IC

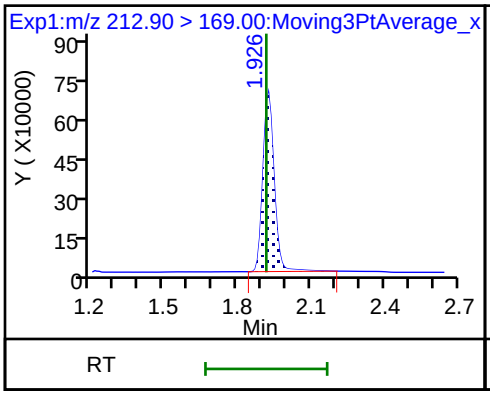
Client ID:

Operator ID: lc812tech ALS Bottle#: 6 Worklist Smp#: 9

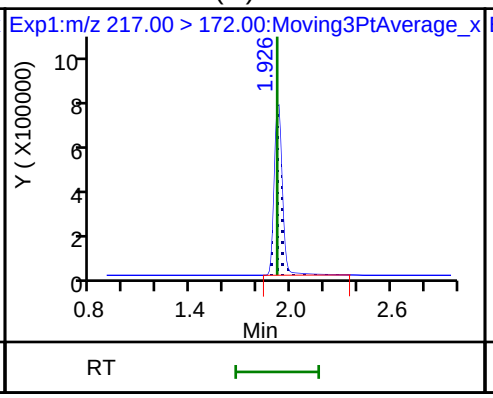
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFC_LC812 Limit Group: LC_PFC_ICAL

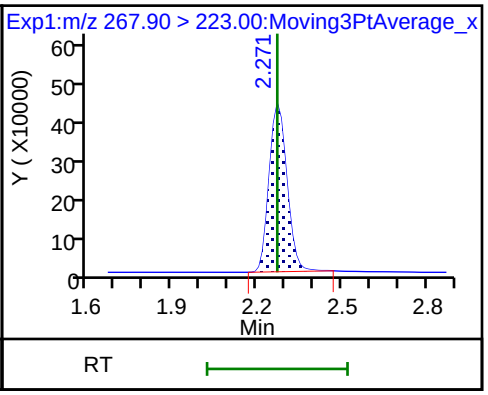
2 Perfluorobutanoic acid



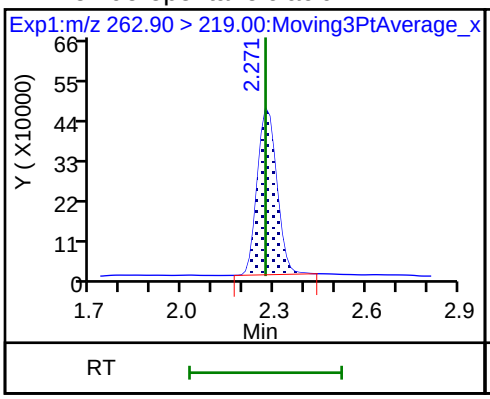
D 1 13C4 PFBA (M)



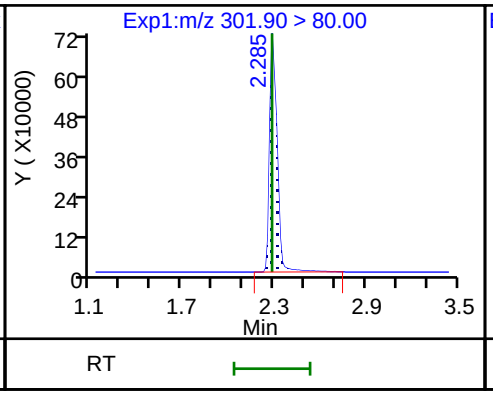
D 3 13C5 PFPeA



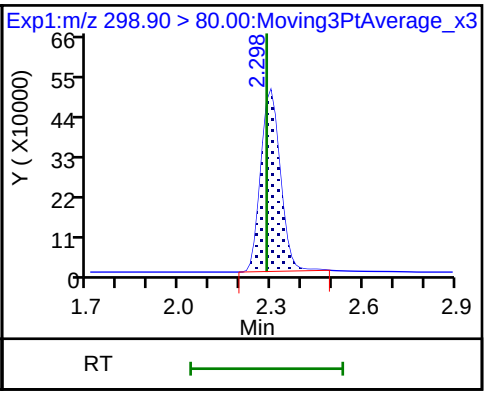
4 Perfluoropentanoic acid



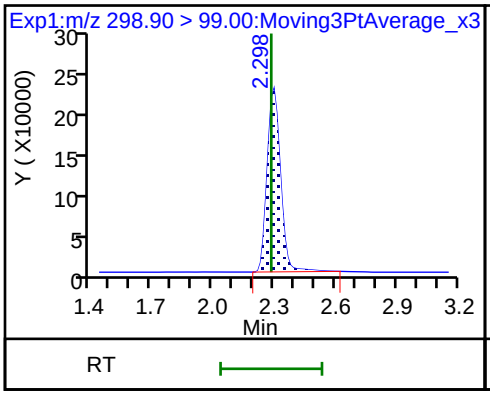
D 47 13C3 PFBS



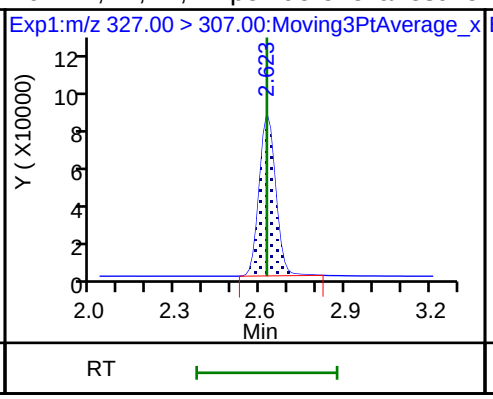
5 Perfluorobutanesulfonic acid



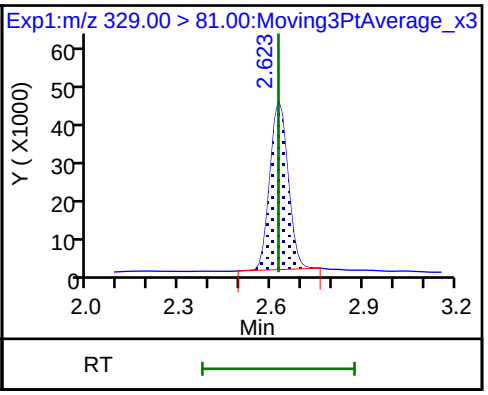
5 Perfluorobutanesulfonic acid



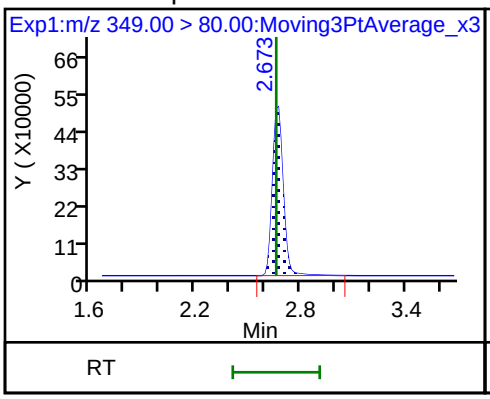
61 1H,1H,2H,2H-perfluorohexanesulfon



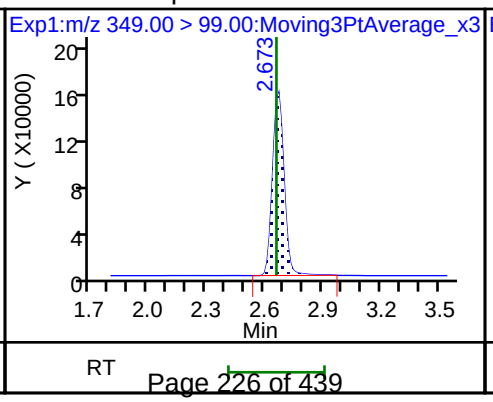
D 60 M2-4:2 FTS



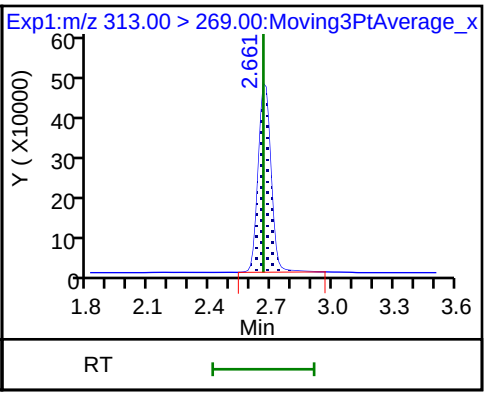
70 Perfluoropentanesulfonic acid



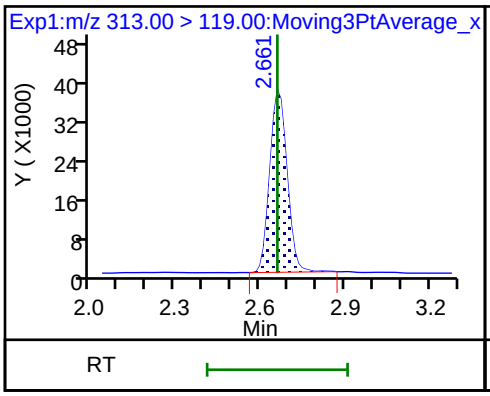
70 Perfluoropentanesulfonic acid



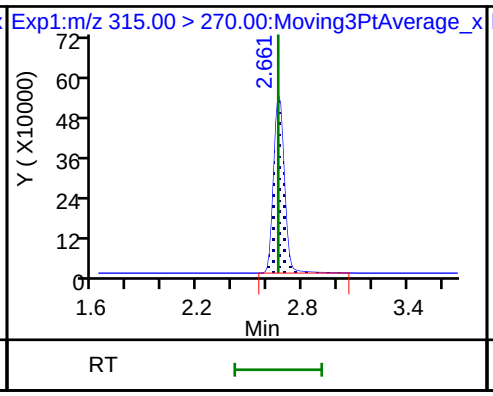
6 Perfluorohexanoic acid



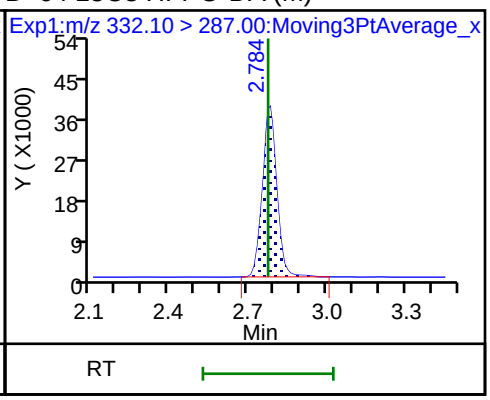
6 Perfluorohexanoic acid



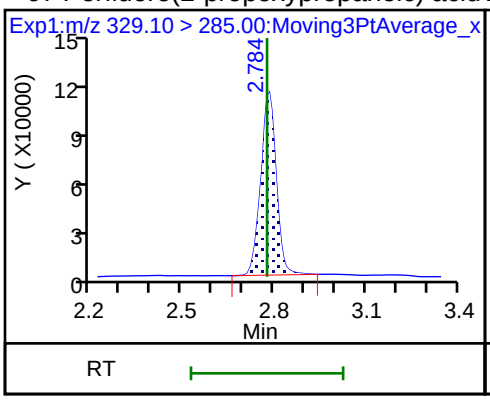
D 7 13C2 PFHxA



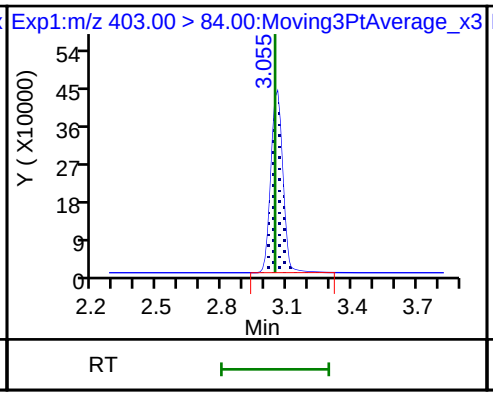
D 64 13C3 HFPO-DA (M)



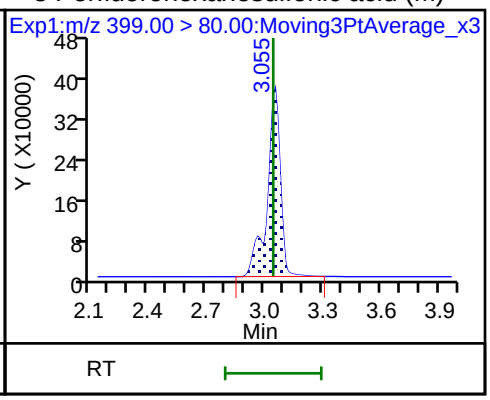
67 Perfluoro(2-propoxypropanoic) acid



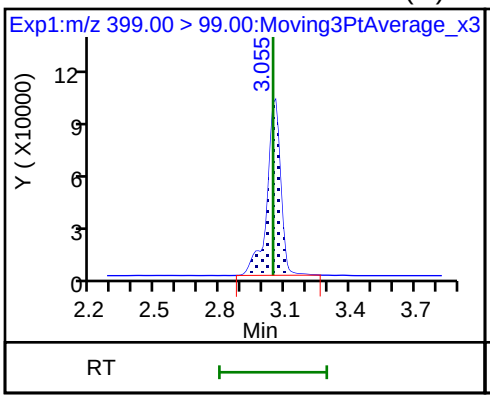
D 11 18O2 PFHxS



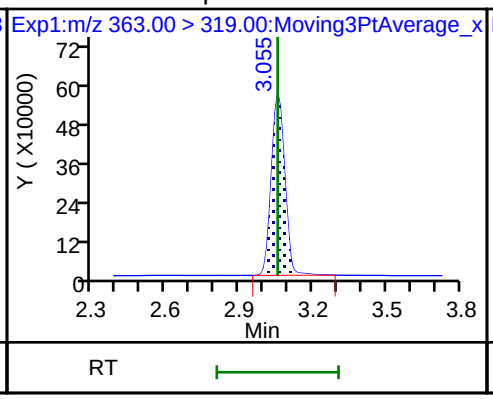
8 Perfluorohexanesulfonic acid (M)



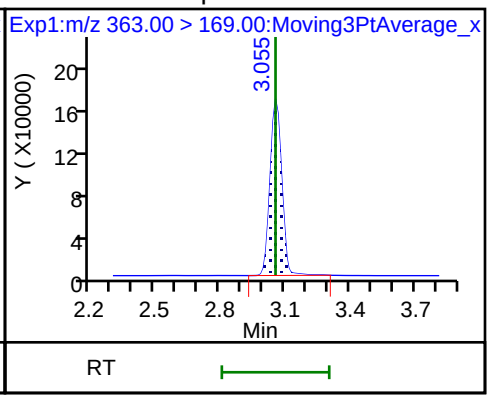
8 Perfluorohexanesulfonic acid (M)



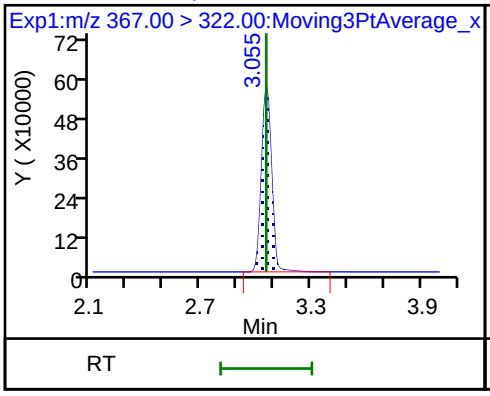
10 Perfluoroheptanoic acid



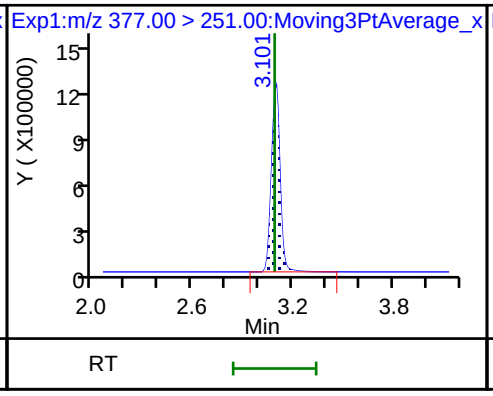
10 Perfluoroheptanoic acid



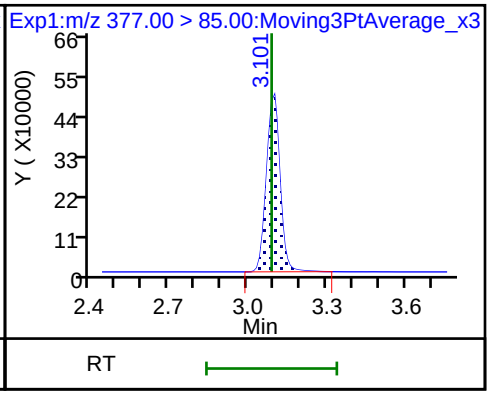
D 9 13C4 PFHpA



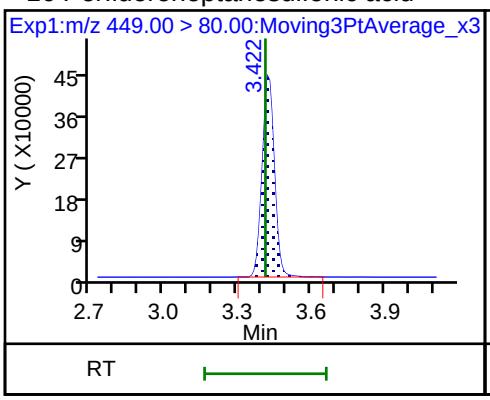
77 DONA



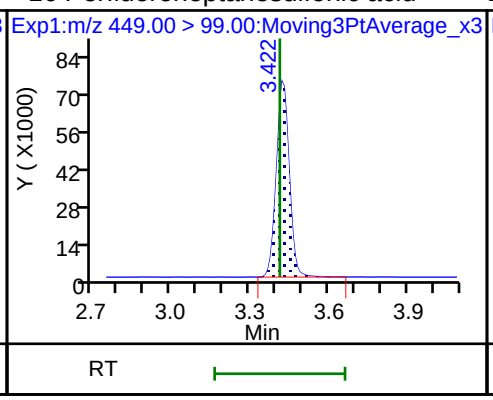
77 DONA



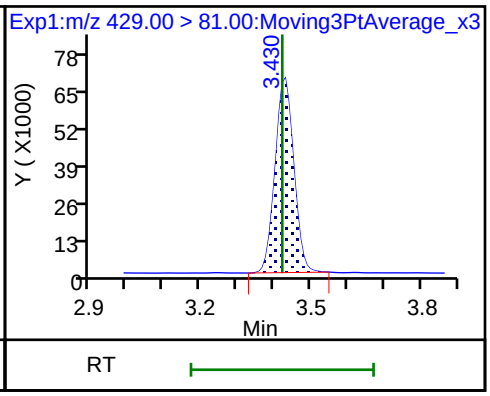
16 Perfluoroheptanesulfonic acid



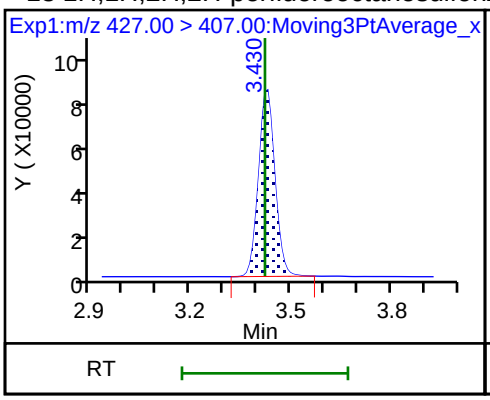
16 Perfluoroheptanesulfonic acid

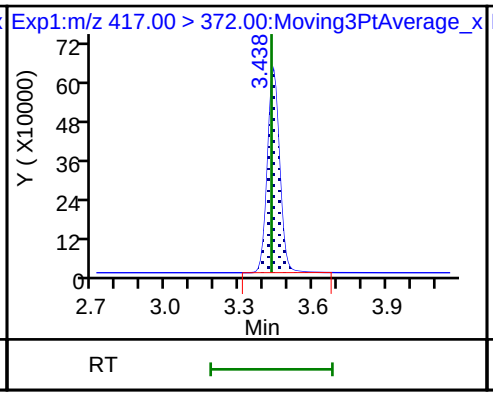


D 12 M2-6:2 FTS

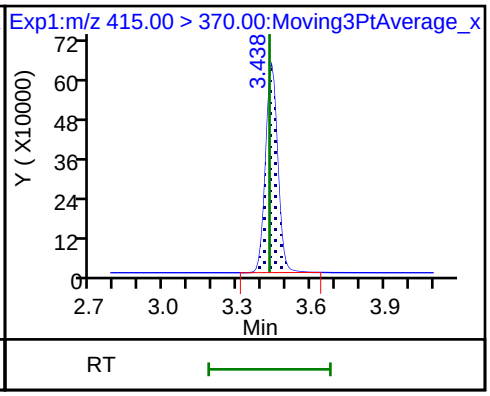


13 1H,1H,2H,2H-perfluorooctanesulfonD 14 13C4 PFOA

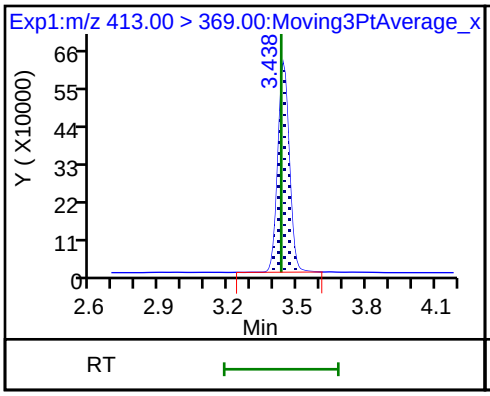




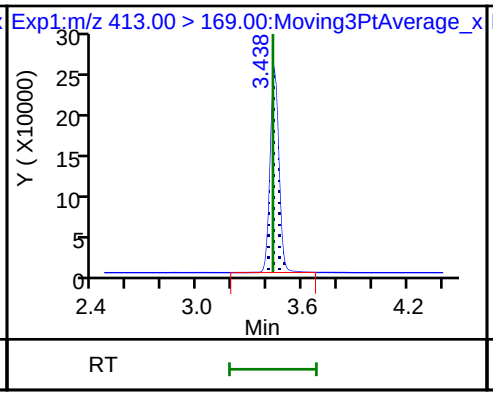
* 62 13C2 PFOA



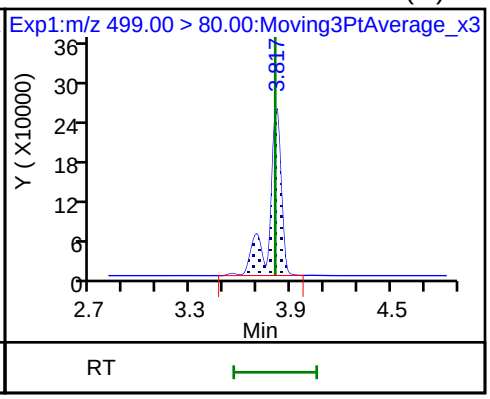
15 Perfluorooctanoic acid



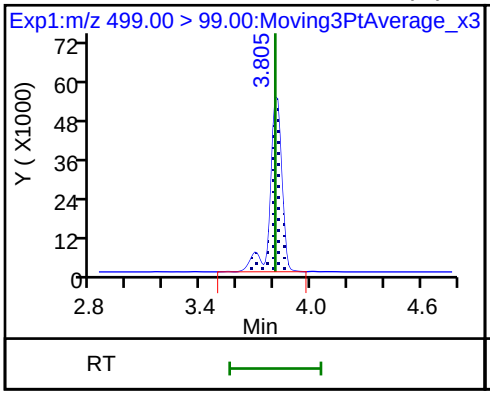
15 Perfluorooctanoic acid



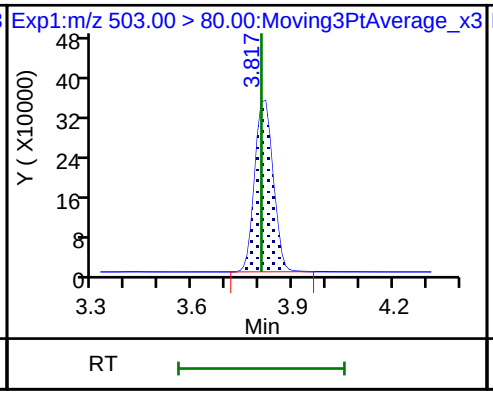
17 Perfluorooctanesulfonic acid (M)



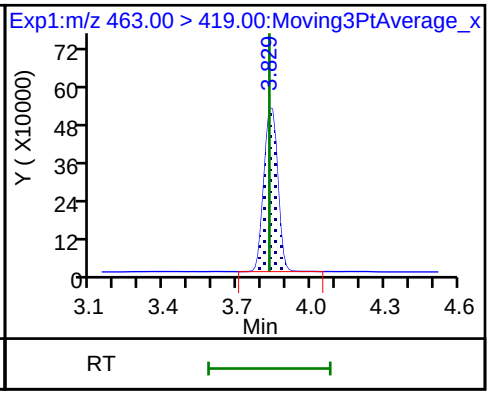
17 Perfluorooctanesulfonic acid (M)



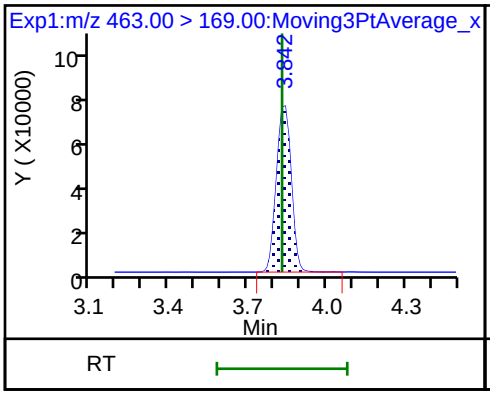
D 18 13C4 PFOS



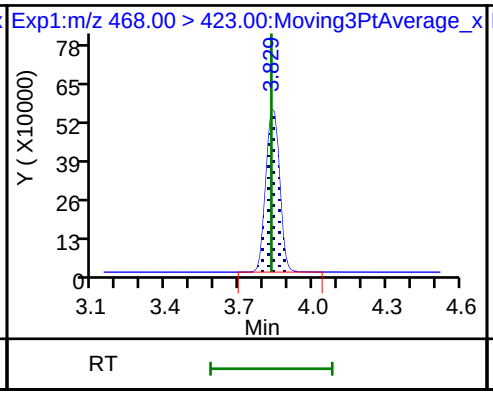
20 Perfluorononanoic acid



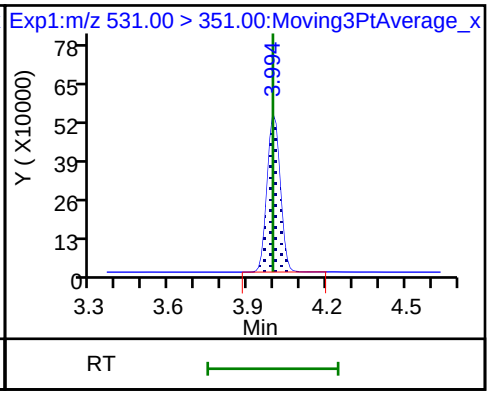
20 Perfluorononanoic acid



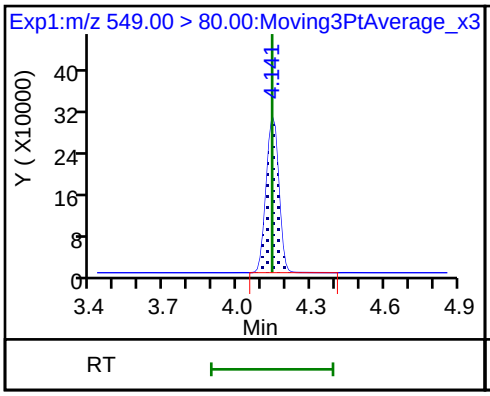
D 19 13C5 PFNA



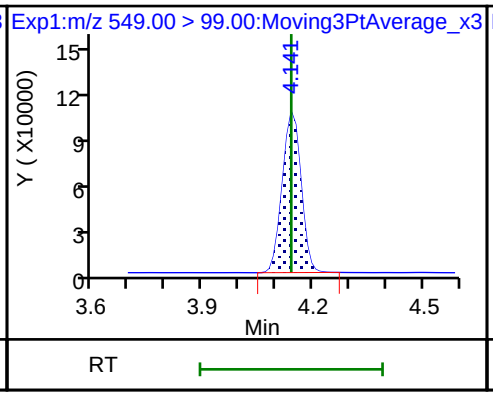
69 9-Chlorohexadecafluoro-3-oxanonane



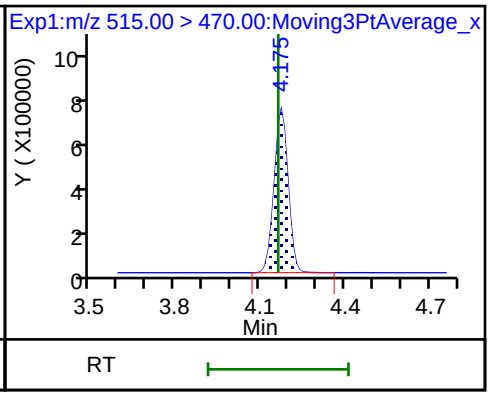
68 Perfluorononanesulfonic acid



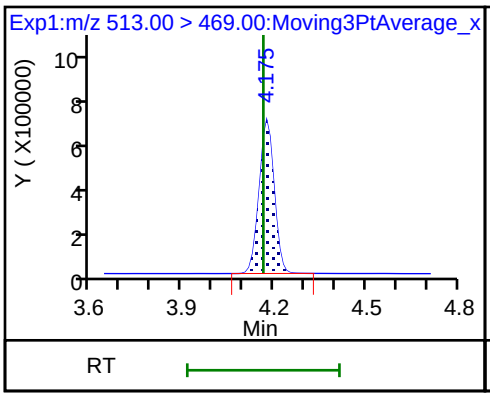
68 Perfluorononanesulfonic acid



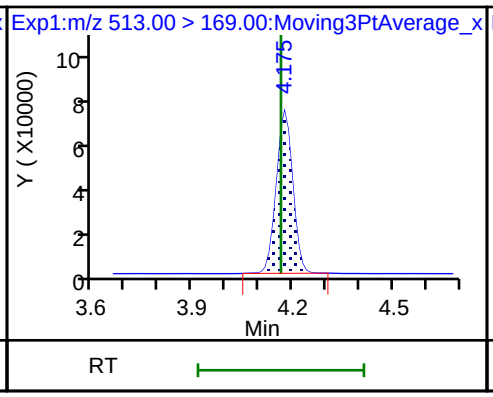
D 23 13C2 PFDA



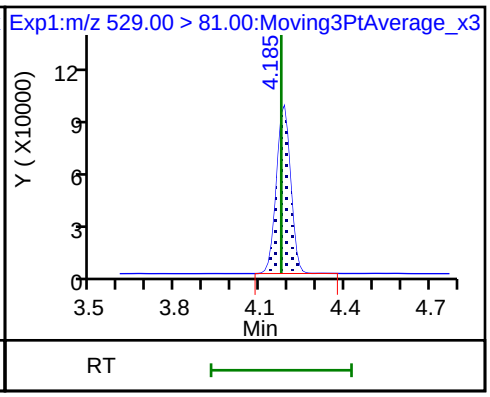
24 Perfluorodecanoic acid



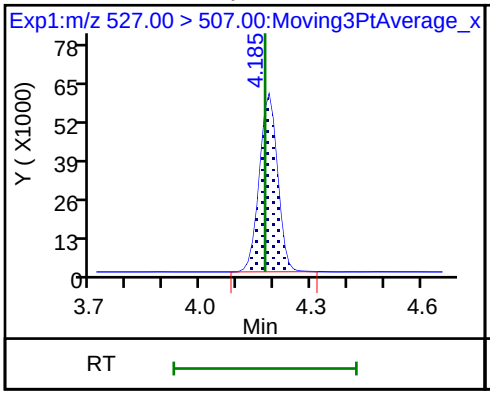
24 Perfluorodecanoic acid



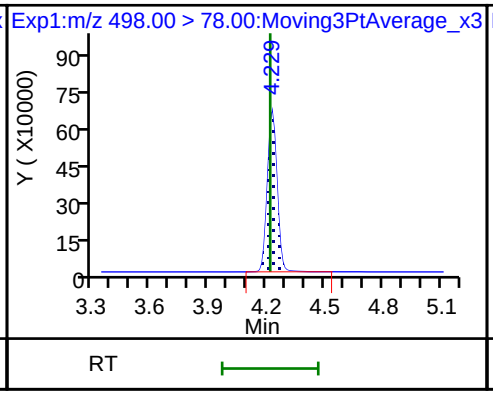
D 26 M2-8:2 FTS



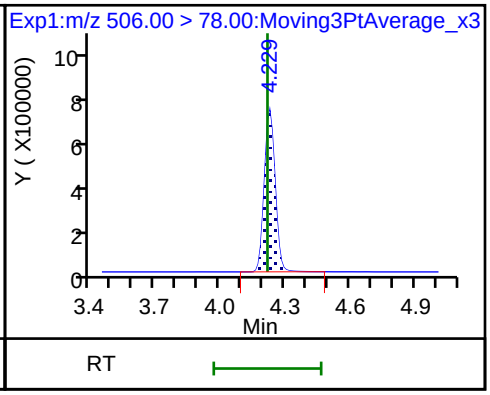
25 1H,1H,2H,2H-perfluorodecanesulfoni



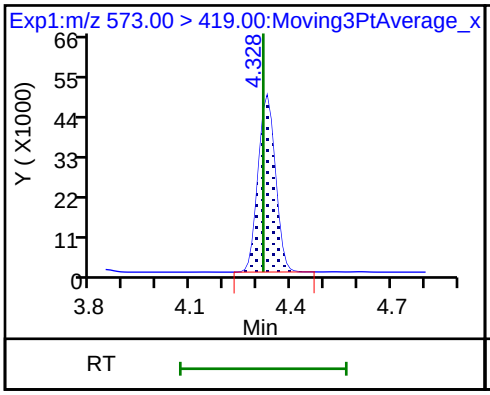
22 Perfluorooctanesulfonamide



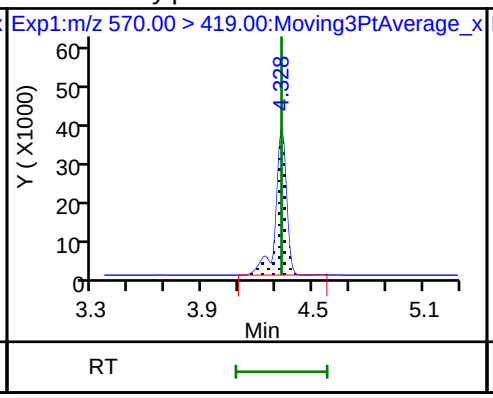
D 21 13C8 FOSA



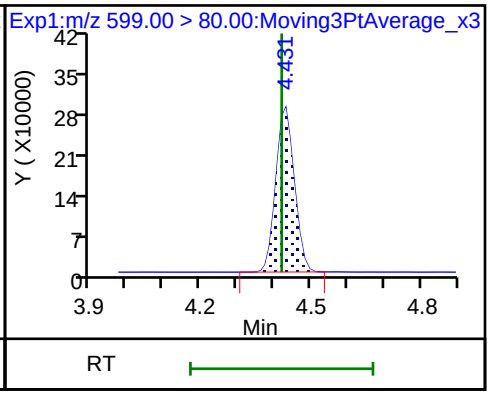
D 27 d3-NMeFOSAA



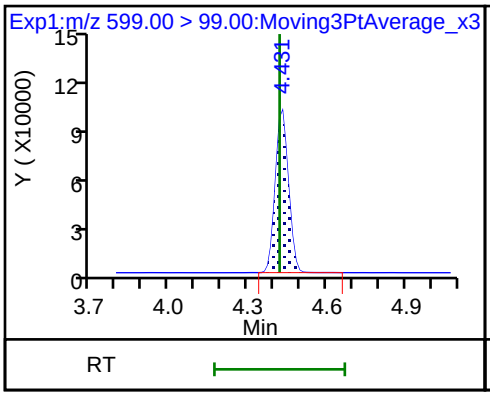
28 N-methylperfluorooctanesulfonamido



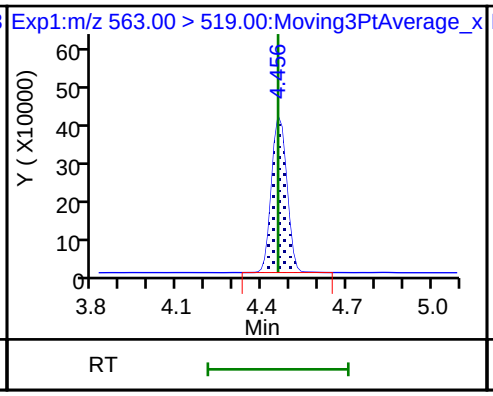
29 Perfluorodecanesulfonic acid



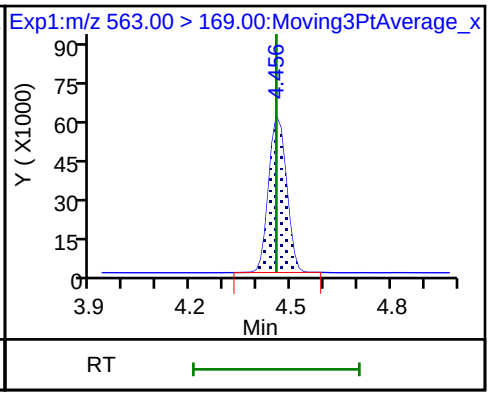
29 Perfluorodecanesulfonic acid



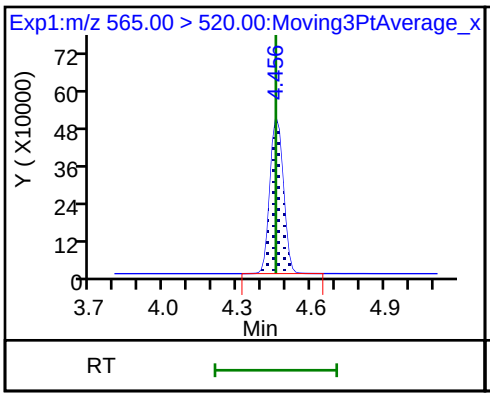
31 Perfluoroundecanoic acid



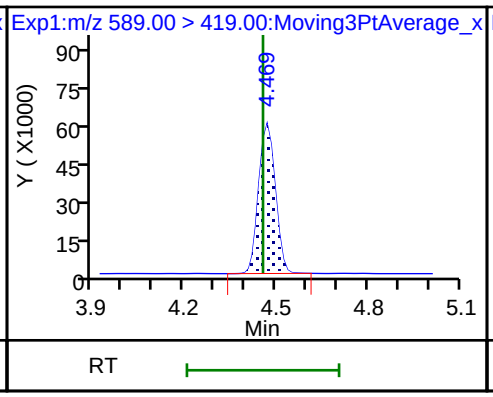
31 Perfluoroundecanoic acid



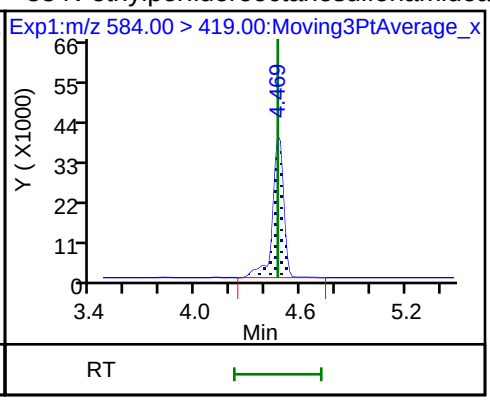
D 30 13C2 PFUnA



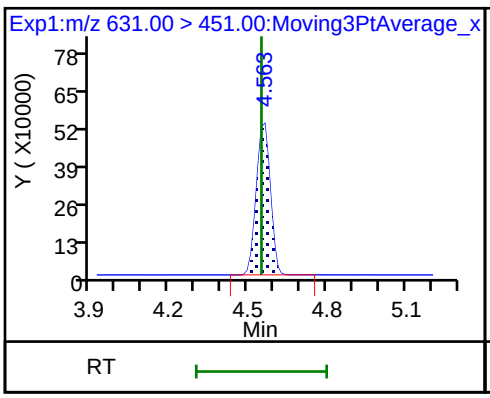
D 32 d5-NEtFOSAA



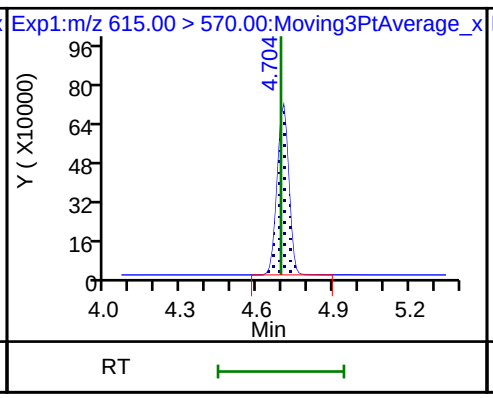
33 N-ethylperfluorooctanesulfonamidoa



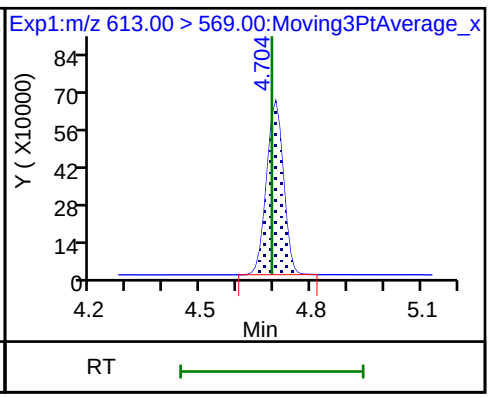
66 11-Chloroeicosafluoro-3-oxaundecan



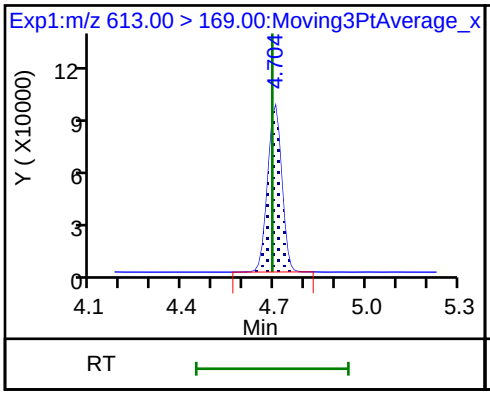
D 36 13C2 PFDoA



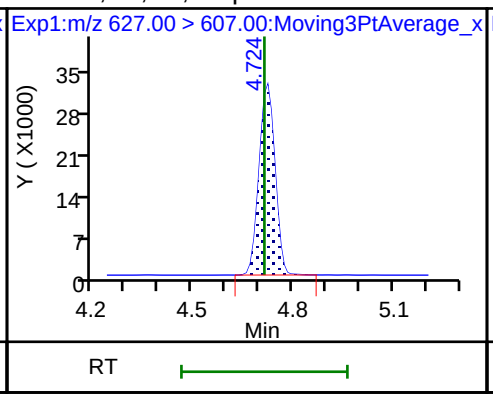
37 Perfluorododecanoic acid



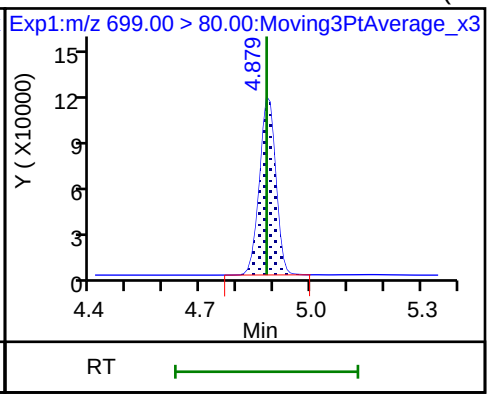
37 Perfluorododecanoic acid



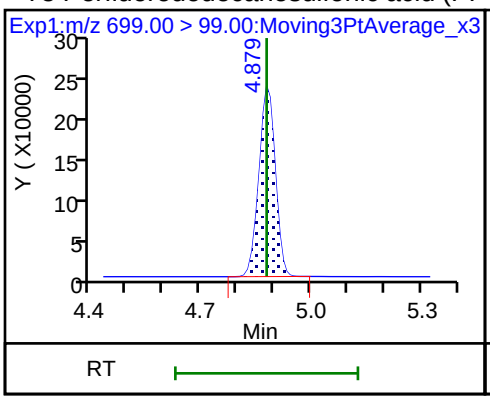
74 1H,1H,2H,2H-perfluorododecanesulfo



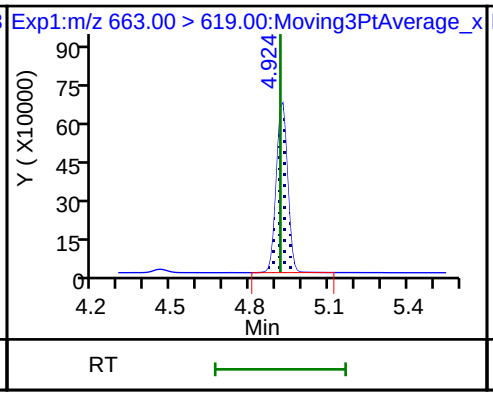
75 Perfluorododecanesulfonic acid (PF



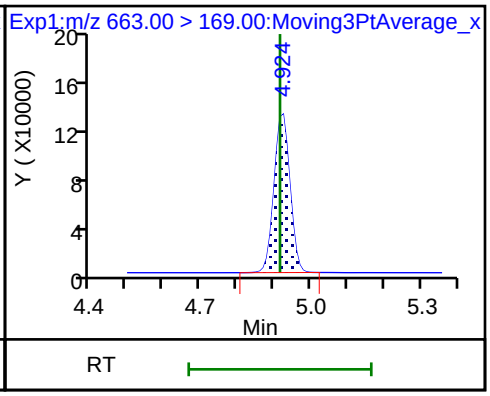
75 Perfluorododecanesulfonic acid (PF



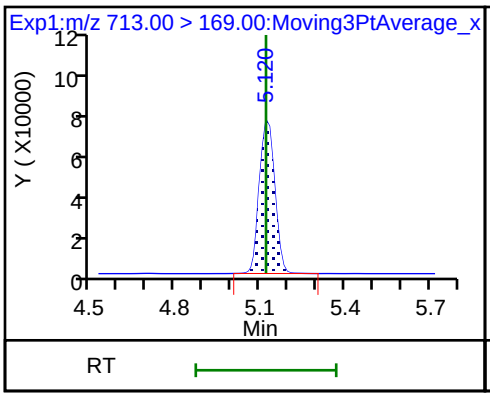
41 Perfluorotridecanoic acid



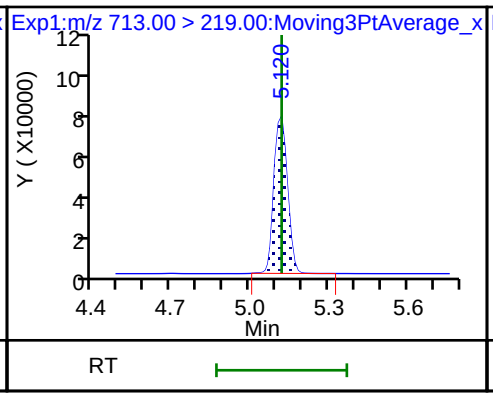
41 Perfluorotridecanoic acid



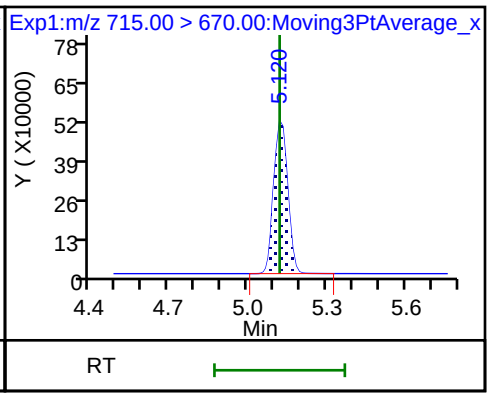
42 Perfluorotetradecanoic acid



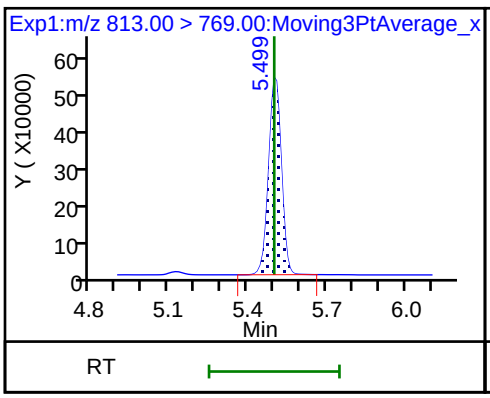
42 Perfluorotetradecanoic acid



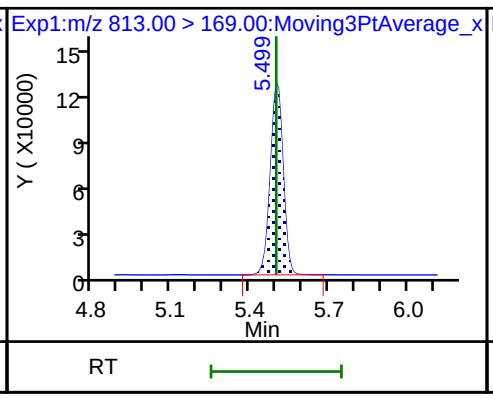
D 43 13C2 PFTeDA



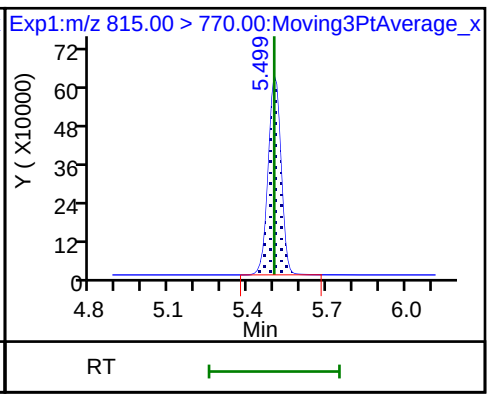
45 Perfluorohexadecanoic acid



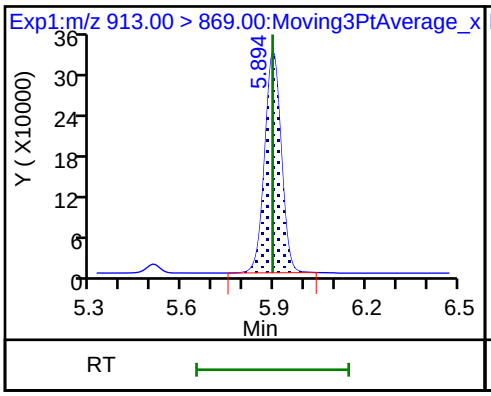
45 Perfluorohexadecanoic acid



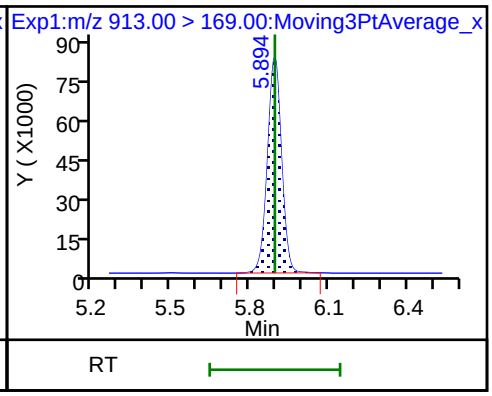
D 44 13C2 PFHxDA



46 Perfluorooctadecanoic acid



46 Perfluorooctadecanoic acid



Eurofins TestAmerica, Burlington

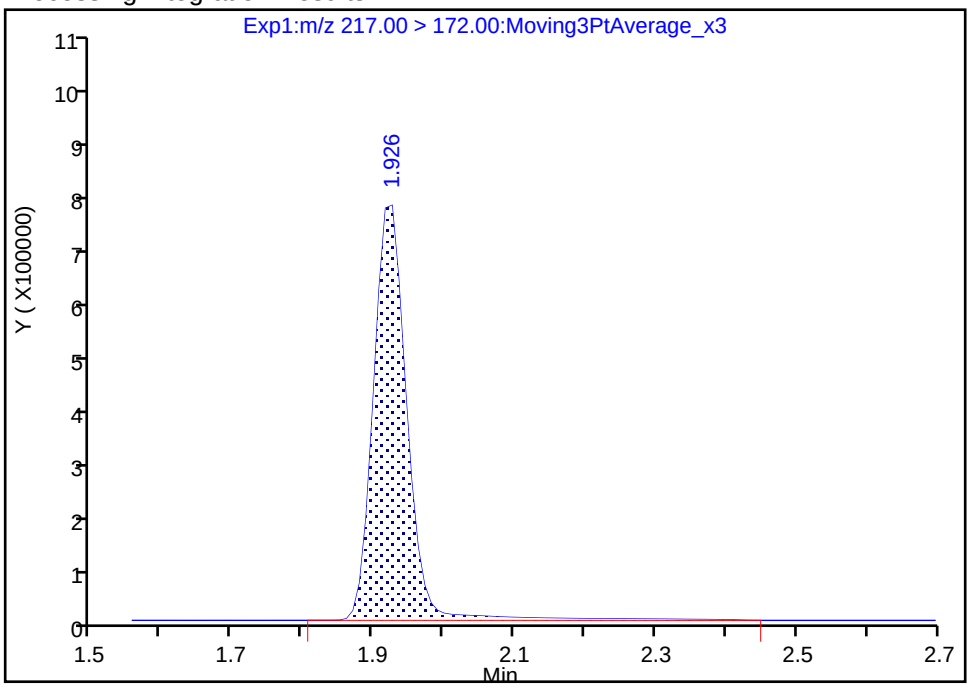
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL009.d
Injection Date: 10-Feb-2020 12:21:22 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 6 Worklist Smp#: 9
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

D 1 13C4 PFBA, CAS: STL00992

Signal: 1

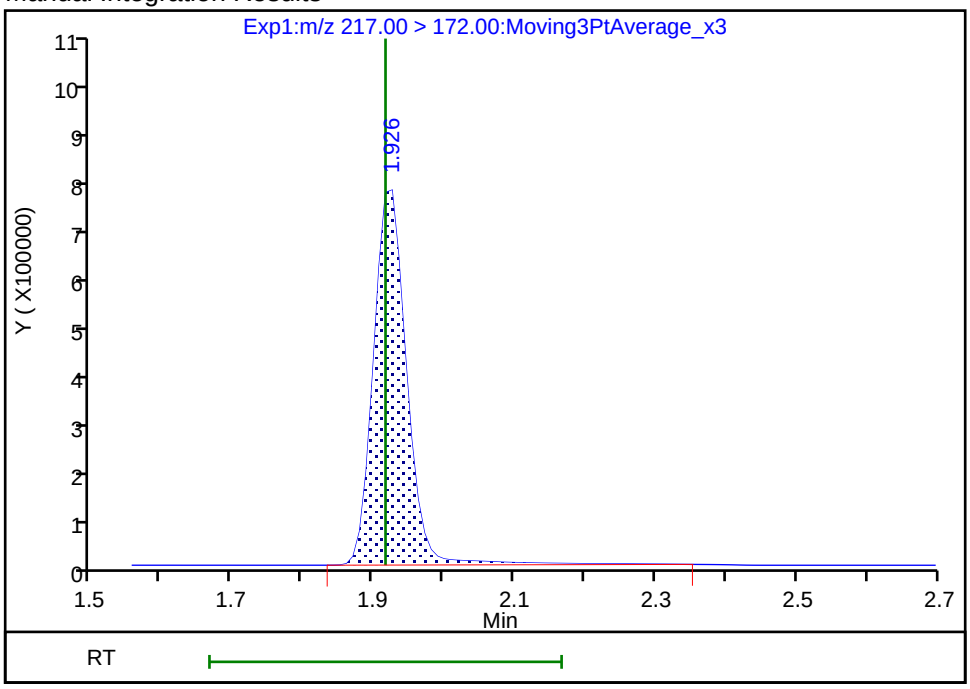
Processing Integration Results

RT: 1.93
Area: 2577091
Amount: 2.805427
Amount Units: ng/ml



Manual Integration Results

RT: 1.93
Area: 2544477
Amount: 2.793036
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:49:38
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

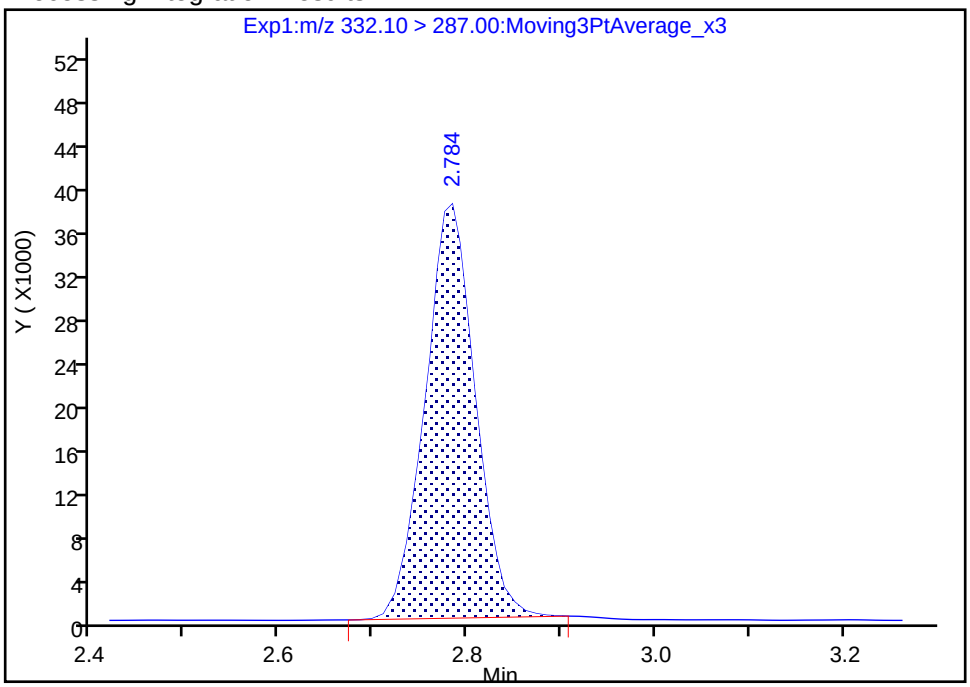
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL009.d
Injection Date: 10-Feb-2020 12:21:22 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 6 Worklist Smp#: 9
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

D 64 13C3 HFPO-DA, CAS: STL02255

Signal: 1

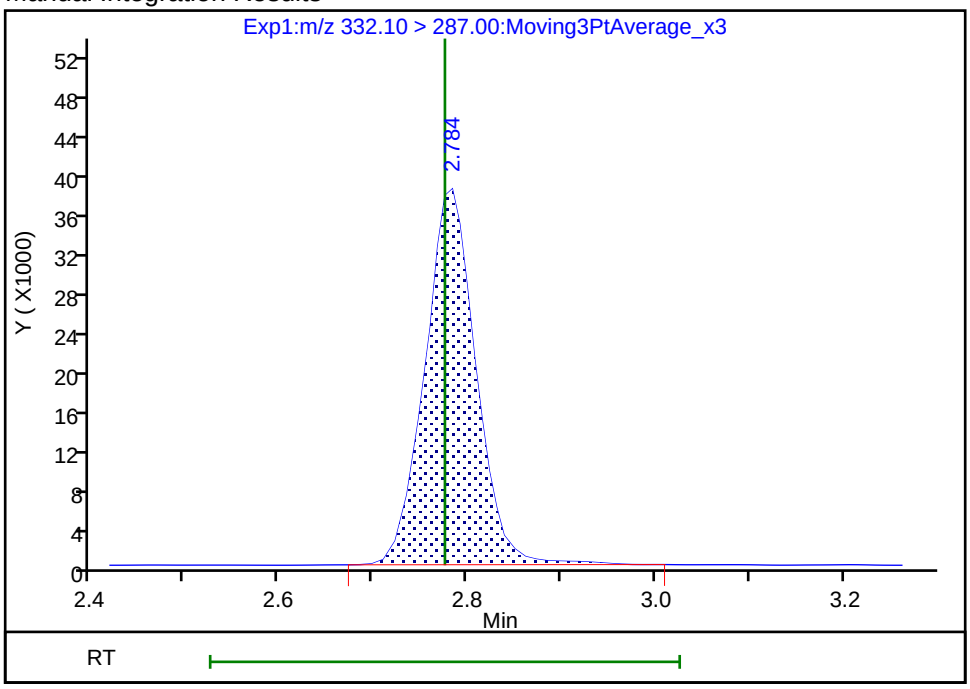
Processing Integration Results

RT: 2.78
Area: 139625
Amount: 2.129752
Amount Units: ng/ml



Manual Integration Results

RT: 2.78
Area: 142590
Amount: 2.168581
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:58:06
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

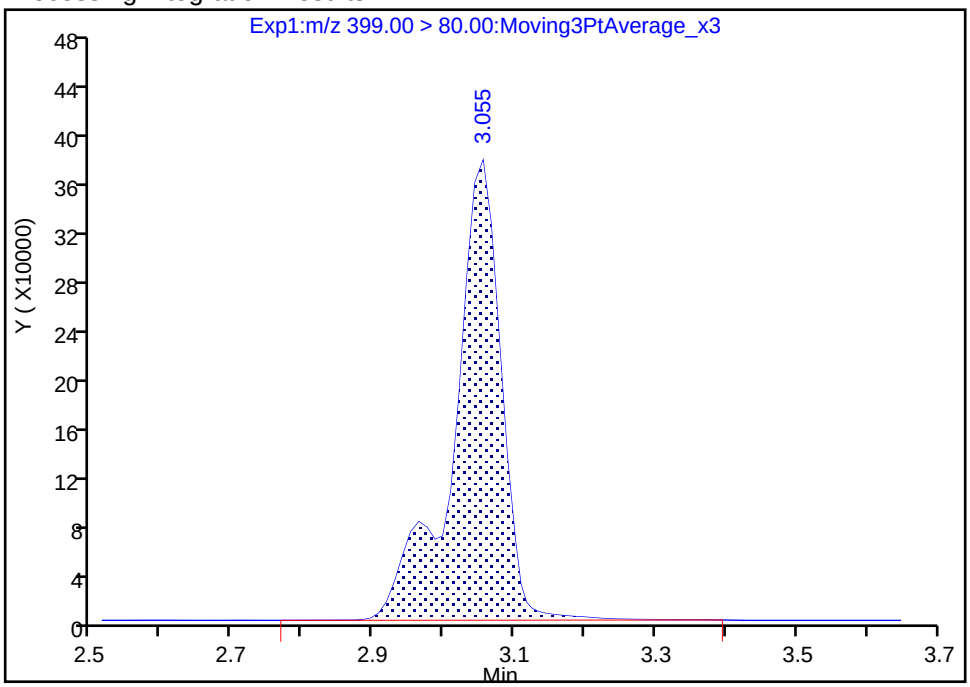
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL009.d				
Injection Date:	10-Feb-2020 12:21:22	Instrument ID:	LC812		
Lims ID:	IC				
Client ID:					
Operator ID:	lc812tech	ALS Bottle#:	6	Worklist Smp#:	9
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

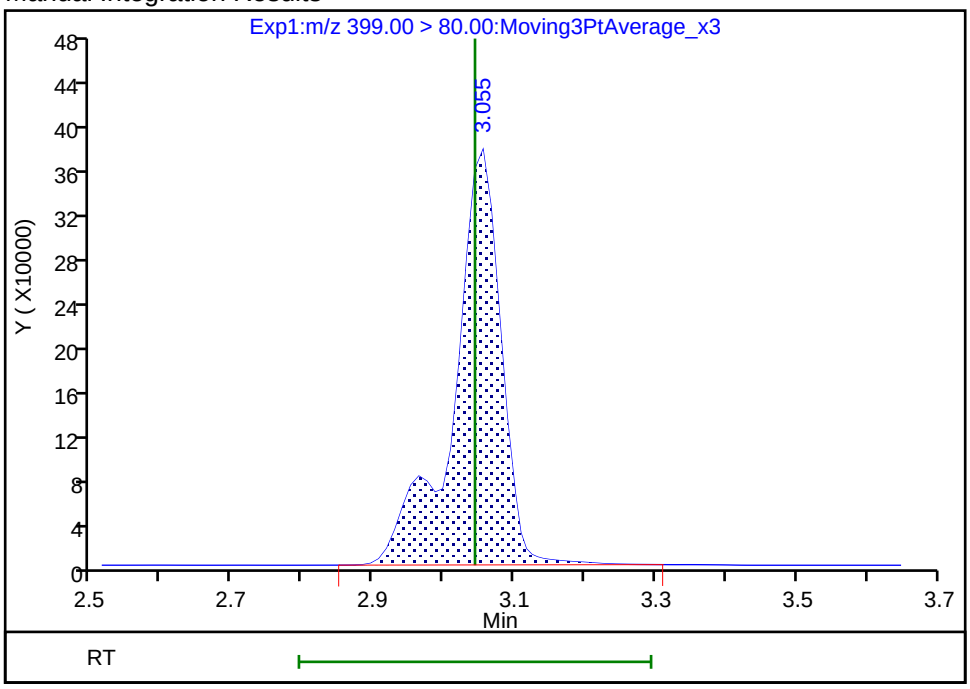
Processing Integration Results

RT: 3.06
Area: 1763832
Amount: 2.115016
Amount Units: ng/ml



Manual Integration Results

RT: 3.06
Area: 1758590
Amount: 2.135213
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:49:11

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

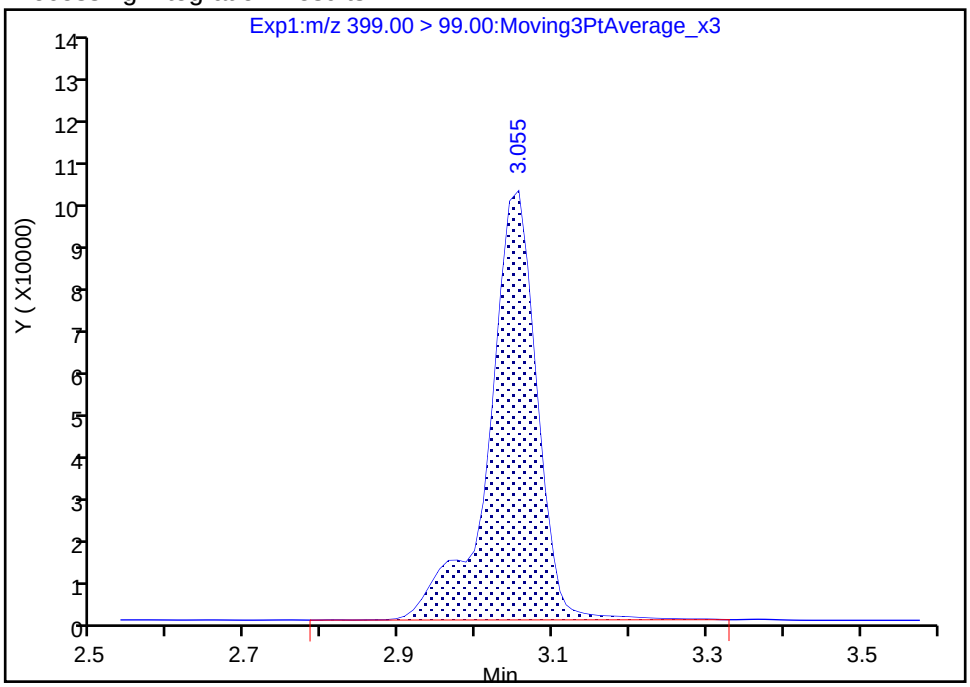
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL009.d				
Injection Date:	10-Feb-2020 12:21:22	Instrument ID:	LC812		
Lims ID:	IC				
Client ID:					
Operator ID:	lc812tech	ALS Bottle#:	6	Worklist Smp#:	9
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

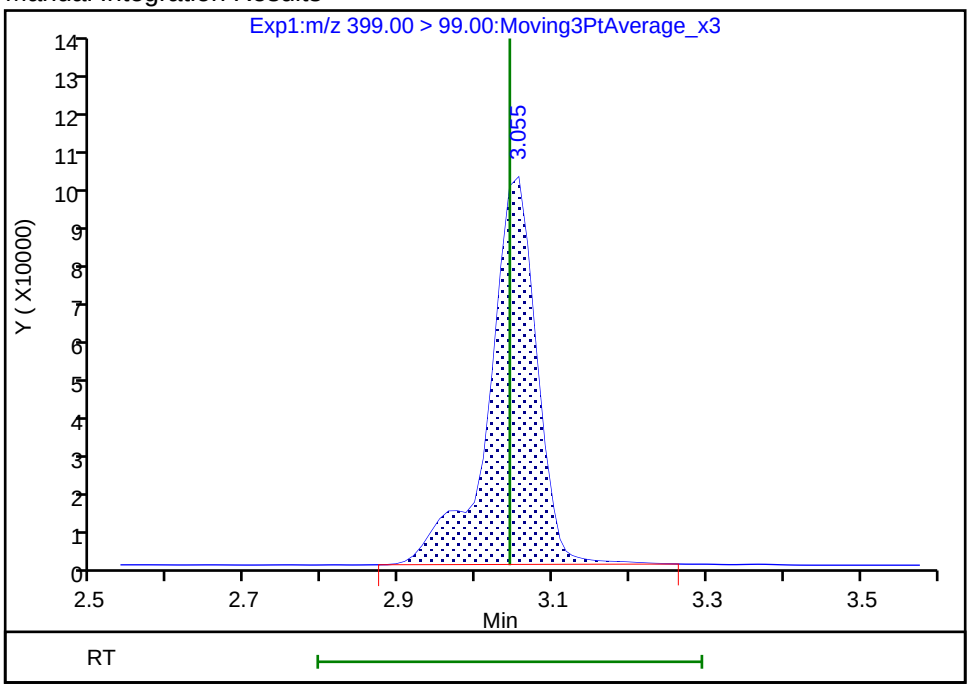
Processing Integration Results

RT: 3.06
Area: 436970
Amount: 2.115016
Amount Units: ng/ml



Manual Integration Results

RT: 3.06
Area: 433798
Amount: 2.135213
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:49:17

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

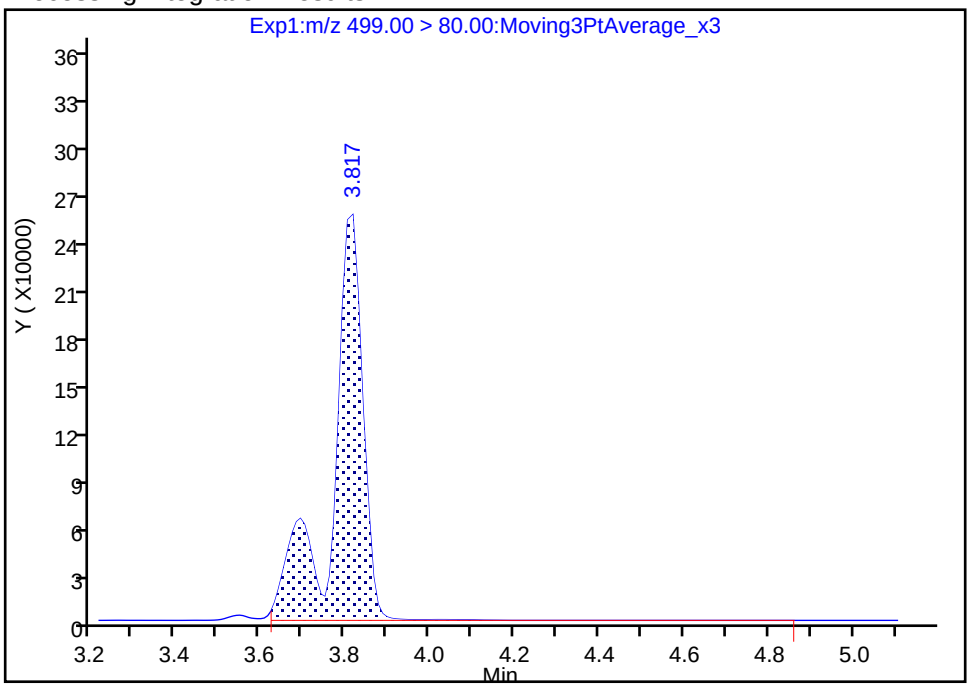
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL009.d
Injection Date: 10-Feb-2020 12:21:22 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 6 Worklist Smp#: 9
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

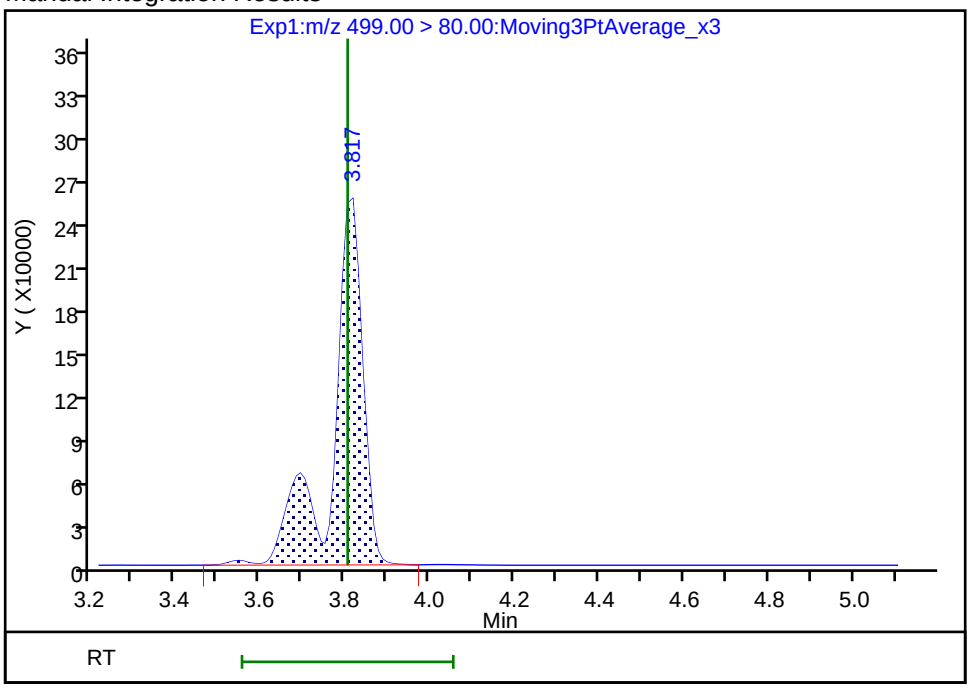
Processing Integration Results

RT: 3.82
Area: 1275890
Amount: 2.114018
Amount Units: ng/ml



Manual Integration Results

RT: 3.82
Area: 1283094
Amount: 2.120113
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:48:49
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

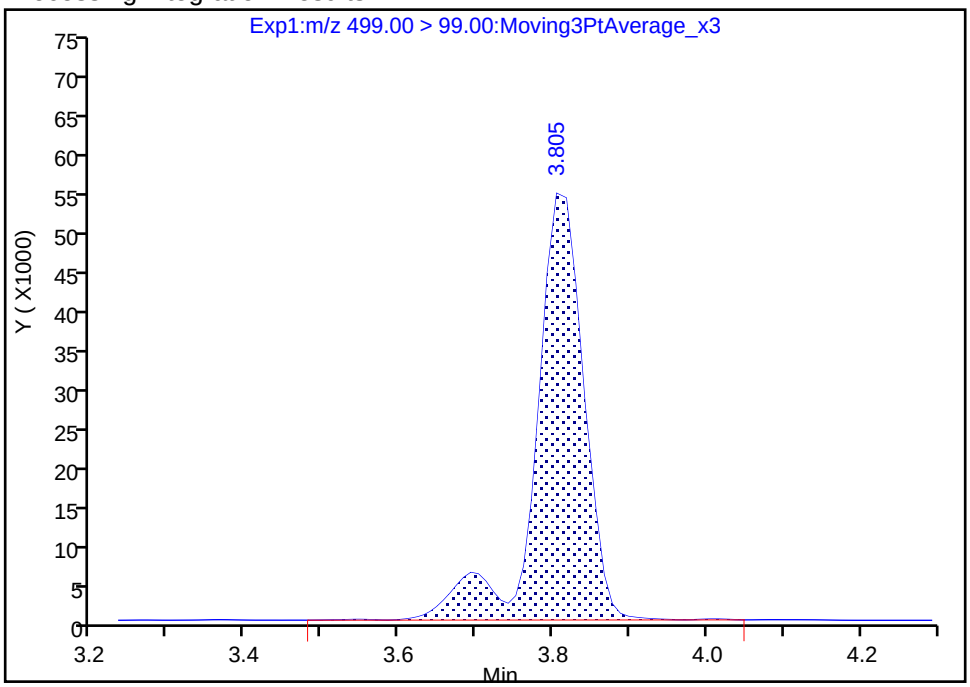
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL009.d
Injection Date: 10-Feb-2020 12:21:22 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 6 Worklist Smp#: 9
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

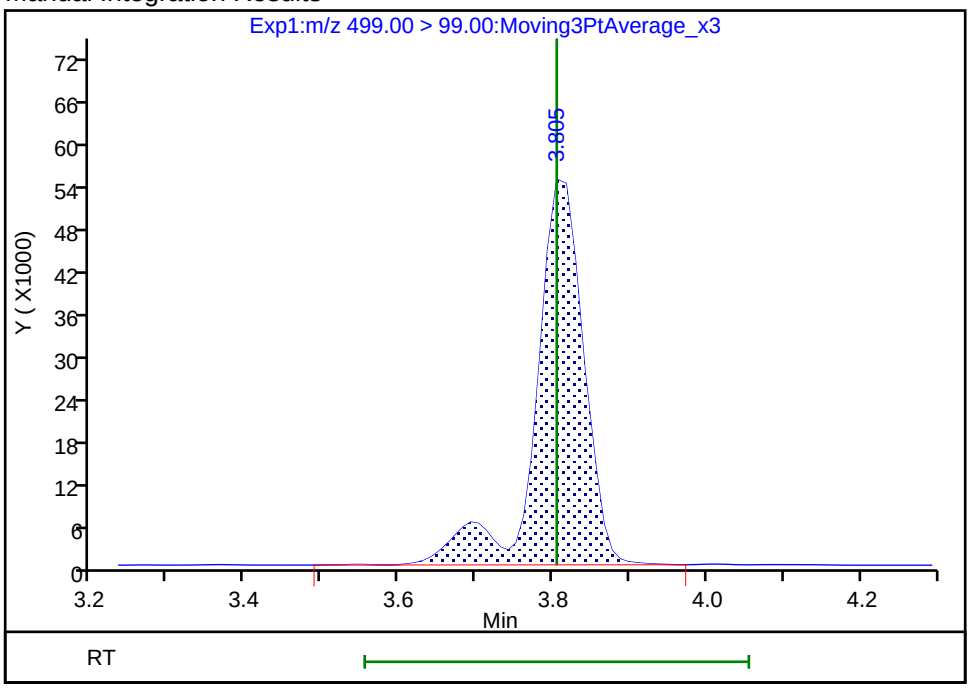
Processing Integration Results

RT: 3.80
Area: 237634
Amount: 2.114018
Amount Units: ng/ml



Manual Integration Results

RT: 3.80
Area: 237130
Amount: 2.120113
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:48:55
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL010.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 10-Feb-2020 12:29:33 ALS Bottle#: 7 Worklist Smp#: 10
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: IC 6
Misc. Info.: 200-0039917-010 Plate: 1 Rack: 1
Operator ID: lc812tech Instrument ID: LC812
Sublist: chrom-PFC_LC812*sub3

Method: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\PFC_LC812.m
Limit Group: LC_PFC_ICAL
Last Update: 10-Feb-2020 13:09:45 Calib Date: 10-Feb-2020 12:29:33
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL010.d

Column 1 : C-18 (4.60 mm) Det: EXP1
Process Host: CTX0302

First Level Reviewer: chirgwinb Date: 10-Feb-2020 12:51:14
Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										M
212.90 > 169.00	1.917	1.917	0.0	1.000	8040027	9.60		96.0	1007	M
D 1 13C4 PFBA										M
217.00 > 172.00	1.917	1.917	0.0	0.559	2200894	2.36		94.5	5583	M
D 3 13C5 PFPeA										
267.90 > 223.00	2.271	2.271	0.0	0.662	1763442	2.43		97.2	710	
4 Perfluoropentanoic acid										
262.90 > 219.00	2.271	2.271	0.0	1.000	7248787	9.52		95.2	339	
D 47 13C3 PFBS										
301.90 > 80.00	2.285	2.284	0.001	0.666	2130139	2.18		93.9	614608	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.285	2.284	0.001	1.000	8699125	9.31	Target=2.20	105	36025	
298.90 > 99.00	2.285	2.284	0.001	1.000	3835946		2.27(1.10-3.31)	105	5359	
61 1H,1H,2H,2H-perfluorohexanesulfoni										
327.00 > 307.00	2.623	2.623	0.0	1.005	1218431	9.26		99.2	8908	
D 60 M2-4:2 FTS										
329.00 > 81.00	2.611	2.623	-0.012	0.761	158394	2.22		95.1	114	
70 Perfluoropentanesulfonic acid										
349.00 > 80.00	2.661	2.660	0.001	0.874	7687926	9.34	Target=3.28	99.6	51879	
349.00 > 99.00	2.661	2.660	0.001	0.874	2503903		3.07(1.64-4.91)	99.6	11239	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.661	2.660	0.001	1.000	8016357	10.2	Target=12.10	102	2865	
313.00 > 119.00	2.661	2.660	0.001	1.000	623753		12.85(6.05-18.16)	102	1233	
D 7 13C2 PFHxA										
315.00 > 270.00	2.661	2.660	0.001	0.776	1989787	2.35		93.8	8386	
D 64 13C3 HFPO-DA										
332.10 > 287.00	2.768	2.776	-0.008	0.807	126685	1.88		75.3	688	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.776	2.776	0.0	1.003	1291907	10.9		109	395	
D 11 18O2 PFHxS										
403.00 > 84.00	3.044	3.044	0.0	0.887	1533357	2.22		94.0	4038	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.044	3.044	0.0	1.000	6545076	8.55	Target=4.10	94.0	60561	
399.00 > 99.00	3.044	3.044	0.0	1.000	1563262		4.19(2.05-6.15)	94.0	2735	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.055	3.055	0.0	1.000	7497842	9.80	Target=3.67	98.0	2221	
363.00 > 169.00	3.055	3.055	0.0	1.000	2125571		3.53(1.83-5.50)	98.0	4468	
D 9 13C4 PFHpA										
367.00 > 322.00	3.055	3.055	0.0	0.891	1869509	2.29		91.7	4031	
77 DONA										
377.00 > 251.00	3.089	3.089	0.0	0.812	16898147	9.47	Target=2.51	101	17587	
377.00 > 85.00	3.089	3.089	0.0	0.812	6822481		2.48(1.26-3.77)	101	14098	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.413	3.413	0.0	0.897	5910488	10.0	Target=5.96	105	7360	
449.00 > 99.00	3.422	3.413	0.009	0.899	980276		6.03(2.98-8.94)	105	9848	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.422	3.421	0.001	0.998	215578	2.28		96.1	690	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.422	3.421	0.001	1.000	926020	9.08		95.8	3430	
D 14 13C4 PFOA										
417.00 > 372.00	3.430	3.430	0.0	1.000	1993608	2.36		94.5	7239	
* 62 13C2 PFOA										
415.00 > 370.00	3.430	3.430	0.0		2239479	2.50			7993	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.438	3.430	0.008	1.002	7943146	9.56	Target=2.57	95.6	1752	
413.00 > 169.00	3.430	3.430	0.0	1.000	3259798		2.44(1.28-3.85)	95.6	9094	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.805	3.805	0.0	1.000	4989818	9.36	Target=5.37	101	9527	M
499.00 > 99.00	3.805	3.805	0.0	1.000	892564		5.59(2.69-8.06)	101	3404	M
D 18 13C4 PFOS										
503.00 > 80.00	3.805	3.805	0.0	1.109	1160213	2.26		94.6	2353	
20 Perfluorononanoic acid										
463.00 > 419.00	3.829	3.829	0.0	1.000	7616280	9.36	Target=7.44	93.6	1896	
463.00 > 169.00	3.829	3.829	0.0	1.000	1043580		7.30(3.72-11.15)	93.6	3112	
D 19 13C5 PFNA										
468.00 > 423.00	3.829	3.829	0.0	1.116	1979125	2.44		97.8	6145	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.994	3.994	0.0	1.050	6558043	9.66		104	14426	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.141	4.141	0.0	1.088	4273868	9.94	Target=2.85	104	12073	
549.00 > 99.00	4.141	4.141	0.0	1.088	1455080		2.94(1.43-4.28)	104	4753	
D 23 13C2 PFDA										
515.00 > 470.00	4.164	4.164	0.0	1.214	1972429	2.24		89.7	3561	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
24 Perfluorodecanoic acid										
513.00 > 469.00	4.174	4.164	0.010	1.003	7510380	9.30	Target=9.04	93.0	4846	
513.00 > 169.00	4.164	4.164	0.0	1.000	885372		8.48(4.52-13.56)	93.0	4617	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.174	4.174	0.0	1.217	299706	2.25		93.8	1086	
25 1H,1H,2H,2H-perfluorodecanesulfoni										
527.00 > 507.00	4.174	4.174	0.0	1.000	759595	9.78		102	2321	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.218	4.218	0.0	1.000	8797149	10.3		103	9527	
D 21 13C8 FOSA										
506.00 > 78.00	4.218	4.218	0.0	1.230	2081783	2.30		92.2	2937	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.317	4.316	0.0	1.258	166908	2.40		96.2	77.7	
28 N-methylperfluorooctanesulfonamido										
570.00 > 419.00	4.328	4.328	0.0	1.003	599098	10.5		105	2655	
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.420	4.420	0.0	1.162	3604144	9.53	Target=2.69	98.9	9844	
599.00 > 99.00	4.420	4.420	0.0	1.162	1330216		2.71(1.34-4.03)	98.9	8417	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.456	4.456	0.0	1.000	6437039	10.2	Target=7.95	102	3955	
563.00 > 169.00	4.456	4.456	0.0	1.000	802079		8.03(3.98-11.93)	102	3173	
D 30 13C2 PFUnA										
565.00 > 520.00	4.456	4.456	0.0	1.299	1736515	2.26		90.5	6451	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.456	4.456	0.0	1.299	191771	2.42		96.9	1043	
33 N-ethylperfluorooctanesulfonamidoa										
584.00 > 419.00	4.469	4.469	0.0	1.003	577937	9.46		94.6	1537	
66 11-Chloroeicosafluoro-3-oxaundecan										
631.00 > 451.00	4.550	4.550	0.0	1.196	7391322	9.58		102	17634	
D 36 13C2 PFDoA										
615.00 > 570.00	4.693	4.693	0.0	1.368	2010629	2.34		93.6	4634	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.693	4.693	0.0	1.000	7802036	10.0	Target=7.12	100.0	1380	
613.00 > 169.00	4.693	4.693	0.0	1.000	1170595		6.67(3.56-10.68)	100.0	4851	
74 1H,1H,2H,2H-perfluorododecanesulfo										
627.00 > 607.00	4.714	4.714	0.0	1.129	407659	9.81		102	5549	
75 Perfluorododecanesulfonic acid (PF										
699.00 > 80.00	4.879	4.879	0.0	1.282	1212025	9.24	Target=0.50	95.4	2333	
699.00 > 99.00	4.870	4.879	-0.009	1.280	2579126		0.47(0.25-0.74)	95.4	6036	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.915	4.915	0.0	1.047	7088974	9.98	Target=4.73	99.8	1617	
663.00 > 169.00	4.915	4.915	0.0	1.047	1382979		5.13(2.36-7.09)	99.8	4397	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.120	5.120	0.0	1.000	1088759	9.46	Target=1.08	94.6	7008	
713.00 > 219.00	5.108	5.120	-0.012	0.998	1000203		1.09(0.54-1.62)	94.6	7441	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.120	5.120	0.0	1.493	1848671	2.51		100	9873	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.491	5.499	-0.008	1.000	6840759	10.1	Target=4.40	101	1508	
813.00 > 169.00	5.491	5.499	-0.008	1.000	1585338		4.32(2.20-6.60)	101	8533	
D 44 13C2 PFHxDA										
815.00 > 770.00	5.491	5.499	-0.008	1.601	1911167	2.38		95.4	8146	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.884	5.894	-0.010	1.072	4554489	9.57	Target=4.01	95.7	937	
913.00 > 169.00	5.884	5.894	-0.010	1.072	1117118		4.08(2.01-6.02)	95.7	11147	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

PFAS32NCIC6_00003 Amount Added: 100.00 Units: uL

Report Date: 10-Feb-2020 13:09:46 Chrom Revision: 2.3 14-Jan-2020 22:23:42

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL010.d

Injection Date: 10-Feb-2020 12:29:33 Instrument ID: LC812

Lims ID: IC

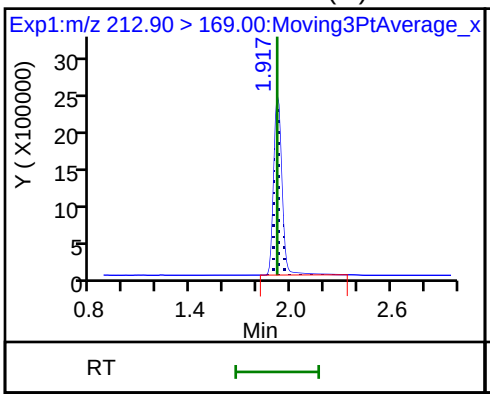
Client ID:

Operator ID: lc812tech ALS Bottle#: 7 Worklist Smp#: 10

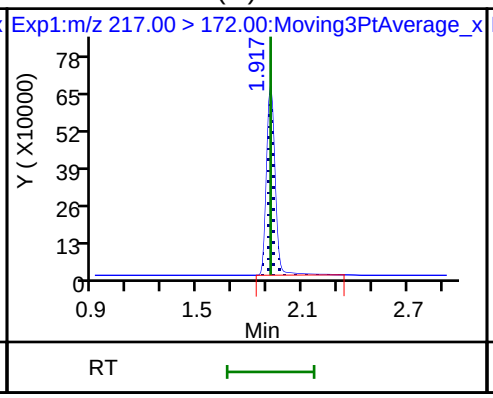
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFC_LC812 Limit Group: LC_PFC_ICAL

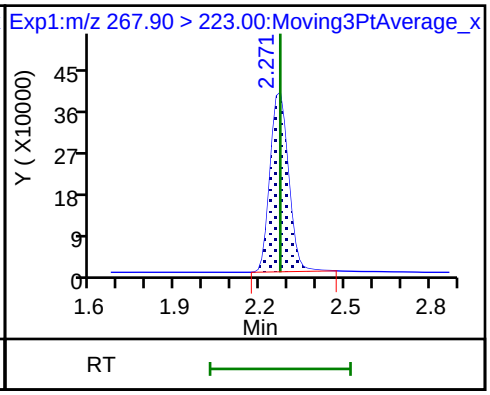
2 Perfluorobutanoic acid (M)



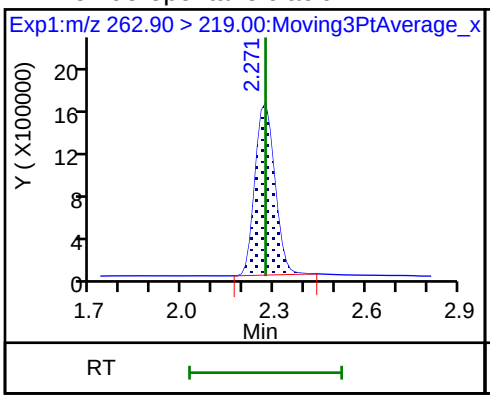
D 1 13C4 PFBA (M)



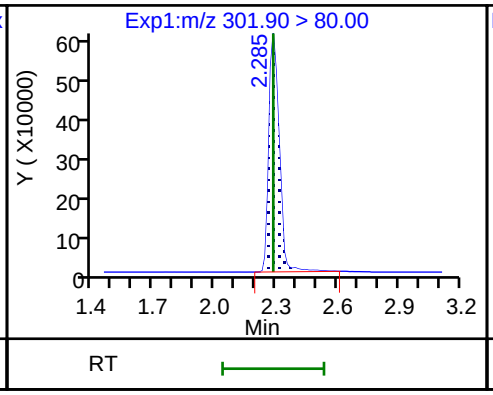
D 3 13C5 PFPeA



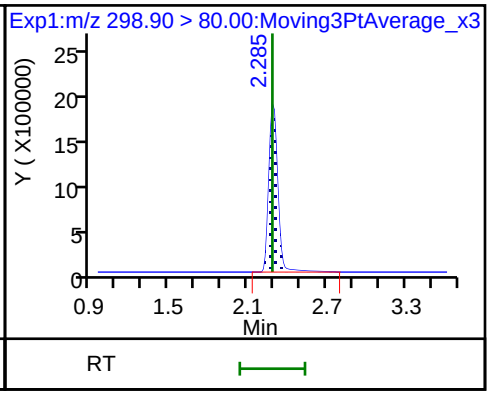
4 Perfluoropentanoic acid



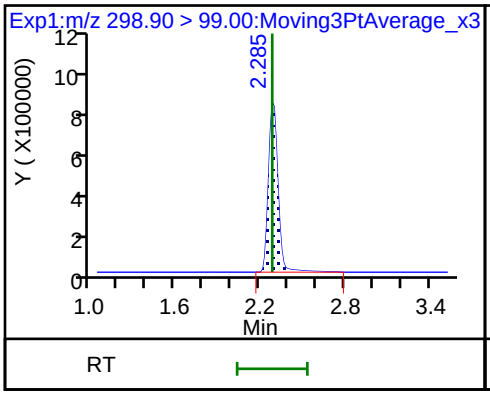
D 47 13C3 PFBS



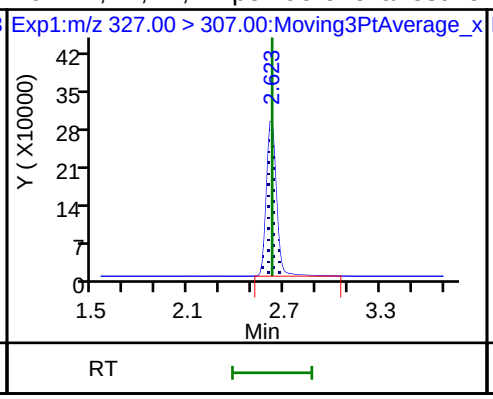
5 Perfluorobutanesulfonic acid



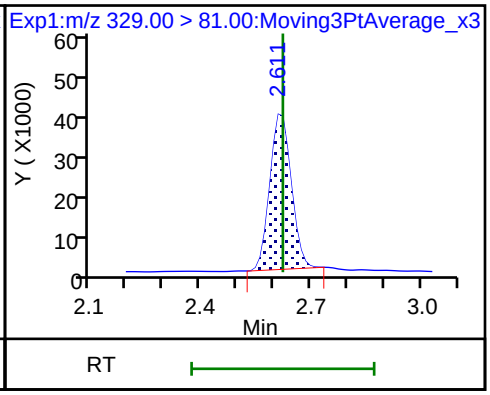
5 Perfluorobutanesulfonic acid



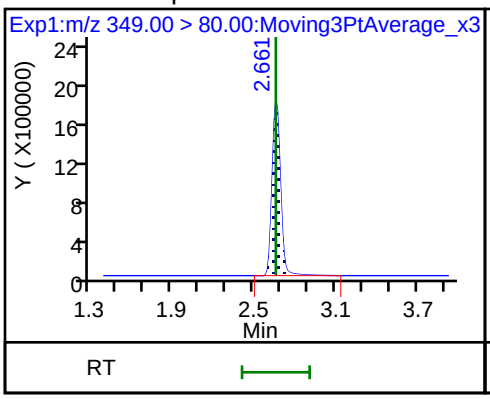
61 1H,1H,2H,2H-perfluorohexanesulfon



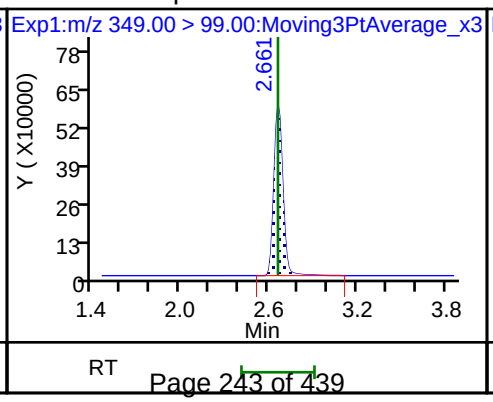
D 60 M2-4:2 FTS



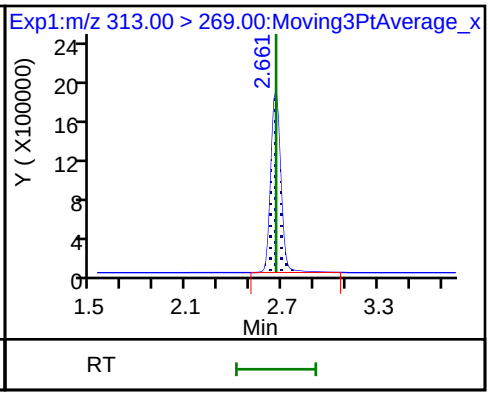
70 Perfluoropentanesulfonic acid



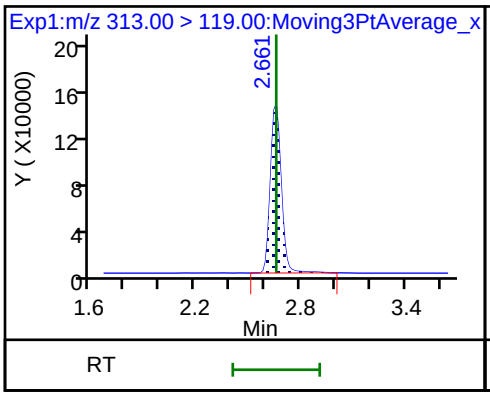
70 Perfluoropentanesulfonic acid



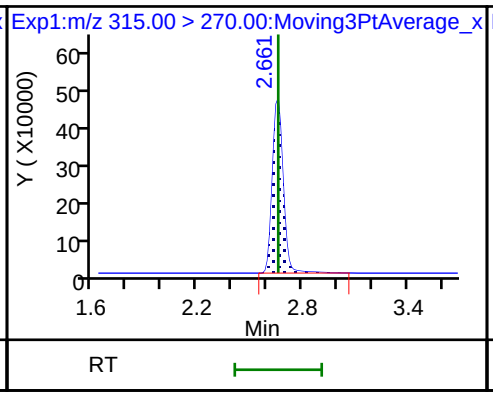
6 Perfluorohexanoic acid



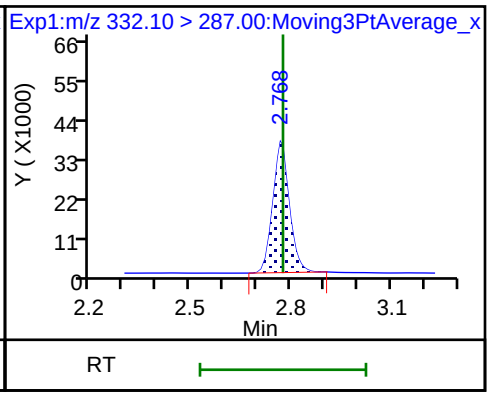
6 Perfluorohexanoic acid



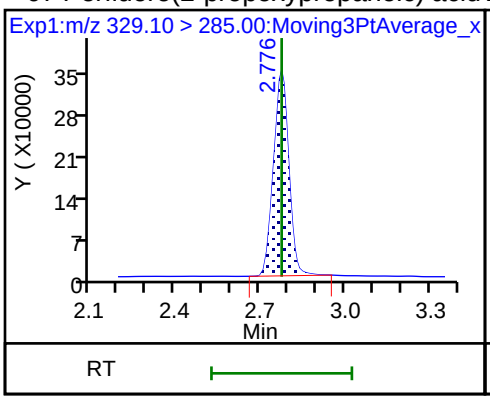
D 7 13C2 PFHxA



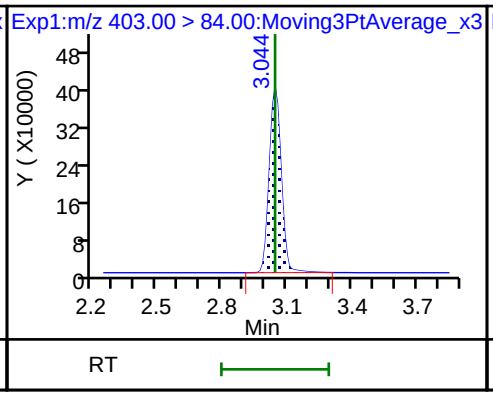
D 64 13C3 HFPO-DA



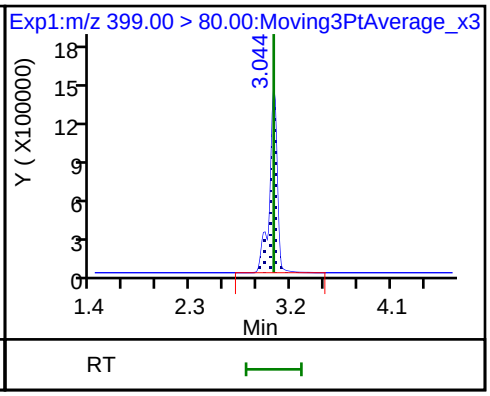
67 Perfluoro(2-propoxypropanoic) acid



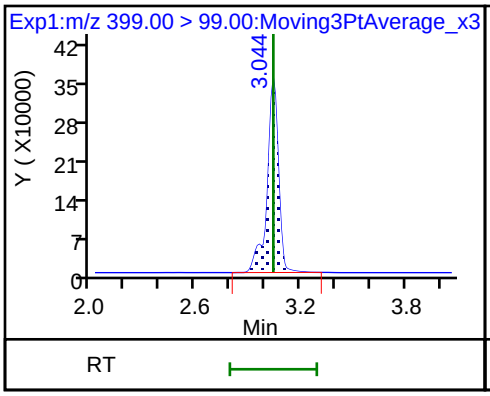
D 11 18O2 PFHxS



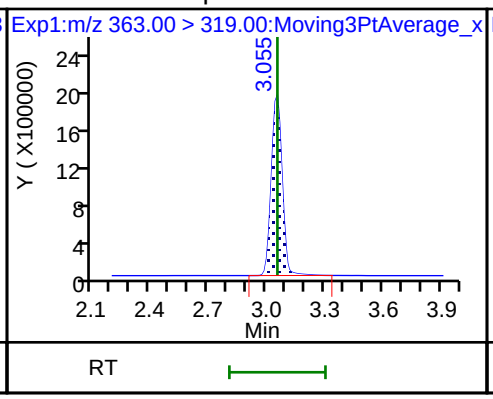
8 Perfluorohexanesulfonic acid



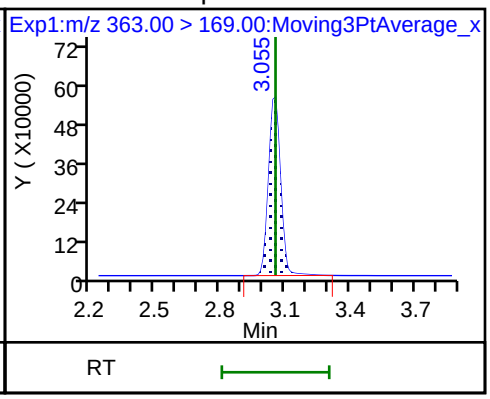
8 Perfluorohexanesulfonic acid



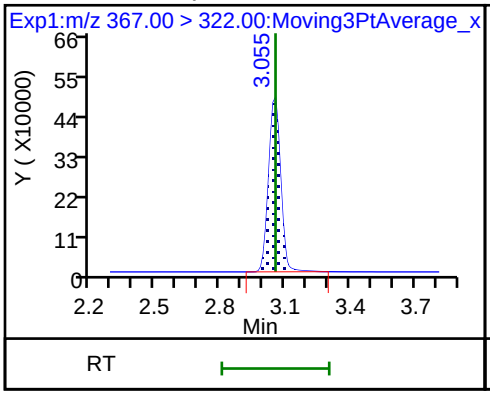
10 Perfluoroheptanoic acid



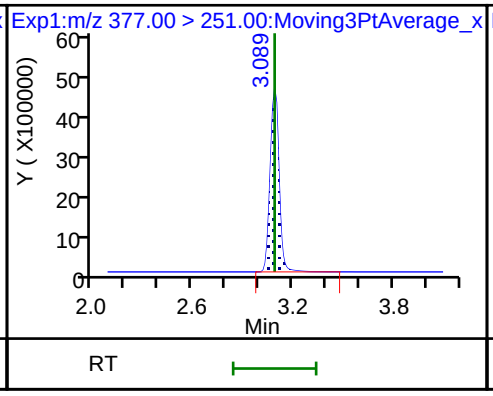
10 Perfluoroheptanoic acid



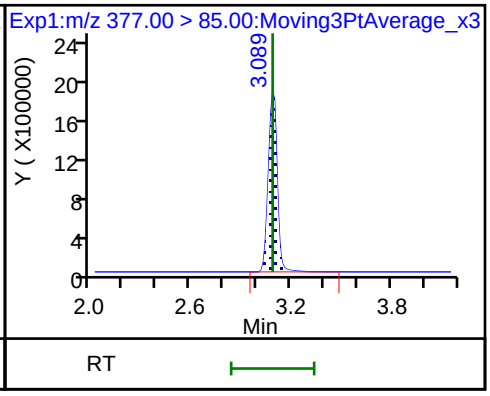
D 9 13C4 PFHpA



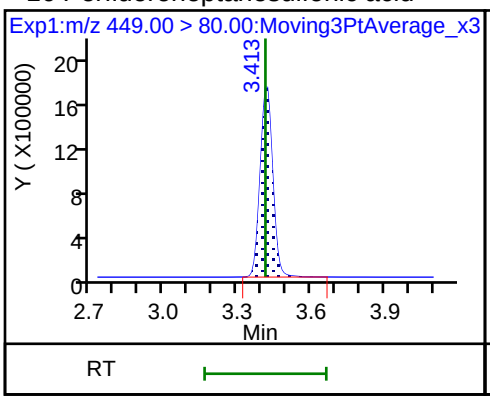
77 DONA



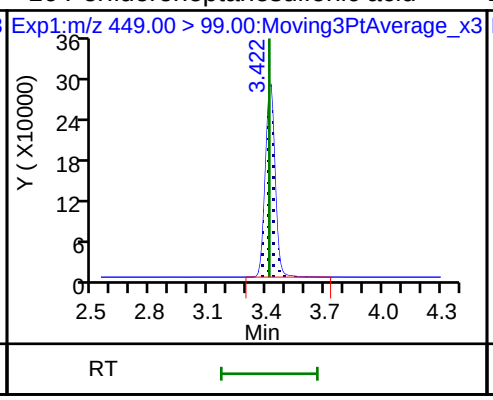
77 DONA



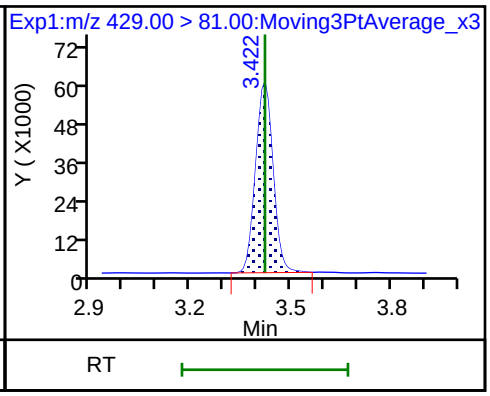
16 Perfluoroheptanesulfonic acid



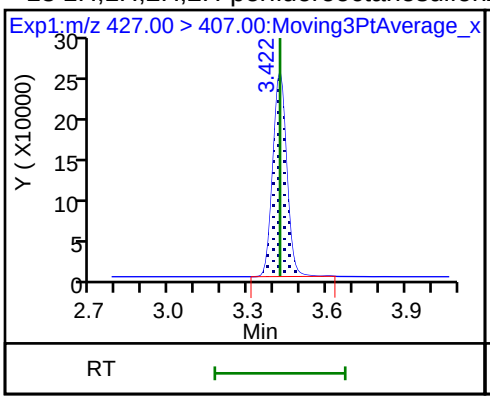
16 Perfluoroheptanesulfonic acid



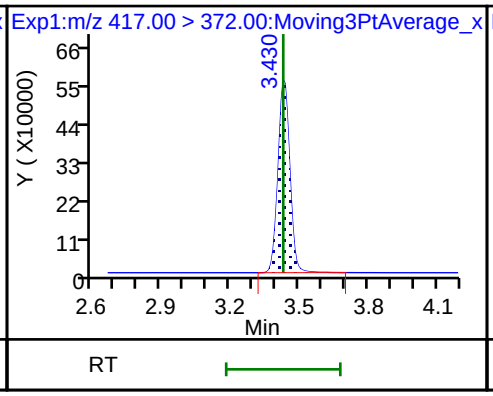
D 12 M2-6:2 FTS



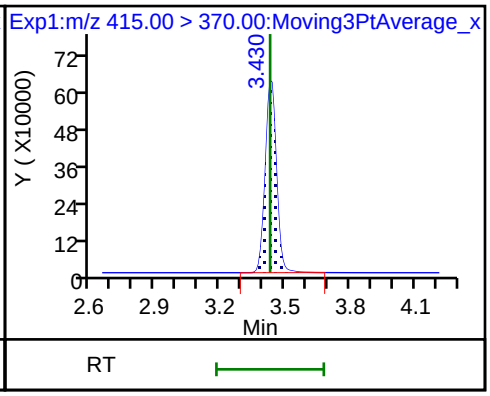
13 1H,1H,2H,2H-perfluorooctanesulfonI



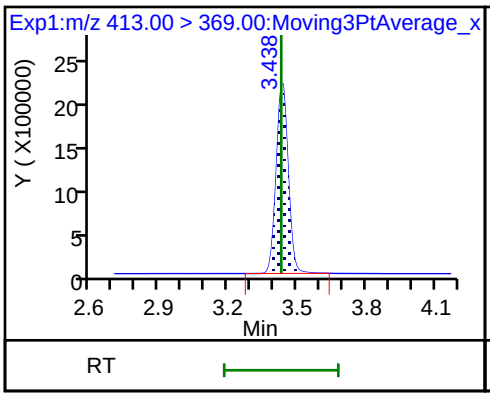
D 14 13C4 PFOA



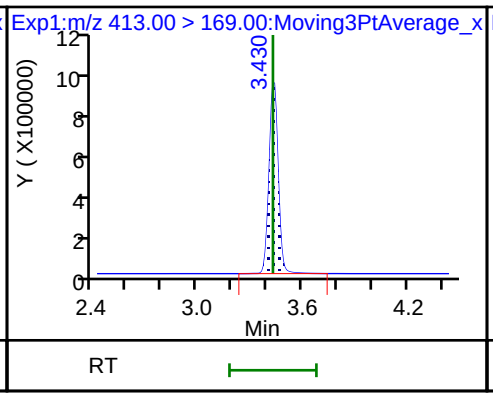
* 62 13C2 PFOA



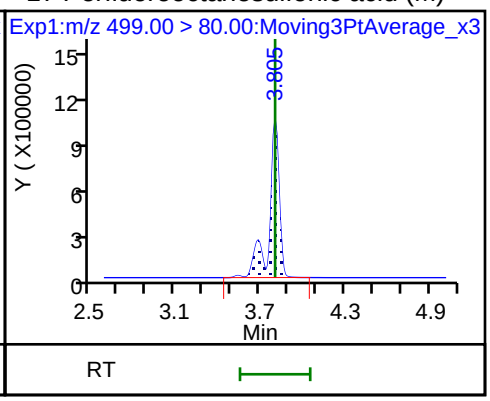
15 Perfluorooctanoic acid



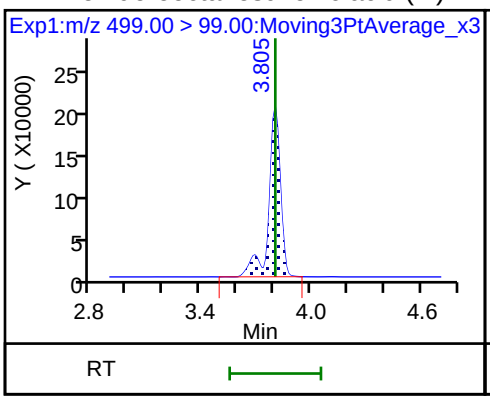
15 Perfluorooctanoic acid



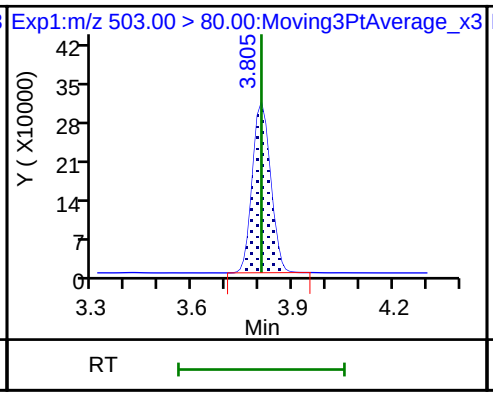
17 Perfluorooctanesulfonic acid (M)



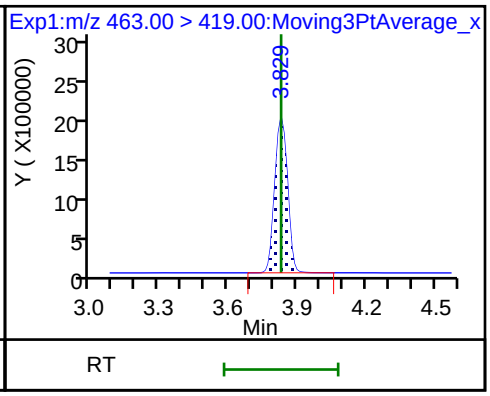
17 Perfluorooctanesulfonic acid (M)



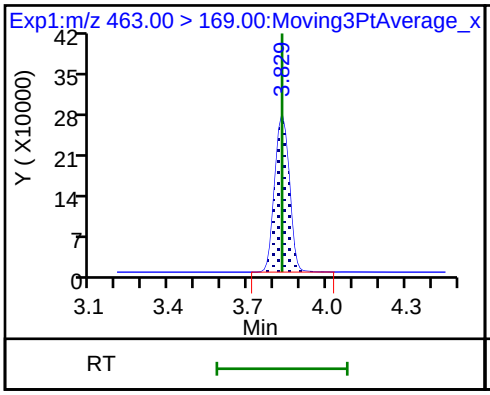
D 18 13C4 PFOS



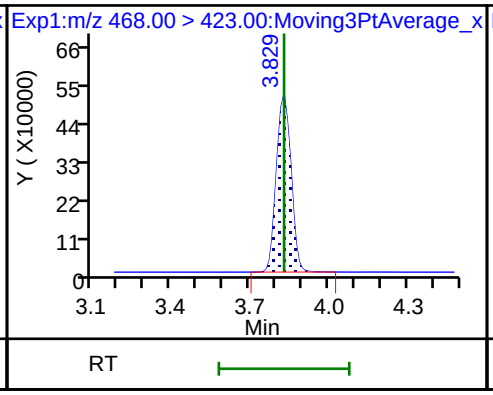
20 Perfluorononanoic acid



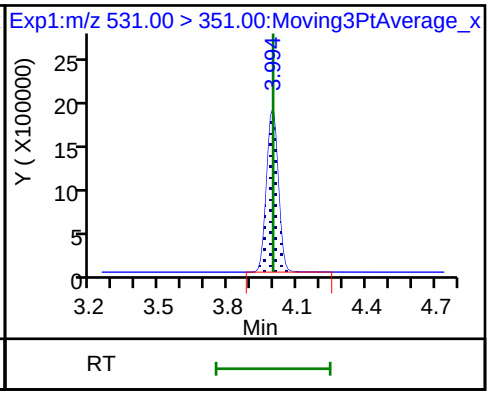
20 Perfluorononanoic acid



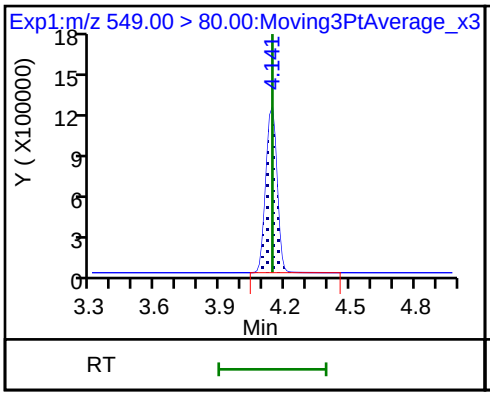
D 19 13C5 PFNA



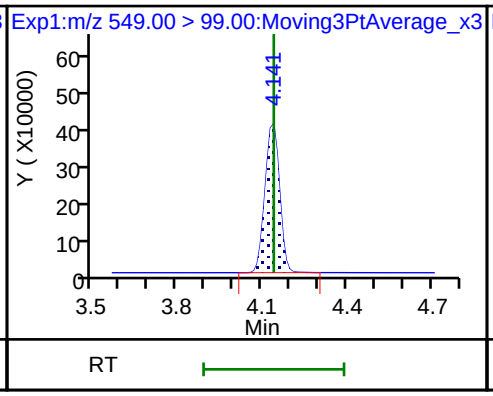
69 9-Chlorohexadecafluoro-3-oxanonane



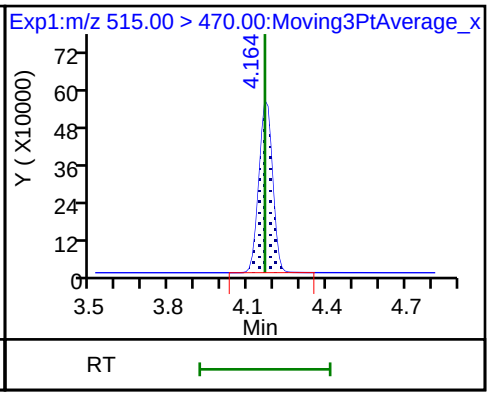
68 Perfluorononanesulfonic acid



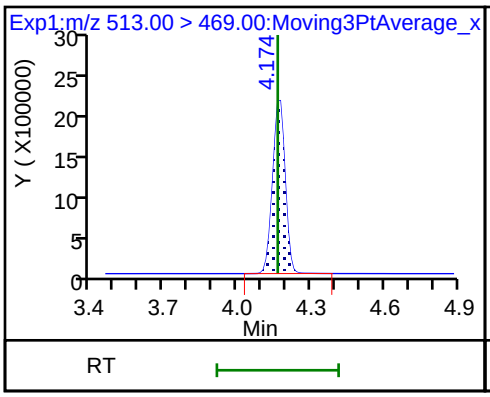
68 Perfluorononanesulfonic acid



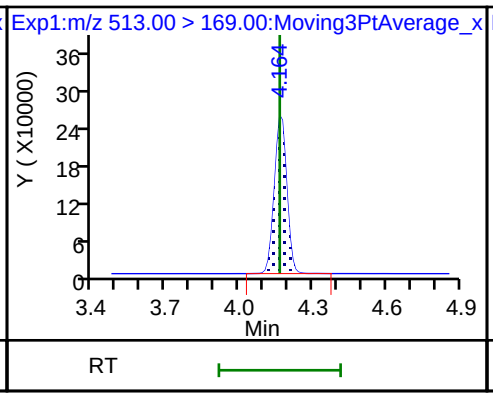
D 23 13C2 PFDA



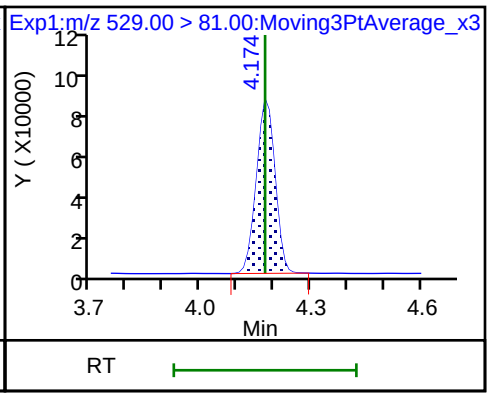
24 Perfluorodecanoic acid



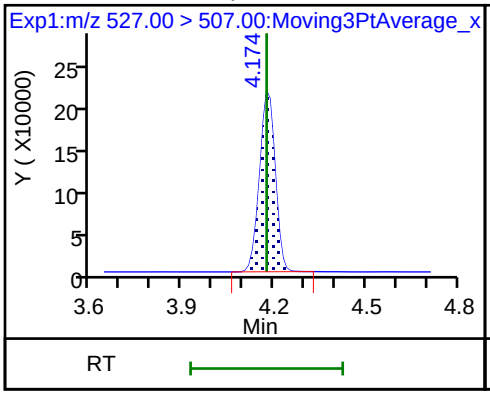
24 Perfluorodecanoic acid



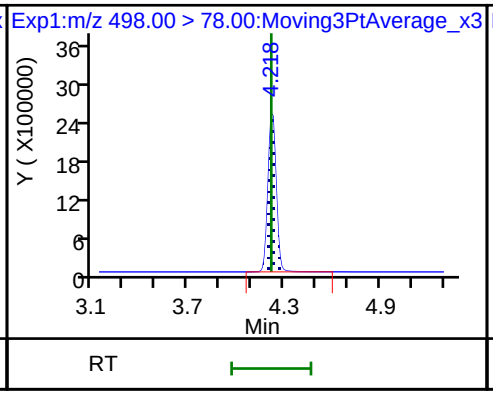
D 26 M2-8:2 FTS



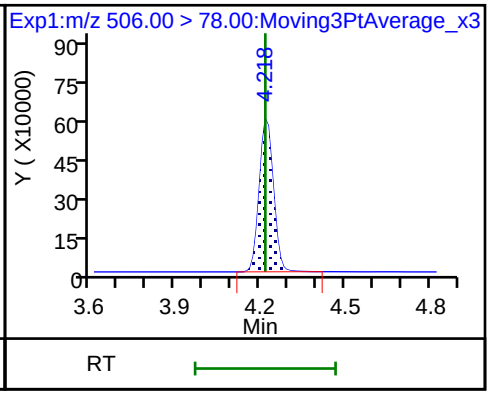
25 1H,1H,2H,2H-perfluorodecanesulfoni



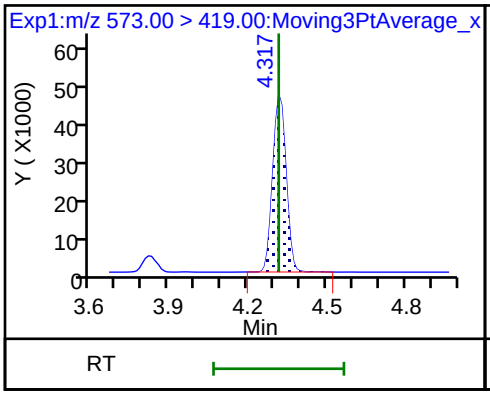
22 Perfluorooctanesulfonamide



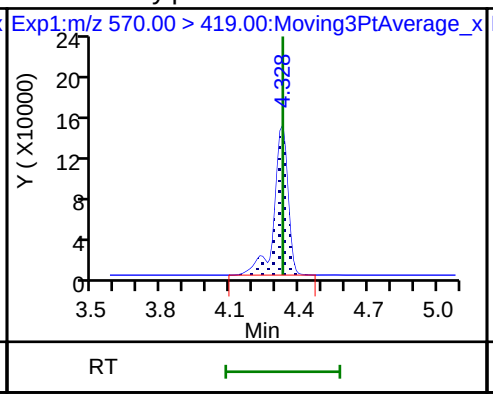
D 21 13C8 FOSA



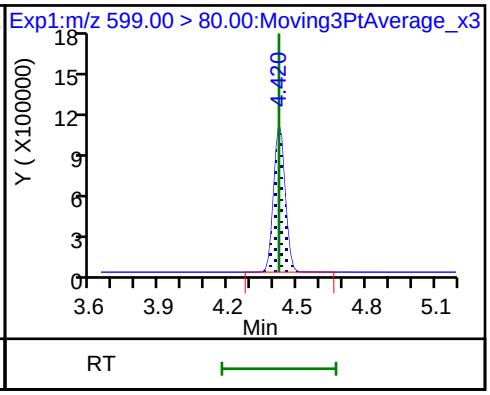
D 27 d3-NMeFOSAA



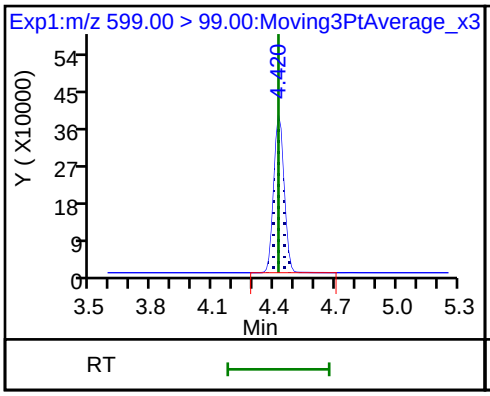
28 N-methylperfluorooctanesulfonamido



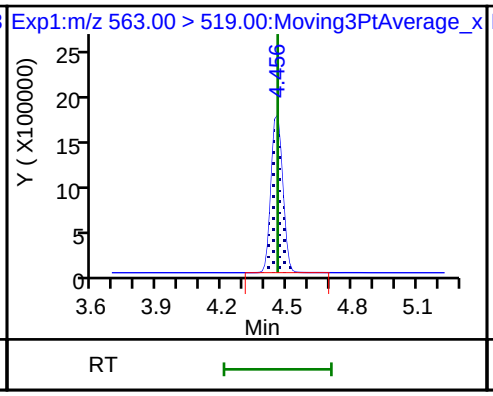
29 Perfluorodecanesulfonic acid



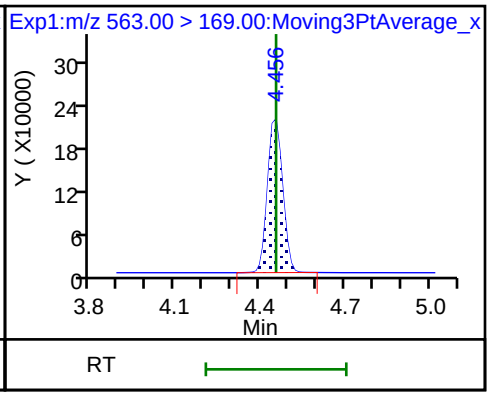
29 Perfluorodecanesulfonic acid



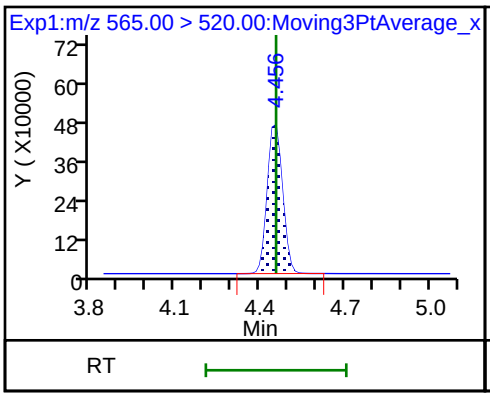
31 Perfluoroundecanoic acid



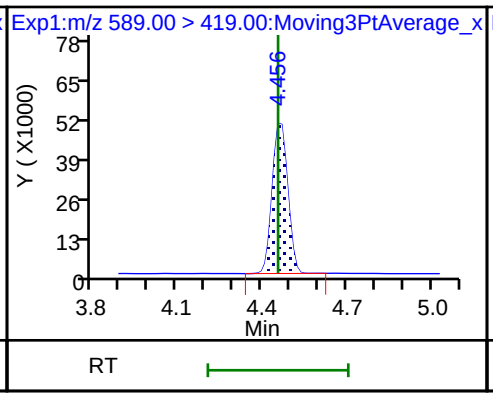
31 Perfluoroundecanoic acid



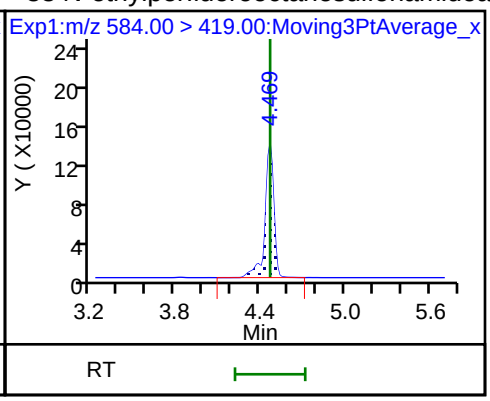
D 30 13C2 PFUnA



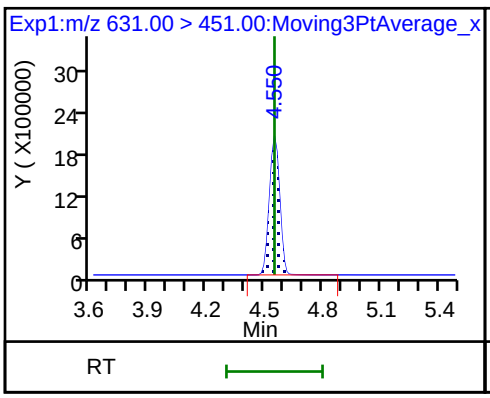
D 32 d5-NEtFOSAA



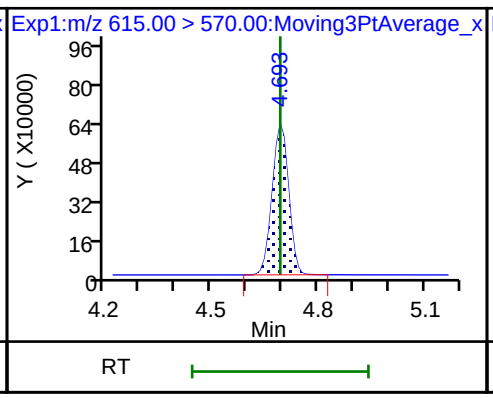
33 N-ethylperfluorooctanesulfonamidoa



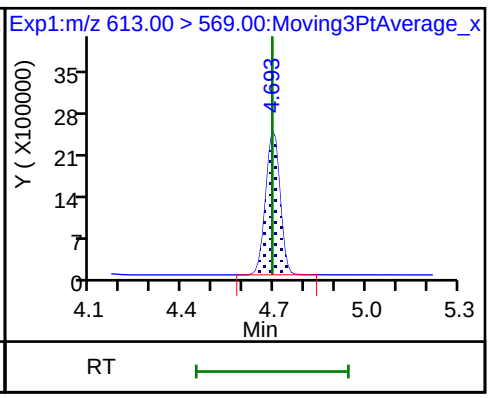
66 11-Chloroeicosafluoro-3-oxaundecan



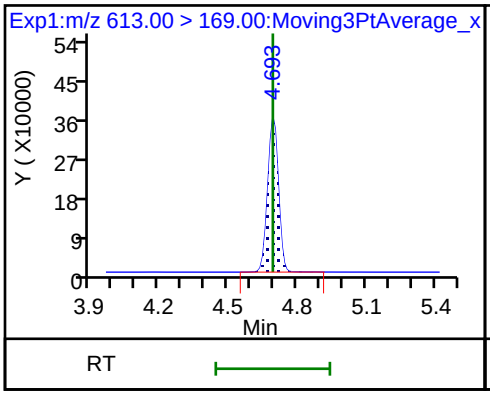
D 36 13C2 PFDoA



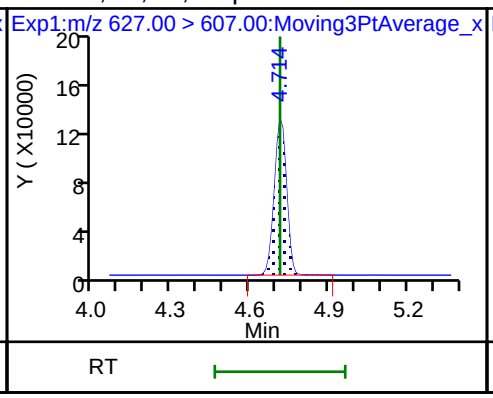
37 Perfluorododecanoic acid



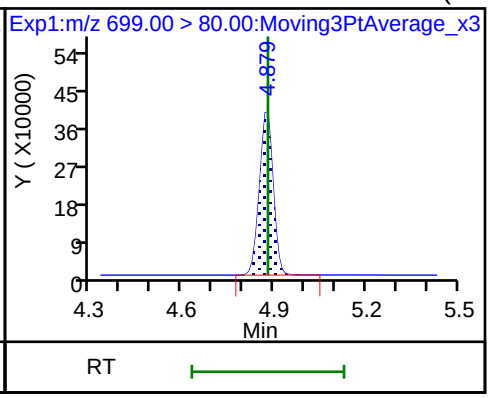
37 Perfluorododecanoic acid



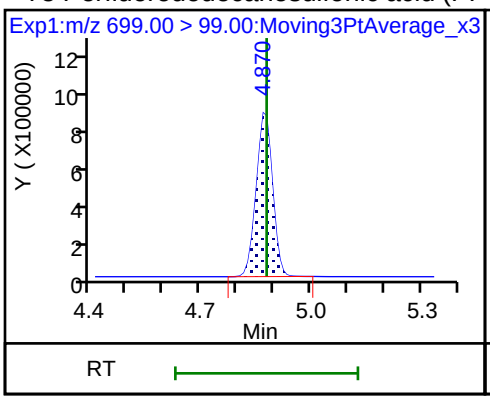
74 1H,1H,2H,2H-perfluorododecanesulfo



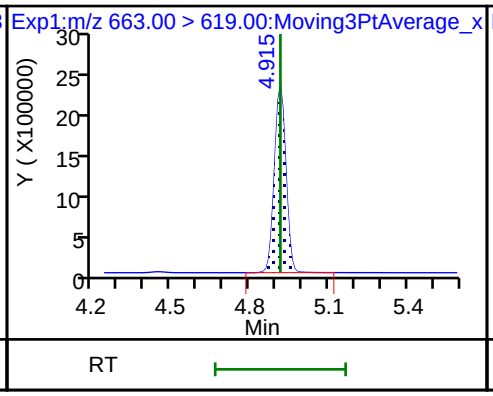
75 Perfluorododecanesulfonic acid (PF



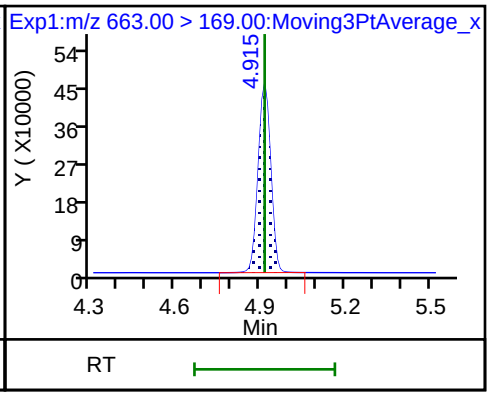
75 Perfluorododecanesulfonic acid (PF



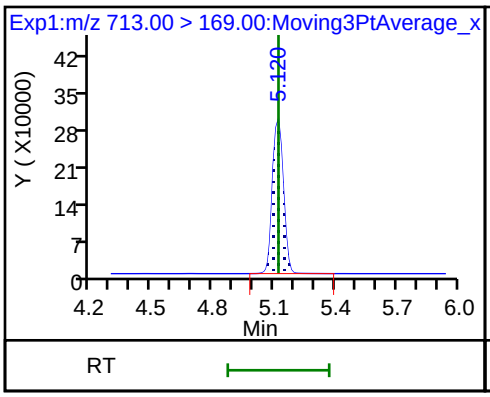
41 Perfluorotridecanoic acid



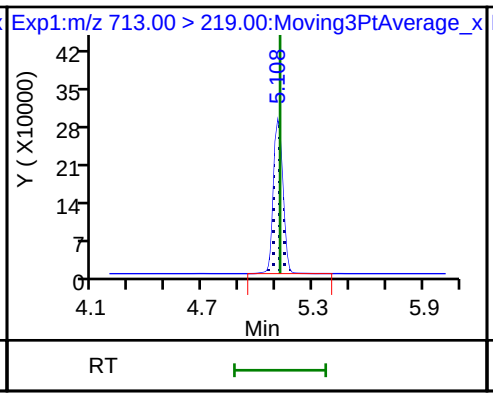
41 Perfluorotridecanoic acid



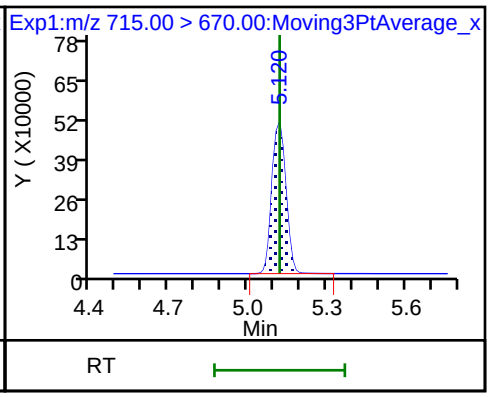
42 Perfluorotetradecanoic acid



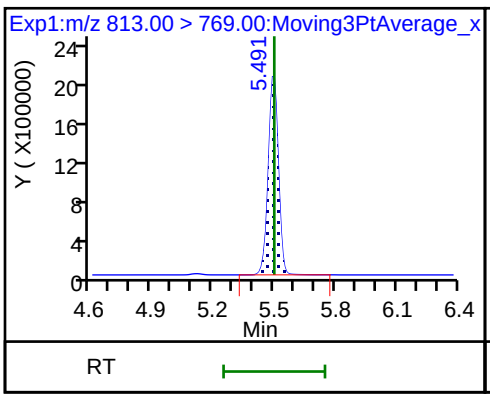
42 Perfluorotetradecanoic acid



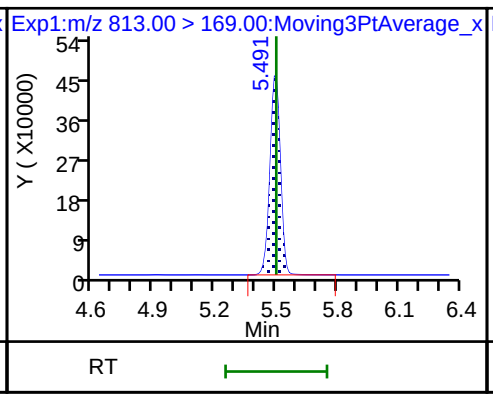
D 43 13C2 PFTeDA



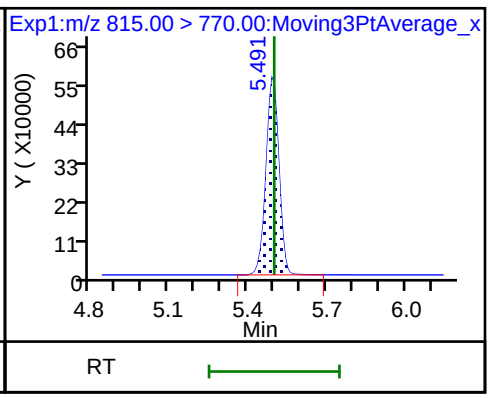
45 Perfluorohexadecanoic acid



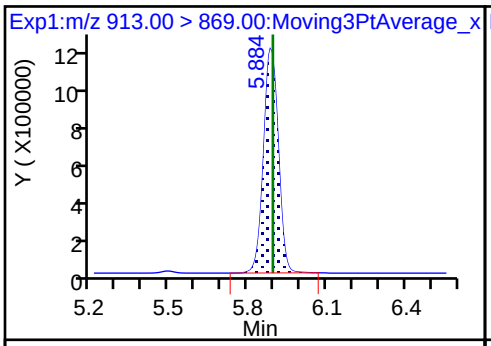
45 Perfluorohexadecanoic acid



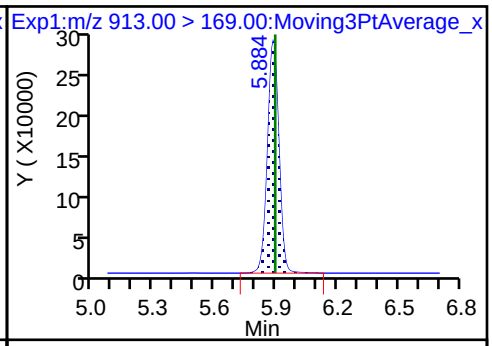
D 44 13C2 PFHxDA



46 Perfluorooctadecanoic acid



46 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

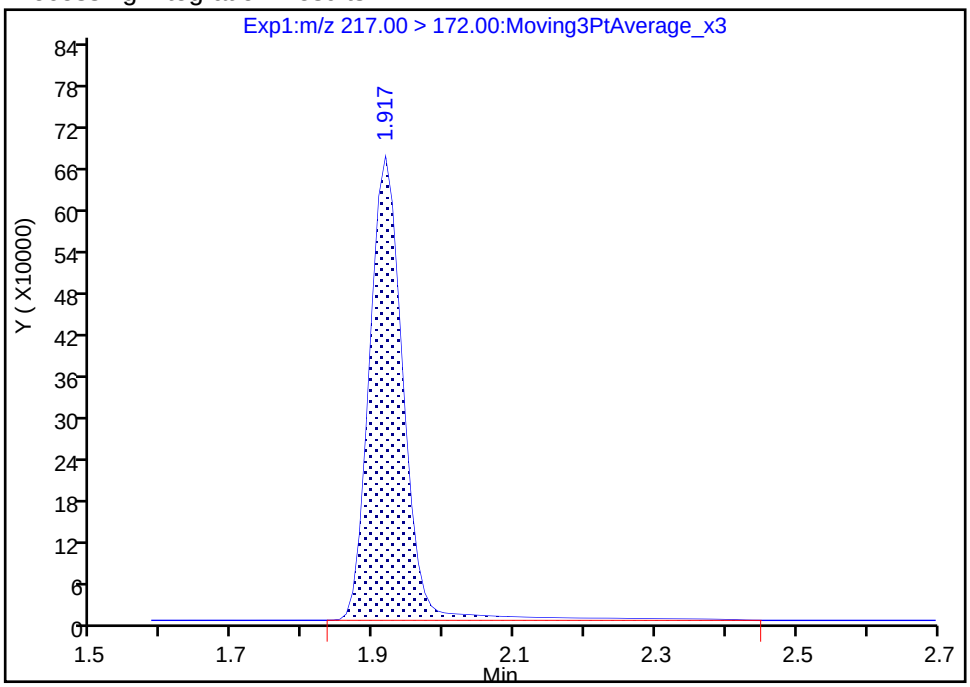
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL010.d
Injection Date: 10-Feb-2020 12:29:33 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 7 Worklist Smp#: 10
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

D 1 13C4 PFBA, CAS: STL00992

Signal: 1

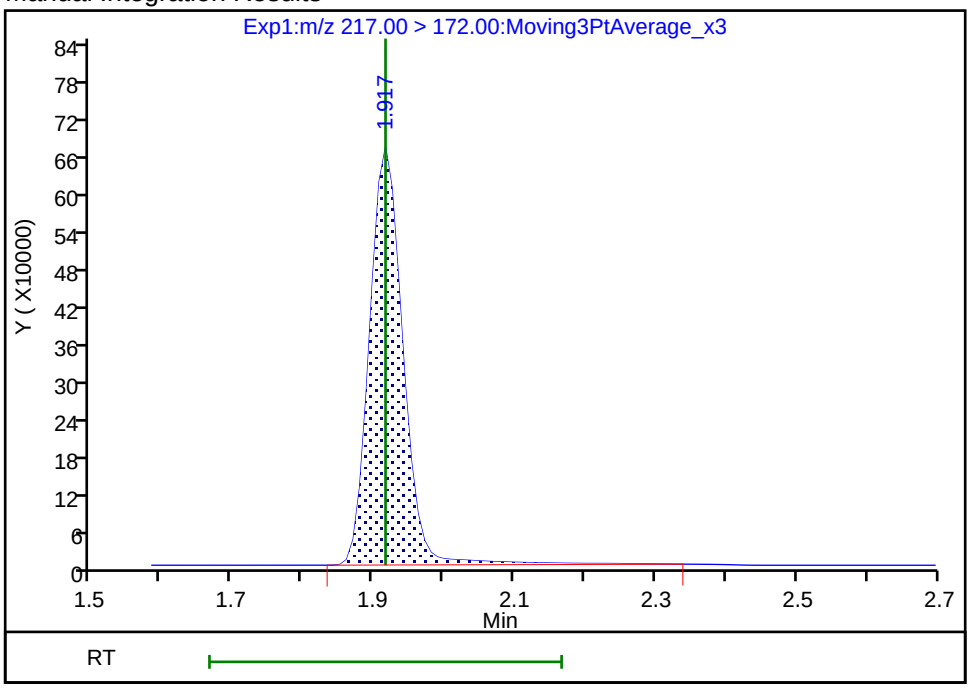
Processing Integration Results

RT: 1.92
Area: 2233355
Amount: 2.402103
Amount Units: ng/ml



Manual Integration Results

RT: 1.92
Area: 2200894
Amount: 2.361666
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:50:23
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

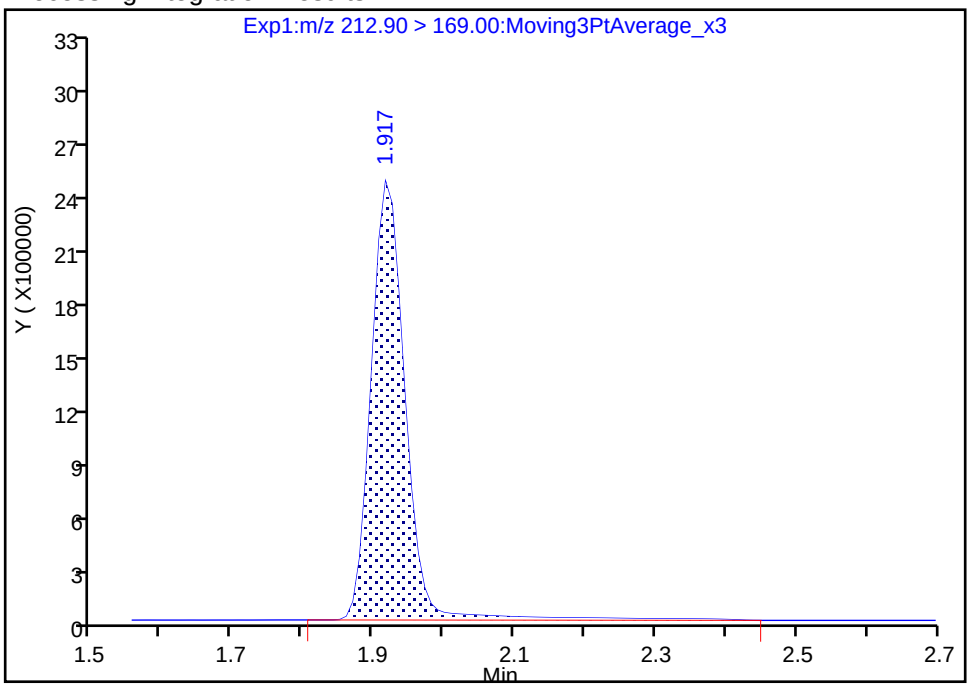
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Injection Date: 10-Feb-2020 12:29:33 Instrument ID: LC812
Lims ID: IC
Client ID:
Operator ID: lc812tech ALS Bottle#: 7 Worklist Smp#: 10
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

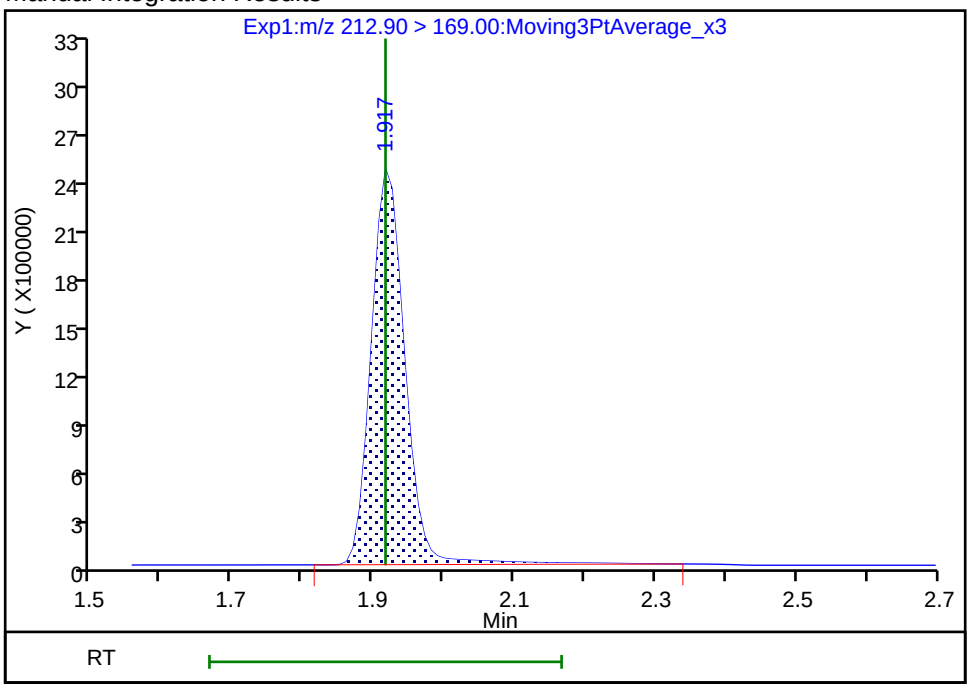
Processing Integration Results

RT: 1.92
Area: 8187830
Amount: 9.771557
Amount Units: ng/ml



Manual Integration Results

RT: 1.92
Area: 8040027
Amount: 9.600546
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:50:15
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

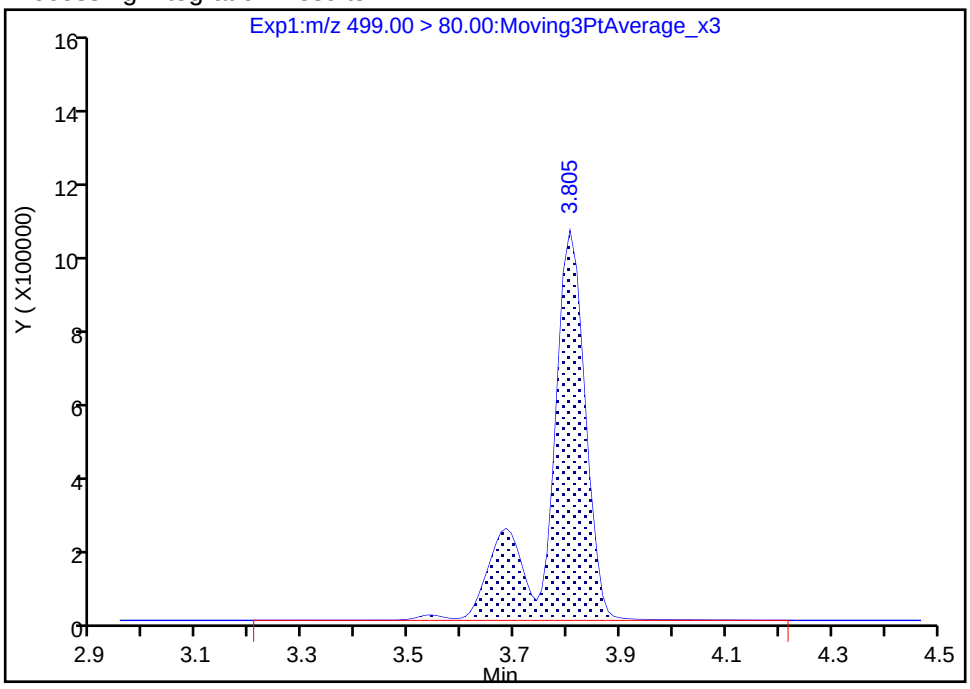
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Injection Date:	10-Feb-2020 12:29:33	Instrument ID:	LC812		
Lims ID:	IC				
Client ID:					
Operator ID:	lc812tech	ALS Bottle#:	7	Worklist Smp#:	10
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

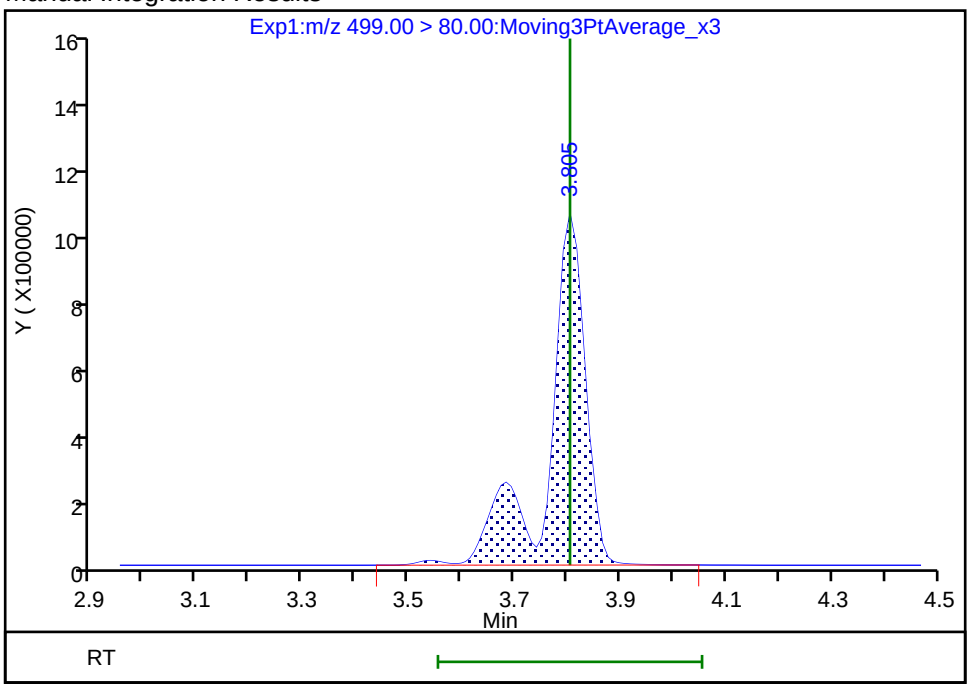
Processing Integration Results

RT: 3.80
Area: 5009920
Amount: 9.391219
Amount Units: ng/ml



Manual Integration Results

RT: 3.80
Area: 4989818
Amount: 9.359871
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:50:45

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

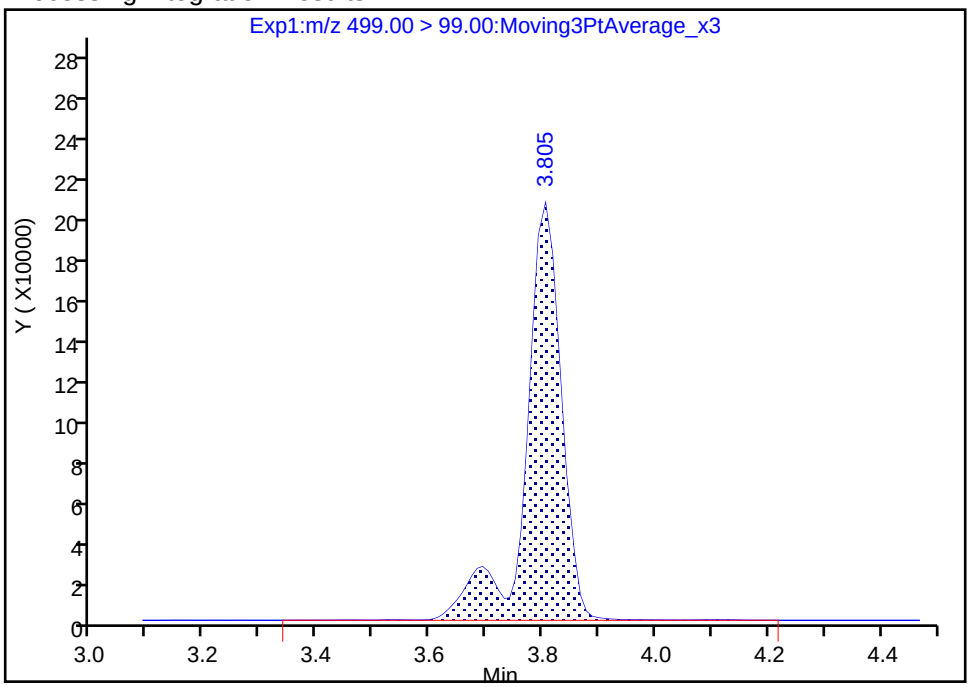
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL010.d				
Injection Date:	10-Feb-2020 12:29:33	Instrument ID:	LC812		
Lims ID:	IC				
Client ID:					
Operator ID:	lc812tech	ALS Bottle#:	7	Worklist Smp#:	10
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

