



Source Test Report

The Chemours Company, FC, LLC
22828 Highway 87W
Fayetteville, NC 28306

Sources Tested: VEN Carbon Bed
Test Date: September 18, 2021

AST Project No. 2021-25370

Prepared By
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Regulatory Information

Permit No. Title V Permit No. 03735T48

Source Information

<i>Source Name</i>	<i>Target Parameter</i>
VEN Carbon Bed (Inlet / Outlet)	HFPO-DA

Contact Information

<i>Test Location</i>	<i>Test Company</i>	<i>Analytical Laboratory</i>
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Alliance Source Testing, LLC (AST) has completed the source testing as described in this report. Results apply only to the source(s) tested and operating condition(s) for the specific test date(s) and time(s) identified within this report. All results are intended to be considered in their entirety, and AST is not responsible for use of less than the complete test report without written consent. This report shall not be reproduced in full or in part without written approval from the customer.

To the best of my knowledge and abilities, all information, facts and test data are correct. Data presented in this report has been checked for completeness and is accurate, error-free and legible. Onsite testing was conducted in accordance with approved internal Standard Operating Procedures. Any deviations or problems are detailed in the relevant sections on the test report.

This report is only considered valid once an authorized representative of AST has signed in the space provided below; any other version is considered draft. This document was prepared in portable document format (.pdf) and contains pages as identified in the bottom footer of this document.



10/21/2021

Patrick Grady, QSTI
Project Manager
Alliance Source Testing, LLC

Date

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Introduction

1.0 Introduction

Alliance Source Testing, LLC (AST) was retained by The Chemours Company (Chemours) to conduct compliance testing at the Fayetteville Works facility in Fayetteville, North Carolina. The facility operates under Title V Permit No. 03735T47. Source emissions testing were conducted at the inlet and outlet of the Vinyl Ethers North (VEN) carbon bed. The testing was conducted to evaluate emissions of hexafluoro-propylene oxide-dimer acid (HFPO-DA). HFPO-DA, hexafluoro-propylene oxide dimer acid fluoride (HFPO-DAF) and hexafluoro-propylene oxide dimer acid ammonium salt are captured and reported together as HFPO-DA.

1.1 Source and Control System Descriptions

VEN is part of the fluoromonomer area at the Fayetteville facility. This area produces fluorocarbon compounds used to produce Chemours products, such as Nafion[®] Krytox[®] and Viton[®]. Indoor air fugitive emissions from VEN are vented to a carbon bed which is then vented to atmosphere through the Division Stack. Process emissions from VEN are directed to a thermal oxidizer.

1.2 Project Team

Personnel involved in this project are identified in the following table.

**Table 1-1
Project Team**

Chemours Personnel	Christel Compton Eddie Vega
NCDEQ Personnel	Gary Saunders
AST Personnel	Patrick Grady Antonio Anderson Brian Goodhile Jeffrey Sheldon

Summary of Results

2.0 Summary of Results

AST conducted compliance testing at the Fayetteville Works facility in Fayetteville, North Carolina on September 18, 2021. Testing consisted of determining the emission rates of HFPO-DA at the inlets and outlet of the VEN carbon bed. It should be noted that test Run No. 1 was stopped 12 minutes early as there was a leak within the tower in VEN.

Table 2-1 provides a summary of the emission testing results. Any difference between the summary results listed in the following tables and the detailed results contained in appendices is due to rounding for presentation.

**Table 2-1
Summary of Results – VEN**

Run Number	Run 1	Run 2	Run 3	Average
Date	9/18/21	9/18/21	9/18/21	--
HFPO-DA Data				
Outlet Emission Rate, lb/hr	2.0E-04	3.0E-04	3.3E-04	2.8E-04
Inlet Emission Rate, lb/hr	1.6E-01	2.2E-01	1.3E-01	1.7E-01
Reduction Efficiency, %	99.9	99.9	99.7	99.8

Testing Methodology

3.0 Testing Methodology

The emission testing program was conducted in accordance with the test methods listed in Table 3-1. Method descriptions are provided below while quality assurance/quality control data is provided in Appendix C.

Table 3-1
Source Testing Methodology

Parameter	U.S. EPA Reference Test Methods	Notes/Remarks
Volumetric Flow Rate	1 & 2	Full Velocity Traverses
Moisture Content	4	Gravimetric Analysis
Hexafluoro-Propylene Oxide-Dimer Acid	Modified Method 0010	Isokinetic Sampling

3.1 U.S. EPA Reference Test Methods 1 and 2 – Sampling/Traverse Points and Volumetric Flow Rate

The sampling location and number of traverse (sampling) points were selected in accordance with U.S. EPA Reference Test Method 1. To determine the minimum number of traverse points, the upstream and downstream distances were equated into equivalent diameters and compared to Figure 1-1 in U.S. EPA Reference Test Method 1.

Full velocity traverses were conducted in accordance with U.S. EPA Reference Test Method 2 to determine the average stack gas velocity pressure, static pressure and temperature. The velocity and static pressure measurement system consisted of a pitot tube and inclined manometer. The stack gas temperature was measured with a K-type thermocouple and pyrometer.

3.2 U.S. EPA Reference Test Method 4 – Moisture Content

The stack gas moisture content was determined in accordance with U.S. EPA Reference Test Method 4. The gas conditioning train consisted of a series of chilled impingers. Prior to testing, each impinger was filled with a known quantity of water or silica gel. Each impinger was analyzed gravimetrically before and after each test run on the same balance to determine the amount of moisture condensed.

3.3 Modified Method 0010 – Hexafluoro-Propylene Oxide-Dimer Acid

HFPO-DA emissions were evaluated in accordance with Modified Method 0010. Testing followed the submitted protocol in the execution of our onsite sampling and analysis activities. Modified Method 0010 procedure was followed as outlined in the protocol submitted to NC Division of Air Quality. Modified Method 0010 sampling and analysis procedures performed for this project are consistent with OTM-45, which was released by EPA in January 2021, subsequent to Chemours submittal of plans to DAQ.

The sample train consisted of a borosilicate glass nozzle attached directly to a heated borosilicate glass-lined probe. The probe was connected directly to a heated borosilicate glass filter holder containing a solvent-extracted glass fiber filter. In order to minimize possible thermal degradation of the HFPO-DA, the probe and particulate filter were heated to just above stack temperature to minimize water vapor condensation before the filter. The filter holder exit was connected to a water-cooled coil condenser followed by a water-cooled sorbent module containing approximately 40 grams of XAD-2 resin. The XAD-2 inlet temperature was monitored to ensure that the module is maintained at a temperature below 20°C.

The XAD-2 resin trap was followed by a condensate knockout impinger and a series of three impingers each containing 100-ml of high purity deionized water. The water impingers were followed by another condensate knockout impinger equipped with a second XAD-2 resin trap to account for any sample breakthrough. The final impinger contained approximately 250 grams of dry pre-weighed silica gel. The water impingers and condensate impingers were submerged in an ice bath through the duration of the testing. The water in the ice bath was also used to circulate around the coil condenser and the XAD-2 resin traps.

Exhaust gases were extracted from the sample locations isokinetically using a metering console equipped with a vacuum pump, a calibrated orifice, oil manometer and probe/filter heat controllers.

3.4 HFPO-DA Sample Train and Equipment Preparation

Prior to conducting the field work the following procedures were conducted to prepare the field sampling glassware and sample recovery tools.

1. Wash all glassware, brushes, and ancillary tools with low residue soap and hot water.
2. Rinse all glassware, brushes, and ancillary tools three (3) times with D.I. H₂O.
3. Bake glassware (with the exception of probe liners) at 450°C for approximately 2 hours, (XAD-2 resin tube glassware is cleaned by Eurofins/TestAmerica by this same procedure).
4. Solvent rinse three (3) times all glassware, brushes, and ancillary tools with the following sequence of solvents: acetone, methylene chloride, hexane, and methanol.
5. Clean glassware and tools will be sealed in plastic bags or aluminum foil for transport to the sampling site.
6. Squirt bottles will be new dedicated bottles of known history and dedicated to the D.I. Water and methanol/ammonium hydroxide (MeOH/ 5% NH₄OH) solvent contents. Squirt bottles will be labelled with the solvent content it contains.

3.5 HFPO-DA Sample Train Recovery

Following completion of each test run, the sample probe, nozzle and front-half of the filter holder were brushed and rinsed three times each with the MeOH/ 5% NH₄OH solution (Container #1). The glass fiber filter was removed from its housing and transferred to a polyethylene bottle (Container #2). Any particulate matter and filter fibers which adhered to the filter holder and gasket were also placed in Container #2. The XAD-2 resin trap was sealed, labelled and placed in an iced sample cooler. The back-half of the filter holder, coil condenser condensate trap and connecting glassware were rinsed with the same MeOH/ 5% NH₄OH solution and placed in Container #3.

The volume of water collected in all impingers was measured for moisture determinations and then placed in Container #4. All impingers and connecting glassware were then rinsed with the MeOH/ 5% NH₄OH solution and placed in Container #5. The second (breakthrough) XAD-2 resin trap was sealed, labelled and placed in an iced sample cooler. The contents of the fifth impinger were placed in its original container and weighed for moisture determinations.

Containers were sealed and labeled with the appropriate sample information. Samples remained chilled until analysis. HFPO-DA analysis was conducted using liquid chromatography/dual mass spectrometry (LC/MS/MS).

Appendix A

Location: Chemours Company - Fayetteville Works Facility, NC
Source: VEN Carbon Bed Outlet
Project No.: 2021-25370
Run No.: 1
Parameter: HFPO-DA

Meter Pressure (Pm), in. Hg

$$P_m = P_b + \frac{\Delta H}{13.6}$$

where,

P_b $\frac{30.10}{}$ = barometric pressure, in. Hg
 ΔH $\frac{2.640}{}$ = pressure differential of orifice, in H₂O
 P_m $\frac{30.29}{}$ = in. Hg

Absolute Stack Gas Pressure (Ps), in. Hg

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

where,

P_b $\frac{30.10}{}$ = barometric pressure, in. Hg
 P_g $\frac{2.80}{}$ = static pressure, in. H₂O
 P_s $\frac{30.31}{}$ = in. Hg

Standard Meter Volume (Vmstd), dscf

$$V_{mstd} = \frac{17.636 \times Y \times V_m \times P_m}{T_m}$$

where,

Y $\frac{0.979}{}$ = meter correction factor
 V_m $\frac{78.811}{}$ = meter volume, cf
 P_m $\frac{30.29}{}$ = absolute meter pressure, in. Hg
 T_m $\frac{536.1}{}$ = absolute meter temperature, °R
 V_{mstd} $\frac{76.886}{}$ = dscf

Standard Wet Volume (Vwstd), scf

$$V_{wstd} = 0.04716 \times V_{lc}$$

where,

V_{lc} $\frac{54.4}{}$ = volume of H₂O collected, ml
 V_{wstd} $\frac{2.566}{}$ = scf

Moisture Fraction (BWSsat), dimensionless (theoretical at saturated conditions)

$$BWS_{sat} = \frac{10^{6.37 - \left(\frac{2,827}{T_s + 365}\right)}}{P_s}$$

where,

T_s $\frac{92.5}{}$ = stack temperature, °F
 P_s $\frac{30.31}{}$ = absolute stack gas pressure, in. Hg
 BWS_{sat} $\frac{0.050}{}$ = dimensionless

Moisture Fraction (BWS), dimensionless (measured)

$$BWS = \frac{V_{wstd}}{(V_{wstd} + V_{mstd})}$$

where,

V_{wstd} $\frac{2.566}{}$ = standard wet volume, scf
 V_{mstd} $\frac{76.886}{}$ = standard meter volume, dscf
 BWS $\frac{0.032}{}$ = dimensionless

Location: Chemours Company - Fayetteville Works Facility, NC
 Source: VEN Carbon Bed Outlet
 Project No.: 2021-25370
 Run No.: 1
 Parameter: HFPO-DA

Moisture Fraction (BWS), dimensionless

$$BWS = BWSmsd \text{ unless } BWSsat < BWSmsd$$

where,

$$BWSsat \frac{0.050}{\quad} = \text{moisture fraction (theoretical at saturated conditions)}$$

$$BWSmsd \frac{0.032}{\quad} = \text{moisture fraction (measured)}$$

$$BWS \frac{0.032}{\quad}$$

Molecular Weight (DRY) (Md), lb/lb-mole

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

where,

$$CO_2 \frac{0.1}{\quad} = \text{carbon dioxide concentration, \%}$$

$$O_2 \frac{20.9}{\quad} = \text{oxygen concentration, \%}$$

$$Md \frac{28.85}{\quad} = \text{lb/lb mol}$$

Molecular Weight (WET) (Ms), lb/lb-mole

$$Ms = Md (1 - BWS) + 18.015 (BWS)$$

where,

$$Md \frac{28.85}{\quad} = \text{molecular weight (DRY), lb/lb mol}$$

$$BWS \frac{0.032}{\quad} = \text{moisture fraction, dimensionless}$$

$$Ms \frac{28.50}{\quad} = \text{lb/lb mol}$$

Average Velocity (Vs), ft/sec

$$Vs = 85.49 \times Cp \times (\Delta P^{1/2})_{avg} \times \sqrt{\frac{Ts}{Ps \times Ms}}$$

where,

$$Cp \frac{0.840}{\quad} = \text{pitot tube coefficient}$$

$$\Delta P^{1/2} \frac{0.815}{\quad} = \text{velocity head of stack gas, (in. H}_2\text{O)}^{1/2}$$

$$Ts \frac{552.2}{\quad} = \text{absolute stack temperature, } ^\circ\text{R}$$

$$Ps \frac{30.31}{\quad} = \text{absolute stack gas pressure, in. Hg}$$

$$Ms \frac{28.50}{\quad} = \text{molecular weight of stack gas, lb/lb mol}$$

$$Vs \frac{46.8}{\quad} = \text{ft/sec}$$

Average Stack Gas Flow at Stack Conditions (Qa), acfm

$$Qa = 60 \times Vs \times As$$

where,

$$Vs \frac{46.8}{\quad} = \text{stack gas velocity, ft/sec}$$

$$As \frac{7.07}{\quad} = \text{cross-sectional area of stack, ft}^2$$

$$Qa \frac{19,850}{\quad} = \text{acfm}$$

Average Stack Gas Flow at Standard Conditions (Qs), dscfm

$$Qs = 17.636 \times Qa \times (1 - BWS) \times \frac{Ps}{Ts}$$

where,

$$Qa \frac{19,850}{\quad} = \text{average stack gas flow at stack conditions, acfm}$$

$$BWS \frac{0.032}{\quad} = \text{moisture fraction, dimensionless}$$

$$Ps \frac{30.31}{\quad} = \text{absolute stack gas pressure, in. Hg}$$

$$Ts \frac{552.2}{\quad} = \text{absolute stack temperature, } ^\circ\text{R}$$

$$Qs \frac{18,592}{\quad} = \text{dscfm}$$

Location: Chemours Company - Fayetteville Works Facility, NC
Source: VEN Carbon Bed Outlet
Project No.: 2021-2537O
Run No.: 1
Parameter: HFPO-DA

Dry Gas Meter Calibration Check (Yqa), dimensionless

$$Yqa = \frac{Y - \left(\frac{\Theta}{V_m} \sqrt{\frac{0.0319 \times T_m \times 29}{\Delta H@ \times \left(P_b + \frac{\Delta H_{avg}}{13.6} \right) \times M_d}} \sqrt{\Delta H_{avg.}} \right)}{Y} \times 100$$

where,

Y	<u>0.979</u>	= meter correction factor, dimensionless
Θ	<u>84</u>	= run time, min.
V_m	<u>78.811</u>	= total meter volume, def
T_m	<u>536.1</u>	= absolute meter temperature, °R
$\Delta H@$	<u>1.66</u>	= orifice meter calibration coefficient, in. H ₂ O
P_b	<u>30.10</u>	= barometric pressure, in. Hg
ΔH_{avg}	<u>2.640</u>	= average pressure differential of orifice, in H ₂ O
M_d	<u>28.85</u>	= molecular weight (DRY), lb/lb mol
$(\Delta H)^{1/2}$	<u>1.607</u>	= average squareroot pressure differential of orifice, (in. H ₂ O) ^{1/2}
Yqa	<u>-2.3</u>	= dimensionless

Volume of Nozzle (Vn), ft³

$$V_n = \frac{T_s}{P_s} \left(0.002669 \times V_{lc} + \frac{V_m \times P_m \times Y}{T_m} \right)$$

where,

T_s	<u>552.2</u>	= absolute stack temperature, °R
P_s	<u>30.31</u>	= absolute stack gas pressure, in. Hg
V_{lc}	<u>54.4</u>	= volume of H ₂ O collected, ml
V_m	<u>78.811</u>	= meter volume, cf
P_m	<u>30.29</u>	= absolute meter pressure, in. Hg
Y	<u>0.979</u>	= meter correction factor, unitless
T_m	<u>536.1</u>	= absolute meter temperature, °R
V_n	<u>82.080</u>	= volume of nozzle, ft ³

Isokinetic Sampling Rate (I), %

$$I = \left(\frac{V_n}{\theta \times 60 \times A_n \times V_s} \right) \times 100$$

where,

V_n	<u>82.080</u>	= nozzle volume, ft ³
θ	<u>84.0</u>	= run time, minutes
A_n	<u>0.00035</u>	= area of nozzle, ft ²
V_s	<u>46.8</u>	= average velocity, ft/sec
I	<u>98.1</u>	= %

Location: Chemours Company - Fayetteville Works Facility, NC
 Source: VEN Carbon Bed Outlet
 Project No.: 2021-25370
 Run No.: 1
 Parameter: HFPO-DA

HFPO-DA Concentration (C_{HFPODA}), ng/dscm

$$C_{HFPODA} = \frac{M_{HFPODA} \times 35.313}{Vmstd}$$

where,

$$M_{(HFPODA)} \frac{6,394.1}{Vmstd} = \text{HFPO-DA mass, ng}$$

$$\frac{76.886}{Vmstd} = \text{standard meter volume, dscf}$$

$$C_{HFPODA} \frac{2.9E+03}{Vmstd} = \text{ng/dscm}$$

HFPO-DA Emission Rate (ER_{HFPODA}), lb/hr

$$ER_{HFPODA} = \frac{C_{HFPODA} \times Qs \times 60}{Vmstd \times 4.5E + 11}$$

where,

$$C_{HFPODA} \frac{2.9E+03}{Qs} = \text{HFPO-DA concentration, ng/dscm}$$

$$\frac{18,592}{Qs} = \text{average stack gas flow at standard conditions, dscfm}$$

$$ER_{HFPODA} \frac{2.0E-04}{Qs} = \text{lb/hr}$$

Appendix B

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Outlet
Project No. 2021-25370
Parameter HFPO-DA

Run Number		Run 1	Run 2	Run 3	Average
Date		9/18/21	9/18/21	9/18/21	--
Start Time		8:02	11:14	13:55	--
Stop Time		9:46	13:09	15:55	--
Run Time, min	(θ)	84.0	96.0	96.0	92.0
INPUT DATA					
Barometric Pressure, in. Hg	(Pb)	30.10	30.10	30.10	30.10
Meter Correction Factor	(Y)	0.979	0.979	0.979	0.979
Orifice Calibration Value	($\Delta H @$)	1.660	1.660	1.660	1.660
Meter Volume, ft ³	(Vm)	78.811	93.518	93.652	88.660
Meter Temperature, °F	(Tm)	76.5	91.3	94.5	87.4
Meter Temperature, °R	(Tm)	536.1	551.0	554.1	547.1
Meter Orifice Pressure, in. WC	(ΔH)	2.640	2.698	2.719	2.686
Volume H ₂ O Collected, mL	(Vlc)	54.4	63.4	61.4	59.7
Nozzle Diameter, in	(Dn)	0.255	0.255	0.255	0.255
Area of Nozzle, ft ²	(An)	0.0004	0.0004	0.0004	0.0004
FH HFPO-DA Mass, ng	M _(HFPODA)	4,670.0	9,390.0	11,000.0	8,353.3
BH HFPO-DA Mass, ng	M _(HFPODA)	1,550.0	1,260.0	746.0	1,185.3
Imp HFPO-DA Mass, ng	M _(HFPODA)	167.0	229.0	83.6	159.9
Breakthrough HFPO-DA Mass, ng	M _(HFPODA)	7.1	11.8	4.01	7.64
Total HFPO-DA Mass, ng	M _(HFPODA)	6,394.1	10,890.8	11,833.6	9,706.2
ISOKINETIC DATA					
Standard Meter Volume, ft ³	(Vmstd)	76.886	88.792	88.416	84.698
Standard Water Volume, ft ³	(Vwstd)	2.566	2.990	2.895	2.817
Moisture Fraction Measured	(BWSmsd)	0.032	0.033	0.032	0.032
Moisture Fraction @ Saturation	(BWSsat)	0.050	0.052	0.054	0.052
Moisture Fraction	(BWS)	0.032	0.033	0.032	0.032
Meter Pressure, in Hg	(Pm)	30.29	30.30	30.30	30.30
Volume at Nozzle, ft ³	(Vn)	82.080	94.980	94.678	90.58
Isokinetic Sampling Rate, (%)	(I)	98.1	99.4	98.7	98.8
DGM Calibration Check Value, (+/- 5%)	(Y _{qa})	-2.3	-1.0	-1.7	-1.7
EMISSION CALCULATIONS					
Outlet HFPO-DA Concentration, ng/dscm	C _(HFPODA)	2.9E+03	4.3E+03	4.7E+03	4.0E+03
Outlet HFPO-DA Emission Rate, lb/hr	ER _(HFPODA)	2.0E-04	3.0E-04	3.3E-04	2.8E-04
REDUCTION CALCULATIONS					
Inlet HFPO-DA Emission Rate, lb/hr	ER _(HFPODA)	1.6E-01	2.2E-01	1.3E-01	1.7E-01
HFPO-DA Reduction Efficiency, %	ER _(HFPODA)	99.9	99.9	99.7	99.8

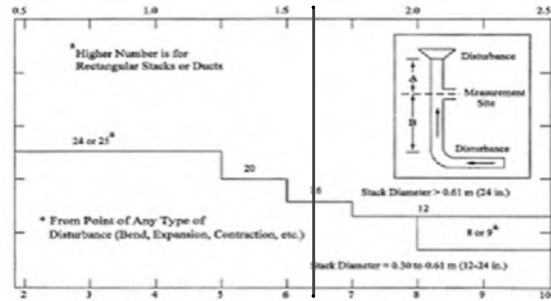
Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Outlet
Project No. 2021-25370
Parameter HFPO-DA

Run Number		Run 1	Run 2	Run 3	Average
Date		9/18/21	9/18/21	9/18/21	--
Start Time		8:02	11:14	13:55	--
Stop Time		9:46	13:09	15:55	--
Run Time, min		84.0	96.0	96.0	92.0
VELOCITY HEAD, in. WC					
Point 1		0.38	0.35	0.39	0.37
Point 2		0.40	0.42	0.42	0.41
Point 3		0.42	0.48	0.46	0.45
Point 4		0.48	0.51	0.54	0.51
Point 5		0.55	0.58	0.59	0.57
Point 6		0.56	0.67	0.70	0.64
Point 7		0.67	0.69	0.71	0.69
Point 8		0.68	0.71	0.70	0.70
Point 9		0.70	0.70	0.72	0.71
Point 10		0.69	0.71	0.72	0.71
Point 11		0.67	0.71	0.73	0.70
Point 12		0.67	0.70	0.74	0.70
Point 13		0.96	0.90	0.75	0.87
Point 14		0.95	1.00	0.80	0.92
Point 15		1.00	1.00	1.00	1.00
Point 16		0.99	1.05	1.00	1.01
Point 17		0.97	0.95	1.00	0.97
Point 18		0.86	0.91	0.96	0.91
Point 19		0.63	0.64	0.70	0.66
Point 20		0.51	0.56	0.60	0.56
Point 21		0.52	0.50	0.54	0.52
Point 22		--	0.49	0.51	0.50
Point 23		--	0.49	0.49	0.49
Point 24		--	0.50	0.50	0.50
CALCULATED DATA					
Square Root of ΔP , (in. WC) ^{1/2}	(ΔP)	0.815	0.814	0.816	0.815
Pitot Tube Coefficient	(Cp)	0.840	0.840	0.840	0.840
Barometric Pressure, in. Hg	(Pb)	30.10	30.10	30.10	30.10
Static Pressure, in. WC	(Pg)	2.80	2.80	2.80	2.80
Stack Pressure, in. Hg	(Ps)	30.31	30.31	30.31	30.31
Stack Cross-sectional Area, ft ²	(As)	7.07	7.07	7.07	7.07
Temperature, °F	(Ts)	92.5	93.5	94.5	93.5
Temperature, °R	(Ts)	552.2	553.1	554.2	553.178
Moisture Fraction Measured	(BWSmsd)	0.032	0.033	0.032	0.032
Moisture Fraction @ Saturation	(BWSsat)	0.050	0.052	0.054	0.052
Moisture Fraction	(BWS)	0.032	0.033	0.032	0.032
O ₂ Concentration, %	(O ₂)	20.9	20.9	20.9	20.9
CO ₂ Concentration, %	(CO ₂)	0.1	0.1	0.1	0.1
Molecular Weight, lb/lb-mole (dry)	(Md)	28.85	28.85	28.85	28.85
Molecular Weight, lb/lb-mole (wet)	(Ms)	28.50	28.50	28.51	28.50
Velocity, ft/sec	(Vs)	46.8	46.8	46.9	46.8
VOLUMETRIC FLOW RATE					
At Stack Conditions, acfm	(Qa)	19,850	19,830	19,910	19,863
At Standard Conditions, dscfm	(Qs)	18,592	18,537	18,592	18,574

Location Chemours Company - Fayetteville Works Facility, NC
 Source VEN Carbon Bed Outlet
 Project No. 2021-25370
 Date: 09/17/21

Stack Parameters

Duct Orientation: Horizontal
 Duct Design: Circular
 Distance from Far Wall to Outside of Port: 51.13 in
 Nipple Length: 15.13 in
 Depth of Duct: 36.00 in
 Cross Sectional Area of Duct: 7.07 ft²
 No. of Test Ports: 2
 Distance A: 4.8 ft
 Distance A Duct Diameters: 1.6 (must be > 0.5)
 Distance B: 4.8 ft
 Distance B Duct Diameters: 1.6 (must be > 2)
 Minimum Number of Traverse Points: 24
 Actual Number of Traverse Points: 24
 Number of Readings per Point: 1
 Measurer (Initial and Date): PJG 9/17/21
 Reviewer (Initial and Date): BAG 9/17/21



CIRCULAR DUCT

LOCATION OF TRAVERSE POINTS

Number of traverse points on a diameter

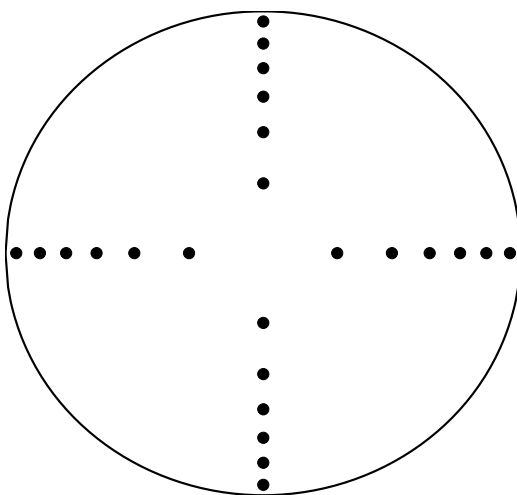
	2	3	4	5	6	7	8	9	10	11	12
1	14.6	--	6.7	--	4.4	--	3.2	--	2.6	--	2.1
2	85.4	--	25.0	--	14.6	--	10.5	--	8.2	--	6.7
3	--	--	75.0	--	29.6	--	19.4	--	14.6	--	11.8
4	--	--	93.3	--	70.4	--	32.3	--	22.6	--	17.7
5	--	--	--	--	85.4	--	67.7	--	34.2	--	25.0
6	--	--	--	--	95.6	--	80.6	--	65.8	--	35.6
7	--	--	--	--	--	--	89.5	--	77.4	--	64.4
8	--	--	--	--	--	--	96.8	--	85.4	--	75.0
9	--	--	--	--	--	--	--	--	91.8	--	82.3
10	--	--	--	--	--	--	--	--	97.4	--	88.2
11	--	--	--	--	--	--	--	--	--	--	93.3
12	--	--	--	--	--	--	--	--	--	--	97.9

Traverse Point	% of Diameter	Distance from inside wall	Distance from outside of port
1	2.1	1.00	16.13
2	6.7	2.41	17.54
3	11.8	4.25	19.37
4	17.7	6.37	21.50
5	25.0	9.00	24.13
6	35.6	12.82	27.94
7	64.4	23.18	38.31
8	75.0	27.00	42.13
9	82.3	29.63	44.75
10	88.2	31.75	46.88
11	93.3	33.59	48.71
12	97.9	35.00	50.13

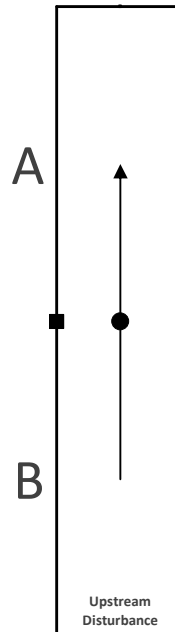
*Percent of stack diameter from inside wall to traverse point.

Stack Diagram
 A = 4.8 ft.
 B = 4.8 ft.
 Depth of Duct = 36 in.

Cross Sectional Area



Downstream Disturbance



Location Chemours Company - Fayetteville Works Facility, NC
 Source VEN Carbon Bed Outlet
 Project No. 2021-25370
 Date 09/17/21

Sample Point	Angle (AP=0)
1	5
2	10
3	10
4	10
5	15
6	15
7	15
8	10
9	10
10	10
11	15
12	10
13	5
14	5
15	10
16	10
17	15
18	15
19	15
20	12
21	10
22	12
23	10
24	10
Average	11

Location Chemours Company - Fayetteville Works Facility, NC
 Source VEN Carbon Bed Outlet
 Project No. 2021-25370
 Parameter HFPO-DA
 Analysis Gravimetric

Run 1	Date: 9/18/21								
Impinger No.	1	2	3	4	5	6	7	8	Total
Contents	XAD Trap	Empty	H2O	H2O	H2O	Empty	XAD Trap	Silica	--
Initial Mass, g	270.4	478.6	769.6	718.4	699.4	477.2	269.0	840.0	4522.6
Final Mass, g	294.0	491.8	768.6	717.2	699.8	478.6	278.8	848.2	4577.0
Gain	23.6	13.2	-1.0	-1.2	0.4	1.4	9.8	8.2	54.4
Run 2	Date: 9/18/21								
Impinger No.	1	2	3	4	5	6	7	8	Total
Contents	XAD Trap	Empty	H2O	H2O	H2O	Empty	XAD Trap	Silica	--
Initial Mass, g	271.4	470.6	759.2	723.0	758.2	499.6	277.0	867.6	4626.6
Final Mass, g	296.2	479.4	759.0	724.2	758.6	502.6	289.4	880.6	4690.0
Gain	24.8	8.8	-0.2	1.2	0.4	3.0	12.4	13.0	63.4
Run 3	Date: 9/18/21								
Impinger No.	1	2	3	4	5	6	7	8	Total
Contents	XAD Trap	Empty	H2O	H2O	H2O	Empty	XAD Trap	Silica	--
Initial Mass, g	261.0	531.8	738.6	685.6	776.4	499.6	267.2	837.4	4597.6
Final Mass, g	285.2	542.8	738.0	685.6	776.8	502.0	279.4	849.2	4659.0
Gain	24.2	11.0	-0.6	0.0	0.4	2.4	12.2	11.8	61.4

Location: Chemours Company - Fayetteville Works Facility, NC			Start Time: 8:02		Source: VEN Carbon Bed Outlet									
Date: 9/18/21		Run 1	VALID	End Time: 9:46		Project No.: 2021-25370	Parameter: HFPO-DA							
STACK DATA (EST)		EQUIPMENT		STACK DATA (EST)		FILTER NO.	STACK DATA (FINAL)		MOIST. DATA					
Moisture: 3.0 % est.		Meter Box ID: 4		Est. Tm: 85 °F			Pb: 30.10 in. Hg		Vlc (ml)					
Barometric: 30.10 in. Hg		Y: 0.979		Est. Ts: 81 °F			Pg: 2.80 in. WC		54.4					
Static Press: 2.00 in. WC		ΔH @ (in.WC): 1.660		Est. ΔP: 0.59 in. WC			O ₂ : 20.9 %		K-FACTOR					
Stack Press: 30.25 in. Hg		Probe ID: TC-5D		Est. Dn: 0.231 in.			CO ₂ : 0.1 %		4.023					
CO ₂ : 0.1 %		Liner Material: glass		Target Rate: 0.75 scfm			Check Pt.		Initial	Final	Corr.			
O ₂ : 20.9 %		Pitot ID: P4-2		LEAK CHECK!		Pre	Mid 1	Mid 2	Mid 3	Post	Mid 1 (cf)	418.641	#####	1.269
N ₂ /CO: 79.0 %		Pitot Cp/Type: 0.840 S-type		Leak Rate (cfm):		0.005	0.001	0.005	--	0.004	Mid 2 (cf)		--	
Md: 28.85 lb/lb-mole		Nozzle ID: G-5 glass		Vacuum (in Hg):		9	10	10	--	9	Mid 3 (cf)		--	
Ms: 28.53 lb/lb-mole		Nozzle Dn (in.): 0.255		Pitot Tube:		Pass	--	--	--	Pass	Mid-Point Leak Check Vol (cf): 1.269			

Sample Pt.	Sample Time (minutes)		Dry Gas Meter Reading (ft ³)	Pitot Tube ΔP (in WC)	Gas Temperatures (°F)		Orifice Press. ΔH (in. WC)		Pump Vac (in. Hg)	Gas Temperatures (°F)				% ISO	Vs (fps)
	Begin	End			DGM Average	Stack	Ideal	Actual		Probe	Filter	Imp Exit	Aux		
					Amb.	Amb.				Amb.	Amb.	Amb.	Amb.		
A-1	0.00	4.00	376.933	0.38	70	92	1.46	1.45	3	90	85	65	44	99.6	35.40
2	4.00	8.00	379.790	0.40	70	92	1.53	1.55	3	90	84	55	37	99.9	36.32
3	8.00	12.00	382.730	0.42	70	92	1.61	1.60	3	90	85	53	37	100.1	37.21
4	12.00	16.00	385.750	0.48	70	92	1.84	1.85	4	90	88	51	37	98.7	39.78
5	16.00	20.00	388.930	0.55	72	92	2.11	2.10	5	90	93	50	37	97.7	42.58
6	20.00	24.00	392.310	0.56	74	92	2.16	2.15	5	90	92	49	37	99.0	42.97
7	24.00	28.00	395.780	0.67	74	92	2.58	2.60	6	90	90	49	39	95.9	47.00
8	28.00	32.00	399.450	0.68	74	92	2.62	2.65	8	90	89	49	39	99.3	47.35
9	32.00	36.00	403.280	0.70	74	92	2.70	2.70	8	90	90	49	39	98.7	48.04
10	36.00	40.00	407.140	0.69	74	92	2.66	2.70	8	90	90	50	39	99.4	47.70
11	40.00	44.00	411.000	0.67	77	93	2.59	2.60	8	90	90	50	40	99.1	47.04
12	44.00	48.00	414.810	0.67	77	93	2.59	2.60	8	90	90	50	39	99.6	47.04
B-1	48.00	52.00	418.641	0.96	78	93	3.71	3.70	8	90	89	50	39	100.6	56.31
2	52.00	56.00	423.270	0.95	79	93	3.68	3.70	8	90	90	45	39	98.2	56.02
3	56.00	60.00	427.770	1.00	79	93	3.87	3.90	8	90	91	48	41	98.5	57.47
4	60.00	64.00	432.400	0.99	81	93	3.85	3.90	8	90	90	49	41	98.6	57.18
5	64.00	68.00	437.030	0.97	82	93	3.78	3.80	8	90	90	49	40	98.1	56.60
6	68.00	72.00	441.600	0.86	82	93	3.35	3.40	8	90	90	49	41	100.2	53.30
7	72.00	76.00	446.000	0.63	83	93	2.47	2.50	8	90	90	49	41	100.5	45.62
8	76.00	80.00	449.790	0.51	83	93	2.00	2.00	7	90	90	48	41	101.8	41.04
9	80.00	84.00	453.250	0.52	83	93	2.04	2.00	7	90	90	49	44	109.7	41.44
Final DGM:			457.013												

RESULTS	Run Time	Vm	ΔP	Tm	Ts	Max Vac	ΔH	%ISO	BWS	Y _{ga}
	84.0 min	78.811 ft ³	0.68 in. WC	76.5 °F	92.5 °F	8	2.640 in. WC	98.1	0.032	-2.3

Location: Chemours Company - Fayetteville Works Facility, NC			Start Time: 11:14			Source: VEN Carbon Bed Outlet					
Date: 9/18/21		Run 2		End Time: 13:09		Project No.: 2021-25370		Parameter: HFPO-DA			
STACK DATA (EST)		EQUIPMENT		STACK DATA (EST)		FILTER NO.		STACK DATA (FINAL)		MOIST. DATA	
Moisture: 3.0 % est.		Meter Box ID: 4		Est. Tm: 76 °F				Pb: 30.10 in. Hg		Vlc (ml)	
Barometric: 30.10 in. Hg		Y: 0.979		Est. Ts: 93 °F				Pg: 2.80 in. WC		63.4	
Static Press: 2.00 in. WC		AH @ (in.WC): 1.660		Est. AP: 0.68 in. WC				O ₂ : 20.9 %		K-FACTOR	
Stack Press: 30.25 in. Hg		Probe ID: TC-5D		Est. Dn: 0.227 in.				CO ₂ : 0.1 %		3.88	
CO ₂ : 0.1 %		Liner Material: glass		Target Rate: 0.75 scfm				Check Pt.		Initial Final Corr.	
O ₂ : 20.9 %		Pitot ID: P4-2		LEAK CHECK!		Pre Mid 1 Mid 2 Mid 3 Post		Mid 1 (cf) 501.856 #####		0.054	
N ₂ /CO: 79.0 %		Pitot Cp/Type: 0.840 S-type		Leak Rate (cfm): 0.007 0.001 0.001 -- 0.008				Mid 2 (cf)		--	
Md: 28.85 lb/lb-mole		Nozzle ID: G-5 glass		Vacuum (in Hg): 10 10 8 -- 10				Mid 3 (cf)		--	
Ms: 28.53 lb/lb-mole		Nozzle Dn (in.): 0.255		Pitot Tube: Pass -- -- -- Pass				Mid-Point Leak Check Vol (cf):		0.054	

Sample Pt.	Sample Time (minutes)		Dry Gas Meter Reading (ft ³)	Pitot Tube ΔP (in WC)	Gas Temperatures (°F)		Orifice Press. ΔH (in. WC)		Pump Vac (in. Hg)	Gas Temperatures (°F)				% ISO	Vs (fps)
	Begin	End			DGM Average	Stack	Ideal	Actual		Probe	Filter	Imp Exit	Aux		
					Amb.	Amb.				Amb.	Amb.	Amb.	Amb.		
A-1	0.00	4.00	457.353	0.35	89	94	1.39	1.40	3	90	90	65	49	103.8	34.03
2	4.00	8.00	460.310	0.42	89	94	1.66	1.65	4	90	90	63	46	99.1	37.28
3	8.00	12.00	463.400	0.48	88	93	1.90	1.90	4	90	90	59	42	98.6	39.82
4	12.00	16.00	466.680	0.51	89	93	2.02	2.00	5	90	90	55	44	98.7	41.04
5	16.00	20.00	470.070	0.58	89	93	2.30	2.30	5	90	90	54	42	99.1	43.77
6	20.00	24.00	473.700	0.67	90	93	2.65	2.70	6	90	91	53	48	97.2	47.04
7	24.00	28.00	477.530	0.69	92	93	2.74	2.75	7	90	91	52	42	99.0	47.74
8	28.00	32.00	481.500	0.71	92	93	2.82	2.85	8	90	91	52	41	98.8	48.43
9	32.00	36.00	485.520	0.70	92	93	2.78	2.80	8	90	91	51	42	99.5	48.09
10	36.00	40.00	489.540	0.71	92	93	2.82	2.80	8	90	90	51	41	98.6	48.43
11	40.00	44.00	493.550	0.71	92	93	2.82	2.80	8	90	90	51	39	101.5	48.43
12	44.00	48.00	497.680	0.70	93	93	2.79	2.80	8	91	90	50	41	103.2	48.09
B-1	48.00	52.00	501.856	0.90	93	93	3.58	3.60	9	94	95	57	46	96.4	54.52
2	52.00	56.00	506.270	1.00	91	93	3.96	4.00	9	93	94	53	45	96.8	57.47
3	56.00	60.00	510.920	1.00	91	93	3.96	4.00	9	92	93	56	47	99.1	57.47
4	60.00	64.00	515.680	1.05	91	94	4.15	4.20	10	92	93	56	46	98.2	58.95
5	64.00	68.00	520.510	0.95	91	94	3.75	3.80	10	92	92	56	42	99.3	56.07
6	68.00	72.00	525.160	0.91	92	94	3.60	3.60	9	92	91	53	41	98.0	54.88
7	72.00	76.00	529.660	0.64	92	94	2.54	2.60	7	92	91	51	41	101.3	46.02
8	76.00	80.00	533.570	0.56	92	94	2.23	2.20	6	91	89	49	38	100.4	43.05
9	80.00	84.00	537.200	0.50	92	94	1.99	2.00	6	90	89	49	39	101.8	40.68
10	84.00	88.00	540.680	0.49	93	94	1.97	2.00	6	91	90	49	40	101.1	40.43
11	88.00	92.00	544.120	0.49	93	94	1.95	2.00	6	93	91	49	40	100.3	40.27
12	92.00	96.00	547.520	0.50	93	94	1.99	2.00	6	94	90	49	41	99.5	40.68

Final DGM: 550.925

RESULTS	Run Time	V _m	ΔP	T _m	T _s	Max Vac	ΔH	%ISO	BWS	Y _{qa}
	96.0 min	93.518 ft ³	0.68 in. WC	91.3 °F	93.5 °F	10	2.698 in. WC	99.4	0.033	-1.0

Location: Chemours Company - Fayetteville Works Facility, NC				Start Time: 13:55		Source: VEN Carbon Bed Outlet			
Date: 9/18/21		Run 3		End Time: 15:55		Project No.: 2021-25370		Parameter: HFPO-DA	

STACK DATA (EST)		EQUIPMENT		STACK DATA (EST)		FILTER NO.		STACK DATA (FINAL)		MOIST. DATA	
Moisture:	3.0 % est.	Meter Box ID:	4	Est. Tm:	91 °F			Pb:	30.10 in. Hg	Vlc (ml)	
Barometric:	30.10 in. Hg	Y:	0.979	Est. Ts:	93 °F			Pg:	2.80 in. WC	61.4	
Static Press:	2.00 in. WC	AH @ (in.WC):	1.660	Est. AP:	0.68 in. WC			O ₂ :	20.9 %	K-FACTOR	
Stack Press:	30.25 in. Hg	Probe ID:	TC-5D	Est. Dn:	0.224 in.			CO ₂ :	0.1 %	3.978	
CO ₂ :	0.1 %	Liner Material:	glass	Target Rate:	0.75 scfm			Check Pt. Initial Final Corr.			
O ₂ :	20.9 %	Pitot ID:	P4-2	LEAK CHECK!		Pre	Mid 1	Mid 2	Mid 3	Post	Mid 1 (cf) 595.920 ##### 0.275
N ₂ /CO:	79.0 %	Pitot Cp/Type:	0.840 S-type	Leak Rate (cfm):	0.008 0.006 0.005 -- 0.006						Mid 2 (cf) --
Md:	28.85 lb/lb-mole	Nozzle ID:	G-5 glass	Vacuum (in Hg):	11 10 10 -- 12						Mid 3 (cf) --
Ms:	28.53 lb/lb-mole	Nozzle Dn (in.):	0.255	Pitot Tube:	Pass -- -- -- Pass						Mid-Point Leak Check Vol (cf): 0.275

Sample Pt.	Sample Time (minutes)		Dry Gas Meter Reading (ft ³)	Pitot Tube ΔP (in WC)	Gas Temperatures (°F)		Orifice Press. ΔH (in. WC)		Pump Vac (in. Hg)	Gas Temperatures (°F)				% ISO	Vs (fps)
	Begin	End			DGM Average	Stack	Ideal	Actual		Probe	Filter	Imp Exit	Aux		
					Amb.	Amb.				Amb.	Amb.	Amb.	Amb.		
A-1	0.00	4.00	551.261	0.39	92	93	1.56	1.55	5	90	92	65	48	101.2	35.89
2	4.00	8.00	554.320	0.42	92	93	1.67	1.70	5	90	91	62	44	97.9	37.25
3	8.00	12.00	557.390	0.46	92	94	1.83	1.85	6	91	91	58	46	98.8	39.02
4	12.00	16.00	560.630	0.54	92	94	2.15	2.20	7	91	90	54	42	100.3	42.27
5	16.00	20.00	564.190	0.59	93	94	2.35	2.35	7	91	90	52	45	98.2	44.19
6	20.00	24.00	567.840	0.70	93	94	2.78	2.80	7	94	90	51	43	90.3	48.13
7	24.00	28.00	571.490	0.71	94	94	2.83	2.85	8	95	91	51	44	99.1	48.47
8	28.00	32.00	575.530	0.70	95	94	2.79	2.80	8	97	93	52	45	99.1	48.13
9	32.00	36.00	579.550	0.72	95	94	2.87	2.90	8	97	93	53	47	99.7	48.81
10	36.00	40.00	583.650	0.72	95	94	2.87	2.90	8	98	95	55	47	99.2	48.81
11	40.00	44.00	587.730	0.73	96	95	2.91	2.90	8	98	96	56	48	100.6	49.19
12	44.00	48.00	591.900	0.74	96	95	2.95	3.00	8	99	97	57	51	96.3	49.53
B-1	48.00	52.00	595.920	0.75	94	95	2.98	3.00	10	99	97	57	46	103.9	49.86
2	52.00	56.00	600.270	0.80	94	94	3.17	3.20	10	97	96	45	43	97.0	51.54
3	56.00	60.00	604.460	1.00	95	95	3.97	4.00	10	96	95	45	43	97.9	57.58
4	60.00	64.00	609.190	1.00	95	95	3.97	4.00	10	95	94	45	43	98.1	57.58
5	64.00	68.00	613.930	1.00	95	95	3.97	4.00	10	95	94	45	44	97.9	57.58
6	68.00	72.00	618.660	0.96	95	95	3.81	3.85	10	94	93	44	43	98.2	56.41
7	72.00	76.00	623.310	0.70	95	95	2.79	2.80	9	94	92	44	43	99.7	48.17
8	76.00	80.00	627.350	0.60	95	95	2.39	2.40	8	96	92	46	43	100.6	44.60
9	80.00	84.00	631.130	0.54	96	95	2.16	2.20	7	98	92	45	44	102.2	42.31
10	84.00	88.00	634.780	0.51	96	95	2.04	2.00	7	98	93	46	43	99.6	41.12
11	88.00	92.00	638.240	0.49	96	95	1.96	2.00	7	99	94	47	45	101.3	40.30
12	92.00	96.00	641.690	0.50	96	95	2.00	2.00	7	99	94	48	47	101.7	40.71
Final DGM:			645.188												

RESULTS	Run Time	Vm	AP	Tm	Ts	Max Vac	ΔH	%ISO	BWS	Y _{qa}
		96.0 min	93.652 ft ³	0.68 in. WC	94.5 °F	94.5 °F	10	2.719 in. WC	98.7	0.032

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Inlet
Project No. 2021-25370
Parameter HFPO-DA

Run Number		Run 1	Run 2	Run 3	Average
Date		9/18/21	9/18/21	9/18/21	--
Start Time		8:02	11:14	13:55	--
Stop Time		9:46	13:09	15:55	--
Run Time, min	(θ)	84.0	96.0	96.0	92.0
INPUT DATA					
Barometric Pressure, in. Hg	(Pb)	30.09	30.09	30.09	30.09
Meter Correction Factor	(Y)	1.025	1.025	1.025	1.025
Orifice Calibration Value	($\Delta H @$)	1.720	1.720	1.720	1.720
Meter Volume, ft ³	(Vm)	72.070	86.846	82.976	80.631
Meter Temperature, °F	(Tm)	77.9	91.0	95.6	88.2
Meter Temperature, °R	(Tm)	537.6	550.6	555.3	547.8
Meter Orifice Pressure, in. WC	(ΔH)	2.471	2.625	2.434	2.510
Volume H ₂ O Collected, mL	(Vlc)	57.8	68.0	62.4	62.7
Nozzle Diameter, in	(Dn)	0.255	0.255	0.255	0.255
Area of Nozzle, ft ²	(An)	0.0004	0.0004	0.0004	0.0004
FH HFPO-DA Mass, ng	M _(HFPODA)	123,000	43,100	89,900	85,333
BH HFPO-DA Mass, ng	M _(HFPODA)	4,590,000	7,290,000	4,130,000	5,336,667
Imp HFPO-DA Mass, ng	M _(HFPODA)	322,000	466,000	293,000	360,333
Breakthrough HFPO-DA Mass, ng	M _(HFPODA)	9,030	22,900	29,000	20,310
Total HFPO-DA Mass, ng	M _(HFPODA)	5,044,030	7,822,000	4,541,900	5,802,643
ISOKINETIC DATA					
Standard Meter Volume, ft ³	(Vmstd)	73.363	86.340	81.762	80.488
Standard Water Volume, ft ³	(Vwstd)	2.726	3.207	2.942	2.958
Moisture Fraction Measured	(BWSmsd)	0.036	0.036	0.035	0.035
Moisture Fraction @ Saturation	(BWSsat)	0.043	0.053	0.059	0.052
Moisture Fraction	(BWS)	0.036	0.036	0.035	0.035
Meter Pressure, in Hg	(Pm)	30.27	30.28	30.27	30.27
Volume at Nozzle, ft ³	(Vn)	79.695	94.901	90.357	88.32
Isokinetic Sampling Rate, (%)	(I)	98.6	99.4	98.3	98.8
DGM Calibration Check Value, (+/- 5%)	(Y _{qa})	-2.6	-1.7	-2.8	-2.3
EMISSION CALCULATIONS					
HFPO-DA Concentration, ng/dscm	C _(HFPODA)	2.4E+06	3.2E+06	2.0E+06	2.5E+06
HFPO-DA Emission Rate, lb/hr	ER _(HFPODA)	1.6E-01	2.2E-01	1.3E-01	1.7E-01

Location Chemours Company - Fayetteville Works Facility, NC
Source VEN Carbon Bed Inlet
Project No. 2021-25370
Parameter HFPO-DA

Run Number		Run 1	Run 2	Run 3	Average
Date		9/18/21	9/18/21	9/18/21	--
Start Time		8:02	11:14	13:55	--
Stop Time		9:46	13:09	15:55	--
Run Time, min		84.0	96.0	96.0	92.0
VELOCITY HEAD, in. WC					
Point 1		0.45	0.52	0.38	0.45
Point 2		0.44	0.54	0.40	0.46
Point 3		0.62	0.64	0.58	0.61
Point 4		0.62	0.64	0.63	0.63
Point 5		0.63	0.65	0.63	0.64
Point 6		0.66	0.64	0.62	0.64
Point 7		0.62	0.64	0.58	0.61
Point 8		0.62	0.66	0.60	0.63
Point 9		0.67	0.66	0.62	0.65
Point 10		0.67	0.68	0.62	0.66
Point 11		0.67	0.67	0.64	0.66
Point 12		0.67	0.67	0.64	0.66
Point 13		0.45	0.65	0.55	0.55
Point 14		0.44	0.65	0.58	0.56
Point 15		0.65	0.64	0.65	0.65
Point 16		0.71	0.64	0.68	0.68
Point 17		0.72	0.74	0.72	0.73
Point 18		0.75	0.74	0.72	0.74
Point 19		0.65	0.68	0.62	0.65
Point 20		0.59	0.65	0.59	0.61
Point 21		0.60	0.64	0.58	0.61
Point 22		--	0.64	0.58	0.61
Point 23		--	0.62	0.56	0.59
Point 24		--	0.60	0.57	0.59
CALCULATED DATA					
Square Root of ΔP , (in. WC) ^{1/2}	(ΔP)	0.781	0.803	0.771	0.785
Pitot Tube Coefficient	(Cp)	0.840	0.840	0.840	0.840
Barometric Pressure, in. Hg	(Pb)	30.09	30.09	30.09	30.09
Static Pressure, in. WC	(Pg)	-6.80	-6.80	-6.80	-6.80
Stack Pressure, in. Hg	(Ps)	29.59	29.59	29.59	29.59
Stack Cross-sectional Area, ft ²	(As)	7.07	7.07	7.07	7.07
Temperature, °F	(Ts)	87.0	93.4	97.0	92.5
Temperature, °R	(Ts)	546.6	553.1	556.7	552.140
Moisture Fraction Measured	(BWSmsd)	0.036	0.036	0.035	0.035
Moisture Fraction @ Saturation	(BWSsat)	0.043	0.053	0.059	0.052
Moisture Fraction	(BWS)	0.036	0.036	0.035	0.035
O ₂ Concentration, %	(O ₂)	20.9	20.9	20.9	20.9
CO ₂ Concentration, %	(CO ₂)	0.1	0.1	0.1	0.1
Molecular Weight, lb/lb-mole (dry)	(Md)	28.85	28.85	28.85	28.85
Molecular Weight, lb/lb-mole (wet)	(Ms)	28.46	28.46	28.48	28.47
Velocity, ft/sec	(Vs)	45.2	46.7	45.0	45.7
VOLUMETRIC FLOW RATE					
At Stack Conditions, acfm	(Qa)	19,174	19,821	19,093	19,362
At Standard Conditions, dscfm	(Qs)	17,649	18,032	17,275	17,652

Location Chemours Company - Fayetteville Works Facility, NC

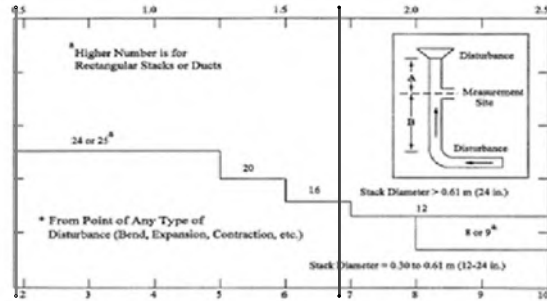
Source VEN Carbon Bed Inlet

Project No. 2021-25370

Date: 09/17/21

Stack Parameters

Duct Orientation: Horizontal
 Duct Design: Circular
 Distance from Far Wall to Outside of Port: 51.13 in
 Nipple Length: 15.13 in
 Depth of Duct: 36.00 in
 Cross Sectional Area of Duct: 7.07 ft²
 No. of Test Ports: 2
 Distance A: 5.1 ft
 Distance A Duct Diameters: 1.7 (must be > 0.5)
 Distance B: 5.7 ft
 Distance B Duct Diameters: 1.9 (must be > 2)
 Minimum Number of Traverse Points: 24
 Actual Number of Traverse Points: 24
 Number of Readings per Point: 1
 Measurer (Initial and Date): PJG 09/17/21
 Reviewer (Initial and Date): BAG 09/17/21



CIRCULAR DUCT

LOCATION OF TRAVERSE POINTS

Number of traverse points on a diameter

	2	3	4	5	6	7	8	9	10	11	12
1	14.6	--	6.7	--	4.4	--	3.2	--	2.6	--	2.1
2	85.4	--	25.0	--	14.6	--	10.5	--	8.2	--	6.7
3	--	--	75.0	--	29.6	--	19.4	--	14.6	--	11.8
4	--	--	93.3	--	70.4	--	32.3	--	22.6	--	17.7
5	--	--	--	--	85.4	--	67.7	--	34.2	--	25.0
6	--	--	--	--	95.6	--	80.6	--	65.8	--	35.6
7	--	--	--	--	--	--	89.5	--	77.4	--	64.4
8	--	--	--	--	--	--	96.8	--	85.4	--	75.0
9	--	--	--	--	--	--	--	--	91.8	--	82.3
10	--	--	--	--	--	--	--	--	97.4	--	88.2
11	--	--	--	--	--	--	--	--	--	--	93.3
12	--	--	--	--	--	--	--	--	--	--	97.9

Traverse Point	% of Diameter	Distance from inside wall	Distance from outside of port
1	2.1	1.00	16.13
2	6.7	2.41	17.54
3	11.8	4.25	19.37
4	17.7	6.37	21.50
5	25.0	9.00	24.13
6	35.6	12.82	27.94
7	64.4	23.18	38.31
8	75.0	27.00	42.13
9	82.3	29.63	44.75
10	88.2	31.75	46.88
11	93.3	33.59	48.71
12	97.9	35.00	50.13

*Percent of stack diameter from inside wall to traverse point.

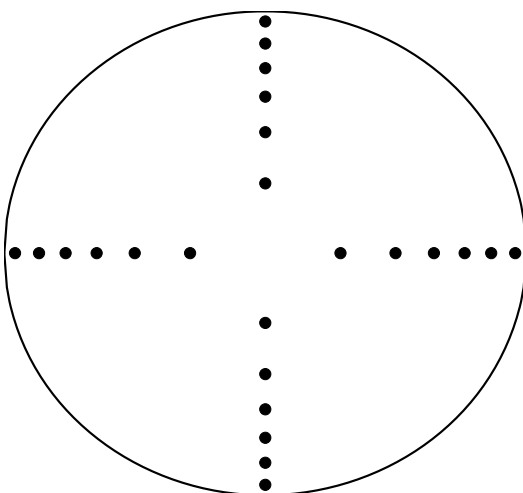
Stack Diagram

A = 5.1 ft.

B = 5.7 ft.

Depth of Duct = 36 in.

Cross Sectional Area



Downstream Disturbance

A

B

Upstream Disturbance

Location Chemours Company - Fayetteville Works Facility, NC
 Source VEN Carbon Bed Inlet
 Project No. 2021-25370
 Date 09/18/21

Sample Point	Angle (AP=0)
1	10
2	10
3	15
4	15
5	10
6	5
7	10
8	10
9	10
10	5
11	5
12	5
13	10
14	10
15	7
16	7
17	7
18	5
19	10
20	10
21	15
22	10
23	10
24	10
Average	9

Location Chemours Company - Fayetteville Works Facility, NC
 Source VEN Carbon Bed Inlet
 Project No. 2021-25370
 Parameter HFPO-DA
 Analysis Gravimetric

Run 1	Date: 9/18/21								
Impinger No.	1	2	3	4	5	6	7	8	Total
Contents	XAD Trap	Empty	H2O	H2O	H2O	Empty	XAD Trap	Silica	--
Initial Mass, g	328.4	477.6	767.8	715.8	705.6	476.4	319.0	790.8	4581.4
Final Mass, g	346.0	501.6	766.0	714.2	706.2	478.0	327.2	800.0	4639.2
Gain	17.6	24.0	-1.8	-1.6	0.6	1.6	8.2	9.2	57.8
Run 2	Date: 9/18/21								
Impinger No.	1	2	3	4	5	6	7	8	Total
Contents	XAD Trap	Empty	H2O	H2O	H2O	Empty	XAD Trap	Silica	--
Initial Mass, g	336.0	499.4	754.2	723.8	759.4	469.4	333.0	832.4	4707.6
Final Mass, g	354.8	524.2	751.6	722.4	759.4	472.8	343.2	847.2	4775.6
Gain	18.8	24.8	-2.6	-1.4	0.0	3.4	10.2	14.8	68.0
Run 3	Date: 9/18/21								
Impinger No.	1	2	3	4	5	6	7	8	Total
Contents	XAD Trap	Empty	H2O	H2O	H2O	Empty	XAD Trap	Silica	--
Initial Mass, g	334.2	531.8	752.0	677.4	742.8	499.2	330.2	774.6	4642.2
Final Mass, g	354.0	547.6	753.2	676.4	743.6	500.6	339.0	790.2	4704.6
Gain	19.8	15.8	1.2	-1.0	0.8	1.4	8.8	15.6	62.4

Location: Chemours Company - Fayetteville Works Facility, NC			Start Time: 8:02			Source: VEN Carbon Bed Inlet								
Date: 9/18/21		Run 1		VALID		End Time: 9:46		Project No.: 2021-25370		Parameter: HFPO-DA				
STACK DATA (EST)			EQUIPMENT			STACK DATA (EST)			FILTER NO.		STACK DATA (FINAL)		MOIST. DATA	
Moisture: 3.0 % est.			Meter Box ID: 15			Est. Tm: 85 °F					Pb: 30.09 in. Hg		Vlc (ml)	
Barometric: 30.10 in. Hg			Y: 1.025			Est. Ts: 81 °F					Pg: -6.80 in. WC		57.8	
Static Press: -2.80 in. WC			ΔH @ (in.WC): 1.720			Est. ΔP: 0.51 in. WC					O ₂ : 20.9 %		K-FACTOR	
Stack Press: 29.89 in. Hg			Probe ID: TC-7D			Est. Dn: 0.241 in.					CO ₂ : 0.1 %		4.120	
CO ₂ : 0.1 %			Liner Material: glass			Target Rate: 0.75 scfm					Check Pt.		Initial Final Corr.	
O ₂ : 20.9 %			Pitot ID: P4-1			LEAK CHECK!			Pre Mid 1 Mid 2 Mid 3 Post		Mid 1 (cf) 899.300 #####		0.213	
N ₂ /CO: 79.0 %			Pitot Cp/Type: 0.840 S-type			Leak Rate (cfm): 0.003 0.001 0.001 -- 0.002					Mid 2 (cf)		--	
Md: 28.85 lb/lb-mole			Nozzle ID: G-6 glass			Vacuum (in Hg): 10 15 12 -- 15					Mid 3 (cf)		--	
Ms: 28.53 lb/lb-mole			Nozzle Dn (in.): 0.255			Pitot Tube: Pass -- -- -- Pass					Mid-Point Leak Check Vol (cf):		0.213	

Sample Pt.	Sample Time (minutes)		Dry Gas Meter Reading (ft ³)	Pitot Tube ΔP (in WC)	Gas Temperatures (°F)		Orifice Press. ΔH (in. WC)		Pump Vac (in. Hg)	Gas Temperatures (°F)				% ISO	Vs (fps)
					DGM Average	Stack	Ideal Actual			Probe	Filter	Imp Exit	Aux		
	Amb.	Amb.					Amb.	Amb.		Amb.	Amb.				
	-	-			-	-	-	-		-	-				
A1	0.00	4.00	858.042	0.45	72	83	1.80	1.80	6	88	88	65	47	97.6	38.43
2	4.00	8.00	860.968	0.44	73	84	1.76	1.80	6	88	86	60	43	100.4	38.03
3	8.00	12.00	863.948	0.62	73	86	2.47	2.50	7	90	90	55	45	98.6	45.23
4	12.00	16.00	867.409	0.62	74	87	2.47	2.50	7	90	90	54	44	97.5	45.27
5	16.00	20.00	870.835	0.63	75	87	2.51	2.50	7	90	89	53	42	96.5	45.64
6	20.00	24.00	874.258	0.66	75	87	2.63	2.60	8	90	89	52	44	97.2	46.71
7	24.00	28.00	877.788	0.62	76	87	2.48	2.50	8	95	94	51	45	99.4	45.27
8	28.00	32.00	881.293	0.62	76	87	2.48	2.50	8	95	95	51	43	96.6	45.27
9	32.00	36.00	884.700	0.67	76	87	2.68	2.70	8	95	95	51	44	101.0	47.06
10	36.00	40.00	888.400	0.67	77	87	2.68	2.70	8	95	95	51	43	98.1	47.06
11	40.00	44.00	892.000	0.67	77	87	2.68	2.70	8	95	95	51	43	98.1	47.06
12	44.00	48.00	895.600	0.67	77	87	2.68	2.70	8	95	95	51	43	100.8	47.06
B1	48.00	52.00	899.300	0.45	80	87	1.82	1.80	6	96	95	59	46	97.6	38.57
2	52.00	56.00	902.258	0.44	81	87	1.78	1.80	6	97	95	53	45	97.8	38.14
3	56.00	60.00	905.196	0.65	81	88	2.62	2.60	8	95	95	52	45	93.4	46.40
4	60.00	64.00	908.598	0.71	81	88	2.86	2.90	9	95	94	52	46	94.6	48.49
5	64.00	68.00	912.193	0.72	82	88	2.90	2.90	10	95	95	52	46	95.9	48.83
6	68.00	72.00	915.871	0.75	82	88	3.02	3.00	10	95	95	52	49	100.4	49.84
7	72.00	76.00	919.799	0.65	82	88	2.62	2.60	8	95	93	53	48	101.2	46.40
8	76.00	80.00	923.490	0.59	83	88	2.39	2.40	8	95	94	53	50	102.9	44.20
9	80.00	84.00	927.073	0.60	83	88	2.43	2.40	8	95	97	54	49	92.6	44.58
Final DGM:			930.325												

RESULTS	Run Time		Vm	ΔP	Tm	Ts	Max Vac	ΔH	%ISO	BWS	Y _{ga}				
	84.0	min	72.070	ft ³	0.61	in. WC	77.9	°F	87.0	°F	10	2.471	in. WC	98.6	0.036

Location: Chemours Company - Fayetteville Works Facility, NC			Start Time: 11:14			Source: VEN Carbon Bed Inlet									
Date: 9/18/21		Run 2		VALID		End Time: 13:09		Project No.: 2021-25370		Parameter: HFPO-DA					
STACK DATA (EST)			EQUIPMENT			STACK DATA (EST)			FILTER NO.	STACK DATA (FINAL)			MOIST. DATA		
Moisture: 3.0 % est.			Meter Box ID: 15			Est. Tm: 78 °F				Pb: 30.09 in. Hg			Vlc (ml)		
Barometric: 30.10 in. Hg			Y: 1.025			Est. Ts: 87 °F				Pg: -6.80 in. WC			68.0		
Static Press: -2.80 in. WC			AH @ (in.WC): 1.720			Est. AP: 0.61 in. WC				O ₂ : 20.9 %			K-FACTOR		
Stack Press: 29.89 in. Hg			Probe ID: TC-7D			Est. Dn: 0.232 in.				CO ₂ : 0.1 %			4.02		
CO ₂ : 0.1 %			Liner Material: glass			Target Rate: 0.75 scfm				Check Pt.			Initial Final Corr.		
O ₂ : 20.9 %			Pitot ID: P4-1			LEAK CHECK!			Pre	Mid 1	Mid 2	Mid 3	Post	Mid 1 (cf) 973.191 ##### 0.205	
N ₂ /CO: 79.0 %			Pitot Cp/Type: 0.840 S-type			Leak Rate (cfm):			0.000	0.002	0.003	--	0.001	Mid 2 (cf) --	
Md: 28.85 lb/lb-mole			Nozzle ID: G-6 glass			Vacuum (in Hg):			12	15	16	--	12	Mid 3 (cf) --	
Ms: 28.53 lb/lb-mole			Nozzle Dn (in.): 0.255			Pitot Tube:			Pass	--	--	--	Pass	Mid-Point Leak Check Vol (cf): 0.205	

Sample Pt.	Sample Time (minutes)		Dry Gas Meter Reading (ft ³)	Pitot Tube ΔP (in WC)	Gas Temperatures (°F)		Orifice Press. ΔH (in. WC)		Pump Vac (in. Hg)	Gas Temperatures (°F)				% ISO	Vs (fps)
					DGM Average	Stack	Ideal Actual			Probe	Filter	Imp Exit	Aux		
	Amb.	Amb.					Amb.	Amb.		Amb.	Amb.				
	--	--					--	--		--	--				
A1	0.00	4.00	930.581	0.52	87	92	2.11	2.10	6	95	97	66	54	101.0	41.65
2	4.00	8.00	933.899	0.54	87	92	2.19	2.20	6	95	97	63	55	96.4	42.44
3	8.00	12.00	937.125	0.64	88	92	2.59	2.60	8	95	98	62	56	94.8	46.21
4	12.00	16.00	940.580	0.64	88	92	2.59	2.60	8	101	99	57	56	91.4	46.21
5	16.00	20.00	943.912	0.65	88	92	2.63	2.60	8	100	101	53	56	99.0	46.57
6	20.00	24.00	947.550	0.64	89	93	2.59	2.60	8	100	101	53	58	99.7	46.25
7	24.00	28.00	951.188	0.64	89	93	2.59	2.60	8	100	101	53	54	95.8	46.25
8	28.00	32.00	954.683	0.66	90	93	2.68	2.70	8	100	100	51	55	93.0	46.97
9	32.00	36.00	958.133	0.66	90	93	2.68	2.70	8	100	100	50	56	101.3	46.97
10	36.00	40.00	961.893	0.68	90	93	2.76	2.80	8	100	101	50	56	102.4	47.67
11	40.00	44.00	965.751	0.67	90	93	2.72	2.70	8	100	100	49	55	99.9	47.32
12	44.00	48.00	969.488	0.67	91	93	2.72	2.70	8	100	100	50	58	98.8	47.32
B1	48.00	52.00	973.191	0.65	91	94	2.64	2.60	8	101	98	53	55	102.2	46.65
2	52.00	56.00	976.961	0.65	92	94	2.64	2.60	8	102	98	51	55	101.2	46.65
3	56.00	60.00	980.698	0.64	92	94	2.60	2.60	8	100	100	51	56	94.5	46.29
4	60.00	64.00	984.162	0.64	92	94	2.60	2.60	8	99	102	51	55	98.4	46.29
5	64.00	68.00	987.770	0.74	93	94	3.01	3.00	9	100	101	52	58	99.6	49.78
6	68.00	72.00	991.699	0.74	93	95	3.01	3.00	9	100	101	53	56	98.8	49.82
7	72.00	76.00	995.593	0.68	93	95	2.76	2.80	9	99	100	52	54	97.9	47.76
8	76.00	80.00	999.293	0.65	94	94	2.65	2.70	8	100	101	53	56	101.4	46.65
9	80.00	84.00	1003.050	0.64	94	94	2.61	2.60	8	100	100	53	57	99.2	46.29
10	84.00	88.00	1006.700	0.64	94	94	2.61	2.60	8	100	99	53	55	102.8	46.29
11	88.00	92.00	1010.483	0.62	94	95	2.53	2.50	8	100	99	53	57	98.0	45.60
12	92.00	96.00	1014.031	0.60	94	94	2.45	2.50	8	100	101	53	56	101.1	44.82

Final DGM: 1017.632

RESULTS	Run Time	Vm	ΔP	Tm	Ts	Max Vac	ΔH	%ISO	BWS	Y _{qa}
		96.0 min	86.846 ft ³	0.65 in. WC	91.0 °F	93.4 °F	9	2.625 in. WC	99.4	0.036

Location: Chemours Company - Fayetteville Works Facility, NC			Start Time: 13:55		Source: VEN Carbon Bed Inlet									
Date: 9/18/21		Run 3	VALID	End Time: 15:55		Project No.: 2021-25370	Parameter: HFPO-DA							
STACK DATA (EST)		EQUIPMENT		STACK DATA (EST)		FILTER NO.	STACK DATA (FINAL)		MOIST. DATA					
Moisture: 3.0 % est.		Meter Box ID: 15		Est. Tm: 91 °F			Pb: 30.09 in. Hg		Vlc (ml)					
Barometric: 30.10 in. Hg		Y: 1.025		Est. Ts: 93 °F			Pg: -6.80 in. WC		62.4					
Static Press: -2.80 in. WC		AH @ (in.WC): 1.720		Est. AP: 0.65 in. WC			O ₂ : 20.9 %		K-FACTOR					
Stack Press: 29.89 in. Hg		Probe ID: TC-7D		Est. Dn: 0.227 in.			CO ₂ : 0.1 %		4.071					
CO ₂ : 0.1 %		Liner Material: glass		Target Rate: 0.75 scfm										
O ₂ : 20.9 %		Pitot ID: P4-1		LEAK CHECK!		Pre	Mid 1	Mid 2	Mid 3	Post	Check Pt.	Initial	Final	Corr.
N ₂ /CO: 79.0 %		Pitot Cp/Type: 0.840 S-type		Leak Rate (cfm):		0.007	0.003	0.002	--	0.002	Mid 1 (cf)	58.505	58.711	0.206
Md: 28.85 lb/lb-mole		Nozzle ID: G-6 glass		Vacuum (in Hg):		12	11	13	--	10	Mid 2 (cf)			
Ms: 28.53 lb/lb-mole		Nozzle Dn (in.): 0.255		Pitot Tube:		Pass	--	--	--	Pass	Mid 3 (cf)			
											Mid-Point Leak Check Vol (cf): 0.206			

Sample Pt.	Sample Time (minutes)		Dry Gas Meter Reading (ft ³)	Pitot Tube ΔP (in WC)	Gas Temperatures (°F)		Orifice Press. ΔH (in. WC)		Pump Vac (in. Hg)	Gas Temperatures (°F)				% ISO	Vs (fps)
					DGM Average	Stack	Ideal			Actual	Probe	Filter	Imp Exit		
	Amb.	Amb.			Amb.	Amb.	Amb.	Amb.		Amb.	Amb.				
	--	--			--	--	--	--		--	--				
A1	0.00	4.00	17.960	0.38	94	93	1.56	1.60	4	100	100	66	50	95.9	35.64
2	4.00	8.00	20.688	0.40	94	94	1.64	1.60	4	100	100	59	52	93.0	36.60
3	8.00	12.00	23.399	0.58	95	94	2.37	2.40	5	100	100	58	52	94.7	44.07
4	12.00	16.00	26.723	0.63	96	94	2.58	2.60	6	100	100	57	50	95.9	45.93
5	16.00	20.00	30.238	0.63	97	94	2.58	2.60	6	100	100	58	53	97.8	45.93
6	20.00	24.00	33.828	0.62	97	100	2.52	2.50	6	101	102	59	54	101.4	45.81
7	24.00	28.00	37.500	0.58	97	100	2.36	2.37	5	101	100	59	54	99.9	44.31
8	28.00	32.00	41.000	0.60	95	97	2.44	2.45	5	101	102	60	50	95.5	44.94
9	32.00	36.00	44.400	0.62	95	97	2.52	2.50	7	101	100	60	51	94.0	45.68
10	36.00	40.00	47.800	0.62	95	97	2.52	2.50	7	101	100	59	51	102.2	45.68
11	40.00	44.00	51.500	0.64	95	97	2.60	2.60	7	101	100	60	53	92.5	46.42
12	44.00	48.00	54.900	0.64	95	97	2.60	2.60	7	101	100	60	53	98.1	46.42
B1	48.00	52.00	58.505	0.55	95	97	2.24	2.20	6	100	105	68	57	99.2	43.03
2	52.00	56.00	61.890	0.58	95	98	2.36	2.40	6	104	103	63	51	91.3	44.23
3	56.00	60.00	65.083	0.65	96	98	2.64	2.60	7	101	100	58	49	96.7	46.82
4	60.00	64.00	68.668	0.68	96	98	2.76	2.80	8	105	103	56	51	100.9	47.89
5	64.00	68.00	72.491	0.72	96	98	2.93	2.90	8	105	104	56	54	101.3	49.28
6	68.00	72.00	76.440	0.72	96	98	2.93	2.90	8	105	104	56	56	101.6	49.28
7	72.00	76.00	80.400	0.62	96	98	2.52	2.50	7	105	103	57	53	100.3	45.73
8	76.00	80.00	84.032	0.59	96	98	2.40	2.40	7	105	104	57	54	99.3	44.61
9	80.00	84.00	87.541	0.58	96	98	2.36	2.40	7	105	104	56	53	97.0	44.23
10	84.00	88.00	90.940	0.58	96	98	2.36	2.40	7	105	104	55	53	100.5	44.23
11	88.00	92.00	94.461	0.56	96	98	2.28	2.30	6	105	104	55	53	95.9	43.46
12	92.00	96.00	97.763	0.57	96	98	2.32	2.30	6	105	104	55	52	97.2	43.84

Final DGM: 101.142

RESULTS	Run Time	Vm	ΔP	Tm	Ts	Max Vac	ΔH	%ISO	BWS	Y _{qa}
	96.0 min	82.976 ft ³	0.60 in. WC	95.6 °F	97.0 °F	8	2.434 in. WC	98.3	0.035	-2.8

Appendix C

ANALYTICAL REPORT

Job Number: 140-24649-1

Job Description: Fayetteville VEN Carbon Bed Outlet

Contract Number: LBIO-67048

For:

The Chemours Company FC, LLC

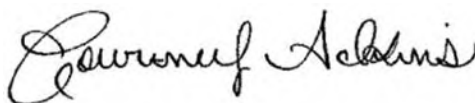
c/o AECOM

Sabre Building, Suite 300

4051 Ogletown Road

Newark, DE 19713

Attention: Michael Aucoin



Approved for release.
Courtney M Adkins
Project Manager II
10/11/2021 11:22 AM

Courtney M Adkins, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3019
courtney.adkins@eurofinset.com
10/11/2021

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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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Definitions/Glossary

Client: The Chemours Company FC, LLC
Project/Site: Fayetteville VEN Carbon Bed Outlet

Job ID: 140-24649-1

Glossary

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

Method Summary

Client: The Chemours Company FC, LLC
Project/Site: Fayetteville VEN Carbon Bed Outlet

Job ID: 140-24649-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL KNX
Dilution	Dilution and Re-fortification of Standards	None	TAL KNX
None	Leaching Procedure	TAL SOP	TAL KNX
None	Leaching Procedure for Condensate	TAL SOP	TAL KNX
None	Leaching Procedure for Filter	TAL SOP	TAL KNX
Split	Source Air Split	None	TAL KNX

Protocol References:

- EPA = US Environmental Protection Agency
- None = None
- TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: The Chemours Company FC, LLC
Project/Site: Fayetteville VEN Carbon Bed Outlet

Job ID: 140-24649-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-24649-1	P-2642,2643 VEN CARBON BED OUTLET R1 OTM-45 FH	Air	09/18/21 00:00	09/20/21 08:00
140-24649-2	P-2644,2645,2647 VEN CARBON BED OUTLET R1 OTM-45 BH	Air	09/18/21 00:00	09/20/21 08:00
140-24649-3	P-2646 VEN CARBON BED OUTLET R1 OTM-45 IMPINGERS 1,2&3 COND	Air	09/18/21 00:00	09/20/21 08:00
140-24649-4	P-2648 VEN CARBON BED OUTLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Air	09/18/21 00:00	09/20/21 08:00
140-24649-5	P-2649,2650 VEN CARBON BED OUTLET R2 OTM-45 FH	Air	09/18/21 00:00	09/20/21 08:00
140-24649-6	P-2651,2652,2654 VEN CARBON BED OUTLET R2 OTM-45 BH	Air	09/18/21 00:00	09/20/21 08:00
140-24649-7	P-2653 VEN CARBON BED OUTLET R2 OTM-45 IMPINGERS 1,2&3 COND	Air	09/18/21 00:00	09/20/21 08:00
140-24649-8	P-2655 VEN CARBON BED OUTLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Air	09/18/21 00:00	09/20/21 08:00
140-24649-9	P-2656,2657 VEN CARBON BED OUTLET R3 OTM-45 FH	Air	09/18/21 00:00	09/20/21 08:00
140-24649-10	P-2658,2659,2661 VEN CARBON BED OUTLET R3 OTM-45 BH	Air	09/18/21 00:00	09/20/21 08:00
140-24649-11	P-2660 VEN CARBON BED OUTLET R3 OTM-45 IMPINGERS 1,2&3 COND	Air	09/18/21 00:00	09/20/21 08:00
140-24649-12	P-2662 VEN CARBON BED OUTLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Air	09/18/21 00:00	09/20/21 08:00

Job Narrative 140-24649-1

Receipt

The samples were received on 9/20/2021 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.8° C.

LCMS

LC/MS/MS Sampling Train Preparation and Analysis: The sampling train components are extracted and analyzed for Per- and Polyfluorinated Alkyl Substances (PFAS) using Eurofins TestAmerica Knoxville standard operating procedures KNOX-OP-0026 and KNOX-LC-0007.

The sampling trains are prepared as four analytical fractions: The particulate filter and front half of the filter holder, nozzle and probe solvent rinses are combined for one analytical fraction. The XAD-2 resin trap and back half of the filter holder, coil condenser and connecting glassware solvent rinses are also combined as a separate analytical fraction. The condensate, impinger contents and their related glassware DI water rinses make up the third analytical fraction. The breakthrough XAD module makes up the fourth analytical fraction.

The filters and XAD components are spiked with isotope dilution internal standards and the components are extracted with methanol/ammonium hydroxide by shaking for at least 18 hours. The extracts are concentrated to 10 mL and analyzed by HPLC/MS/MS. The condensates are spiked with the isotope dilution internal standards and extracted using either Solid-Phase Extraction (SPE) or diluting the water sample for analysis. Each extract at its final volume is 80:20 methanol:water

Sample results were calculated using the following equation:

$$\text{Result, ng/sample} = (\text{on-column concentration, ng/mL}) \times (\text{nominal final volume of extract (10 mL) / 1 sample}) \times \text{DF} \times \text{SF}$$

Where:

DF = Instrument dilution factor

SF = Extraction Split Factor = (final volume of extract in the initial extraction batch / initial volume of extract in the "Split" batch)

For condensate, if less than the entire sample is extracted, the fraction of sample used replaces "1 sample"

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

Organic Prep

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

QC Association Summary

Client: The Chemours Company FC, LLC
 Project/Site: Fayetteville VEN Carbon Bed Outlet

Job ID: 140-24649-1

LCMS

Prep Batch: 54177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24649-1	P-2642,2643 VEN CARBON BED OUTLET R1 O	Total/NA	Air	None	
140-24649-5	P-2649,2650 VEN CARBON BED OUTLET R2 O	Total/NA	Air	None	
140-24649-9	P-2656,2657 VEN CARBON BED OUTLET R3 O	Total/NA	Air	None	
MB 140-54177/14-B	Method Blank	Total/NA	Air	None	
MB 140-54177/1-B	Method Blank	Total/NA	Air	None	
LCS 140-54177/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-54177/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Cleanup Batch: 54245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24649-1	P-2642,2643 VEN CARBON BED OUTLET R1 O	Total/NA	Air	Split	54177
140-24649-5	P-2649,2650 VEN CARBON BED OUTLET R2 O	Total/NA	Air	Split	54177
140-24649-9	P-2656,2657 VEN CARBON BED OUTLET R3 O	Total/NA	Air	Split	54177
MB 140-54177/14-B	Method Blank	Total/NA	Air	Split	54177
MB 140-54177/1-B	Method Blank	Total/NA	Air	Split	54177
LCS 140-54177/2-B	Lab Control Sample	Total/NA	Air	Split	54177
LCSD 140-54177/3-B	Lab Control Sample Dup	Total/NA	Air	Split	54177

Prep Batch: 54326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24649-2	P-2644,2645,2647 VEN CARBON BED OUTLET	Total/NA	Air	None	
140-24649-4	P-2648 VEN CARBON BED OUTLET R1 OTM-4:	Total/NA	Air	None	
140-24649-6	P-2651,2652,2654 VEN CARBON BED OUTLET	Total/NA	Air	None	
140-24649-8	P-2655 VEN CARBON BED OUTLET R2 OTM-4:	Total/NA	Air	None	
140-24649-10	P-2658,2659,2661 VEN CARBON BED OUTLET	Total/NA	Air	None	
140-24649-12	P-2662 VEN CARBON BED OUTLET R3 OTM-4:	Total/NA	Air	None	
MB 140-54326/1-B	Method Blank	Total/NA	Air	None	
LCS 140-54326/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-54326/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Prep Batch: 54348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24649-3	P-2646 VEN CARBON BED OUTLET R1 OTM-4:	Total/NA	Air	None	
MB 140-54348/1-B	Method Blank	Total/NA	Air	None	
LCS 140-54348/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-54348/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Cleanup Batch: 54427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24649-3	P-2646 VEN CARBON BED OUTLET R1 OTM-4:	Total/NA	Air	Split	54348
MB 140-54348/1-B	Method Blank	Total/NA	Air	Split	54348
LCS 140-54348/2-B	Lab Control Sample	Total/NA	Air	Split	54348
LCSD 140-54348/3-B	Lab Control Sample Dup	Total/NA	Air	Split	54348

Cleanup Batch: 54458

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24649-2	P-2644,2645,2647 VEN CARBON BED OUTLET	Total/NA	Air	Split	54326
140-24649-4	P-2648 VEN CARBON BED OUTLET R1 OTM-4:	Total/NA	Air	Split	54326
140-24649-6	P-2651,2652,2654 VEN CARBON BED OUTLET	Total/NA	Air	Split	54326
140-24649-8	P-2655 VEN CARBON BED OUTLET R2 OTM-4:	Total/NA	Air	Split	54326
140-24649-10	P-2658,2659,2661 VEN CARBON BED OUTLET	Total/NA	Air	Split	54326

QC Association Summary

Client: The Chemours Company FC, LLC
Project/Site: Fayetteville VEN Carbon Bed Outlet

Job ID: 140-24649-1

LCMS (Continued)

Cleanup Batch: 54458 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24649-12	P-2662 VEN CARBON BED OUTLET R3 OTM-4:	Total/NA	Air	Split	54326
MB 140-54326/1-B	Method Blank	Total/NA	Air	Split	54326
LCS 140-54326/2-B	Lab Control Sample	Total/NA	Air	Split	54326
LCSD 140-54326/3-B	Lab Control Sample Dup	Total/NA	Air	Split	54326

Analysis Batch: 54568

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24649-1	P-2642,2643 VEN CARBON BED OUTLET R1 O	Total/NA	Air	537 (modified)	54569
140-24649-3	P-2646 VEN CARBON BED OUTLET R1 OTM-4:	Total/NA	Air	537 (modified)	54427
140-24649-5	P-2649,2650 VEN CARBON BED OUTLET R2 O	Total/NA	Air	537 (modified)	54569
140-24649-9	P-2656,2657 VEN CARBON BED OUTLET R3 O	Total/NA	Air	537 (modified)	54569
MB 140-54177/14-B	Method Blank	Total/NA	Air	537 (modified)	54245
MB 140-54177/1-B	Method Blank	Total/NA	Air	537 (modified)	54245
MB 140-54348/1-B	Method Blank	Total/NA	Air	537 (modified)	54427
LCS 140-54177/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	54245
LCS 140-54348/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	54427
LCSD 140-54177/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	54245
LCSD 140-54348/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	54427

Cleanup Batch: 54569

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24649-1	P-2642,2643 VEN CARBON BED OUTLET R1 O	Total/NA	Air	Dilution	54245
140-24649-5	P-2649,2650 VEN CARBON BED OUTLET R2 O	Total/NA	Air	Dilution	54245
140-24649-9	P-2656,2657 VEN CARBON BED OUTLET R3 O	Total/NA	Air	Dilution	54245

Prep Batch: 54602

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24649-7	P-2653 VEN CARBON BED OUTLET R2 OTM-4:	Total/NA	Air	None	
140-24649-11	P-2660 VEN CARBON BED OUTLET R3 OTM-4:	Total/NA	Air	None	
MB 140-54602/1-B	Method Blank	Total/NA	Air	None	
LCS 140-54602/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-54602/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Cleanup Batch: 54614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24649-7	P-2653 VEN CARBON BED OUTLET R2 OTM-4:	Total/NA	Air	Split	54602
140-24649-11	P-2660 VEN CARBON BED OUTLET R3 OTM-4:	Total/NA	Air	Split	54602
MB 140-54602/1-B	Method Blank	Total/NA	Air	Split	54602
LCS 140-54602/2-B	Lab Control Sample	Total/NA	Air	Split	54602
LCSD 140-54602/3-B	Lab Control Sample Dup	Total/NA	Air	Split	54602

Analysis Batch: 54642

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24649-2	P-2644,2645,2647 VEN CARBON BED OUTLET	Total/NA	Air	537 (modified)	54458
140-24649-4	P-2648 VEN CARBON BED OUTLET R1 OTM-4:	Total/NA	Air	537 (modified)	54458
140-24649-6	P-2651,2652,2654 VEN CARBON BED OUTLET	Total/NA	Air	537 (modified)	54458
140-24649-7	P-2653 VEN CARBON BED OUTLET R2 OTM-4:	Total/NA	Air	537 (modified)	54614
140-24649-8	P-2655 VEN CARBON BED OUTLET R2 OTM-4:	Total/NA	Air	537 (modified)	54458
140-24649-10	P-2658,2659,2661 VEN CARBON BED OUTLET	Total/NA	Air	537 (modified)	54458
140-24649-11	P-2660 VEN CARBON BED OUTLET R3 OTM-4:	Total/NA	Air	537 (modified)	54614
140-24649-12	P-2662 VEN CARBON BED OUTLET R3 OTM-4:	Total/NA	Air	537 (modified)	54458

Eurofins TestAmerica, Knoxville

QC Association Summary

Client: The Chemours Company FC, LLC
Project/Site: Fayetteville VEN Carbon Bed Outlet

Job ID: 140-24649-1

LCMS (Continued)

Analysis Batch: 54642 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 140-54326/1-B	Method Blank	Total/NA	Air	537 (modified)	54458
MB 140-54602/1-B	Method Blank	Total/NA	Air	537 (modified)	54614
LCS 140-54326/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	54458
LCS 140-54602/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	54614
LCSD 140-54326/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	54458
LCSD 140-54602/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	54614

Client Sample Results

Client: The Chemours Company FC, LLC
Project/Site: Fayetteville VEN Carbon Bed Outlet

Job ID: 140-24649-1

Client Sample ID: P-2642,2643 VEN CARBON BED OUTLET

Lab Sample ID: 140-24649-1

R1 OTM-45 FH

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	4.67		0.100	0.0580	ug/Sample		09/24/21 09:38	10/07/21 11:55	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	95		25 - 150				09/24/21 09:38	10/07/21 11:55	1

Client Sample ID: P-2644,2645,2647 VEN CARBON BED

Lab Sample ID: 140-24649-2

OUTLET R1 OTM-45 BH

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	1.55		0.0320	0.0280	ug/Sample		09/29/21 13:10	10/08/21 16:33	20
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	117		25 - 150				09/29/21 13:10	10/08/21 16:33	20

Client Sample ID: P-2646 VEN CARBON BED OUTLET R1

Lab Sample ID: 140-24649-3

OTM-45 IMPINGERS 1,2&3 COND

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.167		0.0813	0.0134	ug/Sample		09/30/21 08:55	10/07/21 04:13	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	98		25 - 150				09/30/21 08:55	10/07/21 04:13	1

Client Sample ID: P-2648 VEN CARBON BED OUTLET R1

Lab Sample ID: 140-24649-4

OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.00710		0.00160	0.00140	ug/Sample		09/29/21 13:10	10/08/21 16:42	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	85		25 - 150				09/29/21 13:10	10/08/21 16:42	1

Client Sample Results

Client: The Chemours Company FC, LLC
 Project/Site: Fayetteville VEN Carbon Bed Outlet

Job ID: 140-24649-1

**Client Sample ID: P-2649,2650 VEN CARBON BED OUTLET
 R2 OTM-45 FH**

Lab Sample ID: 140-24649-5

Date Collected: 09/18/21 00:00
 Date Received: 09/20/21 08:00
 Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	9.39		0.0989	0.0573	ug/Sample		09/24/21 09:38	10/07/21 12:30	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	97		25 - 150				09/24/21 09:38	10/07/21 12:30	1

**Client Sample ID: P-2651,2652,2654 VEN CARBON BED
 OUTLET R2 OTM-45 BH**

Lab Sample ID: 140-24649-6

Date Collected: 09/18/21 00:00
 Date Received: 09/20/21 08:00
 Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	1.26		0.0320	0.0280	ug/Sample		09/29/21 13:10	10/08/21 16:51	20
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	104		25 - 150				09/29/21 13:10	10/08/21 16:51	20

**Client Sample ID: P-2653 VEN CARBON BED OUTLET R2
 OTM-45 IMPINGERS 1,2&3 COND**

Lab Sample ID: 140-24649-7

Date Collected: 09/18/21 00:00
 Date Received: 09/20/21 08:00
 Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.229		0.0813	0.0134	ug/Sample		10/07/21 13:59	10/08/21 13:18	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	96		25 - 150				10/07/21 13:59	10/08/21 13:18	1

**Client Sample ID: P-2655 VEN CARBON BED OUTLET R2
 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE**

Lab Sample ID: 140-24649-8

Date Collected: 09/18/21 00:00
 Date Received: 09/20/21 08:00
 Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.0118		0.00160	0.00140	ug/Sample		09/29/21 13:10	10/08/21 17:00	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	84		25 - 150				09/29/21 13:10	10/08/21 17:00	1

Client Sample Results

Client: The Chemours Company FC, LLC
 Project/Site: Fayetteville VEN Carbon Bed Outlet

Job ID: 140-24649-1

Client Sample ID: P-2656,2657 VEN CARBON BED OUTLET R3 OTM-45 FH

Lab Sample ID: 140-24649-9

Date Collected: 09/18/21 00:00
 Date Received: 09/20/21 08:00
 Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	11.0		0.100	0.0580	ug/Sample		09/24/21 09:38	10/07/21 12:39	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	90		25 - 150				09/24/21 09:38	10/07/21 12:39	1

Client Sample ID: P-2658,2659,2661 VEN CARBON BED OUTLET R3 OTM-45 BH

Lab Sample ID: 140-24649-10

Date Collected: 09/18/21 00:00
 Date Received: 09/20/21 08:00
 Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.746		0.0160	0.0140	ug/Sample		09/29/21 13:10	10/08/21 17:08	10
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	103		25 - 150				09/29/21 13:10	10/08/21 17:08	10

Client Sample ID: P-2660 VEN CARBON BED OUTLET R3 OTM-45 IMPINGERS 1,2&3 COND

Lab Sample ID: 140-24649-11

Date Collected: 09/18/21 00:00
 Date Received: 09/20/21 08:00
 Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.0836		0.0813	0.0134	ug/Sample		10/07/21 13:59	10/08/21 13:27	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	89		25 - 150				10/07/21 13:59	10/08/21 13:27	1

Client Sample ID: P-2662 VEN CARBON BED OUTLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Lab Sample ID: 140-24649-12

Date Collected: 09/18/21 00:00
 Date Received: 09/20/21 08:00
 Sample Container: Air Train

Matrix: Air

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.00401		0.00160	0.00140	ug/Sample		09/29/21 13:10	10/08/21 17:17	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	87		25 - 150				09/29/21 13:10	10/08/21 17:17	1

Default Detection Limits

Client: The Chemours Company FC, LLC
Project/Site: Fayetteville VEN Carbon Bed Outlet

Job ID: 140-24649-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Prep: None

Analyte	RL	MDL	Units
HFPO-DA	0.00100	0.000580	ug/Sample
HFPO-DA	0.00160	0.00140	ug/Sample
HFPO-DA	0.00200	0.000330	ug/Sample

Isotope Dilution Summary

Client: The Chemours Company FC, LLC
 Project/Site: Fayetteville VEN Carbon Bed Outlet

Job ID: 140-24649-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Air

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	HFPODA (25-150)
140-24649-1	P-2642,2643 VEN CARBON BE	95
140-24649-2	P-2644,2645,2647 VEN CARBON BED OUTLET R1	117
140-24649-3	OTM-45 BH P-2646 VEN CARBON BED OUTLET R1 OTM-45 IMPINGEF	98
140-24649-4	1,2&3 COND P-2648 VEN CARBON BED OUTLET R1 OTM-45	85
140-24649-5	BREAKTHROUGH XAD-2 RESI TUBE P-2649,2650 VEN CARBON BED OUTLET R2 OTM-45 FH	97
140-24649-6	P-2651,2652,2654 VEN CARBON BED OUTLET R2	104
140-24649-7	OTM-45 BH P-2653 VEN CARBON BED OUTLET R2 OTM-45 IMPINGEF	96
140-24649-8	1,2&3 COND P-2655 VEN CARBON BED OUTLET R2 OTM-45	84
140-24649-9	BREAKTHROUGH XAD-2 RESI TUBE P-2656,2657 VEN CARBON BED OUTLET R3 OTM-45 FH	90
140-24649-10	P-2658,2659,2661 VEN CARBON BED OUTLET R3	103
140-24649-11	OTM-45 BH P-2660 VEN CARBON BED OUTLET R3 OTM-45 IMPINGEF	89
140-24649-12	1,2&3 COND P-2662 VEN CARBON BED OUTLET R3 OTM-45	87
LCS 140-54177/2-B	BREAKTHROUGH XAD-2 RESI TUBE Lab Control Sample	91
LCS 140-54326/2-B	Lab Control Sample	99
LCS 140-54348/2-B	Lab Control Sample	91
LCS 140-54602/2-B	Lab Control Sample	96
LCSD 140-54177/3-B	Lab Control Sample Dup	97
LCSD 140-54326/3-B	Lab Control Sample Dup	90
LCSD 140-54348/3-B	Lab Control Sample Dup	96
LCSD 140-54602/3-B	Lab Control Sample Dup	92
MB 140-54177/14-B	Method Blank	94
MB 140-54177/1-B	Method Blank	94
MB 140-54326/1-B	Method Blank	88
MB 140-54348/1-B	Method Blank	84
MB 140-54602/1-B	Method Blank	94

Surrogate Legend

HFPODA = 13C3 HFPO-DA

QC Sample Results

Client: The Chemours Company FC, LLC
 Project/Site: Fayetteville VEN Carbon Bed Outlet

Job ID: 140-24649-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 140-54177/14-B
Matrix: Air
Analysis Batch: 54568

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54177

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00100	0.000580	ug/Sample		09/24/21 09:38	10/07/21 12:21	1
<i>Isotope Dilution</i>		<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>			<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA		94		25 - 150			09/24/21 09:38	10/07/21 12:21	1

Lab Sample ID: MB 140-54177/1-B
Matrix: Air
Analysis Batch: 54568

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54177

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00100	0.000580	ug/Sample		09/24/21 09:38	10/07/21 09:49	1
<i>Isotope Dilution</i>		<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>			<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA		94		25 - 150			09/24/21 09:38	10/07/21 09:49	1

Lab Sample ID: LCS 140-54177/2-B
Matrix: Air
Analysis Batch: 54568

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54177

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HFPO-DA	0.0200	0.01930		ug/Sample		96	60 - 140
<i>Isotope Dilution</i>		<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>			
13C3 HFPO-DA		91		25 - 150			

Lab Sample ID: LCSD 140-54177/3-B
Matrix: Air
Analysis Batch: 54568

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 54177

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HFPO-DA	0.0200	0.02071		ug/Sample		104	60 - 140	7	30
<i>Isotope Dilution</i>		<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>					
13C3 HFPO-DA		97		25 - 150					

Lab Sample ID: MB 140-54326/1-B
Matrix: Air
Analysis Batch: 54642

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54326

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00160	0.00140	ug/Sample		09/29/21 13:10	10/08/21 16:05	1
<i>Isotope Dilution</i>		<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>			<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA		88		25 - 150			09/29/21 13:10	10/08/21 16:05	1

QC Sample Results

Client: The Chemours Company FC, LLC
 Project/Site: Fayetteville VEN Carbon Bed Outlet

Job ID: 140-24649-1

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

Lab Sample ID: LCS 140-54326/2-B
Matrix: Air
Analysis Batch: 54642

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54326

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HFPO-DA	0.0200	0.01843		ug/Sample		92	60 - 140
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>LCS Qualifier</i>	<i>Limits</i>				
13C3 HFPO-DA	99		25 - 150				

Lab Sample ID: LCSD 140-54326/3-B
Matrix: Air
Analysis Batch: 54642

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 54326

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HFPO-DA	0.0200	0.01935		ug/Sample		97	60 - 140	5	30
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>LCSD Qualifier</i>	<i>Limits</i>						
13C3 HFPO-DA	90		25 - 150						

Lab Sample ID: MB 140-54348/1-B
Matrix: Air
Analysis Batch: 54568

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54348

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.0000825	ug/Sample		09/30/21 08:55	10/07/21 02:10	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>MB Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	84		25 - 150				09/30/21 08:55	10/07/21 02:10	1

Lab Sample ID: LCS 140-54348/2-B
Matrix: Air
Analysis Batch: 54568

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54348

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HFPO-DA	0.0100	0.009386		ug/Sample		94	60 - 140
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>LCS Qualifier</i>	<i>Limits</i>				
13C3 HFPO-DA	91		25 - 150				

Lab Sample ID: LCSD 140-54348/3-B
Matrix: Air
Analysis Batch: 54568

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 54348

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HFPO-DA	0.0100	0.009247		ug/Sample		92	60 - 140	1	30
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>LCSD Qualifier</i>	<i>Limits</i>						
13C3 HFPO-DA	96		25 - 150						

QC Sample Results

Client: The Chemours Company FC, LLC
 Project/Site: Fayetteville VEN Carbon Bed Outlet

Job ID: 140-24649-1

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

Lab Sample ID: MB 140-54602/1-B
Matrix: Air
Analysis Batch: 54642

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54602

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.0000825	ug/Sample		10/07/21 13:59	10/08/21 12:52	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
¹³ C3 HFPO-DA	94		25 - 150				10/07/21 13:59	10/08/21 12:52	1

Lab Sample ID: LCS 140-54602/2-B
Matrix: Air
Analysis Batch: 54642

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54602

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HFPO-DA	0.0100	0.009438		ug/Sample		94	60 - 140
Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits				
¹³ C3 HFPO-DA	96		25 - 150				

Lab Sample ID: LCSD 140-54602/3-B
Matrix: Air
Analysis Batch: 54642

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 54602

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HFPO-DA	0.0100	0.009795		ug/Sample		98	60 - 140	4	30
Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits						
¹³ C3 HFPO-DA	92		25 - 150						

Lab Chronicle

Client: The Chemours Company FC, LLC
Project/Site: Fayetteville VEN Carbon Bed Outlet

Job ID: 140-24649-1

Client Sample ID: P-2642,2643 VEN CARBON BED OUTLET

Lab Sample ID: 140-24649-1

R1 OTM-45 FH

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	78 mL	54177	09/24/21 09:38	DWS	TAL KNX
Total/NA	Cleanup	Split			39 mL	10 mL	54245	09/27/21 15:06	DWS	TAL KNX
Total/NA	Cleanup	Dilution			100 uL	10000 uL	54569	10/06/21 19:06	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			54568	10/07/21 11:55	JRC	TAL KNX

Instrument ID: LCA

Client Sample ID: P-2644,2645,2647 VEN CARBON BED OUTLET R1 OTM-45 BH

Lab Sample ID: 140-24649-2

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	54326	09/29/21 13:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	54458	10/04/21 11:10	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		20			54642	10/08/21 16:33	JRC	TAL KNX

Instrument ID: LCA

Client Sample ID: P-2646 VEN CARBON BED OUTLET R1 OTM-45 IMPINGERS 1,2&3 COND

Lab Sample ID: 140-24649-3

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			0.00615 Sample	10 mL	54348	09/30/21 08:55	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	54427	10/03/21 03:45	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			54568	10/07/21 04:13	JRC	TAL KNX

Instrument ID: LCA

Client Sample ID: P-2648 VEN CARBON BED OUTLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Lab Sample ID: 140-24649-4

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	54326	09/29/21 13:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	54458	10/04/21 11:10	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			54642	10/08/21 16:42	JRC	TAL KNX

Instrument ID: LCA

Lab Chronicle

Client: The Chemours Company FC, LLC
 Project/Site: Fayetteville VEN Carbon Bed Outlet

Job ID: 140-24649-1

Client Sample ID: P-2649,2650 VEN CARBON BED OUTLET

Lab Sample ID: 140-24649-5

R2 OTM-45 FH

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	87 mL	54177	09/24/21 09:38	DWS	TAL KNX
Total/NA	Cleanup	Split			44 mL	10 mL	54245	09/27/21 15:06	DWS	TAL KNX
Total/NA	Cleanup	Dilution			100 uL	10000 uL	54569	10/06/21 19:06	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			54568	10/07/21 12:30	JRC	TAL KNX

Instrument ID: LCA

Client Sample ID: P-2651,2652,2654 VEN CARBON BED

Lab Sample ID: 140-24649-6

OUTLET R2 OTM-45 BH

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	54326	09/29/21 13:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	54458	10/04/21 11:10	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		20			54642	10/08/21 16:51	JRC	TAL KNX

Instrument ID: LCA

Client Sample ID: P-2653 VEN CARBON BED OUTLET R2

Lab Sample ID: 140-24649-7

OTM-45 IMPINGERS 1,2&3 COND

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			0.00615 Sample	10 mL	54602	10/07/21 13:59	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	54614	10/07/21 15:40	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			54642	10/08/21 13:18	JRC	TAL KNX

Instrument ID: LCA

Client Sample ID: P-2655 VEN CARBON BED OUTLET R2

Lab Sample ID: 140-24649-8

OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	54326	09/29/21 13:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	54458	10/04/21 11:10	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			54642	10/08/21 17:00	JRC	TAL KNX

Instrument ID: LCA

Lab Chronicle

Client: The Chemours Company FC, LLC
 Project/Site: Fayetteville VEN Carbon Bed Outlet

Job ID: 140-24649-1

Client Sample ID: P-2656,2657 VEN CARBON BED OUTLET

Lab Sample ID: 140-24649-9

R3 OTM-45 FH

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	100 mL	54177	09/24/21 09:38	DWS	TAL KNX
Total/NA	Cleanup	Split			50 mL	10 mL	54245	09/27/21 15:06	DWS	TAL KNX
Total/NA	Cleanup	Dilution			100 uL	10000 uL	54569	10/06/21 19:06	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			54568	10/07/21 12:39	JRC	TAL KNX

Instrument ID: LCA

Client Sample ID: P-2658,2659,2661 VEN CARBON BED OUTLET R3 OTM-45 BH

Lab Sample ID: 140-24649-10

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	54326	09/29/21 13:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	54458	10/04/21 11:10	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		10			54642	10/08/21 17:08	JRC	TAL KNX

Instrument ID: LCA

Client Sample ID: P-2660 VEN CARBON BED OUTLET R3 OTM-45 IMPINGERS 1,2&3 COND

Lab Sample ID: 140-24649-11

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			0.00615 Sample	10 mL	54602	10/07/21 13:59	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	54614	10/07/21 15:40	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			54642	10/08/21 13:27	JRC	TAL KNX

Instrument ID: LCA

Client Sample ID: P-2662 VEN CARBON BED OUTLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Lab Sample ID: 140-24649-12

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	54326	09/29/21 13:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	54458	10/04/21 11:10	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			54642	10/08/21 17:17	JRC	TAL KNX

Instrument ID: LCA

Lab Chronicle

Client: The Chemours Company FC, LLC
 Project/Site: Fayetteville VEN Carbon Bed Outlet

Job ID: 140-24649-1

Client Sample ID: Method Blank

Lab Sample ID: MB 140-54177/14-B

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	50 mL	54177	09/24/21 09:38	DWS	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	54245	09/27/21 15:06	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			54568	10/07/21 12:21	JRC	TAL KNX
Instrument ID: LCA										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-54177/1-B

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	50 mL	54177	09/24/21 09:38	DWS	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	54245	09/27/21 15:06	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			54568	10/07/21 09:49	JRC	TAL KNX
Instrument ID: LCA										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-54326/1-B

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	54326	09/29/21 13:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	54458	10/04/21 11:10	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			54642	10/08/21 16:05	JRC	TAL KNX
Instrument ID: LCA										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-54348/1-B

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	10 mL	54348	09/30/21 08:55	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	54427	10/03/21 03:45	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			54568	10/07/21 02:10	JRC	TAL KNX
Instrument ID: LCA										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-54602/1-B

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	10 mL	54602	10/07/21 13:59	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	54614	10/07/21 15:40	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			54642	10/08/21 12:52	JRC	TAL KNX
Instrument ID: LCA										

Lab Chronicle

Client: The Chemours Company FC, LLC
 Project/Site: Fayetteville VEN Carbon Bed Outlet

Job ID: 140-24649-1

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-54177/2-B

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	50 mL	54177	09/24/21 09:38	DWS	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	54245	09/27/21 15:06	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			54568	10/07/21 09:59	JRC	TAL KNX
Instrument ID: LCA										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-54326/2-B

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	54326	09/29/21 13:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	54458	10/04/21 11:10	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			54642	10/08/21 16:16	JRC	TAL KNX
Instrument ID: LCA										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-54348/2-B

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	10 mL	54348	09/30/21 08:55	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	54427	10/03/21 03:45	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			54568	10/07/21 02:19	JRC	TAL KNX
Instrument ID: LCA										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-54602/2-B

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	10 mL	54602	10/07/21 13:59	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	54614	10/07/21 15:40	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			54642	10/08/21 13:00	JRC	TAL KNX
Instrument ID: LCA										

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-54177/3-B

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	50 mL	54177	09/24/21 09:38	DWS	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	54245	09/27/21 15:06	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			54568	10/07/21 10:09	JRC	TAL KNX
Instrument ID: LCA										

Lab Chronicle

Client: The Chemours Company FC, LLC
Project/Site: Fayetteville VEN Carbon Bed Outlet

Job ID: 140-24649-1

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-54326/3-B

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	54326	09/29/21 13:10	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	54458	10/04/21 11:10	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			54642	10/08/21 16:24	JRC	TAL KNX
Instrument ID: LCA										

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-54348/3-B

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	10 mL	54348	09/30/21 08:55	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	54427	10/03/21 03:45	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			54568	10/07/21 02:27	JRC	TAL KNX
Instrument ID: LCA										

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-54602/3-B

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	10 mL	54602	10/07/21 13:59	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	54614	10/07/21 15:40	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			54642	10/08/21 13:09	JRC	TAL KNX
Instrument ID: LCA										

Laboratory References:

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

Accreditation/Certification Summary

Client: The Chemours Company FC, LLC
 Project/Site: Fayetteville VEN Carbon Bed Outlet

Job ID: 140-24649-1

Laboratory: Eurofins TestAmerica, Knoxville

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	N/A	
ANAB	Dept. of Defense ELAP	L2311	02-13-22
ANAB	Dept. of Energy	L2311.01	02-13-22
ANAB	ISO/IEC 17025	L2311	02-13-22
Arkansas DEQ	State	88-0688	06-17-22
California	State	2423	06-30-22
Colorado	State	TN00009	02-28-22
Connecticut	State	PH-0223	09-30-21 *
Florida	NELAP	E87177	06-30-22
Georgia (DW)	State	906	12-11-22
Hawaii	State	NA	12-11-21
Kansas	NELAP	E-10349	10-31-21
Kentucky (DW)	State	90101	12-31-21
Louisiana	NELAP	83979	06-30-22
Louisiana (DW)	State	LA019	12-31-21
Maryland	State	277	03-31-22
Michigan	State	9933	12-11-22
Nevada	State	TN00009	07-31-22
New Hampshire	NELAP	299919	01-17-22
New Jersey	NELAP	TN001	06-30-22
New York	NELAP	10781	03-31-22
North Carolina (DW)	State	21705	07-31-22
North Carolina (WW/SW)	State	64	12-31-21
Ohio VAP	State	CL0059	06-02-23
Oklahoma	State	9415	08-31-22
Oregon	NELAP	TNI0189	01-01-22
Pennsylvania	NELAP	68-00576	12-31-21
Tennessee	State	02014	12-11-22
Texas	NELAP	T104704380-18-12	08-31-22
US Fish & Wildlife	US Federal Programs	058448	07-31-22
USDA	US Federal Programs	P330-19-00236	08-20-22
Utah	NELAP	TN00009	07-31-22
Virginia	NELAP	460176	09-14-22
Washington	State	C593	01-19-22
West Virginia (DW)	State	9955C	01-02-22
West Virginia DEP	State	345	04-30-22
Wisconsin	State	998044300	08-31-22

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

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1

SDG No.:

Instrument ID: LCA Analysis Batch Number: 54515

Lab Sample ID: IC 140-54515/6 Client Sample ID:

Date Analyzed: 10/05/21 22:00 Lab File ID: 006.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.82	Baseline	cochranj	10/06/21 15:49
Perfluorooctanesulfonic acid (PFOS)	4.46	Baseline	cochranj	10/06/21 15:49
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.91	Baseline	cochranj	10/06/21 15:50
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.05	Baseline	cochranj	10/06/21 15:50
Perfluorohexadecanoic acid	5.97	Baseline	cochranj	10/06/21 16:15
Perfluorooctadecanoic acid	6.24	Baseline	cochranj	10/06/21 15:51

Lab Sample ID: IC 140-54515/7 Client Sample ID:

Date Analyzed: 10/05/21 22:09 Lab File ID: 007.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanoic acid (PFHxA)	3.48	Split Peak	cochranj	10/06/21 15:57
Perfluorohexanesulfonic acid (PFHxS)	3.83	Baseline	cochranj	10/06/21 15:57
Perfluorooctanesulfonic acid (PFOS)	4.47	Baseline	cochranj	10/06/21 15:57
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.91	Baseline	cochranj	10/06/21 15:58
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.05	Baseline	cochranj	10/06/21 15:58
2-(N-ethylperfluoro-1-octanesulfona mido) ethanol	5.46	Split Peak	cochranj	10/06/21 15:58
Perfluorohexadecanoic acid	5.96	Baseline	cochranj	10/06/21 16:15

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1

SDG No.:

Instrument ID: LCA Analysis Batch Number: 54515

Lab Sample ID: IC 140-54515/8 Client Sample ID:

Date Analyzed: 10/05/21 22:18 Lab File ID: 008.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION	
		REASON	ANALYST DATE
Perfluorohexanesulfonic acid (PFHxS)	3.80	Baseline	cochranj 10/06/21 15:59
Perfluorooctanesulfonic acid (PFOS)	4.45	Baseline	cochranj 10/06/21 15:59
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.90	Baseline	cochranj 10/06/21 15:59
Perfluorohexadecanoic acid	5.95	Baseline	cochranj 10/06/21 16:14

Lab Sample ID: ICIS 140-54515/9 Client Sample ID:

Date Analyzed: 10/05/21 22:27 Lab File ID: 009.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION	
		REASON	ANALYST DATE
Perfluorohexanesulfonic acid (PFHxS)	3.82	Baseline	cochranj 10/06/21 16:00
Perfluorooctanesulfonic acid (PFOS)	4.45	Baseline	cochranj 10/06/21 16:00
Perfluorohexadecanoic acid	5.96	Baseline	cochranj 10/06/21 16:14

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1

SDG No.:

Instrument ID: LCA Analysis Batch Number: 54515

Lab Sample ID: IC 140-54515/10 Client Sample ID:

Date Analyzed: 10/05/21 22:36 Lab File ID: 010.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION	
		REASON	ANALYST
Perfluorohexanesulfonic acid (PFHxS)	3.82	Baseline	cochranj
Perfluorooctanesulfonic acid (PFOS)	4.45	Baseline	cochranj
N-methylperfluorooctanesulfonamide acetic acid (NMeFOSAA)	4.90	Baseline	cochranj
N-ethylperfluorooctanesulfonamide acetic acid (NEtFOSAA)	5.04	Baseline	cochranj
Perfluorohexadecanoic acid	5.96	Baseline	cochranj

Lab Sample ID: IC 140-54515/11 Client Sample ID:

Date Analyzed: 10/05/21 22:44 Lab File ID: 011.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION	
		REASON	ANALYST
Perfluorohexanesulfonic acid (PFHxS)	3.80	Baseline	cochranj
Perfluorooctanesulfonic acid (PFOS)	4.45	Baseline	cochranj
N-methylperfluorooctanesulfonamide acetic acid (NMeFOSAA)	4.90	Baseline	cochranj
N-ethylperfluorooctanesulfonamide acetic acid (NEtFOSAA)	5.04	Baseline	cochranj
Perfluorohexadecanoic acid	5.96	Baseline	cochranj

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1

SDG No.:

Instrument ID: LCA Analysis Batch Number: 54515

Lab Sample ID: IC 140-54515/12 Client Sample ID:

Date Analyzed: 10/05/21 22:53 Lab File ID: 012.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION	
		REASON	ANALYST DATE
Perfluorohexanesulfonic acid (PFHxS)	3.82	Baseline	cochranj 10/06/21 16:05
Perfluorooctanesulfonic acid (PFOS)	4.45	Baseline	cochranj 10/06/21 16:05

Lab Sample ID: ICV 140-54515/14 Client Sample ID:

Date Analyzed: 10/05/21 23:11 Lab File ID: 014.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION	
		REASON	ANALYST DATE
Perfluorooctanesulfonic acid (PFOS)	4.44	Baseline	cochranj 10/06/21 16:22

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1

SDG No.:

Instrument ID: ICA Analysis Batch Number: 54568

Lab Sample ID: CCVL 140-54568/6 Client Sample ID:

Date Analyzed: 10/06/21 21:10 Lab File ID: 006.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.83	Incomplete Integration	mcwhirter 1	10/07/21 02:31
Perfluorooctanesulfonic acid (PFOS)	4.47	Incomplete Integration	mcwhirter 1	10/07/21 02:31
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.92	Incomplete Integration	mcwhirter 1	10/07/21 02:32
N-ethylperfluorooctanesulfonamid oacetic acid (NEtFOSAA)	5.07	Incomplete Integration	mcwhirter 1	10/07/21 02:32

Lab Sample ID: CCVIS 140-54568/7 Client Sample ID:

Date Analyzed: 10/06/21 21:19 Lab File ID: 007.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorooctanesulfonic acid (PFOS)	4.45	Incomplete Integration	mcwhirter 1	10/07/21 02:34

Lab Sample ID: CCV 140-54568/32 Client Sample ID:

Date Analyzed: 10/07/21 01:08 Lab File ID: 032.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorooctanesulfonic acid (PFOS)	4.43	Baseline	cochranj	10/09/21 16:45
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.88	Baseline	cochranj	10/09/21 16:46

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1

SDG No.:

Instrument ID: ICA Analysis Batch Number: 54568

Lab Sample ID: CCV 140-54568/45 Client Sample ID:

Date Analyzed: 10/07/21 03:03 Lab File ID: 045.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.78	Baseline	cochranj	10/09/21 17:24
Perfluorooctanesulfonic acid (PFOS)	4.42	Baseline	cochranj	10/09/21 17:24
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.87	Baseline	cochranj	10/09/21 17:24
N-ethylperfluorooctanesulfonamid oacetic acid (NEtFOSAA)	5.01	Baseline	cochranj	10/09/21 17:25

Lab Sample ID: CCV 140-54568/58 Client Sample ID:

Date Analyzed: 10/07/21 04:57 Lab File ID: 058.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.79	Baseline	cochranj	10/09/21 17:30
Perfluorooctanesulfonic acid (PFOS)	4.42	Baseline	cochranj	10/09/21 17:31
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.87	Baseline	cochranj	10/09/21 17:31

Lab Sample ID: CCV 140-54568/83 Client Sample ID:

Date Analyzed: 10/07/21 08:37 Lab File ID: 083.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.79	Baseline	cochranj	10/09/21 17:57
Perfluorooctanesulfonic acid (PFOS)	4.42	Baseline	cochranj	10/09/21 17:57
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.87	Baseline	cochranj	10/09/21 17:57

537 (modified)

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1

SDG No.:

Instrument ID: LCA Analysis Batch Number: 54568

Lab Sample ID: CCV 140-54568/95 Client Sample ID:

Date Analyzed: 10/07/21 10:27 Lab File ID: 095.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.79	Baseline	cochranj	10/09/21 18:07
Perfluorooctanesulfonic acid (PFOS)	4.42	Baseline	cochranj	10/09/21 18:07
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.87	Baseline	cochranj	10/09/21 18:07

Lab Sample ID: CCV 140-54568/107 Client Sample ID:

Date Analyzed: 10/07/21 12:13 Lab File ID: 107.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.79	Baseline	cochranj	10/09/21 18:12
Perfluorooctanesulfonic acid (PFOS)	4.43	Baseline	cochranj	10/09/21 18:12
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.87	Baseline	cochranj	10/09/21 18:12

Lab Sample ID: MB 140-54177/14-B Client Sample ID:

Date Analyzed: 10/07/21 12:21 Lab File ID: 108.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HFPO-DA	3.55	Baseline	cochranj	10/09/21 18:14

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1

SDG No.: _____

Instrument ID: ICA Analysis Batch Number: 54568

Lab Sample ID: CCV 140-54568/115 Client Sample ID: _____

Date Analyzed: 10/07/21 13:23 Lab File ID: 115.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.79	Baseline	cochranj	10/09/21 18:17
Perfluorooctanesulfonic acid (PFOS)	4.43	Baseline	cochranj	10/09/21 18:17
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.88	Baseline	cochranj	10/09/21 18:17

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1

SDG No.:

Instrument ID: ICA Analysis Batch Number: 54642

Lab Sample ID: CCVL 140-54642/6 Client Sample ID:

Date Analyzed: 10/08/21 12:34 Lab File ID: 006.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION	
		REASON	ANALYST DATE
Perfluorohexanesulfonic acid (PFHxS)	3.80	Baseline	cochranj 10/09/21 09:59
Perfluorooctanesulfonic acid (PFOS)	4.45	Baseline	cochranj 10/09/21 10:00
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.90	Baseline	cochranj 10/09/21 10:00
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.04	Baseline	cochranj 10/09/21 10:00
NMeFOSA	5.30	Baseline	cochranj 10/09/21 10:00
Perfluorooctadecanoic acid	6.22	Baseline	cochranj 10/09/21 10:01

Lab Sample ID: CCVIS 140-54642/7 Client Sample ID:

Date Analyzed: 10/08/21 12:43

GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION	
		REASON	ANALYST DATE
Perfluorohexanesulfonic acid (PFHxS)	3.80	Baseline	cochranj 10/09/21 10:02
Perfluorooctanesulfonic acid (PFOS)	4.45	Baseline	cochranj 10/09/21 10:02
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.90	Baseline	cochranj 10/09/21 10:02
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.04	Baseline	cochranj 10/09/21 10:02

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1

SDG No.:

Instrument ID: ICA Analysis Batch Number: 54642

Lab Sample ID: CCV 140-54642/18 Client Sample ID:

Date Analyzed: 10/08/21 14:20 Lab File ID: 018.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.79	Baseline	cochranj	10/09/21 10:14
Perfluorooctanesulfonic acid (PFOS)	4.43	Baseline	cochranj	10/09/21 10:14
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.88	Baseline	cochranj	10/09/21 10:15
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.02	Baseline	cochranj	10/09/21 10:15

Lab Sample ID: CCV 140-54642/29 Client Sample ID:

Date Analyzed: 10/08/21 15:57

GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.80	Baseline	cochranj	10/09/21 10:25
Perfluorooctanesulfonic acid (PFOS)	4.43	Baseline	cochranj	10/09/21 10:26

Lab Sample ID: 140-24649-4

Client Sample ID: P-2648 VEN CARBON BED OUTLET R1 OTM-45 BREAKTHROUGH XAD-2

Date Analyzed: 10/08/21 16:42

GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HFPO-DA	3.55	Baseline	cochranj	10/09/21 10:30

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1

SDG No.: _____

Instrument ID: ICA Analysis Batch Number: 54642

Lab Sample ID: CCV 140-54642/41 Client Sample ID: _____

Date Analyzed: 10/08/21 17:44 Lab File ID: 041.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION	
		REASON	ANALYST
Perfluorohexanesulfonic acid (PFHxS)	3.79	Baseline	cochranj
Perfluorooctanesulfonic acid (PFOS)	4.43	Baseline	cochranj
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.88	Baseline	cochranj

Method PFC IDA

Fluorinated Hydrocarbons by Method
PFAS IDA

FORM II
PFAS SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Knoxville

Job No.: 140-24649-1

SDG No.: _____

Matrix: Air

Level: Low

GC Column (1): GeminiC18 3 ID: 3 (mm)

Client Sample ID	Lab Sample ID	HFPODA #
P-2642,2643 VEN CARBON BED OUTLET R1 OTM-45 FH	140-24649-1	95
P-2644,2645,2647 VEN CARBON BED OUTLET R1 OTM-45 BH	140-24649-2	117
P-2646 VEN CARBON BED OUTLET R1 OTM-45 IMPINGERS 1,2&3 COND	140-24649-3	98
P-2648 VEN CARBON BED OUTLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	140-24649-4	85
P-2649,2650 VEN CARBON BED OUTLET R2 OTM-45 FH	140-24649-5	97
P-2651,2652,2654 VEN CARBON BED OUTLET R2 OTM-45 BH	140-24649-6	104
P-2653 VEN CARBON BED OUTLET R2 OTM-45 IMPINGERS 1,2&3 COND	140-24649-7	96
P-2655 VEN CARBON BED OUTLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	140-24649-8	84
P-2656,2657 VEN CARBON BED OUTLET R3 OTM-45 FH	140-24649-9	90
P-2658,2659,2661 VEN CARBON BED OUTLET R3 OTM-45 BH	140-24649-10	103
P-2660 VEN CARBON BED OUTLET R3 OTM-45 IMPINGERS 1,2&3 COND	140-24649-11	89
P-2662 VEN CARBON BED OUTLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	140-24649-12	87
	MB 140-54177/1-B	94

HFPODA = 13C3 HFPO-DA

QC LIMITS
25-150

Column to be used to flag recovery values

FORM II 537 (modified)

FORM II
PFAS SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Knoxville

Job No.: 140-24649-1

SDG No.: _____

Matrix: Air

Level: Low

GC Column (1): GeminiC18 3 ID: 3 (mm)

Client Sample ID	Lab Sample ID	HFPODA #
	MB 140-54177/14-B	94
	MB 140-54326/1-B	88
	MB 140-54348/1-B	84
	MB 140-54602/1-B	94
	LCS 140-54177/2-B	91
	LCS 140-54326/2-B	99
	LCS 140-54348/2-B	91
	LCS 140-54602/2-B	96
	LCSD 140-54177/3-B	97
	LCSD 140-54326/3-B	90
	LCSD 140-54348/3-B	96
	LCSD 140-54602/3-B	92

HFPODA = 13C3 HFPO-DA

QC LIMITS
25-150

Column to be used to flag recovery values

FORM II 537 (modified)

FORM III
PFAS LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: _092.d
 Lab ID: LCS 140-54177/2-B Client ID: _____

COMPOUND	SPIKE ADDED (ug/Sample)	LCS CONCENTRATION (ug/Sample)	LCS % REC	QC LIMITS REC	#
HFPO-DA	0.0200	0.01930	96	60-140	
13C3 HFPO-DA	0.0250	0.02273	91	25-150	

Column to be used to flag recovery and RPD values
 FORM III 537 (modified)

FORM III
PFAS LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: _031.d
 Lab ID: LCS 140-54326/2-B Client ID: _____

COMPOUND	SPIKE ADDED (ug/Sample)	LCS CONCENTRATION (ug/Sample)	LCS % REC	QC LIMITS REC	#
HFPO-DA	0.0200	0.01843	92	60-140	
13C3 HFPO-DA	0.0250	0.02469	99	25-150	

Column to be used to flag recovery and RPD values
 FORM III 537 (modified)

FORM III
PFAS LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: _040.d
 Lab ID: LCS 140-54348/2-B Client ID: _____

COMPOUND	SPIKE ADDED (ug/Sample)	LCS CONCENTRATION (ug/Sample)	LCS % REC	QC LIMITS REC	#
HFPO-DA	0.0100	0.009386	94	60-140	
13C3 HFPO-DA	0.0125	0.01142	91	25-150	

Column to be used to flag recovery and RPD values
 FORM III 537 (modified)

FORM III
PFAS LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: _009.d
 Lab ID: LCS 140-54602/2-B Client ID: _____

COMPOUND	SPIKE ADDED (ug/Sample)	LCS CONCENTRATION (ug/Sample)	LCS % REC	QC LIMITS REC	#
HFPO-DA	0.0100	0.009438	94	60-140	
13C3 HFPO-DA	0.0125	0.01204	96	25-150	

Column to be used to flag recovery and RPD values
 FORM III 537 (modified)

FORM III
PFAS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: _093.d
 Lab ID: LCSD 140-54177/3-B Client ID: _____

COMPOUND	SPIKE ADDED (ug/Sample)	LCSD CONCENTRATION (ug/Sample)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
HFPO-DA	0.0200	0.02071	104	7	30	60-140	
13C3 HFPO-DA	0.0250	0.02414	97			25-150	

Column to be used to flag recovery and RPD values
 FORM III 537 (modified)

FORM III
 PFAS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: _032.d
 Lab ID: LCSD 140-54326/3-B Client ID: _____

COMPOUND	SPIKE ADDED (ug/Sample)	LCSD CONCENTRATION (ug/Sample)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
HFPO-DA	0.0200	0.01935	97	5	30	60-140	
13C3 HFPO-DA	0.0250	0.02242	90			25-150	

Column to be used to flag recovery and RPD values
 FORM III 537 (modified)

FORM III
PFAS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: _041.d
 Lab ID: LCSD 140-54348/3-B Client ID: _____

COMPOUND	SPIKE ADDED (ug/Sample)	LCSD CONCENTRATION (ug/Sample)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
HFPO-DA	0.0100	0.009247	92	1	30	60-140	
13C3 HFPO-DA	0.0125	0.01204	96			25-150	

Column to be used to flag recovery and RPD values
 FORM III 537 (modified)

FORM III
 PFAS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: _010.d
 Lab ID: LCSD 140-54602/3-B Client ID: _____

COMPOUND	SPIKE ADDED (ug/Sample)	LCSD CONCENTRATION (ug/Sample)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
HFPO-DA	0.0100	0.009795	98	4	30	60-140	
13C3 HFPO-DA	0.0125	0.01155	92			25-150	

Column to be used to flag recovery and RPD values
 FORM III 537 (modified)

FORM IV
PFAS METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab File ID: _091.d Lab Sample ID: MB 140-54177/1-B
 Matrix: Air Date Extracted: 09/24/2021 09:38
 Instrument ID: LCA Date Analyzed: 10/07/2021 09:49
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-54177/2-B	_092.d	10/07/2021 09:59
	LCSD 140-54177/3-B	_093.d	10/07/2021 10:09

FORM IV
PFAS METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab File ID: _108.d Lab Sample ID: MB 140-54177/14-B
 Matrix: Air Date Extracted: 09/24/2021 09:38
 Instrument ID: LCA Date Analyzed: 10/07/2021 12:21
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
P-2642,2643 VEN CARBON BED OUTLET R1 OTM-45 FH	140-24649-1	_105.d	10/07/2021 11:55
P-2649,2650 VEN CARBON BED OUTLET R2 OTM-45 FH	140-24649-5	_109.d	10/07/2021 12:30
P-2656,2657 VEN CARBON BED OUTLET R3 OTM-45 FH	140-24649-9	_110.d	10/07/2021 12:39

FORM IV
PFAS METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab File ID: _030.d Lab Sample ID: MB 140-54326/1-B
 Matrix: Air Date Extracted: 09/29/2021 13:10
 Instrument ID: LCA Date Analyzed: 10/08/2021 16:05
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-54326/2-B	_031.d	10/08/2021 16:16
	LCSD 140-54326/3-B	_032.d	10/08/2021 16:24
P-2644,2645,2647 VEN CARBON BED OUTLET R1 OTM-45 BH	140-24649-2	_033.d	10/08/2021 16:33
P-2648 VEN CARBON BED OUTLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	140-24649-4	_034.d	10/08/2021 16:42
P-2651,2652,2654 VEN CARBON BED OUTLET R2 OTM-45 BH	140-24649-6	_035.d	10/08/2021 16:51
P-2655 VEN CARBON BED OUTLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	140-24649-8	_036.d	10/08/2021 17:00
P-2658,2659,2661 VEN CARBON BED OUTLET R3 OTM-45 BH	140-24649-10	_037.d	10/08/2021 17:08
P-2662 VEN CARBON BED OUTLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	140-24649-12	_038.d	10/08/2021 17:17

FORM IV
PFAS METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab File ID: _039.d Lab Sample ID: MB 140-54348/1-B
 Matrix: Air Date Extracted: 09/30/2021 08:55
 Instrument ID: LCA Date Analyzed: 10/07/2021 02:10
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-54348/2-B	_040.d	10/07/2021 02:19
	LCSD 140-54348/3-B	_041.d	10/07/2021 02:27
P-2646 VEN CARBON BED OUTLET R1 OTM-45 IMPINGERS 1,2&3 COND	140-24649-3	_053.d	10/07/2021 04:13

FORM IV
PFAS METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab File ID: _008.d Lab Sample ID: MB 140-54602/1-B
 Matrix: Air Date Extracted: 10/07/2021 13:59
 Instrument ID: LCA Date Analyzed: 10/08/2021 12:52
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-54602/2-B	_009.d	10/08/2021 13:00
	LCSD 140-54602/3-B	_010.d	10/08/2021 13:09
P-2653 VEN CARBON BED OUTLET R2 OTM-45 IMPINGERS 1,2&3 COND	140-24649-7	_011.d	10/08/2021 13:18
P-2660 VEN CARBON BED OUTLET R3 OTM-45 IMPINGERS 1,2&3 COND	140-24649-11	_012.d	10/08/2021 13:27

FORM VIII
PFAS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Sample No.: ICIS 140-54515/9 Date Analyzed: 10/05/2021 22:27
 Instrument ID: LCA GC Column: GeminiC18 3x100 ID: 3 (mm)
 Lab File ID (Standard): 009.d Heated Purge: (Y/N) N
 Calibration ID: 3272

	13PFOA		#	RT #	#	RT #
	AREA #	RT #				
INITIAL CALIBRATION MID-POINT	5652969	4.16				
UPPER LIMIT	8479454	4.36				
LOWER LIMIT	2826485	3.96				
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-54515/14		4987828	4.14			
CCVIS 140-54568/7		5905342	4.16			
CCVIS 140-54642/7		5304670	4.16			

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
PFAS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Sample No.: CCVIS 140-54568/7 Date Analyzed: 10/06/2021 21:19
 Instrument ID: LCA GC Column: GeminiC18 3x100 ID: 3 (mm)
 Lab File ID (Standard): 007.d Heated Purge: (Y/N) N
 Calibration ID: 3272

		13PFOA					
		AREA #	RT #	#	RT #	#	RT #
12/24 HOUR STD		5905342	4.16				
UPPER LIMIT		8858013	4.36				
LOWER LIMIT		2952671	3.96				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 140-54568/32		5828723	4.13				
MB 140-54348/1-B		6504302	4.13				
LCS 140-54348/2-B		6201956	4.12				
LCSD 140-54348/3-B		5964477	4.13				
CCV 140-54568/45		5159434	4.12				
140-24649-3	P-2646 VEN CARBON BED OUTLET R1 OTM-45 IMPINGERS 1,2&3 COND	5868223	4.12				
CCV 140-54568/58		5666590	4.13				
CCV 140-54568/83		5232999	4.13				
MB 140-54177/1-B		5399146	4.13				
LCS 140-54177/2-B		5521347	4.13				
LCSD 140-54177/3-B		5169003	4.13				
CCV 140-54568/95		5328787	4.13				
140-24649-1	P-2642,2643 VEN CARBON BED OUTLET R1 OTM-45 FH	5412238	4.13				
CCV 140-54568/107		4965965	4.12				
MB 140-54177/14-B		4992247	4.13				
140-24649-5	P-2649,2650 VEN CARBON BED OUTLET R2 OTM-45 FH	5308654	4.13				
140-24649-9	P-2656,2657 VEN CARBON BED OUTLET R3 OTM-45 FH	5703622	4.13				
CCV 140-54568/115		4820381	4.14				

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
PFAS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Sample No.: CCVIS 140-54642/7 Date Analyzed: 10/08/2021 12:43
 Instrument ID: LCA GC Column: GeminiC18 3x100 ID: 3 (mm)
 Lab File ID (Standard): 007.d Heated Purge: (Y/N) N
 Calibration ID: 3272

		13PFOA					
		AREA #	RT #	#	RT #	#	RT #
12/24 HOUR STD		5304670	4.16				
UPPER LIMIT		7957005	4.36				
LOWER LIMIT		2652335	3.96				
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 140-54602/1-B		5497949	4.13				
LCS 140-54602/2-B		5678382	4.14				
LCSD 140-54602/3-B		5871567	4.14				
140-24649-7	P-2653 VEN CARBON BED OUTLET R2 OTM-45 IMPINGERS 1,2&3 COND	5491478	4.14				
140-24649-11	P-2660 VEN CARBON BED OUTLET R3 OTM-45 IMPINGERS 1,2&3 COND	5853558	4.13				
CCV 140-54642/18		4998708	4.13				
CCV 140-54642/29		5328485	4.13				
MB 140-54326/1-B		5921457	4.13				
LCS 140-54326/2-B		5242787	4.13				
LCSD 140-54326/3-B		5569768	4.13				
140-24649-2	P-2644,2645,2647 VEN CARBON BED OUTLET R1 OTM-45 BH	254888*3	4.13				
140-24649-4	P-2648 VEN CARBON BED OUTLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	5918553	4.13				
140-24649-6	P-2651,2652,2654 VEN CARBON BED OUTLET R2 OTM-45 BH	284272*3	4.13				
140-24649-8	P-2655 VEN CARBON BED OUTLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	6154772	4.13				
140-24649-10	P-2658,2659,2661 VEN CARBON BED OUTLET R3 OTM-45 BH	622700*3	4.12				
140-24649-12	P-2662 VEN CARBON BED OUTLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	6159354	4.13				
CCV 140-54642/41		4929914	4.13				

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 I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Client Sample ID: P-2642,2643 VEN CARBON Lab Sample ID: 140-24649-1
 BED OUTLET R1 OTM-45 FH
 Matrix: Air Lab File ID: _105.d
 Analysis Method: 537 (modified) Date Collected: 09/18/2021 00:00
 Extraction Method: None Date Extracted: 09/24/2021 09:38
 Sample wt/vol: 1 (Sample) Date Analyzed: 10/07/2021 11:55
 Con. Extract Vol.: 78 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: GeminiC18 3x100 ID: 3 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54568 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	4.67		0.100	0.0580

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	95		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_105.d
 Lims ID: 140-24649-A-1-C
 Client ID: P-2642,2643 VEN CARBON BED OUTLET R1 OTM-45 FH
 Sample Type: Client
 Inject. Date: 07-Oct-2021 11:55:33 ALS Bottle#: 51 Worklist Smp#: 105
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-105 140-24649-a-1-c
 Misc. Info.: Plate: 11 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 18:12:51 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675
 First Level Reviewer: cochranj Date: 09-Oct-2021 18:11:45
 Ratio Calibration: None

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA	287.00 > 169.00	3.535	3.561	-0.026	0.856	2949398	1.20	95.4	7310	
13 HFPO-DA	285.00 > 169.00	3.535	3.561	-0.026	1.000	7528501	2.34		5315	
* 22 13C2 PFOA	415.00 > 370.00	4.131	4.155	-0.024		5412238	1.26		18658	

[QC Flag Legend](#)
Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_105.d

Injection Date: 07-Oct-2021 11:55:33

Instrument ID: LCA

Lims ID: 140-24649-A-1-C

Lab Sample ID: 140-24649-1

Client ID: P-2642,2643 VEN CARBON BED OUTLET R1 OTM-45 FH

Operator ID: Cochran, Bobby

ALS Bottle#: 51

Worklist Smp#: 105

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

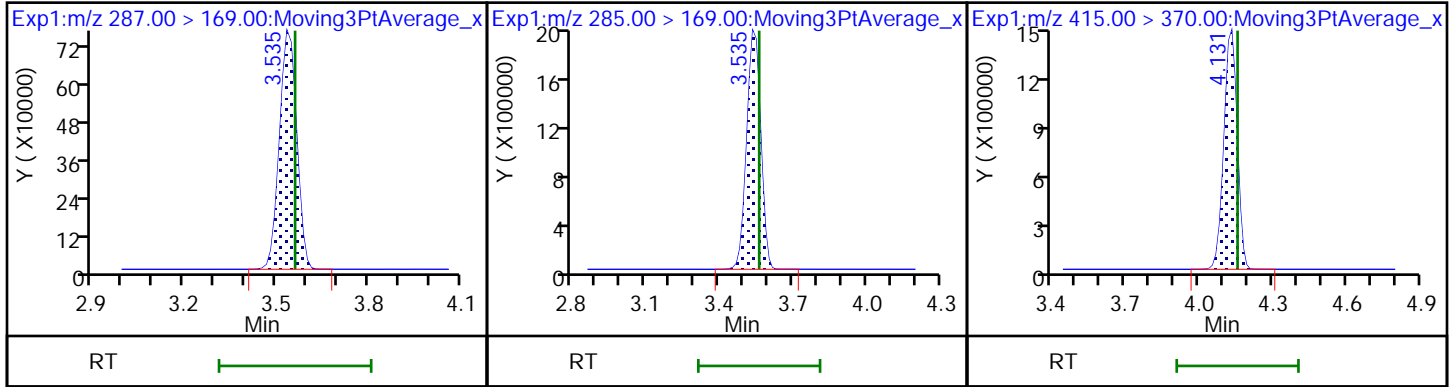
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 12 13C3 HFPO-DA

13 HFPO-DA

* 22 13C2 PFOA



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
SDG No.: _____
Client Sample ID: P-2644,2645,2647 VEN Lab Sample ID: 140-24649-2
CARBON BED OUTLET R1
OTM-45 BH
Matrix: Air Lab File ID: _033.d
Analysis Method: 537 (modified) Date Collected: 09/18/2021 00:00
Extraction Method: None Date Extracted: 09/29/2021 13:10
Sample wt/vol: 1 (Sample) Date Analyzed: 10/08/2021 16:33
Con. Extract Vol.: 360 (mL) Dilution Factor: 20
Injection Volume: 1 (uL) GC Column: GeminiC18 3x100 ID: 3 (mm)
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 54642 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	1.55		0.0320	0.0280

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	117		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_033.d
 Lims ID: 140-24649-A-2-B
 Client ID: P-2644,2645,2647 VEN CARBON BED OUTLET R1 OTM-45 BH
 Sample Type: Client
 Inject. Date: 08-Oct-2021 16:33:42 ALS Bottle#: 4 Worklist Smp#: 33
 Injection Vol: 1.0 ul Dil. Factor: 20.0000
 Sample Info: 140-0021001-033 140-24649-a-2-b
 Misc. Info.: Plate: 8 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 11:11:30 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675
 First Level Reviewer: cochranj Date: 09-Oct-2021 10:30:26
 Ratio Calibration: None

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA	287.00 > 169.00	3.545	3.561	-0.016	0.859	170587	0.0732	117	510	
13 HFPO-DA	285.00 > 169.00	3.545	3.561	-0.016	1.000	14586790	3.88		13150	
* 22 13C2 PFOA	415.00 > 370.00	4.129	4.155	-0.026		254888	0.0625		1302	

QC Flag Legend
Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_033.d

Injection Date: 08-Oct-2021 16:33:42

Instrument ID: LCA

Lims ID: 140-24649-A-2-B

Lab Sample ID: 140-24649-2

Client ID: P-2644,2645,2647 VEN CARBON BED OUTLET R1 OTM-45 BH

Operator ID: Cochran, Bobby

ALS Bottle#: 4

Worklist Smp#: 33

Injection Vol: 1.0 ul

Dil. Factor: 20.0000

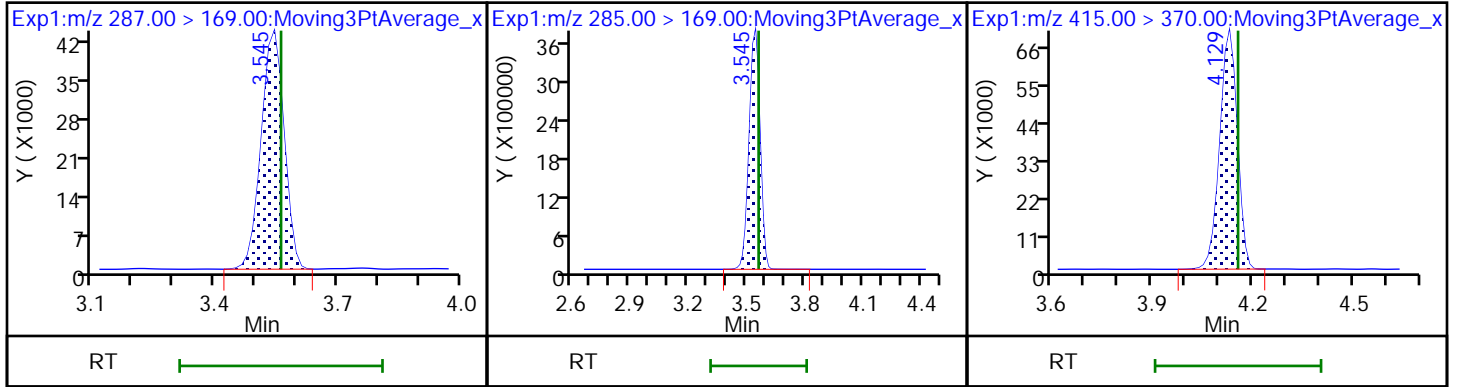
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 12 13C3 HFPO-DA

13 HFPO-DA

* 22 13C2 PFOA



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Client Sample ID: P-2646 VEN CARBON BED Lab Sample ID: 140-24649-3
 OUTLET R1 OTM-45
 IMPINGERS 1,2&3 COND
 Matrix: Air Lab File ID: _053.d
 Analysis Method: 537 (modified) Date Collected: 09/18/2021 00:00
 Extraction Method: None Date Extracted: 09/30/2021 08:55
 Sample wt/vol: 0.00615 (Sample) Date Analyzed: 10/07/2021 04:13
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: GeminiC18 3x100 ID: 3 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54568 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.167		0.0813	0.0134

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	98		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_053.d
 Lims ID: 140-24649-A-3-B
 Client ID: P-2646 VEN CARBON BED OUTLET R1 OTM-45 IMPINGERS 1,2&3 COND
 Sample Type: Client
 Inject. Date: 07-Oct-2021 04:13:41 ALS Bottle#: 53 Worklist Smp#: 53
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-053 140-24649-a-3-b
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 17:31:28 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675
 First Level Reviewer: cochranj Date: 09-Oct-2021 17:29:39
 Ratio Calibration: None

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA	287.00 > 169.00	3.535	3.561	-0.026	0.858	3288250	1.23	98.1	10127	
13 HFPO-DA	285.00 > 169.00	3.535	3.561	-0.026	1.000	394581	0.1027		339	
* 22 13C2 PFOA	415.00 > 370.00	4.119	4.155	-0.036		5868223	1.25		31073	

[QC Flag Legend](#)
Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_053.d

Injection Date: 07-Oct-2021 04:13:41

Instrument ID: LCA

Lims ID: 140-24649-A-3-B

Lab Sample ID: 140-24649-3

Client ID: P-2646 VEN CARBON BED OUTLET R1 OTM-45 IMPINGERS 1,2&3 COND

Operator ID: Cochran, Bobby

ALS Bottle#: 53

Worklist Smp#: 53

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

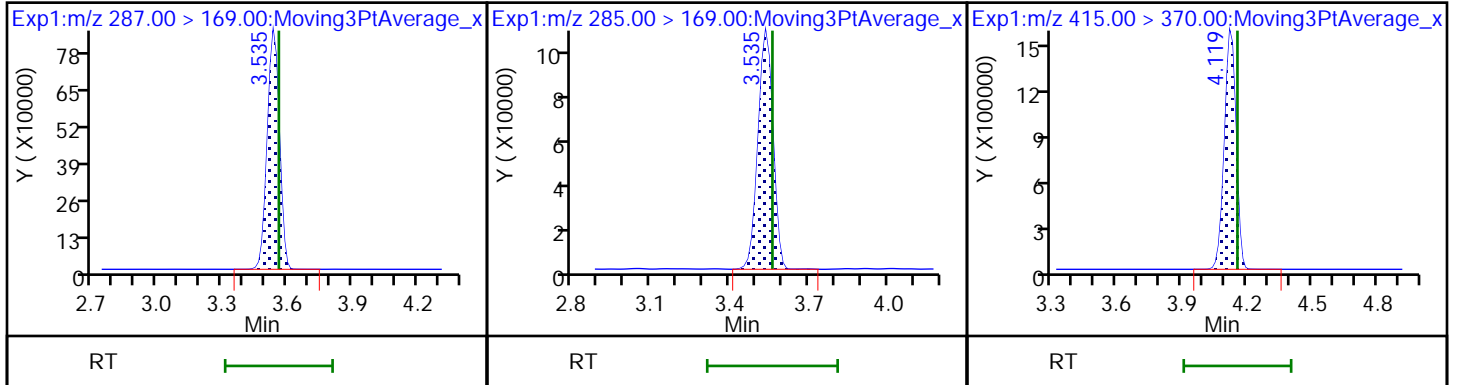
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 12 13C3 HFPO-DA

13 HFPO-DA

* 22 13C2 PFOA



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Client Sample ID: P-2648 VEN CARBON BED Lab Sample ID: 140-24649-4
 OUTLET R1 OTM-45
 BREAKTHROUGH XAD-2 RESIN
 TUBE
 Matrix: Air Lab File ID: _034.d
 Analysis Method: 537 (modified) Date Collected: 09/18/2021 00:00
 Extraction Method: None Date Extracted: 09/29/2021 13:10
 Sample wt/vol: 1 (Sample) Date Analyzed: 10/08/2021 16:42
 Con. Extract Vol.: 360 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: GeminiC18 3x100 ID: 3 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54642 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.00710		0.00160	0.00140

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	85		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_034.d
 Lims ID: 140-24649-A-4-B
 Client ID: P-2648 VEN CARBON BED OUTLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE
 Sample Type: Client
 Inject. Date: 08-Oct-2021 16:42:29 ALS Bottle#: 5 Worklist Smp#: 34
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0021001-034 140-24649-a-4-b
 Misc. Info.: Plate: 8 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 11:11:30 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 10:30:43
 Ratio Calibration: None

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA	287.00 > 169.00	3.548	3.561	-0.013	0.859	2872414	1.06	84.9	10654	
13 HFPO-DA										M
285.00 > 169.00	3.548	3.561	-0.013	1.000	1142957	0.3552		1661		M
* 22 13C2 PFOA	415.00 > 370.00	4.131	4.155	-0.024		5918553	1.25		14085	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_034.d

Injection Date: 08-Oct-2021 16:42:29

Instrument ID: LCA

Lims ID: 140-24649-A-4-B

Lab Sample ID: 140-24649-4

Client ID: P-2648 VEN CARBON BED OUTLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Operator ID: Cochran, Bobby

ALS Bottle#: 5 Worklist Smp#: 34

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

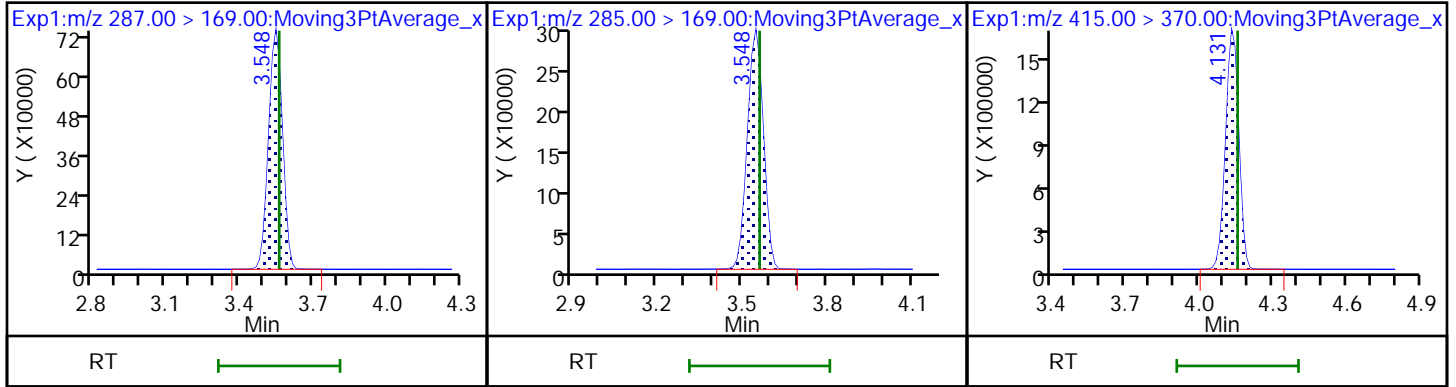
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 12 13C3 HFPO-DA

13 HFPO-DA (M)

* 22 13C2 PFOA



Eurofins TestAmerica, Knoxville
Recovery Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_034.d
 Lims ID: 140-24649-A-4-B
 Client ID: P-2648 VEN CARBON BED OUTLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE
 Sample Type: Client
 Inject. Date: 08-Oct-2021 16:42:29 ALS Bottle#: 5 Worklist Smp#: 34
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0021001-034 140-24649-a-4-b
 Misc. Info.: Plate: 8 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 11:11:30 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 10:30:43

Compound	Amount Added	Amount Recovered	% Rec.
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Eurofins TestAmerica, Knoxville

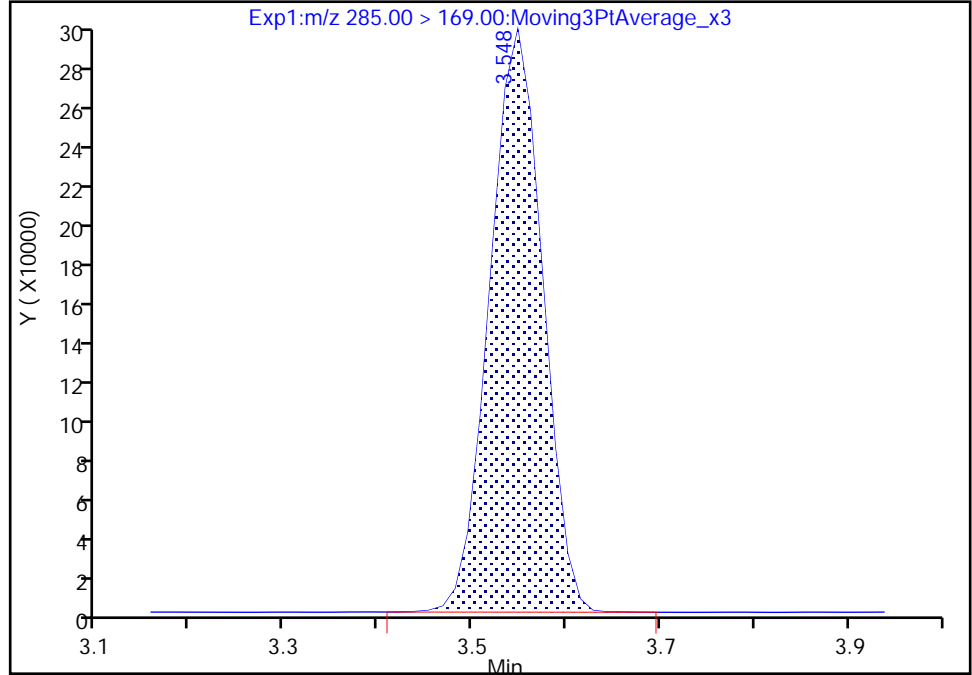
Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_034.d
Injection Date: 08-Oct-2021 16:42:29 Instrument ID: LCA
Lims ID: 140-24649-A-4-B Lab Sample ID: 140-24649-4
Client ID: P-2648 VEN CARBON BED OUTLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE
Operator ID: Cochran, Bobby ALS Bottle#: 5 Worklist Smp#: 34
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

13 HFPO-DA, CAS: 13252-13-6

Signal: 1

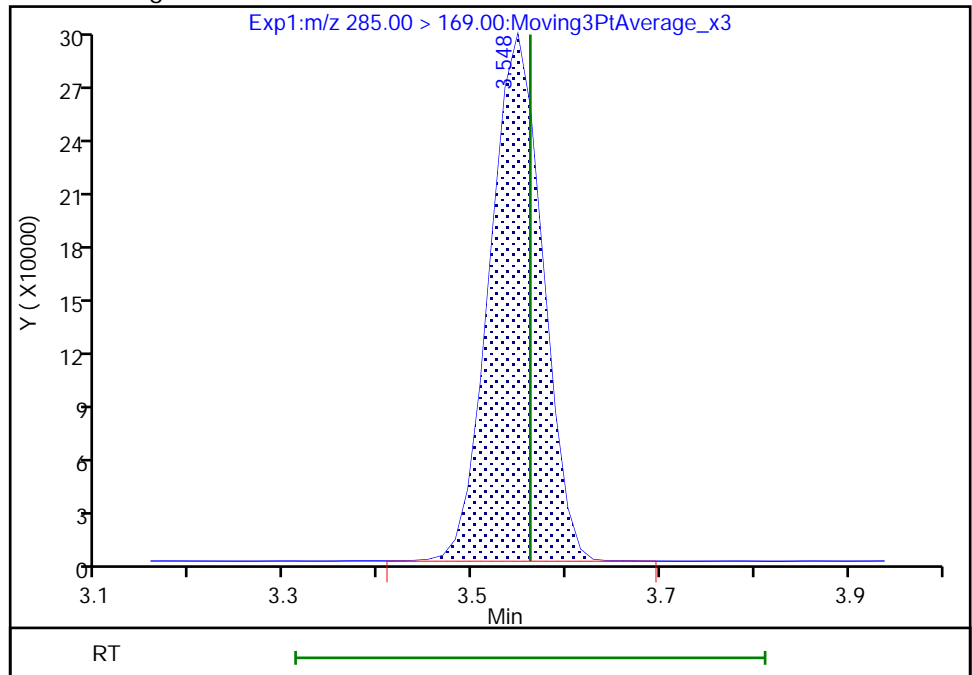
RT: 3.55
Area: 1141479
Amount: 0.354713
Amount Units: ng/ml

Processing Integration Results



RT: 3.55
Area: 1142957
Amount: 0.355180
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 10:30:37
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Client Sample ID: P-2649,2650 VEN CARBON Lab Sample ID: 140-24649-5
 BED OUTLET R2 OTM-45 FH
 Matrix: Air Lab File ID: _109.d
 Analysis Method: 537 (modified) Date Collected: 09/18/2021 00:00
 Extraction Method: None Date Extracted: 09/24/2021 09:38
 Sample wt/vol: 1(Sample) Date Analyzed: 10/07/2021 12:30
 Con. Extract Vol.: 87(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: GeminiC18 3x100 ID: 3(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54568 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	9.39		0.0989	0.0573

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	97		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_109.d
 Lims ID: 140-24649-A-5-C
 Client ID: P-2649,2650 VEN CARBON BED OUTLET R2 OTM-45 FH
 Sample Type: Client
 Inject. Date: 07-Oct-2021 12:30:43 ALS Bottle#: 1 Worklist Smp#: 109
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-109 140-24649-a-5-c
 Misc. Info.: Plate: 12 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 18:17:38 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675
 First Level Reviewer: cochranj Date: 08-Oct-2021 18:18:39
 Ratio Calibration: None

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA	287.00 > 169.00	3.535	3.561	-0.026	0.856	2929033	1.22	96.6	6841	
13 HFPO-DA	285.00 > 169.00	3.535	3.561	-0.026	1.000	15182523	4.75		10651	
* 22 13C2 PFOA	415.00 > 370.00	4.131	4.155	-0.024		5308654	1.26		16501	

[QC Flag Legend](#)
Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_109.d

Injection Date: 07-Oct-2021 12:30:43

Instrument ID: LCA

Lims ID: 140-24649-A-5-C

Lab Sample ID: 140-24649-5

Client ID: P-2649,2650 VEN CARBON BED OUTLET R2 OTM-45 FH

Operator ID: Cochran, Bobby

ALS Bottle#: 1

Worklist Smp#: 109

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

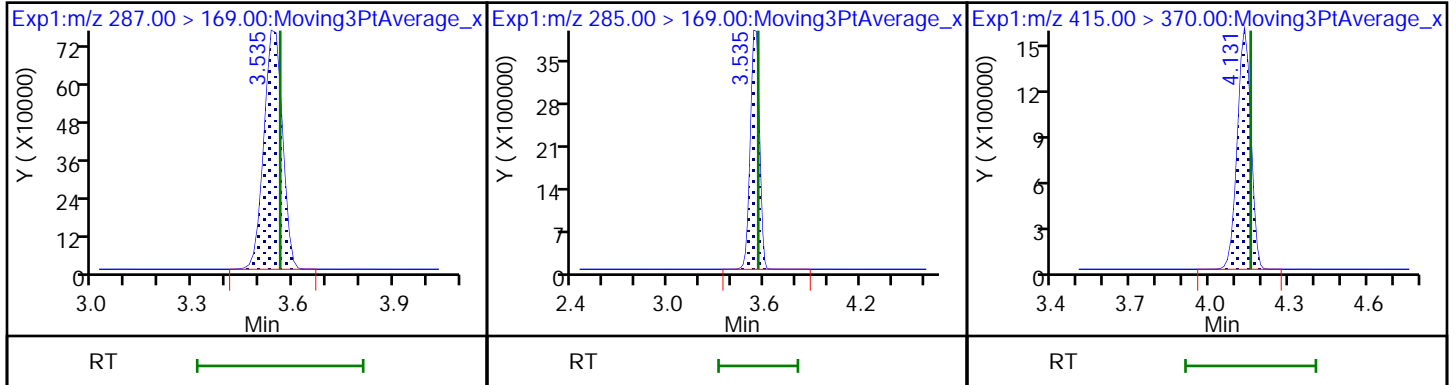
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 12 13C3 HFPO-DA

13 HFPO-DA

* 22 13C2 PFOA



Eurofins TestAmerica, Knoxville
Recovery Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_109.d
 Lims ID: 140-24649-A-5-C
 Client ID: P-2649,2650 VEN CARBON BED OUTLET R2 OTM-45 FH
 Sample Type: Client
 Inject. Date: 07-Oct-2021 12:30:43 ALS Bottle#: 1 Worklist Smp#: 109
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-109 140-24649-a-5-c
 Misc. Info.: Plate: 12 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 18:17:38 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 08-Oct-2021 18:18:39

Compound	Amount Added	Amount Recovered	% Rec.
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FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
SDG No.: _____
Client Sample ID: P-2651,2652,2654 VEN Lab Sample ID: 140-24649-6
CARBON BED OUTLET R2
OTM-45 BH
Matrix: Air Lab File ID: _035.d
Analysis Method: 537 (modified) Date Collected: 09/18/2021 00:00
Extraction Method: None Date Extracted: 09/29/2021 13:10
Sample wt/vol: 1(Sample) Date Analyzed: 10/08/2021 16:51
Con. Extract Vol.: 360(mL) Dilution Factor: 20
Injection Volume: 1(uL) GC Column: GeminiC18 3x100 ID: 3(mm)
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 54642 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	1.26		0.0320	0.0280

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	104		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_035.d
 Lims ID: 140-24649-A-6-B
 Client ID: P-2651,2652,2654 VEN CARBON BED OUTLET R2 OTM-45 BH
 Sample Type: Client
 Inject. Date: 08-Oct-2021 16:51:18 ALS Bottle#: 6 Worklist Smp#: 35
 Injection Vol: 1.0 ul Dil. Factor: 20.0000
 Sample Info: 140-0021001-035 140-24649-a-6-b
 Misc. Info.: Plate: 8 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 11:11:30 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675
 First Level Reviewer: cochranj Date: 09-Oct-2021 10:30:54
 Ratio Calibration: None

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA	287.00 > 169.00	3.535	3.561	-0.026	0.856	168686	0.0649	104	454	
13 HFPO-DA	285.00 > 169.00	3.548	3.561	-0.013	1.004	11720359	3.15		12694	
* 22 13C2 PFOA	415.00 > 370.00	4.131	4.155	-0.025		284272	0.0625		1326	

QC Flag Legend
Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_035.d

Injection Date: 08-Oct-2021 16:51:18

Instrument ID: LCA

Lims ID: 140-24649-A-6-B

Lab Sample ID: 140-24649-6

Client ID: P-2651,2652,2654 VEN CARBON BED OUTLET R2 OTM-45 BH

Operator ID: Cochran, Bobby

ALS Bottle#: 6

Worklist Smp#: 35

Injection Vol: 1.0 ul

Dil. Factor: 20.0000

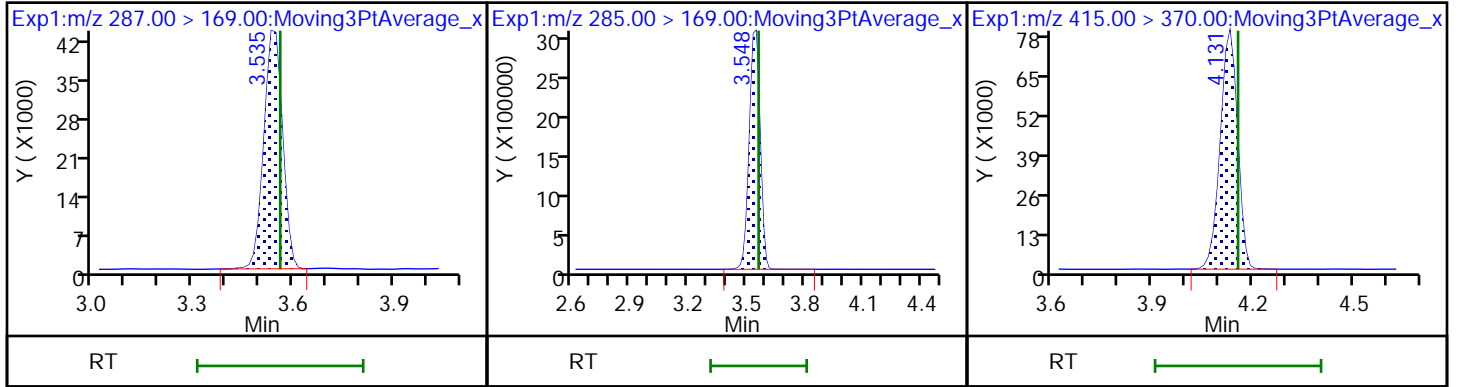
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 12 13C3 HFPO-DA

13 HFPO-DA

* 22 13C2 PFOA



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Client Sample ID: P-2653 VEN CARBON BED Lab Sample ID: 140-24649-7
 OUTLET R2 OTM-45
 IMPINGERS 1,2&3 COND
 Matrix: Air Lab File ID: _011.d
 Analysis Method: 537 (modified) Date Collected: 09/18/2021 00:00
 Extraction Method: None Date Extracted: 10/07/2021 13:59
 Sample wt/vol: 0.00615 (Sample) Date Analyzed: 10/08/2021 13:18
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: GeminiC18 3x100 ID: 3 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54642 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.229		0.0813	0.0134

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	96		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_011.d
 Lims ID: 140-24649-A-7-D
 Client ID: P-2653 VEN CARBON BED OUTLET R2 OTM-45 IMPINGERS 1,2&3 COND
 Sample Type: Client
 Inject. Date: 08-Oct-2021 13:18:36 ALS Bottle#: 11 Worklist Smp#: 11
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0021001-011 140-24649-a-7-d
 Misc. Info.: Plate: 7 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 11:11:08 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 10:12:20
 Ratio Calibration: None

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
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D 12 13C3 HFPO-DA	287.00 > 169.00	3.548	3.561	-0.013	0.856	3026367	1.21	96.5	8265	
13 HFPO-DA	285.00 > 169.00	3.548	3.561	-0.013	1.000	489537	0.1407		909	
* 22 13C2 PFOA	415.00 > 370.00	4.143	4.155	-0.012		5491478	1.25		19950	

QC Flag Legend
Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_011.d

Injection Date: 08-Oct-2021 13:18:36

Instrument ID: LCA

Lims ID: 140-24649-A-7-D

Lab Sample ID: 140-24649-7

Client ID: P-2653 VEN CARBON BED OUTLET R2 OTM-45 IMPINGERS 1,2&3 COND

Operator ID: Cochran, Bobby

ALS Bottle#: 11 Worklist Smp#: 11

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

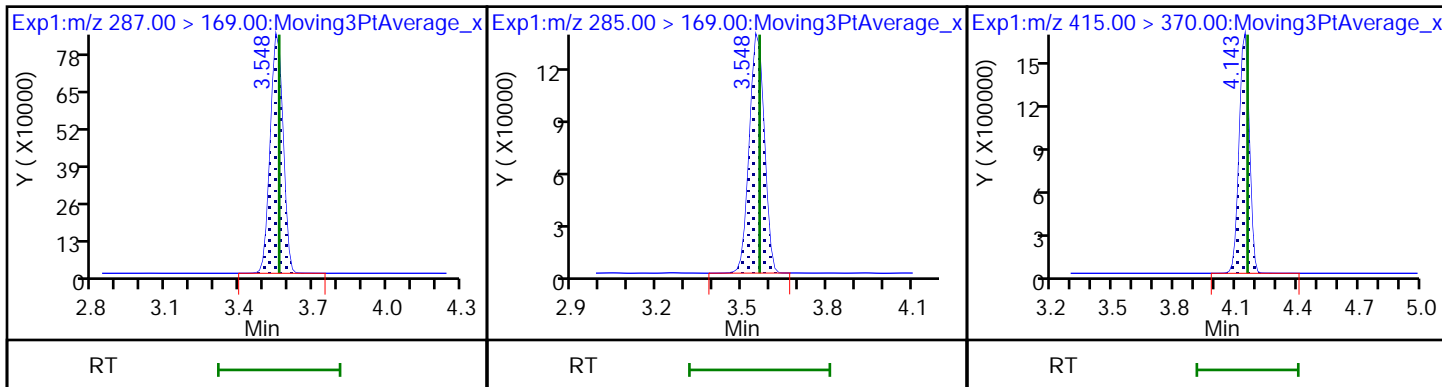
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 12 13C3 HFPO-DA

13 HFPO-DA

* 22 13C2 PFOA



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Client Sample ID: P-2655 VEN CARBON BED Lab Sample ID: 140-24649-8
 OUTLET R2 OTM-45
 BREAKTHROUGH XAD-2 RESIN
 TUBE
 Matrix: Air Lab File ID: _036.d
 Analysis Method: 537 (modified) Date Collected: 09/18/2021 00:00
 Extraction Method: None Date Extracted: 09/29/2021 13:10
 Sample wt/vol: 1 (Sample) Date Analyzed: 10/08/2021 17:00
 Con. Extract Vol.: 360 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: GeminiC18 3x100 ID: 3 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54642 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.0118		0.00160	0.00140

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	84		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_036.d
 Lims ID: 140-24649-A-8-B
 Client ID: P-2655 VEN CARBON BED OUTLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE
 Sample Type: Client
 Inject. Date: 08-Oct-2021 17:00:06 ALS Bottle#: 7 Worklist Smp#: 36
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0021001-036 140-24649-a-8-b
 Misc. Info.: Plate: 8 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 11:11:30 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 10:31:08
 Ratio Calibration: None

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
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D 12 13C3 HFPO-DA	287.00 > 169.00	3.548	3.561	-0.013	0.859	2955935	1.05	84.1	9169	
13 HFPO-DA	285.00 > 169.00	3.548	3.561	-0.013	1.000	1941799	0.5905		2117	
* 22 13C2 PFOA	415.00 > 370.00	4.130	4.155	-0.025		6154772	1.25		14001	

QC Flag Legend
Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_036.d

Injection Date: 08-Oct-2021 17:00:06

Instrument ID: LCA

Lims ID: 140-24649-A-8-B

Lab Sample ID: 140-24649-8

Client ID: P-2655 VEN CARBON BED OUTLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Operator ID: Cochran, Bobby

ALS Bottle#: 7 Worklist Smp#: 36

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

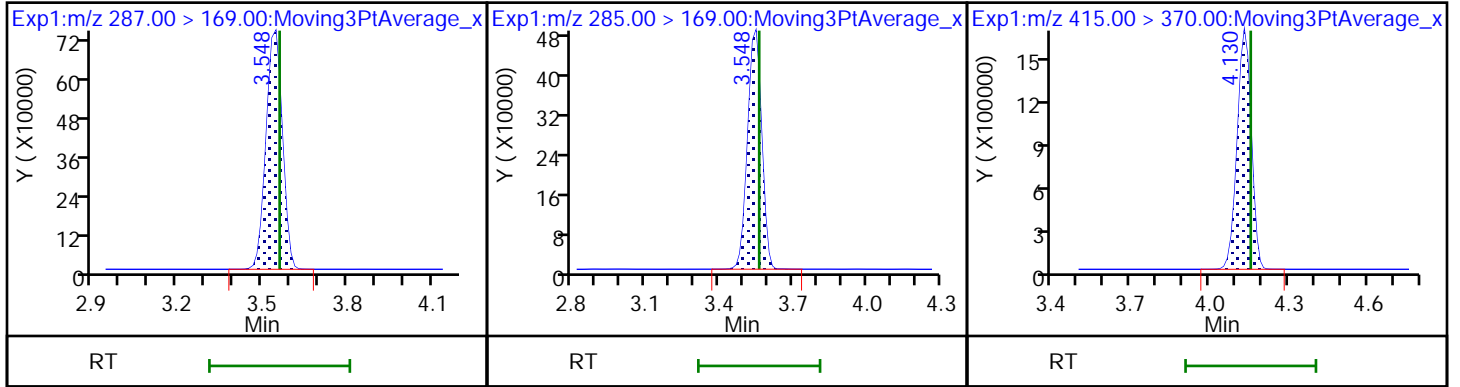
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 12 13C3 HFPO-DA

13 HFPO-DA

* 22 13C2 PFOA



Eurofins TestAmerica, Knoxville
Recovery Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_036.d
 Lims ID: 140-24649-A-8-B
 Client ID: P-2655 VEN CARBON BED OUTLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE
 Sample Type: Client
 Inject. Date: 08-Oct-2021 17:00:06 ALS Bottle#: 7 Worklist Smp#: 36
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0021001-036 140-24649-a-8-b
 Misc. Info.: Plate: 8 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 11:11:30 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 10:31:08

Compound	Amount Added	Amount Recovered	% Rec.
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FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
SDG No.: _____
Client Sample ID: P-2656,2657 VEN CARBON Lab Sample ID: 140-24649-9
BED OUTLET R3 OTM-45 FH
Matrix: Air Lab File ID: _110.d
Analysis Method: 537 (modified) Date Collected: 09/18/2021 00:00
Extraction Method: None Date Extracted: 09/24/2021 09:38
Sample wt/vol: 1(Sample) Date Analyzed: 10/07/2021 12:39
Con. Extract Vol.: 100(mL) Dilution Factor: 1
Injection Volume: 1(uL) GC Column: GeminiC18 3x100 ID: 3(mm)
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 54568 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	11.0		0.100	0.0580

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	90		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_110.d
 Lims ID: 140-24649-A-9-C
 Client ID: P-2656,2657 VEN CARBON BED OUTLET R3 OTM-45 FH
 Sample Type: Client
 Inject. Date: 07-Oct-2021 12:39:32 ALS Bottle#: 2 Worklist Smp#: 110
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-110 140-24649-a-9-c
 Misc. Info.: Plate: 12 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 18:17:38 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 18:15:37
 Ratio Calibration: None

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA	287.00 > 169.00	3.548	3.561	-0.013	0.859	2928584	1.13	89.9	6840	
13 HFPO-DA	285.00 > 169.00	3.548	3.561	-0.013	1.000	17514960	5.48		10459	
* 22 13C2 PFOA	415.00 > 370.00	4.131	4.155	-0.024		5703622	1.26		20718	

QC Flag Legend
Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_110.d

Injection Date: 07-Oct-2021 12:39:32

Instrument ID: LCA

Lims ID: 140-24649-A-9-C

Lab Sample ID: 140-24649-9

Client ID: P-2656,2657 VEN CARBON BED OUTLET R3 OTM-45 FH

Operator ID: Cochran, Bobby

ALS Bottle#: 2

Worklist Smp#: 110

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

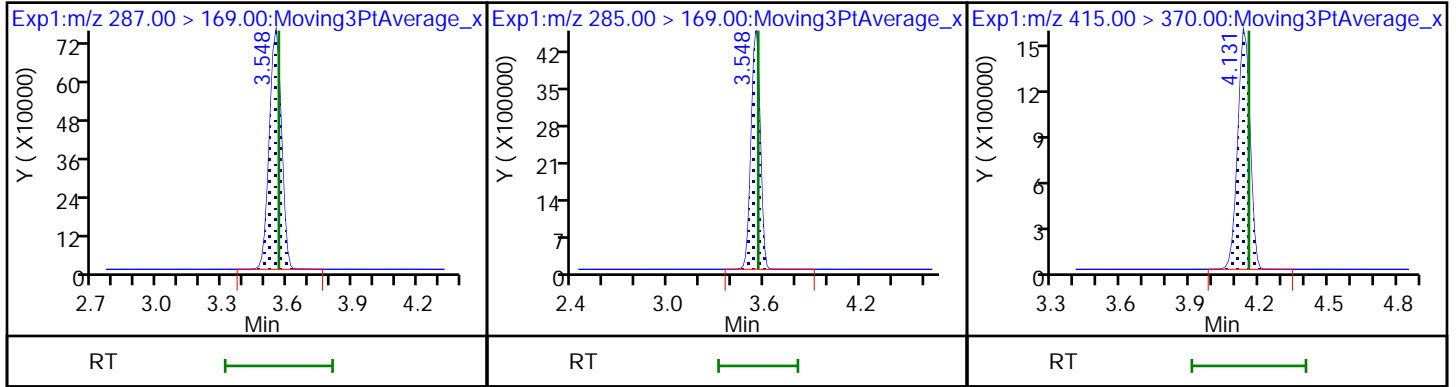
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 12 13C3 HFPO-DA

13 HFPO-DA

* 22 13C2 PFOA



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Client Sample ID: P-2658,2659,2661 VEN Lab Sample ID: 140-24649-10
 CARBON BED OUTLET R3
 OTM-45 BH
 Matrix: Air Lab File ID: _037.d
 Analysis Method: 537 (modified) Date Collected: 09/18/2021 00:00
 Extraction Method: None Date Extracted: 09/29/2021 13:10
 Sample wt/vol: 1(Sample) Date Analyzed: 10/08/2021 17:08
 Con. Extract Vol.: 360(mL) Dilution Factor: 10
 Injection Volume: 1(uL) GC Column: GeminiC18 3x100 ID: 3(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54642 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.746		0.0160	0.0140

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	103		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_037.d
 Lims ID: 140-24649-A-10-B
 Client ID: P-2658,2659,2661 VEN CARBON BED OUTLET R3 OTM-45 BH
 Sample Type: Client
 Inject. Date: 08-Oct-2021 17:08:54 ALS Bottle#: 8 Worklist Smp#: 37
 Injection Vol: 1.0 ul Dil. Factor: 10.0000
 Sample Info: 140-0021001-037 140-24649-a-10-b
 Misc. Info.: Plate: 8 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 11:11:30 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675
 First Level Reviewer: cochranj Date: 09-Oct-2021 10:31:19
 Ratio Calibration: None

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA	287.00 > 169.00	3.535	3.561	-0.026	0.858	365006	0.1282	103	1233	
13 HFPO-DA	285.00 > 169.00	3.535	3.561	-0.026	1.000	15002521	3.73		13202	
* 22 13C2 PFOA	415.00 > 370.00	4.118	4.155	-0.037		622700	0.1250		3368	

QC Flag Legend
Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_037.d

Injection Date: 08-Oct-2021 17:08:54

Instrument ID: LCA

Lims ID: 140-24649-A-10-B

Lab Sample ID: 140-24649-10

Client ID: P-2658,2659,2661 VEN CARBON BED OUTLET R3 OTM-45 BH

Operator ID: Cochran, Bobby

ALS Bottle#: 8

Worklist Smp#: 37

Injection Vol: 1.0 ul

Dil. Factor: 10.0000

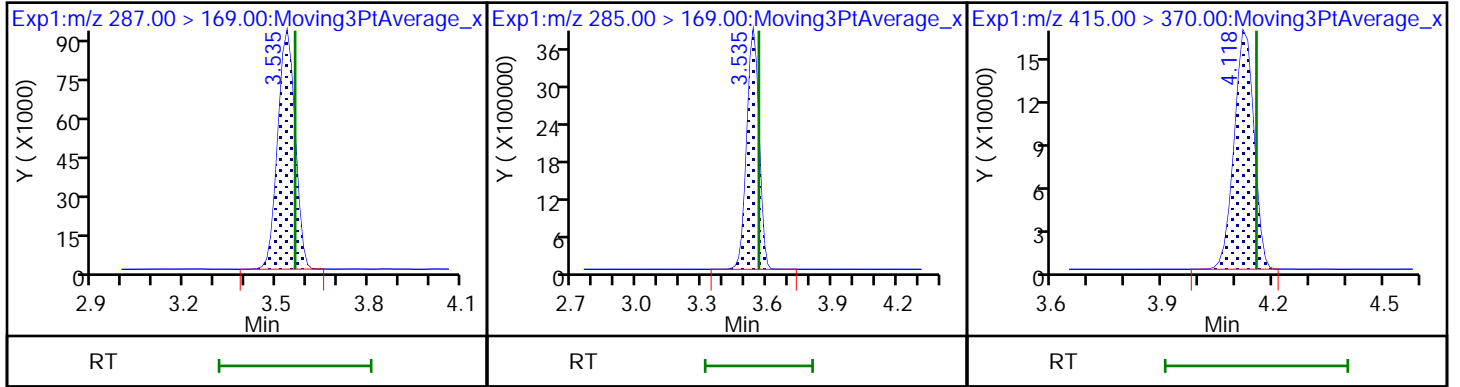
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 12 13C3 HFPO-DA

13 HFPO-DA

* 22 13C2 PFOA



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Client Sample ID: P-2660 VEN CARBON BED Lab Sample ID: 140-24649-11
 OUTLET R3 OTM-45
 IMPINGERS 1,2&3 COND
 Matrix: Air Lab File ID: 012.d
 Analysis Method: 537 (modified) Date Collected: 09/18/2021 00:00
 Extraction Method: None Date Extracted: 10/07/2021 13:59
 Sample wt/vol: 0.00615 (Sample) Date Analyzed: 10/08/2021 13:27
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: GeminiC18 3x100 ID: 3 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54642 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.0836		0.0813	0.0134

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	89		25-150

Eurofins TestAmerica, Knoxville
 Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_012.d
 Lims ID: 140-24649-A-11-D
 Client ID: P-2660 VEN CARBON BED OUTLET R3 OTM-45 IMPINGERS 1,2&3 COND
 Sample Type: Client
 Inject. Date: 08-Oct-2021 13:27:24 ALS Bottle#: 12 Worklist Smp#: 12
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0021001-012 140-24649-a-11-d
 Misc. Info.: Plate: 7 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 11:11:08 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675
 First Level Reviewer: cochranj Date: 09-Oct-2021 10:12:34
 Ratio Calibration: None

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA	287.00 > 169.00	3.548	3.561	-0.013	0.859	2966779	1.11	88.7	9686	
13 HFPO-DA	285.00 > 169.00	3.548	3.561	-0.013	1.000	188533	0.0514		262	
* 22 13C2 PFOA	415.00 > 370.00	4.131	4.155	-0.024		5853558	1.25		20295	

QC Flag Legend
 Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_012.d

Injection Date: 08-Oct-2021 13:27:24

Instrument ID: LCA

Lims ID: 140-24649-A-11-D

Lab Sample ID: 140-24649-11

Client ID: P-2660 VEN CARBON BED OUTLET R3 OTM-45 IMPINGERS 1,2&3 COND

Operator ID: Cochran, Bobby

ALS Bottle#: 12 Worklist Smp#: 12

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

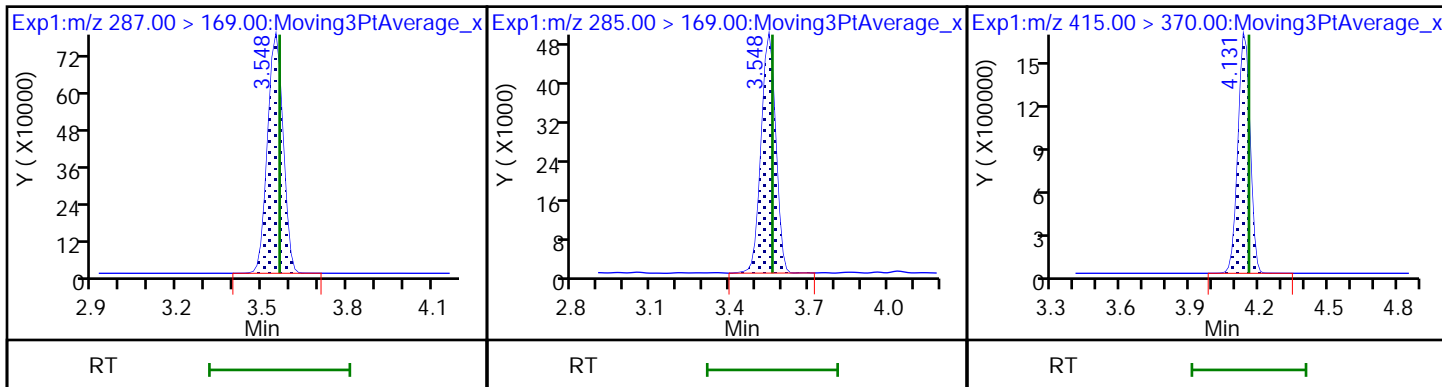
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 12 13C3 HFPO-DA

13 HFPO-DA

* 22 13C2 PFOA



Eurofins TestAmerica, Knoxville
Recovery Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_012.d
 Lims ID: 140-24649-A-11-D
 Client ID: P-2660 VEN CARBON BED OUTLET R3 OTM-45 IMPINGERS 1,2&3 COND
 Sample Type: Client
 Inject. Date: 08-Oct-2021 13:27:24 ALS Bottle#: 12 Worklist Smp#: 12
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0021001-012 140-24649-a-11-d
 Misc. Info.: Plate: 7 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 11:11:08 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 10:12:34

Compound	Amount Added	Amount Recovered	% Rec.
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FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Client Sample ID: P-2662 VEN CARBON BED Lab Sample ID: 140-24649-12
 OUTLET R3 OTM-45
 BREAKTHROUGH XAD-2 RESIN
 TUBE
 Matrix: Air Lab File ID: _038.d
 Analysis Method: 537 (modified) Date Collected: 09/18/2021 00:00
 Extraction Method: None Date Extracted: 09/29/2021 13:10
 Sample wt/vol: 1 (Sample) Date Analyzed: 10/08/2021 17:17
 Con. Extract Vol.: 360 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: GeminiC18 3x100 ID: 3 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54642 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.00401		0.00160	0.00140

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	87		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_038.d
 Lims ID: 140-24649-A-12-B
 Client ID: P-2662 VEN CARBON BED OUTLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE
 Sample Type: Client
 Inject. Date: 08-Oct-2021 17:17:40 ALS Bottle#: 9 Worklist Smp#: 38
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0021001-038 140-24649-a-12-b
 Misc. Info.: Plate: 8 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 11:11:30 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 10:31:30
 Ratio Calibration: None

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
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D 12 13C3 HFPO-DA	287.00 > 169.00	3.548	3.561	-0.013	0.859	3079164	1.09	87.5	6875	
13 HFPO-DA	285.00 > 169.00	3.548	3.561	-0.013	1.000	701153	0.2006		911	
* 22 13C2 PFOA	415.00 > 370.00	4.130	4.155	-0.025		6159354	1.25		13106	

QC Flag Legend
Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_038.d

Injection Date: 08-Oct-2021 17:17:40

Instrument ID: LCA

Lims ID: 140-24649-A-12-B

Lab Sample ID: 140-24649-12

Client ID: P-2662 VEN CARBON BED OUTLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Operator ID: Cochran, Bobby

ALS Bottle#: 9 Worklist Smp#: 38

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

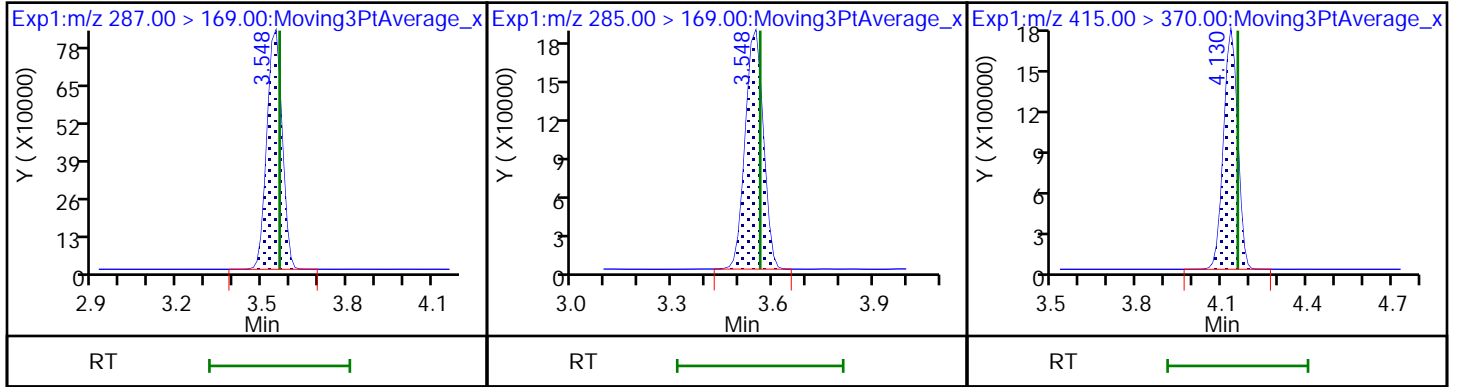
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 12 13C3 HFPO-DA

13 HFPO-DA

* 22 13C2 PFOA



Eurofins TestAmerica, Knoxville
Recovery Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_038.d
 Lims ID: 140-24649-A-12-B
 Client ID: P-2662 VEN CARBON BED OUTLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE
 Sample Type: Client
 Inject. Date: 08-Oct-2021 17:17:40 ALS Bottle#: 9 Worklist Smp#: 38
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0021001-038 140-24649-a-12-b
 Misc. Info.: Plate: 8 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 11:11:30 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 10:31:30

Compound	Amount Added	Amount Recovered	% Rec.
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FORM VI
PFAS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1 Analy Batch No.: 54515

SDG No.: _____

Instrument ID: LCA GC Column: GeminiC18 3 ID: 3 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/05/2021 22:00 Calibration End Date: 10/05/2021 22:53 Calibration ID: 3272

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-54515/6	006.d
Level 2	IC 140-54515/7	007.d
Level 3	IC 140-54515/8	008.d
Level 4	ICIS 140-54515/9	009.d
Level 5	IC 140-54515/10	010.d
Level 6	IC 140-54515/11	011.d
Level 7	IC 140-54515/12	012.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 7	LVL 3	LVL 4	LVL 5	B	M1		M2									
Perfluorobutanoic acid (PFBA)	0.8442 0.7694	0.8406 0.7549	0.7872	0.7662	0.7358		AveI D	0.785 5			5.3		35.0					
Perfluoropentanoic acid (PFPeA)	1.1043 0.9727	1.0981 0.9491	1.0517	0.9707	0.9443		AveI D	1.013 0			6.9		35.0					
Perfluorobutanesulfonic acid (PFBS)	1.2247 1.1027	1.1847 1.1071	1.1366	1.1038	1.0228		AveI D	1.126 1			5.8		35.0					
4:2 FTS	2.4811 2.5807	2.7194 0.9919	2.5360	2.5345	2.2945		AveI D	2.499 9			5.7		35.0					
Perfluoropentanesulfonic acid (PFPeS)	1.0214 0.8505	0.9919 0.8413	0.8993	0.8497	0.8384		L2ID	0.004 5					0.9990				0.9900	
Perfluorohexanoic acid (PFHxA)	0.9338 0.8230	0.9308 0.8238	0.8920	0.8220	0.7750		AveI D	0.857 2			7.2		35.0					
HFPO-DA	1.7244 1.3525	1.5356 1.4242	1.4676	1.3649	1.3316		L2ID	0.008 7					0.9990				0.9900	
Perfluorohexanesulfonic acid (PFHxS)	1.6415 1.3643	1.5174 1.3708	1.4440	1.3125	1.3042		L2ID	0.006 9					0.9990				0.9900	
Perfluoroheptanoic acid (PFHpA)	1.2260 1.0253	1.1901 1.0468	1.1124	1.0523	1.0347		L2ID	0.004 9					0.9990				0.9900	
DONA	3.3260 3.0563	3.5814 2.9684	3.3127	3.3890	3.0699		AveI D	3.243 4			6.8		35.0					
Perfluoroheptanesulfonic Acid (PFHpS)	1.0498 0.9829	1.0948 0.9519	1.0032	0.9624	0.9183		AveI D	0.994 7			6.1		35.0					
6:2 FTS	2.4958 2.0128	2.4734 1.9305	2.0914	1.9739	1.9734		L2ID	0.014 0					0.9970				0.9900	
Perfluorooctanoic acid (PFOA)	1.4828 1.0697	1.2770 1.1154	1.1688	1.1272	1.0789		L2ID	0.009 5					0.9990				0.9900	

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

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

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1 Analy Batch No.: 54515

SDG No.: _____

Instrument ID: LCA GC Column: GeminiC18 3 ID: 3 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/05/2021 22:00 Calibration End Date: 10/05/2021 22:53 Calibration ID: 3272

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 7	LVL 3	LVL 4	LVL 5	B	M1		M2								
Perfluorooctanesulfonic acid (PFOS)	1.1355 1.0480	1.1309 1.1074	1.1289	1.0964	1.0511			AveI D	1.099 8		35.0						
Perfluorononanoic acid (PFNA)	1.0076 0.8482	0.9183 0.8104	0.8536	0.8325	0.8327	0.004 4	0.830	L2ID	0.830			1.0000					0.9900
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	2.3673 2.2089	2.4028 2.2323	2.4317	2.3301	2.1817		2.307 8	AveI D	2.307 8		4.3		35.0				
Perfluorononanesulfonic acid (PFNS)	1.1500 1.0046	1.1202 0.9989	1.0220	0.9743	1.0256		1.042 2	AveI D	1.042 2		6.4		35.0				
Perfluorooctanesulfonamide (FOSA)	0.9385 0.9395	0.9617 0.9793	0.9790	0.9253	0.9406		0.960 6	AveI D	0.960 6		2.8		35.0				
Perfluorodecanoic acid (PFDA)	1.3337 0.9459	1.1533 0.9008	1.0527	0.9458	0.9140	0.010 1	0.940 0	L2ID	0.940 0			0.9980					0.9900
8:2 FTS	1.9042 1.6929	1.8419 1.7053	1.9403	1.7186	1.6832		1.783 8	AveI D	1.783 8		6.1		35.0				
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	1.1962 0.9189	1.0132 0.9018	1.0046	0.9006	0.9005	0.006 8	0.912 8	L2ID	0.912 8				0.9980				0.9900
Perfluorodecanesulfonic acid (PFDS)	0.9734 0.9008	1.0761 0.9277	0.9897	0.9653	0.8687		0.957 4	AveI D	0.957 4		7.1		35.0				
Perfluoroundecanoic acid (PFUnA)	1.2015 0.9816	1.1321 0.9900	1.0782	1.0130	0.9957	0.005 2	1.006 8	L2ID	1.006 8				0.9990				0.9900
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	0.9751 0.8901	1.1154 0.9350	0.9193	0.9324	0.8786		0.949 4	AveI D	0.949 4		8.4		35.0				
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid	1.9527 1.7237	2.0484 1.7281	1.9850	1.8557	1.7149		1.858 4	AveI D	1.858 4		7.5		35.0				
Perfluorododecanoic acid (PFDoA)	1.1008 0.9272	1.1987 0.9164	1.1236	1.0045	0.9550	0.002 3	1.058 9	Q2ID	1.058 9	-0.018065			0.9950				0.9900
10:2 FTS	2.3033 2.2288	2.3231 2.1563	2.2551	2.1315	2.1494		2.221 1	AveI D	2.221 1		3.5		35.0				
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	1.4548 1.1038	1.4555 1.1606	1.2970	1.0790	1.1040	0.009 4	1.148 5	L2ID	1.148 5				0.9930				0.9900
NMeFOSA	1.1961 0.9903	1.1338 1.0119	1.0173	1.0100	0.9694		1.047 0	AveI D	1.047 0		8.0		35.0				
Perfluorododecanesulfonic acid (PFDoS)	1.0129 1.0114	1.0268 0.9571	1.0365	0.9489	0.9216		0.987 9	AveI D	0.987 9		4.5		35.0				

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

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

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1 Analy Batch No.: 54515

SDG No.: _____

Instrument ID: LCA GC Column: GeminiC18 3 ID: 3 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/05/2021 22:00 Calibration End Date: 10/05/2021 22:53 Calibration ID: 3272

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 7	LVL 3		LVL 4	LVL 5	B						
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	1.4715 1.1994	1.3913 1.2926	1.2932	1.3081	1.2150	0.0057	1.2569				0.9990		0.9900
Perfluorotridecanoic acid (PFTrIA)	1.0525 0.8258	1.0477 0.8436	0.9558	0.8777	0.8937	0.0053	0.8786				0.9970		0.9900
N-ethylperfluoro-1-octanesulfonamide	1.1668 1.1121	1.2609 1.1667	1.2170	1.1491	1.1063		1.1684	4.7	35.0				
Perfluorotetradecanoic acid (PFTeA)	0.1574 0.1231	0.1488 0.1274	0.1342	0.1232	0.1209	0.0009	0.1252				0.9980		0.9900
Perfluorohexadecanoic acid (PFHeA)	1.6548 0.9539	1.4111 1.0074	1.2004	1.0959	1.0288	0.0146	1.0915				0.9980		0.9900
Perfluorooctadecanoic acid	0.9702 0.8276	0.9754 0.8564	0.9529	0.9144	0.8564		0.9076	6.7	35.0				
13C4 PFBA	1.3239 1.3078	1.2914 1.3654	1.3716	1.2896	1.3201		1.3242	2.5	50.0				
13C5 PFPeA	1.1120 1.0556	1.0670 1.1072	1.1478	1.0514	1.0692		1.0872	3.3	50.0				
13C3 PFBS	0.7175 0.6744	0.6863 0.7415	0.7191	0.6694	0.7051		0.7019	3.8	50.0				
M2-4:2 FTS	0.1166 0.0948	0.1085 0.0997	0.1129	0.0982	0.1061		0.1052	7.6	50.0				
13C2 PFHxA	1.1593 1.0890	1.1086 1.1182	1.1296	1.0820	1.1277		1.1164	2.4	50.0				
13C3 HFPO-DA	0.5685 0.5761	0.5481 0.5793	0.5823	0.5601	0.5851		0.5714	2.3	50.0				
18O2 PFHxS	0.4337 0.4153	0.4245 0.4328	0.4289	0.4243	0.4139		0.4248	1.8	50.0				
13C4 PFHpA	1.1229 1.1202	1.1044 1.0891	1.1584	1.1135	1.0837		1.1132	2.2	50.0				
M2-6:2 FTS	0.1107 0.1015	0.1123 0.1038	0.1155	0.1070	0.1036		0.1078	4.8	50.0				
13C4 PFOA	0.9934 1.0232	1.0259 0.9635	1.0266	0.9940	1.0204		1.0067	2.4	50.0				
13C4 PFOS	0.5952 0.5815	0.5614 0.6135	0.6042	0.5652	0.5753		0.5852	3.4	50.0				

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

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

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1 Analy Batch No.: 54515

SDG No.:

Instrument ID: LCA GC Column: GeminiC18 3 ID: 3 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/05/2021 22:00 Calibration End Date: 10/05/2021 22:53 Calibration ID: 3272

ANALYTE	RRF			CURVE TYPE	B	COEFFICIENT		MIN RRF	%RSD	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL_6	LVL 2 LVL_7	LVL 3			LVL 4	LVL 5						
13C5 PFNA	1.2663 1.2579	1.1959 1.2838	1.3750	1.2783	1.2990		1.279 5		4.2	50.0			
13C8 FOSA	0.9299 0.8117	0.8740 0.7850	0.9389	0.8576	0.8163		0.859 1		6.9	50.0			
13C2 PFDA	1.3216 1.2685	1.3057 1.2326	1.3764	1.2933	1.2707		1.295 5		3.5	50.0			
M2-8:2 FTS	0.1403 0.1264	0.1385 0.1224	0.1370	0.1283	0.1285		0.131 6		5.2	50.0			
d3-NMeFOSAA	0.1702 0.1748	0.1753 0.1912	0.1707	0.1844	0.1750		0.177 4		4.3	50.0			
13C2 PFUnA	1.2343 1.2637	1.2043 1.1770	1.2993	1.2394	1.2417		1.237 1		3.2	50.0			
d5-NEtFOSAA	0.1810 0.1679	0.1701 0.1617	0.1814	0.1635	0.1680		0.170 5		4.6	50.0			
13C2 PFDoA	1.3648 1.3209	1.2339 1.3408	1.4107	1.3057	1.2595		1.319 5		4.6	50.0			
d7-N-MeFOSE-M	0.1071 0.1113	0.1022 0.1116	0.1077	0.1086	0.1043		0.107 5		3.2	50.0			
d-N-MeFOSA-M	0.1110 0.1170	0.1073 0.1174	0.1138	0.1087	0.1085		0.112 0		3.7	50.0			
d9-N-EtFOSE-M	0.1119 0.1198	0.1148 0.1099	0.1185	0.1116	0.1158		0.114 6		3.2	50.0			
d-N-EtFOSA-M	0.0963 0.0987	0.0918 0.0958	0.0932	0.0907	0.0931		0.094 2		3.0	50.0			
13C2 PFTeDA	1.2302 1.2008	1.1463 1.2259	1.2836	1.1988	1.1902		1.210 8		3.5	50.0			
13C2 PFHxDA	0.8721 0.9263	0.8341 0.9163	0.8948	0.8429	0.8609		0.878 2		4.0	50.0			
13C8 PFOA	0.9998 0.9711	0.9932 0.9951	1.0244	0.9582	0.9785		0.988 6		2.2	50.0			
13C8 PFOS	0.1295 0.1211	0.1232 0.1288	0.1293	0.1217	0.1254		0.125 6		2.9	50.0			

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

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1 Analy Batch No.: 54515

SDG No.: _____

Instrument ID: LCA GC Column: GeminiC18 3 ID: 3 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/05/2021 22:00 Calibration End Date: 10/05/2021 22:53 Calibration ID: 3272

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-54515/6	006.d
Level 2	IC 140-54515/7	007.d
Level 3	IC 140-54515/8	008.d
Level 4	ICIS 140-54515/9	009.d
Level 5	IC 140-54515/10	010.d
Level 6	IC 140-54515/11	011.d
Level 7	IC 140-54515/12	012.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Perfluorobutanoic acid (PFBA)		AveI D	120569 20710345	244540 39839183	1138114	4468418	10441309	0.0250	0.0500	0.250	1.00	2.50
Perfluoropentanoic acid (PFPeA)		AveI D	132485 21134542	263929 40614146	1272508	4615308	10852858	0.0250	0.0500	0.250	1.00	2.50
Perfluorobutanesulfonic acid (PFBS)		AveI D	83808 13531845	161928 28048729	761606	2953898	6852855	0.0221	0.0442	0.221	0.884	2.21
4:2 FTS		AveI D	29140 4703298	62062 8466918	282001	1050887	2443233	0.0234	0.0467	0.234	0.934	2.34
Perfluoropentanesulfonic acid (PFPeS)		L2ID	74167 11073888	143856 22616554	639381	2412870	5960167	0.0235	0.0469	0.235	0.938	2.35
Perfluorohexanoic acid (PFHxA)		AveI D	116796 18447950	232467 35602644	1062073	4022201	9394999	0.0250	0.0500	0.250	1.00	2.50
HFPO-DA		L2ID	105764 16036699	189596 31885892	900885	3457493	8376090	0.0250	0.0500	0.250	1.00	2.50
Perfluorohexanesulfonic acid (PFHxS)		L2ID	69897 10611543	132033 20867517	594032	2292161	5280667	0.0228	0.0455	0.228	0.910	2.28
Perfluorohexanoic acid (PFHpA)		L2ID	148523 23641761	296091 44063826	1358343	5299224	12053684	0.0250	0.0500	0.250	1.00	2.50
DONA		AveI D	201171	426633	1987545	8159890	17882462	0.0236	0.0471	0.236	0.942	2.36

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

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1 Analy Batch No.: 54515

SDG No.:

Instrument ID: LCA GC Column: GeminiC18 3 ID: 3 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/05/2021 22:00 Calibration End Date: 10/05/2021 22:53 Calibration ID: 3272

ANALYTE	IS REF	CURVE TYPE	RESPONSE							CONCENTRATION (NG/ML)						
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5				
Perfluoroheptanesulfonic Acid (PFHps)		AveI D	34461769 64170	66306425 131799	608296	2341758	5405819	4.71 0.0238	9.42 0.0476	0.238	0.952	2.38				
6:2 FTS		L2ID	11200331 28268	21488703 59326	241304	905258	2082865	4.76 0.0237	9.52 0.0474	0.237	0.948	2.37				
Perfluorooctanoic acid (PFOA)		L2ID	3986787 158921	7345217 295123	1264785	5067237	11834254	4.74 0.0250	9.48 0.0500	0.250	1.00	2.50				
Perfluorooctanesulfonic acid (PFOS)		AveI D	22528349 67658	41535789 132719	667256	2600759	6031664	5.00 0.0232	10.0 0.0464	0.232	0.928	2.32				
Perfluorononanoic acid (PFNA)		L2ID	11641795 137647	24369559 247402	1237218	4812773	11627018	4.64 0.0250	9.28 0.0500	0.250	1.00	2.50				
9-Chlorohexadecafluoro-3-oxanona ne-1-sulfonic acid		AveI D	21961402 141666	40209311 283194	1443521	5550758	12573714	5.00 0.0233	10.0 0.0466	0.233	0.932	2.33				
Perfluorononanesulfonic acid (PFNS)		AveI D	24643016 70887	49335058 135991	624876	2390809	6088408	4.66 0.0240	9.32 0.0480	0.240	0.960	2.40				
Perfluorooctanesulfonamide (FOSA)		AveI D	11544387 100166	22739383 189353	968946	3588461	8253604	4.80 0.0250	9.60 0.0500	0.250	1.00	2.50				
Perfluorodecanoic acid (PFDA)		L2ID	15696244 190158	29712974 339239	1527349	5531515	12485057	5.00 0.0250	10.0 0.0500	0.250	1.00	2.50				
8:2 FTS		AveI D	24696030 27611	42913494 55047	268508	955136	2228105	5.00 0.0240	10.0 0.0479	0.240	0.958	2.40				
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)		L2ID	4218955 21967	7727315 40014	180751	750862	1693902	4.79 0.0250	9.58 0.0500	0.250	1.00	2.50				
Perfluorodecanesulfonic acid (PFDS)		AveI D	3306213 60252	6665393 131183	607648	2378581	5178406	5.00 0.0241	10.0 0.0482	0.241	0.964	2.41				
Perfluoroundecanoic acid (PFUnA)		L2ID	10394826 159986	21205557 307117	1476790	5677846	13290080	4.82 0.0250	9.64 0.0500	0.250	1.00	2.50				
			25533444	45034155				5.00	10.0							

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

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1 Analy Batch No.: 54515

SDG No.: _____

Instrument ID: LCA GC Column: GeminiC18 3 ID: 3 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/05/2021 22:00 Calibration End Date: 10/05/2021 22:53 Calibration ID: 3272

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
N-ethylperfluorooctanesulfonamid oacetic acid (NETFOSAA)		AveI D	19038	42754	175791	689486	1586439	0.0250	0.0500	0.250	1.00	2.50
11-Chloroeicosafuoro-3-oxaundec ane-1-sulfonic acid		AveI D	3076062	5841454	1190988	4468073	9989503	0.0236	0.0471	0.236	0.942	2.36
Perfluorododecanoic acid (PFDoA)		Q2ID	19435719	38600586	1670808	5931269	12930212	4.71	9.42	0.250	1.00	2.50
10:2 FTS		AveI D	162084	333197	314026	1192076	2863089	5.00	10.0	0.241	0.964	2.41
2- (N-methylperfluoro-1-octanesulfo namido) ethanol		L2ID	5589408	9831765	147243	530157	1237379	4.82	9.64	0.250	1.00	2.50
NMeFOSA		AveI D	16817	33495	121993	496513	1130206	5.00	10.0	0.250	1.00	2.50
Perfluorododecanesulfonic acid (PFDoS)		AveI D	2528011	5008224	639069	2347772	5516594	0.0250	0.0500	0.250	1.00	2.50
2- (N-ethylperfluoro-1-octanesulfon amido) ethanol		L2ID	2384386	4593149	161487	660212	1512862	5.00	10.0	0.242	0.968	2.42
Perfluorotridecanoic acid (PFTriA)		L2ID	62954	125689	35981	5182810	12100663	4.84	9.68	0.250	1.00	2.50
N-ethylperfluoro-1-octanesulfona mide		AveI D	11718637	21969563	119604	471510	1106784	0.0250	0.0500	0.250	1.00	2.50
Perfluorotetradecanoic acid (PFTeA)		L2ID	22450214	43719274	181597	667705	1546553	5.00	10.0	0.250	1.00	2.50
Perfluorohexadecanoic acid		Q2ID	12127	26074	1132217	417724	9520842	0.0250	0.0500	0.250	1.00	2.50
			2258394	4319144	35675947			5.00	10.0	0.250	1.00	2.50
			20886	38423				5.00	10.0	0.250	1.00	2.50
			3043028	6036068				5.00	10.0	0.250	1.00	2.50
			155694	265142				5.00	10.0	0.250	1.00	2.50
			18185862	35675947				5.00	10.0	0.250	1.00	2.50

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

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1 Analy Batch No.: 54515

SDG No.:

Instrument ID: LCA GC Column: GeminiC18 3 ID: 3 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/05/2021 22:00 Calibration End Date: 10/05/2021 22:53 Calibration ID: 3272

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Perfluorooctadecanoic acid		AveI D	91283	1832269	898794	3485638	7925788	0.0250	0.0500	0.250	1.00	2.50
13C4 PFBA	13PF OA	Ave	15778779	30330955	7228968	7289844	7094947	5.00	10.0	1.25	1.25	1.25
13C5 PFPeA	13PF OA	Ave	6729747	6596355	6049600	5943333	5746550	1.25	1.25	1.25	1.25	1.25
13C3 PFBS	13PF OA	Ave	5431895	5348940	3524723	3519158	3524311	1.25	1.25	1.16	1.16	1.16
M2-4:2 FTS	13PF OA	Ave	3227418	3331755	556004	518286	532409	1.17	1.17	1.17	1.17	1.17
13C2 PFHxA	13PF OA	Ave	587242	570559	5953465	6116663	6061274	1.17	1.17	1.25	1.25	1.25
13C3 HFPO-DA	13PF OA	Ave	455617	449831	3069191	3166510	3145011	1.25	1.25	1.25	1.25	1.25
18C2 PFHxS	13PF OA	Ave	6253583	6243564	2138254	2269288	2104634	1.25	1.25	1.18	1.18	1.18
13C4 PFHpA	13PF OA	Ave	5603980	5402140	6105640	6294659	5824750	1.25	1.25	1.25	1.25	1.25
M2-6:2 FTS	13PF OA	Ave	3066694	3086719	578119	574488	528850	1.25	1.25	1.19	1.19	1.19
13C4 PFOA	13PF OA	Ave	2964356	2798495	5410657	5619219	5484596	1.18	1.18	1.25	1.25	1.25
13C4 PFOS	13PF OA	Ave	2213335	2261386	3044513	3054456	2955831	1.25	1.25	1.20	1.20	1.20
		Ave	2021420	1978127	2833668			1.18	1.18	1.18	1.18	1.18
		Ave	6057062	6219868				1.18	1.18	1.25	1.25	1.25
		Ave	5764452	5261701				1.25	1.25	1.25	1.25	1.25
		Ave	567503	600900				1.19	1.19	1.19	1.19	1.19
		Ave	496216	476601				1.19	1.19	1.25	1.25	1.25
		Ave	5358656	5777544				1.25	1.25	1.25	1.25	1.25
		Ave	5265292	4654864				1.25	1.25	1.25	1.25	1.25
		Ave	3069142	3022370				1.20	1.20	1.20	1.20	1.20
		Ave	2860822	2833668				1.20	1.20	1.20	1.20	1.20

FORM VI
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RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1 Analy Batch No.: 54515

SDG No.: _____

Instrument ID: LCA GC Column: GeminiC18 3 ID: 3 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/05/2021 22:00 Calibration End Date: 10/05/2021 22:53 Calibration ID: 3272

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)					
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	
13C5 PFNA	13PF OA	Ave	6830452	6735203	7247107	7226283	6981917	1.25	1.25	1.25	1.25	1.25	1.25
13C8 FOSA	13PF OA	Ave	6472750	6202112	4948768	4847961	4387447	1.25	1.25	1.25	1.25	1.25	1.25
13C2 PFDA	13PF OA	Ave	4176620	3792608	7254432	7310968	6829600	1.25	1.25	1.25	1.25	1.25	1.25
M2-8:2 FTS	13PF OA	Ave	6527325	5955015	691926	694718	661877	1.25	1.25	1.25	1.25	1.25	1.25
d3-NMeFOSAA	13PF OA	Ave	725011	747134	899632	1042167	940501	1.25	1.25	1.25	1.25	1.25	1.25
13C2 PFUnA	13PF OA	Ave	623050	566408	6848234	7006211	6673920	1.25	1.25	1.25	1.25	1.25	1.25
d5-NEtFOSAA	13PF OA	Ave	899537	923936	956097	924381	902846	1.25	1.25	1.25	1.25	1.25	1.25
13C2 PFDoA	13PF OA	Ave	6657852	6782308	7435382	7381117	6769707	1.25	1.25	1.25	1.25	1.25	1.25
d7-N-MeFOSE-M	13PF OA	Ave	6502949	5686115	567624	614171	560383	1.25	1.25	1.25	1.25	1.25	1.25
d-N-MeFOSA-M	13PF OA	Ave	976252	958230	599582	614480	582914	1.25	1.25	1.25	1.25	1.25	1.25
d9-N-EtFOSE-M	13PF OA	Ave	863924	780959	624358	630903	622602	1.25	1.25	1.25	1.25	1.25	1.25
d-N-EtFOSA-M	13PF OA	Ave	7362218	6949236	491391	512905	500239	1.25	1.25	1.25	1.25	1.25	1.25
		Ave	6796811	6477734	462772			1.25	1.25	1.25	1.25	1.25	1.25
		Ave	577982	575299				1.25	1.25	1.25	1.25	1.25	1.25
		Ave	572551	539386				1.25	1.25	1.25	1.25	1.25	1.25
		Ave	598816	604340				1.25	1.25	1.25	1.25	1.25	1.25
		Ave	601939	567405				1.25	1.25	1.25	1.25	1.25	1.25
		Ave	603776	646520				1.25	1.25	1.25	1.25	1.25	1.25
		Ave	616316	531061				1.25	1.25	1.25	1.25	1.25	1.25
		Ave	519654	516960				1.25	1.25	1.25	1.25	1.25	1.25
		Ave	507678	462772				1.25	1.25	1.25	1.25	1.25	1.25

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RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1 Analy Batch No.: 54515

SDG No.: _____

Instrument ID: LCA GC Column: GeminiC18 3 ID: 3 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/05/2021 22:00 Calibration End Date: 10/05/2021 22:53 Calibration ID: 3272

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)					
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	
13C2 PFTeDA	13PF OA	Ave	6635881	6455611	6765277	6776597	6396884	1.25	1.25	1.25	1.25	1.25	1.25
13C2 PFHxDA	13PF OA	Ave	6178920	5922620	4715970	4764988	4627358	1.25	1.25	1.25	1.25	1.25	1.25
13C8 PFOA	13PF OA	Ave	4766428	4426886	5399320	5416582	5259329	1.25	1.25	1.25	1.25	1.25	1.25
13C8 PFOS	13PF OA	Ave	5393077	5593233	651731	657677	644134	1.25	1.25	1.25	1.25	1.25	1.25
			4997107	4807435				1.25	1.25	1.25	1.25	1.25	1.25
			667645	663148				1.25	1.25	1.25	1.25	1.25	1.25
			595505	594930				1.25	1.25	1.25	1.25	1.25	1.25

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution
L2ID = Linear 1/conc^2 Isodil
Q2ID = Quadratic 1/conc^2 Isodil

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_006.d
 Lims ID: IC 1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 05-Oct-2021 22:00:59 ALS Bottle#: 6 Worklist Smp#: 6
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020953-006 ic 1
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15
 Method: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 07-Oct-2021 14:20:57 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1613

First Level Reviewer: cochranj Date: 06-Oct-2021 15:51:29

Ratio Calibration: None

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	2.812	2.812	0.0	0.677	7141181	1.25	100.0	16142	
2 Perfluorobutanoic acid	212.90 > 169.00	2.812	2.812	0.0	1.000	120569	0.0269	107	16.1	
D 3 13C5 PFPeA	267.90 > 223.00	3.129	3.130	-0.001	0.753	5998363	1.28	102	16661	
4 Perfluoropentanoic acid	262.90 > 219.00	3.129	3.131	-0.002	1.000	132485	0.0273	109	30.7	
D 6 13C3 PFBS	301.90 > 80.00	3.143	3.143	0.0	0.756	3599561	1.19	102	29886	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.157	3.151	0.006	1.004	83808	0.0240	Target=3.06	109	281
	298.90 > 99.00	3.157	3.151	0.006	1.004	32492		2.58(1.53-4.59)	109	88.4
D 8 M2-4:2 FTS	329.00 > 81.00	3.437	3.431	0.006	0.827	587242	1.29	111	711	
7 4:2 FTS	327.00 > 307.00	3.437	3.431	0.006	1.000	29140	0.0232	99.2	483	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.469	3.468	0.001	1.104	74167	0.0228	Target=3.47	97.3	630
	349.00 > 99.00	3.469	3.468	0.001	1.104	21820		3.40(1.73-5.20)	97.3	250
D 9 13C2 PFHxA	315.00 > 270.00	3.469	3.471	-0.002	0.835	6253583	1.30	104	19233	
10 Perfluorohexanoic acid	313.00 > 269.00	3.469	3.471	-0.002	1.000	116796	0.0272	Target=9.74	109	70.4
	313.00 > 119.00	3.469	3.471	-0.002	1.000	8027		14.55(4.87-14.61)	109	32.0
D 12 13C3 HFPO-DA	287.00 > 169.00	3.575	3.565	0.010	0.860	3066694	1.24	99.5	11896	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.575	3.565	0.010	1.000	105764	0.0250		100	61.7	
D 17 18O2 PFHxS										
403.00 > 84.00	3.815	3.813	0.002	0.918	2213335	1.21		102	15718	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.815	3.813	0.002	1.000	69897	0.0225	Target=2.96	99.1	346	M
399.00 > 99.00	3.815	3.813	0.002	1.000	22102		3.16(1.48-4.44)	99.1	122	
D 14 13C4 PFHpA										
367.00 > 322.00	3.827	3.819	0.008	0.921	6057062	1.26		101	20055	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.827	3.819	0.008	1.000	148523	0.0244	Target=3.35	97.8	121	
363.00 > 169.00	3.827	3.819	0.008	1.000	45055		3.30(1.67-5.02)	97.8	228	
68 DONA										
377.00 > 251.00	3.852	3.850	0.002	0.864	201171	0.0242	Target=1.49	103	638	
377.00 > 85.00	3.852	3.850	0.002	0.864	115256		1.75(0.74-2.23)	103	945	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.143	4.143	0.0	0.929	64170	0.0251	Target=3.73	106	443	
449.00 > 99.00	4.143	4.143	0.0	0.929	16411		3.91(1.87-5.61)	106	117	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.155	4.146	0.009	1.000	5393077	1.26		101	34589	
19 6:2 FTS										
427.00 > 407.00	4.155	4.151	0.004	1.000	28268	0.0226		95.4	119	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.155	4.151	0.004	1.000	567503	1.22		103	811	
* 22 13C2 PFOA										
415.00 > 370.00	4.155	4.155	0.0		5394236	1.25			31023	
D 21 13C4 PFOA										
417.00 > 372.00	4.155	4.155	0.0	1.000	5358656	1.23		98.7	19938	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.167	4.156	0.011	1.003	158921	0.0251	Target=2.40	100	50.3	
413.00 > 169.00	4.167	4.156	0.011	1.003	59057		2.69(1.20-3.61)	100	98.2	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.458	4.446	0.012	1.073	667645	1.23		103	2154	
D 25 13C4 PFOS										
503.00 > 80.00	4.458	4.451	0.007	1.073	3069142	1.22		102	11975	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.458	4.451	0.007	1.000	67658	0.0240	Target=3.83	103	131	M
499.00 > 99.00	4.470	4.451	0.019	1.003	16161		4.19(1.91-5.74)	103	73.6	M
D 27 13C5 PFNA										
468.00 > 423.00	4.481	4.471	0.010	1.079	6830452	1.24		99.0	18820	
26 Perfluorononanoic acid										
463.00 > 419.00	4.481	4.471	0.010	1.000	137647	0.0250	Target=3.68	100.0	97.6	
463.00 > 169.00	4.481	4.471	0.010	1.000	27411		5.02(1.84-5.52)	100.0	92.4	
63 9CIFOS										
531.00 > 351.00	4.608	4.606	0.002	1.109	141666	0.0239		103	267	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.735	4.728	0.007	1.062	70887	0.0265	Target=3.97	110	337	
549.00 > 99.00	4.735	4.728	0.007	1.062	14821		4.78(1.99-5.96)	110	74.1	
D 34 13C8 FOSA										
506.00 > 78.00	4.749	4.743	0.006	1.143	5016067	1.35		108	5189	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.749	4.745	0.004	1.000	100166	0.0260		104	208	
D 32 13C2 PFDA										
515.00 > 470.00	4.762	4.758	0.004	1.146	7129138	1.28		102	20021	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.762	4.760	0.002	1.000	190158	0.0247	Target=10.11	98.7	105	
513.00 > 169.00	4.762	4.760	0.002	1.000	17292		11.00(5.06-15.17)	98.7	57.7	
31 8:2 FTS										
527.00 > 507.00	4.776	4.774	0.002	1.000	27611	0.0256		107	277	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.776	4.774	0.002	1.149	725011	1.28		107	2324	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.909	4.899	0.010	1.182	918162	1.20		96.0	3530	
36 NMeFOSAA										
570.00 > 419.00	4.909	4.899	0.010	1.000	21967	0.0253		101	43.0	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	5.007	4.997	0.010	1.123	60252	0.0245	Target=3.80	102	439	
599.00 > 99.00	5.007	4.997	0.010	1.123	13934		4.32(1.90-5.70)	102	60.1	
D 39 13C2 PFUnA										
565.00 > 520.00	5.022	5.015	0.007	1.209	6657852	1.25		99.8	22196	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.022	5.018	0.004	1.000	159986	0.0246	Target=7.45	98.5	107	
563.00 > 169.00	5.022	5.018	0.004	1.000	20400		7.84(3.78-11.33)	98.5	87.6	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.036	5.034	0.002	1.212	976252	1.33		106	5056	
40 NEtFOSA										
584.00 > 419.00	5.050	5.040	0.010	1.003	19038	0.0257		103	97.7	M
57 11CIFOS										
631.00 > 451.00	5.132	5.122	0.010	1.151	118107	0.0247		105	286	
D 43 13C2 PFDaA										
615.00 > 570.00	5.266	5.255	0.011	1.267	7362218	1.29		103	20244	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.266	5.255	0.011	1.000	162084	0.0238	Target=5.33	95.2	81.3	
613.00 > 169.00	5.266	5.255	0.011	1.000	20373		7.96(2.66-7.99)	95.2	104	
50 10:2 FTS										
627.00 > 607.00	5.280	5.274	0.006	1.106	33608	0.0250		104	354	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.295	5.289	0.006	1.274	577982	1.25		99.6	375	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.274	598816	1.24		99.2	35.4	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.297	-0.002	1.000	16817	0.0235		94.1	16.7	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.310	5.301	0.009	1.003	14325	0.0286		114	45.2	
54 PFDoS										
699.00 > 80.00	5.449	5.439	0.010	1.222	62954	0.0248	Target=4.32	103	278	
699.00 > 99.00	5.449	5.439	0.010	1.222	14779		4.26(2.19-6.58)	103	115	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.449	5.445	0.004	1.311	603776	1.22		97.7	731	
62 N-EtFOSE-M										
630.00 > 59.00	5.462	5.458	0.004	1.002	17769	0.0248		99.0	42.8	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.460	0.002	1.315	519654	1.28		102	610	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.475	5.462	0.013	1.040	154981	0.0239	Target=5.66	95.8	84.6	
663.00 > 169.00	5.475	5.462	0.013	1.040	20905		7.41(2.83-8.48)	95.8	125	
56 N-EtFOSA-M										
526.00 > 169.00	5.475	5.469	0.006	1.002	12127	0.0250		99.9	54.8	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.651	5.643	0.008	1.000	20886	0.0243	Target=1.07	97.3	156	
713.00 > 219.00	5.651	5.643	0.008	1.000	18790		1.11(0.53-1.60)	97.3	255	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.651	5.643	0.008	1.360	6635881	1.27		102	19352	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.973	5.961	0.012	1.438	4704223	1.24		99.3	6891	
55 Perfluorohexadecanoic acid										M
813.00 > 769.00	5.973	5.966	0.007	1.000	155694	0.0246	Target=7.50	98.2	131	M
813.00 > 169.00	5.973	5.966	0.007	1.000	18066		8.62(3.75-11.26)	98.2	115	
60 Perfluorooctadecanoic acid										M
913.00 > 869.00	6.240	6.226	0.014	1.045	91283	0.0267	Target=9.98	107	134	
913.00 > 169.00	6.240	6.226	0.014	1.045	7844		11.64(5.14-15.41)	107	118	M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L1PFC2_00002

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_006.d

Injection Date: 05-Oct-2021 22:00:59

Instrument ID: LCA

Lims ID: IC 1

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 6

Worklist Smp#: 6

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

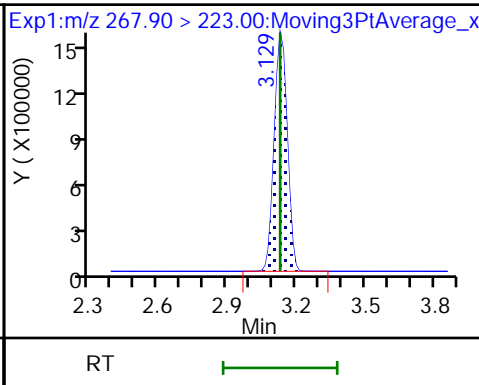
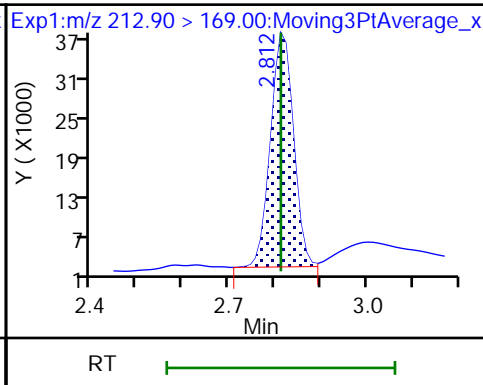
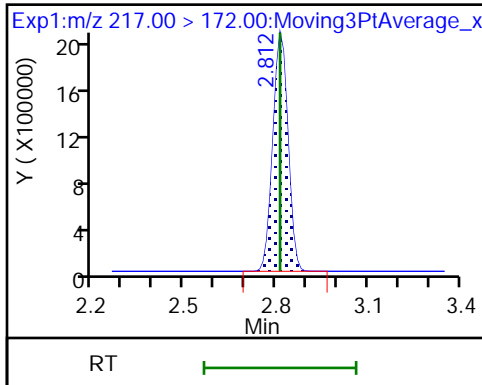
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

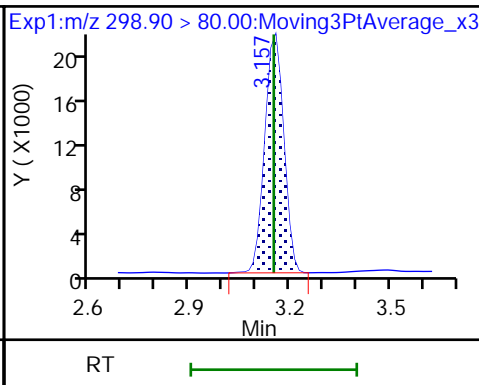
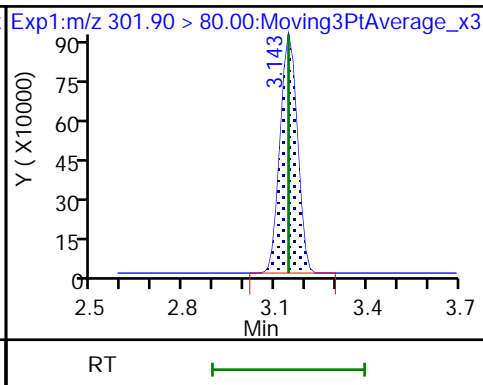
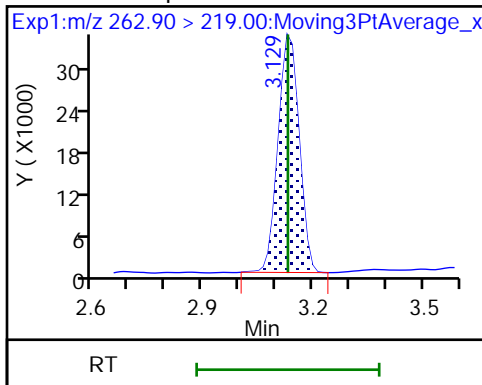
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

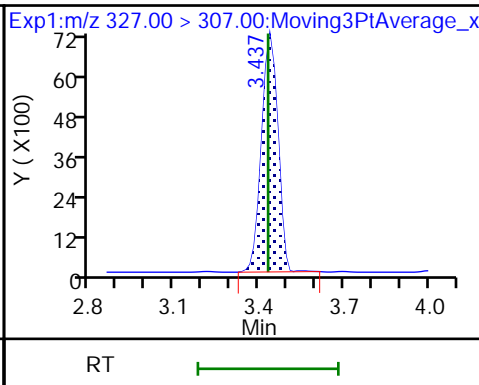
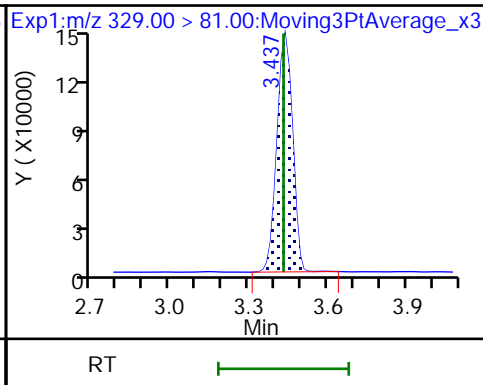
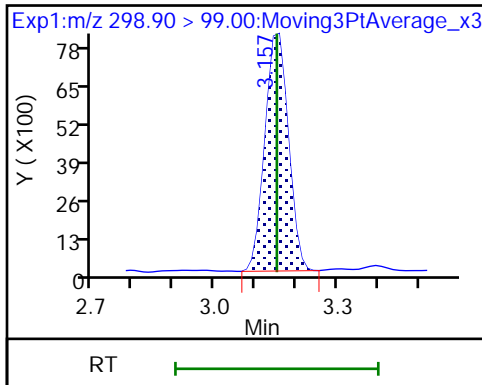
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

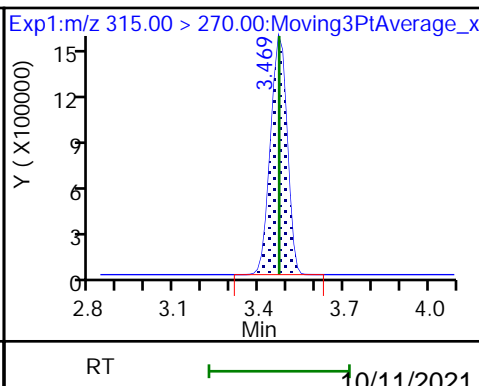
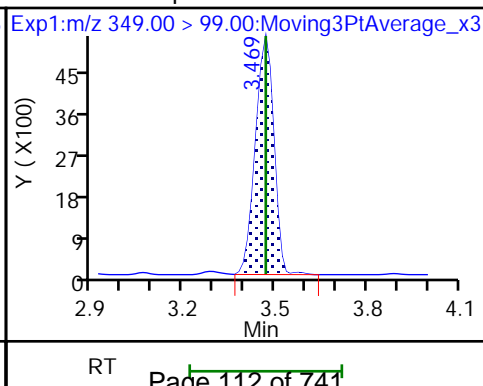
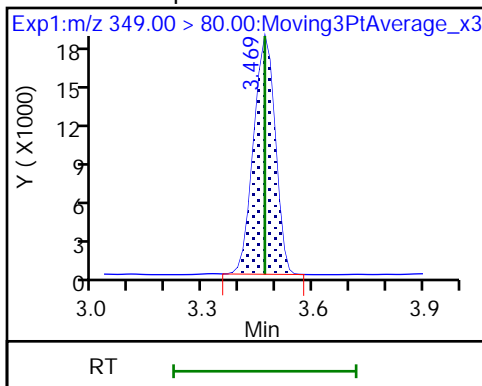
7 4:2 FTS

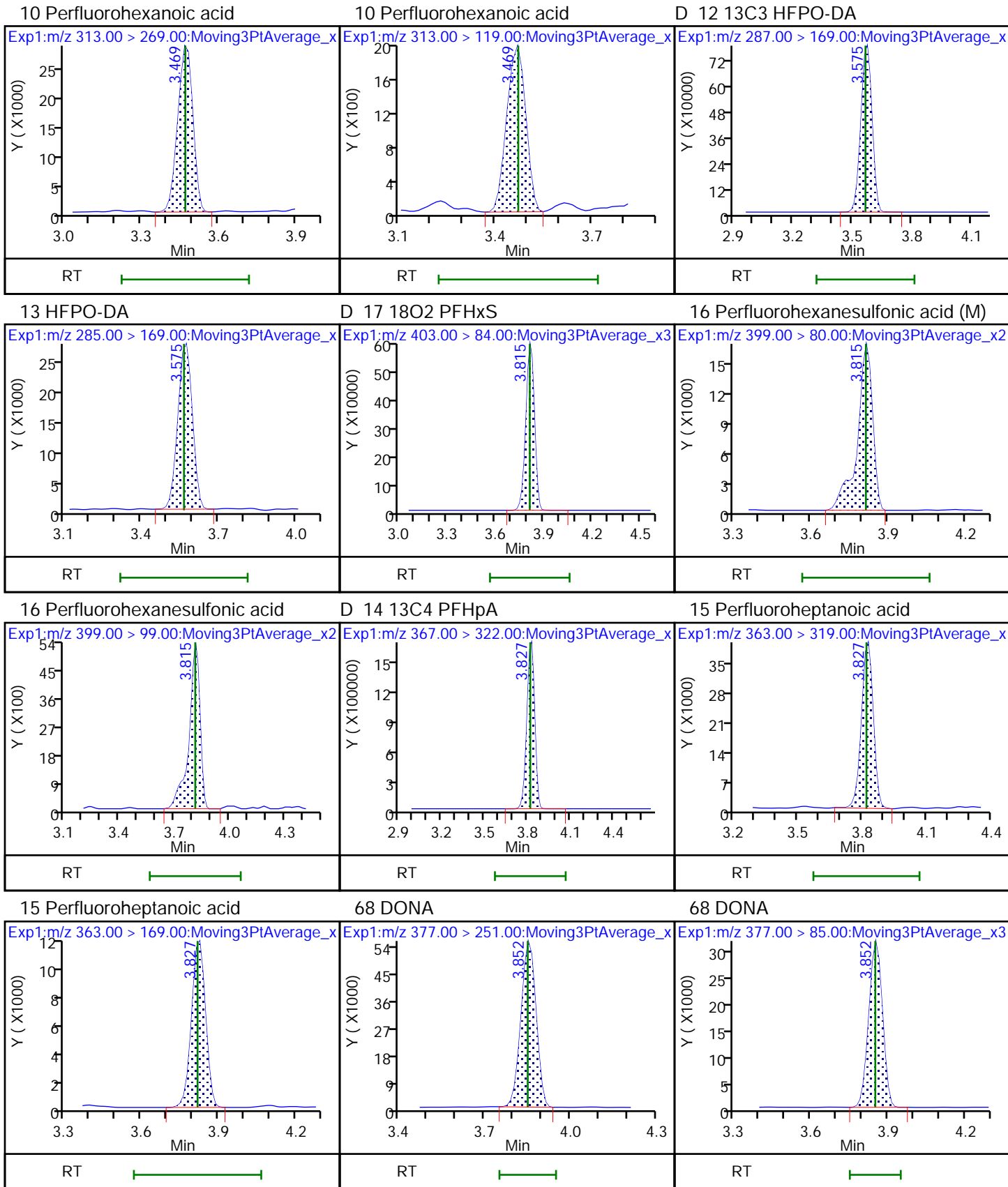


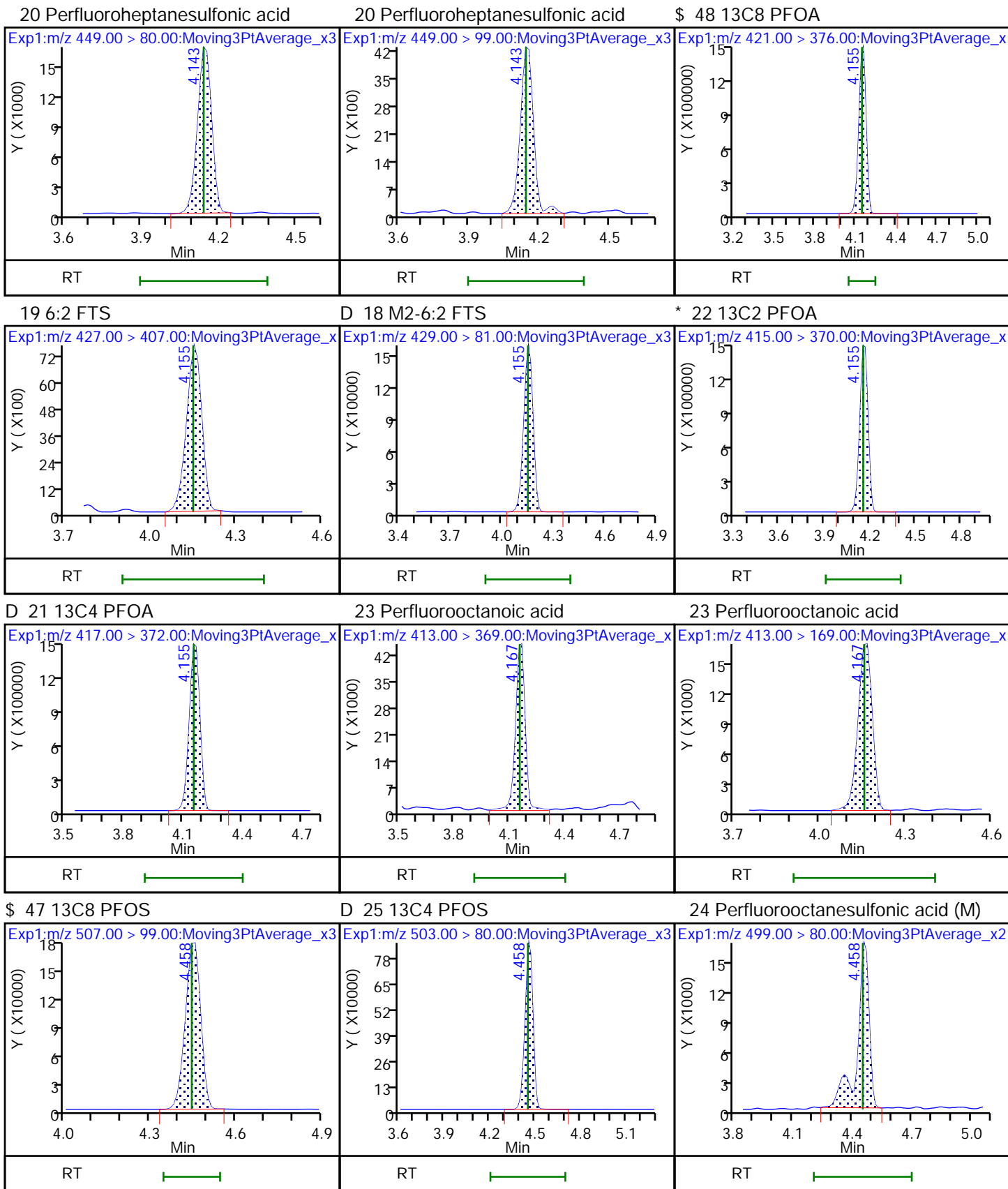
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA

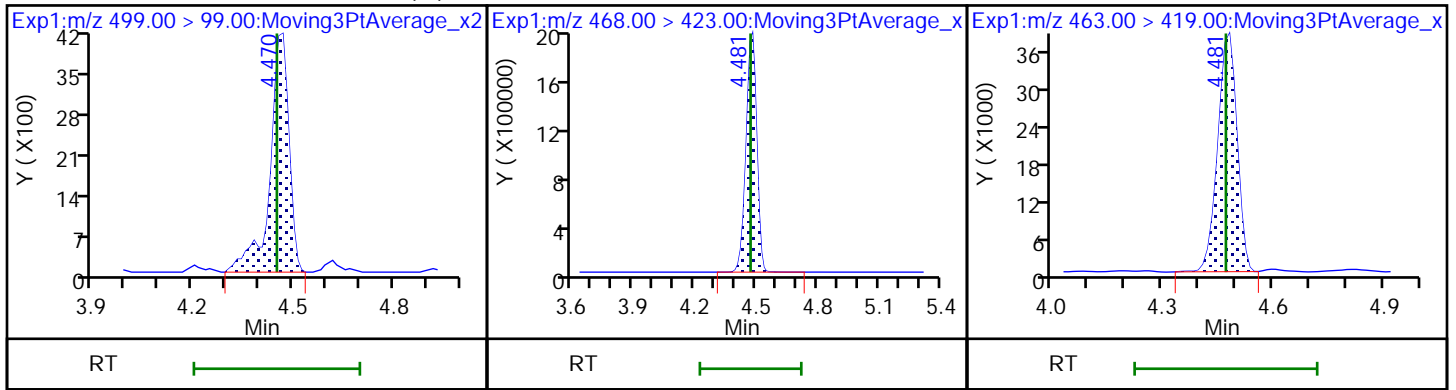






24 Perfluorooctanesulfonic acid (M) D 27 13C5 PFNA

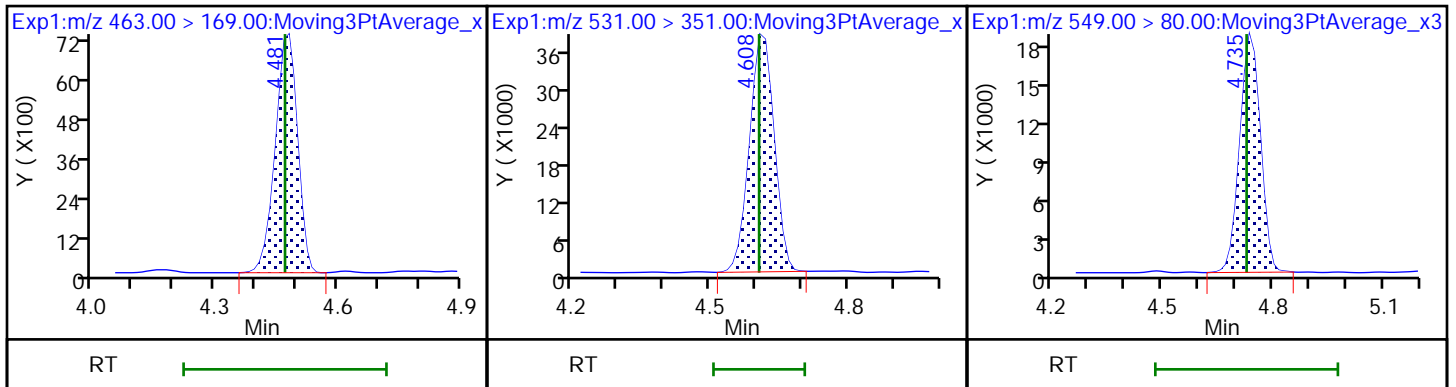
26 Perfluorononanoic acid



26 Perfluorononanoic acid

63 9CIFOS

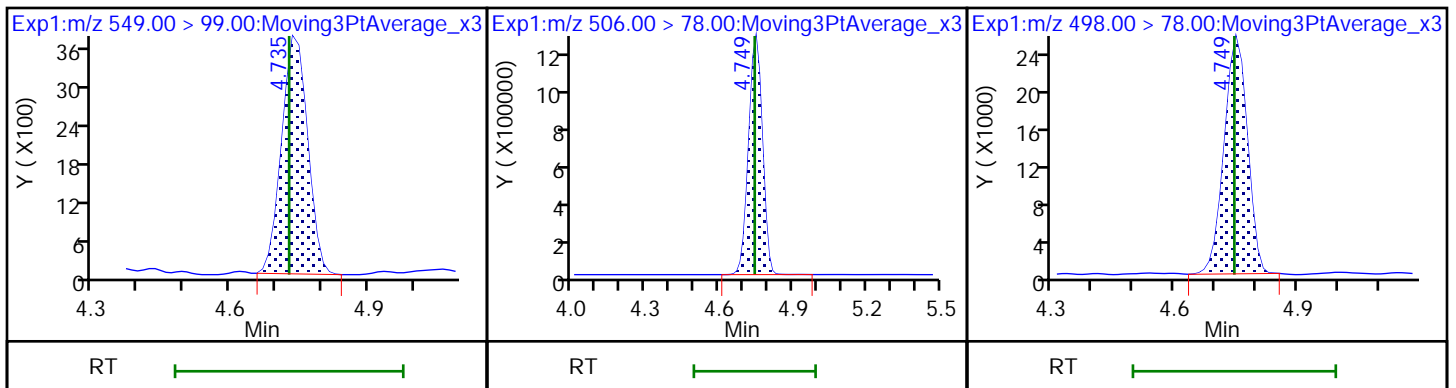
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

D 34 13C8 FOSA

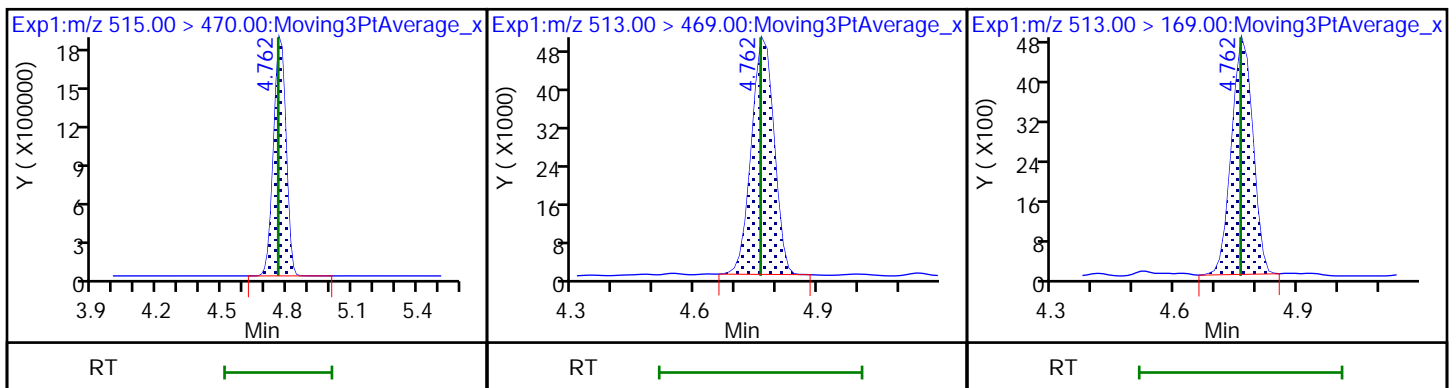
33 Perfluorooctanesulfonamide

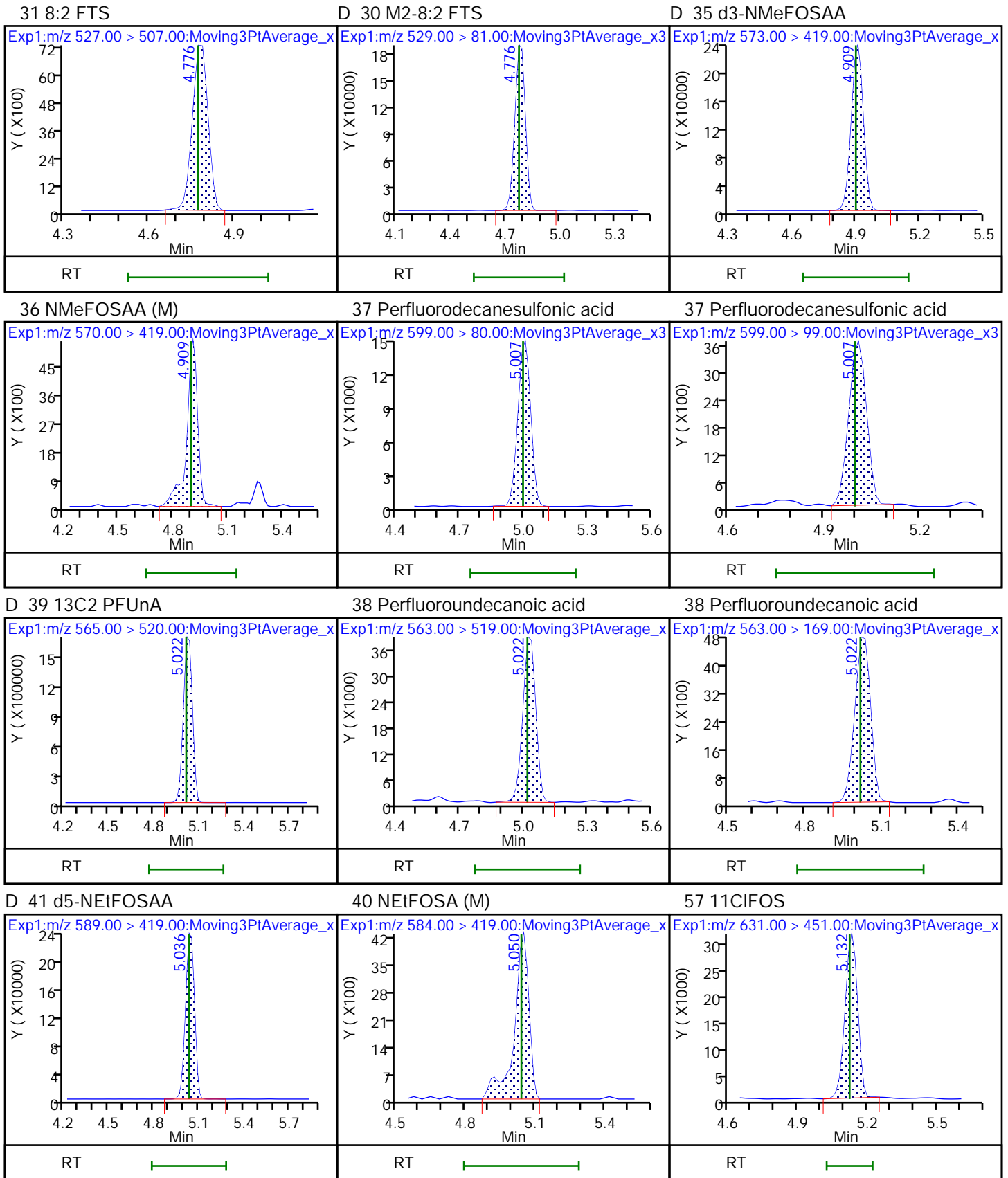


D 32 13C2 PFDA

29 Perfluorodecanoic acid

29 Perfluorodecanoic acid

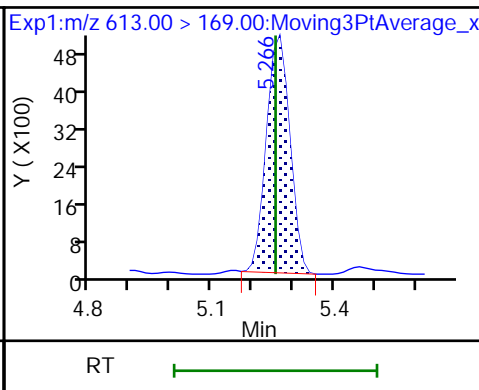
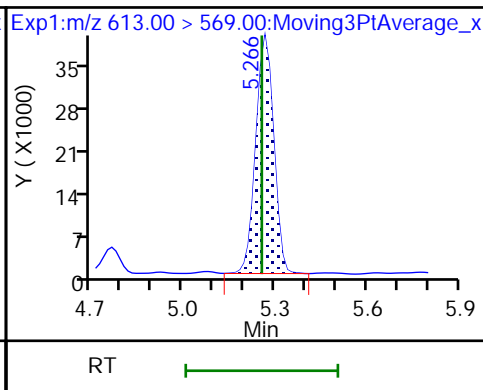
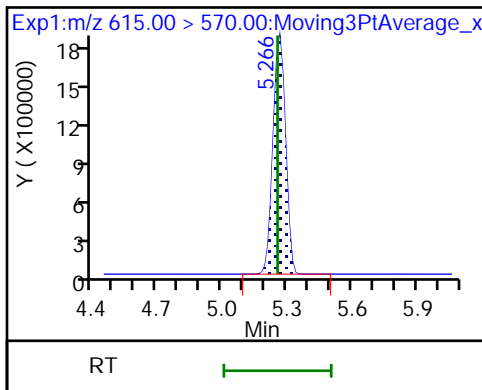




D 43 13C2 PFDoA

42 Perfluorododecanoic acid

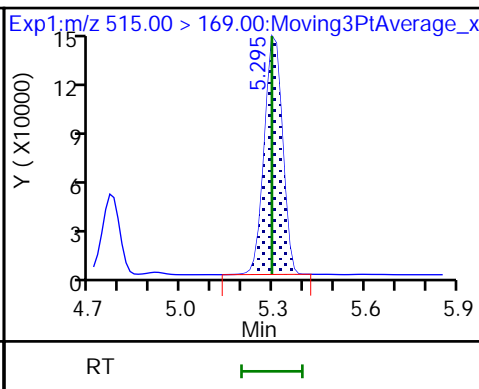
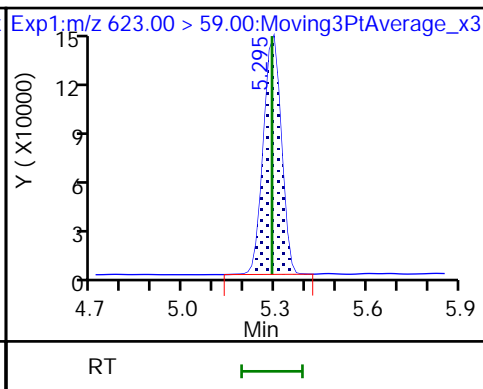
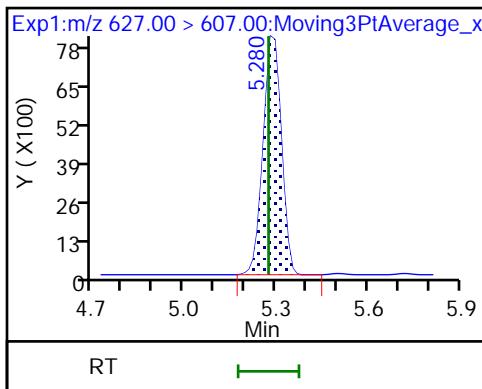
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

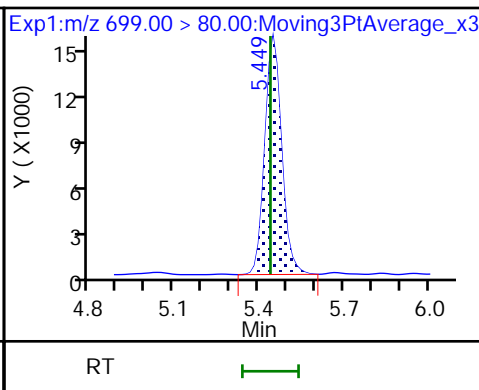
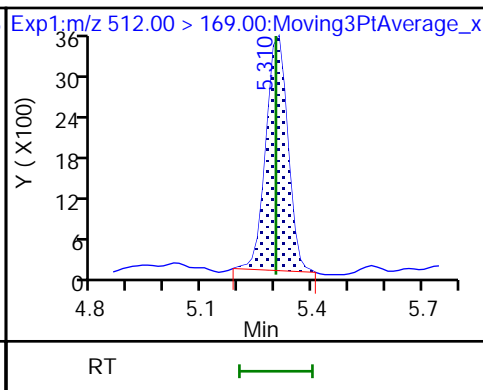
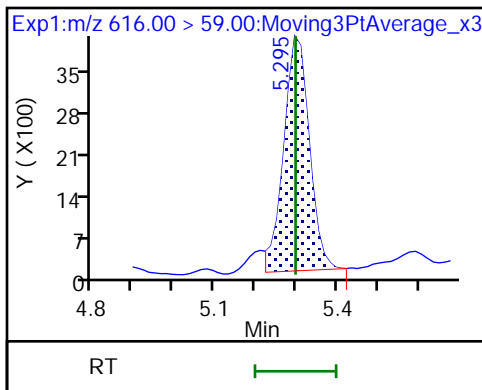
D 58 d-N-MeFOSEA-M



49 N-MeFOSE-M

61 NMeFOSEA

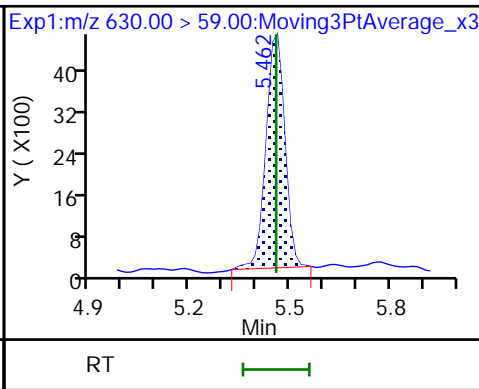
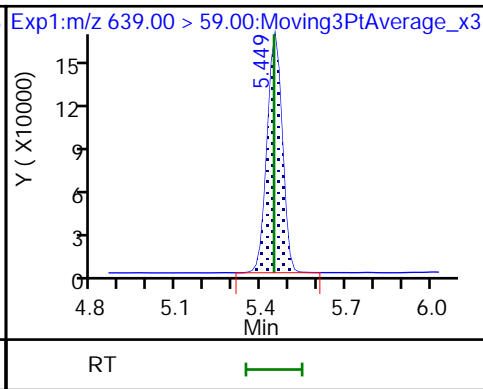
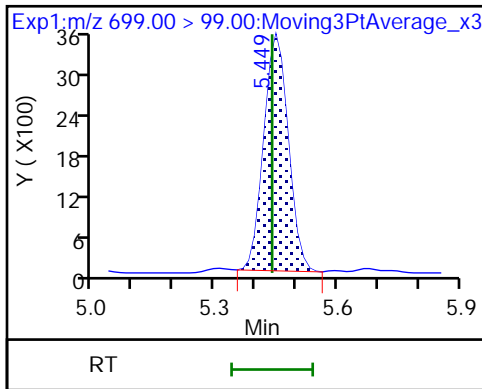
54 PFDoS



54 PFDoS

D 53 d9-N-EtFOSE-M

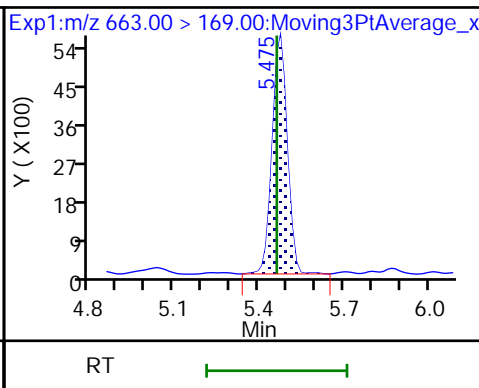
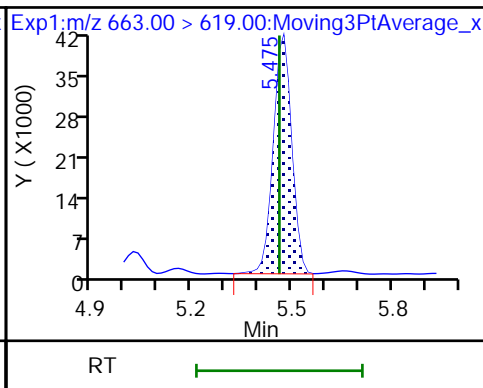
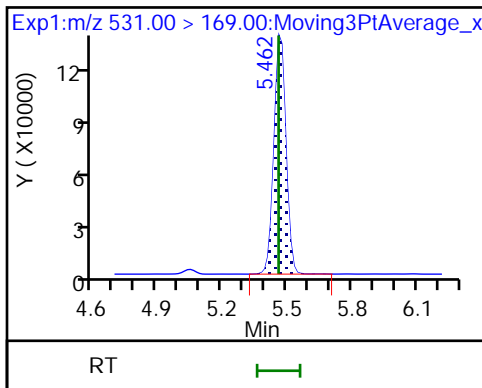
62 N-EtFOSE-M



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid

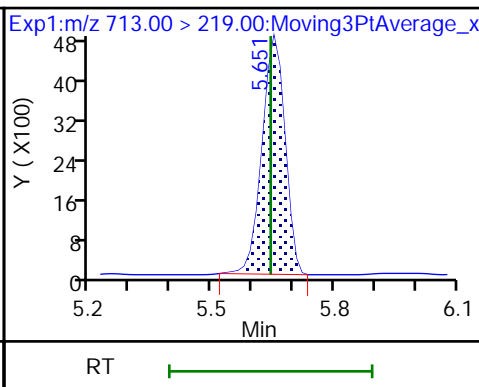
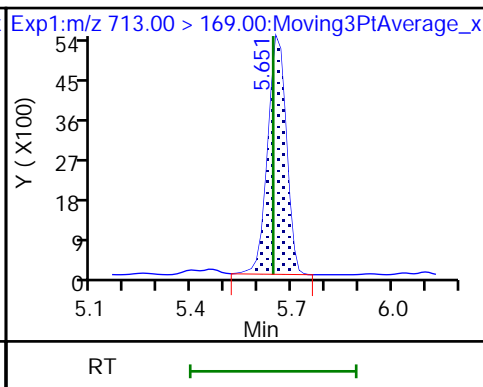
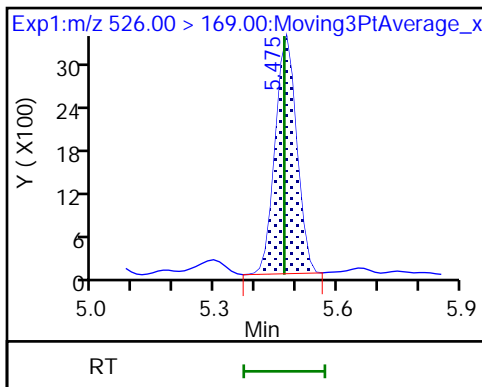
44 Perfluorotridecanoic acid



56 N-EtFOSA-M

45 Perfluorotetradecanoic acid

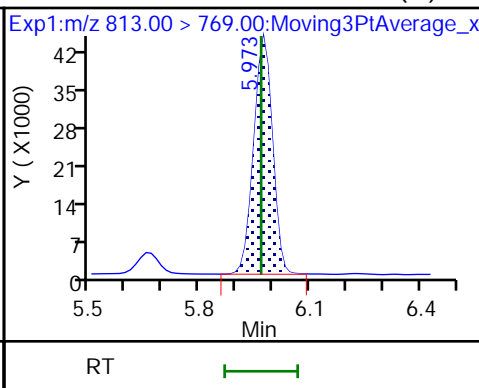
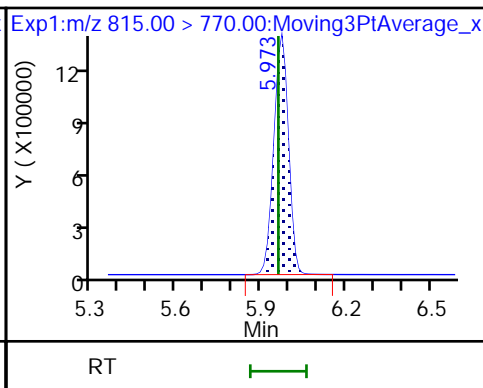
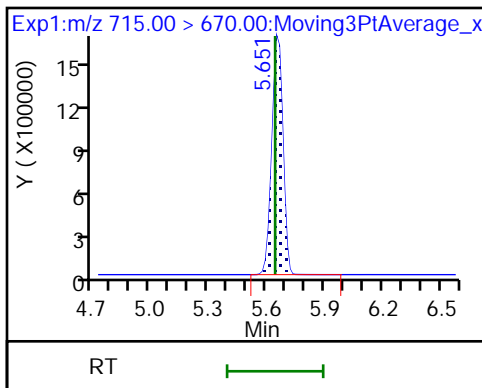
45 Perfluorotetradecanoic acid