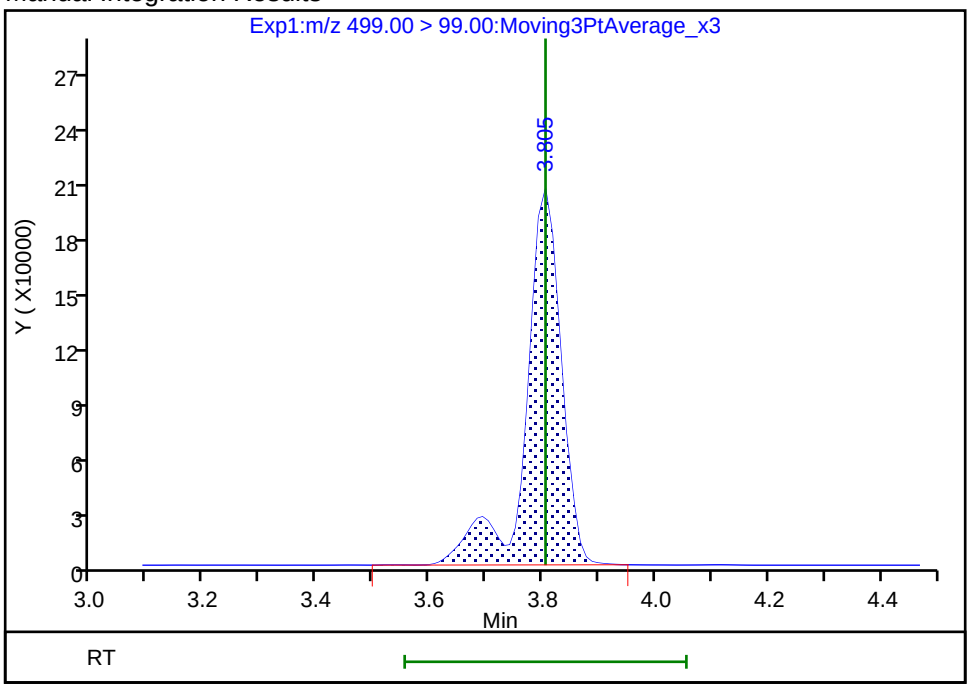
Processing Integration Results

RT: 3.80
Area: 898113
Amount: 9.391219
Amount Units: ng/ml



Manual Integration Results

RT: 3.80
Area: 892564
Amount: 9.359871
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 12:50:50

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Lab Sample ID: ICV 200-152172/12 Calibration Date: 02/10/2020 12:45

Instrument ID: LC812 Calib Start Date: 02/10/2020 11:48

GC Column: C-18 ID: 4.60(mm) Calib End Date: 02/10/2020 12:29

Lab File ID: SC021020ICAL012.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.9513	0.9531		1000	1000	0.2	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.079	1.110		1040	1010	2.9	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.020	1.060		1040	1000	3.9	40.0
1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2)	AveID	1.939	2.001		1030	1000	3.2	50.0
Perfluorohexanoic acid (PFHxA)	AveID	0.9901	1.053		1070	1010	6.3	40.0
Perfluoropentanesulfonic acid	AveID	1.269	1.436		1130	1000	13.2	50.0
HFPO-DA	AveID	2.342	3.404		1470	1010	45.3*	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.023	1.033		1010	1000	0.9	40.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.180	1.244		1060	1010	5.4	40.0
DONA	AveID	3.676	3.551		966	1000	-3.4	50.0
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	AveID	1.124	1.198		1070	1000	6.6	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	1.216	1.275		1050	1000	4.8	50.0
Perfluorooctanoic acid (PFOA)	AveID	1.041	1.105		1060	1000	6.1	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.098	1.043		959	1010	-5.0	40.0
Perfluorononanoic acid (PFNA)	AveID	1.028	1.152		1120	1000	12.1	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	1.399	1.404		1000	1000	0.4	50.0
Perfluorononanesulfonic acid	AveID	0.8855	0.8455		964	1010	-4.5	50.0
Perfluorodecanoic acid (PFDA)	AveID	1.024	1.197		1170	1000	16.9	40.0
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	AveID	0.6207	0.6426		1050	1010	3.5	40.0
Perfluorooctanesulfonamide (PFOSA)	AveID	1.025	0.9923		968	1000	-3.2	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	AveID	0.8567	0.8794		1030	1000	2.6	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.7787	0.7881		1020	1010	1.2	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9066	0.9075		1000	1000	0.1	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.7968	0.7547		947	1000	-5.3	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.589	1.604		1010	1000	0.9	50.0
Perfluorododecanoic acid (PFDoA)	AveID	0.9702	1.138		1170	1000	17.3	40.0
10:2 FTS	AveID	0.3321	0.3539		514	482	6.6	50.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.2703	0.2586		463	484	-4.3	50.0
Perfluorotridecanoic acid (PFTriA)	AveID	0.8833	0.9542		1080	1000	8.0	50.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1556	0.1813		1170	1000	16.6	40.0

FORM VII 537 (modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Lab Sample ID: ICV 200-152172/12 Calibration Date: 02/10/2020 12:45

Instrument ID: LC812 Calib Start Date: 02/10/2020 11:48

GC Column: C-18 ID: 4.60(mm) Calib End Date: 02/10/2020 12:29

Lab File ID: SC021020ICAL012.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluoro-n-hexadecanoic acid (PFHxDA)	L1ID		0.9763		521	500	4.1	40.0
Perfluoro-n-octadecanoic acid (PFODA)	AveID	0.6228	0.6133		492	500	-1.5	50.0
13C4 PFBA	Ave	1.040	1.035		2490	2500	-0.5	50.0
13C5 PFPeA	Ave	0.8098	0.8203		2530	2500	1.3	50.0
13C3 PFBS	Ave	1.089	1.103		2350	2330	1.3	50.0
M2-4:2 FTS	Ave	0.0796	0.0813		2380	2340	2.1	50.0
13C2 PFHxA	Ave	0.9471	0.9257		2440	2500	-2.3	50.0
13C3 HFPO-DA	Ave	0.0751	0.0469		1560	2500	-37.5	50.0
13C4 PFHpA	Ave	0.9106	0.9039		2480	2500	-0.7	50.0
18O2 PFHxS	Ave	0.7696	0.7230		2220	2370	-6.1	50.0
M2-6:2 FTS	Ave	0.1054	0.1088		2450	2380	3.2	50.0
13C4 PFOA	Ave	0.9424	0.9181		2440	2500	-2.6	50.0
13C4 PFOS	Ave	0.5730	0.5801		2420	2390	1.2	50.0
13C5 PFNA	Ave	0.9041	0.8697		2400	2500	-3.8	50.0
13C2 PFDA	Ave	0.9823	0.9172		2330	2500	-6.6	50.0
M2-8:2 FTS	Ave	0.1489	0.1455		2340	2400	-2.3	50.0
13C8 FOSA	Ave	1.008	0.995		2470	2500	-1.3	50.0
d3-NMeFOSAA	Ave	0.0775	0.0752		2430	2500	-2.9	50.0
13C2 PFUnA	Ave	0.8568	0.9312		2720	2500	8.7	50.0
d5-NEtFOSAA	Ave	0.0883	0.0976		2760	2500	10.5	50.0
13C2 PFDoA	Ave	0.9588	0.8538		2230	2500	-11.0	50.0
13C2 PFTeDA	Ave	0.8231	0.8468		2570	2500	2.9	50.0
13C2 PFHxDA	Ave	0.8949	0.8891		2480	2500	-0.7	50.0

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL012.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 10-Feb-2020 12:45:52 ALS Bottle#: 9 Worklist Smp#: 12
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 200-0039917-012 Plate: 1 Rack: 1
Operator ID: lc812tech Instrument ID: LC812
Sublist:

Method: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\PFC_LC812.m
Limit Group: LC_PFC_ICAL
Last Update: 14-Feb-2020 14:16:51 Calib Date: 10-Feb-2020 12:29:33
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL010.d

Column 1 : C-18 (4.60 mm) Det: EXP1
Process Host: CTX0314

First Level Reviewer: chirgwinb Date: 10-Feb-2020 13:07:13
Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										
212.90 > 169.00	1.917	1.917	0.0	1.000	937198	1.00			114	
D 1 13C4 PFBA										M
217.00 > 172.00	1.917	1.917	0.0	0.559	2458230	2.49		99.5	7059	M
D 3 13C5 PFPeA										
267.90 > 223.00	2.257	2.271	-0.014	0.658	1948406	2.53		101	765	
4 Perfluoropentanoic acid										
262.90 > 219.00	2.257	2.271	-0.014	1.000	873960	1.04			80.0	
D 47 13C3 PFBS										
301.90 > 80.00	2.271	2.284	-0.013	0.662	2436554	2.35		101	690504	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.285	2.284	0.001	1.006	1111273	1.04	Target=2.19		1606	
298.90 > 99.00	2.285	2.284	0.001	1.006	494662		2.25(1.09-3.28)		405	
61 1H,1H,2H,2H-perfluorohexanesulfoni										
327.00 > 307.00	2.611	2.623	-0.012	1.000	154524	1.03			509	
D 60 M2-4:2 FTS										
329.00 > 81.00	2.611	2.623	-0.012	0.761	180352	2.38		102	71.3	
70 Perfluoropentanesulfonic acid										
349.00 > 80.00	2.661	2.660	0.001	0.874	986445	1.13	Target=3.29		2165	
349.00 > 99.00	2.661	2.660	0.001	0.874	303669		3.25(1.64-4.93)		827	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.648	2.660	-0.012	1.000	935277	1.07	Target=12.51		251	
313.00 > 119.00	2.661	2.660	0.001	1.005	78230		11.96(6.25-18.76)		158	
D 7 13C2 PFHxA										
315.00 > 270.00	2.648	2.660	-0.012	0.772	2198952	2.44		97.7	8399	
D 64 13C3 HFPO-DA										M
332.10 > 287.00	2.768	2.776	-0.008	0.807	111464	1.56		62.5	885	M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
67 Perfluoro(2-propoxypropanoic) acid										M
329.10 > 285.00	2.776	2.776	0.0	1.003	153276	1.47			63.6	M
D 11 18O2 PFHxS										
403.00 > 84.00	3.044	3.044	0.0	0.887	1624612	2.22		93.9	33082	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.044	3.044	0.0	1.000	863234	1.06	Target=4.33		2634	
399.00 > 99.00	3.044	3.044	0.0	1.000	204078		4.23(2.17-6.50)		430	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.044	3.055	-0.011	1.000	886914	1.01	Target=3.79		340	
363.00 > 169.00	3.044	3.055	-0.011	1.000	245947		3.61(1.89-5.68)		952	
D 9 13C4 PFHpA										
367.00 > 322.00	3.044	3.055	-0.011	0.887	2147125	2.48		99.3	5298	
77 DONA										
377.00 > 251.00	3.089	3.089	0.0	0.812	1957397	0.9661	Target=2.43		2739	
377.00 > 85.00	3.089	3.089	0.0	0.812	771666		2.54(1.22-3.65)		2105	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.413	3.413	0.0	0.897	702736	1.05	Target=6.01		2345	
449.00 > 99.00	3.413	3.413	0.0	0.897	116048		6.06(3.01-9.02)		823	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.422	3.421	0.001	0.998	245448	2.45		103	763	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.413	3.421	-0.008	0.998	123812	1.07			1187	
D 14 13C4 PFOA										
417.00 > 372.00	3.430	3.430	0.0	1.000	2180820	2.44		97.4	10218	
* 62 13C2 PFOA										
415.00 > 370.00	3.430	3.430	0.0		2375371	2.50			8240	
15 Perfluorooctanoic acid										M
413.00 > 369.00	3.430	3.430	0.0	1.000	964310	1.06	Target=2.66		241	M
413.00 > 169.00	3.430	3.430	0.0	1.000	361934		2.66(1.33-3.99)		368	M
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.805	3.805	0.0	1.000	580652	0.9593	Target=5.29		1508	M
499.00 > 99.00	3.793	3.805	-0.012	0.997	98848		5.87(2.65-7.94)		485	M
D 18 13C4 PFOS										
503.00 > 80.00	3.805	3.805	0.0	1.109	1317329	2.42		101	5031	
20 Perfluorononanoic acid										
463.00 > 419.00	3.829	3.829	0.0	1.000	952146	1.12	Target=7.73		251	
463.00 > 169.00	3.829	3.829	0.0	1.000	124778		7.63(3.87-11.60)		1017	
D 19 13C5 PFNA										
468.00 > 423.00	3.829	3.829	0.0	1.116	2065801	2.40		96.2	5689	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.983	3.994	-0.011	1.047	773711	1.00			1758	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.128	4.141	-0.013	1.085	470702	0.9644	Target=2.78		2610	
549.00 > 99.00	4.128	4.141	-0.013	1.085	169367		2.78(1.39-4.17)		1045	
D 23 13C2 PFDA										
515.00 > 470.00	4.164	4.164	0.0	1.214	2178746	2.33		93.4	8244	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
24 Perfluorodecanoic acid										
513.00 > 469.00	4.164	4.164	0.0	1.000	1043254	1.17	Target=9.75		649	
513.00 > 169.00	4.164	4.164	0.0	1.000	111640		9.34(4.88-14.63)		830	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.174	4.174	0.0	1.217	330990	2.34		97.7	300	
25 1H,1H,2H,2H-perfluorodecanesulfoni										
527.00 > 507.00	4.174	4.174	0.0	1.000	89701	1.05			1057	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.218	4.218	0.0	1.000	938549	0.9682			2088	
D 21 13C8 FOSA										
506.00 > 78.00	4.218	4.218	0.0	1.230	2364668	2.47		98.7	2844	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.317	4.316	0.001	1.258	178729	2.43		97.1	888	
28 N-methylperfluorooctanesulfonamido										M
570.00 > 419.00	4.317	4.328	-0.011	1.000	62868	1.03			319	M
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.420	4.420	0.0	1.162	438731	1.02	Target=2.63		1302	
599.00 > 99.00	4.420	4.420	0.0	1.162	152819		2.87(1.32-3.95)		643	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.442	4.456	-0.014	1.000	802933	1.00	Target=7.31		591	
563.00 > 169.00	4.442	4.456	-0.014	1.000	114461		7.01(3.66-10.97)		440	
D 30 13C2 PFUnA										
565.00 > 520.00	4.442	4.456	-0.014	1.295	2211900	2.72		109	5601	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.456	4.456	0.0	1.299	231814	2.76		110	1309	
33 N-ethylperfluorooctanesulfonamidoa										
584.00 > 419.00	4.469	4.469	0.0	1.003	69981	0.9471			400	
66 11-Chloroeicosafluoro-3-oxaundecan										
631.00 > 451.00	4.550	4.550	0.0	1.196	884132	1.01			3083	
D 36 13C2 PFDoA										
615.00 > 570.00	4.693	4.693	0.0	1.368	2028050	2.23		89.0	6481	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.693	4.693	0.0	1.000	923568	1.17	Target=6.96		165	
613.00 > 169.00	4.693	4.693	0.0	1.000	137220		6.73(3.48-10.44)		1496	
74 1H,1H,2H,2H-perfluorododecanesulfo										
627.00 > 607.00	4.714	4.714	0.0	1.129	23577	0.5138			512	
75 Perfluorododecanesulfonic acid (PF										
699.00 > 80.00	4.870	4.879	-0.009	1.280	68994	0.4632	Target=0.47		257	
699.00 > 99.00	4.870	4.879	-0.009	1.280	142237		0.49(0.24-0.71)		1255	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.915	4.915	0.0	1.047	774099	1.08	Target=4.84		189	
663.00 > 169.00	4.915	4.915	0.0	1.047	160429		4.83(2.42-7.26)		463	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.107	5.120	-0.013	1.000	145906	1.17	Target=1.15		572	
713.00 > 219.00	5.107	5.120	-0.013	1.000	127097		1.15(0.58-1.73)		266	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.107	5.120	-0.013	1.489	2011540	2.57		103	10709	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.491	5.499	-0.008	1.000	412343	0.5207	Target=4.36		149	
813.00 > 169.00	5.491	5.499	-0.008	1.000	91374		4.51(2.18-6.53)		1112	
D 44 13C2 PFHxDA										
815.00 > 770.00	5.491	5.499	-0.008	1.601	2111876	2.48		99.3	8394	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.884	5.894	-0.010	1.072	259034	0.4923	Target=4.01		72.6	
913.00 > 169.00	5.879	5.894	-0.015	1.071	66132		3.92(2.00-6.01)		924	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

LCPFAS28NCICV_00003 Amount Added: 100.00 Units: uL

Report Date: 14-Feb-2020 14:16:53 Chrom Revision: 2.3 14-Jan-2020 22:23:42

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL012.d

Injection Date: 10-Feb-2020 12:45:52 Instrument ID: LC812

Lims ID: ICV

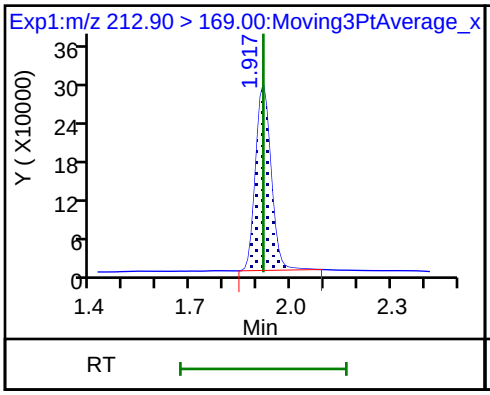
Client ID:

Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 12

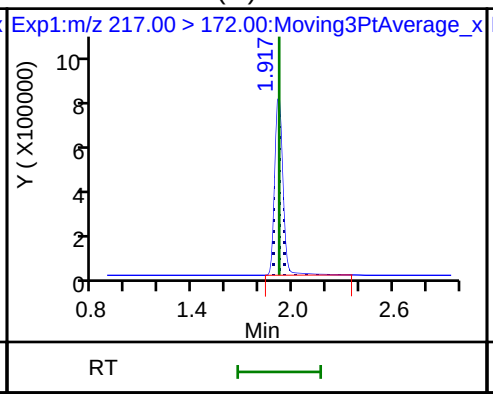
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFC_LC812 Limit Group: LC_PFC_ICAL

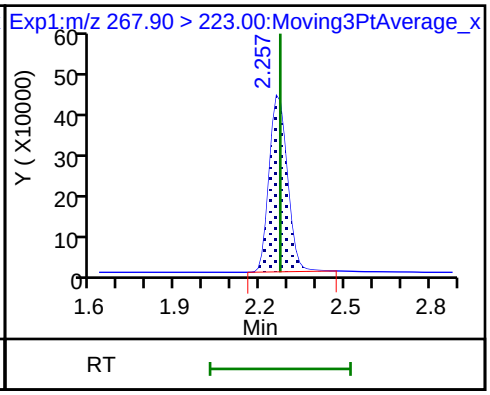
2 Perfluorobutanoic acid



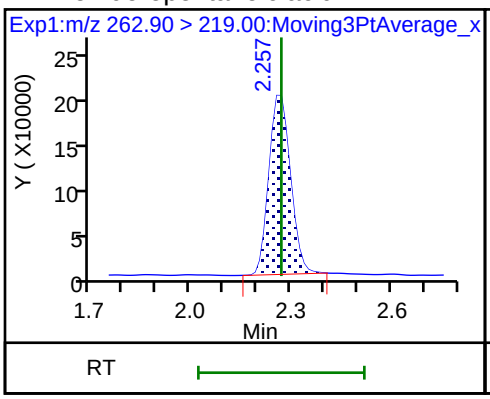
D 1 13C4 PFBA (M)



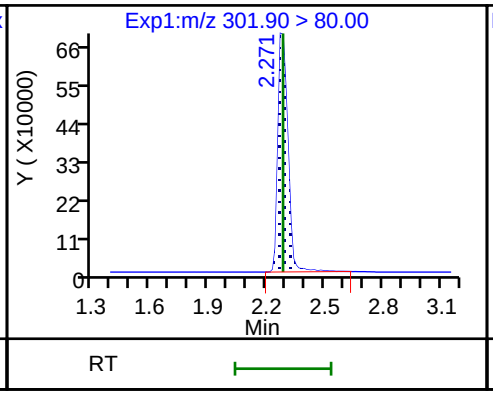
D 3 13C5 PFPeA



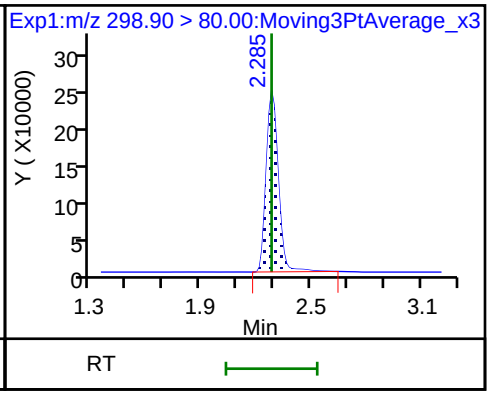
4 Perfluoropentanoic acid



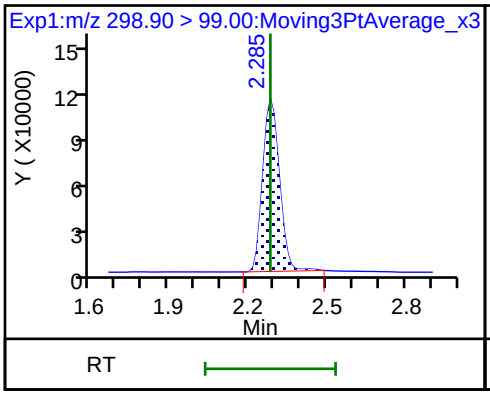
D 47 13C3 PFBS



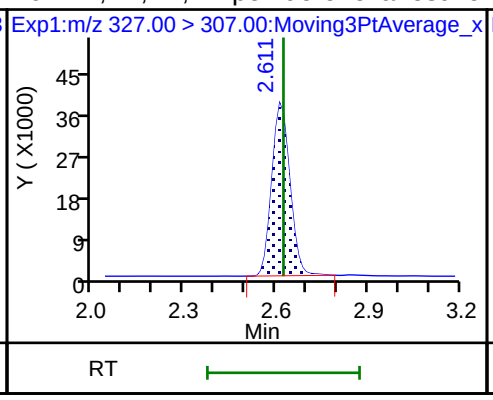
5 Perfluorobutanesulfonic acid



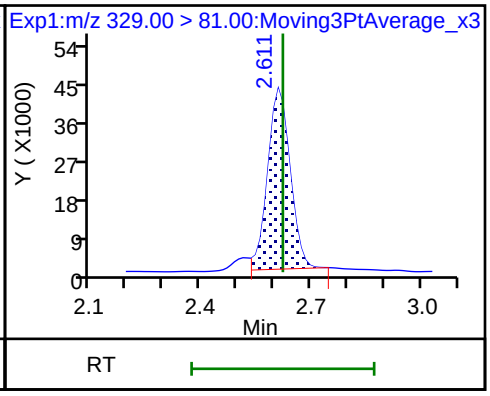
5 Perfluorobutanesulfonic acid



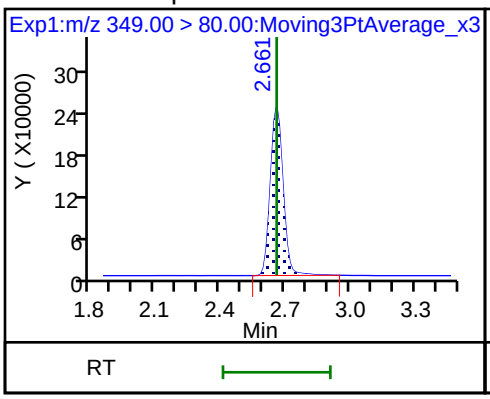
61 1H,1H,2H,2H-perfluorohexanesulfon



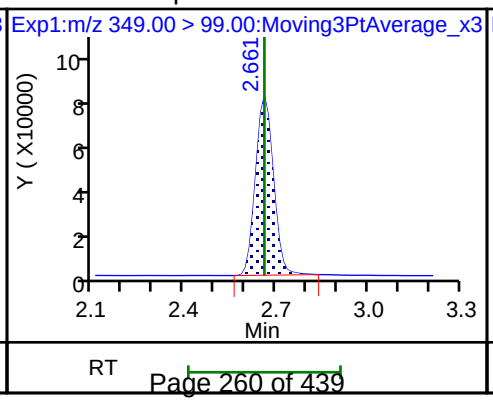
D 60 M2-4:2 FTS



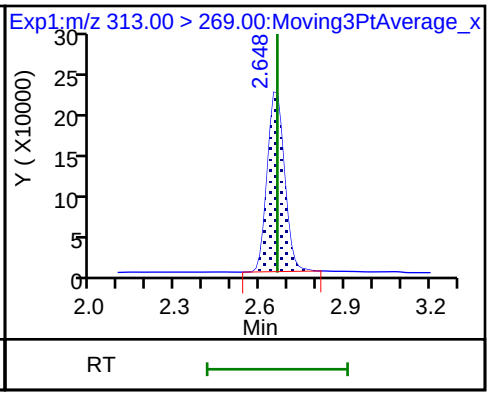
70 Perfluoropentanesulfonic acid



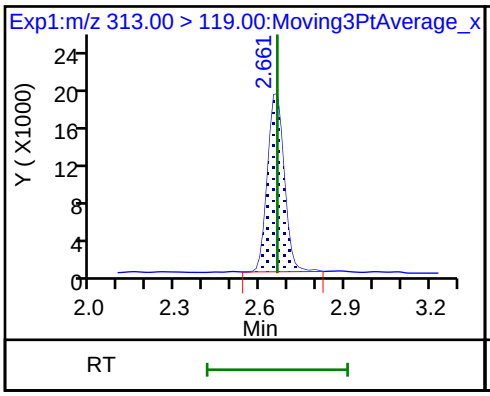
70 Perfluoropentanesulfonic acid



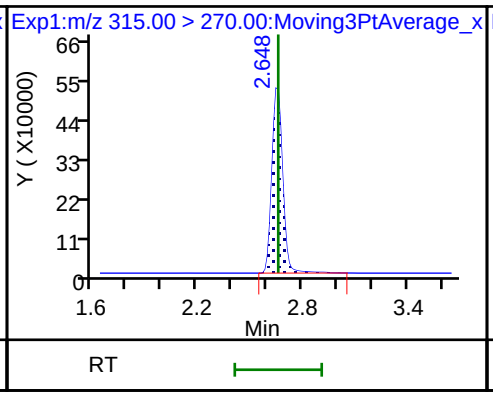
6 Perfluorohexanoic acid



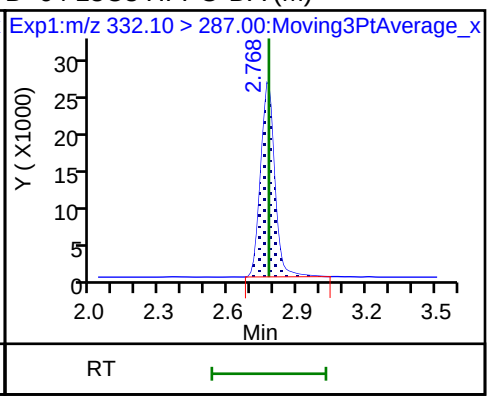
6 Perfluorohexanoic acid



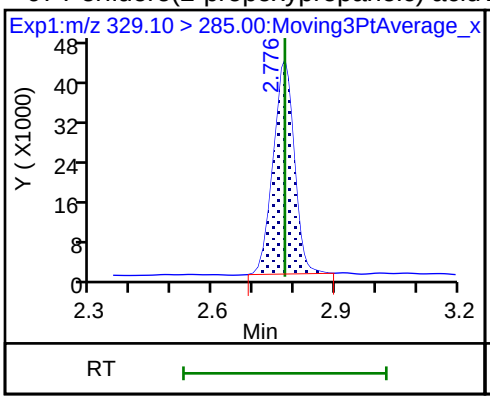
D 7 13C2 PFHxA



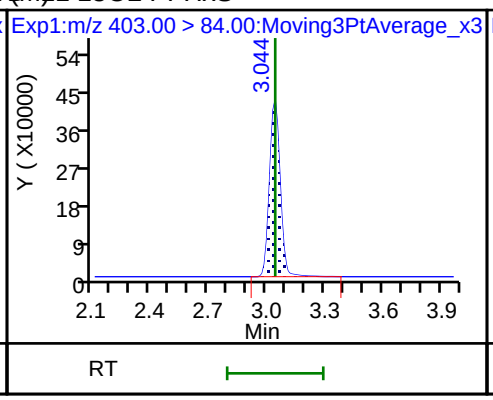
D 64 13C3 HFPO-DA (M)



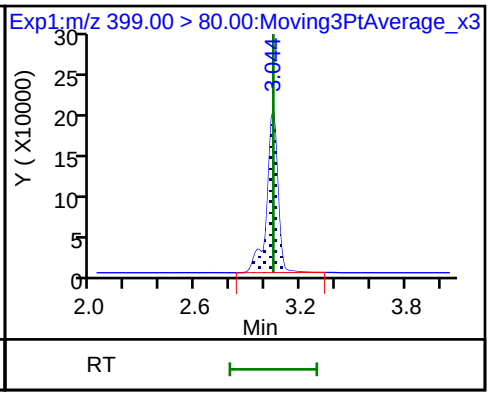
67 Perfluoro(2-propoxypropanoic) acid (M)



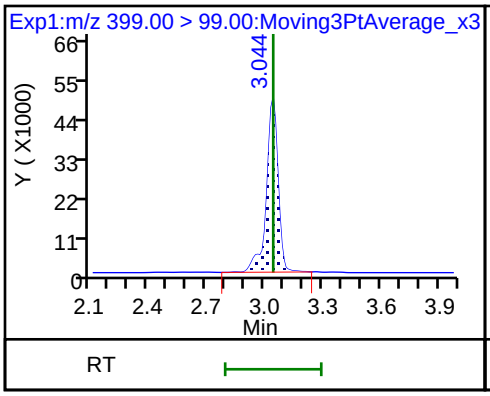
D 11 18O2 PFHxS



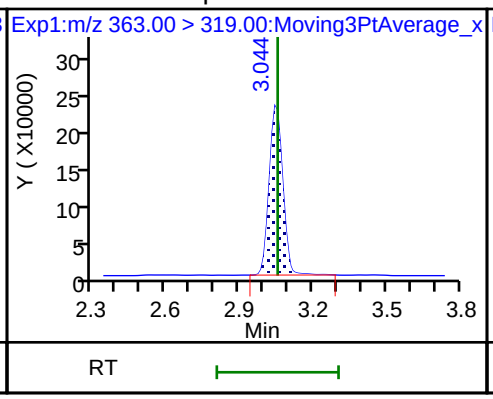
8 Perfluorohexanesulfonic acid



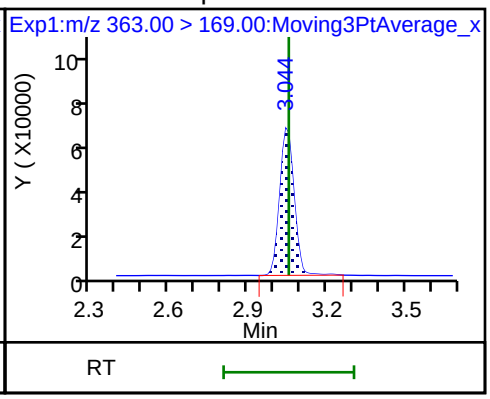
8 Perfluorohexanesulfonic acid



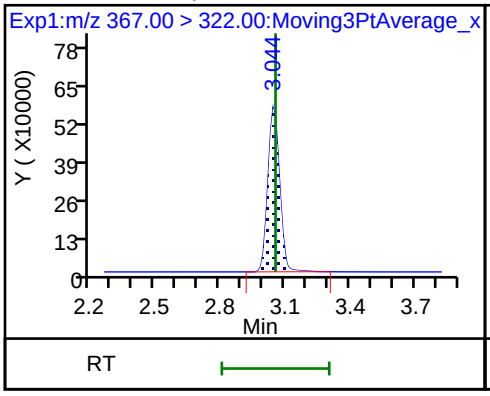
10 Perfluoroheptanoic acid



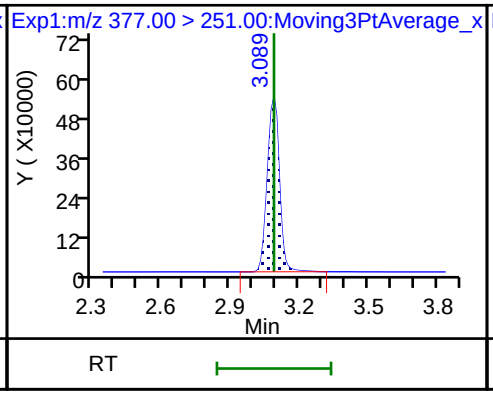
10 Perfluoroheptanoic acid



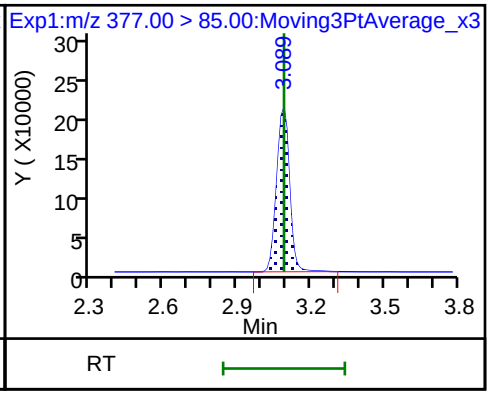
D 9 13C4 PFHpA



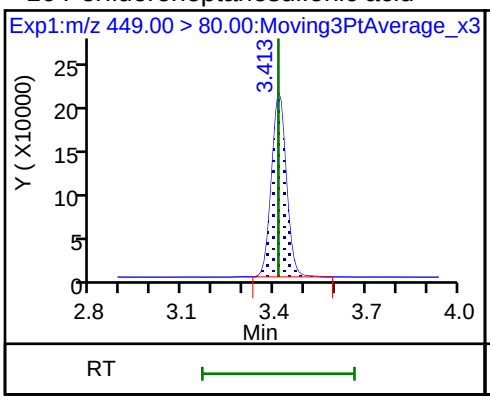
77 DONA



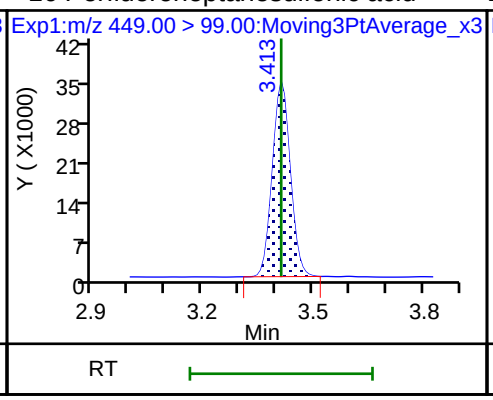
77 DONA



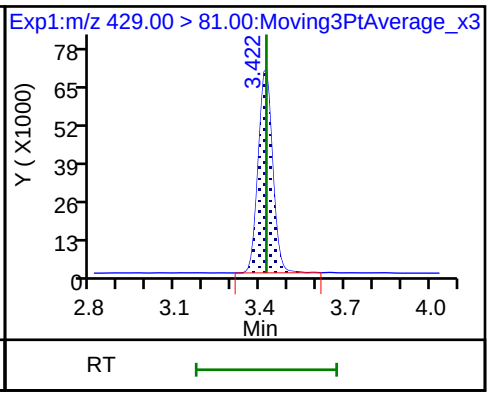
16 Perfluoroheptanesulfonic acid



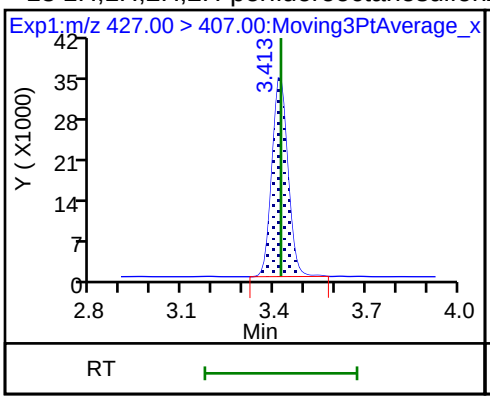
16 Perfluoroheptanesulfonic acid



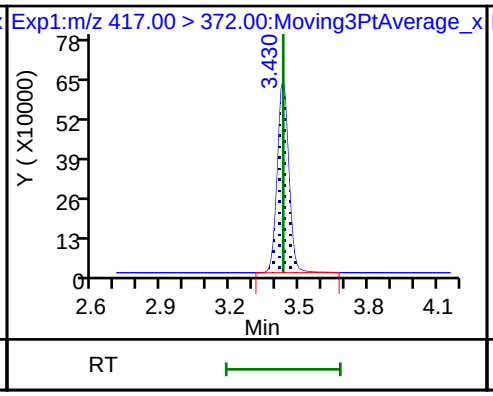
D 12 M2-6:2 FTS



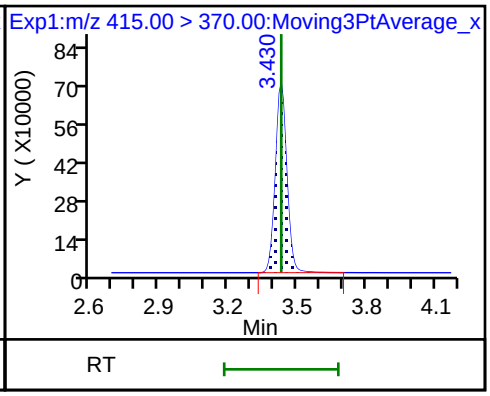
13 1H,1H,2H,2H-perfluorooctanesulfon



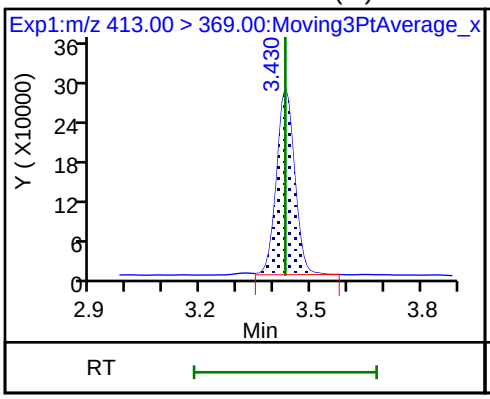
D 14 13C4 PFOA



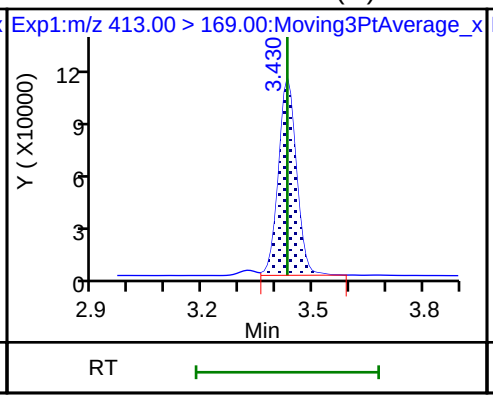
* 62 13C2 PFOA



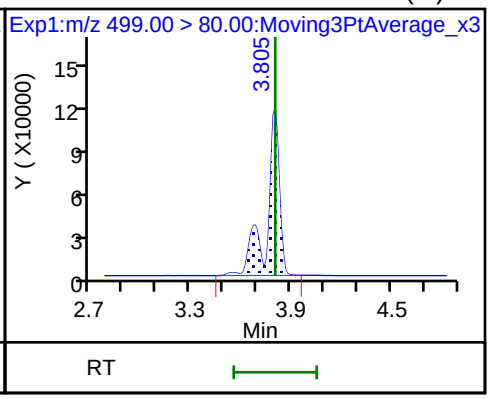
15 Perfluorooctanoic acid (M)



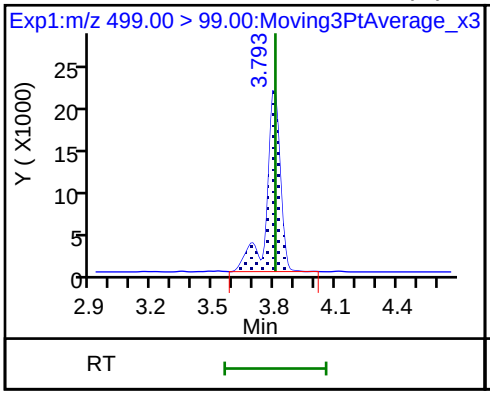
15 Perfluorooctanoic acid (M)



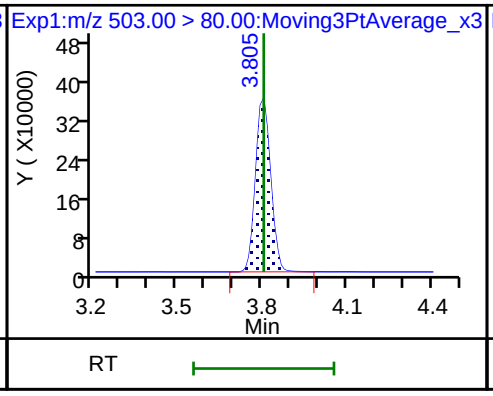
17 Perfluorooctanesulfonic acid (M)



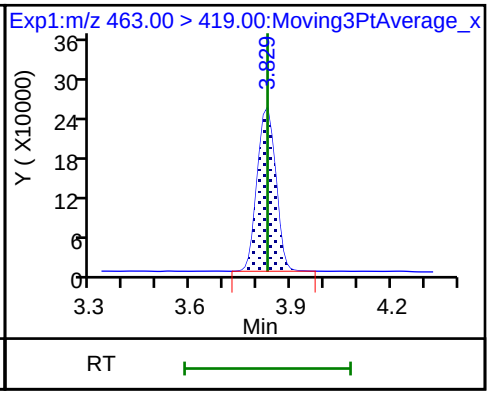
17 Perfluorooctanesulfonic acid (M)



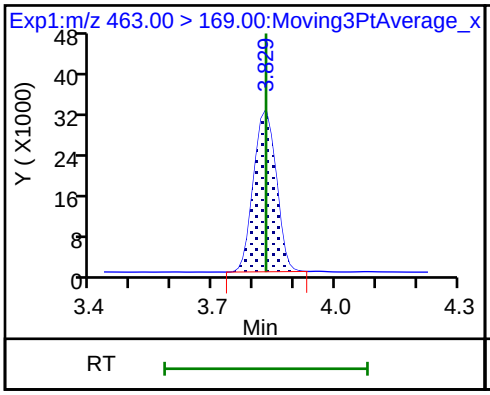
D 18 13C4 PFOS



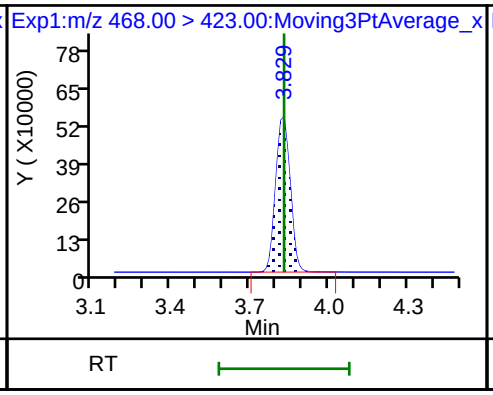
20 Perfluorononanoic acid



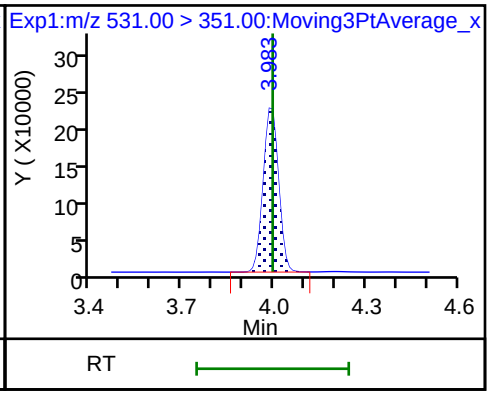
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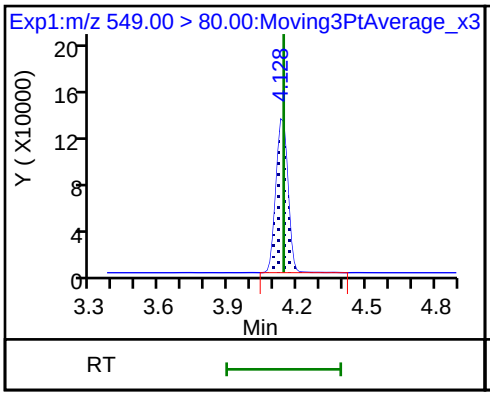
D 19 13C5 PFNA



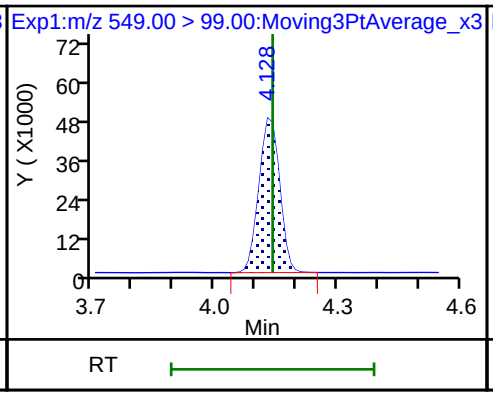
69 9-Chlorohexadecafluoro-3-oxanonane



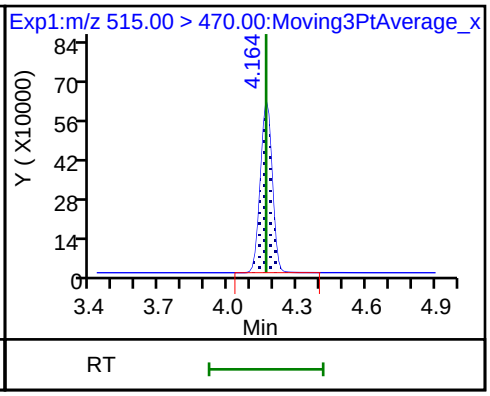
68 Perfluorononanesulfonic acid



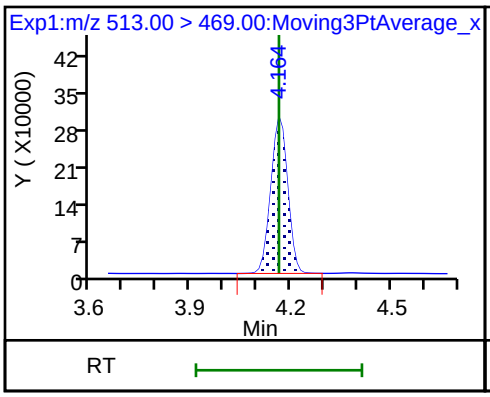
68 Perfluorononanesulfonic acid



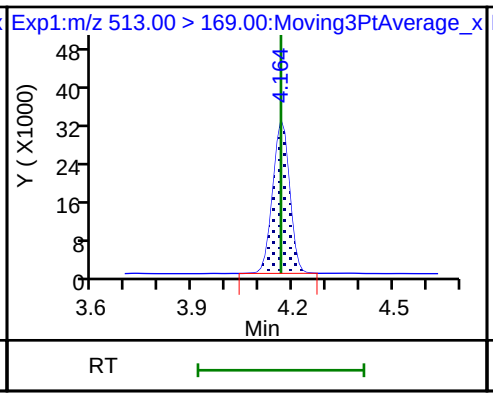
D 23 13C2 PFDA



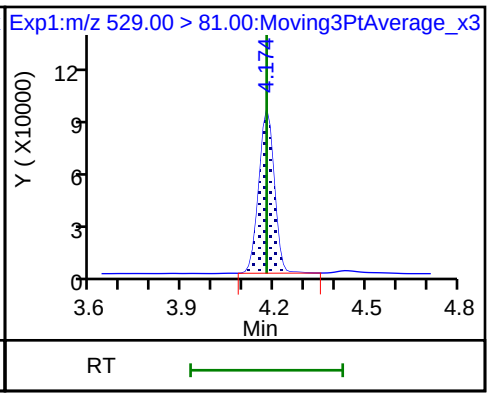
24 Perfluorodecanoic acid



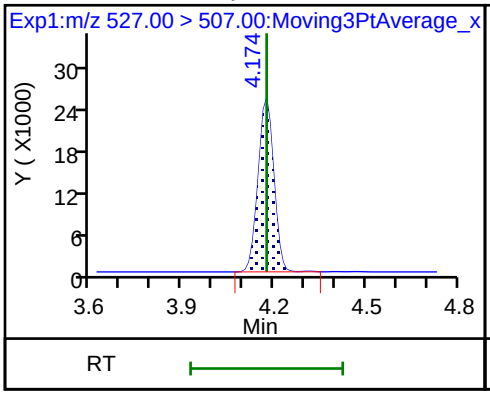
24 Perfluorodecanoic acid



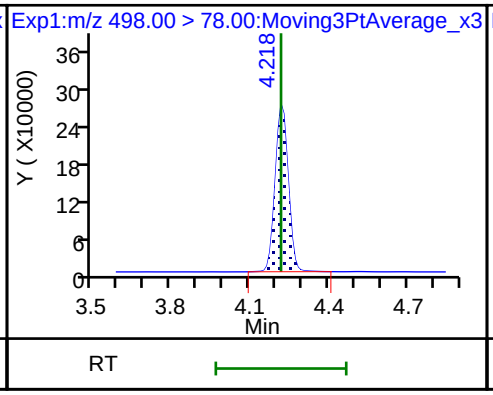
D 26 M2-8:2 FTS



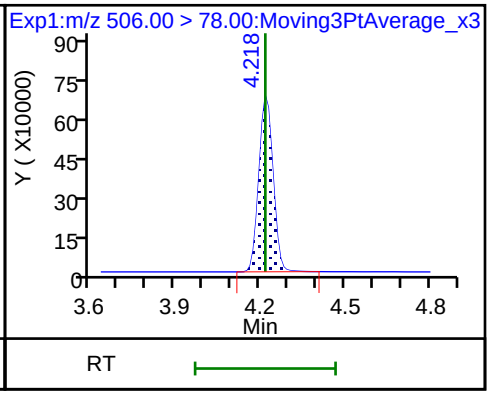
25 1H,1H,2H,2H-perfluorodecanesulfoni



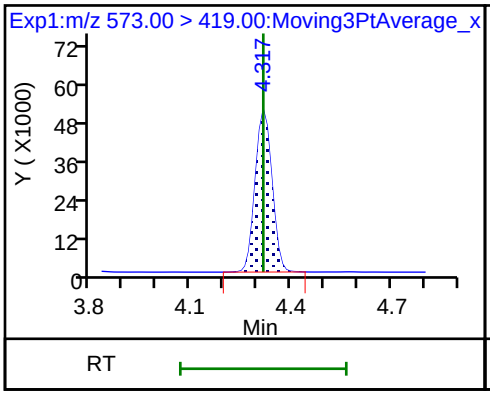
22 Perfluorooctanesulfonamide



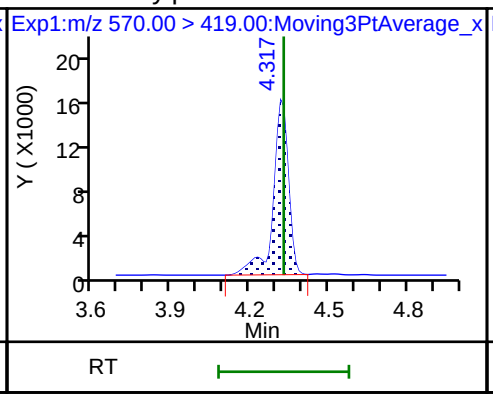
D 21 13C8 FOSA



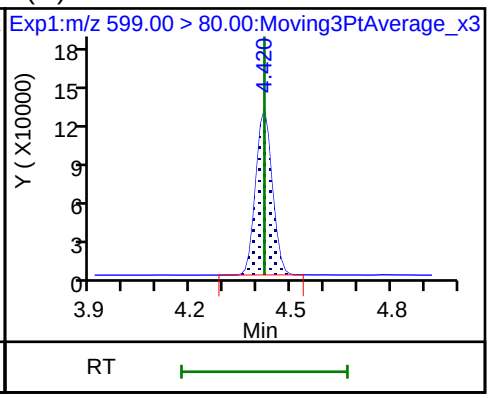
D 27 d3-NMeFOSAA



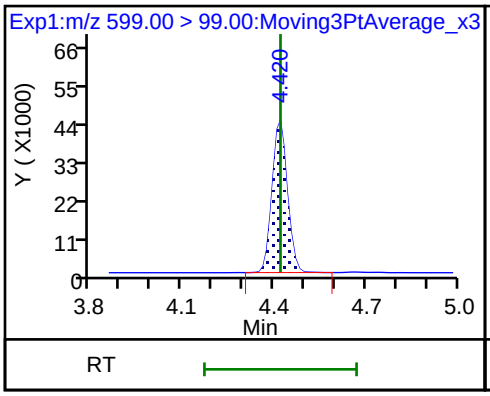
28 N-methylperfluorooctanesulfonamido (29)



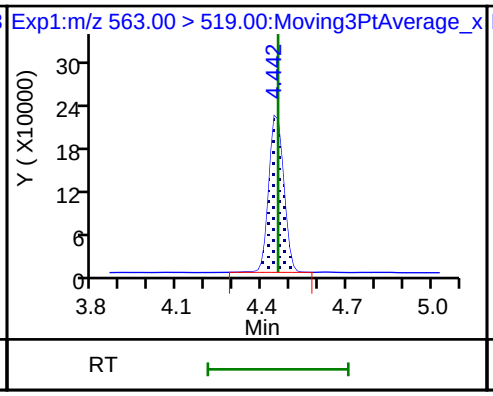
29 Perfluorodecanesulfonic acid



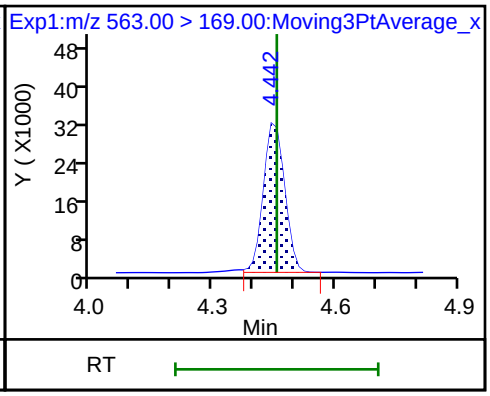
29 Perfluorodecanesulfonic acid



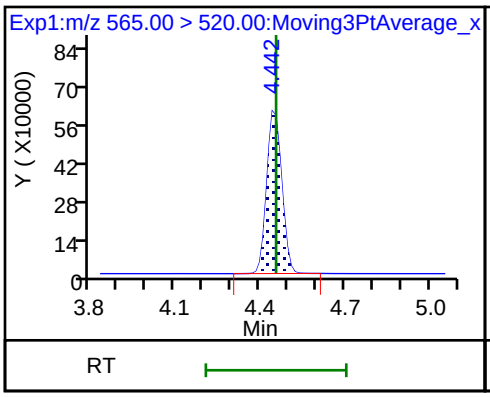
31 Perfluoroundecanoic acid



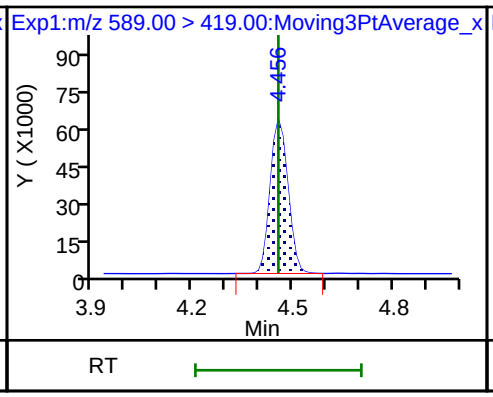
31 Perfluoroundecanoic acid



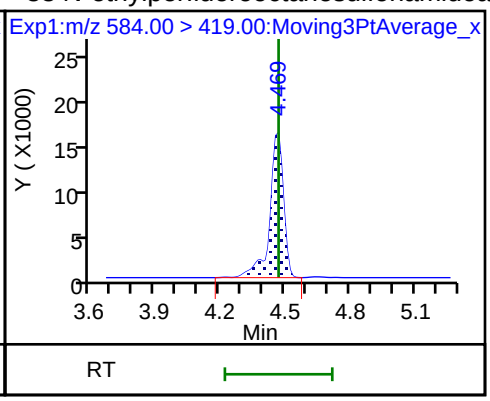
D 30 13C2 PFUnA



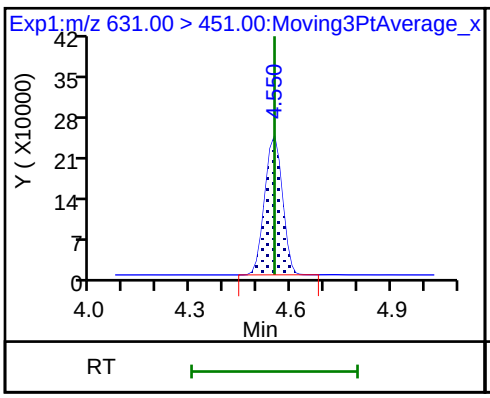
D 32 d5-NEtFOSAA



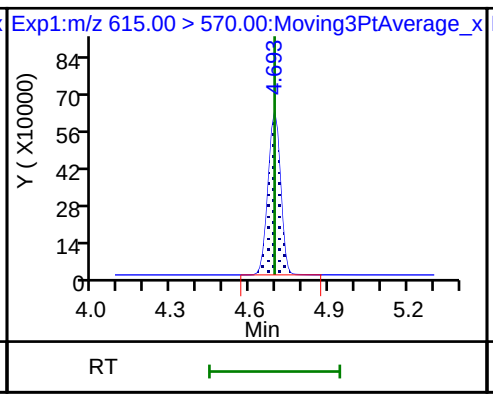
33 N-ethylperfluorooctanesulfonamidoa



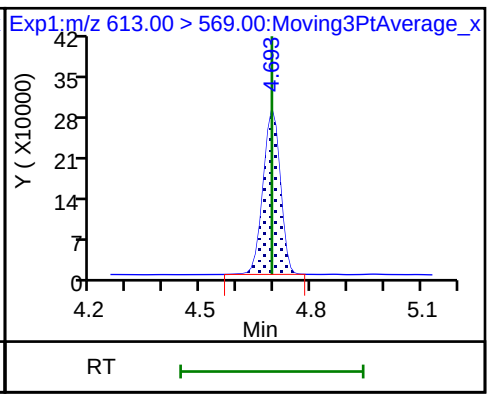
66 11-Chloroeicosafluoro-3-oxaundecan



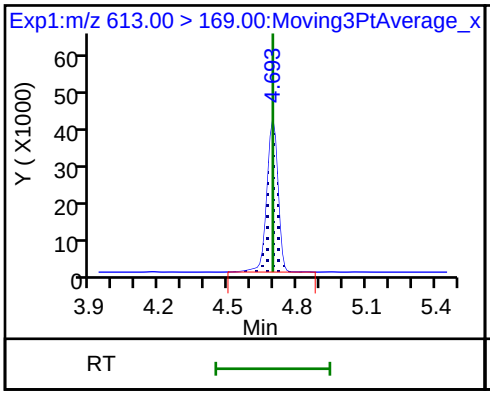
D 36 13C2 PFDoA



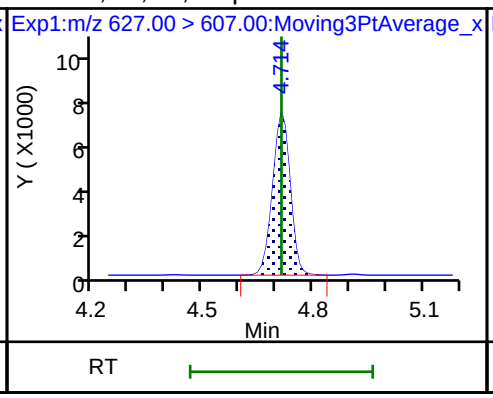
37 Perfluorododecanoic acid



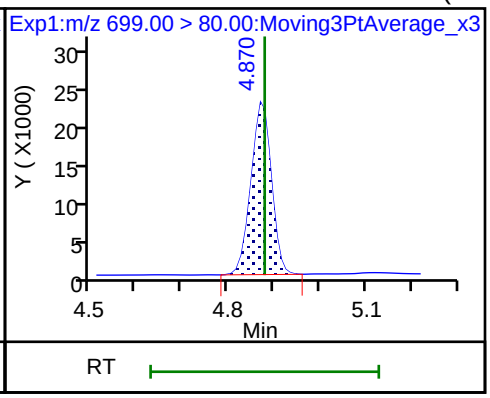
37 Perfluorododecanoic acid



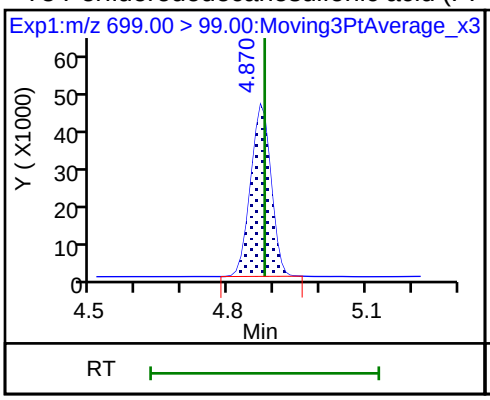
74 1H,1H,2H,2H-perfluorododecanesulfo



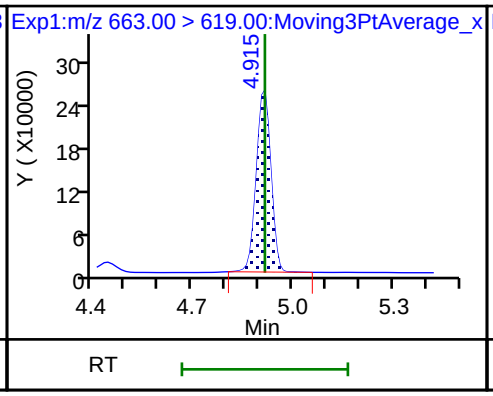
75 Perfluorododecanesulfonic acid (PF



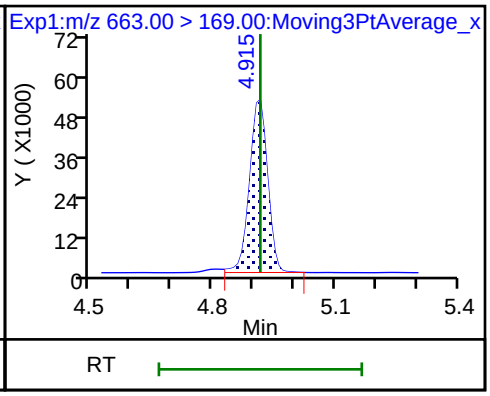
75 Perfluorododecanesulfonic acid (PF



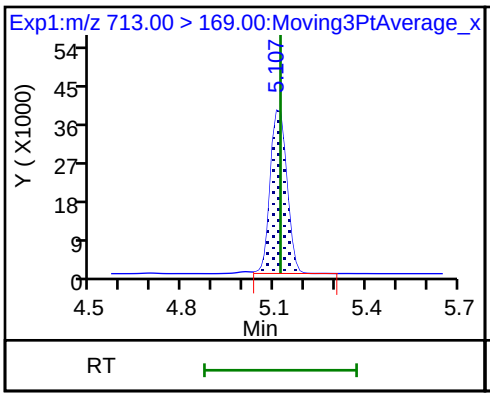
41 Perfluorotridecanoic acid



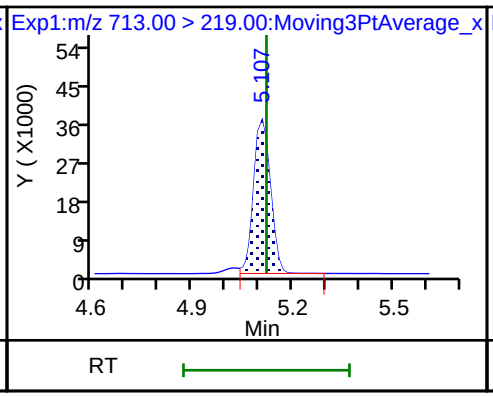
41 Perfluorotridecanoic acid



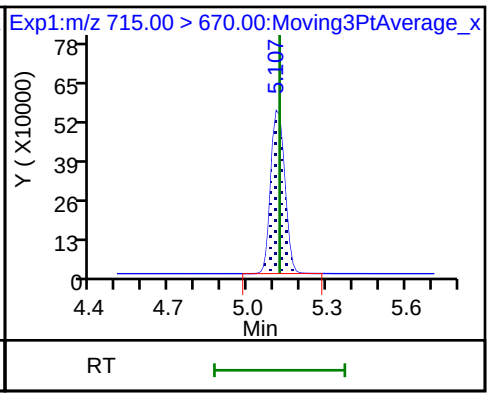
42 Perfluorotetradecanoic acid



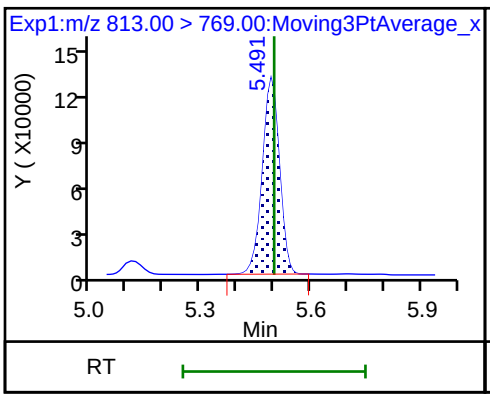
42 Perfluorotetradecanoic acid



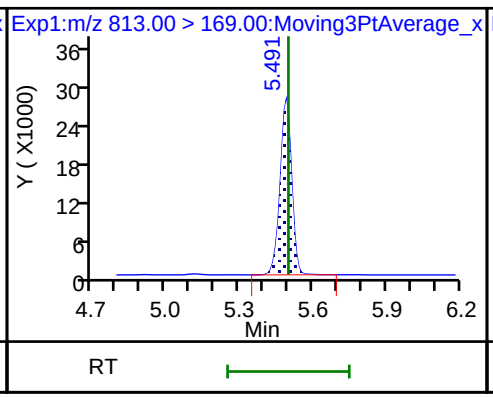
D 43 13C2 PFTeDA



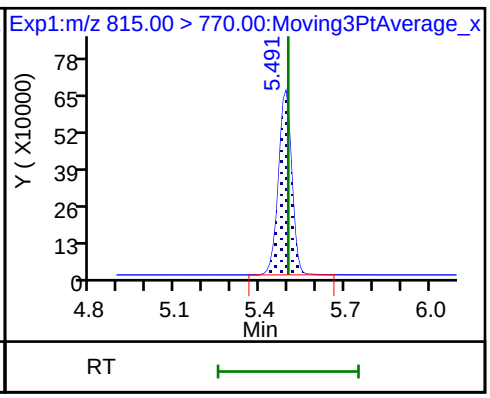
45 Perfluorohexadecanoic acid



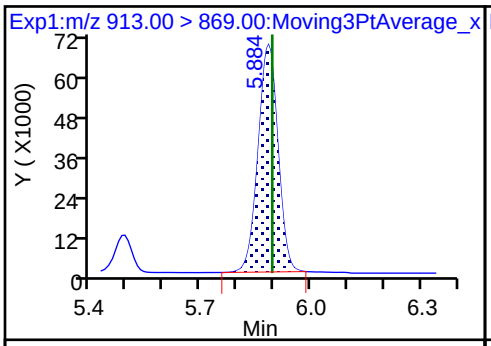
45 Perfluorohexadecanoic acid



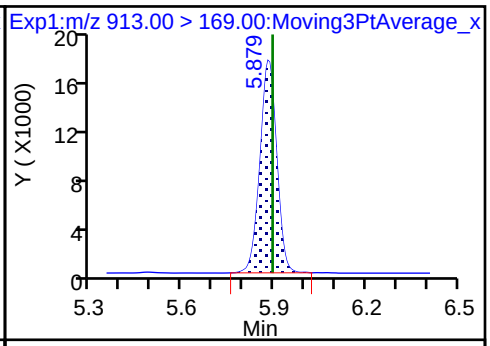
D 44 13C2 PFHxDA



46 Perfluorooctadecanoic acid



46 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

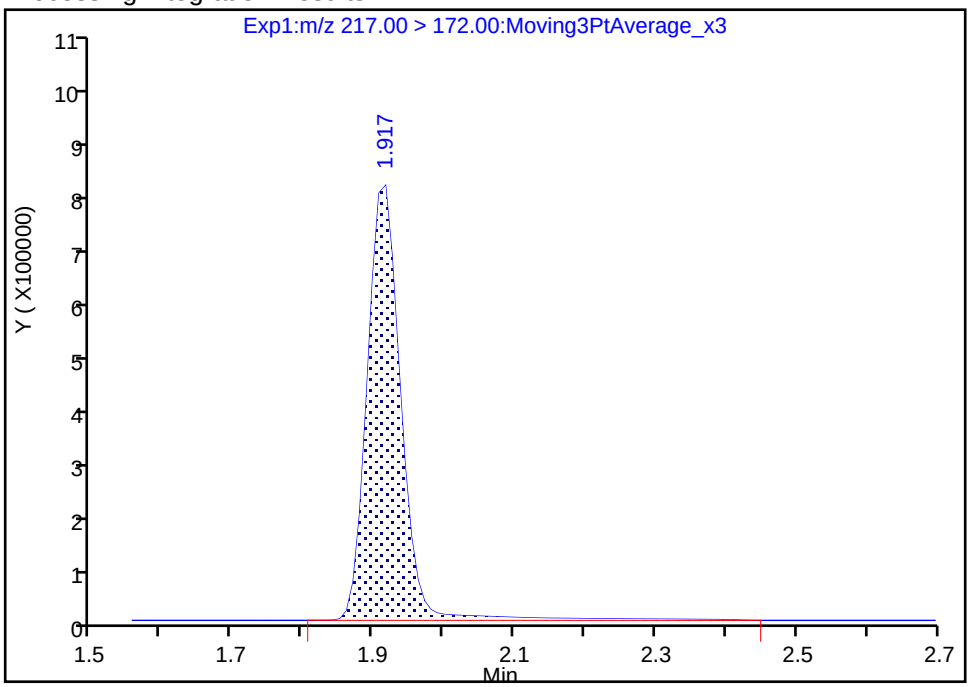
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL012.d
Injection Date: 10-Feb-2020 12:45:52 Instrument ID: LC812
Lims ID: ICV
Client ID:
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 12
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

D 1 13C4 PFBA, CAS: STL00992

Signal: 1

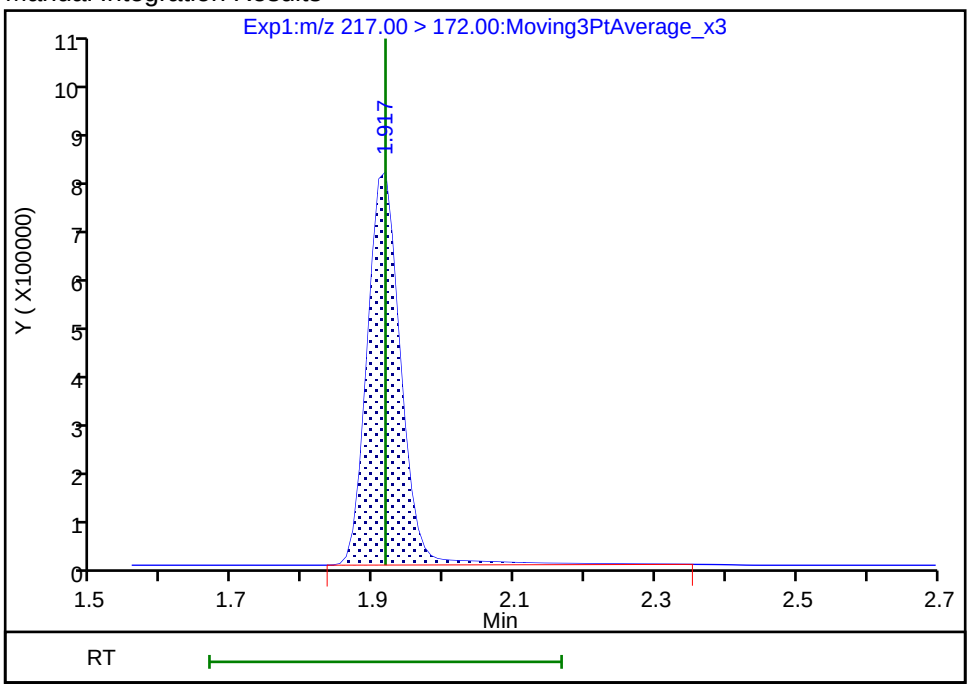
Processing Integration Results

RT: 1.92
Area: 2489717
Amount: 2.518749
Amount Units: ng/ml



Manual Integration Results

RT: 1.92
Area: 2458230
Amount: 2.486895
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 13:05:31
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

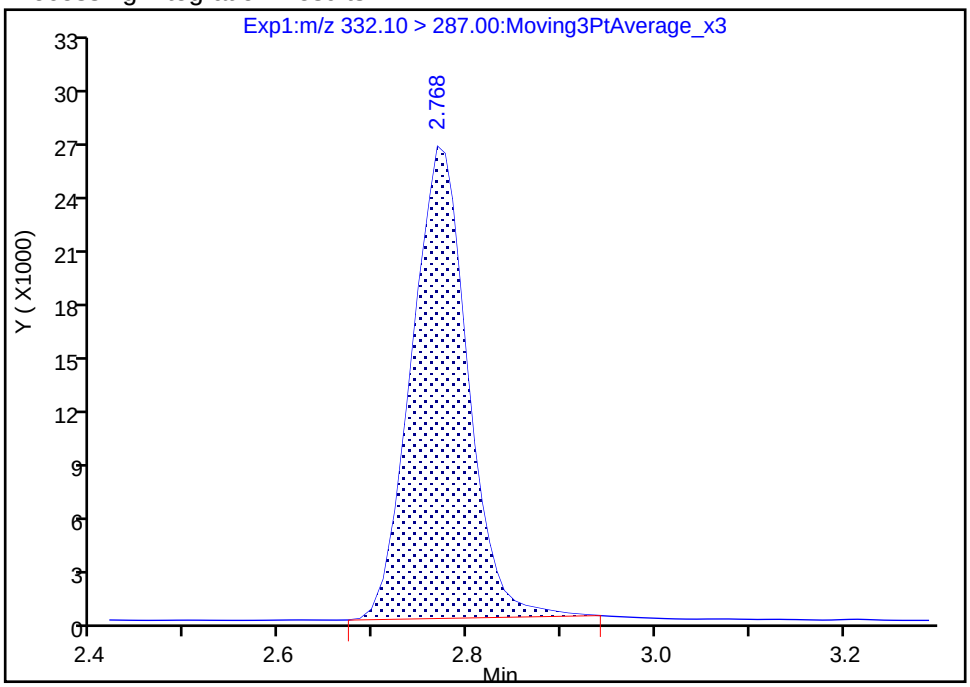
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Injection Date:	10-Feb-2020 12:45:52	Instrument ID:	LC812		
Lims ID:	ICV				
Client ID:					
Operator ID:	lc812tech	ALS Bottle#:	9	Worklist Smp#:	12
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

D 64 13C3 HFPO-DA, CAS: STL02255

Signal: 1

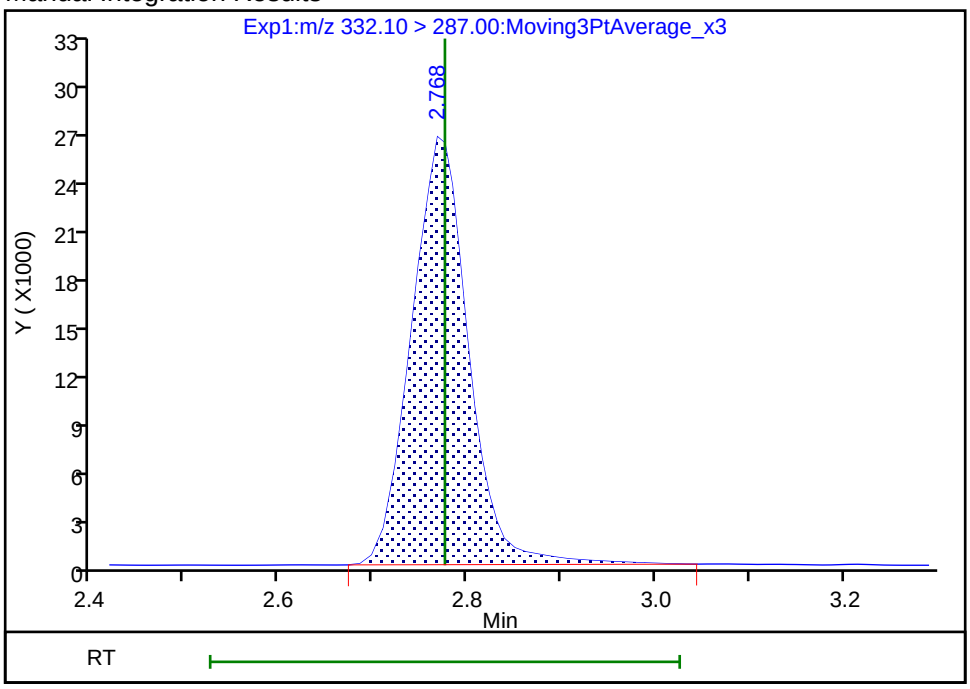
Processing Integration Results

RT: 2.77
Area: 109309
Amount: 1.532144
Amount Units: ng/ml



Manual Integration Results

RT: 2.77
Area: 111464
Amount: 1.562350
Amount Units: ng/ml



Reviewer: chirgwinb, 14-Feb-2020 12:30:17

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

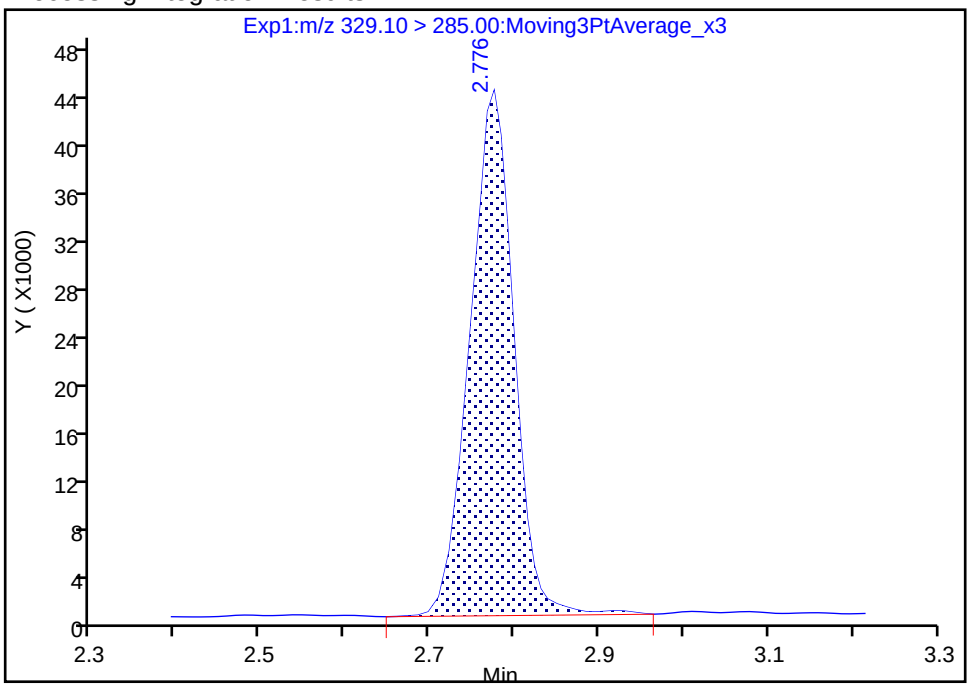
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL012.d
Injection Date: 10-Feb-2020 12:45:52 Instrument ID: LC812
Lims ID: ICV
Client ID:
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 12
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

67 Perfluoro(2-propoxypropanoic) acid, CAS: 13252-13-6

Signal: 1

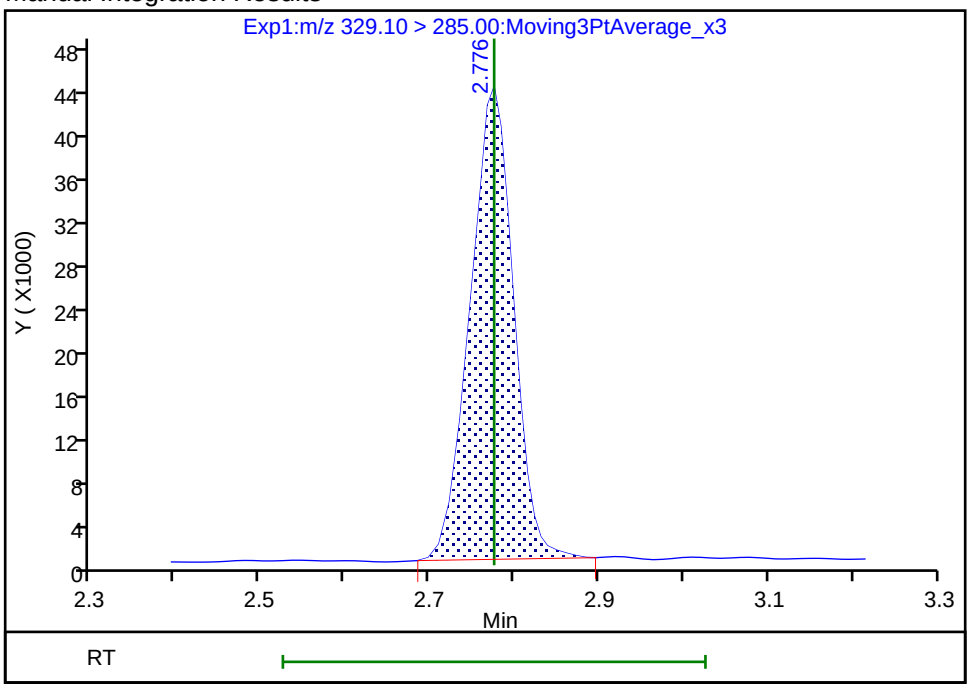
Processing Integration Results

RT: 2.78
Area: 156294
Amount: 1.496779
Amount Units: ng/ml



Manual Integration Results

RT: 2.78
Area: 153276
Amount: 1.467877
Amount Units: ng/ml



Reviewer: chirgwinb, 14-Feb-2020 12:30:29
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

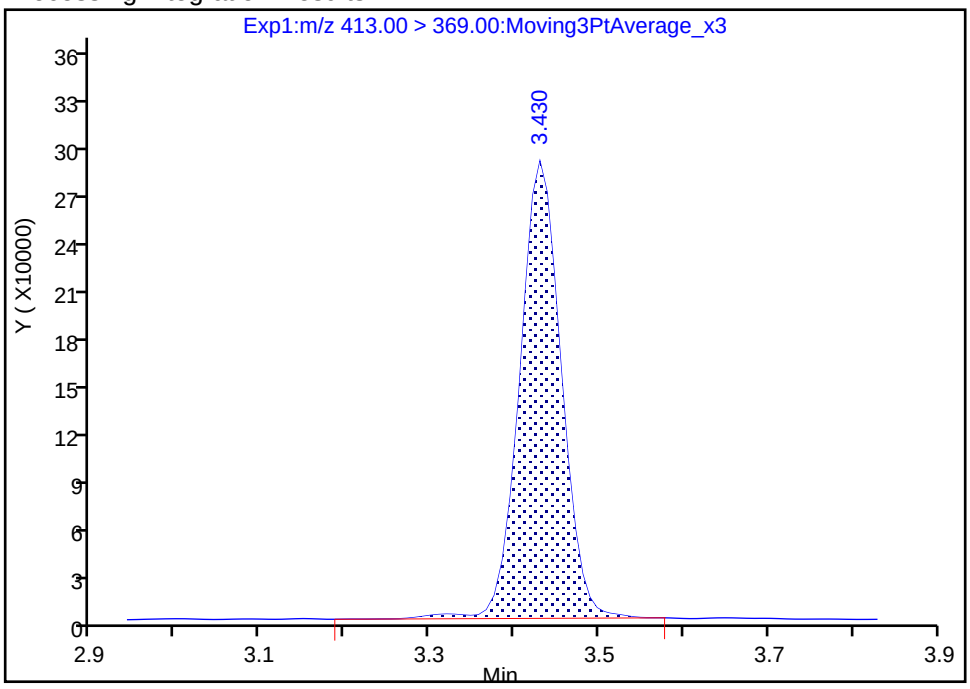
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL012.d				
Injection Date:	10-Feb-2020 12:45:52	Instrument ID:	LC812		
Lims ID:	ICV				
Client ID:					
Operator ID:	lc812tech	ALS Bottle#:	9	Worklist Smp#:	12
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

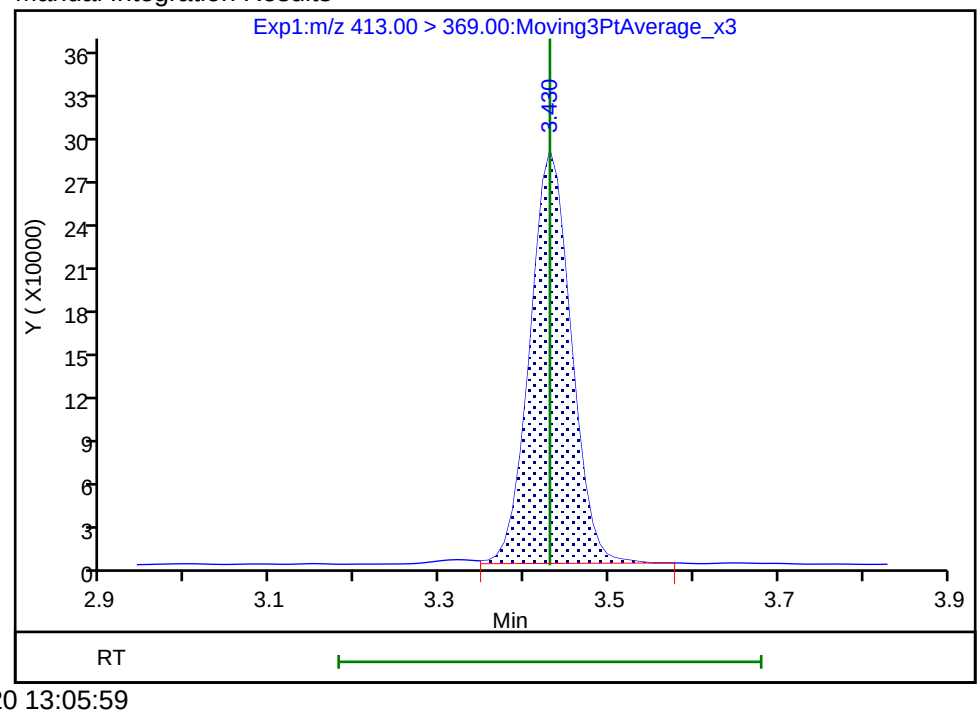
Processing Integration Results

RT: 3.43
Area: 973922
Amount: 1.072040
Amount Units: ng/ml



Manual Integration Results

RT: 3.43
Area: 964310
Amount: 1.061459
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 13:05:59

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

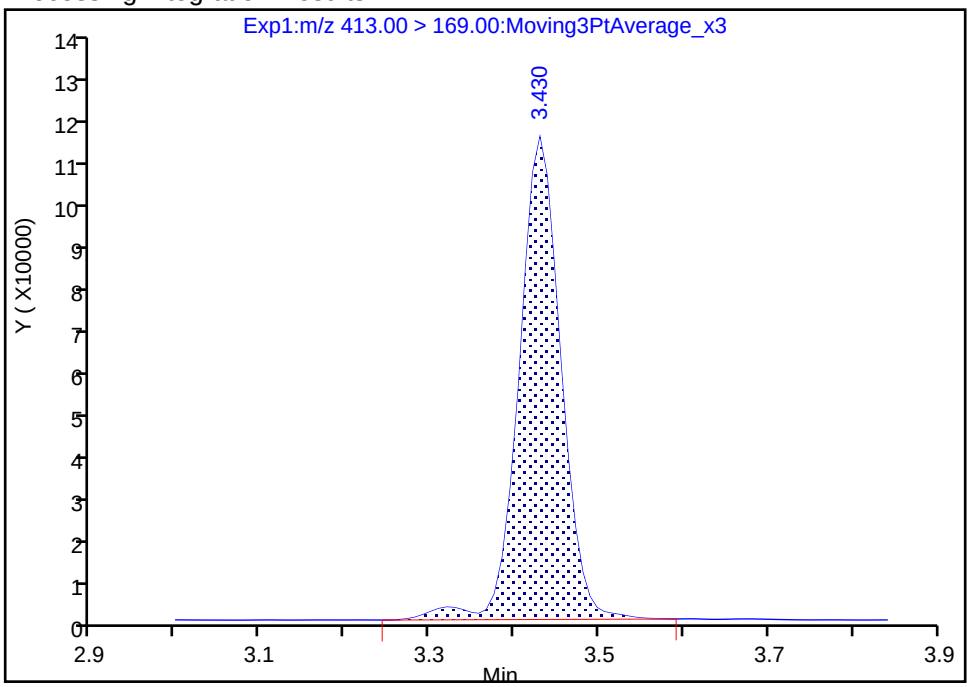
Data File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL012.d
Injection Date: 10-Feb-2020 12:45:52 Instrument ID: LC812
Lims ID: ICV
Client ID:
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 12
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

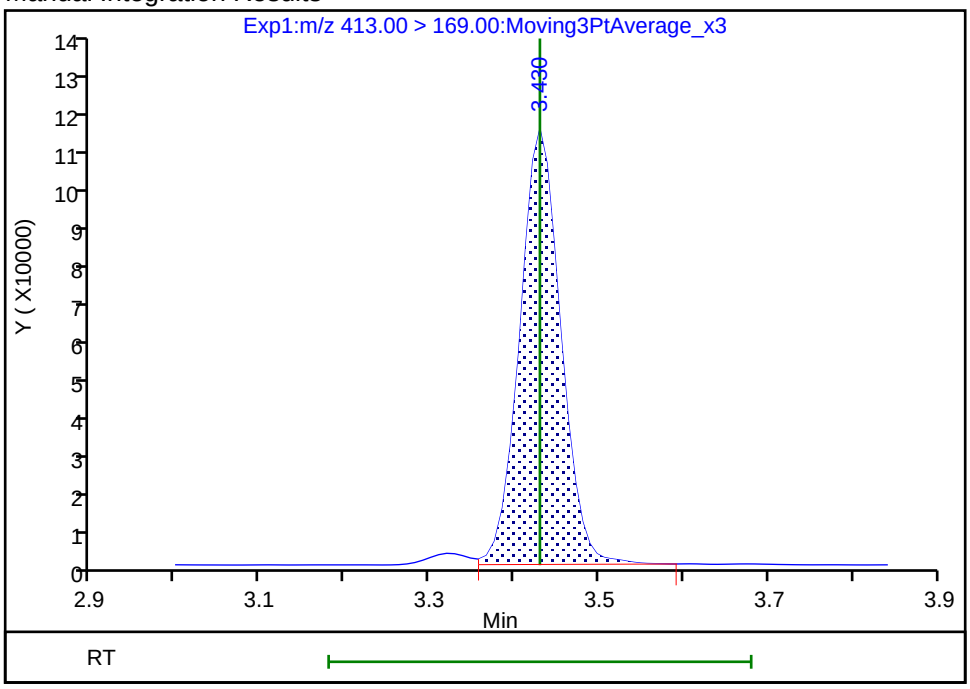
Processing Integration Results

RT: 3.43
Area: 371270
Amount: 1.072040
Amount Units: ng/ml



Manual Integration Results

RT: 3.43
Area: 361934
Amount: 1.061459
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 13:06:04
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

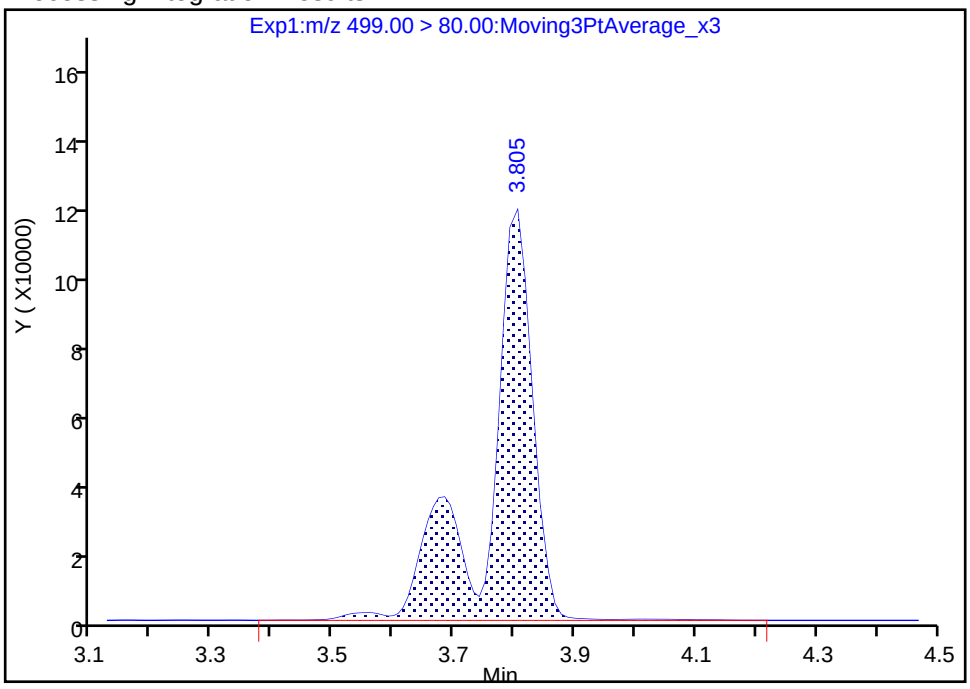
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL012.d				
Injection Date:	10-Feb-2020 12:45:52	Instrument ID:	LC812		
Lims ID:	ICV				
Client ID:					
Operator ID:	lc812tech	ALS Bottle#:	9	Worklist Smp#:	12
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

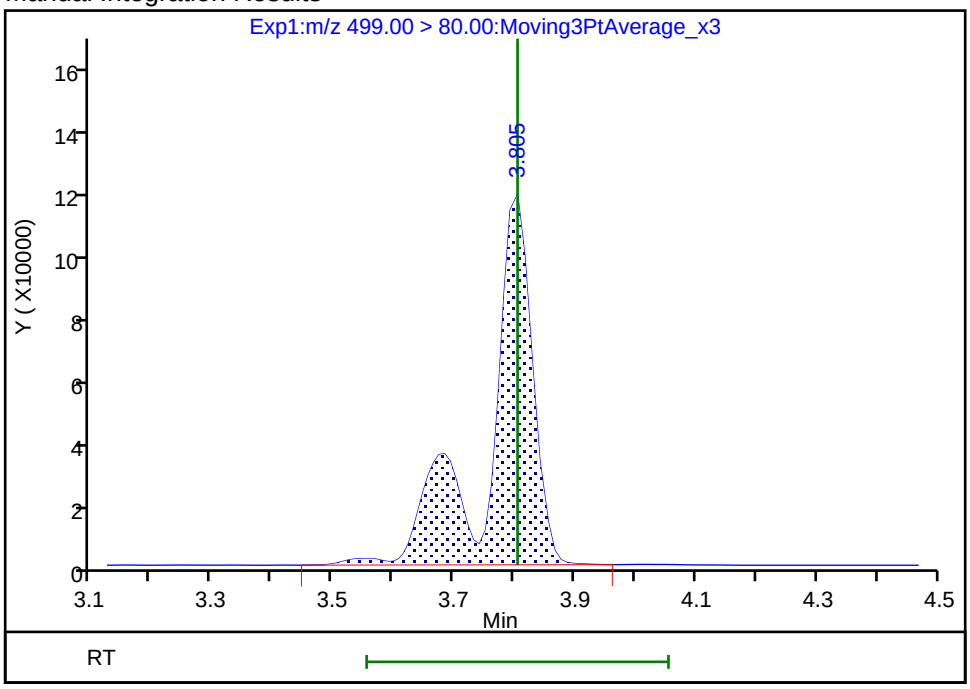
Processing Integration Results

RT: 3.80
Area: 586059
Amount: 0.968211
Amount Units: ng/ml



Manual Integration Results

RT: 3.80
Area: 580652
Amount: 0.959278
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 13:06:14

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

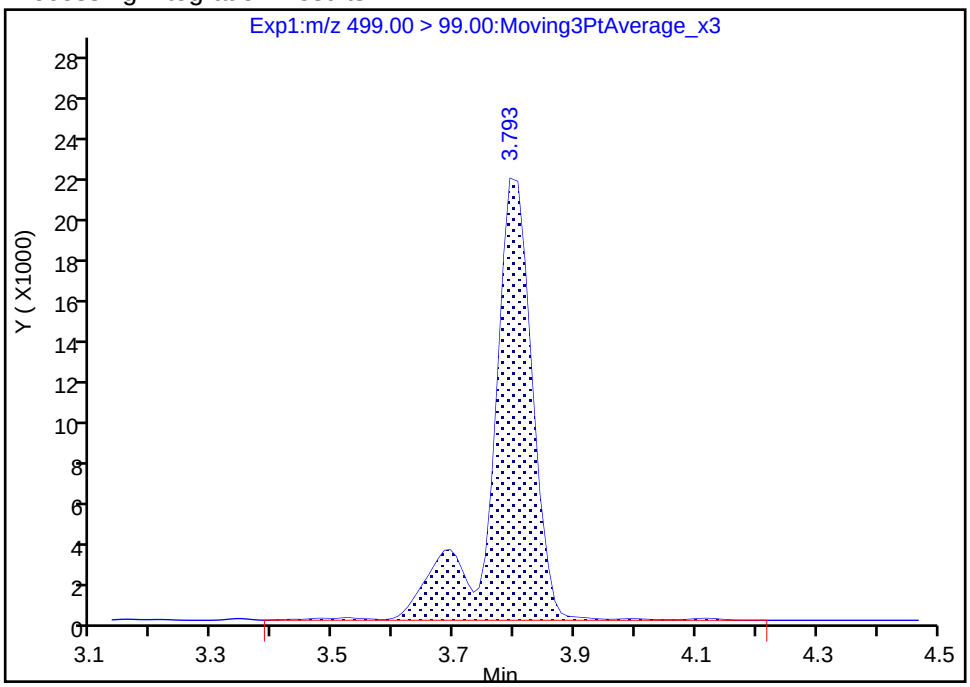
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL012.d				
Injection Date:	10-Feb-2020 12:45:52	Instrument ID:	LC812		
Lims ID:	ICV				
Client ID:					
Operator ID:	lc812tech	ALS Bottle#:	9	Worklist Smp#:	12
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

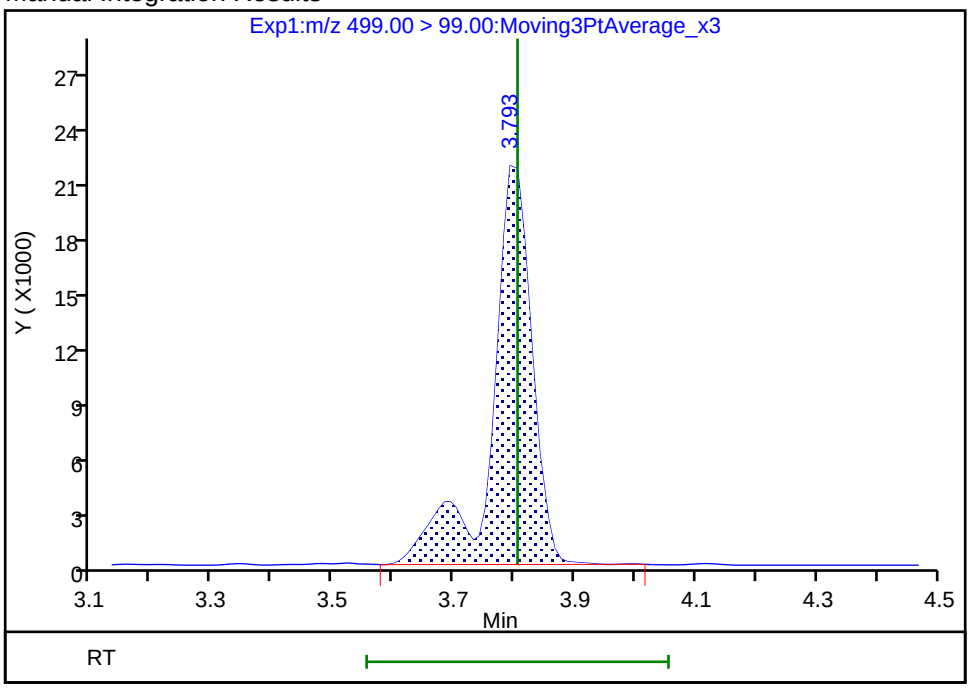
Processing Integration Results

RT: 3.79
Area: 100756
Amount: 0.968211
Amount Units: ng/ml



Manual Integration Results

RT: 3.79
Area: 98848
Amount: 0.959278
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 13:06:18

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

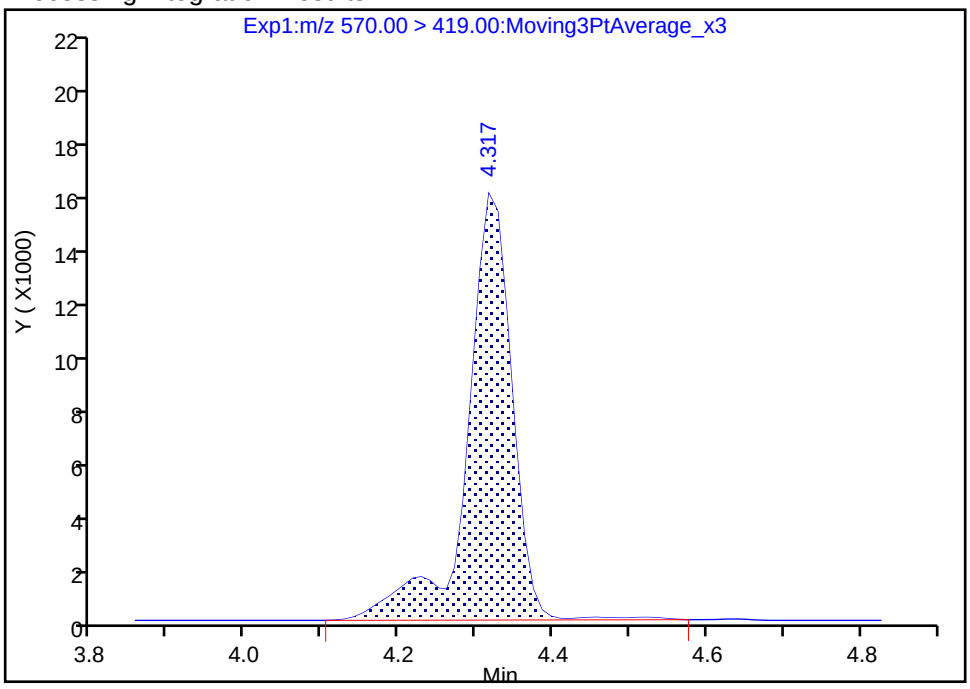
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL012.d				
Injection Date:	10-Feb-2020 12:45:52	Instrument ID:	LC812		
Lims ID:	ICV				
Client ID:					
Operator ID:	lc812tech	ALS Bottle#:	9	Worklist Smp#:	12
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

28 N-methylperfluorooctanesulfonamidoacetic aci, CAS: 2355-31-9

Signal: 1

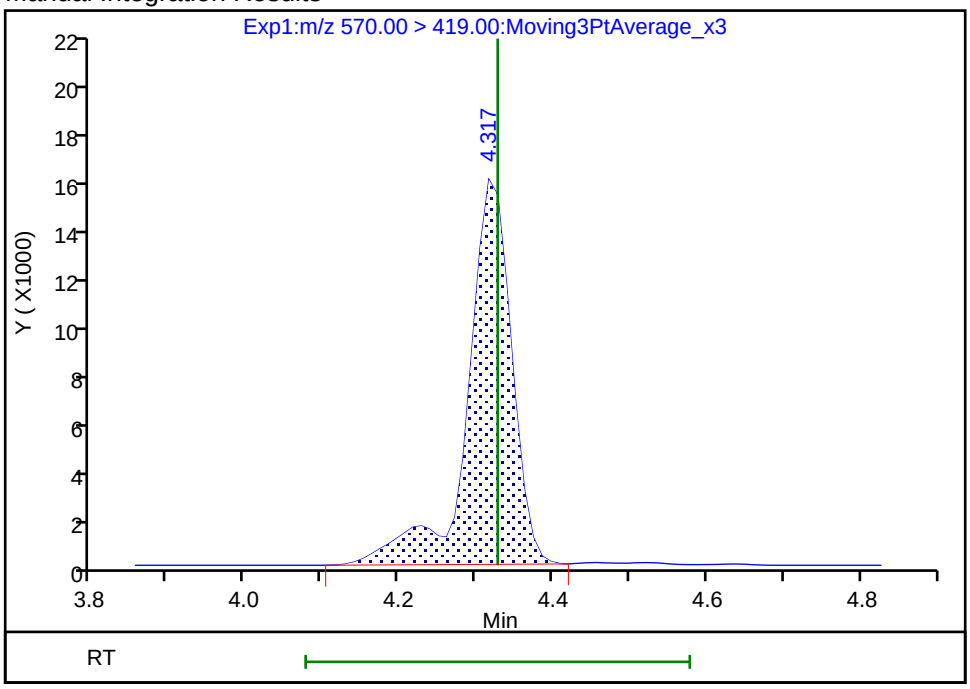
Processing Integration Results

RT: 4.32
Area: 63788
Amount: 1.041442
Amount Units: ng/ml



Manual Integration Results

RT: 4.32
Area: 62868
Amount: 1.026422
Amount Units: ng/ml



Reviewer: chirgwinb, 10-Feb-2020 13:06:32

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Lab Sample ID: CCVL 200-152693/5 Calibration Date: 02/25/2020 13:23

Instrument ID: LC812 Calib Start Date: 02/10/2020 11:48

GC Column: C-18 ID: 4.60(mm) Calib End Date: 02/10/2020 12:29

Lab File ID: SC022520A05.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.9513	1.012		53.2	50.0	6.4	50.0
Perfluoropentanoic acid (PFPeA)	AveID	1.079	1.321		61.2	50.0	22.4	50.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.020	1.164		50.4	44.2	14.1	50.0
1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2)	AveID	1.939	1.639		395	467	-15.5	50.0
Perfluorohexanoic acid (PFHxA)	AveID	0.9901	1.337		67.5	50.0	35.1	50.0
Perfluoropentanesulfonic acid	AveID	1.269	1.904		70.4	46.9	50.0	50.0
HFPO-DA	AveID	2.342	2.679		57.2	50.0	14.4	50.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.023	1.268		62.0	50.0	23.9	50.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.180	1.432		55.2	45.5	21.3	50.0
DONA	AveID	3.676	5.446		69.8	47.1	48.2	50.0
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	AveID	1.124	0.9655		407	474	-14.1	50.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	1.216	2.039		79.8	47.6	67.6*	50.0
Perfluorooctanoic acid (PFOA)	AveID	1.041	1.336		64.1	50.0	28.2	50.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.098	1.264		53.4	46.4	15.1	50.0
Perfluorononanoic acid (PFNA)	AveID	1.028	0.9511		46.2	50.0	-7.5	50.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	1.399	2.265		75.5	46.6	62.0*	50.0
Perfluorononanesulfonic acid	AveID	0.8855	1.248		67.7	48.0	40.9	50.0
Perfluorodecanoic acid (PFDA)	AveID	1.024	1.100		53.7	50.0	7.4	50.0
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	AveID	0.6207	0.4991		385	479	-19.6	50.0
Perfluorooctanesulfonamide (PFOSA)	AveID	1.025	1.177		57.4	50.0	14.8	50.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	AveID	0.8567	0.9095		531	500	6.2	50.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.7787	0.9689		60.0	48.2	24.4	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9066	1.160		64.0	50.0	28.0	50.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.7968	0.7942		498	500	-0.3	50.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.589	1.606		47.6	47.1	1.1	50.0
Perfluorododecanoic acid (PFDoA)	AveID	0.9702	1.094		56.4	50.0	12.8	50.0
10:2 FTS	AveID	0.3321	0.2922		424	482	-12.0	50.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.2703	0.3357		60.1	48.4	24.2	50.0
Perfluorotridecanoic acid (PFTriA)	AveID	0.8833	0.9751		55.2	50.0	10.4	50.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1556	0.1957		62.9	50.0	25.8	50.0

FORM VII 537 (modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Lab Sample ID: CCVL 200-152693/5 Calibration Date: 02/25/2020 13:23

Instrument ID: LC812 Calib Start Date: 02/10/2020 11:48

GC Column: C-18 ID: 4.60(mm) Calib End Date: 02/10/2020 12:29

Lab File ID: SC022520A05.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluoro-n-hexadecanoic acid (PFHxDA)	L1ID		1.475		52.5	50.0	5.0	50.0
Perfluoro-n-octadecanoic acid (PFODA)	AveID	0.6228	0.7351		59.0	50.0	18.0	50.0
13C4 PFBA	Ave	1.040	1.062		2550	2500	2.1	50.0
13C5 PFPeA	Ave	0.8098	0.7832		2420	2500	-3.3	50.0
13C3 PFBS	Ave	1.089	0.9781		2090	2330	-10.2	50.0
M2-4:2 FTS	Ave	0.0796	0.0813		2380	2340	2.1	50.0
13C2 PFHxA	Ave	0.9471	0.8584		2270	2500	-9.4	50.0
13C3 HFPO-DA	Ave	0.0751	0.1005		3350	2500	33.9	50.0
13C4 PFHpA	Ave	0.9106	0.8225		2260	2500	-9.7	50.0
18O2 PFHxS	Ave	0.7696	0.7097		2180	2370	-7.8	50.0
M2-6:2 FTS	Ave	0.1054	0.1050		2360	2380	-0.5	50.0
13C4 PFOA	Ave	0.9424	0.9134		2420	2500	-3.1	50.0
13C4 PFOS	Ave	0.5730	0.5525		2300	2390	-3.6	50.0
13C5 PFNA	Ave	0.9041	0.8736		2420	2500	-3.4	50.0
13C2 PFDA	Ave	0.9823	0.9730		2480	2500	-0.9	50.0
M2-8:2 FTS	Ave	0.1489	0.1685		2710	2400	13.2	50.0
13C8 FOSA	Ave	1.008	1.044		2590	2500	3.6	50.0
d3-NMeFOSAA	Ave	0.0775	0.0838		2700	2500	8.1	50.0
13C2 PFUnA	Ave	0.8568	0.8567		2500	2500	-0.0	50.0
d5-NEtFOSAA	Ave	0.0883	0.0924		2610	2500	4.5	50.0
13C2 PFDoA	Ave	0.9588	0.9908		2580	2500	3.3	50.0
13C2 PFTeDA	Ave	0.8231	0.8546		2600	2500	3.8	50.0
13C2 PFHxDA	Ave	0.8949	0.7740		2160	2500	-13.5	50.0

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40160.b\SC022520A05.d
Lims ID: CCVL
Client ID:
Sample Type: CCVL
Inject. Date: 25-Feb-2020 13:23:54 ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCVL
Misc. Info.: 200-0040160-005 Plate: 1 Rack: 1
Operator ID: lc812tech Instrument ID: LC812
Sublist: chrom-PFC_LC812*sub3

Method: \\ChromNA\Burlington\ChromData\LC812\20200225-40160.b\PFC_LC812.m
Limit Group: LC_PFC_ICAL
Last Update: 26-Feb-2020 08:43:39 Calib Date: 10-Feb-2020 12:29:33
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL010.d

Column 1 : C-18 (4.60 mm) Det: EXP1
Process Host: CTX0311

First Level Reviewer: murrayjw Date: 25-Feb-2020 13:53:54
Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										
217.00 > 172.00	1.917	1.917	0.0	0.527	2284920	2.55		102	23013	
2 Perfluorobutanoic acid										
212.90 > 169.00	1.917	1.917	0.0	1.000	46240	0.0532		106	6.5	
D 3 13C5 PFPeA										
267.90 > 223.00	2.257	2.257	0.0	0.620	1684257	2.42		96.7	1755	
4 Perfluoropentanoic acid										
262.90 > 219.00	2.271	2.271	0.0	1.006	44501	0.0612		122	5.7	
D 47 13C3 PFBS										
301.90 > 80.00	2.285	2.284	0.0	0.628	1956143	2.09		89.8	397359	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.285	2.284	0.0	1.000	43272	0.0504	Target=2.19	114	159	
298.90 > 99.00	2.285	2.284	0.0	1.000	19822		2.18(1.09-3.28)		31.8	
61 1H,1H,2H,2H-perfluorohexanesulfoni										
327.00 > 307.00	2.623	2.623	0.0	1.000	53523	0.3948		84.5	759	
D 60 M2-4:2 FTS										
329.00 > 81.00	2.623	2.623	0.0	0.721	163253	2.38		102	214	
D 7 13C2 PFHxA										
315.00 > 270.00	2.673	2.673	0.0	0.734	1845986	2.27		90.6	6996	
6 Perfluorohexanoic acid										M
313.00 > 269.00	2.673	2.673	0.0	1.000	49373	0.0675	Target=12.51	135	21.0	M
313.00 > 119.00	2.673	2.673	0.0	1.000	3858		12.80(6.25-18.76)		13.6	
70 Perfluoropentanesulfonic acid										M
349.00 > 80.00	2.685	2.685	0.0	0.848	54512	0.0704	Target=3.29	150	246	M
349.00 > 99.00	2.685	2.685	0.0	0.848	16090		3.39(1.64-4.93)		83.9	
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.815	2.815	0.0	1.000	11584	0.0572		114	5.5	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 64 13C3 HFPO-DA										
332.10 > 287.00	2.815	2.815	0.0	0.773	216223	3.35		134	1280	
D 11 18O2 PFHxS										
403.00 > 84.00	3.169	3.168	0.0	0.870	1443787	2.18		92.2	37641	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.169	3.168	0.0	1.000	39775	0.0552	Target=4.33	121	112	M
399.00 > 99.00	3.169	3.168	0.0	1.000	9537		4.17(2.17-6.50)		33.9	M
D 9 13C4 PFHpA										
367.00 > 322.00	3.169	3.168	0.0	0.870	1768918	2.26		90.3	5524	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.169	3.168	0.0	1.000	44850	0.0620	Target=3.79	124	29.5	
363.00 > 169.00	3.169	3.168	0.0	1.000	12303		3.65(1.89-5.68)		57.8	
77 DONA										
377.00 > 251.00	3.225	3.225	0.0	0.805	121899	0.0698	Target=2.43	148	149	
377.00 > 85.00	3.225	3.225	0.0	0.805	48632		2.51(1.22-3.65)		117	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.624	3.624	0.0	1.000	41321	0.4073		85.9	1416	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.624	3.624	0.0	0.996	214438	2.36		99.5	1678	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.632	3.632	0.0	0.907	46115	0.0798	Target=6.01	168	684	
449.00 > 99.00	3.632	3.632	0.0	0.907	7663		6.02(3.01-9.02)		114	
D 14 13C4 PFOA										
417.00 > 372.00	3.640	3.640	0.0	1.000	1964343	2.42		96.9	8452	
* 62 13C2 PFOA										
415.00 > 370.00	3.640	3.640	0.0		2150552	2.50			9712	
15 Perfluorooctanoic acid										M
413.00 > 369.00	3.640	3.640	0.0	1.000	52472	0.0641	Target=2.66	128	25.2	M
413.00 > 169.00	3.640	3.640	0.0	1.000	20515		2.56(1.33-3.99)		168	M
D 18 13C4 PFOS										
503.00 > 80.00	4.005	4.005	0.0	1.100	1135837	2.30		96.4	13165	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.005	4.005	0.0	1.000	27877	0.0534	Target=5.29	115	465	
499.00 > 99.00	4.005	4.005	0.0	1.000	4645		6.00(2.65-7.94)		43.0	M
D 19 13C5 PFNA										
468.00 > 423.00	4.016	4.027	-0.011	1.103	1878808	2.42		96.6	25975	
20 Perfluorononanoic acid										
463.00 > 419.00	4.027	4.027	0.0	1.003	35739	0.0462	Target=7.73	92.5	18.6	
463.00 > 169.00	4.027	4.027	0.0	1.003	6578		5.43(3.87-11.60)		117	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	4.164	4.164	0.0	1.040	50166	0.0755		162	485	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.283	4.283	0.0	1.069	28472	0.0677	Target=2.78	141	673	
549.00 > 99.00	4.272	4.283	-0.011	1.067	9295		3.06(1.39-4.17)		66.2	
D 23 13C2 PFDA										
515.00 > 470.00	4.305	4.305	0.0	1.183	2092500	2.48		99.1	11207	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
24 Perfluorodecanoic acid										M
513.00 > 469.00	4.305	4.305	0.0	1.000	46018	0.0537	Target=9.75	107	8.8	
513.00 > 169.00	4.305	4.305	0.0	1.000	4568		10.07(4.88-14.63)		17.2	M
D 26 M2-8:2 FTS										
529.00 > 81.00	4.317	4.317	-0.001	1.186	347237	2.71		113	1913	
25 1H,1H,2H,2H-perfluorodecanesulfoni										
527.00 > 507.00	4.317	4.317	-0.001	1.000	34659	0.3851		80.4	777	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.340	4.340	0.0	1.000	52841	0.0574		115	435	
D 21 13C8 FOSA										
506.00 > 78.00	4.340	4.340	0.0	1.192	2245558	2.59		104	7089	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.431	4.431	0.0	1.217	180118	2.70		108	1590	
28 N-methylperfluorooctanesulfonamido										
570.00 > 419.00	4.442	4.443	-0.001	1.003	32765	0.5308		106		
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.510	4.524	-0.014	1.126	22195	0.0600	Target=2.63	124	290	
599.00 > 99.00	4.510	4.524	-0.014	1.126	8634		2.57(1.32-3.95)		156	
D 30 13C2 PFUnA										
565.00 > 520.00	4.537	4.537	0.0	1.246	1842276	2.50		100.0	8776	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.537	4.551	-0.014	1.000	42752	0.0640	Target=7.31	128	47.1	
563.00 > 169.00	4.537	4.551	-0.014	1.000	5779		7.40(3.66-10.97)		118	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.550	4.551	-0.001	1.250	198633	2.61		105	2028	
33 N-ethylperfluorooctanesulfonamidoa										
584.00 > 419.00	4.550	4.563	-0.013	1.000	31550	0.4983		99.7	324	
66 11-Chloroeicosafluoro-3-oxaundecan										
631.00 > 451.00	4.614	4.626	-0.012	1.152	35959	0.0476		101	273	
D 36 13C2 PFDoA										
615.00 > 570.00	4.744	4.744	0.0	1.303	2130657	2.58		103	6414	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.744	4.744	0.0	1.000	46630	0.0564	Target=6.96	113	12.3	
613.00 > 169.00	4.744	4.744	0.0	1.000	6913		6.75(3.48-10.44)		157	
74 1H,1H,2H,2H-perfluorododecanesulfo										
627.00 > 607.00	4.764	4.764	0.0	1.104	20418	0.4241		88.0		
75 Perfluorododecanesulfonic acid (PF										M
699.00 > 80.00	4.897	4.897	0.0	1.223	7721	0.0601	Target=0.47	124	26.8	M
699.00 > 99.00	4.897	4.897	0.0	1.223	16079		0.48(0.24-0.71)		430	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.934	4.934	0.0	1.040	41550	0.0552	Target=4.84	110	14.3	
663.00 > 169.00	4.934	4.934	0.0	1.040	9528		4.36(2.42-7.26)		181	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.107	5.108	-0.001	1.403	1837817	2.60		104	7636	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.107	5.120	-0.013	1.000	7193	0.0629	Target=1.15	126	80.8	
713.00 > 219.00	5.107	5.120	-0.013	1.000	6431		1.12(0.58-1.73)		109	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 44 13C2 PFHxDA										
815.00 > 770.00	5.465	5.465	0.0	1.501	1664489	2.16		86.5	4771	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.465	5.465	0.0	1.000	49102	0.0525	Target=4.36	105	17.7	
813.00 > 169.00	5.465	5.465	0.0	1.000	11961		4.11(2.18-6.53)		221	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.838	5.843	-0.005	1.068	24472	0.0590	Target=4.01	118	9.0	
913.00 > 169.00	5.838	5.843	-0.005	1.068	6582		3.72(2.00-6.01)		148	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

PFAS32NCLOQV_00003 Amount Added: 100.00 Units: uL

Report Date: 26-Feb-2020 08:43:39 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40160.b\SC022520A05.d

Injection Date: 25-Feb-2020 13:23:54 Instrument ID: LC812

Lims ID: CCVL

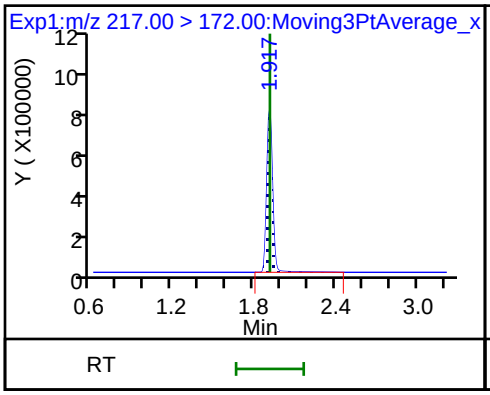
Client ID:

Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5

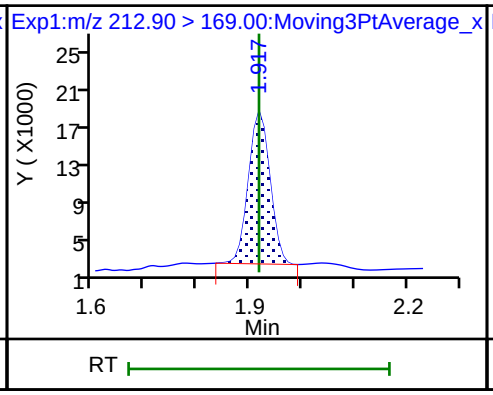
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFC_LC812 Limit Group: LC_PFC_ICAL

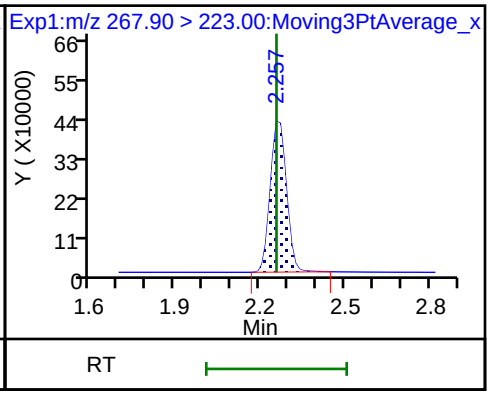
D 1 13C4 PFBA



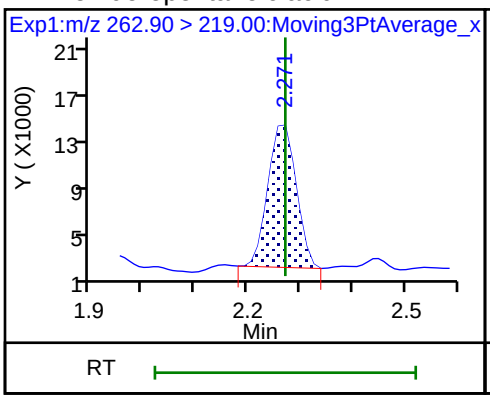
2 Perfluorobutanoic acid



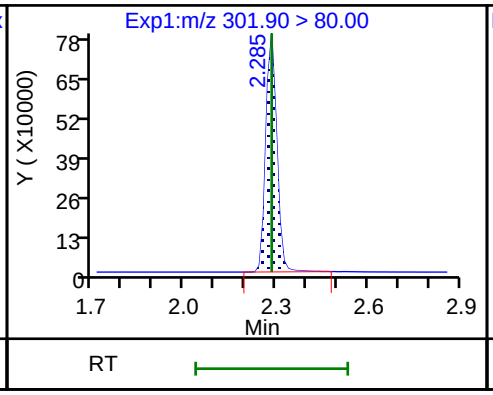
D 3 13C5 PFPeA



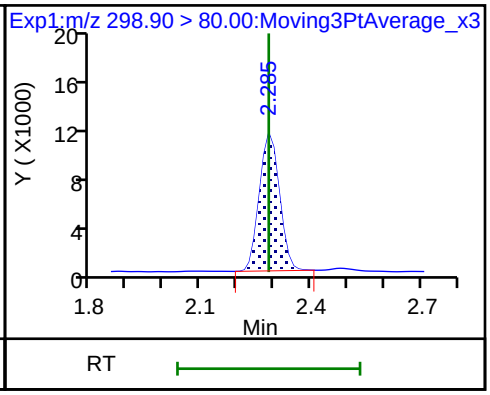
4 Perfluoropentanoic acid



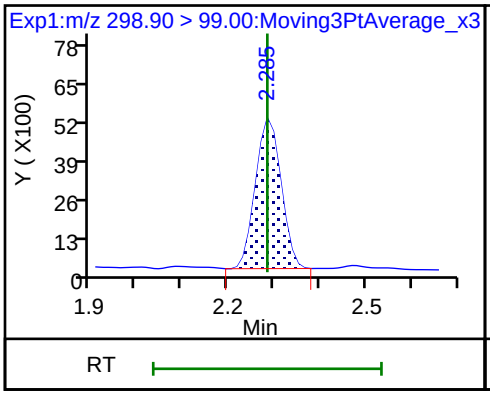
D 47 13C3 PFBS



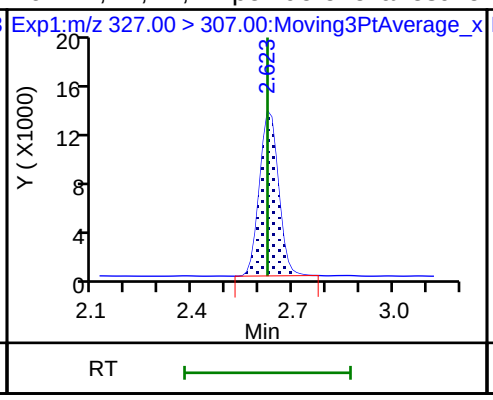
5 Perfluorobutanesulfonic acid



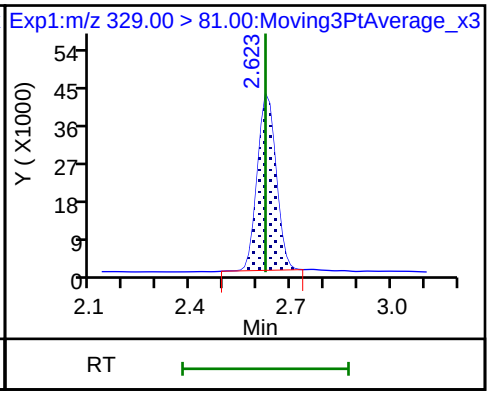
5 Perfluorobutanesulfonic acid



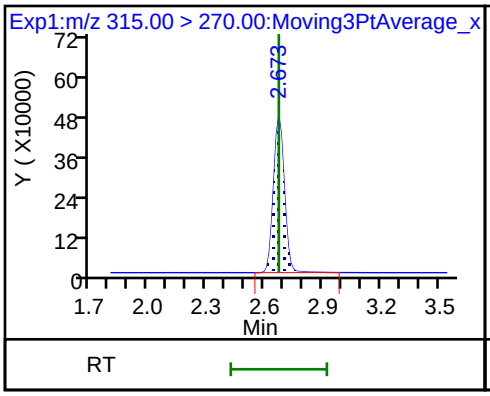
61 1H,1H,2H,2H-perfluorohexanesulfon



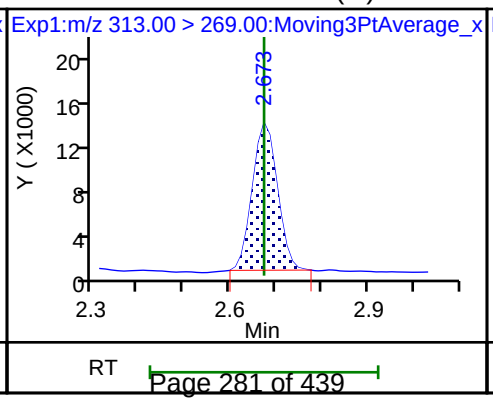
D 60 M2-4:2 FTS



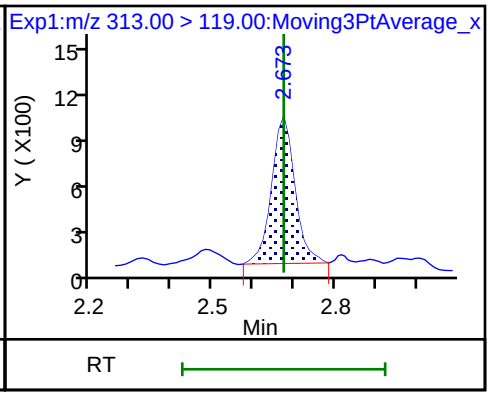
D 7 13C2 PFHxA



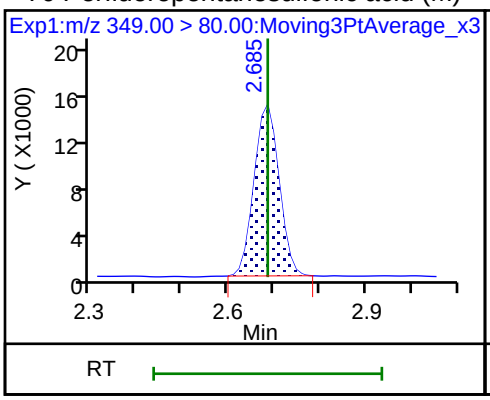
6 Perfluorohexanoic acid (M)



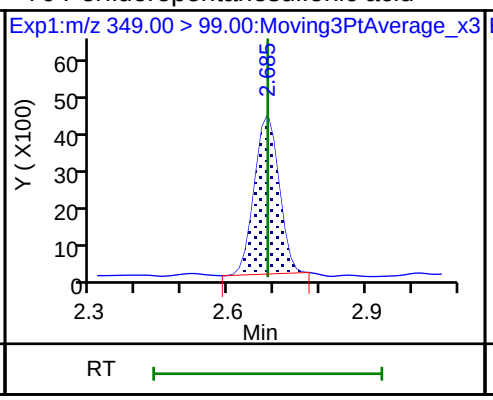
6 Perfluorohexanoic acid



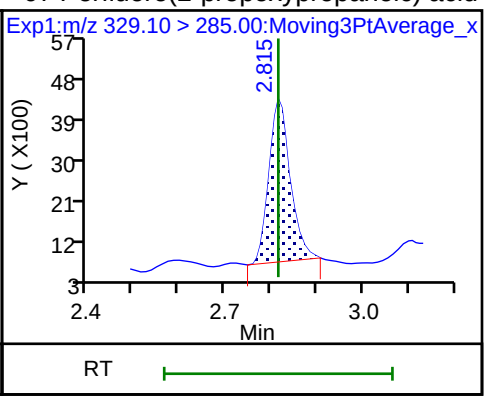
70 Perfluoropentanesulfonic acid (M)



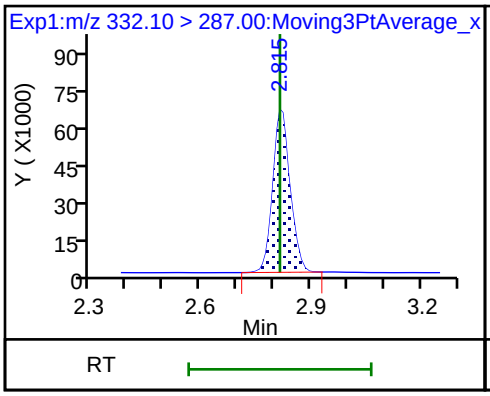
70 Perfluoropentanesulfonic acid



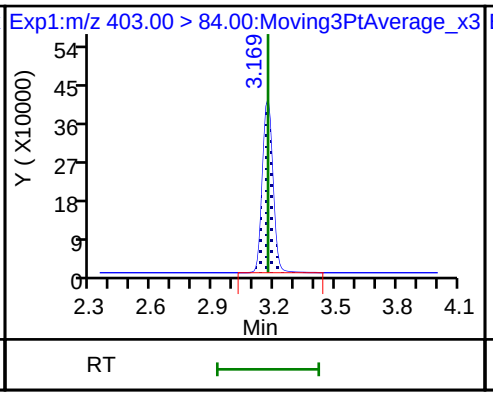
67 Perfluoro(2-propoxypropanoic) acid



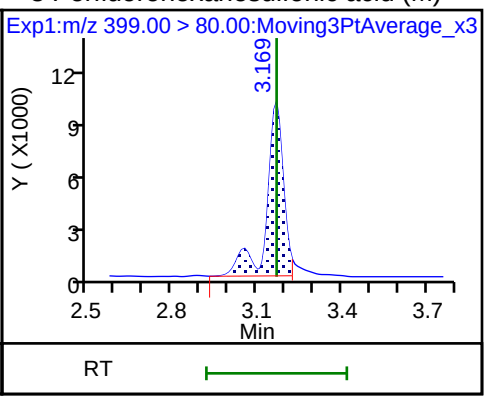
D 64 13C3 HFPO-DA



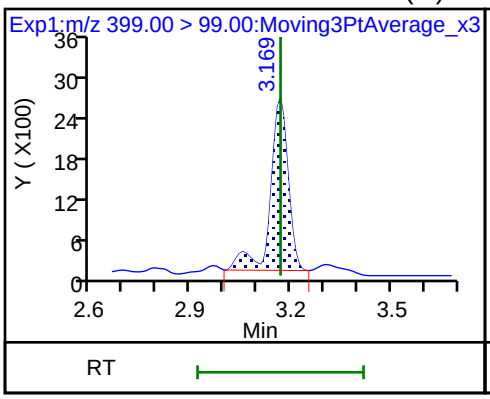
D 11 18O2 PFHxS



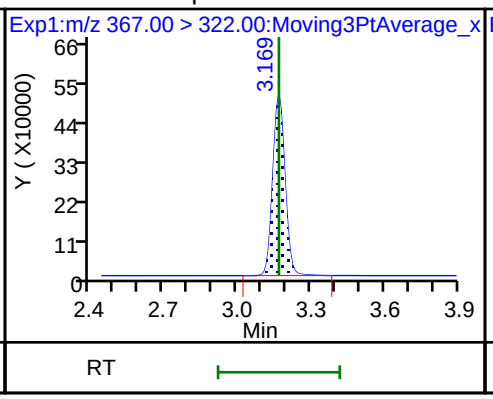
8 Perfluorohexanesulfonic acid (M)



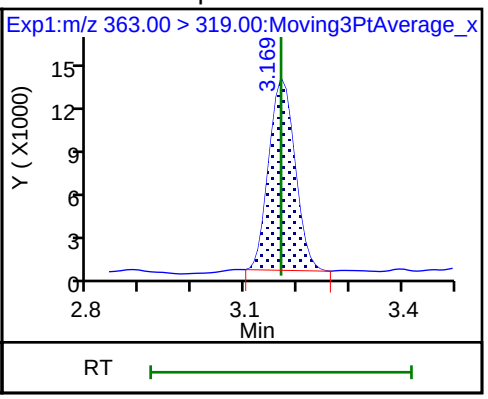
8 Perfluorohexanesulfonic acid (M)



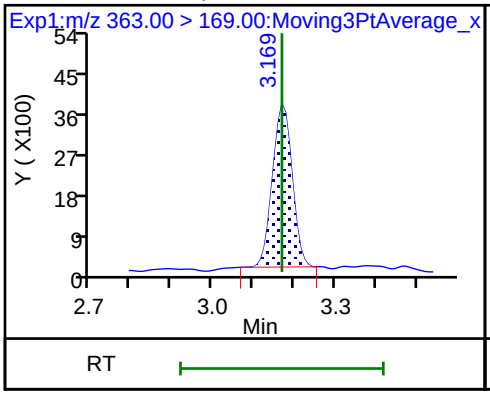
D 9 13C4 PFHpA



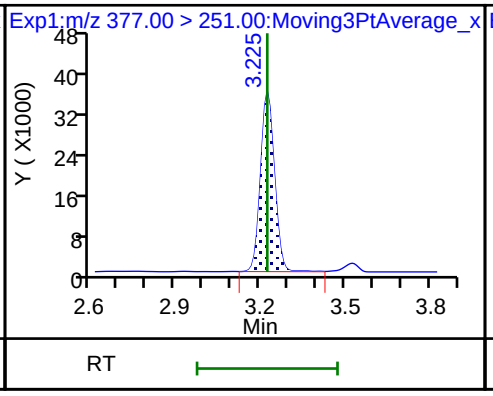
10 Perfluoroheptanoic acid



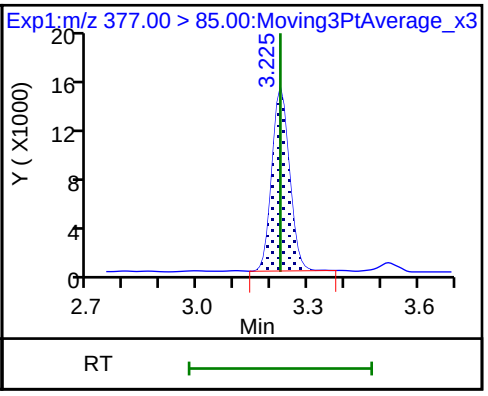
10 Perfluoroheptanoic acid



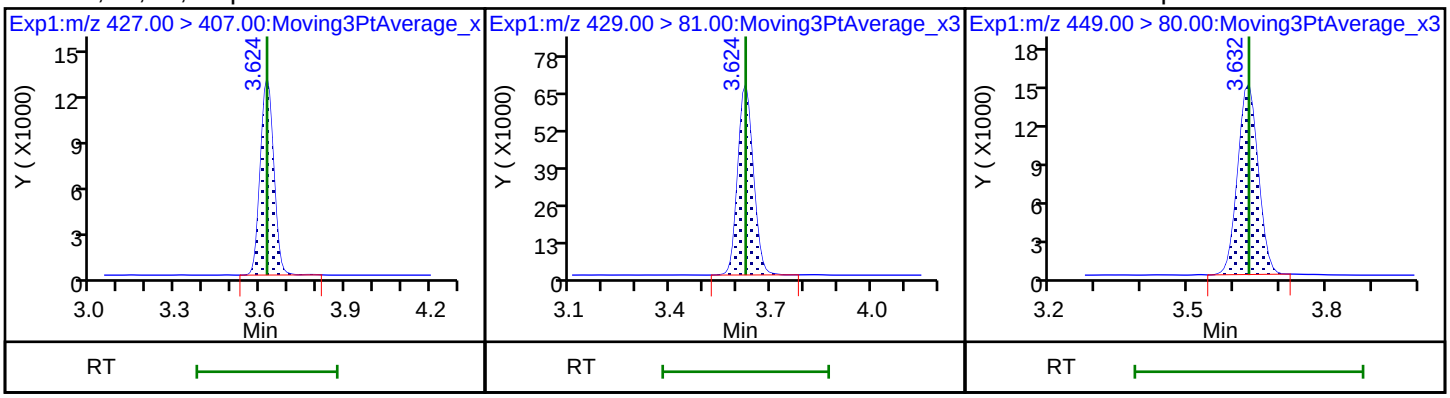
77 DONA



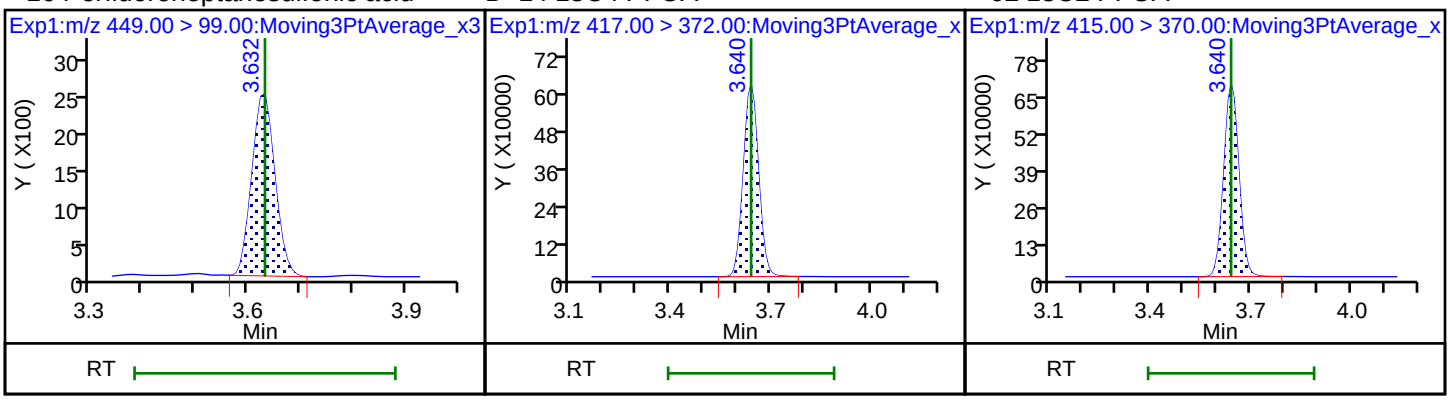
77 DONA



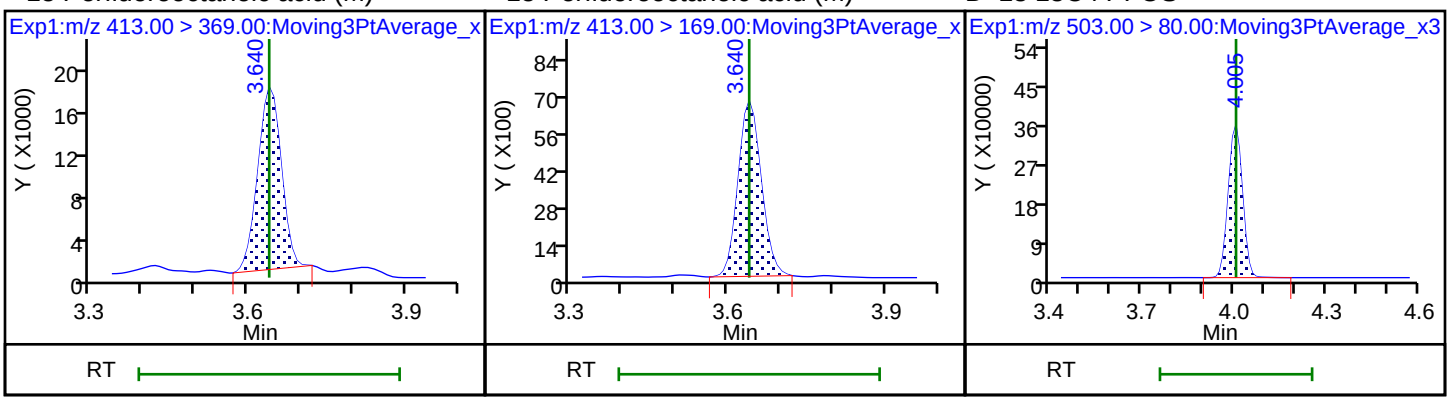
13 1H,1H,2H,2H-perfluorooctanesulfonD 12 M2-6:2 FTS 16 Perfluoroheptanesulfonic acid



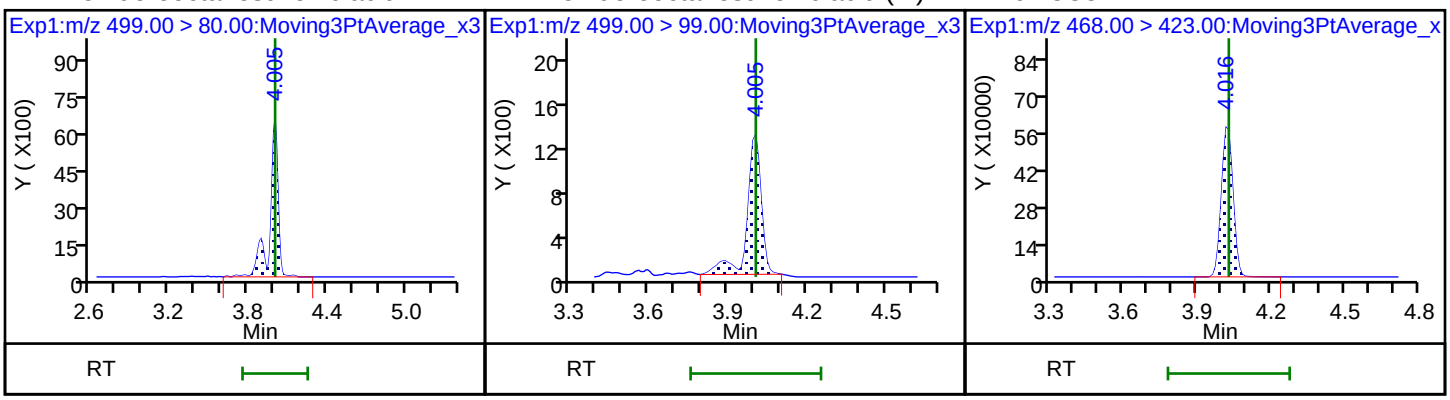
16 Perfluoroheptanesulfonic acid D 14 13C4 PFOA * 62 13C2 PFOA



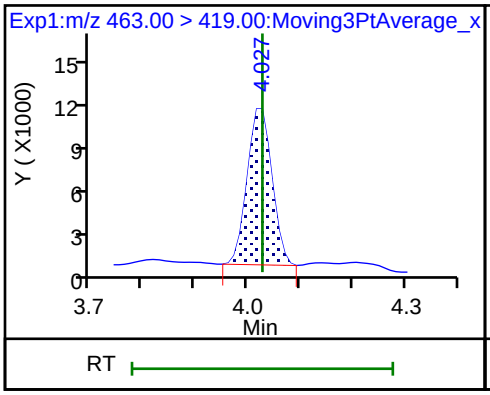
15 Perfluorooctanoic acid (M) 15 Perfluorooctanoic acid (M) D 18 13C4 PFOS



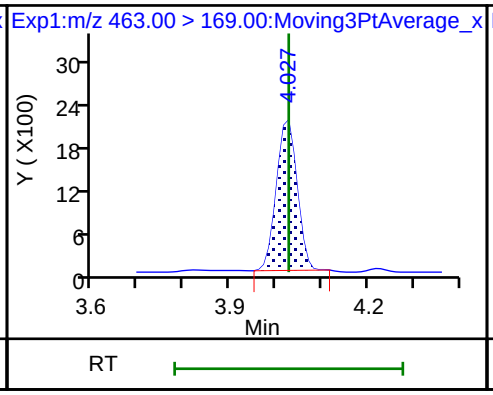
17 Perfluorooctanesulfonic acid 17 Perfluorooctanesulfonic acid (M) D 19 13C5 PFNA



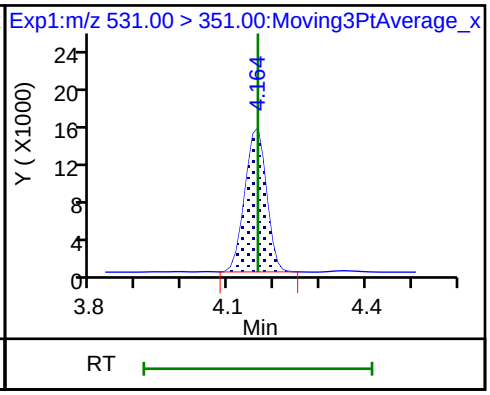
20 Perfluorononanoic acid



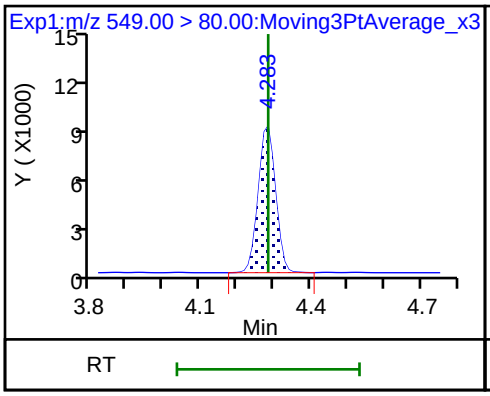
20 Perfluorononanoic acid



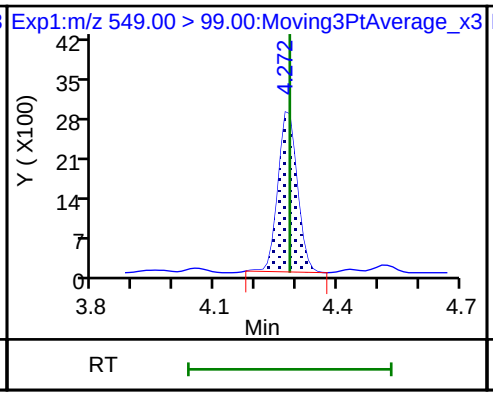
69 9-Chlorohexadecafluoro-3-oxanonane



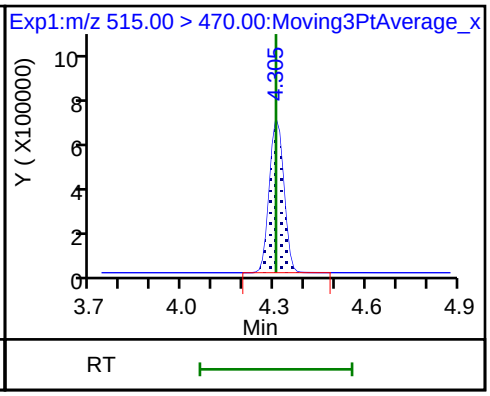
68 Perfluorononanesulfonic acid



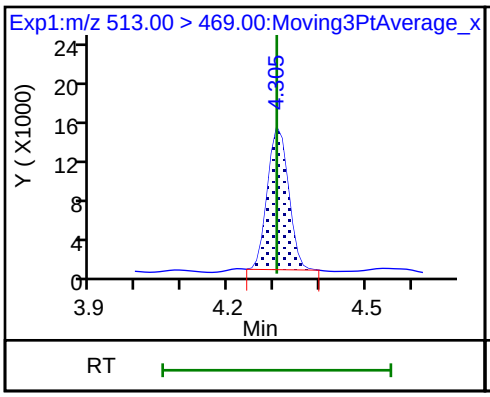
68 Perfluorononanesulfonic acid



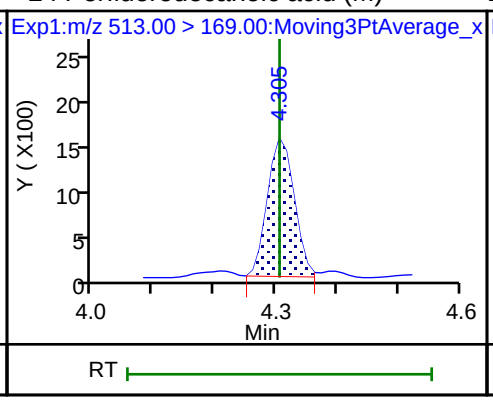
D 23 13C2 PFDA



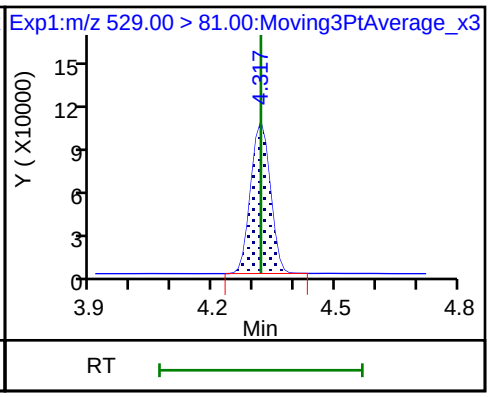
24 Perfluorodecanoic acid



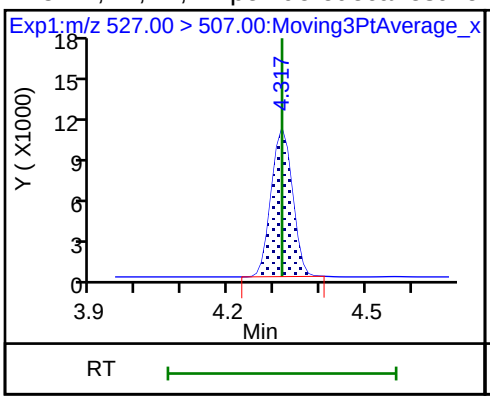
24 Perfluorodecanoic acid (M)



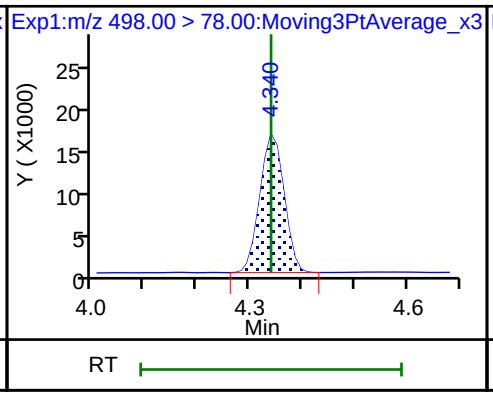
D 26 M2-8:2 FTS



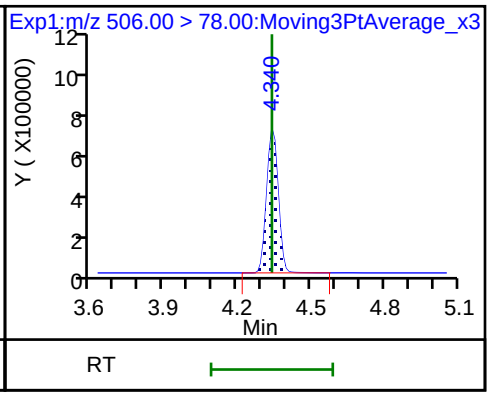
25 1H,1H,2H,2H-perfluorodecanesulfoni



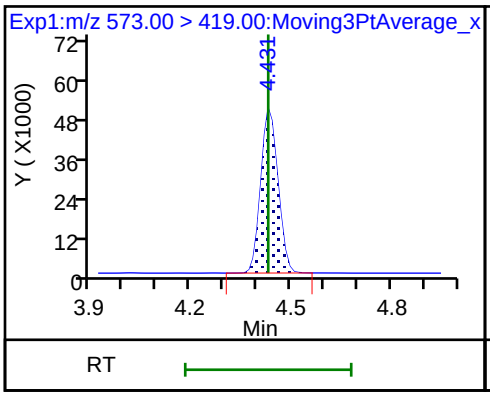
22 Perfluorooctanesulfonamide



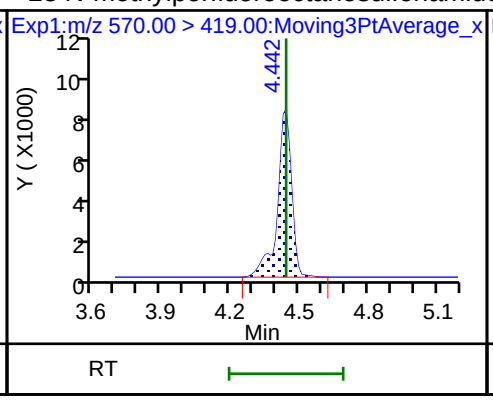
D 21 13C8 FOSA



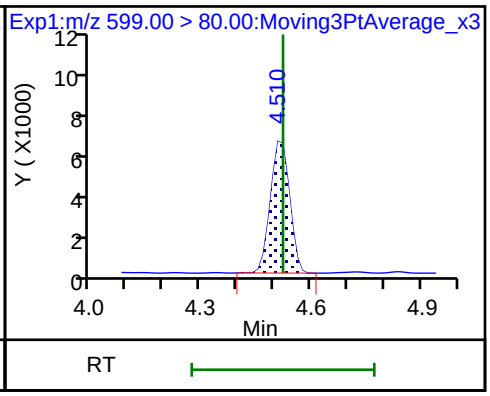
D 27 d3-NMeFOSAA



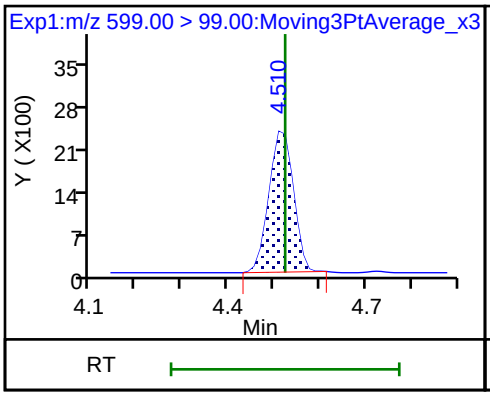
28 N-methylperfluorooctanesulfonamido



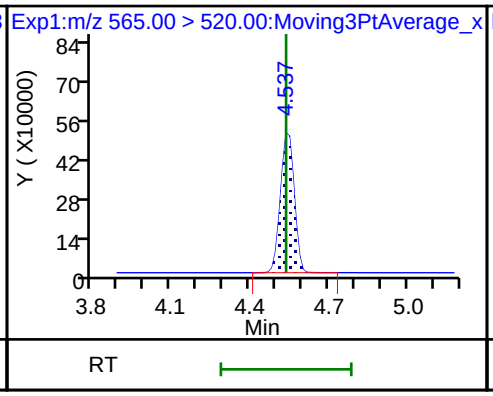
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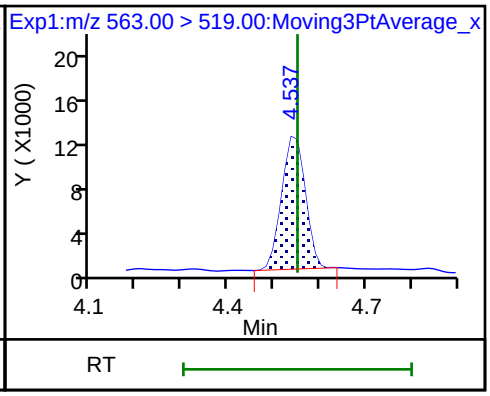
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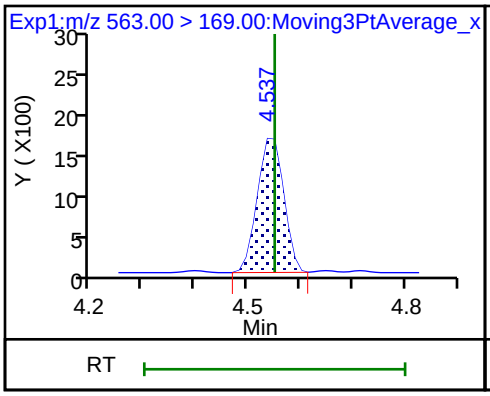
D 30 13C2 PFUnA



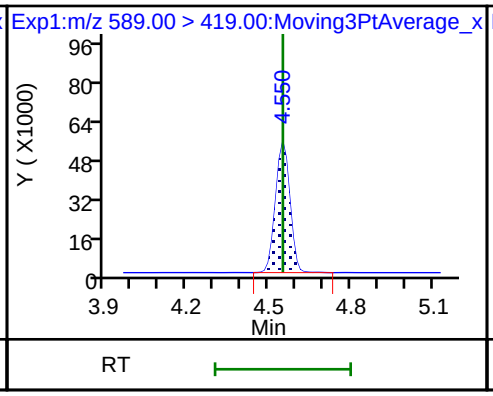
31 Perfluoroundecanoic acid



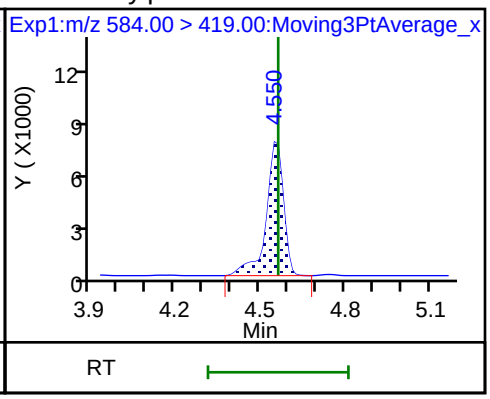
31 Perfluoroundecanoic acid



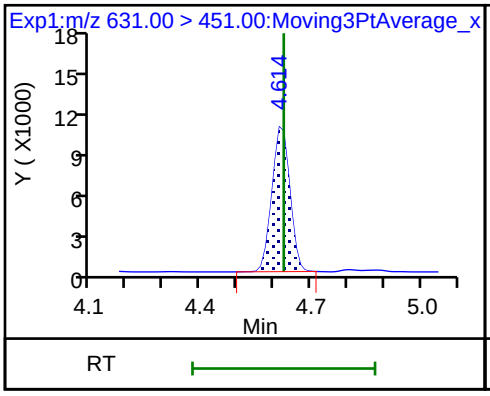
D 32 d5-NEtFOSAA



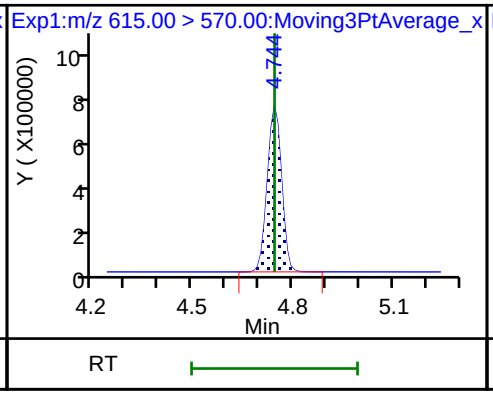
33 N-ethylperfluorooctanesulfonamidoa



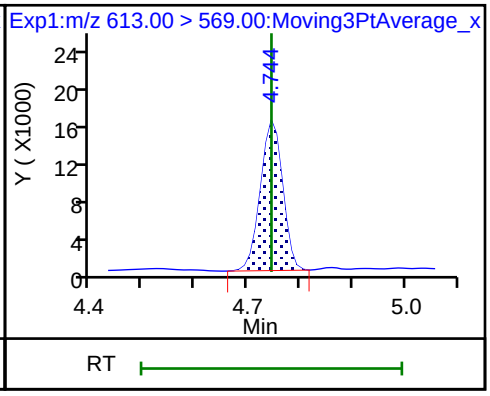
66 11-Chloroeicosafluoro-3-oxaundecan



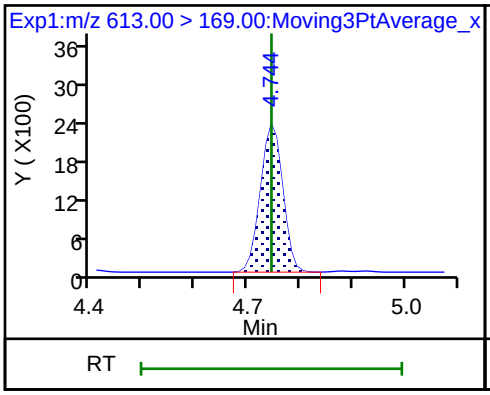
D 36 13C2 PFDoA



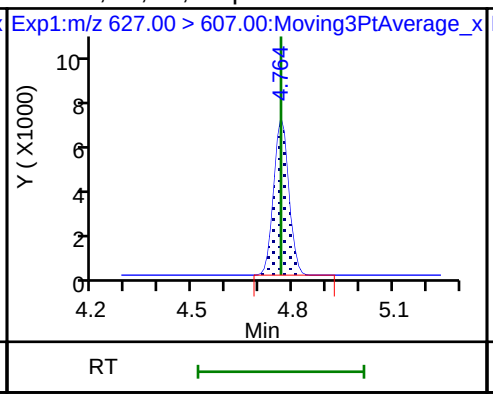
37 Perfluorododecanoic acid



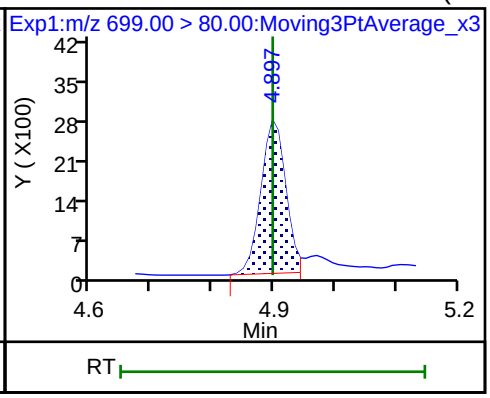
37 Perfluorododecanoic acid



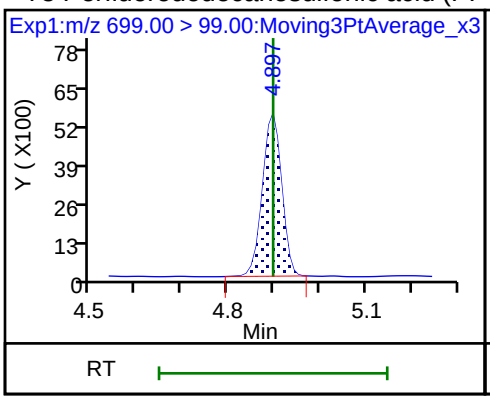
74 1H,1H,2H,2H-perfluorododecanesulfo



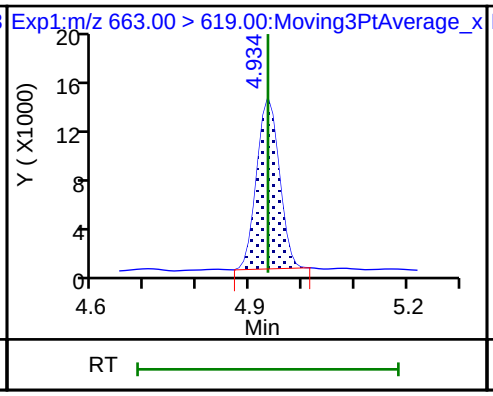
75 Perfluorododecanesulfonic acid (PF (M)



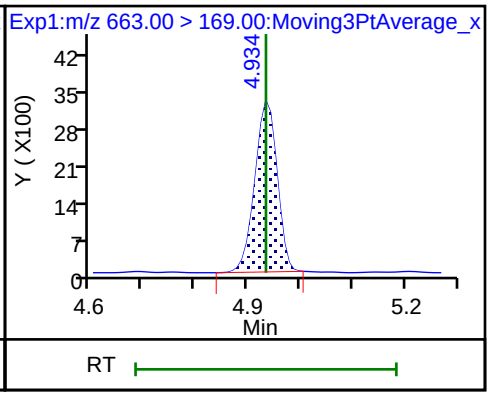
75 Perfluorododecanesulfonic acid (PF



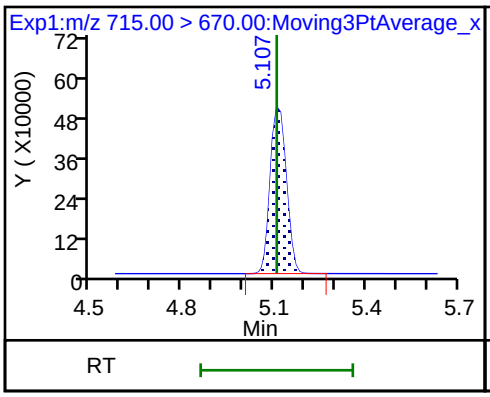
41 Perfluorotridecanoic acid



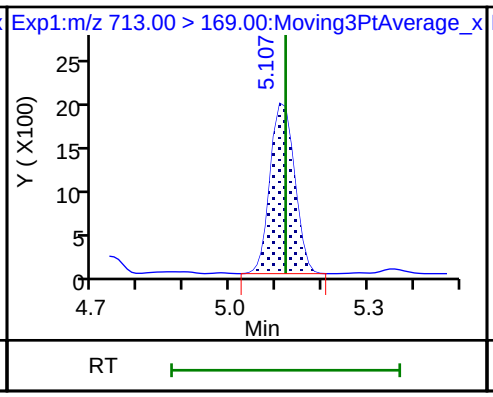
41 Perfluorotridecanoic acid



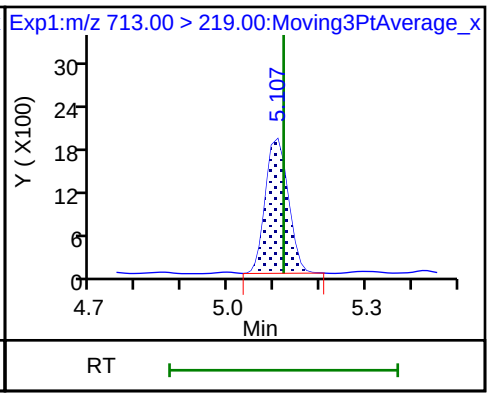
D 43 13C2 PFTeDA



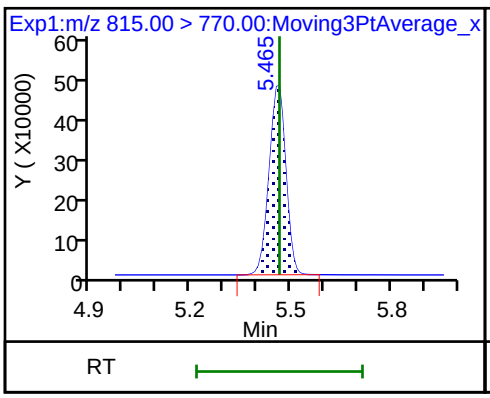
42 Perfluorotetradecanoic acid



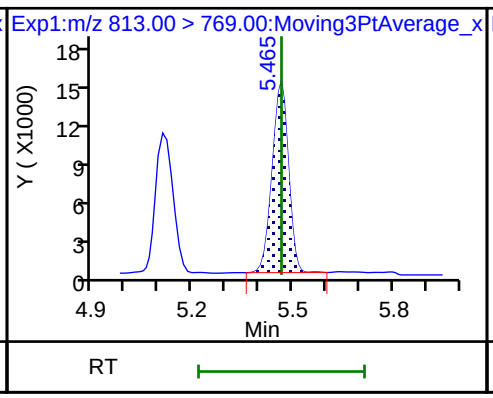
42 Perfluorotetradecanoic acid



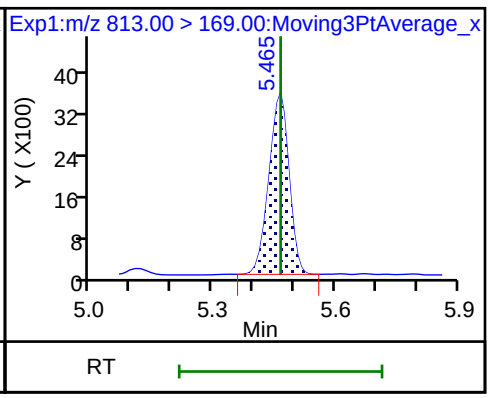
D 44 13C2 PFHxDA



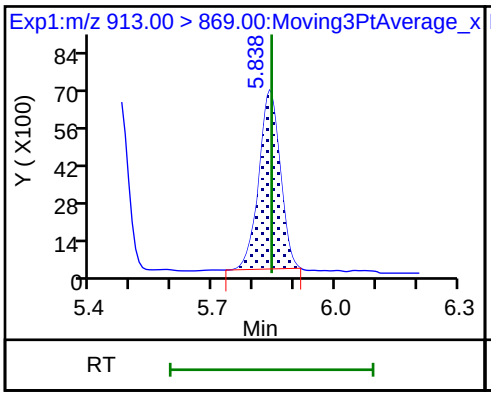
45 Perfluorohexadecanoic acid



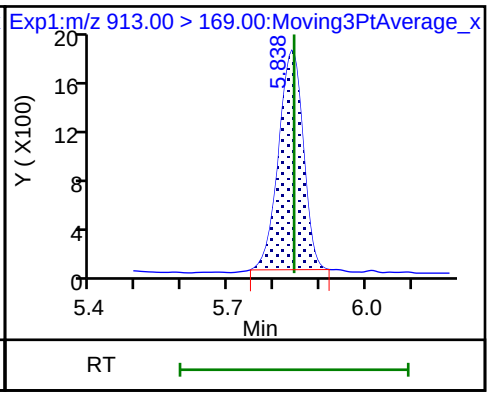
45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid



46 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

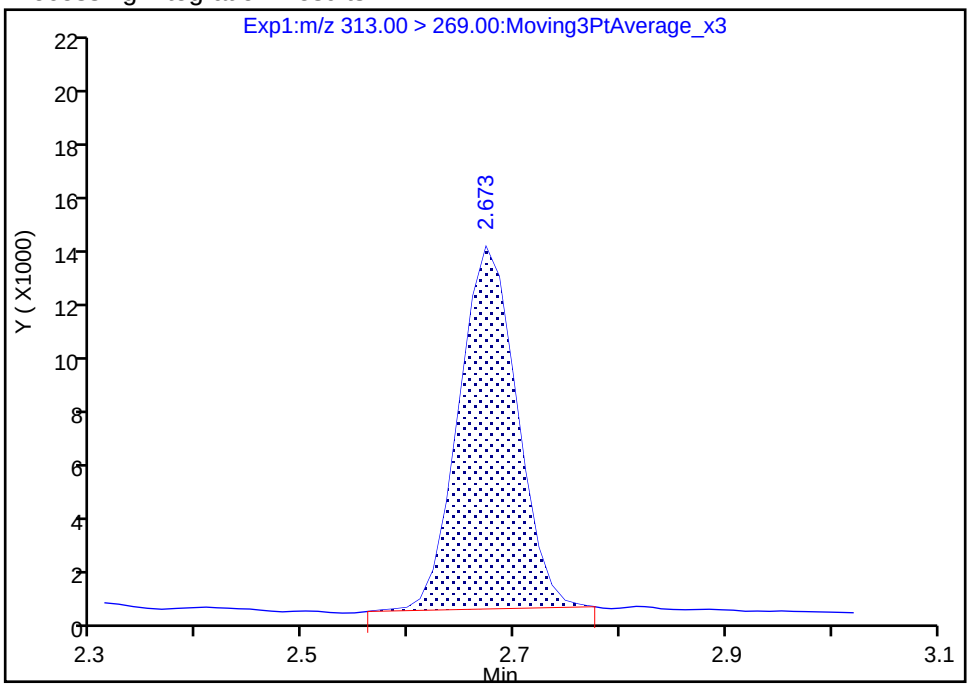
Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40160.b\SC022520A05.d
Injection Date: 25-Feb-2020 13:23:54 Instrument ID: LC812
Lims ID: CCVL
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

6 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

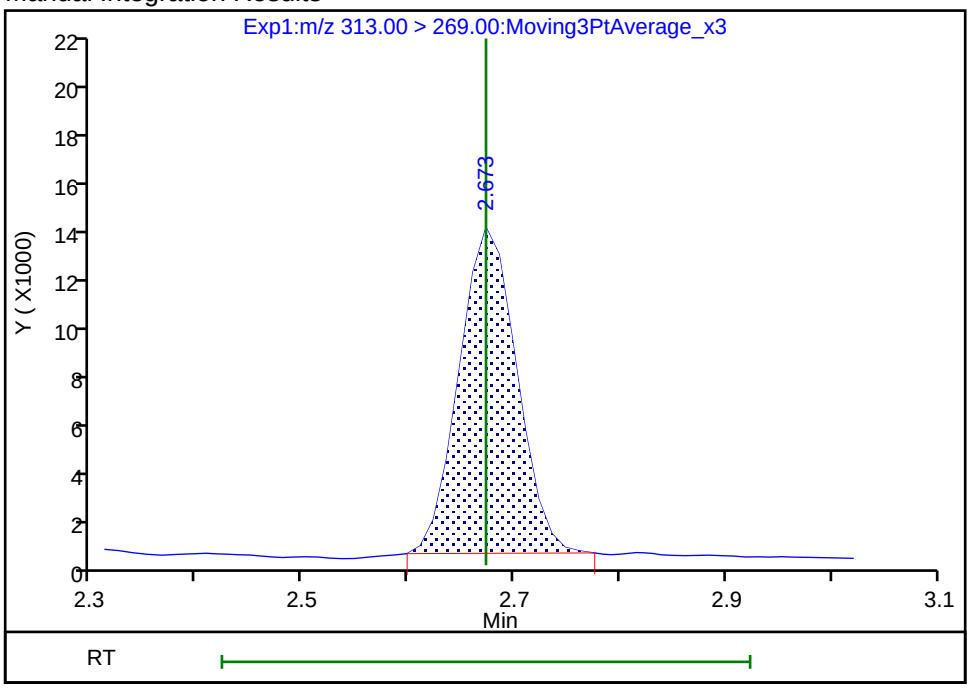
Processing Integration Results

RT: 2.67
Area: 50097
Amount: 0.068524
Amount Units: ng/ml



Manual Integration Results

RT: 2.67
Area: 49373
Amount: 0.067534
Amount Units: ng/ml



Reviewer: murrayjw, 25-Feb-2020 13:51:15
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

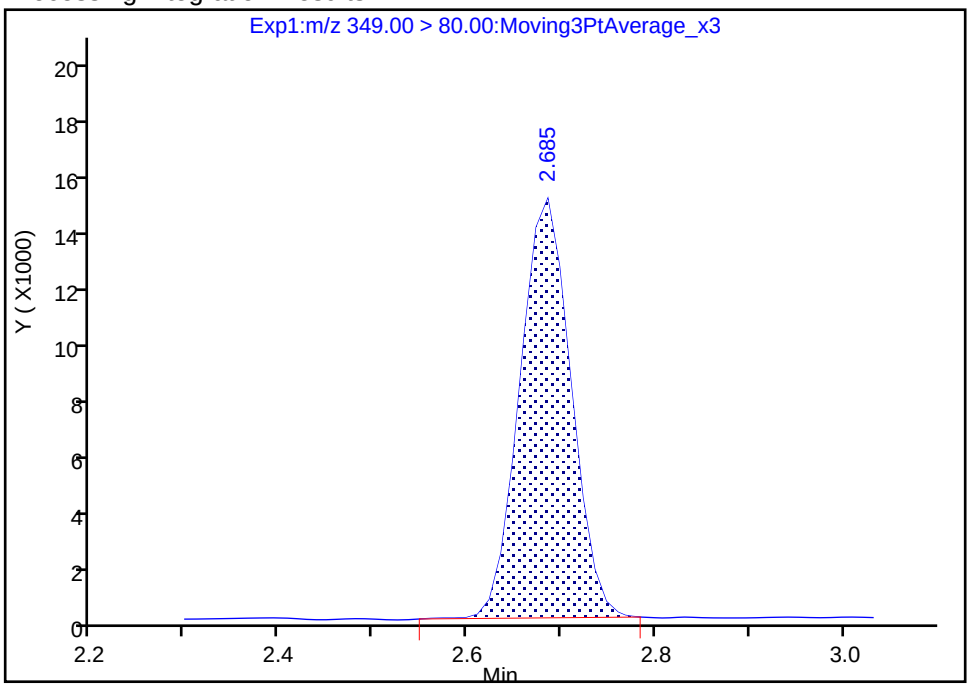
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Injection Date: 25-Feb-2020 13:23:54 Instrument ID: LC812
Lims ID: CCVL
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

70 Perfluoropentanesulfonic acid, CAS: 2706-91-4

Signal: 1

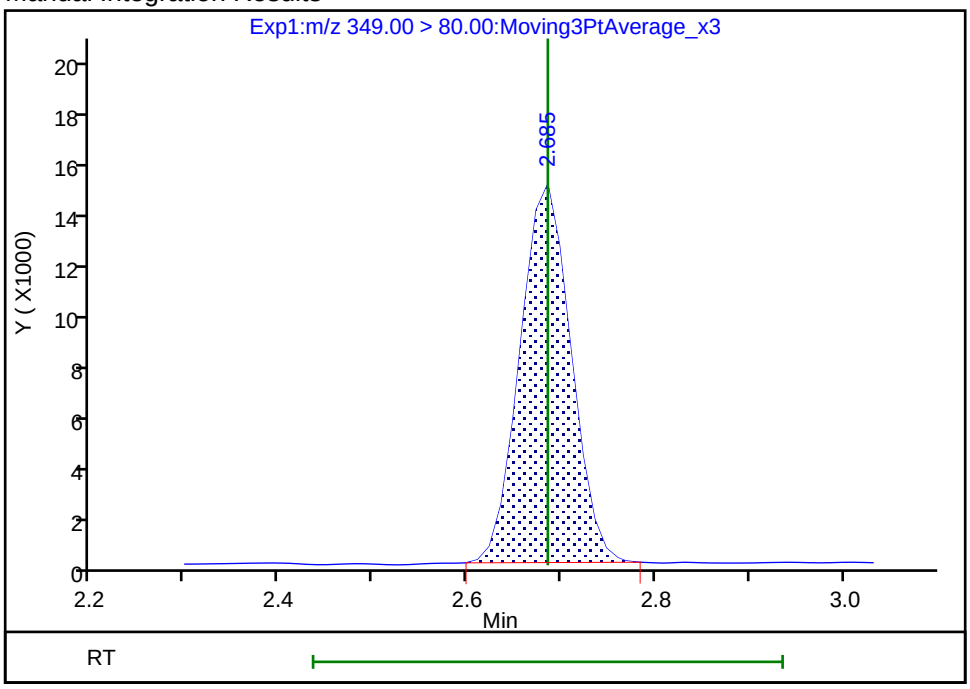
Processing Integration Results

RT: 2.69
Area: 54727
Amount: 0.070639
Amount Units: ng/ml



Manual Integration Results

RT: 2.69
Area: 54512
Amount: 0.070361
Amount Units: ng/ml



Reviewer: murrayjw, 25-Feb-2020 13:51:35
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

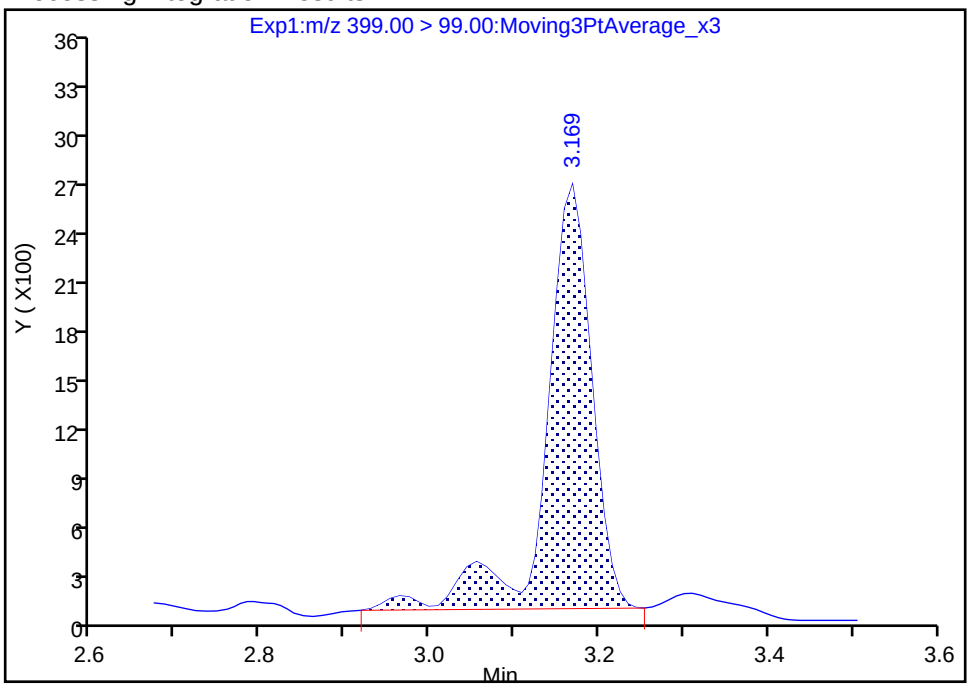
Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40160.b\SC022520A05.d
Injection Date: 25-Feb-2020 13:23:54 Instrument ID: LC812
Lims ID: CCVL
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

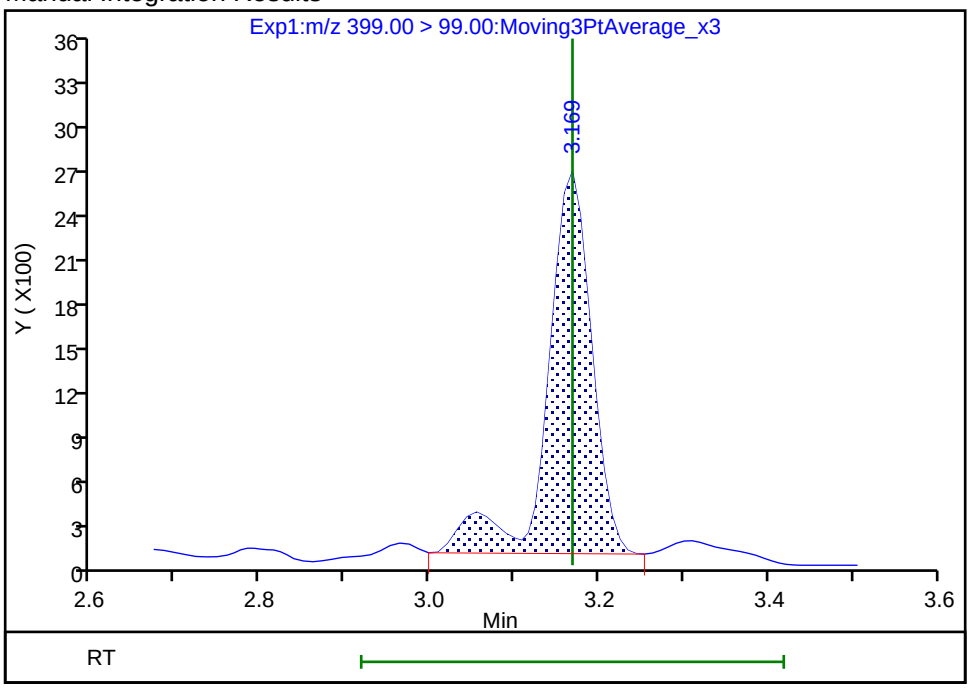
Processing Integration Results

RT: 3.17
Area: 9920
Amount: 0.058230
Amount Units: ng/ml



Manual Integration Results

RT: 3.17
Area: 9537
Amount: 0.055209
Amount Units: ng/ml



Reviewer: deannd, 26-Feb-2020 08:03:55
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40160.b\SC022520A05.d

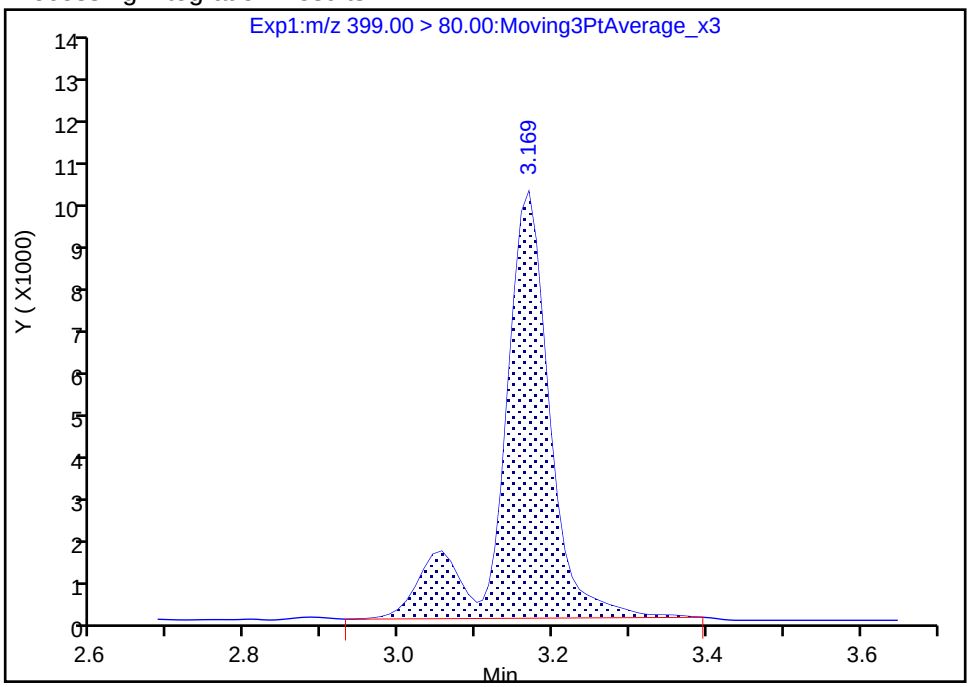
Injection Date:	25-Feb-2020 13:23:54	Instrument ID:	LC812		
Lims ID:	CCVL				
Client ID:					
Operator ID:	lc812tech	ALS Bottle#:	2	Worklist Smp#:	5
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

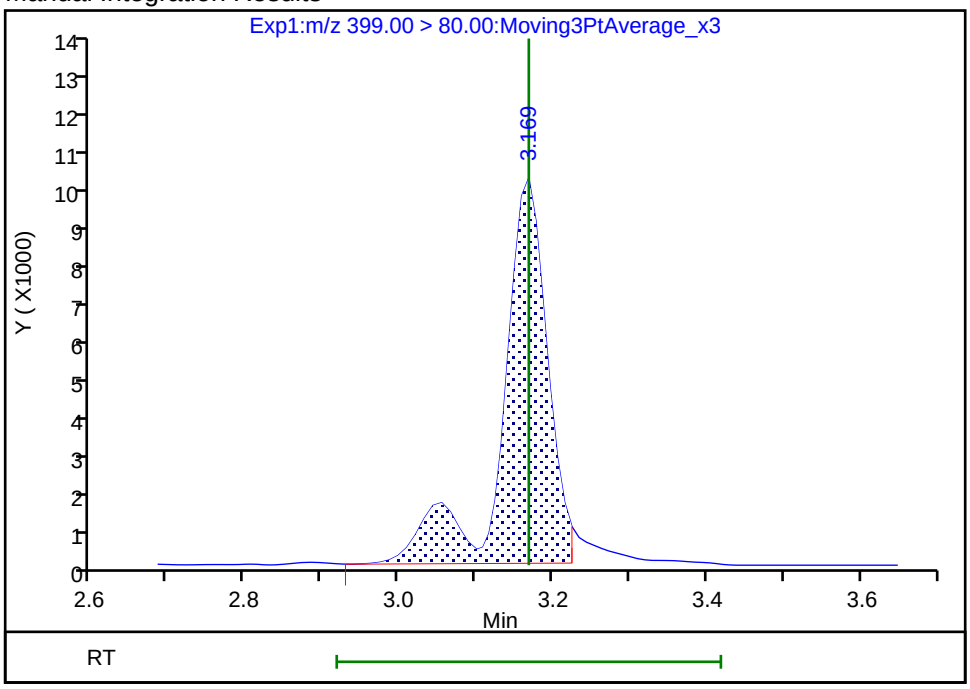
Processing Integration Results

RT: 3.17
Area: 41952
Amount: 0.058230
Amount Units: ng/ml



Manual Integration Results

RT: 3.17
Area: 39775
Amount: 0.055209
Amount Units: ng/ml



Reviewer: deannd, 26-Feb-2020 08:03:59

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

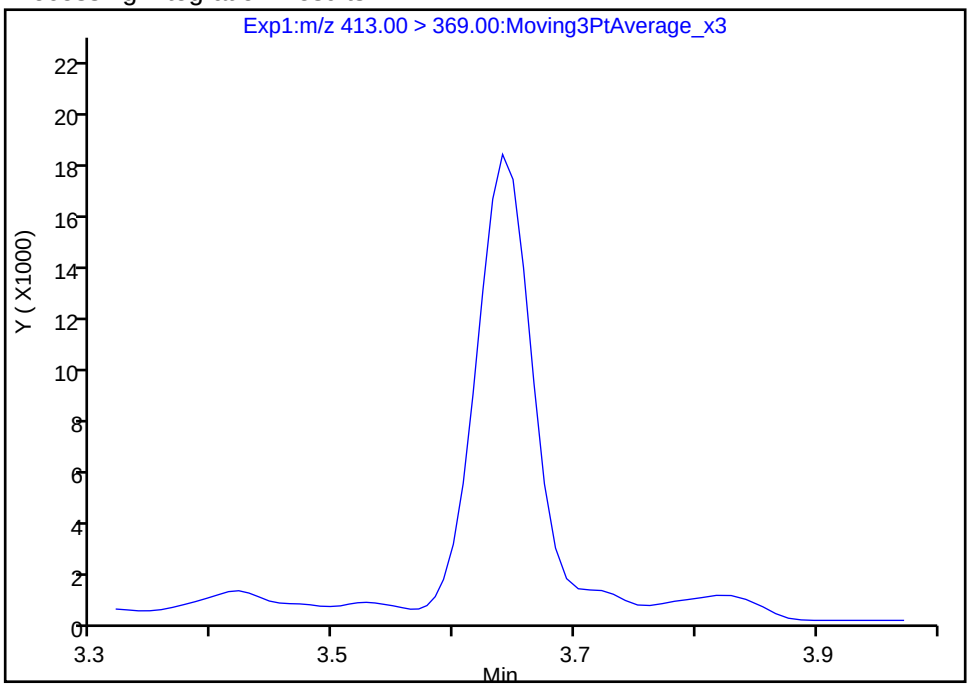
Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40160.b\SC022520A05.d
Injection Date: 25-Feb-2020 13:23:54 Instrument ID: LC812
Lims ID: CCVL
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

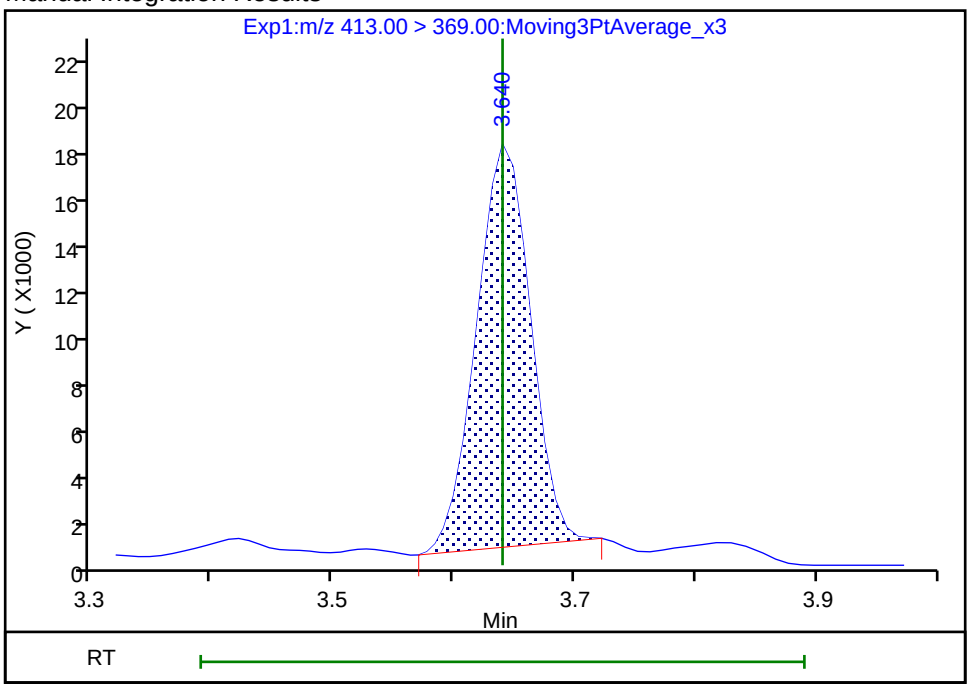
Not Detected
Expected RT: 3.64

Processing Integration Results



Manual Integration Results

RT: 3.64
Area: 52472
Amount: 0.064123
Amount Units: ng/ml



Reviewer: murrayjw, 25-Feb-2020 13:52:03
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

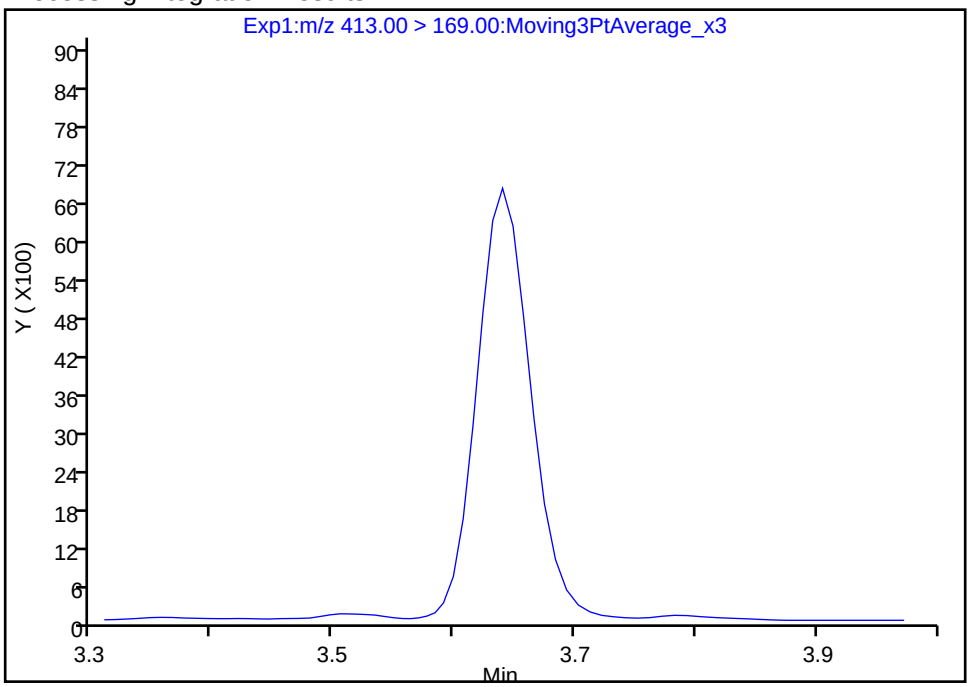
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40160.b\SC022520A05.d				
Injection Date:	25-Feb-2020 13:23:54	Instrument ID:	LC812		
Lims ID:	CCVL				
Client ID:					
Operator ID:	lc812tech	ALS Bottle#:	2	Worklist Smp#:	5
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

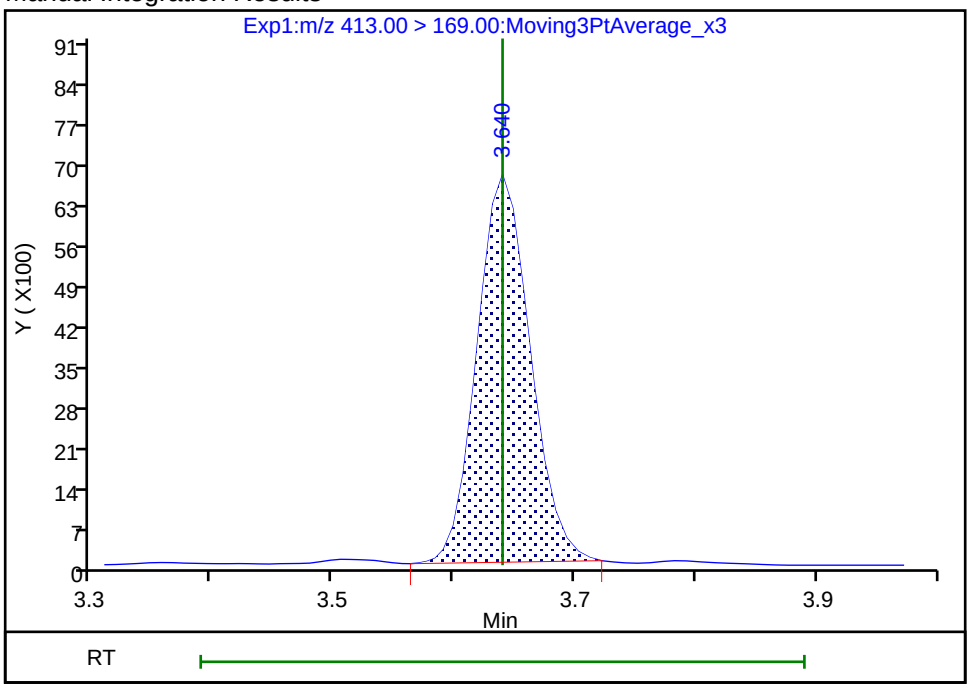
Not Detected
Expected RT: 3.64

Processing Integration Results



Manual Integration Results

RT: 3.64
Area: 20515
Amount: 0.064123
Amount Units: ng/ml



Reviewer: murrayjw, 25-Feb-2020 13:52:10
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

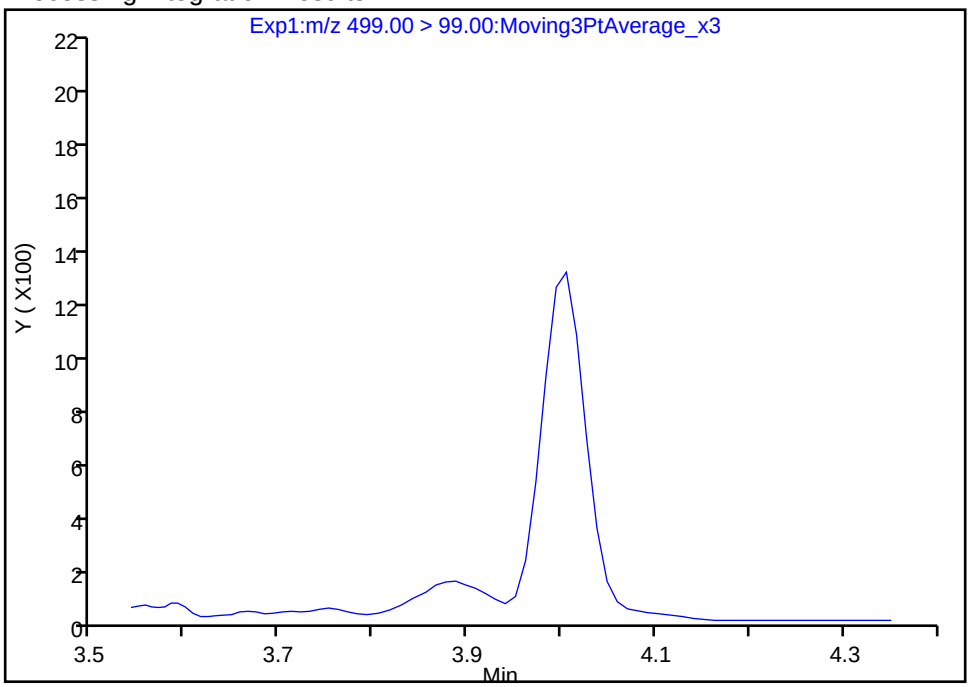
Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40160.b\SC022520A05.d
Injection Date: 25-Feb-2020 13:23:54 Instrument ID: LC812
Lims ID: CCVL
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

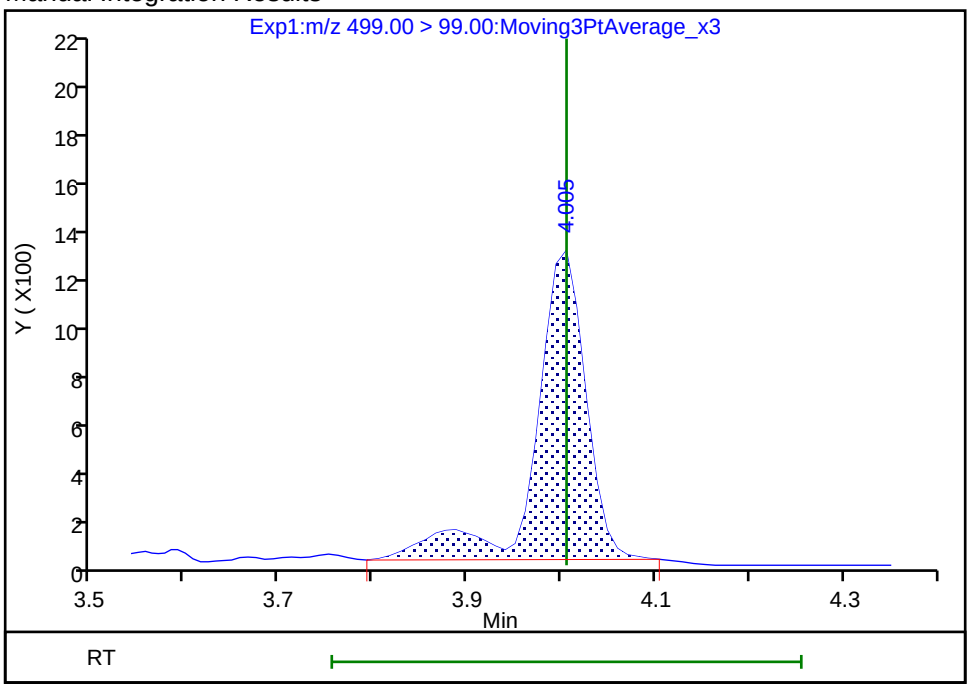
Not Detected
Expected RT: 4.01

Processing Integration Results



Manual Integration Results

RT: 4.01
Area: 4645
Amount: 0.053414
Amount Units: ng/ml



Reviewer: murrayjw, 25-Feb-2020 13:52:39
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

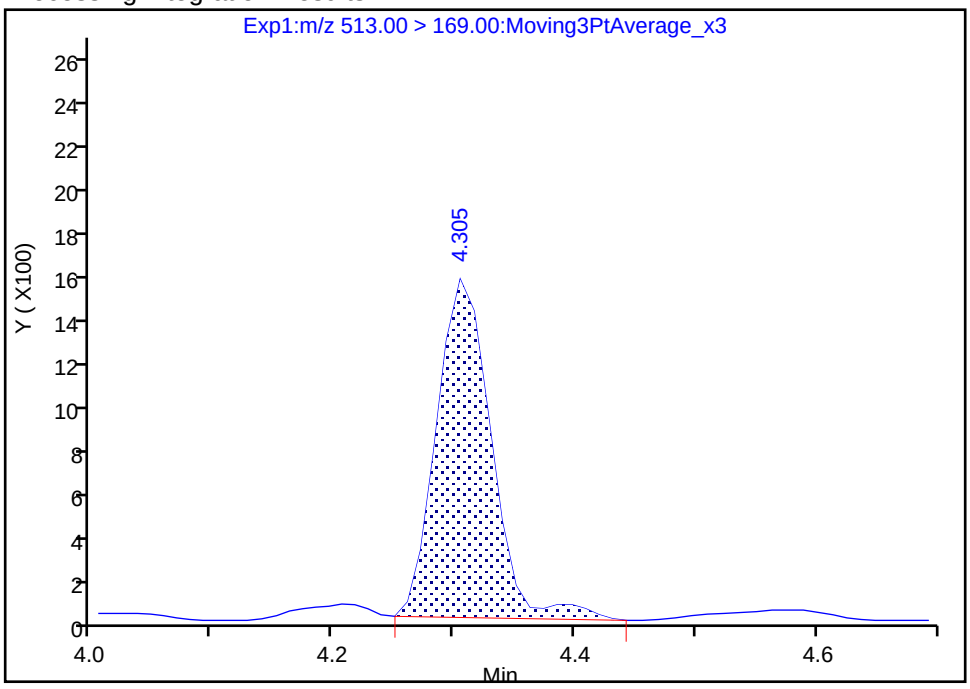
Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40160.b\SC022520A05.d
Injection Date: 25-Feb-2020 13:23:54 Instrument ID: LC812
Lims ID: CCVL
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

24 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 2

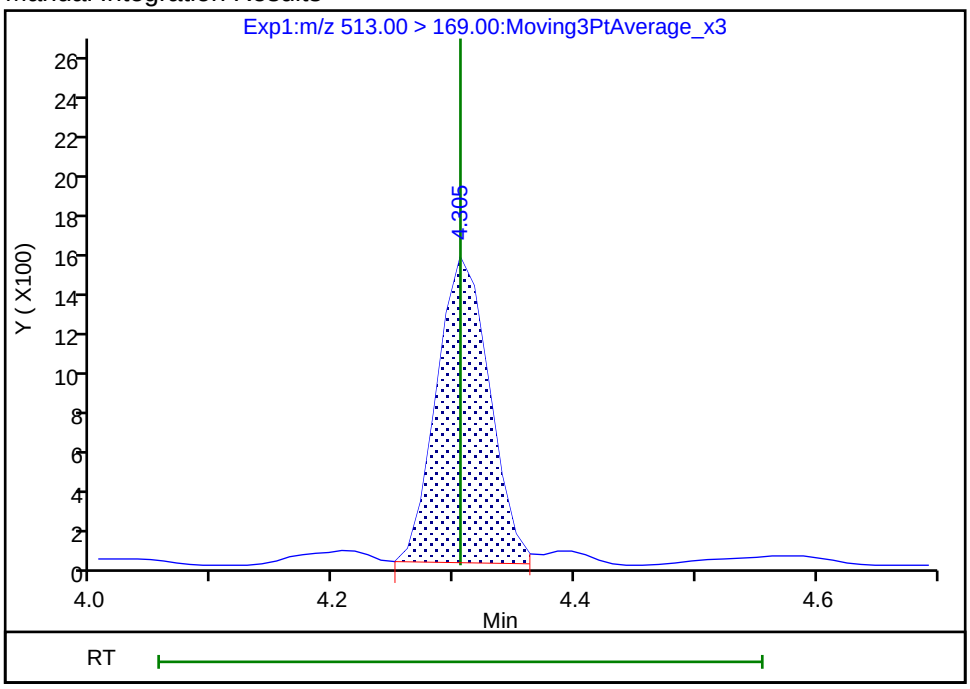
Processing Integration Results

RT: 4.30
Area: 4758
Amount: 0.053691
Amount Units: ng/ml



Manual Integration Results

RT: 4.30
Area: 4568
Amount: 0.053691
Amount Units: ng/ml



Reviewer: deannd, 26-Feb-2020 08:04:29
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

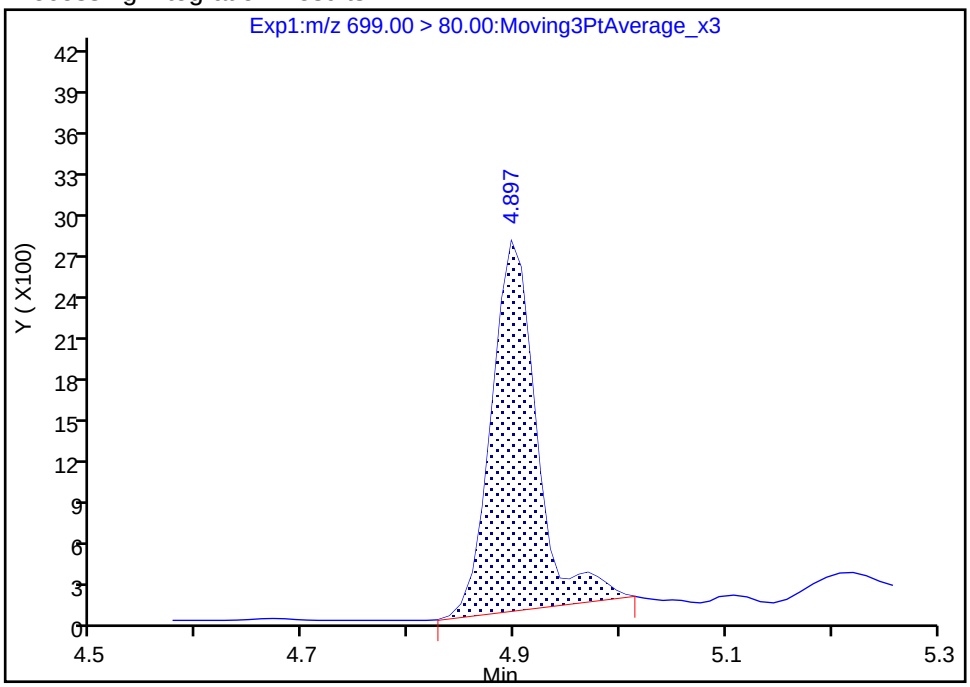
Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40160.b\SC022520A05.d
Injection Date: 25-Feb-2020 13:23:54 Instrument ID: LC812
Lims ID: CCVL
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

75 Perfluorododecanesulfonic acid (PFDoS), CAS: 79780-39-5

Signal: 1

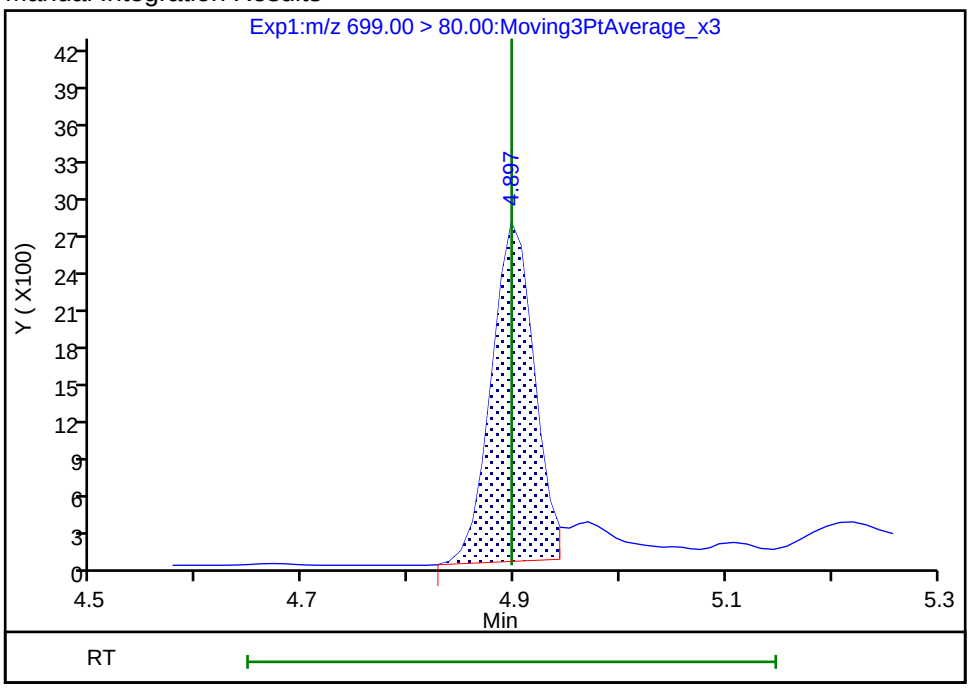
Processing Integration Results

RT: 4.90
Area: 8111
Amount: 0.063150
Amount Units: ng/ml



Manual Integration Results

RT: 4.90
Area: 7721
Amount: 0.060113
Amount Units: ng/ml



Reviewer: deannd, 26-Feb-2020 08:04:55
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Lab Sample ID: CCVIS 200-152693/6 Calibration Date: 02/25/2020 13:32

Instrument ID: LC812 Calib Start Date: 02/10/2020 11:48

GC Column: C-18 ID: 4.60(mm) Calib End Date: 02/10/2020 12:29

Lab File ID: SC022520A06.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.9513	0.8787		924	1000	-7.6	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.079	1.036		960	1000	-4.0	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.020	1.007		872	884	-1.3	40.0
1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2)	AveID	1.939	1.830		881	934	-5.6	50.0
Perfluorohexanoic acid (PFHxA)	AveID	0.9901	0.9641		974	1000	-2.6	40.0
Perfluoropentanesulfonic acid	AveID	1.269	1.128		834	938	-11.1	50.0
HFPO-DA	AveID	2.342	1.739		743	1000	-25.7	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.023	0.9753		953	1000	-4.7	40.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.180	1.018		785	910	-13.7	40.0
DONA	AveID	3.676	3.181		815	942	-13.5	50.0
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	AveID	1.124	0.9931		838	948	-11.6	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	1.216	1.129		883	952	-7.2	50.0
Perfluorooctanoic acid (PFOA)	AveID	1.041	1.040		998	1000	-0.2	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.098	1.082		914	928	-1.5	40.0
Perfluorononanoic acid (PFNA)	AveID	1.028	0.8882		864	1000	-13.6	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	1.399	1.196		797	932	-14.4	50.0
Perfluorononanesulfonic acid	AveID	0.8855	0.9216		999	960	4.1	50.0
Perfluorodecanoic acid (PFDA)	AveID	1.024	1.000		977	1000	-2.3	40.0
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	AveID	0.6207	0.5667		875	958	-8.7	40.0
Perfluorooctanesulfonamide (PFOSA)	AveID	1.025	0.9928		969	1000	-3.1	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	AveID	0.8567	0.8718		1020	1000	1.8	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.7787	0.7512		930	964	-3.5	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9066	0.8417		929	1000	-7.1	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.7968	0.7936		996	1000	-0.4	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.589	1.296		768	942	-18.5	50.0
Perfluorododecanoic acid (PFDoA)	AveID	0.9702	0.9329		961	1000	-3.9	40.0
10:2 FTS	AveID	0.3321	0.3309		961	964	-0.3	50.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.2703	0.2705		969	968	0.1	50.0
Perfluorotridecanoic acid (PFTriA)	AveID	0.8833	0.8814		998	1000	-0.2	50.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1556	0.1675		1080	1000	7.6	40.0

FORM VII 537 (modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Lab Sample ID: CCVIS 200-152693/6 Calibration Date: 02/25/2020 13:32

Instrument ID: LC812 Calib Start Date: 02/10/2020 11:48

GC Column: C-18 ID: 4.60(mm) Calib End Date: 02/10/2020 12:29

Lab File ID: SC022520A06.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluoro-n-hexadecanoic acid (PFHxDA)	L1ID		0.8899		975	1000	-2.5	40.0
Perfluoro-n-octadecanoic acid (PFODA)	AveID	0.6228	0.6275		1010	1000	0.8	50.0
13C4 PFBA	Ave	1.040	1.148		2760	2500	10.3	50.0
13C5 PFPeA	Ave	0.8098	0.8807		2720	2500	8.8	50.0
13C3 PFBS	Ave	1.089	1.132		2420	2330	3.9	50.0
M2-4:2 FTS	Ave	0.0796	0.0793		2330	2340	-0.4	50.0
13C2 PFHxA	Ave	0.9471	0.9002		2380	2500	-5.0	50.0
13C3 HFPO-DA	Ave	0.0751	0.0909		3030	2500	21.1	50.0
13C4 PFHpA	Ave	0.9106	0.9067		2490	2500	-0.4	50.0
18O2 PFHxS	Ave	0.7696	0.8264		2540	2370	7.4	50.0
M2-6:2 FTS	Ave	0.1054	0.1152		2590	2380	9.2	50.0
13C4 PFOA	Ave	0.9424	1.002		2660	2500	6.3	50.0
13C4 PFOS	Ave	0.5730	0.6474		2700	2390	13.0	50.0
13C5 PFNA	Ave	0.9041	0.9108		2520	2500	0.7	50.0
13C2 PFDA	Ave	0.9823	1.070		2720	2500	8.9	50.0
M2-8:2 FTS	Ave	0.1489	0.1522		2450	2400	2.2	50.0
13C8 FOSA	Ave	1.008	1.165		2890	2500	15.6	50.0
d3-NMeFOSAA	Ave	0.0775	0.1010		3260	2500	30.3	50.0
13C2 PFUnA	Ave	0.8568	0.8943		2610	2500	4.4	50.0
d5-NEtFOSAA	Ave	0.0883	0.1098		3110	2500	24.3	50.0
13C2 PFDoA	Ave	0.9588	1.009		2630	2500	5.3	50.0
13C2 PFTeDA	Ave	0.8231	0.9194		2790	2500	11.7	50.0
13C2 PFHxDA	Ave	0.8949	0.9220		2580	2500	3.0	50.0

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40160.b\SC022520A06.d
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 25-Feb-2020 13:32:12 ALS Bottle#: 3 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 200-0040160-006 Plate: 1 Rack: 1
Operator ID: lc812tech Instrument ID: LC812
Sublist: chrom-PFC_LC812*sub3

Method: \\ChromNA\Burlington\ChromData\LC812\20200225-40160.b\PFC_LC812.m
Limit Group: LC_PFC_ICAL
Last Update: 26-Feb-2020 08:43:41 Calib Date: 10-Feb-2020 12:29:33
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL010.d

Column 1 : C-18 (4.60 mm) Det: EXP1
Process Host: CTX0311

First Level Reviewer: murrayjw Date: 25-Feb-2020 13:54:55
Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										
217.00 > 172.00	1.917	1.917	0.0	0.527	2415944	2.76		110	22668	
2 Perfluorobutanoic acid										
212.90 > 169.00	1.917	1.917	0.0	1.000	849129	0.9237		92.4	120	
D 3 13C5 PFPeA										
267.90 > 223.00	2.257	2.257	0.0	0.620	1853769	2.72		109	2035	
4 Perfluoropentanoic acid										
262.90 > 219.00	2.271	2.271	0.0	1.006	768356	0.9604		96.0	85.4	
D 47 13C3 PFBS										
301.90 > 80.00	2.284	2.284	0.0	0.628	2215794	2.42		104	1002836	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.284	2.284	0.0	1.000	848135	0.8723	Target=2.19	98.7	1260	
298.90 > 99.00	2.284	2.284	0.0	1.000	392614		2.16(1.09-3.28)		467	
61 1H,1H,2H,2H-perfluorohexanesulfoni										
327.00 > 307.00	2.623	2.623	0.0	1.000	114148	0.8813		94.4	875	
D 60 M2-4:2 FTS										
329.00 > 81.00	2.623	2.623	0.0	0.721	155959	2.33		99.6	194	
D 7 13C2 PFHxA										
315.00 > 270.00	2.673	2.673	0.0	0.734	1894795	2.38		95.0	1854	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.673	2.673	0.0	1.000	730672	0.9737	Target=12.51	97.4	282	
313.00 > 119.00	2.673	2.673	0.0	1.000	60327		12.11(6.25-18.76)		176	
70 Perfluoropentanesulfonic acid										
349.00 > 80.00	2.685	2.685	0.0	0.848	736498	0.8340	Target=3.29	88.9	1229	
349.00 > 99.00	2.685	2.685	0.0	0.848	215966		3.41(1.64-4.93)		630	
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.815	2.815	0.0	1.000	133160	0.7427		74.3	59.5	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 64 13C3 HFPO-DA										
332.10 > 287.00	2.815	2.815	0.0	0.773	191378	3.03		121	1528	
D 11 18O2 PFHxS										
403.00 > 84.00	3.168	3.168	0.0	0.870	1645666	2.54		107	8099	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.168	3.168	0.0	1.000	644770	0.7852	Target=4.33	86.3	3344	M
399.00 > 99.00	3.168	3.168	0.0	1.000	154887		4.16(2.17-6.50)		453	
D 9 13C4 PFHpA										
367.00 > 322.00	3.168	3.168	0.0	0.870	1908476	2.49		99.6	5362	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.168	3.168	0.0	1.000	744544	0.9533	Target=3.79	95.3	436	
363.00 > 169.00	3.168	3.168	0.0	1.000	210730		3.53(1.89-5.68)		986	
77 DONA										
377.00 > 251.00	3.225	3.225	0.0	0.805	1633323	0.8152	Target=2.43	86.5	1652	
377.00 > 85.00	3.225	3.225	0.0	0.805	662102		2.47(1.22-3.65)		1073	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.624	3.624	0.0	1.000	91287	0.8378		88.4	1552	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.624	3.624	0.0	0.996	230297	2.59		109	1547	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.632	3.632	0.0	0.907	585694	0.8834	Target=6.01	92.8	5371	
449.00 > 99.00	3.632	3.632	0.0	0.907	94172		6.22(3.01-9.02)		1594	
D 14 13C4 PFOA										
417.00 > 372.00	3.640	3.640	0.0	1.000	2108790	2.66		106	21025	
* 62 13C2 PFOA										
415.00 > 370.00	3.640	3.640	0.0		2104973	2.50			9210	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.640	3.640	0.0	1.000	877027	1.00	Target=2.66	99.8	376	
413.00 > 169.00	3.640	3.640	0.0	1.000	364126		2.41(1.33-3.99)		2072	
D 18 13C4 PFOS										
503.00 > 80.00	4.005	4.005	0.0	1.100	1302706	2.70		113	8823	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.005	4.005	0.0	1.000	547260	0.9143	Target=5.29	98.5	5555	
499.00 > 99.00	4.005	4.005	0.0	1.000	86982		6.29(2.65-7.94)		855	
D 19 13C5 PFNA										
468.00 > 423.00	4.027	4.027	0.0	1.106	1917151	2.52		101	31991	
20 Perfluorononanoic acid										
463.00 > 419.00	4.027	4.027	0.0	1.000	681127	0.8637	Target=7.73	86.4	381	
463.00 > 169.00	4.027	4.027	0.0	1.000	114632		5.94(3.87-11.60)		1854	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	4.164	4.164	0.0	1.040	607819	0.7974		85.6	5451	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.283	4.283	0.0	1.069	482231	1.00	Target=2.78	104	5752	
549.00 > 99.00	4.283	4.283	0.0	1.069	159816		3.02(1.39-4.17)		1363	
D 23 13C2 PFDA										
515.00 > 470.00	4.305	4.305	0.0	1.183	2252106	2.72		109	11999	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
24 Perfluorodecanoic acid										
513.00 > 469.00	4.305	4.305	0.0	1.000	901072	0.9768	Target=9.75	97.7	123	
513.00 > 169.00	4.305	4.305	0.0	1.000	100278		8.99(4.88-14.63)		348	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.317	4.317	0.0	1.186	307002	2.45		102	1808	
25 1H,1H,2H,2H-perfluorodecanesulfoni										
527.00 > 507.00	4.317	4.317	0.0	1.000	69588	0.8746		91.3	1449	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.340	4.340	0.0	1.000	974004	0.9688		96.9	2902	
D 21 13C8 FOSA										
506.00 > 78.00	4.340	4.340	0.0	1.192	2452623	2.89		116	5274	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.431	4.431	0.0	1.217	212598	3.26		130	1109	
28 N-methylperfluorooctanesulfonamido										
570.00 > 419.00	4.443	4.443	0.0	1.003	74139	1.02		102	1161	
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.524	4.524	0.0	1.129	394714	0.9300	Target=2.63	96.5	4536	
599.00 > 99.00	4.510	4.524	-0.014	1.126	130959		3.01(1.32-3.95)		1302	
D 30 13C2 PFUnA										
565.00 > 520.00	4.537	4.537	0.0	1.246	1882497	2.61		104	9479	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.551	4.551	0.0	1.003	633830	0.9285	Target=7.31	92.9	705	
563.00 > 169.00	4.551	4.551	0.0	1.003	87065		7.28(3.66-10.97)		1081	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.551	4.551	0.0	1.250	231152	3.11		124	2105	
33 N-ethylperfluorooctanesulfonamidoa										
584.00 > 419.00	4.563	4.563	0.0	1.003	73380	1.00		99.6	756	
66 11-Chloroeicosafluoro-3-oxaundecan										
631.00 > 451.00	4.626	4.626	0.0	1.155	665177	0.7678		81.5	5366	
D 36 13C2 PFDoA										
615.00 > 570.00	4.744	4.744	0.0	1.303	2124751	2.63		105	8004	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.744	4.744	0.0	1.000	792830	0.9615	Target=6.96	96.1	209	
613.00 > 169.00	4.744	4.744	0.0	1.000	134507		5.89(3.48-10.44)		1700	
74 1H,1H,2H,2H-perfluorododecanesulfo										
627.00 > 607.00	4.764	4.764	0.0	1.104	40890	0.9606		99.7	1036	
75 Perfluorododecanesulfonic acid (PF										
699.00 > 80.00	4.897	4.897	0.0	1.223	142743	0.9690	Target=0.47	100	529	
699.00 > 99.00	4.897	4.897	0.0	1.223	282115		0.51(0.24-0.71)		2954	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.934	4.934	0.0	1.040	749135	1.00	Target=4.84	99.8	198	
663.00 > 169.00	4.934	4.934	0.0	1.040	174590		4.29(2.42-7.26)		2027	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.108	5.108	0.0	1.403	1935212	2.79		112	8423	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.120	5.120	0.0	1.002	129642	1.08	Target=1.15	108	1309	
713.00 > 219.00	5.108	5.120	-0.012	1.000	107550		1.21(0.58-1.73)		1735	

Report Date: 26-Feb-2020 08:43:41 Chrom Revision: 2.3 19-Feb-2020 16:45:46
Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40160.b\SC022520A06.d
Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 44 13C2 PFHxDA										
815.00 > 770.00	5.465	5.465	0.0	1.501	1940846	2.58		103	9534	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.465	5.465	0.0	1.000	690834	0.9747	Target=4.36	97.5	238	
813.00 > 169.00	5.465	5.465	0.0	1.000	169055		4.09(2.18-6.53)		2526	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.843	5.843	0.0	1.069	487170	1.01	Target=4.01	101	133	
913.00 > 169.00	5.838	5.843	-0.005	1.068	131356		3.71(2.00-6.01)		1602	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

PFAS32NCIC4_00004 Amount Added: 100.00 Units: uL

Report Date: 26-Feb-2020 08:43:41 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40160.b\SC022520A06.d

Injection Date: 25-Feb-2020 13:32:12 Instrument ID: LC812

Lims ID: CCVIS

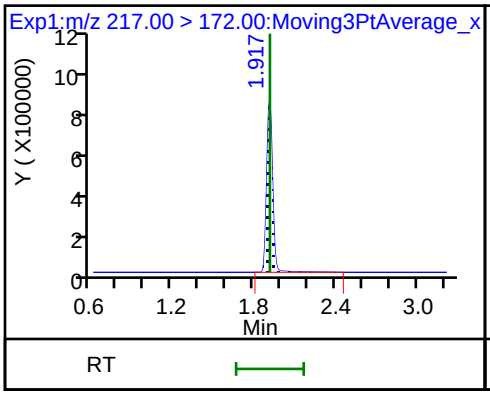
Client ID:

Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 6

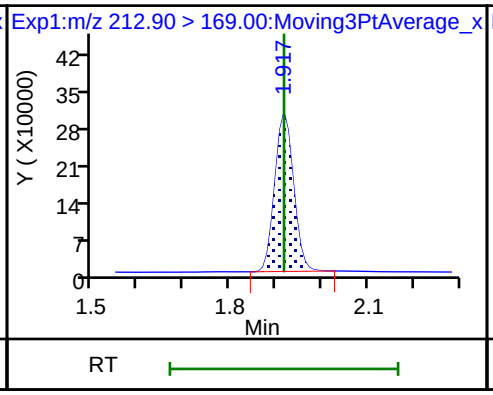
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFC_LC812 Limit Group: LC_PFC_ICAL

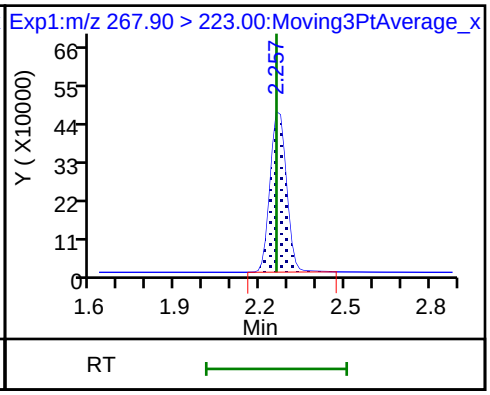
D 1 13C4 PFBA



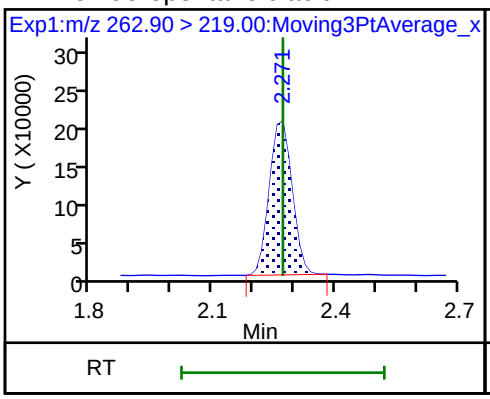
2 Perfluorobutanoic acid



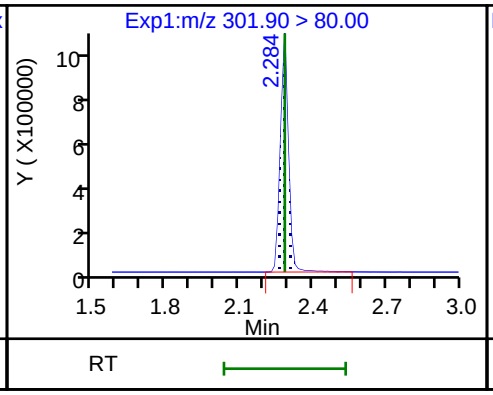
D 3 13C5 PFPeA



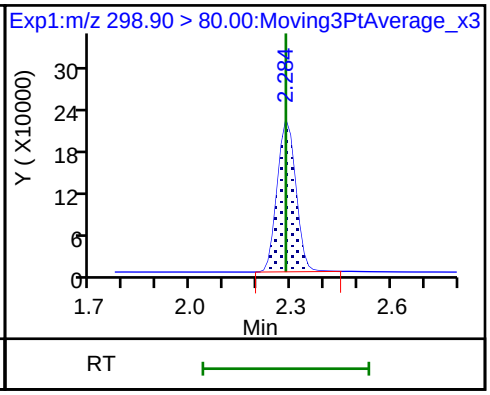
4 Perfluoropentanoic acid



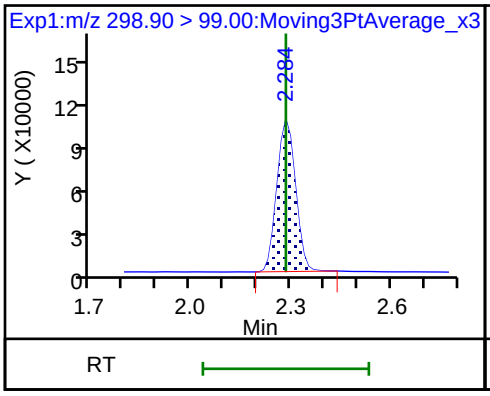
D 47 13C3 PFBS



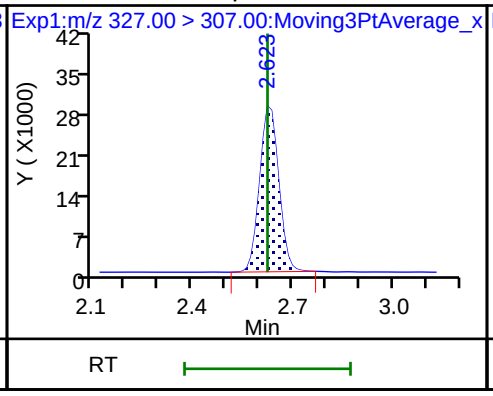
5 Perfluorobutanesulfonic acid



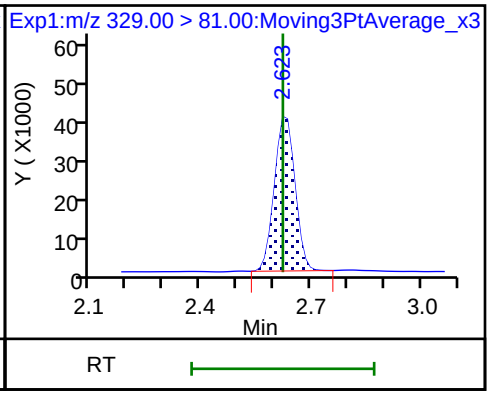
5 Perfluorobutanesulfonic acid



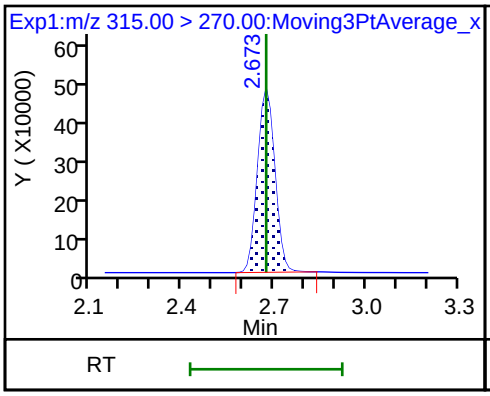
61 1H,1H,2H,2H-perfluorohexanesulfon



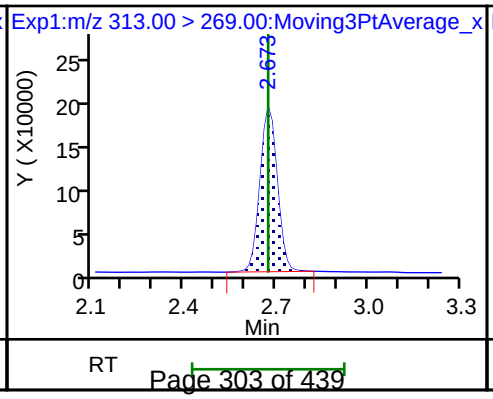
D 60 M2-4:2 FTS



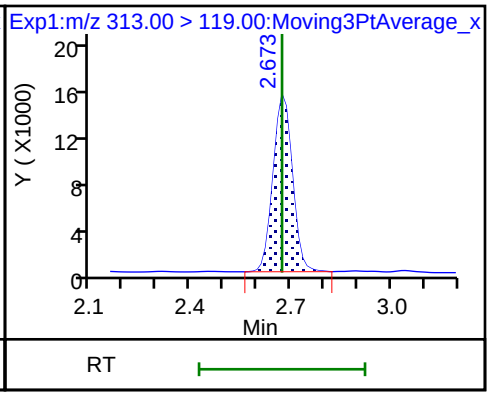
D 7 13C2 PFHxA



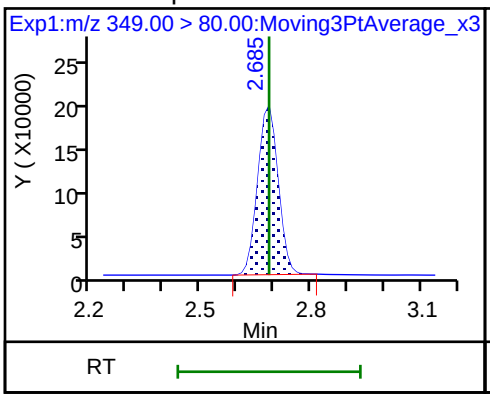
6 Perfluorohexanoic acid



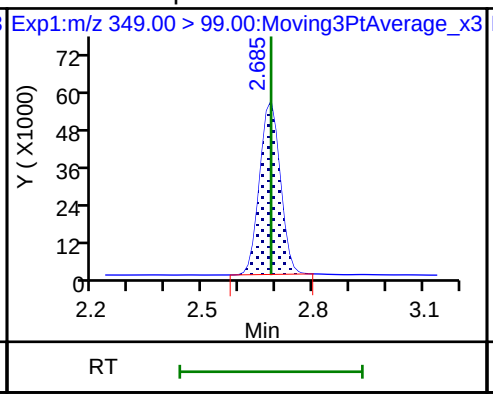
6 Perfluorohexanoic acid



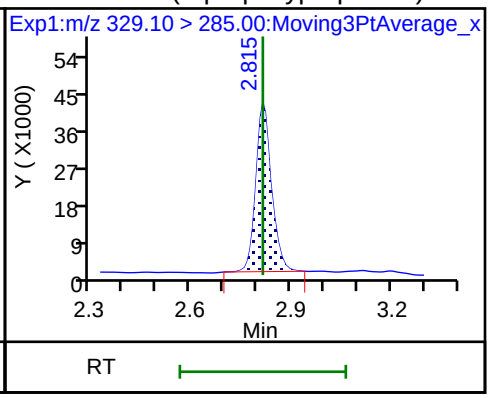
70 Perfluoropentanesulfonic acid



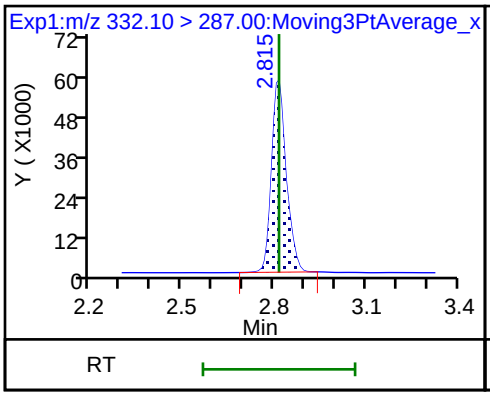
70 Perfluoropentanesulfonic acid



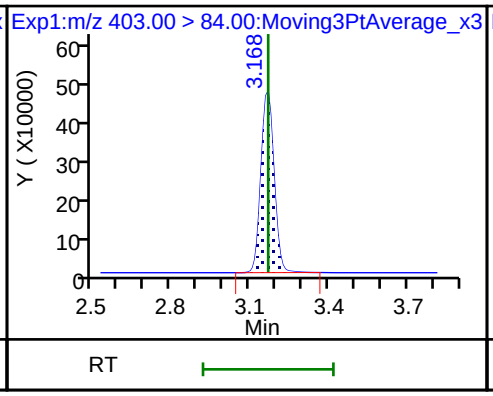
67 Perfluoro(2-propoxypropanoic) acid



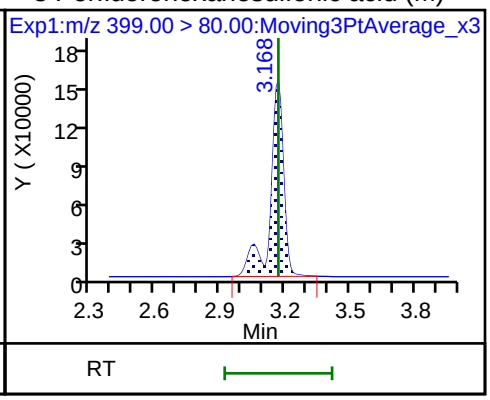
D 64 13C3 HFPO-DA



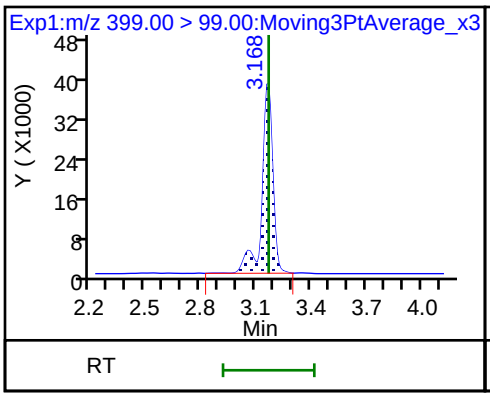
D 11 18O2 PFHxS



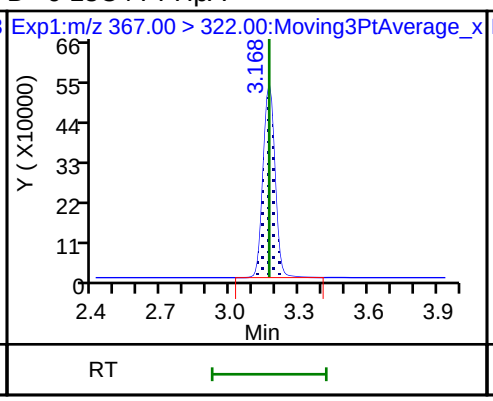
8 Perfluorohexanesulfonic acid (M)



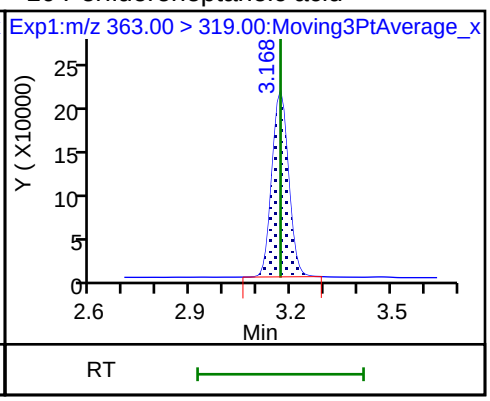
8 Perfluorohexanesulfonic acid



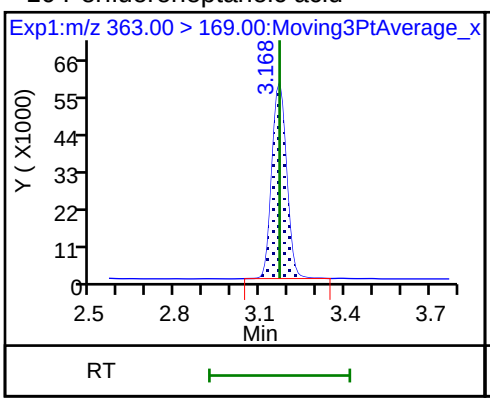
D 9 13C4 PFHpA



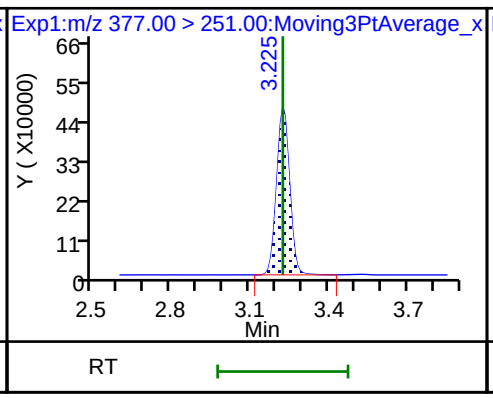
10 Perfluoroheptanoic acid



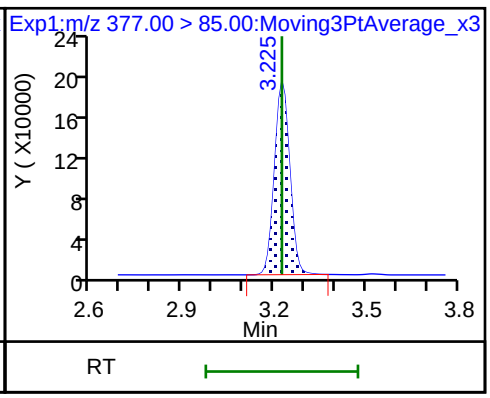
10 Perfluoroheptanoic acid



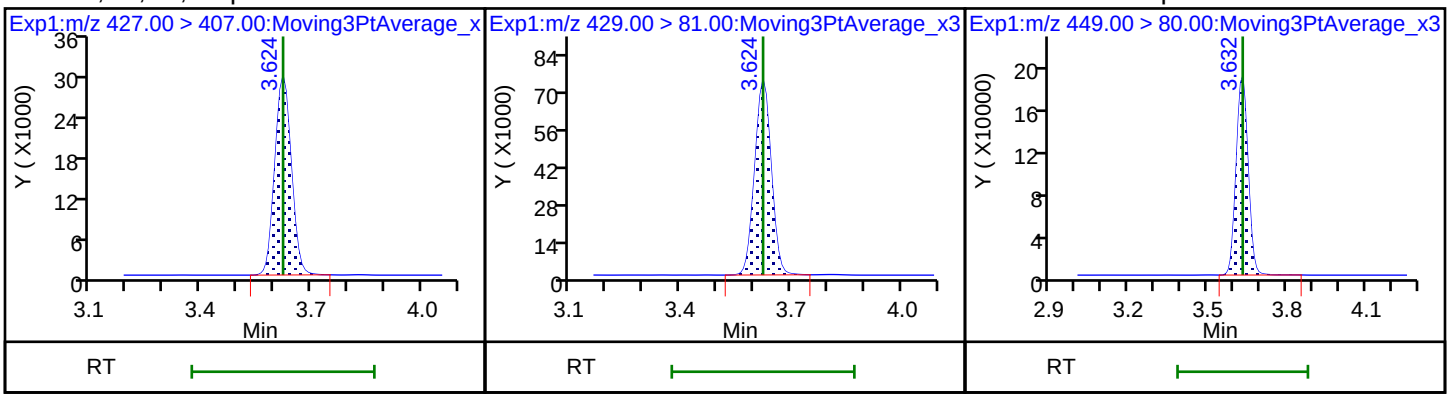
77 DONA



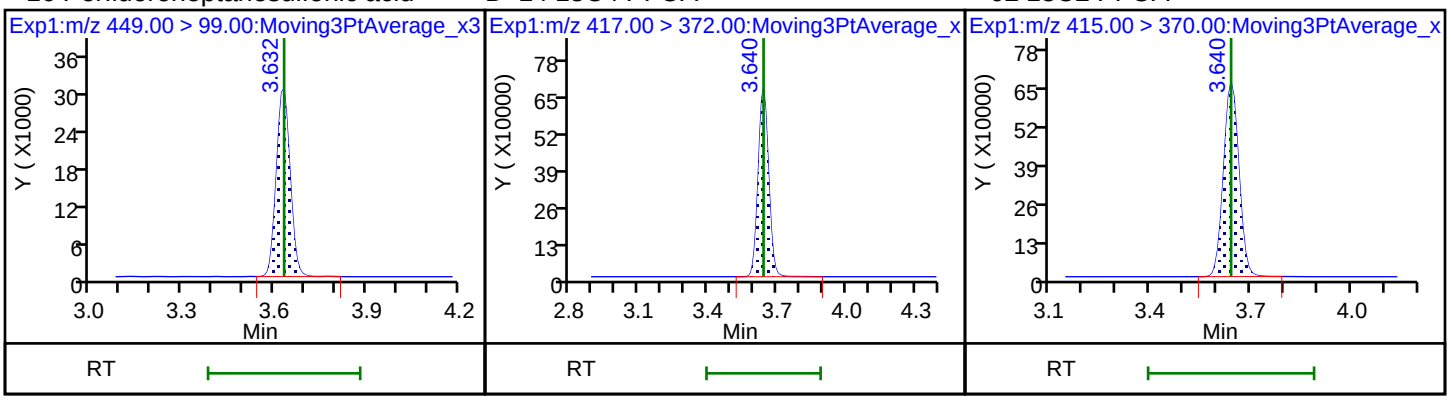
77 DONA



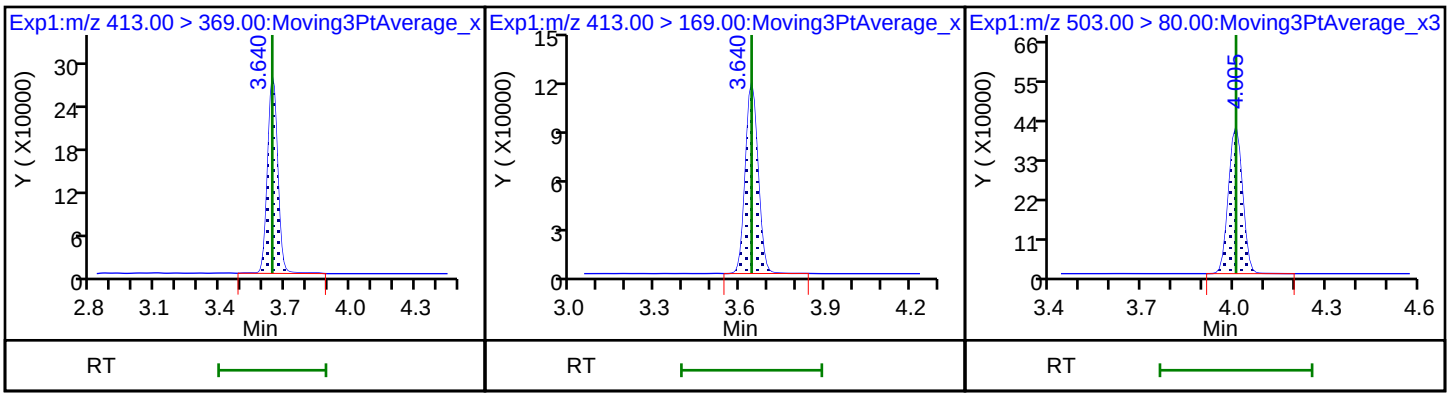
13 1H,1H,2H,2H-perfluorooctanesulfonD 12 M2-6:2 FTS 16 Perfluoroheptanesulfonic acid



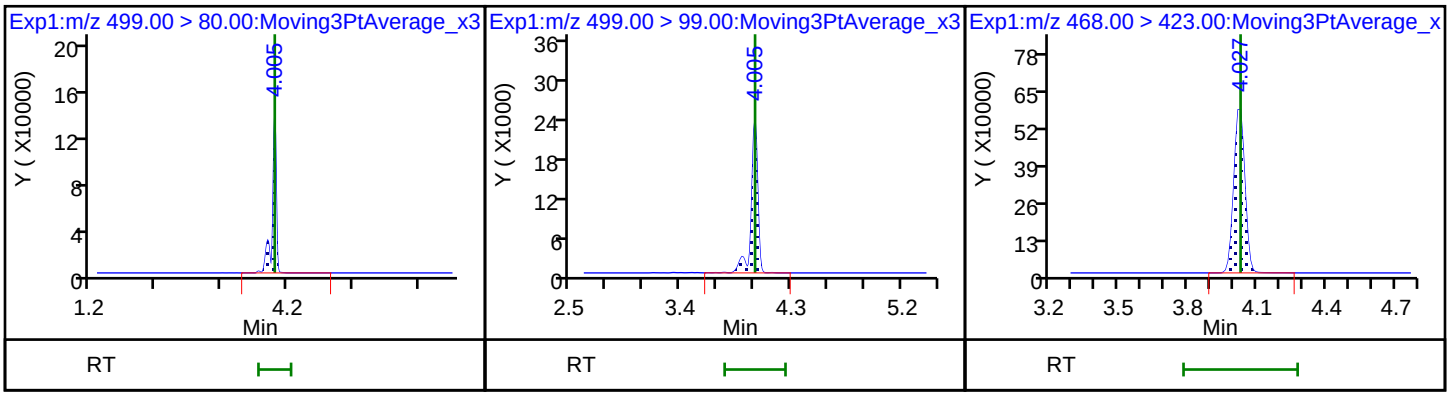
16 Perfluoroheptanesulfonic acid D 14 13C4 PFOA * 62 13C2 PFOA



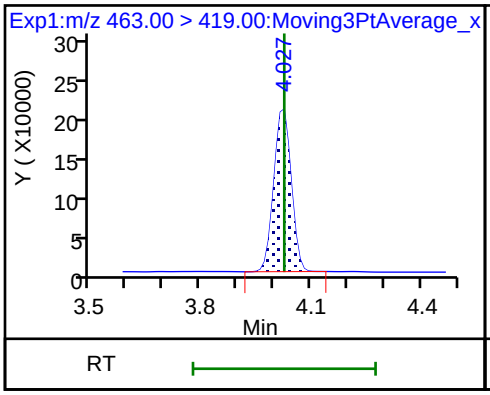
15 Perfluorooctanoic acid 15 Perfluorooctanoic acid D 18 13C4 PFOS



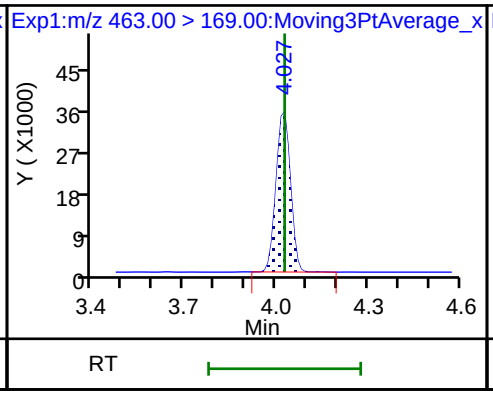
17 Perfluorooctanesulfonic acid 17 Perfluorooctanesulfonic acid D 19 13C5 PFNA



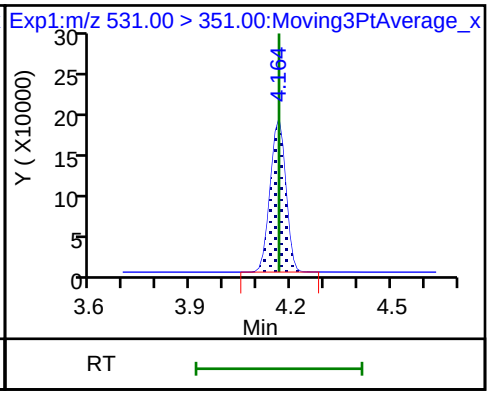
20 Perfluorononanoic acid



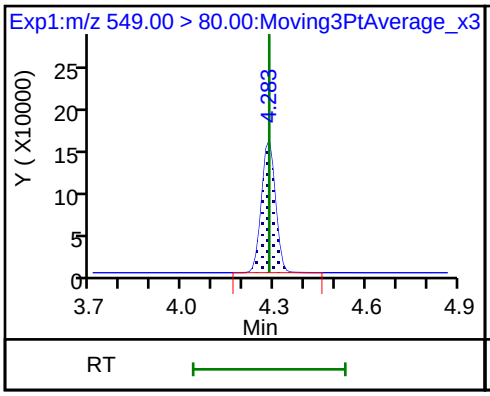
20 Perfluorononanoic acid



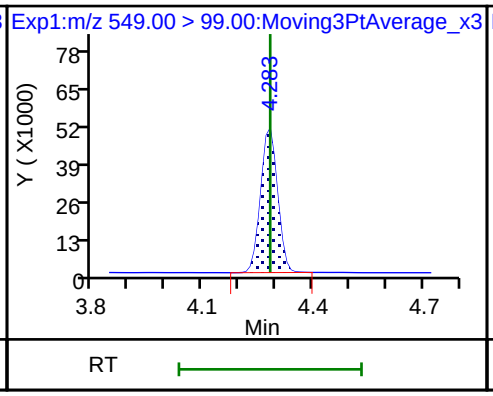
69 9-Chlorohexadecafluoro-3-oxanonane



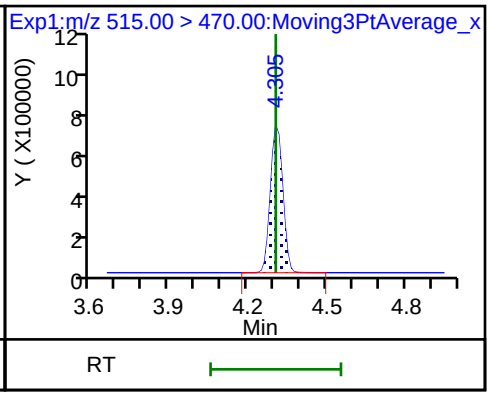
68 Perfluorononanesulfonic acid



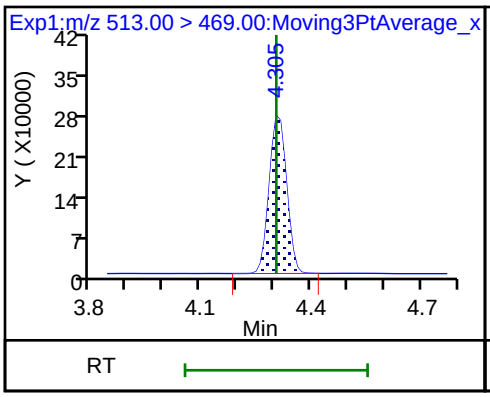
68 Perfluorononanesulfonic acid



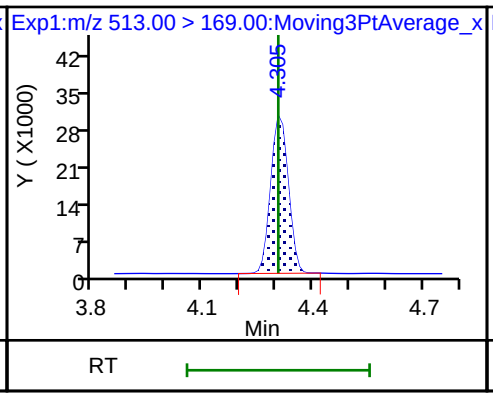
D 23 13C2 PFDA



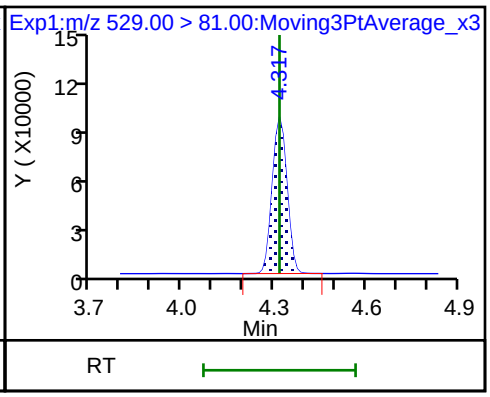
24 Perfluorodecanoic acid



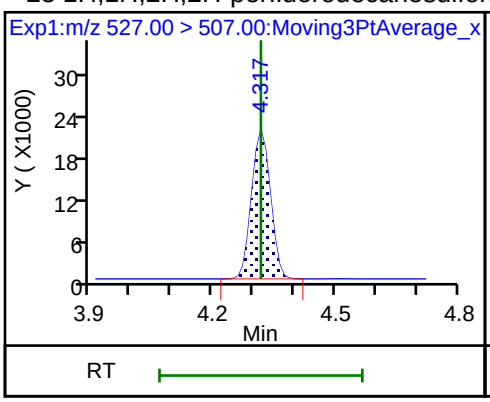
24 Perfluorodecanoic acid



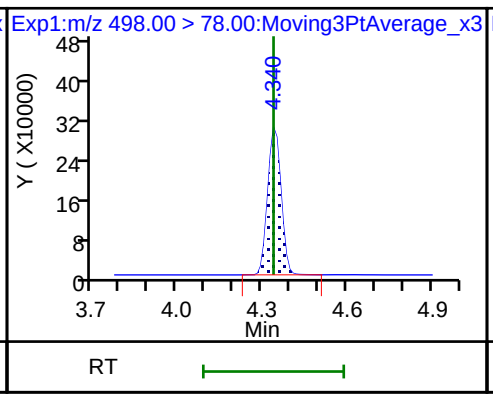
D 26 M2-8:2 FTS



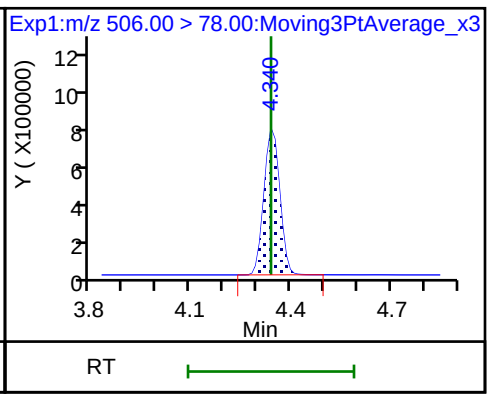
25 1H,1H,2H,2H-perfluorodecanesulfoni



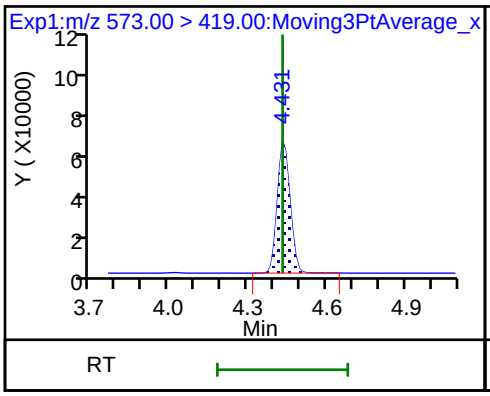
22 Perfluorooctanesulfonamide



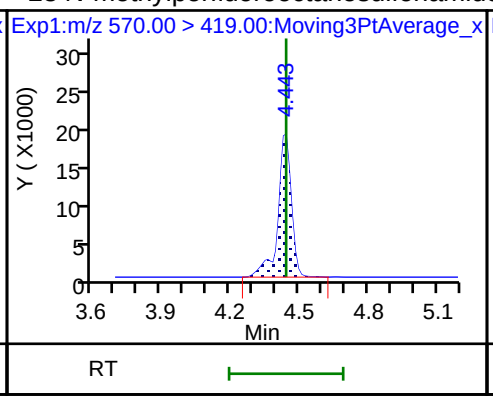
D 21 13C8 FOSA



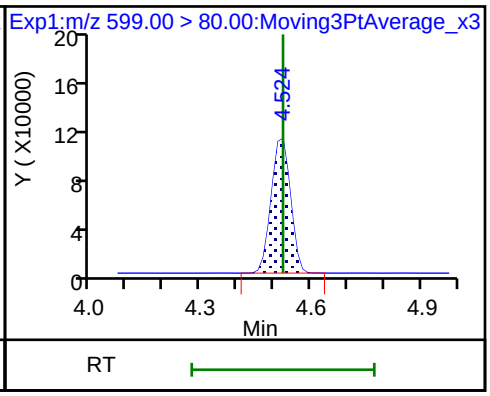
D 27 d3-NMeFOSAA



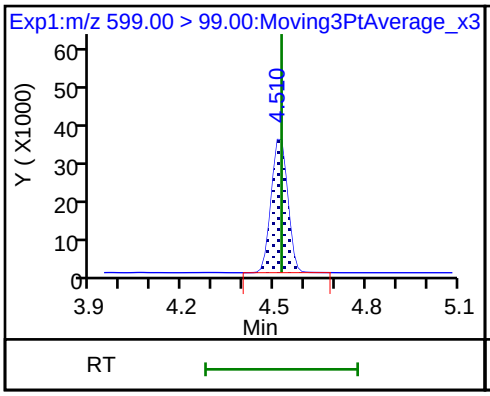
28 N-methylperfluorooctanesulfonamido



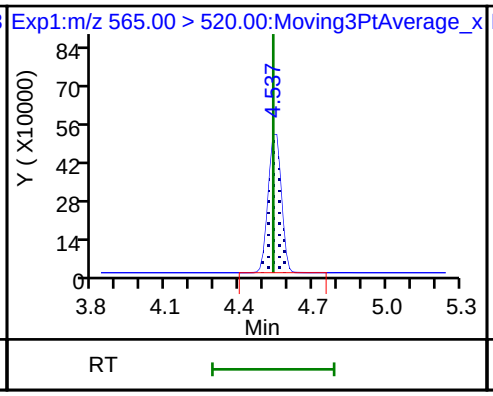
29 Perfluorodecanesulfonic acid



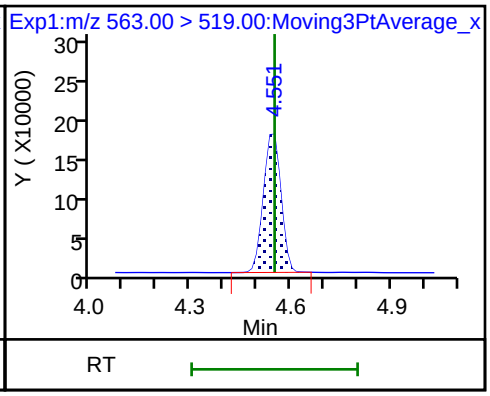
29 Perfluorodecanesulfonic acid



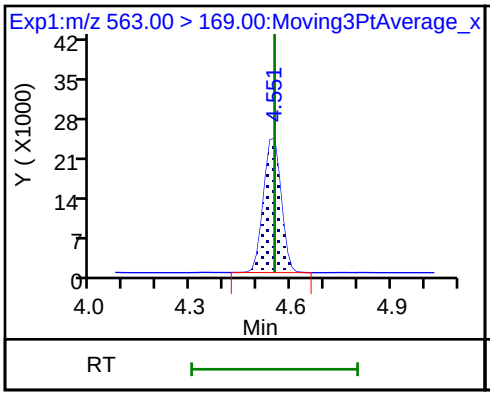
D 30 13C2 PFUnA



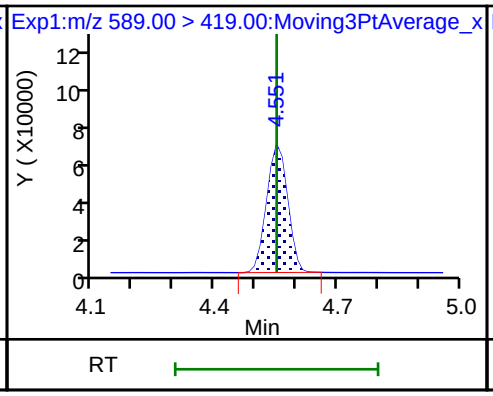
31 Perfluoroundecanoic acid



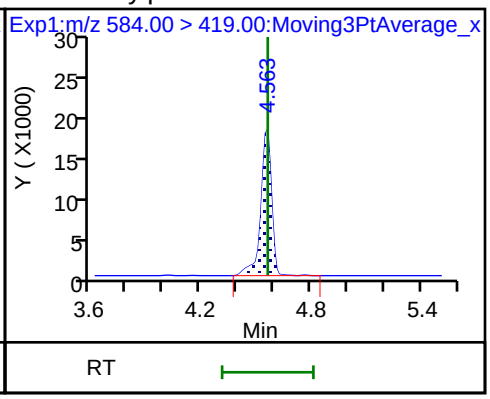
31 Perfluoroundecanoic acid



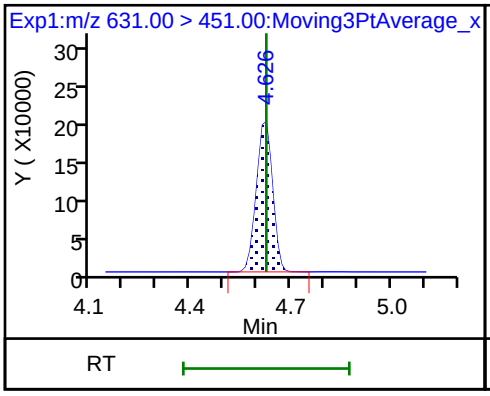
D 32 d5-NEtFOSAA



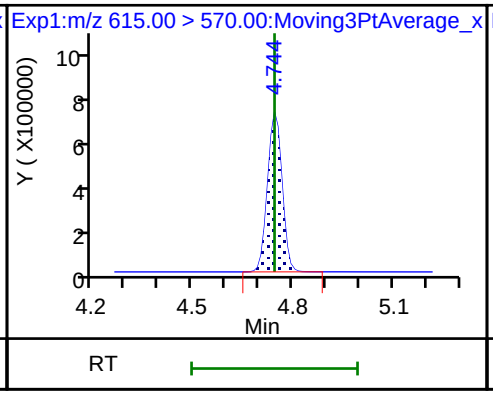
33 N-ethylperfluorooctanesulfonamidoa



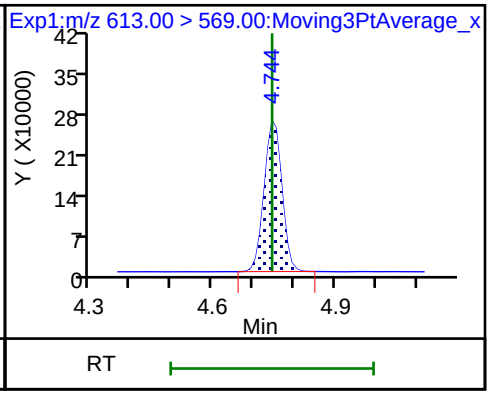
66 11-Chloroeicosafluoro-3-oxaundecan



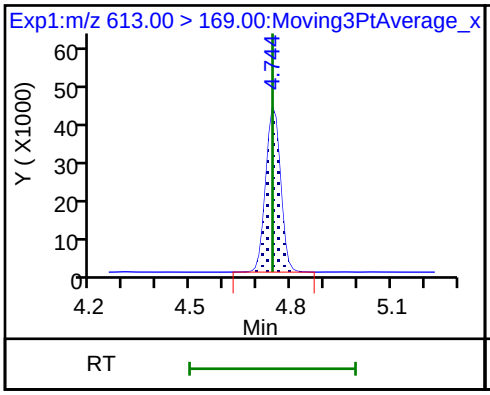
D 36 13C2 PFDoA



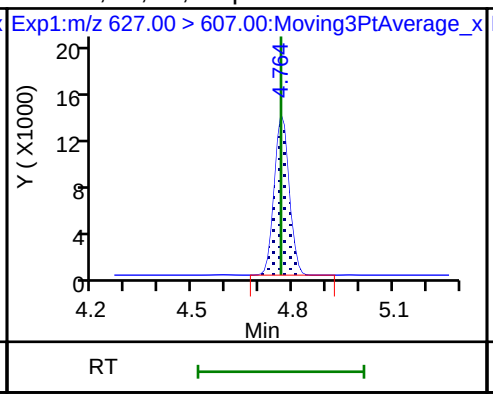
37 Perfluorododecanoic acid



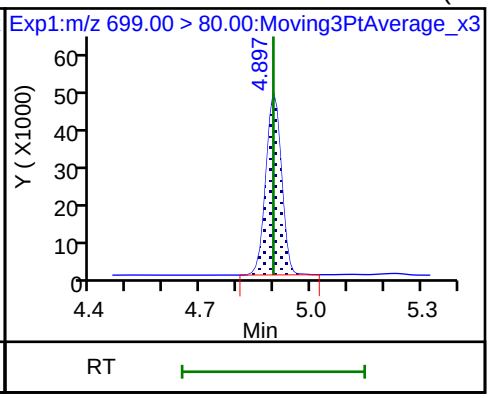
37 Perfluorododecanoic acid



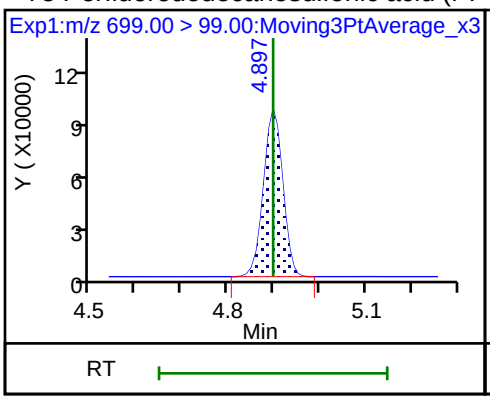
74 1H,1H,2H,2H-perfluorododecanesulfo



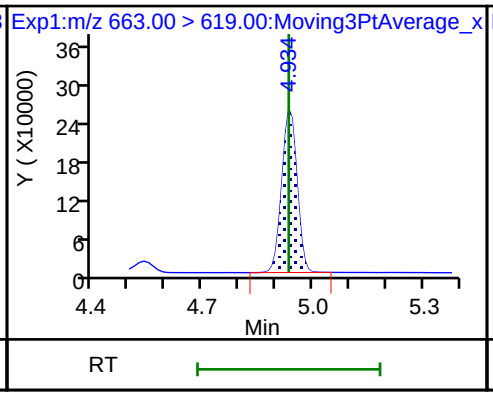
75 Perfluorododecanesulfonic acid (PF



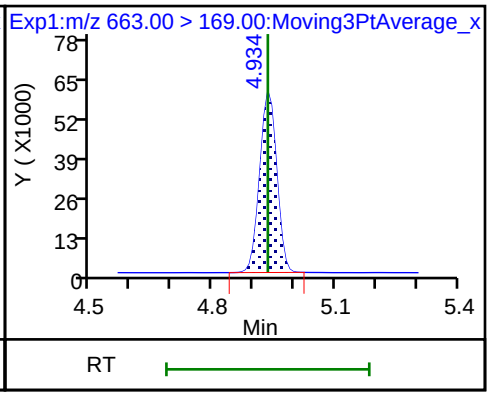
75 Perfluorododecanesulfonic acid (PF



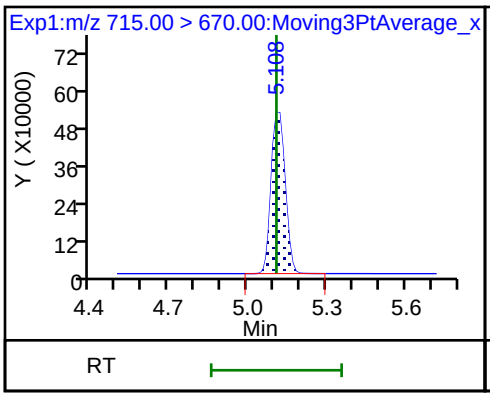
41 Perfluorotridecanoic acid



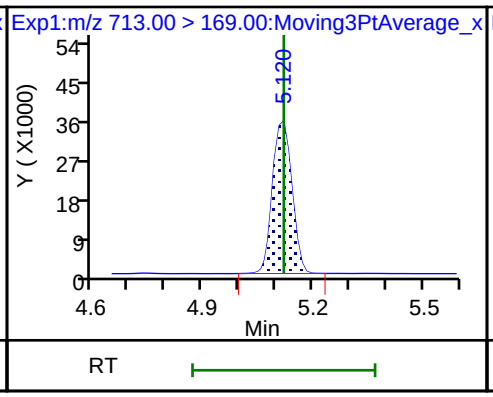
41 Perfluorotridecanoic acid



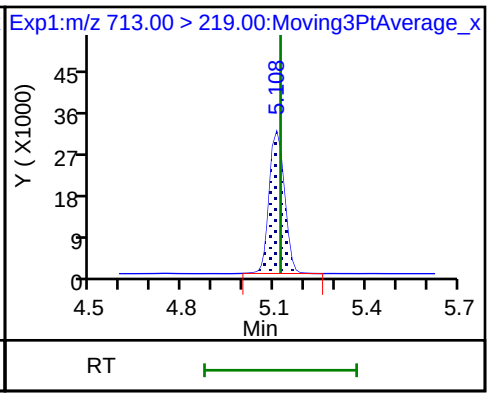
D 43 13C2 PFTeDA



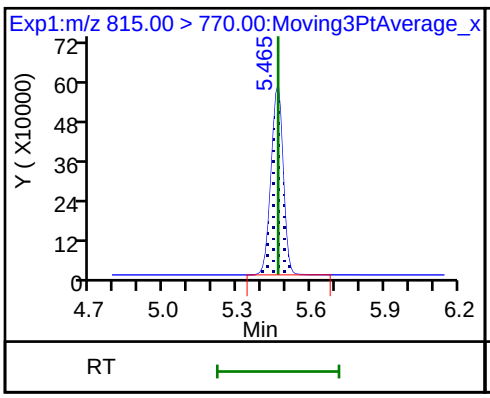
42 Perfluorotetradecanoic acid



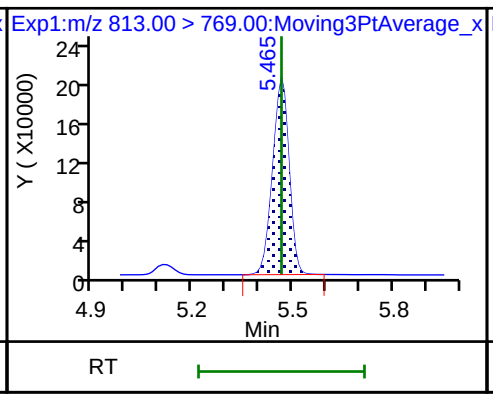
42 Perfluorotetradecanoic acid



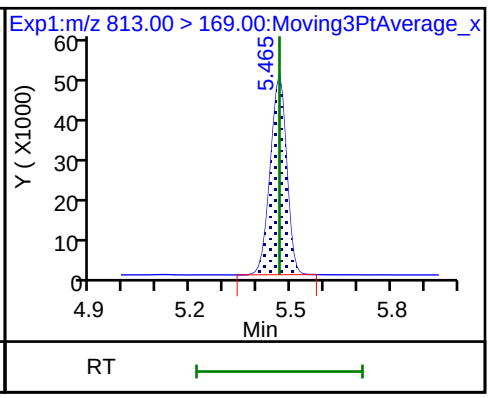
D 44 13C2 PFHxDA



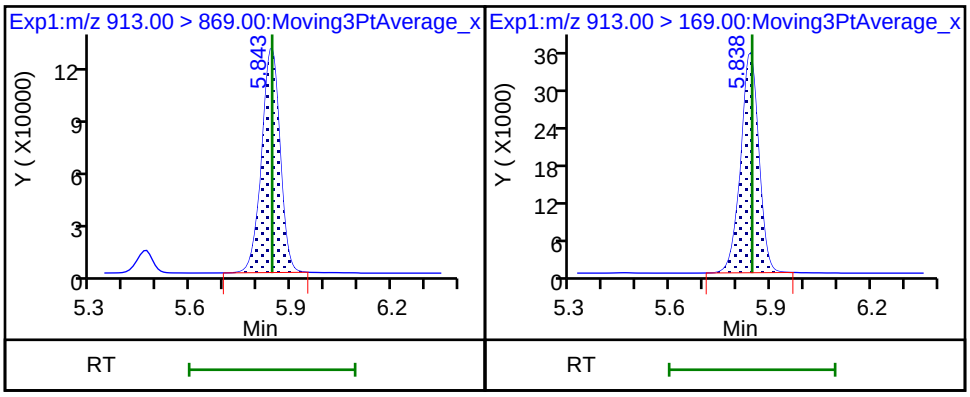
45 Perfluorohexadecanoic acid



45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid



46 Perfluorooctadecanoic acid

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

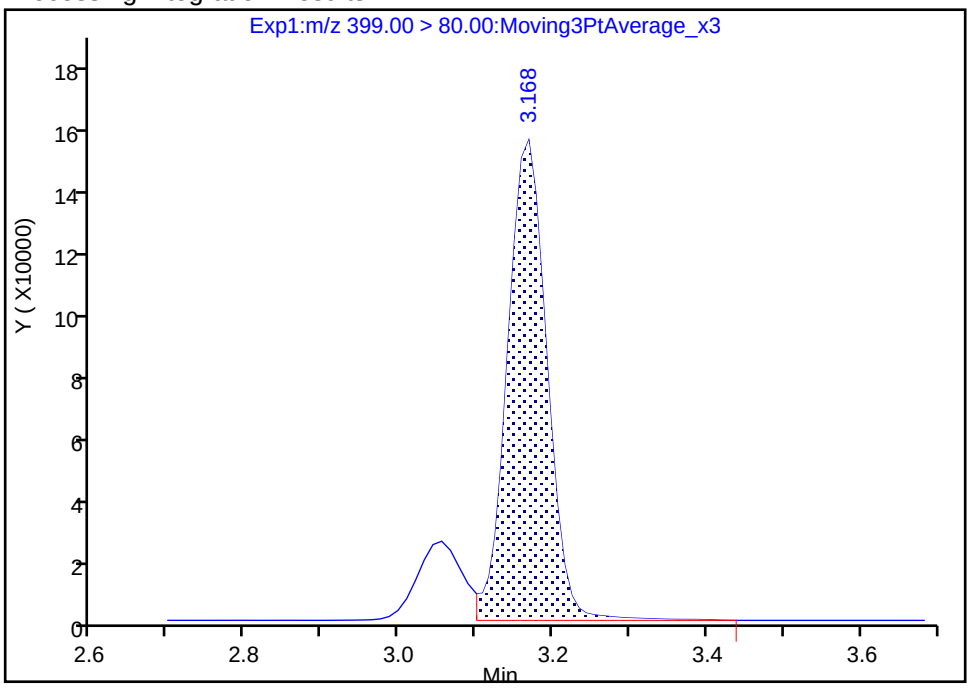
Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40160.b\SC022520A06.d
Injection Date: 25-Feb-2020 13:32:12 Instrument ID: LC812
Lims ID: CCVIS
Client ID:
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

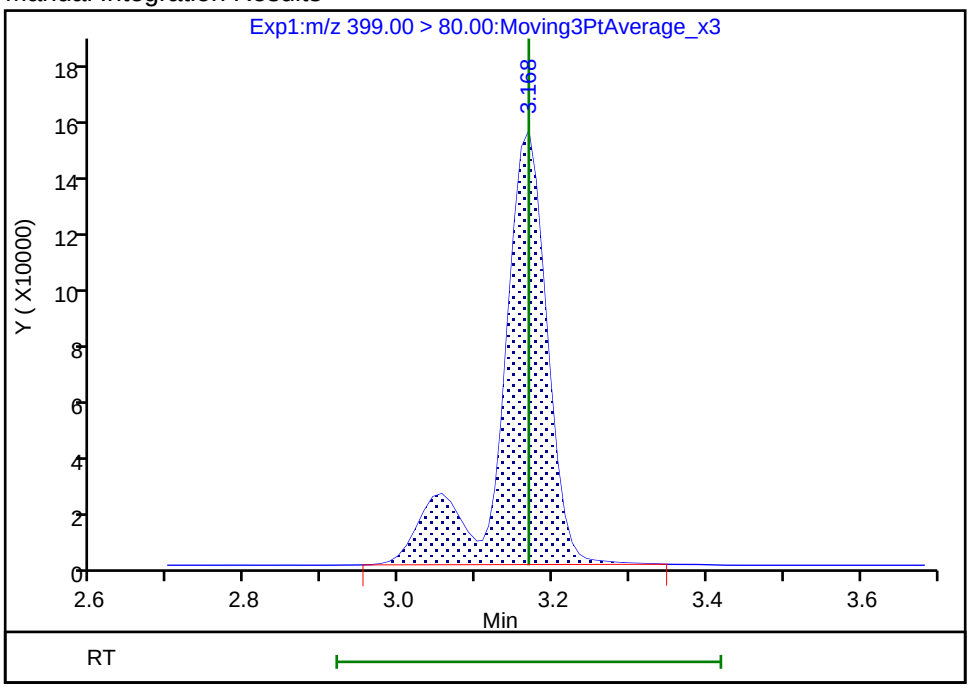
Processing Integration Results

RT: 3.17
Area: 549611
Amount: 0.669289
Amount Units: ng/ml



Manual Integration Results

RT: 3.17
Area: 644770
Amount: 0.785169
Amount Units: ng/ml



Reviewer: deannd, 26-Feb-2020 08:05:54
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Lab Sample ID: CCV 200-152696/1 Calibration Date: 02/25/2020 18:55

Instrument ID: LC812 Calib Start Date: 02/10/2020 11:48

GC Column: C-18 ID: 4.60(mm) Calib End Date: 02/10/2020 12:29

Lab File ID: SC022520C01.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.9513	0.8663		2280	2500	-8.9	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.079	0.9189		2130	2500	-14.8	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.020	0.9643		2090	2210	-5.5	40.0
1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2)	AveID	1.939	1.765		2130	2340	-9.0	50.0
Perfluorohexanoic acid (PFHxA)	AveID	0.9901	0.8829		2230	2500	-10.8	40.0
Perfluoropentanesulfonic acid	AveID	1.269	1.152		2130	2350	-9.2	50.0
HFPO-DA	AveID	2.342	1.809		1930	2500	-22.8	40.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.180	1.086		2090	2280	-8.0	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.023	0.9164		2240	2500	-10.4	40.0
DONA	AveID	3.676	3.224		2070	2360	-12.3	50.0
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	AveID	1.124	0.9458		1990	2370	-15.8	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	1.216	1.223		2390	2380	0.5	50.0
Perfluorooctanoic acid (PFOA)	AveID	1.041	1.014		2430	2500	-2.7	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.098	1.077		2270	2320	-2.0	40.0
Perfluorononanoic acid (PFNA)	AveID	1.028	0.8260		2010	2500	-19.7	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	1.399	1.294		2160	2330	-7.5	50.0
Perfluorononanesulfonic acid	AveID	0.8855	0.9096		2470	2400	2.7	50.0
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	AveID	0.6207	0.5022		1940	2400	-19.1	40.0
Perfluorodecanoic acid (PFDA)	AveID	1.024	0.9928		2420	2500	-3.0	40.0
Perfluorooctanesulfonamide (PFOSA)	AveID	1.025	0.9651		2350	2500	-5.8	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	AveID	0.8567	0.8599		2510	2500	0.4	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.7787	0.8338		2580	2410	7.1	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9066	0.8029		2210	2500	-11.4	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.7968	0.7840		2460	2500	-1.6	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.589	1.329		1970	2360	-16.4	50.0
Perfluorododecanoic acid (PFDoA)	AveID	0.9702	0.9400		2420	2500	-3.1	40.0
10:2 FTS	AveID	0.3321	0.2997		2170	2410	-9.8	50.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.2703	0.2790		2500	2420	3.2	50.0
Perfluorotridecanoic acid (PFTriA)	AveID	0.8833	0.8361		2370	2500	-5.3	50.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1556	0.1641		2640	2500	5.5	40.0

FORM VII 537 (modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Lab Sample ID: CCV 200-152696/1 Calibration Date: 02/25/2020 18:55

Instrument ID: LC812 Calib Start Date: 02/10/2020 11:48

GC Column: C-18 ID: 4.60(mm) Calib End Date: 02/10/2020 12:29

Lab File ID: SC022520C01.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluoro-n-hexadecanoic acid (PFHxDA)	L1ID		0.7827		2180	2500	-12.8	40.0
Perfluoro-n-octadecanoic acid (PFODA)	AveID	0.6228	0.5921		2380	2500	-4.9	50.0
13C4 PFBA	Ave	1.040	1.179		2830	2500	13.4	50.0
13C5 PFPeA	Ave	0.8098	0.9254		2860	2500	14.3	50.0
13C3 PFBS	Ave	1.089	1.161		2480	2330	6.6	50.0
M2-4:2 FTS	Ave	0.0796	0.0790		2320	2340	-0.8	50.0
13C2 PFHxA	Ave	0.9471	0.9708		2560	2500	2.5	50.0
13C3 HFPO-DA	Ave	0.0751	0.0825		2750	2500	9.8	50.0
18O2 PFHxS	Ave	0.7696	0.8088		2490	2370	5.1	50.0
13C4 PFHpA	Ave	0.9106	0.9681		2660	2500	6.3	50.0
M2-6:2 FTS	Ave	0.1054	0.1185		2670	2380	12.4	50.0
13C4 PFOA	Ave	0.9424	0.9627		2550	2500	2.2	50.0
13C4 PFOS	Ave	0.5730	0.6164		2570	2390	7.6	50.0
13C5 PFNA	Ave	0.9041	0.9365		2590	2500	3.6	50.0
13C2 PFDA	Ave	0.9823	1.036		2640	2500	5.5	50.0
M2-8:2 FTS	Ave	0.1489	0.1608		2590	2400	8.0	50.0
13C8 FOSA	Ave	1.008	1.118		2770	2500	10.8	50.0
d3-NMeFOSAA	Ave	0.0775	0.0949		3060	2500	22.5	50.0
13C2 PFUnA	Ave	0.8568	0.8910		2600	2500	4.0	50.0
d5-NEtFOSAA	Ave	0.0883	0.1017		2880	2500	15.1	50.0
13C2 PFDoA	Ave	0.9588	0.995		2600	2500	3.8	50.0
13C2 PFTeDA	Ave	0.8231	0.9157		2780	2500	11.3	50.0
13C2 PFHxDA	Ave	0.8949	0.8587		2400	2500	-4.0	50.0

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C01.d
Lims ID: CCV L5
Client ID:
Sample Type: CCV
Inject. Date: 25-Feb-2020 18:55:10 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCV L5
Misc. Info.: 200-0040162-001 Plate: 1 Rack: 2
Operator ID: lc812tech Instrument ID: LC812
Sublist: chrom-PFC_LC812*sub3

Method: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\PFC_LC812.m
Limit Group: LC_PFC_ICAL
Last Update: 26-Feb-2020 17:13:10 Calib Date: 10-Feb-2020 12:29:33
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL010.d

Column 1 : C-18 (4.60 mm) Det: EXP1
Process Host: CTX0323
Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										
217.00 > 172.00	1.907	1.917	-0.010	0.528	2636954	2.83		113	18428	
2 Perfluorobutanoic acid										
212.90 > 169.00	1.907	1.917	-0.010	1.000	2284262	2.28		91.1	300	
D 3 13C5 PFPeA										
267.90 > 223.00	2.244	2.257	-0.013	0.621	2068785	2.86		114	1949	
4 Perfluoropentanoic acid										
262.90 > 219.00	2.244	2.271	-0.027	1.000	1901011	2.13		85.2	180	
D 47 13C3 PFBS										
301.90 > 80.00	2.271	2.284	-0.013	0.628	2413696	2.48		107	907212	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.271	2.284	-0.013	1.000	2212502	2.09	Target=2.19	94.5	8343	
298.90 > 99.00	2.271	2.284	-0.013	1.000	1024696		2.16(1.09-3.28)		1400	
61 1H,1H,2H,2H-perfluorohexanesulfoni										
327.00 > 307.00	2.611	2.623	-0.012	1.000	291012	2.13		91.0	1545	
D 60 M2-4:2 FTS										
329.00 > 81.00	2.611	2.623	-0.012	0.722	164903	2.32		99.2	243	
D 7 13C2 PFHxA										
315.00 > 270.00	2.648	2.673	-0.025	0.732	2170268	2.56		102	8765	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.648	2.673	-0.025	1.000	1916186	2.23	Target=12.51	89.2	688	
313.00 > 119.00	2.648	2.673	-0.025	1.000	167210		11.46(6.25-18.76)		445	
70 Perfluoropentanesulfonic acid										
349.00 > 80.00	2.661	2.685	-0.024	0.849	1953794	2.13	Target=3.29	90.8	8486	
349.00 > 99.00	2.661	2.685	-0.024	0.849	578294		3.38(1.64-4.93)		1689	
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.792	2.815	-0.023	1.003	333560	1.93		77.2	140	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 64 13C3 HFPO-DA										
332.10 > 287.00	2.784	2.815	-0.031	0.770	184402	2.75		110	1595	
D 11 18O2 PFHxS										
403.00 > 84.00	3.133	3.168	-0.035	0.866	1710469	2.49		105	7265	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.133	3.168	-0.035	1.000	1786593	2.09	Target=4.33	92.0	15277	
399.00 > 99.00	3.133	3.168	-0.035	1.000	367648		4.86(2.17-6.50)		84.5	
D 9 13C4 PFHpA										
367.00 > 322.00	3.141	3.168	-0.027	0.869	2164383	2.66		106	5955	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.141	3.168	-0.027	1.000	1983333	2.24	Target=3.79	89.6	1025	
363.00 > 169.00	3.133	3.168	-0.035	0.997	575182		3.45(1.89-5.68)		1726	
77 DONA										
377.00 > 251.00	3.197	3.225	-0.028	0.802	4185442	2.07	Target=2.43	87.7	2589	
377.00 > 85.00	3.197	3.225	-0.028	0.802	1783276		2.35(1.22-3.65)		2296	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.591	3.624	-0.033	1.000	237534	1.99		84.2	1825	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.591	3.624	-0.033	0.993	251673	2.67		112	1643	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.599	3.632	-0.033	0.904	1603958	2.39	Target=6.01	101	15722	
449.00 > 99.00	3.599	3.632	-0.033	0.904	262695		6.11(3.01-9.02)		4103	
D 14 13C4 PFOA										
417.00 > 372.00	3.607	3.640	-0.033	0.998	2152304	2.55		102	8520	
* 62 13C2 PFOA										
415.00 > 370.00	3.616	3.640	-0.024		2235668	2.50			7071	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.616	3.640	-0.024	1.002	2181503	2.43	Target=2.66	97.3	800	
413.00 > 169.00	3.616	3.640	-0.024	1.002	890984		2.45(1.33-3.99)		5282	
D 18 13C4 PFOS										
503.00 > 80.00	3.984	4.005	-0.021	1.102	1317516	2.57		108	6817	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.984	4.005	-0.021	1.000	1377091	2.27	Target=5.29	98.0	14386	
499.00 > 99.00	3.984	4.005	-0.021	1.000	225794		6.10(2.65-7.94)		2208	
D 19 13C5 PFNA										
468.00 > 423.00	3.994	4.027	-0.033	1.105	2093736	2.59		104	17901	
20 Perfluorononanoic acid										
463.00 > 419.00	4.005	4.027	-0.022	1.003	1729389	2.01	Target=7.73	80.3	917	
463.00 > 169.00	4.005	4.027	-0.022	1.003	301009		5.75(3.87-11.60)		5328	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	4.141	4.164	-0.023	1.039	1662260	2.16		92.5	6829	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.262	4.283	-0.021	1.070	1203421	2.47	Target=2.78	103	18447	
549.00 > 99.00	4.262	4.283	-0.021	1.070	431285		2.79(1.39-4.17)		4380	
D 23 13C2 PFDA										
515.00 > 470.00	4.294	4.305	-0.011	1.187	2316056	2.64		105	15260	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
24 Perfluorodecanoic acid										
513.00 > 469.00	4.294	4.305	-0.011	1.000	2299463	2.42	Target=9.75	97.0	445	
513.00 > 169.00	4.294	4.305	-0.011	1.000	268491		8.56(4.88-14.63)		731	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.294	4.317	-0.023	1.187	344421	2.59		108	1402	
25 1H,1H,2H,2H-perfluorodecanesulfoni										
527.00 > 507.00	4.294	4.317	-0.023	1.000	172963	1.94		80.9	2162	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.328	4.340	-0.012	1.000	2411117	2.35		94.2	3957	
D 21 13C8 FOSA										
506.00 > 78.00	4.328	4.340	-0.012	1.197	2498361	2.77		111	8503	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.420	4.431	-0.011	1.222	212230	3.06		122	254	
28 N-methylperfluorooctanesulfonamido										
570.00 > 419.00	4.420	4.443	-0.023	1.000	182485	2.51		100	1494	
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.496	4.524	-0.028	1.129	1107672	2.58	Target=2.63	107	5562	
599.00 > 99.00	4.496	4.524	-0.028	1.129	379457		2.92(1.32-3.95)		4115	
D 30 13C2 PFUnA										
565.00 > 520.00	4.523	4.537	-0.014	1.251	1991934	2.60		104	7477	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.523	4.551	-0.028	1.000	1599361	2.21	Target=7.31	88.6	1619	
563.00 > 169.00	4.523	4.551	-0.028	1.000	234283		6.83(3.66-10.97)		3646	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.537	4.551	-0.014	1.255	227410	2.88		115	2071	
33 N-ethylperfluorooctanesulfonamidoa										
584.00 > 419.00	4.537	4.563	-0.026	1.000	178297	2.46		98.4	442	
66 11-Chloroeicosafluoro-3-oxaundecan										
631.00 > 451.00	4.602	4.626	-0.024	1.155	1725798	1.97		83.6	7600	
D 36 13C2 PFDoA										
615.00 > 570.00	4.724	4.744	-0.020	1.307	2225498	2.60		104	8378	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.724	4.744	-0.020	1.000	2091940	2.42	Target=6.96	96.9	338	
613.00 > 169.00	4.724	4.744	-0.020	1.000	327675		6.38(3.48-10.44)		2992	
74 1H,1H,2H,2H-perfluorododecanesulfo										
627.00 > 607.00	4.744	4.764	-0.020	1.105	103860	2.17		90.2	2067	
75 Perfluorododecanesulfonic acid (PF										
699.00 > 80.00	4.879	4.897	-0.018	1.225	372161	2.50	Target=0.47	103	1558	
699.00 > 99.00	4.879	4.897	-0.018	1.225	742488		0.50(0.24-0.71)		6411	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.915	4.934	-0.019	1.041	1860750	2.37	Target=4.84	94.7	495	
663.00 > 169.00	4.915	4.934	-0.019	1.041	436488		4.26(2.42-7.26)		3090	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.085	5.108	-0.023	1.406	2047256	2.78		111	8790	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.085	5.120	-0.035	1.000	335921	2.64	Target=1.15	105	2932	
713.00 > 219.00	5.076	5.120	-0.044	0.998	293955		1.14(0.58-1.73)		3746	

Report Date: 26-Feb-2020 17:13:11 Chrom Revision: 2.3 19-Feb-2020 16:45:46
Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C01.d
Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 44 13C2 PFHxDA										
815.00 > 770.00	5.424	5.465	-0.041	1.500	1919827	2.40		96.0	5371	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.424	5.465	-0.041	1.000	1502664	2.18	Target=4.36	87.2	403	
813.00 > 169.00	5.424	5.465	-0.041	1.000	422521		3.56(2.18-6.53)		3365	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.790	5.843	-0.053	1.067	1136747	2.38	Target=4.01	95.1	310	
913.00 > 169.00	5.782	5.843	-0.061	1.066	332454		3.42(2.00-6.01)		2104	

Reagents:

PFAS32NCIC5_00004 Amount Added: 100.00 Units: uL

Report Date: 26-Feb-2020 17:13:11 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C01.d

Injection Date: 25-Feb-2020 18:55:10 Instrument ID: LC812

Lims ID: CCV L5

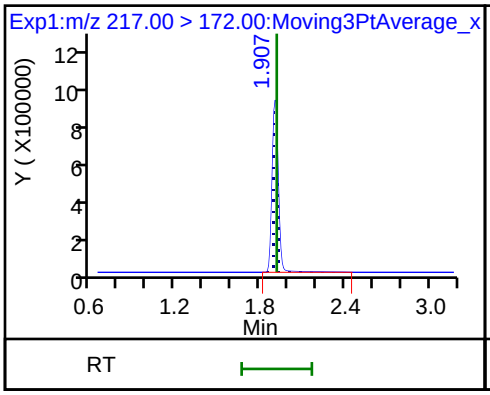
Client ID:

Operator ID: lc812tech ALS Bottle#: 1 Worklist Smp#: 1

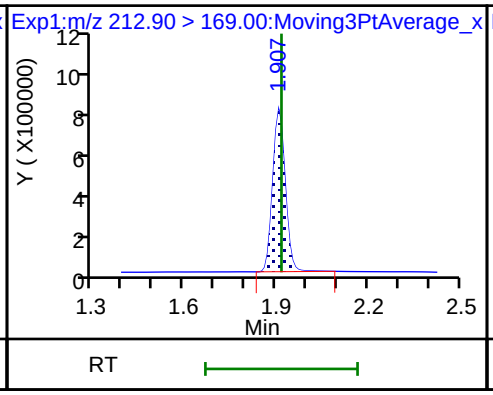
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFC_LC812 Limit Group: LC_PFC_ICAL

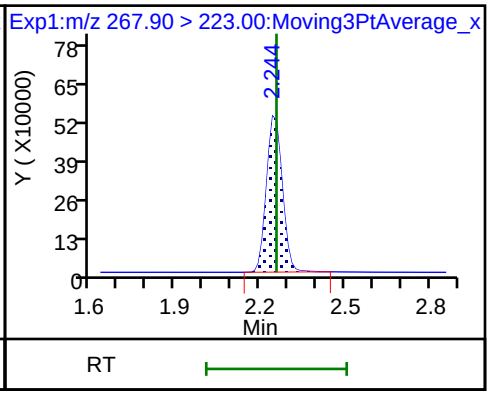
D 1 13C4 PFBA



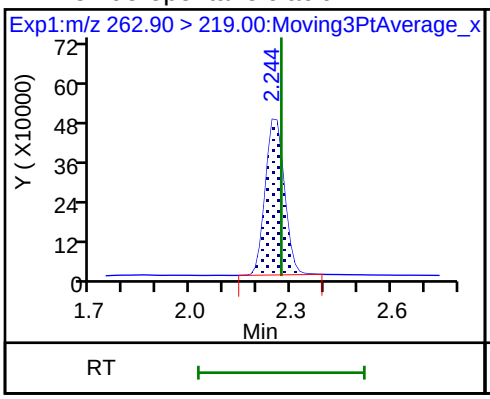
2 Perfluorobutanoic acid



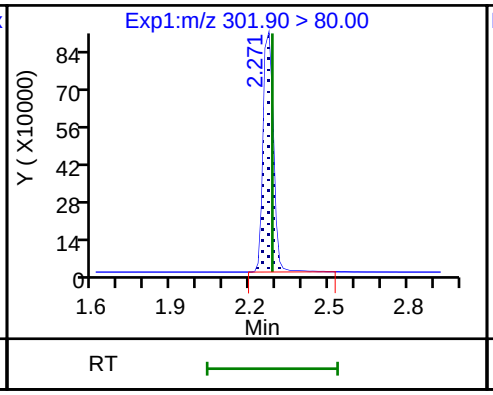
D 3 13C5 PFPeA



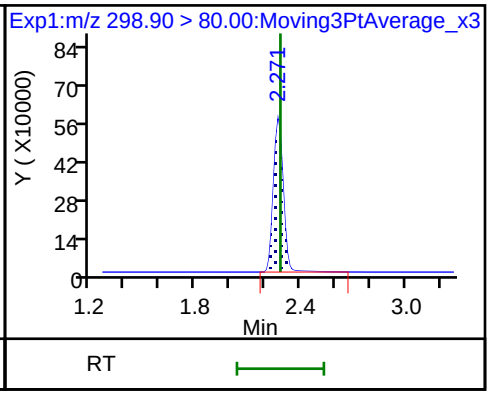
4 Perfluoropentanoic acid



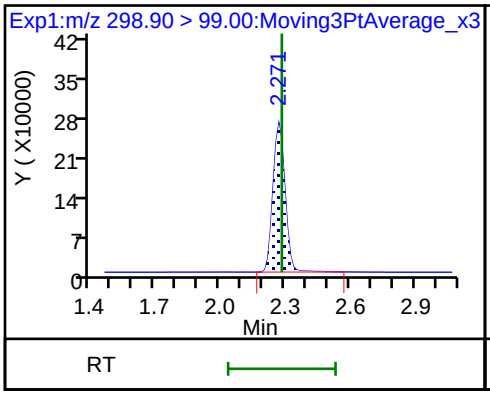
D 47 13C3 PFBS



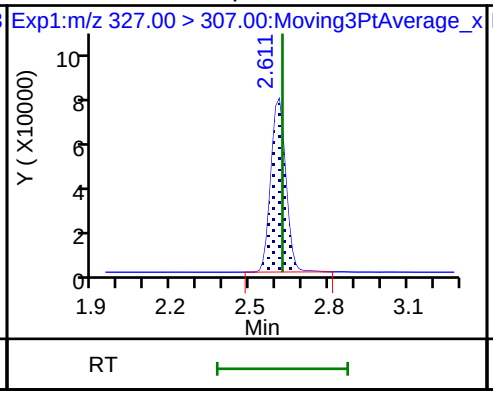
5 Perfluorobutanesulfonic acid



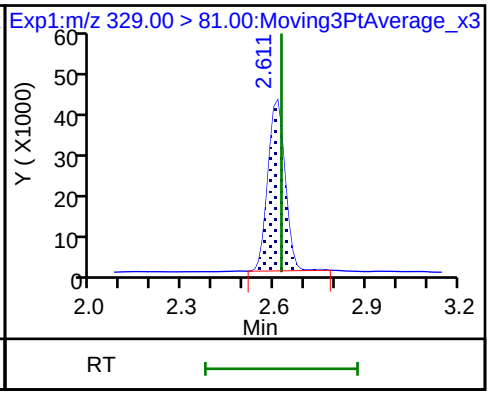
5 Perfluorobutanesulfonic acid



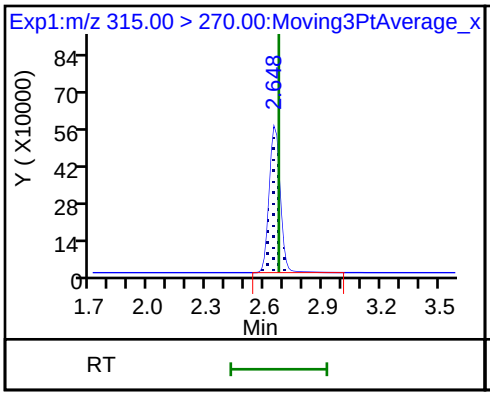
61 1H,1H,2H,2H-perfluorohexanesulfon



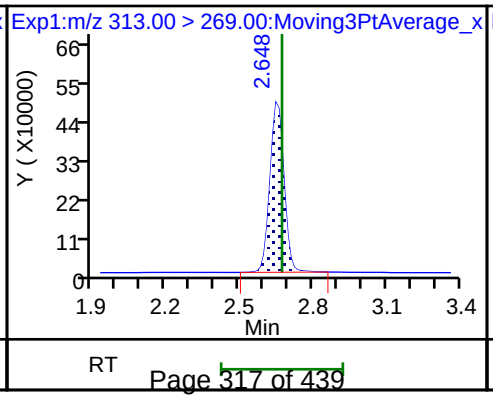
D 60 M2-4:2 FTS



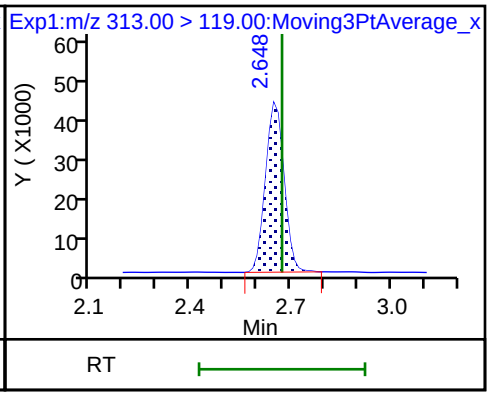
D 7 13C2 PFHxA



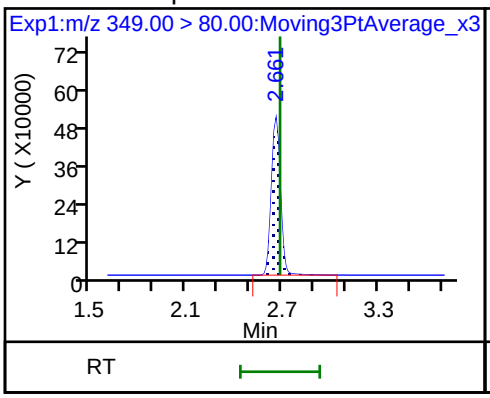
6 Perfluorohexanoic acid



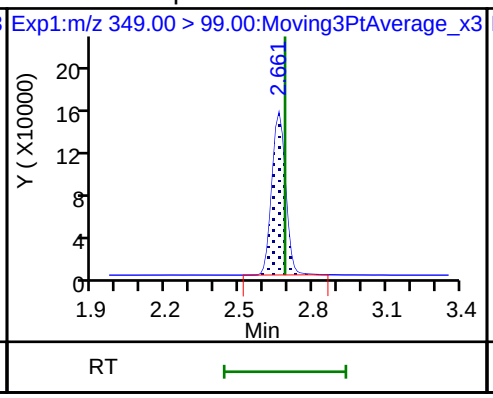
6 Perfluorohexanoic acid



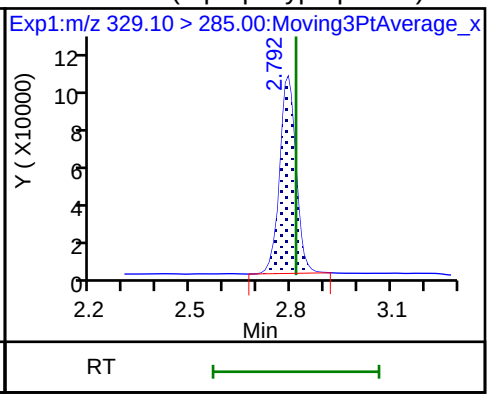
70 Perfluoropentanesulfonic acid



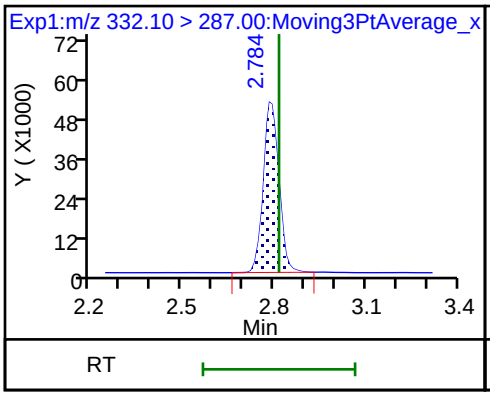
70 Perfluoropentanesulfonic acid



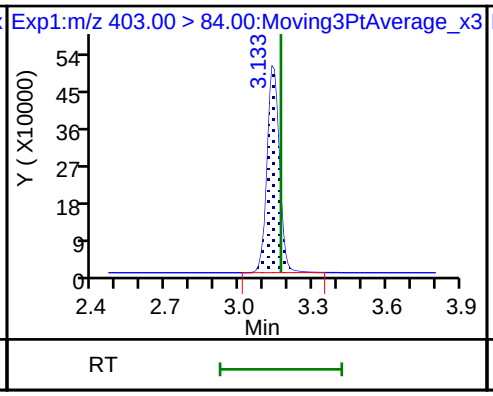
67 Perfluoro(2-propoxypropanoic) acid



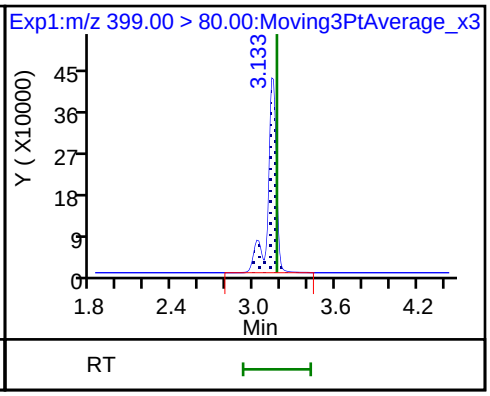
D 64 13C3 HFPO-DA



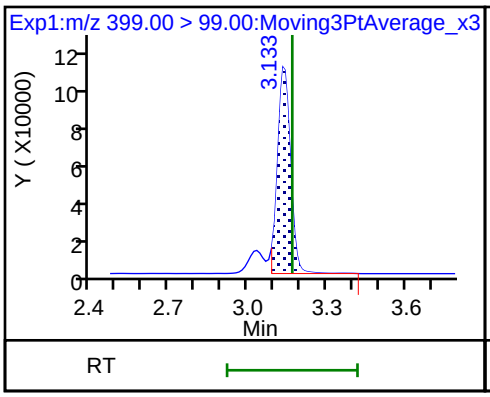
D 11 18O2 PFHxS



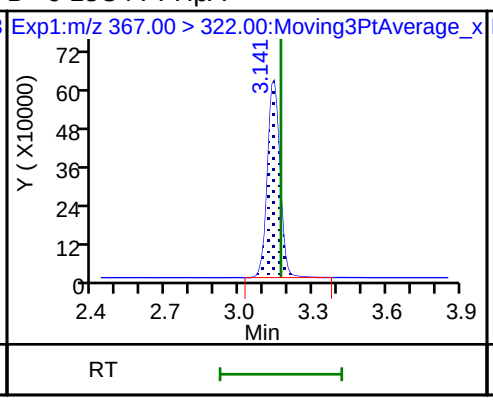
8 Perfluorohexanesulfonic acid



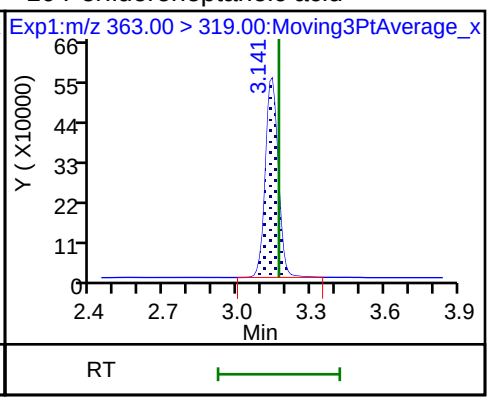
8 Perfluorohexanesulfonic acid



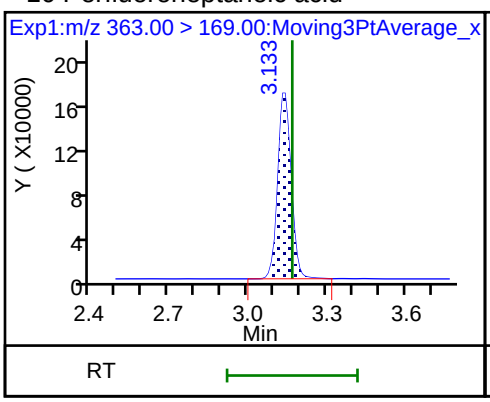
D 9 13C4 PFHpA



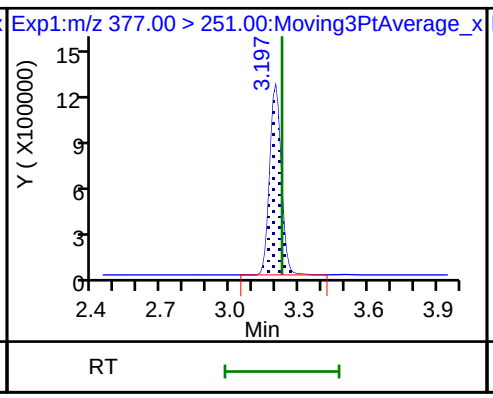
10 Perfluoroheptanoic acid



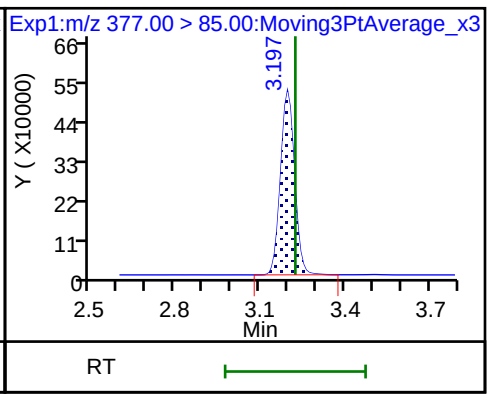
10 Perfluoroheptanoic acid



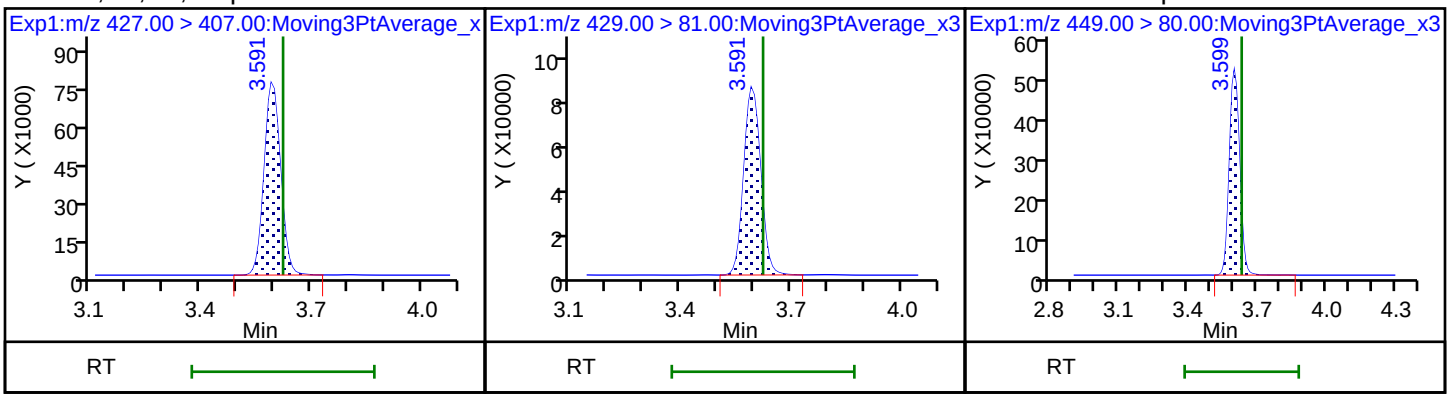
77 DONA



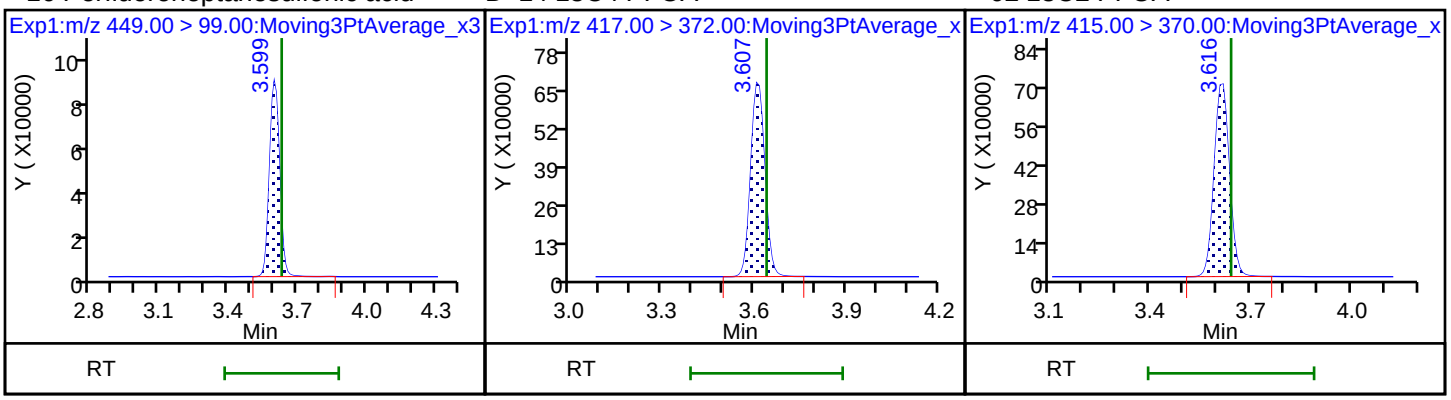
77 DONA



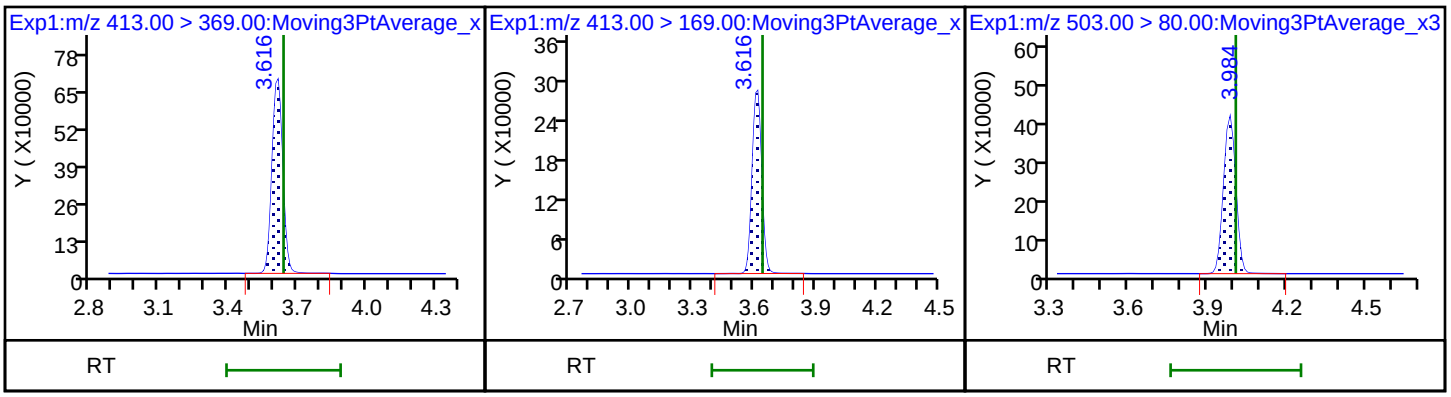
13 1H,1H,2H,2H-perfluorooctanesulfonD 12 M2-6:2 FTS 16 Perfluoroheptanesulfonic acid