D 46 13C2 PFTeDA

D 59 13C2 PFHxDA

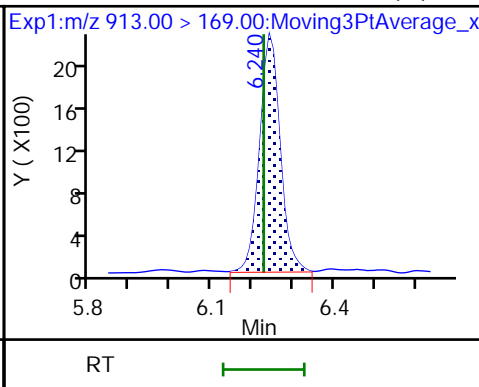
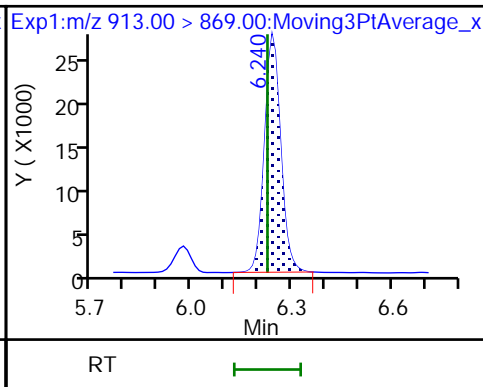
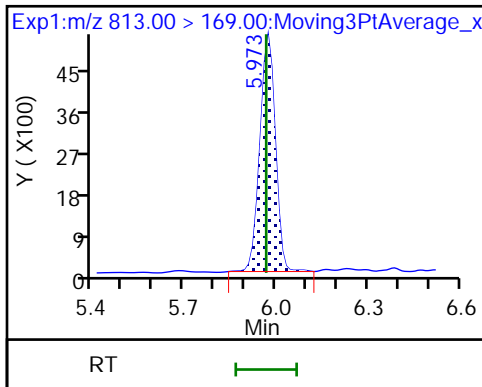
55 Perfluorohexadecanoic acid (M)



55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid (M)



Eurofins TestAmerica, Knoxville

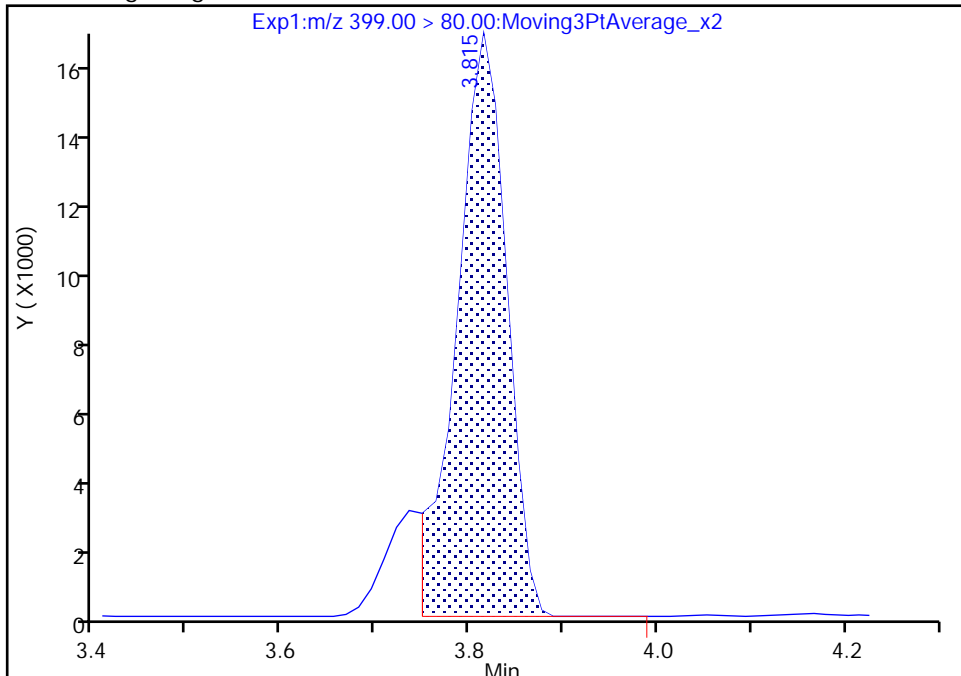
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Injection Date: 05-Oct-2021 22:00:59 Instrument ID: LCA
Lims ID: IC 1
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

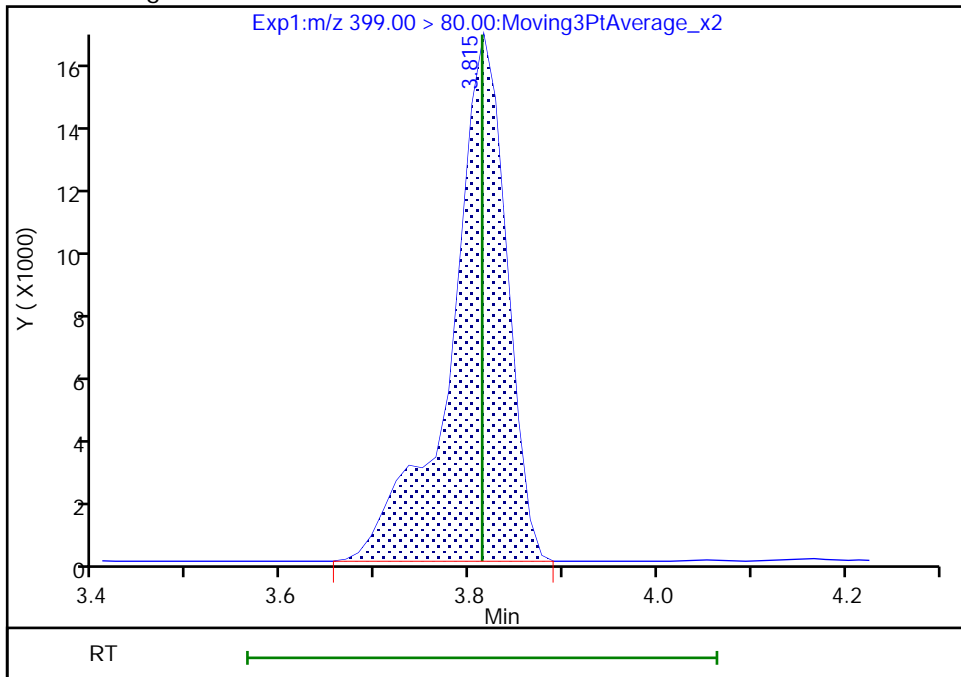
RT: 3.81
Area: 61724
Amount: 0.027054
Amount Units: ng/ml

Processing Integration Results



RT: 3.81
Area: 69897
Amount: 0.022544
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:49:35
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

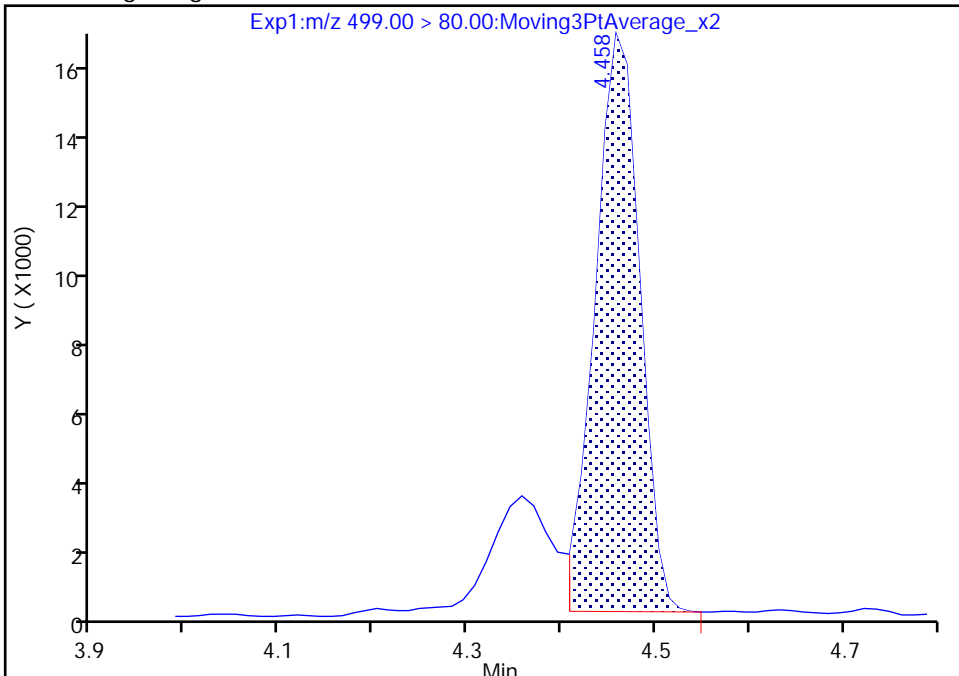
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Injection Date: 05-Oct-2021 22:00:59 Instrument ID: LCA
Lims ID: IC 1
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

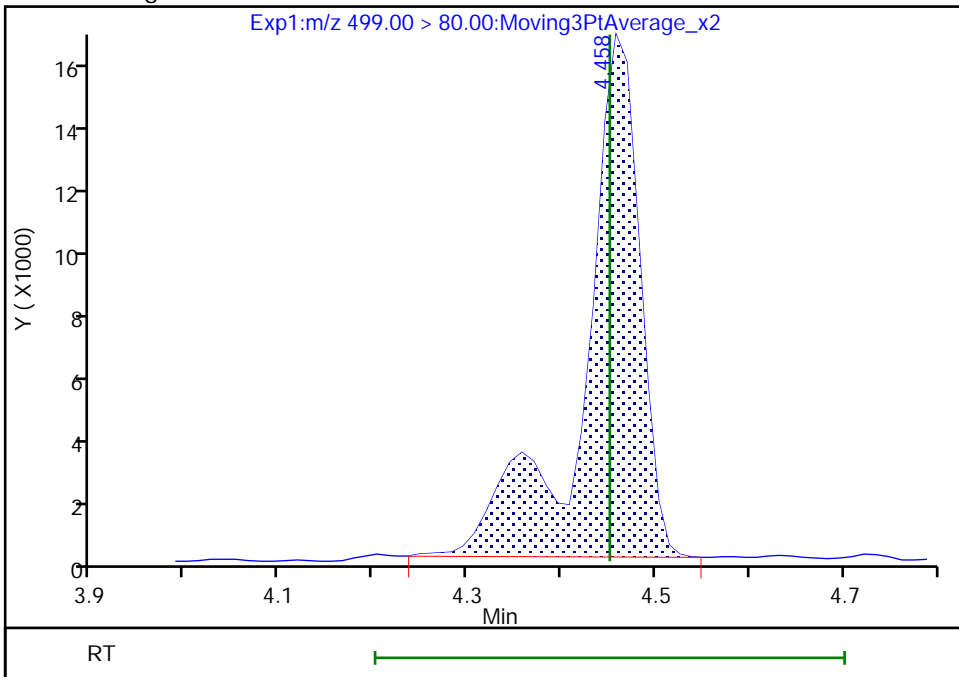
RT: 4.46
Area: 53289
Amount: 0.024771
Amount Units: ng/ml

Processing Integration Results



RT: 4.46
Area: 67658
Amount: 0.023954
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:49:55
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

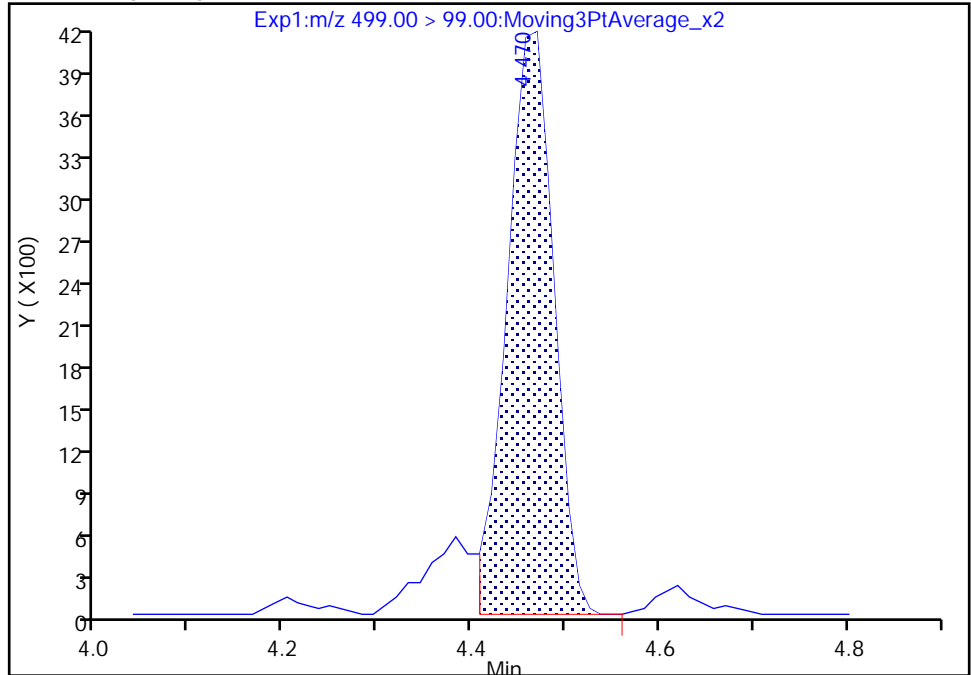
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Injection Date: 05-Oct-2021 22:00:59 Instrument ID: LCA
Lims ID: IC 1
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

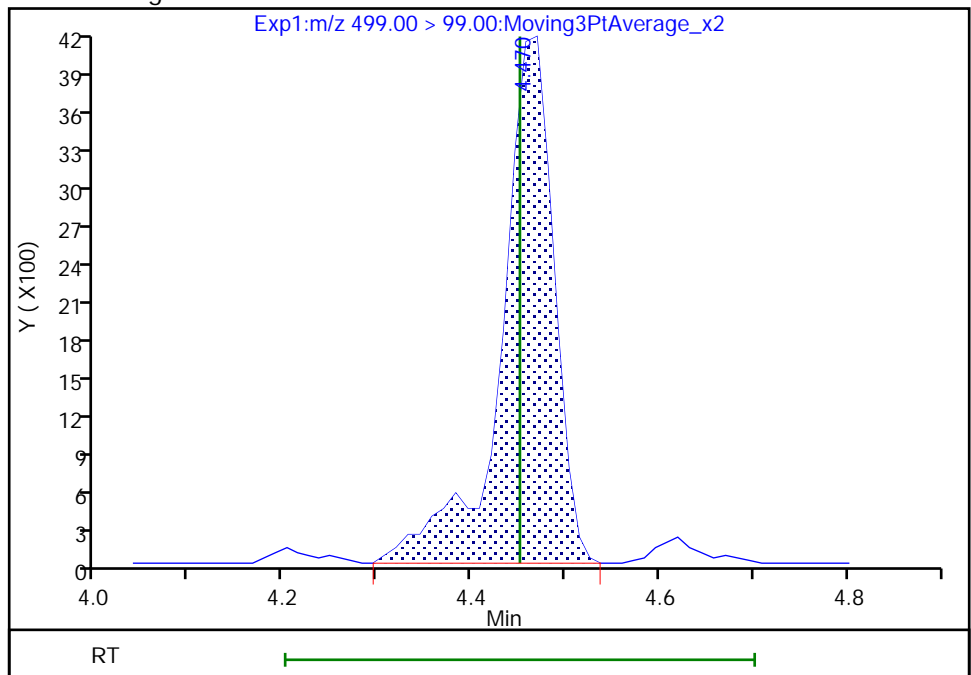
RT: 4.47
Area: 14174
Amount: 0.024771
Amount Units: ng/ml

Processing Integration Results



RT: 4.47
Area: 16161
Amount: 0.023954
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:50:04

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

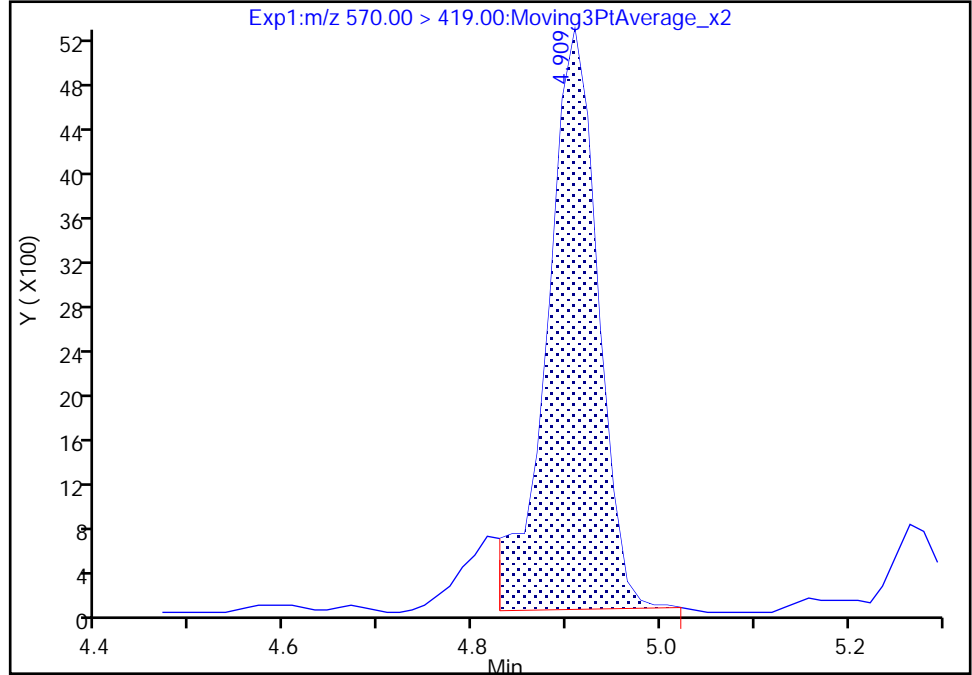
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Injection Date: 05-Oct-2021 22:00:59 Instrument ID: LCA
Lims ID: IC 1
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

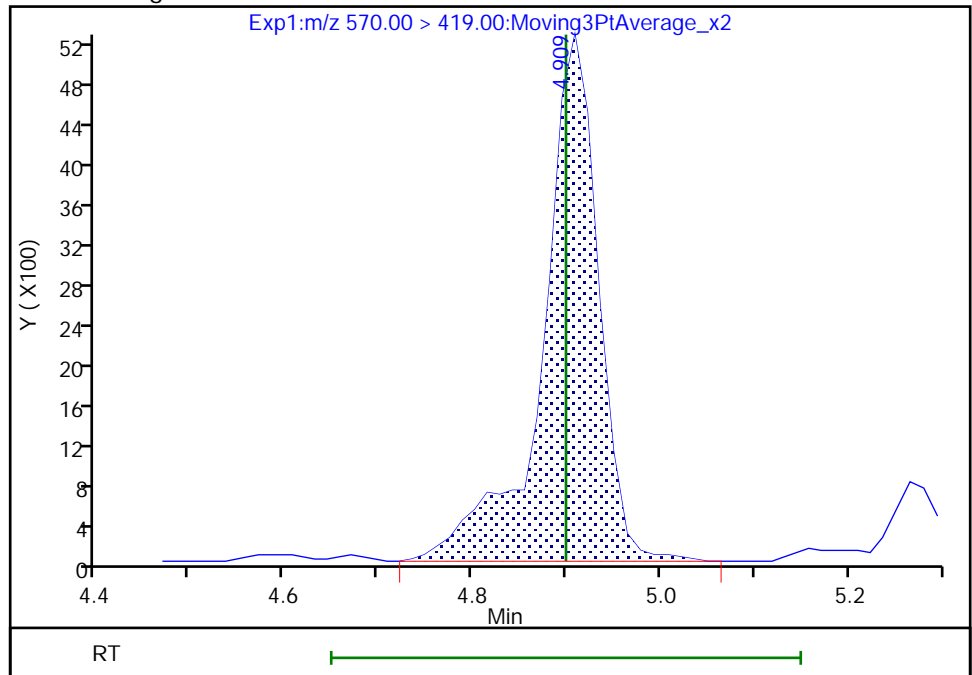
RT: 4.91
Area: 19644
Amount: 0.029858
Amount Units: ng/ml

Processing Integration Results



RT: 4.91
Area: 21967
Amount: 0.025325
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:50:20
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

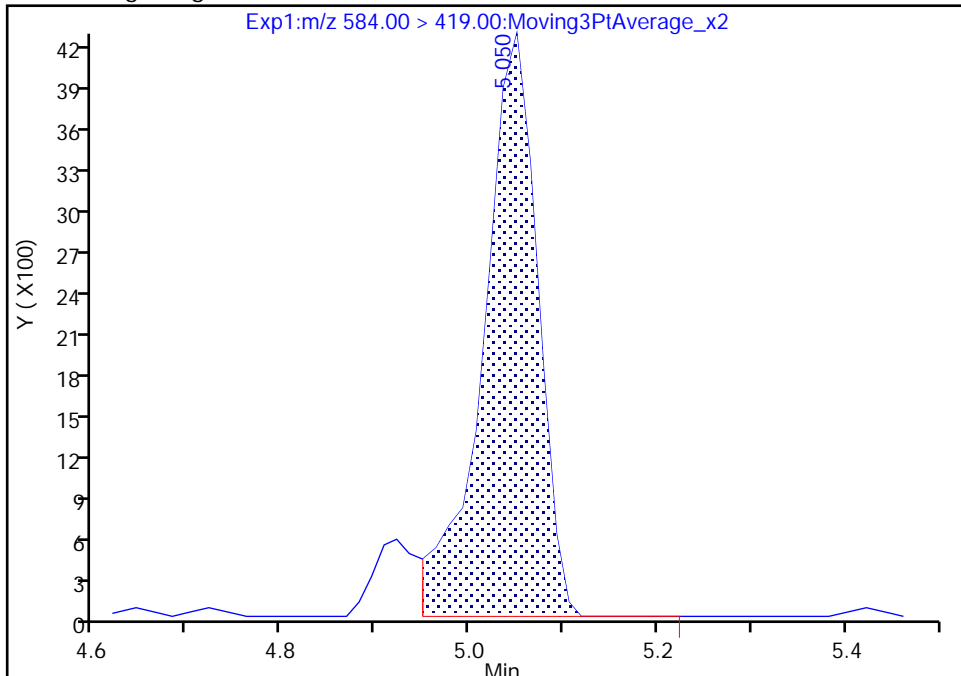
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_006.d
Injection Date: 05-Oct-2021 22:00:59 Instrument ID: LCA
Lims ID: IC 1
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

40 NEtFOSA, CAS: 2991-50-6

Signal: 1

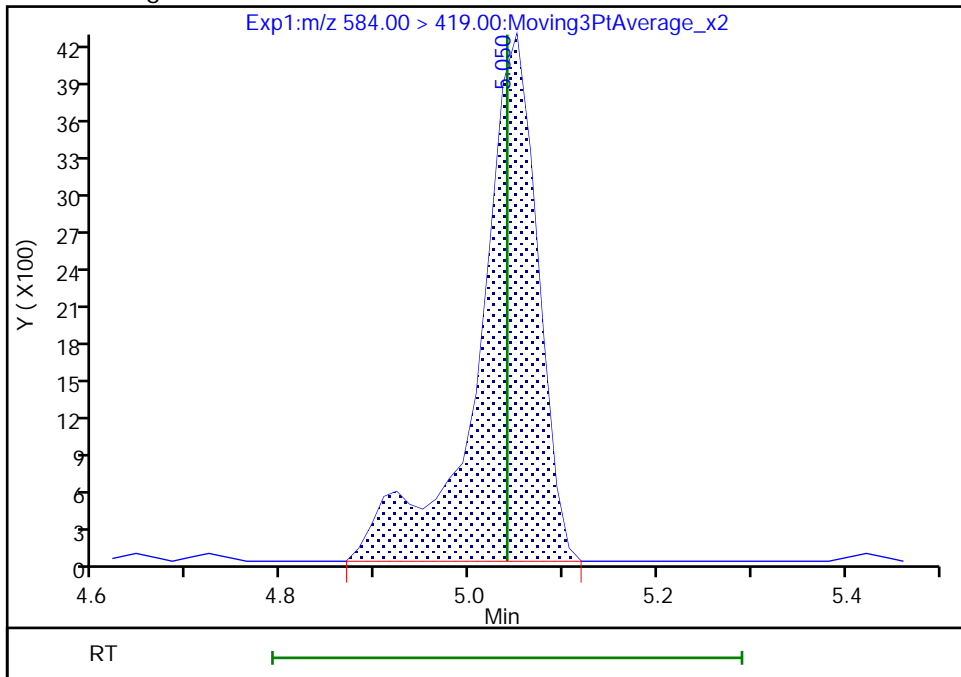
RT: 5.05
Area: 17270
Amount: 0.024713
Amount Units: ng/ml

Processing Integration Results



RT: 5.05
Area: 19038
Amount: 0.025675
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:50:30
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

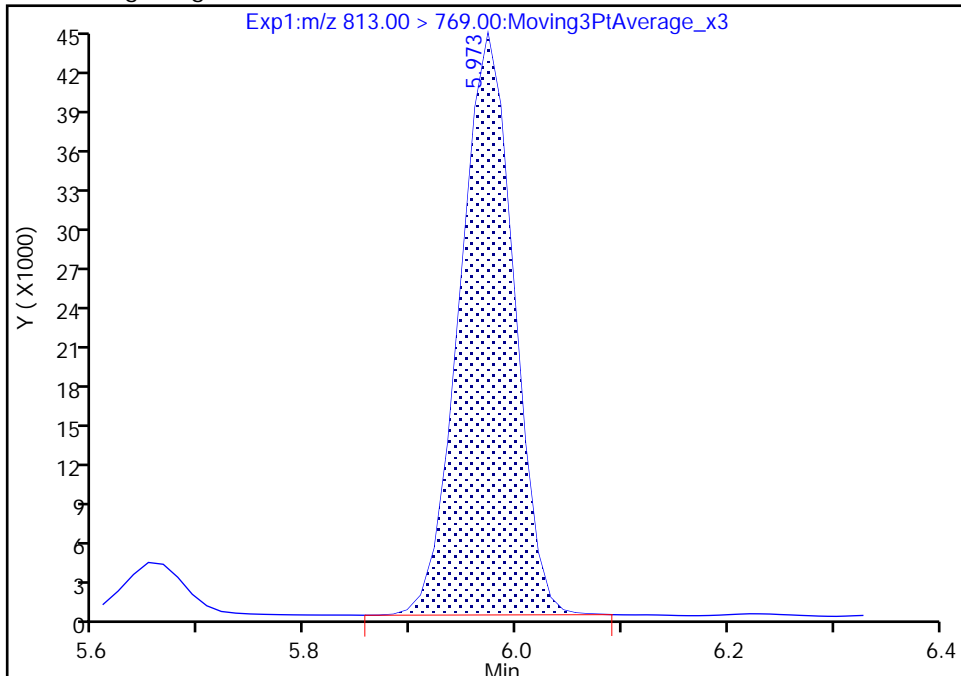
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Injection Date: 05-Oct-2021 22:00:59 Instrument ID: LCA
Lims ID: IC 1
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

55 Perfluorohexadecanoic acid, CAS: 67905-19-5

Signal: 1

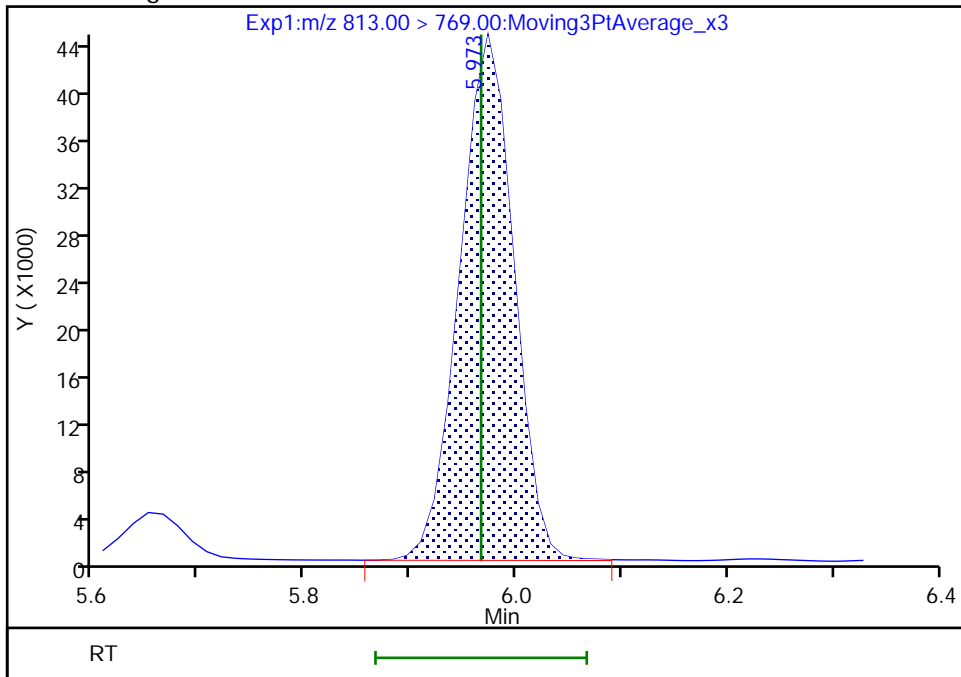
RT: 5.97
Area: 155218
Amount: 0.034588
Amount Units: ng/ml

Processing Integration Results



RT: 5.97
Area: 155694
Amount: 0.024559
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:15:35
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

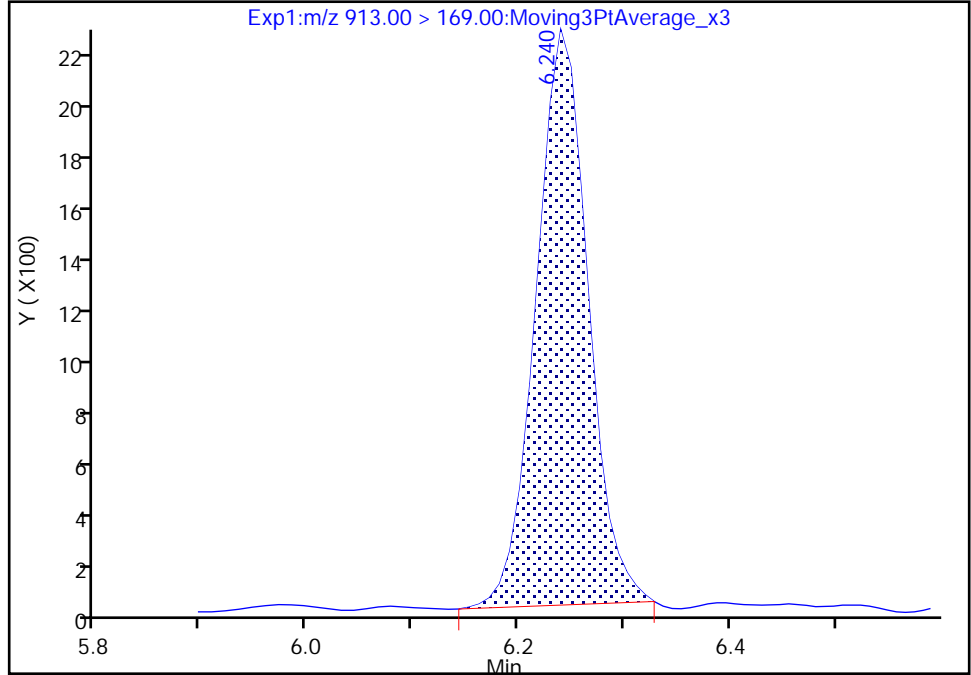
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Injection Date: 05-Oct-2021 22:00:59 Instrument ID: LCA
Lims ID: IC 1
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

60 Perfluorooctadecanoic acid, CAS: 16517-11-6

Signal: 2

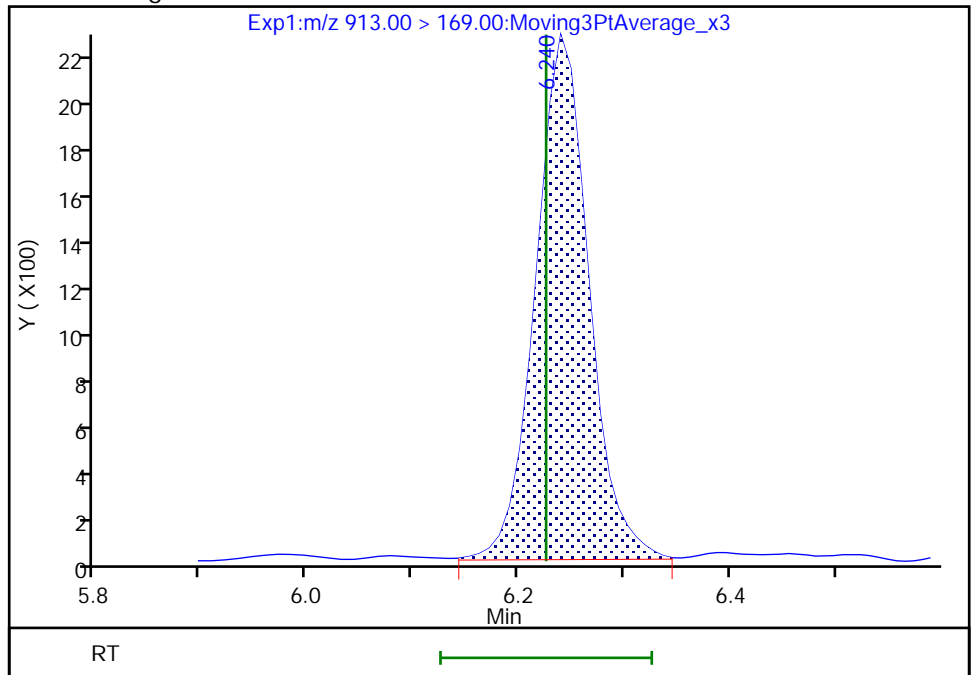
RT: 6.24
Area: 7596
Amount: 0.026724
Amount Units: ng/ml

Processing Integration Results



RT: 6.24
Area: 7844
Amount: 0.026724
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:51:18
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_007.d
 Lims ID: IC 2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 05-Oct-2021 22:09:48 ALS Bottle#: 7 Worklist Smp#: 7
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020953-007 ic 2
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15

Method: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 07-Oct-2021 14:21:00 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1613

First Level Reviewer: cochranj Date: 06-Oct-2021 15:58:50

Ratio Calibration: None

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	2.812	2.812	0.0	1.000	244540	0.0535		107	32.9	
D 1 13C4 PFBA										
217.00 > 172.00	2.812	2.812	0.0	0.675	7272665	1.22		97.5	13790	
D 3 13C5 PFPeA										
267.90 > 223.00	3.129	3.130	-0.001	0.751	6008895	1.23		98.1	9439	
4 Perfluoropentanoic acid										
262.90 > 219.00	3.143	3.131	0.012	1.004	263929	0.0542		108	60.9	
D 6 13C3 PFBS										
301.90 > 80.00	3.143	3.143	0.0	0.754	3594749	1.14		97.8	17676	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	3.157	3.151	0.006	1.004	161928	0.0465	Target=3.06	105	475	
298.90 > 99.00	3.157	3.151	0.006	1.004	59880		2.70(1.53-4.59)	105	180	
7 4:2 FTS										
327.00 > 307.00	3.437	3.431	0.006	1.000	62062	0.0508		109	1086	
D 8 M2-4:2 FTS										
329.00 > 81.00	3.437	3.431	0.006	0.825	570559	1.20		103	606	
11 Perfluoropentanesulfonic acid										
349.00 > 80.00	3.482	3.468	0.014	1.108	143856	0.0492	Target=3.47	105	1601	
349.00 > 99.00	3.469	3.468	0.001	1.104	42142		3.41(1.73-5.20)	105	749	
D 9 13C2 PFHxA										
315.00 > 270.00	3.482	3.471	0.011	0.836	6243564	1.24		99.3	9485	
10 Perfluorohexanoic acid										
313.00 > 269.00	3.482	3.471	0.011	1.000	232467	0.0543	Target=9.74	109	129	M
313.00 > 119.00	3.482	3.471	0.011	1.000	17423		13.34(4.87-14.61)	109	63.8	M
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.575	3.565	0.010	0.858	3086719	1.20		95.9	8153	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.575	3.565	0.010	1.000	189596	0.0495		99.0	120	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.827	3.813	0.014	1.000	132033	0.0460	Target=2.96	101	476	M
399.00 > 99.00	3.827	3.813	0.014	1.000	40366		3.27(1.48-4.44)	101	422	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.827	3.813	0.014	0.919	2261386	1.18		99.9	9829	
D 14 13C4 PFHpA										
367.00 > 322.00	3.827	3.819	0.008	0.919	6219868	1.24		99.2	11381	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.827	3.819	0.008	1.000	296091	0.0519	Target=3.35	104	246	
363.00 > 169.00	3.827	3.819	0.008	1.000	82042		3.61(1.67-5.02)	104	571	
68 DONA										
377.00 > 251.00	3.864	3.850	0.014	0.865	426633	0.0520	Target=1.49	110	1178	
377.00 > 85.00	3.864	3.850	0.014	0.865	232688		1.83(0.74-2.23)	110	1349	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.155	4.143	0.012	0.930	131799	0.0524	Target=3.73	110	831	
449.00 > 99.00	4.155	4.143	0.012	0.930	32047		4.11(1.87-5.61)	110	223	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.167	4.151	0.016	1.000	600900	1.24		104	823	
D 21 13C4 PFOA										
417.00 > 372.00	4.167	4.155	0.012	1.000	5777544	1.27		102	19276	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.155	4.146	0.009	0.997	5593233	1.26		100	22703	
19 6:2 FTS										
427.00 > 407.00	4.167	4.151	0.016	1.000	59326	0.0517		109	402	
* 22 13C2 PFOA										
415.00 > 370.00	4.167	4.155	0.012		5631791	1.25			12126	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.167	4.156	0.011	1.000	295123	0.0494	Target=2.40	98.9	98.1	
413.00 > 169.00	4.167	4.156	0.011	1.000	105261		2.80(1.20-3.61)	98.9	253	
D 25 13C4 PFOS										
503.00 > 80.00	4.470	4.451	0.019	1.073	3022370	1.15		95.9	8839	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.458	4.446	0.012	1.070	663148	1.17		98.1	3312	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.470	4.451	0.019	1.000	132719	0.0477	Target=3.83	103	217	M
499.00 > 99.00	4.470	4.451	0.019	1.000	31095		4.27(1.91-5.74)	103	139	M
D 27 13C5 PFNA										
468.00 > 423.00	4.481	4.471	0.010	1.075	6735203	1.17		93.5	22183	
26 Perfluorononanoic acid										
463.00 > 419.00	4.481	4.471	0.010	1.000	247402	0.0500	Target=3.68	99.9	171	
463.00 > 169.00	4.481	4.471	0.010	1.000	49675		4.98(1.84-5.52)	99.9	180	
63 9CIFOS										
531.00 > 351.00	4.620	4.606	0.014	1.109	283194	0.0485		104	497	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.736	4.728	0.008	1.059	135991	0.0516	Target=3.97	107	800	
549.00 > 99.00	4.736	4.728	0.008	1.059	32881		4.14(1.99-5.96)	107	173	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.749	4.745	0.004	1.000	189353	0.0501		100	372	
D 34 13C8 FOSA										
506.00 > 78.00	4.749	4.743	0.006	1.140	4922112	1.27		102	5425	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.776	4.760	0.016	1.000	339239	0.0506	Target=10.11	101	185	
513.00 > 169.00	4.776	4.760	0.016	1.000	27194		12.47(5.06-15.17)	101	78.3	
D 32 13C2 PFDA										
515.00 > 470.00	4.776	4.758	0.018	1.146	7353570	1.26		101	33155	
31 8:2 FTS										
527.00 > 507.00	4.789	4.774	0.015	1.000	55047	0.0495		103	523	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.789	4.774	0.015	1.149	747134	1.26		105	1720	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.909	4.899	0.010	1.178	987298	1.24		98.8	3910	
36 NMeFOSAA										
570.00 > 419.00	4.909	4.899	0.010	1.000	40014	0.0481		96.1	68.3	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	5.007	4.997	0.010	1.120	131183	0.0542	Target=3.80	112	734	
599.00 > 99.00	5.007	4.997	0.010	1.120	33172		3.95(1.90-5.70)	112	212	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.022	5.018	0.004	1.000	307117	0.0510	Target=7.45	102	266	
563.00 > 169.00	5.022	5.018	0.004	1.000	34044		9.02(3.78-11.33)	102	190	
D 39 13C2 PFUnA										
565.00 > 520.00	5.022	5.015	0.007	1.205	6782308	1.22		97.3	39549	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.050	5.034	0.016	1.212	958230	1.25		99.8	3708	
40 NEtFOSA										
584.00 > 419.00	5.050	5.040	0.010	1.000	42754	0.0587		117	177	M
57 11C1FOS										
631.00 > 451.00	5.132	5.122	0.010	1.148	244018	0.0519		110	636	
D 43 13C2 PFDa										
615.00 > 570.00	5.266	5.255	0.011	1.264	6949236	1.17		93.5	19527	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.266	5.255	0.011	1.000	333197	0.0544	Target=5.33	109	176	
613.00 > 169.00	5.266	5.255	0.011	1.000	42680		7.81(2.66-7.99)	109	108	
50 10:2 FTS										
627.00 > 607.00	5.280	5.274	0.006	1.103	69862	0.0504		105	799	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.295	5.289	0.006	1.271	575299	1.19		95.0	365	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.271	604340	1.20		95.9	42.2	
49 N-MeFOSE-M										
616.00 > 59.00	5.310	5.297	0.013	1.003	33495	0.0552		110	34.0	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.310	5.301	0.009	1.003	27409	0.0541		108	101	
54 PFDoS										
699.00 > 80.00	5.449	5.439	0.010	1.219	125689	0.0503	Target=4.32	104	582	
699.00 > 99.00	5.449	5.439	0.010	1.219	29825		4.21(2.19-6.58)	104	210	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.449	5.445	0.004	1.308	646520	1.25		100	680	
62 N-EtFOSE-M										M
630.00 > 59.00	5.462	5.458	0.004	1.002	35981	0.0508		102	86.6	M
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.460	0.002	1.311	516960	1.22		97.4	681	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.462	5.462	0.0	1.037	291224	0.0536	Target=5.66	107	134	
663.00 > 169.00	5.462	5.462	0.0	1.037	45187		6.44(2.83-8.48)	107	200	
56 N-EtFOSA-M										
526.00 > 169.00	5.475	5.469	0.006	1.002	26074	0.0540		108	158	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.651	5.643	0.008	1.356	6455611	1.18		94.7	25317	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.651	5.643	0.008	1.000	38423	0.0523	Target=1.07	105	351	
713.00 > 219.00	5.651	5.643	0.008	1.000	33621		1.14(0.53-1.60)	105	471	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.961	5.961	0.0	1.430	4697373	1.19		95.0	7884	
55 Perfluorohexadecanoic acid										M
813.00 > 769.00	5.961	5.967	-0.006	1.000	265142	0.0513	Target=7.50	103	223	M
813.00 > 169.00	5.961	5.967	-0.006	1.000	33449		7.93(3.75-11.26)	103	188	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.230	6.226	0.004	1.045	183269	0.0537	Target=9.98	107	248	
913.00 > 169.00	6.230	6.226	0.004	1.045	15307		11.97(5.14-15.41)	107	234	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L2PFC2_00003

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_007.d

Injection Date: 05-Oct-2021 22:09:48

Instrument ID: LCA

Lims ID: IC 2

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 7

Worklist Smp#: 7

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

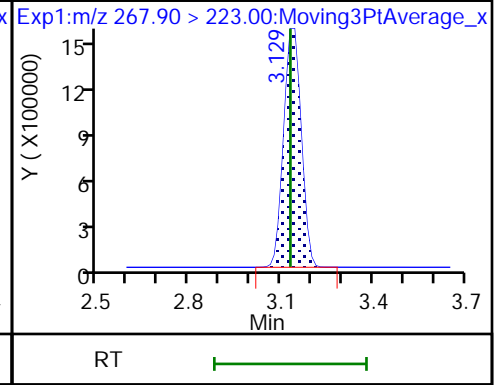
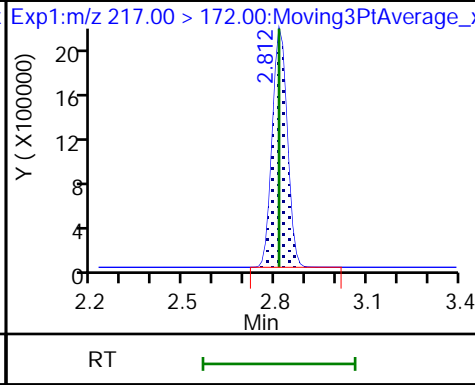
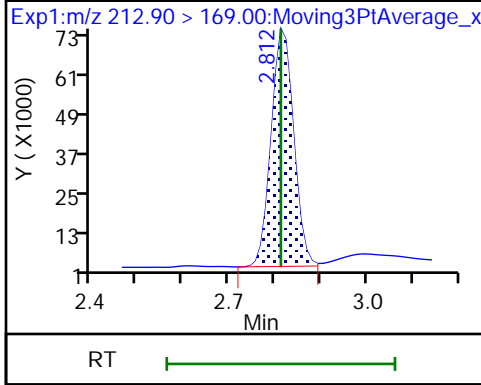
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

2 Perfluorobutanoic acid

D 1 13C4 PFBA

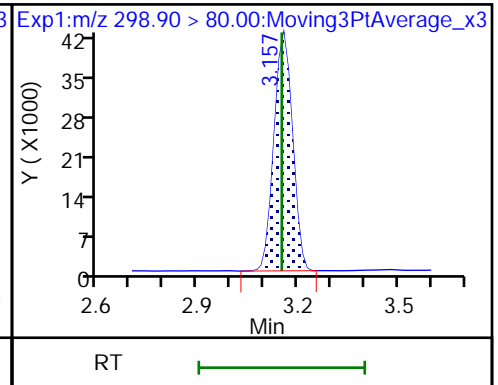
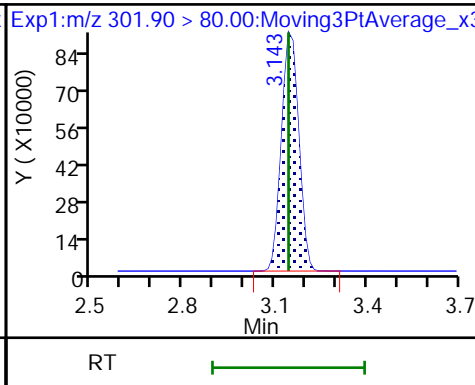
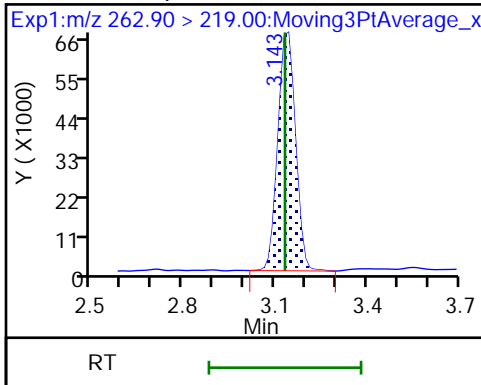
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

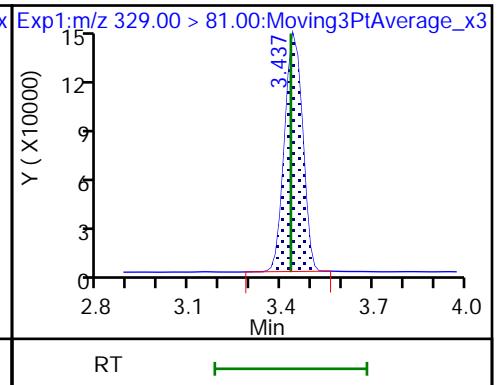
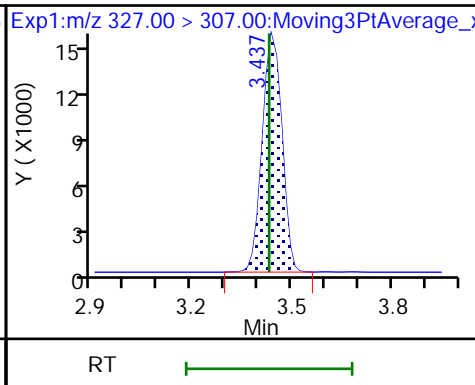
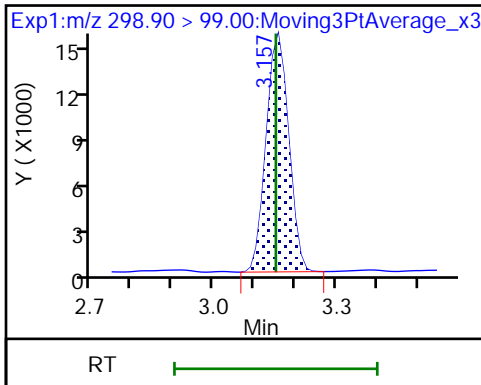
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

7 4:2 FTS

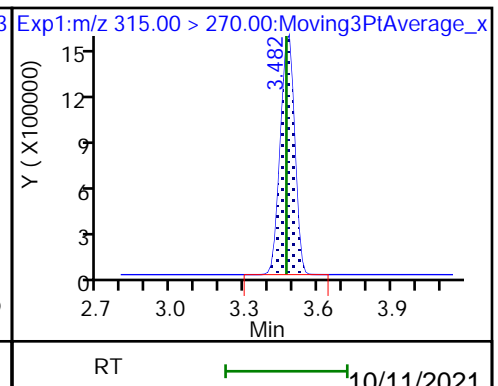
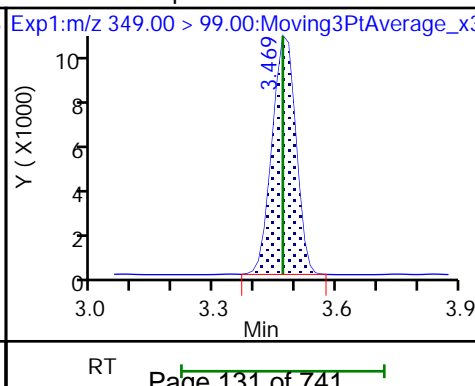
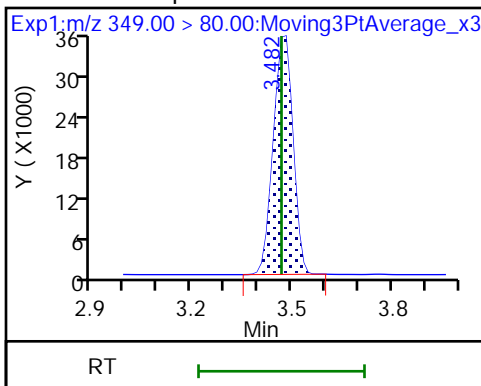
D 8 M2-4:2 FTS

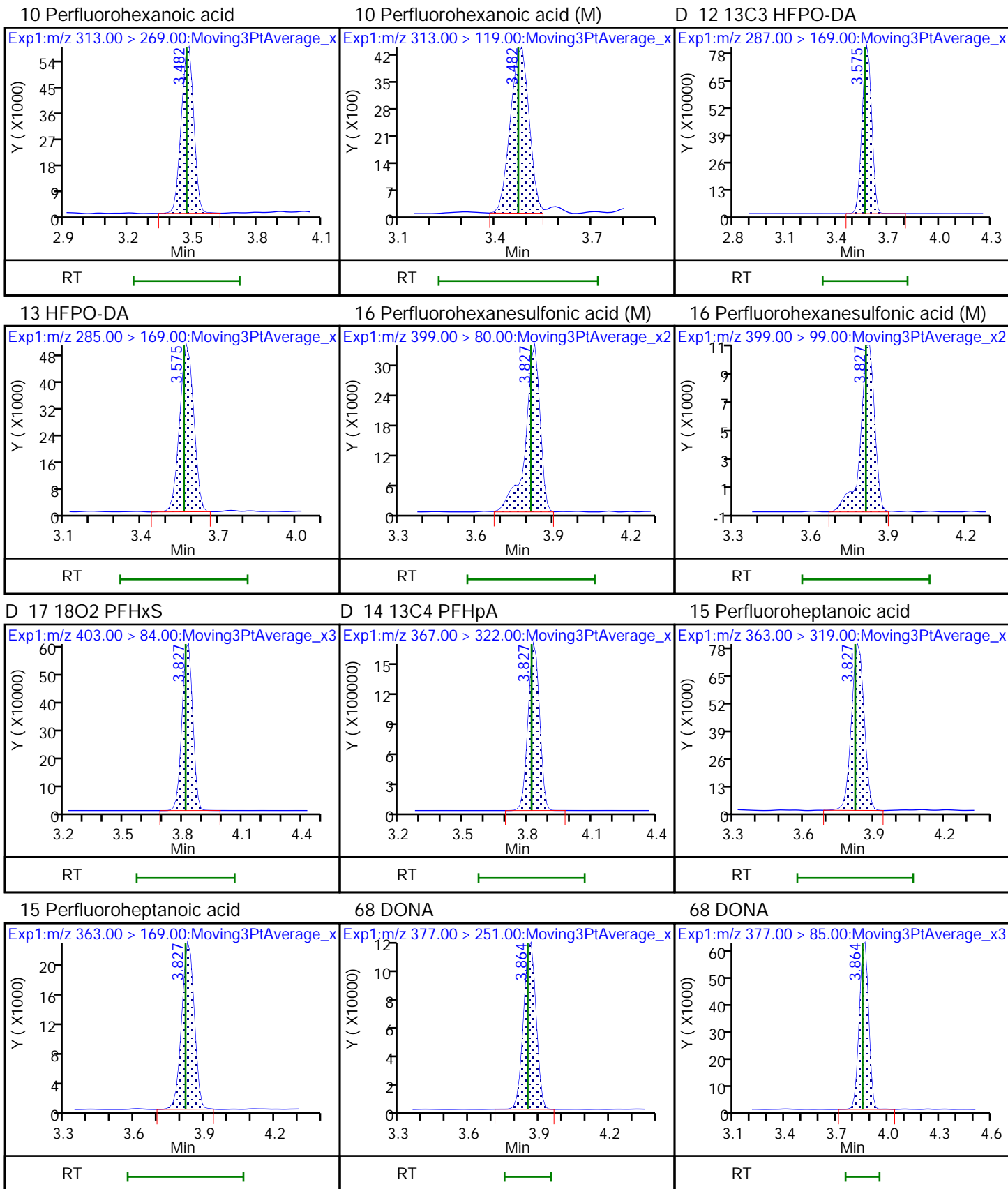


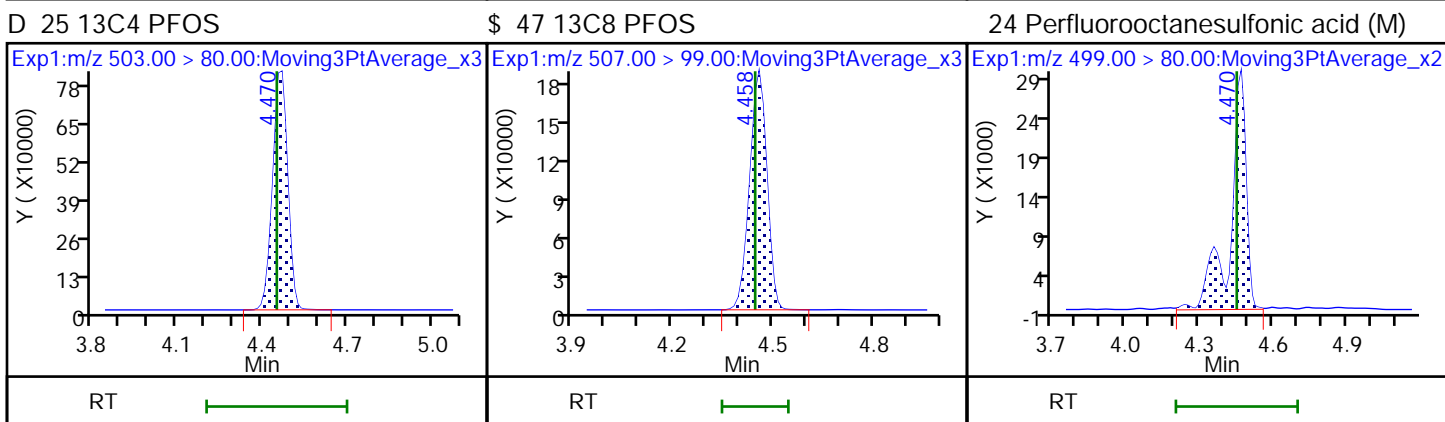
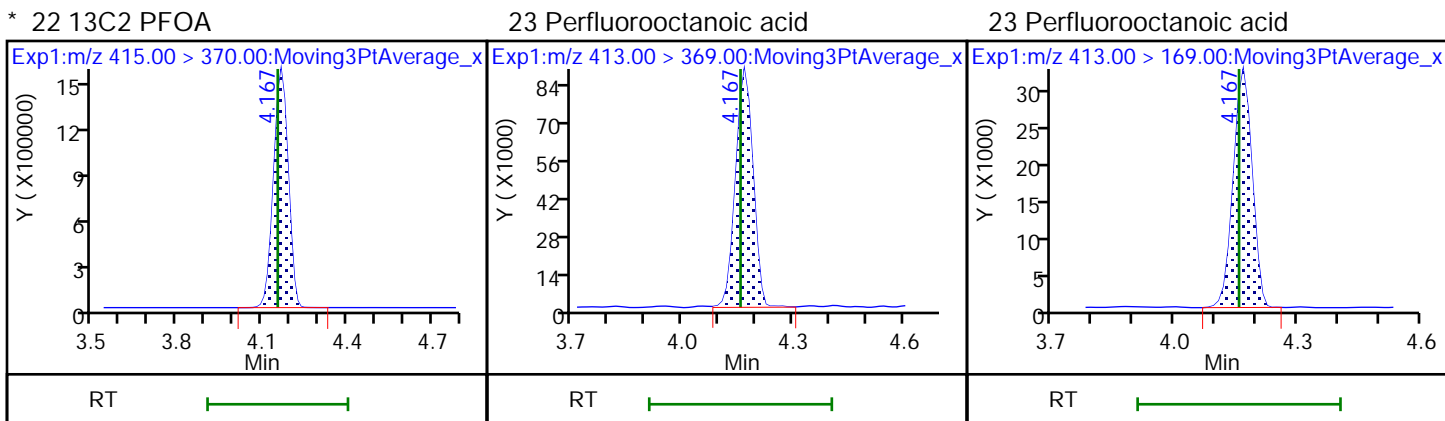
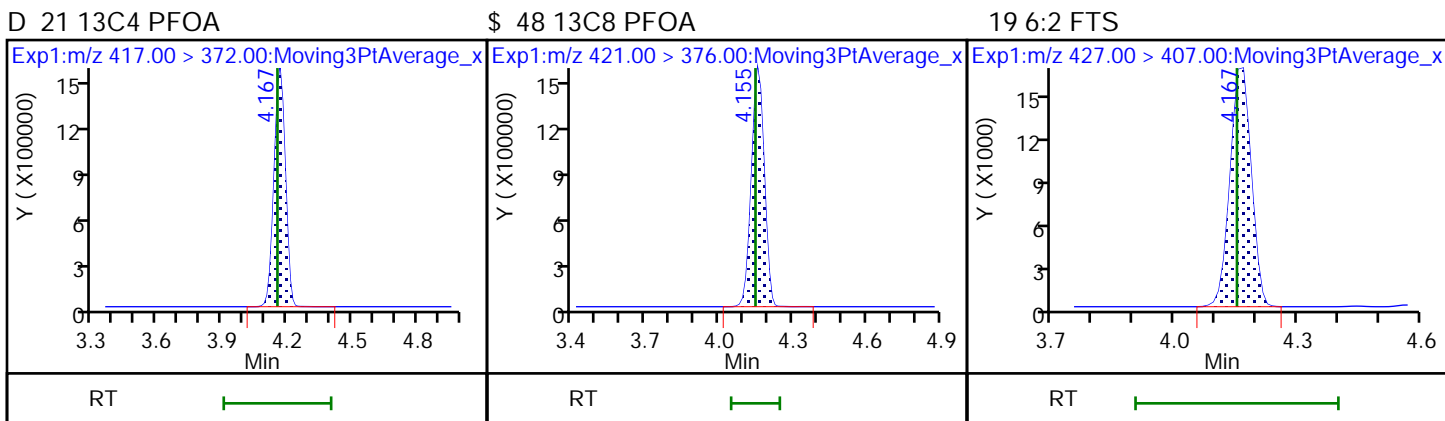
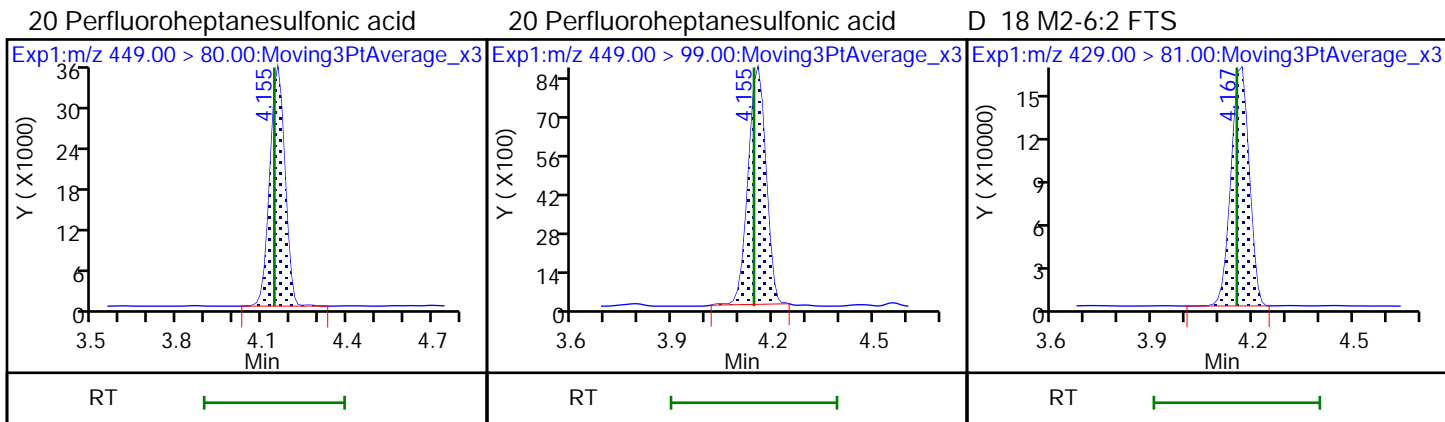
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

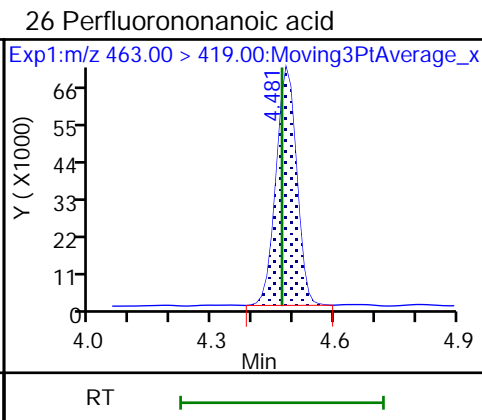
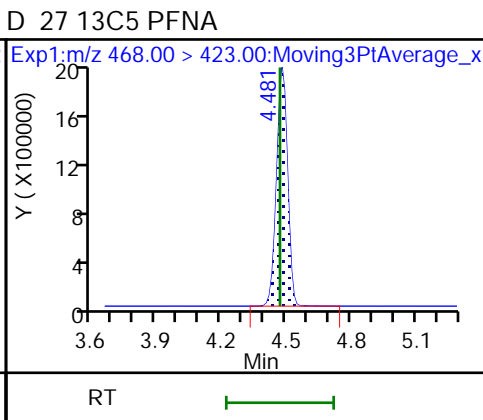
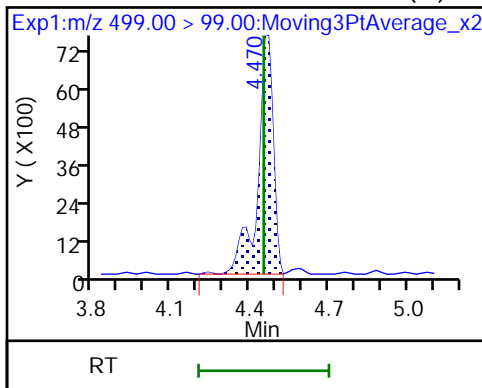
D 9 13C2 PFHxA







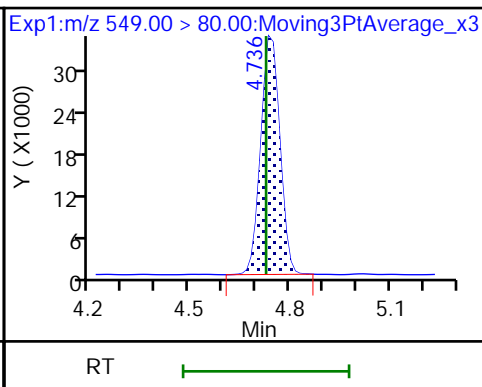
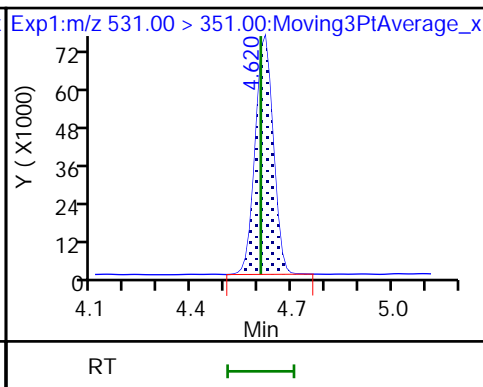
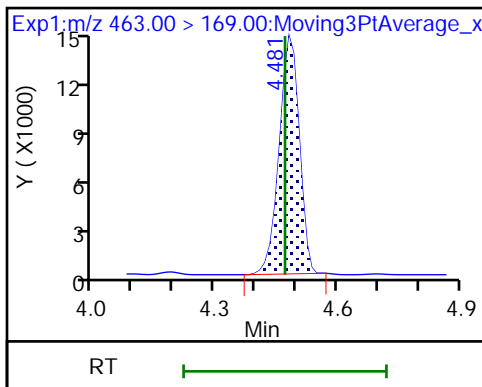
24 Perfluorooctanesulfonic acid (M) D 27 13C5 PFNA



26 Perfluorononanoic acid

63 9CIFOS

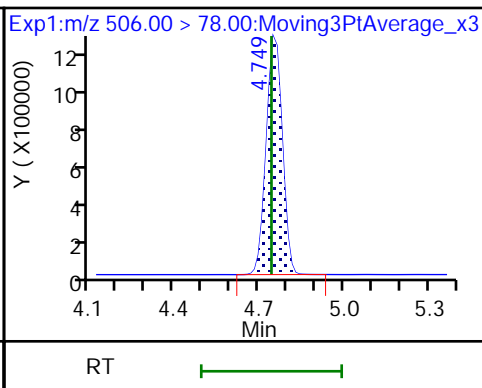
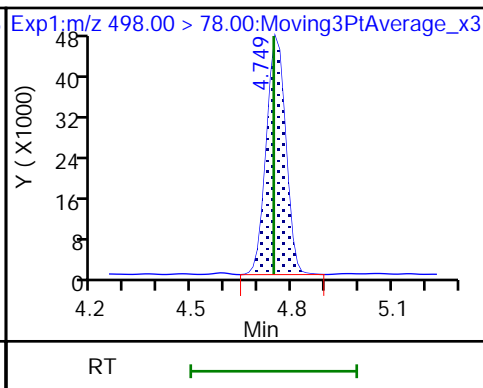
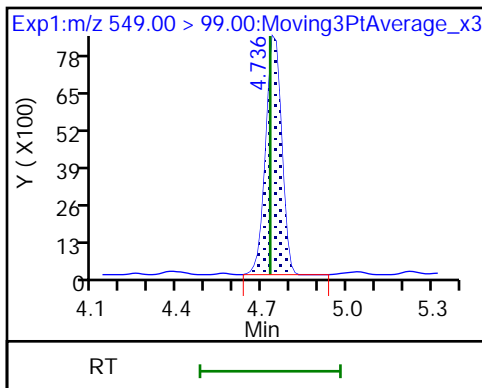
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

33 Perfluorooctanesulfonamide

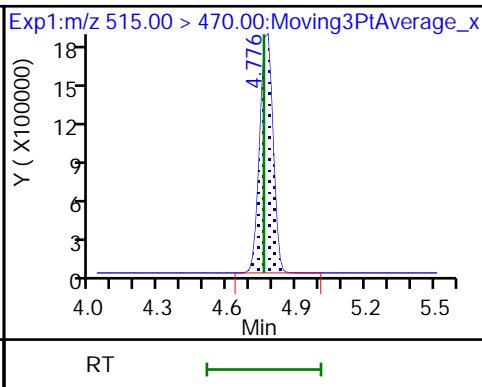
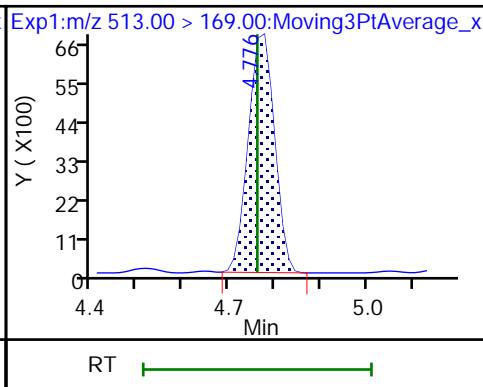
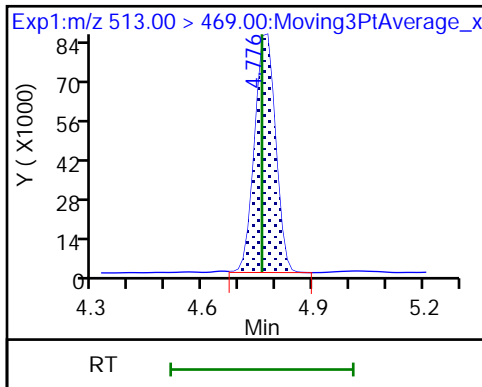
D 34 13C8 FOSA

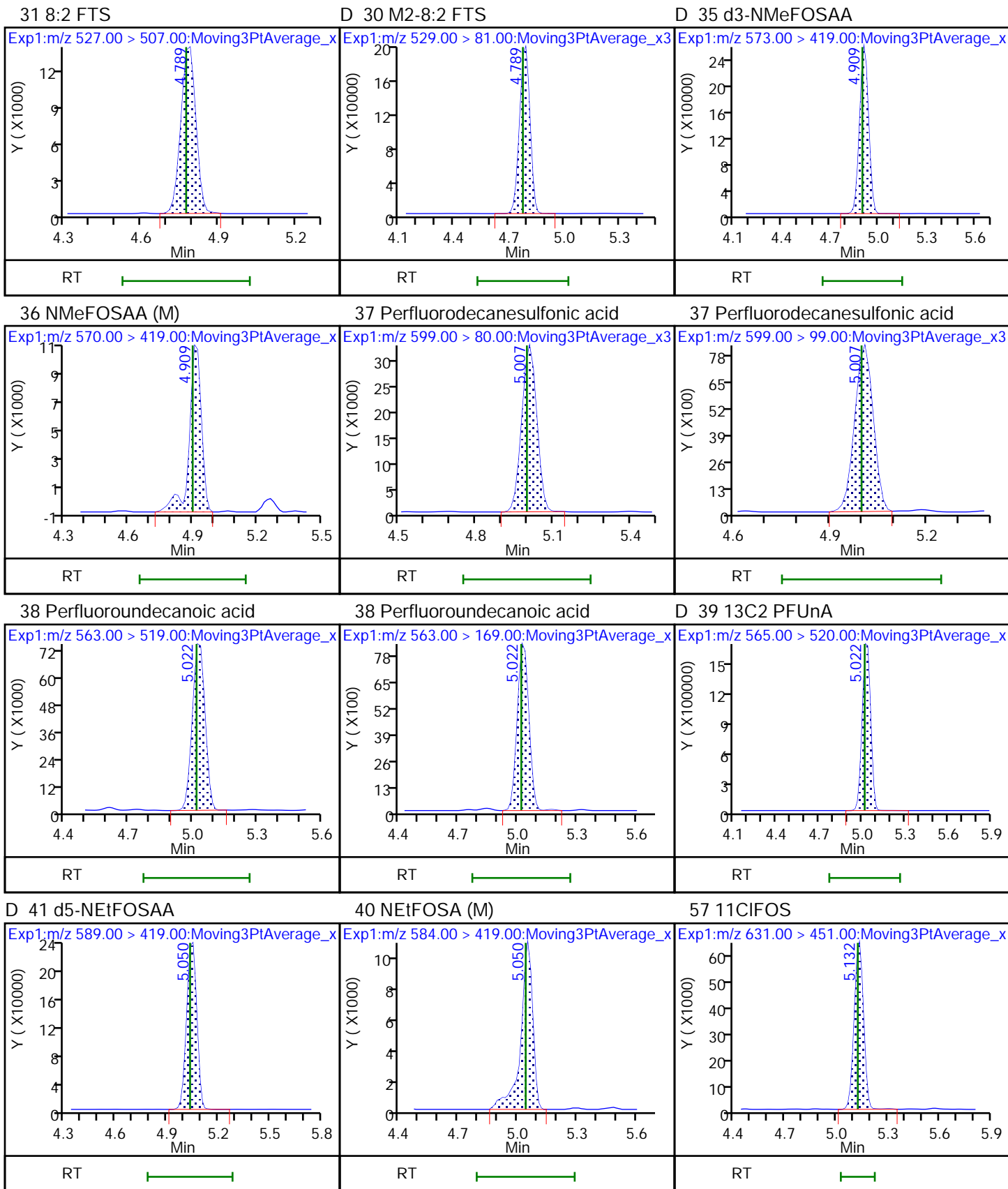


29 Perfluorodecanoic acid

29 Perfluorodecanoic acid

D 32 13C2 PFDA

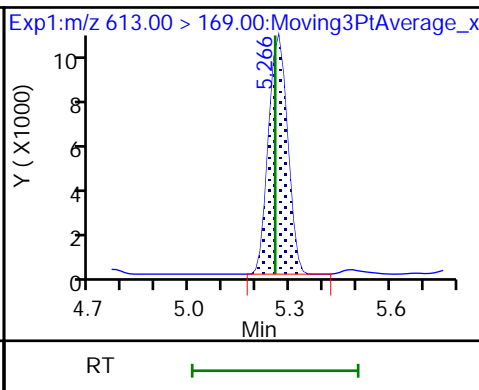
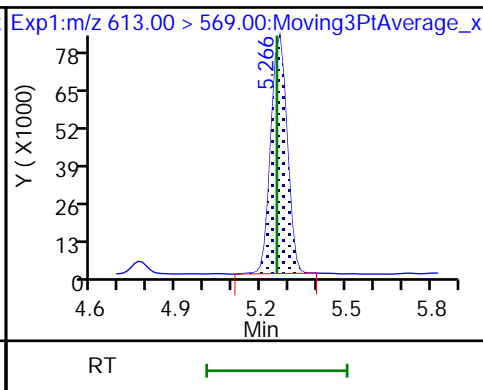
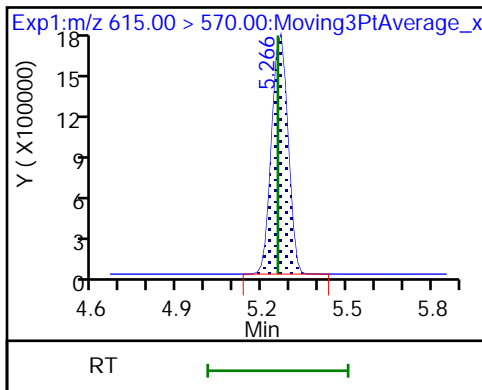




D 43 13C2 PFDa

42 Perfluorododecanoic acid

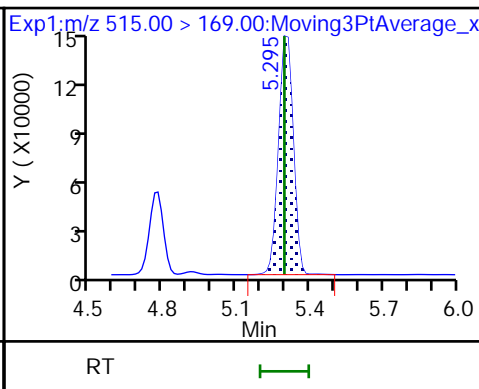
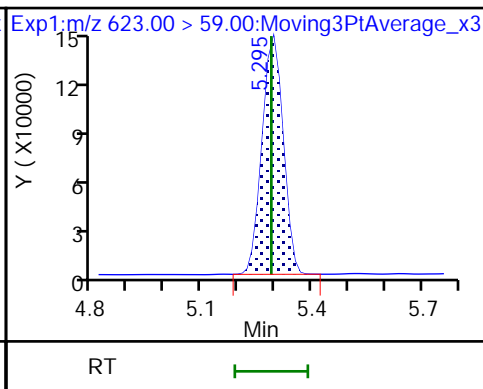
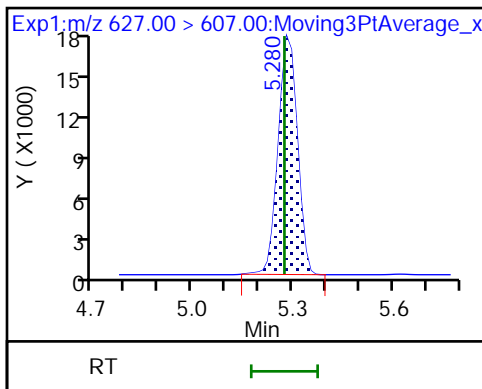
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

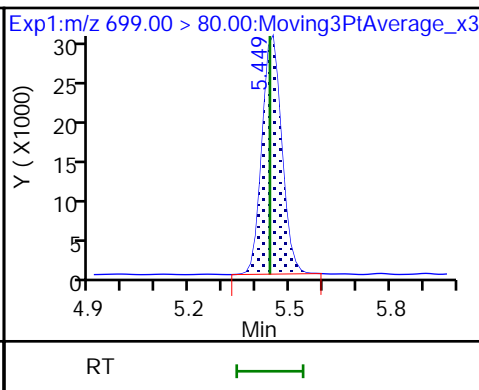
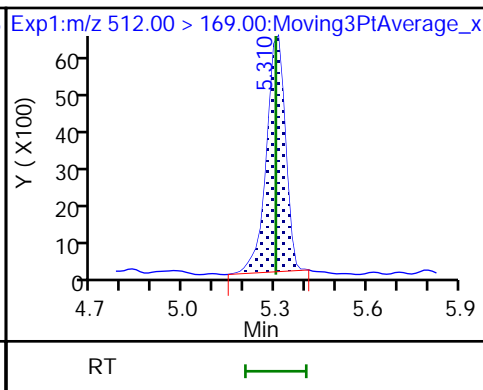
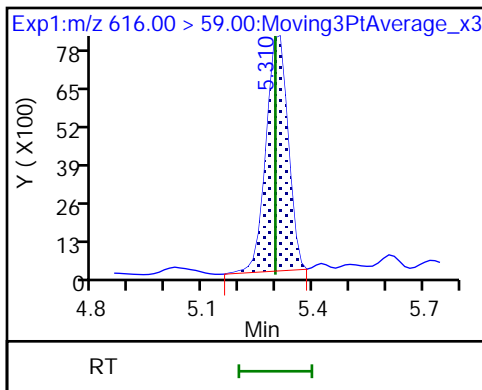
D 58 d-N-MeFOSE-M



49 N-MeFOSE-M

61 NMeFOSE

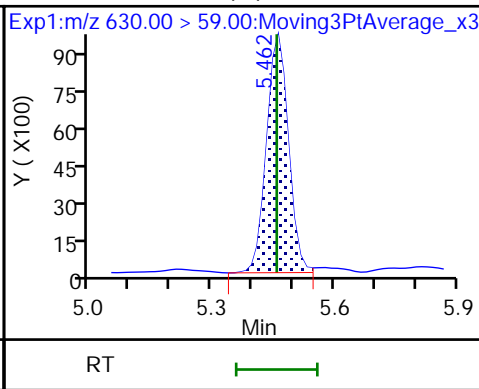
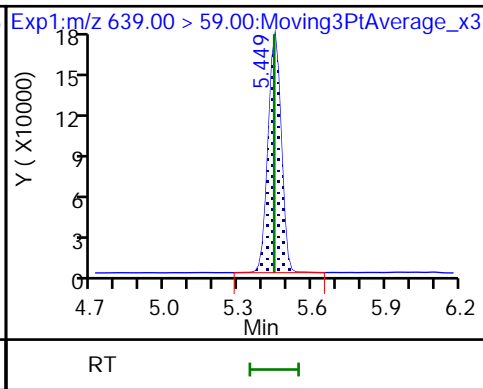
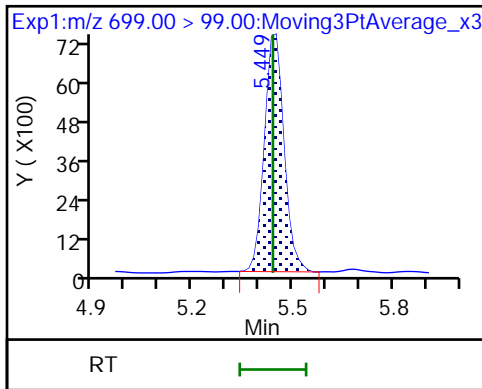
54 PFDoS



54 PFDoS

D 53 d9-N-EtFOSE-M

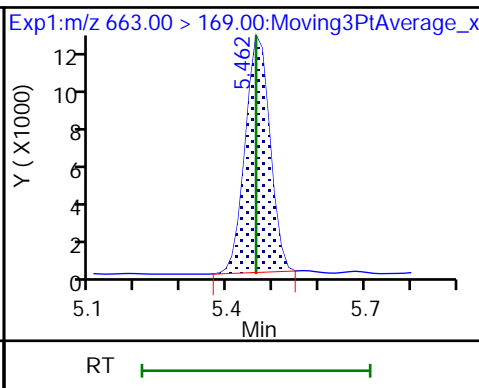
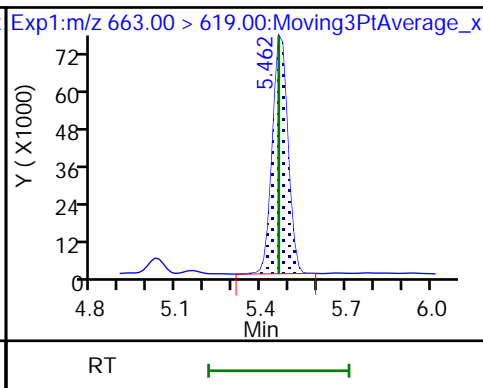
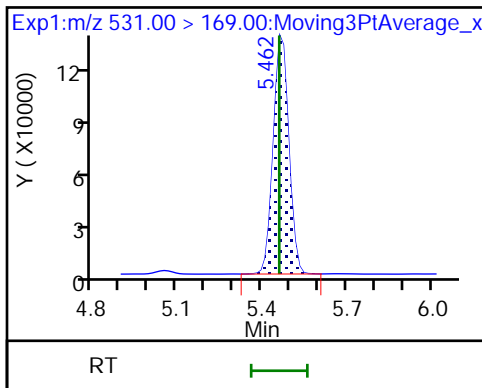
62 N-EtFOSE-M (M)



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid

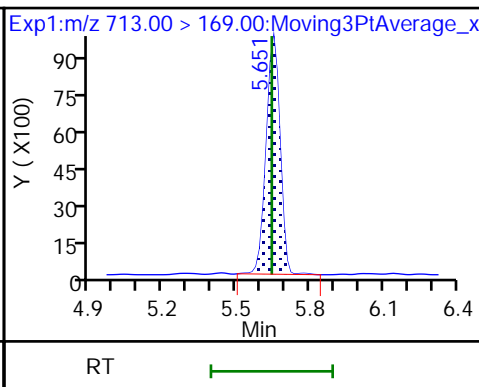
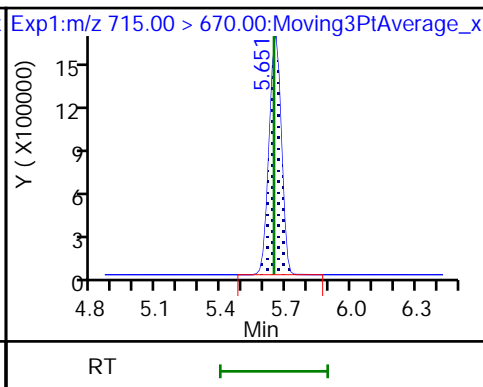
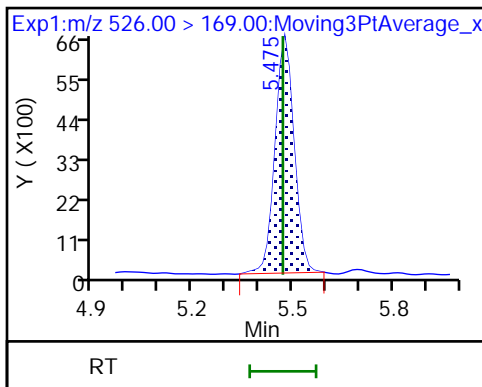
44 Perfluorotridecanoic acid



56 N-EtFOSA-M

D 46 13C2 PFTeDA

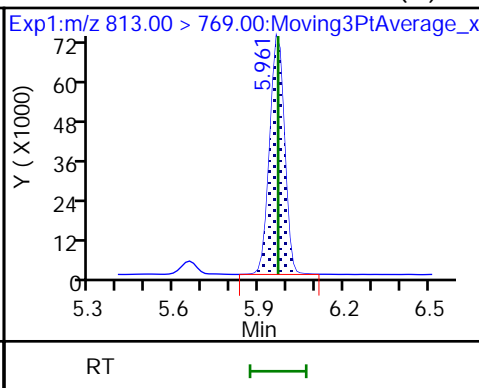
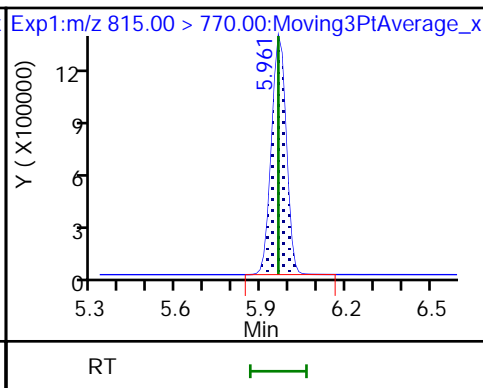
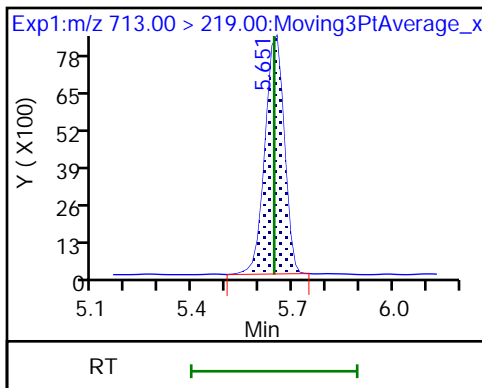
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

D 59 13C2 PFHxDA

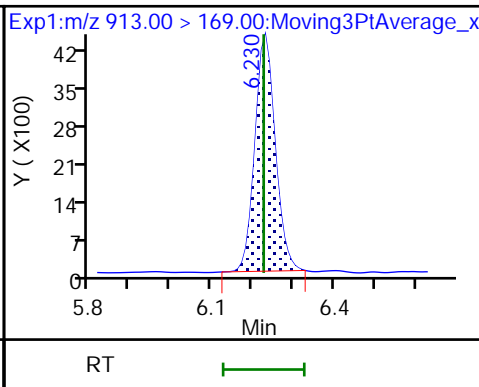
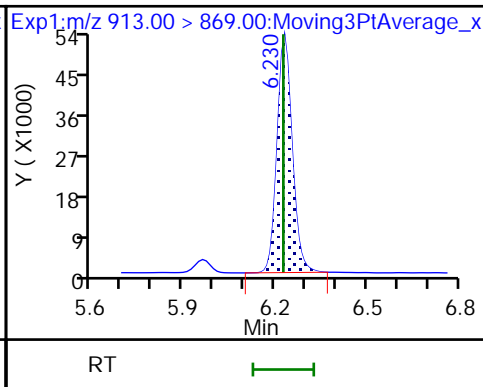
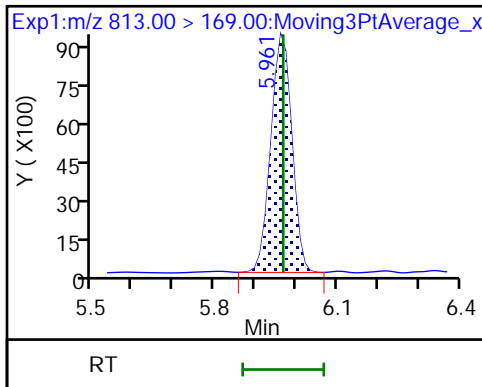
55 Perfluorohexadecanoic acid (M)



55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid



Eurofins TestAmerica, Knoxville

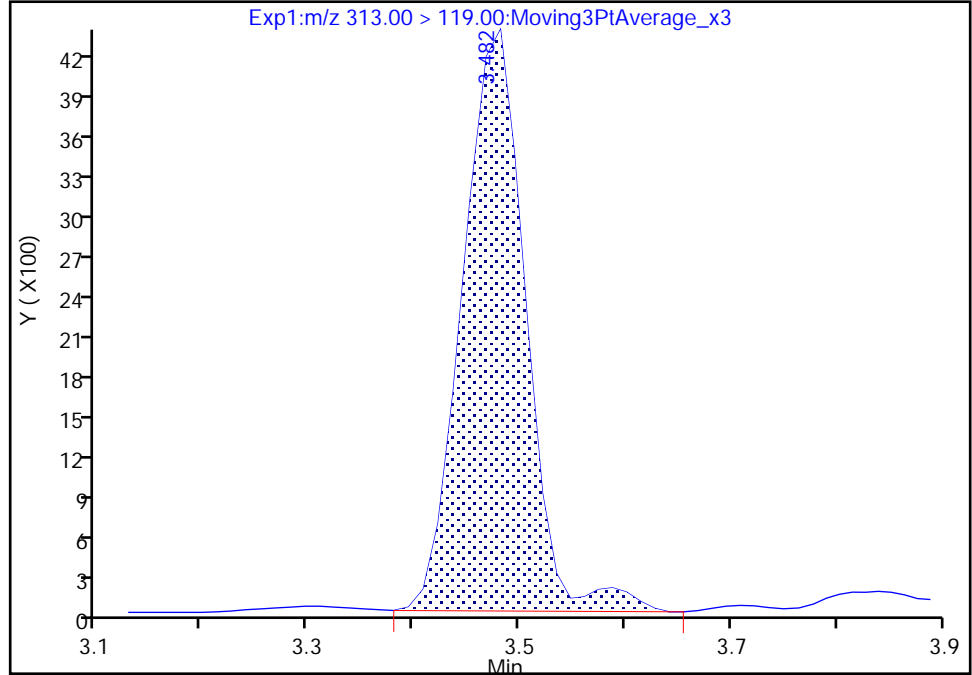
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_007.d
Injection Date: 05-Oct-2021 22:09:48 Instrument ID: LCA
Lims ID: IC 2
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

10 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 2

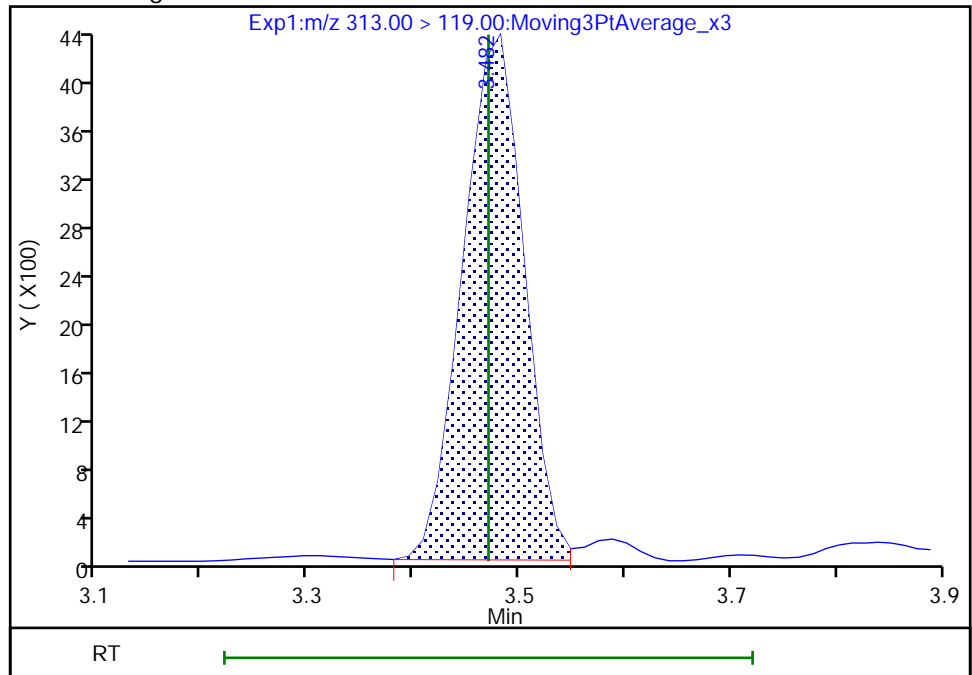
RT: 3.48
Area: 18019
Amount: 0.049919
Amount Units: ng/ml

Processing Integration Results



RT: 3.48
Area: 17423
Amount: 0.054295
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:57:03
Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Knoxville

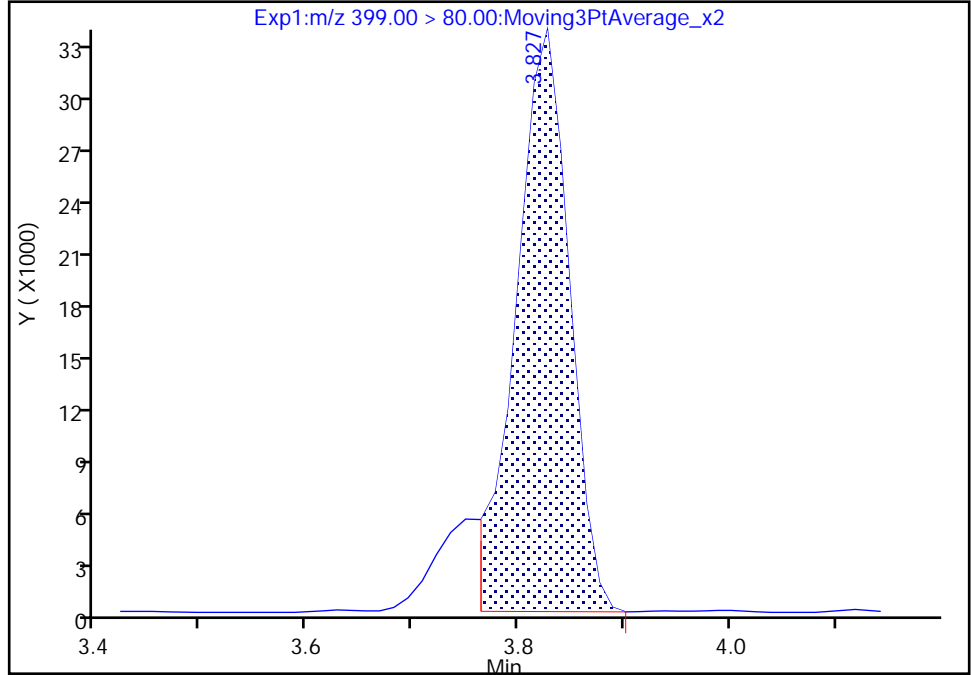
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_007.d
Injection Date: 05-Oct-2021 22:09:48 Instrument ID: LCA
Lims ID: IC 2
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

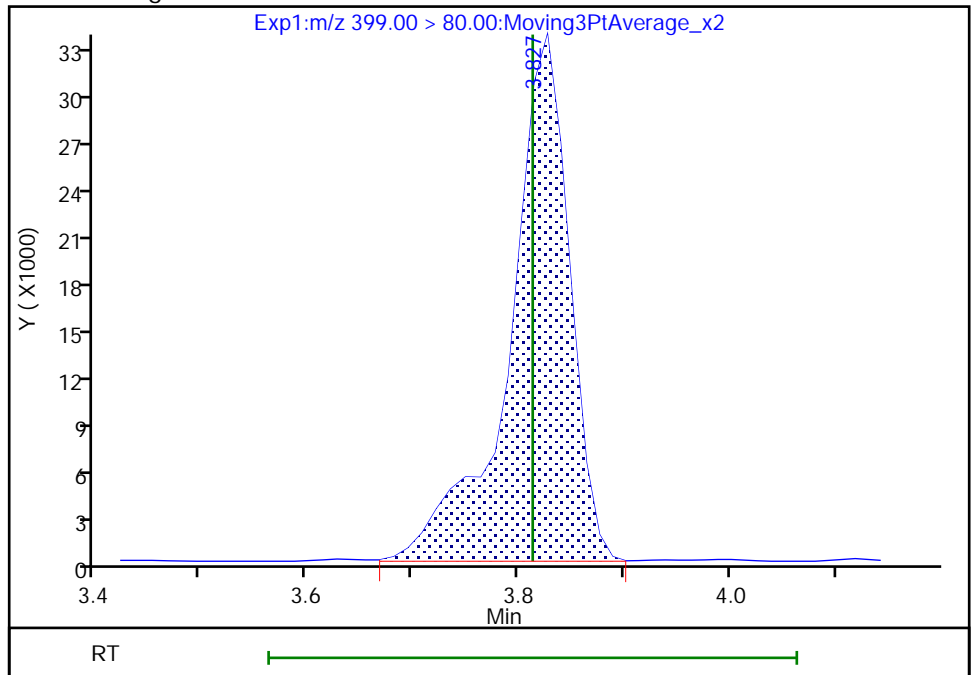
RT: 3.83
Area: 115981
Amount: 0.040780
Amount Units: ng/ml

Processing Integration Results



RT: 3.83
Area: 132033
Amount: 0.046005
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:57:35
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

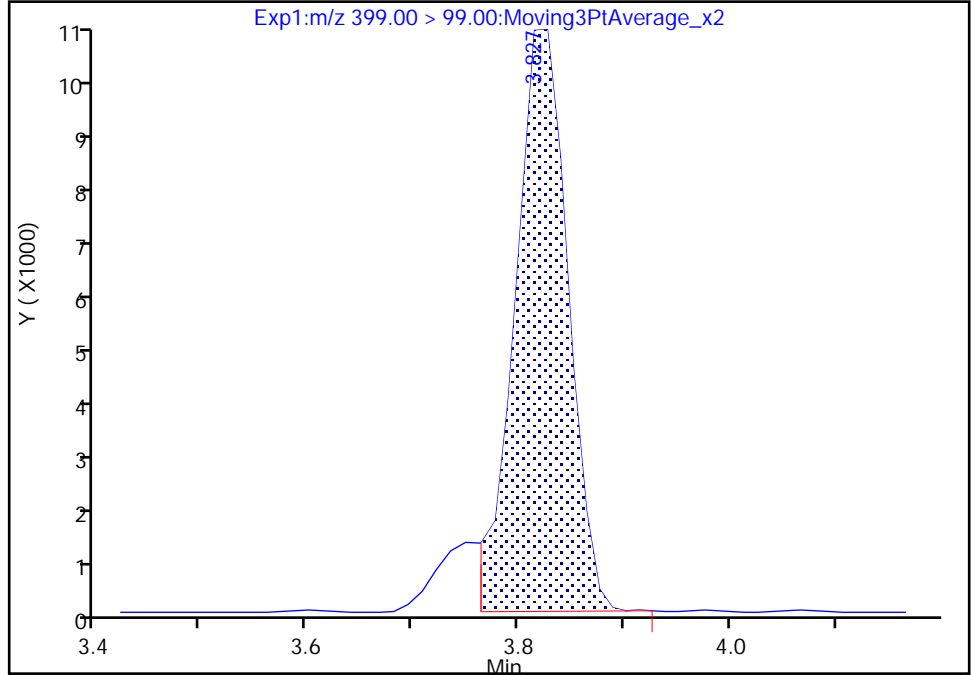
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_007.d
Injection Date: 05-Oct-2021 22:09:48 Instrument ID: LCA
Lims ID: IC 2
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

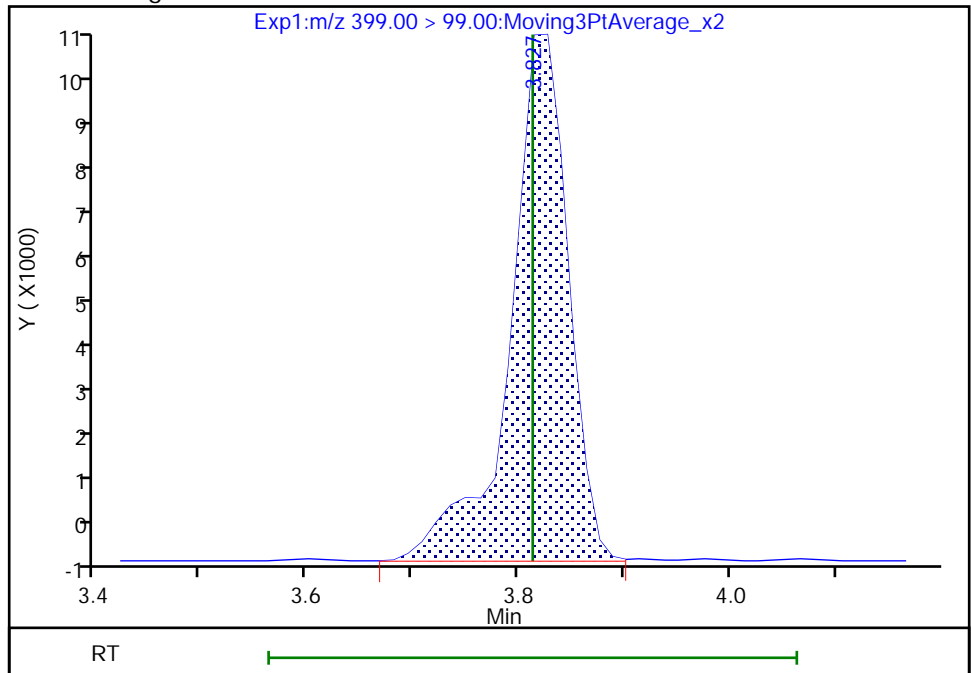
RT: 3.83
Area: 36537
Amount: 0.040780
Amount Units: ng/ml

Processing Integration Results



RT: 3.83
Area: 40366
Amount: 0.046005
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:57:39

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

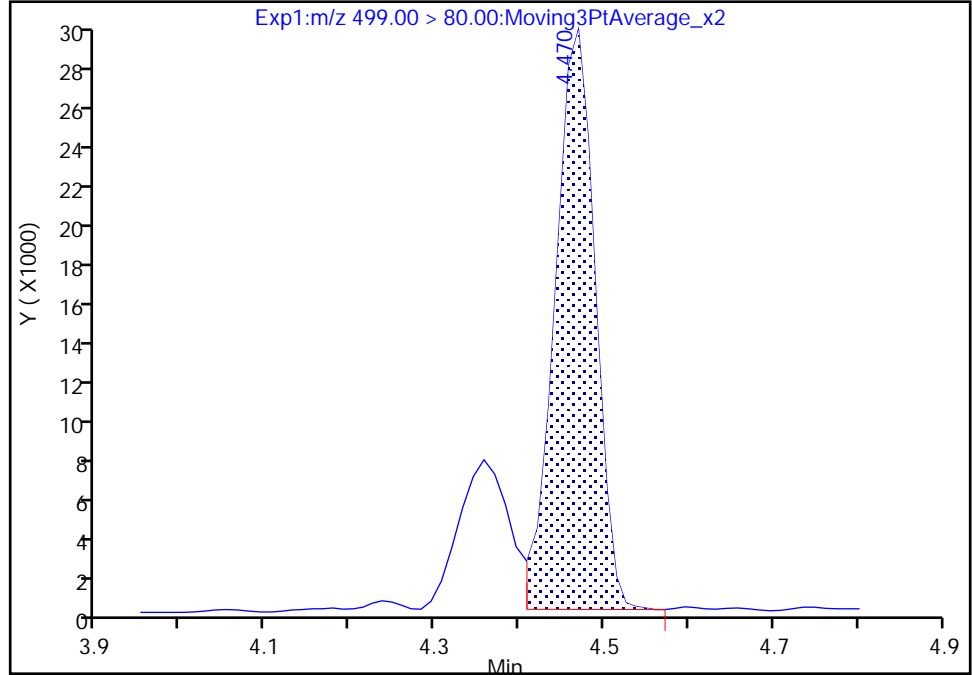
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_007.d
Injection Date: 05-Oct-2021 22:09:48 Instrument ID: LCA
Lims ID: IC 2
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

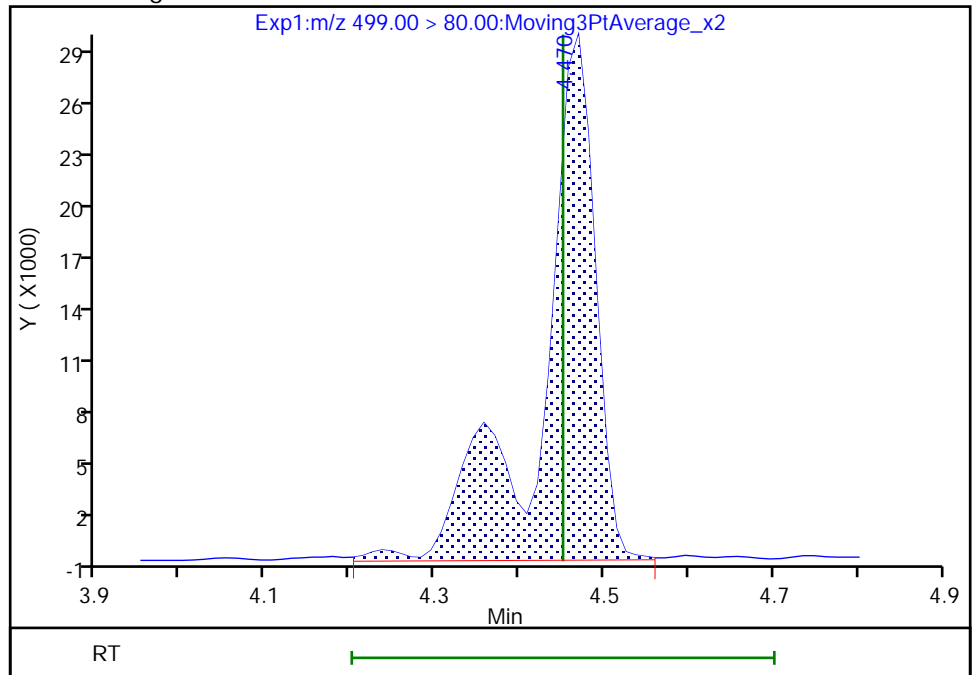
RT: 4.47
Area: 96975
Amount: 0.039088
Amount Units: ng/ml

Processing Integration Results



RT: 4.47
Area: 132719
Amount: 0.047715
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:57:52
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

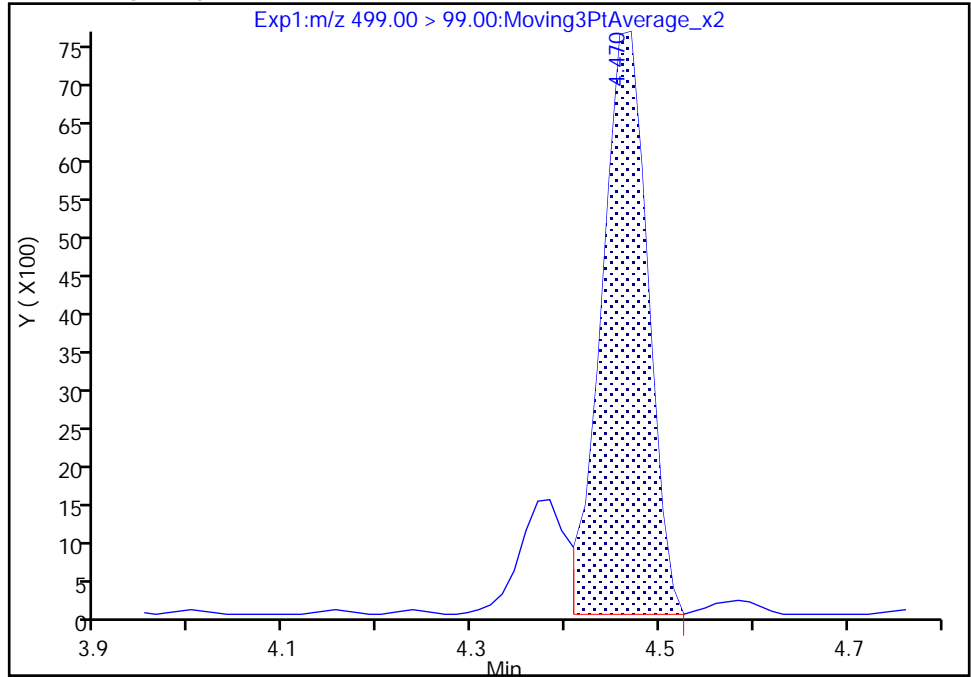
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_007.d
Injection Date: 05-Oct-2021 22:09:48 Instrument ID: LCA
Lims ID: IC 2
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

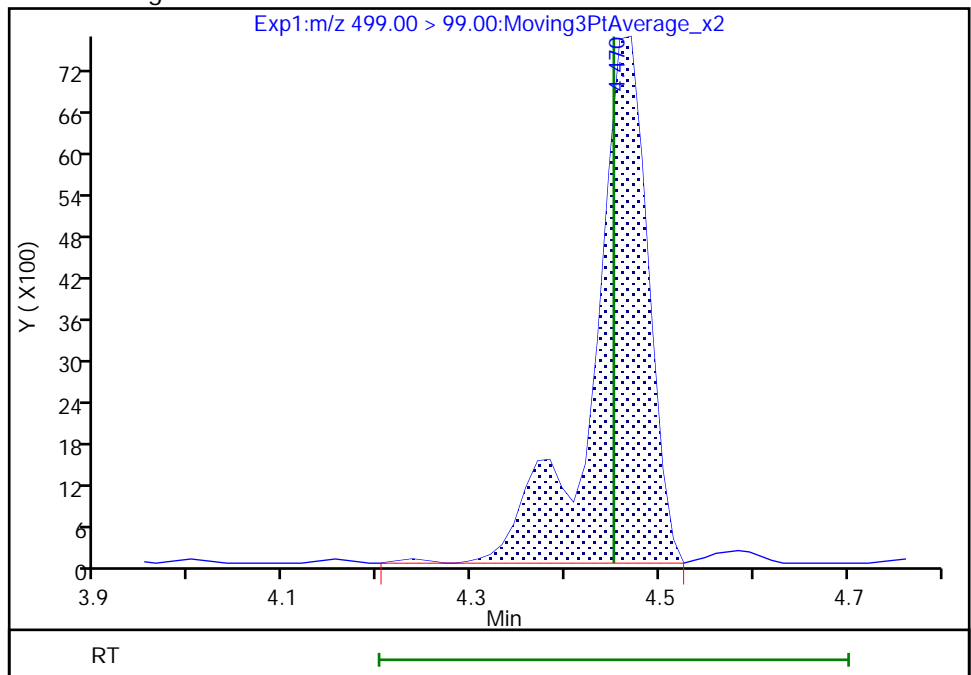
RT: 4.47
Area: 25915
Amount: 0.039088
Amount Units: ng/ml

Processing Integration Results



RT: 4.47
Area: 31095
Amount: 0.047715
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:57:57

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

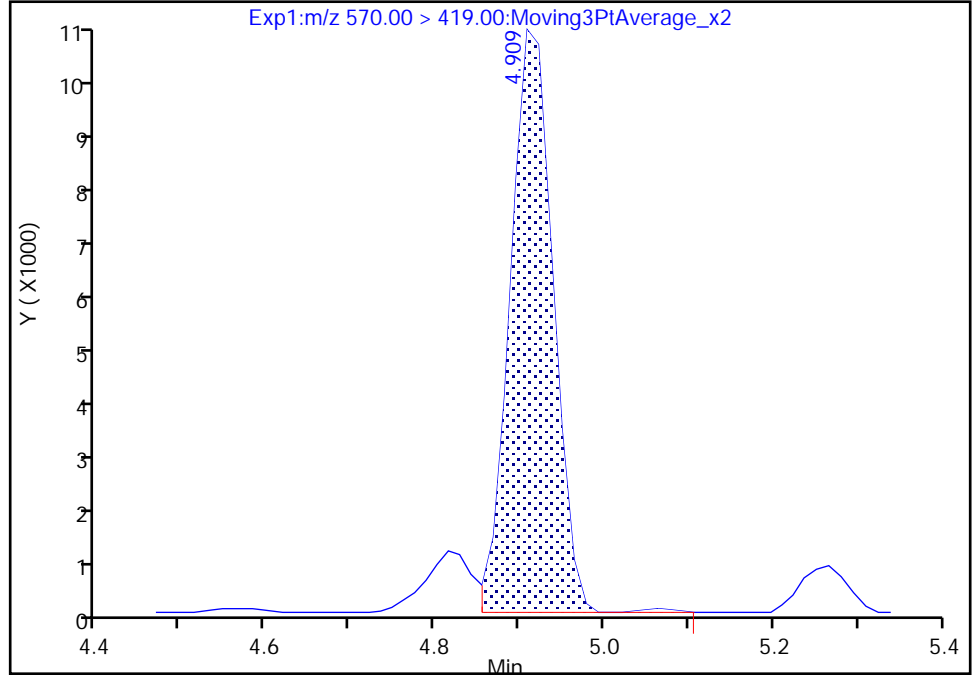
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_007.d
Injection Date: 05-Oct-2021 22:09:48 Instrument ID: LCA
Lims ID: IC 2
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

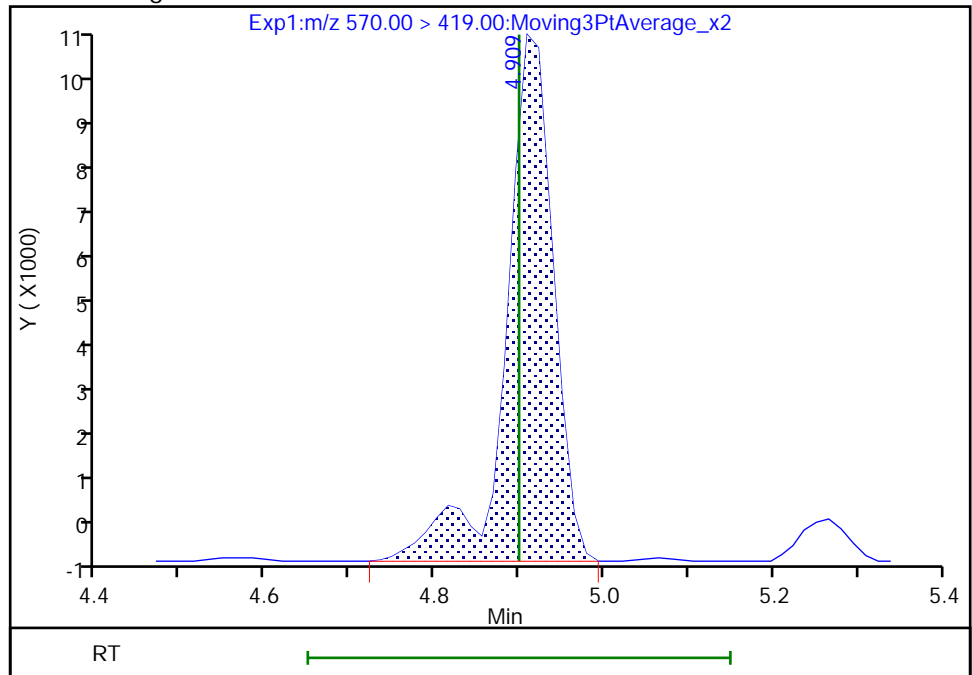
RT: 4.91
Area: 36106
Amount: 0.043319
Amount Units: ng/ml

Processing Integration Results



RT: 4.91
Area: 40014
Amount: 0.048062
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:58:09
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

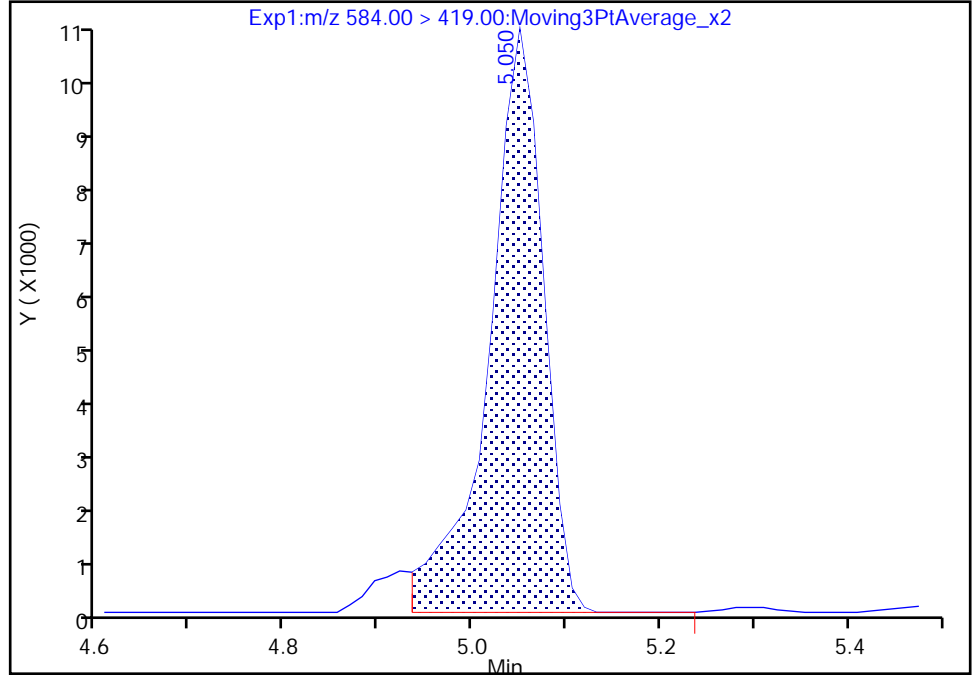
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_007.d
Injection Date: 05-Oct-2021 22:09:48 Instrument ID: LCA
Lims ID: IC 2
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

40 NEtFOSA, CAS: 2991-50-6

Signal: 1

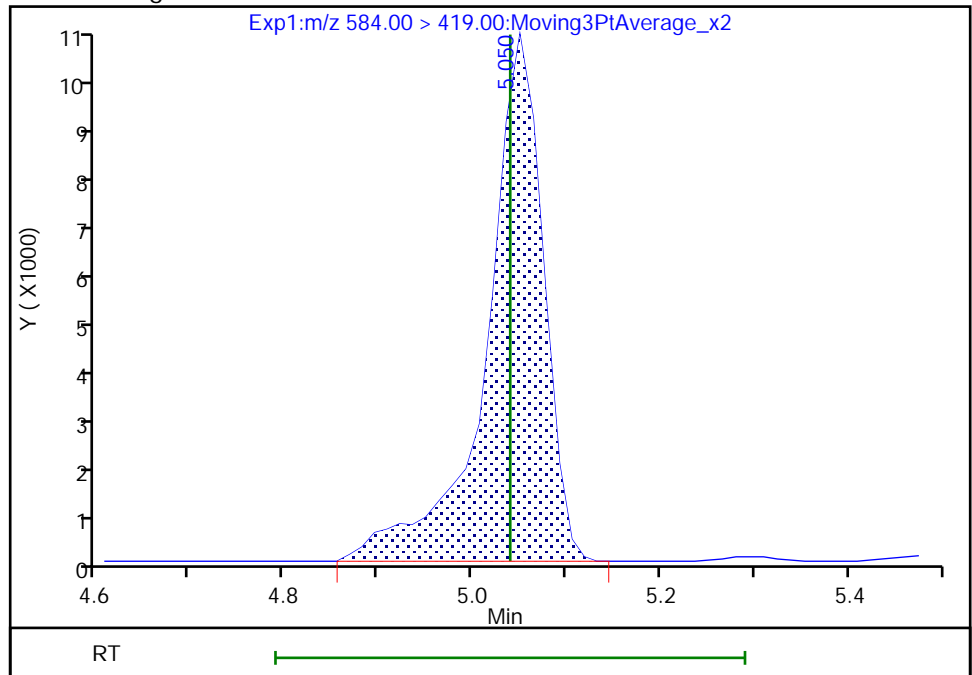
RT: 5.05
Area: 40642
Amount: 0.052095
Amount Units: ng/ml

Processing Integration Results



RT: 5.05
Area: 42754
Amount: 0.058744
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:58:19
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

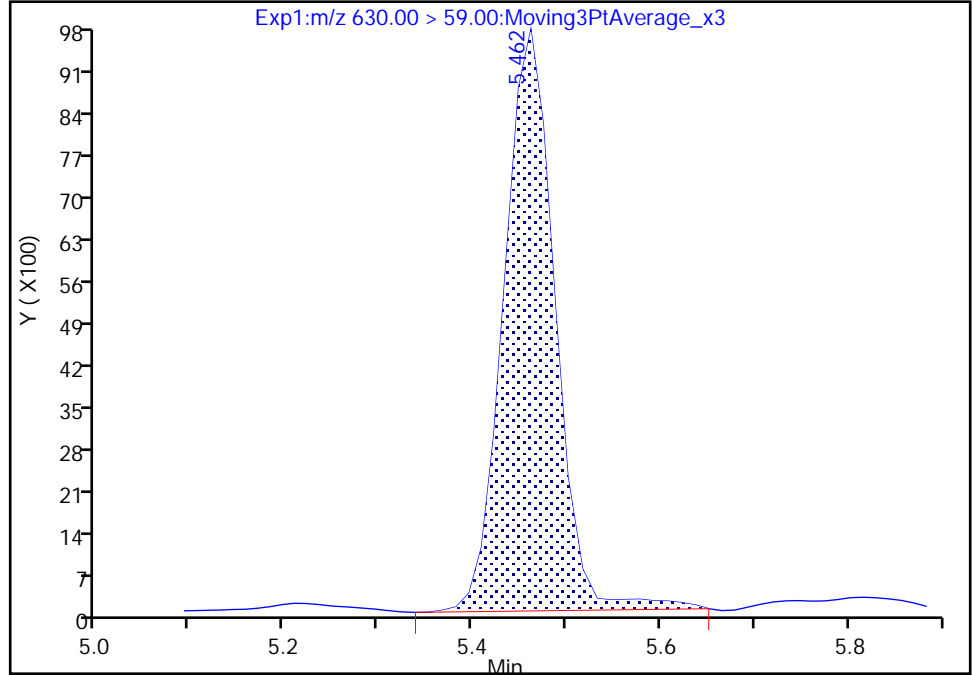
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Injection Date: 05-Oct-2021 22:09:48 Instrument ID: LCA
Lims ID: IC 2
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

62 N-EtFOSE-M, CAS: 1691-99-2

Signal: 1

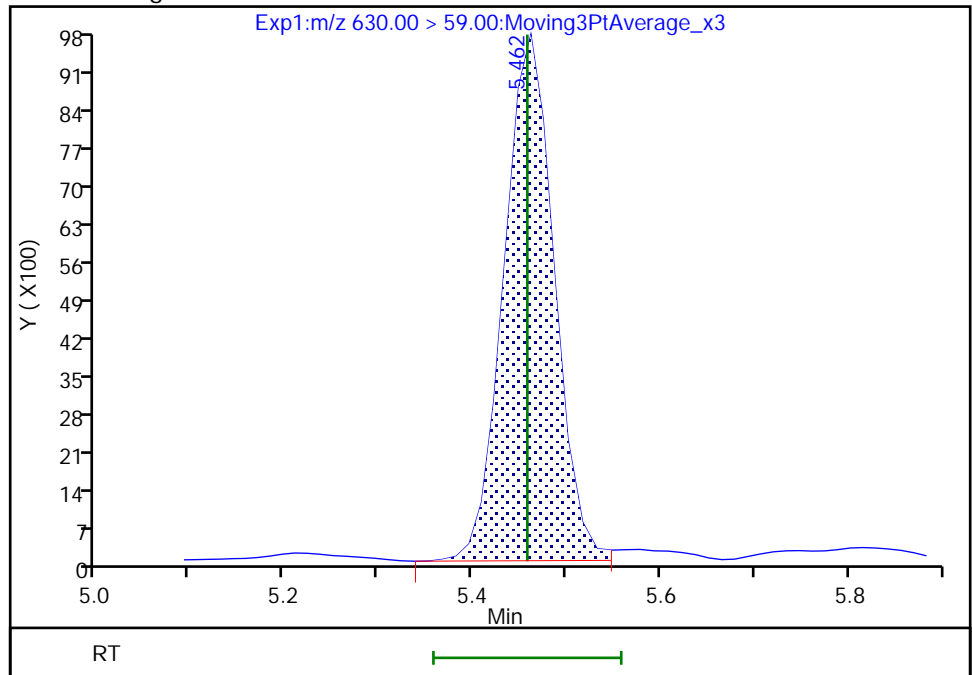
RT: 5.46
Area: 36612
Amount: 0.049034
Amount Units: ng/ml

Processing Integration Results



RT: 5.46
Area: 35981
Amount: 0.050834
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:58:41
Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Knoxville

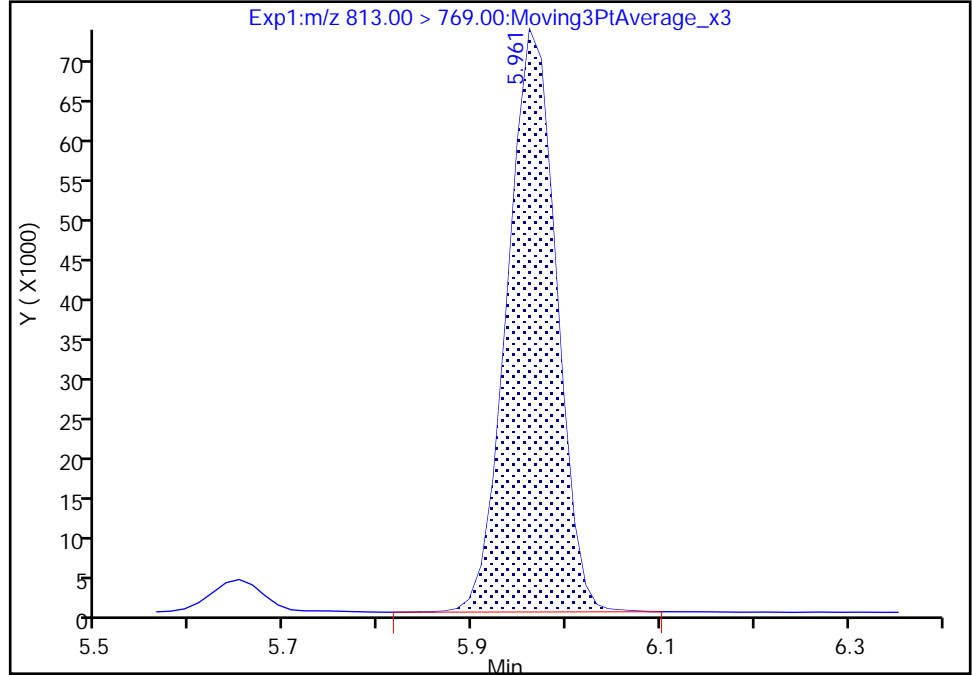
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_007.d
Injection Date: 05-Oct-2021 22:09:48 Instrument ID: LCA
Lims ID: IC 2
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

55 Perfluorohexadecanoic acid, CAS: 67905-19-5

Signal: 1

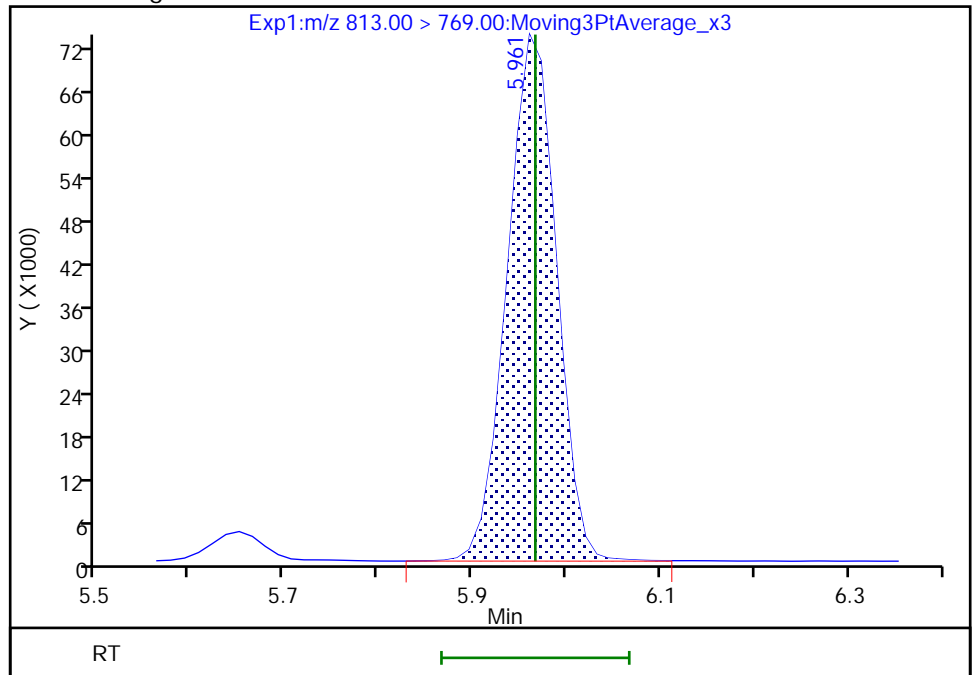
RT: 5.96
Area: 264564
Amount: 0.059061
Amount Units: ng/ml

Processing Integration Results



RT: 5.96
Area: 265142
Amount: 0.051322
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:15:18
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_008.d
 Lims ID: IC 3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 05-Oct-2021 22:18:36 ALS Bottle#: 8 Worklist Smp#: 8
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020953-008 ic 3
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15

Method: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 07-Oct-2021 14:21:02 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1613

First Level Reviewer: cochranj Date: 06-Oct-2021 16:00:06

Ratio Calibration: None

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	2.812	2.812	0.0	0.679	7228968	1.29	104	16985	
2 Perfluorobutanoic acid	212.90 > 169.00	2.812	2.812	0.0	1.000	1138114	0.2505	100	155	
D 3 13C5 PFPeA	267.90 > 223.00	3.130	3.130	0.0	0.755	6049600	1.32	106	15094	
4 Perfluoropentanoic acid	262.90 > 219.00	3.130	3.131	-0.001	1.000	1272508	0.2596	104	251	
D 6 13C3 PFBS	301.90 > 80.00	3.143	3.143	0.0	0.759	3524723	1.19	102	28599	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.143	3.151	-0.008	1.000	761606	0.2231	Target=3.06	101	2547
	298.90 > 99.00	3.143	3.151	-0.008	1.000	293397		2.60(1.53-4.59)	101	736
7 4:2 FTS	327.00 > 307.00	3.423	3.431	-0.008	1.000	282001	0.2369	101	4191	
D 8 M2-4:2 FTS	329.00 > 81.00	3.423	3.431	-0.008	0.826	556004	1.25	107	614	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.453	3.468	-0.015	1.099	639381	0.2416	Target=3.47	103	5692
	349.00 > 99.00	3.453	3.468	-0.015	1.099	181235		3.53(1.73-5.20)	103	1906
D 9 13C2 PFHxA	315.00 > 270.00	3.469	3.471	-0.002	0.837	5953465	1.26	101	17535	
10 Perfluorohexanoic acid	313.00 > 269.00	3.469	3.471	-0.002	1.000	1062073	0.2601	Target=9.74	104	578
	313.00 > 119.00	3.469	3.471	-0.002	1.000	77008		13.79(4.87-14.61)	104	396
13 HFPO-DA	285.00 > 169.00	3.562	3.565	-0.003	1.000	900885	0.2604		104	584

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.562	3.565	-0.003	0.860	3069191	1.27		102	13112	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.803	3.813	-0.010	1.000	594032	0.2380	Target=2.96	105	2112	M
399.00 > 99.00	3.803	3.813	-0.010	1.000	173544		3.42(1.48-4.44)	105	1311	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.803	3.813	-0.010	0.918	2138254	1.19		101	20520	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.815	3.819	-0.004	1.000	1358343	0.2597	Target=3.35	104	1153	
363.00 > 169.00	3.815	3.819	-0.004	1.000	414309		3.28(1.67-5.02)	104	3164	
D 14 13C4 PFHpA										
367.00 > 322.00	3.815	3.819	-0.004	0.921	6105640	1.30		104	19044	
68 DONA										
377.00 > 251.00	3.840	3.850	-0.010	0.864	1987545	0.2405	Target=1.49	102	4329	
377.00 > 85.00	3.840	3.850	-0.010	0.864	1066028		1.86(0.74-2.23)	102	4041	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.131	4.143	-0.012	0.929	608296	0.2400	Target=3.73	101	3355	
449.00 > 99.00	4.131	4.143	-0.012	0.929	164039		3.71(1.87-5.61)	101	1991	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.143	4.146	-0.003	1.000	5399320	1.30		104	40593	
19 6:2 FTS										
427.00 > 407.00	4.143	4.151	-0.008	1.000	241304	0.2412		102	2044	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.143	4.151	-0.008	1.000	578119	1.27		107	859	
D 21 13C4 PFOA										
417.00 > 372.00	4.143	4.155	-0.012	1.000	5410657	1.27		102	16536	
* 22 13C2 PFOA										
415.00 > 370.00	4.143	4.155	-0.012		5270606	1.25			24481	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.143	4.156	-0.013	1.000	1264785	0.2572	Target=2.40	103	385	
413.00 > 169.00	4.143	4.156	-0.013	1.000	498329		2.54(1.20-3.61)	103	987	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.435	4.446	-0.011	1.070	651731	1.23		103	2718	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.447	4.451	-0.004	1.000	667256	0.2381	Target=3.83	103	1716	M
499.00 > 99.00	4.447	4.451	-0.004	1.000	142904		4.67(1.91-5.74)	103	479	M
D 25 13C4 PFOS										
503.00 > 80.00	4.447	4.451	-0.004	1.073	3044513	1.23		103	11424	
26 Perfluorononanoic acid										
463.00 > 419.00	4.458	4.471	-0.013	1.000	1237218	0.2517	Target=3.68	101	946	
463.00 > 169.00	4.458	4.471	-0.013	1.000	273095		4.53(1.84-5.52)	101	836	
D 27 13C5 PFNA										
468.00 > 423.00	4.458	4.471	-0.013	1.076	7247107	1.34		107	25912	
63 9CIFOS										
531.00 > 351.00	4.596	4.606	-0.010	1.109	1443521	0.2455		105	3708	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.723	4.728	-0.005	1.062	624876	0.2353	Target=3.97	98.1	2859	
549.00 > 99.00	4.723	4.728	-0.005	1.062	172599		3.62(1.99-5.96)	98.1	738	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.736	4.745	-0.009	1.000	968946	0.2548		102	2175	
D 34 13C8 FOSA										
506.00 > 78.00	4.736	4.743	-0.007	1.143	4948768	1.37		109	8985	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.749	4.760	-0.011	1.000	1527349	0.2692	Target=10.11	108	718	
513.00 > 169.00	4.749	4.760	-0.011	1.000	114129		13.38(5.06-15.17)	108	236	
D 32 13C2 PFDA										
515.00 > 470.00	4.749	4.758	-0.009	1.146	7254432	1.33		106	37476	
31 8:2 FTS										
527.00 > 507.00	4.763	4.774	-0.011	1.000	268508	0.2605		109	2054	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.763	4.774	-0.011	1.150	691926	1.25		104	2613	
36 NMeFOSAA										
570.00 > 419.00	4.896	4.899	-0.003	1.000	180751	0.2677		107	155	M
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.896	4.899	-0.003	1.182	899632	1.20		96.2	3828	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.993	4.997	-0.004	1.123	607648	0.2491	Target=3.80	103	2944	
599.00 > 99.00	4.993	4.997	-0.004	1.123	166446		3.65(1.90-5.70)	103	1088	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.008	5.018	-0.010	1.000	1476790	0.2625	Target=7.45	105	1033	
563.00 > 169.00	5.008	5.018	-0.010	1.000	164802		8.96(3.78-11.33)	105	886	
D 39 13C2 PFUnA										
565.00 > 520.00	5.008	5.015	-0.007	1.209	6848234	1.31		105	21126	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.022	5.034	-0.012	1.212	956097	1.33		106	3920	
40 NEtFOSA										
584.00 > 419.00	5.036	5.040	-0.004	1.003	175791	0.2421		96.8	373	
57 11CIFOS										
631.00 > 451.00	5.119	5.122	-0.003	1.151	1190988	0.2516		107	2875	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.251	5.255	-0.004	1.000	1670808	0.2642	Target=5.33	106	649	R
613.00 > 169.00	5.251	5.255	-0.004	1.000	205992		8.11(2.66-7.99)	106	1257	R
D 43 13C2 PFDoA										
615.00 > 570.00	5.251	5.255	-0.004	1.268	7435382	1.34		107	22411	
50 10:2 FTS										
627.00 > 607.00	5.266	5.274	-0.008	1.106	314026	0.2447		102	2458	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.281	5.289	-0.008	1.275	567624	1.25		100	420	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.278	599582	1.27		102	43.7	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.297	-0.002	1.003	147243	0.2742		110	147	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.295	5.301	-0.006	1.000	121993	0.2429		97.2	279	
54 PFDoS										
699.00 > 80.00	5.436	5.439	-0.003	1.222	639069	0.2539	Target=4.32	105	1916	
699.00 > 99.00	5.436	5.439	-0.003	1.222	143873		4.44(2.19-6.58)	105	1096	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.436	5.445	-0.009	1.312	624358	1.29		103	684	
62 N-EtFOSE-M										
630.00 > 59.00	5.449	5.458	-0.009	1.002	161487	0.2527		101	390	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.449	5.460	-0.011	1.315	491391	1.24		98.9	673	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.449	5.462	-0.013	1.038	1421298	0.2659	Target=5.66	106	714	
663.00 > 169.00	5.449	5.462	-0.013	1.038	224087		6.34(2.83-8.48)	106	1196	
56 N-EtFOSA-M										
526.00 > 169.00	5.462	5.469	-0.007	1.002	119604	0.2604		104	540	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.638	5.643	-0.005	1.000	181597	0.2608	Target=1.07	104	1730	
713.00 > 219.00	5.638	5.643	-0.005	1.000	172746		1.05(0.53-1.60)	104	1660	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.638	5.643	-0.005	1.361	6765277	1.33		106	14418	
55 Perfluorohexadecanoic acid										M
813.00 > 769.00	5.948	5.961	-0.013	1.000	1132217	0.2624	Target=7.50	105	928	M
813.00 > 169.00	5.948	5.961	-0.013	1.000	138791		8.16(3.75-11.26)	105	829	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.948	5.961	-0.013	1.436	4715970	1.27		102	6248	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.221	6.226	-0.005	1.046	898794	0.2625	Target=9.98	105	993	
913.00 > 169.00	6.221	6.226	-0.005	1.046	75575		11.89(5.14-15.41)	105	879	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Review Flags

M - Manually Integrated

Reagents:

63L3PFC2_00002

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_008.d

Injection Date: 05-Oct-2021 22:18:36

Instrument ID: LCA

Lims ID: IC 3

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 8

Worklist Smp#: 8

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

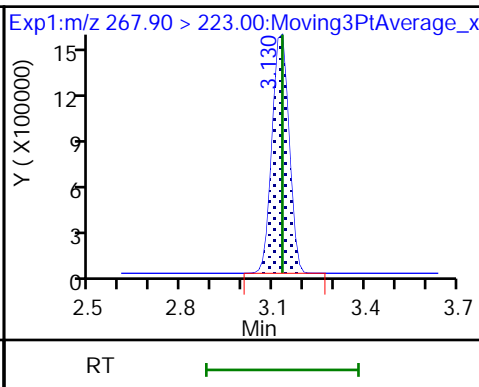
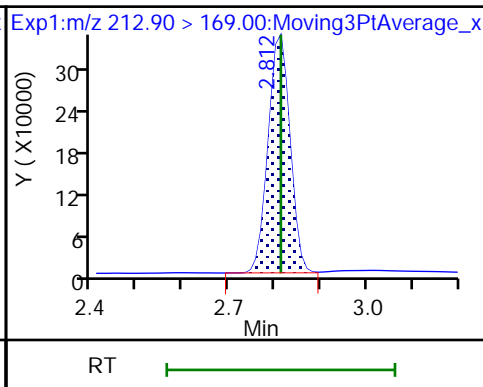
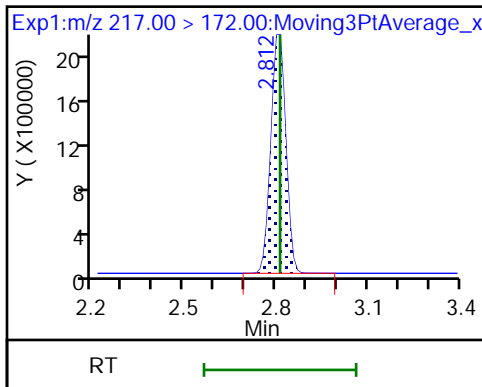
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

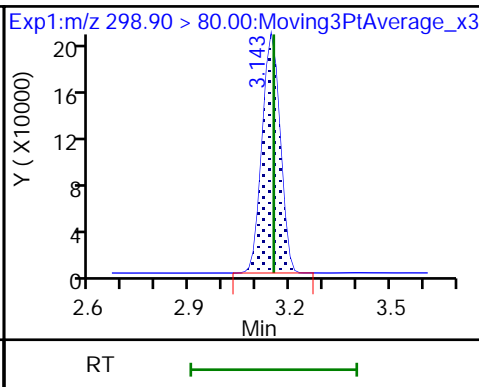
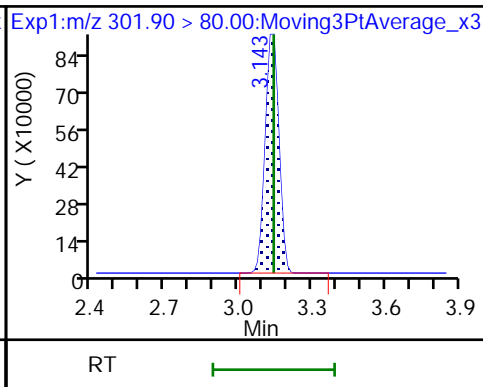
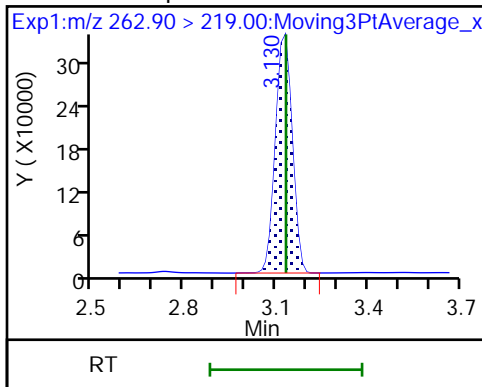
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

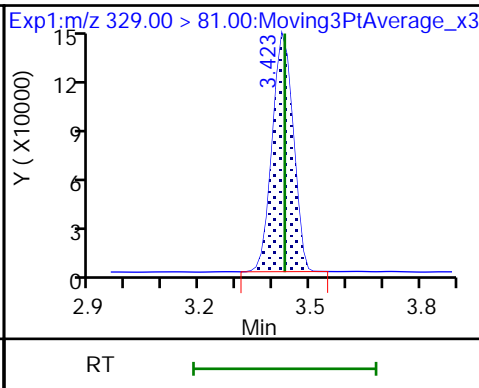
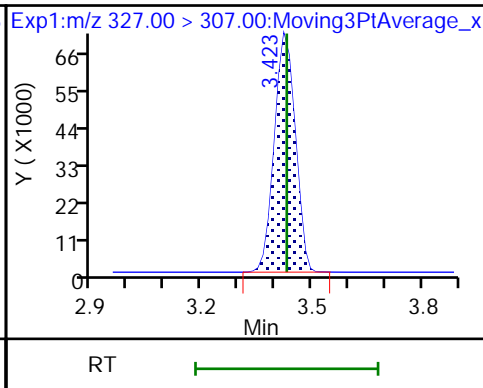
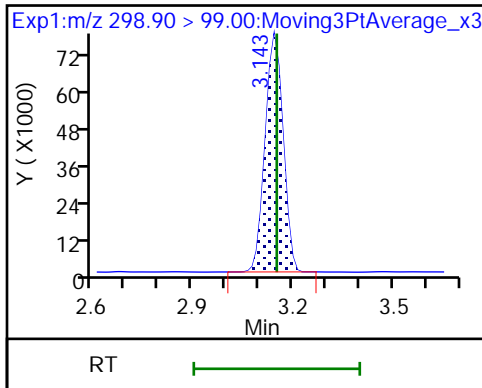
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

7 4:2 FTS

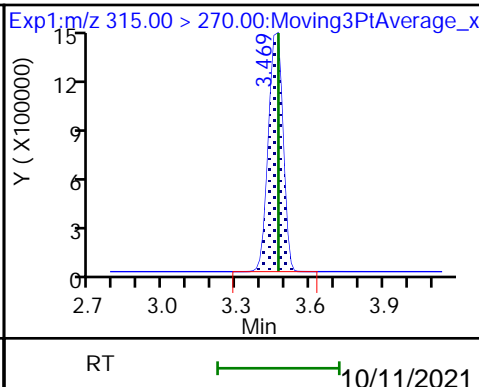
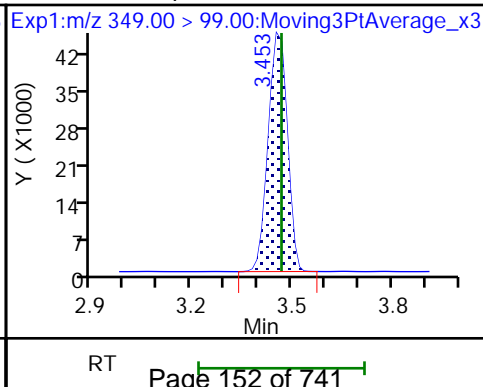
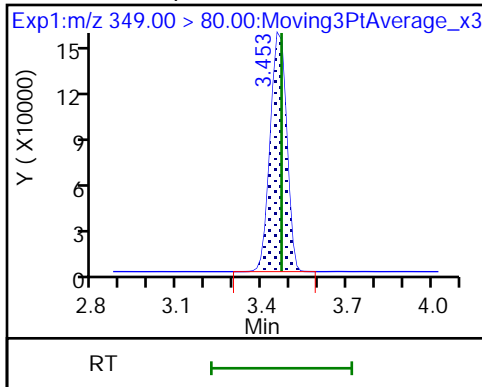
D 8 M2-4:2 FTS

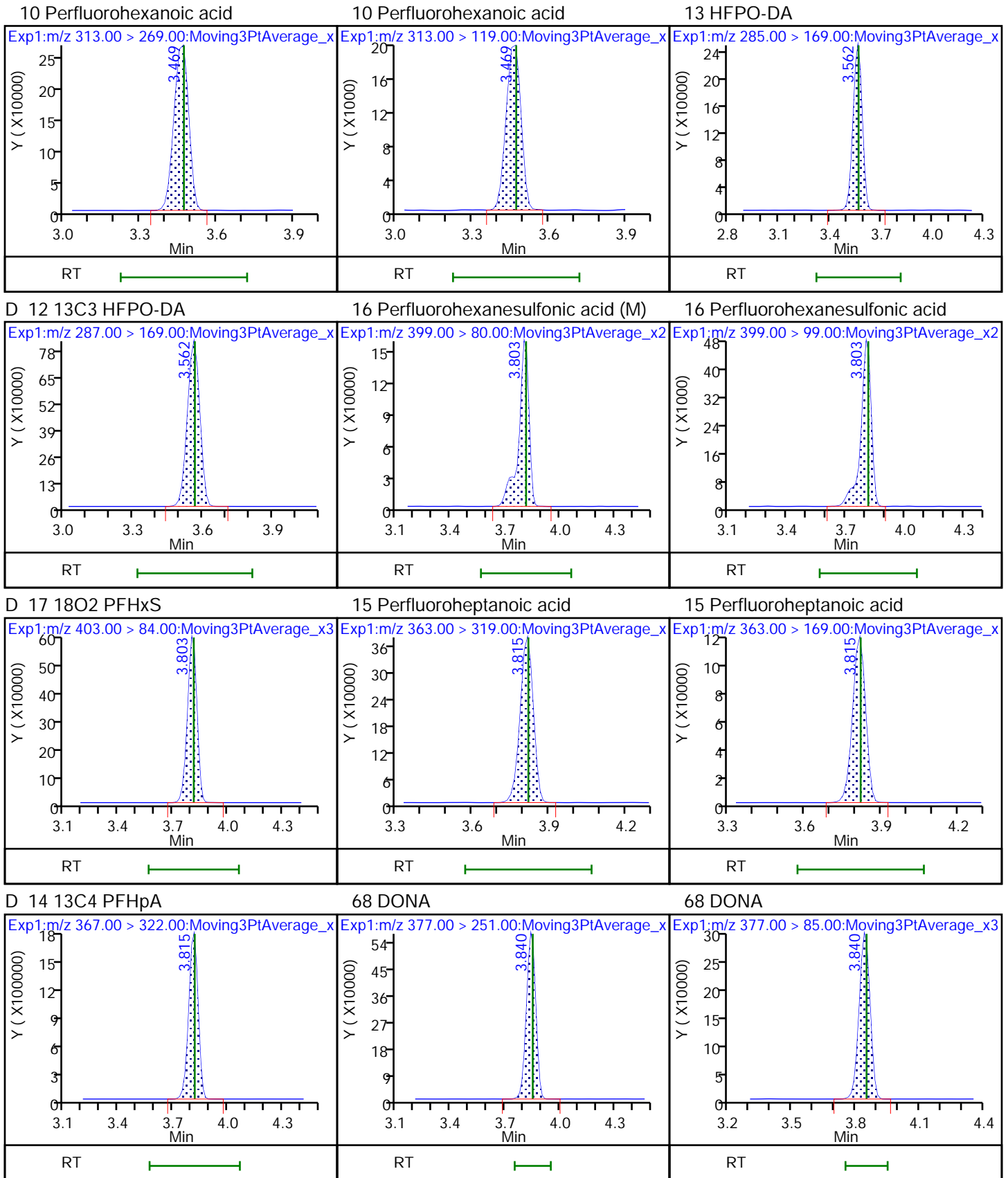


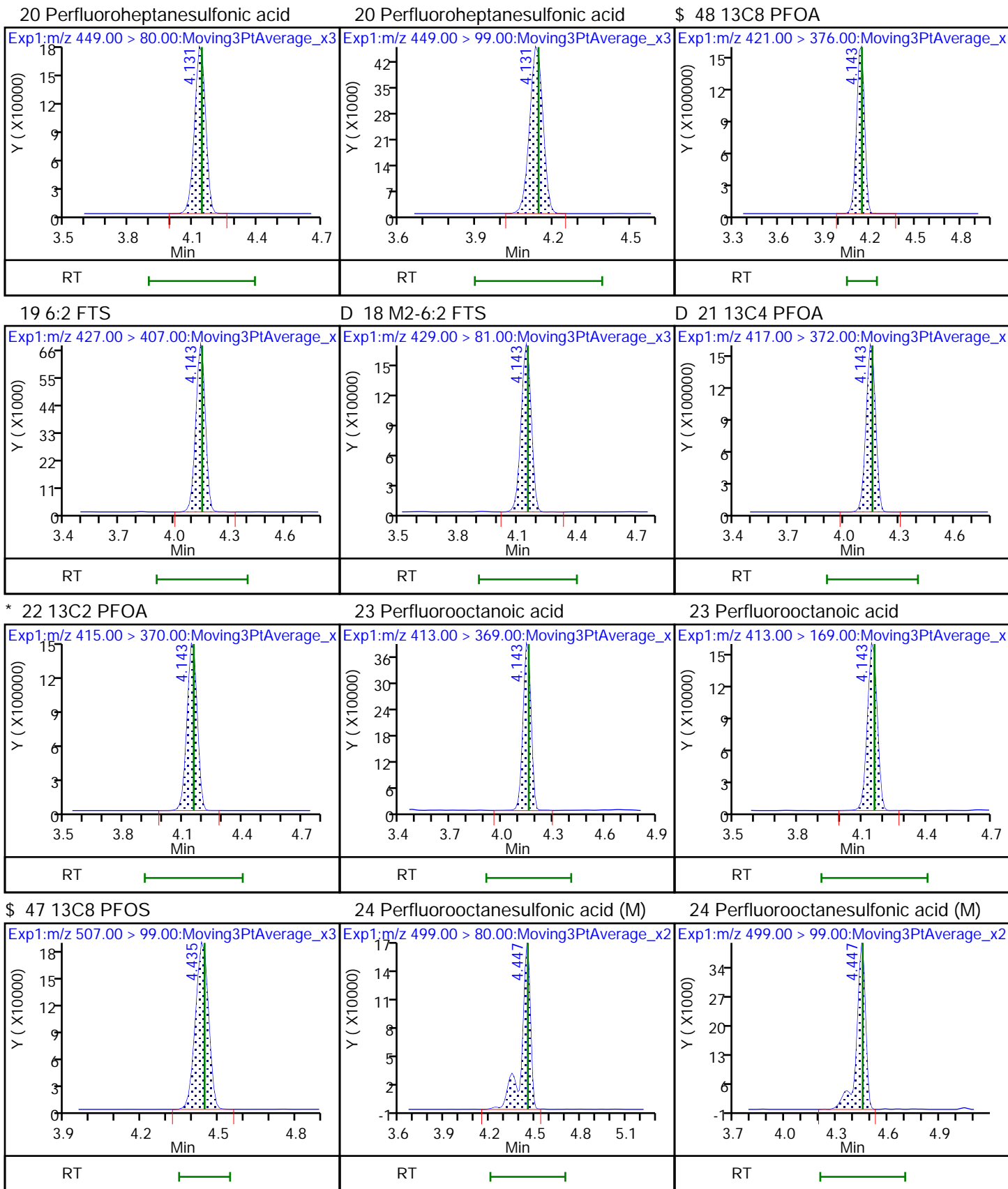
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA



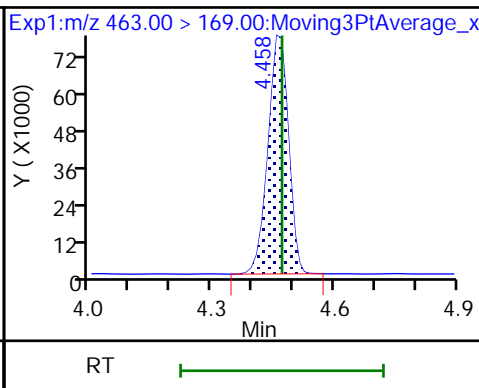
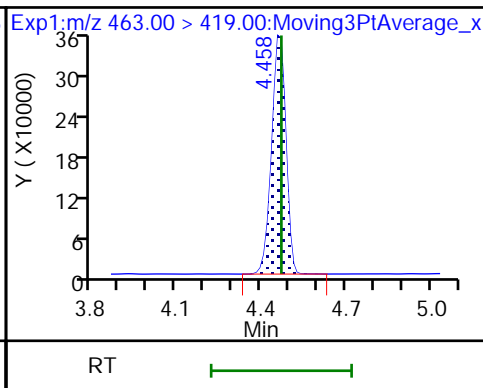
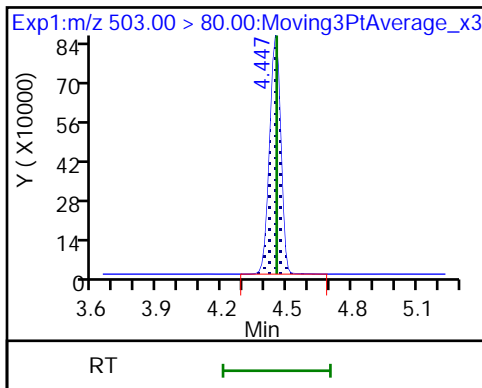




D 25 13C4 PFOS

26 Perfluorononanoic acid

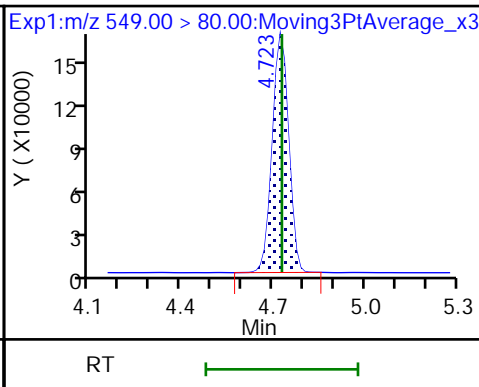
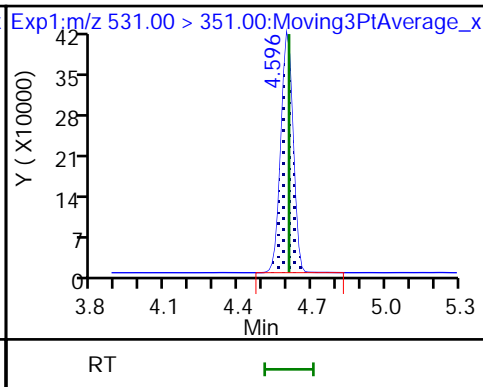
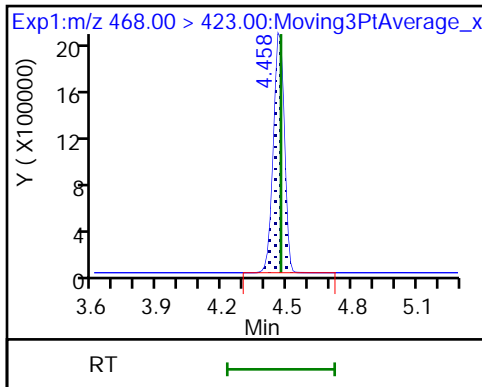
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS

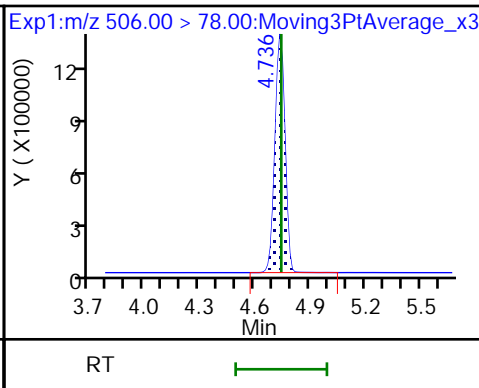
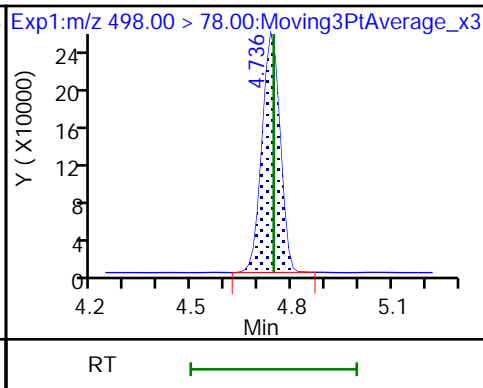
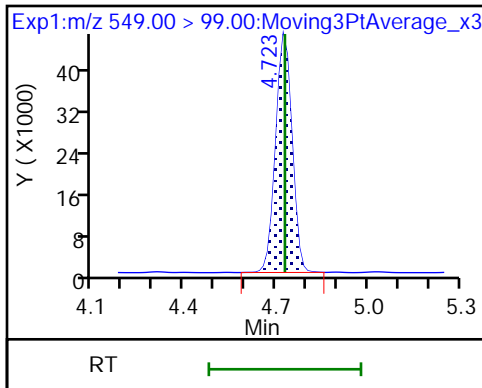
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

33 Perfluorooctanesulfonamide

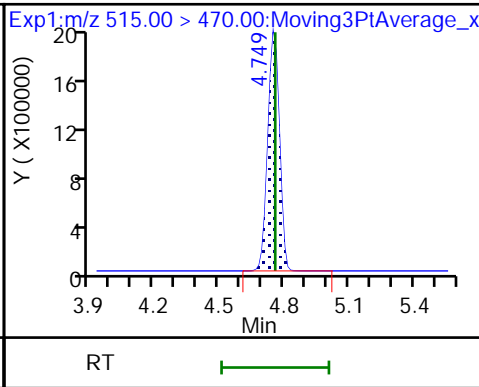
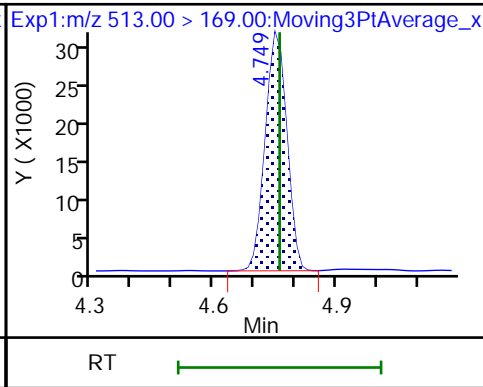
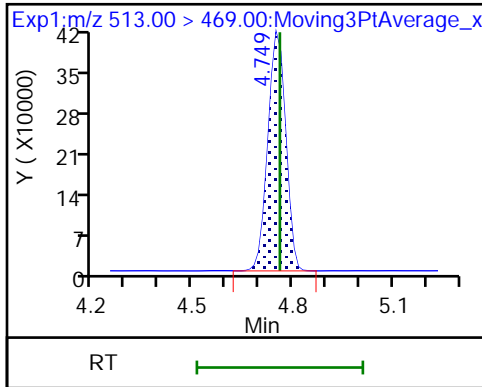
D 34 13C8 FOSA

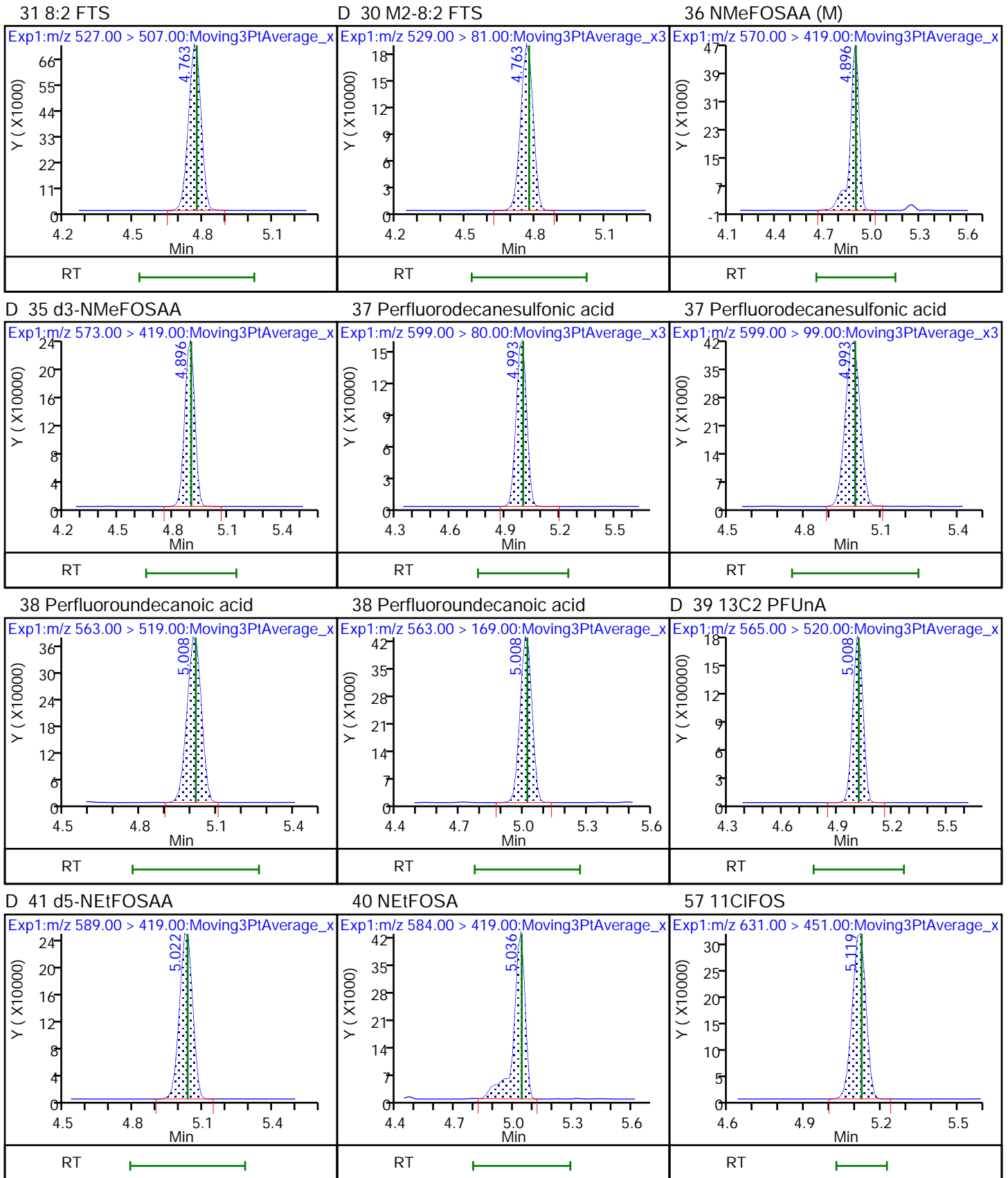


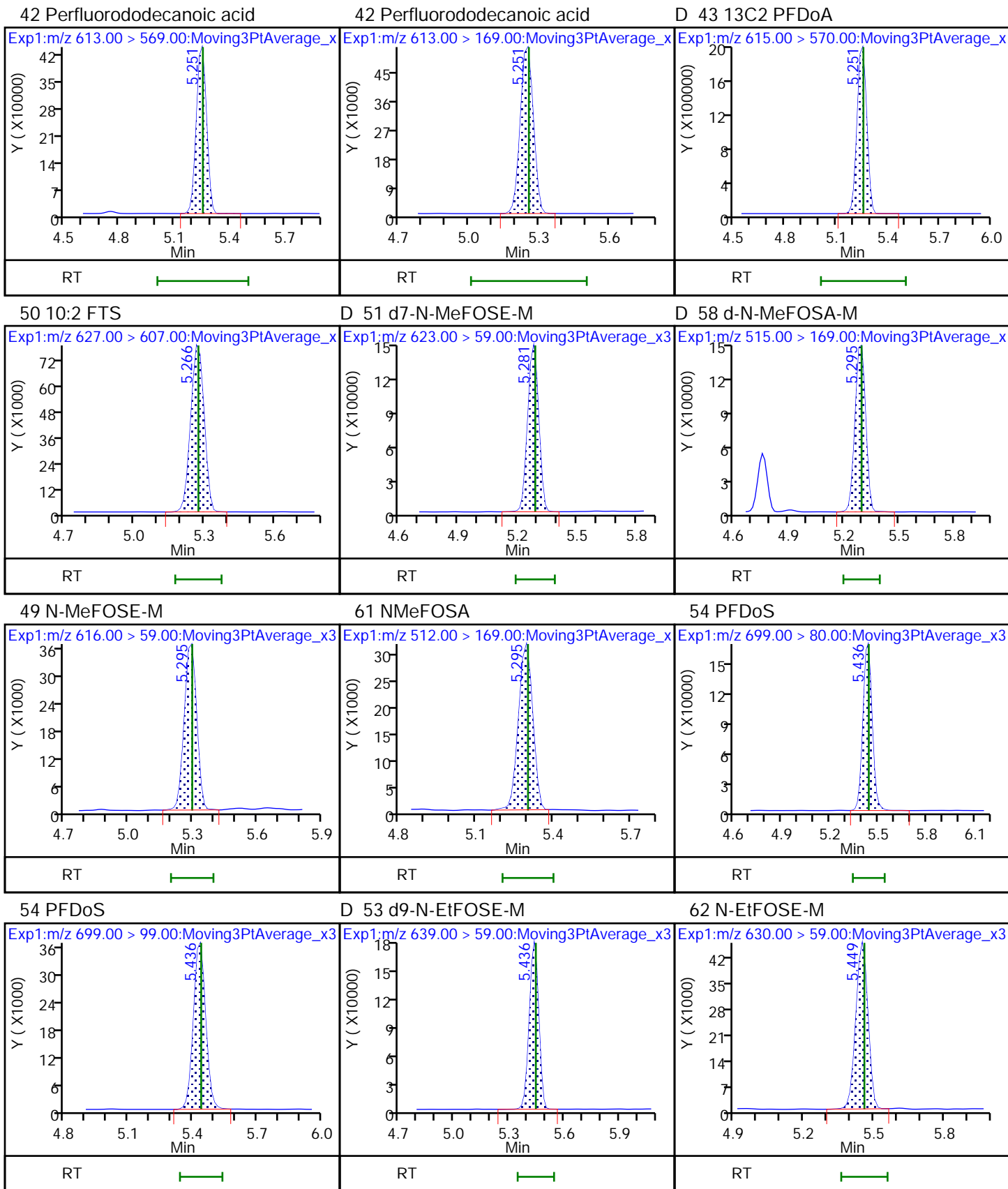
29 Perfluorodecanoic acid

29 Perfluorodecanoic acid

D 32 13C2 PFDA



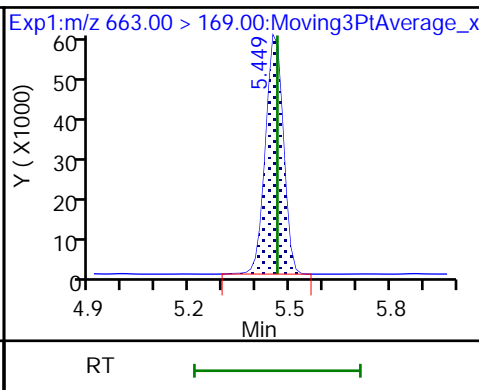
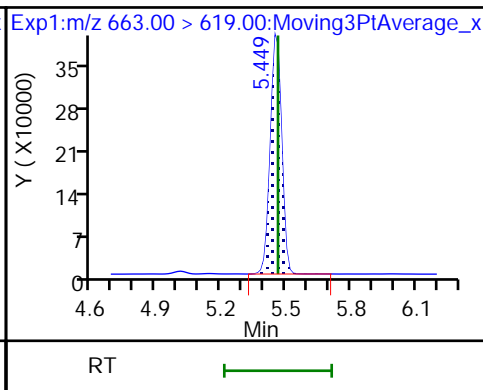
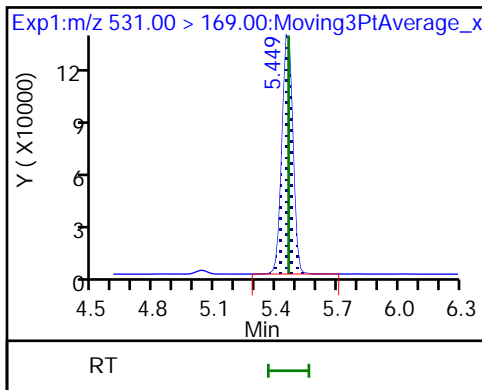




D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid

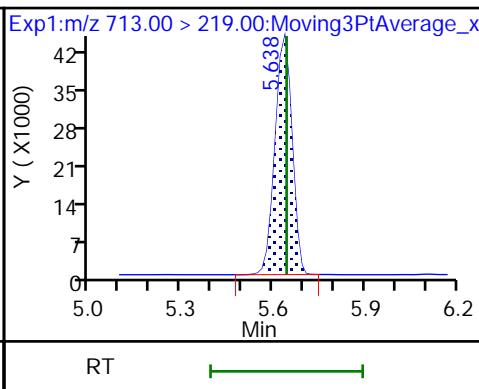
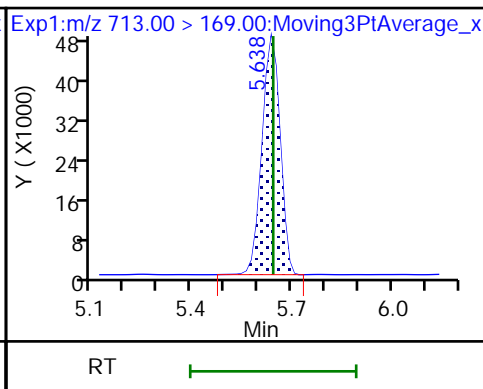
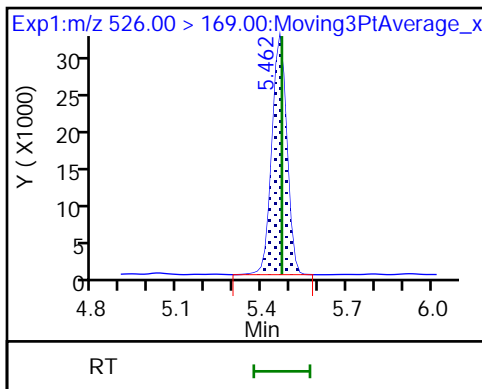
44 Perfluorotridecanoic acid



56 N-EtFOSA-M

45 Perfluorotetradecanoic acid

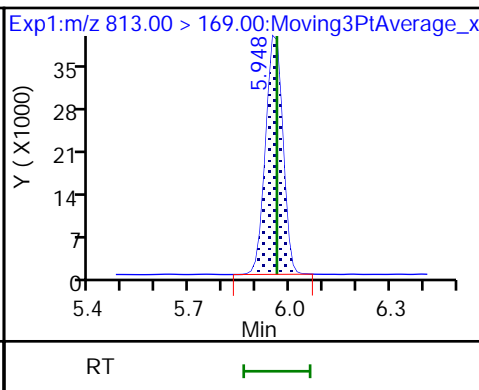
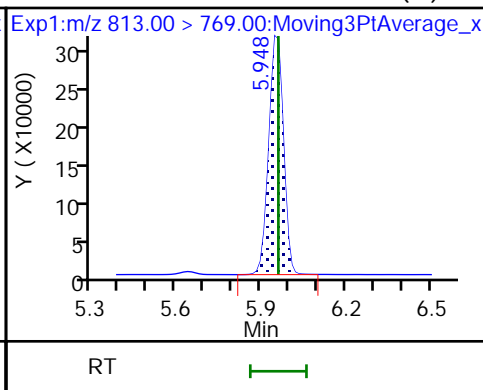
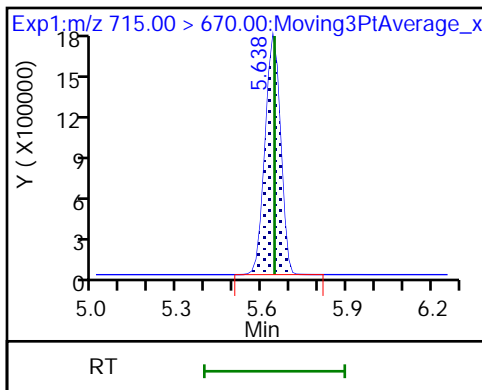
45 Perfluorotetradecanoic acid



D 46 13C2 PFTeDA

55 Perfluorohexadecanoic acid (M)

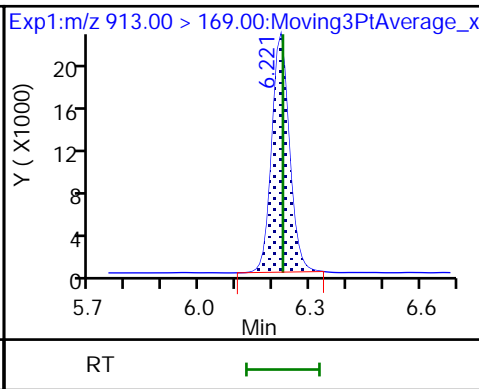
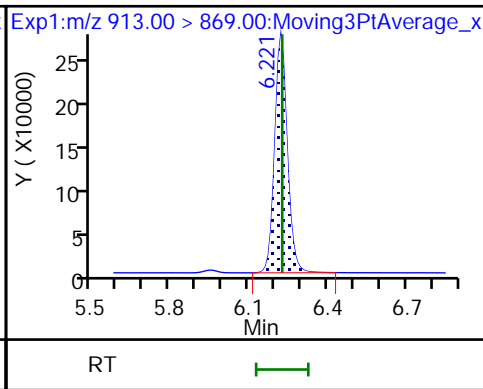
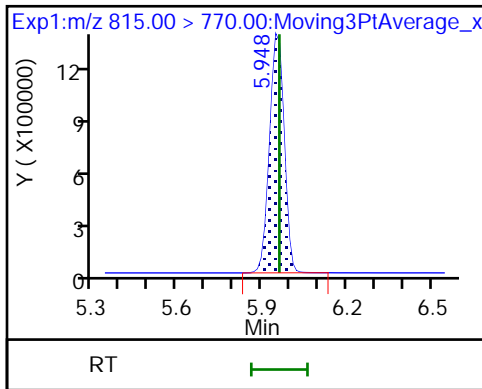
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid



Eurofins TestAmerica, Knoxville

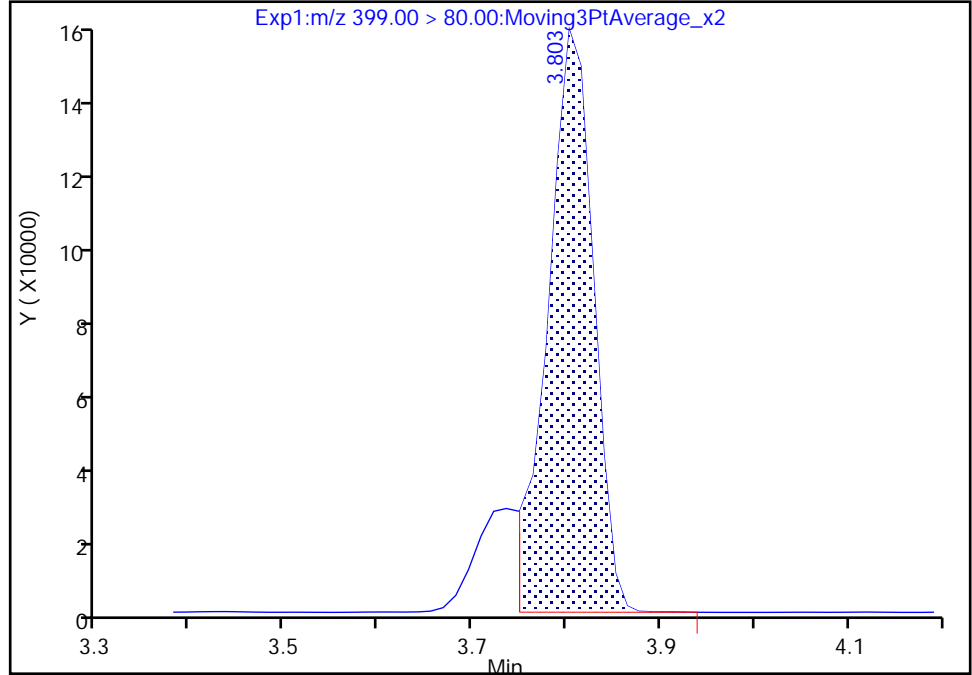
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_008.d
Injection Date: 05-Oct-2021 22:18:36 Instrument ID: LCA
Lims ID: IC 3
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

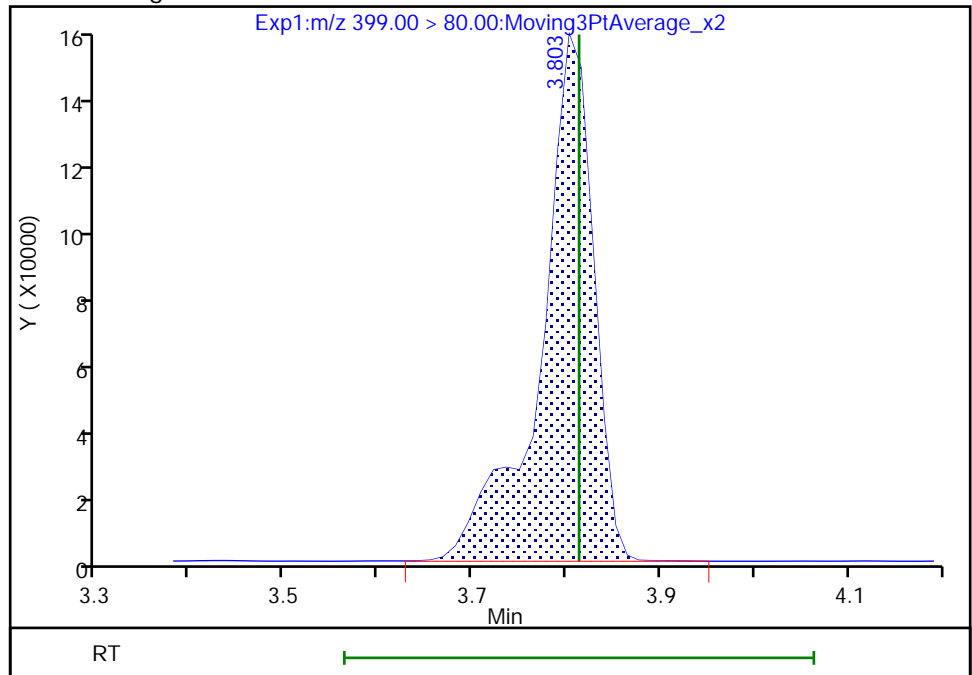
RT: 3.80
Area: 508505
Amount: 0.227500
Amount Units: ng/ml

Processing Integration Results



RT: 3.80
Area: 594032
Amount: 0.238050
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:59:17
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

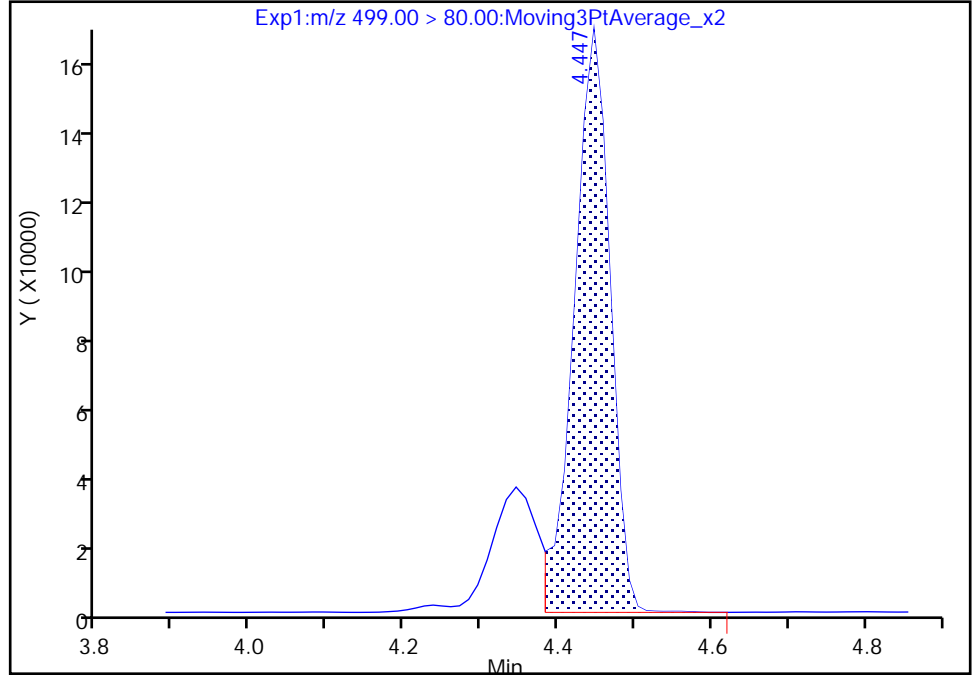
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_008.d
Injection Date: 05-Oct-2021 22:18:36 Instrument ID: LCA
Lims ID: IC 3
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

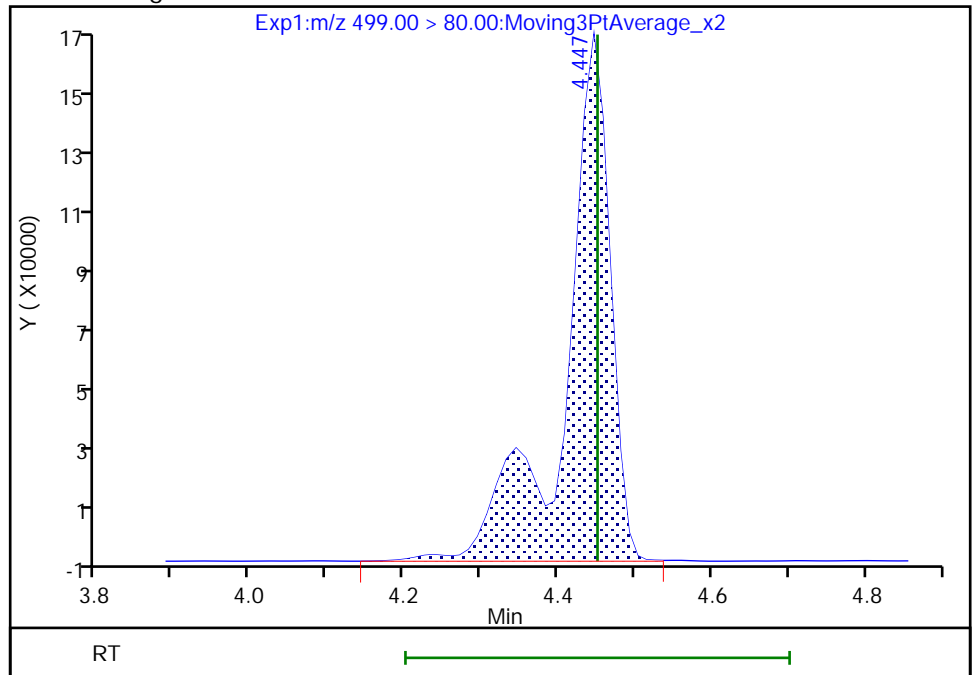
RT: 4.45
Area: 523125
Amount: 0.195463
Amount Units: ng/ml

Processing Integration Results



RT: 4.45
Area: 667256
Amount: 0.238147
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:59:29
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

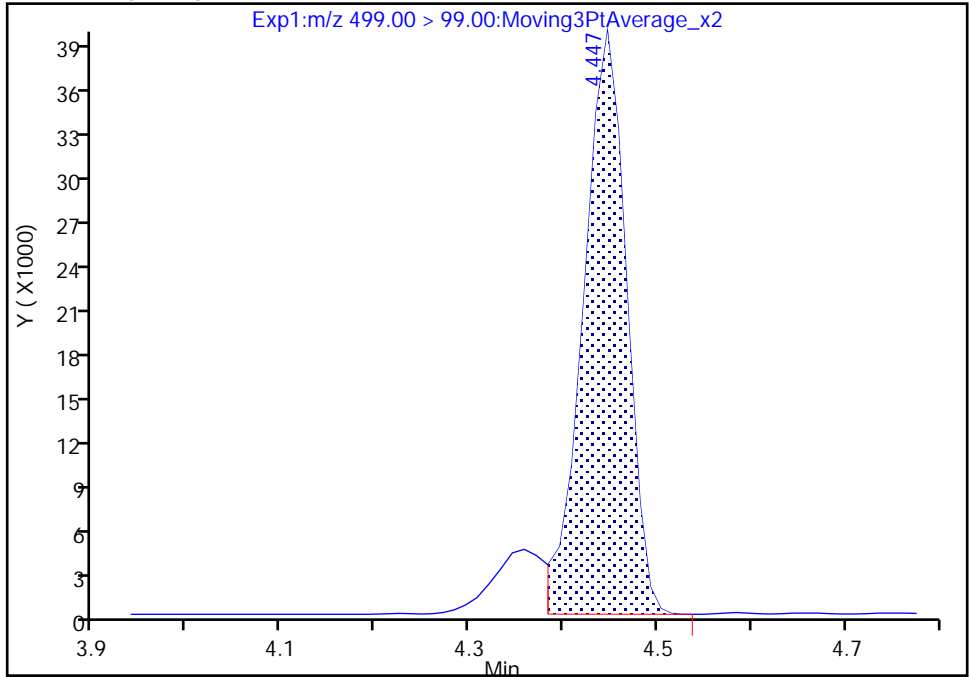
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_008.d
Injection Date: 05-Oct-2021 22:18:36 Instrument ID: LCA
Lims ID: IC 3
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

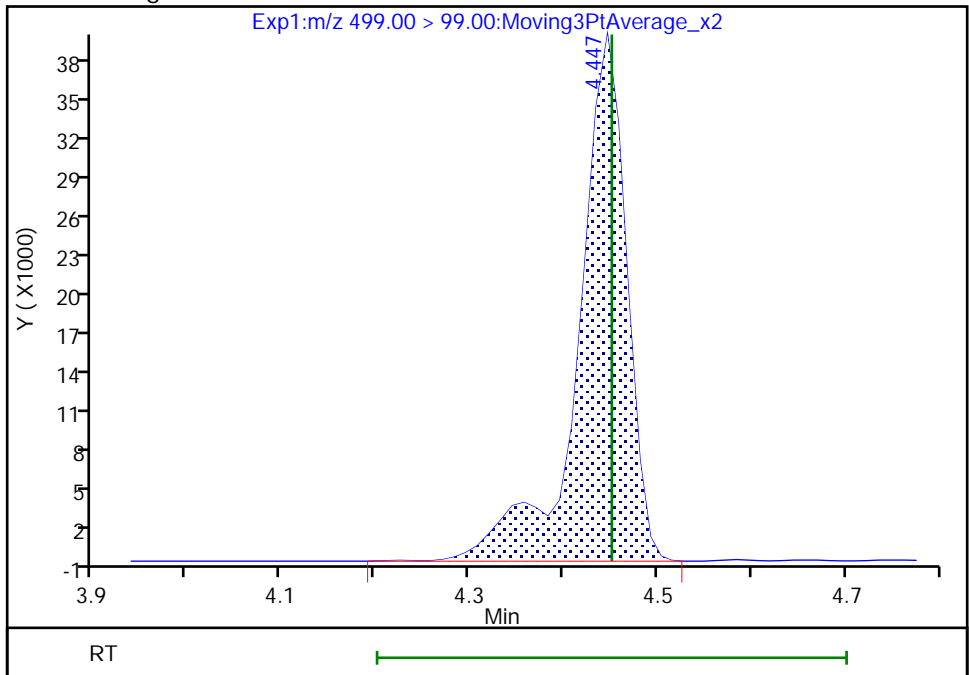
RT: 4.45
Area: 126358
Amount: 0.195463
Amount Units: ng/ml

Processing Integration Results



RT: 4.45
Area: 142904
Amount: 0.238147
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:59:36

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

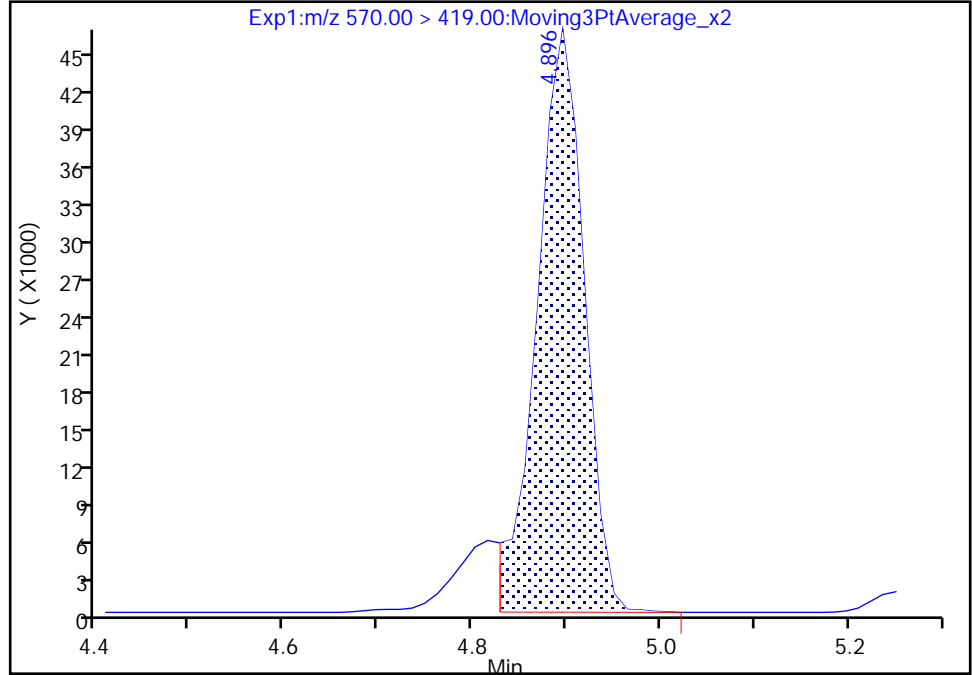
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Injection Date: 05-Oct-2021 22:18:36 Instrument ID: LCA
Lims ID: IC 3
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

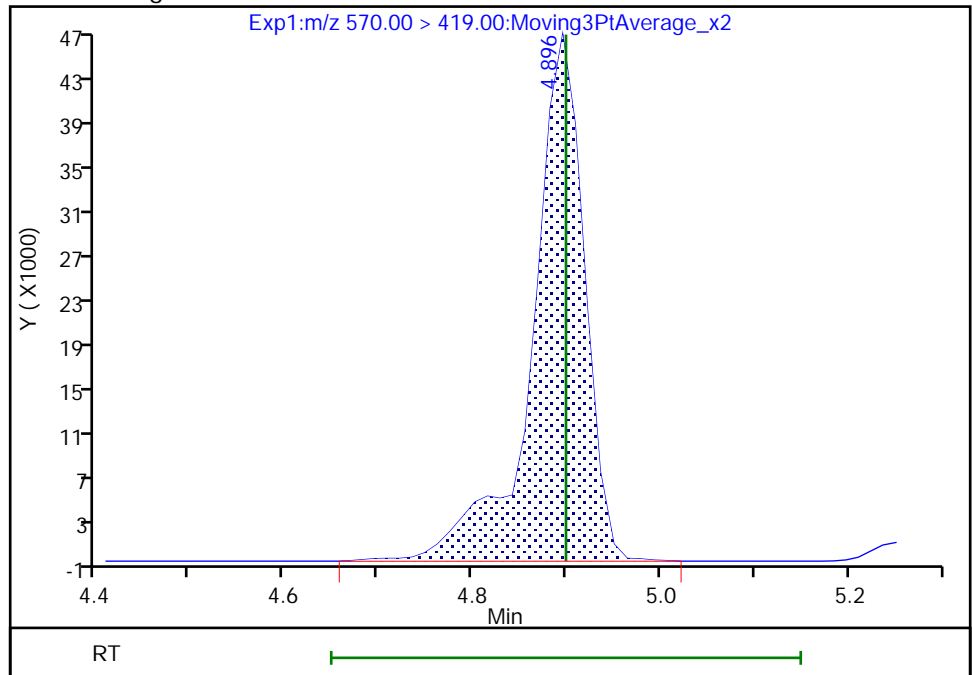
RT: 4.90
Area: 161530
Amount: 0.250000
Amount Units: ng/ml

Processing Integration Results



RT: 4.90
Area: 180751
Amount: 0.267693
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:59:49
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

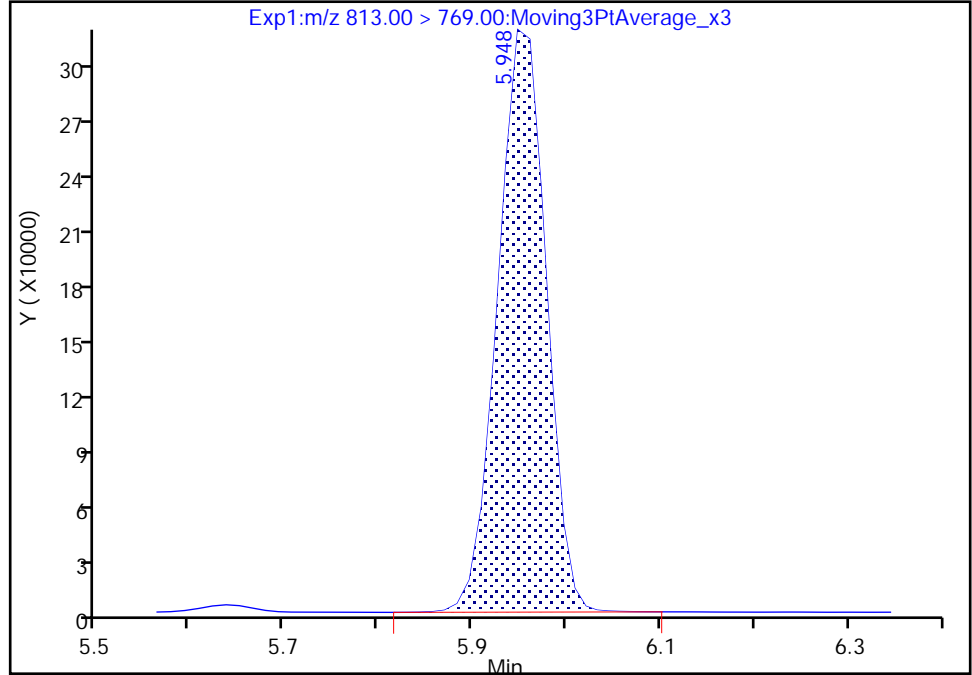
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Injection Date: 05-Oct-2021 22:18:36 Instrument ID: LCA
Lims ID: IC 3
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

55 Perfluorohexadecanoic acid, CAS: 67905-19-5

Signal: 1

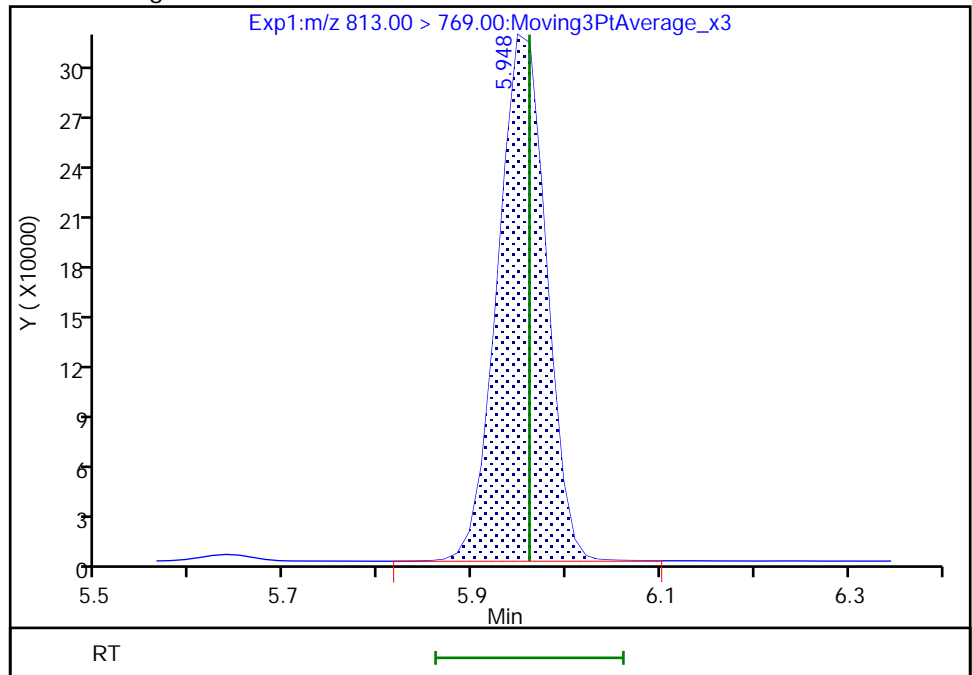
RT: 5.95
Area: 1130161
Amount: 0.251368
Amount Units: ng/ml

Processing Integration Results



RT: 5.95
Area: 1132217
Amount: 0.262415
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:14:59
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_009.d
 Lims ID: ICIS
 Client ID:
 Sample Type: ICIS Calib Level: 4
 Inject. Date: 05-Oct-2021 22:27:23 ALS Bottle#: 9 Worklist Smp#: 9
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020953-009 icis
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15

Method: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 07-Oct-2021 14:21:06 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1613

First Level Reviewer: cochranj Date: 06-Oct-2021 16:01:12

Ratio Calibration: None

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	2.812	2.812	0.0	0.677	7289844	1.22	97.4	16005	
2 Perfluorobutanoic acid	212.90 > 169.00	2.812	2.812	0.0	1.000	4468418	0.9755	97.5	574	
D 3 13C5 PFPeA	267.90 > 223.00	3.129	3.130	-0.001	0.753	5943333	1.21	96.7	13688	
4 Perfluoropentanoic acid	262.90 > 219.00	3.129	3.131	-0.002	1.000	4615308	0.9582	95.8	1056	
D 6 13C3 PFBS	301.90 > 80.00	3.143	3.143	0.0	0.756	3519158	1.11	95.4	26115	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.143	3.151	-0.008	1.000	2953898	0.8665	Target=3.06	98.0	8808
	298.90 > 99.00	3.143	3.151	-0.008	1.000	1118824		2.64(1.53-4.59)	98.0	2775
7 4:2 FTS	327.00 > 307.00	3.423	3.431	-0.008	1.000	1050887	0.9470	101	9112	
D 8 M2-4:2 FTS	329.00 > 81.00	3.423	3.431	-0.008	0.824	518286	1.09	93.3	480	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.469	3.468	0.001	1.104	2412870	0.9279	Target=3.47	98.9	11598
	349.00 > 99.00	3.469	3.468	0.001	1.104	679986		3.55(1.73-5.20)	98.9	7713
10 Perfluorohexanoic acid	313.00 > 269.00	3.469	3.471	-0.002	1.000	4022201	0.9589	Target=9.74	95.9	1871
	313.00 > 119.00	3.469	3.471	-0.002	1.000	323554		12.43(4.87-14.61)	95.9	1561
D 9 13C2 PFHxA	315.00 > 270.00	3.469	3.471	-0.002	0.835	6116663	1.21	96.9	19679	
13 HFPO-DA	285.00 > 169.00	3.561	3.565	-0.004	1.000	3457493	0.9856	98.6	2276	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.561	3.565	-0.004	0.857	3166510	1.23		98.0	11810	
D 17 18O2 PFHxS										
403.00 > 84.00	3.815	3.813	0.002	0.918	2269288	1.18		99.9	9756	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.815	3.813	0.002	1.000	2292161	0.8789	Target=2.96	96.6	6542	M
399.00 > 99.00	3.815	3.813	0.002	1.000	665596		3.44(1.48-4.44)	96.6	3758	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.815	3.819	-0.004	1.000	5299224	1.00	Target=3.35	99.6	3193	
363.00 > 169.00	3.815	3.819	-0.004	1.000	1615663		3.28(1.67-5.02)	99.6	6725	
D 14 13C4 PFHpA										
367.00 > 322.00	3.815	3.819	-0.004	0.918	6294659	1.25		100	18492	
68 DONA										
377.00 > 251.00	3.852	3.850	0.002	0.866	8159890	0.9843	Target=1.49	104	15833	
377.00 > 85.00	3.852	3.850	0.002	0.866	4252443		1.92(0.74-2.23)	104	6029	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.143	4.143	0.0	0.932	2341758	0.9210	Target=3.73	96.7	9023	
449.00 > 99.00	4.143	4.143	0.0	0.932	600330		3.90(1.87-5.61)	96.7	5216	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.155	4.156	-0.001	1.000	5067237	1.02	Target=2.40	102	1572	
413.00 > 169.00	4.155	4.156	-0.001	1.000	2006775		2.53(1.20-3.61)	102	3710	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.143	4.146	-0.003	0.997	5416582	1.21		96.9	24454	
19 6:2 FTS										
427.00 > 407.00	4.155	4.151	0.004	1.003	905258	0.9299		98.1	6785	
* 22 13C2 PFOA										
415.00 > 370.00	4.155	4.155	0.0		5652969	1.25			14547	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.143	4.151	-0.008	0.997	574488	1.18		99.3	738	
D 21 13C4 PFOA										
417.00 > 372.00	4.155	4.155	0.0	1.000	5619219	1.23		98.7	27097	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.447	4.446	0.0	1.070	657677	1.16		96.9	4109	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.447	4.451	-0.005	1.000	2600759	0.9252	Target=3.83	99.7	3124	M
499.00 > 99.00	4.447	4.451	-0.005	1.000	571705		4.55(1.91-5.74)	99.7	2576	M
D 25 13C4 PFOS										
503.00 > 80.00	4.447	4.451	-0.005	1.070	3054456	1.15		96.6	9604	
26 Perfluorononanoic acid										
463.00 > 419.00	4.470	4.471	-0.001	1.000	4812773	1.00	Target=3.68	99.7	3288	
463.00 > 169.00	4.470	4.471	-0.001	1.000	1055178		4.56(1.84-5.52)	99.7	3798	
D 27 13C5 PFNA										
468.00 > 423.00	4.470	4.471	-0.001	1.076	7226283	1.25		99.9	30078	
63 9CIFOS										
531.00 > 351.00	4.608	4.606	0.002	1.109	5550758	0.9410		101	10741	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.722	4.728	-0.006	1.062	2390809	0.8975	Target=3.97	93.5	8373	
549.00 > 99.00	4.722	4.728	-0.006	1.062	624360		3.83(1.99-5.96)	93.5	2794	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.736	4.745	-0.009	1.000	3588461	0.9632		96.3	4464	
D 34 13C8 FOSA										
506.00 > 78.00	4.736	4.743	-0.007	1.140	4847961	1.25		99.8	6653	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.762	4.760	0.002	1.003	5531515	1.00	Target=10.11	99.5	2321	
513.00 > 169.00	4.749	4.760	-0.011	1.000	467474		11.83(5.06-15.17)	99.5	449	
D 32 13C2 PFDA										
515.00 > 470.00	4.749	4.758	-0.009	1.143	7310968	1.25		99.8	23779	
31 8:2 FTS										
527.00 > 507.00	4.776	4.774	0.002	1.000	955136	0.9230		96.3	5270	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.776	4.774	0.002	1.149	694718	1.17		97.5	2940	
36 NMeFOSAA										
570.00 > 419.00	4.896	4.899	-0.003	1.000	750862	0.9792		97.9	1069	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.896	4.899	-0.003	1.178	1042167	1.30		104	2722	
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.993	4.997	-0.004	1.123	2378581	0.9720	Target=3.80	101	8625	
599.00 > 99.00	4.993	4.997	-0.004	1.123	651235		3.65(1.90-5.70)	101	3090	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.022	5.018	0.004	1.003	5677846	1.00	Target=7.45	100	3880	
563.00 > 169.00	5.022	5.018	0.004	1.003	615172		9.23(3.78-11.33)	100	3649	
D 39 13C2 PFUnA										
565.00 > 520.00	5.007	5.015	-0.008	1.205	7006211	1.25		100	22211	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.036	5.034	0.002	1.212	924381	1.20		95.9	2699	
40 NEtFOSA										
584.00 > 419.00	5.036	5.040	-0.004	1.000	689486	0.9820		98.2	867	
57 11CIFOS										
631.00 > 451.00	5.119	5.122	-0.003	1.151	4468073	0.9406		99.9	9988	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.251	5.255	-0.004	1.000	5931269	0.9622	Target=5.33	96.2	2551	
613.00 > 169.00	5.251	5.255	-0.004	1.000	838904		7.07(2.66-7.99)	96.2	6384	
D 43 13C2 PFDaA										
615.00 > 570.00	5.251	5.255	-0.004	1.264	7381117	1.24		99.0	18925	
50 10:2 FTS										
627.00 > 607.00	5.266	5.274	-0.008	1.103	1192076	0.9251		96.0	4562	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.280	5.289	-0.009	1.271	614171	1.26		101	359	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.274	614480	1.21		97.1	43.4	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.297	-0.002	1.003	530157	0.9313		93.1	584	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.295	5.301	-0.006	1.000	496513	0.9647		96.5	763	
54 PFDoS										
699.00 > 80.00	5.436	5.439	-0.003	1.222	2347772	0.9298	Target=4.32	96.1	6677	
699.00 > 99.00	5.436	5.439	-0.003	1.222	574923		4.08(2.19-6.58)	96.1	3426	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.436	5.445	-0.009	1.308	630903	1.22		97.4	544	
62 N-EtFOSE-M										
630.00 > 59.00	5.449	5.458	-0.009	1.002	660212	1.04		104	1077	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.462	5.462	0.0	1.040	5182810	0.99	Target=5.66	99.3	2195	
663.00 > 169.00	5.462	5.462	0.0	1.040	865750		5.99(2.83-8.48)	99.3	5801	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.460	0.002	1.315	512905	1.20		96.3	847	
56 N-EtFOSA-M										
526.00 > 169.00	5.462	5.469	-0.007	1.000	471510	0.9835		98.3	621	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.637	5.643	-0.006	1.000	667705	0.9763	Target=1.07	97.6	4677	
713.00 > 219.00	5.637	5.643	-0.006	1.000	667385		1.00(0.53-1.60)	97.6	5495	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.637	5.643	-0.006	1.357	6776597	1.24		99.0	18426	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.961	5.961	0.0	1.435	4764988	1.20		96.0	8789	
55 Perfluorohexadecanoic acid										M
813.00 > 769.00	5.961	5.961	0.0	1.000	4177724	1.00	Target=7.50	100	2599	M
813.00 > 169.00	5.961	5.961	0.0	1.000	494952		8.44(3.75-11.26)	100	2415	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.221	6.226	-0.005	1.044	3485638	1.01	Target=9.98	101	2407	
913.00 > 169.00	6.221	6.226	-0.005	1.044	294960		11.82(5.14-15.41)	101	1990	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L4PFC2_00003

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_009.d

Injection Date: 05-Oct-2021 22:27:23

Instrument ID: LCA

Lims ID: ICIS

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 9

Worklist Smp#: 9

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

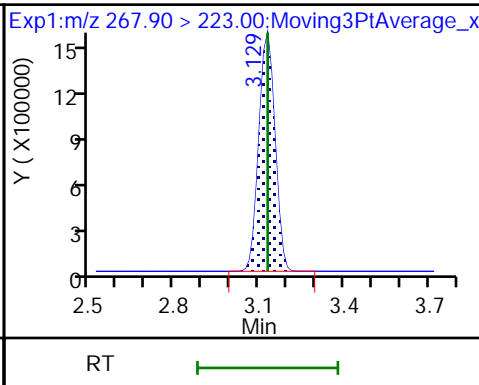
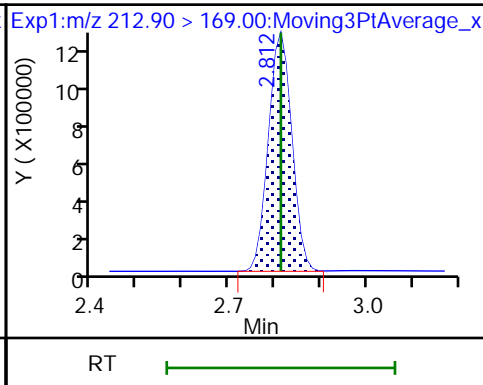
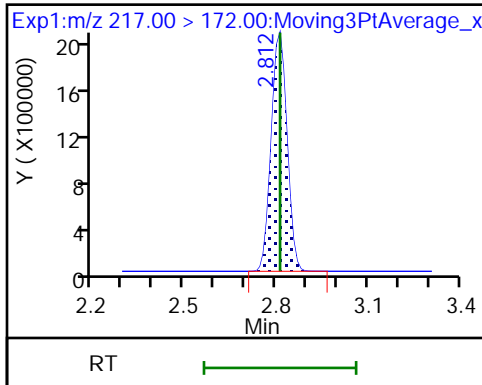
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

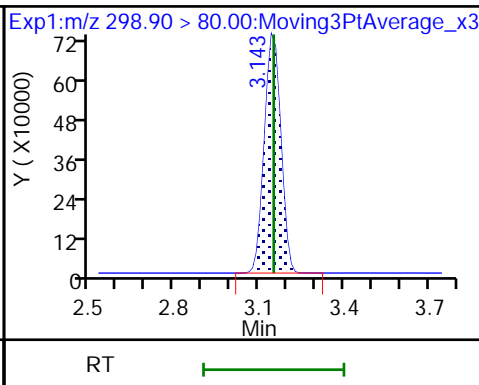
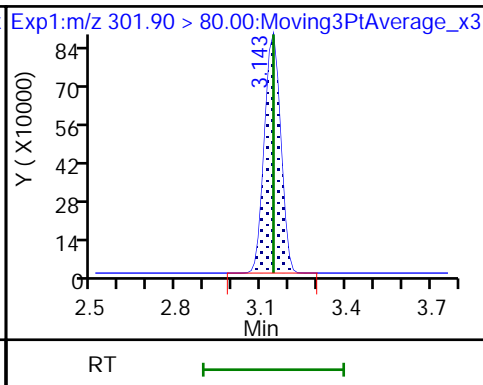
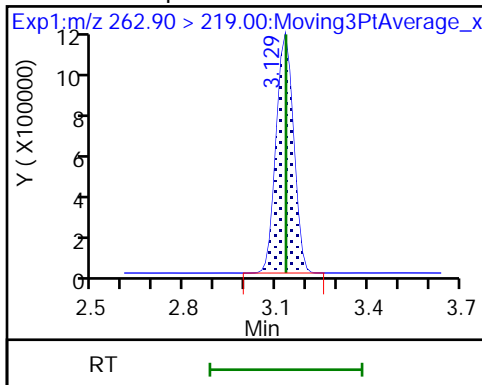
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

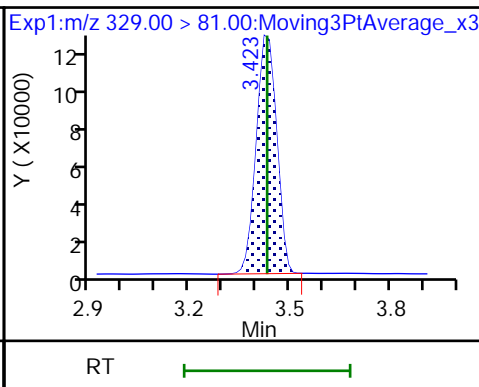
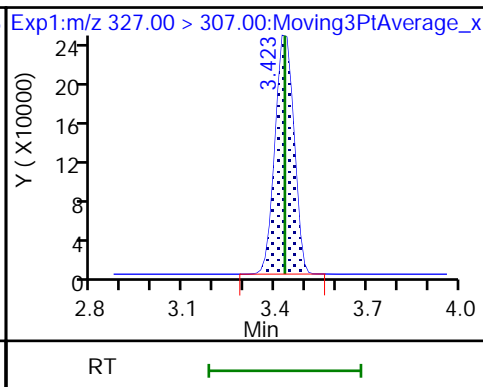
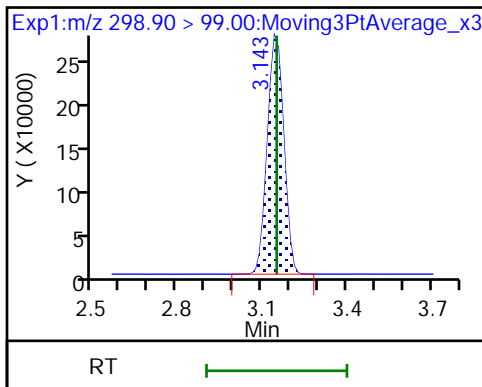
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

7 4:2 FTS

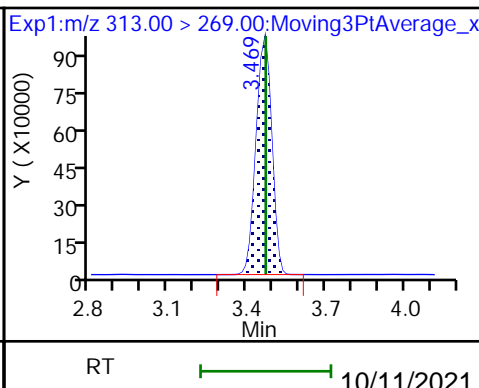
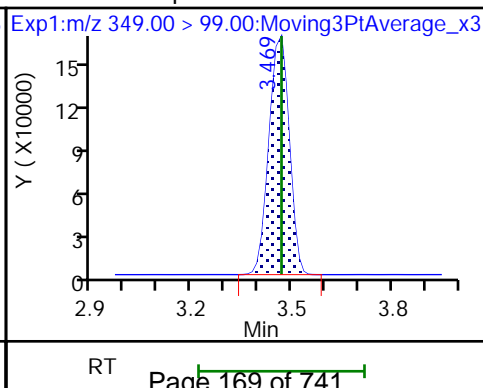
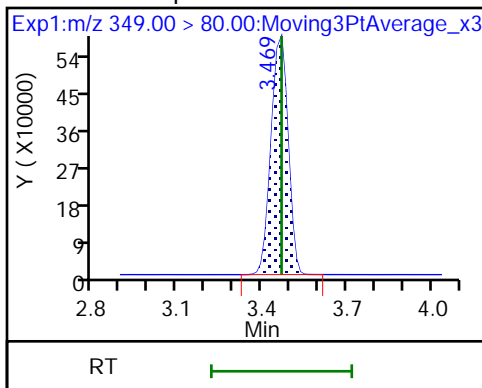
D 8 M2-4:2 FTS

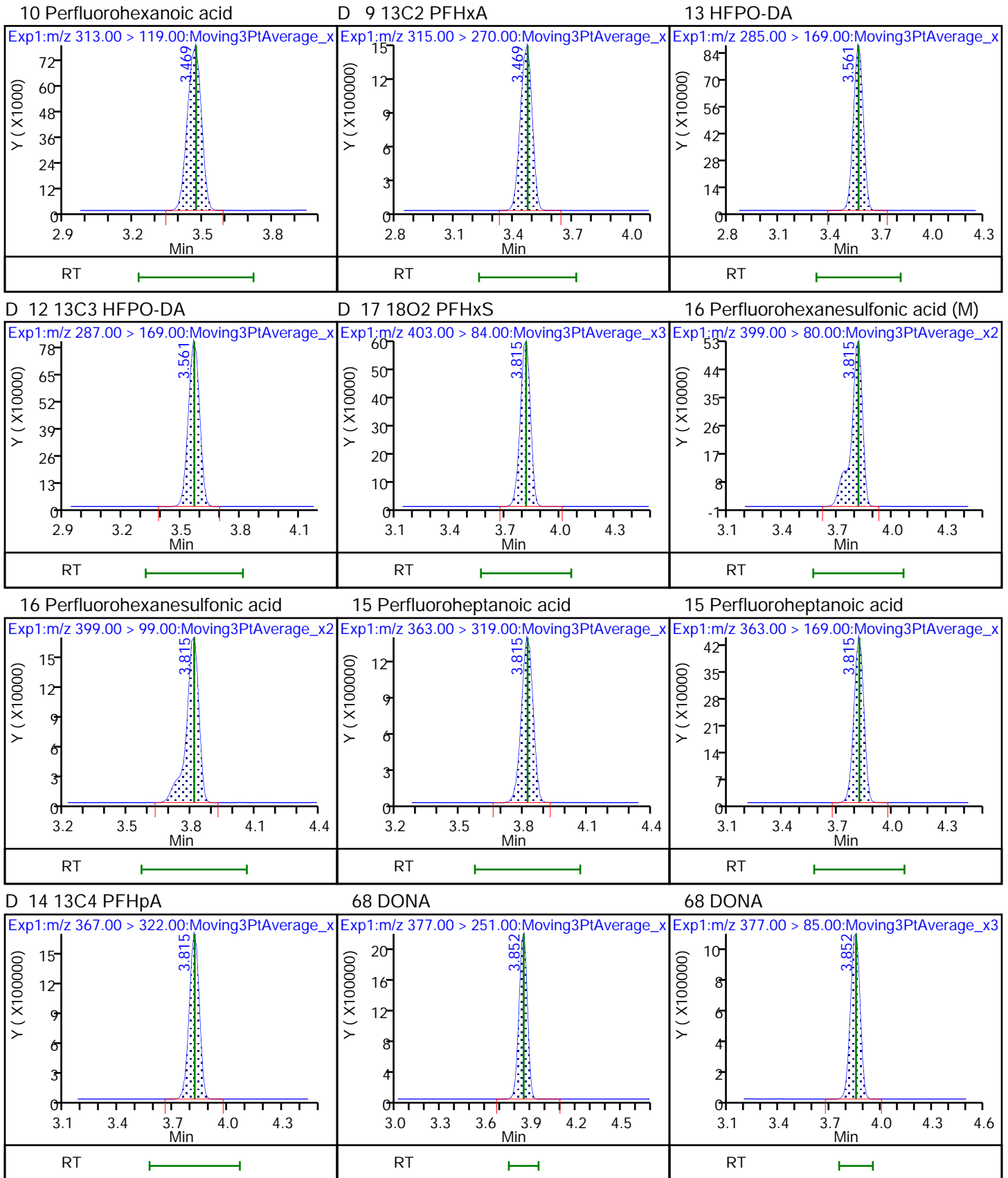


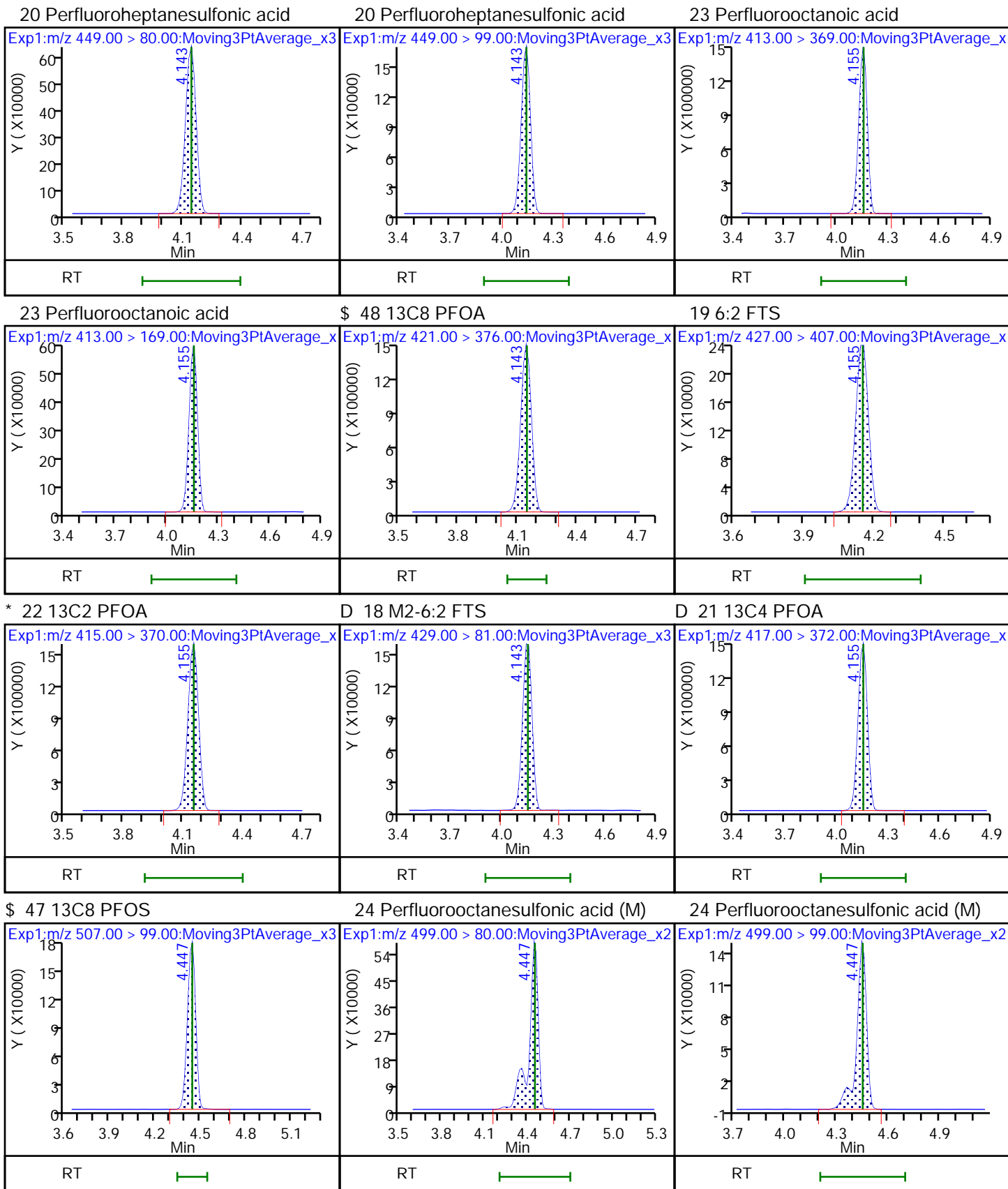
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

10 Perfluorohexanoic acid



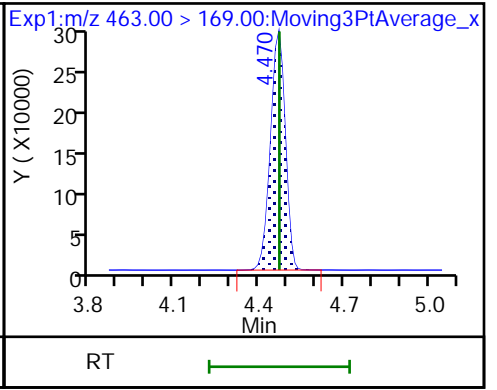
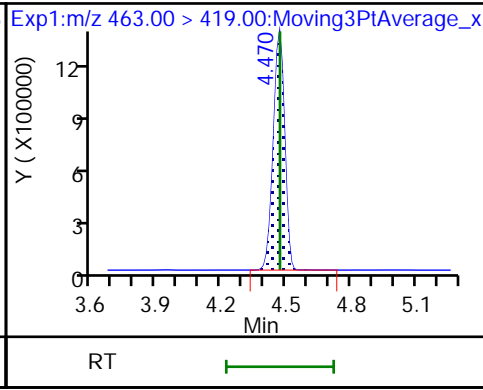
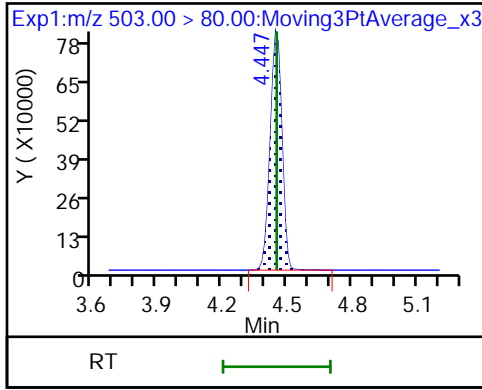




D 25 13C4 PFOS

26 Perfluorononanoic acid

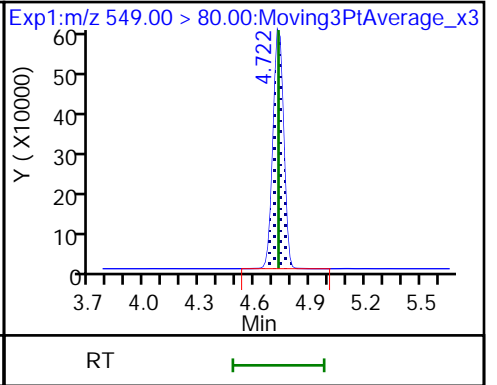
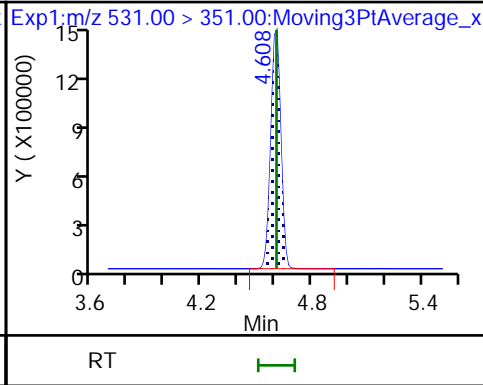
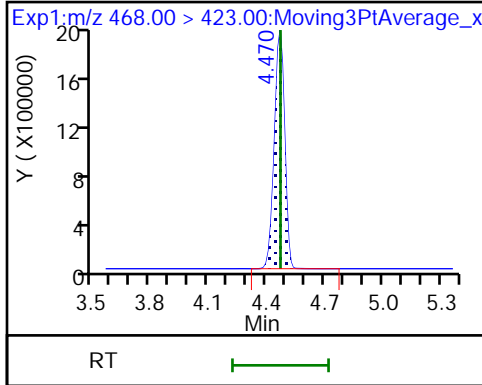
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS

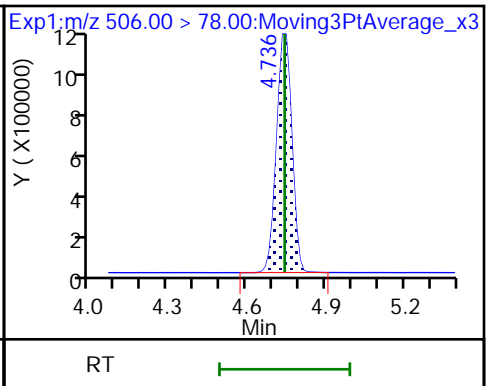
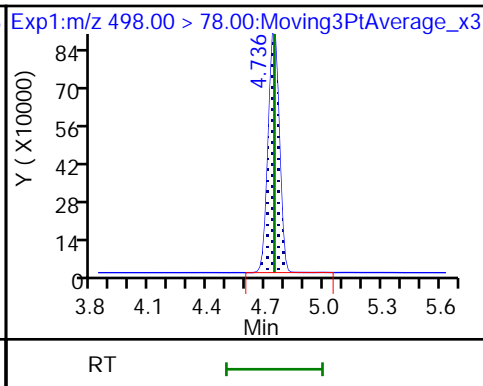
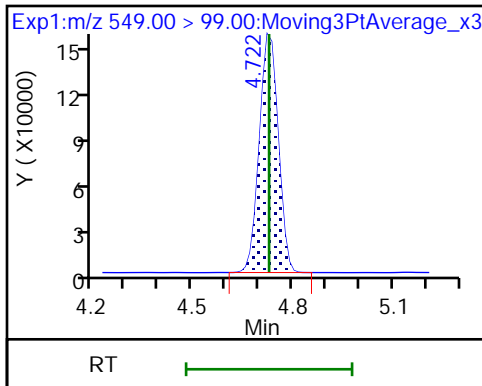
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

33 Perfluorooctanesulfonamide

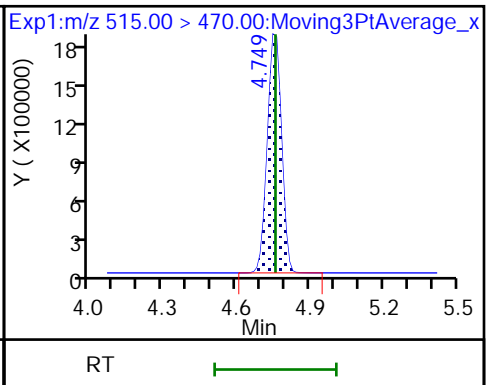
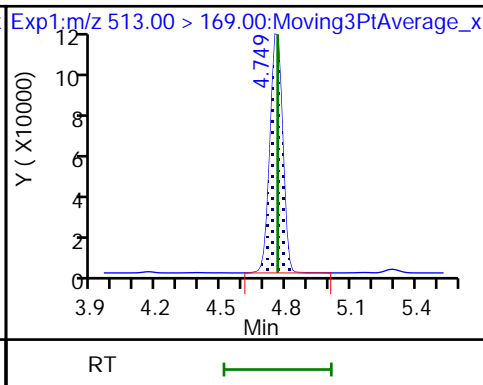
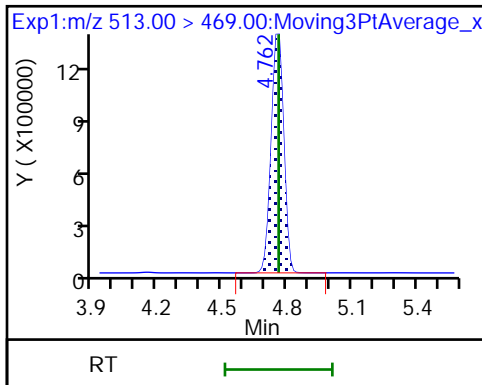
D 34 13C8 FOSA

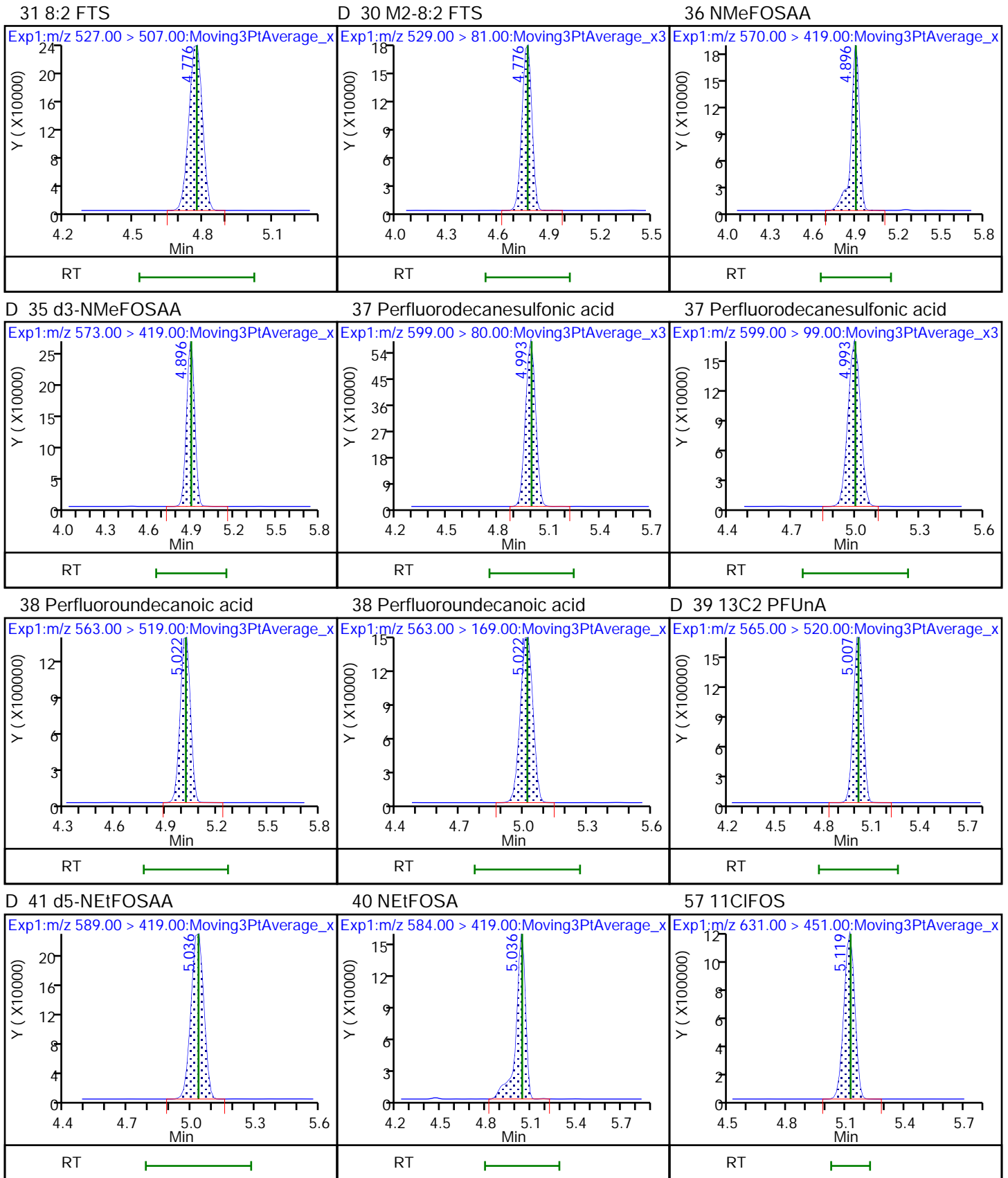


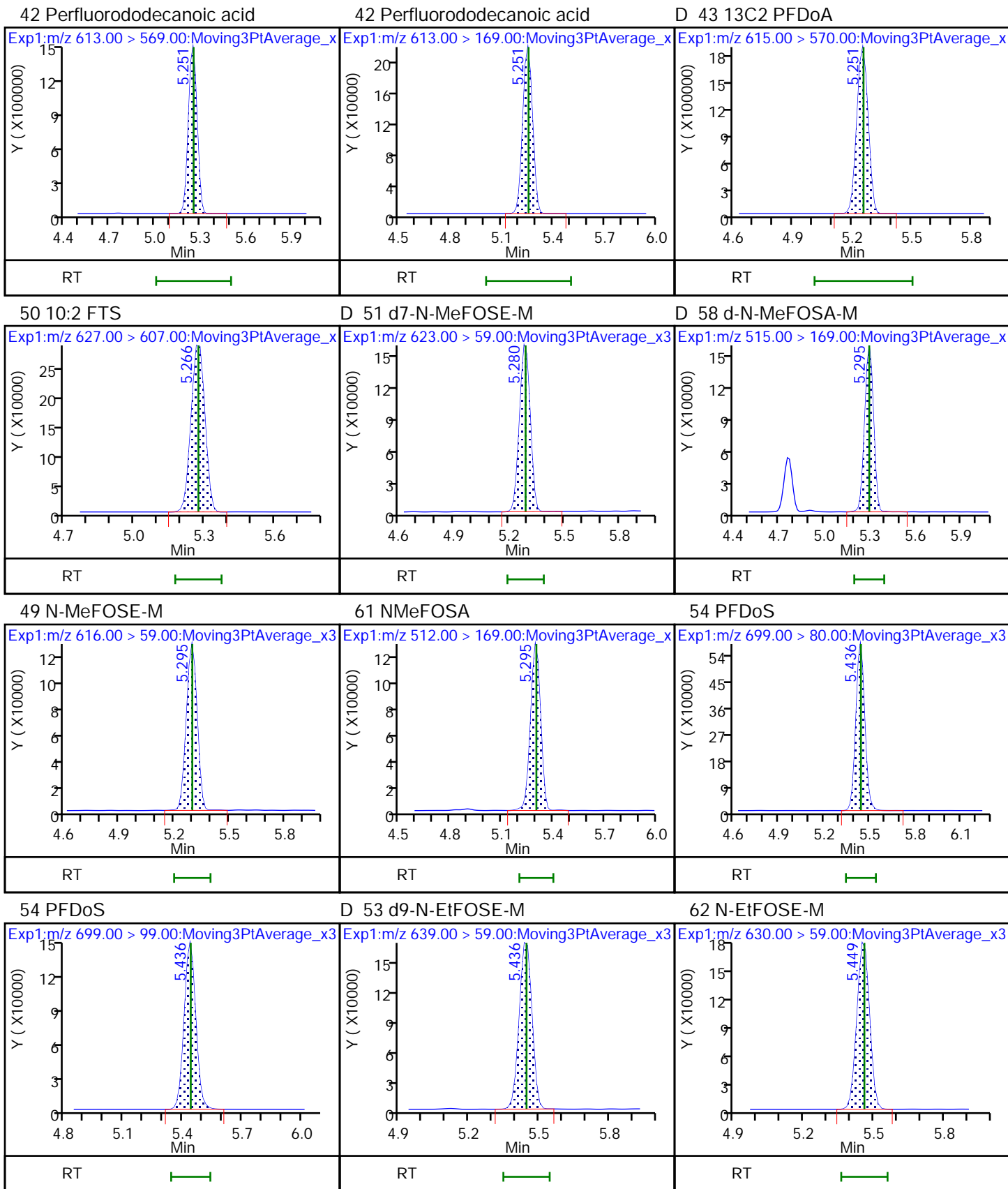
29 Perfluorodecanoic acid

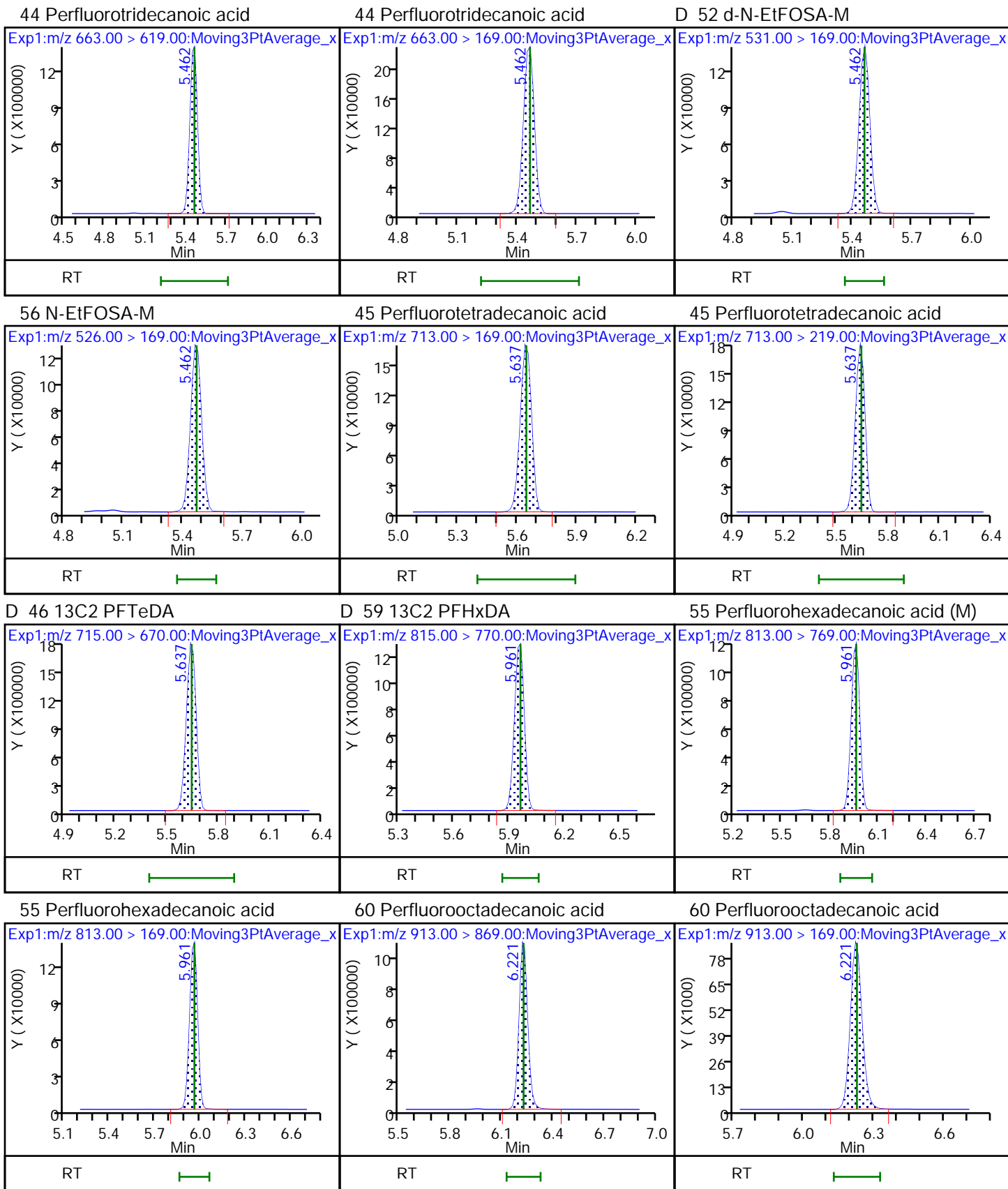
29 Perfluorodecanoic acid

D 32 13C2 PFDA









Eurofins TestAmerica, Knoxville

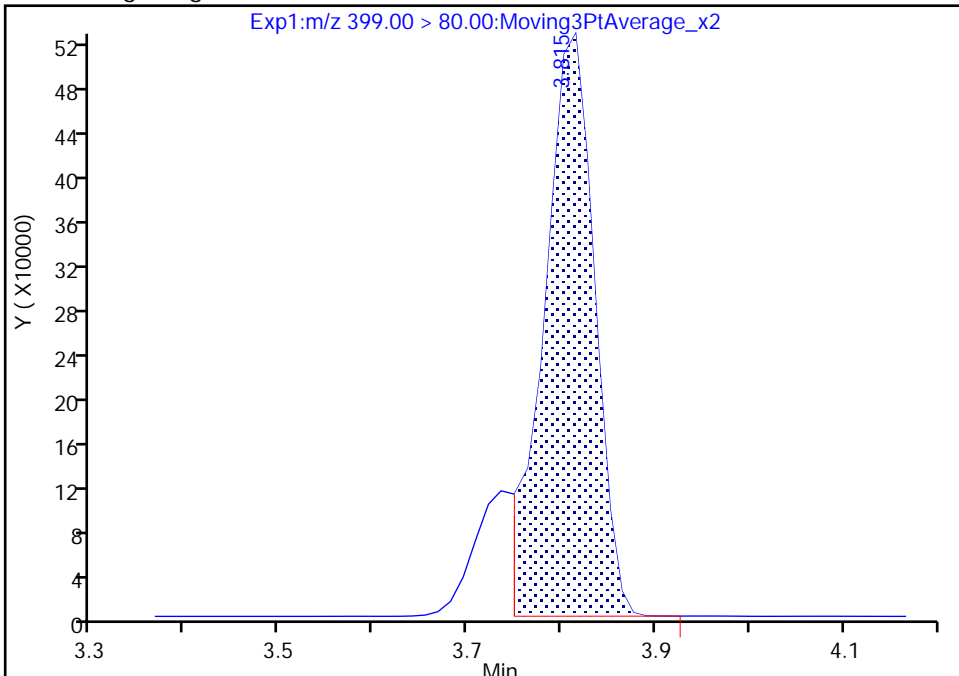
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_009.d
Injection Date: 05-Oct-2021 22:27:23 Instrument ID: LCA
Lims ID: ICIS
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

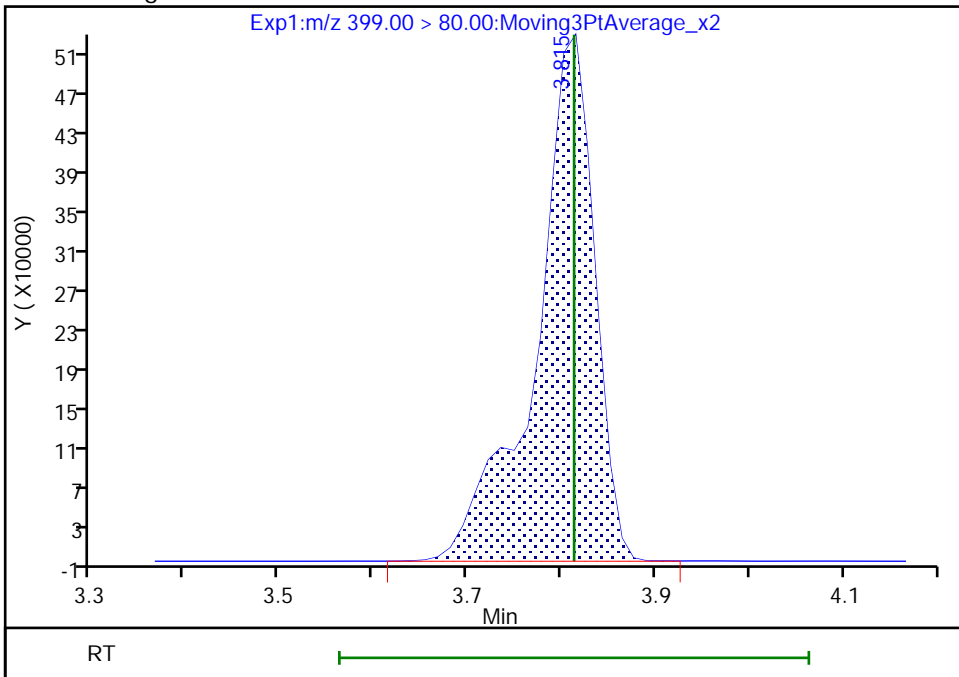
RT: 3.82
Area: 1964246
Amount: 0.904580
Amount Units: ng/ml

Processing Integration Results



RT: 3.82
Area: 2292161
Amount: 0.878940
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:00:32
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

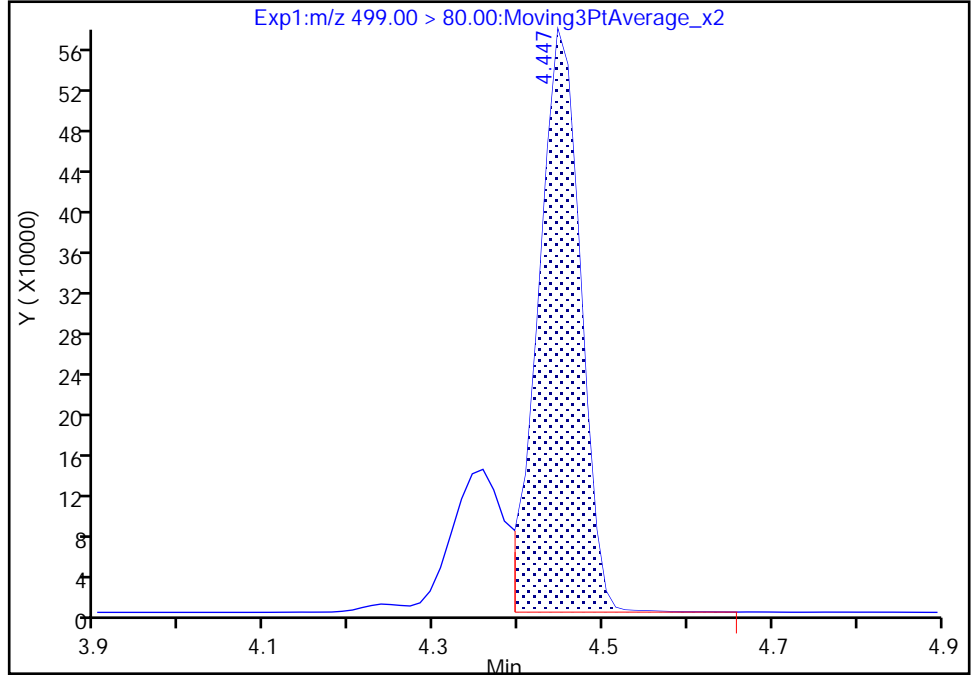
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_009.d
Injection Date: 05-Oct-2021 22:27:23 Instrument ID: LCA
Lims ID: ICIS
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

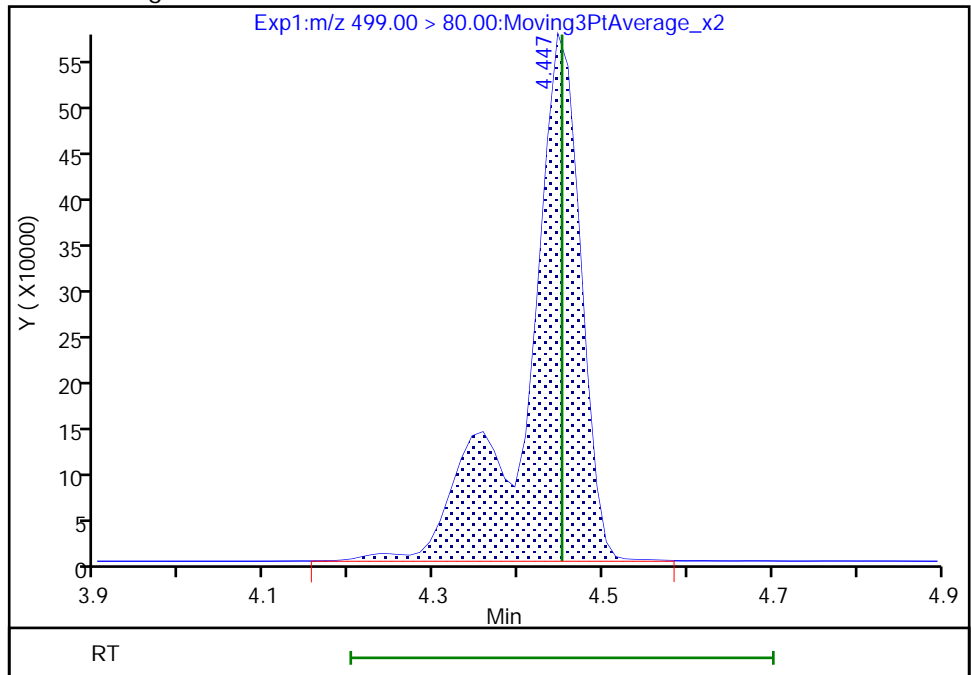
RT: 4.45
Area: 1968825
Amount: 0.729188
Amount Units: ng/ml

Processing Integration Results



RT: 4.45
Area: 2600759
Amount: 0.925201
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:00:45
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

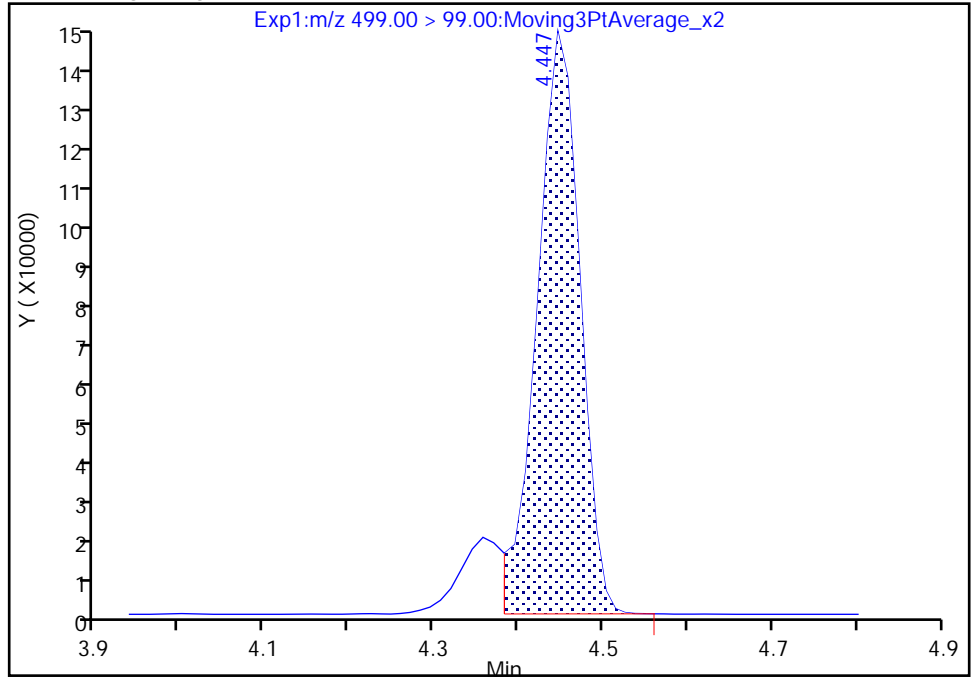
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_009.d
Injection Date: 05-Oct-2021 22:27:23 Instrument ID: LCA
Lims ID: ICIS
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

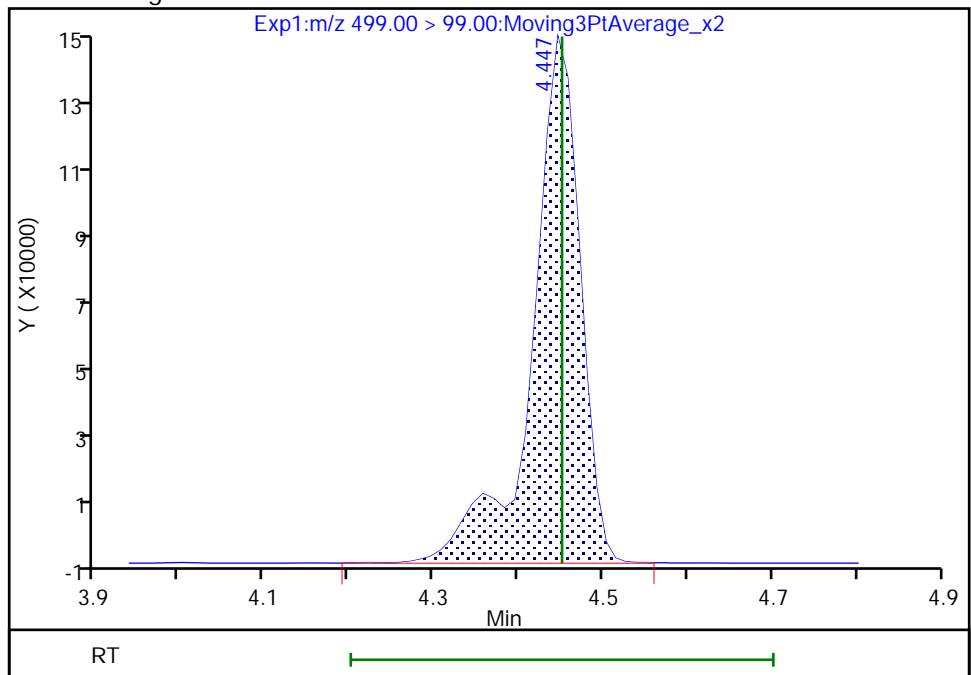
RT: 4.45
Area: 505754
Amount: 0.729188
Amount Units: ng/ml

Processing Integration Results



RT: 4.45
Area: 571705
Amount: 0.925201
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:00:52

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

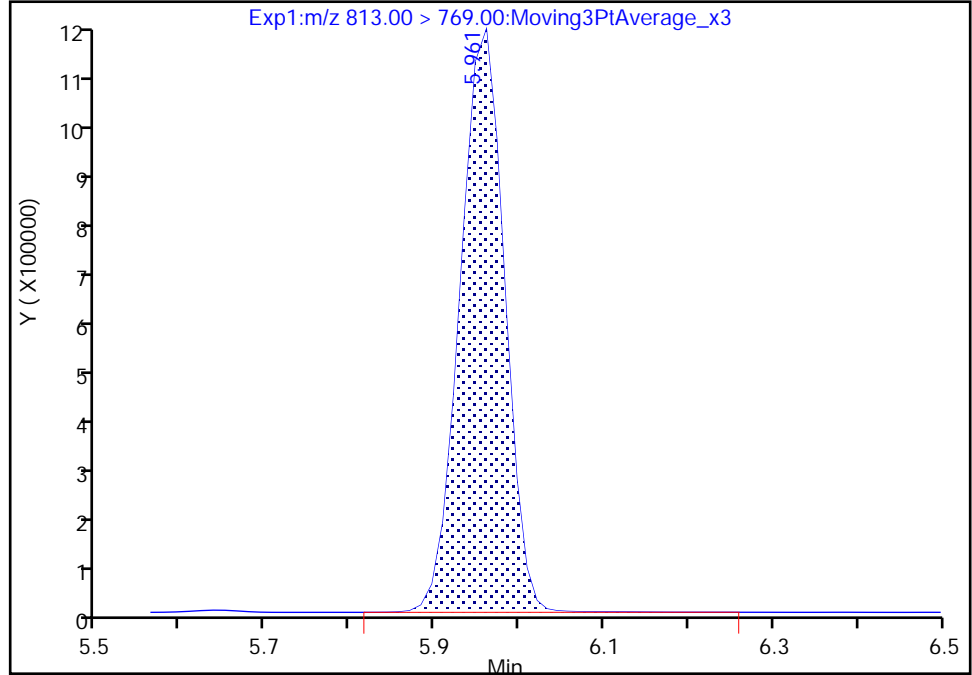
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_009.d
Injection Date: 05-Oct-2021 22:27:23 Instrument ID: LCA
Lims ID: ICIS
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

55 Perfluorohexadecanoic acid, CAS: 67905-19-5

Signal: 1

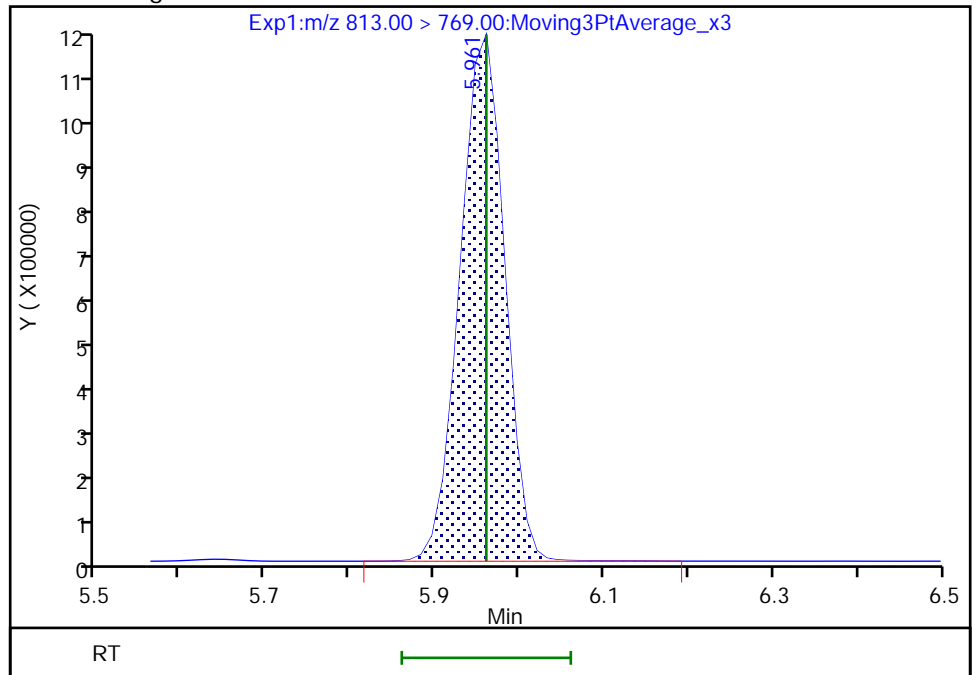
RT: 5.96
Area: 4176587
Amount: 0.919423
Amount Units: ng/ml

Processing Integration Results



RT: 5.96
Area: 4177724
Amount: 1.002735
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:14:38
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_010.d
 Lims ID: IC 5
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 05-Oct-2021 22:36:10 ALS Bottle#: 10 Worklist Smp#: 10
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020953-010 ic 5
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15

Method: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 07-Oct-2021 14:21:08 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1613