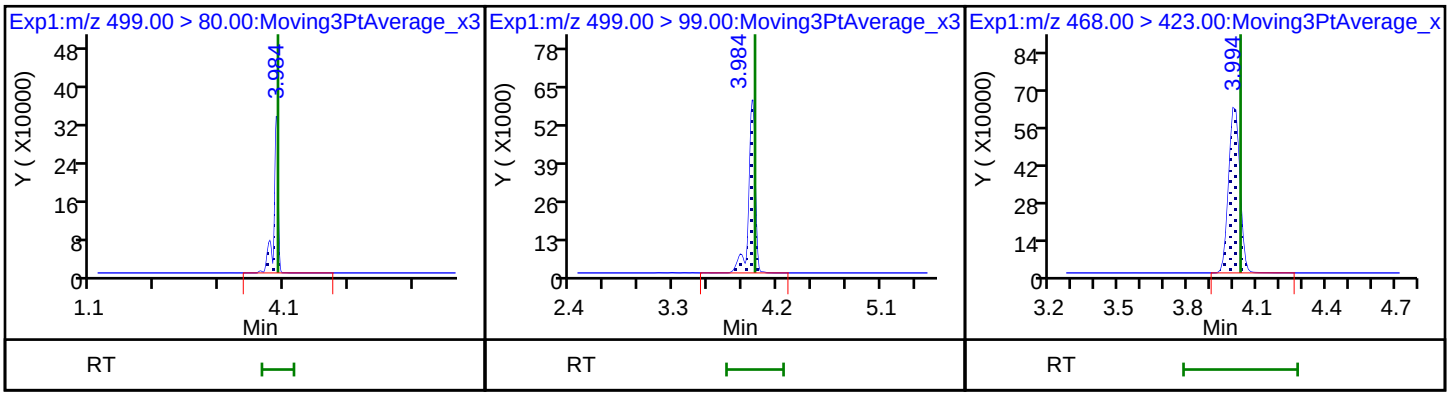
16 Perfluoroheptanesulfonic acid D 14 13C4 PFOA * 62 13C2 PFOA



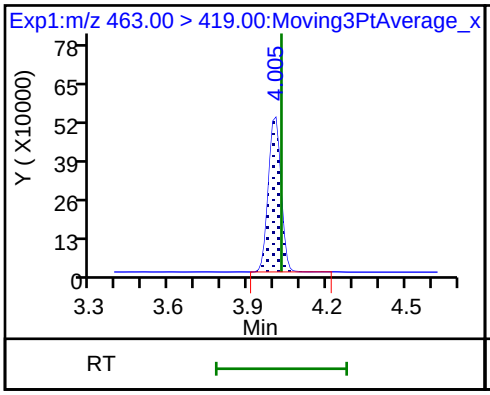
15 Perfluorooctanoic acid 15 Perfluorooctanoic acid D 18 13C4 PFOS



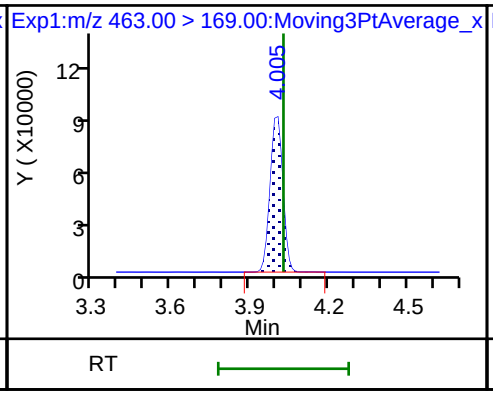
17 Perfluorooctanesulfonic acid 17 Perfluorooctanesulfonic acid D 19 13C5 PFNA



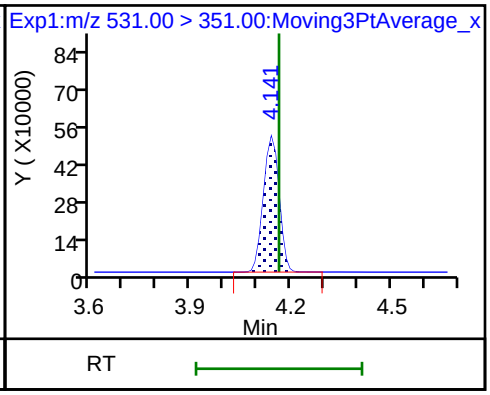
20 Perfluorononanoic acid



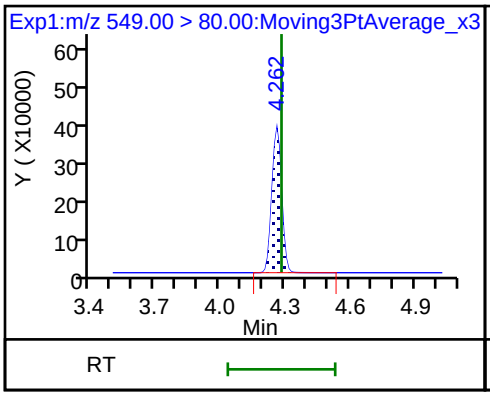
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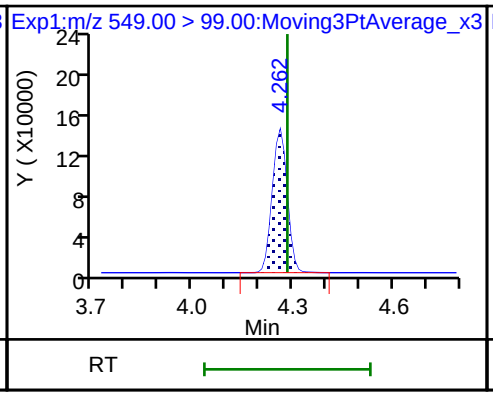
69 9-Chlorohexadecafluoro-3-oxanonane



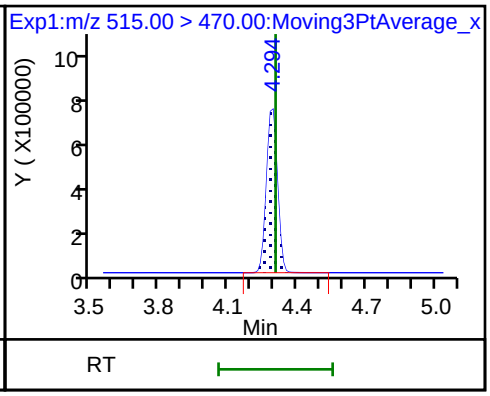
68 Perfluorononanesulfonic acid



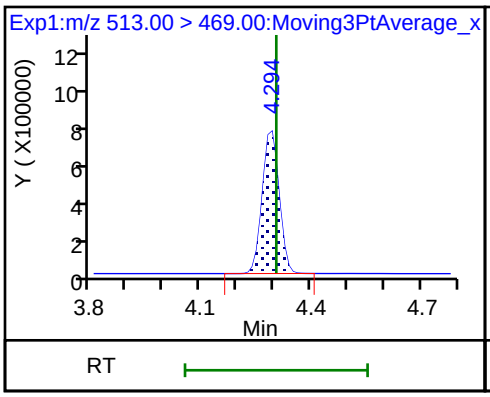
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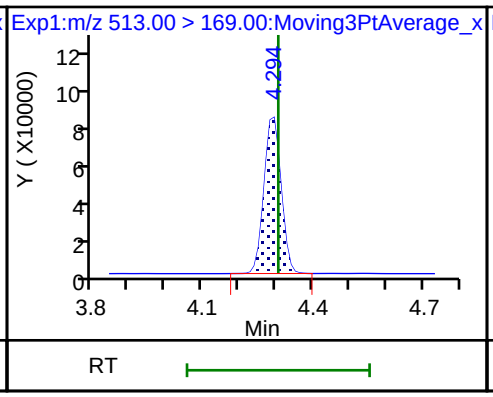
D 23 13C2 PFDA



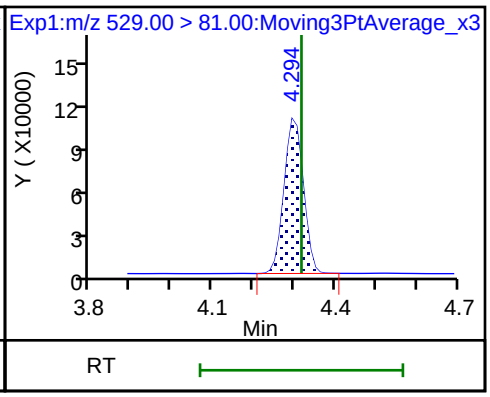
24 Perfluorodecanoic acid



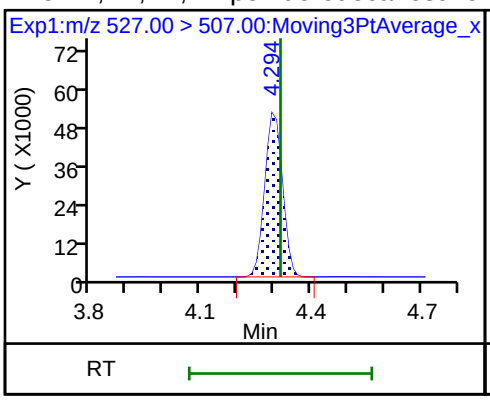
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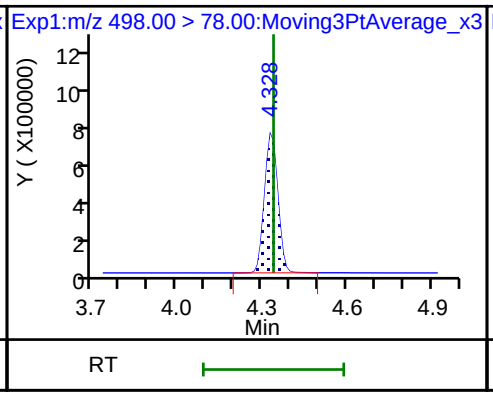
D 26 M2-8:2 FTS



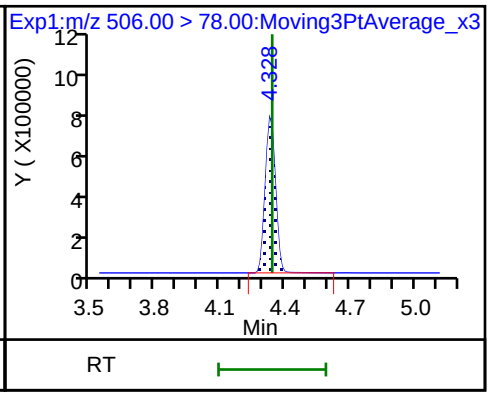
25 1H,1H,2H,2H-perfluorodecanesulfoni



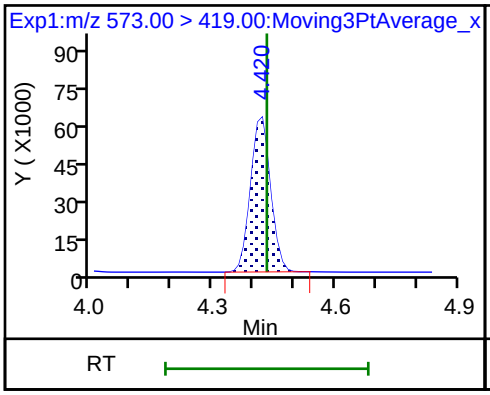
22 Perfluorooctanesulfonamide



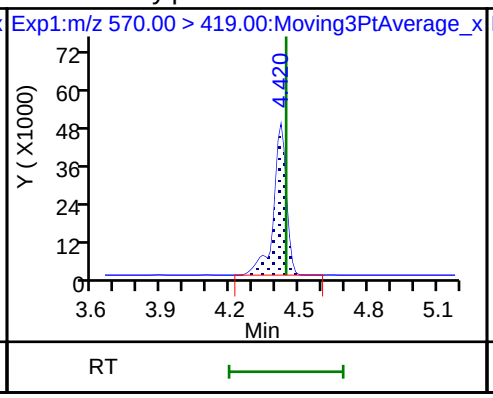
D 21 13C8 FOSA



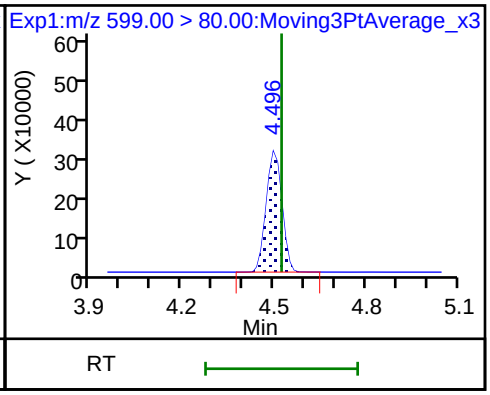
D 27 d3-NMeFOSAA



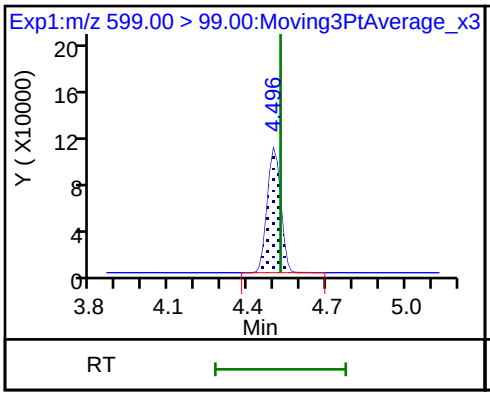
28 N-methylperfluorooctanesulfonamido



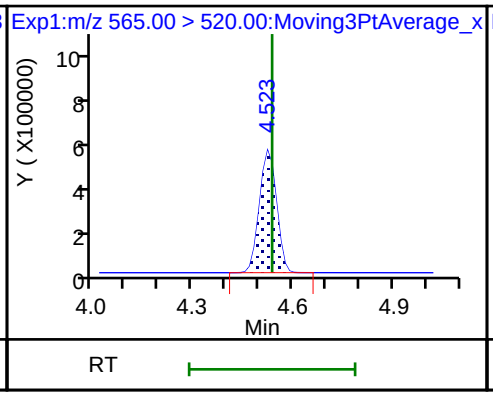
29 Perfluorodecanesulfonic acid



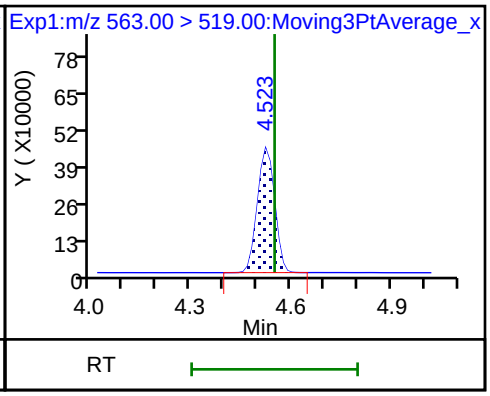
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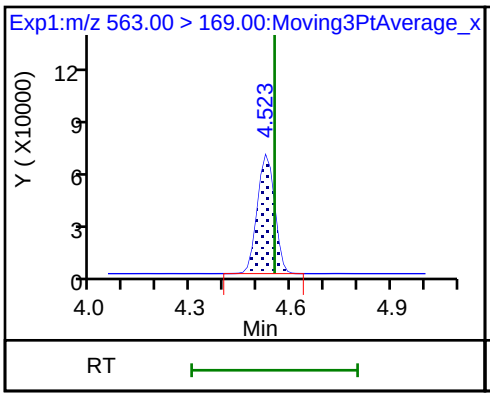
D 30 13C2 PFUnA



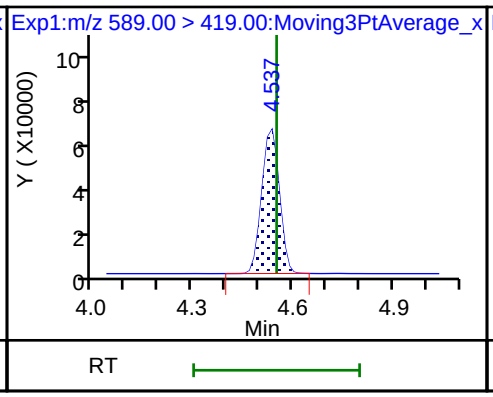
31 Perfluoroundecanoic acid



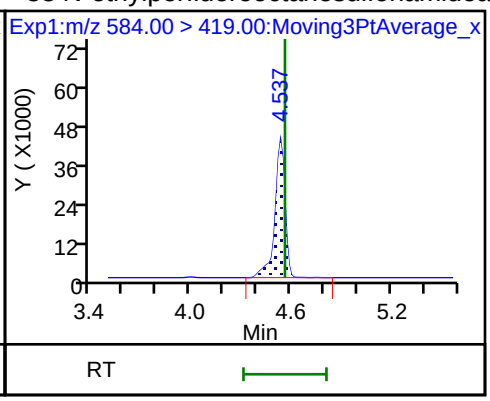
31 Perfluoroundecanoic acid



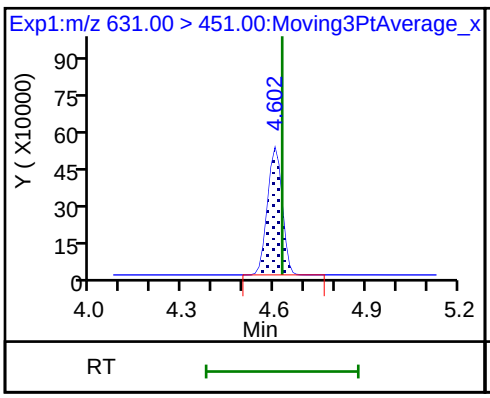
D 32 d5-NEtFOSAA



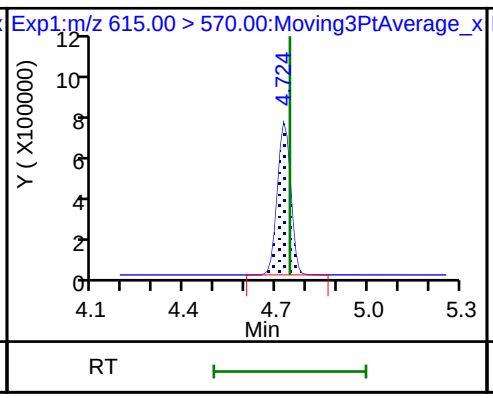
33 N-ethylperfluorooctanesulfonamidoa



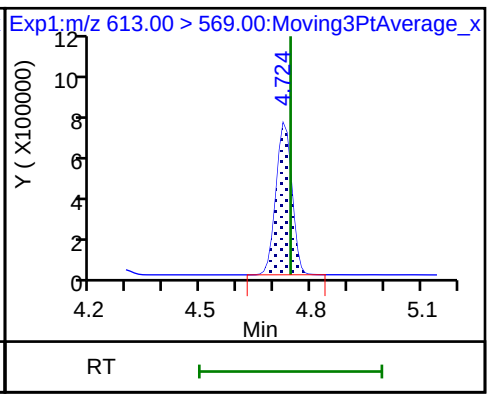
66 11-Chloroeicosafluoro-3-oxaundecan



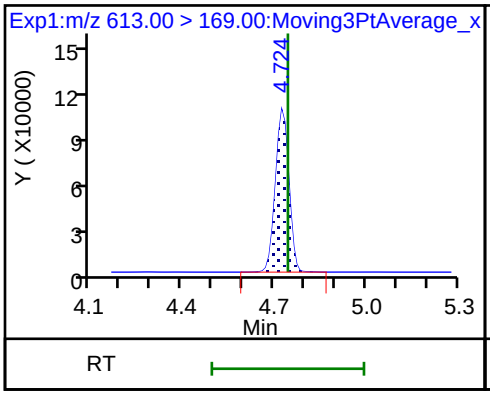
D 36 13C2 PFDoA



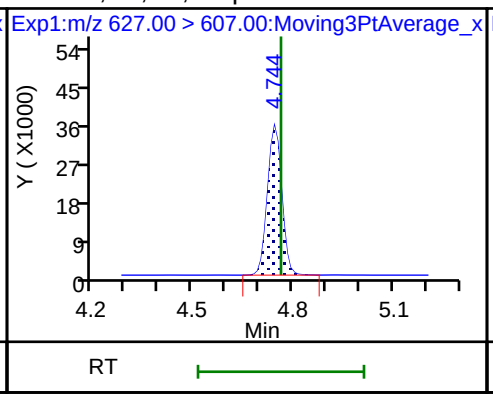
37 Perfluorododecanoic acid



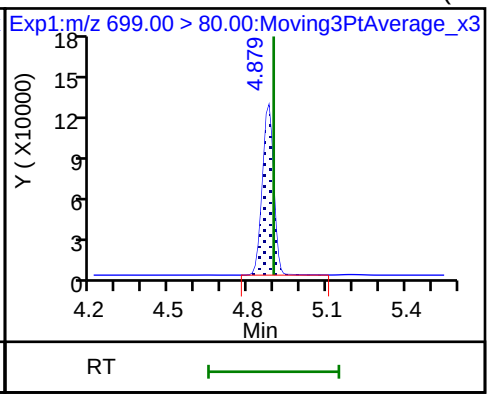
37 Perfluorododecanoic acid



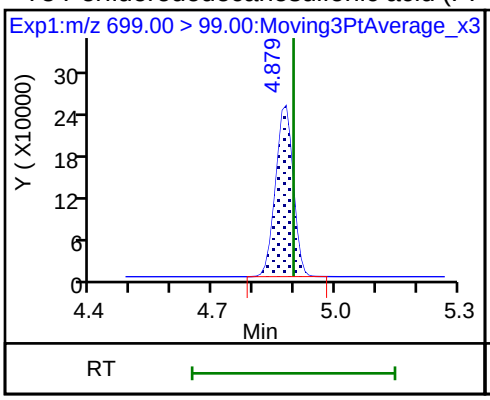
74 1H,1H,2H,2H-perfluorododecanesulfo



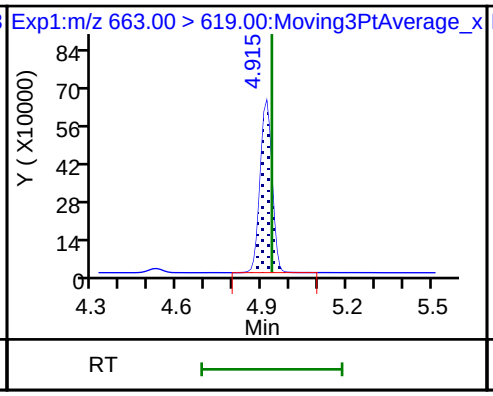
75 Perfluorododecanesulfonic acid (PF



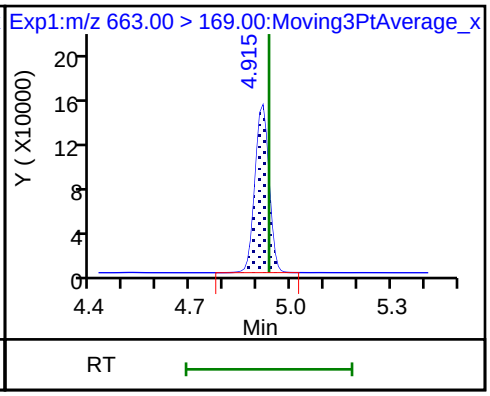
75 Perfluorododecanesulfonic acid (PF



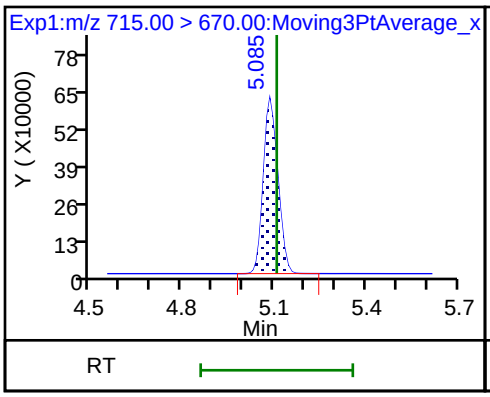
41 Perfluorotridecanoic acid



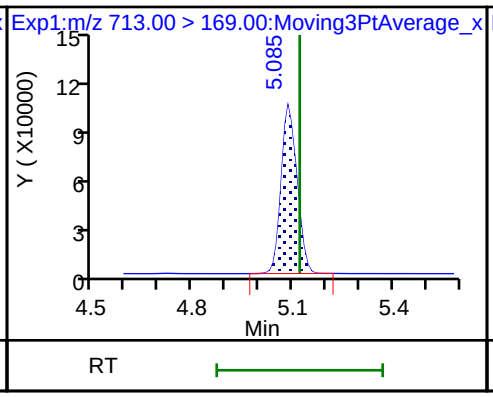
41 Perfluorotridecanoic acid



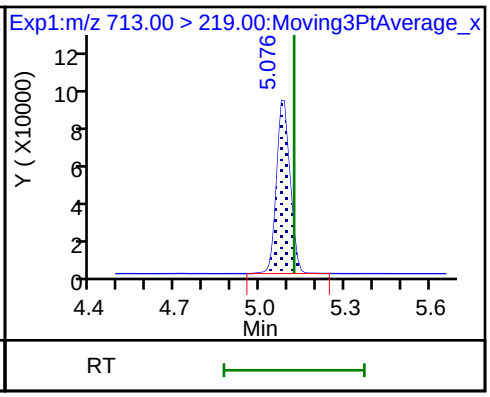
D 43 13C2 PFTeDA



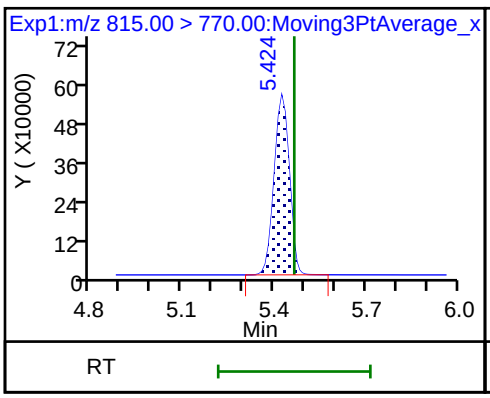
42 Perfluorotetradecanoic acid



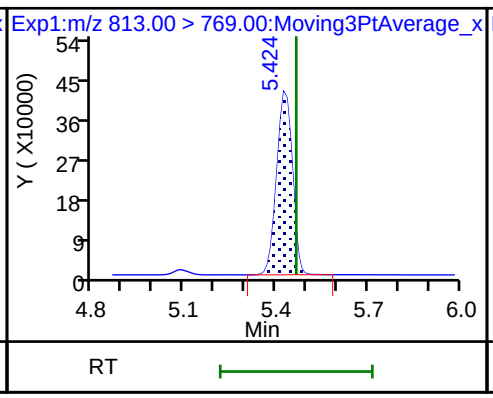
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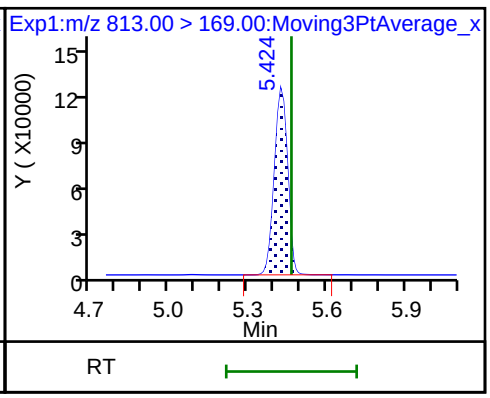
D 44 13C2 PFHxDA



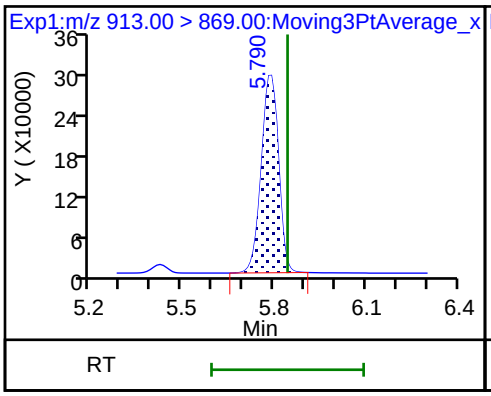
45 Perfluorohexadecanoic acid



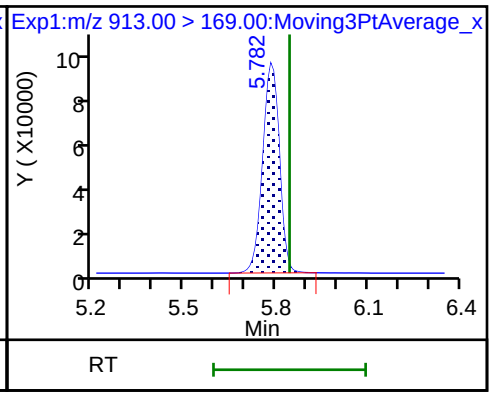
45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid



46 Perfluorooctadecanoic acid



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Lab Sample ID: CCV 200-152696/17 Calibration Date: 02/25/2020 21:07

Instrument ID: LC812 Calib Start Date: 02/10/2020 11:48

GC Column: C-18 ID: 4.60(mm) Calib End Date: 02/10/2020 12:29

Lab File ID: SC022520C17.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.9513	0.8519		896	1000	-10.4	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.079	0.9800		908	1000	-9.2	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.020	1.075		931	884	5.4	40.0
1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2)	AveID	1.939	1.865		898	934	-3.8	50.0
Perfluorohexanoic acid (PFHxA)	AveID	0.9901	0.9916		1000	1000	0.2	40.0
Perfluoropentanesulfonic acid	AveID	1.269	1.142		844	938	-10.0	50.0
HFPO-DA	AveID	2.342	2.361		1010	1000	0.8	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.023	0.9948		972	1000	-2.8	40.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.180	1.115		859	910	-5.6	40.0
DONA	AveID	3.676	3.342		857	942	-9.1	50.0
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	AveID	1.124	0.9082		766	948	-19.2	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	1.216	1.207		945	952	-0.7	50.0
Perfluorooctanoic acid (PFOA)	AveID	1.041	1.050		1010	1000	0.9	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.098	1.074		907	928	-2.2	40.0
Perfluorononanoic acid (PFNA)	AveID	1.028	0.8666		843	1000	-15.7	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	1.399	1.261		840	932	-9.9	50.0
Perfluorononanesulfonic acid	AveID	0.8855	0.8904		965	960	0.5	50.0
Perfluorodecanoic acid (PFDA)	AveID	1.024	0.8996		878	1000	-12.2	40.0
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	AveID	0.6207	0.4583		707	958	-26.2	40.0
Perfluorooctanesulfonamide (PFOSA)	AveID	1.025	0.9138		892	1000	-10.8	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	AveID	0.8567	0.9262		1080	1000	8.1	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.7787	0.7378		913	964	-5.3	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9066	0.8446		932	1000	-6.8	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.7968	0.8080		1010	1000	1.4	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.589	1.288		763	942	-19.0	50.0
Perfluorododecanoic acid (PFDoA)	AveID	0.9702	0.9907		1020	1000	2.1	40.0
10:2 FTS	AveID	0.3321	0.3020		877	964	-9.1	50.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.2703	0.2917		1040	968	7.9	50.0
Perfluorotridecanoic acid (PFTriA)	AveID	0.8833	0.8642		978	1000	-2.2	50.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1556	0.1756		1130	1000	12.9	40.0

FORM VII 537 (modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Lab Sample ID: CCV 200-152696/17 Calibration Date: 02/25/2020 21:07

Instrument ID: LC812 Calib Start Date: 02/10/2020 11:48

GC Column: C-18 ID: 4.60(mm) Calib End Date: 02/10/2020 12:29

Lab File ID: SC022520C17.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluoro-n-hexadecanoic acid (PFHxDA)	L1ID		0.8807		964	1000	-3.6	40.0
Perfluoro-n-octadecanoic acid (PFODA)	AveID	0.6228	0.6295		1010	1000	1.1	50.0
13C4 PFBA	Ave	1.040	1.145		2750	2500	10.0	50.0
13C5 PFPeA	Ave	0.8098	0.8674		2680	2500	7.1	50.0
13C3 PFBS	Ave	1.089	0.9920		2120	2330	-8.9	50.0
M2-4:2 FTS	Ave	0.0796	0.0719		2110	2340	-9.8	50.0
13C2 PFHxA	Ave	0.9471	0.9043		2390	2500	-4.5	50.0
13C3 HFPO-DA	Ave	0.0751	0.0604		2010	2500	-19.5	50.0
13C4 PFHpA	Ave	0.9106	0.8836		2430	2500	-3.0	50.0
18O2 PFHxS	Ave	0.7696	0.7677		2360	2370	-0.3	50.0
M2-6:2 FTS	Ave	0.1054	0.1234		2780	2380	17.0	50.0
13C4 PFOA	Ave	0.9424	0.9621		2550	2500	2.1	50.0
13C4 PFOS	Ave	0.5730	0.6255		2610	2390	9.2	50.0
13C5 PFNA	Ave	0.9041	0.8886		2460	2500	-1.7	50.0
13C2 PFDA	Ave	0.9823	1.099		2800	2500	11.9	50.0
M2-8:2 FTS	Ave	0.1489	0.1628		2620	2400	9.4	50.0
13C8 FOSA	Ave	1.008	1.212		3000	2500	20.2	50.0
d3-NMeFOSAA	Ave	0.0775	0.0820		2650	2500	5.8	50.0
13C2 PFUnA	Ave	0.8568	0.8278		2420	2500	-3.4	50.0
d5-NEtFOSAA	Ave	0.0883	0.0993		2810	2500	12.3	50.0
13C2 PFDoA	Ave	0.9588	0.9523		2480	2500	-0.7	50.0
13C2 PFTeDA	Ave	0.8231	0.8825		2680	2500	7.2	50.0
13C2 PFHxDA	Ave	0.8949	0.7987		2230	2500	-10.8	50.0

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C17.d
Lims ID: CCV L4
Client ID:
Sample Type: CCV
Inject. Date: 25-Feb-2020 21:07:46 ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCV L4
Misc. Info.: 200-0040162-017 Plate: 1 Rack: 2
Operator ID: lc812tech Instrument ID: LC812
Sublist: chrom-PFC_LC812*sub3

Method: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\PFC_LC812.m
Limit Group: LC_PFC_ICAL
Last Update: 26-Feb-2020 17:13:38 Calib Date: 10-Feb-2020 12:29:33
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL010.d

Column 1 : C-18 (4.60 mm) Det: EXP1
Process Host: CTX0323

First Level Reviewer: murrayjw Date: 26-Feb-2020 10:37:23
Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										M
217.00 > 172.00	1.907	1.917	-0.010	0.529	2363572	2.75		110	7097	M
2 Perfluorobutanoic acid										
212.90 > 169.00	1.907	1.917	-0.010	1.000	805415	0.8955		89.6	115	
D 3 13C5 PFPeA										
267.90 > 223.00	2.244	2.257	-0.013	0.622	1790733	2.68		107	2390	
4 Perfluoropentanoic acid										
262.90 > 219.00	2.244	2.271	-0.027	1.000	701991	0.9084		90.8	77.9	
D 47 13C3 PFBS										
301.90 > 80.00	2.271	2.284	-0.013	0.630	1904670	2.12		91.1	12392	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.271	2.284	-0.013	1.000	778377	0.9314	Target=2.19	105	3551	
298.90 > 99.00	2.271	2.284	-0.013	1.000	342059		2.28(1.09-3.28)		573	
61 1H,1H,2H,2H-perfluorohexanesulfoni										
327.00 > 307.00	2.611	2.623	-0.012	1.005	103331	0.8981		96.2	1203	
D 60 M2-4:2 FTS										
329.00 > 81.00	2.598	2.623	-0.025	0.720	138544	2.11		90.2	257	
D 7 13C2 PFHxA										
315.00 > 270.00	2.648	2.673	-0.025	0.734	1866879	2.39		95.5	8121	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.648	2.673	-0.025	1.000	740475	1.00	Target=12.51	100	355	
313.00 > 119.00	2.648	2.673	-0.025	1.000	55435		13.36(6.25-18.76)		143	
70 Perfluoropentanesulfonic acid										
349.00 > 80.00	2.660	2.685	-0.025	0.849	678864	0.8438	Target=3.29	90.0	1249	
349.00 > 99.00	2.648	2.685	-0.037	0.845	213141		3.19(1.64-4.93)		905	
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.784	2.815	-0.031	1.000	117840	1.01		101	51.8	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 64 13C3 HFPO-DA										
332.10 > 287.00	2.784	2.815	-0.031	0.772	124759	2.01		80.5	1019	
D 11 18O2 PFHxS										
403.00 > 84.00	3.132	3.168	-0.036	0.868	1499232	2.36		99.7	7290	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.132	3.168	-0.036	1.000	642964	0.8594	Target=4.33	94.4	6000	
399.00 > 99.00	3.132	3.168	-0.036	1.000	145897		4.41(2.17-6.50)		520	
D 9 13C4 PFHpA										
367.00 > 322.00	3.132	3.168	-0.036	0.868	1824246	2.43		97.0	5321	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.132	3.168	-0.036	1.000	725882	0.9723	Target=3.79	97.2	446	
363.00 > 169.00	3.132	3.168	-0.036	1.000	202109		3.59(1.89-5.68)		657	
77 DONA										
377.00 > 251.00	3.187	3.225	-0.038	0.800	1626303	0.8565	Target=2.43	90.9	1383	
377.00 > 85.00	3.187	3.225	-0.038	0.800	656138		2.48(1.22-3.65)		1262	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.591	3.624	-0.033	1.000	87755	0.7663		80.8	810	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.591	3.624	-0.033	0.995	242065	2.78		117	1545	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.591	3.632	-0.041	0.902	593773	0.9450	Target=6.01	99.3	3842	
449.00 > 99.00	3.591	3.632	-0.041	0.902	95505		6.22(3.01-9.02)		1390	
D 14 13C4 PFOA										
417.00 > 372.00	3.607	3.640	-0.033	1.000	1986300	2.55		102	21970	
* 62 13C2 PFOA										
415.00 > 370.00	3.607	3.640	-0.033		2064475	2.50			18694	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.607	3.640	-0.033	1.000	834620	1.01	Target=2.66	101	379	
413.00 > 169.00	3.607	3.640	-0.033	1.000	328327		2.54(1.33-3.99)		2919	
D 18 13C4 PFOS										
503.00 > 80.00	3.983	4.005	-0.022	1.104	1234569	2.61		109	10825	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.983	4.005	-0.022	1.000	514725	0.9074	Target=5.29	97.8	4324	
499.00 > 99.00	3.983	4.005	-0.022	1.000	83631		6.15(2.65-7.94)		778	
D 19 13C5 PFNA										
468.00 > 423.00	3.994	4.027	-0.033	1.107	1834564	2.46		98.3	12389	
20 Perfluorononanoic acid										
463.00 > 419.00	3.994	4.027	-0.033	1.000	635925	0.8427	Target=7.73	84.3	327	
463.00 > 169.00	3.994	4.027	-0.033	1.000	104657		6.08(3.87-11.60)		1531	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	4.141	4.164	-0.023	1.039	606913	0.8401		90.1	1948	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.261	4.283	-0.022	1.070	441521	0.9652	Target=2.78	101	5095	
549.00 > 99.00	4.261	4.283	-0.022	1.070	151699		2.91(1.39-4.17)		1821	
D 23 13C2 PFDA										
515.00 > 470.00	4.283	4.305	-0.022	1.187	2269288	2.80		112	8857	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
24 Perfluorodecanoic acid										
513.00 > 469.00	4.283	4.305	-0.022	1.000	816539	0.8785	Target=9.75	87.8	158	
513.00 > 169.00	4.283	4.305	-0.022	1.000	99439		8.21(4.88-14.63)		475	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.293	4.317	-0.024	1.190	322060	2.62		109	2616	
25 1H,1H,2H,2H-perfluorodecanesulfoni										
527.00 > 507.00	4.293	4.317	-0.024	1.000	59038	0.7073		73.8	1539	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.328	4.340	-0.012	1.000	914404	0.8916		89.2	2409	
D 21 13C8 FOSA										
506.00 > 78.00	4.328	4.340	-0.012	1.200	2501741	3.00		120	8326	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.409	4.431	-0.022	1.222	169315	2.65		106	682	
28 N-methylperfluorooctanesulfonamido										
570.00 > 419.00	4.420	4.443	-0.023	1.003	62730	1.08		108	542	
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.496	4.524	-0.028	1.129	367370	0.9133	Target=2.63	94.7	2854	
599.00 > 99.00	4.496	4.524	-0.028	1.129	134501		2.73(1.32-3.95)		1485	
D 30 13C2 PFUnA										
565.00 > 520.00	4.523	4.537	-0.014	1.254	1709012	2.42		96.6	9268	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.523	4.551	-0.028	1.000	577390	0.9317	Target=7.31	93.2	645	
563.00 > 169.00	4.523	4.551	-0.028	1.000	86619		6.67(3.66-10.97)		1873	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.537	4.551	-0.014	1.258	204891	2.81		112	1445	
33 N-ethylperfluorooctanesulfonamidoa										
584.00 > 419.00	4.537	4.563	-0.026	1.000	66219	1.01		101	1129	
66 11-Chloroeicosafluoro-3-oxaundecan										
631.00 > 451.00	4.602	4.626	-0.024	1.155	626591	0.7632		81.0	1553	
D 36 13C2 PFDoA										
615.00 > 570.00	4.724	4.744	-0.020	1.310	1965991	2.48		99.3	8472	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.724	4.744	-0.020	1.000	779092	1.02	Target=6.96	102	177	
613.00 > 169.00	4.724	4.744	-0.020	1.000	125025		6.23(3.48-10.44)		1494	
74 1H,1H,2H,2H-perfluorododecanesulfo										
627.00 > 607.00	4.744	4.764	-0.020	1.105	39145	0.8767		90.9	1312	
75 Perfluorododecanesulfonic acid (PF										
699.00 > 80.00	4.879	4.897	-0.018	1.225	145847	1.04	Target=0.47	108	509	
699.00 > 99.00	4.879	4.897	-0.018	1.225	280219		0.52(0.24-0.71)		4962	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.915	4.934	-0.019	1.041	679634	0.9784	Target=4.84	97.8	239	
663.00 > 169.00	4.915	4.934	-0.019	1.041	159994		4.25(2.42-7.26)		2391	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.085	5.108	-0.023	1.410	1821885	2.68		107	10324	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.085	5.120	-0.035	1.000	127977	1.13	Target=1.15	113	1457	
713.00 > 219.00	5.076	5.120	-0.044	0.998	111091		1.15(0.58-1.73)		1916	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 44 13C2 PFHxDA										
815.00 > 770.00	5.424	5.465	-0.041	1.504	1648793	2.23		89.2	5894	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.424	5.465	-0.041	1.000	580839	0.9643	Target=4.36	96.4	170	
813.00 > 169.00	5.424	5.465	-0.041	1.000	149097		3.90(2.18-6.53)		1626	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.782	5.843	-0.061	1.066	415190	1.01	Target=4.01	101	141	
913.00 > 169.00	5.773	5.843	-0.070	1.064	120113		3.46(2.00-6.01)		1197	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

PFAS32NCIC4_00004 Amount Added: 100.00 Units: uL

Report Date: 26-Feb-2020 17:13:39 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C17.d

Injection Date: 25-Feb-2020 21:07:46 Instrument ID: LC812

Lims ID: CCV L4

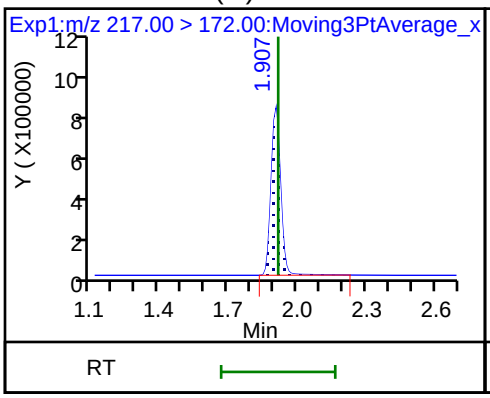
Client ID:

Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17

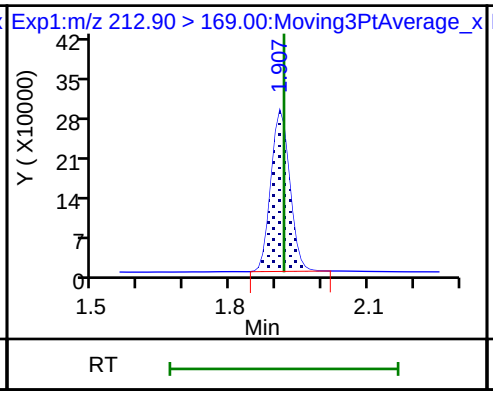
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFC_LC812 Limit Group: LC_PFC_ICAL

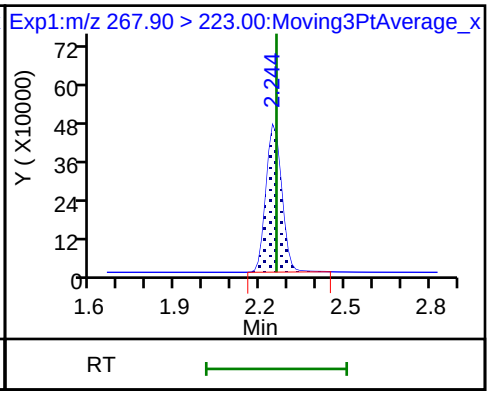
D 1 13C4 PFBA (M)



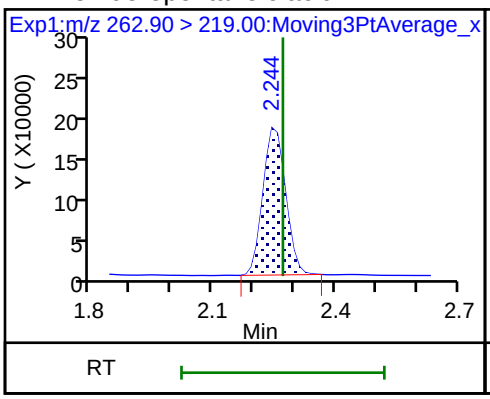
2 Perfluorobutanoic acid



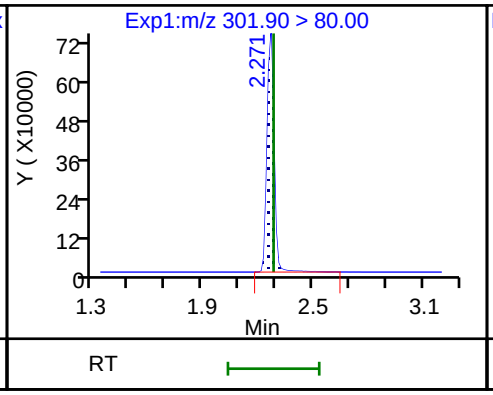
D 3 13C5 PFPeA



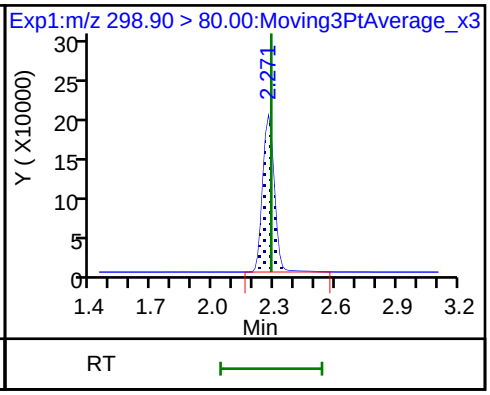
4 Perfluoropentanoic acid



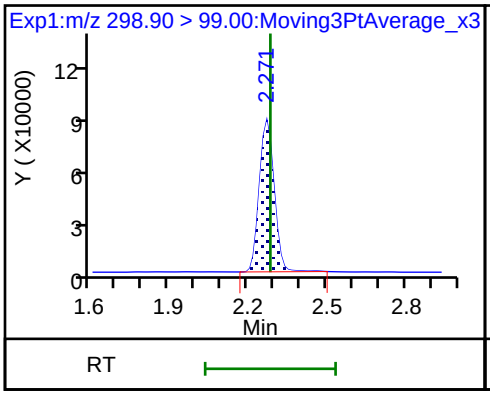
D 47 13C3 PFBS



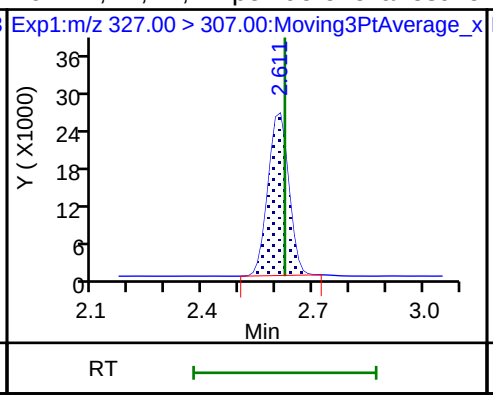
5 Perfluorobutanesulfonic acid



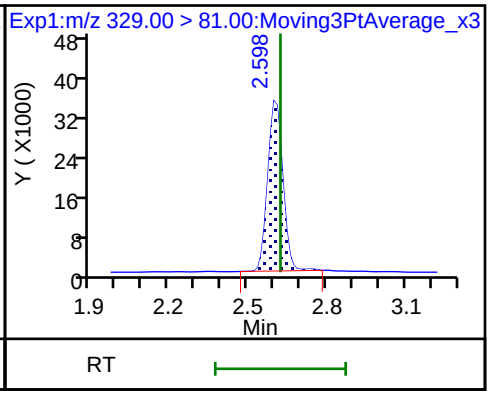
5 Perfluorobutanesulfonic acid



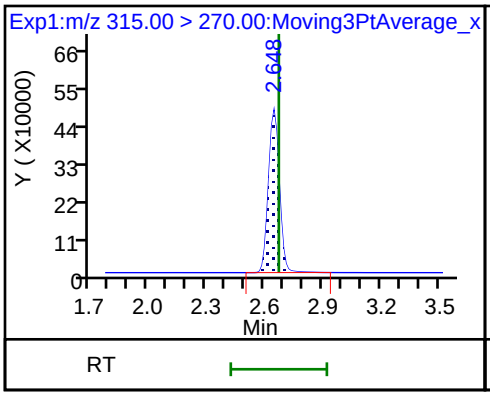
61 1H,1H,2H,2H-perfluorohexanesulfon



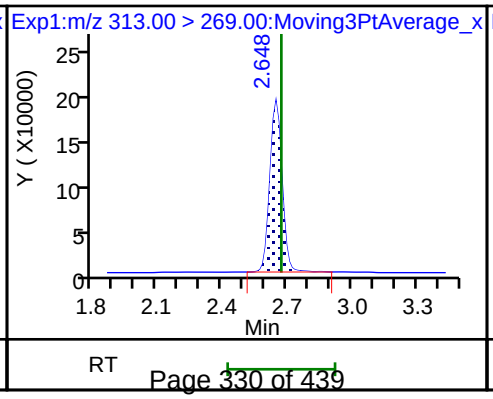
D 60 M2-4:2 FTS



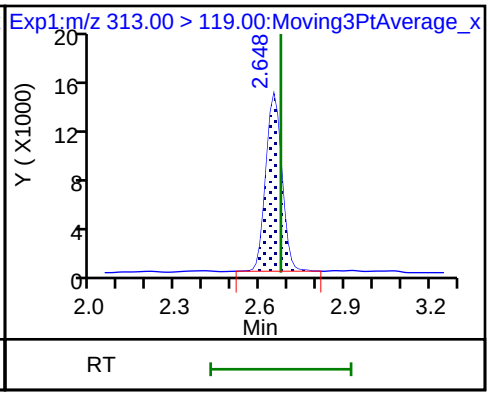
D 7 13C2 PFHxA



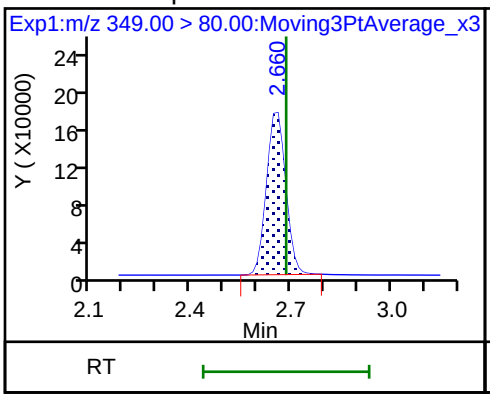
6 Perfluorohexanoic acid



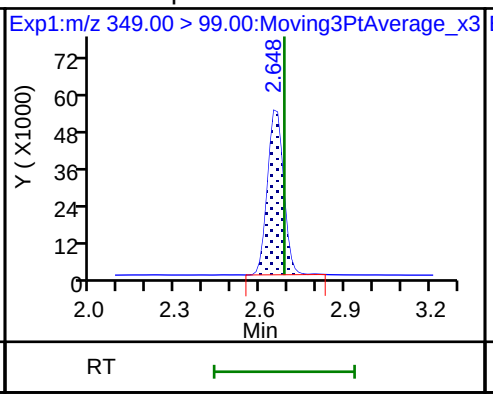
6 Perfluorohexanoic acid



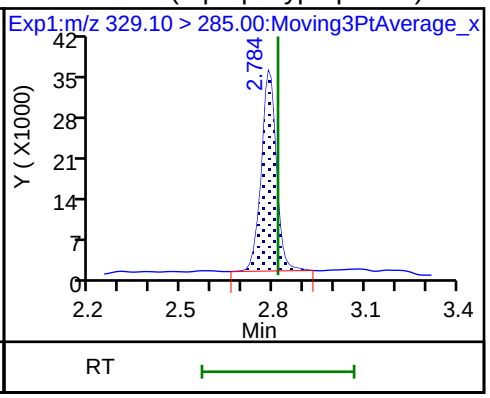
70 Perfluoropentanesulfonic acid



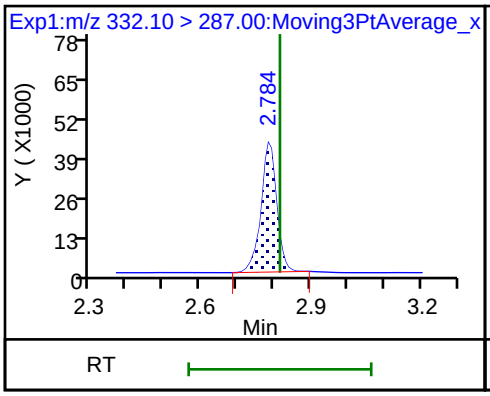
70 Perfluoropentanesulfonic acid



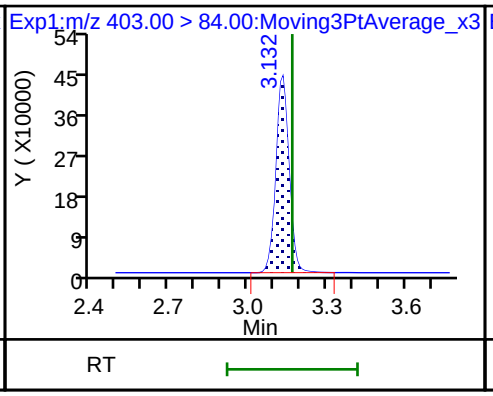
67 Perfluoro(2-propoxypropanoic) acid



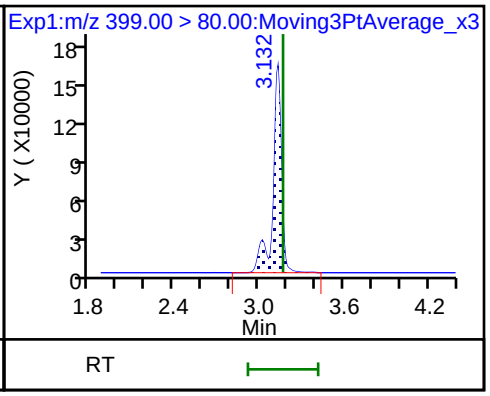
D 64 13C3 HFPO-DA



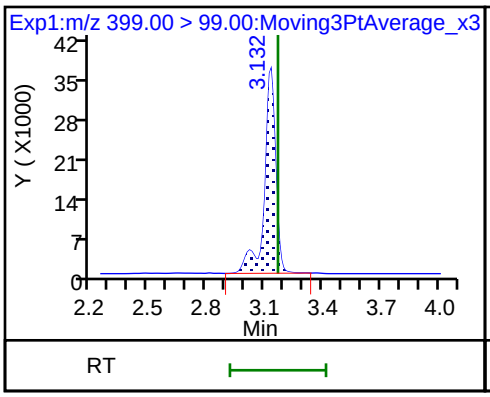
D 11 18O2 PFHxS



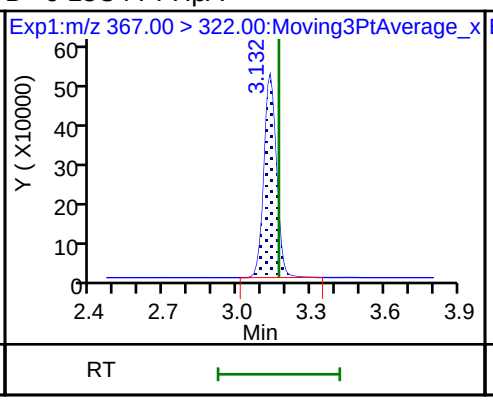
8 Perfluorohexanesulfonic acid



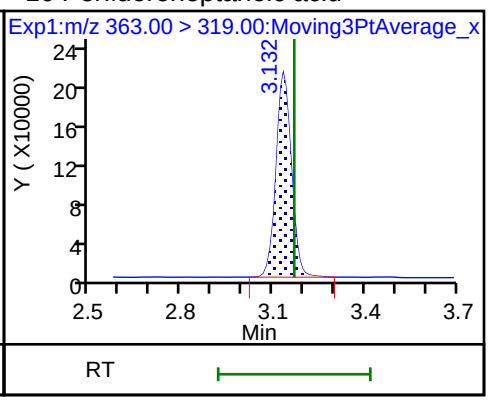
8 Perfluorohexanesulfonic acid



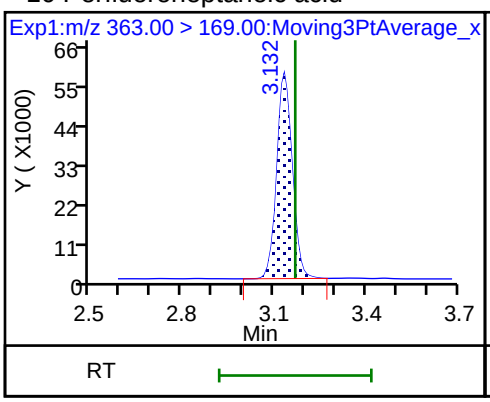
D 9 13C4 PFHpA



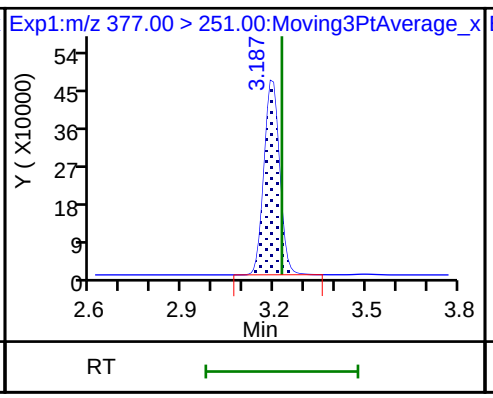
10 Perfluoroheptanoic acid



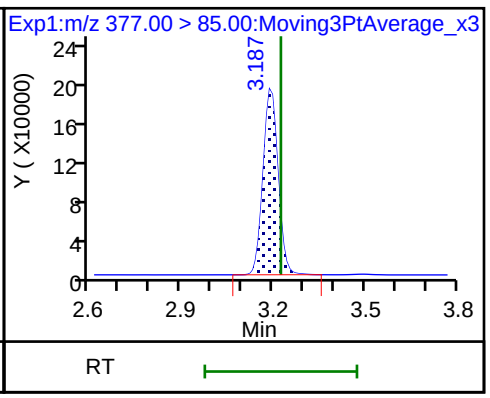
10 Perfluoroheptanoic acid



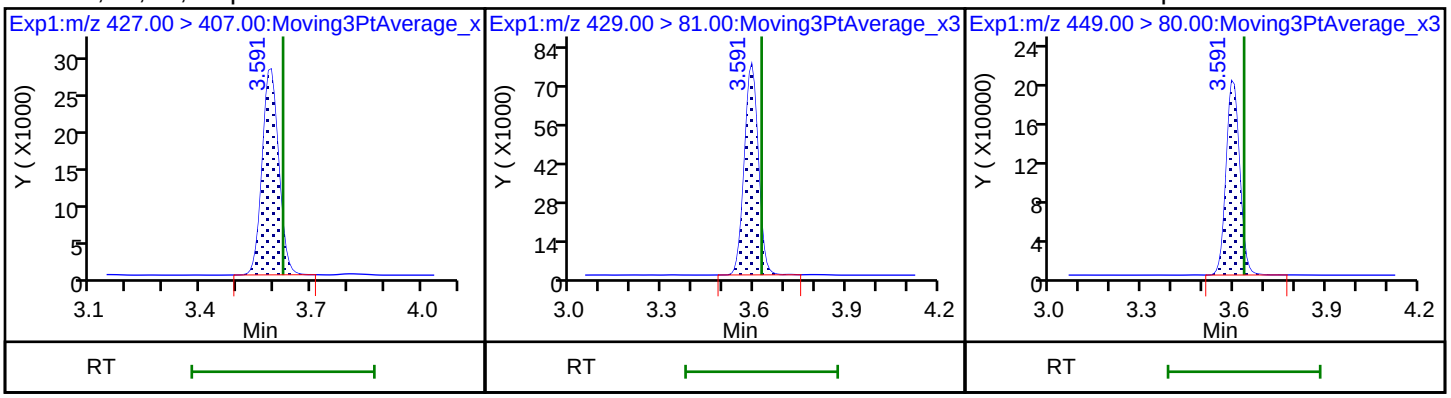
77 DONA



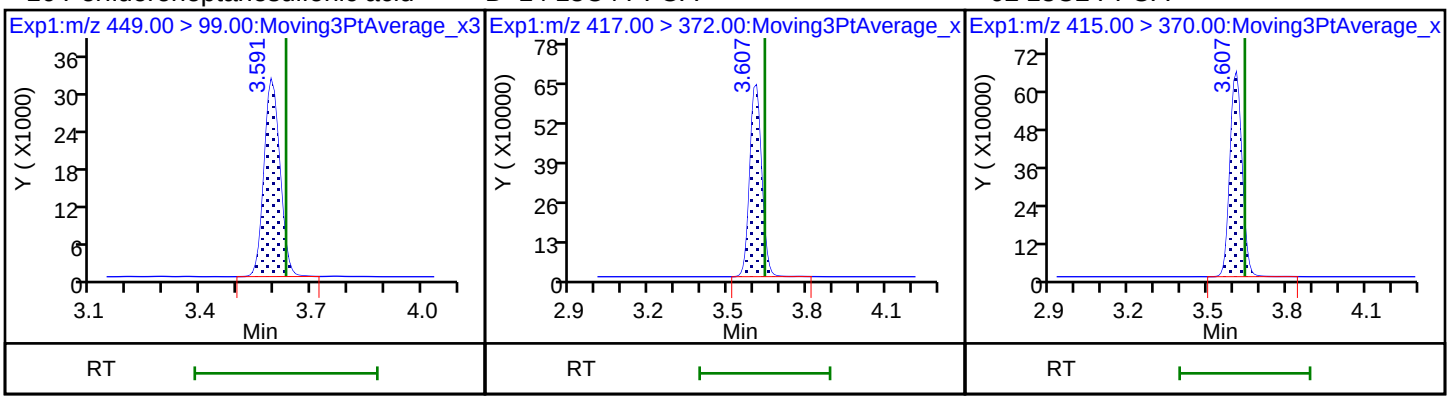
77 DONA



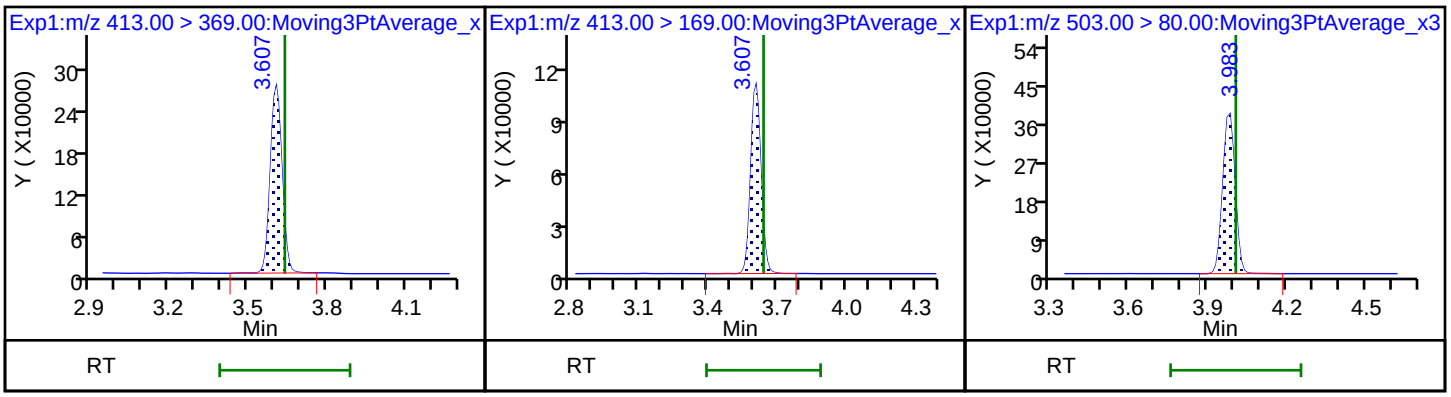
13 1H,1H,2H,2H-perfluorooctanesulfonD 12 M2-6:2 FTS 16 Perfluoroheptanesulfonic acid



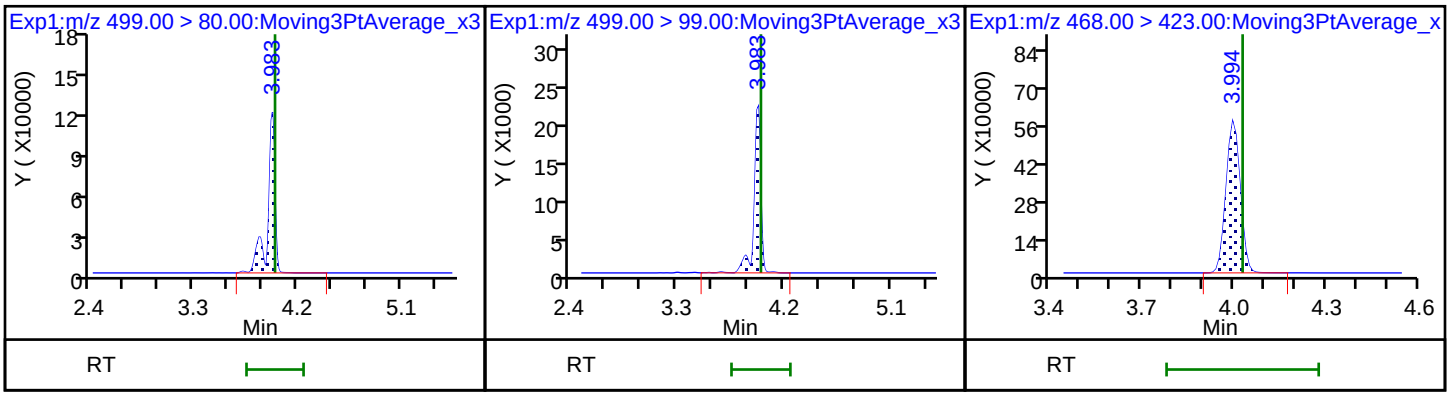
16 Perfluoroheptanesulfonic acid D 14 13C4 PFOA * 62 13C2 PFOA



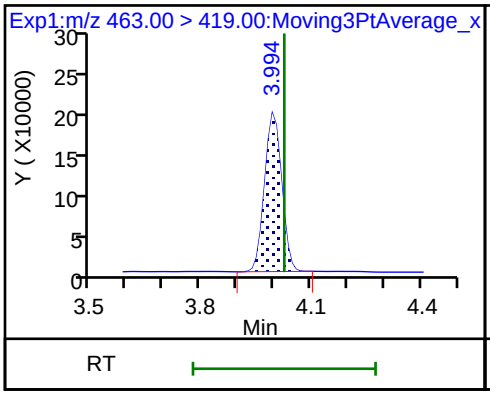
15 Perfluorooctanoic acid 15 Perfluorooctanoic acid D 18 13C4 PFOS



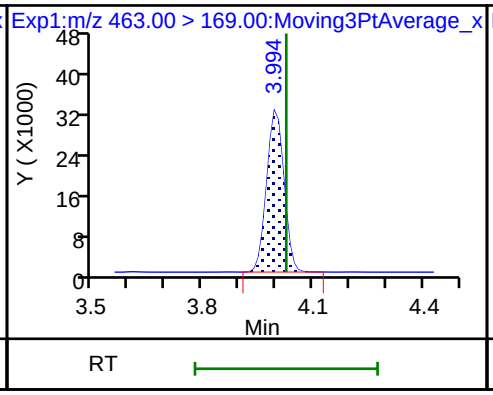
17 Perfluorooctanesulfonic acid 17 Perfluorooctanesulfonic acid D 19 13C5 PFNA



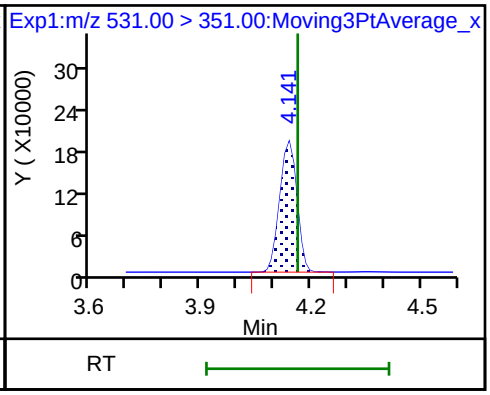
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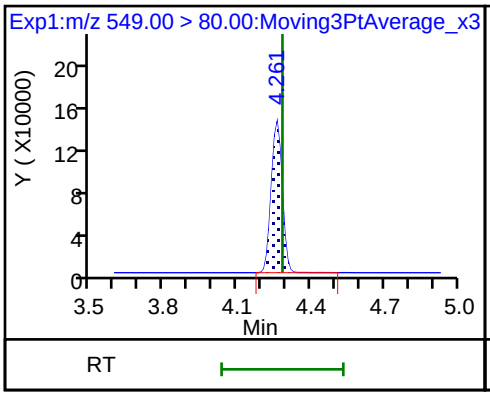
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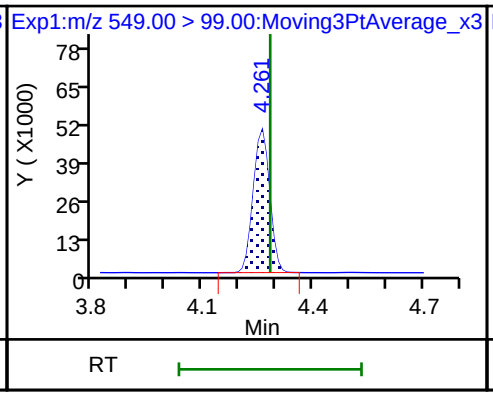
69 9-Chlorohexadecafluoro-3-oxanonane



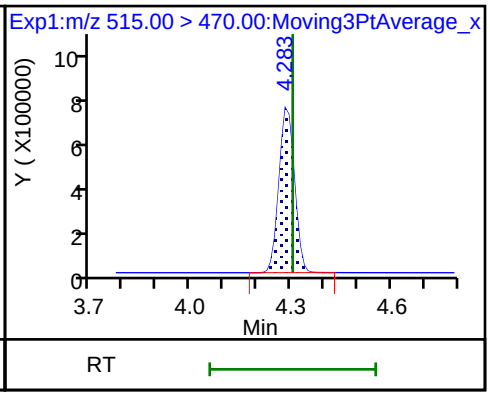
68 Perfluorononanesulfonic acid



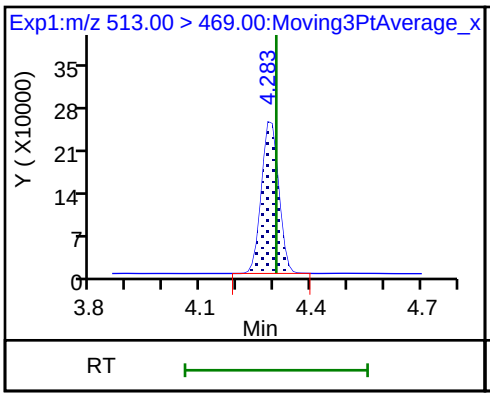
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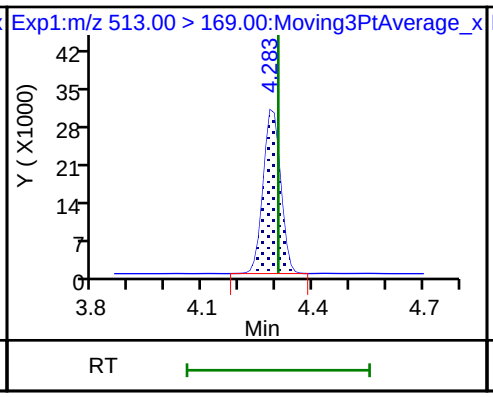
D 23 13C2 PFDA



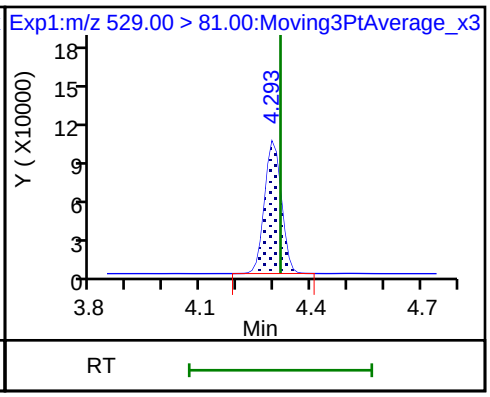
24 Perfluorodecanoic acid



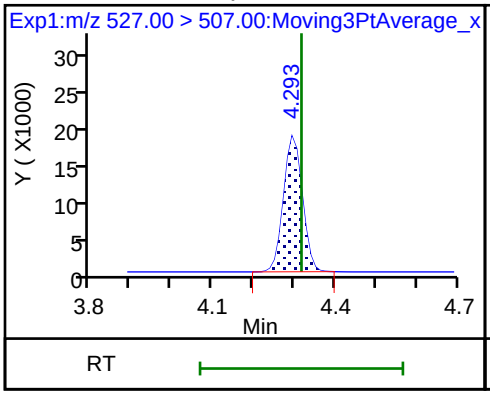
24 Perfluorodecanoic acid



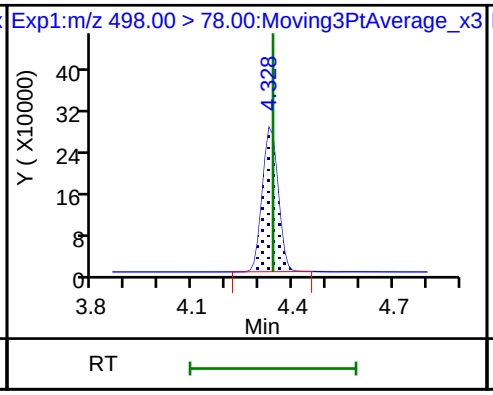
D 26 M2-8:2 FTS



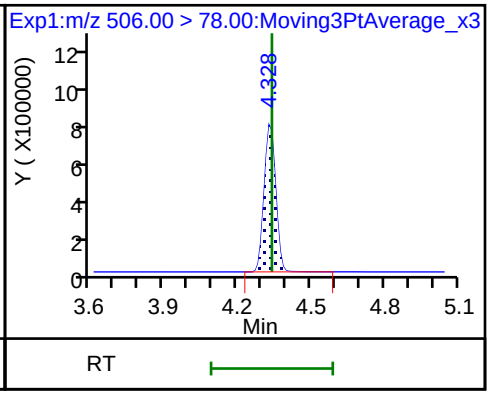
25 1H,1H,2H,2H-perfluorodecanesulfoni



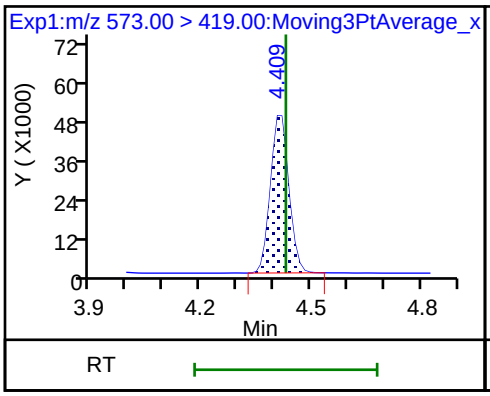
22 Perfluorooctanesulfonamide



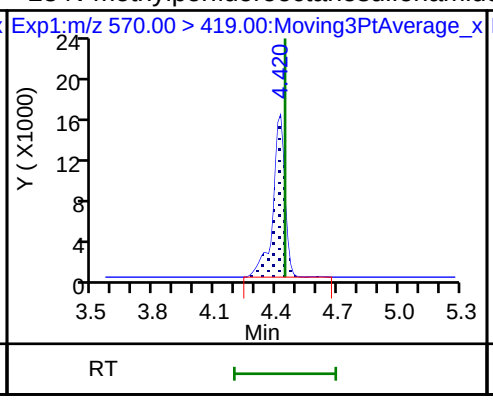
D 21 13C8 FOSA



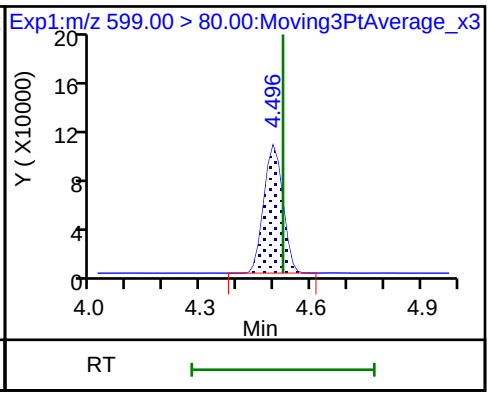
D 27 d3-NMeFOSAA



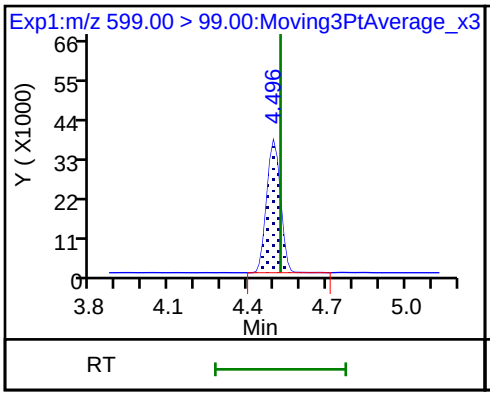
28 N-methylperfluorooctanesulfonamido



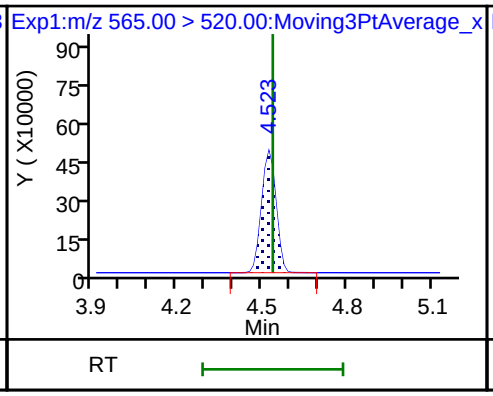
29 Perfluorodecanesulfonic acid



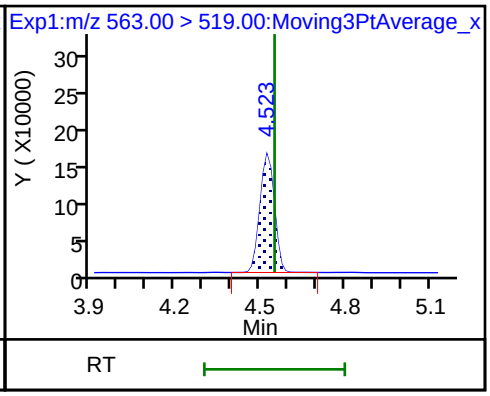
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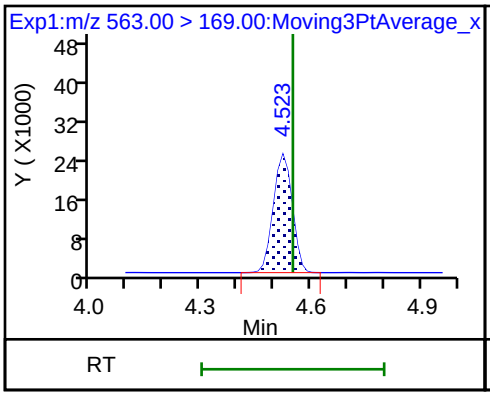
D 30 13C2 PFUnA



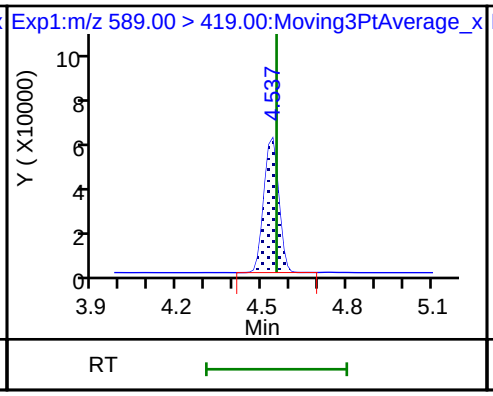
31 Perfluoroundecanoic acid



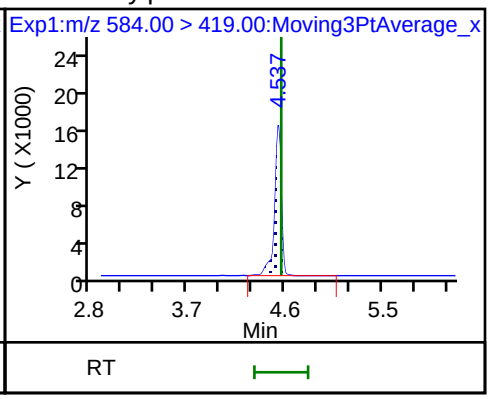
31 Perfluoroundecanoic acid



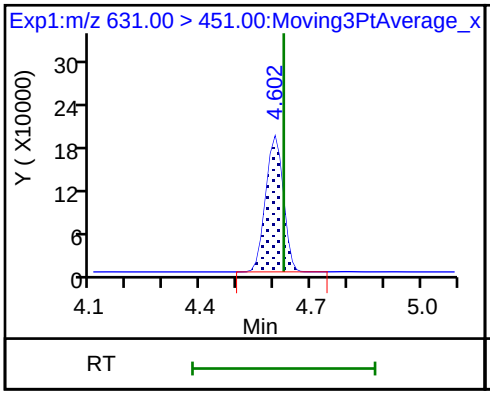
D 32 d5-NEtFOSAA



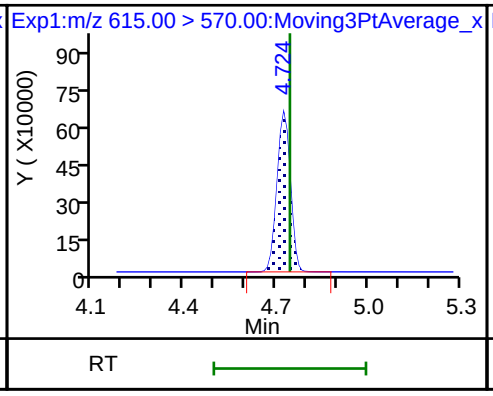
33 N-ethylperfluorooctanesulfonamidoa



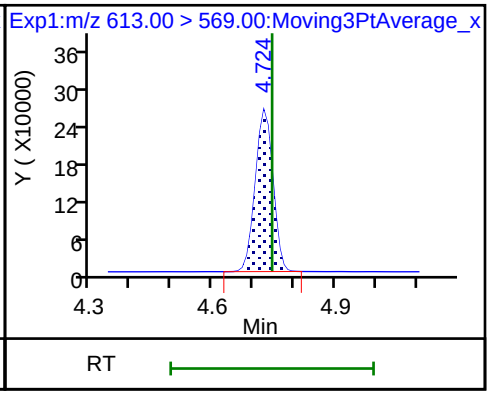
66 11-Chloroeicosafluoro-3-oxaundecan



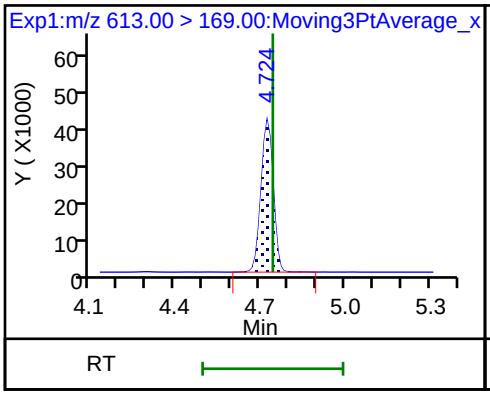
D 36 13C2 PFDoA



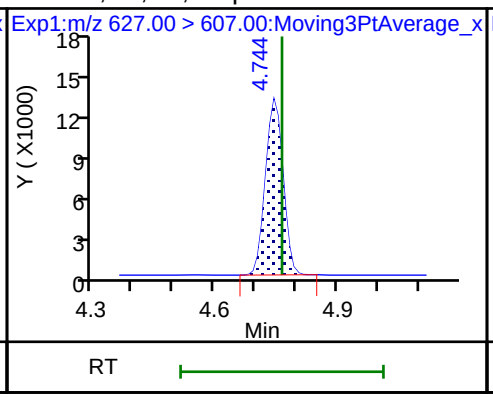
37 Perfluorododecanoic acid



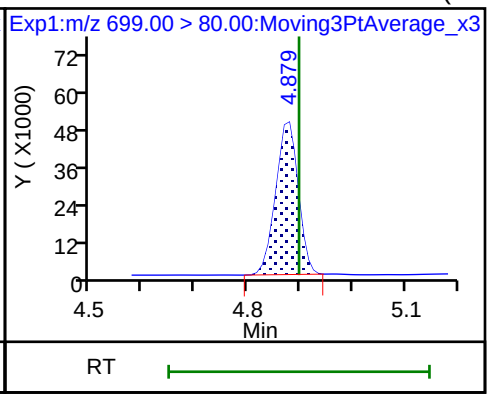
37 Perfluorododecanoic acid



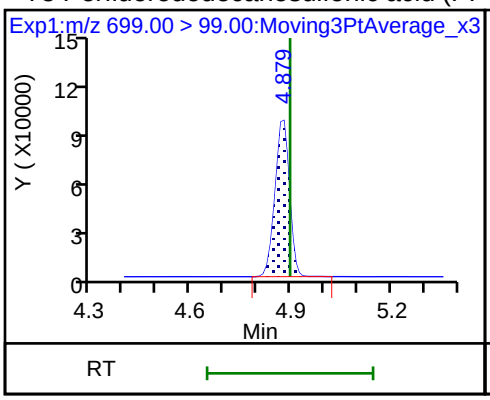
74 1H,1H,2H,2H-perfluorododecanesulfo



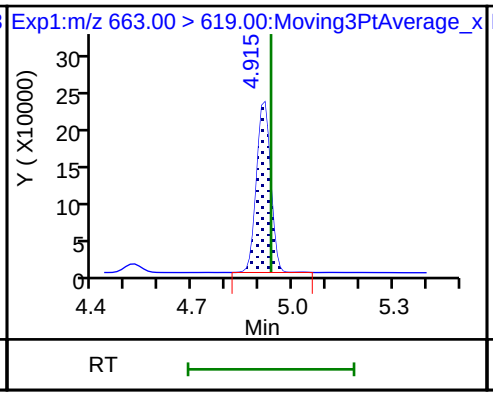
75 Perfluorododecanesulfonic acid (PF



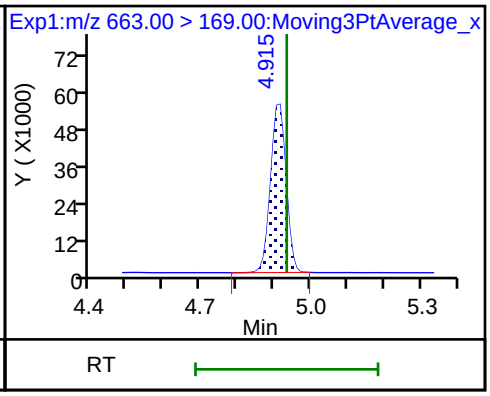
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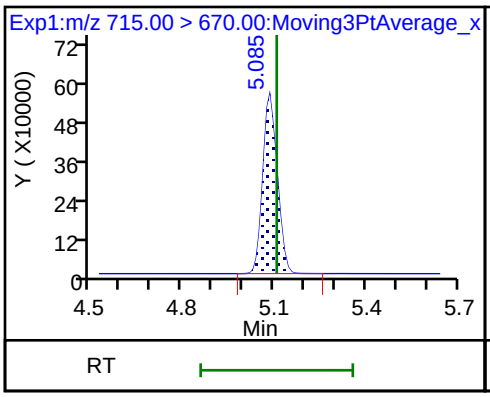
41 Perfluorotridecanoic acid



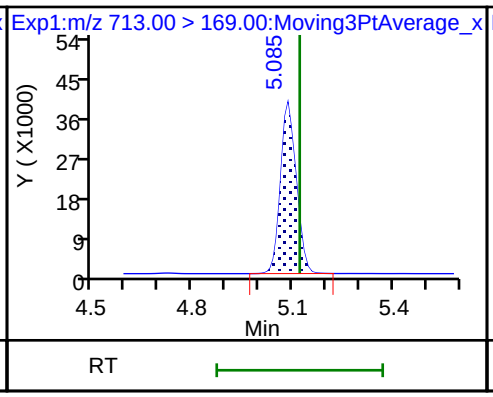
41 Perfluorotridecanoic acid



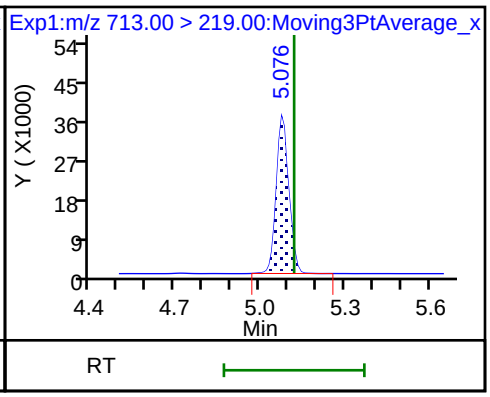
D 43 13C2 PFTeDA



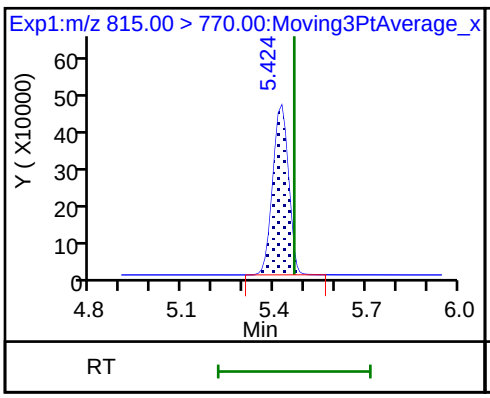
42 Perfluorotetradecanoic acid



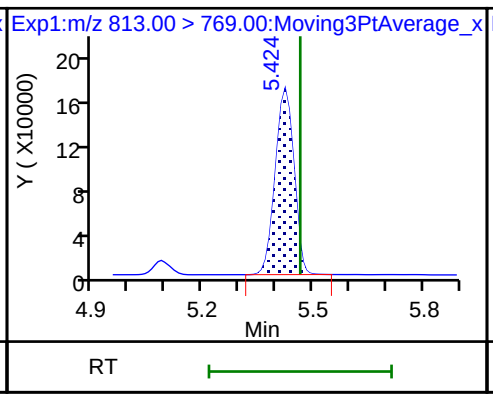
42 Perfluorotetradecanoic acid



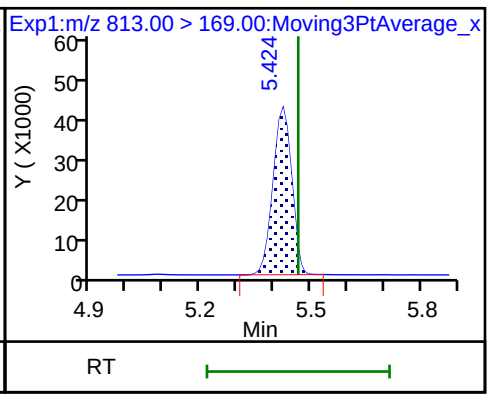
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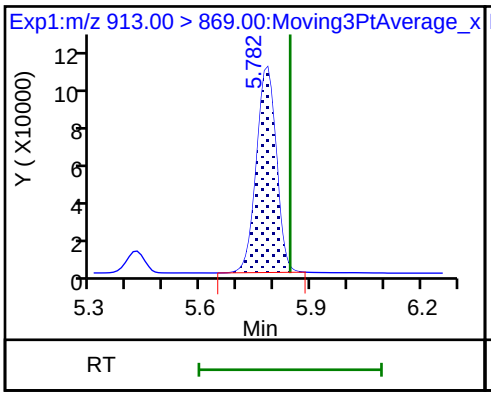
45 Perfluorohexadecanoic acid



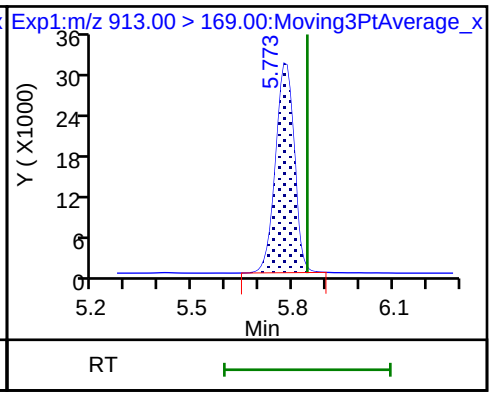
45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid



46 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

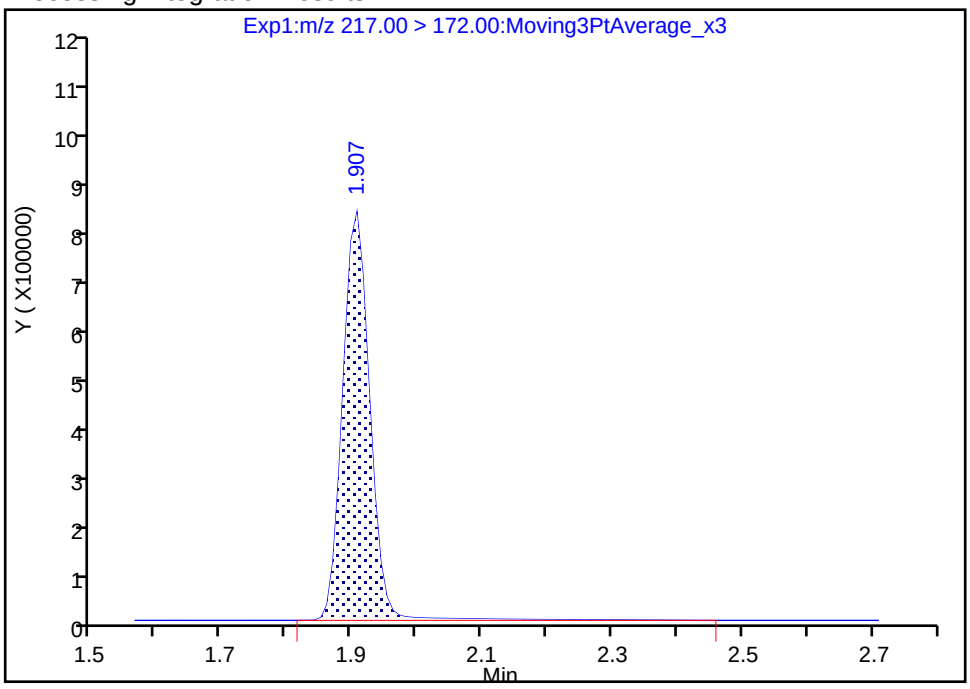
Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C17.d
Injection Date: 25-Feb-2020 21:07:46 Instrument ID: LC812
Lims ID: CCV L4
Client ID:
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

D 1 13C4 PFBA, CAS: STL00992

Signal: 1

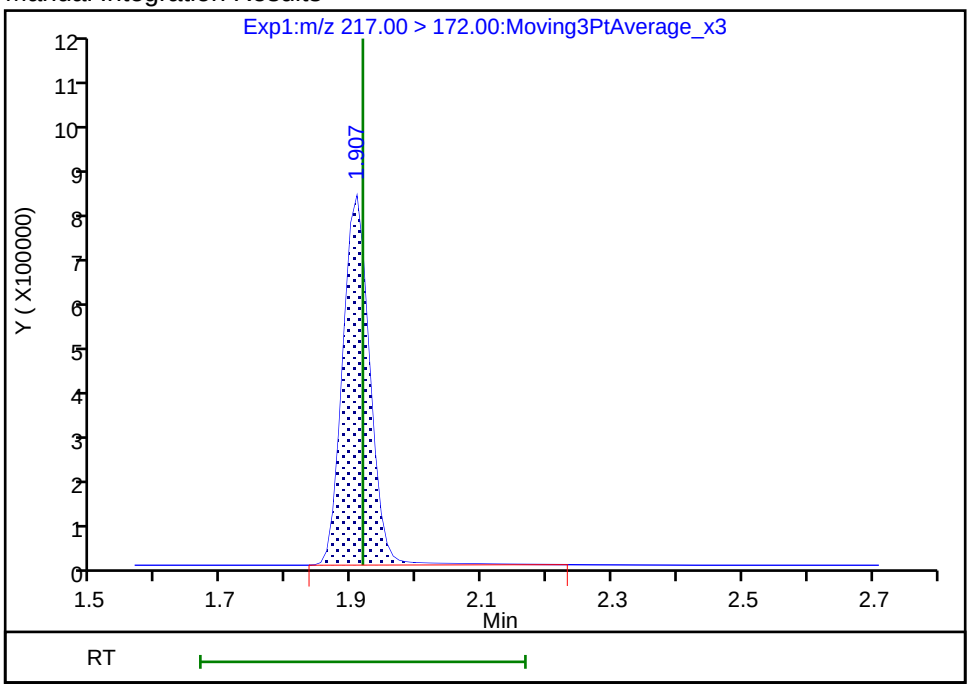
Processing Integration Results

RT: 1.91
Area: 2387405
Amount: 2.778963
Amount Units: ng/ml



Manual Integration Results

RT: 1.91
Area: 2363572
Amount: 2.751221
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 10:36:47
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Lab Sample ID: CCV 200-152696/26 Calibration Date: 02/25/2020 22:22

Instrument ID: LC812 Calib Start Date: 02/10/2020 11:48

GC Column: C-18 ID: 4.60(mm) Calib End Date: 02/10/2020 12:29

Lab File ID: SC022520C26.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.9513	0.8743		2300	2500	-8.1	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.079	0.9630		2230	2500	-10.7	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.020	1.049		2270	2210	2.9	40.0
1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2)	AveID	1.939	1.717		2070	2340	-11.5	50.0
Perfluorohexanoic acid (PFHxA)	AveID	0.9901	0.8931		2260	2500	-9.8	40.0
Perfluoropentanesulfonic acid	AveID	1.269	1.070		1980	2350	-15.7	50.0
HFPO-DA	AveID	2.342	2.018		2150	2500	-13.8	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.023	0.9583		2340	2500	-6.3	40.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.180	1.009		1940	2280	-14.5	40.0
DONA	AveID	3.676	3.133		2010	2360	-14.8	50.0
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	AveID	1.124	0.9848		2080	2370	-12.4	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	1.216	1.192		2330	2380	-2.0	50.0
Perfluorooctanoic acid (PFOA)	AveID	1.041	0.9944		2390	2500	-4.5	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.098	1.018		2150	2320	-7.3	40.0
Perfluorononanoic acid (PFNA)	AveID	1.028	0.8114		1970	2500	-21.1	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	1.399	1.095		1820	2330	-21.7	50.0
Perfluorononanesulfonic acid	AveID	0.8855	0.9031		2450	2400	2.0	50.0
Perfluorodecanoic acid (PFDA)	AveID	1.024	0.9506		2320	2500	-7.2	40.0
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	AveID	0.6207	0.4838		1870	2400	-22.1	40.0
Perfluorooctanesulfonamide (PFOSA)	AveID	1.025	0.997		2430	2500	-2.7	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	AveID	0.8567	0.8628		2520	2500	0.7	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.7787	0.7710		2390	2410	-1.0	50.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.7968	0.7938		2490	2500	-0.4	40.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9066	0.8171		2250	2500	-9.9	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.589	1.317		1950	2360	-17.1	50.0
Perfluorododecanoic acid (PFDoA)	AveID	0.9702	0.9475		2440	2500	-2.3	40.0
10:2 FTS	AveID	0.3321	0.3039		2210	2410	-8.5	50.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.2703	0.2701		2420	2420	-0.0	50.0
Perfluorotridecanoic acid (PFTriA)	AveID	0.8833	0.8474		2400	2500	-4.1	50.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1556	0.1747		2810	2500	12.3	40.0

FORM VII 537 (modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Lab Sample ID: CCV 200-152696/26 Calibration Date: 02/25/2020 22:22

Instrument ID: LC812 Calib Start Date: 02/10/2020 11:48

GC Column: C-18 ID: 4.60(mm) Calib End Date: 02/10/2020 12:29

Lab File ID: SC022520C26.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluoro-n-hexadecanoic acid (PFHxDA)	L1ID		0.8874		2480	2500	-1.0	40.0
Perfluoro-n-octadecanoic acid (PFODA)	AveID	0.6228	0.6658		2670	2500	6.9	50.0
13C4 PFBA	Ave	1.040	1.165		2800	2500	12.0	50.0
13C5 PFPeA	Ave	0.8098	0.8790		2710	2500	8.6	50.0
13C3 PFBS	Ave	1.089	1.044		2230	2330	-4.1	50.0
M2-4:2 FTS	Ave	0.0796	0.0861		2530	2340	8.1	50.0
13C2 PFHxA	Ave	0.9471	0.9002		2380	2500	-5.0	50.0
13C3 HFPO-DA	Ave	0.0751	0.0756		2520	2500	0.6	50.0
13C4 PFHpA	Ave	0.9106	0.9222		2530	2500	1.3	50.0
18O2 PFHxS	Ave	0.7696	0.8336		2560	2370	8.3	50.0
M2-6:2 FTS	Ave	0.1054	0.1178		2650	2380	11.7	50.0
13C4 PFOA	Ave	0.9424	0.9932		2630	2500	5.4	50.0
13C4 PFOS	Ave	0.5730	0.6392		2670	2390	11.6	50.0
13C5 PFNA	Ave	0.9041	0.9467		2620	2500	4.7	50.0
13C2 PFDA	Ave	0.9823	1.067		2710	2500	8.6	50.0
M2-8:2 FTS	Ave	0.1489	0.2021		3250	2400	35.7	50.0
13C8 FOSA	Ave	1.008	1.142		2830	2500	13.3	50.0
d3-NMeFOSAA	Ave	0.0775	0.0919		2960	2500	18.5	50.0
13C2 PFUnA	Ave	0.8568	0.9537		2780	2500	11.3	50.0
d5-NEtFOSAA	Ave	0.0883	0.1177		3330	2500	33.2	50.0
13C2 PFDoA	Ave	0.9588	1.015		2650	2500	5.8	50.0
13C2 PFTeDA	Ave	0.8231	0.8869		2690	2500	7.8	50.0
13C2 PFHxDA	Ave	0.8949	0.8370		2340	2500	-6.5	50.0

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C26.d
Lims ID: CCV L5
Client ID:
Sample Type: CCV
Inject. Date: 25-Feb-2020 22:22:23 ALS Bottle#: 26 Worklist Smp#: 26
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: CCV L5
Misc. Info.: 200-0040162-026 Plate: 1 Rack: 2
Operator ID: lc812tech Instrument ID: LC812
Sublist: chrom-PFC_LC812*sub3

Method: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\PFC_LC812.m
Limit Group: LC_PFC_ICAL
Last Update: 26-Feb-2020 17:13:55 Calib Date: 10-Feb-2020 12:29:33
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL010.d

Column 1 : C-18 (4.60 mm) Det: EXP1
Process Host: CTX0323

First Level Reviewer: murrayjw Date: 26-Feb-2020 12:30:15
Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										M
217.00 > 172.00	1.907	1.917	-0.010	0.530	2097354	2.80		112	8810	M
2 Perfluorobutanoic acid										
212.90 > 169.00	1.907	1.917	-0.010	1.000	1833610	2.30		91.9	275	
D 3 13C5 PFPeA										
267.90 > 223.00	2.244	2.257	-0.013	0.623	1582669	2.71		109	2283	
4 Perfluoropentanoic acid										
262.90 > 219.00	2.244	2.271	-0.027	1.000	1524088	2.23		89.3	158	
D 47 13C3 PFBS										
301.90 > 80.00	2.257	2.284	-0.027	0.627	1748567	2.23		95.9	691686	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.271	2.284	-0.013	1.006	1744047	2.27	Target=2.19	103	6268	
298.90 > 99.00	2.271	2.284	-0.013	1.006	812946		2.15(1.09-3.28)		1329	
61 1H,1H,2H,2H-perfluorohexanesulfoni										
327.00 > 307.00	2.598	2.623	-0.025	1.000	248632	2.07		88.5	1400	
D 60 M2-4:2 FTS										
329.00 > 81.00	2.598	2.623	-0.025	0.722	144803	2.53		108	212	
D 7 13C2 PFHxA										
315.00 > 270.00	2.648	2.673	-0.025	0.736	1620781	2.38		95.0	6284	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.648	2.673	-0.025	1.000	1447515	2.26	Target=12.51	90.2	510	
313.00 > 119.00	2.648	2.673	-0.025	1.000	126531		11.44(6.25-18.76)		302	
70 Perfluoropentanesulfonic acid										
349.00 > 80.00	2.648	2.685	-0.037	0.847	1506117	1.98	Target=3.29	84.3	4801	
349.00 > 99.00	2.648	2.685	-0.037	0.847	444658		3.39(1.64-4.93)		1533	
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.784	2.815	-0.031	1.000	274519	2.15		86.2	119	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 64 13C3 HFPO-DA										
332.10 > 287.00	2.784	2.815	-0.031	0.773	136056	2.52		101	885	
D 11 18O2 PFHxS										
403.00 > 84.00	3.124	3.168	-0.044	0.868	1419758	2.56		108	6192	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.124	3.168	-0.044	1.000	1377934	1.94	Target=4.33	85.5	8561	
399.00 > 99.00	3.124	3.168	-0.044	1.000	330796		4.17(2.17-6.50)		1067	
D 9 13C4 PFHpA										
367.00 > 322.00	3.124	3.168	-0.044	0.868	1660358	2.53		101	5603	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.124	3.168	-0.044	1.000	1591036	2.34	Target=3.79	93.7	966	
363.00 > 169.00	3.124	3.168	-0.044	1.000	462917		3.44(1.89-5.68)		1586	
77 DONA										
377.00 > 251.00	3.187	3.225	-0.038	0.802	3397109	2.01	Target=2.43	85.2	2370	
377.00 > 85.00	3.187	3.225	-0.038	0.802	1408883		2.41(1.22-3.65)		1807	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.584	3.624	-0.040	1.000	197940	2.08		87.6	1401	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.584	3.624	-0.040	0.996	201416	2.65		112	1215	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.591	3.632	-0.041	0.904	1306583	2.33	Target=6.01	98.0	6266	
449.00 > 99.00	3.584	3.632	-0.048	0.902	208844		6.26(3.01-9.02)		2672	
D 14 13C4 PFOA										
417.00 > 372.00	3.599	3.640	-0.041	1.000	1788262	2.63		105	10764	
* 62 13C2 PFOA										
415.00 > 370.00	3.599	3.640	-0.041		1800498	2.50			6134	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.599	3.640	-0.041	1.000	1778282	2.39	Target=2.66	95.5	744	
413.00 > 169.00	3.599	3.640	-0.041	1.000	710920		2.50(1.33-3.99)		5952	
D 18 13C4 PFOS										
503.00 > 80.00	3.972	4.005	-0.033	1.104	1100316	2.67		112	4856	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.972	4.005	-0.033	1.000	1087338	2.15	Target=5.29	92.7	15102	
499.00 > 99.00	3.972	4.005	-0.033	1.000	182760		5.95(2.65-7.94)		1720	
D 19 13C5 PFNA										
468.00 > 423.00	3.994	4.027	-0.033	1.110	1704498	2.62		105	7857	
20 Perfluorononanoic acid										
463.00 > 419.00	3.994	4.027	-0.033	1.000	1383044	1.97	Target=7.73	78.9	622	
463.00 > 169.00	3.994	4.027	-0.033	1.000	240303		5.76(3.87-11.60)		1775	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	4.128	4.164	-0.036	1.039	1174623	1.82		78.3	5479	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.251	4.283	-0.032	1.070	997849	2.45	Target=2.78	102	7984	
549.00 > 99.00	4.251	4.283	-0.032	1.070	326430		3.06(1.39-4.17)		3604	
D 23 13C2 PFDA										
515.00 > 470.00	4.283	4.305	-0.022	1.190	1920430	2.71		109	10471	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
24 Perfluorodecanoic acid										
513.00 > 469.00	4.283	4.305	-0.022	1.000	1825551	2.32	Target=9.75	92.8	481	
513.00 > 169.00	4.283	4.305	-0.022	1.000	220769		8.27(4.88-14.63)		1197	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.283	4.317	-0.034	1.190	348634	3.25		136	2398	
25 1H,1H,2H,2H-perfluorodecanesulfoni										
527.00 > 507.00	4.293	4.317	-0.024	1.002	168677	1.87		77.9	3037	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.328	4.340	-0.012	1.000	2050988	2.43		97.3	5556	
D 21 13C8 FOSA										
506.00 > 78.00	4.328	4.340	-0.012	1.202	2056801	2.83		113	7151	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.409	4.431	-0.022	1.225	165393	2.96		119	400	
28 N-methylperfluorooctanesulfonamido										
570.00 > 419.00	4.409	4.443	-0.034	1.000	142696	2.52		101		
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.496	4.524	-0.028	1.132	855409	2.39	Target=2.63	99.0	8290	
599.00 > 99.00	4.496	4.524	-0.028	1.132	292752		2.92(1.32-3.95)		2563	
D 30 13C2 PFUnA										
565.00 > 520.00	4.510	4.537	-0.027	1.253	1717115	2.78		111	10813	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.523	4.551	-0.028	1.003	1403013	2.25	Target=7.31	90.1	922	
563.00 > 169.00	4.510	4.551	-0.041	1.000	206164		6.81(3.66-10.97)		3316	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.523	4.551	-0.028	1.257	211932	3.33		133	1707	
33 N-ethylperfluorooctanesulfonamidoa										
584.00 > 419.00	4.523	4.563	-0.040	1.000	168223	2.49		99.6	603	
66 11-Chloroeicosafluoro-3-oxaundecan										
631.00 > 451.00	4.589	4.626	-0.037	1.155	1428254	1.95		82.9	4036	
D 36 13C2 PFDoA										
615.00 > 570.00	4.714	4.744	-0.030	1.310	1827314	2.65		106	10603	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.714	4.744	-0.030	1.000	1731414	2.44	Target=6.96	97.7	427	
613.00 > 169.00	4.714	4.744	-0.030	1.000	283703		6.10(3.48-10.44)		2746	
74 1H,1H,2H,2H-perfluorododecanesulfo										
627.00 > 607.00	4.734	4.764	-0.030	1.105	106604	2.21		91.5	3492	
75 Perfluorododecanesulfonic acid (PF										
699.00 > 80.00	4.869	4.897	-0.028	1.226	300922	2.42	Target=0.47	99.9	1261	
699.00 > 99.00	4.869	4.897	-0.028	1.226	611410		0.49(0.24-0.71)		4984	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.906	4.934	-0.028	1.041	1548440	2.40	Target=4.84	95.9	574	
663.00 > 169.00	4.906	4.934	-0.028	1.041	360077		4.30(2.42-7.26)		3687	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.076	5.108	-0.032	1.410	1596923	2.69		108	9213	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.076	5.120	-0.044	1.000	278969	2.81	Target=1.15	112	3571	
713.00 > 219.00	5.067	5.120	-0.053	0.998	264395		1.06(0.58-1.73)		3730	

Report Date: 26-Feb-2020 17:13:56 Chrom Revision: 2.3 19-Feb-2020 16:45:46
Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C26.d
Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 44 13C2 PFHxDA										
815.00 > 770.00	5.413	5.465	-0.052	1.504	1507068	2.34		93.5	5128	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.413	5.465	-0.052	1.000	1337382	2.48	Target=4.36	99.0	415	
813.00 > 169.00	5.413	5.465	-0.052	1.000	330615		4.05(2.18-6.53)		2776	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.764	5.843	-0.079	1.065	1003372	2.67	Target=4.01	107	399	
913.00 > 169.00	5.764	5.843	-0.079	1.065	280261		3.58(2.00-6.01)		2122	

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

PFAS32NCIC5_00004 Amount Added: 100.00 Units: uL

Report Date: 26-Feb-2020 17:13:56 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C26.d

Injection Date: 25-Feb-2020 22:22:23 Instrument ID: LC812

Lims ID: CCV L5

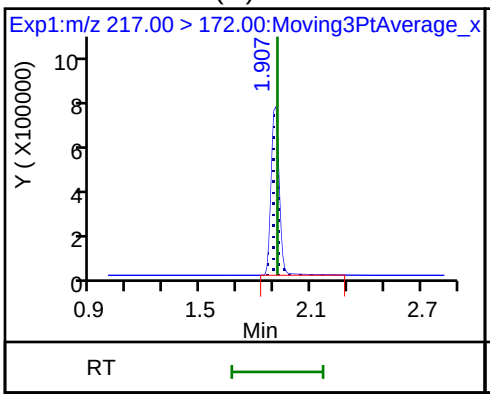
Client ID:

Operator ID: lc812tech ALS Bottle#: 26 Worklist Smp#: 26

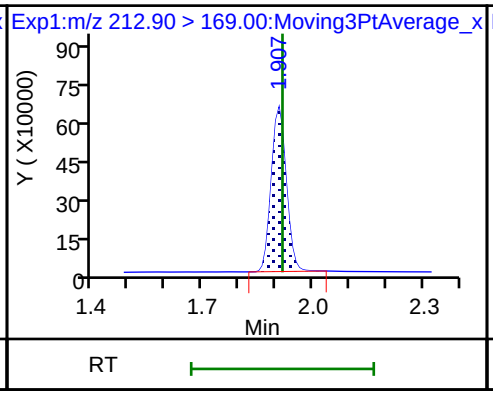
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFC_LC812 Limit Group: LC_PFC_ICAL

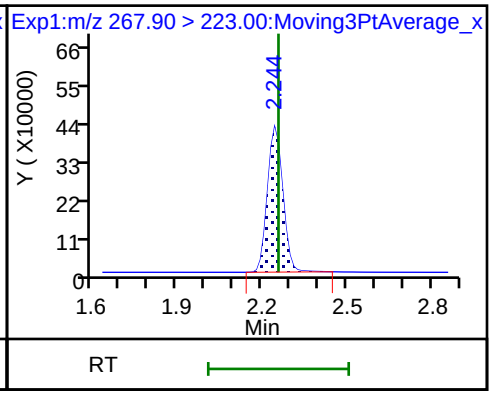
D 1 13C4 PFBA (M)



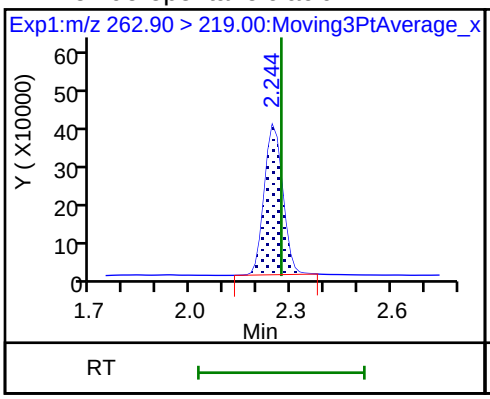
2 Perfluorobutanoic acid



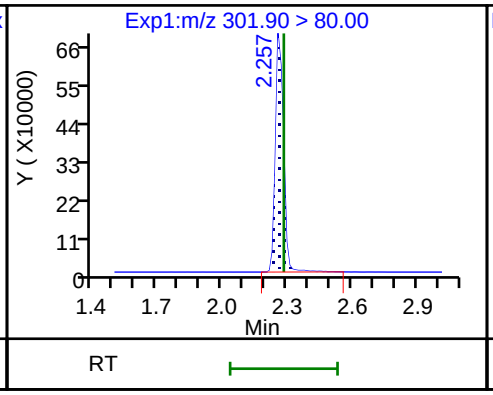
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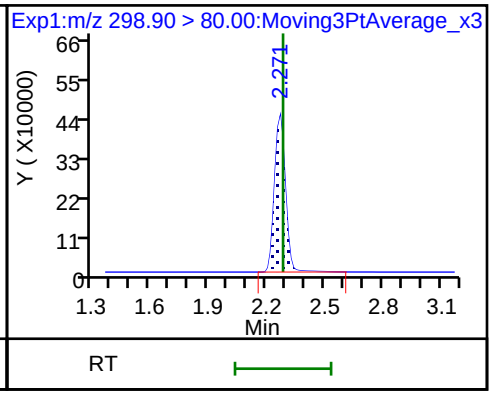
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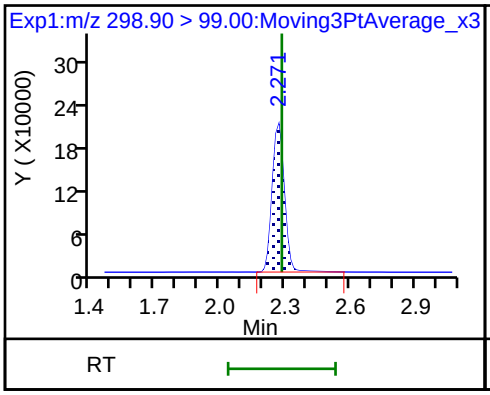
D 47 13C3 PFBS



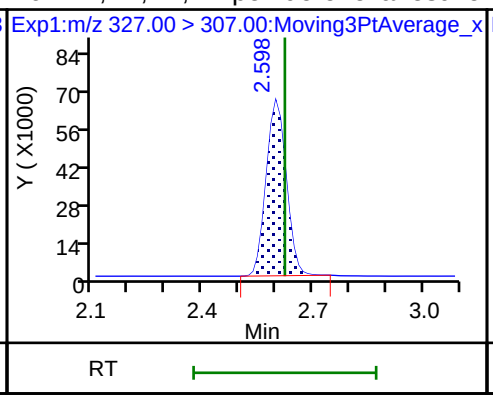
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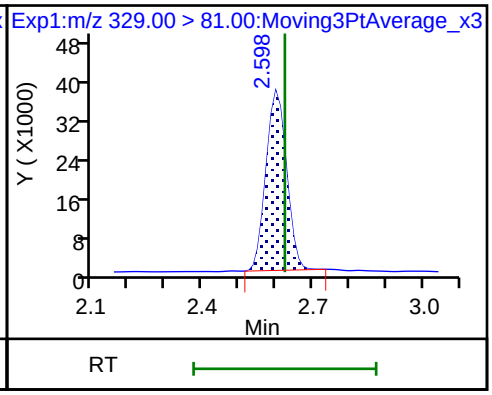
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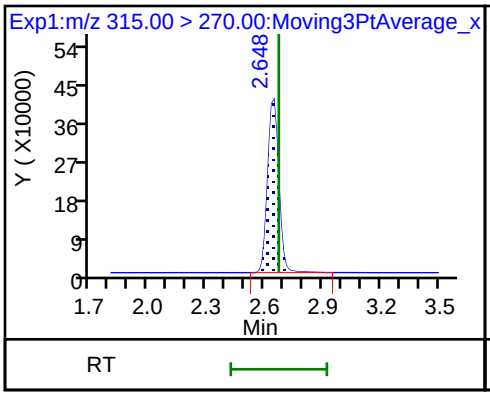
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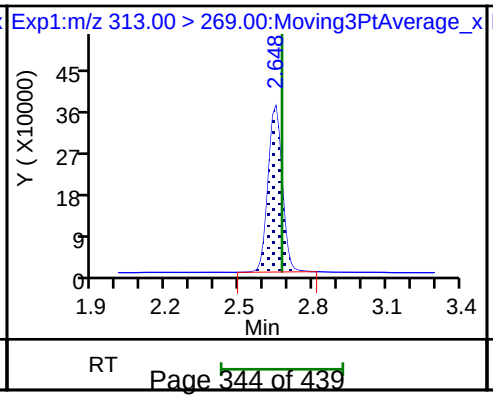
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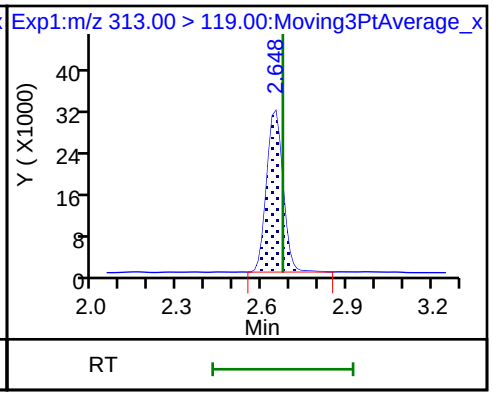
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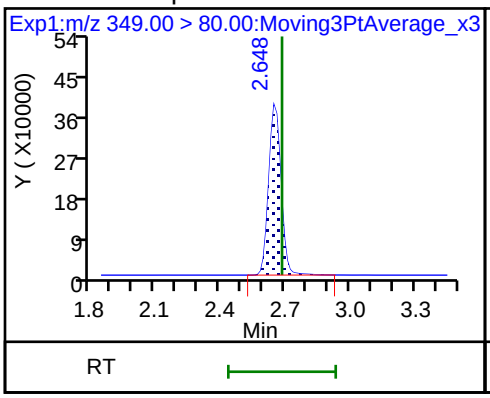
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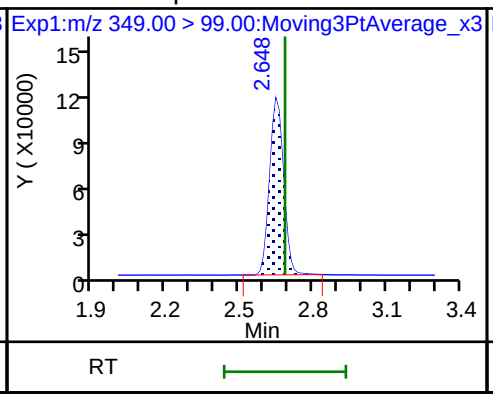
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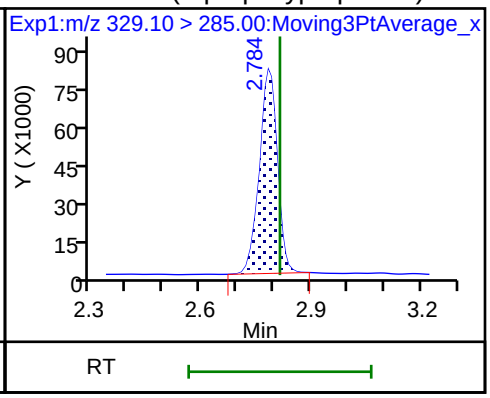
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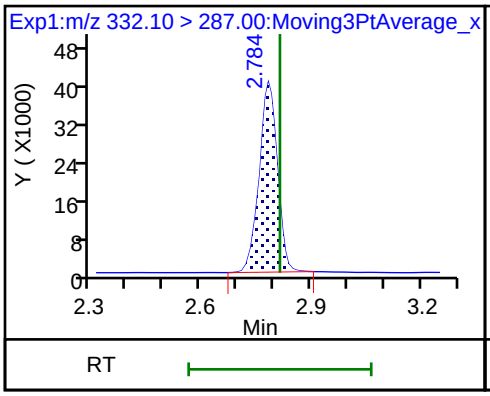
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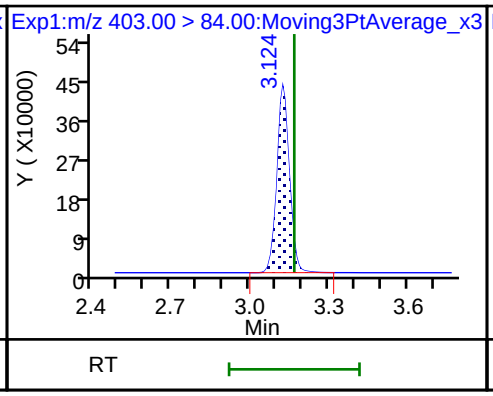
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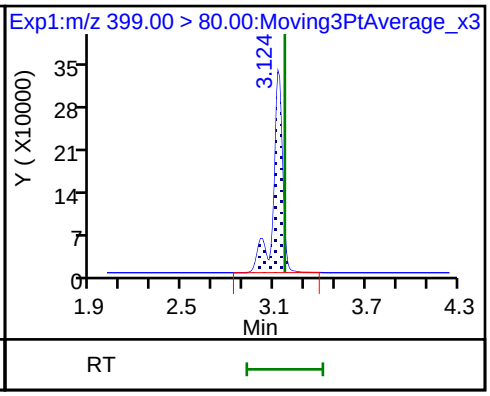
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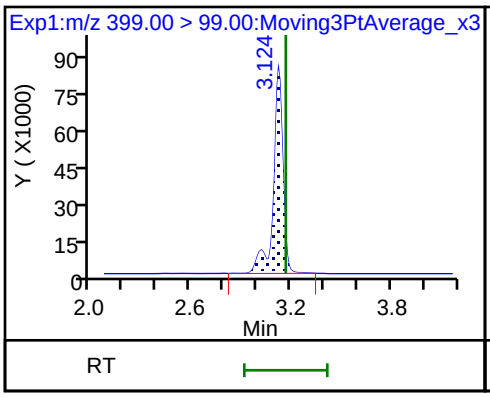
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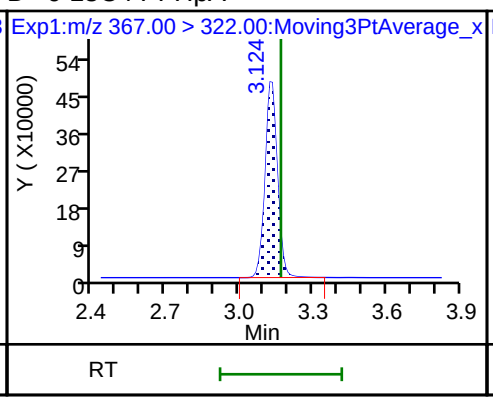
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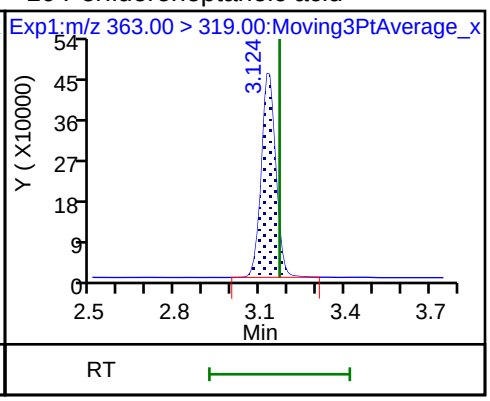
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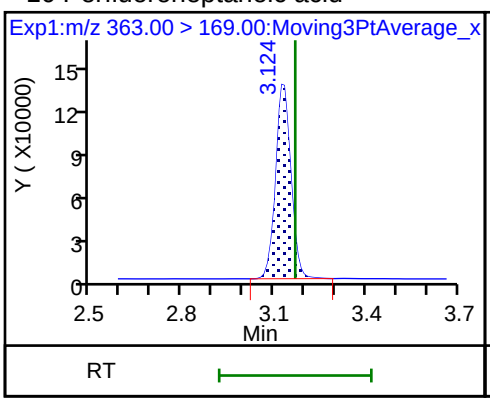
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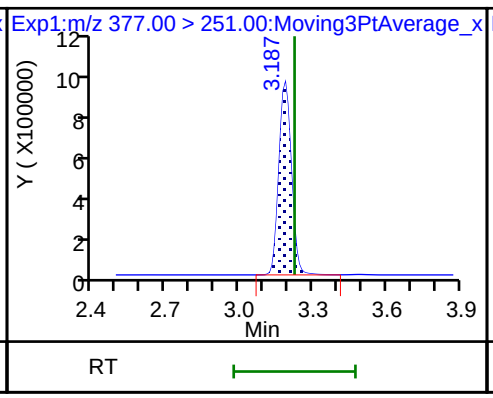
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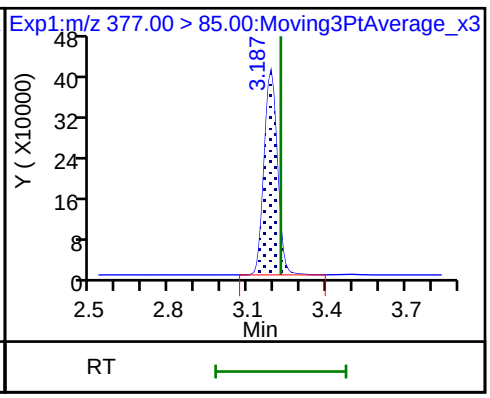
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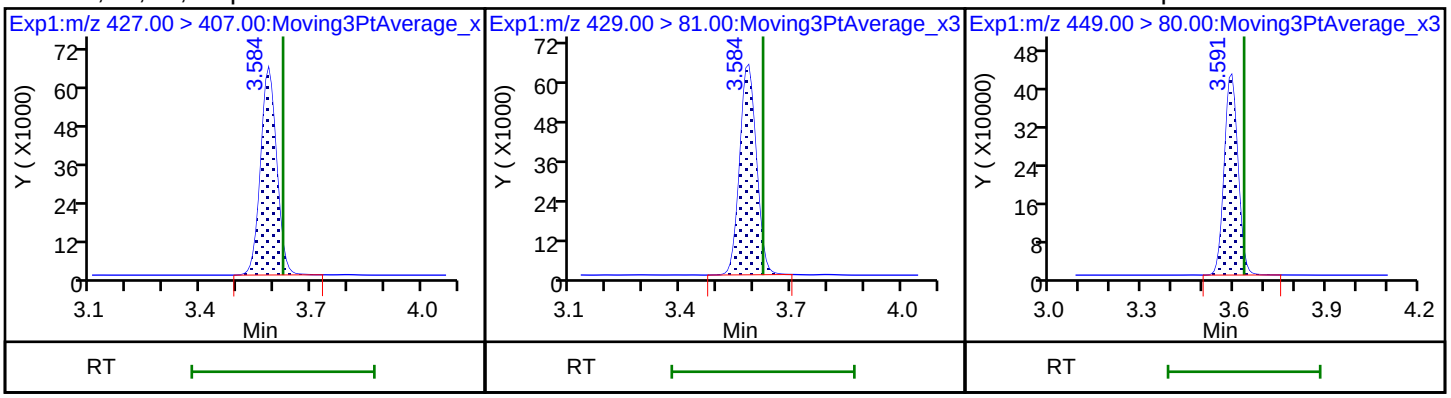
77 DONA



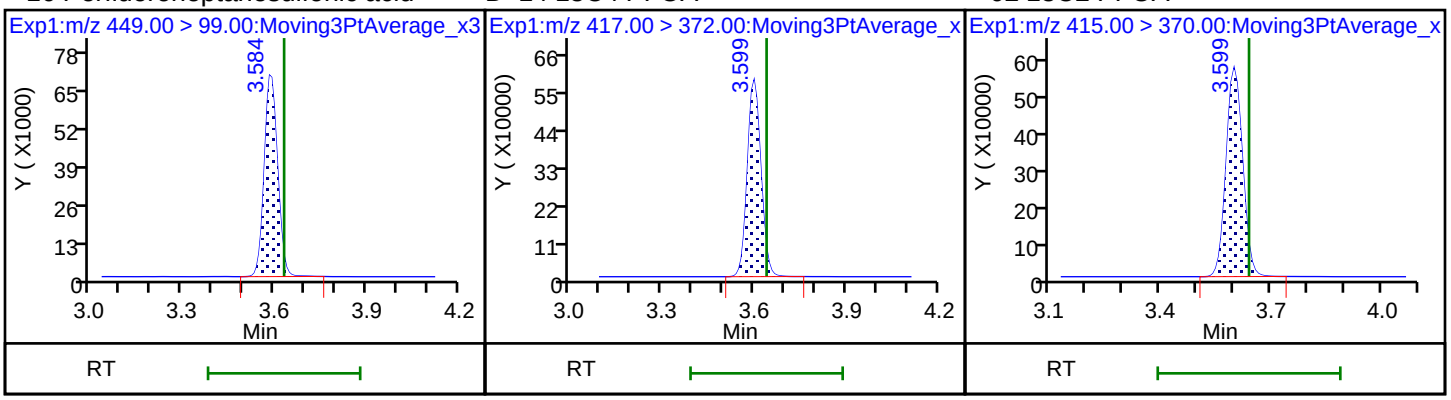
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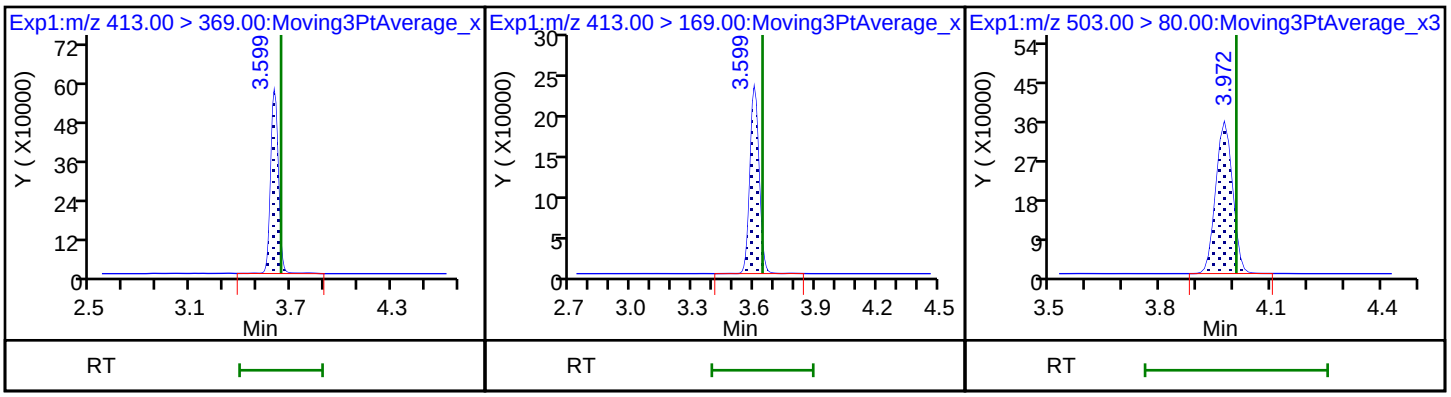
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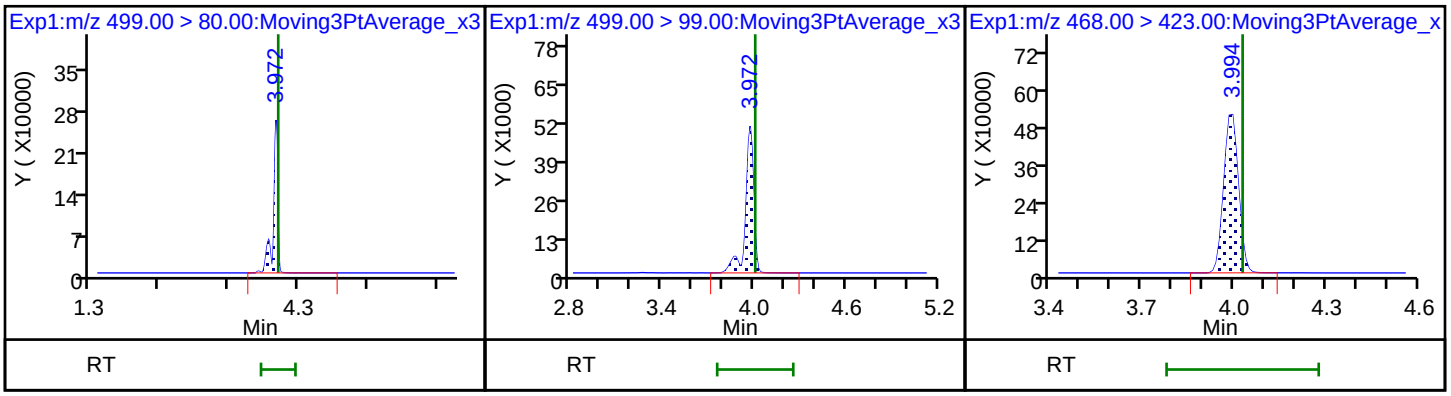
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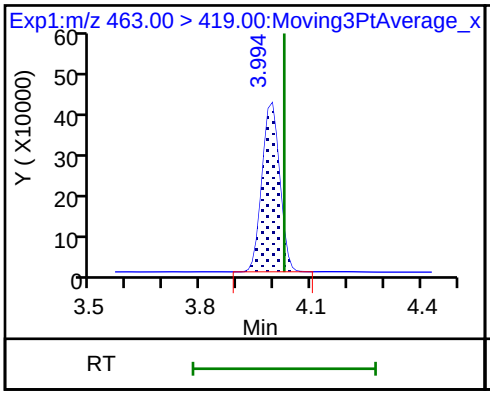
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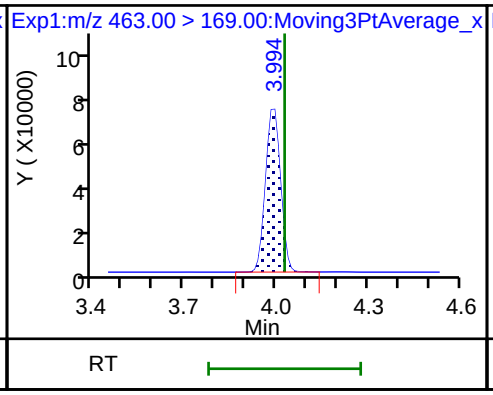
17 Perfluorooctanesulfonic acid 17 Perfluorooctanesulfonic acid D 19 13C5 PFNA



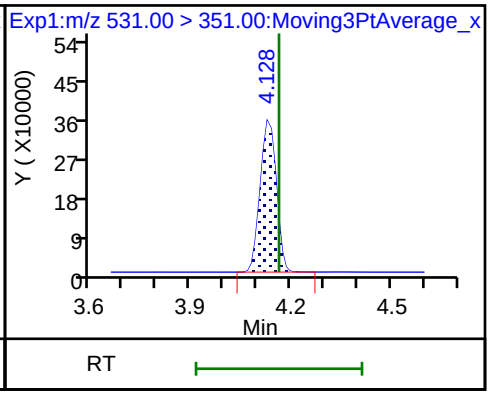
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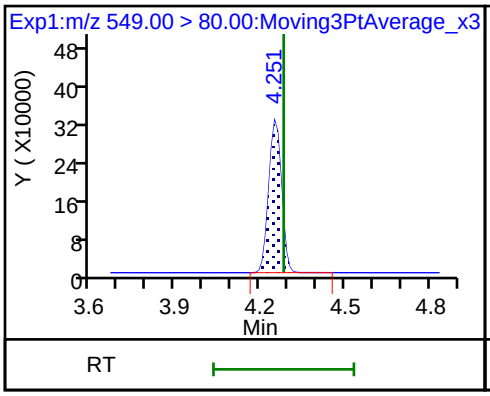
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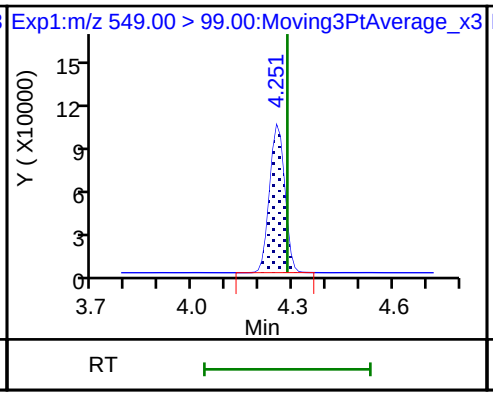
69 9-Chlorohexadecafluoro-3-oxanonane



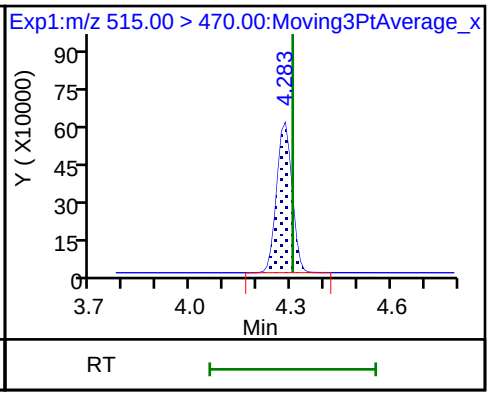
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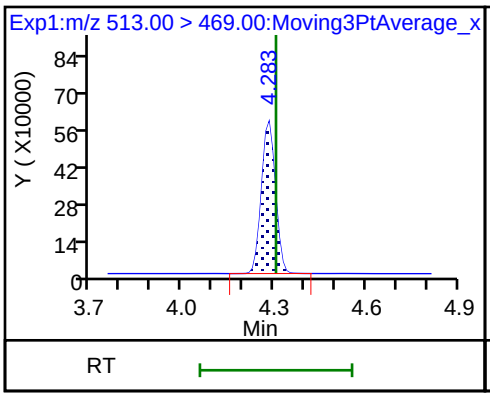
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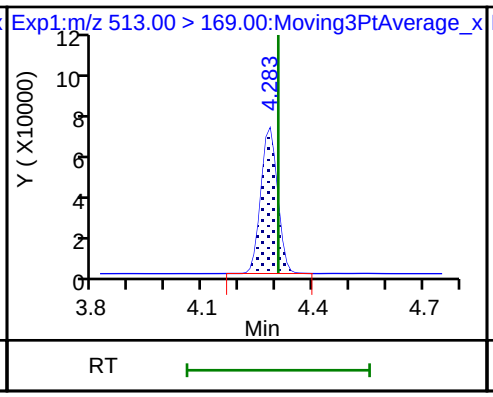
D 23 13C2 PFDA



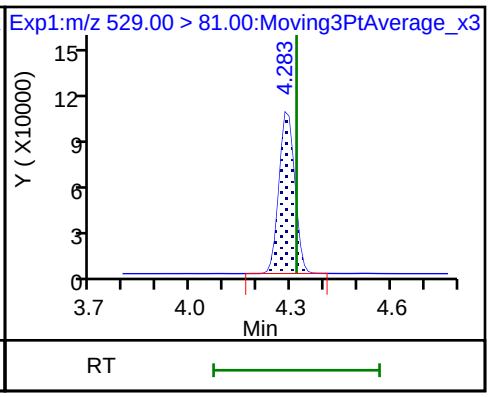
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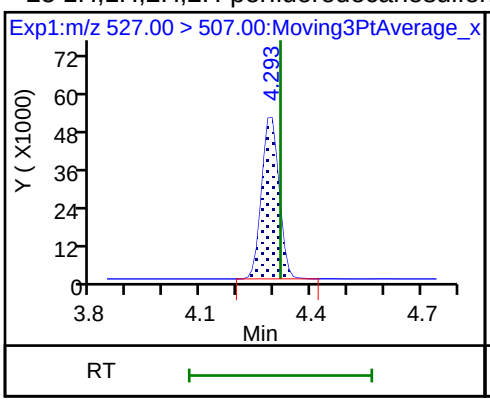
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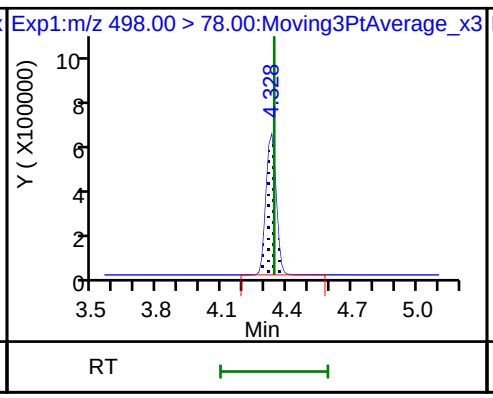
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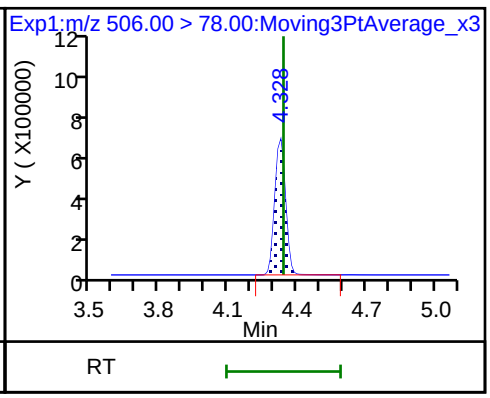
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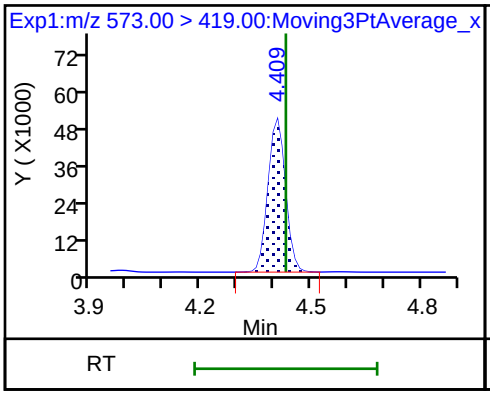
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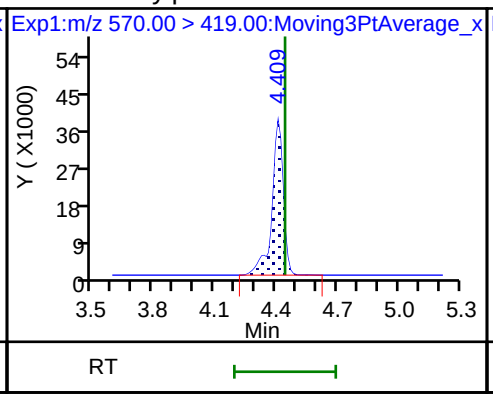
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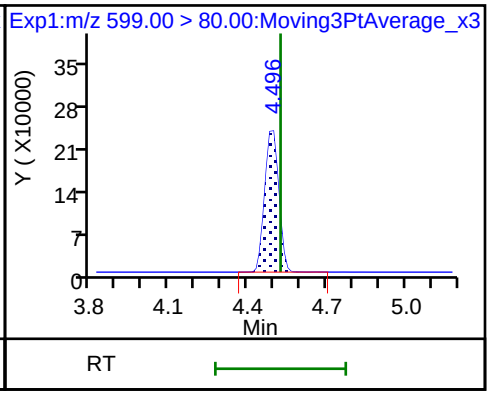
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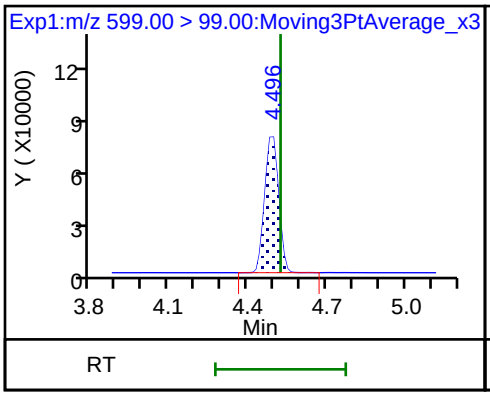
28 N-methylperfluorooctanesulfonamido



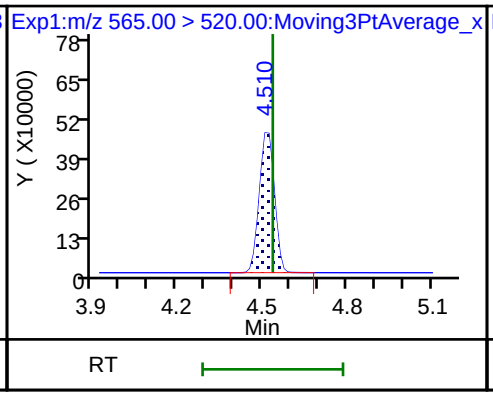
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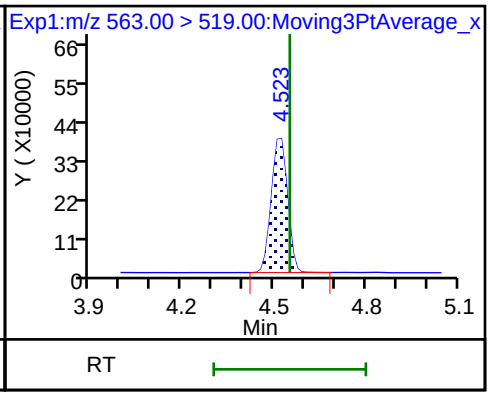
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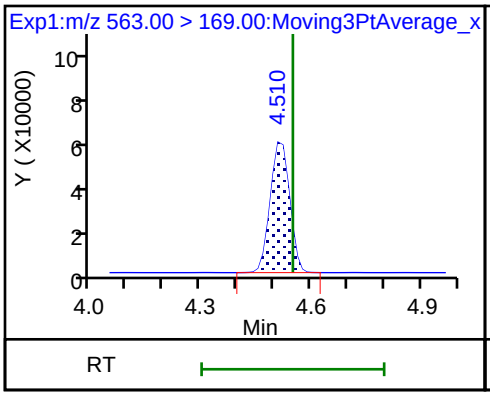
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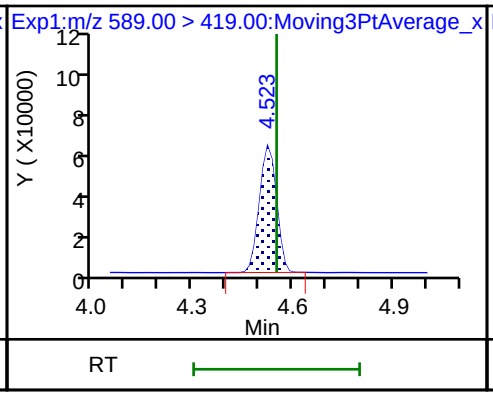
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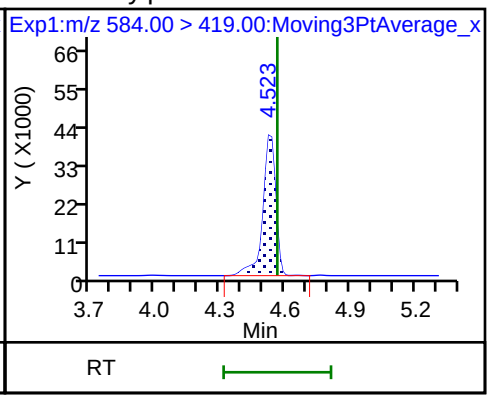
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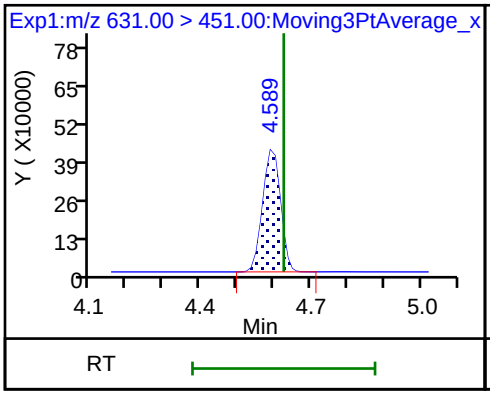
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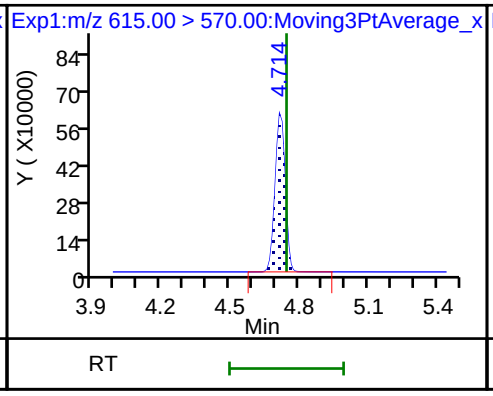
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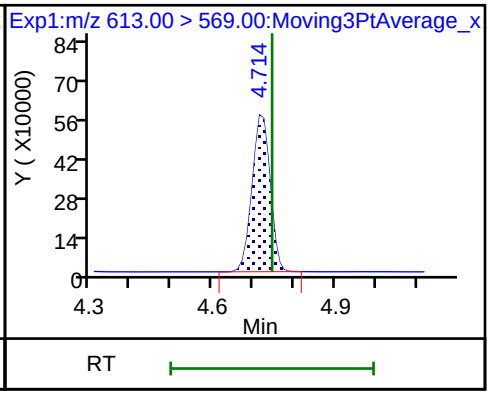
66 11-Chloroeicosafluoro-3-oxaundecan



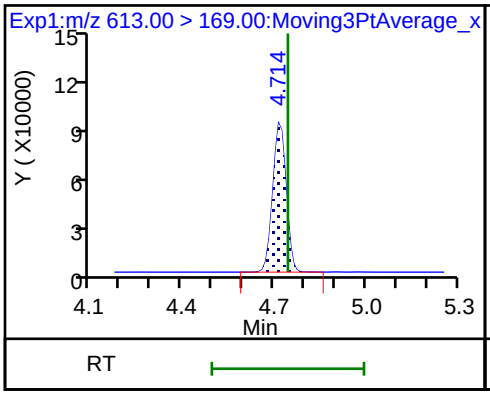
D 36 13C2 PFDoA



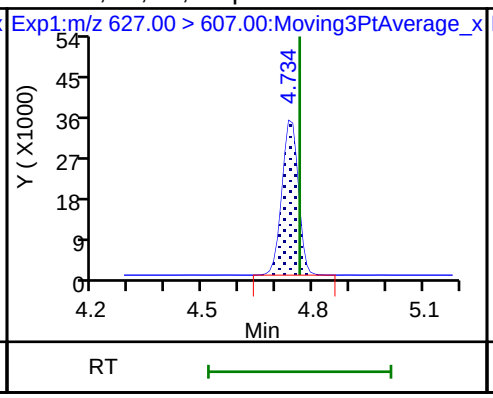
37 Perfluorododecanoic acid



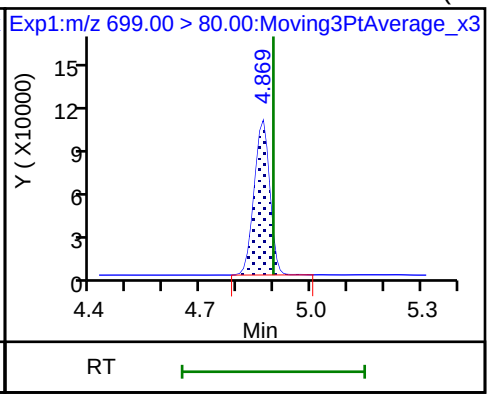
37 Perfluorododecanoic acid



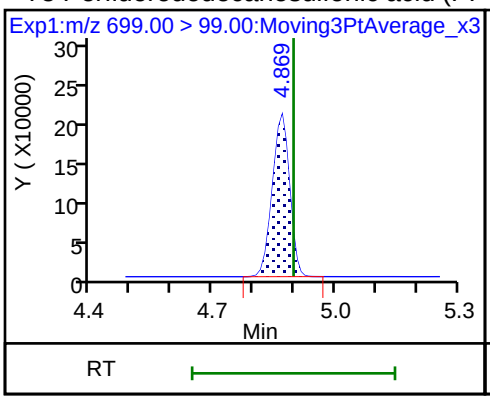
74 1H,1H,2H,2H-perfluorododecanesulfo



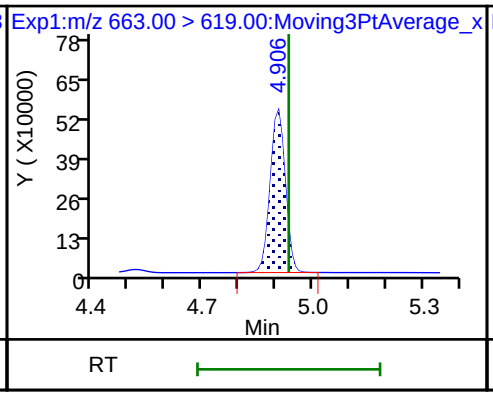
75 Perfluorododecanesulfonic acid (PF



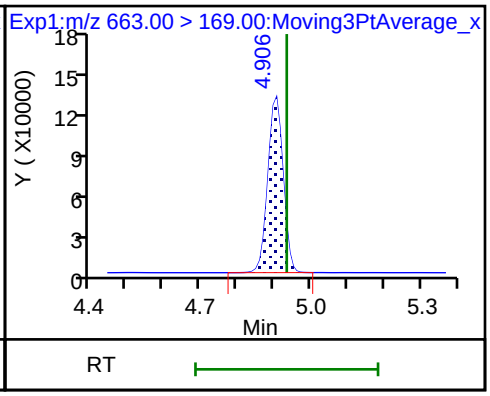
75 Perfluorododecanesulfonic acid (PF



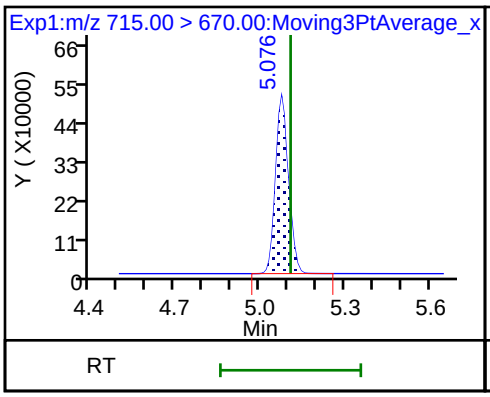
41 Perfluorotridecanoic acid



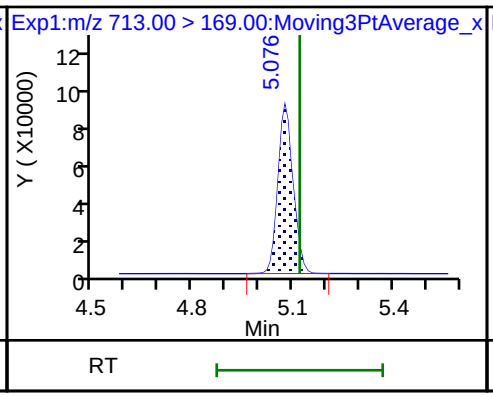
41 Perfluorotridecanoic acid



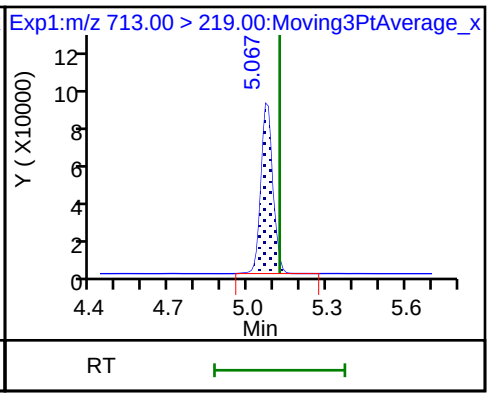
D 43 13C2 PFTeDA



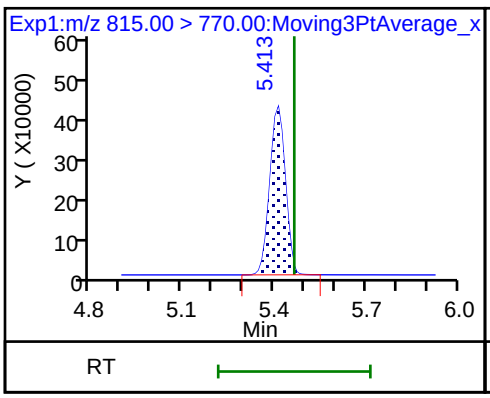
42 Perfluorotetradecanoic acid



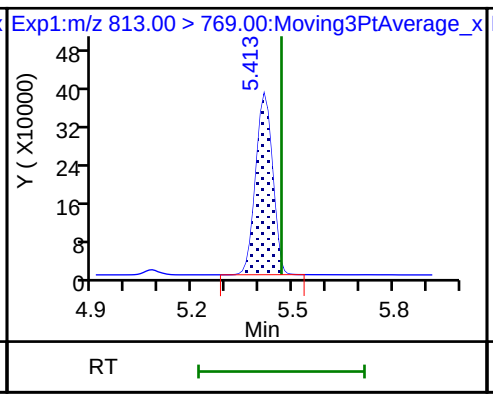
42 Perfluorotetradecanoic acid



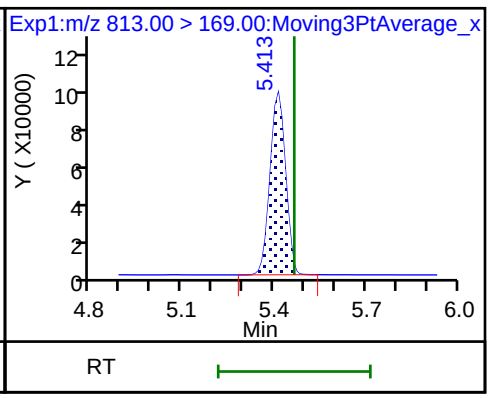
D 44 13C2 PFHxDA



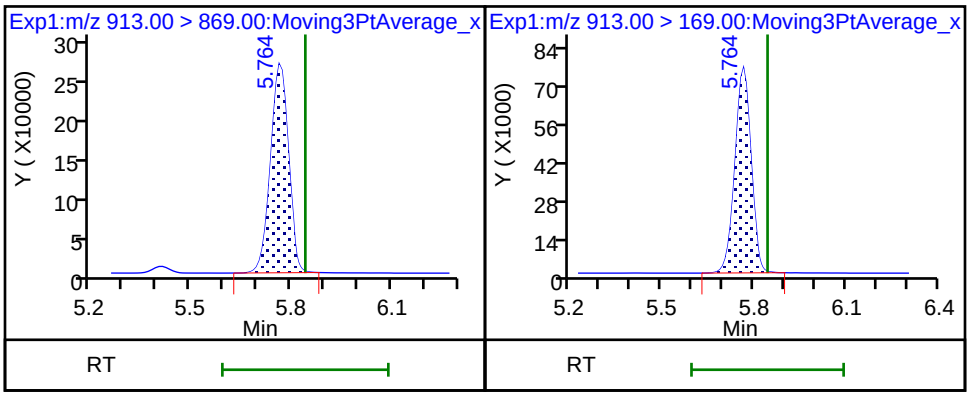
45 Perfluorohexadecanoic acid



45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid



46 Perfluorooctadecanoic acid

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

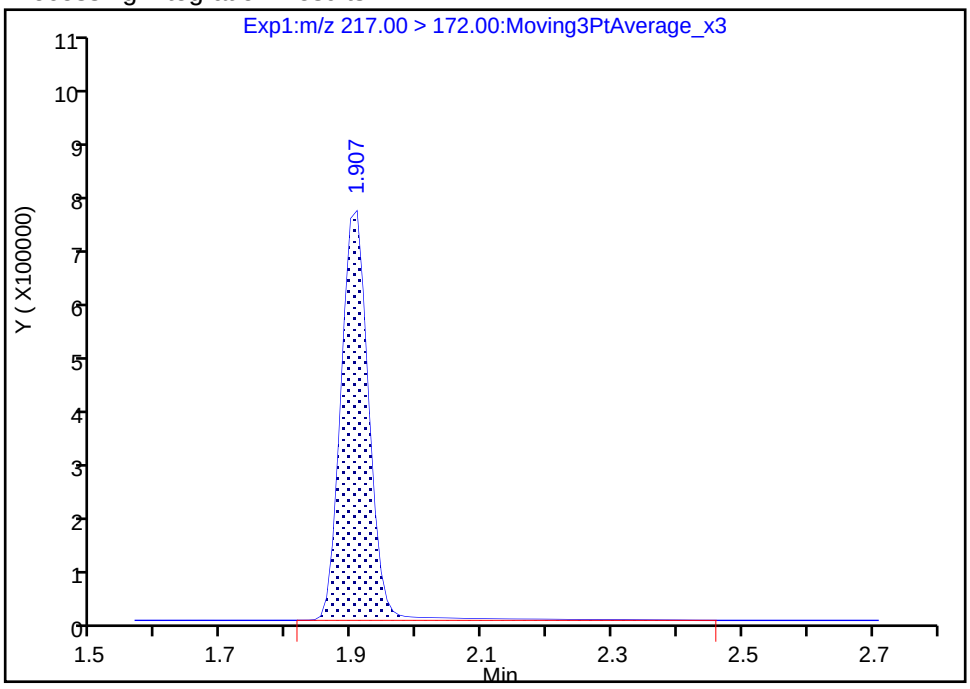
Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C26.d
Injection Date: 25-Feb-2020 22:22:23 Instrument ID: LC812
Lims ID: CCV L5
Client ID:
Operator ID: lc812tech ALS Bottle#: 26 Worklist Smp#: 26
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

D 1 13C4 PFBA, CAS: STL00992

Signal: 1

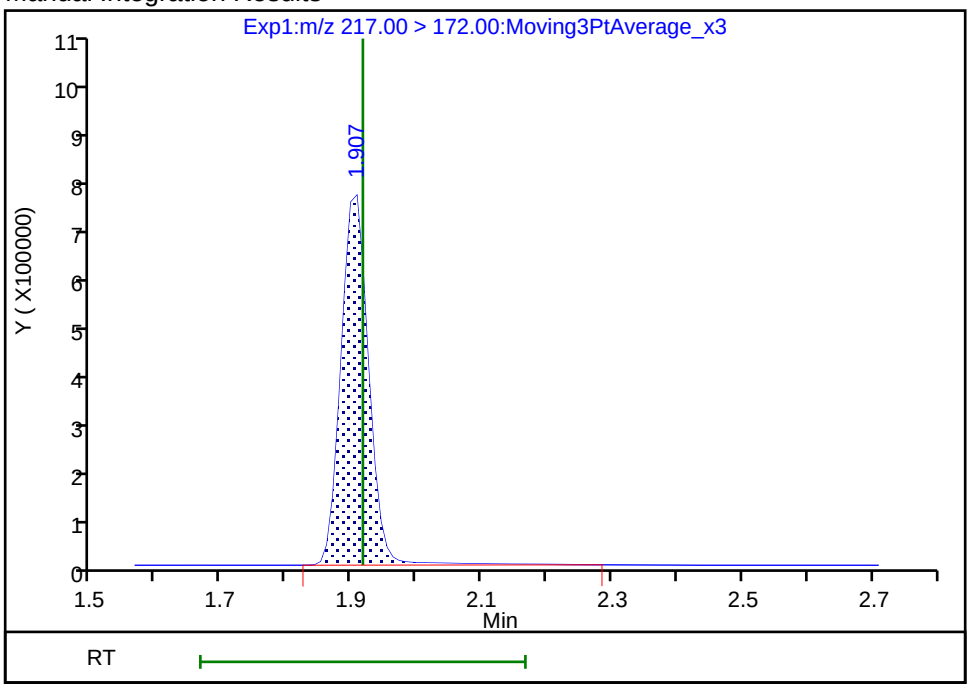
Processing Integration Results

RT: 1.91
Area: 2112793
Amount: 2.819880
Amount Units: ng/ml



Manual Integration Results

RT: 1.91
Area: 2097354
Amount: 2.799274
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 12:01:53
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 200-152665/1-A

Matrix: Water Lab File ID: SC022520C02.d

Analysis Method: 537 (modified) Date Collected:

Extraction Method: 3535 Date Extracted: 02/24/2020 13:43

Sample wt/vol: 250(mL) Date Analyzed: 02/25/2020 19:03

Con. Extract Vol.: 10(mL) Dilution Factor: 1

Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 152696 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	ND		2.0	1.0
2706-90-3	Perfluoropentanoic acid (PFPeA)	ND		2.0	0.63
307-24-4	Perfluorohexanoic acid (PFHxA)	ND		2.0	0.76
375-85-9	Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.91
335-67-1	Perfluorooctanoic acid (PFOA)	0.961	J	2.0	0.81
375-95-1	Perfluorononanoic acid (PFNA)	0.578	J	2.0	0.27
335-76-2	Perfluorodecanoic acid (PFDA)	ND		2.0	0.77
2058-94-8	Perfluoroundecanoic acid (PFUnA)	0.981	J	2.0	0.78
307-55-1	Perfluorododecanoic acid (PFDoA)	0.863	J	2.0	0.59
72629-94-8	Perfluorotridecanoic acid (PFTriA)	0.737	J	2.0	0.60
376-06-7	Perfluorotetradecanoic acid (PFTeA)	1.01	J	2.0	0.92
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.749	J	2.0	0.49
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.80
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0	0.95
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	0.697	J	2.0	0.61
335-77-3	Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.90
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND		10	10
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		20	1.7
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		20	1.5
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		20	5.5
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		20	2.9

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 200-152665/1-A

Matrix: Water Lab File ID: SC022520C02.d

Analysis Method: 537 (modified) Date Collected:

Extraction Method: 3535 Date Extracted: 02/24/2020 13:43

Sample wt/vol: 250(mL) Date Analyzed: 02/25/2020 19:03

Con. Extract Vol.: 10(mL) Dilution Factor: 1

Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 152696 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	98		50-150
STL01892	13C4 PFHpA	97		50-150
STL00990	13C4 PFOA	91		50-150
STL00991	13C4 PFOS	94		50-150
STL00995	13C5 PFNA	88		50-150
STL00992	13C4 PFBA	100		25-150
STL00993	13C2 PFHxA	91		50-150
STL00996	13C2 PFDA	94		50-150
STL00997	13C2 PFUnA	79		50-150
STL00998	13C2 PFDoA	73		50-150
STL01056	13C8 FOSA	62		25-150
STL01893	13C5 PFPeA	100		25-150
STL02116	13C2 PFTeDA	68		50-150
STL02118	d3-NMeFOSAA	95		50-150
STL02117	d5-NEtFOSAA	82		50-150
STL02279	M2-6:2 FTS	93		25-150
STL02280	M2-8:2 FTS	92		25-150
STL02337	13C3 PFBS	84		50-150

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C02.d
Lims ID: MB 200-152665/1-A
Client ID:
Sample Type: MB
Inject. Date: 25-Feb-2020 19:03:27 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: MB 200-152665/1-A
Misc. Info.: 200-0040162-002 Plate: 1 Rack: 2
Operator ID: lc812tech Instrument ID: LC812

Method: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\PFC_LC812.m
Limit Group: LC_PFC_ICAL
Last Update: 26-Feb-2020 17:13:10 Calib Date: 10-Feb-2020 12:29:33
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL010.d

Column 1 : C-18 (4.60 mm) Det: EXP1
Process Host: CTX0323

First Level Reviewer: murrayjw Date: 26-Feb-2020 09:46:27
Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										M
217.00 > 172.00	1.898	1.917	-0.019	0.526	2475675	2.50		100	5589	M
D 3 13C5 PFPeA										
267.90 > 223.00	2.244	2.257	-0.013	0.622	1932858	2.51		100	2071	
4 Perfluoropentanoic acid										M
262.90 > 219.00	2.244	2.271	-0.027	1.000	12725	0.0153			1.3	M
D 47 13C3 PFBS										
301.90 > 80.00	2.257	2.284	-0.027	0.626	2019978	1.95		83.8	754390	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.257	2.284	-0.027	1.000	16600	0.0187	Target=2.19		44.1	
298.90 > 99.00	2.257	2.284	-0.027	1.000	8106		2.05(1.09-3.28)		10.2	
61 1H,1H,2H,2H-perfluorohexanesulfoni										M
327.00 > 307.00	2.598	2.623	-0.025	1.000	1499	0.0109			33.6	M
D 60 M2-4:2 FTS										
329.00 > 81.00	2.598	2.623	-0.025	0.720	166349	2.20		94.0	245	
D 7 13C2 PFHxA										
315.00 > 270.00	2.648	2.673	-0.025	0.734	2050417	2.27		91.0	8037	
6 Perfluorohexanoic acid										M
313.00 > 269.00	2.648	2.673	-0.025	1.000	14222	0.0175	Target=12.51		5.3	M
313.00 > 119.00	2.648	2.673	-0.025	1.000	1064		13.37(6.25-18.76)		3.4	M
70 Perfluoropentanesulfonic acid										
349.00 > 80.00	2.648	2.685	-0.037	0.845	11474	0.0126	Target=3.29		48.4	
349.00 > 99.00	2.648	2.685	-0.037	0.845	3433		3.34(1.64-4.93)		12.3	
67 Perfluoro(2-propoxypropanoic) acid										M
329.10 > 285.00	2.784	2.815	-0.031	1.000	2321	0.0145			1.2	M
D 64 13C3 HFPO-DA										
332.10 > 287.00	2.784	2.815	-0.031	0.772	171243	2.40		95.9	1295	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 11 18O2 PFHxS										
403.00 > 84.00	3.132	3.168	-0.036	0.868	1697730	2.32		98.0	8617	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.132	3.168	-0.036	1.000	16607	0.0196	Target=4.33		99.9	M
399.00 > 99.00	3.125	3.168	-0.043	0.997	3649		4.55(2.17-6.50)		15.3	M
D 9 13C4 PFHpA										
367.00 > 322.00	3.132	3.168	-0.036	0.868	2107460	2.43		97.3	4951	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.132	3.168	-0.036	1.000	15581	0.0181	Target=3.79		5.3	
363.00 > 169.00	3.132	3.168	-0.036	1.000	4007		3.89(1.89-5.68)		16.3	
77 DONA										
377.00 > 251.00	3.187	3.225	-0.038	0.800	24948	0.0132	Target=2.43		18.2	
377.00 > 85.00	3.187	3.225	-0.038	0.800	9269		2.69(1.22-3.65)		19.1	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.584	3.624	-0.040	1.000	1533	0.0146			52.0	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.584	3.624	-0.040	0.994	222536	2.22		93.4	1304	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.599	3.632	-0.033	0.904	8713	0.0140	Target=6.01		110	
449.00 > 99.00	3.591	3.632	-0.041	0.901	1454		5.99(3.01-9.02)		18.1	
D 14 13C4 PFOA										
417.00 > 372.00	3.607	3.640	-0.033	1.000	2035549	2.27		90.8	9909	
* 62 13C2 PFOA										
415.00 > 370.00	3.607	3.640	-0.033		2379278	2.50			9778	
15 Perfluorooctanoic acid										M
413.00 > 369.00	3.607	3.640	-0.033	1.000	20371	0.0240	Target=2.66		6.7	M
413.00 > 169.00	3.607	3.640	-0.033	1.000	8095		2.52(1.33-3.99)		52.0	M
D 18 13C4 PFOS										
503.00 > 80.00	3.983	4.005	-0.022	1.104	1226848	2.25		94.1	8293	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.973	4.005	-0.032	0.997	9817	0.0174	Target=5.29		85.6	M
499.00 > 99.00	3.973	4.005	-0.032	0.997	2216		4.43(2.65-7.94)		17.0	M
D 19 13C5 PFNA										
468.00 > 423.00	3.994	4.027	-0.033	1.107	1894623	2.20		88.1	11447	
20 Perfluorononanoic acid										M
463.00 > 419.00	3.994	4.027	-0.033	1.000	11271	0.0145	Target=7.73		6.2	M
463.00 > 169.00	3.994	4.027	-0.033	1.000	1934		5.83(3.87-11.60)		55.4	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	4.141	4.164	-0.023	1.039	9944	0.0139			62.6	
68 Perfluorononanesulfonic acid										M
549.00 > 80.00	4.261	4.283	-0.022	1.070	6339	0.0139	Target=2.78		79.9	M
549.00 > 99.00	4.251	4.283	-0.032	1.067	1922		3.30(1.39-4.17)		20.0	
D 23 13C2 PFDA										
515.00 > 470.00	4.283	4.305	-0.022	1.187	2191879	2.34		93.8	10301	
24 Perfluorodecanoic acid										
513.00 > 469.00	4.283	4.305	-0.022	1.000	17014	0.0190	Target=9.75		4.2	
513.00 > 169.00	4.283	4.305	-0.022	1.000	1928		8.82(4.88-14.63)		9.9	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 26 M2-8:2 FTS										
529.00 > 81.00	4.293	4.317	-0.024	1.190	311612	2.20		91.8	2011	
25 1H,1H,2H,2H-perfluorodecanesulfoni										M
527.00 > 507.00	4.293	4.317	-0.024	1.000	932	0.0115			21.5	M
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.328	4.340	-0.012	1.000	14834	0.0245			92.1	
D 21 13C8 FOSA										
506.00 > 78.00	4.328	4.340	-0.012	1.200	1476621	1.54		61.5	3508	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.409	4.431	-0.022	1.222	174632	2.37		94.7	2631	
28 N-methylperfluorooctanesulfonamido										M
570.00 > 419.00	4.409	4.443	-0.034	1.000	871	0.0146			17.9	M
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.496	4.524	-0.028	1.129	4905	0.0123	Target=2.63		59.7	
599.00 > 99.00	4.496	4.524	-0.028	1.129	2164		2.27(1.32-3.95)		24.2	
D 30 13C2 PFUnA										
565.00 > 520.00	4.523	4.537	-0.014	1.254	1604167	1.97		78.7	8592	
31 Perfluoroundecanoic acid										M
563.00 > 519.00	4.523	4.551	-0.028	1.000	14265	0.0245	Target=7.31		15.5	M
563.00 > 169.00	4.523	4.551	-0.028	1.000	2058		6.93(3.66-10.97)		24.1	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.523	4.551	-0.028	1.254	172360	2.05		82.0	1044	
33 N-ethylperfluorooctanesulfonamidoa										M
584.00 > 419.00	4.537	4.563	-0.026	1.003	1557	0.0283			15.6	M
66 11-Chloroeicosafluoro-3-oxaundecan										
631.00 > 451.00	4.602	4.626	-0.024	1.155	8993	0.0110			55.3	
D 36 13C2 PFDoA										
615.00 > 570.00	4.724	4.744	-0.020	1.310	1665804	1.83		73.0	6370	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.724	4.744	-0.020	1.000	13945	0.0216	Target=6.96		3.6	
613.00 > 169.00	4.724	4.744	-0.020	1.000	2071		6.73(3.48-10.44)		27.3	
74 1H,1H,2H,2H-perfluorododecanesulfo										M
627.00 > 607.00	4.734	4.764	-0.030	1.103	866	0.0200				M
75 Perfluorododecanesulfonic acid (PF										
699.00 > 80.00	4.870	4.897	-0.027	1.222	2013	0.0145	Target=0.47		8.6	
699.00 > 99.00	4.870	4.897	-0.027	1.222	3796		0.53(0.24-0.71)		29.7	
41 Perfluorotridecanoic acid										M
663.00 > 619.00	4.906	4.934	-0.028	1.039	10841	0.0184	Target=4.84		4.6	M
663.00 > 169.00	4.906	4.934	-0.028	1.039	2460		4.41(2.42-7.26)		43.5	M
D 43 13C2 PFTeDA										
715.00 > 670.00	5.076	5.108	-0.032	1.407	1332191	1.70		68.0	6354	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.076	5.120	-0.044	1.000	2094	0.0253	Target=1.15		32.3	
713.00 > 219.00	5.076	5.120	-0.044	1.000	1820		1.15(0.58-1.73)		82.0	
D 44 13C2 PFHxDA										
815.00 > 770.00	5.413	5.465	-0.052	1.501	1268051	1.49		59.6	3539	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.424	5.465	-0.041	1.002	19845	0.0134	Target=4.36		7.6	
813.00 > 169.00	5.424	5.465	-0.041	1.002	5119		3.88(2.18-6.53)		94.7	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.773	5.843	-0.070	1.066	7020	0.0222	Target=4.01		4.0	
913.00 > 169.00	5.773	5.843	-0.070	1.066	2202		3.19(2.00-6.01)		48.5	

QC Flag Legend

Review Flags

M - Manually Integrated

Report Date: 26-Feb-2020 17:13:14 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C02.d

Injection Date: 25-Feb-2020 19:03:27 Instrument ID: LC812

Lims ID: MB 200-152665/1-A

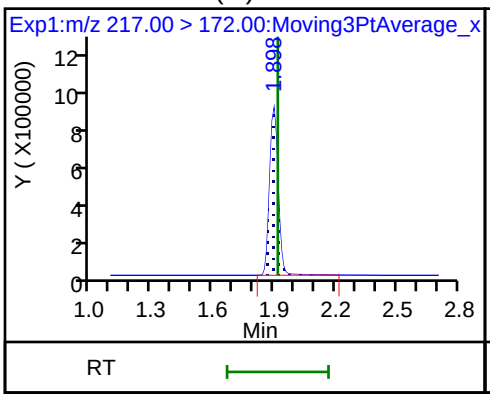
Client ID:

Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2

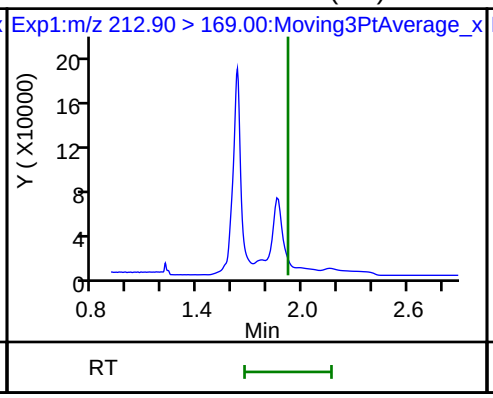
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFC_LC812 Limit Group: LC_PFC_ICAL

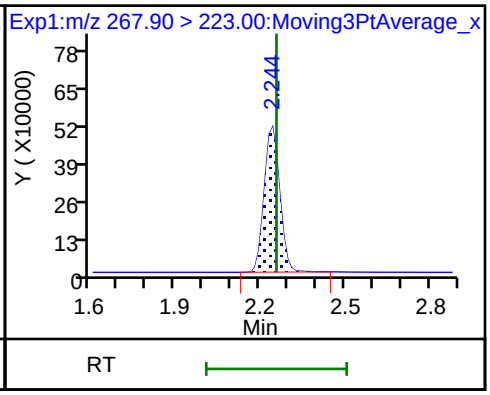
D 1 13C4 PFBA (M)



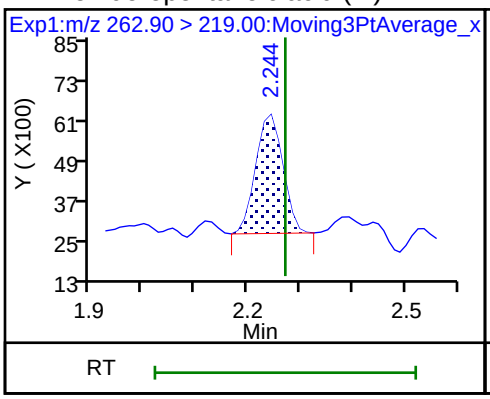
2 Perfluorobutanoic acid (ND)



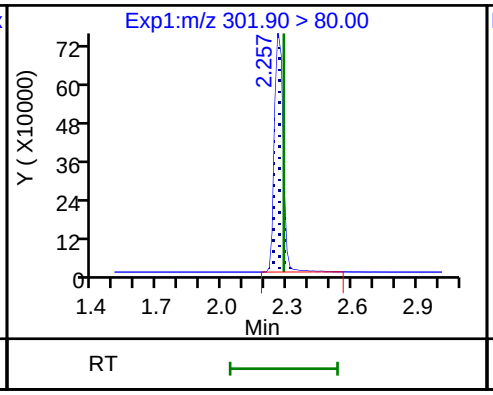
D 3 13C5 PFPeA



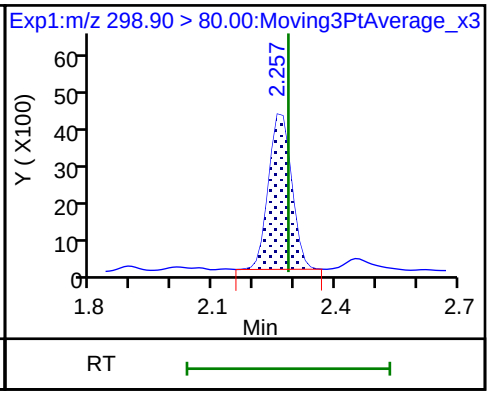
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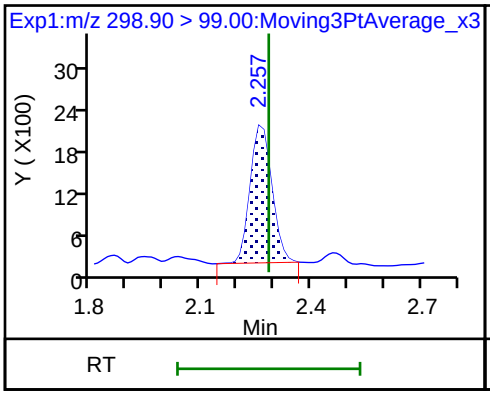
D 47 13C3 PFBS



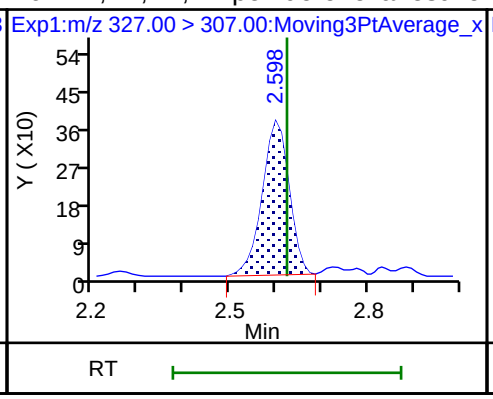
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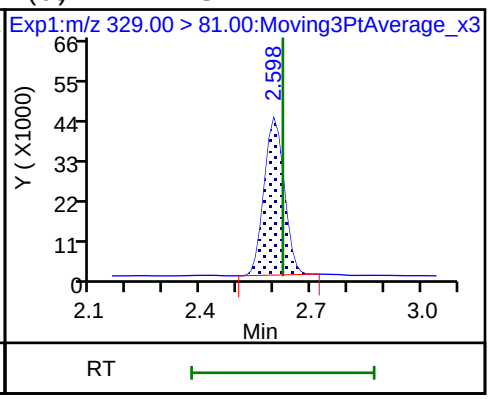
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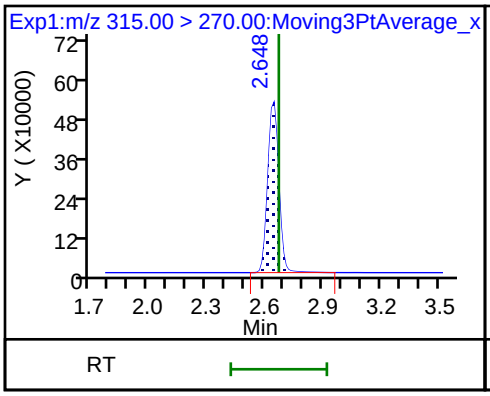
61 1H,1H,2H,2H-perfluorohexanesulfonic (M)



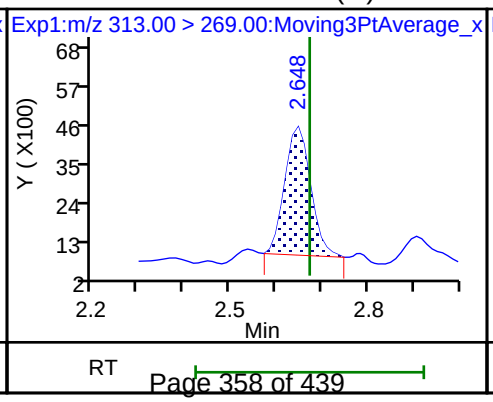
D 60 M2-4:2 FTS



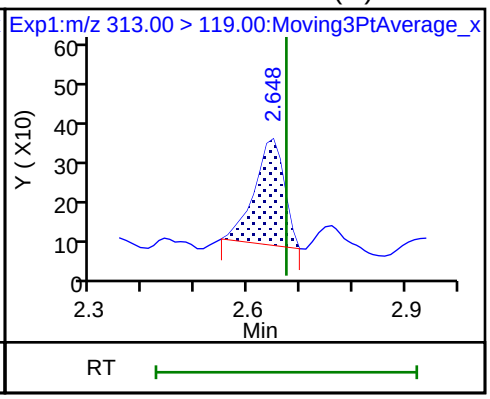
D 7 13C2 PFHxA



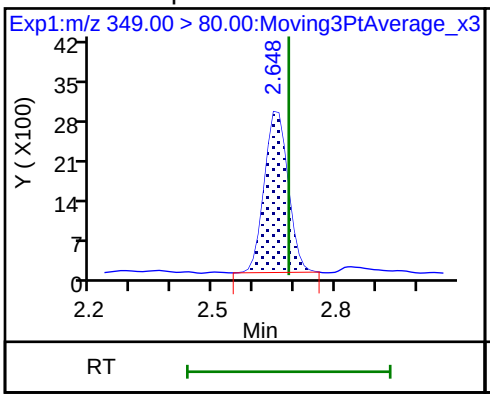
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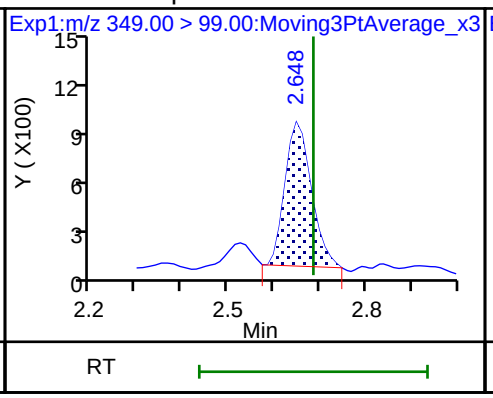
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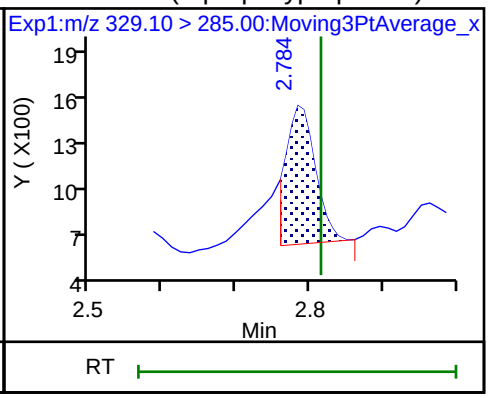
70 Perfluoropentanesulfonic acid



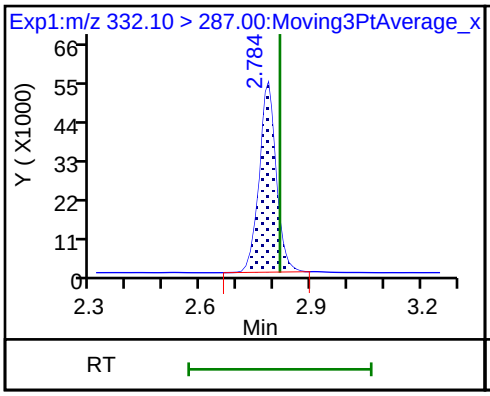
70 Perfluoropentanesulfonic acid



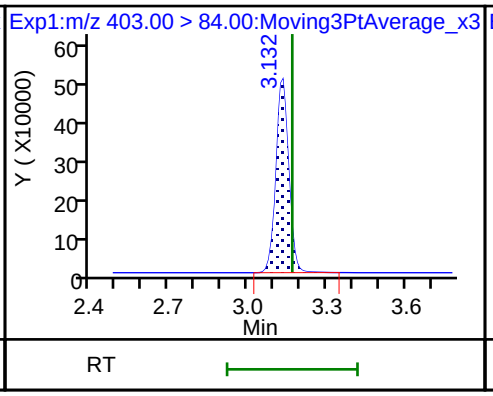
67 Perfluoro(2-propoxypropanoic) acid (M)



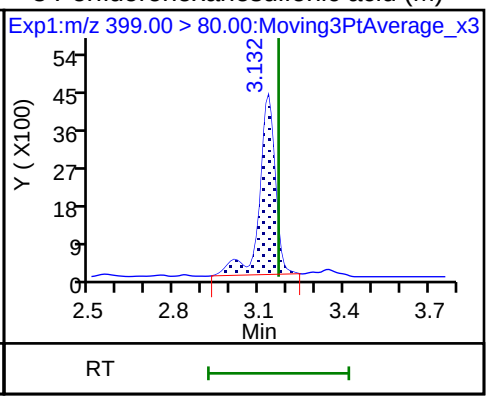
D 64 13C3 HFPO-DA



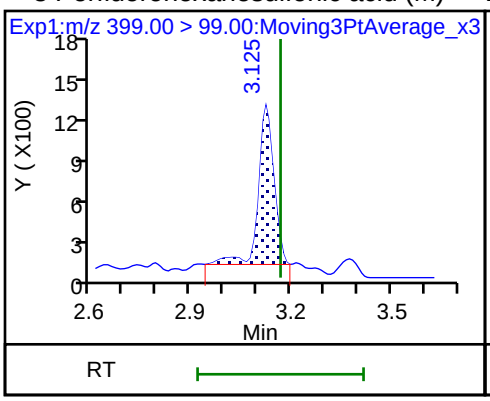
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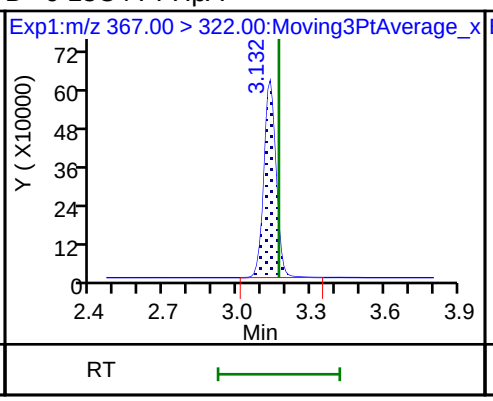
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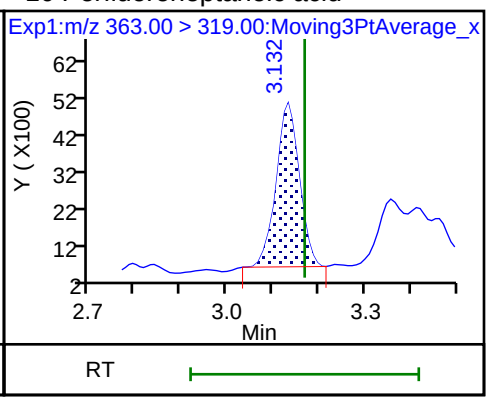
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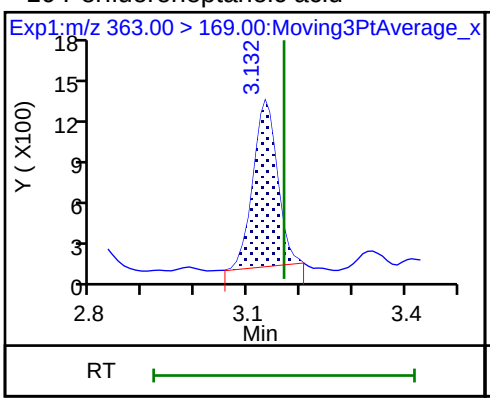
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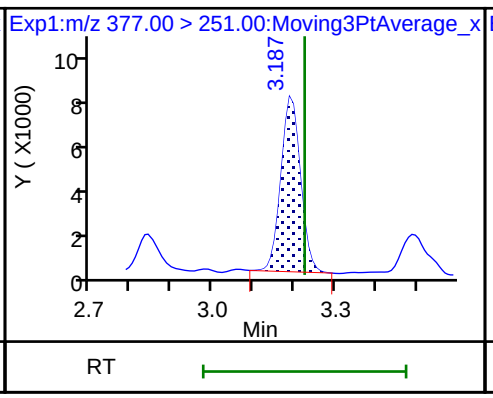
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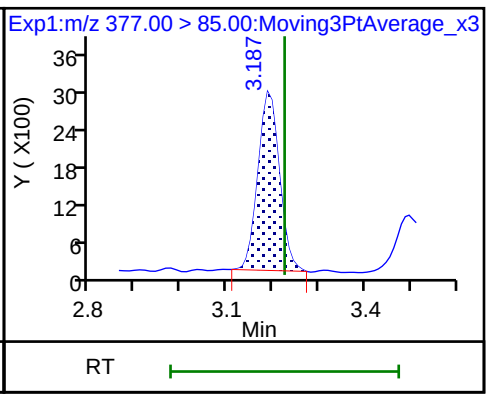
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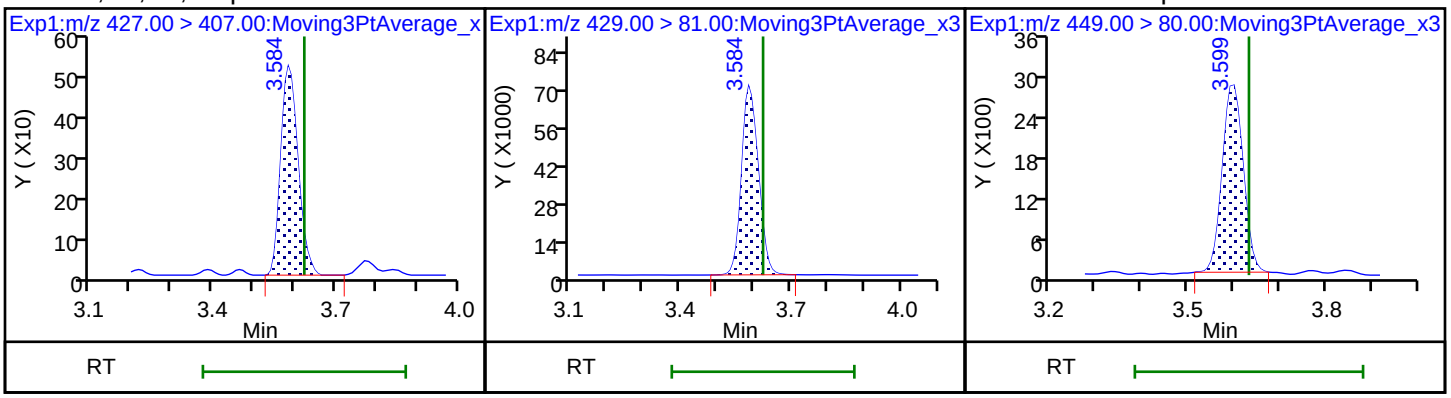
77 DONA



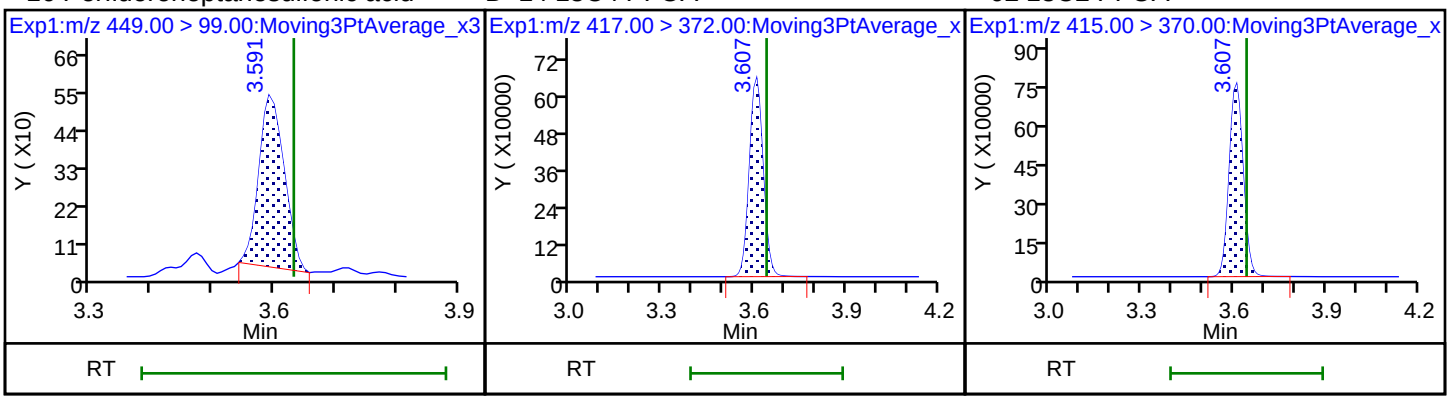
77 DONA



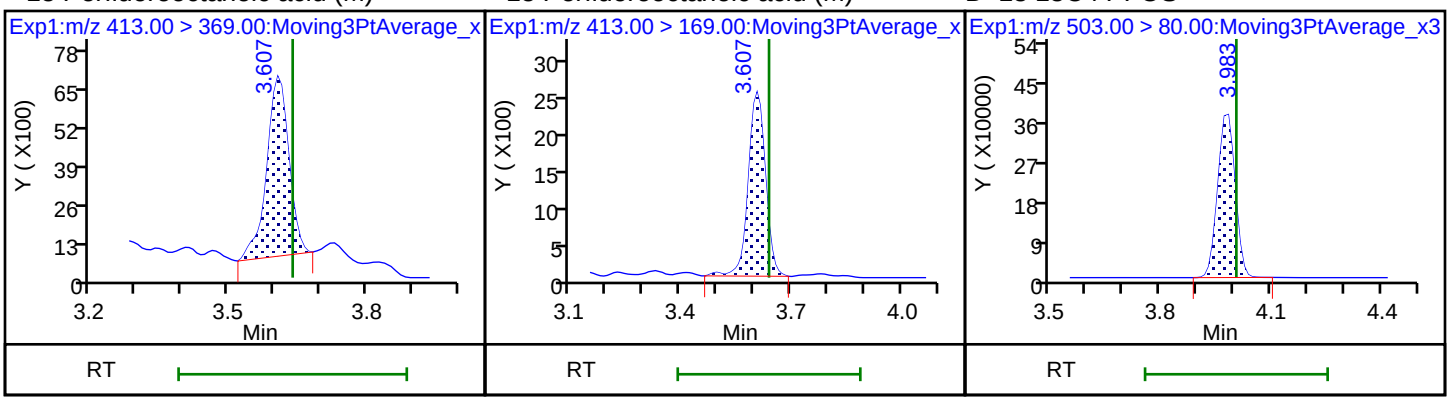
13 1H,1H,2H,2H-perfluorooctanesulfonD 12 M2-6:2 FTS 16 Perfluoroheptanesulfonic acid



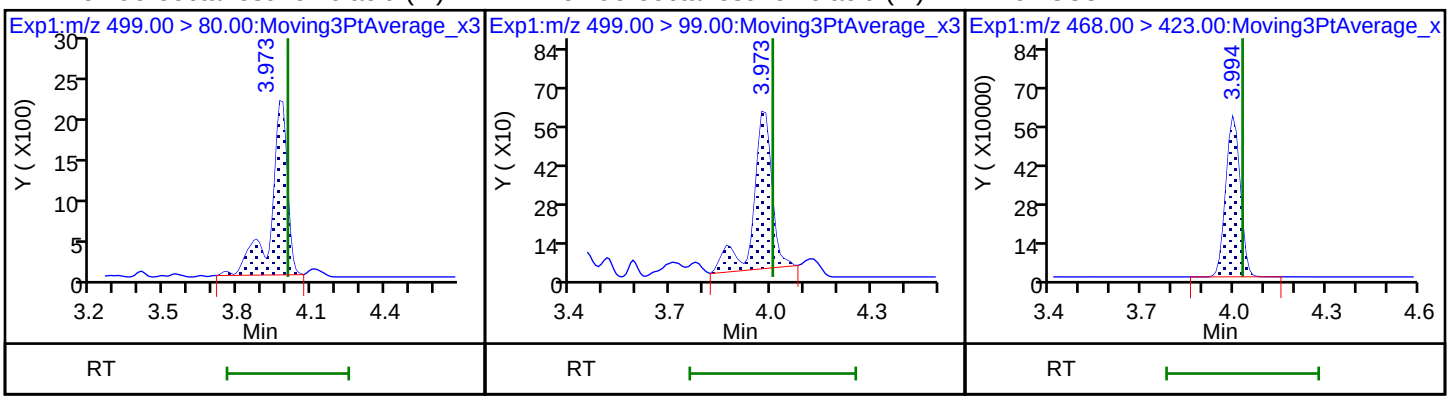
16 Perfluoroheptanesulfonic acid D 14 13C4 PFOA * 62 13C2 PFOA



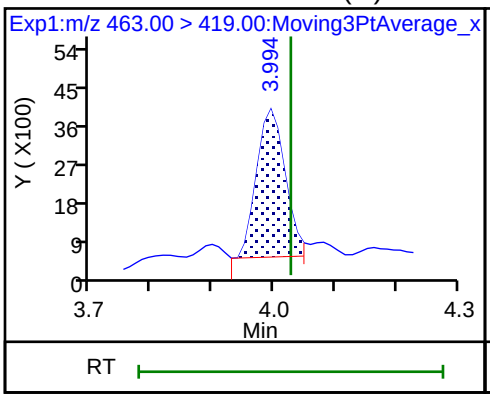
15 Perfluorooctanoic acid (M) 15 Perfluorooctanoic acid (M) D 18 13C4 PFOS



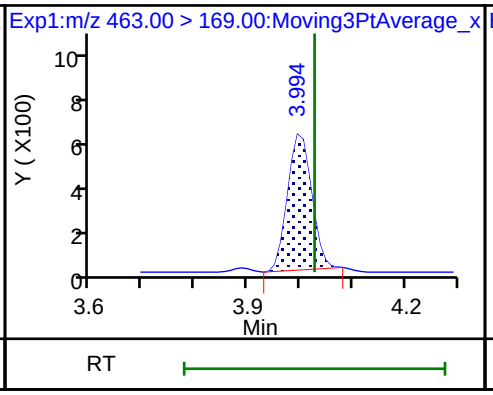
17 Perfluorooctanesulfonic acid (M) 17 Perfluorooctanesulfonic acid (M) D 19 13C5 PFNA



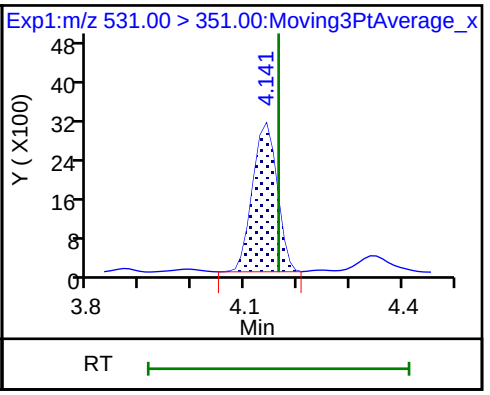
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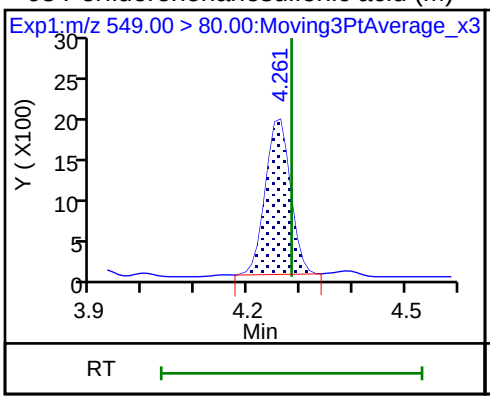
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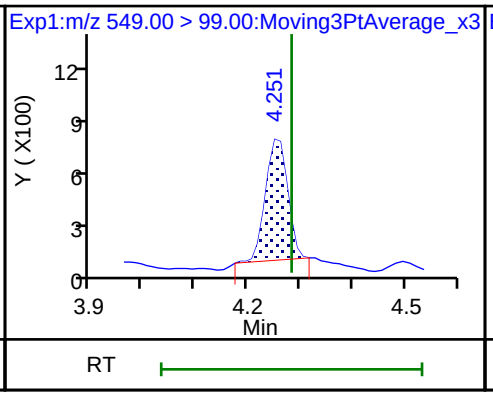
69 9-Chlorohexadecafluoro-3-oxanonane



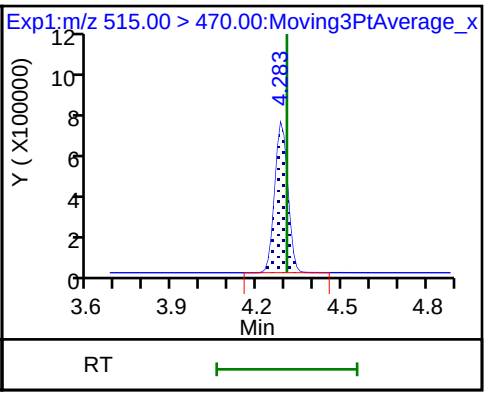
68 Perfluorononanesulfonic acid (M)



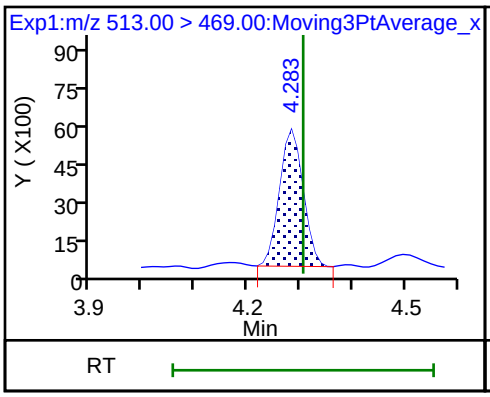
68 Perfluorononanesulfonic acid



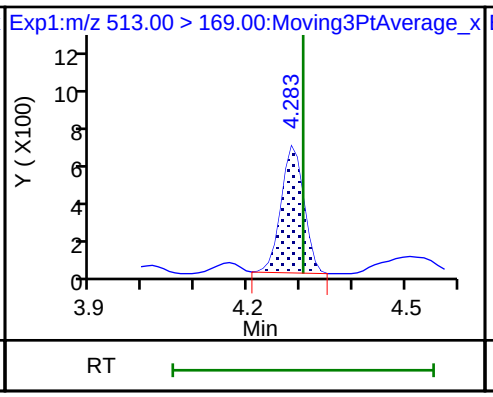
D 23 13C2 PFDA



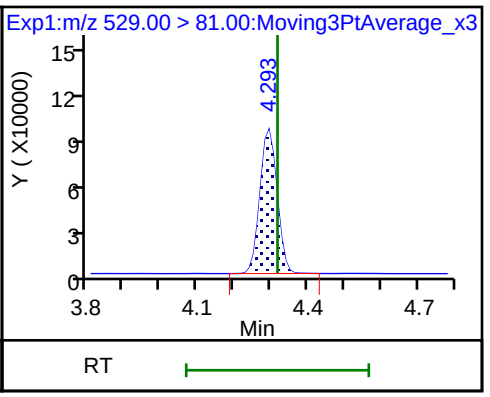
24 Perfluorodecanoic acid



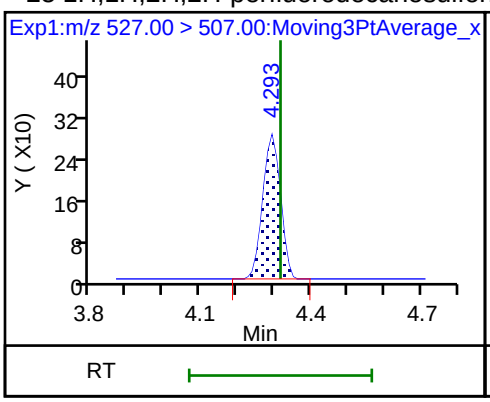
24 Perfluorodecanoic acid



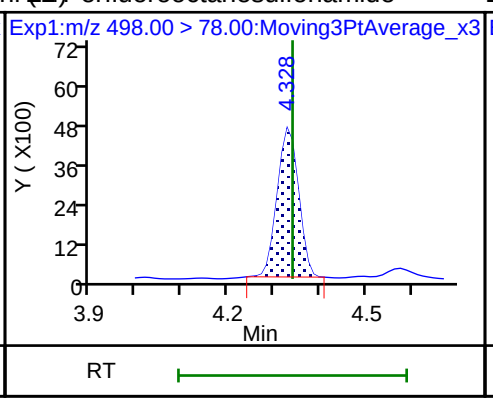
D 26 M2-8:2 FTS



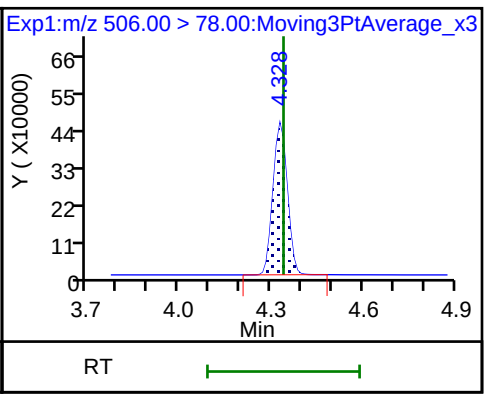
25 1H,1H,2H,2H-perfluorodecanesulfoni



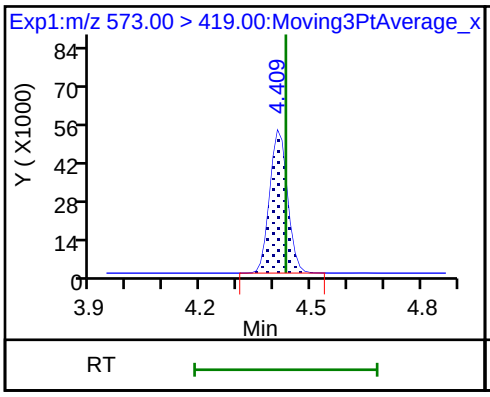
(M) Perfluorooctanesulfonamide



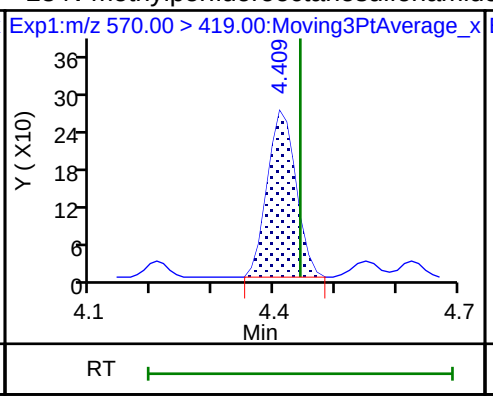
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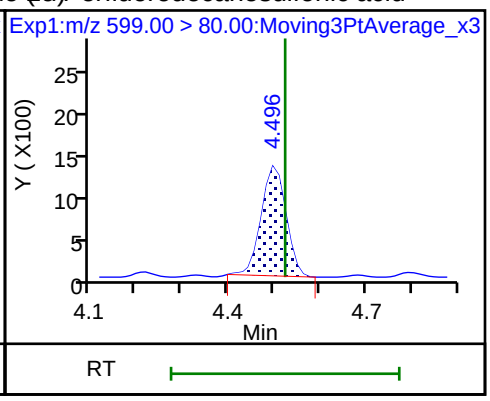
D 27 d3-NMeFOSAA



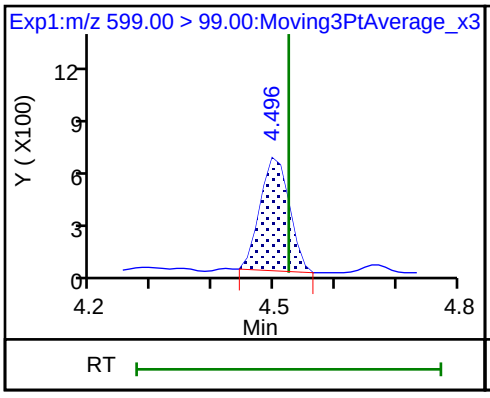
28 N-methylperfluorooctanesulfonamido (M)



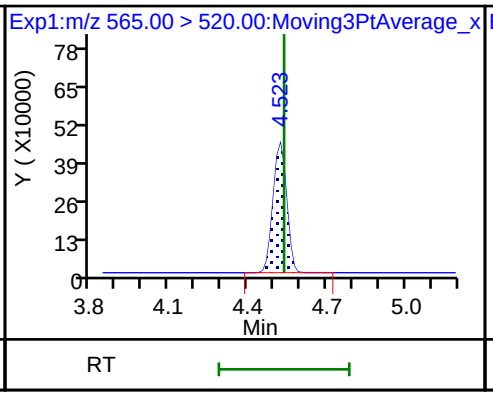
29 Perfluorodecanesulfonic acid



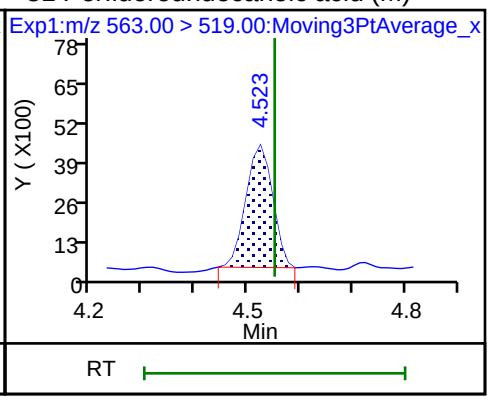
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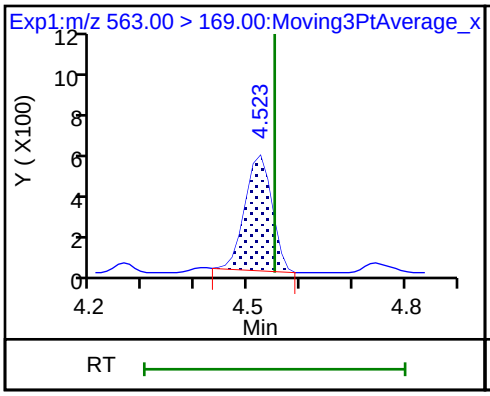
D 30 13C2 PFUnA



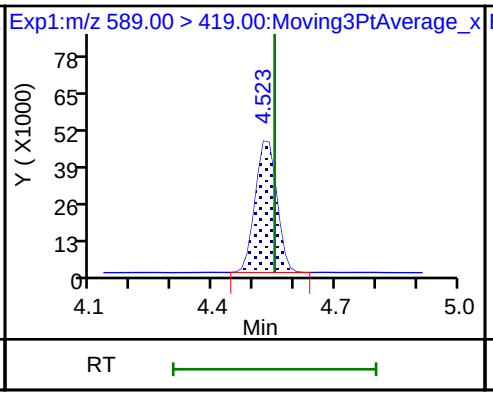
31 Perfluoroundecanoic acid (M)



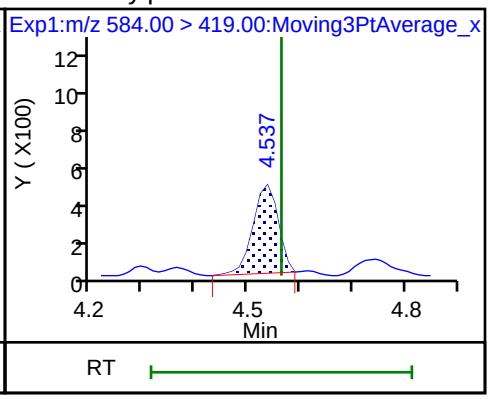
31 Perfluoroundecanoic acid



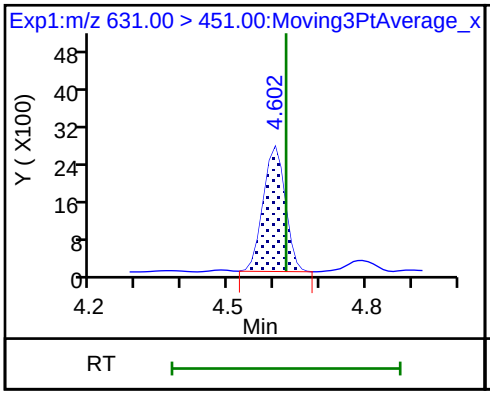
D 32 d5-NEtFOSAA



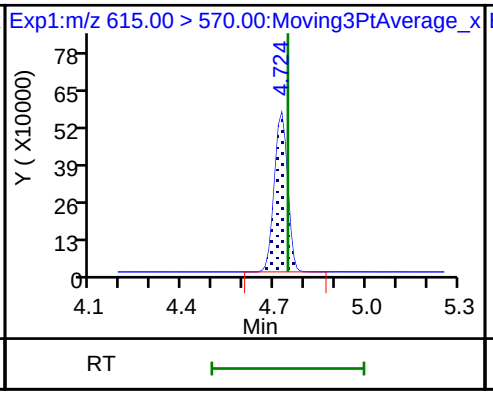
33 N-ethylperfluorooctanesulfonamidoa (M)



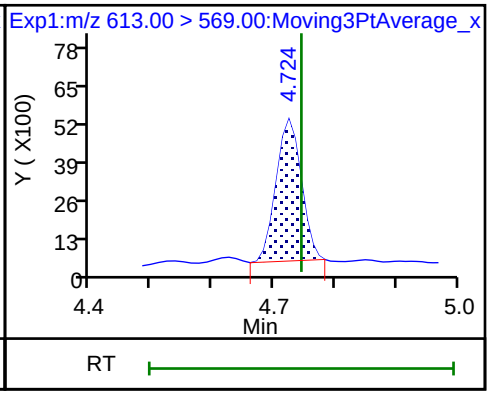
66 11-Chloroeicosafluoro-3-oxaundecan



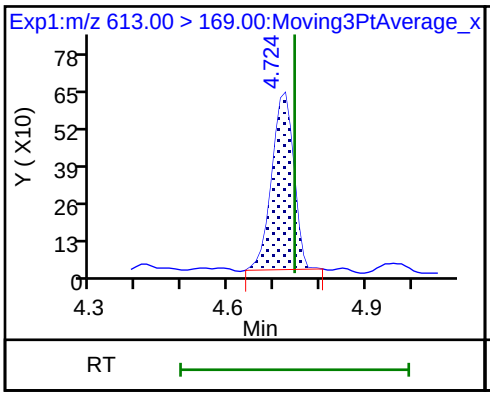
D 36 13C2 PFDoA



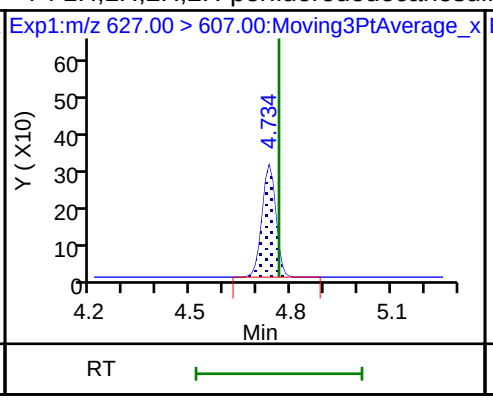
37 Perfluorododecanoic acid



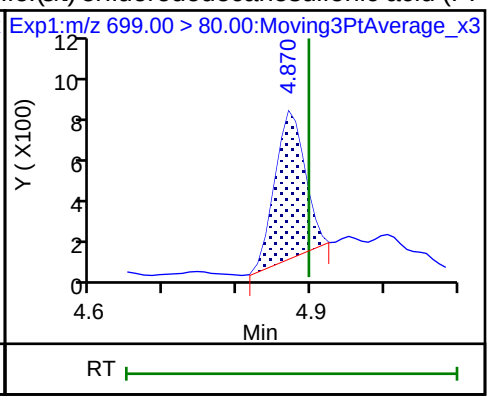
37 Perfluorododecanoic acid



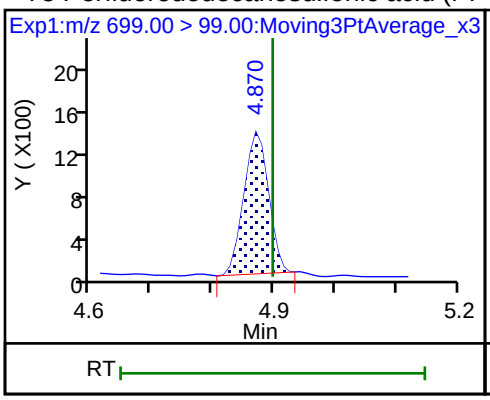
74 1H,1H,2H,2H-perfluorododecanesulfonic acid (M)



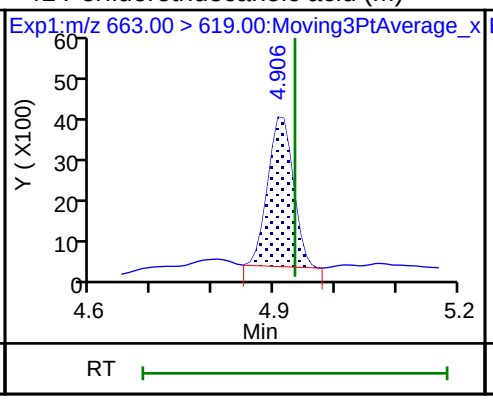
75 Perfluorododecanesulfonic acid (PF



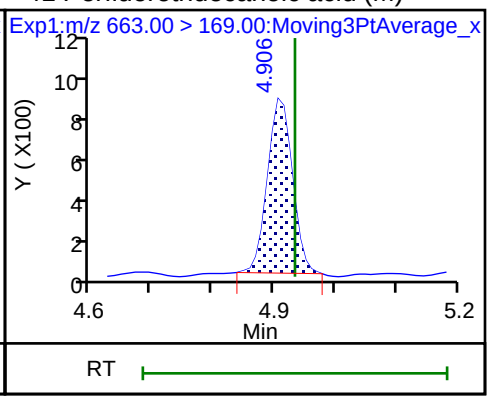
75 Perfluorododecanesulfonic acid (PF



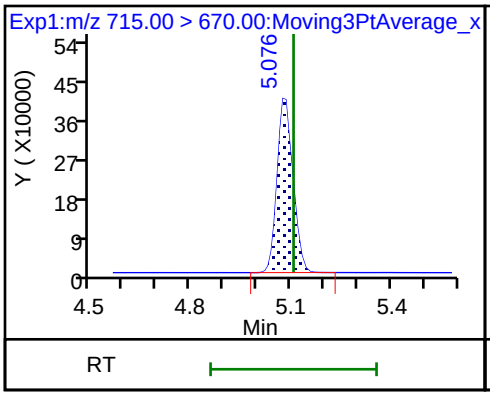
41 Perfluorotridecanoic acid (M)



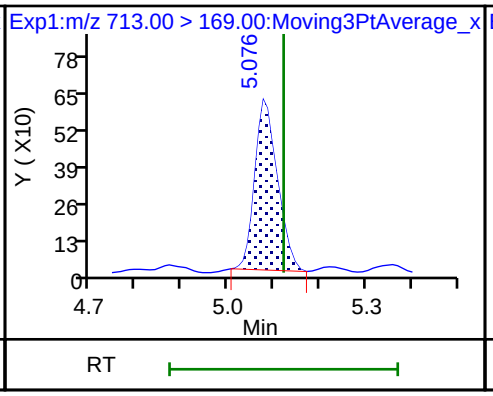
41 Perfluorotridecanoic acid (M)



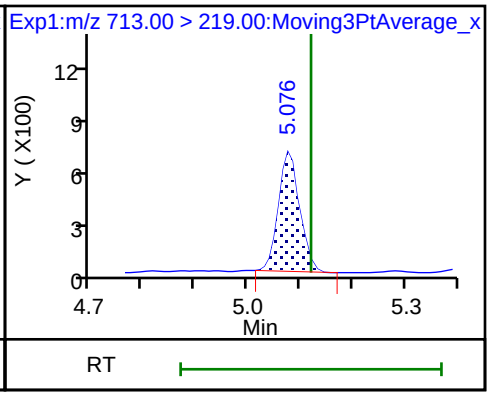
D 43 13C2 PFTeDA



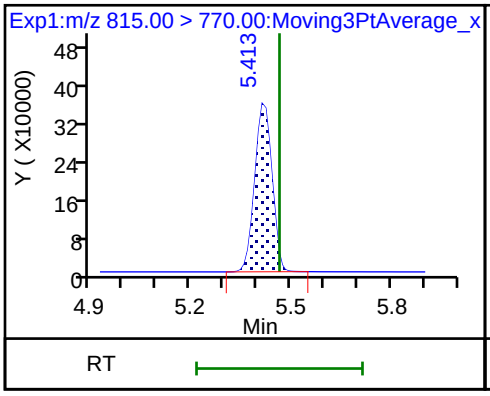
42 Perfluorotetradecanoic acid



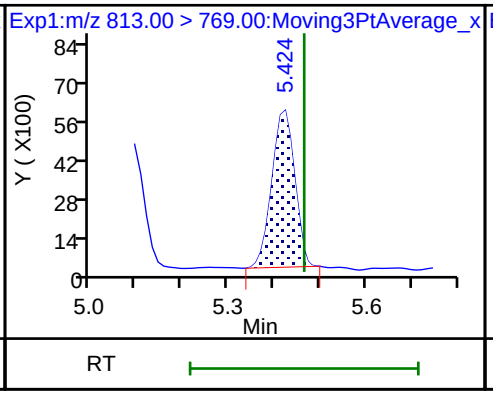
42 Perfluorotetradecanoic acid



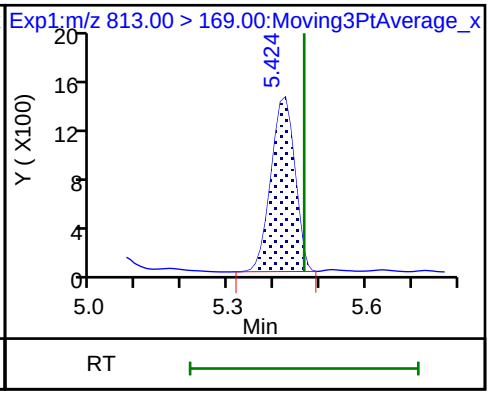
D 44 13C2 PFHxDA



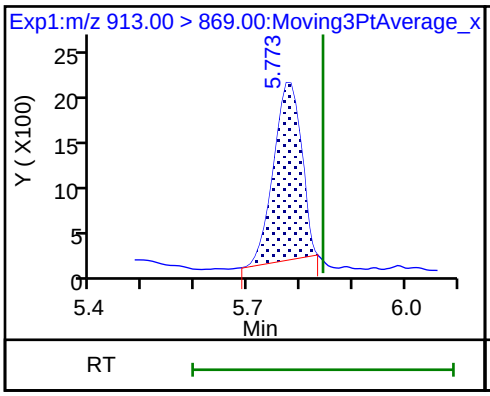
45 Perfluorohexadecanoic acid



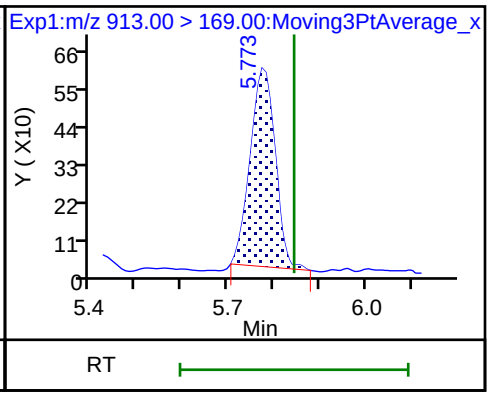
45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid



46 Perfluorooctadecanoic acid



Eurofins TestAmerica, Burlington

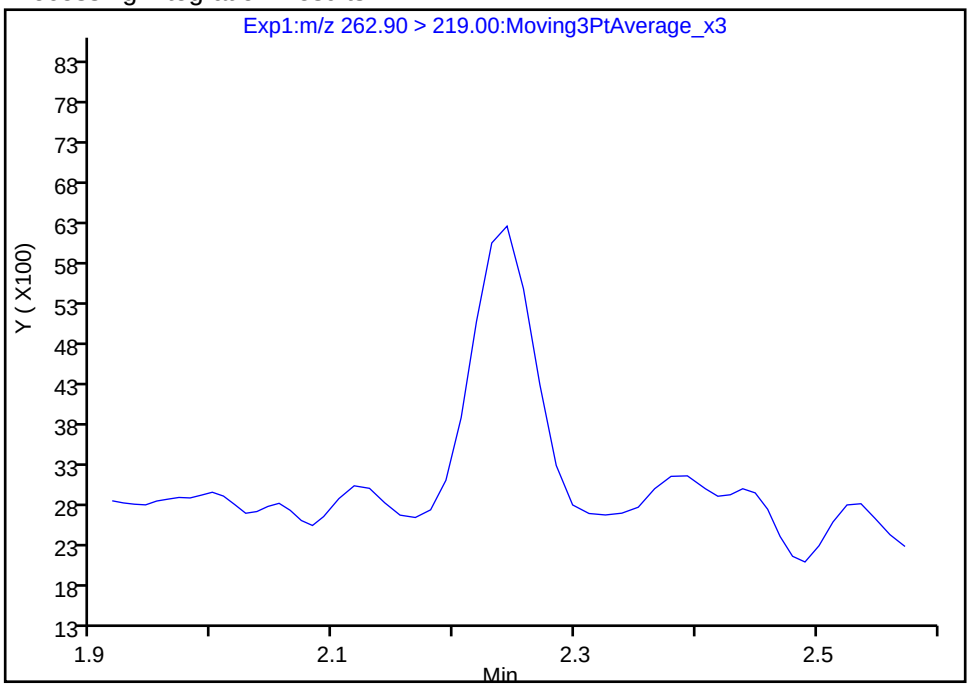
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C02.d				
Injection Date:	25-Feb-2020 19:03:27	Instrument ID:	LC812		
Lims ID:	MB 200-152665/1-A				
Client ID:					
Operator ID:	lc812tech	ALS Bottle#:	2	Worklist Smp#:	2
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

4 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

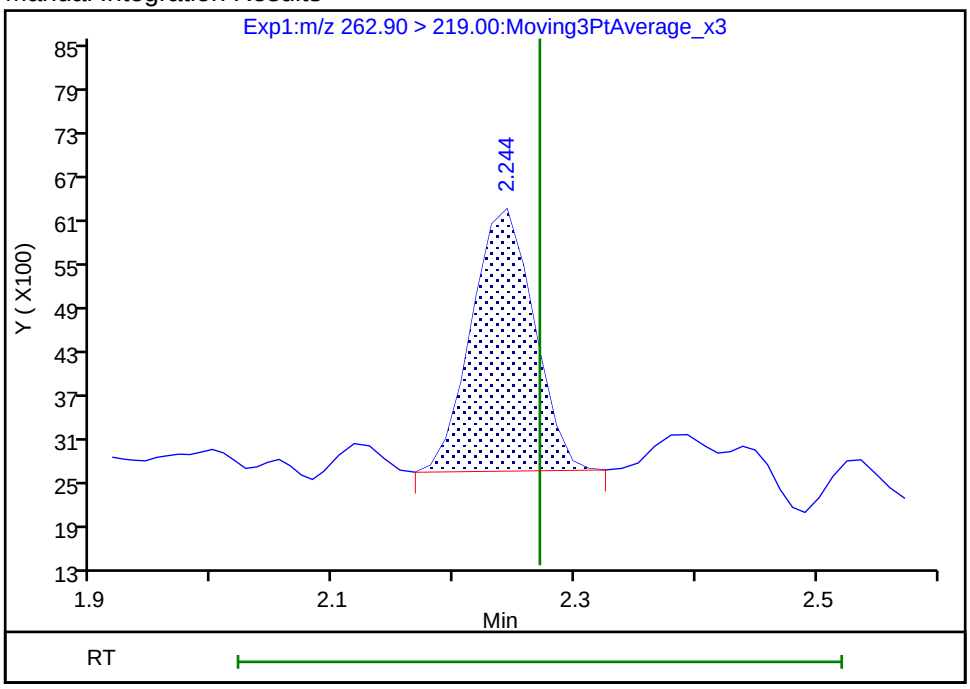
Not Detected
Expected RT: 2.27

Processing Integration Results



Manual Integration Results

RT: 2.24
Area: 12725
Amount: 0.015255
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 09:36:49
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

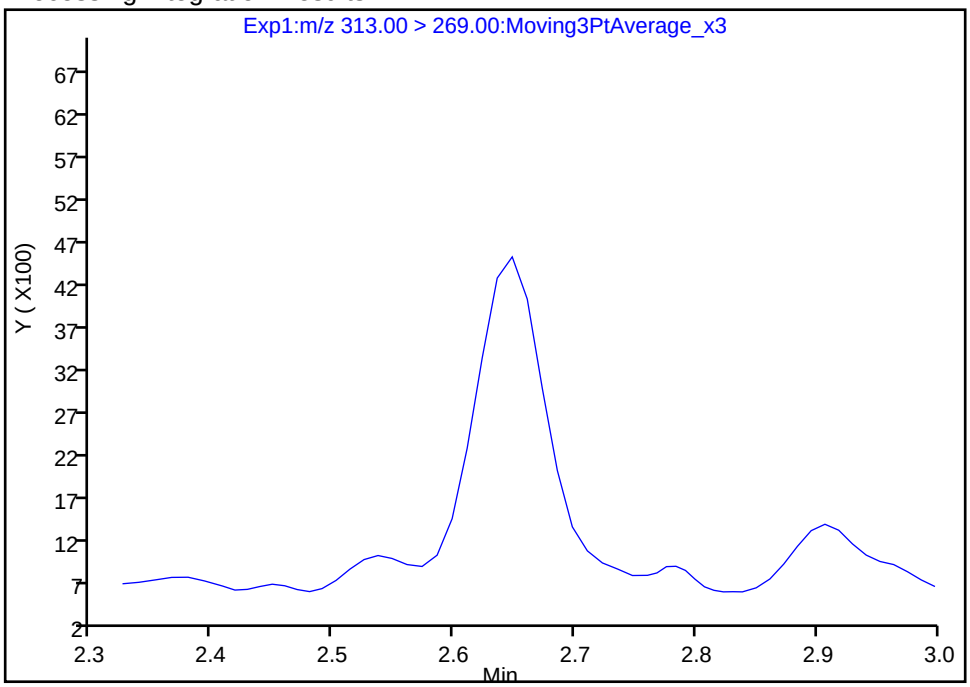
Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C02.d
Injection Date: 25-Feb-2020 19:03:27 Instrument ID: LC812
Lims ID: MB 200-152665/1-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

6 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

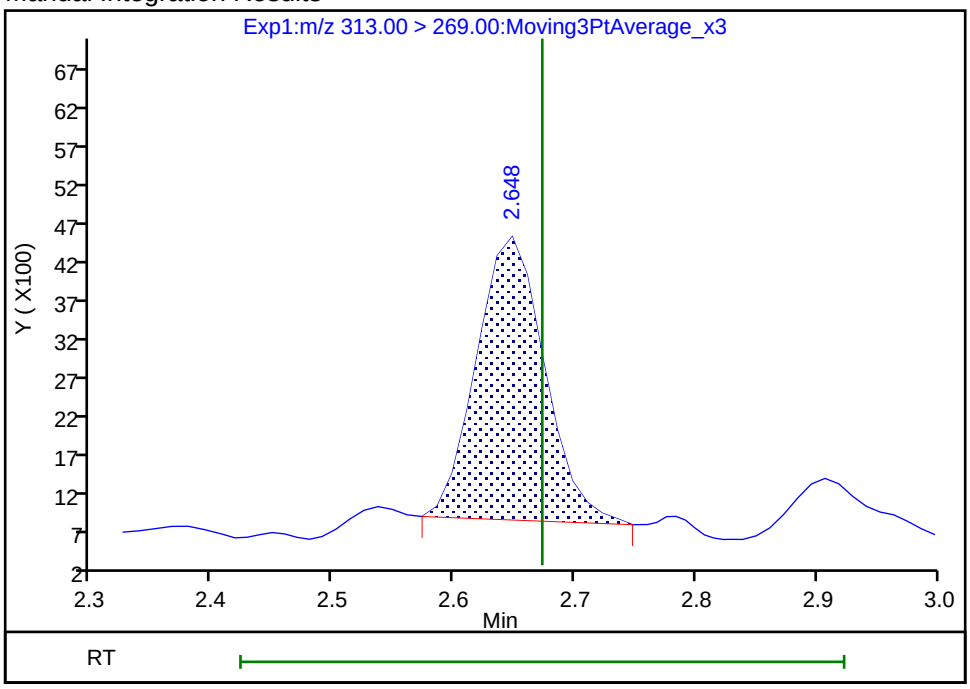
Not Detected
Expected RT: 2.67

Processing Integration Results



Manual Integration Results

RT: 2.65
Area: 14222
Amount: 0.017514
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 09:35:50
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

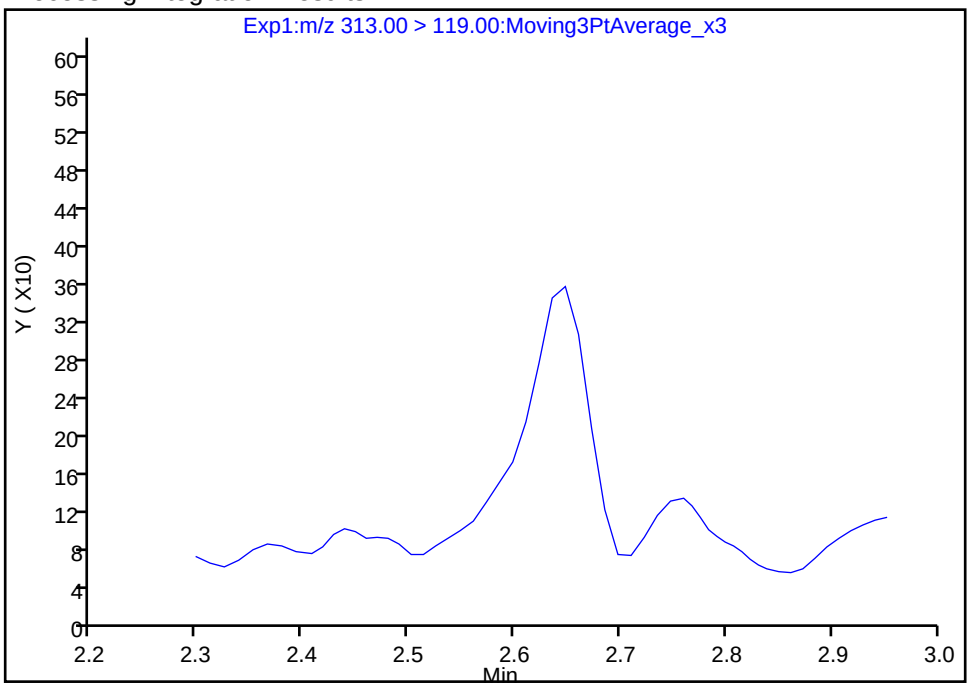
Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C02.d
Injection Date: 25-Feb-2020 19:03:27 Instrument ID: LC812
Lims ID: MB 200-152665/1-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

6 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 2

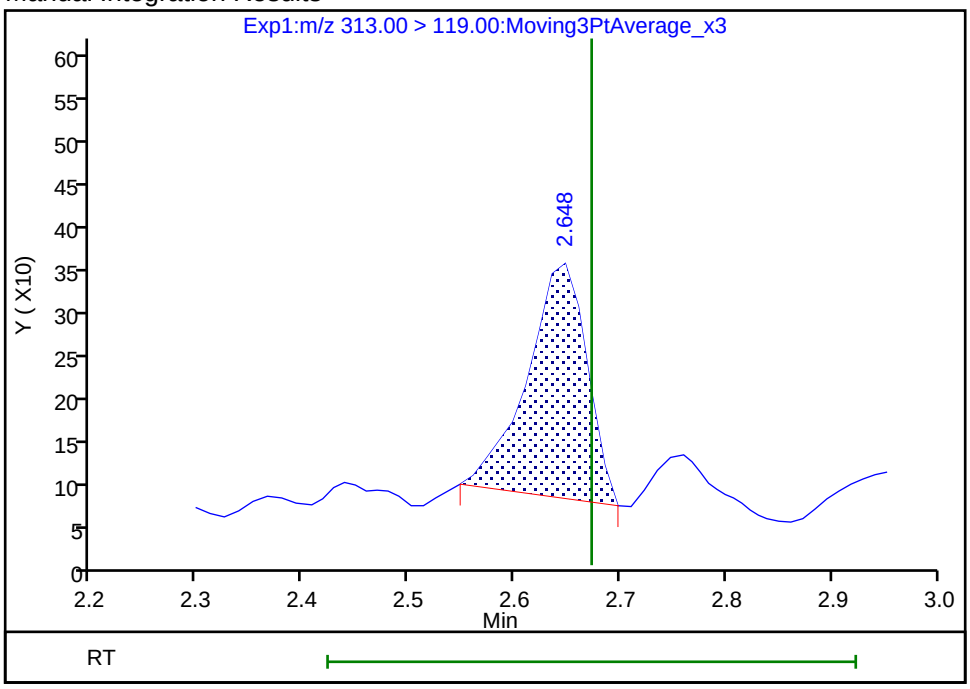
Not Detected
Expected RT: 2.67

Processing Integration Results



Manual Integration Results

RT: 2.65
Area: 1064
Amount: 0.017514
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 09:35:57
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

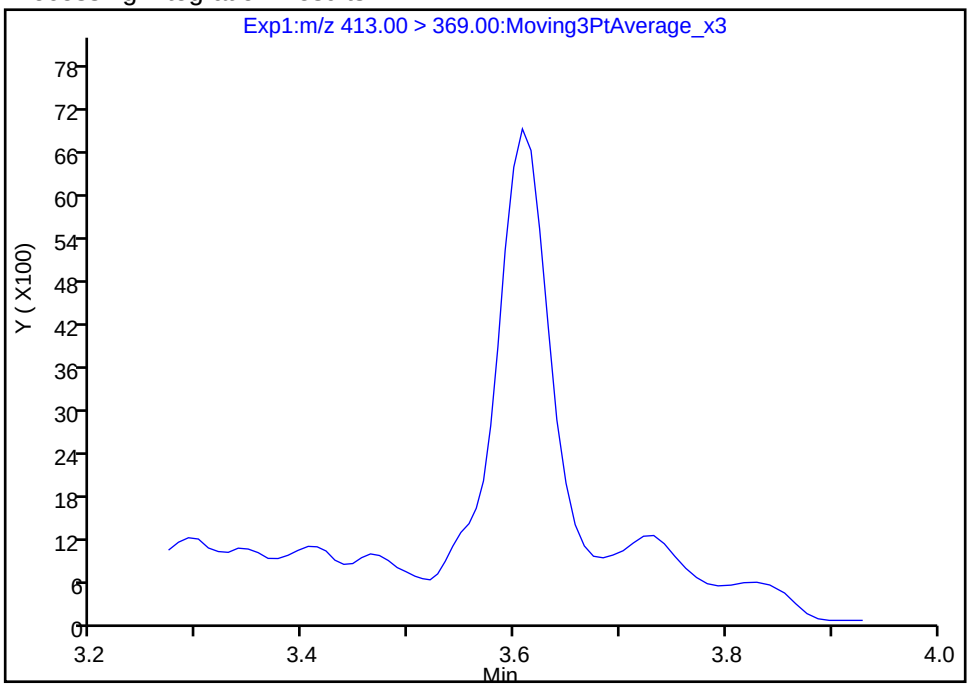
Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C02.d
Injection Date: 25-Feb-2020 19:03:27 Instrument ID: LC812
Lims ID: MB 200-152665/1-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

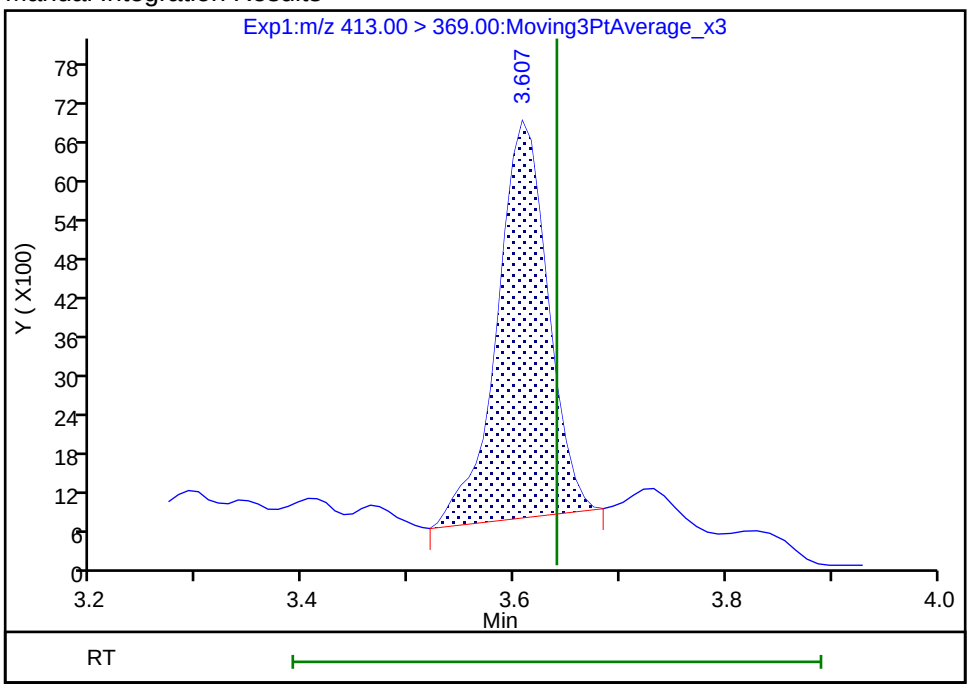
Not Detected
Expected RT: 3.64

Processing Integration Results



Manual Integration Results

RT: 3.61
Area: 20371
Amount: 0.024024
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 09:28:55
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

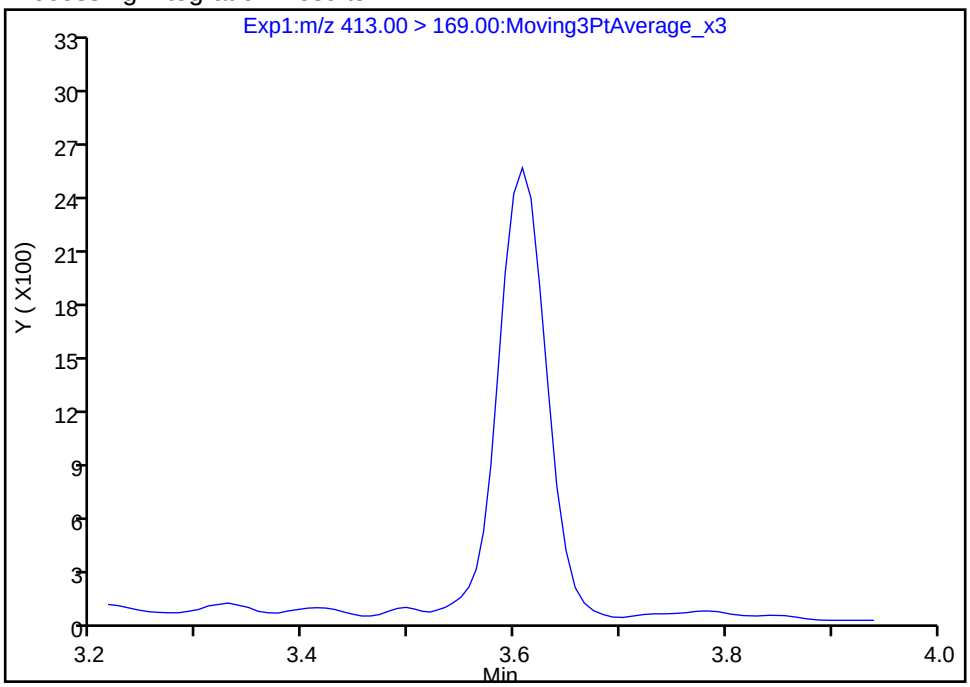
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Injection Date:	25-Feb-2020 19:03:27	Instrument ID:	LC812		
Lims ID:	MB 200-152665/1-A				
Client ID:					
Operator ID:	lc812tech	ALS Bottle#:	2	Worklist Smp#:	2
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

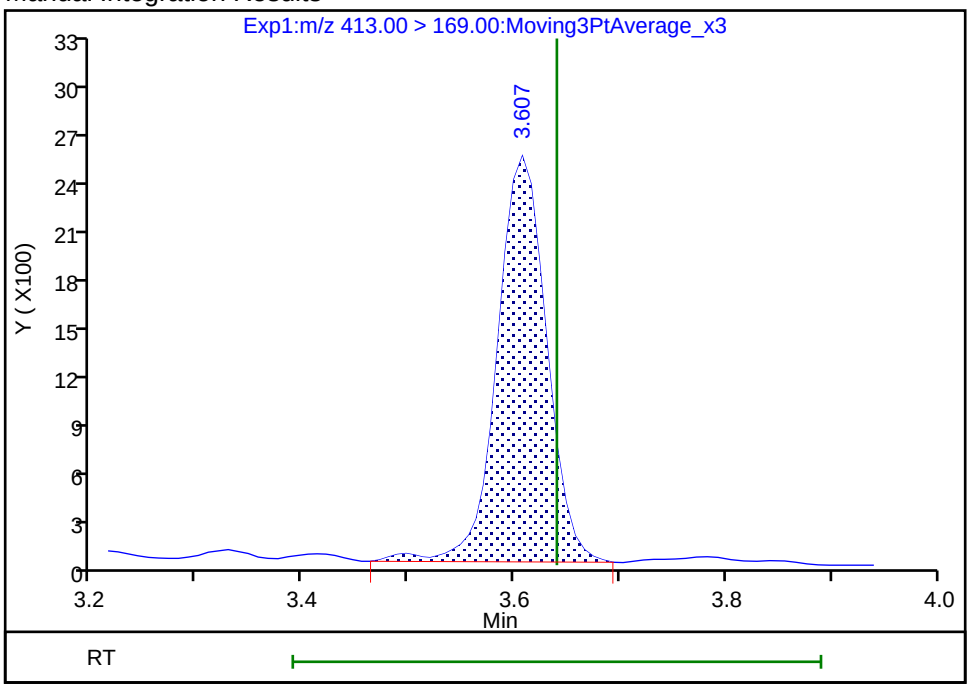
Not Detected
Expected RT: 3.64

Processing Integration Results



Manual Integration Results

RT: 3.61
Area: 8095
Amount: 0.024024
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 09:29:03
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

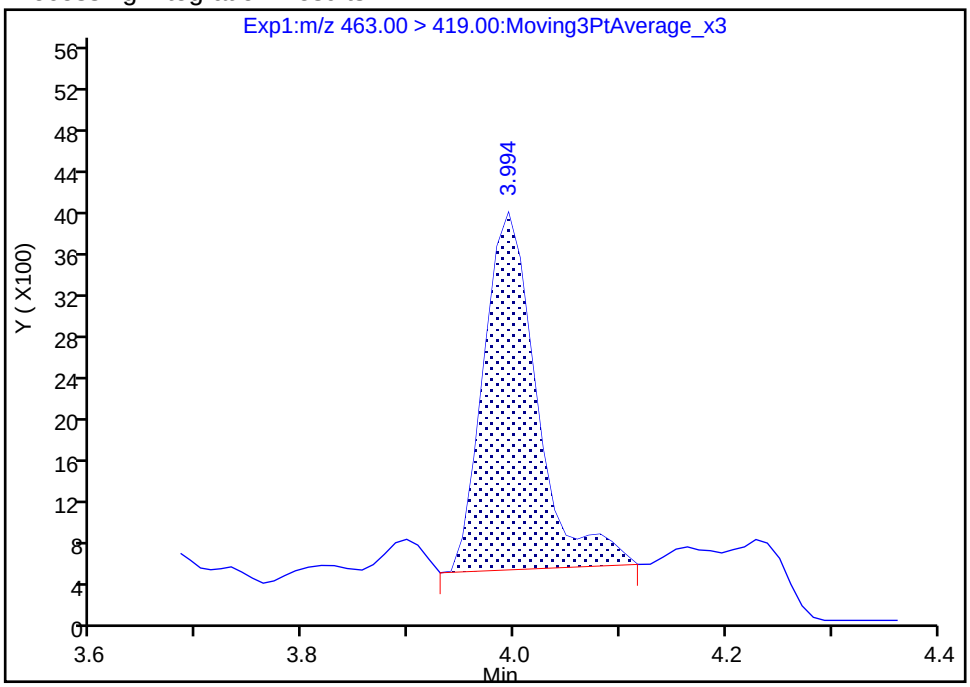
Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C02.d
Injection Date: 25-Feb-2020 19:03:27 Instrument ID: LC812
Lims ID: MB 200-152665/1-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

20 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

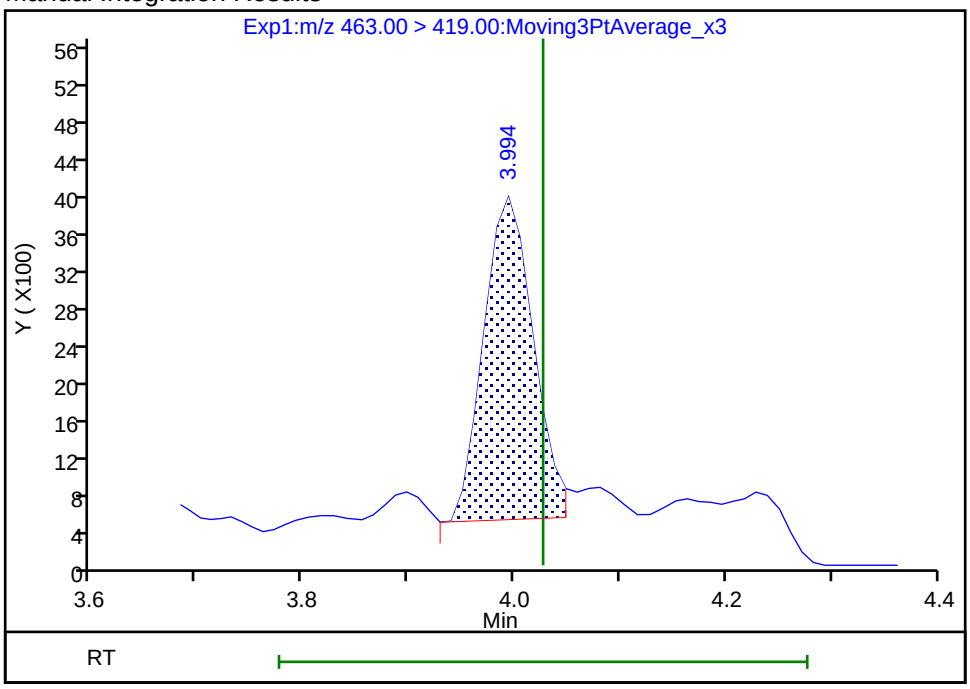
Processing Integration Results

RT: 3.99
Area: 12189
Amount: 0.015640
Amount Units: ng/ml



Manual Integration Results

RT: 3.99
Area: 11271
Amount: 0.014462
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 09:29:30
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

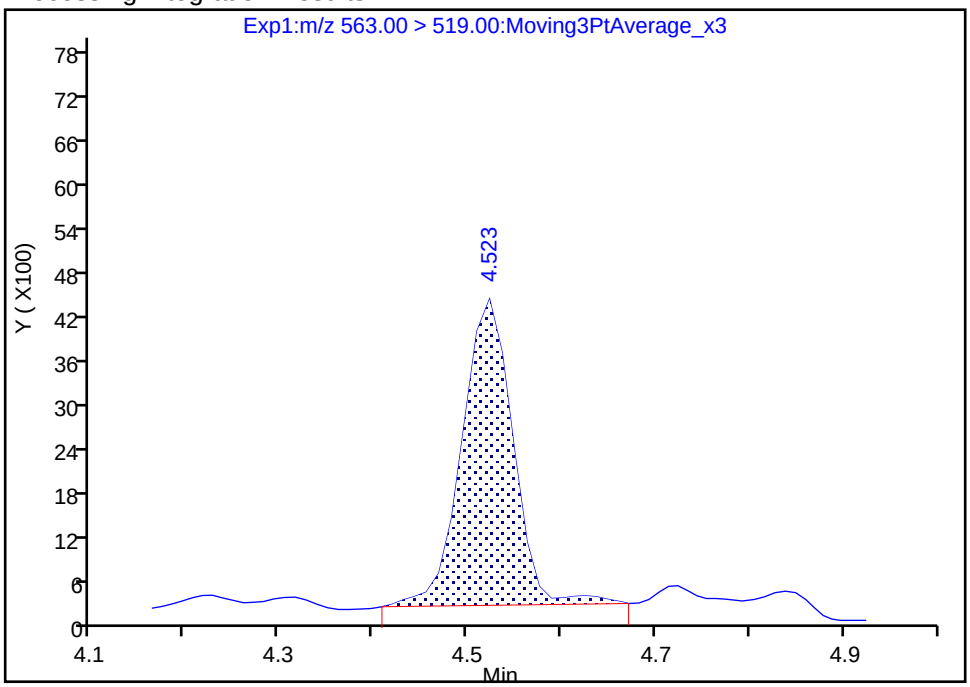
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Injection Date: 25-Feb-2020 19:03:27 Instrument ID: LC812
Lims ID: MB 200-152665/1-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 1

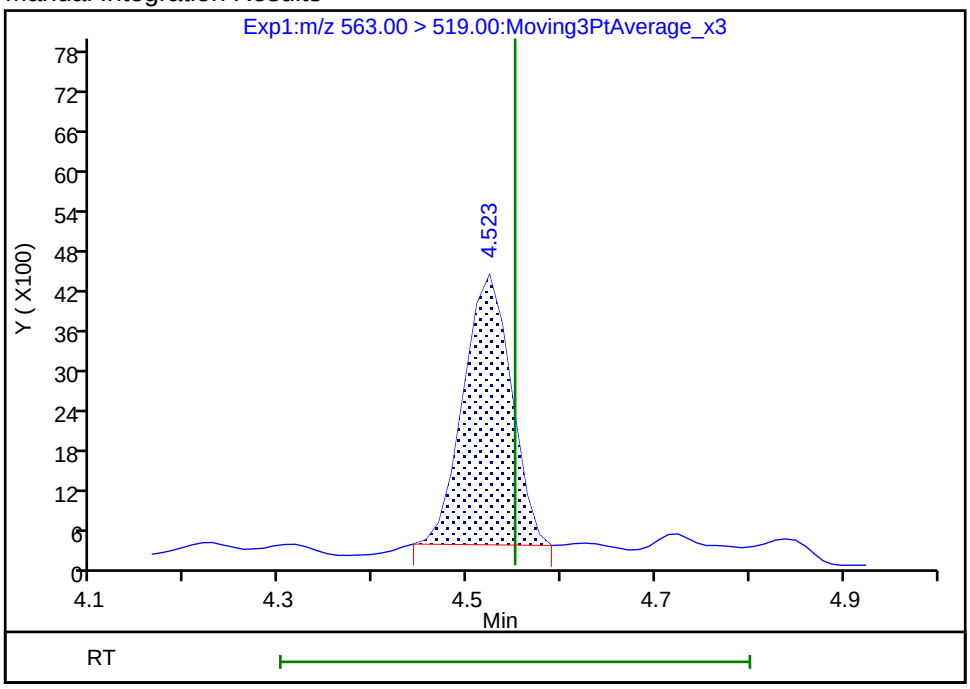
Processing Integration Results

RT: 4.52
Area: 15690
Amount: 0.026972
Amount Units: ng/ml



Manual Integration Results

RT: 4.52
Area: 14265
Amount: 0.024523
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 09:33:53
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

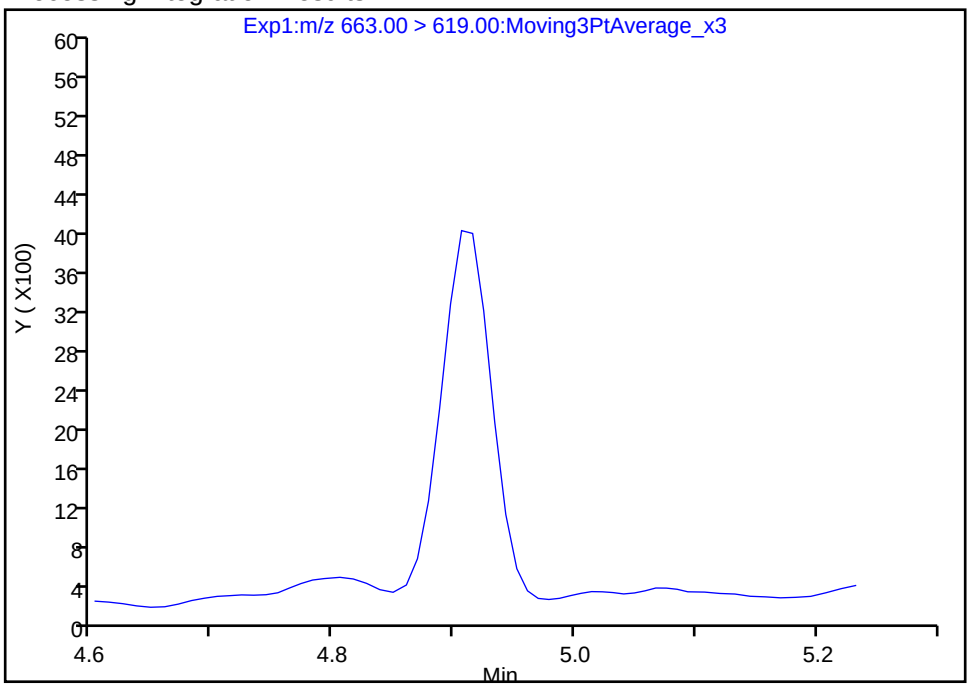
Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C02.d
Injection Date: 25-Feb-2020 19:03:27 Instrument ID: LC812
Lims ID: MB 200-152665/1-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

41 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 1

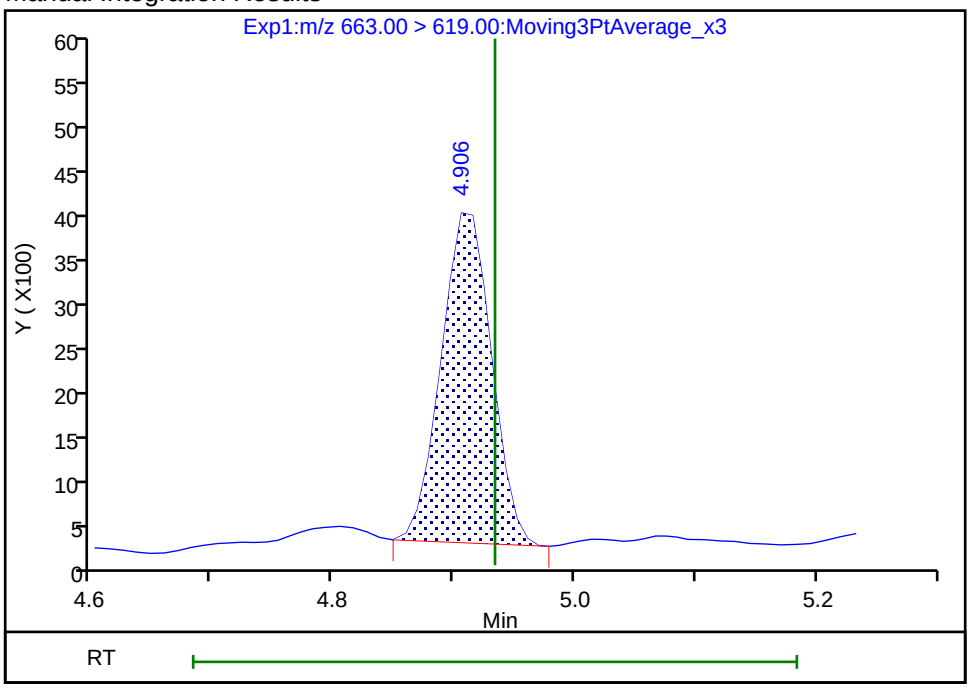
Not Detected
Expected RT: 4.93

Processing Integration Results



Manual Integration Results

RT: 4.91
Area: 10841
Amount: 0.018419
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 09:34:48
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

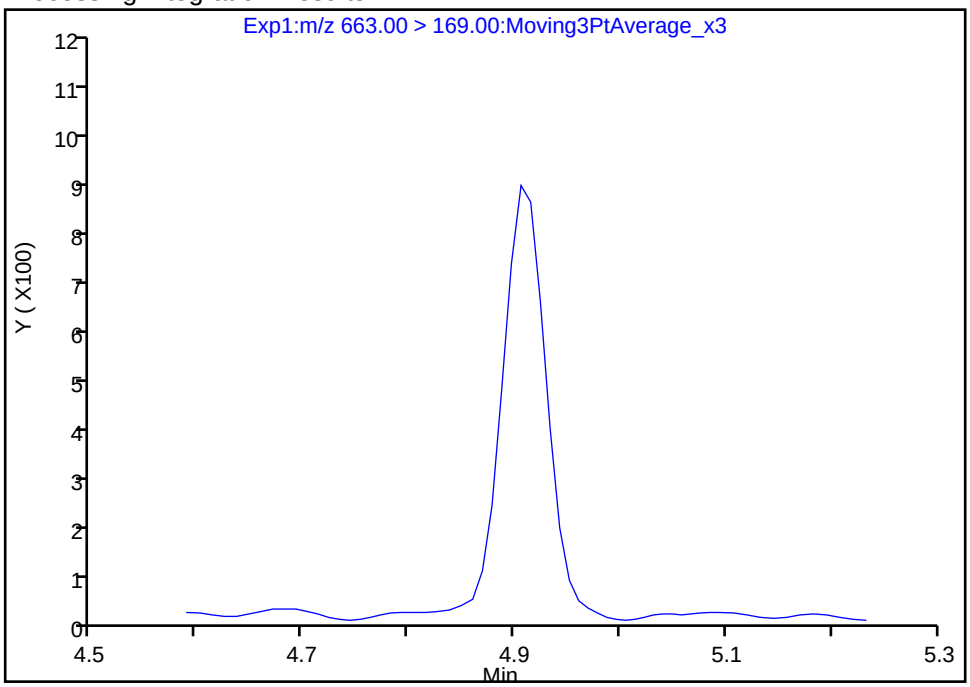
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C02.d				
Injection Date:	25-Feb-2020 19:03:27	Instrument ID:	LC812		
Lims ID:	MB 200-152665/1-A				
Client ID:					
Operator ID:	lc812tech	ALS Bottle#:	2	Worklist Smp#:	2
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

41 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 2

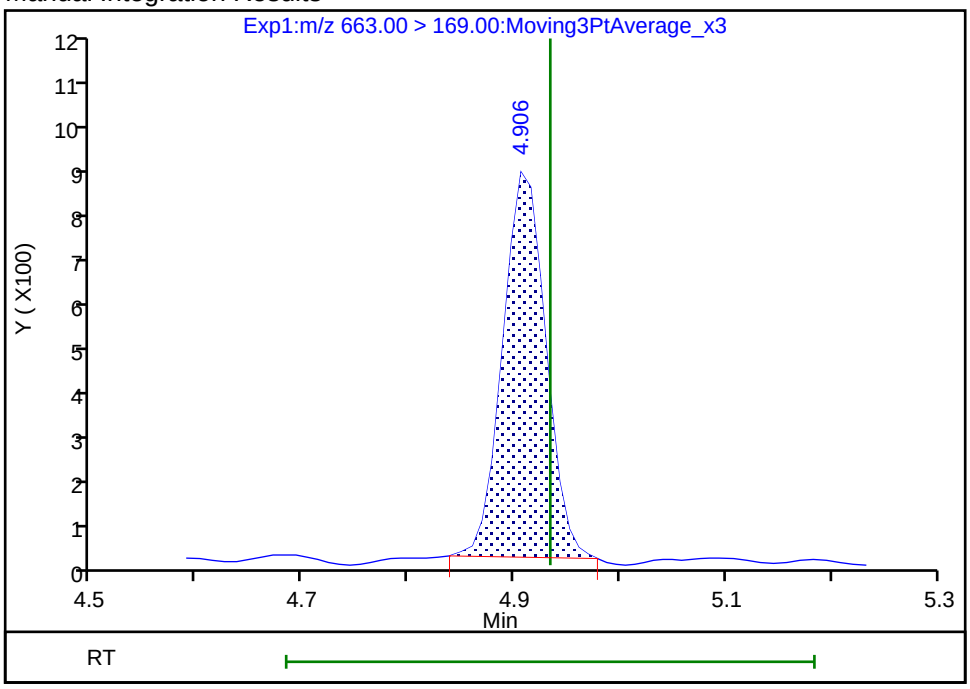
Not Detected
Expected RT: 4.93

Processing Integration Results



Manual Integration Results

RT: 4.91
Area: 2460
Amount: 0.018419
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 09:34:54
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

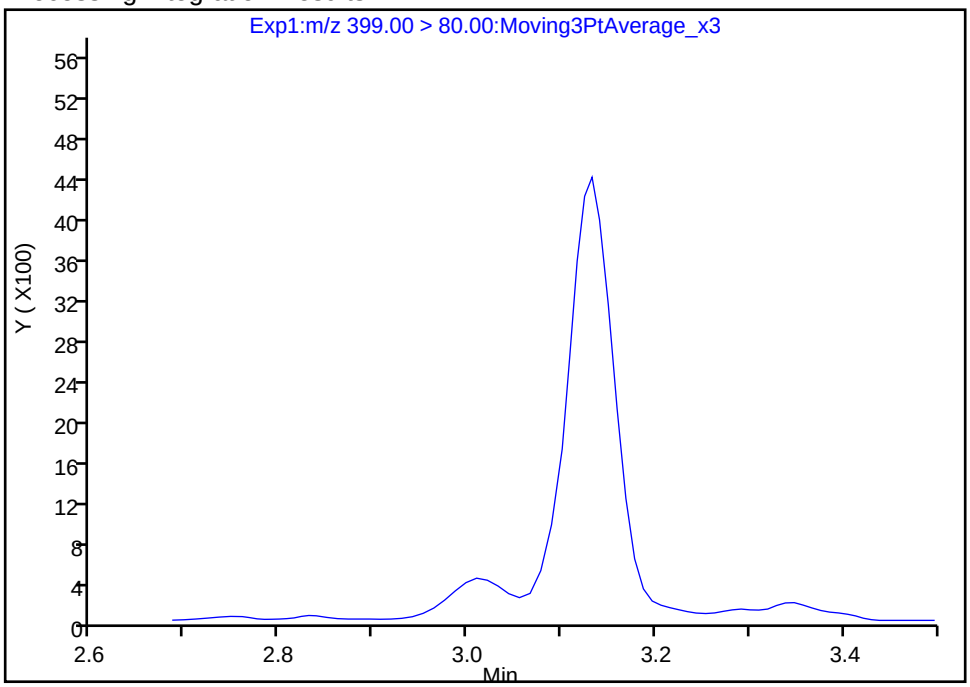
Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C02.d
Injection Date: 25-Feb-2020 19:03:27 Instrument ID: LC812
Lims ID: MB 200-152665/1-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

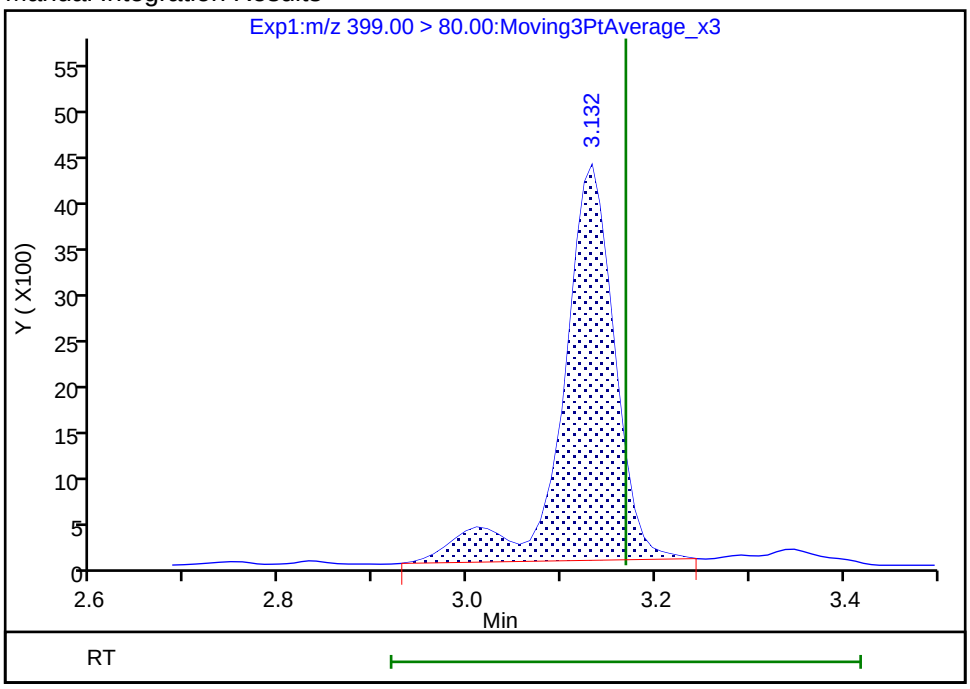
Not Detected
Expected RT: 3.17

Processing Integration Results



Manual Integration Results

RT: 3.13
Area: 16607
Amount: 0.019603
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 09:27:48
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

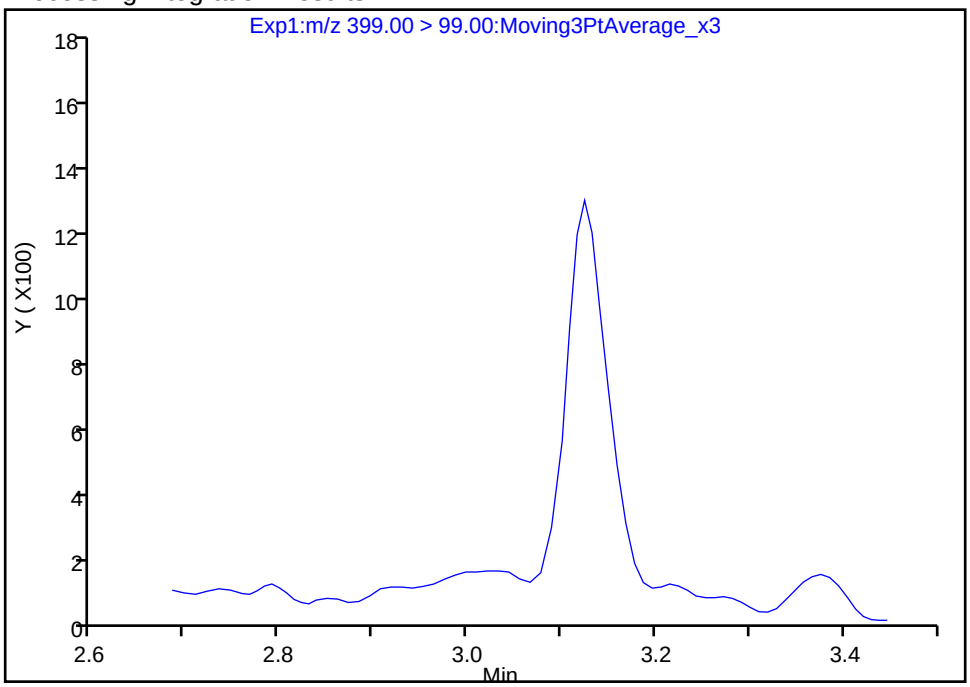
Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C02.d
Injection Date: 25-Feb-2020 19:03:27 Instrument ID: LC812
Lims ID: MB 200-152665/1-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

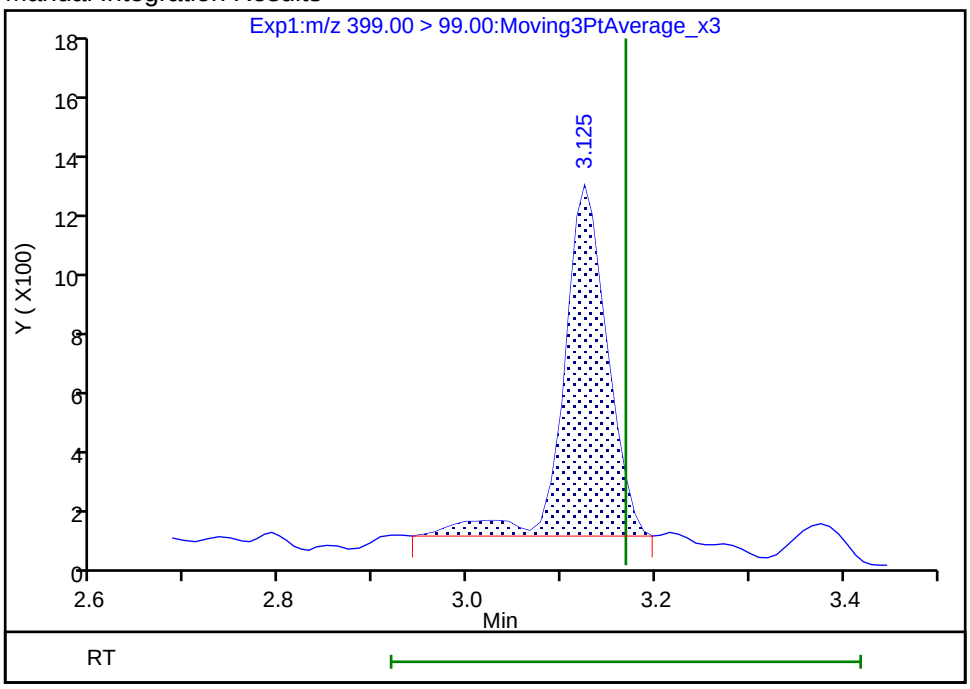
Not Detected
Expected RT: 3.17

Processing Integration Results



Manual Integration Results

RT: 3.12
Area: 3649
Amount: 0.019603
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 09:28:05
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

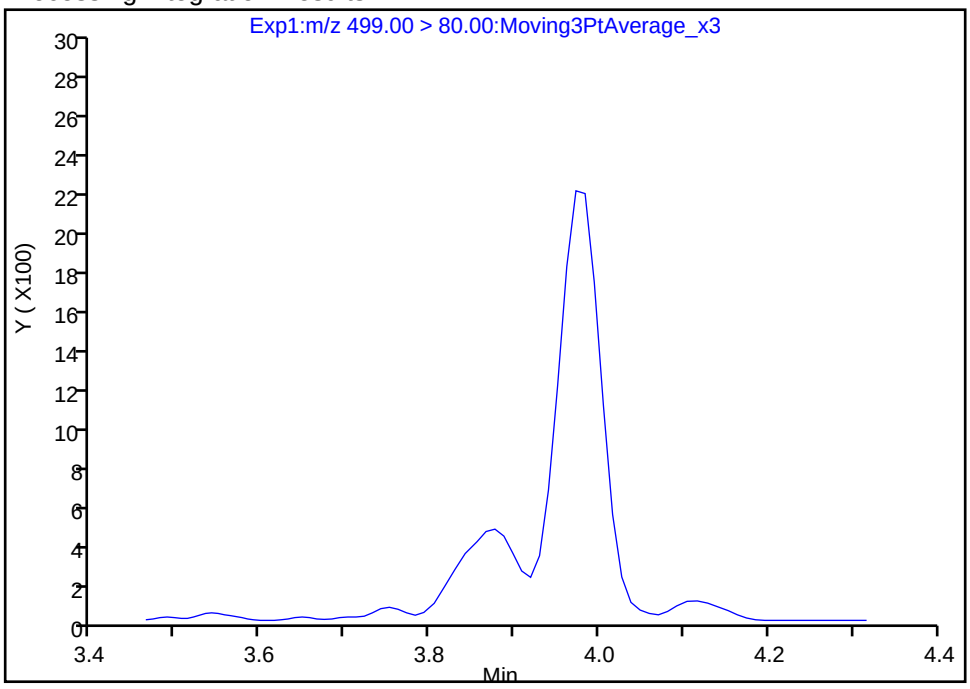
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C02.d				
Injection Date:	25-Feb-2020 19:03:27	Instrument ID:	LC812		
Lims ID:	MB 200-152665/1-A				
Client ID:					
Operator ID:	lc812tech	ALS Bottle#:	2	Worklist Smp#:	2
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

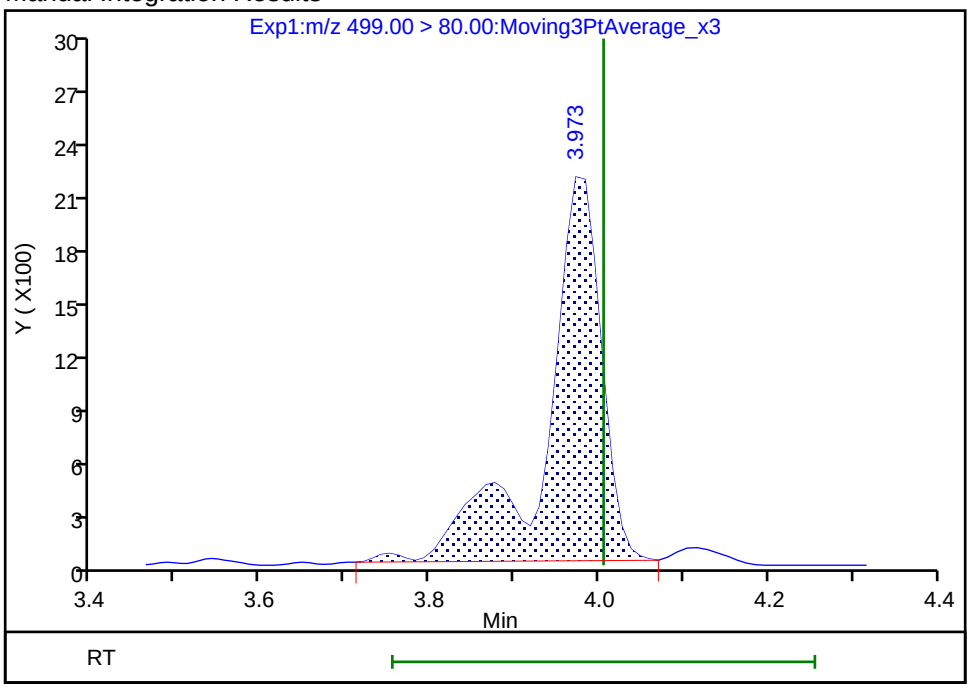
Not Detected
Expected RT: 4.01

Processing Integration Results



Manual Integration Results

RT: 3.97
Area: 9817
Amount: 0.017414
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 09:27:25
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

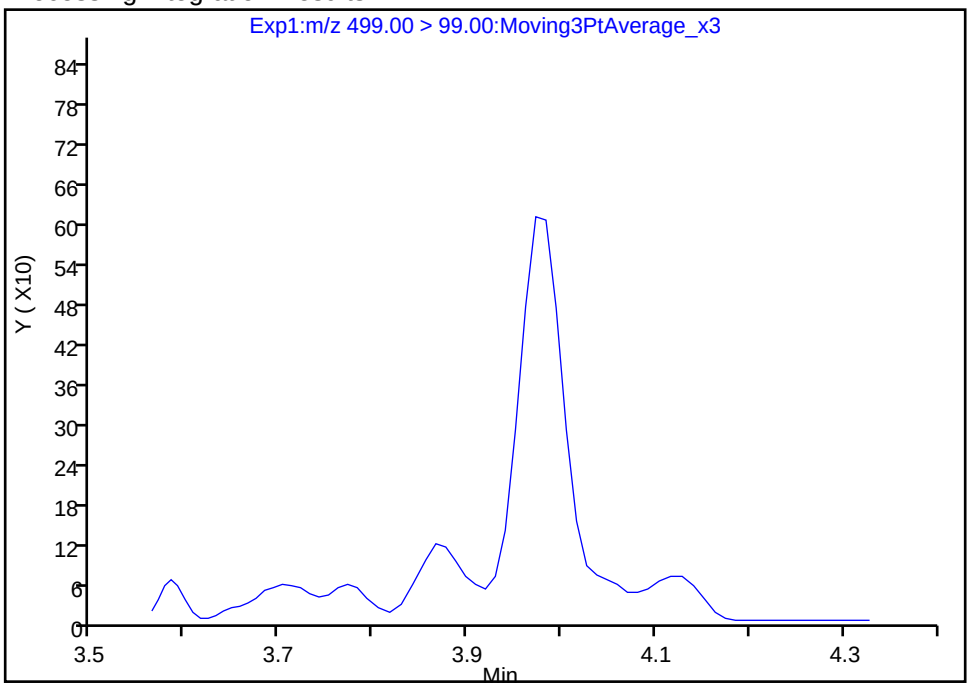
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C02.d				
Injection Date:	25-Feb-2020 19:03:27	Instrument ID:	LC812		
Lims ID:	MB 200-152665/1-A				
Client ID:					
Operator ID:	lc812tech	ALS Bottle#:	2	Worklist Smp#:	2
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

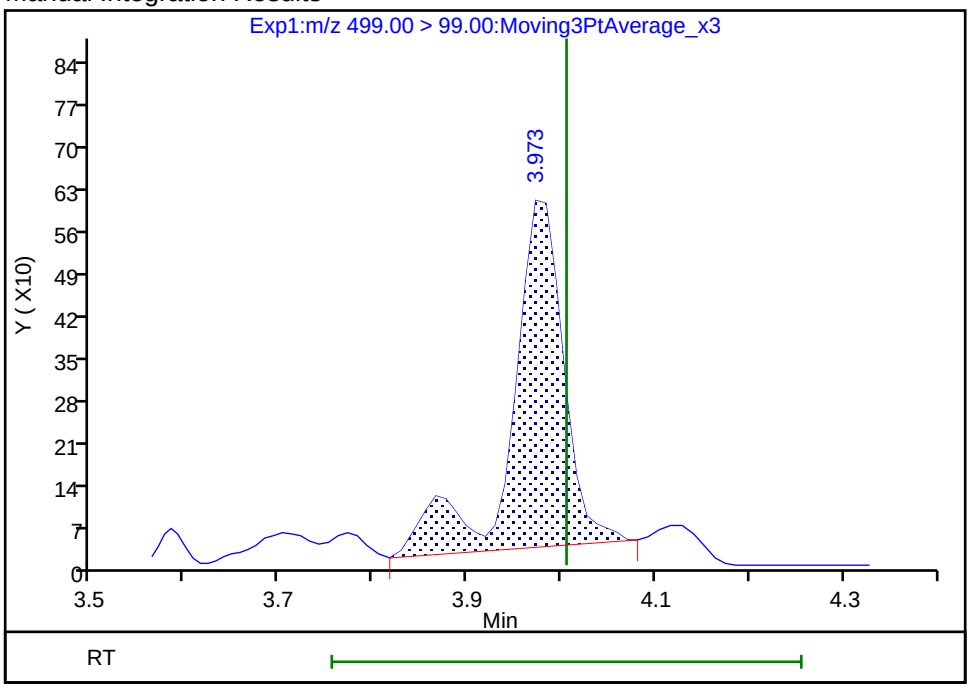
Not Detected
Expected RT: 4.01

Processing Integration Results



Manual Integration Results

RT: 3.97
Area: 2216
Amount: 0.017414
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 09:27:31
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

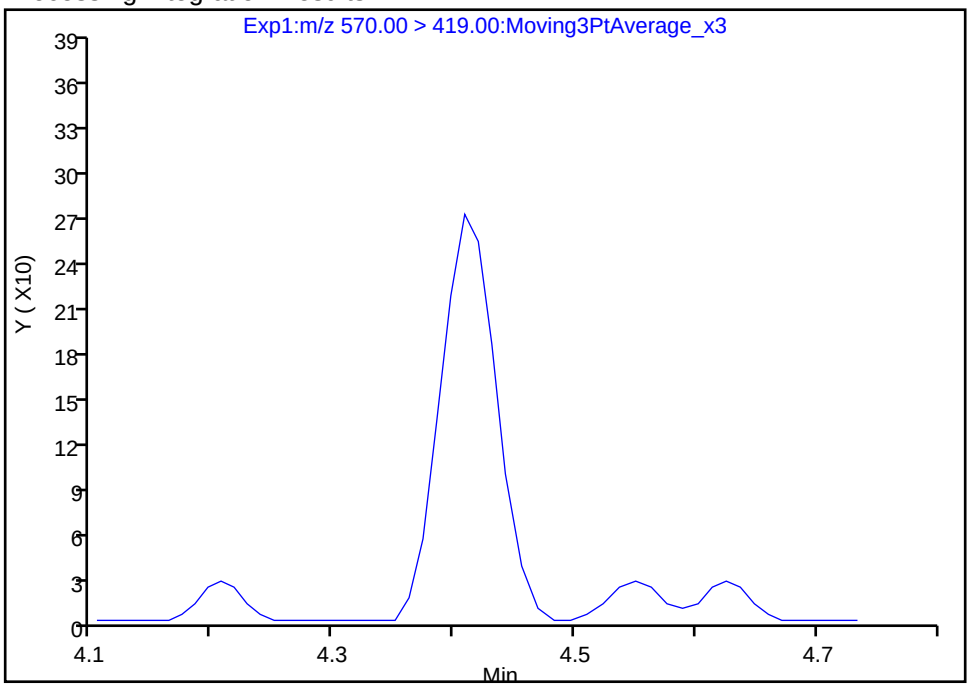
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C02.d				
Injection Date:	25-Feb-2020 19:03:27	Instrument ID:	LC812		
Lims ID:	MB 200-152665/1-A				
Client ID:					
Operator ID:	lc812tech	ALS Bottle#:	2	Worklist Smp#:	2
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

28 N-methylperfluorooctanesulfonamidoacetic aci, CAS: 2355-31-9

Signal: 1

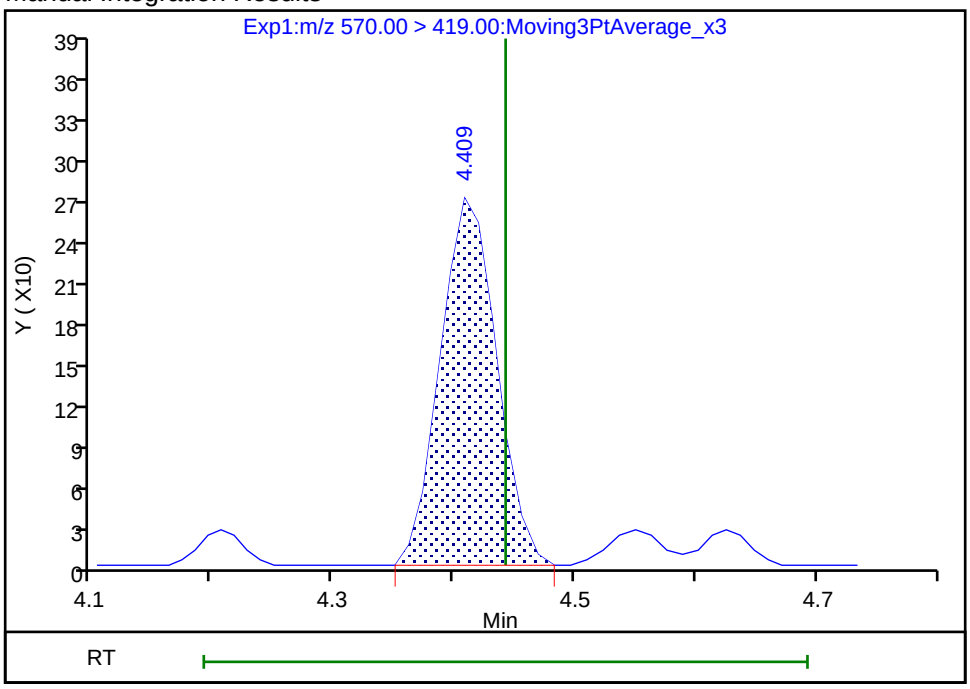
Not Detected
Expected RT: 4.44

Processing Integration Results



Manual Integration Results

RT: 4.41
Area: 871
Amount: 0.014554
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 09:33:36
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

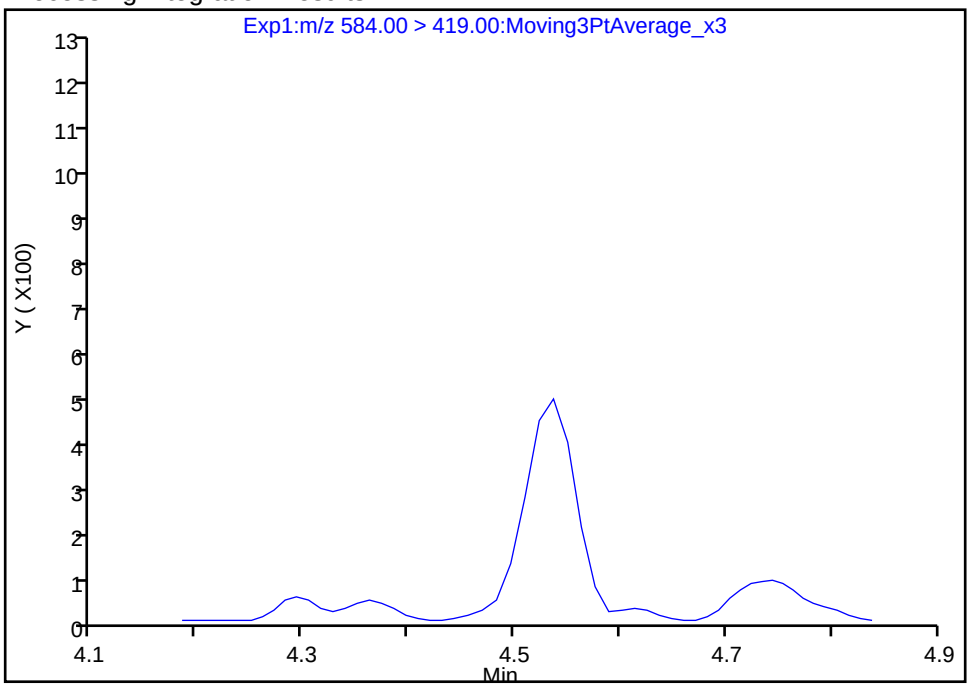
Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C02.d
Injection Date: 25-Feb-2020 19:03:27 Instrument ID: LC812
Lims ID: MB 200-152665/1-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

33 N-ethylperfluorooctanesulfonamidoacetic acid, CAS: 2991-50-6

Signal: 1

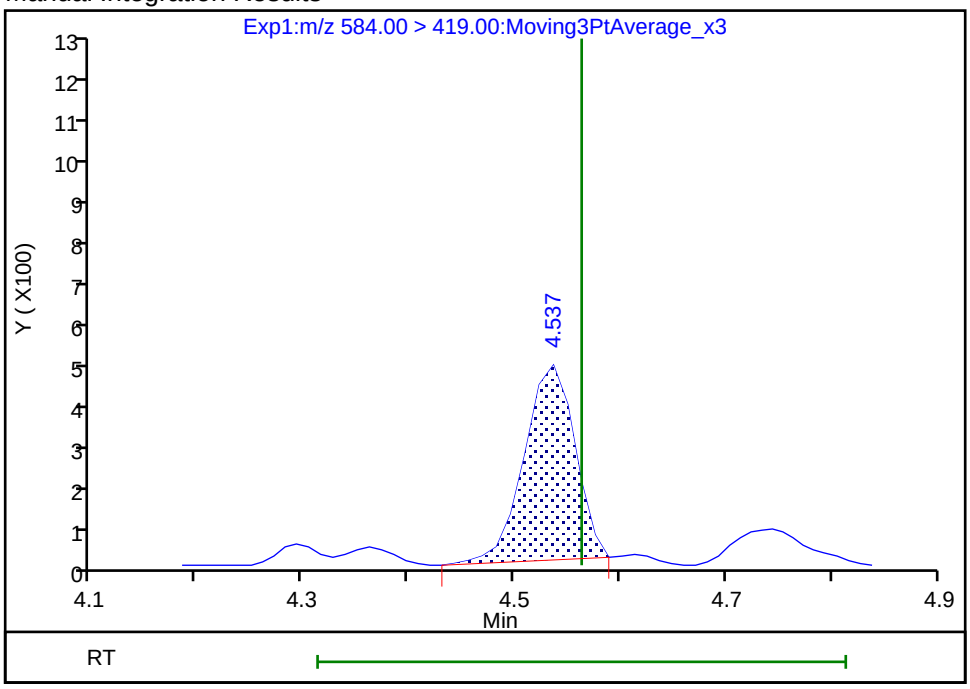
Not Detected
Expected RT: 4.56

Processing Integration Results



Manual Integration Results

RT: 4.54
Area: 1557
Amount: 0.028341
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 09:34:15
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

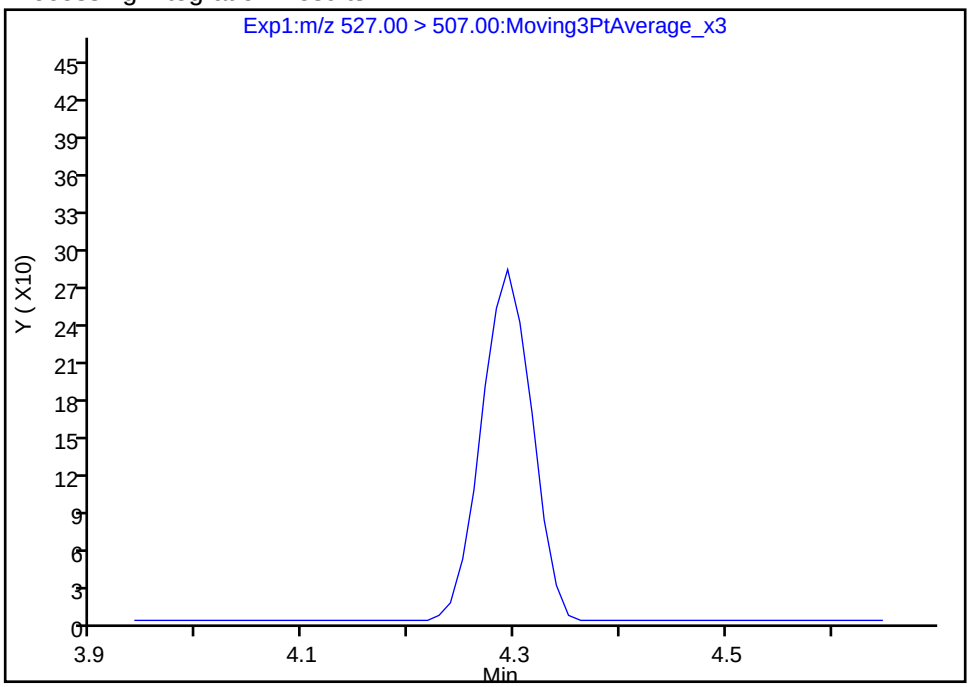
Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C02.d
Injection Date: 25-Feb-2020 19:03:27 Instrument ID: LC812
Lims ID: MB 200-152665/1-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

25 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:, CAS: 39108-34-4

Signal: 1

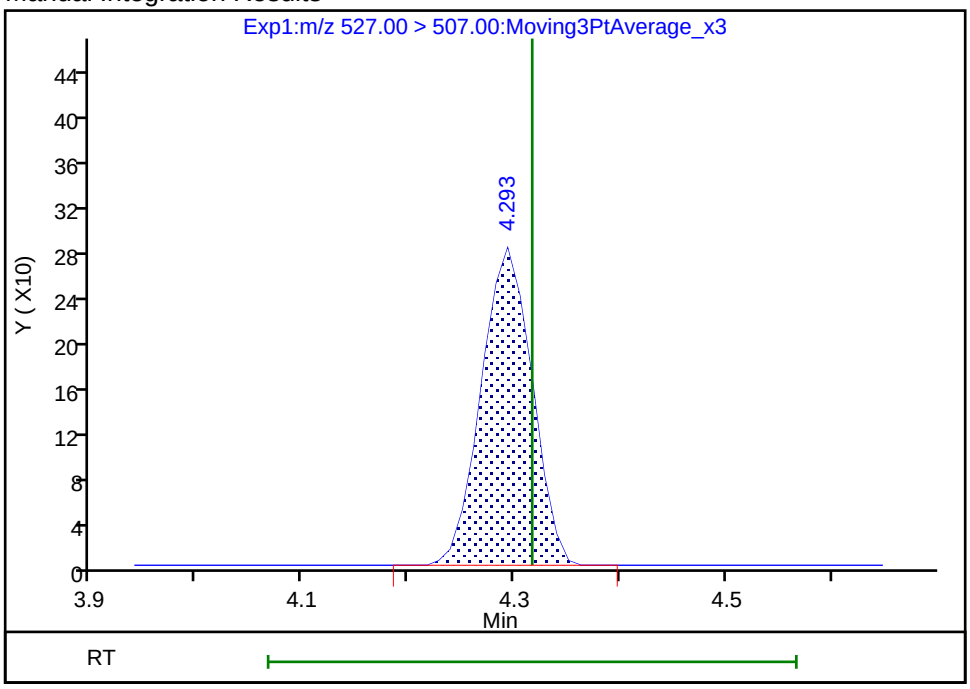
Not Detected
Expected RT: 4.32

Processing Integration Results



Manual Integration Results

RT: 4.29
Area: 932
Amount: 0.011540
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 09:30:07
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