First Level Reviewer: cochranj Date: 06-Oct-2021 16:02:46

Ratio Calibration: None

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	2.812	2.812	0.0	1.000	10441309	2.34		93.7	1439	
D 1 13C4 PFBA										
217.00 > 172.00	2.812	2.812	0.0	0.677	7094947	1.25		99.7	16482	
D 3 13C5 PFPeA										
267.90 > 223.00	3.130	3.130	0.0	0.753	5746550	1.23		98.3	13358	
4 Perfluoropentanoic acid										
262.90 > 219.00	3.130	3.131	-0.001	1.000	10852858	2.33		93.2	2497	
D 6 13C3 PFBS										
301.90 > 80.00	3.143	3.143	0.0	0.756	3524311	1.17		100	24619	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	3.157	3.151	0.006	1.004	6852855	2.01	Target=3.06	90.8	15630	
298.90 > 99.00	3.157	3.151	0.006	1.004	2604355		2.63(1.53-4.59)	90.8	7911	
D 8 M2-4:2 FTS										
329.00 > 81.00	3.437	3.431	0.006	0.827	532409	1.18		101	579	
7 4:2 FTS										
327.00 > 307.00	3.437	3.431	0.006	1.000	2443233	2.14		91.8	32351	
11 Perfluoropentanesulfonic acid										
349.00 > 80.00	3.469	3.468	0.001	1.104	5960167	2.30	Target=3.47	97.9	31574	
349.00 > 99.00	3.469	3.468	0.001	1.104	1670398		3.57(1.73-5.20)	97.9	16633	
D 9 13C2 PFHxA										
315.00 > 270.00	3.469	3.471	-0.002	0.835	6061274	1.26		101	18497	
10 Perfluorohexanoic acid										
313.00 > 269.00	3.469	3.471	-0.002	1.000	9394999	2.26	Target=9.74	90.4	4433	
313.00 > 119.00	3.469	3.471	-0.002	1.000	732195		12.83(4.87-14.61)	90.4	2093	
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.561	3.565	-0.004	0.857	3145011	1.28		102	12167	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.561	3.565	-0.004	1.000	8376090	2.41		96.5	5826	
D 17 18O2 PFHxS										
403.00 > 84.00	3.815	3.813	0.002	0.918	2104634	1.15		97.4	8865	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.815	3.813	0.002	1.000	5280667	2.19	Target=2.96	96.3	14209	M
399.00 > 99.00	3.815	3.813	0.002	1.000	1553610		3.40(1.48-4.44)	96.3	10949	
D 14 13C4 PFHpA										
367.00 > 322.00	3.815	3.819	-0.004	0.918	5824750	1.22		97.4	18059	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.815	3.819	-0.004	1.000	12053684	2.45	Target=3.35	98.2	6120	
363.00 > 169.00	3.815	3.819	-0.004	1.000	3696669		3.26(1.67-5.02)	98.2	17372	
68 DONA										
377.00 > 251.00	3.852	3.850	0.002	0.866	17882462	2.23	Target=1.49	94.7	33527	
377.00 > 85.00	3.852	3.850	0.002	0.866	10226407		1.75(0.74-2.23)	94.7	7758	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.143	4.143	0.0	0.932	5405819	2.20	Target=3.73	92.3	13393	
449.00 > 99.00	4.143	4.143	0.0	0.932	1355722		3.99(1.87-5.61)	92.3	6283	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.155	4.151	0.004	1.000	528850	1.14		96.1	893	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.143	4.146	-0.003	0.997	5259329	1.24		99.0	22928	
D 21 13C4 PFOA										
417.00 > 372.00	4.155	4.155	0.0	1.000	5484596	1.27		101	20050	
19 6:2 FTS										
427.00 > 407.00	4.155	4.151	0.004	1.000	2082865	2.33		98.5	9698	
* 22 13C2 PFOA										
415.00 > 370.00	4.155	4.155	0.0		5374730	1.25			24316	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.155	4.156	-0.001	1.000	11834254	2.45	Target=2.40	97.8	3878	
413.00 > 169.00	4.155	4.156	-0.001	1.000	4438078		2.67(1.20-3.61)	97.8	6008	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.447	4.446	0.001	1.070	644134	1.19		99.8	4177	
D 25 13C4 PFOS										
503.00 > 80.00	4.447	4.451	-0.004	1.070	2955831	1.17		98.3	8199	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.447	4.451	-0.004	1.000	6031664	2.22	Target=3.83	95.6	5140	M
499.00 > 99.00	4.447	4.451	-0.004	1.000	1370743		4.40(1.91-5.74)	95.6	7354	M
D 27 13C5 PFNA										
468.00 > 423.00	4.470	4.471	-0.001	1.076	6981917	1.27		102	24140	
26 Perfluorononanoic acid										
463.00 > 419.00	4.470	4.471	-0.001	1.000	11627018	2.50	Target=3.68	100	8452	
463.00 > 169.00	4.470	4.471	-0.001	1.000	2445628		4.75(1.84-5.52)	100	6352	
63 9CIFOS										
531.00 > 351.00	4.608	4.606	0.002	1.109	12573714	2.20		94.5	28414	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.736	4.728	0.008	1.065	6088408	2.36	Target=3.97	98.4	13871	
549.00 > 99.00	4.722	4.728	-0.006	1.062	1513409		4.02(1.99-5.96)	98.4	6037	
D 34 13C8 FOSA										
506.00 > 78.00	4.749	4.743	0.006	1.143	4387447	1.19		95.0	5611	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.749	4.745	0.004	1.000	8253604	2.45		97.9	6445	
D 32 13C2 PFDA										
515.00 > 470.00	4.763	4.758	0.005	1.146	6829600	1.23		98.1	18569	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.763	4.760	0.003	1.000	12485057	2.42	Target=10.11	96.8	5940	
513.00 > 169.00	4.763	4.760	0.003	1.000	1025857		12.17(5.06-15.17)	96.8	618	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.776	4.774	0.002	1.149	661877	1.17		97.7	1662	
31 8:2 FTS										
527.00 > 507.00	4.776	4.774	0.002	1.000	2228105	2.26		94.4	13430	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.896	4.899	-0.003	1.178	940501	1.23		98.7	1992	
36 NMeFOSAA										
570.00 > 419.00	4.896	4.899	-0.003	1.000	1693902	2.46		98.4	2868	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.993	4.997	-0.004	1.123	5178406	2.19	Target=3.80	90.7	26324	
599.00 > 99.00	4.993	4.997	-0.004	1.123	1392200		3.72(1.90-5.70)	90.7	4629	
D 39 13C2 PFUnA										
565.00 > 520.00	5.022	5.015	0.007	1.209	6673920	1.25		100	17764	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.022	5.018	0.004	1.000	13290080	2.47	Target=7.45	98.7	9687	
563.00 > 169.00	5.022	5.018	0.004	1.000	1456143		9.13(3.78-11.33)	98.7	7641	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.036	5.034	0.002	1.212	902846	1.23		98.5	3037	
40 NEtFOSA										
584.00 > 419.00	5.036	5.040	-0.004	1.000	1586439	2.31		92.5	594	M
57 11C1FOS										
631.00 > 451.00	5.119	5.122	-0.003	1.151	9989503	2.17		92.3	25300	
D 43 13C2 PFDaA										
615.00 > 570.00	5.251	5.255	-0.004	1.264	6769707	1.19		95.5	27101	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.251	5.255	-0.004	1.000	12930212	2.35	Target=5.33	93.9	5196	
613.00 > 169.00	5.251	5.255	-0.004	1.000	1927173		6.71(2.66-7.99)	93.9	6907	
50 10:2 FTS										
627.00 > 607.00	5.281	5.274	0.007	1.106	2863089	2.33		96.8	20723	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.295	5.289	0.006	1.274	560383	1.21		96.9	340	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.274	582914	1.21		96.9	47.7	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.297	-0.002	1.000	1237379	2.40		95.8	1250	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.295	5.301	-0.006	1.000	1130206	2.31		92.6	697	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.449	5.445	0.004	1.311	622602	1.26		101	410	
54 PFDoS										
699.00 > 80.00	5.436	5.439	-0.003	1.222	5516594	2.26	Target=4.32	93.3	11356	
699.00 > 99.00	5.436	5.439	-0.003	1.222	1270424		4.34(2.19-6.58)	93.3	5984	
62 N-EtFOSE-M										
630.00 > 59.00	5.462	5.458	0.004	1.002	1512862	2.41		96.5	2472	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.460	0.002	1.315	500239	1.23		98.8	560	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.462	5.462	0.0	1.040	12100663	2.54	Target=5.66	101	5555	
663.00 > 169.00	5.462	5.462	0.0	1.040	1928662		6.27(2.83-8.48)	101	8077	
56 N-EtFOSA-M										
526.00 > 169.00	5.475	5.469	0.006	1.002	1106784	2.37		94.7	749	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.652	5.643	0.009	1.360	6396884	1.23		98.3	41786	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.652	5.643	0.009	1.000	1546553	2.41	Target=1.07	96.2	10379	
713.00 > 219.00	5.637	5.643	-0.006	0.998	1575904		0.98(0.53-1.60)	96.2	16478	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.961	5.961	0.0	1.435	4627358	1.23		98.0	9675	
55 Perfluorohexadecanoic acid										M
813.00 > 769.00	5.961	5.961	0.0	1.000	9520842	2.41	Target=7.50	96.5	4950	M
813.00 > 169.00	5.961	5.961	0.0	1.000	1160505		8.20(3.75-11.26)	96.5	4597	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.230	6.226	0.004	1.045	7925788	2.36	Target=9.98	94.4	4149	
913.00 > 169.00	6.230	6.226	0.004	1.045	694616		11.41(5.14-15.41)	94.4	3245	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L5PFC2_00002

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_010.d

Injection Date: 05-Oct-2021 22:36:10

Instrument ID: LCA

Lims ID: IC 5

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 10

Worklist Smp#: 10

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

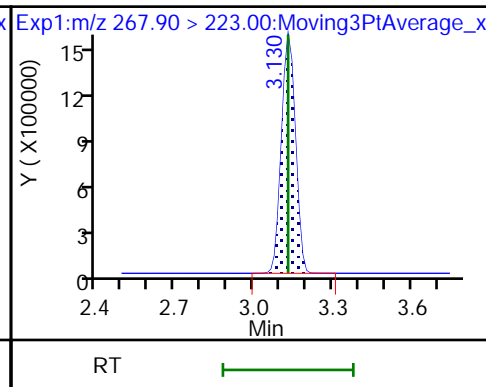
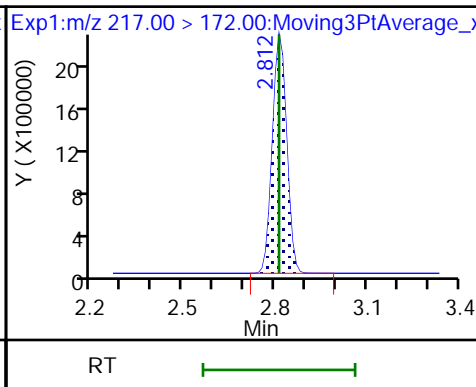
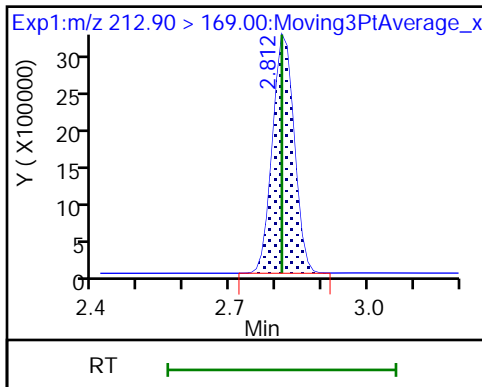
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

2 Perfluorobutanoic acid

D 1 13C4 PFBA

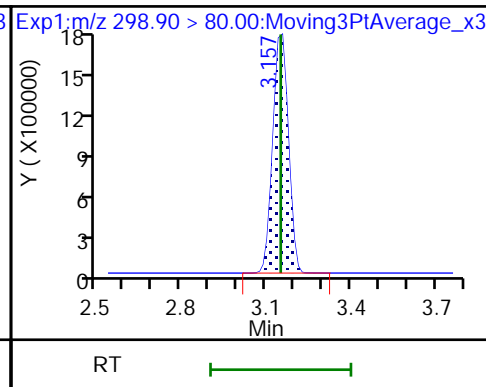
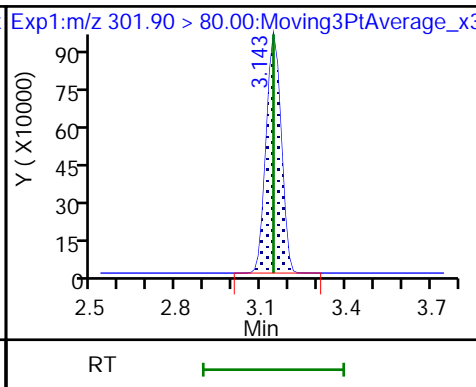
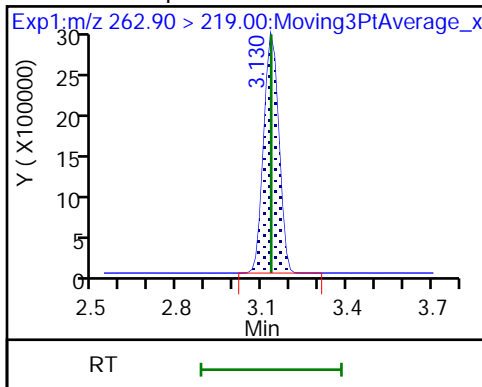
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

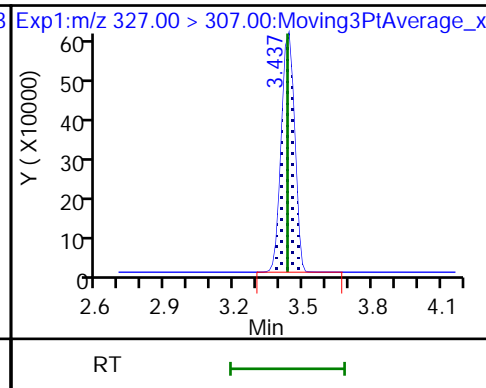
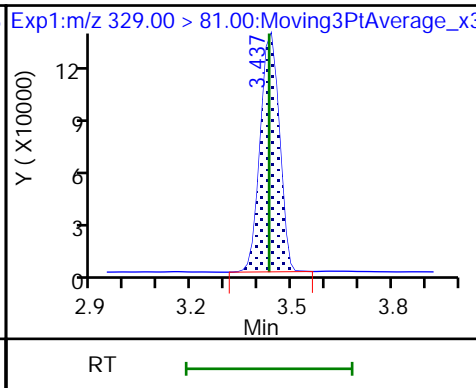
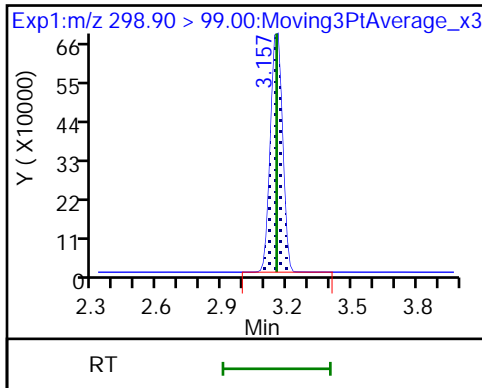
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

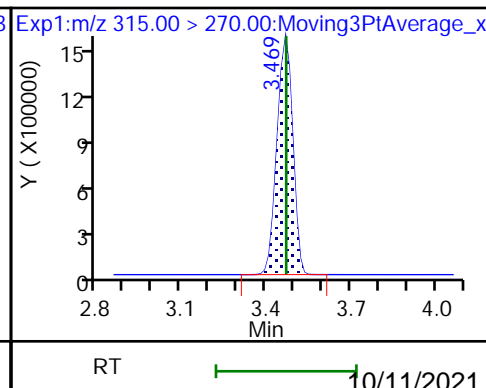
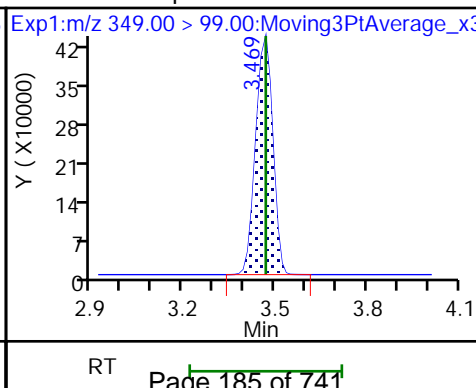
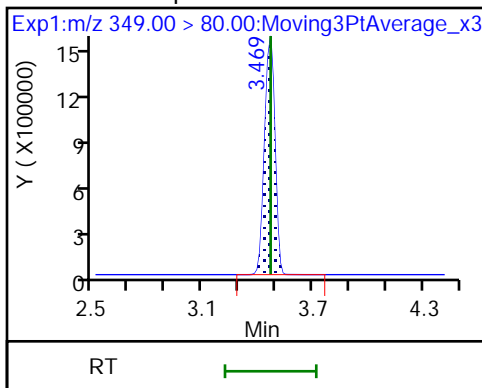
7 4:2 FTS

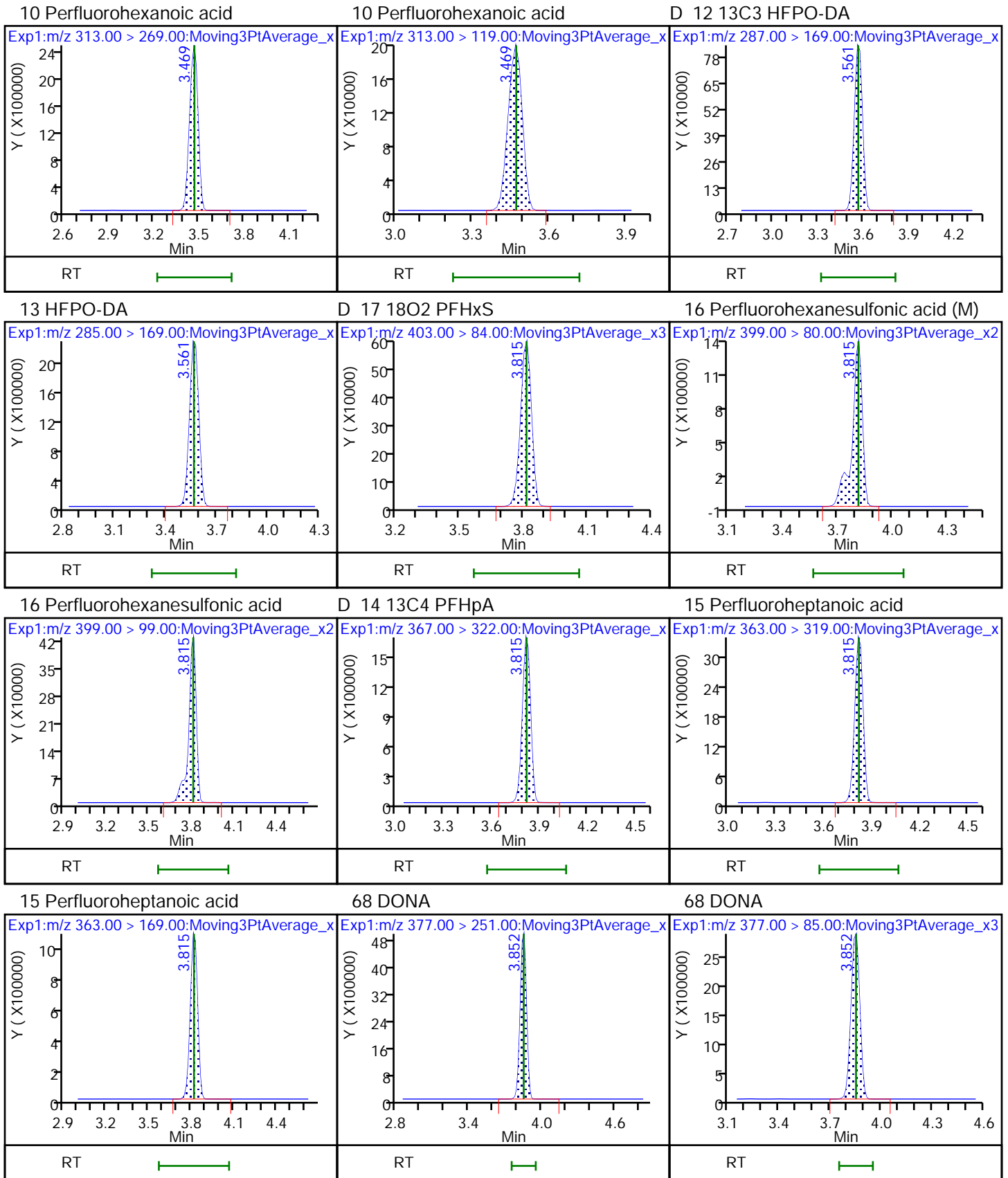


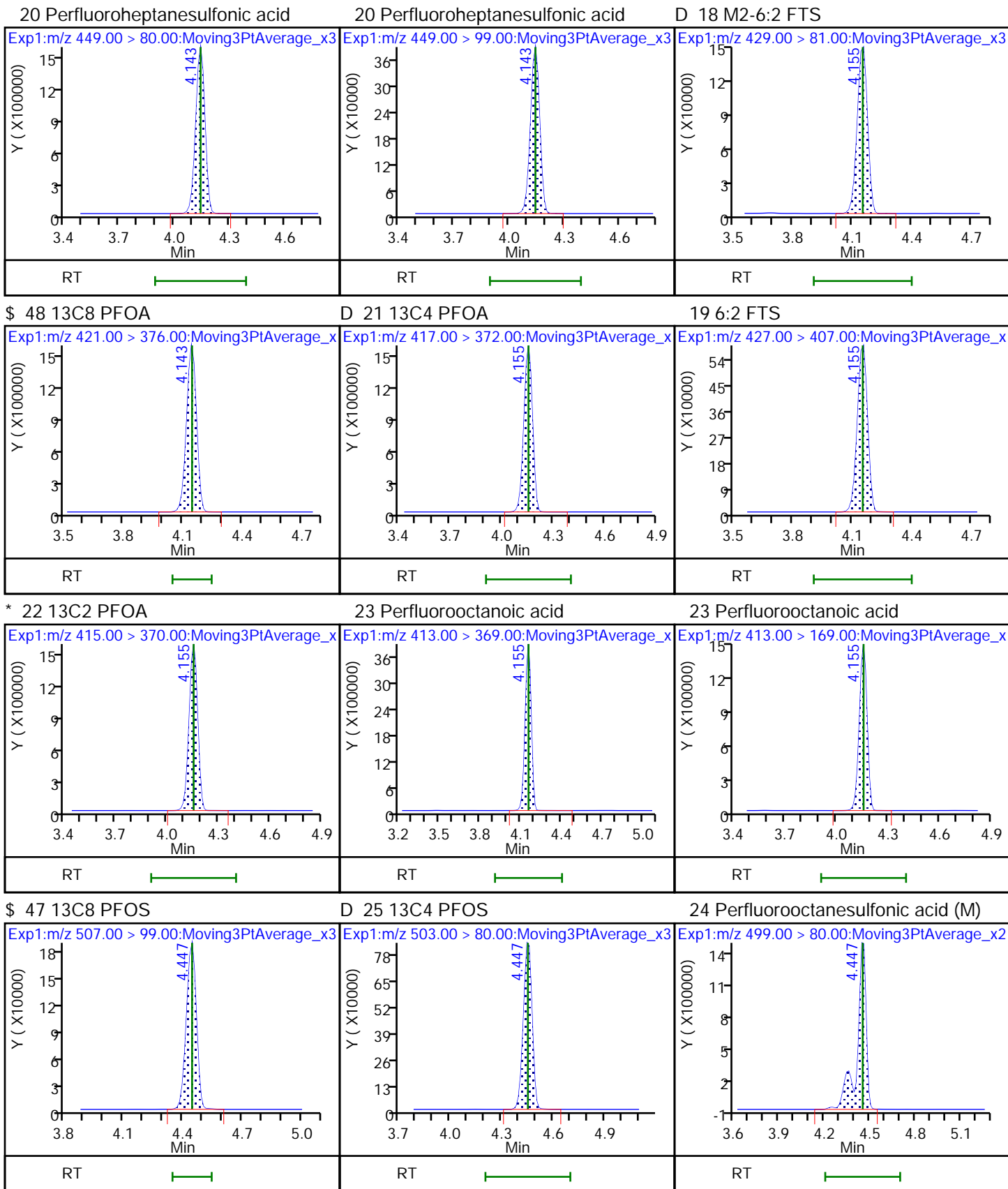
11 Perfluoropentanesulfonic acid

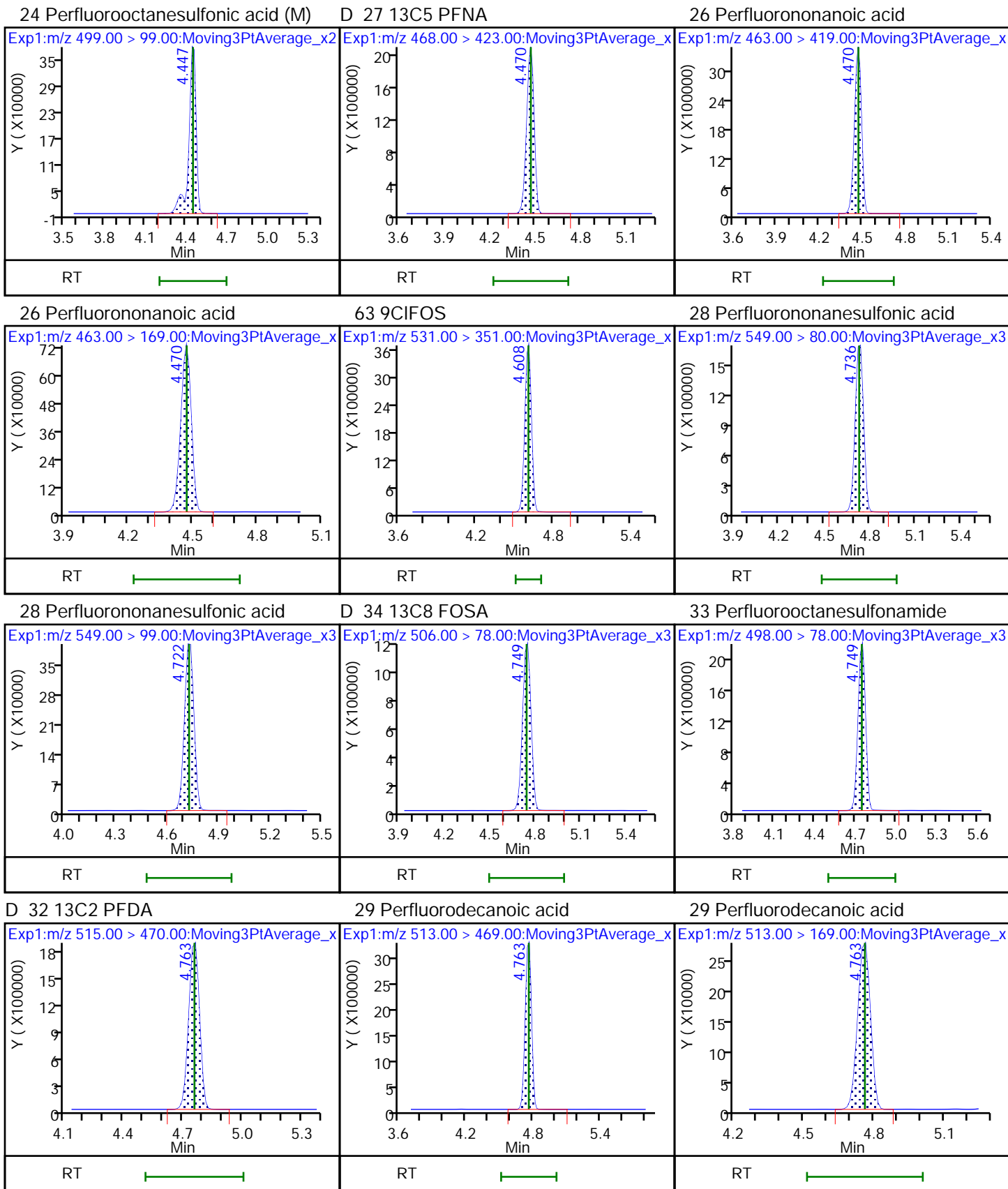
11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA





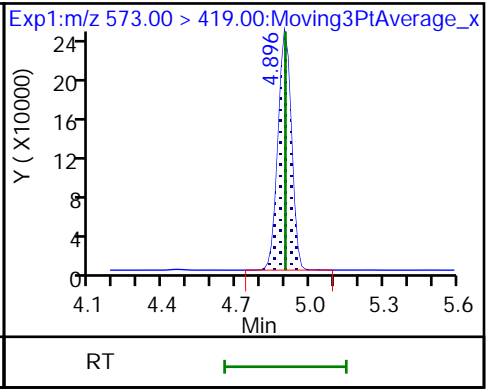
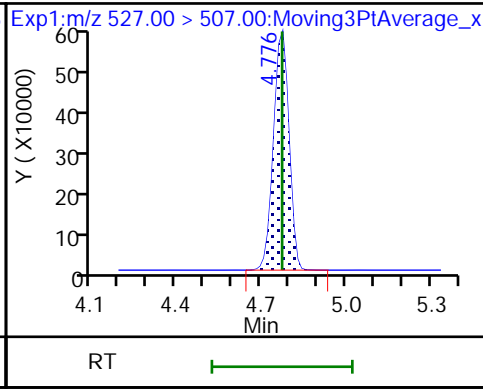
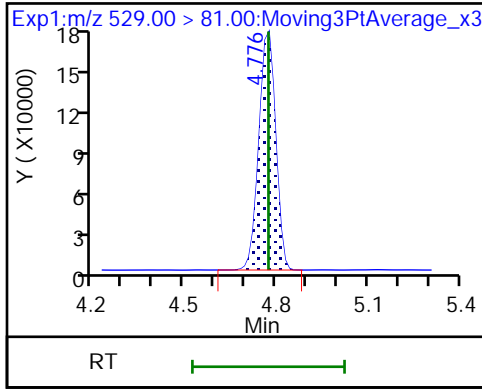




D 30 M2-8:2 FTS

31 8:2 FTS

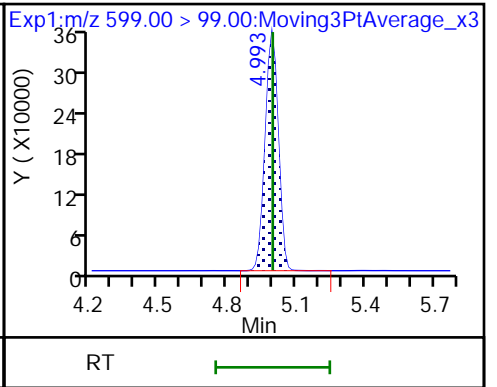
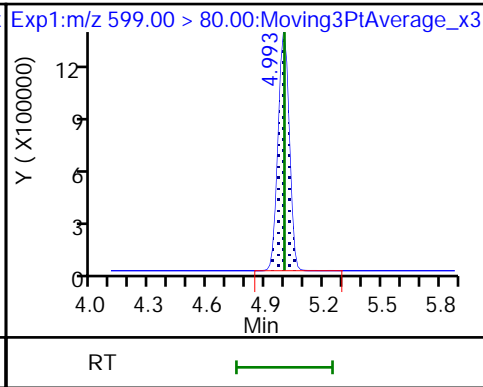
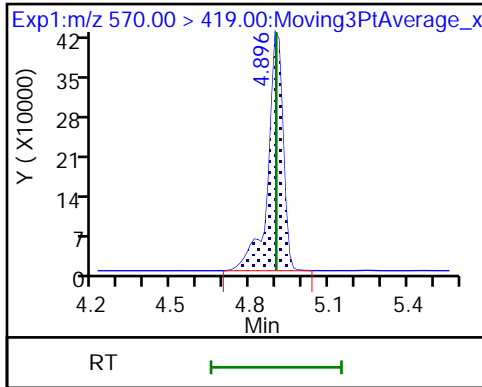
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

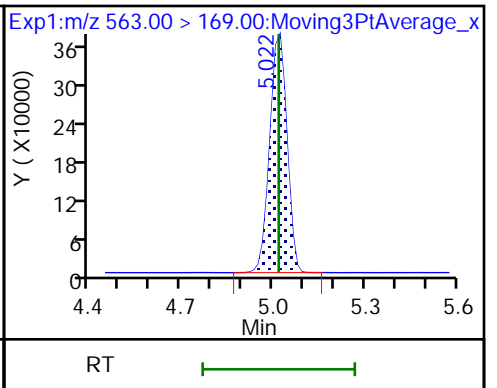
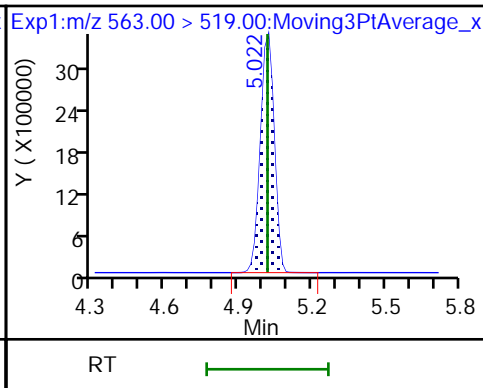
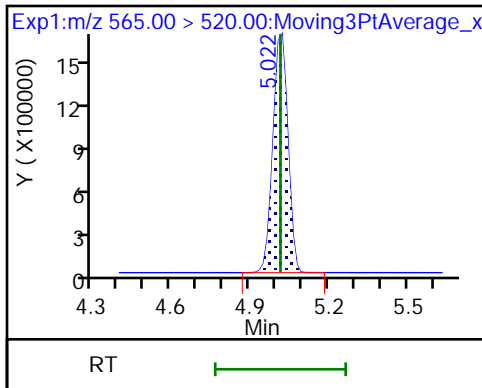
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

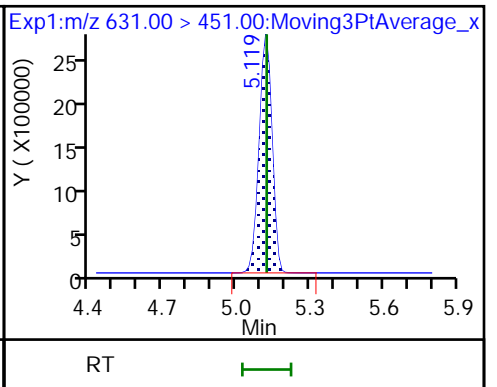
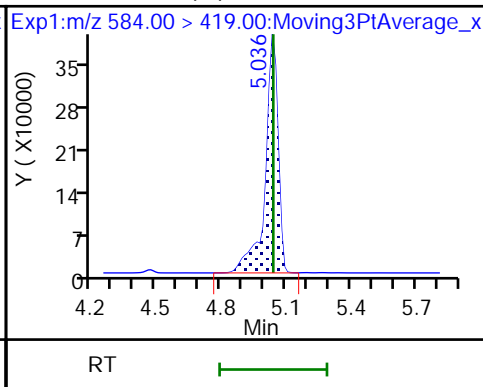
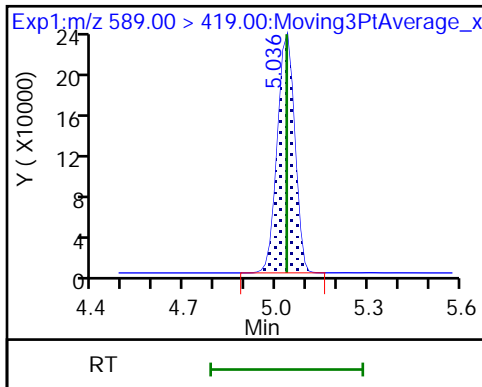
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA (M)

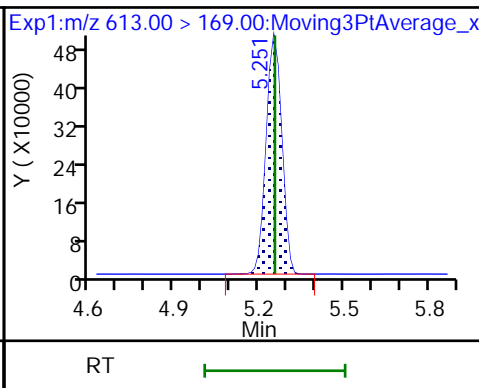
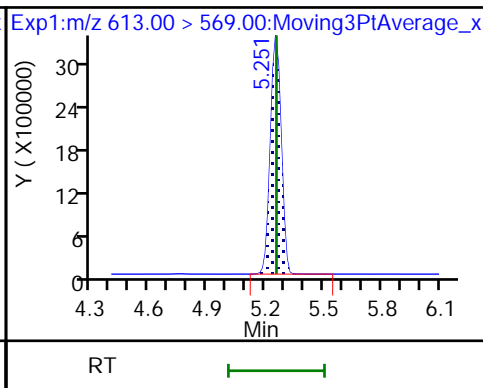
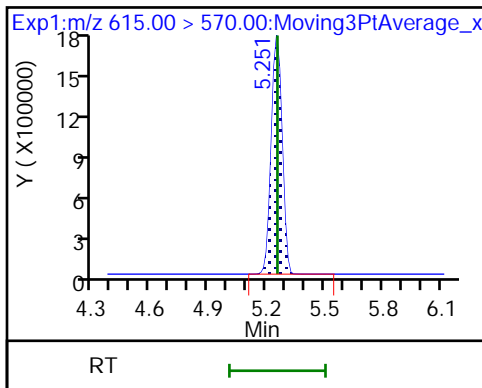
57 11CIFOS



D 43 13C2 PFDoA

42 Perfluorododecanoic acid

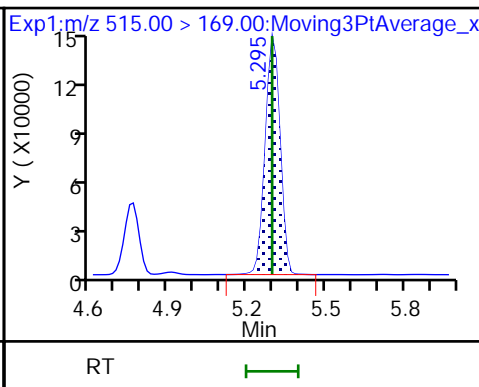
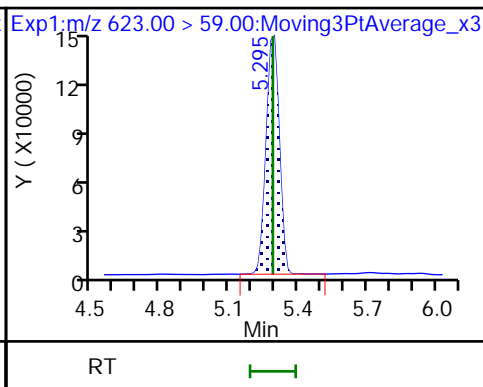
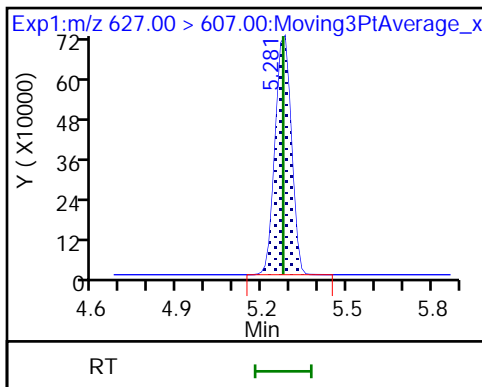
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

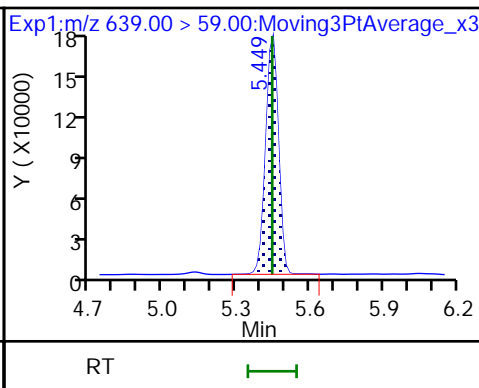
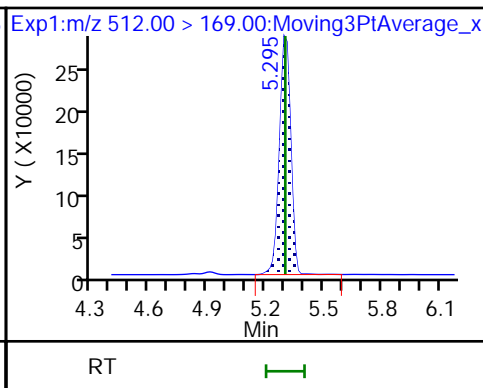
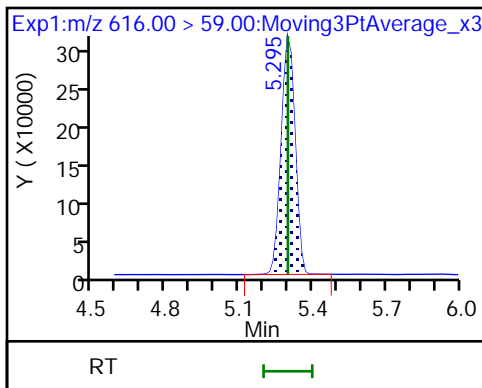
D 58 d-N-MeFOSA-M



49 N-MeFOSE-M

61 NMeFOSA

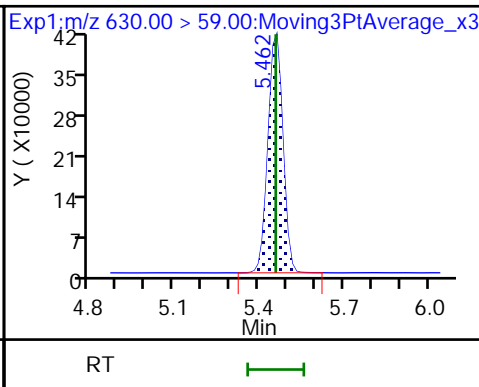
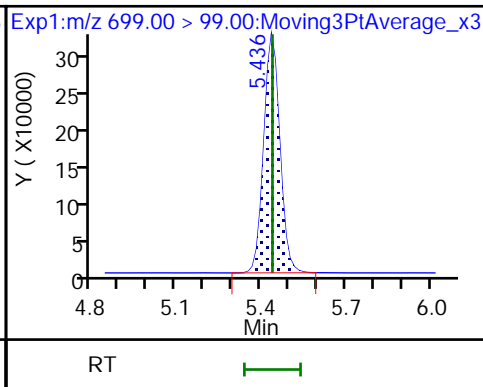
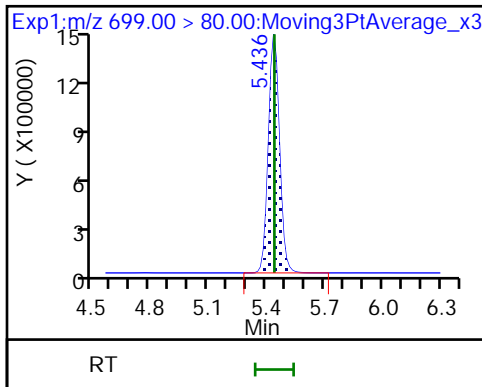
D 53 d9-N-EtFOSE-M



54 PFDoS

54 PFDoS

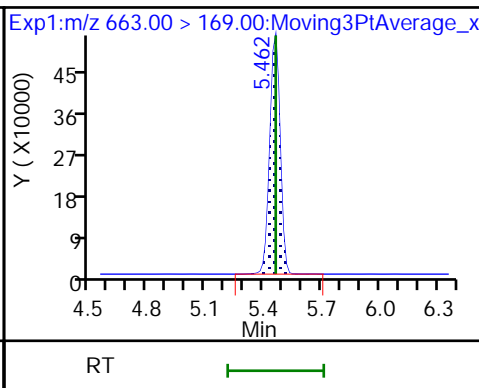
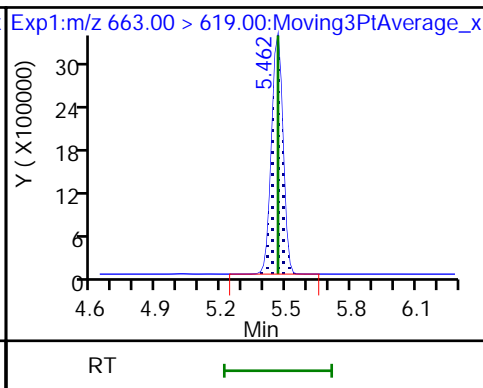
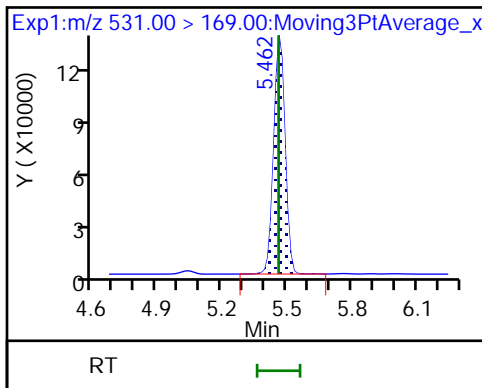
62 N-EtFOSE-M



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid

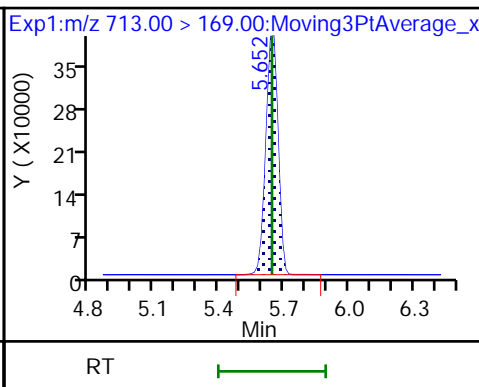
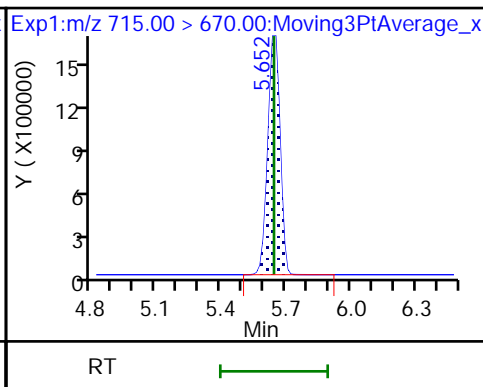
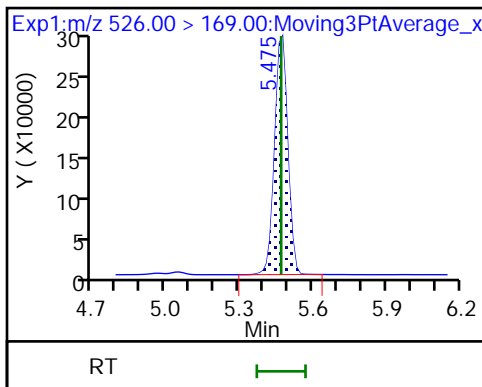
44 Perfluorotridecanoic acid



56 N-EtFOSA-M

D 46 13C2 PFTeDA

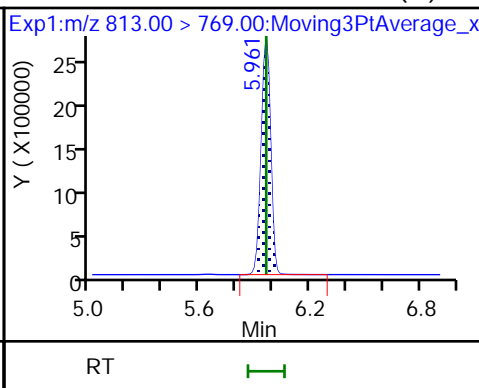
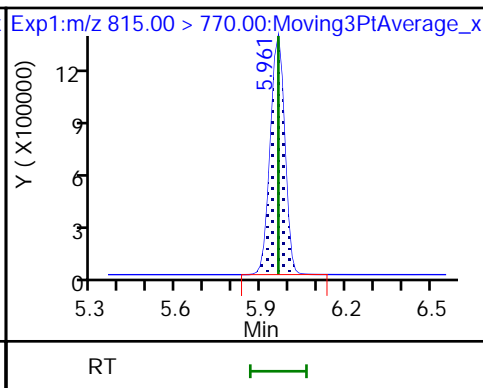
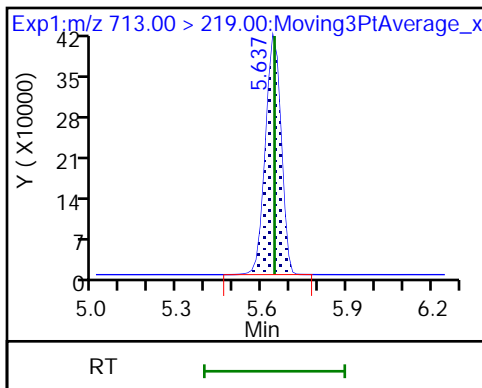
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

D 59 13C2 PFHxDA

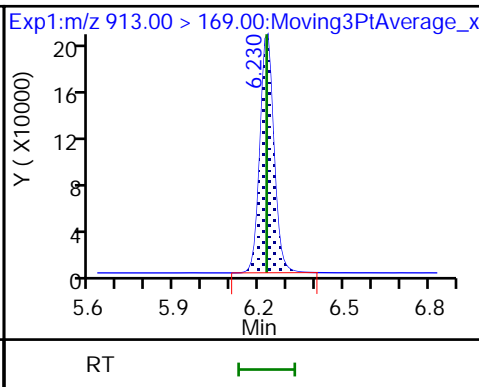
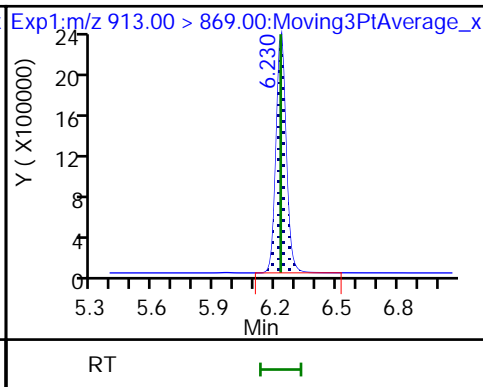
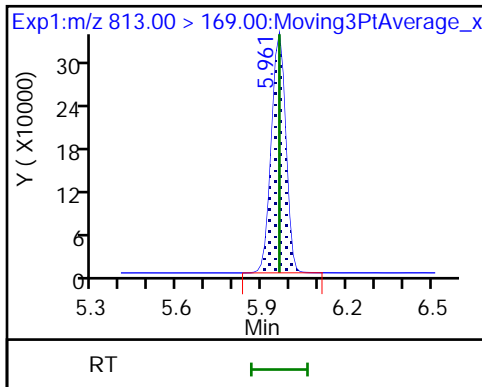
55 Perfluorohexadecanoic acid (M)



55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid



Eurofins TestAmerica, Knoxville

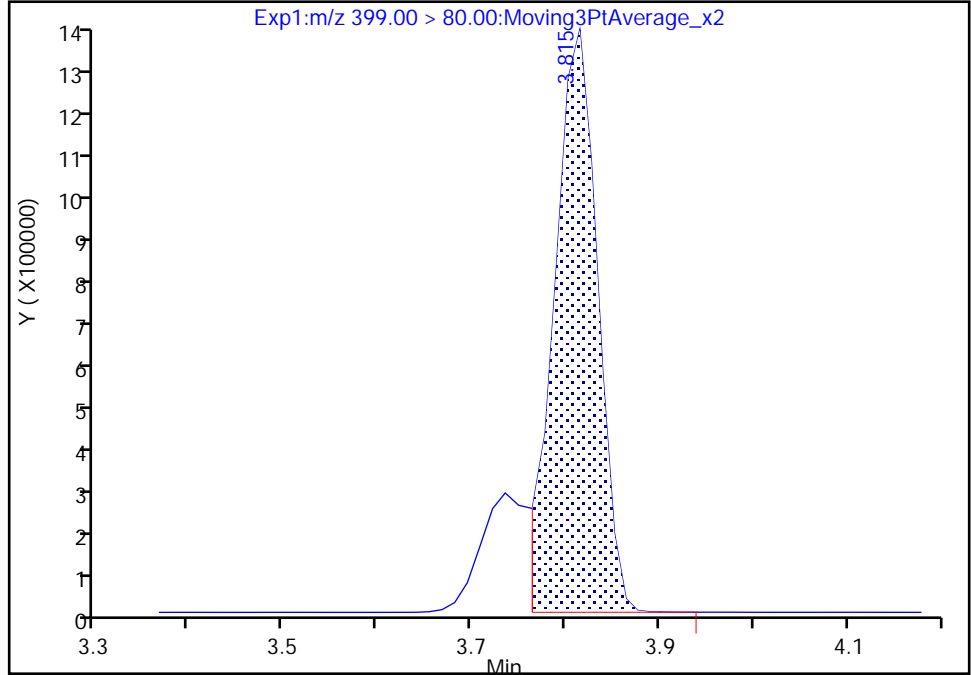
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Injection Date: 05-Oct-2021 22:36:10 Instrument ID: LCA
Lims ID: IC 5
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

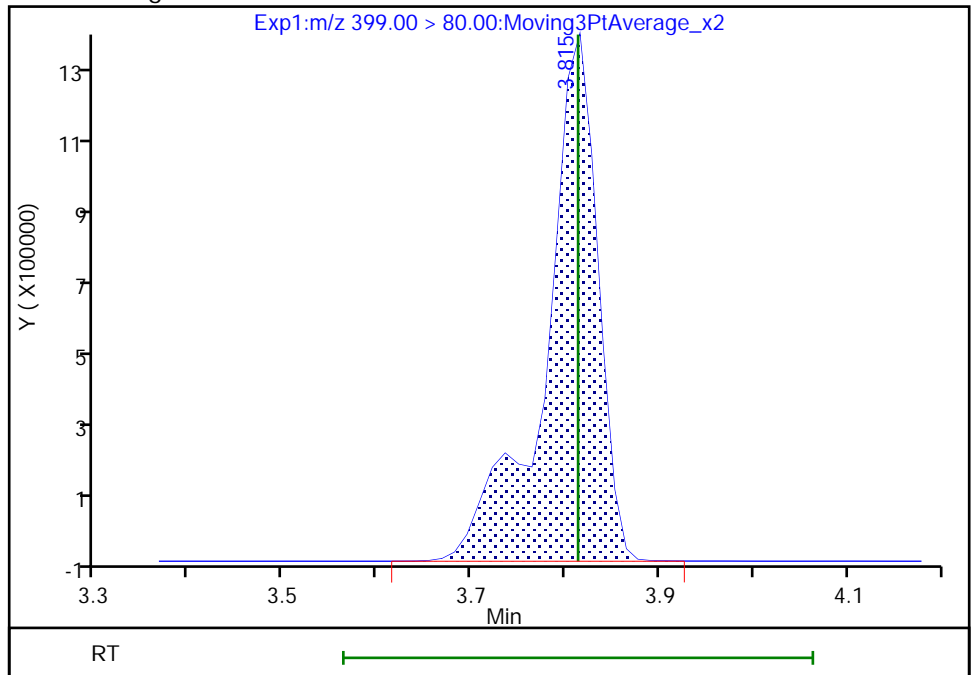
RT: 3.82
Area: 4323281
Amount: 1.739233
Amount Units: ng/ml

Processing Integration Results



RT: 3.82
Area: 5280667
Amount: 2.190873
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:01:51
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

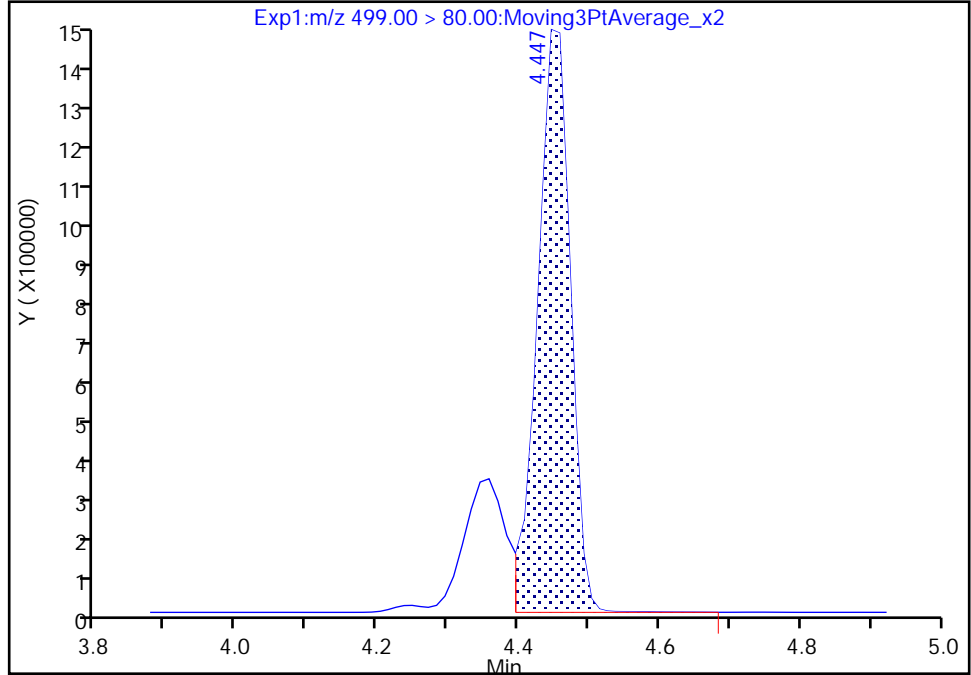
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Injection Date: 05-Oct-2021 22:36:10 Instrument ID: LCA
Lims ID: IC 5
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

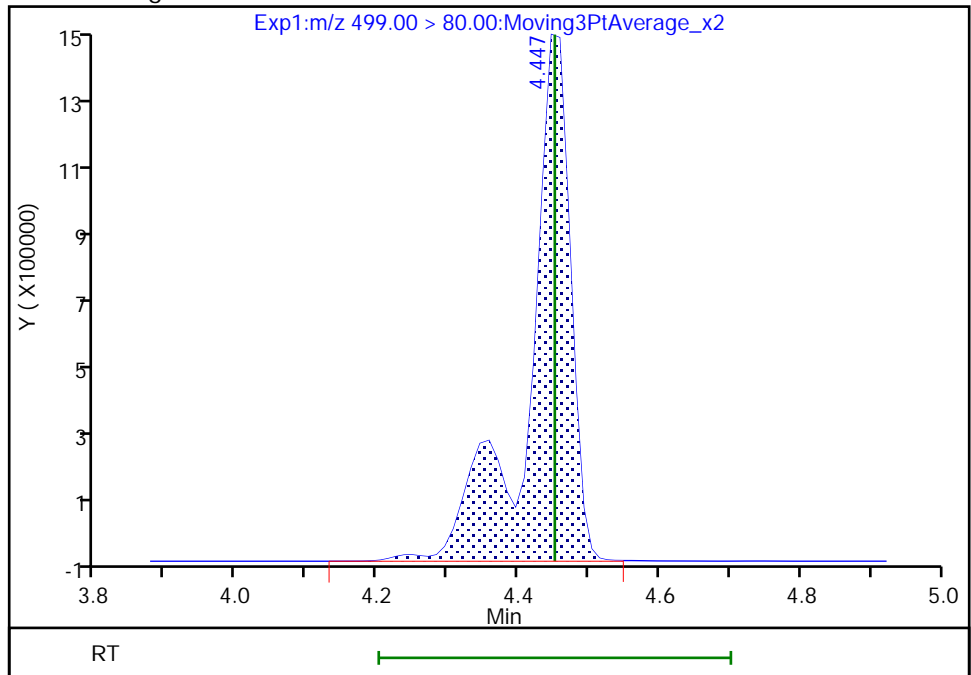
RT: 4.45
Area: 4640684
Amount: 1.769815
Amount Units: ng/ml

Processing Integration Results



RT: 4.45
Area: 6031664
Amount: 2.217316
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:02:03
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

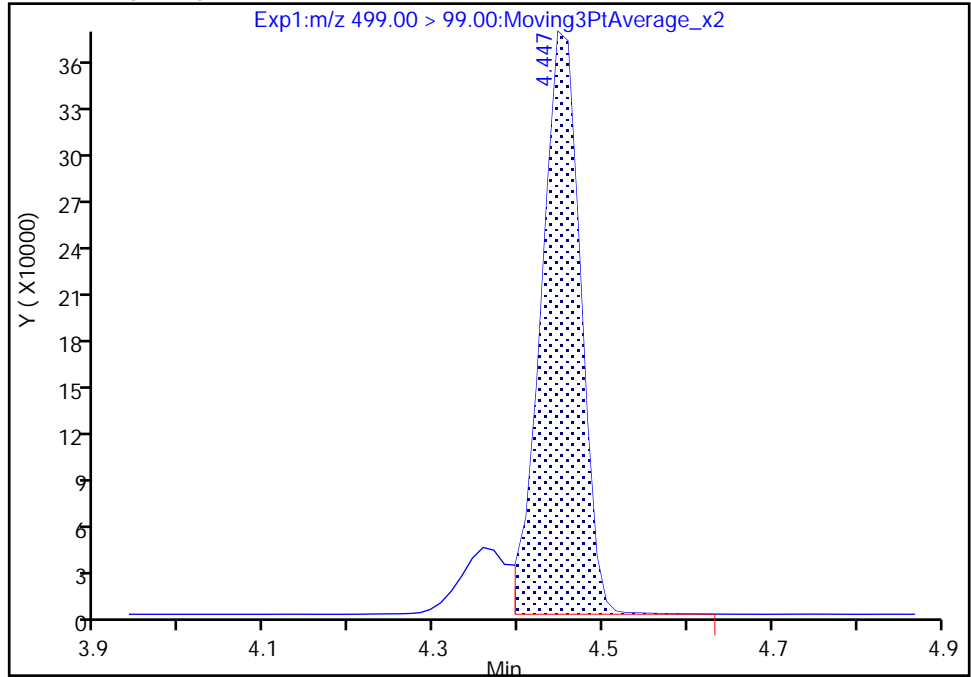
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Injection Date: 05-Oct-2021 22:36:10 Instrument ID: LCA
Lims ID: IC 5
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

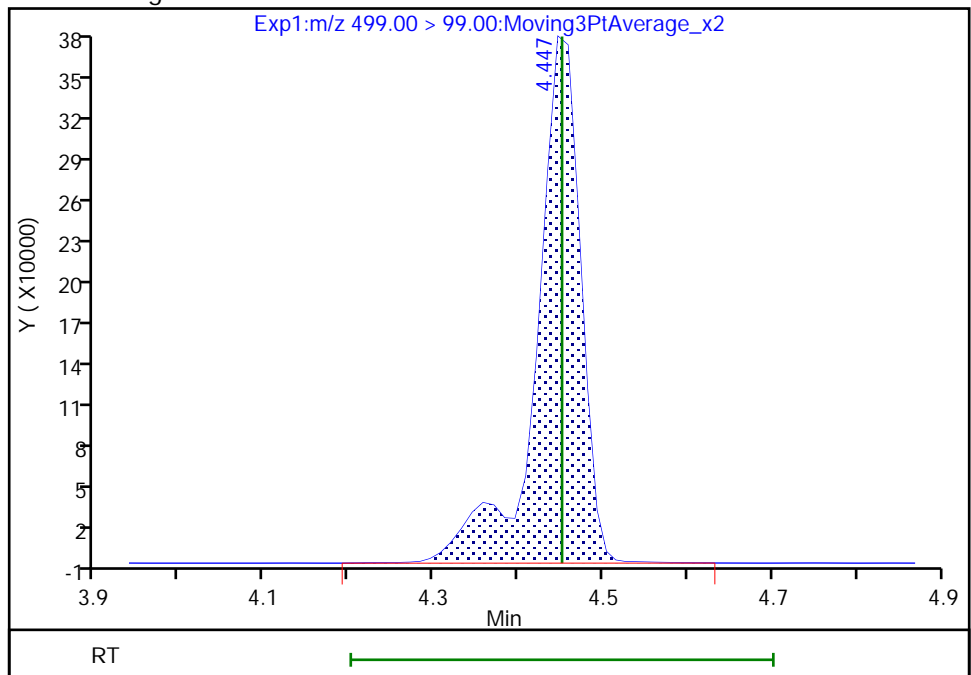
RT: 4.45
Area: 1202559
Amount: 1.769815
Amount Units: ng/ml

Processing Integration Results



RT: 4.45
Area: 1370743
Amount: 2.217316
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:02:09

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

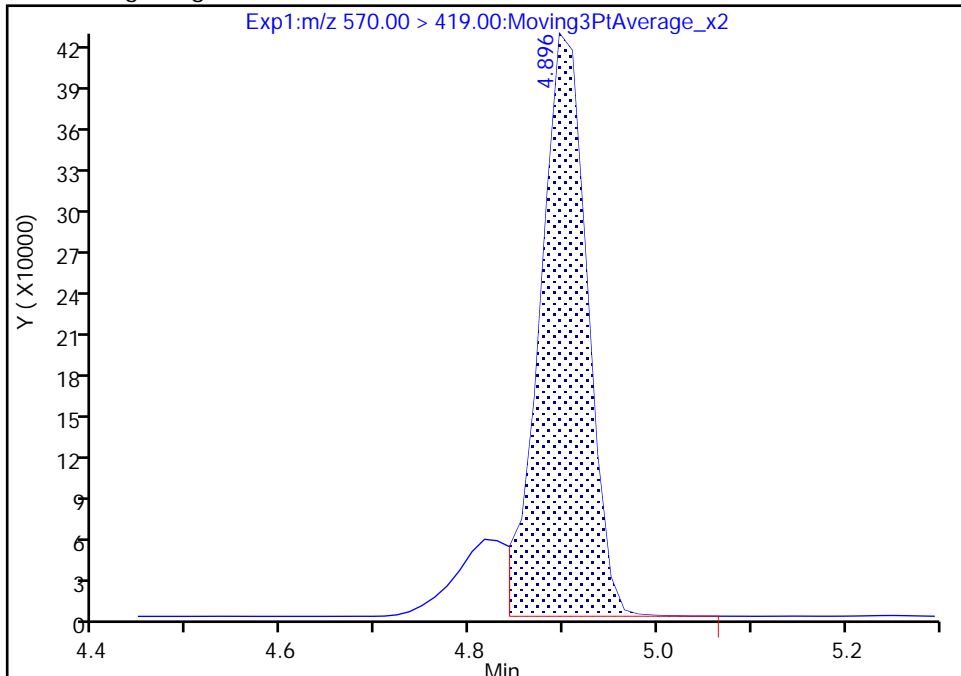
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_010.d
Injection Date: 05-Oct-2021 22:36:10 Instrument ID: LCA
Lims ID: IC 5
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

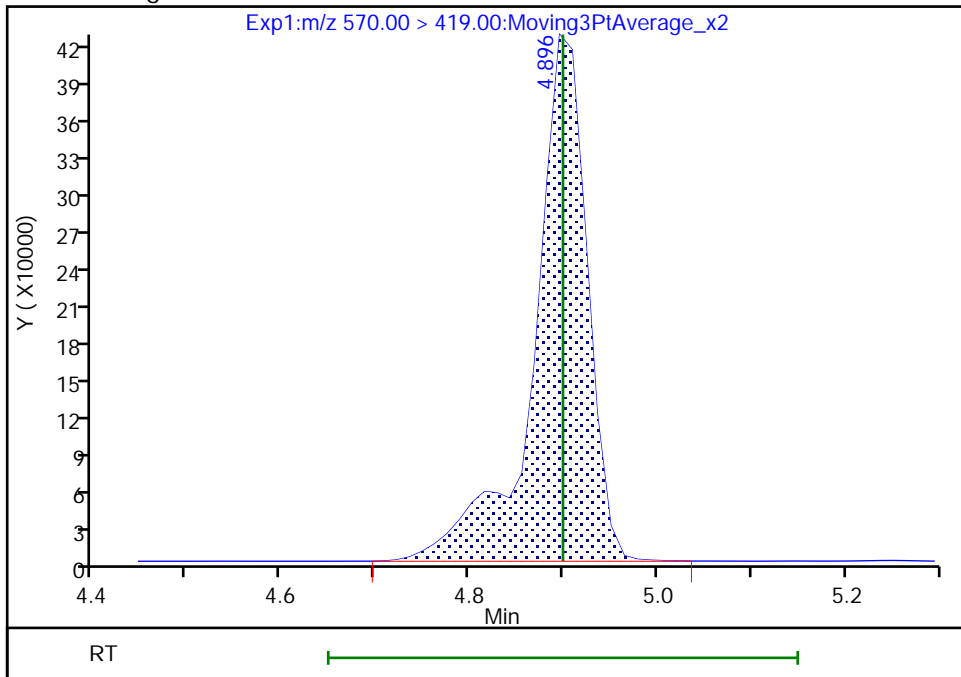
RT: 4.90
Area: 1479143
Amount: 2.005604
Amount Units: ng/ml

Processing Integration Results



RT: 4.90
Area: 1693902
Amount: 2.458892
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:02:21
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

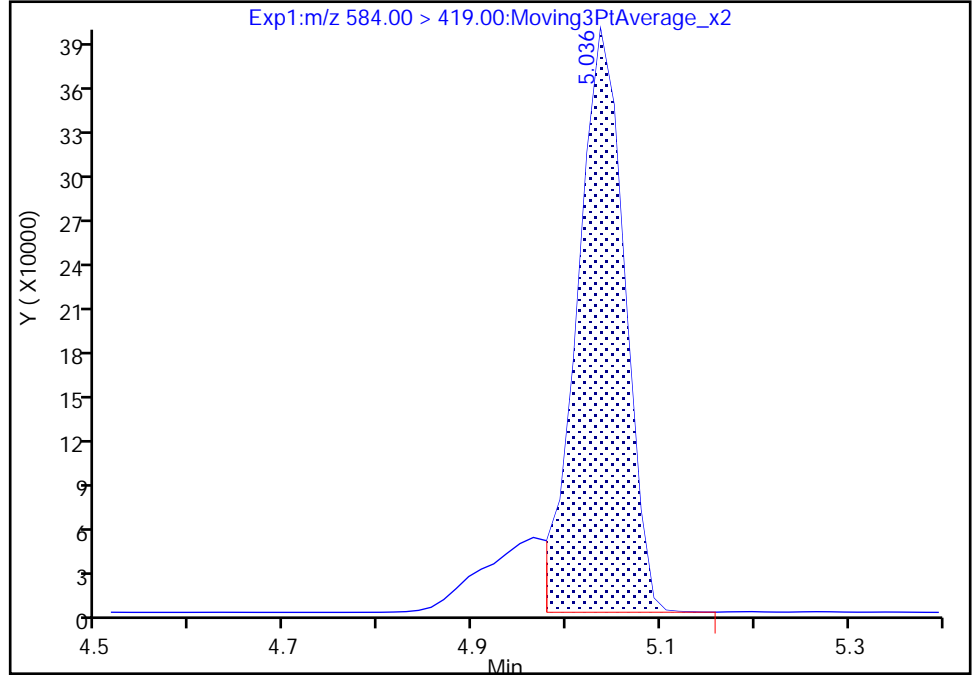
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_010.d
Injection Date: 05-Oct-2021 22:36:10 Instrument ID: LCA
Lims ID: IC 5
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

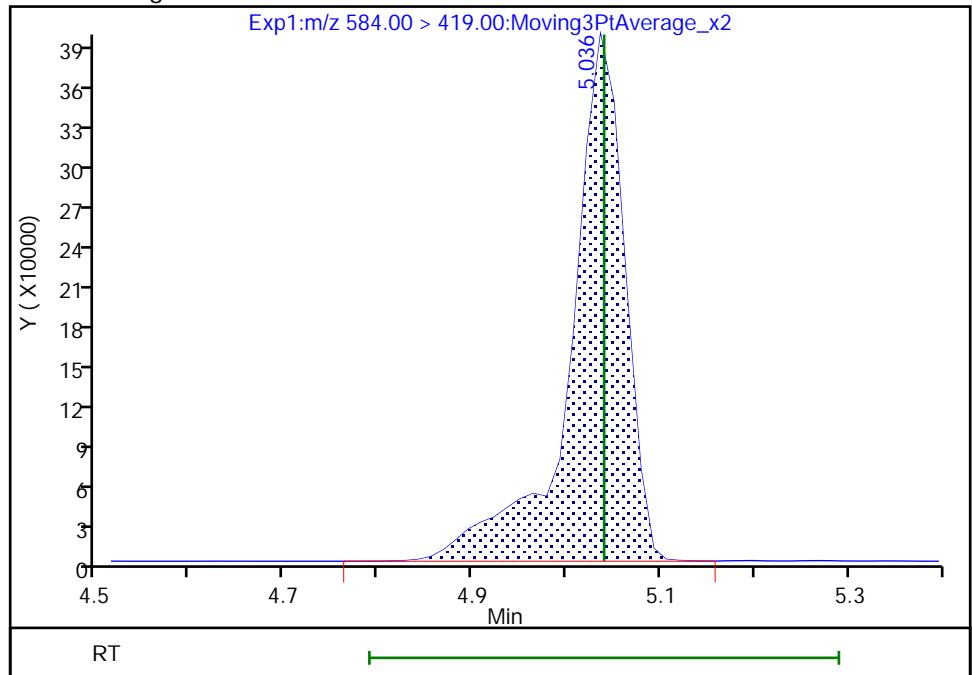
RT: 5.04
Area: 1356875
Amount: 2.001236
Amount Units: ng/ml

Processing Integration Results



RT: 5.04
Area: 1586439
Amount: 2.313479
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:02:32
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

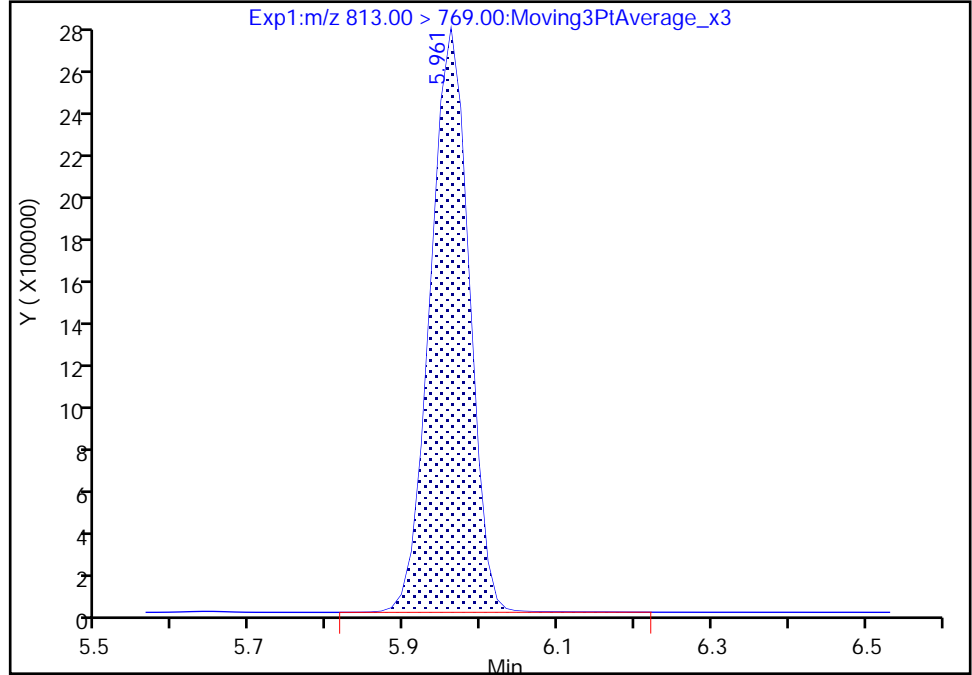
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Injection Date: 05-Oct-2021 22:36:10 Instrument ID: LCA
Lims ID: IC 5
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

55 Perfluorohexadecanoic acid, CAS: 67905-19-5

Signal: 1

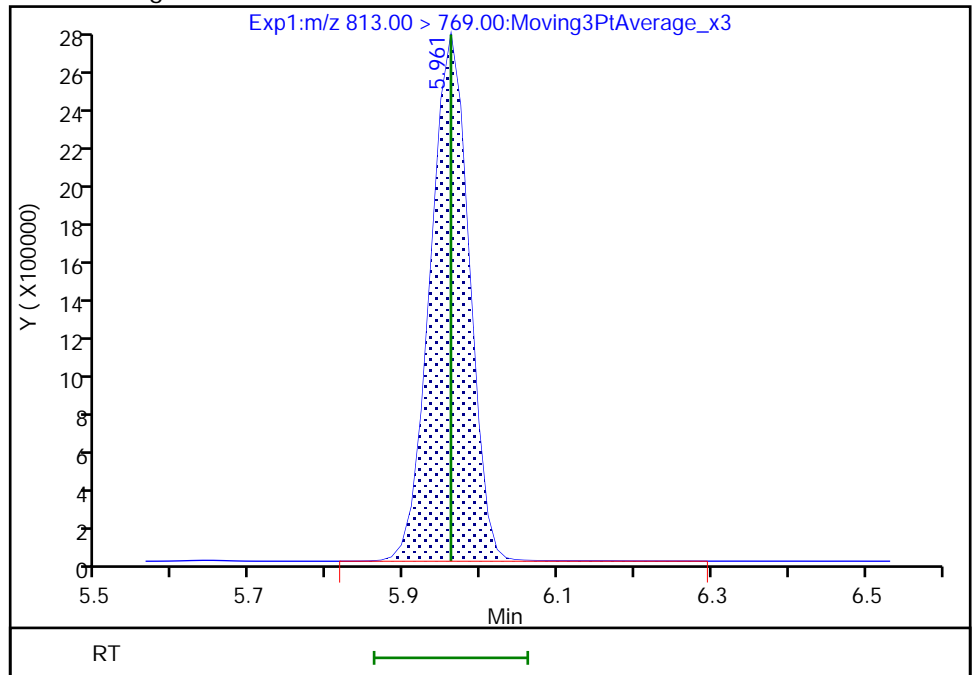
RT: 5.96
Area: 9512813
Amount: 2.156635
Amount Units: ng/ml

Processing Integration Results



RT: 5.96
Area: 9520842
Amount: 2.412512
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:14:12
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville
 Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_011.d
 Lims ID: IC 6
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 05-Oct-2021 22:44:57 ALS Bottle#: 11 Worklist Smp#: 11
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020953-011 ic 6
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15

Method: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 07-Oct-2021 14:21:11 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1613

First Level Reviewer: cochranj Date: 06-Oct-2021 16:05:02

Ratio Calibration: None

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	2.812	2.812	0.0	0.677	6729747	1.23	98.8	13366	
2 Perfluorobutanoic acid	212.90 > 169.00	2.812	2.812	0.0	1.000	20710345	4.90	97.9	2585	
D 3 13C5 PFPeA	267.90 > 223.00	3.129	3.130	-0.001	0.753	5431895	1.21	97.1	11786	
4 Perfluoropentanoic acid	262.90 > 219.00	3.129	3.131	-0.002	1.000	21134542	4.80	96.0	4261	
D 6 13C3 PFBS	301.90 > 80.00	3.143	3.143	0.0	0.756	3227418	1.12	96.1	26621	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.143	3.151	-0.008	1.000	13531845	4.33	Target=3.06	97.9	29834
	298.90 > 99.00	3.143	3.151	-0.008	1.000	5156114		2.62(1.53-4.59)	97.9	12101
D 8 M2-4:2 FTS	329.00 > 81.00	3.423	3.431	-0.008	0.824	455617	1.05	90.1	566	
7 4:2 FTS	327.00 > 307.00	3.423	3.431	-0.008	1.000	4703298	4.82	103	22646	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.469	3.468	0.001	1.104	11073888	4.66	Target=3.47	99.5	30025
	349.00 > 99.00	3.469	3.468	0.001	1.104	3101548		3.57(1.73-5.20)	99.5	16652
D 9 13C2 PFHxA	315.00 > 270.00	3.469	3.471	-0.002	0.835	5603980	1.22	97.6	16105	
10 Perfluorohexanoic acid	313.00 > 269.00	3.469	3.471	-0.002	1.000	18447950	4.80	Target=9.74	96.0	5773
	313.00 > 119.00	3.469	3.471	-0.002	1.000	1449123		12.73(4.87-14.61)	96.0	2827
D 12 13C3 HFPO-DA	287.00 > 169.00	3.561	3.565	-0.004	0.857	2964356	1.26	101	11397	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.561	3.565	-0.004	1.000	16036699	4.91		98.2	8359	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.803	3.813	-0.010	1.000	10611543	4.59	Target=2.96	101	17201	M
399.00 > 99.00	3.803	3.813	-0.010	1.000	3129687		3.39(1.48-4.44)	101	9581	
D 17 18O2 PFHxS										
403.00 > 84.00	3.803	3.813	-0.010	0.915	2021420	1.16		97.8	16937	
D 14 13C4 PFHpA										
367.00 > 322.00	3.815	3.819	-0.004	0.918	5764452	1.26		101	16766	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.815	3.819	-0.004	1.000	23641761	4.87	Target=3.35	97.4	8685	
363.00 > 169.00	3.815	3.819	-0.004	1.000	7270525		3.25(1.67-5.02)	97.4	31666	
68 DONA										
377.00 > 251.00	3.840	3.850	-0.010	0.864	34461769	4.44	Target=1.49	94.2	36853	
377.00 > 85.00	3.840	3.850	-0.010	0.864	19687267		1.75(0.74-2.23)	94.2	6935	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.143	4.143	0.0	0.932	11200331	4.70	Target=3.73	98.8	32774	
449.00 > 99.00	4.143	4.143	0.0	0.932	2840371		3.94(1.87-5.61)	98.8	6253	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.143	4.146	-0.003	0.997	4997107	1.23		98.2	20785	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.143	4.151	-0.008	0.997	496216	1.12		94.2	864	
19 6:2 FTS										
427.00 > 407.00	4.143	4.151	-0.008	1.000	3986787	4.77		101	23180	
D 21 13C4 PFOA										
417.00 > 372.00	4.155	4.155	0.0	1.000	5265292	1.27		102	22673	
* 22 13C2 PFOA										
415.00 > 370.00	4.155	4.155	0.0		5145778	1.25			27355	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.155	4.156	-0.001	1.000	22528349	4.86	Target=2.40	97.1	6583	
413.00 > 169.00	4.155	4.156	-0.001	1.000	8638416		2.61(1.20-3.61)	97.1	9379	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.434	4.446	-0.012	1.067	595505	1.15		96.4	2692	
D 25 13C4 PFOS										
503.00 > 80.00	4.446	4.451	-0.005	1.070	2860822	1.19		99.4	5990	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.446	4.451	-0.005	1.000	11641795	4.42	Target=3.83	95.3	16616	M
499.00 > 99.00	4.446	4.451	-0.005	1.000	2629068		4.43(1.91-5.74)	95.3	9039	M
D 27 13C5 PFNA										
468.00 > 423.00	4.470	4.471	-0.001	1.076	6472750	1.23		98.3	18962	
26 Perfluorononanoic acid										
463.00 > 419.00	4.470	4.471	-0.001	1.000	21961402	5.10	Target=3.68	102	13226	
463.00 > 169.00	4.470	4.471	-0.001	1.000	4765402		4.61(1.84-5.52)	102	12027	
63 9CIFOS										
531.00 > 351.00	4.596	4.606	-0.010	1.106	24643016	4.46		95.7	21684	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.722	4.728	-0.006	1.062	11544387	4.63	Target=3.97	96.4	18490	
549.00 > 99.00	4.722	4.728	-0.006	1.062	2876872		4.01(1.99-5.96)	96.4	13200	
D 34 13C8 FOSA										
506.00 > 78.00	4.736	4.743	-0.007	1.140	4176620	1.18		94.5	3595	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.749	4.745	0.004	1.003	15696244	4.89		97.8	8417	
D 32 13C2 PFDA										
515.00 > 470.00	4.749	4.758	-0.009	1.143	6527325	1.22		97.9	20149	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.749	4.760	-0.011	1.000	24696030	5.02	Target=10.11	100	12098	
513.00 > 169.00	4.749	4.760	-0.011	1.000	2008044		12.30(5.06-15.17)	100	606	
31 8:2 FTS										
527.00 > 507.00	4.762	4.774	-0.012	1.000	4218955	4.55		94.9	26258	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.762	4.774	-0.012	1.146	623050	1.15		96.0	2297	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.896	4.899	-0.003	1.178	899537	1.23		98.6	742	
36 NMeFOSAA										
570.00 > 419.00	4.896	4.899	-0.003	1.000	3306213	5.03		101	4651	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.993	4.997	-0.004	1.123	10394826	4.54	Target=3.80	94.1	21800	
599.00 > 99.00	4.993	4.997	-0.004	1.123	2822458		3.68(1.90-5.70)	94.1	10985	
D 39 13C2 PFUnA										
565.00 > 520.00	5.007	5.015	-0.008	1.205	6502949	1.28		102	18292	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.007	5.018	-0.011	1.000	25533444	4.87	Target=7.45	97.4	13673	
563.00 > 169.00	5.007	5.018	-0.011	1.000	2799969		9.12(3.78-11.33)	97.4	11390	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.022	5.034	-0.012	1.209	863924	1.23		98.5	2162	
40 NEtFOSA										
584.00 > 419.00	5.036	5.040	-0.004	1.003	3076062	4.69		93.8	993	M
57 11C1FOS										
631.00 > 451.00	5.119	5.122	-0.003	1.151	19435719	4.37		92.8	41153	
D 43 13C2 PFDaA										
615.00 > 570.00	5.251	5.255	-0.004	1.264	6796811	1.25		100	22079	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.251	5.255	-0.004	1.000	25206941	4.76	Target=5.33	95.3	10028	
613.00 > 169.00	5.251	5.255	-0.004	1.000	3911957		6.44(2.66-7.99)	95.3	10696	
50 10:2 FTS										
627.00 > 607.00	5.266	5.274	-0.008	1.106	5589408	4.84		100	17253	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.280	5.289	-0.009	1.271	572551	1.29		103	293	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.274	601939	1.31		104	52.1	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.297	-0.002	1.003	2528011	4.80		95.9	1784	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.295	5.301	-0.006	1.000	2384386	4.73		94.6	891	
54 PFDoS										
699.00 > 80.00	5.436	5.439	-0.003	1.223	11718637	4.96	Target=4.32	102	13249	
699.00 > 99.00	5.436	5.439	-0.003	1.223	2770601		4.23(2.19-6.58)	102	14711	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.449	5.445	0.004	1.312	616316	1.31		104	327	
62 N-EtFOSE-M										
630.00 > 59.00	5.462	5.458	0.004	1.002	2956824	4.77		95.3	3736	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.462	5.462	0.0	1.040	22450214	4.69	Target=5.66	93.9	8691	
663.00 > 169.00	5.449	5.462	-0.013	1.038	3719227		6.04(2.83-8.48)	93.9	14844	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.460	0.002	1.315	507678	1.31		105	684	
56 N-EtFOSA-M										
526.00 > 169.00	5.462	5.469	-0.007	1.000	2258394	4.76		95.2	742	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.637	5.643	-0.006	1.357	6178920	1.24		99.2	25735	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.637	5.643	-0.006	1.000	3043028	4.91	Target=1.07	98.2	12023	
713.00 > 219.00	5.637	5.643	-0.006	1.000	3046353		1.00(0.53-1.60)	98.2	20196	
55 Perfluorohexadecanoic acid										M
813.00 > 769.00	5.961	5.961	0.0	1.000	18185862	4.61	Target=7.50	92.2	6552	M
813.00 > 169.00	5.961	5.961	0.0	1.000	2354564		7.72(3.75-11.26)	92.2	5592	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.961	5.961	0.0	1.435	4766428	1.32		105	9998	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.221	6.226	-0.005	1.044	15778779	4.56	Target=9.98	91.2	5451	
913.00 > 169.00	6.221	6.226	-0.005	1.044	1402787		11.25(5.14-15.41)	91.2	3952	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L6PFC2_00002

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_011.d

Injection Date: 05-Oct-2021 22:44:57

Instrument ID: LCA

Lims ID: IC 6

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 11

Worklist Smp#: 11

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

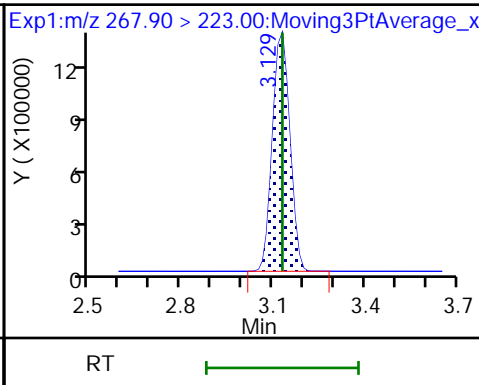
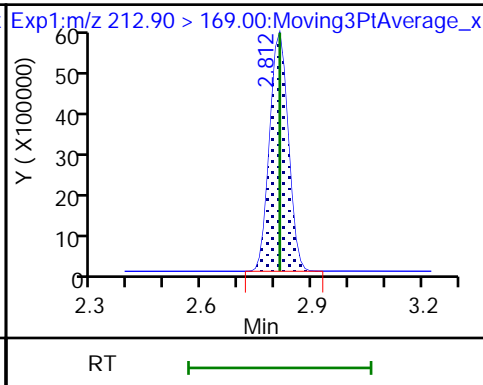
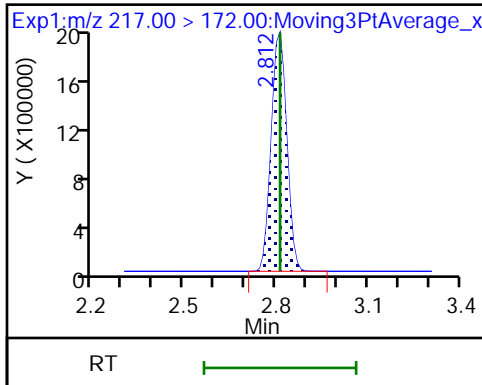
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

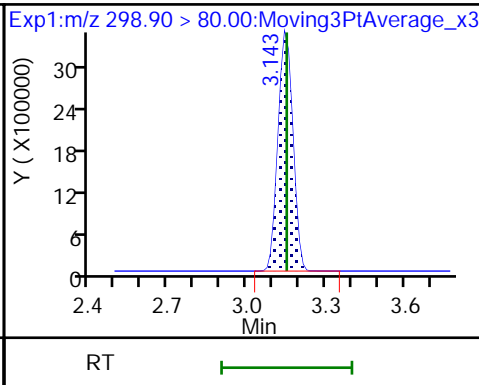
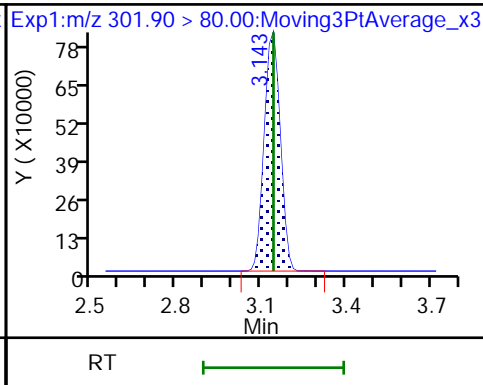
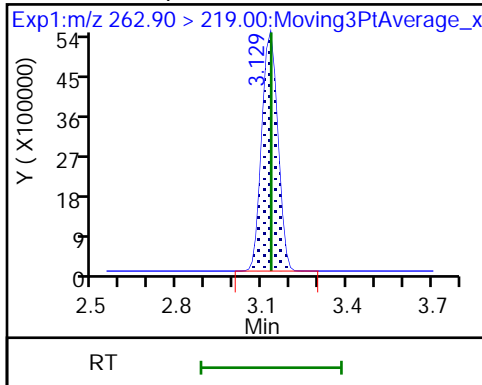
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

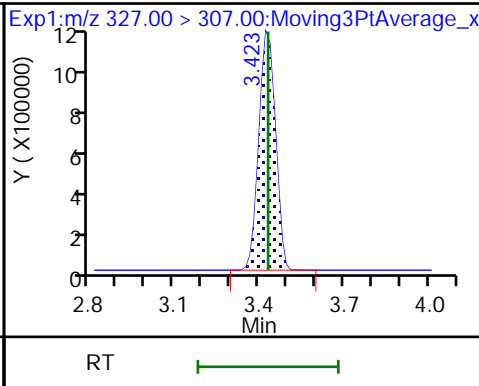
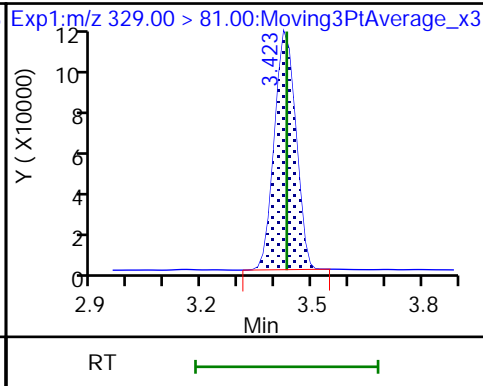
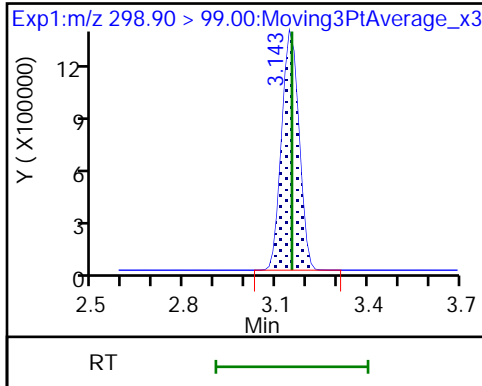
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

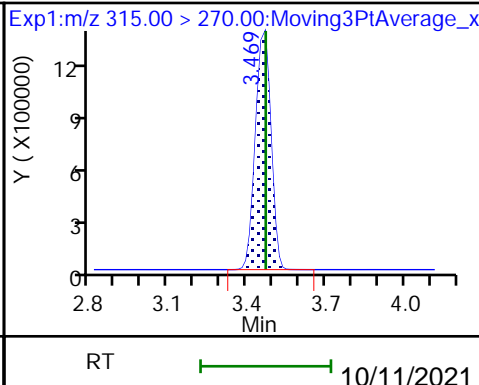
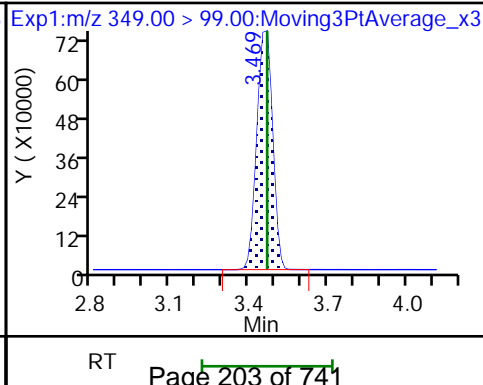
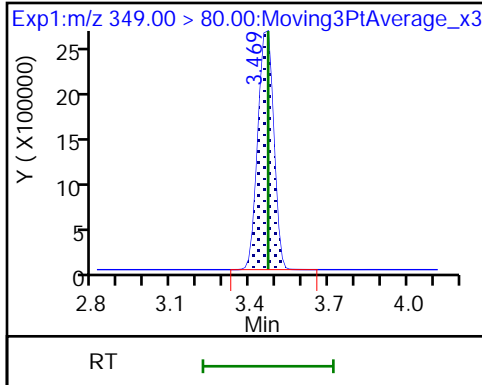
7 4:2 FTS

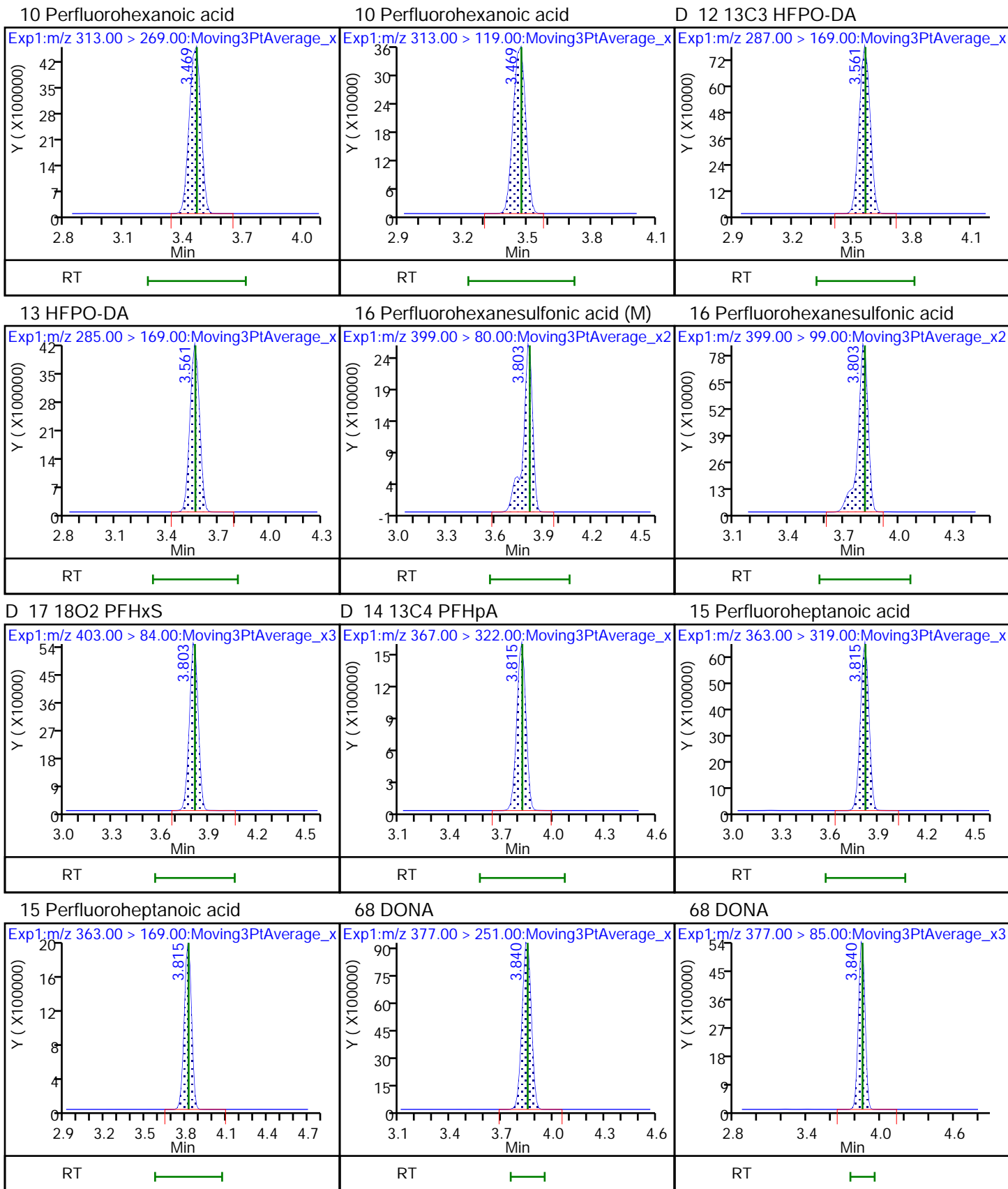


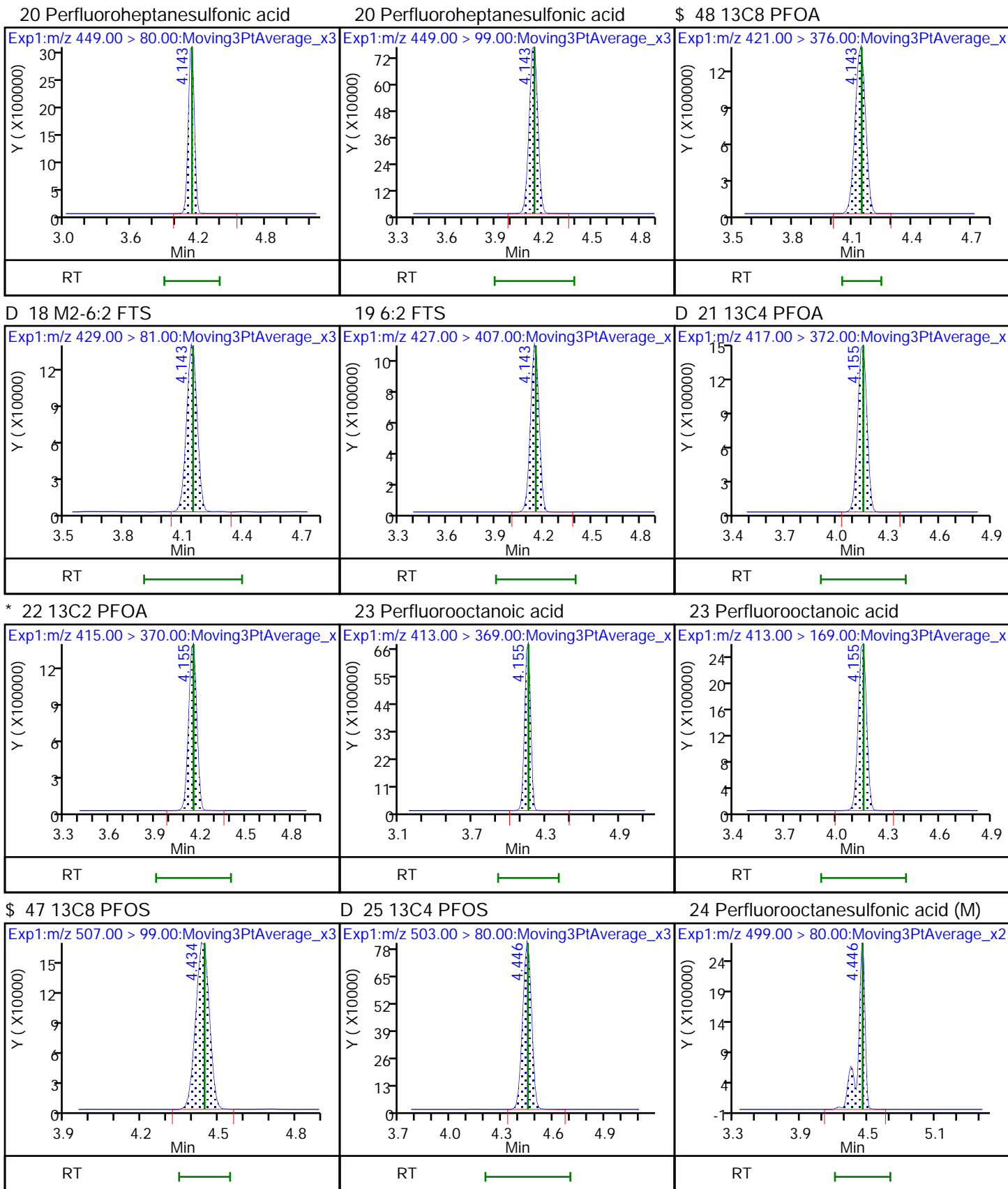
11 Perfluoropentanesulfonic acid

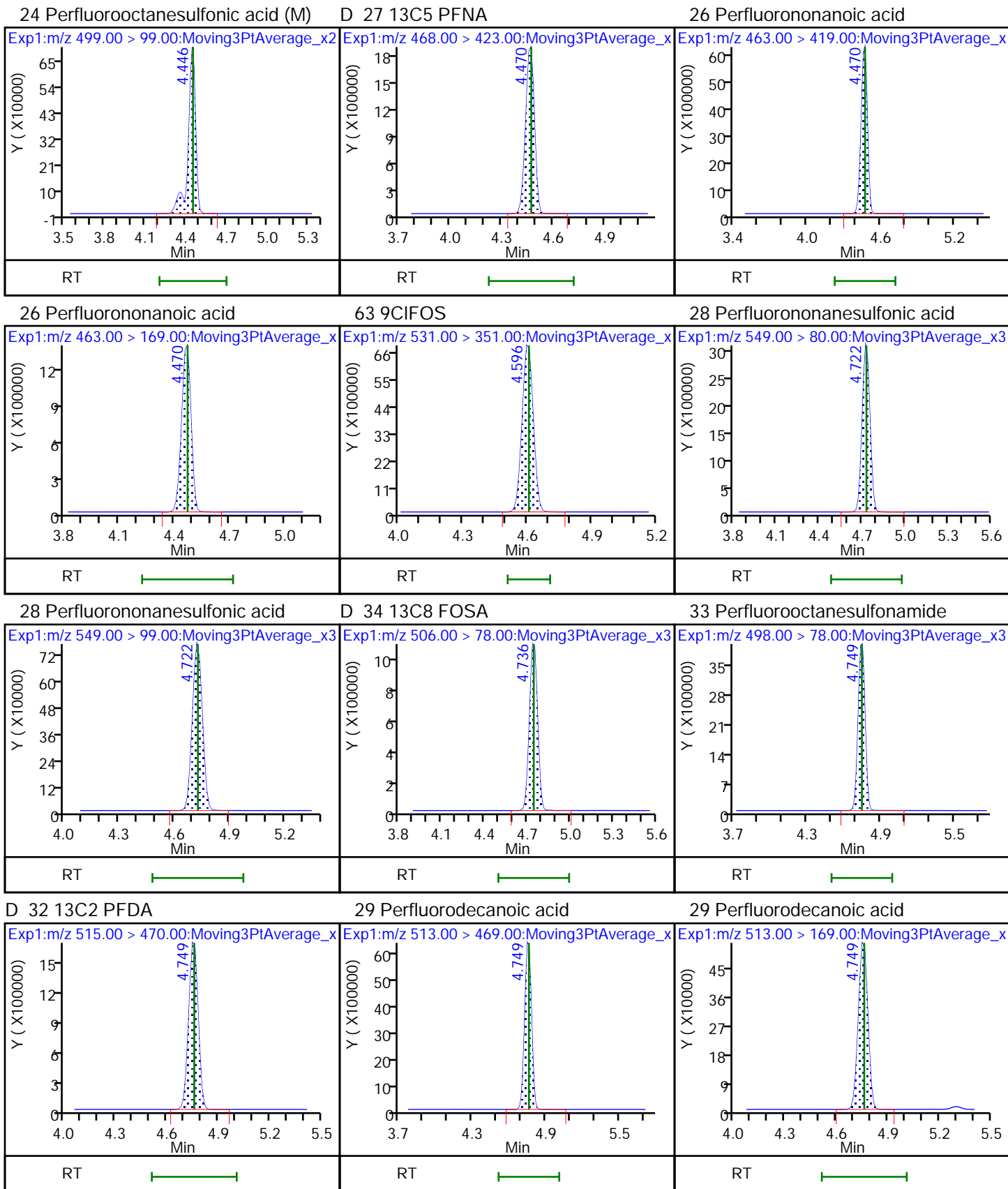
11 Perfluoropentanesulfonic acid

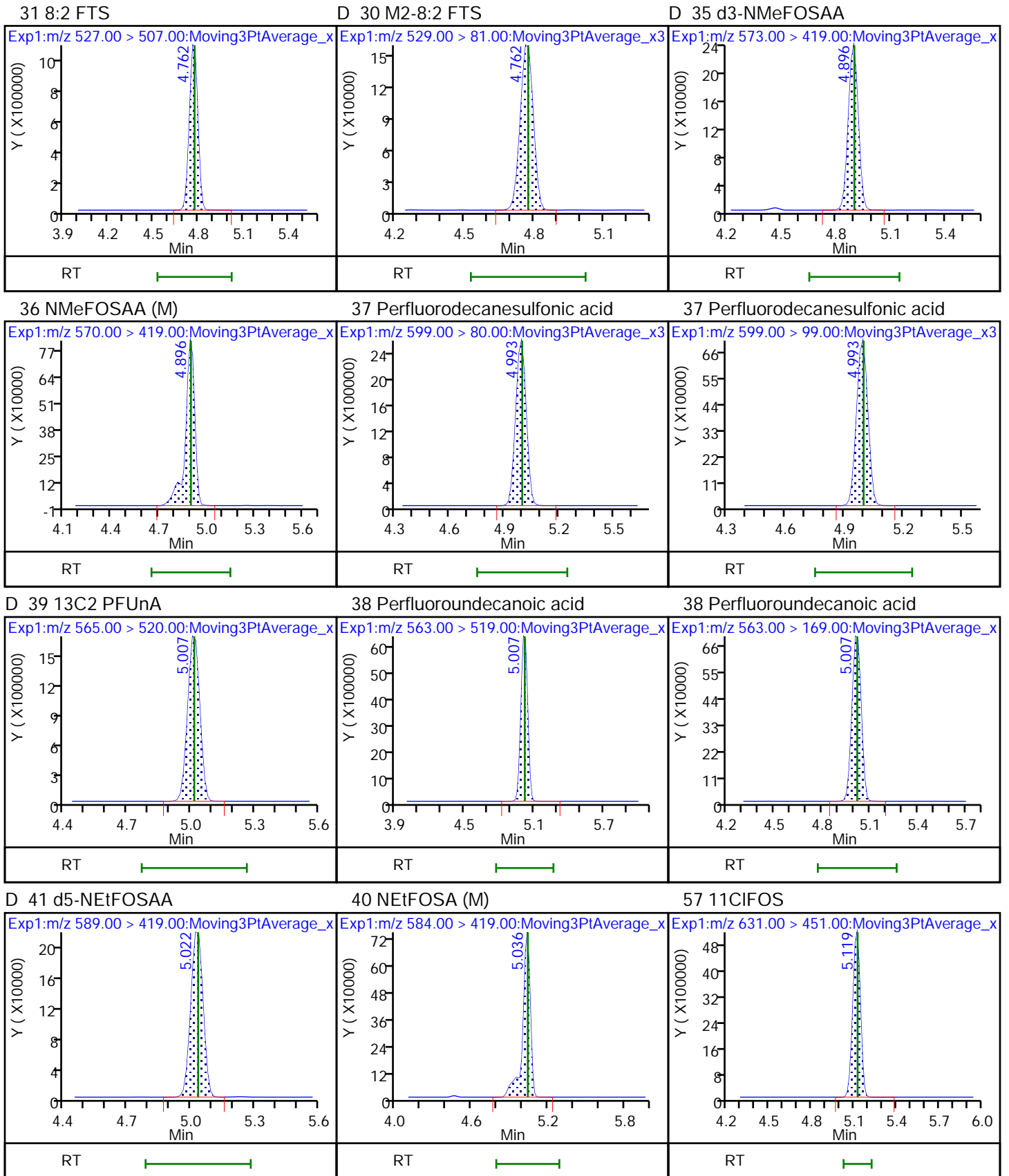
D 9 13C2 PFHxA







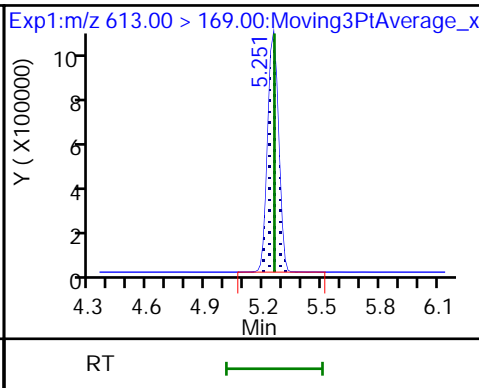
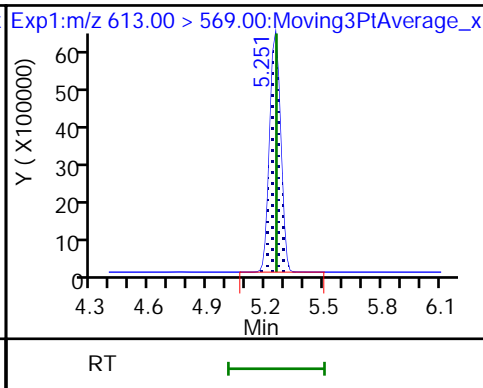
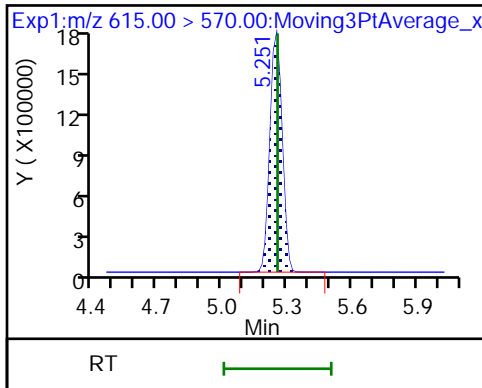




D 43 13C2 PFDoA

42 Perfluorododecanoic acid

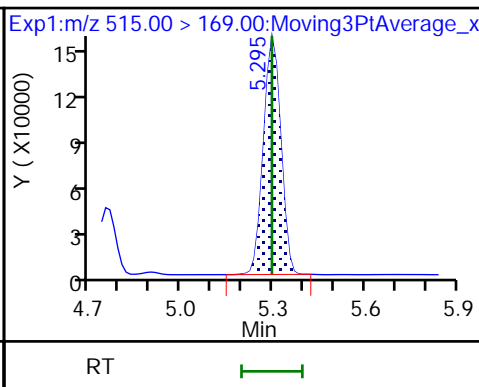
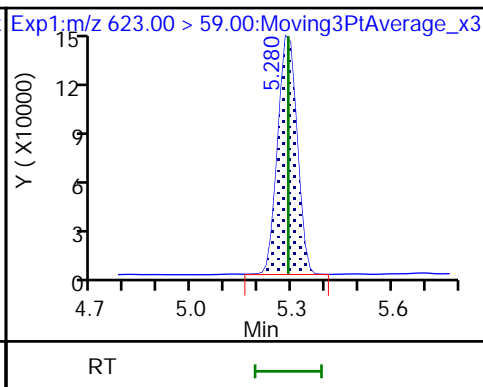
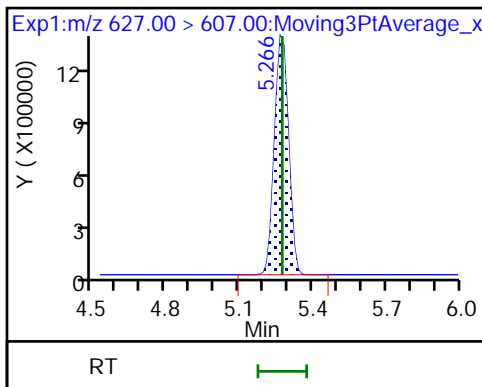
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

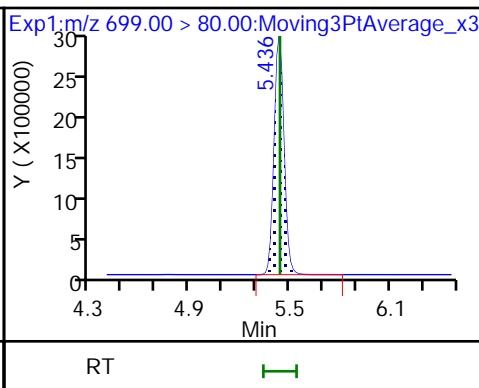
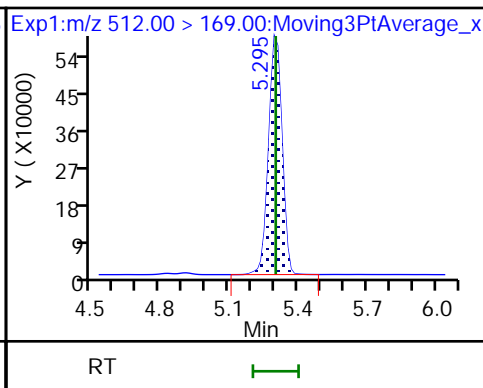
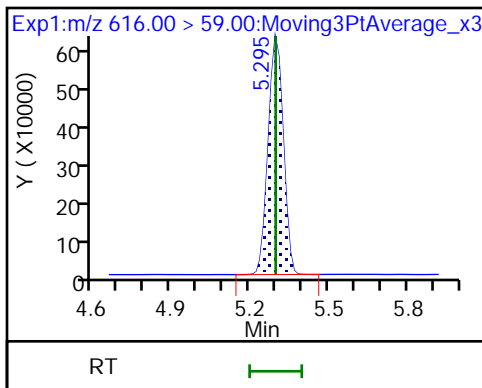
D 58 d-N-MeFOSA-M



49 N-MeFOSE-M

61 NMeFOSA

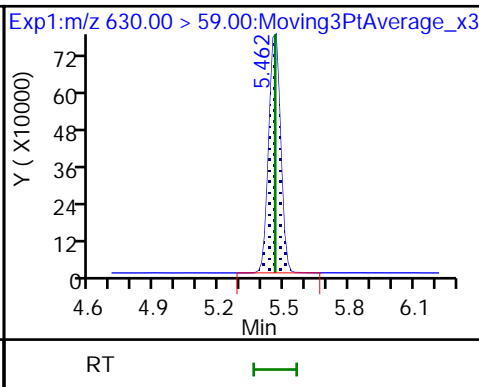
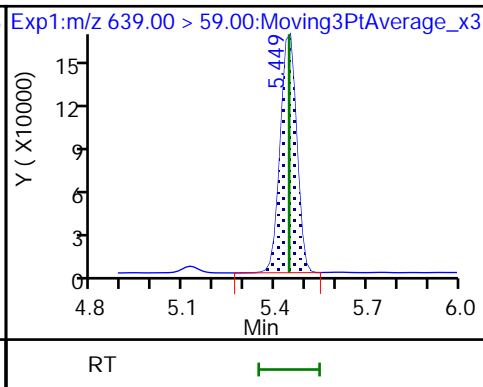
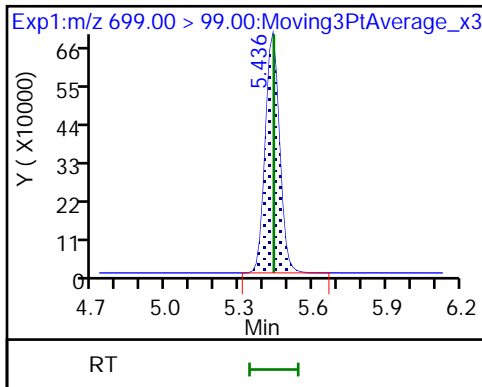
54 PFDoS

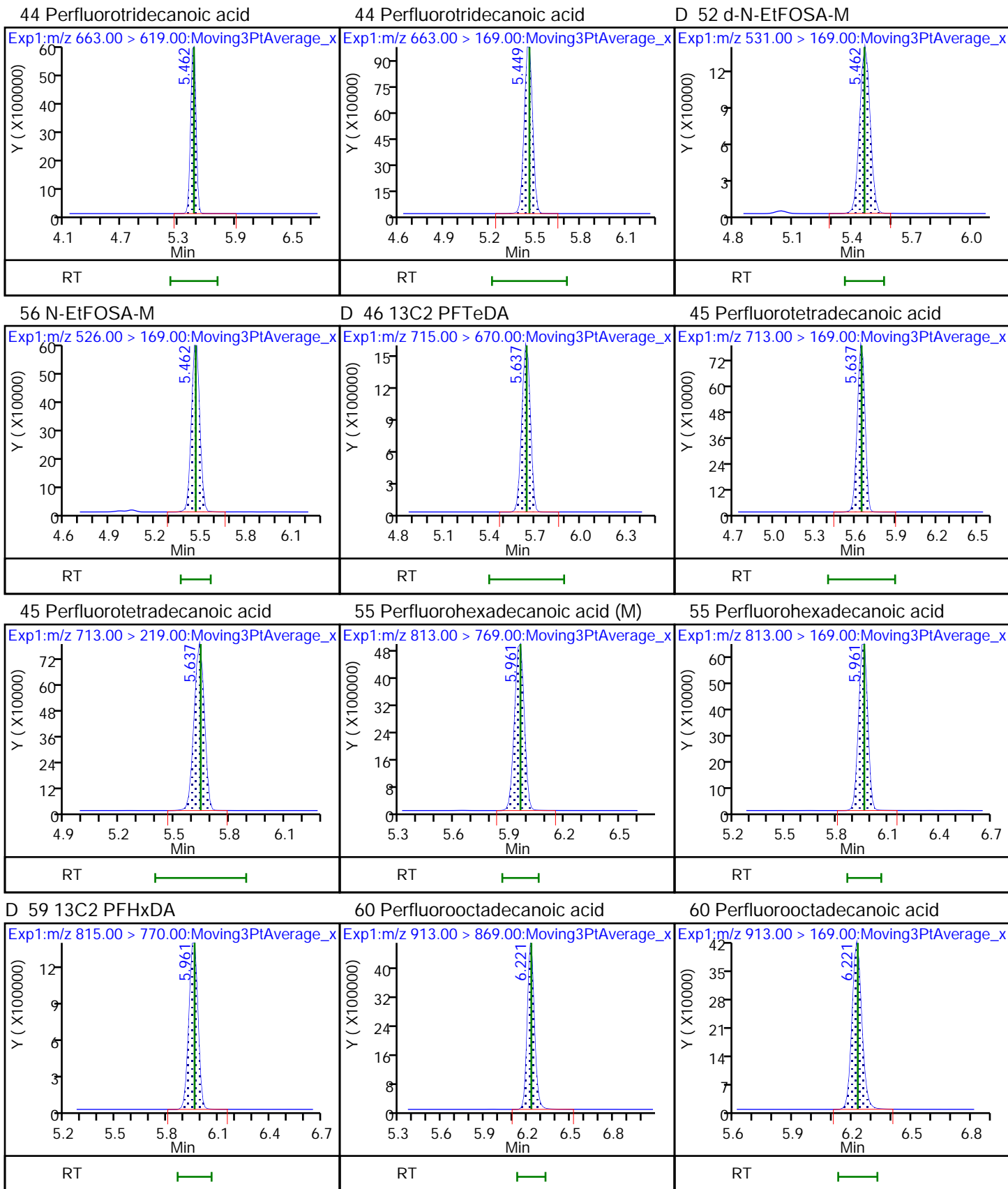


54 PFDoS

D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M





Eurofins TestAmerica, Knoxville

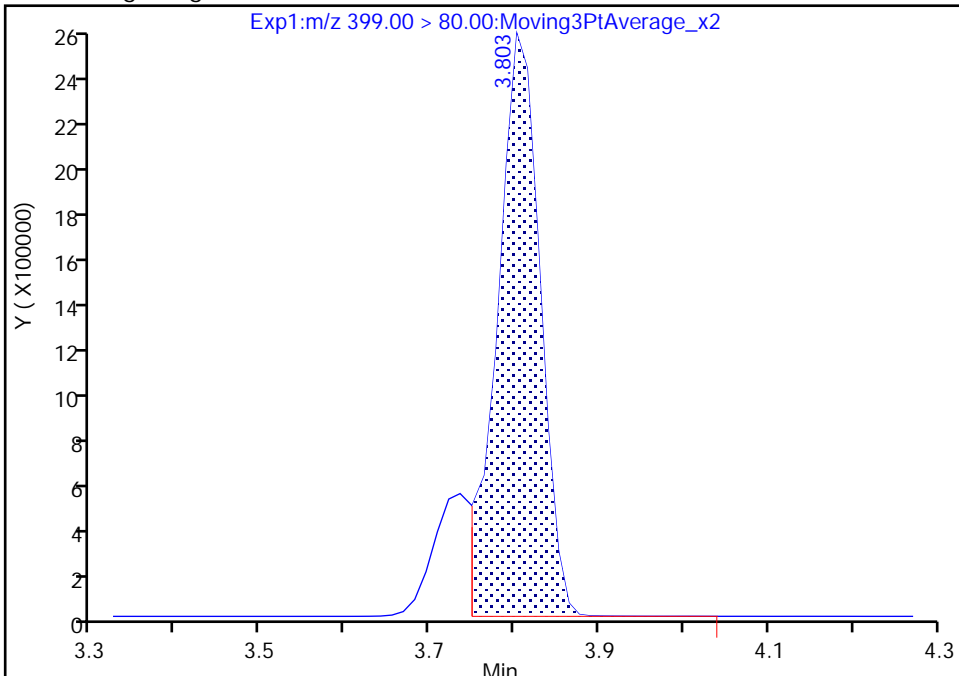
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_011.d
Injection Date: 05-Oct-2021 22:44:57 Instrument ID: LCA
Lims ID: IC 6
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

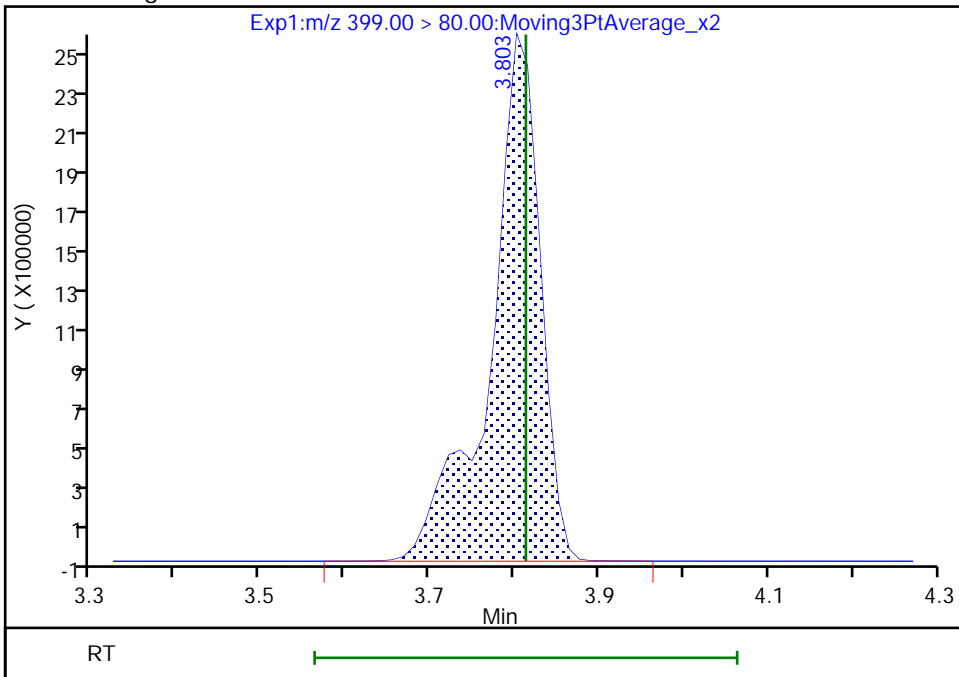
RT: 3.80
Area: 8986327
Amount: 3.766143
Amount Units: ng/ml

Processing Integration Results



RT: 3.80
Area: 10611543
Amount: 4.589378
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:03:51
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

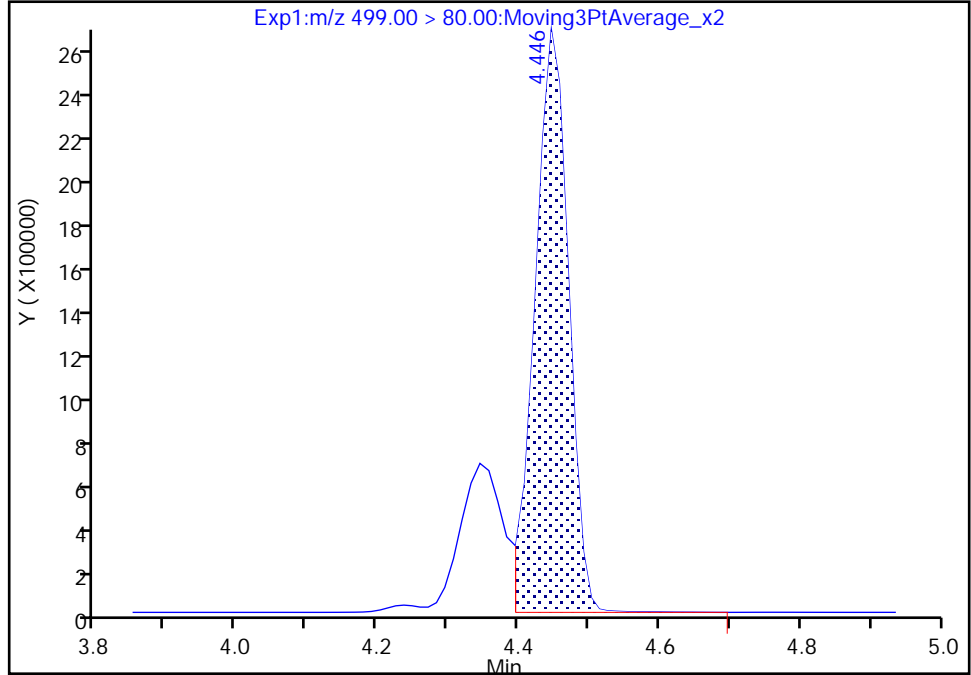
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_011.d
Injection Date: 05-Oct-2021 22:44:57 Instrument ID: LCA
Lims ID: IC 6
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

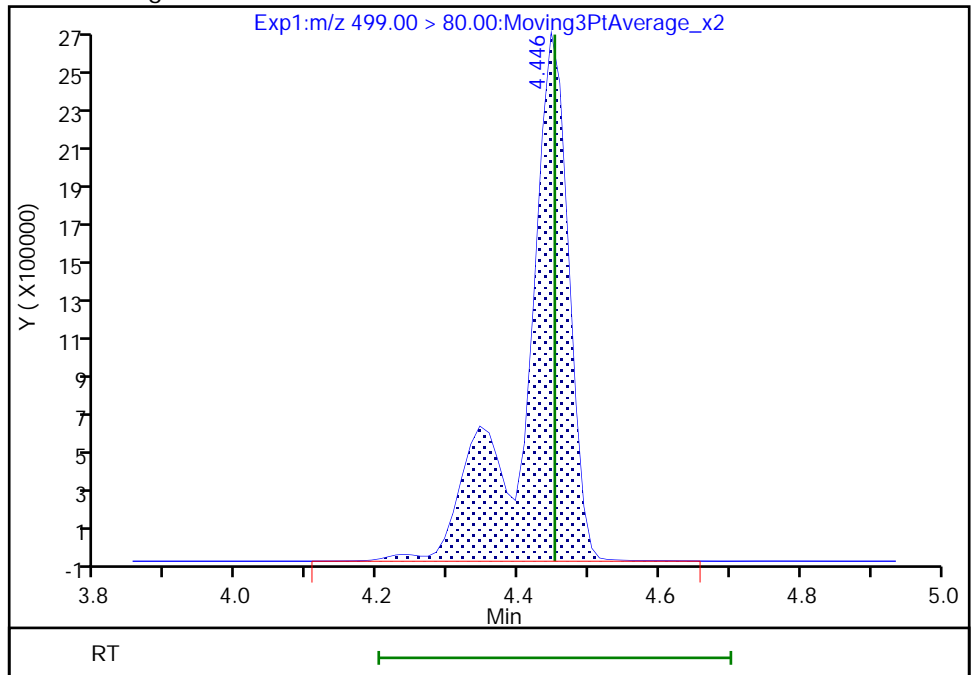
RT: 4.45
Area: 8689691
Amount: 3.443211
Amount Units: ng/ml

Processing Integration Results



RT: 4.45
Area: 11641795
Amount: 4.421800
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:04:02
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

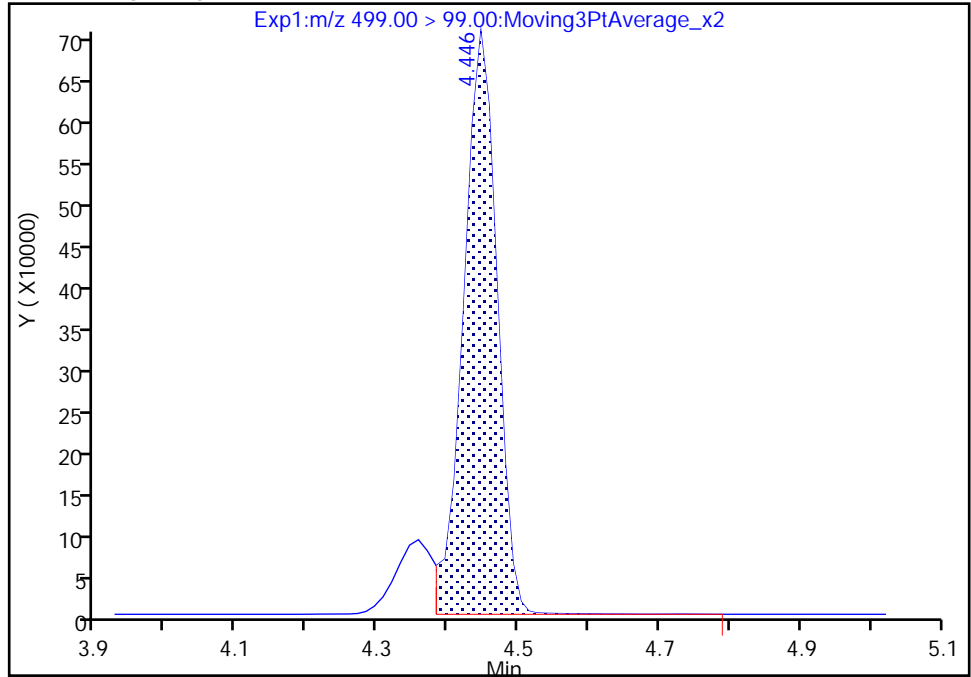
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_011.d
Injection Date: 05-Oct-2021 22:44:57 Instrument ID: LCA
Lims ID: IC 6
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

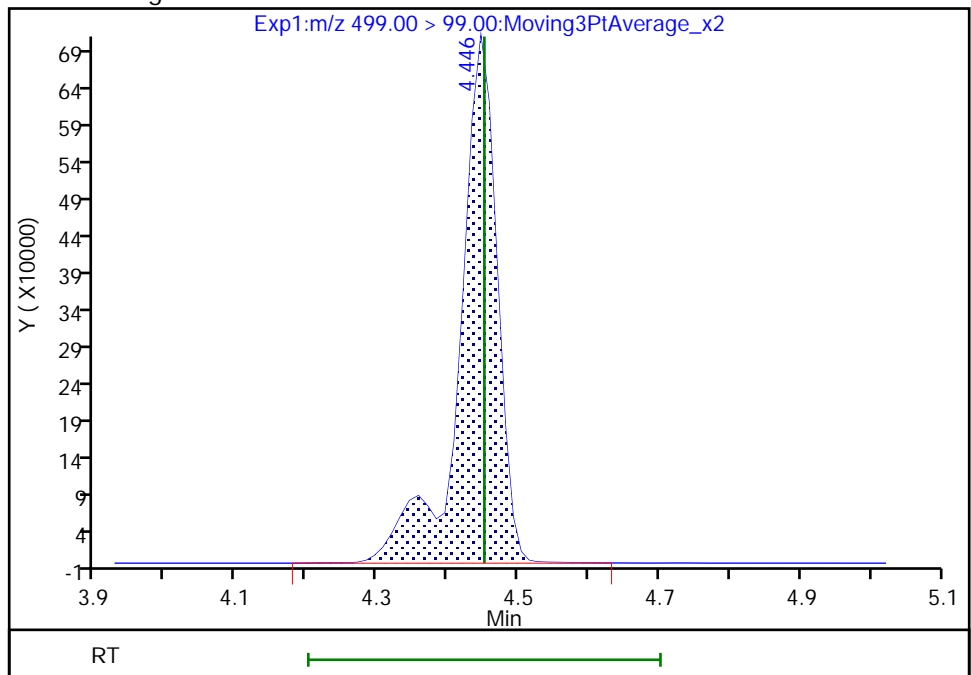
RT: 4.45
Area: 2312926
Amount: 3.443211
Amount Units: ng/ml

Processing Integration Results



RT: 4.45
Area: 2629068
Amount: 4.421800
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:04:09

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

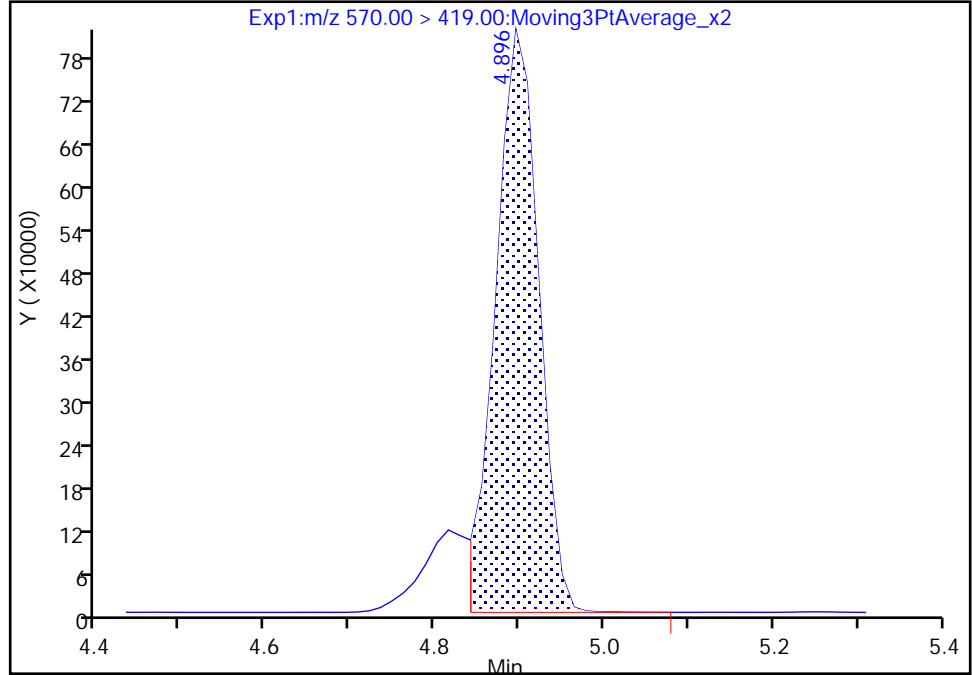
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_011.d
Injection Date: 05-Oct-2021 22:44:57 Instrument ID: LCA
Lims ID: IC 6
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

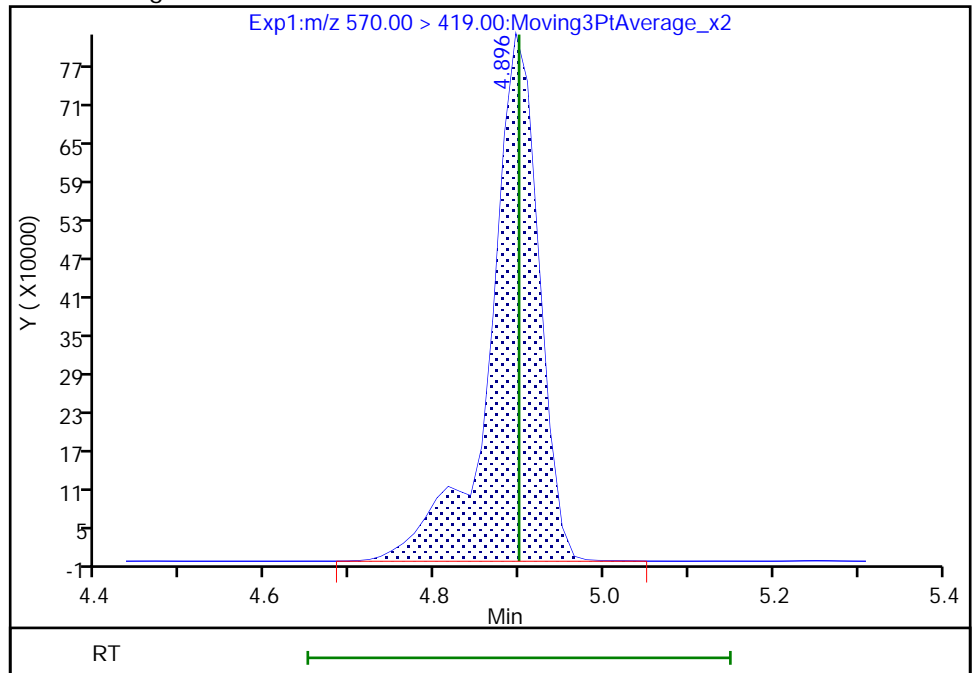
RT: 4.90
Area: 2876549
Amount: 4.124690
Amount Units: ng/ml

Processing Integration Results



RT: 4.90
Area: 3306213
Amount: 5.025643
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:04:24
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

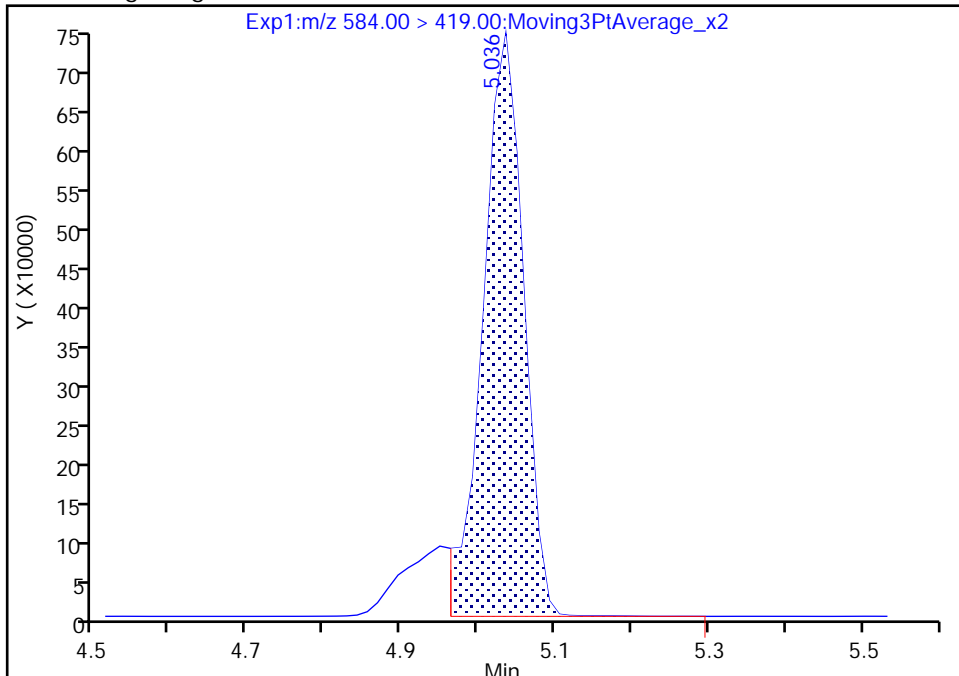
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_011.d
Injection Date: 05-Oct-2021 22:44:57 Instrument ID: LCA
Lims ID: IC 6
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

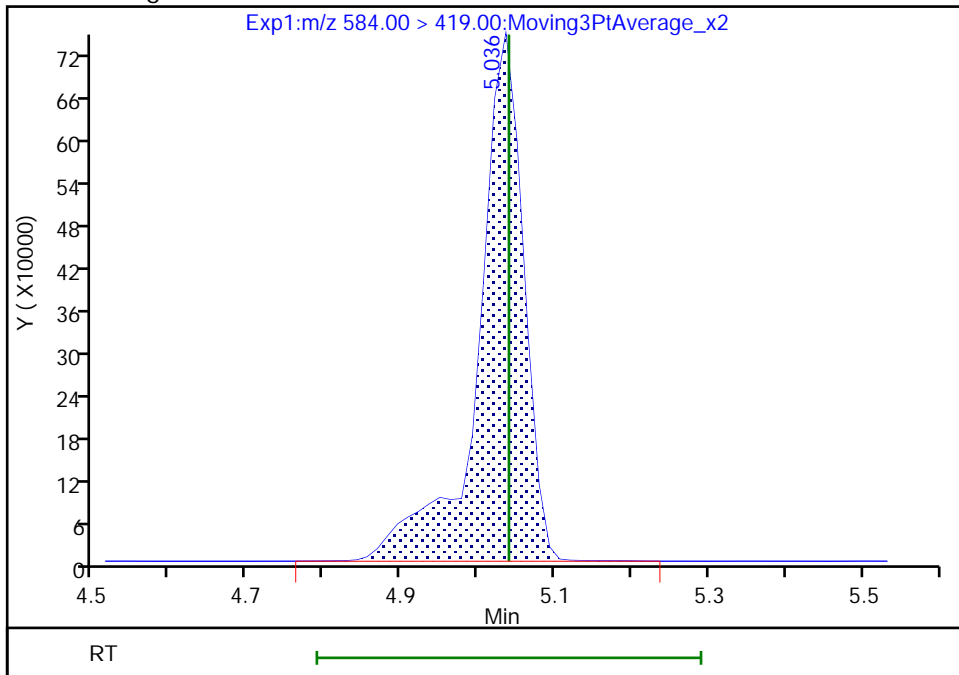
RT: 5.04
Area: 2697499
Amount: 4.180753
Amount Units: ng/ml

Processing Integration Results



RT: 5.04
Area: 3076062
Amount: 4.687868
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:04:33
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

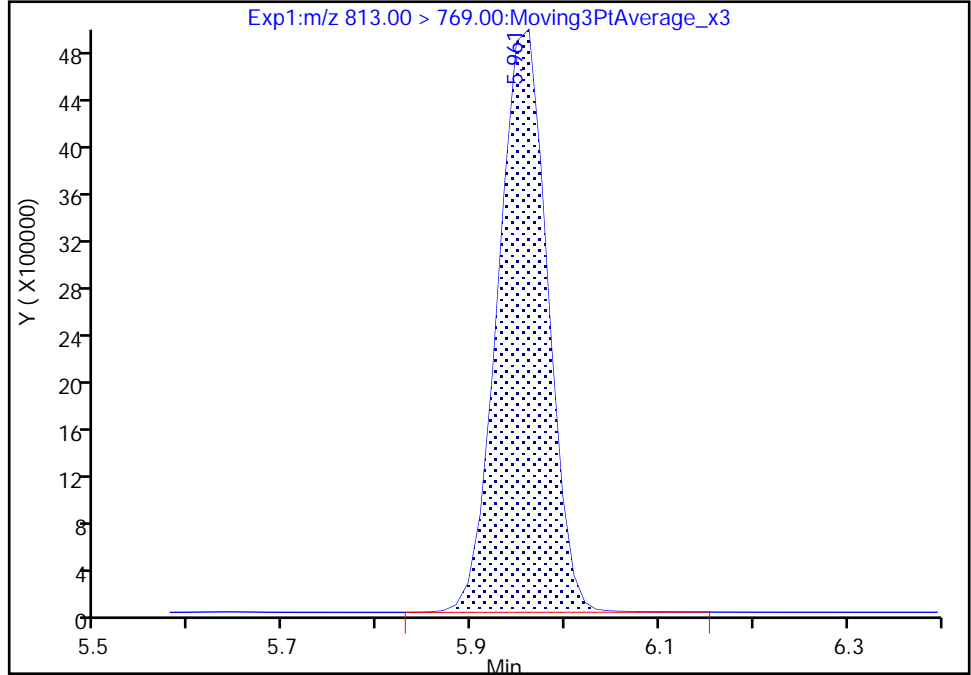
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_011.d
Injection Date: 05-Oct-2021 22:44:57 Instrument ID: LCA
Lims ID: IC 6
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

55 Perfluorohexadecanoic acid, CAS: 67905-19-5

Signal: 1

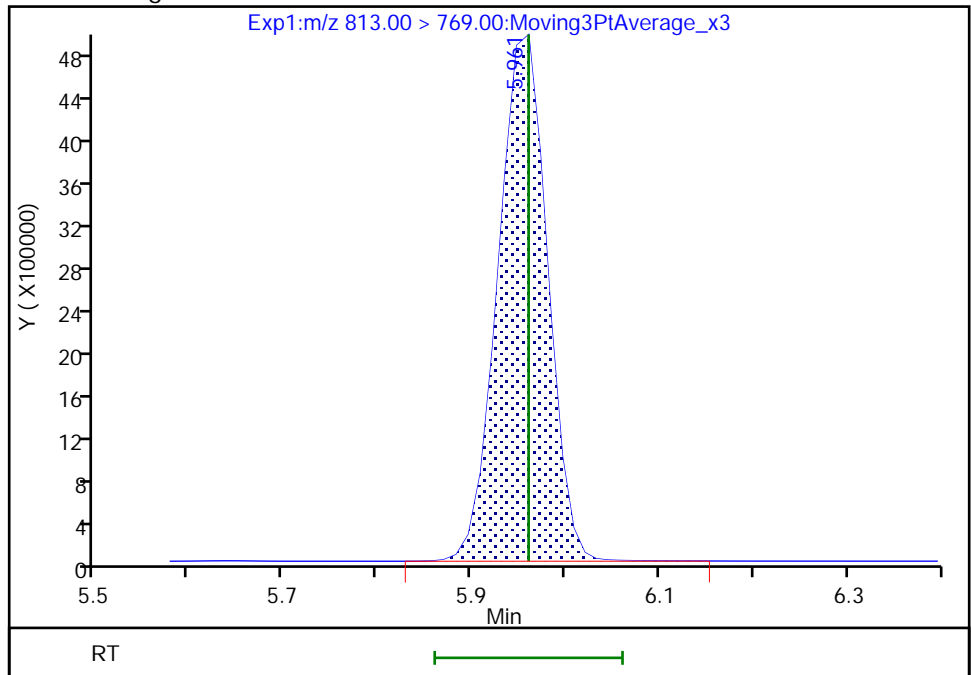
RT: 5.96
Area: 18169501
Amount: 3.999405
Amount Units: ng/ml

Processing Integration Results



RT: 5.96
Area: 18185862
Amount: 4.610203
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:13:20
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Lims ID: IC 7
 Client ID:
 Sample Type: IC Calib Level: 7
 Inject. Date: 05-Oct-2021 22:53:45 ALS Bottle#: 12 Worklist Smp#: 12
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020953-012 ic 7
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15

Method: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 07-Oct-2021 14:21:13 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1613

First Level Reviewer: cochranj Date: 06-Oct-2021 16:06:12
 Ratio Calibration: None

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	2.812	2.812	0.0	0.677	6596355	1.29	103	14044	
2 Perfluorobutanoic acid	212.90 > 169.00	2.812	2.812	0.0	1.000	39839183	9.61	96.1	4834	
D 3 13C5 PFPeA	267.90 > 223.00	3.130	3.130	0.0	0.753	5348940	1.27	102	13447	
4 Perfluoropentanoic acid	262.90 > 219.00	3.130	3.131	-0.001	1.000	40614146	9.37	93.7	7827	
D 6 13C3 PFBS	301.90 > 80.00	3.143	3.143	0.0	0.757	3331755	1.23	106	28041	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.157	3.151	0.006	1.004	28048729	8.69	Target=3.06	98.3	42426
	298.90 > 99.00	3.157	3.151	0.006	1.004	10561274		2.66(1.53-4.59)	98.3	19065
7 4:2 FTS	327.00 > 307.00	3.437	3.431	0.006	1.000	8466918	8.79	94.1	45656	
D 8 M2-4:2 FTS	329.00 > 81.00	3.437	3.431	0.006	0.827	449831	1.11	94.7	525	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.469	3.468	0.001	1.104	22616554	9.23	Target=3.47	98.4	34855
	349.00 > 99.00	3.469	3.468	0.001	1.104	6302587		3.59(1.73-5.20)	98.4	27937
D 9 13C2 PFHxA	315.00 > 270.00	3.469	3.471	-0.002	0.835	5402140	1.25	100	13799	
10 Perfluorohexanoic acid	313.00 > 269.00	3.469	3.471	-0.002	1.000	35602644	9.61	Target=9.74	96.1	7663
	313.00 > 119.00	3.469	3.471	-0.002	1.000	2792461		12.75(4.87-14.61)	96.1	4539
D 12 13C3 HFPO-DA	287.00 > 169.00	3.562	3.565	-0.003	0.857	2798495	1.27	101	9697	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.562	3.565	-0.003	1.000	31885892	10.3		103	15510	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.815	3.813	0.002	1.000	20867517	9.23	Target=2.96	101	27209	M
399.00 > 99.00	3.815	3.813	0.002	1.000	6190880		3.37(1.48-4.44)	101	16827	
D 17 18O2 PFHxS										
403.00 > 84.00	3.815	3.813	0.002	0.918	1978127	1.20		102	17304	
D 14 13C4 PFHpA										
367.00 > 322.00	3.815	3.819	-0.004	0.918	5261701	1.22		97.8	12601	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.815	3.819	-0.004	1.000	44063826	9.95	Target=3.35	99.5	10628	
363.00 > 169.00	3.815	3.819	-0.004	1.000	14241351		3.09(1.67-5.02)	99.5	30983	
68 DONA										
377.00 > 251.00	3.852	3.850	0.002	0.866	66306425	8.62	Target=1.49	91.5	47285	
377.00 > 85.00	3.852	3.850	0.002	0.866	38619689		1.72(0.74-2.23)	91.5	7478	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.154	4.151	0.003	1.000	476601	1.14		96.4	673	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.142	4.143	-0.001	0.932	21488703	9.11	Target=3.73	95.7	27451	
449.00 > 99.00	4.142	4.143	-0.001	0.932	5435144		3.95(1.87-5.61)	95.7	19683	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.142	4.146	-0.004	0.997	4807435	1.26		101	18261	
19 6:2 FTS										
427.00 > 407.00	4.142	4.151	-0.009	0.997	7345217	9.16		96.6	14754	
* 22 13C2 PFOA										
415.00 > 370.00	4.154	4.155	-0.001		4831158	1.25			12847	
D 21 13C4 PFOA										
417.00 > 372.00	4.154	4.155	-0.001	1.000	4654864	1.20		95.7	13364	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.154	4.156	-0.002	1.000	41535789	10.1	Target=2.40	101	9481	
413.00 > 169.00	4.154	4.156	-0.002	1.000	16614950		2.50(1.20-3.61)	101	8127	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.446	4.446	0.0	1.070	594930	1.23		103	2257	
D 25 13C4 PFOS										
503.00 > 80.00	4.446	4.451	-0.005	1.070	2833668	1.25		105	3976	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.446	4.451	-0.005	1.000	24369559	9.34	Target=3.83	101	12434	M
499.00 > 99.00	4.446	4.451	-0.005	1.000	5504556		4.43(1.91-5.74)	101	10598	M
D 27 13C5 PFNA										
468.00 > 423.00	4.469	4.471	-0.002	1.076	6202112	1.25		100	25154	
26 Perfluorononanoic acid										
463.00 > 419.00	4.469	4.471	-0.002	1.000	40209311	9.76	Target=3.68	97.6	20448	
463.00 > 169.00	4.469	4.471	-0.002	1.000	9164022		4.39(1.84-5.52)	97.6	21242	
63 9CIFOS										
531.00 > 351.00	4.607	4.606	0.001	1.109	49335058	9.02		96.7	53380	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.721	4.728	-0.007	1.062	22739383	9.20	Target=3.97	95.8	24949	
549.00 > 99.00	4.721	4.728	-0.007	1.062	5847953		3.89(1.99-5.96)	95.8	20451	
D 34 13C8 FOSA										
506.00 > 78.00	4.748	4.743	0.005	1.143	3792608	1.14		91.4	4855	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.748	4.745	0.003	1.000	29712974	10.2		102	9371	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.762	4.760	0.002	1.000	42913494	9.57	Target=10.11	95.7	16864	
513.00 > 169.00	4.762	4.760	0.002	1.000	3740556		11.47(5.06-15.17)	95.7	591	
D 32 13C2 PFDA										
515.00 > 470.00	4.762	4.758	0.004	1.146	5955015	1.19		95.1	16114	
31 8:2 FTS										
527.00 > 507.00	4.775	4.774	0.001	1.000	7727315	9.16		95.6	18830	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.775	4.774	0.001	1.149	566408	1.11		93.0	1717	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.895	4.899	-0.004	1.178	923936	1.35		108	531	
36 NMeFOSAA										
570.00 > 419.00	4.895	4.899	-0.004	1.000	6665393	9.87		98.7	6195	
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.992	4.997	-0.005	1.123	21205557	9.34	Target=3.80	96.9	32841	
599.00 > 99.00	4.992	4.997	-0.005	1.123	5779847		3.67(1.90-5.70)	96.9	19310	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.021	5.018	0.003	1.000	45034155	9.83	Target=7.45	98.3	18724	
563.00 > 169.00	5.021	5.018	0.003	1.000	5130652		8.78(3.78-11.33)	98.3	11495	
D 39 13C2 PFUnA										
565.00 > 520.00	5.021	5.015	0.006	1.209	5686115	1.19		95.1	14018	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.035	5.034	0.001	1.212	780959	1.19		94.8	2747	
40 NEtFOSA										
584.00 > 419.00	5.035	5.040	-0.005	1.000	5841454	9.85		98.5	1665	
57 11CIFOS										
631.00 > 451.00	5.118	5.122	-0.004	1.151	38600586	8.76		93.0	40731	
D 43 13C2 PFDaA										
615.00 > 570.00	5.250	5.255	-0.005	1.264	6477734	1.27		102	16981	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.250	5.255	-0.005	1.000	47491148	10.6	Target=5.33	106	16990	
613.00 > 169.00	5.250	5.255	-0.005	1.000	7273008		6.53(2.66-7.99)	106	17336	
50 10:2 FTS										
627.00 > 607.00	5.280	5.274	0.006	1.106	9831765	9.36		97.1	29286	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.294	5.289	0.005	1.274	539386	1.30		104	330	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.294	5.295	-0.001	1.274	567405	1.31		105	51.1	
49 N-MeFOSE-M										
616.00 > 59.00	5.294	5.297	-0.003	1.000	5008224	10.1		101	2946	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.309	5.301	0.008	1.003	4593149	9.66		96.6	853	
54 PFDoS										
699.00 > 80.00	5.435	5.439	-0.004	1.223	21969563	9.38	Target=4.32	96.9	17924	
699.00 > 99.00	5.435	5.439	-0.004	1.223	5440342		4.04(2.19-6.58)	96.9	20020	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.448	5.445	0.003	1.311	531061	1.20		95.9	218	
62 N-EtFOSE-M										
630.00 > 59.00	5.461	5.458	0.003	1.002	5491561	10.3		103	5304	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.461	5.462	-0.001	1.040	43719274	9.60	Target=5.66	96.0	16915	
663.00 > 169.00	5.461	5.462	-0.001	1.040	7012213		6.23(2.83-8.48)	96.0	26579	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.461	5.460	0.001	1.315	462772	1.27		102	694	
56 N-EtFOSA-M										
526.00 > 169.00	5.474	5.469	0.005	1.002	4319144	9.98		99.8	681	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.637	5.643	-0.006	1.000	6036068	10.2	Target=1.07	102	16016	
713.00 > 219.00	5.637	5.643	-0.006	1.000	5846732		1.03(0.53-1.60)	102	16861	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.637	5.643	-0.006	1.357	5922620	1.27		101	22248	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.960	5.961	-0.001	1.000	35675947	10.5	Target=7.50	105	10913	
813.00 > 169.00	5.960	5.961	-0.001	1.000	4606690		7.74(3.75-11.26)	105	9079	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.960	5.961	-0.001	1.435	4426886	1.30		104	11108	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.220	6.226	-0.006	1.044	30330955	9.44	Target=9.98	94.4	8530	
913.00 > 169.00	6.220	6.226	-0.006	1.044	2735872		11.09(5.14-15.41)	94.4	5219	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L7PFC2_00002

Amount Added: 1.00

Units: mL

Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Injection Date: 05-Oct-2021 22:53:45

Instrument ID: LCA

Lims ID: IC 7

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 12

Worklist Smp#: 12

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

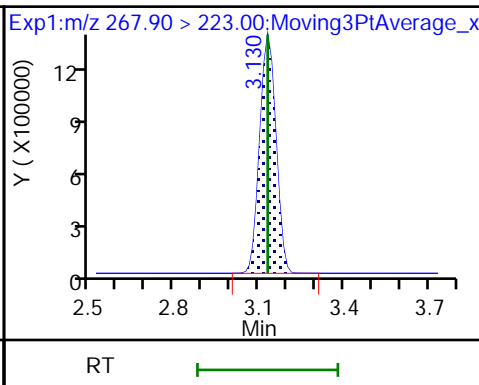
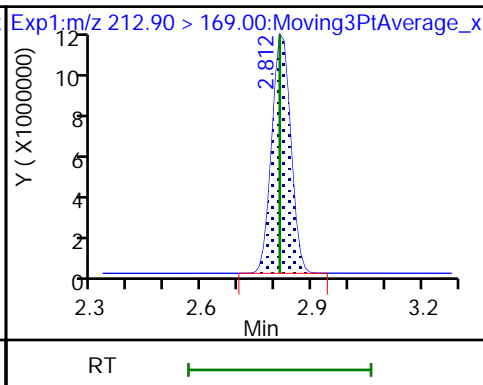
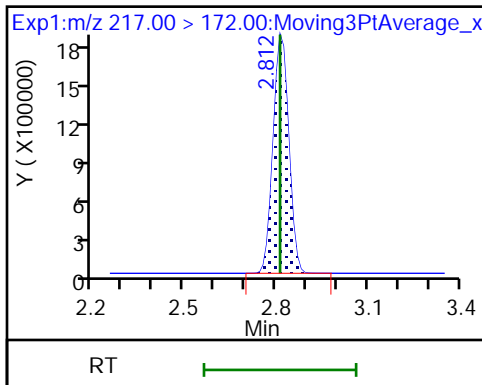
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

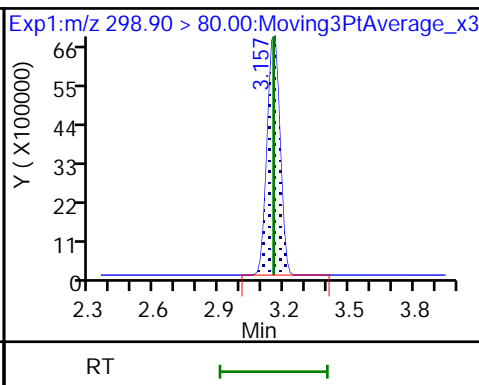
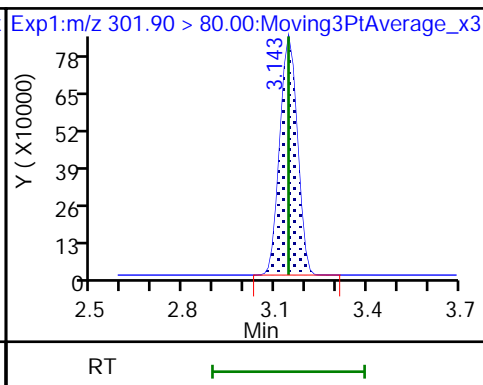
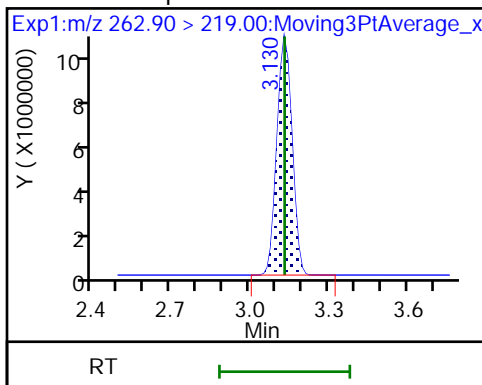
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

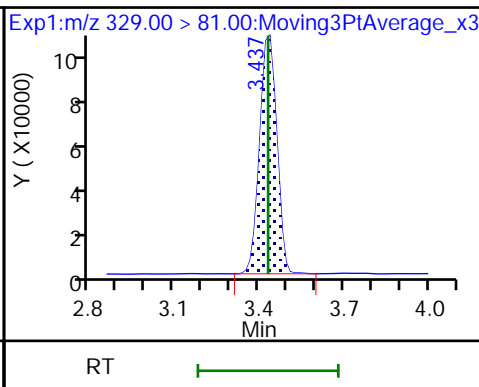
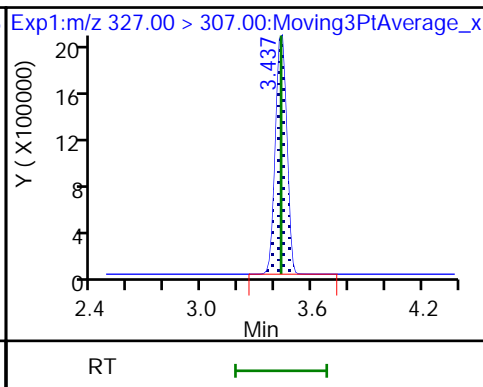
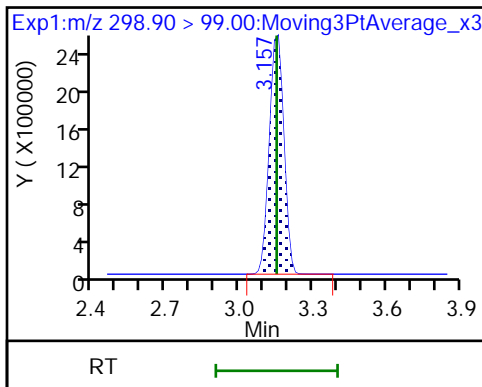
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

7 4:2 FTS

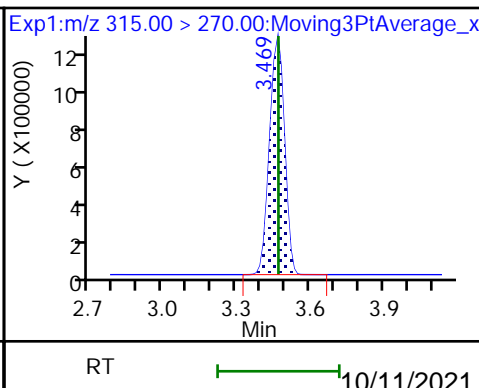
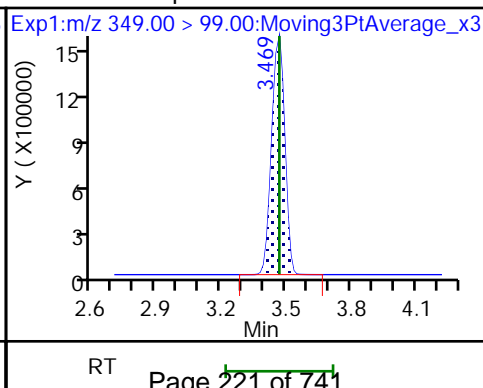
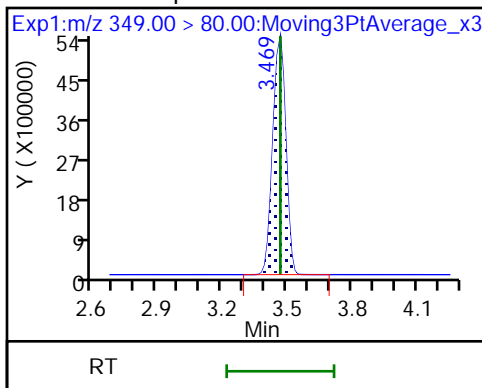
D 8 M2-4:2 FTS

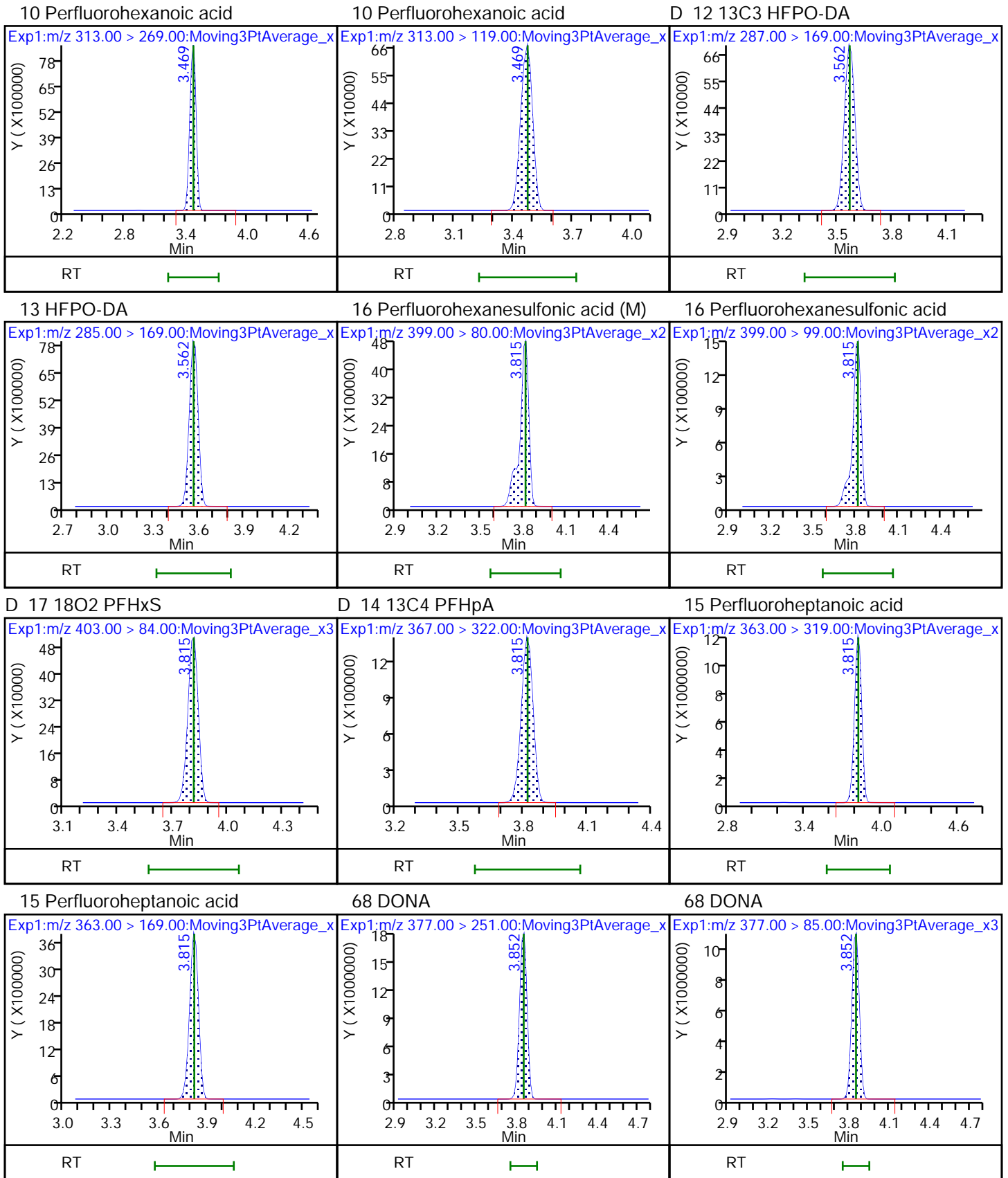


11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA

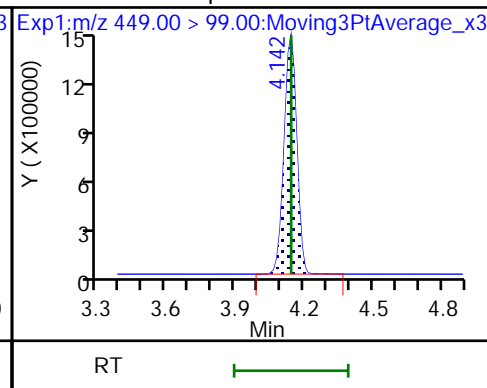
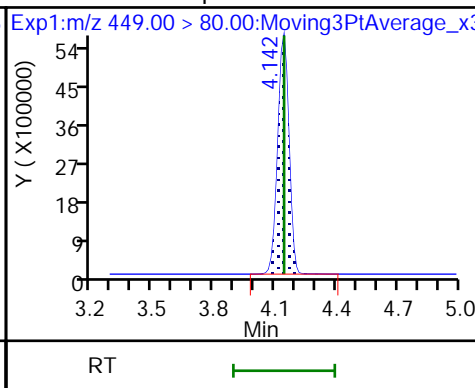
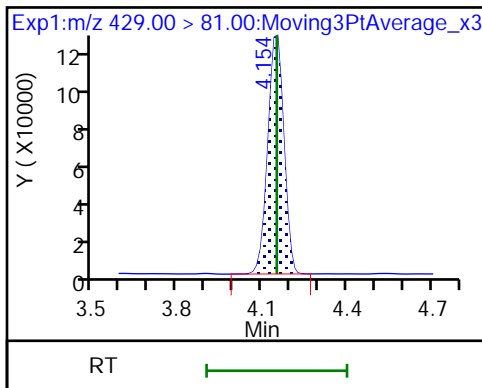




D 18 M2-6:2 FTS

20 Perfluoroheptanesulfonic acid

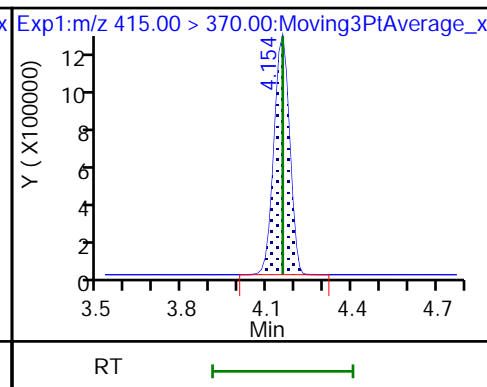
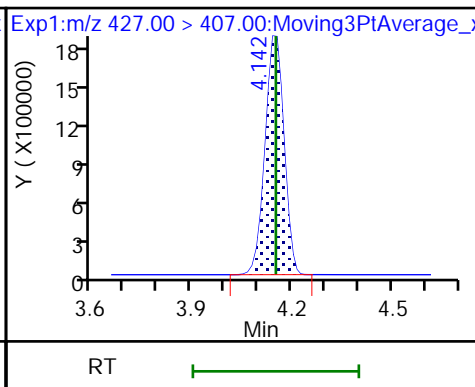
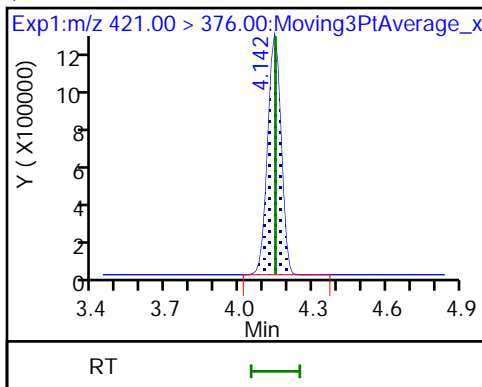
20 Perfluoroheptanesulfonic acid



\$ 48 13C8 PFOA

19 6:2 FTS

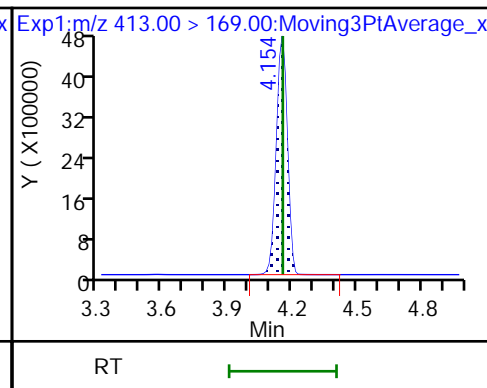
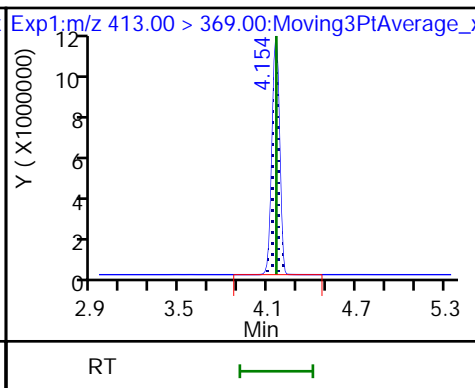
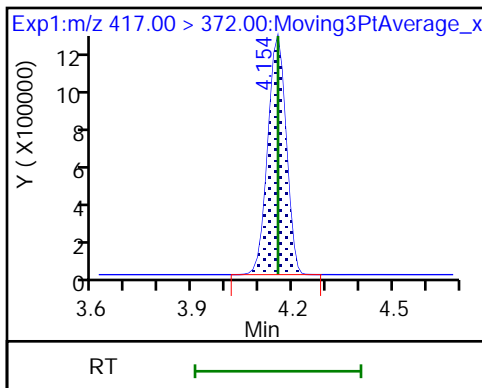
* 22 13C2 PFOA



D 21 13C4 PFOA

23 Perfluorooctanoic acid

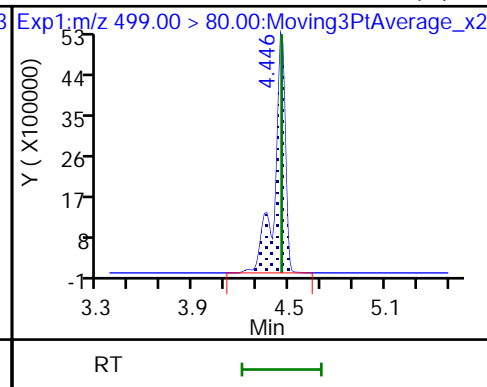
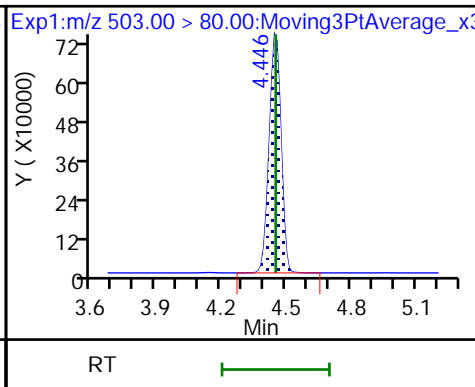
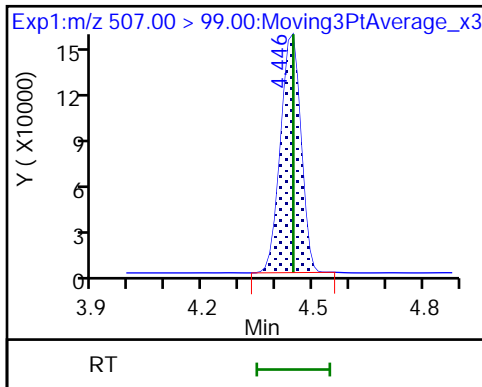
23 Perfluorooctanoic acid



\$ 47 13C8 PFOS

D 25 13C4 PFOS

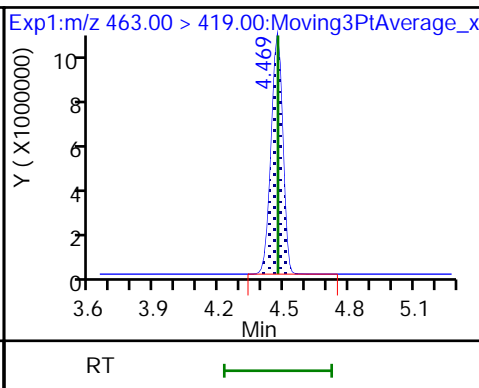
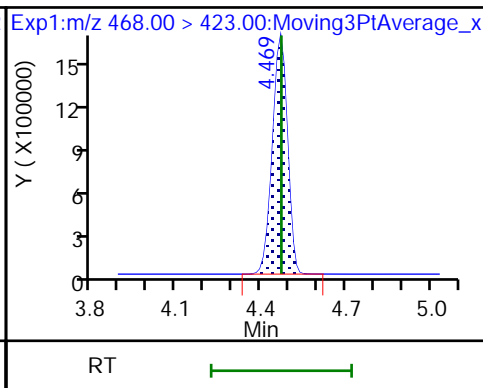
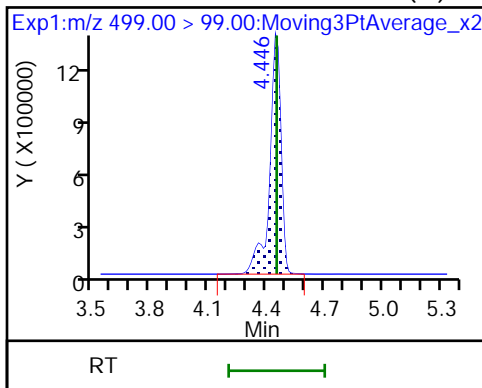
24 Perfluorooctanesulfonic acid (M)



24 Perfluorooctanesulfonic acid (M)

D 27 13C5 PFNA

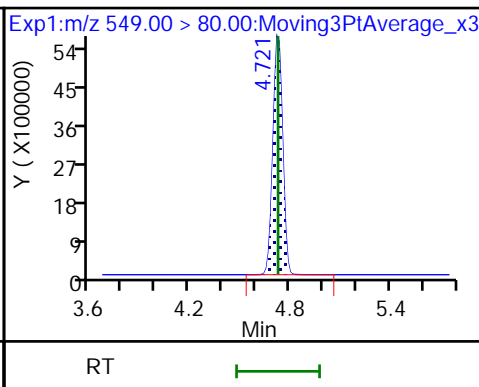
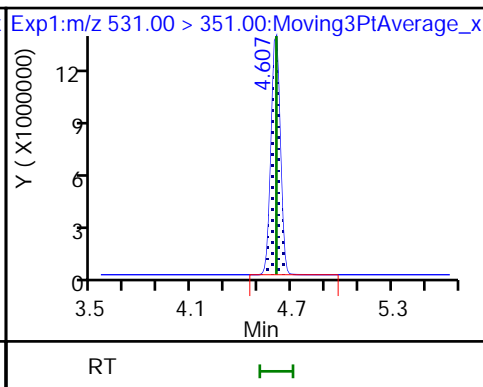
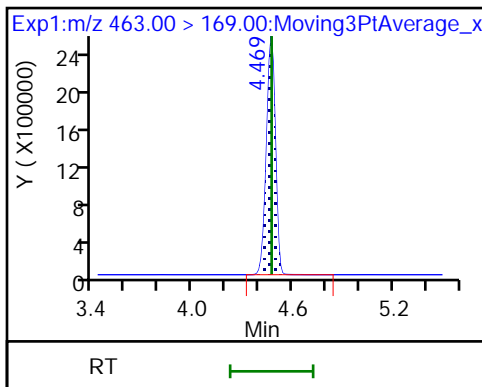
26 Perfluorononanoic acid



26 Perfluorononanoic acid

63 9CIFOS

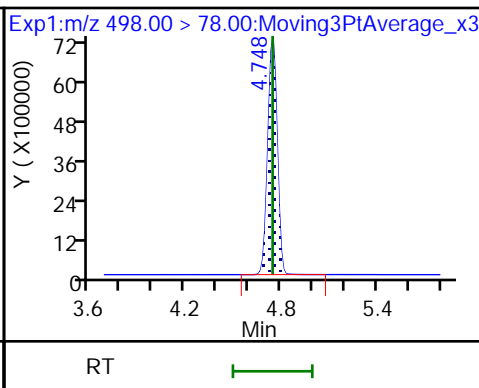
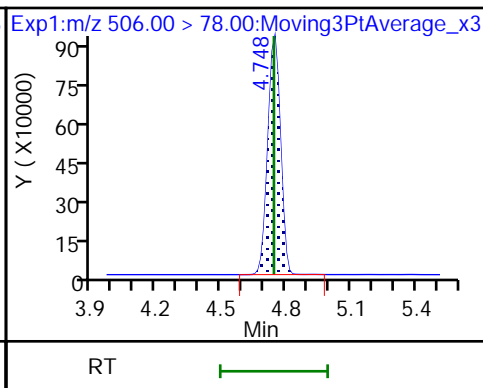
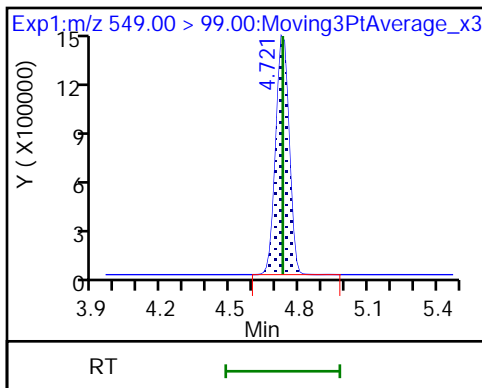
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

D 34 13C8 FOSA

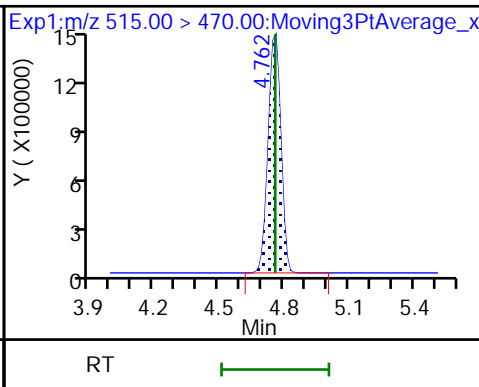
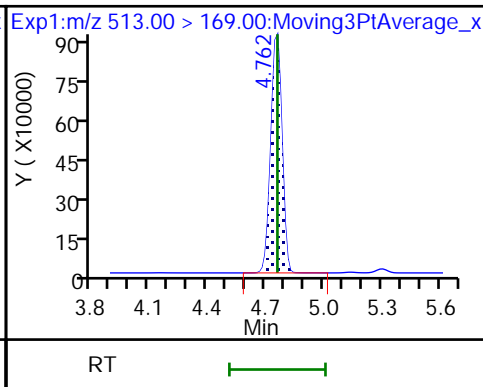
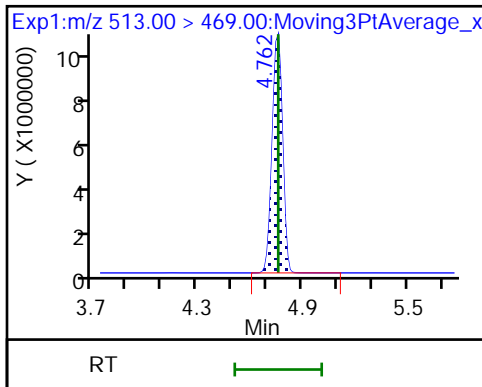
33 Perfluorooctanesulfonamide

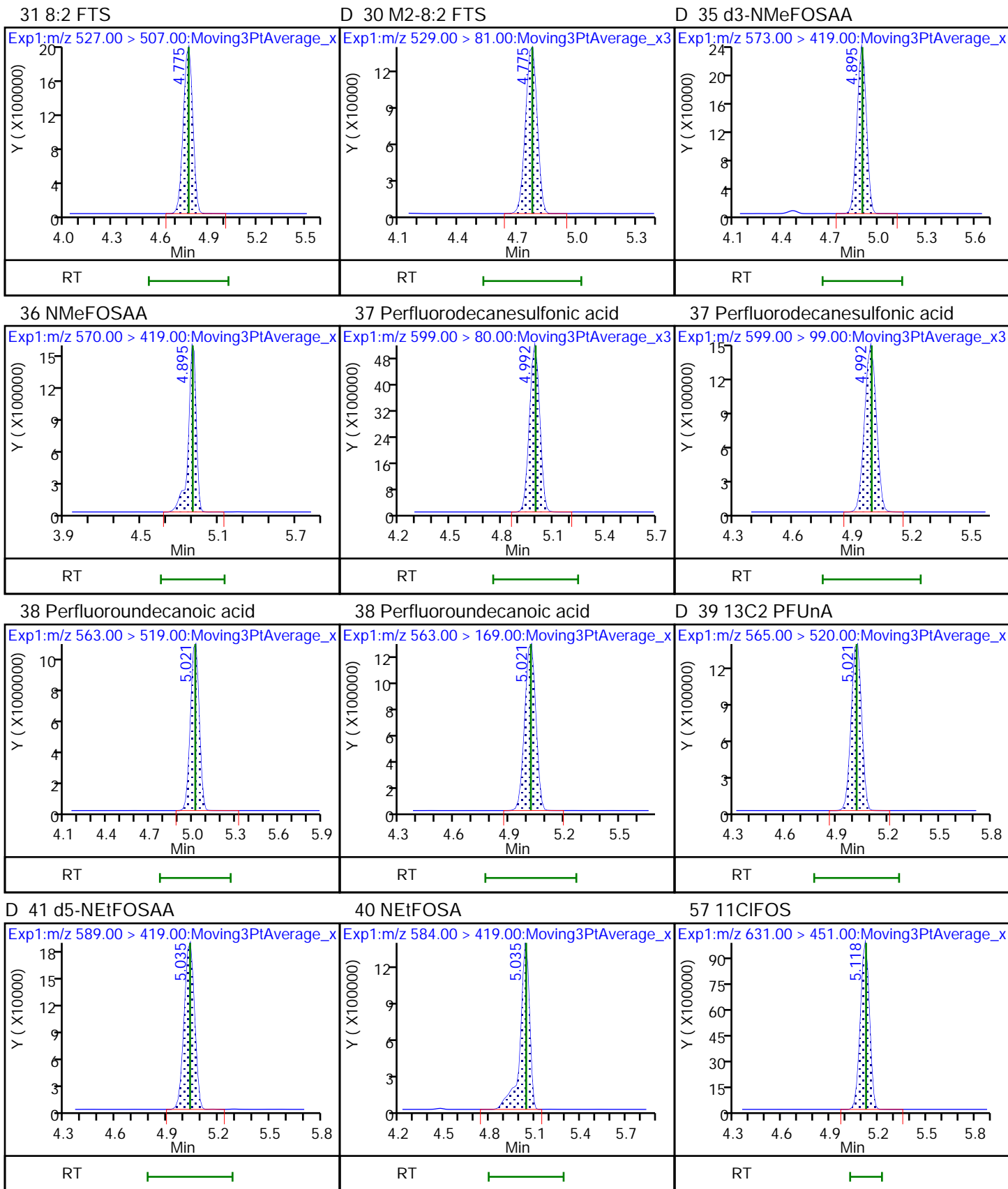


29 Perfluorodecanoic acid

29 Perfluorodecanoic acid

D 32 13C2 PFDA

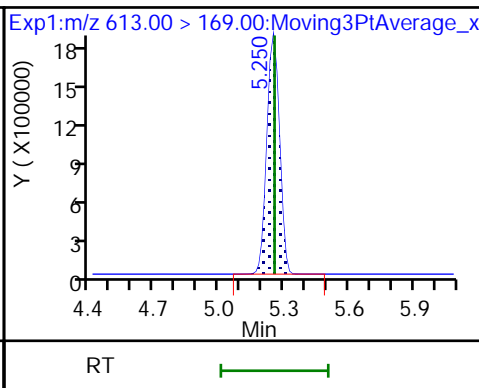
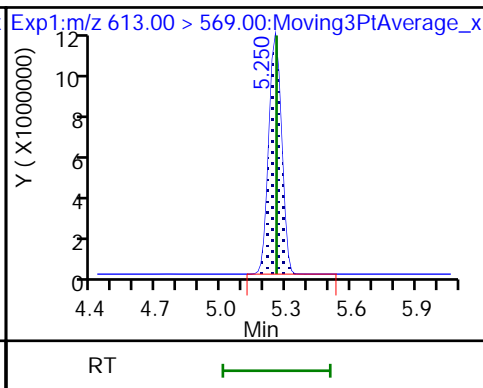
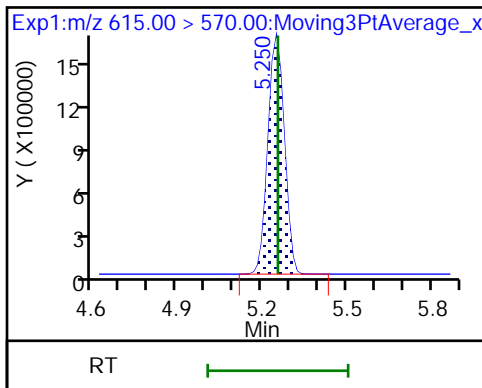




D 43 13C2 PFDoA

42 Perfluorododecanoic acid

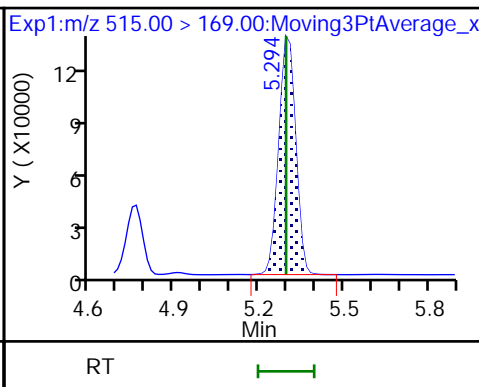
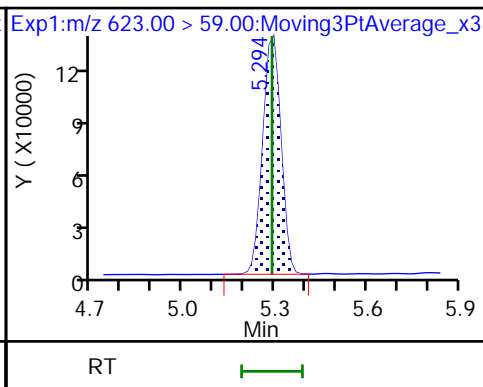
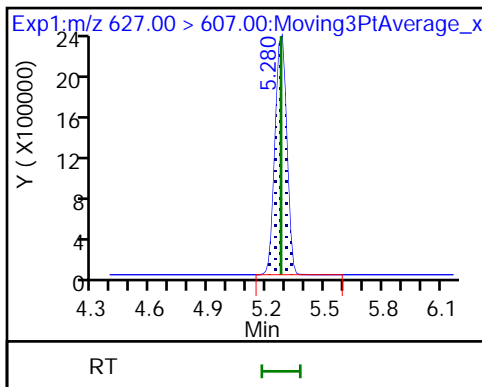
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

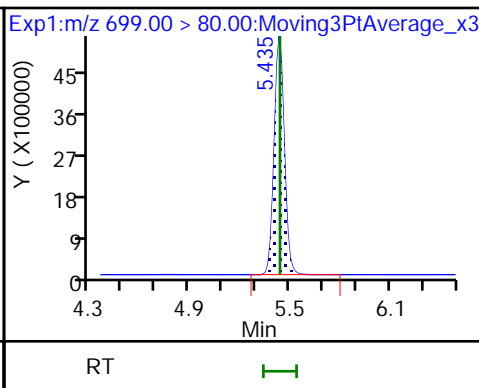
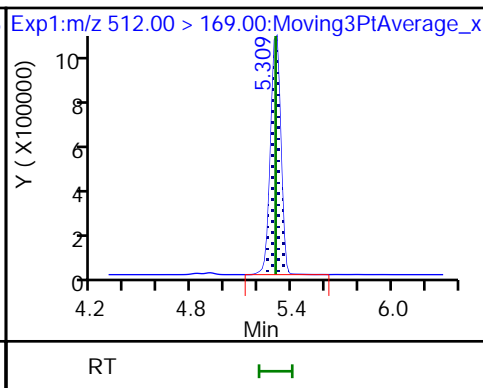
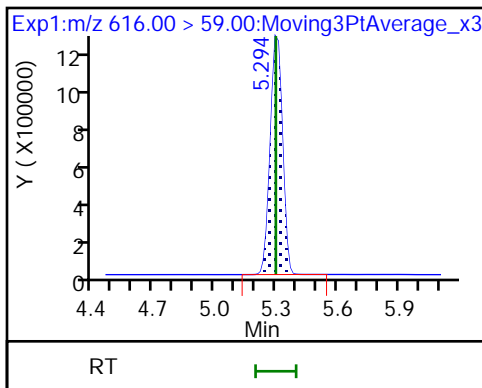
D 58 d-N-MeFOSA-M



49 N-MeFOSE-M

61 NMeFOSA

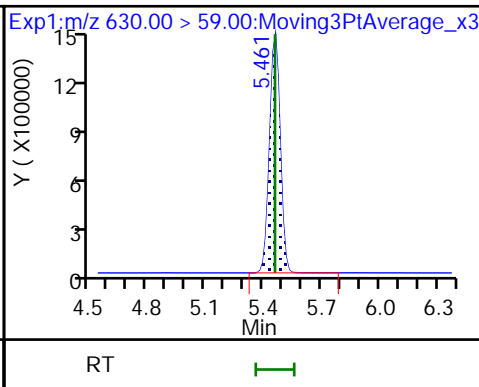
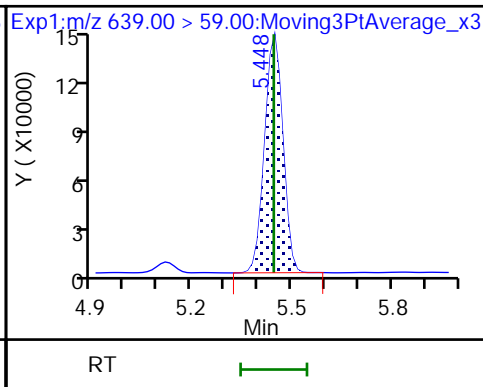
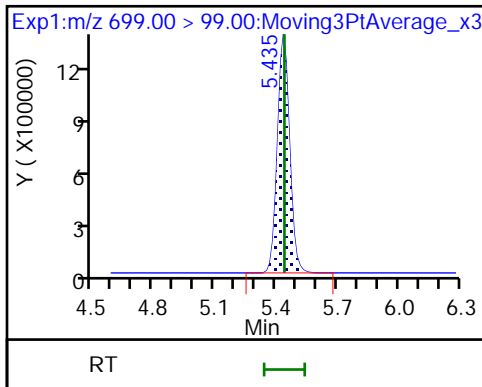
54 PFDoS

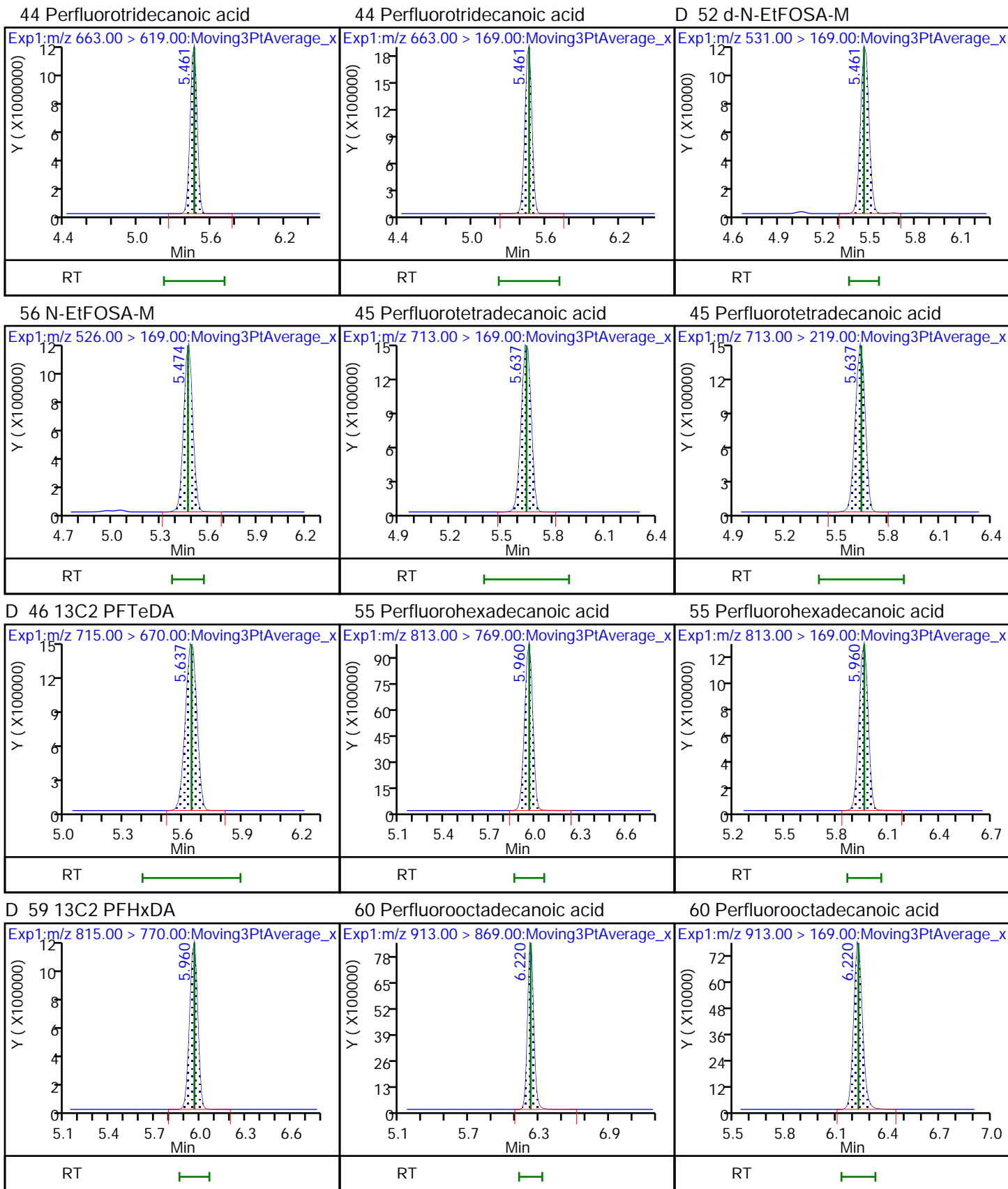


54 PFDoS

D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M





Eurofins TestAmerica, Knoxville

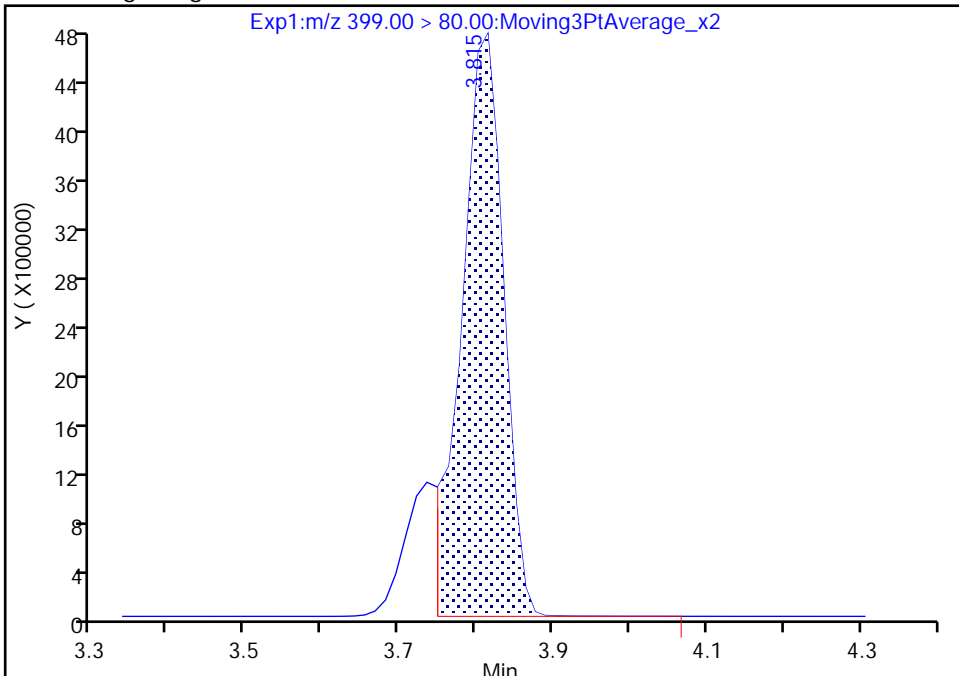
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
Injection Date: 05-Oct-2021 22:53:45 Instrument ID: LCA
Lims ID: IC 7
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

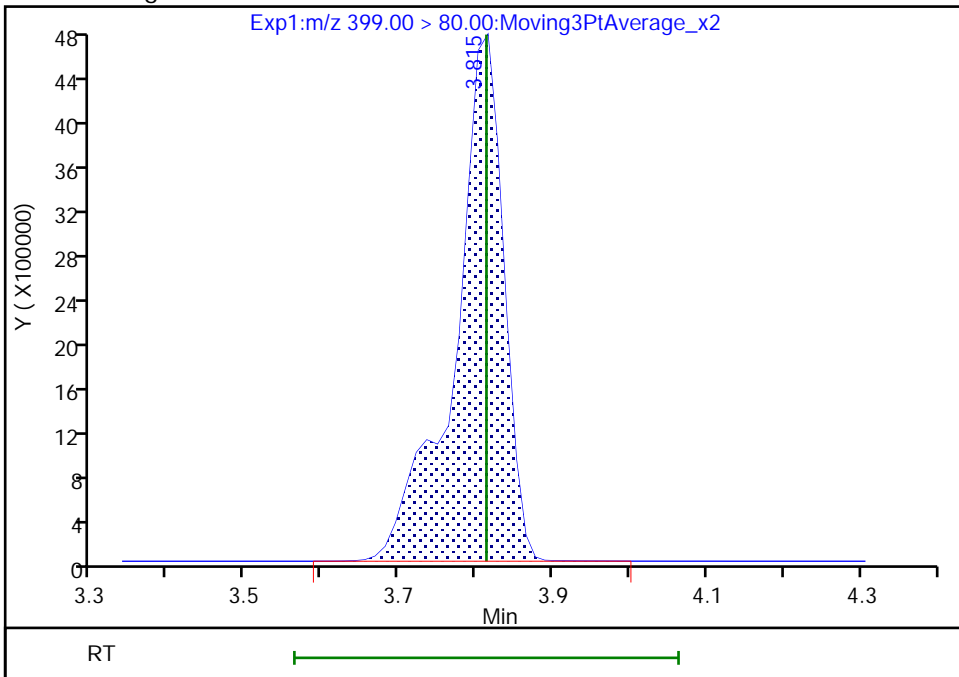
RT: 3.82
Area: 17752237
Amount: 7.618888
Amount Units: ng/ml

Processing Integration Results



RT: 3.82
Area: 20867517
Amount: 9.227640
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:05:31
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

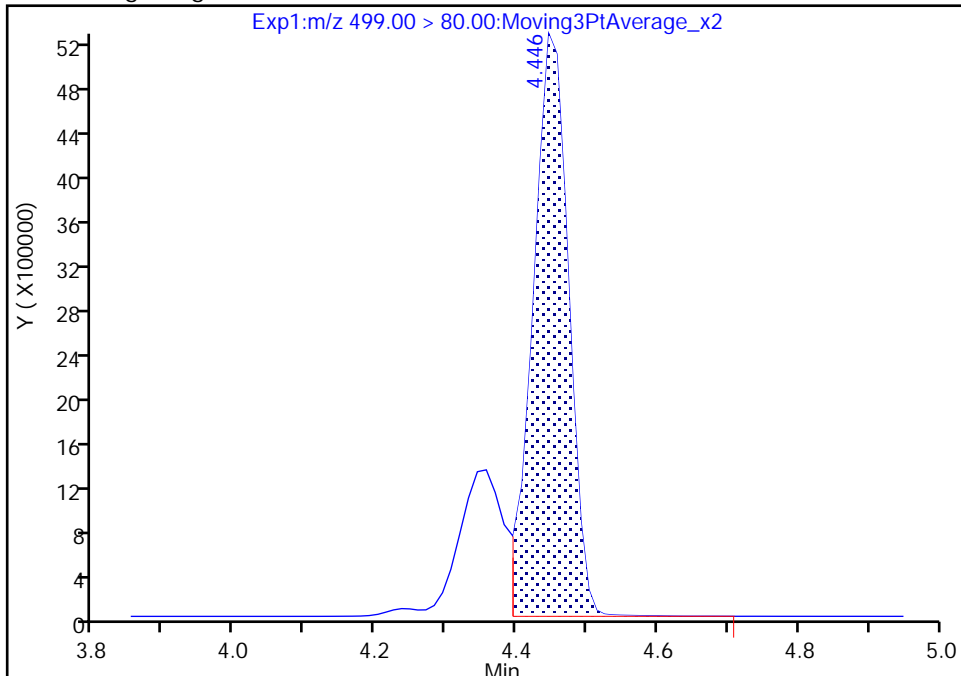
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
Injection Date: 05-Oct-2021 22:53:45 Instrument ID: LCA
Lims ID: IC 7
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

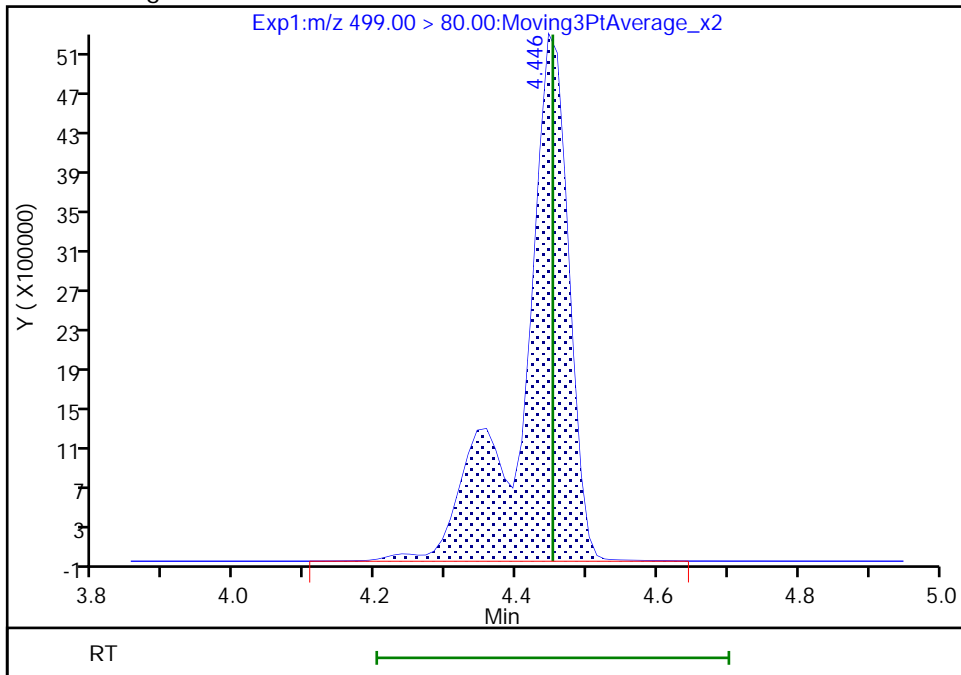
RT: 4.45
Area: 18406903
Amount: 7.315827
Amount Units: ng/ml

Processing Integration Results



RT: 4.45
Area: 24369559
Amount: 9.344772
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:05:44
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

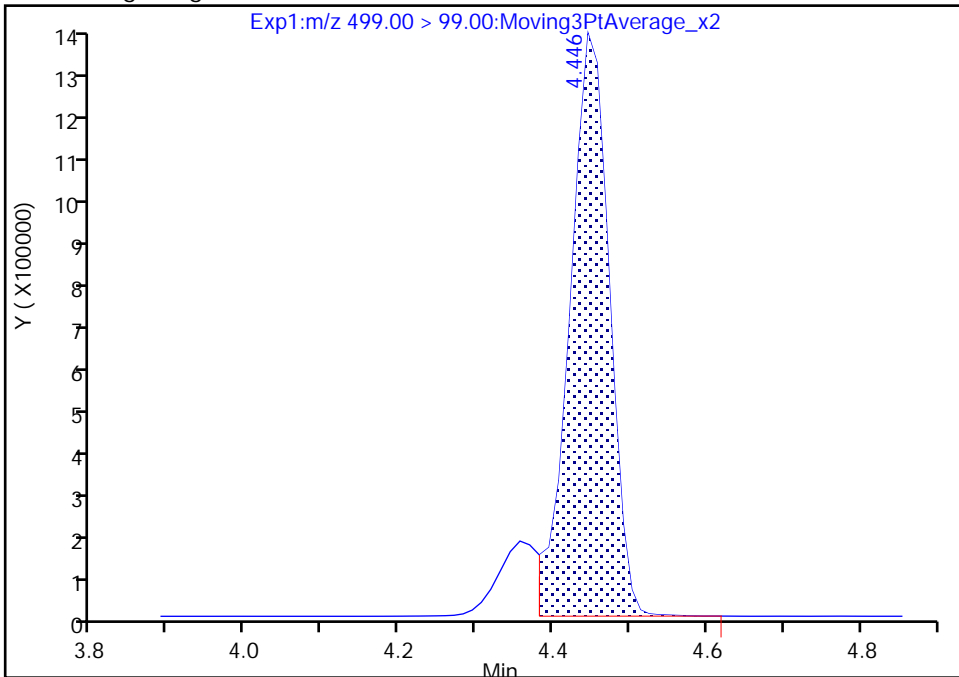
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
Injection Date: 05-Oct-2021 22:53:45 Instrument ID: LCA
Lims ID: IC 7
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

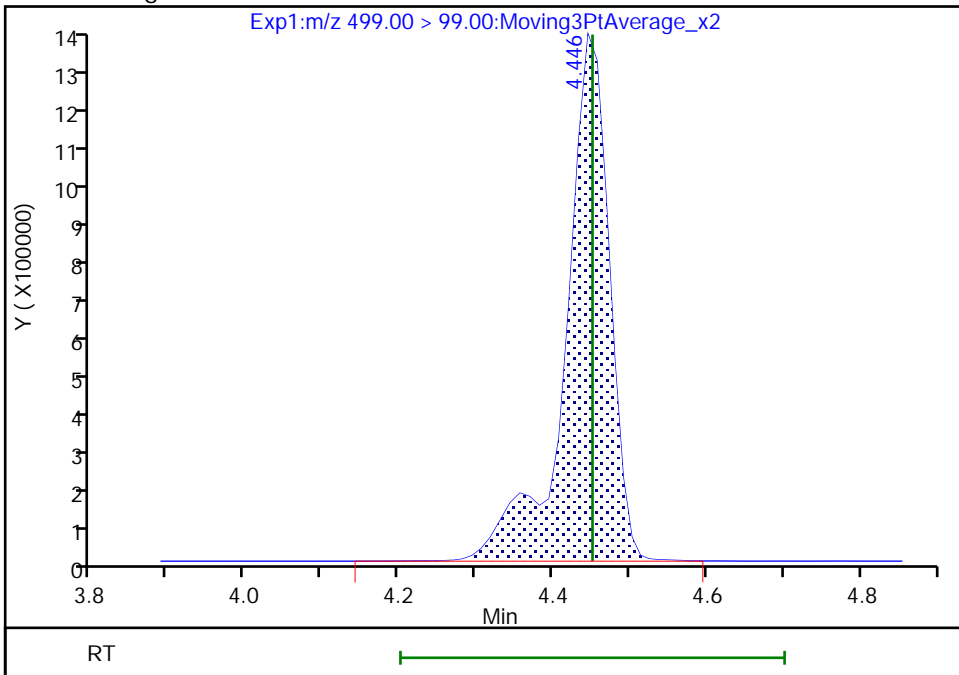
RT: 4.45
Area: 4892596
Amount: 7.315827
Amount Units: ng/ml

Processing Integration Results



RT: 4.45
Area: 5504556
Amount: 9.344772
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:05:54

Audit Action: Manually Integrated

Audit Reason: Baseline

Calibration

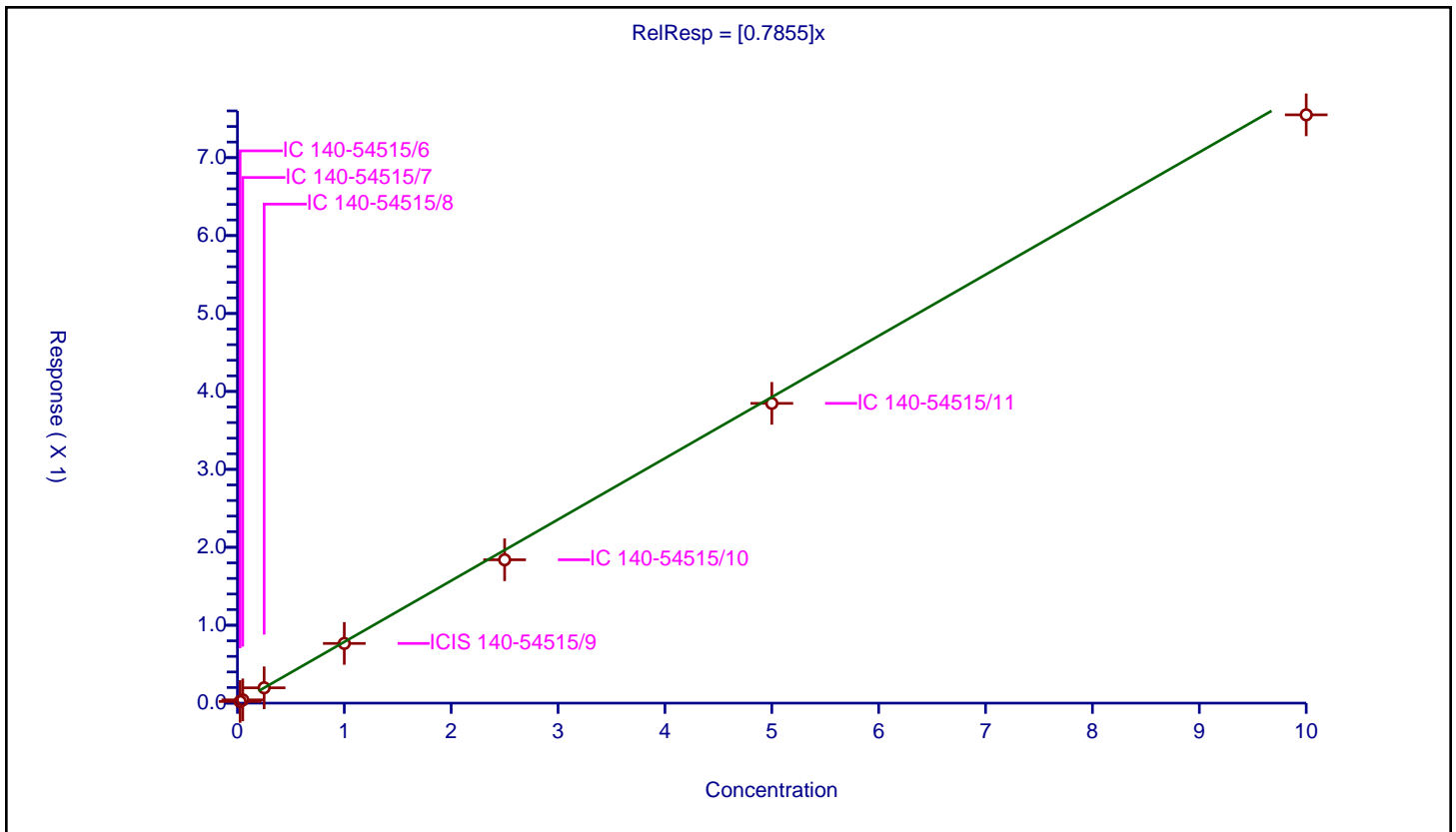
/ Perfluorobutanoic acid

Curve Type: Average
 Weighting: Conc_Sq
 Origin: Force
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.7855

Error Coefficients	
Standard Error:	18900000
Relative Standard Error:	5.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.021105	1.25	7141181.0	0.844181	Y
2	IC 140-54515/7	0.05	0.042031	1.25	7272665.0	0.840613	Y
3	IC 140-54515/8	0.25	0.196797	1.25	7228968.0	0.78719	Y
4	ICIS 140-54515/9	1.0	0.766206	1.25	7289844.0	0.766206	Y
5	IC 140-54515/10	2.5	1.839568	1.25	7094947.0	0.735827	Y
6	IC 140-54515/11	5.0	3.846791	1.25	6729747.0	0.769358	Y
7	IC 140-54515/12	10.0	7.549469	1.25	6596355.0	0.754947	Y



Calibration

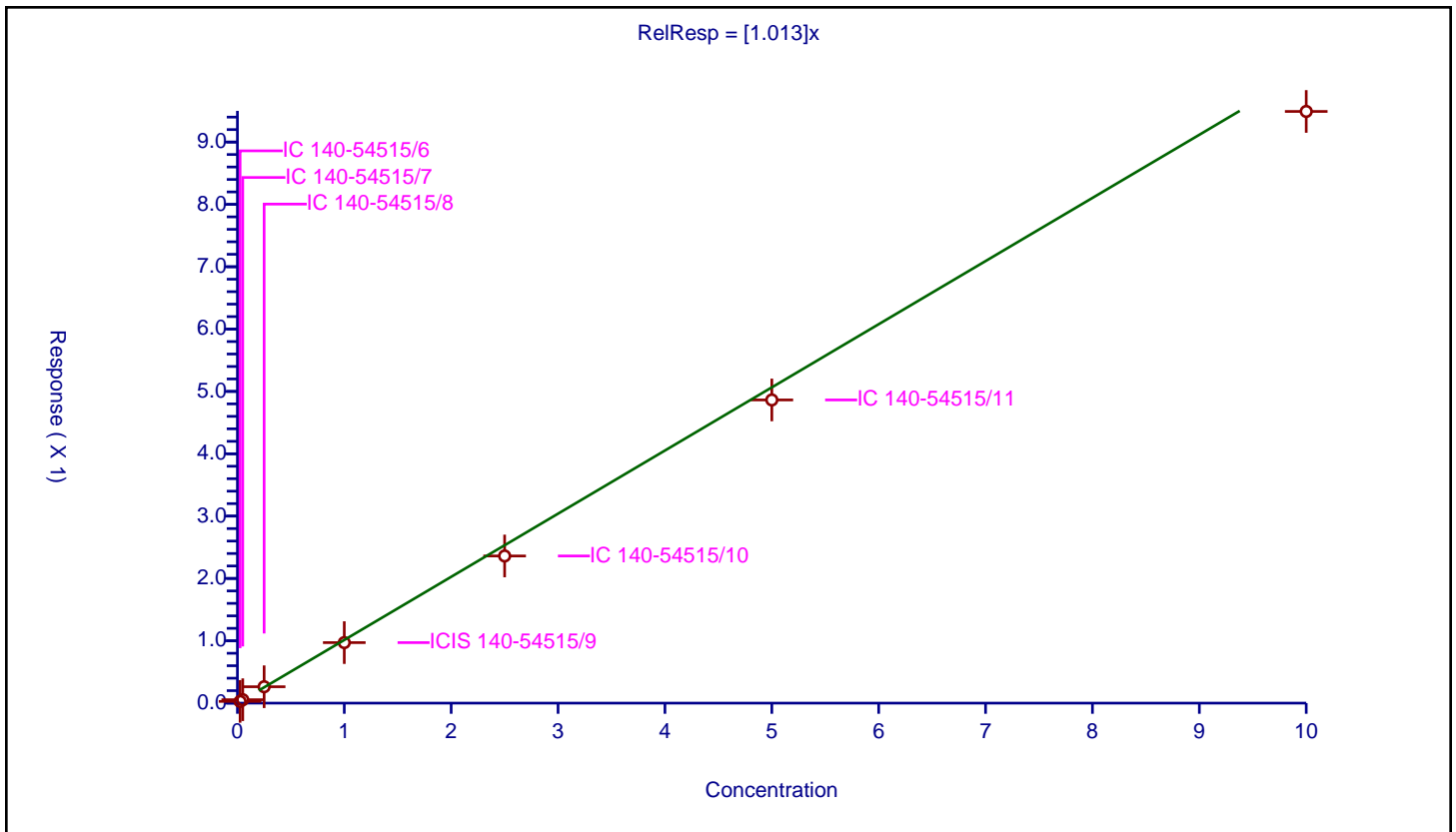
/ Perfluoropentanoic acid

Curve Type: Average
 Weighting: Conc_Sq
 Origin: Force
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.013

Error Coefficients	
Standard Error:	19300000
Relative Standard Error:	6.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.027609	1.25	5998363.0	1.104343	Y
2	IC 140-54515/7	0.05	0.054904	1.25	6008895.0	1.098076	Y
3	IC 140-54515/8	0.25	0.262932	1.25	6049600.0	1.051729	Y
4	ICIS 140-54515/9	1.0	0.97069	1.25	5943333.0	0.97069	Y
5	IC 140-54515/10	2.5	2.360733	1.25	5746550.0	0.944293	Y
6	IC 140-54515/11	5.0	4.863529	1.25	5431895.0	0.972706	Y
7	IC 140-54515/12	10.0	9.491167	1.25	5348940.0	0.949117	Y



Calibration

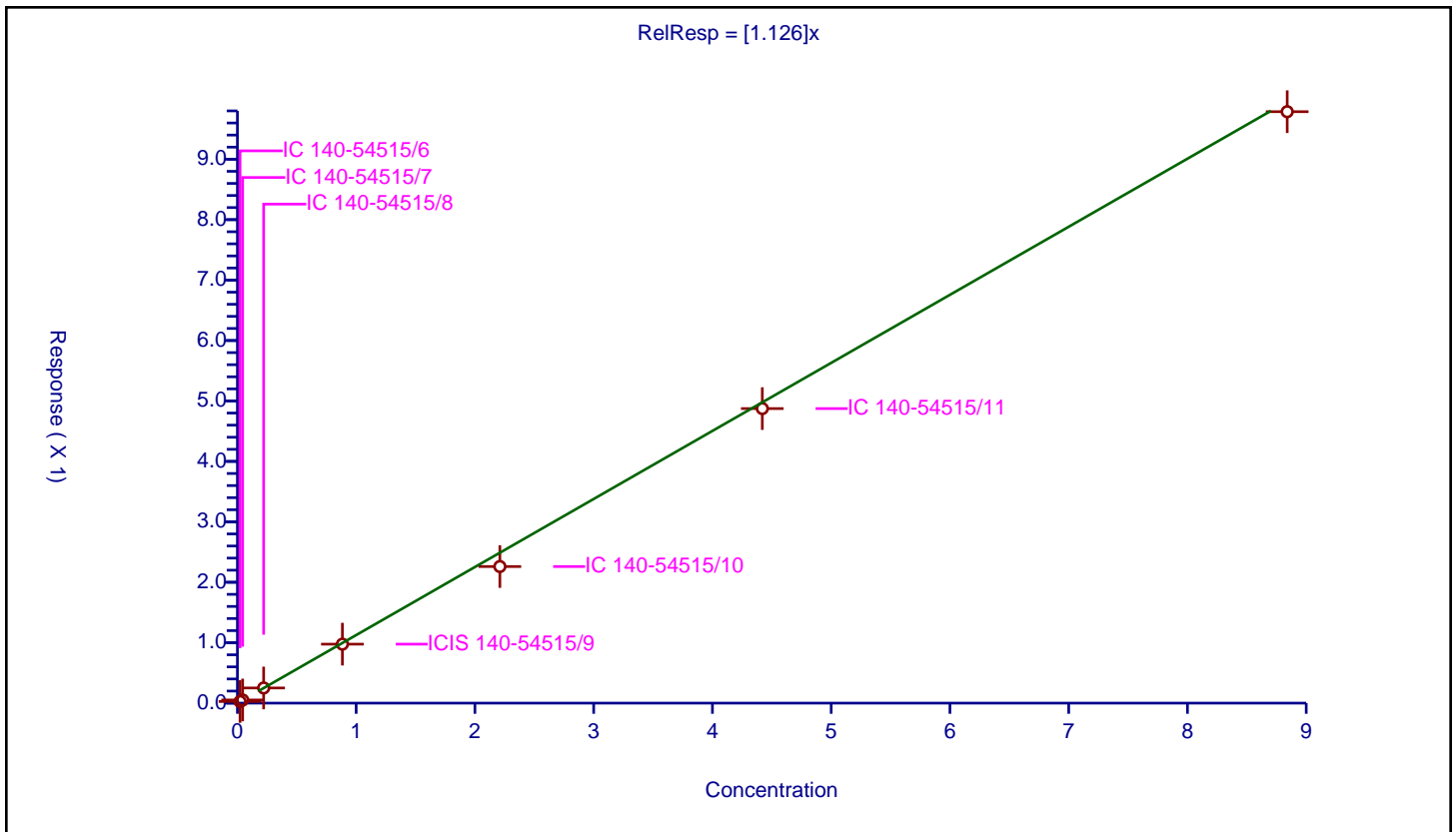
/ Perfluorobutanesulfonic acid

Curve Type: Average
 Weighting: Conc_Sq
 Origin: Force
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.126

Error Coefficients	
Standard Error:	13100000
Relative Standard Error:	5.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.0221	0.027066	1.1625	3599561.0	1.224719	Y
2	IC 140-54515/7	0.0442	0.052366	1.1625	3594749.0	1.184743	Y
3	IC 140-54515/8	0.221	0.251188	1.1625	3524723.0	1.136596	Y
4	ICIS 140-54515/9	0.884	0.975775	1.1625	3519158.0	1.103818	Y
5	IC 140-54515/10	2.21	2.260426	1.1625	3524311.0	1.022817	Y
6	IC 140-54515/11	4.42	4.874104	1.1625	3227418.0	1.102738	Y
7	IC 140-54515/12	8.84	9.786628	1.1625	3331755.0	1.107085	Y



Calibration

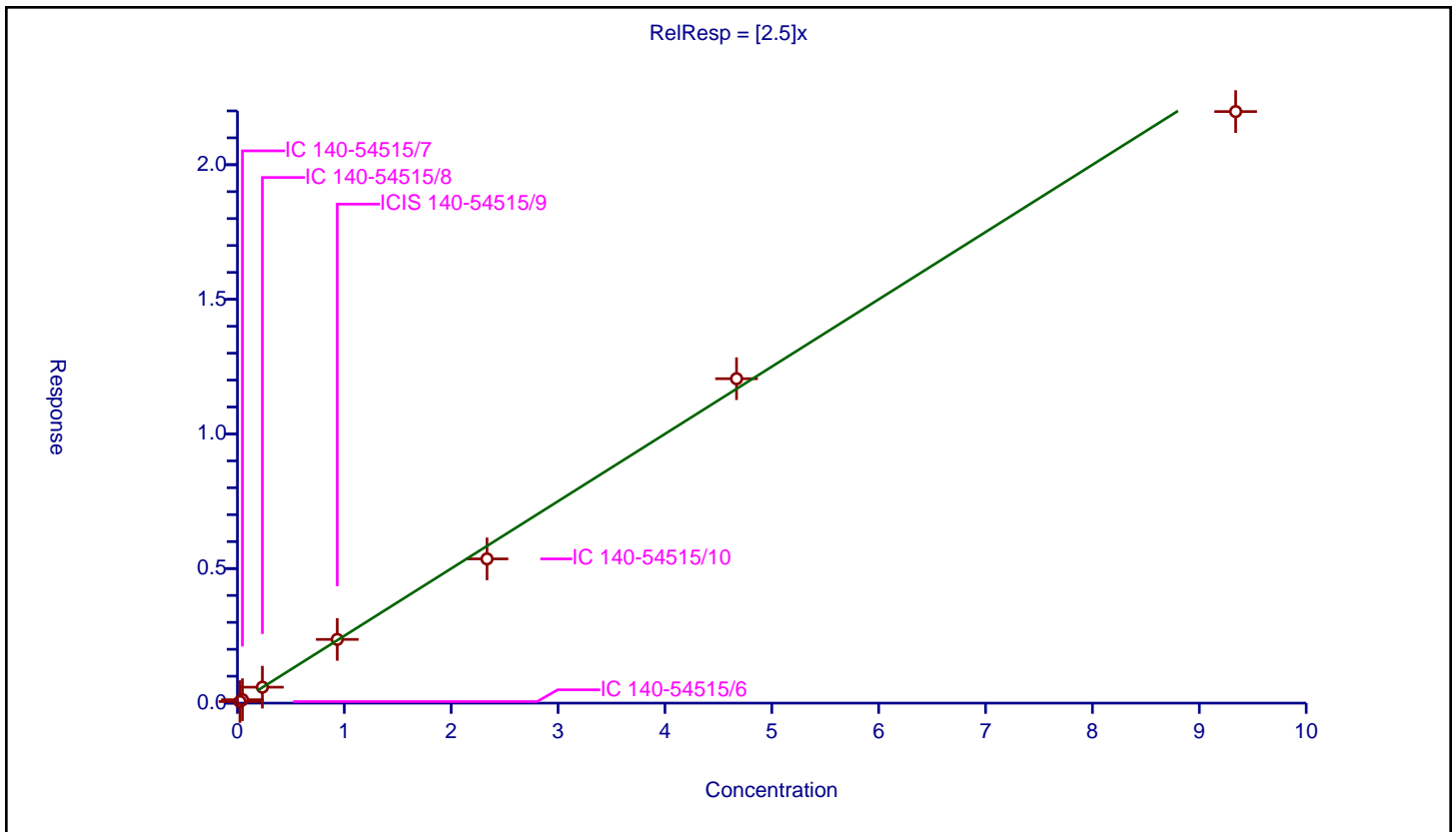
/ 1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2)

Curve Type: Average
 Weighting: Conc_Sq
 Origin: Force
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	2.5

Error Coefficients	
Standard Error:	4100000
Relative Standard Error:	5.7
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.02335	0.057933	1.1675	587242.0	2.48109	Y
2	IC 140-54515/7	0.0467	0.126994	1.1675	570559.0	2.719351	Y
3	IC 140-54515/8	0.2335	0.592147	1.1675	556004.0	2.535962	Y
4	ICIS 140-54515/9	0.934	2.367246	1.1675	518286.0	2.534525	Y
5	IC 140-54515/10	2.335	5.357675	1.1675	532409.0	2.294508	Y
6	IC 140-54515/11	4.67	12.05201	1.1675	455617.0	2.58073	Y
7	IC 140-54515/12	9.34	21.975201	1.1675	449831.0	2.352805	Y



Calibration

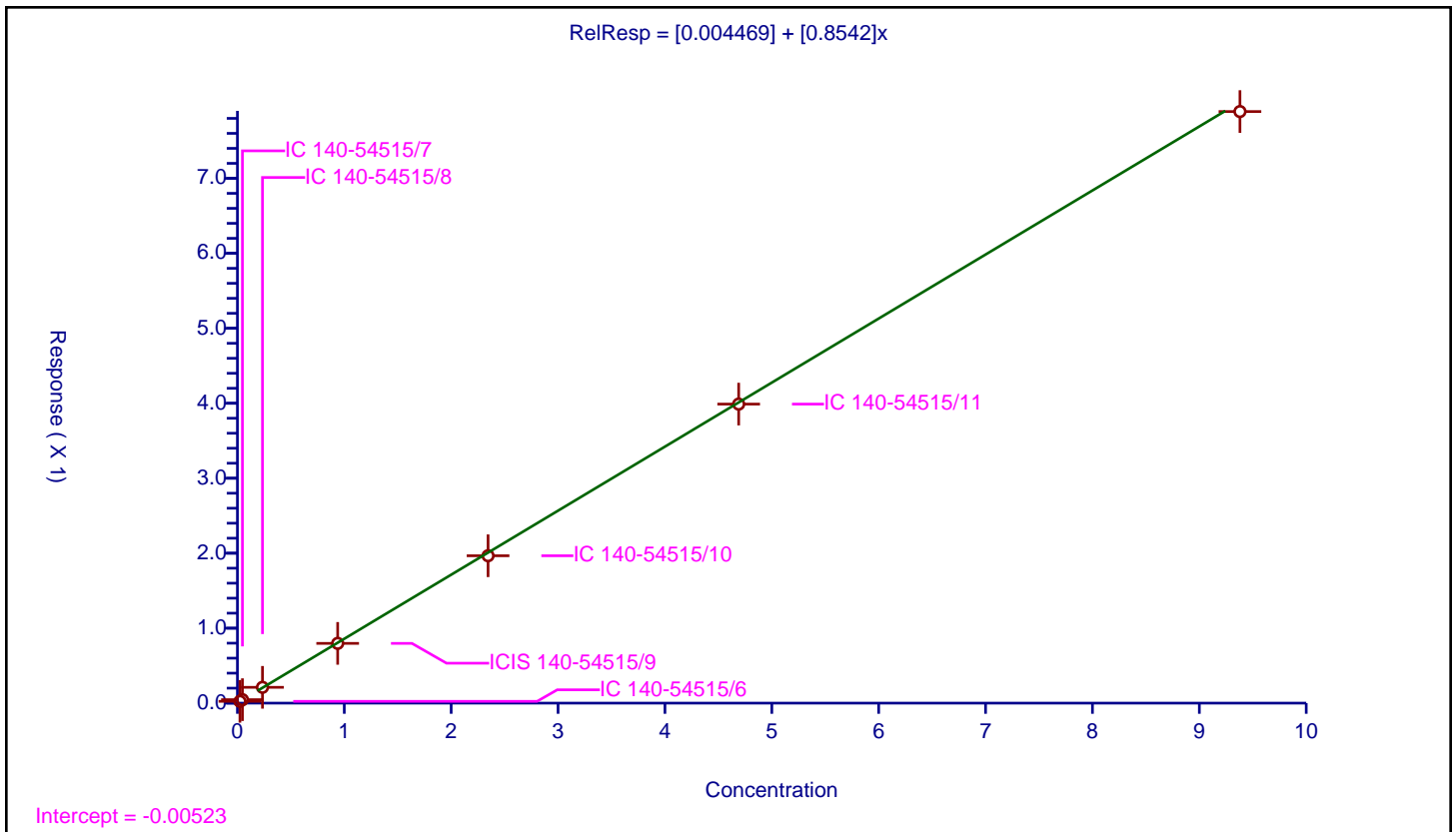
/ Perfluoropentanesulfonic acid

Curve Type: Linear
 Weighting: Conc_Sq
 Origin: None
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.004469
Slope:	0.8542

Error Coefficients	
Standard Error:	11600000
Relative Standard Error:	3.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.02345	0.023953	1.1625	3599561.0	1.021436	Y
2	IC 140-54515/7	0.0469	0.046521	1.1625	3594749.0	0.991927	Y
3	IC 140-54515/8	0.2345	0.210876	1.1625	3524723.0	0.899259	Y
4	ICIS 140-54515/9	0.938	0.797055	1.1625	3519158.0	0.849738	Y
5	IC 140-54515/10	2.345	1.965971	1.1625	3524311.0	0.838367	Y
6	IC 140-54515/11	4.69	3.98876	1.1625	3227418.0	0.850482	Y
7	IC 140-54515/12	9.38	7.89126	1.1625	3331755.0	0.841286	Y



Calibration

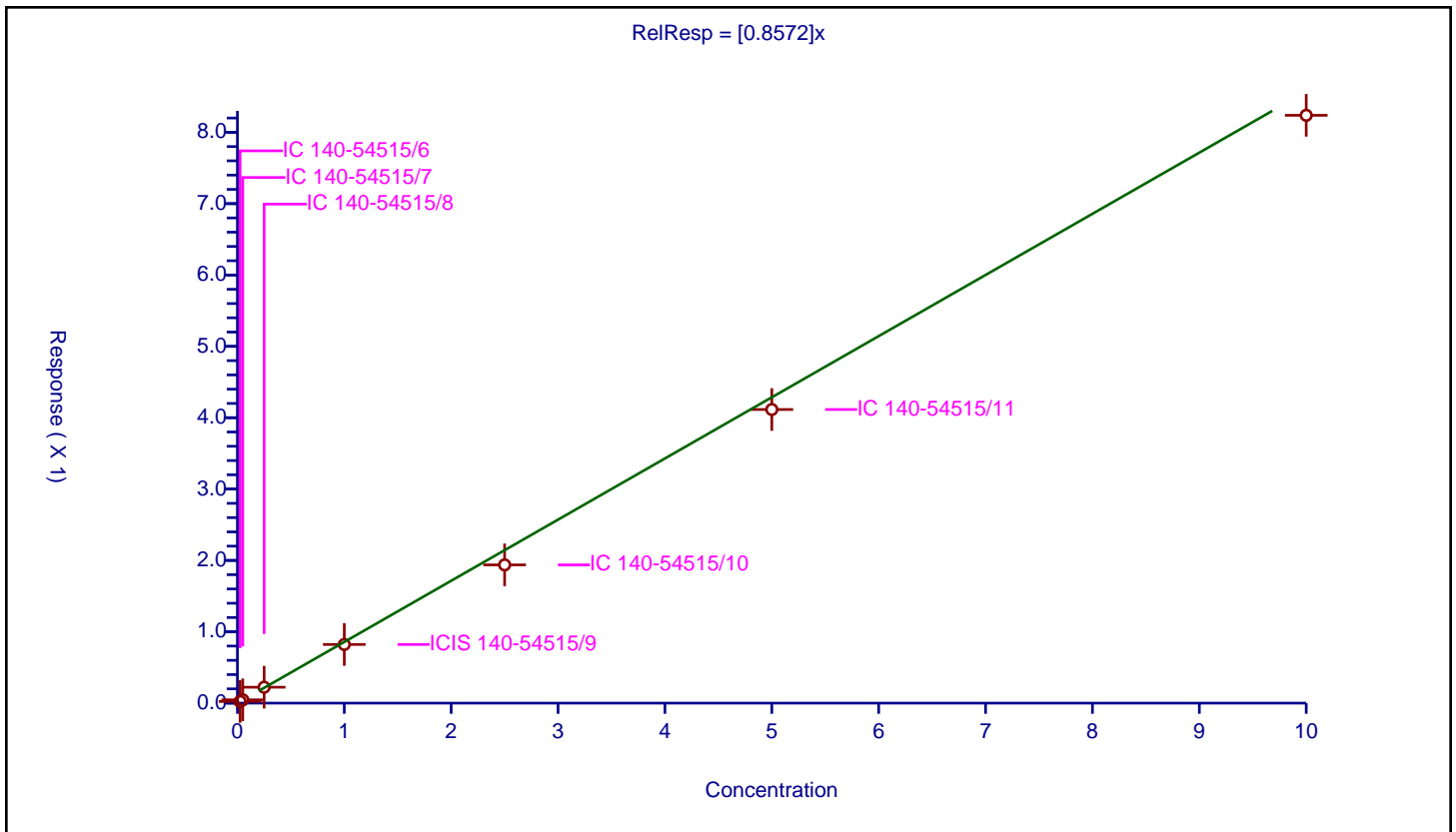
/ Perfluorohexanoic acid

Curve Type: Average
 Weighting: Conc_Sq
 Origin: Force
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.8572

Error Coefficients	
Standard Error:	16900000
Relative Standard Error:	7.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.023346	1.25	6253583.0	0.933833	Y
2	IC 140-54515/7	0.05	0.046541	1.25	6243564.0	0.930827	Y
3	IC 140-54515/8	0.25	0.222995	1.25	5953465.0	0.891979	Y
4	ICIS 140-54515/9	1.0	0.821976	1.25	6116663.0	0.821976	Y
5	IC 140-54515/10	2.5	1.937505	1.25	6061274.0	0.775002	Y
6	IC 140-54515/11	5.0	4.114921	1.25	5603980.0	0.822984	Y
7	IC 140-54515/12	10.0	8.238088	1.25	5402140.0	0.823809	Y



Calibration

/ Perfluoro(2-propoxypropanoic) acid

Curve Type: Linear
Weighting: Conc_Sq
Origin: None
Dependency: Response
Calib Mode: IsoDil
Response Base: AREA
RF Rounding: 0

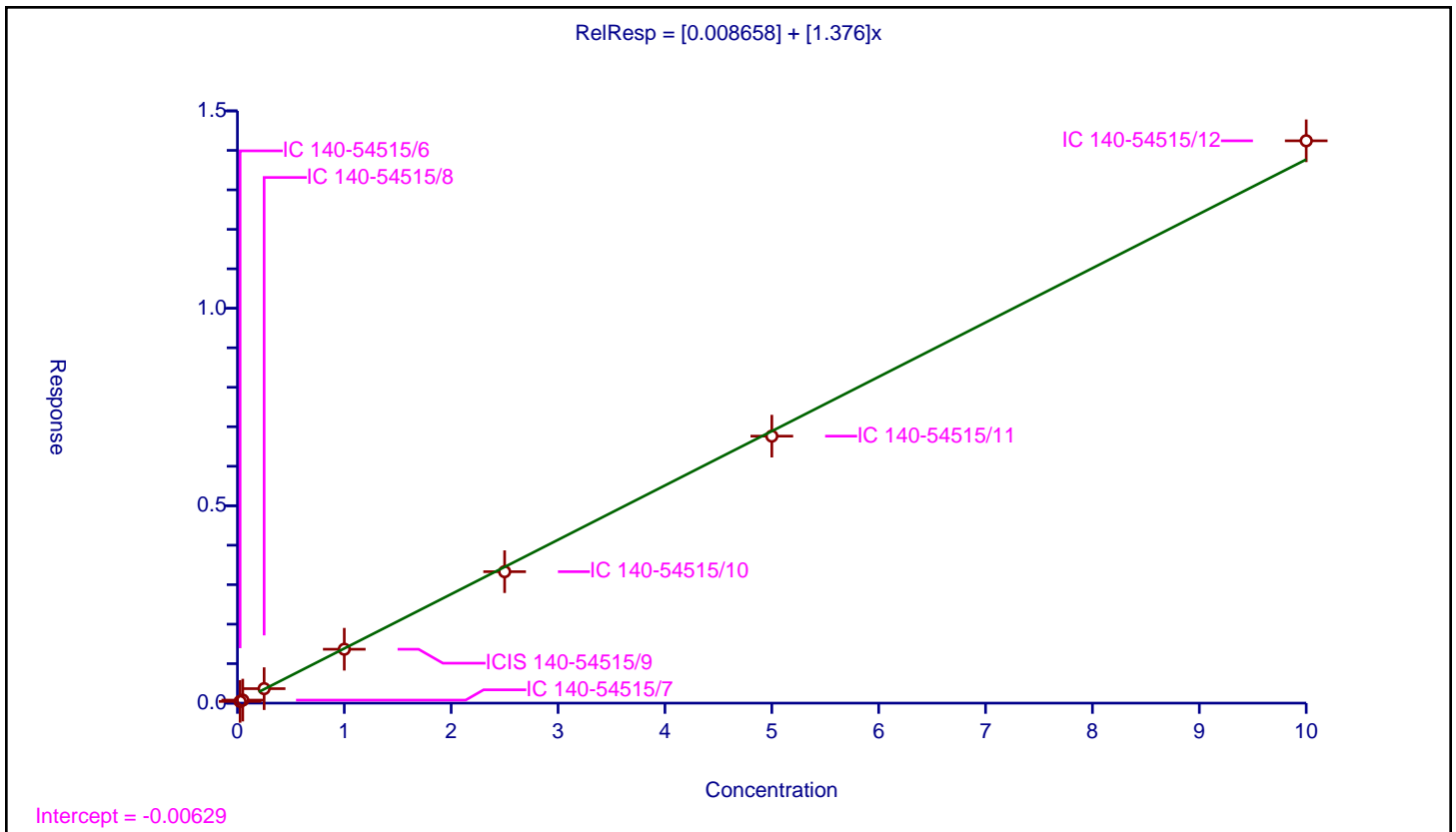
Curve Coefficients

Intercept: 0.008658
Slope: 1.376

Error Coefficients

Standard Error: 16500000
Relative Standard Error: 3.1
Correlation Coefficient: 1.000
Coefficient of Determination (Adjusted): 0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.04311	1.25	3066694.0	1.724398	Y
2	IC 140-54515/7	0.05	0.076779	1.25	3086719.0	1.535579	Y
3	IC 140-54515/8	0.25	0.366907	1.25	3069191.0	1.467626	Y
4	ICIS 140-54515/9	1.0	1.364867	1.25	3166510.0	1.364867	Y
5	IC 140-54515/10	2.5	3.329118	1.25	3145011.0	1.331647	Y
6	IC 140-54515/11	5.0	6.762303	1.25	2964356.0	1.352461	Y
7	IC 140-54515/12	10.0	14.242429	1.25	2798495.0	1.424243	Y



Calibration

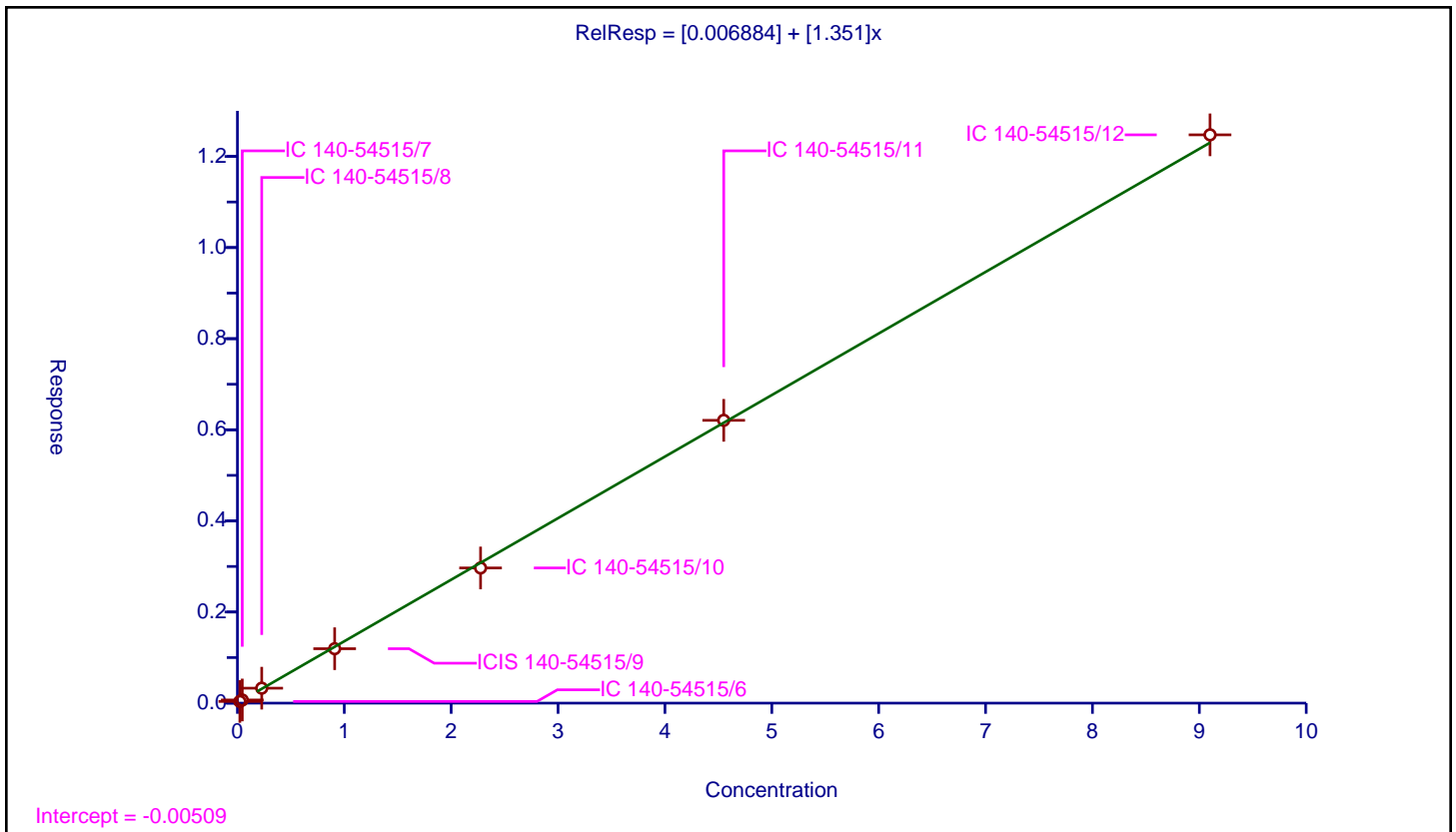
/ Perfluorohexanesulfonic acid

Curve Type: Linear
 Weighting: Conc_Sq
 Origin: None
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.006884
Slope:	1.351

Error Coefficients	
Standard Error:	10800000
Relative Standard Error:	3.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.02275	0.037343	1.1825	2213335.0	1.641463	Y
2	IC 140-54515/7	0.0455	0.069041	1.1825	2261386.0	1.517391	Y
3	IC 140-54515/8	0.2275	0.328512	1.1825	2138254.0	1.44401	Y
4	ICIS 140-54515/9	0.91	1.194419	1.1825	2269288.0	1.312548	Y
5	IC 140-54515/10	2.275	2.966971	1.1825	2104634.0	1.304163	Y
6	IC 140-54515/11	4.55	6.207591	1.1825	2021420.0	1.364306	Y
7	IC 140-54515/12	9.1	12.474345	1.1825	1978127.0	1.370807	Y



Calibration

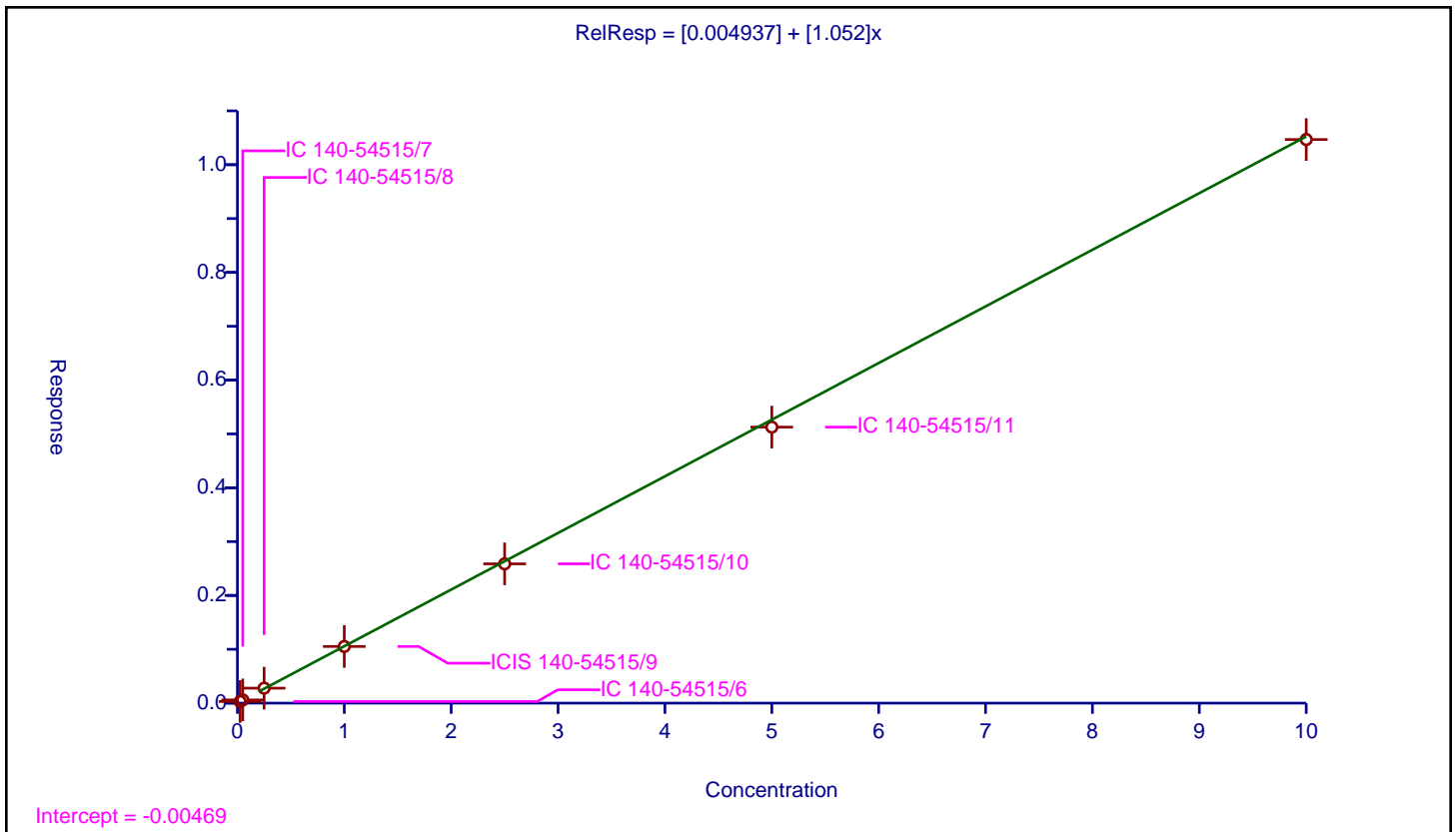
/ Perfluoroheptanoic acid

Curve Type: Linear
 Weighting: Conc_Sq
 Origin: None
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.004937
Slope:	1.052

Error Coefficients	
Standard Error:	23100000
Relative Standard Error:	3.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.030651	1.25	6057062.0	1.226032	Y
2	IC 140-54515/7	0.05	0.059505	1.25	6219868.0	1.190102	Y
3	IC 140-54515/8	0.25	0.278092	1.25	6105640.0	1.112367	Y
4	ICIS 140-54515/9	1.0	1.052325	1.25	6294659.0	1.052325	Y
5	IC 140-54515/10	2.5	2.586738	1.25	5824750.0	1.034695	Y
6	IC 140-54515/11	5.0	5.126628	1.25	5764452.0	1.025326	Y
7	IC 140-54515/12	10.0	10.468056	1.25	5261701.0	1.046806	Y



Calibration

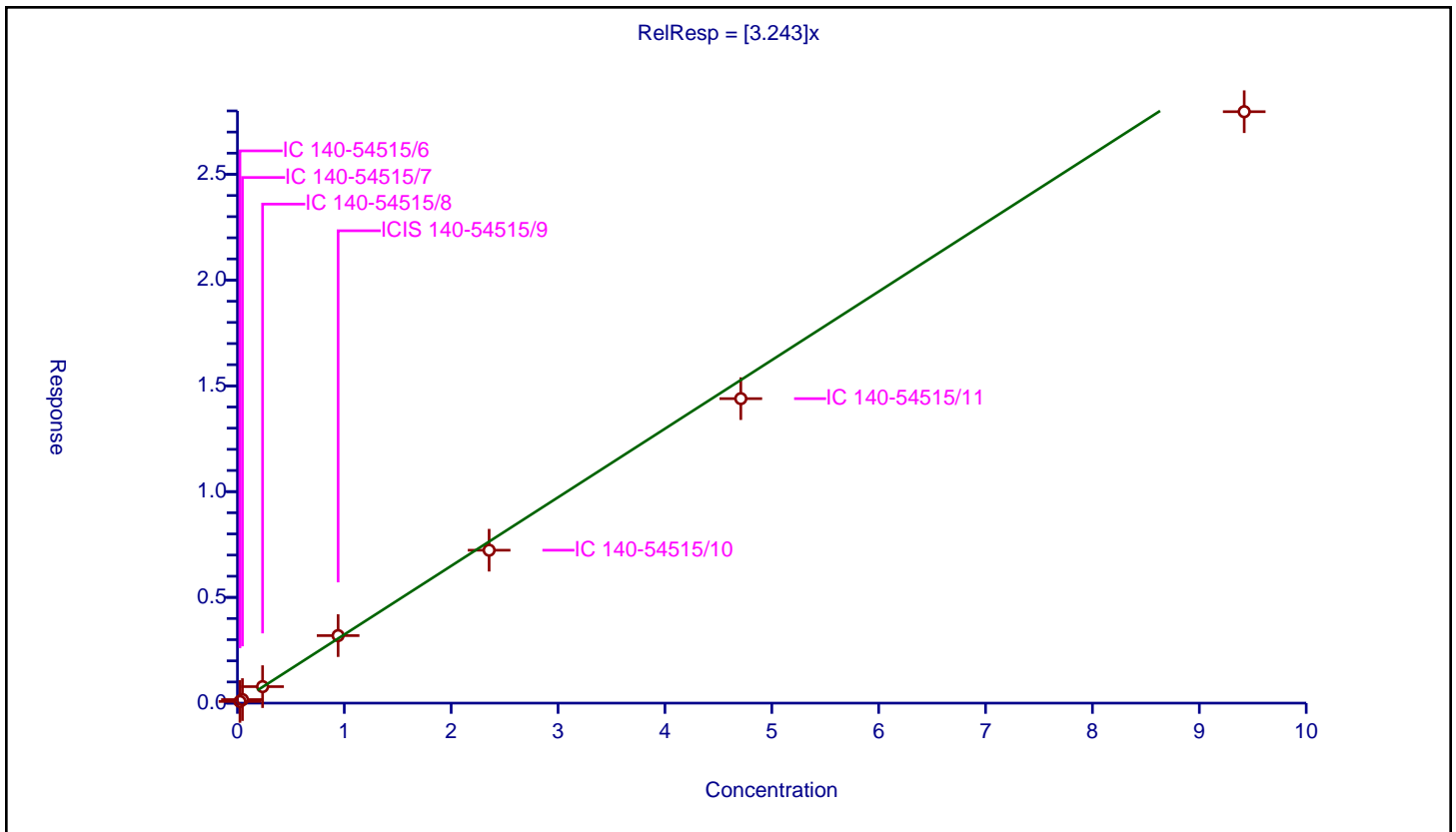
/ DONA

Curve Type: Average
 Weighting: Conc_Sq
 Origin: Force
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	3.243

Error Coefficients	
Standard Error:	31600000
Relative Standard Error:	6.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.02355	0.078328	1.195	3069142.0	3.326024	Y
2	IC 140-54515/7	0.0471	0.168684	1.195	3022370.0	3.581408	Y
3	IC 140-54515/8	0.2355	0.78013	1.195	3044513.0	3.312654	Y
4	ICIS 140-54515/9	0.942	3.192408	1.195	3054456.0	3.388968	Y
5	IC 140-54515/10	2.355	7.229622	1.195	2955831.0	3.069903	Y
6	IC 140-54515/11	4.71	14.395098	1.195	2860822.0	3.056284	Y
7	IC 140-54515/12	9.42	27.962407	1.195	2833668.0	2.968408	Y



Calibration

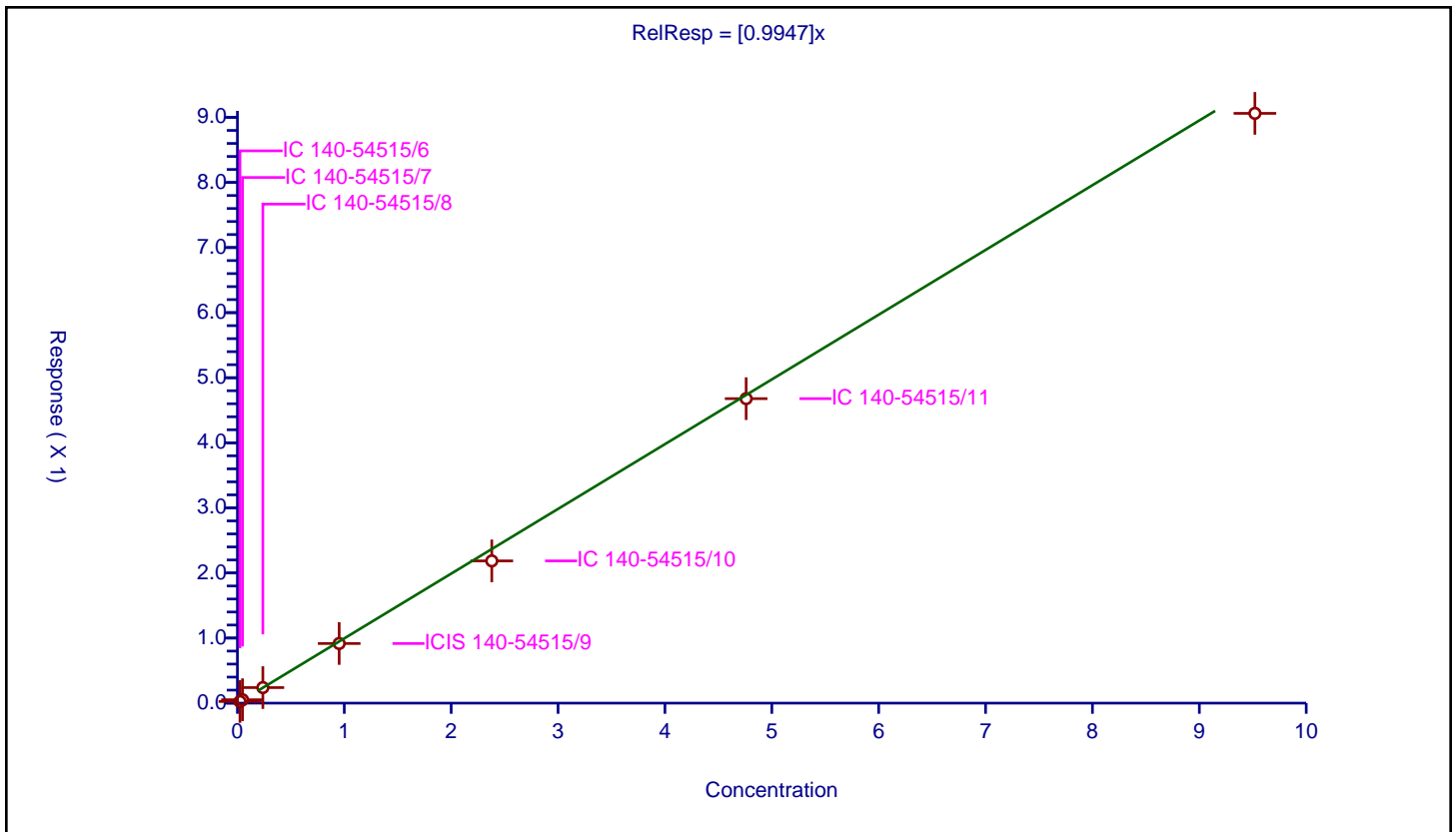
/ Perfluoroheptanesulfonic acid

Curve Type: Average
 Weighting: Conc_Sq
 Origin: Force
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.9947

Error Coefficients	
Standard Error:	10200000
Relative Standard Error:	6.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.0238	0.024985	1.195	3069142.0	1.049799	Y
2	IC 140-54515/7	0.0476	0.052111	1.195	3022370.0	1.094776	Y
3	IC 140-54515/8	0.238	0.238762	1.195	3044513.0	1.003201	Y
4	ICIS 140-54515/9	0.952	0.91617	1.195	3054456.0	0.962363	Y
5	IC 140-54515/10	2.38	2.185495	1.195	2955831.0	0.918275	Y
6	IC 140-54515/11	4.76	4.678514	1.195	2860822.0	0.982881	Y
7	IC 140-54515/12	9.52	9.062106	1.195	2833668.0	0.951902	Y



Calibration

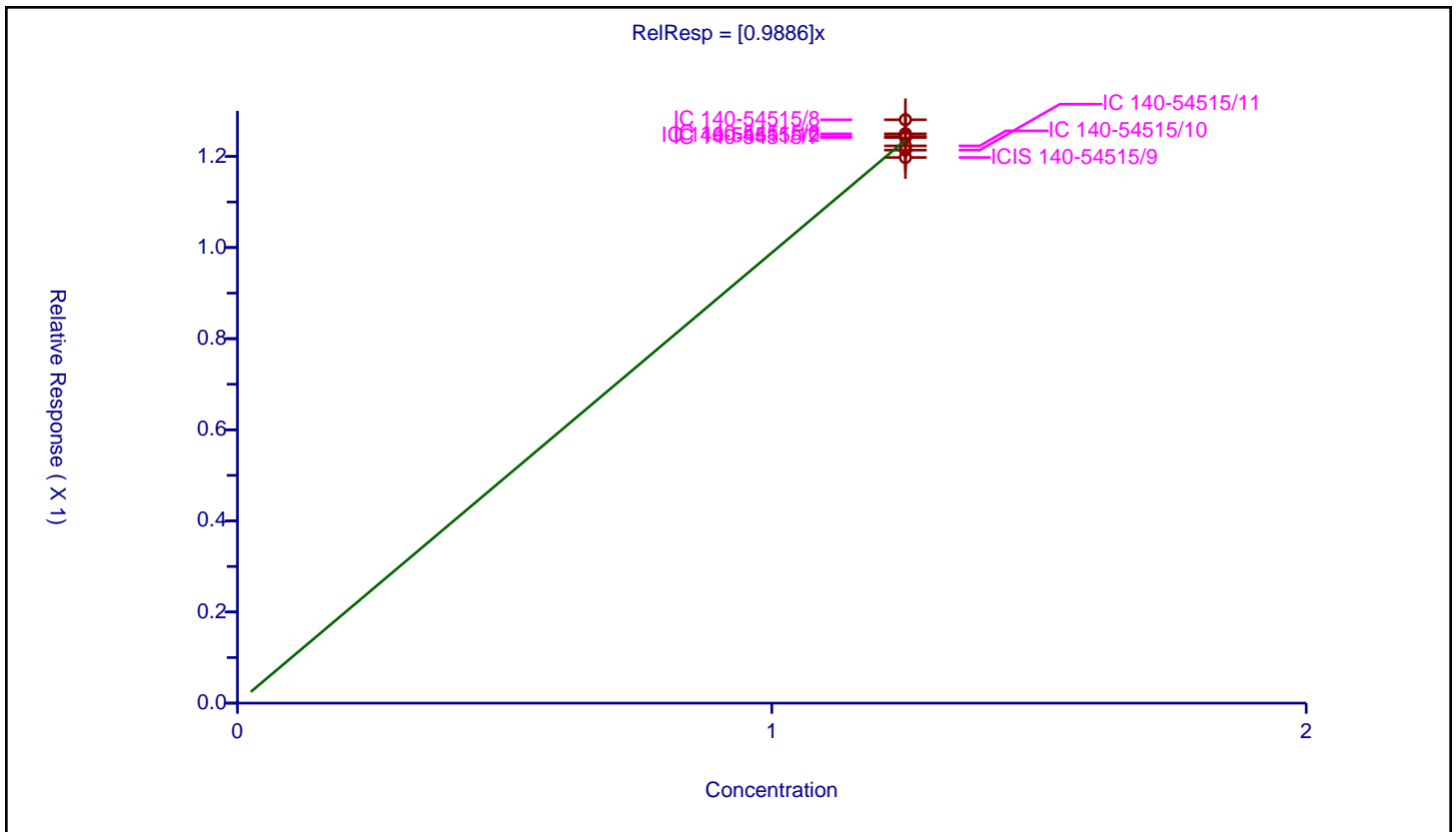
/ 13C8 PFOA

Curve Type: Average
Weighting: Conc_Sq
Origin: Force
Dependency: Response
Calib Mode: ISTD
Response Base: AREA
RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.9886

Error Coefficients	
Standard Error:	5700000
Relative Standard Error:	2.2
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	1.25	1.249731	1.25	5394236.0	0.999785	Y
2	IC 140-54515/7	1.25	1.241442	1.25	5631791.0	0.993154	Y
3	IC 140-54515/8	1.25	1.280526	1.25	5270606.0	1.024421	Y
4	ICIS 140-54515/9	1.25	1.197729	1.25	5652969.0	0.958184	Y
5	IC 140-54515/10	1.25	1.223161	1.25	5374730.0	0.978529	Y
6	IC 140-54515/11	1.25	1.213885	1.25	5145778.0	0.971108	Y
7	IC 140-54515/12	1.25	1.243862	1.25	4831158.0	0.99509	Y



Calibration

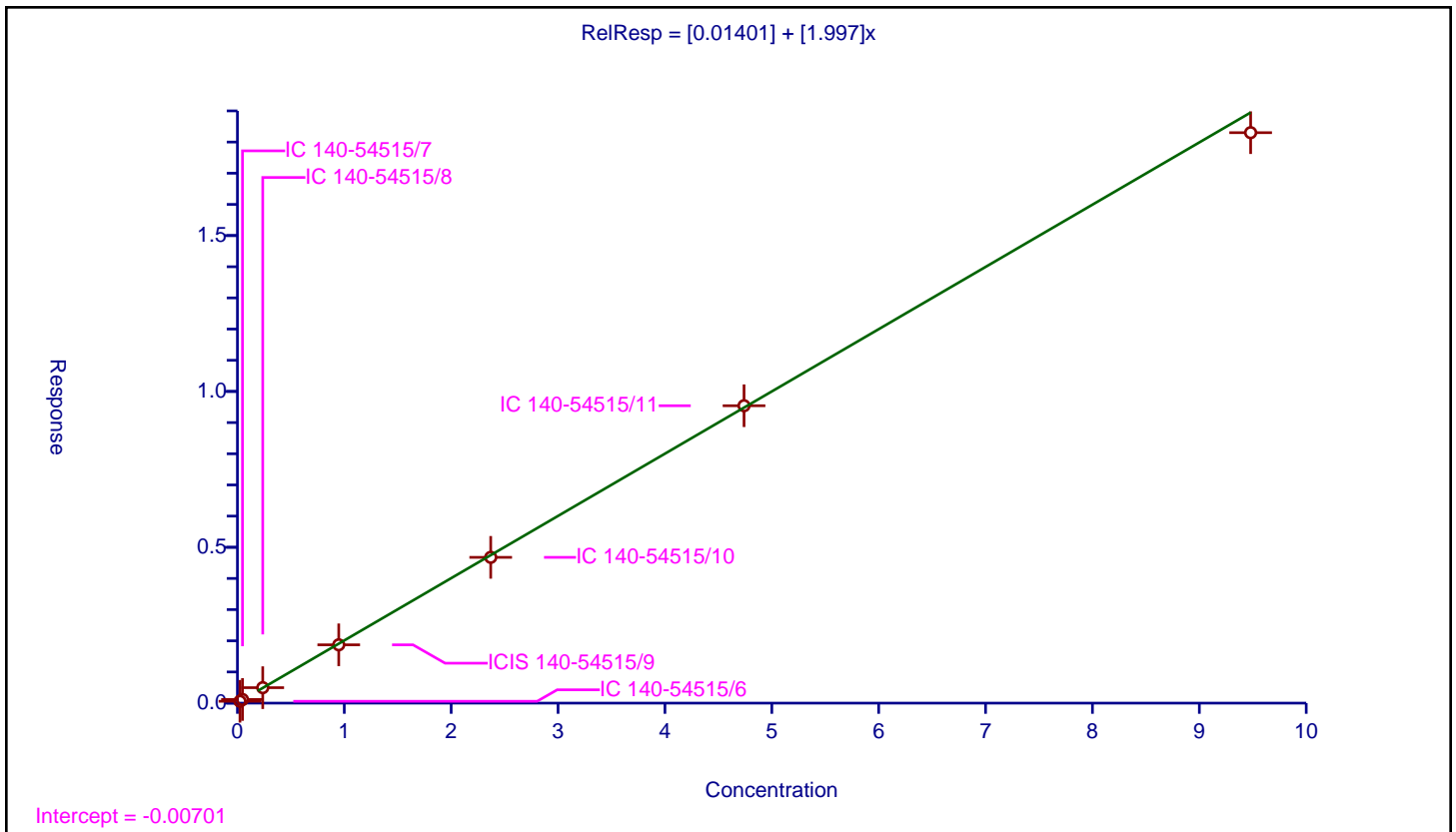
/ 1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)

Curve Type: Linear
Weighting: Conc_Sq
Origin: None
Dependency: Response
Calib Mode: IsoDil
Response Base: AREA
RF Rounding: 0

Curve Coefficients	
Intercept:	0.01401
Slope:	1.997

Error Coefficients	
Standard Error:	3870000
Relative Standard Error:	5.0
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.0237	0.059151	1.1875	567503.0	2.495814	Y
2	IC 140-54515/7	0.0474	0.11724	1.1875	600900.0	2.473422	Y
3	IC 140-54515/8	0.237	0.495657	1.1875	578119.0	2.091378	Y
4	ICIS 140-54515/9	0.948	1.871221	1.1875	574488.0	1.973862	Y
5	IC 140-54515/10	2.37	4.676945	1.1875	528850.0	1.973394	Y
6	IC 140-54515/11	4.74	9.540824	1.1875	496216.0	2.012832	Y
7	IC 140-54515/12	9.48	18.301357	1.1875	476601.0	1.930523	Y



Calibration

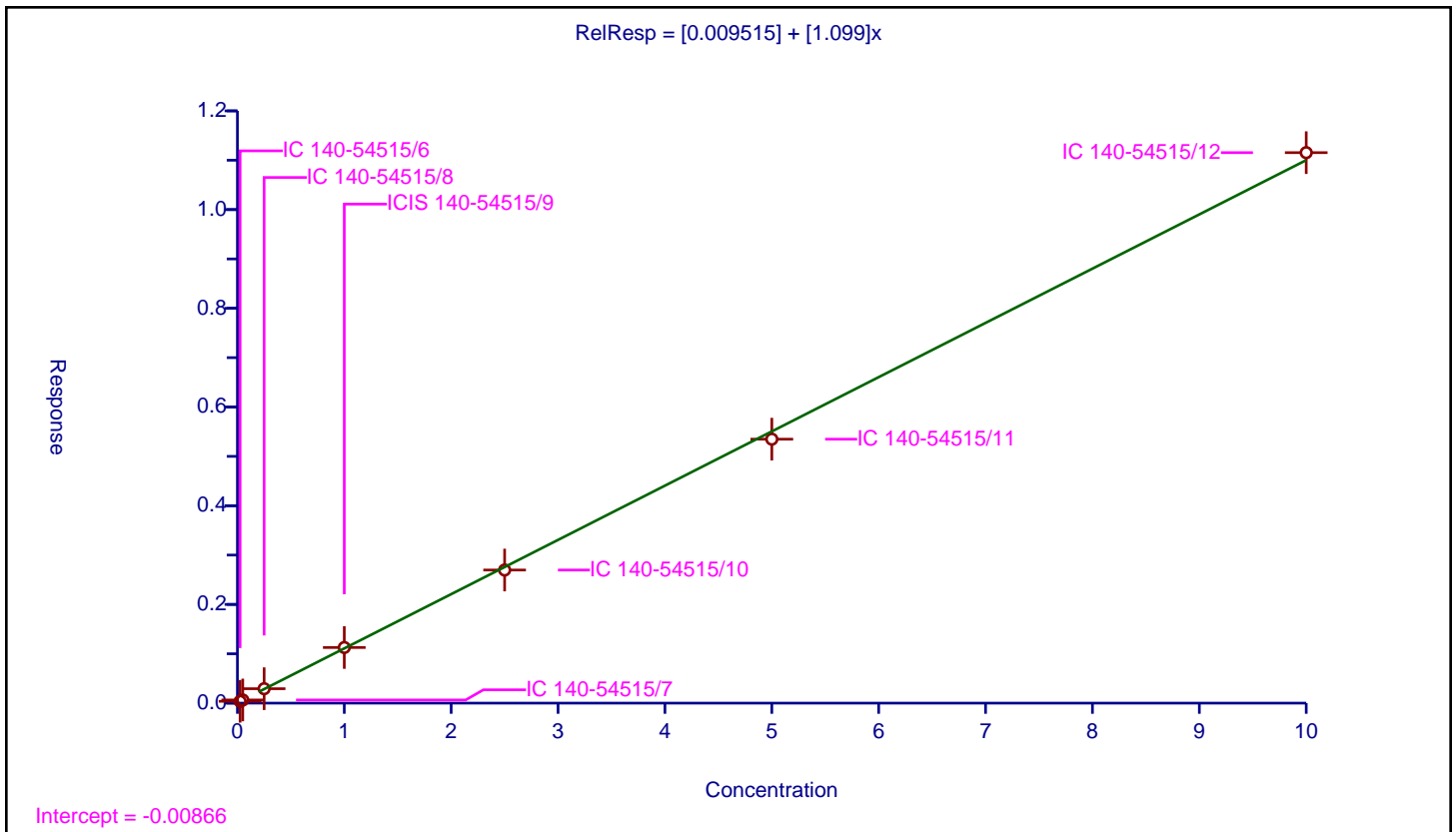
/ Perfluorooctanoic acid

Curve Type: Linear
 Weighting: Conc_Sq
 Origin: None
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.009515
Slope:	1.099

Error Coefficients	
Standard Error:	21900000
Relative Standard Error:	2.3
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.037071	1.25	5358656.0	1.482844	Y
2	IC 140-54515/7	0.05	0.063851	1.25	5777544.0	1.277026	Y
3	IC 140-54515/8	0.25	0.292198	1.25	5410657.0	1.168791	Y
4	ICIS 140-54515/9	1.0	1.127211	1.25	5619219.0	1.127211	Y
5	IC 140-54515/10	2.5	2.697157	1.25	5484596.0	1.078863	Y
6	IC 140-54515/11	5.0	5.348314	1.25	5265292.0	1.069663	Y
7	IC 140-54515/12	10.0	11.153867	1.25	4654864.0	1.115387	Y



Calibration

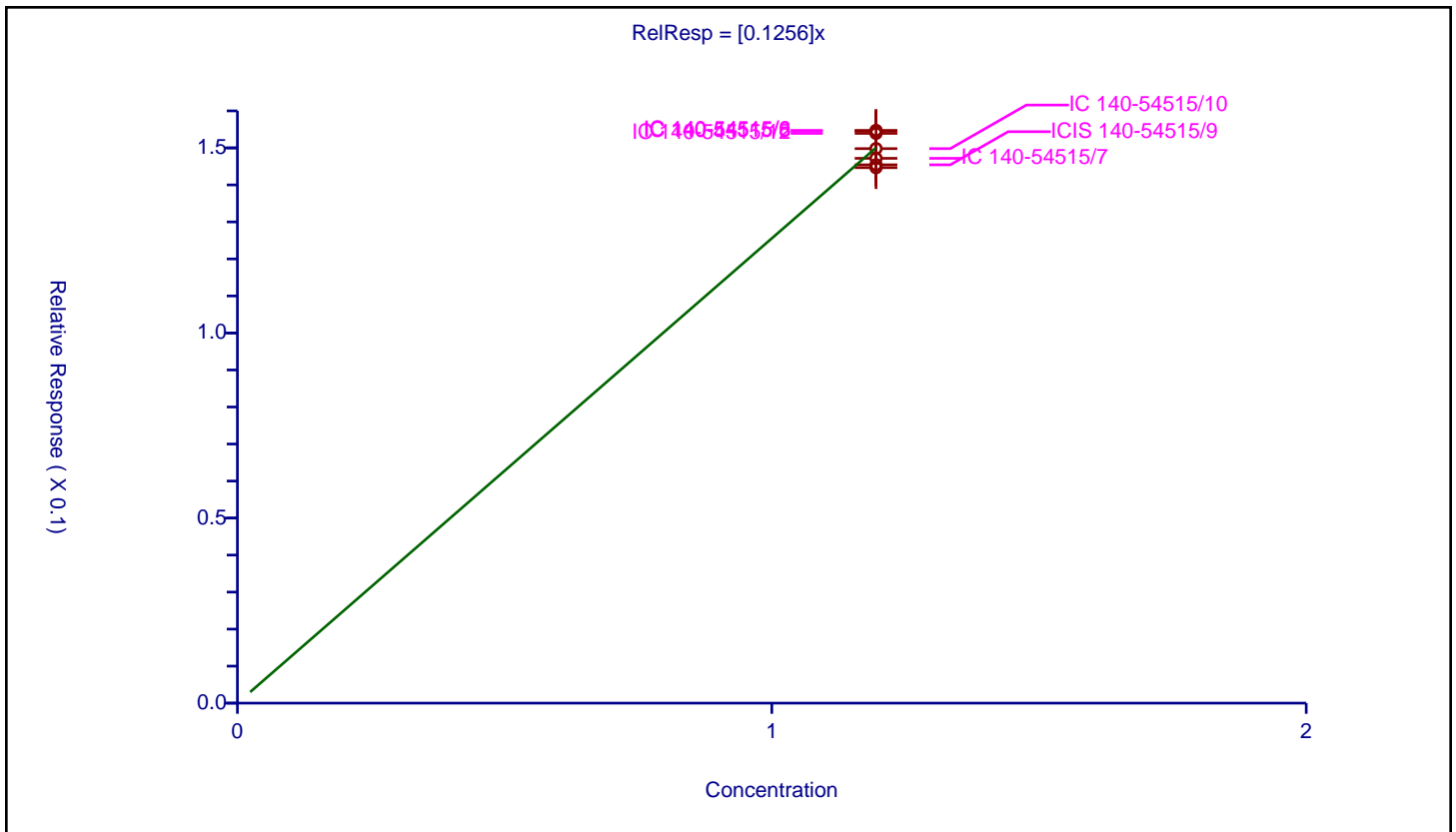
/ 13C8 PFOS

Curve Type: Average
 Weighting: Conc_Sq
 Origin: Force
 Dependency: Response
 Calib Mode: ISTD
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.1256

Error Coefficients	
Standard Error:	691000
Relative Standard Error:	2.9
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	1.195	0.154713	1.25	5394236.0	0.129467	Y
2	IC 140-54515/7	1.195	0.147189	1.25	5631791.0	0.12317	Y
3	IC 140-54515/8	1.195	0.154567	1.25	5270606.0	0.129345	Y
4	ICIS 140-54515/9	1.195	0.145427	1.25	5652969.0	0.121697	Y
5	IC 140-54515/10	1.195	0.149806	1.25	5374730.0	0.125361	Y
6	IC 140-54515/11	1.195	0.144659	1.25	5145778.0	0.121053	Y
7	IC 140-54515/12	1.195	0.15393	1.25	4831158.0	0.128812	Y



Calibration

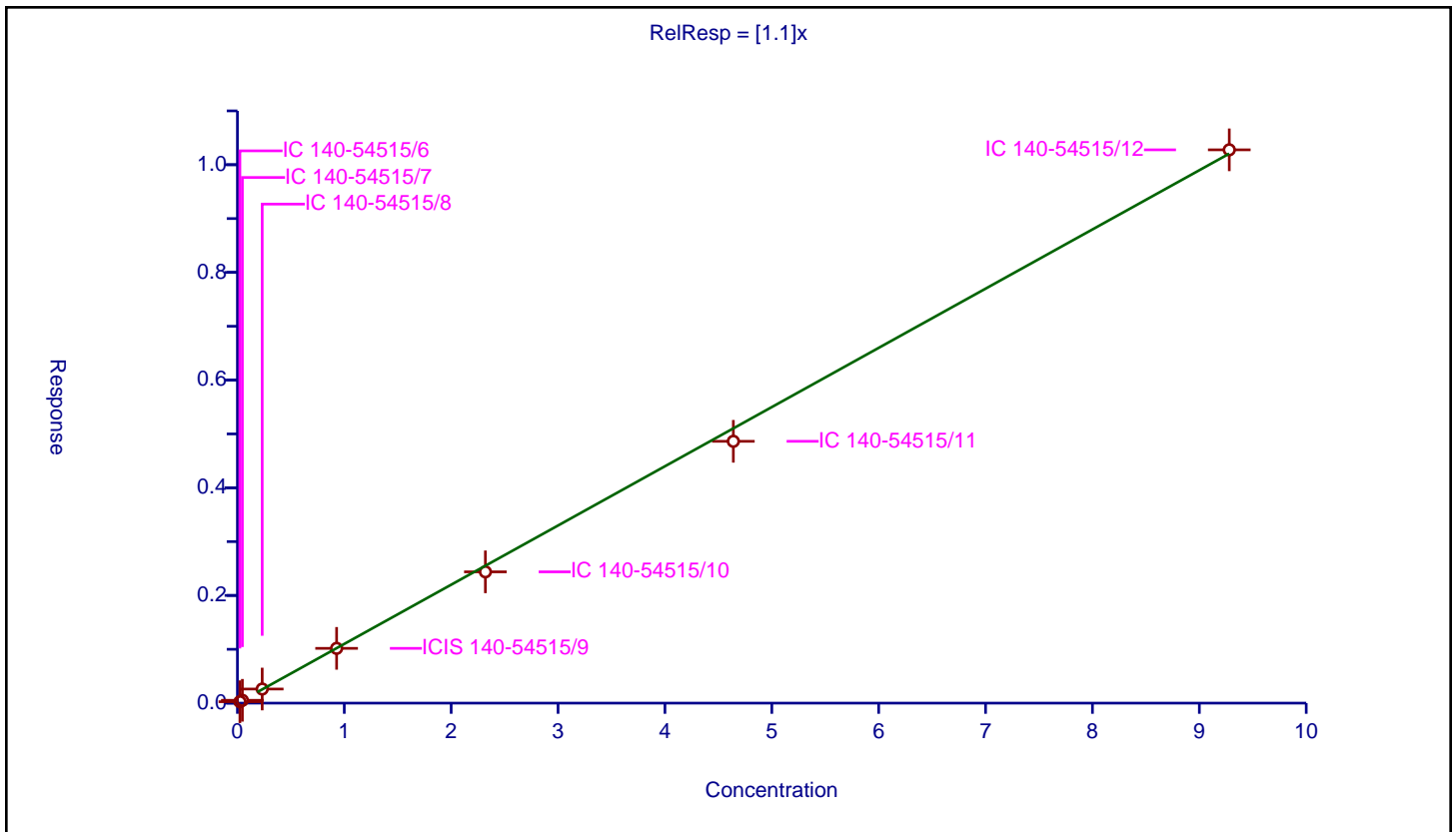
/ Perfluorooctanesulfonic acid

Curve Type: Average
 Weighting: Conc_Sq
 Origin: Force
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.1

Error Coefficients	
Standard Error:	11400000
Relative Standard Error:	3.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.0232	0.026343	1.195	3069142.0	1.135487	Y
2	IC 140-54515/7	0.0464	0.052475	1.195	3022370.0	1.130929	Y
3	IC 140-54515/8	0.232	0.261904	1.195	3044513.0	1.128898	Y
4	ICIS 140-54515/9	0.928	1.017499	1.195	3054456.0	1.096443	Y
5	IC 140-54515/10	2.32	2.438515	1.195	2955831.0	1.051084	Y
6	IC 140-54515/11	4.64	4.862919	1.195	2860822.0	1.048043	Y
7	IC 140-54515/12	9.28	10.277006	1.195	2833668.0	1.107436	Y



Calibration

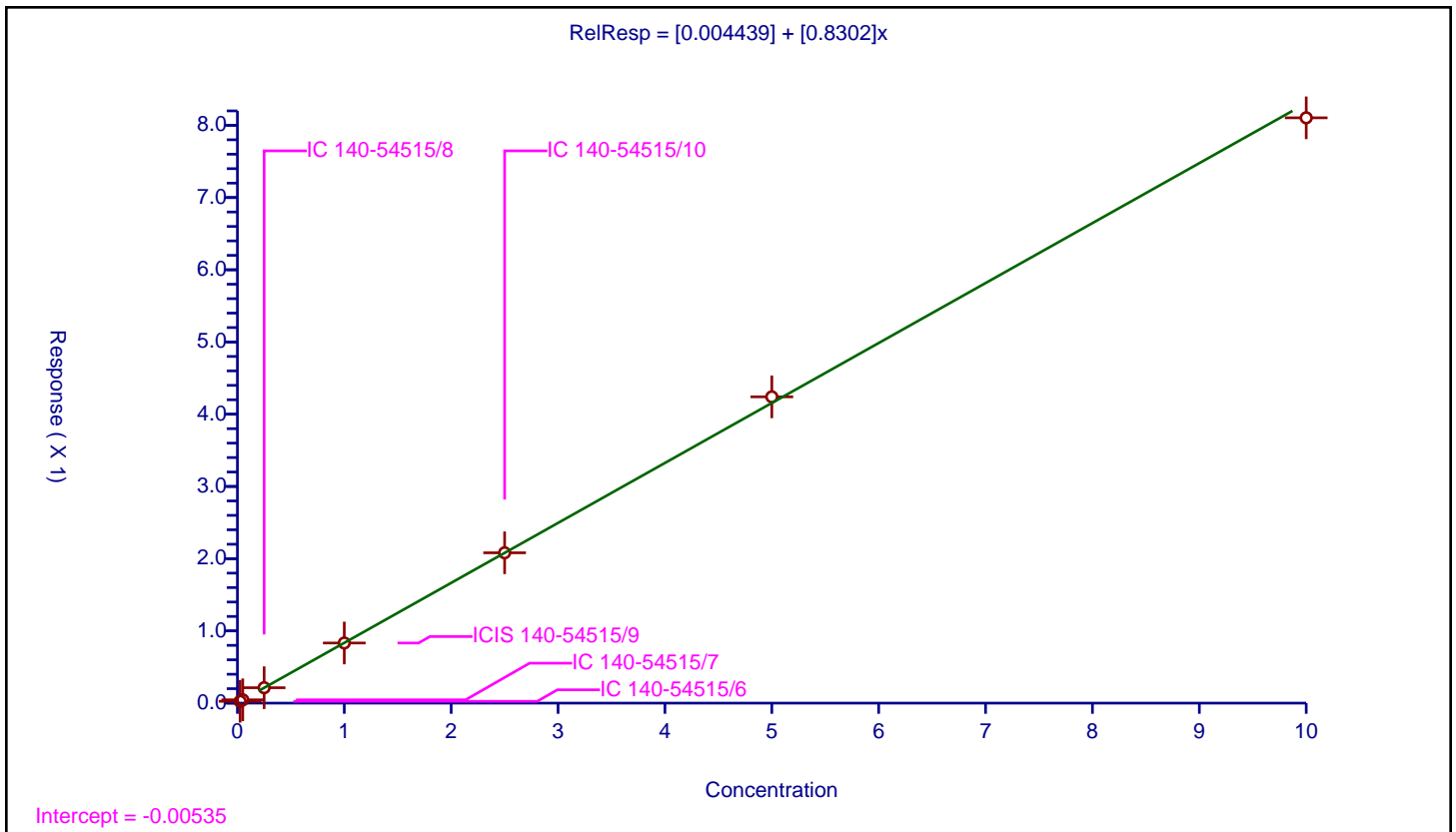
/ Perfluorononanoic acid

Curve Type: Linear
 Weighting: Conc_Sq
 Origin: None
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.004439
Slope:	0.8302

Error Coefficients	
Standard Error:	21300000
Relative Standard Error:	1.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.02519	1.25	6830452.0	1.007598	Y
2	IC 140-54515/7	0.05	0.045916	1.25	6735203.0	0.918317	Y
3	IC 140-54515/8	0.25	0.213399	1.25	7247107.0	0.853594	Y
4	ICIS 140-54515/9	1.0	0.832512	1.25	7226283.0	0.832512	Y
5	IC 140-54515/10	2.5	2.081631	1.25	6981917.0	0.832652	Y
6	IC 140-54515/11	5.0	4.241127	1.25	6472750.0	0.848225	Y
7	IC 140-54515/12	10.0	8.103955	1.25	6202112.0	0.810396	Y



Calibration

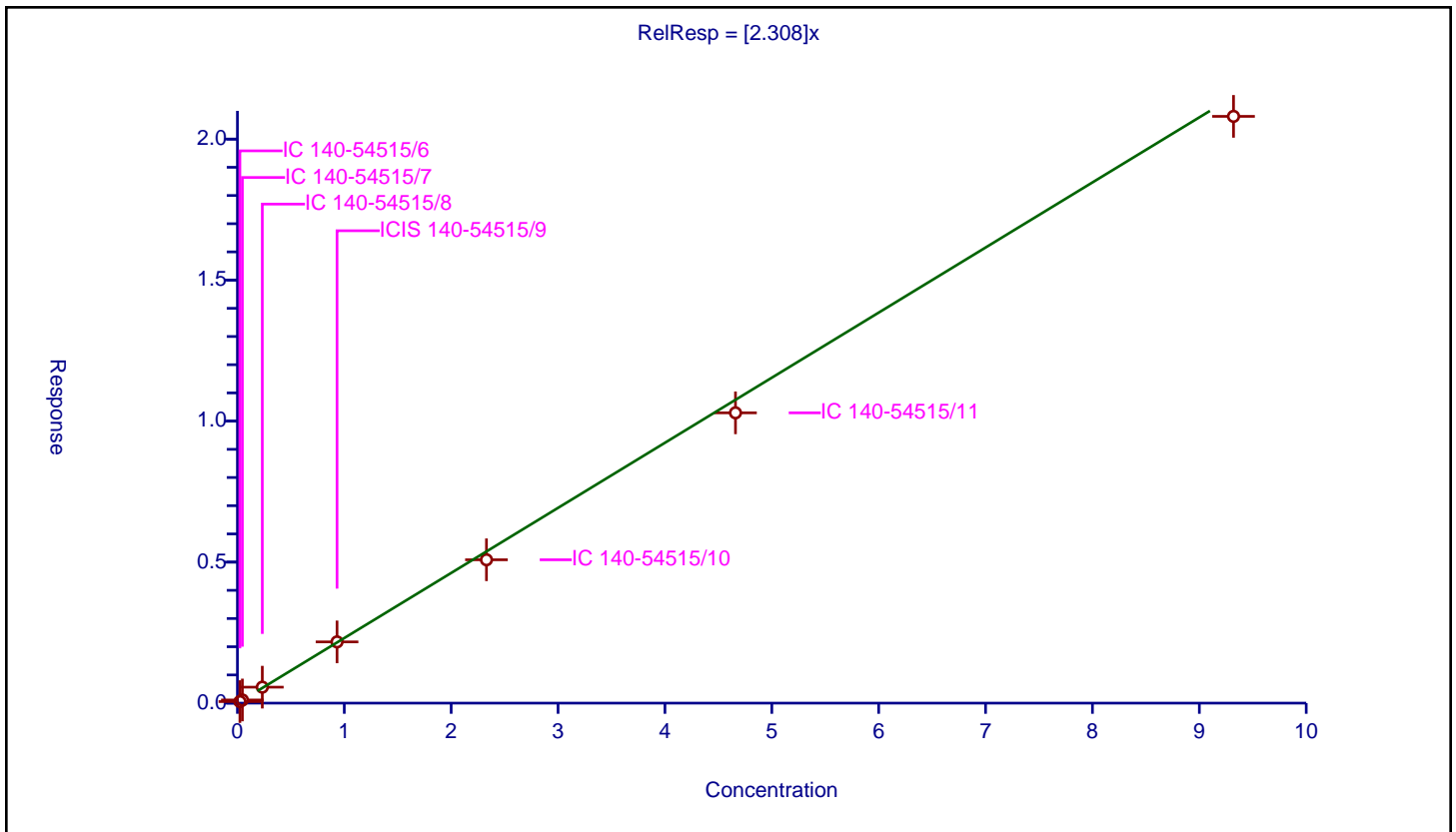
/ 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid

Curve Type: Average
Weighting: Conc_Sq
Origin: Force
Dependency: Response
Calib Mode: IsoDil
Response Base: AREA
RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	2.308

Error Coefficients	
Standard Error:	23200000
Relative Standard Error:	4.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.0233	0.055159	1.195	3069142.0	2.36734	Y
2	IC 140-54515/7	0.0466	0.111971	1.195	3022370.0	2.402804	Y
3	IC 140-54515/8	0.233	0.566596	1.195	3044513.0	2.431741	Y
4	ICIS 140-54515/9	0.932	2.171632	1.195	3054456.0	2.330078	Y
5	IC 140-54515/10	2.33	5.083372	1.195	2955831.0	2.181705	Y
6	IC 140-54515/11	4.66	10.293686	1.195	2860822.0	2.208946	Y
7	IC 140-54515/12	9.32	20.805329	1.195	2833668.0	2.232331	Y



Calibration

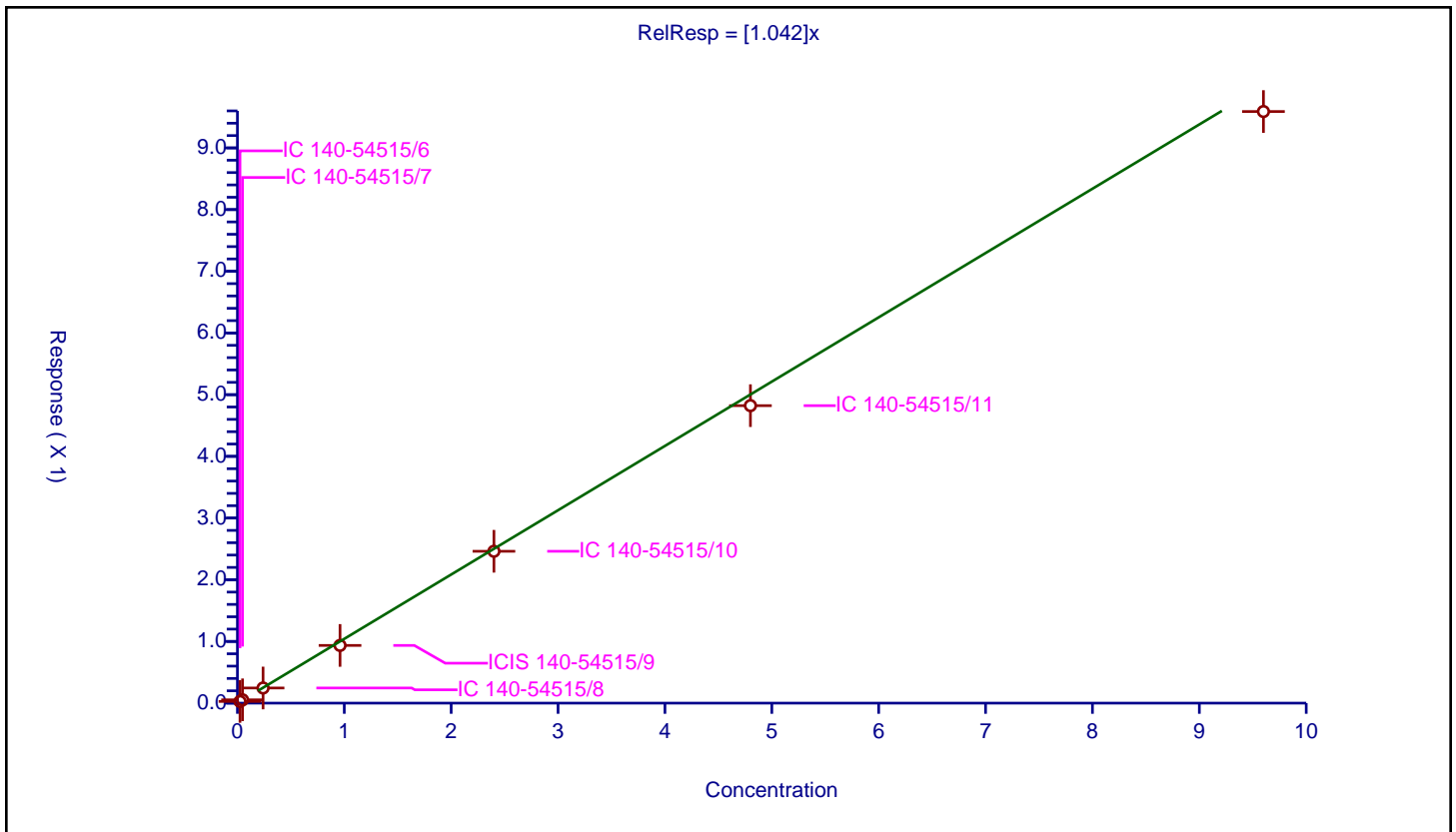
/ Perfluorononanesulfonic acid

Curve Type: Average
 Weighting: Conc_Sq
 Origin: Force
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.042

Error Coefficients	
Standard Error:	10800000
Relative Standard Error:	6.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.024	0.027601	1.195	3069142.0	1.150022	Y
2	IC 140-54515/7	0.048	0.053769	1.195	3022370.0	1.120184	Y
3	IC 140-54515/8	0.24	0.24527	1.195	3044513.0	1.021957	Y
4	ICIS 140-54515/9	0.96	0.93536	1.195	3054456.0	0.974334	Y
5	IC 140-54515/10	2.4	2.461456	1.195	2955831.0	1.025607	Y
6	IC 140-54515/11	4.8	4.82223	1.195	2860822.0	1.004631	Y
7	IC 140-54515/12	9.6	9.589536	1.195	2833668.0	0.99891	Y



Calibration

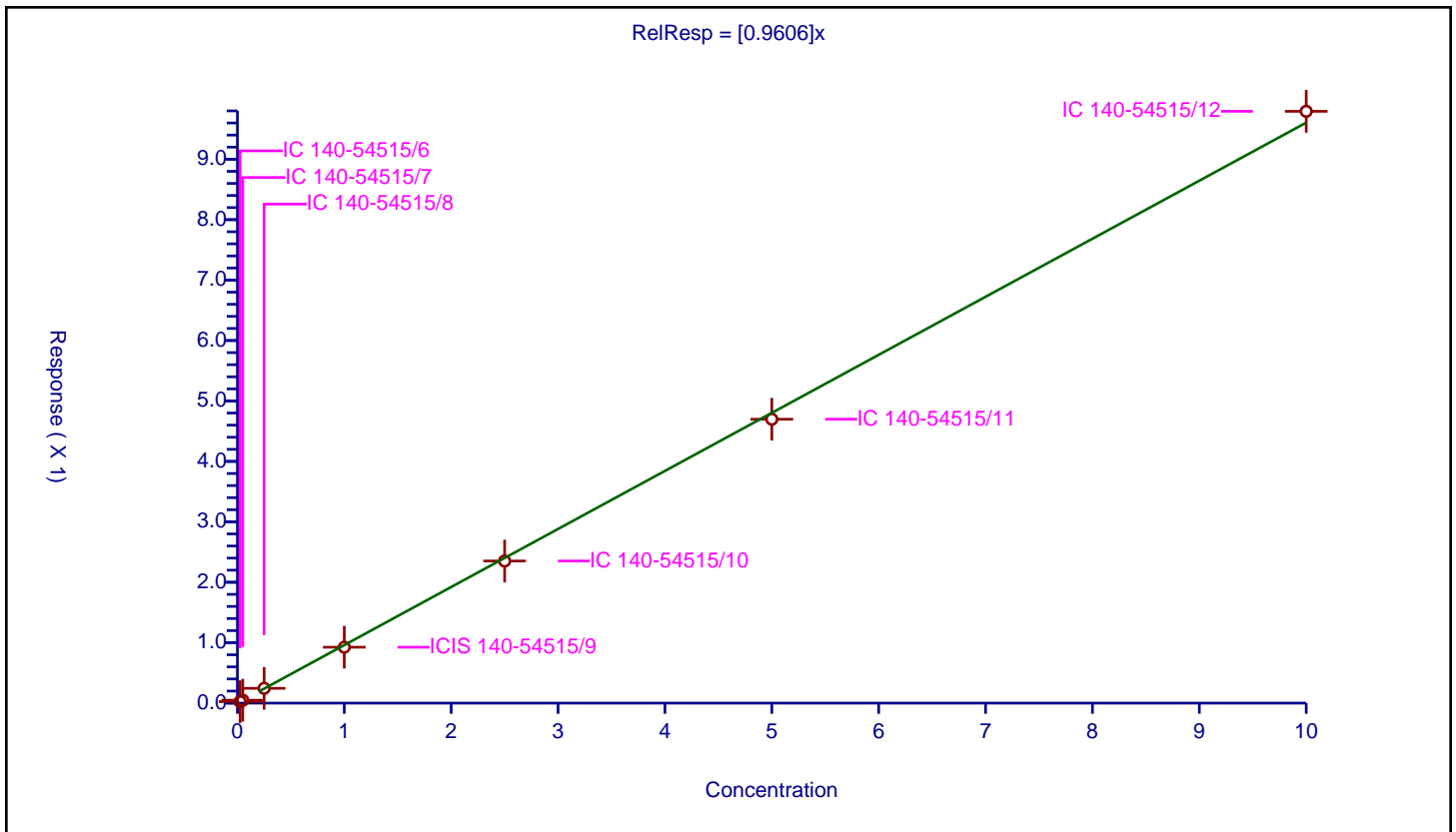
/ Perfluorooctanesulfonamide

Curve Type: Average
Weighting: Conc_Sq
Origin: Force
Dependency: Response
Calib Mode: IsoDil
Response Base: AREA
RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.9606

Error Coefficients	
Standard Error:	14200000
Relative Standard Error:	2.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.024961	1.25	5016067.0	0.998452	Y
2	IC 140-54515/7	0.05	0.048087	1.25	4922112.0	0.961747	Y
3	IC 140-54515/8	0.25	0.244744	1.25	4948768.0	0.978977	Y
4	ICIS 140-54515/9	1.0	0.92525	1.25	4847961.0	0.92525	Y
5	IC 140-54515/10	2.5	2.351483	1.25	4387447.0	0.940593	Y
6	IC 140-54515/11	5.0	4.697651	1.25	4176620.0	0.93953	Y
7	IC 140-54515/12	10.0	9.793055	1.25	3792608.0	0.979305	Y



Calibration

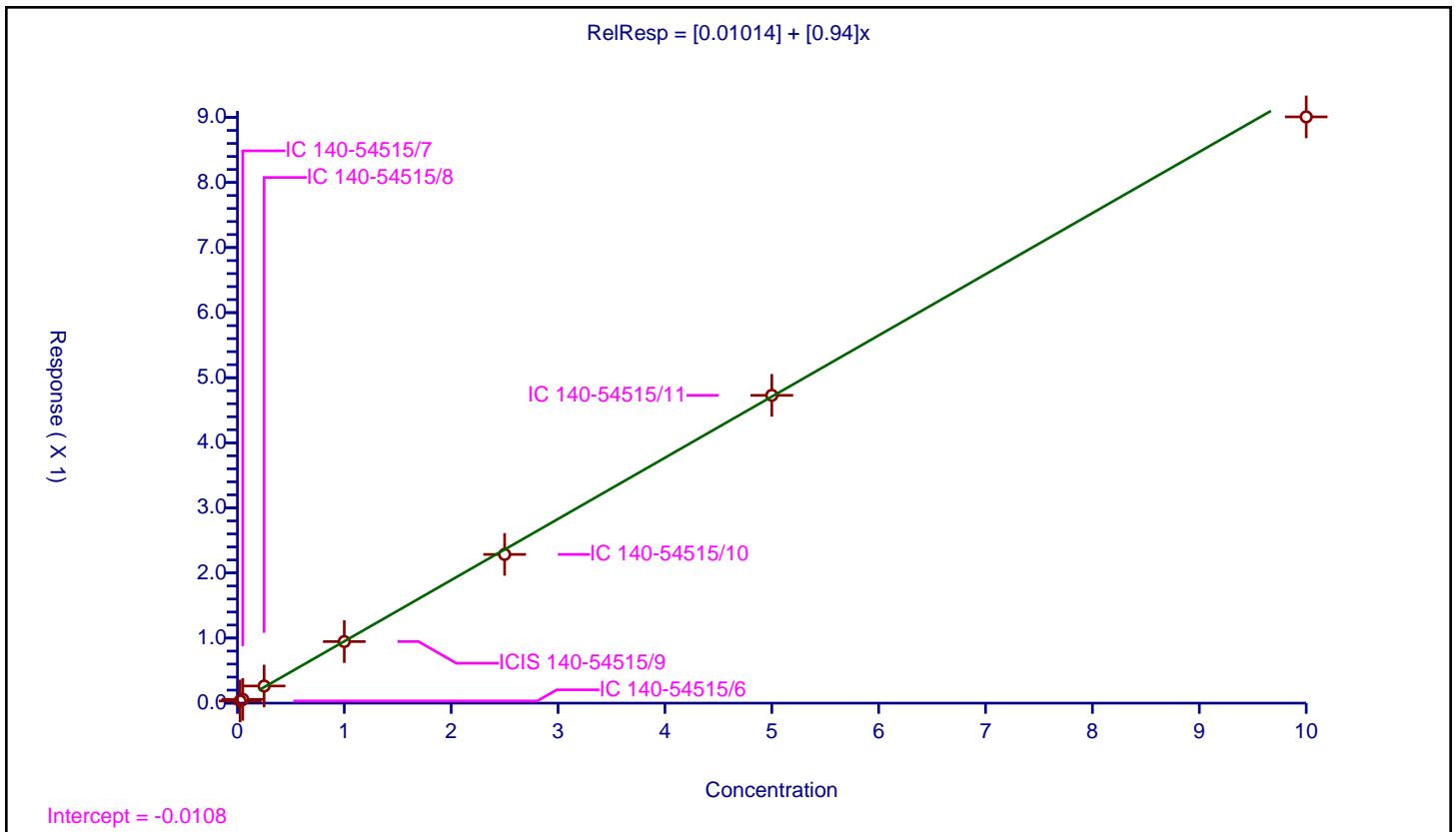
/ Perfluorodecanoic acid

Curve Type: Linear
 Weighting: Conc_Sq
 Origin: None
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.01014
Slope:	0.94

Error Coefficients	
Standard Error:	23000000
Relative Standard Error:	4.3
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.033342	1.25	7129138.0	1.333668	Y
2	IC 140-54515/7	0.05	0.057666	1.25	7353570.0	1.153314	Y
3	IC 140-54515/8	0.25	0.263175	1.25	7254432.0	1.052701	Y
4	ICIS 140-54515/9	1.0	0.945756	1.25	7310968.0	0.945756	Y
5	IC 140-54515/10	2.5	2.2851	1.25	6829600.0	0.91404	Y
6	IC 140-54515/11	5.0	4.729355	1.25	6527325.0	0.945871	Y
7	IC 140-54515/12	10.0	9.007848	1.25	5955015.0	0.900785	Y



Calibration

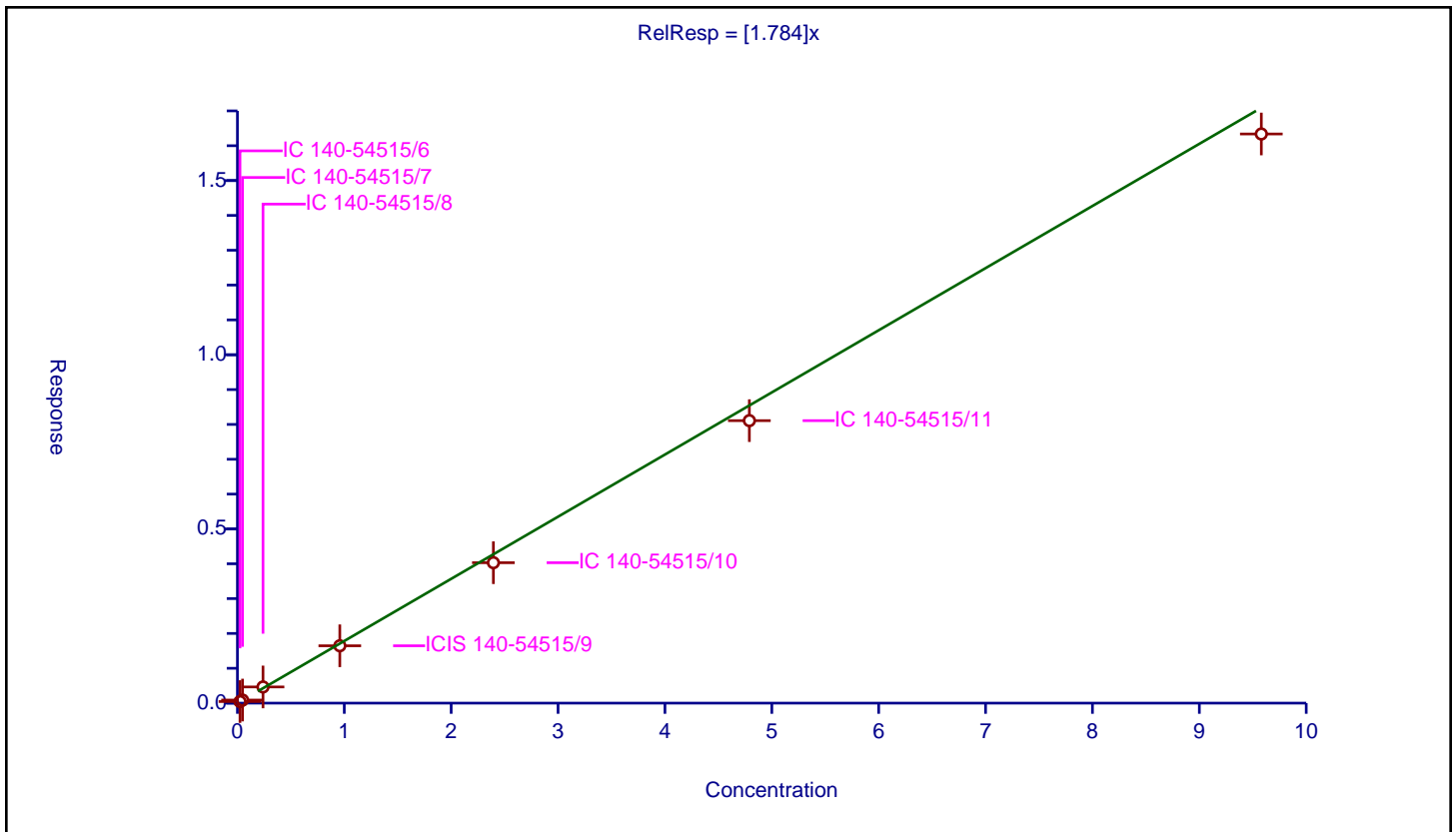
/ 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)

Curve Type: Average
 Weighting: Conc_Sq
 Origin: Force
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.784

Error Coefficients	
Standard Error:	3730000
Relative Standard Error:	6.1
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.02395	0.045605	1.1975	725011.0	1.904178	Y
2	IC 140-54515/7	0.0479	0.088229	1.1975	747134.0	1.841939	Y
3	IC 140-54515/8	0.2395	0.4647	1.1975	691926.0	1.940294	Y
4	ICIS 140-54515/9	0.958	1.646388	1.1975	694718.0	1.718568	Y
5	IC 140-54515/10	2.395	4.031196	1.1975	661877.0	1.683171	Y
6	IC 140-54515/11	4.79	8.108817	1.1975	623050.0	1.692864	Y
7	IC 140-54515/12	9.58	16.337092	1.1975	566408.0	1.705333	Y



Calibration

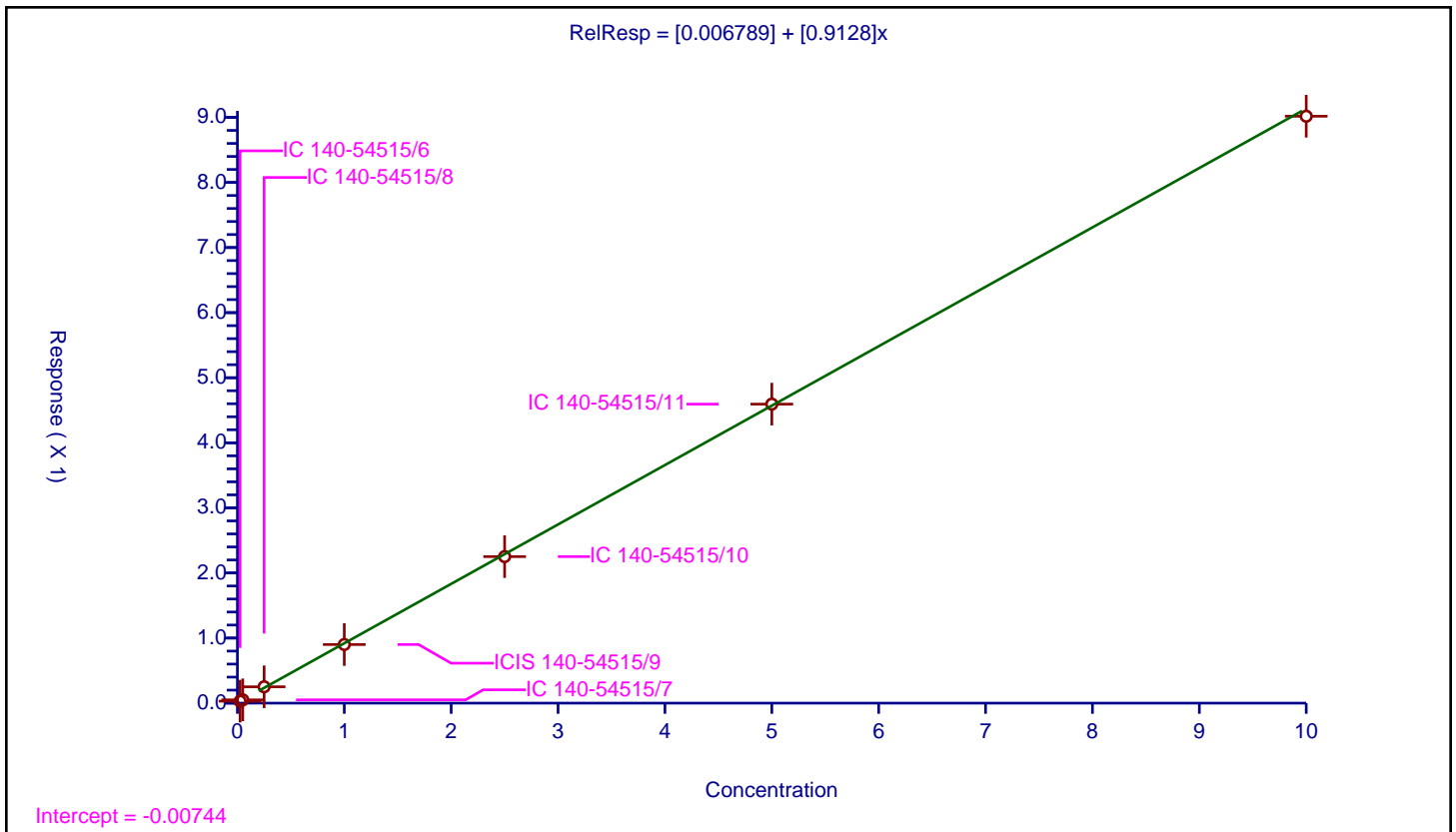
/ N-methylperfluorooctanesulfonamidoacetic acid

Curve Type: Linear
Weighting: Conc_Sq
Origin: None
Dependency: Response
Calib Mode: IsoDil
Response Base: AREA
RF Rounding: 0

Curve Coefficients	
Intercept:	0.006789
Slope:	0.9128

Error Coefficients	
Standard Error:	3430000
Relative Standard Error:	3.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.029906	1.25	918162.0	1.196249	Y
2	IC 140-54515/7	0.05	0.050661	1.25	987298.0	1.01322	Y
3	IC 140-54515/8	0.25	0.251146	1.25	899632.0	1.004583	Y
4	ICIS 140-54515/9	1.0	0.900602	1.25	1042167.0	0.900602	Y
5	IC 140-54515/10	2.5	2.251329	1.25	940501.0	0.900532	Y
6	IC 140-54515/11	5.0	4.594326	1.25	899537.0	0.918865	Y
7	IC 140-54515/12	10.0	9.017661	1.25	923936.0	0.901766	Y



Calibration

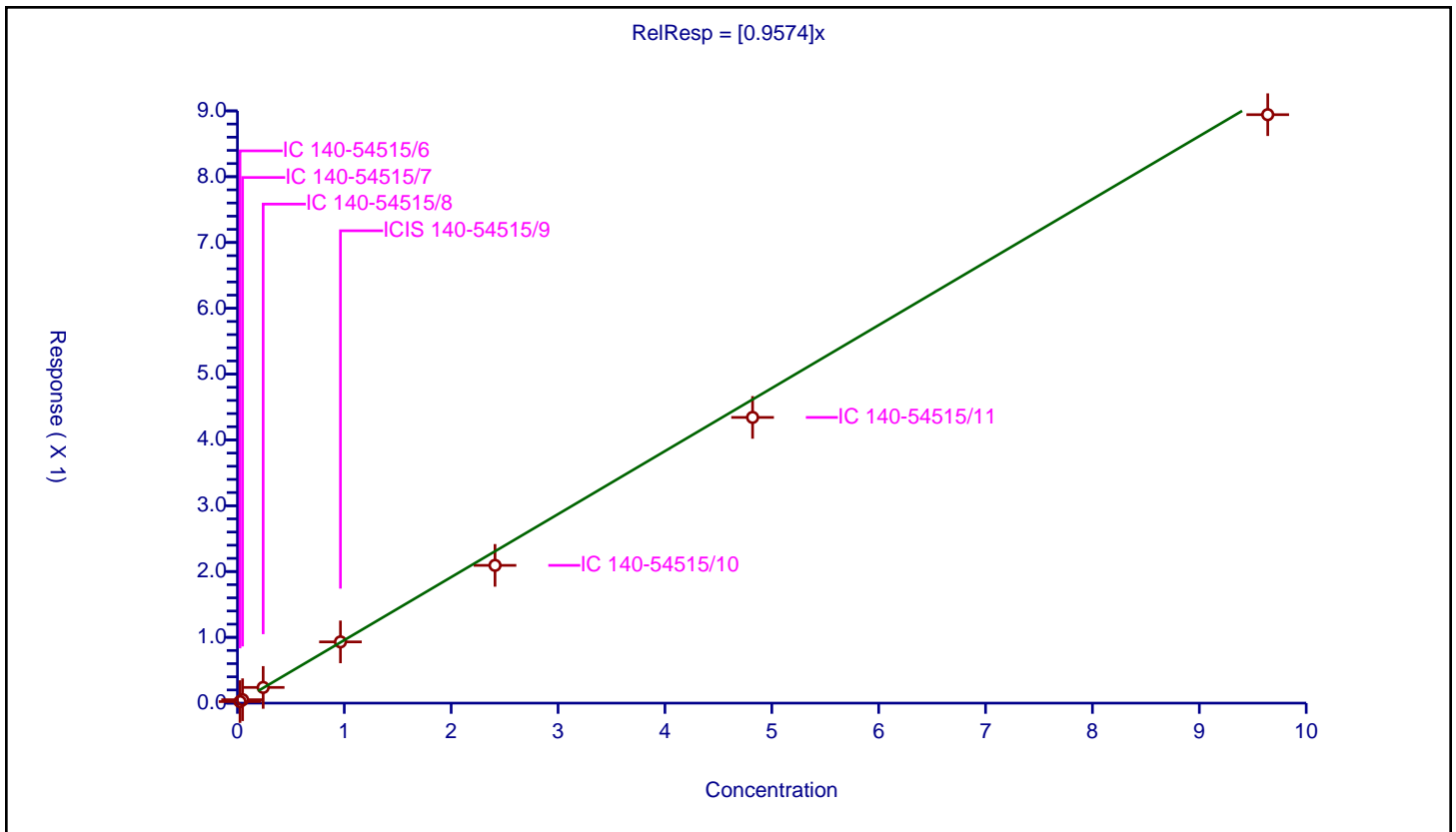
/ Perfluorodecanesulfonic acid

Curve Type: Average
 Weighting: Conc_Sq
 Origin: Force
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.9574

Error Coefficients	
Standard Error:	9920000
Relative Standard Error:	7.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.0241	0.02346	1.195	3069142.0	0.973431	Y
2	IC 140-54515/7	0.0482	0.051868	1.195	3022370.0	1.076095	Y
3	IC 140-54515/8	0.241	0.238508	1.195	3044513.0	0.989658	Y
4	ICIS 140-54515/9	0.964	0.930576	1.195	3054456.0	0.965328	Y
5	IC 140-54515/10	2.41	2.093555	1.195	2955831.0	0.868695	Y
6	IC 140-54515/11	4.82	4.342045	1.195	2860822.0	0.900839	Y
7	IC 140-54515/12	9.64	8.942699	1.195	2833668.0	0.927666	Y



Calibration

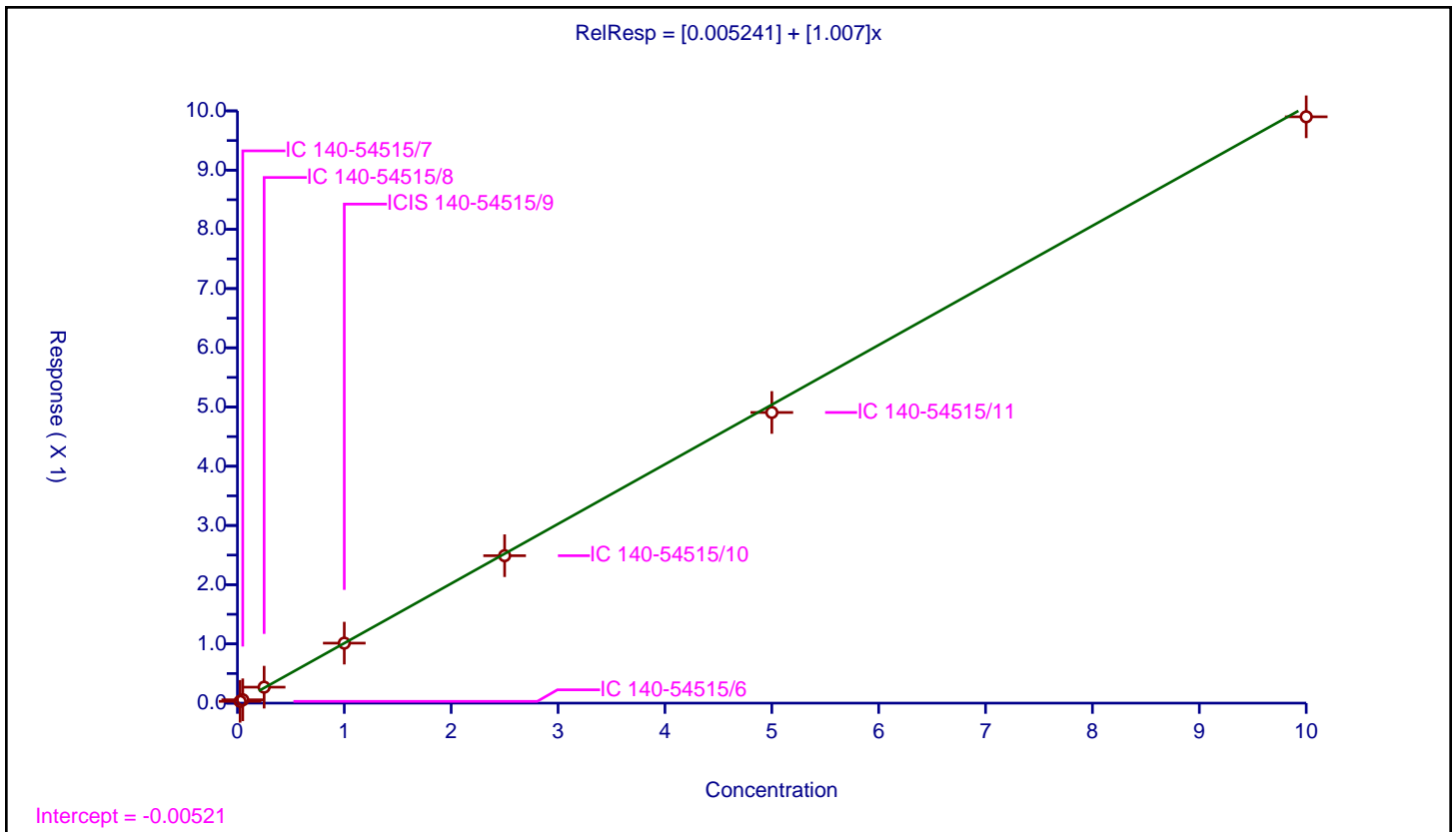
/ Perfluoroundecanoic acid

Curve Type: Linear
 Weighting: Conc_Sq
 Origin: None
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.005241
Slope:	1.007

Error Coefficients	
Standard Error:	24000000
Relative Standard Error:	2.9
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.030037	1.25	6657852.0	1.201484	Y
2	IC 140-54515/7	0.05	0.056603	1.25	6782308.0	1.132052	Y
3	IC 140-54515/8	0.25	0.269557	1.25	6848234.0	1.078227	Y
4	ICIS 140-54515/9	1.0	1.013002	1.25	7006211.0	1.013002	Y
5	IC 140-54515/10	2.5	2.489182	1.25	6673920.0	0.995673	Y
6	IC 140-54515/11	5.0	4.908051	1.25	6502949.0	0.98161	Y
7	IC 140-54515/12	10.0	9.900027	1.25	5686115.0	0.990003	Y



Calibration

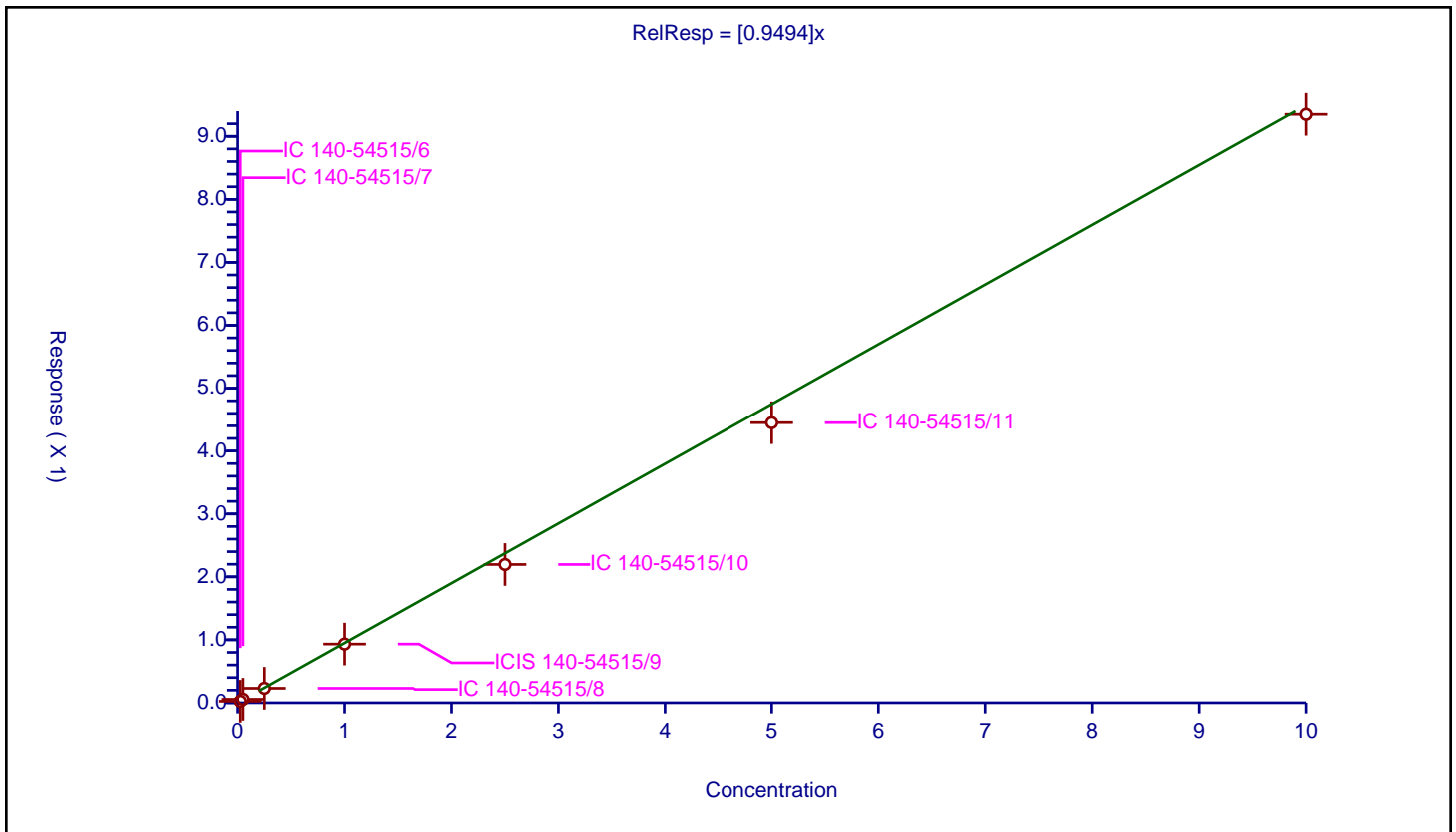
/ N-ethylperfluorooctanesulfonamidoacetic acid

Curve Type: Average
 Weighting: Conc_Sq
 Origin: Force
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.9494

Error Coefficients	
Standard Error:	2790000
Relative Standard Error:	8.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.024376	1.25	976252.0	0.975056	Y
2	IC 140-54515/7	0.05	0.055772	1.25	958230.0	1.115442	Y
3	IC 140-54515/8	0.25	0.229829	1.25	956097.0	0.919316	Y
4	ICIS 140-54515/9	1.0	0.932362	1.25	924381.0	0.932362	Y
5	IC 140-54515/10	2.5	2.196442	1.25	902846.0	0.878577	Y
6	IC 140-54515/11	5.0	4.450713	1.25	863924.0	0.890143	Y
7	IC 140-54515/12	10.0	9.349809	1.25	780959.0	0.934981	Y



Calibration

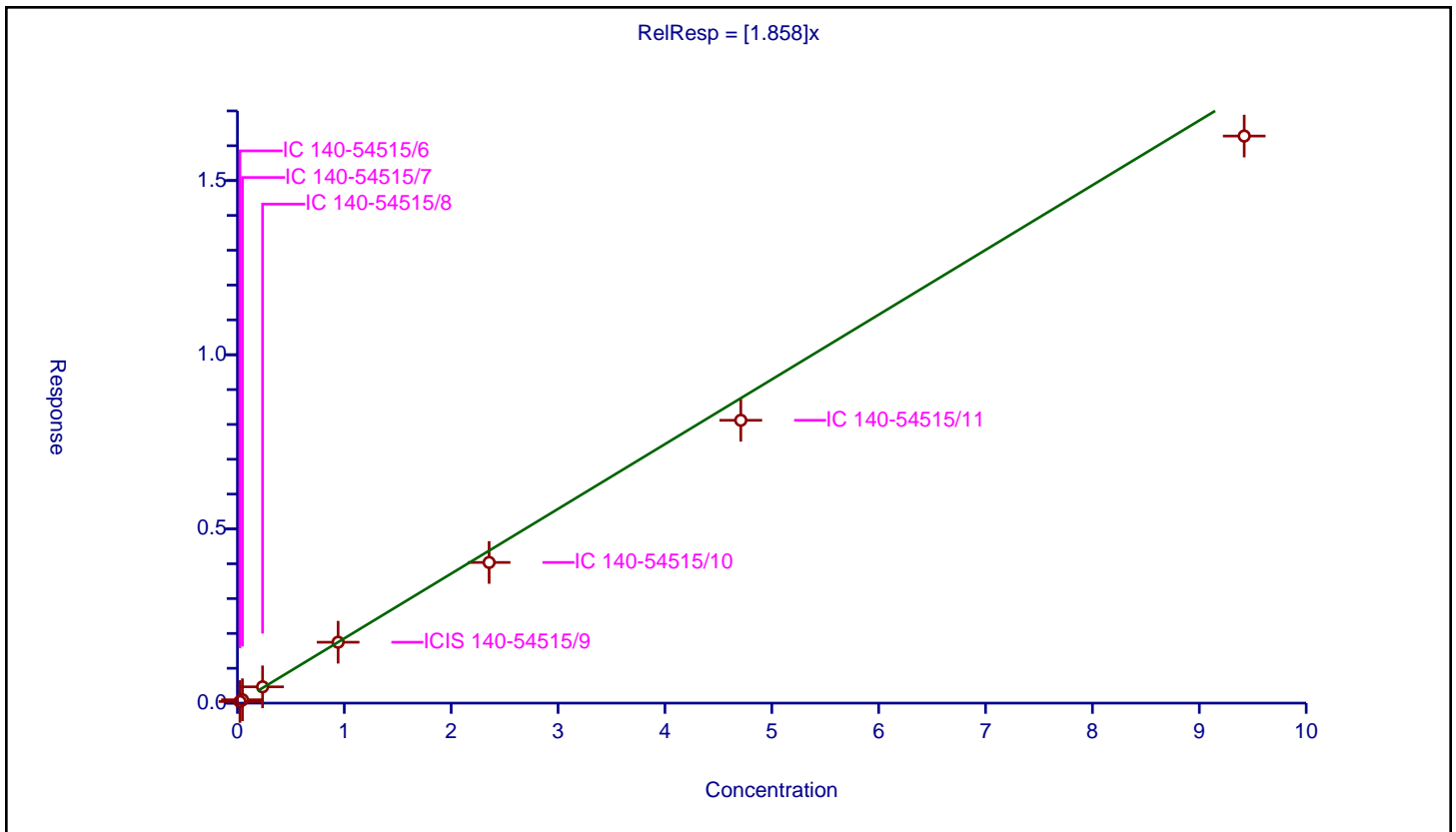
/ 11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid

Curve Type: Average
Weighting: Conc_Sq
Origin: Force
Dependency: Response
Calib Mode: IsoDil
Response Base: AREA
RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.858

Error Coefficients	
Standard Error:	18200000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.02355	0.045986	1.195	3069142.0	1.952701	Y
2	IC 140-54515/7	0.0471	0.096481	1.195	3022370.0	2.04843	Y
3	IC 140-54515/8	0.2355	0.467474	1.195	3044513.0	1.985028	Y
4	ICIS 140-54515/9	0.942	1.748052	1.195	3054456.0	1.855681	Y
5	IC 140-54515/10	2.355	4.038613	1.195	2955831.0	1.71491	Y
6	IC 140-54515/11	4.71	8.118535	1.195	2860822.0	1.723681	Y
7	IC 140-54515/12	9.42	16.278442	1.195	2833668.0	1.728072	Y



Calibration

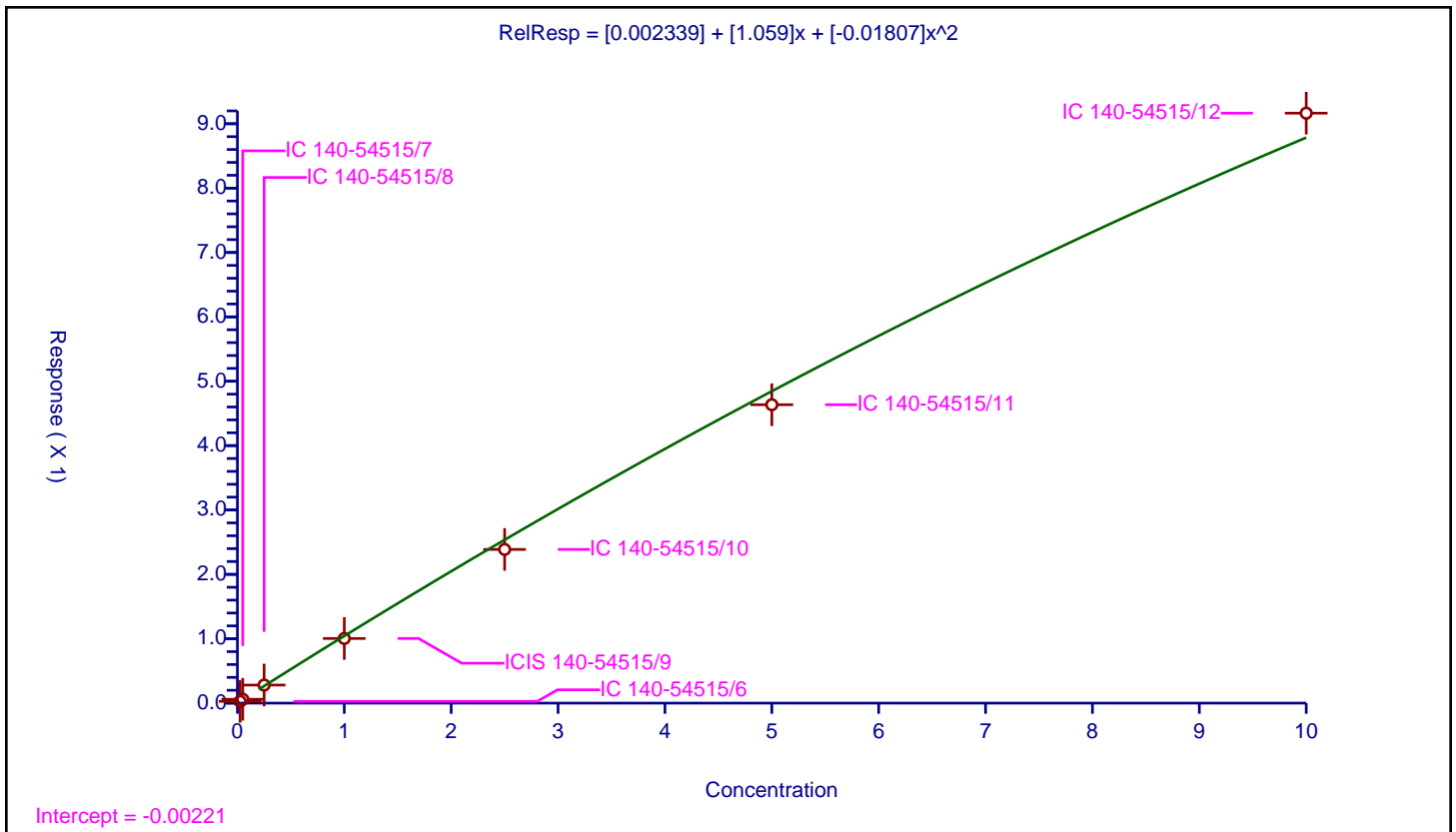
/ Perfluorododecanoic acid

Curve Type: Quadratic
 Weighting: Conc_Sq
 Origin: None
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.002339
Slope:	1.059
Second Order:	-0.01807

Error Coefficients	
Standard Error:	27800000
Relative Standard Error:	7.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.02752	1.25	7362218.0	1.100782	Y
2	IC 140-54515/7	0.05	0.059934	1.25	6949236.0	1.198682	Y
3	IC 140-54515/8	0.25	0.280888	1.25	7435382.0	1.123552	Y
4	ICIS 140-54515/9	1.0	1.004467	1.25	7381117.0	1.004467	Y
5	IC 140-54515/10	2.5	2.387513	1.25	6769707.0	0.955005	Y
6	IC 140-54515/11	5.0	4.635803	1.25	6796811.0	0.927161	Y
7	IC 140-54515/12	10.0	9.164306	1.25	6477734.0	0.916431	Y



Calibration

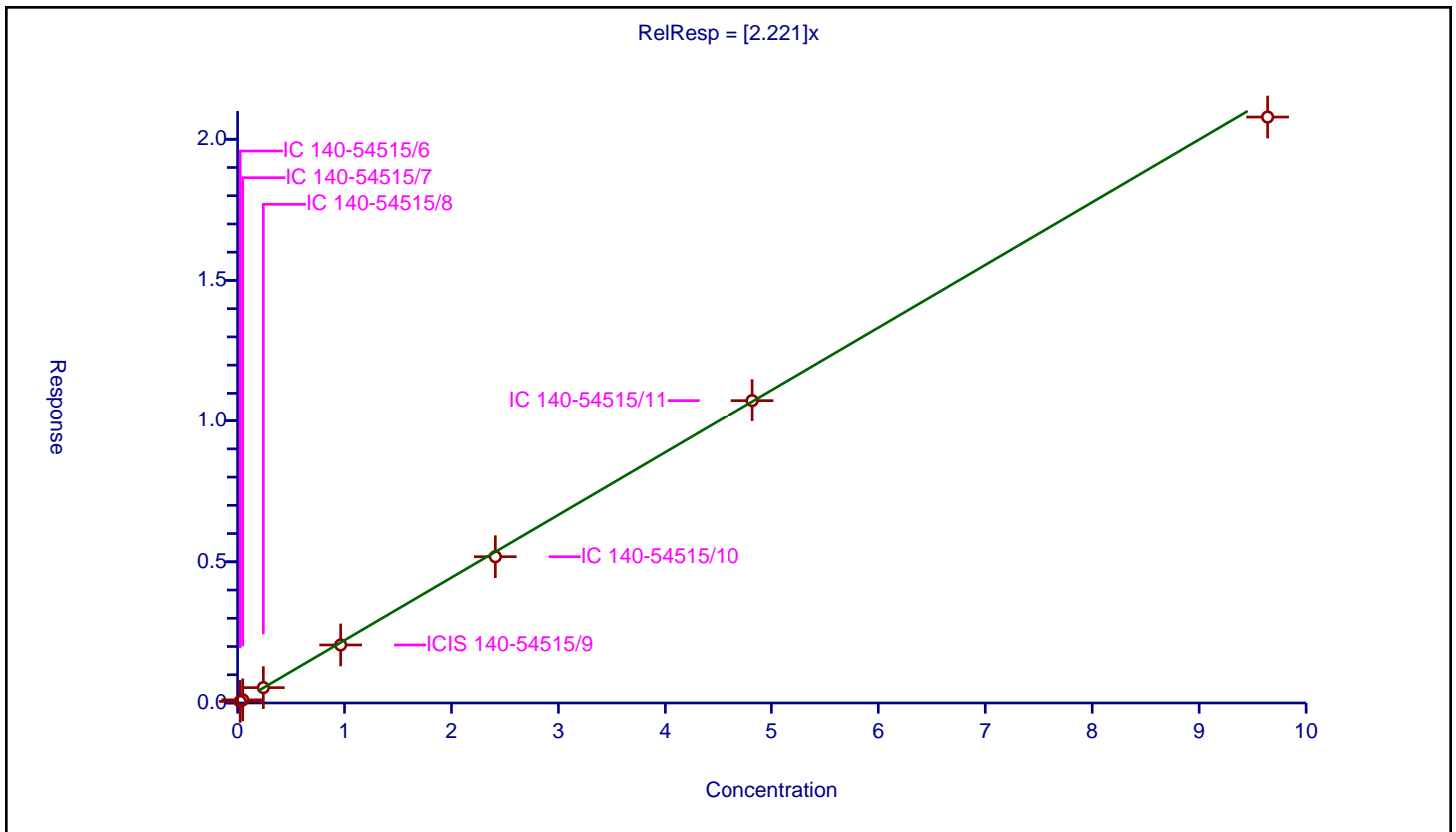
/ 1H,1H,2H,2H-perfluorododecanesulfonic acid (10:2)

Curve Type: Average
 Weighting: Conc_Sq
 Origin: Force
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	2.221

Error Coefficients	
Standard Error:	4790000
Relative Standard Error:	3.5
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.0241	0.05551	1.1975	725011.0	2.303332	Y
2	IC 140-54515/7	0.0482	0.111974	1.1975	747134.0	2.323117	Y
3	IC 140-54515/8	0.241	0.543477	1.1975	691926.0	2.255093	Y
4	ICIS 140-54515/9	0.964	2.054806	1.1975	694718.0	2.131542	Y
5	IC 140-54515/10	2.41	5.18004	1.1975	661877.0	2.149394	Y
6	IC 140-54515/11	4.82	10.742823	1.1975	623050.0	2.228802	Y
7	IC 140-54515/12	9.64	20.786321	1.1975	566408.0	2.156257	Y



Calibration

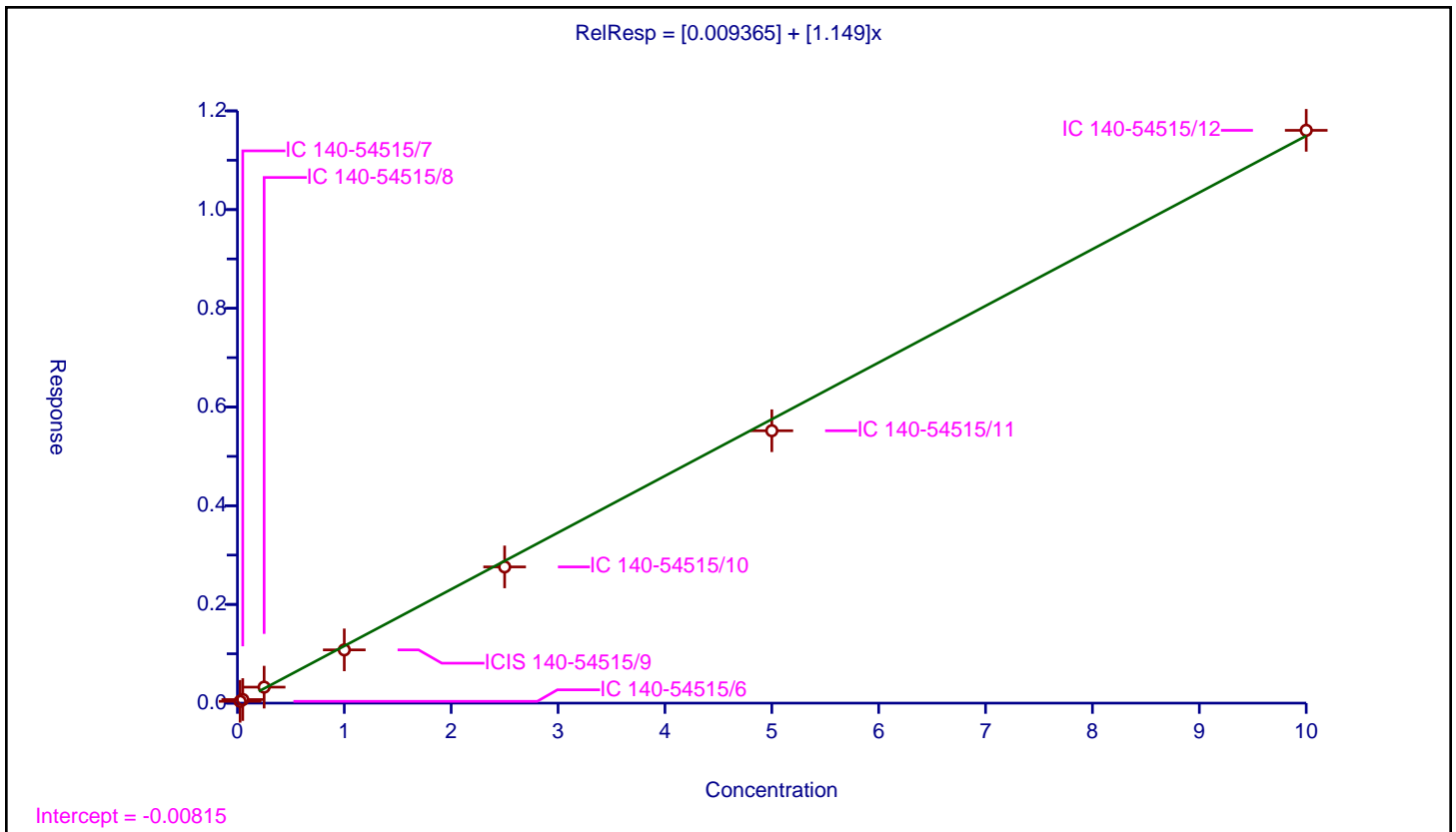
/ 2-(N-methylperfluoro-1-octanesulfonamido) ethanol

Curve Type: Linear
Weighting: Conc_Sq
Origin: None
Dependency: Response
Calib Mode: IsoDil
Response Base: AREA
RF Rounding: 0

Curve Coefficients	
Intercept:	0.009365
Slope:	1.149

Error Coefficients	
Standard Error:	2580000
Relative Standard Error:	8.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.03637	1.25	577982.0	1.454803	Y
2	IC 140-54515/7	0.05	0.072777	1.25	575299.0	1.455547	Y
3	IC 140-54515/8	0.25	0.324253	1.25	567624.0	1.297012	Y
4	ICIS 140-54515/9	1.0	1.079009	1.25	614171.0	1.079009	Y
5	IC 140-54515/10	2.5	2.760119	1.25	560383.0	1.104048	Y
6	IC 140-54515/11	5.0	5.519183	1.25	572551.0	1.103837	Y
7	IC 140-54515/12	10.0	11.606308	1.25	539386.0	1.160631	Y



Calibration

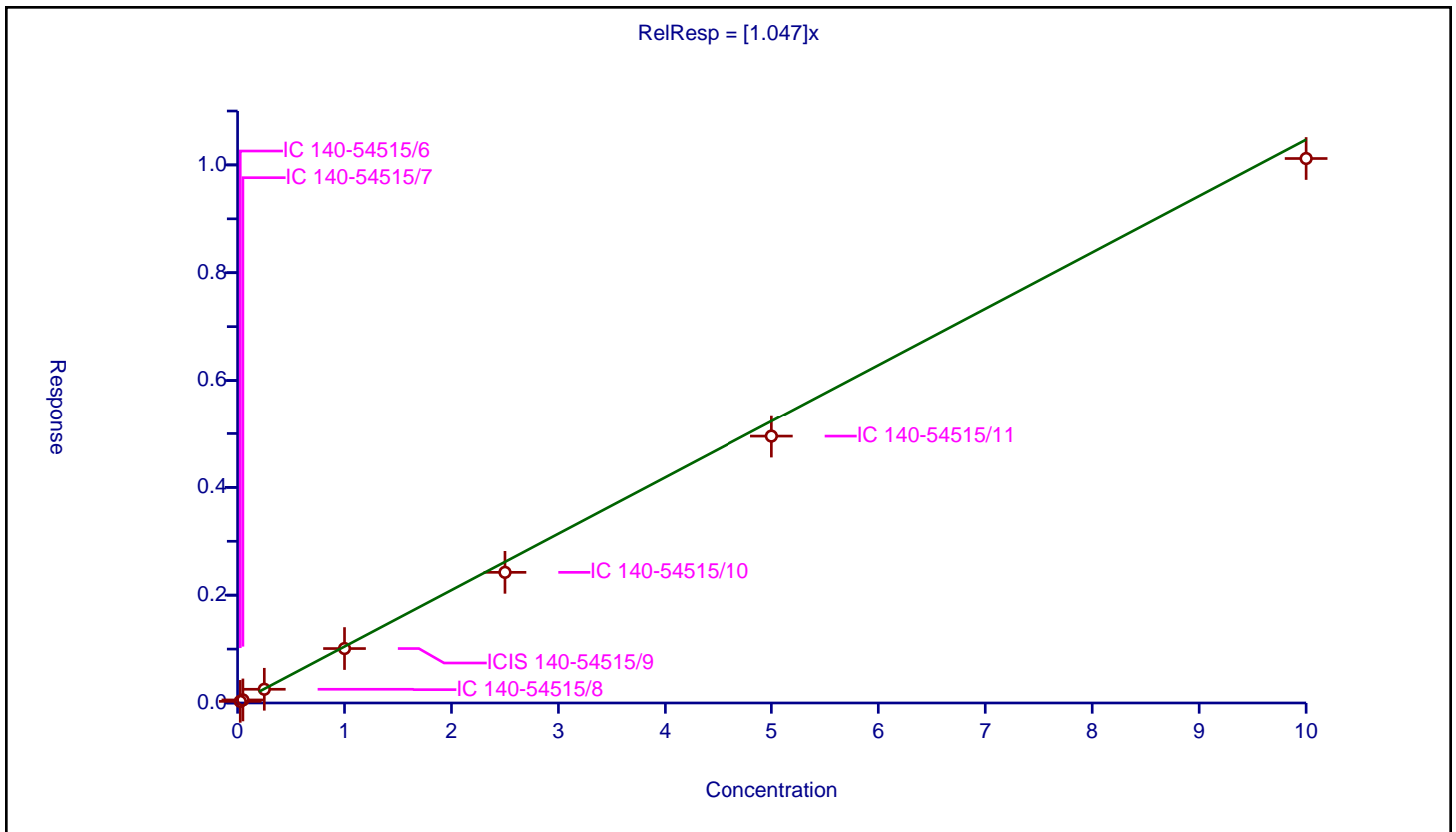
/ NMeFOSA

Curve Type: Average
 Weighting: Conc_Sq
 Origin: Force
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.047

Error Coefficients	
Standard Error:	2170000
Relative Standard Error:	8.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.029903	1.25	598816.0	1.19611	Y
2	IC 140-54515/7	0.05	0.056692	1.25	604340.0	1.13384	Y
3	IC 140-54515/8	0.25	0.254329	1.25	599582.0	1.017317	Y
4	ICIS 140-54515/9	1.0	1.010027	1.25	614480.0	1.010027	Y
5	IC 140-54515/10	2.5	2.423612	1.25	582914.0	0.969445	Y
6	IC 140-54515/11	5.0	4.951469	1.25	601939.0	0.990294	Y
7	IC 140-54515/12	10.0	10.118762	1.25	567405.0	1.011876	Y



Calibration

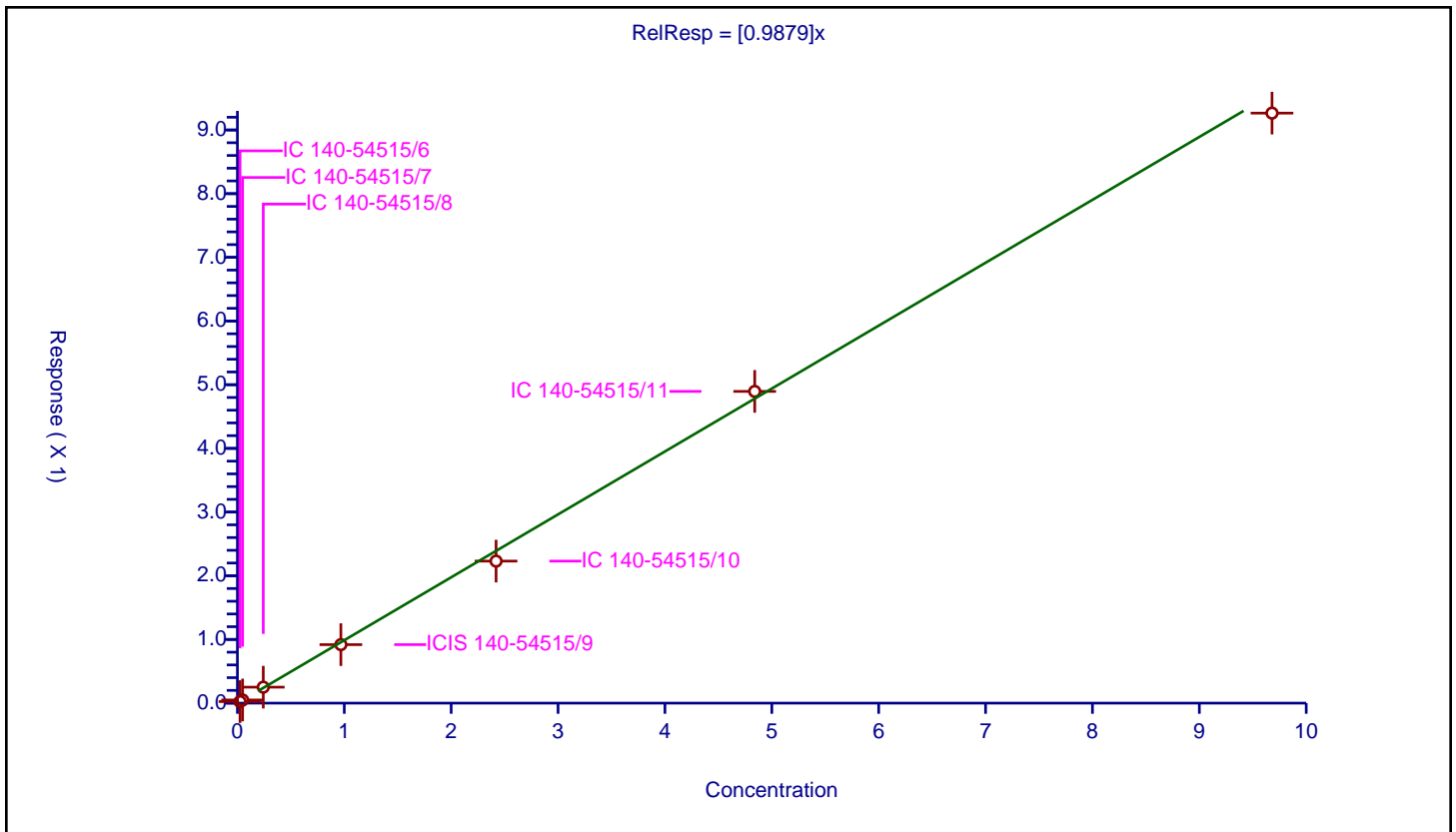
/ Perfluorododecanesulfonic acid (PFDoS)

Curve Type: Average
Weighting: Conc_Sq
Origin: Force
Dependency: Response
Calib Mode: IsoDil
Response Base: AREA
RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.9879

Error Coefficients	
Standard Error:	10500000
Relative Standard Error:	4.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.0242	0.024512	1.195	3069142.0	1.012882	Y
2	IC 140-54515/7	0.0484	0.049696	1.195	3022370.0	1.026768	Y
3	IC 140-54515/8	0.242	0.250841	1.195	3044513.0	1.036531	Y
4	ICIS 140-54515/9	0.968	0.918523	1.195	3054456.0	0.948887	Y
5	IC 140-54515/10	2.42	2.23028	1.195	2955831.0	0.921603	Y
6	IC 140-54515/11	4.84	4.895017	1.195	2860822.0	1.011367	Y
7	IC 140-54515/12	9.68	9.264892	1.195	2833668.0	0.957117	Y



Calibration

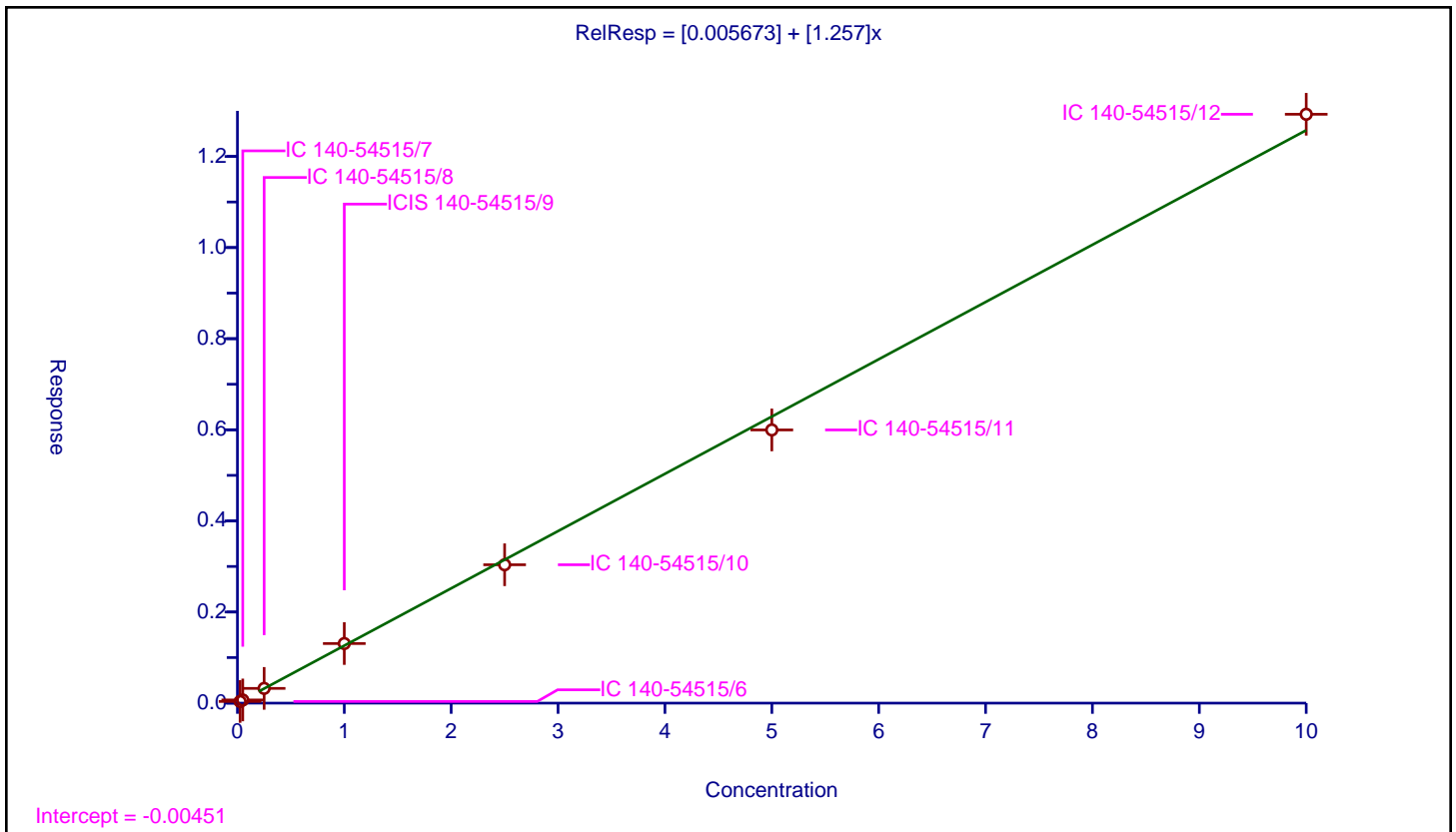
/ 2-(N-ethylperfluoro-1-octanesulfonamido) ethanol

Curve Type: Linear
Weighting: Conc_Sq
Origin: None
Dependency: Response
Calib Mode: IsoDil
Response Base: AREA
RF Rounding: 0

Curve Coefficients	
Intercept:	0.005673
Slope:	1.257

Error Coefficients	
Standard Error:	2890000
Relative Standard Error:	3.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.036787	1.25	603776.0	1.471489	Y
2	IC 140-54515/7	0.05	0.069567	1.25	646520.0	1.391334	Y
3	IC 140-54515/8	0.25	0.323306	1.25	624358.0	1.293224	Y
4	ICIS 140-54515/9	1.0	1.30807	1.25	630903.0	1.30807	Y
5	IC 140-54515/10	2.5	3.037378	1.25	622602.0	1.214951	Y
6	IC 140-54515/11	5.0	5.996972	1.25	616316.0	1.199394	Y
7	IC 140-54515/12	10.0	12.925919	1.25	531061.0	1.292592	Y



Calibration

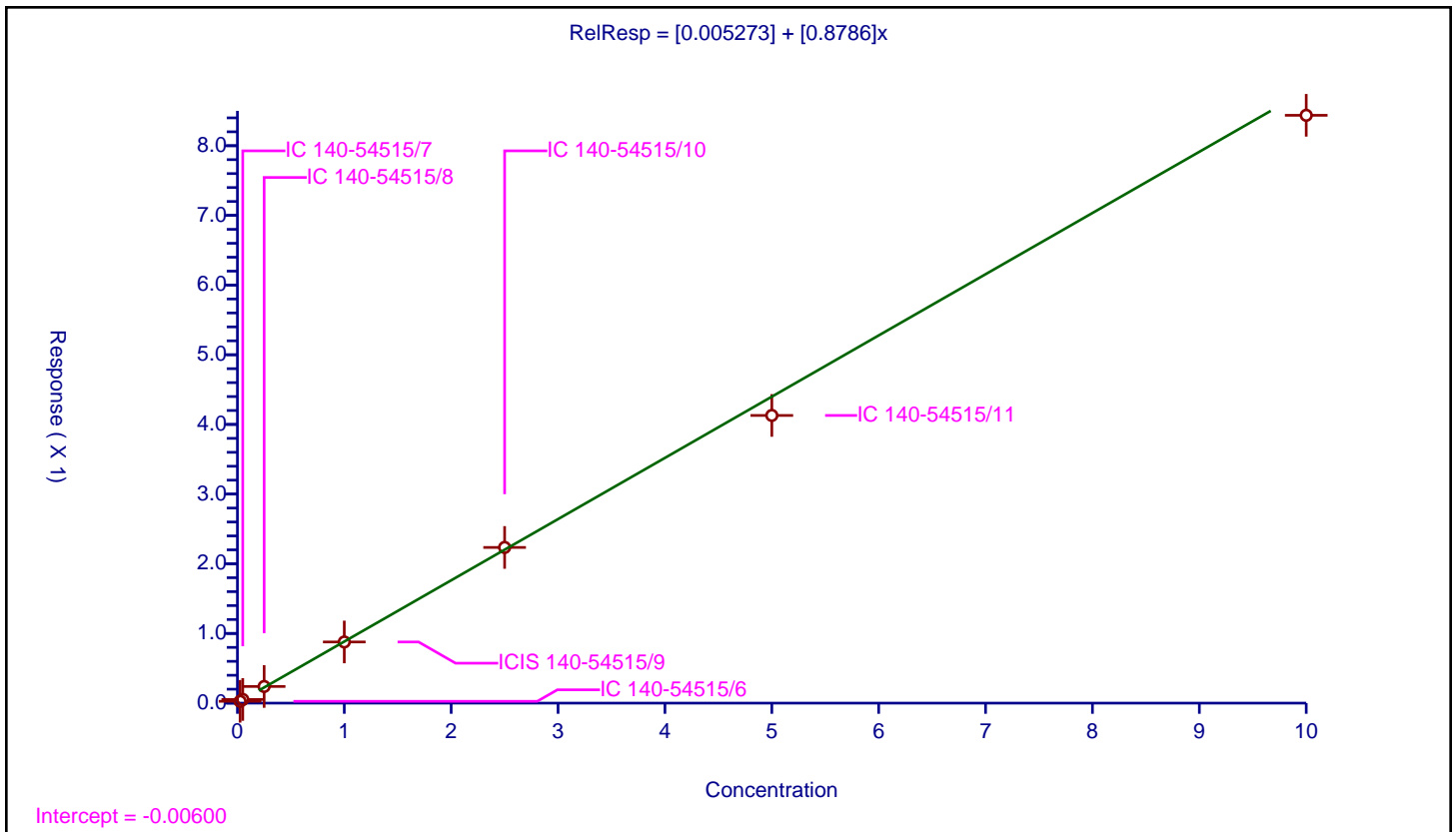
/ Perfluorotridecanoic acid

Curve Type: Linear
 Weighting: Conc_Sq
 Origin: None
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.005273
Slope:	0.8786

Error Coefficients	
Standard Error:	22800000
Relative Standard Error:	5.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.026314	1.25	7362218.0	1.052543	Y
2	IC 140-54515/7	0.05	0.052384	1.25	6949236.0	1.047684	Y
3	IC 140-54515/8	0.25	0.238942	1.25	7435382.0	0.955767	Y
4	ICIS 140-54515/9	1.0	0.877714	1.25	7381117.0	0.877714	Y
5	IC 140-54515/10	2.5	2.23434	1.25	6769707.0	0.893736	Y
6	IC 140-54515/11	5.0	4.128814	1.25	6796811.0	0.825763	Y
7	IC 140-54515/12	10.0	8.436452	1.25	6477734.0	0.843645	Y



Calibration

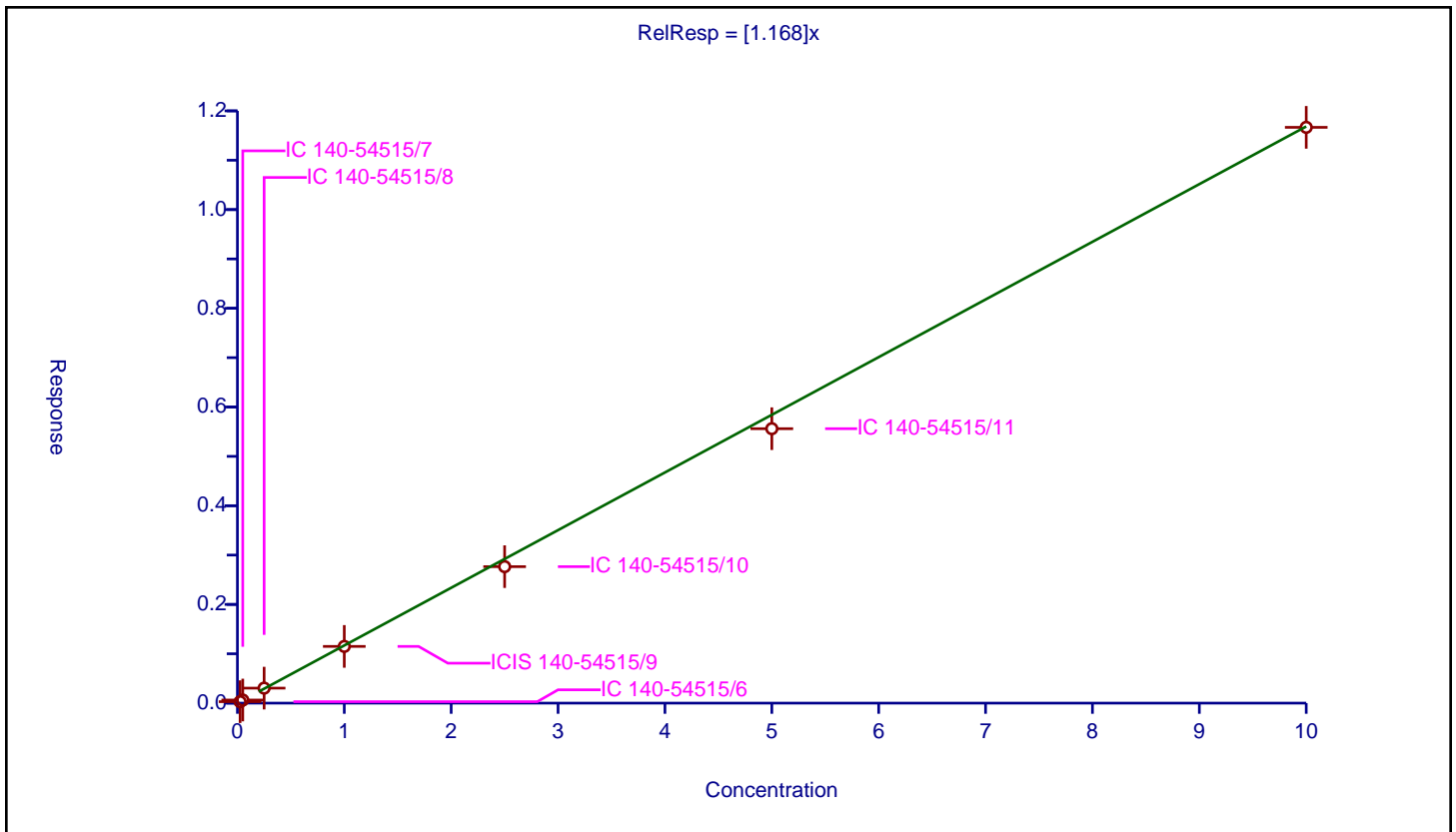
/ N-ethylperfluoro-1-octanesulfonamide

Curve Type: Average
Weighting: Conc_Sq
Origin: Force
Dependency: Response
Calib Mode: IsoDil
Response Base: AREA
RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.168

Error Coefficients	
Standard Error:	2050000
Relative Standard Error:	4.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.029171	1.25	519654.0	1.166834	Y
2	IC 140-54515/7	0.05	0.063046	1.25	516960.0	1.260929	Y
3	IC 140-54515/8	0.25	0.304249	1.25	491391.0	1.216994	Y
4	ICIS 140-54515/9	1.0	1.149116	1.25	512905.0	1.149116	Y
5	IC 140-54515/10	2.5	2.765638	1.25	500239.0	1.106255	Y
6	IC 140-54515/11	5.0	5.560596	1.25	507678.0	1.112119	Y
7	IC 140-54515/12	10.0	11.666501	1.25	462772.0	1.16665	Y



Calibration

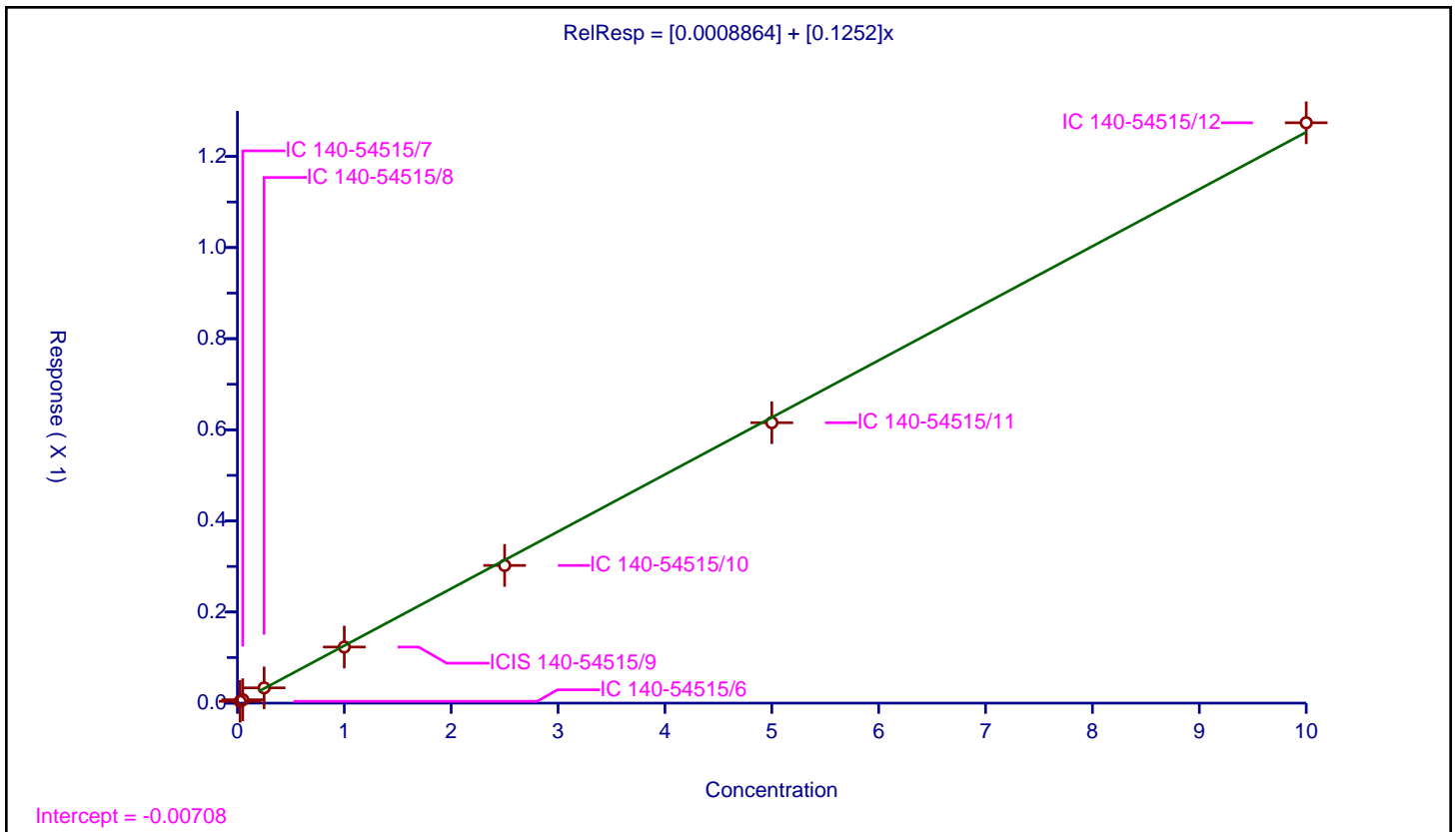
/ Perfluorotetradecanoic acid

Curve Type: Linear
 Weighting: Conc_Sq
 Origin: None
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.0008864
Slope:	0.1252

Error Coefficients	
Standard Error:	3120000
Relative Standard Error:	3.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.003934	1.25	6635881.0	0.157372	Y
2	IC 140-54515/7	0.05	0.00744	1.25	6455611.0	0.148797	Y
3	IC 140-54515/8	0.25	0.033553	1.25	6765277.0	0.134213	Y
4	ICIS 140-54515/9	1.0	0.123164	1.25	6776597.0	0.123164	Y
5	IC 140-54515/10	2.5	0.302208	1.25	6396884.0	0.120883	Y
6	IC 140-54515/11	5.0	0.615607	1.25	6178920.0	0.123121	Y
7	IC 140-54515/12	10.0	1.273944	1.25	5922620.0	0.127394	Y



Calibration

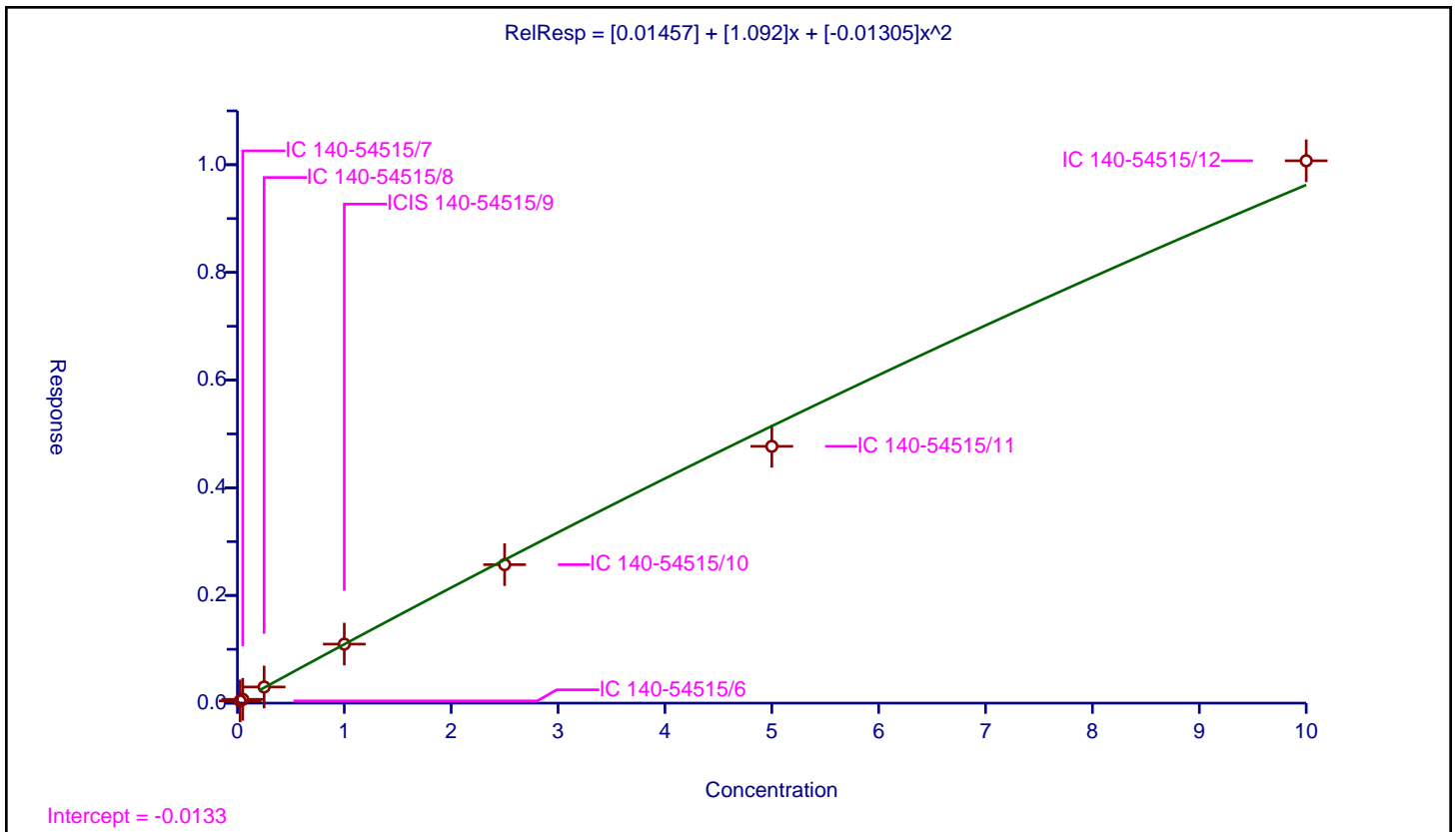
/ Perfluorohexadecanoic acid

Curve Type: Quadratic
 Weighting: Conc_Sq
 Origin: None
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.01457
Slope:	1.092
Second Order:	-0.01305

Error Coefficients	
Standard Error:	20700000
Relative Standard Error:	5.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.041371	1.25	4704223.0	1.654832	Y
2	IC 140-54515/7	0.05	0.070556	1.25	4697373.0	1.411119	Y
3	IC 140-54515/8	0.25	0.300102	1.25	4715970.0	1.200407	Y
4	ICIS 140-54515/9	1.0	1.095943	1.25	4764988.0	1.095943	Y
5	IC 140-54515/10	2.5	2.571889	1.25	4627358.0	1.028756	Y
6	IC 140-54515/11	5.0	4.769259	1.25	4766428.0	0.953852	Y
7	IC 140-54515/12	10.0	10.073658	1.25	4426886.0	1.007366	Y



Calibration

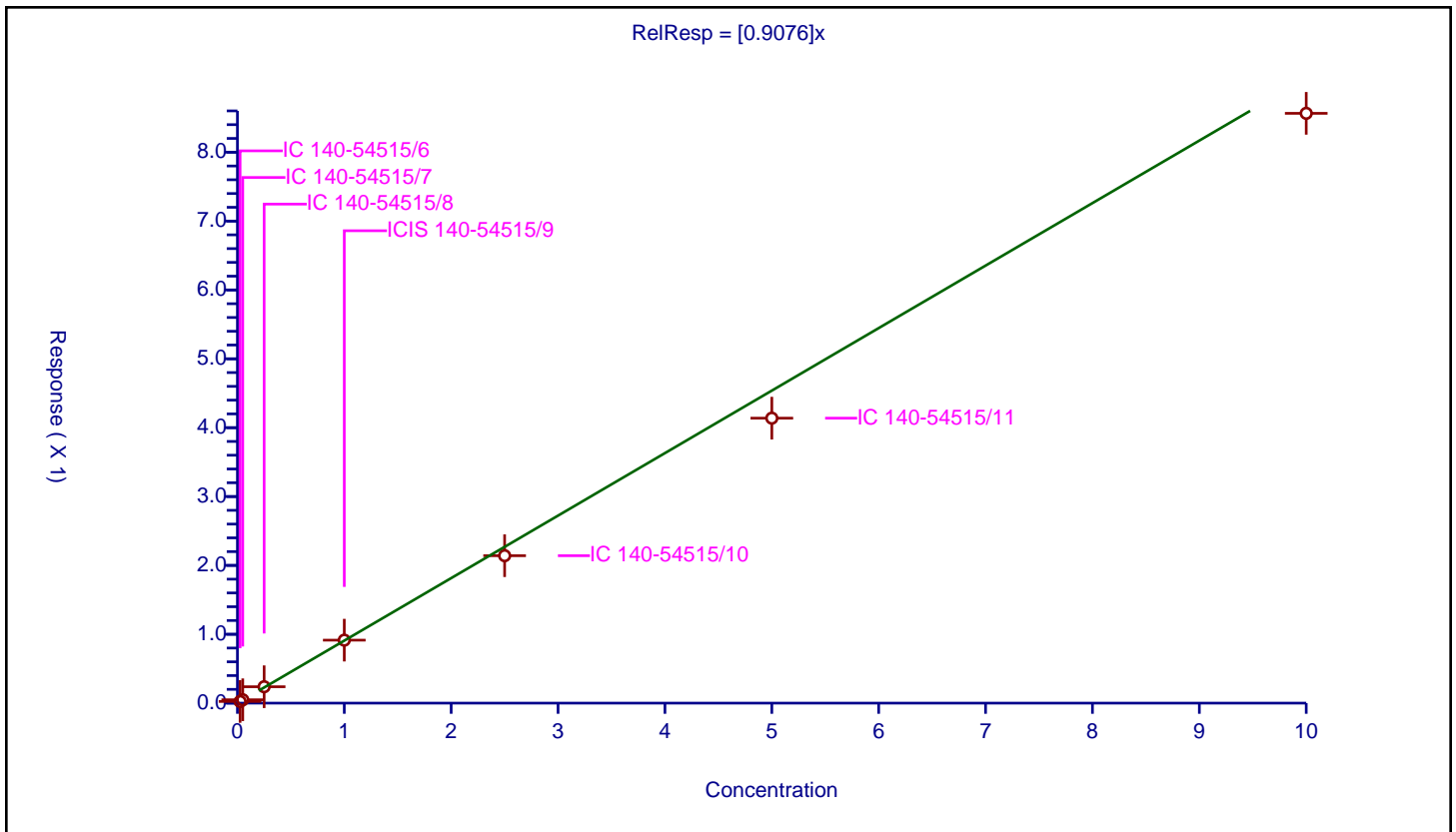
/ Perfluorooctadecanoic acid

Curve Type: Average
 Weighting: Conc_Sq
 Origin: Force
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.9076

Error Coefficients	
Standard Error:	14400000
Relative Standard Error:	6.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.024256	1.25	4704223.0	0.970224	Y
2	IC 140-54515/7	0.05	0.048769	1.25	4697373.0	0.97538	Y
3	IC 140-54515/8	0.25	0.238231	1.25	4715970.0	0.952926	Y
4	ICIS 140-54515/9	1.0	0.914388	1.25	4764988.0	0.914388	Y
5	IC 140-54515/10	2.5	2.141013	1.25	4627358.0	0.856405	Y
6	IC 140-54515/11	5.0	4.137999	1.25	4766428.0	0.8276	Y
7	IC 140-54515/12	10.0	8.564416	1.25	4426886.0	0.856442	Y



FORM VII
PFAS CONTINUING CALIBRATION DATA

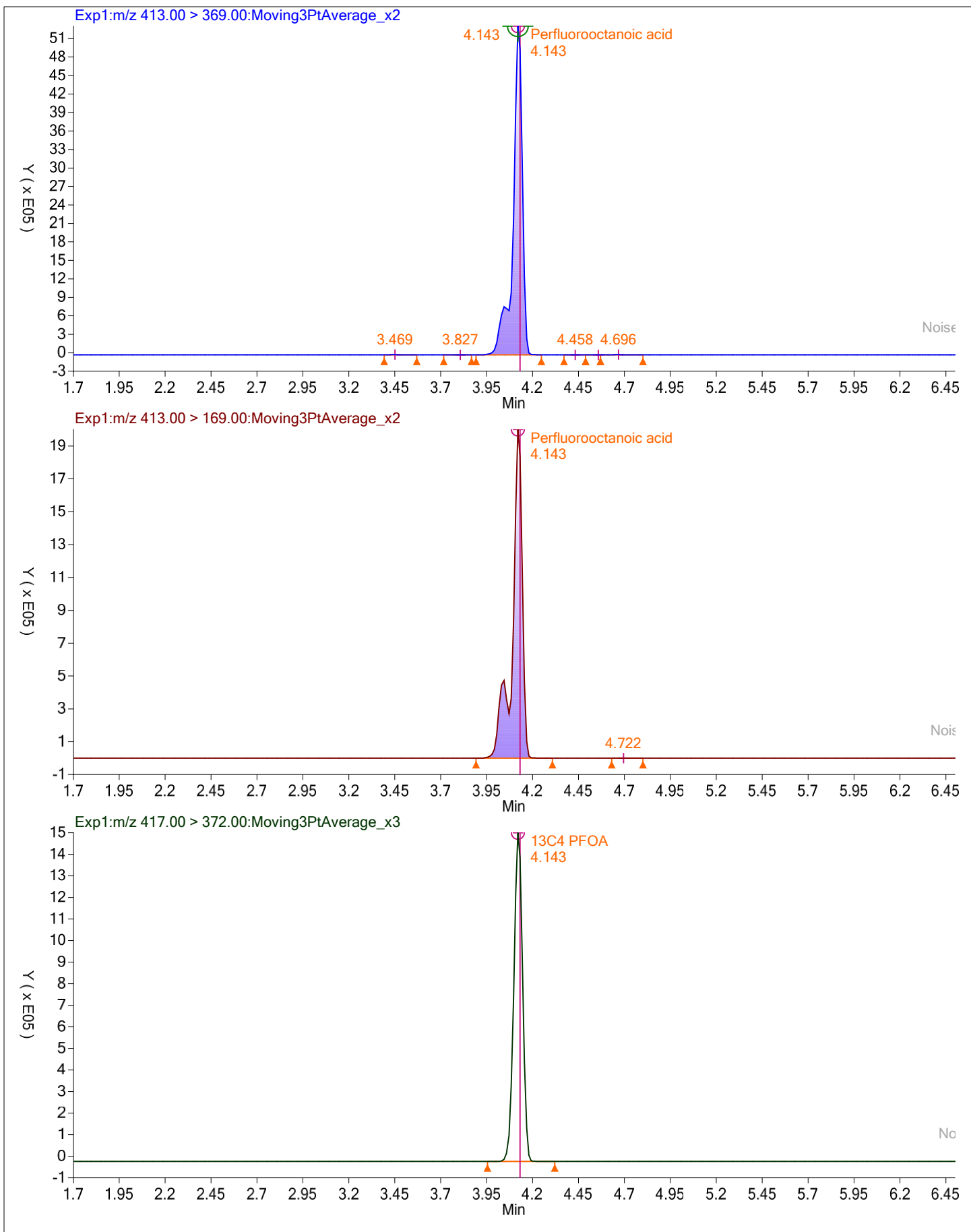
Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab Sample ID: ICV 140-54515/14 Calibration Date: 10/05/2021 23:11
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _014.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7855	0.7959		4.12	4.06	1.3	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.013	1.021		4.17	4.14	0.8	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.126	1.138		4.55	4.50	1.1	40.0
4:2 FTS	AveID	2.500	2.560		4.31	4.20	2.4	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8572	0.8761		4.60	4.50	2.2	40.0
Perfluoropentanesulfonic acid (PFPeS)	L2ID		0.7930		3.91	4.22	-7.3	50.0
HFPO-DA	L2ID		1.365		4.46	4.50	-1.0	40.0
Perfluoroheptanoic acid (PFHpA)	L2ID		1.088		4.65	4.50	3.3	40.0
Perfluorohexanesulfonic acid (PFHxS)	L2ID		1.439		4.79	4.50	6.4	40.0
DONA	AveID	3.243	2.958		4.10	4.50	-8.8	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9947	1.007		4.34	4.28	1.3	40.0
6:2 FTS	L2ID		1.993		4.26	4.27	-0.4	40.0
Perfluorooctanoic acid (PFOA)	L2ID		1.111		4.54	4.50	0.8	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.100	1.014		4.15	4.50	-7.8	40.0
Perfluorononanoic acid (PFNA)	L2ID		0.8983		4.86	4.50	8.1	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	2.308	2.159		4.21	4.50	-6.5	40.0
Perfluorononanesulfonic acid (PFNS)	AveID	1.042	0.997		4.13	4.32	-4.3	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9606	0.9165		4.29	4.50	-4.6	40.0
Perfluorodecanoic acid (PFDA)	L2ID		0.9947		4.75	4.50	5.6	40.0
8:2 FTS	AveID	1.784	1.657		4.13	4.44	-7.1	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	L2ID		0.9249		4.55	4.50	1.2	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.9574	1.012		4.59	4.34	5.8	40.0
Perfluoroundecanoic acid (PFUnA)	L2ID		0.9723		4.34	4.50	-3.5	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.9494	0.9477		4.49	4.50	-0.2	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.858	1.630		3.95	4.50	-12.3	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9075		4.15	4.50	-7.8	40.0
10:2 FTS	AveID	2.221	2.279		4.45	4.34	2.6	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.181		4.62	4.50	2.6	40.0
NMeFOSA	AveID	1.047	1.106		4.75	4.50	5.6	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9879	1.036		4.57	4.36	4.9	40.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab Sample ID: ICV 140-54515/14 Calibration Date: 10/05/2021 23:11
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _014.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.354		4.84	4.50	7.6	40.0
Perfluorotridecanoic acid (PFTrIA)	L2ID		0.7947		4.06	4.50	-9.7	50.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.168	1.354		5.21	4.50	15.8	40.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.1322		4.74	4.50	5.4	40.0
Perfluorohexadecanoic acid	Q2ID		0.9779		4.23	4.50	-5.9	40.0
Perfluorooctadecanoic acid	AveID	0.9076	0.8326		4.13	4.50	-8.3	40.0
13C4 PFBA	Ave	1.324	1.401		1.32	1.25	5.8	50.0
13C5 PFPeA	Ave	1.087	1.133		1.30	1.25	4.2	50.0
13C3 PFBS	Ave	0.7019	0.7471		1.24	1.16	6.4	50.0
M2-4:2 FTS	Ave	0.1052	0.1083		1.20	1.17	2.9	50.0
13C2 PFHxA	Ave	1.116	1.175		1.32	1.25	5.3	50.0
13C3 HFPO-DA	Ave	0.5714	0.6040		1.32	1.25	5.7	50.0
13C4 PFHpA	Ave	1.113	1.113		1.25	1.25	0.0	50.0
18O2 PFHxS	Ave	0.4248	0.4178		1.16	1.18	-1.6	50.0
13C4 PFOA	Ave	1.007	1.037		1.29	1.25	3.0	50.0
M2-6:2 FTS	Ave	0.1078	0.1040		1.15	1.19	-3.5	50.0
13C4 PFOS	Ave	0.5852	0.6176		1.26	1.20	5.5	50.0
13C5 PFNA	Ave	1.279	1.342		1.31	1.25	4.9	50.0
13C8 FOSA	Ave	0.8591	0.8674		1.26	1.25	1.0	50.0
13C2 PFDA	Ave	1.296	1.265		1.22	1.25	-2.3	50.0
M2-8:2 FTS	Ave	0.1316	0.1340		1.22	1.20	1.8	50.0
d3-NMeFOSAA	Ave	0.1774	0.1981		1.40	1.25	11.7	50.0
13C2 PFUnA	Ave	1.237	1.287		1.30	1.25	4.1	50.0
d5-NEtFOSAA	Ave	0.1705	0.1702		1.25	1.25	-0.2	50.0
13C2 PFDoA	Ave	1.319	1.395		1.32	1.25	5.8	50.0
d7-N-MeFOSE-M	Ave	0.1075	0.1105		1.28	1.25	2.7	50.0
d-N-MeFOSA-M	Ave	0.1120	0.1167		1.30	1.25	4.3	50.0
d9-N-EtFOSE-M	Ave	0.1146	0.1147		1.25	1.25	0.1	50.0
d-N-EtFOSA-M	Ave	0.0942	0.0944		1.25	1.25	0.2	50.0
13C2 PFTeDA	Ave	1.211	1.242		1.28	1.25	2.6	50.0
13C2 PFHxDA	Ave	0.8782	0.9190		1.31	1.25	4.6	50.0
13C8 PFOA	Ave	0.9886	1.012		1.28	1.25	2.4	50.0
13C8 PFOS	Ave	0.1256	0.1396		1.33	1.20	11.2	50.0



Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_014.d
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 05-Oct-2021 23:11:18 ALS Bottle#: 14 Worklist Smp#: 14
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020953-014 icv
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist:

Method: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 07-Oct-2021 14:48:19 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1613

First Level Reviewer: cochranj Date: 06-Oct-2021 16:23:03

Ratio Calibration: None

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	2.812	2.812	0.0	0.679	6987039	1.32	106	8889	
2 Perfluorobutanoic acid	212.90 > 169.00	2.812	2.812	0.0	1.000	18069189	4.12		2079	
D 3 13C5 PFPeA	267.90 > 223.00	3.117	3.130	-0.013	0.752	5650264	1.30	104	8813	
4 Perfluoropentanoic acid	262.90 > 219.00	3.117	3.130	-0.013	1.000	19103937	4.17		3736	
D 6 13C3 PFBS	301.90 > 80.00	3.131	3.143	-0.012	0.756	3465403	1.24	106	12340	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.144	3.157	-0.013	1.004	15270909	4.55	Target=3.06	15626	
	298.90 > 99.00	3.144	3.157	-0.013	1.004	5685973		2.69(1.53-4.59)	8867	
D 8 M2-4:2 FTS	329.00 > 81.00	3.424	3.437	-0.013	0.826	504483	1.20	103	566	
7 4:2 FTS	327.00 > 307.00	3.424	3.437	-0.013	1.000	4651534	4.31		7059	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.454	3.469	-0.015	1.103	9978124	3.91	Target=3.47	12664	
	349.00 > 99.00	3.454	3.469	-0.015	1.103	2692222		3.71(1.73-5.20)	8814	
D 9 13C2 PFHxA	315.00 > 270.00	3.454	3.469	-0.015	0.834	5861764	1.32	105	10194	
10 Perfluorohexanoic acid	313.00 > 269.00	3.454	3.469	-0.015	1.000	18486876	4.60	Target=9.74	5135	
	313.00 > 119.00	3.454	3.469	-0.015	1.000	1482669		12.47(4.87-14.61)	3641	
D 12 13C3 HFPO-DA	287.00 > 169.00	3.549	3.562	-0.013	0.857	3012775	1.32	106	7880	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.549	3.562	-0.013	1.000	14802746	4.46			6689	
D 17 18O2 PFHxS										
403.00 > 84.00	3.804	3.815	-0.011	0.918	1971320	1.16		98.4	8722	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.804	3.815	-0.011	1.000	10795264	4.79	Target=2.96		28139	
399.00 > 99.00	3.804	3.815	-0.011	1.000	3104032		3.48(1.48-4.44)		12693	
D 14 13C4 PFHpA										
367.00 > 322.00	3.804	3.815	-0.011	0.918	5553860	1.25		100	12353	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.804	3.815	-0.011	1.000	21751688	4.65	Target=3.35		7257	
363.00 > 169.00	3.804	3.815	-0.011	1.000	6606867		3.29(1.67-5.02)		12851	
68 DONA										
377.00 > 251.00	3.841	3.852	-0.011	0.866	32804430	4.10	Target=1.49		32741	
377.00 > 85.00	3.841	3.852	-0.011	0.866	18407919		1.78(0.74-2.23)		8812	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.131	4.142	-0.011	0.932	10633717	4.34	Target=3.73		19779	
449.00 > 99.00	4.131	4.142	-0.011	0.932	2751374		3.86(1.87-5.61)		13922	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.131	4.142	-0.011	0.997	5047497	1.28		102	17786	
19 6:2 FTS										
427.00 > 407.00	4.143	4.142	0.001	1.000	3533924	4.26			12032	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.143	4.154	-0.011	1.000	492988	1.15		96.5	922	
D 21 13C4 PFOA										
417.00 > 372.00	4.143	4.154	-0.011	1.000	5170463	1.29		103	11773	
* 22 13C2 PFOA										
415.00 > 370.00	4.143	4.154	-0.011		4987828	1.25			16494	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.143	4.154	-0.011	1.000	20672770	4.54	Target=2.40		5405	
413.00 > 169.00	4.143	4.154	-0.011	1.000	8120302		2.55(1.20-3.61)		7970	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.435	4.446	-0.011	1.070	665766	1.33		111	2272	
D 25 13C4 PFOS										
503.00 > 80.00	4.435	4.446	-0.011	1.070	2944786	1.26		106	6261	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.435	4.446	-0.011	1.000	11246828	4.15	Target=3.83		14052	M
499.00 > 99.00	4.435	4.446	-0.011	1.000	2502390		4.49(1.91-5.74)		7816	M
D 27 13C5 PFNA										
468.00 > 423.00	4.459	4.469	-0.010	1.076	6694326	1.31		105	30145	
26 Perfluorononanoic acid										
463.00 > 419.00	4.459	4.469	-0.010	1.000	21648409	4.86	Target=3.68		12194	
463.00 > 169.00	4.459	4.469	-0.010	1.000	4805427		4.50(1.84-5.52)		8901	
63 9CIFOS										
531.00 > 351.00	4.596	4.607	-0.011	1.109	23938826	4.21			40891	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.723	4.721	0.002	1.065	10616061	4.13	Target=3.97		21527	
549.00 > 99.00	4.723	4.721	0.002	1.065	2705275		3.92(1.99-5.96)		12411	
D 34 13C8 FOSA										
506.00 > 78.00	4.736	4.748	-0.012	1.143	4326566	1.26		101	5281	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.736	4.748	-0.012	1.000	14274954	4.29			8020	
D 32 13C2 PFDA										
515.00 > 470.00	4.749	4.762	-0.013	1.146	6310941	1.22		97.7	22677	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.749	4.762	-0.013	1.000	22599592	4.75	Target=10.11		8621	
513.00 > 169.00	4.749	4.762	-0.013	1.000	1869525		12.09(5.06-15.17)		626	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.763	4.775	-0.012	1.150	640118	1.22		102	1418	
31 8:2 FTS										
527.00 > 507.00	4.763	4.775	-0.012	1.000	3933432	4.13			16014	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.883	4.895	-0.012	1.178	987986	1.40		112	932	
36 NMeFOSAA										
570.00 > 419.00	4.883	4.895	-0.012	1.000	3289538	4.55			3417	
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.979	4.992	-0.013	1.123	10823230	4.59	Target=3.80		41537	
599.00 > 99.00	4.979	4.992	-0.013	1.123	2836335		3.82(1.90-5.70)		6420	
D 39 13C2 PFUnA										
565.00 > 520.00	5.008	5.021	-0.013	1.209	6420735	1.30		104	25293	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.008	5.021	-0.013	1.000	22474598	4.34	Target=7.45		9493	
563.00 > 169.00	5.008	5.021	-0.013	1.000	2533028		8.87(3.78-11.33)		12115	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.022	5.035	-0.013	1.212	848788	1.25		99.8	3066	
40 NEtFOSA										
584.00 > 419.00	5.022	5.035	-0.013	1.000	2895758	4.49			1100	
57 11CIFOS										
631.00 > 451.00	5.106	5.118	-0.012	1.151	18070139	3.95			31562	
D 43 13C2 PFDaA										
615.00 > 570.00	5.237	5.250	-0.013	1.264	6960212	1.32		106	20316	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.237	5.250	-0.013	1.000	22738327	4.15	Target=5.33		7799	
613.00 > 169.00	5.237	5.250	-0.013	1.000	3497949		6.50(2.66-7.99)		11106	
50 10:2 FTS										
627.00 > 607.00	5.266	5.280	-0.014	1.106	5288521	4.45			10468	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.281	5.294	-0.013	1.275	551142	1.28		103	330	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.296	5.294	0.002	1.278	582246	1.30		104	36.9	
49 N-MeFOSE-M										
616.00 > 59.00	5.296	5.294	0.002	1.003	2342398	4.62			1311	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.296	5.309	-0.013	1.000	2317704	4.75			929	
54 PFDoS										
699.00 > 80.00	5.423	5.435	-0.012	1.223	11124791	4.57	Target=4.32		9986	
699.00 > 99.00	5.423	5.435	-0.012	1.223	2677059		4.16(2.19-6.58)		15557	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.436	5.448	-0.012	1.312	572334	1.25		100	344	
62 N-EtFOSE-M										
630.00 > 59.00	5.449	5.461	-0.012	1.002	2788942	4.84			2230	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.449	5.461	-0.012	1.041	19912502	4.06	Target=5.66		6741	
663.00 > 169.00	5.449	5.461	-0.012	1.041	3278499		6.07(2.83-8.48)		8782	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.463	5.461	0.002	1.318	470738	1.25		100	351	
56 N-EtFOSA-M										
526.00 > 169.00	5.463	5.474	-0.011	1.000	2293882	5.21			520	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.638	5.637	0.001	1.361	6193342	1.28		103	17405	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.638	5.637	0.001	1.000	2947717	4.74	Target=1.07		12526	
713.00 > 219.00	5.623	5.637	-0.014	0.997	3021778		0.98(0.53-1.60)		11463	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.948	5.960	-0.012	1.000	16136895	4.23	Target=7.50		5801	
813.00 > 169.00	5.948	5.960	-0.012	1.000	2033565		7.94(3.75-11.26)		4505	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.948	5.960	-0.012	1.436	4583991	1.31		105	7494	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.211	6.220	-0.009	1.044	13739225	4.13	Target=9.98		4619	
913.00 > 169.00	6.211	6.220	-0.009	1.044	1254723		10.95(5.14-15.41)		3381	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63ICVPFC2_FUL_00002

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromf\Knoxville\ChromData\LCA\20211005-20953.b_014.d

Injection Date: 05-Oct-2021 23:11:18

Instrument ID: LCA

Lims ID: ICV

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 14

Worklist Smp#: 14

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

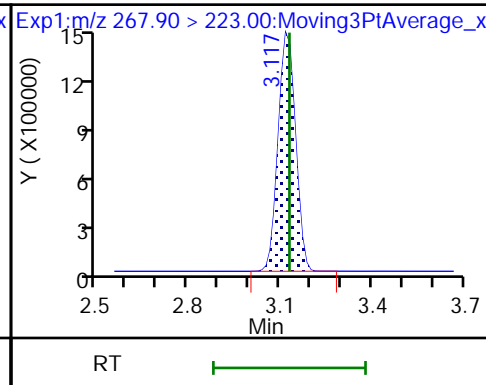
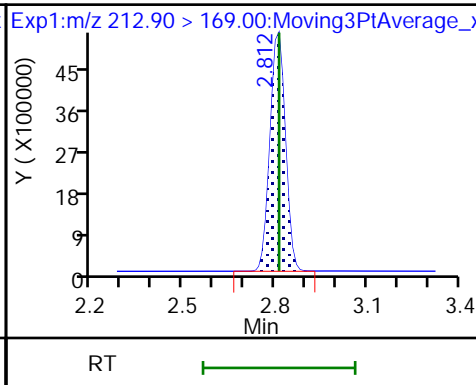
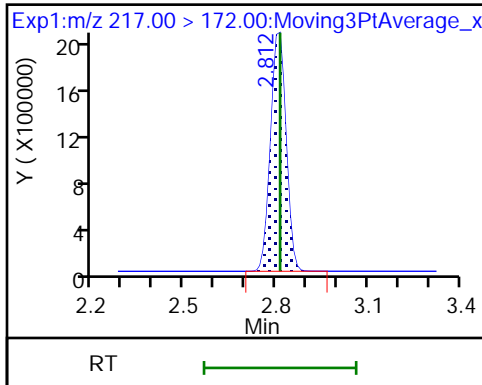
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

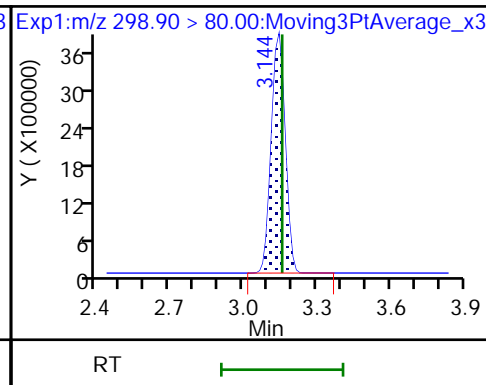
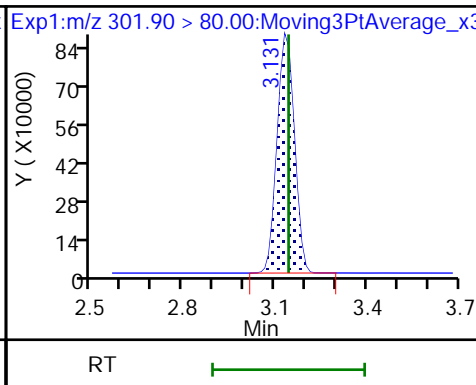
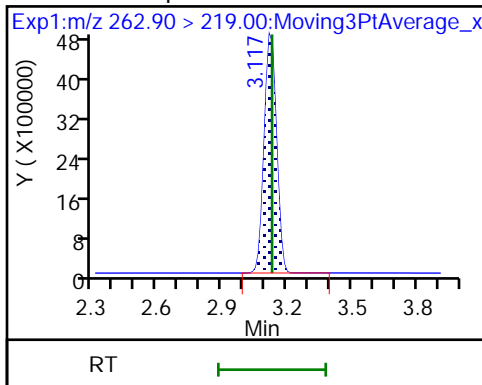
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

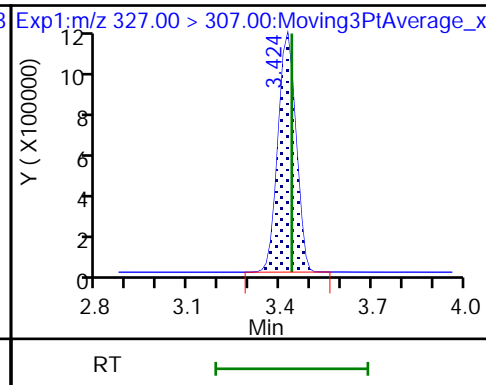
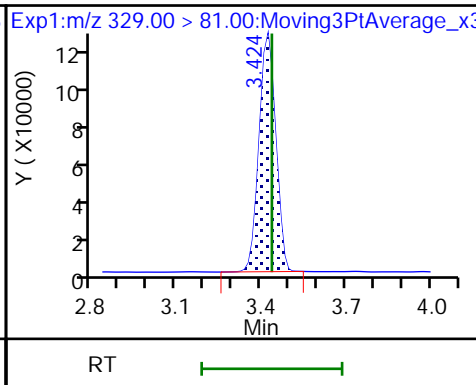
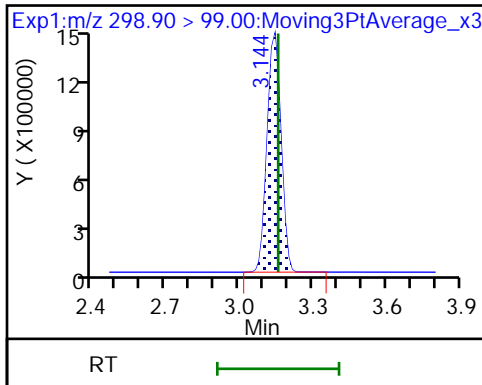
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

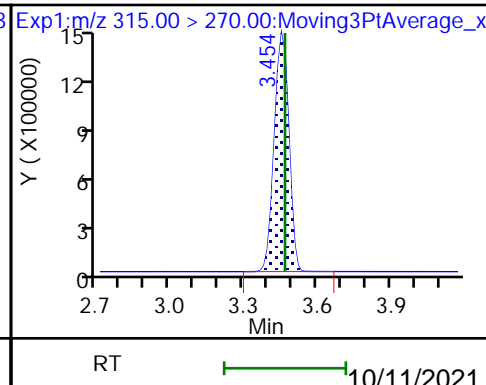
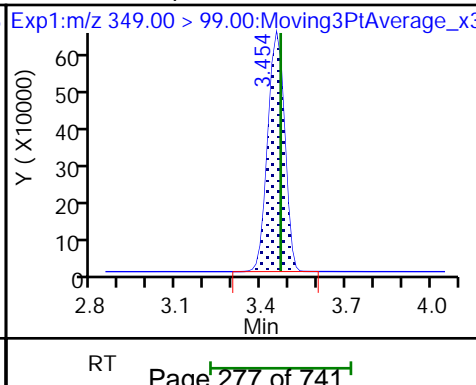
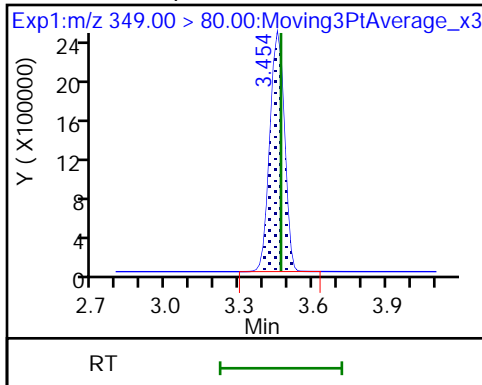
7 4:2 FTS

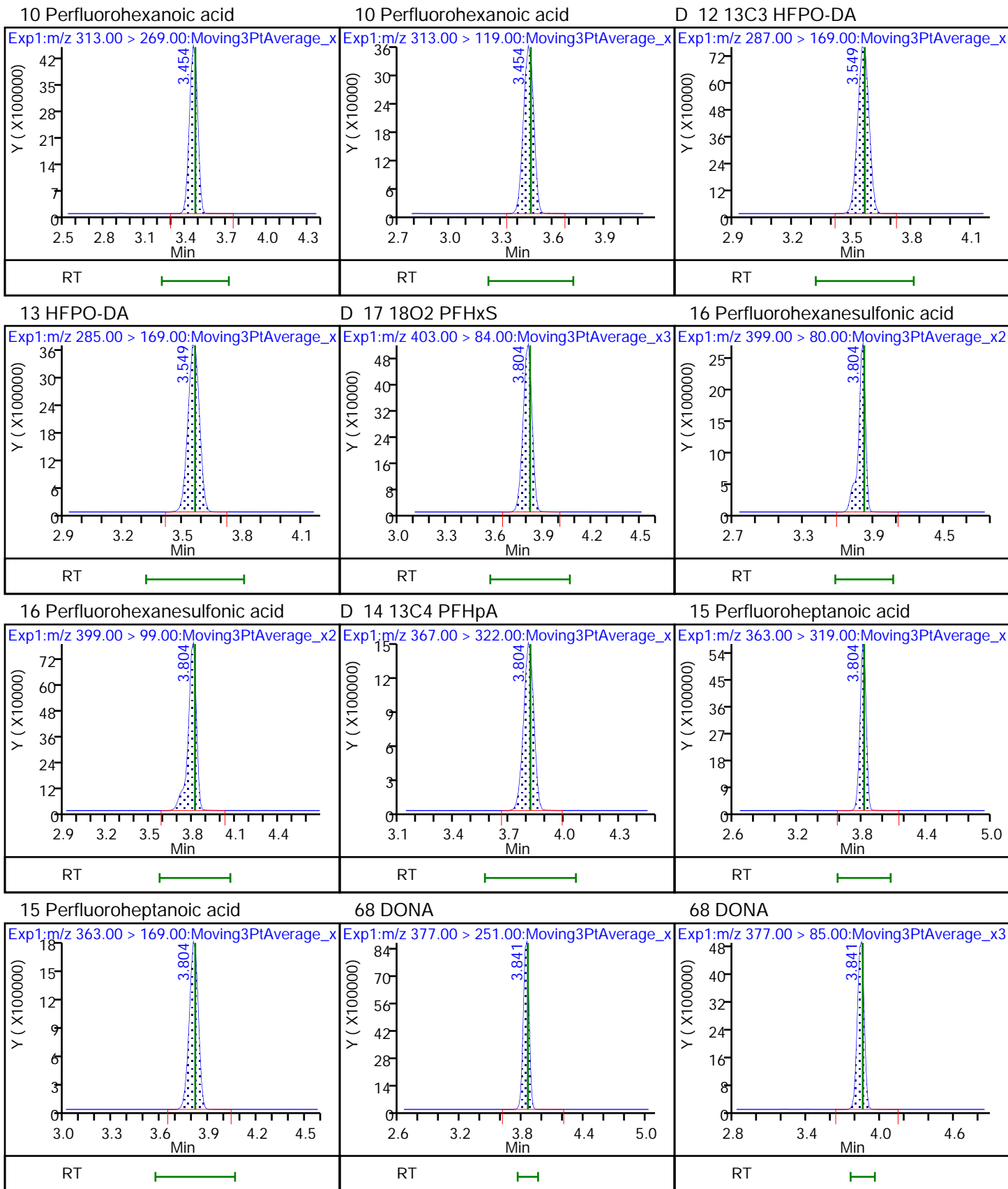


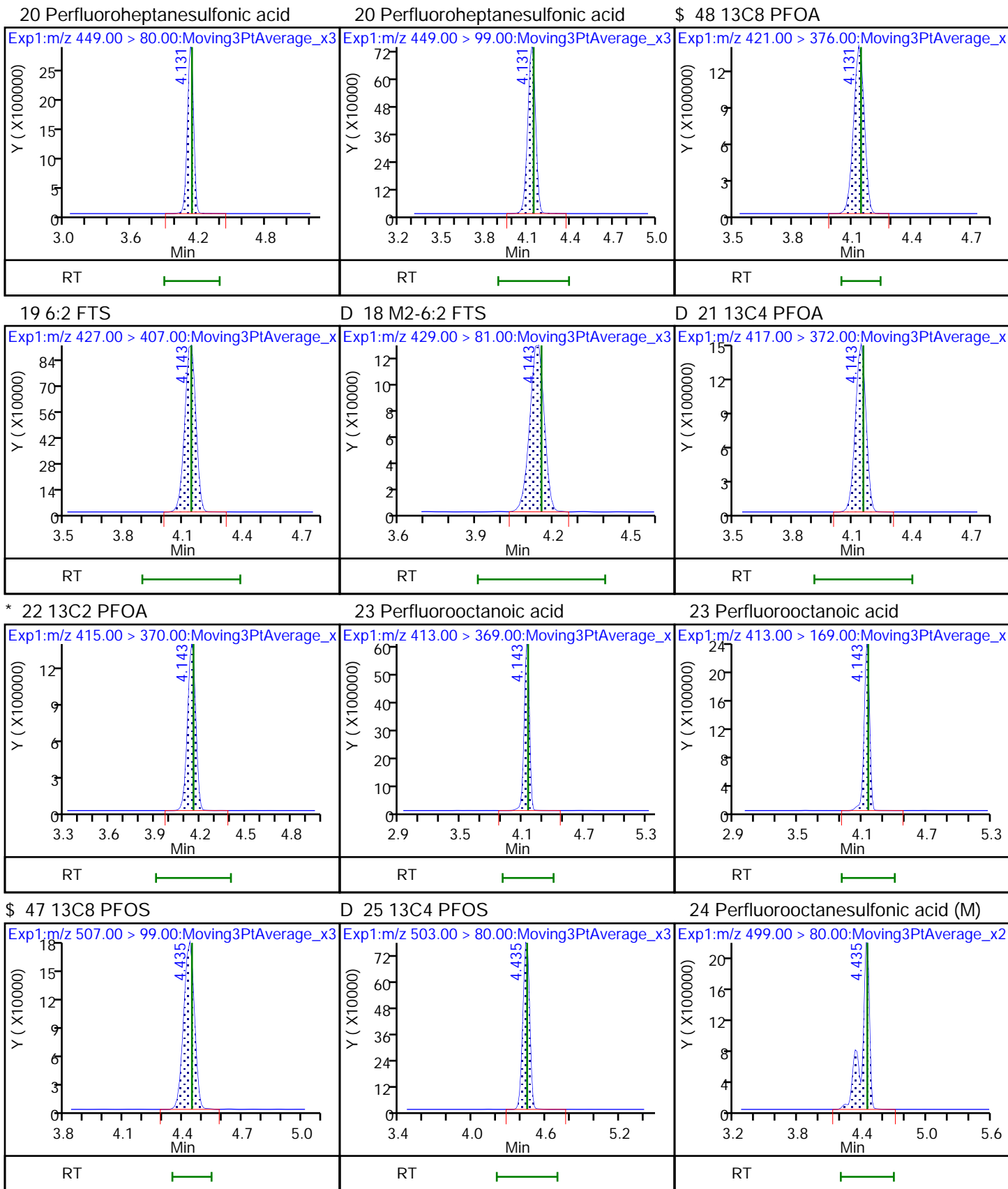
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

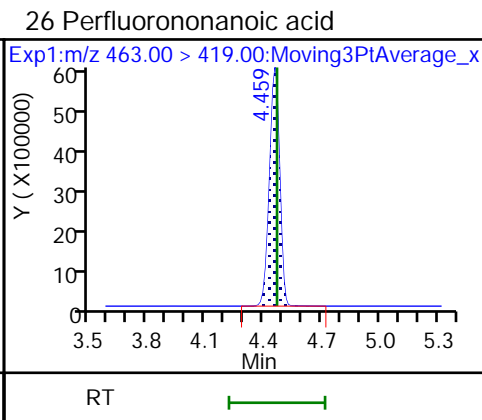
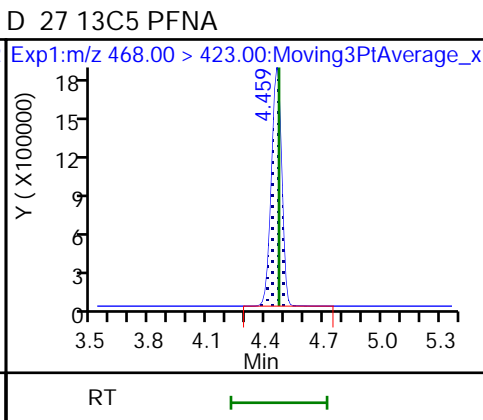
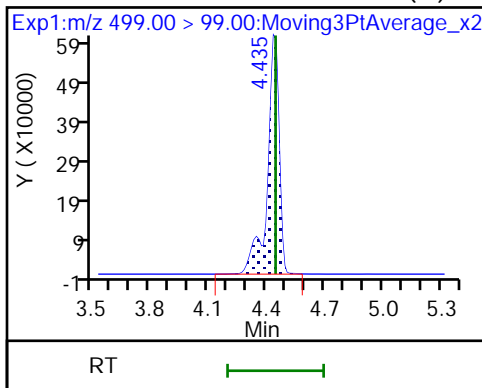
D 9 13C2 PFHxA







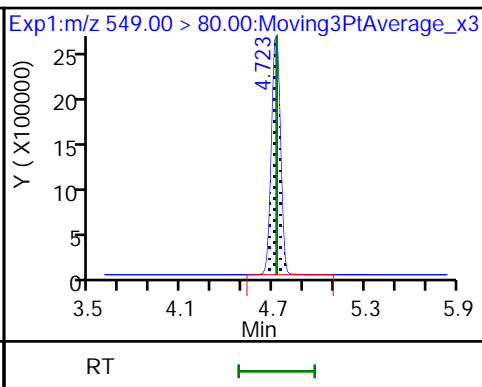
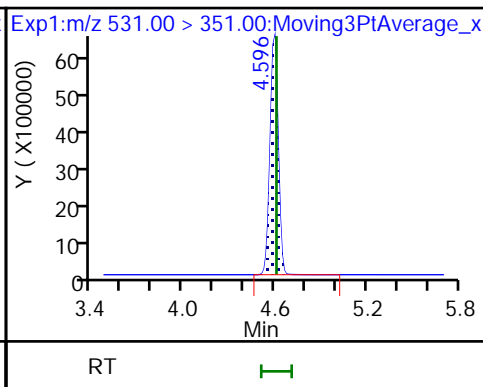
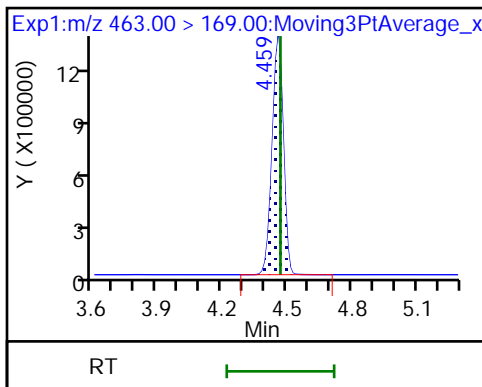
24 Perfluorooctanesulfonic acid (M) D 27 13C5 PFNA



26 Perfluorononanoic acid

63 9CIFOS

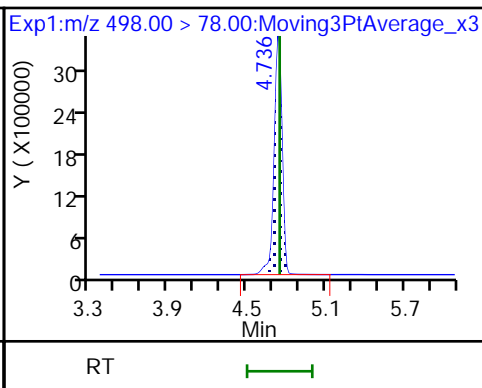
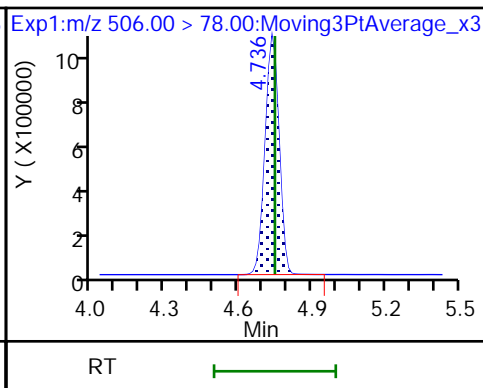
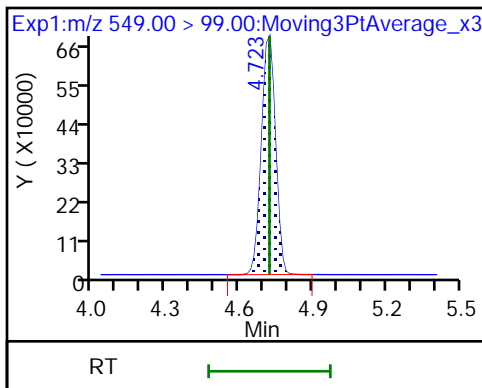
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

D 34 13C8 FOSA

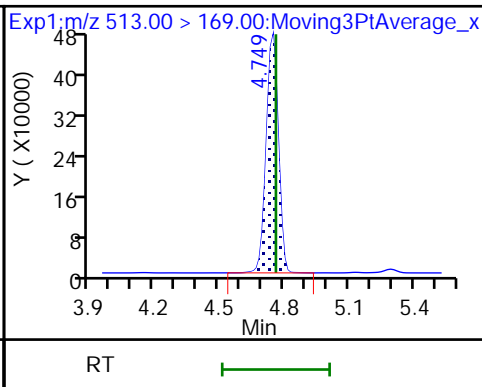
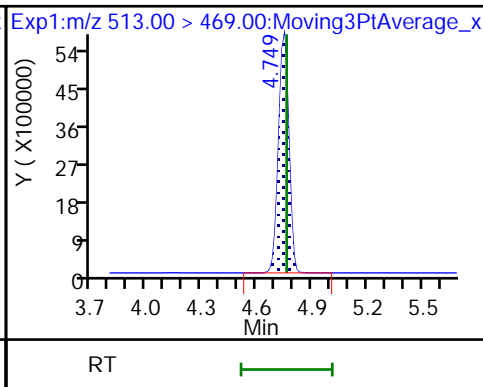
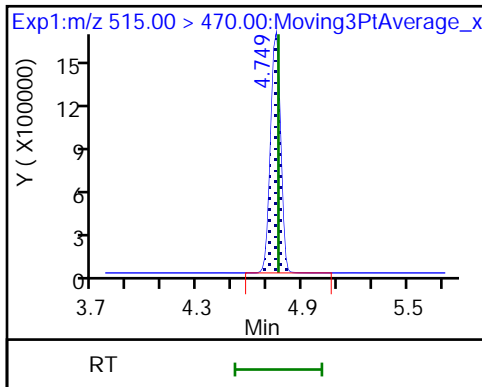
33 Perfluorooctanesulfonamide



D 32 13C2 PFDA

29 Perfluorodecanoic acid

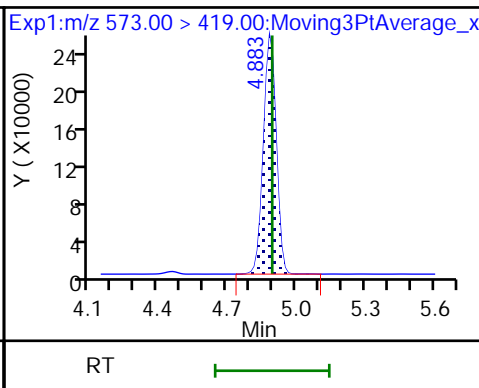
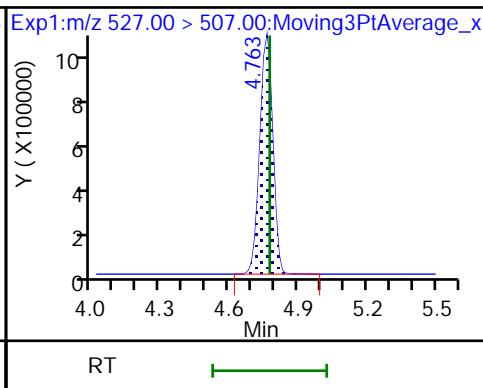
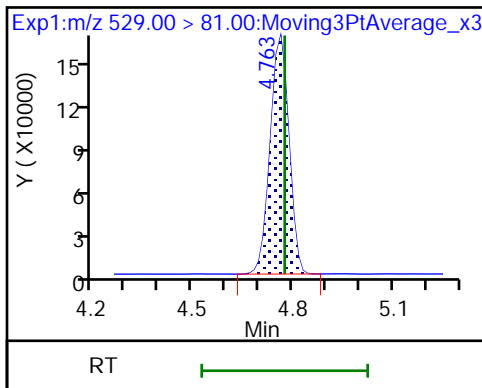
29 Perfluorodecanoic acid



D 30 M2-8:2 FTS

31 8:2 FTS

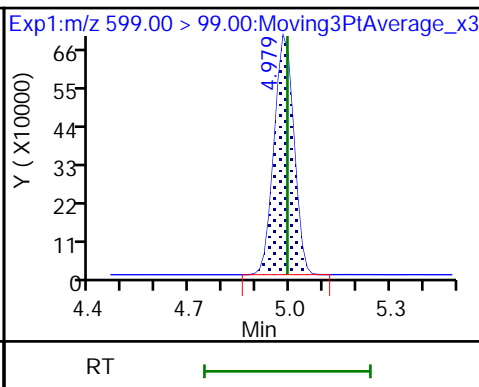
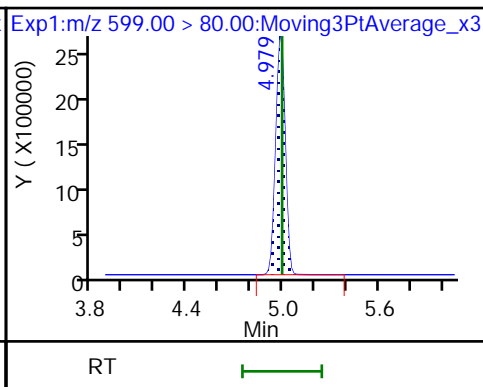
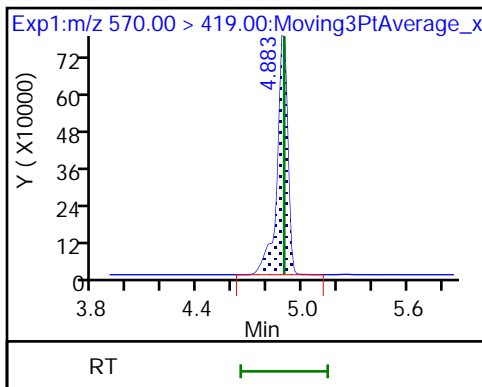
D 35 d3-NMeFOSAA



36 NMeFOSAA

37 Perfluorodecanesulfonic acid

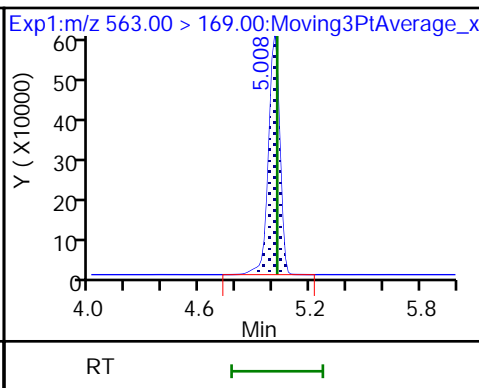
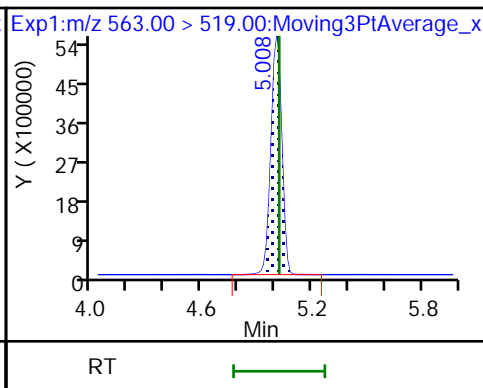
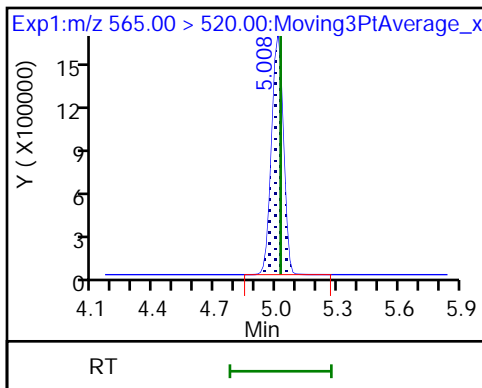
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

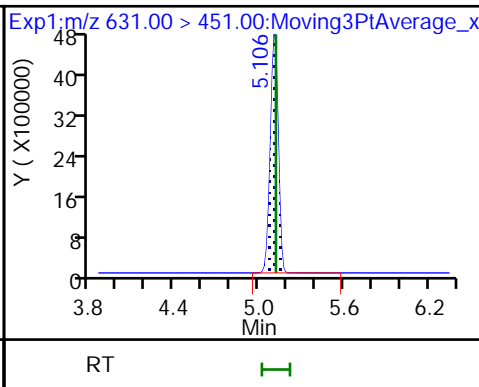
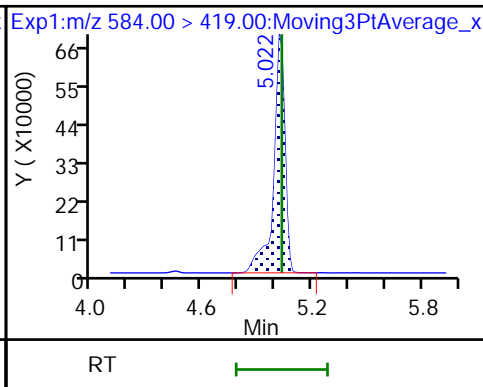
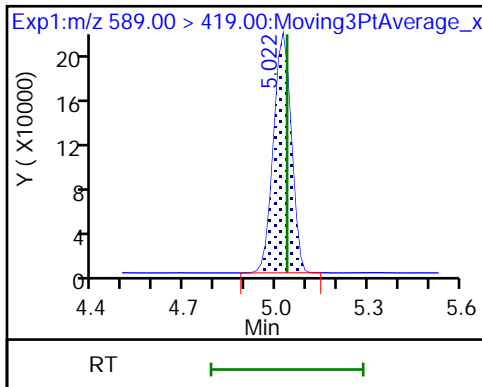
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA

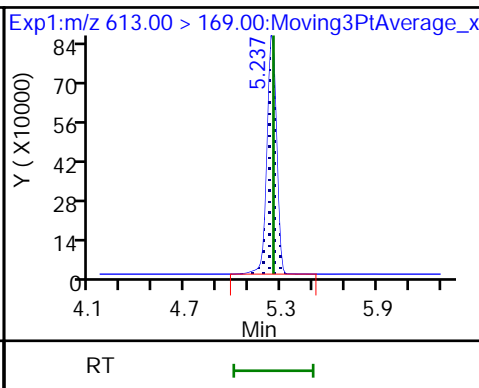
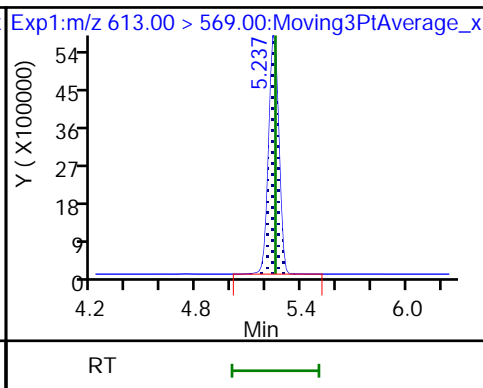
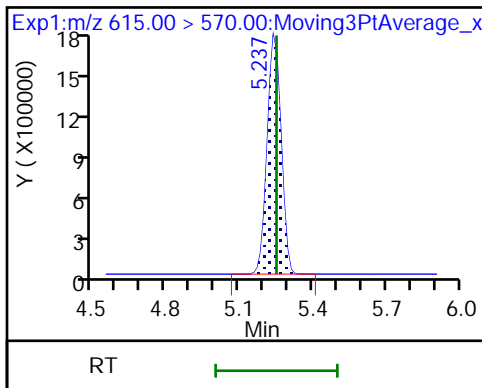
57 11CIFOS



D 43 13C2 PFDoA

42 Perfluorododecanoic acid

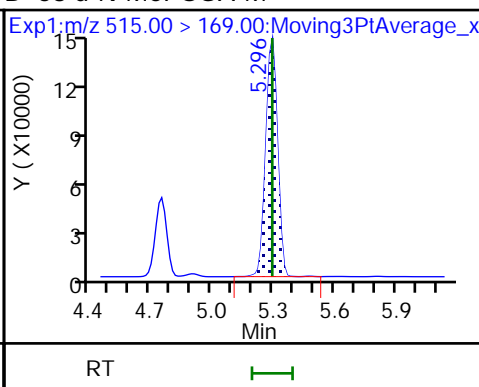
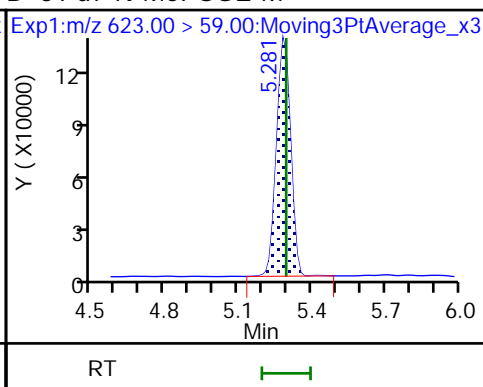
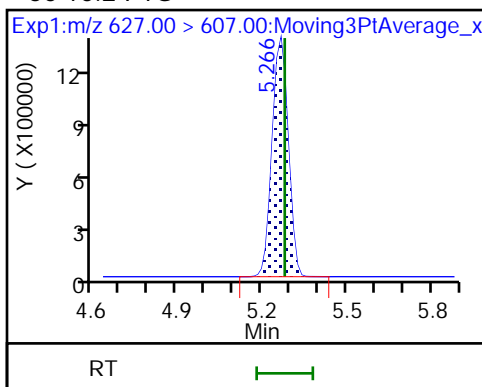
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

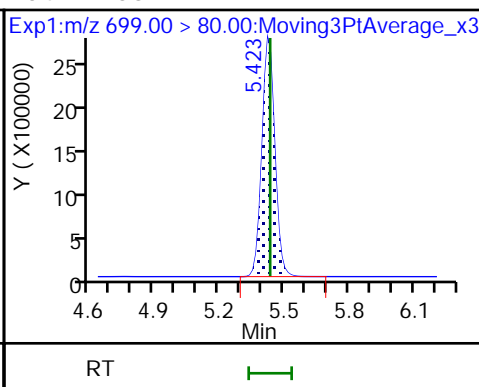
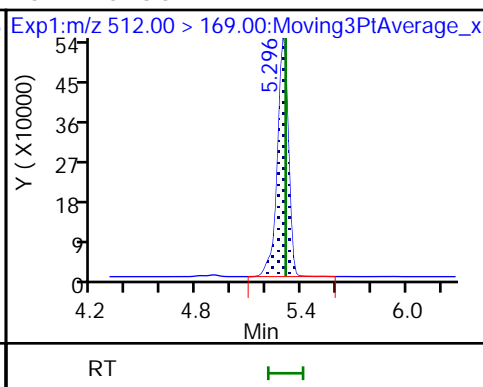
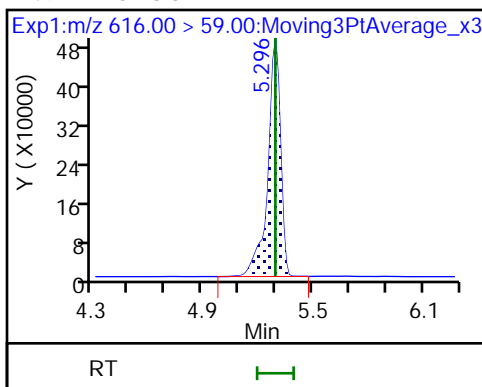
D 58 d-N-MeFOSA-M



49 N-MeFOSE-M

61 NMeFOSA

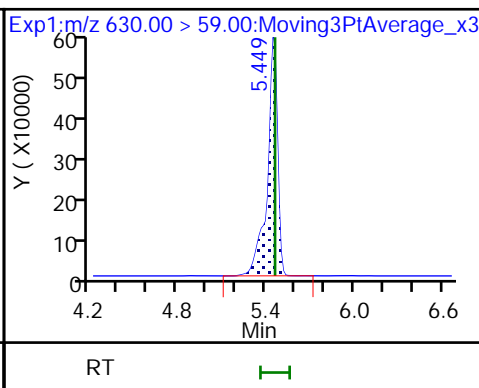
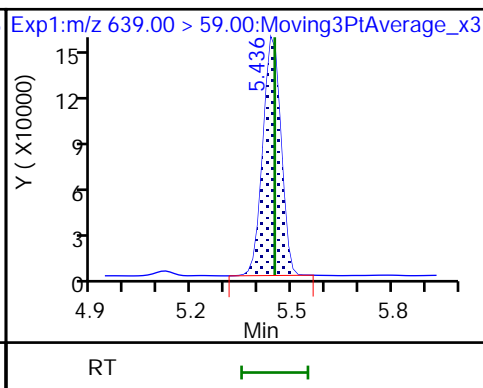
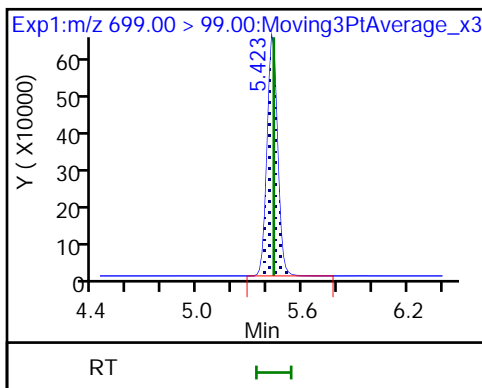
54 PFDoS

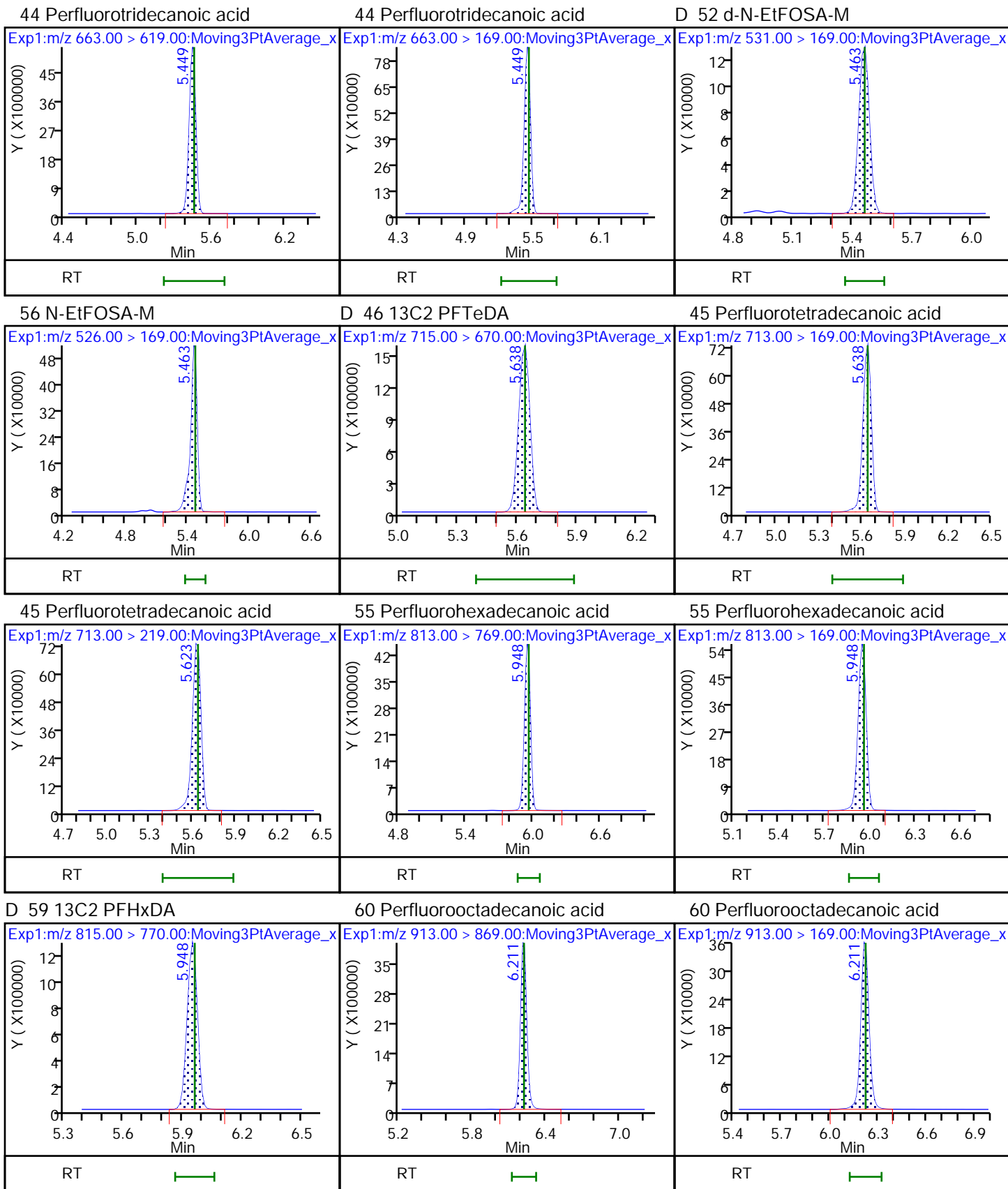


54 PFDoS

D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M





Eurofins TestAmerica, Knoxville

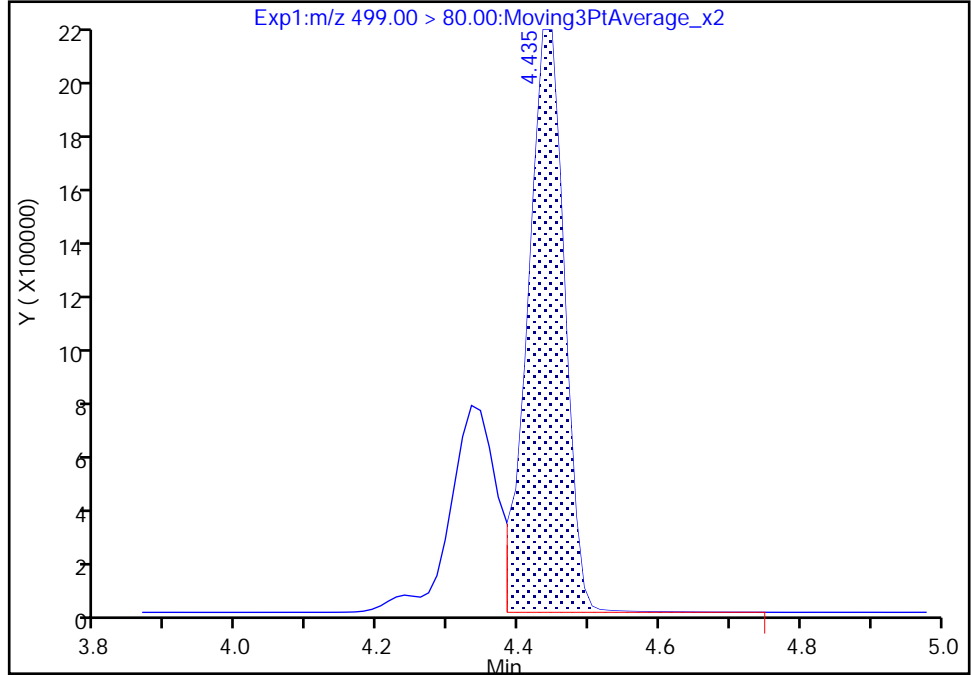
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Injection Date: 05-Oct-2021 23:11:18 Instrument ID: LCA
Lims ID: ICV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

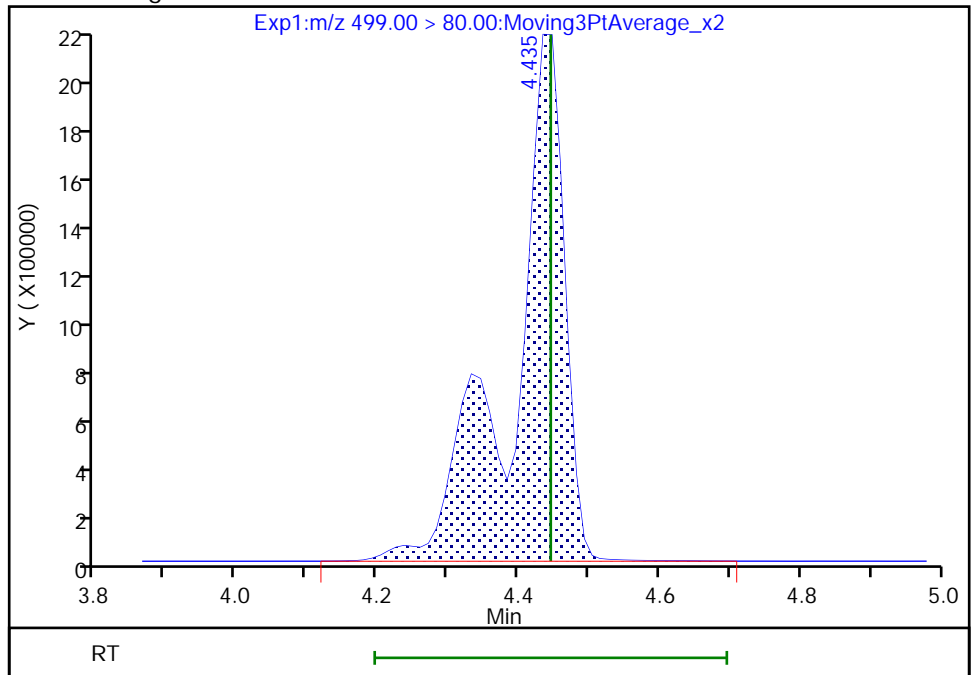
RT: 4.43
Area: 7756717
Amount: 2.862162
Amount Units: ng/ml

Processing Integration Results



RT: 4.43
Area: 11246828
Amount: 4.149983
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:22:41
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

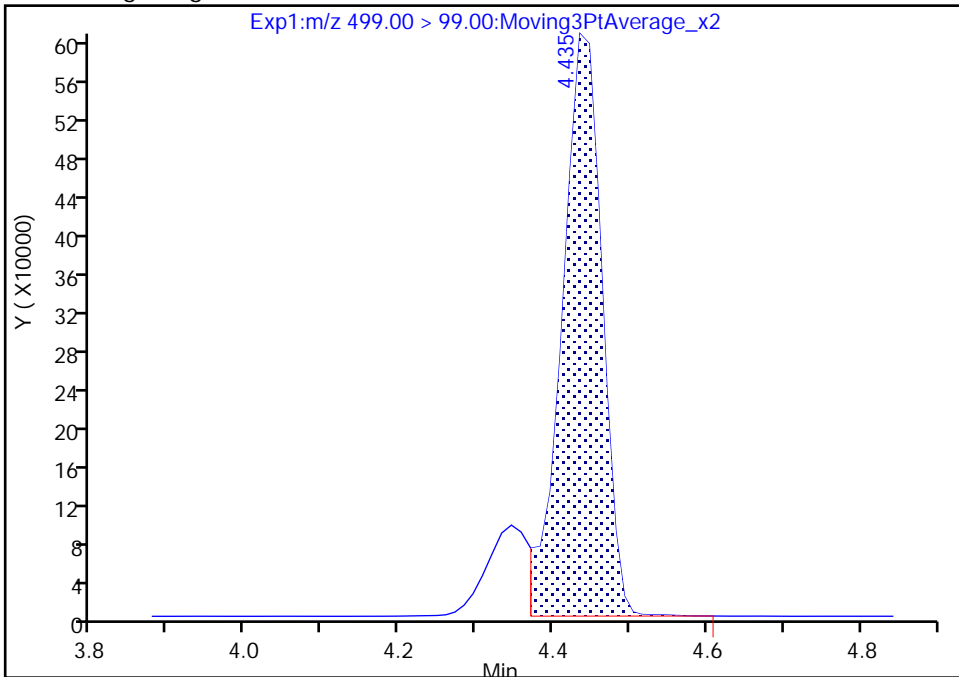
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Injection Date: 05-Oct-2021 23:11:18 Instrument ID: LCA
Lims ID: ICV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

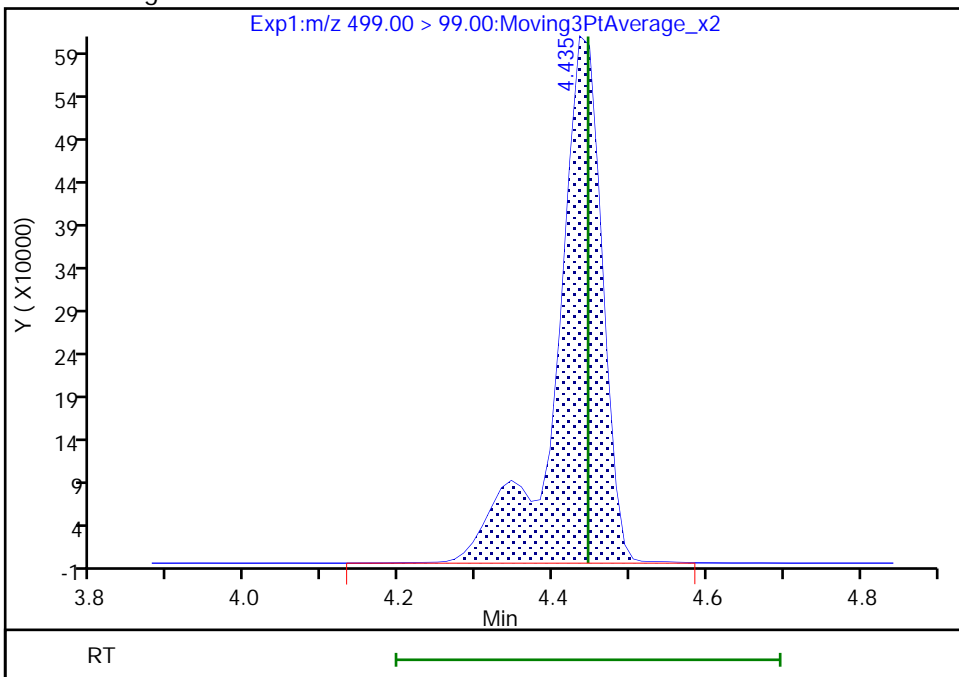
RT: 4.43
Area: 2159866
Amount: 2.862162
Amount Units: ng/ml

Processing Integration Results



RT: 4.43
Area: 2502390
Amount: 4.149983
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:22:51

Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab Sample ID: CCVL 140-54568/6 Calibration Date: 10/06/2021 21:10
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _006.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7855	0.8433		0.0537	0.0500	7.4	50.0
Perfluoropentanoic acid (PFPeA)	AveID	1.013	1.112		0.0549	0.0500	9.8	50.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.126	1.245		0.0489	0.0442	10.6	50.0
4:2 FTS	AveID	2.500	2.584		0.0483	0.0467	3.4	50.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8572	0.8921		0.0520	0.0500	4.1	50.0
Perfluoropentanesulfonic acid (PFPeS)	L2ID		1.026		0.0511	0.0469	9.0	50.0
HFPO-DA	L2ID		1.556		0.0502	0.0500	0.5	50.0
Perfluorohexanesulfonic acid (PFHxS)	L2ID		1.580		0.0481	0.0455	5.7	50.0
Perfluoroheptanoic acid (PFHpA)	L2ID		1.206		0.0527	0.0500	5.3	50.0
DONA	AveID	3.243	3.337		0.0485	0.0471	2.9	50.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9947	1.085		0.0519	0.0476	9.0	50.0
6:2 FTS	L2ID		2.250		0.0464	0.0474	-2.1	50.0
Perfluorooctanoic acid (PFOA)	L2ID		1.281		0.0496	0.0500	-0.8	50.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.100	1.171		0.0494	0.0464	6.5	50.0
Perfluorononanoic acid (PFNA)	L2ID		0.9614		0.0526	0.0500	5.1	50.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	2.308	2.509		0.0507	0.0466	8.7	50.0
Perfluorononanesulfonic acid (PFNS)	AveID	1.042	1.102		0.0507	0.0480	5.7	50.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9606	0.9871		0.0514	0.0500	2.8	50.0
Perfluorodecanoic acid (PFDA)	L2ID		1.212		0.0537	0.0500	7.3	50.0
8:2 FTS	AveID	1.784	2.056		0.0552	0.0479	15.3	50.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	L2ID		0.9282		0.0434	0.0500	-13.2	50.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.9574	0.9534		0.0480	0.0482	-0.4	50.0
Perfluoroundecanoic acid (PFUnA)	L2ID		1.074		0.0481	0.0500	-3.8	50.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.9494	0.9756		0.0514	0.0500	2.8	50.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.858	2.105		0.0534	0.0471	13.3	50.0
Perfluorododecanoic acid (PFDoA)	Q2ID		1.164		0.0528	0.0500	5.6	50.0
10:2 FTS	AveID	2.221	2.797		0.0607	0.0482	25.9	50.0
2- (N-methylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.303		0.0486	0.0500	-2.8	50.0
NMeFOSA	AveID	1.047	1.051		0.0502	0.0500	0.4	50.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9879	1.067		0.0523	0.0484	8.0	50.0

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Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab Sample ID: CCVL 140-54568/6 Calibration Date: 10/06/2021 21:10
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _006.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.263		0.0458	0.0500	-8.5	50.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.168	1.311		0.0561	0.0500	12.2	50.0
Perfluorotridecanoic acid (PFTriA)	L2ID		1.024		0.0523	0.0500	4.6	50.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.1445		0.0506	0.0500	1.2	50.0
Perfluorohexadecanoic acid	Q2ID		1.475		0.0543	0.0500	8.5	50.0
Perfluorooctadecanoic acid	AveID	0.9076	1.000		0.0551	0.0500	10.2	50.0
13C4 PFBA	Ave	1.324	1.290		1.22	1.25	-2.6	50.0
13C5 PFPeA	Ave	1.087	1.056		1.22	1.25	-2.8	50.0
13C3 PFBS	Ave	0.7019	0.6716		1.11	1.16	-4.3	50.0
M2-4:2 FTS	Ave	0.1052	0.1109		1.23	1.17	5.4	50.0
13C2 PFHxA	Ave	1.116	1.104		1.24	1.25	-1.1	50.0
13C3 HFPO-DA	Ave	0.5714	0.5448		1.19	1.25	-4.7	50.0
13C4 PFHpA	Ave	1.113	1.055		1.19	1.25	-5.2	50.0
18O2 PFHxS	Ave	0.4248	0.4185		1.17	1.18	-1.5	50.0
13C4 PFOA	Ave	1.007	0.9936		1.23	1.25	-1.3	50.0
M2-6:2 FTS	Ave	0.1078	0.1284		1.42	1.19	19.1	50.0
13C4 PFOS	Ave	0.5852	0.5657		1.16	1.20	-3.3	50.0
13C5 PFNA	Ave	1.279	1.209		1.18	1.25	-5.5	50.0
13C8 FOSA	Ave	0.8591	0.9198		1.34	1.25	7.1	50.0
13C2 PFDA	Ave	1.296	1.290		1.25	1.25	-0.4	50.0
M2-8:2 FTS	Ave	0.1316	0.1489		1.35	1.20	13.1	50.0
d3-NMeFOSAA	Ave	0.1774	0.1631		1.15	1.25	-8.0	50.0
13C2 PFUnA	Ave	1.237	1.200		1.21	1.25	-3.0	50.0
d5-NEtFOSAA	Ave	0.1705	0.1693		1.24	1.25	-0.7	50.0
13C2 PFDoA	Ave	1.319	1.239		1.17	1.25	-6.1	50.0
d7-N-MeFOSE-M	Ave	0.1075	0.1225		1.42	1.25	13.9	50.0
d-N-MeFOSA-M	Ave	0.1120	0.1066		1.19	1.25	-4.8	50.0
d9-N-EtFOSE-M	Ave	0.1146	0.1348		1.47	1.25	17.6	50.0
d-N-EtFOSA-M	Ave	0.0942	0.0929		1.23	1.25	-1.4	50.0
13C2 PFTeDA	Ave	1.211	1.164		1.20	1.25	-3.8	50.0
13C2 PFHxDA	Ave	0.8782	0.8416		1.20	1.25	-4.2	50.0
13C8 PFOA	Ave	0.9886	0.9132		1.16	1.25	-7.6	50.0
13C8 PFOS	Ave	0.1256	0.1210		1.15	1.20	-3.7	50.0

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_006.d
 Lims ID: CCVL
 Client ID:
 Sample Type: CCVL
 Inject. Date: 06-Oct-2021 21:10:55 ALS Bottle#: 6 Worklist Smp#: 6
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-006 ccvl
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 16:11:14 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: mcwhirterl Date: 07-Oct-2021 02:34:03

Ratio Calibration: None

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	2.823	2.801	0.022	0.677	7213479	1.22	97.4	18869	
2 Perfluorobutanoic acid	212.90 > 169.00	2.823	2.812	0.011	1.000	243321	0.0537	107	64.4	
D 3 13C5 PFPeA	267.90 > 223.00	3.143	3.129	0.014	0.754	5906848	1.21	97.2	13449	
4 Perfluoropentanoic acid	262.90 > 219.00	3.143	3.129	0.014	1.000	262708	0.0549	110	80.4	
D 6 13C3 PFBS	301.90 > 80.00	3.157	3.129	0.028	0.758	3492442	1.11	95.7	19824	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.157	3.143	0.014	1.000	165387	0.0489	Target=3.06	111	932
	298.90 > 99.00	3.157	3.143	0.014	1.000	59333		2.79(1.53-4.59)		294
D 8 M2-4:2 FTS	329.00 > 81.00	3.437	3.423	0.014	0.825	579049	1.23	105	1097	
7 4:2 FTS	327.00 > 307.00	3.437	3.423	0.014	1.000	59842	0.0483	103	591	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.482	3.453	0.029	1.103	144583	0.0511	Target=3.47	109	1005
	349.00 > 99.00	3.482	3.453	0.029	1.103	39115		3.70(1.73-5.20)		654
D 9 13C2 PFHxA	315.00 > 270.00	3.482	3.469	0.013	0.836	6172511	1.24	98.9	13346	
10 Perfluorohexanoic acid	313.00 > 269.00	3.482	3.469	0.013	1.000	220267	0.0520	Target=9.74	104	138
	313.00 > 119.00	3.482	3.469	0.013	1.000	16875		13.05(4.87-14.61)		64.3
D 12 13C3 HFPO-DA	287.00 > 169.00	3.575	3.561	0.014	0.858	3046183	1.19	95.3	8937	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.575	3.561	0.014	1.000	189539	0.0502		100	169	
D 17 18O2 PFHxS										
403.00 > 84.00	3.827	3.803	0.024	0.919	2213911	1.17		98.5	7861	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.827	3.803	0.024	1.000	134584	0.0481	Target=2.96	106	563	M
399.00 > 99.00	3.827	3.803	0.024	1.000	40287		3.34(1.48-4.44)		248	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.827	3.815	0.012	0.919	5900208	1.18		94.8	12037	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.840	3.815	0.025	1.003	284741	0.0527	Target=3.35	105	296	
363.00 > 169.00	3.827	3.815	0.012	1.000	82138		3.47(1.67-5.02)		375	
68 DONA										
377.00 > 251.00	3.864	3.840	0.024	0.865	397768	0.0485	Target=1.49	103	997	
377.00 > 85.00	3.864	3.840	0.024	0.865	228454		1.74(0.74-2.23)		1418	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.155	4.143	0.012	0.930	130663	0.0519	Target=3.73	109	877	
449.00 > 99.00	4.155	4.143	0.012	0.930	34640		3.77(1.87-5.61)		337	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.155	4.143	0.012	0.997	5106384	1.15		92.4	8641	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.167	4.143	0.024	1.000	682013	1.41		119	3536	
19 6:2 FTS										
427.00 > 407.00	4.167	4.143	0.024	1.000	61264	0.0464		97.9	441	
D 21 13C4 PFOA										
417.00 > 372.00	4.167	4.155	0.012	1.000	5555687	1.23		98.7	10768	
* 22 13C2 PFOA										
415.00 > 370.00	4.167	4.155	0.012		5591588	1.25			13580	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.167	4.155	0.012	1.000	284731	0.0496	Target=2.40	99.2	145	
413.00 > 169.00	4.167	4.155	0.012	1.000	113475		2.51(1.20-3.61)		389	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.458	4.447	0.012	1.070	646642	1.15		96.3	3189	
D 25 13C4 PFOS										
503.00 > 80.00	4.470	4.447	0.024	1.073	3024018	1.16		96.7	12467	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.470	4.447	0.024	1.000	137468	0.0494	Target=3.83	106	293	M
499.00 > 99.00	4.470	4.447	0.024	1.000	30724		4.47(1.91-5.74)		237	M
D 27 13C5 PFNA										
468.00 > 423.00	4.481	4.470	0.011	1.075	6761626	1.18		94.5	13358	
26 Perfluorononanoic acid										
463.00 > 419.00	4.481	4.470	0.011	1.000	260033	0.0526	Target=3.68	105	237	
463.00 > 169.00	4.481	4.470	0.011	1.000	54939		4.73(1.84-5.52)		128	
63 9CIFOS										
531.00 > 351.00	4.620	4.596	0.024	1.109	295849	0.0507		109	497	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.749	4.722	0.027	1.062	133818	0.0507	Target=3.97	106	534	
549.00 > 99.00	4.749	4.722	0.027	1.062	34650		3.86(1.99-5.96)		227	
D 34 13C8 FOSA										
506.00 > 78.00	4.749	4.736	0.013	1.140	5142999	1.34		107	7044	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.749	4.736	0.013	1.000	203063	0.0514		103	430	
D 32 13C2 PFDA										
515.00 > 470.00	4.776	4.749	0.027	1.146	7214657	1.24		99.6	12457	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.776	4.749	0.027	1.000	349728	0.0537	Target=10.11	107	253	
513.00 > 169.00	4.776	4.749	0.027	1.000	28538		12.25(5.06-15.17)		53.6	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.790	4.763	0.027	1.149	797447	1.35		113	3552	
31 8:2 FTS										
527.00 > 507.00	4.790	4.763	0.027	1.000	65592	0.0552		115	18113	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.909	4.896	0.013	1.178	912130	1.15		92.0	2425	
36 NMeFOSAA										
570.00 > 419.00	4.923	4.896	0.027	1.003	33866	0.0434		86.8	50.0	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	5.008	4.993	0.015	1.120	116290	0.0480	Target=3.80	99.6	776	
599.00 > 99.00	5.008	4.993	0.015	1.120	33880		3.43(1.90-5.70)		249	
D 39 13C2 PFUnA										
565.00 > 520.00	5.036	5.022	0.014	1.209	6709341	1.21		97.0	14014	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.036	5.022	0.014	1.000	288195	0.0481	Target=7.45	96.2	437	
563.00 > 169.00	5.036	5.022	0.014	1.000	35546		8.11(3.78-11.33)		201	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.051	5.036	0.015	1.212	946452	1.24		99.3	4083	
40 NEtFOSA										
584.00 > 419.00	5.065	5.036	0.029	1.003	36936	0.0514		103	151	M
57 11CIFOS										
631.00 > 451.00	5.132	5.119	0.013	1.148	250869	0.0533		113	950	
D 43 13C2 PFDaA										
615.00 > 570.00	5.266	5.251	0.015	1.264	6926812	1.17		93.9	16090	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.266	5.251	0.015	1.000	322605	0.0528	Target=5.33	106	261	
613.00 > 169.00	5.266	5.251	0.015	1.000	47933		6.73(2.66-7.99)		215	
50 10:2 FTS										
627.00 > 607.00	5.295	5.266	0.029	1.106	89788	0.0607		126	585	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.295	5.281	0.014	1.271	684887	1.42		114	378	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.310	5.295	0.015	1.274	596174	1.19		95.2	42.2	
49 N-MeFOSE-M										
616.00 > 59.00	5.310	5.295	0.015	1.003	35707	0.0486		97.2	46.8	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.310	5.295	0.015	1.000	25057	0.0502		100	91.0	
54 PFDoS										
699.00 > 80.00	5.449	5.436	0.013	1.219	130726	0.0523	Target=4.32	108	512	
699.00 > 99.00	5.449	5.436	0.013	1.219	28154		4.64(2.19-6.58)		228	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.449	5.436	0.013	1.308	753571	1.47		118	713	
62 N-EtFOSE-M										
630.00 > 59.00	5.462	5.449	0.013	1.002	38083	0.0457		91.5	91.9	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.475	5.449	0.026	1.314	519414	1.23		98.6	668	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.475	5.462	0.013	1.040	283786	0.0523	Target=5.66	105	220	
663.00 > 169.00	5.475	5.462	0.013	1.040	39027		7.27(2.83-8.48)		220	
56 N-EtFOSA-M										
526.00 > 169.00	5.475	5.462	0.013	1.000	27234	0.0561		112	128	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.666	5.637	0.029	1.360	6510677	1.20		96.2	16436	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.666	5.637	0.029	1.000	37637	0.0506	Target=1.07	101	268	
713.00 > 219.00	5.652	5.637	0.015	0.998	38949		0.97(0.53-1.60)		401	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.973	5.948	0.025	1.000	277656	0.0543	Target=7.50	109	395	
813.00 > 169.00	5.973	5.948	0.025	1.000	32361		8.58(3.75-11.26)		192	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.973	5.948	0.025	1.433	4706074	1.20		95.8	14870	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.240	6.221	0.019	1.045	188252	0.0551	Target=9.98	110	398	
913.00 > 169.00	6.240	6.221	0.019	1.045	15416		12.21(5.14-15.41)		230	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L2PFC2_00003

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_006.d

Injection Date: 06-Oct-2021 21:10:55

Instrument ID: LCA

Lims ID: CCVL

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 6

Worklist Smp#: 6

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

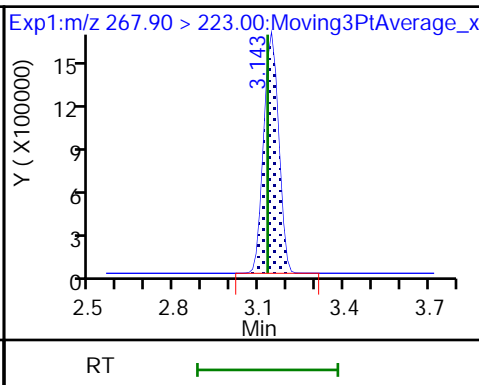
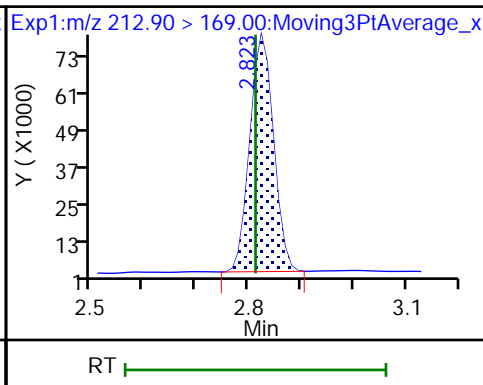
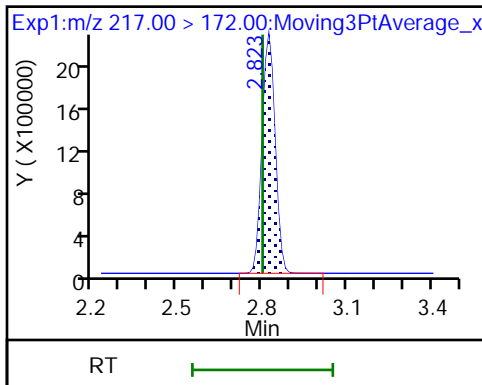
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

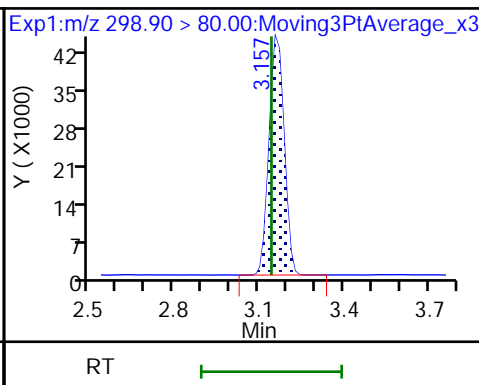
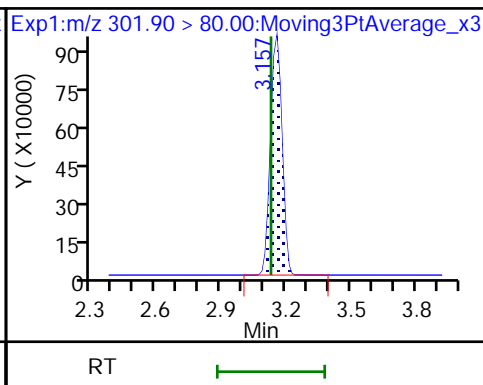
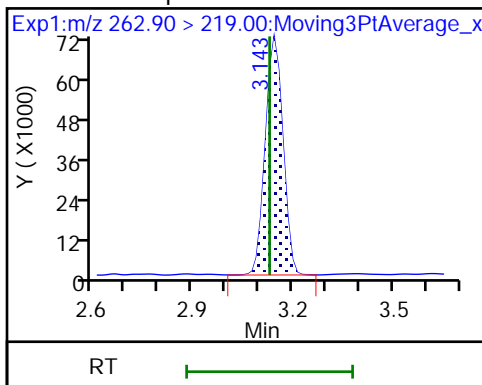
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

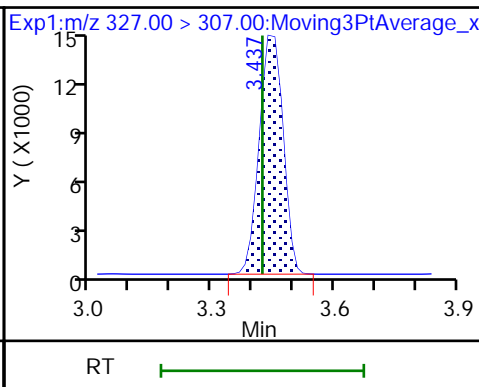
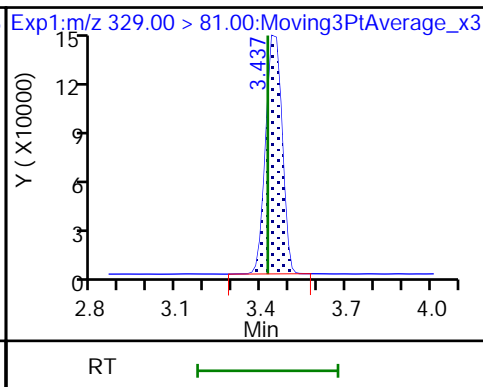
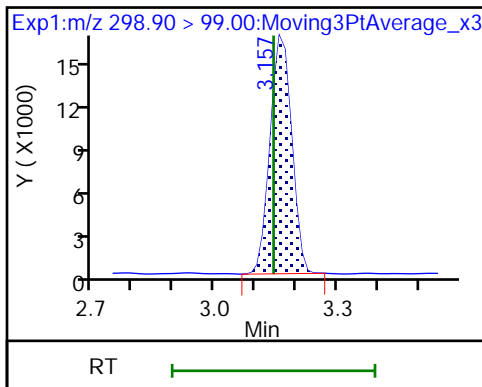
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

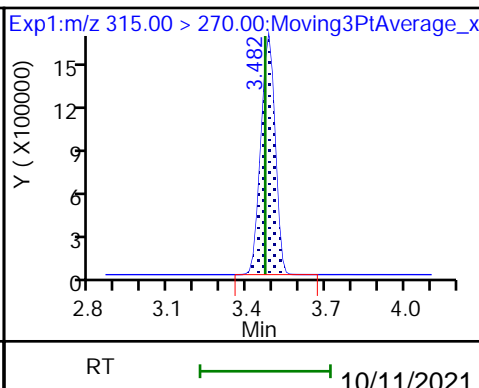
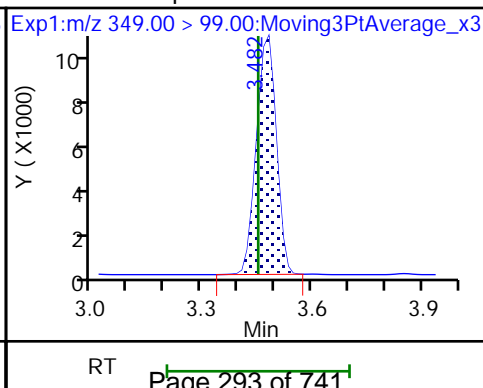
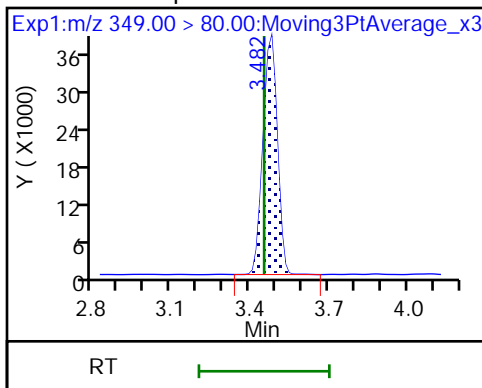
7 4:2 FTS

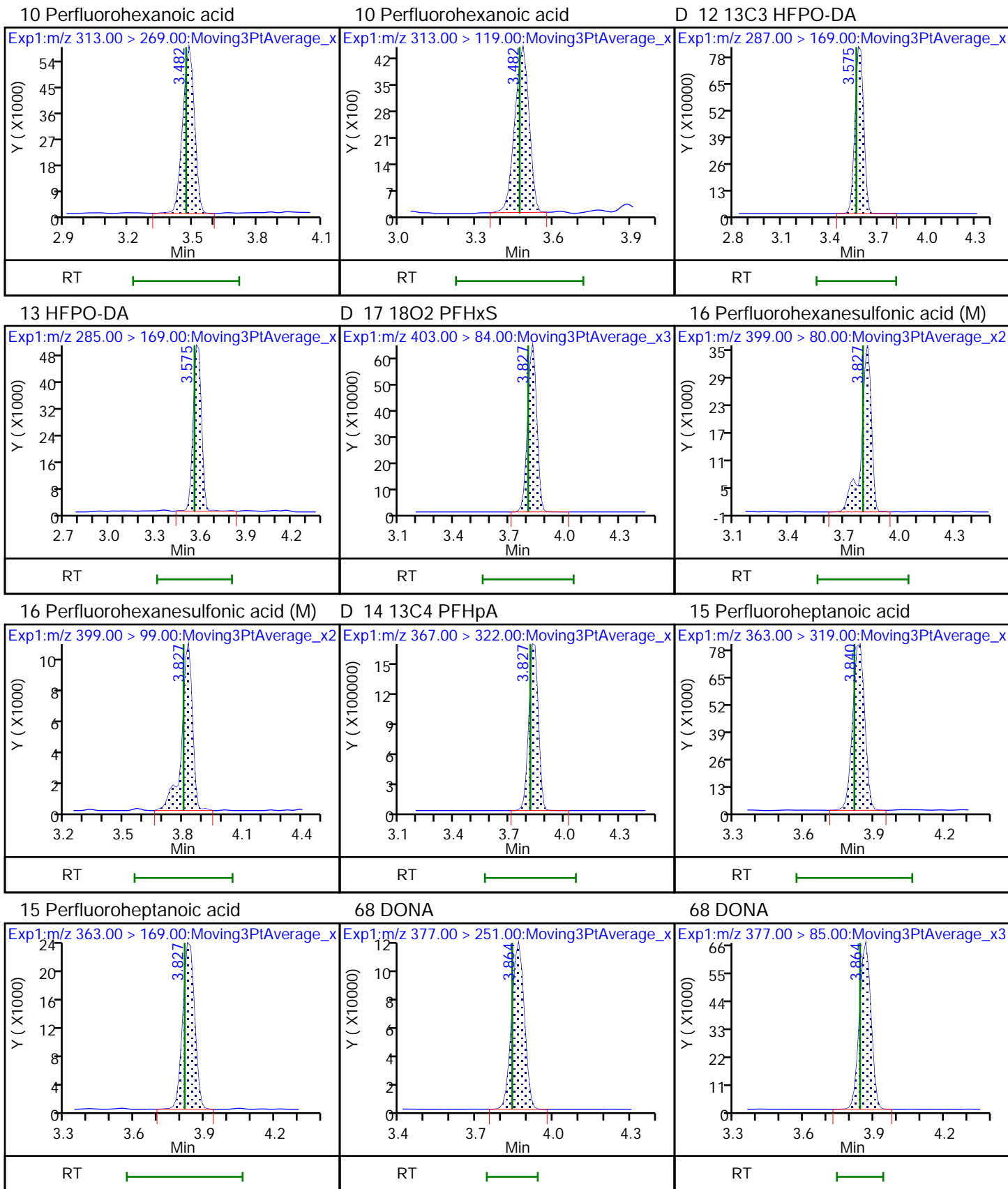


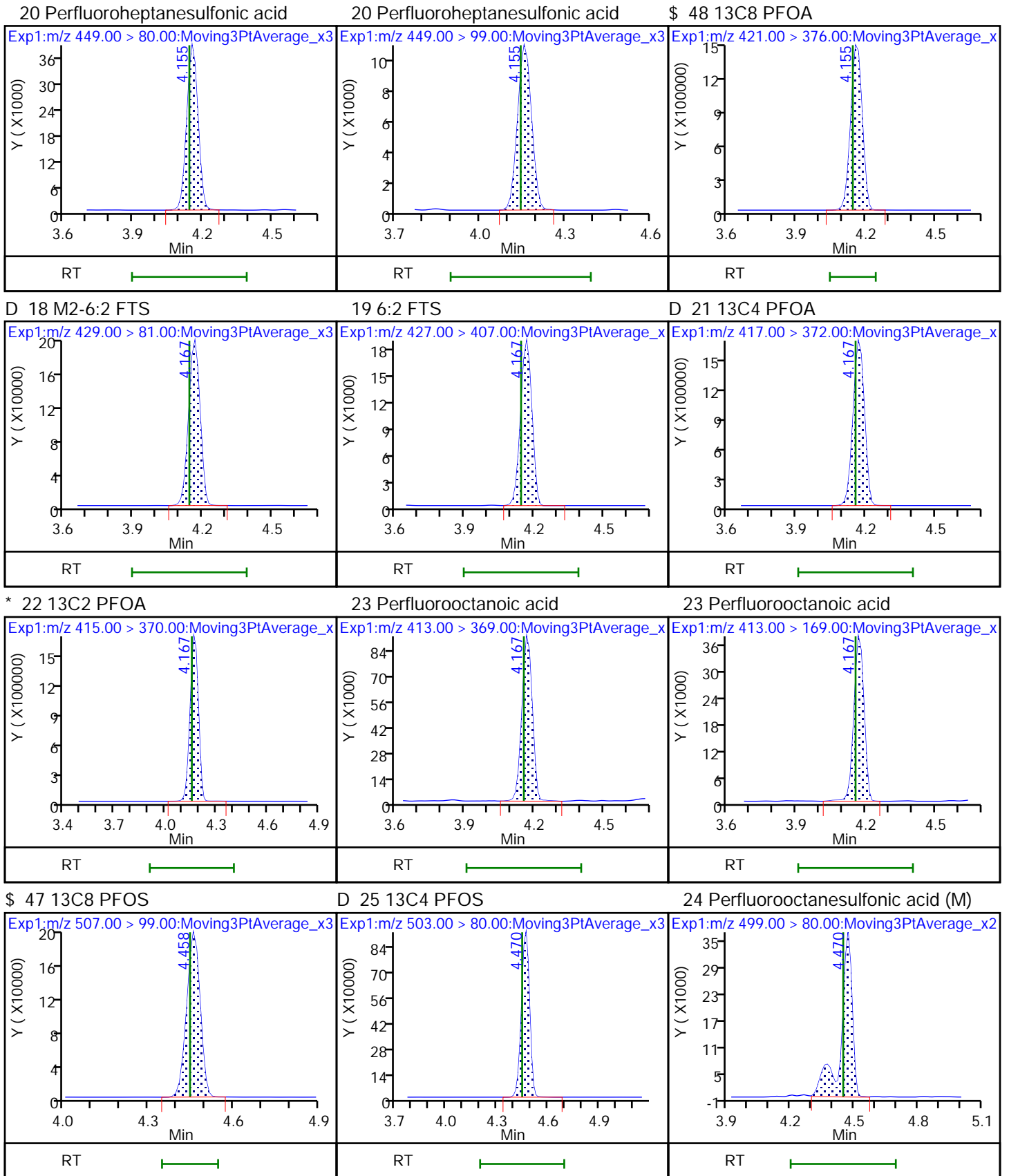
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

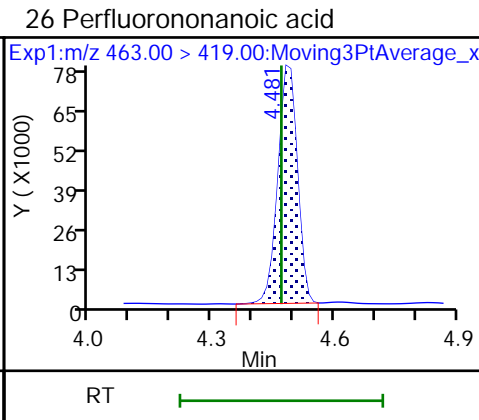
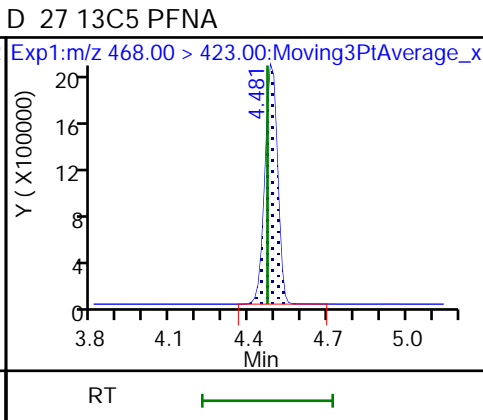
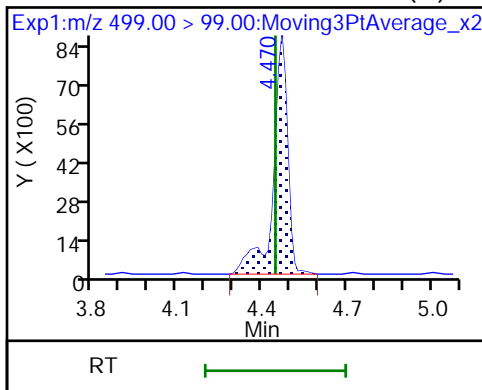
D 9 13C2 PFHxA







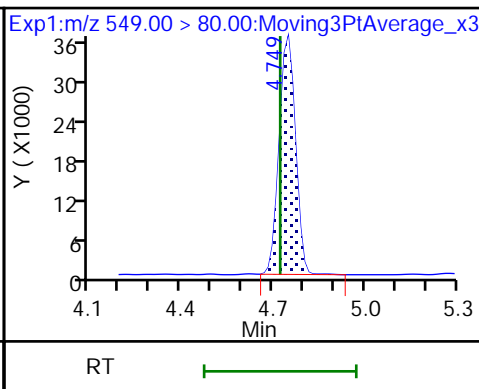
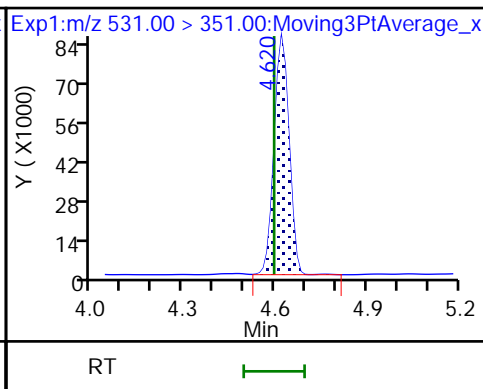
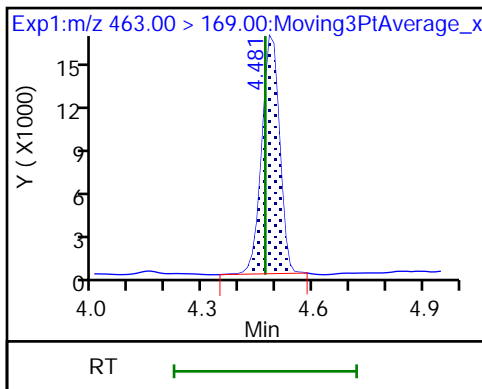
24 Perfluorooctanesulfonic acid (M) D 27 13C5 PFNA



26 Perfluorononanoic acid

63 9CIFOS

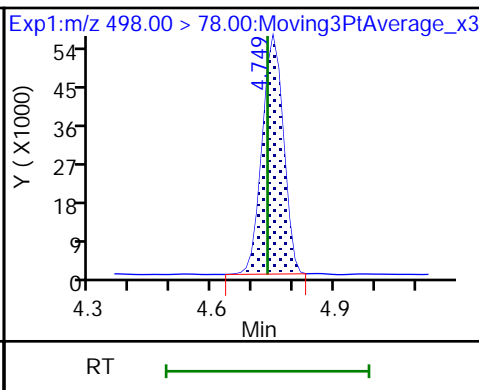
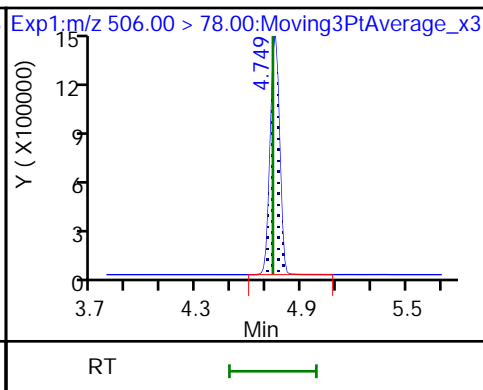
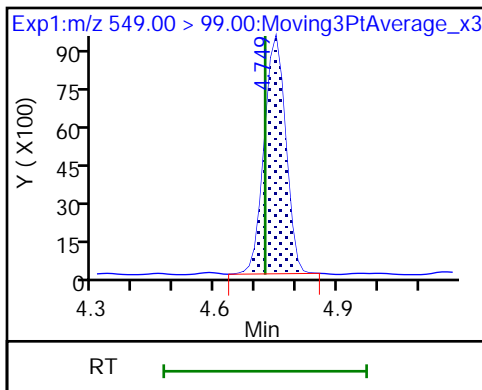
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

D 34 13C8 FOSA

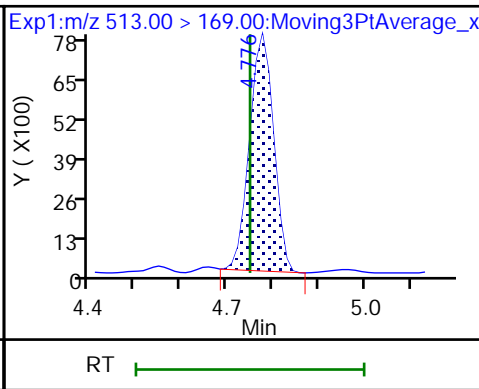
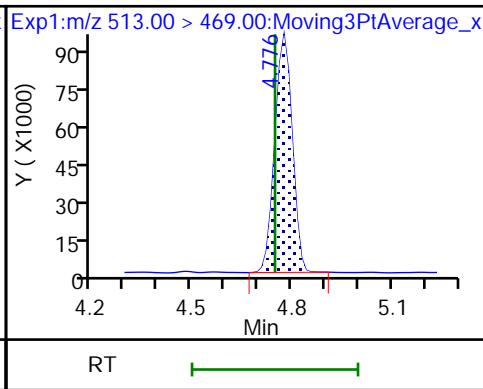
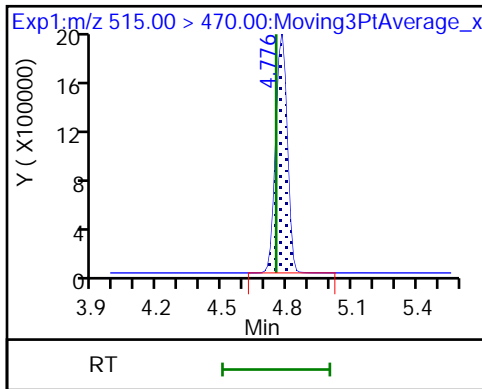
33 Perfluorooctanesulfonamide



D 32 13C2 PFDA

29 Perfluorodecanoic acid

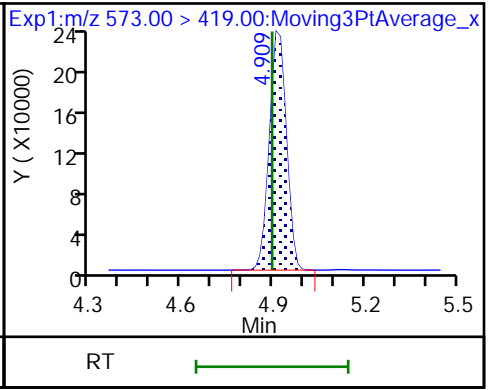
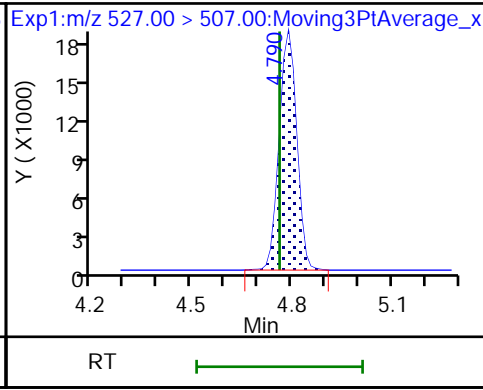
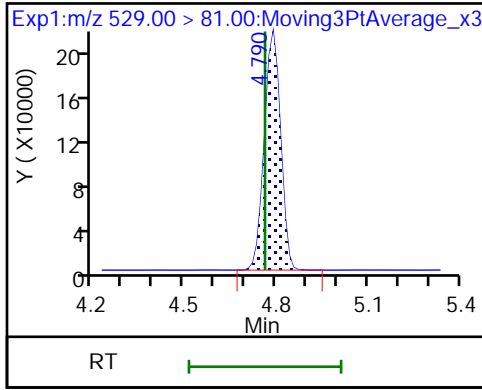
29 Perfluorodecanoic acid



D 30 M2-8:2 FTS

31 8:2 FTS

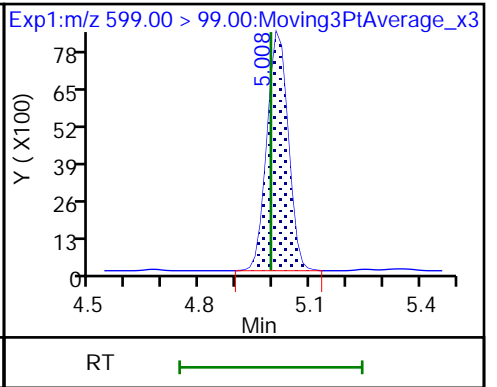
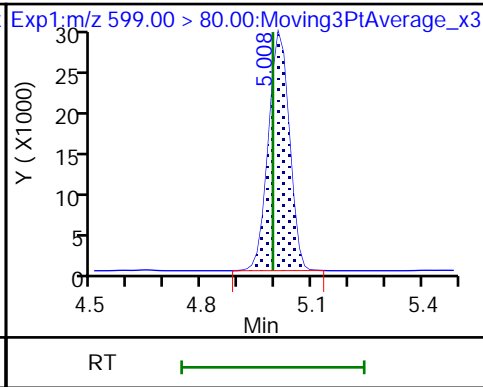
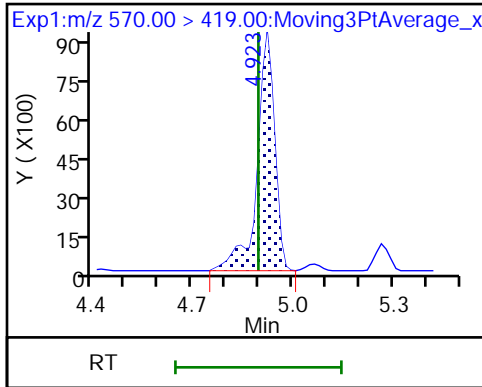
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

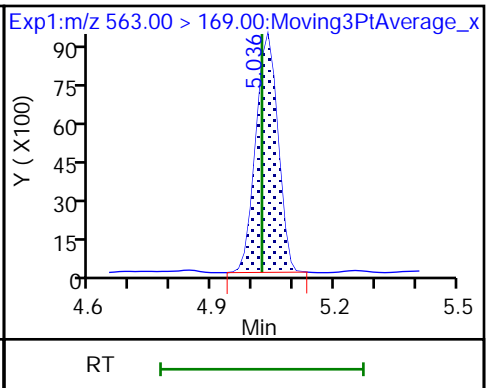
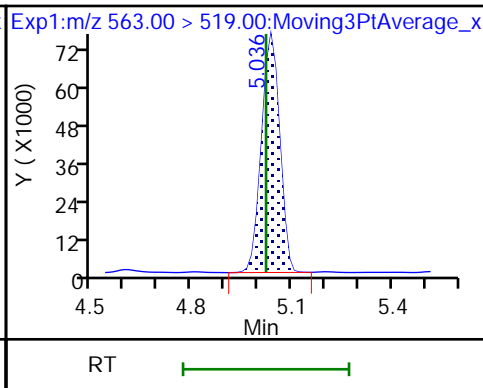
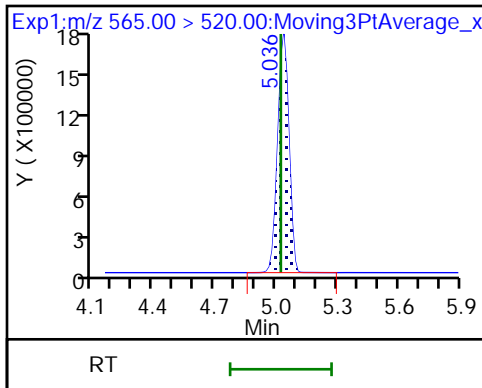
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

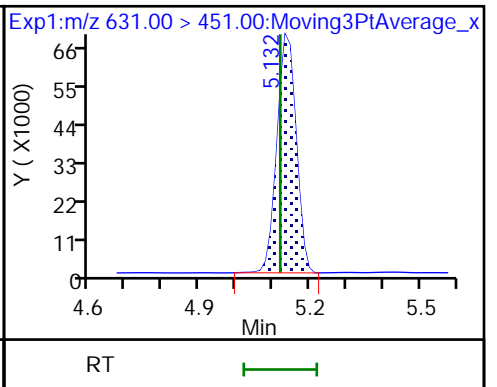
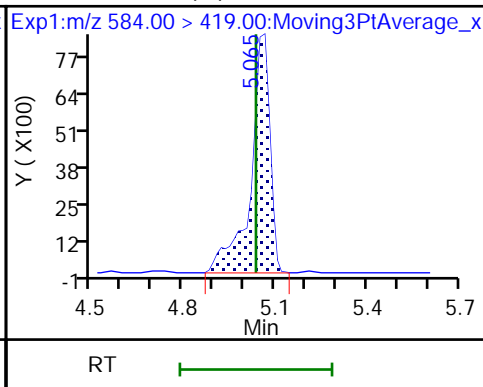
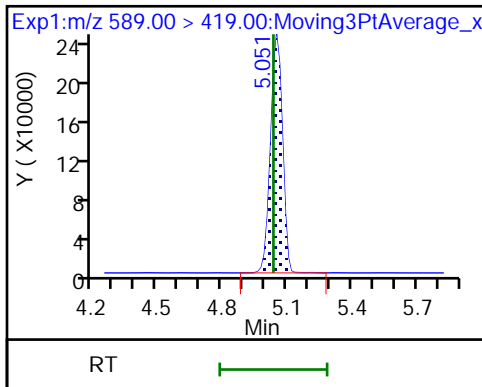
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA (M)

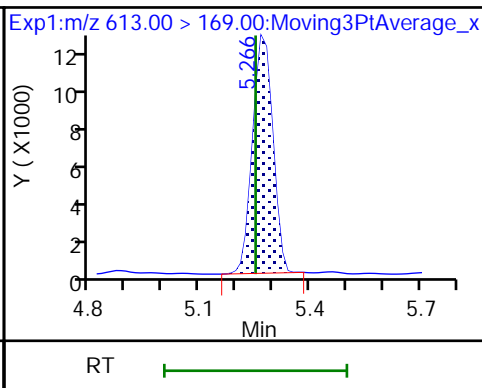
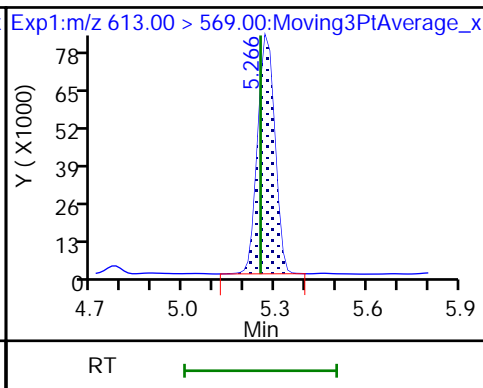
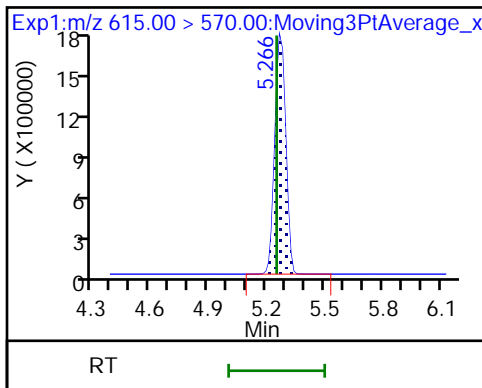
57 11CIFOS



D 43 13C2 PFDoA

42 Perfluorododecanoic acid

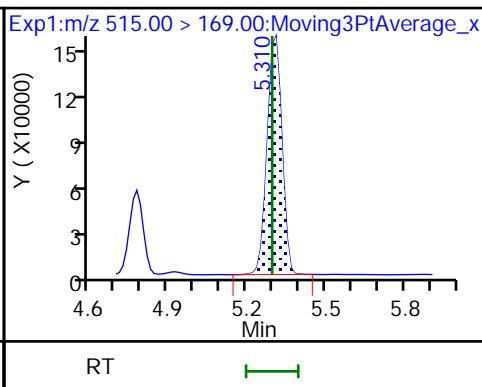
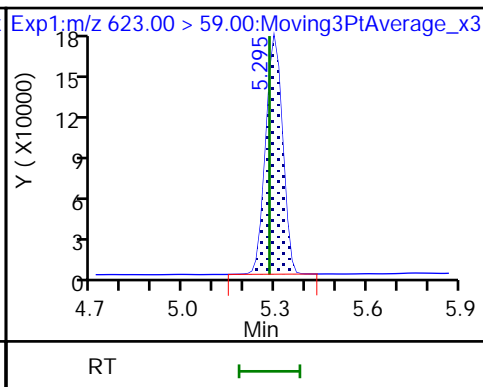
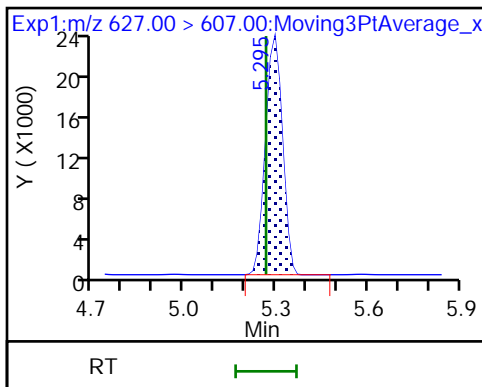
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

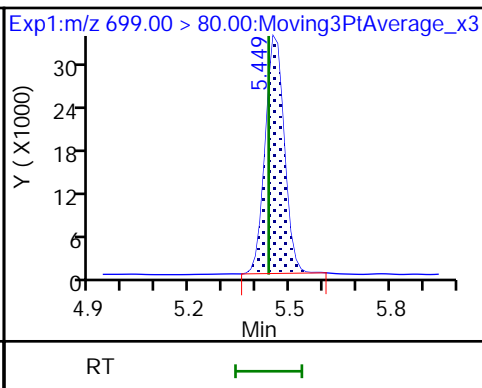
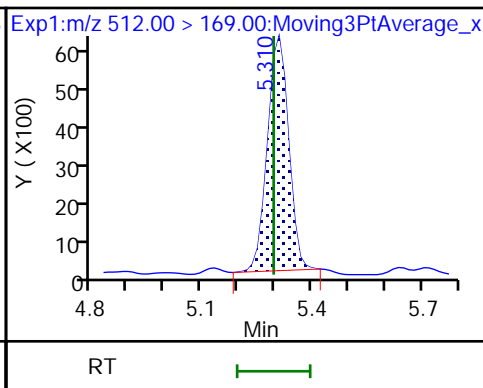
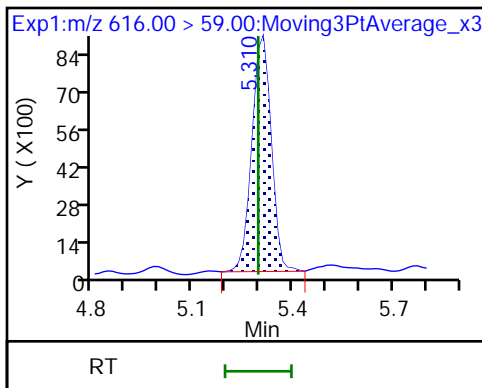
D 58 d-N-MeFOSA-M



49 N-MeFOSE-M

61 NMeFOSA

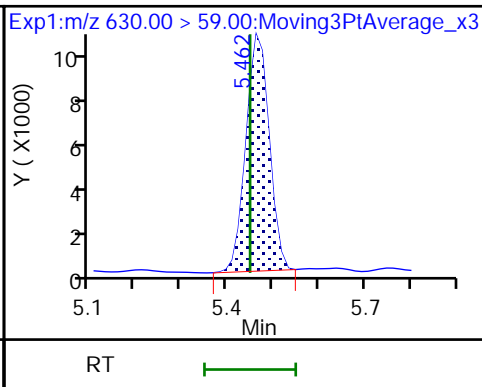
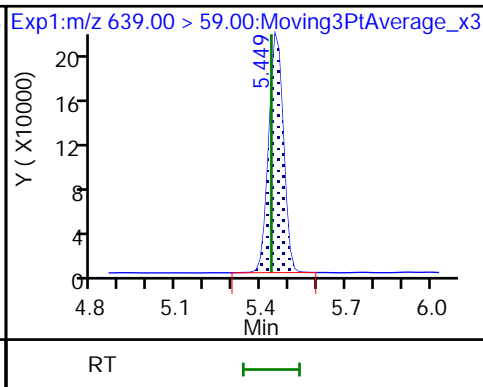
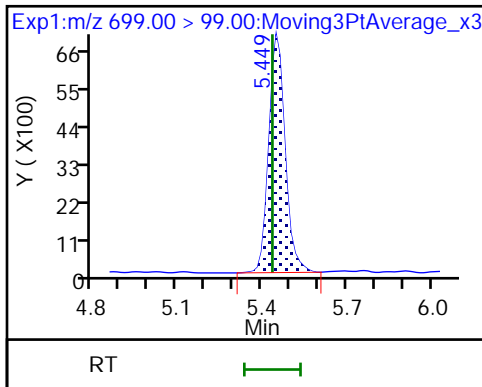
54 PFDoS



54 PFDoS

D 53 d9-N-EtFOSE-M

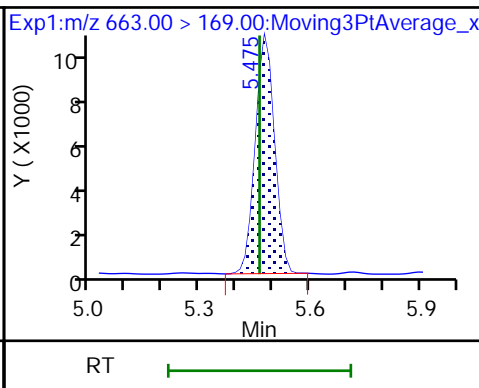
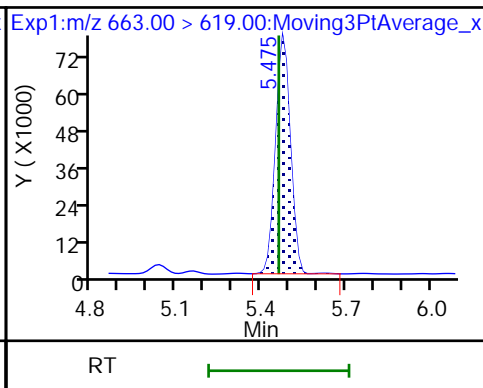
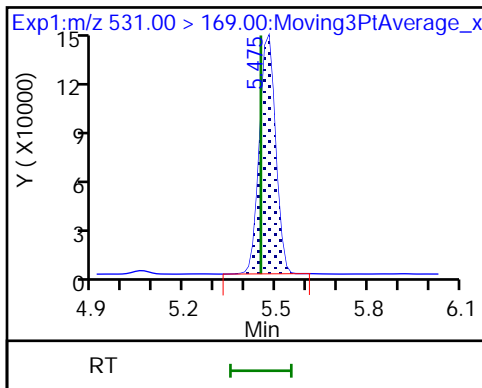
62 N-EtFOSE-M



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid

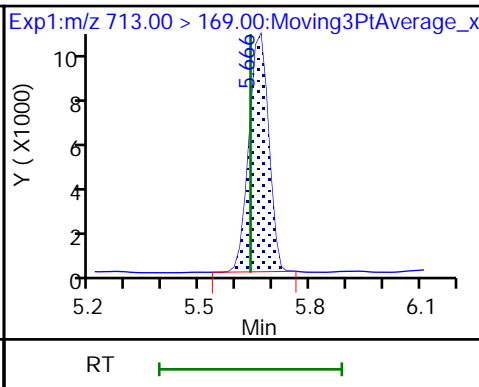
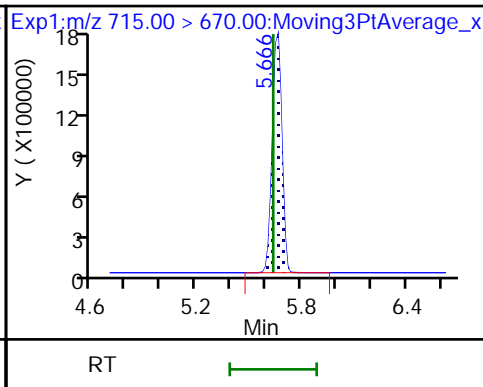
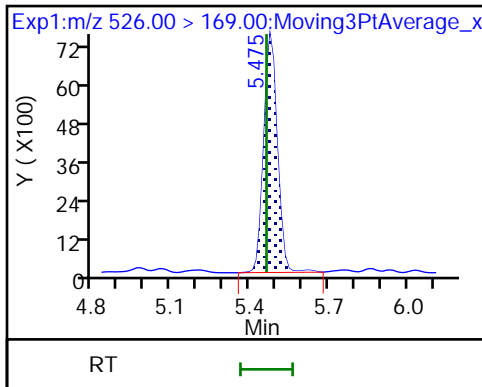
44 Perfluorotridecanoic acid



56 N-EtFOSA-M

D 46 13C2 PFTeDA

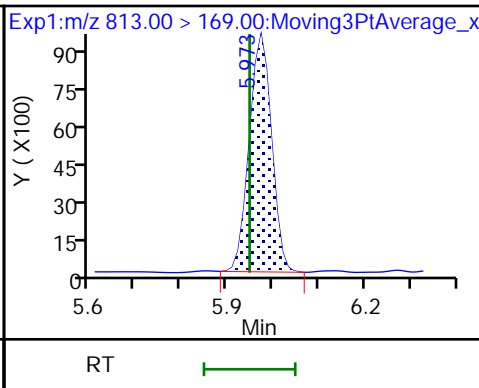
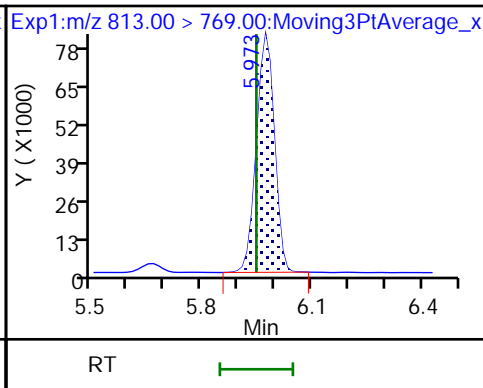
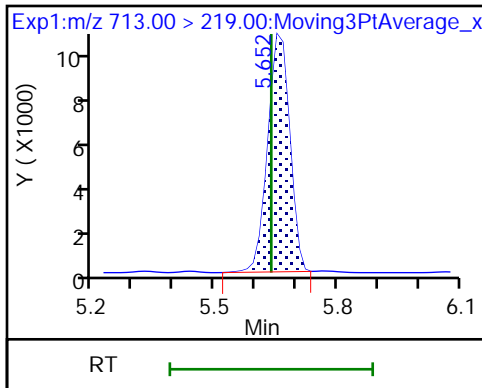
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

55 Perfluorohexadecanoic acid

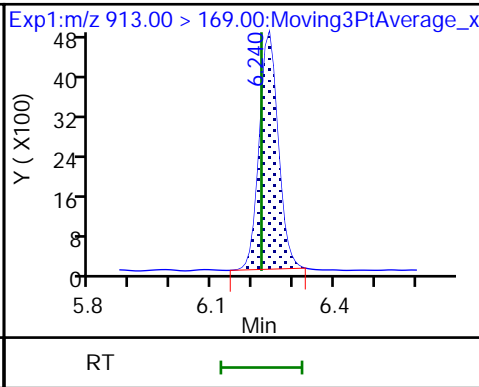
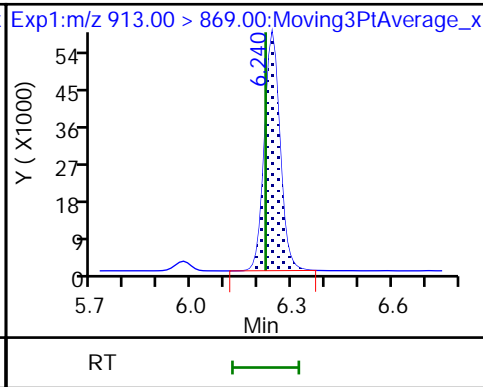
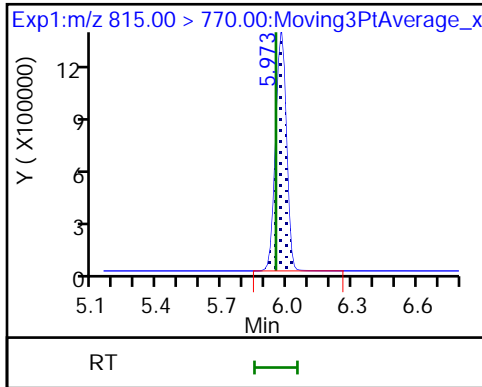
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid



Eurofins TestAmerica, Knoxville

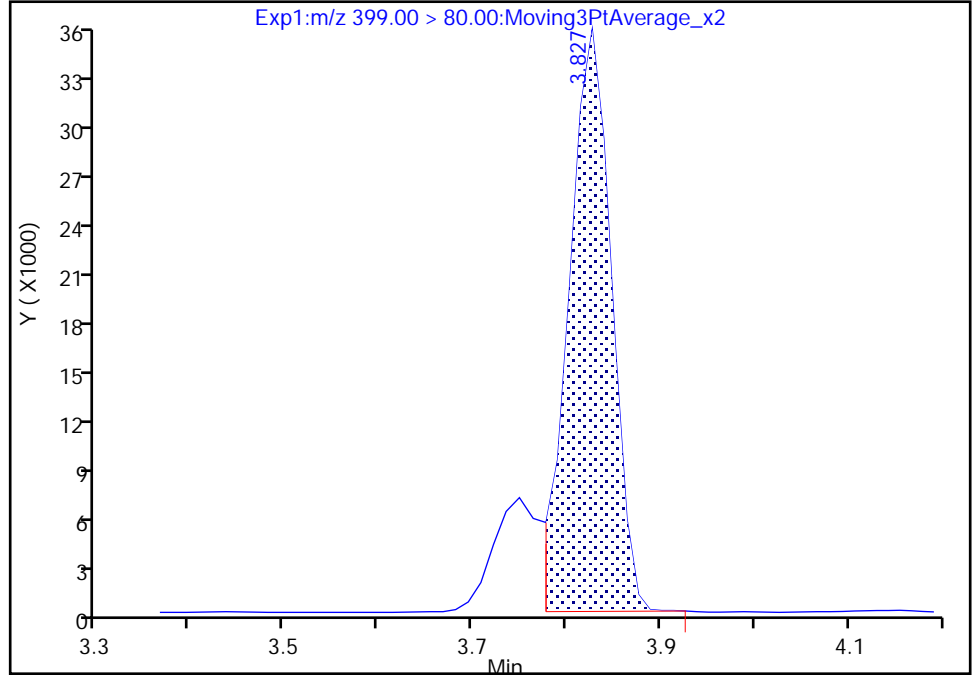
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Injection Date: 06-Oct-2021 21:10:55 Instrument ID: LCA
Lims ID: CCVL
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

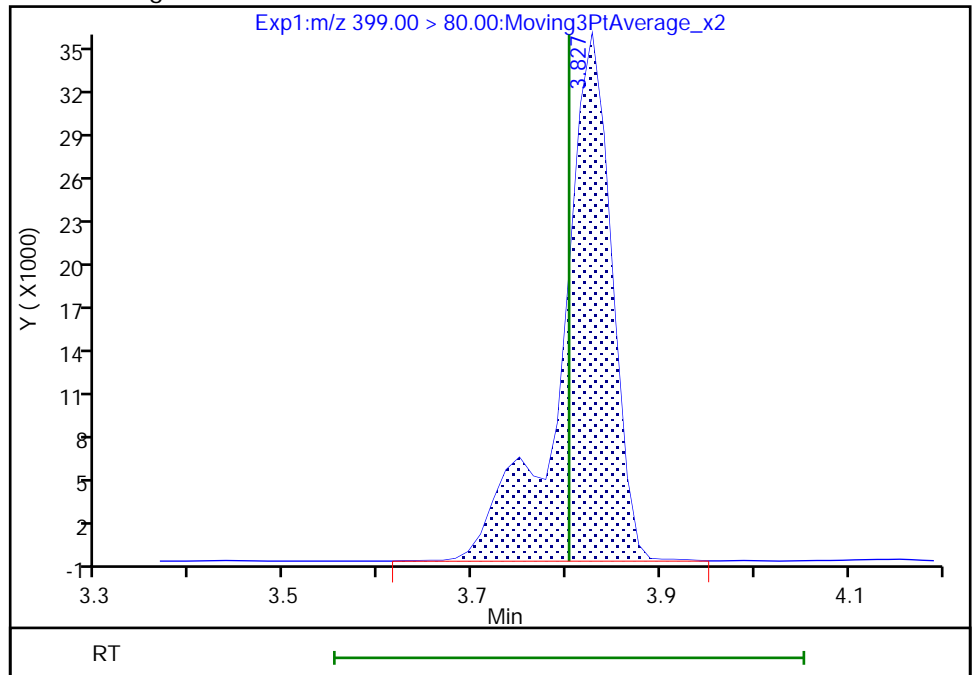
RT: 3.83
Area: 110197
Amount: 0.038469
Amount Units: ng/ml

Processing Integration Results



RT: 3.83
Area: 134584
Amount: 0.048109
Amount Units: ng/ml

Manual Integration Results



Reviewer: mcwhirterl, 07-Oct-2021 02:31:01
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Knoxville

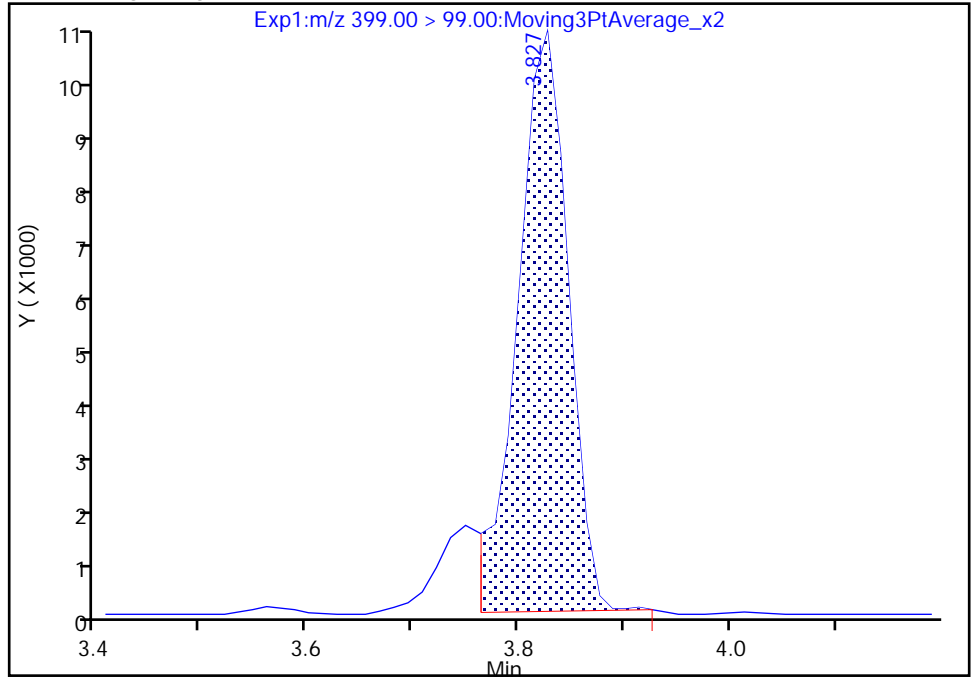
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_006.d
Injection Date: 06-Oct-2021 21:10:55 Instrument ID: LCA
Lims ID: CCVL
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

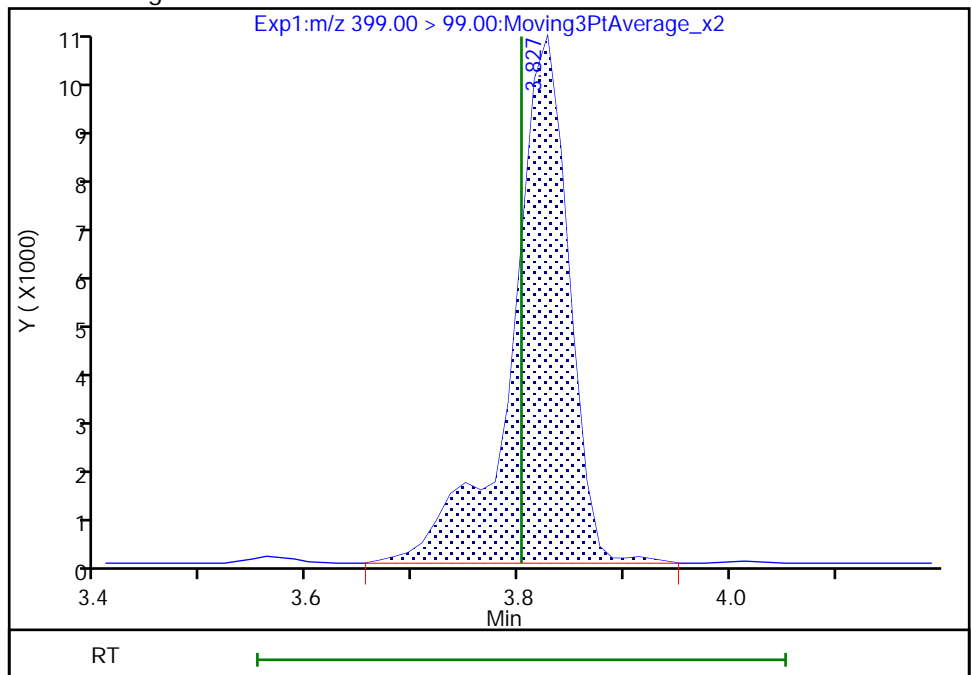
RT: 3.83
Area: 35105
Amount: 0.038469
Amount Units: ng/ml

Processing Integration Results



RT: 3.83
Area: 40287
Amount: 0.048109
Amount Units: ng/ml

Manual Integration Results



Reviewer: mcwhirterl, 07-Oct-2021 02:31:10

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Knoxville

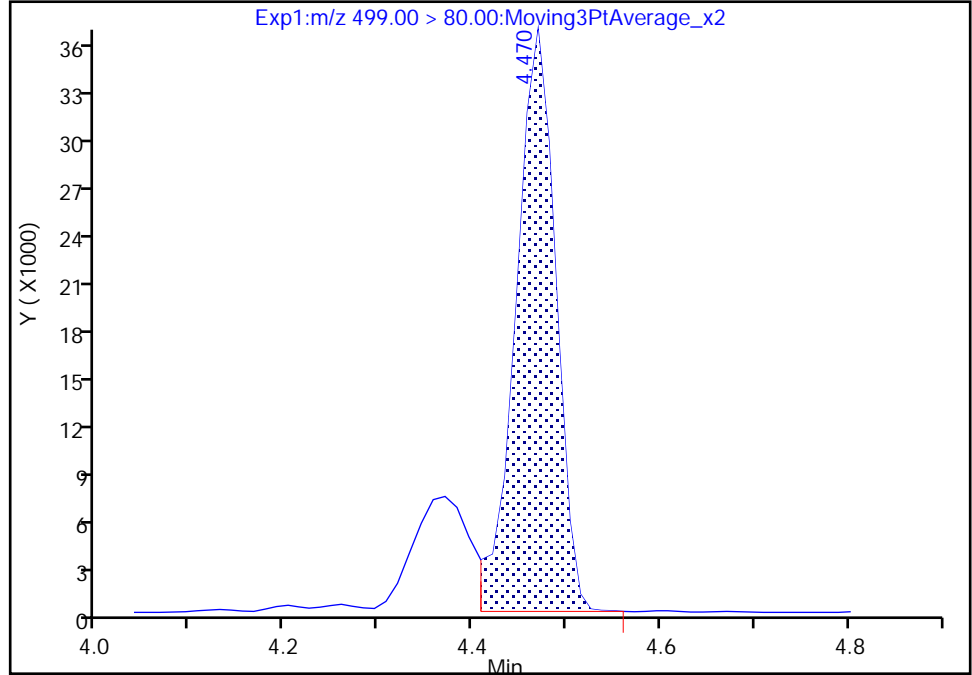
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Injection Date: 06-Oct-2021 21:10:55 Instrument ID: LCA
Lims ID: CCVL
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

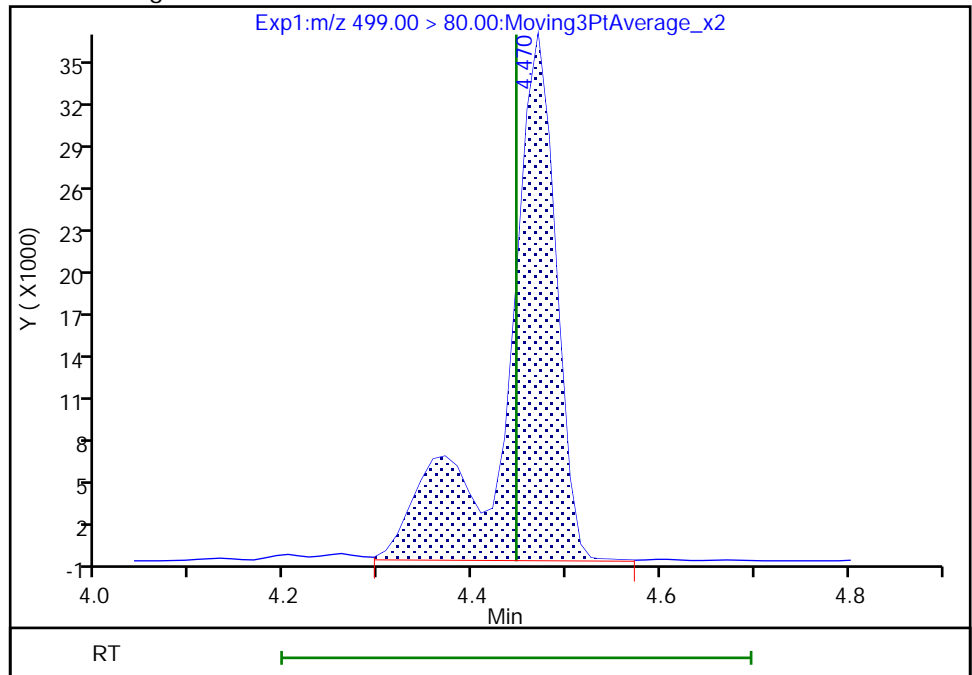
RT: 4.47
Area: 107273
Amount: 0.038546
Amount Units: ng/ml

Processing Integration Results



RT: 4.47
Area: 137468
Amount: 0.049395
Amount Units: ng/ml

Manual Integration Results



Reviewer: mcwhirterl, 07-Oct-2021 02:31:44
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Knoxville