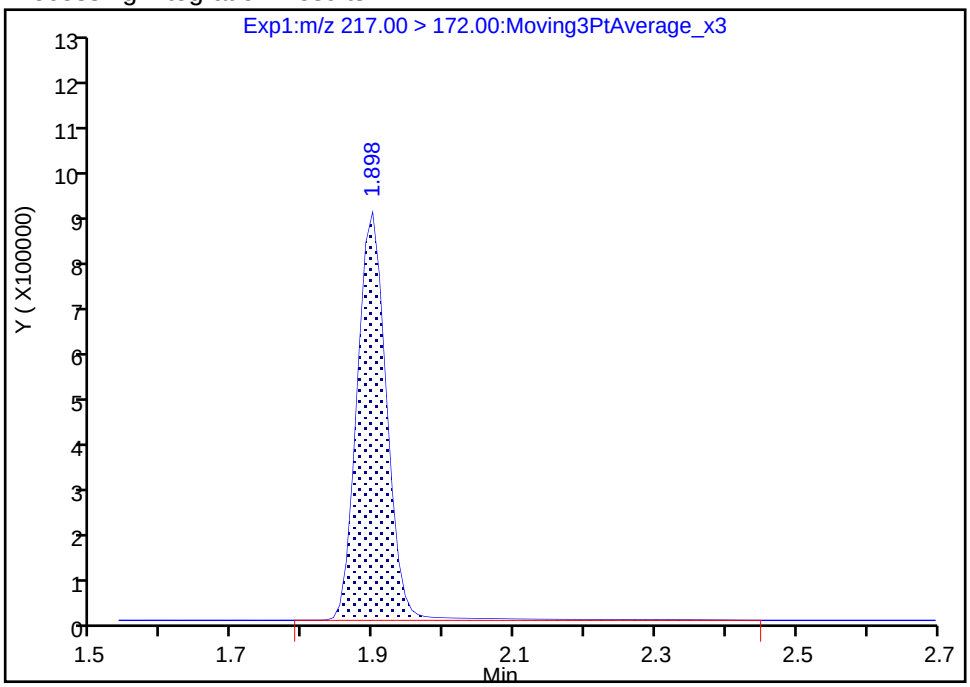
Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C02.d
Injection Date: 25-Feb-2020 19:03:27 Instrument ID: LC812
Lims ID: MB 200-152665/1-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

D 1 13C4 PFBA, CAS: STL00992

Signal: 1

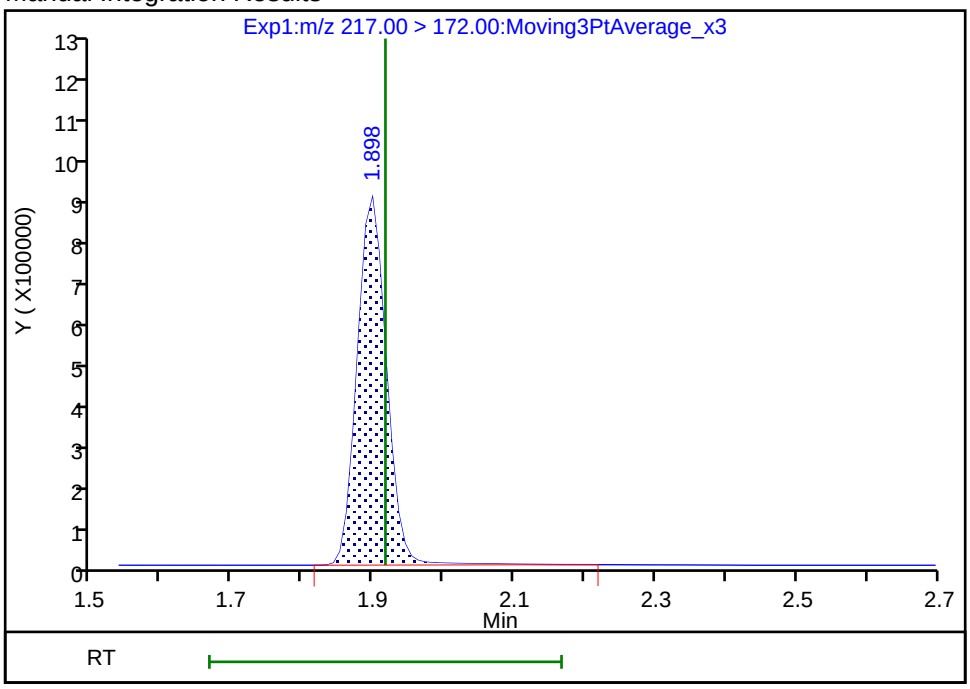
Processing Integration Results

RT: 1.90
Area: 2501616
Amount: 2.526631
Amount Units: ng/ml



Manual Integration Results

RT: 1.90
Area: 2475675
Amount: 2.500431
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 09:46:09
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 200-152665/2-A

Matrix: Water Lab File ID: SC022520C03.d

Analysis Method: 537 (modified) Date Collected:

Extraction Method: 3535 Date Extracted: 02/24/2020 13:43

Sample wt/vol: 250(mL) Date Analyzed: 02/25/2020 19:11

Con. Extract Vol.: 10(mL) Dilution Factor: 1

Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 152696 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	45.6		2.0	1.0
2706-90-3	Perfluoropentanoic acid (PFPeA)	38.0		2.0	0.63
307-24-4	Perfluorohexanoic acid (PFHxA)	42.5		2.0	0.76
375-85-9	Perfluoroheptanoic acid (PFHpA)	37.7		2.0	0.91
335-67-1	Perfluorooctanoic acid (PFOA)	44.2		2.0	0.81
375-95-1	Perfluorononanoic acid (PFNA)	36.8		2.0	0.27
335-76-2	Perfluorodecanoic acid (PFDA)	41.2		2.0	0.77
2058-94-8	Perfluoroundecanoic acid (PFUnA)	39.3		2.0	0.78
307-55-1	Perfluorododecanoic acid (PFDoA)	43.3		2.0	0.59
72629-94-8	Perfluorotridecanoic acid (PFTriA)	34.9		2.0	0.60
376-06-7	Perfluorotetradecanoic acid (PFTeA)	42.5		2.0	0.92
375-73-5	Perfluorobutanesulfonic acid (PFBS)	36.4		2.0	0.49
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	32.8		2.0	0.80
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	40.0		2.0	0.95
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	36.1		2.0	0.61
335-77-3	Perfluorodecanesulfonic acid (PFDS)	29.6		2.0	0.90
754-91-6	Perfluorooctanesulfonamide (PFOSA)	35.2		10	10
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	44.8		20	1.7
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	42.3		20	1.5
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	33.0		20	5.5
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	34.6		20	2.9

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 200-152665/2-A

Matrix: Water Lab File ID: SC022520C03.d

Analysis Method: 537 (modified) Date Collected:

Extraction Method: 3535 Date Extracted: 02/24/2020 13:43

Sample wt/vol: 250(mL) Date Analyzed: 02/25/2020 19:11

Con. Extract Vol.: 10(mL) Dilution Factor: 1

Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 152696 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	95		50-150
STL01892	13C4 PFHpA	97		50-150
STL00990	13C4 PFOA	90		50-150
STL00991	13C4 PFOS	93		50-150
STL00995	13C5 PFNA	88		50-150
STL00992	13C4 PFBA	96		25-150
STL00993	13C2 PFHxA	81		50-150
STL00996	13C2 PFDA	89		50-150
STL00997	13C2 PFUnA	78		50-150
STL00998	13C2 PFDoA	65		50-150
STL01056	13C8 FOSA	60		25-150
STL01893	13C5 PFPeA	97		25-150
STL02116	13C2 PFTeDA	69		50-150
STL02118	d3-NMeFOSAA	96		50-150
STL02117	d5-NEtFOSAA	94		50-150
STL02279	M2-6:2 FTS	94		25-150
STL02280	M2-8:2 FTS	98		25-150
STL02337	13C3 PFBS	85		50-150

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C03.d
Lims ID: LCS 200-152665/2-A
Client ID:
Sample Type: LCS
Inject. Date: 25-Feb-2020 19:11:43 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: LCS 200-152665/2-A
Misc. Info.: 200-0040162-003 Plate: 1 Rack: 2
Operator ID: lc812tech Instrument ID: LC812

Method: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\PFC_LC812.m
Limit Group: LC_PFC_ICAL
Last Update: 26-Feb-2020 17:13:10 Calib Date: 10-Feb-2020 12:29:33
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL010.d

Column 1 : C-18 (4.60 mm) Det: EXP1
Process Host: CTX0323

First Level Reviewer: murrayjw Date: 26-Feb-2020 09:48:50
Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										M
217.00 > 172.00	1.898	1.917	-0.019	0.526	2354487	2.39		95.6	2068	M
2 Perfluorobutanoic acid										M
212.90 > 169.00	1.898	1.917	-0.019	1.000	1020475	1.14		114	60.3	M
D 3 13C5 PFPeA										
267.90 > 223.00	2.244	2.257	-0.013	0.622	1852366	2.41		96.6	2048	
4 Perfluoropentanoic acid										
262.90 > 219.00	2.244	2.271	-0.027	1.000	758533	0.9489		94.9	68.4	
D 47 13C3 PFBS										
301.90 > 80.00	2.257	2.284	-0.027	0.626	2040763	1.98		85.1	759996	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.271	2.284	-0.013	1.006	814205	0.9093	Target=2.19	103	1196	
298.90 > 99.00	2.271	2.284	-0.013	1.006	389109		2.09(1.09-3.28)		396	
61 1H,1H,2H,2H-perfluorohexanesulfoni										
327.00 > 307.00	2.598	2.623	-0.025	1.000	127355	0.9200		98.5	1067	
D 60 M2-4:2 FTS										
329.00 > 81.00	2.598	2.623	-0.025	0.720	166682	2.21		94.6	248	
D 7 13C2 PFHxA										
315.00 > 270.00	2.648	2.673	-0.025	0.734	1826465	2.04		81.4	6200	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.648	2.673	-0.025	1.000	769406	1.06	Target=12.51	106	259	
313.00 > 119.00	2.648	2.673	-0.025	1.000	59172		13.00(6.25-18.76)		154	
70 Perfluoropentanesulfonic acid										
349.00 > 80.00	2.660	2.685	-0.025	0.849	762302	0.8661	Target=3.29	92.3	1651	
349.00 > 99.00	2.648	2.685	-0.037	0.845	229281		3.32(1.64-4.93)		548	
67 Perfluoro(2-propoxypropanoic) acid										M
329.10 > 285.00	2.791	2.815	-0.024	1.003	120538	0.7996		80.0	53.9	M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 64 13C3 HFPO-DA										
332.10 > 287.00	2.784	2.815	-0.031	0.772	160914	2.26		90.5	1068	
D 11 18O2 PFHxS										
403.00 > 84.00	3.132	3.168	-0.036	0.868	1640275	2.25		95.1	12202	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.132	3.168	-0.036	1.000	671980	0.8210	Target=4.33	90.2	5876	
399.00 > 99.00	3.132	3.168	-0.036	1.000	158899		4.23(2.17-6.50)		486	
D 9 13C4 PFHpA										
367.00 > 322.00	3.132	3.168	-0.036	0.868	2091044	2.42		97.0	5465	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.132	3.168	-0.036	1.000	806271	0.9422	Target=3.79	94.2	270	
363.00 > 169.00	3.132	3.168	-0.036	1.000	234938		3.43(1.89-5.68)		682	
77 DONA										
377.00 > 251.00	3.196	3.225	-0.029	0.802	1759126	0.9486	Target=2.43	101	975	
377.00 > 85.00	3.187	3.225	-0.038	0.800	728377		2.42(1.22-3.65)		1098	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.591	3.624	-0.033	1.000	86783	0.8262		87.1	3028	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.591	3.624	-0.033	0.995	222025	2.22		93.6	1524	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.599	3.632	-0.033	0.904	613183	1.00	Target=6.01	105	4288	
449.00 > 99.00	3.599	3.632	-0.033	0.904	91970		6.67(3.01-9.02)		953	
D 14 13C4 PFOA										
417.00 > 372.00	3.607	3.640	-0.033	1.000	1999313	2.24		89.6	21735	
* 62 13C2 PFOA										
415.00 > 370.00	3.607	3.640	-0.033		2368227	2.50			7660	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.607	3.640	-0.033	1.000	919489	1.10	Target=2.66	110	317	
413.00 > 169.00	3.607	3.640	-0.033	1.000	351367		2.62(1.33-3.99)		2033	
D 18 13C4 PFOS										
503.00 > 80.00	3.983	4.005	-0.022	1.104	1205802	2.22		92.9	10572	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.983	4.005	-0.022	1.000	499379	0.9013	Target=5.29	97.1	8854	M
499.00 > 99.00	3.983	4.005	-0.022	1.000	82179		6.08(2.65-7.94)		650	M
D 19 13C5 PFNA										
468.00 > 423.00	3.994	4.027	-0.033	1.107	1878482	2.19		87.7	12734	
20 Perfluorononanoic acid										
463.00 > 419.00	3.994	4.027	-0.033	1.000	711724	0.9211	Target=7.73	92.1	361	
463.00 > 169.00	3.994	4.027	-0.033	1.000	121941		5.84(3.87-11.60)		2196	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	4.141	4.164	-0.023	1.039	626902	0.8885		95.3	2709	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.261	4.283	-0.022	1.070	440955	0.9870	Target=2.78	103	4728	
549.00 > 99.00	4.261	4.283	-0.022	1.070	159568		2.76(1.39-4.17)		974	
D 23 13C2 PFDA										
515.00 > 470.00	4.283	4.305	-0.022	1.187	2071658	2.23		89.1	10108	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
24 Perfluorodecanoic acid										
513.00 > 469.00	4.293	4.305	-0.012	1.002	874956	1.03	Target=9.75	103	134	
513.00 > 169.00	4.283	4.305	-0.022	1.000	97943		8.93(4.88-14.63)		382	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.293	4.317	-0.024	1.190	330005	2.34		97.7	1680	
25 1H,1H,2H,2H-perfluorodecanesulfoni										
527.00 > 507.00	4.293	4.317	-0.024	1.000	73893	0.8639		90.2	1563	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.328	4.340	-0.012	1.000	512359	0.8791		87.9	2156	
D 21 13C8 FOSA										
506.00 > 78.00	4.328	4.340	-0.012	1.200	1421697	1.49		59.5	4395	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.420	4.431	-0.011	1.225	176179	2.40		96.0	1447	
28 N-methylperfluorooctanesulfonamido										M
570.00 > 419.00	4.420	4.443	-0.023	1.000	67633	1.12		112	718	M
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.496	4.524	-0.028	1.129	290373	0.7391	Target=2.63	76.7	2138	
599.00 > 99.00	4.496	4.524	-0.028	1.129	110094		2.64(1.32-3.95)		945	
D 30 13C2 PFUnA										
565.00 > 520.00	4.523	4.537	-0.014	1.254	1589543	1.96		78.3	4751	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.523	4.551	-0.028	1.000	566126	0.9822	Target=7.31	98.2	542	
563.00 > 169.00	4.523	4.551	-0.028	1.000	86769		6.52(3.66-10.97)		1063	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.537	4.551	-0.014	1.258	196840	2.35		94.1	1714	
33 N-ethylperfluorooctanesulfonamidoa										
584.00 > 419.00	4.537	4.563	-0.026	1.000	66375	1.06		106	399	
66 11-Chloroeicosafluoro-3-oxaundecan										
631.00 > 451.00	4.602	4.626	-0.024	1.155	425692	0.5309		56.4	1964	
D 36 13C2 PFDoA										
615.00 > 570.00	4.724	4.744	-0.020	1.310	1478701	1.63		65.1	8361	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.724	4.744	-0.020	1.000	621454	1.08	Target=6.96	108	161	
613.00 > 169.00	4.724	4.744	-0.020	1.000	88303		7.04(3.48-10.44)		1262	
74 1H,1H,2H,2H-perfluorododecanesulfo										
627.00 > 607.00	4.744	4.764	-0.020	1.105	25883	0.5657		58.7	724	
75 Perfluorododecanesulfonic acid (PF										
699.00 > 80.00	4.879	4.897	-0.018	1.225	88641	0.6501	Target=0.47	67.2	331	
699.00 > 99.00	4.879	4.897	-0.018	1.225	168471		0.53(0.24-0.71)		1189	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.915	4.934	-0.019	1.041	455191	0.8713	Target=4.84	87.1	136	
663.00 > 169.00	4.915	4.934	-0.019	1.041	107977		4.22(2.42-7.26)		1171	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.085	5.108	-0.023	1.410	1339866	1.72		68.7	5608	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.085	5.120	-0.035	1.000	88579	1.06	Target=1.15	106	1493	
713.00 > 219.00	5.076	5.120	-0.044	0.998	76644		1.16(0.58-1.73)		1360	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 44 13C2 PFHxDA										
815.00 > 770.00	5.413	5.465	-0.052	1.501	1326080	1.56		62.6	5017	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.424	5.465	-0.041	1.002	416778	0.8570	Target=4.36	85.7	158	
813.00 > 169.00	5.424	5.465	-0.041	1.002	111010		3.75(2.18-6.53)		1892	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.773	5.843	-0.070	1.066	305112	0.9236	Target=4.01	92.4	130	
913.00 > 169.00	5.773	5.843	-0.070	1.066	88007		3.47(2.00-6.01)		1072	

QC Flag Legend

Review Flags

M - Manually Integrated

Report Date: 26-Feb-2020 17:13:17 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C03.d

Injection Date: 25-Feb-2020 19:11:43 Instrument ID: LC812

Lims ID: LCS 200-152665/2-A

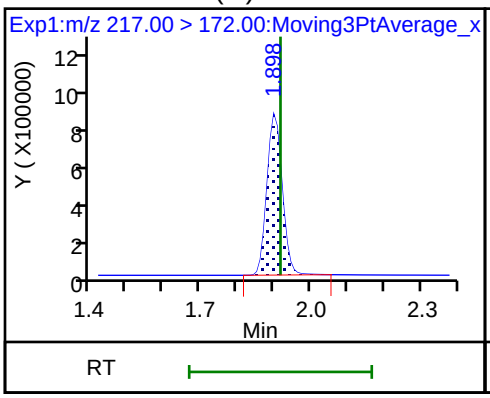
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Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3

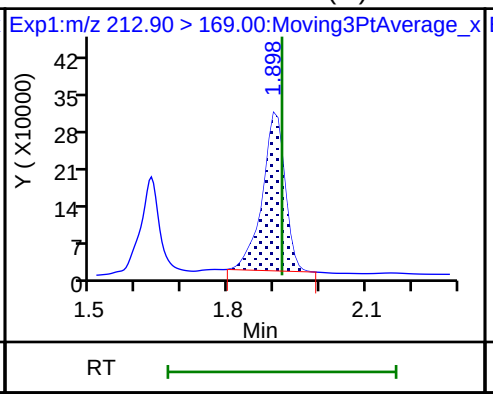
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFC_LC812 Limit Group: LC_PFC_ICAL

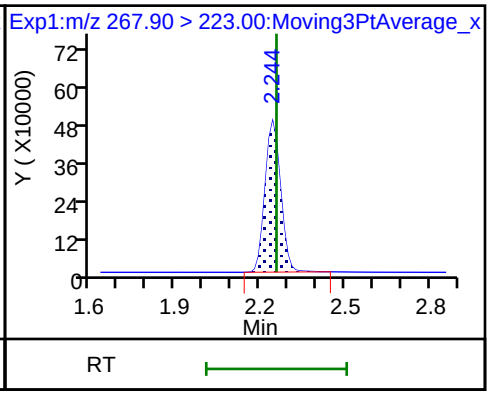
D 1 13C4 PFBA (M)



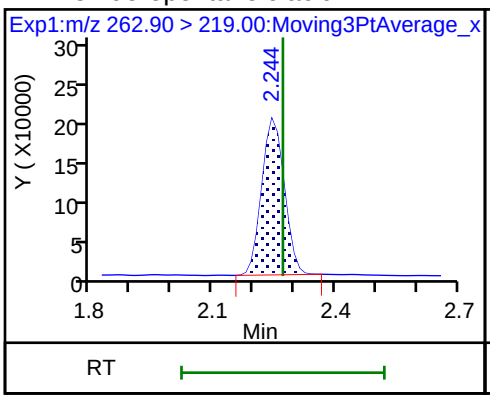
2 Perfluorobutanoic acid (M)



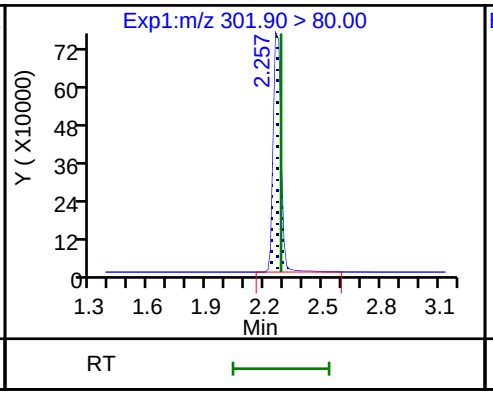
D 3 13C5 PFPeA



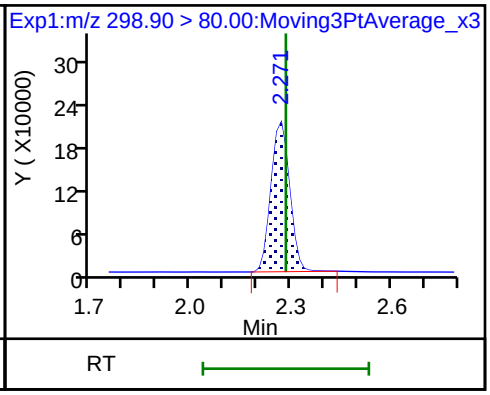
4 Perfluoropentanoic acid



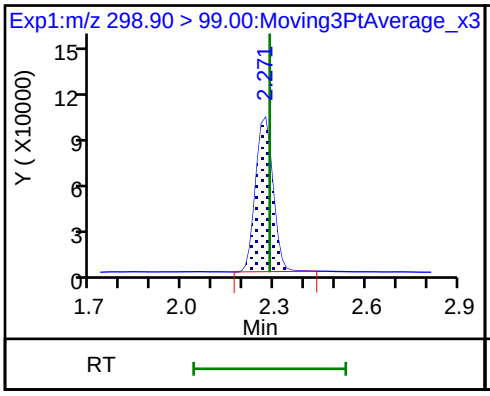
D 47 13C3 PFBS



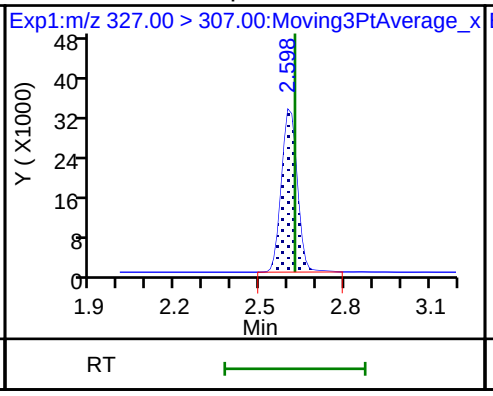
5 Perfluorobutanesulfonic acid



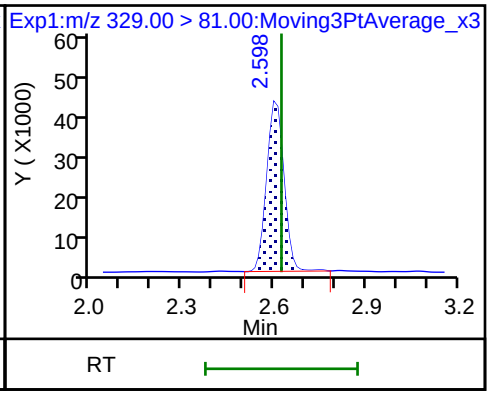
5 Perfluorobutanesulfonic acid



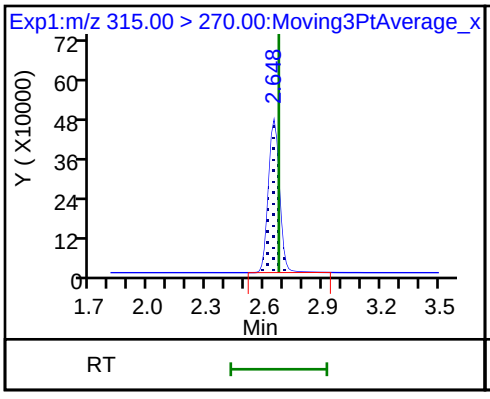
61 1H,1H,2H,2H-perfluorohexanesulfon



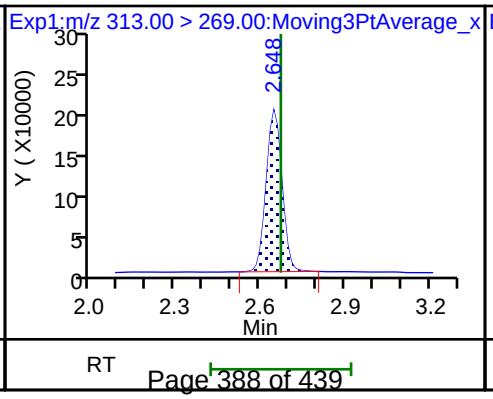
D 60 M2-4:2 FTS



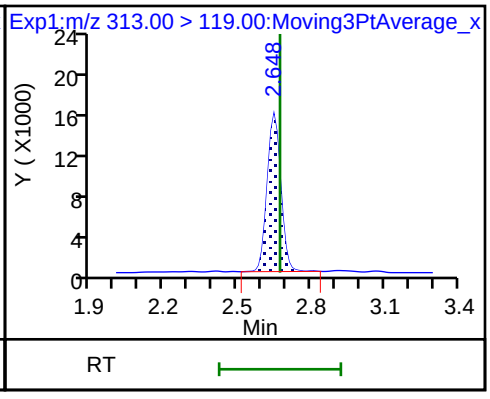
D 7 13C2 PFHxA



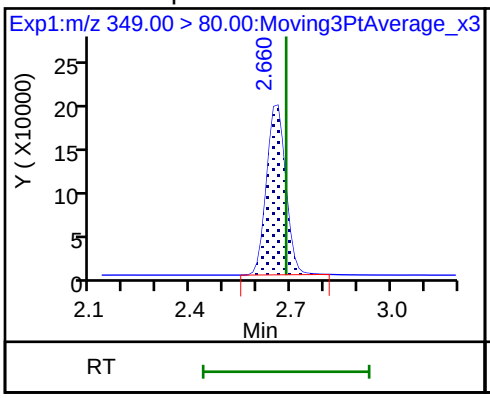
6 Perfluorohexanoic acid



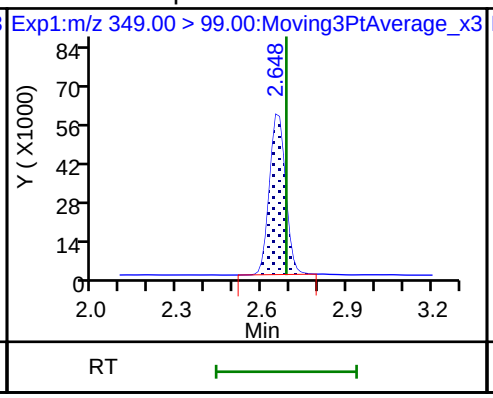
6 Perfluorohexanoic acid



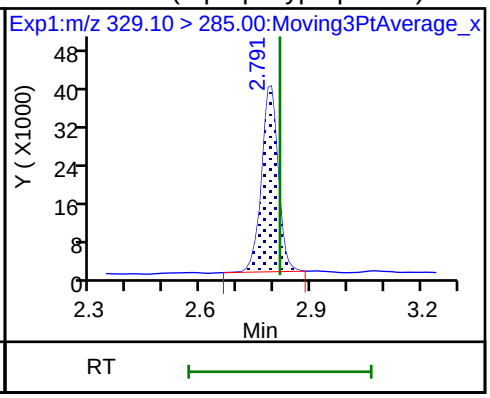
70 Perfluoropentanesulfonic acid



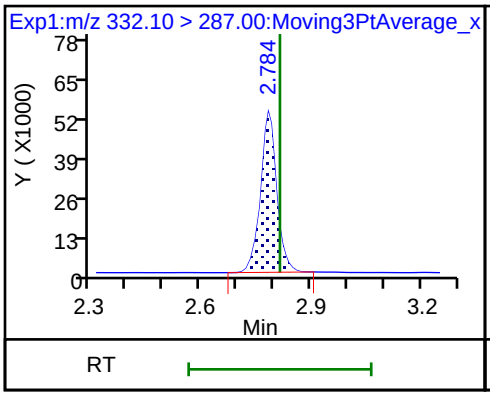
70 Perfluoropentanesulfonic acid



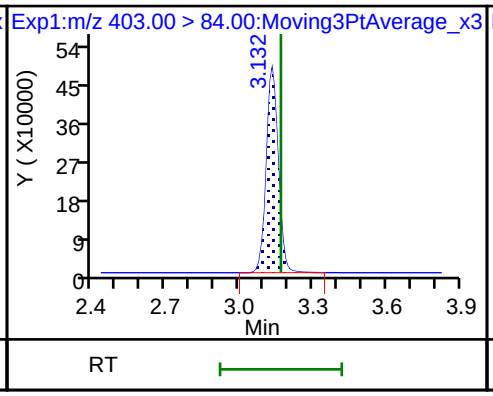
67 Perfluoro(2-propoxypropanoic) acid (M)



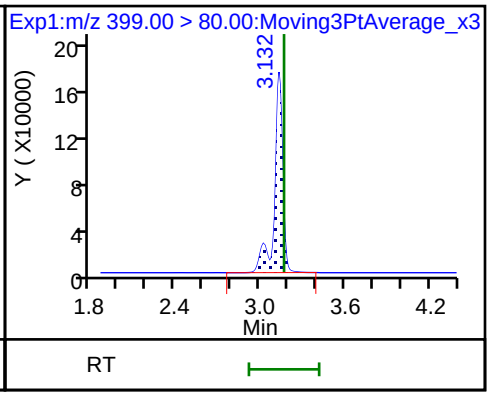
D 64 13C3 HFPO-DA



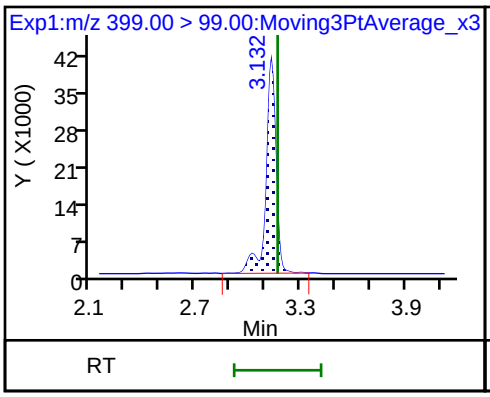
D 11 18O2 PFHxS



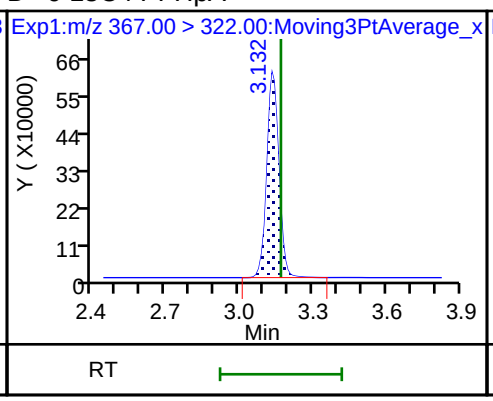
8 Perfluorohexanesulfonic acid



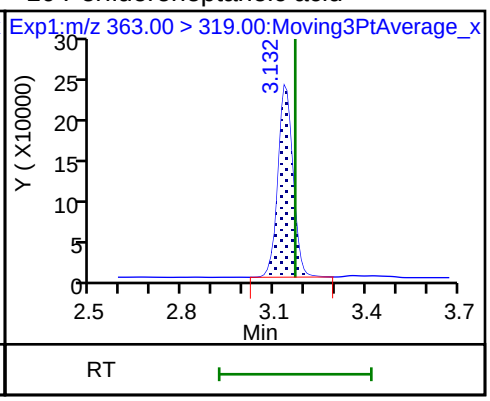
8 Perfluorohexanesulfonic acid



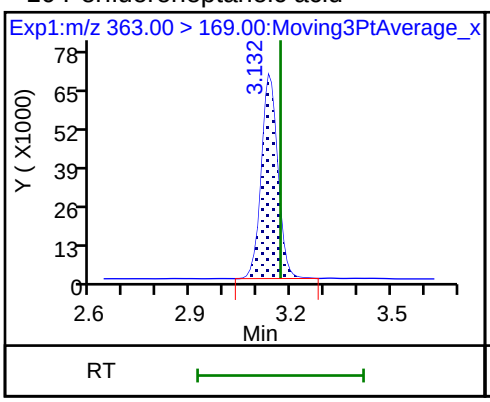
D 9 13C4 PFHpA



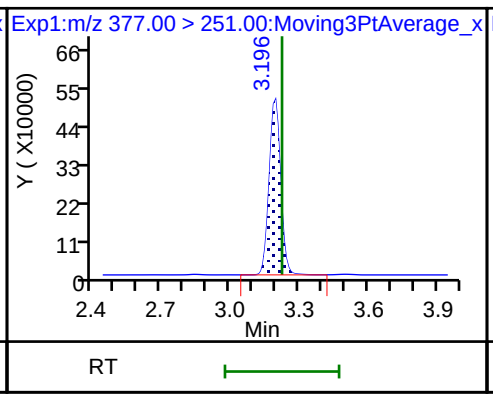
10 Perfluoroheptanoic acid



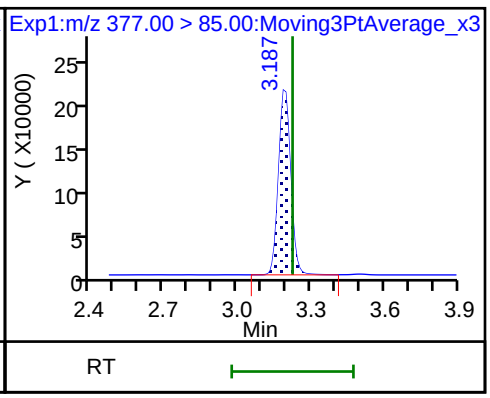
10 Perfluoroheptanoic acid



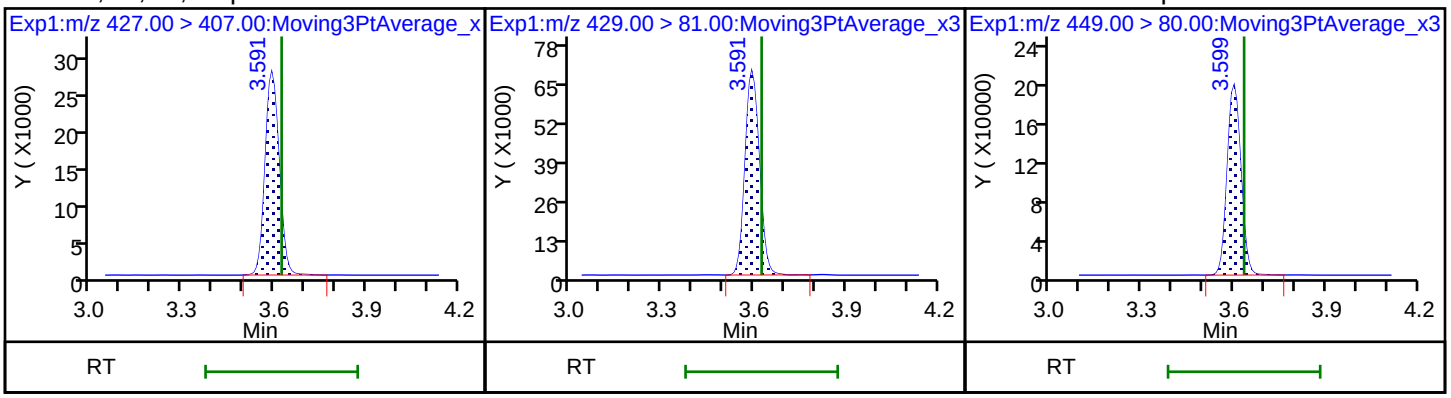
77 DONA



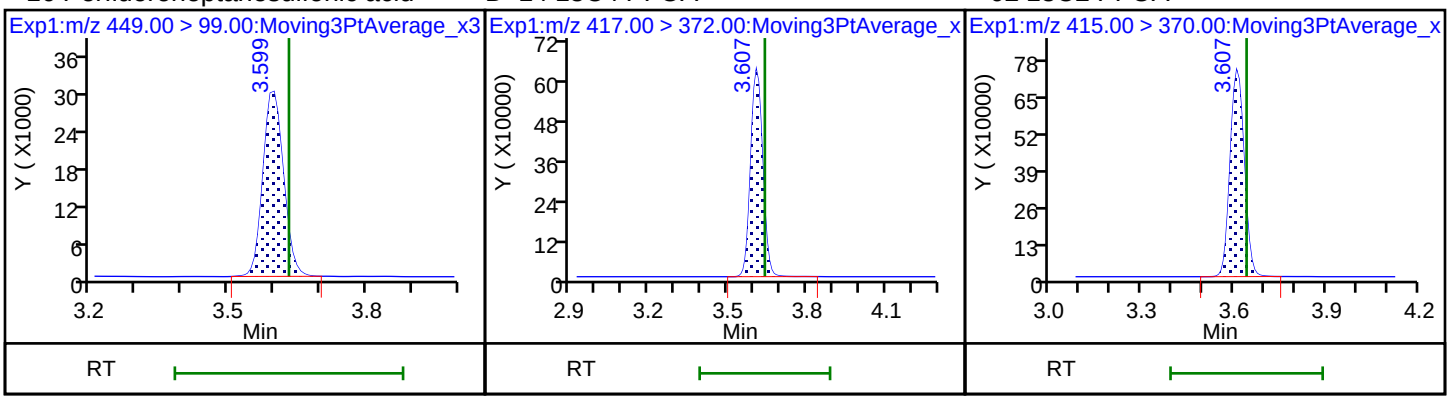
77 DONA



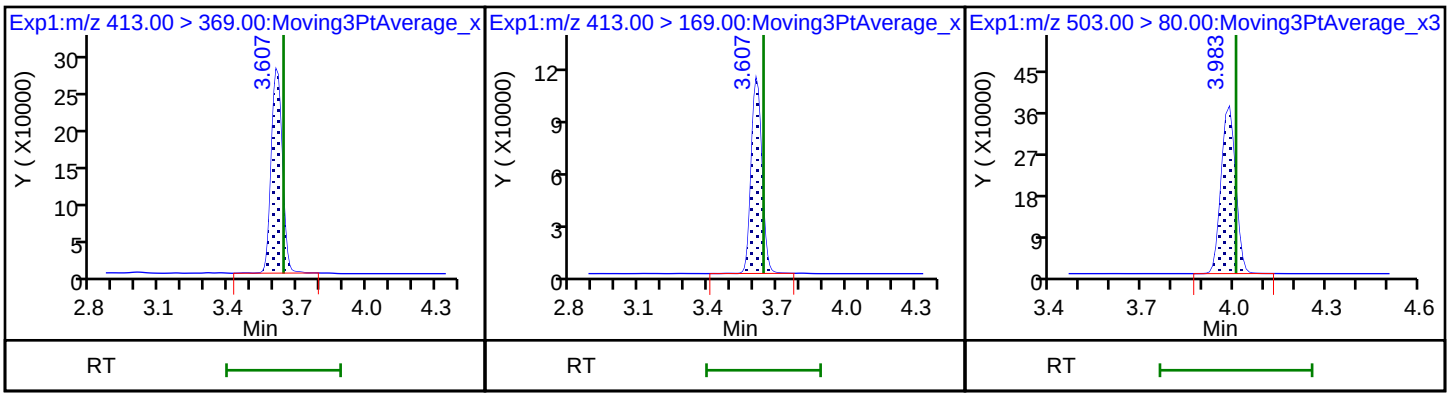
13 1H,1H,2H,2H-perfluorooctanesulfonD 12 M2-6:2 FTS 16 Perfluoroheptanesulfonic acid



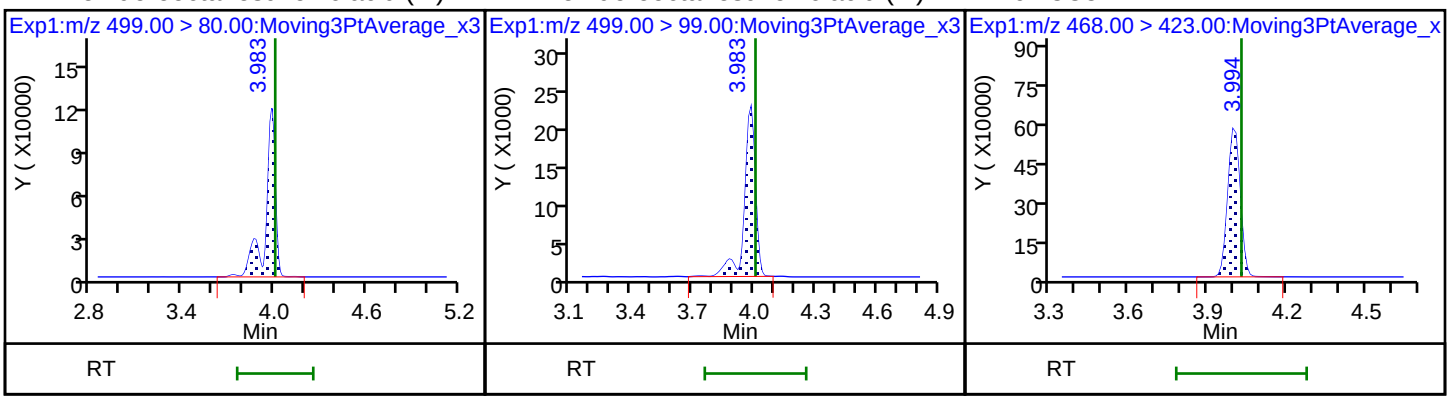
16 Perfluoroheptanesulfonic acid D 14 13C4 PFOA * 62 13C2 PFOA



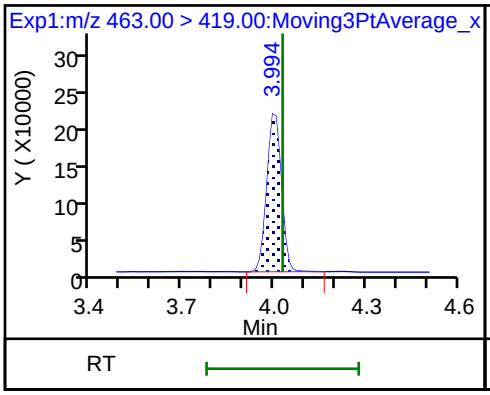
15 Perfluorooctanoic acid 15 Perfluorooctanoic acid D 18 13C4 PFOS



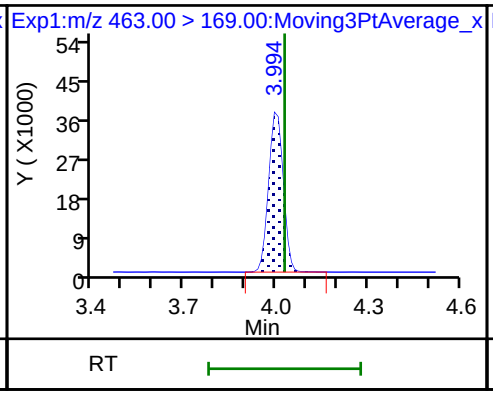
17 Perfluorooctanesulfonic acid (M) 17 Perfluorooctanesulfonic acid (M) D 19 13C5 PFNA



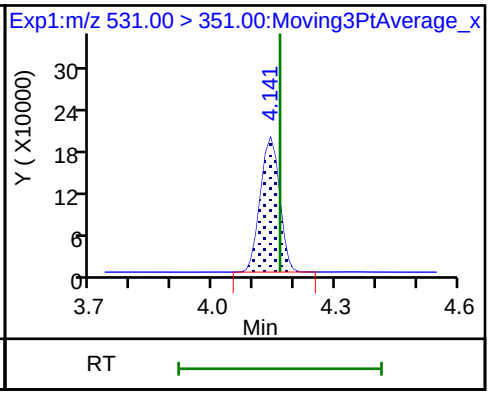
20 Perfluorononanoic acid



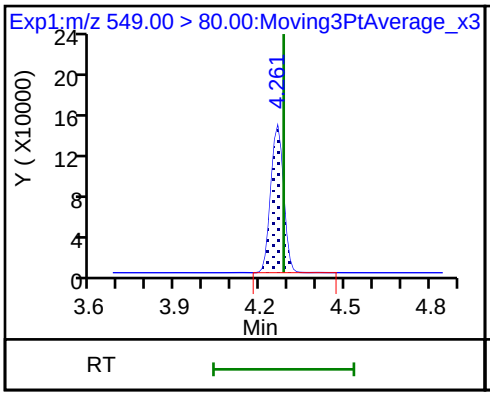
20 Perfluorononanoic acid



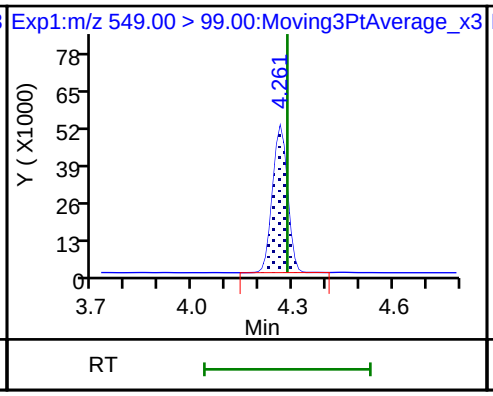
69 9-Chlorohexadecafluoro-3-oxanonane



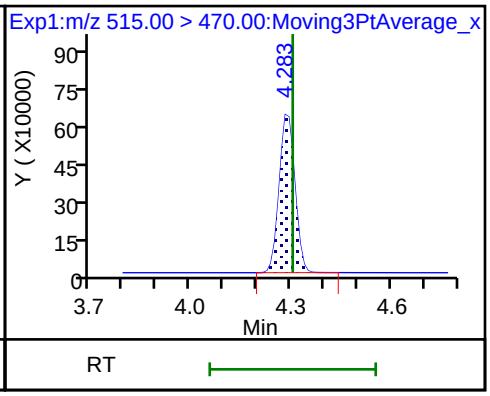
68 Perfluorononanesulfonic acid



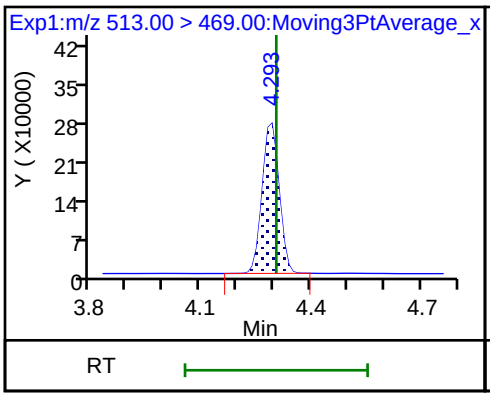
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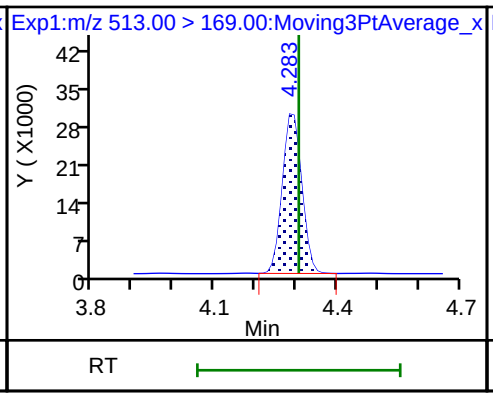
D 23 13C2 PFDA



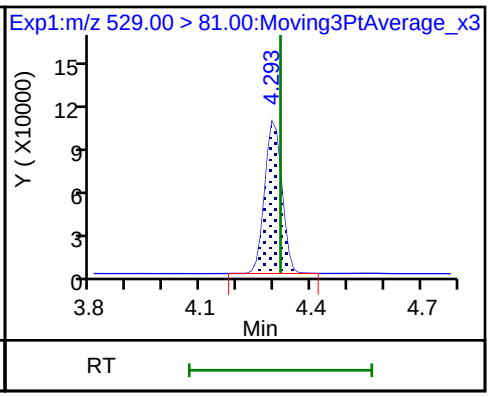
24 Perfluorodecanoic acid



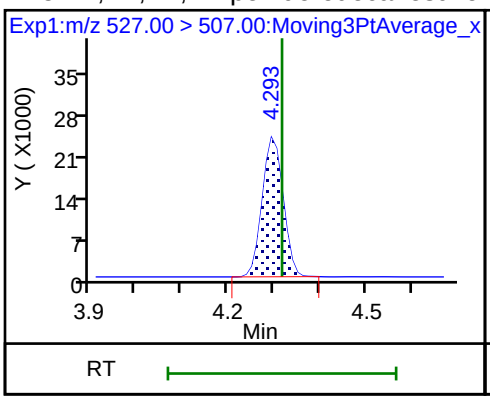
24 Perfluorodecanoic acid



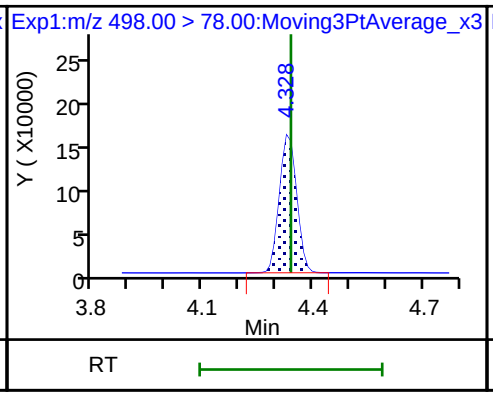
D 26 M2-8:2 FTS



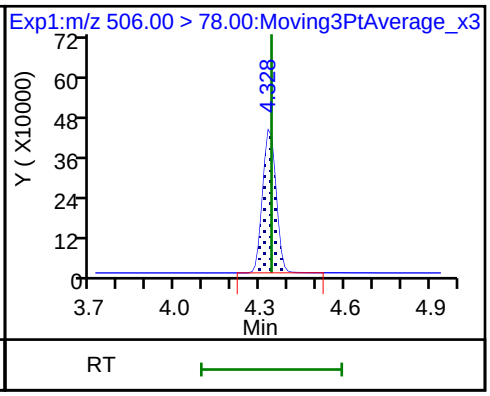
25 1H,1H,2H,2H-perfluorodecanesulfoni



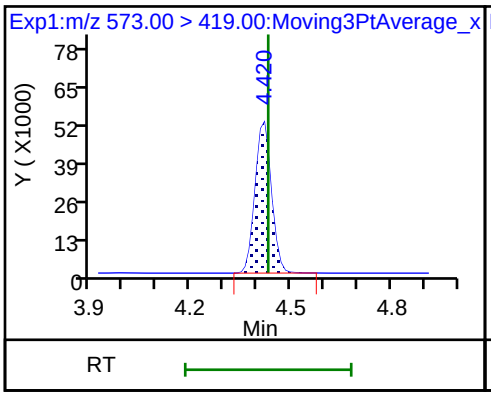
22 Perfluorooctanesulfonamide



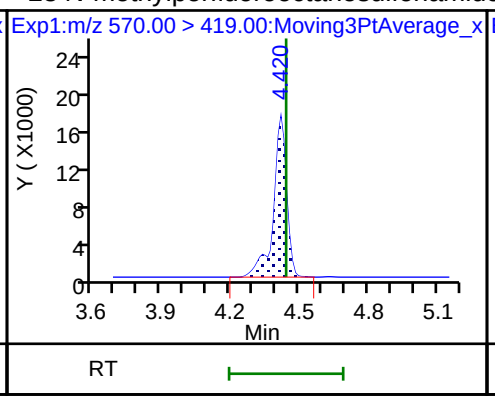
D 21 13C8 FOSA



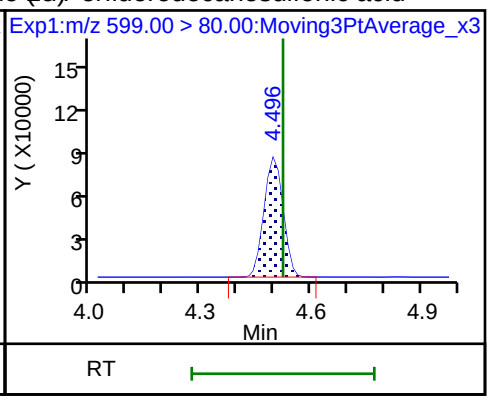
D 27 d3-NMeFOSAA



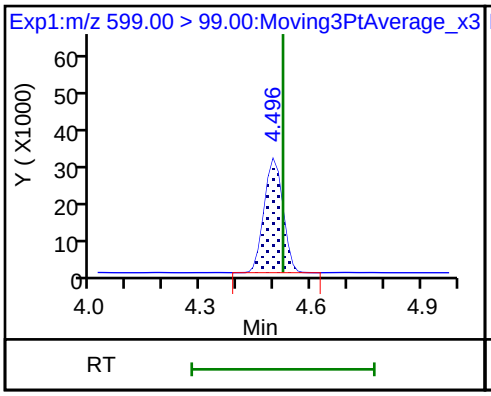
28 N-methylperfluorooctanesulfonamido (29)



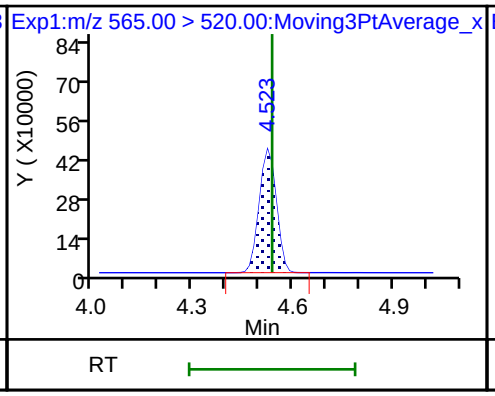
29 Perfluorodecanesulfonic acid



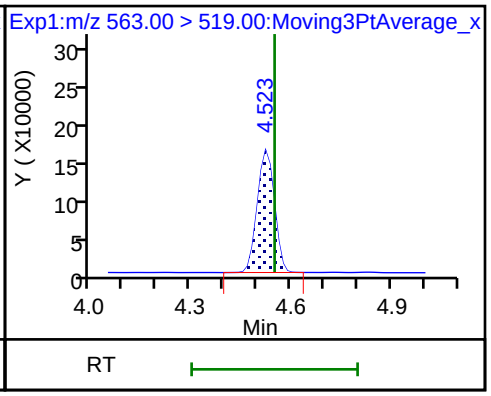
29 Perfluorodecanesulfonic acid



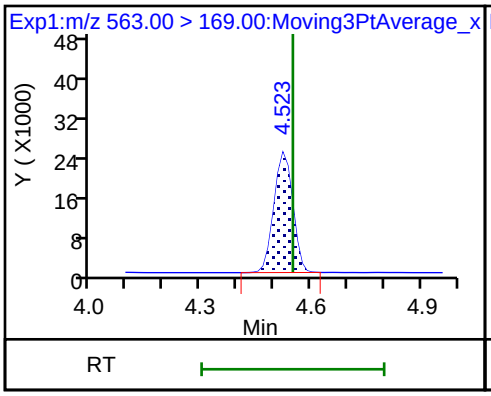
D 30 13C2 PFUnA



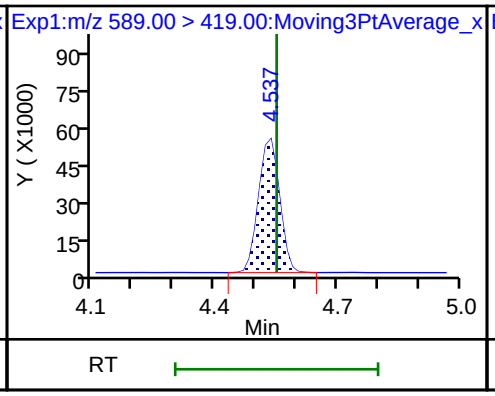
31 Perfluoroundecanoic acid



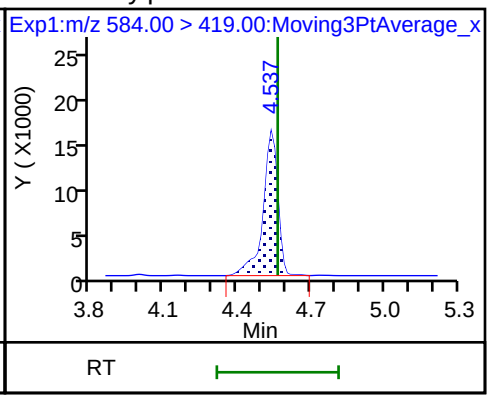
31 Perfluoroundecanoic acid



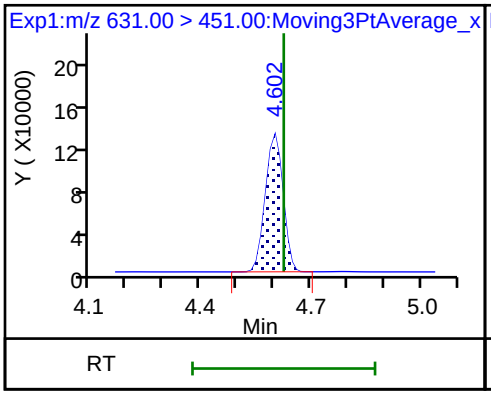
D 32 d5-NEtFOSAA



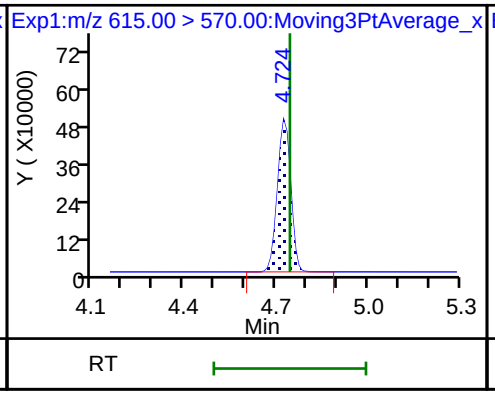
33 N-ethylperfluorooctanesulfonamidoa



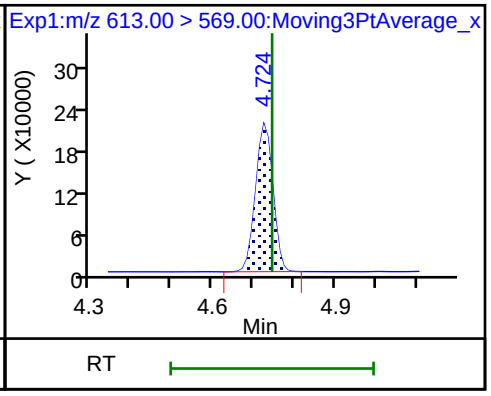
66 11-Chloroeicosafluoro-3-oxaundecan



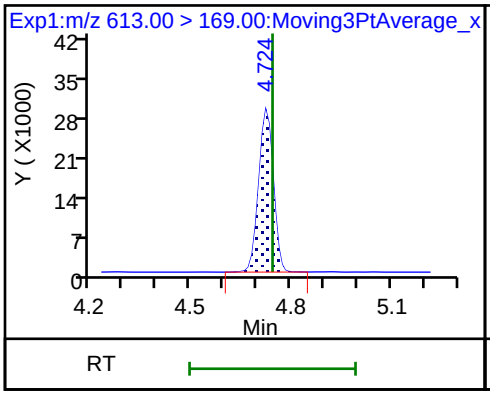
D 36 13C2 PFDoA



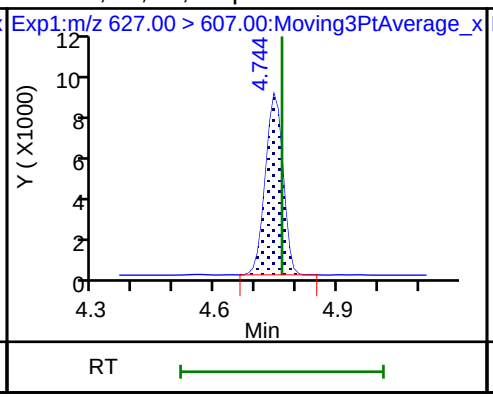
37 Perfluorododecanoic acid



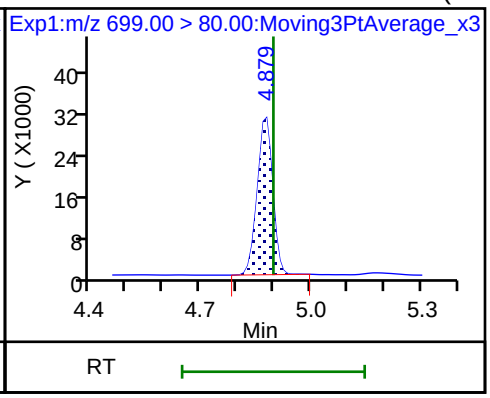
37 Perfluorododecanoic acid



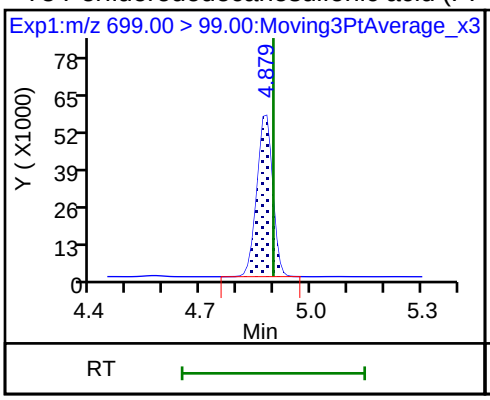
74 1H,1H,2H,2H-perfluorododecanesulfo



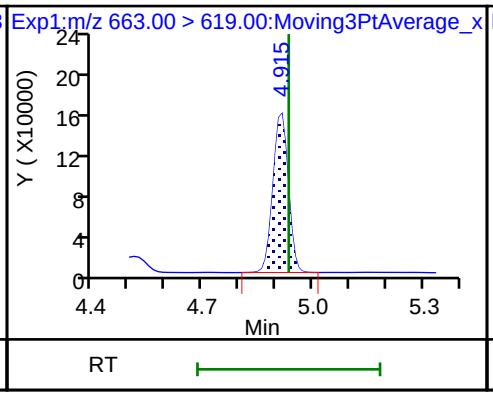
75 Perfluorododecanesulfonic acid (PF



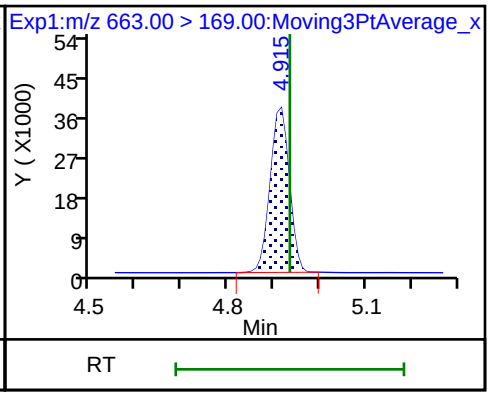
75 Perfluorododecanesulfonic acid (PF



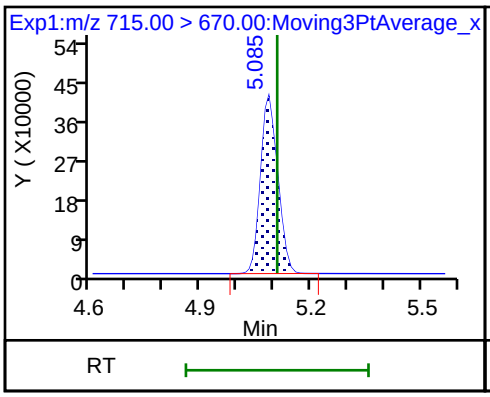
41 Perfluorotridecanoic acid



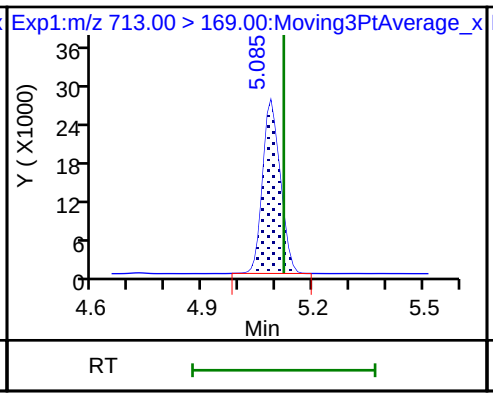
41 Perfluorotridecanoic acid



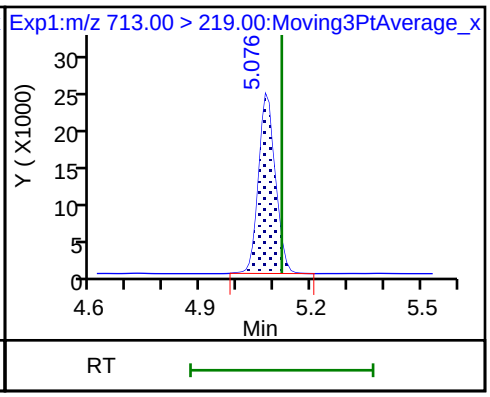
D 43 13C2 PFTeDA



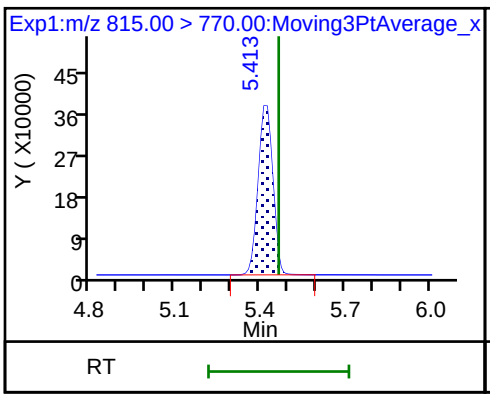
42 Perfluorotetradecanoic acid



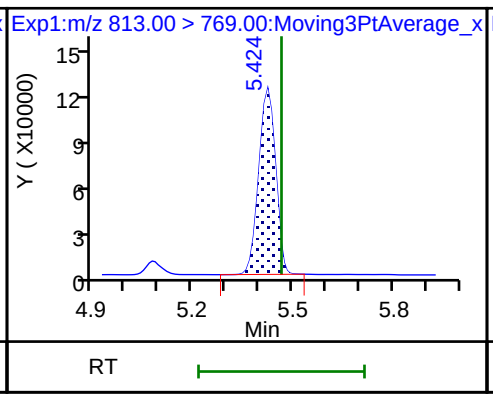
42 Perfluorotetradecanoic acid



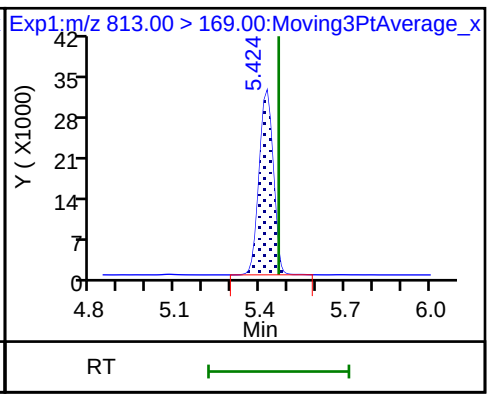
D 44 13C2 PFHxDA



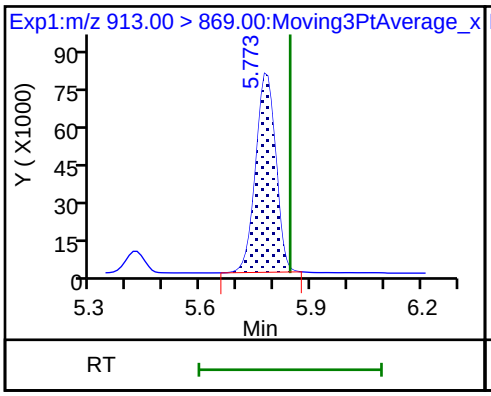
45 Perfluorohexadecanoic acid



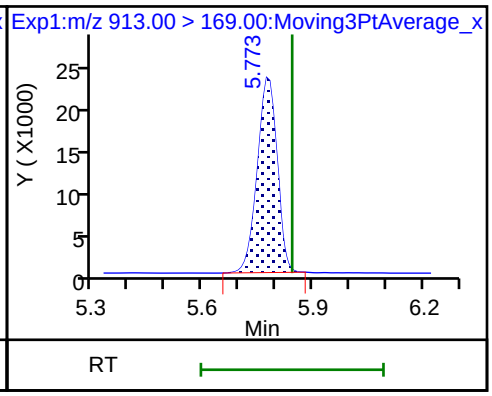
45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid



46 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

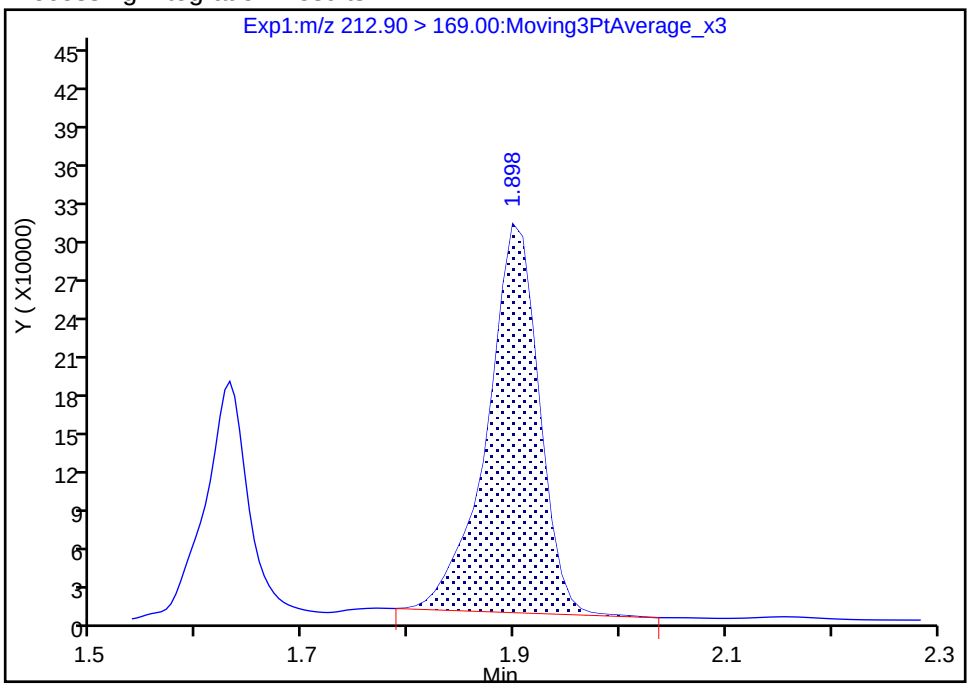
Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C03.d
Injection Date: 25-Feb-2020 19:11:43 Instrument ID: LC812
Lims ID: LCS 200-152665/2-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

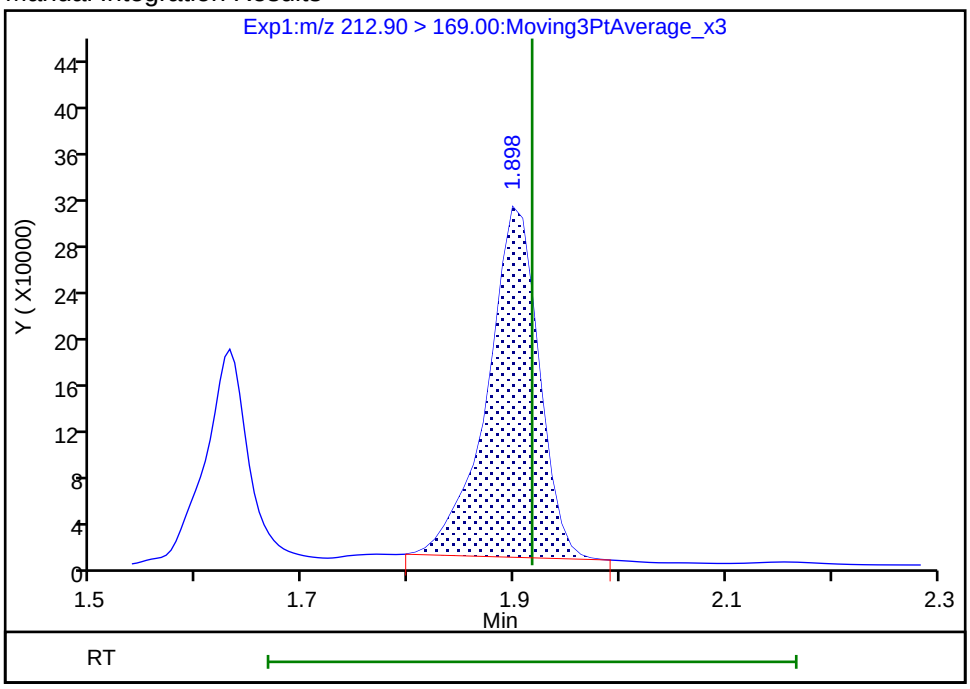
Processing Integration Results

RT: 1.90
Area: 1031819
Amount: 1.125702
Amount Units: ng/ml



Manual Integration Results

RT: 1.90
Area: 1020475
Amount: 1.139052
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 09:47:04
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

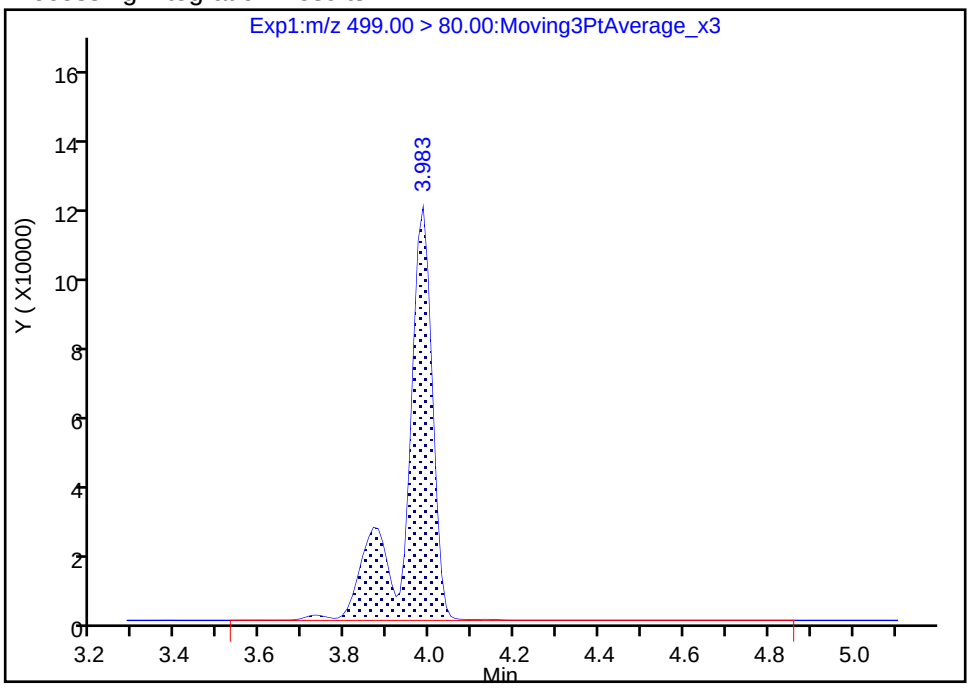
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Injection Date: 25-Feb-2020 19:11:43 Instrument ID: LC812
Lims ID: LCS 200-152665/2-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

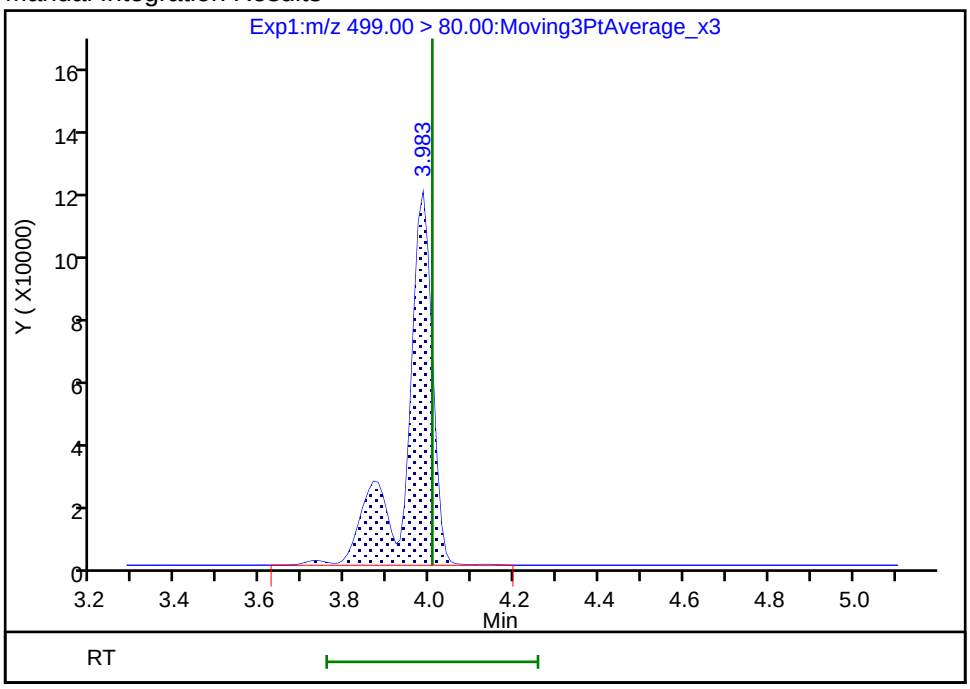
Processing Integration Results

RT: 3.98
Area: 499635
Amount: 0.901778
Amount Units: ng/ml



Manual Integration Results

RT: 3.98
Area: 499379
Amount: 0.901316
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 09:48:04
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

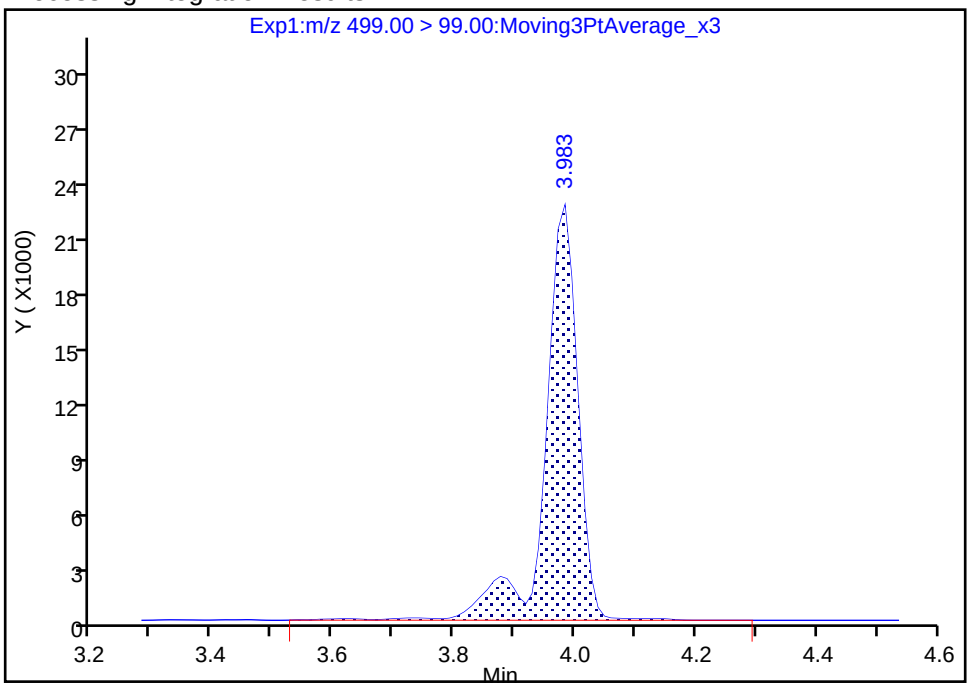
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Injection Date: 25-Feb-2020 19:11:43 Instrument ID: LC812
Lims ID: LCS 200-152665/2-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

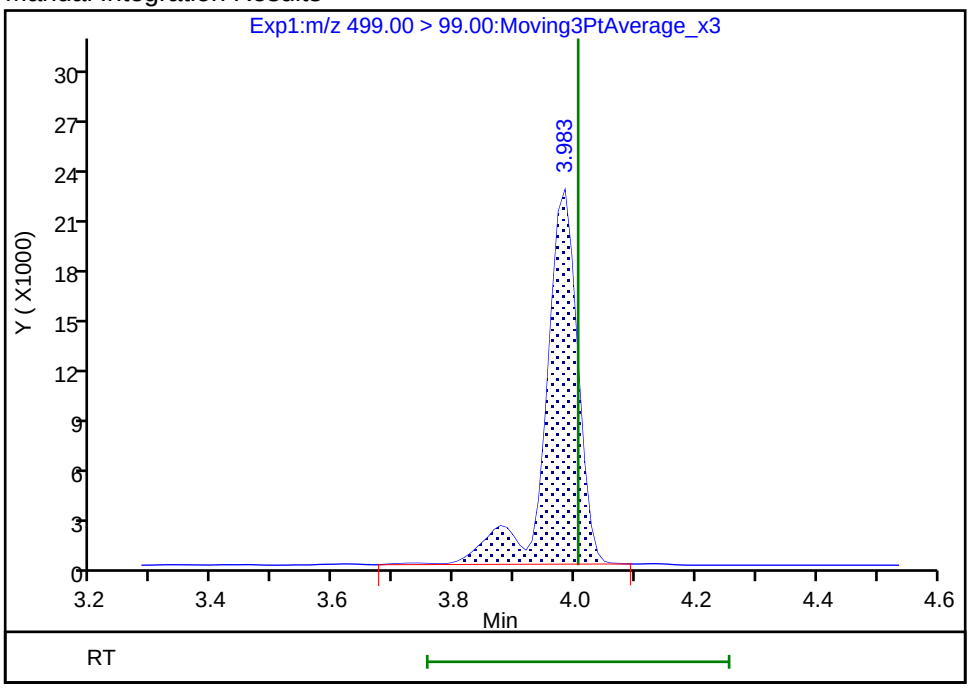
Processing Integration Results

RT: 3.98
Area: 83986
Amount: 0.901778
Amount Units: ng/ml



Manual Integration Results

RT: 3.98
Area: 82179
Amount: 0.901316
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 09:48:15
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

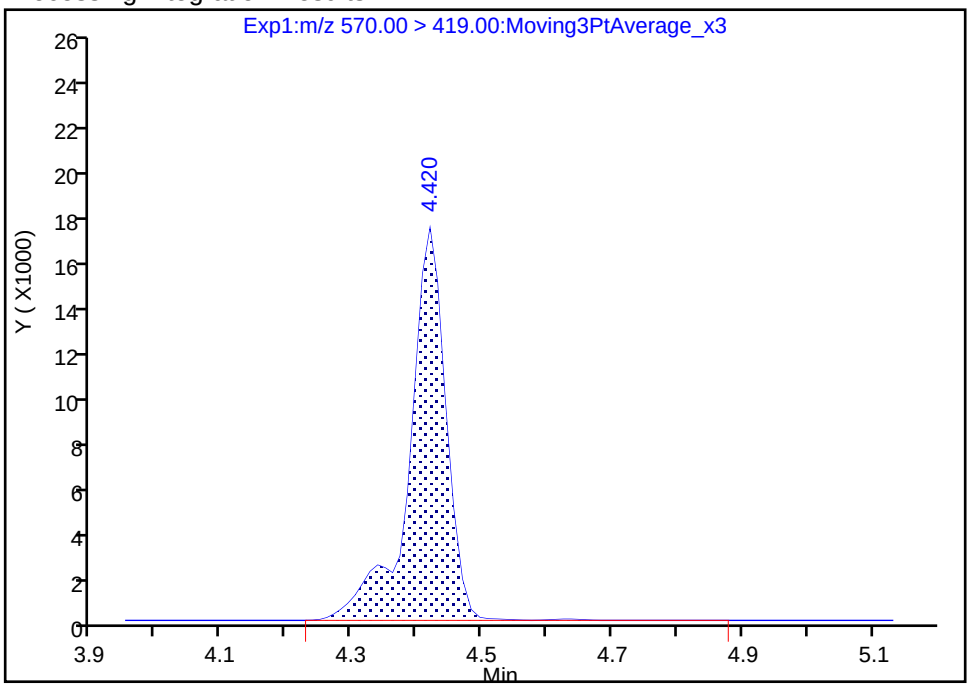
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Injection Date: 25-Feb-2020 19:11:43 Instrument ID: LC812
Lims ID: LCS 200-152665/2-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

28 N-methylperfluorooctanesulfonamidoacetic aci, CAS: 2355-31-9

Signal: 1

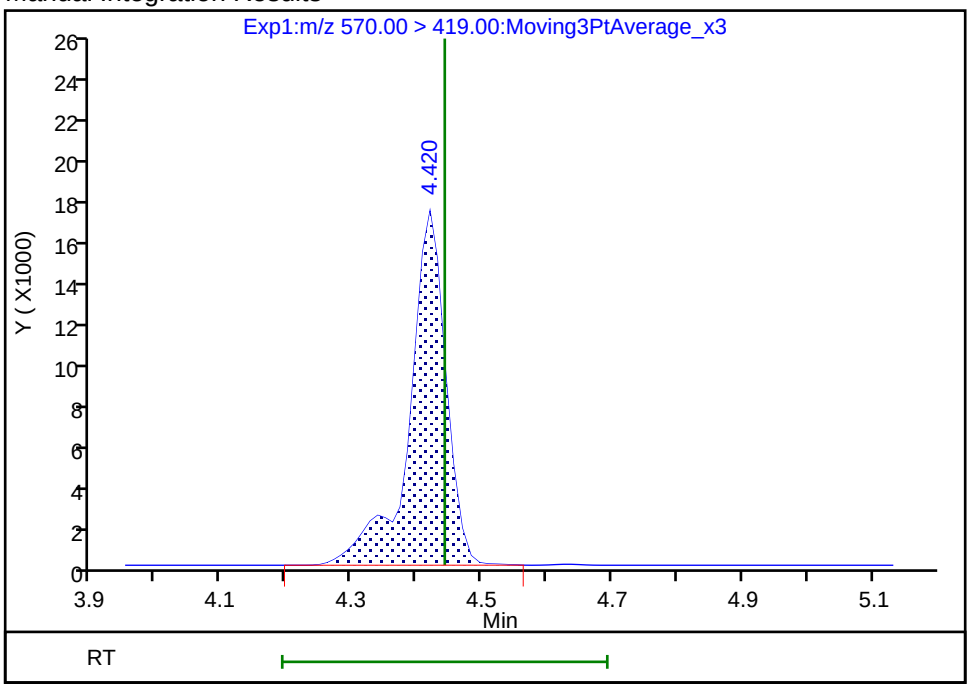
Processing Integration Results

RT: 4.42
Area: 67817
Amount: 1.123248
Amount Units: ng/ml



Manual Integration Results

RT: 4.42
Area: 67633
Amount: 1.120200
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 09:48:34
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

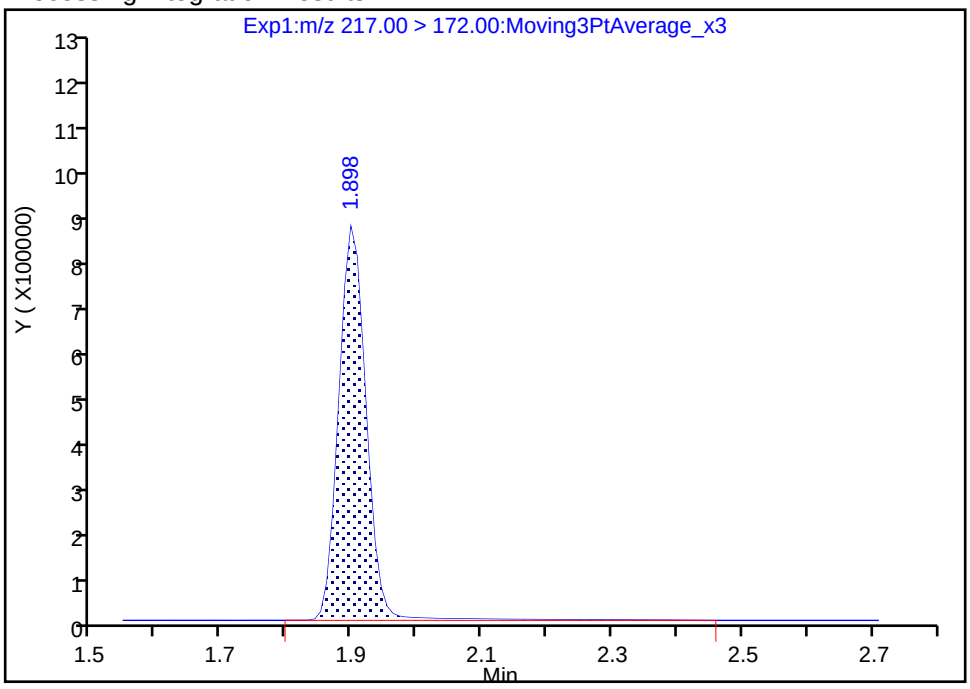
Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C03.d
Injection Date: 25-Feb-2020 19:11:43 Instrument ID: LC812
Lims ID: LCS 200-152665/2-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector EXP1

D 1 13C4 PFBA, CAS: STL00992

Signal: 1

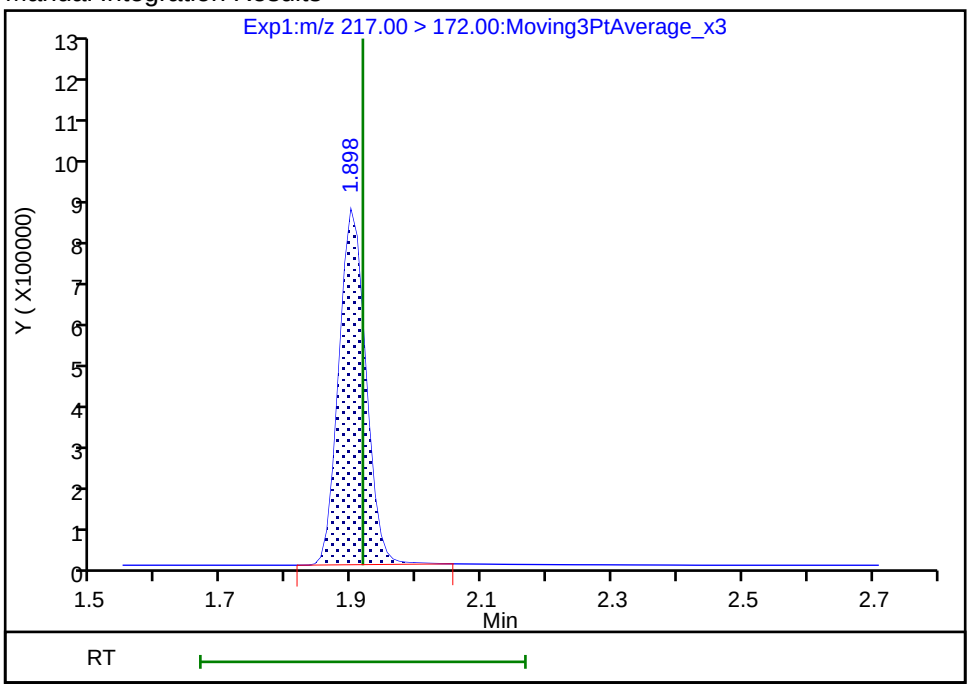
Processing Integration Results

RT: 1.90
Area: 2408893
Amount: 2.444334
Amount Units: ng/ml



Manual Integration Results

RT: 1.90
Area: 2354487
Amount: 2.389127
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 09:47:14
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Client Sample ID: SW-01-021920-EC-MS MS Lab Sample ID: 480-166551-1 MS

Matrix: Water Lab File ID: SC022520C19.d

Analysis Method: 537 (modified) Date Collected: 02/19/2020 08:20

Extraction Method: 3535 Date Extracted: 02/24/2020 13:43

Sample wt/vol: 283.3(mL) Date Analyzed: 02/25/2020 21:24

Con. Extract Vol.: 10(mL) Dilution Factor: 1

Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 152696 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	34.7		1.8	0.88
2706-90-3	Perfluoropentanoic acid (PFPeA)	31.3		1.8	0.56
307-24-4	Perfluorohexanoic acid (PFHxA)	38.3		1.8	0.67
375-85-9	Perfluoroheptanoic acid (PFHpA)	34.4		1.8	0.80
335-67-1	Perfluorooctanoic acid (PFOA)	38.9		1.8	0.71
375-95-1	Perfluorononanoic acid (PFNA)	31.0		1.8	0.24
335-76-2	Perfluorodecanoic acid (PFDA)	34.7		1.8	0.68
2058-94-8	Perfluoroundecanoic acid (PFUnA)	33.2		1.8	0.69
307-55-1	Perfluorododecanoic acid (PFDoA)	35.4		1.8	0.52
72629-94-8	Perfluorotridecanoic acid (PFTriA)	33.6		1.8	0.53
376-06-7	Perfluorotetradecanoic acid (PFTeA)	36.7		1.8	0.81
375-73-5	Perfluorobutanesulfonic acid (PFBS)	31.2		1.8	0.43
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	31.4		1.8	0.71
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	32.3		1.8	0.84
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	31.6		1.8	0.54
335-77-3	Perfluorodecanesulfonic acid (PFDS)	29.2		1.8	0.79
754-91-6	Perfluorooctanesulfonamide (PFOSA)	35.5		8.8	8.8
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	38.0		18	1.5
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	33.4		18	1.3
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	30.8		18	4.9
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	25.2		18	2.6

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Client Sample ID: SW-01-021920-EC-MS MS Lab Sample ID: 480-166551-1 MS

Matrix: Water Lab File ID: SC022520C19.d

Analysis Method: 537 (modified) Date Collected: 02/19/2020 08:20

Extraction Method: 3535 Date Extracted: 02/24/2020 13:43

Sample wt/vol: 283.3(mL) Date Analyzed: 02/25/2020 21:24

Con. Extract Vol.: 10(mL) Dilution Factor: 1

Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 152696 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	103		50-150
STL01892	13C4 PFHpA	105		50-150
STL00990	13C4 PFOA	101		50-150
STL00991	13C4 PFOS	107		50-150
STL00995	13C5 PFNA	95		50-150
STL00992	13C4 PFBA	104		25-150
STL00993	13C2 PFHxA	93		50-150
STL00996	13C2 PFDA	101		50-150
STL00997	13C2 PFUnA	94		50-150
STL00998	13C2 PFDoA	92		50-150
STL01056	13C8 FOSA	94		25-150
STL01893	13C5 PFPeA	102		25-150
STL02116	13C2 PFTeDA	96		50-150
STL02118	d3-NMeFOSAA	104		50-150
STL02117	d5-NEtFOSAA	121		50-150
STL02279	M2-6:2 FTS	100		25-150
STL02280	M2-8:2 FTS	113		25-150
STL02337	13C3 PFBS	94		50-150

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C19.d
Lims ID: 480-166551-A-1-B MS
Client ID: SW-01-021920-EC-MS
Sample Type: MS
Inject. Date: 25-Feb-2020 21:24:20 ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 480-166551-A-1-B MS
Misc. Info.: 200-0040162-019 Plate: 1 Rack: 2
Operator ID: lc812tech Instrument ID: LC812

Method: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\PFC_LC812.m
Limit Group: LC_PFC_ICAL
Last Update: 26-Feb-2020 17:13:38 Calib Date: 10-Feb-2020 12:29:33
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL010.d

Column 1 : C-18 (4.60 mm) Det: EXP1
Process Host: CTX0323

First Level Reviewer: murrayjw Date: 26-Feb-2020 11:22:31
Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										M
217.00 > 172.00	1.898	1.917	-0.019	0.527	2207503	2.60		104	7306	M
2 Perfluorobutanoic acid										
212.90 > 169.00	1.898	1.917	-0.019	1.000	825398	0.9827		98.3	113	
D 3 13C5 PFPeA										
267.90 > 223.00	2.244	2.257	-0.013	0.623	1688816	2.56		102	2220	
4 Perfluoropentanoic acid										
262.90 > 219.00	2.244	2.271	-0.027	1.000	646891	0.8876		88.8	63.0	
D 47 13C3 PFBS										
301.90 > 80.00	2.257	2.284	-0.027	0.627	1932702	2.18		93.6	405225	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.257	2.284	-0.027	1.000	750768	0.8853	Target=2.19	100	1163	
298.90 > 99.00	2.257	2.284	-0.027	1.000	356025		2.11(1.09-3.28)		416	
61 1H,1H,2H,2H-perfluorohexanesulfoni										
327.00 > 307.00	2.598	2.623	-0.025	1.000	105764	0.8422		90.2	986	
D 60 M2-4:2 FTS										
329.00 > 81.00	2.598	2.623	-0.025	0.722	151225	2.33		99.8	239	
D 7 13C2 PFHxA										
315.00 > 270.00	2.635	2.673	-0.038	0.732	1793979	2.32		92.9	2313	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.635	2.673	-0.038	1.000	770315	1.08	Target=12.51	108	280	
313.00 > 119.00	2.635	2.673	-0.038	1.000	63569		12.12(6.25-18.76)		202	
70 Perfluoropentanesulfonic acid										
349.00 > 80.00	2.648	2.685	-0.037	0.847	749128	0.9121	Target=3.29	97.2	1954	
349.00 > 99.00	2.648	2.685	-0.037	0.847	241445		3.10(1.64-4.93)		669	
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.776	2.815	-0.039	1.000	127693	0.9324		93.2	52.4	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 64 13C3 HFPO-DA										
332.10 > 287.00	2.776	2.815	-0.039	0.771	146192	2.39		95.5	1664	
D 11 18O2 PFHxS										
403.00 > 84.00	3.124	3.168	-0.044	0.868	1530671	2.44		103	11562	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.124	3.168	-0.044	1.000	678425	0.8882	Target=4.33	97.6	2776	
399.00 > 99.00	3.124	3.168	-0.044	1.000	155654		4.36(2.17-6.50)		481	
D 9 13C4 PFHpA										
367.00 > 322.00	3.124	3.168	-0.044	0.868	1953309	2.63		105	5143	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.124	3.168	-0.044	1.000	778878	0.9744	Target=3.79	97.4	433	
363.00 > 169.00	3.124	3.168	-0.044	1.000	212522		3.66(1.89-5.68)		743	
77 DONA										
377.00 > 251.00	3.187	3.225	-0.038	0.802	1516247	0.8267	Target=2.43	87.8	1246	
377.00 > 85.00	3.187	3.225	-0.038	0.802	662728		2.29(1.22-3.65)		1130	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.584	3.624	-0.040	1.000	84099	0.8725		92.0	1266	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.584	3.624	-0.040	0.996	203735	2.37		99.8	1494	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.591	3.632	-0.041	0.904	554737	0.9140	Target=6.01	96.0	4290	
449.00 > 99.00	3.584	3.632	-0.048	0.902	92169		6.02(3.01-9.02)		819	
D 14 13C4 PFOA										
417.00 > 372.00	3.599	3.640	-0.041	1.000	1948235	2.54		101	16763	
* 62 13C2 PFOA										
415.00 > 370.00	3.599	3.640	-0.041		2038011	2.50			12150	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.599	3.640	-0.041	1.000	895507	1.10	Target=2.66	110	288	
413.00 > 169.00	3.599	3.640	-0.041	1.000	350669		2.55(1.33-3.99)		2722	
D 18 13C4 PFOS										
503.00 > 80.00	3.973	4.005	-0.033	1.104	1192528	2.55		107	8936	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.973	4.005	-0.033	1.000	490811	0.8957	Target=5.29	96.5	4100	
499.00 > 99.00	3.973	4.005	-0.033	1.000	89460		5.49(2.65-7.94)		877	
D 19 13C5 PFNA										
468.00 > 423.00	3.994	4.027	-0.033	1.110	1745360	2.37		94.7	23999	
20 Perfluorononanoic acid										
463.00 > 419.00	3.994	4.027	-0.033	1.000	629667	0.8771	Target=7.73	87.7	297	
463.00 > 169.00	3.994	4.027	-0.033	1.000	101470		6.21(3.87-11.60)		1620	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	4.128	4.164	-0.036	1.039	585933	0.8397		90.1	3126	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.251	4.283	-0.032	1.070	428991	0.9709	Target=2.78	101	4732	
549.00 > 99.00	4.251	4.283	-0.032	1.070	154990		2.77(1.39-4.17)		1142	
35 MeFOSA										
512.00 > 169.00	4.339	4.283	0.056		2773	NC			17.6	
D 23 13C2 PFDA										
515.00 > 470.00	4.283	4.305	-0.022	1.190	2025299	2.53		101	11051	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
24 Perfluorodecanoic acid										
513.00 > 469.00	4.283	4.305	-0.022	1.000	815796	0.9833	Target=9.75	98.3	232	
513.00 > 169.00	4.283	4.305	-0.022	1.000	94352		8.65(4.88-14.63)		520	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.293	4.317	-0.024	1.193	328784	2.71		113	1617	
25 1H,1H,2H,2H-perfluorodecanesulfoni										
527.00 > 507.00	4.293	4.317	-0.024	1.000	60890	0.7146		74.6	1112	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.328	4.340	-0.012	1.000	795951	1.01		101	2430	
D 21 13C8 FOSA										
506.00 > 78.00	4.328	4.340	-0.012	1.202	1930427	2.35		93.9	4088	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.409	4.431	-0.022	1.225	164450	2.60		104	549	
28 N-methylperfluorooctanesulfonamido										
570.00 > 419.00	4.409	4.443	-0.034	1.000	60615	1.08		108	869	
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.496	4.524	-0.028	1.132	320939	0.8260	Target=2.63	85.7	3182	
599.00 > 99.00	4.496	4.524	-0.028	1.132	116520		2.75(1.32-3.95)		1415	
D 30 13C2 PFUnA										
565.00 > 520.00	4.523	4.537	-0.014	1.257	1633930	2.34		93.6	7554	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.523	4.551	-0.028	1.000	557085	0.9402	Target=7.31	94.0	497	
563.00 > 169.00	4.523	4.551	-0.028	1.000	83502		6.67(3.66-10.97)		1783	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.523	4.551	-0.028	1.257	217813	3.02		121	1233	
33 N-ethylperfluorooctanesulfonamidoa										
584.00 > 419.00	4.537	4.563	-0.026	1.003	65739	0.9469		94.7	482	
66 11-Chloroeicosafluoro-3-oxaundecan										
631.00 > 451.00	4.602	4.626	-0.024	1.158	562549	0.7094		75.3	2968	
39 N-ethylperfluoro-1-octanesulfonami										
526.00 > 169.00	4.537	4.734	-0.197		5536	NC			21.9	
D 36 13C2 PFDoA										
615.00 > 570.00	4.714	4.744	-0.030	1.310	1794753	2.30		91.8	7102	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.724	4.744	-0.020	1.002	699111	1.00	Target=6.96	100	162	
613.00 > 169.00	4.714	4.744	-0.030	1.000	106884		6.54(3.48-10.44)		1335	
74 1H,1H,2H,2H-perfluorododecanesulfo										
627.00 > 607.00	4.734	4.764	-0.030	1.103	38626	0.8473		87.9	661	
75 Perfluorododecanesulfonic acid (PF										
699.00 > 80.00	4.870	4.897	-0.027	1.226	116543	0.8642	Target=0.47	89.3	314	
699.00 > 99.00	4.870	4.897	-0.027	1.226	244395		0.48(0.24-0.71)		2539	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.906	4.934	-0.028	1.041	603535	0.9518	Target=4.84	95.2	207	
663.00 > 169.00	4.906	4.934	-0.028	1.041	140421		4.30(2.42-7.26)		2306	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.076	5.108	-0.032	1.410	1611128	2.40		96.0	7218	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.076	5.120	-0.044	1.000	104249	1.04	Target=1.15	104	1579	
713.00 > 219.00	5.067	5.120	-0.053	0.998	101019		1.03(0.58-1.73)		3275	
D 44 13C2 PFHxDA										
815.00 > 770.00	5.413	5.465	-0.052	1.504	1449931	1.99		79.5	4307	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.413	5.465	-0.052	1.000	531356	1.00	Target=4.36	100	147	
813.00 > 169.00	5.413	5.465	-0.052	1.000	138746		3.83(2.18-6.53)		1604	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.764	5.843	-0.079	1.065	359825	1.00	Target=4.01	99.6	130	
913.00 > 169.00	5.764	5.843	-0.079	1.065	103802		3.47(2.00-6.01)		1329	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Report Date: 26-Feb-2020 17:13:43 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C19.d

Injection Date: 25-Feb-2020 21:24:20 Instrument ID: LC812

Lims ID: 480-166551-A-1-B MS

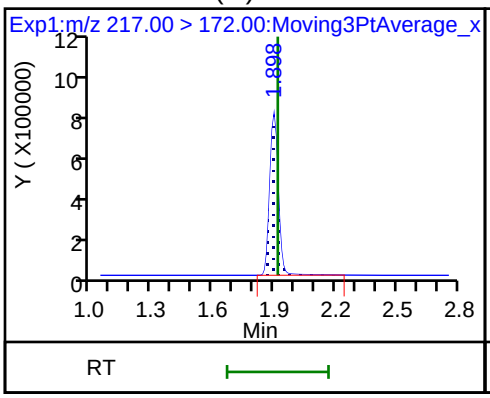
Client ID: SW-01-021920-EC-MS

Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19

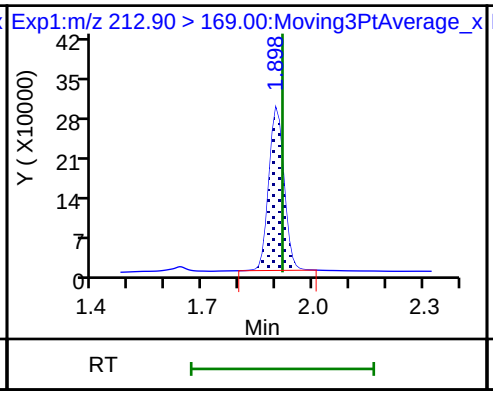
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFC_LC812 Limit Group: LC_PFC_ICAL

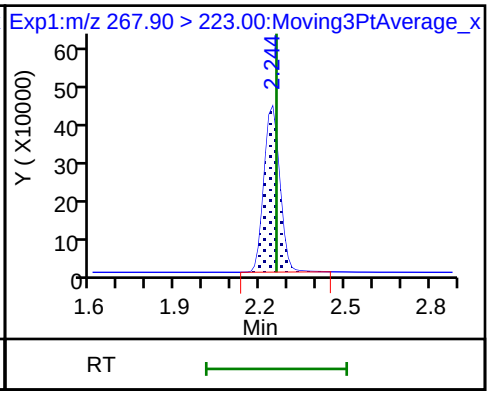
D 1 13C4 PFBA (M)



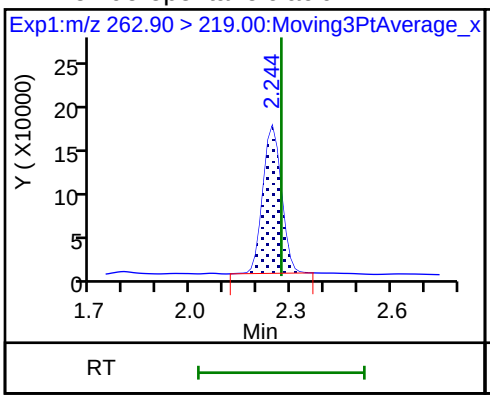
2 Perfluorobutanoic acid



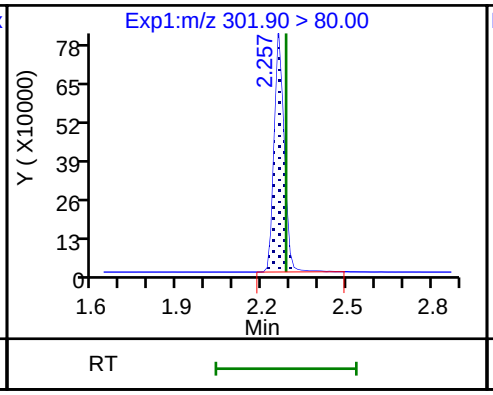
D 3 13C5 PFPeA



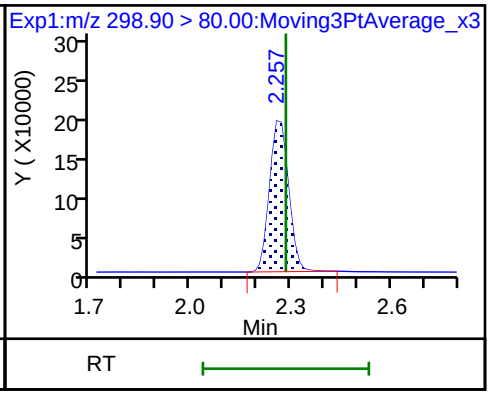
4 Perfluoropentanoic acid



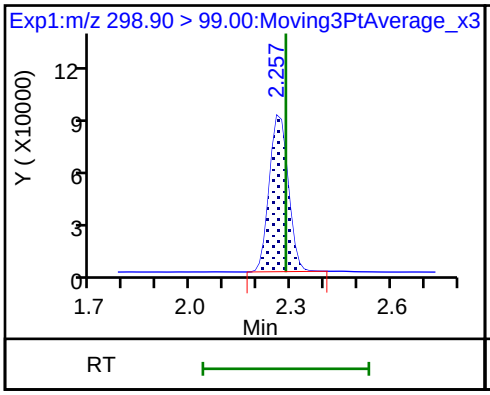
D 47 13C3 PFBS



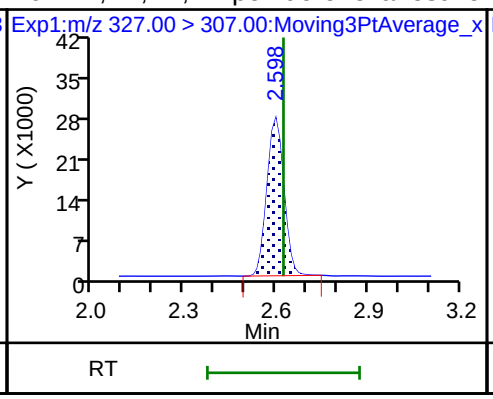
5 Perfluorobutanesulfonic acid



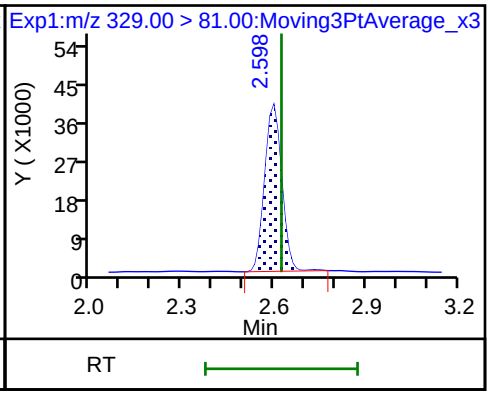
5 Perfluorobutanesulfonic acid



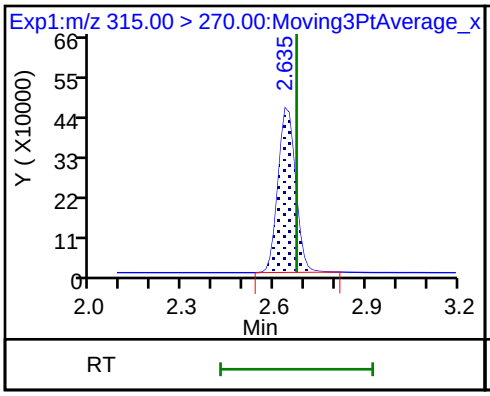
61 1H,1H,2H,2H-perfluorohexanesulfon



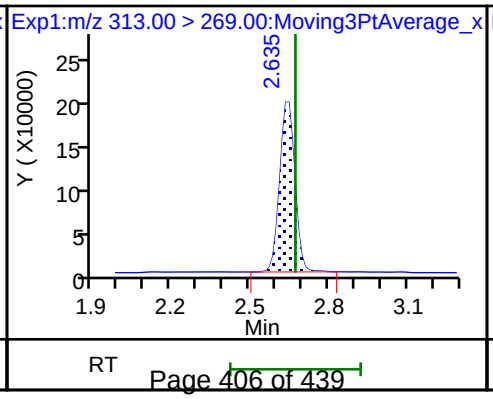
D 60 M2-4:2 FTS



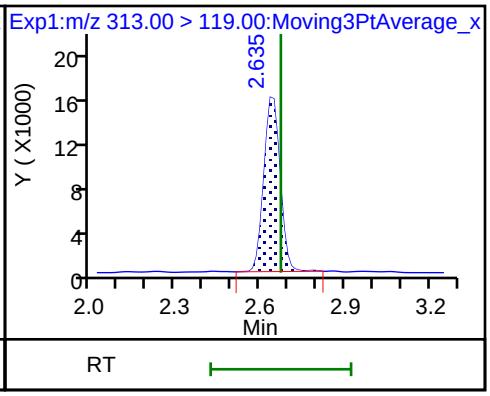
D 7 13C2 PFHxA



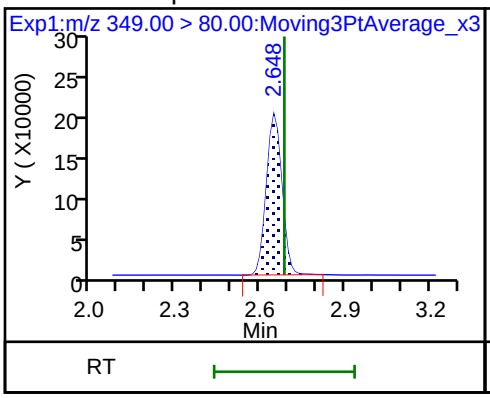
6 Perfluorohexanoic acid



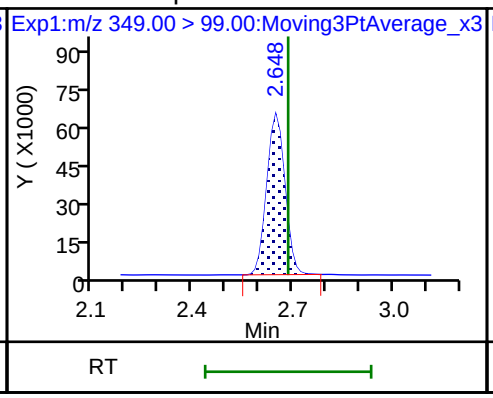
6 Perfluorohexanoic acid



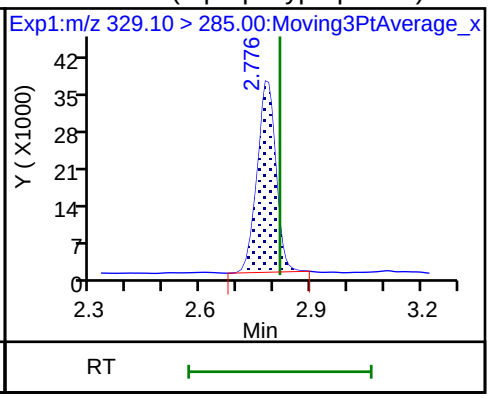
70 Perfluoropentanesulfonic acid



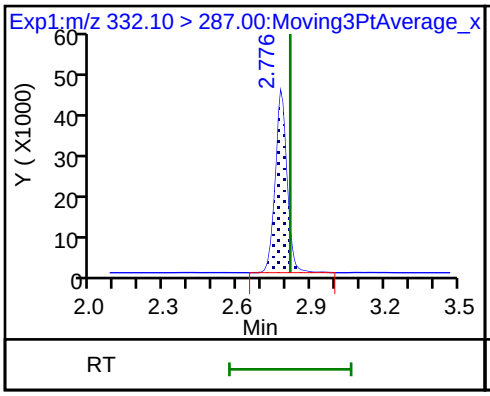
70 Perfluoropentanesulfonic acid



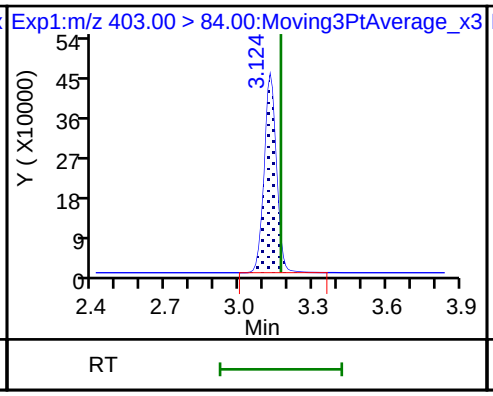
67 Perfluoro(2-propoxypropanoic) acid



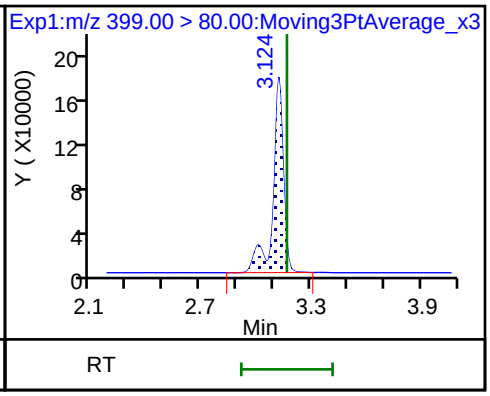
D 64 13C3 HFPO-DA



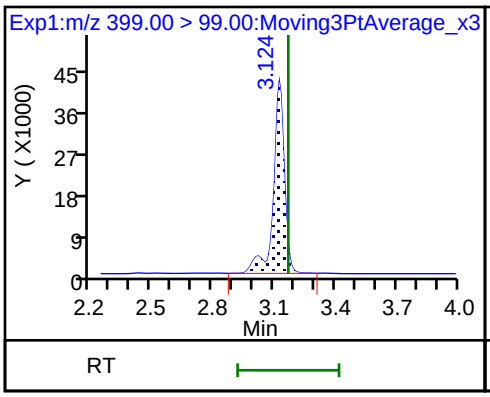
D 11 18O2 PFHxS



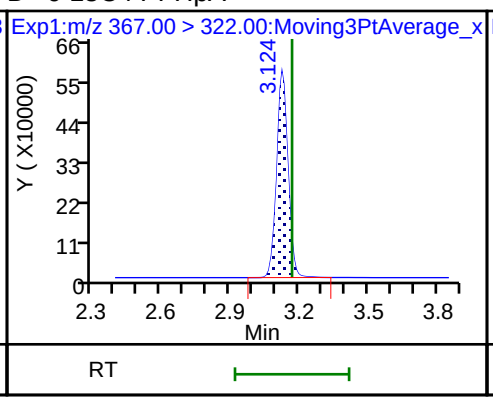
8 Perfluorohexanesulfonic acid



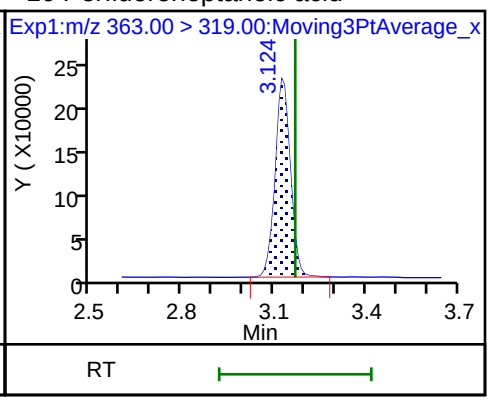
8 Perfluorohexanesulfonic acid



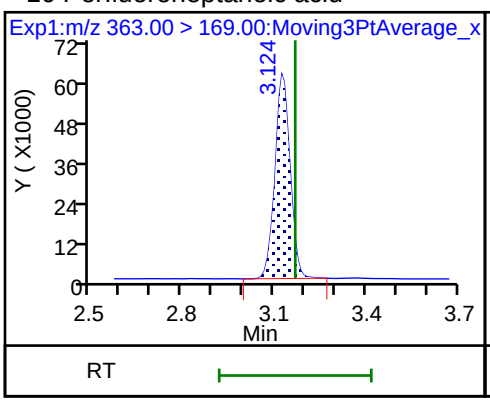
D 9 13C4 PFHpA



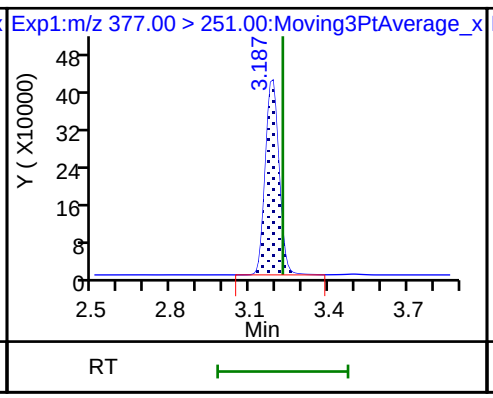
10 Perfluoroheptanoic acid



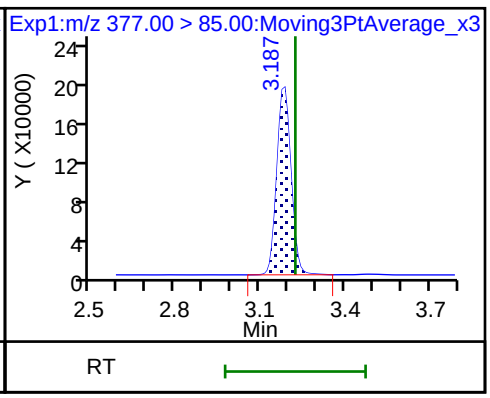
10 Perfluoroheptanoic acid



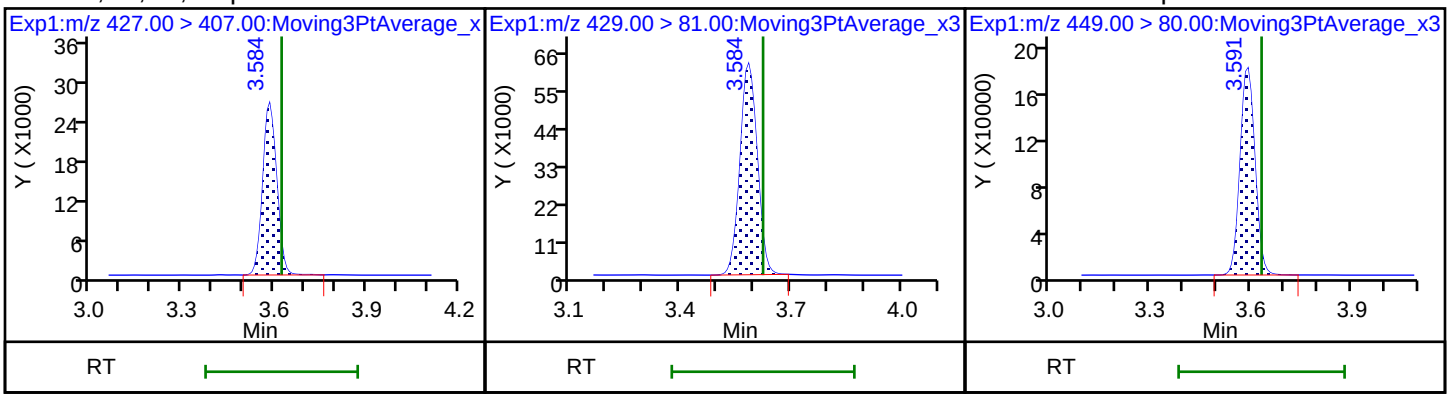
77 DONA



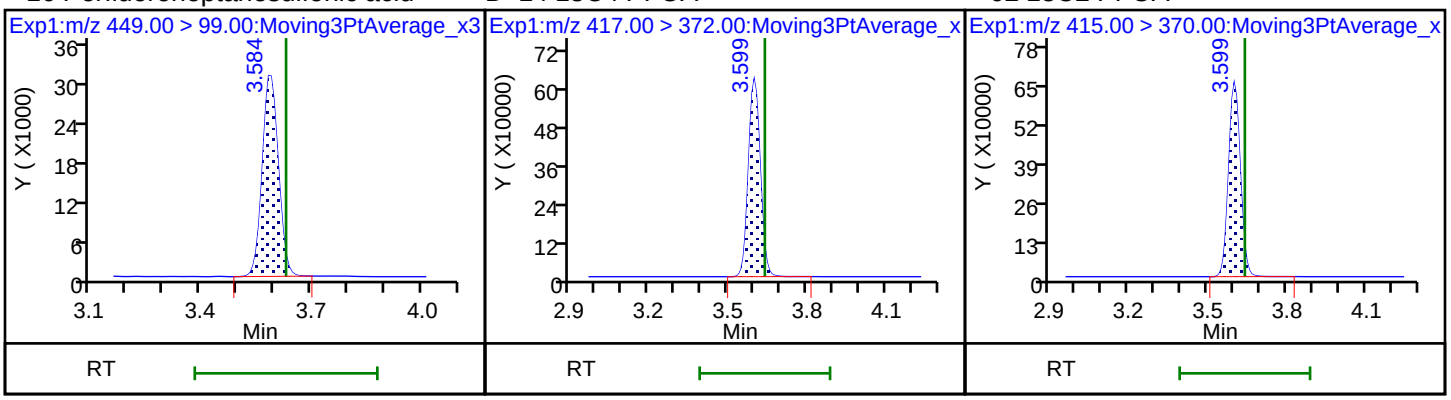
77 DONA



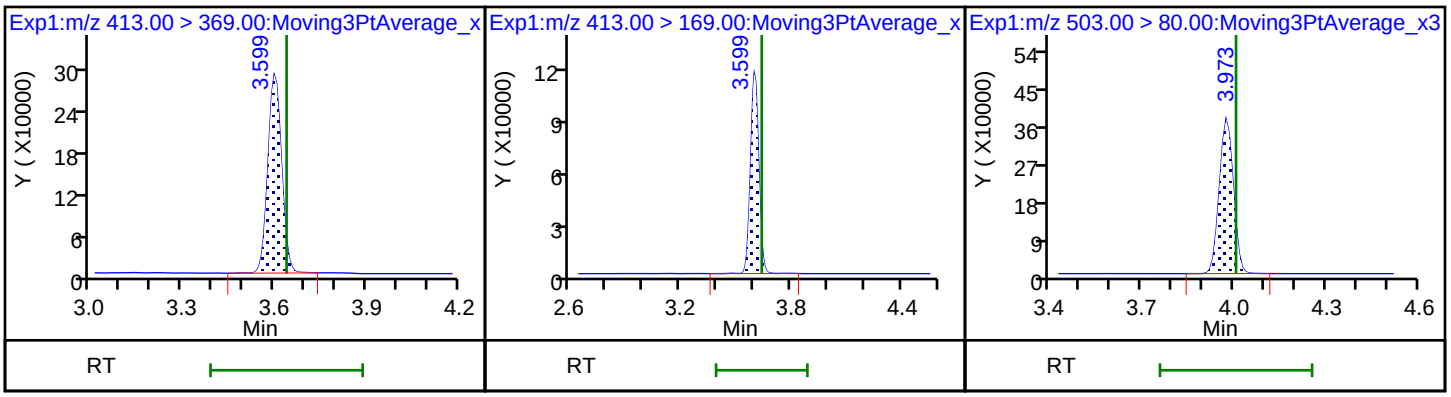
13 1H,1H,2H,2H-perfluorooctanesulfonD 12 M2-6:2 FTS 16 Perfluoroheptanesulfonic acid



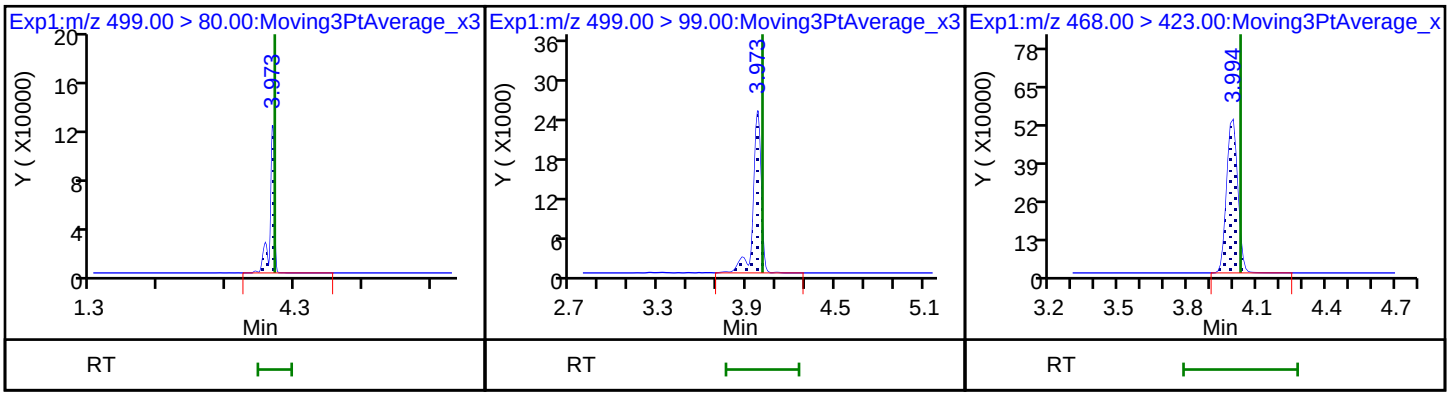
16 Perfluoroheptanesulfonic acid D 14 13C4 PFOA * 62 13C2 PFOA



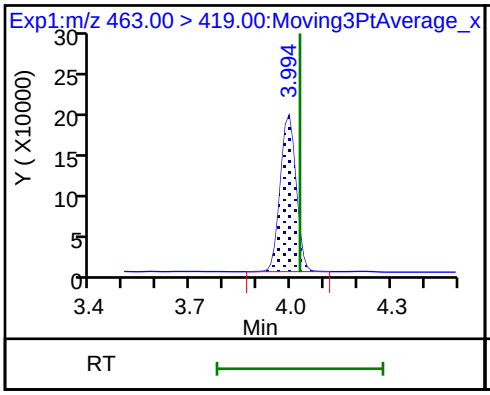
15 Perfluorooctanoic acid 15 Perfluorooctanoic acid D 18 13C4 PFOS



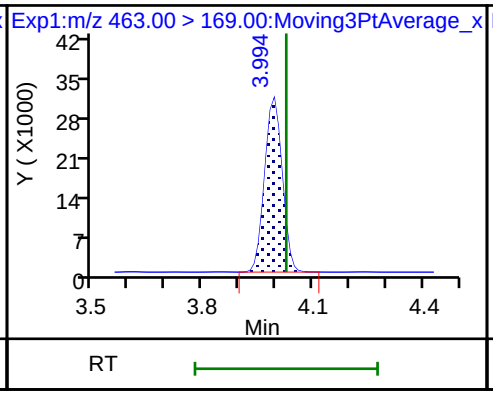
17 Perfluorooctanesulfonic acid 17 Perfluorooctanesulfonic acid D 19 13C5 PFNA



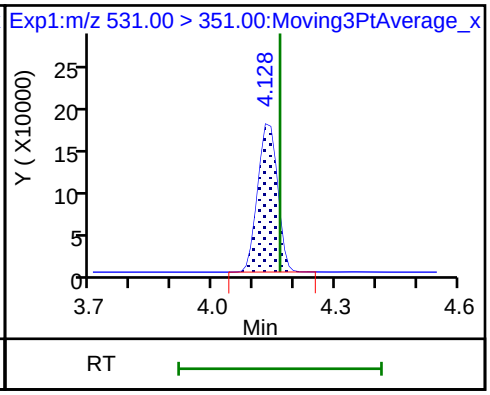
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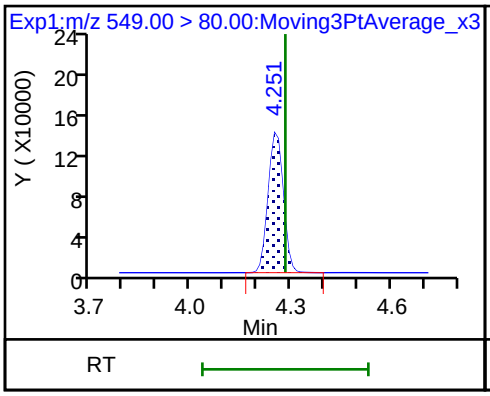
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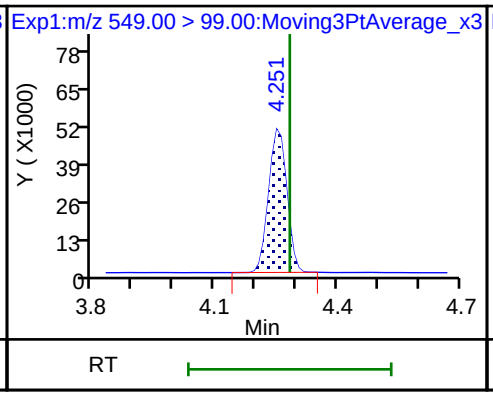
69 9-Chlorohexadecafluoro-3-oxanonane



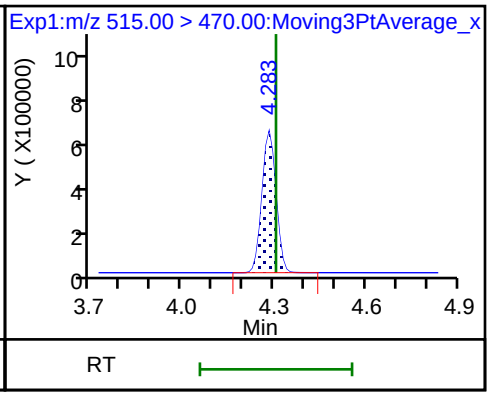
68 Perfluorononanesulfonic acid



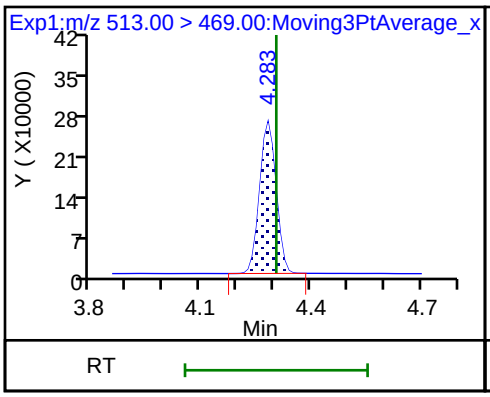
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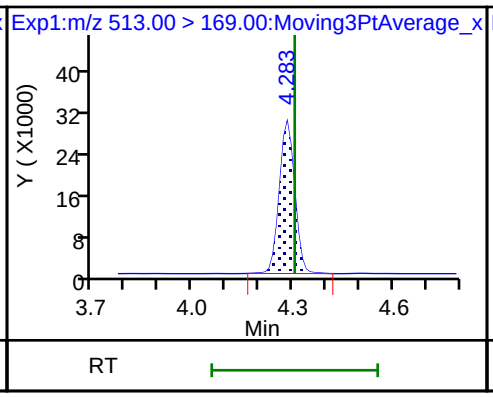
D 23 13C2 PFDA



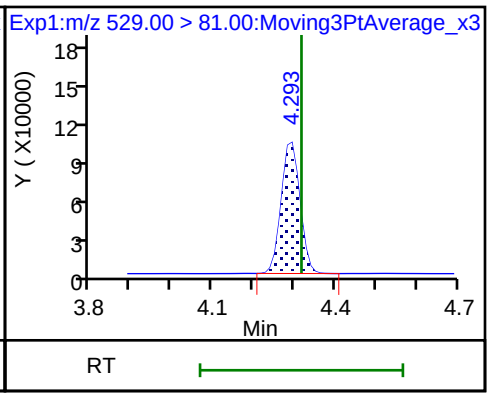
24 Perfluorodecanoic acid



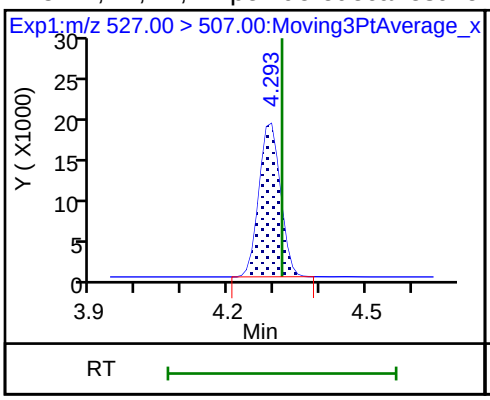
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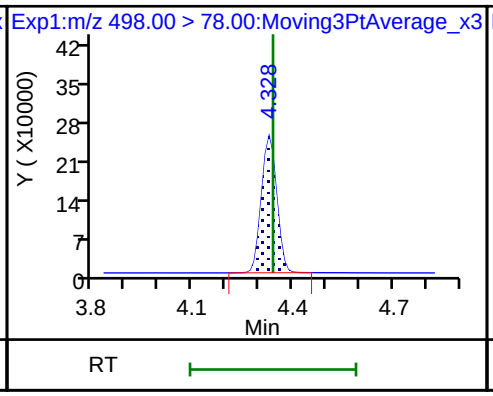
D 26 M2-8:2 FTS



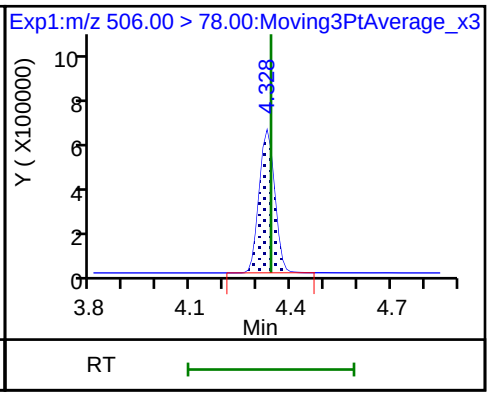
25 1H,1H,2H,2H-perfluorodecanesulfoni



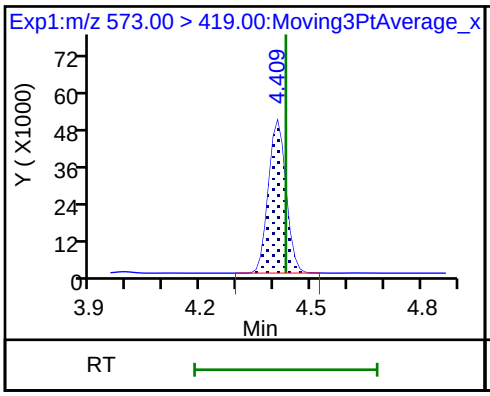
22 Perfluorooctanesulfonamide



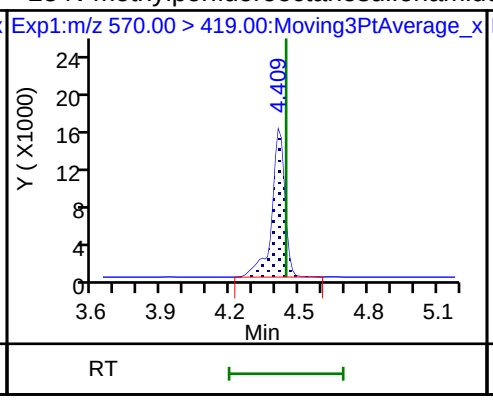
D 21 13C8 FOSA



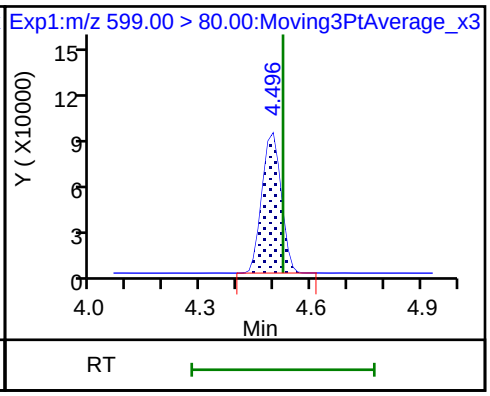
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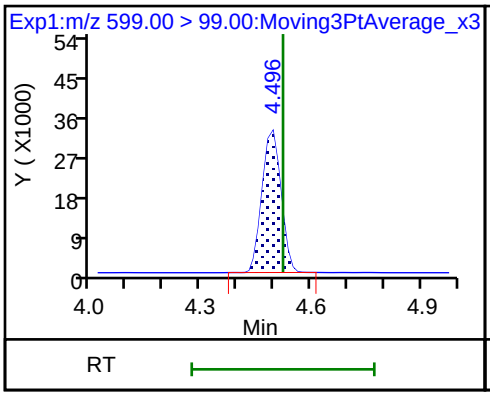
28 N-methylperfluorooctanesulfonamido



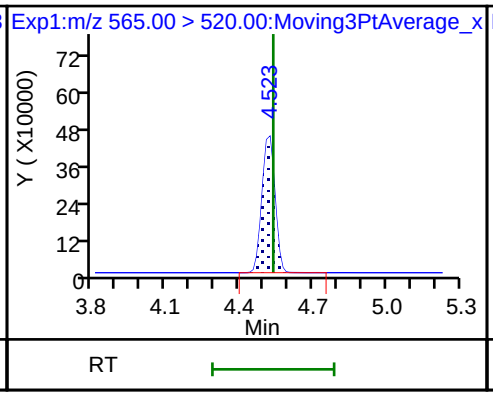
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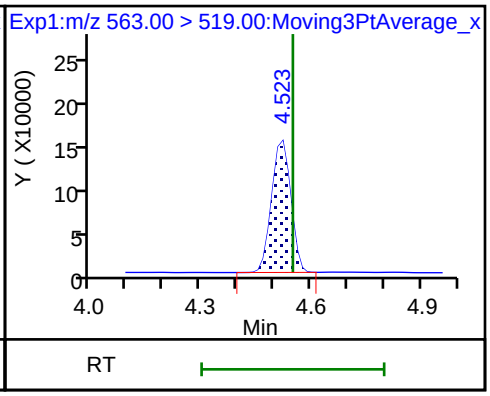
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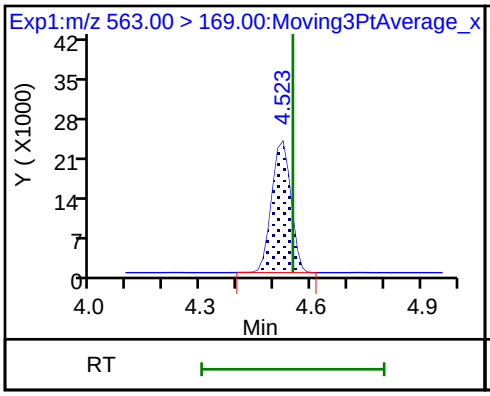
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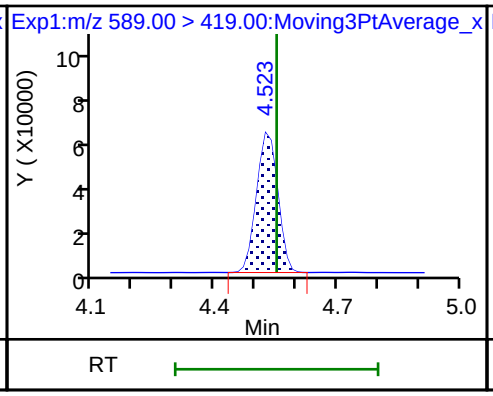
31 Perfluoroundecanoic acid



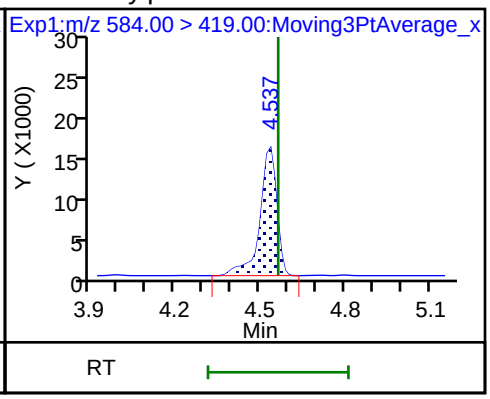
31 Perfluoroundecanoic acid



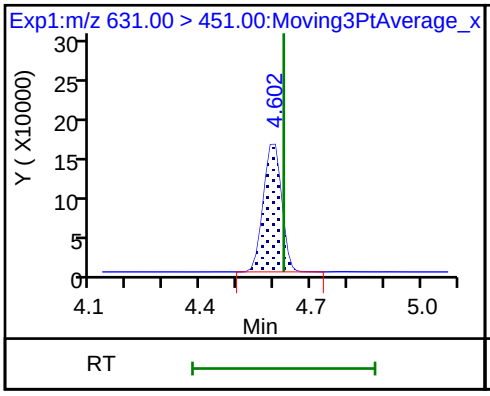
D 32 d5-NEtFOSAA



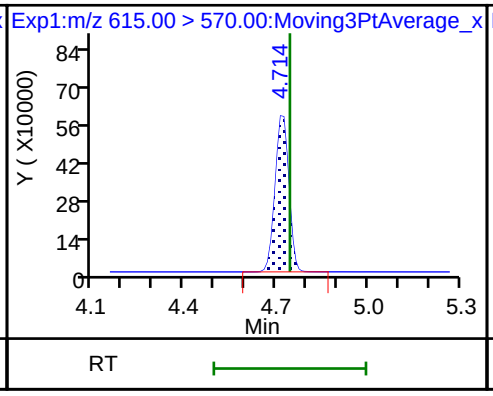
33 N-ethylperfluorooctanesulfonamidoa



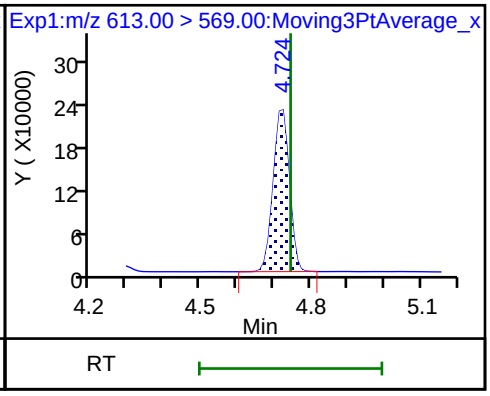
66 11-Chloroeicosafluoro-3-oxaundecan



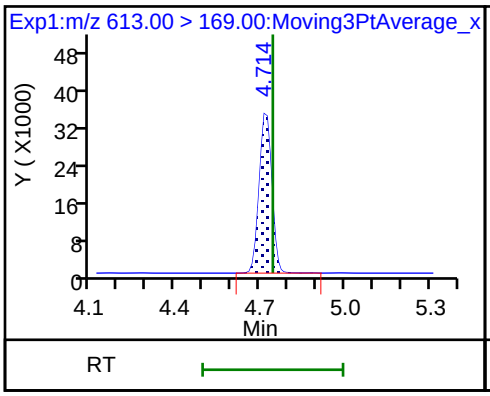
D 36 13C2 PFDoA



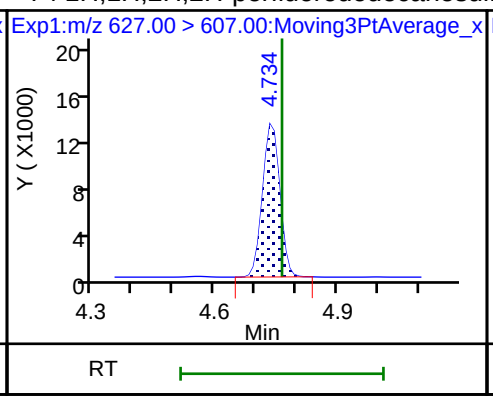
37 Perfluorododecanoic acid



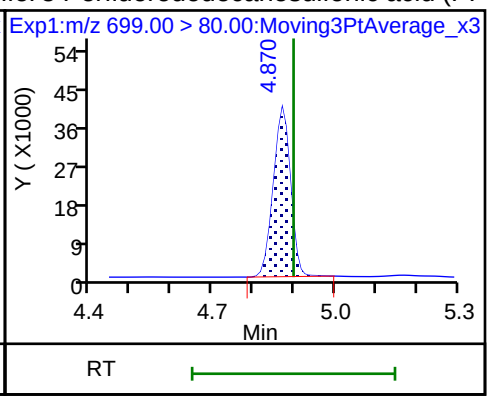
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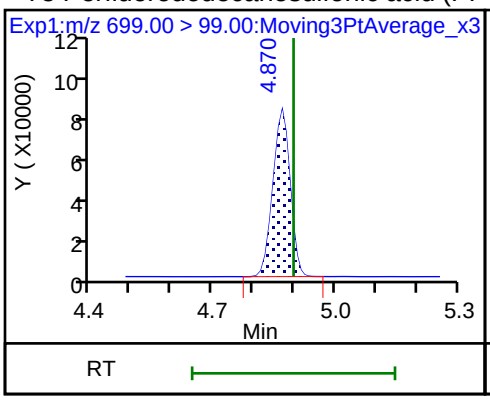
74 1H,1H,2H,2H-perfluorododecanesulfo



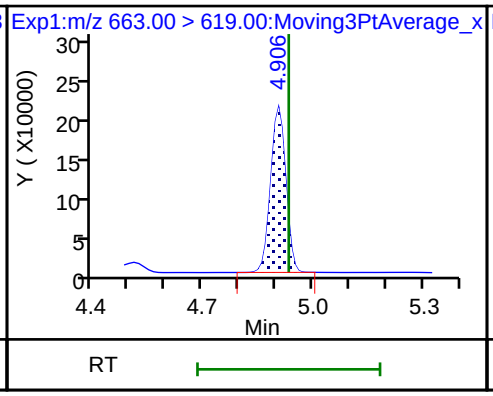
75 Perfluorododecanesulfonic acid (PF



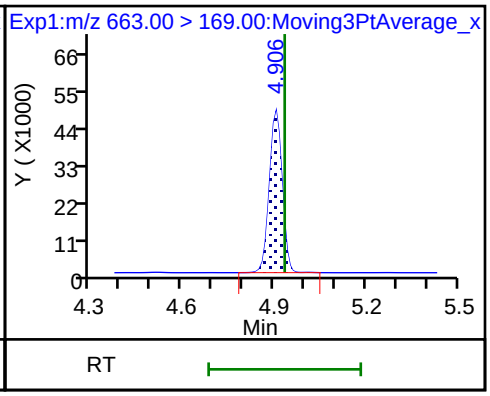
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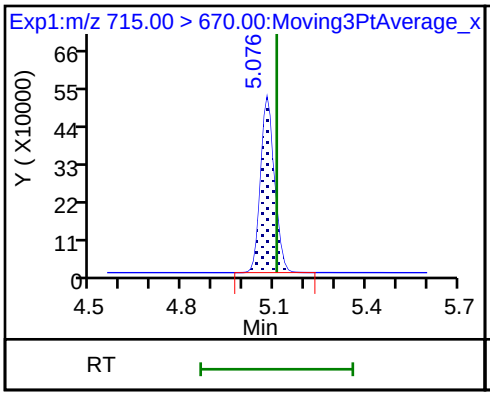
41 Perfluorotridecanoic acid



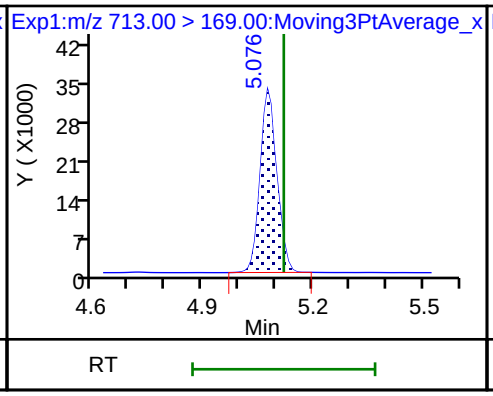
41 Perfluorotridecanoic acid



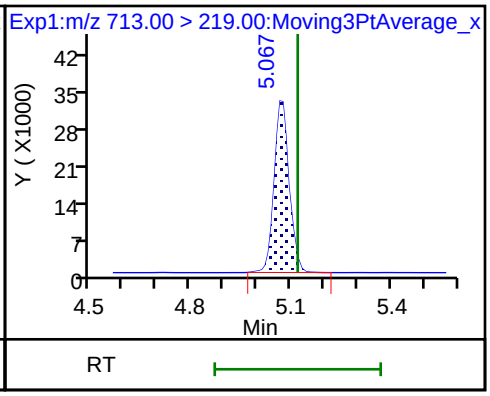
D 43 13C2 PFTeDA



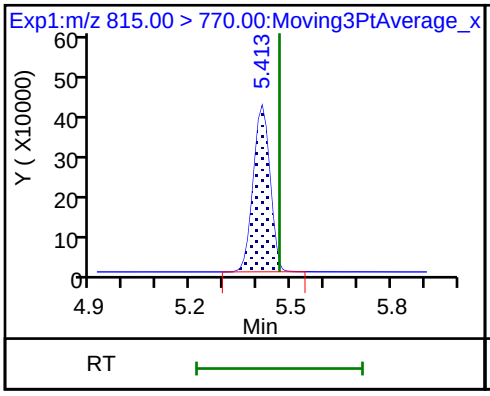
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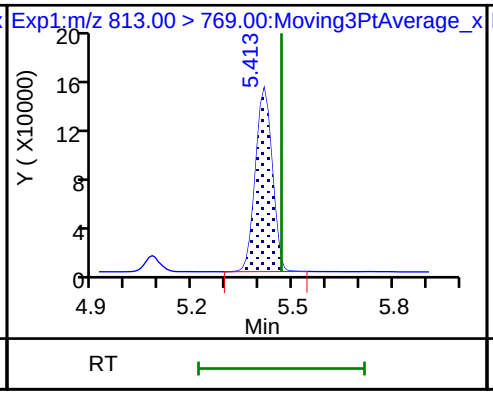
42 Perfluorotetradecanoic acid



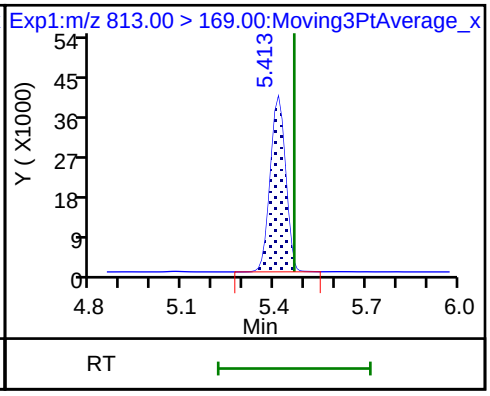
D 44 13C2 PFHxDA



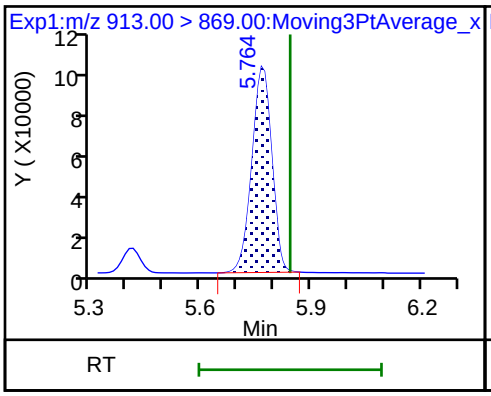
45 Perfluorohexadecanoic acid



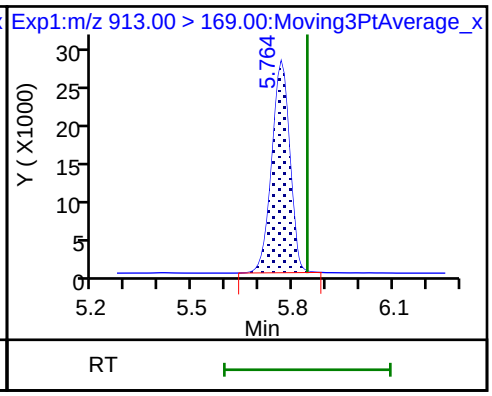
45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid



46 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

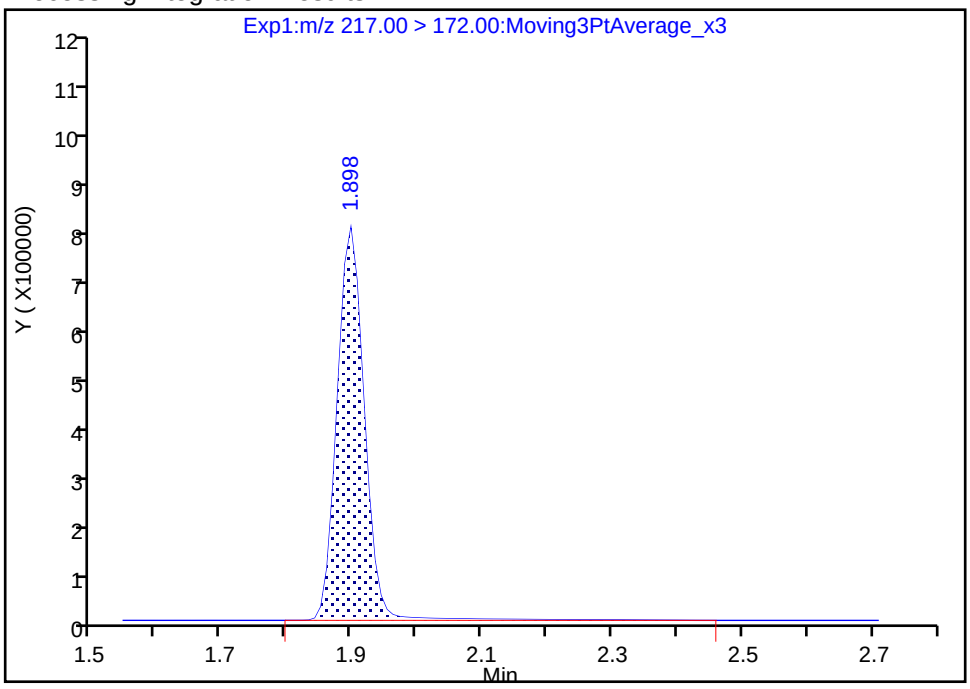
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Lims ID:	480-166551-A-1-B MS				
Client ID:	SW-01-021920-EC-MS				
Operator ID:	lc812tech	ALS Bottle#:	19	Worklist Smp#:	19
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