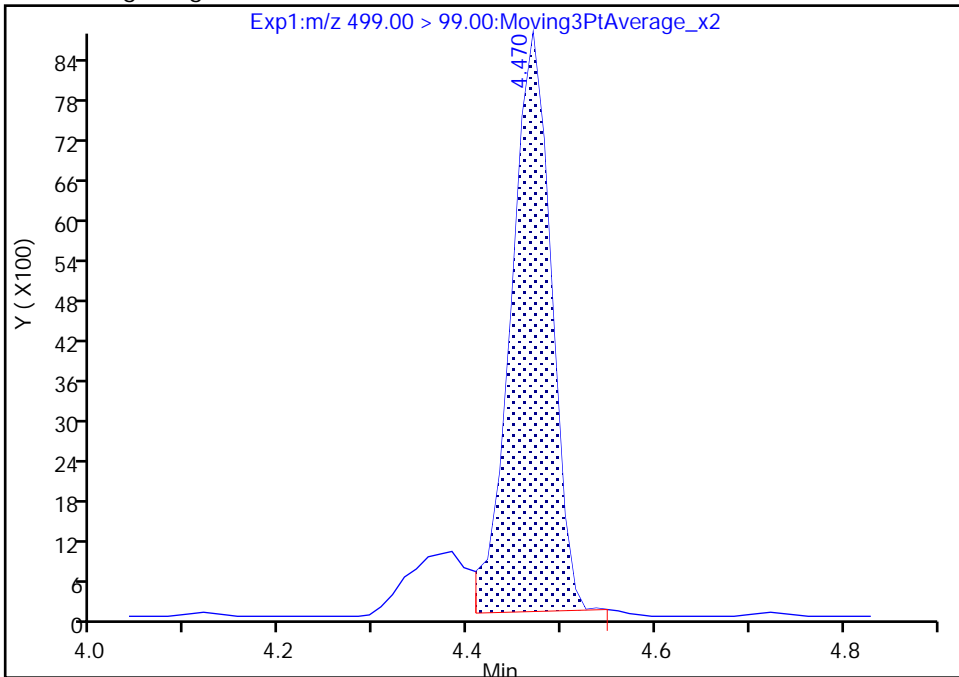
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_006.d
Injection Date: 06-Oct-2021 21:10:55 Instrument ID: LCA
Lims ID: CCVL
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

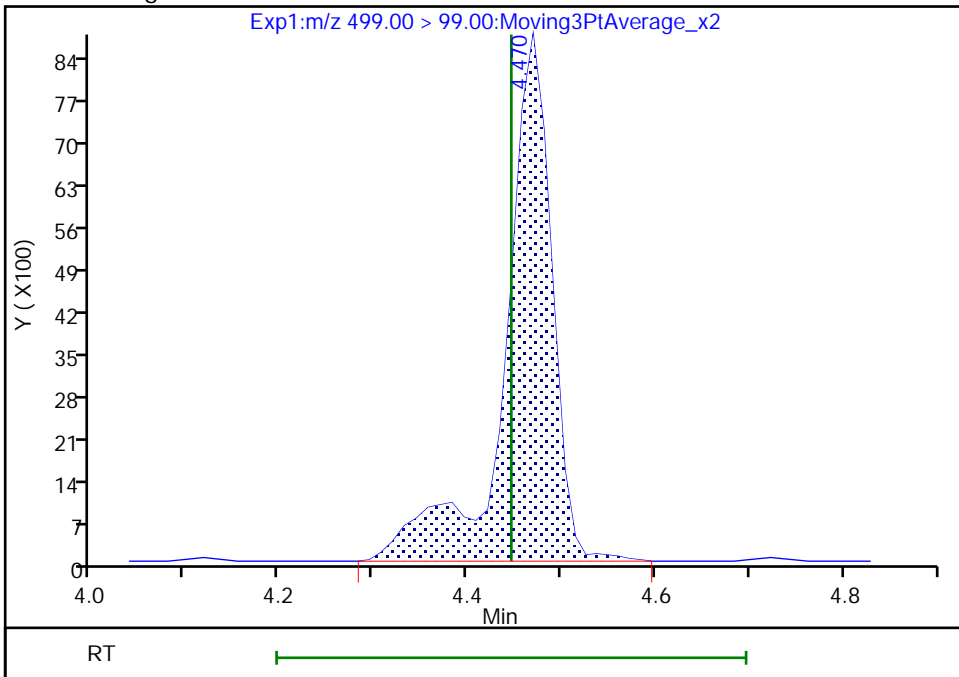
RT: 4.47
Area: 25665
Amount: 0.038546
Amount Units: ng/ml

Processing Integration Results



RT: 4.47
Area: 30724
Amount: 0.049395
Amount Units: ng/ml

Manual Integration Results



Reviewer: mcwhirterl, 07-Oct-2021 02:31:50

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Knoxville

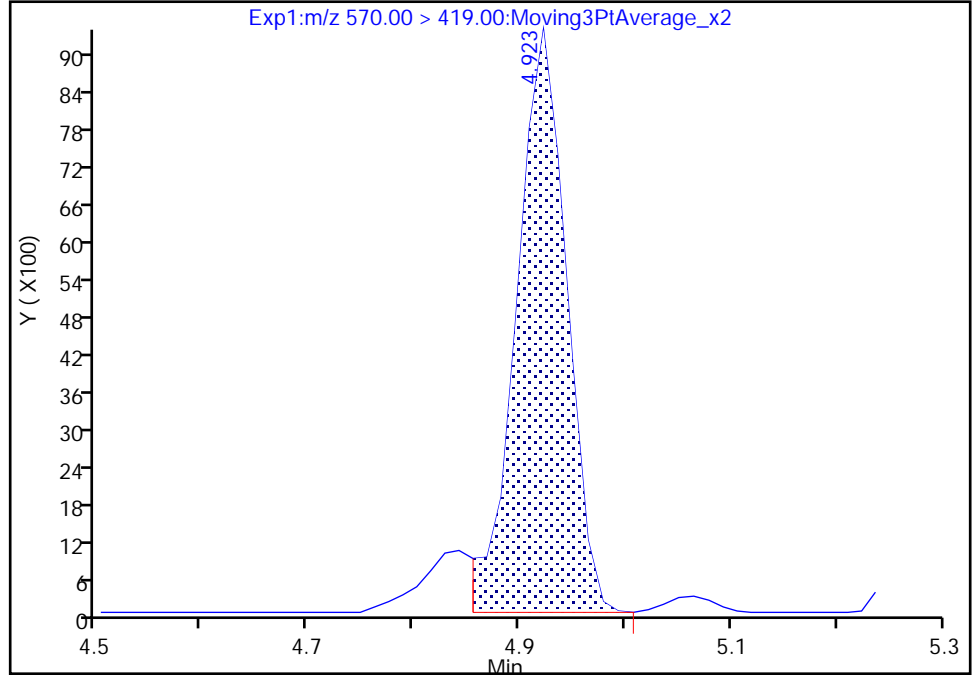
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Injection Date: 06-Oct-2021 21:10:55 Instrument ID: LCA
Lims ID: CCVL
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

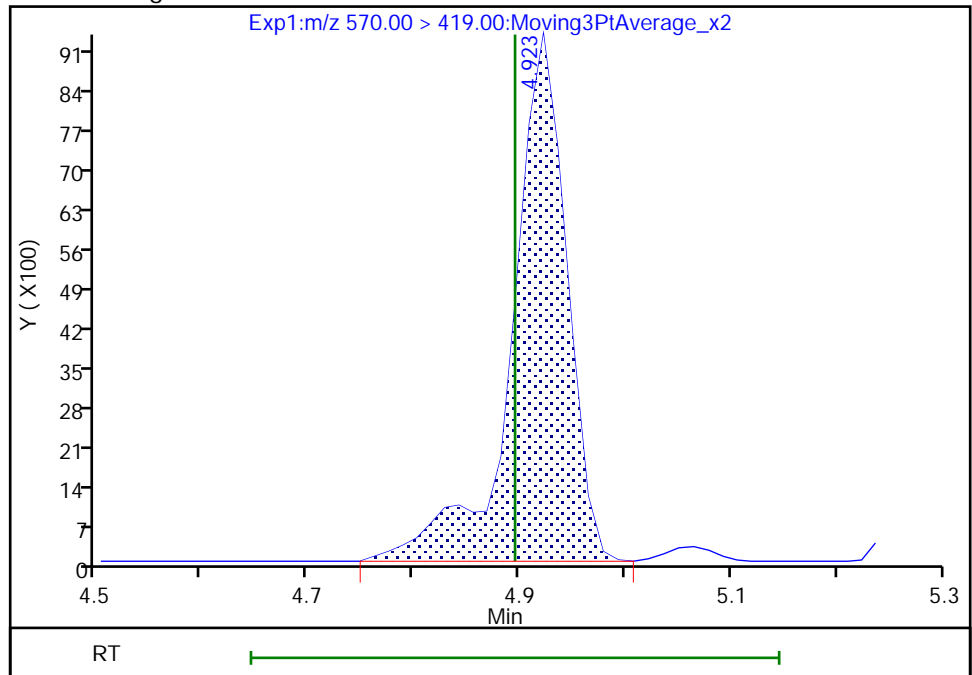
RT: 4.92
Area: 30670
Amount: 0.038607
Amount Units: ng/ml

Processing Integration Results



RT: 4.92
Area: 33866
Amount: 0.043405
Amount Units: ng/ml

Manual Integration Results



Reviewer: mcwhirterl, 07-Oct-2021 02:32:15
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Knoxville

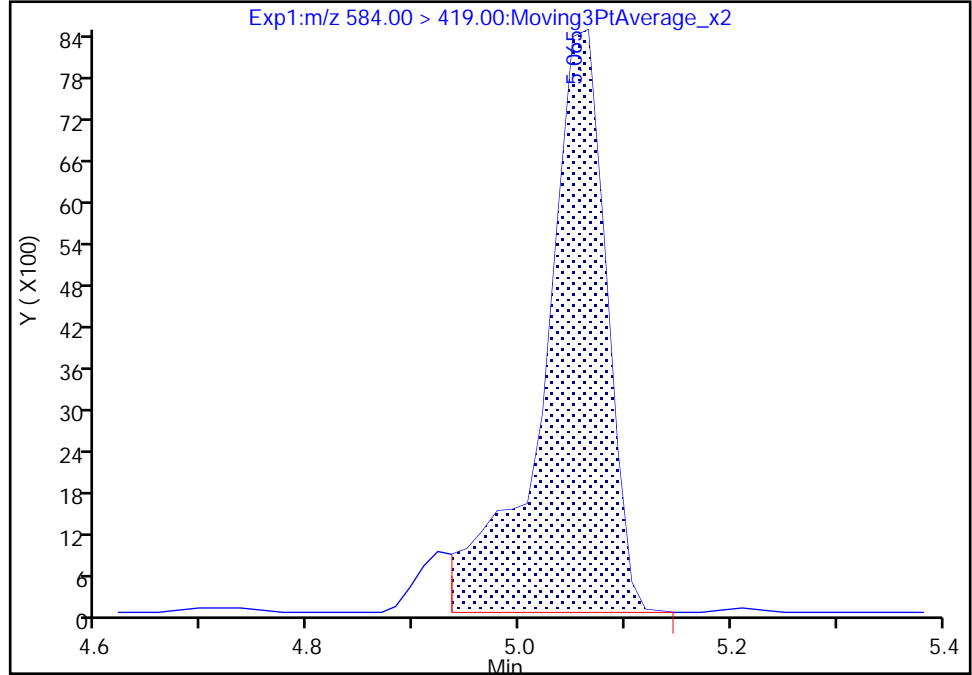
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_006.d
Injection Date: 06-Oct-2021 21:10:55 Instrument ID: LCA
Lims ID: CCVL
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

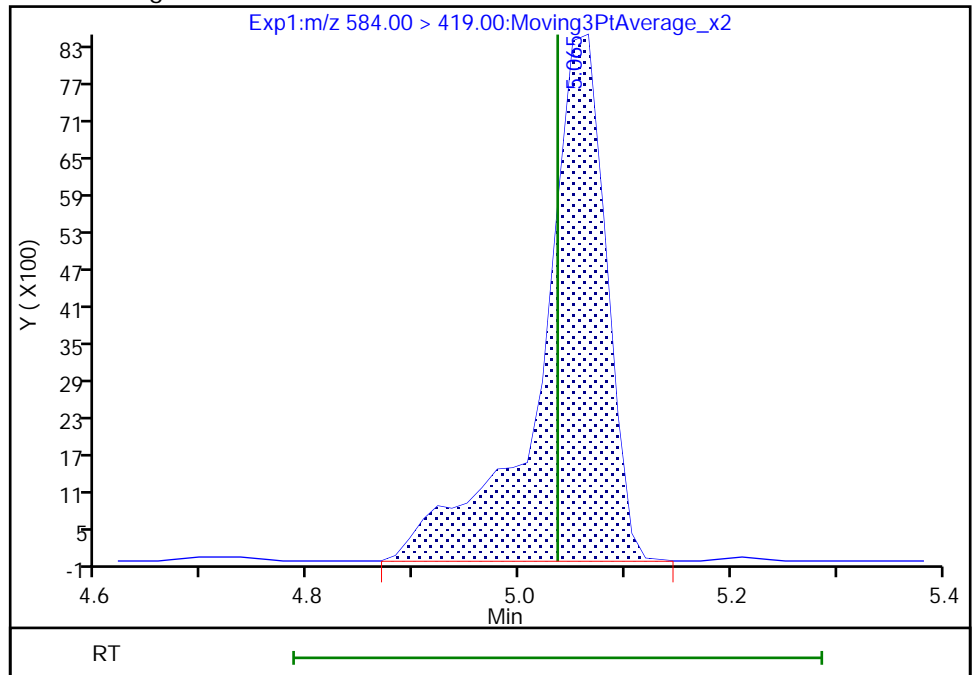
RT: 5.06
Area: 34915
Amount: 0.048570
Amount Units: ng/ml

Processing Integration Results



RT: 5.06
Area: 36936
Amount: 0.051382
Amount Units: ng/ml

Manual Integration Results



Reviewer: mcwhirterl, 07-Oct-2021 02:32:29
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-54568/7 Calibration Date: 10/06/2021 21:19
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _007.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7855	0.7718		0.983	1.00	-1.7	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.013	0.9542		0.942	1.00	-5.8	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.126	1.168		0.917	0.884	3.7	40.0
4:2 FTS	AveID	2.500	2.428		0.907	0.934	-2.9	40.0
Perfluoropentanesulfonic acid (PFPeS)	L2ID		0.8890		0.971	0.938	3.5	50.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8572	0.8192		0.956	1.00	-4.4	40.0
HFPO-DA	L2ID		1.363		0.984	1.00	-1.6	40.0
Perfluorohexanesulfonic acid (PFHxS)	L2ID		1.317		0.882	0.910	-3.1	40.0
Perfluoroheptanoic acid (PFHpA)	L2ID		1.116		1.06	1.00	5.6	40.0
DONA	AveID	3.243	3.356		0.975	0.942	3.5	40.0
6:2 FTS	L2ID		1.847		0.870	0.948	-8.2	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9947	0.9937		0.951	0.952	-0.1	40.0
Perfluorooctanoic acid (PFOA)	L2ID		1.139		1.03	1.00	2.7	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.100	1.080		0.911	0.928	-1.8	40.0
Perfluorononanoic acid (PFNA)	L2ID		0.8176		0.980	1.00	-2.1	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	2.308	2.393		0.966	0.932	3.7	40.0
Perfluorononanesulfonic acid (PFNS)	AveID	1.042	1.075		0.990	0.960	3.2	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9606	0.9321		0.970	1.00	-3.0	40.0
Perfluorodecanoic acid (PFDA)	L2ID		0.9706		1.02	1.00	2.2	40.0
8:2 FTS	AveID	1.784	1.698		0.912	0.958	-4.8	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	L2ID		0.8876		0.965	1.00	-3.5	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.9574	0.9553		0.962	0.964	-0.2	40.0
Perfluoroundecanoic acid (PFUnA)	L2ID		1.072		1.06	1.00	5.9	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.9494	0.8713		0.918	1.00	-8.2	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.858	1.845		0.935	0.942	-0.7	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9774		0.936	1.00	-6.4	40.0
10:2 FTS	AveID	2.221	2.027		0.880	0.964	-8.7	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.118		0.965	1.00	-3.5	40.0
NMeFOSA	AveID	1.047	1.107		1.06	1.00	5.7	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9879	1.006		0.986	0.968	1.8	40.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-54568/7 Calibration Date: 10/06/2021 21:19
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _007.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.314		1.04	1.00	4.1	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.168	1.259		1.08	1.00	7.8	40.0
Perfluorotridecanoic acid (PFTriA)	L2ID		0.8817		0.998	1.00	-0.3	50.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.1257		0.996	1.00	-0.4	40.0
Perfluorohexadecanoic acid	Q2ID		1.107		1.01	1.00	1.3	40.0
Perfluorooctadecanoic acid	AveID	0.9076	0.9185		1.01	1.00	1.2	40.0
13C4 PFBA	Ave	1.324	1.250		1.18	1.25	-5.6	50.0
13C3 PFBS	Ave	0.7019	0.6697		1.11	1.16	-4.6	50.0
13C5 PFPeA	Ave	1.087	1.085		1.25	1.25	-0.2	50.0
M2-4:2 FTS	Ave	0.1052	0.1119		1.24	1.17	6.3	50.0
13C2 PFHxA	Ave	1.116	1.089		1.22	1.25	-2.4	50.0
13C3 HFPO-DA	Ave	0.5714	0.5345		1.17	1.25	-6.5	50.0
18O2 PFHxS	Ave	0.4248	0.4217		1.17	1.18	-0.7	50.0
13C4 PFHpA	Ave	1.113	1.055		1.19	1.25	-5.2	50.0
M2-6:2 FTS	Ave	0.1078	0.1191		1.31	1.19	10.5	50.0
13C4 PFOA	Ave	1.007	0.9834		1.22	1.25	-2.3	50.0
13C4 PFOS	Ave	0.5852	0.5409		1.11	1.20	-7.6	50.0
13C5 PFNA	Ave	1.279	1.273		1.24	1.25	-0.5	50.0
13C8 FOSA	Ave	0.8591	0.8366		1.22	1.25	-2.6	50.0
13C2 PFDA	Ave	1.296	1.285		1.24	1.25	-0.8	50.0
M2-8:2 FTS	Ave	0.1316	0.1464		1.33	1.20	11.2	50.0
d3-NMeFOSAA	Ave	0.1774	0.1710		1.21	1.25	-3.6	50.0
13C2 PFUnA	Ave	1.237	1.216		1.23	1.25	-1.7	50.0
d5-NEtFOSAA	Ave	0.1705	0.1791		1.31	1.25	5.0	50.0
13C2 PFDoA	Ave	1.319	1.337		1.27	1.25	1.3	50.0
d7-N-MeFOSE-M	Ave	0.1075	0.1173		1.36	1.25	9.1	50.0
d-N-MeFOSA-M	Ave	0.1120	0.1030		1.15	1.25	-8.0	50.0
d9-N-EtFOSE-M	Ave	0.1146	0.1228		1.34	1.25	7.1	50.0
d-N-EtFOSA-M	Ave	0.0942	0.0852		1.13	1.25	-9.6	50.0
13C2 PFTeDA	Ave	1.211	1.121		1.16	1.25	-7.4	50.0
13C2 PFHxDA	Ave	0.8782	0.8067		1.15	1.25	-8.1	50.0
13C8 PFOA	Ave	0.9886	0.9894		1.25	1.25	0.0	50.0
13C8 PFOS	Ave	0.1256	0.1224		1.17	1.20	-2.5	50.0

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_007.d
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 06-Oct-2021 21:19:43 ALS Bottle#: 7 Worklist Smp#: 7
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-007 ccvis
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 16:11:16 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: mcwhirterl Date: 07-Oct-2021 02:35:36

Ratio Calibration: None

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	2.801	2.801	0.0	0.674	7384045	1.18	94.4	12942	
2 Perfluorobutanoic acid	212.90 > 169.00	2.812	2.812	0.0	1.004	4559427	0.9826	98.3	1067	
D 3 13C5 PFPeA	267.90 > 223.00	3.129	3.129	0.0	0.753	6406187	1.25	99.8	13565	
4 Perfluoropentanoic acid	262.90 > 219.00	3.129	3.129	0.0	1.000	4890388	0.9420	94.2	1326	
D 6 13C3 PFBS	301.90 > 80.00	3.129	3.129	0.0	0.753	3678151	1.11	95.4	19507	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.143	3.143	0.0	1.004	3266040	0.9167	Target=3.06	104	12116
	298.90 > 99.00	3.143	3.143	0.0	1.004	1195956		2.73(1.53-4.59)		4944
D 8 M2-4:2 FTS	329.00 > 81.00	3.423	3.423	0.0	0.824	617217	1.24	106	1041	
7 4:2 FTS	327.00 > 307.00	3.423	3.423	0.0	1.000	1199084	0.9073	97.1	10019	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.453	3.453	0.0	1.103	2638277	0.9709	Target=3.47	104	10061
	349.00 > 99.00	3.453	3.453	0.0	1.103	733210		3.60(1.73-5.20)		10849
D 9 13C2 PFHxA	315.00 > 270.00	3.469	3.469	0.0	0.835	6431734	1.22	97.6	14789	
10 Perfluorohexanoic acid	313.00 > 269.00	3.469	3.469	0.0	1.000	4215039	0.9557	Target=9.74	95.6	1978
	313.00 > 119.00	3.469	3.469	0.0	1.000	340103		12.39(4.87-14.61)		868
D 12 13C3 HFPO-DA	287.00 > 169.00	3.561	3.561	0.0	0.857	3156311	1.17	93.5	8109	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.561	3.561	0.0	1.000	3441944	0.9843		98.4	2810	
D 17 18O2 PFHxS										
403.00 > 84.00	3.803	3.803	0.0	0.915	2356033	1.17		99.3	14897	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.803	3.803	0.0	1.000	2387846	0.8819	Target=2.96	96.9	6595	
399.00 > 99.00	3.803	3.803	0.0	1.000	708406		3.37(1.48-4.44)		4033	
D 14 13C4 PFHpA										
367.00 > 322.00	3.815	3.815	0.0	0.918	6232404	1.19		94.8	14163	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.815	3.815	0.0	1.000	5565391	1.06	Target=3.35	106	4173	
363.00 > 169.00	3.815	3.815	0.0	1.000	1672654		3.33(1.67-5.02)		3883	
68 DONA										
377.00 > 251.00	3.840	3.840	0.0	0.864	8077532	0.9746	Target=1.49	103	14194	
377.00 > 85.00	3.840	3.840	0.0	0.864	4449864		1.82(0.74-2.23)		5797	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.143	4.143	0.0	0.932	2417379	0.9510	Target=3.73	99.9	9937	
449.00 > 99.00	4.143	4.143	0.0	0.932	627291		3.85(1.87-5.61)		5610	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.143	4.143	0.0	0.997	5842763	1.25		100	17305	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.143	4.143	0.0	0.997	667939	1.31		110	3074	
19 6:2 FTS										
427.00 > 407.00	4.143	4.143	0.0	1.000	985025	0.8698		91.8	4215	
D 21 13C4 PFOA										
417.00 > 372.00	4.155	4.155	0.0	1.000	5807600	1.22		97.7	14096	
* 22 13C2 PFOA										
415.00 > 370.00	4.155	4.155	0.0		5905342	1.25			16310	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.155	4.155	0.0	1.000	5289917	1.03	Target=2.40	103	2199	
413.00 > 169.00	4.155	4.155	0.0	1.000	2013058		2.63(1.20-3.61)		2909	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.447	4.447	0.0	1.070	691091	1.17		97.5	3090	
D 25 13C4 PFOS										
503.00 > 80.00	4.447	4.447	0.0	1.070	3053591	1.10		92.4	6101	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.447	4.447	0.0	1.000	2560226	0.9110	Target=3.83	98.2	3223	M
499.00 > 99.00	4.447	4.447	0.0	1.000	577710		4.43(1.91-5.74)		2793	M
D 27 13C5 PFNA										
468.00 > 423.00	4.470	4.470	0.0	1.076	7520440	1.24		99.5	16511	
26 Perfluorononanoic acid										
463.00 > 419.00	4.470	4.470	0.0	1.000	4919101	0.9795	Target=3.68	97.9	4155	
463.00 > 169.00	4.470	4.470	0.0	1.000	1080554		4.55(1.84-5.52)		2175	
63 9CIFOS										
531.00 > 351.00	4.596	4.596	0.0	1.106	5698891	0.9664		104	11170	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.722	4.722	0.0	1.062	2637439	0.99	Target=3.97	103	10579	
549.00 > 99.00	4.722	4.722	0.0	1.062	641737		4.11(1.99-5.96)		2928	
D 34 13C8 FOSA										
506.00 > 78.00	4.736	4.736	0.0	1.140	4940241	1.22		97.4	7246	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.736	4.736	0.0	1.000	3683811	0.9704		97.0	4418	
D 32 13C2 PFDA										
515.00 > 470.00	4.749	4.749	0.0	1.143	7588872	1.24		99.2	29050	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.749	4.749	0.0	1.000	5892908	1.02	Target=10.11	102	3418	
513.00 > 169.00	4.749	4.749	0.0	1.000	474932		12.41(5.06-15.17)		492	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.763	4.763	0.0	1.146	828441	1.33		111	3204	
31 8:2 FTS										
527.00 > 507.00	4.763	4.763	0.0	1.000	1125330	0.9119		95.2	9046	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.896	4.896	0.0	1.178	1009819	1.21		96.4	1422	
36 NMeFOSAA										
570.00 > 419.00	4.896	4.896	0.0	1.000	717061	0.9649		96.5	1199	
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.993	4.993	0.0	1.123	2353305	0.9619	Target=3.80	99.8	8332	
599.00 > 99.00	4.993	4.993	0.0	1.123	638101		3.69(1.90-5.70)		4882	
D 39 13C2 PFUnA										
565.00 > 520.00	5.022	5.022	0.0	1.209	7183493	1.23		98.3	20480	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.022	5.022	0.0	1.000	6158338	1.06	Target=7.45	106	7874	
563.00 > 169.00	5.022	5.022	0.0	1.000	662444		9.30(3.78-11.33)		2001	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.036	5.036	0.0	1.212	1057417	1.31		105	3636	
40 NEtFOSA										
584.00 > 419.00	5.036	5.036	0.0	1.000	737099	0.9178		91.8	808	
57 11C1FOS										
631.00 > 451.00	5.119	5.119	0.0	1.151	4441355	0.9353		99.3	10223	
D 43 13C2 PFDaA										
615.00 > 570.00	5.251	5.251	0.0	1.264	7896183	1.27		101	29590	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.251	5.251	0.0	1.000	6174104	0.9357	Target=5.33	93.6	3325	
613.00 > 169.00	5.251	5.251	0.0	1.000	848216		7.28(2.66-7.99)		1854	
50 10:2 FTS										
627.00 > 607.00	5.266	5.266	0.0	1.106	1352013	0.8799		91.3	6083	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.281	5.281	0.0	1.271	692604	1.36		109	361	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.274	608049	1.15		92.0	37.7	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.295	0.0	1.003	619279	0.9650		96.5	662	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA	512.00 > 169.00	5.295	5.295	0.0	1.000	538324	1.06	106	485	
54 PFDoS	699.00 > 80.00	5.436	5.436	0.0	1.222	2488715	0.9859	102	6355	
	699.00 > 99.00	5.436	5.436	0.0	1.222	598829	4.16(2.19-6.58)		3839	
D 53 d9-N-EtFOSE-M	639.00 > 59.00	5.436	5.436	0.0	1.308	725221	1.34	107	538	
62 N-EtFOSE-M	630.00 > 59.00	5.449	5.449	0.0	1.002	762162	1.04	104	1840	
D 52 d-N-EtFOSA-M	531.00 > 169.00	5.449	5.449	0.0	1.311	503007	1.13	90.4	588	
44 Perfluorotridecanoic acid	663.00 > 619.00	5.462	5.462	0.0	1.040	5569591	1.00	99.7	3357	
	663.00 > 169.00	5.462	5.462	0.0	1.040	870172	6.40(2.83-8.48)		2437	
56 N-EtFOSA-M	526.00 > 169.00	5.462	5.462	0.0	1.002	506701	1.08	108	585	
D 46 13C2 PFTeDA	715.00 > 670.00	5.637	5.637	0.0	1.357	6619599	1.16	92.6	16037	
45 Perfluorotetradecanoic acid	713.00 > 169.00	5.637	5.637	0.0	1.000	665503	1.00	99.6	3981	
	713.00 > 219.00	5.637	5.637	0.0	1.000	695181	0.96(0.53-1.60)		7122	
55 Perfluorohexadecanoic acid	813.00 > 769.00	5.948	5.948	0.0	1.000	4218077	1.01	101	3550	
	813.00 > 169.00	5.948	5.948	0.0	1.000	517075	8.16(3.75-11.26)		1778	
D 59 13C2 PFHxDA	815.00 > 770.00	5.948	5.948	0.0	1.432	4763666	1.15	91.9	10358	
60 Perfluorooctadecanoic acid	913.00 > 869.00	6.221	6.221	0.0	1.046	3500222	1.01	101	3148	
	913.00 > 169.00	6.221	6.221	0.0	1.046	301373	11.61(5.14-15.41)		1991	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L4PFC2_00003

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_007.d

Injection Date: 06-Oct-2021 21:19:43

Instrument ID: LCA

Lims ID: CCVIS

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 7

Worklist Smp#: 7

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

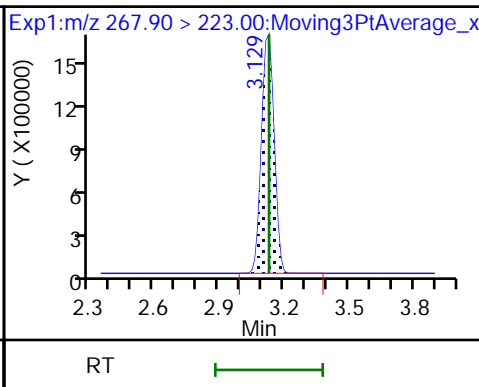
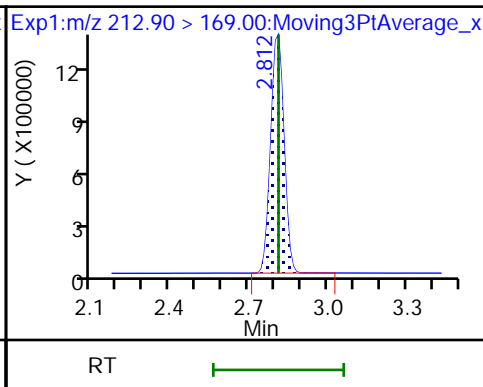
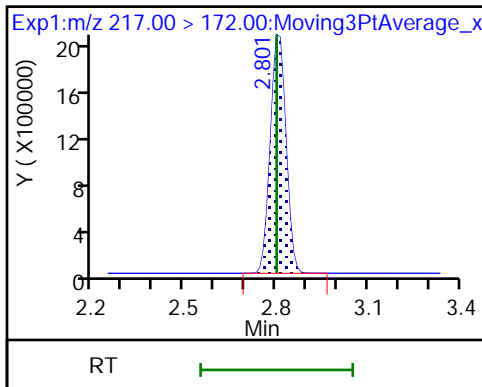
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

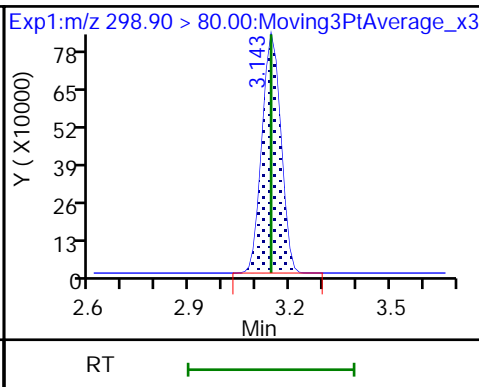
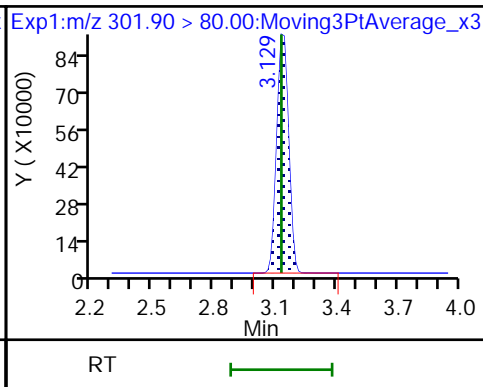
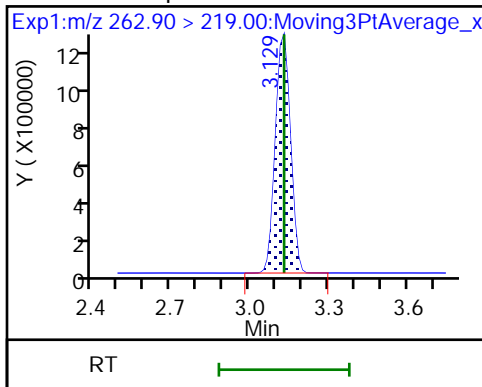
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

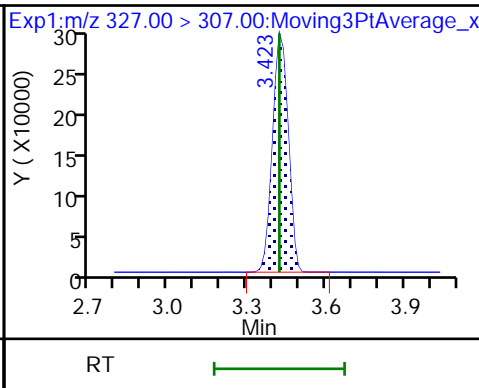
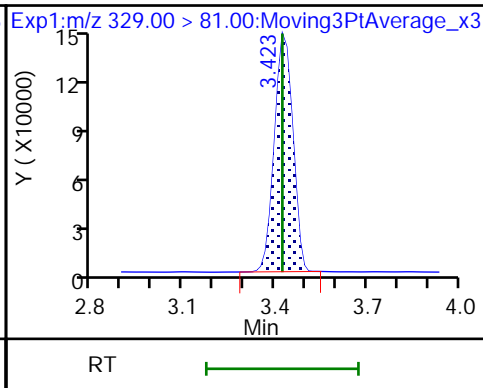
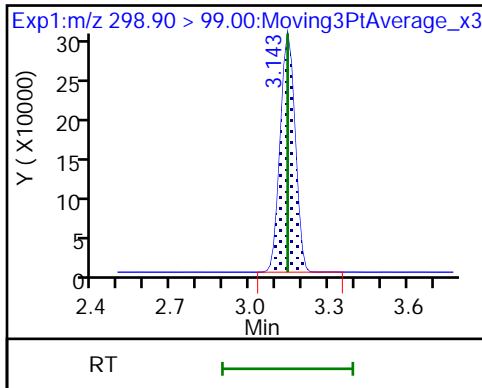
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

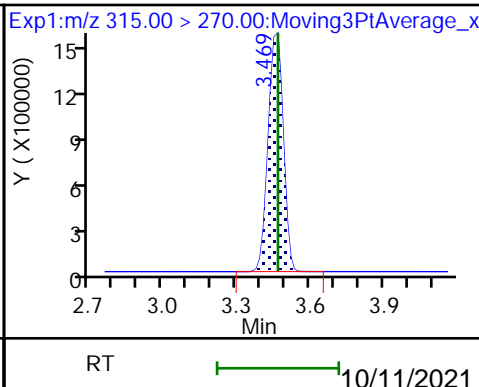
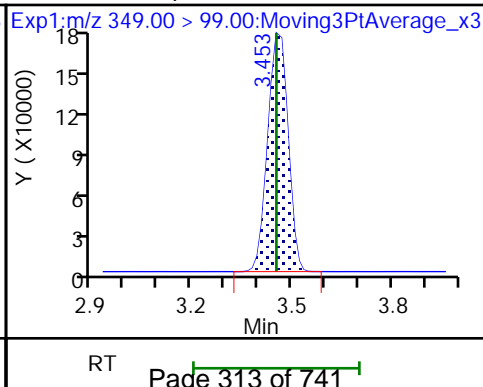
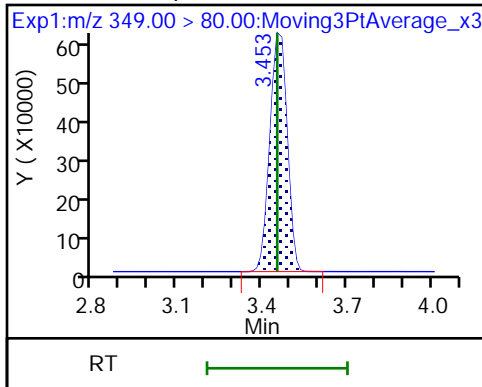
7 4:2 FTS

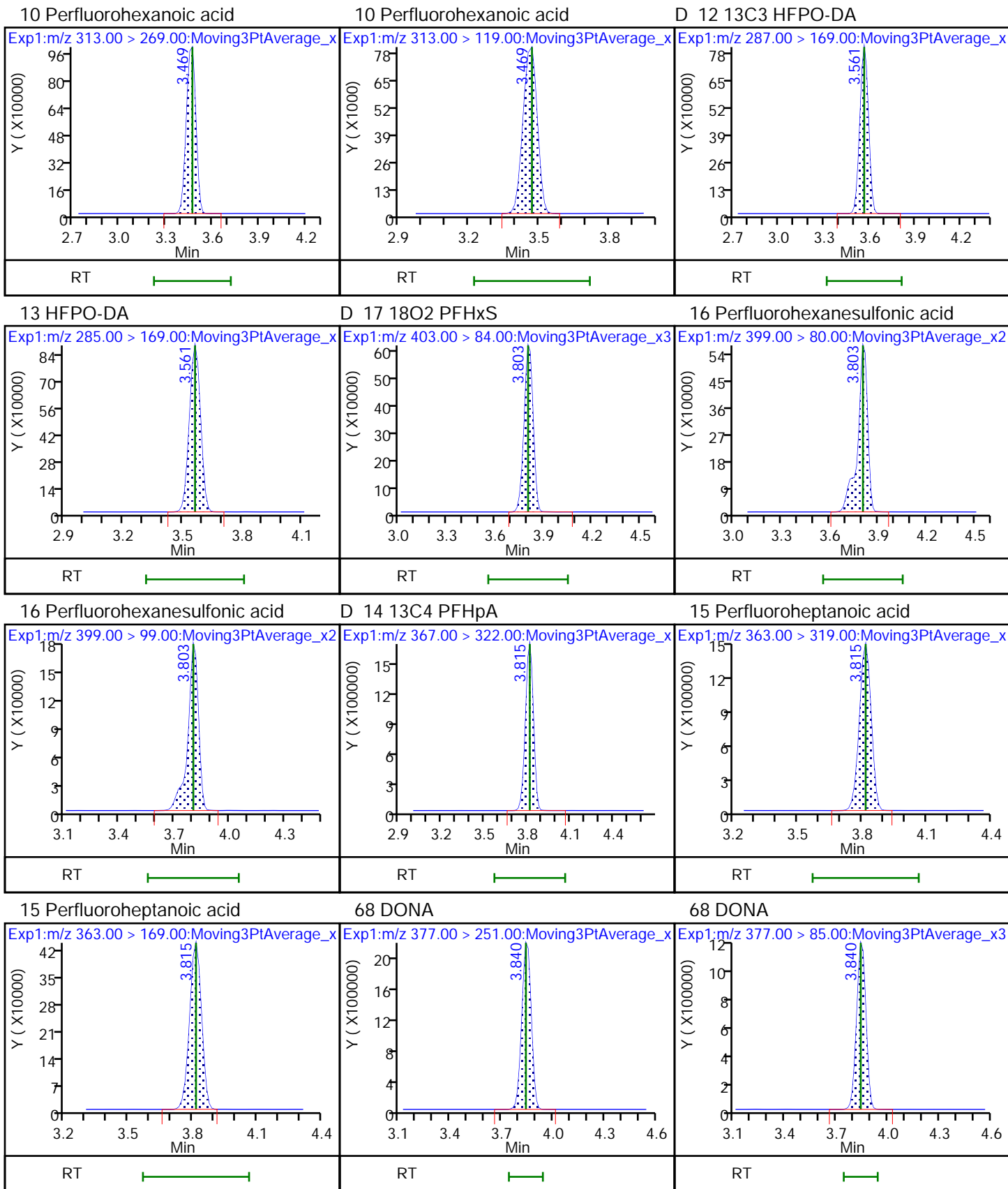


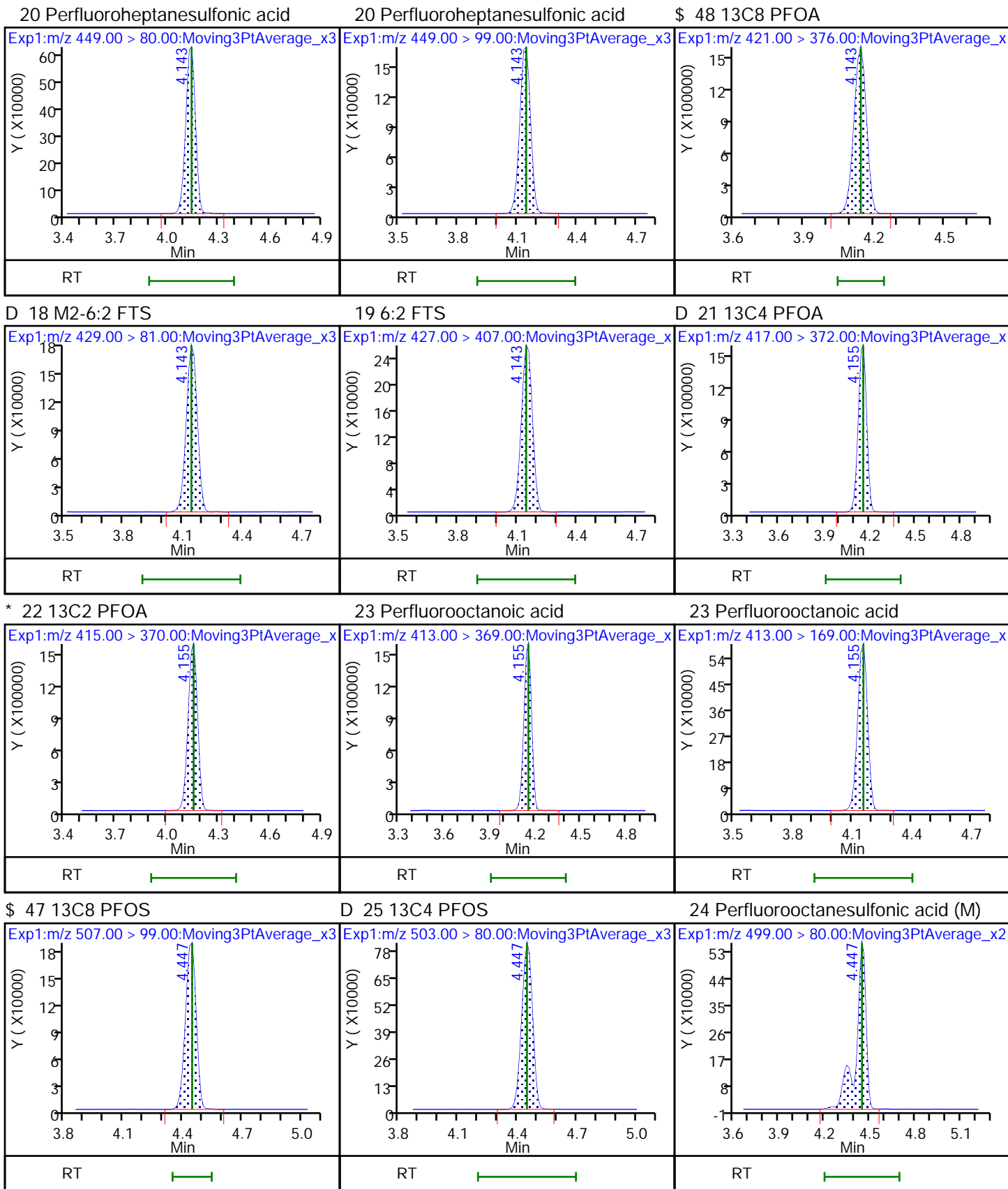
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA



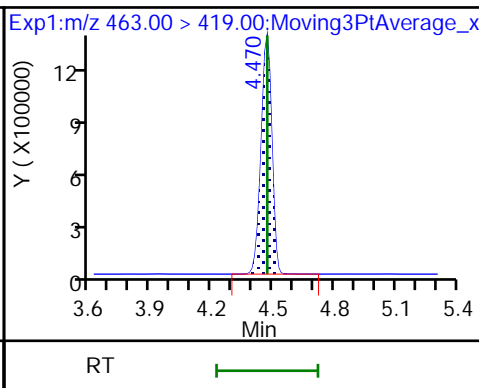
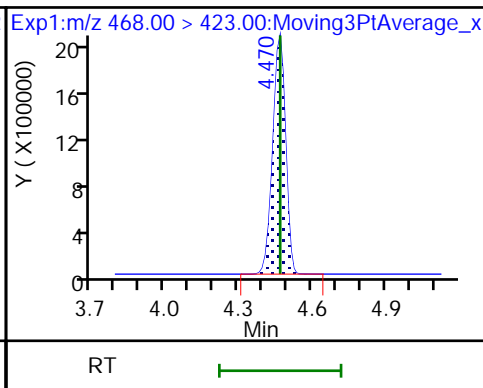
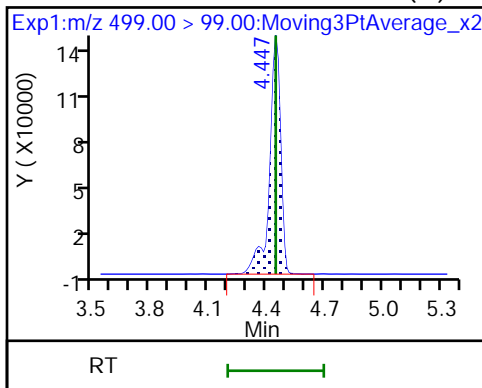




24 Perfluorooctanesulfonic acid (M)

D 27 13C5 PFNA

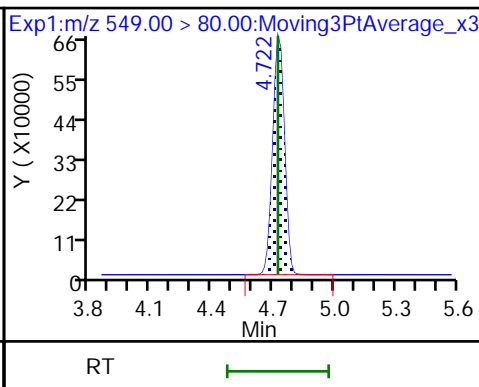
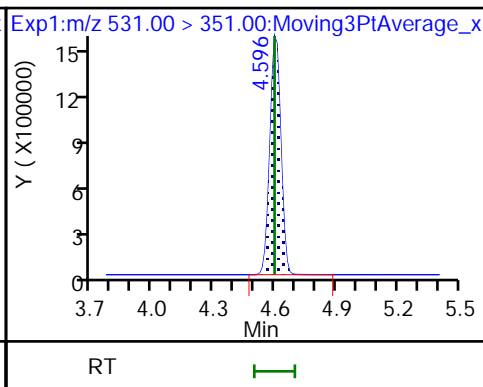
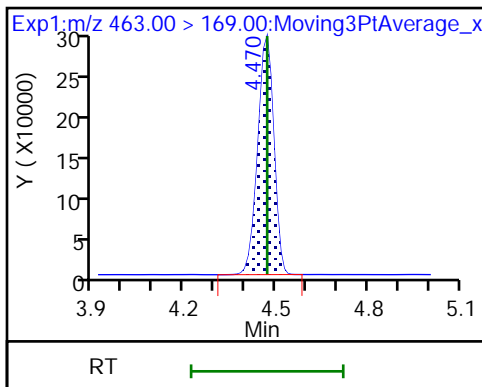
26 Perfluorononanoic acid



26 Perfluorononanoic acid

63 9CIFOS

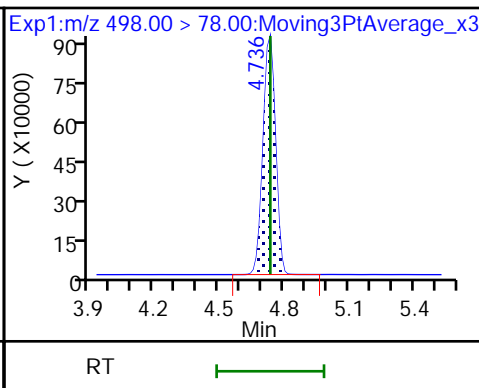
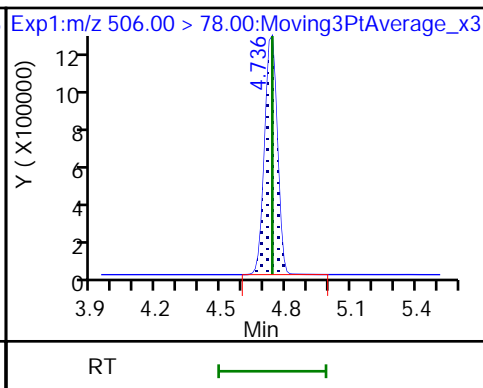
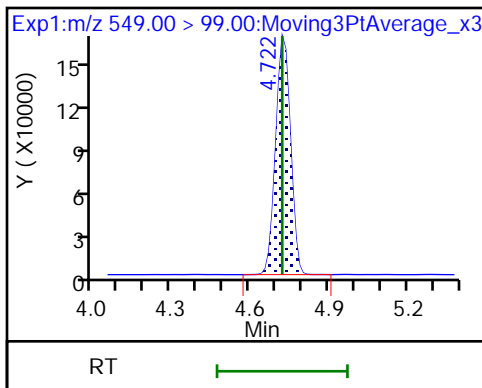
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

D 34 13C8 FOSA

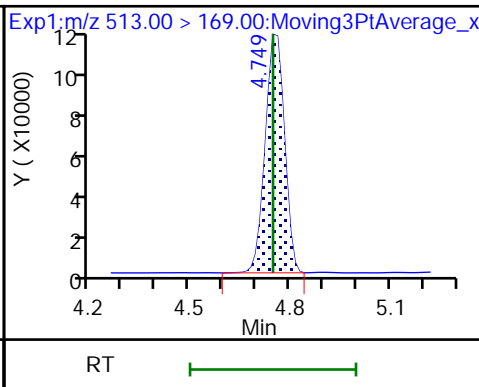
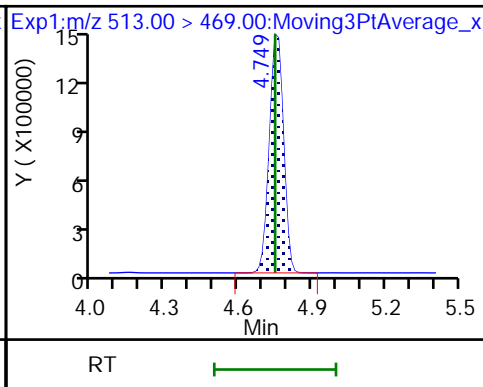
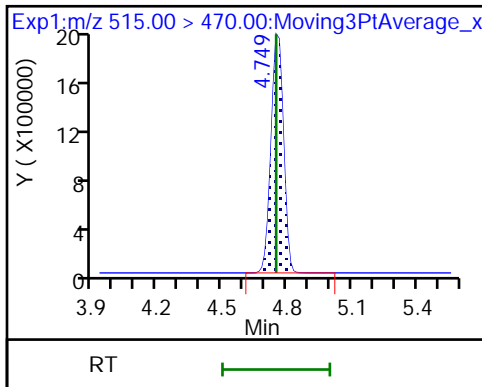
33 Perfluorooctanesulfonamide



D 32 13C2 PFDA

29 Perfluorodecanoic acid

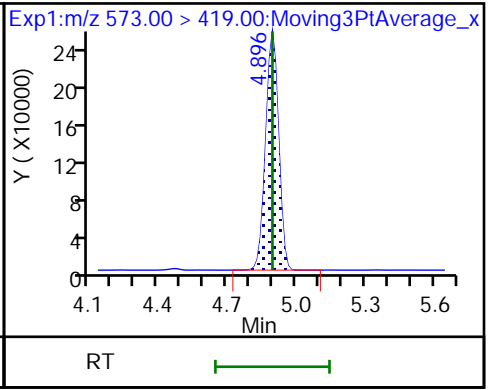
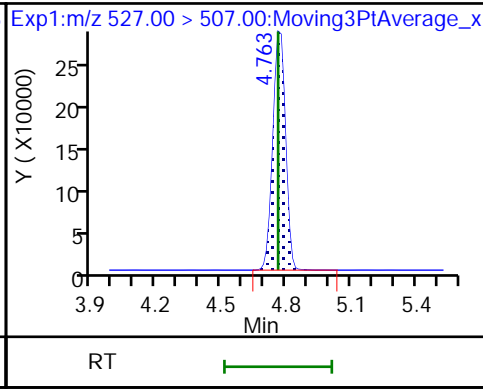
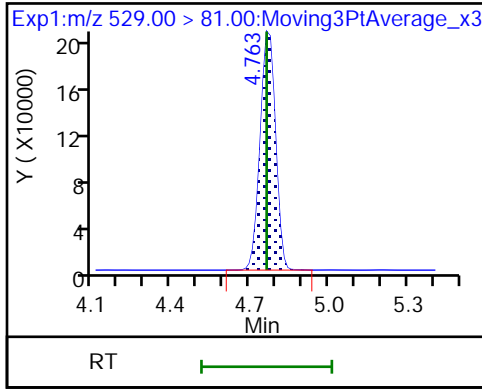
29 Perfluorodecanoic acid



D 30 M2-8:2 FTS

31 8:2 FTS

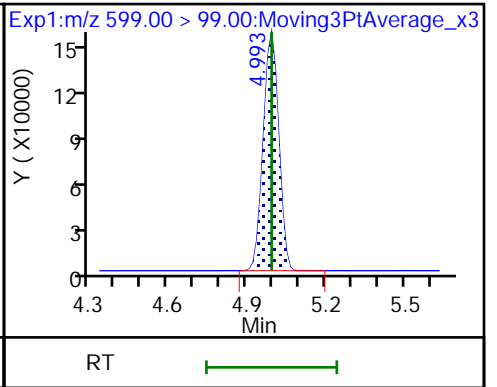
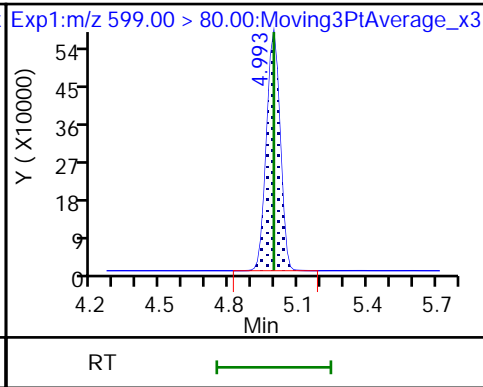
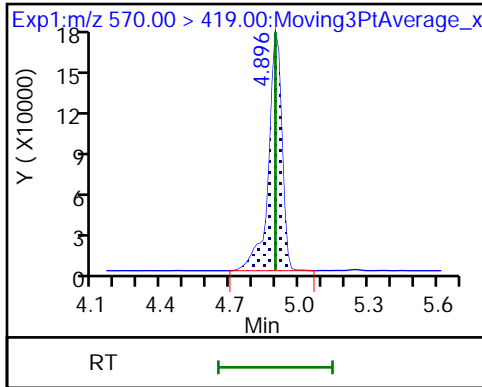
D 35 d3-NMeFOSAA



36 NMeFOSAA

37 Perfluorodecanesulfonic acid

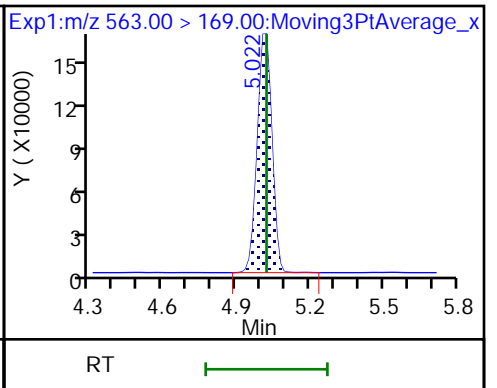
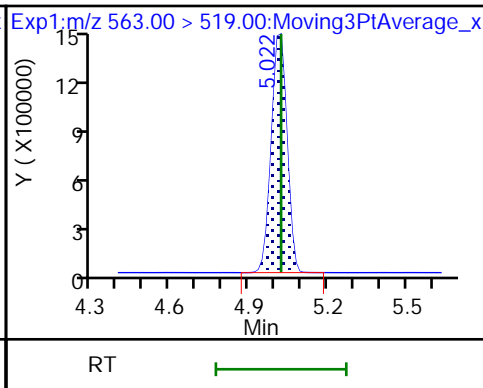
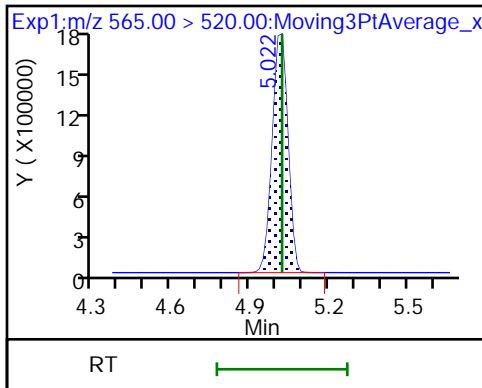
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

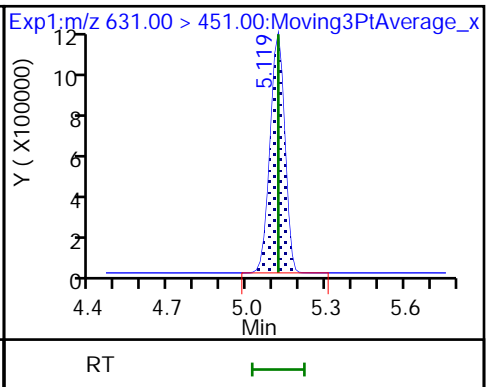
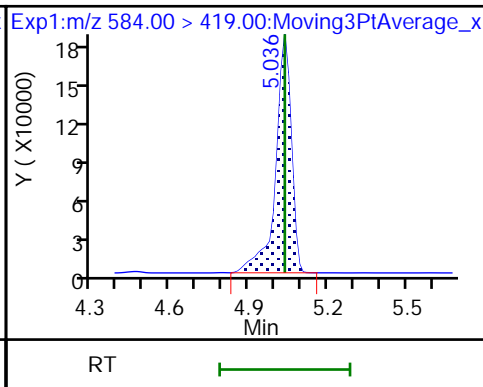
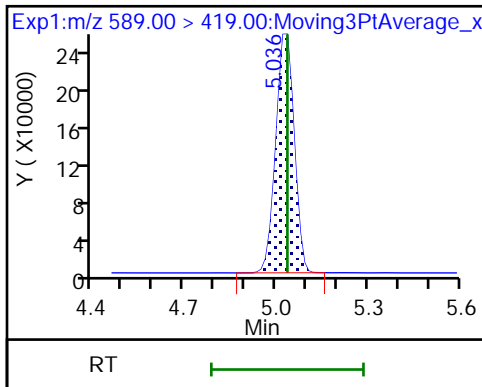
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA

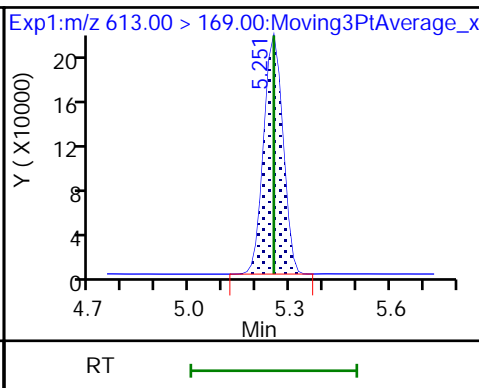
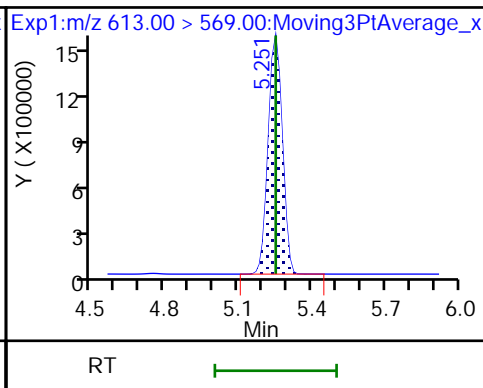
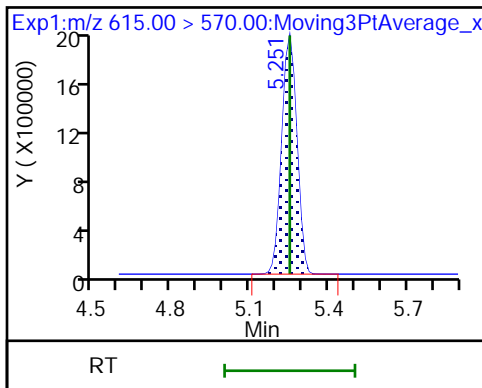
57 11C1FOS



D 43 13C2 PFDaA

42 Perfluorododecanoic acid

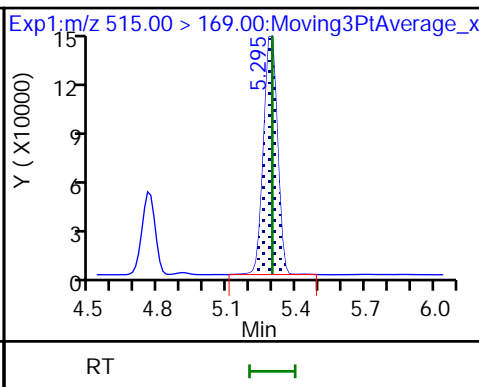
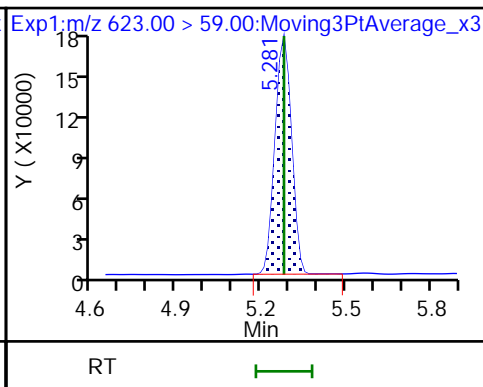
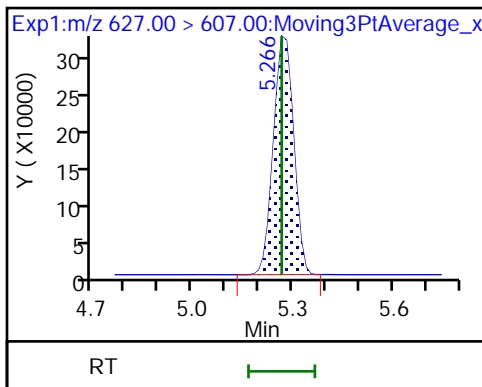
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

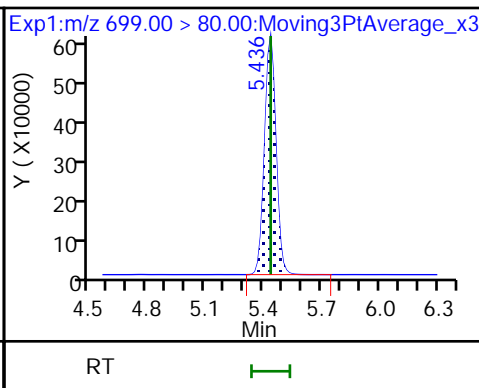
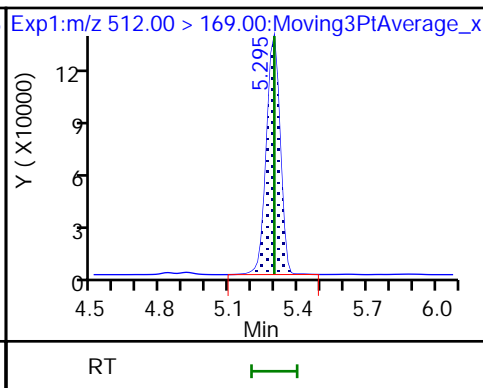
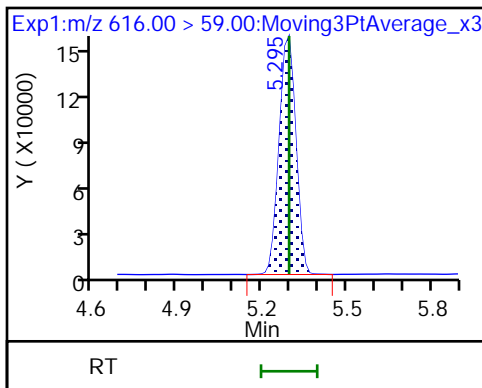
D 58 d-N-MeFOSEA-M



49 N-MeFOSE-M

61 NMeFOSEA

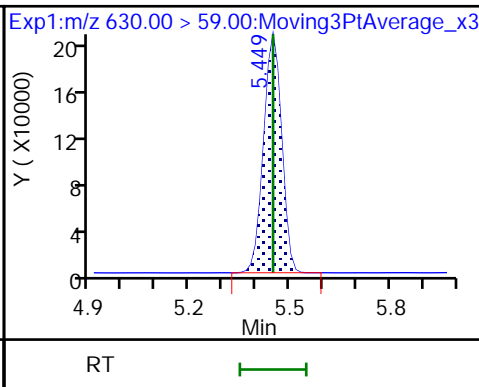
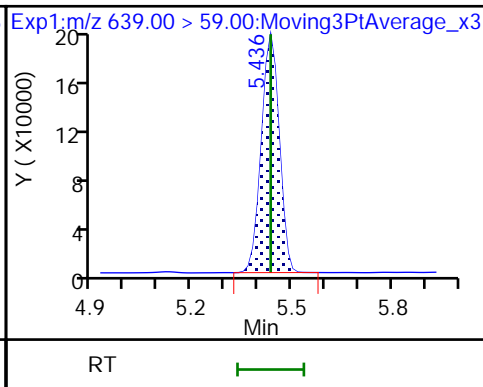
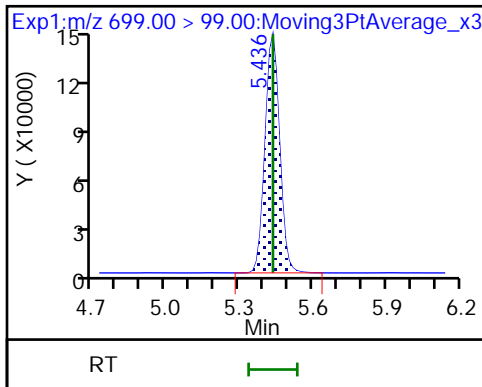
54 PFDoS



54 PFDoS

D 53 d9-N-EtFOSE-M

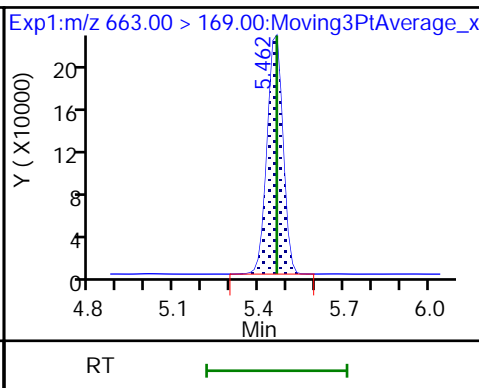
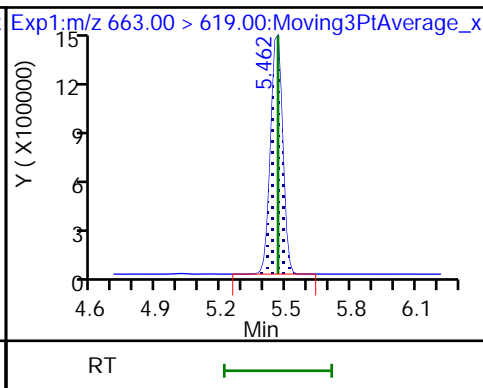
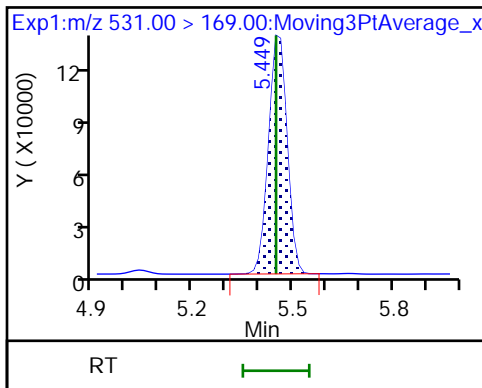
62 N-EtFOSE-M



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid

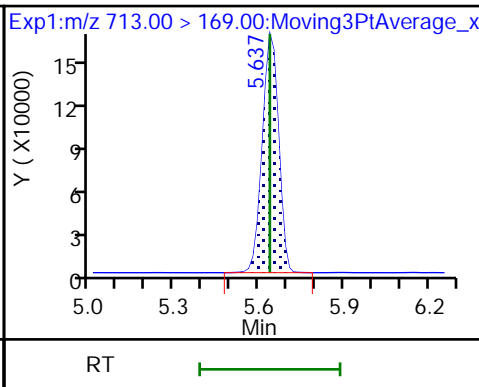
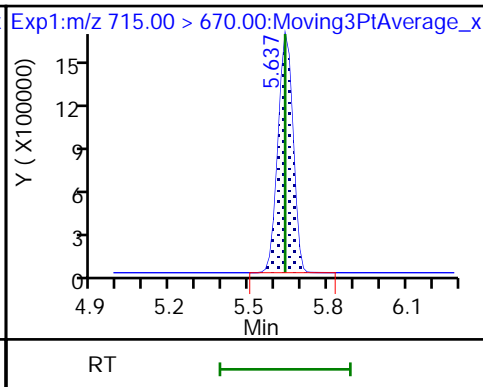
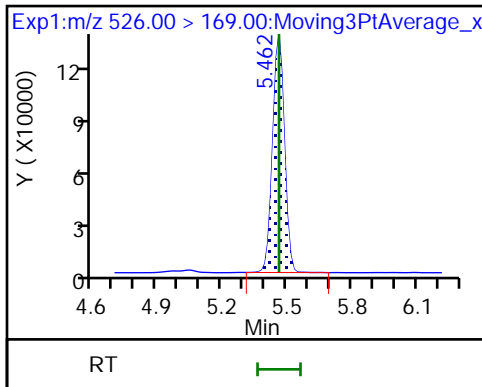
44 Perfluorotridecanoic acid



56 N-EtFOSA-M

D 46 13C2 PFTeDA

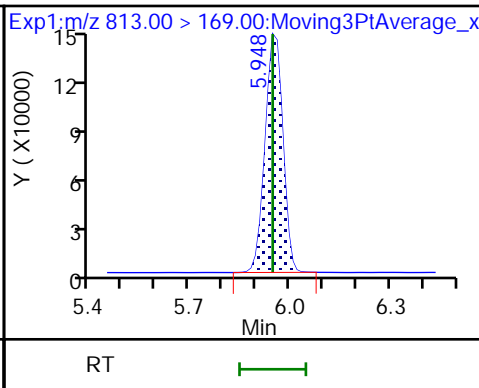
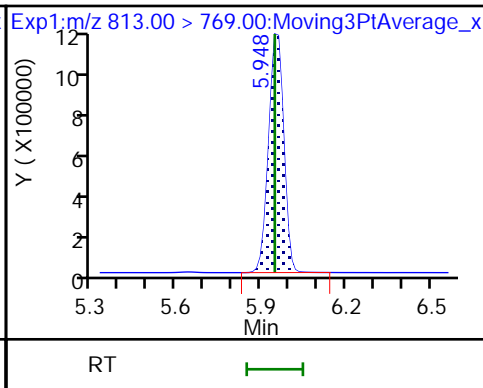
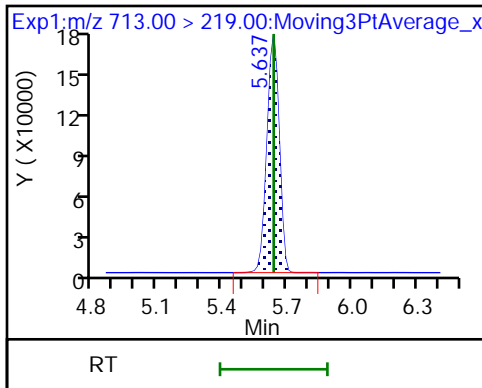
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

55 Perfluorohexadecanoic acid

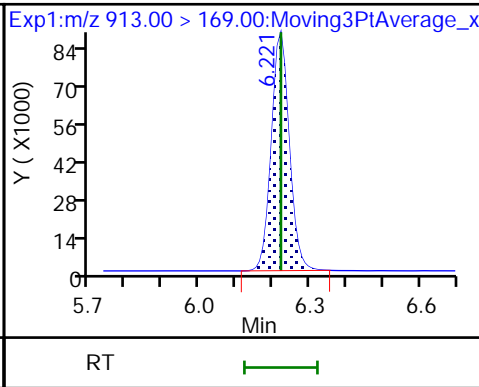
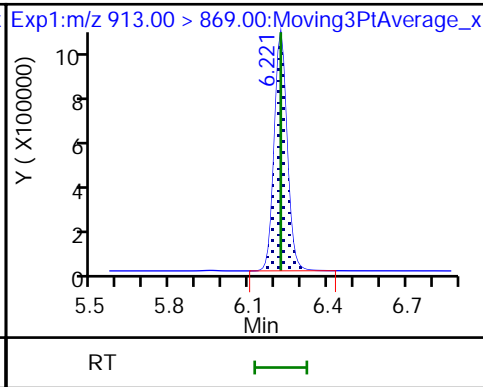
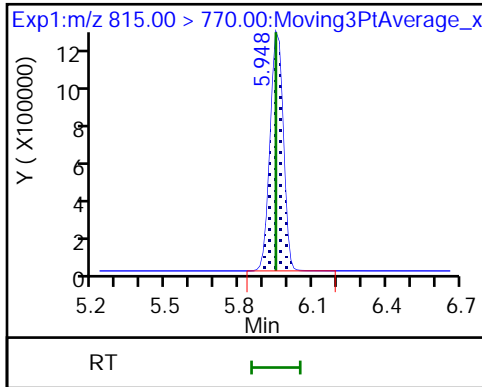
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid



Eurofins TestAmerica, Knoxville

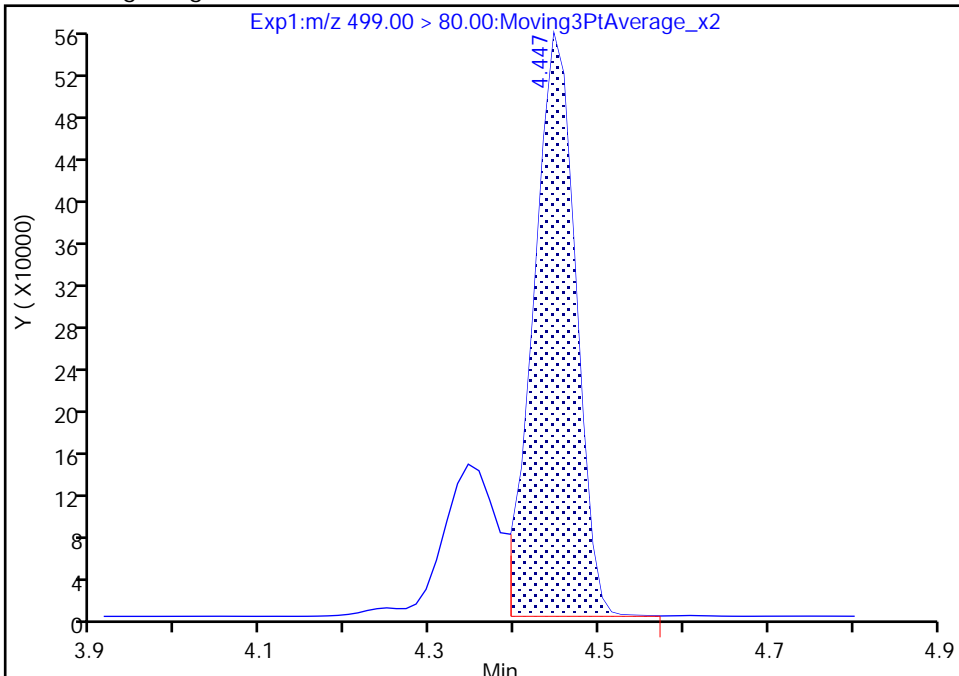
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Injection Date: 06-Oct-2021 21:19:43 Instrument ID: LCA
Lims ID: CCVIS
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

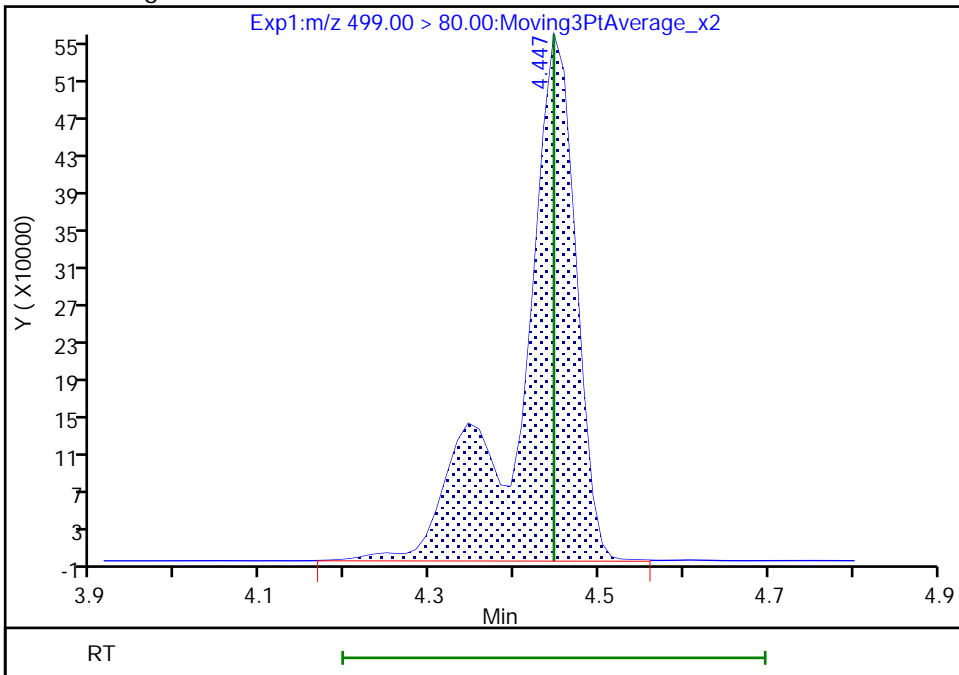
RT: 4.45
Area: 1901952
Amount: 0.676797
Amount Units: ng/ml

Processing Integration Results



RT: 4.45
Area: 2560226
Amount: 0.911040
Amount Units: ng/ml

Manual Integration Results



Reviewer: mcwhirterl, 07-Oct-2021 02:34:57
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Knoxville

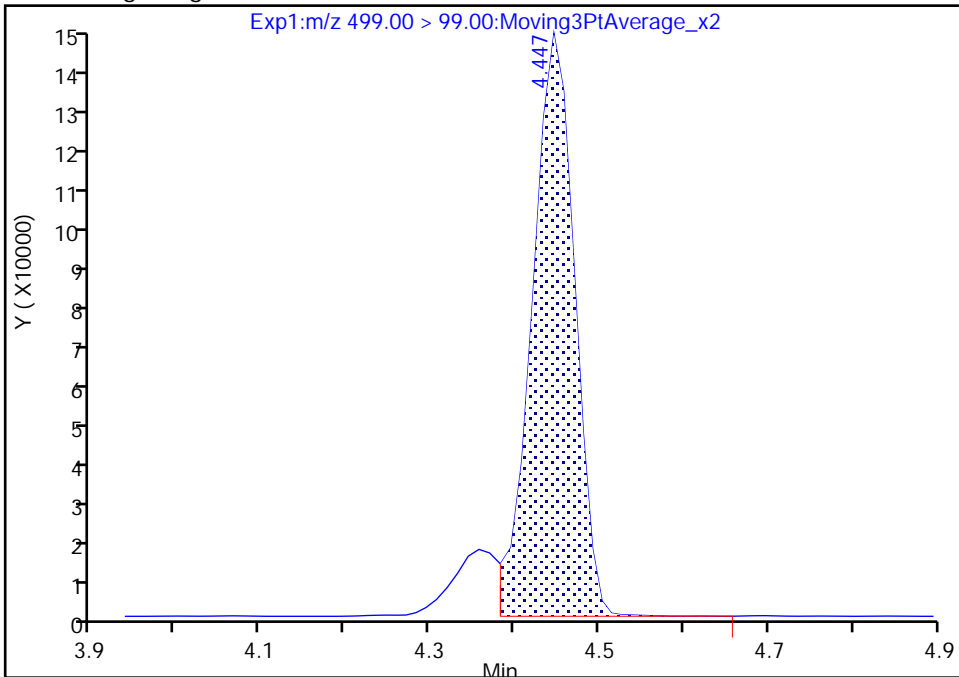
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Injection Date: 06-Oct-2021 21:19:43 Instrument ID: LCA
Lims ID: CCVIS
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

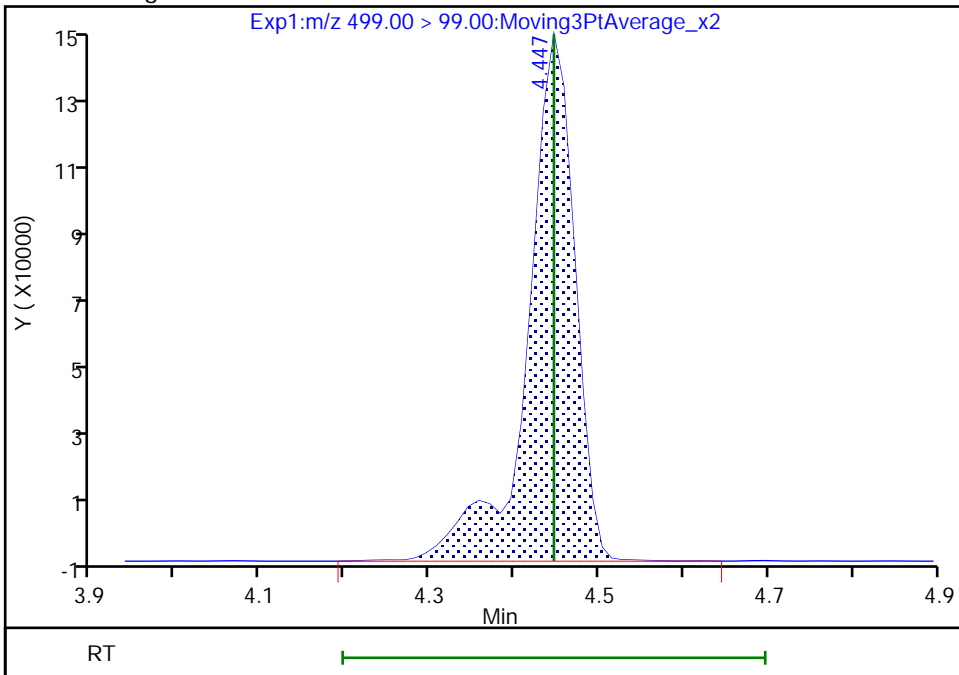
RT: 4.45
Area: 515466
Amount: 0.676797
Amount Units: ng/ml

Processing Integration Results



RT: 4.45
Area: 577710
Amount: 0.911040
Amount Units: ng/ml

Manual Integration Results



Reviewer: mcwhirterl, 07-Oct-2021 02:35:06

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54568/32 Calibration Date: 10/07/2021 01:08
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _032.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7855	0.7836		0.998	1.00	-0.2	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.013	0.9930		0.980	1.00	-2.0	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.126	1.099		0.863	0.884	-2.4	40.0
4:2 FTS	AveID	2.500	2.293		0.857	0.934	-8.3	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8572	0.8198		0.956	1.00	-4.4	40.0
Perfluoropentanesulfonic acid (PFPeS)	L2ID		0.8308		0.907	0.938	-3.3	50.0
HFPO-DA	L2ID		1.289		0.930	1.00	-7.0	40.0
Perfluorohexanesulfonic acid (PFHxS)	L2ID		1.357		0.909	0.910	-0.1	40.0
Perfluoroheptanoic acid (PFHpA)	L2ID		1.065		1.01	1.00	0.8	40.0
DONA	AveID	3.243	3.138		0.911	0.942	-3.2	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9947	1.004		0.961	0.952	0.9	40.0
6:2 FTS	L2ID		1.973		0.929	0.948	-2.0	40.0
Perfluorooctanoic acid (PFOA)	L2ID		1.116		1.01	1.00	0.7	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.100	1.057		0.892	0.928	-3.9	40.0
Perfluorononanoic acid (PFNA)	L2ID		0.8493		1.02	1.00	1.8	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	2.308	2.280		0.921	0.932	-1.2	40.0
Perfluorononanesulfonic acid (PFNS)	AveID	1.042	0.999		0.920	0.960	-4.2	40.0
Perfluorodecanoic acid (PFDA)	L2ID		0.999		1.05	1.00	5.2	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9606	0.9807		1.02	1.00	2.1	40.0
8:2 FTS	AveID	1.784	1.762		0.946	0.958	-1.2	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	L2ID		0.9748		1.06	1.00	6.0	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.9574	0.9264		0.933	0.964	-3.2	40.0
Perfluoroundecanoic acid (PFUnA)	L2ID		1.030		1.02	1.00	1.8	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.9494	0.8951		0.943	1.00	-5.7	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.858	1.743		0.883	0.942	-6.2	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		1.025		0.982	1.00	-1.8	40.0
10:2 FTS	AveID	2.221	2.537		1.10	0.964	14.2	40.0
2- (N-methylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.135		0.980	1.00	-2.0	40.0
NMeFOSA	AveID	1.047	1.008		0.962	1.00	-3.8	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9879	0.9774		0.958	0.968	-1.1	40.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54568/32 Calibration Date: 10/07/2021 01:08
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _032.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTrIA)	L2ID		0.8578		0.970	1.00	-3.0	50.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.383		1.10	1.00	9.6	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.168	1.135		0.971	1.00	-2.9	40.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.1258		0.997	1.00	-0.3	40.0
Perfluorohexadecanoic acid	Q2ID		1.079		0.986	1.00	-1.4	40.0
Perfluorooctadecanoic acid	AveID	0.9076	0.9237		1.02	1.00	1.8	40.0
13C4 PFBA	Ave	1.324	1.270		1.20	1.25	-4.1	50.0
13C5 PFPeA	Ave	1.087	1.032		1.19	1.25	-5.1	50.0
13C3 PFBS	Ave	0.7019	0.6835		1.13	1.16	-2.6	50.0
M2-4:2 FTS	Ave	0.1052	0.1150		1.28	1.17	9.3	50.0
13C2 PFHxA	Ave	1.116	1.073		1.20	1.25	-3.9	50.0
13C3 HFPO-DA	Ave	0.5714	0.5343		1.17	1.25	-6.5	50.0
18O2 PFHxS	Ave	0.4248	0.4103		1.14	1.18	-3.4	50.0
13C4 PFHpA	Ave	1.113	1.073		1.21	1.25	-3.6	50.0
13C4 PFOA	Ave	1.007	0.9819		1.22	1.25	-2.5	50.0
M2-6:2 FTS	Ave	0.1078	0.1186		1.31	1.19	10.0	50.0
13C4 PFOS	Ave	0.5852	0.5634		1.15	1.20	-3.7	50.0
13C5 PFNA	Ave	1.279	1.225		1.20	1.25	-4.3	50.0
13C2 PFDA	Ave	1.296	1.184		1.14	1.25	-8.6	50.0
13C8 FOSA	Ave	0.8591	0.8070		1.17	1.25	-6.1	50.0
M2-8:2 FTS	Ave	0.1316	0.1353		1.23	1.20	2.8	50.0
d3-NMeFOSAA	Ave	0.1774	0.1607		1.13	1.25	-9.4	50.0
13C2 PFUnA	Ave	1.237	1.207		1.22	1.25	-2.4	50.0
d5-NEtFOSAA	Ave	0.1705	0.1679		1.23	1.25	-1.5	50.0
13C2 PFDoA	Ave	1.319	1.309		1.24	1.25	-0.8	50.0
d7-N-MeFOSE-M	Ave	0.1075	0.1209		1.41	1.25	12.4	50.0
d-N-MeFOSA-M	Ave	0.1120	0.1073		1.20	1.25	-4.2	50.0
d9-N-EtFOSE-M	Ave	0.1146	0.1192		1.30	1.25	4.0	50.0
d-N-EtFOSA-M	Ave	0.0942	0.0930		1.23	1.25	-1.3	50.0
13C2 PFTeDA	Ave	1.211	1.205		1.24	1.25	-0.5	50.0
13C2 PFHxDA	Ave	0.8782	0.8279		1.18	1.25	-5.7	50.0
13C8 PFOA	Ave	0.9886	0.9256		1.17	1.25	-6.4	50.0
13C8 PFOS	Ave	0.1256	0.1164		1.11	1.20	-7.3	50.0

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_032.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 07-Oct-2021 01:08:28 ALS Bottle#: 32 Worklist Smp#: 32
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-032 ccv
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 16:47:37 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 16:46:28

Ratio Calibration: None

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	2.801	2.801	0.0	0.678	7405051	1.20	95.9	18960	
2 Perfluorobutanoic acid	212.90 > 169.00	2.801	2.812	-0.011	1.000	4642257	1.00	99.8	1205	
D 3 13C5 PFPeA	267.90 > 223.00	3.116	3.129	-0.013	0.754	6014902	1.19	94.9	18250	
4 Perfluoropentanoic acid	262.90 > 219.00	3.116	3.129	-0.013	1.000	4778047	0.9802	98.0	1451	
D 6 13C3 PFBS	301.90 > 80.00	3.130	3.129	0.001	0.758	3705293	1.13	97.4	30599	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.130	3.143	-0.013	1.000	3096195	0.8626	Target=3.06	97.6	18618
	298.90 > 99.00	3.130	3.143	-0.013	1.000	1183351		2.62(1.53-4.59)		7529
D 8 M2-4:2 FTS	329.00 > 81.00	3.409	3.423	-0.014	0.825	626085	1.28	109	1262	
7 4:2 FTS	327.00 > 307.00	3.409	3.423	-0.014	1.000	1148641	0.8568	91.7	10958	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.453	3.453	0.0	1.103	2483958	0.9071	Target=3.47	96.7	13386
	349.00 > 99.00	3.453	3.453	0.0	1.103	710545		3.50(1.73-5.20)		10397
D 9 13C2 PFHxA	315.00 > 270.00	3.453	3.469	-0.016	0.836	6252800	1.20	96.1	21695	
10 Perfluorohexanoic acid	313.00 > 269.00	3.453	3.469	-0.016	1.000	4100919	0.9564	Target=9.74	95.6	2303
	313.00 > 119.00	3.453	3.469	-0.016	1.000	329560		12.44(4.87-14.61)		1293
D 12 13C3 HFPO-DA	287.00 > 169.00	3.549	3.561	-0.013	0.859	3114257	1.17	93.5	10831	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.549	3.561	-0.013	1.000	3210373	0.9302		93.0	2904	
D 17 18O2 PFHxS										
403.00 > 84.00	3.791	3.803	-0.012	0.918	2262640	1.14		96.6	7754	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.791	3.803	-0.012	1.000	2362481	0.9087	Target=2.96	99.9	6682	
399.00 > 99.00	3.791	3.803	-0.012	1.000	663355		3.56(1.48-4.44)		4900	
D 14 13C4 PFHpA										
367.00 > 322.00	3.803	3.815	-0.012	0.921	6254017	1.20		96.4	32634	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.803	3.815	-0.012	1.000	5327616	1.01	Target=3.35	101	4346	
363.00 > 169.00	3.803	3.815	-0.012	1.000	1626293		3.28(1.67-5.02)		5124	
68 DONA										
377.00 > 251.00	3.828	3.840	-0.012	0.863	7765534	0.9114	Target=1.49	96.8	16175	
377.00 > 85.00	3.828	3.840	-0.012	0.863	4275034		1.82(0.74-2.23)		7407	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.118	4.143	-0.025	0.929	2510294	0.9607	Target=3.73	101	10859	
449.00 > 99.00	4.118	4.143	-0.025	0.929	628587		3.99(1.87-5.61)		3896	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.118	4.143	-0.025	0.997	5395062	1.17		93.6	28867	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.130	4.143	-0.013	1.000	656492	1.31		110	3779	
19 6:2 FTS										
427.00 > 407.00	4.130	4.143	-0.013	1.000	1033871	0.9294		98.0	4852	
D 21 13C4 PFOA										
417.00 > 372.00	4.130	4.155	-0.025	1.000	5723371	1.22		97.5	22206	
* 22 13C2 PFOA										
415.00 > 370.00	4.130	4.155	-0.025		5828723	1.25			23965	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.130	4.155	-0.025	1.000	5110427	1.01	Target=2.40	101	2180	
413.00 > 169.00	4.130	4.155	-0.025	1.000	1942975		2.63(1.20-3.61)		2851	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.421	4.447	-0.025	1.070	648861	1.11		92.7	3313	
D 25 13C4 PFOS										
503.00 > 80.00	4.434	4.447	-0.012	1.074	3139139	1.15		96.3	5629	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.434	4.447	-0.012	1.000	2575510	0.8915	Target=3.83	96.1	1726	M
499.00 > 99.00	4.434	4.447	-0.012	1.000	580777		4.43(1.91-5.74)		2615	M
D 27 13C5 PFNA										
468.00 > 423.00	4.446	4.470	-0.024	1.076	7138005	1.20		95.7	24463	
26 Perfluorononanoic acid										
463.00 > 419.00	4.446	4.470	-0.024	1.000	4849767	1.02	Target=3.68	102	4500	
463.00 > 169.00	4.446	4.470	-0.024	1.000	1081572		4.48(1.84-5.52)		2349	
63 9CIFOS										
531.00 > 351.00	4.584	4.596	-0.012	1.110	5583112	0.9209		98.8	7113	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.709	4.722	-0.013	1.062	2518654	0.9199	Target=3.97	95.8	5250	
549.00 > 99.00	4.709	4.722	-0.013	1.062	641224		3.93(1.99-5.96)		2475	
D 34 13C8 FOSA										
506.00 > 78.00	4.736	4.736	0.0	1.146	4703742	1.17		93.9	4782	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.736	4.736	0.0	1.000	3690378	1.02		102	5008	
D 32 13C2 PFDA										
515.00 > 470.00	4.736	4.749	-0.013	1.146	6899316	1.14		91.4	18281	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.736	4.749	-0.013	1.000	5514481	1.05	Target=10.11	105	4019	
513.00 > 169.00	4.736	4.749	-0.013	1.000	474726		11.62(5.06-15.17)		474	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.763	-0.014	1.150	755497	1.23		103	3205	
31 8:2 FTS										
527.00 > 507.00	4.749	4.763	-0.014	1.000	1065066	0.9464		98.8	3875	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.882	4.896	-0.014	1.182	936957	1.13		90.6	1608	
36 NMeFOSAA										
570.00 > 419.00	4.882	4.896	-0.014	1.000	730676	1.06		106	1445	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.979	4.993	-0.014	1.123	2345986	0.9328	Target=3.80	96.8	6358	
599.00 > 99.00	4.979	4.993	-0.014	1.123	618497		3.79(1.90-5.70)		4610	
D 39 13C2 PFUnA										
565.00 > 520.00	4.993	5.022	-0.029	1.209	7035346	1.22		97.6	20636	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.993	5.022	-0.029	1.000	5799494	1.02	Target=7.45	102	4419	
563.00 > 169.00	4.993	5.022	-0.029	1.000	616688		9.40(3.78-11.33)		1573	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.007	5.036	-0.029	1.212	978808	1.23		98.5	2977	
40 NEtFOSA										
584.00 > 419.00	5.022	5.036	-0.014	1.003	700937	0.9428		94.3	709	
57 11CIFOS										
631.00 > 451.00	5.106	5.119	-0.013	1.151	4312526	0.8834		93.8	8355	
D 43 13C2 PFDaA										
615.00 > 570.00	5.237	5.251	-0.014	1.268	7630157	1.24		99.2	16472	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.237	5.251	-0.014	1.000	6258132	0.9824	Target=5.33	98.2	3608	
613.00 > 169.00	5.237	5.251	-0.014	1.000	872034		7.18(2.66-7.99)		2257	
50 10:2 FTS										
627.00 > 607.00	5.251	5.266	-0.015	1.106	1543079	1.10		114	9464	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.281	5.281	-0.001	1.278	704718	1.41		112	400	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.282	625214	1.20		95.8	45.5	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.295	0.0	1.003	639995	0.9802		98.0	752	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA	512.00 > 169.00	5.295	5.295	0.0	1.000	503957	0.9624	96.2	685	
54 PFDoS	699.00 > 80.00	5.423	5.436	-0.013	1.223	2485350	0.9577	Target=4.32	98.9	5600
	699.00 > 99.00	5.423	5.436	-0.013	1.223	578260		4.30(2.19-6.58)		3532
D 53 d9-N-EtFOSE-M	639.00 > 59.00	5.449	5.436	0.013	1.319	694994	1.30	104	613	
62 N-EtFOSE-M	630.00 > 59.00	5.462	5.449	0.013	1.002	769216	1.10	110	2509	
D 52 d-N-EtFOSA-M	531.00 > 169.00	5.462	5.449	0.013	1.322	542274	1.23	98.7	815	
44 Perfluorotridecanoic acid	663.00 > 619.00	5.436	5.462	-0.026	1.038	5236157	0.9703	Target=5.66	97.0	2749
	663.00 > 169.00	5.436	5.462	-0.026	1.038	884522		5.92(2.83-8.48)		4830
56 N-EtFOSA-M	526.00 > 169.00	5.462	5.462	0.0	1.000	492170	0.9710	97.1	578	
D 46 13C2 PFTeDA	715.00 > 670.00	5.623	5.637	-0.014	1.361	7023097	1.24	99.5	11626	
45 Perfluorotetradecanoic acid	713.00 > 169.00	5.623	5.637	-0.014	1.000	706732	1.00	Target=1.07	99.7	4016
	713.00 > 219.00	5.623	5.637	-0.014	1.000	635690		1.11(0.53-1.60)		4604
55 Perfluorohexadecanoic acid	813.00 > 769.00	5.935	5.948	-0.013	1.000	4163833	0.9864	Target=7.50	98.6	2974
	813.00 > 169.00	5.935	5.948	-0.013	1.000	512284		8.13(3.75-11.26)		2553
D 59 13C2 PFHxDA	815.00 > 770.00	5.935	5.948	-0.013	1.437	4825769	1.18	94.3	7736	
60 Perfluorooctadecanoic acid	913.00 > 869.00	6.201	6.221	-0.020	1.045	3566022	1.02	Target=9.98	102	2858
	913.00 > 169.00	6.201	6.221	-0.020	1.045	306284		11.64(5.14-15.41)		2148

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L4PFC2_00003

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_032.d

Injection Date: 07-Oct-2021 01:08:28

Instrument ID: LCA

Lims ID: CCV

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 32

Worklist Smp#: 32

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

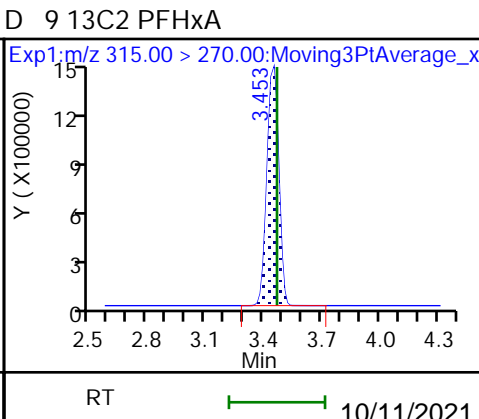
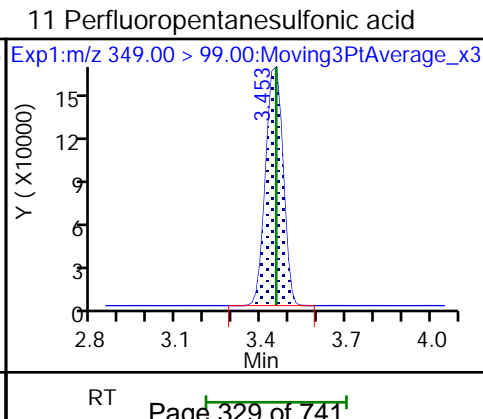
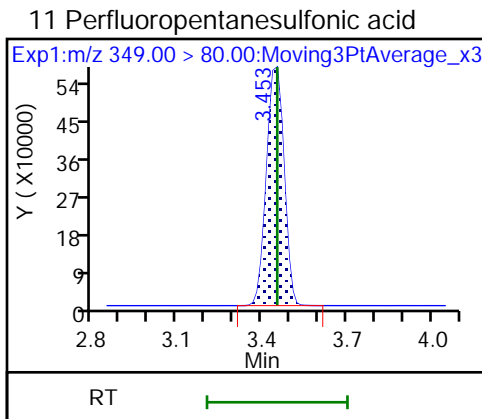
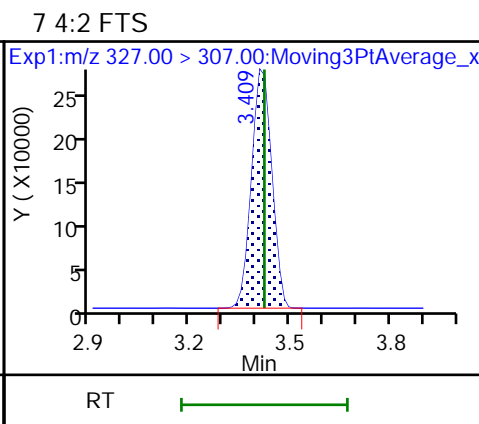
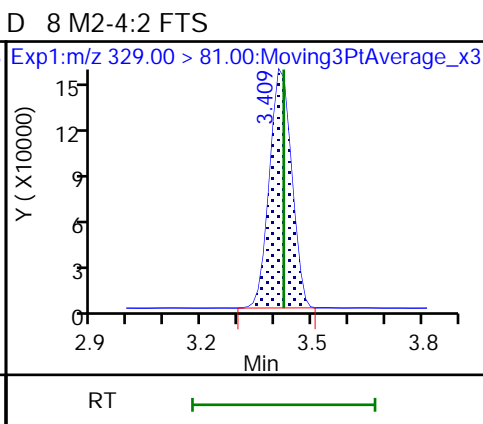
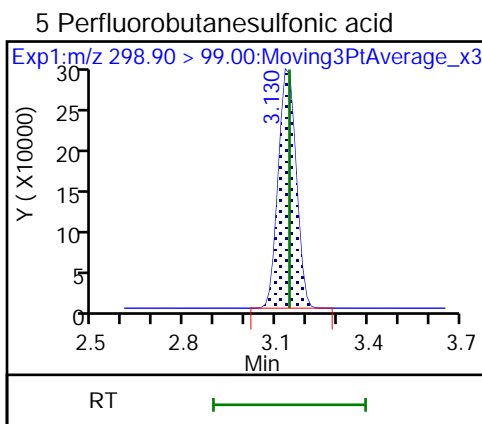
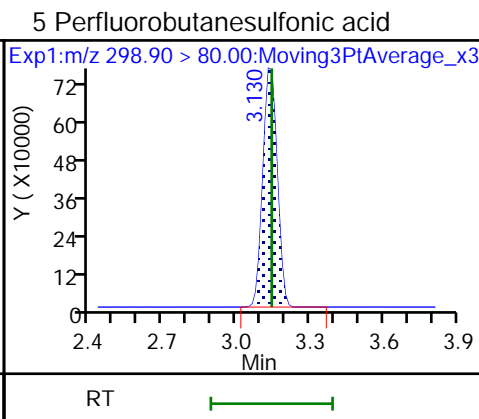
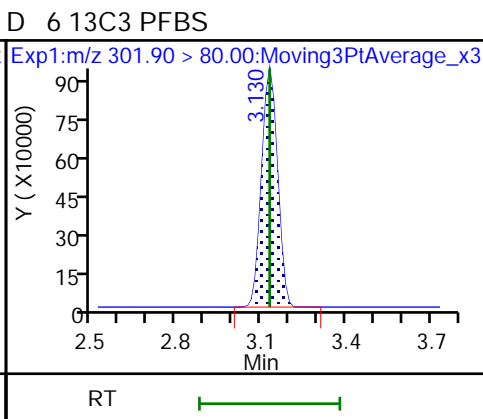
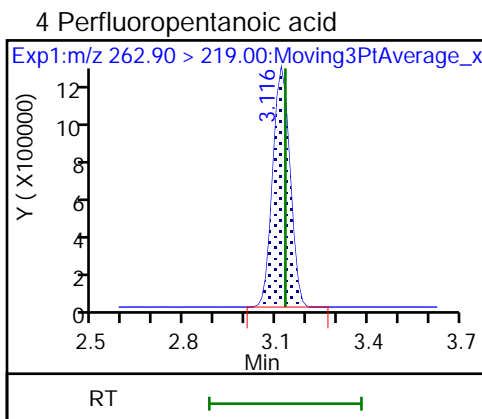
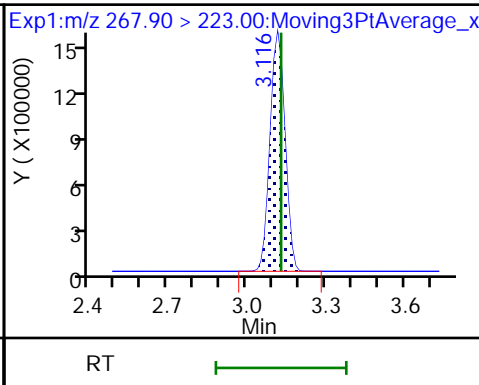
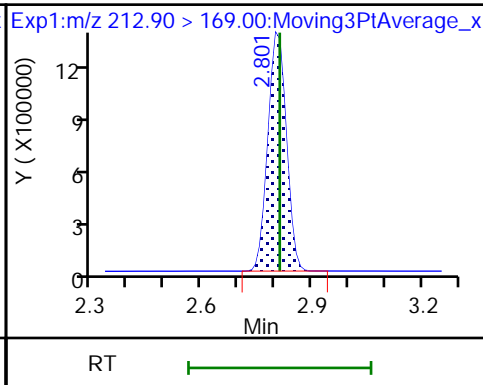
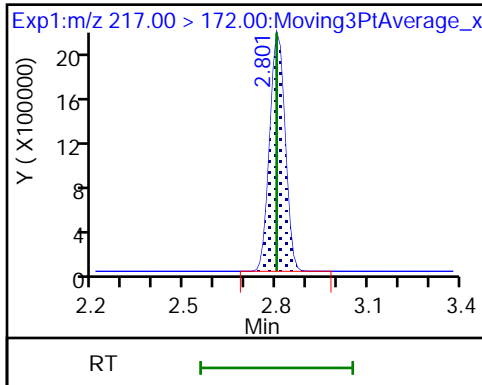
Method: PFC_LCA

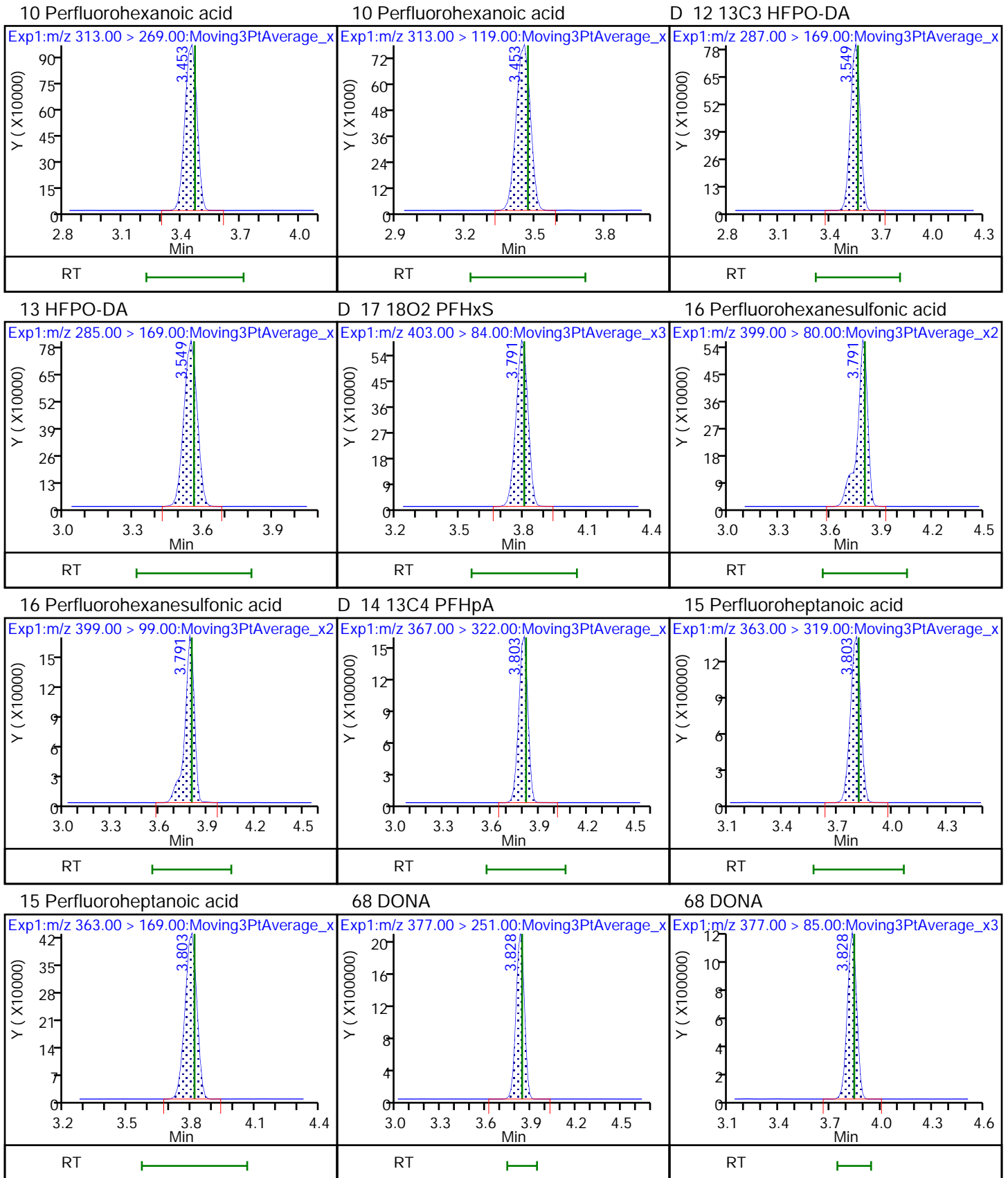
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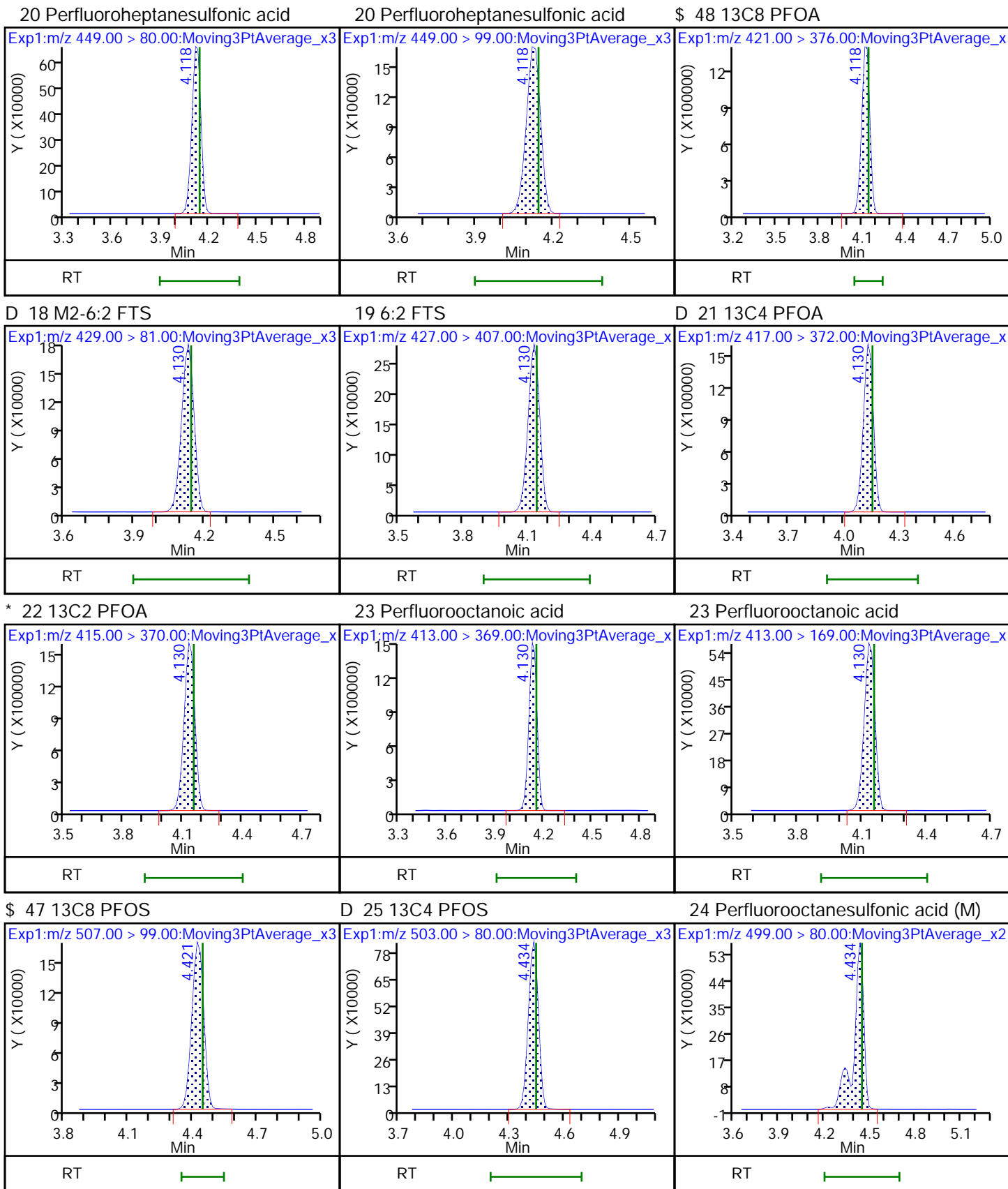
D 1 13C4 PFBA

2 Perfluorobutanoic acid

D 3 13C5 PFPeA

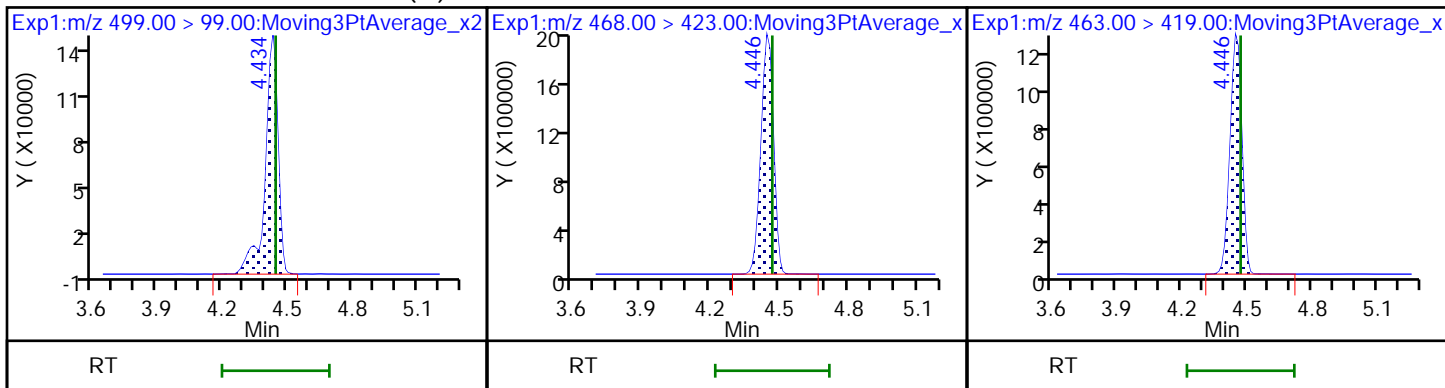






24 Perfluorooctanesulfonic acid (M) D 27 13C5 PFNA

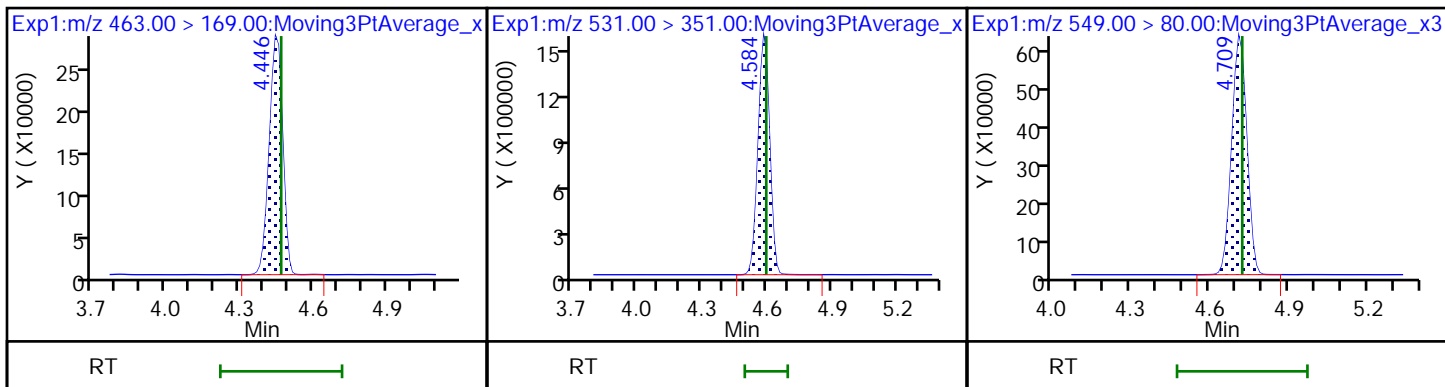
26 Perfluorononanoic acid



26 Perfluorononanoic acid

63 9CIFOS

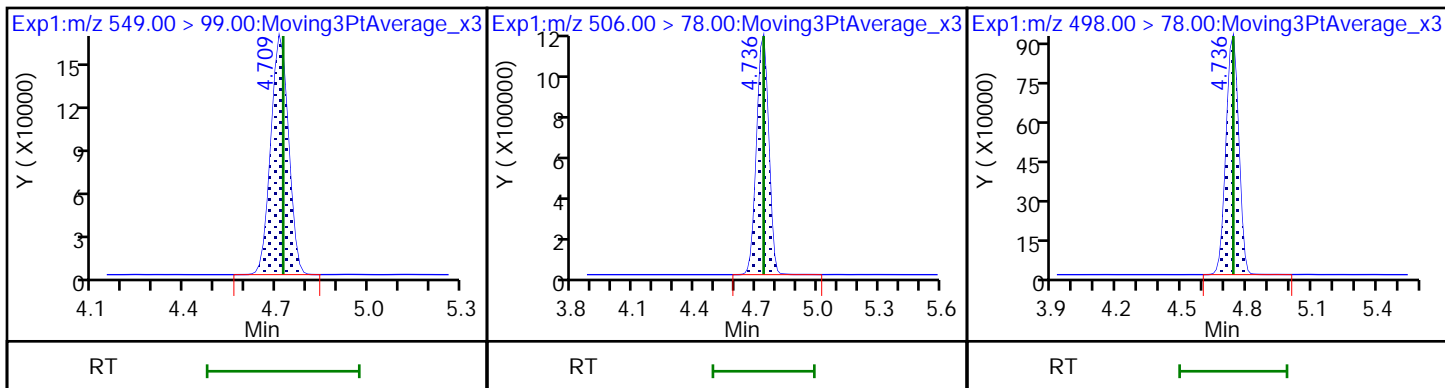
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

D 34 13C8 FOSA

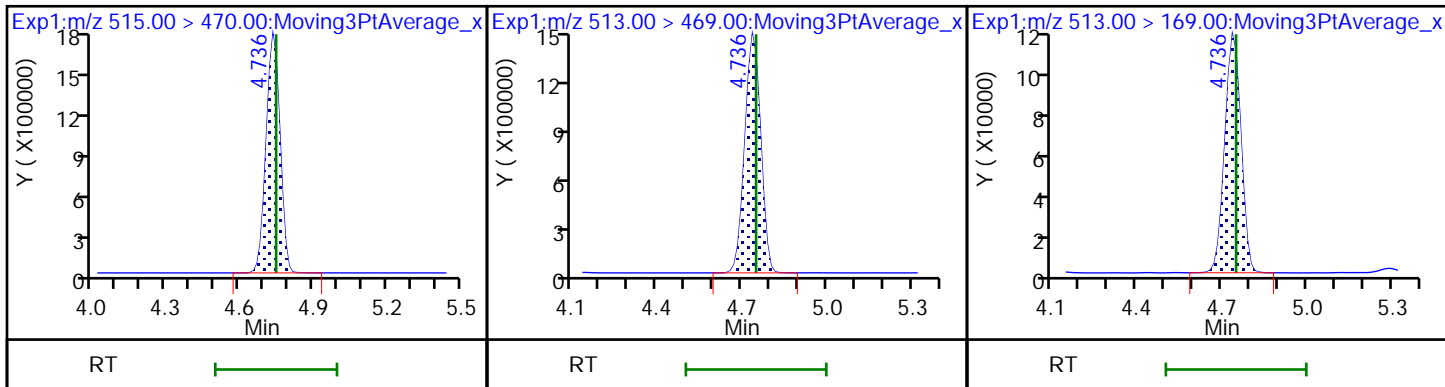
33 Perfluorooctanesulfonamide



D 32 13C2 PFDA

29 Perfluorodecanoic acid

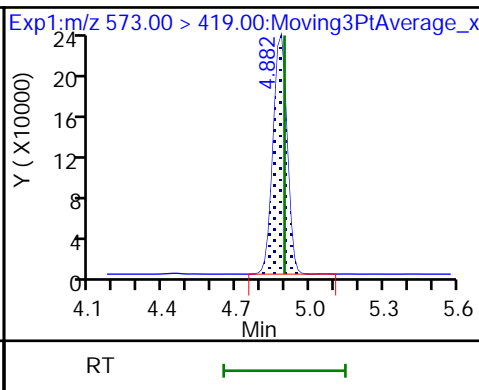
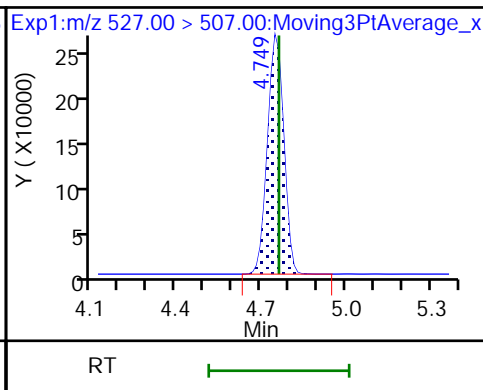
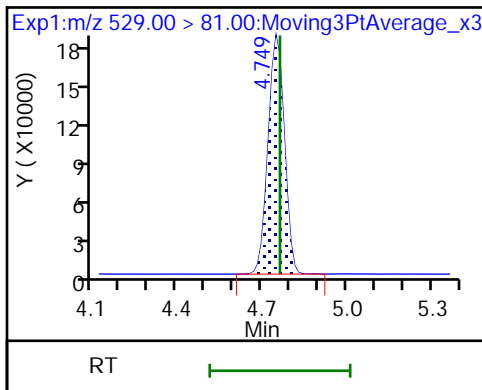
29 Perfluorodecanoic acid



D 30 M2-8:2 FTS

31 8:2 FTS

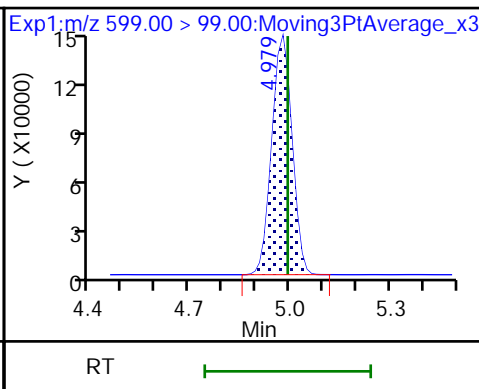
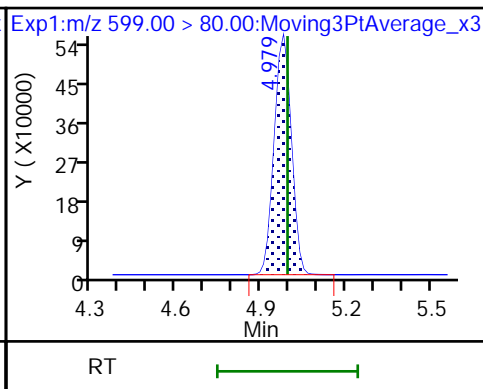
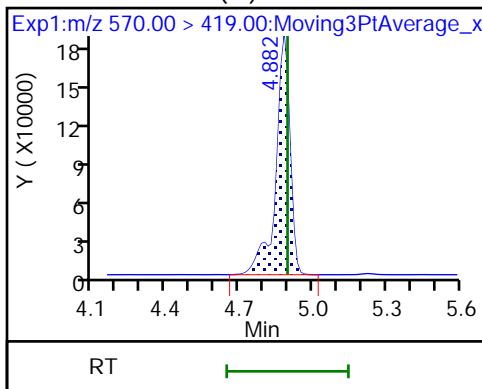
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

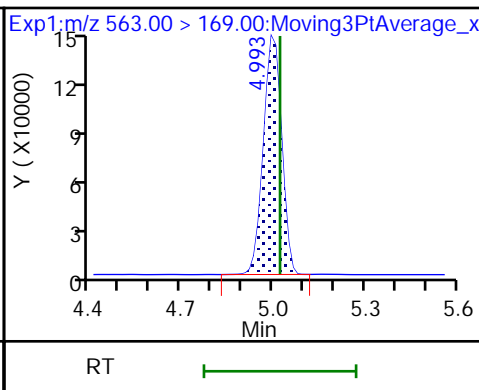
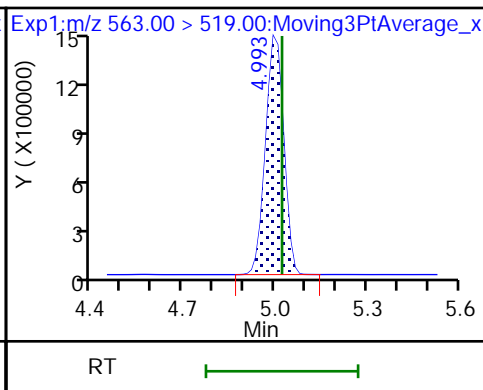
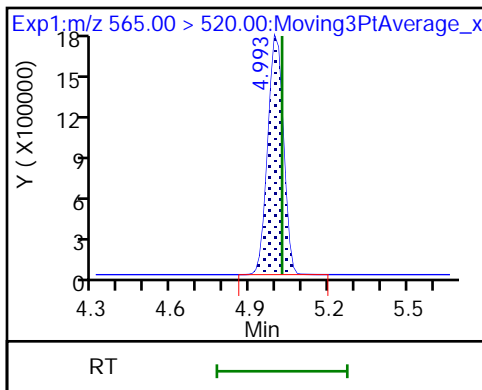
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

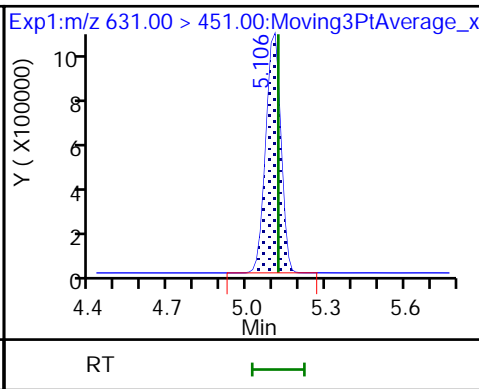
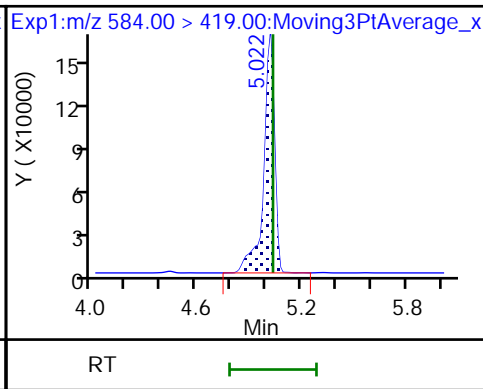
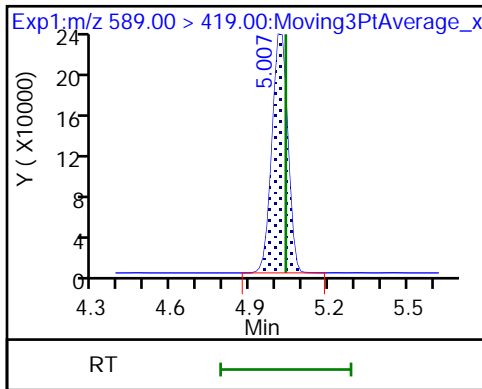
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA

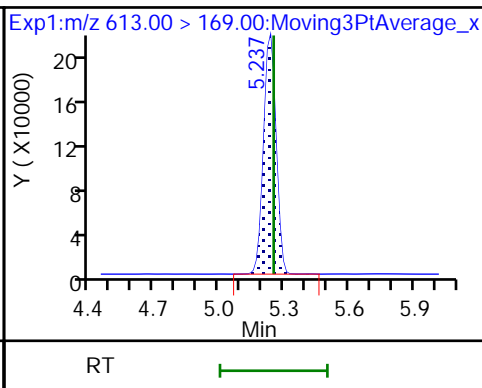
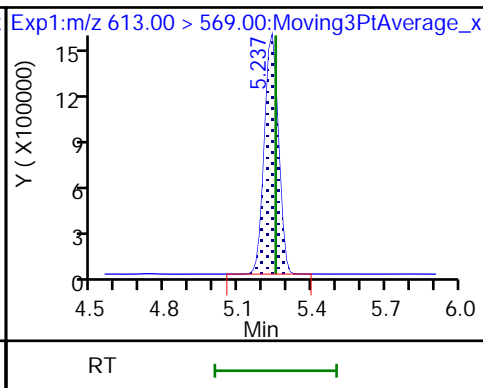
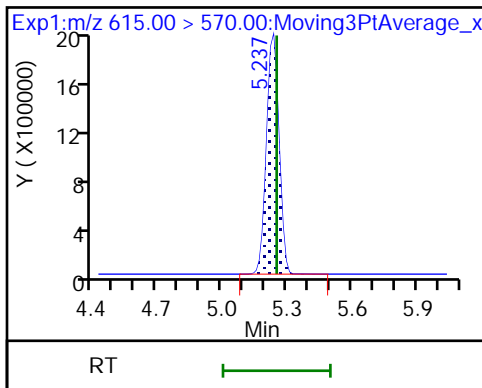
57 11CIFOS



D 43 13C2 PFDaA

42 Perfluorododecanoic acid

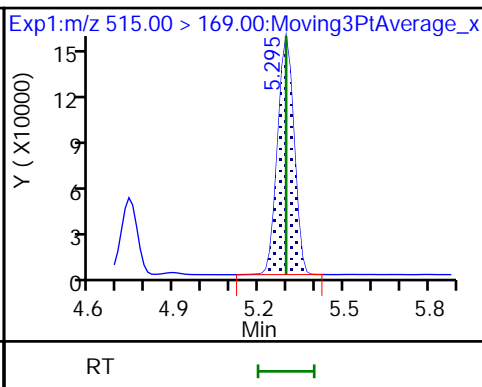
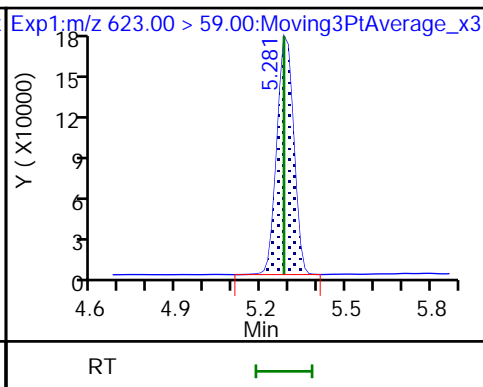
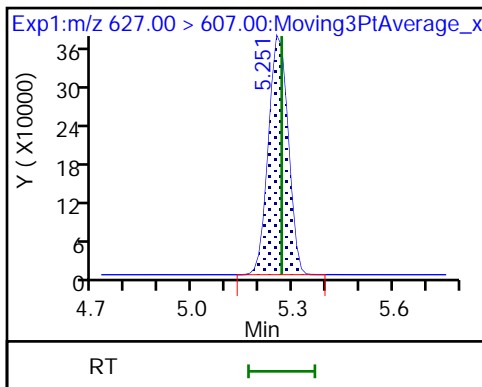
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

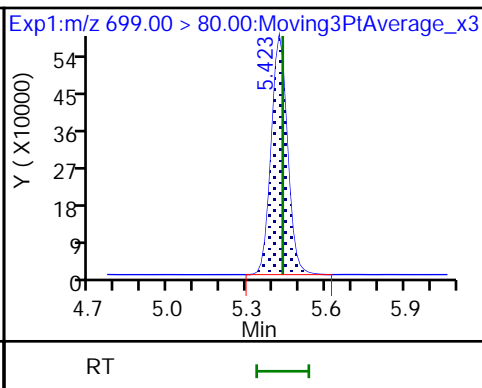
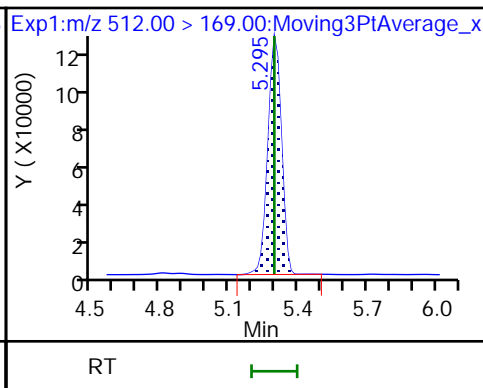
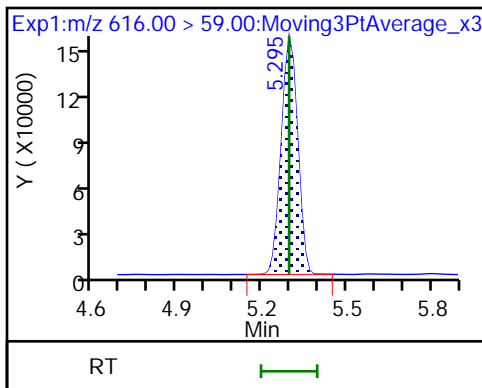
D 58 d-N-MeFOSA-M



49 N-MeFOSE-M

61 NMeFOSA

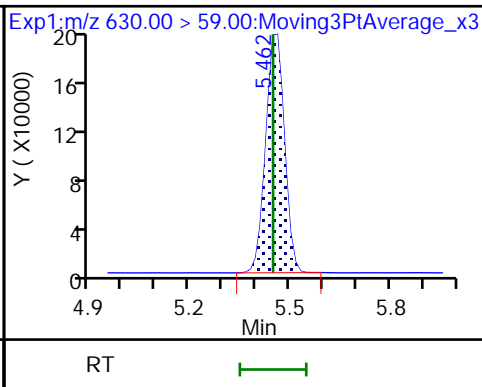
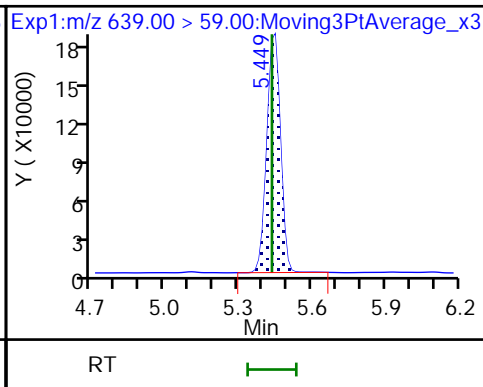
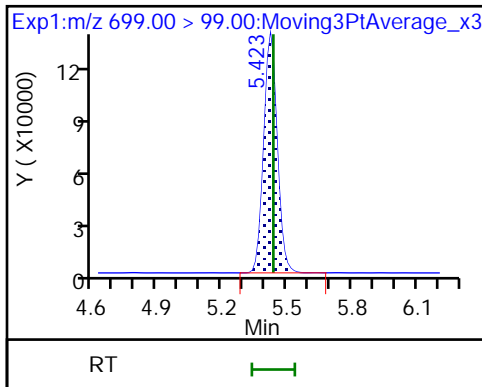
54 PFDoS



54 PFDoS

D 53 d9-N-EtFOSE-M

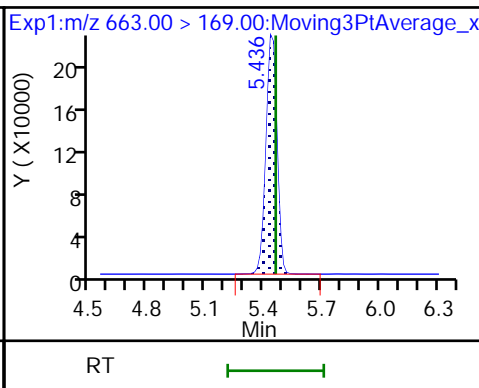
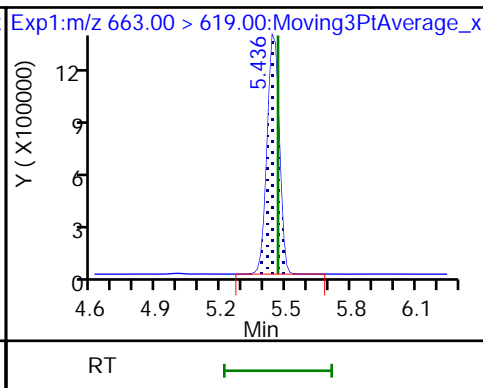
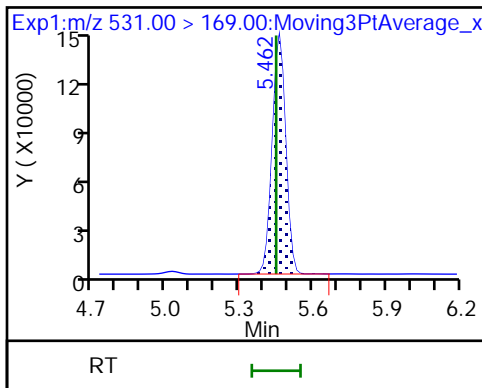
62 N-EtFOSE-M



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid

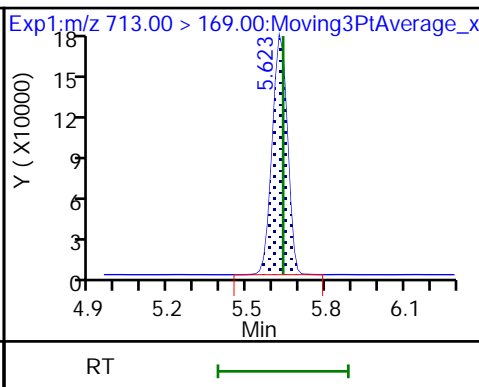
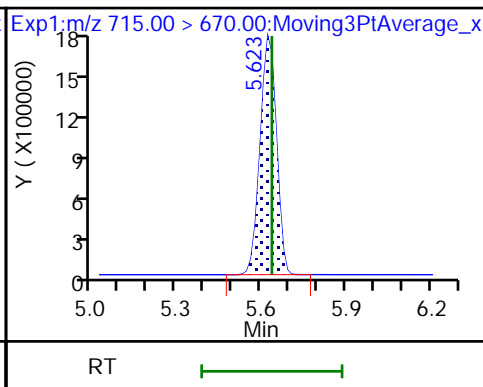
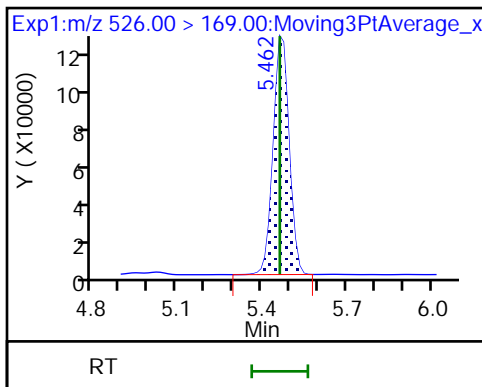
44 Perfluorotridecanoic acid



56 N-EtFOSA-M

D 46 13C2 PFTeDA

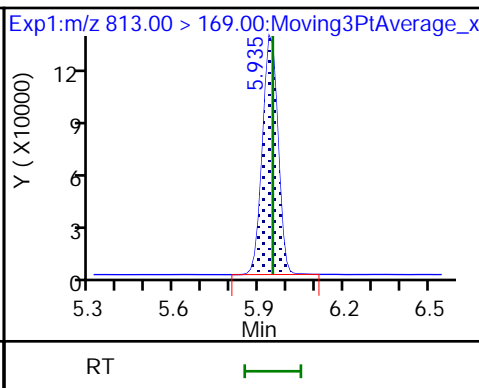
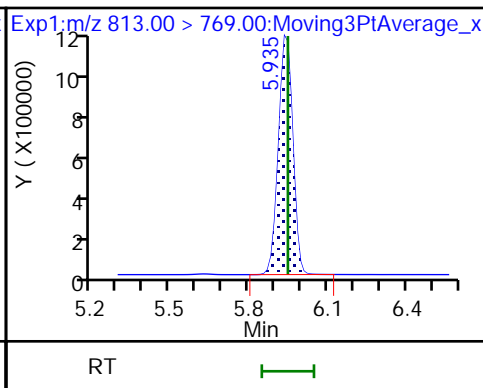
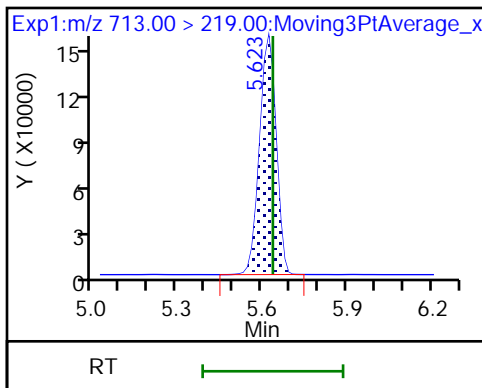
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

55 Perfluorohexadecanoic acid

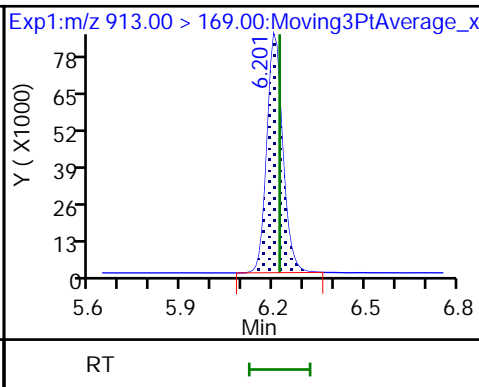
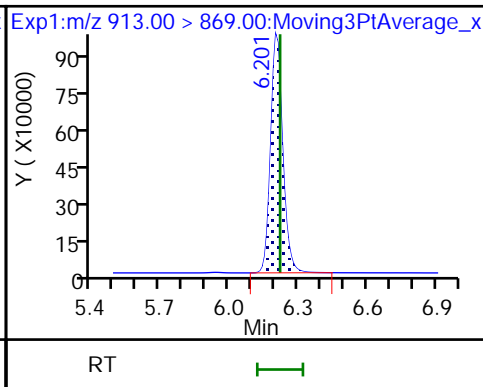
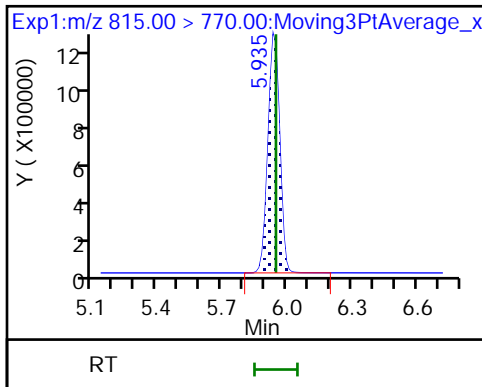
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid



Eurofins TestAmerica, Knoxville

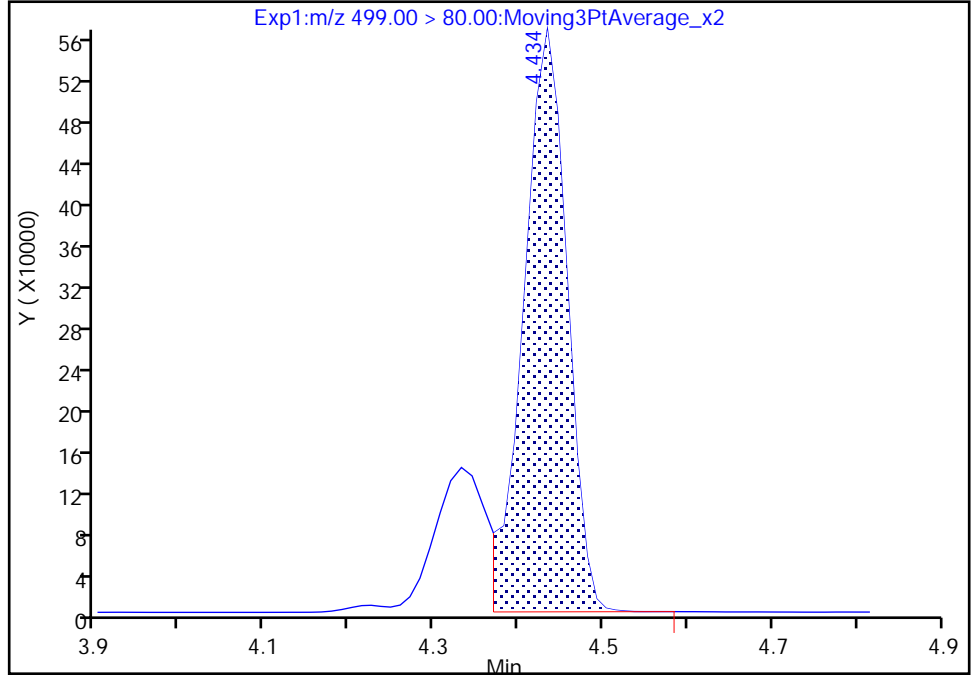
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Injection Date: 07-Oct-2021 01:08:28 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 32 Worklist Smp#: 32
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

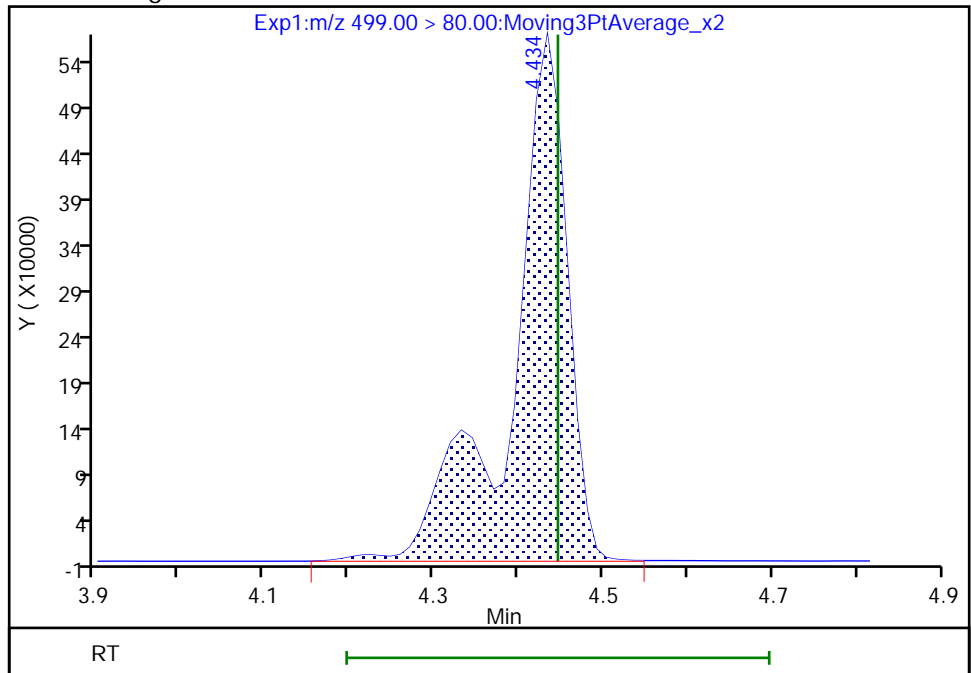
RT: 4.43
Area: 1984021
Amount: 0.686761
Amount Units: ng/ml

Processing Integration Results



RT: 4.43
Area: 2575510
Amount: 0.891503
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 16:45:59
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

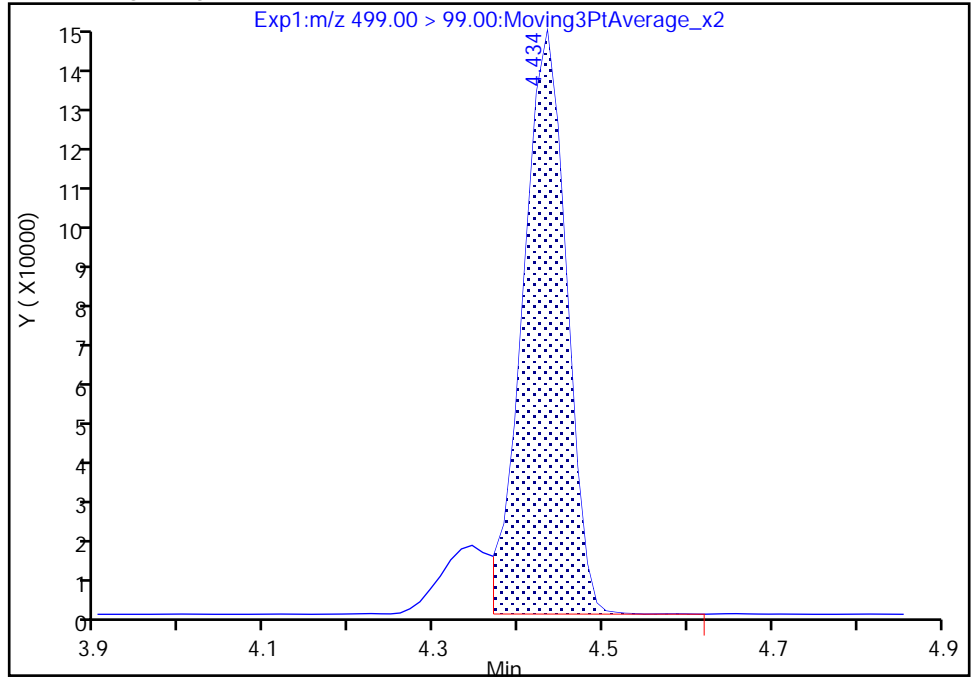
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Injection Date: 07-Oct-2021 01:08:28 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 32 Worklist Smp#: 32
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

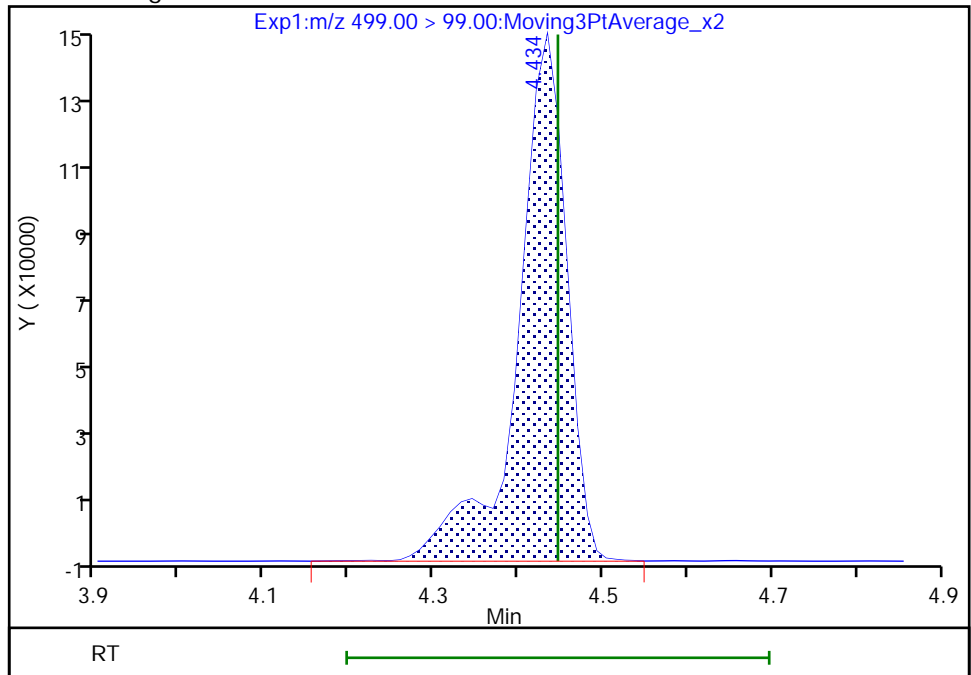
RT: 4.43
Area: 512814
Amount: 0.686761
Amount Units: ng/ml

Processing Integration Results



RT: 4.43
Area: 580777
Amount: 0.891503
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 16:46:06

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

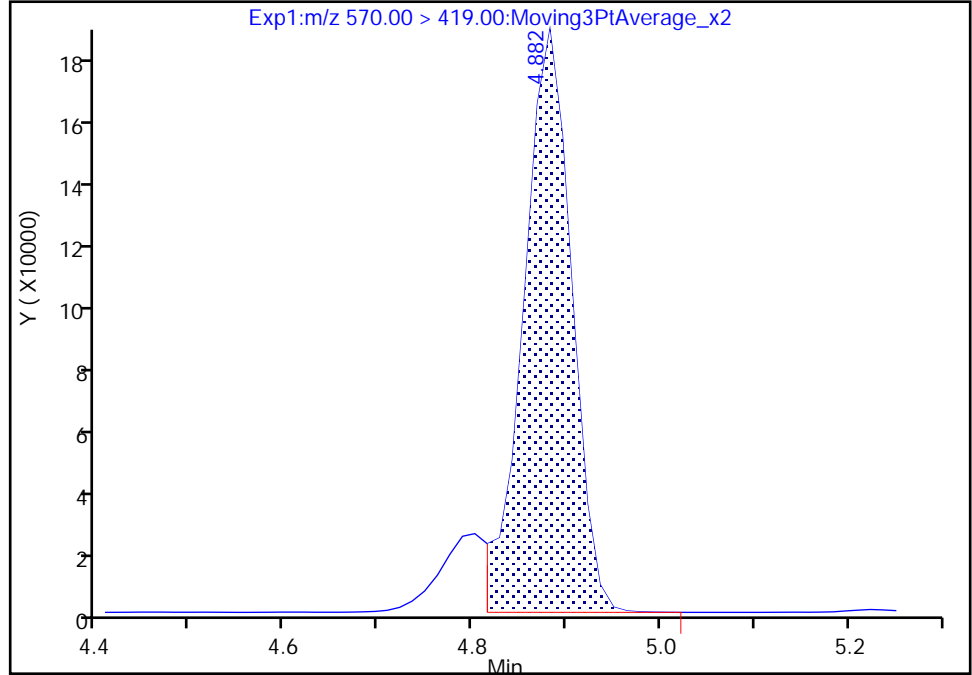
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Injection Date: 07-Oct-2021 01:08:28 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 32 Worklist Smp#: 32
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

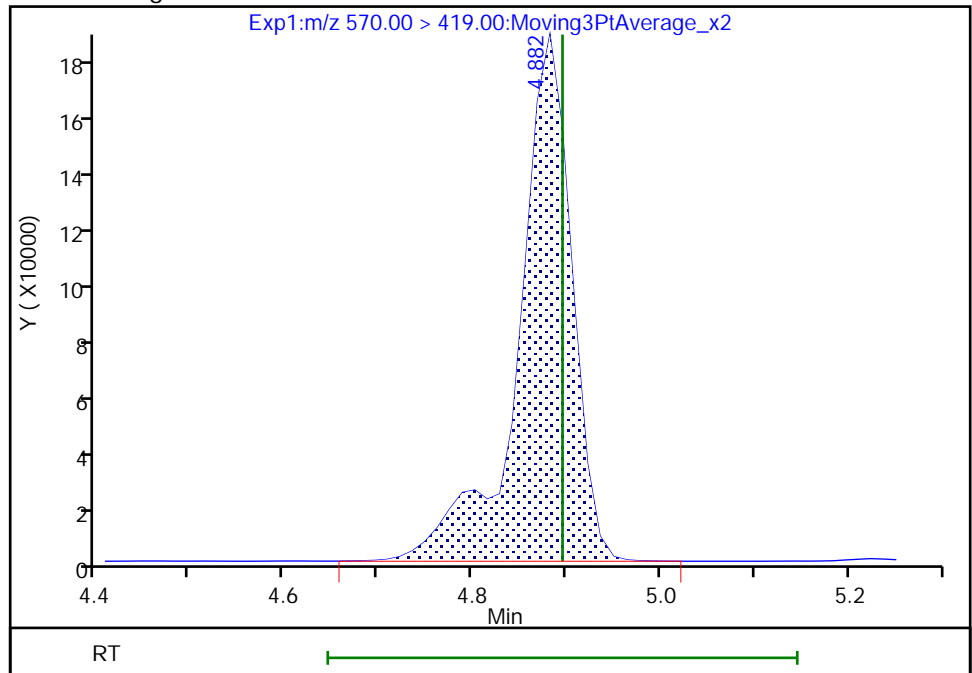
RT: 4.88
Area: 648556
Amount: 0.940435
Amount Units: ng/ml

Processing Integration Results



RT: 4.88
Area: 730676
Amount: 1.060455
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 16:46:17
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54568/45 Calibration Date: 10/07/2021 03:03
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _045.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7855	0.7622		2.43	2.50	-3.0	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.013	0.9227		2.28	2.50	-8.9	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.126	1.055		2.07	2.21	-6.3	40.0
4:2 FTS	AveID	2.500	2.346		2.19	2.34	-6.1	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8572	0.7578		2.21	2.50	-11.6	40.0
Perfluoropentanesulfonic acid (PFPeS)	L2ID		0.8592		2.35	2.35	0.4	50.0
HFPO-DA	L2ID		1.270		2.30	2.50	-8.0	40.0
Perfluorohexanesulfonic acid (PFHxS)	L2ID		1.304		2.19	2.28	-3.7	40.0
Perfluoroheptanoic acid (PFHpA)	L2ID		1.038		2.46	2.50	-1.5	40.0
DONA	AveID	3.243	3.246		2.36	2.36	0.0	40.0
6:2 FTS	L2ID		1.895		2.24	2.37	-5.4	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9947	0.9410		2.25	2.38	-5.4	40.0
Perfluorooctanoic acid (PFOA)	L2ID		1.082		2.45	2.50	-1.9	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.100	1.122		2.37	2.32	2.1	40.0
Perfluorononanoic acid (PFNA)	L2ID		0.8160		2.45	2.50	-1.9	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	2.308	2.279		2.30	2.33	-1.3	40.0
Perfluorononanesulfonic acid (PFNS)	AveID	1.042	1.005		2.31	2.40	-3.6	40.0
Perfluorodecanoic acid (PFDA)	L2ID		0.8989		2.38	2.50	-4.8	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9606	0.9007		2.34	2.50	-6.2	40.0
8:2 FTS	AveID	1.784	1.795		2.41	2.40	0.7	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	L2ID		0.9364		2.56	2.50	2.3	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.9574	0.9292		2.34	2.41	-2.9	40.0
Perfluoroundecanoic acid (PFUnA)	L2ID		0.9737		2.41	2.50	-3.5	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.9494	0.9066		2.39	2.50	-4.5	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.858	1.873		2.37	2.36	0.8	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9702		2.39	2.50	-4.6	40.0
10:2 FTS	AveID	2.221	2.309		2.51	2.41	4.0	40.0
2- (N-methylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.116		2.42	2.50	-3.1	40.0
NMeFOSA	AveID	1.047	0.9815		2.34	2.50	-6.3	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9879	0.9678		2.37	2.42	-2.0	40.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54568/45 Calibration Date: 10/07/2021 03:03
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _045.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTrIA)	L2ID		0.8166		2.32	2.50	-7.3	50.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.298		2.58	2.50	3.1	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.168	1.060		2.27	2.50	-9.3	40.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.1192		2.37	2.50	-5.1	40.0
Perfluorohexadecanoic acid	Q2ID		1.048		2.46	2.50	-1.6	40.0
Perfluorooctadecanoic acid	AveID	0.9076	0.8786		2.42	2.50	-3.2	40.0
13C4 PFBA	Ave	1.324	1.358		1.28	1.25	2.6	50.0
13C5 PFPeA	Ave	1.087	1.158		1.33	1.25	6.5	50.0
13C3 PFBS	Ave	0.7019	0.7155		1.19	1.16	1.9	50.0
M2-4:2 FTS	Ave	0.1052	0.1224		1.36	1.17	16.3	50.0
13C2 PFHxA	Ave	1.116	1.204		1.35	1.25	7.9	50.0
13C3 HFPO-DA	Ave	0.5714	0.5935		1.30	1.25	3.9	50.0
18O2 PFHxS	Ave	0.4248	0.4316		1.20	1.18	1.6	50.0
13C4 PFHpA	Ave	1.113	1.119		1.26	1.25	0.5	50.0
13C4 PFOA	Ave	1.007	1.020		1.27	1.25	1.3	50.0
M2-6:2 FTS	Ave	0.1078	0.1145		1.26	1.19	6.3	50.0
13C4 PFOS	Ave	0.5852	0.5579		1.14	1.20	-4.7	50.0
13C5 PFNA	Ave	1.279	1.348		1.32	1.25	5.4	50.0
13C2 PFDA	Ave	1.296	1.368		1.32	1.25	5.6	50.0
13C8 FOSA	Ave	0.8591	0.8582		1.25	1.25	-0.1	50.0
M2-8:2 FTS	Ave	0.1316	0.1349		1.23	1.20	2.5	50.0
d3-NMeFOSAA	Ave	0.1774	0.1780		1.26	1.25	0.4	50.0
13C2 PFUnA	Ave	1.237	1.276		1.29	1.25	3.1	50.0
d5-NEtFOSAA	Ave	0.1705	0.1737		1.27	1.25	1.8	50.0
13C2 PFDoA	Ave	1.319	1.408		1.33	1.25	6.7	50.0
d7-N-MeFOSE-M	Ave	0.1075	0.1335		1.55	1.25	24.1	50.0
d-N-MeFOSA-M	Ave	0.1120	0.1159		1.29	1.25	3.5	50.0
d9-N-EtFOSE-M	Ave	0.1146	0.1333		1.45	1.25	16.3	50.0
d-N-EtFOSA-M	Ave	0.0942	0.1026		1.36	1.25	8.8	50.0
13C2 PFTeDA	Ave	1.211	1.233		1.27	1.25	1.8	50.0
13C2 PFHxDA	Ave	0.8782	0.9131		1.30	1.25	4.0	50.0
13C8 PFOA	Ave	0.9886	1.013		1.28	1.25	2.5	50.0
13C8 PFOS	Ave	0.1256	0.1255		1.19	1.20	-0.0	50.0

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_045.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 07-Oct-2021 03:03:10 ALS Bottle#: 45 Worklist Smp#: 45
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-045 ccv
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 17:26:12 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 17:25:19

Ratio Calibration: None

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	2.801	2.801	0.0	0.680	7008980	1.28	103	19462	
2 Perfluorobutanoic acid	212.90 > 169.00	2.801	2.812	-0.011	1.000	10684881	2.43	97.0	3381	
D 3 13C5 PFPeA	267.90 > 223.00	3.102	3.129	-0.027	0.753	5976115	1.33	107	17865	
4 Perfluoropentanoic acid	262.90 > 219.00	3.102	3.129	-0.027	1.000	11028662	2.28	91.1	3210	
D 6 13C3 PFBS	301.90 > 80.00	3.116	3.129	-0.013	0.757	3432927	1.18	102	26697	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.130	3.143	-0.013	1.004	6884309	2.07	Target=3.06	93.7	28854
	298.90 > 99.00	3.130	3.143	-0.013	1.004	2611802		2.64(1.53-4.59)		11645
D 8 M2-4:2 FTS	329.00 > 81.00	3.409	3.423	-0.014	0.828	590027	1.36	116	1320	
7 4:2 FTS	327.00 > 307.00	3.409	3.423	-0.014	1.000	2768547	2.19	93.9	26588	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.437	3.453	-0.016	1.103	5949810	2.35	Target=3.47	100	29070
	349.00 > 99.00	3.437	3.453	-0.016	1.103	1707809		3.48(1.73-5.20)		13415
D 9 13C2 PFHxA	315.00 > 270.00	3.437	3.469	-0.032	0.835	6212619	1.35	108	20433	
10 Perfluorohexanoic acid	313.00 > 269.00	3.437	3.469	-0.032	1.000	9416306	2.21	Target=9.74	88.4	4485
	313.00 > 119.00	3.437	3.469	-0.032	1.000	738867		12.74(4.87-14.61)		2325
D 12 13C3 HFPO-DA	287.00 > 169.00	3.535	3.561	-0.026	0.858	3062261	1.30	104	9873	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.535	3.561	-0.026	1.000	7776741	2.30		92.0	8173	
D 17 18O2 PFHxS										
403.00 > 84.00	3.778	3.803	-0.025	0.917	2106669	1.20		102	8661	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.778	3.803	-0.025	1.000	5286977	2.19	Target=2.96	96.3	12138	M
399.00 > 99.00	3.778	3.803	-0.025	1.000	1513732		3.49(1.48-4.44)		8074	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.791	3.815	-0.024	0.920	5773416	1.26		101	25165	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.791	3.815	-0.024	1.000	11986462	2.46	Target=3.35	98.5	7456	
363.00 > 169.00	3.791	3.815	-0.024	1.000	3693975		3.24(1.67-5.02)		17722	
68 DONA										
377.00 > 251.00	3.815	3.840	-0.025	0.863	17605568	2.36	Target=1.49	100	26739	
377.00 > 85.00	3.815	3.840	-0.025	0.863	9683672		1.82(0.74-2.23)		7683	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.118	4.143	-0.025	0.932	5157611	2.25	Target=3.73	94.6	24049	
449.00 > 99.00	4.118	4.143	-0.025	0.932	1383811		3.73(1.87-5.61)		5651	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.118	4.143	-0.025	1.000	5226457	1.28		102	18262	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.118	4.143	-0.025	1.000	561279	1.26		106	3465	
19 6:2 FTS										
427.00 > 407.00	4.118	4.143	-0.025	1.000	2123299	2.24		94.6	7276	
D 21 13C4 PFOA										
417.00 > 372.00	4.118	4.155	-0.037	1.000	5261938	1.27		101	19427	
* 22 13C2 PFOA										
415.00 > 370.00	4.118	4.155	-0.037		5159434	1.25			19795	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.118	4.155	-0.037	1.000	11387062	2.45	Target=2.40	98.1	5773	
413.00 > 169.00	4.118	4.155	-0.037	1.000	4234756		2.69(1.20-3.61)		6505	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.408	4.447	-0.038	1.070	618962	1.19		99.9	2526	
D 25 13C4 PFOS										
503.00 > 80.00	4.421	4.447	-0.025	1.073	2752041	1.14		95.3	8400	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.421	4.447	-0.025	1.000	5997300	2.37	Target=3.83	102	13195	M
499.00 > 99.00	4.421	4.447	-0.025	1.000	1326022		4.52(1.91-5.74)		3758	M
D 27 13C5 PFNA										
468.00 > 423.00	4.434	4.470	-0.036	1.077	6956325	1.32		105	17906	
26 Perfluorononanoic acid										
463.00 > 419.00	4.446	4.470	-0.024	1.003	11352351	2.45	Target=3.68	98.1	8017	
463.00 > 169.00	4.434	4.470	-0.036	1.000	2485555		4.57(1.84-5.52)		5401	
63 9CIFOS										
531.00 > 351.00	4.571	4.596	-0.025	1.110	12227346	2.30		98.7	18301	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.695	4.722	-0.027	1.062	5553781	2.31	Target=3.97	96.4	13707	
549.00 > 99.00	4.695	4.722	-0.027	1.062	1345262		4.13(1.99-5.96)		5569	
D 34 13C8 FOSA										
506.00 > 78.00	4.721	4.736	-0.015	1.146	4427983	1.25		99.9	6256	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.721	4.736	-0.015	1.000	7976335	2.34		93.8	9983	
D 32 13C2 PFDA										
515.00 > 470.00	4.721	4.749	-0.028	1.146	7056529	1.32		106	30472	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.721	4.749	-0.028	1.000	12686910	2.38	Target=10.11	95.2	6509	
513.00 > 169.00	4.721	4.749	-0.028	1.000	1067576		11.88(5.06-15.17)		913	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.735	4.763	-0.028	1.150	666951	1.23		103	2642	
31 8:2 FTS										
527.00 > 507.00	4.735	4.763	-0.028	1.000	2394842	2.41		101	16272	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.868	4.896	-0.028	1.182	918449	1.25		100	1294	
36 NMeFOSAA										
570.00 > 419.00	4.868	4.896	-0.028	1.000	1720148	2.56		102	3590	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.964	4.993	-0.029	1.123	5157432	2.34	Target=3.80	97.1	17782	
599.00 > 99.00	4.964	4.993	-0.029	1.123	1389926		3.71(1.90-5.70)		7264	
D 39 13C2 PFUnA										
565.00 > 520.00	4.992	5.022	-0.030	1.212	6583679	1.29		103	18629	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.992	5.022	-0.030	1.000	12820619	2.41	Target=7.45	96.5	11119	
563.00 > 169.00	4.992	5.022	-0.030	1.000	1351380		9.49(3.78-11.33)		8604	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.007	5.036	-0.029	1.216	895943	1.27		102	5453	
40 NEtFOSA										
584.00 > 419.00	5.007	5.036	-0.029	1.000	1624588	2.39		95.5	2136	M
57 11C1FOS										
631.00 > 451.00	5.092	5.119	-0.027	1.152	10155818	2.37		101	24553	
D 43 13C2 PFDaA										
615.00 > 570.00	5.223	5.251	-0.028	1.268	7263121	1.33		107	18158	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.223	5.251	-0.028	1.000	14093474	2.39	Target=5.33	95.4	7351	
613.00 > 169.00	5.223	5.251	-0.028	1.000	2021572		6.97(2.66-7.99)		6449	
50 10:2 FTS										
627.00 > 607.00	5.252	5.266	-0.014	1.109	3099772	2.51		104	16144	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.282	5.281	0.001	1.282	688597	1.55		124	430	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.282	5.295	-0.013	1.282	598036	1.29		104	53.5	
49 N-MeFOSE-M										
616.00 > 59.00	5.296	5.295	0.001	1.003	1537573	2.42		96.9	1660	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.296	5.295	0.001	1.003	1173914	2.34		93.7	921	
54 PFDoS										
699.00 > 80.00	5.411	5.436	-0.025	1.224	5393847	2.37	Target=4.32	98.0	7196	
699.00 > 99.00	5.411	5.436	-0.025	1.224	1265815		4.26(2.19-6.58)		7247	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.437	5.436	0.001	1.320	687686	1.45		116	530	
62 N-EtFOSE-M										
630.00 > 59.00	5.450	5.449	0.001	1.002	1785295	2.58		103	3183	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.450	5.449	0.001	1.323	529175	1.36		109	753	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.437	5.462	-0.025	1.041	11862208	2.32	Target=5.66	92.7	6021	
663.00 > 169.00	5.437	5.462	-0.025	1.041	1918067		6.18(2.83-8.48)		7293	
56 N-EtFOSA-M										
526.00 > 169.00	5.463	5.462	0.001	1.002	1121724	2.27		90.7	692	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.609	5.637	-0.028	1.362	6360137	1.27		102	18559	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.609	5.637	-0.028	1.000	1516617	2.37	Target=1.07	94.9	5920	
713.00 > 219.00	5.609	5.637	-0.028	1.000	1567003		0.97(0.53-1.60)		10489	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.936	5.948	-0.012	1.002	9874027	2.46	Target=7.50	98.4	5539	
813.00 > 169.00	5.936	5.948	-0.012	1.002	1190518		8.29(3.75-11.26)		4467	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.923	5.948	-0.025	1.438	4711273	1.30		104	8430	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.192	6.221	-0.029	1.045	8278380	2.42	Target=9.98	96.8	4412	
913.00 > 169.00	6.192	6.221	-0.029	1.045	687654		12.04(5.14-15.41)		2764	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L5PFC2_00002

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_045.d

Injection Date: 07-Oct-2021 03:03:10

Instrument ID: LCA

Lims ID: CCV

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 45

Worklist Smp#: 45

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

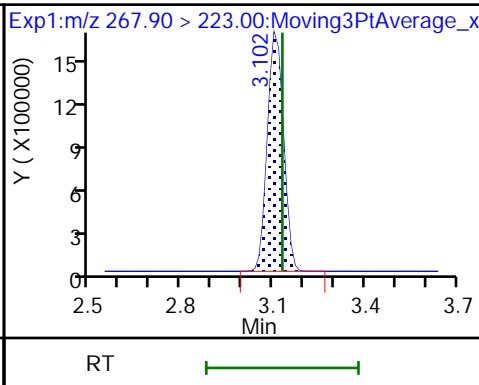
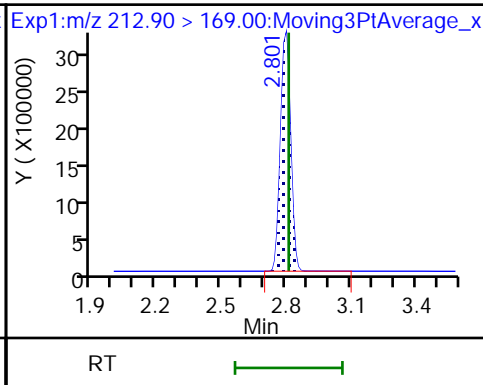
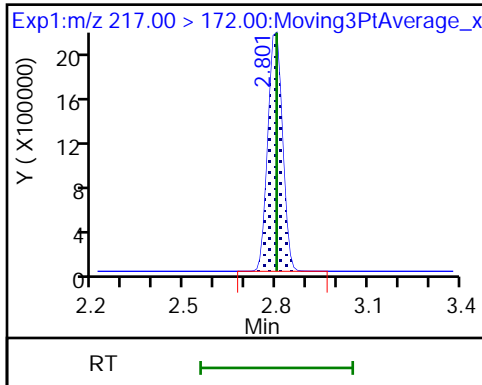
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

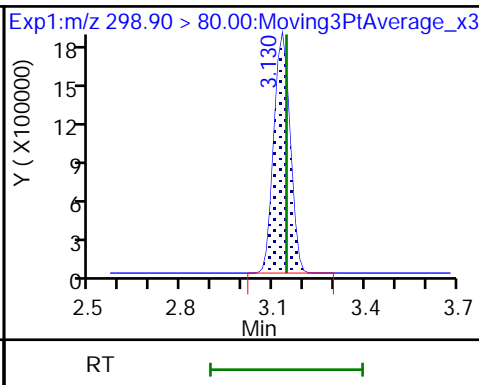
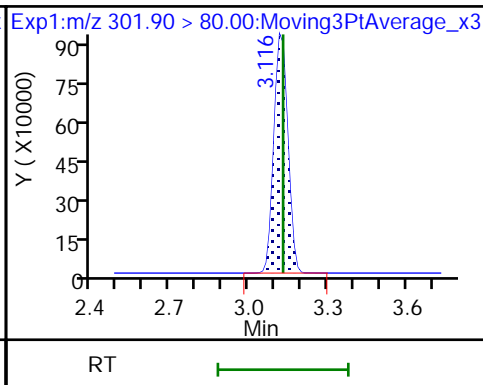
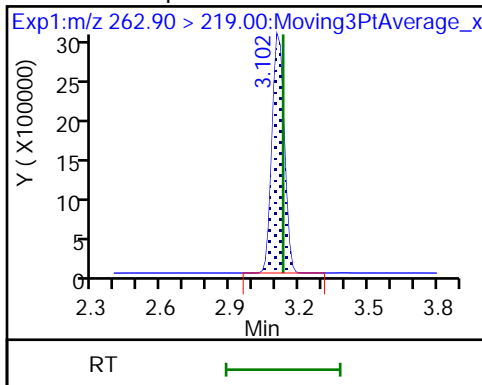
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

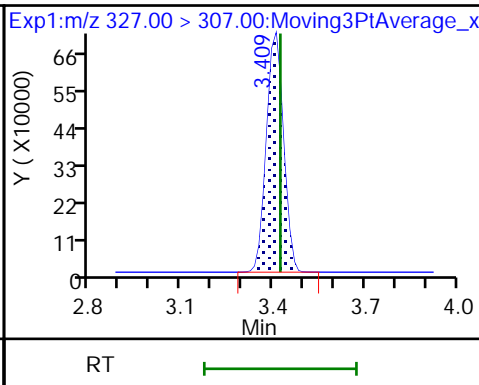
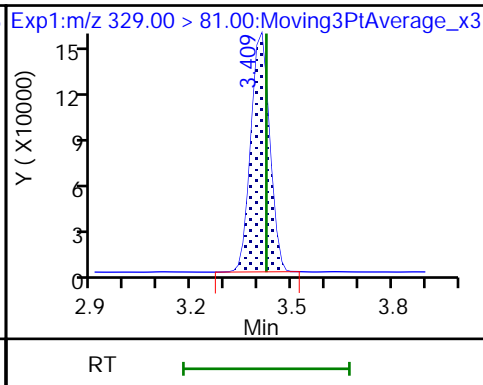
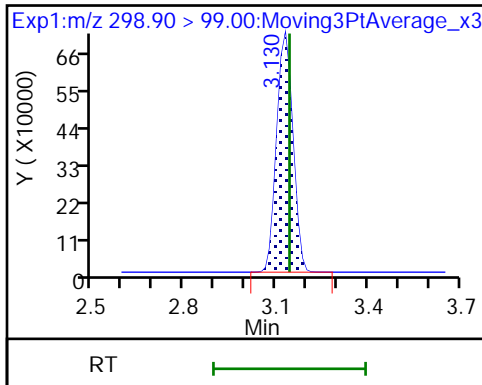
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

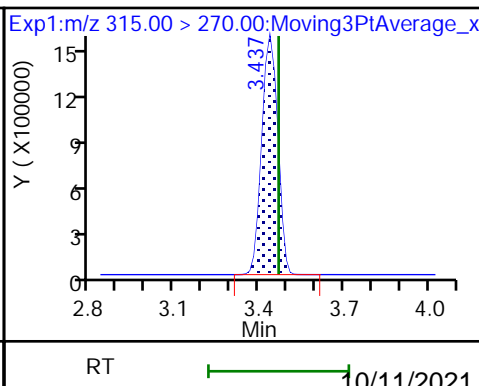
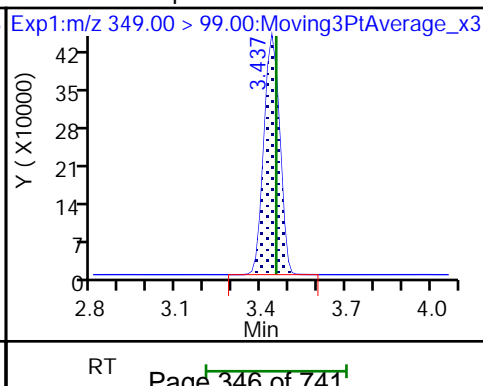
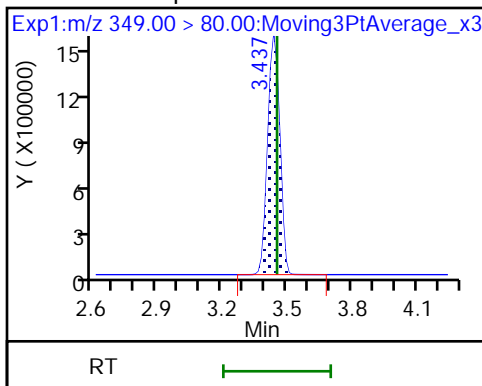
7 4:2 FTS

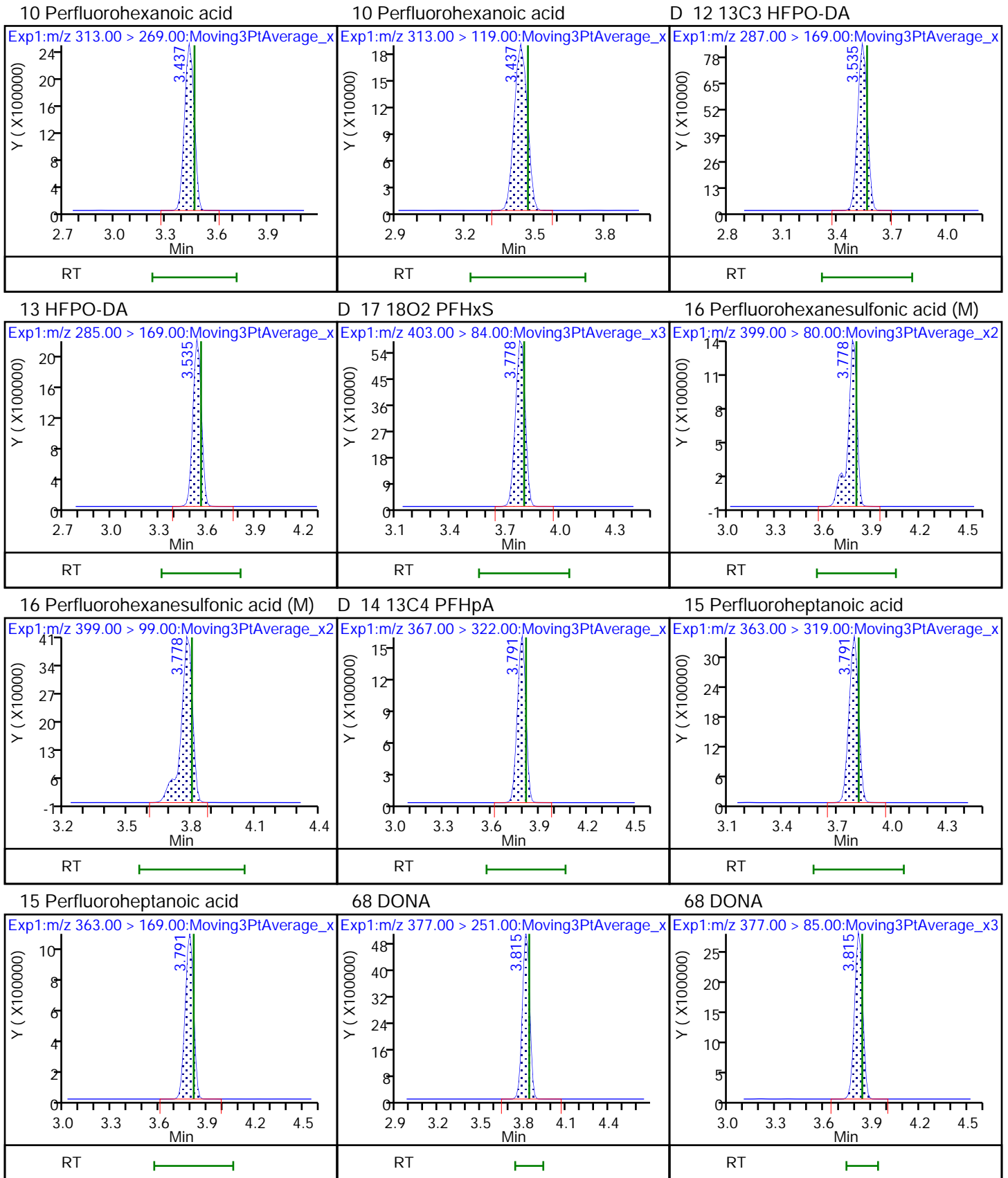


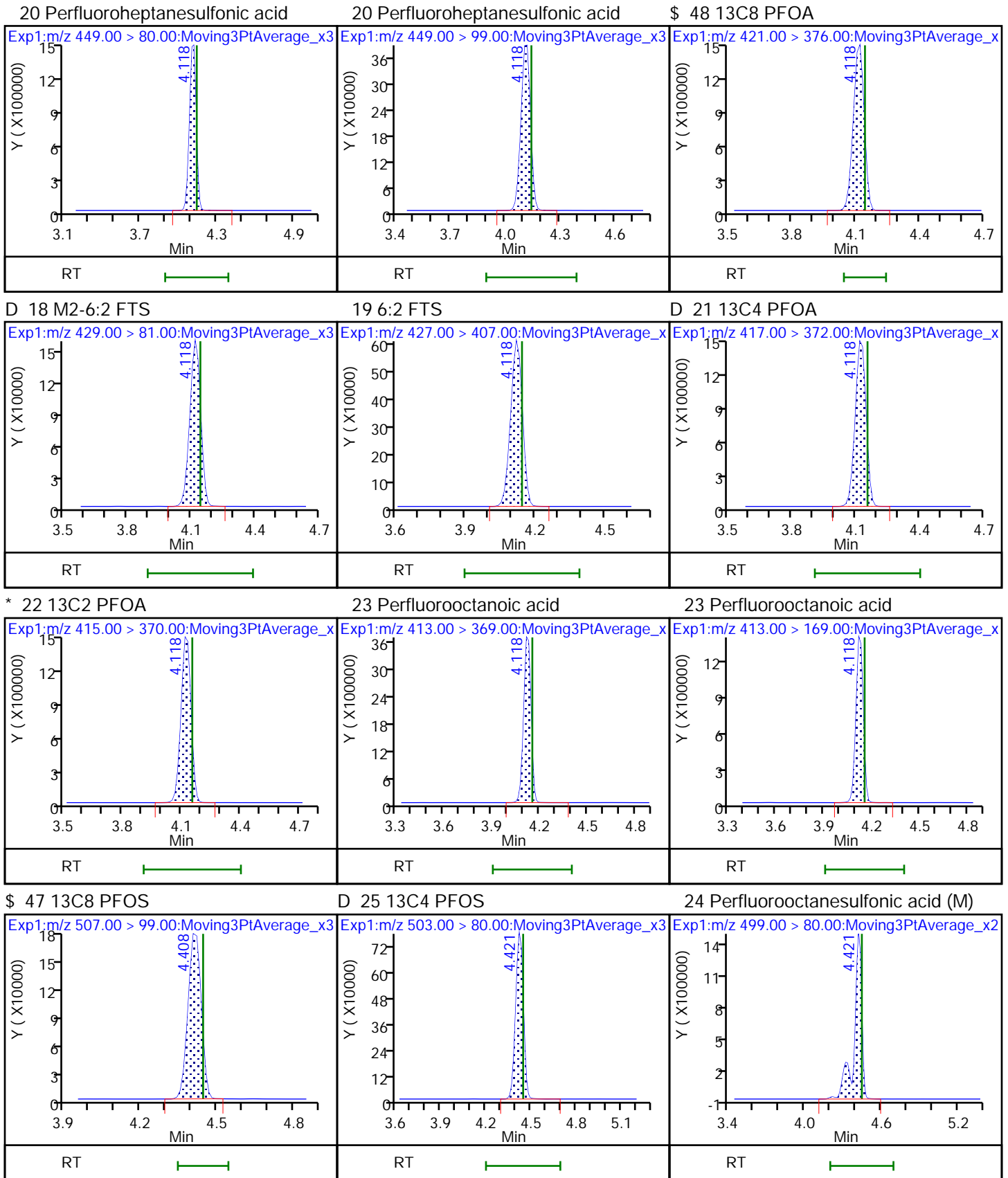
11 Perfluoropentanesulfonic acid

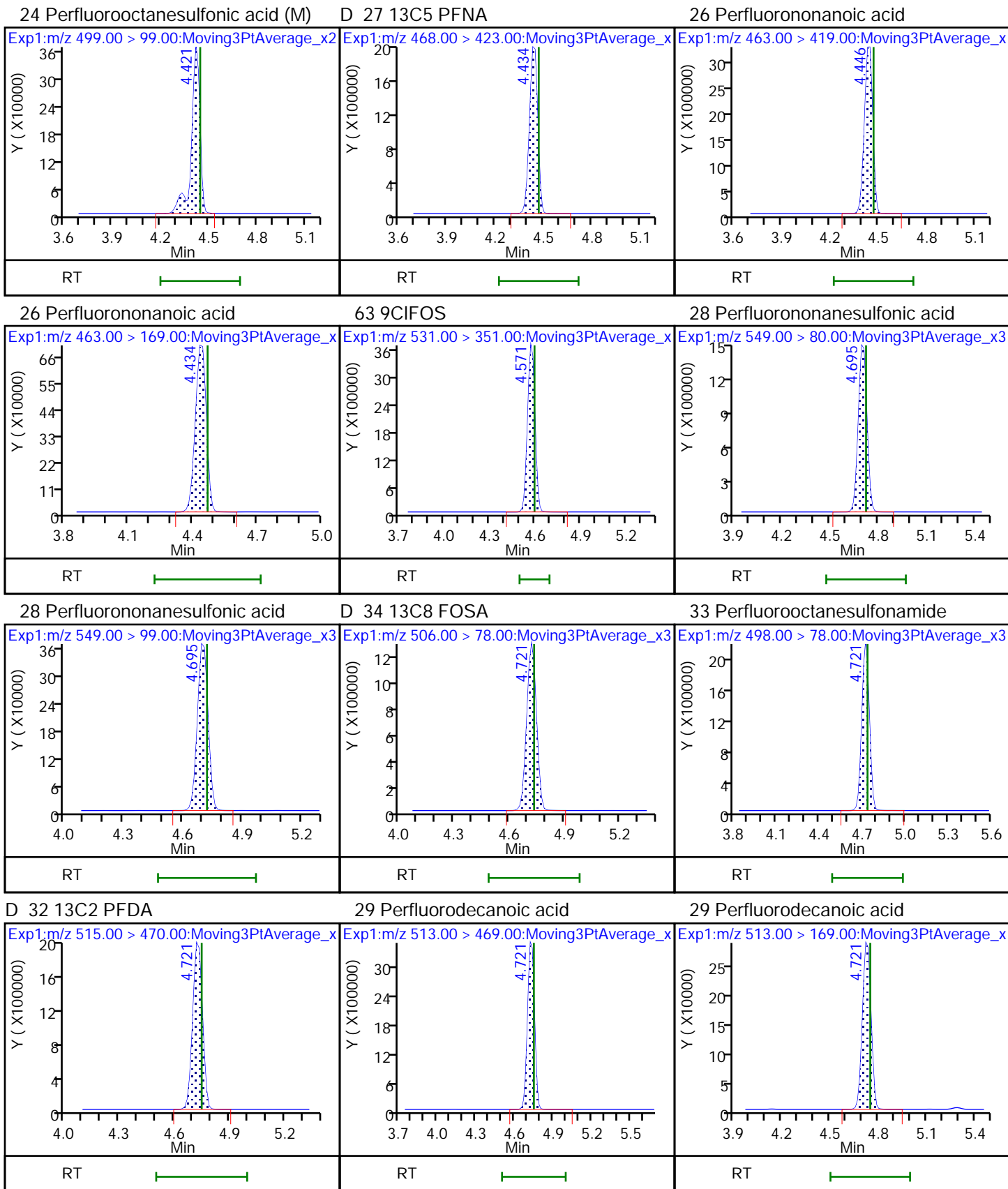
11 Perfluoropentanesulfonic acid

D 9 13C2 PFXa





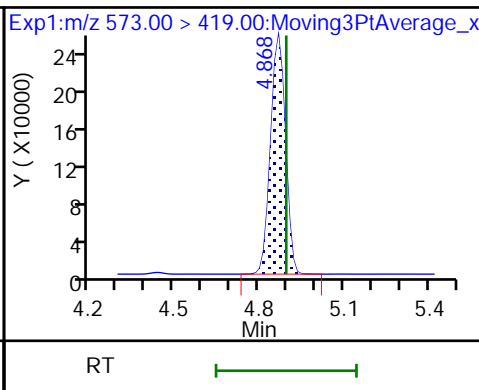
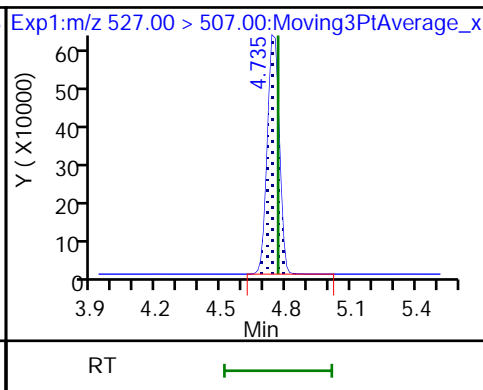
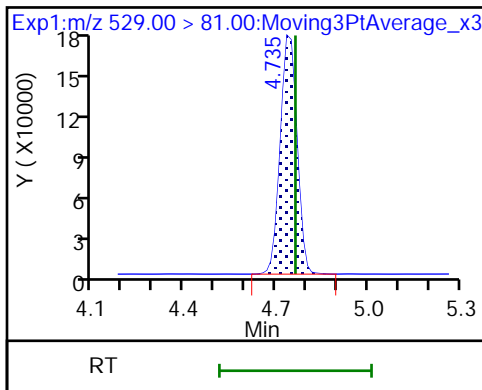




D 30 M2-8:2 FTS

31 8:2 FTS

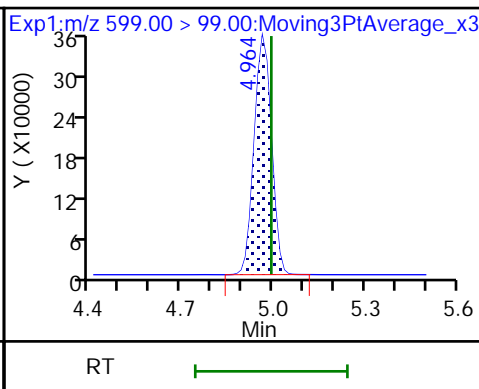
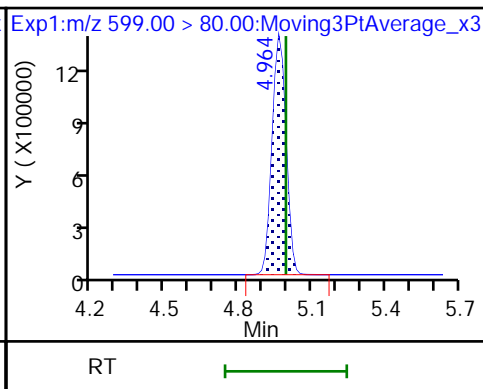
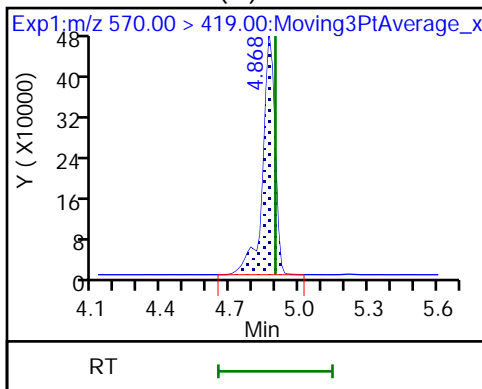
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

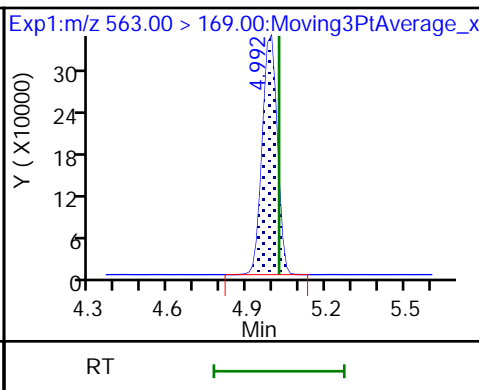
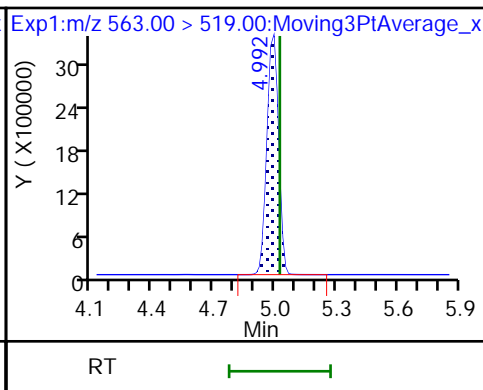
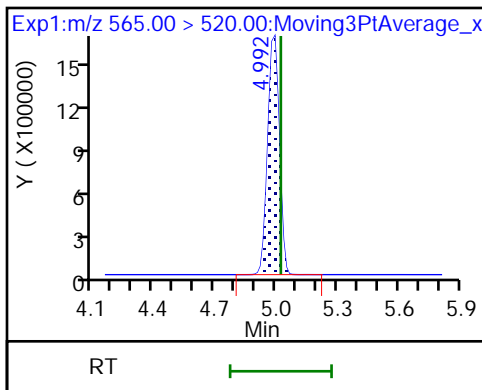
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

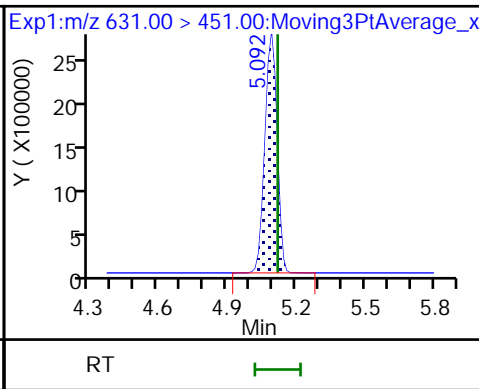
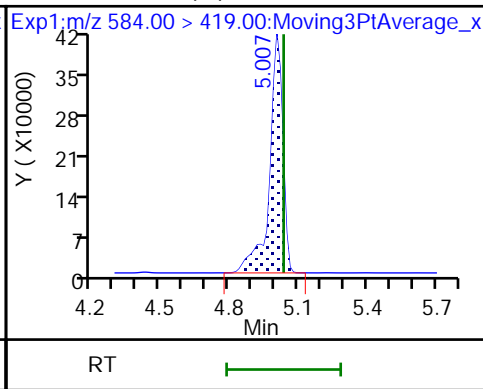
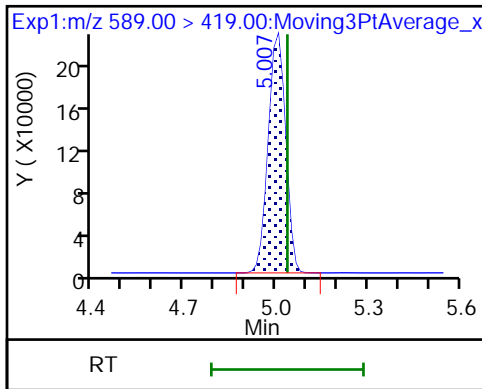
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA (M)

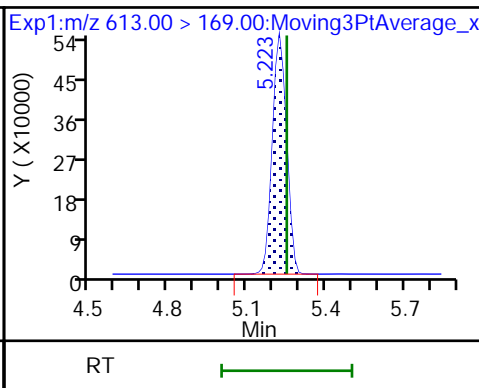
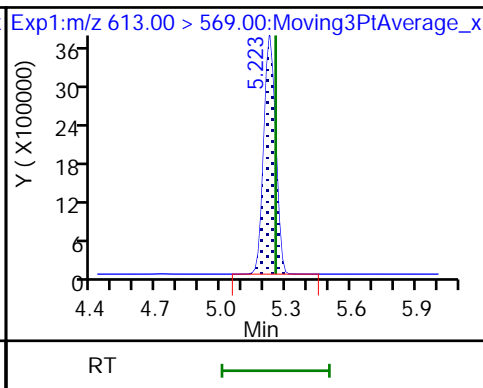
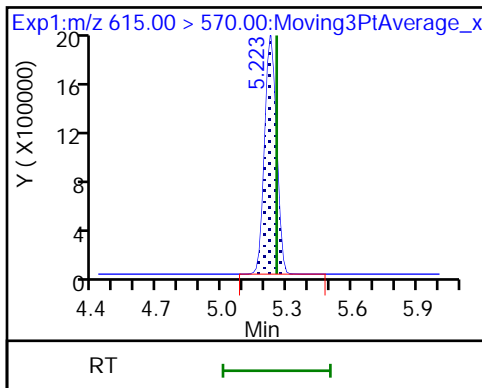
57 11CIFOS



D 43 13C2 PFDoA

42 Perfluorododecanoic acid

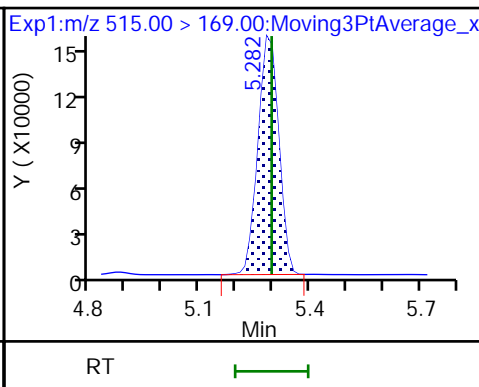
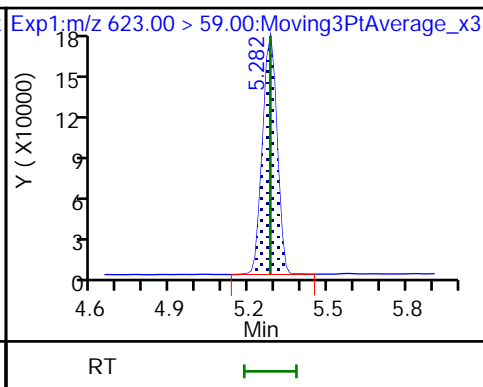
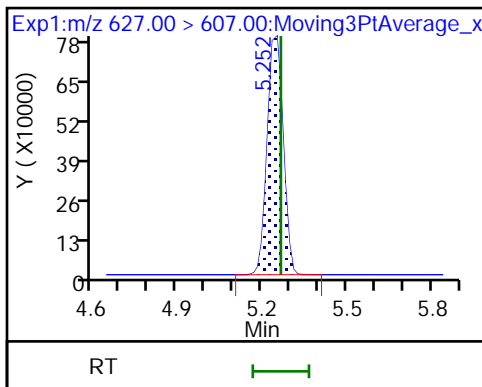
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

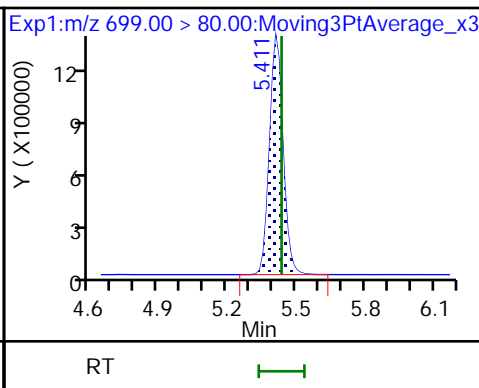
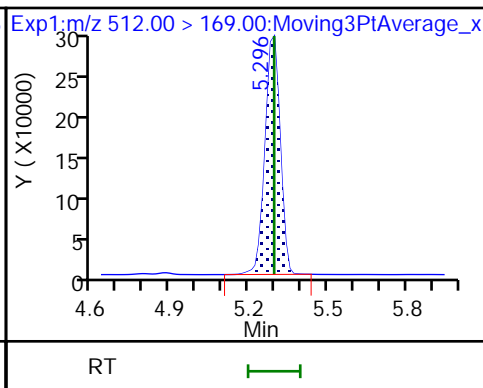
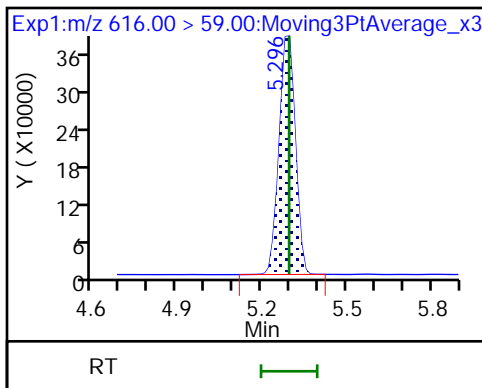
D 58 d-N-MeFOSA-M



49 N-MeFOSE-M

61 NMeFOSA

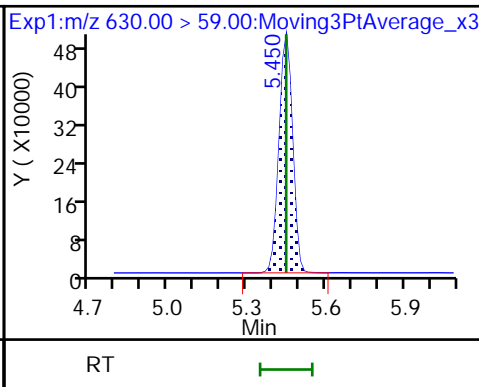
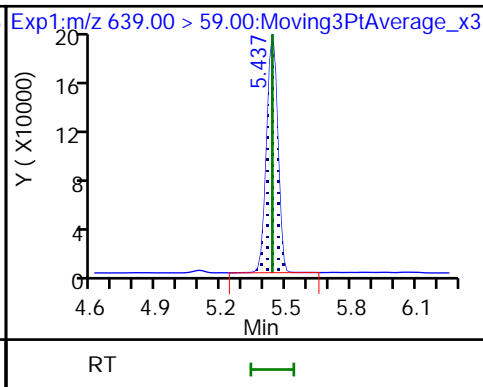
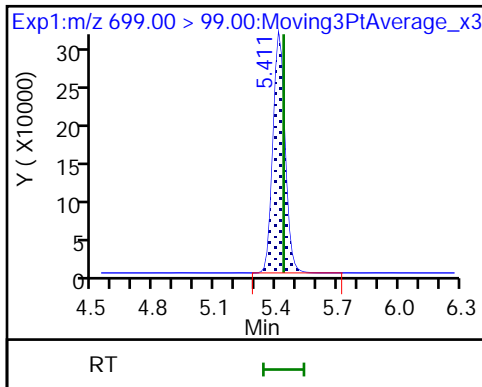
54 PFDoS



54 PFDoS

D 53 d9-N-EtFOSE-M

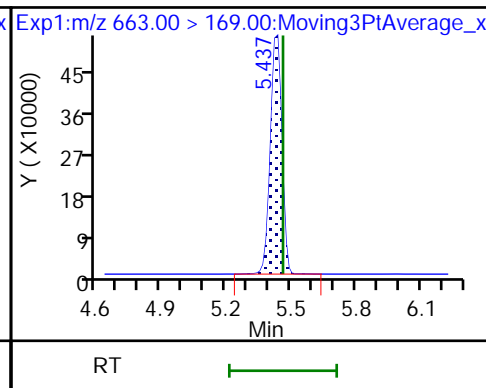
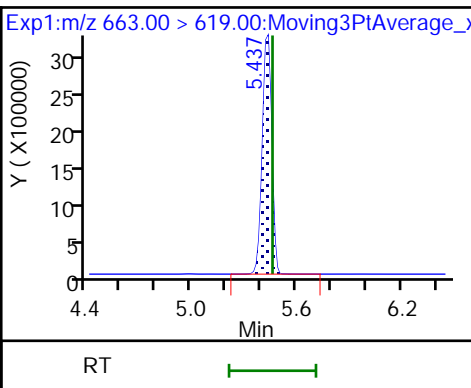
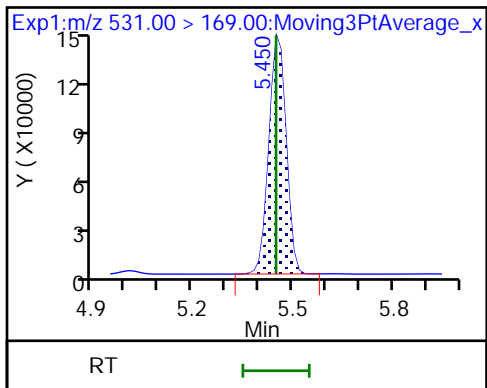
62 N-EtFOSE-M



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid

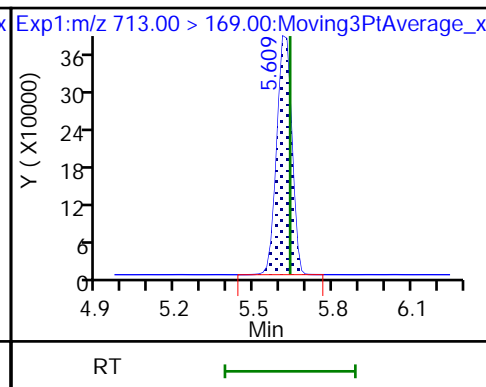
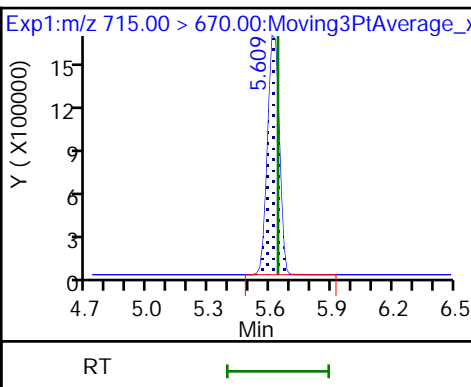
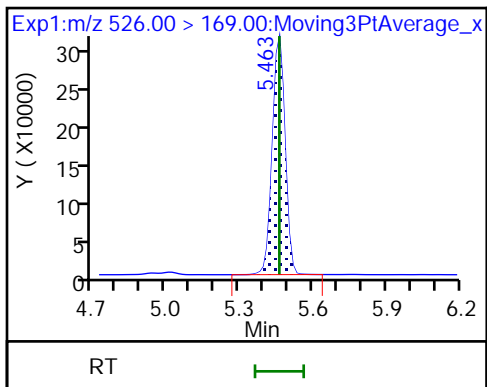
44 Perfluorotridecanoic acid



56 N-EtFOSA-M

D 46 13C2 PFTeDA

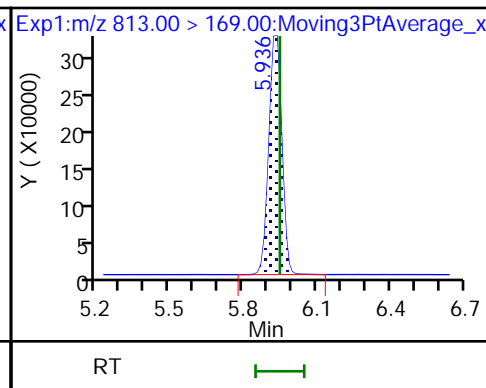
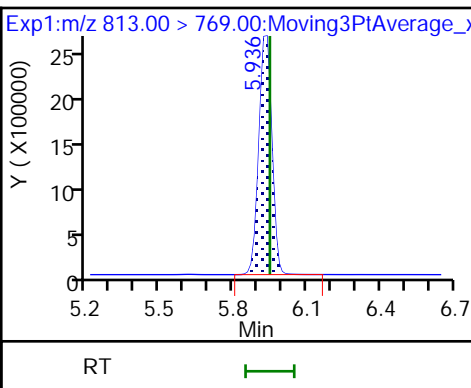
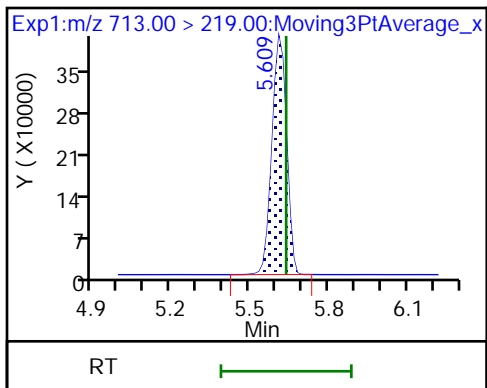
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

55 Perfluorohexadecanoic acid

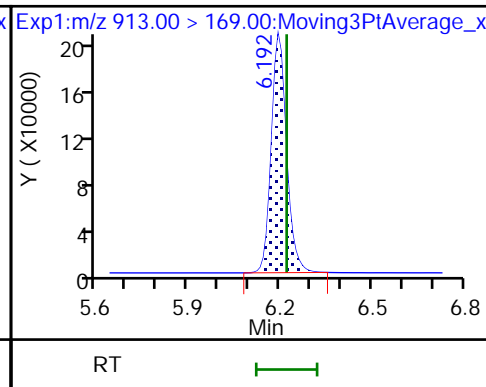
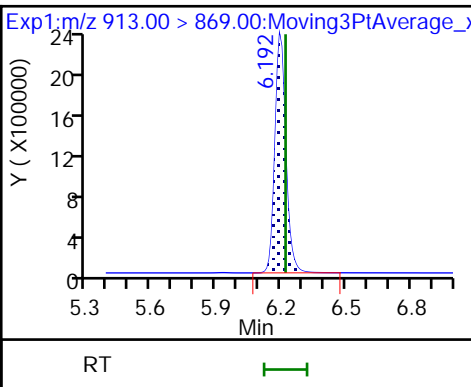
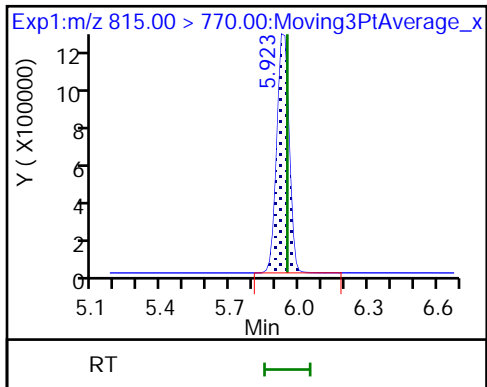
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid



Eurofins TestAmerica, Knoxville

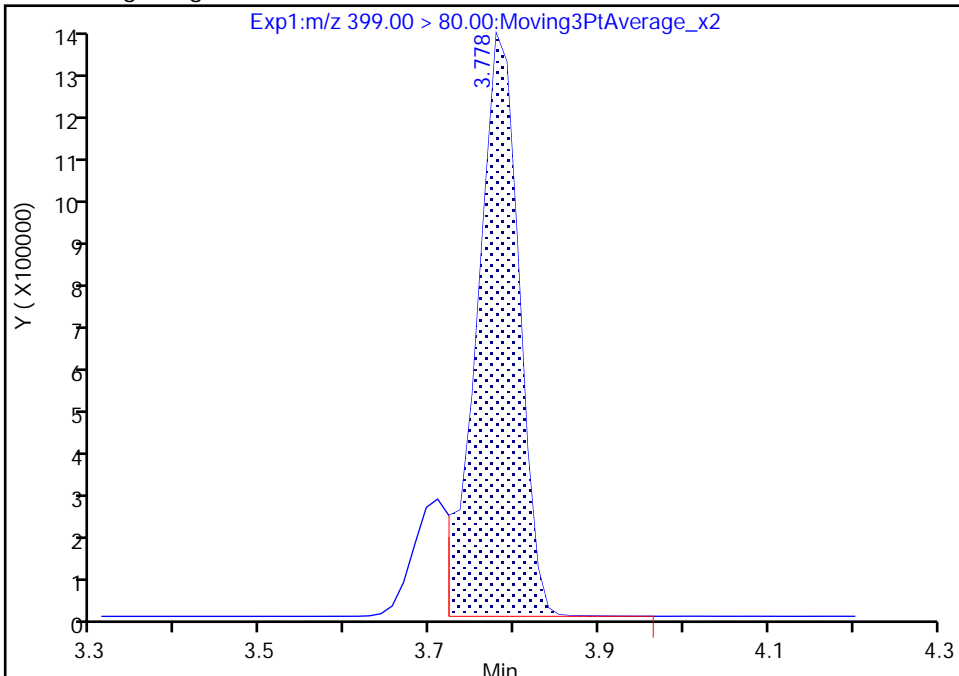
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Injection Date: 07-Oct-2021 03:03:10 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 45 Worklist Smp#: 45
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

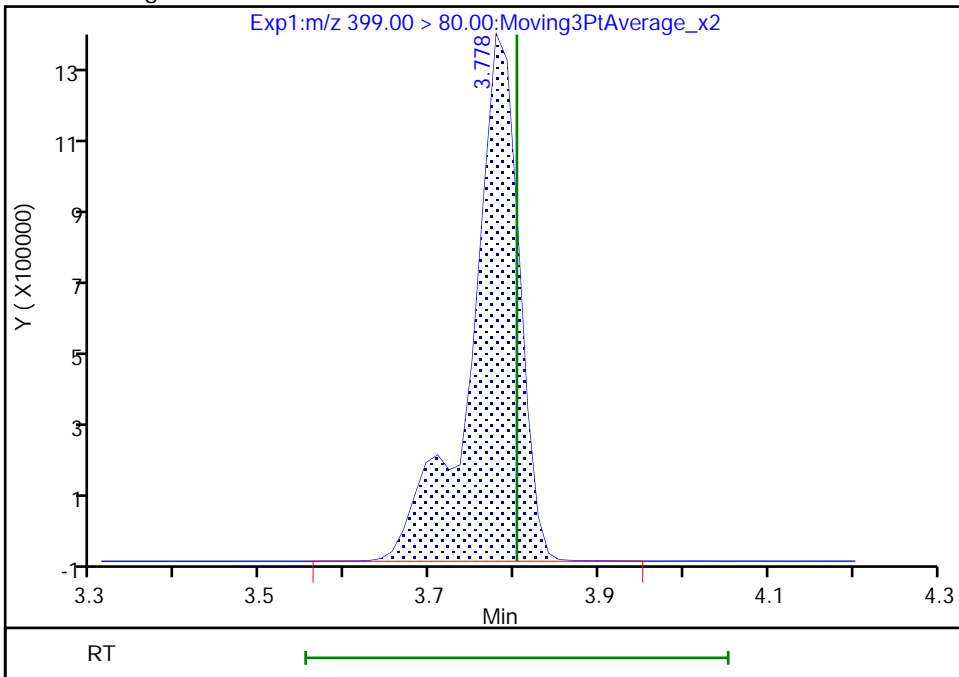
RT: 3.78
Area: 4552150
Amount: 1.886090
Amount Units: ng/ml

Processing Integration Results



RT: 3.78
Area: 5286977
Amount: 2.191373
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:24:27
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

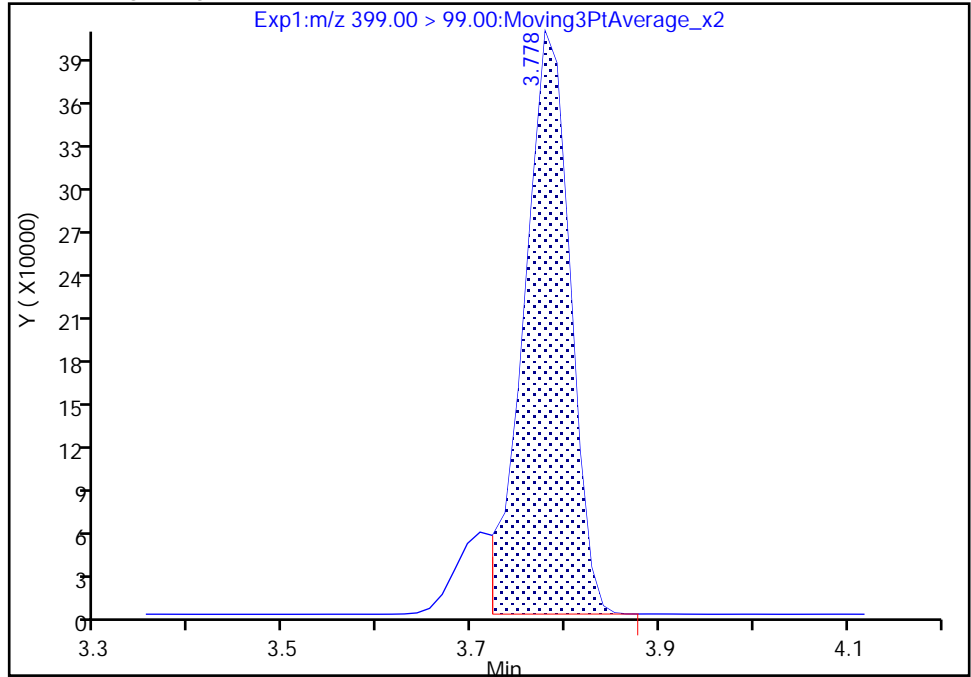
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Injection Date: 07-Oct-2021 03:03:10 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 45 Worklist Smp#: 45
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

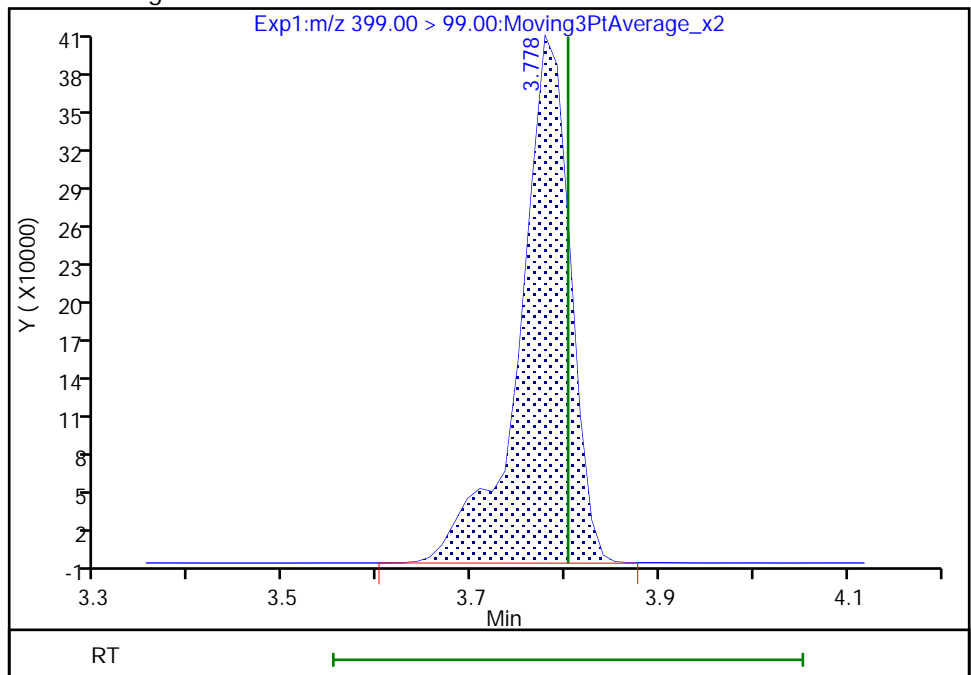
RT: 3.78
Area: 1363517
Amount: 1.886090
Amount Units: ng/ml

Processing Integration Results



RT: 3.78
Area: 1513732
Amount: 2.191373
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:24:31

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

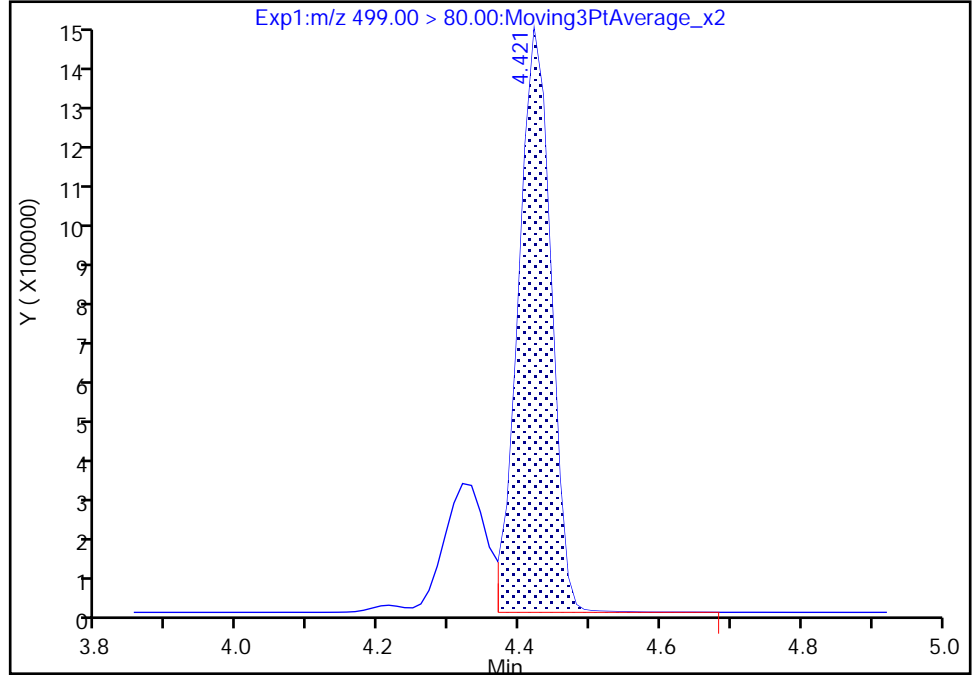
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Injection Date: 07-Oct-2021 03:03:10 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 45 Worklist Smp#: 45
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

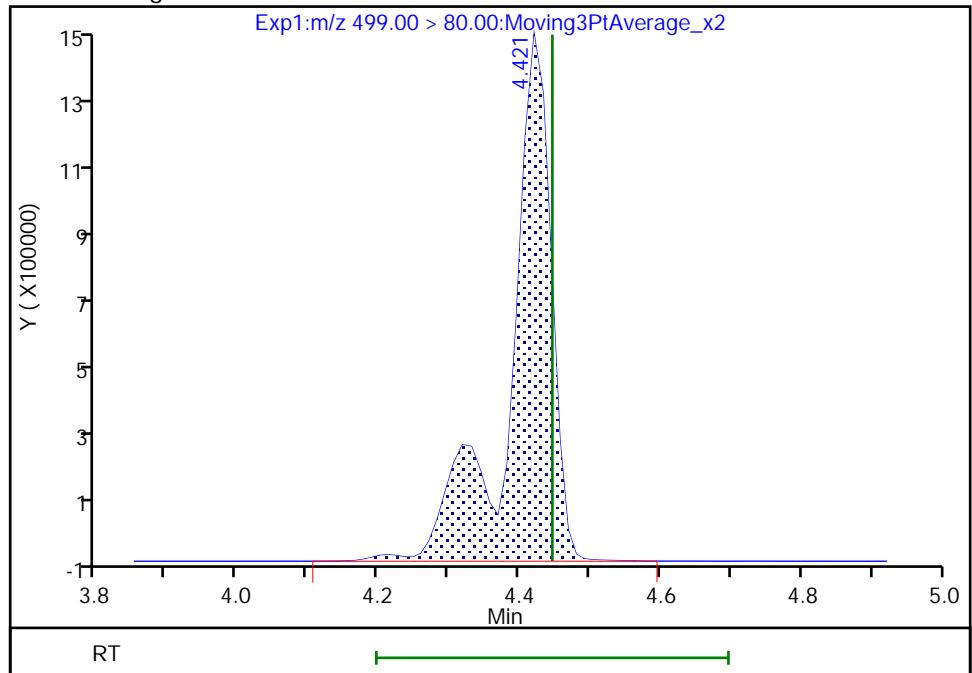
RT: 4.42
Area: 4622760
Amount: 1.825225
Amount Units: ng/ml

Processing Integration Results



RT: 4.42
Area: 5997300
Amount: 2.367941
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:24:41
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

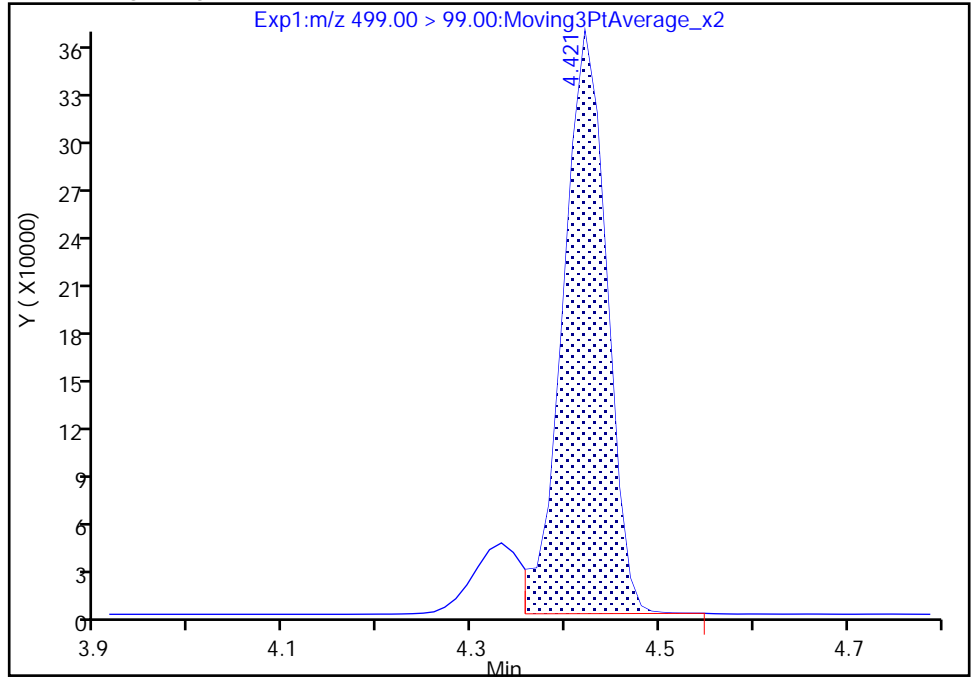
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Injection Date: 07-Oct-2021 03:03:10 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 45 Worklist Smp#: 45
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

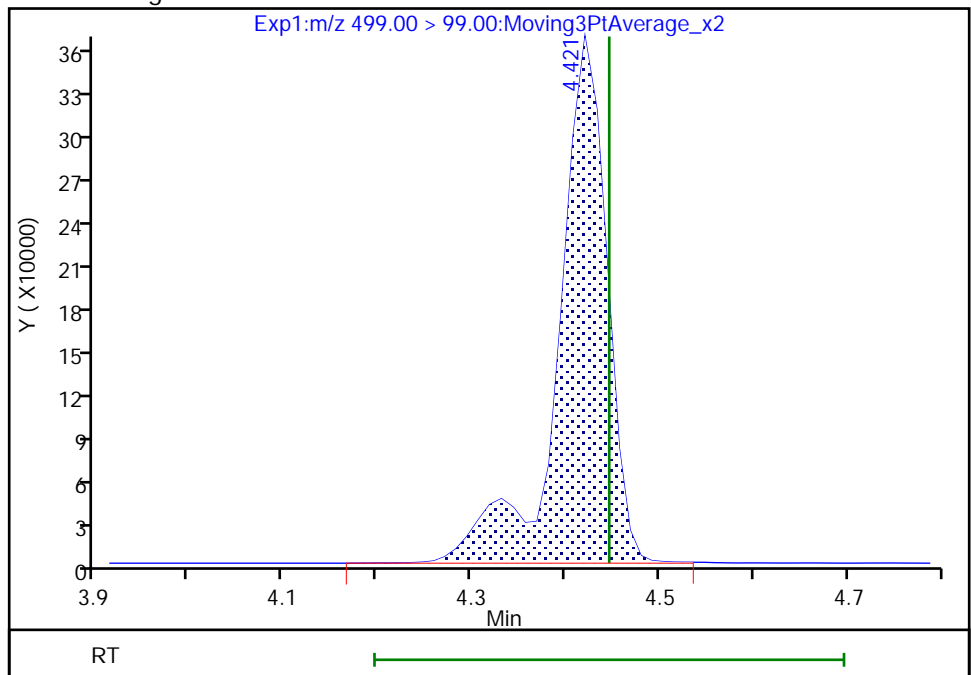
RT: 4.42
Area: 1170502
Amount: 1.825225
Amount Units: ng/ml

Processing Integration Results



RT: 4.42
Area: 1326022
Amount: 2.367941
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:24:47

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

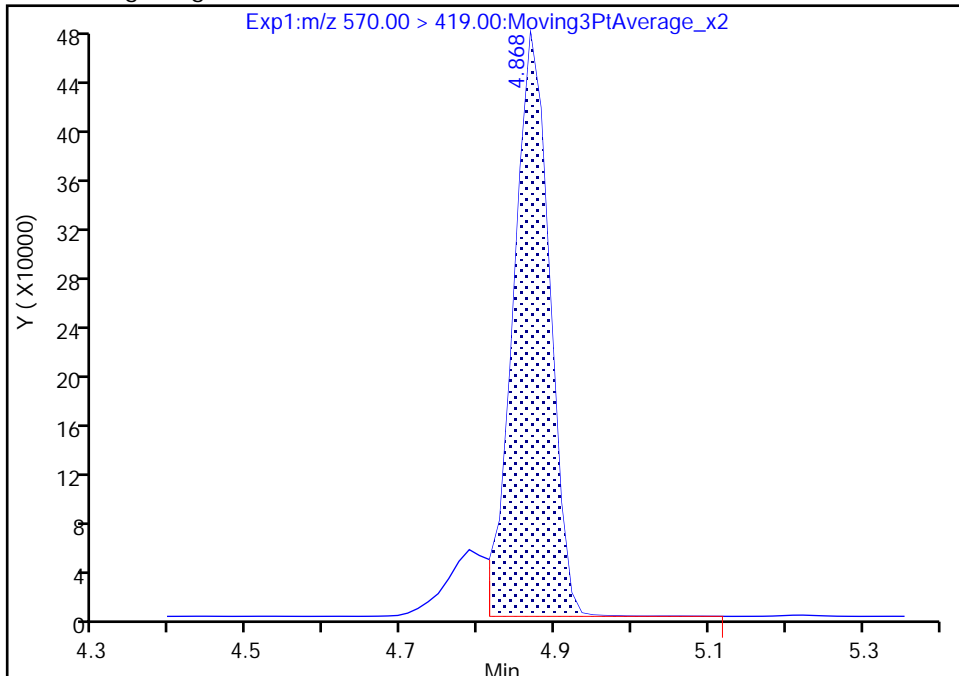
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Injection Date: 07-Oct-2021 03:03:10 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 45 Worklist Smp#: 45
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

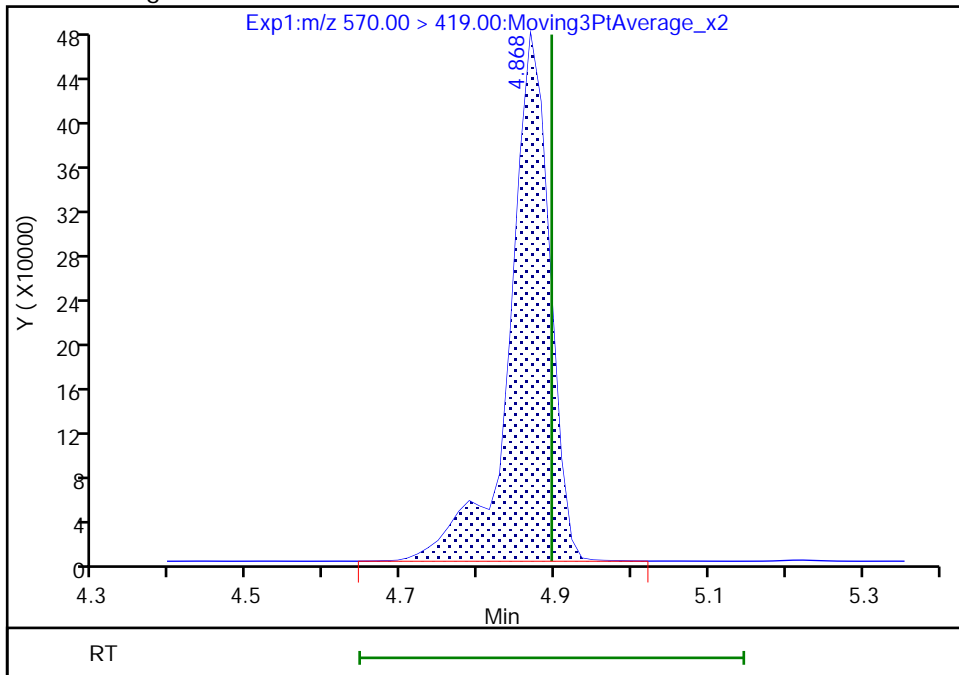
RT: 4.87
Area: 1527633
Amount: 2.270208
Amount Units: ng/ml

Processing Integration Results



RT: 4.87
Area: 1720148
Amount: 2.557241
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:24:58
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

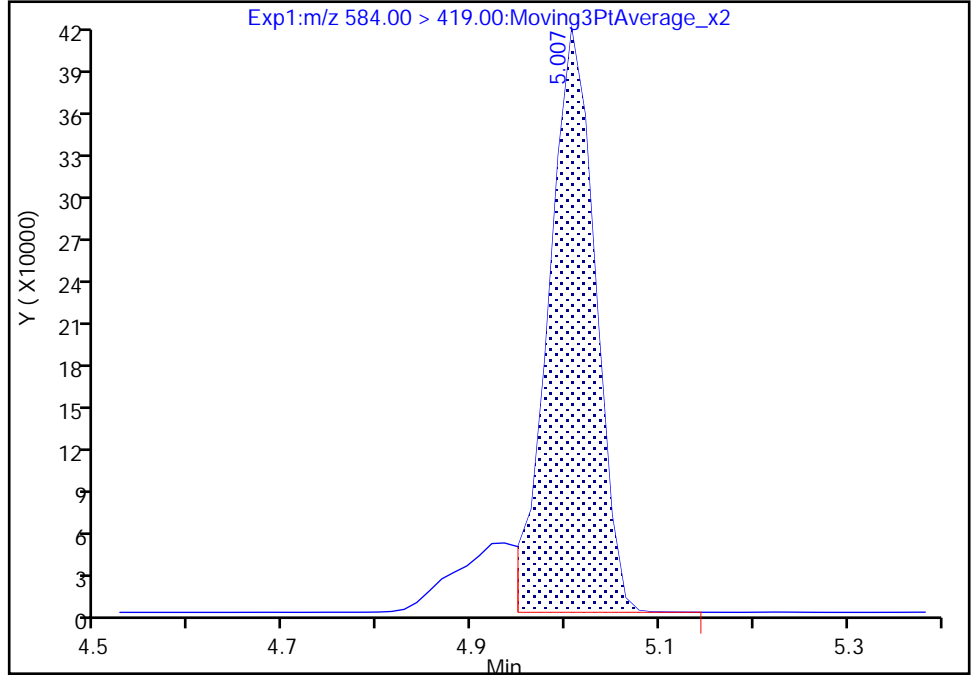
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_045.d
Injection Date: 07-Oct-2021 03:03:10 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 45 Worklist Smp#: 45
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

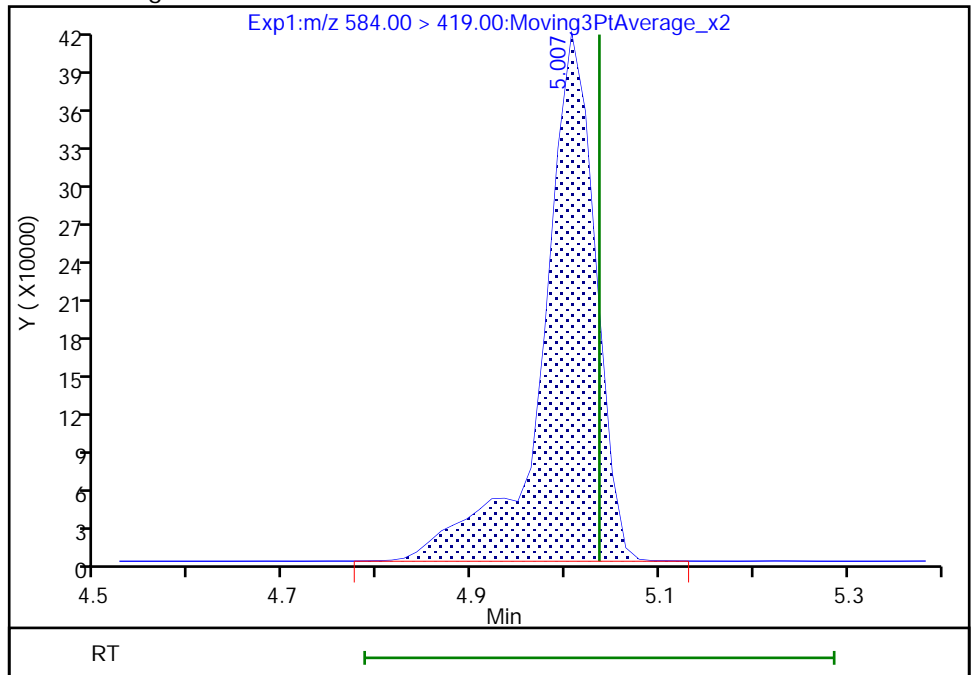
RT: 5.01
Area: 1404862
Amount: 2.064473
Amount Units: ng/ml

Processing Integration Results



RT: 5.01
Area: 1624588
Amount: 2.387364
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:25:08
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54568/58 Calibration Date: 10/07/2021 04:57
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _058.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7855	0.7779		0.990	1.00	-1.0	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.013	0.9538		0.942	1.00	-5.8	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.126	1.124		0.883	0.884	-0.2	40.0
4:2 FTS	AveID	2.500	2.483		0.928	0.934	-0.7	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8572	0.8396		0.980	1.00	-2.1	40.0
Perfluoropentanesulfonic acid (PFPeS)	L2ID		0.9255		1.01	0.938	7.8	50.0
HFPO-DA	L2ID		1.262		0.911	1.00	-8.9	40.0
Perfluoroheptanoic acid (PFHpA)	L2ID		1.052		0.996	1.00	-0.4	40.0
Perfluorohexanesulfonic acid (PFHxS)	L2ID		1.333		0.893	0.910	-1.9	40.0
DONA	AveID	3.243	3.359		0.976	0.942	3.6	40.0
6:2 FTS	L2ID		1.987		0.936	0.948	-1.3	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9947	0.9737		0.932	0.952	-2.1	40.0
Perfluorooctanoic acid (PFOA)	L2ID		1.135		1.02	1.00	2.4	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.100	1.064		0.898	0.928	-3.2	40.0
Perfluorononanoic acid (PFNA)	L2ID		0.8738		1.05	1.00	4.7	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	2.308	2.259		0.912	0.932	-2.1	40.0
Perfluorononanesulfonic acid (PFNS)	AveID	1.042	0.9932		0.915	0.960	-4.7	40.0
Perfluorodecanoic acid (PFDA)	L2ID		0.9689		1.02	1.00	2.0	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9606	0.9466		0.986	1.00	-1.5	40.0
8:2 FTS	AveID	1.784	1.857		0.998	0.958	4.1	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	L2ID		0.9816		1.07	1.00	6.8	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.9574	0.9678		0.975	0.964	1.1	40.0
Perfluoroundecanoic acid (PFUnA)	L2ID		1.031		1.02	1.00	1.9	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.9494	0.9785		1.03	1.00	3.1	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.858	1.827		0.926	0.942	-1.7	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9811		0.939	1.00	-6.1	40.0
10:2 FTS	AveID	2.221	2.452		1.06	0.964	10.4	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.147		0.991	1.00	-0.9	40.0
NMeFOSA	AveID	1.047	1.014		0.968	1.00	-3.2	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9879	0.9662		0.947	0.968	-2.2	40.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54568/58 Calibration Date: 10/07/2021 04:57
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _058.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTrIA)	L2ID		0.8889		1.01	1.00	0.6	50.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.369		1.08	1.00	8.4	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.168	1.172		1.00	1.00	0.3	40.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.1358		1.08	1.00	7.7	40.0
Perfluorohexadecanoic acid	Q2ID		1.066		0.975	1.00	-2.5	40.0
Perfluorooctadecanoic acid	AveID	0.9076	0.9083		1.00	1.00	0.0	40.0
13C4 PFBA	Ave	1.324	1.281		1.21	1.25	-3.3	50.0
13C5 PFPeA	Ave	1.087	1.084		1.25	1.25	-0.3	50.0
13C3 PFBS	Ave	0.7019	0.6499		1.08	1.16	-7.4	50.0
M2-4:2 FTS	Ave	0.1052	0.1138		1.26	1.17	8.1	50.0
13C2 PFHxA	Ave	1.116	1.062		1.19	1.25	-4.8	50.0
13C3 HFPO-DA	Ave	0.5714	0.5666		1.24	1.25	-0.8	50.0
13C4 PFHpA	Ave	1.113	1.121		1.26	1.25	0.7	50.0
18O2 PFHxS	Ave	0.4248	0.4230		1.18	1.18	-0.4	50.0
M2-6:2 FTS	Ave	0.1078	0.1113		1.23	1.19	3.3	50.0
13C4 PFOA	Ave	1.007	0.9703		1.21	1.25	-3.6	50.0
13C4 PFOS	Ave	0.5852	0.5549		1.13	1.20	-5.2	50.0
13C5 PFNA	Ave	1.279	1.257		1.23	1.25	-1.7	50.0
13C2 PFDA	Ave	1.296	1.231		1.19	1.25	-5.0	50.0
13C8 FOSA	Ave	0.8591	0.8434		1.23	1.25	-1.8	50.0
M2-8:2 FTS	Ave	0.1316	0.1296		1.18	1.20	-1.5	50.0
d3-NMeFOSAA	Ave	0.1774	0.1667		1.18	1.25	-6.0	50.0
13C2 PFUnA	Ave	1.237	1.209		1.22	1.25	-2.3	50.0
d5-NEtFOSAA	Ave	0.1705	0.1557		1.14	1.25	-8.7	50.0
13C2 PFDoA	Ave	1.319	1.384		1.31	1.25	4.9	50.0
d7-N-MeFOSE-M	Ave	0.1075	0.1223		1.42	1.25	13.7	50.0
d-N-MeFOSA-M	Ave	0.1120	0.1062		1.19	1.25	-5.1	50.0
d9-N-EtFOSE-M	Ave	0.1146	0.1270		1.39	1.25	10.8	50.0
d-N-EtFOSA-M	Ave	0.0942	0.0910		1.21	1.25	-3.5	50.0
13C2 PFTeDA	Ave	1.211	1.126		1.16	1.25	-7.0	50.0
13C2 PFHxDA	Ave	0.8782	0.8758		1.25	1.25	-0.3	50.0
13C8 PFOA	Ave	0.9886	0.9460		1.20	1.25	-4.3	50.0
13C8 PFOS	Ave	0.1256	0.1188		1.13	1.20	-5.4	50.0

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_058.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 07-Oct-2021 04:57:45 ALS Bottle#: 4 Worklist Smp#: 58
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-058 ccv
 Misc. Info.: Plate: 11 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 17:32:03 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 17:31:28

Ratio Calibration: None

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	2.801	2.801	0.0	0.678	7256193	1.21	96.7	19788	
2 Perfluorobutanoic acid	212.90 > 169.00	2.801	2.812	-0.011	1.000	4515817	0.99	99.0	1506	
D 3 13C5 PFPeA	267.90 > 223.00	3.102	3.129	-0.027	0.751	6140349	1.25	99.7	18127	
4 Perfluoropentanoic acid	262.90 > 219.00	3.102	3.129	-0.027	1.000	4685245	0.9415	94.2	1376	
D 6 13C3 PFBS	301.90 > 80.00	3.116	3.129	-0.013	0.754	3424942	1.08	92.6	35317	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.129	3.143	-0.014	1.004	2927739	0.8825	Target=3.06	99.8	19736
	298.90 > 99.00	3.129	3.143	-0.014	1.004	1103257		2.65(1.53-4.59)		7059
D 8 M2-4:2 FTS	329.00 > 81.00	3.409	3.423	-0.014	0.825	602234	1.26	108	1357	
7 4:2 FTS	327.00 > 307.00	3.409	3.423	-0.014	1.000	1196331	0.9277	99.3	11466	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.437	3.453	-0.016	1.103	2557618	1.01	Target=3.47	108	18193
	349.00 > 99.00	3.437	3.453	-0.016	1.103	687611		3.72(1.73-5.20)		5320
D 9 13C2 PFHxA	315.00 > 270.00	3.437	3.469	-0.032	0.832	6020494	1.19	95.2	26770	
10 Perfluorohexanoic acid	313.00 > 269.00	3.437	3.469	-0.032	1.000	4043981	0.9795	Target=9.74	97.9	2256
	313.00 > 119.00	3.437	3.469	-0.032	1.000	311403		12.99(4.87-14.61)		1232

D 12 13C3 HFPO-DA

287.00 > 169.00 3.535 3.561 -0.026 0.856 3210964 1.24 99.2 9930

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.535	3.561	-0.026	1.000	3241092	0.9107		91.1	3970	
D 17 18O2 PFHxS										
403.00 > 84.00	3.790	3.803	-0.013	0.918	2267548	1.18		99.6	11014	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.790	3.803	-0.013	1.000	2325418	0.8925	Target=2.96	98.1	6633	M
399.00 > 99.00	3.790	3.803	-0.013	1.000	680611		3.42(1.48-4.44)		3911	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.790	3.815	-0.025	0.918	6352913	1.26		101	28631	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.790	3.815	-0.025	1.000	5347948	1.00	Target=3.35	99.6	3787	
363.00 > 169.00	3.790	3.815	-0.025	1.000	1617719		3.31(1.67-5.02)		7686	
68 DONA										
377.00 > 251.00	3.815	3.840	-0.025	0.863	7960097	0.9756	Target=1.49	104	22659	
377.00 > 85.00	3.815	3.840	-0.025	0.863	4353933		1.83(0.74-2.23)		7376	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.119	4.143	-0.024	0.931	2331850	0.9318	Target=3.73	97.9	6887	
449.00 > 99.00	4.119	4.143	-0.024	0.931	602050		3.87(1.87-5.61)		3936	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.119	4.143	-0.024	0.997	5360561	1.20		95.7	19144	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.119	4.143	-0.024	0.997	599420	1.23		103	4041	
19 6:2 FTS										
427.00 > 407.00	4.119	4.143	-0.024	1.000	950797	0.9361		98.7	8594	
D 21 13C4 PFOA										
417.00 > 372.00	4.131	4.155	-0.024	1.000	5498453	1.20		96.4	16525	
* 22 13C2 PFOA										
415.00 > 370.00	4.131	4.155	-0.024		5666590	1.25			20687	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.131	4.155	-0.024	1.000	4992180	1.02	Target=2.40	102	2513	
413.00 > 169.00	4.131	4.155	-0.024	1.000	1980807		2.52(1.20-3.61)		3183	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.422	4.447	-0.024	1.070	643739	1.13		94.6	2273	
D 25 13C4 PFOS										
503.00 > 80.00	4.422	4.447	-0.024	1.070	3006220	1.13		94.8	10120	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.422	4.447	-0.024	1.000	2484243	0.8979	Target=3.83	96.8	5167	M
499.00 > 99.00	4.422	4.447	-0.024	1.000	584679		4.25(1.91-5.74)		2651	M
D 27 13C5 PFNA										
468.00 > 423.00	4.447	4.470	-0.023	1.077	7124166	1.23		98.3	20144	
26 Perfluorononanoic acid										
463.00 > 419.00	4.447	4.470	-0.023	1.000	4980237	1.05	Target=3.68	105	3244	
463.00 > 169.00	4.447	4.470	-0.023	1.000	1073279		4.64(1.84-5.52)		3370	
63 9CIFOS										
531.00 > 351.00	4.572	4.596	-0.024	1.107	5296021	0.9122		97.9	9682	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.696	4.722	-0.026	1.062	2398691	0.9149	Target=3.97	95.3	7727	
549.00 > 99.00	4.696	4.722	-0.026	1.062	636567		3.77(1.99-5.96)		4422	
D 34 13C8 FOSA										
506.00 > 78.00	4.723	4.736	-0.013	1.143	4778933	1.23		98.2	5437	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.723	4.736	-0.013	1.000	3619052	0.9855		98.5	5695	
D 32 13C2 PFDA										
515.00 > 470.00	4.723	4.749	-0.026	1.143	6973556	1.19		95.0	22455	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.723	4.749	-0.026	1.000	5405286	1.02	Target=10.11	102	2767	
513.00 > 169.00	4.723	4.749	-0.026	1.000	454453		11.89(5.06-15.17)		373	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.736	4.763	-0.027	1.147	703570	1.18		98.5	2794	
31 8:2 FTS										
527.00 > 507.00	4.736	4.763	-0.027	1.000	1045413	1.00		104	6678	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.869	4.896	-0.027	1.179	944661	1.17		94.0	1562	
36 NMeFOSAA										
570.00 > 419.00	4.869	4.896	-0.027	1.000	741826	1.07		107	1400	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.965	4.993	-0.028	1.123	2347132	0.9745	Target=3.80	101	8517	
599.00 > 99.00	4.965	4.993	-0.028	1.123	584937		4.01(1.90-5.70)		2608	
D 39 13C2 PFUnA										
565.00 > 520.00	4.993	5.022	-0.029	1.209	6848496	1.22		97.7	20039	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.993	5.022	-0.029	1.000	5650776	1.02	Target=7.45	102	5389	
563.00 > 169.00	4.993	5.022	-0.029	1.000	604319		9.35(3.78-11.33)		2201	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.008	5.036	-0.028	1.212	882335	1.14		91.3	4539	
40 NEtFOSA										
584.00 > 419.00	5.008	5.036	-0.028	1.000	690710	1.03		103	956	
57 11CIFOS										
631.00 > 451.00	5.093	5.119	-0.026	1.152	4330078	0.9262		98.3	11128	
D 43 13C2 PFDaA										
615.00 > 570.00	5.224	5.251	-0.027	1.265	7842337	1.31		105	28350	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.224	5.251	-0.027	1.000	6155251	0.9393	Target=5.33	93.9	4370	
613.00 > 169.00	5.224	5.251	-0.027	1.000	864167		7.12(2.66-7.99)		2509	
50 10:2 FTS										
627.00 > 607.00	5.251	5.266	-0.015	1.109	1388782	1.06		110	15714	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.281	5.281	0.0	1.278	692940	1.42		114	441	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.282	601858	1.19		94.9	43.5	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.295	0.0	1.003	636054	0.99		99.1	903	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA	512.00 > 169.00	5.295	5.295	0.0	1.000	487987	0.9680	96.8	661	
54 PFDoS	699.00 > 80.00	5.410	5.436	-0.026	1.223	2352787	0.9467	Target=4.32	97.8	4915
	699.00 > 99.00	5.410	5.436	-0.026	1.223	557941		4.22(2.19-6.58)		3014
D 53 d9-N-EtFOSE-M	639.00 > 59.00	5.436	5.436	0.0	1.316	719403	1.38	111	480	
62 N-EtFOSE-M	630.00 > 59.00	5.449	5.449	0.0	1.002	787727	1.08	108	1811	
D 52 d-N-EtFOSA-M	531.00 > 169.00	5.449	5.449	0.0	1.319	515465	1.21	96.5	697	
44 Perfluorotridecanoic acid	663.00 > 619.00	5.436	5.462	-0.026	1.041	5576839	1.01	Target=5.66	101	3019
	663.00 > 169.00	5.436	5.462	-0.026	1.041	904538		6.17(2.83-8.48)		3359
56 N-EtFOSA-M	526.00 > 169.00	5.462	5.462	0.0	1.002	483254	1.00	100	656	
D 46 13C2 PFTeDA	715.00 > 670.00	5.608	5.637	-0.029	1.358	6380378	1.16	93.0	16268	
45 Perfluorotetradecanoic acid	713.00 > 169.00	5.623	5.637	-0.014	1.003	692997	1.08	Target=1.07	108	4084
	713.00 > 219.00	5.608	5.637	-0.029	1.000	671678		1.03(0.53-1.60)		4219
55 Perfluorohexadecanoic acid	813.00 > 769.00	5.935	5.948	-0.013	1.002	4231854	0.9745	Target=7.50	97.5	3100
	813.00 > 169.00	5.922	5.948	-0.026	1.000	498711		8.49(3.75-11.26)		3683
D 59 13C2 PFHxDA	815.00 > 770.00	5.922	5.948	-0.026	1.434	4962759	1.25	99.7	9890	
60 Perfluorooctadecanoic acid	913.00 > 869.00	6.192	6.221	-0.029	1.045	3606175	1.00	Target=9.98	100	2916
	913.00 > 169.00	6.192	6.221	-0.029	1.045	298657		12.07(5.14-15.41)		2167

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L4PFC2_00003

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_058.d

Injection Date: 07-Oct-2021 04:57:45

Instrument ID: LCA

Lims ID: CCV

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 4

Worklist Smp#: 58

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

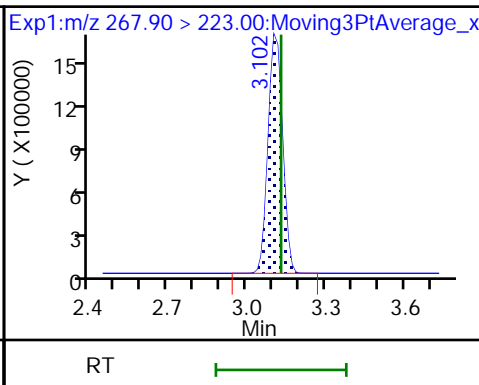
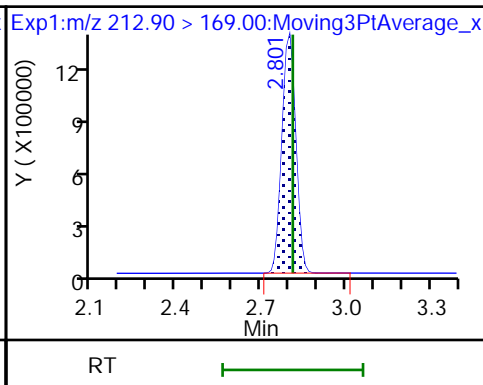
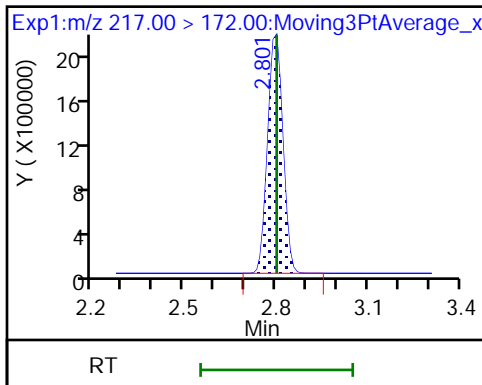
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

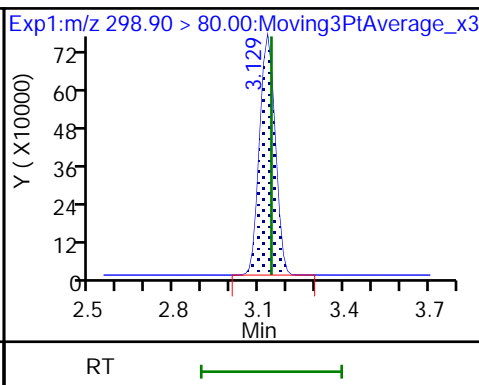
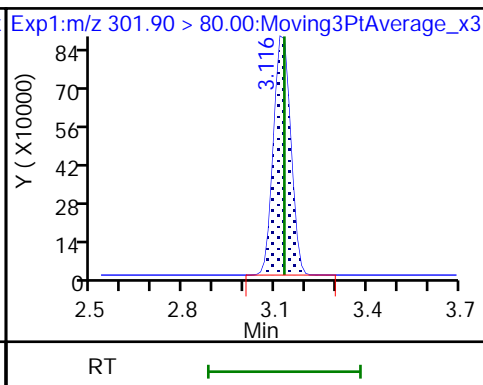
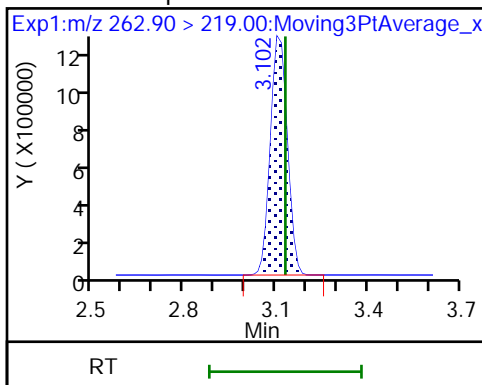
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

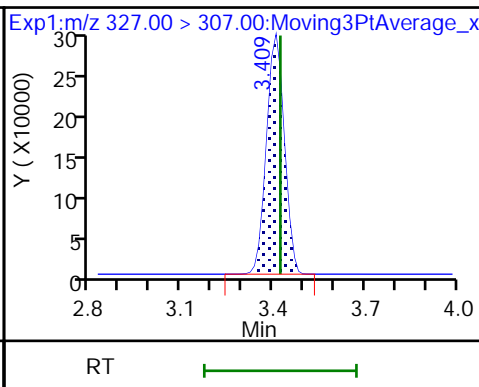
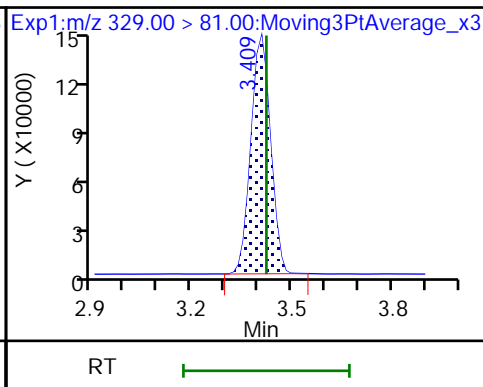
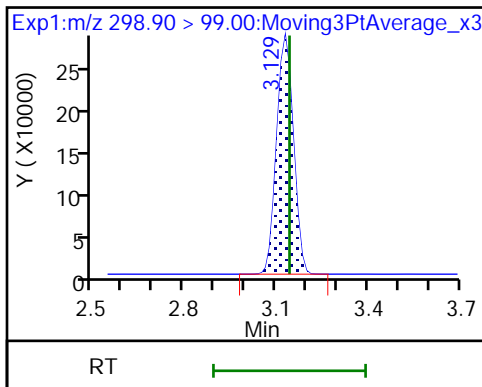
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

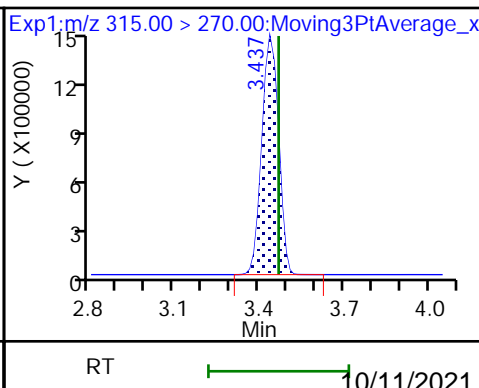
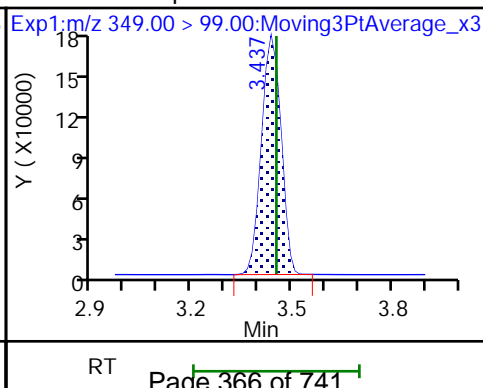
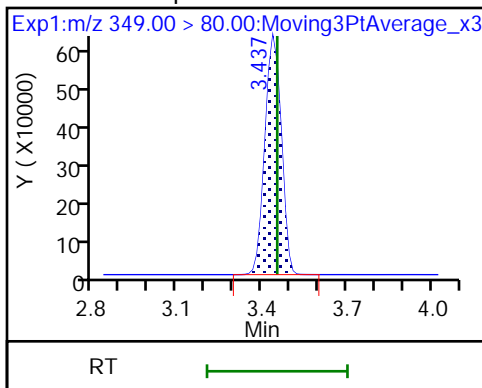
7 4:2 FTS

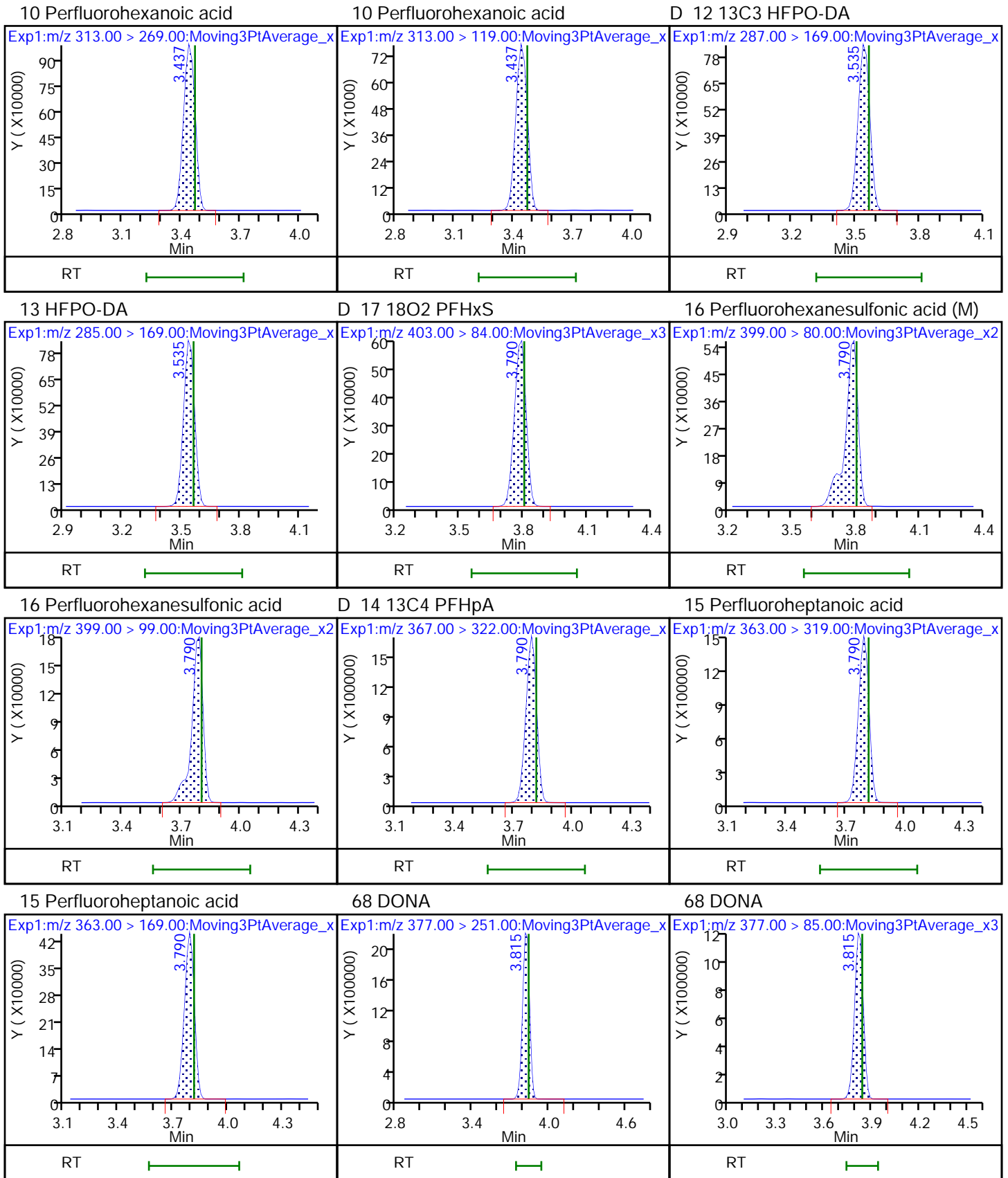


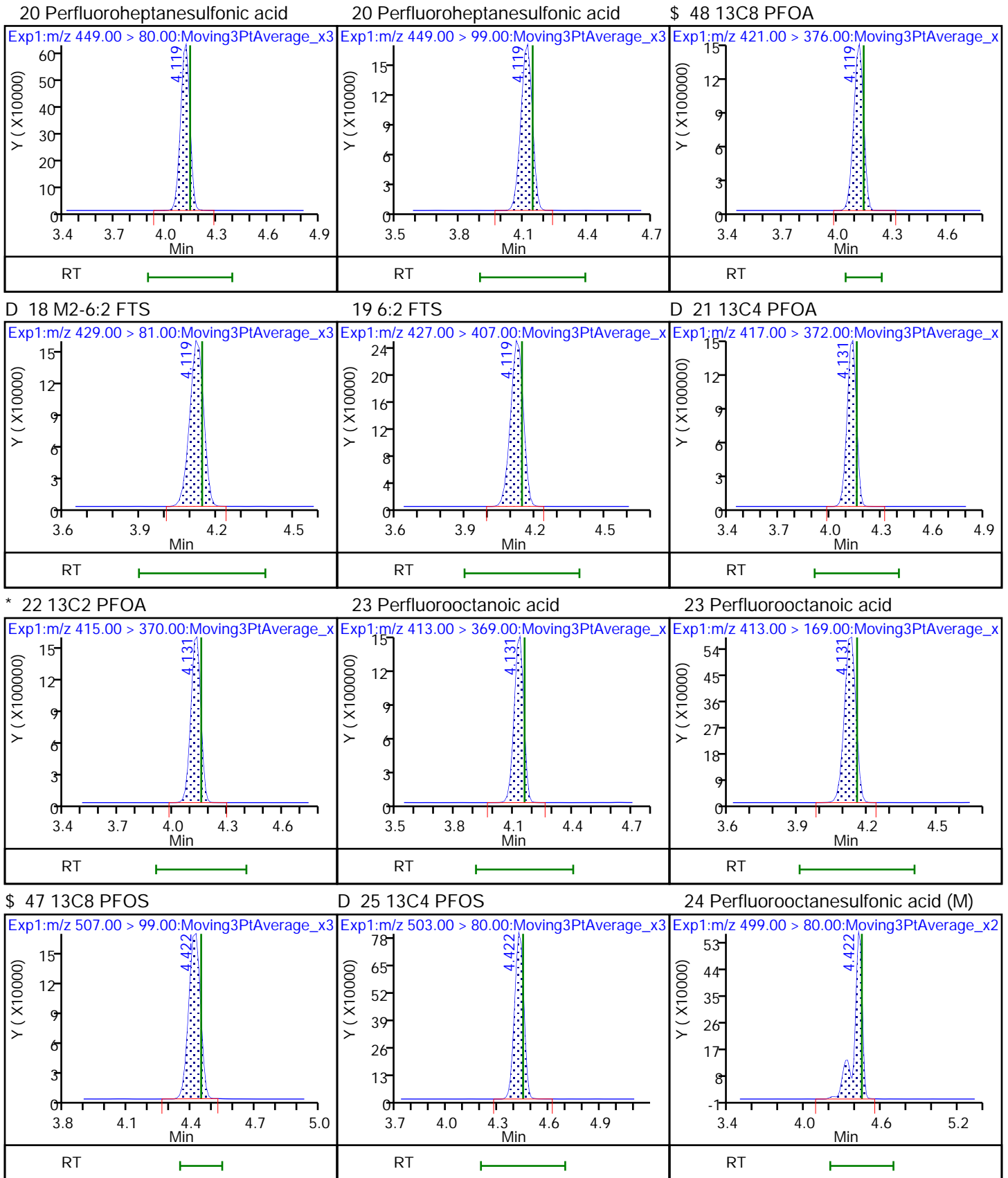
11 Perfluoropentanesulfonic acid

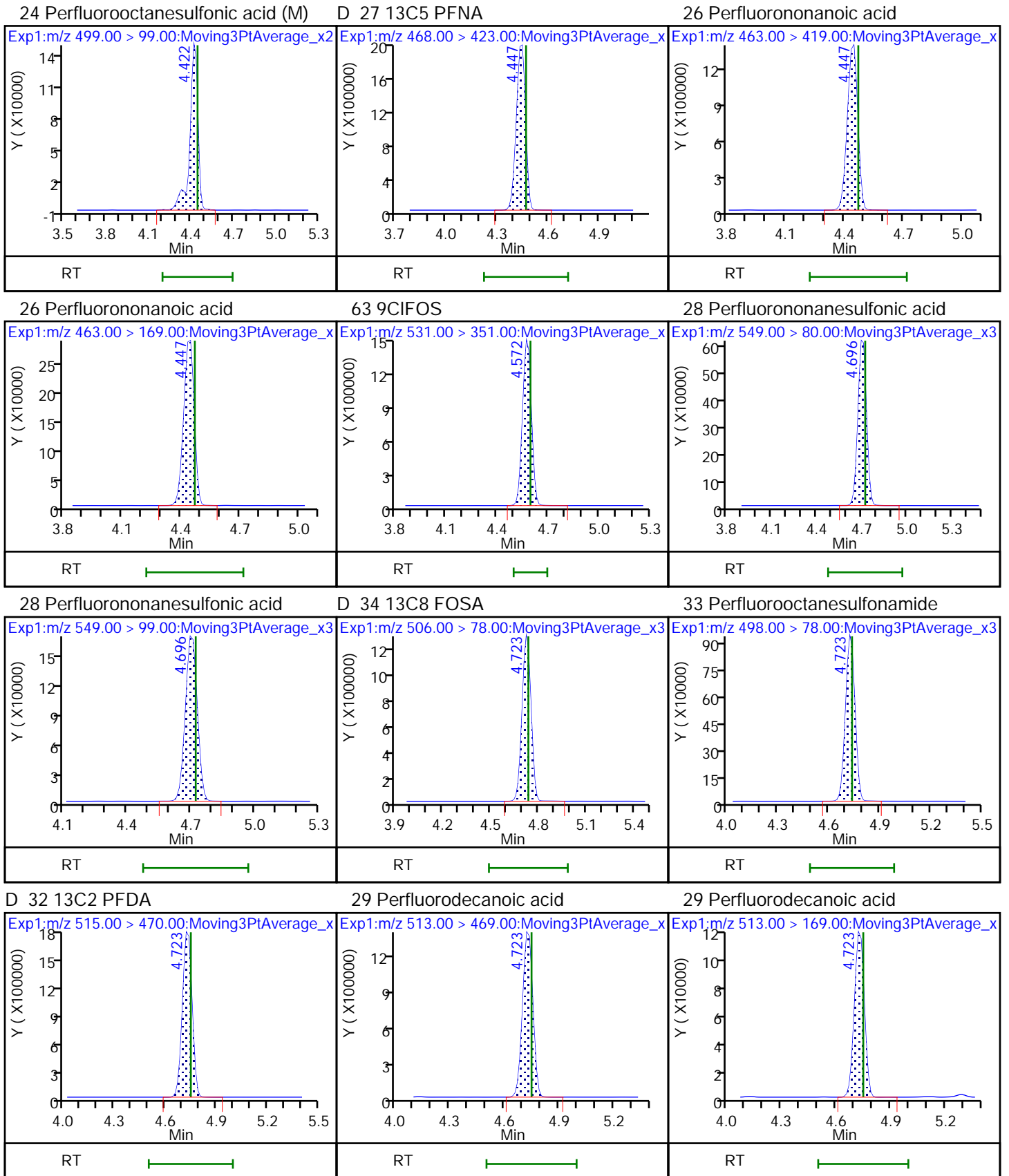
11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA





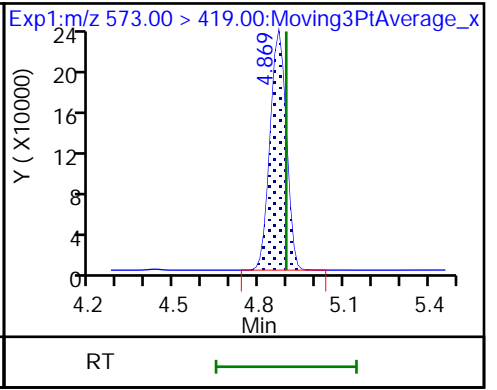
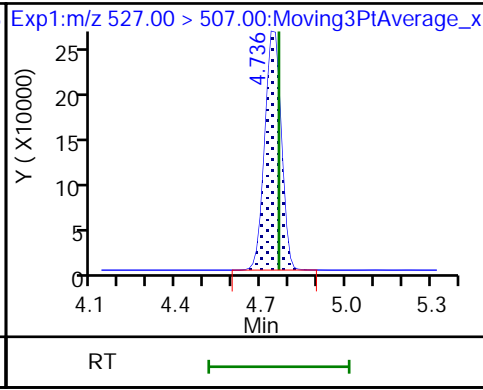
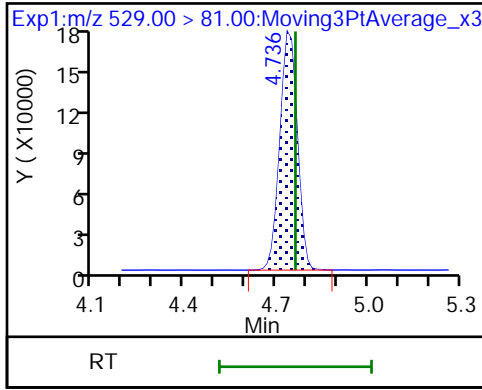




D 30 M2-8:2 FTS

31 8:2 FTS

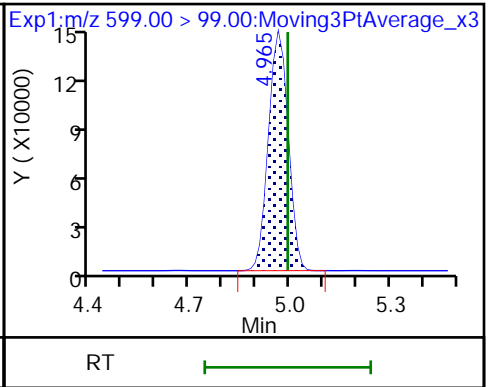
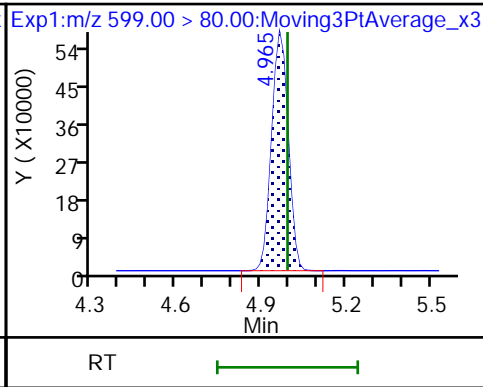
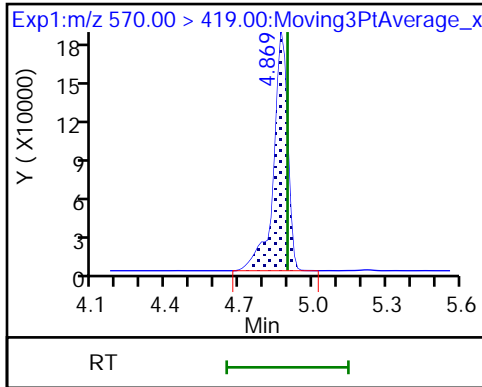
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

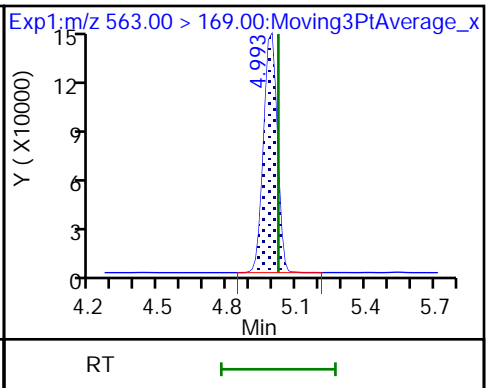
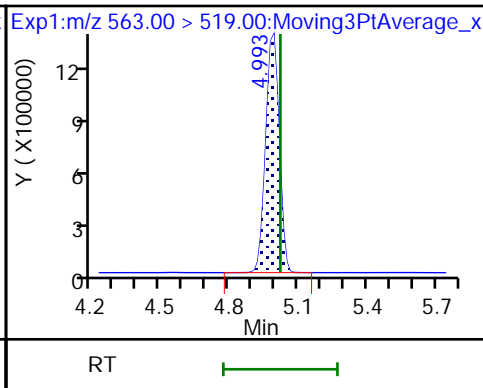
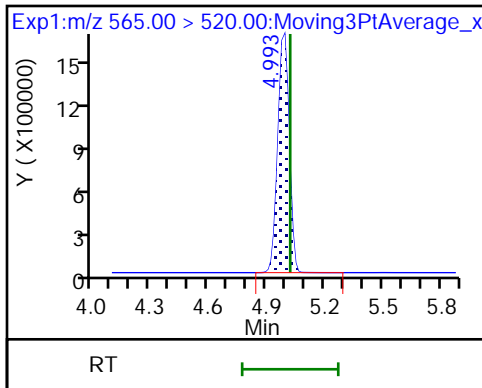
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

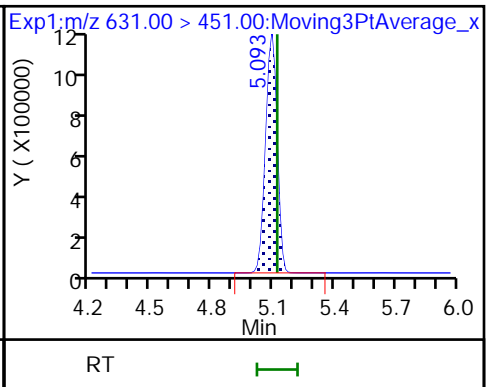
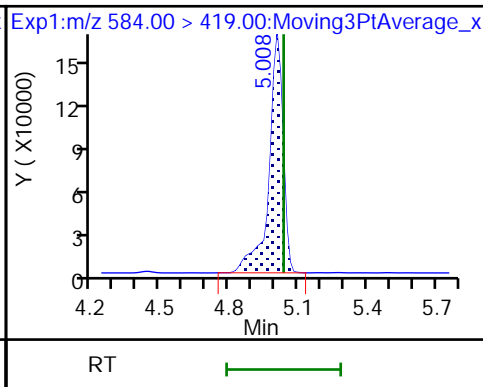
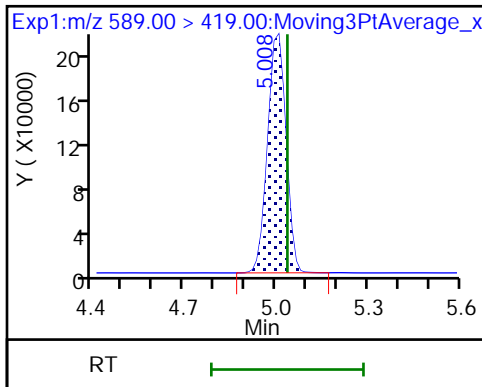
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA

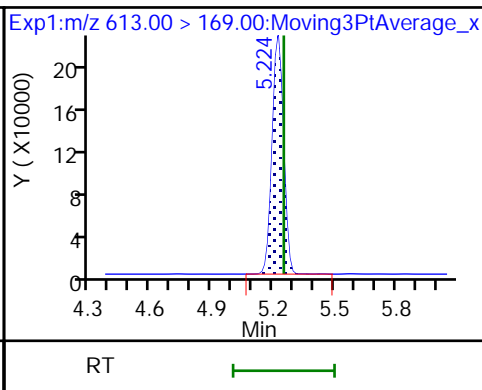
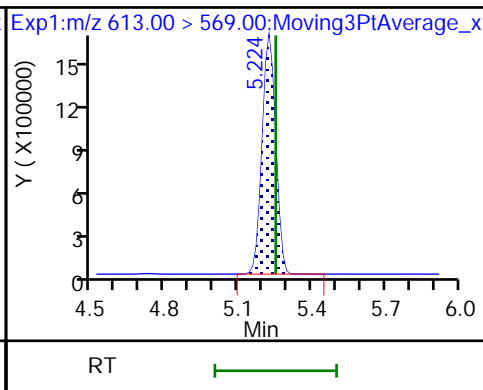
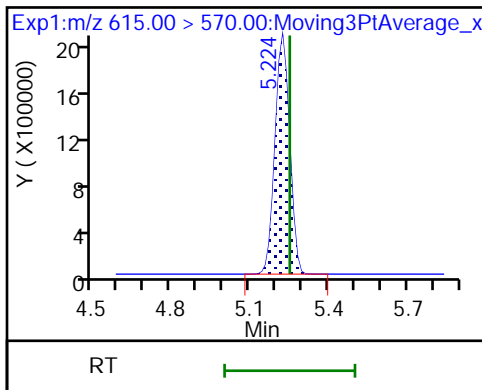
57 11C1FOS



D 43 13C2 PFDaA

42 Perfluorododecanoic acid

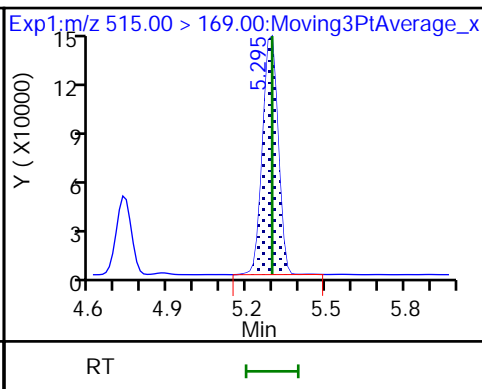
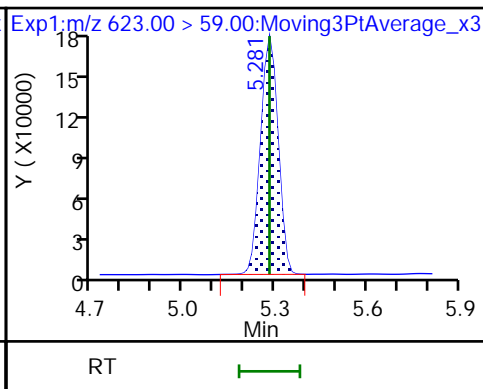
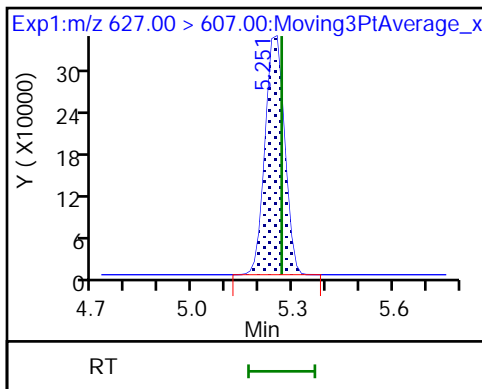
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

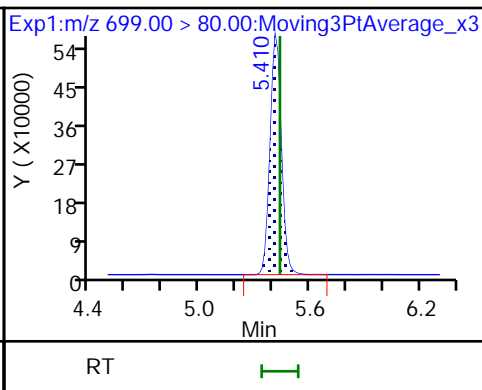
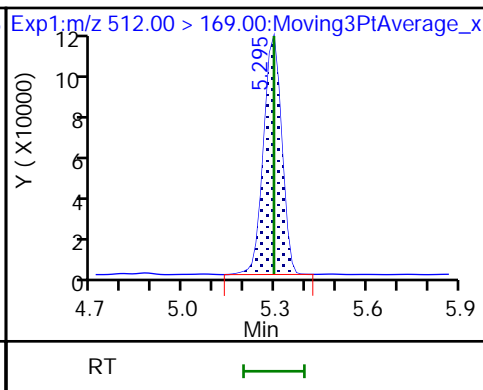
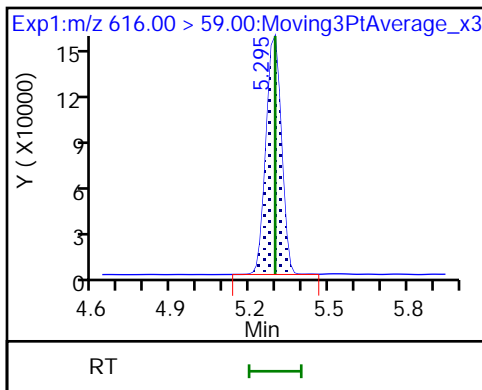
D 58 d-N-MeFOSEA-M



49 N-MeFOSE-M

61 NMeFOSEA

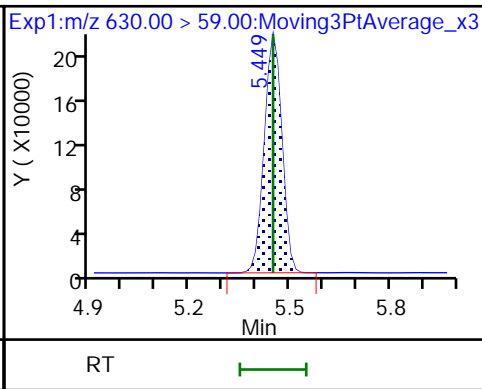
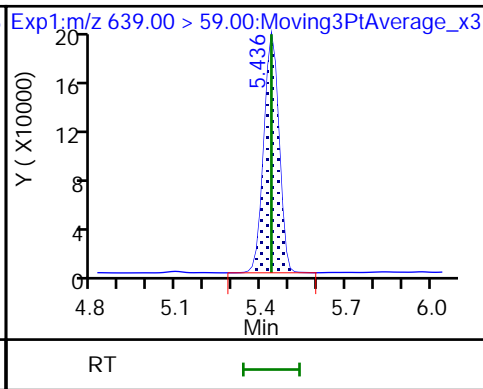
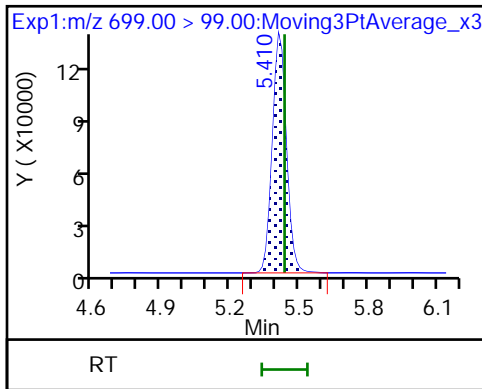
54 PFDoS



54 PFDoS

D 53 d9-N-EtFOSE-M

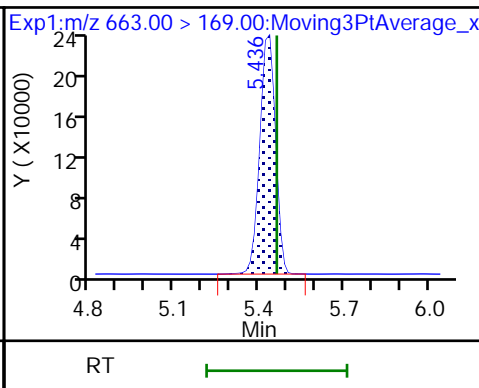
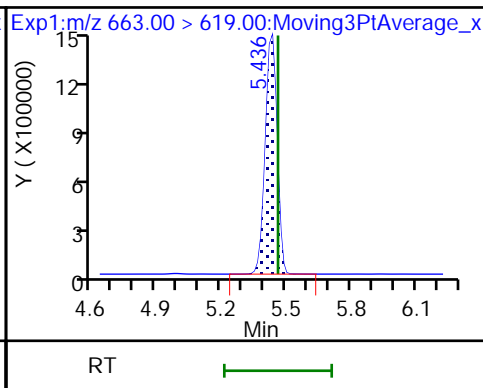
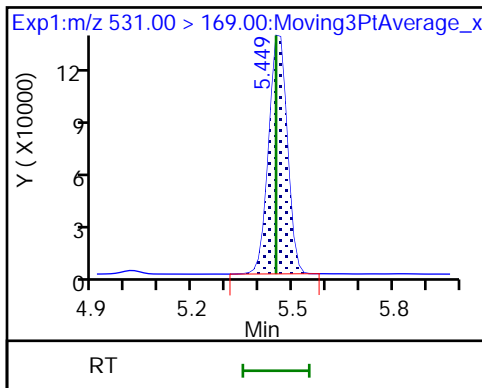
62 N-EtFOSE-M



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid

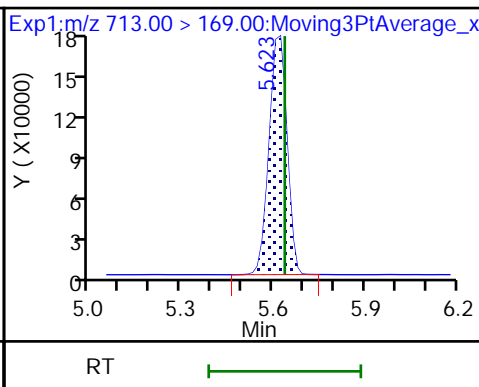
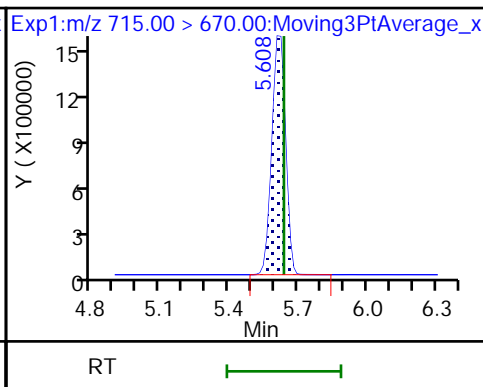
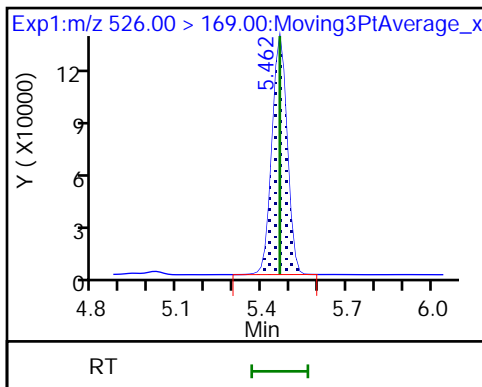
44 Perfluorotridecanoic acid



56 N-EtFOSA-M

D 46 13C2 PFTeDA

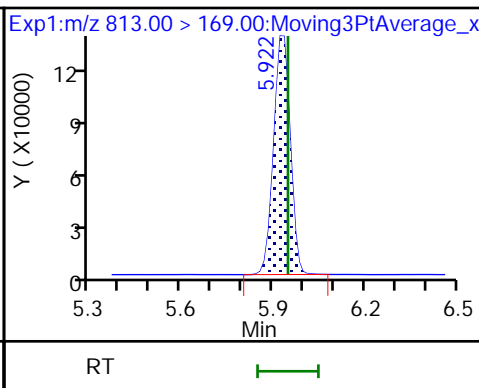
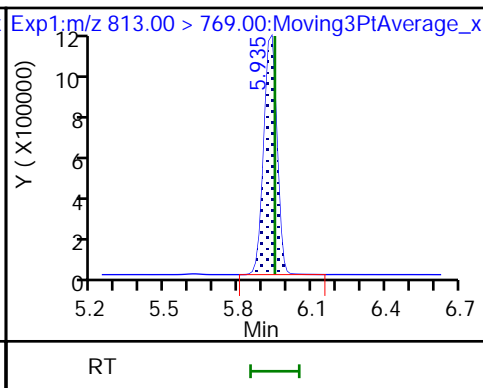
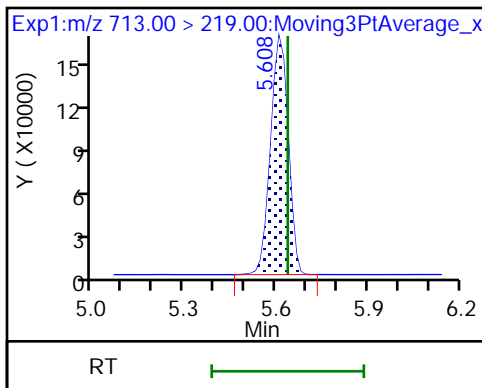
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

55 Perfluorohexadecanoic acid

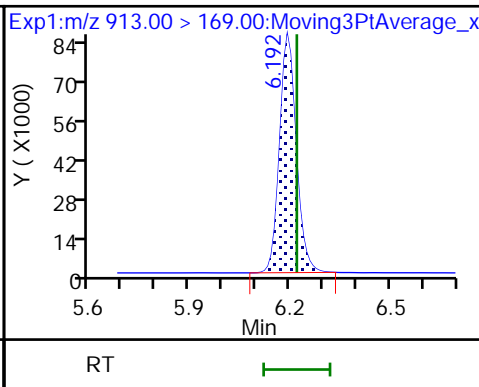
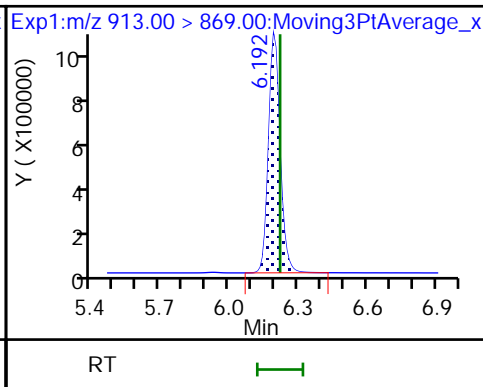
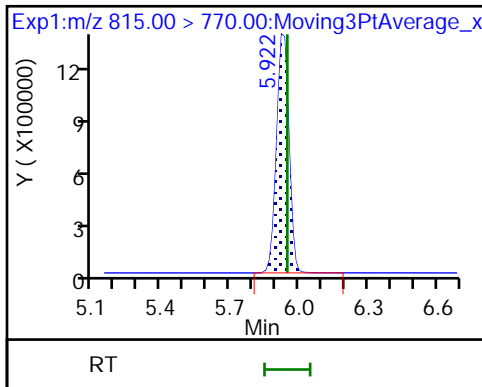
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid



Eurofins TestAmerica, Knoxville

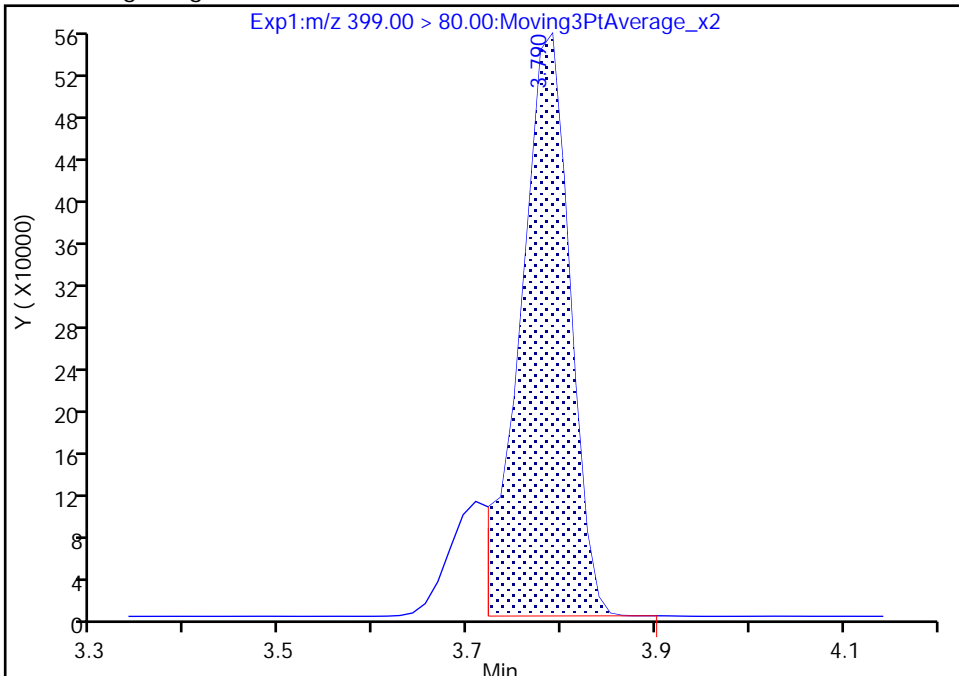
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_058.d
Injection Date: 07-Oct-2021 04:57:45 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 4 Worklist Smp#: 58
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

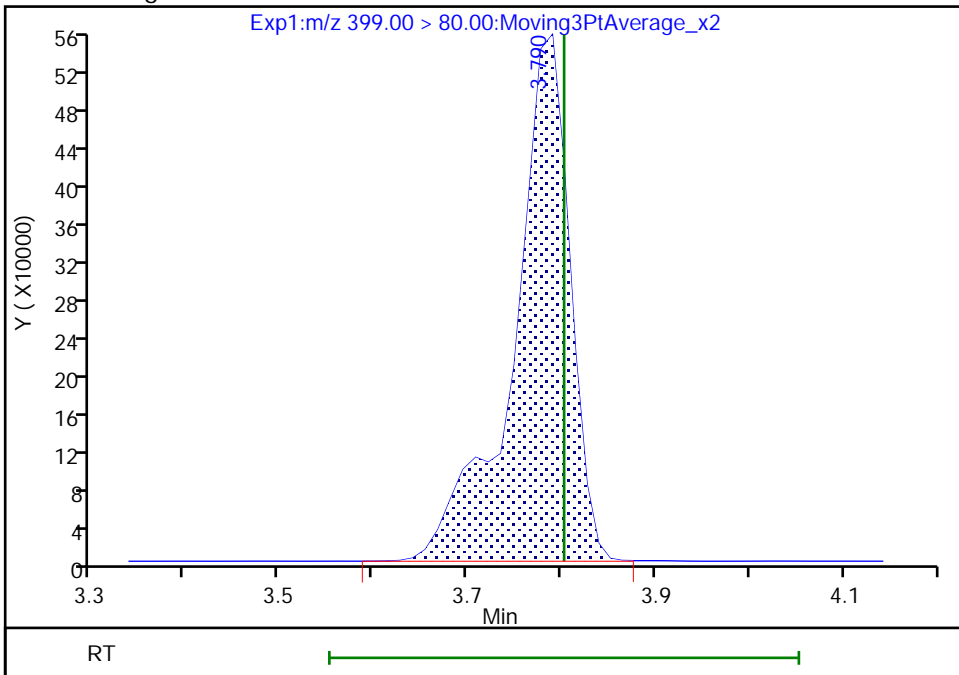
RT: 3.79
Area: 2019472
Amount: 0.774367
Amount Units: ng/ml

Processing Integration Results



RT: 3.79
Area: 2325418
Amount: 0.892454
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:30:51
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

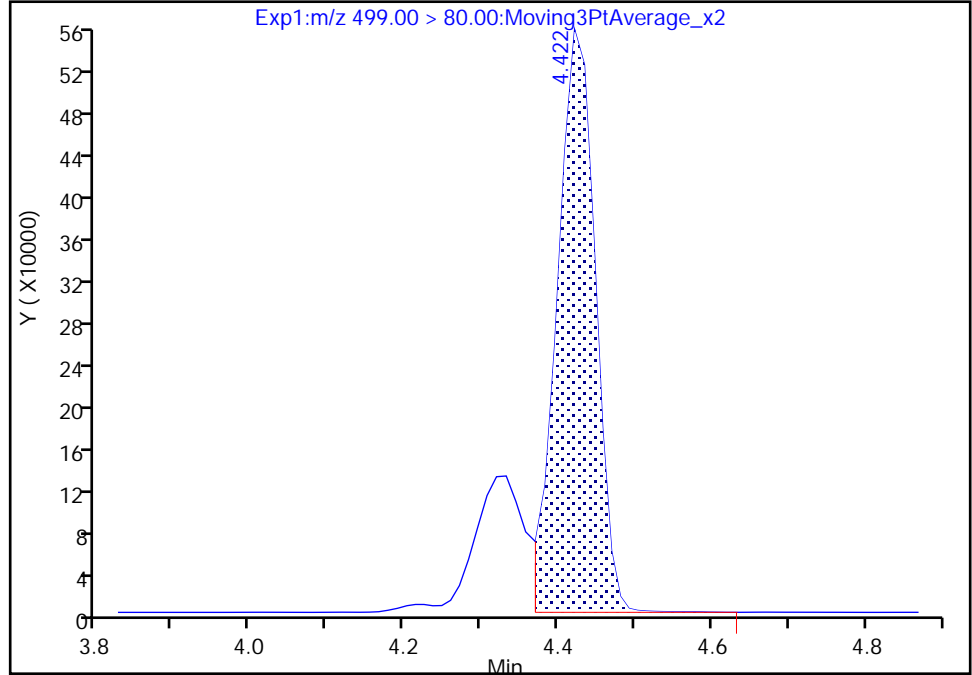
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Injection Date: 07-Oct-2021 04:57:45 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 4 Worklist Smp#: 58
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

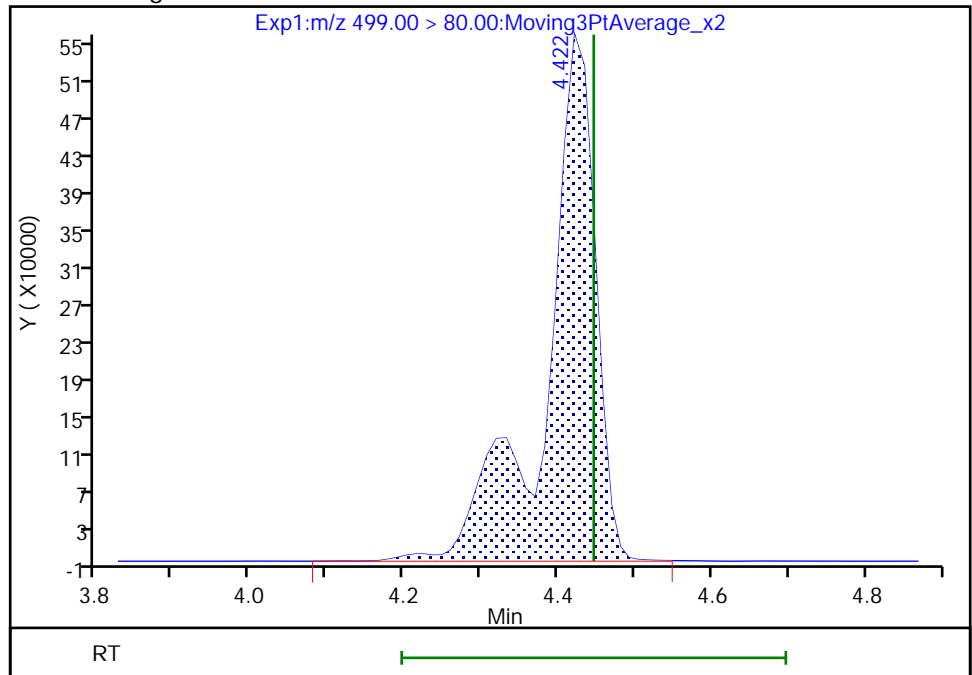
RT: 4.42
Area: 1897383
Amount: 0.685811
Amount Units: ng/ml

Processing Integration Results



RT: 4.42
Area: 2484243
Amount: 0.897932
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:31:03
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

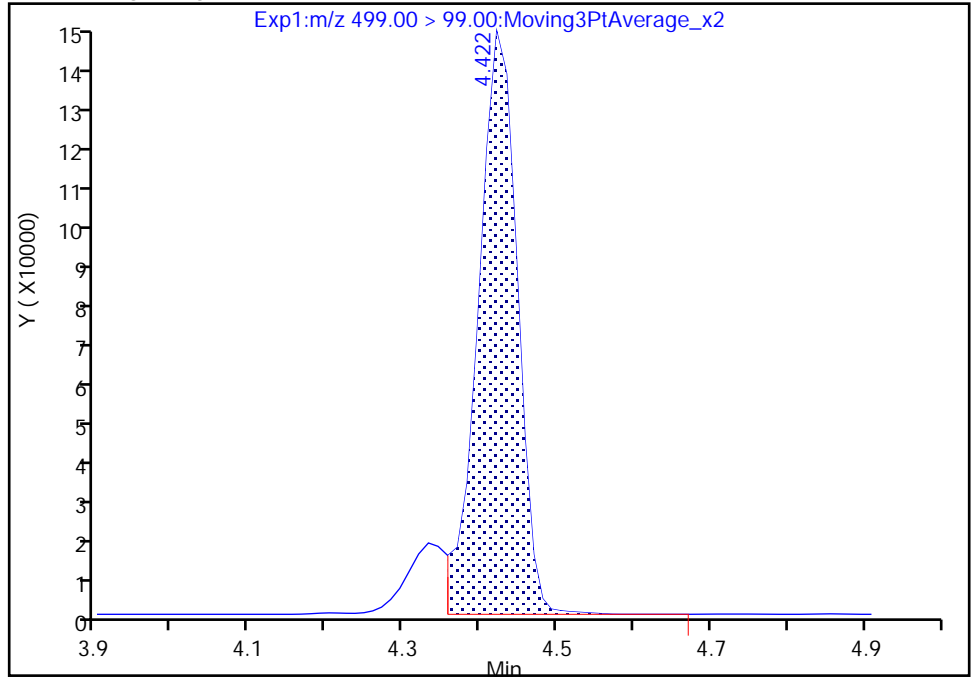
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Injection Date: 07-Oct-2021 04:57:45 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 4 Worklist Smp#: 58
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

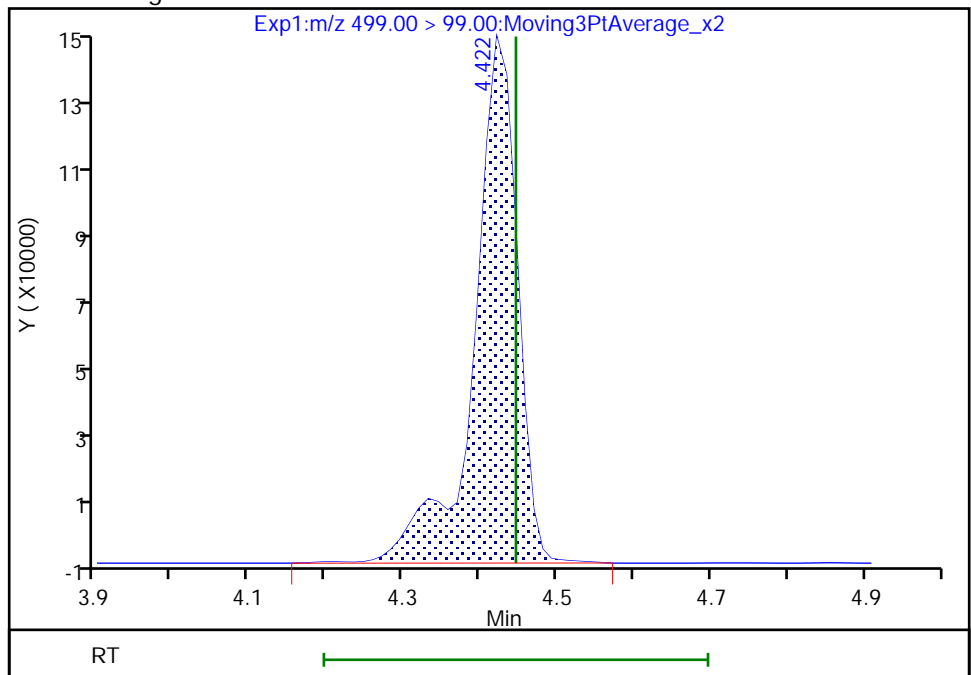
RT: 4.42
Area: 522108
Amount: 0.685811
Amount Units: ng/ml

Processing Integration Results



RT: 4.42
Area: 584679
Amount: 0.897932
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:31:08

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

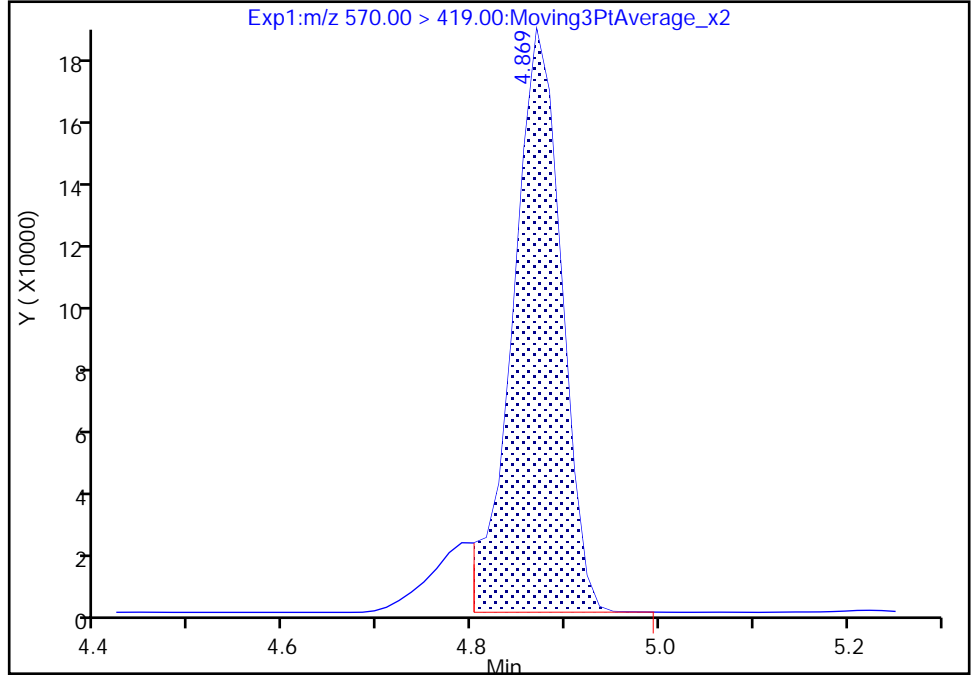
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\058.d
Injection Date: 07-Oct-2021 04:57:45 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 4 Worklist Smp#: 58
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

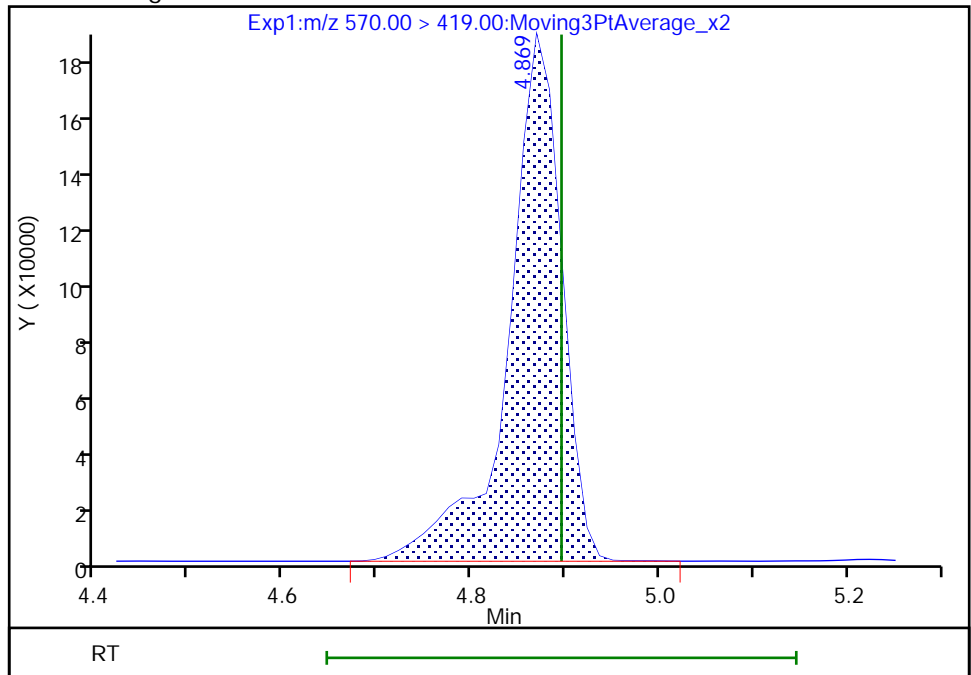
RT: 4.87
Area: 669698
Amount: 0.963352
Amount Units: ng/ml

Processing Integration Results



RT: 4.87
Area: 741826
Amount: 1.067909
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:31:18
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54568/83 Calibration Date: 10/07/2021 08:37
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _083.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7855	0.7851		1.000	1.00	-0.0	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.013	0.9637		0.951	1.00	-4.9	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.126	1.115		0.876	0.884	-1.0	40.0
4:2 FTS	AveID	2.500	2.372		0.886	0.934	-5.1	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8572	0.8035		0.937	1.00	-6.3	40.0
Perfluoropentanesulfonic acid (PFPeS)	L2ID		0.8539		0.933	0.938	-0.6	50.0
HFPO-DA	L2ID		1.367		0.988	1.00	-1.2	40.0
Perfluoroheptanoic acid (PFHpA)	L2ID		1.061		1.00	1.00	0.4	40.0
Perfluorohexanesulfonic acid (PFHxS)	L2ID		1.386		0.928	0.910	2.0	40.0
DONA	AveID	3.243	3.013		0.875	0.942	-7.1	40.0
6:2 FTS	L2ID		2.040		0.961	0.948	1.4	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9947	0.9348		0.895	0.952	-6.0	40.0
Perfluorooctanoic acid (PFOA)	L2ID		1.094		0.986	1.00	-1.4	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.100	1.058		0.893	0.928	-3.8	40.0
Perfluorononanoic acid (PFNA)	L2ID		0.8196		0.982	1.00	-1.8	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	2.308	2.311		0.933	0.932	0.1	40.0
Perfluorononanesulfonic acid (PFNS)	AveID	1.042	1.030		0.949	0.960	-1.1	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9606	0.9485		0.987	1.00	-1.3	40.0
Perfluorodecanoic acid (PFDA)	L2ID		0.9465		0.996	1.00	-0.4	40.0
8:2 FTS	AveID	1.784	1.723		0.925	0.958	-3.4	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	L2ID		0.9627		1.05	1.00	4.7	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.9574	0.9571		0.964	0.964	-0.0	40.0
Perfluoroundecanoic acid (PFUnA)	L2ID		1.067		1.05	1.00	5.4	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.9494	0.9213		0.970	1.00	-3.0	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.858	1.855		0.940	0.942	-0.2	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9815		0.940	1.00	-6.0	40.0
10:2 FTS	AveID	2.221	2.442		1.06	0.964	9.9	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.125		0.972	1.00	-2.8	40.0
NMeFOSA	AveID	1.047	1.048		1.00	1.00	0.1	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9879	0.9271		0.909	0.968	-6.2	40.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54568/83 Calibration Date: 10/07/2021 08:37
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _083.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTrIA)	L2ID		0.8621		0.975	1.00	-2.5	50.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.302		1.03	1.00	3.1	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.168	1.151		0.985	1.00	-1.5	40.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.1253		0.993	1.00	-0.7	40.0
Perfluorohexadecanoic acid	Q2ID		1.123		1.03	1.00	2.8	40.0
Perfluorooctadecanoic acid	AveID	0.9076	0.9161		1.01	1.00	0.9	40.0
13C4 PFBA	Ave	1.324	1.392		1.31	1.25	5.1	50.0
13C5 PFPeA	Ave	1.087	1.166		1.34	1.25	7.3	50.0
13C3 PFBS	Ave	0.7019	0.7373		1.22	1.16	5.0	50.0
M2-4:2 FTS	Ave	0.1052	0.1311		1.45	1.17	24.6	50.0
13C2 PFHxA	Ave	1.116	1.168		1.31	1.25	4.6	50.0
13C3 HFPO-DA	Ave	0.5714	0.5927		1.30	1.25	3.7	50.0
13C4 PFHpA	Ave	1.113	1.163		1.31	1.25	4.5	50.0
18O2 PFHxS	Ave	0.4248	0.4224		1.18	1.18	-0.5	50.0
M2-6:2 FTS	Ave	0.1078	0.1197		1.32	1.19	11.1	50.0
13C4 PFOA	Ave	1.007	1.034		1.28	1.25	2.7	50.0
13C4 PFOS	Ave	0.5852	0.6063		1.24	1.20	3.6	50.0
13C5 PFNA	Ave	1.279	1.400		1.37	1.25	9.4	50.0
13C2 PFDA	Ave	1.296	1.283		1.24	1.25	-1.0	50.0
13C8 FOSA	Ave	0.8591	0.8878		1.29	1.25	3.3	50.0
M2-8:2 FTS	Ave	0.1316	0.1408		1.28	1.20	7.0	50.0
d3-NMeFOSAA	Ave	0.1774	0.1912		1.35	1.25	7.8	50.0
13C2 PFUnA	Ave	1.237	1.248		1.26	1.25	0.9	50.0
d5-NEtFOSAA	Ave	0.1705	0.1839		1.35	1.25	7.9	50.0
13C2 PFDoA	Ave	1.319	1.487		1.41	1.25	12.7	50.0
d7-N-MeFOSE-M	Ave	0.1075	0.1381		1.61	1.25	28.4	50.0
d-N-MeFOSA-M	Ave	0.1120	0.1160		1.30	1.25	3.6	50.0
d9-N-EtFOSE-M	Ave	0.1146	0.1422		1.55	1.25	24.0	50.0
d-N-EtFOSA-M	Ave	0.0942	0.1004		1.33	1.25	6.5	50.0
13C2 PFTeDA	Ave	1.211	1.279		1.32	1.25	5.6	50.0
13C2 PFHxDA	Ave	0.8782	0.9300		1.32	1.25	5.9	50.0
13C8 PFOA	Ave	0.9886	1.018		1.29	1.25	3.0	50.0
13C8 PFOS	Ave	0.1256	0.1298		1.24	1.20	3.4	50.0

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_083.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 07-Oct-2021 08:37:56 ALS Bottle#: 29 Worklist Smp#: 83
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-083 ccv
 Misc. Info.: Plate: 11 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 17:58:55 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 17:57:56

Ratio Calibration: None

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	2.801	2.801	0.0	0.678	7281916	1.31	105	12722	
2 Perfluorobutanoic acid	212.90 > 169.00	2.801	2.812	-0.011	1.000	4573851	1.00	100.0	1321	
D 3 13C5 PFPeA	267.90 > 223.00	3.116	3.129	-0.013	0.754	6102054	1.34	107	12033	
4 Perfluoropentanoic acid	262.90 > 219.00	3.116	3.129	-0.013	1.000	4704548	0.9514	95.1	1422	
D 6 13C3 PFBS	301.90 > 80.00	3.130	3.129	0.001	0.758	3588068	1.22	105	15931	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.130	3.143	-0.013	1.000	3043149	0.8756	Target=3.06	99.0	11675
	298.90 > 99.00	3.130	3.143	-0.013	1.000	1124840		2.71(1.53-4.59)		4886
D 8 M2-4:2 FTS	329.00 > 81.00	3.409	3.423	-0.014	0.825	640673	1.45	125	1235	
7 4:2 FTS	327.00 > 307.00	3.409	3.423	-0.014	1.000	1215674	0.8862	94.9	11260	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.437	3.453	-0.016	1.098	2472292	0.9325	Target=3.47	99.4	9680
	349.00 > 99.00	3.437	3.453	-0.016	1.098	685695		3.61(1.73-5.20)		6799
D 9 13C2 PFHxA	315.00 > 270.00	3.437	3.469	-0.032	0.832	6109635	1.31	105	10801	
10 Perfluorohexanoic acid	313.00 > 269.00	3.437	3.469	-0.032	1.000	3927219	0.9373	Target=9.74	93.7	2020
	313.00 > 119.00	3.437	3.469	-0.032	1.000	329364		11.92(4.87-14.61)		960
D 12 13C3 HFPO-DA	287.00 > 169.00	3.535	3.561	-0.026	0.856	3101847	1.30	104	9445	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.535	3.561	-0.026	1.000	3393404	0.9875		98.8	3050	
D 17 18O2 PFHxS										
403.00 > 84.00	3.790	3.803	-0.013	0.918	2091292	1.18		99.5	5827	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.790	3.803	-0.013	1.000	2230426	0.9283	Target=2.96	102	5403	M
399.00 > 99.00	3.790	3.803	-0.013	1.000	641305		3.48(1.48-4.44)		2915	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.790	3.815	-0.025	0.918	6087015	1.31		104	15521	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.790	3.815	-0.025	1.000	5166001	1.00	Target=3.35	100	3914	
363.00 > 169.00	3.790	3.815	-0.025	1.000	1580638		3.27(1.67-5.02)		5343	
68 DONA										
377.00 > 251.00	3.815	3.840	-0.025	0.863	7204145	0.8751	Target=1.49	92.9	10871	
377.00 > 85.00	3.815	3.840	-0.025	0.863	4182517		1.72(0.74-2.23)		4794	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.119	4.143	-0.024	0.932	2258927	0.8946	Target=3.73	94.0	8065	
449.00 > 99.00	4.119	4.143	-0.024	0.932	566002		3.99(1.87-5.61)		2958	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.119	4.143	-0.024	0.997	5327359	1.29		103	14414	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.119	4.143	-0.024	0.997	595204	1.32		111	2383	
19 6:2 FTS										
427.00 > 407.00	4.119	4.143	-0.024	1.000	969444	0.9614		101	5121	
D 21 13C4 PFOA										
417.00 > 372.00	4.131	4.155	-0.024	1.000	5410903	1.28		103	7025	
* 22 13C2 PFOA										
415.00 > 370.00	4.131	4.155	-0.024		5232999	1.25			10741	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.131	4.155	-0.024	1.000	4734425	0.9863	Target=2.40	98.6	2335	
413.00 > 169.00	4.131	4.155	-0.024	1.000	1889334		2.51(1.20-3.61)		3779	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.422	4.447	-0.024	1.070	649561	1.24		103	2853	
D 25 13C4 PFOS										
503.00 > 80.00	4.422	4.447	-0.024	1.070	3033281	1.24		104	7651	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.422	4.447	-0.024	1.000	2491346	0.8925	Target=3.83	96.2	3740	M
499.00 > 99.00	4.422	4.447	-0.024	1.000	578391		4.31(1.91-5.74)		2118	M
D 27 13C5 PFNA										
468.00 > 423.00	4.447	4.470	-0.023	1.076	7325496	1.37		109	16144	
26 Perfluorononanoic acid										
463.00 > 419.00	4.447	4.470	-0.023	1.000	4803057	0.9818	Target=3.68	98.2	4029	
463.00 > 169.00	4.447	4.470	-0.023	1.000	1085625		4.42(1.84-5.52)		3086	
63 9CIFOS										
531.00 > 351.00	4.572	4.596	-0.024	1.107	5467138	0.9333		100	10602	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.709	4.722	-0.013	1.065	2510706	0.9490	Target=3.97	98.9	7689	
549.00 > 99.00	4.709	4.722	-0.013	1.065	653466		3.84(1.99-5.96)		2740	
D 34 13C8 FOSA										
506.00 > 78.00	4.722	4.736	-0.014	1.143	4645991	1.29		103	3728	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.722	4.736	-0.014	1.000	3525331	0.9874		98.7	5229	
D 32 13C2 PFDA										
515.00 > 470.00	4.722	4.749	-0.027	1.143	6711543	1.24		99.0	9484	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.736	4.749	-0.013	1.003	5081718	1.00	Target=10.11	99.6	2739	
513.00 > 169.00	4.722	4.749	-0.027	1.000	439219		11.57(5.06-15.17)		476	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.763	-0.014	1.150	705920	1.28		107	3057	
31 8:2 FTS										
527.00 > 507.00	4.749	4.763	-0.014	1.000	973099	0.9254		96.6	5243	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.869	4.896	-0.027	1.179	1000510	1.35		108	2262	
36 NMeFOSAA										
570.00 > 419.00	4.869	4.896	-0.027	1.000	770545	1.05		105	1324	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.965	4.993	-0.028	1.123	2342019	0.9637	Target=3.80	100.0	4918	
599.00 > 99.00	4.965	4.993	-0.028	1.123	616447		3.80(1.90-5.70)		3417	
D 39 13C2 PFUnA										
565.00 > 520.00	4.993	5.022	-0.029	1.209	6530046	1.26		101	13248	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.993	5.022	-0.029	1.000	5571583	1.05	Target=7.45	105	5211	
563.00 > 169.00	4.993	5.022	-0.029	1.000	576362		9.67(3.78-11.33)		3362	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.007	5.036	-0.029	1.212	962485	1.35		108	2748	
40 NEtFOSA										
584.00 > 419.00	5.007	5.036	-0.029	1.000	709371	0.9704		97.0	754	
57 11CIFOS										
631.00 > 451.00	5.093	5.119	-0.026	1.152	4434981	0.9402		99.8	9654	
D 43 13C2 PFDaA										
615.00 > 570.00	5.224	5.251	-0.027	1.265	7779346	1.41		113	16019	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.224	5.251	-0.027	1.000	6108059	0.9397	Target=5.33	94.0	3350	
613.00 > 169.00	5.224	5.251	-0.027	1.000	885152		6.90(2.66-7.99)		3248	
50 10:2 FTS										
627.00 > 607.00	5.251	5.266	-0.015	1.106	1387754	1.06		110	5216	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.281	5.281	0.0	1.278	722508	1.60		128	423	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.282	606995	1.30		104	43.8	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.295	0.0	1.003	650404	0.9716		97.2	779	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.295	5.295	0.0	1.000	509032	1.00		100	689	
54 PFDoS										
699.00 > 80.00	5.423	5.436	-0.013	1.226	2278023	0.9085	Target=4.32	93.8	4078	
699.00 > 99.00	5.423	5.436	-0.013	1.226	558348		4.08(2.19-6.58)		2948	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.436	5.436	0.0	1.316	743935	1.55		124	633	
62 N-EtFOSE-M										
630.00 > 59.00	5.449	5.449	0.0	1.002	774792	1.03		103	2173	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.449	0.013	1.322	525189	1.33		107	868	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.436	5.462	-0.026	1.041	5365011	0.9751	Target=5.66	97.5	2885	
663.00 > 169.00	5.436	5.462	-0.026	1.041	846511		6.34(2.83-8.48)		4930	
56 N-EtFOSA-M										
526.00 > 169.00	5.462	5.462	0.0	1.000	483744	0.9854		98.5	575	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.623	5.637	-0.014	1.361	6691783	1.32		106	13746	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.623	5.637	-0.014	1.000	670557	0.99	Target=1.07	99.3	3230	
713.00 > 219.00	5.608	5.637	-0.029	0.997	676057		0.99(0.53-1.60)		4733	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.935	5.948	-0.013	1.000	4372745	1.03	Target=7.50	103	3469	
813.00 > 169.00	5.935	5.948	-0.013	1.000	515080		8.49(3.75-11.26)		2831	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.935	5.948	-0.013	1.437	4866869	1.32		106	6241	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.201	6.221	-0.020	1.045	3566833	1.01	Target=9.98	101	2592	
913.00 > 169.00	6.201	6.221	-0.020	1.045	308200		11.57(5.14-15.41)		2100	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L4PFC2_00003

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_083.d

Injection Date: 07-Oct-2021 08:37:56

Instrument ID: LCA

Lims ID: CCV

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 29

Worklist Smp#: 83

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

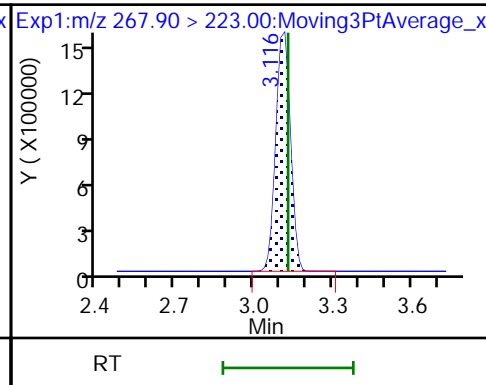
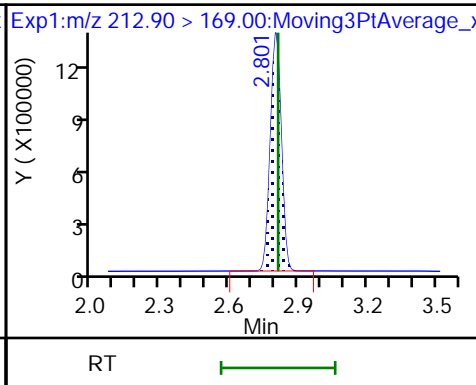
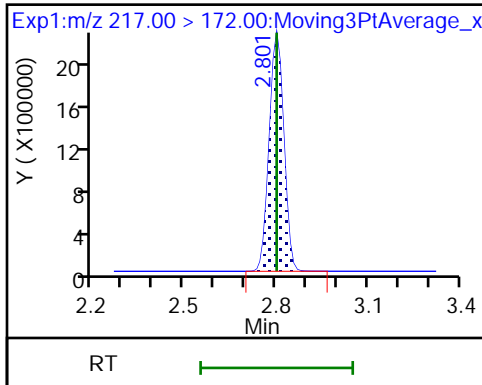
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

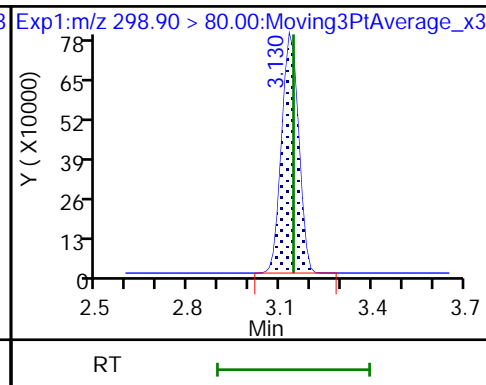
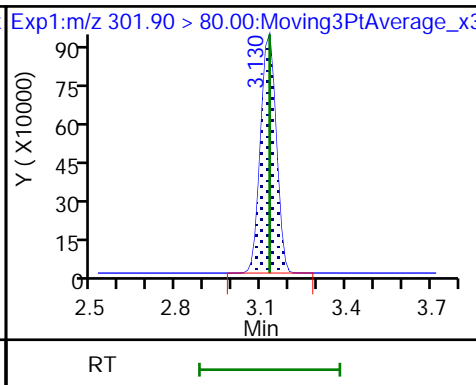
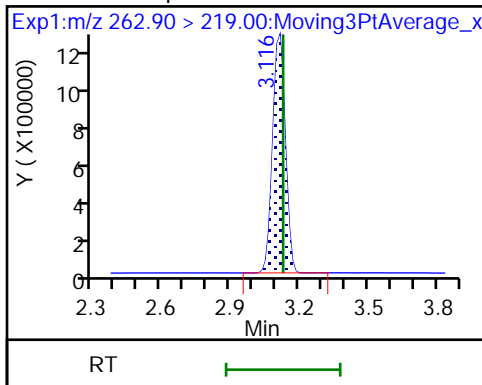
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

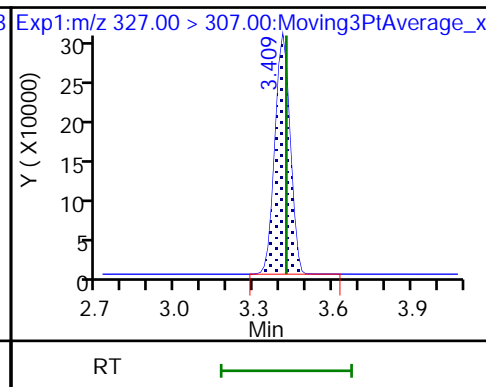
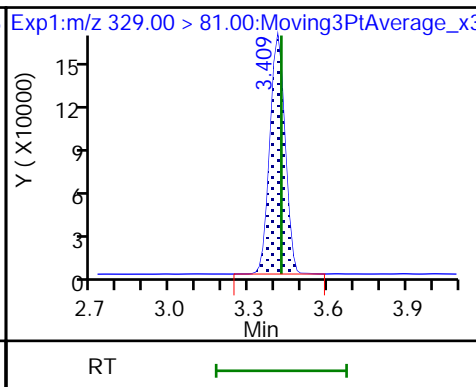
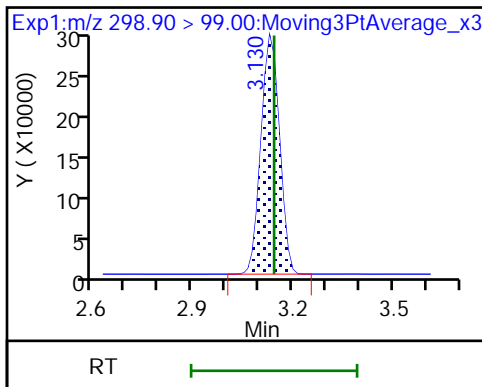
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

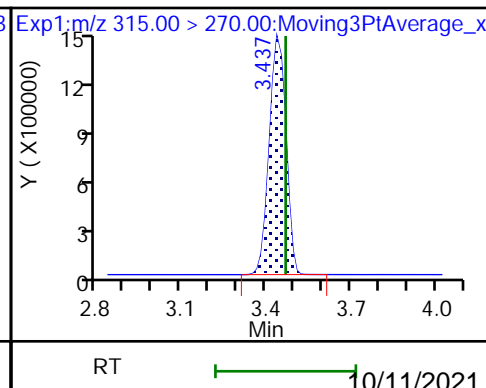
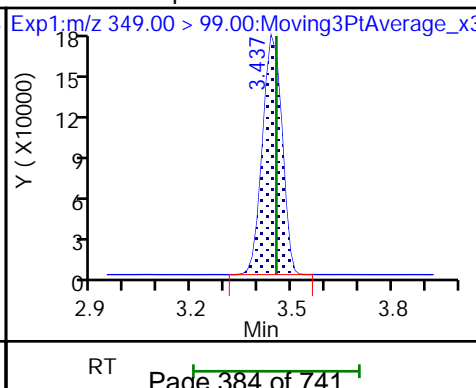
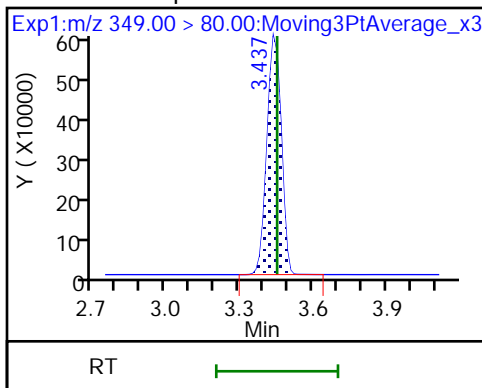
7 4:2 FTS

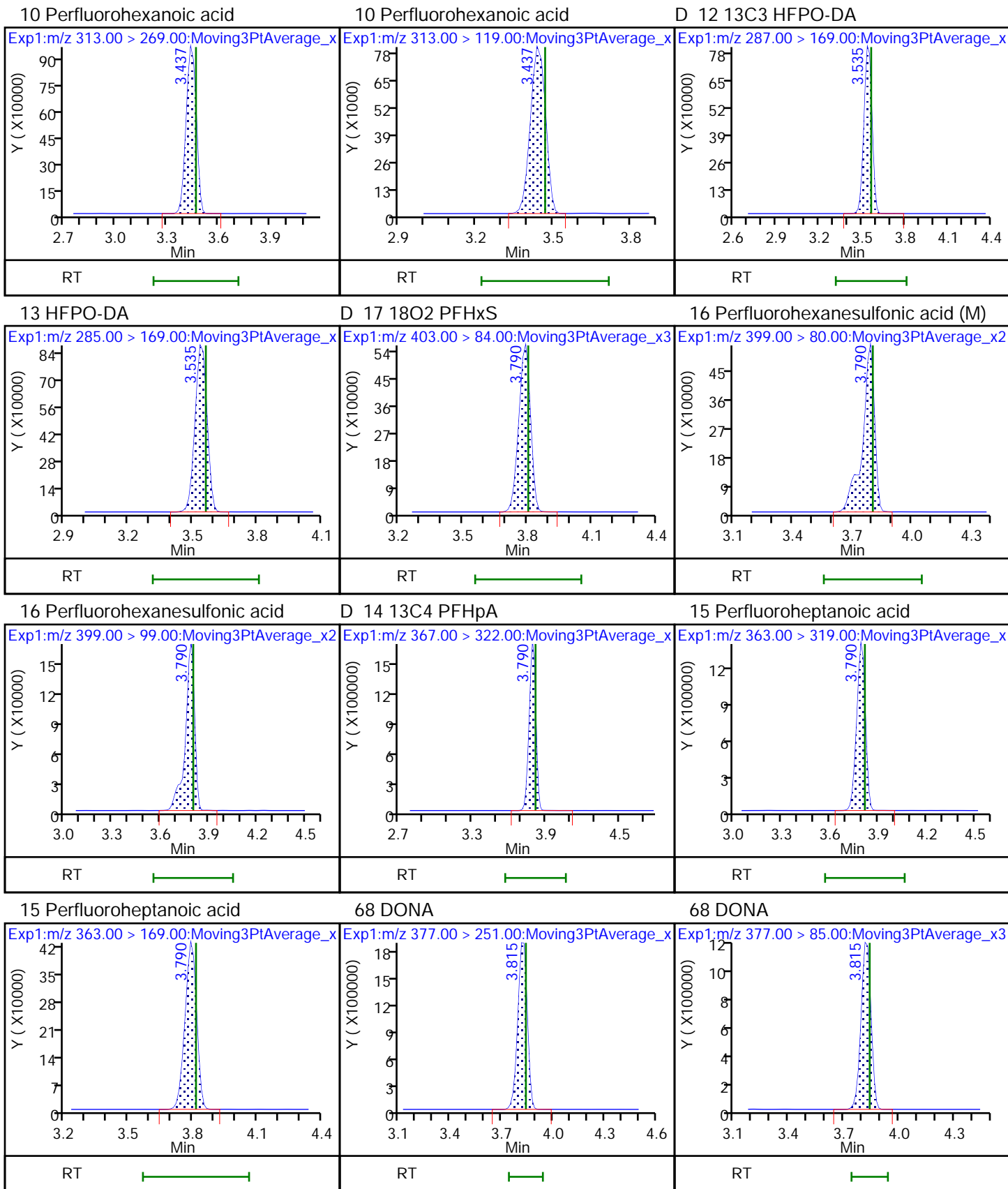


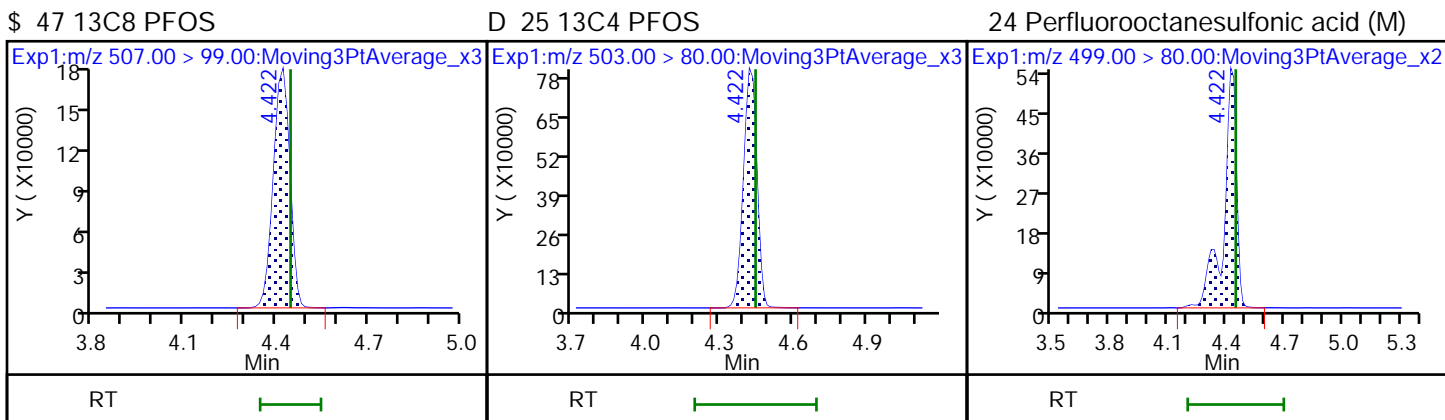
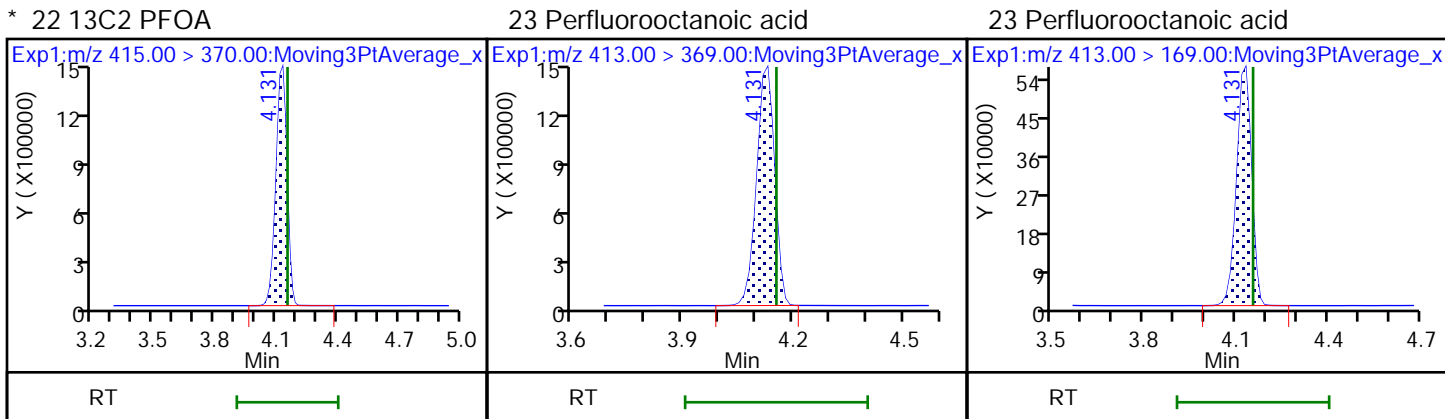
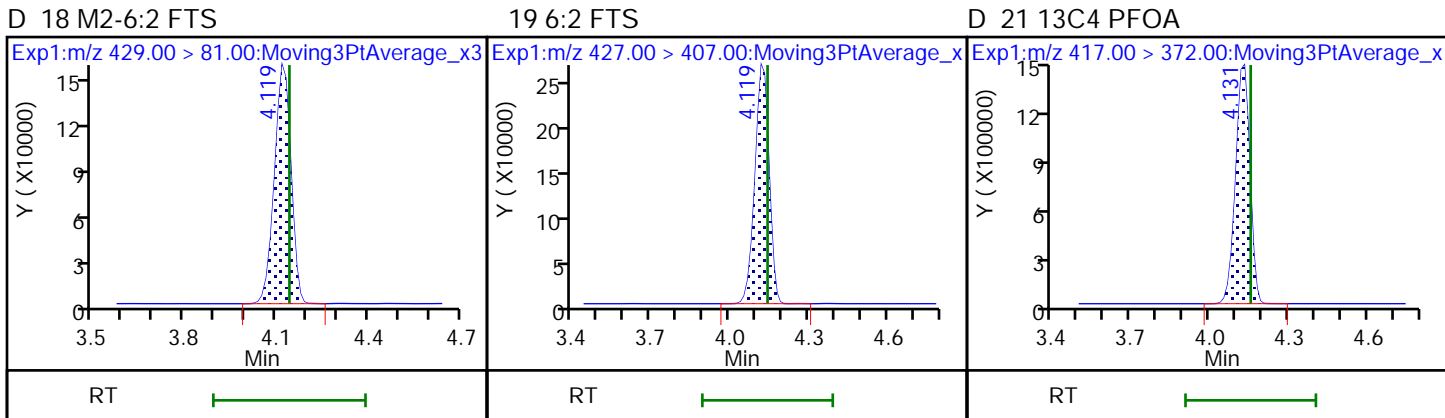
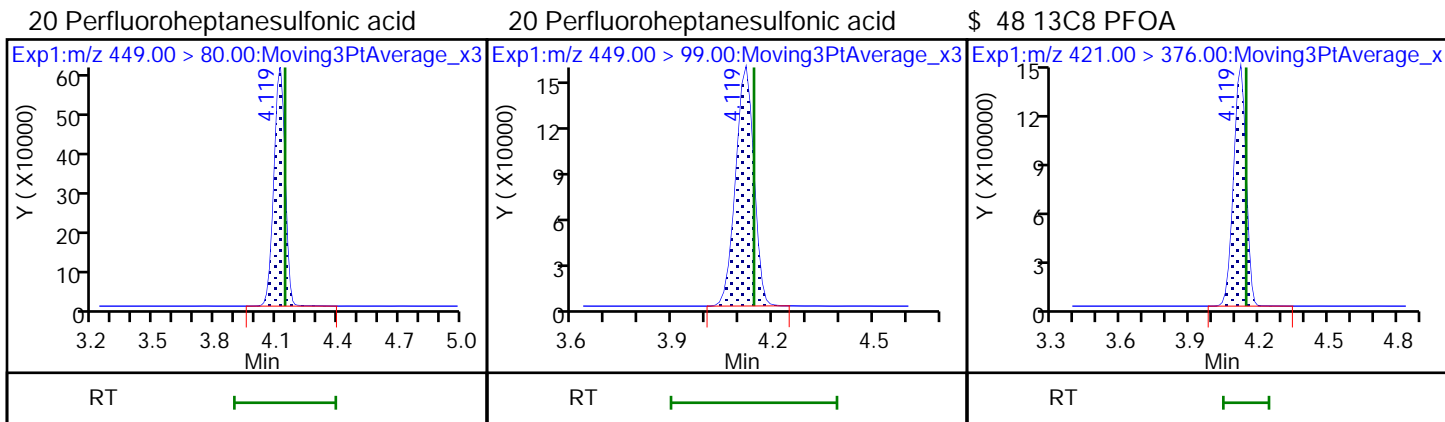
11 Perfluoropentanesulfonic acid

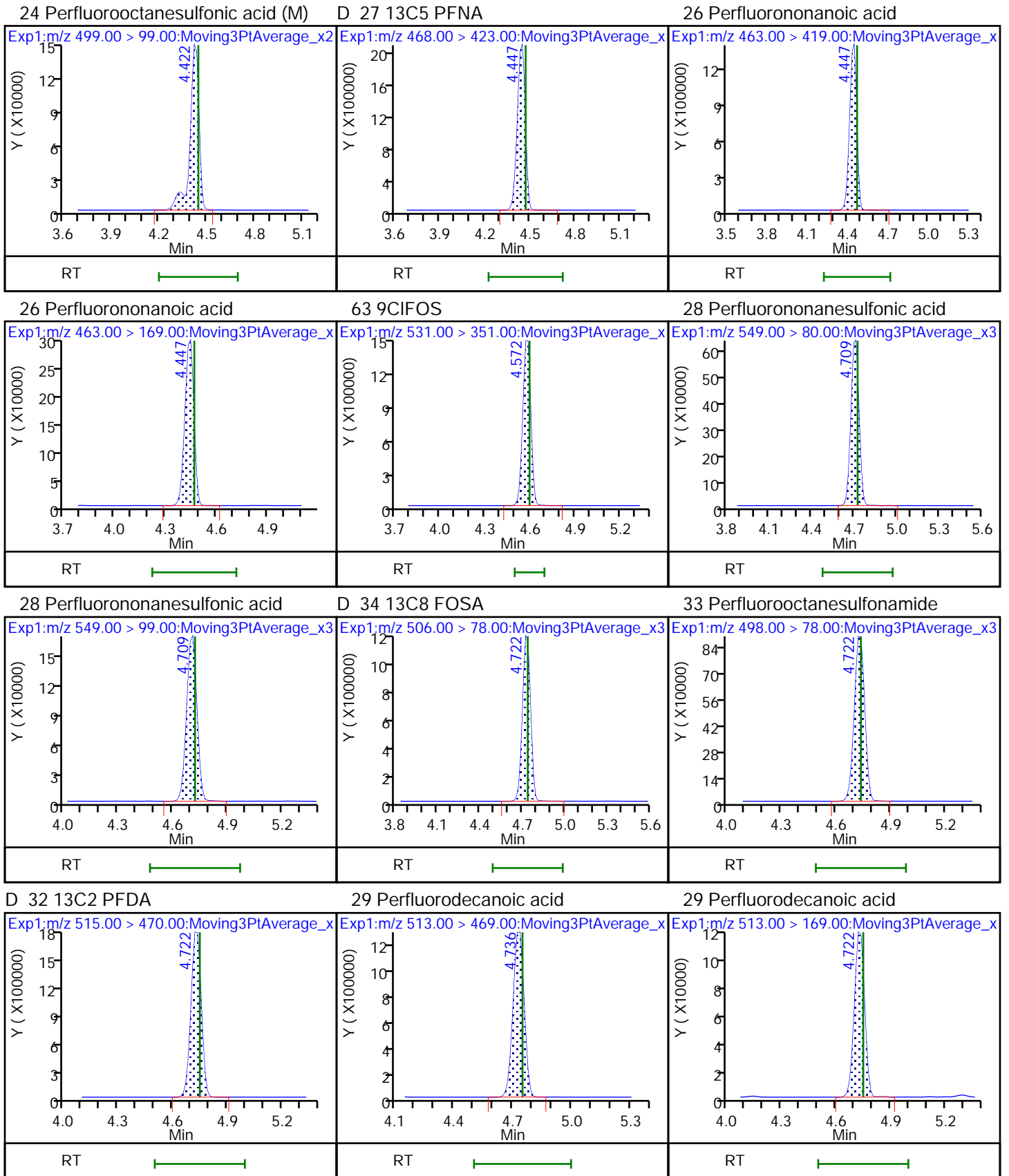
11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA





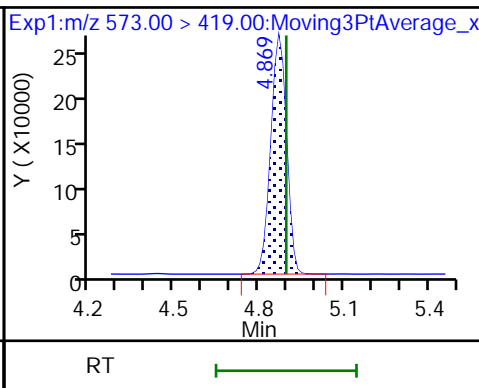
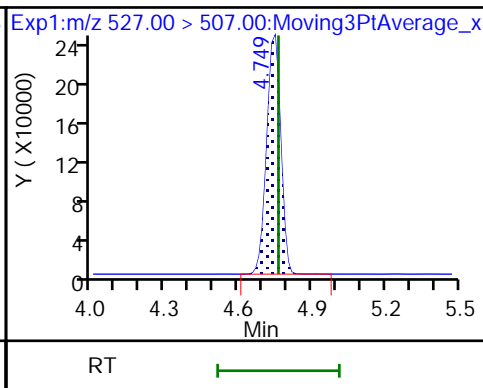
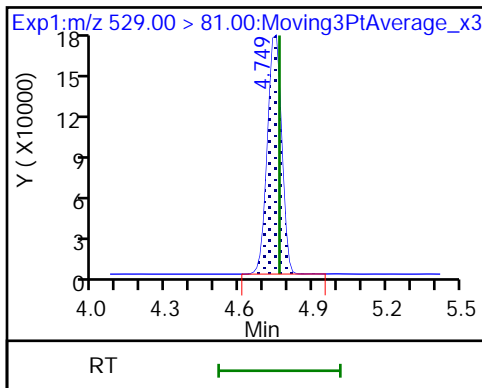




D 30 M2-8:2 FTS

31 8:2 FTS

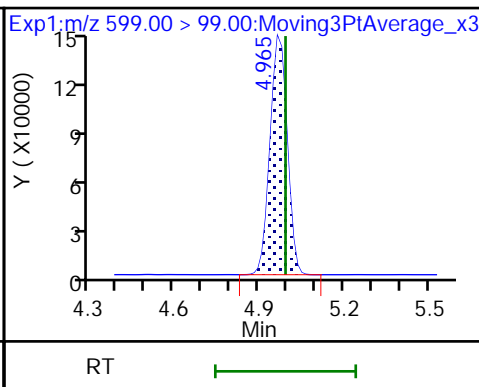
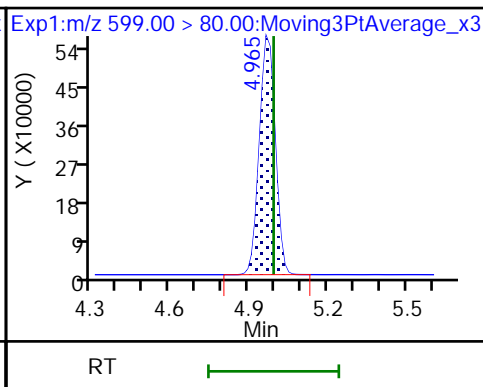
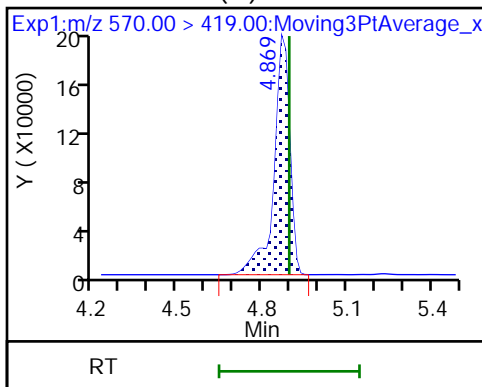
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

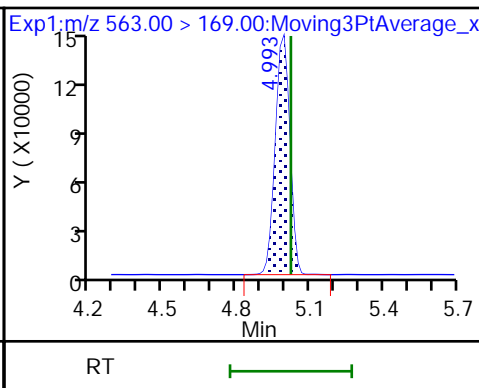
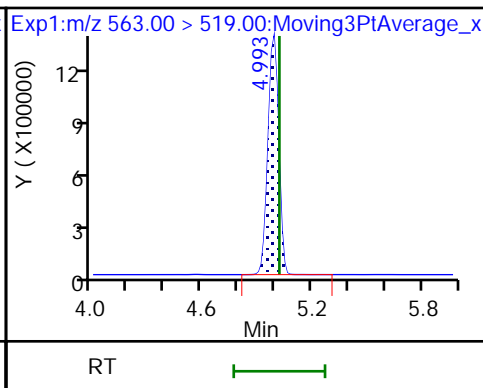
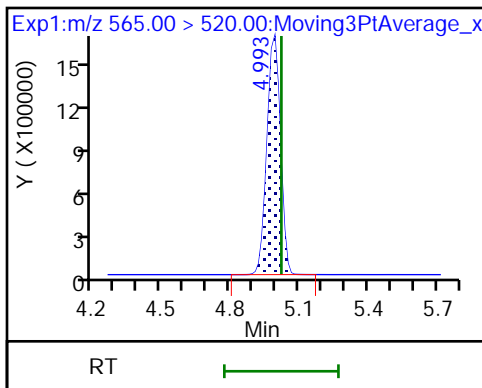
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

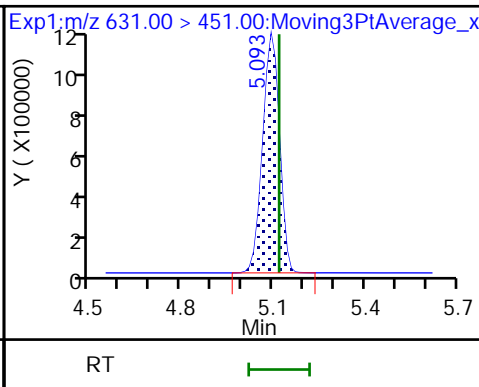
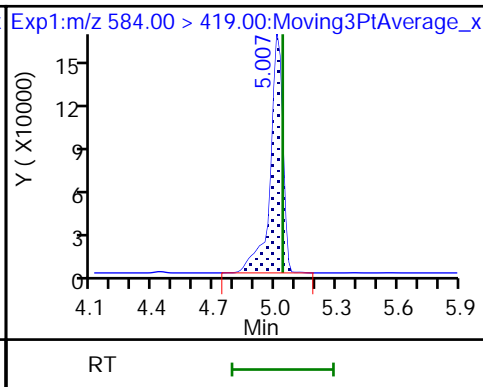
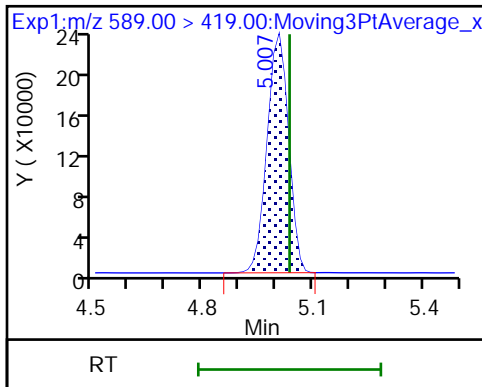
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA

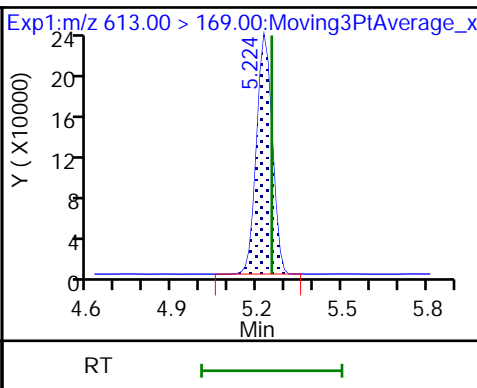
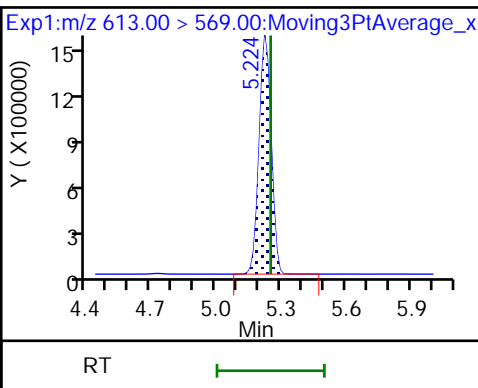
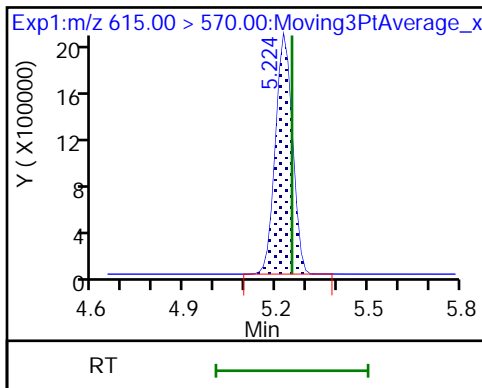
57 11CIFOS



D 43 13C2 PFDaA

42 Perfluorododecanoic acid

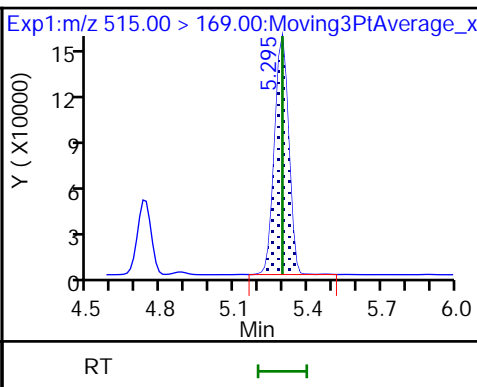
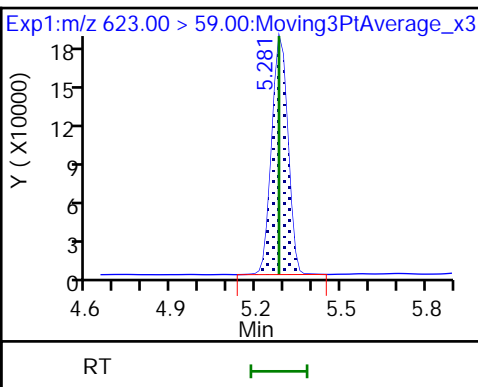
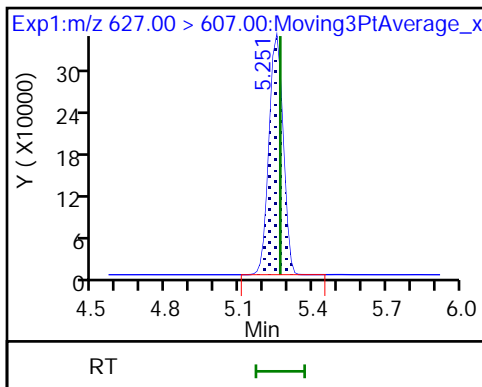
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

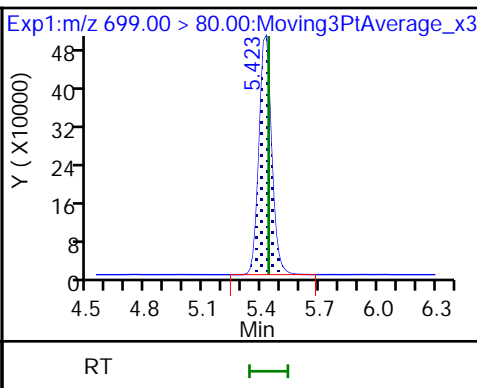
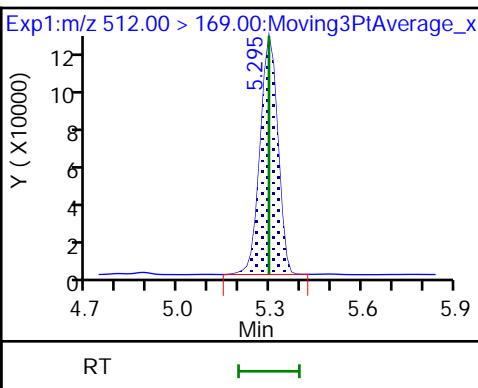
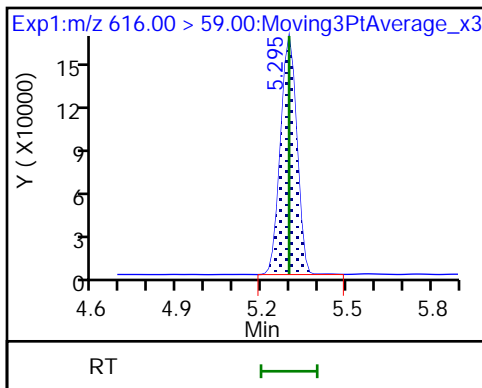
D 58 d-N-MeFOSA-M



49 N-MeFOSE-M

61 NMeFOSA

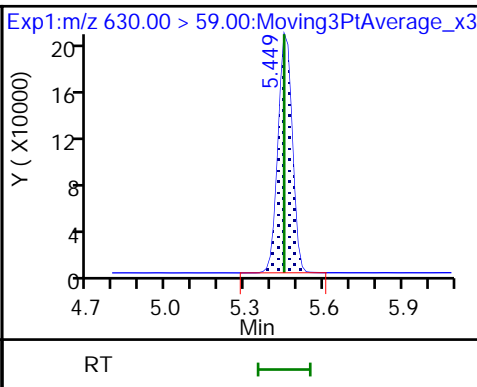
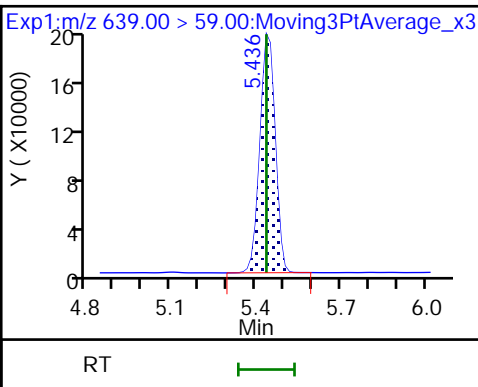
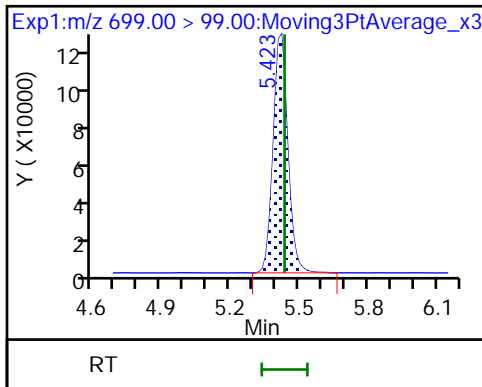
54 PFDoS



54 PFDoS

D 53 d9-N-EtFOSE-M

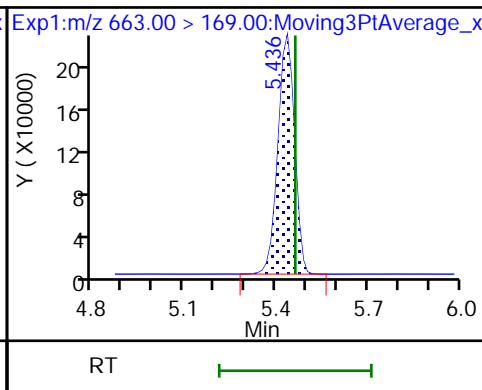
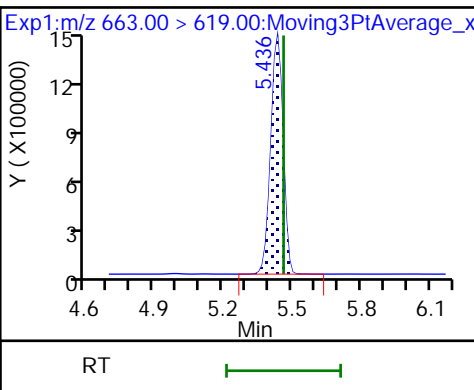
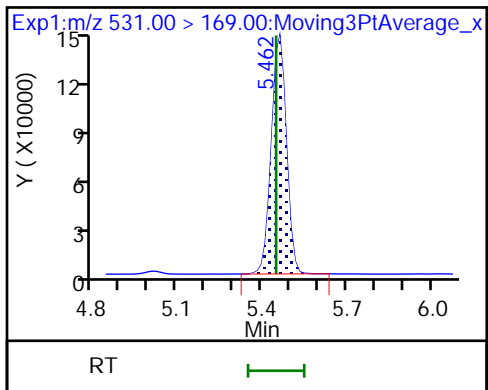
62 N-EtFOSE-M



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid

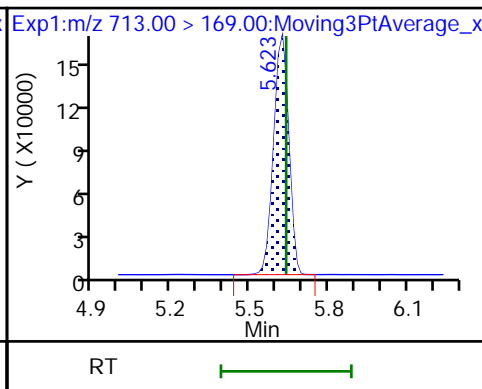
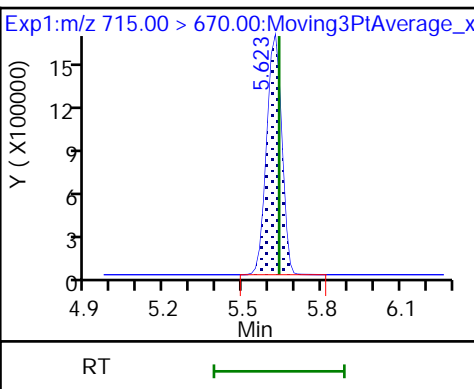
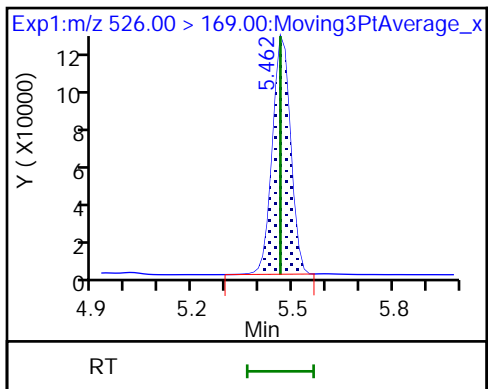
44 Perfluorotridecanoic acid



56 N-EtFOSA-M

D 46 13C2 PFTeDA

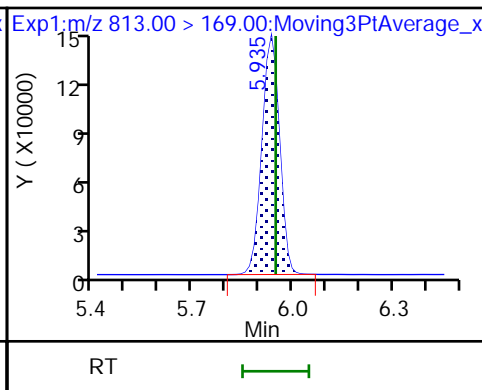
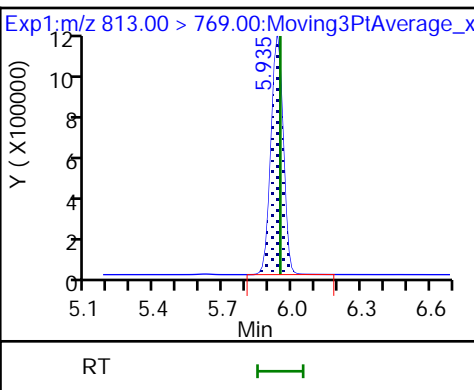
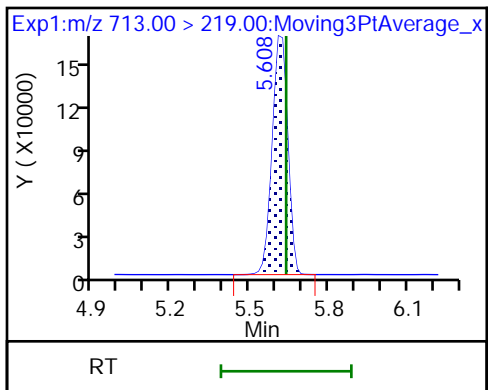
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

55 Perfluorohexadecanoic acid

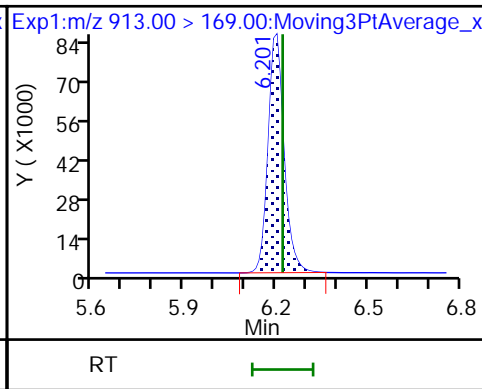
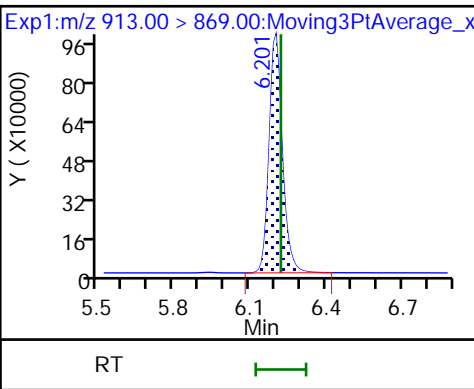
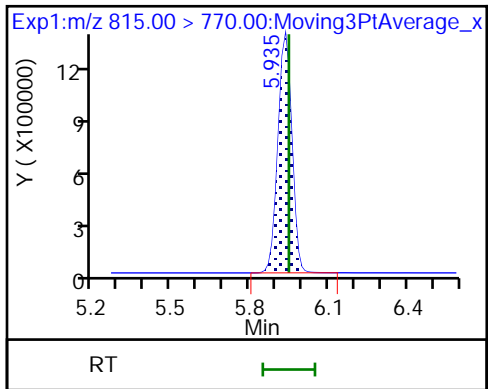
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid



Eurofins TestAmerica, Knoxville

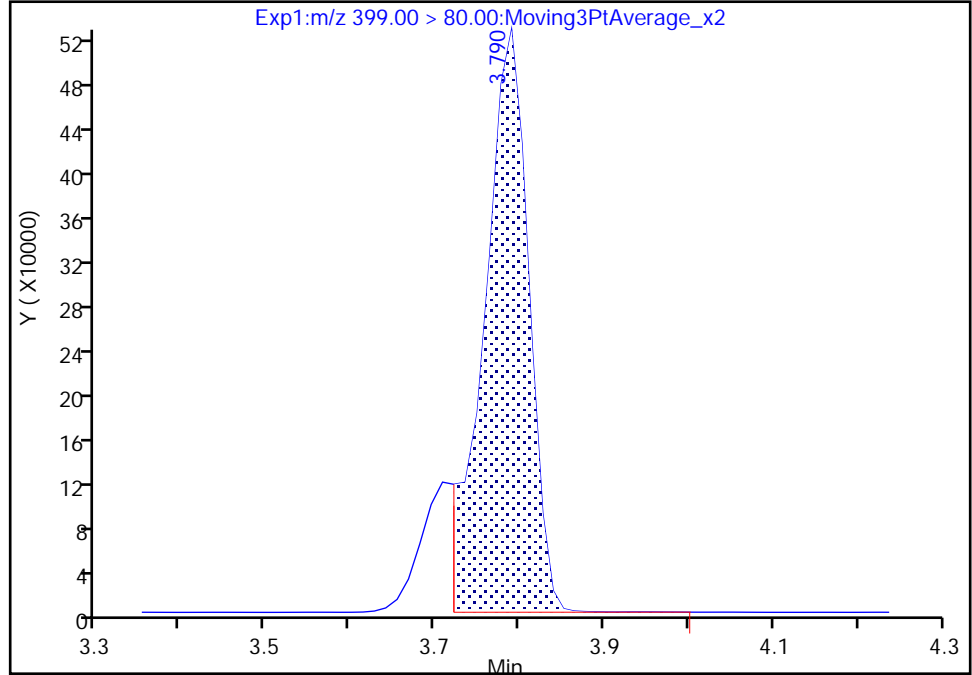
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_083.d
Injection Date: 07-Oct-2021 08:37:56 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 29 Worklist Smp#: 83
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

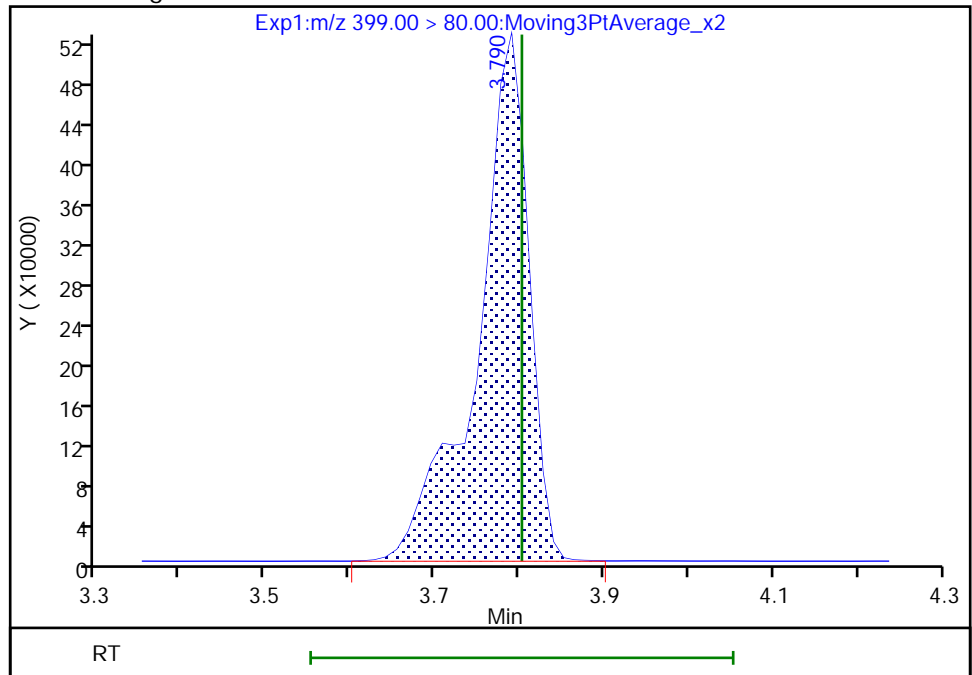
RT: 3.79
Area: 1919719
Amount: 0.798314
Amount Units: ng/ml

Processing Integration Results



RT: 3.79
Area: 2230426
Amount: 0.928346
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:57:18
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

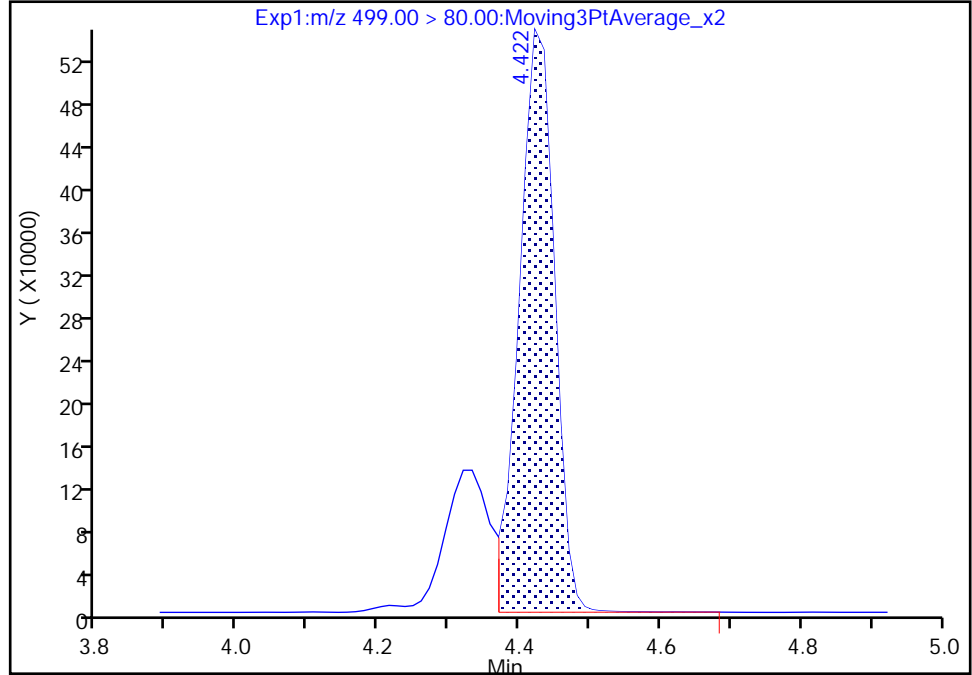
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_083.d
Injection Date: 07-Oct-2021 08:37:56 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 29 Worklist Smp#: 83
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

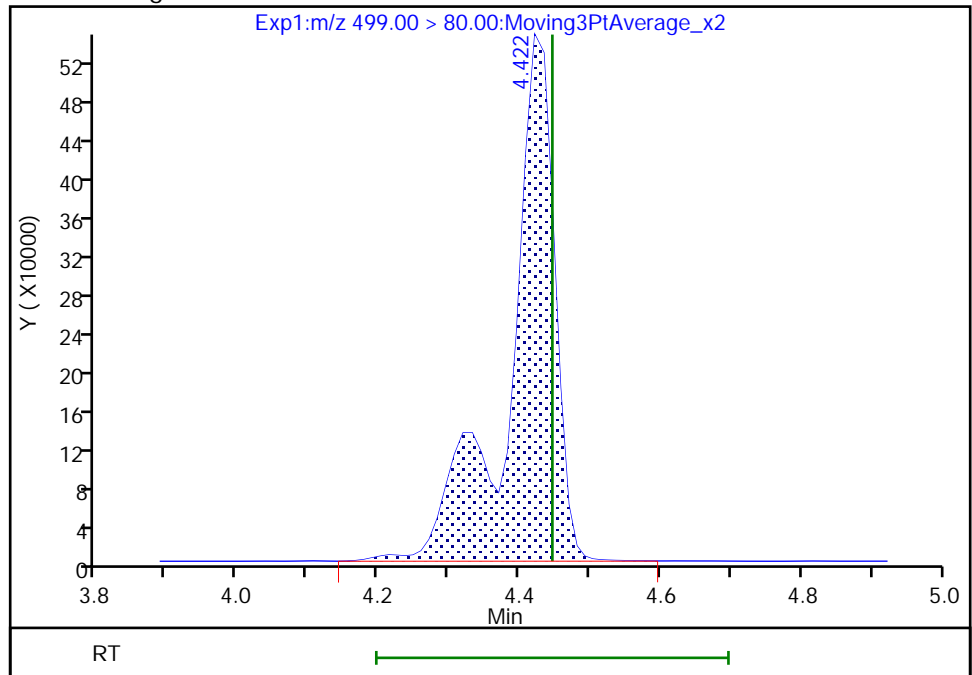
RT: 4.42
Area: 1891987
Amount: 0.677759
Amount Units: ng/ml

Processing Integration Results



RT: 4.42
Area: 2491346
Amount: 0.892465
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:57:28
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

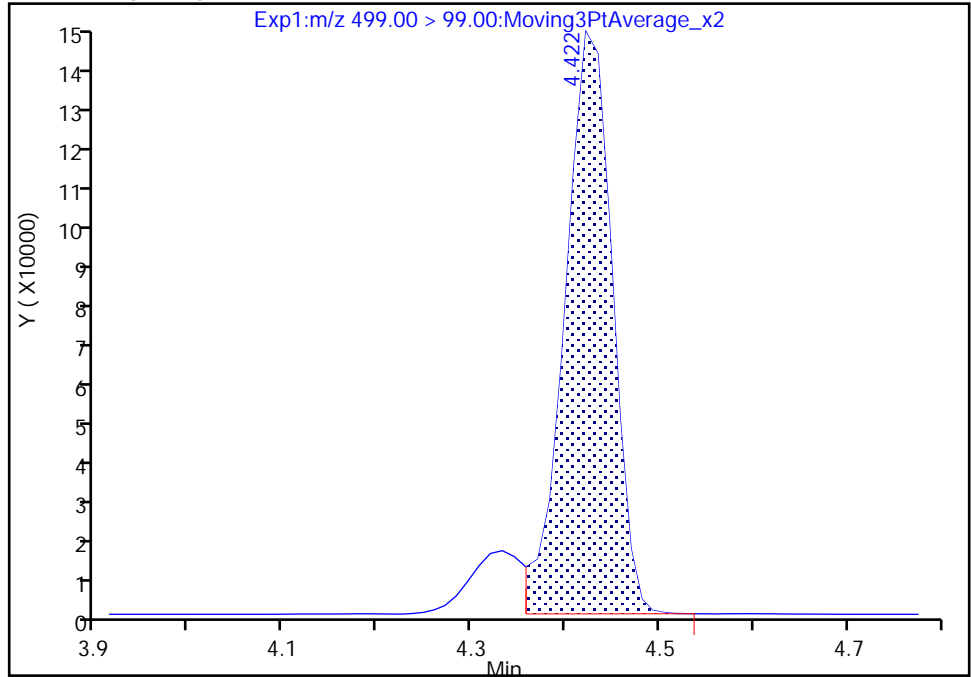
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_083.d
Injection Date: 07-Oct-2021 08:37:56 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 29 Worklist Smp#: 83
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

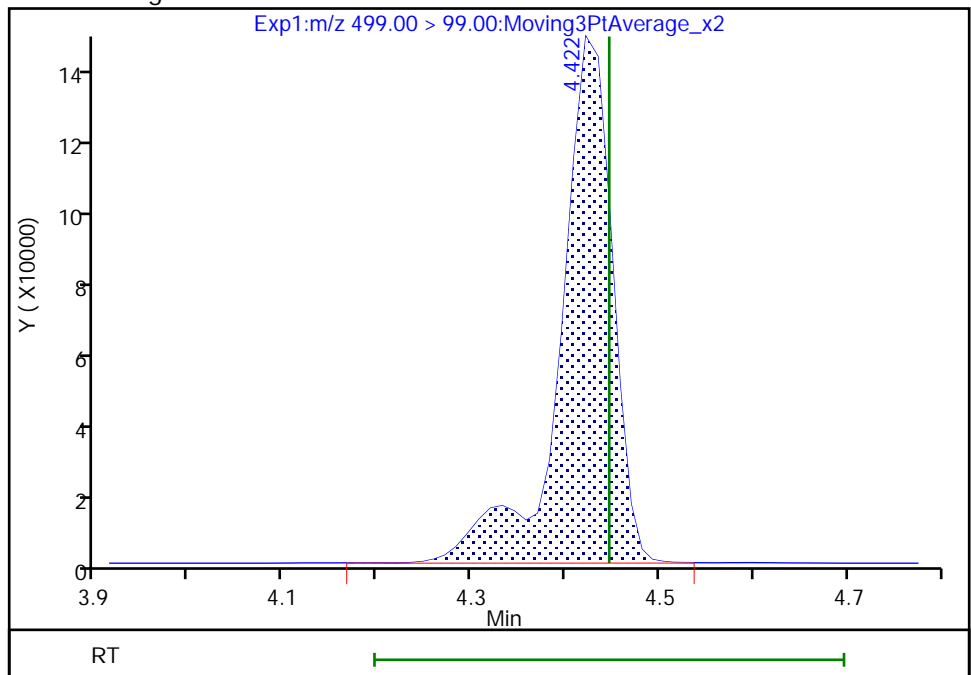
RT: 4.42
Area: 516378
Amount: 0.677759
Amount Units: ng/ml

Processing Integration Results



RT: 4.42
Area: 578391
Amount: 0.892465
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:57:35

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

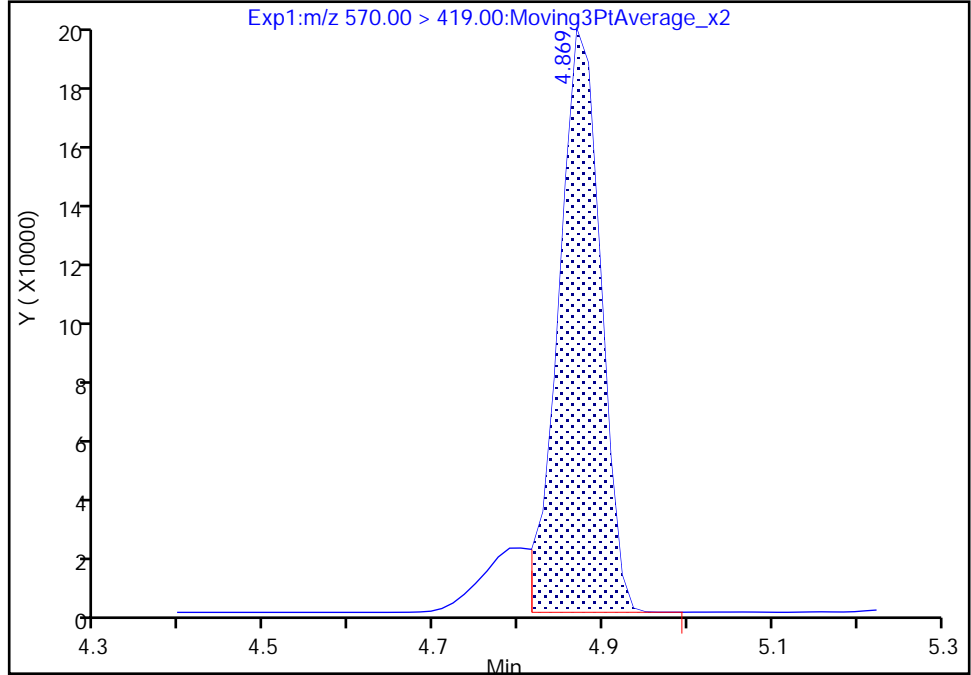
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_083.d
Injection Date: 07-Oct-2021 08:37:56 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 29 Worklist Smp#: 83
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

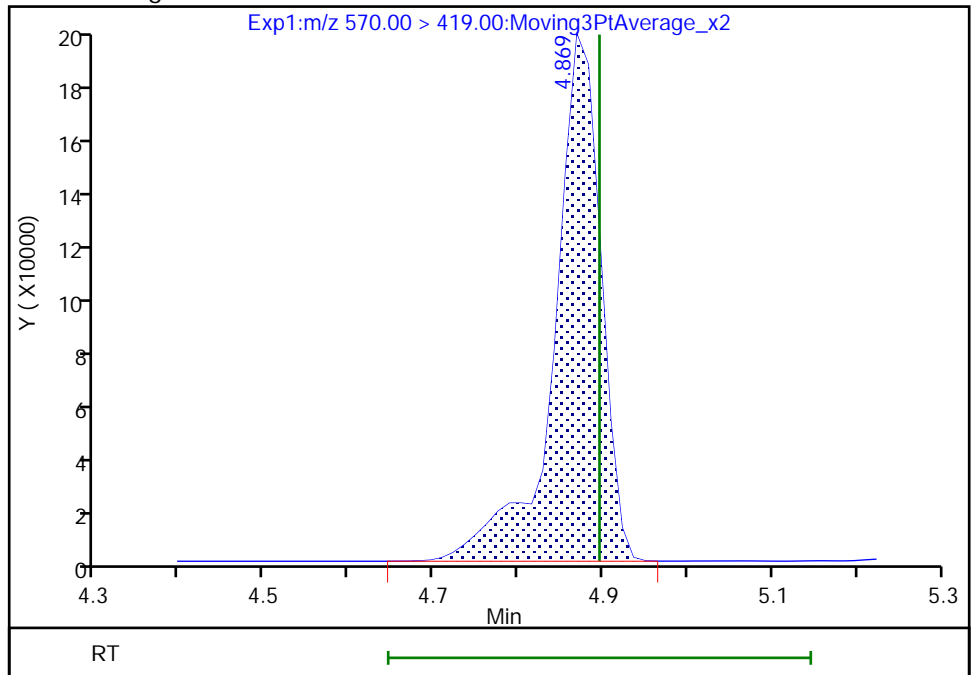
RT: 4.87
Area: 682921
Amount: 0.927260
Amount Units: ng/ml

Processing Integration Results



RT: 4.87
Area: 770545
Amount: 1.047189
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:57:46
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54568/95 Calibration Date: 10/07/2021 10:27
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _095.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7855	0.7488		2.38	2.50	-4.7	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.013	0.9098		2.25	2.50	-10.2	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.126	1.104		2.17	2.21	-1.9	40.0
4:2 FTS	AveID	2.500	2.282		2.13	2.34	-8.7	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8572	0.7933		2.31	2.50	-7.5	40.0
Perfluoropentanesulfonic acid (PFPeS)	L2ID		0.8262		2.26	2.35	-3.5	50.0
HFPO-DA	L2ID		1.295		2.35	2.50	-6.2	40.0
Perfluoroheptanoic acid (PFHpA)	L2ID		0.9915		2.35	2.50	-5.9	40.0
Perfluorohexanesulfonic acid (PFHxS)	L2ID		1.272		2.14	2.28	-6.1	40.0
DONA	AveID	3.243	3.094		2.25	2.36	-4.6	40.0
6:2 FTS	L2ID		1.968		2.33	2.37	-1.8	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9947	0.8723		2.09	2.38	-12.3	40.0
Perfluorooctanoic acid (PFOA)	L2ID		1.069		2.42	2.50	-3.1	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.100	1.007		2.12	2.32	-8.5	40.0
Perfluorononanoic acid (PFNA)	L2ID		0.7982		2.40	2.50	-4.1	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	2.308	2.151		2.17	2.33	-6.8	40.0
Perfluorononanesulfonic acid (PFNS)	AveID	1.042	0.9392		2.16	2.40	-9.9	40.0
Perfluorodecanoic acid (PFDA)	L2ID		0.9072		2.40	2.50	-3.9	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9606	0.8416		2.19	2.50	-12.4	40.0
8:2 FTS	AveID	1.784	1.637		2.20	2.40	-8.2	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	L2ID		0.8319		2.27	2.50	-9.2	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.9574	0.8914		2.24	2.41	-6.9	40.0
Perfluoroundecanoic acid (PFUnA)	L2ID		0.9604		2.38	2.50	-4.8	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.9494	0.9279		2.44	2.50	-2.3	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.858	1.701		2.16	2.36	-8.5	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9097		2.23	2.50	-10.8	40.0
10:2 FTS	AveID	2.221	2.413		2.62	2.41	8.7	40.0
2- (N-methylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.126		2.44	2.50	-2.3	40.0
NMeFOSA	AveID	1.047	0.9607		2.29	2.50	-8.2	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9879	0.9578		2.35	2.42	-3.0	40.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54568/95 Calibration Date: 10/07/2021 10:27
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _095.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTrIA)	L2ID		0.8109		2.30	2.50	-7.9	50.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.293		2.57	2.50	2.7	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.168	1.144		2.45	2.50	-2.1	40.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.1217		2.42	2.50	-3.1	40.0
Perfluorohexadecanoic acid	Q2ID		1.030		2.42	2.50	-3.4	40.0
Perfluorooctadecanoic acid	AveID	0.9076	0.8941		2.46	2.50	-1.5	40.0
13C4 PFBA	Ave	1.324	1.276		1.20	1.25	-3.7	50.0
13C5 PFPeA	Ave	1.087	1.149		1.32	1.25	5.7	50.0
13C3 PFBS	Ave	0.7019	0.6690		1.11	1.16	-4.7	50.0
M2-4:2 FTS	Ave	0.1052	0.1137		1.26	1.17	8.1	50.0
13C2 PFHxA	Ave	1.116	1.150		1.29	1.25	3.0	50.0
13C3 HFPO-DA	Ave	0.5714	0.5659		1.24	1.25	-1.0	50.0
13C4 PFHpA	Ave	1.113	1.101		1.24	1.25	-1.1	50.0
18O2 PFHxS	Ave	0.4248	0.4130		1.15	1.18	-2.8	50.0
M2-6:2 FTS	Ave	0.1078	0.1030		1.14	1.19	-4.4	50.0
13C4 PFOA	Ave	1.007	1.002		1.24	1.25	-0.4	50.0
13C4 PFOS	Ave	0.5852	0.5730		1.17	1.20	-2.1	50.0
13C5 PFNA	Ave	1.279	1.294		1.26	1.25	1.1	50.0
13C2 PFDA	Ave	1.296	1.274		1.23	1.25	-1.7	50.0
13C8 FOSA	Ave	0.8591	0.8507		1.24	1.25	-1.0	50.0
M2-8:2 FTS	Ave	0.1316	0.1287		1.17	1.20	-2.2	50.0
d3-NMeFOSAA	Ave	0.1774	0.1865		1.32	1.25	5.2	50.0
13C2 PFUnA	Ave	1.237	1.196		1.21	1.25	-3.3	50.0
d5-NEtFOSAA	Ave	0.1705	0.1659		1.22	1.25	-2.7	50.0
13C2 PFDoA	Ave	1.319	1.409		1.34	1.25	6.8	50.0
d7-N-MeFOSE-M	Ave	0.1075	0.1265		1.47	1.25	17.6	50.0
d-N-MeFOSA-M	Ave	0.1120	0.1145		1.28	1.25	2.3	50.0
d9-N-EtFOSE-M	Ave	0.1146	0.1294		1.41	1.25	12.9	50.0
d-N-EtFOSA-M	Ave	0.0942	0.0950		1.26	1.25	0.8	50.0
13C2 PFTeDA	Ave	1.211	1.238		1.28	1.25	2.2	50.0
13C2 PFHxDA	Ave	0.8782	0.8717		1.24	1.25	-0.7	50.0
13C8 PFOA	Ave	0.9886	0.9502		1.20	1.25	-3.9	50.0
13C8 PFOS	Ave	0.1256	0.1163		1.11	1.20	-7.4	50.0

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_095.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 07-Oct-2021 10:27:25 ALS Bottle#: 41 Worklist Smp#: 95
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-095 ccv
 Misc. Info.: Plate: 11 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 18:08:34 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 18:07:45

Ratio Calibration: None

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	2.801	2.801	0.0	0.678	6798933	1.20	96.3	11883	
2 Perfluorobutanoic acid	212.90 > 169.00	2.801	2.812	-0.011	1.000	10182160	2.38	95.3	2665	
D 3 13C5 PFPeA	267.90 > 223.00	3.102	3.129	-0.027	0.751	6121718	1.32	106	16800	
4 Perfluoropentanoic acid	262.90 > 219.00	3.102	3.129	-0.027	1.000	11139551	2.25	89.8	3845	
D 6 13C3 PFBS	301.90 > 80.00	3.116	3.129	-0.013	0.754	3315532	1.11	95.3	26948	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.130	3.143	-0.013	1.004	6960780	2.17	Target=3.06	98.1	23939
	298.90 > 99.00	3.130	3.143	-0.013	1.004	2608757		2.67(1.53-4.59)		10389
D 8 M2-4:2 FTS	329.00 > 81.00	3.409	3.423	-0.014	0.825	566141	1.26	108	1127	
7 4:2 FTS	327.00 > 307.00	3.409	3.423	-0.014	1.000	2584131	2.13	91.3	25790	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.437	3.453	-0.016	1.103	5525630	2.26	Target=3.47	96.5	18676
	349.00 > 99.00	3.437	3.453	-0.016	1.103	1551555		3.56(1.73-5.20)		10912
D 9 13C2 PFHxA	315.00 > 270.00	3.437	3.469	-0.032	0.832	6125993	1.29	103	13022	
10 Perfluorohexanoic acid	313.00 > 269.00	3.437	3.469	-0.032	1.000	9719128	2.31	Target=9.74	92.5	4372
	313.00 > 119.00	3.437	3.469	-0.032	1.000	767735		12.66(4.87-14.61)		2196
D 12 13C3 HFPO-DA	287.00 > 169.00	3.535	3.561	-0.026	0.856	3015641	1.24	99.0	7364	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.535	3.561	-0.026	1.000	7807976	2.35		93.8	6892	
D 17 18O2 PFHxS										
403.00 > 84.00	3.791	3.803	-0.012	0.918	2081723	1.15		97.2	11819	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.791	3.803	-0.012	1.000	5095151	2.14	Target=2.96	93.9	11727	M
399.00 > 99.00	3.791	3.803	-0.012	1.000	1452369		3.51(1.48-4.44)		7343	
D 14 13C4 PFHpA										
367.00 > 322.00	3.791	3.815	-0.024	0.918	5866346	1.24		98.9	17205	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.791	3.815	-0.024	1.000	11633313	2.35	Target=3.35	94.1	6440	
363.00 > 169.00	3.791	3.815	-0.024	1.000	3573172		3.26(1.67-5.02)		16530	
68 DONA										
377.00 > 251.00	3.815	3.840	-0.025	0.863	17799852	2.25	Target=1.49	95.4	33162	
377.00 > 85.00	3.815	3.840	-0.025	0.863	9661113		1.84(0.74-2.23)		6851	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.119	4.143	-0.024	0.932	5071272	2.09	Target=3.73	87.7	14057	
449.00 > 99.00	4.119	4.143	-0.024	0.932	1363486		3.72(1.87-5.61)		4912	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.119	4.143	-0.024	0.997	5063613	1.20		96.1	18534	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.119	4.143	-0.024	0.997	521617	1.14		95.6	2095	
19 6:2 FTS										
427.00 > 407.00	4.119	4.143	-0.024	1.000	2048637	2.33		98.2	9422	
D 21 13C4 PFOA										
417.00 > 372.00	4.131	4.155	-0.024	1.000	5340610	1.24		99.6	16907	
* 22 13C2 PFOA										
415.00 > 370.00	4.131	4.155	-0.024		5328787	1.25			13211	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.119	4.155	-0.036	0.997	11416530	2.42	Target=2.40	96.9	6222	
413.00 > 169.00	4.131	4.155	-0.024	1.000	4352903		2.62(1.20-3.61)		5110	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.422	4.447	-0.024	1.070	592595	1.11		92.6	3779	
D 25 13C4 PFOS										
503.00 > 80.00	4.422	4.447	-0.024	1.070	2919039	1.17		97.9	10235	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.422	4.447	-0.024	1.000	5704266	2.12	Target=3.83	91.5	9604	M
499.00 > 99.00	4.422	4.447	-0.024	1.000	1310731		4.35(1.91-5.74)		2816	M
D 27 13C5 PFNA										
468.00 > 423.00	4.435	4.470	-0.035	1.073	6895606	1.26		101	30250	
26 Perfluorononanoic acid										
463.00 > 419.00	4.435	4.470	-0.035	1.000	11008630	2.40	Target=3.68	95.9	10282	
463.00 > 169.00	4.435	4.470	-0.035	1.000	2390172		4.61(1.84-5.52)		4234	
63 9CIFOS										
531.00 > 351.00	4.572	4.596	-0.024	1.107	12245203	2.17		93.2	17471	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.696	4.722	-0.026	1.062	5506341	2.16	Target=3.97	90.1	18514	
549.00 > 99.00	4.696	4.722	-0.026	1.062	1479895		3.72(1.99-5.96)		4747	
D 34 13C8 FOSA										
506.00 > 78.00	4.723	4.736	-0.013	1.143	4533181	1.24		99.0	6052	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.723	4.736	-0.013	1.000	7630129	2.19		87.6	7653	
D 32 13C2 PFDA										
515.00 > 470.00	4.723	4.749	-0.026	1.143	6786524	1.23		98.3	33061	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.723	4.749	-0.026	1.000	12313607	2.40	Target=10.11	96.1	7299	
513.00 > 169.00	4.723	4.749	-0.026	1.000	1048767		11.74(5.06-15.17)		733	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.736	4.763	-0.027	1.146	656909	1.17		97.8	3771	
31 8:2 FTS										
527.00 > 507.00	4.736	4.763	-0.027	1.000	2150642	2.20		91.8	7547	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.869	4.896	-0.027	1.179	994045	1.31		105	1196	
36 NMeFOSAA										
570.00 > 419.00	4.869	4.896	-0.027	1.000	1653923	2.27		90.8	2586	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.965	4.993	-0.028	1.123	5247885	2.24	Target=3.80	93.1	16662	
599.00 > 99.00	4.965	4.993	-0.028	1.123	1350048		3.89(1.90-5.70)		8019	
D 39 13C2 PFUnA										
565.00 > 520.00	4.993	5.022	-0.029	1.209	6374543	1.21		96.7	20338	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.993	5.022	-0.029	1.000	12244609	2.38	Target=7.45	95.2	10990	
563.00 > 169.00	4.993	5.022	-0.029	1.000	1390998		8.80(3.78-11.33)		5998	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.008	5.036	-0.028	1.212	883931	1.22		97.3	2930	
40 NEtFOSA										
584.00 > 419.00	5.008	5.036	-0.028	1.000	1640470	2.44		97.7	1500	
57 11CIFOS										
631.00 > 451.00	5.093	5.119	-0.026	1.152	9784816	2.16		91.5	21489	
D 43 13C2 PFDaA										
615.00 > 570.00	5.224	5.251	-0.027	1.265	7508223	1.33		107	21015	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.224	5.251	-0.027	1.000	13660116	2.23	Target=5.33	89.2	8869	
613.00 > 169.00	5.224	5.251	-0.027	1.000	1955506		6.99(2.66-7.99)		7609	
50 10:2 FTS										
627.00 > 607.00	5.251	5.266	-0.015	1.109	3190548	2.62		109	19756	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.281	5.281	0.0	1.278	674126	1.47		118	422	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.282	610283	1.28		102	48.7	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.295	0.0	1.003	1518024	2.44		97.7	1702	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.295	5.295	0.0	1.000	1172538	2.29		91.8	712	
54 PFDoS										
699.00 > 80.00	5.410	5.436	-0.026	1.223	5662033	2.35	Target=4.32	97.0	10917	
699.00 > 99.00	5.410	5.436	-0.026	1.223	1314342		4.31(2.19-6.58)		12436	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.436	5.436	0.0	1.316	689630	1.41		113	433	
62 N-EtFOSE-M										
630.00 > 59.00	5.449	5.449	0.0	1.002	1783083	2.57		103	3354	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.449	0.013	1.322	506122	1.26		101	751	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.436	5.462	-0.026	1.041	12177204	2.30	Target=5.66	92.1	8066	
663.00 > 169.00	5.436	5.462	-0.026	1.041	1978480		6.15(2.83-8.48)		8418	
56 N-EtFOSA-M										
526.00 > 169.00	5.462	5.462	0.0	1.000	1157689	2.45		97.9	670	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.623	5.637	-0.014	1.361	6594474	1.28		102	20379	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.623	5.637	-0.014	1.000	1604679	2.42	Target=1.07	96.9	8679	
713.00 > 219.00	5.608	5.637	-0.029	0.997	1585611		1.01(0.53-1.60)		14258	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.935	5.948	-0.013	1.000	9566745	2.42	Target=7.50	96.6	5848	
813.00 > 169.00	5.935	5.948	-0.013	1.000	1161483		8.24(3.75-11.26)		4802	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.935	5.948	-0.013	1.437	4644911	1.24		99.3	7556	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.192	6.221	-0.029	1.043	8306324	2.46	Target=9.98	98.5	3923	
913.00 > 169.00	6.192	6.221	-0.029	1.043	727921		11.41(5.14-15.41)		2910	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L5PFC2_00002

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_095.d

Injection Date: 07-Oct-2021 10:27:25

Instrument ID: LCA

Lims ID: CCV

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 41

Worklist Smp#: 95

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

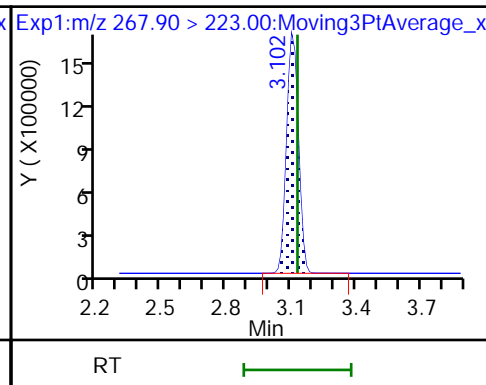
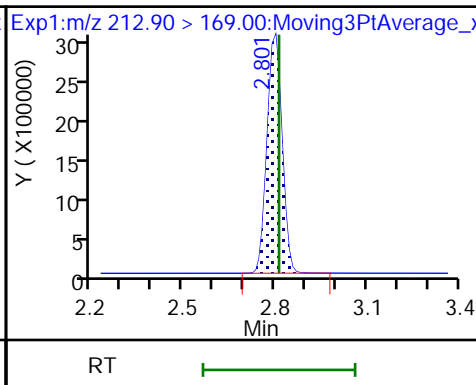
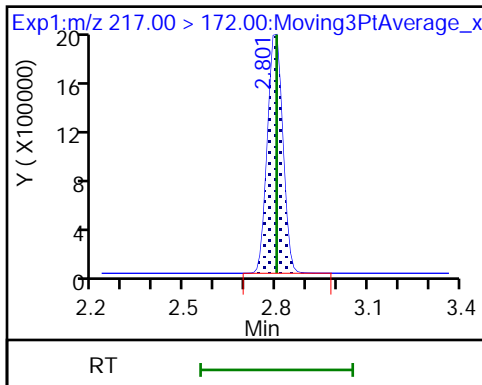
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

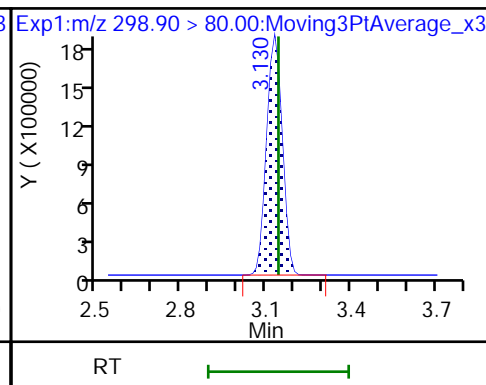
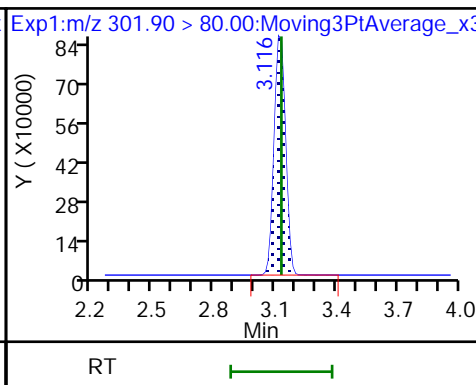
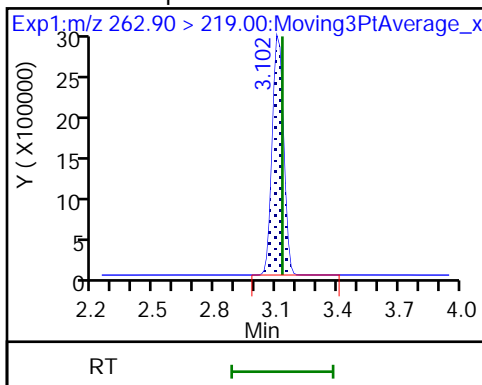
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

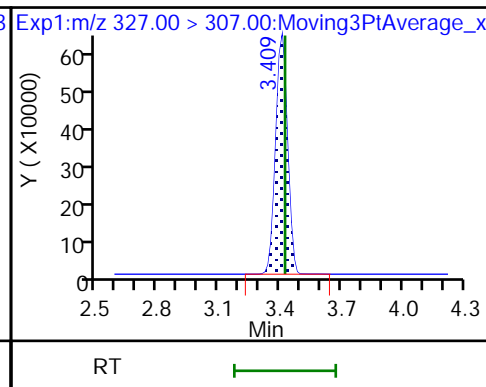
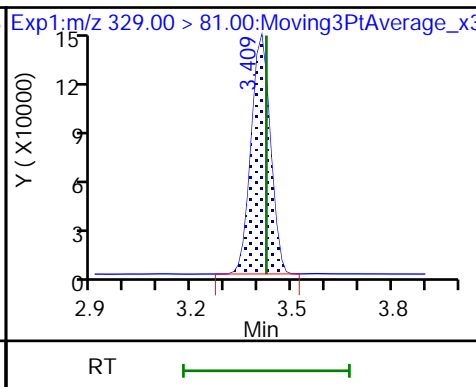
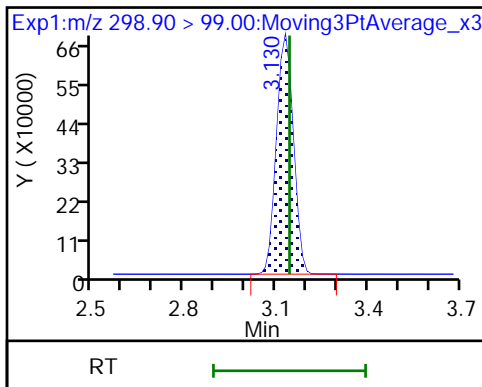
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

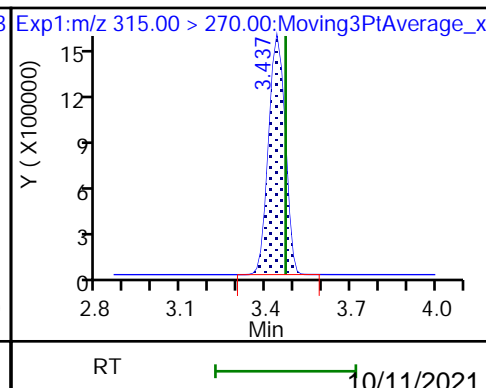
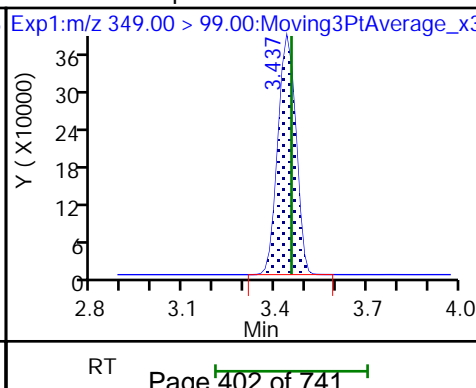
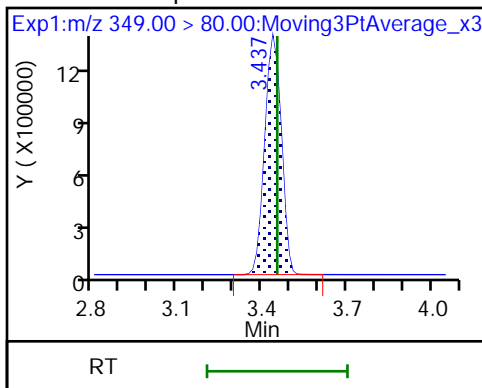
7 4:2 FTS

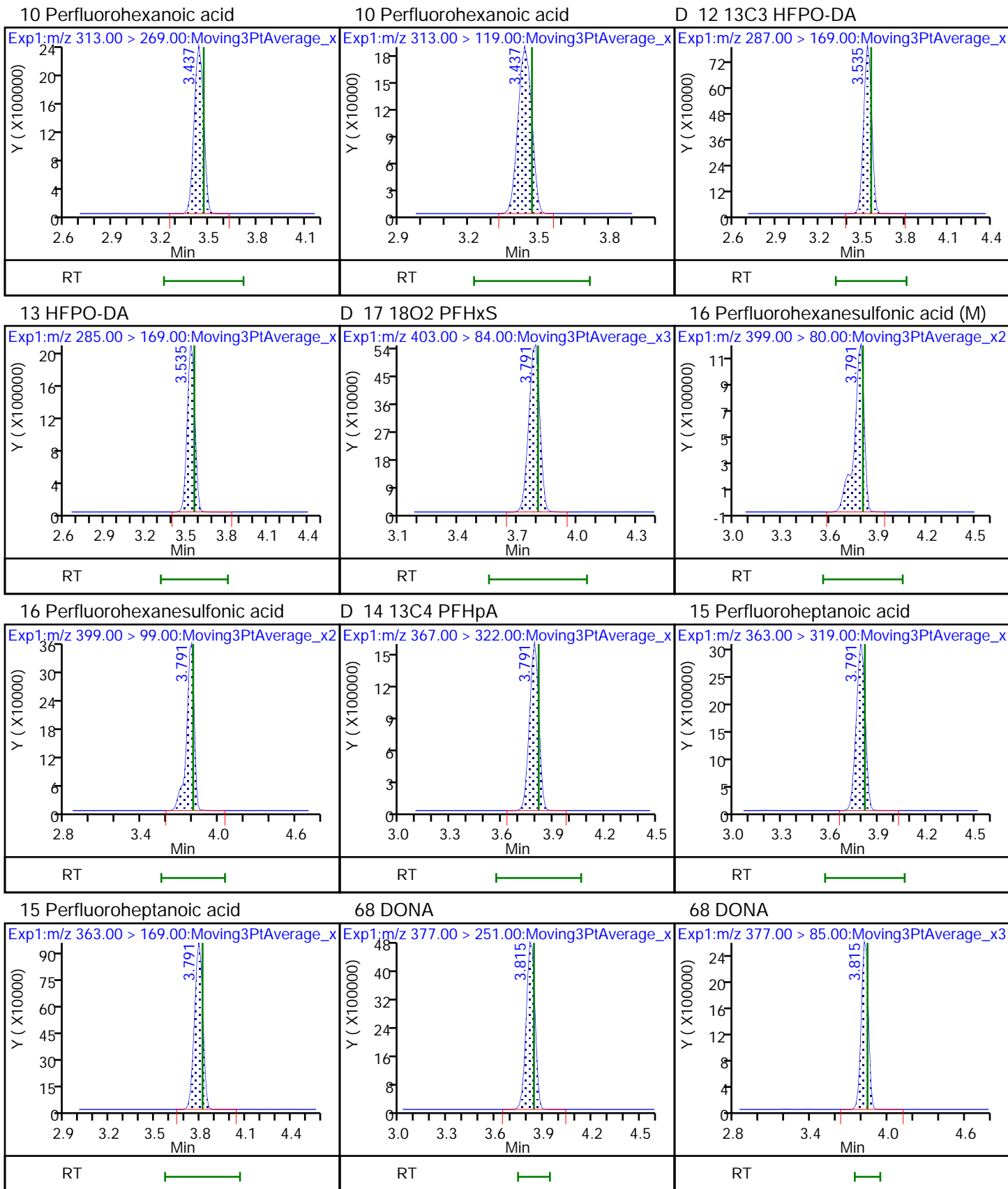


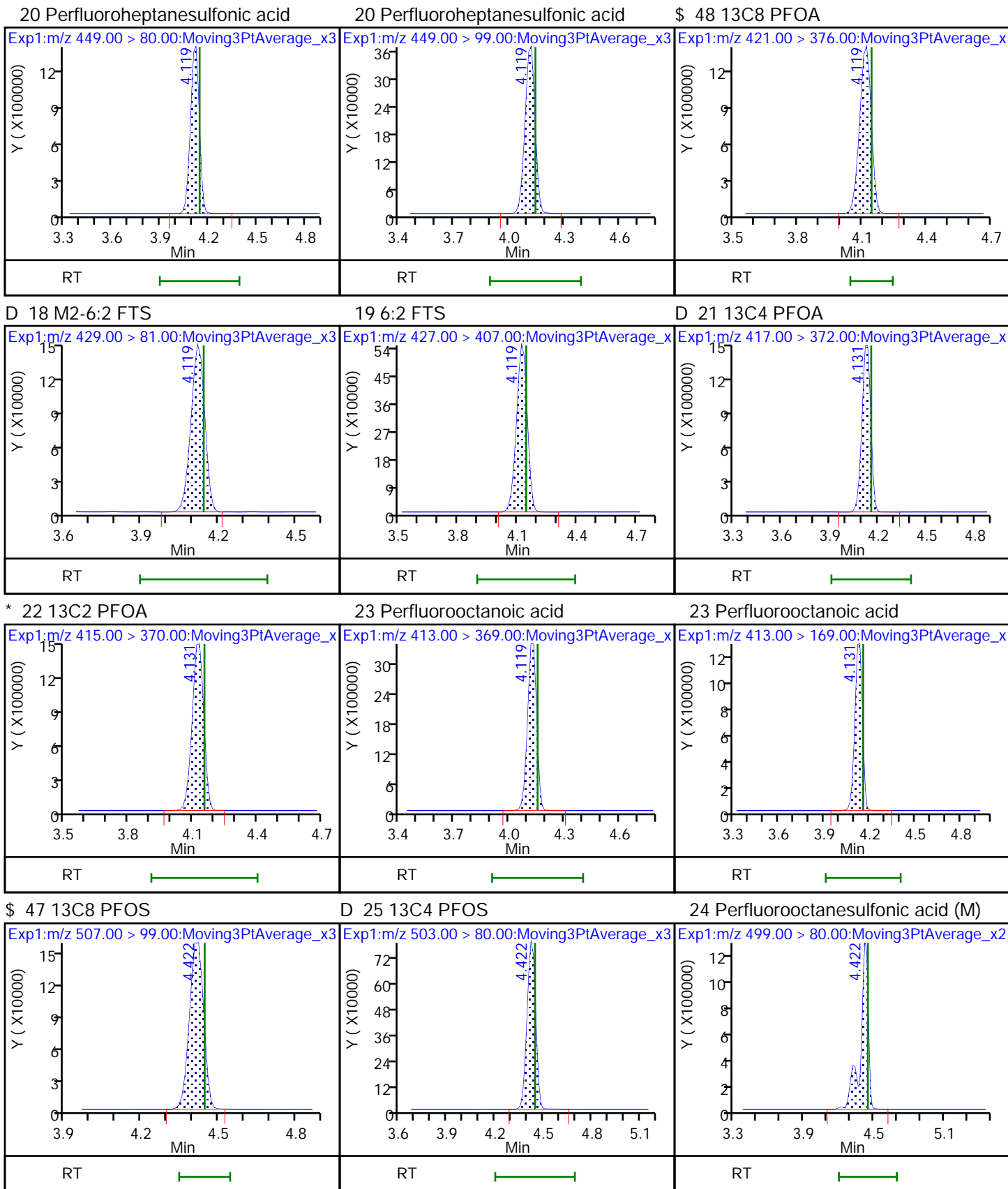
11 Perfluoropentanesulfonic acid

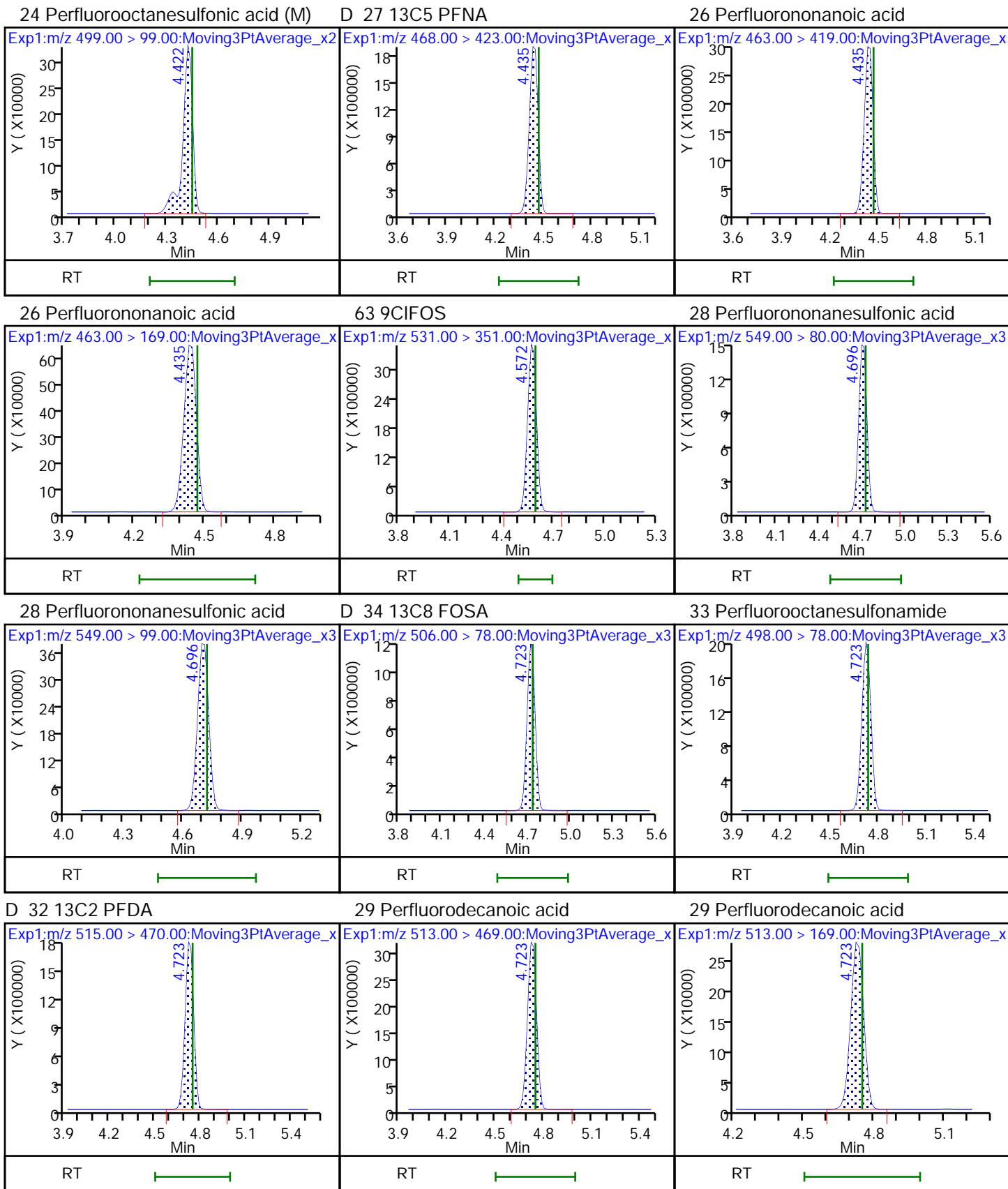
11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA





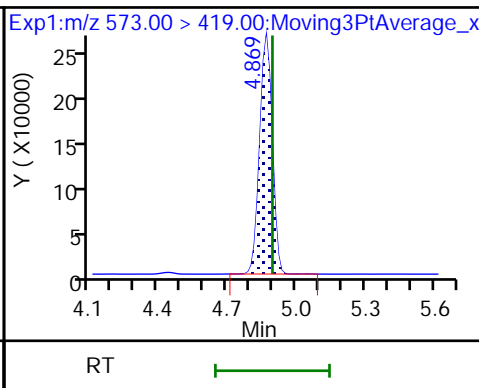
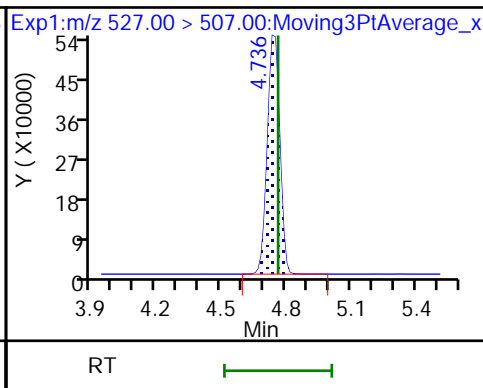
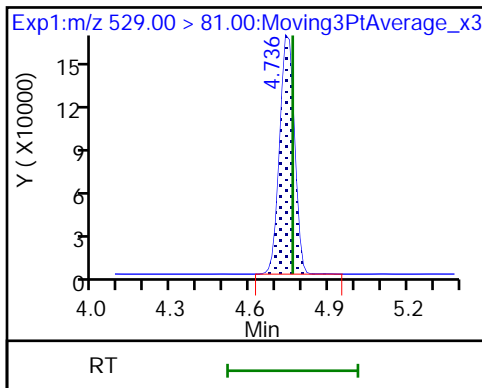




D 30 M2-8:2 FTS

31 8:2 FTS

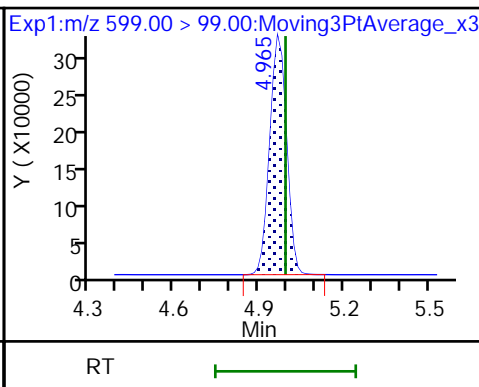
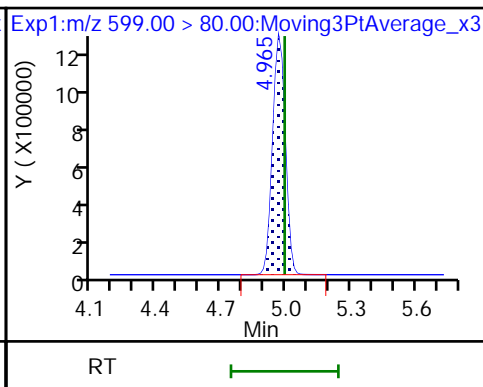
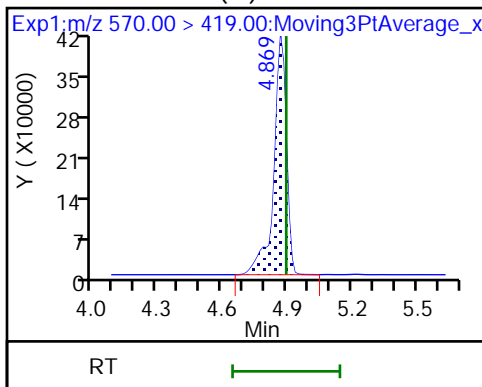
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

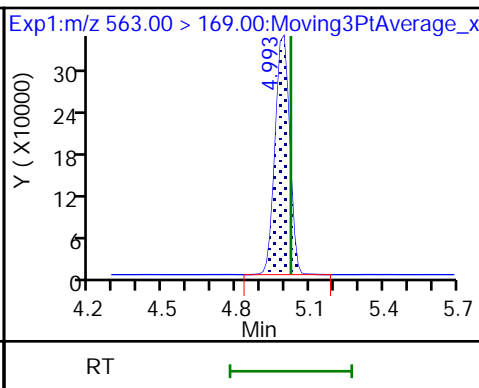
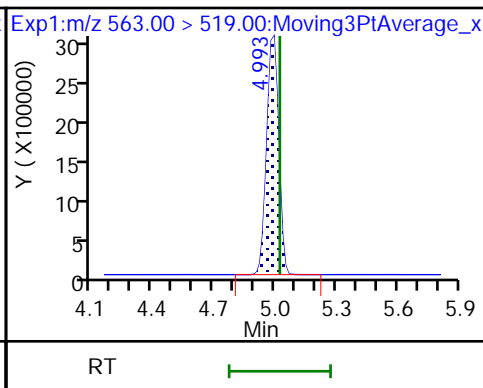
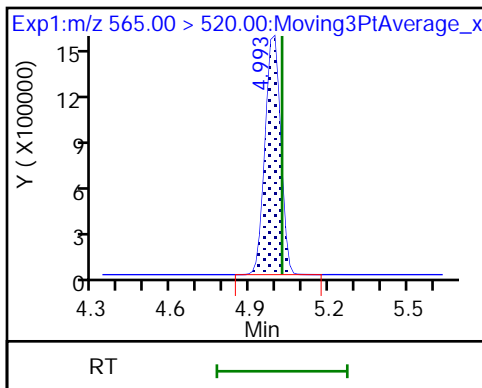
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

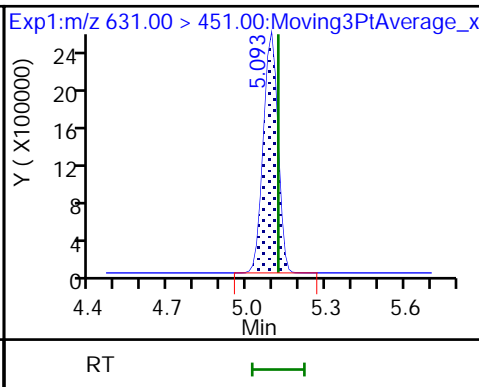
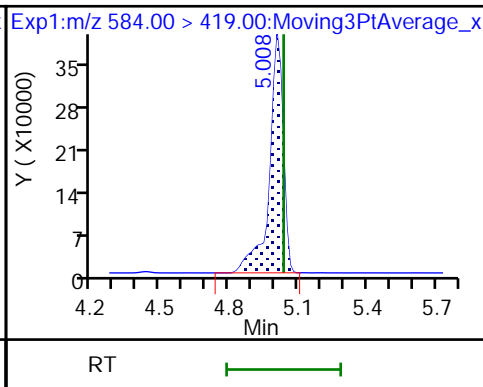
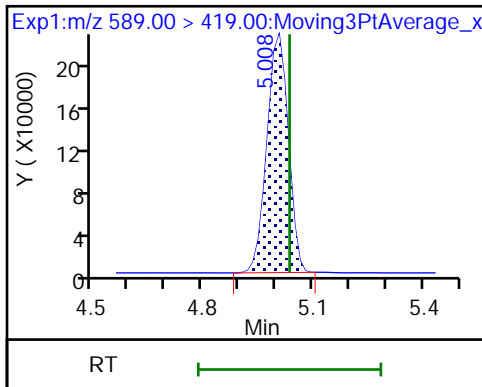
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA

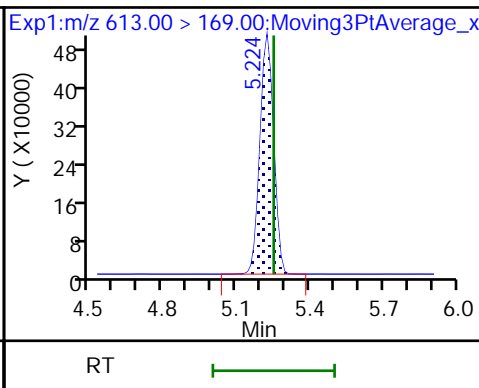
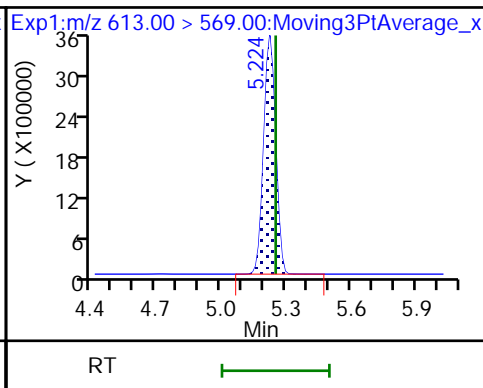
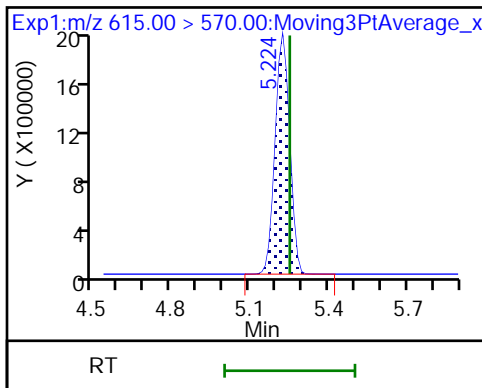
57 11C1FOS



D 43 13C2 PFDoA

42 Perfluorododecanoic acid

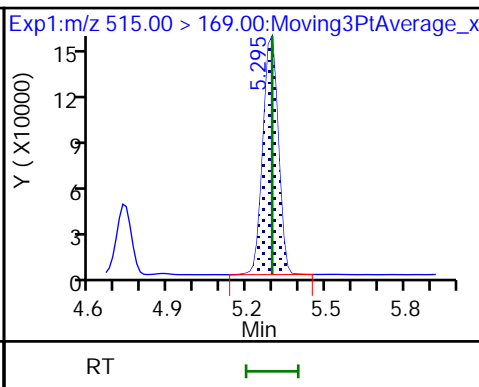
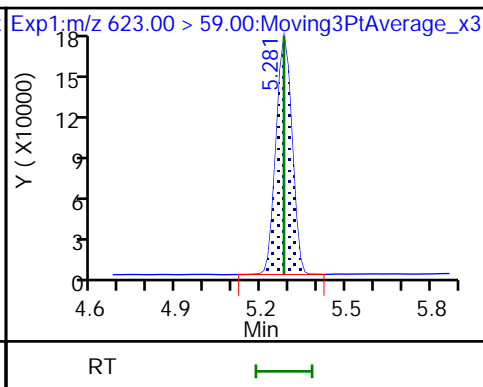
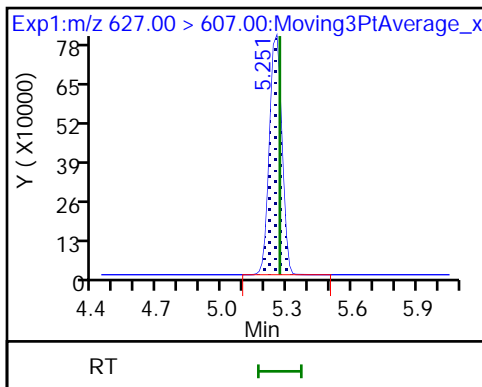
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

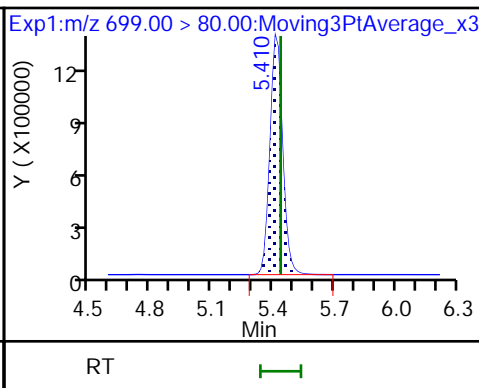
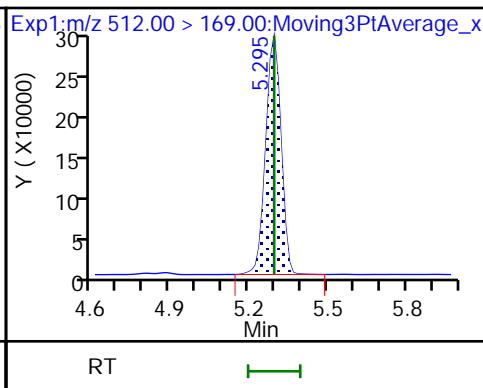
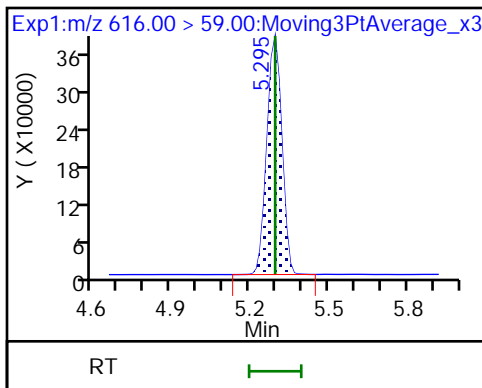
D 58 d-N-MeFOSA-M



49 N-MeFOSE-M

61 NMeFOSA

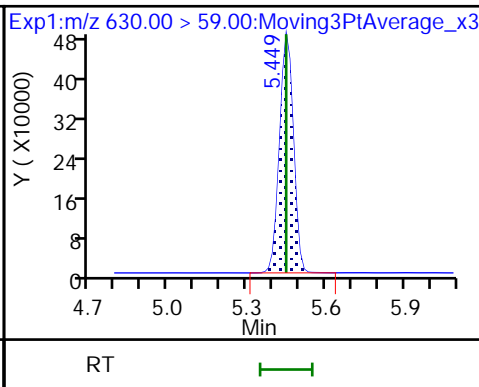
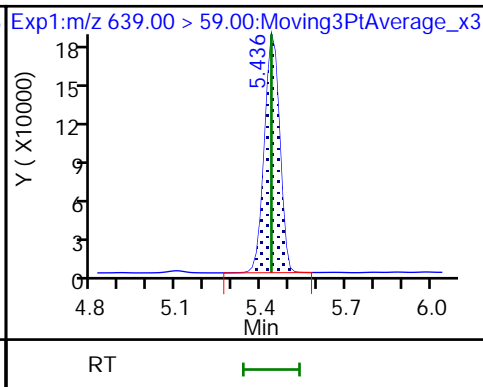
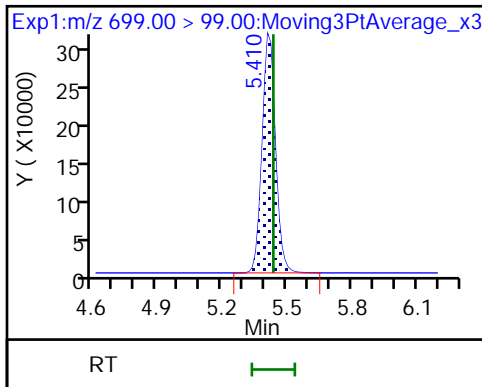
54 PFDoS



54 PFDoS

D 53 d9-N-EtFOSE-M

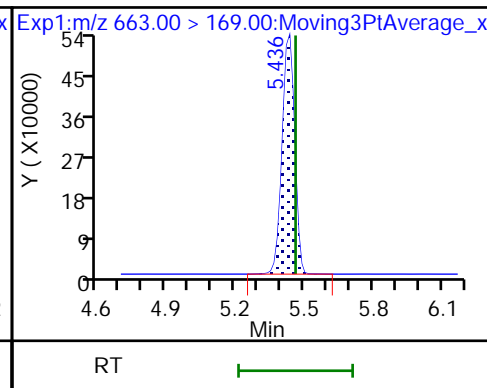
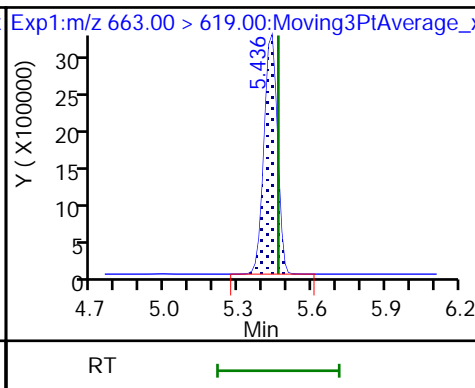
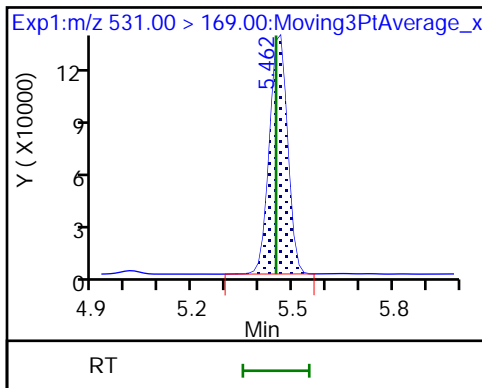
62 N-EtFOSE-M



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid

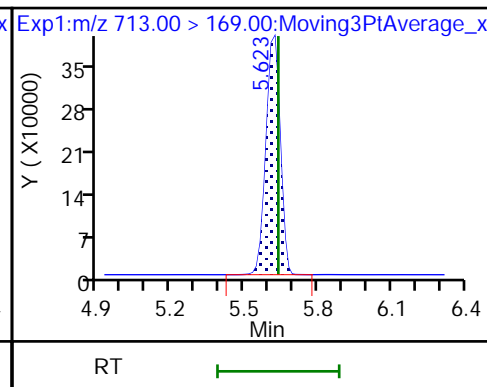
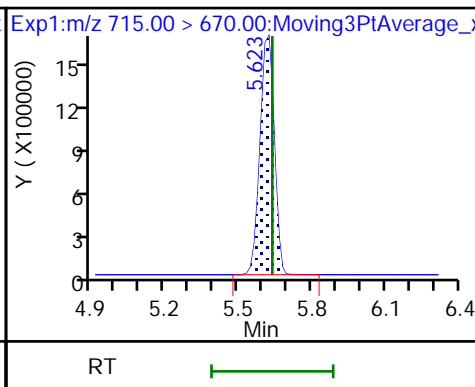
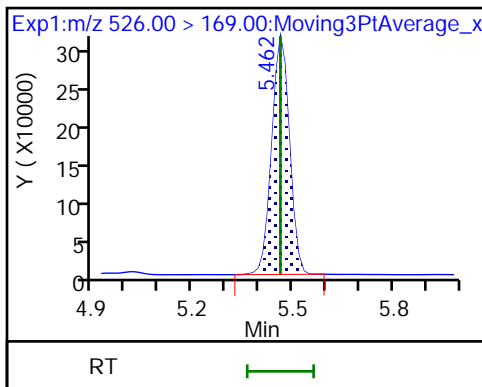
44 Perfluorotridecanoic acid



56 N-EtFOSA-M

D 46 13C2 PFTeDA

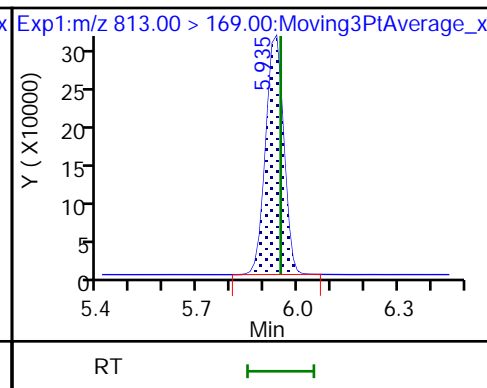
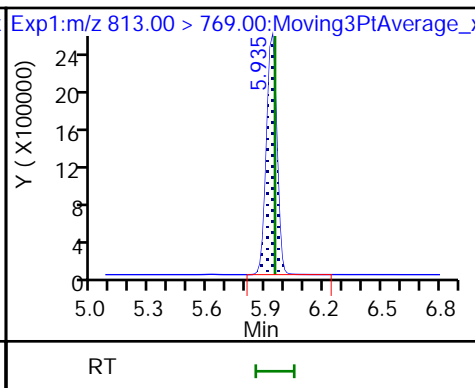
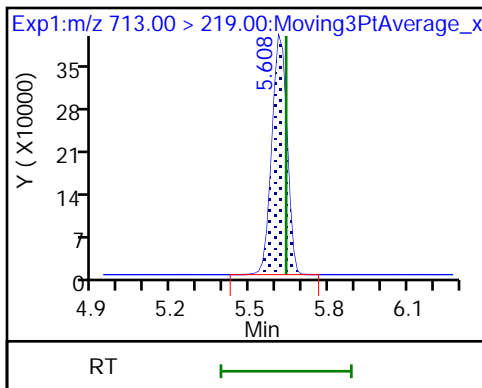
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

55 Perfluorohexadecanoic acid

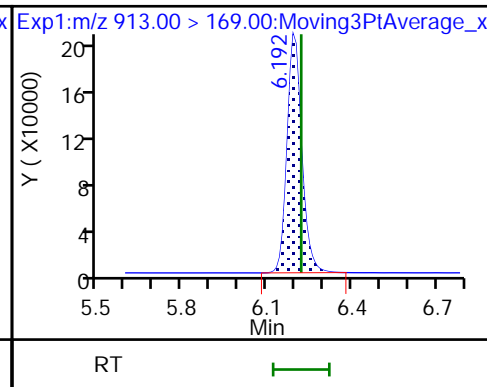
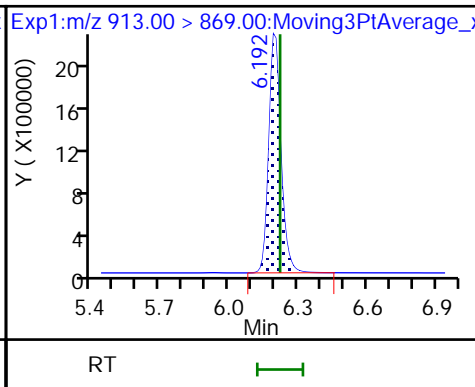
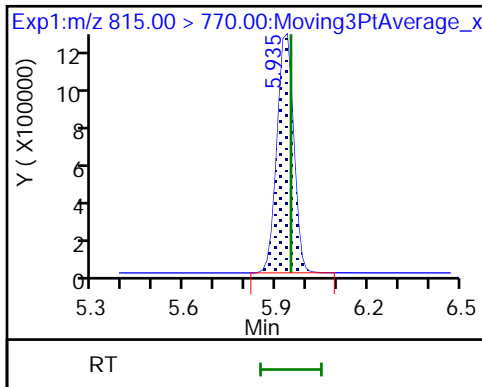
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid



Eurofins TestAmerica, Knoxville

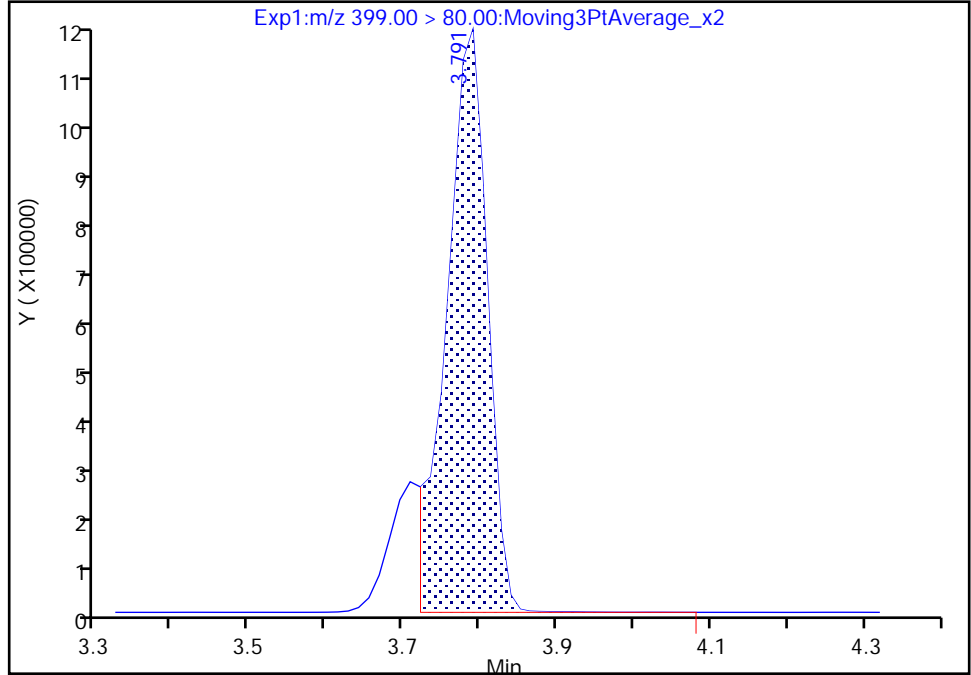
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Injection Date: 07-Oct-2021 10:27:25 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 41 Worklist Smp#: 95
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

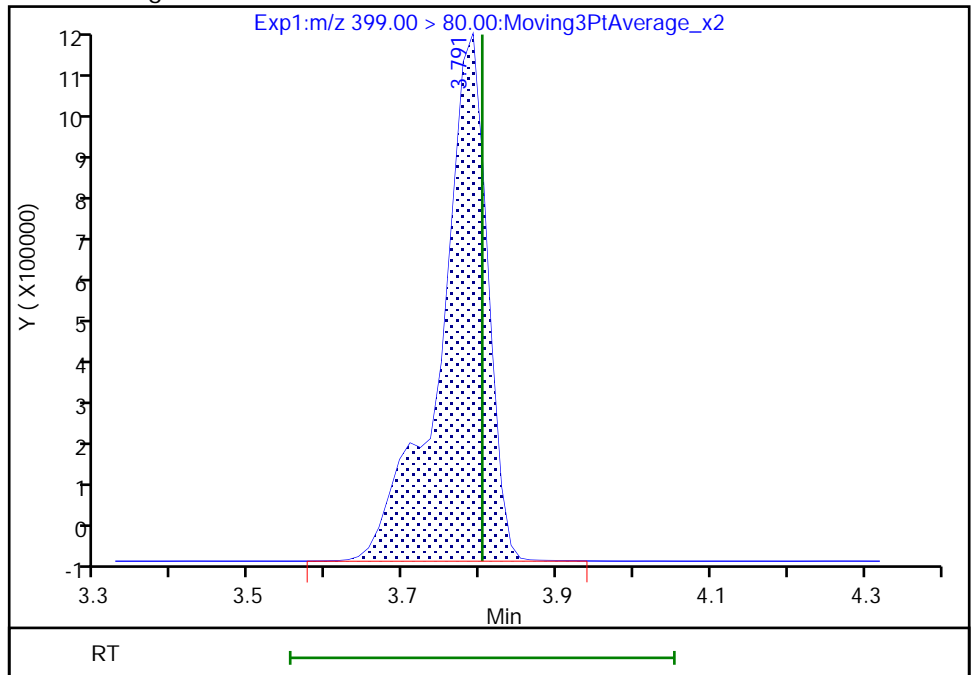
RT: 3.79
Area: 4370509
Amount: 1.832386
Amount Units: ng/ml

Processing Integration Results



RT: 3.79
Area: 5095151
Amount: 2.137045
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 18:07:07
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

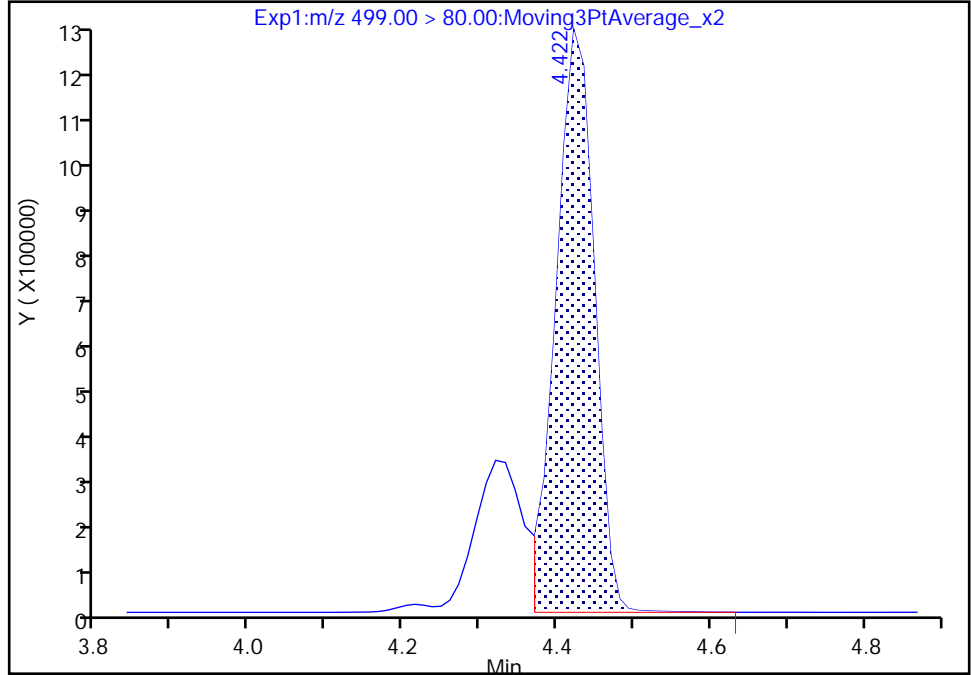
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_095.d
Injection Date: 07-Oct-2021 10:27:25 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 41 Worklist Smp#: 95
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

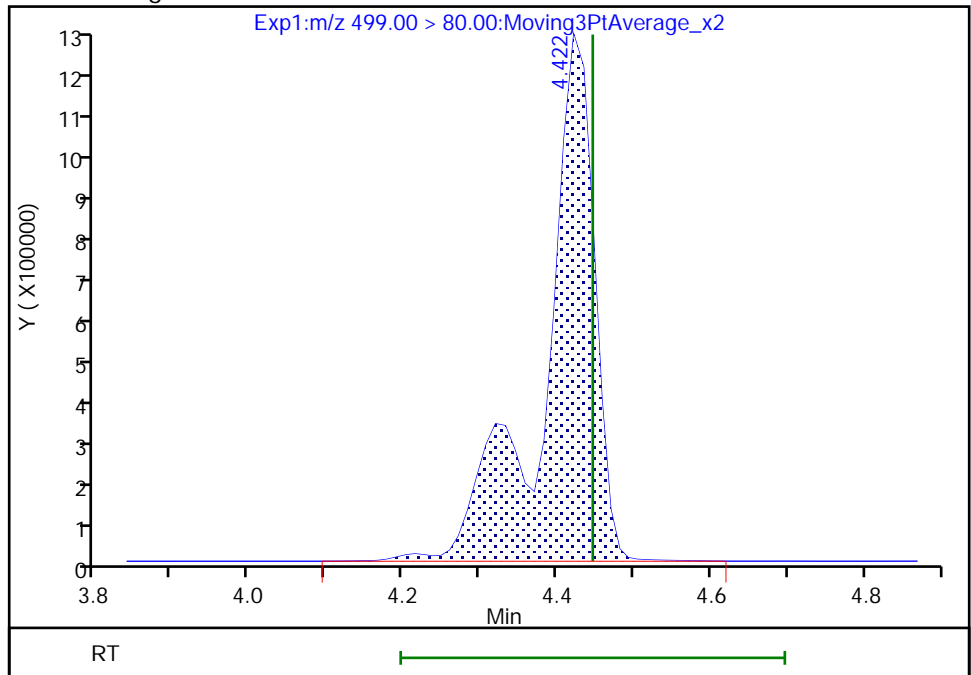
RT: 4.42
Area: 4266281
Amount: 1.588106
Amount Units: ng/ml

Processing Integration Results



RT: 4.42
Area: 5704266
Amount: 2.123390
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 18:07:16
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

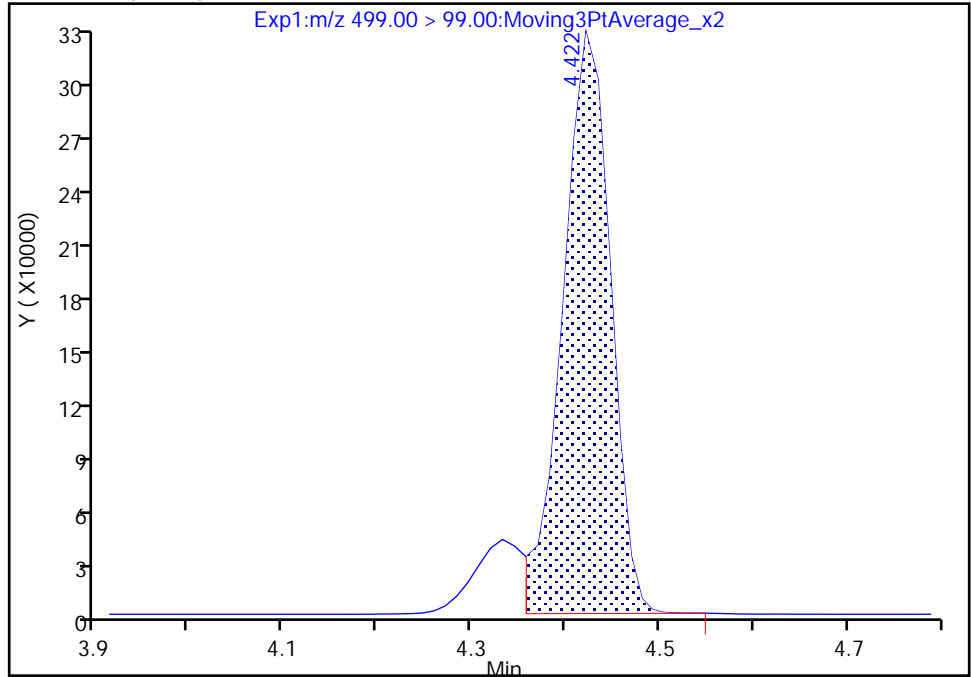
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_095.d
Injection Date: 07-Oct-2021 10:27:25 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 41 Worklist Smp#: 95
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

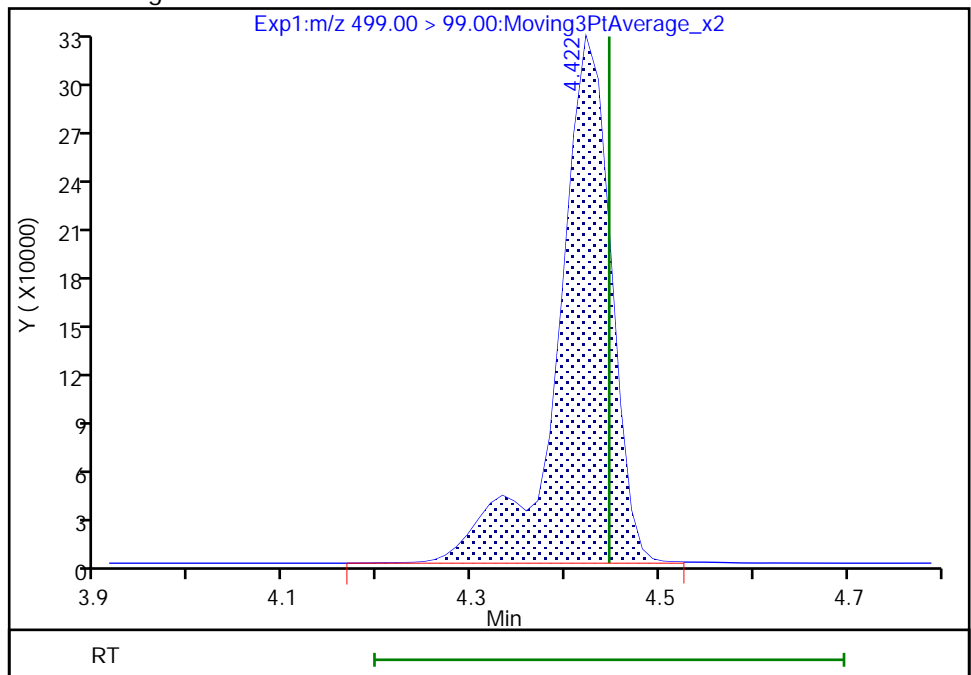
RT: 4.42
Area: 1157886
Amount: 1.588106
Amount Units: ng/ml

Processing Integration Results



RT: 4.42
Area: 1310731
Amount: 2.123390
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 18:07:22

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

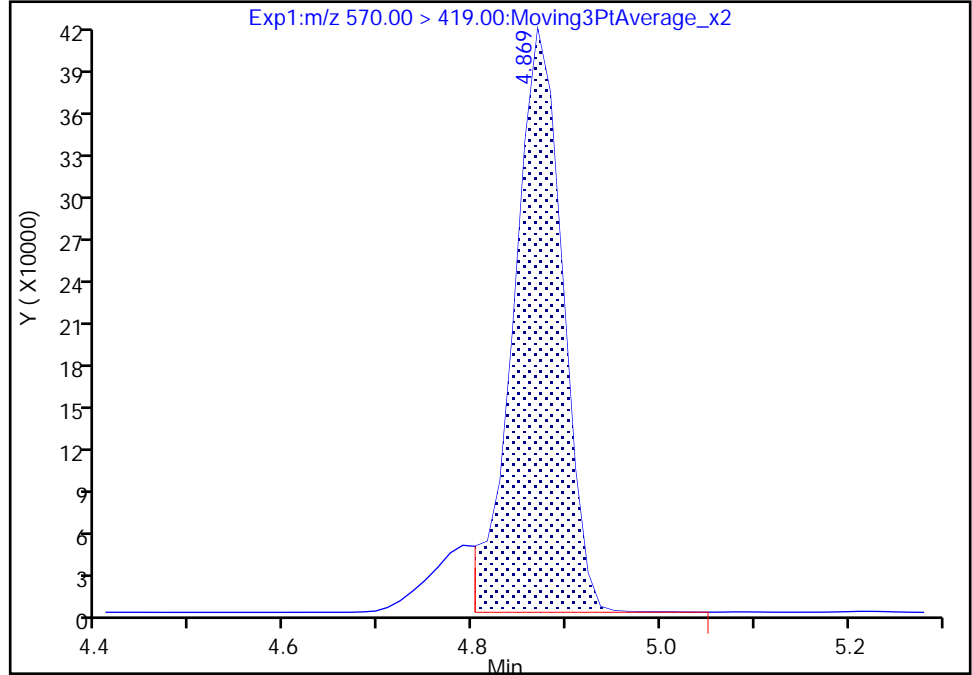
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_095.d
Injection Date: 07-Oct-2021 10:27:25 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 41 Worklist Smp#: 95
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

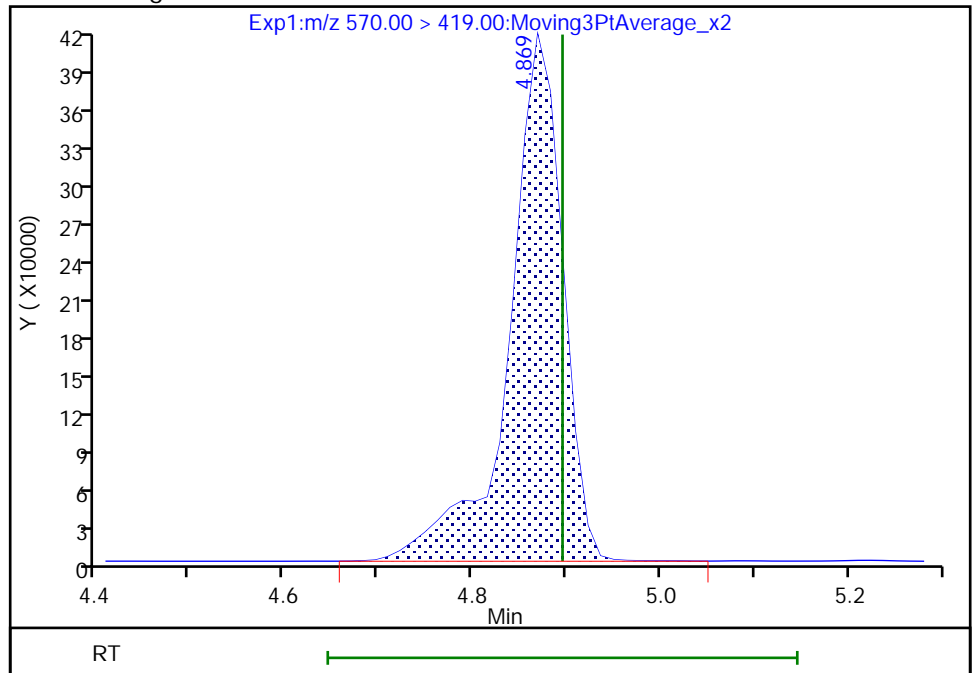
RT: 4.87
Area: 1495008
Amount: 2.052052
Amount Units: ng/ml

Processing Integration Results



RT: 4.87
Area: 1653923
Amount: 2.270970
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 18:07:32
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54568/107 Calibration Date: 10/07/2021 12:13
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _107.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7855	0.7635		0.972	1.00	-2.8	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.013	0.9764		0.964	1.00	-3.6	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.126	1.130		0.887	0.884	0.4	40.0
4:2 FTS	AveID	2.500	2.520		0.942	0.934	0.8	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8572	0.7962		0.929	1.00	-7.1	40.0
Perfluoropentanesulfonic acid (PFPeS)	L2ID		0.8694		0.950	0.938	1.2	50.0
HFPO-DA	L2ID		1.326		0.958	1.00	-4.2	40.0
Perfluorohexanesulfonic acid (PFHxS)	L2ID		1.338		0.896	0.910	-1.5	40.0
Perfluoroheptanoic acid (PFHpA)	L2ID		1.054		0.998	1.00	-0.2	40.0
DONA	AveID	3.243	3.391		0.985	0.942	4.6	40.0
6:2 FTS	L2ID		1.946		0.917	0.948	-3.3	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9947	1.021		0.977	0.952	2.6	40.0
Perfluorooctanoic acid (PFOA)	L2ID		1.086		0.980	1.00	-2.0	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.100	1.067		0.900	0.928	-3.0	40.0
Perfluorononanoic acid (PFNA)	L2ID		0.8447		1.01	1.00	1.2	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	2.308	2.248		0.908	0.932	-2.6	40.0
Perfluorononanesulfonic acid (PFNS)	AveID	1.042	1.021		0.940	0.960	-2.0	40.0
Perfluorodecanoic acid (PFDA)	L2ID		0.9860		1.04	1.00	3.8	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9606	0.9340		0.972	1.00	-2.8	40.0
8:2 FTS	AveID	1.784	1.728		0.928	0.958	-3.1	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	L2ID		1.008		1.10	1.00	9.7	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.9574	0.9416		0.948	0.964	-1.7	40.0
Perfluoroundecanoic acid (PFUnA)	L2ID		0.9932		0.981	1.00	-1.9	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.9494	0.8727		0.919	1.00	-8.1	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.858	1.977		1.00	0.942	6.4	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		1.020		0.977	1.00	-2.3	40.0
10:2 FTS	AveID	2.221	2.373		1.03	0.964	6.8	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.198		1.04	1.00	3.5	40.0
NMeFOSA	AveID	1.047	1.031		0.985	1.00	-1.5	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9879	0.9808		0.961	0.968	-0.7	40.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54568/107 Calibration Date: 10/07/2021 12:13
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _107.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTrIA)	L2ID		0.9069		1.03	1.00	2.6	50.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.271		1.01	1.00	0.7	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.168	1.090		0.933	1.00	-6.7	40.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.1287		1.02	1.00	2.0	40.0
Perfluorohexadecanoic acid	Q2ID		1.095		1.00	1.00	0.2	40.0
Perfluorooctadecanoic acid	AveID	0.9076	0.9848		1.09	1.00	8.5	40.0
13C4 PFBA	Ave	1.324	1.387		1.31	1.25	4.8	50.0
13C5 PFPeA	Ave	1.087	1.159		1.33	1.25	6.6	50.0
13C3 PFBS	Ave	0.7019	0.7348		1.22	1.16	4.7	50.0
M2-4:2 FTS	Ave	0.1052	0.1005		1.12	1.17	-4.5	50.0
13C2 PFHxA	Ave	1.116	1.183		1.33	1.25	6.0	50.0
13C3 HFPO-DA	Ave	0.5714	0.5910		1.29	1.25	3.4	50.0
18O2 PFHxS	Ave	0.4248	0.4372		1.22	1.18	2.9	50.0
13C4 PFHpA	Ave	1.113	1.180		1.33	1.25	6.0	50.0
13C4 PFOA	Ave	1.007	1.017		1.26	1.25	1.0	50.0
M2-6:2 FTS	Ave	0.1078	0.1040		1.15	1.19	-3.5	50.0
13C4 PFOS	Ave	0.5852	0.5729		1.17	1.20	-2.1	50.0
13C5 PFNA	Ave	1.279	1.240		1.21	1.25	-3.1	50.0
13C8 FOSA	Ave	0.8591	0.7392		1.08	1.25	-14.0	50.0
13C2 PFDA	Ave	1.296	1.172		1.13	1.25	-9.5	50.0
M2-8:2 FTS	Ave	0.1316	0.1002		0.912	1.20	-23.9	50.0
d3-NMeFOSAA	Ave	0.1774	0.1372		0.967	1.25	-22.6	50.0
13C2 PFUnA	Ave	1.237	1.124		1.14	1.25	-9.1	50.0
d5-NEtFOSAA	Ave	0.1705	0.1505		1.10	1.25	-11.7	50.0
13C2 PFDoA	Ave	1.319	1.308		1.24	1.25	-0.9	50.0
d7-N-MeFOSE-M	Ave	0.1075	0.1262		1.47	1.25	17.3	50.0
d-N-MeFOSA-M	Ave	0.1120	0.1223		1.37	1.25	9.2	50.0
d9-N-EtFOSE-M	Ave	0.1146	0.1395		1.52	1.25	21.7	50.0
d-N-EtFOSA-M	Ave	0.0942	0.1034		1.37	1.25	9.7	50.0
13C2 PFTeDA	Ave	1.211	1.225		1.26	1.25	1.2	50.0
13C2 PFHxDA	Ave	0.8782	0.8961		1.28	1.25	2.0	50.0
13C8 PFOA	Ave	0.9886	0.9662		1.22	1.25	-2.3	50.0
13C8 PFOS	Ave	0.1256	0.1304		1.24	1.20	3.8	50.0

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_107.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 07-Oct-2021 12:13:06 ALS Bottle#: 53 Worklist Smp#: 107
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-107 ccv
 Misc. Info.: Plate: 11 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 18:13:43 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 18:12:51

Ratio Calibration: None

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	2.796	2.801	-0.005	0.678	6889834	1.31	105	15228	
2 Perfluorobutanoic acid	212.90 > 169.00	2.796	2.812	-0.016	1.000	4208505	0.9721	97.2	1213	
D 3 13C5 PFPeA	267.90 > 223.00	3.109	3.129	-0.020	0.754	5756336	1.33	107	12673	
4 Perfluoropentanoic acid	262.90 > 219.00	3.109	3.129	-0.020	1.000	4496598	0.9639	96.4	2402	
D 6 13C3 PFBS	301.90 > 80.00	3.123	3.129	-0.006	0.757	3393637	1.22	105	27284	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.137	3.143	-0.006	1.004	2916256	0.8871	Target=3.06	100	17682
	298.90 > 99.00	3.137	3.143	-0.006	1.004	1076650		2.71(1.53-4.59)		3691
D 8 M2-4:2 FTS	329.00 > 81.00	3.402	3.423	-0.021	0.825	466067	1.11	95.5	964	
7 4:2 FTS	327.00 > 307.00	3.416	3.423	-0.007	1.004	939703	0.9416	101	1340	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.446	3.453	-0.007	1.103	2380764	0.9495	Target=3.47	101	12733
	349.00 > 99.00	3.446	3.453	-0.007	1.103	676590		3.52(1.73-5.20)		5677
D 9 13C2 PFHxA	315.00 > 270.00	3.446	3.469	-0.023	0.835	5874819	1.32	106	15914	
10 Perfluorohexanoic acid	313.00 > 269.00	3.446	3.469	-0.023	1.000	3741972	0.9288	Target=9.74	92.9	2804
	313.00 > 119.00	3.446	3.469	-0.023	1.000	303481		12.33(4.87-14.61)		916

D 12 13C3 HFPO-DA

287.00 > 169.00 3.541 3.561 -0.020 0.859 2934953 1.29 103 6055

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.541	3.561	-0.020	1.000	3114097	0.9576		95.8	2378	
D 17 18O2 PFHxS										
403.00 > 84.00	3.785	3.803	-0.018	0.918	2053691	1.22		103	13964	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.785	3.803	-0.018	1.000	2114892	0.8962	Target=2.96	98.5	5457	M
399.00 > 99.00	3.785	3.803	-0.018	1.000	616141		3.43(1.48-4.44)		2599	
D 14 13C4 PFHpA										
367.00 > 322.00	3.797	3.815	-0.018	0.921	5861472	1.33		106	19878	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.797	3.815	-0.018	1.000	4943553	1.00	Target=3.35	99.8	5625	
363.00 > 169.00	3.797	3.815	-0.018	1.000	1498828		3.30(1.67-5.02)		3887	
68 DONA										
377.00 > 251.00	3.822	3.840	-0.018	0.863	7270169	0.9849	Target=1.49	105	16345	
377.00 > 85.00	3.822	3.840	-0.018	0.863	3956156		1.84(0.74-2.23)		2431	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.124	4.143	-0.019	0.932	2211856	0.9770	Target=3.73	103	7156	
449.00 > 99.00	4.124	4.143	-0.019	0.932	564811		3.92(1.87-5.61)		3502	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.124	4.143	-0.019	1.000	4798067	1.22		97.7	30345	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.124	4.143	-0.019	1.000	490488	1.15		96.5	2946	
19 6:2 FTS										
427.00 > 407.00	4.124	4.143	-0.019	1.000	762094	0.9168		96.7	1305	
D 21 13C4 PFOA										
417.00 > 372.00	4.124	4.155	-0.031	1.000	5051178	1.26		101	15822	
* 22 13C2 PFOA										
415.00 > 370.00	4.124	4.155	-0.031		4965965	1.25			25070	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.124	4.155	-0.031	1.000	4389720	0.9796	Target=2.40	98.0	3508	
413.00 > 169.00	4.124	4.155	-0.031	1.000	1708046		2.57(1.20-3.61)		3250	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.426	4.447	-0.020	1.073	618988	1.24		104	5129	
D 25 13C4 PFOS										
503.00 > 80.00	4.426	4.447	-0.020	1.073	2719810	1.17		97.9	6899	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.426	4.447	-0.020	1.000	2253625	0.9004	Target=3.83	97.0	2403	M
499.00 > 99.00	4.426	4.447	-0.020	1.000	508561		4.43(1.91-5.74)		2105	M
D 27 13C5 PFNA										
468.00 > 423.00	4.450	4.470	-0.020	1.079	6159036	1.21		96.9	33145	
26 Perfluorononanoic acid										
463.00 > 419.00	4.450	4.470	-0.020	1.000	4162192	1.01	Target=3.68	101	1964	
463.00 > 169.00	4.450	4.470	-0.020	1.000	906860		4.59(1.84-5.52)		1089	
63 9CIFOS										
531.00 > 351.00	4.576	4.596	-0.020	1.109	4769133	0.9079		97.4	13077	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.713	4.722	-0.009	1.065	2230753	0.9404	Target=3.97	98.0	6144	
549.00 > 99.00	4.713	4.722	-0.009	1.065	585907		3.81(1.99-5.96)		2226	
D 34 13C8 FOSA										
506.00 > 78.00	4.726	4.736	-0.010	1.146	3670787	1.08		86.0	7038	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.726	4.736	-0.010	1.000	2742805	0.9724		97.2	4008	
D 32 13C2 PFDA										
515.00 > 470.00	4.739	4.749	-0.010	1.149	5821806	1.13		90.5	19953	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.726	4.749	-0.023	0.997	4592323	1.04	Target=10.11	104	4261	
513.00 > 169.00	4.739	4.749	-0.010	1.000	365538		12.56(5.06-15.17)		245	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.753	4.763	-0.010	1.152	476833	0.9118		76.1	1681	
31 8:2 FTS										
527.00 > 507.00	4.753	4.763	-0.010	1.000	659130	0.9280		96.9	704	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.872	4.896	-0.024	1.181	681574	0.9672		77.4	2017	
36 NMeFOSAA										
570.00 > 419.00	4.872	4.896	-0.024	1.000	549823	1.10		110	1137	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.969	4.993	-0.024	1.123	2065839	0.9481	Target=3.80	98.3	7604	
599.00 > 99.00	4.969	4.993	-0.024	1.123	575796		3.59(1.90-5.70)		3157	
D 39 13C2 PFUnA										
565.00 > 520.00	4.997	5.022	-0.025	1.212	5582352	1.14		90.9	12803	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.997	5.022	-0.025	1.000	4435396	0.9812	Target=7.45	98.1	1582	
563.00 > 169.00	4.997	5.022	-0.025	1.000	503233		8.81(3.78-11.33)		438	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.012	5.036	-0.024	1.215	747302	1.10		88.3	3174	
40 NEtFOSA										
584.00 > 419.00	5.012	5.036	-0.024	1.000	521740	0.9192		91.9	930	
57 11CIFOS										
631.00 > 451.00	5.096	5.119	-0.023	1.151	4239555	1.00		106	25303	
D 43 13C2 PFDaA										
615.00 > 570.00	5.227	5.251	-0.024	1.267	6494762	1.24		99.1	16815	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.227	5.251	-0.024	1.000	5298484	0.9771	Target=5.33	97.7	6031	
613.00 > 169.00	5.227	5.251	-0.024	1.000	743489		7.13(2.66-7.99)		701	
50 10:2 FTS										
627.00 > 607.00	5.255	5.266	-0.011	1.106	910784	1.03		107	1621	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.284	5.281	0.003	1.281	626489	1.47		117	573	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.299	5.295	0.004	1.285	607132	1.37		109	51.4	
49 N-MeFOSE-M										
616.00 > 59.00	5.299	5.295	0.004	1.003	600581	1.04		104	917	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.299	5.295	0.004	1.000	500838	0.9849		98.5	602	
54 PFDoS										
699.00 > 80.00	5.413	5.436	-0.023	1.223	2160870	0.9611	Target=4.32	99.3	6526	
699.00 > 99.00	5.413	5.436	-0.023	1.223	518349		4.17(2.19-6.58)		3606	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.439	5.436	0.003	1.319	692718	1.52		122	883	
62 N-EtFOSE-M										
630.00 > 59.00	5.452	5.449	0.003	1.002	704437	1.01		101	2040	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.465	5.449	0.016	1.325	513286	1.37		110	683	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.439	5.462	-0.023	1.041	4712190	1.03	Target=5.66	103	4970	
663.00 > 169.00	5.439	5.462	-0.023	1.041	760259		6.20(2.83-8.48)		1501	
56 N-EtFOSA-M										
526.00 > 169.00	5.465	5.462	0.003	1.000	447484	0.9327		93.3	638	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.626	5.637	-0.011	1.364	6082307	1.26		101	21686	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.626	5.637	-0.011	1.000	626158	1.02	Target=1.07	102	1409	
713.00 > 219.00	5.612	5.637	-0.025	0.997	599342		1.04(0.53-1.60)		1593	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.938	5.948	-0.010	1.000	3898698	1.00	Target=7.50	100	5503	
813.00 > 169.00	5.938	5.948	-0.010	1.000	460945		8.46(3.75-11.26)		1673	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.938	5.948	-0.010	1.440	4450008	1.28		102	9583	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.204	6.221	-0.017	1.045	3505765	1.08	Target=9.98	108	4000	
913.00 > 169.00	6.204	6.221	-0.017	1.045	289954		12.09(5.14-15.41)		1702	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L4PFC2_00003

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_107.d

Injection Date: 07-Oct-2021 12:13:06

Instrument ID: LCA

Lims ID: CCV

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 53

Worklist Smp#: 107

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

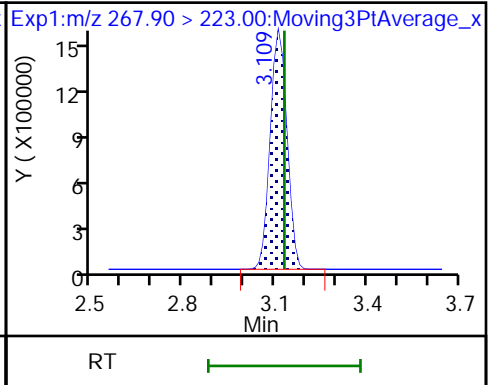
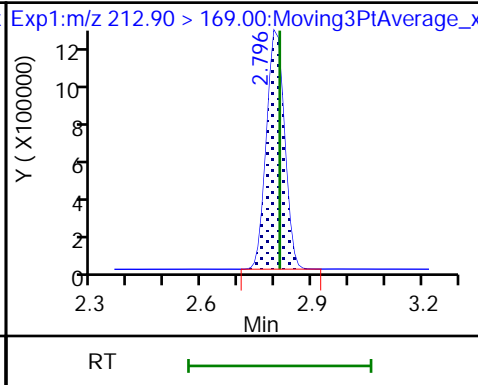
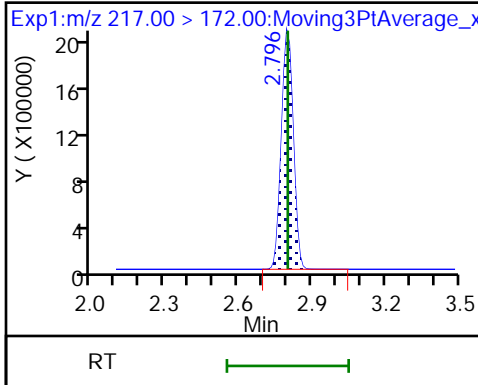
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

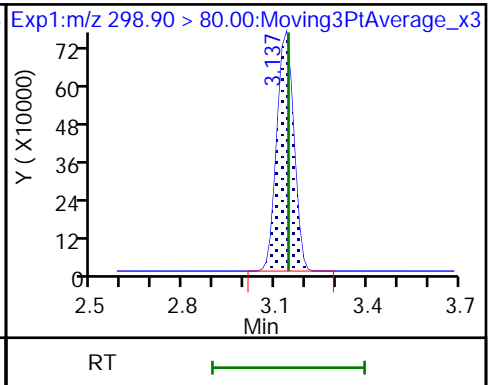
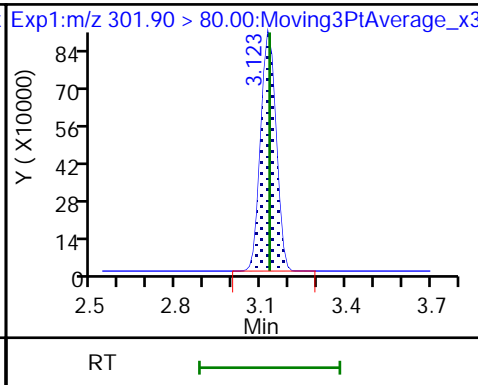
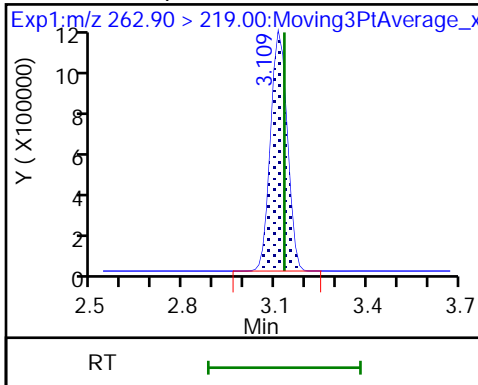
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

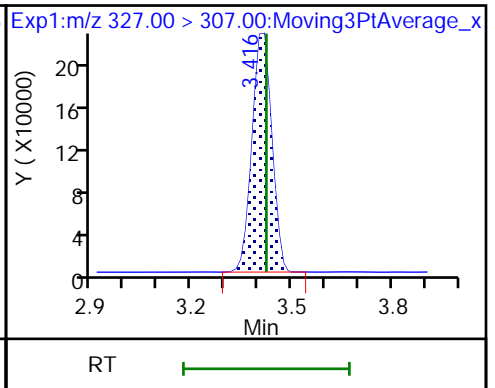
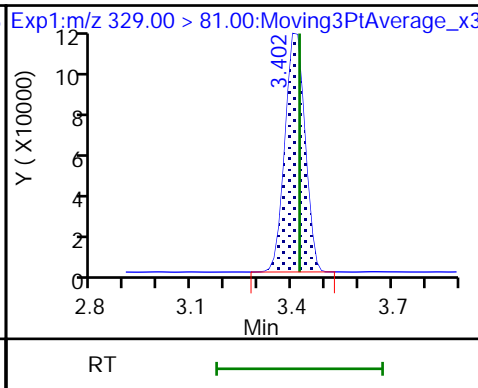
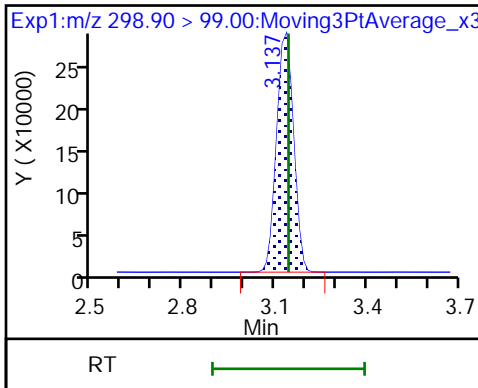
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

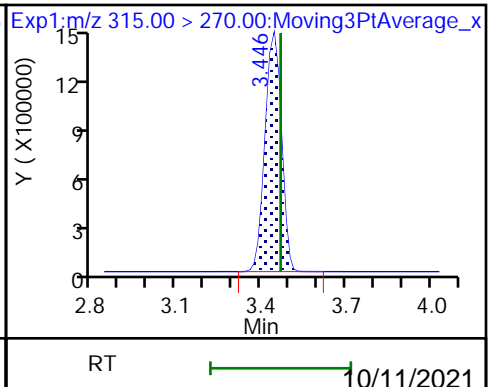
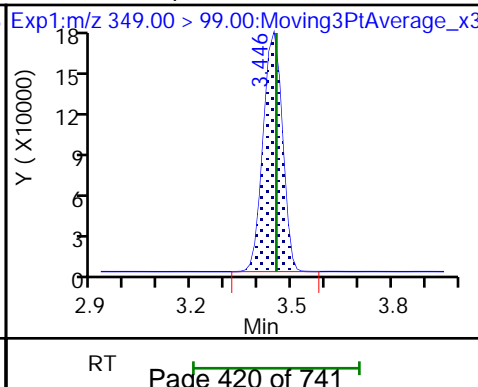
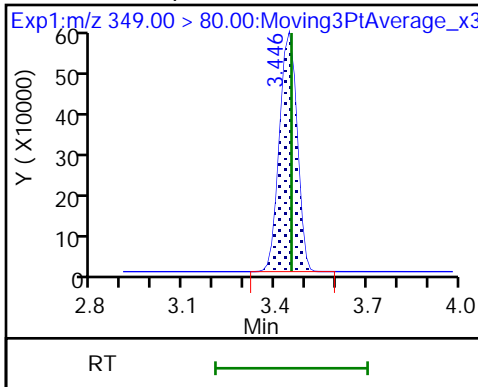
7 4:2 FTS

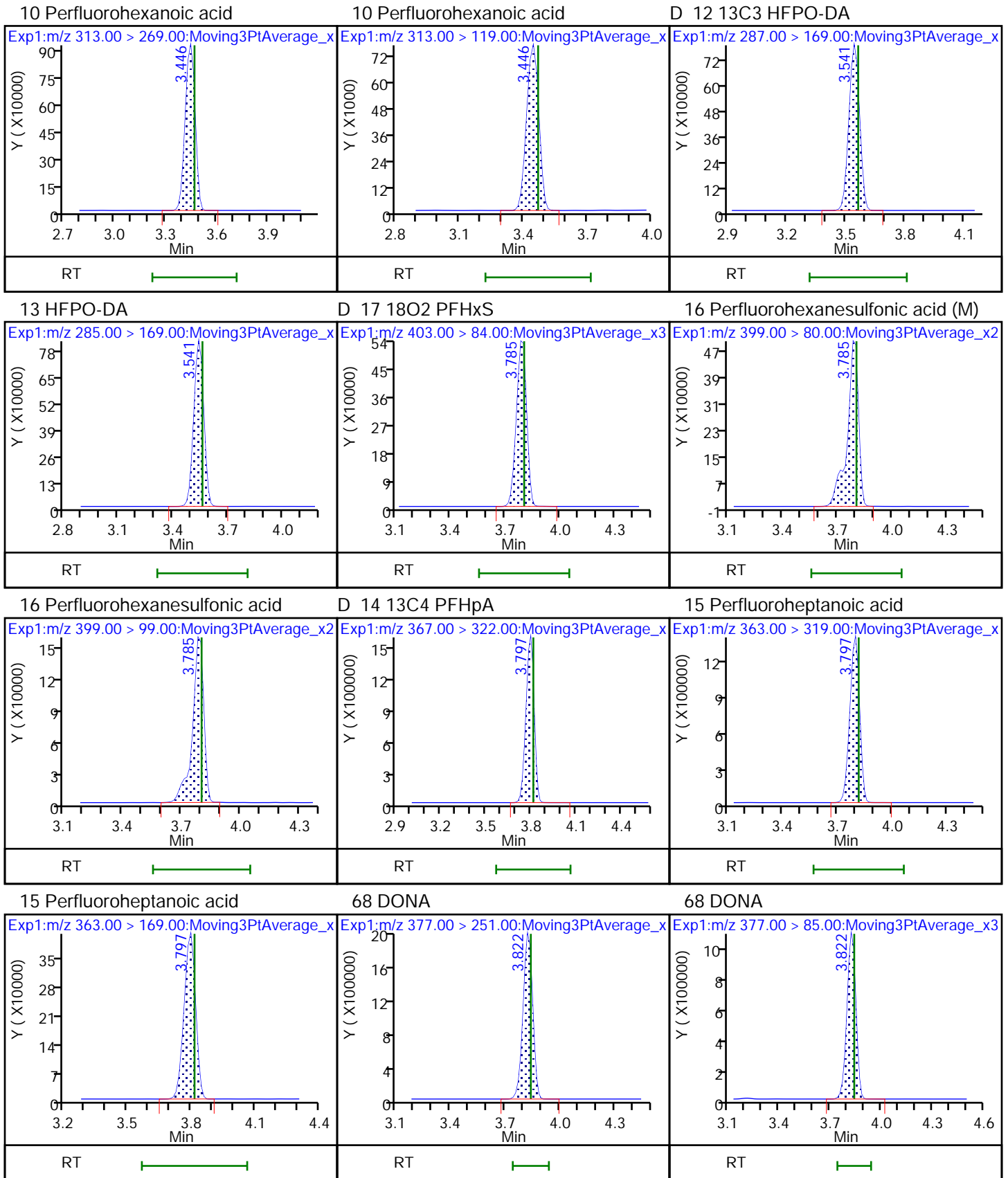


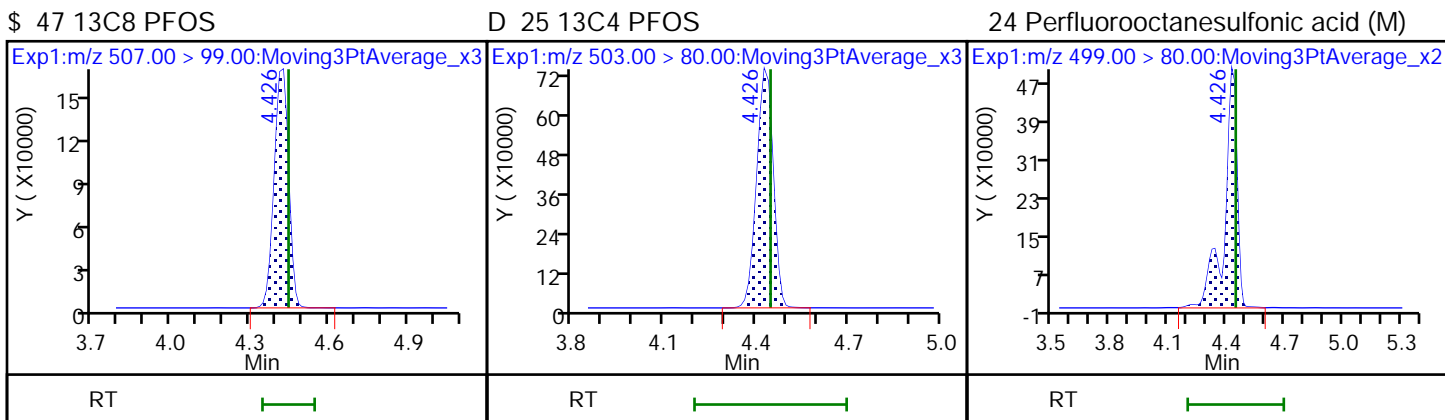
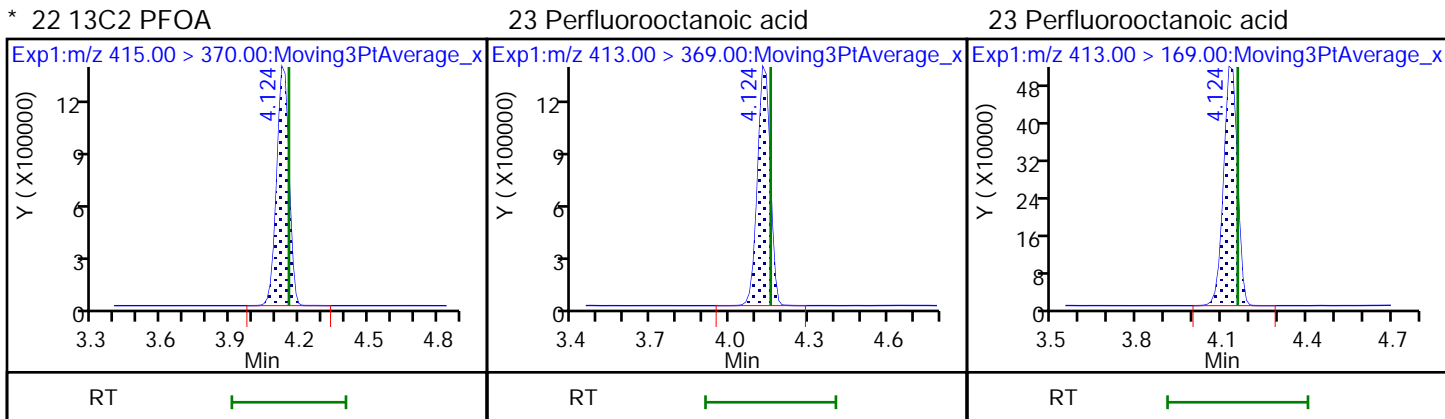
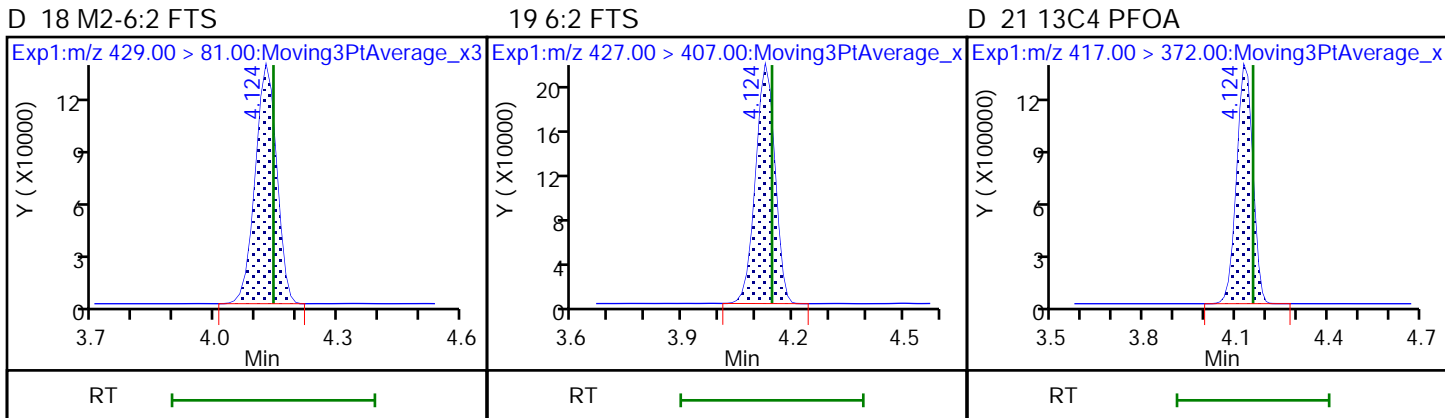
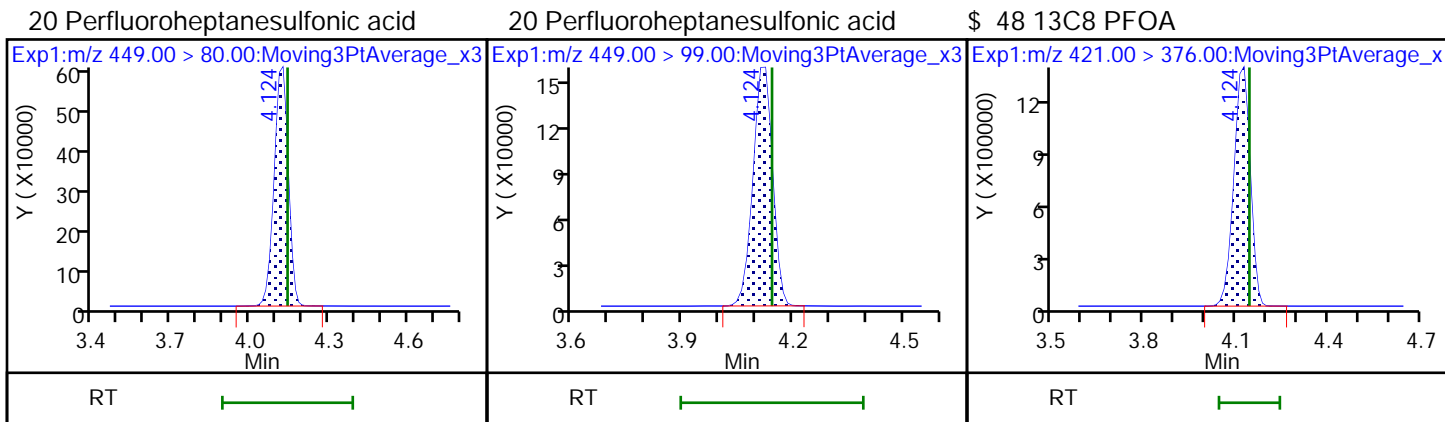
11 Perfluoropentanesulfonic acid

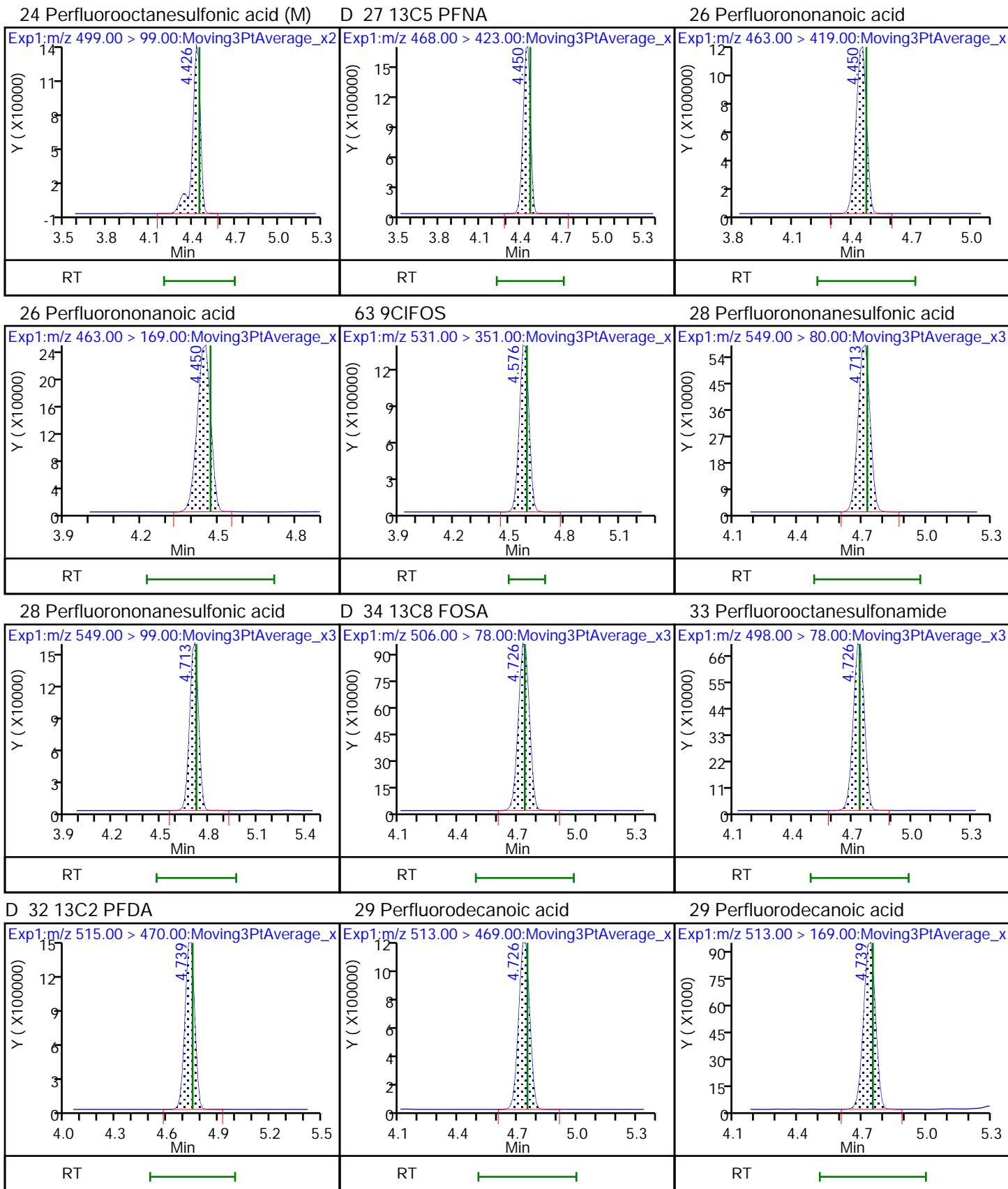
11 Perfluoropentanesulfonic acid

D 9 13C2 PFXhA





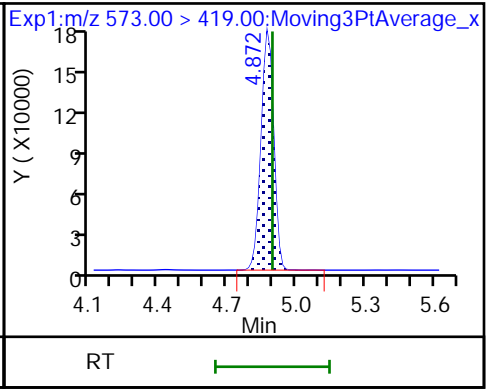
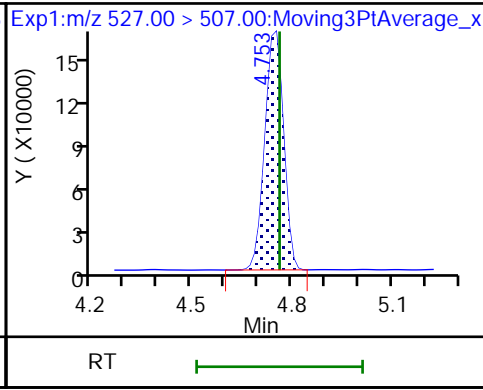
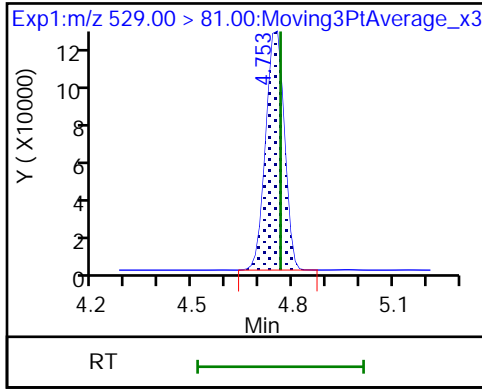




D 30 M2-8:2 FTS

31 8:2 FTS

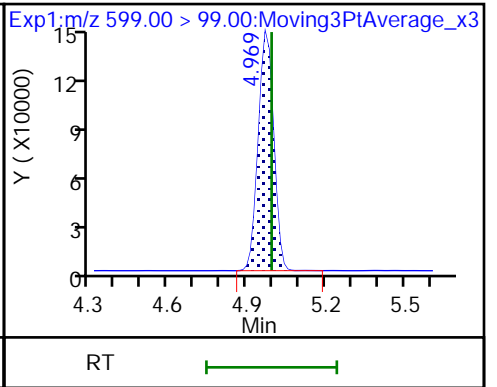
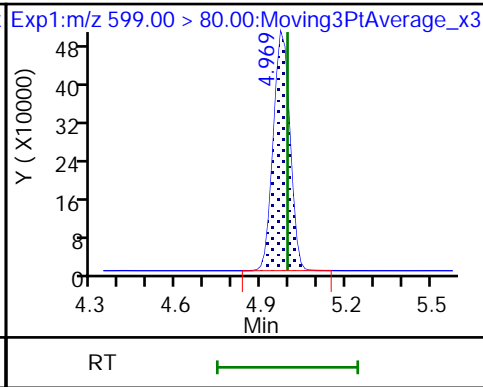
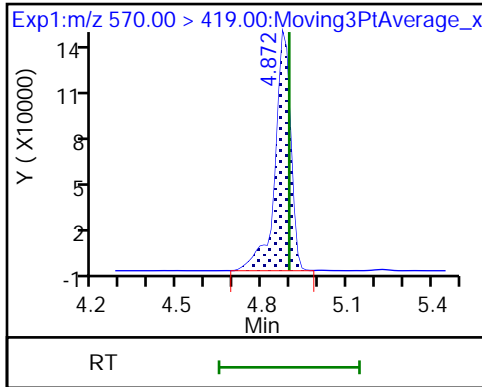
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

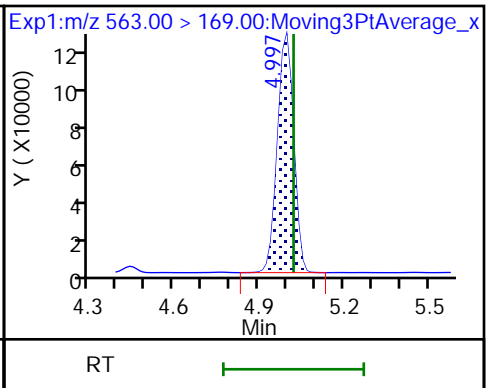
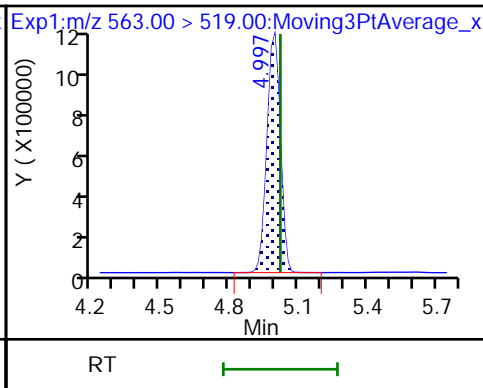
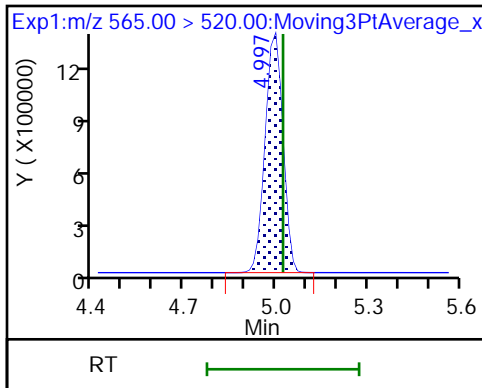
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

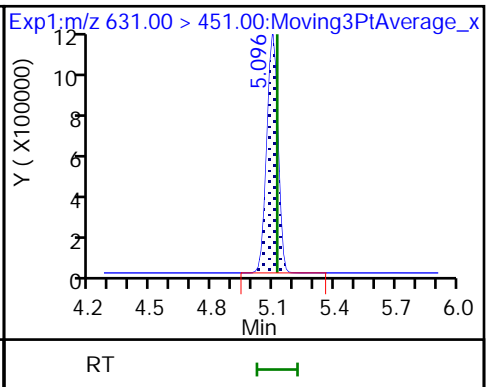
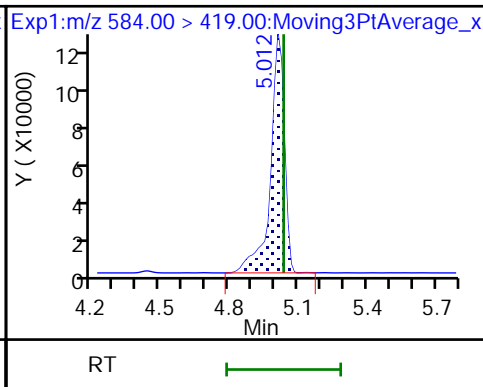
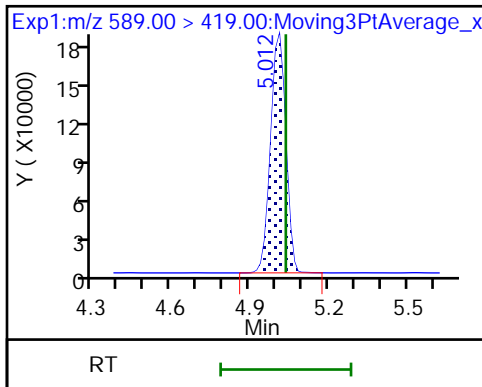
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA

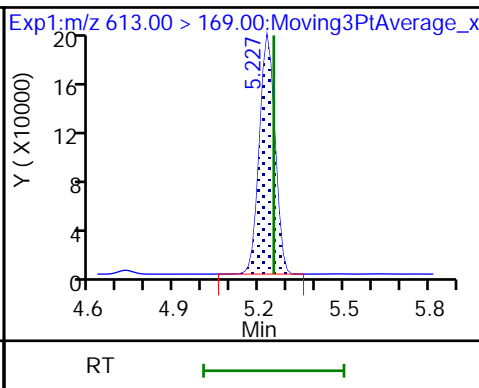
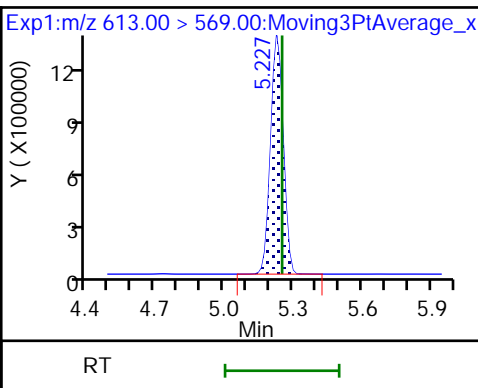
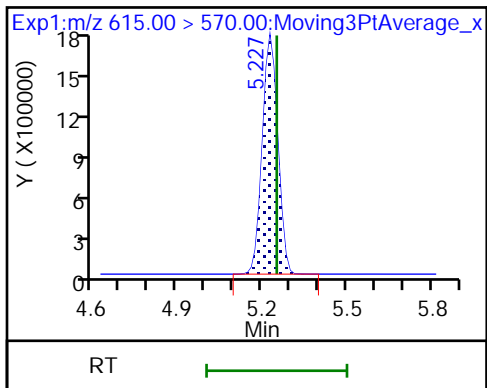
57 11C1FOS



D 43 13C2 PFDaA

42 Perfluorododecanoic acid

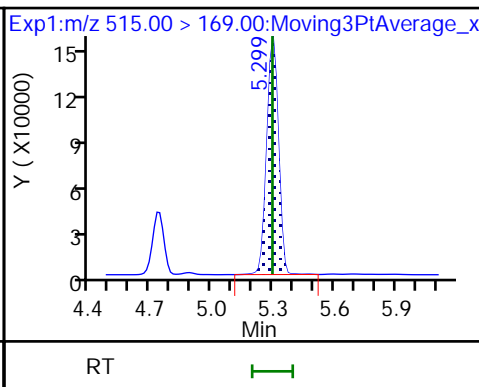
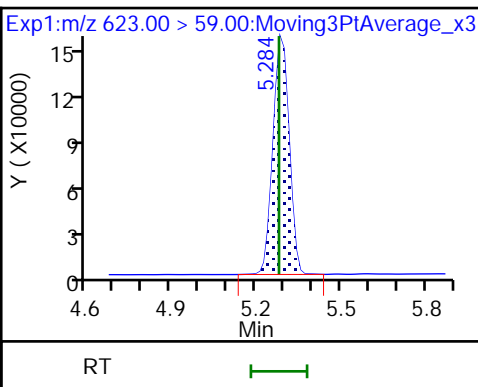
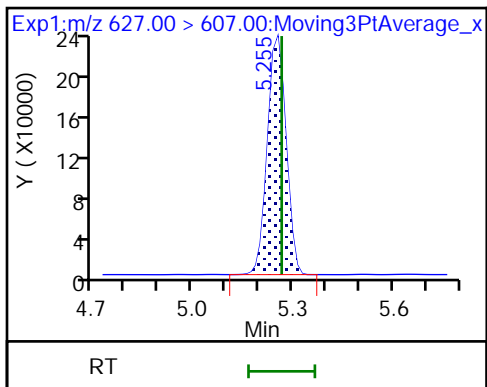
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

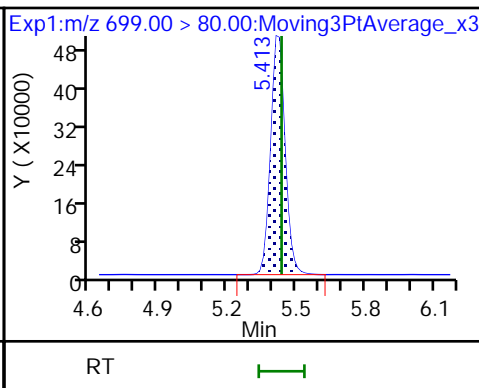
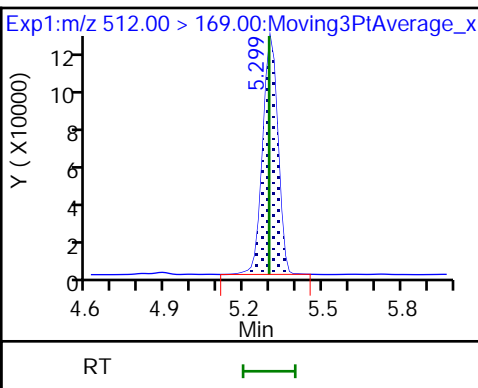
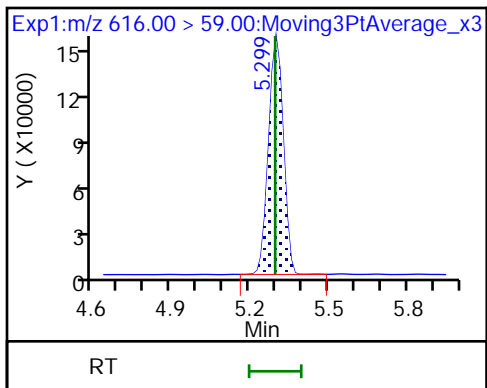
D 58 d-N-MeFOSA-M



49 N-MeFOSE-M

61 NMeFOSA

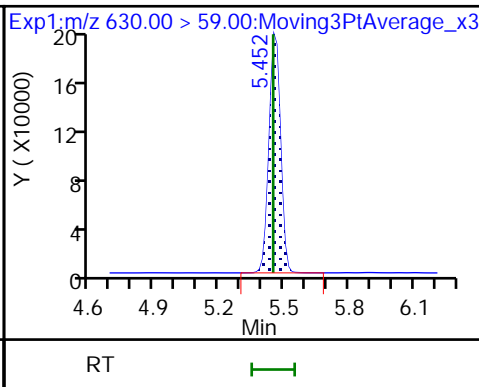
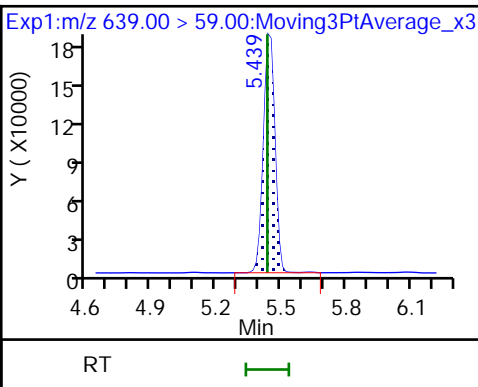
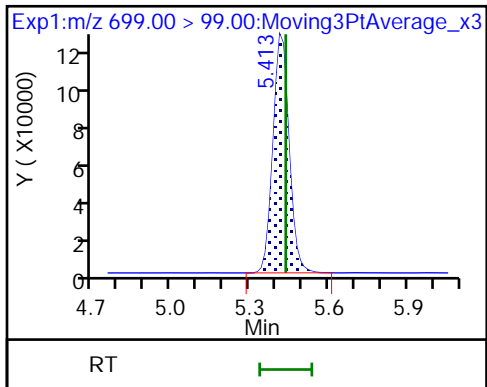
54 PFDoS



54 PFDoS

D 53 d9-N-EtFOSE-M

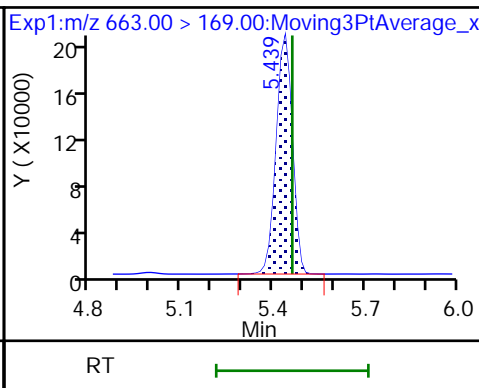
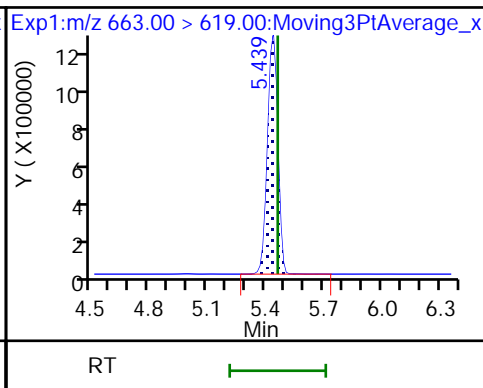
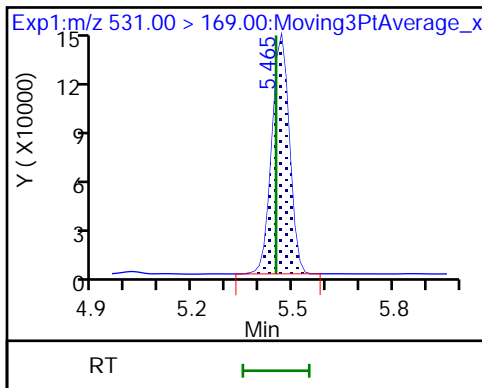
62 N-EtFOSE-M



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid

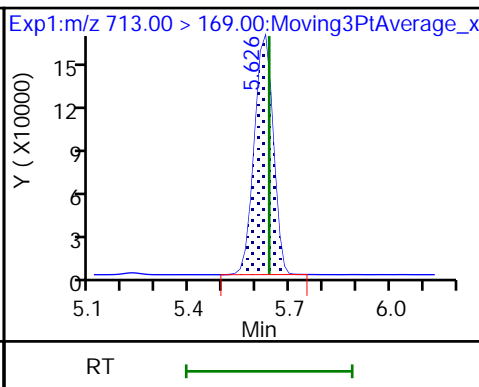
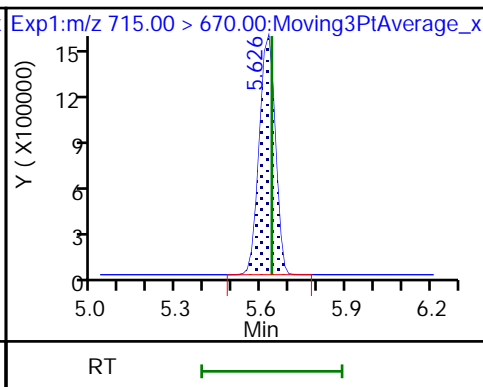
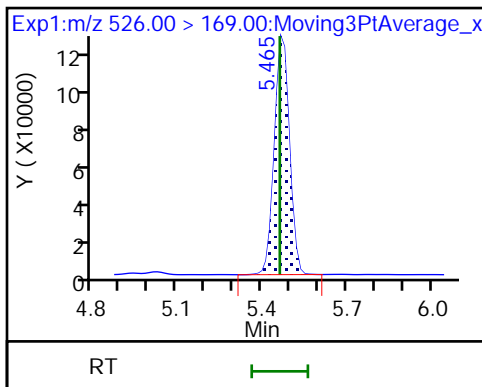
44 Perfluorotridecanoic acid



56 N-EtFOSA-M

D 46 13C2 PFTeDA

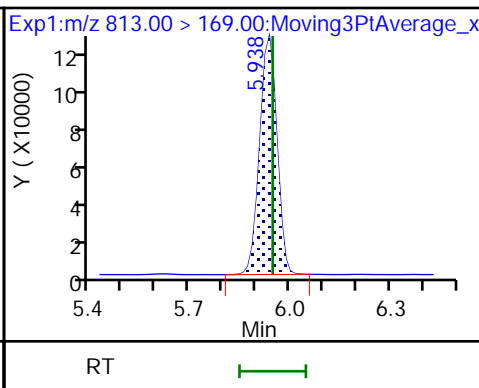
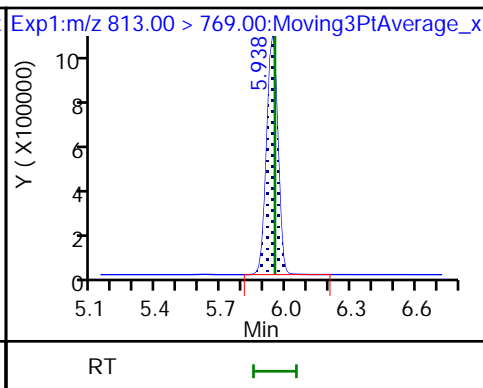
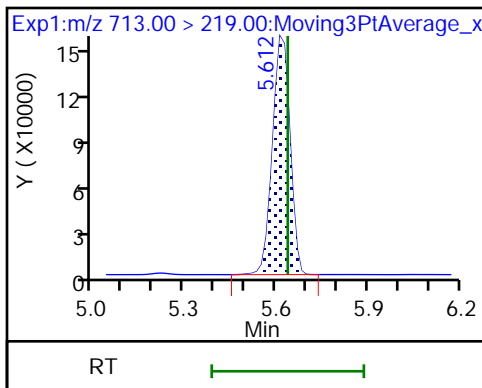
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

55 Perfluorohexadecanoic acid

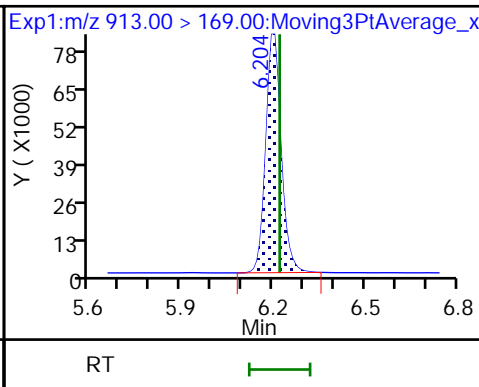
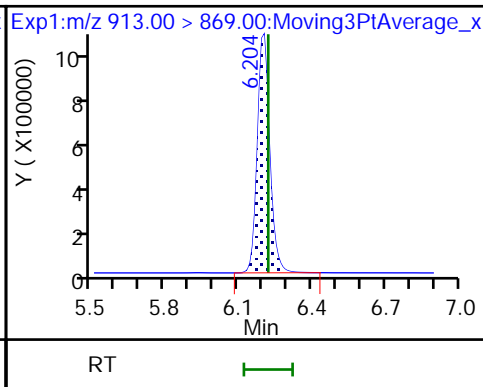
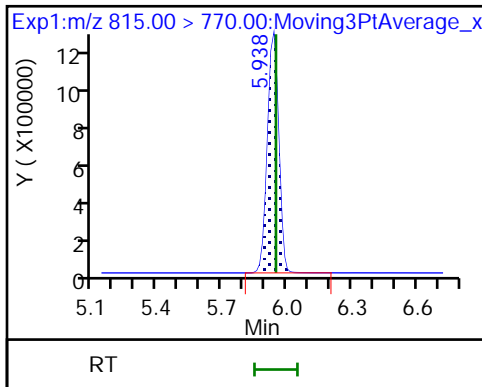
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid



Eurofins TestAmerica, Knoxville

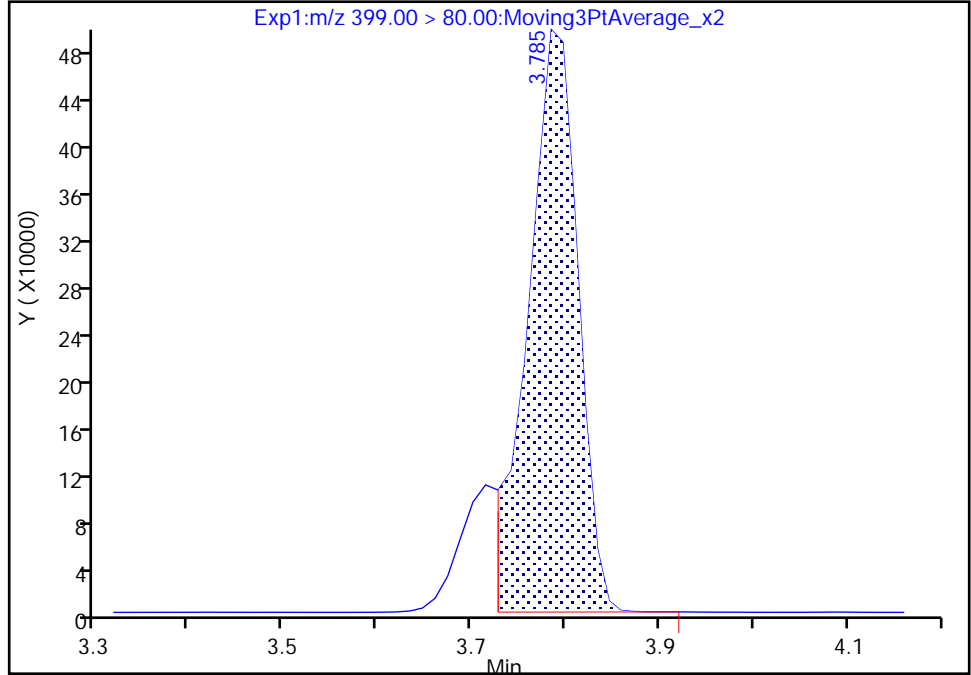
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Injection Date: 07-Oct-2021 12:13:06 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 53 Worklist Smp#: 107
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