D 1 13C4 PFBA, CAS: STL00992

Signal: 1

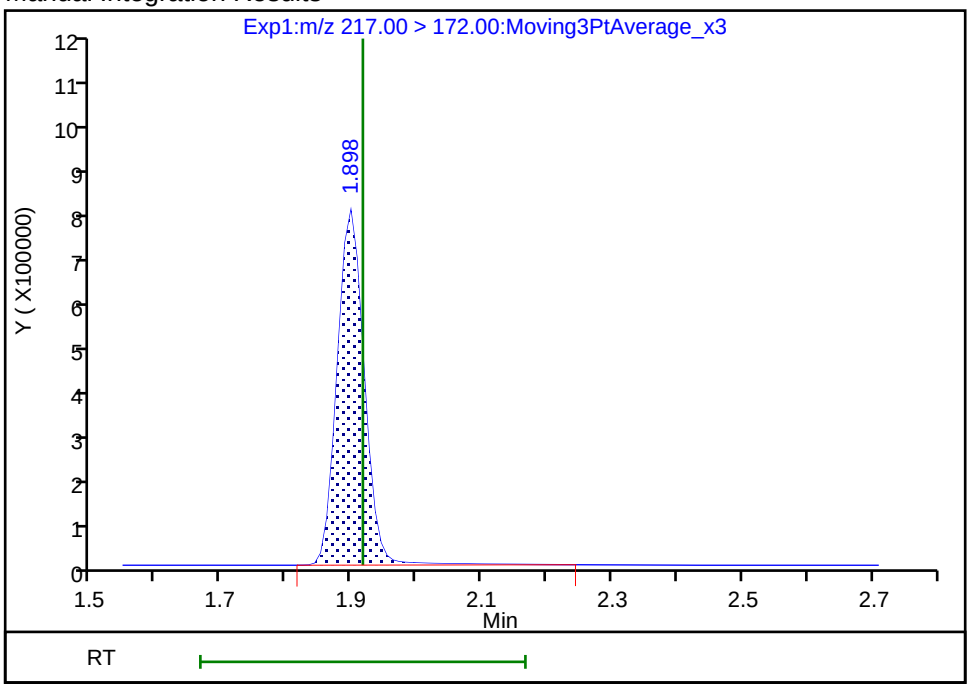
Processing Integration Results

RT: 1.90
Area: 2228115
Amount: 2.627226
Amount Units: ng/ml



Manual Integration Results

RT: 1.90
Area: 2207503
Amount: 2.602922
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:21:33

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Client Sample ID: SW-01-021920-EC-MSD MSD Lab Sample ID: 480-166551-1 MSD

Matrix: Water Lab File ID: SC022520C20.d

Analysis Method: 537 (modified) Date Collected: 02/19/2020 08:20

Extraction Method: 3535 Date Extracted: 02/24/2020 13:43

Sample wt/vol: 277(mL) Date Analyzed: 02/25/2020 21:32

Con. Extract Vol.: 10(mL) Dilution Factor: 1

Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 152696 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	34.3		1.8	0.90
2706-90-3	Perfluoropentanoic acid (PFPeA)	32.8		1.8	0.57
307-24-4	Perfluorohexanoic acid (PFHxA)	34.3		1.8	0.69
375-85-9	Perfluoroheptanoic acid (PFHpA)	34.2		1.8	0.82
335-67-1	Perfluorooctanoic acid (PFOA)	38.3		1.8	0.73
375-95-1	Perfluorononanoic acid (PFNA)	28.1		1.8	0.24
335-76-2	Perfluorodecanoic acid (PFDA)	35.5		1.8	0.69
2058-94-8	Perfluoroundecanoic acid (PFUnA)	33.5		1.8	0.70
307-55-1	Perfluorododecanoic acid (PFDoA)	36.8		1.8	0.53
72629-94-8	Perfluorotridecanoic acid (PFTriA)	34.8		1.8	0.54
376-06-7	Perfluorotetradecanoic acid (PFTeA)	37.4		1.8	0.83
375-73-5	Perfluorobutanesulfonic acid (PFBS)	32.3		1.8	0.44
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	25.7		1.8	0.72
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	34.1		1.8	0.86
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	33.6		1.8	0.55
335-77-3	Perfluorodecanesulfonic acid (PFDS)	34.6		1.8	0.81
754-91-6	Perfluorooctanesulfonamide (PFOSA)	34.3		9.0	9.0
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	36.9		18	1.5
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	36.5		18	1.4
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	30.1		18	5.0
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	26.7		18	2.6

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Client Sample ID: SW-01-021920-EC-MSD MSD Lab Sample ID: 480-166551-1 MSD

Matrix: Water Lab File ID: SC022520C20.d

Analysis Method: 537 (modified) Date Collected: 02/19/2020 08:20

Extraction Method: 3535 Date Extracted: 02/24/2020 13:43

Sample wt/vol: 277(mL) Date Analyzed: 02/25/2020 21:32

Con. Extract Vol.: 10(mL) Dilution Factor: 1

Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 152696 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	107		50-150
STL01892	13C4 PFHpA	106		50-150
STL00990	13C4 PFOA	105		50-150
STL00991	13C4 PFOS	111		50-150
STL00995	13C5 PFNA	106		50-150
STL00992	13C4 PFBA	112		25-150
STL00993	13C2 PFHxA	104		50-150
STL00996	13C2 PFDA	102		50-150
STL00997	13C2 PFUnA	104		50-150
STL00998	13C2 PFDoA	95		50-150
STL01056	13C8 FOSA	102		25-150
STL01893	13C5 PFPeA	112		25-150
STL02116	13C2 PFTeDA	102		50-150
STL02118	d3-NMeFOSAA	119		50-150
STL02117	d5-NEtFOSAA	113		50-150
STL02279	M2-6:2 FTS	112		25-150
STL02280	M2-8:2 FTS	122		25-150
STL02337	13C3 PFBS	104		50-150

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C20.d
Lims ID: 480-166551-A-1-C MSD
Client ID: SW-01-021920-EC-MSD
Sample Type: MSD
Inject. Date: 25-Feb-2020 21:32:38 ALS Bottle#: 20 Worklist Smp#: 20
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 480-166551-A-1-C MSD
Misc. Info.: 200-0040162-020 Plate: 1 Rack: 2
Operator ID: lc812tech Instrument ID: LC812

Method: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\PFC_LC812.m
Limit Group: LC_PFC_ICAL
Last Update: 26-Feb-2020 17:13:38 Calib Date: 10-Feb-2020 12:29:33
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20200207-39917.b\SC021020ICAL010.d

Column 1 : C-18 (4.60 mm) Det: EXP1
Process Host: CTX0323

First Level Reviewer: murrayjw Date: 26-Feb-2020 11:24:57
Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										M
217.00 > 172.00	1.898	1.917	-0.019	0.529	1369415	2.79		112	7572	M
2 Perfluorobutanoic acid										
212.90 > 169.00	1.898	1.917	-0.019	1.000	494929	0.9498		95.0	68.4	
D 3 13C5 PFPeA										
267.90 > 223.00	2.231	2.257	-0.026	0.621	1069204	2.80		112	2929	
4 Perfluoropentanoic acid										
262.90 > 219.00	2.244	2.271	-0.027	1.006	418950	0.9079		90.8	43.5	
D 47 13C3 PFBS										
301.90 > 80.00	2.257	2.284	-0.027	0.629	1235756	2.41		104	523367	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.257	2.284	-0.027	1.000	485120	0.8947	Target=2.19	101	1714	
298.90 > 99.00	2.257	2.284	-0.027	1.000	212240		2.29(1.09-3.28)		320	
61 1H,1H,2H,2H-perfluorohexanesulfoni										
327.00 > 307.00	2.598	2.623	-0.025	1.000	69127	0.9007		96.4	1054	
D 60 M2-4:2 FTS										M
329.00 > 81.00	2.598	2.623	-0.025	0.724	92416	2.46		105	127	M
D 7 13C2 PFHxA										
315.00 > 270.00	2.636	2.673	-0.037	0.734	1155860	2.59		104	3950	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.636	2.673	-0.037	1.000	434521	0.9492	Target=12.51	94.9	185	
313.00 > 119.00	2.636	2.673	-0.037	1.000	36126		12.03(6.25-18.76)		111	
70 Perfluoropentanesulfonic acid										
349.00 > 80.00	2.648	2.685	-0.037	0.850	436813	0.8886	Target=3.29	94.7	1710	
349.00 > 99.00	2.648	2.685	-0.037	0.850	121093		3.61(1.64-4.93)		444	
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.776	2.815	-0.039	1.003	67351	0.99		99.5	28.4	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 64 13C3 HFPO-DA										
332.10 > 287.00	2.768	2.815	-0.047	0.771	72290	2.04		81.7	780	
D 11 18O2 PFHxS										
403.00 > 84.00	3.117	3.168	-0.051	0.868	916131	2.52		107	2344	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.125	3.168	-0.043	1.003	325952	0.7130	Target=4.33	78.4	79.4	
399.00 > 99.00	3.117	3.168	-0.051	1.000	90524		3.60(2.17-6.50)		359	
D 9 13C4 PFHpA										
367.00 > 322.00	3.125	3.168	-0.043	0.870	1136844	2.65		106	4230	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.125	3.168	-0.043	1.000	440762	0.9474	Target=3.79	94.7	273	
363.00 > 169.00	3.125	3.168	-0.043	1.000	123163		3.58(1.89-5.68)		604	
77 DONA										
377.00 > 251.00	3.178	3.225	-0.047	0.800	1039801	0.9469	Target=2.43	101	1113	
377.00 > 85.00	3.178	3.225	-0.047	0.800	388070		2.68(1.22-3.65)		610	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.578	3.624	-0.046	1.000	51917	0.8326		87.8	1103	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.578	3.624	-0.046	0.996	131800	2.65		112	997	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.585	3.632	-0.047	0.902	343092	0.9442	Target=6.01	99.2	3246	
449.00 > 99.00	3.585	3.632	-0.047	0.902	55812		6.15(3.01-9.02)		859	
D 14 13C4 PFOA										
417.00 > 372.00	3.592	3.640	-0.048	1.000	1163734	2.62		105	7092	
* 62 13C2 PFOA										
415.00 > 370.00	3.592	3.640	-0.048		1178647	2.50			6415	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.592	3.640	-0.048	1.000	514484	1.06	Target=2.66	106	209	
413.00 > 169.00	3.600	3.640	-0.040	1.002	210354		2.45(1.33-3.99)		1658	
D 18 13C4 PFOS										
503.00 > 80.00	3.973	4.005	-0.032	1.106	713983	2.64		111	4733	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.973	4.005	-0.032	1.000	304896	0.9294	Target=5.29	100	3929	
499.00 > 99.00	3.973	4.005	-0.032	1.000	50467		6.04(2.65-7.94)		934	
D 19 13C5 PFNA										
468.00 > 423.00	3.984	4.027	-0.043	1.109	1131715	2.66		106	7103	
20 Perfluorononanoic acid										
463.00 > 419.00	3.984	4.027	-0.043	1.000	362005	0.7776	Target=7.73	77.8	176	
463.00 > 169.00	3.984	4.027	-0.043	1.000	67831		5.34(3.87-11.60)		1933	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	4.129	4.164	-0.035	1.039	339613	0.8129		87.2	2269	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.251	4.283	-0.032	1.070	261894	0.99	Target=2.78	103	5612	
549.00 > 99.00	4.251	4.283	-0.032	1.070	95810		2.73(1.39-4.17)		783	
35 MeFOSA										
512.00 > 169.00	4.420	4.283	0.137		808	NC			8.1	
D 23 13C2 PFDA										
515.00 > 470.00	4.273	4.305	-0.032	1.190	1179203	2.55		102	8563	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
24 Perfluorodecanoic acid										
513.00 > 469.00	4.273	4.305	-0.032	1.000	475314	0.9841	Target=9.75	98.4	163	
513.00 > 169.00	4.273	4.305	-0.032	1.000	55759		8.52(4.88-14.63)		693	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.283	4.317	-0.034	1.193	205037	2.92		122	1895	
25 1H,1H,2H,2H-perfluorodecanesulfoni										
527.00 > 507.00	4.283	4.317	-0.034	1.000	39370	0.7409		77.3		
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.328	4.340	-0.012	1.000	471234	0.9494		94.9	1187	
D 21 13C8 FOSA										
506.00 > 78.00	4.328	4.340	-0.012	1.205	1210756	2.55		102	3834	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.409	4.431	-0.022	1.228	108828	2.98		119	357	
28 N-methylperfluorooctanesulfonamido										
570.00 > 419.00	4.409	4.443	-0.034	1.000	38139	1.02		102	393	
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.483	4.524	-0.041	1.128	223051	0.9589	Target=2.63	99.5	1587	
599.00 > 99.00	4.483	4.524	-0.041	1.128	78685		2.83(1.32-3.95)		665	
D 30 13C2 PFUnA										
565.00 > 520.00	4.510	4.537	-0.027	1.256	1052300	2.61		104	5859	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.510	4.551	-0.041	1.000	354573	0.9292	Target=7.31	92.9	371	
563.00 > 169.00	4.510	4.551	-0.041	1.000	51633		6.87(3.66-10.97)		657	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.524	4.551	-0.027	1.260	117858	2.83		113	746	
33 N-ethylperfluorooctanesulfonamidoa										
584.00 > 419.00	4.524	4.563	-0.039	1.000	37932	1.01		101	257	
66 11-Chloroeicosafluoro-3-oxaundecan										
631.00 > 451.00	4.590	4.626	-0.036	1.155	334111	0.7037		74.7	1773	
D 36 13C2 PFDoA										
615.00 > 570.00	4.714	4.744	-0.030	1.313	1078342	2.39		95.4	4709	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.714	4.744	-0.030	1.000	426912	1.02	Target=6.96	102	137	
613.00 > 169.00	4.714	4.744	-0.030	1.000	68566		6.23(3.48-10.44)		1041	
74 1H,1H,2H,2H-perfluorododecanesulfo										
627.00 > 607.00	4.734	4.764	-0.030	1.105	19937	0.7013		72.8		
75 Perfluorododecanesulfonic acid (PF										
699.00 > 80.00	4.868	4.897	-0.029	1.225	71830	0.8897	Target=0.47	91.9	197	
699.00 > 99.00	4.868	4.897	-0.029	1.225	147474		0.49(0.24-0.71)		2372	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.905	4.934	-0.029	1.040	367458	0.9645	Target=4.84	96.4	183	
663.00 > 169.00	4.905	4.934	-0.029	1.040	83630		4.39(2.42-7.26)		1320	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.074	5.108	-0.034	1.413	985686	2.54		102	6028	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.074	5.120	-0.046	1.000	63609	1.04	Target=1.15	104	1246	
713.00 > 219.00	5.066	5.120	-0.054	0.998	66226		0.96(0.58-1.73)		1658	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 44 13C2 PFHxDA										
815.00 > 770.00	5.412	5.465	-0.053	1.507	887530	2.10		84.1	3312	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.412	5.465	-0.053	1.000	312157	0.9627	Target=4.36	96.3	133	
813.00 > 169.00	5.412	5.465	-0.053	1.000	83706		3.73(2.18-6.53)		1505	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.763	5.843	-0.080	1.065	223874	1.01	Target=4.01	101	130	
913.00 > 169.00	5.763	5.843	-0.080	1.065	60938		3.67(2.00-6.01)		1076	

QC Flag Legend

Processing Flags
NC - Not Calibrated
Review Flags
M - Manually Integrated

Report Date: 26-Feb-2020 17:13:45 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C20.d

Injection Date: 25-Feb-2020 21:32:38 Instrument ID: LC812

Lims ID: 480-166551-A-1-C MSD

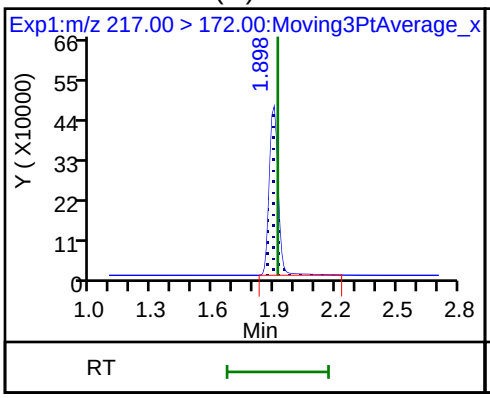
Client ID: SW-01-021920-EC-MSD

Operator ID: lc812tech ALS Bottle#: 20 Worklist Smp#: 20

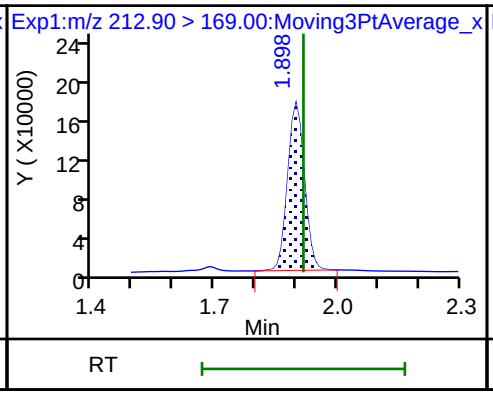
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFC_LC812 Limit Group: LC_PFC_ICAL

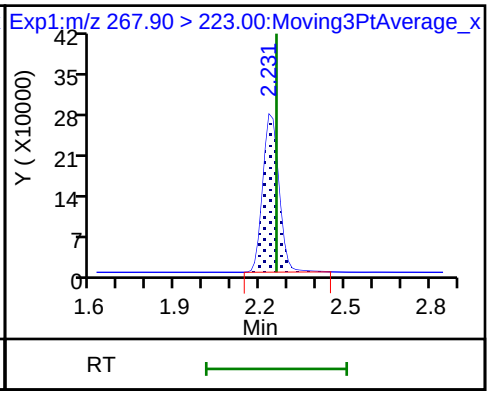
D 1 13C4 PFBA (M)



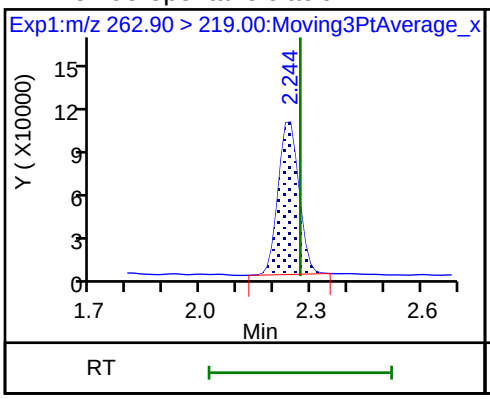
2 Perfluorobutanoic acid



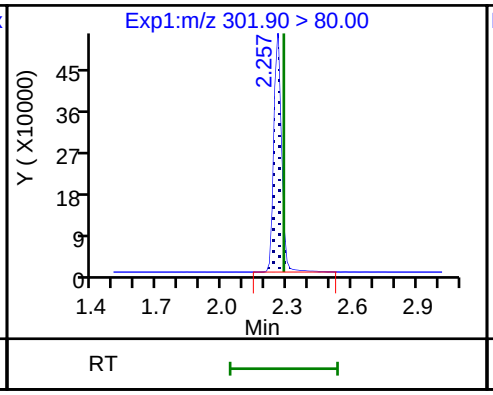
D 3 13C5 PFPeA



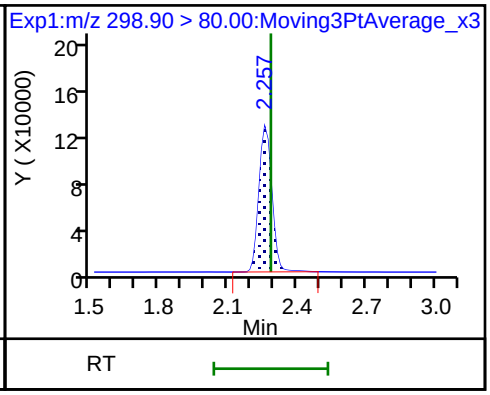
4 Perfluoropentanoic acid



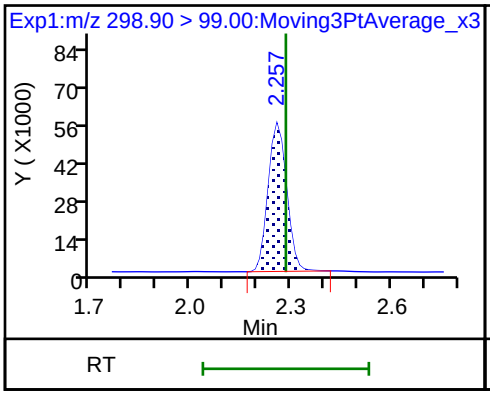
D 47 13C3 PFBS



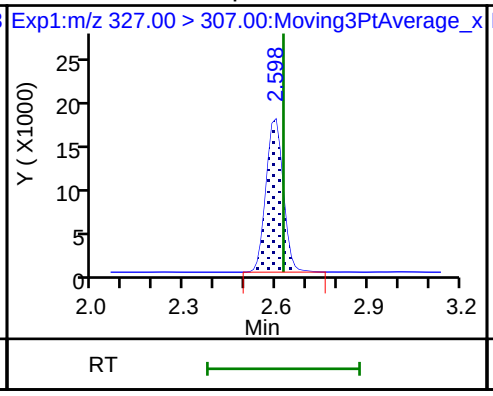
5 Perfluorobutanesulfonic acid



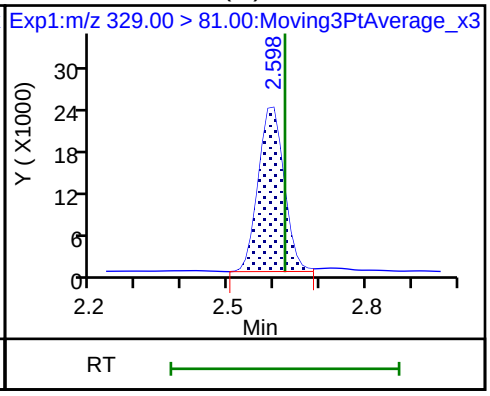
5 Perfluorobutanesulfonic acid



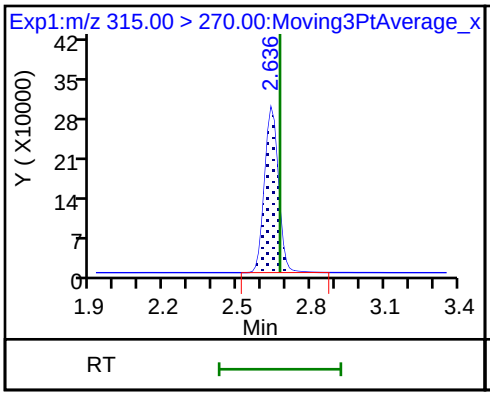
61 1H,1H,2H,2H-perfluorohexanesulfon



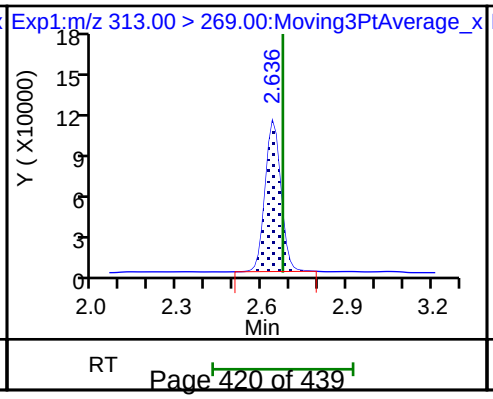
D 60 M2-4:2 FTS (M)



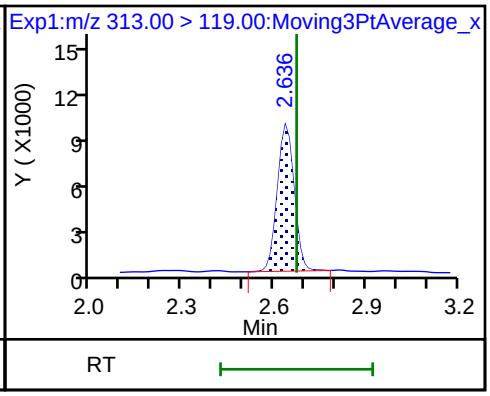
D 7 13C2 PFHxA



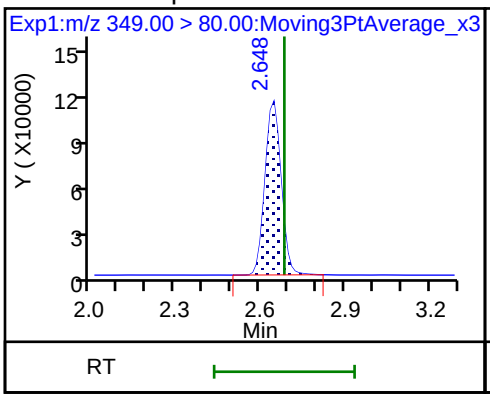
6 Perfluorohexanoic acid



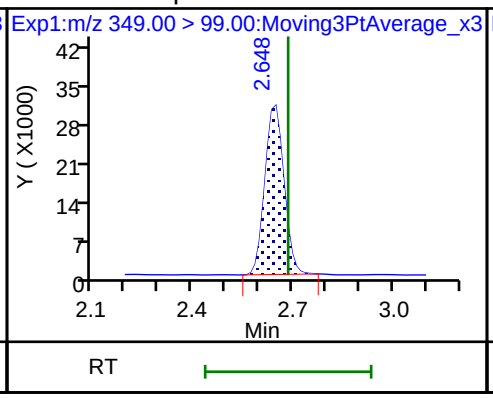
6 Perfluorohexanoic acid



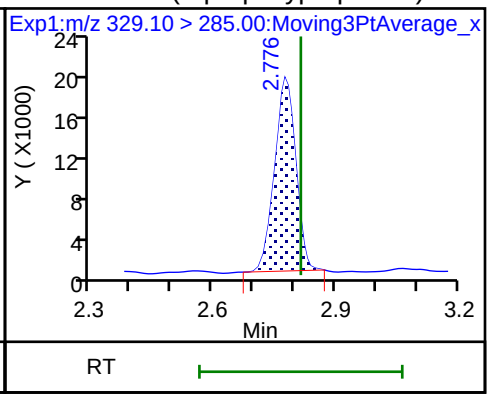
70 Perfluoropentanesulfonic acid



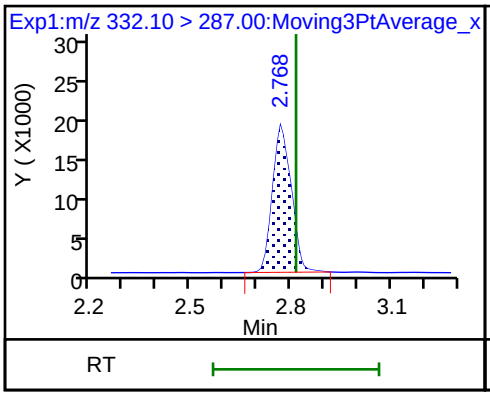
70 Perfluoropentanesulfonic acid



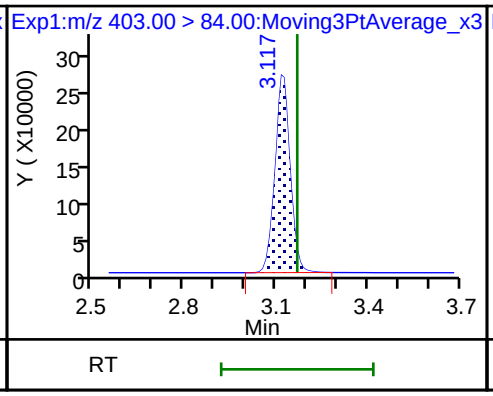
67 Perfluoro(2-propoxypropanoic) acid



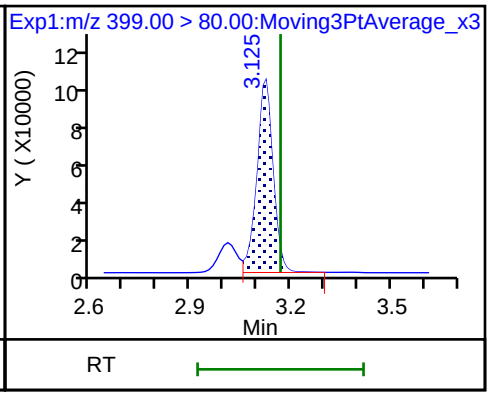
D 64 13C3 HFPO-DA



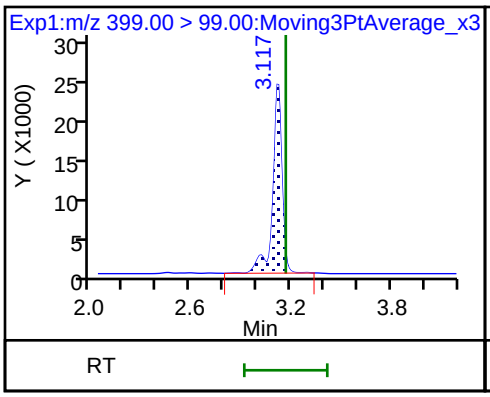
D 11 18O2 PFHxS



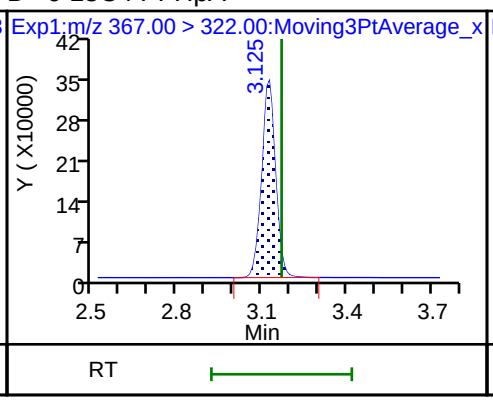
8 Perfluorohexanesulfonic acid



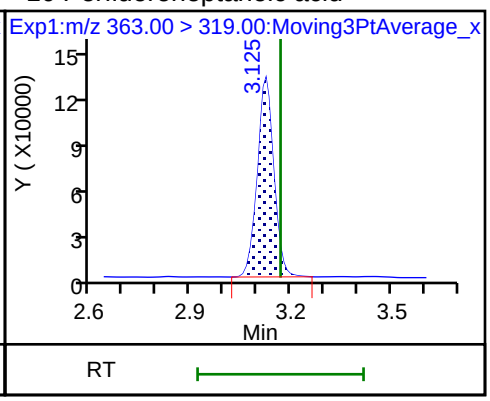
8 Perfluorohexanesulfonic acid



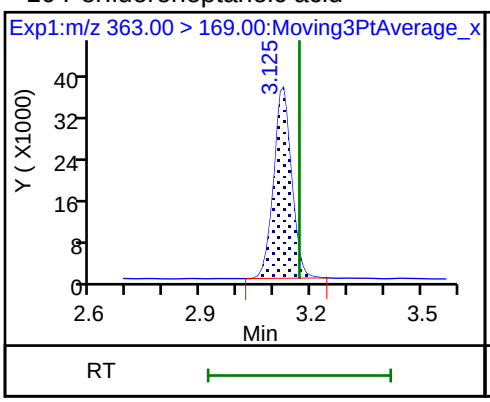
D 9 13C4 PFHpA



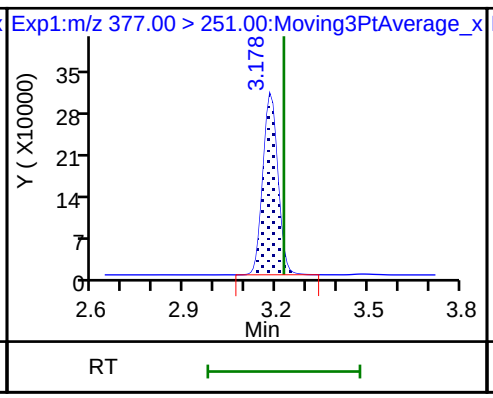
10 Perfluoroheptanoic acid



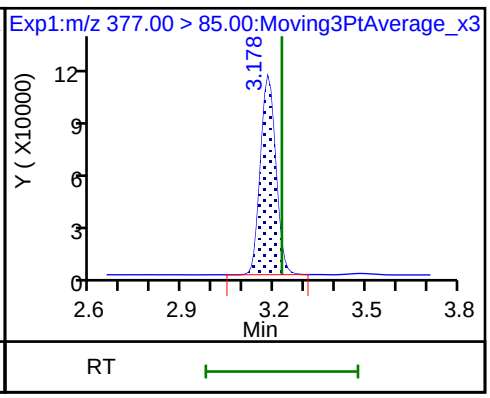
10 Perfluoroheptanoic acid



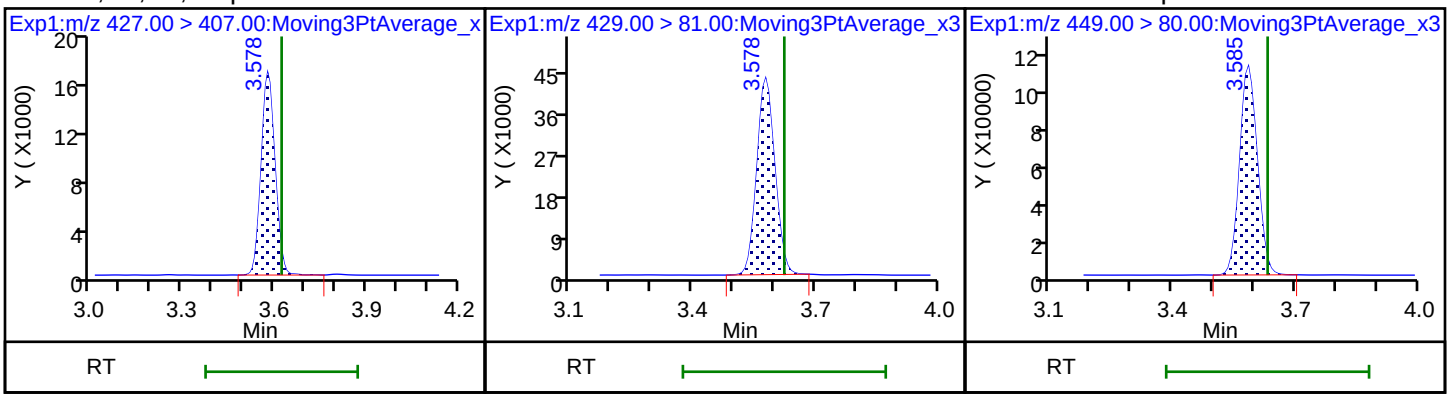
77 DONA



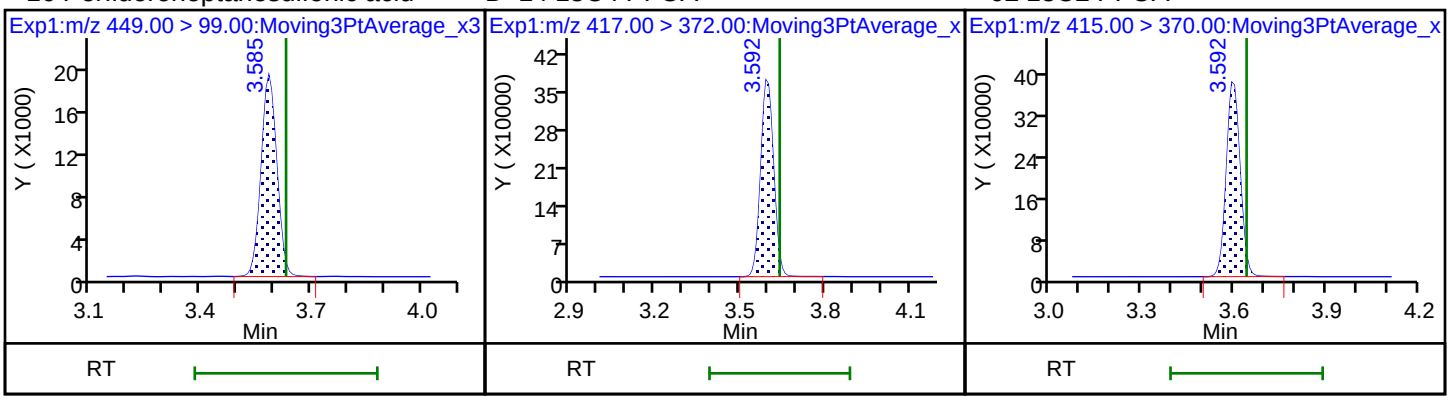
77 DONA



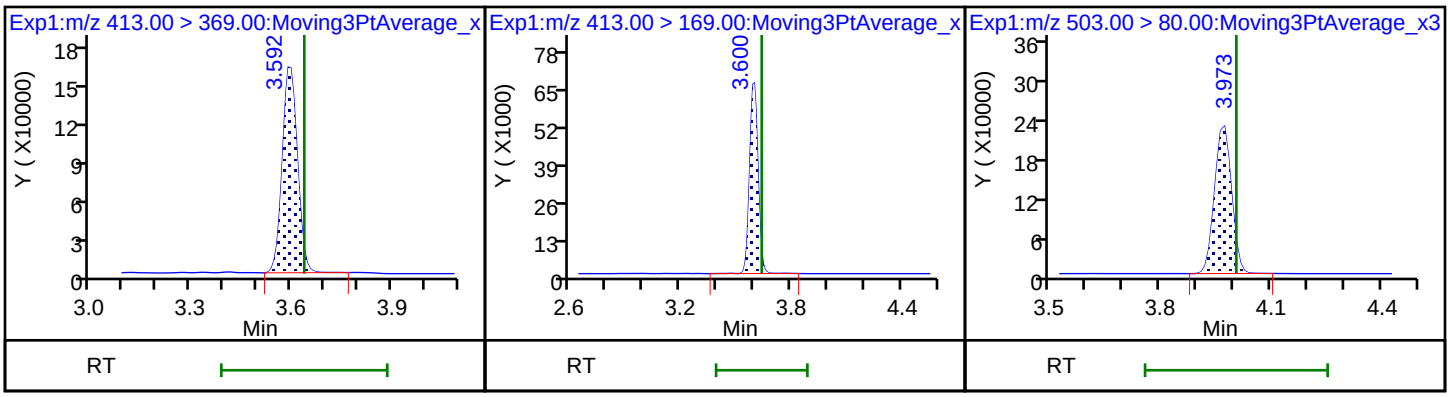
13 1H,1H,2H,2H-perfluorooctanesulfonD 12 M2-6:2 FTS 16 Perfluoroheptanesulfonic acid



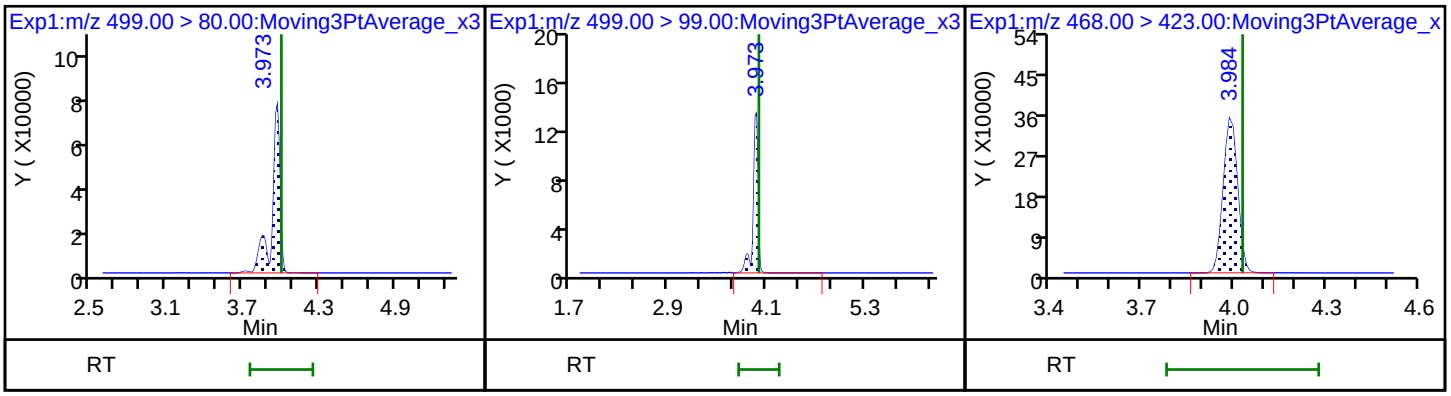
16 Perfluoroheptanesulfonic acid D 14 13C4 PFOA * 62 13C2 PFOA



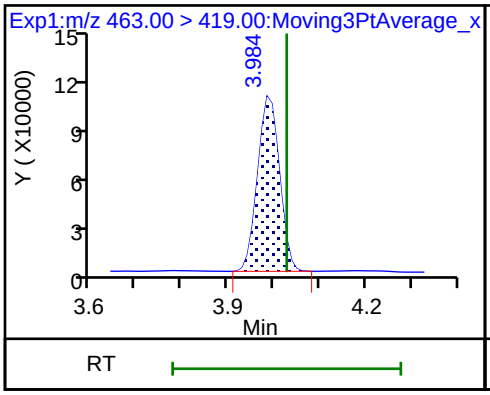
15 Perfluorooctanoic acid 15 Perfluorooctanoic acid D 18 13C4 PFOS



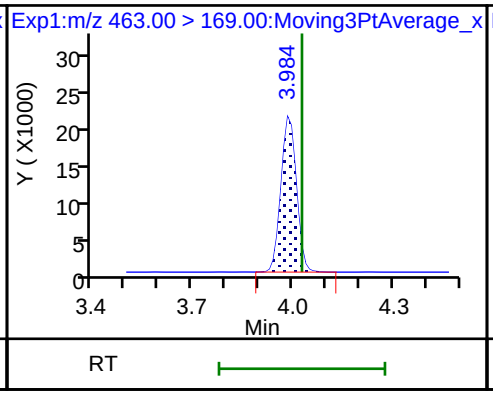
17 Perfluorooctanesulfonic acid 17 Perfluorooctanesulfonic acid D 19 13C5 PFNA



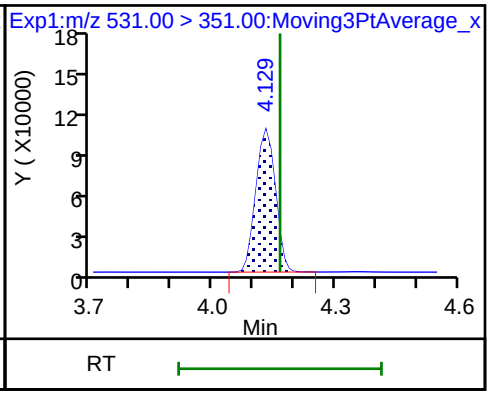
20 Perfluorononanoic acid



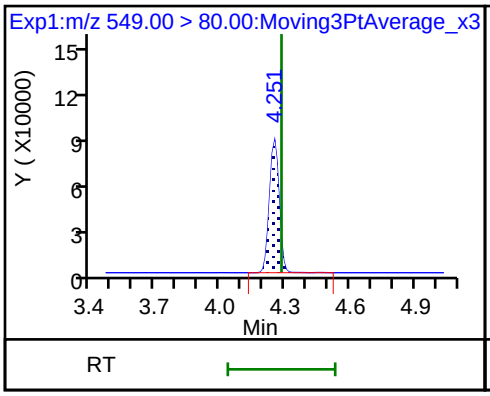
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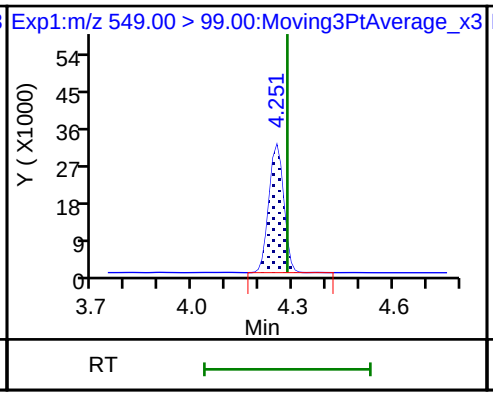
69 9-Chlorohexadecafluoro-3-oxanonane



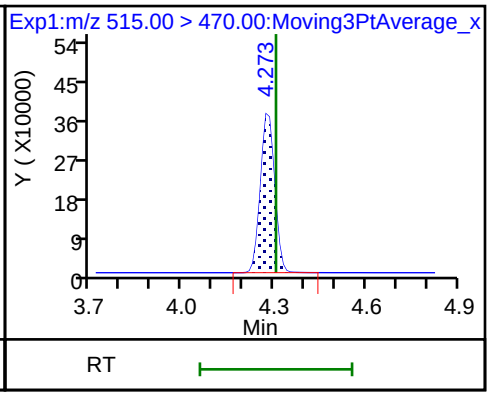
68 Perfluorononanesulfonic acid



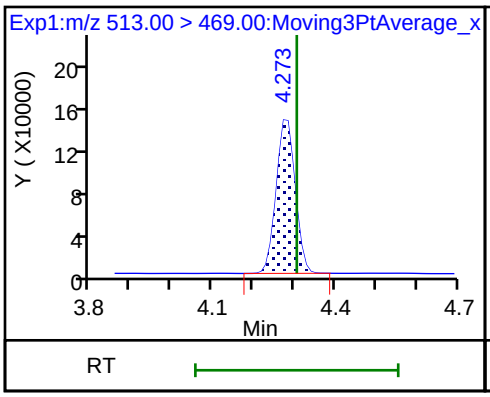
68 Perfluorononanesulfonic acid



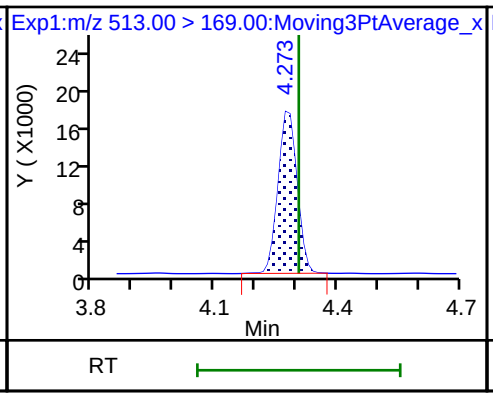
D 23 13C2 PFDA



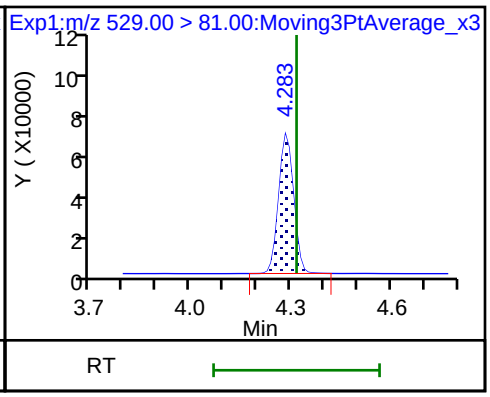
24 Perfluorodecanoic acid



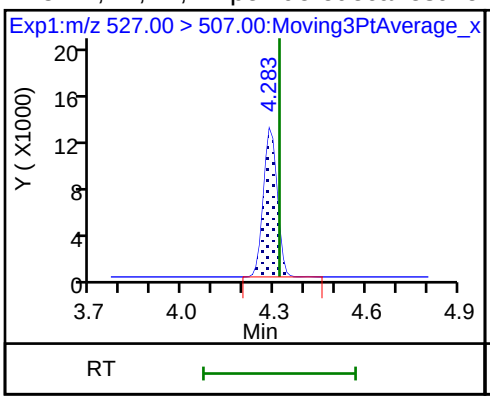
24 Perfluorodecanoic acid



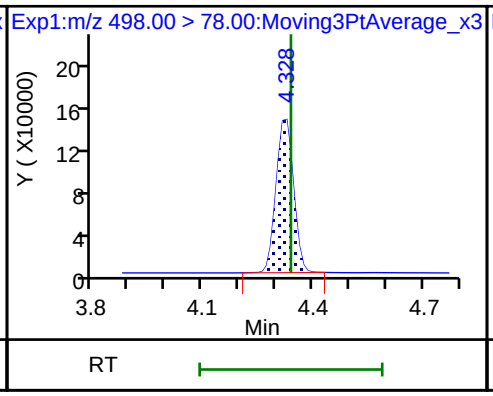
D 26 M2-8:2 FTS



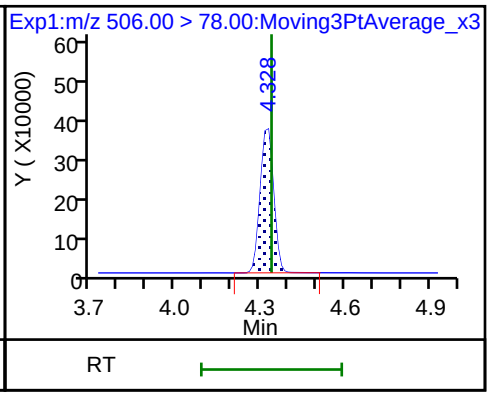
25 1H,1H,2H,2H-perfluorodecanesulfoni



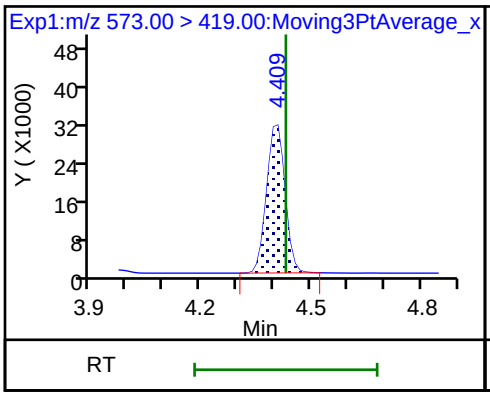
22 Perfluorooctanesulfonamide



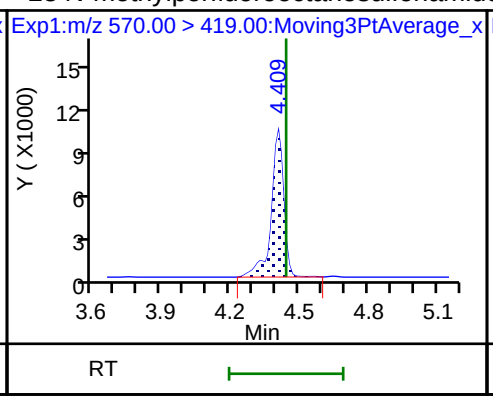
D 21 13C8 FOSA



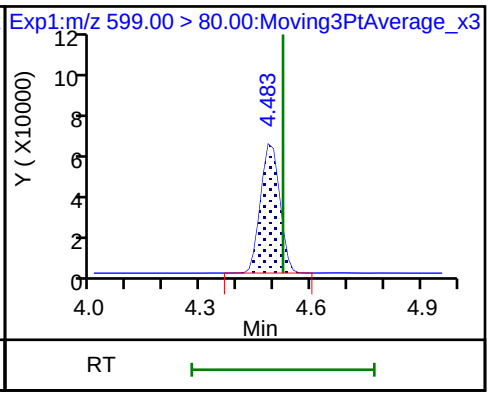
D 27 d3-NMeFOSAA



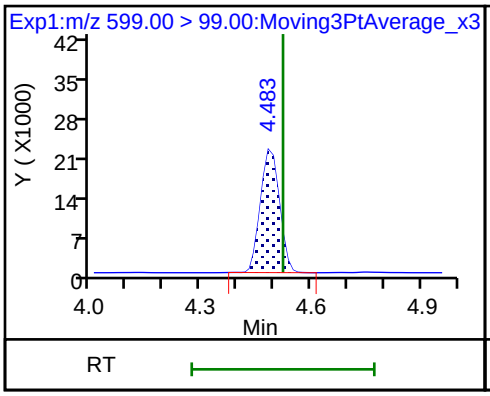
28 N-methylperfluorooctanesulfonamido



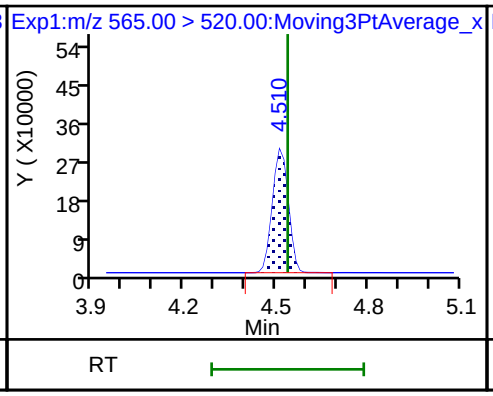
29 Perfluorodecanesulfonic acid



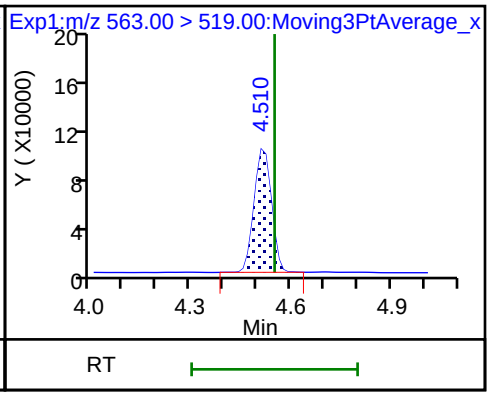
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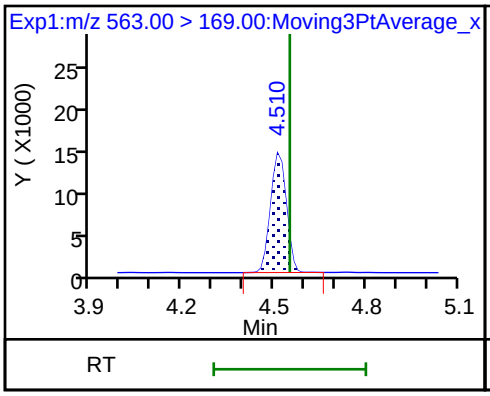
D 30 13C2 PFUnA



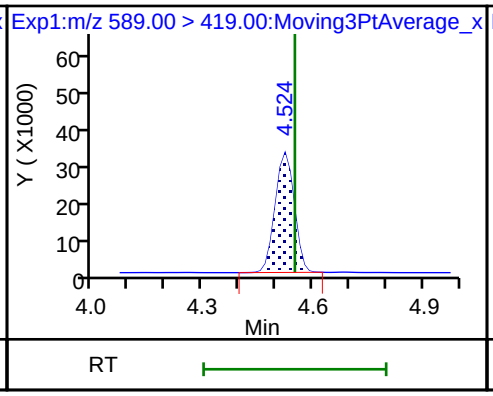
31 Perfluoroundecanoic acid



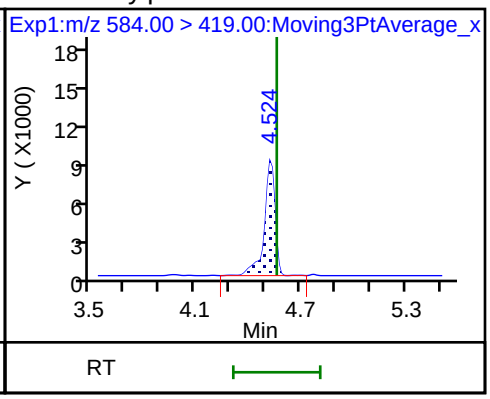
31 Perfluoroundecanoic acid



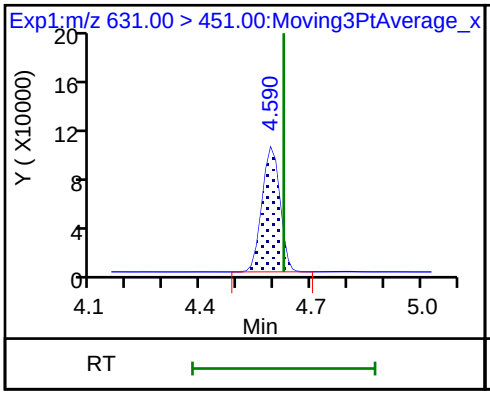
D 32 d5-NEtFOSAA



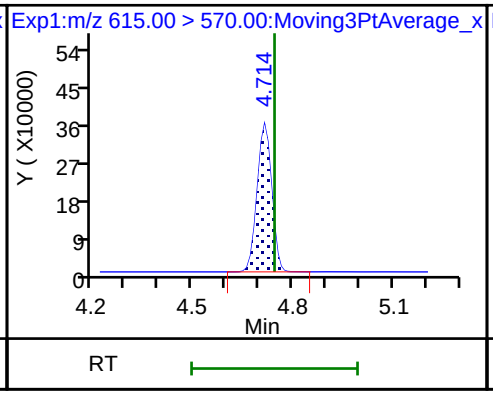
33 N-ethylperfluorooctanesulfonamidoa



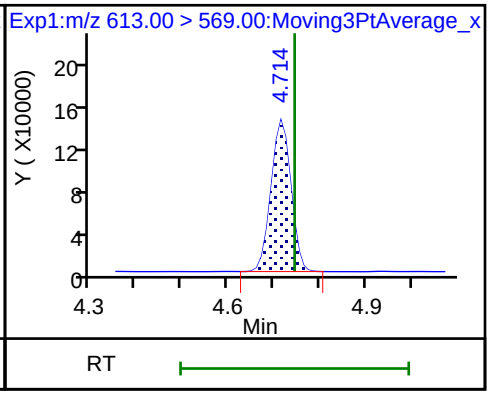
66 11-Chloroeicosafluoro-3-oxaundecan



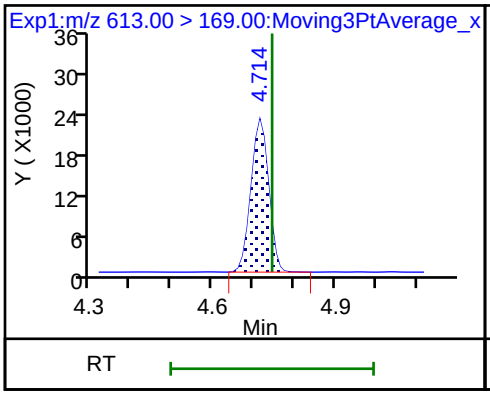
D 36 13C2 PFDoA



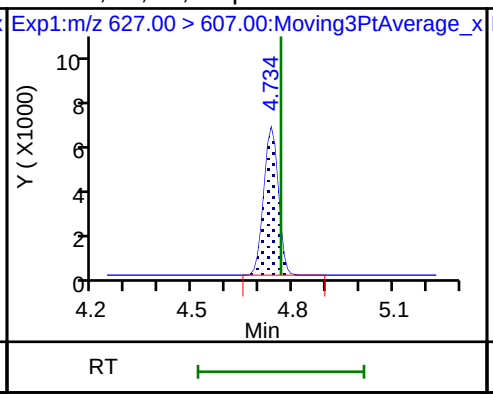
37 Perfluorododecanoic acid



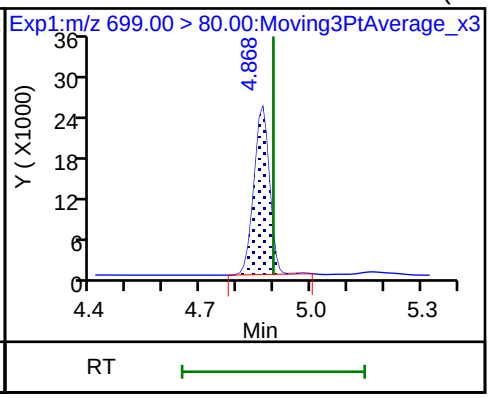
37 Perfluorododecanoic acid



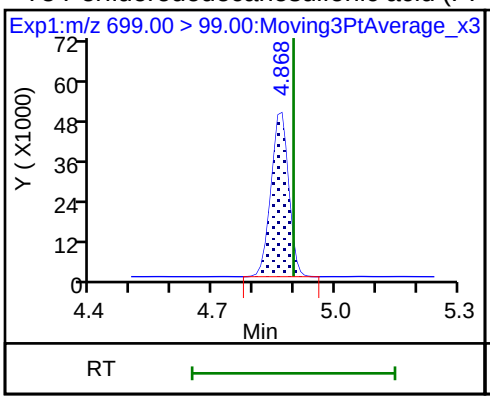
74 1H,1H,2H,2H-perfluorododecanesulfo



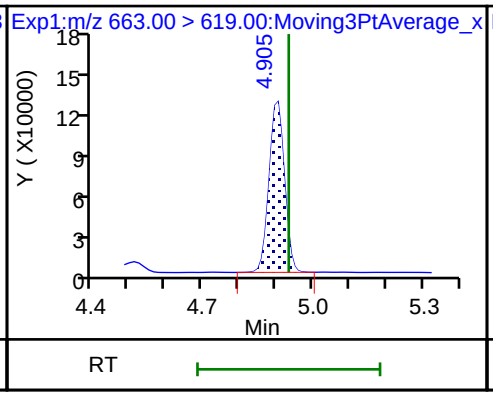
75 Perfluorododecanesulfonic acid (PF



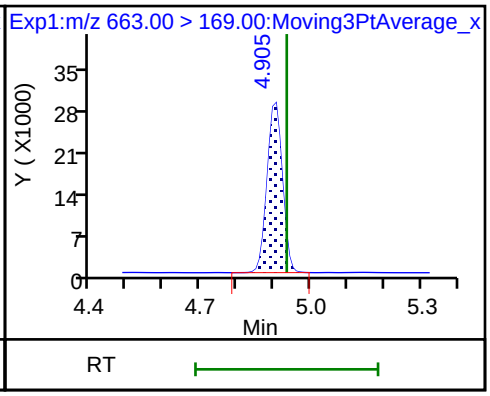
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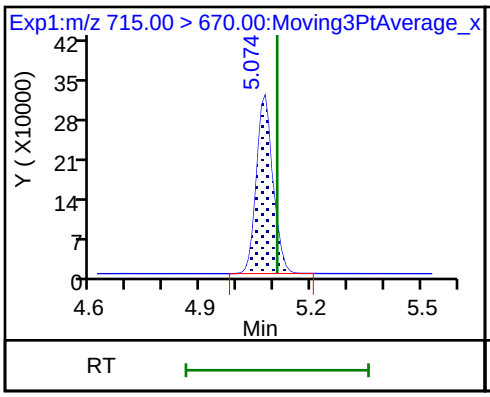
41 Perfluorotridecanoic acid



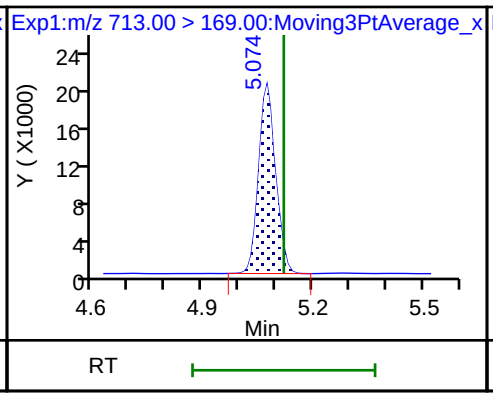
41 Perfluorotridecanoic acid



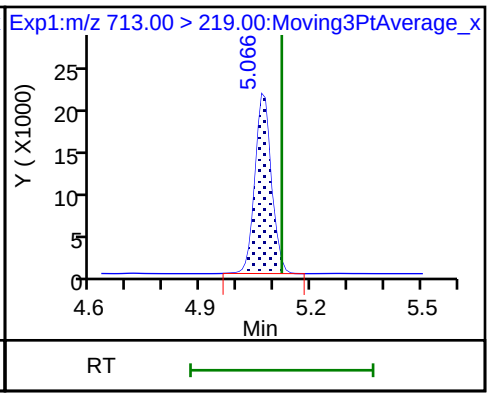
D 43 13C2 PFTeDA



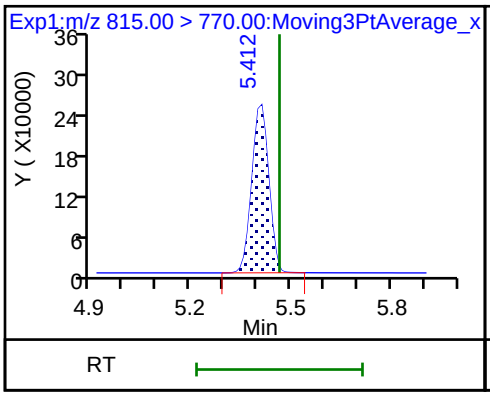
42 Perfluorotetradecanoic acid



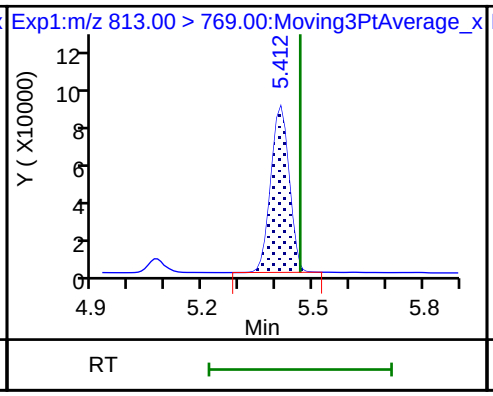
42 Perfluorotetradecanoic acid



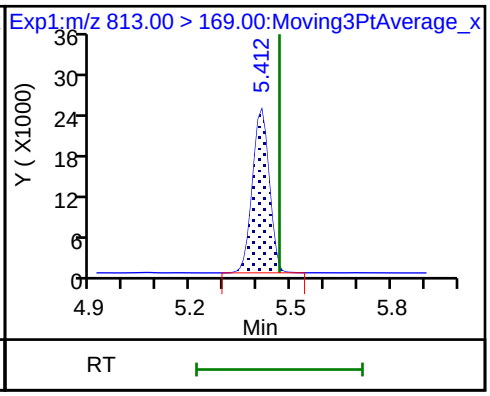
D 44 13C2 PFHxDA



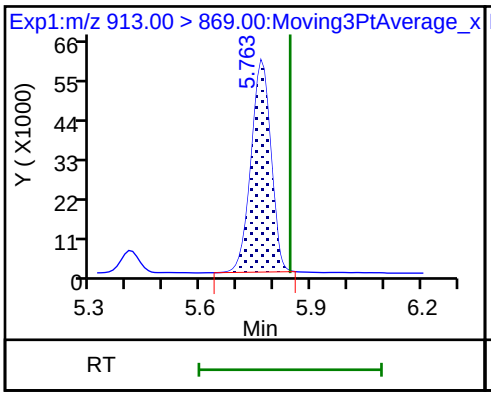
45 Perfluorohexadecanoic acid



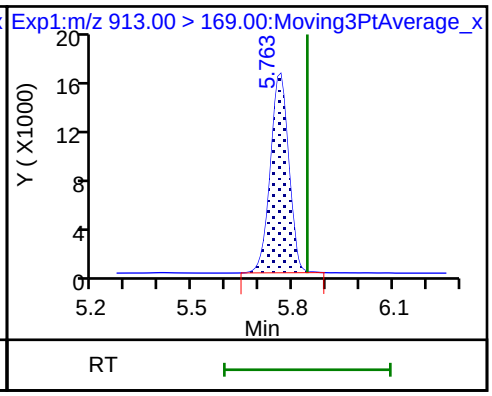
45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid



46 Perfluorooctadecanoic acid



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Burlington

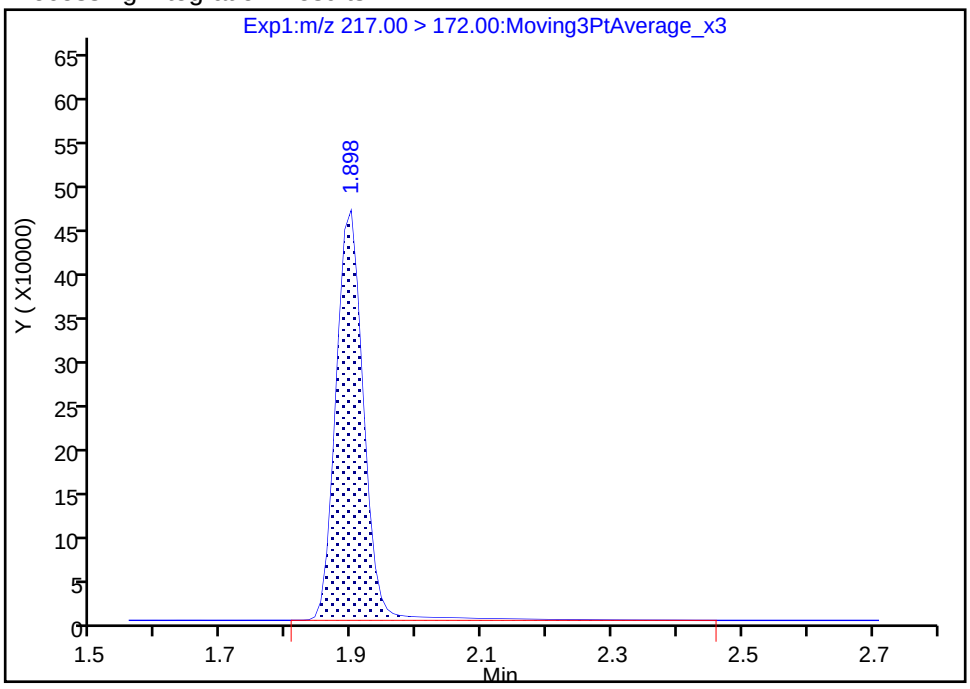
Data File:	\\ChromNA\Burlington\ChromData\LC812\20200225-40162.b\SC022520C20.d				
Injection Date:	25-Feb-2020 21:32:38	Instrument ID:	LC812		
Lims ID:	480-166551-A-1-C MSD				
Client ID:	SW-01-021920-EC-MSD				
Operator ID:	lc812tech	ALS Bottle#:	20	Worklist Smp#:	20
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFC_LC812	Limit Group:	LC_PFC_ICAL		
Column:	C-18 (4.60 mm)	Detector	EXP1		

D 1 13C4 PFBA, CAS: STL00992

Signal: 1

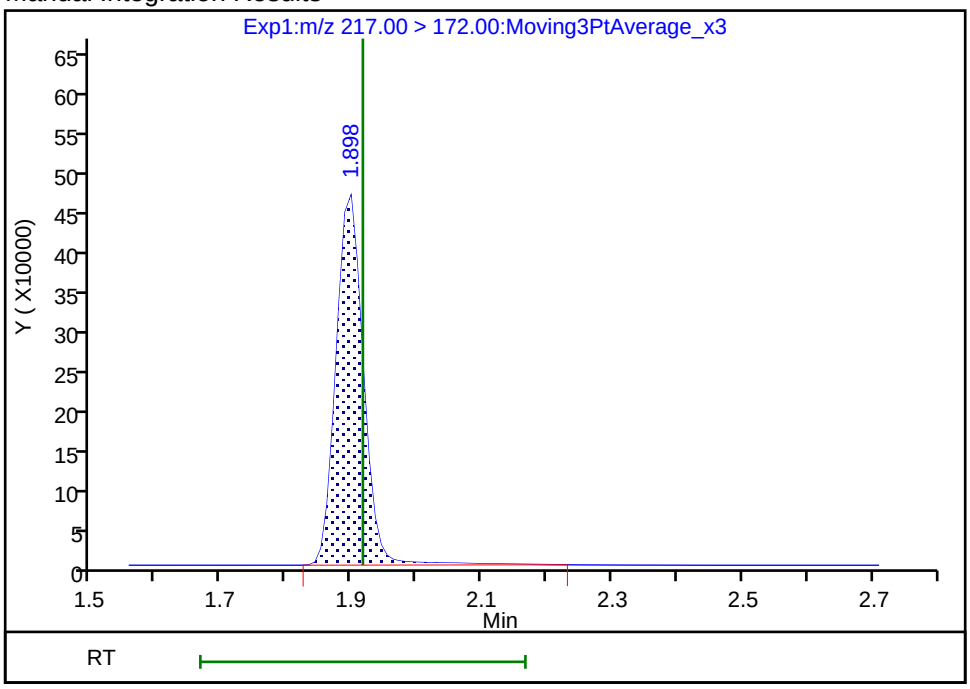
Processing Integration Results

RT: 1.90
Area: 1379187
Amount: 2.811938
Amount Units: ng/ml



Manual Integration Results

RT: 1.90
Area: 1369415
Amount: 2.792015
Amount Units: ng/ml



Reviewer: murrayjw, 26-Feb-2020 11:23:10

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

LCMS ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Instrument ID: LC812 Start Date: 02/10/2020 11:15

Analysis Batch Number: 152172 End Date: 02/10/2020 12:54

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		02/10/2020 11:15	1		C-18 4.6(mm)
ZZZZZ		02/10/2020 11:24	1		C-18 4.6(mm)
ZZZZZ		02/10/2020 11:32	1		C-18 4.6(mm)
ZZZZZ		02/10/2020 11:40	1		C-18 4.6(mm)
IC 200-152172/5		02/10/2020 11:48	1	SC021020ICAL005.d	C-18 4.6(mm)
IC 200-152172/6		02/10/2020 11:56	1	SC021020ICAL006.d	C-18 4.6(mm)
IC 200-152172/7		02/10/2020 12:04	1	SC021020ICAL007.d	C-18 4.6(mm)
ICIS 200-152172/8		02/10/2020 12:13	1	SC021020ICAL008.d	C-18 4.6(mm)
IC 200-152172/9		02/10/2020 12:21	1	SC021020ICAL009.d	C-18 4.6(mm)
IC 200-152172/10		02/10/2020 12:29	1	SC021020ICAL010.d	C-18 4.6(mm)
ICB 200-152172/11		02/10/2020 12:37	1		C-18 4.6(mm)
ICV 200-152172/12		02/10/2020 12:45	1	SC021020ICAL012.d	C-18 4.6(mm)
ZZZZZ		02/10/2020 12:54	1		C-18 4.6(mm)

537 (modified)

LCMS ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Instrument ID: LC812 Start Date: 02/25/2020 12:50

Analysis Batch Number: 152693 End Date: 02/25/2020 15:11

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		02/25/2020 12:50	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 12:59	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 13:07	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 13:15	1		C-18 4.6(mm)
CCVL 200-152693/5		02/25/2020 13:23	1	SC022520A05.d	C-18 4.6(mm)
CCVIS 200-152693/6		02/25/2020 13:32	1	SC022520A06.d	C-18 4.6(mm)
ZZZZZ		02/25/2020 13:40	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 13:48	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 13:57	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 14:05	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 14:13	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 14:21	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 14:30	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 14:38	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 14:46	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 14:55	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 15:03	1		C-18 4.6(mm)
CCV 200-152693/18		02/25/2020 15:11	1		C-18 4.6(mm)

537 (modified)

LCMS ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-166551-1

SDG No.:

Instrument ID: LC812 Start Date: 02/25/2020 18:55

Analysis Batch Number: 152696 End Date: 02/25/2020 23:53

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 200-152696/1		02/25/2020 18:55	1	SC022520C01.d	C-18 4.6(mm)
MB 200-152665/1-A		02/25/2020 19:03	1	SC022520C02.d	C-18 4.6(mm)
LCS 200-152665/2-A		02/25/2020 19:11	1	SC022520C03.d	C-18 4.6(mm)
ZZZZZ		02/25/2020 19:20	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 19:28	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 19:36	10		C-18 4.6(mm)
ZZZZZ		02/25/2020 19:44	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 19:53	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 20:01	5		C-18 4.6(mm)
ZZZZZ		02/25/2020 20:09	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 20:18	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 20:26	50		C-18 4.6(mm)
ZZZZZ		02/25/2020 20:34	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 20:42	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 20:51	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 20:59	1		C-18 4.6(mm)
CCV 200-152696/17		02/25/2020 21:07	1	SC022520C17.d	C-18 4.6(mm)
480-166551-1		02/25/2020 21:16	1	SC022520C18.d	C-18 4.6(mm)
480-166551-1 MS		02/25/2020 21:24	1	SC022520C19.d	C-18 4.6(mm)
480-166551-1 MSD		02/25/2020 21:32	1	SC022520C20.d	C-18 4.6(mm)
480-166551-2		02/25/2020 21:40	1	SC022520C21.d	C-18 4.6(mm)
480-166551-3		02/25/2020 21:49	1	SC022520C22.d	C-18 4.6(mm)
480-166551-4		02/25/2020 21:57	1	SC022520C23.d	C-18 4.6(mm)
ZZZZZ		02/25/2020 22:05	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 22:14	1		C-18 4.6(mm)
CCV 200-152696/26		02/25/2020 22:22	1	SC022520C26.d	C-18 4.6(mm)
ZZZZZ		02/25/2020 22:30	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 22:38	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 22:47	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 22:55	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 23:03	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 23:12	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 23:20	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 23:28	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 23:36	1		C-18 4.6(mm)
ZZZZZ		02/25/2020 23:45	1		C-18 4.6(mm)
CCV 200-152696/37		02/25/2020 23:53	1		C-18 4.6(mm)

537 (modified)

LCMS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Burlingt Job No.: 480-166551-1

SDG No.:

Batch Number: 152665 Batch Start Date: 02/24/20 13:43 Batch Analyst: Dean, Nathan

Batch Method: 3535 Batch End Date: 02/24/20 17:15

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	LCMPFCIDASPK 00014	LCPFC32MTXStk 00013
MB 200-152665/1		3535, 537 (modified)		250 g	0 g	250 mL	10 mL	25 uL	
LCS 200-152665/2		3535, 537 (modified)		250 g	0 g	250 mL	10 mL	25 uL	25 uL
480-166551-A-1	SW-01-021920-EC	3535, 537 (modified)	T	311.65 g	25.91 g	285.7 mL	10 mL	25 uL	
480-166551-A-1 MS	SW-01-021920-EC-MS	3535, 537 (modified)	T	309.29 g	26.02 g	283.3 mL	10 mL	25 uL	25 uL
480-166551-A-1 MSD	SW-01-021920-EC-MSD	3535, 537 (modified)	T	302.86 g	25.87 g	277 mL	10 mL	25 uL	25 uL
480-166551-A-2	FB-021920	3535, 537 (modified)	T	313.65 g	25.96 g	287.7 mL	10 mL	25 uL	
480-166551-A-3	BW-01-021920-EC	3535, 537 (modified)	T	314.70 g	26.15 g	288.6 mL	10 mL	25 uL	
480-166551-A-4	FD-021920	3535, 537 (modified)	T	318.03 g	26.34 g	291.7 mL	10 mL	25 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	PFAS21 IS Stk 00016					
MB 200-152665/1		3535, 537 (modified)		10 uL					
LCS 200-152665/2		3535, 537 (modified)		10 uL					
480-166551-A-1	SW-01-021920-EC	3535, 537 (modified)	T	10 uL					
480-166551-A-1 MS	SW-01-021920-EC-MS	3535, 537 (modified)	T	10 uL					
480-166551-A-1 MSD	SW-01-021920-EC-MSD	3535, 537 (modified)	T	10 uL					
480-166551-A-2	FB-021920	3535, 537 (modified)	T	10 uL					
480-166551-A-3	BW-01-021920-EC	3535, 537 (modified)	T	10 uL					
480-166551-A-4	FD-021920	3535, 537 (modified)	T	10 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

LCMS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Burlingt Job No.: 480-166551-1

SDG No.:

Batch Number: 152665 Batch Start Date: 02/24/20 13:43 Batch Analyst: Dean, Nathan

Batch Method: 3535 Batch End Date: 02/24/20 17:15

Batch Notes	
Balance ID	M02926
Manifold ID	IDA 3 & 4
Rinse Solvent Lot	1363984
Rinse Solvent Name	Hexane
Solvent Lot #	1364954
Solvent Name	Methanol (0.3% NH4OH)
SPE Cartridge Lot ID	Lot 004839175A
SPE Cartridge Type	Oasis WAX 500 mg
Analyst ID - Spike Analyst	NDD
Analyst ID - Spike Witness Analyst	JWM

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Subcontract Data

Shipping and Receiving Documents

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Client Information	Sampler: ROBERT MURPHY	Lab PM: Schove, John R	Carrier Tracking No(s):	COC No: 480-135966-30599.1
Client Contact: Ms. Ann Marie Kropovitch	Phone: 716-903-1346	E-Mail: john.schove@testamericainc.com		Page: Page 1 of 1
Company: AECOM				Job #:

Address: 257 West Genesee Street Suite 400	Due Date Requested:
City: Buffalo	TAT Requested (days): STANDARD TAT
State, Zip: NY, 14202-2657	
Phone: 716-923-1137(Tel)	PO #: 60623657 TASK 01 Purchase Order Requested
Email: ann.marie.kropovitch@aecom.com	WO #:
Project Name: Residential PFAS Water Analysis	Project #: 48020982
Site:	SSOW#:

Analysis Requested

Preservation Codes:
A - HCL M - Hexane
B - NaOH N - None
C - Zn Acetate O - AsNaO2
D - Nitric Acid P - Na2O4S

480-166551 Chain of Custody

cahydrate

cify)

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC_IDA - PFAS, Standard List (21 analytes)	Total Number of	Special Instructions/Note:
			Preservation Code:				N		
SW-01-021920-EC	2/19/20	0820	G	Water			2	2	
SW-01-021920-EC-MS	2/19/20	0820	G	Water		Y	2	2	MATRIX SPIKE
SW-01-021920-EC-MSD	2/19/20	0820	G	Water		Y	2	2	MATRIX SPIKE DUPLICATE
FB-021920	2/19/20	0822	G	Water			2	2	
BW-01-021920-EC	2/19/20	1310	G	Water			2	2	
FD-021920	2/19/20	—	G	Water			2	2	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: DROP OFF

Relinquished by: Robert J Murphy	Date/Time: 2/19/20 1550	Company: AECOM	Received by: Unknown Cikolp	Date/Time: 02/19/20 1558	Company: TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 3.2 #1 ICE

Ver: 01/16/2019

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

480-166551 Chain of Custody

Eurofins | Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Schove, John R		No: 480-54505.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: john.schove@testamericainc.com	State of Origin: New York	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - New York		Job #: 480-166551-1
Address: 30 Community Drive, Suite 11,	Due Date Requested: 3/4/2020			
City: South Burlington	TAT Requested (days):			
State, Zip: VT, 05403				
Phone: 802-660-1990(Tel) 802-660-1919(Fax)	PO #:			
Email:	WO #:			
Project Name: Residential PFAS Water Analysis	Project #: 48020982			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC_IDA/3535_IWT PFAS, Standard List (21 analytes)	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
SW-01-021920-EC (480-166551-1)	2/19/20	08:20 Eastern		Water			X	2	
SW-01-021920-EC (480-166551-1MS)	2/19/20	08:20 Eastern	MS	Water			X	2	
SW-01-021920-EC (480-166551-1MSD)	2/19/20	08:20 Eastern	MSD	Water			X	2	
FB-021920-EC (480-166551-2)	2/19/20	08:22 Eastern		Water			X	2	
BW-01-021920-EC (480-166551-3)	2/19/20	13:10 Eastern		Water			X	2	
FD-021920 (480-166551-4)	2/19/20	Eastern		Water			X	2	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 4	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Thomas Kolb	2/20/20 1700	TA		2/21/2020 10:35	TAB URL
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact:	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
Δ Yes (Δ No)	99 28 52	1.0

Ver: 01/16/2019



ORIGIN ID:DKKA (716) 691-2600
CHRIS KOLB
TESTAMERICA
10 HAZELWOOD DR

AMHERST, NY 14228
UNITED STATES US

SHIP DATE: 20FEB20
ACTWGT: 21.50 LB
CAD: 846654/CAFE3312
DIMS: 19x15x10 IN

BILL RECIPIENT

TO SAMPLE MGT.
TA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 660-1990
REF: TA BURLINGTON

565C2/049E/05A2

FedEx Express

J191219082001uv

FRI - 21 FEB 10:30A
PRIORITY OVERNIGHT

TRK# 0201 4276 0722 6585

XH BTVA

05403
VT-US BTV

Login Sample Receipt Checklist

Client: AECOM

Job Number: 480-166551-1

Login Number: 166551
List Number: 1
Creator: Kolb, Chris M

List Source: Eurofins TestAmerica, Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	aecom
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: AECOM

Job Number: 480-166551-1

Login Number: 166551
List Number: 2
Creator: Khudaier, Zahraa

List Source: Eurofins TestAmerica, Burlington
List Creation: 02/21/20 01:31 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	992852
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.0ºC
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

eurofins | Environment Testing America



ANALYTICAL REPORT

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

Laboratory Job ID: 480-174119-1
Client Project/Site: 60583042 - Wyoming County FTC

For:
AECOM
257 West Genesee Street
Suite 400
Buffalo, New York 14202-2657

Attn: Colin Wasteneys

Authorized for release by:
8/31/2020 10:45:33 AM
Rebecca Jones, Project Management Assistant I
Rebecca.Jones@Eurofinset.com

Designee for

John Schove, Project Manager II
(716)504-9838
John.Schove@Eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: AECOM
Job ID: 480-174119-1
Project/Site: 60583042 - Wyoming County FTC

Qualifiers

GC/MS VOA

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

Glossary

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

Case Narrative

Client: AECOM
Project/Site: 60583042 - Wyoming County FTC

Job ID: 480-174119-1

Job ID: 480-174119-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative
480-174119-1

Comments
No additional comments.

Receipt
The samples were received on 8/21/2020 4:55 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.7º C.

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

Detection Summary

Client: AECOM
Job ID: 480-174119-1
Project/Site: 60583042 - Wyoming County FTC

Client Sample ID: BW-01-082020 — Lab Sample ID: 480-174119-1

No Detections.

Client Sample ID: FD-082020 — Lab Sample ID: 480-174119-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
t-Butanol	1.4	J	2.0	0.34	ug/L	1		524.2	Total/NA

Client Sample ID: SPRING-082020 — Lab Sample ID: 480-174119-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	6.4		0.50	0.14	ug/L	1		524.2	Total/NA
1,1-Dichloroethene	1.0		0.50	0.19	ug/L	1		524.2	Total/NA
trans-1,2-Dichloroethene	0.62		0.50	0.13	ug/L	1		524.2	Total/NA
Trichloroethene	7.5		0.50	0.11	ug/L	1		524.2	Total/NA
Vinyl chloride	0.26	J	0.50	0.25	ug/L	1		524.2	Total/NA
1,1,1-Trichloroethane - DL	44		1.0	0.34	ug/L	2		524.2	Total/NA
cis-1,2-Dichloroethene - DL	52		1.0	0.28	ug/L	2		524.2	Total/NA
Tetrachloroethene - DL	45		1.0	0.28	ug/L	2		524.2	Total/NA

Client Sample ID: SW-01-082020 — Lab Sample ID: 480-174119-4

No Detections.

Client Sample ID: TB-082020 — Lab Sample ID: 480-174119-5

No Detections.

This Detection Summary does not include radiochemical test results.

Client: AECOM
Job ID: 480-174119-1
Project/Site: 60583042 - Wyoming County FTC

Client Sample ID: BW-01-082020
Lab Sample ID: 480-174119-1
Date Collected: 08/20/20 14:05
Matrix: Water
Date Received: 08/21/20 16:55

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.12	ug/L			08/28/20 13:54	1
1,1,1-Trichloroethane	ND		0.50	0.17	ug/L			08/28/20 13:54	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.15	ug/L			08/28/20 13:54	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.14	ug/L			08/28/20 13:54	1
1,1,2-Trichloroethane	ND		0.50	0.090	ug/L			08/28/20 13:54	1
1,1-Dichloroethane	ND		0.50	0.14	ug/L			08/28/20 13:54	1
1,1-Dichloroethene	ND		0.50	0.19	ug/L			08/28/20 13:54	1
1,1-Dichloropropene	ND		0.50	0.18	ug/L			08/28/20 13:54	1
1,2,3-Trichlorobenzene	ND		0.50	0.10	ug/L			08/28/20 13:54	1
1,2,3-Trichloropropane	ND		0.50	0.14	ug/L			08/28/20 13:54	1
1,2,4-Trichlorobenzene	ND		0.50	0.10	ug/L			08/28/20 13:54	1
1,2,4-Trimethylbenzene	ND		0.50	0.10	ug/L			08/28/20 13:54	1
1,2-Dibromo-3-Chloropropane	ND		0.50	0.35	ug/L			08/28/20 13:54	1
1,2-Dibromoethane	ND		0.50	0.13	ug/L			08/28/20 13:54	1
1,2-Dichlorobenzene	ND		0.50	0.11	ug/L			08/28/20 13:54	1
1,2-Dichloroethane	ND		0.50	0.11	ug/L			08/28/20 13:54	1
1,2-Dichloropropane	ND		0.50	0.11	ug/L			08/28/20 13:54	1
1,3,5-Trimethylbenzene	ND		0.50	0.12	ug/L			08/28/20 13:54	1
1,3-Dichlorobenzene	ND		0.50	0.090	ug/L			08/28/20 13:54	1
1,3-Dichloropropane	ND		0.50	0.090	ug/L			08/28/20 13:54	1
1,4-Dichlorobenzene	ND		0.50	0.090	ug/L			08/28/20 13:54	1
2,2-Dichloropropane	ND		0.50	0.15	ug/L			08/28/20 13:54	1
2-Butanone (MEK)	ND		2.5	1.1	ug/L			08/28/20 13:54	1
2-Chlorotoluene	ND		0.50	0.10	ug/L			08/28/20 13:54	1
2-Hexanone	ND		2.5	0.36	ug/L			08/28/20 13:54	1
4-Chlorotoluene	ND		0.50	0.11	ug/L			08/28/20 13:54	1
4-Isopropyltoluene	ND		0.50	0.13	ug/L			08/28/20 13:54	1
4-Methyl-2-pentanone (MIBK)	ND		2.5	0.26	ug/L			08/28/20 13:54	1
Acetone	ND		3.0	2.9	ug/L			08/28/20 13:54	1
Acrylonitrile	ND		0.50	0.37	ug/L			08/28/20 13:54	1
Allyl chloride	ND		0.50	0.10	ug/L			08/28/20 13:54	1
Benzene	ND		0.50	0.11	ug/L			08/28/20 13:54	1
Bromobenzene	ND		0.50	0.070	ug/L			08/28/20 13:54	1
Bromochloromethane	ND		0.50	0.10	ug/L			08/28/20 13:54	1
Bromoform	ND		0.50	0.080	ug/L			08/28/20 13:54	1
Bromomethane	ND		0.50	0.14	ug/L			08/28/20 13:54	1
Carbon disulfide	ND		0.50	0.10	ug/L			08/28/20 13:54	1
Carbon tetrachloride	ND		0.50	0.17	ug/L			08/28/20 13:54	1
Chlorobenzene	ND		0.50	0.10	ug/L			08/28/20 13:54	1
Chlorodibromomethane	ND		0.50	0.15	ug/L			08/28/20 13:54	1
Chloroethane	ND		0.50	0.23	ug/L			08/28/20 13:54	1
Chloroform	ND		0.50	0.12	ug/L			08/28/20 13:54	1
Chloromethane	ND		0.50	0.18	ug/L			08/28/20 13:54	1
cis-1,2-Dichloroethene	ND		0.50	0.14	ug/L			08/28/20 13:54	1
cis-1,3-Dichloropropene	ND		0.50	0.080	ug/L			08/28/20 13:54	1
Dibromomethane	ND		0.50	0.10	ug/L			08/28/20 13:54	1
Dichlorobromomethane	ND		0.50	0.090	ug/L			08/28/20 13:54	1
Dichlorodifluoromethane	ND		0.50	0.30	ug/L			08/28/20 13:54	1
Ethyl ether	ND		0.50	0.14	ug/L			08/28/20 13:54	1

Client: AECOM
Job ID: 480-174119-1
Project/Site: 60583042 - Wyoming County FTC

Client Sample ID: BW-01-082020
Lab Sample ID: 480-174119-1
Date Collected: 08/20/20 14:05
Matrix: Water
Date Received: 08/21/20 16:55

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		0.50	0.090	ug/L			08/28/20 13:54	1
Hexachlorobutadiene	ND		0.50	0.19	ug/L			08/28/20 13:54	1
Iodomethane	ND		0.50	0.15	ug/L			08/28/20 13:54	1
Isopropylbenzene	ND		0.50	0.14	ug/L			08/28/20 13:54	1
Methyl tert-butyl ether	ND		0.50	0.090	ug/L			08/28/20 13:54	1
Methylene Chloride	ND		0.50	0.42	ug/L			08/28/20 13:54	1
m-Xylene & p-Xylene	ND		1.0	0.24	ug/L			08/28/20 13:54	1
Naphthalene	ND		0.50	0.080	ug/L			08/28/20 13:54	1
n-Butylbenzene	ND		0.50	0.14	ug/L			08/28/20 13:54	1
N-Propylbenzene	ND		0.50	0.14	ug/L			08/28/20 13:54	1
o-Xylene	ND		0.50	0.090	ug/L			08/28/20 13:54	1
sec-Butylbenzene	ND		0.50	0.15	ug/L			08/28/20 13:54	1
Styrene	ND		0.50	0.090	ug/L			08/28/20 13:54	1
t-Butanol	ND		2.0	0.34	ug/L			08/28/20 13:54	1
tert-Butylbenzene	ND		0.50	0.16	ug/L			08/28/20 13:54	1
Tetrachloroethene	ND		0.50	0.14	ug/L			08/28/20 13:54	1
Toluene	ND		0.50	0.11	ug/L			08/28/20 13:54	1
trans-1,2-Dichloroethene	ND		0.50	0.13	ug/L			08/28/20 13:54	1
trans-1,3-Dichloropropene	ND		0.50	0.13	ug/L			08/28/20 13:54	1
trans-1,4-Dichloro-2-butene	ND		0.50	0.090	ug/L			08/28/20 13:54	1
Trichloroethene	ND		0.50	0.11	ug/L			08/28/20 13:54	1
Trichlorofluoromethane	ND		0.50	0.27	ug/L			08/28/20 13:54	1
Trihalomethanes, Total	ND		0.50	0.080	ug/L			08/28/20 13:54	1
Vinyl chloride	ND		0.50	0.25	ug/L			08/28/20 13:54	1
Xylenes, Total	ND		0.50	0.32	ug/L			08/28/20 13:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*104*		*70 - 130*		*08/28/20 13:54*	*1*
1,2-Dichlorobenzene-d4	*101*		*70 - 130*		*08/28/20 13:54*	*1*

Client: AECOM
Job ID: 480-174119-1
Project/Site: 60583042 - Wyoming County FTC

Client Sample ID: FD-082020
Lab Sample ID: 480-174119-2
Date Collected: 08/20/20 00:00
Matrix: Water
Date Received: 08/21/20 16:55

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.12	ug/L			08/28/20 14:17	1
1,1,1-Trichloroethane	ND		0.50	0.17	ug/L			08/28/20 14:17	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.15	ug/L			08/28/20 14:17	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.14	ug/L			08/28/20 14:17	1
1,1,2-Trichloroethane	ND		0.50	0.090	ug/L			08/28/20 14:17	1
1,1-Dichloroethane	ND		0.50	0.14	ug/L			08/28/20 14:17	1
1,1-Dichloroethene	ND		0.50	0.19	ug/L			08/28/20 14:17	1
1,1-Dichloropropene	ND		0.50	0.18	ug/L			08/28/20 14:17	1
1,2,3-Trichlorobenzene	ND		0.50	0.10	ug/L			08/28/20 14:17	1
1,2,3-Trichloropropane	ND		0.50	0.14	ug/L			08/28/20 14:17	1
1,2,4-Trichlorobenzene	ND		0.50	0.10	ug/L			08/28/20 14:17	1
1,2,4-Trimethylbenzene	ND		0.50	0.10	ug/L			08/28/20 14:17	1
1,2-Dibromo-3-Chloropropane	ND		0.50	0.35	ug/L			08/28/20 14:17	1
1,2-Dibromoethane	ND		0.50	0.13	ug/L			08/28/20 14:17	1
1,2-Dichlorobenzene	ND		0.50	0.11	ug/L			08/28/20 14:17	1
1,2-Dichloroethane	ND		0.50	0.11	ug/L			08/28/20 14:17	1
1,2-Dichloropropane	ND		0.50	0.11	ug/L			08/28/20 14:17	1
1,3,5-Trimethylbenzene	ND		0.50	0.12	ug/L			08/28/20 14:17	1
1,3-Dichlorobenzene	ND		0.50	0.090	ug/L			08/28/20 14:17	1
1,3-Dichloropropane	ND		0.50	0.090	ug/L			08/28/20 14:17	1
1,4-Dichlorobenzene	ND		0.50	0.090	ug/L			08/28/20 14:17	1
2,2-Dichloropropane	ND		0.50	0.15	ug/L			08/28/20 14:17	1
2-Butanone (MEK)	ND		2.5	1.1	ug/L			08/28/20 14:17	1
2-Chlorotoluene	ND		0.50	0.10	ug/L			08/28/20 14:17	1
2-Hexanone	ND		2.5	0.36	ug/L			08/28/20 14:17	1
4-Chlorotoluene	ND		0.50	0.11	ug/L			08/28/20 14:17	1
4-Isopropyltoluene	ND		0.50	0.13	ug/L			08/28/20 14:17	1
4-Methyl-2-pentanone (MIBK)	ND		2.5	0.26	ug/L			08/28/20 14:17	1
Acetone	ND		3.0	2.9	ug/L			08/28/20 14:17	1
Acrylonitrile	ND		0.50	0.37	ug/L			08/28/20 14:17	1
Allyl chloride	ND		0.50	0.10	ug/L			08/28/20 14:17	1
Benzene	ND		0.50	0.11	ug/L			08/28/20 14:17	1
Bromobenzene	ND		0.50	0.070	ug/L			08/28/20 14:17	1
Bromochloromethane	ND		0.50	0.10	ug/L			08/28/20 14:17	1
Bromoform	ND		0.50	0.080	ug/L			08/28/20 14:17	1
Bromomethane	ND		0.50	0.14	ug/L			08/28/20 14:17	1
Carbon disulfide	ND		0.50	0.10	ug/L			08/28/20 14:17	1
Carbon tetrachloride	ND		0.50	0.17	ug/L			08/28/20 14:17	1
Chlorobenzene	ND		0.50	0.10	ug/L			08/28/20 14:17	1
Chlorodibromomethane	ND		0.50	0.15	ug/L			08/28/20 14:17	1
Chloroethane	ND		0.50	0.23	ug/L			08/28/20 14:17	1
Chloroform	ND		0.50	0.12	ug/L			08/28/20 14:17	1
Chloromethane	ND		0.50	0.18	ug/L			08/28/20 14:17	1
cis-1,2-Dichloroethene	ND		0.50	0.14	ug/L			08/28/20 14:17	1
cis-1,3-Dichloropropene	ND		0.50	0.080	ug/L			08/28/20 14:17	1
Dibromomethane	ND		0.50	0.10	ug/L			08/28/20 14:17	1
Dichlorobromomethane	ND		0.50	0.090	ug/L			08/28/20 14:17	1
Dichlorodifluoromethane	ND		0.50	0.30	ug/L			08/28/20 14:17	1
Ethyl ether	ND		0.50	0.14	ug/L			08/28/20 14:17	1

Client: AECOM
Project/Site: 60583042 - Wyoming County FTC

Job ID: 480-174119-1

Client Sample ID: FD-082020
Date Collected: 08/20/20 00:00
Date Received: 08/21/20 16:55

Lab Sample ID: 480-174119-2
Matrix: Water

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		0.50	0.090	ug/L			08/28/20 14:17	1
Hexachlorobutadiene	ND		0.50	0.19	ug/L			08/28/20 14:17	1
Iodomethane	ND		0.50	0.15	ug/L			08/28/20 14:17	1
Isopropylbenzene	ND		0.50	0.14	ug/L			08/28/20 14:17	1
Methyl tert-butyl ether	ND		0.50	0.090	ug/L			08/28/20 14:17	1
Methylene Chloride	ND		0.50	0.42	ug/L			08/28/20 14:17	1
m-Xylene & p-Xylene	ND		1.0	0.24	ug/L			08/28/20 14:17	1
Naphthalene	ND		0.50	0.080	ug/L			08/28/20 14:17	1
n-Butylbenzene	ND		0.50	0.14	ug/L			08/28/20 14:17	1
N-Propylbenzene	ND		0.50	0.14	ug/L			08/28/20 14:17	1
o-Xylene	ND		0.50	0.090	ug/L			08/28/20 14:17	1
sec-Butylbenzene	ND		0.50	0.15	ug/L			08/28/20 14:17	1
Styrene	ND		0.50	0.090	ug/L			08/28/20 14:17	1
t-Butanol	**1.4**	**J**	2.0	0.34	ug/L			08/28/20 14:17	1
tert-Butylbenzene	ND		0.50	0.16	ug/L			08/28/20 14:17	1
Tetrachloroethene	ND		0.50	0.14	ug/L			08/28/20 14:17	1
Toluene	ND		0.50	0.11	ug/L			08/28/20 14:17	1
trans-1,2-Dichloroethene	ND		0.50	0.13	ug/L			08/28/20 14:17	1
trans-1,3-Dichloropropene	ND		0.50	0.13	ug/L			08/28/20 14:17	1
trans-1,4-Dichloro-2-butene	ND		0.50	0.090	ug/L			08/28/20 14:17	1
Trichloroethene	ND		0.50	0.11	ug/L			08/28/20 14:17	1
Trichlorofluoromethane	ND		0.50	0.27	ug/L			08/28/20 14:17	1
Trihalomethanes, Total	ND		0.50	0.080	ug/L			08/28/20 14:17	1
Vinyl chloride	ND		0.50	0.25	ug/L			08/28/20 14:17	1
Xylenes, Total	ND		0.50	0.32	ug/L			08/28/20 14:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*70 - 130*		*08/28/20 14:17*	*1*
1,2-Dichlorobenzene-d4	*100*		*70 - 130*		*08/28/20 14:17*	*1*

Client: AECOM
Job ID: 480-174119-1
Project/Site: 60583042 - Wyoming County FTC

Client Sample ID: SPRING-082020
Lab Sample ID: 480-174119-3
Date Collected: 08/20/20 14:50
Matrix: Water
Date Received: 08/21/20 16:55

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.12	ug/L			08/28/20 14:41	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.15	ug/L			08/28/20 14:41	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.14	ug/L			08/28/20 14:41	1
1,1,2-Trichloroethane	ND		0.50	0.090	ug/L			08/28/20 14:41	1
1,1-Dichloroethane	**6.4**		0.50	0.14	ug/L			08/28/20 14:41	1
1,1-Dichloroethene	**1.0**		0.50	0.19	ug/L			08/28/20 14:41	1
1,1-Dichloropropene	ND		0.50	0.18	ug/L			08/28/20 14:41	1
1,2,3-Trichlorobenzene	ND		0.50	0.10	ug/L			08/28/20 14:41	1
1,2,3-Trichloropropane	ND		0.50	0.14	ug/L			08/28/20 14:41	1
1,2,4-Trichlorobenzene	ND		0.50	0.10	ug/L			08/28/20 14:41	1
1,2,4-Trimethylbenzene	ND		0.50	0.10	ug/L			08/28/20 14:41	1
1,2-Dibromo-3-Chloropropane	ND		0.50	0.35	ug/L			08/28/20 14:41	1
1,2-Dibromoethane	ND		0.50	0.13	ug/L			08/28/20 14:41	1
1,2-Dichlorobenzene	ND		0.50	0.11	ug/L			08/28/20 14:41	1
1,2-Dichloroethane	ND		0.50	0.11	ug/L			08/28/20 14:41	1
1,2-Dichloropropane	ND		0.50	0.11	ug/L			08/28/20 14:41	1
1,3,5-Trimethylbenzene	ND		0.50	0.12	ug/L			08/28/20 14:41	1
1,3-Dichlorobenzene	ND		0.50	0.090	ug/L			08/28/20 14:41	1
1,3-Dichloropropane	ND		0.50	0.090	ug/L			08/28/20 14:41	1
1,4-Dichlorobenzene	ND		0.50	0.090	ug/L			08/28/20 14:41	1
2,2-Dichloropropane	ND		0.50	0.15	ug/L			08/28/20 14:41	1
2-Butanone (MEK)	ND		2.5	1.1	ug/L			08/28/20 14:41	1
2-Chlorotoluene	ND		0.50	0.10	ug/L			08/28/20 14:41	1
2-Hexanone	ND		2.5	0.36	ug/L			08/28/20 14:41	1
4-Chlorotoluene	ND		0.50	0.11	ug/L			08/28/20 14:41	1
4-Isopropyltoluene	ND		0.50	0.13	ug/L			08/28/20 14:41	1
4-Methyl-2-pentanone (MIBK)	ND		2.5	0.26	ug/L			08/28/20 14:41	1
Acetone	ND		3.0	2.9	ug/L			08/28/20 14:41	1
Acrylonitrile	ND		0.50	0.37	ug/L			08/28/20 14:41	1
Allyl chloride	ND		0.50	0.10	ug/L			08/28/20 14:41	1
Benzene	ND		0.50	0.11	ug/L			08/28/20 14:41	1
Bromobenzene	ND		0.50	0.070	ug/L			08/28/20 14:41	1
Bromochloromethane	ND		0.50	0.10	ug/L			08/28/20 14:41	1
Bromoform	ND		0.50	0.080	ug/L			08/28/20 14:41	1
Bromomethane	ND		0.50	0.14	ug/L			08/28/20 14:41	1
Carbon disulfide	ND		0.50	0.10	ug/L			08/28/20 14:41	1
Carbon tetrachloride	ND		0.50	0.17	ug/L			08/28/20 14:41	1
Chlorobenzene	ND		0.50	0.10	ug/L			08/28/20 14:41	1
Chlorodibromomethane	ND		0.50	0.15	ug/L			08/28/20 14:41	1
Chloroethane	ND		0.50	0.23	ug/L			08/28/20 14:41	1
Chloroform	ND		0.50	0.12	ug/L			08/28/20 14:41	1
Chloromethane	ND		0.50	0.18	ug/L			08/28/20 14:41	1
cis-1,3-Dichloropropene	ND		0.50	0.080	ug/L			08/28/20 14:41	1
Dibromomethane	ND		0.50	0.10	ug/L			08/28/20 14:41	1
Dichlorobromomethane	ND		0.50	0.090	ug/L			08/28/20 14:41	1
Dichlorodifluoromethane	ND		0.50	0.30	ug/L			08/28/20 14:41	1
Ethyl ether	ND		0.50	0.14	ug/L			08/28/20 14:41	1
Ethylbenzene	ND		0.50	0.090	ug/L			08/28/20 14:41	1
Hexachlorobutadiene	ND		0.50	0.19	ug/L			08/28/20 14:41	1

Client: AECOM
Job ID: 480-174119-1
Project/Site: 60583042 - Wyoming County FTC

Client Sample ID: SPRING-082020
Lab Sample ID: 480-174119-3
Date Collected: 08/20/20 14:50
Matrix: Water
Date Received: 08/21/20 16:55

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iodomethane	ND		0.50	0.15	ug/L			08/28/20 14:41	1
Isopropylbenzene	ND		0.50	0.14	ug/L			08/28/20 14:41	1
Methyl tert-butyl ether	ND		0.50	0.090	ug/L			08/28/20 14:41	1
Methylene Chloride	ND		0.50	0.42	ug/L			08/28/20 14:41	1
m-Xylene & p-Xylene	ND		1.0	0.24	ug/L			08/28/20 14:41	1
Naphthalene	ND		0.50	0.080	ug/L			08/28/20 14:41	1
n-Butylbenzene	ND		0.50	0.14	ug/L			08/28/20 14:41	1
N-Propylbenzene	ND		0.50	0.14	ug/L			08/28/20 14:41	1
o-Xylene	ND		0.50	0.090	ug/L			08/28/20 14:41	1
sec-Butylbenzene	ND		0.50	0.15	ug/L			08/28/20 14:41	1
Styrene	ND		0.50	0.090	ug/L			08/28/20 14:41	1
t-Butanol	ND		2.0	0.34	ug/L			08/28/20 14:41	1
tert-Butylbenzene	ND		0.50	0.16	ug/L			08/28/20 14:41	1
Toluene	ND		0.50	0.11	ug/L			08/28/20 14:41	1
trans-1,2-Dichloroethene	**0.62**		0.50	0.13	ug/L			08/28/20 14:41	1
trans-1,3-Dichloropropene	ND		0.50	0.13	ug/L			08/28/20 14:41	1
trans-1,4-Dichloro-2-butene	ND		0.50	0.090	ug/L			08/28/20 14:41	1
Trichloroethene	**7.5**		0.50	0.11	ug/L			08/28/20 14:41	1
Trichlorofluoromethane	ND		0.50	0.27	ug/L			08/28/20 14:41	1
Trihalomethanes, Total	ND		0.50	0.080	ug/L			08/28/20 14:41	1
Vinyl chloride	**0.26**	**J**	0.50	0.25	ug/L			08/28/20 14:41	1
Xylenes, Total	ND		0.50	0.32	ug/L			08/28/20 14:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*70 - 130*		*08/28/20 14:41*	*1*
1,2-Dichlorobenzene-d4	*97*		*70 - 130*		*08/28/20 14:41*	*1*

Method: 524.2 - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**44**		1.0	0.34	ug/L			08/28/20 17:37	2
cis-1,2-Dichloroethene	**52**		1.0	0.28	ug/L			08/28/20 17:37	2
Tetrachloroethene	**45**		1.0	0.28	ug/L			08/28/20 17:37	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*70 - 130*		*08/28/20 17:37*	*2*
1,2-Dichlorobenzene-d4	*100*		*70 - 130*		*08/28/20 17:37*	*2*

Client: AECOM
Job ID: 480-174119-1
Project/Site: 60583042 - Wyoming County FTC

Client Sample ID: SW-01-082020
Lab Sample ID: 480-174119-4
Date Collected: 08/20/20 15:45
Matrix: Water
Date Received: 08/21/20 16:55

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.12	ug/L			08/28/20 17:14	1
1,1,1-Trichloroethane	ND		0.50	0.17	ug/L			08/28/20 17:14	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.15	ug/L			08/28/20 17:14	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.14	ug/L			08/28/20 17:14	1
1,1,2-Trichloroethane	ND		0.50	0.090	ug/L			08/28/20 17:14	1
1,1-Dichloroethane	ND		0.50	0.14	ug/L			08/28/20 17:14	1
1,1-Dichloroethene	ND		0.50	0.19	ug/L			08/28/20 17:14	1
1,1-Dichloropropene	ND		0.50	0.18	ug/L			08/28/20 17:14	1
1,2,3-Trichlorobenzene	ND		0.50	0.10	ug/L			08/28/20 17:14	1
1,2,3-Trichloropropane	ND		0.50	0.14	ug/L			08/28/20 17:14	1
1,2,4-Trichlorobenzene	ND		0.50	0.10	ug/L			08/28/20 17:14	1
1,2,4-Trimethylbenzene	ND		0.50	0.10	ug/L			08/28/20 17:14	1
1,2-Dibromo-3-Chloropropane	ND		0.50	0.35	ug/L			08/28/20 17:14	1
1,2-Dibromoethane	ND		0.50	0.13	ug/L			08/28/20 17:14	1
1,2-Dichlorobenzene	ND		0.50	0.11	ug/L			08/28/20 17:14	1
1,2-Dichloroethane	ND		0.50	0.11	ug/L			08/28/20 17:14	1
1,2-Dichloropropane	ND		0.50	0.11	ug/L			08/28/20 17:14	1
1,3,5-Trimethylbenzene	ND		0.50	0.12	ug/L			08/28/20 17:14	1
1,3-Dichlorobenzene	ND		0.50	0.090	ug/L			08/28/20 17:14	1
1,3-Dichloropropane	ND		0.50	0.090	ug/L			08/28/20 17:14	1
1,4-Dichlorobenzene	ND		0.50	0.090	ug/L			08/28/20 17:14	1
2,2-Dichloropropane	ND		0.50	0.15	ug/L			08/28/20 17:14	1
2-Butanone (MEK)	ND		2.5	1.1	ug/L			08/28/20 17:14	1
2-Chlorotoluene	ND		0.50	0.10	ug/L			08/28/20 17:14	1
2-Hexanone	ND		2.5	0.36	ug/L			08/28/20 17:14	1
4-Chlorotoluene	ND		0.50	0.11	ug/L			08/28/20 17:14	1
4-Isopropyltoluene	ND		0.50	0.13	ug/L			08/28/20 17:14	1
4-Methyl-2-pentanone (MIBK)	ND		2.5	0.26	ug/L			08/28/20 17:14	1
Acetone	ND		3.0	2.9	ug/L			08/28/20 17:14	1
Acrylonitrile	ND		0.50	0.37	ug/L			08/28/20 17:14	1
Allyl chloride	ND		0.50	0.10	ug/L			08/28/20 17:14	1
Benzene	ND		0.50	0.11	ug/L			08/28/20 17:14	1
Bromobenzene	ND		0.50	0.070	ug/L			08/28/20 17:14	1
Bromochloromethane	ND		0.50	0.10	ug/L			08/28/20 17:14	1
Bromoform	ND		0.50	0.080	ug/L			08/28/20 17:14	1
Bromomethane	ND		0.50	0.14	ug/L			08/28/20 17:14	1
Carbon disulfide	ND		0.50	0.10	ug/L			08/28/20 17:14	1
Carbon tetrachloride	ND		0.50	0.17	ug/L			08/28/20 17:14	1
Chlorobenzene	ND		0.50	0.10	ug/L			08/28/20 17:14	1
Chlorodibromomethane	ND		0.50	0.15	ug/L			08/28/20 17:14	1
Chloroethane	ND		0.50	0.23	ug/L			08/28/20 17:14	1
Chloroform	ND		0.50	0.12	ug/L			08/28/20 17:14	1
Chloromethane	ND		0.50	0.18	ug/L			08/28/20 17:14	1
cis-1,2-Dichloroethene	ND		0.50	0.14	ug/L			08/28/20 17:14	1
cis-1,3-Dichloropropene	ND		0.50	0.080	ug/L			08/28/20 17:14	1
Dibromomethane	ND		0.50	0.10	ug/L			08/28/20 17:14	1
Dichlorobromomethane	ND		0.50	0.090	ug/L			08/28/20 17:14	1
Dichlorodifluoromethane	ND		0.50	0.30	ug/L			08/28/20 17:14	1
Ethyl ether	ND		0.50	0.14	ug/L			08/28/20 17:14	1

Client: AECOM
Project/Site: 60583042 - Wyoming County FTC

Job ID: 480-174119-1

Client Sample ID: SW-01-082020
Date Collected: 08/20/20 15:45
Date Received: 08/21/20 16:55

Lab Sample ID: 480-174119-4
Matrix: Water

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		0.50	0.090	ug/L			08/28/20 17:14	1
Hexachlorobutadiene	ND		0.50	0.19	ug/L			08/28/20 17:14	1
Iodomethane	ND		0.50	0.15	ug/L			08/28/20 17:14	1
Isopropylbenzene	ND		0.50	0.14	ug/L			08/28/20 17:14	1
Methyl tert-butyl ether	ND		0.50	0.090	ug/L			08/28/20 17:14	1
Methylene Chloride	ND		0.50	0.42	ug/L			08/28/20 17:14	1
m-Xylene & p-Xylene	ND		1.0	0.24	ug/L			08/28/20 17:14	1
Naphthalene	ND		0.50	0.080	ug/L			08/28/20 17:14	1
n-Butylbenzene	ND		0.50	0.14	ug/L			08/28/20 17:14	1
N-Propylbenzene	ND		0.50	0.14	ug/L			08/28/20 17:14	1
o-Xylene	ND		0.50	0.090	ug/L			08/28/20 17:14	1
sec-Butylbenzene	ND		0.50	0.15	ug/L			08/28/20 17:14	1
Styrene	ND		0.50	0.090	ug/L			08/28/20 17:14	1
t-Butanol	ND		2.0	0.34	ug/L			08/28/20 17:14	1
tert-Butylbenzene	ND		0.50	0.16	ug/L			08/28/20 17:14	1
Tetrachloroethene	ND		0.50	0.14	ug/L			08/28/20 17:14	1
Toluene	ND		0.50	0.11	ug/L			08/28/20 17:14	1
trans-1,2-Dichloroethene	ND		0.50	0.13	ug/L			08/28/20 17:14	1
trans-1,3-Dichloropropene	ND		0.50	0.13	ug/L			08/28/20 17:14	1
trans-1,4-Dichloro-2-butene	ND		0.50	0.090	ug/L			08/28/20 17:14	1
Trichloroethene	ND		0.50	0.11	ug/L			08/28/20 17:14	1
Trichlorofluoromethane	ND		0.50	0.27	ug/L			08/28/20 17:14	1
Trihalomethanes, Total	ND		0.50	0.080	ug/L			08/28/20 17:14	1
Vinyl chloride	ND		0.50	0.25	ug/L			08/28/20 17:14	1
Xylenes, Total	ND		0.50	0.32	ug/L			08/28/20 17:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*102*		*70 - 130*		*08/28/20 17:14*	*1*
1,2-Dichlorobenzene-d4	*102*		*70 - 130*		*08/28/20 17:14*	*1*

Client: AECOM
Job ID: 480-174119-1
Project/Site: 60583042 - Wyoming County FTC

Client Sample ID: TB-082020
Lab Sample ID: 480-174119-5
Date Collected: 08/20/20 00:00
Matrix: Water
Date Received: 08/21/20 16:55

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.12	ug/L			08/28/20 09:12	1
1,1,1-Trichloroethane	ND		0.50	0.17	ug/L			08/28/20 09:12	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.15	ug/L			08/28/20 09:12	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.14	ug/L			08/28/20 09:12	1
1,1,2-Trichloroethane	ND		0.50	0.090	ug/L			08/28/20 09:12	1
1,1-Dichloroethane	ND		0.50	0.14	ug/L			08/28/20 09:12	1
1,1-Dichloroethene	ND		0.50	0.19	ug/L			08/28/20 09:12	1
1,1-Dichloropropene	ND		0.50	0.18	ug/L			08/28/20 09:12	1
1,2,3-Trichlorobenzene	ND		0.50	0.10	ug/L			08/28/20 09:12	1
1,2,3-Trichloropropane	ND		0.50	0.14	ug/L			08/28/20 09:12	1
1,2,4-Trichlorobenzene	ND		0.50	0.10	ug/L			08/28/20 09:12	1
1,2,4-Trimethylbenzene	ND		0.50	0.10	ug/L			08/28/20 09:12	1
1,2-Dibromo-3-Chloropropane	ND		0.50	0.35	ug/L			08/28/20 09:12	1
1,2-Dibromoethane	ND		0.50	0.13	ug/L			08/28/20 09:12	1
1,2-Dichlorobenzene	ND		0.50	0.11	ug/L			08/28/20 09:12	1
1,2-Dichloroethane	ND		0.50	0.11	ug/L			08/28/20 09:12	1
1,2-Dichloropropane	ND		0.50	0.11	ug/L			08/28/20 09:12	1
1,3,5-Trimethylbenzene	ND		0.50	0.12	ug/L			08/28/20 09:12	1
1,3-Dichlorobenzene	ND		0.50	0.090	ug/L			08/28/20 09:12	1
1,3-Dichloropropane	ND		0.50	0.090	ug/L			08/28/20 09:12	1
1,4-Dichlorobenzene	ND		0.50	0.090	ug/L			08/28/20 09:12	1
2,2-Dichloropropane	ND		0.50	0.15	ug/L			08/28/20 09:12	1
2-Butanone (MEK)	ND		2.5	1.1	ug/L			08/28/20 09:12	1
2-Chlorotoluene	ND		0.50	0.10	ug/L			08/28/20 09:12	1
2-Hexanone	ND		2.5	0.36	ug/L			08/28/20 09:12	1
4-Chlorotoluene	ND		0.50	0.11	ug/L			08/28/20 09:12	1
4-Isopropyltoluene	ND		0.50	0.13	ug/L			08/28/20 09:12	1
4-Methyl-2-pentanone (MIBK)	ND		2.5	0.26	ug/L			08/28/20 09:12	1
Acetone	ND		3.0	2.9	ug/L			08/28/20 09:12	1
Acrylonitrile	ND		0.50	0.37	ug/L			08/28/20 09:12	1
Allyl chloride	ND		0.50	0.10	ug/L			08/28/20 09:12	1
Benzene	ND		0.50	0.11	ug/L			08/28/20 09:12	1
Bromobenzene	ND		0.50	0.070	ug/L			08/28/20 09:12	1
Bromochloromethane	ND		0.50	0.10	ug/L			08/28/20 09:12	1
Bromoform	ND		0.50	0.080	ug/L			08/28/20 09:12	1
Bromomethane	ND		0.50	0.14	ug/L			08/28/20 09:12	1
Carbon disulfide	ND		0.50	0.10	ug/L			08/28/20 09:12	1
Carbon tetrachloride	ND		0.50	0.17	ug/L			08/28/20 09:12	1
Chlorobenzene	ND		0.50	0.10	ug/L			08/28/20 09:12	1
Chlorodibromomethane	ND		0.50	0.15	ug/L			08/28/20 09:12	1
Chloroethane	ND		0.50	0.23	ug/L			08/28/20 09:12	1
Chloroform	ND		0.50	0.12	ug/L			08/28/20 09:12	1
Chloromethane	ND		0.50	0.18	ug/L			08/28/20 09:12	1
cis-1,2-Dichloroethene	ND		0.50	0.14	ug/L			08/28/20 09:12	1
cis-1,3-Dichloropropene	ND		0.50	0.080	ug/L			08/28/20 09:12	1
Dibromomethane	ND		0.50	0.10	ug/L			08/28/20 09:12	1
Dichlorobromomethane	ND		0.50	0.090	ug/L			08/28/20 09:12	1
Dichlorodifluoromethane	ND		0.50	0.30	ug/L			08/28/20 09:12	1
Ethyl ether	ND		0.50	0.14	ug/L			08/28/20 09:12	1

Client: AECOM
Job ID: 480-174119-1
Project/Site: 60583042 - Wyoming County FTC

Client Sample ID: TB-082020
Lab Sample ID: 480-174119-5
Date Collected: 08/20/20 00:00
Matrix: Water
Date Received: 08/21/20 16:55

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		0.50	0.090	ug/L			08/28/20 09:12	1
Hexachlorobutadiene	ND		0.50	0.19	ug/L			08/28/20 09:12	1
Iodomethane	ND		0.50	0.15	ug/L			08/28/20 09:12	1
Isopropylbenzene	ND		0.50	0.14	ug/L			08/28/20 09:12	1
Methyl tert-butyl ether	ND		0.50	0.090	ug/L			08/28/20 09:12	1
Methylene Chloride	ND		0.50	0.42	ug/L			08/28/20 09:12	1
m-Xylene & p-Xylene	ND		1.0	0.24	ug/L			08/28/20 09:12	1
Naphthalene	ND		0.50	0.080	ug/L			08/28/20 09:12	1
n-Butylbenzene	ND		0.50	0.14	ug/L			08/28/20 09:12	1
N-Propylbenzene	ND		0.50	0.14	ug/L			08/28/20 09:12	1
o-Xylene	ND		0.50	0.090	ug/L			08/28/20 09:12	1
sec-Butylbenzene	ND		0.50	0.15	ug/L			08/28/20 09:12	1
Styrene	ND		0.50	0.090	ug/L			08/28/20 09:12	1
t-Butanol	ND		2.0	0.34	ug/L			08/28/20 09:12	1
tert-Butylbenzene	ND		0.50	0.16	ug/L			08/28/20 09:12	1
Tetrachloroethene	ND		0.50	0.14	ug/L			08/28/20 09:12	1
Toluene	ND		0.50	0.11	ug/L			08/28/20 09:12	1
trans-1,2-Dichloroethene	ND		0.50	0.13	ug/L			08/28/20 09:12	1
trans-1,3-Dichloropropene	ND		0.50	0.13	ug/L			08/28/20 09:12	1
trans-1,4-Dichloro-2-butene	ND		0.50	0.090	ug/L			08/28/20 09:12	1
Trichloroethene	ND		0.50	0.11	ug/L			08/28/20 09:12	1
Trichlorofluoromethane	ND		0.50	0.27	ug/L			08/28/20 09:12	1
Trihalomethanes, Total	ND		0.50	0.080	ug/L			08/28/20 09:12	1
Vinyl chloride	ND		0.50	0.25	ug/L			08/28/20 09:12	1
Xylenes, Total	ND		0.50	0.32	ug/L			08/28/20 09:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*70 - 130*		*08/28/20 09:12*	*1*
1,2-Dichlorobenzene-d4	*102*		*70 - 130*		*08/28/20 09:12*	*1*

Surrogate Summary

Client: AECOM
Project/Site: 60583042 - Wyoming County FTC

Job ID: 480-174119-1

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)											
		BFB	DCZ										
Lab Sample ID	Client Sample ID	(70-130)	(70-130)										
480-174119-1	BW-01-082020	104	101										
480-174119-2	FD-082020	101	100										
480-174119-3	SPRING-082020	99	97										
480-174119-3 - DL	SPRING-082020	100	100										
480-174119-4	SW-01-082020	102	102										
480-174119-5	TB-082020	101	102										
LCS 460-720213/3	Lab Control Sample	100	100										
LCSD 460-720213/4	Lab Control Sample Dup	101	99										
MB 460-720213/7	Method Blank	103	100										

Surrogate Legend

BFB = 4-Bromofluorobenzene

DCZ = 1,2-Dichlorobenzene-d4

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 460-720213/7
Matrix: Water
Analysis Batch: 720213

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.12	ug/L			08/28/20 08:45	1
1,1,1-Trichloroethane	ND		0.50	0.17	ug/L			08/28/20 08:45	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.15	ug/L			08/28/20 08:45	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.14	ug/L			08/28/20 08:45	1
1,1,2-Trichloroethane	ND		0.50	0.090	ug/L			08/28/20 08:45	1
1,1-Dichloroethane	ND		0.50	0.14	ug/L			08/28/20 08:45	1
1,1-Dichloroethene	ND		0.50	0.19	ug/L			08/28/20 08:45	1
1,1-Dichloropropene	ND		0.50	0.18	ug/L			08/28/20 08:45	1
1,2,3-Trichlorobenzene	ND		0.50	0.10	ug/L			08/28/20 08:45	1
1,2,3-Trichloropropane	ND		0.50	0.14	ug/L			08/28/20 08:45	1
1,2,4-Trichlorobenzene	ND		0.50	0.10	ug/L			08/28/20 08:45	1
1,2,4-Trimethylbenzene	ND		0.50	0.10	ug/L			08/28/20 08:45	1
1,2-Dibromo-3-Chloropropane	ND		0.50	0.35	ug/L			08/28/20 08:45	1
1,2-Dibromoethane	ND		0.50	0.13	ug/L			08/28/20 08:45	1
1,2-Dichlorobenzene	ND		0.50	0.11	ug/L			08/28/20 08:45	1
1,2-Dichloroethane	ND		0.50	0.11	ug/L			08/28/20 08:45	1
1,2-Dichloropropane	ND		0.50	0.11	ug/L			08/28/20 08:45	1
1,3,5-Trimethylbenzene	ND		0.50	0.12	ug/L			08/28/20 08:45	1
1,3-Dichlorobenzene	ND		0.50	0.090	ug/L			08/28/20 08:45	1
1,3-Dichloropropane	ND		0.50	0.090	ug/L			08/28/20 08:45	1
1,4-Dichlorobenzene	ND		0.50	0.090	ug/L			08/28/20 08:45	1
2,2-Dichloropropane	ND		0.50	0.15	ug/L			08/28/20 08:45	1
2-Butanone (MEK)	ND		2.5	1.1	ug/L			08/28/20 08:45	1
2-Chlorotoluene	ND		0.50	0.10	ug/L			08/28/20 08:45	1
2-Hexanone	ND		2.5	0.36	ug/L			08/28/20 08:45	1
4-Chlorotoluene	ND		0.50	0.11	ug/L			08/28/20 08:45	1
4-Isopropyltoluene	ND		0.50	0.13	ug/L			08/28/20 08:45	1
4-Methyl-2-pentanone (MIBK)	ND		2.5	0.26	ug/L			08/28/20 08:45	1
Acetone	ND		3.0	2.9	ug/L			08/28/20 08:45	1
Acrylonitrile	ND		0.50	0.37	ug/L			08/28/20 08:45	1
Allyl chloride	ND		0.50	0.10	ug/L			08/28/20 08:45	1
Benzene	ND		0.50	0.11	ug/L			08/28/20 08:45	1
Bromobenzene	ND		0.50	0.070	ug/L			08/28/20 08:45	1
Bromochloromethane	ND		0.50	0.10	ug/L			08/28/20 08:45	1
Bromoform	ND		0.50	0.080	ug/L			08/28/20 08:45	1
Bromomethane	ND		0.50	0.14	ug/L			08/28/20 08:45	1
Carbon disulfide	ND		0.50	0.10	ug/L			08/28/20 08:45	1
Carbon tetrachloride	ND		0.50	0.17	ug/L			08/28/20 08:45	1
Chlorobenzene	ND		0.50	0.10	ug/L			08/28/20 08:45	1
Chlorodibromomethane	ND		0.50	0.15	ug/L			08/28/20 08:45	1
Chloroethane	ND		0.50	0.23	ug/L			08/28/20 08:45	1
Chloroform	0.120	J	0.50	0.12	ug/L			08/28/20 08:45	1
Chloromethane	ND		0.50	0.18	ug/L			08/28/20 08:45	1
cis-1,2-Dichloroethene	ND		0.50	0.14	ug/L			08/28/20 08:45	1
cis-1,3-Dichloropropene	ND		0.50	0.080	ug/L			08/28/20 08:45	1
Dibromomethane	ND		0.50	0.10	ug/L			08/28/20 08:45	1
Dichlorobromomethane	ND		0.50	0.090	ug/L			08/28/20 08:45	1
Dichlorodifluoromethane	ND		0.50	0.30	ug/L			08/28/20 08:45	1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 460-720213/7
Matrix: Water
Analysis Batch: 720213

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethyl ether	ND		0.50	0.14	ug/L			08/28/20 08:45	1
Ethylbenzene	ND		0.50	0.090	ug/L			08/28/20 08:45	1
Hexachlorobutadiene	ND		0.50	0.19	ug/L			08/28/20 08:45	1
Iodomethane	ND		0.50	0.15	ug/L			08/28/20 08:45	1
Isopropylbenzene	ND		0.50	0.14	ug/L			08/28/20 08:45	1
Methyl tert-butyl ether	ND		0.50	0.090	ug/L			08/28/20 08:45	1
Methylene Chloride	ND		0.50	0.42	ug/L			08/28/20 08:45	1
m-Xylene & p-Xylene	ND		1.0	0.24	ug/L			08/28/20 08:45	1
Naphthalene	ND		0.50	0.080	ug/L			08/28/20 08:45	1
n-Butylbenzene	ND		0.50	0.14	ug/L			08/28/20 08:45	1
N-Propylbenzene	ND		0.50	0.14	ug/L			08/28/20 08:45	1
o-Xylene	ND		0.50	0.090	ug/L			08/28/20 08:45	1
sec-Butylbenzene	ND		0.50	0.15	ug/L			08/28/20 08:45	1
Styrene	ND		0.50	0.090	ug/L			08/28/20 08:45	1
t-Butanol	ND		2.0	0.34	ug/L			08/28/20 08:45	1
tert-Butylbenzene	ND		0.50	0.16	ug/L			08/28/20 08:45	1
Tetrachloroethene	ND		0.50	0.14	ug/L			08/28/20 08:45	1
Toluene	ND		0.50	0.11	ug/L			08/28/20 08:45	1
trans-1,2-Dichloroethene	ND		0.50	0.13	ug/L			08/28/20 08:45	1
trans-1,3-Dichloropropene	ND		0.50	0.13	ug/L			08/28/20 08:45	1
trans-1,4-Dichloro-2-butene	ND		0.50	0.090	ug/L			08/28/20 08:45	1
Trichloroethene	ND		0.50	0.11	ug/L			08/28/20 08:45	1
Trichlorofluoromethane	ND		0.50	0.27	ug/L			08/28/20 08:45	1
Trihalomethanes, Total	0.120	J	0.50	0.080	ug/L			08/28/20 08:45	1
Vinyl chloride	ND		0.50	0.25	ug/L			08/28/20 08:45	1
Xylenes, Total	ND		0.50	0.32	ug/L			08/28/20 08:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*103*		*70 - 130*		*08/28/20 08:45*	*1*
1,2-Dichlorobenzene-d4	*100*		*70 - 130*		*08/28/20 08:45*	*1*

Lab Sample ID: LCS 460-720213/3
Matrix: Water
Analysis Batch: 720213

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	2.00	1.99		ug/L		99	70 - 130
1,1,1-Trichloroethane	2.00	2.07		ug/L		103	70 - 130
1,1,2,2-Tetrachloroethane	2.00	2.00		ug/L		100	70 - 130
1,1,2-Trichloroethane	2.00	1.85		ug/L		93	70 - 130
1,1-Dichloroethane	2.00	2.15		ug/L		107	70 - 130
1,1-Dichloroethene	2.00	2.14		ug/L		107	70 - 130
1,1-Dichloropropene	2.00	2.19		ug/L		109	70 - 130
1,2,3-Trichlorobenzene	2.00	1.93		ug/L		96	70 - 130
1,2,3-Trichloropropane	2.00	2.06		ug/L		103	70 - 130
1,2,4-Trichlorobenzene	2.00	1.96		ug/L		98	70 - 130
1,2,4-Trimethylbenzene	2.00	1.97		ug/L		99	70 - 130
1,2-Dibromo-3-Chloropropane	2.00	2.17		ug/L		109	70 - 130

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 460-720213/3
Matrix: Water
Analysis Batch: 720213

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane	2.00	1.88		ug/L		94	70 - 130
1,2-Dichlorobenzene	2.00	1.96		ug/L		98	70 - 130
1,2-Dichloroethane	2.00	2.08		ug/L		104	70 - 130
1,2-Dichloropropane	2.00	2.13		ug/L		106	70 - 130
1,3,5-Trimethylbenzene	2.00	1.93		ug/L		97	70 - 130
1,3-Dichlorobenzene	2.00	2.01		ug/L		101	70 - 130
1,3-Dichloropropane	2.00	2.12		ug/L		106	70 - 130
1,4-Dichlorobenzene	2.00	1.99		ug/L		99	70 - 130
2,2-Dichloropropane	2.00	2.35		ug/L		117	70 - 130
2-Butanone (MEK)	10.0	9.94		ug/L		99	70 - 130
2-Chlorotoluene	2.00	2.03		ug/L		101	70 - 130
2-Hexanone	10.0	9.54		ug/L		95	70 - 130
4-Chlorotoluene	2.00	2.06		ug/L		103	70 - 130
4-Isopropyltoluene	2.00	1.97		ug/L		98	70 - 130
4-Methyl-2-pentanone (MIBK)	10.0	9.56		ug/L		96	70 - 130
Acetone	10.0	7.85		ug/L		78	70 - 130
Benzene	2.00	2.06		ug/L		103	70 - 130
Bromobenzene	2.00	1.97		ug/L		98	70 - 130
Bromochloromethane	2.00	2.06		ug/L		103	70 - 130
Bromoform	2.00	1.93		ug/L		97	70 - 130
Bromomethane	2.00	1.87		ug/L		93	70 - 130
Carbon disulfide	2.00	2.39		ug/L		120	70 - 130
Carbon tetrachloride	2.00	2.01		ug/L		101	70 - 130
Chlorobenzene	2.00	2.01		ug/L		101	70 - 130
Chlorodibromomethane	2.00	1.96		ug/L		98	70 - 130
Chloroethane	2.00	1.81		ug/L		90	70 - 130
Chloroform	2.00	2.26		ug/L		113	70 - 130
Chloromethane	2.00	1.78		ug/L		89	70 - 130
cis-1,2-Dichloroethene	2.00	2.09		ug/L		105	70 - 130
cis-1,3-Dichloropropene	2.00	2.07		ug/L		104	70 - 130
Dibromomethane	2.00	2.02		ug/L		101	70 - 130
Dichlorobromomethane	2.00	2.05		ug/L		103	70 - 130
Dichlorodifluoromethane	2.00	1.59		ug/L		80	70 - 130
Ethylbenzene	2.00	1.98		ug/L		99	70 - 130
Hexachlorobutadiene	2.00	2.10		ug/L		105	70 - 130
Isopropylbenzene	2.00	2.04		ug/L		102	70 - 130
Methyl tert-butyl ether	2.00	2.05		ug/L		102	70 - 130
Methylene Chloride	2.00	2.14		ug/L		107	70 - 130
Naphthalene	2.00	1.86		ug/L		93	70 - 130
n-Butylbenzene	2.00	2.01		ug/L		100	70 - 130
N-Propylbenzene	2.00	2.06		ug/L		103	70 - 130
sec-Butylbenzene	2.00	1.99		ug/L		99	70 - 130
Styrene	2.00	1.98		ug/L		99	70 - 130
tert-Butylbenzene	2.00	2.02		ug/L		101	70 - 130
Tetrachloroethene	2.00	2.02		ug/L		101	70 - 130
Toluene	2.00	1.97		ug/L		98	70 - 130
trans-1,2-Dichloroethene	2.00	2.10		ug/L		105	70 - 130
trans-1,3-Dichloropropene	2.00	2.01		ug/L		101	70 - 130
Trichloroethene	2.00	2.08		ug/L		104	70 - 130

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 460-720213/3
Matrix: Water
Analysis Batch: 720213

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Trichlorofluoromethane			2.00	1.73		ug/L		87	70 - 130		
Vinyl chloride			2.00	1.73		ug/L		87	70 - 130		
Xylenes, Total			6.00	5.89		ug/L		98	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*100*		*70 - 130*
1,2-Dichlorobenzene-d4	*100*		*70 - 130*

Lab Sample ID: LCSD 460-720213/4
Matrix: Water
Analysis Batch: 720213

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane			2.00	2.02		ug/L		101	70 - 130	2	30
1,1,1-Trichloroethane			2.00	2.11		ug/L		105	70 - 130	2	30
1,1,2,2-Tetrachloroethane			2.00	2.07		ug/L		104	70 - 130	3	30
1,1,2-Trichloroethane			2.00	2.11		ug/L		106	70 - 130	13	30
1,1-Dichloroethane			2.00	2.17		ug/L		109	70 - 130	1	30
1,1-Dichloroethene			2.00	2.15		ug/L		107	70 - 130	0	30
1,1-Dichloropropene			2.00	2.20		ug/L		110	70 - 130	1	30
1,2,3-Trichlorobenzene			2.00	1.89		ug/L		94	70 - 130	2	30
1,2,3-Trichloropropane			2.00	1.82		ug/L		91	70 - 130	12	30
1,2,4-Trichlorobenzene			2.00	2.03		ug/L		101	70 - 130	3	30
1,2,4-Trimethylbenzene			2.00	2.02		ug/L		101	70 - 130	2	30
1,2-Dibromo-3-Chloropropane			2.00	2.16		ug/L		108	70 - 130	1	30
1,2-Dibromoethane			2.00	2.01		ug/L		101	70 - 130	7	30
1,2-Dichlorobenzene			2.00	2.00		ug/L		100	70 - 130	2	30
1,2-Dichloroethane			2.00	2.15		ug/L		107	70 - 130	3	30
1,2-Dichloropropane			2.00	2.16		ug/L		108	70 - 130	2	30
1,3,5-Trimethylbenzene			2.00	2.05		ug/L		102	70 - 130	6	30
1,3-Dichlorobenzene			2.00	2.04		ug/L		102	70 - 130	1	30
1,3-Dichloropropane			2.00	2.11		ug/L		105	70 - 130	1	30
1,4-Dichlorobenzene			2.00	2.03		ug/L		102	70 - 130	2	30
2,2-Dichloropropane			2.00	2.33		ug/L		116	70 - 130	1	30
2-Butanone (MEK)			10.0	9.53		ug/L		95	70 - 130	4	30
2-Chlorotoluene			2.00	2.11		ug/L		105	70 - 130	4	30
2-Hexanone			10.0	9.42		ug/L		94	70 - 130	1	30
4-Chlorotoluene			2.00	2.11		ug/L		106	70 - 130	3	30
4-Isopropyltoluene			2.00	2.02		ug/L		101	70 - 130	3	30
4-Methyl-2-pentanone (MIBK)			10.0	10.0		ug/L		100	70 - 130	5	30
Acetone			10.0	8.13		ug/L		81	70 - 130	4	30
Benzene			2.00	2.07		ug/L		104	70 - 130	1	30
Bromobenzene			2.00	2.01		ug/L		101	70 - 130	2	30
Bromochloromethane			2.00	2.06		ug/L		103	70 - 130	0	30
Bromoform			2.00	1.94		ug/L		97	70 - 130	0	30
Bromomethane			2.00	1.82		ug/L		91	70 - 130	3	30
Carbon disulfide			2.00	2.48		ug/L		124	70 - 130	4	30
Carbon tetrachloride			2.00	2.03		ug/L		101	70 - 130	1	30

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 460-720213/4
Matrix: Water
Analysis Batch: 720213

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chlorobenzene			2.00	2.04		ug/L		102	70 - 130	1	30
Chlorodibromomethane			2.00	1.98		ug/L		99	70 - 130	1	30
Chloroethane			2.00	1.88		ug/L		94	70 - 130	4	30
Chloroform			2.00	2.24		ug/L		112	70 - 130	0	30
Chloromethane			2.00	1.88		ug/L		94	70 - 130	5	30
cis-1,2-Dichloroethene			2.00	2.03		ug/L		102	70 - 130	3	30
cis-1,3-Dichloropropene			2.00	2.13		ug/L		106	70 - 130	3	30
Dibromomethane			2.00	2.10		ug/L		105	70 - 130	4	30
Dichlorobromomethane			2.00	2.08		ug/L		104	70 - 130	1	30
Dichlorodifluoromethane			2.00	1.58		ug/L		79	70 - 130	1	30
Ethylbenzene			2.00	2.02		ug/L		101	70 - 130	2	30
Hexachlorobutadiene			2.00	2.04		ug/L		102	70 - 130	3	30
Isopropylbenzene			2.00	2.09		ug/L		104	70 - 130	2	30
Methyl tert-butyl ether			2.00	2.08		ug/L		104	70 - 130	1	30
Methylene Chloride			2.00	2.21		ug/L		111	70 - 130	3	30
Naphthalene			2.00	1.91		ug/L		96	70 - 130	3	30
n-Butylbenzene			2.00	2.06		ug/L		103	70 - 130	3	30
N-Propylbenzene			2.00	2.10		ug/L		105	70 - 130	2	30
sec-Butylbenzene			2.00	2.04		ug/L		102	70 - 130	3	30
Styrene			2.00	2.03		ug/L		102	70 - 130	2	30
tert-Butylbenzene			2.00	2.09		ug/L		104	70 - 130	3	30
Tetrachloroethene			2.00	2.07		ug/L		104	70 - 130	3	30
Toluene			2.00	2.04		ug/L		102	70 - 130	4	30
trans-1,2-Dichloroethene			2.00	2.13		ug/L		107	70 - 130	2	30
trans-1,3-Dichloropropene			2.00	2.19		ug/L		109	70 - 130	8	30
Trichloroethene			2.00	2.11		ug/L		105	70 - 130	1	30
Trichlorofluoromethane			2.00	1.76		ug/L		88	70 - 130	2	30
Vinyl chloride			2.00	1.83		ug/L		92	70 - 130	6	30
Xylenes, Total			6.00	6.08		ug/L		101	70 - 130	3	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*101*		*70 - 130*
1,2-Dichlorobenzene-d4	*99*		*70 - 130*

QC Association Summary

Client: AECOM
Job ID: 480-174119-1
Project/Site: 60583042 - Wyoming County FTC

GC/MS VOA

Analysis Batch: 720213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-174119-1	BW-01-082020	Total/NA	Water	524.2	
480-174119-2	FD-082020	Total/NA	Water	524.2	
480-174119-3	SPRING-082020	Total/NA	Water	524.2	
480-174119-3 - DL	SPRING-082020	Total/NA	Water	524.2	
480-174119-4	SW-01-082020	Total/NA	Water	524.2	
480-174119-5	TB-082020	Total/NA	Water	524.2	
MB 460-720213/7	Method Blank	Total/NA	Water	524.2	
LCS 460-720213/3	Lab Control Sample	Total/NA	Water	524.2	
LCSD 460-720213/4	Lab Control Sample Dup	Total/NA	Water	524.2	

Lab Chronicle

Client: AECOM
Job ID: 480-174119-1
Project/Site: 60583042 - Wyoming County FTC

Client Sample ID: BW-01-082020
Lab Sample ID: 480-174119-1
Date Collected: 08/20/20 14:05
Matrix: Water
Date Received: 08/21/20 16:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	720213	08/28/20 13:54	SZD	TAL EDI

Client Sample ID: FD-082020
Lab Sample ID: 480-174119-2
Date Collected: 08/20/20 00:00
Matrix: Water
Date Received: 08/21/20 16:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	720213	08/28/20 14:17	SZD	TAL EDI

Client Sample ID: SPRING-082020
Lab Sample ID: 480-174119-3
Date Collected: 08/20/20 14:50
Matrix: Water
Date Received: 08/21/20 16:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	720213	08/28/20 14:41	SZD	TAL EDI
Total/NA	Analysis	524.2	DL	2	720213	08/28/20 17:37	SZD	TAL EDI

Client Sample ID: SW-01-082020
Lab Sample ID: 480-174119-4
Date Collected: 08/20/20 15:45
Matrix: Water
Date Received: 08/21/20 16:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	720213	08/28/20 17:14	SZD	TAL EDI

Client Sample ID: TB-082020
Lab Sample ID: 480-174119-5
Date Collected: 08/20/20 00:00
Matrix: Water
Date Received: 08/21/20 16:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	720213	08/28/20 09:12	SZD	TAL EDI

Laboratory References:

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

Accreditation/Certification Summary

Client: AECOM
Job ID: 480-174119-1
Project/Site: 60583042 - Wyoming County FTC

Laboratory: Eurofins TestAmerica, Edison

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Connecticut	State	PH-0200	09-30-20
DE Haz. Subst. Cleanup Act (HSCA)	State	<cert No.>	12-31-21
Georgia	State	12028 (NJ)	07-01-21
Massachusetts	State	M-NJ312	06-30-21
New Jersey	NELAP	12028	06-30-21
New York	NELAP	11452	04-01-21
Pennsylvania	NELAP	68-00522	02-28-21
Rhode Island	State	LAO00132	12-31-20
USDA	US Federal Programs	P330-18-00135	05-03-21

Method Summary

Client: AECOM
Job ID: 480-174119-1
Project/Site: 60583042 - Wyoming County FTC

Method	Method Description	Protocol	Laboratory
524.2	Volatile Organic Compounds (GC/MS)	EPA-DW	TAL EDI

Protocol References:

EPA-DW = "Methods For The Determination Of Organic Compounds In Drinking Water", EPA/600/4-88/039, December 1988 And Its Supplements.

Laboratory References:

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

Sample Summary

Client: AECOM
Job ID: 480-174119-1
Project/Site: 60583042 - Wyoming County FTC

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-174119-1	BW-01-082020	Water	08/20/20 14:05	08/21/20 16:55	
480-174119-2	FD-082020	Water	08/20/20 00:00	08/21/20 16:55	
480-174119-3	SPRING-082020	Water	08/20/20 14:50	08/21/20 16:55	
480-174119-4	SW-01-082020	Water	08/20/20 15:45	08/21/20 16:55	
480-174119-5	TB-082020	Water	08/20/20 00:00	08/21/20 16:55	

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

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Client Information	Sampler: ROB MURPHY	Lab PM: Schove, John R	Carrier Tracking No(s):	COC No: 480-149398-33245.1
Client Contact: Colin Wasteneys	Phone: 716-903-1346	E-Mail: John.Schove@Eurofinset.com		Page: Page 1 of 1
Company: AECOM				Job #:
Address: 257 West Genesee Street Suite 400	Due Date Requested:			
City: Buffalo	TAT Requested (days): STANDARD TAT			
State, Zip: NY, 14202-2657				
Phone:	PO #: 60623657			
Email: colin.wasteneys@aecom.com	WO #: colin.wasteneys@aecom.com.			
Project Name: 60583042 - Wyoming County FTC	Project #: 48005402			
Site:	SSOW#:			

Analysis Requested

480-174119 Chain of Custody

Preservation Codes:

A - HCL
B - NaOH
Zn Acetate
Nitric Acid
NaHSO4
MeOH
Amchlor
Ascorbic Acid
e
l Water
EDTA
EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	524.2_Preserved - Standard Analyte list	Total Number of cont	Special Instructions/Note:
			Preservation Code:				A		
BW-01-082020	8/20/20	1405	G	Water	N	N	3	3	
FD-082020	8/20/20	—	G	Water	N	N	3	3	
SPRING-082020	8/20/20	1450	G	Water	N	N	3	3	
SW-01-082020	8/20/20	1545	G	Water	N	N	3	3	
TB-082020	8/20/20	—	G	WATER	N	N	1	1	TRIP BLANK.

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: DROP OFF

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	8/20/20 1655	AECOM	UNKNOWN CHILLED	8/20/20 1655	TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 3.7 #1 ICE

Ver: 01/16/2019

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

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Client Information (Sub Contract Lab)	Sampler:	Lab PM: Schove, John R	Carrier Tracking No(s):	COC No: 480-58034.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: John.Schove@Eurofinset.com	State of Origin: New York	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - New York		Job #: 480-174119-1
Address: 777 New Durham Road, ,	Due Date Requested: 9/3/2020			
City: Edison	TAT Requested (days):			
State, Zip: NJ, 08817				
Phone: 732-549-3900(Tel) 732-549-3679(Fax)	PO #:			
Email:	WO #:			
Project Name: 60583042 - Wyoming County FTC	Project #: 48005402			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	524.2_Preserved/ 524.2	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
BW-01-082020 (480-174119-1)	8/20/20	14:05 Eastern		Water			X	3	
FD-082020 (480-174119-2)	8/20/20	Eastern		Water			X	3	
SPRING-082020 (480-174119-3)	8/20/20	14:50 Eastern		Water			X	3	
SW-01-082020 (480-174119-4)	8/20/20	15:45 Eastern		Water			X	3	
TB-082020 (480-174119-5)	8/20/20	Eastern		Water			X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	8/26/20 1705		via Fedex	8/27/20 1000	ETAL
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: X Yes Δ No	Custody Seal No.: 1149714	Cooler Temperature(s) °C and Other Remarks: 5.2°C IR11

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: AECOM

Job Number: 480-174119-1

Login Number: 174119

List Source: Eurofins TestAmerica, Buffalo

List Number: 1

Creator: Stopa, Erik S

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	AECOM
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: AECOM

Job Number: 480-174119-1

Login Number: 174119
List Number: 2
Creator: Armbruster, Chris

List Source: Eurofins TestAmerica, Edison
List Creation: 08/27/20 11:21 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	1149714
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.2°C IR11
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

Laboratory Job ID: 480-184597-1
Client Project/Site: 60583042 - Wyoming County FTC

For:
AECOM
257 West Genesee Street
Suite 400
Buffalo, New York 14202-2657

Attn: Colin Wasteneys

Authorized for release by:
5/24/2021 2:54:17 PM
Rebecca Jones, Project Management Assistant I
Rebecca.Jones@Eurofinset.com

Designee for

John Schove, Project Manager II
(716)504-9838
John.Schove@Eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: AECOM
Job ID: 480-184597-1
Project/Site: 60583042 - Wyoming County FTC

Qualifiers

GC/MS VOA

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

Glossary

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

Job ID: 480-184597-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative
480-184597-1

Comments
No additional comments.

Receipt
The samples were received on 5/12/2021 4:30 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.9º C.

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

Detection Summary

Client: AECOM
Job ID: 480-184597-1
Project/Site: 60583042 - Wyoming County FTC

Client Sample ID: BW-01-051221 — Lab Sample ID: 480-184597-1

No Detections.

Client Sample ID: SPRING-051221 — Lab Sample ID: 480-184597-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	39		0.50	0.17	ug/L	1		524.2	Total/NA
1,1-Dichloroethane	4.6		0.50	0.14	ug/L	1		524.2	Total/NA
1,1-Dichloroethene	0.72		0.50	0.19	ug/L	1		524.2	Total/NA
Tetrachloroethene	40		0.50	0.14	ug/L	1		524.2	Total/NA
trans-1,2-Dichloroethene	0.42	J	0.50	0.13	ug/L	1		524.2	Total/NA
Trichloroethene	5.6		0.50	0.11	ug/L	1		524.2	Total/NA
cis-1,2-Dichloroethene - DL	42		1.0	0.28	ug/L	2		524.2	Total/NA

Client Sample ID: SW-01-051221 — Lab Sample ID: 480-184597-3

No Detections.

Client Sample ID: TB-051221 — Lab Sample ID: 480-184597-4

No Detections.

Client Sample ID: FD-051221 — Lab Sample ID: 480-184597-5

No Detections.

This Detection Summary does not include radiochemical test results.