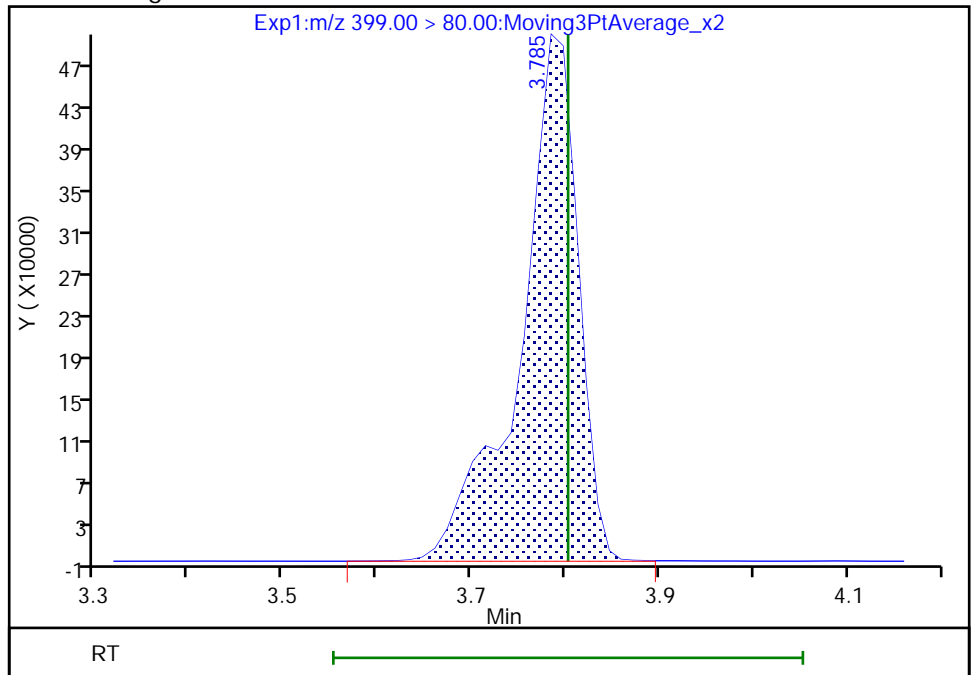
RT: 3.78
Area: 1815312
Amount: 0.768529
Amount Units: ng/ml

Processing Integration Results



RT: 3.78
Area: 2114892
Amount: 0.896200
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 18:12:09
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

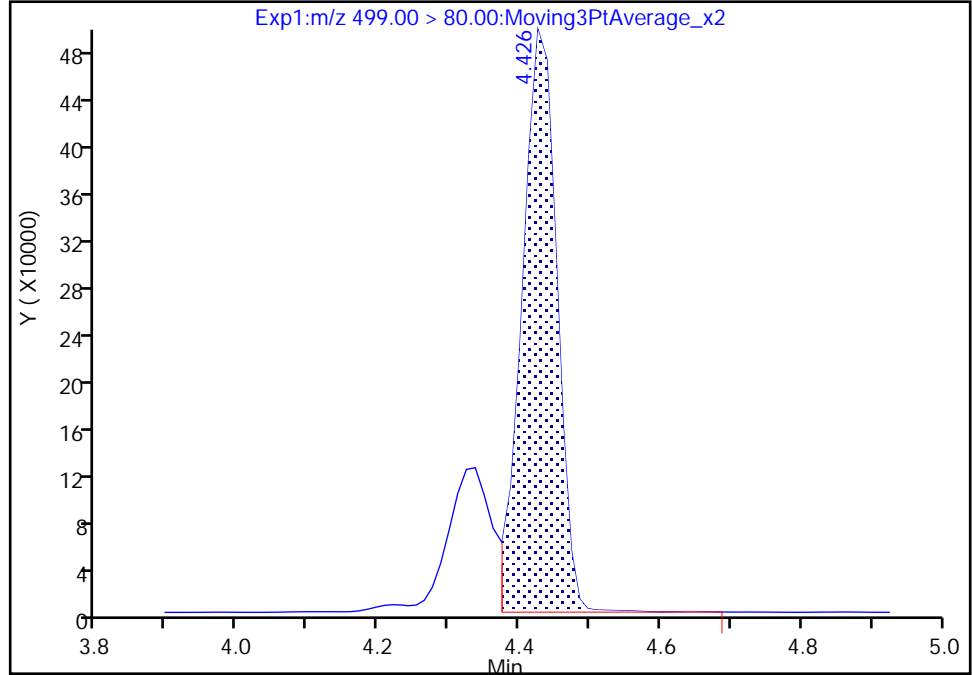
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_107.d
Injection Date: 07-Oct-2021 12:13:06 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 53 Worklist Smp#: 107
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

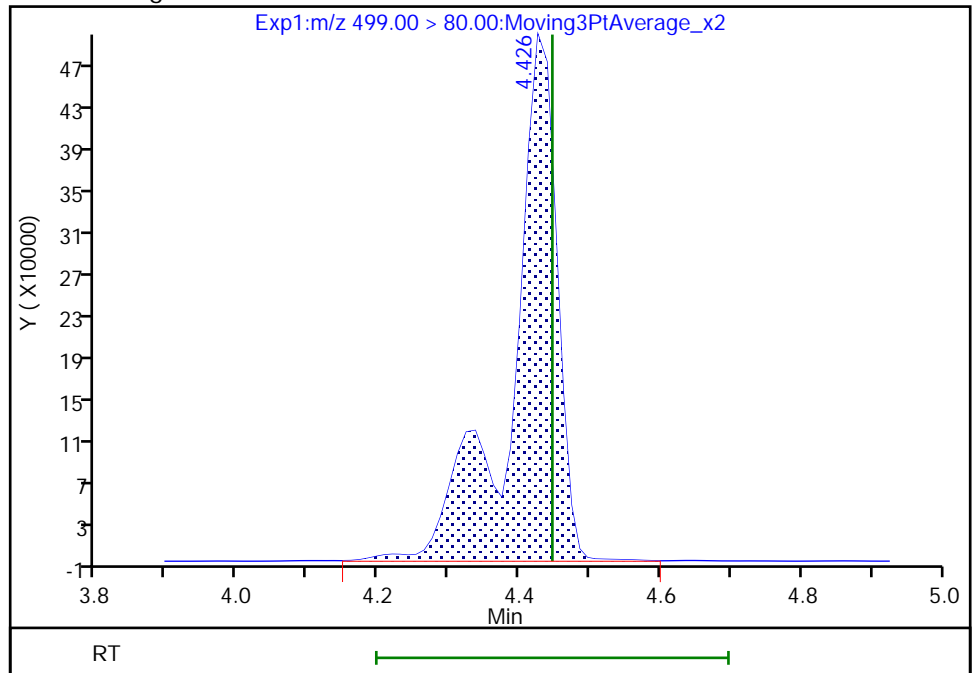
RT: 4.43
Area: 1705265
Amount: 0.681276
Amount Units: ng/ml

Processing Integration Results



RT: 4.43
Area: 2253625
Amount: 0.900354
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 18:12:19
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

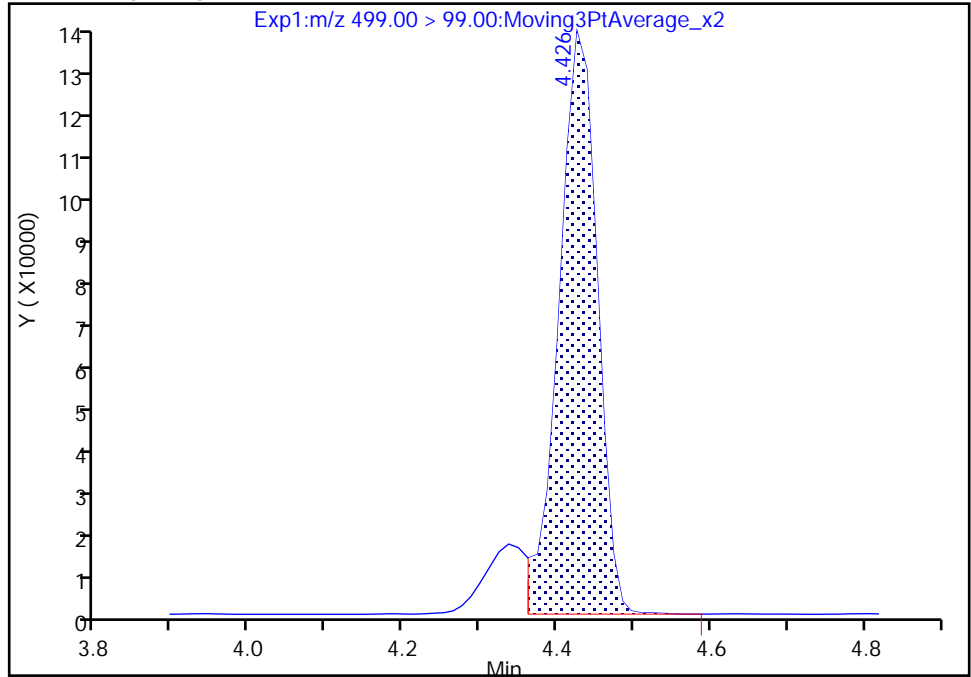
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Injection Date: 07-Oct-2021 12:13:06 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 53 Worklist Smp#: 107
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

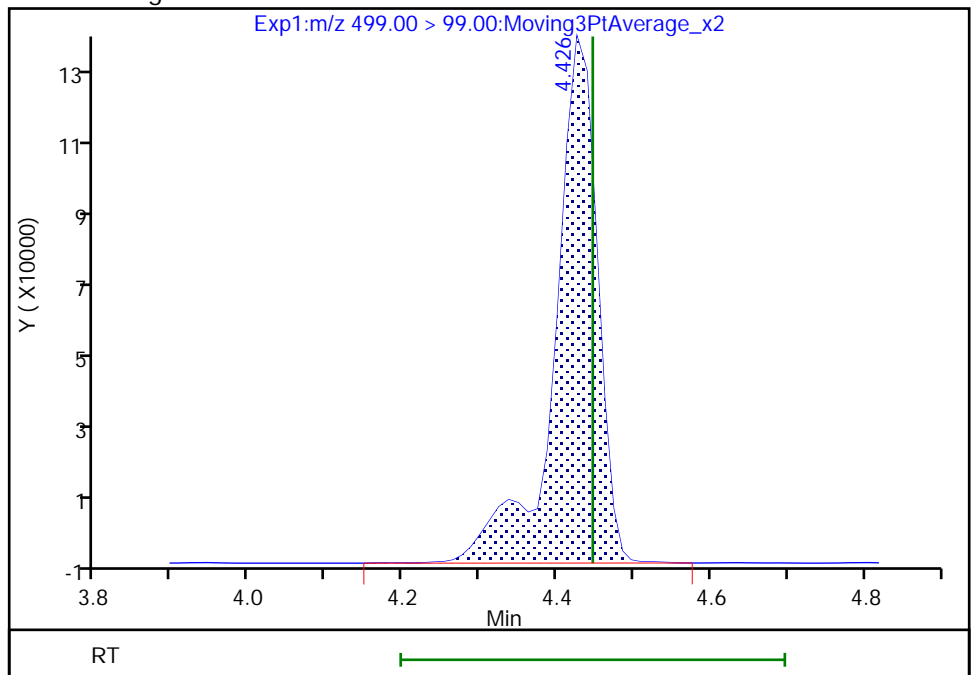
RT: 4.43
Area: 451558
Amount: 0.681276
Amount Units: ng/ml

Processing Integration Results



RT: 4.43
Area: 508561
Amount: 0.900354
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 18:12:26

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

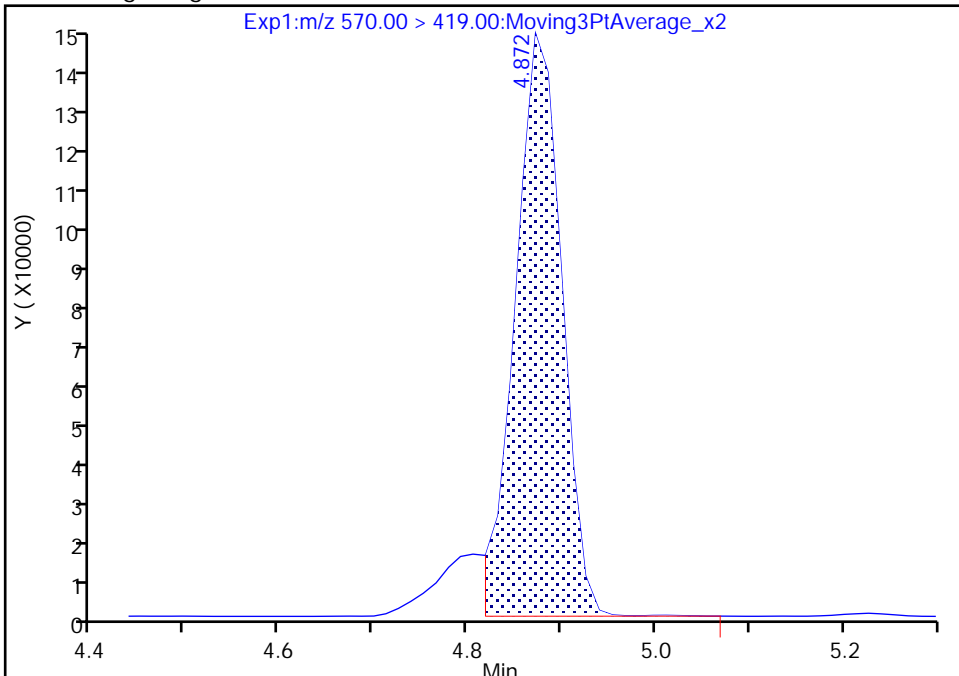
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Injection Date: 07-Oct-2021 12:13:06 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 53 Worklist Smp#: 107
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

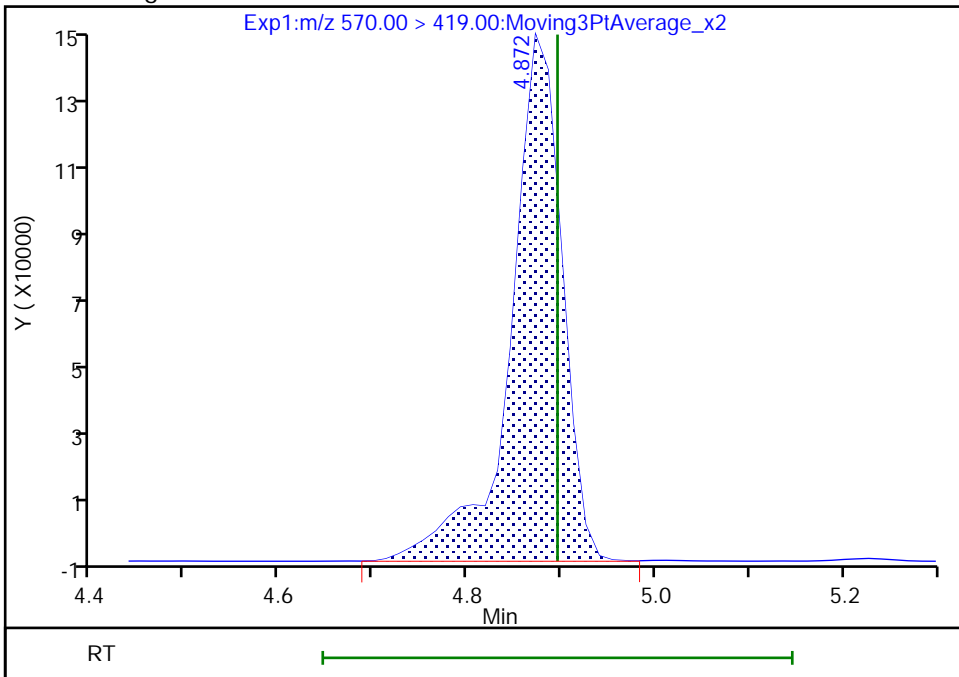
RT: 4.87
Area: 494037
Amount: 0.985150
Amount Units: ng/ml

Processing Integration Results



RT: 4.87
Area: 549823
Amount: 1.097231
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 18:12:40
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54568/115 Calibration Date: 10/07/2021 13:23
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _115.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7855	0.7425		2.36	2.50	-5.5	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.013	0.9246		2.28	2.50	-8.7	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.126	1.096		2.15	2.21	-2.7	40.0
4:2 FTS	AveID	2.500	2.479		2.32	2.34	-0.8	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8572	0.7613		2.22	2.50	-11.2	40.0
Perfluoropentanesulfonic acid (PFPeS)	L2ID		0.7935		2.17	2.35	-7.3	50.0
HFPO-DA	L2ID		1.310		2.37	2.50	-5.1	40.0
Perfluorohexanesulfonic acid (PFHxS)	L2ID		1.251		2.10	2.28	-7.6	40.0
Perfluoroheptanoic acid (PFHpA)	L2ID		0.998		2.37	2.50	-5.3	40.0
DONA	AveID	3.243	3.333		2.42	2.36	2.8	40.0
6:2 FTS	L2ID		1.951		2.31	2.37	-2.6	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9947	0.9735		2.33	2.38	-2.1	40.0
Perfluorooctanoic acid (PFOA)	L2ID		1.059		2.40	2.50	-4.0	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.100	1.041		2.20	2.32	-5.4	40.0
Perfluorononanoic acid (PFNA)	L2ID		0.8350		2.51	2.50	0.4	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	2.308	2.289		2.31	2.33	-0.8	40.0
Perfluorononanesulfonic acid (PFNS)	AveID	1.042	0.9713		2.24	2.40	-6.8	40.0
Perfluorodecanoic acid (PFDA)	L2ID		0.9081		2.41	2.50	-3.8	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9606	0.9310		2.42	2.50	-3.1	40.0
8:2 FTS	AveID	1.784	1.629		2.19	2.40	-8.7	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	L2ID		0.8933		2.44	2.50	-2.4	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.9574	0.9010		2.27	2.41	-5.9	40.0
Perfluoroundecanoic acid (PFUnA)	L2ID		0.9303		2.31	2.50	-7.8	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.9494	0.9098		2.40	2.50	-4.2	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.858	1.953		2.48	2.36	5.1	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9532		2.34	2.50	-6.3	40.0
10:2 FTS	AveID	2.221	2.272		2.47	2.41	2.3	40.0
2- (N-methylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.077		2.34	2.50	-6.6	40.0
NMeFOSA	AveID	1.047	0.9922		2.37	2.50	-5.2	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9879	0.9384		2.30	2.42	-5.0	40.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54568/115 Calibration Date: 10/07/2021 13:23
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _115.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTrIA)	L2ID		0.8164		2.32	2.50	-7.3	50.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.232		2.45	2.50	-2.1	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.168	1.113		2.38	2.50	-4.8	40.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.1156		2.30	2.50	-8.0	40.0
Perfluorohexadecanoic acid	Q2ID		1.057		2.48	2.50	-0.8	40.0
Perfluorooctadecanoic acid	AveID	0.9076	0.9190		2.53	2.50	1.3	40.0
13C4 PFBA	Ave	1.324	1.367		1.29	1.25	3.2	50.0
13C5 PFPeA	Ave	1.087	1.114		1.28	1.25	2.5	50.0
13C3 PFBS	Ave	0.7019	0.7369		1.22	1.16	5.0	50.0
M2-4:2 FTS	Ave	0.1052	0.0983		1.09	1.17	-6.6	50.0
13C2 PFHxA	Ave	1.116	1.178		1.32	1.25	5.5	50.0
13C3 HFPO-DA	Ave	0.5714	0.6032		1.32	1.25	5.6	50.0
18O2 PFHxS	Ave	0.4248	0.4459		1.24	1.18	5.0	50.0
13C4 PFHpA	Ave	1.113	1.140		1.28	1.25	2.4	50.0
13C4 PFOA	Ave	1.007	1.020		1.27	1.25	1.4	50.0
M2-6:2 FTS	Ave	0.1078	0.1005		1.11	1.19	-6.7	50.0
13C4 PFOS	Ave	0.5852	0.5620		1.15	1.20	-4.0	50.0
13C5 PFNA	Ave	1.279	1.245		1.22	1.25	-2.7	50.0
13C2 PFDA	Ave	1.296	1.181		1.14	1.25	-8.8	50.0
13C8 FOSA	Ave	0.8591	0.7100		1.03	1.25	-17.3	50.0
M2-8:2 FTS	Ave	0.1316	0.1074		0.977	1.20	-18.4	50.0
d3-NMeFOSAA	Ave	0.1774	0.1488		1.05	1.25	-16.1	50.0
13C2 PFUnA	Ave	1.237	1.156		1.17	1.25	-6.6	50.0
d5-NEtFOSAA	Ave	0.1705	0.1461		1.07	1.25	-14.3	50.0
13C2 PFDoA	Ave	1.319	1.375		1.30	1.25	4.2	50.0
d7-N-MeFOSE-M	Ave	0.1075	0.1334		1.55	1.25	24.1	50.0
d-N-MeFOSA-M	Ave	0.1120	0.1190		1.33	1.25	6.3	50.0
d9-N-EtFOSE-M	Ave	0.1146	0.1402		1.53	1.25	22.3	50.0
d-N-EtFOSA-M	Ave	0.0942	0.1028		1.36	1.25	9.1	50.0
13C2 PFTeDA	Ave	1.211	1.240		1.28	1.25	2.4	50.0
13C2 PFHxDA	Ave	0.8782	0.8947		1.27	1.25	1.9	50.0
13C8 PFOA	Ave	0.9886	1.006		1.27	1.25	1.8	50.0
13C8 PFOS	Ave	0.1256	0.1235		1.18	1.20	-1.7	50.0

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_115.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 07-Oct-2021 13:23:38 ALS Bottle#: 7 Worklist Smp#: 115
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-115 ccv
 Misc. Info.: Plate: 12 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 18:18:17 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 18:17:38

Ratio Calibration: None

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	2.812	2.801	0.011	0.679	6589997	1.29	103	12227	
2 Perfluorobutanoic acid	212.90 > 169.00	2.812	2.812	0.0	1.000	9785690	2.36	94.5	2834	
D 3 13C5 PFPeA	267.90 > 223.00	3.116	3.129	-0.013	0.752	5371115	1.28	102	12362	
4 Perfluoropentanoic acid	262.90 > 219.00	3.116	3.129	-0.013	1.000	9932139	2.28	91.3	4495	
D 6 13C3 PFBS	301.90 > 80.00	3.129	3.129	0.0	0.755	3303681	1.22	105	24785	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.143	3.143	0.0	1.004	6883859	2.15	Target=3.06	97.3	27256
	298.90 > 99.00	3.143	3.143	0.0	1.004	2541296		2.71(1.53-4.59)		7501
D 8 M2-4:2 FTS	329.00 > 81.00	3.423	3.423	0.0	0.826	442692	1.09	93.4	893	
7 4:2 FTS	327.00 > 307.00	3.423	3.423	0.0	1.000	2194933	2.32	99.2	2825	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.453	3.453	0.0	1.103	5288101	2.17	Target=3.47	92.7	18750
	349.00 > 99.00	3.453	3.453	0.0	1.103	1534282		3.45(1.73-5.20)		9047
D 9 13C2 PFHxA	315.00 > 270.00	3.453	3.469	-0.016	0.833	5676349	1.32	105	15249	
10 Perfluorohexanoic acid	313.00 > 269.00	3.453	3.469	-0.016	1.000	8642340	2.22	Target=9.74	88.8	4708
	313.00 > 119.00	3.453	3.469	-0.016	1.000	715284		12.08(4.87-14.61)		2014

D 12 13C3 HFPO-DA

287.00 > 169.00 3.548 3.561 -0.013 0.856 2907502 1.32

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.548	3.561	-0.013	1.000	7617015	2.37		94.9	5100	
D 17 18O2 PFHxS										
403.00 > 84.00	3.790	3.803	-0.013	0.915	2033270	1.24		105	11637	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.790	3.803	-0.013	1.000	4895064	2.10	Target=2.96	92.4	12226	M
399.00 > 99.00	3.790	3.803	-0.013	1.000	1424241		3.44(1.48-4.44)		4080	
D 14 13C4 PFHpA										
367.00 > 322.00	3.803	3.815	-0.012	0.918	5495634	1.28		102	16324	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.803	3.815	-0.012	1.000	10969132	2.37	Target=3.35	94.7	8435	
363.00 > 169.00	3.803	3.815	-0.012	1.000	3446601		3.18(1.67-5.02)		8464	
68 DONA										
377.00 > 251.00	3.827	3.840	-0.013	0.863	17013451	2.42	Target=1.49	103	44934	
377.00 > 85.00	3.827	3.840	-0.013	0.863	9411310		1.81(0.74-2.23)		2408	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.131	4.143	-0.012	0.931	5021428	2.33	Target=3.73	97.9	15200	
449.00 > 99.00	4.131	4.143	-0.012	0.931	1253331		4.01(1.87-5.61)		5281	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.131	4.143	-0.012	0.997	4850716	1.27		102	22291	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.131	4.143	-0.012	0.997	460388	1.11		93.3	2391	
19 6:2 FTS										
427.00 > 407.00	4.131	4.143	-0.012	1.000	1792526	2.31		97.4	2687	
D 21 13C4 PFOA										
417.00 > 372.00	4.131	4.155	-0.024	0.997	4918339	1.27		101	24102	
* 22 13C2 PFOA										
415.00 > 370.00	4.143	4.155	-0.012		4820381	1.25			22433	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.143	4.155	-0.012	1.003	10417972	2.40	Target=2.40	96.0	6771	
413.00 > 169.00	4.143	4.155	-0.012	1.003	4063782		2.56(1.20-3.61)		5784	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.434	4.447	-0.012	1.070	568988	1.18		98.3	4099	
D 25 13C4 PFOS										
503.00 > 80.00	4.434	4.447	-0.012	1.070	2589831	1.15		96.0	8590	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.434	4.447	-0.012	1.000	5233175	2.20	Target=3.83	94.6	4965	M
499.00 > 99.00	4.434	4.447	-0.012	1.000	1208633		4.33(1.91-5.74)		4445	M
D 27 13C5 PFNA										
468.00 > 423.00	4.458	4.470	-0.012	1.076	5999839	1.22		97.3	18095	
26 Perfluorononanoic acid										
463.00 > 419.00	4.458	4.470	-0.012	1.000	10019148	2.51	Target=3.68	100	5577	
463.00 > 169.00	4.458	4.470	-0.012	1.000	2177148		4.60(1.84-5.52)		1783	
63 9CIFOS										
531.00 > 351.00	4.584	4.596	-0.012	1.107	11557207	2.31		99.2	29907	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.709	4.722	-0.013	1.062	5052146	2.24	Target=3.97	93.2	11899	
549.00 > 99.00	4.709	4.722	-0.013	1.062	1281771		3.94(1.99-5.96)		7201	
D 34 13C8 FOSA										
506.00 > 78.00	4.736	4.736	0.0	1.143	3422642	1.03		82.7	4768	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.736	4.736	0.0	1.000	6373267	2.42		96.9	7446	
D 32 13C2 PFDA										
515.00 > 470.00	4.736	4.749	-0.013	1.143	5695137	1.14		91.2	16667	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.736	4.749	-0.013	1.000	10344007	2.40	Target=10.11	96.2	10363	
513.00 > 169.00	4.736	4.749	-0.013	1.000	888676		11.64(5.06-15.17)		367	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.763	-0.014	1.146	496082	0.9773		81.6	1564	
31 8:2 FTS										
527.00 > 507.00	4.749	4.763	-0.014	1.000	1616362	2.19		91.3	1226	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.883	4.896	-0.013	1.179	717403	1.05		83.9	1433	
36 NMeFOSAA										
570.00 > 419.00	4.883	4.896	-0.013	1.000	1281747	2.44		97.6	1935	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.979	4.993	-0.014	1.123	4705826	2.27	Target=3.80	94.1	13724	
599.00 > 99.00	4.979	4.993	-0.014	1.123	1268459		3.71(1.90-5.70)		4534	
D 39 13C2 PFUnA										
565.00 > 520.00	5.008	5.022	-0.014	1.209	5571269	1.17		93.4	13588	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.008	5.022	-0.014	1.000	10365980	2.30	Target=7.45	92.2	4574	
563.00 > 169.00	5.008	5.022	-0.014	1.000	1166362		8.89(3.78-11.33)		500	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.022	5.036	-0.014	1.212	704214	1.07		85.7	2563	
40 NEtFOSA										
584.00 > 419.00	5.022	5.036	-0.014	1.000	1281407	2.40		95.8	525	
57 11C1FOS										
631.00 > 451.00	5.106	5.119	-0.013	1.151	9969547	2.48		105	20197	
D 43 13C2 PFDoA										
615.00 > 570.00	5.237	5.251	-0.014	1.264	6626565	1.30		104	13499	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.237	5.251	-0.014	1.000	12633297	2.34	Target=5.33	93.7	10070	
613.00 > 169.00	5.237	5.251	-0.014	1.000	1812609		6.97(2.66-7.99)		1675	
50 10:2 FTS										
627.00 > 607.00	5.266	5.266	0.0	1.109	2267990	2.46		102	4924	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.295	5.281	0.014	1.278	643162	1.55		124	436	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.310	5.295	0.015	1.282	573583	1.33		106	55.4	
49 N-MeFOSE-M										
616.00 > 59.00	5.310	5.295	0.015	1.003	1385284	2.34		93.4	1795	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.310	5.295	0.015	1.000	1138248	2.37		94.8	885	
54 PFDoS										
699.00 > 80.00	5.423	5.436	-0.013	1.223	4921477	2.30	Target=4.32	95.0	9678	
699.00 > 99.00	5.423	5.436	-0.013	1.223	1205856		4.08(2.19-6.58)		4996	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.449	5.436	0.013	1.315	675904	1.53		122	587	
62 N-EtFOSE-M										
630.00 > 59.00	5.462	5.449	0.013	1.002	1665729	2.45		97.9	3905	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.475	5.449	0.026	1.322	495350	1.36		109	655	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.449	5.462	-0.013	1.041	10819304	2.32	Target=5.66	92.7	9778	
663.00 > 169.00	5.449	5.462	-0.013	1.041	1776496		6.09(2.83-8.48)		2409	
56 N-EtFOSA-M										
526.00 > 169.00	5.475	5.462	0.013	1.000	1102178	2.38		95.2	812	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.638	5.637	0.001	1.361	5976850	1.28		102	11276	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.638	5.637	0.001	1.000	1381848	2.30	Target=1.07	92.0	1825	
713.00 > 219.00	5.623	5.637	-0.014	0.997	1327315		1.04(0.53-1.60)		2348	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.948	5.948	0.0	1.000	9117002	2.48	Target=7.50	99.2	8143	
813.00 > 169.00	5.948	5.948	0.0	1.000	1073690		8.49(3.75-11.26)		3433	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.948	5.948	0.0	1.436	4312758	1.27		102	9639	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.211	6.221	-0.010	1.044	7926763	2.53	Target=9.98	101	5959	
913.00 > 169.00	6.211	6.221	-0.010	1.044	673931		11.76(5.14-15.41)		2906	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L5PFC2_00002

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_115.d

Injection Date: 07-Oct-2021 13:23:38

Instrument ID: LCA

Lims ID: CCV

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 7

Worklist Smp#: 115

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

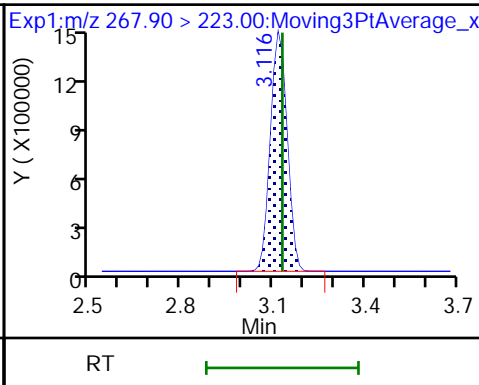
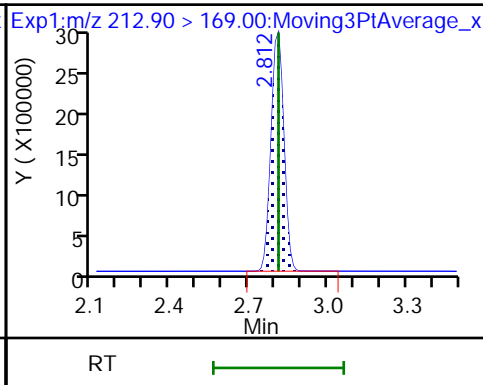
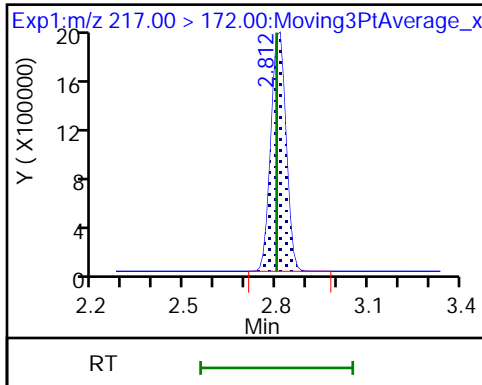
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

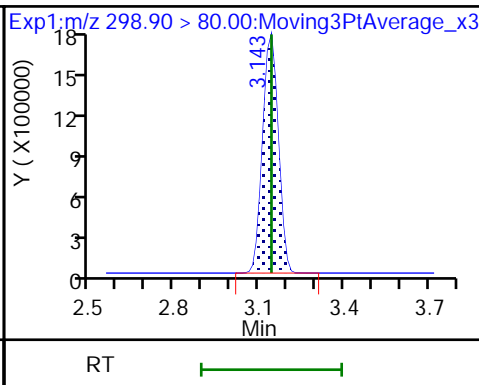
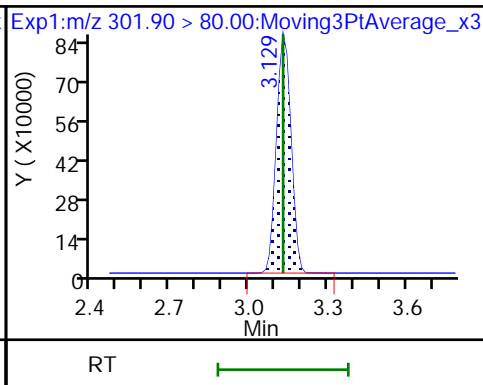
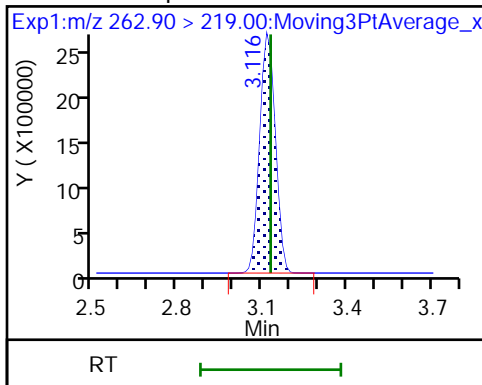
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

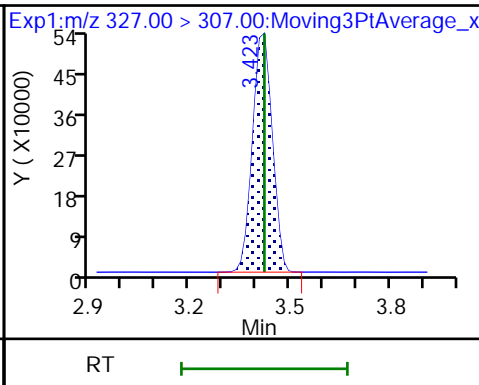
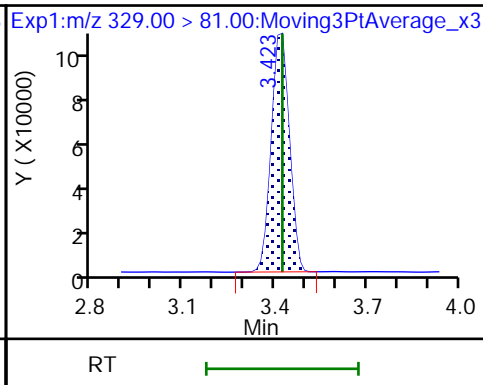
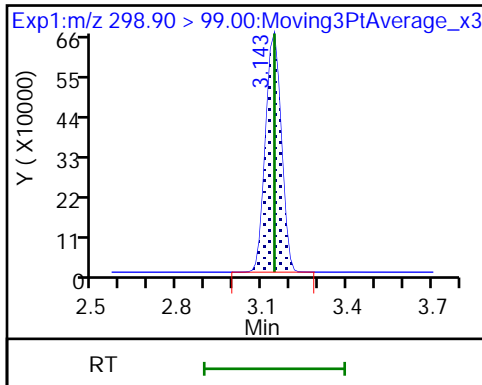
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

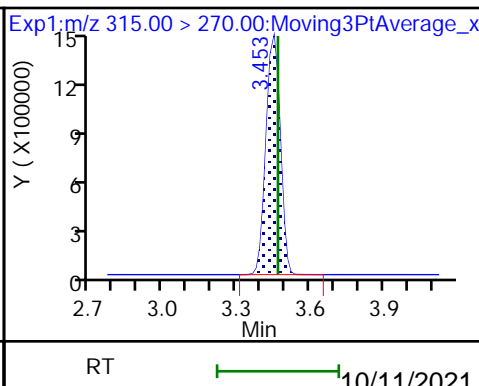
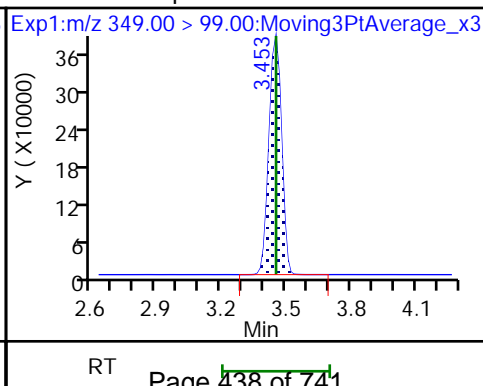
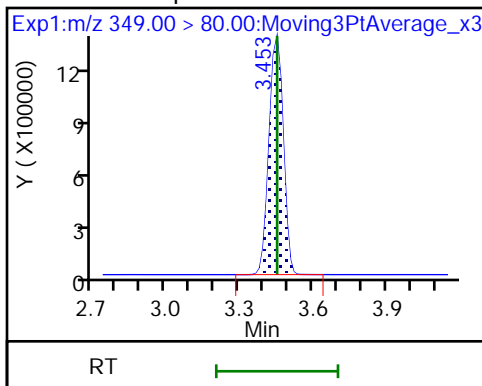
7 4:2 FTS

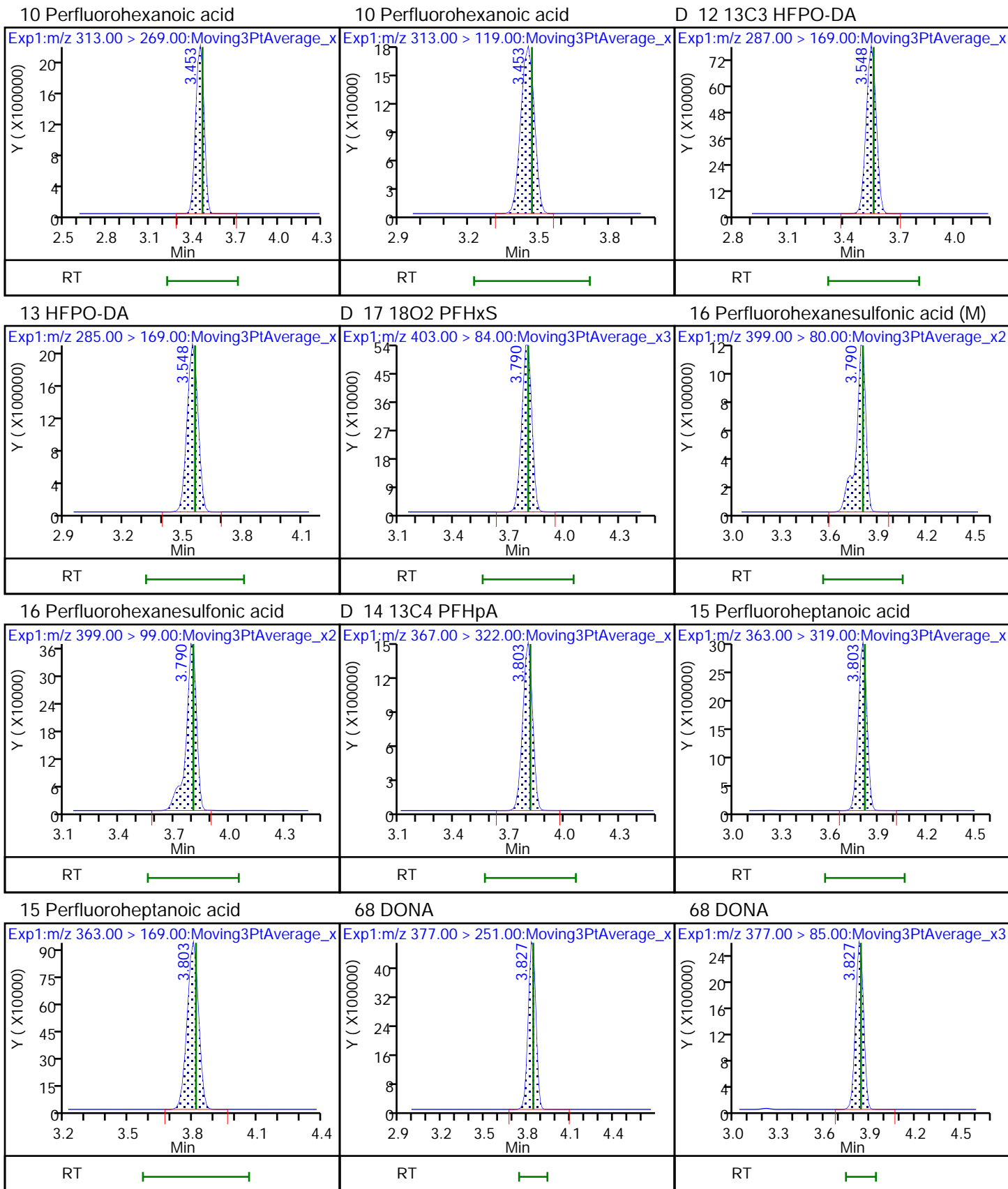


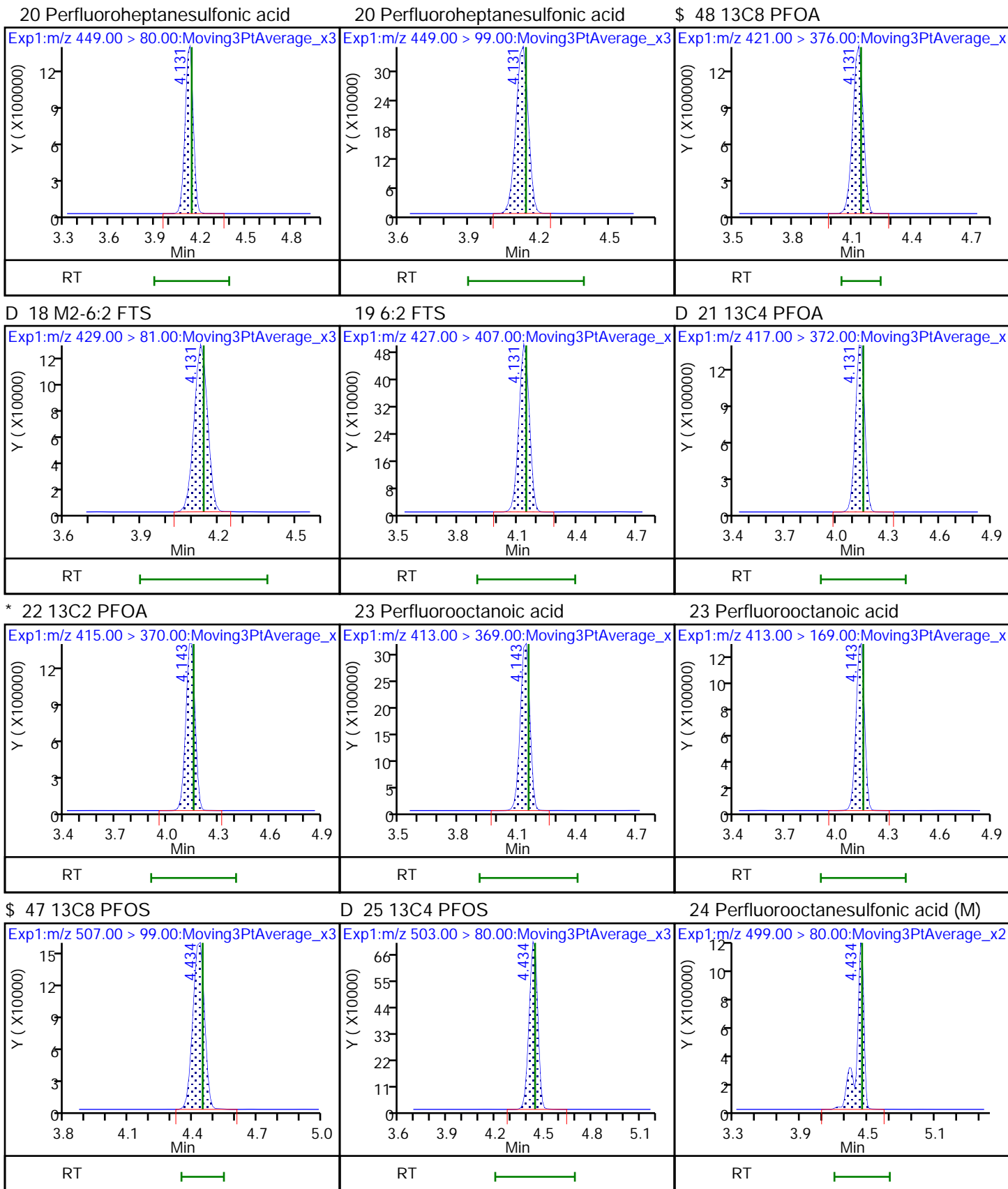
11 Perfluoropentanesulfonic acid

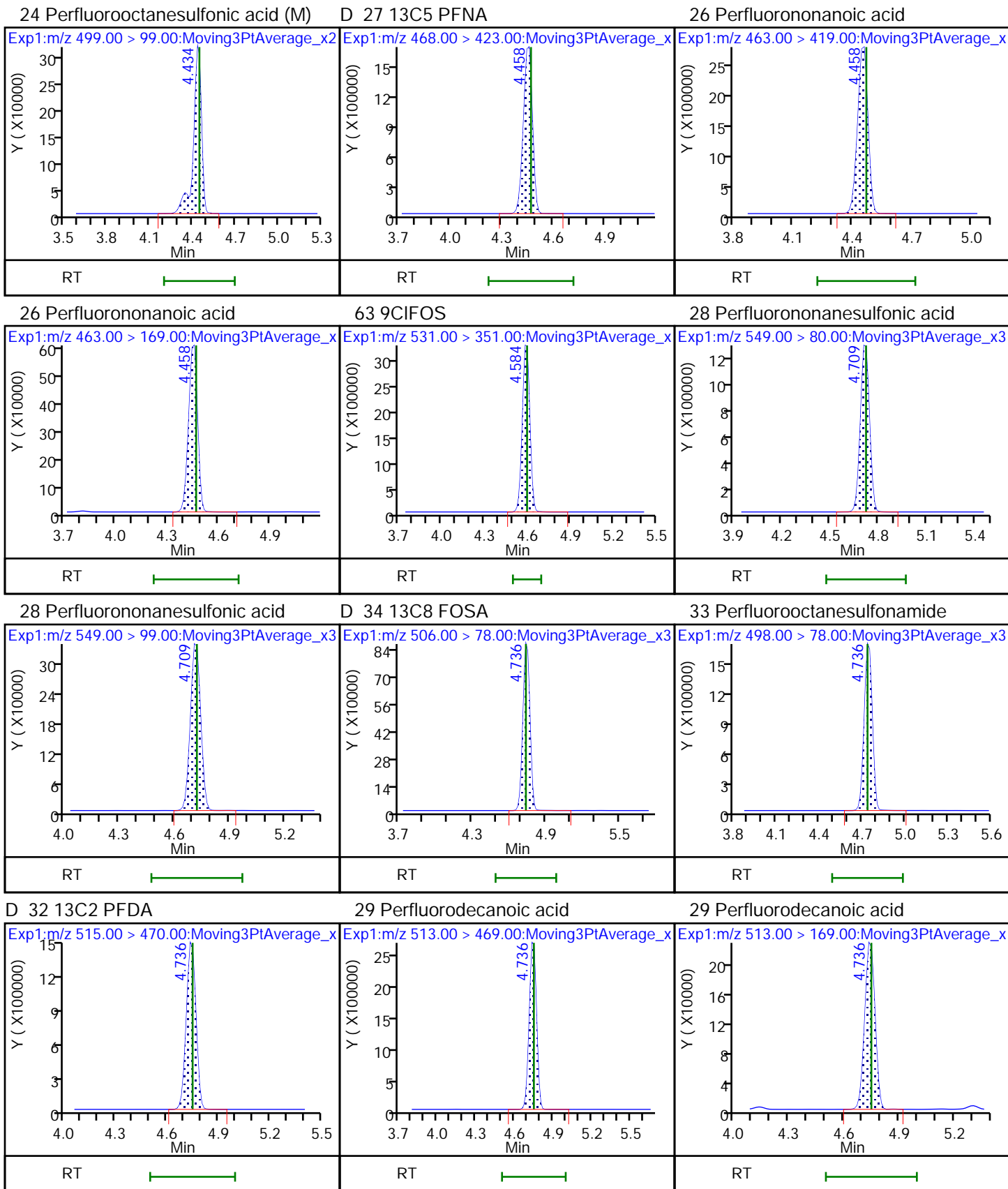
11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA





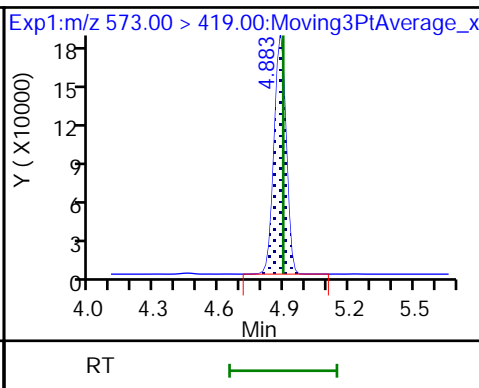
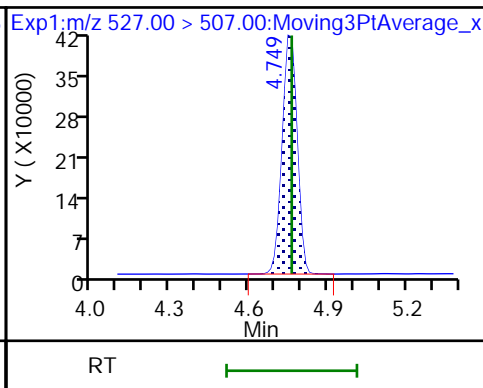
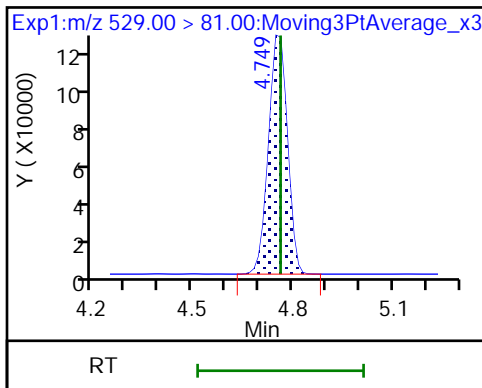




D 30 M2-8:2 FTS

31 8:2 FTS

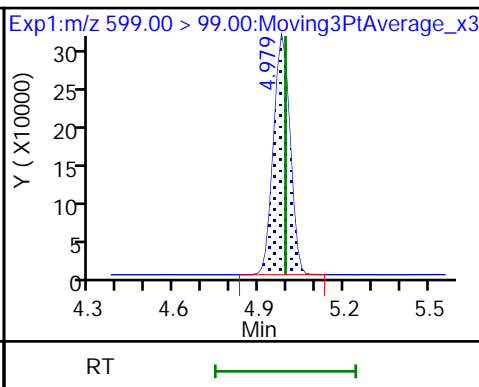
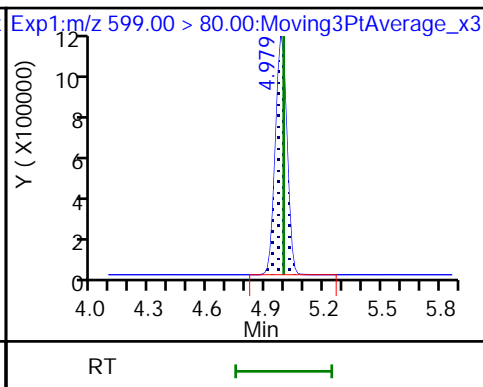
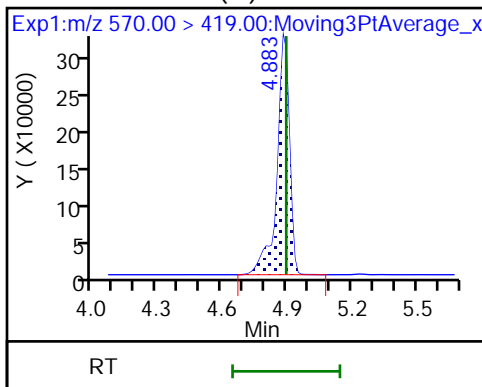
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

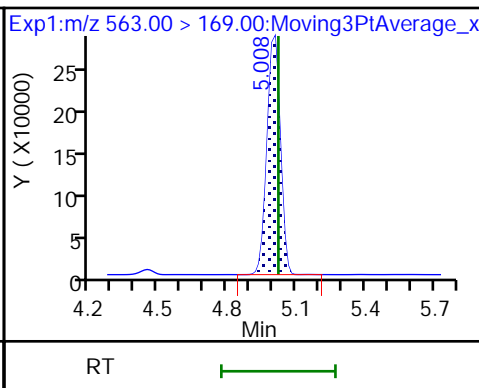
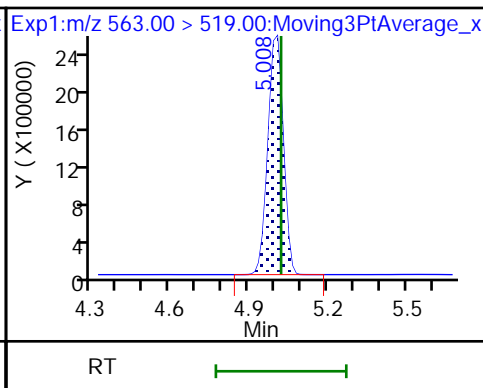
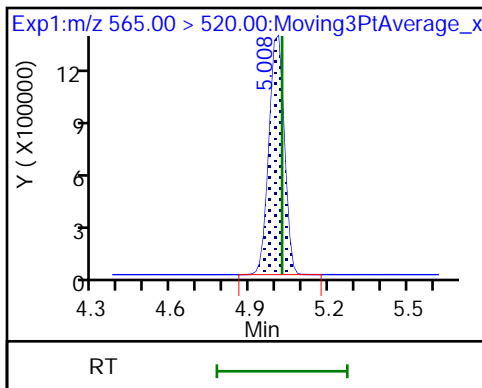
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

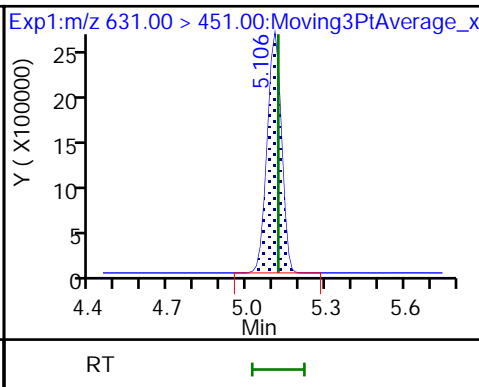
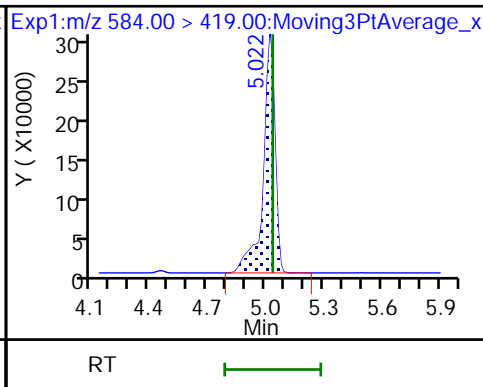
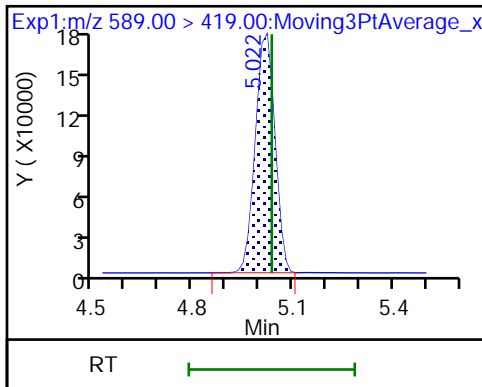
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA

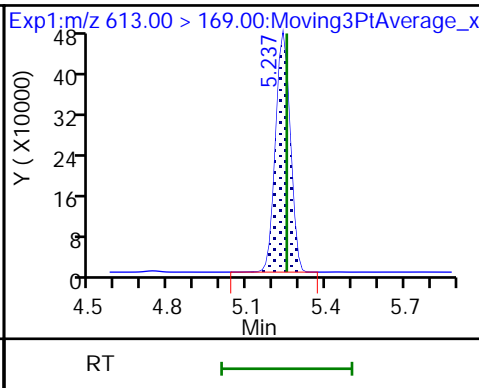
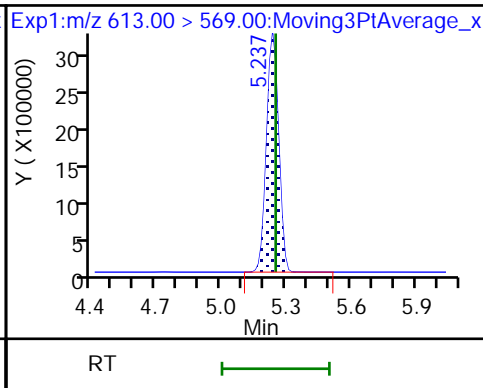
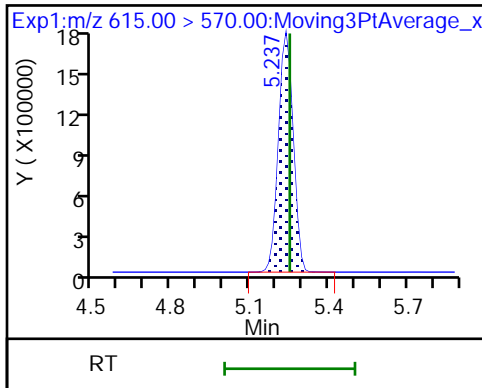
57 11CIFOS



D 43 13C2 PFDaA

42 Perfluorododecanoic acid

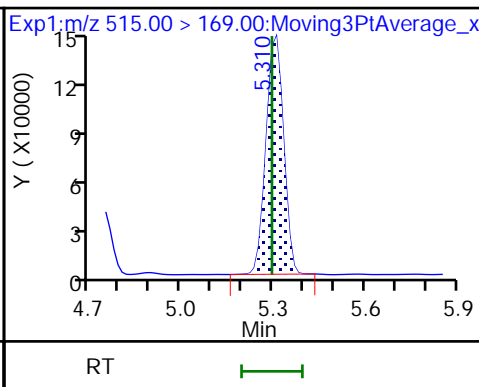
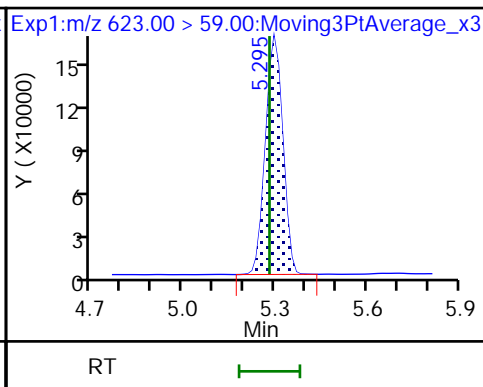
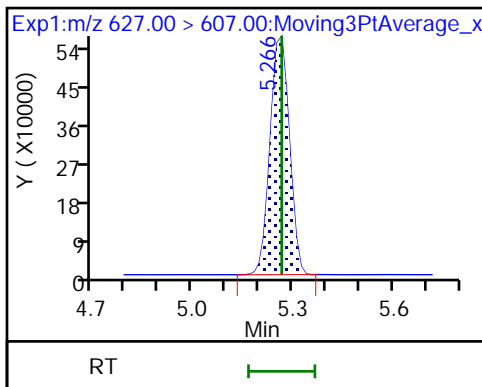
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

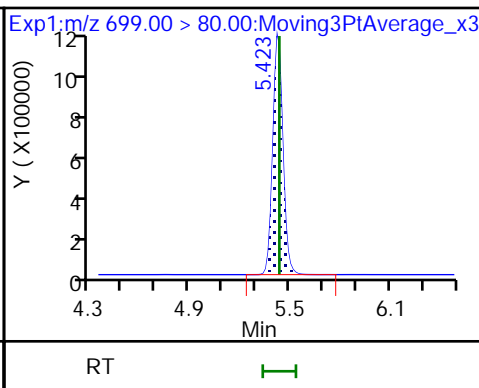
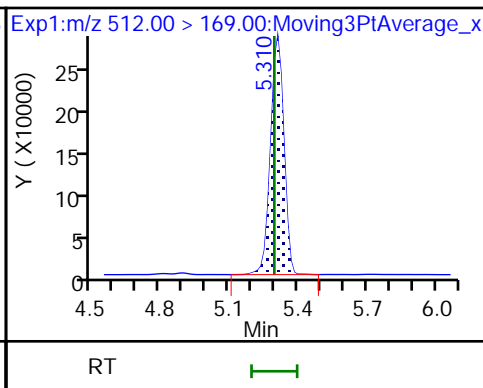
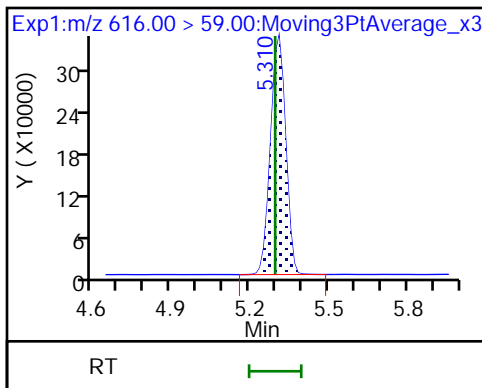
D 58 d-N-MeFOSA-M



49 N-MeFOSE-M

61 NMeFOSA

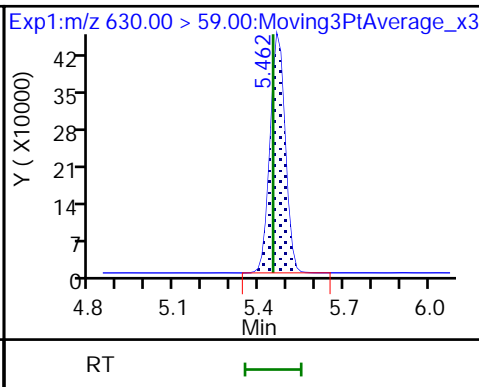
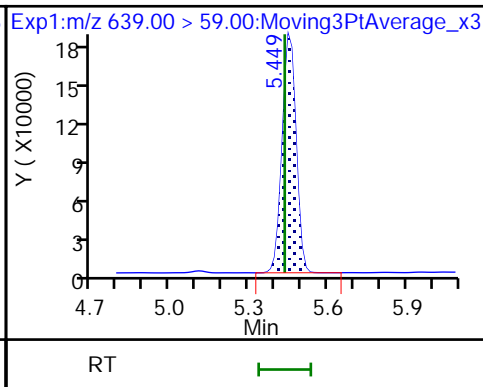
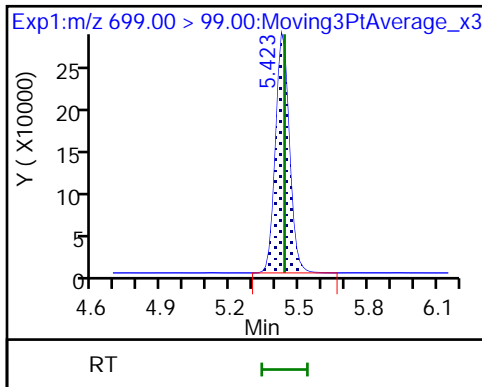
54 PFDoS



54 PFDoS

D 53 d9-N-EtFOSE-M

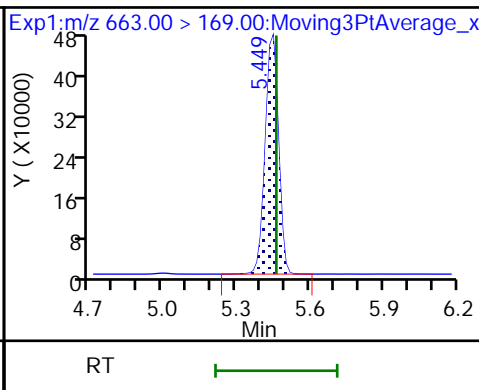
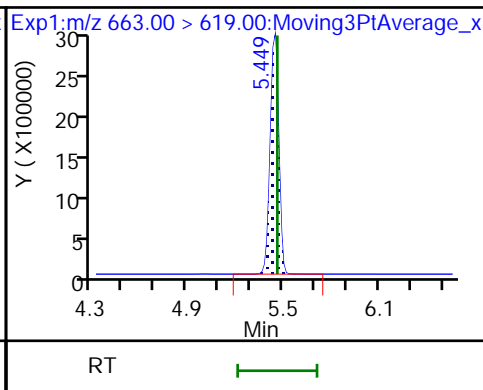
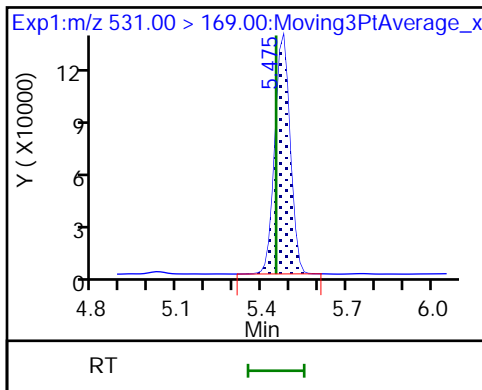
62 N-EtFOSE-M



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid

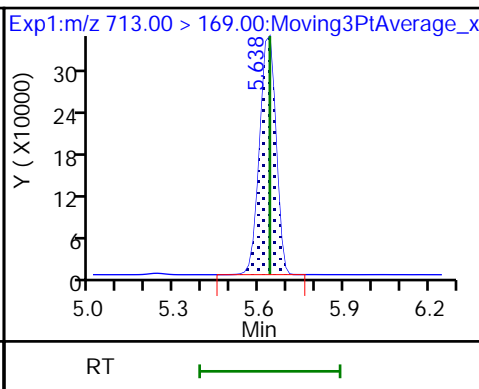
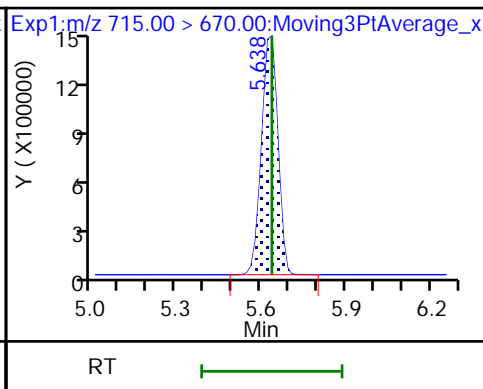
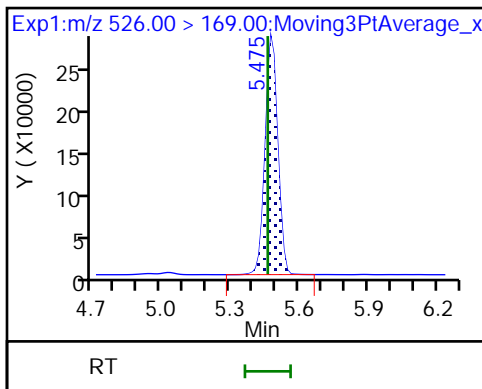
44 Perfluorotridecanoic acid



56 N-EtFOSA-M

D 46 13C2 PFTeDA

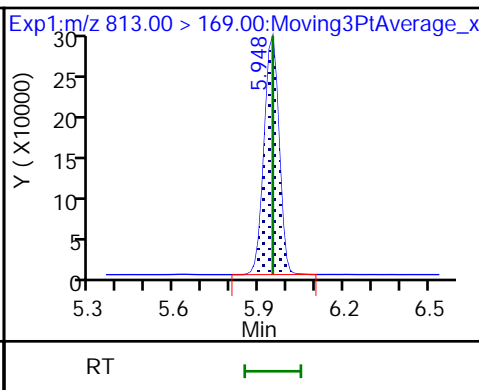
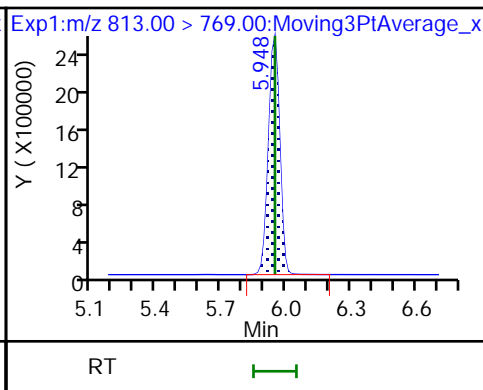
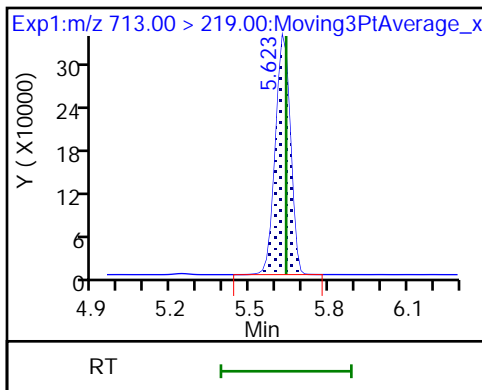
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

55 Perfluorohexadecanoic acid

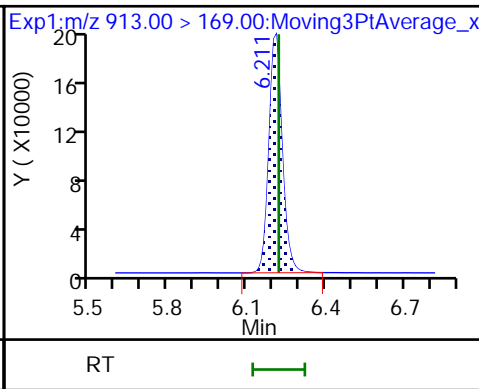
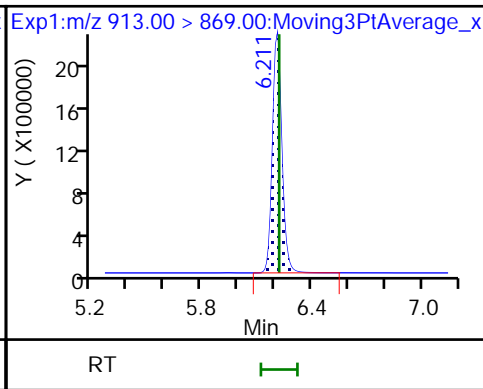
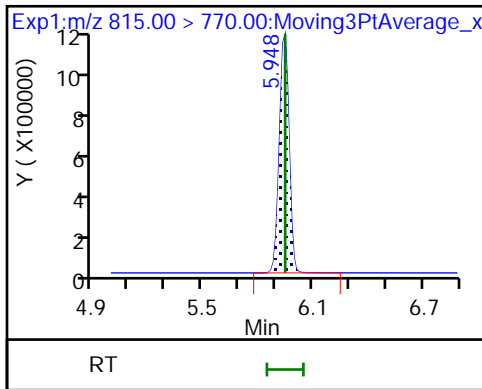
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid



Eurofins TestAmerica, Knoxville

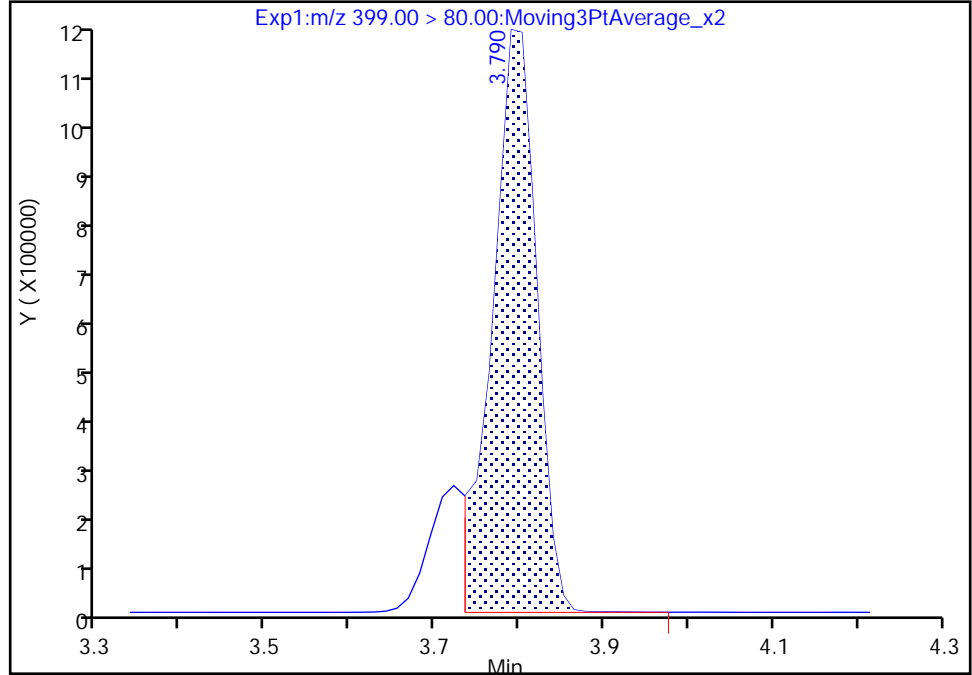
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Injection Date: 07-Oct-2021 13:23:38 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 115
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

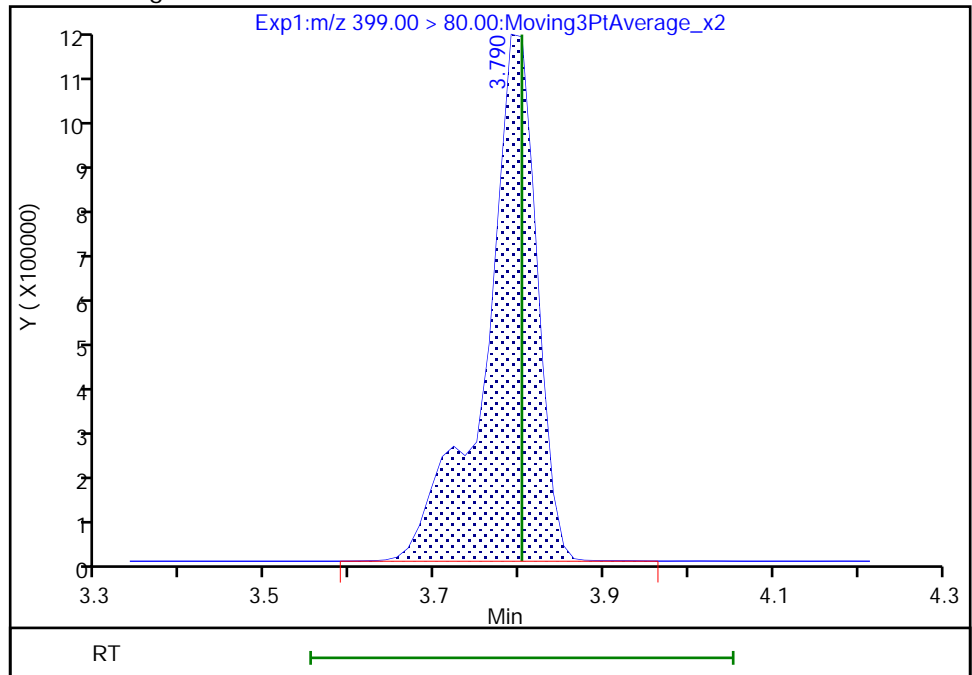
RT: 3.79
Area: 4188252
Amount: 1.797722
Amount Units: ng/ml

Processing Integration Results



RT: 3.79
Area: 4895064
Amount: 2.101966
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 18:17:01
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

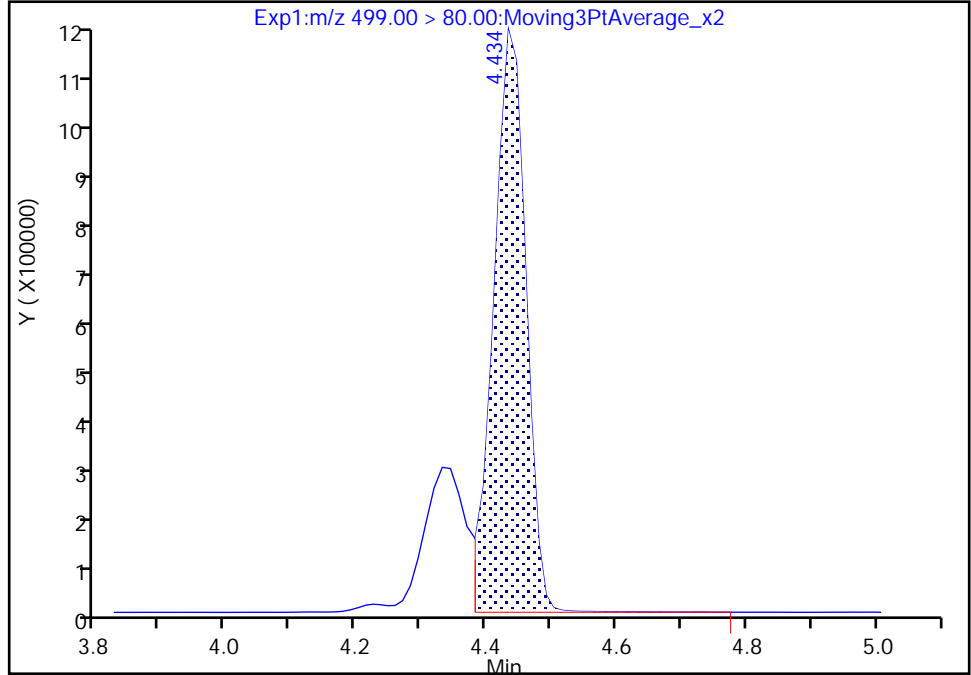
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_115.d
Injection Date: 07-Oct-2021 13:23:38 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 115
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC - ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

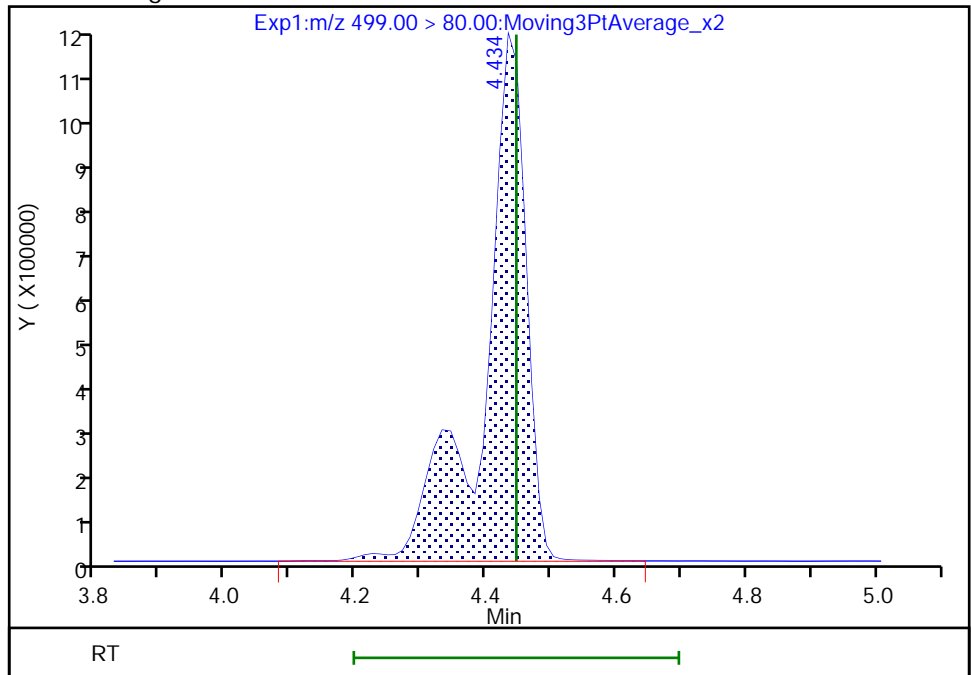
RT: 4.43
Area: 3924595
Amount: 1.646620
Amount Units: ng/ml

Processing Integration Results



RT: 4.43
Area: 5233175
Amount: 2.195654
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 18:17:12
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

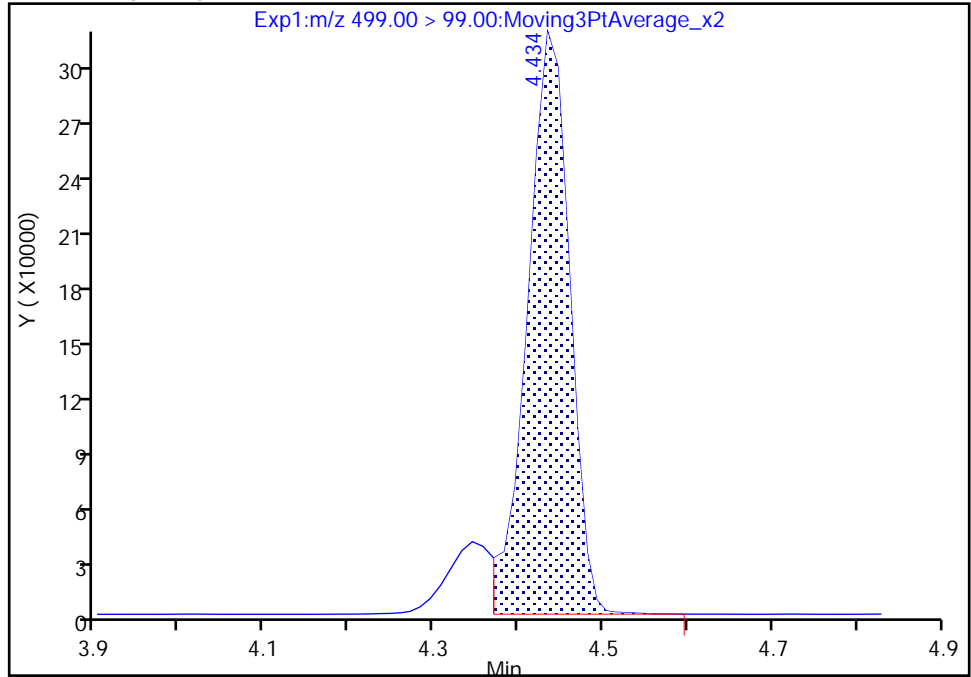
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Injection Date: 07-Oct-2021 13:23:38 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 115
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

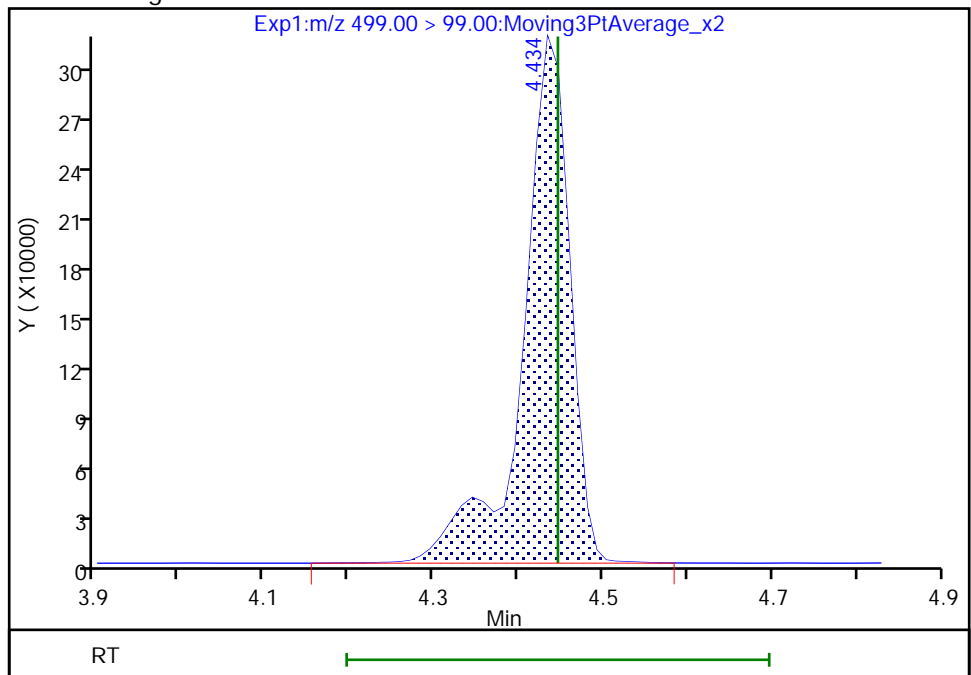
RT: 4.43
Area: 1072484
Amount: 1.646620
Amount Units: ng/ml

Processing Integration Results



RT: 4.43
Area: 1208633
Amount: 2.195654
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 18:17:16

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

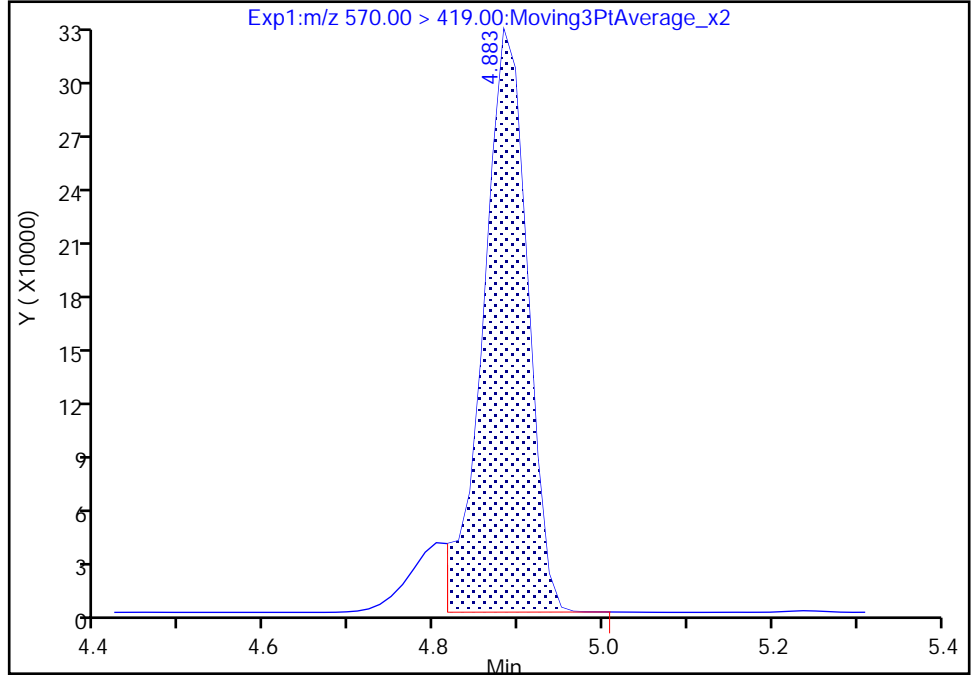
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_115.d
Injection Date: 07-Oct-2021 13:23:38 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 115
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

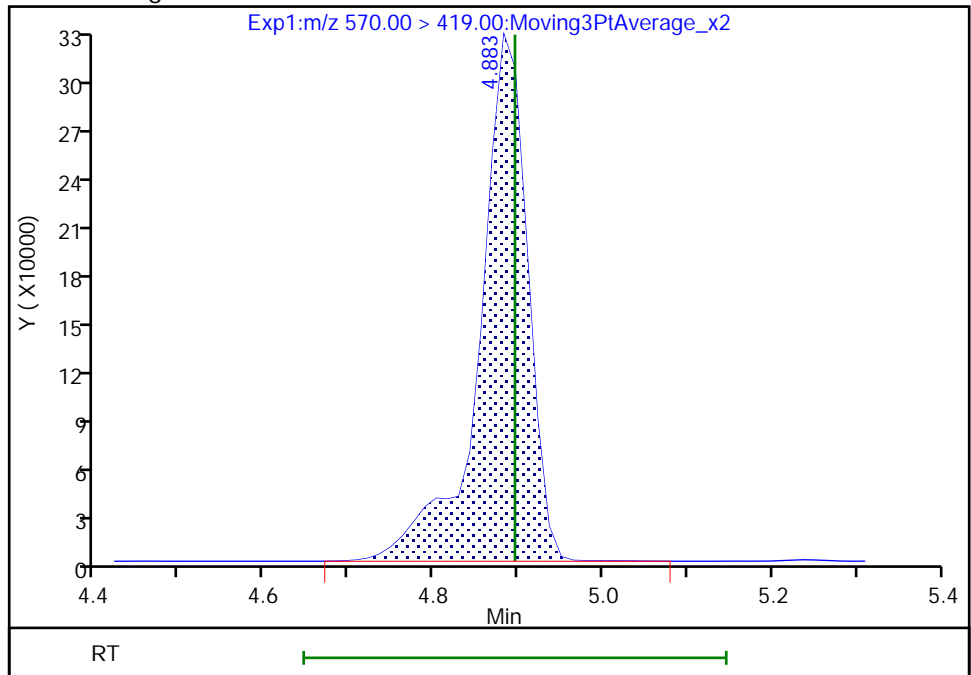
RT: 4.88
Area: 1162102
Amount: 2.210775
Amount Units: ng/ml

Processing Integration Results



RT: 4.88
Area: 1281747
Amount: 2.439153
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 18:17:29
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab Sample ID: CCVL 140-54642/6 Calibration Date: 10/08/2021 12:34
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _006.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7855	0.8245		0.0525	0.0500	5.0	50.0
Perfluoropentanoic acid (PFPeA)	AveID	1.013	1.058		0.0522	0.0500	4.4	50.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.126	1.226		0.0481	0.0442	8.9	50.0
4:2 FTS	AveID	2.500	2.802		0.0524	0.0467	12.1	50.0
Perfluoropentanesulfonic acid (PFPeS)	L2ID		0.9627		0.0476	0.0469	1.5	50.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8572	0.9083		0.0530	0.0500	6.0	50.0
HFPO-DA	L2ID		1.585		0.0513	0.0500	2.6	50.0
Perfluorohexanesulfonic acid (PFHxS)	L2ID		1.629		0.0498	0.0455	9.4	50.0
Perfluoroheptanoic acid (PFHpA)	L2ID		1.121		0.0486	0.0500	-2.9	50.0
DONA	AveID	3.243	3.272		0.0475	0.0471	0.9	50.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9947	1.063		0.0509	0.0476	6.8	50.0
6:2 FTS	L2ID		2.311		0.0478	0.0474	0.9	50.0
Perfluorooctanoic acid (PFOA)	L2ID		1.306		0.0507	0.0500	1.5	50.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.100	1.127		0.0476	0.0464	2.5	50.0
Perfluorononanoic acid (PFNA)	L2ID		0.8983		0.0488	0.0500	-2.5	50.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	2.308	2.508		0.0506	0.0466	8.7	50.0
Perfluorononanesulfonic acid (PFNS)	AveID	1.042	1.082		0.0498	0.0480	3.8	50.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9606	1.002		0.0522	0.0500	4.3	50.0
Perfluorodecanoic acid (PFDA)	L2ID		1.255		0.0560	0.0500	11.9	50.0
8:2 FTS	AveID	1.784	1.846		0.0496	0.0479	3.5	50.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	L2ID		0.9303		0.0435	0.0500	-13.0	50.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.9574	1.008		0.0507	0.0482	5.3	50.0
Perfluoroundecanoic acid (PFUnA)	L2ID		1.051		0.0470	0.0500	-6.0	50.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.9494	1.099		0.0579	0.0500	15.7	50.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.858	1.947		0.0493	0.0471	4.8	50.0
Perfluorododecanoic acid (PFDoA)	Q2ID		1.079		0.0488	0.0500	-2.5	50.0
10:2 FTS	AveID	2.221	2.963		0.0643	0.0482	33.4	50.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.290		0.0480	0.0500	-4.0	50.0
NMeFOSA	AveID	1.047	1.129		0.0539	0.0500	7.8	50.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9879	1.022		0.0501	0.0484	3.4	50.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1

SDG No.: _____

Lab Sample ID: CCVL 140-54642/6 Calibration Date: 10/08/2021 12:34

Instrument ID: LCA Calib Start Date: 10/05/2021 22:00

GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53

Lab File ID: _006.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.432		0.0525	0.0500	4.9	50.0
Perfluorotridecanoic acid (PFTriA)	L2ID		1.021		0.0521	0.0500	4.2	50.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.168	1.172		0.0502	0.0500	0.3	50.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.1453		0.0509	0.0500	1.8	50.0
Perfluorohexadecanoic acid	Q2ID		1.407		0.0512	0.0500	2.3	50.0
Perfluorooctadecanoic acid	AveID	0.9076	1.027		0.0566	0.0500	13.1	50.0
13C4 PFBA	Ave	1.324	1.224		1.16	1.25	-7.6	50.0
13C5 PFPeA	Ave	1.087	1.045		1.20	1.25	-3.8	50.0
13C3 PFBS	Ave	0.7019	0.6454		1.07	1.16	-8.0	50.0
M2-4:2 FTS	Ave	0.1052	0.1021		1.13	1.17	-3.0	50.0
13C2 PFHxA	Ave	1.116	1.049		1.17	1.25	-6.1	50.0
13C3 HFPO-DA	Ave	0.5714	0.5272		1.15	1.25	-7.7	50.0
18O2 PFHxS	Ave	0.4248	0.3874		1.08	1.18	-8.8	50.0
13C4 PFHpA	Ave	1.113	1.072		1.20	1.25	-3.7	50.0
13C4 PFOA	Ave	1.007	0.9822		1.22	1.25	-2.4	50.0
M2-6:2 FTS	Ave	0.1078	0.1034		1.14	1.19	-4.1	50.0
13C4 PFOS	Ave	0.5852	0.5336		1.09	1.20	-8.8	50.0
13C5 PFNA	Ave	1.279	1.203		1.18	1.25	-6.0	50.0
13C8 FOSA	Ave	0.8591	0.8031		1.17	1.25	-6.5	50.0
13C2 PFDA	Ave	1.296	1.135		1.10	1.25	-12.4	50.0
M2-8:2 FTS	Ave	0.1316	0.1208		1.10	1.20	-8.2	50.0
d3-NMeFOSAA	Ave	0.1774	0.1769		1.25	1.25	-0.3	50.0
13C2 PFUnA	Ave	1.237	1.226		1.24	1.25	-0.9	50.0
d5-NEtFOSAA	Ave	0.1705	0.1796		1.32	1.25	5.3	50.0
13C2 PFDoA	Ave	1.319	1.328		1.26	1.25	0.6	50.0
d7-N-MeFOSE-M	Ave	0.1075	0.1242		1.44	1.25	15.4	50.0
d-N-MeFOSA-M	Ave	0.1120	0.1048		1.17	1.25	-6.4	50.0
d9-N-EtFOSE-M	Ave	0.1146	0.1365		1.49	1.25	19.1	50.0
d-N-EtFOSA-M	Ave	0.0942	0.0960		1.27	1.25	1.9	50.0
13C2 PFTeDA	Ave	1.211	1.128		1.16	1.25	-6.9	50.0
13C2 PFHxDA	Ave	0.8782	0.8546		1.22	1.25	-2.7	50.0
13C8 PFOA	Ave	0.9886	0.9099		1.15	1.25	-8.0	50.0
13C8 PFOS	Ave	0.1256	0.1135		1.08	1.20	-9.6	50.0

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_006.d
 Lims ID: CCVL
 Client ID:
 Sample Type: CCVL
 Inject. Date: 08-Oct-2021 12:34:37 ALS Bottle#: 6 Worklist Smp#: 6
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0021001-006 ccvl
 Misc. Info.: Plate: 7 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15
 Method: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 11:11:06 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 10:01:21

Ratio Calibration: None

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	2.812	2.812	0.0	0.679	6744124	1.16	92.4	16668	
2 Perfluorobutanoic acid	212.90 > 169.00	2.812	2.812	0.0	1.000	222414	0.0525	105	55.5	
D 3 13C5 PFPeA	267.90 > 223.00	3.130	3.129	0.001	0.755	5760644	1.20	96.2	16888	
4 Perfluoropentanoic acid	262.90 > 219.00	3.130	3.129	0.001	1.000	243718	0.0522	104	90.9	
D 6 13C3 PFBS	301.90 > 80.00	3.143	3.143	0.0	0.759	3307787	1.07	92.0	31011	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.143	3.143	0.0	1.000	154159	0.0481	Target=3.06	109	1054
	298.90 > 99.00	3.143	3.143	0.0	1.000	55918		2.76(1.53-4.59)		242
D 8 M2-4:2 FTS	329.00 > 81.00	3.423	3.423	0.0	0.826	525549	1.13	97.0	1048	
7 4:2 FTS	327.00 > 307.00	3.423	3.423	0.0	1.000	58911	0.0524	112	530	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.453	3.469	-0.016	1.099	128470	0.0476	Target=3.47	102	1356
	349.00 > 99.00	3.469	3.469	0.0	1.104	35796		3.59(1.73-5.20)		531
D 9 13C2 PFHxA	315.00 > 270.00	3.469	3.469	0.0	0.837	5778884	1.17	93.9	20259	
10 Perfluorohexanoic acid	313.00 > 269.00	3.469	3.469	0.0	1.000	209958	0.0530	Target=9.74	106	139
	313.00 > 119.00	3.469	3.469	0.0	1.000	19624		10.70(4.87-14.61)		75.3
D 12 13C3 HFPO-DA	287.00 > 169.00	3.562	3.561	0.001	0.860	2905275	1.15	92.3	10683	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.562	3.561	0.001	1.000	184200	0.0513		103	277	
D 17 18O2 PFHxS										
403.00 > 84.00	3.803	3.803	0.0	0.918	2019612	1.08		91.2	17366	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.803	3.803	0.0	1.000	126599	0.0498	Target=2.96	109	726	M
399.00 > 99.00	3.803	3.803	0.0	1.000	35037		3.61(1.48-4.44)		225	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.815	3.815	0.0	0.921	5909902	1.20		96.3	38735	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.815	3.815	0.0	1.000	264902	0.0486	Target=3.35	97.1	351	
363.00 > 169.00	3.815	3.815	0.0	1.000	81610		3.25(1.67-5.02)		315	
68 DONA										
377.00 > 251.00	3.840	3.840	0.0	0.864	362478	0.0475	Target=1.49	101	1412	
377.00 > 85.00	3.840	3.840	0.0	0.864	207693		1.75(0.74-2.23)		1356	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.131	4.143	-0.012	0.929	118982	0.0508	Target=3.73	107	894	
449.00 > 99.00	4.143	4.143	0.0	0.932	32894		3.62(1.87-5.61)		337	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.143	4.143	0.0	1.000	5014372	1.15		92.0	25947	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.143	4.143	0.0	1.000	541262	1.14		95.9	3134	
19 6:2 FTS										
427.00 > 407.00	4.143	4.143	0.0	1.000	49936	0.0478		101	324	
D 21 13C4 PFOA										
417.00 > 372.00	4.143	4.155	-0.012	1.000	5412614	1.22		97.6	18192	
* 22 13C2 PFOA										
415.00 > 370.00	4.143	4.155	-0.012		5510821	1.25			26989	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.143	4.155	-0.012	1.000	282663	0.0507	Target=2.40	101	154	
413.00 > 169.00	4.155	4.155	0.0	1.003	107807		2.62(1.20-3.61)		257	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.435	4.447	-0.012	1.070	598077	1.08		90.4	3994	
D 25 13C4 PFOS										
503.00 > 80.00	4.447	4.447	0.0	1.073	2811019	1.09		91.2	11961	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.447	4.447	0.0	1.000	123042	0.0476	Target=3.83	103	700	M
499.00 > 99.00	4.447	4.447	0.0	1.000	33931		3.63(1.91-5.74)		195	M
D 27 13C5 PFNA										
468.00 > 423.00	4.458	4.470	-0.012	1.076	6626828	1.17		94.0	26562	
26 Perfluorononanoic acid										
463.00 > 419.00	4.458	4.470	-0.012	1.000	238121	0.0488	Target=3.68	97.5	253	
463.00 > 169.00	4.470	4.470	0.0	1.003	52323		4.55(1.84-5.52)		166	
63 9CIFOS										
531.00 > 351.00	4.596	4.596	0.0	1.109	274870	0.0506		109	720	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.723	4.722	0.001	1.062	122203	0.0498	Target=3.97	104	605	
549.00 > 99.00	4.723	4.722	0.001	1.062	33359		3.66(1.99-5.96)		235	
D 34 13C8 FOSA										
506.00 > 78.00	4.736	4.736	0.0	1.143	4425782	1.17		93.5	10462	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.736	4.736	0.0	1.000	177383	0.0522		104	443	
D 32 13C2 PFDA										
515.00 > 470.00	4.749	4.749	0.0	1.146	6257506	1.10		87.6	19900	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.749	4.749	0.0	1.000	314135	0.0560	Target=10.11	112	193	
513.00 > 169.00	4.749	4.749	0.0	1.000	25391		12.37(5.06-15.17)		85.9	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.763	4.763	0.0	1.150	637916	1.10		91.8	2743	
31 8:2 FTS										
527.00 > 507.00	4.763	4.763	0.0	1.000	47115	0.0496		104	59.8	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.896	4.896	0.0	1.182	974724	1.25		99.7	3986	
36 NMeFOSAA										
570.00 > 419.00	4.896	4.896	0.0	1.000	36273	0.0435		87.0	81.6	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.994	4.993	0.001	1.123	114274	0.0507	Target=3.80	105	725	
599.00 > 99.00	4.994	4.993	0.001	1.123	28394		4.02(1.90-5.70)		243	
D 39 13C2 PFUnA										
565.00 > 520.00	5.008	5.008	0.0	1.209	6755666	1.24		99.1	26498	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.008	5.008	0.0	1.000	283982	0.0470	Target=7.45	94.0	355	
563.00 > 169.00	5.008	5.008	0.0	1.000	35569		7.98(3.78-11.33)		228	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.022	5.022	0.0	1.212	989900	1.32		105	3896	
40 NEtFOSA										
584.00 > 419.00	5.037	5.036	0.001	1.003	43501	0.0579		116	199	M
57 11CIFOS										
631.00 > 451.00	5.119	5.119	0.0	1.151	215702	0.0493		105	765	
D 43 13C2 PFDaA										
615.00 > 570.00	5.252	5.251	0.001	1.268	7316984	1.26		101	19878	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.252	5.251	0.001	1.000	315719	0.0488	Target=5.33	97.5	214	
613.00 > 169.00	5.252	5.251	0.001	1.000	49196		6.42(2.66-7.99)		202	
50 10:2 FTS										
627.00 > 607.00	5.266	5.266	0.0	1.106	76068	0.0643		133	428	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.281	5.295	-0.014	1.275	684214	1.44		115	427	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.296	5.295	0.001	1.278	577470	1.17		93.6	47.9	
49 N-MeFOSE-M										
616.00 > 59.00	5.296	5.295	0.001	1.003	35293	0.0480		96.0	39.6	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										M
512.00 > 169.00	5.296	5.295	0.001	1.000	26081	0.0539		108	87.4	M
54 PFDoS										
699.00 > 80.00	5.436	5.436	0.0	1.223	116318	0.0501	Target=4.32	103	473	
699.00 > 99.00	5.436	5.436	0.0	1.223	28420		4.09(2.19-6.58)		163	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.436	5.449	-0.013	1.312	752390	1.49		119	803	
62 N-EtFOSE-M										
630.00 > 59.00	5.449	5.462	-0.013	1.002	43111	0.0525		105	137	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.463	5.462	0.001	1.318	529052	1.27		102	799	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.449	5.462	-0.013	1.038	298835	0.0521	Target=5.66	104	237	
663.00 > 169.00	5.449	5.462	-0.013	1.038	45408		6.58(2.83-8.48)		315	
56 N-EtFOSA-M										
526.00 > 169.00	5.463	5.462	0.001	1.000	24798	0.0501		100	140	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.638	5.637	0.001	1.361	6214888	1.16		93.1	30669	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.638	5.637	0.001	1.000	36111	0.0509	Target=1.07	102	336	
713.00 > 219.00	5.638	5.637	0.001	1.000	34813		1.04(0.53-1.60)		334	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.948	5.948	0.0	1.000	265139	0.0512	Target=7.50	102	377	
813.00 > 169.00	5.948	5.948	0.0	1.000	33066		8.02(3.75-11.26)		219	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.948	5.948	0.0	1.436	4709607	1.22		97.3	8385	
60 Perfluorooctadecanoic acid										M
913.00 > 869.00	6.221	6.221	0.0	1.046	193446	0.0566	Target=9.98	113	404	
913.00 > 169.00	6.221	6.221	0.0	1.046	16575		11.67(5.14-15.41)		220	M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L2PFC2_00003

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_006.d

Injection Date: 08-Oct-2021 12:34:37

Instrument ID: LCA

Lims ID: CCVL

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 6

Worklist Smp#: 6

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

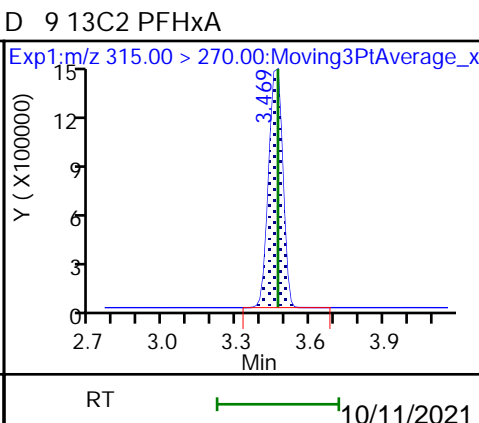
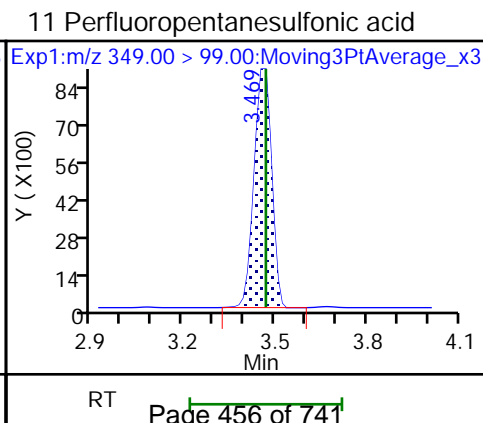
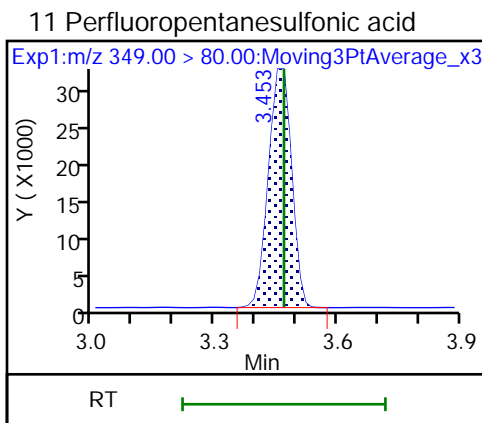
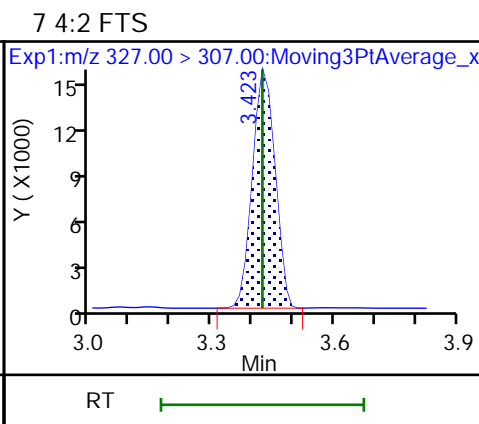
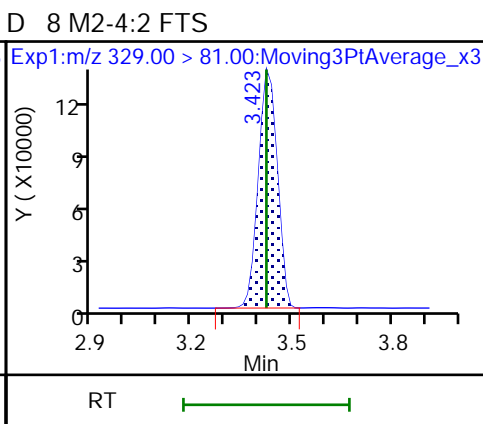
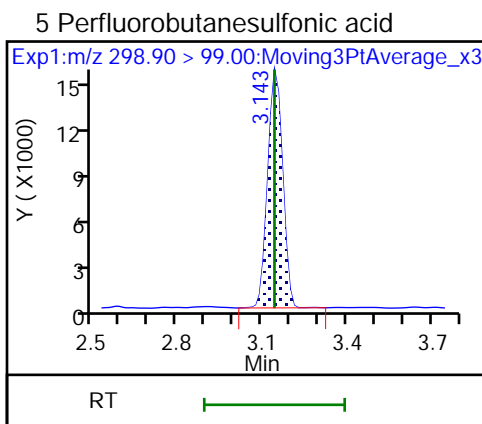
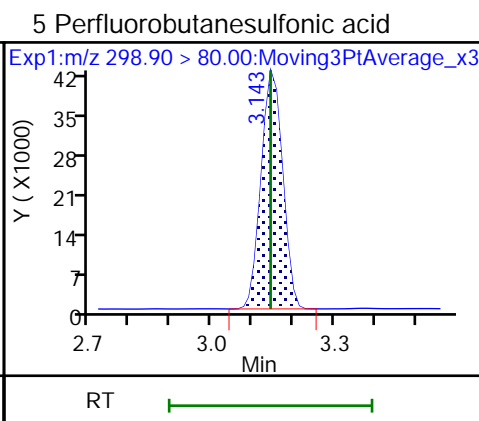
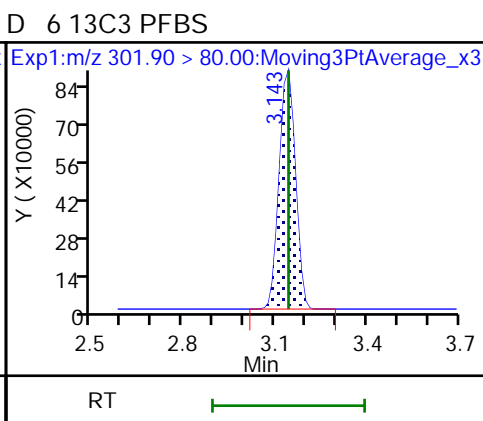
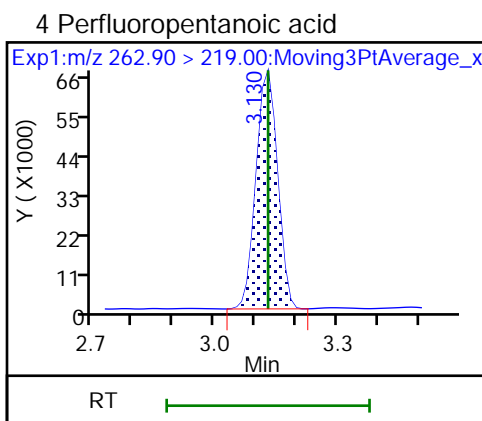
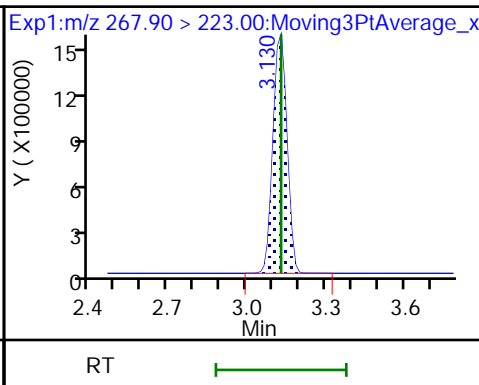
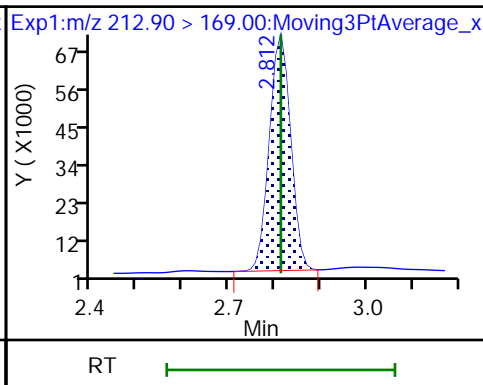
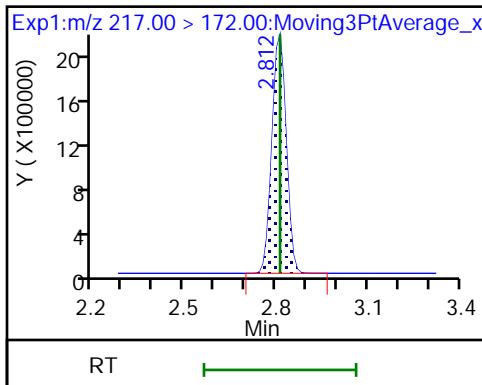
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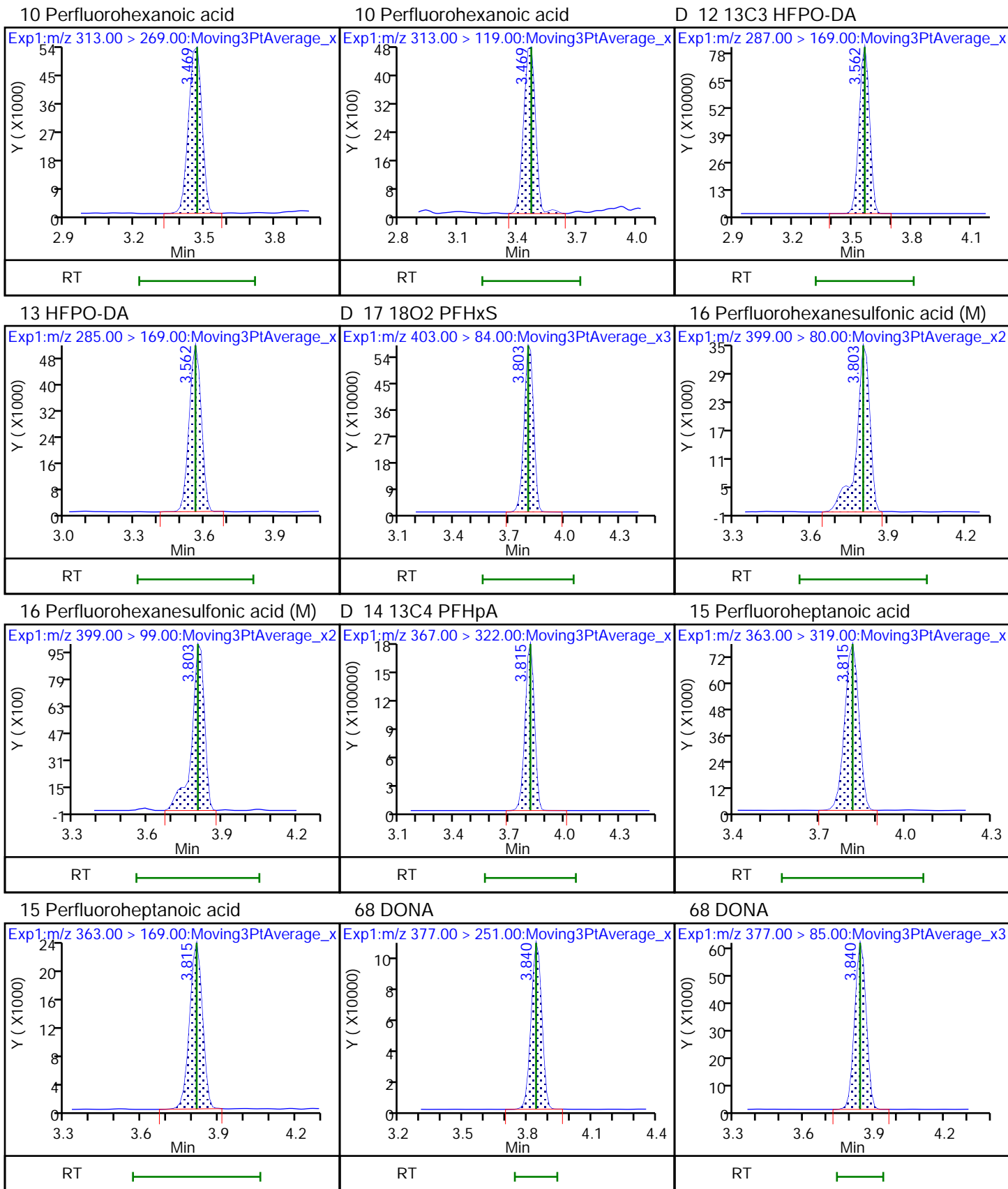
Limit Group: LC - PFC- ICAL

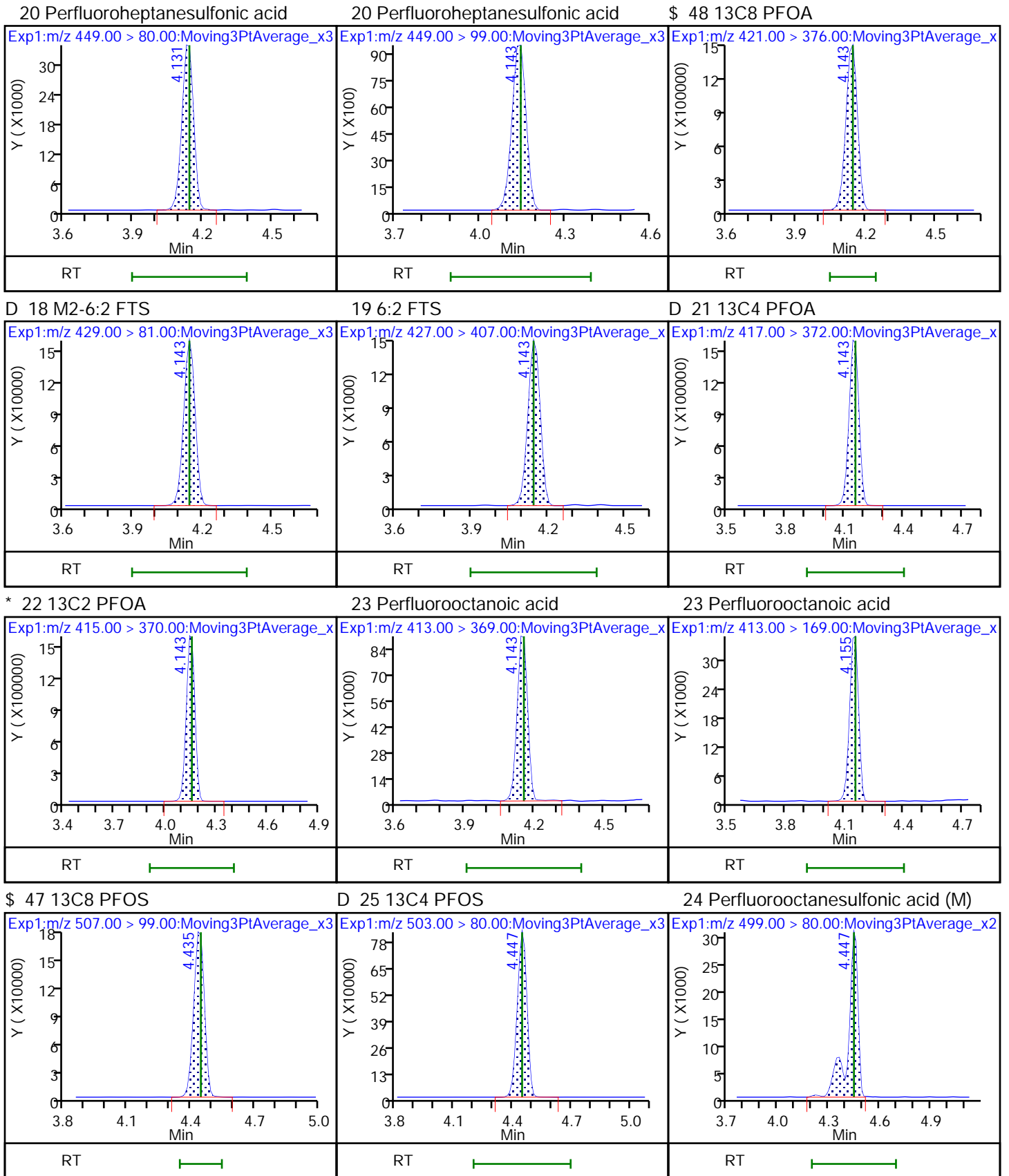
D 1 13C4 PFBA

2 Perfluorobutanoic acid

D 3 13C5 PFPeA

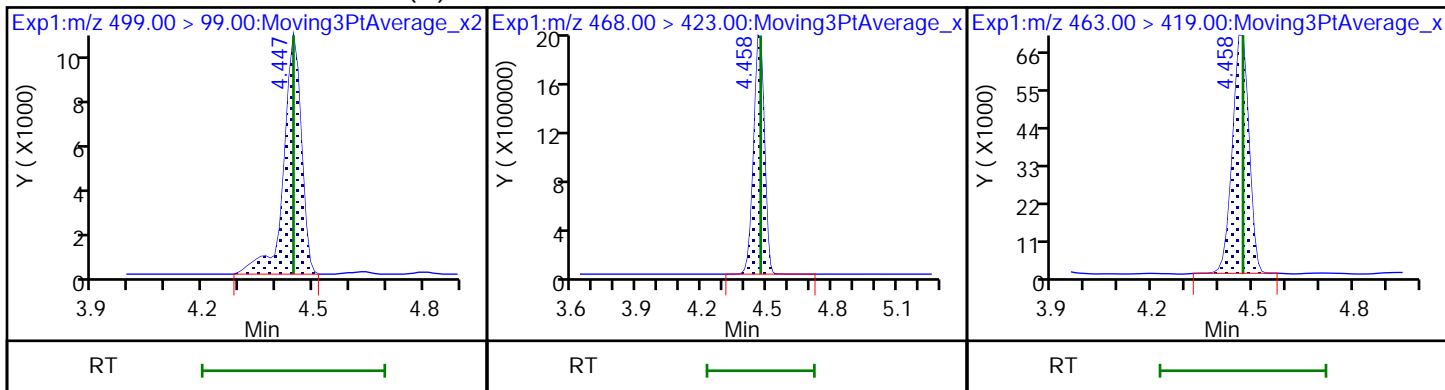






24 Perfluorooctanesulfonic acid (M) D 27 13C5 PFNA

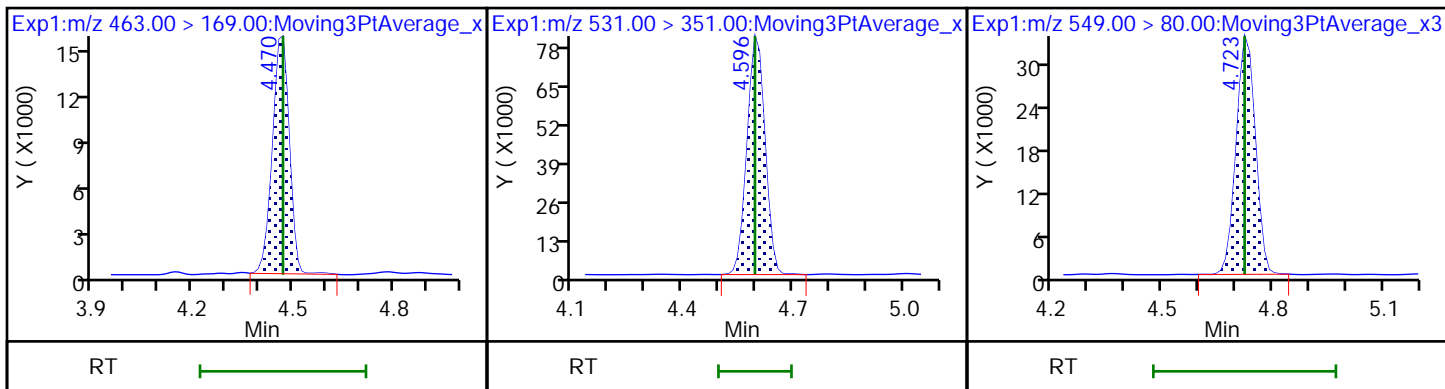
26 Perfluorononanoic acid



26 Perfluorononanoic acid

63 9CIFOS

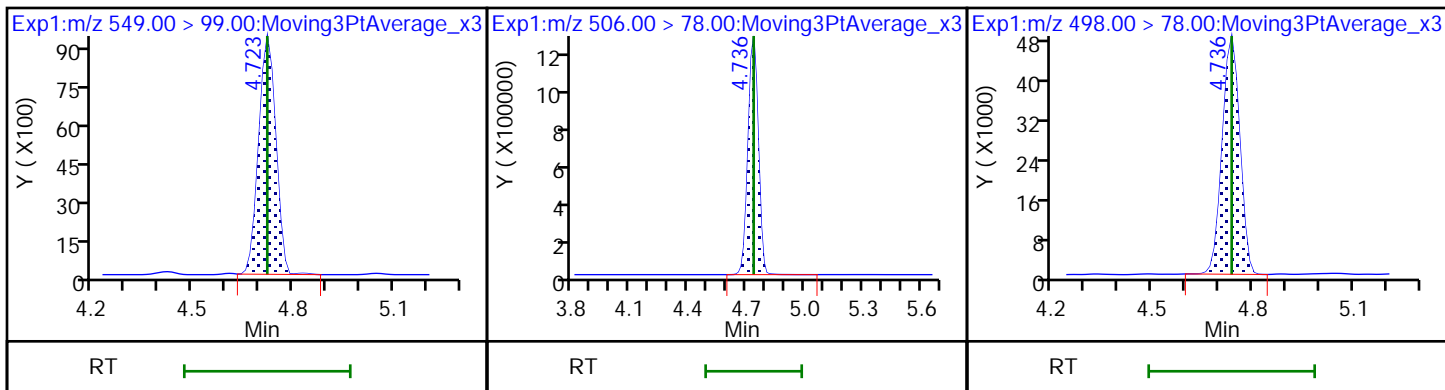
28 Perfluoronanesulfonic acid



28 Perfluoronanesulfonic acid

D 34 13C8 FOSA

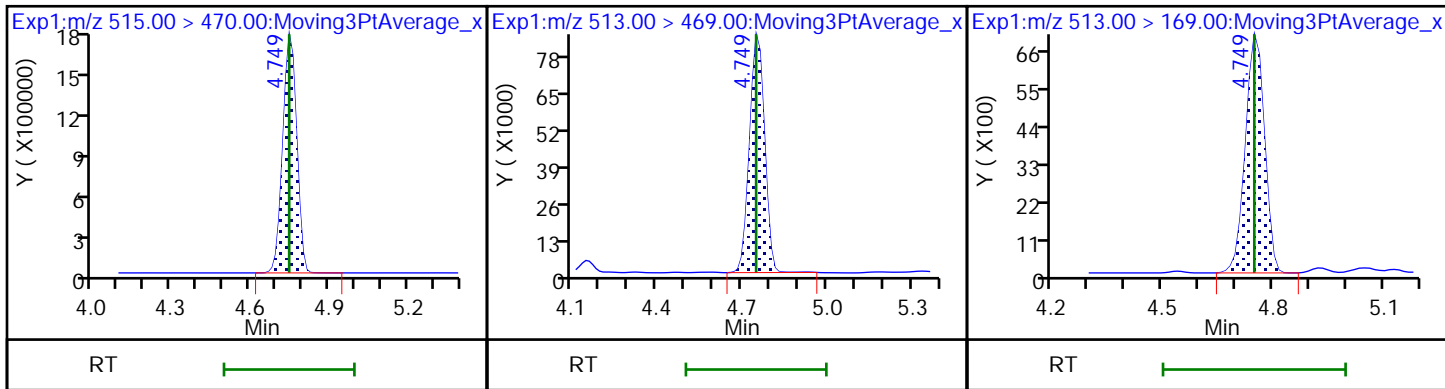
33 Perfluorooctanesulfonamide



D 32 13C2 PFDA

29 Perfluorodecanoic acid

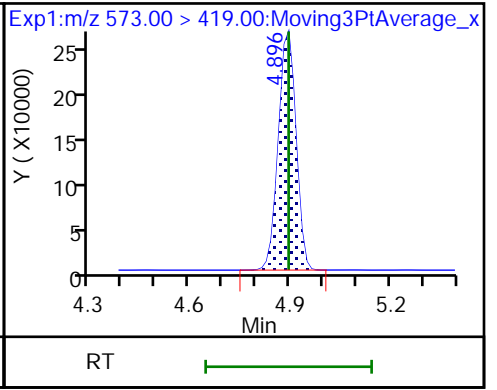
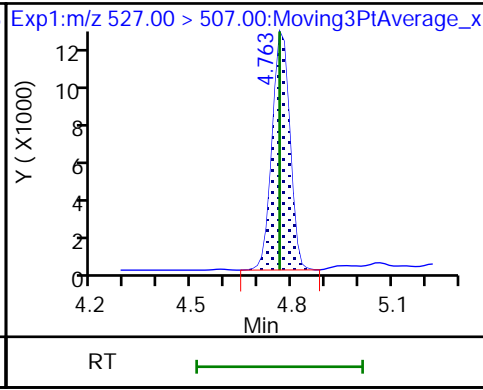
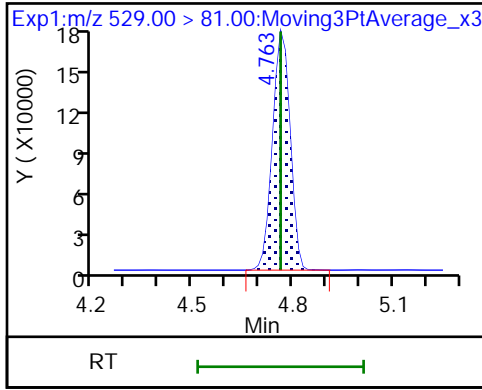
29 Perfluorodecanoic acid



D 30 M2-8:2 FTS

31 8:2 FTS

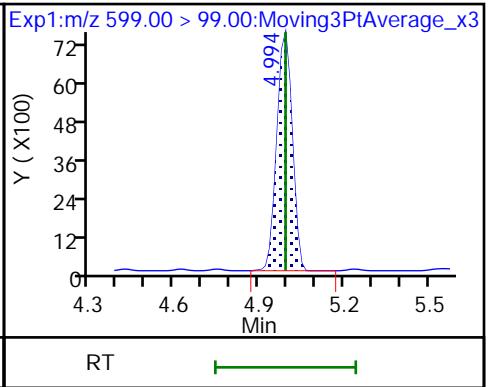
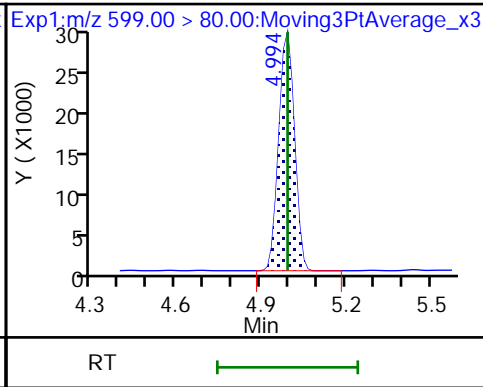
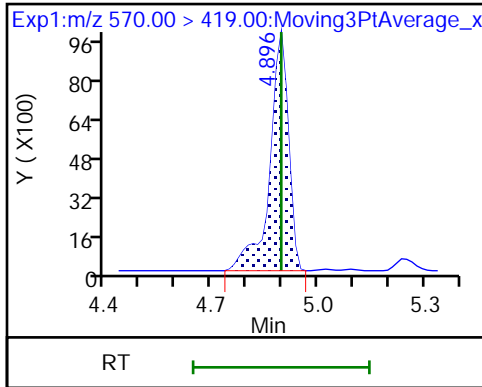
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

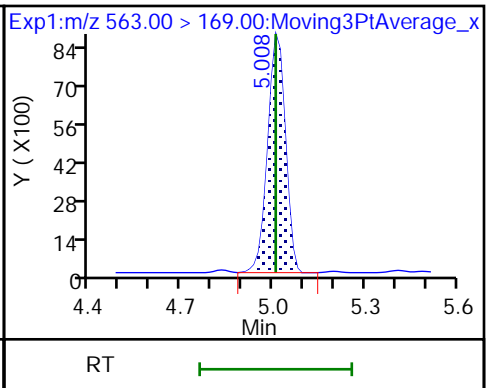
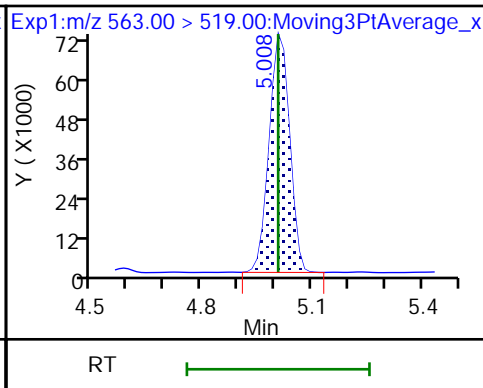
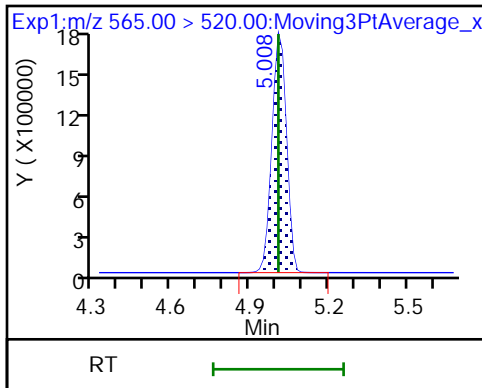
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

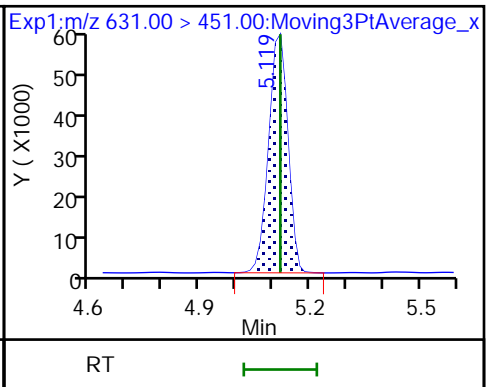
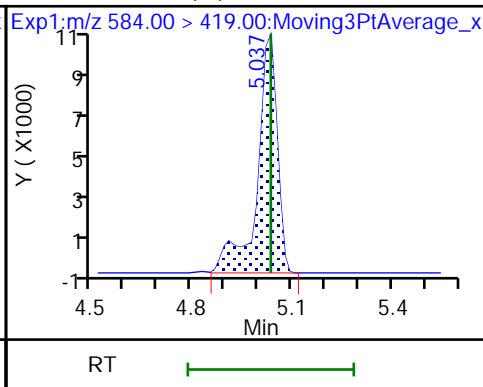
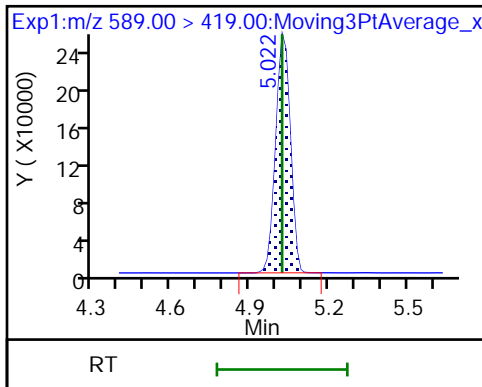
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA (M)

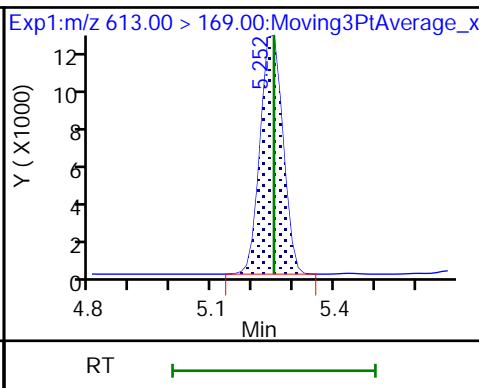
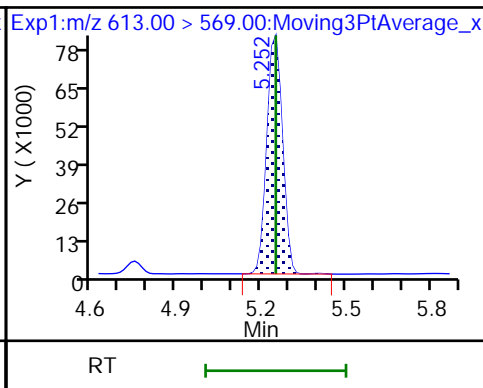
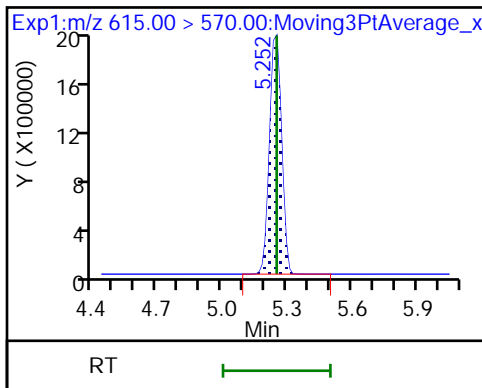
57 11CIFOS



D 43 13C2 PFDoA

42 Perfluorododecanoic acid

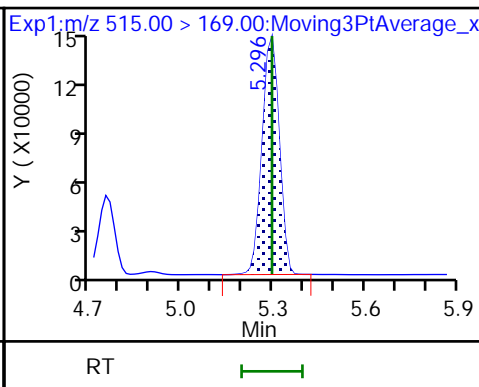
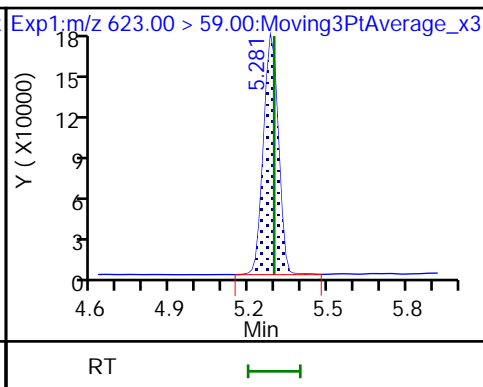
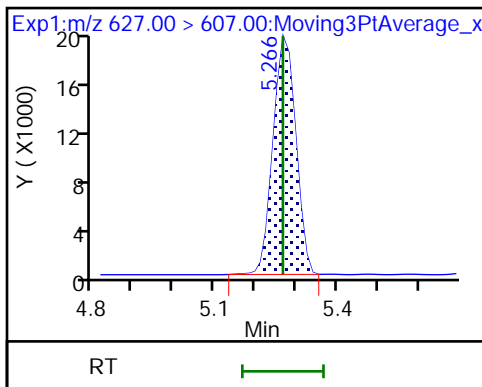
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

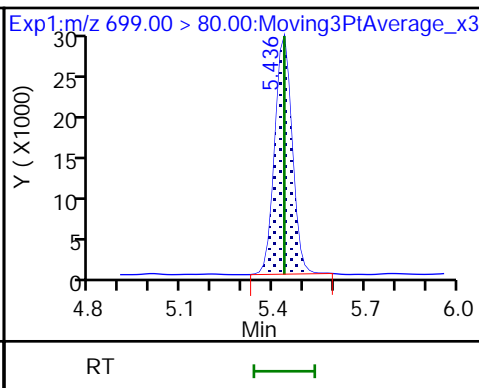
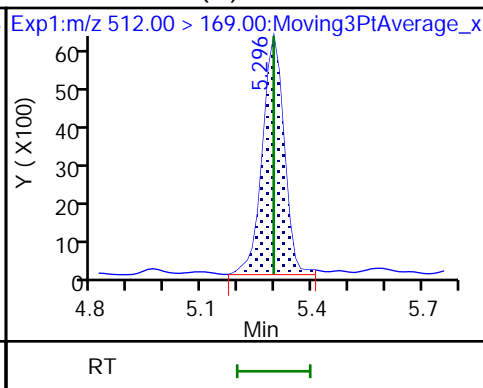
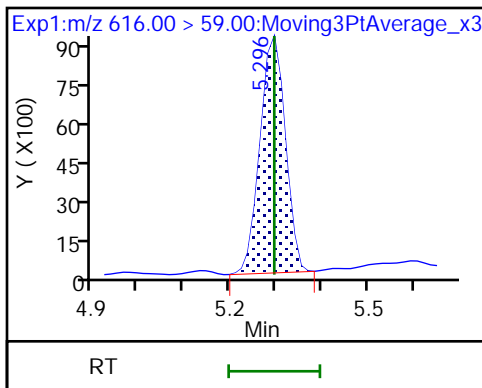
D 58 d-N-MeFOSA-M



49 N-MeFOSE-M

61 NMeFOSA (M)

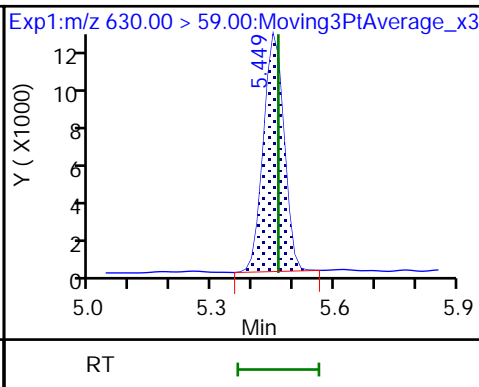
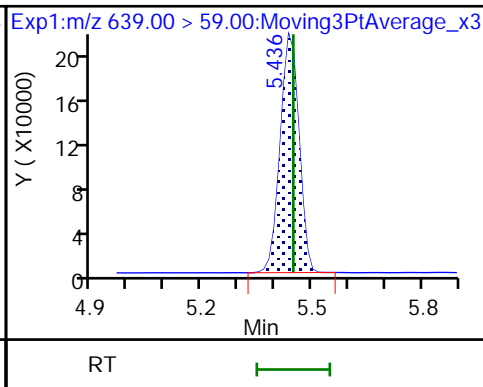
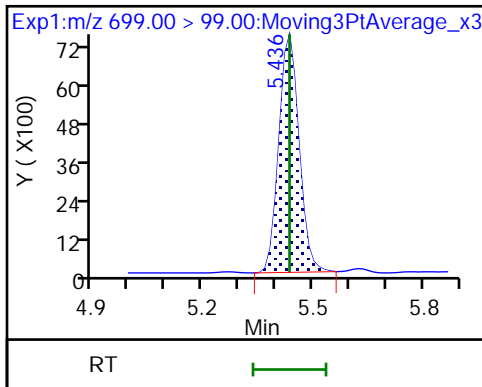
54 PFDoS



54 PFDoS

D 53 d9-N-EtFOSE-M

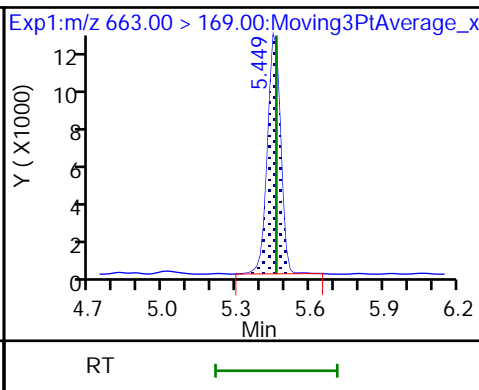
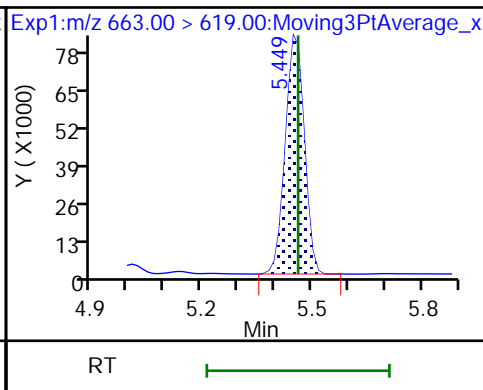
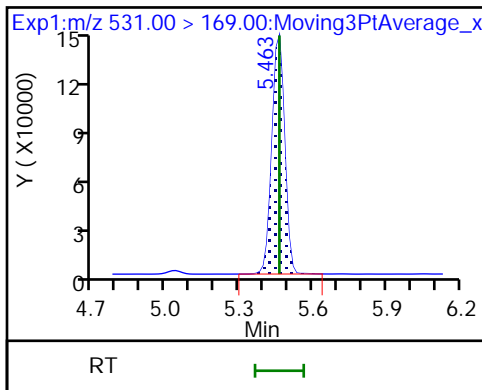
62 N-EtFOSE-M



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid

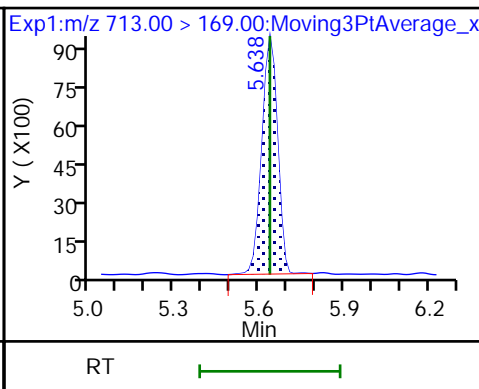
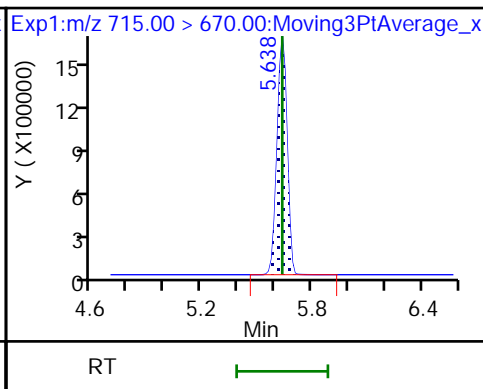
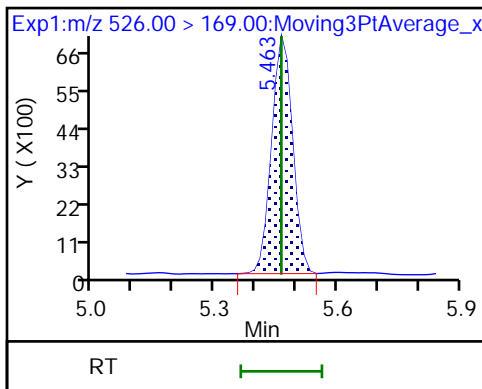
44 Perfluorotridecanoic acid



56 N-EtFOSA-M

D 46 13C2 PFTeDA

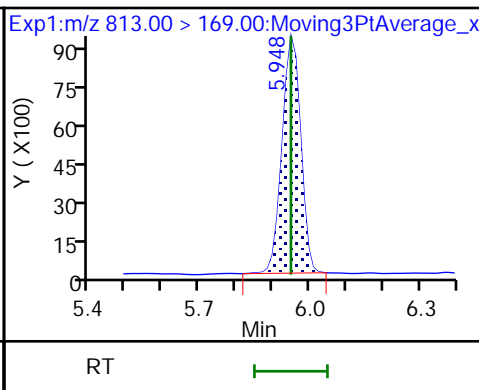
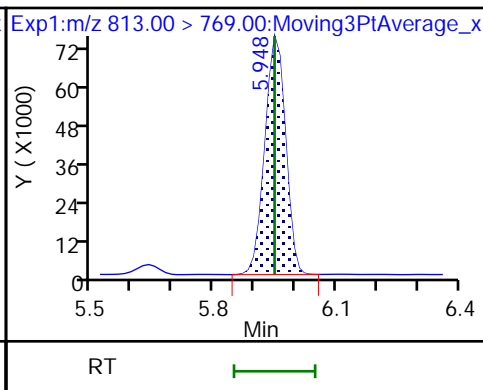
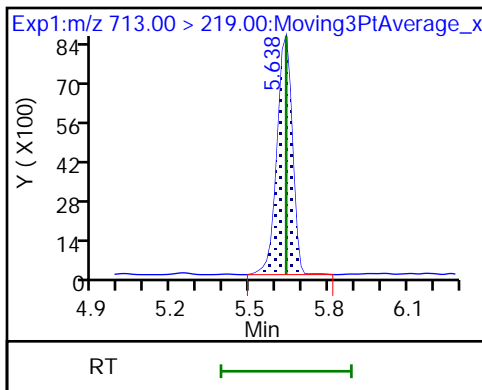
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

55 Perfluorohexadecanoic acid

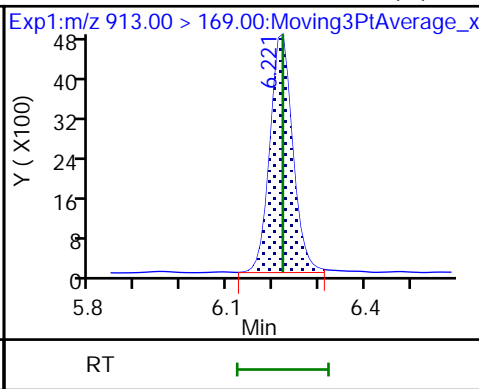
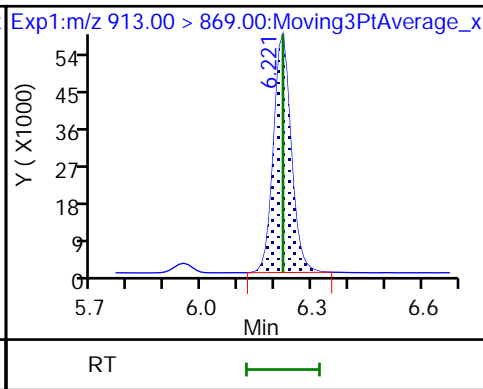
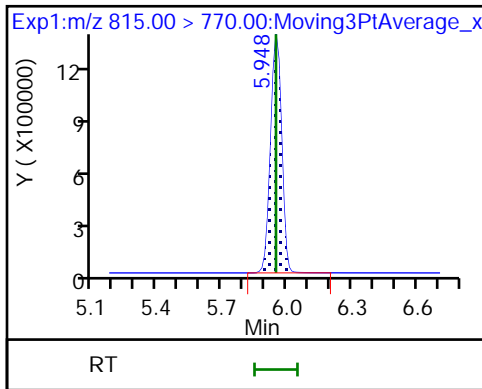
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid (M)



Eurofins TestAmerica, Knoxville

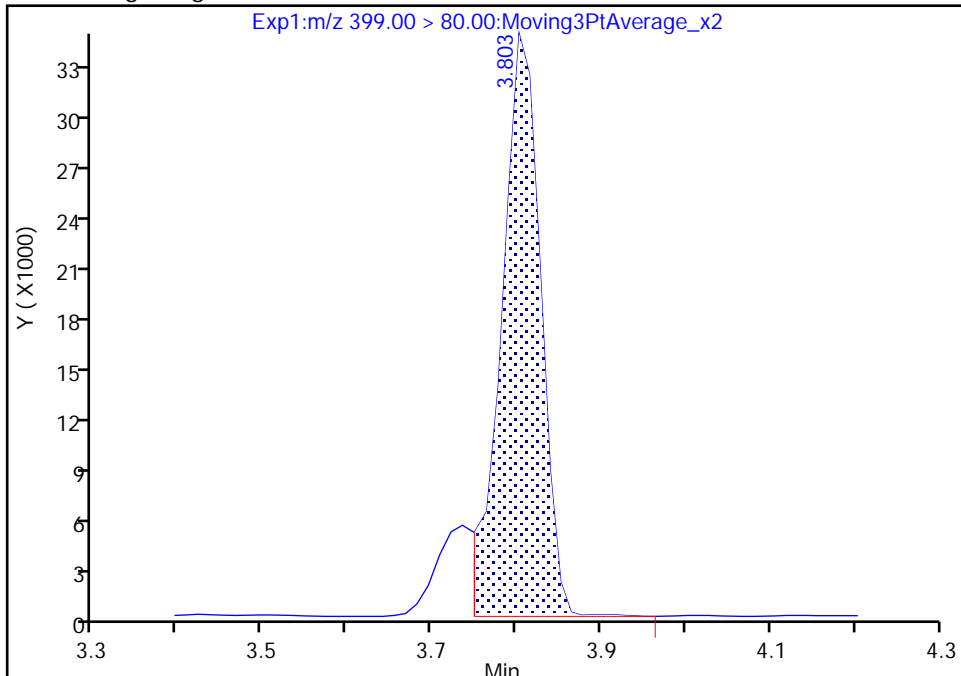
Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_006.d
Injection Date: 08-Oct-2021 12:34:37 Instrument ID: LCA
Lims ID: CCVL
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

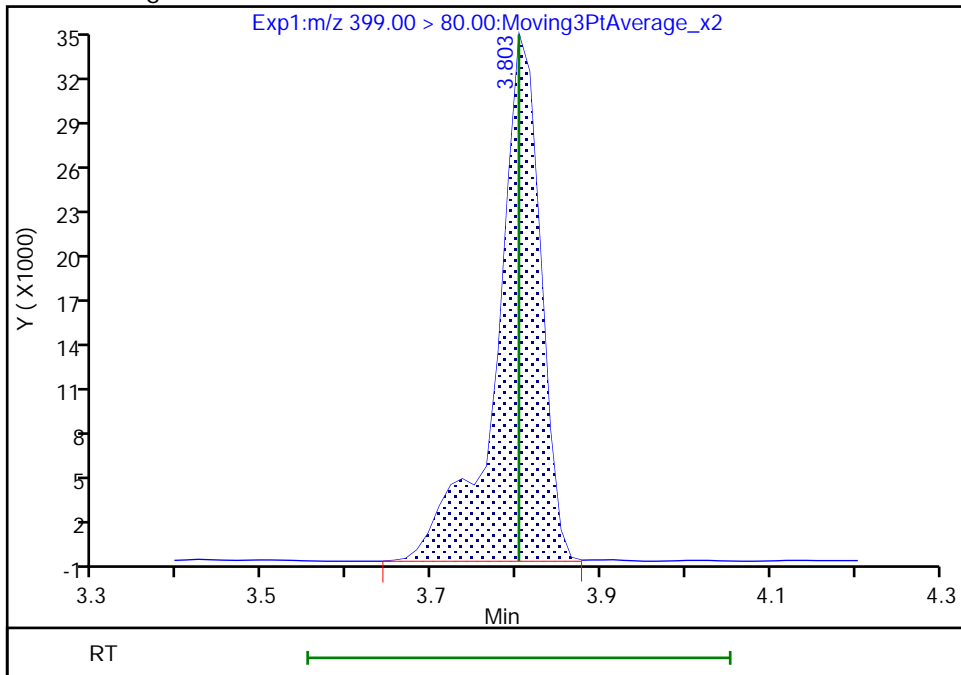
RT: 3.80
Area: 110874
Amount: 0.042953
Amount Units: ng/ml

Processing Integration Results



RT: 3.80
Area: 126599
Amount: 0.049768
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 09:59:51
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

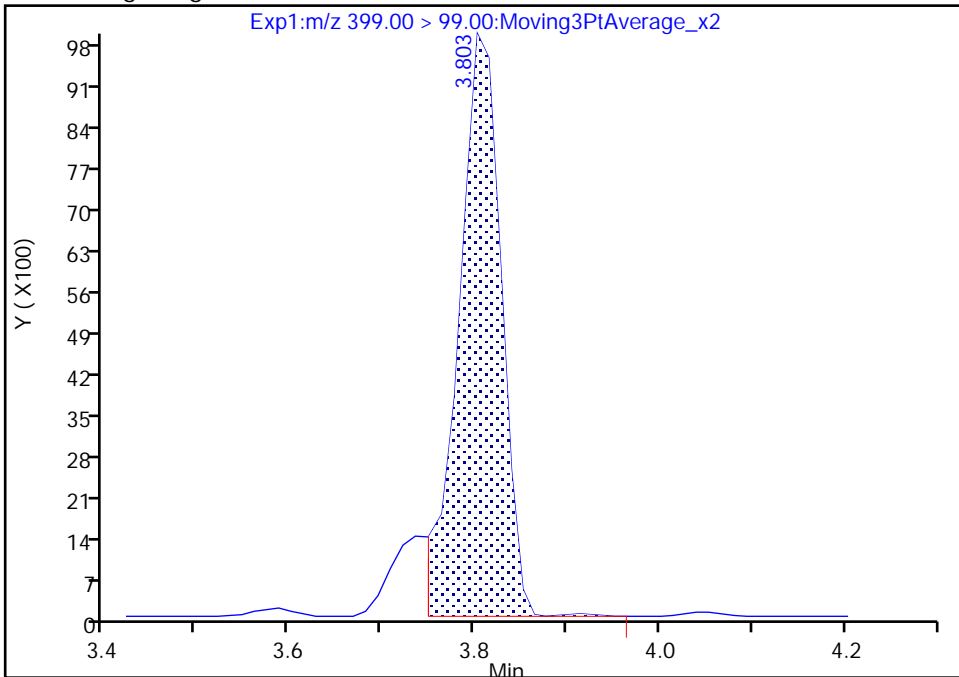
Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_006.d
Injection Date: 08-Oct-2021 12:34:37 Instrument ID: LCA
Lims ID: CCVL
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

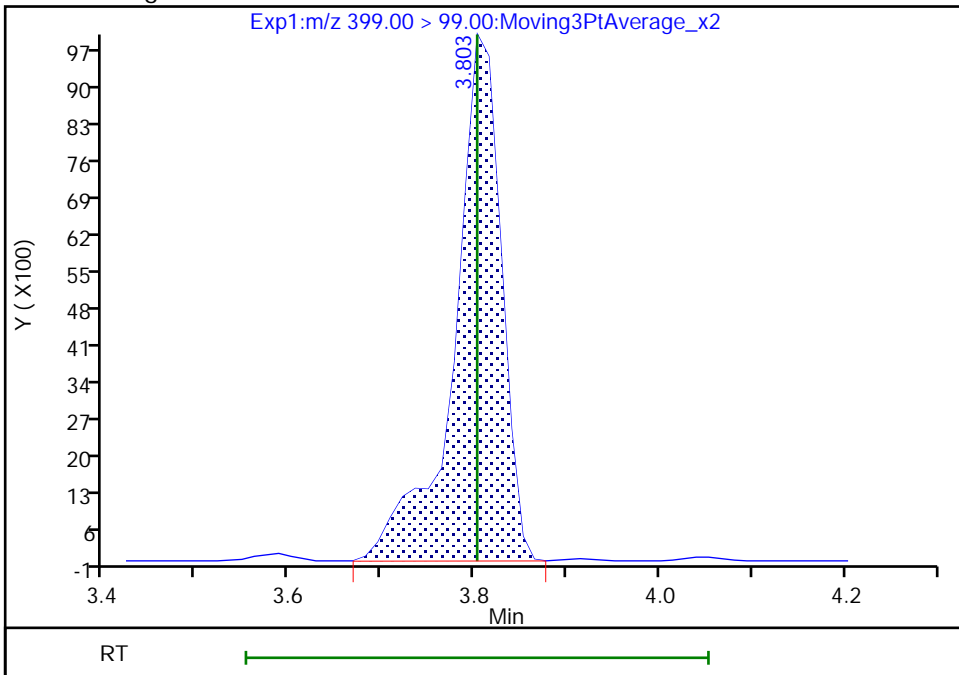
RT: 3.80
Area: 31392
Amount: 0.042953
Amount Units: ng/ml

Processing Integration Results



RT: 3.80
Area: 35037
Amount: 0.049768
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 09:59:58

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

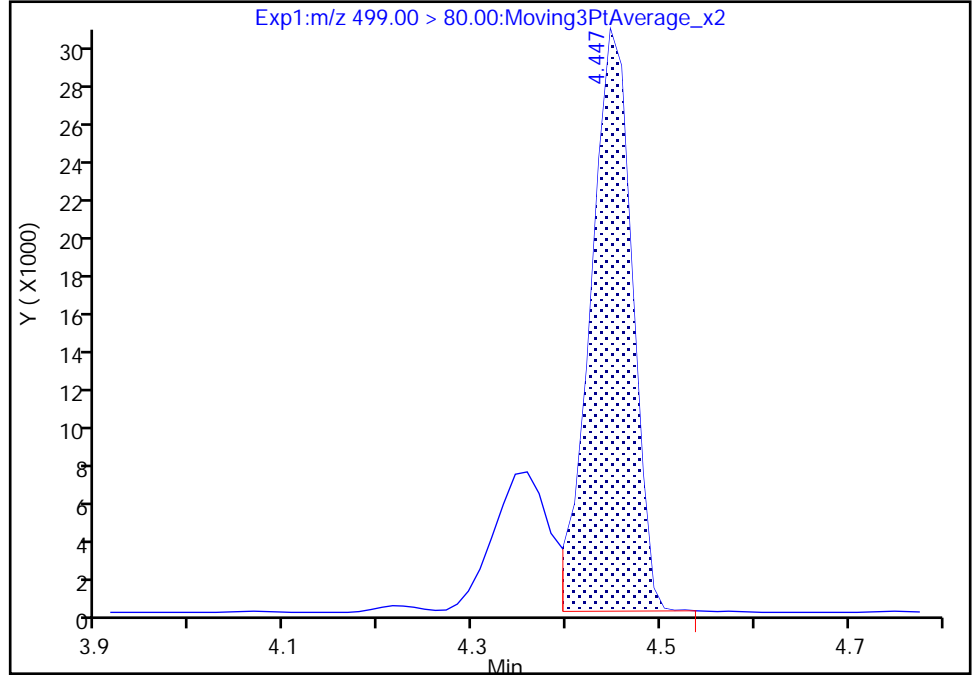
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Injection Date: 08-Oct-2021 12:34:37 Instrument ID: LCA
Lims ID: CCVL
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

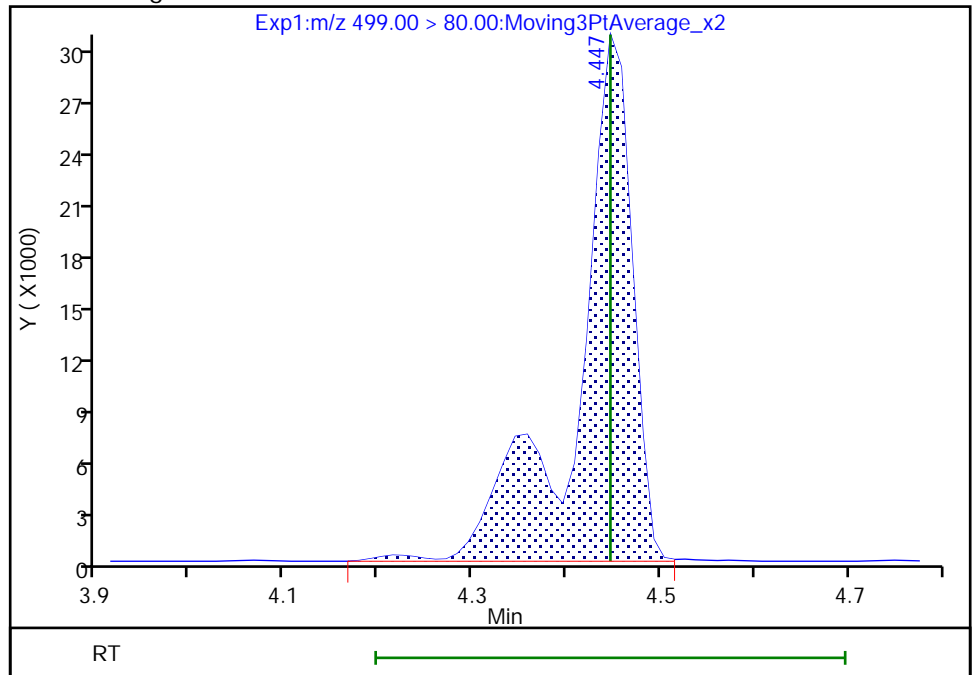
RT: 4.45
Area: 91602
Amount: 0.035409
Amount Units: ng/ml

Processing Integration Results



RT: 4.45
Area: 123042
Amount: 0.047562
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 10:00:14
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

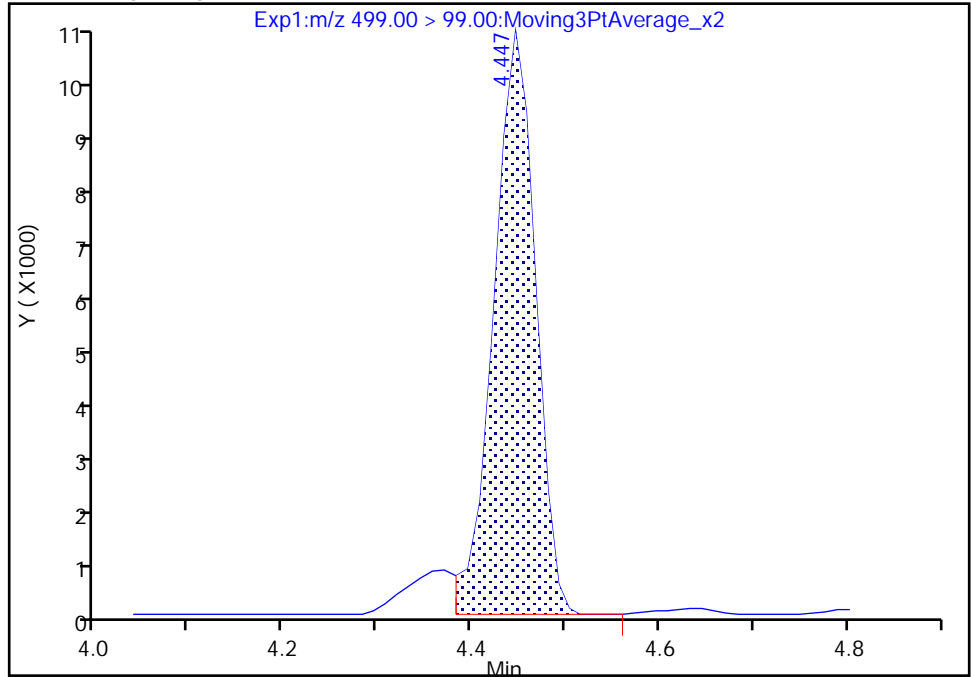
Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_006.d
Injection Date: 08-Oct-2021 12:34:37 Instrument ID: LCA
Lims ID: CCVL
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

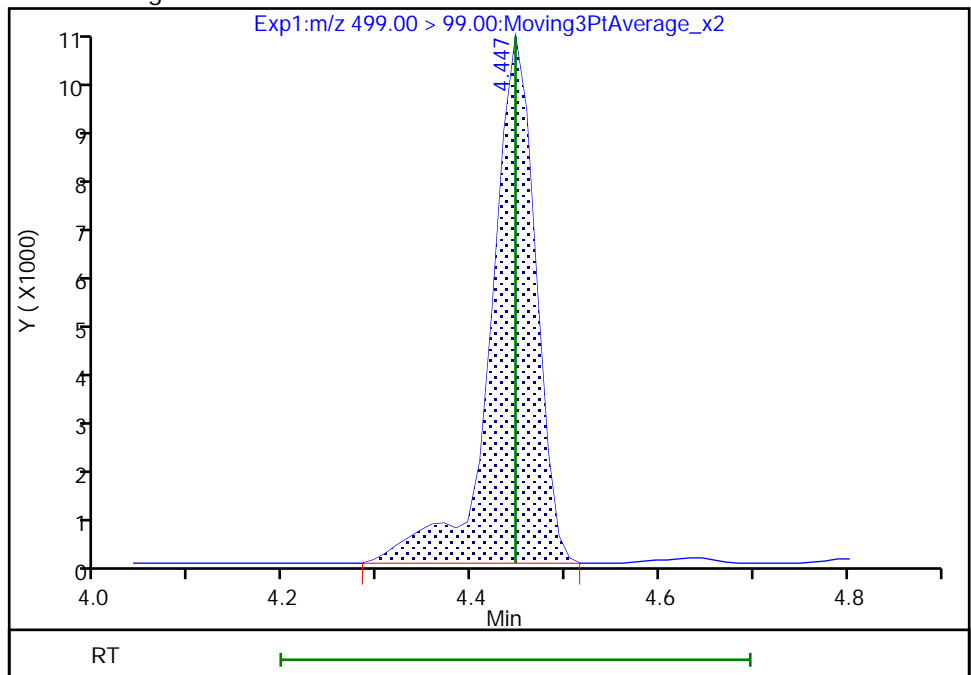
RT: 4.45
Area: 31229
Amount: 0.035409
Amount Units: ng/ml

Processing Integration Results



RT: 4.45
Area: 33931
Amount: 0.047562
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 10:00:20

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

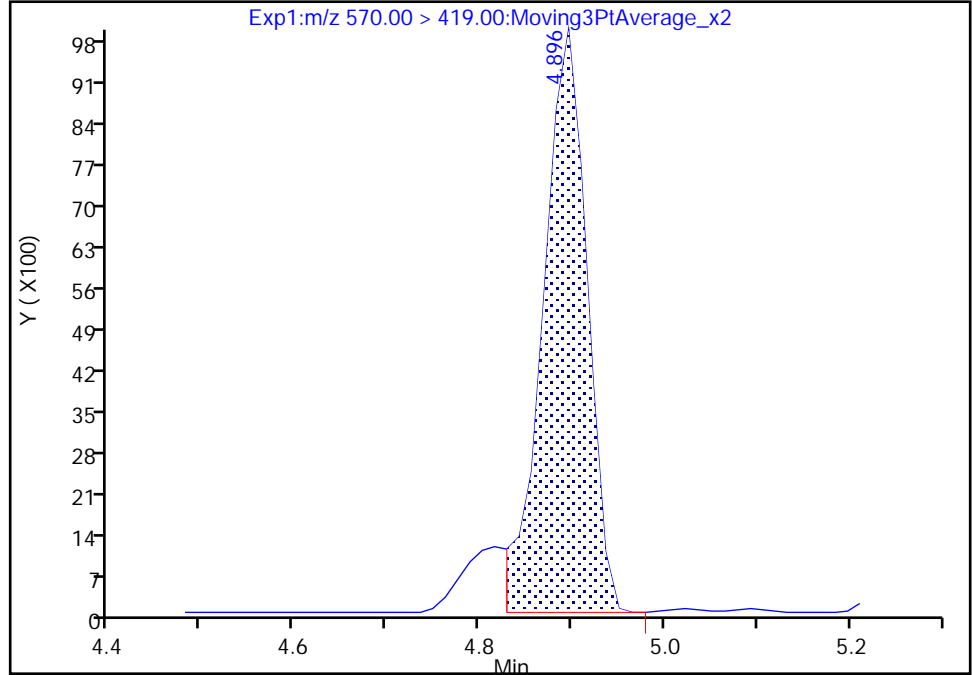
Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_006.d
Injection Date: 08-Oct-2021 12:34:37 Instrument ID: LCA
Lims ID: CCVL
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

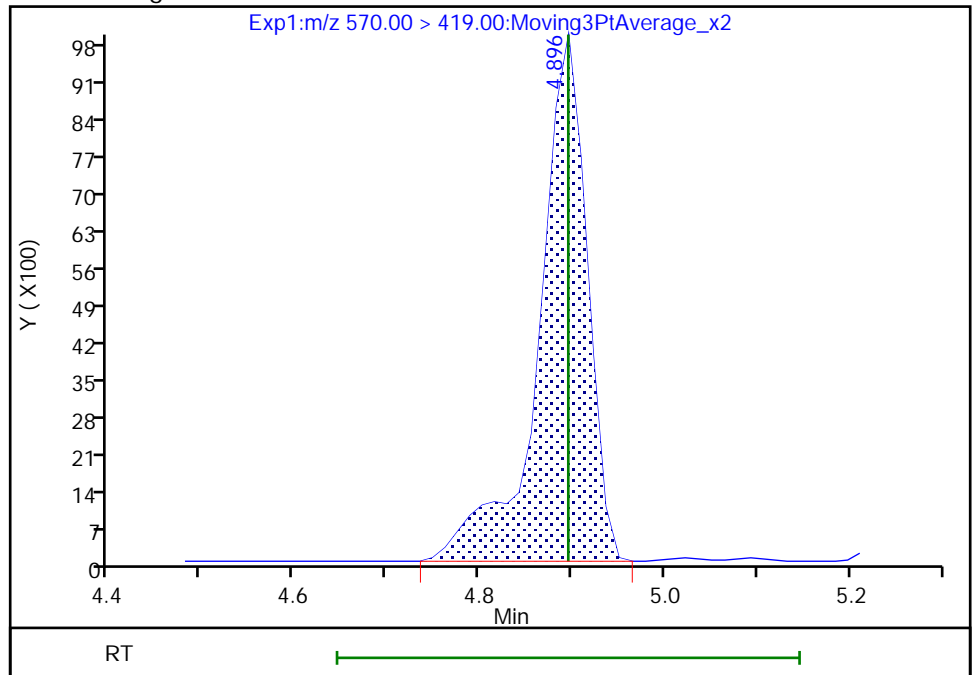
RT: 4.90
Area: 32698
Amount: 0.038500
Amount Units: ng/ml

Processing Integration Results



RT: 4.90
Area: 36273
Amount: 0.043522
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 10:00:37
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

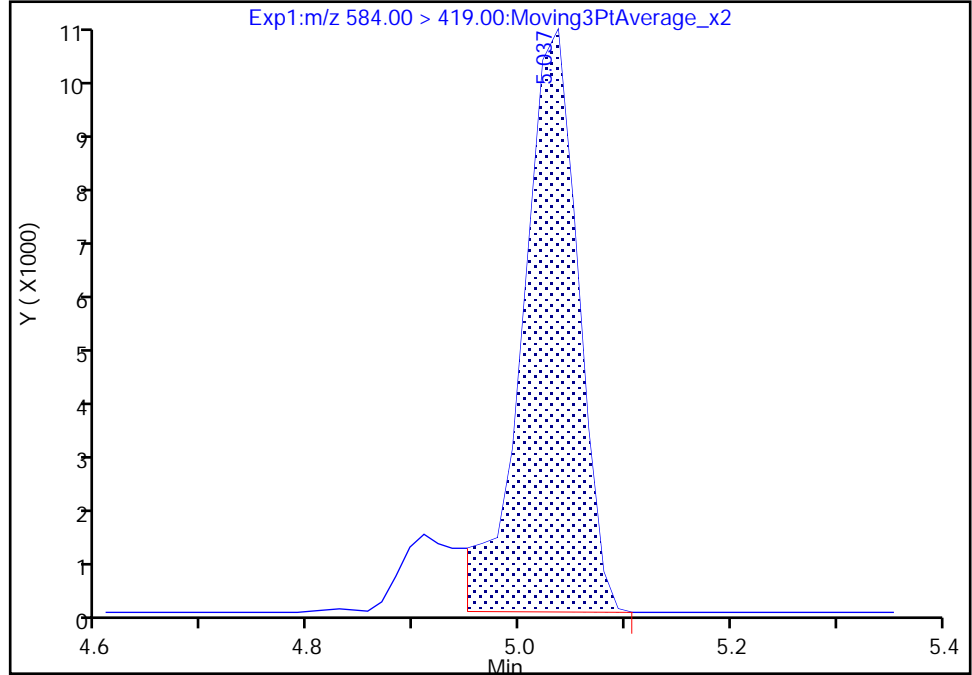
Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_006.d
Injection Date: 08-Oct-2021 12:34:37 Instrument ID: LCA
Lims ID: CCVL
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

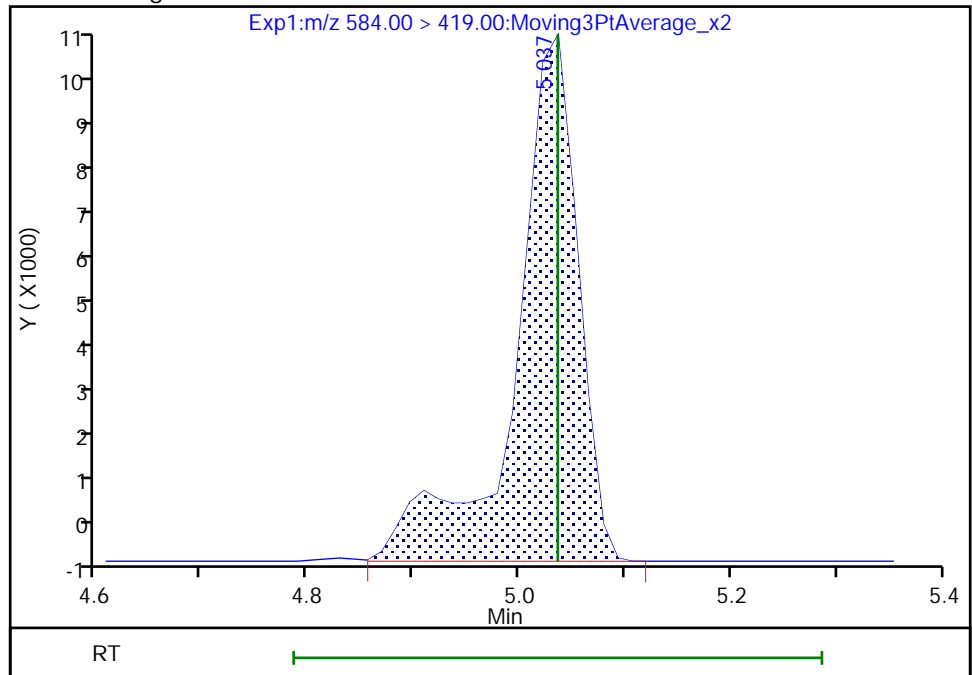
RT: 5.04
Area: 38198
Amount: 0.050805
Amount Units: ng/ml

Processing Integration Results



RT: 5.04
Area: 43501
Amount: 0.057858
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 10:00:46
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

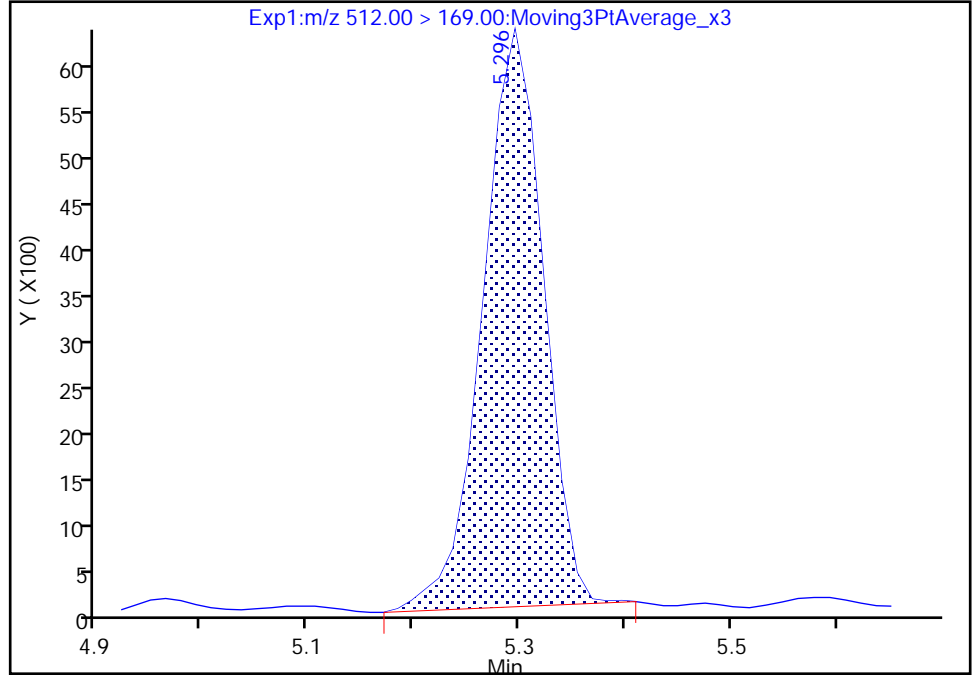
Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_006.d
Injection Date: 08-Oct-2021 12:34:37 Instrument ID: LCA
Lims ID: CCVL
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

61 NMeFOSA, CAS: 31506-32-8

Signal: 1

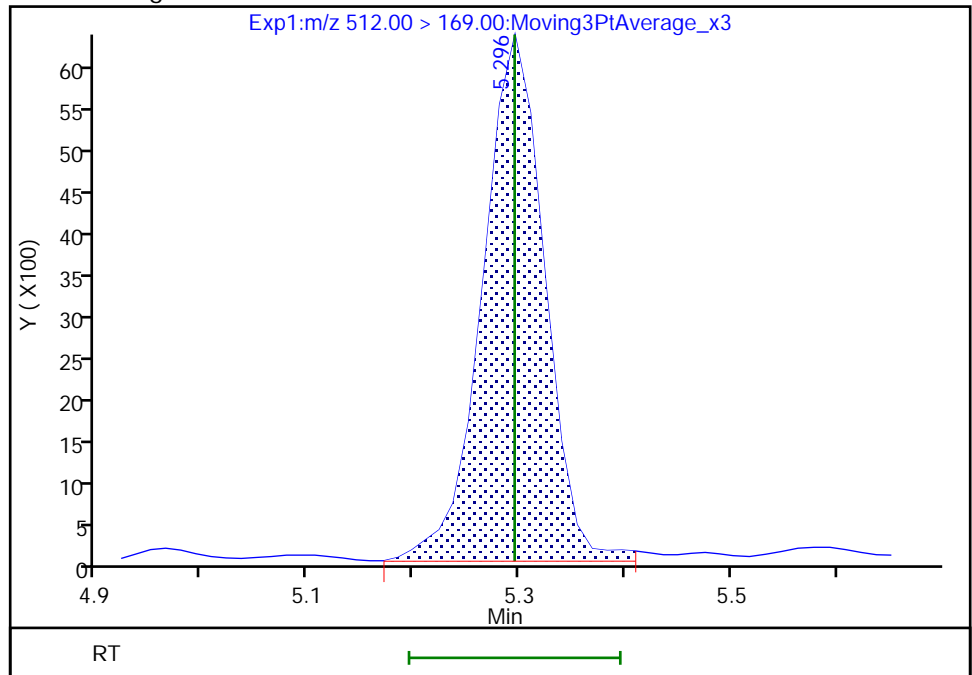
RT: 5.30
Area: 25159
Amount: 0.052015
Amount Units: ng/ml

Processing Integration Results



RT: 5.30
Area: 26081
Amount: 0.053922
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 10:00:58
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

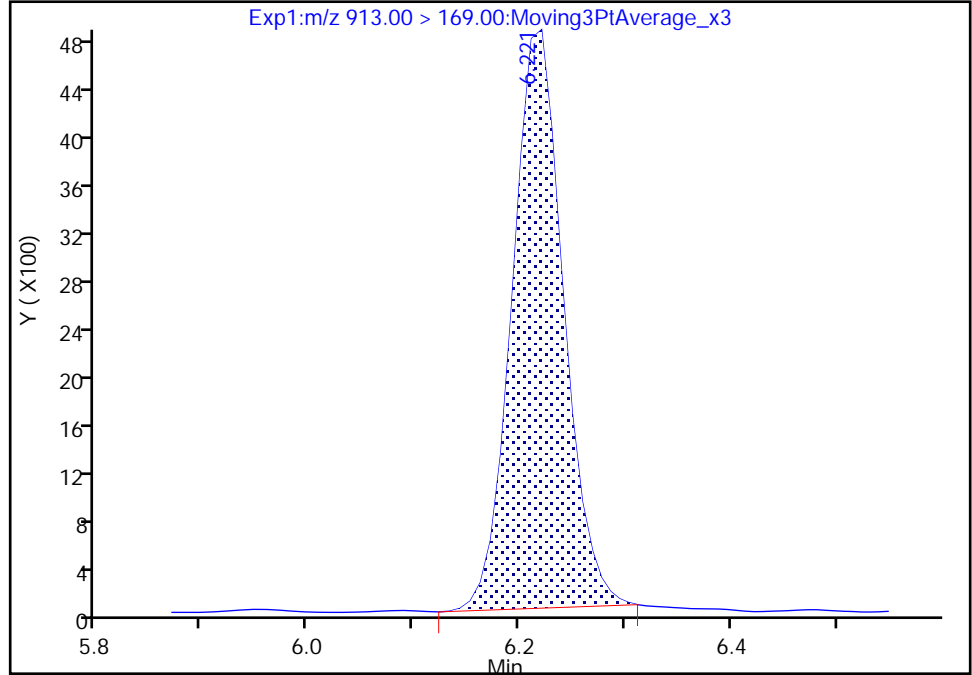
Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_006.d
Injection Date: 08-Oct-2021 12:34:37 Instrument ID: LCA
Lims ID: CCVL
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

60 Perfluorooctadecanoic acid, CAS: 16517-11-6

Signal: 2

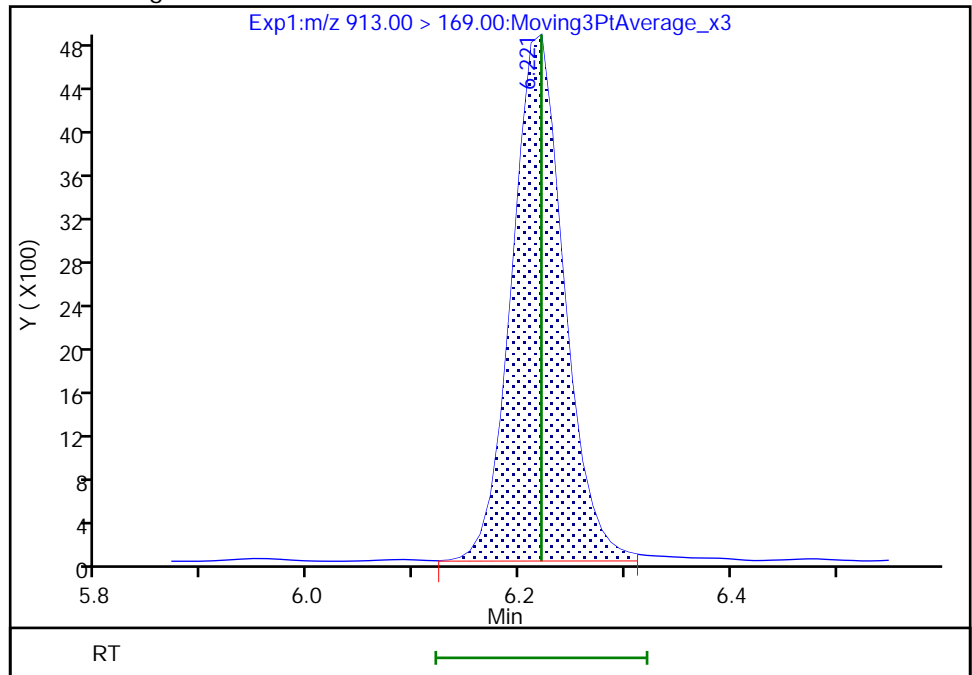
RT: 6.22
Area: 16214
Amount: 0.056569
Amount Units: ng/ml

Processing Integration Results



RT: 6.22
Area: 16575
Amount: 0.056569
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 10:01:15
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-54642/7 Calibration Date: 10/08/2021 12:43
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _007.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7855	0.7718		0.983	1.00	-1.7	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.013	1.003		0.990	1.00	-1.0	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.126	1.081		0.849	0.884	-4.0	40.0
4:2 FTS	AveID	2.500	2.394		0.894	0.934	-4.2	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8572	0.7957		0.928	1.00	-7.2	40.0
Perfluoropentanesulfonic acid (PFPeS)	L2ID		0.8484		0.926	0.938	-1.2	50.0
HFPO-DA	L2ID		1.408		1.02	1.00	1.7	40.0
Perfluorohexanesulfonic acid (PFHxS)	L2ID		1.313		0.879	0.910	-3.4	40.0
Perfluoroheptanoic acid (PFHpA)	L2ID		1.094		1.04	1.00	3.6	40.0
DONA	AveID	3.243	3.184		0.925	0.942	-1.8	40.0
6:2 FTS	L2ID		2.058		0.970	0.948	2.3	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9947	0.9307		0.891	0.952	-6.4	40.0
Perfluorooctanoic acid (PFOA)	L2ID		1.171		1.06	1.00	5.6	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.100	1.040		0.878	0.928	-5.4	40.0
Perfluorononanoic acid (PFNA)	L2ID		0.8553		1.03	1.00	2.5	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	2.308	2.226		0.899	0.932	-3.5	40.0
Perfluorononanesulfonic acid (PFNS)	AveID	1.042	0.996		0.918	0.960	-4.4	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9606	0.9084		0.946	1.00	-5.4	40.0
Perfluorodecanoic acid (PFDA)	L2ID		0.9581		1.01	1.00	0.8	40.0
8:2 FTS	AveID	1.784	1.708		0.917	0.958	-4.2	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	L2ID		0.9604		1.05	1.00	4.5	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.9574	0.9499		0.956	0.964	-0.8	40.0
Perfluoroundecanoic acid (PFUnA)	L2ID		1.054		1.04	1.00	4.2	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.9494	0.9145		0.963	1.00	-3.7	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.858	1.789		0.907	0.942	-3.7	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		1.041		0.997	1.00	-0.3	40.0
10:2 FTS	AveID	2.221	2.391		1.04	0.964	7.7	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.172		1.01	1.00	1.2	40.0
NMeFOSA	AveID	1.047	1.068		1.02	1.00	2.0	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9879	0.9249		0.906	0.968	-6.4	40.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-54642/7 Calibration Date: 10/08/2021 12:43
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _007.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.177		0.932	1.00	-6.8	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.168	1.153		0.987	1.00	-1.3	40.0
Perfluorotridecanoic acid (PFTriA)	L2ID		0.9156		1.04	1.00	3.6	50.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.1271		1.01	1.00	0.8	40.0
Perfluorohexadecanoic acid	Q2ID		1.069		0.978	1.00	-2.2	40.0
Perfluorooctadecanoic acid	AveID	0.9076	0.9186		1.01	1.00	1.2	40.0
13C4 PFBA	Ave	1.324	1.279		1.21	1.25	-3.4	50.0
13C5 PFPeA	Ave	1.087	1.058		1.22	1.25	-2.7	50.0
13C3 PFBS	Ave	0.7019	0.6973		1.16	1.16	-0.7	50.0
M2-4:2 FTS	Ave	0.1052	0.1085		1.20	1.17	3.1	50.0
13C2 PFHxA	Ave	1.116	1.080		1.21	1.25	-3.3	50.0
13C3 HFPO-DA	Ave	0.5714	0.5719		1.25	1.25	0.0	50.0
18O2 PFHxS	Ave	0.4248	0.4236		1.18	1.18	-0.3	50.0
13C4 PFHpA	Ave	1.113	1.039		1.17	1.25	-6.7	50.0
M2-6:2 FTS	Ave	0.1078	0.1013		1.12	1.19	-6.0	50.0
13C4 PFOA	Ave	1.007	0.9903		1.23	1.25	-1.6	50.0
13C4 PFOS	Ave	0.5852	0.5977		1.22	1.20	2.1	50.0
13C5 PFNA	Ave	1.279	1.261		1.23	1.25	-1.4	50.0
13C8 FOSA	Ave	0.8591	0.8385		1.22	1.25	-2.4	50.0
13C2 PFDA	Ave	1.296	1.275		1.23	1.25	-1.6	50.0
M2-8:2 FTS	Ave	0.1316	0.1336		1.22	1.20	1.5	50.0
d3-NMeFOSAA	Ave	0.1774	0.1935		1.36	1.25	9.1	50.0
13C2 PFUnA	Ave	1.237	1.249		1.26	1.25	1.0	50.0
d5-NEtFOSAA	Ave	0.1705	0.1859		1.36	1.25	9.0	50.0
13C2 PFDoA	Ave	1.319	1.349		1.28	1.25	2.3	50.0
d7-N-MeFOSE-M	Ave	0.1075	0.1365		1.59	1.25	26.9	50.0
d-N-MeFOSA-M	Ave	0.1120	0.1141		1.27	1.25	1.9	50.0
d9-N-EtFOSE-M	Ave	0.1146	0.1516		1.65	1.25	32.3	50.0
d-N-EtFOSA-M	Ave	0.0942	0.1004		1.33	1.25	6.6	50.0
13C2 PFTeDA	Ave	1.211	1.242		1.28	1.25	2.6	50.0
13C2 PFHxDA	Ave	0.8782	0.9056		1.29	1.25	3.1	50.0
13C8 PFOA	Ave	0.9886	0.9905		1.25	1.25	0.2	50.0
13C8 PFOS	Ave	0.1256	0.1232		1.17	1.20	-1.9	50.0

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_007.d
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 08-Oct-2021 12:43:25 ALS Bottle#: 7 Worklist Smp#: 7
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0021001-007 ccvis
 Misc. Info.: Plate: 7 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15
 Method: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 11:11:08 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 10:03:03

Ratio Calibration: None

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	2.812	2.812	0.0	0.677	6784710	1.21	96.6	9574	
2 Perfluorobutanoic acid	212.90 > 169.00	2.812	2.812	0.0	1.000	4189005	0.9826	98.3	972	
D 3 13C5 PFPeA	267.90 > 223.00	3.129	3.129	0.0	0.753	5609814	1.22	97.3	7786	
4 Perfluoropentanoic acid	262.90 > 219.00	3.129	3.129	0.0	1.000	4500154	0.9899	99.0	1493	
D 6 13C3 PFBS	301.90 > 80.00	3.143	3.143	0.0	0.756	3440045	1.15	99.3	10065	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.143	3.143	0.0	1.000	2828630	0.8489	Target=3.06	96.0	7307
	298.90 > 99.00	3.143	3.143	0.0	1.000	1082863		2.61(1.53-4.59)		3450
D 8 M2-4:2 FTS	329.00 > 81.00	3.423	3.423	0.0	0.824	537463	1.20	103	909	
7 4:2 FTS	327.00 > 307.00	3.423	3.423	0.0	1.000	1029330	0.8944	95.8	4194	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.469	3.469	0.0	1.104	2354893	0.9264	Target=3.47	98.8	5632
	349.00 > 99.00	3.469	3.469	0.0	1.104	672668		3.50(1.73-5.20)		3671
D 9 13C2 PFHxA	315.00 > 270.00	3.469	3.469	0.0	0.835	5728264	1.21	96.7	7202	
10 Perfluorohexanoic acid	313.00 > 269.00	3.469	3.469	0.0	1.000	3646251	0.9282	Target=9.74	92.8	1956
	313.00 > 119.00	3.469	3.469	0.0	1.000	292951		12.45(4.87-14.61)		1126
D 12 13C3 HFPO-DA	287.00 > 169.00	3.561	3.561	0.0	0.857	3033700	1.25	100	6484	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.561	3.561	0.0	1.000	3417369	1.02		102	3437	
D 17 18O2 PFHxS										
403.00 > 84.00	3.803	3.803	0.0	0.915	2125767	1.18		99.7	5818	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.803	3.803	0.0	1.000	2148107	0.8793	Target=2.96	96.6	3119	M
399.00 > 99.00	3.803	3.803	0.0	1.000	668664		3.21(1.48-4.44)		3285	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.815	3.815	0.0	0.918	5510219	1.17		93.3	5980	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.815	3.815	0.0	1.000	4823514	1.04	Target=3.35	104	4315	
363.00 > 169.00	3.815	3.815	0.0	1.000	1442577		3.34(1.67-5.02)		5157	
68 DONA										
377.00 > 251.00	3.840	3.840	0.0	0.863	7606867	0.9246	Target=1.49	98.2	7388	
377.00 > 85.00	3.840	3.840	0.0	0.863	4354702		1.75(0.74-2.23)		4828	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.143	4.143	0.0	0.932	2247399	0.8907	Target=3.73	93.6	9870	
449.00 > 99.00	4.143	4.143	0.0	0.932	563175		3.99(1.87-5.61)		3420	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.143	4.143	0.0	0.997	5254385	1.25		100	11164	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.143	4.143	0.0	0.997	510398	1.12		94.0	2011	
19 6:2 FTS										
427.00 > 407.00	4.143	4.143	0.0	1.000	838378	0.9697		102	4414	
D 21 13C4 PFOA										
417.00 > 372.00	4.155	4.155	0.0	1.000	5253261	1.23		98.4	10456	
* 22 13C2 PFOA										
415.00 > 370.00	4.155	4.155	0.0		5304670	1.25			5943	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.155	4.155	0.0	1.000	4920640	1.06	Target=2.40	106	2524	
413.00 > 169.00	4.155	4.155	0.0	1.000	1784199		2.76(1.20-3.61)		3496	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.447	4.447	0.0	1.070	624765	1.17		98.1	3214	
D 25 13C4 PFOS										
503.00 > 80.00	4.447	4.447	0.0	1.070	3031186	1.22		102	6848	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.447	4.447	0.0	1.000	2448542	0.8777	Target=3.83	94.6	3805	M
499.00 > 99.00	4.447	4.447	0.0	1.000	550642		4.45(1.91-5.74)		1865	M
D 27 13C5 PFNA										
468.00 > 423.00	4.470	4.470	0.0	1.076	6689295	1.23		98.6	12476	
26 Perfluorononanoic acid										
463.00 > 419.00	4.470	4.470	0.0	1.000	4576962	1.02	Target=3.68	102	3855	
463.00 > 169.00	4.470	4.470	0.0	1.000	999518		4.58(1.84-5.52)		3149	
63 9CIFOS										
531.00 > 351.00	4.596	4.596	0.0	1.106	5262691	0.8990		96.5	8547	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.722	4.722	0.0	1.062	2425585	0.9175	Target=3.97	95.6	6985	
549.00 > 99.00	4.722	4.722	0.0	1.062	606172		4.00(1.99-5.96)		2409	
D 34 13C8 FOSA										
506.00 > 78.00	4.736	4.736	0.0	1.140	4447834	1.22		97.6	4266	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.736	4.736	0.0	1.000	3232305	0.9457		94.6	5103	
D 32 13C2 PFDA										
515.00 > 470.00	4.749	4.749	0.0	1.143	6762178	1.23		98.4	14027	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.749	4.749	0.0	1.000	5182891	1.01	Target=10.11	101	3166	
513.00 > 169.00	4.749	4.749	0.0	1.000	429008		12.08(5.06-15.17)		577	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.763	4.763	0.0	1.146	678990	1.22		102	2934	
31 8:2 FTS										
527.00 > 507.00	4.763	4.763	0.0	1.000	927827	0.9174		95.8	1763	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.896	4.896	0.0	1.178	1026650	1.36		109	2589	
36 NMeFOSAA										
570.00 > 419.00	4.896	4.896	0.0	1.000	788816	1.04		104	1473	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.993	4.993	0.0	1.123	2322663	0.9564	Target=3.80	99.2	7755	
599.00 > 99.00	4.993	4.993	0.0	1.123	598087		3.88(1.90-5.70)		3296	
D 39 13C2 PFUnA										
565.00 > 520.00	5.008	5.008	0.0	1.205	6625307	1.26		101	25194	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.008	5.008	0.0	1.000	5586048	1.04	Target=7.45	104	5271	
563.00 > 169.00	5.008	5.008	0.0	1.000	590110		9.47(3.78-11.33)		2865	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.022	5.022	0.0	1.209	986240	1.36		109	3730	
40 NEtFOSA										
584.00 > 419.00	5.036	5.036	0.0	1.003	721500	0.9632		96.3	1735	M
57 11C1FOS										
631.00 > 451.00	5.119	5.119	0.0	1.151	4274708	0.9068		96.3	9235	
D 43 13C2 PFDaA										
615.00 > 570.00	5.251	5.251	0.0	1.264	7157400	1.28		102	10953	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.251	5.251	0.0	1.000	5958151	1.00	Target=5.33	99.7	3609	
613.00 > 169.00	5.251	5.251	0.0	1.000	840572		7.09(2.66-7.99)		2770	
50 10:2 FTS										
627.00 > 607.00	5.266	5.266	0.0	1.106	1307165	1.04		108	3469	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.295	5.295	0.0	1.274	724053	1.59		127	411	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.274	605200	1.27		102	43.1	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.295	0.0	1.000	678615	1.01		101	627	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA	512.00 > 169.00	5.295	5.295	0.0	1.000	517044	1.02	102	621	
54 PFDoS	699.00 > 80.00	5.436	5.436	0.0	1.222	2271017	0.9063	93.6	5424	
	699.00 > 99.00	5.436	5.436	0.0	1.222	548060	4.14(2.19-6.58)		3896	
D 53 d9-N-EtFOSE-M	639.00 > 59.00	5.449	5.449	0.0	1.311	804360	1.65	132	671	
62 N-EtFOSE-M	630.00 > 59.00	5.462	5.462	0.0	1.002	757599	0.9322	93.2	1854	
D 52 d-N-EtFOSA-M	531.00 > 169.00	5.462	5.462	0.0	1.315	532748	1.33	107	701	
44 Perfluorotridecanoic acid	663.00 > 619.00	5.462	5.462	0.0	1.040	5242467	1.04	104	3233	
	663.00 > 169.00	5.462	5.462	0.0	1.040	858606	6.11(2.83-8.48)		3660	
56 N-EtFOSA-M	526.00 > 169.00	5.462	5.462	0.0	1.000	491271	0.9865	98.7	614	
D 46 13C2 PFTeDA	715.00 > 670.00	5.637	5.637	0.0	1.357	6589784	1.28	103	23206	
45 Perfluorotetradecanoic acid	713.00 > 169.00	5.637	5.637	0.0	1.000	669996	1.01	101	3585	
	713.00 > 219.00	5.637	5.637	0.0	1.000	638056	1.05(0.53-1.60)		3948	
55 Perfluorohexadecanoic acid	813.00 > 769.00	5.948	5.948	0.0	1.000	4108937	0.9776	97.8	3298	
	813.00 > 169.00	5.948	5.948	0.0	1.000	483121	8.50(3.75-11.26)		1979	
D 59 13C2 PFHxDA	815.00 > 770.00	5.948	5.948	0.0	1.432	4804007	1.29	103	8090	
60 Perfluorooctadecanoic acid	913.00 > 869.00	6.221	6.221	0.0	1.046	3530350	1.01	101	3152	
	913.00 > 169.00	6.221	6.221	0.0	1.046	299128	11.80(5.14-15.41)		2456	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L4PFC2_00003

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_007.d

Injection Date: 08-Oct-2021 12:43:25

Instrument ID: LCA

Lims ID: CCVIS

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 7

Worklist Smp#: 7

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

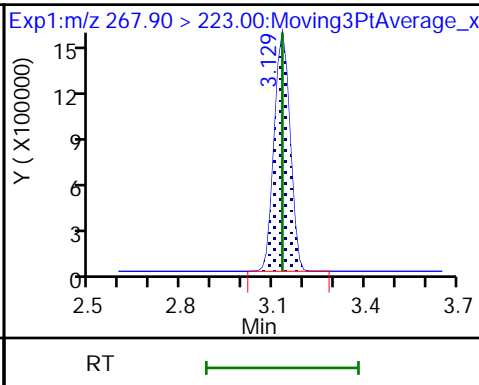
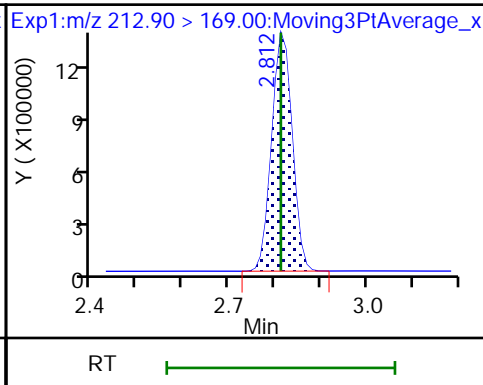
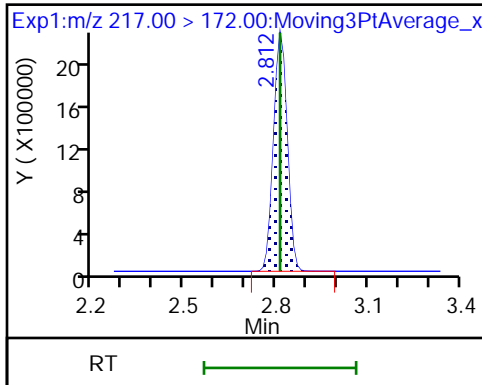
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

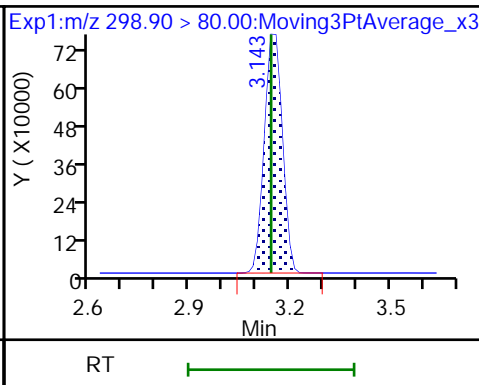
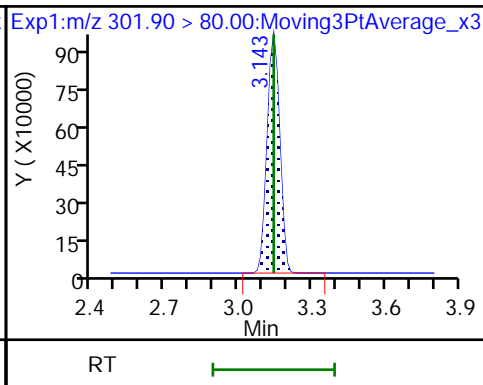
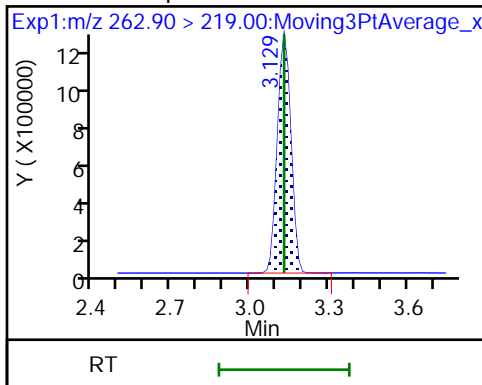
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

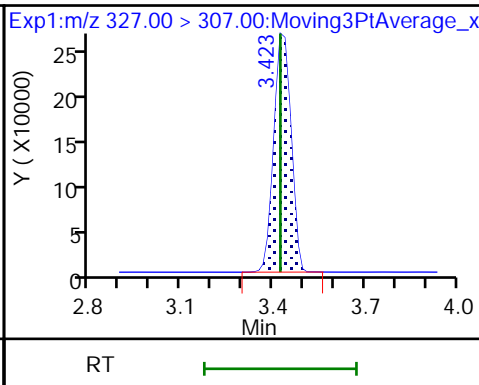
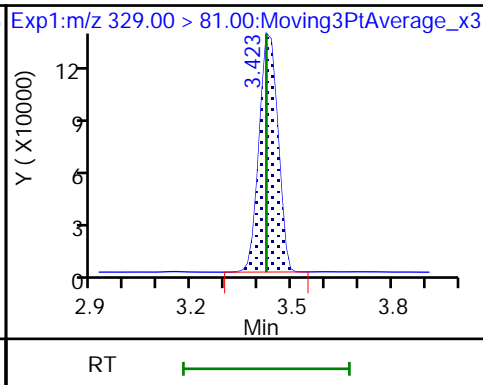
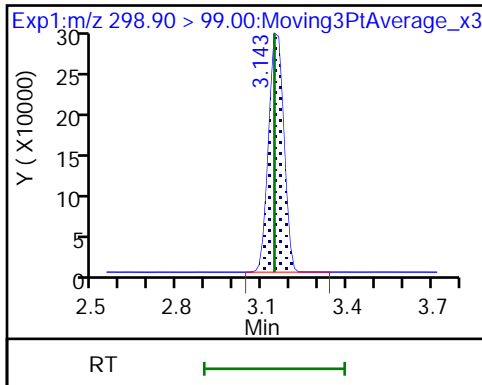
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

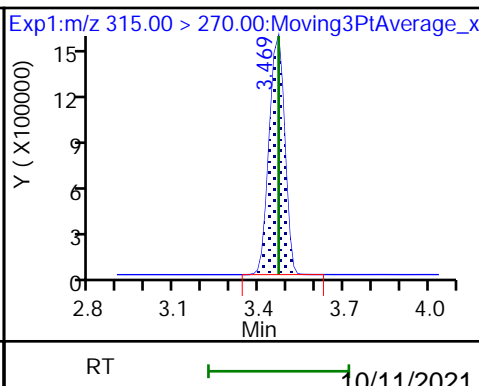
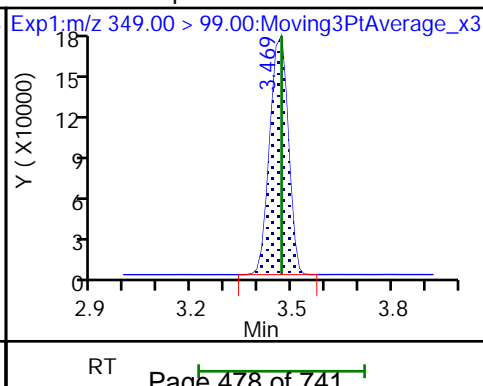
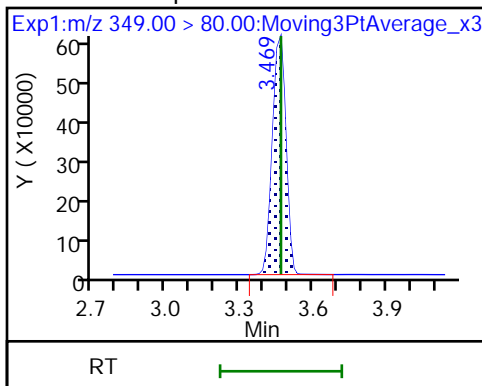
7 4:2 FTS

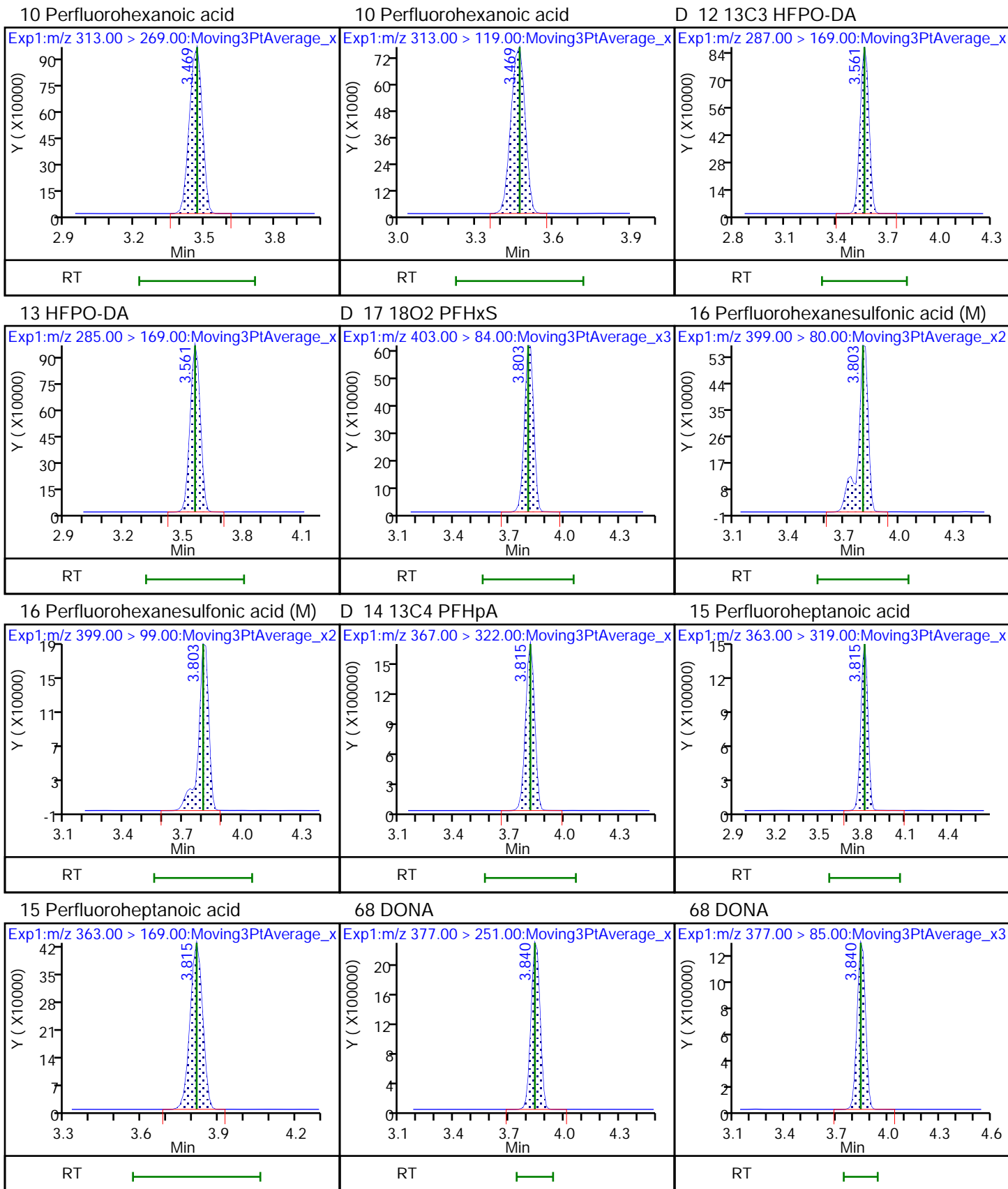


11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA

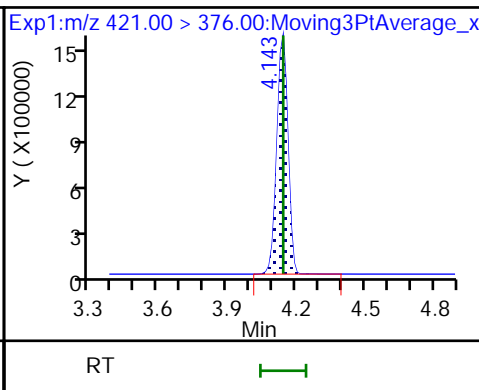
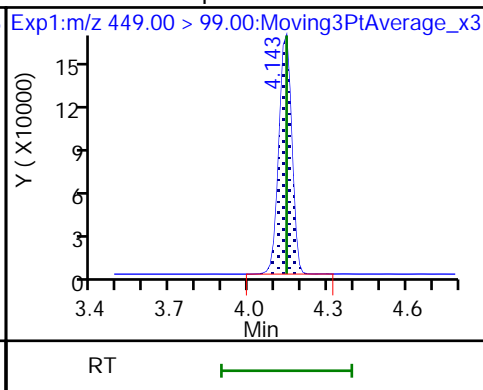
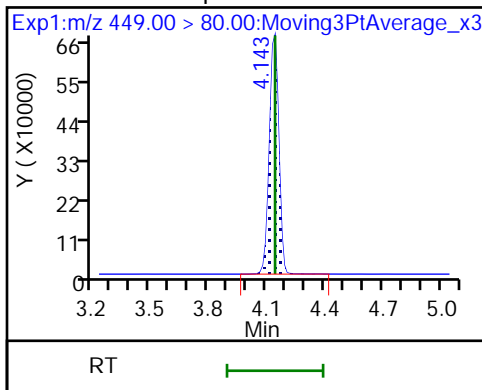




20 Perfluoroheptanesulfonic acid

20 Perfluoroheptanesulfonic acid

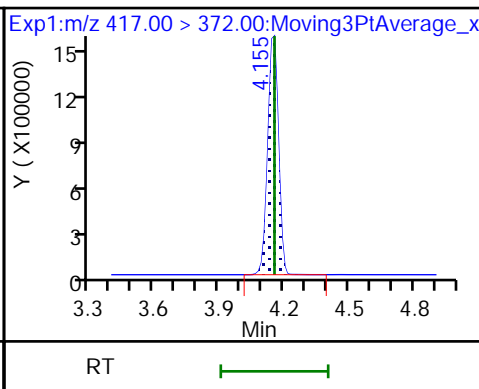
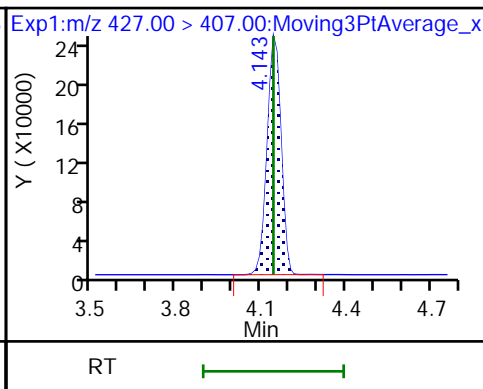
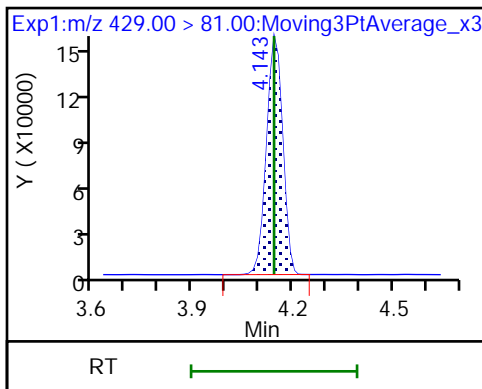
\$ 48 13C8 PFOA



D 18 M2-6:2 FTS

19 6:2 FTS

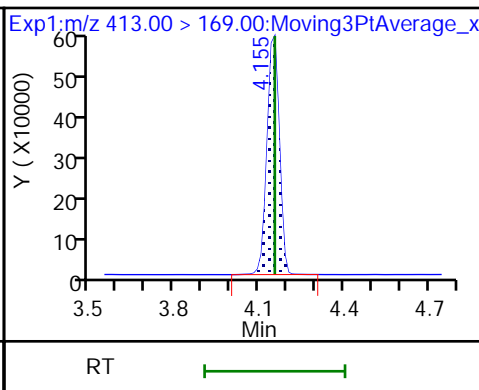
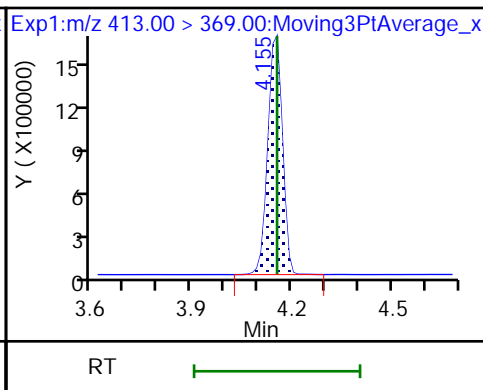
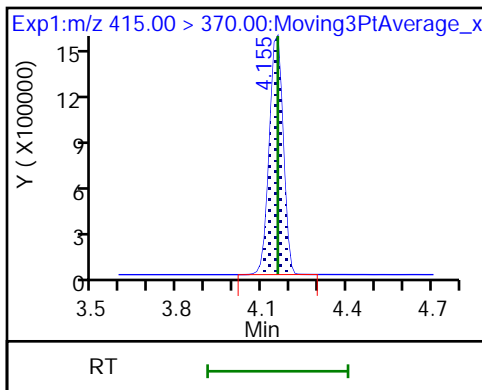
D 21 13C4 PFOA



* 22 13C2 PFOA

23 Perfluorooctanoic acid

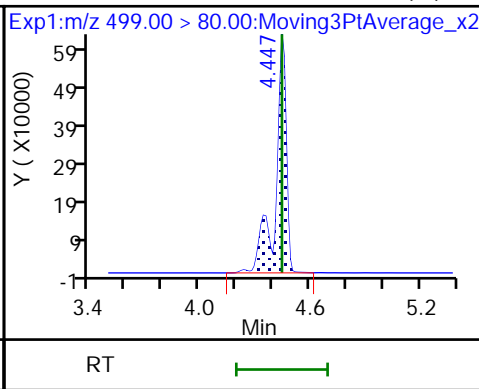
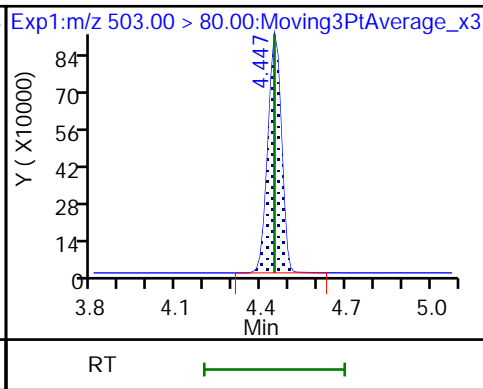
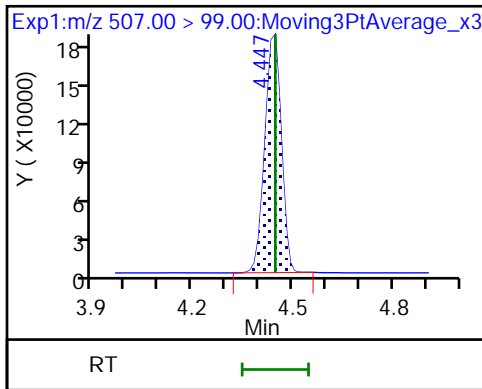
23 Perfluorooctanoic acid



\$ 47 13C8 PFOS

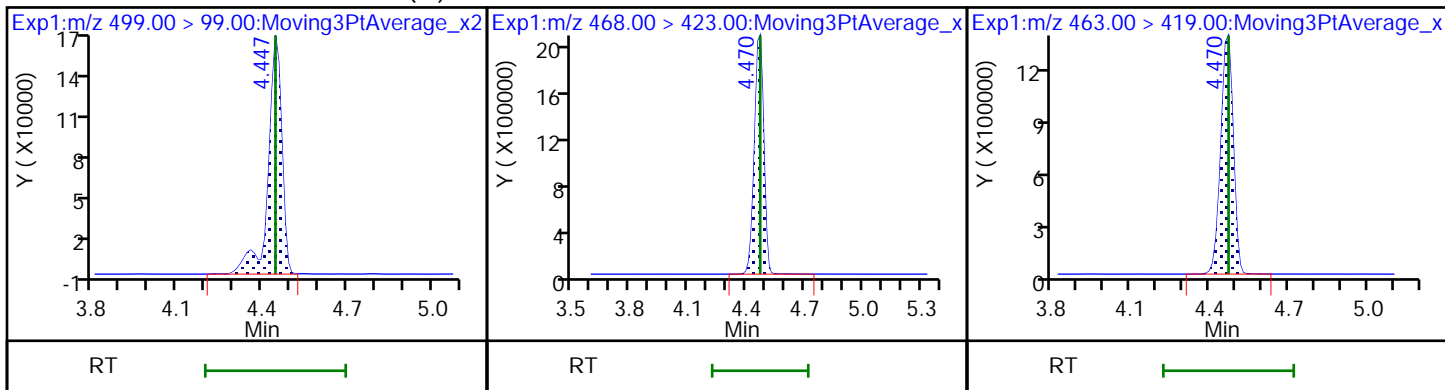
D 25 13C4 PFOS

24 Perfluorooctanesulfonic acid (M)



24 Perfluorooctanesulfonic acid (M) D 27 13C5 PFNA

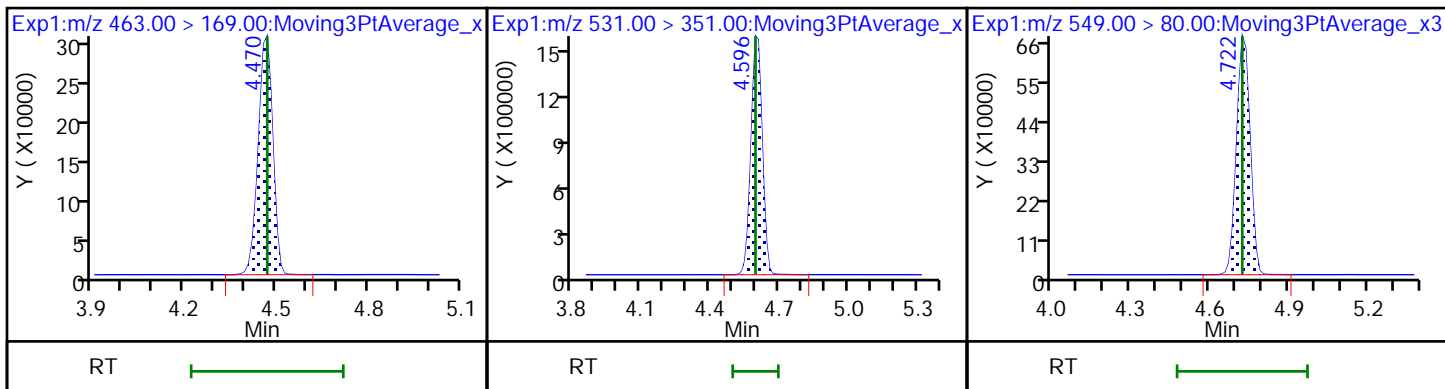
26 Perfluorononanoic acid



26 Perfluorononanoic acid

63 9CIFOS

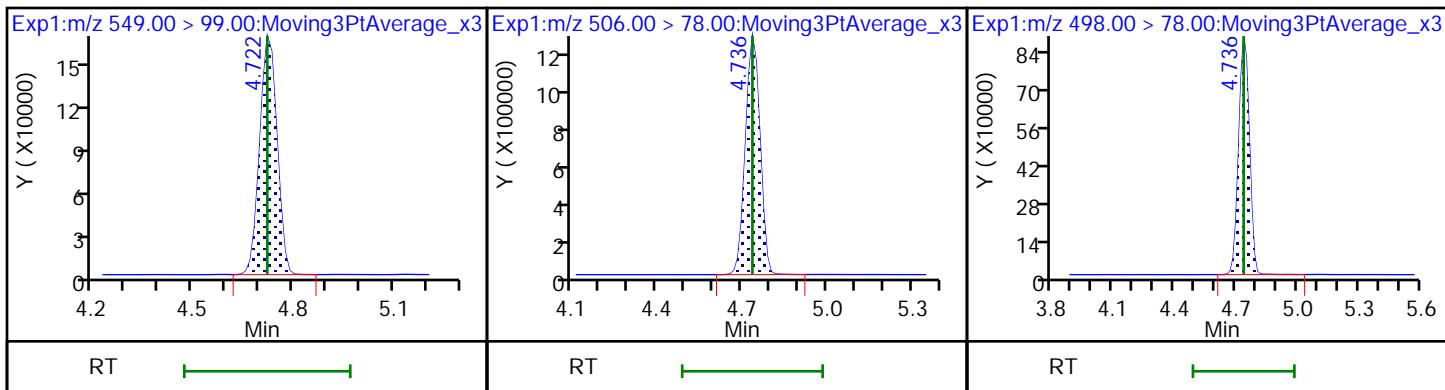
28 Perfluoronanesulfonic acid



28 Perfluoronanesulfonic acid

D 34 13C8 FOSA

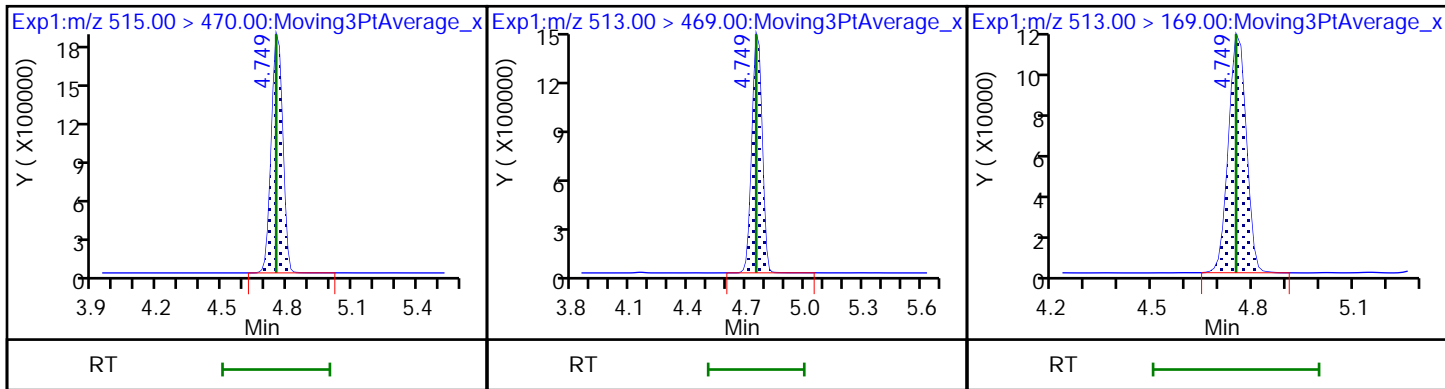
33 Perfluorooctanesulfonamide



D 32 13C2 PFDA

29 Perfluorodecanoic acid

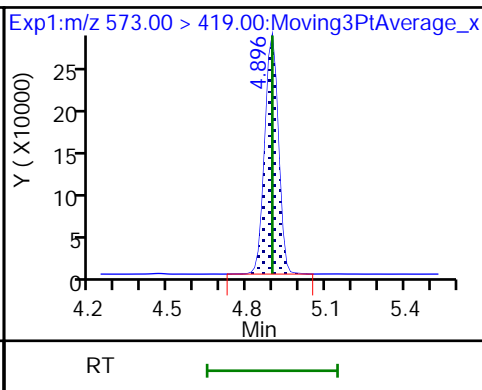
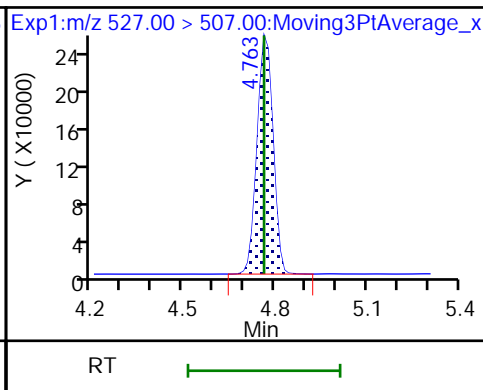
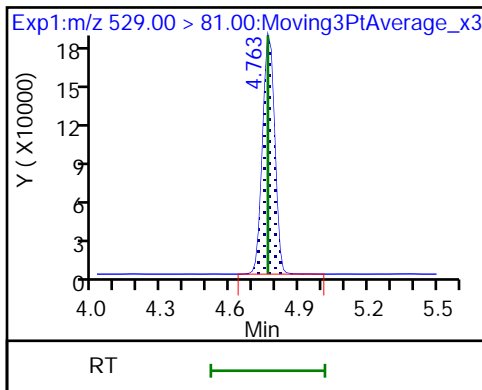
29 Perfluorodecanoic acid



D 30 M2-8:2 FTS

31 8:2 FTS

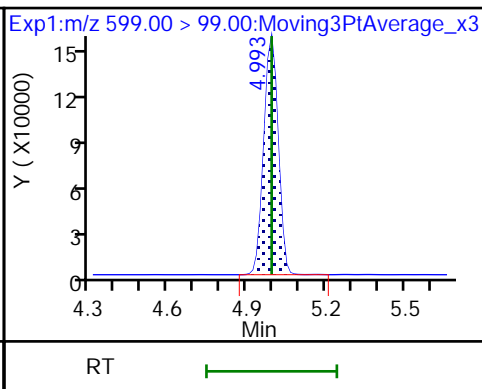
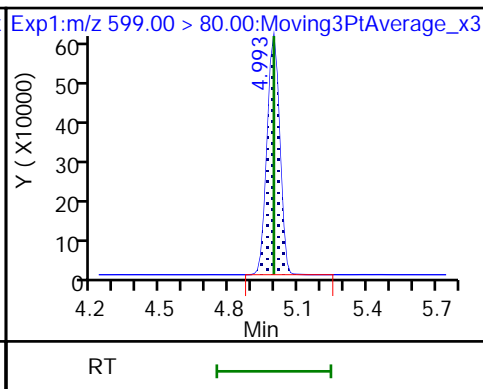
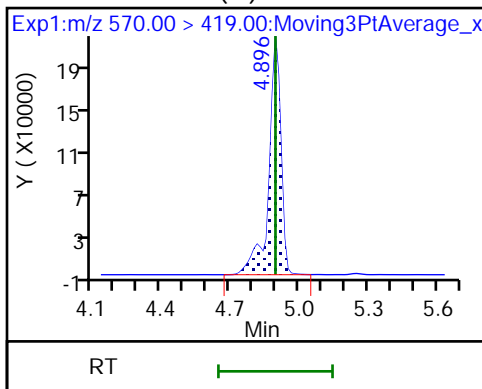
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

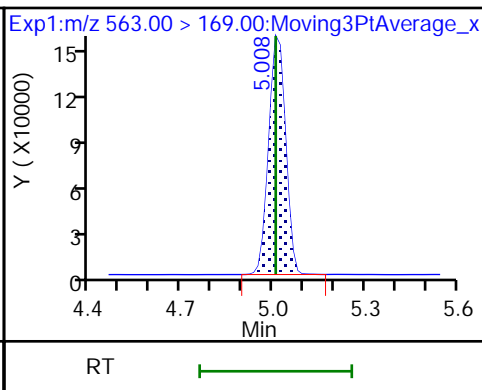
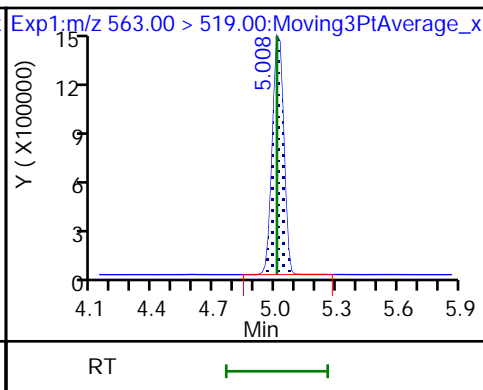
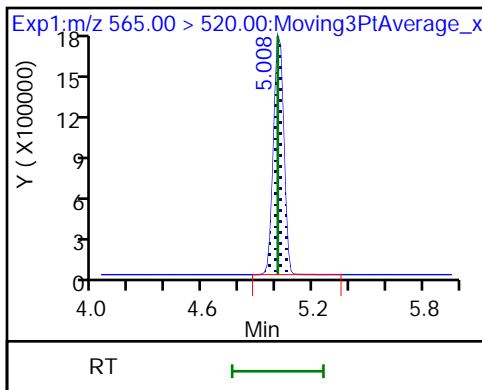
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

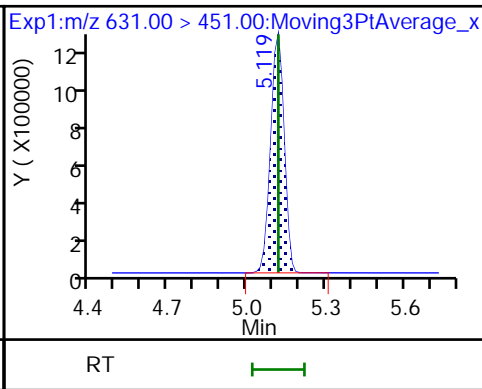
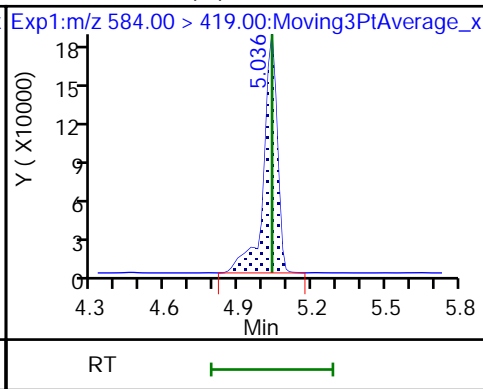
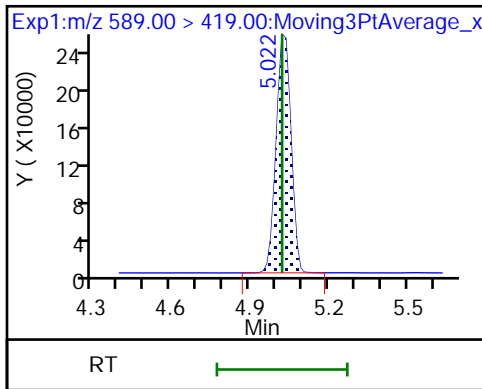
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA (M)

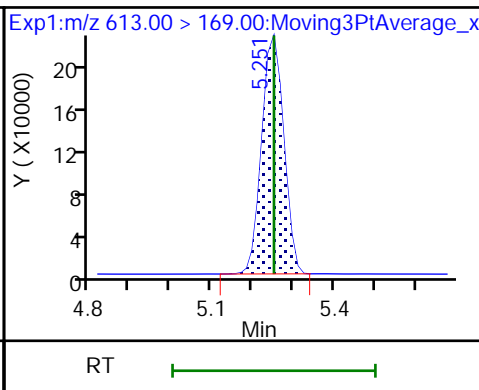
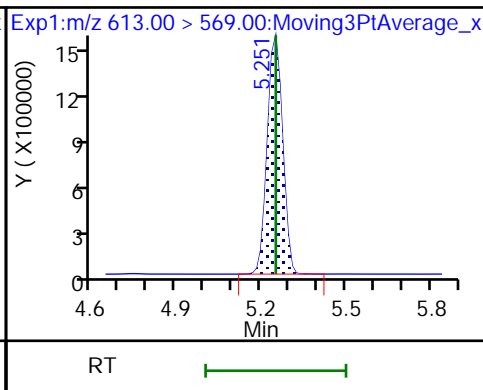
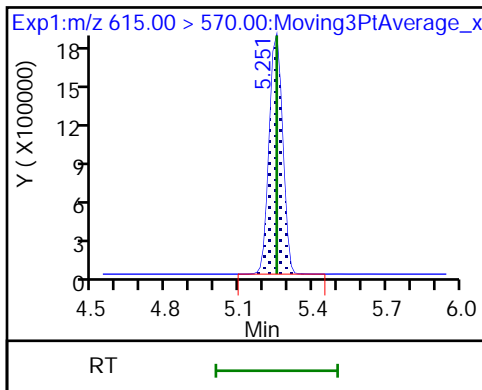
57 11C1FOS



D 43 13C2 PFDaA

42 Perfluorododecanoic acid

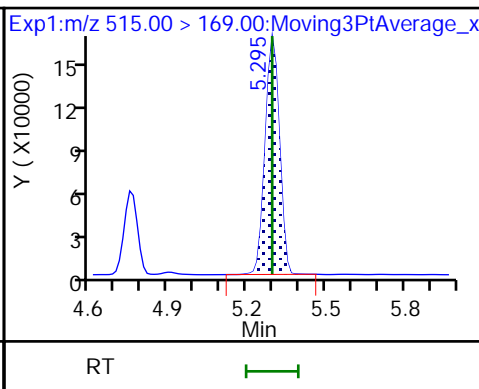
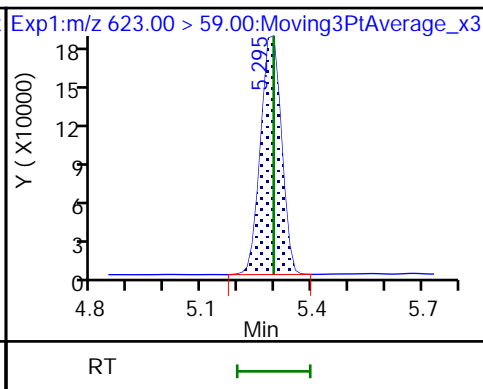
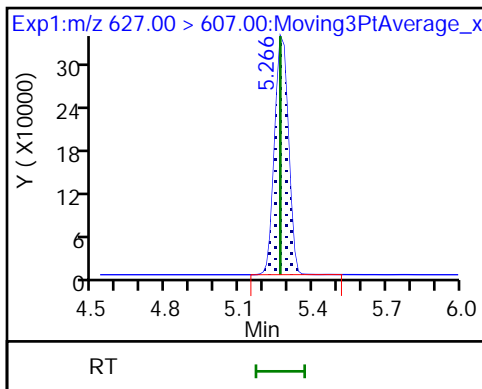
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

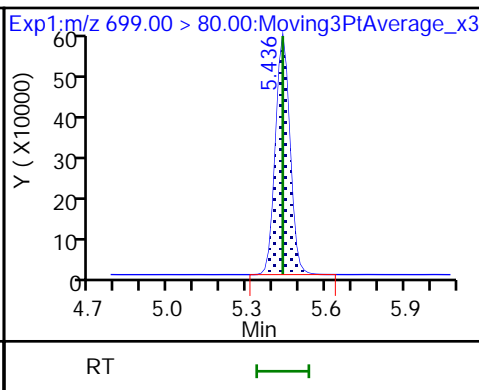
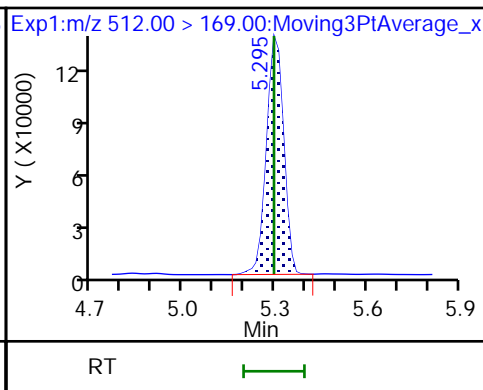
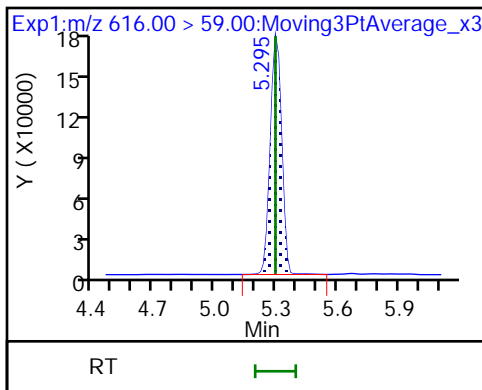
D 58 d-N-MeFOSA-M



49 N-MeFOSE-M

61 NMeFOSA

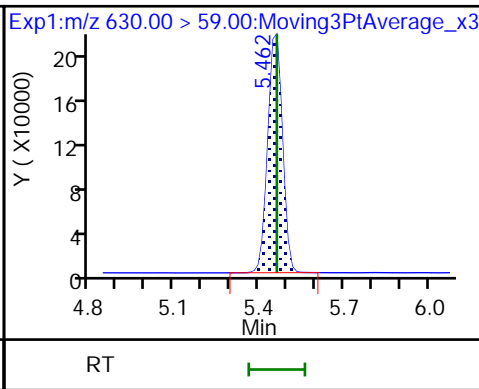
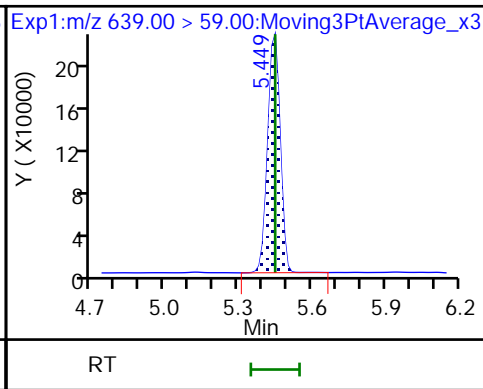
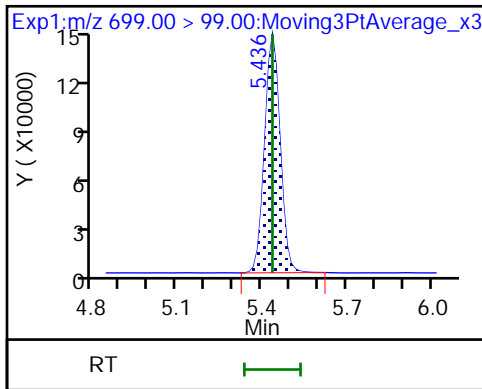
54 PFDoS



54 PFDoS

D 53 d9-N-EtFOSE-M

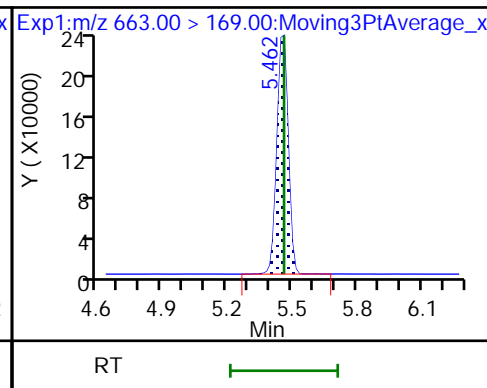
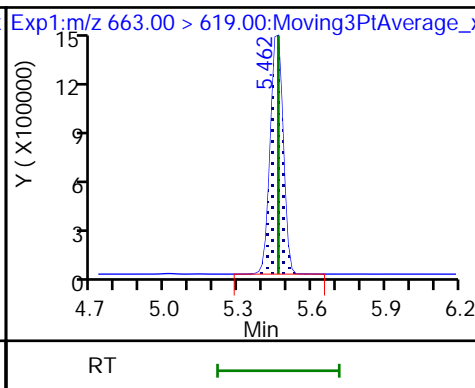
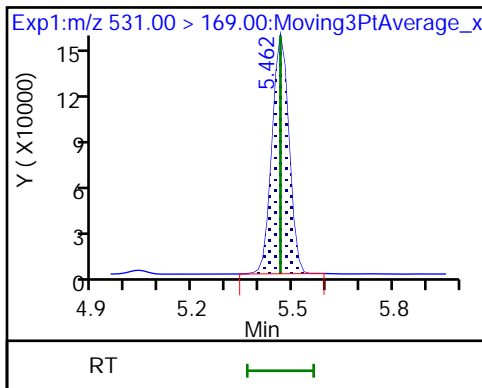
62 N-EtFOSE-M



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid

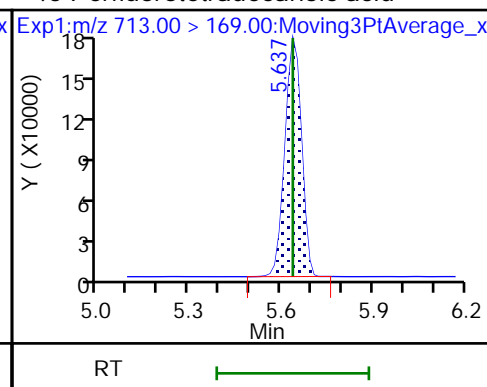
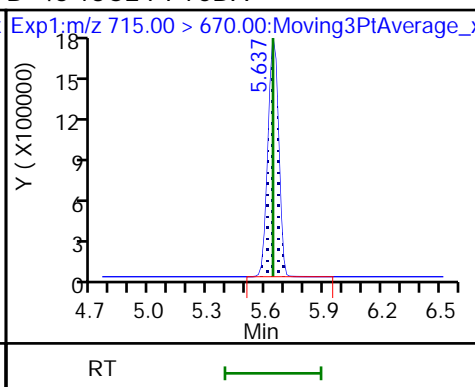
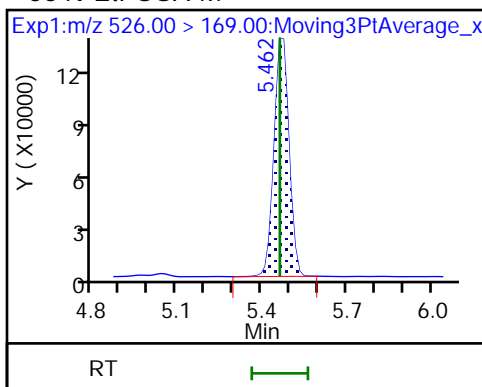
44 Perfluorotridecanoic acid



56 N-EtFOSA-M

D 46 13C2 PFTeDA

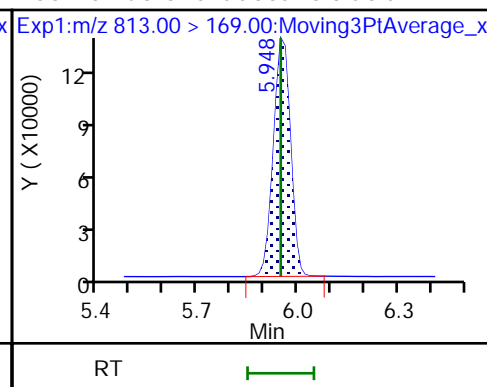
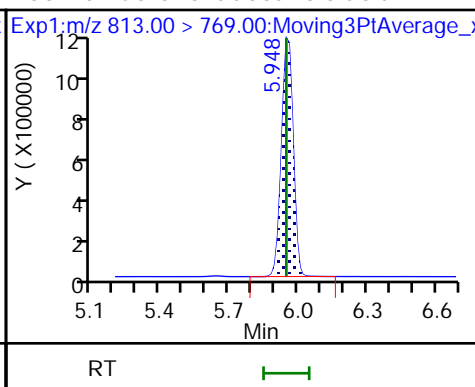
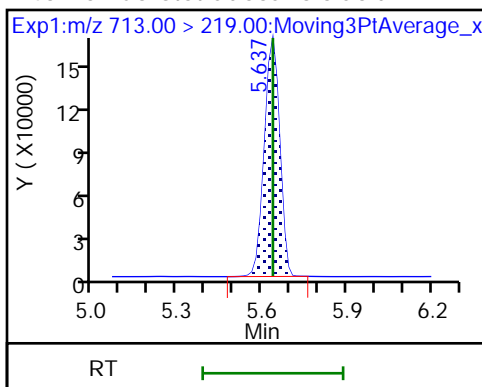
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

55 Perfluorohexadecanoic acid

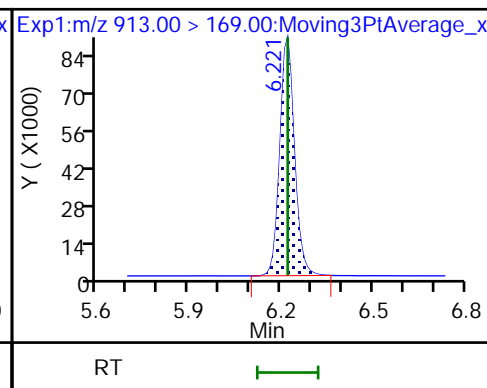
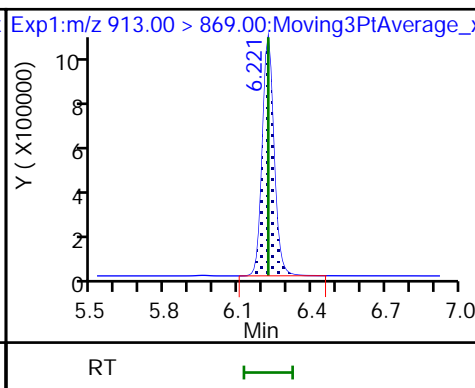
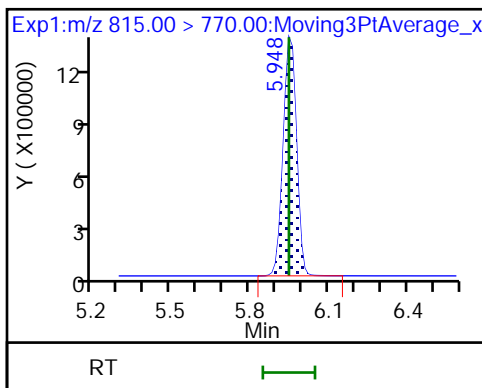
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid



Eurofins TestAmerica, Knoxville

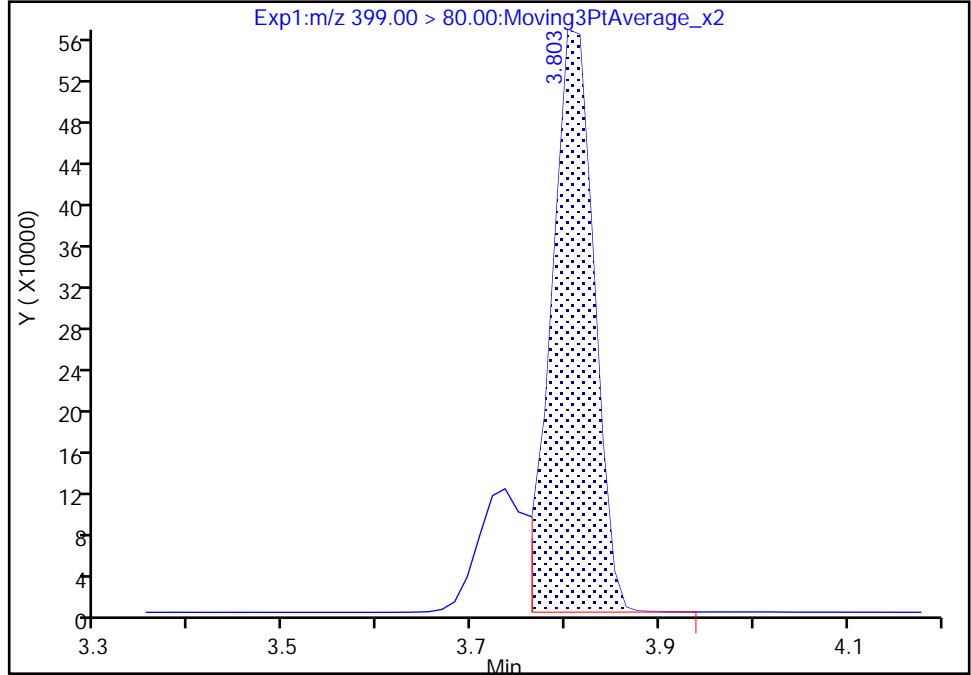
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Injection Date: 08-Oct-2021 12:43:25 Instrument ID: LCA
Lims ID: CCVIS
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

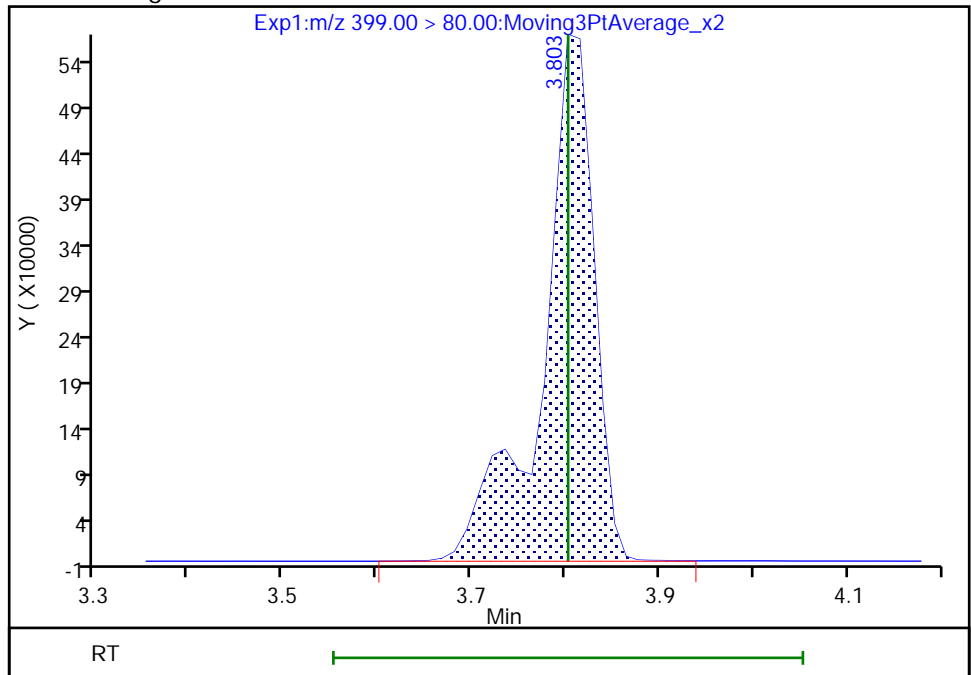
RT: 3.80
Area: 1734253
Amount: 0.708925
Amount Units: ng/ml

Processing Integration Results



RT: 3.80
Area: 2148107
Amount: 0.879316
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 10:02:04
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

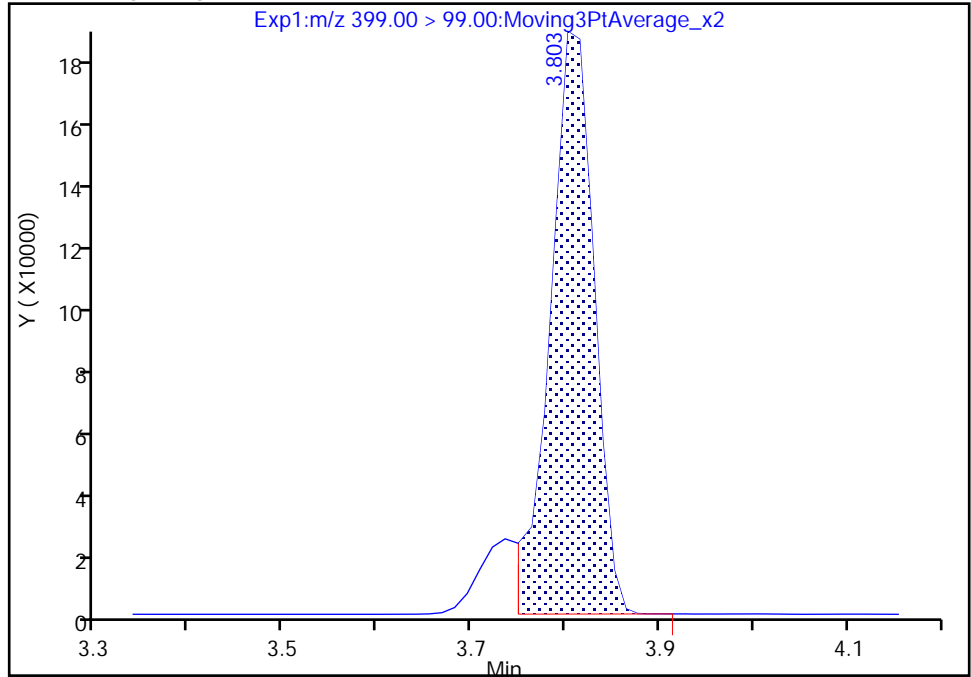
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Lims ID: CCVIS
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

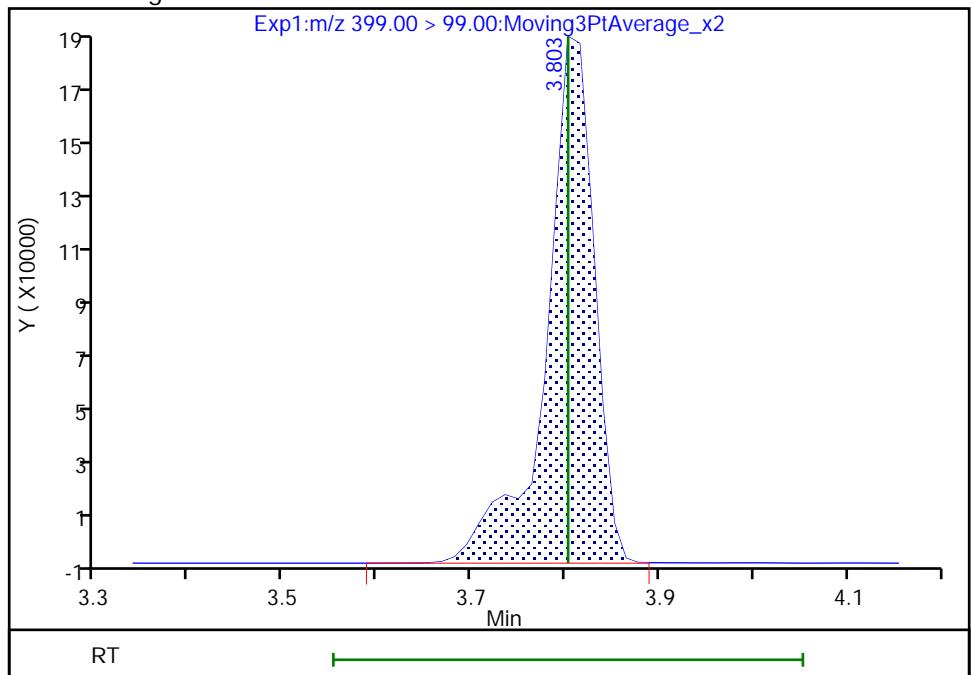
RT: 3.80
Area: 601106
Amount: 0.708925
Amount Units: ng/ml

Processing Integration Results



RT: 3.80
Area: 668664
Amount: 0.879316
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 10:02:10

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

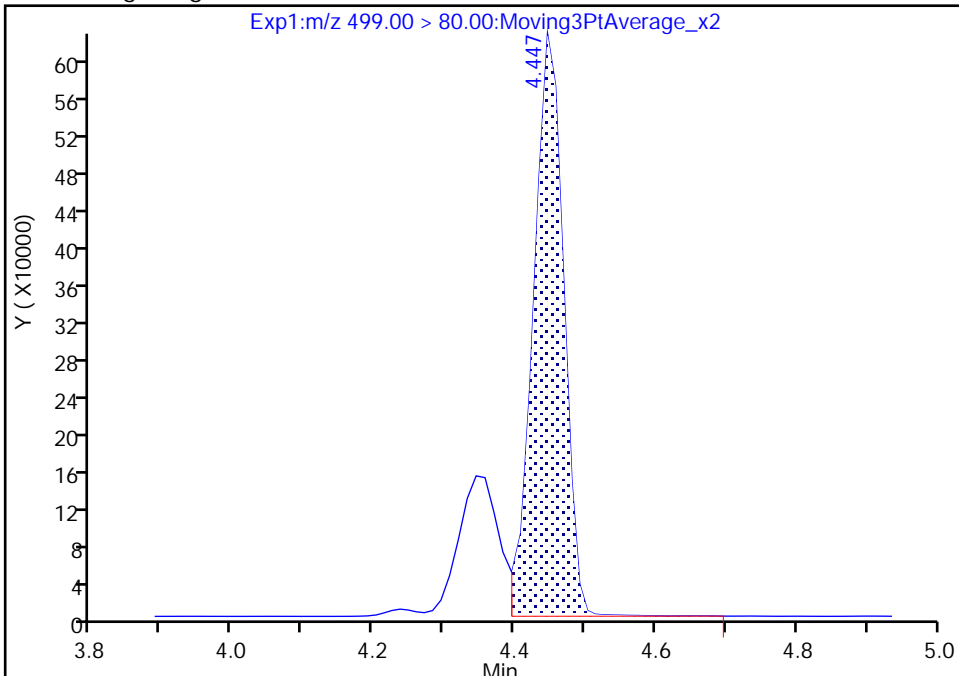
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Injection Date: 08-Oct-2021 12:43:25 Instrument ID: LCA
Lims ID: CCVIS
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

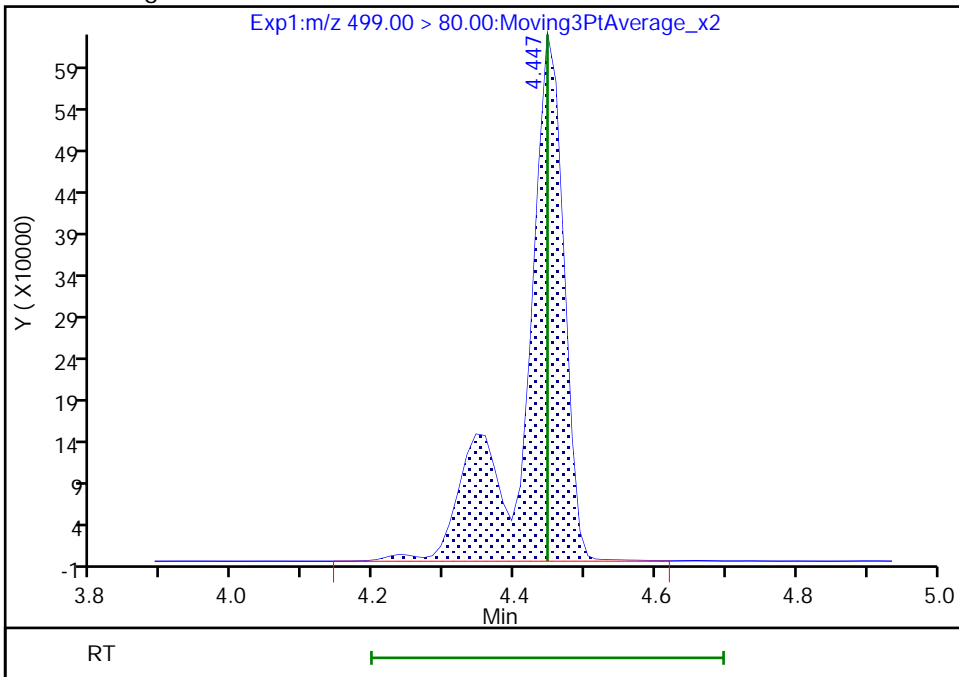
RT: 4.45
Area: 1838953
Amount: 0.659216
Amount Units: ng/ml