Client: AECOM
Job ID: 480-184597-1
Project/Site: 60583042 - Wyoming County FTC

Client Sample ID: BW-01-051221
Lab Sample ID: 480-184597-1
Date Collected: 05/12/21 13:10
Matrix: Water
Date Received: 05/12/21 16:30

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.12	ug/L			05/18/21 11:16	1
1,1,1-Trichloroethane	ND		0.50	0.17	ug/L			05/18/21 11:16	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.15	ug/L			05/18/21 11:16	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.14	ug/L			05/18/21 11:16	1
1,1,2-Trichloroethane	ND		0.50	0.090	ug/L			05/18/21 11:16	1
1,1-Dichloroethane	ND		0.50	0.14	ug/L			05/18/21 11:16	1
1,1-Dichloroethene	ND		0.50	0.19	ug/L			05/18/21 11:16	1
1,1-Dichloropropene	ND		0.50	0.18	ug/L			05/18/21 11:16	1
1,2,3-Trichlorobenzene	ND		0.50	0.10	ug/L			05/18/21 11:16	1
1,2,3-Trichloropropane	ND		0.50	0.14	ug/L			05/18/21 11:16	1
1,2,4-Trichlorobenzene	ND		0.50	0.10	ug/L			05/18/21 11:16	1
1,2,4-Trimethylbenzene	ND		0.50	0.10	ug/L			05/18/21 11:16	1
1,2-Dibromo-3-Chloropropane	ND		0.50	0.35	ug/L			05/18/21 11:16	1
1,2-Dibromoethane	ND		0.50	0.13	ug/L			05/18/21 11:16	1
1,2-Dichlorobenzene	ND		0.50	0.11	ug/L			05/18/21 11:16	1
1,2-Dichloroethane	ND		0.50	0.11	ug/L			05/18/21 11:16	1
1,2-Dichloropropane	ND		0.50	0.11	ug/L			05/18/21 11:16	1
1,3,5-Trimethylbenzene	ND		0.50	0.12	ug/L			05/18/21 11:16	1
1,3-Dichlorobenzene	ND		0.50	0.090	ug/L			05/18/21 11:16	1
1,3-Dichloropropane	ND		0.50	0.090	ug/L			05/18/21 11:16	1
1,4-Dichlorobenzene	ND		0.50	0.090	ug/L			05/18/21 11:16	1
2,2-Dichloropropane	ND		0.50	0.15	ug/L			05/18/21 11:16	1
2-Butanone (MEK)	ND		2.5	1.1	ug/L			05/18/21 11:16	1
2-Chlorotoluene	ND		0.50	0.10	ug/L			05/18/21 11:16	1
2-Hexanone	ND		2.5	1.1	ug/L			05/18/21 11:16	1
4-Chlorotoluene	ND		0.50	0.11	ug/L			05/18/21 11:16	1
4-Isopropyltoluene	ND		0.50	0.13	ug/L			05/18/21 11:16	1
4-Methyl-2-pentanone (MIBK)	ND		2.5	1.0	ug/L			05/18/21 11:16	1
Acetone	ND		3.0	2.9	ug/L			05/18/21 11:16	1
Acrylonitrile	ND		0.50	0.37	ug/L			05/18/21 11:16	1
Allyl chloride	ND		0.50	0.10	ug/L			05/18/21 11:16	1
Benzene	ND		0.50	0.11	ug/L			05/18/21 11:16	1
Bromobenzene	ND		0.50	0.070	ug/L			05/18/21 11:16	1
Bromochloromethane	ND		0.50	0.10	ug/L			05/18/21 11:16	1
Bromoform	ND		0.50	0.080	ug/L			05/18/21 11:16	1
Bromomethane	ND		0.50	0.31	ug/L			05/18/21 11:16	1
Carbon disulfide	ND		0.50	0.10	ug/L			05/18/21 11:16	1
Carbon tetrachloride	ND		0.50	0.17	ug/L			05/18/21 11:16	1
Chlorobenzene	ND		0.50	0.10	ug/L			05/18/21 11:16	1
Chlorodibromomethane	ND		0.50	0.15	ug/L			05/18/21 11:16	1
Chloroethane	ND		0.50	0.23	ug/L			05/18/21 11:16	1
Chloroform	ND		0.50	0.12	ug/L			05/18/21 11:16	1
Chloromethane	ND		0.50	0.18	ug/L			05/18/21 11:16	1
cis-1,2-Dichloroethene	ND		0.50	0.14	ug/L			05/18/21 11:16	1
cis-1,3-Dichloropropene	ND		0.50	0.18	ug/L			05/18/21 11:16	1
Dibromomethane	ND		0.50	0.10	ug/L			05/18/21 11:16	1
Dichlorobromomethane	ND		0.50	0.090	ug/L			05/18/21 11:16	1
Dichlorodifluoromethane	ND		0.50	0.30	ug/L			05/18/21 11:16	1
Ethyl ether	ND		0.50	0.14	ug/L			05/18/21 11:16	1

Client: AECOM
Job ID: 480-184597-1
Project/Site: 60583042 - Wyoming County FTC

Client Sample ID: BW-01-051221
Lab Sample ID: 480-184597-1
Date Collected: 05/12/21 13:10
Matrix: Water
Date Received: 05/12/21 16:30

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		0.50	0.090	ug/L			05/18/21 11:16	1
Hexachlorobutadiene	ND		0.50	0.19	ug/L			05/18/21 11:16	1
Iodomethane	ND		0.50	0.033	ug/L			05/18/21 11:16	1
Isopropylbenzene	ND		0.50	0.14	ug/L			05/18/21 11:16	1
Methyl tert-butyl ether	ND		0.50	0.24	ug/L			05/18/21 11:16	1
Methylene Chloride	ND		0.50	0.42	ug/L			05/18/21 11:16	1
m-Xylene & p-Xylene	ND		1.0	0.24	ug/L			05/18/21 11:16	1
Naphthalene	ND		0.50	0.080	ug/L			05/18/21 11:16	1
n-Butylbenzene	ND		0.50	0.14	ug/L			05/18/21 11:16	1
N-Propylbenzene	ND		0.50	0.14	ug/L			05/18/21 11:16	1
o-Xylene	ND		0.50	0.090	ug/L			05/18/21 11:16	1
sec-Butylbenzene	ND		0.50	0.15	ug/L			05/18/21 11:16	1
Styrene	ND		0.50	0.090	ug/L			05/18/21 11:16	1
t-Butanol	ND		10	2.5	ug/L			05/18/21 11:16	1
tert-Butylbenzene	ND		0.50	0.16	ug/L			05/18/21 11:16	1
Tetrachloroethene	ND		0.50	0.14	ug/L			05/18/21 11:16	1
Toluene	ND		0.50	0.11	ug/L			05/18/21 11:16	1
trans-1,2-Dichloroethene	ND		0.50	0.13	ug/L			05/18/21 11:16	1
trans-1,3-Dichloropropene	ND		0.50	0.13	ug/L			05/18/21 11:16	1
trans-1,4-Dichloro-2-butene	ND		0.50	0.28	ug/L			05/18/21 11:16	1
Trichloroethene	ND		0.50	0.11	ug/L			05/18/21 11:16	1
Trichlorofluoromethane	ND		0.50	0.27	ug/L			05/18/21 11:16	1
Trihalomethanes, Total	ND		0.50	0.080	ug/L			05/18/21 11:16	1
Vinyl chloride	ND		0.50	0.25	ug/L			05/18/21 11:16	1
Xylenes, Total	ND		0.50	0.32	ug/L			05/18/21 11:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichlorobenzene-d4	*90*		*70 - 130*		*05/18/21 11:16*	*1*
4-Bromofluorobenzene	*88*		*70 - 130*		*05/18/21 11:16*	*1*

Client: AECOM
Job ID: 480-184597-1
Project/Site: 60583042 - Wyoming County FTC

Client Sample ID: SPRING-051221
Lab Sample ID: 480-184597-2
Date Collected: 05/12/21 13:30
Matrix: Water
Date Received: 05/12/21 16:30

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.12	ug/L			05/18/21 11:37	1
1,1,1-Trichloroethane	**39**		0.50	0.17	ug/L			05/18/21 11:37	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.15	ug/L			05/18/21 11:37	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.14	ug/L			05/18/21 11:37	1
1,1,2-Trichloroethane	ND		0.50	0.090	ug/L			05/18/21 11:37	1
1,1-Dichloroethane	**4.6**		0.50	0.14	ug/L			05/18/21 11:37	1
1,1-Dichloroethene	**0.72**		0.50	0.19	ug/L			05/18/21 11:37	1
1,1-Dichloropropene	ND		0.50	0.18	ug/L			05/18/21 11:37	1
1,2,3-Trichlorobenzene	ND		0.50	0.10	ug/L			05/18/21 11:37	1
1,2,3-Trichloropropane	ND		0.50	0.14	ug/L			05/18/21 11:37	1
1,2,4-Trichlorobenzene	ND		0.50	0.10	ug/L			05/18/21 11:37	1
1,2,4-Trimethylbenzene	ND		0.50	0.10	ug/L			05/18/21 11:37	1
1,2-Dibromo-3-Chloropropane	ND		0.50	0.35	ug/L			05/18/21 11:37	1
1,2-Dibromoethane	ND		0.50	0.13	ug/L			05/18/21 11:37	1
1,2-Dichlorobenzene	ND		0.50	0.11	ug/L			05/18/21 11:37	1
1,2-Dichloroethane	ND		0.50	0.11	ug/L			05/18/21 11:37	1
1,2-Dichloropropane	ND		0.50	0.11	ug/L			05/18/21 11:37	1
1,3,5-Trimethylbenzene	ND		0.50	0.12	ug/L			05/18/21 11:37	1
1,3-Dichlorobenzene	ND		0.50	0.090	ug/L			05/18/21 11:37	1
1,3-Dichloropropane	ND		0.50	0.090	ug/L			05/18/21 11:37	1
1,4-Dichlorobenzene	ND		0.50	0.090	ug/L			05/18/21 11:37	1
2,2-Dichloropropane	ND		0.50	0.15	ug/L			05/18/21 11:37	1
2-Butanone (MEK)	ND		2.5	1.1	ug/L			05/18/21 11:37	1
2-Chlorotoluene	ND		0.50	0.10	ug/L			05/18/21 11:37	1
2-Hexanone	ND		2.5	1.1	ug/L			05/18/21 11:37	1
4-Chlorotoluene	ND		0.50	0.11	ug/L			05/18/21 11:37	1
4-Isopropyltoluene	ND		0.50	0.13	ug/L			05/18/21 11:37	1
4-Methyl-2-pentanone (MIBK)	ND		2.5	1.0	ug/L			05/18/21 11:37	1
Acetone	ND		3.0	2.9	ug/L			05/18/21 11:37	1
Acrylonitrile	ND		0.50	0.37	ug/L			05/18/21 11:37	1
Allyl chloride	ND		0.50	0.10	ug/L			05/18/21 11:37	1
Benzene	ND		0.50	0.11	ug/L			05/18/21 11:37	1
Bromobenzene	ND		0.50	0.070	ug/L			05/18/21 11:37	1
Bromochloromethane	ND		0.50	0.10	ug/L			05/18/21 11:37	1
Bromoform	ND		0.50	0.080	ug/L			05/18/21 11:37	1
Bromomethane	ND		0.50	0.31	ug/L			05/18/21 11:37	1
Carbon disulfide	ND		0.50	0.10	ug/L			05/18/21 11:37	1
Carbon tetrachloride	ND		0.50	0.17	ug/L			05/18/21 11:37	1
Chlorobenzene	ND		0.50	0.10	ug/L			05/18/21 11:37	1
Chlorodibromomethane	ND		0.50	0.15	ug/L			05/18/21 11:37	1
Chloroethane	ND		0.50	0.23	ug/L			05/18/21 11:37	1
Chloroform	ND		0.50	0.12	ug/L			05/18/21 11:37	1
Chloromethane	ND		0.50	0.18	ug/L			05/18/21 11:37	1
cis-1,3-Dichloropropene	ND		0.50	0.18	ug/L			05/18/21 11:37	1
Dibromomethane	ND		0.50	0.10	ug/L			05/18/21 11:37	1
Dichlorobromomethane	ND		0.50	0.090	ug/L			05/18/21 11:37	1
Dichlorodifluoromethane	ND		0.50	0.30	ug/L			05/18/21 11:37	1
Ethyl ether	ND		0.50	0.14	ug/L			05/18/21 11:37	1
Ethylbenzene	ND		0.50	0.090	ug/L			05/18/21 11:37	1

Client: AECOM
Project/Site: 60583042 - Wyoming County FTC

Job ID: 480-184597-1

Client Sample ID: SPRING-051221
Date Collected: 05/12/21 13:30
Date Received: 05/12/21 16:30

Lab Sample ID: 480-184597-2
Matrix: Water

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	ND		0.50	0.19	ug/L			05/18/21 11:37	1
Iodomethane	ND		0.50	0.033	ug/L			05/18/21 11:37	1
Isopropylbenzene	ND		0.50	0.14	ug/L			05/18/21 11:37	1
Methyl tert-butyl ether	ND		0.50	0.24	ug/L			05/18/21 11:37	1
Methylene Chloride	ND		0.50	0.42	ug/L			05/18/21 11:37	1
m-Xylene & p-Xylene	ND		1.0	0.24	ug/L			05/18/21 11:37	1
Naphthalene	ND		0.50	0.080	ug/L			05/18/21 11:37	1
n-Butylbenzene	ND		0.50	0.14	ug/L			05/18/21 11:37	1
N-Propylbenzene	ND		0.50	0.14	ug/L			05/18/21 11:37	1
o-Xylene	ND		0.50	0.090	ug/L			05/18/21 11:37	1
sec-Butylbenzene	ND		0.50	0.15	ug/L			05/18/21 11:37	1
Styrene	ND		0.50	0.090	ug/L			05/18/21 11:37	1
t-Butanol	ND		10	2.5	ug/L			05/18/21 11:37	1
tert-Butylbenzene	ND		0.50	0.16	ug/L			05/18/21 11:37	1
Tetrachloroethene	**40**		0.50	0.14	ug/L			05/18/21 11:37	1
Toluene	ND		0.50	0.11	ug/L			05/18/21 11:37	1
trans-1,2-Dichloroethene	**0.42**	**J**	0.50	0.13	ug/L			05/18/21 11:37	1
trans-1,3-Dichloropropene	ND		0.50	0.13	ug/L			05/18/21 11:37	1
trans-1,4-Dichloro-2-butene	ND		0.50	0.28	ug/L			05/18/21 11:37	1
Trichloroethene	**5.6**		0.50	0.11	ug/L			05/18/21 11:37	1
Trichlorofluoromethane	ND		0.50	0.27	ug/L			05/18/21 11:37	1
Trihalomethanes, Total	ND		0.50	0.080	ug/L			05/18/21 11:37	1
Vinyl chloride	ND		0.50	0.25	ug/L			05/18/21 11:37	1
Xylenes, Total	ND		0.50	0.32	ug/L			05/18/21 11:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichlorobenzene-d4	*95*		*70 - 130*		*05/18/21 11:37*	*1*
4-Bromofluorobenzene	*94*		*70 - 130*		*05/18/21 11:37*	*1*

Method: 524.2 - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**42**		1.0	0.28	ug/L			05/18/21 13:51	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichlorobenzene-d4	*94*		*70 - 130*		*05/18/21 13:51*	*2*
4-Bromofluorobenzene	*86*		*70 - 130*		*05/18/21 13:51*	*2*

Client: AECOM
Job ID: 480-184597-1
Project/Site: 60583042 - Wyoming County FTC

Client Sample ID: SW-01-051221
Lab Sample ID: 480-184597-3
Date Collected: 05/12/21 14:45
Matrix: Water
Date Received: 05/12/21 16:30

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.12	ug/L			05/18/21 11:57	1
1,1,1-Trichloroethane	ND		0.50	0.17	ug/L			05/18/21 11:57	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.15	ug/L			05/18/21 11:57	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.14	ug/L			05/18/21 11:57	1
1,1,2-Trichloroethane	ND		0.50	0.090	ug/L			05/18/21 11:57	1
1,1-Dichloroethane	ND		0.50	0.14	ug/L			05/18/21 11:57	1
1,1-Dichloroethene	ND		0.50	0.19	ug/L			05/18/21 11:57	1
1,1-Dichloropropene	ND		0.50	0.18	ug/L			05/18/21 11:57	1
1,2,3-Trichlorobenzene	ND		0.50	0.10	ug/L			05/18/21 11:57	1
1,2,3-Trichloropropane	ND		0.50	0.14	ug/L			05/18/21 11:57	1
1,2,4-Trichlorobenzene	ND		0.50	0.10	ug/L			05/18/21 11:57	1
1,2,4-Trimethylbenzene	ND		0.50	0.10	ug/L			05/18/21 11:57	1
1,2-Dibromo-3-Chloropropane	ND		0.50	0.35	ug/L			05/18/21 11:57	1
1,2-Dibromoethane	ND		0.50	0.13	ug/L			05/18/21 11:57	1
1,2-Dichlorobenzene	ND		0.50	0.11	ug/L			05/18/21 11:57	1
1,2-Dichloroethane	ND		0.50	0.11	ug/L			05/18/21 11:57	1
1,2-Dichloropropane	ND		0.50	0.11	ug/L			05/18/21 11:57	1
1,3,5-Trimethylbenzene	ND		0.50	0.12	ug/L			05/18/21 11:57	1
1,3-Dichlorobenzene	ND		0.50	0.090	ug/L			05/18/21 11:57	1
1,3-Dichloropropane	ND		0.50	0.090	ug/L			05/18/21 11:57	1
1,4-Dichlorobenzene	ND		0.50	0.090	ug/L			05/18/21 11:57	1
2,2-Dichloropropane	ND		0.50	0.15	ug/L			05/18/21 11:57	1
2-Butanone (MEK)	ND		2.5	1.1	ug/L			05/18/21 11:57	1
2-Chlorotoluene	ND		0.50	0.10	ug/L			05/18/21 11:57	1
2-Hexanone	ND		2.5	1.1	ug/L			05/18/21 11:57	1
4-Chlorotoluene	ND		0.50	0.11	ug/L			05/18/21 11:57	1
4-Isopropyltoluene	ND		0.50	0.13	ug/L			05/18/21 11:57	1
4-Methyl-2-pentanone (MIBK)	ND		2.5	1.0	ug/L			05/18/21 11:57	1
Acetone	ND		3.0	2.9	ug/L			05/18/21 11:57	1
Acrylonitrile	ND		0.50	0.37	ug/L			05/18/21 11:57	1
Allyl chloride	ND		0.50	0.10	ug/L			05/18/21 11:57	1
Benzene	ND		0.50	0.11	ug/L			05/18/21 11:57	1
Bromobenzene	ND		0.50	0.070	ug/L			05/18/21 11:57	1
Bromochloromethane	ND		0.50	0.10	ug/L			05/18/21 11:57	1
Bromoform	ND		0.50	0.080	ug/L			05/18/21 11:57	1
Bromomethane	ND		0.50	0.31	ug/L			05/18/21 11:57	1
Carbon disulfide	ND		0.50	0.10	ug/L			05/18/21 11:57	1
Carbon tetrachloride	ND		0.50	0.17	ug/L			05/18/21 11:57	1
Chlorobenzene	ND		0.50	0.10	ug/L			05/18/21 11:57	1
Chlorodibromomethane	ND		0.50	0.15	ug/L			05/18/21 11:57	1
Chloroethane	ND		0.50	0.23	ug/L			05/18/21 11:57	1
Chloroform	ND		0.50	0.12	ug/L			05/18/21 11:57	1
Chloromethane	ND		0.50	0.18	ug/L			05/18/21 11:57	1
cis-1,2-Dichloroethene	ND		0.50	0.14	ug/L			05/18/21 11:57	1
cis-1,3-Dichloropropene	ND		0.50	0.18	ug/L			05/18/21 11:57	1
Dibromomethane	ND		0.50	0.10	ug/L			05/18/21 11:57	1
Dichlorobromomethane	ND		0.50	0.090	ug/L			05/18/21 11:57	1
Dichlorodifluoromethane	ND		0.50	0.30	ug/L			05/18/21 11:57	1
Ethyl ether	ND		0.50	0.14	ug/L			05/18/21 11:57	1

Client: AECOM
Job ID: 480-184597-1
Project/Site: 60583042 - Wyoming County FTC

Client Sample ID: SW-01-051221
Lab Sample ID: 480-184597-3
Date Collected: 05/12/21 14:45
Matrix: Water
Date Received: 05/12/21 16:30

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		0.50	0.090	ug/L			05/18/21 11:57	1
Hexachlorobutadiene	ND		0.50	0.19	ug/L			05/18/21 11:57	1
Iodomethane	ND		0.50	0.033	ug/L			05/18/21 11:57	1
Isopropylbenzene	ND		0.50	0.14	ug/L			05/18/21 11:57	1
Methyl tert-butyl ether	ND		0.50	0.24	ug/L			05/18/21 11:57	1
Methylene Chloride	ND		0.50	0.42	ug/L			05/18/21 11:57	1
m-Xylene & p-Xylene	ND		1.0	0.24	ug/L			05/18/21 11:57	1
Naphthalene	ND		0.50	0.080	ug/L			05/18/21 11:57	1
n-Butylbenzene	ND		0.50	0.14	ug/L			05/18/21 11:57	1
N-Propylbenzene	ND		0.50	0.14	ug/L			05/18/21 11:57	1
o-Xylene	ND		0.50	0.090	ug/L			05/18/21 11:57	1
sec-Butylbenzene	ND		0.50	0.15	ug/L			05/18/21 11:57	1
Styrene	ND		0.50	0.090	ug/L			05/18/21 11:57	1
t-Butanol	ND		10	2.5	ug/L			05/18/21 11:57	1
tert-Butylbenzene	ND		0.50	0.16	ug/L			05/18/21 11:57	1
Tetrachloroethene	ND		0.50	0.14	ug/L			05/18/21 11:57	1
Toluene	ND		0.50	0.11	ug/L			05/18/21 11:57	1
trans-1,2-Dichloroethene	ND		0.50	0.13	ug/L			05/18/21 11:57	1
trans-1,3-Dichloropropene	ND		0.50	0.13	ug/L			05/18/21 11:57	1
trans-1,4-Dichloro-2-butene	ND		0.50	0.28	ug/L			05/18/21 11:57	1
Trichloroethene	ND		0.50	0.11	ug/L			05/18/21 11:57	1
Trichlorofluoromethane	ND		0.50	0.27	ug/L			05/18/21 11:57	1
Trihalomethanes, Total	ND		0.50	0.080	ug/L			05/18/21 11:57	1
Vinyl chloride	ND		0.50	0.25	ug/L			05/18/21 11:57	1
Xylenes, Total	ND		0.50	0.32	ug/L			05/18/21 11:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichlorobenzene-d4	*95*		*70 - 130*		*05/18/21 11:57*	*1*
4-Bromofluorobenzene	*92*		*70 - 130*		*05/18/21 11:57*	*1*

Client: AECOM
Job ID: 480-184597-1
Project/Site: 60583042 - Wyoming County FTC

Client Sample ID: TB-051221
Lab Sample ID: 480-184597-4
Date Collected: 05/12/21 00:00
Matrix: Water
Date Received: 05/12/21 16:30

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.12	ug/L			05/18/21 09:12	1
1,1,1-Trichloroethane	ND		0.50	0.17	ug/L			05/18/21 09:12	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.15	ug/L			05/18/21 09:12	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.14	ug/L			05/18/21 09:12	1
1,1,2-Trichloroethane	ND		0.50	0.090	ug/L			05/18/21 09:12	1
1,1-Dichloroethane	ND		0.50	0.14	ug/L			05/18/21 09:12	1
1,1-Dichloroethene	ND		0.50	0.19	ug/L			05/18/21 09:12	1
1,1-Dichloropropene	ND		0.50	0.18	ug/L			05/18/21 09:12	1
1,2,3-Trichlorobenzene	ND		0.50	0.10	ug/L			05/18/21 09:12	1
1,2,3-Trichloropropane	ND		0.50	0.14	ug/L			05/18/21 09:12	1
1,2,4-Trichlorobenzene	ND		0.50	0.10	ug/L			05/18/21 09:12	1
1,2,4-Trimethylbenzene	ND		0.50	0.10	ug/L			05/18/21 09:12	1
1,2-Dibromo-3-Chloropropane	ND		0.50	0.35	ug/L			05/18/21 09:12	1
1,2-Dibromoethane	ND		0.50	0.13	ug/L			05/18/21 09:12	1
1,2-Dichlorobenzene	ND		0.50	0.11	ug/L			05/18/21 09:12	1
1,2-Dichloroethane	ND		0.50	0.11	ug/L			05/18/21 09:12	1
1,2-Dichloropropane	ND		0.50	0.11	ug/L			05/18/21 09:12	1
1,3,5-Trimethylbenzene	ND		0.50	0.12	ug/L			05/18/21 09:12	1
1,3-Dichlorobenzene	ND		0.50	0.090	ug/L			05/18/21 09:12	1
1,3-Dichloropropane	ND		0.50	0.090	ug/L			05/18/21 09:12	1
1,4-Dichlorobenzene	ND		0.50	0.090	ug/L			05/18/21 09:12	1
2,2-Dichloropropane	ND		0.50	0.15	ug/L			05/18/21 09:12	1
2-Butanone (MEK)	ND		2.5	1.1	ug/L			05/18/21 09:12	1
2-Chlorotoluene	ND		0.50	0.10	ug/L			05/18/21 09:12	1
2-Hexanone	ND		2.5	1.1	ug/L			05/18/21 09:12	1
4-Chlorotoluene	ND		0.50	0.11	ug/L			05/18/21 09:12	1
4-Isopropyltoluene	ND		0.50	0.13	ug/L			05/18/21 09:12	1
4-Methyl-2-pentanone (MIBK)	ND		2.5	1.0	ug/L			05/18/21 09:12	1
Acetone	ND		3.0	2.9	ug/L			05/18/21 09:12	1
Acrylonitrile	ND		0.50	0.37	ug/L			05/18/21 09:12	1
Allyl chloride	ND		0.50	0.10	ug/L			05/18/21 09:12	1
Benzene	ND		0.50	0.11	ug/L			05/18/21 09:12	1
Bromobenzene	ND		0.50	0.070	ug/L			05/18/21 09:12	1
Bromochloromethane	ND		0.50	0.10	ug/L			05/18/21 09:12	1
Bromoform	ND		0.50	0.080	ug/L			05/18/21 09:12	1
Bromomethane	ND		0.50	0.31	ug/L			05/18/21 09:12	1
Carbon disulfide	ND		0.50	0.10	ug/L			05/18/21 09:12	1
Carbon tetrachloride	ND		0.50	0.17	ug/L			05/18/21 09:12	1
Chlorobenzene	ND		0.50	0.10	ug/L			05/18/21 09:12	1
Chlorodibromomethane	ND		0.50	0.15	ug/L			05/18/21 09:12	1
Chloroethane	ND		0.50	0.23	ug/L			05/18/21 09:12	1
Chloroform	ND		0.50	0.12	ug/L			05/18/21 09:12	1
Chloromethane	ND		0.50	0.18	ug/L			05/18/21 09:12	1
cis-1,2-Dichloroethene	ND		0.50	0.14	ug/L			05/18/21 09:12	1
cis-1,3-Dichloropropene	ND		0.50	0.18	ug/L			05/18/21 09:12	1
Dibromomethane	ND		0.50	0.10	ug/L			05/18/21 09:12	1
Dichlorobromomethane	ND		0.50	0.090	ug/L			05/18/21 09:12	1
Dichlorodifluoromethane	ND		0.50	0.30	ug/L			05/18/21 09:12	1
Ethyl ether	ND		0.50	0.14	ug/L			05/18/21 09:12	1

Client: AECOM
Job ID: 480-184597-1
Project/Site: 60583042 - Wyoming County FTC

Client Sample ID: TB-051221
Lab Sample ID: 480-184597-4
Date Collected: 05/12/21 00:00
Matrix: Water
Date Received: 05/12/21 16:30

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		0.50	0.090	ug/L			05/18/21 09:12	1
Hexachlorobutadiene	ND		0.50	0.19	ug/L			05/18/21 09:12	1
Iodomethane	ND		0.50	0.033	ug/L			05/18/21 09:12	1
Isopropylbenzene	ND		0.50	0.14	ug/L			05/18/21 09:12	1
Methyl tert-butyl ether	ND		0.50	0.24	ug/L			05/18/21 09:12	1
Methylene Chloride	ND		0.50	0.42	ug/L			05/18/21 09:12	1
m-Xylene & p-Xylene	ND		1.0	0.24	ug/L			05/18/21 09:12	1
Naphthalene	ND		0.50	0.080	ug/L			05/18/21 09:12	1
n-Butylbenzene	ND		0.50	0.14	ug/L			05/18/21 09:12	1
N-Propylbenzene	ND		0.50	0.14	ug/L			05/18/21 09:12	1
o-Xylene	ND		0.50	0.090	ug/L			05/18/21 09:12	1
sec-Butylbenzene	ND		0.50	0.15	ug/L			05/18/21 09:12	1
Styrene	ND		0.50	0.090	ug/L			05/18/21 09:12	1
t-Butanol	ND		10	2.5	ug/L			05/18/21 09:12	1
tert-Butylbenzene	ND		0.50	0.16	ug/L			05/18/21 09:12	1
Tetrachloroethene	ND		0.50	0.14	ug/L			05/18/21 09:12	1
Toluene	ND		0.50	0.11	ug/L			05/18/21 09:12	1
trans-1,2-Dichloroethene	ND		0.50	0.13	ug/L			05/18/21 09:12	1
trans-1,3-Dichloropropene	ND		0.50	0.13	ug/L			05/18/21 09:12	1
trans-1,4-Dichloro-2-butene	ND		0.50	0.28	ug/L			05/18/21 09:12	1
Trichloroethene	ND		0.50	0.11	ug/L			05/18/21 09:12	1
Trichlorofluoromethane	ND		0.50	0.27	ug/L			05/18/21 09:12	1
Trihalomethanes, Total	ND		0.50	0.080	ug/L			05/18/21 09:12	1
Vinyl chloride	ND		0.50	0.25	ug/L			05/18/21 09:12	1
Xylenes, Total	ND		0.50	0.32	ug/L			05/18/21 09:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichlorobenzene-d4	*93*		*70 - 130*		*05/18/21 09:12*	*1*
4-Bromofluorobenzene	*92*		*70 - 130*		*05/18/21 09:12*	*1*

Client: AECOM
Job ID: 480-184597-1
Project/Site: 60583042 - Wyoming County FTC

Client Sample ID: FD-051221
Lab Sample ID: 480-184597-5
Date Collected: 05/12/21 00:00
Matrix: Water
Date Received: 05/12/21 16:30

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.12	ug/L			05/18/21 12:18	1
1,1,1-Trichloroethane	ND		0.50	0.17	ug/L			05/18/21 12:18	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.15	ug/L			05/18/21 12:18	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.14	ug/L			05/18/21 12:18	1
1,1,2-Trichloroethane	ND		0.50	0.090	ug/L			05/18/21 12:18	1
1,1-Dichloroethane	ND		0.50	0.14	ug/L			05/18/21 12:18	1
1,1-Dichloroethene	ND		0.50	0.19	ug/L			05/18/21 12:18	1
1,1-Dichloropropene	ND		0.50	0.18	ug/L			05/18/21 12:18	1
1,2,3-Trichlorobenzene	ND		0.50	0.10	ug/L			05/18/21 12:18	1
1,2,3-Trichloropropane	ND		0.50	0.14	ug/L			05/18/21 12:18	1
1,2,4-Trichlorobenzene	ND		0.50	0.10	ug/L			05/18/21 12:18	1
1,2,4-Trimethylbenzene	ND		0.50	0.10	ug/L			05/18/21 12:18	1
1,2-Dibromo-3-Chloropropane	ND		0.50	0.35	ug/L			05/18/21 12:18	1
1,2-Dibromoethane	ND		0.50	0.13	ug/L			05/18/21 12:18	1
1,2-Dichlorobenzene	ND		0.50	0.11	ug/L			05/18/21 12:18	1
1,2-Dichloroethane	ND		0.50	0.11	ug/L			05/18/21 12:18	1
1,2-Dichloropropane	ND		0.50	0.11	ug/L			05/18/21 12:18	1
1,3,5-Trimethylbenzene	ND		0.50	0.12	ug/L			05/18/21 12:18	1
1,3-Dichlorobenzene	ND		0.50	0.090	ug/L			05/18/21 12:18	1
1,3-Dichloropropane	ND		0.50	0.090	ug/L			05/18/21 12:18	1
1,4-Dichlorobenzene	ND		0.50	0.090	ug/L			05/18/21 12:18	1
2,2-Dichloropropane	ND		0.50	0.15	ug/L			05/18/21 12:18	1
2-Butanone (MEK)	ND		2.5	1.1	ug/L			05/18/21 12:18	1
2-Chlorotoluene	ND		0.50	0.10	ug/L			05/18/21 12:18	1
2-Hexanone	ND		2.5	1.1	ug/L			05/18/21 12:18	1
4-Chlorotoluene	ND		0.50	0.11	ug/L			05/18/21 12:18	1
4-Isopropyltoluene	ND		0.50	0.13	ug/L			05/18/21 12:18	1
4-Methyl-2-pentanone (MIBK)	ND		2.5	1.0	ug/L			05/18/21 12:18	1
Acetone	ND		3.0	2.9	ug/L			05/18/21 12:18	1
Acrylonitrile	ND		0.50	0.37	ug/L			05/18/21 12:18	1
Allyl chloride	ND		0.50	0.10	ug/L			05/18/21 12:18	1
Benzene	ND		0.50	0.11	ug/L			05/18/21 12:18	1
Bromobenzene	ND		0.50	0.070	ug/L			05/18/21 12:18	1
Bromochloromethane	ND		0.50	0.10	ug/L			05/18/21 12:18	1
Bromoform	ND		0.50	0.080	ug/L			05/18/21 12:18	1
Bromomethane	ND		0.50	0.31	ug/L			05/18/21 12:18	1
Carbon disulfide	ND		0.50	0.10	ug/L			05/18/21 12:18	1
Carbon tetrachloride	ND		0.50	0.17	ug/L			05/18/21 12:18	1
Chlorobenzene	ND		0.50	0.10	ug/L			05/18/21 12:18	1
Chlorodibromomethane	ND		0.50	0.15	ug/L			05/18/21 12:18	1
Chloroethane	ND		0.50	0.23	ug/L			05/18/21 12:18	1
Chloroform	ND		0.50	0.12	ug/L			05/18/21 12:18	1
Chloromethane	ND		0.50	0.18	ug/L			05/18/21 12:18	1
cis-1,2-Dichloroethene	ND		0.50	0.14	ug/L			05/18/21 12:18	1
cis-1,3-Dichloropropene	ND		0.50	0.18	ug/L			05/18/21 12:18	1
Dibromomethane	ND		0.50	0.10	ug/L			05/18/21 12:18	1
Dichlorobromomethane	ND		0.50	0.090	ug/L			05/18/21 12:18	1
Dichlorodifluoromethane	ND		0.50	0.30	ug/L			05/18/21 12:18	1
Ethyl ether	ND		0.50	0.14	ug/L			05/18/21 12:18	1

Client Sample ID: FD-051221
Date Collected: 05/12/21 00:00
Date Received: 05/12/21 16:30

Lab Sample ID: 480-184597-5
Matrix: Water

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		0.50	0.090	ug/L			05/18/21 12:18	1
Hexachlorobutadiene	ND		0.50	0.19	ug/L			05/18/21 12:18	1
Iodomethane	ND		0.50	0.033	ug/L			05/18/21 12:18	1
Isopropylbenzene	ND		0.50	0.14	ug/L			05/18/21 12:18	1
Methyl tert-butyl ether	ND		0.50	0.24	ug/L			05/18/21 12:18	1
Methylene Chloride	ND		0.50	0.42	ug/L			05/18/21 12:18	1
m-Xylene & p-Xylene	ND		1.0	0.24	ug/L			05/18/21 12:18	1
Naphthalene	ND		0.50	0.080	ug/L			05/18/21 12:18	1
n-Butylbenzene	ND		0.50	0.14	ug/L			05/18/21 12:18	1
N-Propylbenzene	ND		0.50	0.14	ug/L			05/18/21 12:18	1
o-Xylene	ND		0.50	0.090	ug/L			05/18/21 12:18	1
sec-Butylbenzene	ND		0.50	0.15	ug/L			05/18/21 12:18	1
Styrene	ND		0.50	0.090	ug/L			05/18/21 12:18	1
t-Butanol	ND		10	2.5	ug/L			05/18/21 12:18	1
tert-Butylbenzene	ND		0.50	0.16	ug/L			05/18/21 12:18	1
Tetrachloroethene	ND		0.50	0.14	ug/L			05/18/21 12:18	1
Toluene	ND		0.50	0.11	ug/L			05/18/21 12:18	1
trans-1,2-Dichloroethene	ND		0.50	0.13	ug/L			05/18/21 12:18	1
trans-1,3-Dichloropropene	ND		0.50	0.13	ug/L			05/18/21 12:18	1
trans-1,4-Dichloro-2-butene	ND		0.50	0.28	ug/L			05/18/21 12:18	1
Trichloroethene	ND		0.50	0.11	ug/L			05/18/21 12:18	1
Trichlorofluoromethane	ND		0.50	0.27	ug/L			05/18/21 12:18	1
Trihalomethanes, Total	ND		0.50	0.080	ug/L			05/18/21 12:18	1
Vinyl chloride	ND		0.50	0.25	ug/L			05/18/21 12:18	1
Xylenes, Total	ND		0.50	0.32	ug/L			05/18/21 12:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichlorobenzene-d4	*95*		*70 - 130*		*05/18/21 12:18*	*1*
4-Bromofluorobenzene	*90*		*70 - 130*		*05/18/21 12:18*	*1*

Surrogate Summary

Client: AECOM
Project/Site: 60583042 - Wyoming County FTC

Job ID: 480-184597-1

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)	
		DCZ	BFB
Lab Sample ID	Client Sample ID	(70-130)	(70-130)
480-184597-1	BW-01-051221	90	88
480-184597-2	SPRING-051221	95	94
480-184597-2 - DL	SPRING-051221	94	86
480-184597-3	SW-01-051221	95	92
480-184597-4	TB-051221	93	92
480-184597-5	FD-051221	95	90
LCS 460-778593/3	Lab Control Sample	100	95
LCSD 460-778593/4	Lab Control Sample Dup	100	92
MB 460-778593/7	Method Blank	99	93

Surrogate Legend

DCZ = 1,2-Dichlorobenzene-d4

BFB = 4-Bromofluorobenzene

Method: 524.2 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 460-778593/7
Matrix: Water
Analysis Batch: 778593

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.12	ug/L			05/18/21 08:30	1
1,1,1-Trichloroethane	ND		0.50	0.17	ug/L			05/18/21 08:30	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.15	ug/L			05/18/21 08:30	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50	0.14	ug/L			05/18/21 08:30	1
1,1,2-Trichloroethane	ND		0.50	0.090	ug/L			05/18/21 08:30	1
1,1-Dichloroethane	ND		0.50	0.14	ug/L			05/18/21 08:30	1
1,1-Dichloroethene	ND		0.50	0.19	ug/L			05/18/21 08:30	1
1,1-Dichloropropene	ND		0.50	0.18	ug/L			05/18/21 08:30	1
1,2,3-Trichlorobenzene	ND		0.50	0.10	ug/L			05/18/21 08:30	1
1,2,3-Trichloropropane	ND		0.50	0.14	ug/L			05/18/21 08:30	1
1,2,4-Trichlorobenzene	ND		0.50	0.10	ug/L			05/18/21 08:30	1
1,2,4-Trimethylbenzene	ND		0.50	0.10	ug/L			05/18/21 08:30	1
1,2-Dibromo-3-Chloropropane	ND		0.50	0.35	ug/L			05/18/21 08:30	1
1,2-Dibromoethane	ND		0.50	0.13	ug/L			05/18/21 08:30	1
1,2-Dichlorobenzene	ND		0.50	0.11	ug/L			05/18/21 08:30	1
1,2-Dichloroethane	ND		0.50	0.11	ug/L			05/18/21 08:30	1
1,2-Dichloropropane	ND		0.50	0.11	ug/L			05/18/21 08:30	1
1,3,5-Trimethylbenzene	ND		0.50	0.12	ug/L			05/18/21 08:30	1
1,3-Dichlorobenzene	ND		0.50	0.090	ug/L			05/18/21 08:30	1
1,3-Dichloropropane	ND		0.50	0.090	ug/L			05/18/21 08:30	1
1,4-Dichlorobenzene	ND		0.50	0.090	ug/L			05/18/21 08:30	1
2,2-Dichloropropane	ND		0.50	0.15	ug/L			05/18/21 08:30	1
2-Butanone (MEK)	ND		2.5	1.1	ug/L			05/18/21 08:30	1
2-Chlorotoluene	ND		0.50	0.10	ug/L			05/18/21 08:30	1
2-Hexanone	ND		2.5	1.1	ug/L			05/18/21 08:30	1
4-Chlorotoluene	ND		0.50	0.11	ug/L			05/18/21 08:30	1
4-Isopropyltoluene	ND		0.50	0.13	ug/L			05/18/21 08:30	1
4-Methyl-2-pentanone (MIBK)	ND		2.5	1.0	ug/L			05/18/21 08:30	1
Acetone	ND		3.0	2.9	ug/L			05/18/21 08:30	1
Acrylonitrile	ND		0.50	0.37	ug/L			05/18/21 08:30	1
Allyl chloride	ND		0.50	0.10	ug/L			05/18/21 08:30	1
Benzene	ND		0.50	0.11	ug/L			05/18/21 08:30	1
Bromobenzene	ND		0.50	0.070	ug/L			05/18/21 08:30	1
Bromochloromethane	ND		0.50	0.10	ug/L			05/18/21 08:30	1
Bromoform	ND		0.50	0.080	ug/L			05/18/21 08:30	1
Bromomethane	ND		0.50	0.31	ug/L			05/18/21 08:30	1
Carbon disulfide	ND		0.50	0.10	ug/L			05/18/21 08:30	1
Carbon tetrachloride	ND		0.50	0.17	ug/L			05/18/21 08:30	1
Chlorobenzene	ND		0.50	0.10	ug/L			05/18/21 08:30	1
Chlorodibromomethane	ND		0.50	0.15	ug/L			05/18/21 08:30	1
Chloroethane	ND		0.50	0.23	ug/L			05/18/21 08:30	1
Chloroform	ND		0.50	0.12	ug/L			05/18/21 08:30	1
Chloromethane	ND		0.50	0.18	ug/L			05/18/21 08:30	1
cis-1,2-Dichloroethene	ND		0.50	0.14	ug/L			05/18/21 08:30	1
cis-1,3-Dichloropropene	ND		0.50	0.18	ug/L			05/18/21 08:30	1
Dibromomethane	ND		0.50	0.10	ug/L			05/18/21 08:30	1
Dichlorobromomethane	ND		0.50	0.090	ug/L			05/18/21 08:30	1
Dichlorodifluoromethane	ND		0.50	0.30	ug/L			05/18/21 08:30	1

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 460-778593/7
Matrix: Water
Analysis Batch: 778593

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethyl ether	ND		0.50	0.14	ug/L			05/18/21 08:30	1
Ethylbenzene	ND		0.50	0.090	ug/L			05/18/21 08:30	1
Hexachlorobutadiene	ND		0.50	0.19	ug/L			05/18/21 08:30	1
Iodomethane	ND		0.50	0.033	ug/L			05/18/21 08:30	1
Isopropylbenzene	ND		0.50	0.14	ug/L			05/18/21 08:30	1
Methyl tert-butyl ether	ND		0.50	0.24	ug/L			05/18/21 08:30	1
Methylene Chloride	ND		0.50	0.42	ug/L			05/18/21 08:30	1
m-Xylene & p-Xylene	ND		1.0	0.24	ug/L			05/18/21 08:30	1
Naphthalene	ND		0.50	0.080	ug/L			05/18/21 08:30	1
n-Butylbenzene	ND		0.50	0.14	ug/L			05/18/21 08:30	1
N-Propylbenzene	ND		0.50	0.14	ug/L			05/18/21 08:30	1
o-Xylene	ND		0.50	0.090	ug/L			05/18/21 08:30	1
sec-Butylbenzene	ND		0.50	0.15	ug/L			05/18/21 08:30	1
Styrene	ND		0.50	0.090	ug/L			05/18/21 08:30	1
t-Butanol	ND		10	2.5	ug/L			05/18/21 08:30	1
tert-Butylbenzene	ND		0.50	0.16	ug/L			05/18/21 08:30	1
Tetrachloroethene	ND		0.50	0.14	ug/L			05/18/21 08:30	1
Toluene	ND		0.50	0.11	ug/L			05/18/21 08:30	1
trans-1,2-Dichloroethene	ND		0.50	0.13	ug/L			05/18/21 08:30	1
trans-1,3-Dichloropropene	ND		0.50	0.13	ug/L			05/18/21 08:30	1
trans-1,4-Dichloro-2-butene	ND		0.50	0.28	ug/L			05/18/21 08:30	1
Trichloroethene	ND		0.50	0.11	ug/L			05/18/21 08:30	1
Trichlorofluoromethane	ND		0.50	0.27	ug/L			05/18/21 08:30	1
Trihalomethanes, Total	ND		0.50	0.080	ug/L			05/18/21 08:30	1
Vinyl chloride	ND		0.50	0.25	ug/L			05/18/21 08:30	1
Xylenes, Total	ND		0.50	0.32	ug/L			05/18/21 08:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichlorobenzene-d4	*99*		*70 - 130*		*05/18/21 08:30*	*1*
4-Bromofluorobenzene	*93*		*70 - 130*		*05/18/21 08:30*	*1*

Lab Sample ID: LCS 460-778593/3
Matrix: Water
Analysis Batch: 778593

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	2.00	1.93		ug/L		96	70 - 130
1,1,1-Trichloroethane	2.00	1.86		ug/L		93	70 - 130
1,1,2,2-Tetrachloroethane	2.00	1.71		ug/L		86	70 - 130
1,1,2-Trichloroethane	2.00	1.88		ug/L		94	70 - 130
1,1-Dichloroethane	2.00	1.91		ug/L		96	70 - 130
1,1-Dichloroethene	2.00	1.70		ug/L		85	70 - 130
1,1-Dichloropropene	2.00	1.79		ug/L		89	70 - 130
1,2,3-Trichlorobenzene	2.00	1.56		ug/L		78	70 - 130
1,2,3-Trichloropropane	2.00	1.79		ug/L		89	70 - 130
1,2,4-Trichlorobenzene	2.00	1.66		ug/L		83	70 - 130
1,2,4-Trimethylbenzene	2.00	1.55		ug/L		78	70 - 130
1,2-Dibromo-3-Chloropropane	2.00	1.89		ug/L		95	70 - 130

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 460-778593/3
Matrix: Water
Analysis Batch: 778593

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane	2.00	1.69		ug/L		84	70 - 130
1,2-Dichlorobenzene	2.00	1.74		ug/L		87	70 - 130
1,2-Dichloroethane	2.00	1.97		ug/L		99	70 - 130
1,2-Dichloropropane	2.00	1.82		ug/L		91	70 - 130
1,3,5-Trimethylbenzene	2.00	1.58		ug/L		79	70 - 130
1,3-Dichlorobenzene	2.00	1.73		ug/L		87	70 - 130
1,3-Dichloropropane	2.00	1.83		ug/L		92	70 - 130
1,4-Dichlorobenzene	2.00	1.72		ug/L		86	70 - 130
2,2-Dichloropropane	2.00	1.87		ug/L		94	70 - 130
2-Butanone (MEK)	10.0	8.37		ug/L		84	70 - 130
2-Chlorotoluene	2.00	1.60		ug/L		80	70 - 130
2-Hexanone	10.0	8.42		ug/L		84	70 - 130
4-Chlorotoluene	2.00	1.62		ug/L		81	70 - 130
4-Isopropyltoluene	2.00	1.55		ug/L		77	70 - 130
4-Methyl-2-pentanone (MIBK)	10.0	8.37		ug/L		84	70 - 130
Acetone	10.0	9.54		ug/L		95	70 - 130
Benzene	2.00	1.84		ug/L		92	70 - 130
Bromobenzene	2.00	1.63		ug/L		82	70 - 130
Bromochloromethane	2.00	1.90		ug/L		95	70 - 130
Bromoform	2.00	1.63		ug/L		81	70 - 130
Bromomethane	2.00	1.89		ug/L		95	70 - 130
Carbon disulfide	2.00	1.97		ug/L		98	70 - 130
Carbon tetrachloride	2.00	1.87		ug/L		94	70 - 130
Chlorobenzene	2.00	1.70		ug/L		85	70 - 130
Chlorodibromomethane	2.00	1.72		ug/L		86	70 - 130
Chloroethane	2.00	2.05		ug/L		103	70 - 130
Chloroform	2.00	1.98		ug/L		99	70 - 130
Chloromethane	2.00	2.07		ug/L		103	70 - 130
cis-1,2-Dichloroethene	2.00	1.97		ug/L		98	70 - 130
cis-1,3-Dichloropropene	2.00	1.57		ug/L		78	70 - 130
Dibromomethane	2.00	1.97		ug/L		99	70 - 130
Dichlorobromomethane	2.00	1.88		ug/L		94	70 - 130
Dichlorodifluoromethane	2.00	1.89		ug/L		95	70 - 130
Ethylbenzene	2.00	1.67		ug/L		84	70 - 130
Hexachlorobutadiene	2.00	1.64		ug/L		82	70 - 130
Isopropylbenzene	2.00	1.57		ug/L		79	70 - 130
Methyl tert-butyl ether	2.00	1.79		ug/L		90	70 - 130
Methylene Chloride	2.00	1.89		ug/L		95	70 - 130
Naphthalene	2.00	1.50		ug/L		75	70 - 130
n-Butylbenzene	2.00	1.62		ug/L		81	70 - 130
N-Propylbenzene	2.00	1.64		ug/L		82	70 - 130
sec-Butylbenzene	2.00	1.67		ug/L		83	70 - 130
Styrene	2.00	1.53		ug/L		77	70 - 130
tert-Butylbenzene	2.00	1.48		ug/L		74	70 - 130
Tetrachloroethene	2.00	1.61		ug/L		81	70 - 130
Toluene	2.00	1.64		ug/L		82	70 - 130
trans-1,2-Dichloroethene	2.00	1.75		ug/L		87	70 - 130
trans-1,3-Dichloropropene	2.00	1.69		ug/L		85	70 - 130
Trichloroethene	2.00	1.90		ug/L		95	70 - 130

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 460-778593/3
Matrix: Water
Analysis Batch: 778593

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Trichlorofluoromethane			2.00	1.75		ug/L		87	70 - 130		
Vinyl chloride			2.00	1.94		ug/L		97	70 - 130		
Xylenes, Total			6.00	4.54		ug/L		76	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichlorobenzene-d4	*100*		*70 - 130*
4-Bromofluorobenzene	*95*		*70 - 130*

Lab Sample ID: LCSD 460-778593/4
Matrix: Water
Analysis Batch: 778593

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane			2.00	2.15		ug/L		107	70 - 130	11	30
1,1,1-Trichloroethane			2.00	2.02		ug/L		101	70 - 130	9	30
1,1,2,2-Tetrachloroethane			2.00	2.16		ug/L		108	70 - 130	23	30
1,1,2-Trichloroethane			2.00	2.10		ug/L		105	70 - 130	11	30
1,1-Dichloroethane			2.00	1.99		ug/L		100	70 - 130	4	30
1,1-Dichloroethene			2.00	1.93		ug/L		96	70 - 130	12	30
1,1-Dichloropropene			2.00	1.99		ug/L		99	70 - 130	11	30
1,2,3-Trichlorobenzene			2.00	1.78		ug/L		89	70 - 130	13	30
1,2,3-Trichloropropane			2.00	2.04		ug/L		102	70 - 130	13	30
1,2,4-Trichlorobenzene			2.00	1.85		ug/L		93	70 - 130	11	30
1,2,4-Trimethylbenzene			2.00	1.73		ug/L		86	70 - 130	11	30
1,2-Dibromo-3-Chloropropane			2.00	1.81		ug/L		90	70 - 130	5	30
1,2-Dibromoethane			2.00	2.03		ug/L		102	70 - 130	19	30
1,2-Dichlorobenzene			2.00	1.93		ug/L		96	70 - 130	10	30
1,2-Dichloroethane			2.00	2.05		ug/L		102	70 - 130	4	30
1,2-Dichloropropane			2.00	2.02		ug/L		101	70 - 130	11	30
1,3,5-Trimethylbenzene			2.00	1.76		ug/L		88	70 - 130	11	30
1,3-Dichlorobenzene			2.00	1.81		ug/L		91	70 - 130	5	30
1,3-Dichloropropane			2.00	2.01		ug/L		101	70 - 130	9	30
1,4-Dichlorobenzene			2.00	1.86		ug/L		93	70 - 130	7	30
2,2-Dichloropropane			2.00	1.99		ug/L		99	70 - 130	6	30
2-Butanone (MEK)			10.0	9.08		ug/L		91	70 - 130	8	30
2-Chlorotoluene			2.00	1.79		ug/L		90	70 - 130	11	30
2-Hexanone			10.0	9.11		ug/L		91	70 - 130	8	30
4-Chlorotoluene			2.00	1.76		ug/L		88	70 - 130	8	30
4-Isopropyltoluene			2.00	1.69		ug/L		84	70 - 130	9	30
4-Methyl-2-pentanone (MIBK)			10.0	9.06		ug/L		91	70 - 130	8	30
Acetone			10.0	9.39		ug/L		94	70 - 130	2	30
Benzene			2.00	1.99		ug/L		99	70 - 130	8	30
Bromobenzene			2.00	1.77		ug/L		89	70 - 130	8	30
Bromochloromethane			2.00	2.05		ug/L		102	70 - 130	8	30
Bromoform			2.00	1.78		ug/L		89	70 - 130	9	30
Bromomethane			2.00	2.09		ug/L		105	70 - 130	10	30
Carbon disulfide			2.00	2.16		ug/L		108	70 - 130	9	30
Carbon tetrachloride			2.00	2.08		ug/L		104	70 - 130	10	30

Method: 524.2 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 460-778593/4
Matrix: Water
Analysis Batch: 778593

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chlorobenzene			2.00	1.95		ug/L		97	70 - 130	14	30
Chlorodibromomethane			2.00	1.87		ug/L		94	70 - 130	9	30
Chloroethane			2.00	2.09		ug/L		105	70 - 130	2	30
Chloroform			2.00	2.09		ug/L		105	70 - 130	6	30
Chloromethane			2.00	2.25		ug/L		113	70 - 130	9	30
cis-1,2-Dichloroethene			2.00	2.09		ug/L		105	70 - 130	6	30
cis-1,3-Dichloropropene			2.00	1.87		ug/L		94	70 - 130	18	30
Dibromomethane			2.00	2.01		ug/L		100	70 - 130	2	30
Dichlorobromomethane			2.00	2.01		ug/L		101	70 - 130	7	30
Dichlorodifluoromethane			2.00	2.02		ug/L		101	70 - 130	6	30
Ethylbenzene			2.00	1.92		ug/L		96	70 - 130	14	30
Hexachlorobutadiene			2.00	1.62		ug/L		81	70 - 130	1	30
Isopropylbenzene			2.00	1.76		ug/L		88	70 - 130	11	30
Methyl tert-butyl ether			2.00	2.00		ug/L		100	70 - 130	11	30
Methylene Chloride			2.00	2.03		ug/L		102	70 - 130	7	30
Naphthalene			2.00	1.73		ug/L		86	70 - 130	14	30
n-Butylbenzene			2.00	1.82		ug/L		91	70 - 130	11	30
N-Propylbenzene			2.00	1.86		ug/L		93	70 - 130	13	30
sec-Butylbenzene			2.00	1.82		ug/L		91	70 - 130	9	30
Styrene			2.00	1.68		ug/L		84	70 - 130	9	30
tert-Butylbenzene			2.00	1.65		ug/L		82	70 - 130	10	30
Tetrachloroethene			2.00	1.93		ug/L		96	70 - 130	18	30
Toluene			2.00	1.73		ug/L		87	70 - 130	5	30
trans-1,2-Dichloroethene			2.00	1.84		ug/L		92	70 - 130	5	30
trans-1,3-Dichloropropene			2.00	1.95		ug/L		97	70 - 130	14	30
Trichloroethene			2.00	2.14		ug/L		107	70 - 130	12	30
Trichlorofluoromethane			2.00	1.90		ug/L		95	70 - 130	8	30
Vinyl chloride			2.00	2.02		ug/L		101	70 - 130	4	30
Xylenes, Total			6.00	5.28		ug/L		88	70 - 130	15	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichlorobenzene-d4	*100*		*70 - 130*
4-Bromofluorobenzene	*92*		*70 - 130*

QC Association Summary

Client: AECOM
Job ID: 480-184597-1
Project/Site: 60583042 - Wyoming County FTC

GC/MS VOA

Analysis Batch: 778593

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-184597-1	BW-01-051221	Total/NA	Water	524.2	
480-184597-2	SPRING-051221	Total/NA	Water	524.2	
480-184597-2 - DL	SPRING-051221	Total/NA	Water	524.2	
480-184597-3	SW-01-051221	Total/NA	Water	524.2	
480-184597-4	TB-051221	Total/NA	Water	524.2	
480-184597-5	FD-051221	Total/NA	Water	524.2	
MB 460-778593/7	Method Blank	Total/NA	Water	524.2	
LCS 460-778593/3	Lab Control Sample	Total/NA	Water	524.2	
LCSD 460-778593/4	Lab Control Sample Dup	Total/NA	Water	524.2	

Lab Chronicle

Client: AECOM
Job ID: 480-184597-1
Project/Site: 60583042 - Wyoming County FTC

Client Sample ID: BW-01-051221
Lab Sample ID: 480-184597-1
Date Collected: 05/12/21 13:10
Matrix: Water
Date Received: 05/12/21 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	778593	05/18/21 11:16	SZD	TAL EDI

Client Sample ID: SPRING-051221
Lab Sample ID: 480-184597-2
Date Collected: 05/12/21 13:30
Matrix: Water
Date Received: 05/12/21 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	778593	05/18/21 11:37	SZD	TAL EDI
Total/NA	Analysis	524.2	DL	2	778593	05/18/21 13:51	SZD	TAL EDI

Client Sample ID: SW-01-051221
Lab Sample ID: 480-184597-3
Date Collected: 05/12/21 14:45
Matrix: Water
Date Received: 05/12/21 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	778593	05/18/21 11:57	SZD	TAL EDI

Client Sample ID: TB-051221
Lab Sample ID: 480-184597-4
Date Collected: 05/12/21 00:00
Matrix: Water
Date Received: 05/12/21 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	778593	05/18/21 09:12	SZD	TAL EDI

Client Sample ID: FD-051221
Lab Sample ID: 480-184597-5
Date Collected: 05/12/21 00:00
Matrix: Water
Date Received: 05/12/21 16:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	524.2		1	778593	05/18/21 12:18	SZD	TAL EDI

Laboratory References:

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

Accreditation/Certification Summary

Client: AECOM
Job ID: 480-184597-1
Project/Site: 60583042 - Wyoming County FTC

Laboratory: Eurofins TestAmerica, Edison

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Connecticut	State	PH-0200	09-30-22
DE Haz. Subst. Cleanup Act (HSCA)	State	N/A	12-31-21
Georgia	State	12028 (NJ)	07-01-21
Massachusetts	State	M-NJ312	06-30-21
New Jersey	NELAP	12028	06-30-21
New York	NELAP	11452	04-01-22
Pennsylvania	NELAP	68-00522	02-28-22
Rhode Island	State	LAO00132	12-30-21
USDA	US Federal Programs	P330-20-00244	11-03-23

Method Summary

Client: AECOM
Project/Site: 60583042 - Wyoming County FTC

Job ID: 480-184597-1

Method	Method Description	Protocol	Laboratory
524.2	Volatile Organic Compounds (GC/MS)	EPA-DW	TAL EDI

Protocol References:

EPA-DW = "Methods For The Determination Of Organic Compounds In Drinking Water", EPA/600/4-88/039, December 1988 And Its Supplements.

Laboratory References:

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

Sample Summary

Client: AECOM
Job ID: 480-184597-1
Project/Site: 60583042 - Wyoming County FTC

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-184597-1	BW-01-051221	Water	05/12/21 13:10	05/12/21 16:30	
480-184597-2	SPRING-051221	Water	05/12/21 13:30	05/12/21 16:30	
480-184597-3	SW-01-051221	Water	05/12/21 14:45	05/12/21 16:30	
480-184597-4	TB-051221	Water	05/12/21 00:00	05/12/21 16:30	
480-184597-5	FD-051221	Water	05/12/21 00:00	05/12/21 16:30	

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

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Client Information	Sampler: ROB MURPHY	Lab PM: Schove, John R	Carrier Tracking No(s):	COC No: 480-160133-33245.1
Client Contact: Colin Wasteneys	Phone: 716-903-1346	E-Mail: John.Schove@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: AECOM	PWSID:			Job #:

Address: 257 West Genesee Street Suite 400	Due Date Requested:
City: Buffalo	TAT Requested (days): STANDARD
State, Zip: NY, 14202-2657	Compliance Project: Δ Yes Δ No
Phone:	PO #: 60623657.02
Email: colin.wasteneys@aecom.com	WO #: colin.wasteneys@aecom.com.
Project Name: 60583042 - Wyoming County FTC	Project #: 48005402
Site:	SSOW#:

Analysis Requested

Preservation Codes:
A - HCL
B - NaOH
C - Zn Acetate
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Nitric Acid
Na2SO3
cahydrate
ecify)

480-184597 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	524.2_Preserved - Standard Analyte list	Total Number of co	Special Instructions/Note:
			Preservation Code:				A		
BW-01-051221	5/12/21	1310	G	Water			3	3	
SPRING-051221	5/12/21	1330	G	Water			3	3	
SW-01-051221	5/12/21	1445	G	Water			3	3	
~~FB-051221~~ TB-051221	5/12/21	—	G	Water			1	1	
~~FD-051221~~ FD-051221	5/12/21	—	G	Water			3	3	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by: Robert Murphy	Date/Time: 5/12/21 1630	Company: AECOM	Received by:	Date/Time: 5/12/21 1630	Company: FedEx
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: #1 2.9

Ver: 11/01/2020

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Schove, John R	Carrier Tracking No(s):	COC No: 480-63685.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: John.Schove@Eurofinset.com	State of Origin: New York	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - New York		Job #: 480-184597-1
Address: 777 New Durham Road, ,	Due Date Requested: 5/25/2021			
City: Edison	TAT Requested (days):			
State, Zip: NJ, 08817				
Phone: 732-549-3900(Tel) 732-549-3679(Fax)	PO #:			
Email:	WO #:			
Project Name: 60583042 - Wyoming County FTC	Project #: 48005402			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	524.2_Preserved/ 524.2	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
BW-01-051221 (480-184597-1)	5/12/21	13:10 Eastern		Water			X	3	
SPRING-051221 (480-184597-2)	5/12/21	13:30 Eastern		Water			X	3	
SW-01-051221 (480-184597-3)	5/12/21	14:45 Eastern		Water			X	3	
TB-051221 (480-184597-4)	5/12/21	Eastern		Water			X	1	
FD-051221 (480-184597-5)	5/12/21	Eastern		Water			X	3	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Unknown Courier	5/14/21 1700	TA	Fedex via Fedex	5/15/21 1030	ETA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.: 1452976	Cooler Temperature(s) °C and Other Remarks: 5.2°C / 4.7°C 5.1°C / 4.6°C

Ver: 11/01/2020

5/24/2021

Login Sample Receipt Checklist

Client: AECOM

Job Number: 480-184597-1

Login Number: 184597
List Number: 1
Creator: Wallace, Cameron

List Source: Eurofins TestAmerica, Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	AECOM
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: AECOM

Job Number: 480-184597-1

Login Number: 184597
List Number: 2
Creator: Armbruster, Chris

List Source: Eurofins TestAmerica, Edison
List Creation: 05/17/21 03:55 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	1452976
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.7, 4.6°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

Laboratory Job ID: 480-188507-1
Client Project/Site: 60583042 - Wyoming County FTC
Revision: 1

For:
AECOM
One John James Audubon Parkway
Suite 210
Amherst, New York 14228

Attn: Colin Wasteneys

Authorized for release by:
9/3/2021 5:18:22 PM
Rebecca Jones, Project Management Assistant I
Rebecca.Jones@Eurofinset.com

Designee for

John Schove, Project Manager II
(716)504-9838
John.Schove@Eurofinset.com

LINKS

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Visit us at: www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: AECOM
Job ID: 480-188507-1
Project/Site: 60583042 - Wyoming County FTC

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.
E	Result exceeded calibration range.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

LCMS

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

Glossary

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

Job ID: 480-188507-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative
480-188507-1

Revision
This report has been revised to include additional PFC compounds.

Comments
No additional comments.

Receipt
The samples were received on 8/19/2021 12:55 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.2º C.

GC/MS VOA
Method 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-15 (480-188507-6). Elevated reporting limits (RLs) are provided.

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-593646 recovered above the upper control limit for Carbon tetrachloride. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: MW-07 (480-188507-1), MW-12 (480-188507-5), MW-15 (480-188507-6) and TB-081821 (480-188507-7).

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-593646 recovered outside acceptance criteria, low biased, for 2-Butanone (MEK) and 4-Methyl-2-pentanone (MIBK). A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for these analytes, the data have been reported. The associated samples are impacted: MW-07 (480-188507-1), MW-12 (480-188507-5), MW-15 (480-188507-6) and TB-081821 (480-188507-7).

Method 8260C: The laboratory control sample (LCS) for analytical batch 480-593646 recovered outside control limits for the following analyte: Methyl tert-butyl ether. This analyte was biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported. The associated samples are impacted: MW-07 (480-188507-1), MW-12 (480-188507-5), MW-15 (480-188507-6) and TB-081821 (480-188507-7).

Method 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-07 (480-188507-1), MW-02 (480-188507-2) and FD-081821 (480-188507-3). Elevated reporting limits (RLs) are provided.

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-593768 recovered outside acceptance criteria, low biased, for 2-Hexanone. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported. The following samples were affected : MW-07 (480-188507-1), MW-02 (480-188507-2) and FD-081821 (480-188507-3).

Method 8260C: The continuing calibration verification (CCV) associated with batch 480-593768 recovered above the upper control limit for Carbon tetrachloride and Methyl tert-butyl ether. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: MW-07 (480-188507-1), MW-02 (480-188507-2) and FD-081821 (480-188507-3).

Method 8260C: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 480-593768 recovered outside control limits for the following analytes: Chloromethane and Methyl tert-butyl ether. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported. The following samples were affected : MW-07 (480-188507-1), MW-02 (480-188507-2) and FD-081821 (480-188507-3).

Method 8260C: Due to the coelution of Ethyl Acetate with 2-Butanone in the full spike solution, these analytes exceeded control limits in the laboratory control sample (LCS) and/or laboratory control sample duplicate (LCSD) associated with batch 593768. The following samples were affected : MW-07 (480-188507-1), MW-02 (480-188507-2) and FD-081821 (480-188507-3).

Method 8260C: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch

Job ID: 480-188507-1 (Continued)

Laboratory: Eurofins TestAmerica, Buffalo (Continued)

480-593768 recovered outside control limits for the following analyte: Chloromethane. The following samples were affected : MW-07 (480-188507-1), MW-02 (480-188507-2) and FD-081821 (480-188507-3).

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

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

Organic Prep
Method 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-518512.

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

Detection Summary

Client: AECOM
Job ID: 480-188507-1
Project/Site: 60583042 - Wyoming County FTC

Client Sample ID: MW-07 — Lab Sample ID: 480-188507-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	84		1.0	0.82	ug/L	1		8260C	Total/NA
1,1,2-Trichloro-1,2,2-trifluoroethane	1.8		1.0	0.31	ug/L	1		8260C	Total/NA
1,1-Dichloroethane	11		1.0	0.38	ug/L	1		8260C	Total/NA
1,1-Dichloroethene	2.6		1.0	0.29	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	160	E	1.0	0.81	ug/L	1		8260C	Total/NA
Tetrachloroethene	140	E	1.0	0.36	ug/L	1		8260C	Total/NA
Trichloroethene	14		1.0	0.46	ug/L	1		8260C	Total/NA
Vinyl chloride	1.6		1.0	0.90	ug/L	1		8260C	Total/NA
1,1,1-Trichloroethane - DL	78		4.0	3.3	ug/L	4		8260C	Total/NA
1,1-Dichloroethane - DL	11		4.0	1.5	ug/L	4		8260C	Total/NA
cis-1,2-Dichloroethene - DL	150		4.0	3.2	ug/L	4		8260C	Total/NA
Tetrachloroethene - DL	130		4.0	1.4	ug/L	4		8260C	Total/NA
Trichloroethene - DL	14		4.0	1.8	ug/L	4		8260C	Total/NA

Client Sample ID: MW-02 — Lab Sample ID: 480-188507-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	4.7		2.0	1.6	ug/L	2		8260C	Total/NA
1,1-Dichloroethane	1.3	J	2.0	0.76	ug/L	2		8260C	Total/NA
cis-1,2-Dichloroethene	120		2.0	1.6	ug/L	2		8260C	Total/NA
Tetrachloroethene	38		2.0	0.72	ug/L	2		8260C	Total/NA
Trichloroethene	59		2.0	0.92	ug/L	2		8260C	Total/NA
Vinyl chloride	4.5		2.0	1.8	ug/L	2		8260C	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.88	J	1.8	0.18	ng/L	1		537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA)	33		4.5	2.1	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	28		1.8	0.22	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.1	J	1.8	0.51	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	47		1.8	0.52	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	1.9		1.8	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	36		1.8	0.76	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	94		1.8	0.44	ng/L	1		537 (modified)	Total/NA

Client Sample ID: FD-081821 — Lab Sample ID: 480-188507-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	4.9		2.0	1.6	ug/L	2		8260C	Total/NA
1,1-Dichloroethane	1.3	J	2.0	0.76	ug/L	2		8260C	Total/NA
cis-1,2-Dichloroethene	120		2.0	1.6	ug/L	2		8260C	Total/NA
Tetrachloroethene	38		2.0	0.72	ug/L	2		8260C	Total/NA
Trichloroethene	61		2.0	0.92	ug/L	2		8260C	Total/NA
Vinyl chloride	5.1		2.0	1.8	ug/L	2		8260C	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.74	J	1.8	0.18	ng/L	1		537 (modified)	Total/NA
Perfluorobutanoic acid (PFBA)	33		4.5	2.2	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	28		1.8	0.22	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.1	J	1.8	0.51	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	46		1.8	0.52	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	2.0		1.8	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	35		1.8	0.76	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	97		1.8	0.44	ng/L	1		537 (modified)	Total/NA

Client Sample ID: EB-081821 — Lab Sample ID: 480-188507-4

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Buffalo

Detection Summary

Client: AECOM
Job ID: 480-188507-1
Project/Site: 60583042 - Wyoming County FTC

Client Sample ID: MW-12 — Lab Sample ID: 480-188507-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	36		1.0	0.82	ug/L	1		8260C	Total/NA
1,1-Dichloroethane	3.9		1.0	0.38	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	50		1.0	0.81	ug/L	1		8260C	Total/NA
Tetrachloroethene	19		1.0	0.36	ug/L	1		8260C	Total/NA
Trichloroethene	4.7		1.0	0.46	ug/L	1		8260C	Total/NA

Client Sample ID: MW-15 — Lab Sample ID: 480-188507-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	62		2.0	1.6	ug/L	2		8260C	Total/NA
1,1-Dichloroethane	6.8		2.0	0.76	ug/L	2		8260C	Total/NA
cis-1,2-Dichloroethene	44		2.0	1.6	ug/L	2		8260C	Total/NA
Tetrachloroethene	160		2.0	0.72	ug/L	2		8260C	Total/NA
Trichloroethene	7.4		2.0	0.92	ug/L	2		8260C	Total/NA

Client Sample ID: TB-081821 — Lab Sample ID: 480-188507-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	6.9	J	10	3.0	ug/L	1		8260C	Total/NA
Methylene Chloride	0.76	J	1.0	0.44	ug/L	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Client: AECOM
Project/Site: 60583042 - Wyoming County FTC

Job ID: 480-188507-1

Client Sample ID: MW-07
Date Collected: 08/18/21 13:40
Date Received: 08/19/21 12:55

Lab Sample ID: 480-188507-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**84**		1.0	0.82	ug/L			08/21/21 16:23	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			08/21/21 16:23	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			08/21/21 16:23	1
1,1,2-Trichloro-1,2,2-trifluoroethane	**1.8**		1.0	0.31	ug/L			08/21/21 16:23	1
1,1-Dichloroethane	**11**		1.0	0.38	ug/L			08/21/21 16:23	1
1,1-Dichloroethene	**2.6**		1.0	0.29	ug/L			08/21/21 16:23	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			08/21/21 16:23	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			08/21/21 16:23	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			08/21/21 16:23	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			08/21/21 16:23	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			08/21/21 16:23	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			08/21/21 16:23	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			08/21/21 16:23	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			08/21/21 16:23	1
2-Hexanone	ND		5.0	1.2	ug/L			08/21/21 16:23	1
2-Butanone (MEK)	ND		10	1.3	ug/L			08/21/21 16:23	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			08/21/21 16:23	1
Acetone	ND		10	3.0	ug/L			08/21/21 16:23	1
Benzene	ND		1.0	0.41	ug/L			08/21/21 16:23	1
Bromodichloromethane	ND		1.0	0.39	ug/L			08/21/21 16:23	1
Bromoform	ND		1.0	0.26	ug/L			08/21/21 16:23	1
Bromomethane	ND		1.0	0.69	ug/L			08/21/21 16:23	1
Carbon disulfide	ND		1.0	0.19	ug/L			08/21/21 16:23	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			08/21/21 16:23	1
Chlorobenzene	ND		1.0	0.75	ug/L			08/21/21 16:23	1
Dibromochloromethane	ND		1.0	0.32	ug/L			08/21/21 16:23	1
Chloroethane	ND		1.0	0.32	ug/L			08/21/21 16:23	1
Chloroform	ND		1.0	0.34	ug/L			08/21/21 16:23	1
Chloromethane	ND		1.0	0.35	ug/L			08/21/21 16:23	1
cis-1,2-Dichloroethene	**160**	**E**	1.0	0.81	ug/L			08/21/21 16:23	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			08/21/21 16:23	1
Cyclohexane	ND		1.0	0.18	ug/L			08/21/21 16:23	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			08/21/21 16:23	1
Ethylbenzene	ND		1.0	0.74	ug/L			08/21/21 16:23	1
Isopropylbenzene	ND		1.0	0.79	ug/L			08/21/21 16:23	1
Methyl acetate	ND		2.5	1.3	ug/L			08/21/21 16:23	1
Methyl tert-butyl ether	ND	*+	1.0	0.16	ug/L			08/21/21 16:23	1
Methylcyclohexane	ND		1.0	0.16	ug/L			08/21/21 16:23	1
Methylene Chloride	ND		1.0	0.44	ug/L			08/21/21 16:23	1
Styrene	ND		1.0	0.73	ug/L			08/21/21 16:23	1
Tetrachloroethene	**140**	**E**	1.0	0.36	ug/L			08/21/21 16:23	1
Toluene	ND		1.0	0.51	ug/L			08/21/21 16:23	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			08/21/21 16:23	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			08/21/21 16:23	1
Trichloroethene	**14**		1.0	0.46	ug/L			08/21/21 16:23	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			08/21/21 16:23	1
Vinyl chloride	**1.6**		1.0	0.90	ug/L			08/21/21 16:23	1
Xylenes, Total	ND		2.0	0.66	ug/L			08/21/21 16:23	1

Client: AECOM
Project/Site: 60583042 - Wyoming County FTC

Job ID: 480-188507-1

Client Sample ID: MW-07

Date Collected: 08/18/21 13:40
Date Received: 08/19/21 12:55

Lab Sample ID: 480-188507-1

Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*77 - 120*		*08/21/21 16:23*	*1*
Toluene-d8 (Surr)	*94*		*80 - 120*		*08/21/21 16:23*	*1*
4-Bromofluorobenzene (Surr)	*95*		*73 - 120*		*08/21/21 16:23*	*1*
Dibromofluoromethane (Surr)	*111*		*75 - 123*		*08/21/21 16:23*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**78**		4.0	3.3	ug/L			08/24/21 01:11	4
1,1,2,2-Tetrachloroethane	ND		4.0	0.84	ug/L			08/24/21 01:11	4
1,1,2-Trichloroethane	ND		4.0	0.92	ug/L			08/24/21 01:11	4
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.0	1.2	ug/L			08/24/21 01:11	4
1,1-Dichloroethane	**11**		4.0	1.5	ug/L			08/24/21 01:11	4
1,1-Dichloroethene	ND		4.0	1.2	ug/L			08/24/21 01:11	4
1,2,4-Trichlorobenzene	ND		4.0	1.6	ug/L			08/24/21 01:11	4
1,2-Dibromo-3-Chloropropane	ND		4.0	1.6	ug/L			08/24/21 01:11	4
1,2-Dibromoethane	ND		4.0	2.9	ug/L			08/24/21 01:11	4
1,2-Dichlorobenzene	ND		4.0	3.2	ug/L			08/24/21 01:11	4
1,2-Dichloroethane	ND		4.0	0.84	ug/L			08/24/21 01:11	4
1,2-Dichloropropane	ND		4.0	2.9	ug/L			08/24/21 01:11	4
1,3-Dichlorobenzene	ND		4.0	3.1	ug/L			08/24/21 01:11	4
1,4-Dichlorobenzene	ND		4.0	3.4	ug/L			08/24/21 01:11	4
2-Hexanone	ND		20	5.0	ug/L			08/24/21 01:11	4
2-Butanone (MEK)	ND	*+	40	5.3	ug/L			08/24/21 01:11	4
4-Methyl-2-pentanone (MIBK)	ND		20	8.4	ug/L			08/24/21 01:11	4
Acetone	ND		40	12	ug/L			08/24/21 01:11	4
Benzene	ND		4.0	1.6	ug/L			08/24/21 01:11	4
Bromodichloromethane	ND		4.0	1.6	ug/L			08/24/21 01:11	4
Bromoform	ND		4.0	1.0	ug/L			08/24/21 01:11	4
Bromomethane	ND		4.0	2.8	ug/L			08/24/21 01:11	4
Carbon disulfide	ND		4.0	0.76	ug/L			08/24/21 01:11	4
Carbon tetrachloride	ND		4.0	1.1	ug/L			08/24/21 01:11	4
Chlorobenzene	ND		4.0	3.0	ug/L			08/24/21 01:11	4
Dibromochloromethane	ND		4.0	1.3	ug/L			08/24/21 01:11	4
Chloroethane	ND		4.0	1.3	ug/L			08/24/21 01:11	4
Chloroform	ND		4.0	1.4	ug/L			08/24/21 01:11	4
Chloromethane	ND	*+ *1	4.0	1.4	ug/L			08/24/21 01:11	4
cis-1,2-Dichloroethene	**150**		4.0	3.2	ug/L			08/24/21 01:11	4
cis-1,3-Dichloropropene	ND		4.0	1.4	ug/L			08/24/21 01:11	4
Cyclohexane	ND		4.0	0.72	ug/L			08/24/21 01:11	4
Dichlorodifluoromethane	ND		4.0	2.7	ug/L			08/24/21 01:11	4
Ethylbenzene	ND		4.0	3.0	ug/L			08/24/21 01:11	4
Isopropylbenzene	ND		4.0	3.2	ug/L			08/24/21 01:11	4
Methyl acetate	ND		10	5.2	ug/L			08/24/21 01:11	4
Methyl tert-butyl ether	ND	*+	4.0	0.64	ug/L			08/24/21 01:11	4
Methylcyclohexane	ND		4.0	0.64	ug/L			08/24/21 01:11	4
Methylene Chloride	ND		4.0	1.8	ug/L			08/24/21 01:11	4
Styrene	ND		4.0	2.9	ug/L			08/24/21 01:11	4
Tetrachloroethene	**130**		4.0	1.4	ug/L			08/24/21 01:11	4
Toluene	ND		4.0	2.0	ug/L			08/24/21 01:11	4
trans-1,2-Dichloroethene	ND		4.0	3.6	ug/L			08/24/21 01:11	4

Client: AECOM
Job ID: 480-188507-1
Project/Site: 60583042 - Wyoming County FTC

Client Sample ID: MW-07
Lab Sample ID: 480-188507-1
Date Collected: 08/18/21 13:40
Matrix: Water
Date Received: 08/19/21 12:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		4.0	1.5	ug/L			08/24/21 01:11	4
Trichloroethene	**14**		4.0	1.8	ug/L			08/24/21 01:11	4
Trichlorofluoromethane	ND		4.0	3.5	ug/L			08/24/21 01:11	4
Vinyl chloride	ND		4.0	3.6	ug/L			08/24/21 01:11	4
Xylenes, Total	ND		8.0	2.6	ug/L			08/24/21 01:11	4

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*77 - 120*		*08/24/21 01:11*	*4*
Toluene-d8 (Surr)	*95*		*80 - 120*		*08/24/21 01:11*	*4*
4-Bromofluorobenzene (Surr)	*93*		*73 - 120*		*08/24/21 01:11*	*4*
Dibromofluoromethane (Surr)	*104*		*75 - 123*		*08/24/21 01:11*	*4*

Client: AECOM
Project/Site: 60583042 - Wyoming County FTC

Job ID: 480-188507-1

Client Sample ID: MW-02
Date Collected: 08/18/21 15:05
Date Received: 08/19/21 12:55

Lab Sample ID: 480-188507-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**4.7**		2.0	1.6	ug/L			08/24/21 01:34	2
1,1,2,2-Tetrachloroethane	ND		2.0	0.42	ug/L			08/24/21 01:34	2
1,1,2-Trichloroethane	ND		2.0	0.46	ug/L			08/24/21 01:34	2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		2.0	0.62	ug/L			08/24/21 01:34	2
1,1-Dichloroethane	**1.3**	**J**	2.0	0.76	ug/L			08/24/21 01:34	2
1,1-Dichloroethene	ND		2.0	0.58	ug/L			08/24/21 01:34	2
1,2,4-Trichlorobenzene	ND		2.0	0.82	ug/L			08/24/21 01:34	2
1,2-Dibromo-3-Chloropropane	ND		2.0	0.78	ug/L			08/24/21 01:34	2
1,2-Dibromoethane	ND		2.0	1.5	ug/L			08/24/21 01:34	2
1,2-Dichlorobenzene	ND		2.0	1.6	ug/L			08/24/21 01:34	2
1,2-Dichloroethane	ND		2.0	0.42	ug/L			08/24/21 01:34	2
1,2-Dichloropropane	ND		2.0	1.4	ug/L			08/24/21 01:34	2
1,3-Dichlorobenzene	ND		2.0	1.6	ug/L			08/24/21 01:34	2
1,4-Dichlorobenzene	ND		2.0	1.7	ug/L			08/24/21 01:34	2
2-Hexanone	ND		10	2.5	ug/L			08/24/21 01:34	2
2-Butanone (MEK)	ND	*+	20	2.6	ug/L			08/24/21 01:34	2
4-Methyl-2-pentanone (MIBK)	ND		10	4.2	ug/L			08/24/21 01:34	2
Acetone	ND		20	6.0	ug/L			08/24/21 01:34	2
Benzene	ND		2.0	0.82	ug/L			08/24/21 01:34	2
Bromodichloromethane	ND		2.0	0.78	ug/L			08/24/21 01:34	2
Bromoform	ND		2.0	0.52	ug/L			08/24/21 01:34	2
Bromomethane	ND		2.0	1.4	ug/L			08/24/21 01:34	2
Carbon disulfide	ND		2.0	0.38	ug/L			08/24/21 01:34	2
Carbon tetrachloride	ND		2.0	0.54	ug/L			08/24/21 01:34	2
Chlorobenzene	ND		2.0	1.5	ug/L			08/24/21 01:34	2
Dibromochloromethane	ND		2.0	0.64	ug/L			08/24/21 01:34	2
Chloroethane	ND		2.0	0.64	ug/L			08/24/21 01:34	2
Chloroform	ND		2.0	0.68	ug/L			08/24/21 01:34	2
Chloromethane	ND	*+ *1	2.0	0.70	ug/L			08/24/21 01:34	2
cis-1,2-Dichloroethene	**120**		2.0	1.6	ug/L			08/24/21 01:34	2
cis-1,3-Dichloropropene	ND		2.0	0.72	ug/L			08/24/21 01:34	2
Cyclohexane	ND		2.0	0.36	ug/L			08/24/21 01:34	2
Dichlorodifluoromethane	ND		2.0	1.4	ug/L			08/24/21 01:34	2
Ethylbenzene	ND		2.0	1.5	ug/L			08/24/21 01:34	2
Isopropylbenzene	ND		2.0	1.6	ug/L			08/24/21 01:34	2
Methyl acetate	ND		5.0	2.6	ug/L			08/24/21 01:34	2
Methyl tert-butyl ether	ND	*+	2.0	0.32	ug/L			08/24/21 01:34	2
Methylcyclohexane	ND		2.0	0.32	ug/L			08/24/21 01:34	2
Methylene Chloride	ND		2.0	0.88	ug/L			08/24/21 01:34	2
Styrene	ND		2.0	1.5	ug/L			08/24/21 01:34	2
Tetrachloroethene	**38**		2.0	0.72	ug/L			08/24/21 01:34	2
Toluene	ND		2.0	1.0	ug/L			08/24/21 01:34	2
trans-1,2-Dichloroethene	ND		2.0	1.8	ug/L			08/24/21 01:34	2
trans-1,3-Dichloropropene	ND		2.0	0.74	ug/L			08/24/21 01:34	2
Trichloroethene	**59**		2.0	0.92	ug/L			08/24/21 01:34	2
Trichlorofluoromethane	ND		2.0	1.8	ug/L			08/24/21 01:34	2
Vinyl chloride	**4.5**		2.0	1.8	ug/L			08/24/21 01:34	2
Xylenes, Total	ND		4.0	1.3	ug/L			08/24/21 01:34	2

Client Sample ID: MW-02
Date Collected: 08/18/21 15:05
Date Received: 08/19/21 12:55

Lab Sample ID: 480-188507-2
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*99*		*77 - 120*		*08/24/21 01:34*	*2*
Toluene-d8 (Surr)	*97*		*80 - 120*		*08/24/21 01:34*	*2*
4-Bromofluorobenzene (Surr)	*95*		*73 - 120*		*08/24/21 01:34*	*2*
Dibromofluoromethane (Surr)	*103*		*75 - 123*		*08/24/21 01:34*	*2*

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
6:2 FTS	ND		4.5	2.2	ng/L		08/21/21 11:48	08/22/21 16:50	1
8:2 FTS	ND		1.8	0.41	ng/L		08/21/21 11:48	08/22/21 16:50	1
NEtFOSAA	ND		4.5	1.2	ng/L		08/21/21 11:48	08/22/21 16:50	1
NMeFOSAA	ND		4.5	1.1	ng/L		08/21/21 11:48	08/22/21 16:50	1
Perfluorobutanesulfonic acid (PFBS)	**0.88**	**J**	1.8	0.18	ng/L		08/21/21 11:48	08/22/21 16:50	1
Perfluorobutanoic acid (PFBA)	**33**		4.5	2.1	ng/L		08/21/21 11:48	08/22/21 16:50	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.29	ng/L		08/21/21 11:48	08/22/21 16:50	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.28	ng/L		08/21/21 11:48	08/22/21 16:50	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.49	ng/L		08/21/21 11:48	08/22/21 16:50	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.17	ng/L		08/21/21 11:48	08/22/21 16:50	1
Perfluoroheptanoic acid (PFHpA)	**28**		1.8	0.22	ng/L		08/21/21 11:48	08/22/21 16:50	1
Perfluorohexanesulfonic acid (PFHxS)	**1.1**	**J**	1.8	0.51	ng/L		08/21/21 11:48	08/22/21 16:50	1
Perfluorohexanoic acid (PFHxA)	**47**		1.8	0.52	ng/L		08/21/21 11:48	08/22/21 16:50	1
Perfluorononanoic acid (PFNA)	**1.9**		1.8	0.24	ng/L		08/21/21 11:48	08/22/21 16:50	1
Perfluorooctanesulfonamide (FOSA)	ND		1.8	0.87	ng/L		08/21/21 11:48	08/22/21 16:50	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.48	ng/L		08/21/21 11:48	08/22/21 16:50	1
Perfluorooctanoic acid (PFOA)	**36**		1.8	0.76	ng/L		08/21/21 11:48	08/22/21 16:50	1
Perfluoropentanoic acid (PFPeA)	**94**		1.8	0.44	ng/L		08/21/21 11:48	08/22/21 16:50	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.65	ng/L		08/21/21 11:48	08/22/21 16:50	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.8	1.2	ng/L		08/21/21 11:48	08/22/21 16:50	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.98	ng/L		08/21/21 11:48	08/22/21 16:50	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-6:2 FTS	*113*		*25 - 150*	*08/21/21 11:48*	*08/22/21 16:50*	*1*
d5-NEtFOSAA	*78*		*25 - 150*	*08/21/21 11:48*	*08/22/21 16:50*	*1*
d3-NMeFOSAA	*73*		*25 - 150*	*08/21/21 11:48*	*08/22/21 16:50*	*1*
M2-8:2 FTS	*94*		*25 - 150*	*08/21/21 11:48*	*08/22/21 16:50*	*1*
13C3 PFBS	*92*		*25 - 150*	*08/21/21 11:48*	*08/22/21 16:50*	*1*
13C2 PFTeDA	*94*		*25 - 150*	*08/21/21 11:48*	*08/22/21 16:50*	*1*
13C2 PFDA	*97*		*25 - 150*	*08/21/21 11:48*	*08/22/21 16:50*	*1*
13C2 PFDoA	*93*		*25 - 150*	*08/21/21 11:48*	*08/22/21 16:50*	*1*
13C2 PFHxA	*82*		*25 - 150*	*08/21/21 11:48*	*08/22/21 16:50*	*1*
13C2 PFUnA	*95*		*25 - 150*	*08/21/21 11:48*	*08/22/21 16:50*	*1*
13C4 PFBA	*61*		*25 - 150*	*08/21/21 11:48*	*08/22/21 16:50*	*1*
13C4 PFHpA	*89*		*25 - 150*	*08/21/21 11:48*	*08/22/21 16:50*	*1*
13C4 PFOA	*88*		*25 - 150*	*08/21/21 11:48*	*08/22/21 16:50*	*1*
13C4 PFOS	*80*		*25 - 150*	*08/21/21 11:48*	*08/22/21 16:50*	*1*
13C5 PFNA	*78*		*25 - 150*	*08/21/21 11:48*	*08/22/21 16:50*	*1*
13C5 PFPeA	*79*		*25 - 150*	*08/21/21 11:48*	*08/22/21 16:50*	*1*
13C8 FOSA	*88*		*25 - 150*	*08/21/21 11:48*	*08/22/21 16:50*	*1*
18O2 PFHxS	*89*		*25 - 150*	*08/21/21 11:48*	*08/22/21 16:50*	*1*

Client: AECOM
Project/Site: 60583042 - Wyoming County FTC

Job ID: 480-188507-1

Client Sample ID: FD-081821
Date Collected: 08/18/21 00:00
Date Received: 08/19/21 12:55

Lab Sample ID: 480-188507-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**4.9**		2.0	1.6	ug/L			08/24/21 01:57	2
1,1,2,2-Tetrachloroethane	ND		2.0	0.42	ug/L			08/24/21 01:57	2
1,1,2-Trichloroethane	ND		2.0	0.46	ug/L			08/24/21 01:57	2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		2.0	0.62	ug/L			08/24/21 01:57	2
1,1-Dichloroethane	**1.3**	**J**	2.0	0.76	ug/L			08/24/21 01:57	2
1,1-Dichloroethene	ND		2.0	0.58	ug/L			08/24/21 01:57	2
1,2,4-Trichlorobenzene	ND		2.0	0.82	ug/L			08/24/21 01:57	2
1,2-Dibromo-3-Chloropropane	ND		2.0	0.78	ug/L			08/24/21 01:57	2
1,2-Dibromoethane	ND		2.0	1.5	ug/L			08/24/21 01:57	2
1,2-Dichlorobenzene	ND		2.0	1.6	ug/L			08/24/21 01:57	2
1,2-Dichloroethane	ND		2.0	0.42	ug/L			08/24/21 01:57	2
1,2-Dichloropropane	ND		2.0	1.4	ug/L			08/24/21 01:57	2
1,3-Dichlorobenzene	ND		2.0	1.6	ug/L			08/24/21 01:57	2
1,4-Dichlorobenzene	ND		2.0	1.7	ug/L			08/24/21 01:57	2
2-Hexanone	ND		10	2.5	ug/L			08/24/21 01:57	2
2-Butanone (MEK)	ND	*+	20	2.6	ug/L			08/24/21 01:57	2
4-Methyl-2-pentanone (MIBK)	ND		10	4.2	ug/L			08/24/21 01:57	2
Acetone	ND		20	6.0	ug/L			08/24/21 01:57	2
Benzene	ND		2.0	0.82	ug/L			08/24/21 01:57	2
Bromodichloromethane	ND		2.0	0.78	ug/L			08/24/21 01:57	2
Bromoform	ND		2.0	0.52	ug/L			08/24/21 01:57	2
Bromomethane	ND		2.0	1.4	ug/L			08/24/21 01:57	2
Carbon disulfide	ND		2.0	0.38	ug/L			08/24/21 01:57	2
Carbon tetrachloride	ND		2.0	0.54	ug/L			08/24/21 01:57	2
Chlorobenzene	ND		2.0	1.5	ug/L			08/24/21 01:57	2
Dibromochloromethane	ND		2.0	0.64	ug/L			08/24/21 01:57	2
Chloroethane	ND		2.0	0.64	ug/L			08/24/21 01:57	2
Chloroform	ND		2.0	0.68	ug/L			08/24/21 01:57	2
Chloromethane	ND	*+ *1	2.0	0.70	ug/L			08/24/21 01:57	2
cis-1,2-Dichloroethene	**120**		2.0	1.6	ug/L			08/24/21 01:57	2
cis-1,3-Dichloropropene	ND		2.0	0.72	ug/L			08/24/21 01:57	2
Cyclohexane	ND		2.0	0.36	ug/L			08/24/21 01:57	2
Dichlorodifluoromethane	ND		2.0	1.4	ug/L			08/24/21 01:57	2
Ethylbenzene	ND		2.0	1.5	ug/L			08/24/21 01:57	2
Isopropylbenzene	ND		2.0	1.6	ug/L			08/24/21 01:57	2
Methyl acetate	ND		5.0	2.6	ug/L			08/24/21 01:57	2
Methyl tert-butyl ether	ND	*+	2.0	0.32	ug/L			08/24/21 01:57	2
Methylcyclohexane	ND		2.0	0.32	ug/L			08/24/21 01:57	2
Methylene Chloride	ND		2.0	0.88	ug/L			08/24/21 01:57	2
Styrene	ND		2.0	1.5	ug/L			08/24/21 01:57	2
Tetrachloroethene	**38**		2.0	0.72	ug/L			08/24/21 01:57	2
Toluene	ND		2.0	1.0	ug/L			08/24/21 01:57	2
trans-1,2-Dichloroethene	ND		2.0	1.8	ug/L			08/24/21 01:57	2
trans-1,3-Dichloropropene	ND		2.0	0.74	ug/L			08/24/21 01:57	2
Trichloroethene	**61**		2.0	0.92	ug/L			08/24/21 01:57	2
Trichlorofluoromethane	ND		2.0	1.8	ug/L			08/24/21 01:57	2
Vinyl chloride	**5.1**		2.0	1.8	ug/L			08/24/21 01:57	2
Xylenes, Total	ND		4.0	1.3	ug/L			08/24/21 01:57	2

Client Sample ID: FD-081821

Date Collected: 08/18/21 00:00
Date Received: 08/19/21 12:55

Lab Sample ID: 480-188507-3

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		77 - 120		08/24/21 01:57	2
Toluene-d8 (Surr)	99		80 - 120		08/24/21 01:57	2
4-Bromofluorobenzene (Surr)	94		73 - 120		08/24/21 01:57	2
Dibromofluoromethane (Surr)	104		75 - 123		08/24/21 01:57	2

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
6:2 FTS	ND		4.5	2.2	ng/L		08/21/21 11:48	08/22/21 16:59	1
8:2 FTS	ND		1.8	0.41	ng/L		08/21/21 11:48	08/22/21 16:59	1
NEtFOSAA	ND		4.5	1.2	ng/L		08/21/21 11:48	08/22/21 16:59	1
NMeFOSAA	ND		4.5	1.1	ng/L		08/21/21 11:48	08/22/21 16:59	1
Perfluorobutanesulfonic acid (PFBS)	**0.74**	**J**	1.8	0.18	ng/L		08/21/21 11:48	08/22/21 16:59	1
Perfluorobutanoic acid (PFBA)	**33**		4.5	2.2	ng/L		08/21/21 11:48	08/22/21 16:59	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.29	ng/L		08/21/21 11:48	08/22/21 16:59	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.28	ng/L		08/21/21 11:48	08/22/21 16:59	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.49	ng/L		08/21/21 11:48	08/22/21 16:59	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.17	ng/L		08/21/21 11:48	08/22/21 16:59	1
Perfluoroheptanoic acid (PFHpA)	**28**		1.8	0.22	ng/L		08/21/21 11:48	08/22/21 16:59	1
Perfluorohexanesulfonic acid (PFHxS)	**1.1**	**J**	1.8	0.51	ng/L		08/21/21 11:48	08/22/21 16:59	1
Perfluorohexanoic acid (PFHxA)	**46**		1.8	0.52	ng/L		08/21/21 11:48	08/22/21 16:59	1
Perfluorononanoic acid (PFNA)	**2.0**		1.8	0.24	ng/L		08/21/21 11:48	08/22/21 16:59	1
Perfluorooctanesulfonamide (FOSA)	ND		1.8	0.88	ng/L		08/21/21 11:48	08/22/21 16:59	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.48	ng/L		08/21/21 11:48	08/22/21 16:59	1
Perfluorooctanoic acid (PFOA)	**35**		1.8	0.76	ng/L		08/21/21 11:48	08/22/21 16:59	1
Perfluoropentanoic acid (PFPeA)	**97**		1.8	0.44	ng/L		08/21/21 11:48	08/22/21 16:59	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.65	ng/L		08/21/21 11:48	08/22/21 16:59	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.8	1.2	ng/L		08/21/21 11:48	08/22/21 16:59	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.99	ng/L		08/21/21 11:48	08/22/21 16:59	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-6:2 FTS	113		25 - 150	08/21/21 11:48	08/22/21 16:59	1
d5-NEtFOSAA	82		25 - 150	08/21/21 11:48	08/22/21 16:59	1
d3-NMeFOSAA	77		25 - 150	08/21/21 11:48	08/22/21 16:59	1
M2-8:2 FTS	108		25 - 150	08/21/21 11:48	08/22/21 16:59	1
13C3 PFBS	99		25 - 150	08/21/21 11:48	08/22/21 16:59	1
13C2 PFTeDA	105		25 - 150	08/21/21 11:48	08/22/21 16:59	1
13C2 PFDA	94		25 - 150	08/21/21 11:48	08/22/21 16:59	1
13C2 PFDoA	95		25 - 150	08/21/21 11:48	08/22/21 16:59	1
13C2 PFHxA	86		25 - 150	08/21/21 11:48	08/22/21 16:59	1
13C2 PFUnA	97		25 - 150	08/21/21 11:48	08/22/21 16:59	1
13C4 PFBA	63		25 - 150	08/21/21 11:48	08/22/21 16:59	1
13C4 PFHpA	91		25 - 150	08/21/21 11:48	08/22/21 16:59	1
13C4 PFOA	93		25 - 150	08/21/21 11:48	08/22/21 16:59	1
13C4 PFOS	84		25 - 150	08/21/21 11:48	08/22/21 16:59	1
13C5 PFNA	78		25 - 150	08/21/21 11:48	08/22/21 16:59	1
13C5 PFPeA	81		25 - 150	08/21/21 11:48	08/22/21 16:59	1
13C8 FOSA	93		25 - 150	08/21/21 11:48	08/22/21 16:59	1
18O2 PFHxS	86		25 - 150	08/21/21 11:48	08/22/21 16:59	1

Client Sample ID: EB-081821
Lab Sample ID: 480-188507-4

Date Collected: 08/18/21 15:25
Matrix: Water
Date Received: 08/19/21 12:55

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
6:2 FTS	ND		4.6	2.3	ng/L		08/21/21 11:48	08/22/21 17:08	1
8:2 FTS	ND		1.8	0.42	ng/L		08/21/21 11:48	08/22/21 17:08	1
NEtFOSAA	ND		4.6	1.2	ng/L		08/21/21 11:48	08/22/21 17:08	1
NMeFOSAA	ND		4.6	1.1	ng/L		08/21/21 11:48	08/22/21 17:08	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.18	ng/L		08/21/21 11:48	08/22/21 17:08	1
Perfluorobutanoic acid (PFBA)	ND		4.6	2.2	ng/L		08/21/21 11:48	08/22/21 17:08	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.29	ng/L		08/21/21 11:48	08/22/21 17:08	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.28	ng/L		08/21/21 11:48	08/22/21 17:08	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.50	ng/L		08/21/21 11:48	08/22/21 17:08	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.17	ng/L		08/21/21 11:48	08/22/21 17:08	1
Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.23	ng/L		08/21/21 11:48	08/22/21 17:08	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.8	0.52	ng/L		08/21/21 11:48	08/22/21 17:08	1
Perfluorohexanoic acid (PFHxA)	ND		1.8	0.53	ng/L		08/21/21 11:48	08/22/21 17:08	1
Perfluorononanoic acid (PFNA)	ND		1.8	0.25	ng/L		08/21/21 11:48	08/22/21 17:08	1
Perfluorooctanesulfonamide (FOSA)	ND		1.8	0.89	ng/L		08/21/21 11:48	08/22/21 17:08	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.49	ng/L		08/21/21 11:48	08/22/21 17:08	1
Perfluorooctanoic acid (PFOA)	ND		1.8	0.78	ng/L		08/21/21 11:48	08/22/21 17:08	1
Perfluoropentanoic acid (PFPeA)	ND		1.8	0.45	ng/L		08/21/21 11:48	08/22/21 17:08	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.67	ng/L		08/21/21 11:48	08/22/21 17:08	1
Perfluorotridecanoic acid (PFTrDA)	ND		1.8	1.2	ng/L		08/21/21 11:48	08/22/21 17:08	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	1.0	ng/L		08/21/21 11:48	08/22/21 17:08	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
M2-6:2 FTS	*95*		*25 - 150*	*08/21/21 11:48*	*08/22/21 17:08*	*1*
d5-NEtFOSAA	*77*		*25 - 150*	*08/21/21 11:48*	*08/22/21 17:08*	*1*
d3-NMeFOSAA	*76*		*25 - 150*	*08/21/21 11:48*	*08/22/21 17:08*	*1*
M2-8:2 FTS	*94*		*25 - 150*	*08/21/21 11:48*	*08/22/21 17:08*	*1*
13C3 PFBS	*91*		*25 - 150*	*08/21/21 11:48*	*08/22/21 17:08*	*1*
13C2 PFTeDA	*105*		*25 - 150*	*08/21/21 11:48*	*08/22/21 17:08*	*1*
13C2 PFDA	*94*		*25 - 150*	*08/21/21 11:48*	*08/22/21 17:08*	*1*
13C2 PFDoA	*85*		*25 - 150*	*08/21/21 11:48*	*08/22/21 17:08*	*1*
13C2 PFHxA	*79*		*25 - 150*	*08/21/21 11:48*	*08/22/21 17:08*	*1*
13C2 PFUnA	*96*		*25 - 150*	*08/21/21 11:48*	*08/22/21 17:08*	*1*
13C4 PFBA	*66*		*25 - 150*	*08/21/21 11:48*	*08/22/21 17:08*	*1*
13C4 PFHpA	*84*		*25 - 150*	*08/21/21 11:48*	*08/22/21 17:08*	*1*
13C4 PFOA	*87*		*25 - 150*	*08/21/21 11:48*	*08/22/21 17:08*	*1*
13C4 PFOS	*78*		*25 - 150*	*08/21/21 11:48*	*08/22/21 17:08*	*1*
13C5 PFNA	*73*		*25 - 150*	*08/21/21 11:48*	*08/22/21 17:08*	*1*
13C5 PFPeA	*81*		*25 - 150*	*08/21/21 11:48*	*08/22/21 17:08*	*1*
13C8 FOSA	*81*		*25 - 150*	*08/21/21 11:48*	*08/22/21 17:08*	*1*
18O2 PFHxS	*83*		*25 - 150*	*08/21/21 11:48*	*08/22/21 17:08*	*1*

Client: AECOM
Project/Site: 60583042 - Wyoming County FTC

Job ID: 480-188507-1

Client Sample ID: MW-12
Date Collected: 08/18/21 16:25
Date Received: 08/19/21 12:55

Lab Sample ID: 480-188507-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**36**		1.0	0.82	ug/L			08/21/21 17:32	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			08/21/21 17:32	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			08/21/21 17:32	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			08/21/21 17:32	1
1,1-Dichloroethane	**3.9**		1.0	0.38	ug/L			08/21/21 17:32	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			08/21/21 17:32	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			08/21/21 17:32	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			08/21/21 17:32	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			08/21/21 17:32	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			08/21/21 17:32	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			08/21/21 17:32	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			08/21/21 17:32	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			08/21/21 17:32	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			08/21/21 17:32	1
2-Hexanone	ND		5.0	1.2	ug/L			08/21/21 17:32	1
2-Butanone (MEK)	ND		10	1.3	ug/L			08/21/21 17:32	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			08/21/21 17:32	1
Acetone	ND		10	3.0	ug/L			08/21/21 17:32	1
Benzene	ND		1.0	0.41	ug/L			08/21/21 17:32	1
Bromodichloromethane	ND		1.0	0.39	ug/L			08/21/21 17:32	1
Bromoform	ND		1.0	0.26	ug/L			08/21/21 17:32	1
Bromomethane	ND		1.0	0.69	ug/L			08/21/21 17:32	1
Carbon disulfide	ND		1.0	0.19	ug/L			08/21/21 17:32	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			08/21/21 17:32	1
Chlorobenzene	ND		1.0	0.75	ug/L			08/21/21 17:32	1
Dibromochloromethane	ND		1.0	0.32	ug/L			08/21/21 17:32	1
Chloroethane	ND		1.0	0.32	ug/L			08/21/21 17:32	1
Chloroform	ND		1.0	0.34	ug/L			08/21/21 17:32	1
Chloromethane	ND		1.0	0.35	ug/L			08/21/21 17:32	1
cis-1,2-Dichloroethene	**50**		1.0	0.81	ug/L			08/21/21 17:32	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			08/21/21 17:32	1
Cyclohexane	ND		1.0	0.18	ug/L			08/21/21 17:32	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			08/21/21 17:32	1
Ethylbenzene	ND		1.0	0.74	ug/L			08/21/21 17:32	1
Isopropylbenzene	ND		1.0	0.79	ug/L			08/21/21 17:32	1
Methyl acetate	ND		2.5	1.3	ug/L			08/21/21 17:32	1
Methyl tert-butyl ether	ND	*+	1.0	0.16	ug/L			08/21/21 17:32	1
Methylcyclohexane	ND		1.0	0.16	ug/L			08/21/21 17:32	1
Methylene Chloride	ND		1.0	0.44	ug/L			08/21/21 17:32	1
Styrene	ND		1.0	0.73	ug/L			08/21/21 17:32	1
Tetrachloroethene	**19**		1.0	0.36	ug/L			08/21/21 17:32	1
Toluene	ND		1.0	0.51	ug/L			08/21/21 17:32	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			08/21/21 17:32	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			08/21/21 17:32	1
Trichloroethene	**4.7**		1.0	0.46	ug/L			08/21/21 17:32	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			08/21/21 17:32	1
Vinyl chloride	ND		1.0	0.90	ug/L			08/21/21 17:32	1
Xylenes, Total	ND		2.0	0.66	ug/L			08/21/21 17:32	1

Client: AECOM
Job ID: 480-188507-1
Project/Site: 60583042 - Wyoming County FTC

Client Sample ID: MW-12
Lab Sample ID: 480-188507-5
Date Collected: 08/18/21 16:25
Matrix: Water
Date Received: 08/19/21 12:55

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		77 - 120		08/21/21 17:32	1
Toluene-d8 (Surr)	98		80 - 120		08/21/21 17:32	1
4-Bromofluorobenzene (Surr)	96		73 - 120		08/21/21 17:32	1
Dibromofluoromethane (Surr)	106		75 - 123		08/21/21 17:32	1

Client Sample ID: MW-15
Date Collected: 08/18/21 17:10
Date Received: 08/19/21 12:55

Lab Sample ID: 480-188507-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**62**		2.0	1.6	ug/L			08/21/21 17:55	2
1,1,2,2-Tetrachloroethane	ND		2.0	0.42	ug/L			08/21/21 17:55	2
1,1,2-Trichloroethane	ND		2.0	0.46	ug/L			08/21/21 17:55	2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		2.0	0.62	ug/L			08/21/21 17:55	2
1,1-Dichloroethane	**6.8**		2.0	0.76	ug/L			08/21/21 17:55	2
1,1-Dichloroethene	ND		2.0	0.58	ug/L			08/21/21 17:55	2
1,2,4-Trichlorobenzene	ND		2.0	0.82	ug/L			08/21/21 17:55	2
1,2-Dibromo-3-Chloropropane	ND		2.0	0.78	ug/L			08/21/21 17:55	2
1,2-Dibromoethane	ND		2.0	1.5	ug/L			08/21/21 17:55	2
1,2-Dichlorobenzene	ND		2.0	1.6	ug/L			08/21/21 17:55	2
1,2-Dichloroethane	ND		2.0	0.42	ug/L			08/21/21 17:55	2
1,2-Dichloropropane	ND		2.0	1.4	ug/L			08/21/21 17:55	2
1,3-Dichlorobenzene	ND		2.0	1.6	ug/L			08/21/21 17:55	2
1,4-Dichlorobenzene	ND		2.0	1.7	ug/L			08/21/21 17:55	2
2-Hexanone	ND		10	2.5	ug/L			08/21/21 17:55	2
2-Butanone (MEK)	ND		20	2.6	ug/L			08/21/21 17:55	2
4-Methyl-2-pentanone (MIBK)	ND		10	4.2	ug/L			08/21/21 17:55	2
Acetone	ND		20	6.0	ug/L			08/21/21 17:55	2
Benzene	ND		2.0	0.82	ug/L			08/21/21 17:55	2
Bromodichloromethane	ND		2.0	0.78	ug/L			08/21/21 17:55	2
Bromoform	ND		2.0	0.52	ug/L			08/21/21 17:55	2
Bromomethane	ND		2.0	1.4	ug/L			08/21/21 17:55	2
Carbon disulfide	ND		2.0	0.38	ug/L			08/21/21 17:55	2
Carbon tetrachloride	ND		2.0	0.54	ug/L			08/21/21 17:55	2
Chlorobenzene	ND		2.0	1.5	ug/L			08/21/21 17:55	2
Dibromochloromethane	ND		2.0	0.64	ug/L			08/21/21 17:55	2
Chloroethane	ND		2.0	0.64	ug/L			08/21/21 17:55	2
Chloroform	ND		2.0	0.68	ug/L			08/21/21 17:55	2
Chloromethane	ND		2.0	0.70	ug/L			08/21/21 17:55	2
cis-1,2-Dichloroethene	**44**		2.0	1.6	ug/L			08/21/21 17:55	2
cis-1,3-Dichloropropene	ND		2.0	0.72	ug/L			08/21/21 17:55	2
Cyclohexane	ND		2.0	0.36	ug/L			08/21/21 17:55	2
Dichlorodifluoromethane	ND		2.0	1.4	ug/L			08/21/21 17:55	2
Ethylbenzene	ND		2.0	1.5	ug/L			08/21/21 17:55	2
Isopropylbenzene	ND		2.0	1.6	ug/L			08/21/21 17:55	2
Methyl acetate	ND		5.0	2.6	ug/L			08/21/21 17:55	2
Methyl tert-butyl ether	ND	*+	2.0	0.32	ug/L			08/21/21 17:55	2
Methylcyclohexane	ND		2.0	0.32	ug/L			08/21/21 17:55	2
Methylene Chloride	ND		2.0	0.88	ug/L			08/21/21 17:55	2
Styrene	ND		2.0	1.5	ug/L			08/21/21 17:55	2
Tetrachloroethene	**160**		2.0	0.72	ug/L			08/21/21 17:55	2
Toluene	ND		2.0	1.0	ug/L			08/21/21 17:55	2
trans-1,2-Dichloroethene	ND		2.0	1.8	ug/L			08/21/21 17:55	2
trans-1,3-Dichloropropene	ND		2.0	0.74	ug/L			08/21/21 17:55	2
Trichloroethene	**7.4**		2.0	0.92	ug/L			08/21/21 17:55	2
Trichlorofluoromethane	ND		2.0	1.8	ug/L			08/21/21 17:55	2
Vinyl chloride	ND		2.0	1.8	ug/L			08/21/21 17:55	2
Xylenes, Total	ND		4.0	1.3	ug/L			08/21/21 17:55	2

Client Sample Results

Client: AECOM
Project/Site: 60583042 - Wyoming County FTC

Job ID: 480-188507-1

Client Sample ID: MW-15

Date Collected: 08/18/21 17:10
Date Received: 08/19/21 12:55

Lab Sample ID: 480-188507-6

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		77 - 120		08/21/21 17:55	2
Toluene-d8 (Surr)	97		80 - 120		08/21/21 17:55	2
4-Bromofluorobenzene (Surr)	96		73 - 120		08/21/21 17:55	2
Dibromofluoromethane (Surr)	106		75 - 123		08/21/21 17:55	2

Client Sample ID: TB-081821
Date Collected: 08/18/21 00:00
Date Received: 08/19/21 12:55

Lab Sample ID: 480-188507-7
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			08/21/21 18:18	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			08/21/21 18:18	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			08/21/21 18:18	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			08/21/21 18:18	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			08/21/21 18:18	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			08/21/21 18:18	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			08/21/21 18:18	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			08/21/21 18:18	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			08/21/21 18:18	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			08/21/21 18:18	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			08/21/21 18:18	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			08/21/21 18:18	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			08/21/21 18:18	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			08/21/21 18:18	1
2-Hexanone	ND		5.0	1.2	ug/L			08/21/21 18:18	1
2-Butanone (MEK)	ND		10	1.3	ug/L			08/21/21 18:18	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			08/21/21 18:18	1
Acetone	**6.9**	**J**	10	3.0	ug/L			08/21/21 18:18	1
Benzene	ND		1.0	0.41	ug/L			08/21/21 18:18	1
Bromodichloromethane	ND		1.0	0.39	ug/L			08/21/21 18:18	1
Bromoform	ND		1.0	0.26	ug/L			08/21/21 18:18	1
Bromomethane	ND		1.0	0.69	ug/L			08/21/21 18:18	1
Carbon disulfide	ND		1.0	0.19	ug/L			08/21/21 18:18	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			08/21/21 18:18	1
Chlorobenzene	ND		1.0	0.75	ug/L			08/21/21 18:18	1
Dibromochloromethane	ND		1.0	0.32	ug/L			08/21/21 18:18	1
Chloroethane	ND		1.0	0.32	ug/L			08/21/21 18:18	1
Chloroform	ND		1.0	0.34	ug/L			08/21/21 18:18	1
Chloromethane	ND		1.0	0.35	ug/L			08/21/21 18:18	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			08/21/21 18:18	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			08/21/21 18:18	1
Cyclohexane	ND		1.0	0.18	ug/L			08/21/21 18:18	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			08/21/21 18:18	1
Ethylbenzene	ND		1.0	0.74	ug/L			08/21/21 18:18	1
Isopropylbenzene	ND		1.0	0.79	ug/L			08/21/21 18:18	1
Methyl acetate	ND		2.5	1.3	ug/L			08/21/21 18:18	1
Methyl tert-butyl ether	ND	*+	1.0	0.16	ug/L			08/21/21 18:18	1
Methylcyclohexane	ND		1.0	0.16	ug/L			08/21/21 18:18	1
Methylene Chloride	**0.76**	**J**	1.0	0.44	ug/L			08/21/21 18:18	1
Styrene	ND		1.0	0.73	ug/L			08/21/21 18:18	1
Tetrachloroethene	ND		1.0	0.36	ug/L			08/21/21 18:18	1
Toluene	ND		1.0	0.51	ug/L			08/21/21 18:18	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			08/21/21 18:18	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			08/21/21 18:18	1
Trichloroethene	ND		1.0	0.46	ug/L			08/21/21 18:18	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			08/21/21 18:18	1
Vinyl chloride	ND		1.0	0.90	ug/L			08/21/21 18:18	1
Xylenes, Total	ND		2.0	0.66	ug/L			08/21/21 18:18	1

Client: AECOM
Job ID: 480-188507-1
Project/Site: 60583042 - Wyoming County FTC

Client Sample ID: TB-081821
Lab Sample ID: 480-188507-7
Date Collected: 08/18/21 00:00
Matrix: Water
Date Received: 08/19/21 12:55

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		77 - 120		08/21/21 18:18	1
Toluene-d8 (Surr)	98		80 - 120		08/21/21 18:18	1
4-Bromofluorobenzene (Surr)	96		73 - 120		08/21/21 18:18	1
Dibromofluoromethane (Surr)	106		75 - 123		08/21/21 18:18	1

Surrogate Summary

Client: AECOM
Project/Site: 60583042 - Wyoming County FTC

Job ID: 480-188507-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	TOL	BFB	DBFM
Lab Sample ID	Client Sample ID	(77-120)	(80-120)	(73-120)	(75-123)
480-188507-1	MW-07	100	94	95	111
480-188507-1 - DL	MW-07	99	95	93	104
480-188507-2	MW-02	99	97	95	103
480-188507-3	FD-081821	98	99	94	104
480-188507-5	MW-12	99	98	96	106
480-188507-6	MW-15	101	97	96	106
480-188507-7	TB-081821	102	98	96	106
LCS 480-593646/5	Lab Control Sample	99	99	101	106
LCS 480-593768/6	Lab Control Sample	100	96	99	102
LCSD 480-593768/7	Lab Control Sample Dup	100	97	100	104
MB 480-593646/7	Method Blank	99	97	93	104
MB 480-593768/9	Method Blank	98	104	99	101

Surrogate Legend

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

Isotope Dilution Summary

Client: AECOM
Job ID: 480-188507-1
Project/Site: 60583042 - Wyoming County FTC

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	M262FTS (25-150)	d5NEFOS (25-150)	d3NMFOS (25-150)	M282FTS (25-150)	C3PFBS (25-150)	PFTDA (25-150)	PFDA (25-150)	PFDoA (25-150)
480-188507-2	MW-02	113	78	73	94	92	94	97	93
480-188507-3	FD-081821	113	82	77	108	99	105	94	95
480-188507-4	EB-081821	95	77	76	94	91	105	94	85
LCS 320-518512/2-A	Lab Control Sample	91	75	74	91	85	98	90	89
LCSD 320-518512/3-A	Lab Control Sample Dup	95	77	73	97	87	103	93	97
MB 320-518512/1-A	Method Blank	91	79	74	90	82	93	93	91

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFHxA (25-150)	PFUnA (25-150)	PFBA (25-150)	C4PFHA (25-150)	PFOA (25-150)	PFOS (25-150)	PFNA (25-150)	PFPeA (25-150)
480-188507-2	MW-02	82	95	61	89	88	80	78	79
480-188507-3	FD-081821	86	97	63	91	93	84	78	81
480-188507-4	EB-081821	79	96	66	84	87	78	73	81
LCS 320-518512/2-A	Lab Control Sample	78	91	71	79	87	74	66	74
LCSD 320-518512/3-A	Lab Control Sample Dup	77	99	75	81	85	76	69	75
MB 320-518512/1-A	Method Blank	76	93	72	77	84	75	66	74

		Percent Isotope Dilution Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	PFOSA (25-150)	PFHxS (25-150)
480-188507-2	MW-02	88	89
480-188507-3	FD-081821	93	86
480-188507-4	EB-081821	81	83
LCS 320-518512/2-A	Lab Control Sample	77	74
LCSD 320-518512/3-A	Lab Control Sample Dup	76	77
MB 320-518512/1-A	Method Blank	77	73

Surrogate Legend

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

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

Lab Sample ID: MB 480-593646/7
Matrix: Water
Analysis Batch: 593646

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			08/21/21 12:45	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			08/21/21 12:45	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			08/21/21 12:45	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			08/21/21 12:45	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			08/21/21 12:45	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			08/21/21 12:45	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			08/21/21 12:45	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			08/21/21 12:45	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			08/21/21 12:45	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			08/21/21 12:45	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			08/21/21 12:45	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			08/21/21 12:45	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			08/21/21 12:45	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			08/21/21 12:45	1
2-Hexanone	ND		5.0	1.2	ug/L			08/21/21 12:45	1
2-Butanone (MEK)	ND		10	1.3	ug/L			08/21/21 12:45	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			08/21/21 12:45	1
Acetone	ND		10	3.0	ug/L			08/21/21 12:45	1
Benzene	ND		1.0	0.41	ug/L			08/21/21 12:45	1
Bromodichloromethane	ND		1.0	0.39	ug/L			08/21/21 12:45	1
Bromoform	ND		1.0	0.26	ug/L			08/21/21 12:45	1
Bromomethane	ND		1.0	0.69	ug/L			08/21/21 12:45	1
Carbon disulfide	ND		1.0	0.19	ug/L			08/21/21 12:45	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			08/21/21 12:45	1
Chlorobenzene	ND		1.0	0.75	ug/L			08/21/21 12:45	1
Dibromochloromethane	ND		1.0	0.32	ug/L			08/21/21 12:45	1
Chloroethane	ND		1.0	0.32	ug/L			08/21/21 12:45	1
Chloroform	ND		1.0	0.34	ug/L			08/21/21 12:45	1
Chloromethane	ND		1.0	0.35	ug/L			08/21/21 12:45	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			08/21/21 12:45	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			08/21/21 12:45	1
Cyclohexane	ND		1.0	0.18	ug/L			08/21/21 12:45	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			08/21/21 12:45	1
Ethylbenzene	ND		1.0	0.74	ug/L			08/21/21 12:45	1
Isopropylbenzene	ND		1.0	0.79	ug/L			08/21/21 12:45	1
Methyl acetate	ND		2.5	1.3	ug/L			08/21/21 12:45	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			08/21/21 12:45	1
Methylcyclohexane	ND		1.0	0.16	ug/L			08/21/21 12:45	1
Methylene Chloride	ND		1.0	0.44	ug/L			08/21/21 12:45	1
Styrene	ND		1.0	0.73	ug/L			08/21/21 12:45	1
Tetrachloroethene	ND		1.0	0.36	ug/L			08/21/21 12:45	1
Toluene	ND		1.0	0.51	ug/L			08/21/21 12:45	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			08/21/21 12:45	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			08/21/21 12:45	1
Trichloroethene	ND		1.0	0.46	ug/L			08/21/21 12:45	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			08/21/21 12:45	1
Vinyl chloride	ND		1.0	0.90	ug/L			08/21/21 12:45	1
Xylenes, Total	ND		2.0	0.66	ug/L			08/21/21 12:45	1

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

Lab Sample ID: MB 480-593646/7
Matrix: Water
Analysis Batch: 593646

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		77 - 120		08/21/21 12:45	1
Toluene-d8 (Surr)	97		80 - 120		08/21/21 12:45	1
4-Bromofluorobenzene (Surr)	93		73 - 120		08/21/21 12:45	1
Dibromofluoromethane (Surr)	104		75 - 123		08/21/21 12:45	1

Lab Sample ID: LCS 480-593646/5
Matrix: Water
Analysis Batch: 593646

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	28.1		ug/L		112	73 - 126
1,1,2,2-Tetrachloroethane	25.0	20.8		ug/L		83	76 - 120
1,1,2-Trichloroethane	25.0	23.4		ug/L		93	76 - 122
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	25.4		ug/L		101	61 - 148
1,1-Dichloroethane	25.0	25.4		ug/L		102	77 - 120
1,1-Dichloroethene	25.0	27.0		ug/L		108	66 - 127
1,2,4-Trichlorobenzene	25.0	23.1		ug/L		92	79 - 122
1,2-Dibromo-3-Chloropropane	25.0	21.1		ug/L		84	56 - 134
1,2-Dibromoethane	25.0	23.0		ug/L		92	77 - 120
1,2-Dichlorobenzene	25.0	23.3		ug/L		93	80 - 124
1,2-Dichloroethane	25.0	22.8		ug/L		91	75 - 120
1,2-Dichloropropane	25.0	23.6		ug/L		94	76 - 120
1,3-Dichlorobenzene	25.0	23.5		ug/L		94	77 - 120
1,4-Dichlorobenzene	25.0	24.0		ug/L		96	80 - 120
2-Hexanone	125	98.5		ug/L		79	65 - 127
2-Butanone (MEK)	125	96.8		ug/L		77	57 - 140
4-Methyl-2-pentanone (MIBK)	125	96.3		ug/L		77	71 - 125
Acetone	125	121		ug/L		96	56 - 142
Benzene	25.0	24.3		ug/L		97	71 - 124
Bromodichloromethane	25.0	25.4		ug/L		102	80 - 122
Bromoform	25.0	24.5		ug/L		98	61 - 132
Bromomethane	25.0	28.6		ug/L		114	55 - 144
Carbon disulfide	25.0	26.0		ug/L		104	59 - 134
Carbon tetrachloride	25.0	29.5		ug/L		118	72 - 134
Chlorobenzene	25.0	23.9		ug/L		95	80 - 120
Dibromochloromethane	25.0	24.8		ug/L		99	75 - 125
Chloroethane	25.0	28.2		ug/L		113	69 - 136
Chloroform	25.0	24.7		ug/L		99	73 - 127
Chloromethane	25.0	26.1		ug/L		105	68 - 124
cis-1,2-Dichloroethene	25.0	25.0		ug/L		100	74 - 124
cis-1,3-Dichloropropene	25.0	25.9		ug/L		103	74 - 124
Cyclohexane	25.0	24.9		ug/L		100	59 - 135
Dichlorodifluoromethane	25.0	27.5		ug/L		110	59 - 135
Ethylbenzene	25.0	23.6		ug/L		95	77 - 123
Isopropylbenzene	25.0	23.6		ug/L		94	77 - 122
Methyl acetate	50.0	40.7		ug/L		81	74 - 133
Methyl tert-butyl ether	25.0	33.2	*+	ug/L		133	77 - 120
Methylcyclohexane	25.0	27.7		ug/L		111	68 - 134

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

Lab Sample ID: LCS 480-593646/5
Matrix: Water
Analysis Batch: 593646

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylene Chloride	25.0	26.2		ug/L		105	75 - 124
Styrene	25.0	24.8		ug/L		99	80 - 120
Tetrachloroethene	25.0	24.2		ug/L		97	74 - 122
Toluene	25.0	23.9		ug/L		95	80 - 122
trans-1,2-Dichloroethene	25.0	26.1		ug/L		104	73 - 127
trans-1,3-Dichloropropene	25.0	23.9		ug/L		96	80 - 120
Trichloroethene	25.0	25.6		ug/L		102	74 - 123
Trichlorofluoromethane	25.0	27.3		ug/L		109	62 - 150
Vinyl chloride	25.0	29.2		ug/L		117	65 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*77 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*
4-Bromofluorobenzene (Surr)	*101*		*73 - 120*
Dibromofluoromethane (Surr)	*106*		*75 - 123*

Lab Sample ID: MB 480-593768/9
Matrix: Water
Analysis Batch: 593768

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			08/24/21 00:49	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			08/24/21 00:49	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			08/24/21 00:49	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			08/24/21 00:49	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			08/24/21 00:49	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			08/24/21 00:49	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			08/24/21 00:49	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			08/24/21 00:49	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			08/24/21 00:49	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			08/24/21 00:49	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			08/24/21 00:49	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			08/24/21 00:49	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			08/24/21 00:49	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			08/24/21 00:49	1
2-Hexanone	ND		5.0	1.2	ug/L			08/24/21 00:49	1
2-Butanone (MEK)	ND		10	1.3	ug/L			08/24/21 00:49	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			08/24/21 00:49	1
Acetone	ND		10	3.0	ug/L			08/24/21 00:49	1
Benzene	ND		1.0	0.41	ug/L			08/24/21 00:49	1
Bromodichloromethane	ND		1.0	0.39	ug/L			08/24/21 00:49	1
Bromoform	ND		1.0	0.26	ug/L			08/24/21 00:49	1
Bromomethane	ND		1.0	0.69	ug/L			08/24/21 00:49	1
Carbon disulfide	ND		1.0	0.19	ug/L			08/24/21 00:49	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			08/24/21 00:49	1
Chlorobenzene	ND		1.0	0.75	ug/L			08/24/21 00:49	1
Dibromochloromethane	ND		1.0	0.32	ug/L			08/24/21 00:49	1
Chloroethane	ND		1.0	0.32	ug/L			08/24/21 00:49	1

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

Lab Sample ID: MB 480-593768/9
Matrix: Water
Analysis Batch: 593768

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	ND		1.0	0.34	ug/L			08/24/21 00:49	1
Chloromethane	ND		1.0	0.35	ug/L			08/24/21 00:49	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			08/24/21 00:49	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			08/24/21 00:49	1
Cyclohexane	ND		1.0	0.18	ug/L			08/24/21 00:49	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			08/24/21 00:49	1
Ethylbenzene	ND		1.0	0.74	ug/L			08/24/21 00:49	1
Isopropylbenzene	ND		1.0	0.79	ug/L			08/24/21 00:49	1
Methyl acetate	ND		2.5	1.3	ug/L			08/24/21 00:49	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			08/24/21 00:49	1
Methylcyclohexane	ND		1.0	0.16	ug/L			08/24/21 00:49	1
Methylene Chloride	ND		1.0	0.44	ug/L			08/24/21 00:49	1
Styrene	ND		1.0	0.73	ug/L			08/24/21 00:49	1
Tetrachloroethene	ND		1.0	0.36	ug/L			08/24/21 00:49	1
Toluene	ND		1.0	0.51	ug/L			08/24/21 00:49	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			08/24/21 00:49	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			08/24/21 00:49	1
Trichloroethene	ND		1.0	0.46	ug/L			08/24/21 00:49	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			08/24/21 00:49	1
Vinyl chloride	ND		1.0	0.90	ug/L			08/24/21 00:49	1
Xylenes, Total	ND		2.0	0.66	ug/L			08/24/21 00:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*77 - 120*		*08/24/21 00:49*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*08/24/21 00:49*	*1*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*		*08/24/21 00:49*	*1*
Dibromofluoromethane (Surr)	*101*		*75 - 123*		*08/24/21 00:49*	*1*

Lab Sample ID: LCS 480-593768/6
Matrix: Water
Analysis Batch: 593768

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	27.5		ug/L		110	73 - 126
1,1,2,2-Tetrachloroethane	25.0	21.1		ug/L		84	76 - 120
1,1,2-Trichloroethane	25.0	22.4		ug/L		89	76 - 122
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	24.6		ug/L		98	61 - 148
1,1-Dichloroethane	25.0	26.4		ug/L		106	77 - 120
1,1-Dichloroethene	25.0	25.0		ug/L		100	66 - 127
1,2,4-Trichlorobenzene	25.0	22.8		ug/L		91	79 - 122
1,2-Dibromo-3-Chloropropane	25.0	21.9		ug/L		88	56 - 134
1,2-Dibromoethane	25.0	22.4		ug/L		90	77 - 120
1,2-Dichlorobenzene	25.0	23.2		ug/L		93	80 - 124
1,2-Dichloroethane	25.0	22.6		ug/L		90	75 - 120
1,2-Dichloropropane	25.0	22.6		ug/L		90	76 - 120
1,3-Dichlorobenzene	25.0	23.3		ug/L		93	77 - 120
1,4-Dichlorobenzene	25.0	23.4		ug/L		94	80 - 120
2-Hexanone	125	91.0		ug/L		73	65 - 127

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

Lab Sample ID: LCS 480-593768/6
Matrix: Water
Analysis Batch: 593768

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Butanone (MEK)	125	189	*+	ug/L		151	57 - 140
4-Methyl-2-pentanone (MIBK)	125	93.6		ug/L		75	71 - 125
Acetone	125	117		ug/L		93	56 - 142
Benzene	25.0	23.2		ug/L		93	71 - 124
Bromodichloromethane	25.0	24.6		ug/L		98	80 - 122
Bromoform	25.0	24.8		ug/L		99	61 - 132
Bromomethane	25.0	26.9		ug/L		108	55 - 144
Carbon disulfide	25.0	23.9		ug/L		96	59 - 134
Carbon tetrachloride	25.0	28.4		ug/L		114	72 - 134
Chlorobenzene	25.0	23.5		ug/L		94	80 - 120
Dibromochloromethane	25.0	24.6		ug/L		98	75 - 125
Chloroethane	25.0	27.9		ug/L		111	69 - 136
Chloroform	25.0	24.5		ug/L		98	73 - 127
Chloromethane	25.0	35.1	*+	ug/L		140	68 - 124
cis-1,2-Dichloroethene	25.0	25.7		ug/L		103	74 - 124
cis-1,3-Dichloropropene	25.0	23.9		ug/L		96	74 - 124
Cyclohexane	25.0	26.9		ug/L		107	59 - 135
Dichlorodifluoromethane	25.0	28.7		ug/L		115	59 - 135
Ethylbenzene	25.0	23.6		ug/L		94	77 - 123
Isopropylbenzene	25.0	24.0		ug/L		96	77 - 122
Methyl acetate	50.0	43.3		ug/L		87	74 - 133
Methyl tert-butyl ether	25.0	32.6	*+	ug/L		131	77 - 120
Methylcyclohexane	25.0	27.8		ug/L		111	68 - 134
Methylene Chloride	25.0	25.2		ug/L		101	75 - 124
Styrene	25.0	23.8		ug/L		95	80 - 120
Tetrachloroethene	25.0	27.8		ug/L		111	74 - 122
Toluene	25.0	22.9		ug/L		91	80 - 122
trans-1,2-Dichloroethene	25.0	25.9		ug/L		104	73 - 127
trans-1,3-Dichloropropene	25.0	22.4		ug/L		90	80 - 120
Trichloroethene	25.0	24.3		ug/L		97	74 - 123
Trichlorofluoromethane	25.0	28.2		ug/L		113	62 - 150
Vinyl chloride	25.0	30.3		ug/L		121	65 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*77 - 120*
Toluene-d8 (Surr)	*96*		*80 - 120*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*
Dibromofluoromethane (Surr)	*102*		*75 - 123*

Lab Sample ID: LCSD 480-593768/7
Matrix: Water
Analysis Batch: 593768

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	25.0	26.6		ug/L		107	73 - 126	3	15
1,1,2,2-Tetrachloroethane	25.0	22.2		ug/L		89	76 - 120	5	15
1,1,2-Trichloroethane	25.0	22.5		ug/L		90	76 - 122	0	15
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	23.4		ug/L		94	61 - 148	5	20

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

Lab Sample ID: LCSD 480-593768/7
Matrix: Water
Analysis Batch: 593768

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloroethane			25.0	24.7		ug/L		99	77 - 120	7	20
1,1-Dichloroethene			25.0	24.2		ug/L		97	66 - 127	3	16
1,2,4-Trichlorobenzene			25.0	23.1		ug/L		92	79 - 122	1	20
1,2-Dibromo-3-Chloropropane			25.0	22.1		ug/L		89	56 - 134	1	15
1,2-Dibromoethane			25.0	22.8		ug/L		91	77 - 120	2	15
1,2-Dichlorobenzene			25.0	22.4		ug/L		90	80 - 124	4	20
1,2-Dichloroethane			25.0	22.0		ug/L		88	75 - 120	3	20
1,2-Dichloropropane			25.0	22.1		ug/L		88	76 - 120	2	20
1,3-Dichlorobenzene			25.0	22.4		ug/L		90	77 - 120	4	20
1,4-Dichlorobenzene			25.0	22.7		ug/L		91	80 - 120	3	20
2-Hexanone			125	97.4		ug/L		78	65 - 127	7	15
2-Butanone (MEK)			125	168		ug/L		134	57 - 140	12	20
4-Methyl-2-pentanone (MIBK)			125	101		ug/L		81	71 - 125	8	35
Acetone			125	116		ug/L		93	56 - 142	1	15
Benzene			25.0	22.6		ug/L		90	71 - 124	3	13
Bromodichloromethane			25.0	24.9		ug/L		100	80 - 122	1	15
Bromoform			25.0	24.3		ug/L		97	61 - 132	2	15
Bromomethane			25.0	26.9		ug/L		108	55 - 144	0	15
Carbon disulfide			25.0	21.6		ug/L		86	59 - 134	10	15
Carbon tetrachloride			25.0	27.3		ug/L		109	72 - 134	4	15
Chlorobenzene			25.0	22.6		ug/L		90	80 - 120	4	25
Dibromochloromethane			25.0	23.9		ug/L		96	75 - 125	3	15
Chloroethane			25.0	27.6		ug/L		111	69 - 136	1	15
Chloroform			25.0	23.5		ug/L		94	73 - 127	5	20
Chloromethane			25.0	23.6	*1	ug/L		94	68 - 124	39	15
cis-1,2-Dichloroethene			25.0	23.5		ug/L		94	74 - 124	9	15
cis-1,3-Dichloropropene			25.0	24.6		ug/L		98	74 - 124	3	15
Cyclohexane			25.0	26.1		ug/L		104	59 - 135	3	20
Dichlorodifluoromethane			25.0	27.5		ug/L		110	59 - 135	4	20
Ethylbenzene			25.0	22.4		ug/L		90	77 - 123	5	15
Isopropylbenzene			25.0	23.8		ug/L		95	77 - 122	1	20
Methyl acetate			50.0	42.8		ug/L		86	74 - 133	1	20
Methyl tert-butyl ether			25.0	33.1	*+	ug/L		132	77 - 120	1	37
Methylcyclohexane			25.0	26.6		ug/L		106	68 - 134	4	20
Methylene Chloride			25.0	24.5		ug/L		98	75 - 124	3	15
Styrene			25.0	23.4		ug/L		94	80 - 120	2	20
Tetrachloroethene			25.0	26.7		ug/L		107	74 - 122	4	20
Toluene			25.0	21.8		ug/L		87	80 - 122	5	15
trans-1,2-Dichloroethene			25.0	24.1		ug/L		96	73 - 127	7	20
trans-1,3-Dichloropropene			25.0	22.3		ug/L		89	80 - 120	0	15
Trichloroethene			25.0	23.5		ug/L		94	74 - 123	4	16
Trichlorofluoromethane			25.0	27.3		ug/L		109	62 - 150	3	20
Vinyl chloride			25.0	28.8		ug/L		115	65 - 133	5	15

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*77 - 120*
Toluene-d8 (Surr)	*97*		*80 - 120*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*

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

Lab Sample ID: LCSD 480-593768/7
Matrix: Water
Analysis Batch: 593768

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

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dibromofluoromethane (Surr)	104		75 - 123

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-518512/1-A
Matrix: Water
Analysis Batch: 518660

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 518512

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
6:2 FTS	ND		5.0	2.5	ng/L		08/21/21 11:48	08/22/21 14:51	1
8:2 FTS	ND		2.0	0.46	ng/L		08/21/21 11:48	08/22/21 14:51	1
NEtFOSAA	ND		5.0	1.3	ng/L		08/21/21 11:48	08/22/21 14:51	1
NMeFOSAA	ND		5.0	1.2	ng/L		08/21/21 11:48	08/22/21 14:51	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.20	ng/L		08/21/21 11:48	08/22/21 14:51	1
Perfluorobutanoic acid (PFBA)	ND		5.0	2.4	ng/L		08/21/21 11:48	08/22/21 14:51	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.32	ng/L		08/21/21 11:48	08/22/21 14:51	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.31	ng/L		08/21/21 11:48	08/22/21 14:51	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		08/21/21 11:48	08/22/21 14:51	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0	0.19	ng/L		08/21/21 11:48	08/22/21 14:51	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.25	ng/L		08/21/21 11:48	08/22/21 14:51	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.57	ng/L		08/21/21 11:48	08/22/21 14:51	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.58	ng/L		08/21/21 11:48	08/22/21 14:51	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.27	ng/L		08/21/21 11:48	08/22/21 14:51	1
Perfluorooctanesulfonamide (FOSA)	ND		2.0	0.98	ng/L		08/21/21 11:48	08/22/21 14:51	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.54	ng/L		08/21/21 11:48	08/22/21 14:51	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.85	ng/L		08/21/21 11:48	08/22/21 14:51	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.49	ng/L		08/21/21 11:48	08/22/21 14:51	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0	0.73	ng/L		08/21/21 11:48	08/22/21 14:51	1
Perfluorotridecanoic acid (PFTrDA)	ND		2.0	1.3	ng/L		08/21/21 11:48	08/22/21 14:51	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	1.1	ng/L		08/21/21 11:48	08/22/21 14:51	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-6:2 FTS	91		25 - 150	08/21/21 11:48	08/22/21 14:51	1
d5-NEtFOSAA	79		25 - 150	08/21/21 11:48	08/22/21 14:51	1
d3-NMeFOSAA	74		25 - 150	08/21/21 11:48	08/22/21 14:51	1
M2-8:2 FTS	90		25 - 150	08/21/21 11:48	08/22/21 14:51	1
13C3 PFBS	82		25 - 150	08/21/21 11:48	08/22/21 14:51	1
13C2 PFTeDA	93		25 - 150	08/21/21 11:48	08/22/21 14:51	1
13C2 PFDA	93		25 - 150	08/21/21 11:48	08/22/21 14:51	1
13C2 PFDoA	91		25 - 150	08/21/21 11:48	08/22/21 14:51	1
13C2 PFHxA	76		25 - 150	08/21/21 11:48	08/22/21 14:51	1
13C2 PFUnA	93		25 - 150	08/21/21 11:48	08/22/21 14:51	1
13C4 PFBA	72		25 - 150	08/21/21 11:48	08/22/21 14:51	1
13C4 PFHpA	77		25 - 150	08/21/21 11:48	08/22/21 14:51	1
13C4 PFOA	84		25 - 150	08/21/21 11:48	08/22/21 14:51	1
13C4 PFOS	75		25 - 150	08/21/21 11:48	08/22/21 14:51	1
13C5 PFNA	66		25 - 150	08/21/21 11:48	08/22/21 14:51	1
13C5 PFPeA	74		25 - 150	08/21/21 11:48	08/22/21 14:51	1

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

Lab Sample ID: MB 320-518512/1-A
Matrix: Water
Analysis Batch: 518660

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 518512

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 FOSA	77		25 - 150	08/21/21 11:48	08/22/21 14:51	1
18O2 PFHxS	73		25 - 150	08/21/21 11:48	08/22/21 14:51	1

Lab Sample ID: LCS 320-518512/2-A
Matrix: Water
Analysis Batch: 518660

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 518512

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
6:2 FTS	37.9	33.1		ng/L		87	59 - 175
8:2 FTS	38.3	34.5		ng/L		90	75 - 135
NEtFOSAA	40.0	41.0		ng/L		102	76 - 136
NMeFOSAA	40.0	40.8		ng/L		102	76 - 136
Perfluorobutanesulfonic acid (PFBS)	35.4	31.0		ng/L		88	67 - 127
Perfluorobutanoic acid (PFBA)	40.0	43.2		ng/L		108	76 - 136
Perfluorodecanesulfonic acid (PFDS)	38.6	41.3		ng/L		107	71 - 131
Perfluorodecanoic acid (PFDA)	40.0	38.2		ng/L		96	76 - 136
Perfluorododecanoic acid (PFDoA)	40.0	41.3		ng/L		103	71 - 131
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	40.0		ng/L		105	76 - 136
Perfluoroheptanoic acid (PFHpA)	40.0	44.1		ng/L		110	72 - 132
Perfluorohexanesulfonic acid (PFHxS)	36.4	37.0		ng/L		102	59 - 119
Perfluorohexanoic acid (PFHxA)	40.0	37.5		ng/L		94	73 - 133
Perfluorononanoic acid (PFNA)	40.0	51.8		ng/L		129	75 - 135
Perfluorooctanesulfonamide (FOSA)	40.0	36.3		ng/L		91	73 - 133
Perfluorooctanesulfonic acid (PFOS)	37.1	37.8		ng/L		102	70 - 130
Perfluorooctanoic acid (PFOA)	40.0	39.4		ng/L		98	70 - 130
Perfluoropentanoic acid (PFPeA)	40.0	42.9		ng/L		107	71 - 131
Perfluorotetradecanoic acid (PFTeA)	40.0	38.9		ng/L		97	70 - 130
Perfluorotridecanoic acid (PFTrDA)	40.0	43.4		ng/L		109	71 - 131
Perfluoroundecanoic acid (PFUnA)	40.0	40.5		ng/L		101	68 - 128

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
M2-6:2 FTS	91		25 - 150
d5-NEtFOSAA	75		25 - 150
d3-NMeFOSAA	74		25 - 150
M2-8:2 FTS	91		25 - 150
13C3 PFBS	85		25 - 150
13C2 PFTeDA	98		25 - 150
13C2 PFDA	90		25 - 150
13C2 PFDoA	89		25 - 150
13C2 PFHxA	78		25 - 150
13C2 PFUnA	91		25 - 150

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

Lab Sample ID: LCS 320-518512/2-A
Matrix: Water
Analysis Batch: 518660

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 518512

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C4 PFBA	*71*		*25 - 150*
13C4 PFHpA	*79*		*25 - 150*
13C4 PFOA	*87*		*25 - 150*
13C4 PFOS	*74*		*25 - 150*
13C5 PFNA	*66*		*25 - 150*
13C5 PFPeA	*74*		*25 - 150*
13C8 FOSA	*77*		*25 - 150*
18O2 PFHxS	*74*		*25 - 150*

Lab Sample ID: LCSD 320-518512/3-A
Matrix: Water
Analysis Batch: 518660

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 518512

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
6:2 FTS			37.9	33.0		ng/L		87	59 - 175	0	30
8:2 FTS			38.3	32.8		ng/L		86	75 - 135	5	30
NEtFOSAA			40.0	39.4		ng/L		98	76 - 136	4	30
NMeFOSAA			40.0	40.0		ng/L		100	76 - 136	2	30
Perfluorobutanesulfonic acid (PFBS)			35.4	31.5		ng/L		89	67 - 127	2	30
Perfluorobutanoic acid (PFBA)			40.0	43.4		ng/L		108	76 - 136	0	30
Perfluorodecanesulfonic acid (PFDS)			38.6	39.9		ng/L		103	71 - 131	4	30
Perfluorodecanoic acid (PFDA)			40.0	38.1		ng/L		95	76 - 136	0	30
Perfluorododecanoic acid (PFDoA)			40.0	38.5		ng/L		96	71 - 131	7	30
Perfluoroheptanesulfonic Acid (PFHpS)			38.1	40.0		ng/L		105	76 - 136	0	30
Perfluoroheptanoic acid (PFHpA)			40.0	41.7		ng/L		104	72 - 132	6	30
Perfluorohexanesulfonic acid (PFHxS)			36.4	35.3		ng/L		97	59 - 119	5	30
Perfluorohexanoic acid (PFHxA)			40.0	41.7		ng/L		104	73 - 133	11	30
Perfluorononanoic acid (PFNA)			40.0	50.1		ng/L		125	75 - 135	3	30
Perfluorooctanesulfonamide (FOSA)			40.0	39.1		ng/L		98	73 - 133	8	30
Perfluorooctanesulfonic acid (PFOS)			37.1	37.0		ng/L		100	70 - 130	2	30
Perfluorooctanoic acid (PFOA)			40.0	40.2		ng/L		100	70 - 130	2	30
Perfluoropentanoic acid (PFPeA)			40.0	43.1		ng/L		108	71 - 131	0	30
Perfluorotetradecanoic acid (PFTeA)			40.0	34.3		ng/L		86	70 - 130	13	30
Perfluorotridecanoic acid (PFTrDA)			40.0	35.7		ng/L		89	71 - 131	19	30
Perfluoroundecanoic acid (PFUnA)			40.0	39.2		ng/L		98	68 - 128	3	30

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
M2-6:2 FTS	*95*		*25 - 150*
d5-NEtFOSAA	*77*		*25 - 150*
d3-NMeFOSAA	*73*		*25 - 150*
M2-8:2 FTS	*97*		*25 - 150*

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

Lab Sample ID: LCSD 320-518512/3-A
Matrix: Water
Analysis Batch: 518660

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 518512

Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits
13C3 PFBS	87		25 - 150
13C2 PFTeDA	103		25 - 150
13C2 PFDA	93		25 - 150
13C2 PFDoA	97		25 - 150
13C2 PFHxA	77		25 - 150
13C2 PFUnA	99		25 - 150
13C4 PFBA	75		25 - 150
13C4 PFHpA	81		25 - 150
13C4 PFOA	85		25 - 150
13C4 PFOS	76		25 - 150
13C5 PFNA	69		25 - 150
13C5 PFPeA	75		25 - 150
13C8 FOSA	76		25 - 150
18O2 PFHxS	77		25 - 150

QC Association Summary

Client: AECOM
Job ID: 480-188507-1
Project/Site: 60583042 - Wyoming County FTC

GC/MS VOA

Analysis Batch: 593646

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188507-1	MW-07	Total/NA	Water	8260C	
480-188507-5	MW-12	Total/NA	Water	8260C	
480-188507-6	MW-15	Total/NA	Water	8260C	
480-188507-7	TB-081821	Total/NA	Water	8260C	
MB 480-593646/7	Method Blank	Total/NA	Water	8260C	
LCS 480-593646/5	Lab Control Sample	Total/NA	Water	8260C	

Analysis Batch: 593768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188507-1 - DL	MW-07	Total/NA	Water	8260C	
480-188507-2	MW-02	Total/NA	Water	8260C	
480-188507-3	FD-081821	Total/NA	Water	8260C	
MB 480-593768/9	Method Blank	Total/NA	Water	8260C	
LCS 480-593768/6	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-593768/7	Lab Control Sample Dup	Total/NA	Water	8260C	

LCMS

Prep Batch: 518512

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188507-2	MW-02	Total/NA	Water	3535	
480-188507-3	FD-081821	Total/NA	Water	3535	
480-188507-4	EB-081821	Total/NA	Water	3535	
MB 320-518512/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-518512/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-518512/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 518660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-188507-2	MW-02	Total/NA	Water	537 (modified)	518512
480-188507-3	FD-081821	Total/NA	Water	537 (modified)	518512
480-188507-4	EB-081821	Total/NA	Water	537 (modified)	518512
MB 320-518512/1-A	Method Blank	Total/NA	Water	537 (modified)	518512
LCS 320-518512/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	518512
LCSD 320-518512/3-A	Lab Control Sample Dup	Total/NA	Water	537 (modified)	518512

Lab Chronicle

Client: AECOM
Job ID: 480-188507-1
Project/Site: 60583042 - Wyoming County FTC

Client Sample ID: MW-07
Lab Sample ID: 480-188507-1
Date Collected: 08/18/21 13:40
Matrix: Water
Date Received: 08/19/21 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	593646	08/21/21 16:23	CRL	TAL BUF
Total/NA	Analysis	8260C	DL	4	593768	08/24/21 01:11	AXK	TAL BUF

Client Sample ID: MW-02
Lab Sample ID: 480-188507-2
Date Collected: 08/18/21 15:05
Matrix: Water
Date Received: 08/19/21 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		2	593768	08/24/21 01:34	AXK	TAL BUF
Total/NA	Prep	3535			518512	08/21/21 11:48	RAC	TAL SAC
Total/NA	Analysis	537 (modified)		1	518660	08/22/21 16:50	K1S	TAL SAC

Client Sample ID: FD-081821
Lab Sample ID: 480-188507-3
Date Collected: 08/18/21 00:00
Matrix: Water
Date Received: 08/19/21 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		2	593768	08/24/21 01:57	AXK	TAL BUF
Total/NA	Prep	3535			518512	08/21/21 11:48	RAC	TAL SAC
Total/NA	Analysis	537 (modified)		1	518660	08/22/21 16:59	K1S	TAL SAC

Client Sample ID: EB-081821
Lab Sample ID: 480-188507-4
Date Collected: 08/18/21 15:25
Matrix: Water
Date Received: 08/19/21 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			518512	08/21/21 11:48	RAC	TAL SAC
Total/NA	Analysis	537 (modified)		1	518660	08/22/21 17:08	K1S	TAL SAC

Client Sample ID: MW-12
Lab Sample ID: 480-188507-5
Date Collected: 08/18/21 16:25
Matrix: Water
Date Received: 08/19/21 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	593646	08/21/21 17:32	CRL	TAL BUF

Client Sample ID: MW-15
Lab Sample ID: 480-188507-6
Date Collected: 08/18/21 17:10
Matrix: Water
Date Received: 08/19/21 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		2	593646	08/21/21 17:55	CRL	TAL BUF

Lab Chronicle

Client: AECOM
Job ID: 480-188507-1
Project/Site: 60583042 - Wyoming County FTC

Client Sample ID: TB-081821
Lab Sample ID: 480-188507-7
Date Collected: 08/18/21 00:00
Matrix: Water
Date Received: 08/19/21 12:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	593646	08/21/21 18:18	CRL	TAL BUF

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

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

Accreditation/Certification Summary

Client: AECOM
Job ID: 480-188507-1
Project/Site: 60583042 - Wyoming County FTC

Laboratory: Eurofins TestAmerica, Buffalo

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	04-01-22

Laboratory: Eurofins TestAmerica, Sacramento

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

Authority	Program	Identification Number	Expiration Date
New York	NELAP	11666	04-01-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
537 (modified)	3535	Water	6:2 FTS
537 (modified)	3535	Water	8:2 FTS
537 (modified)	3535	Water	NEtFOSAA
537 (modified)	3535	Water	NMeFOSAA
537 (modified)	3535	Water	Perfluorobutanesulfonic acid (PFBS)
537 (modified)	3535	Water	Perfluorobutanoic acid (PFBA)
537 (modified)	3535	Water	Perfluorodecanesulfonic acid (PFDS)
537 (modified)	3535	Water	Perfluorodecanoic acid (PFDA)
537 (modified)	3535	Water	Perfluorododecanoic acid (PFDoA)
537 (modified)	3535	Water	Perfluoroheptanesulfonic Acid (PFHpS)
537 (modified)	3535	Water	Perfluoroheptanoic acid (PFHpA)
537 (modified)	3535	Water	Perfluorohexanesulfonic acid (PFHxS)
537 (modified)	3535	Water	Perfluorohexanoic acid (PFHxA)
537 (modified)	3535	Water	Perfluorononanoic acid (PFNA)
537 (modified)	3535	Water	Perfluorooctanesulfonamide (FOSA)
537 (modified)	3535	Water	Perfluorooctanesulfonic acid (PFOS)
537 (modified)	3535	Water	Perfluorooctanoic acid (PFOA)
537 (modified)	3535	Water	Perfluoropentanoic acid (PFPeA)
537 (modified)	3535	Water	Perfluorotetradecanoic acid (PFTeA)
537 (modified)	3535	Water	Perfluorotridecanoic acid (PFTrDA)
537 (modified)	3535	Water	Perfluoroundecanoic acid (PFUnA)

Method Summary

Client: AECOM
Job ID: 480-188507-1
Project/Site: 60583042 - Wyoming County FTC

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

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

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

Sample Summary

Client: AECOM
Job ID: 480-188507-1
Project/Site: 60583042 - Wyoming County FTC

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-188507-1	MW-07	Water	08/18/21 13:40	08/19/21 12:55
480-188507-2	MW-02	Water	08/18/21 15:05	08/19/21 12:55
480-188507-3	FD-081821	Water	08/18/21 00:00	08/19/21 12:55
480-188507-4	EB-081821	Water	08/18/21 15:25	08/19/21 12:55
480-188507-5	MW-12	Water	08/18/21 16:25	08/19/21 12:55
480-188507-6	MW-15	Water	08/18/21 17:10	08/19/21 12:55
480-188507-7	TB-081821	Water	08/18/21 00:00	08/19/21 12:55

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: R. MURPHY / T. URBAN	Lab PM: Schove, John R	Carrier Tracking No(s):	COC No: 480-164319-36054.1
Client Contact: Colin Wasteneys	Phone: 716-903-1346	E-Mail: John.Schove@Eurofinset.com	State of Origin:	Page: Page 1 of 2
Company: AECOM	PWSID:			Job #:
Address: One John James Audubon Parkway Suite 210	Due Date Requested:			
City: Amherst	TAT Requested (days): STANDARD			
State, Zip: NY, 14228	Compliance Project: Δ Yes Δ No			
Phone:	PO #: 60623657.02			
Email: colin.wasteneys@aecom.com	WO #: colin.wasteneys@aecom.com.			
Project Name: 60583042 - Wyoming County FTC	Project #: 48005402			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, ...odecahydrate, ...e, 5, specify)

480-188507 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260C - TCL VOCs	PFC_IDA - PFAS, Standard List														Total Num	Special Instructions/Note:
Preservation Code:							A	N															
MW-07	8/18/21	1340	G	Water			3															3	
MW-02	8/18/21	1505	G	Water			3	2														5	
FD-081821	8/18/21	—	G	Water			3	2														5	
EB-081821	8/18/21	1525	G	Water				2														2	
MW-12	8/18/21	1625	G	Water			3															3	
MW-15	8/18/21	1710	G	Water			3															3	
TB-081821	8/18/21	—	G	Water			2															2	TRIP BLANK
				Water																			
				Water																			
				Water																			
				Water																			

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: DROP OFF

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Robert J Murphy	8/19/21 1255	AECOM			
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 8/19/21 1255	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 3 2#1

Ver: 06/08/2021

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Schove, John R	Carrier Tracking No(s):	COC No: 480-65957.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: John.Schove@Eurofinset.com	State of Origin: New York	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - New York		Job #: 480-188507-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 9/1/2021			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel) 916-372-1059(Fax)	PO #:			
Email:	WO #:			
Project Name: 60583042 - Wyoming County FTC	Project #: 48005402			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC_IDA/3535_PFC PFAS, Standard List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-02 (480-188507-2)	8/18/21	15:05 Eastern		Water			X	2	
FD-021821 (480-188507-3)	8/18/21	Eastern		Water			X	2	
EB-081821 (480-188507-4)	8/18/21	15:25 Eastern		Water			X	2	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	8/19/21 1700	TA	[signature]	8/20/21 9:40	BT/SAC
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.: 1512517	Cooler Temperature(s) °C and Other Remarks: 1.5c

Ver: 06/08/2021

eurofins | Environment Testing TestAmerica

Sacramento Sample Receiving Notes

480-188507 Field Sheet

Job: _____

Tracking # : 1888 3864 8810

SO / PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier

GSO / OnTrac / Goldstreak / USPS / Other _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations. File in the job folder with the COC.

Therm. ID: L-05 Corr. Factor: (+ / -) — °C

Ice 1 Wet 1 Gel _____ Other _____

Cooler Custody Seal: 1512517

Cooler ID: _____

Temp Observed: 1.5 °C Corrected: 1.5 °C

From: Temp Blank ☐ Sample ☒

Opening/Processing The Shipment	Yes	No	NA
Cooler compromised/tampered with?	☐	☒	☐
Cooler Temperature is acceptable?	☒	☐	☐
Frozen samples show signs of thaw?	☐	☐	☒

Initials: LB Date: 8/20/21

Unpacking/Labeling The Samples	Yes	No	NA
CoC is complete w/o discrepancies?	☒	☐	☐
Samples compromised/tampered with?	☐	☒	☐
Sample containers have legible labels?	☒	☐	☐
Sample custody seal?	☐	☐	☒
Containers are not broken or leaking?	☒	☐	☐
Sample date/times are provided?	☒	☐	☐
Appropriate containers are used?	☒	☐	☐
Sample bottles are completely filled?	☒	☐	☐
Sample preservatives verified?	☐	☐	☒
Samples w/o discrepancies?	☒	☐	☐
Zero headspace?*	☐	☐	☒
Alkalinity has no headspace?	☐	☐	☒
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☒
Multiphasic samples are not present?	☒	☐	☐

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

Initials: LB Date: 8/20/21

Notes: _____

Trizma Lot #(s): _____

Login Completion	Yes	No	NA
Receipt Temperature on COC?	☒	☐	☐
Samples received within hold time?	☒	☐	☐
NCM Filed?	☐	☐	☒
Log Release checked in TALS?	☐	☐	☐

Initials: LB Date: 8/20/21

Login Sample Receipt Checklist

Client: AECOM

Job Number: 480-188507-1

Login Number: 188507
List Number: 1
Creator: Stopa, Erik S

List Source: Eurofins TestAmerica, Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	AECOM
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: AECOM

Job Number: 480-188507-1

Login Number: 188507
List Number: 2
Creator: Simmons, Jason C

List Source: Eurofins TestAmerica, Sacramento
List Creation: 08/20/21 01:28 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1512517
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.5c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	