Processing Integration Results



RT: 4.45
Area: 2448542
Amount: 0.877738
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 10:02:23
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

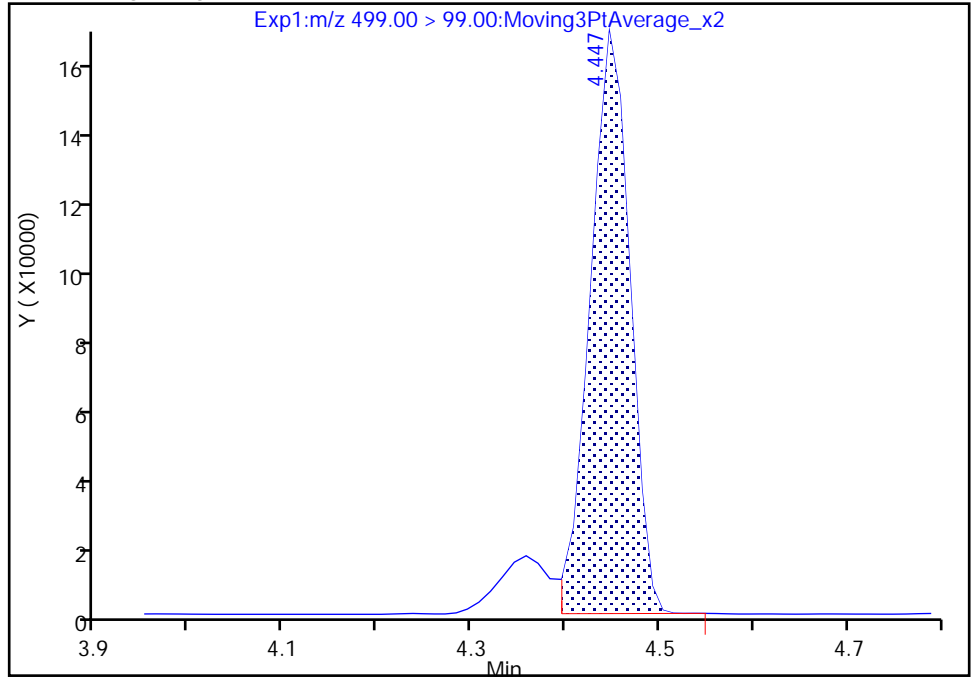
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Lims ID: CCVIS
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

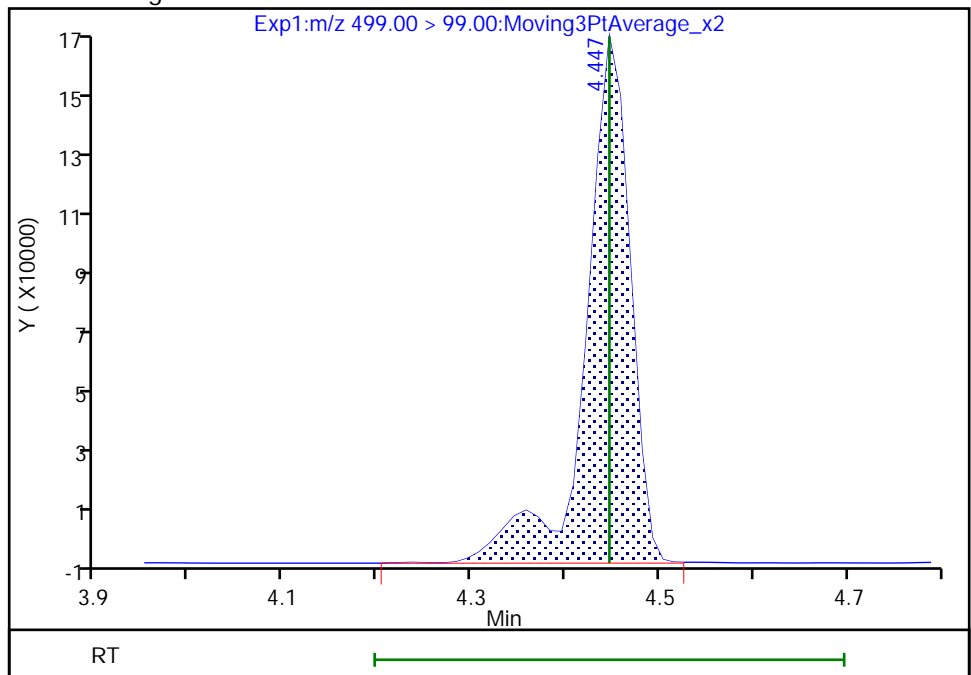
RT: 4.45
Area: 485137
Amount: 0.659216
Amount Units: ng/ml

Processing Integration Results



RT: 4.45
Area: 550642
Amount: 0.877738
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 10:02:27

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

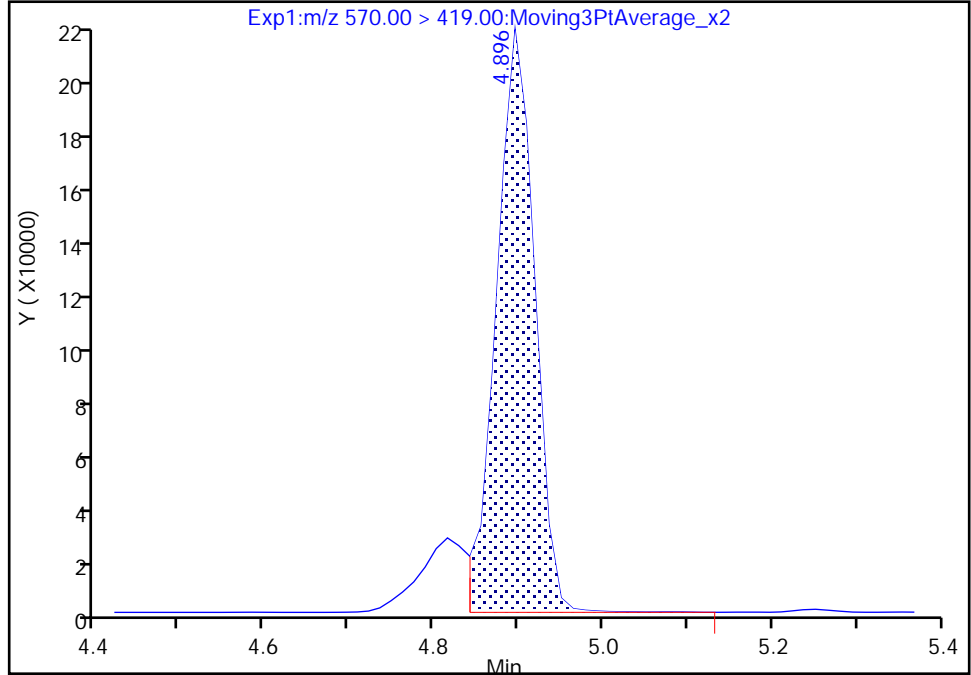
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Injection Date: 08-Oct-2021 12:43:25 Instrument ID: LCA
Lims ID: CCVIS
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

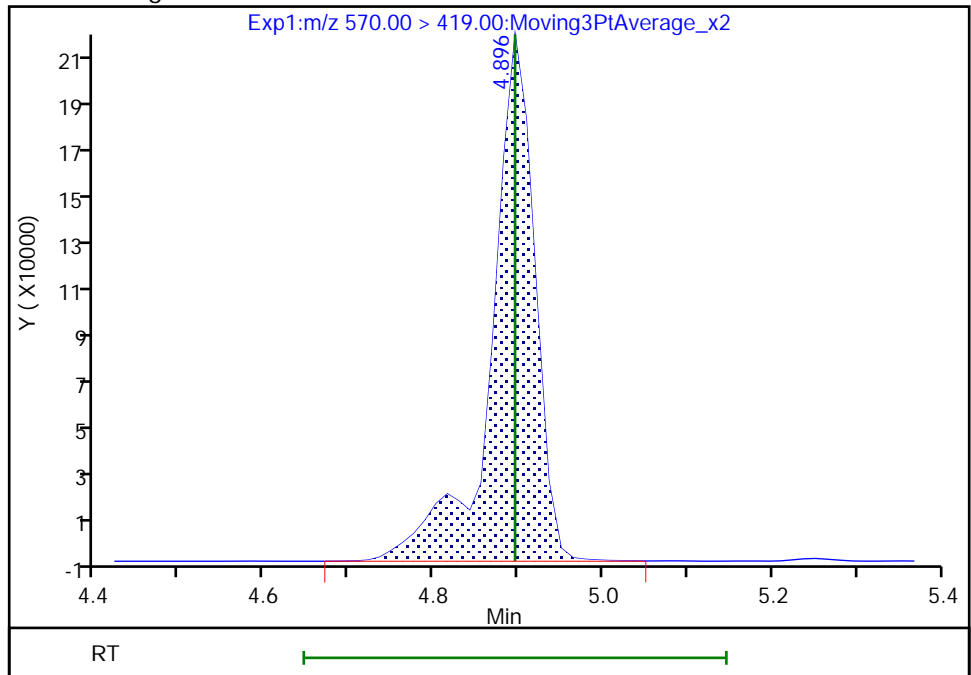
RT: 4.90
Area: 684613
Amount: 0.905718
Amount Units: ng/ml

Processing Integration Results



RT: 4.90
Area: 788816
Amount: 1.044707
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 10:02:38
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

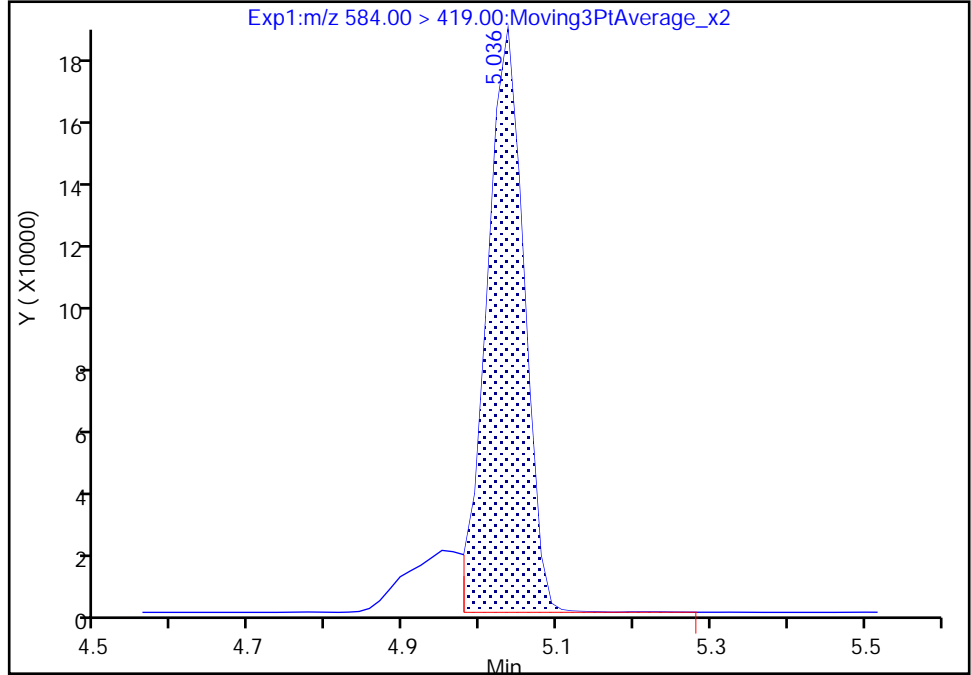
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Lims ID: CCVIS
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

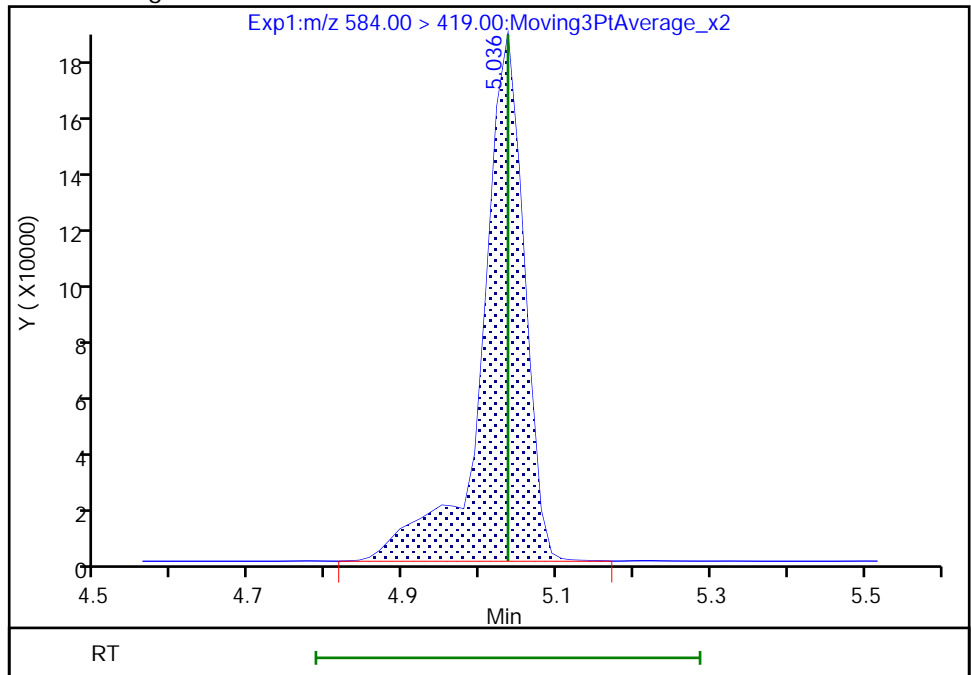
RT: 5.04
Area: 623069
Amount: 0.831782
Amount Units: ng/ml

Processing Integration Results



RT: 5.04
Area: 721500
Amount: 0.963185
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 10:02:48
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54642/18 Calibration Date: 10/08/2021 14:20
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _018.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7855	0.7277		2.32	2.50	-7.4	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.013	0.9380		2.32	2.50	-7.4	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.126	1.072		2.10	2.21	-4.8	40.0
4:2 FTS	AveID	2.500	2.232		2.09	2.34	-10.7	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8572	0.7933		2.31	2.50	-7.5	40.0
Perfluoropentanesulfonic acid (PFPeS)	L2ID		0.7890		2.16	2.35	-7.9	50.0
HFPO-DA	L2ID		1.353		2.45	2.50	-1.9	40.0
Perfluorohexanesulfonic acid (PFHxS)	L2ID		1.309		2.20	2.28	-3.4	40.0
Perfluoroheptanoic acid (PFHpA)	L2ID		0.9571		2.27	2.50	-9.2	40.0
DONA	AveID	3.243	3.207		2.33	2.36	-1.1	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9947	1.025		2.45	2.38	3.0	40.0
6:2 FTS	L2ID		1.831		2.17	2.37	-8.6	40.0
Perfluorooctanoic acid (PFOA)	L2ID		1.096		2.49	2.50	-0.6	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.100	1.071		2.26	2.32	-2.6	40.0
Perfluorononanoic acid (PFNA)	L2ID		0.8438		2.54	2.50	1.4	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	2.308	2.380		2.40	2.33	3.1	40.0
Perfluorononanesulfonic acid (PFNS)	AveID	1.042	1.036		2.39	2.40	-0.6	40.0
Perfluorodecanoic acid (PFDA)	L2ID		0.9487		2.51	2.50	0.5	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9606	0.8939		2.33	2.50	-6.9	40.0
8:2 FTS	AveID	1.784	1.845		2.48	2.40	3.4	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	L2ID		0.8999		2.46	2.50	-1.7	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.9574	0.9820		2.47	2.41	2.6	40.0
Perfluoroundecanoic acid (PFUnA)	L2ID		0.9063		2.25	2.50	-10.2	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.9494	0.8750		2.30	2.50	-7.8	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.858	1.862		2.36	2.36	0.2	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9261		2.27	2.50	-9.1	40.0
10:2 FTS	AveID	2.221	2.643		2.87	2.41	19.0	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.174		2.55	2.50	1.9	40.0
NMeFOSA	AveID	1.047	0.9682		2.31	2.50	-7.5	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9879	1.002		2.46	2.42	1.5	40.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54642/18 Calibration Date: 10/08/2021 14:20
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _018.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTrIA)	L2ID		0.8329		2.36	2.50	-5.4	50.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.195		2.37	2.50	-5.1	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.168	1.140		2.44	2.50	-2.4	40.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.1255		2.50	2.50	-0.1	40.0
Perfluorohexadecanoic acid	Q2ID		1.028		2.41	2.50	-3.6	40.0
Perfluorooctadecanoic acid	AveID	0.9076	0.9195		2.53	2.50	1.3	40.0
13C4 PFBA	Ave	1.324	1.338		1.26	1.25	1.1	50.0
13C5 PFPeA	Ave	1.087	1.155		1.33	1.25	6.2	50.0
13C3 PFBS	Ave	0.7019	0.7275		1.21	1.16	3.6	50.0
M2-4:2 FTS	Ave	0.1052	0.1184		1.31	1.17	12.5	50.0
13C2 PFHxA	Ave	1.116	1.077		1.21	1.25	-3.5	50.0
13C3 HFPO-DA	Ave	0.5714	0.5856		1.28	1.25	2.5	50.0
18O2 PFHxS	Ave	0.4248	0.4251		1.18	1.18	0.0	50.0
13C4 PFHpA	Ave	1.113	1.129		1.27	1.25	1.4	50.0
13C4 PFOA	Ave	1.007	1.010		1.25	1.25	0.3	50.0
M2-6:2 FTS	Ave	0.1078	0.1111		1.22	1.19	3.1	50.0
13C4 PFOS	Ave	0.5852	0.5474		1.12	1.20	-6.5	50.0
13C5 PFNA	Ave	1.279	1.227		1.20	1.25	-4.1	50.0
13C2 PFDA	Ave	1.296	1.242		1.20	1.25	-4.1	50.0
13C8 FOSA	Ave	0.8591	0.8398		1.22	1.25	-2.2	50.0
M2-8:2 FTS	Ave	0.1316	0.1153		1.05	1.20	-12.4	50.0
d3-NMeFOSAA	Ave	0.1774	0.1987		1.40	1.25	12.0	50.0
13C2 PFUnA	Ave	1.237	1.275		1.29	1.25	3.1	50.0
d5-NEtFOSAA	Ave	0.1705	0.1849		1.36	1.25	8.4	50.0
13C2 PFDoA	Ave	1.319	1.394		1.32	1.25	5.6	50.0
d7-N-MeFOSE-M	Ave	0.1075	0.1275		1.48	1.25	18.5	50.0
d-N-MeFOSA-M	Ave	0.1120	0.1228		1.37	1.25	9.7	50.0
d9-N-EtFOSE-M	Ave	0.1146	0.1438		1.57	1.25	25.5	50.0
d-N-EtFOSA-M	Ave	0.0942	0.0979		1.30	1.25	3.9	50.0
13C2 PFTeDA	Ave	1.211	1.231		1.27	1.25	1.7	50.0
13C2 PFHxDA	Ave	0.8782	0.9079		1.29	1.25	3.4	50.0
13C8 PFOA	Ave	0.9886	1.007		1.27	1.25	1.9	50.0
13C8 PFOS	Ave	0.1256	0.1161		1.11	1.20	-7.5	50.0

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_018.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 08-Oct-2021 14:20:13 ALS Bottle#: 18 Worklist Smp#: 18
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0021001-018 ccv
 Misc. Info.: Plate: 7 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15
 Method: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 11:11:19 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 10:16:04

Ratio Calibration: None

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	2.801	2.812	-0.011	0.678	6689773	1.26	101	15965	
2 Perfluorobutanoic acid	212.90 > 169.00	2.801	2.812	-0.011	1.000	9736415	2.32	92.6	2119	
D 3 13C5 PFPeA	267.90 > 223.00	3.116	3.129	-0.013	0.754	5771643	1.33	106	16094	
4 Perfluoropentanoic acid	262.90 > 219.00	3.116	3.129	-0.013	1.000	10827990	2.32	92.6	3814	
D 6 13C3 PFBS	301.90 > 80.00	3.130	3.143	-0.013	0.758	3381794	1.20	104	29332	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.130	3.143	-0.013	1.000	6890800	2.10	Target=3.06	95.2	26623
	298.90 > 99.00	3.130	3.143	-0.013	1.000	2505474		2.75(1.53-4.59)		7280
D 8 M2-4:2 FTS	329.00 > 81.00	3.409	3.423	-0.014	0.825	552762	1.31	112	1201	
7 4:2 FTS	327.00 > 307.00	3.409	3.423	-0.014	1.000	2467496	2.08	89.3	24421	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.453	3.469	-0.016	1.103	5382123	2.16	Target=3.47	92.1	28577
	349.00 > 99.00	3.453	3.469	-0.016	1.103	1577682		3.41(1.73-5.20)		17505
D 9 13C2 PFHxA	315.00 > 270.00	3.453	3.469	-0.016	0.836	5382785	1.21	96.5	14288	
10 Perfluorohexanoic acid	313.00 > 269.00	3.453	3.469	-0.016	1.000	8540097	2.31	Target=9.74	92.5	4236
	313.00 > 119.00	3.453	3.469	-0.016	1.000	682838		12.51(4.87-14.61)		1779
D 12 13C3 HFPO-DA	287.00 > 169.00	3.548	3.561	-0.013	0.859	2927451	1.28	102	14769	

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_018.d

Ratio Calibration: None

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.548	3.561	-0.013	1.000	7922026	2.45		98.1	10285	
D 17 18O2 PFHxS										
403.00 > 84.00	3.791	3.803	-0.012	0.918	2010235	1.18		100	10658	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.791	3.803	-0.012	1.000	5061212	2.20	Target=2.96	96.6	13842	M
399.00 > 99.00	3.791	3.803	-0.012	1.000	1507911		3.36(1.48-4.44)		7384	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.803	3.815	-0.012	0.921	5643646	1.27		101	22571	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.803	3.815	-0.012	1.000	10803417	2.27	Target=3.35	90.8	7875	
363.00 > 169.00	3.803	3.815	-0.012	1.000	3544787		3.05(1.67-5.02)		10453	
68 DONA										
377.00 > 251.00	3.827	3.840	-0.013	0.863	16536210	2.33	Target=1.49	98.9	38234	
377.00 > 85.00	3.827	3.840	-0.013	0.863	9613563		1.72(0.74-2.23)		5304	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.119	4.143	-0.024	0.929	5338125	2.45	Target=3.73	103	32057	
449.00 > 99.00	4.119	4.143	-0.024	0.929	1375067		3.88(1.87-5.61)		9296	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.119	4.143	-0.024	0.997	5033669	1.27		102	42149	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.131	4.143	-0.012	1.000	527446	1.22		103	4620	
19 6:2 FTS										
427.00 > 407.00	4.131	4.143	-0.012	1.000	1927683	2.17		91.4	11151	
D 21 13C4 PFOA										
417.00 > 372.00	4.131	4.155	-0.024	1.000	5046529	1.25		100	27329	
* 22 13C2 PFOA										
415.00 > 370.00	4.131	4.155	-0.024		4998708	1.25			20687	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.131	4.155	-0.024	1.000	11064430	2.48	Target=2.40	99.4	5909	
413.00 > 169.00	4.131	4.155	-0.024	1.000	4271072		2.59(1.20-3.61)		7048	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.422	4.447	-0.025	1.070	554940	1.11		92.5	4186	
D 25 13C4 PFOS										
503.00 > 80.00	4.434	4.447	-0.013	1.074	2616065	1.12		93.5	6176	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.434	4.447	-0.013	1.000	5439150	2.26	Target=3.83	97.4	9775	M
499.00 > 99.00	4.434	4.447	-0.013	1.000	1242903		4.38(1.91-5.74)		5620	M
D 27 13C5 PFNA										
468.00 > 423.00	4.447	4.470	-0.023	1.076	6131010	1.20		95.9	29537	
26 Perfluorononanoic acid										
463.00 > 419.00	4.447	4.470	-0.023	1.000	10346312	2.54	Target=3.68	101	10966	
463.00 > 169.00	4.447	4.470	-0.023	1.000	2226681		4.65(1.84-5.52)		5551	
63 9CIFOS										
531.00 > 351.00	4.584	4.596	-0.012	1.110	12142104	2.40		103	30142	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.709	4.722	-0.013	1.062	5444315	2.39	Target=3.97	99.4	21353	
549.00 > 99.00	4.709	4.722	-0.013	1.062	1432511		3.80(1.99-5.96)		6298	
D 34 13C8 FOSA										
506.00 > 78.00	4.736	4.736	0.0	1.146	4197879	1.22		97.8	8559	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.736	4.736	0.0	1.000	7504558	2.33		93.1	7203	
D 32 13C2 PFDA										
515.00 > 470.00	4.736	4.749	-0.013	1.146	6207464	1.20		95.9	50303	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.736	4.749	-0.013	1.000	11778111	2.51	Target=10.11	100	7581	
513.00 > 169.00	4.736	4.749	-0.013	1.000	926345		12.71(5.06-15.17)		505	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.763	-0.014	1.150	552001	1.05		87.6	2494	
31 8:2 FTS										
527.00 > 507.00	4.749	4.763	-0.014	1.000	2036688	2.48		103	3601	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.882	4.896	-0.014	1.182	993346	1.40		112	1606	
36 NMeFOSAA										
570.00 > 419.00	4.882	4.896	-0.014	1.000	1787742	2.46		98.3	3379	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.979	4.993	-0.014	1.123	5180940	2.47	Target=3.80	103	17151	
599.00 > 99.00	4.979	4.993	-0.014	1.123	1408667		3.68(1.90-5.70)		8827	
D 39 13C2 PFUnA										
565.00 > 520.00	4.993	5.008	-0.015	1.209	6375754	1.29		103	26544	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.993	5.008	-0.015	1.000	11556533	2.25	Target=7.45	89.8	14834	
563.00 > 169.00	4.993	5.008	-0.015	1.000	1360530		8.49(3.78-11.33)		5095	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.007	5.022	-0.015	1.212	924346	1.36		108	3607	
40 NEtFOSA										
584.00 > 419.00	5.022	5.036	-0.014	1.003	1617656	2.30		92.2	1076	M
57 11CIFOS										
631.00 > 451.00	5.106	5.119	-0.013	1.151	9599307	2.36		100	30673	
D 43 13C2 PFDaA										
615.00 > 570.00	5.237	5.251	-0.014	1.268	6967163	1.32		106	27218	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.237	5.251	-0.014	1.000	12904055	2.27	Target=5.33	90.9	8148	
613.00 > 169.00	5.237	5.251	-0.014	1.000	1848357		6.98(2.66-7.99)		4535	
50 10:2 FTS										
627.00 > 607.00	5.251	5.266	-0.015	1.106	2936663	2.87		119	25134	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.281	5.295	-0.014	1.278	637171	1.48		119	367	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.282	613824	1.37		110	52.3	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.295	0.0	1.003	1496121	2.55		102	1685	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA	512.00 > 169.00	5.295	5.295	0.0	1.000	1188633	2.31	92.5	764	
54 PFDoS	699.00 > 80.00	5.423	5.436	-0.013	1.223	5309747	2.46	Target=4.32	101	11800
	699.00 > 99.00	5.423	5.436	-0.013	1.223	1289888		4.12(2.19-6.58)		9330
D 53 d9-N-EtFOSE-M	639.00 > 59.00	5.436	5.449	-0.013	1.316	719058	1.57		126	534
62 N-EtFOSE-M	630.00 > 59.00	5.449	5.462	-0.013	1.002	1717894	2.37		94.9	2642
D 52 d-N-EtFOSA-M	531.00 > 169.00	5.462	5.462	0.0	1.322	489505	1.30		104	740
44 Perfluorotridecanoic acid	663.00 > 619.00	5.436	5.462	-0.026	1.038	11606413	2.36	Target=5.66	94.6	9047
	663.00 > 169.00	5.436	5.462	-0.026	1.038	1919238		6.05(2.83-8.48)		8130
56 N-EtFOSA-M	526.00 > 169.00	5.462	5.462	0.0	1.000	1116258	2.44		97.6	707
D 46 13C2 PFTeDA	715.00 > 670.00	5.623	5.637	-0.014	1.361	6153623	1.27		102	18428
45 Perfluorotetradecanoic acid	713.00 > 169.00	5.623	5.637	-0.014	1.000	1544147	2.50	Target=1.07	99.9	6851
	713.00 > 219.00	5.623	5.637	-0.014	1.000	1482684		1.04(0.53-1.60)		11311
55 Perfluorohexadecanoic acid	813.00 > 769.00	5.935	5.948	-0.013	1.000	9329452	2.41	Target=7.50	96.4	6436
	813.00 > 169.00	5.935	5.948	-0.013	1.000	1123390		8.30(3.75-11.26)		4588
D 59 13C2 PFHxDA	815.00 > 770.00	5.935	5.948	-0.013	1.437	4538103	1.29		103	12762
60 Perfluorooctadecanoic acid	913.00 > 869.00	6.201	6.221	-0.020	1.045	8345885	2.53	Target=9.98	101	4767
	913.00 > 169.00	6.201	6.221	-0.020	1.045	719451		11.60(5.14-15.41)		3345

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L5PFC2_00002

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_018.d

Injection Date: 08-Oct-2021 14:20:13

Instrument ID: LCA

Lims ID: CCV

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 18

Worklist Smp#: 18

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

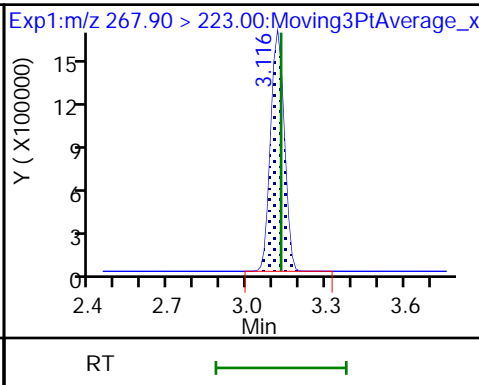
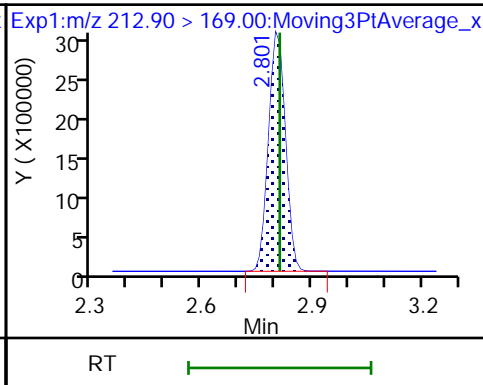
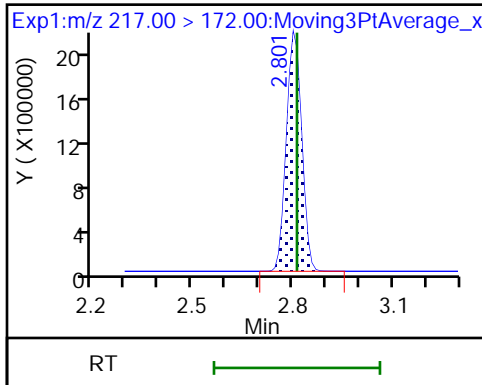
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

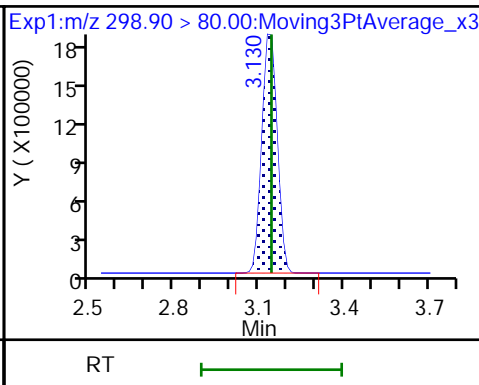
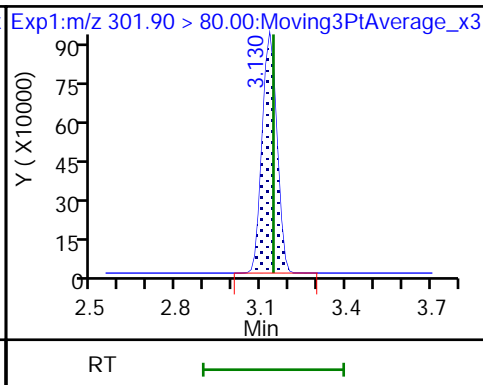
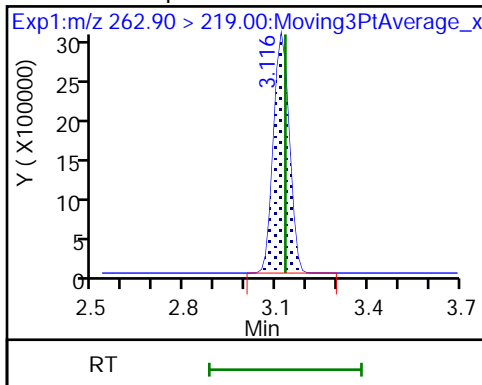
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

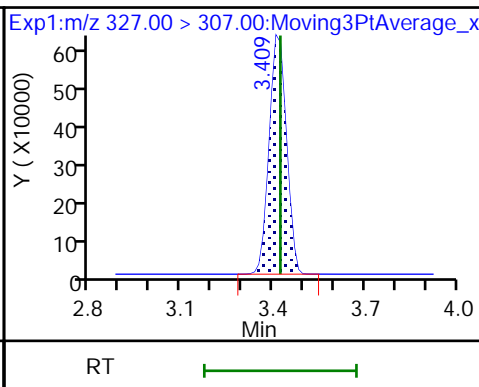
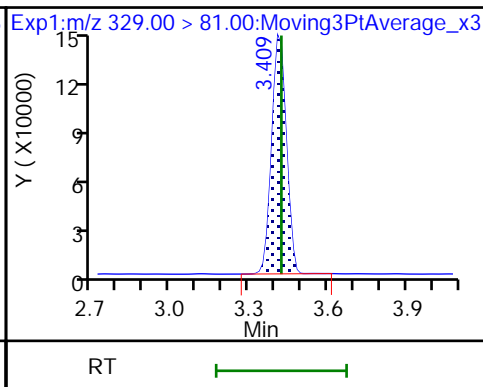
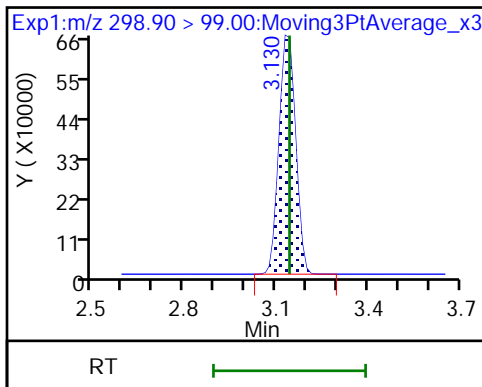
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

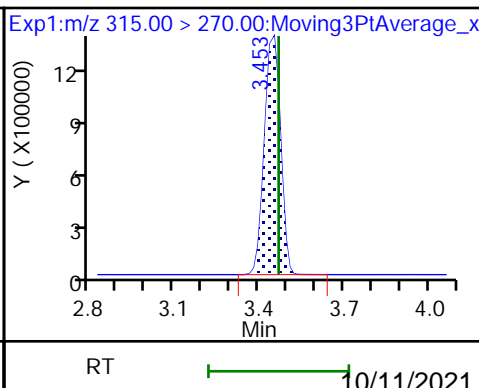
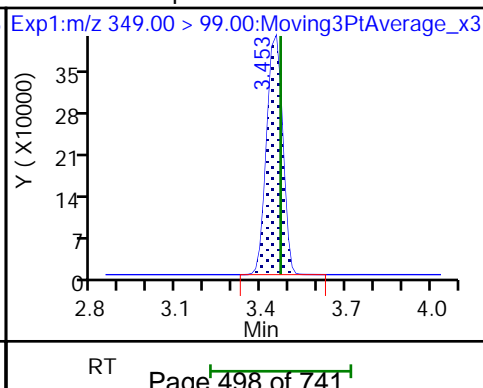
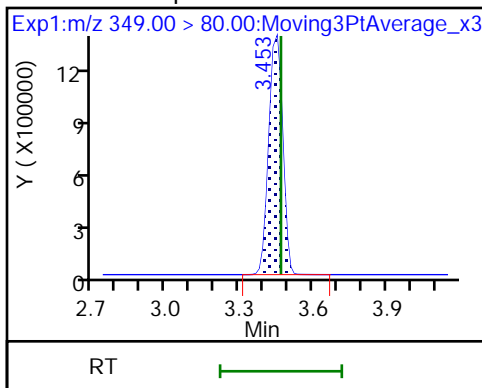
7 4:2 FTS

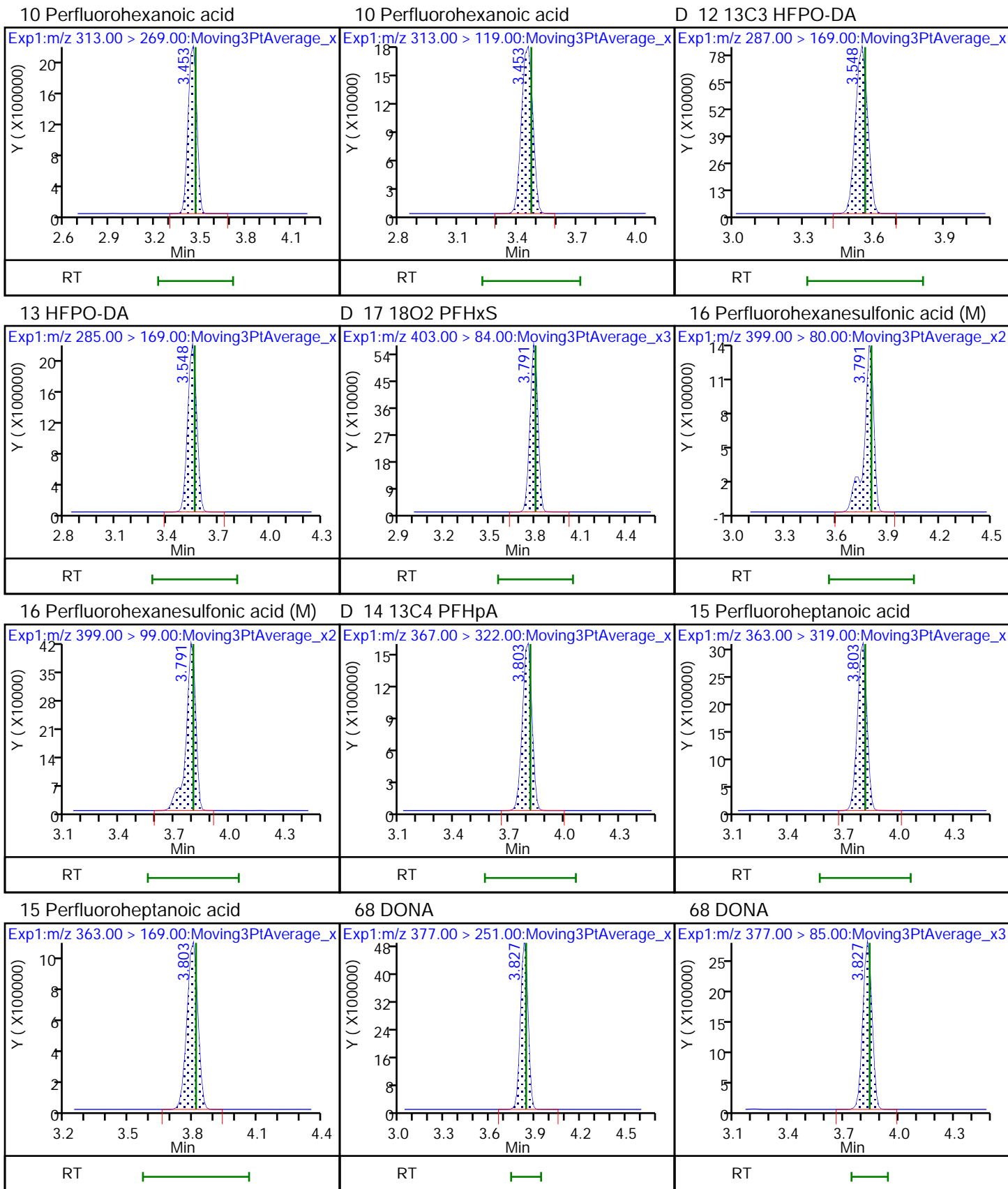


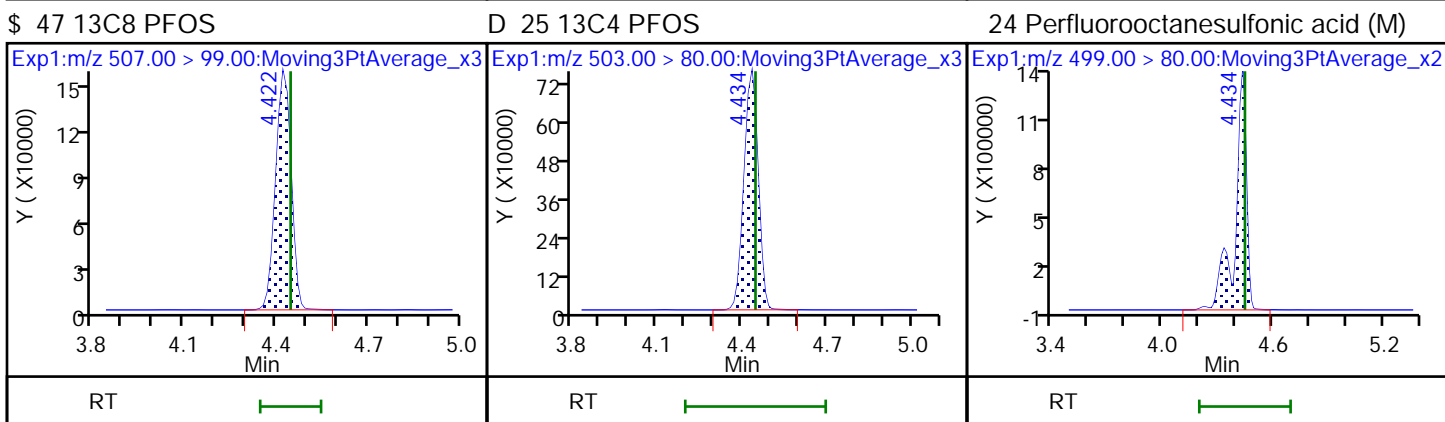
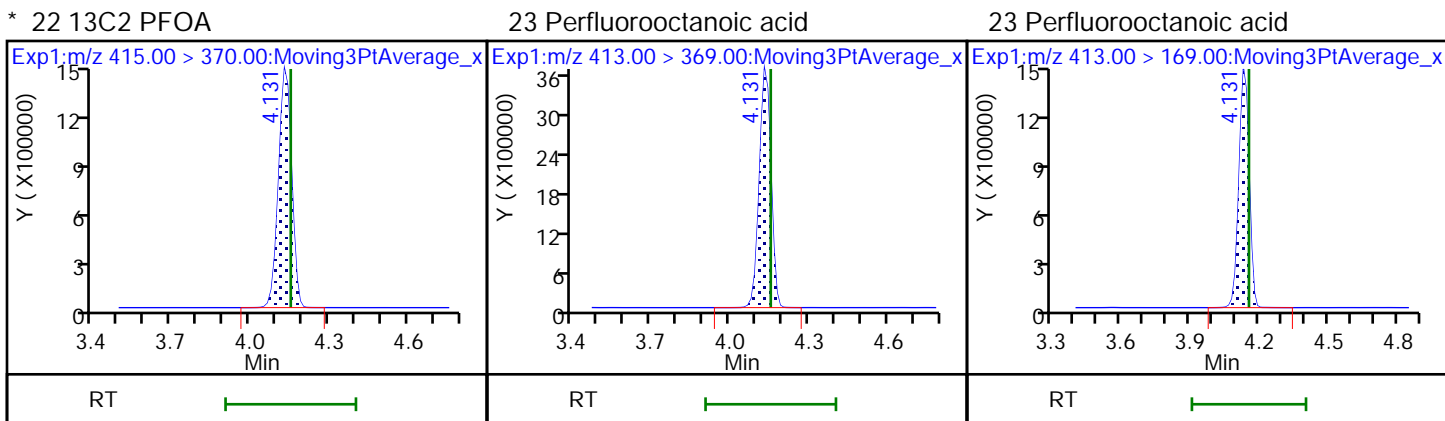
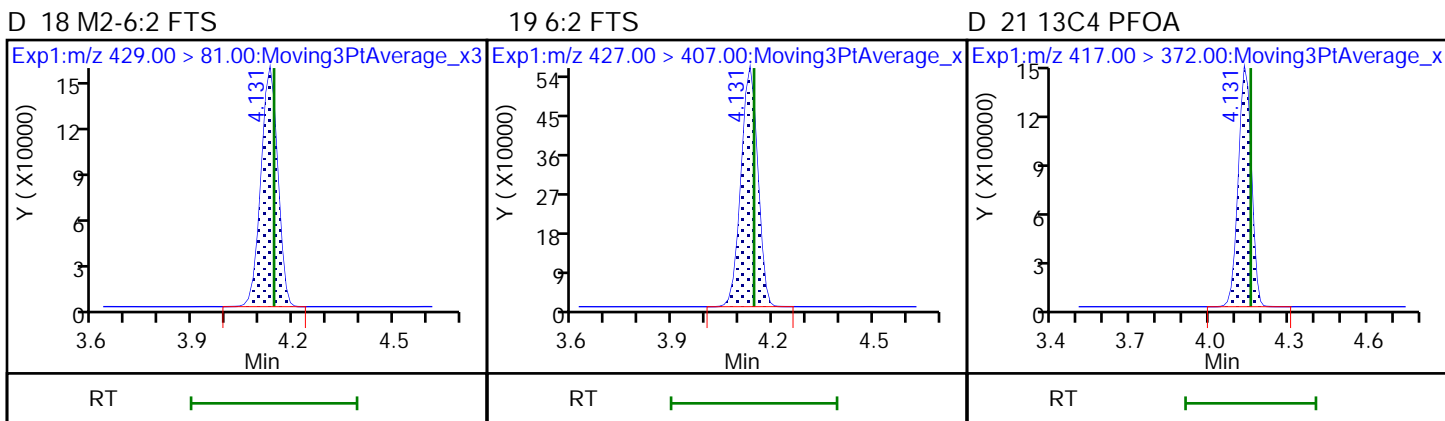
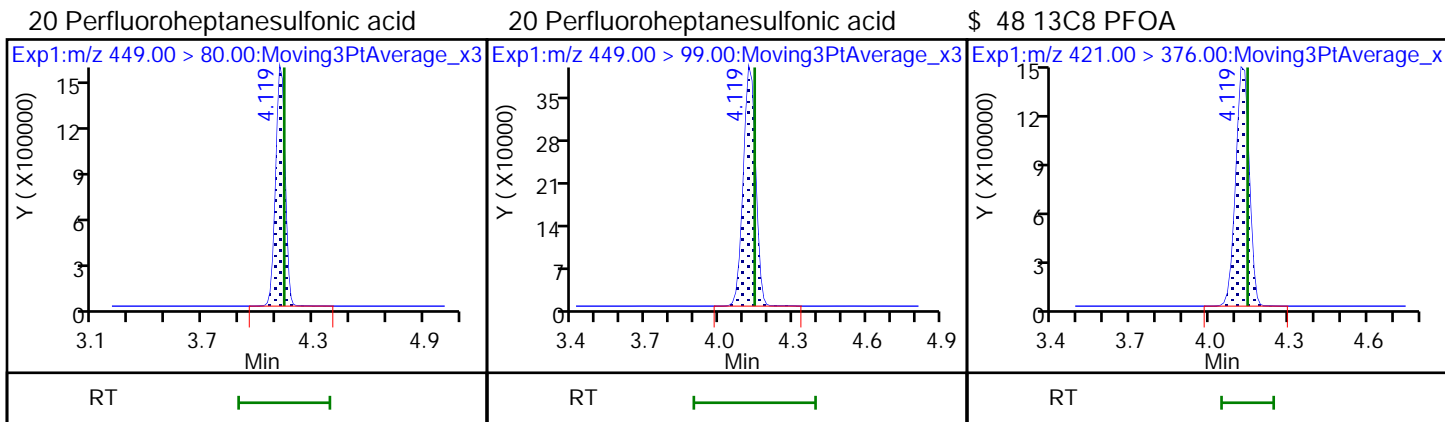
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

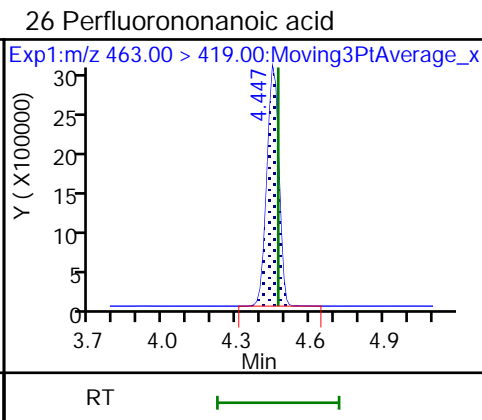
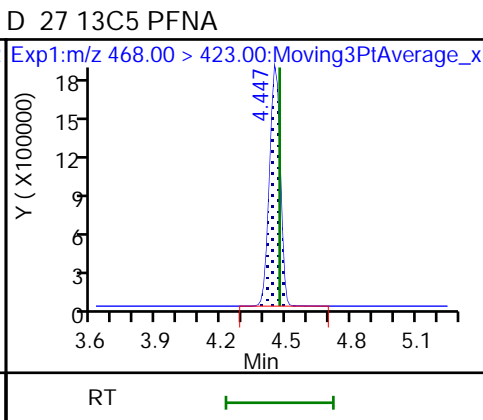
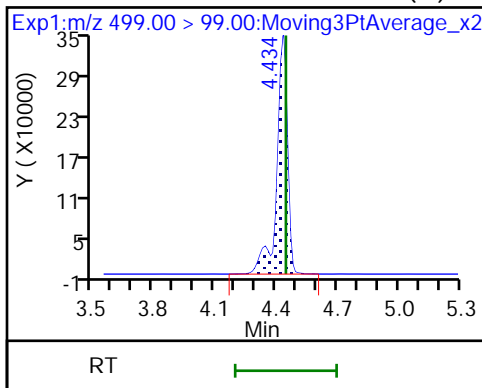
D 9 13C2 PFHxA







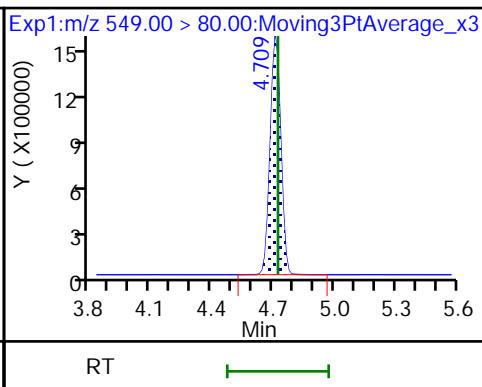
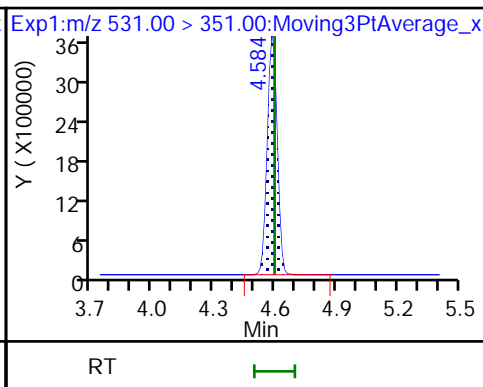
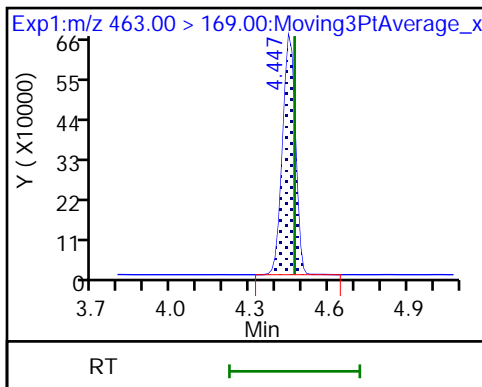
24 Perfluorooctanesulfonic acid (M) D 27 13C5 PFNA



26 Perfluorononanoic acid

63 9CIFOS

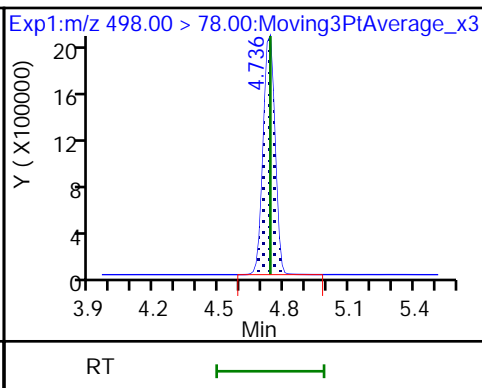
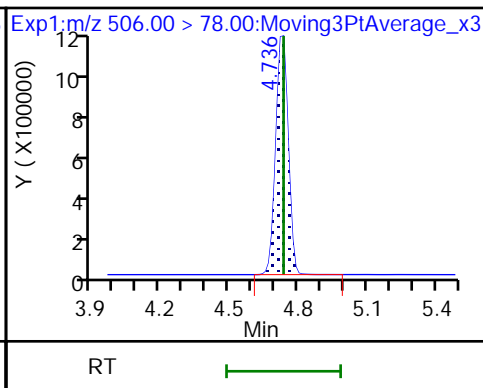
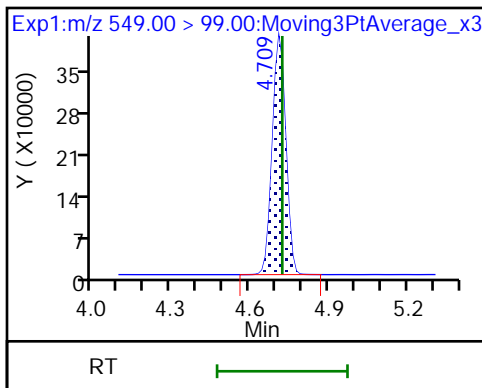
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

D 34 13C8 FOSA

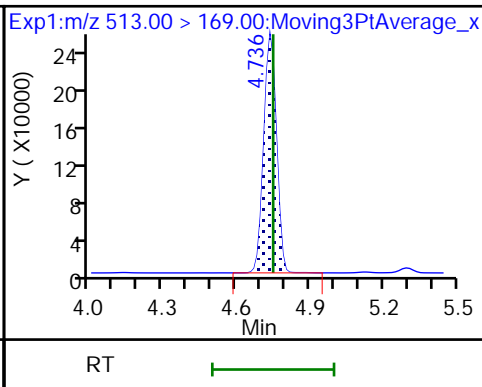
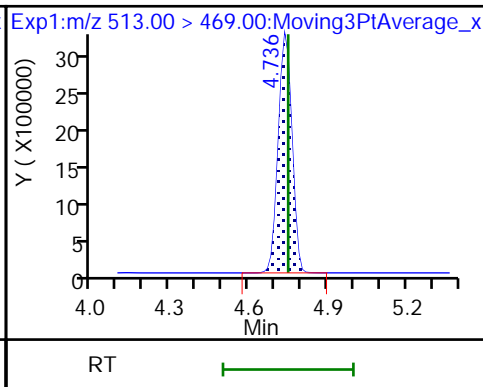
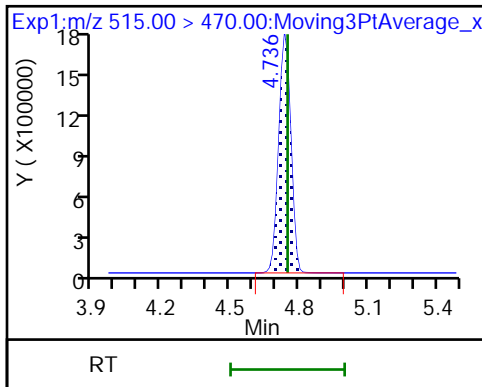
33 Perfluorooctanesulfonamide



D 32 13C2 PFDA

29 Perfluorodecanoic acid

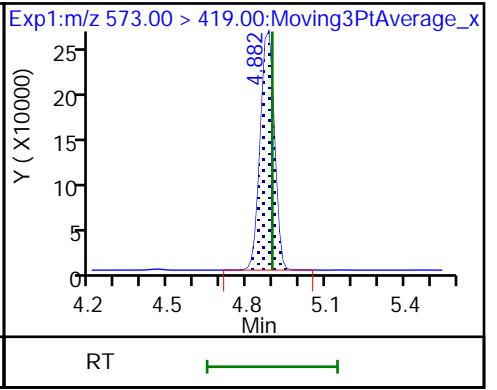
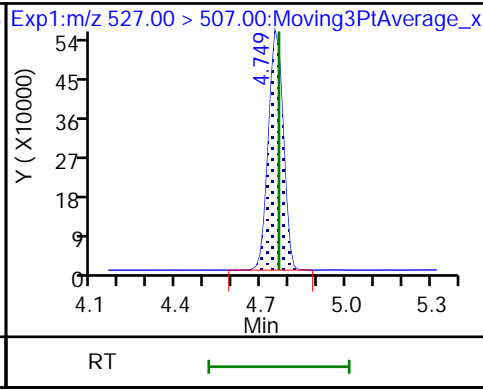
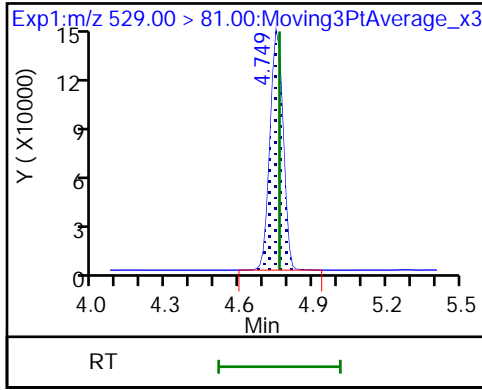
29 Perfluorodecanoic acid



D 30 M2-8:2 FTS

31 8:2 FTS

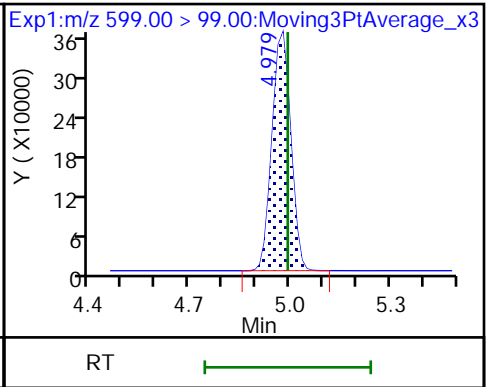
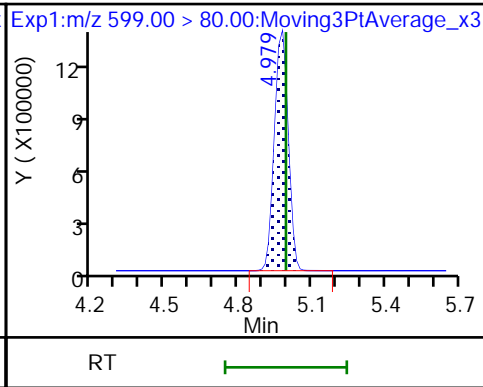
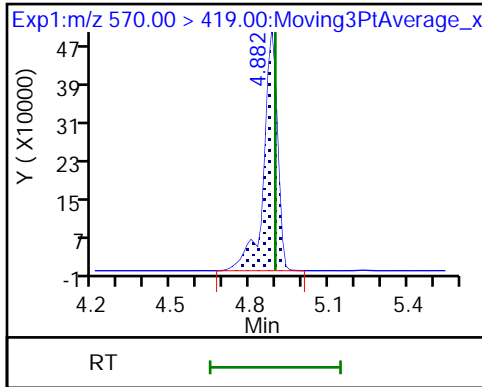
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

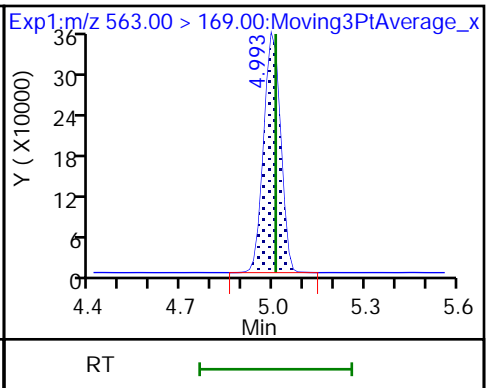
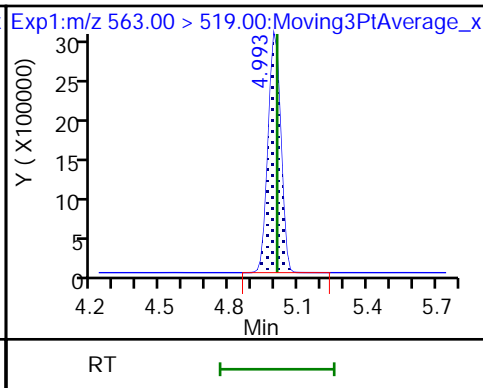
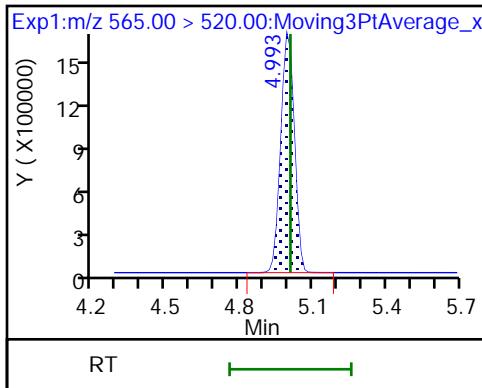
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

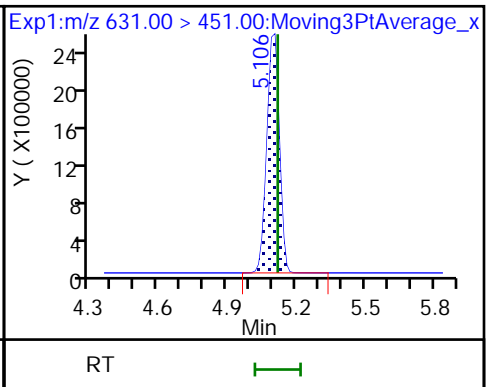
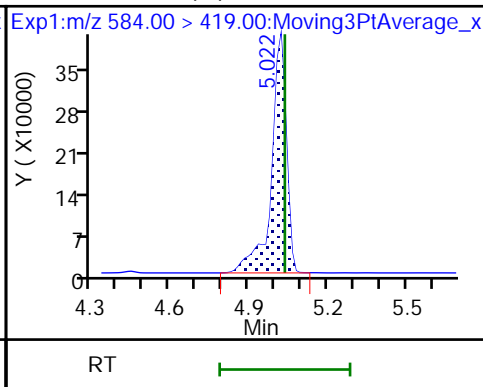
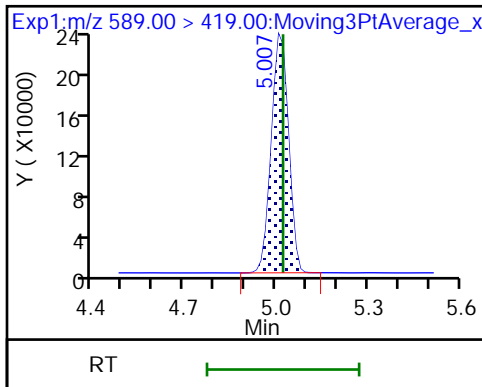
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA (M)

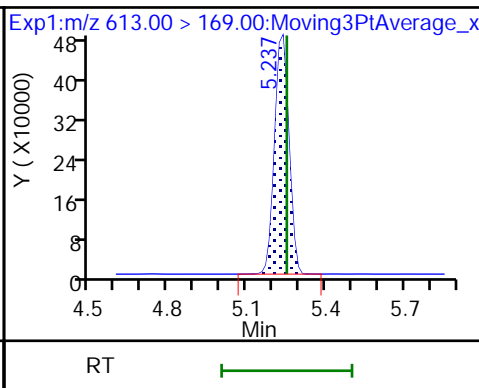
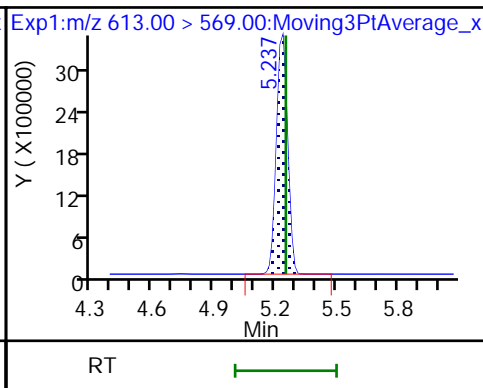
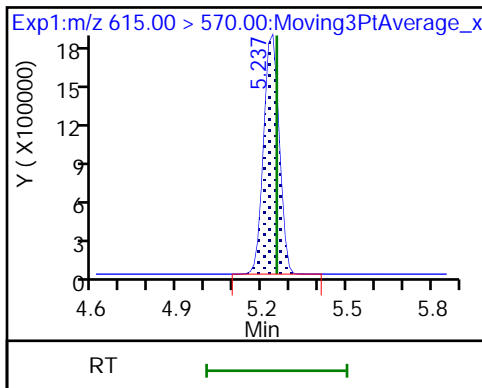
57 11C1FOS



D 43 13C2 PFDoA

42 Perfluorododecanoic acid

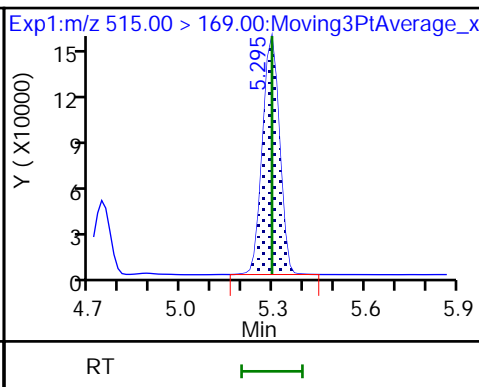
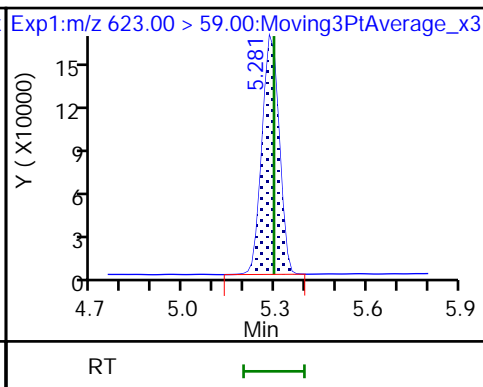
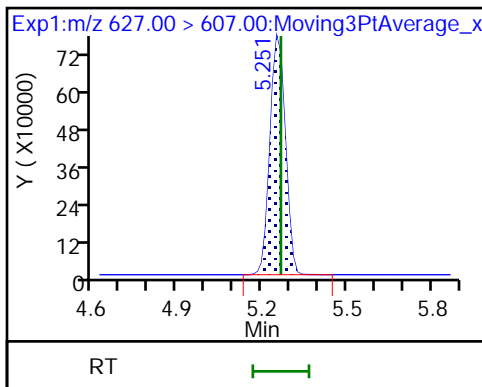
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

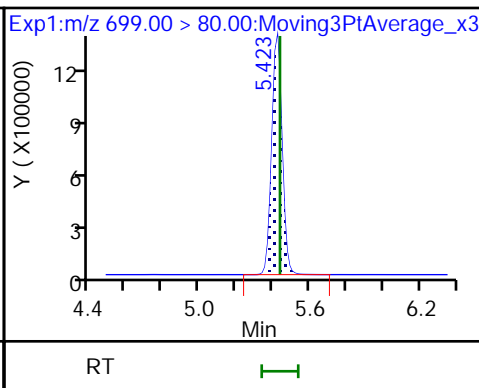
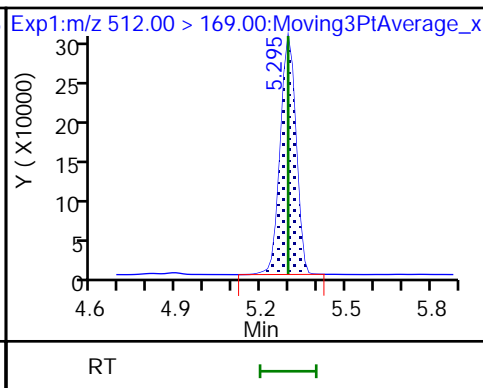
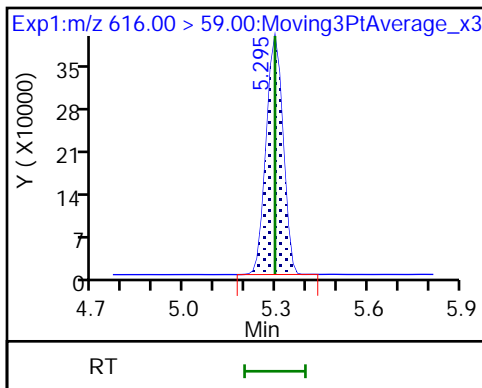
D 58 d-N-MeFOSA-M



49 N-MeFOSE-M

61 NMeFOSA

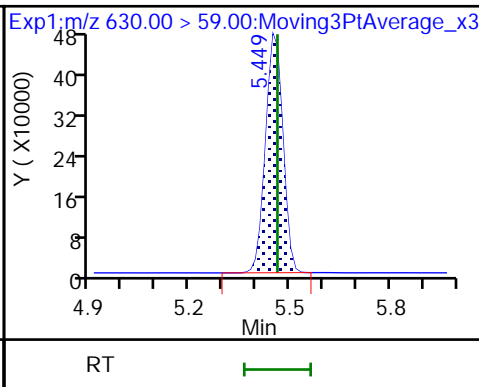
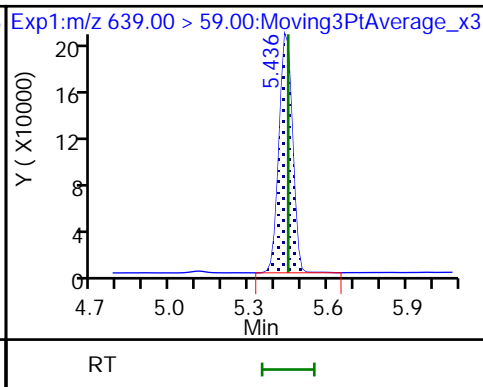
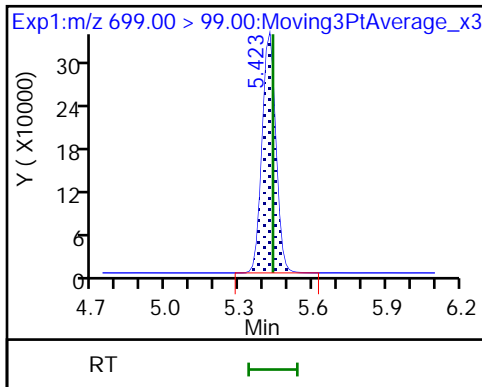
54 PFDoS



54 PFDoS

D 53 d9-N-EtFOSE-M

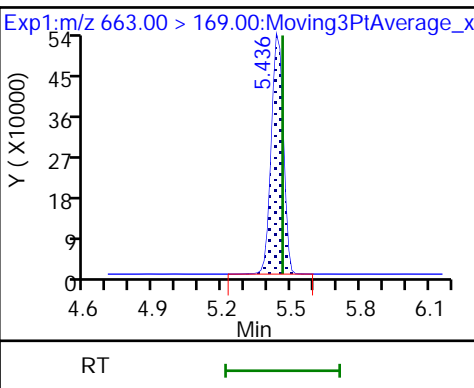
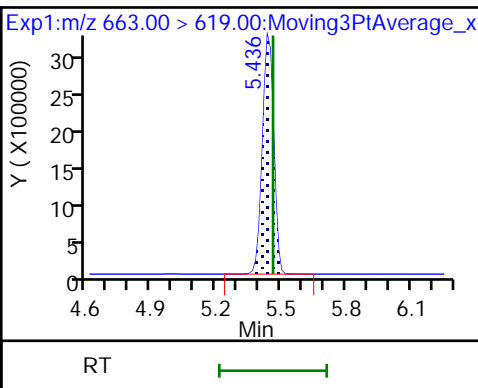
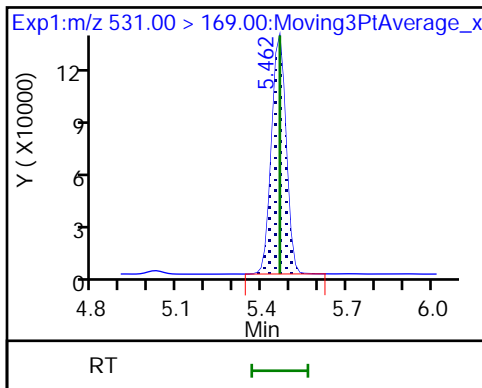
62 N-EtFOSE-M



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid

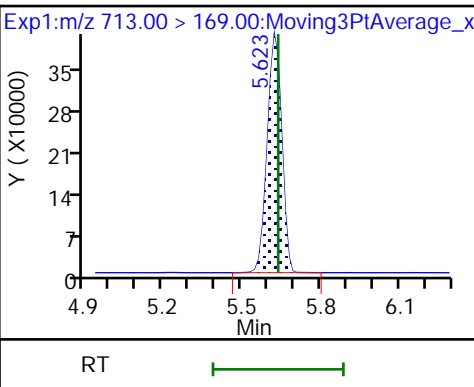
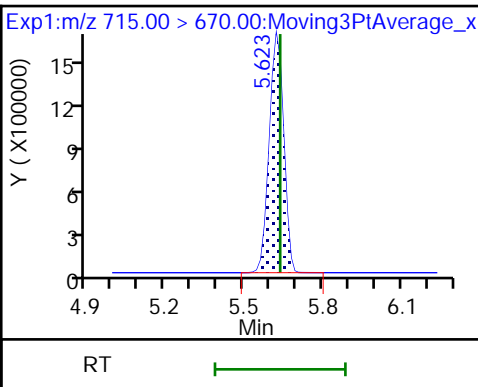
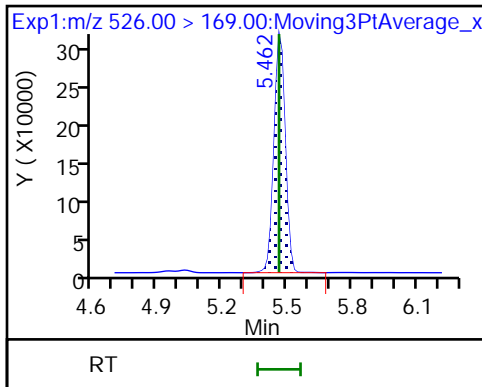
44 Perfluorotridecanoic acid



56 N-EtFOSA-M

D 46 13C2 PFTeDA

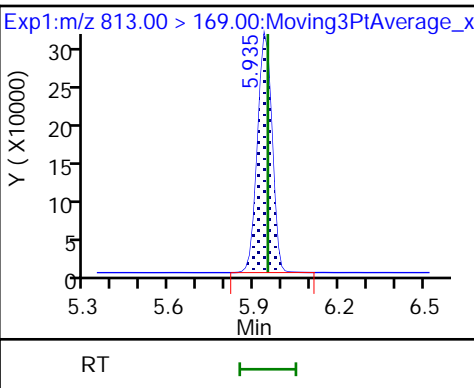
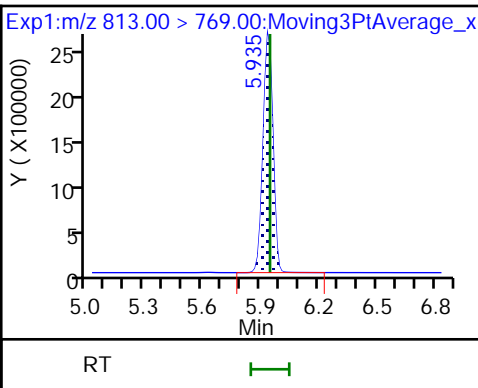
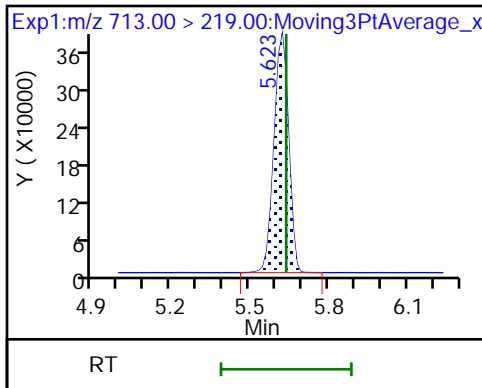
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

55 Perfluorohexadecanoic acid

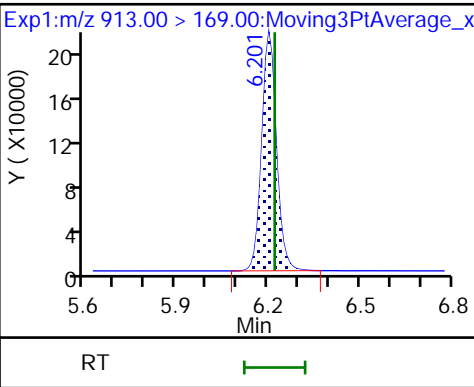
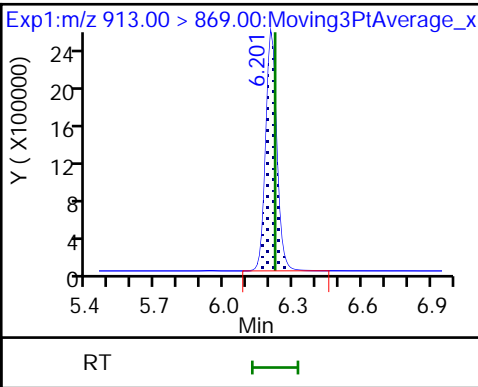
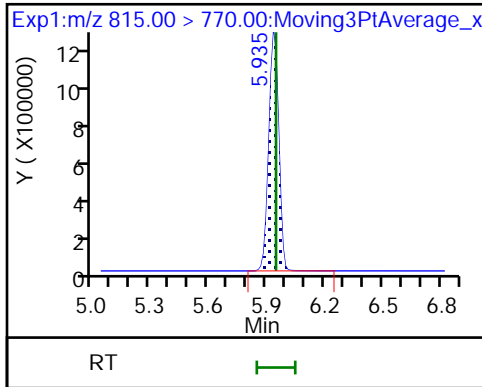
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid



Eurofins TestAmerica, Knoxville

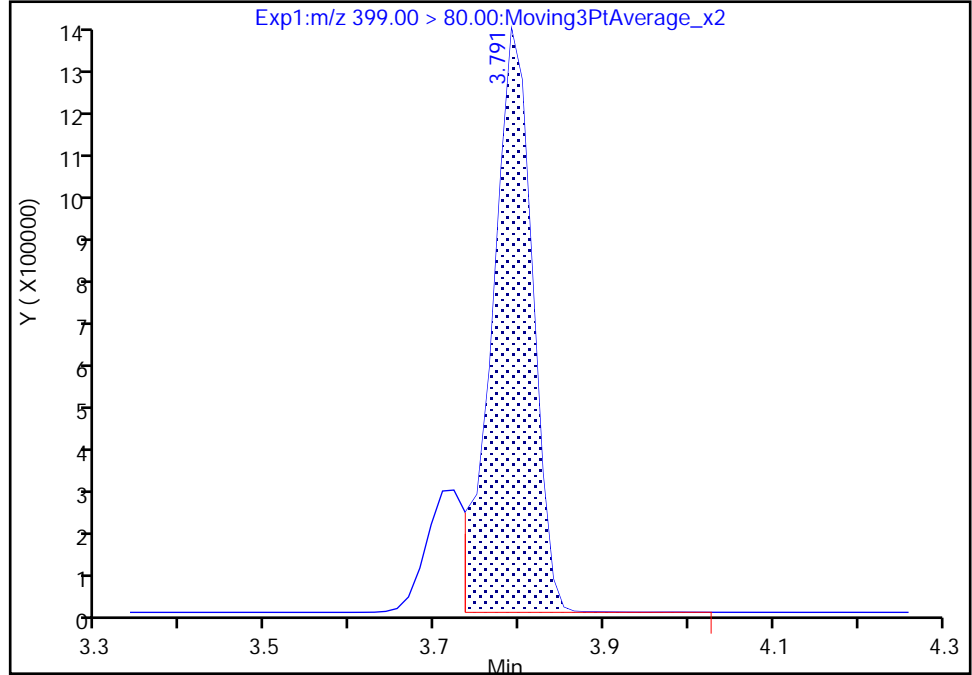
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Injection Date: 08-Oct-2021 14:20:13 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

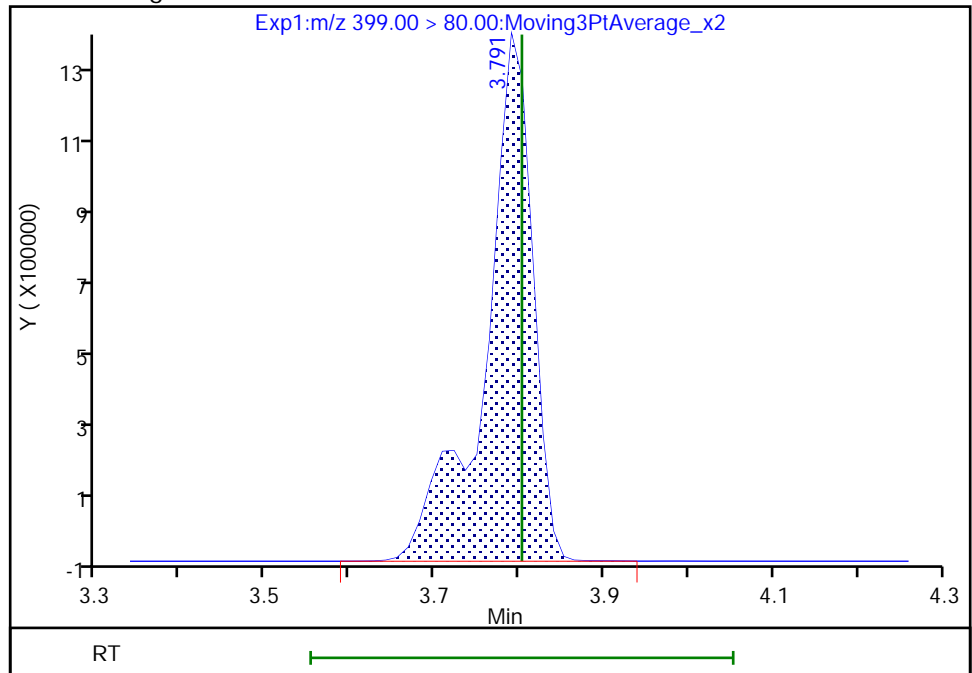
RT: 3.79
Area: 4255625
Amount: 1.847713
Amount Units: ng/ml

Processing Integration Results



RT: 3.79
Area: 5061212
Amount: 2.198448
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 10:14:30
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

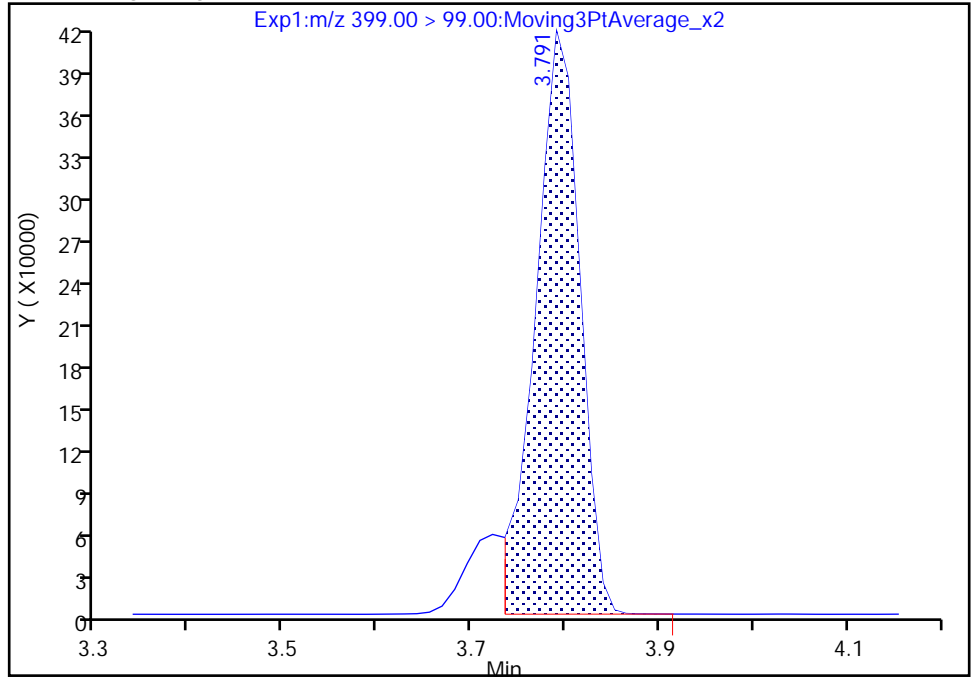
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Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

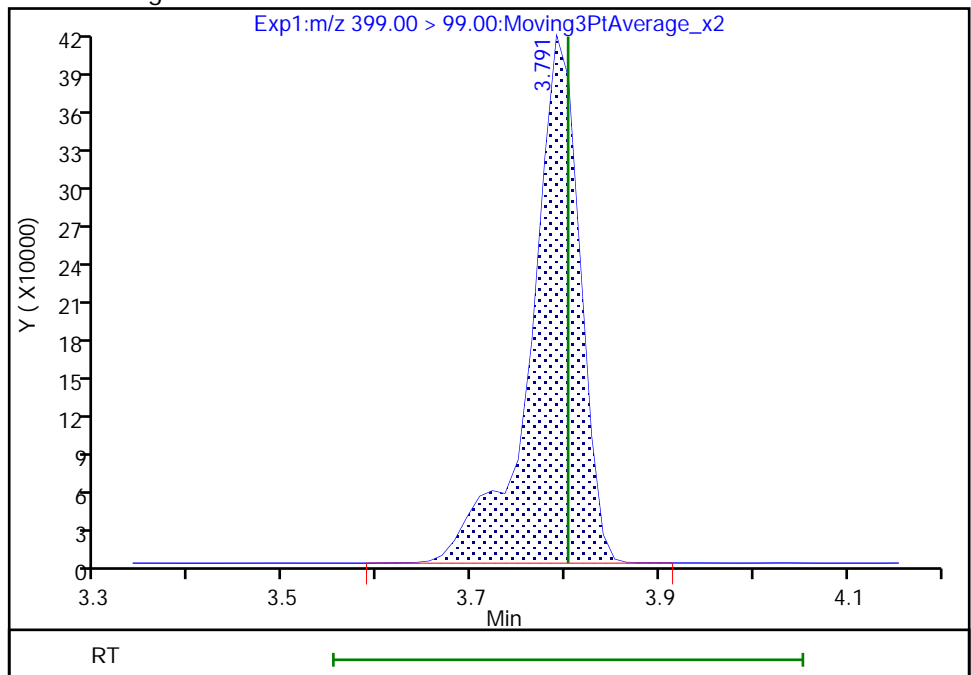
RT: 3.79
Area: 1346296
Amount: 1.847713
Amount Units: ng/ml

Processing Integration Results



RT: 3.79
Area: 1507911
Amount: 2.198448
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 10:14:35

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

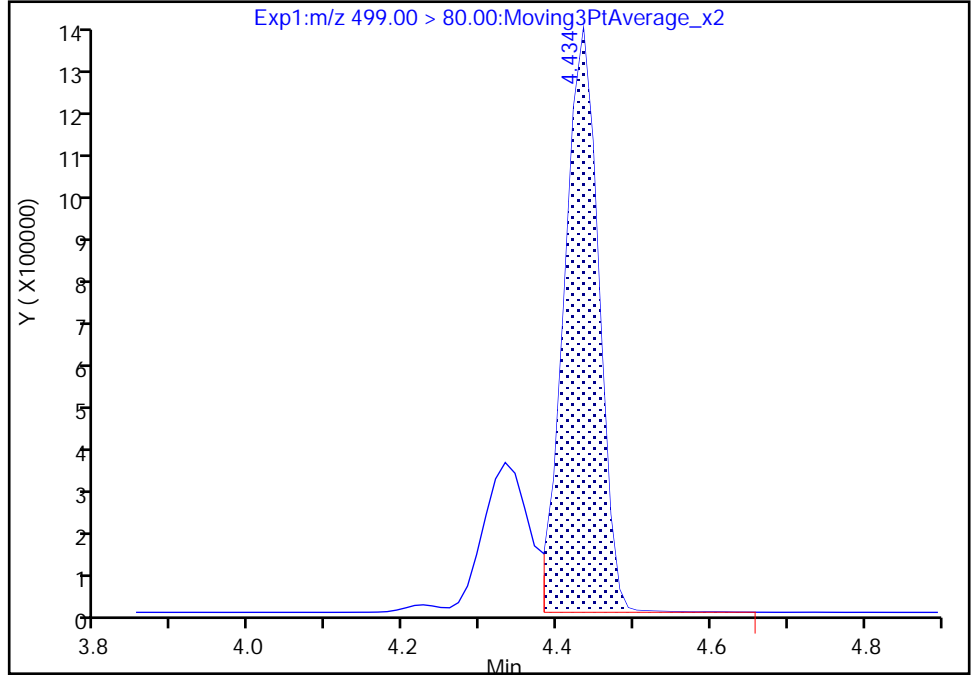
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Injection Date: 08-Oct-2021 14:20:13 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

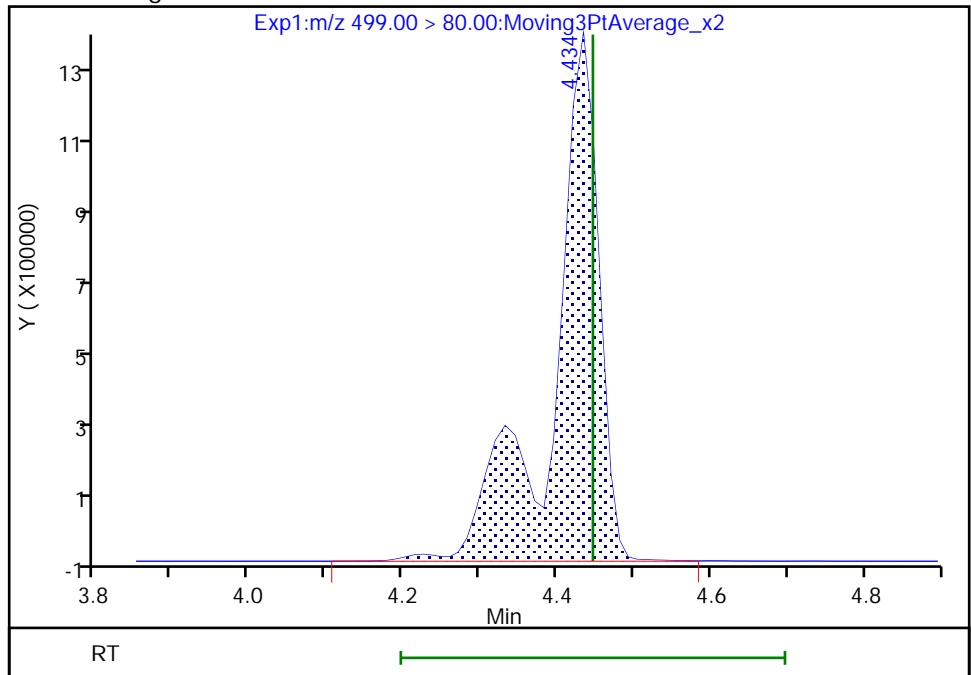
RT: 4.43
Area: 4017070
Amount: 1.668518
Amount Units: ng/ml

Processing Integration Results



RT: 4.43
Area: 5439150
Amount: 2.259189
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 10:14:47
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

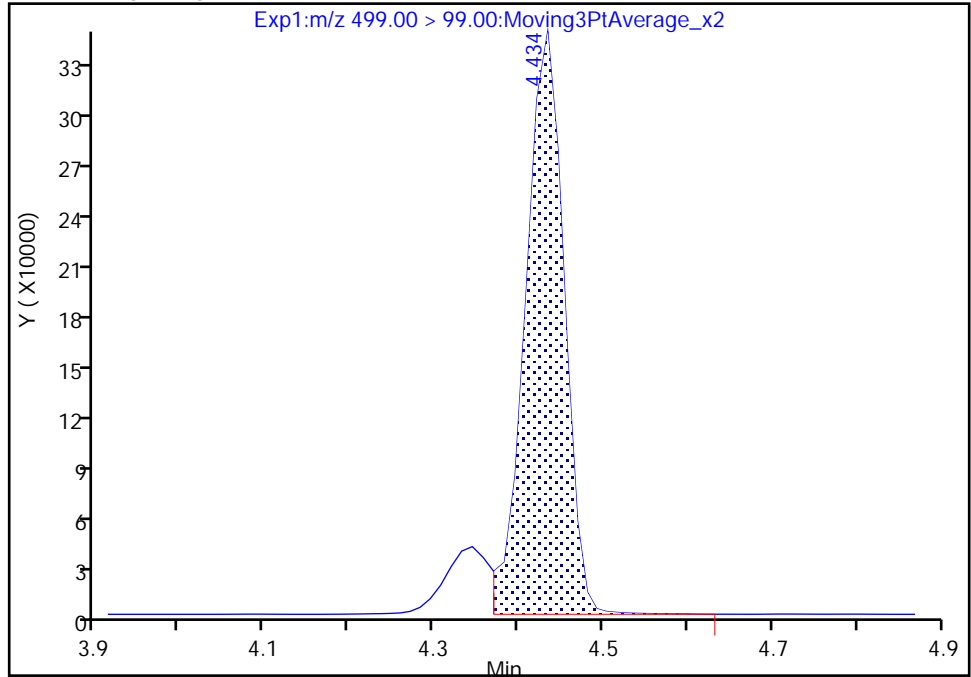
Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_018.d
Injection Date: 08-Oct-2021 14:20:13 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

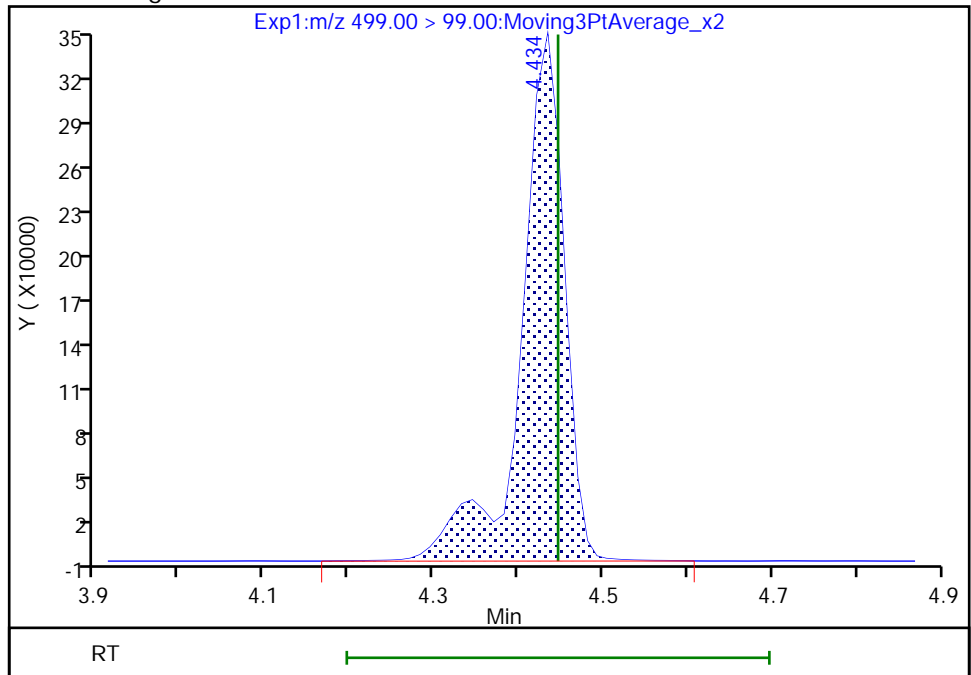
RT: 4.43
Area: 1100888
Amount: 1.668518
Amount Units: ng/ml

Processing Integration Results



RT: 4.43
Area: 1242903
Amount: 2.259189
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 10:14:52

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

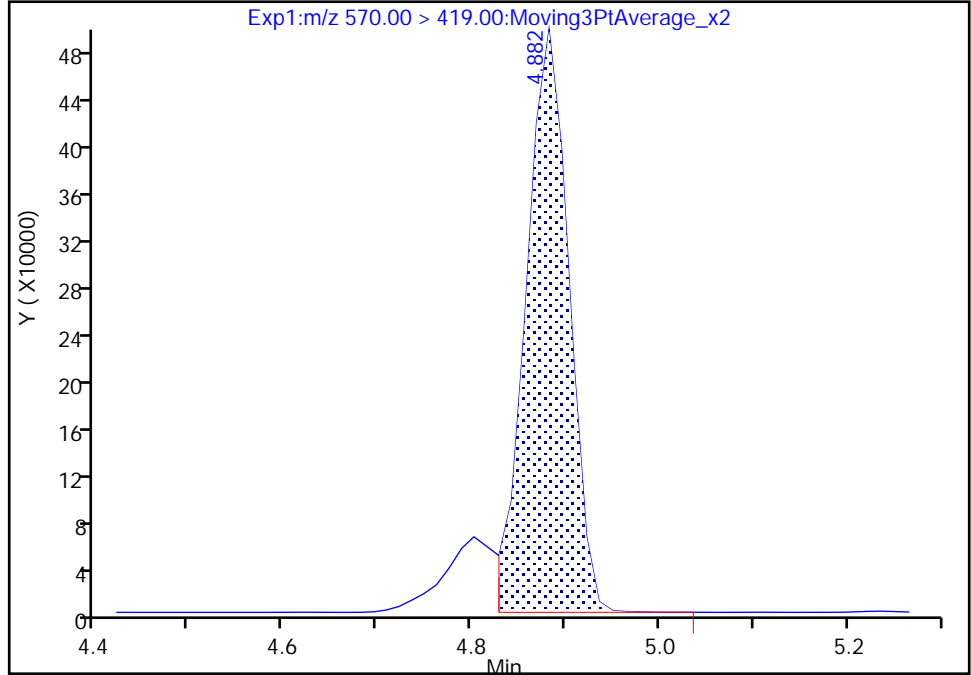
Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_018.d
Injection Date: 08-Oct-2021 14:20:13 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

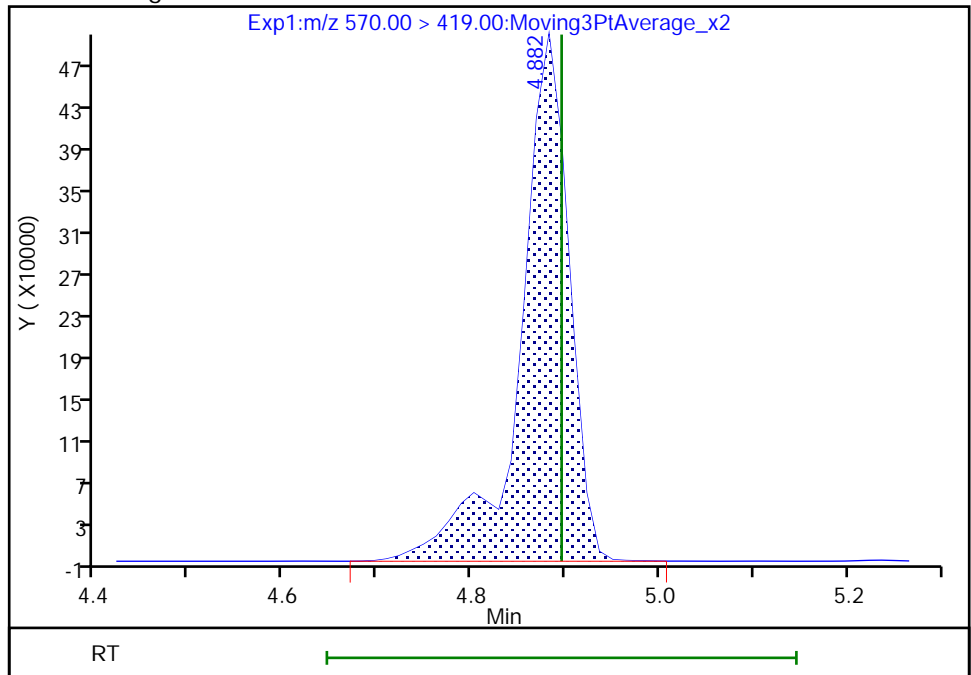
RT: 4.88
Area: 1553589
Amount: 2.134258
Amount Units: ng/ml

Processing Integration Results



RT: 4.88
Area: 1787742
Amount: 2.457049
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 10:15:04
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

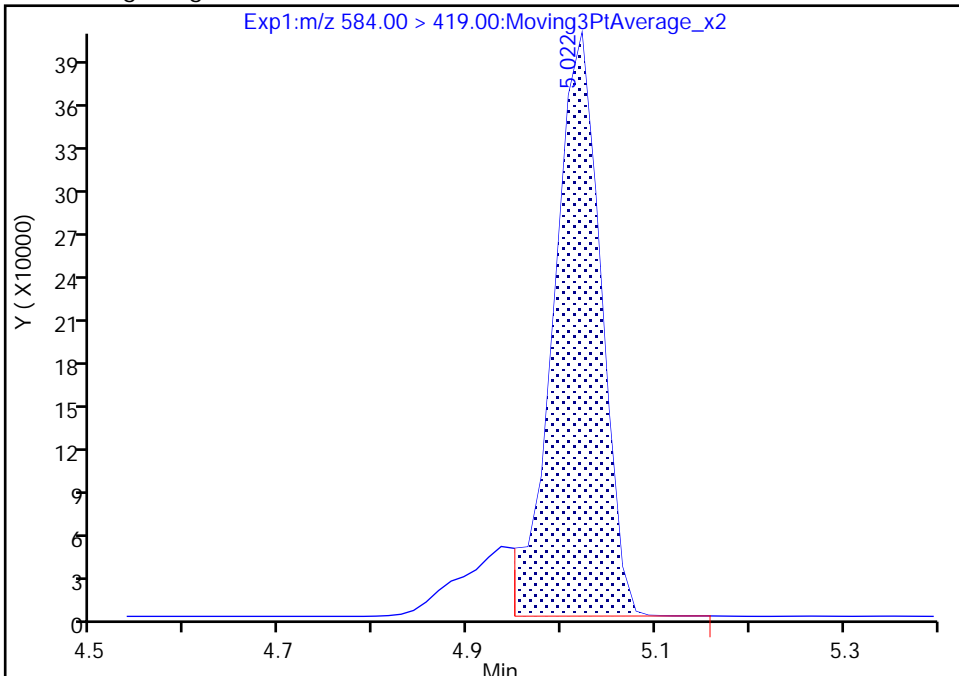
Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_018.d
Injection Date: 08-Oct-2021 14:20:13 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

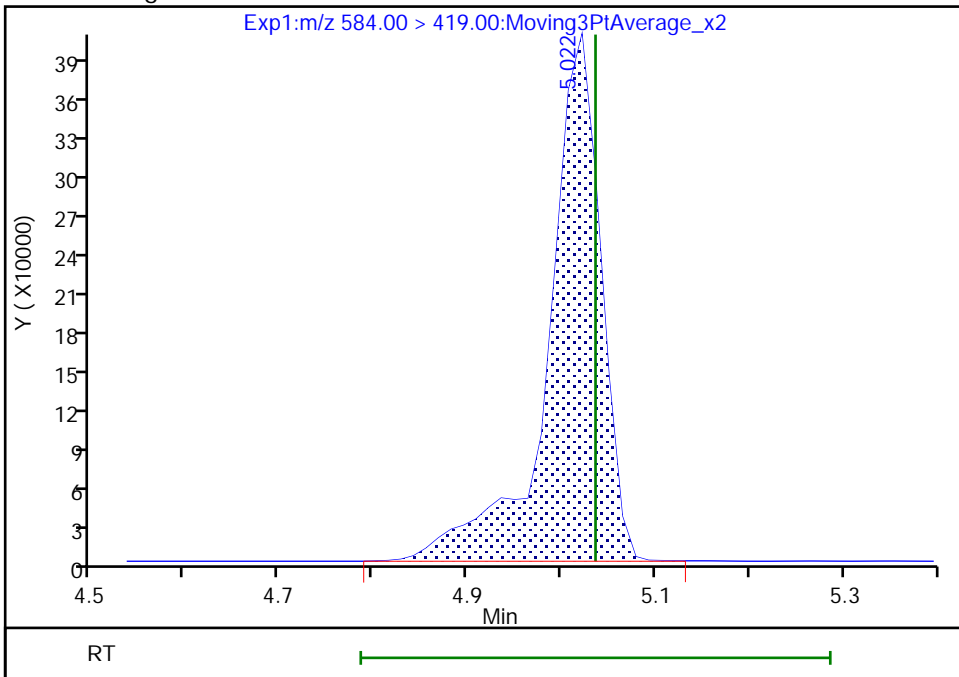
RT: 5.02
Area: 1424300
Amount: 2.028723
Amount Units: ng/ml

Processing Integration Results



RT: 5.02
Area: 1617656
Amount: 2.304133
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 10:15:15
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54642/29 Calibration Date: 10/08/2021 15:57
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _029.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7855	0.7591		0.966	1.00	-3.4	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.013	0.9762		0.964	1.00	-3.6	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.126	1.116		0.876	0.884	-0.9	40.0
4:2 FTS	AveID	2.500	2.508		0.937	0.934	0.3	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8572	0.8271		0.965	1.00	-3.5	40.0
Perfluoropentanesulfonic acid (PFPeS)	L2ID		0.8716		0.952	0.938	1.5	50.0
HFPO-DA	L2ID		1.383		0.999	1.00	-0.1	40.0
Perfluoroheptanoic acid (PFHpA)	L2ID		1.104		1.05	1.00	4.5	40.0
Perfluorohexanesulfonic acid (PFHxS)	L2ID		1.351		0.905	0.910	-0.5	40.0
DONA	AveID	3.243	3.312		0.962	0.942	2.1	40.0
6:2 FTS	L2ID		1.855		0.874	0.948	-7.8	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9947	1.007		0.964	0.952	1.2	40.0
Perfluorooctanoic acid (PFOA)	L2ID		1.103		0.995	1.00	-0.5	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.100	1.065		0.899	0.928	-3.2	40.0
Perfluorononanoic acid (PFNA)	L2ID		0.8494		1.02	1.00	1.8	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	2.308	2.398		0.968	0.932	3.9	40.0
Perfluorononanesulfonic acid (PFNS)	AveID	1.042	1.018		0.938	0.960	-2.3	40.0
Perfluorodecanoic acid (PFDA)	L2ID		0.9898		1.04	1.00	4.2	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9606	0.9653		1.01	1.00	0.5	40.0
8:2 FTS	AveID	1.784	1.844		0.991	0.958	3.4	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	L2ID		0.9769		1.06	1.00	6.3	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.9574	0.9465		0.953	0.964	-1.1	40.0
Perfluoroundecanoic acid (PFUnA)	L2ID		1.014		1.00	1.00	0.2	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.9494	0.9135		0.962	1.00	-3.8	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.858	2.019		1.02	0.942	8.6	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9849		0.943	1.00	-5.7	40.0
10:2 FTS	AveID	2.221	2.518		1.09	0.964	13.4	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.143		0.987	1.00	-1.3	40.0
NMeFOSA	AveID	1.047	0.9923		0.948	1.00	-5.2	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9879	0.995		0.975	0.968	0.7	40.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54642/29 Calibration Date: 10/08/2021 15:57
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _029.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTrIA)	L2ID		0.8636		0.977	1.00	-2.3	50.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.316		1.04	1.00	4.3	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.168	1.153		0.987	1.00	-1.3	40.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.1295		1.03	1.00	2.7	40.0
Perfluorohexadecanoic acid	Q2ID		1.041		0.952	1.00	-4.8	40.0
Perfluorooctadecanoic acid	AveID	0.9076	0.9120		1.01	1.00	0.5	40.0
13C4 PFBA	Ave	1.324	1.305		1.23	1.25	-1.4	50.0
13C5 PFPeA	Ave	1.087	1.105		1.27	1.25	1.7	50.0
13C3 PFBS	Ave	0.7019	0.6993		1.16	1.16	-0.4	50.0
M2-4:2 FTS	Ave	0.1052	0.1059		1.18	1.17	0.6	50.0
13C2 PFHxA	Ave	1.116	1.134		1.27	1.25	1.5	50.0
13C3 HFPO-DA	Ave	0.5714	0.5811		1.27	1.25	1.7	50.0
18O2 PFHxS	Ave	0.4248	0.4134		1.15	1.18	-2.7	50.0
13C4 PFHpA	Ave	1.113	1.071		1.20	1.25	-3.8	50.0
13C4 PFOA	Ave	1.007	1.046		1.30	1.25	3.9	50.0
M2-6:2 FTS	Ave	0.1078	0.1129		1.24	1.19	4.8	50.0
13C4 PFOS	Ave	0.5852	0.5594		1.14	1.20	-4.4	50.0
13C5 PFNA	Ave	1.279	1.264		1.24	1.25	-1.2	50.0
13C2 PFDA	Ave	1.296	1.224		1.18	1.25	-5.5	50.0
13C8 FOSA	Ave	0.8591	0.8258		1.20	1.25	-3.9	50.0
M2-8:2 FTS	Ave	0.1316	0.1244		1.13	1.20	-5.5	50.0
d3-NMeFOSAA	Ave	0.1774	0.1783		1.26	1.25	0.5	50.0
13C2 PFUnA	Ave	1.237	1.218		1.23	1.25	-1.5	50.0
d5-NEtFOSAA	Ave	0.1705	0.1767		1.30	1.25	3.7	50.0
13C2 PFDoA	Ave	1.319	1.423		1.35	1.25	7.9	50.0
d7-N-MeFOSE-M	Ave	0.1075	0.1327		1.54	1.25	23.4	50.0
d-N-MeFOSA-M	Ave	0.1120	0.1186		1.32	1.25	5.9	50.0
d9-N-EtFOSE-M	Ave	0.1146	0.1354		1.48	1.25	18.1	50.0
d-N-EtFOSA-M	Ave	0.0942	0.0999		1.33	1.25	6.1	50.0
13C2 PFTeDA	Ave	1.211	1.265		1.31	1.25	4.5	50.0
13C2 PFHxDA	Ave	0.8782	0.9276		1.32	1.25	5.6	50.0
13C8 PFOA	Ave	0.9886	0.9609		1.22	1.25	-2.8	50.0
13C8 PFOS	Ave	0.1256	0.1189		1.13	1.20	-5.3	50.0

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_029.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 08-Oct-2021 15:57:05 ALS Bottle#: 29 Worklist Smp#: 29
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0021001-029 ccv
 Misc. Info.: Plate: 7 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15
 Method: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 11:11:30 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 10:26:27

Ratio Calibration: None

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	2.811	2.812	-0.001	0.681	6955288	1.23	98.6	14486	
2 Perfluorobutanoic acid	212.90 > 169.00	2.811	2.812	-0.001	1.000	4223890	0.9664	96.6	777	
D 3 13C5 PFPeA	267.90 > 223.00	3.114	3.129	-0.015	0.754	5889474	1.27	102	13578	
4 Perfluoropentanoic acid	262.90 > 219.00	3.114	3.129	-0.015	1.000	4599366	0.9637	96.4	1493	
D 6 13C3 PFBS	301.90 > 80.00	3.127	3.143	-0.016	0.757	3465449	1.16	99.6	21203	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.141	3.143	-0.002	1.004	2941401	0.8762	Target=3.06	99.1	13026
	298.90 > 99.00	3.141	3.143	-0.002	1.004	1095515		2.68(1.53-4.59)		3655
D 8 M2-4:2 FTS	329.00 > 81.00	3.420	3.423	-0.003	0.828	526929	1.17	101	809	
7 4:2 FTS	327.00 > 307.00	3.420	3.423	-0.003	1.000	1057283	0.9371	100	18791	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.450	3.469	-0.019	1.103	2437100	0.9518	Target=3.47	101	11664
	349.00 > 99.00	3.450	3.469	-0.019	1.103	685785		3.55(1.73-5.20)		6664
D 9 13C2 PFHxA	315.00 > 270.00	3.450	3.469	-0.019	0.835	6040194	1.27	102	17970	
10 Perfluorohexanoic acid	313.00 > 269.00	3.450	3.469	-0.019	1.000	3996454	0.9648	Target=9.74	96.5	2164
	313.00 > 119.00	3.450	3.469	-0.019	1.000	318471		12.55(4.87-14.61)		875
D 12 13C3 HFPO-DA	287.00 > 169.00	3.545	3.561	-0.016	0.859	3096315	1.27	102	10003	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.545	3.561	-0.016	1.000	3424769	1.00		99.9	4919	
D 17 18O2 PFHxS										
403.00 > 84.00	3.789	3.803	-0.014	0.918	2084060	1.15		97.3	12646	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.801	3.803	-0.002	1.003	2167493	0.9052	Target=2.96	99.5	5280	M
399.00 > 99.00	3.801	3.803	-0.002	1.003	626474		3.46(1.48-4.44)		3753	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.801	3.815	-0.014	0.921	5705593	1.20		96.2	22182	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.801	3.815	-0.014	1.000	5039381	1.04	Target=3.35	104	4173	
363.00 > 169.00	3.801	3.815	-0.014	1.000	1530339		3.29(1.67-5.02)		6284	
68 DONA										
377.00 > 251.00	3.826	3.840	-0.014	0.863	7440123	0.9619	Target=1.49	102	19188	
377.00 > 85.00	3.826	3.840	-0.014	0.863	4154497		1.79(0.74-2.23)		6973	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.129	4.143	-0.014	0.932	2286434	0.9638	Target=3.73	101	7163	
449.00 > 99.00	4.129	4.143	-0.014	0.932	575787		3.97(1.87-5.61)		3235	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.129	4.143	-0.014	1.000	5120317	1.22		97.2	28236	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.129	4.143	-0.014	1.000	571630	1.24		105	2920	
19 6:2 FTS										
427.00 > 407.00	4.129	4.143	-0.014	1.000	846677	0.8737		92.2	3872	
D 21 13C4 PFOA										
417.00 > 372.00	4.129	4.155	-0.026	1.000	5573494	1.30		104	22565	
* 22 13C2 PFOA										
415.00 > 370.00	4.129	4.155	-0.026		5328485	1.25			20725	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.129	4.155	-0.026	1.000	4917013	0.99	Target=2.40	99.5	2573	
413.00 > 169.00	4.129	4.155	-0.026	1.000	1898118		2.59(1.20-3.61)		3752	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.419	4.447	-0.028	1.070	605535	1.13		94.7	2647	
D 25 13C4 PFOS										
503.00 > 80.00	4.432	4.447	-0.015	1.073	2849797	1.14		95.6	9134	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.432	4.447	-0.015	1.000	2356989	0.8987	Target=3.83	96.8	5114	M
499.00 > 99.00	4.432	4.447	-0.015	1.000	508686		4.63(1.91-5.74)		2250	M
D 27 13C5 PFNA										
468.00 > 423.00	4.444	4.470	-0.026	1.076	6735366	1.23		98.8	17507	
26 Perfluorononanoic acid										
463.00 > 419.00	4.455	4.470	-0.015	1.003	4577063	1.02	Target=3.68	102	4641	
463.00 > 169.00	4.455	4.470	-0.015	1.003	1000752		4.57(1.84-5.52)		2506	
63 9CIFOS										
531.00 > 351.00	4.581	4.596	-0.015	1.109	5329518	0.9684		104	9694	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.706	4.722	-0.016	1.062	2331636	0.9381	Target=3.97	97.7	7922	
549.00 > 99.00	4.706	4.722	-0.016	1.062	559616		4.17(1.99-5.96)		2897	
D 34 13C8 FOSA										
506.00 > 78.00	4.732	4.736	-0.004	1.146	4400499	1.20		96.1	8650	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.732	4.736	-0.004	1.000	3398367	1.00		100	5436	
D 32 13C2 PFDA										
515.00 > 470.00	4.732	4.749	-0.017	1.146	6524306	1.18		94.5	20281	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.732	4.749	-0.017	1.000	5166072	1.04	Target=10.11	104	3053	
513.00 > 169.00	4.732	4.749	-0.017	1.000	423246		12.21(5.06-15.17)		568	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.746	4.763	-0.017	1.149	634957	1.13		94.5	2487	
31 8:2 FTS										
527.00 > 507.00	4.746	4.763	-0.017	1.000	936805	0.99		103	4427	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.878	4.896	-0.018	1.181	950198	1.26		101	2143	
36 NMeFOSAA										
570.00 > 419.00	4.878	4.896	-0.018	1.000	742603	1.06		106	1280	
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.975	4.993	-0.018	1.123	2175912	0.9530	Target=3.80	98.9	7520	
599.00 > 99.00	4.975	4.993	-0.018	1.123	585050		3.72(1.90-5.70)		2733	
D 39 13C2 PFUnA										
565.00 > 520.00	5.003	5.008	-0.005	1.212	6491266	1.23		98.5	13992	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.003	5.008	-0.005	1.000	5263544	1.00	Target=7.45	100	4699	
563.00 > 169.00	5.003	5.008	-0.005	1.000	571902		9.20(3.78-11.33)		3384	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.018	5.022	-0.004	1.215	941732	1.30		104	3245	
40 NEtFOSA										
584.00 > 419.00	5.018	5.036	-0.018	1.000	688252	0.9622		96.2	1132	
57 11C1FOS										
631.00 > 451.00	5.102	5.119	-0.017	1.151	4535403	1.02		109	13960	
D 43 13C2 PFDaA										
615.00 > 570.00	5.233	5.251	-0.018	1.267	7583595	1.35		108	18862	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.233	5.251	-0.018	1.000	5975163	0.9430	Target=5.33	94.3	3404	
613.00 > 169.00	5.233	5.251	-0.018	1.000	866712		6.89(2.66-7.99)		2454	
50 10:2 FTS										
627.00 > 607.00	5.260	5.266	-0.006	1.108	1287167	1.09		113	6907	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.290	5.295	-0.005	1.281	706896	1.54		123	428	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.290	5.295	-0.005	1.281	631785	1.32		106	49.9	
49 N-MeFOSE-M										
616.00 > 59.00	5.304	5.295	0.009	1.003	646617	0.9874		98.7	621	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.304	5.295	0.009	1.003	501527	0.9477		94.8	689	
54 PFDoS										
699.00 > 80.00	5.417	5.436	-0.019	1.222	2297228	0.9751	Target=4.32	101	5627	
699.00 > 99.00	5.417	5.436	-0.019	1.222	569845		4.03(2.19-6.58)		3138	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.443	5.449	-0.006	1.318	721441	1.48		118	631	
62 N-EtFOSE-M										
630.00 > 59.00	5.456	5.462	-0.006	1.002	759535	1.04		104	1484	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.469	5.462	0.007	1.325	532507	1.33		106	746	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.443	5.462	-0.019	1.040	5239240	0.9769	Target=5.66	97.7	3913	
663.00 > 169.00	5.443	5.462	-0.019	1.040	867150		6.04(2.83-8.48)		5701	
56 N-EtFOSA-M										
526.00 > 169.00	5.469	5.462	0.007	1.000	491276	0.9870		98.7	488	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.632	5.637	-0.005	1.364	6742694	1.31		105	16066	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.632	5.637	-0.005	1.000	698697	1.03	Target=1.07	103	5694	
713.00 > 219.00	5.618	5.637	-0.019	0.997	652975		1.07(0.53-1.60)		4019	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.943	5.948	-0.005	1.000	4117373	0.9515	Target=7.50	95.2	3396	
813.00 > 169.00	5.943	5.948	-0.005	1.000	521685		7.89(3.75-11.26)		3310	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.943	5.948	-0.005	1.439	4942451	1.32		106	9438	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.207	6.221	-0.014	1.044	3606123	1.00	Target=9.98	100	3055	
913.00 > 169.00	6.207	6.221	-0.014	1.044	313563		11.50(5.14-15.41)		2356	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L4PFC2_00003

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_029.d

Injection Date: 08-Oct-2021 15:57:05

Instrument ID: LCA

Lims ID: CCV

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 29

Worklist Smp#: 29

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

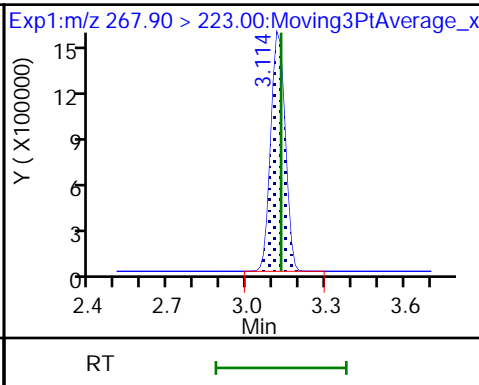
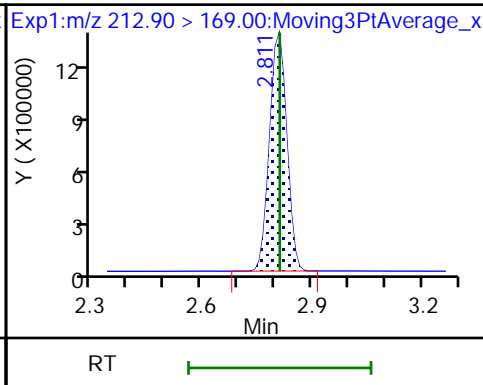
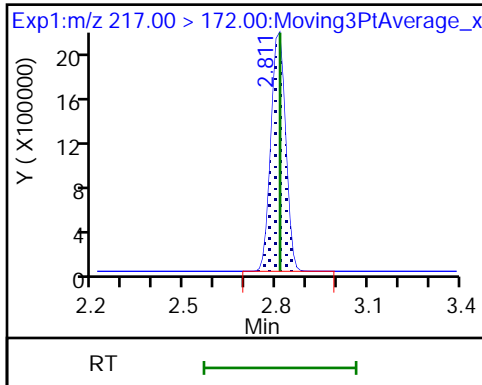
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

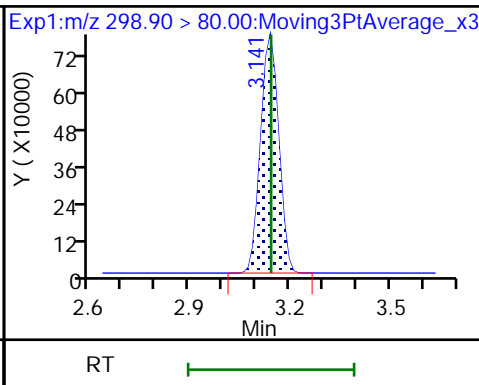
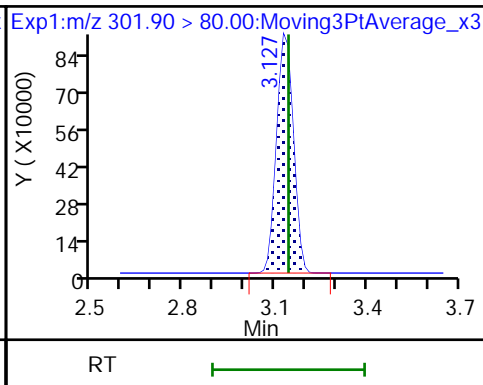
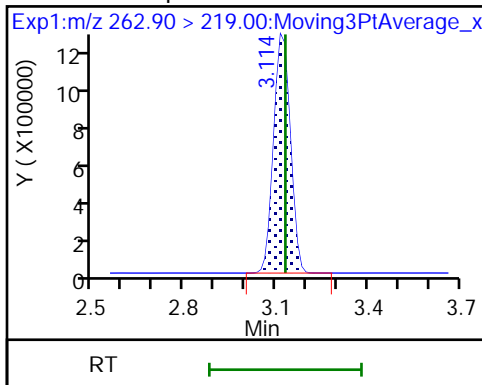
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

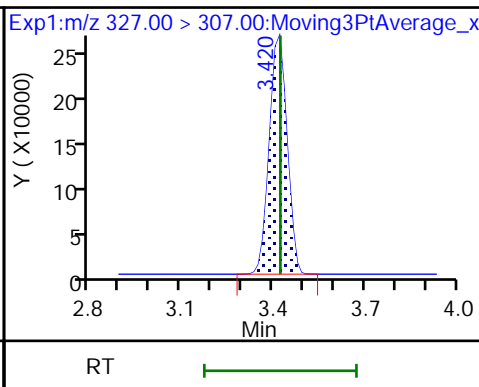
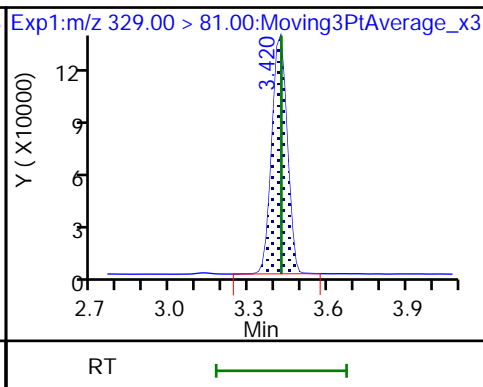
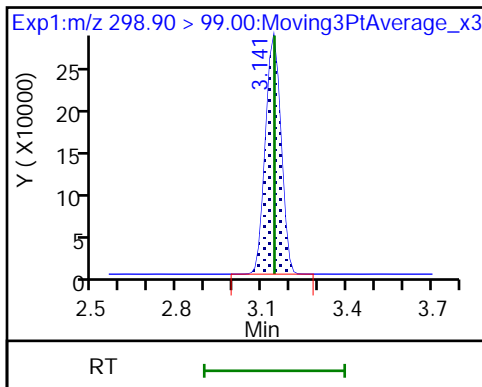
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

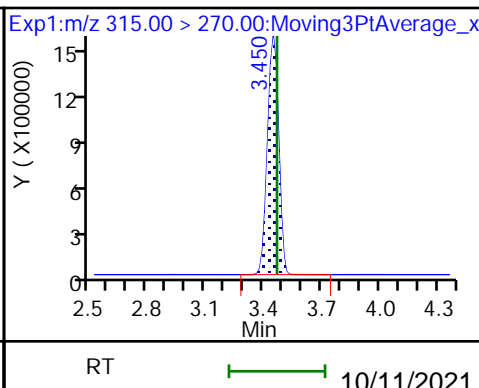
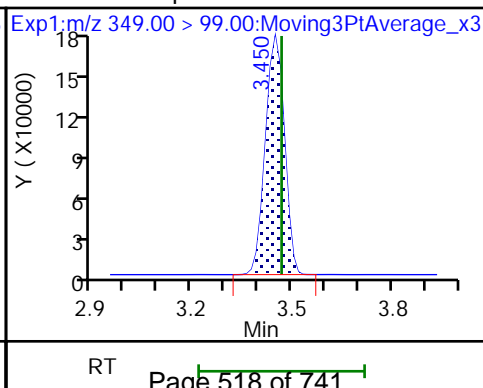
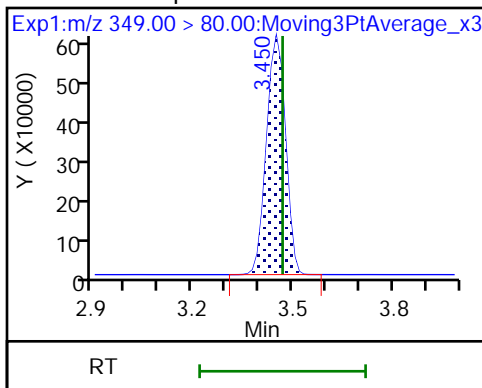
7 4:2 FTS

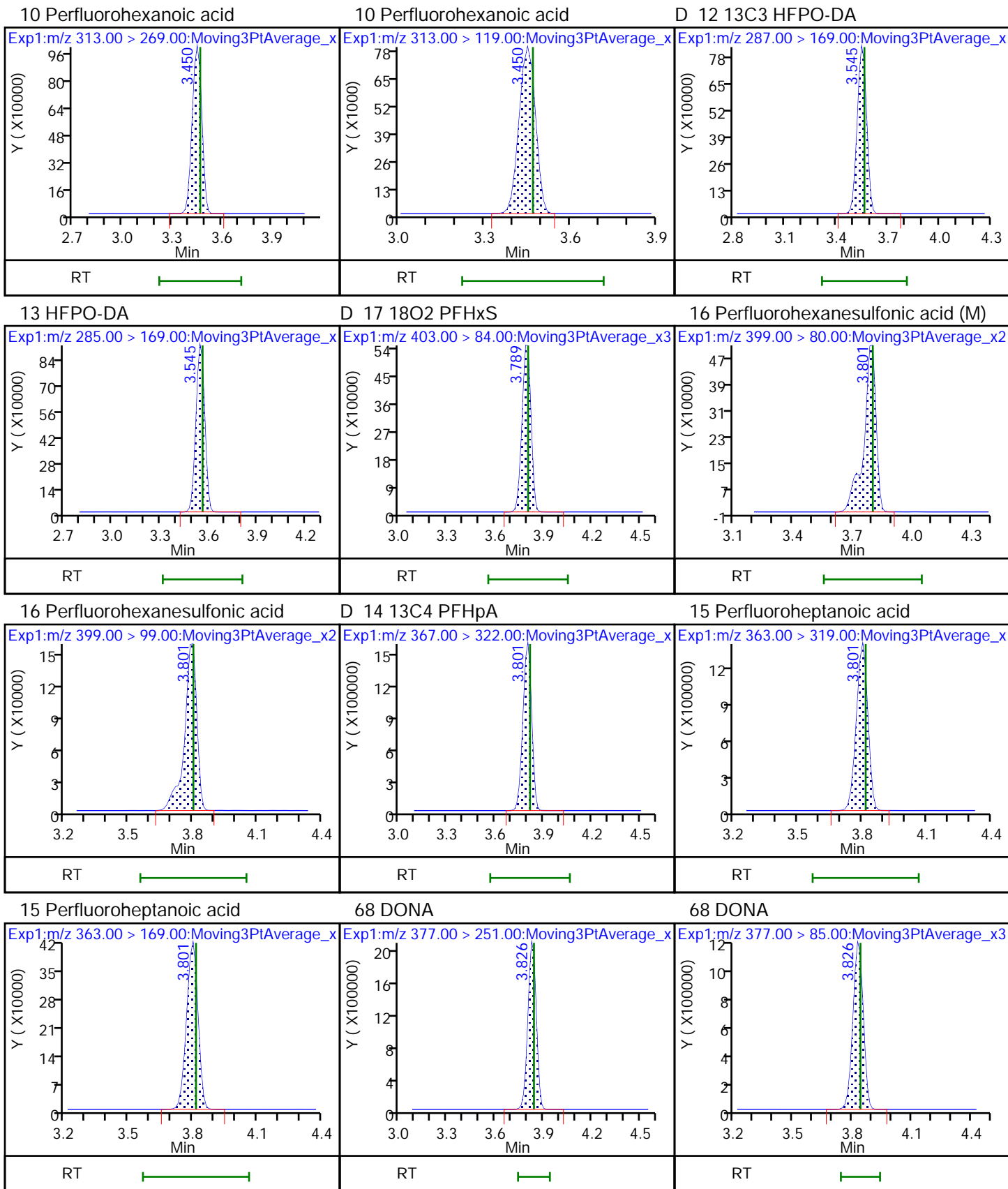


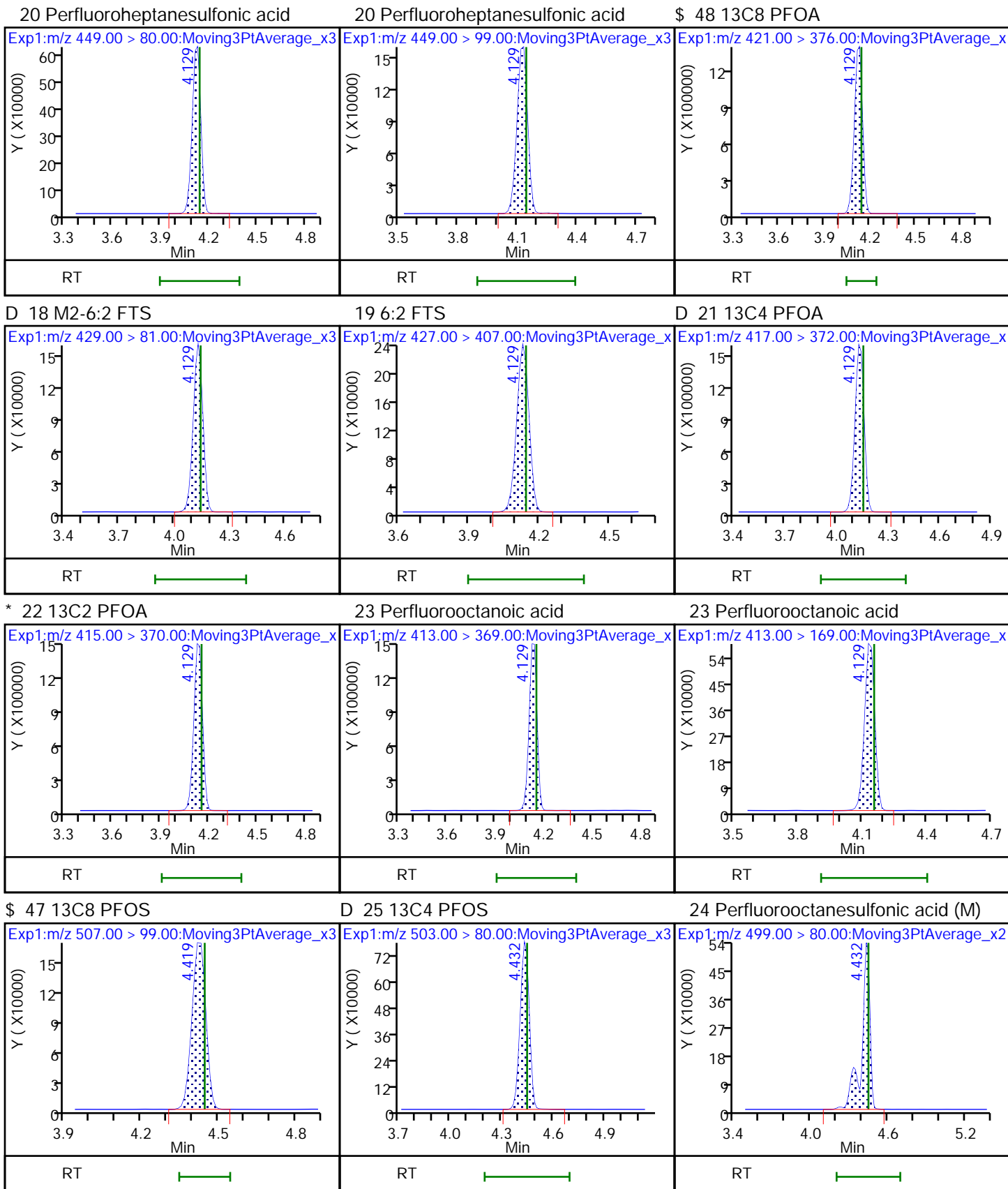
11 Perfluoropentanesulfonic acid

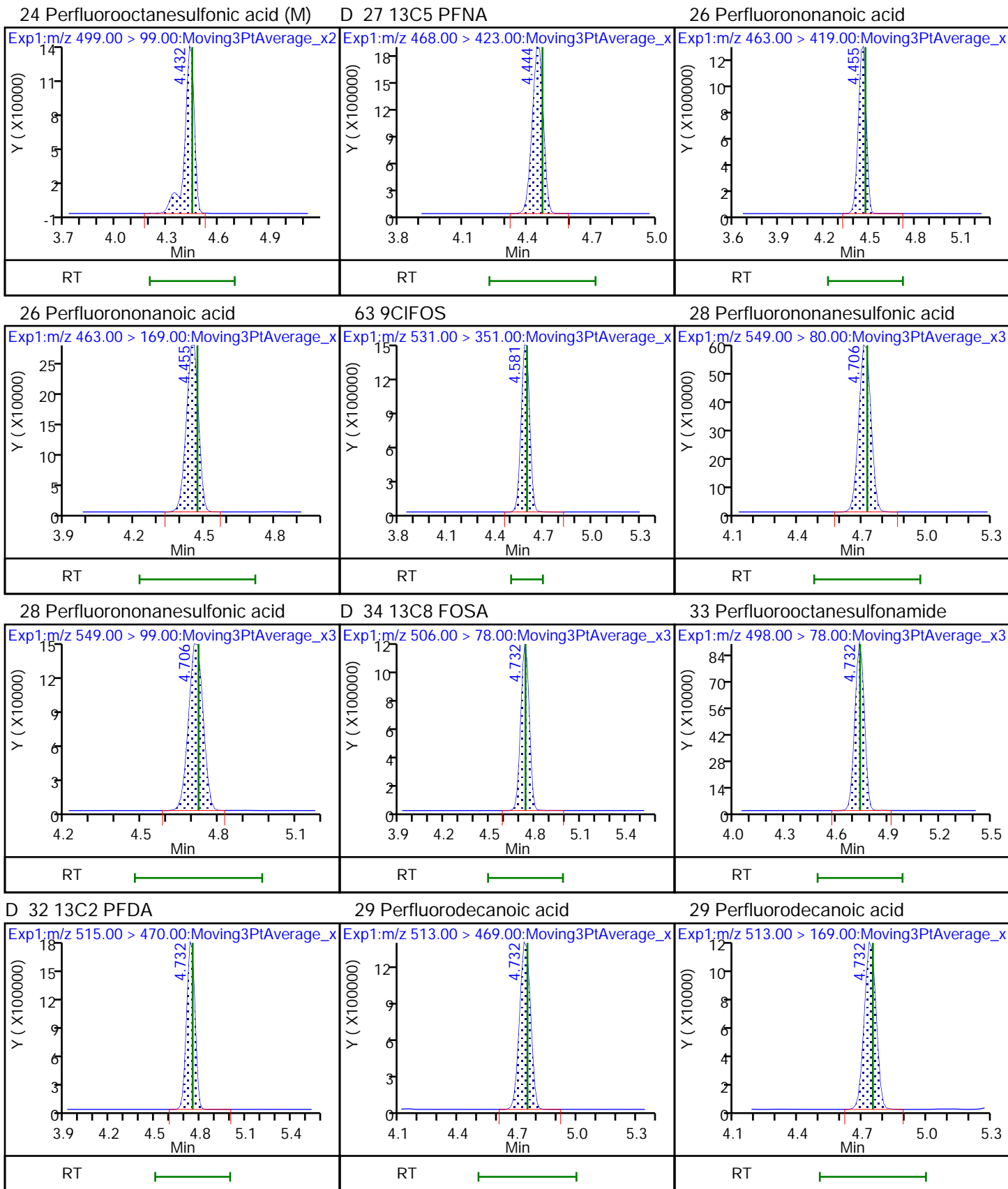
11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA





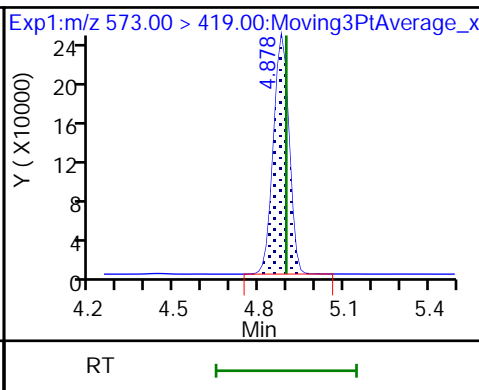
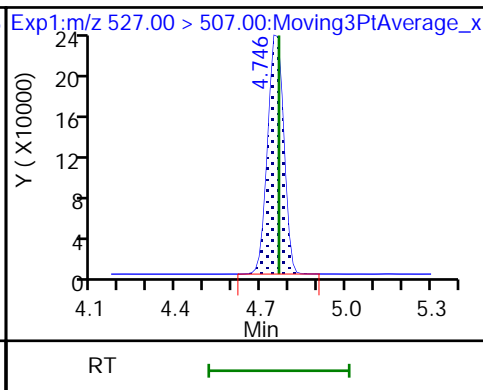
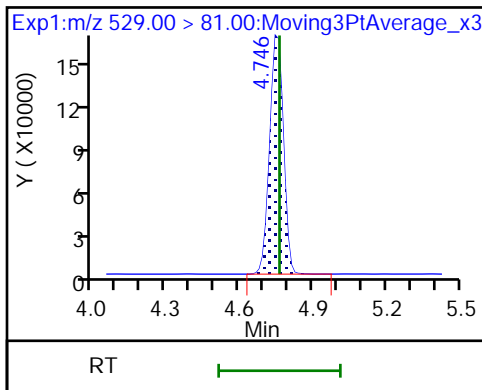




D 30 M2-8:2 FTS

31 8:2 FTS

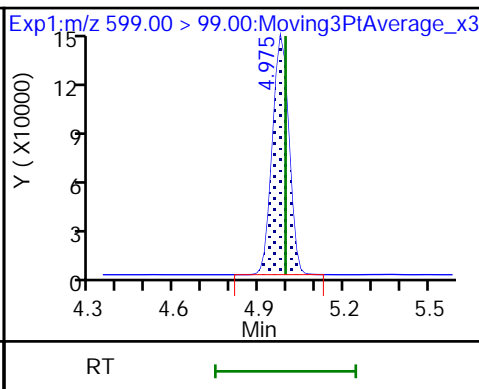
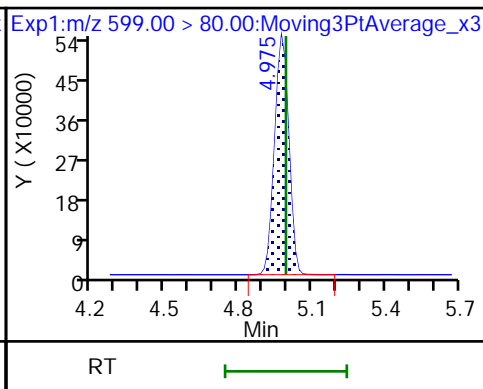
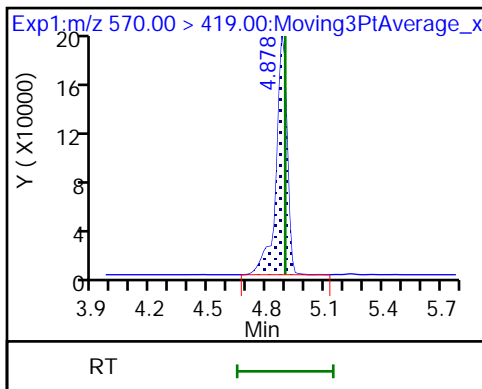
D 35 d3-NMeFOSAA



36 NMeFOSAA

37 Perfluorodecanesulfonic acid

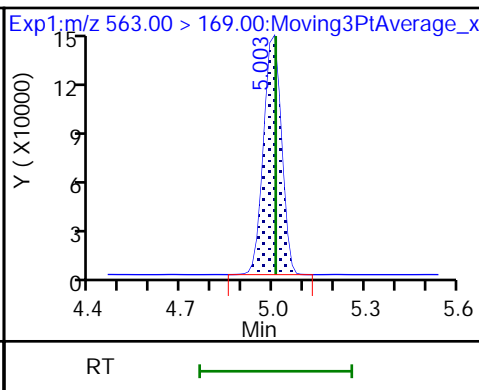
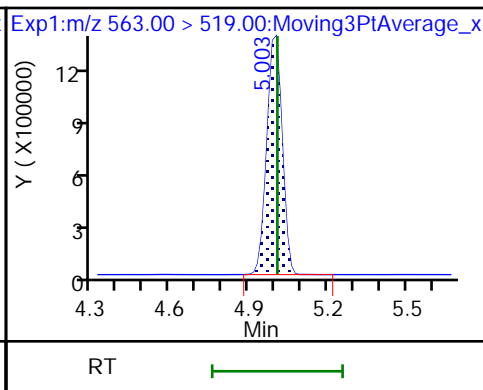
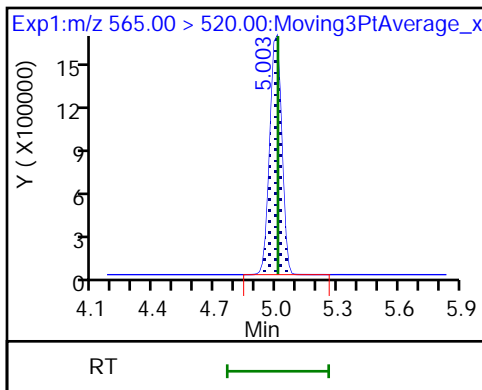
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

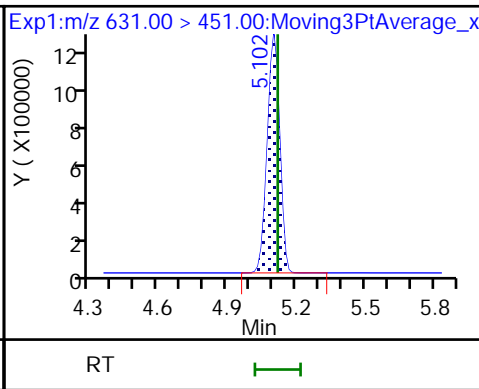
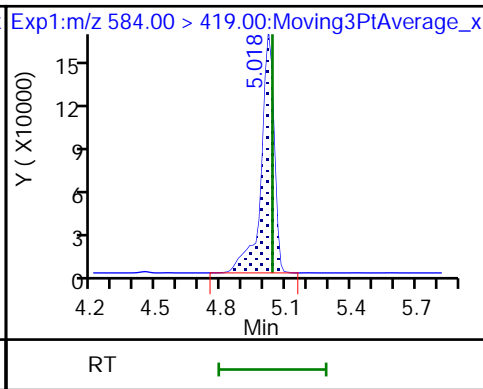
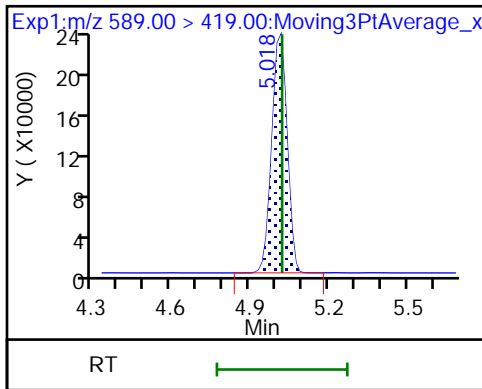
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA

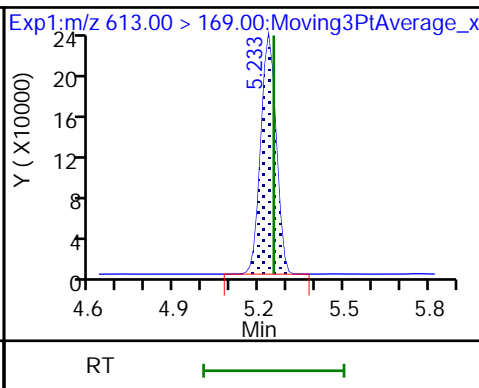
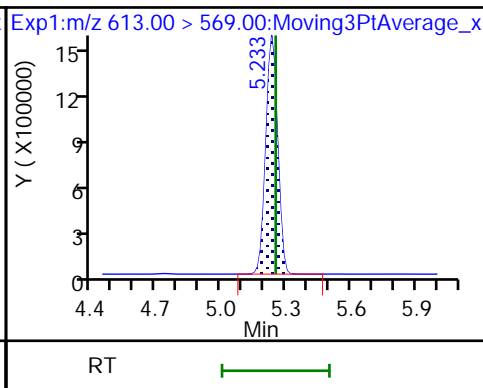
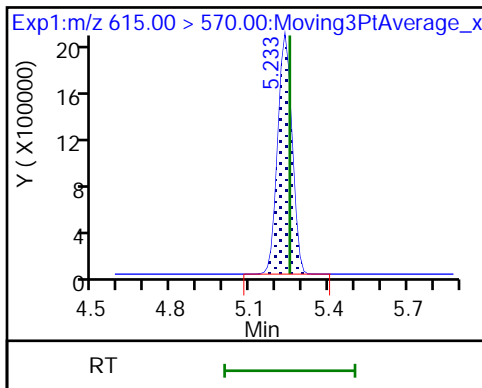
57 11C1FOS



D 43 13C2 PFDoA

42 Perfluorododecanoic acid

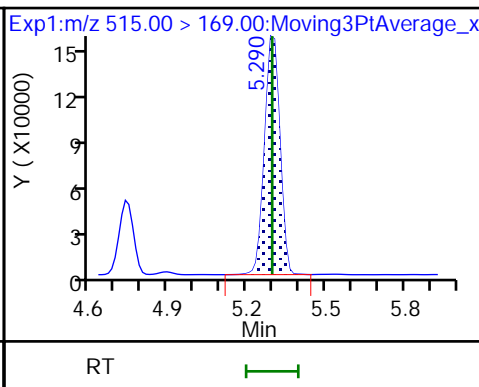
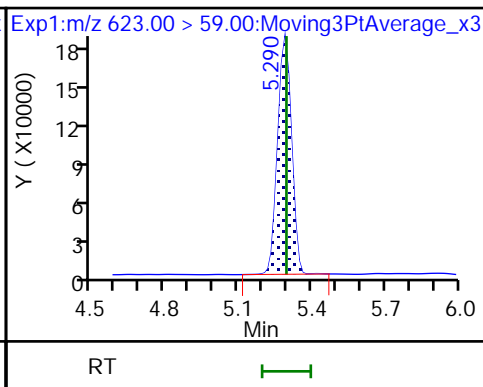
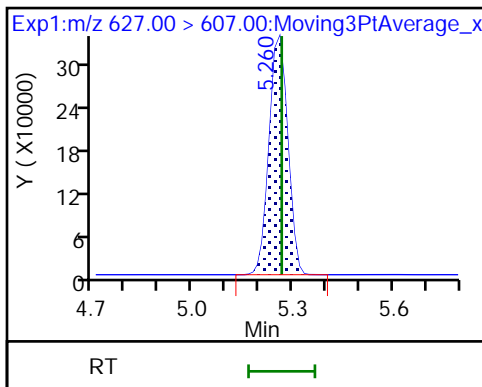
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

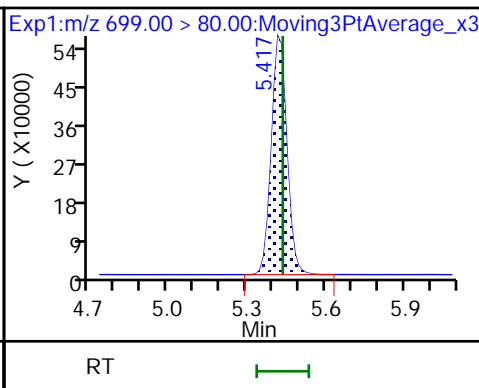
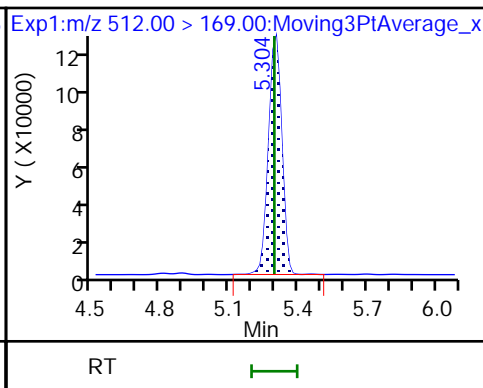
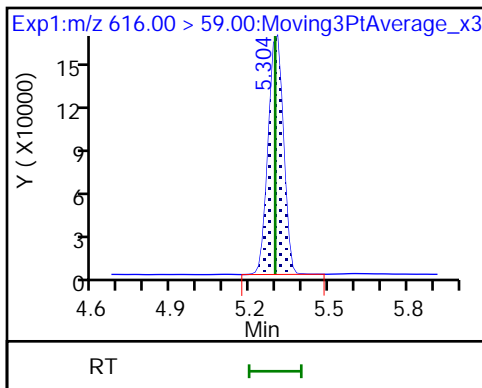
D 58 d-N-MeFOSEA-M



49 N-MeFOSE-M

61 NMeFOSEA

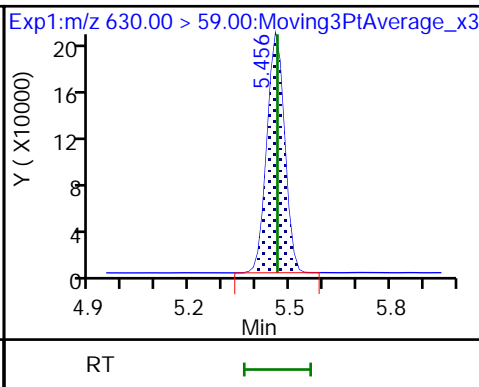
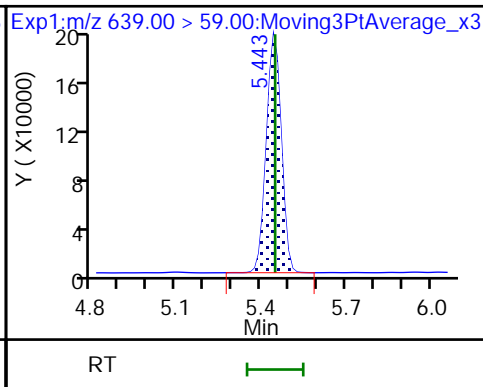
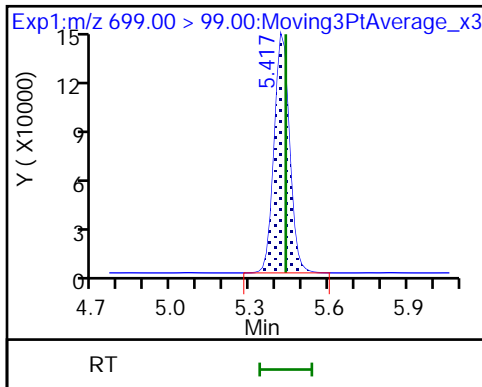
54 PFDoS



54 PFDoS

D 53 d9-N-EtFOSE-M

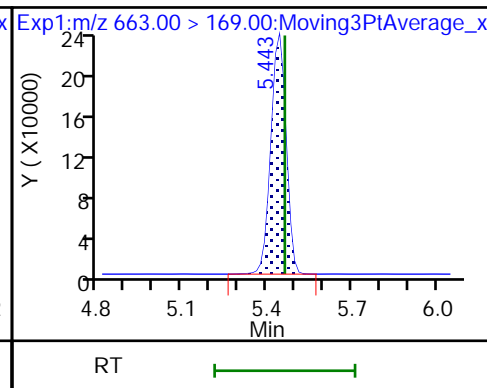
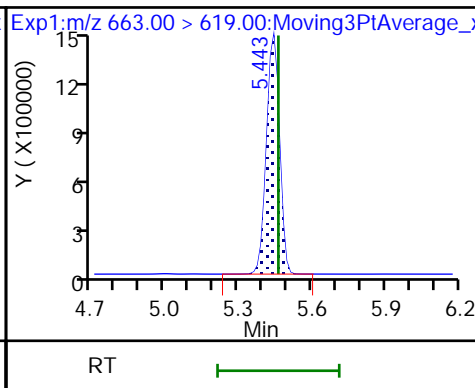
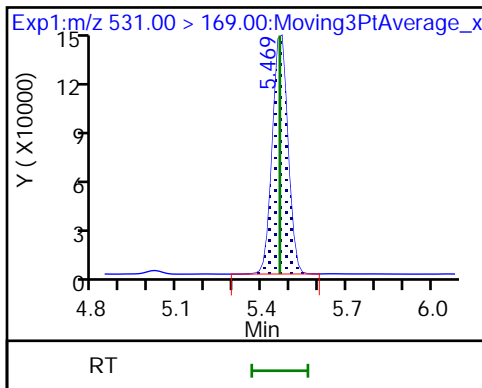
62 N-EtFOSE-M



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid

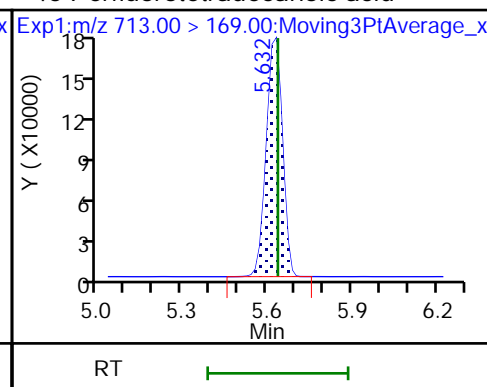
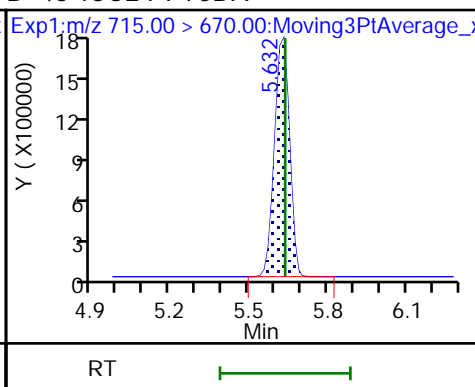
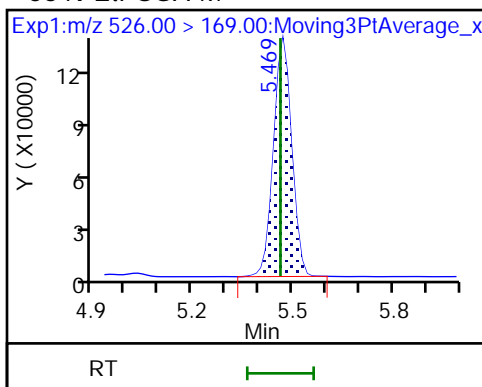
44 Perfluorotridecanoic acid



56 N-EtFOSA-M

D 46 13C2 PFTeDA

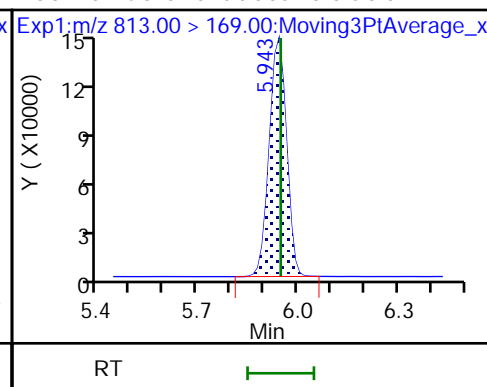
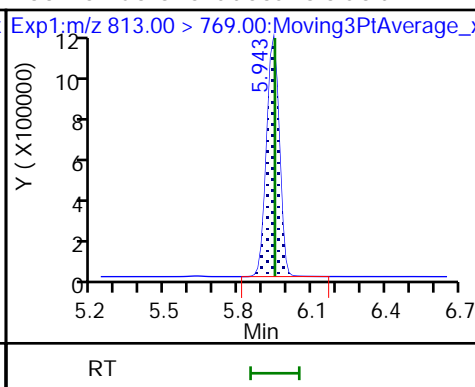
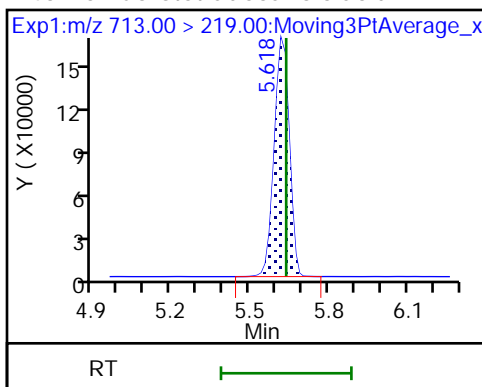
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

55 Perfluorohexadecanoic acid

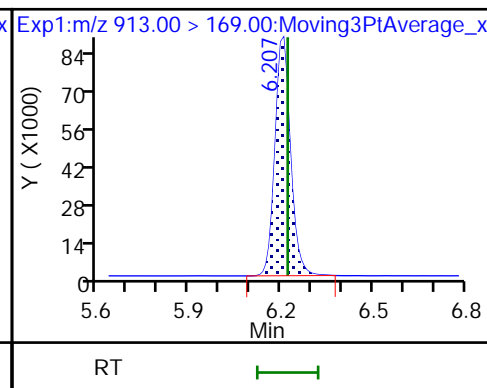
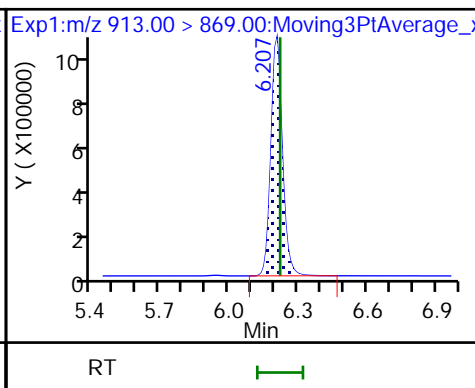
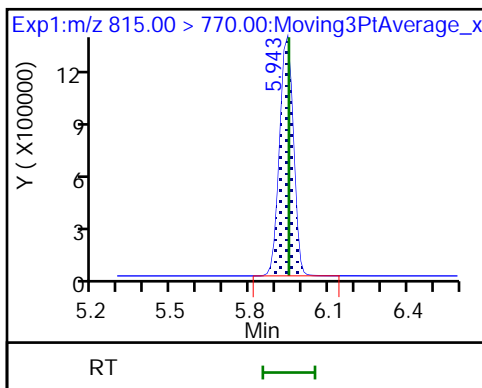
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid



Eurofins TestAmerica, Knoxville

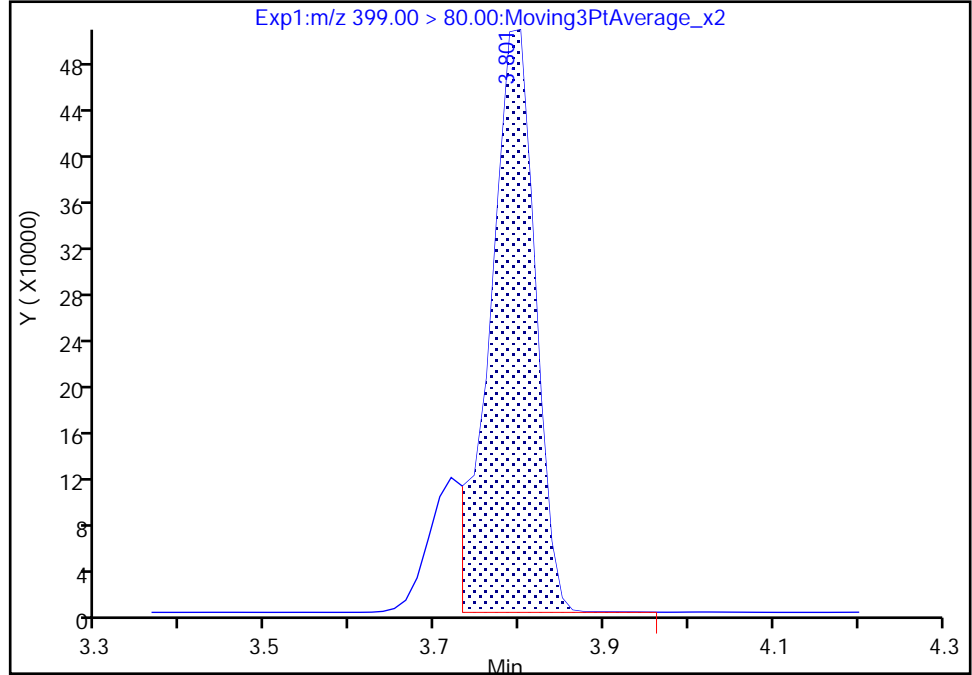
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Injection Date: 08-Oct-2021 15:57:05 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 29 Worklist Smp#: 29
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

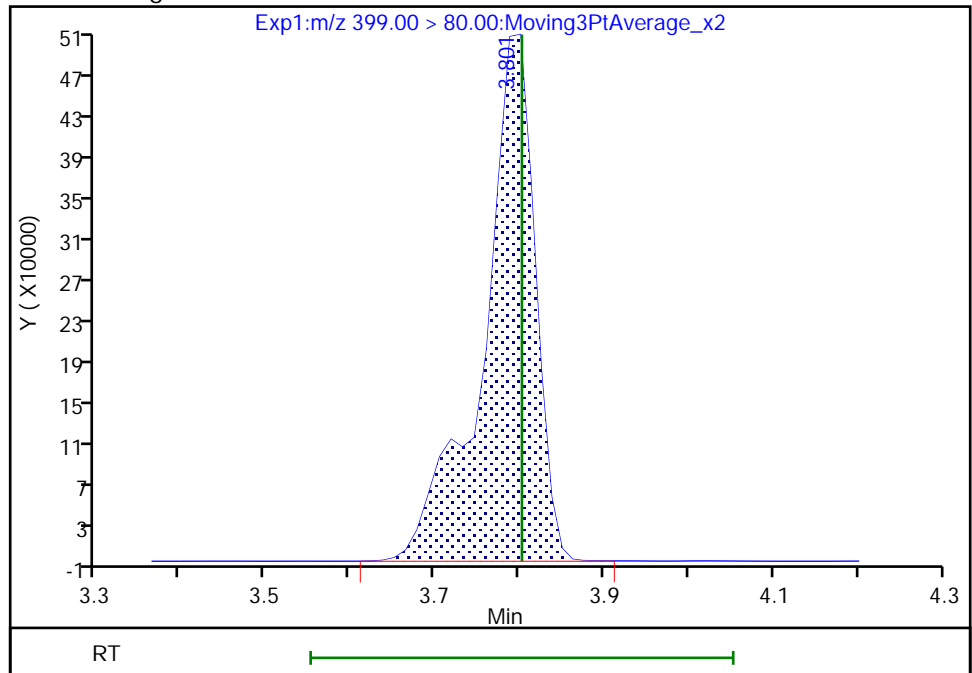
RT: 3.80
Area: 1858711
Amount: 0.775481
Amount Units: ng/ml

Processing Integration Results



RT: 3.80
Area: 2167493
Amount: 0.905156
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 10:25:50
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

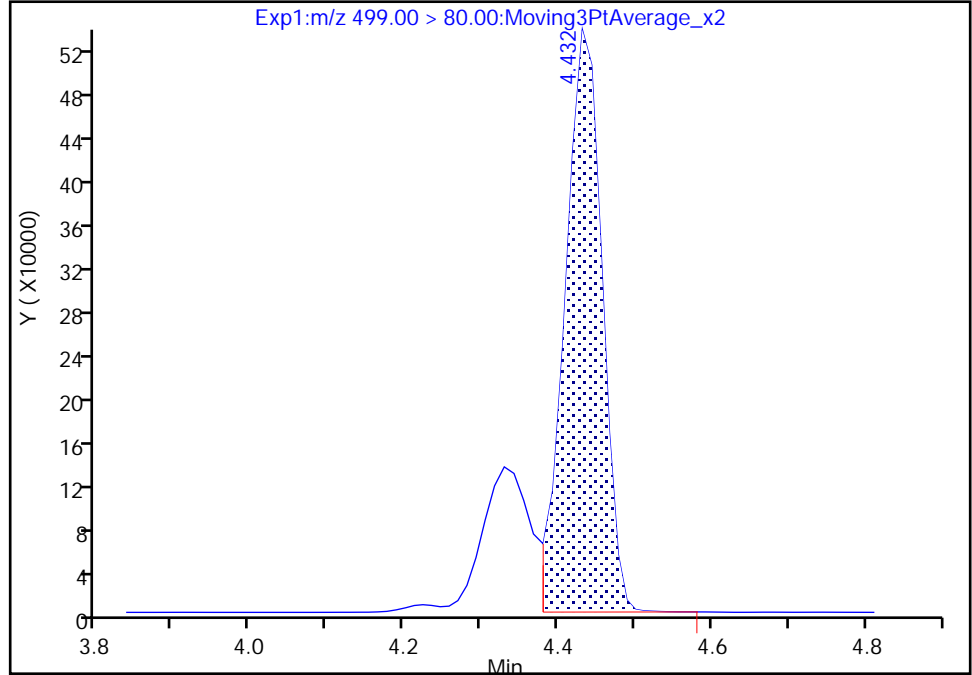
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Injection Date: 08-Oct-2021 15:57:05 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 29 Worklist Smp#: 29
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

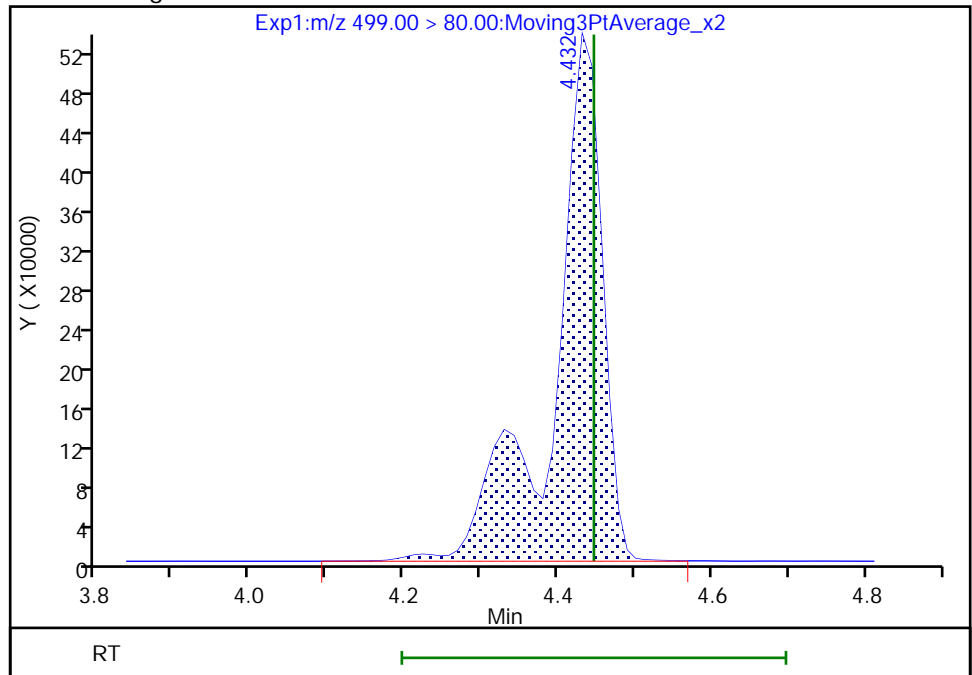
RT: 4.43
Area: 1766771
Amount: 0.673653
Amount Units: ng/ml

Processing Integration Results



RT: 4.43
Area: 2356989
Amount: 0.898698
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 10:26:03
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

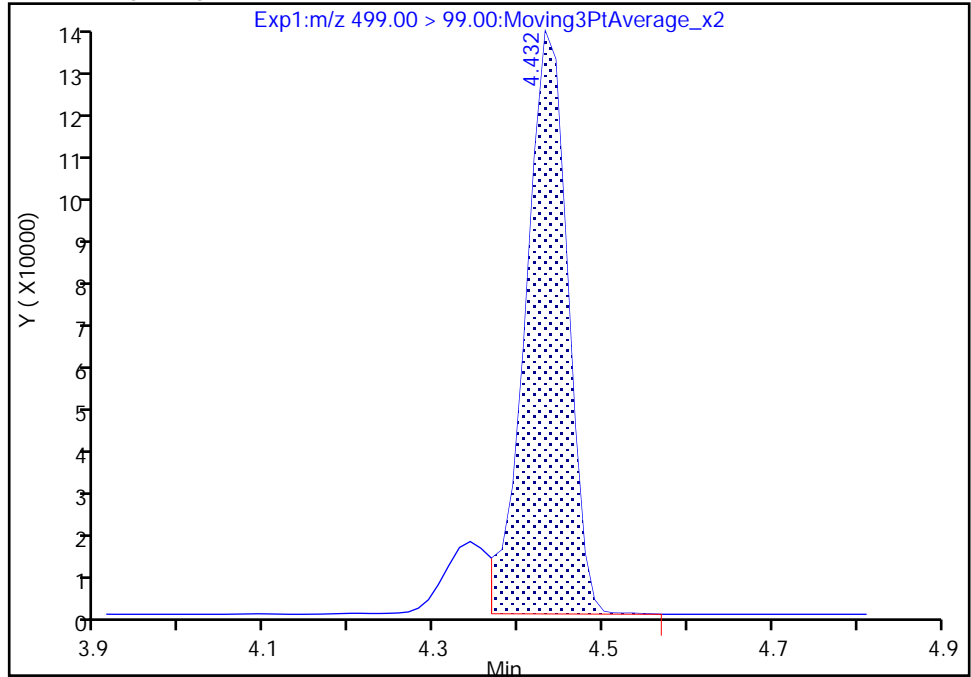
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Injection Date: 08-Oct-2021 15:57:05 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 29 Worklist Smp#: 29
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

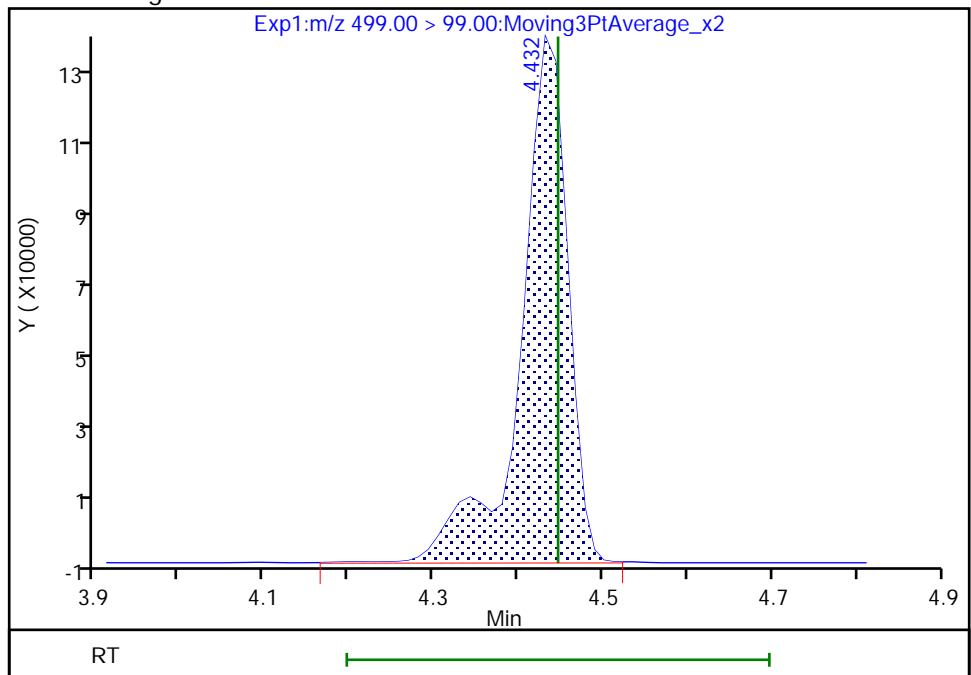
RT: 4.43
Area: 449250
Amount: 0.673653
Amount Units: ng/ml

Processing Integration Results



RT: 4.43
Area: 508686
Amount: 0.898698
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 10:26:08

Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54642/41 Calibration Date: 10/08/2021 17:44
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _041.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7855	0.7469		2.38	2.50	-4.9	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.013	0.9141		2.26	2.50	-9.8	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.126	1.077		2.11	2.21	-4.4	40.0
4:2 FTS	AveID	2.500	2.362		2.21	2.34	-5.5	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8572	0.7884		2.30	2.50	-8.0	40.0
Perfluoropentanesulfonic acid (PFPeS)	L2ID		0.8288		2.27	2.35	-3.2	50.0
HFPO-DA	L2ID		1.276		2.31	2.50	-7.5	40.0
Perfluoroheptanoic acid (PFHpA)	L2ID		1.003		2.38	2.50	-4.9	40.0
Perfluorohexanesulfonic acid (PFHxS)	L2ID		1.343		2.26	2.28	-0.9	40.0
DONA	AveID	3.243	3.229		2.35	2.36	-0.4	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9947	0.9263		2.22	2.38	-6.9	40.0
6:2 FTS	L2ID		1.984		2.35	2.37	-0.9	40.0
Perfluorooctanoic acid (PFOA)	L2ID		1.061		2.41	2.50	-3.8	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.100	1.030		2.17	2.32	-6.4	40.0
Perfluorononanoic acid (PFNA)	L2ID		0.8254		2.48	2.50	-0.8	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	2.308	2.248		2.27	2.33	-2.6	40.0
Perfluorononanesulfonic acid (PFNS)	AveID	1.042	0.9913		2.28	2.40	-4.9	40.0
Perfluorodecanoic acid (PFDA)	L2ID		0.9170		2.43	2.50	-2.9	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9606	0.8723		2.27	2.50	-9.2	40.0
8:2 FTS	AveID	1.784	1.739		2.34	2.40	-2.5	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	L2ID		0.8505		2.32	2.50	-7.1	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.9574	0.9649		2.43	2.41	0.8	40.0
Perfluoroundecanoic acid (PFUnA)	L2ID		0.9457		2.34	2.50	-6.3	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.9494	0.8649		2.28	2.50	-8.9	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.858	1.787		2.27	2.36	-3.8	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9611		2.36	2.50	-5.5	40.0
10:2 FTS	AveID	2.221	2.505		2.72	2.41	12.8	40.0
2- (N-methylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.028		2.23	2.50	-10.8	40.0
NMeFOSA	AveID	1.047	0.9928		2.37	2.50	-5.2	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9879	0.995		2.44	2.42	0.7	40.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54642/41 Calibration Date: 10/08/2021 17:44
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _041.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTrIA)	L2ID		0.8196		2.33	2.50	-7.0	50.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.206		2.40	2.50	-4.2	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.168	1.070		2.29	2.50	-8.4	40.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.1200		2.39	2.50	-4.4	40.0
Perfluorohexadecanoic acid	Q2ID		1.009		2.37	2.50	-5.4	40.0
Perfluorooctadecanoic acid	AveID	0.9076	0.8976		2.47	2.50	-1.1	40.0
13C4 PFBA	Ave	1.324	1.333		1.26	1.25	0.6	50.0
13C5 PFPeA	Ave	1.087	1.150		1.32	1.25	5.8	50.0
13C3 PFBS	Ave	0.7019	0.7147		1.18	1.16	1.8	50.0
M2-4:2 FTS	Ave	0.1052	0.1190		1.32	1.17	13.0	50.0
13C2 PFHxA	Ave	1.116	1.152		1.29	1.25	3.2	50.0
13C3 HFPO-DA	Ave	0.5714	0.6038		1.32	1.25	5.7	50.0
13C4 PFHpA	Ave	1.113	1.177		1.32	1.25	5.7	50.0
18O2 PFHxS	Ave	0.4248	0.4137		1.15	1.18	-2.6	50.0
13C4 PFOA	Ave	1.007	1.038		1.29	1.25	3.1	50.0
M2-6:2 FTS	Ave	0.1078	0.1086		1.20	1.19	0.8	50.0
13C4 PFOS	Ave	0.5852	0.5723		1.17	1.20	-2.2	50.0
13C5 PFNA	Ave	1.279	1.317		1.29	1.25	3.0	50.0
13C2 PFDA	Ave	1.296	1.335		1.29	1.25	3.0	50.0
13C8 FOSA	Ave	0.8591	0.8518		1.24	1.25	-0.8	50.0
M2-8:2 FTS	Ave	0.1316	0.1245		1.13	1.20	-5.4	50.0
d3-NMeFOSAA	Ave	0.1774	0.1940		1.37	1.25	9.4	50.0
13C2 PFUnA	Ave	1.237	1.245		1.26	1.25	0.6	50.0
d5-NEtFOSAA	Ave	0.1705	0.1875		1.38	1.25	10.0	50.0
13C2 PFDoA	Ave	1.319	1.452		1.38	1.25	10.1	50.0
d7-N-MeFOSE-M	Ave	0.1075	0.1397		1.62	1.25	29.9	50.0
d-N-MeFOSA-M	Ave	0.1120	0.1170		1.31	1.25	4.5	50.0
d9-N-EtFOSE-M	Ave	0.1146	0.1418		1.55	1.25	23.8	50.0
d-N-EtFOSA-M	Ave	0.0942	0.1054		1.40	1.25	11.8	50.0
13C2 PFTeDA	Ave	1.211	1.322		1.37	1.25	9.2	50.0
13C2 PFHxDA	Ave	0.8782	0.9628		1.37	1.25	9.6	50.0
13C8 PFOA	Ave	0.9886	1.039		1.31	1.25	5.1	50.0
13C8 PFOS	Ave	0.1256	0.1246		1.19	1.20	-0.8	50.0

Eurofins TestAmerica, Knoxville
 Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_041.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 08-Oct-2021 17:44:04 ALS Bottle#: 12 Worklist Smp#: 41
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0021001-041 ccv
 Misc. Info.: Plate: 8 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15
 Method: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 11:11:42 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 10:33:06

Ratio Calibration: None

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	2.801	2.812	-0.011	0.678	6570302	1.26	101	14277	
2 Perfluorobutanoic acid	212.90 > 169.00	2.801	2.812	-0.011	1.000	9814171	2.38	95.1	1598	
D 3 13C5 PFPeA	267.90 > 223.00	3.116	3.129	-0.013	0.754	5668467	1.32	106	12538	
4 Perfluoropentanoic acid	262.90 > 219.00	3.116	3.129	-0.013	1.000	10363352	2.26	90.2	2872	
D 6 13C3 PFBS	301.90 > 80.00	3.129	3.143	-0.014	0.758	3276553	1.18	102	22309	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.129	3.143	-0.014	1.000	6706004	2.11	Target=3.06	95.6	22996
	298.90 > 99.00	3.129	3.143	-0.014	1.000	2439255		2.75(1.53-4.59)		6687
D 8 M2-4:2 FTS	329.00 > 81.00	3.409	3.423	-0.014	0.825	547731	1.32	113	1011	
7 4:2 FTS	327.00 > 307.00	3.409	3.423	-0.014	1.000	2587110	2.21	94.5	14751	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.437	3.469	-0.032	1.098	5477720	2.27	Target=3.47	96.8	22388
	349.00 > 99.00	3.437	3.469	-0.032	1.098	1528764		3.58(1.73-5.20)		14722
D 9 13C2 PFHxA	315.00 > 270.00	3.437	3.469	-0.032	0.832	5679522	1.29	103	16604	
10 Perfluorohexanoic acid	313.00 > 269.00	3.437	3.469	-0.032	1.000	8955341	2.30	Target=9.74	92.0	3666
	313.00 > 119.00	3.437	3.469	-0.032	1.000	726368		12.33(4.87-14.61)		2309
D 12 13C3 HFPO-DA	287.00 > 169.00	3.535	3.561	-0.026	0.856	2976824	1.32	106	8039	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.548	3.561	-0.013	1.004	7594919	2.31		92.5	9759	
D 17 18O2 PFHxS										
403.00 > 84.00	3.790	3.803	-0.013	0.918	1929564	1.15		97.4	8621	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.790	3.803	-0.013	1.000	4984033	2.26	Target=2.96	99.1	12230	M
399.00 > 99.00	3.790	3.803	-0.013	1.000	1453381		3.43(1.48-4.44)		7862	
D 14 13C4 PFHpA										
367.00 > 322.00	3.790	3.815	-0.025	0.918	5801928	1.32		106	19434	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.790	3.815	-0.025	1.000	11634560	2.38	Target=3.35	95.1	6632	
363.00 > 169.00	3.790	3.815	-0.025	1.000	3560381		3.27(1.67-5.02)		14045	
68 DONA										
377.00 > 251.00	3.827	3.840	-0.013	0.863	17166853	2.34	Target=1.49	99.6	32902	
377.00 > 85.00	3.827	3.840	-0.013	0.863	9686343		1.77(0.74-2.23)		8207	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.119	4.143	-0.024	0.929	4976425	2.22	Target=3.73	93.1	24997	
449.00 > 99.00	4.119	4.143	-0.024	0.929	1246914		3.99(1.87-5.61)		4543	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.119	4.143	-0.024	0.997	5123454	1.31		105	37435	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.131	4.143	-0.012	1.000	508852	1.20		101	2700	
19 6:2 FTS										
427.00 > 407.00	4.131	4.143	-0.012	1.000	2015032	2.35		99.1	8368	
D 21 13C4 PFOA										
417.00 > 372.00	4.131	4.155	-0.024	1.000	5114835	1.29		103	15860	
* 22 13C2 PFOA										
415.00 > 370.00	4.131	4.155	-0.024		4929914	1.25			24590	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.131	4.155	-0.024	1.000	10857616	2.41	Target=2.40	96.2	5339	
413.00 > 169.00	4.131	4.155	-0.024	1.000	4259148		2.55(1.20-3.61)		6601	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.421	4.447	-0.026	1.070	587133	1.19		99.2	3506	
D 25 13C4 PFOS										
503.00 > 80.00	4.434	4.447	-0.013	1.074	2697423	1.17		97.8	6820	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.434	4.447	-0.013	1.000	5393364	2.17	Target=3.83	93.6	6569	M
499.00 > 99.00	4.434	4.447	-0.013	1.000	1212534		4.45(1.91-5.74)		4505	M
D 27 13C5 PFNA										
468.00 > 423.00	4.447	4.470	-0.024	1.076	6494671	1.29		103	40809	
26 Perfluorononanoic acid										
463.00 > 419.00	4.447	4.470	-0.024	1.000	10721315	2.48	Target=3.68	99.2	8578	
463.00 > 169.00	4.447	4.470	-0.024	1.000	2300022		4.66(1.84-5.52)		6108	
63 9CIFOS										
531.00 > 351.00	4.584	4.596	-0.012	1.110	11822716	2.27		97.4	16928	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.709	4.722	-0.013	1.062	5370450	2.28	Target=3.97	95.1	17801	
549.00 > 99.00	4.709	4.722	-0.013	1.062	1308684		4.10(1.99-5.96)		6831	
D 34 13C8 FOSA										
506.00 > 78.00	4.736	4.736	0.0	1.146	4199525	1.24		99.2	6026	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.736	4.736	0.0	1.000	7326497	2.27		90.8	7458	
D 32 13C2 PFDA										
515.00 > 470.00	4.736	4.749	-0.013	1.146	6579515	1.29		103	15649	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.736	4.749	-0.013	1.000	12066506	2.43	Target=10.11	97.1	6716	
513.00 > 169.00	4.736	4.749	-0.013	1.000	1026115		11.76(5.06-15.17)		718	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.763	-0.014	1.150	587952	1.13		94.6	2531	
31 8:2 FTS										
527.00 > 507.00	4.749	4.763	-0.014	1.000	2045480	2.34		97.5	6900	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.869	4.896	-0.027	1.179	956644	1.37		109	1216	
36 NMeFOSAA										
570.00 > 419.00	4.882	4.896	-0.014	1.003	1627307	2.32		92.9	2947	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.979	4.993	-0.014	1.123	5248779	2.43	Target=3.80	101	11684	
599.00 > 99.00	4.979	4.993	-0.014	1.123	1403946		3.74(1.90-5.70)		6810	
D 39 13C2 PFUnA										
565.00 > 520.00	4.993	5.008	-0.015	1.209	6136437	1.26		101	9612	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.993	5.008	-0.015	1.000	11606014	2.34	Target=7.45	93.7	10450	
563.00 > 169.00	4.993	5.008	-0.015	1.000	1345560		8.63(3.78-11.33)		5254	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.007	5.022	-0.015	1.212	924576	1.37		110	3778	
40 NEtFOSA										
584.00 > 419.00	5.007	5.036	-0.029	1.000	1599319	2.28		91.1	1303	
57 11CIFOS										
631.00 > 451.00	5.093	5.119	-0.026	1.148	9501155	2.26		96.2	13104	
D 43 13C2 PFDaA										
615.00 > 570.00	5.223	5.251	-0.028	1.265	7160104	1.38		110	32077	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.223	5.251	-0.028	1.000	13763380	2.36	Target=5.33	94.5	7535	
613.00 > 169.00	5.223	5.251	-0.028	1.000	1898393		7.25(2.66-7.99)		5814	
50 10:2 FTS										
627.00 > 607.00	5.251	5.266	-0.015	1.106	2963985	2.72		113	7969	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.280	5.295	-0.015	1.278	688806	1.62		130	346	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.282	576897	1.31		105	49.6	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.295	0.0	1.003	1416328	2.23		89.2	1380	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.295	5.295	0.0	1.000	1145537	2.37		94.8	741	
54 PFDoS										
699.00 > 80.00	5.423	5.436	-0.013	1.223	5435292	2.44	Target=4.32	101	11141	
699.00 > 99.00	5.423	5.436	-0.013	1.223	1273233		4.27(2.19-6.58)		6520	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.449	5.449	0.0	1.319	699264	1.55		124	498	
62 N-EtFOSE-M										
630.00 > 59.00	5.449	5.462	-0.013	1.000	1687043	2.39		95.8	3075	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.462	0.0	1.322	519384	1.40		112	787	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.436	5.462	-0.026	1.041	11736610	2.33	Target=5.66	93.0	5923	
663.00 > 169.00	5.436	5.462	-0.026	1.041	1951946		6.01(2.83-8.48)		6399	
56 N-EtFOSA-M										
526.00 > 169.00	5.462	5.462	0.0	1.000	1111715	2.29		91.6	659	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.623	5.637	-0.014	1.361	6518592	1.37		109	21244	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.623	5.637	-0.014	1.000	1564995	2.39	Target=1.07	95.6	6840	
713.00 > 219.00	5.623	5.637	-0.014	1.000	1492596		1.05(0.53-1.60)		11909	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.935	5.948	-0.013	1.000	9579407	2.36	Target=7.50	94.6	5996	
813.00 > 169.00	5.935	5.948	-0.013	1.000	1174232		8.16(3.75-11.26)		5337	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.935	5.948	-0.013	1.437	4746285	1.37		110	9264	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.201	6.221	-0.020	1.045	8520563	2.47	Target=9.98	98.9	4656	
913.00 > 169.00	6.201	6.221	-0.020	1.045	712710		11.96(5.14-15.41)		3108	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L5PFC2_00002

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_041.d

Injection Date: 08-Oct-2021 17:44:04

Instrument ID: LCA

Lims ID: CCV

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 12

Worklist Smp#: 41

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

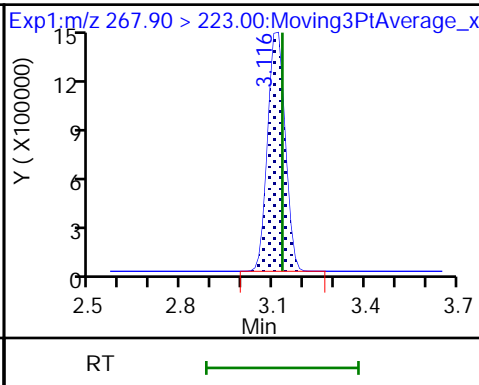
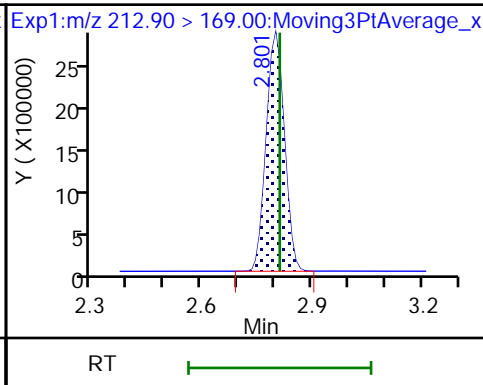
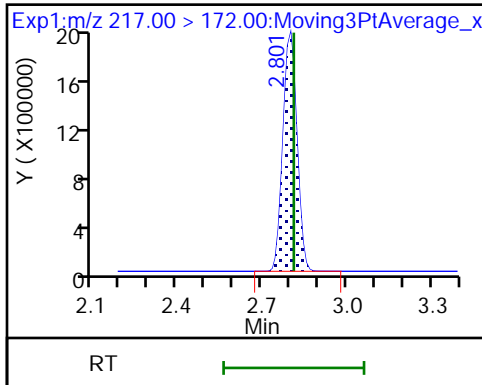
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

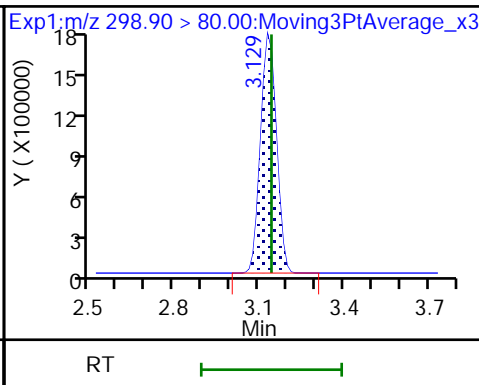
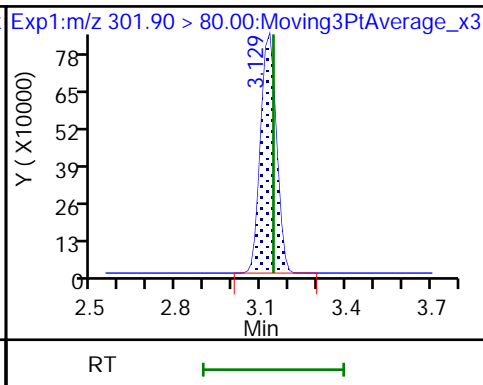
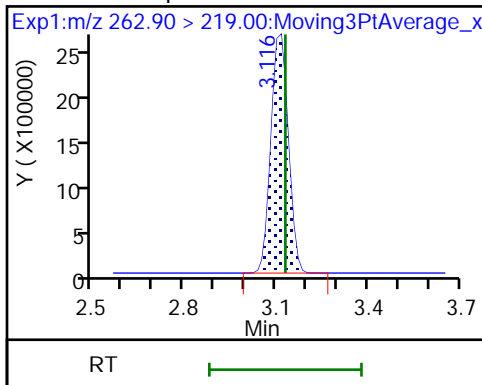
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

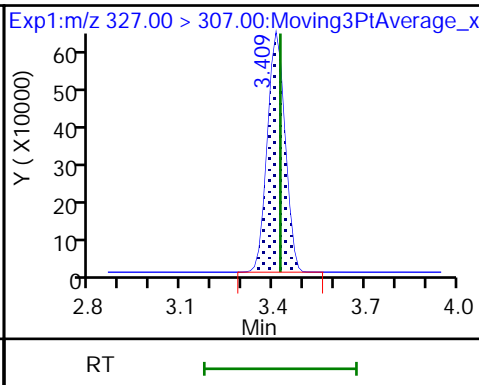
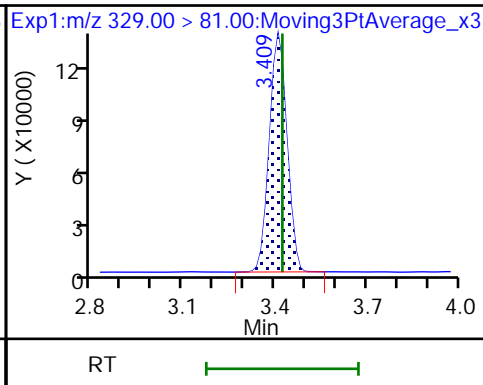
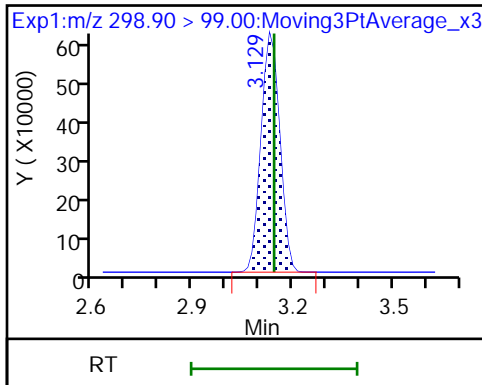
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

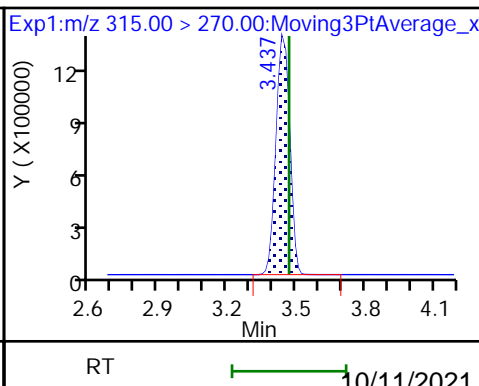
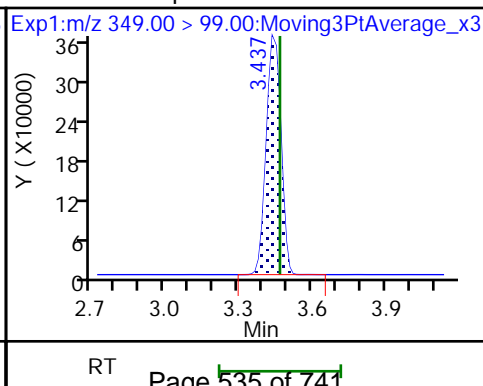
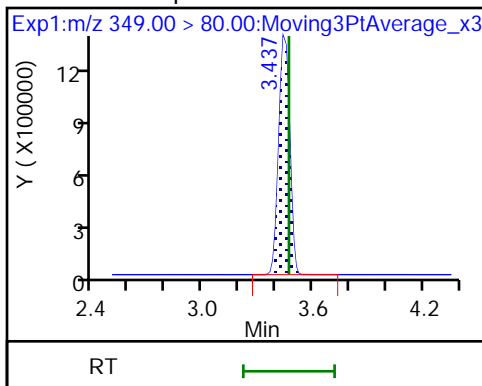
7 4:2 FTS

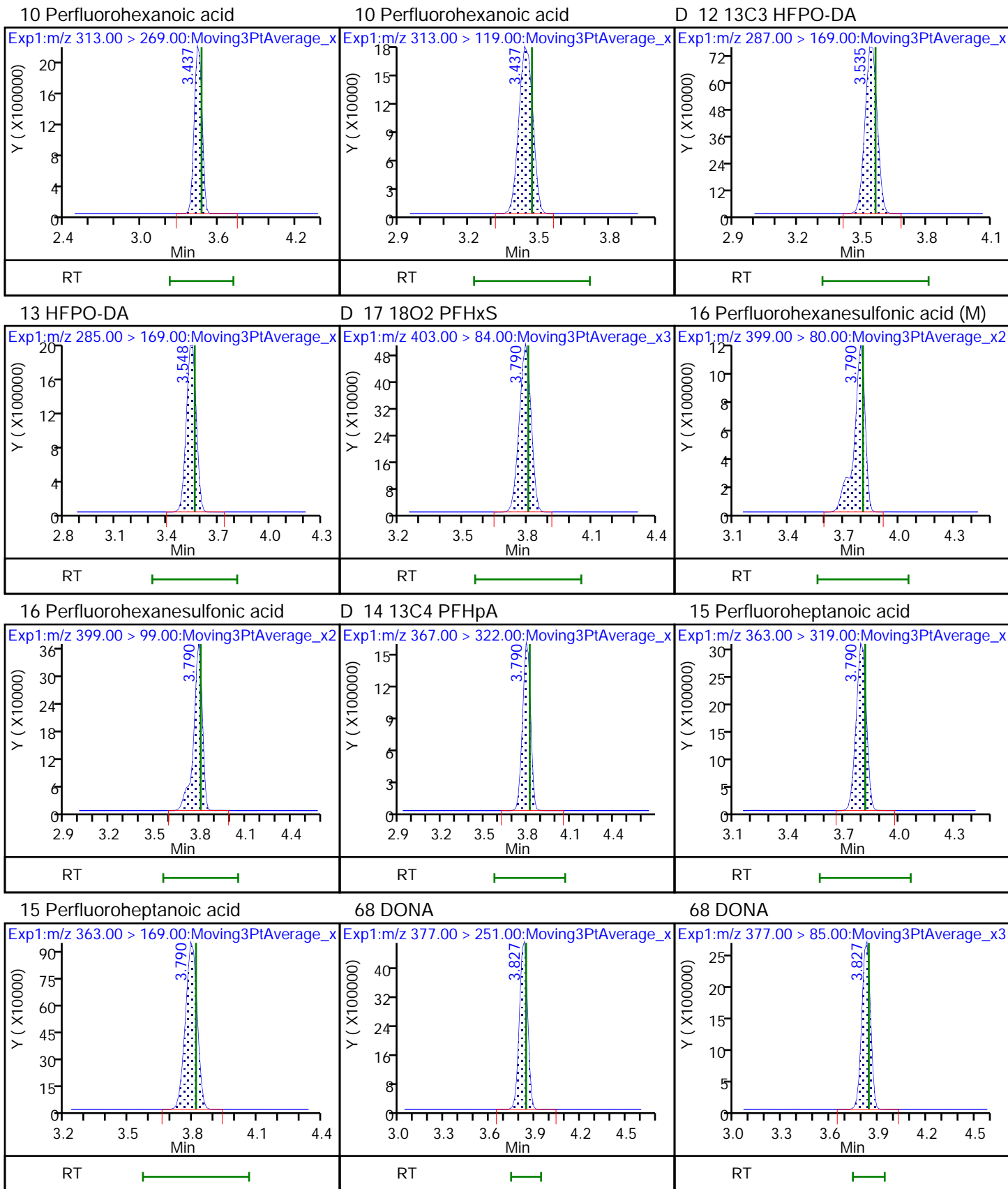


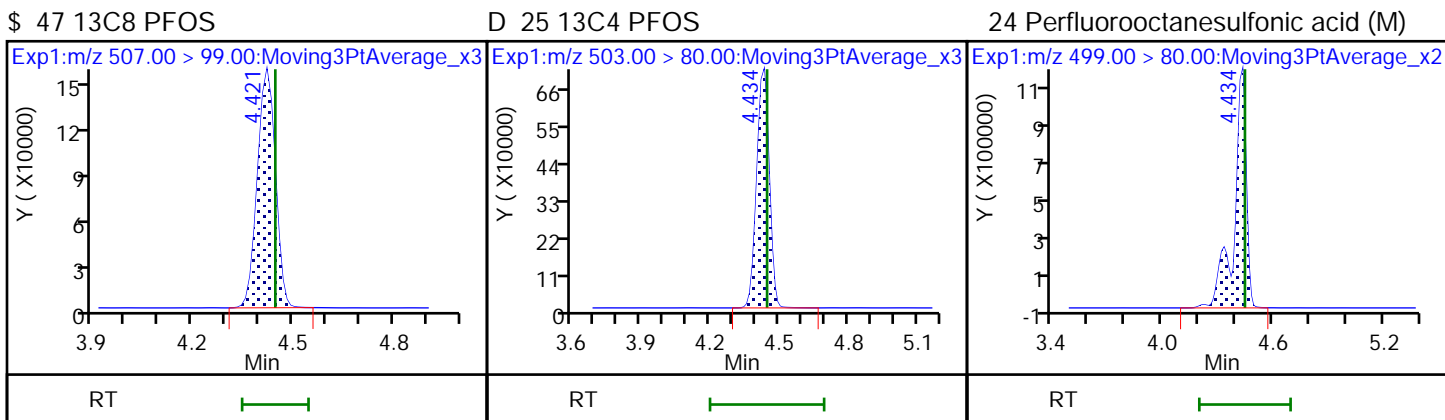
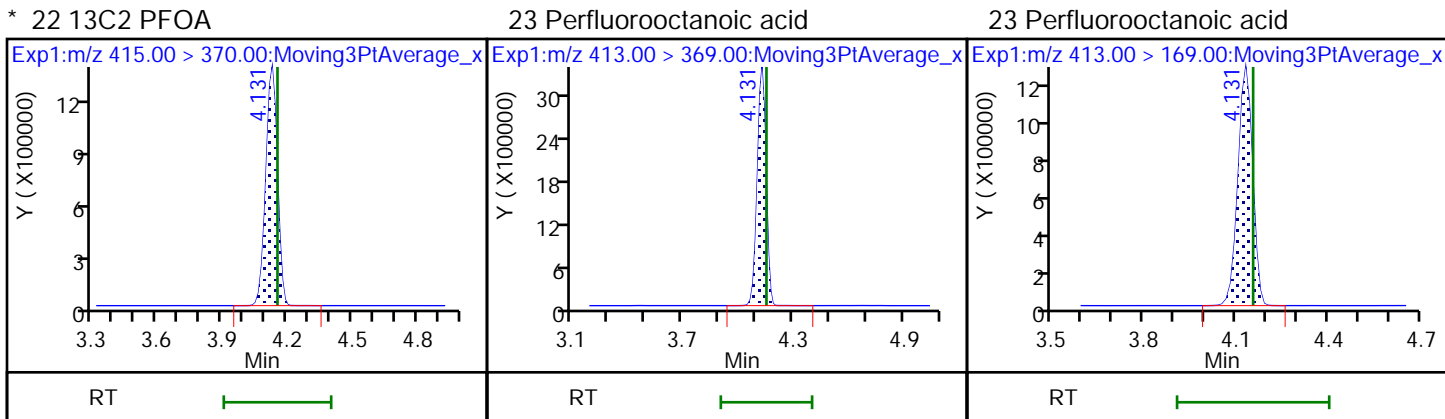
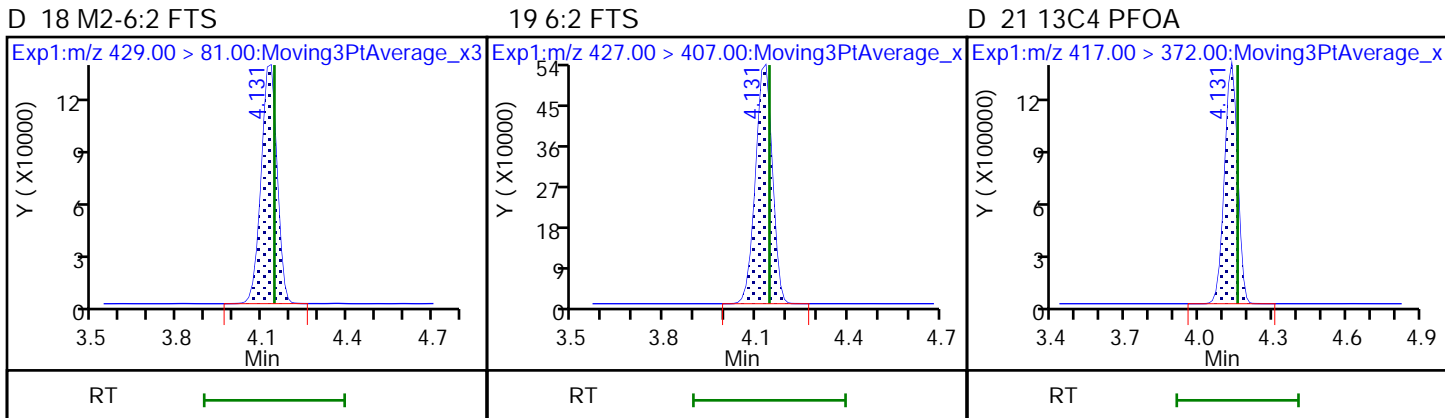
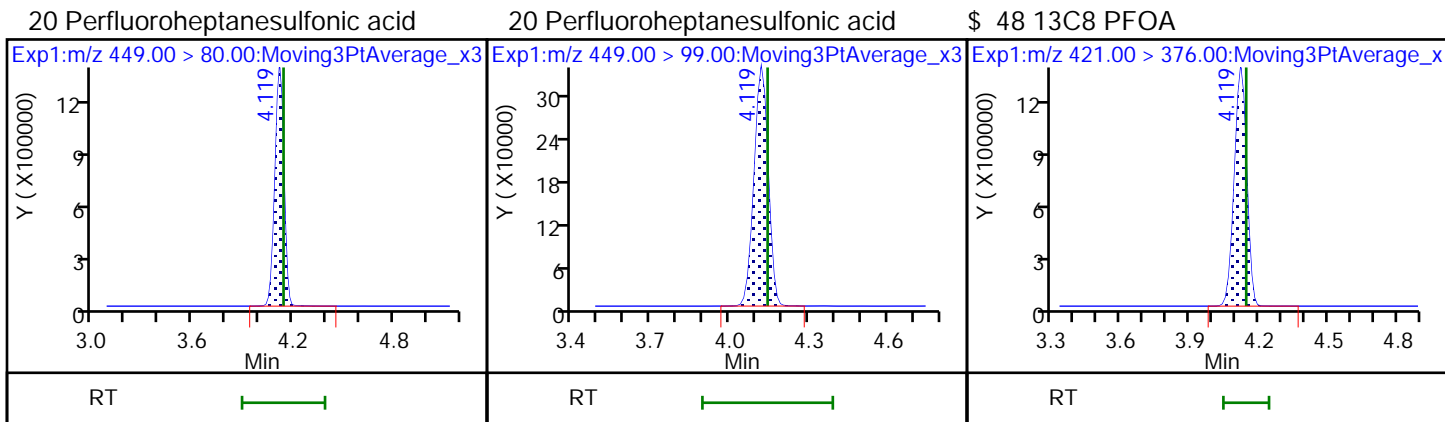
11 Perfluoropentanesulfonic acid

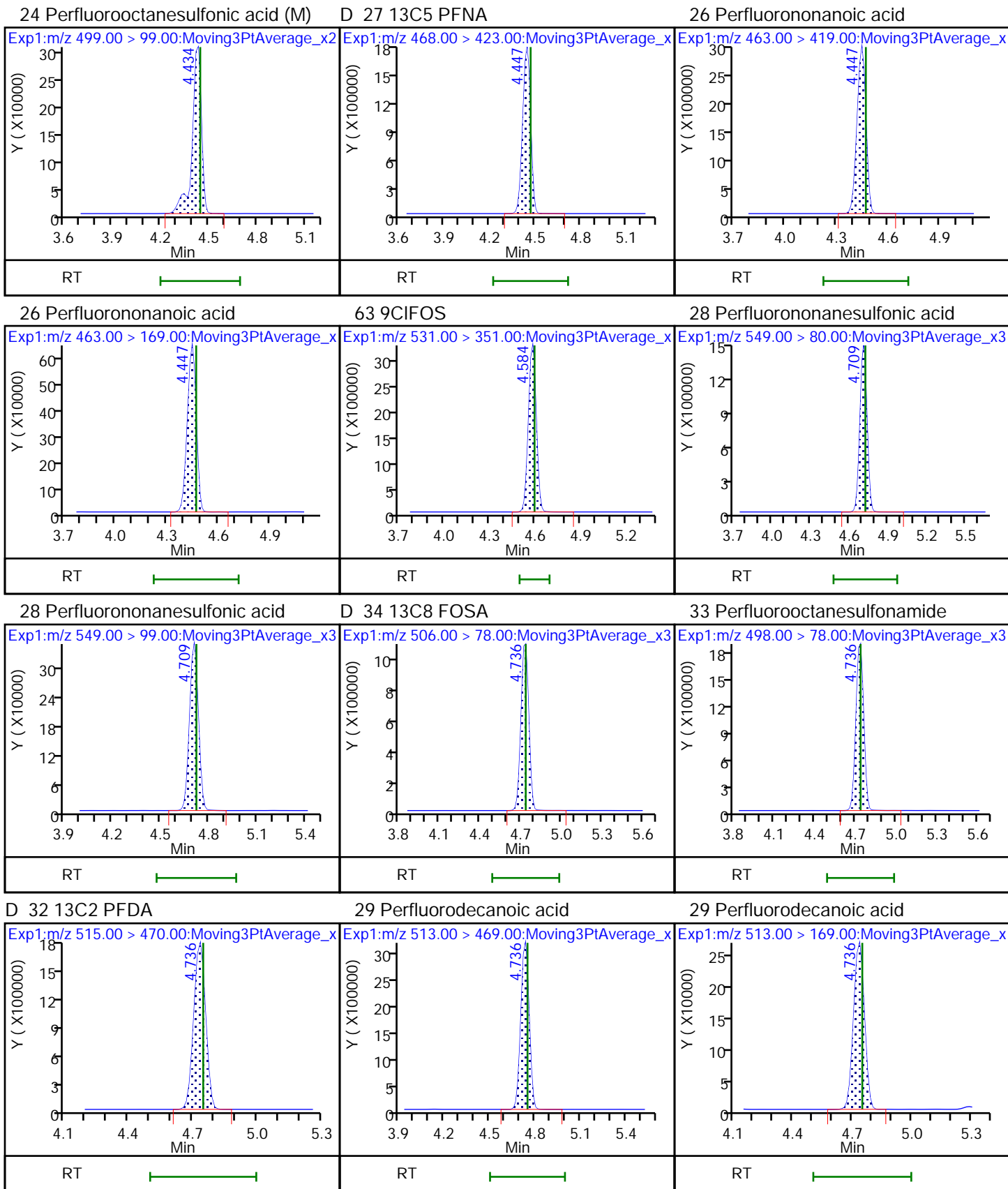
11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA





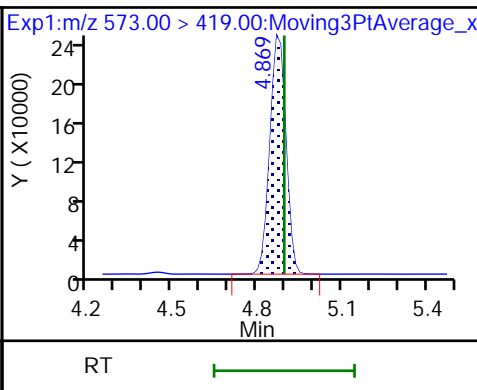
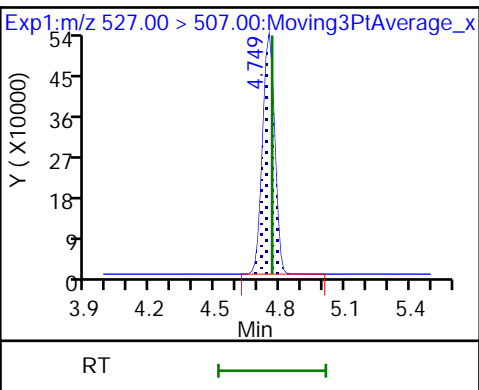
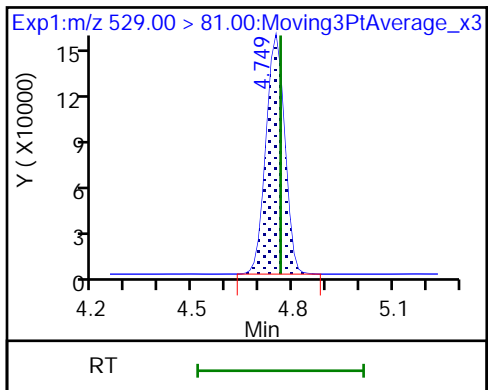




D 30 M2-8:2 FTS

31 8:2 FTS

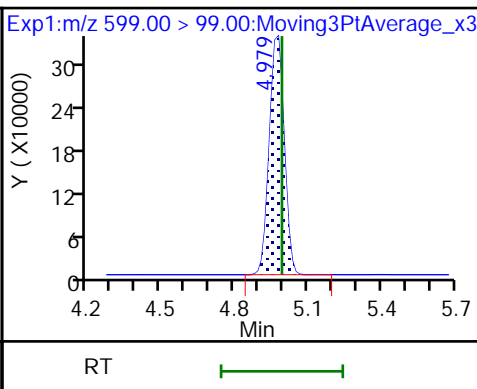
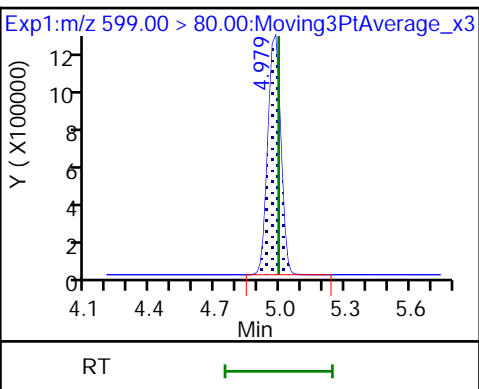
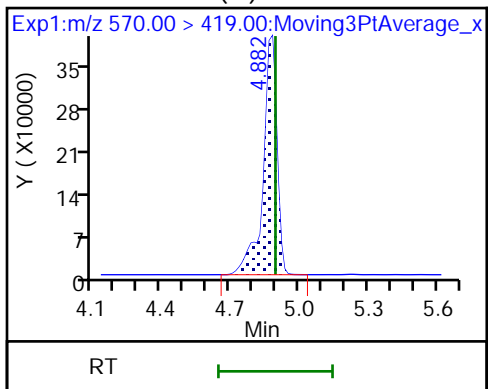
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

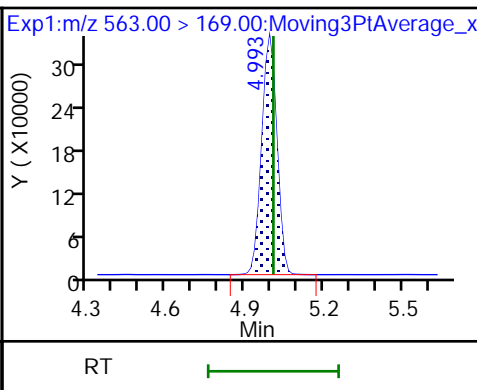
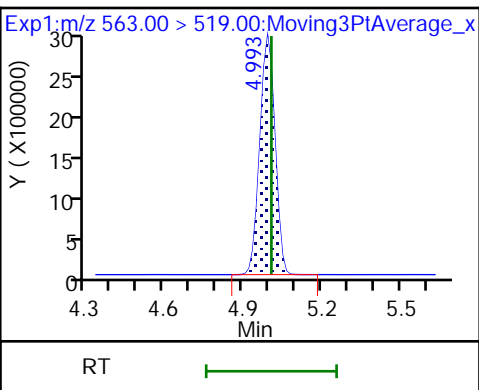
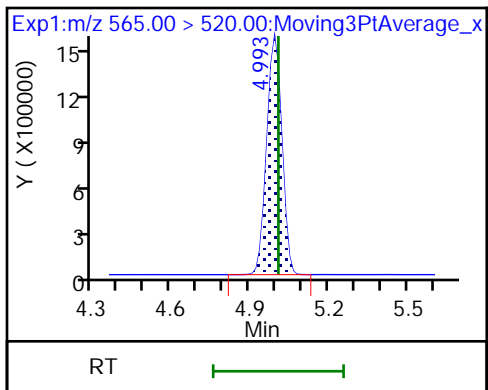
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

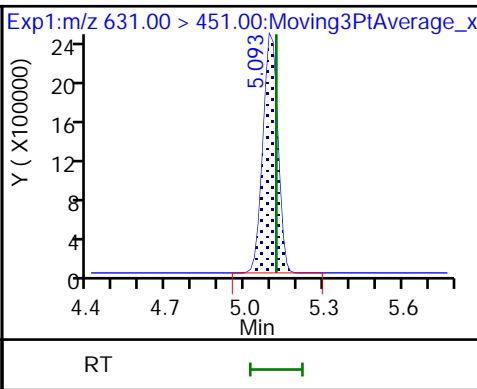
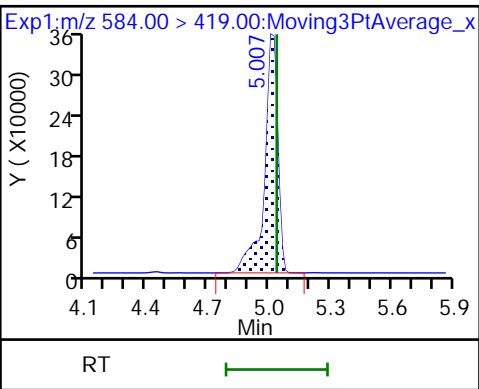
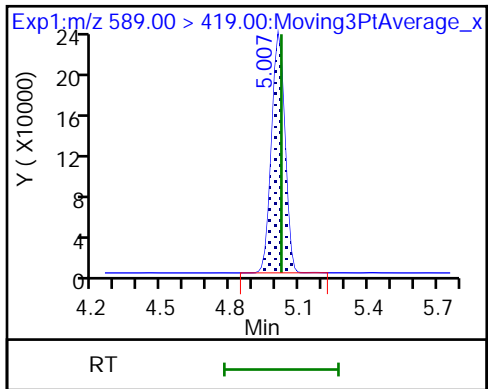
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA

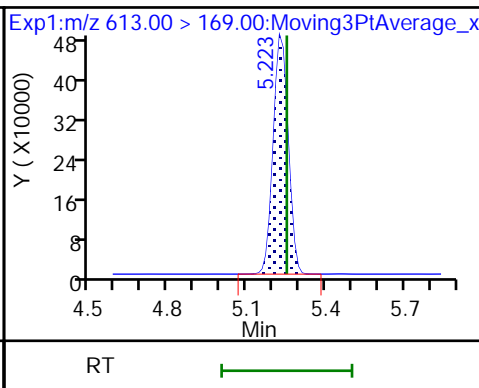
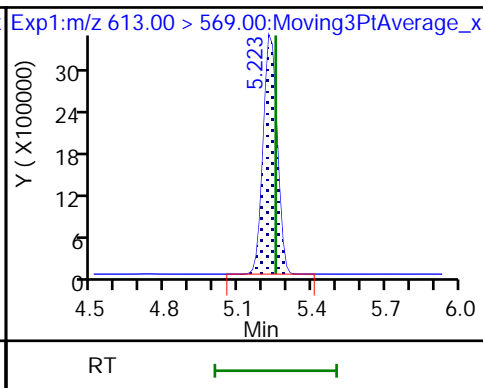
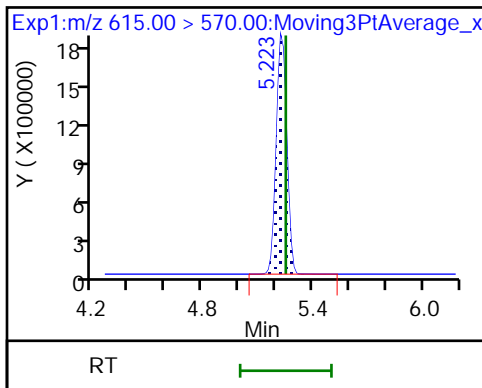
57 11CIFOS



D 43 13C2 PFDaA

42 Perfluorododecanoic acid

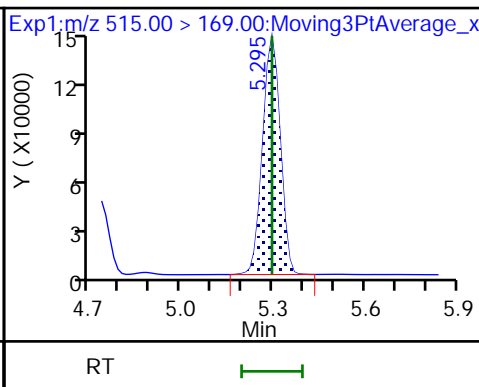
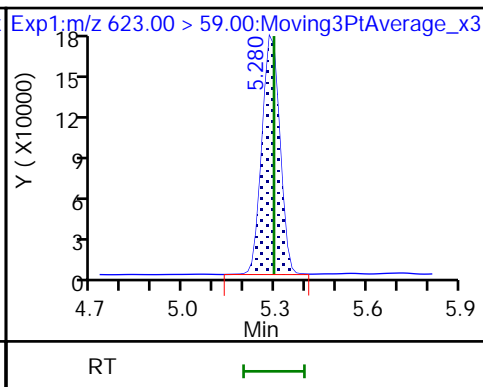
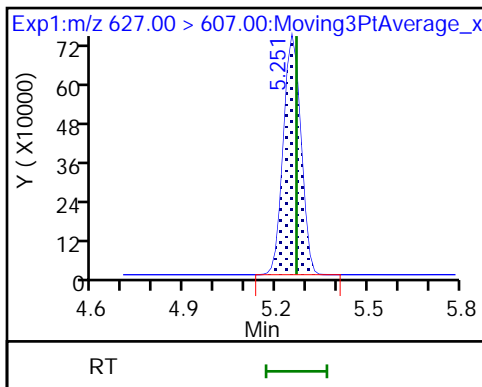
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

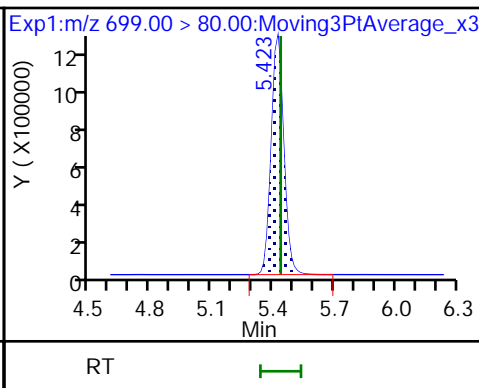
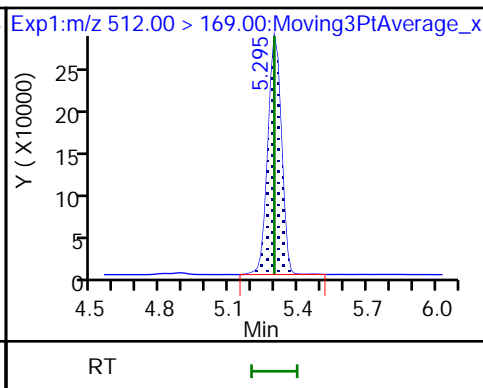
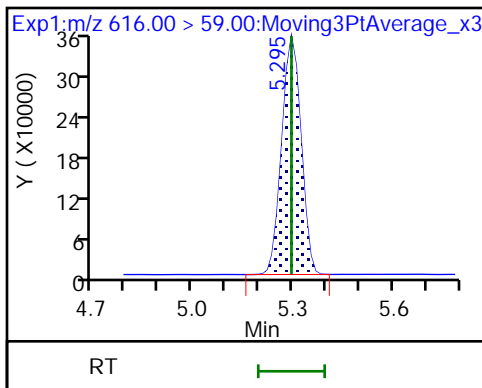
D 58 d-N-MeFOSEA-M



49 N-MeFOSE-M

61 NMeFOSEA

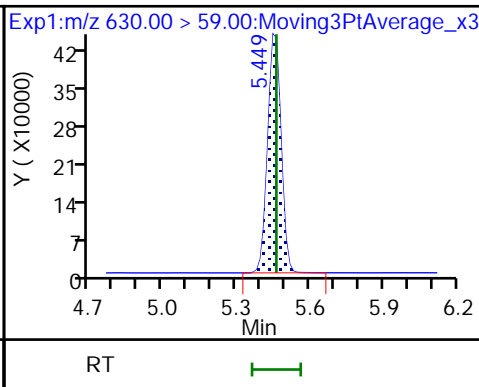
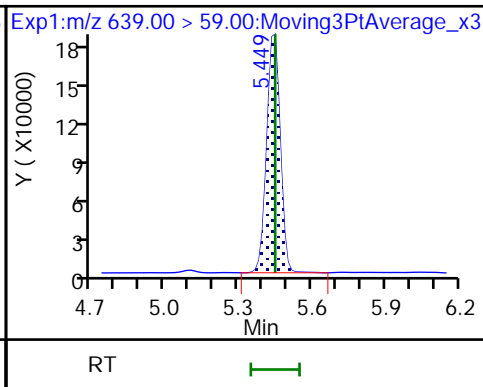
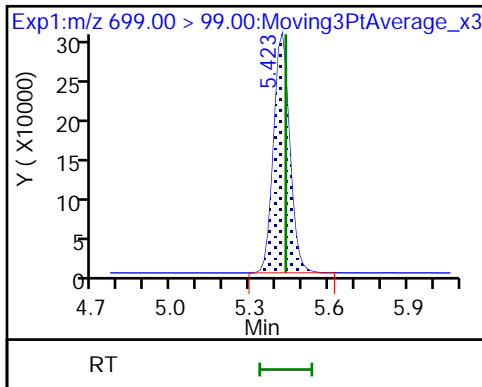
54 PFDoS



54 PFDoS

D 53 d9-N-EtFOSE-M

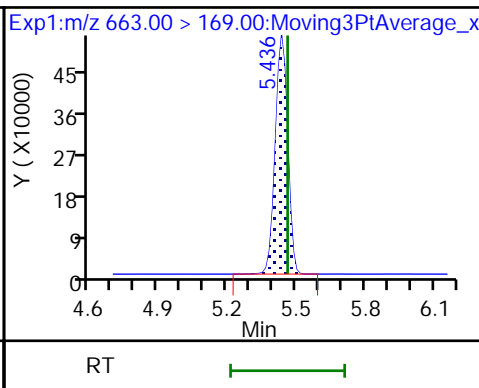
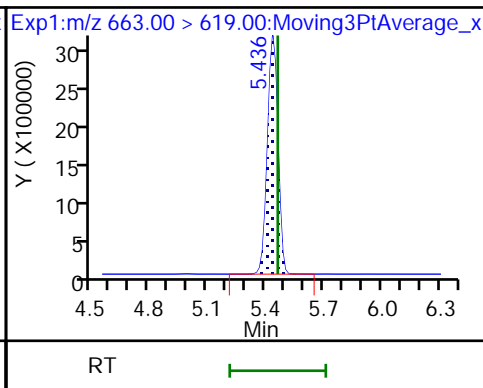
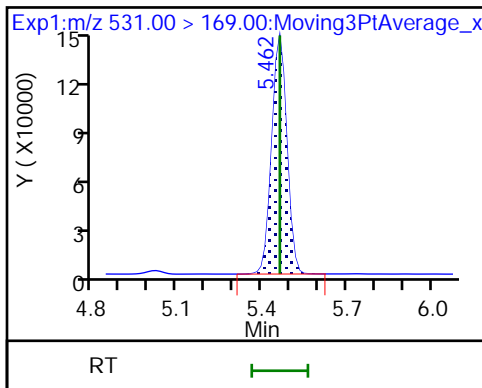
62 N-EtFOSE-M



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid

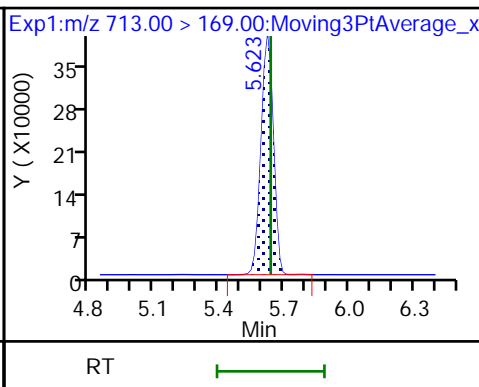
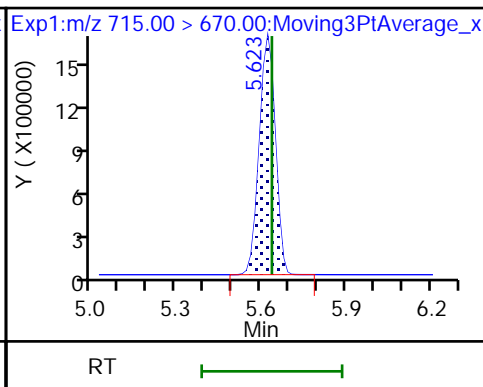
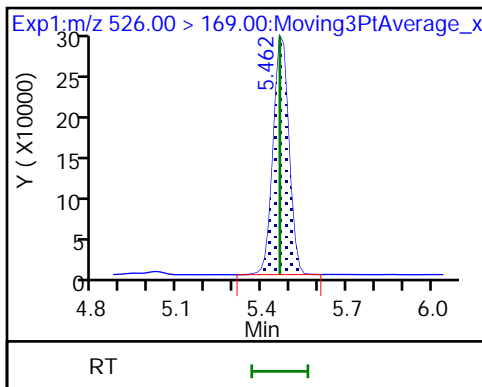
44 Perfluorotridecanoic acid



56 N-EtFOSA-M

D 46 13C2 PFTeDA

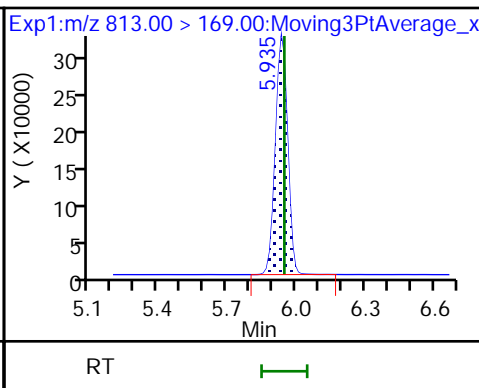
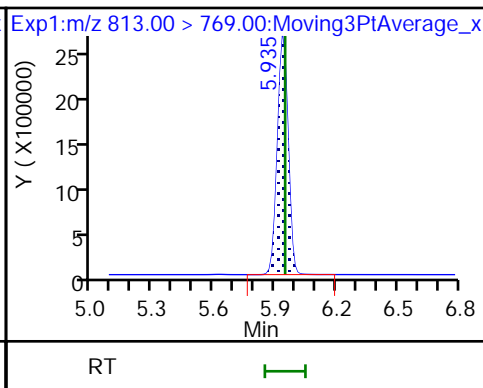
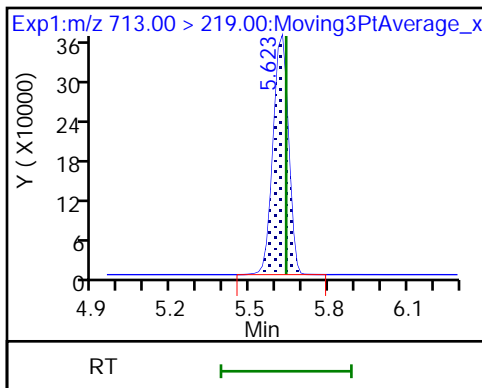
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

55 Perfluorohexadecanoic acid

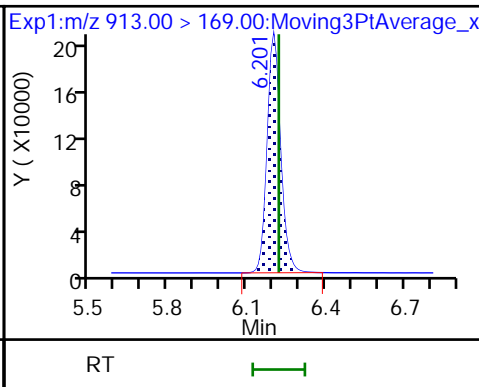
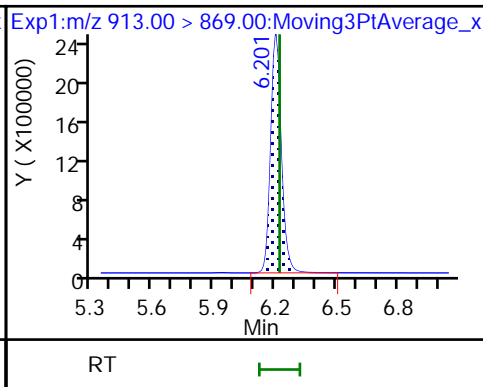
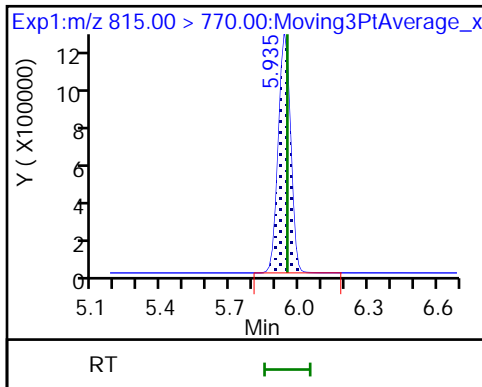
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid



Eurofins TestAmerica, Knoxville

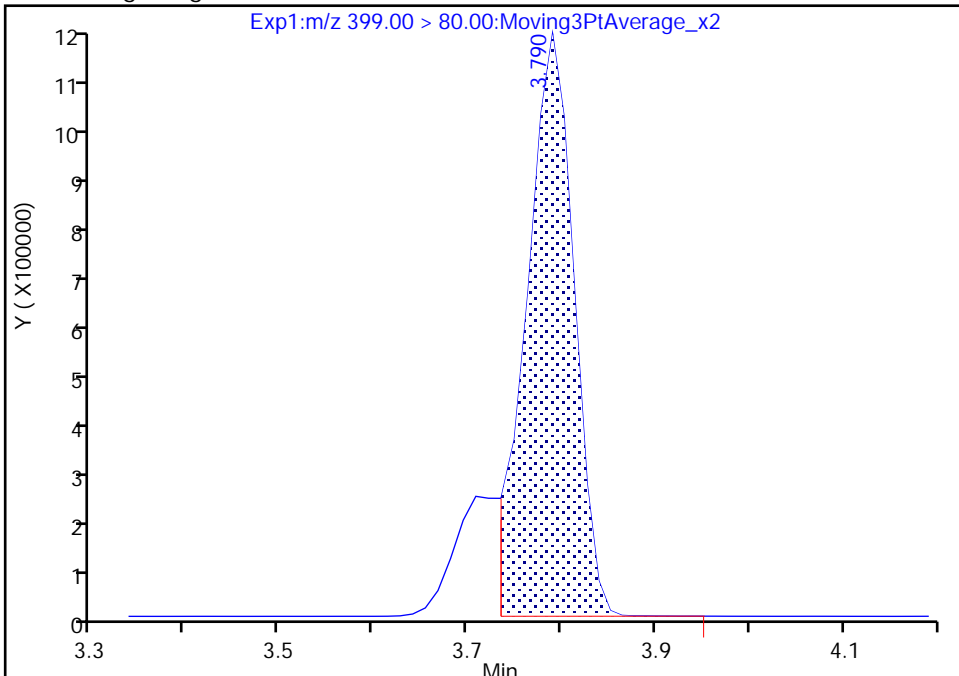
Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_041.d
Injection Date: 08-Oct-2021 17:44:04 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 12 Worklist Smp#: 41
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

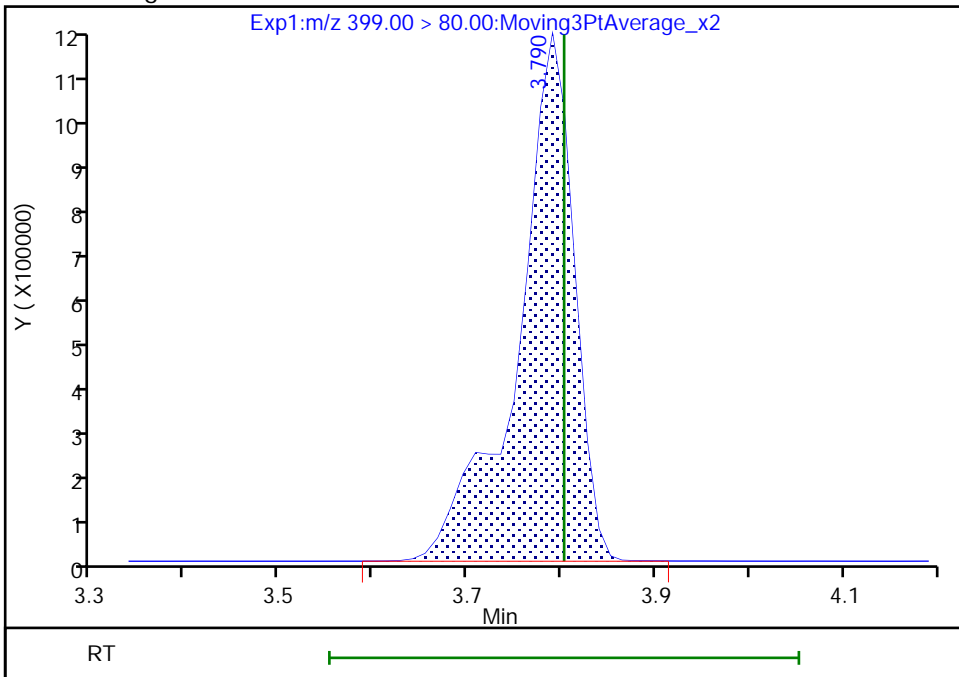
RT: 3.79
Area: 4168386
Amount: 1.885605
Amount Units: ng/ml

Processing Integration Results



RT: 3.79
Area: 4984033
Amount: 2.255566
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 10:32:27
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

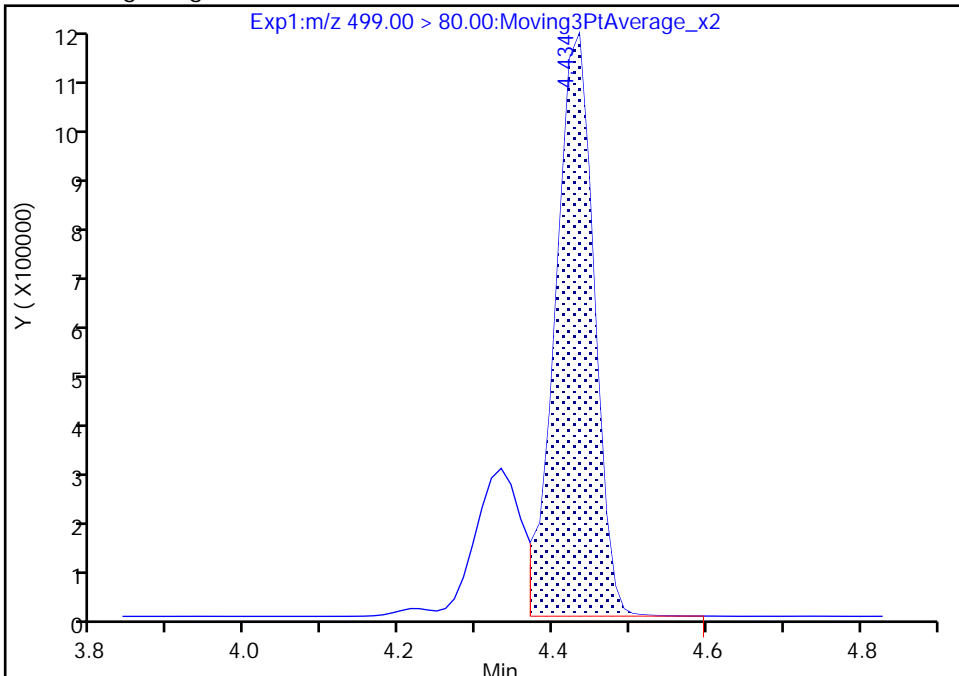
Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_041.d
Injection Date: 08-Oct-2021 17:44:04 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 12 Worklist Smp#: 41
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

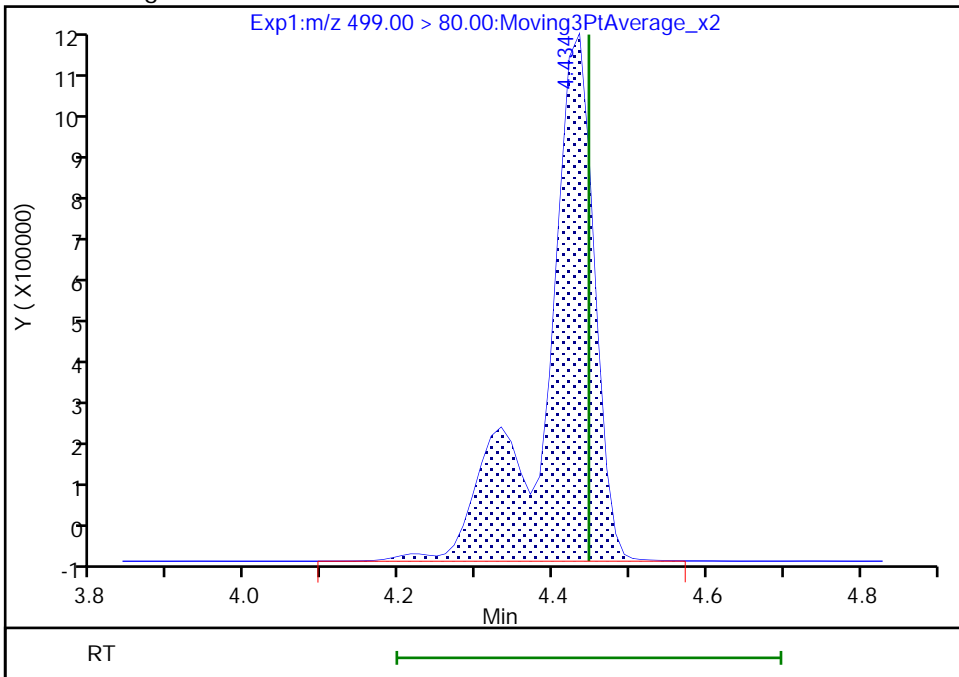
RT: 4.43
Area: 4118976
Amount: 1.659244
Amount Units: ng/ml

Processing Integration Results



RT: 4.43
Area: 5393364
Amount: 2.172604
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 10:32:36
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

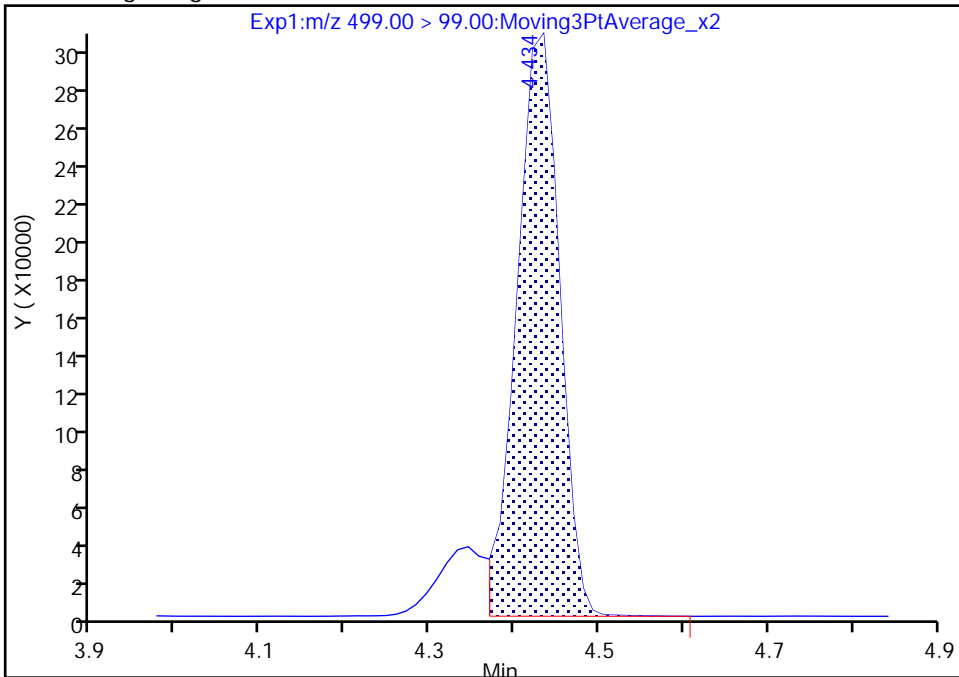
Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_041.d
Injection Date: 08-Oct-2021 17:44:04 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 12 Worklist Smp#: 41
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

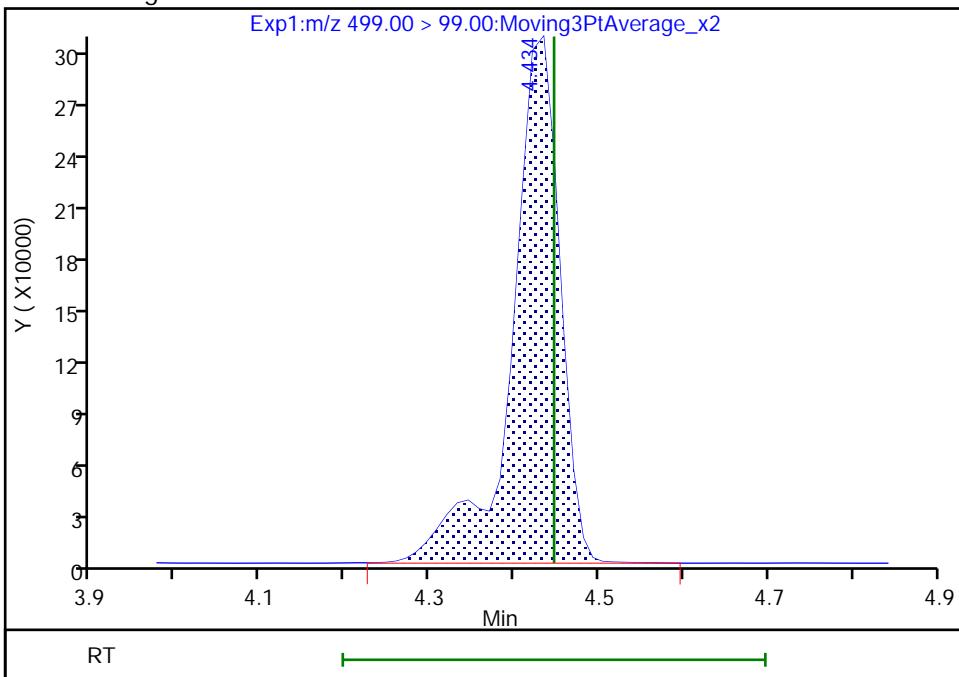
RT: 4.43
Area: 1071290
Amount: 1.659244
Amount Units: ng/ml

Processing Integration Results



RT: 4.43
Area: 1212534
Amount: 2.172604
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 10:32:43

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

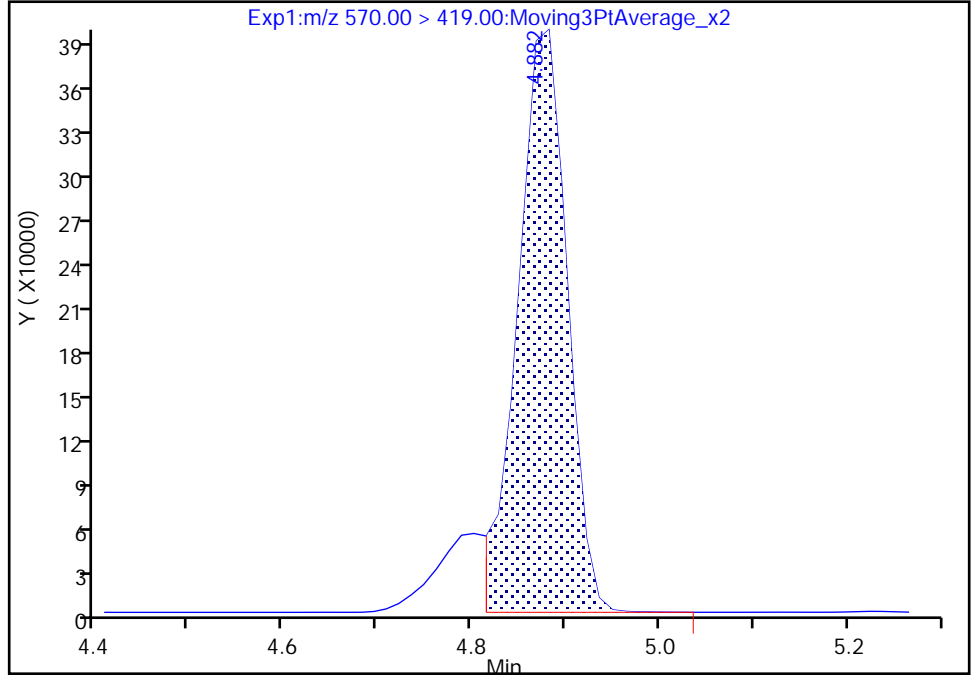
Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_041.d
Injection Date: 08-Oct-2021 17:44:04 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 12 Worklist Smp#: 41
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

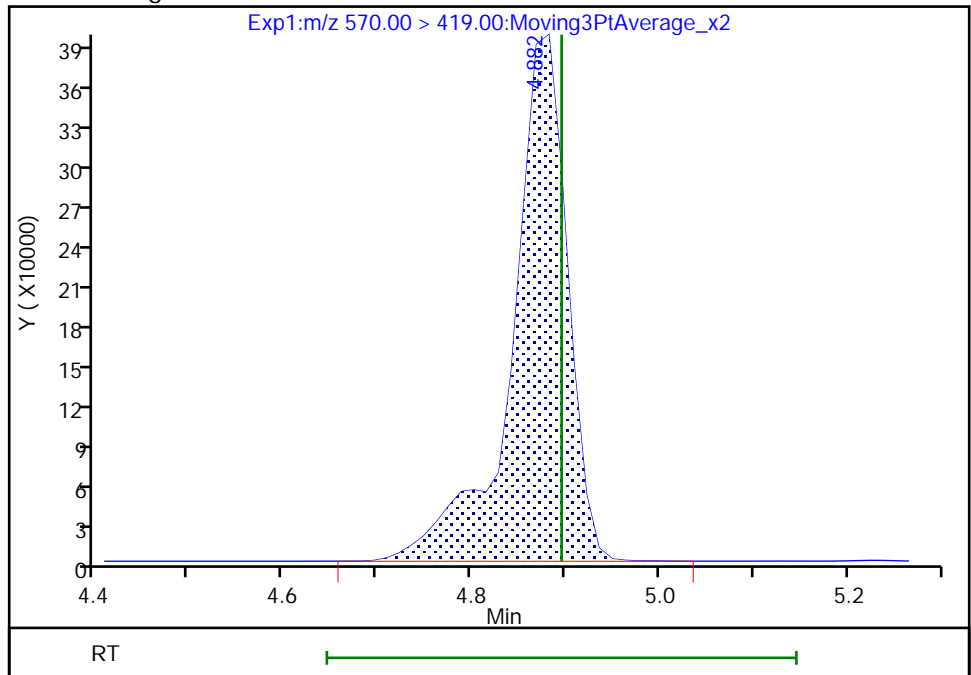
RT: 4.88
Area: 1433150
Amount: 2.044024
Amount Units: ng/ml

Processing Integration Results



RT: 4.88
Area: 1627307
Amount: 2.321947
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 10:32:53
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-54177/1-B
 Matrix: Air Lab File ID: _091.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: None Date Extracted: 09/24/2021 09:38
 Sample wt/vol: 1 (Sample) Date Analyzed: 10/07/2021 09:49
 Con. Extract Vol.: 50 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: GeminiC18 3x100 ID: 3 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54568 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	ND		0.00100	0.000580

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	94		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_091.d
 Lims ID: MB 140-54177/1-B
 Client ID:
 Sample Type: MB
 Inject. Date: 07-Oct-2021 09:49:31 ALS Bottle#: 37 Worklist Smp#: 91
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-091 mb 140-54177/1-b
 Misc. Info.: Plate: 11 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 18:07:45 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 18:04:11
 Ratio Calibration: None

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	2.812	2.801	0.011	0.681	6737936	1.18	94.2	16910	
2 Perfluorobutanoic acid										7M
212.90 > 169.00	2.812	2.812	0.0	1.000	34739	0.008205		4.7	7M	
LOD = 0.0100										
D 3 13C5 PFPeA	267.90 > 223.00	3.116	3.129	-0.013	0.754	5634700	1.20	96.0	16067	
4 Perfluoropentanoic acid										7
262.90 > 219.00	3.116	3.129	-0.013	1.000	10744	0.002353		2.2	7	
LOD = 0.006500										
D 6 13C3 PFBS	301.90 > 80.00	3.129	3.129	0.0	0.758	3267795	1.08	92.7	9305	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00		3.143					ND			
298.90 > 99.00		3.143								
D 8 M2-4:2 FTS	329.00 > 81.00	3.409	3.423	-0.014	0.825	567288	1.25	107	654	
7 4:2 FTS										
327.00 > 307.00		3.423					ND			
11 Perfluoropentanesulfonic acid										
349.00 > 80.00		3.453					ND			
349.00 > 99.00		3.453								
D 9 13C2 PFHxA	315.00 > 270.00	3.453	3.469	-0.016	0.836	5931928	1.23	98.4	23186	
10 Perfluorohexanoic acid										
313.00 > 269.00		3.469					ND			
313.00 > 119.00		3.469								

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.548	3.561	-0.013	0.859	2894977	1.17		93.8	8434	
13 HFPO-DA										
285.00 > 169.00	3.548	3.561	-0.013	1.000	35049	0.004706		25.9	7	7
LOD = 0.008250										
S 65 ADONA										
377.00 > 251.00		3.592				0				
D 17 18O2 PFHxS										
403.00 > 84.00	3.790	3.803	-0.013	0.918	2047627	1.12		94.4	21442	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.790	3.803	-0.013	1.000	8356	-0.001523	Target=2.96	44.3	7	7
399.00 > 99.00	3.790	3.803	-0.013	1.000	4028		2.07(1.48-4.44)	29.6		
LOD = 0.005000										
D 14 13C4 PFHpA										
367.00 > 322.00	3.803	3.815	-0.012	0.921	5800592	1.21		96.5	15231	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.803	3.815	-0.012	1.000	8170	-0.003020	Target=3.35	4.7	7	7
363.00 > 169.00	3.803	3.815	-0.012	1.000	1810		4.51(1.67-5.02)	7.2		
LOD = 0.004250										
68 DONA										
377.00 > 251.00		3.840				ND				
377.00 > 85.00		3.840								
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00		4.143				ND				
449.00 > 99.00		4.143								
\$ 48 13C8 PFOA										
421.00 > 376.00		4.143				ND				
D 18 M2-6:2 FTS										
429.00 > 81.00	4.131	4.143	-0.012	1.000	654160	1.41		118	2034	
19 6:2 FTS										
427.00 > 407.00	4.131	4.143	-0.012	1.000	1169	-0.005952		5.1	7	7
LOD = 0.005000										
D 21 13C4 PFOA										
417.00 > 372.00	4.131	4.155	-0.024	1.000	5334586	1.23		98.1	22571	
* 22 13C2 PFOA										
415.00 > 370.00	4.131	4.155	-0.024		5399146	1.25			25785	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.131	4.155	-0.024	1.000	10613	-0.006394	Target=2.40	4.3	7	7
413.00 > 169.00	4.131	4.155	-0.024	1.000	4090		2.59(1.20-3.61)	7.1		
LOD = 0.007800										
\$ 47 13C8 PFOS										
507.00 > 99.00		4.447				ND				
D 25 13C4 PFOS										
503.00 > 80.00	4.435	4.447	-0.011	1.074	2684403	1.06		88.9	7692	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.422	4.447	-0.024	0.997	2594	0.001050	Target=3.83	5.1	7M	7M
499.00 > 99.00	4.447	4.447	0.0	0.000	0		0.00(1.91-5.74)			
LOD = 0.005500										

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 27 13C5 PFNA										
468.00 > 423.00	4.447	4.470	-0.023	1.077	6651164	1.20		96.3	15340	
26 Perfluorononanoic acid										
463.00 > 419.00		4.470				ND				
463.00 > 169.00		4.470								
63 9CIFOS										
531.00 > 351.00		4.596				ND				
28 Perfluorononanesulfonic acid										
549.00 > 80.00		4.722				ND				
549.00 > 99.00		4.722								
D 34 13C8 FOSA										
506.00 > 78.00	4.749	4.736	0.013	1.150	4741669	1.28		102	9927	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.763	4.736	0.027	1.003	1690	0.000464		7.8	7	7
LOD = 0.004400										
D 32 13C2 PFDA										
515.00 > 470.00	4.736	4.749	-0.013	1.146	6793582	1.21		97.1	24421	
29 Perfluorodecanoic acid										
513.00 > 469.00		4.749				ND				
513.00 > 169.00		4.749								
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.763	-0.014	1.150	741544	1.30		109	2765	
31 8:2 FTS										
527.00 > 507.00		4.763				ND				
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.883	4.896	-0.013	1.182	822627	1.07		85.9	4329	
36 NMeFOSAA										
570.00 > 419.00		4.896				ND				
37 Perfluorodecanesulfonic acid										
599.00 > 80.00		4.993				ND				
599.00 > 99.00		4.993								
69 Perfluoro-3,6,9-trioxatridecanoic acid										
561.00 > 467.00	4.923	4.994	-0.071	1.110	2456	NC	Target=0.00		0.9	
561.00 > 235.00	4.909	4.994	-0.085	1.107	4133		0.59(0.00-0.00)		0.9	
D 39 13C2 PFUnA										
565.00 > 520.00	4.993	5.022	-0.029	1.209	6420955	1.20		96.1	19151	
38 Perfluoroundecanoic acid										
563.00 > 519.00		5.022				ND				
563.00 > 169.00		5.022								
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.022	5.036	-0.014	1.216	773661	1.05		84.0	3686	
40 NEtFOSA										
584.00 > 419.00		5.036				ND				
57 11CIFOS										
631.00 > 451.00		5.119				ND				
D 43 13C2 PFDoA										
615.00 > 570.00	5.237	5.251	-0.014	1.268	7045689	1.24		98.9	28183	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
42 Perfluorododecanoic acid										
613.00 > 569.00		5.251				ND				
613.00 > 169.00		5.251								
50 10:2 FTS										
627.00 > 607.00		5.266				ND				
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.295	5.281	0.014	1.282	612414	1.32		105	306	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.282	539591	1.12		89.3	45.1	
49 N-MeFOSE-M										
616.00 > 59.00		5.295				ND				
61 NMeFOSA										
512.00 > 169.00		5.295				ND				
54 PFDoS										
699.00 > 80.00		5.436				ND				
699.00 > 99.00		5.436								
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.449	5.436	0.013	1.319	696151	1.41		112	455	
62 N-EtFOSE-M										
630.00 > 59.00		5.449				ND				
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.449	0.013	1.322	475669	1.17		93.5	776	
44 Perfluorotridecanoic acid										
663.00 > 619.00		5.462				ND				
663.00 > 169.00		5.462								
56 N-EtFOSA-M										
526.00 > 169.00		5.462				ND				
D 46 13C2 PFTeDA										
715.00 > 670.00	5.638	5.637	0.001	1.365	6122282	1.17		93.7	14121	
45 Perfluorotetradecanoic acid										
713.00 > 169.00		5.637				ND				
713.00 > 219.00		5.637								
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.948	5.948	0.0	1.000	45782	-0.001924	Target=7.50	79.9	7	7
813.00 > 169.00	5.948	5.948	0.0	1.000	5160		8.87(3.75-11.26)	42.2		
LOD = 0.009000										
D 59 13C2 PFHxDA										
815.00 > 770.00	5.948	5.948	0.0	1.440	4588309	1.21		96.8	8246	
60 Perfluorooctadecanoic acid										
913.00 > 869.00		6.221				ND				
913.00 > 169.00		6.221								
S 66 F-53B										
212.90 > 169.00		0.0				0				
S 67 NaDONA										
377.00 > 251.00		0.0				0				
377.00 > 85.00		0.0								

QC Flag Legend

Processing Flags

NC - Not Calibrated

ND - Not Detected or Marked ND

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_091.d

Injection Date: 07-Oct-2021 09:49:31

Instrument ID: LCA

Lims ID: MB 140-54177/1-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 37

Worklist Smp#: 91

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

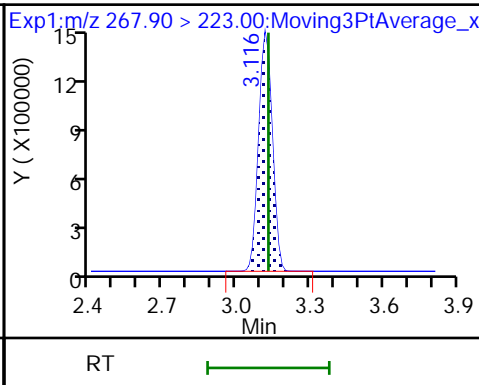
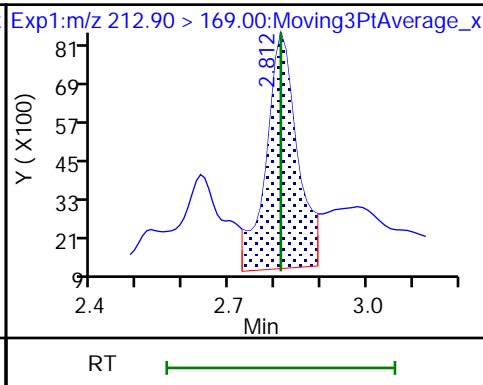
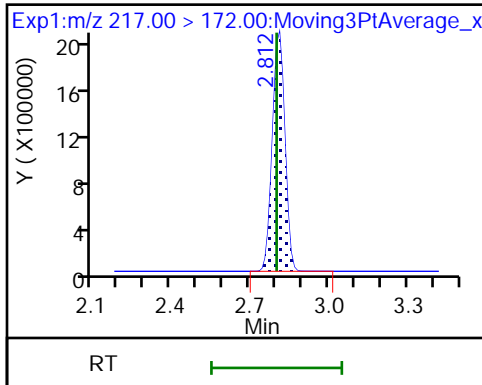
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid (M)

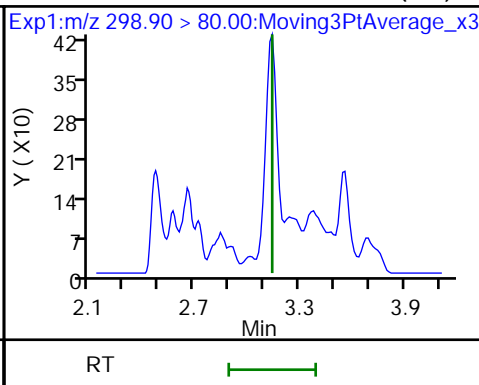
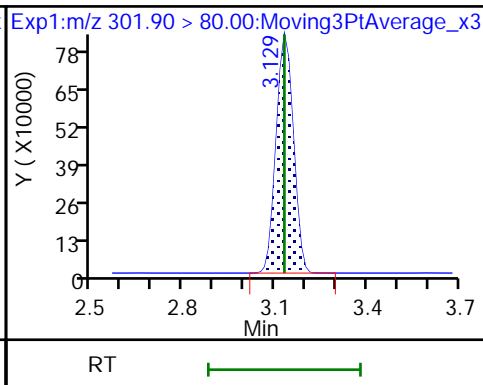
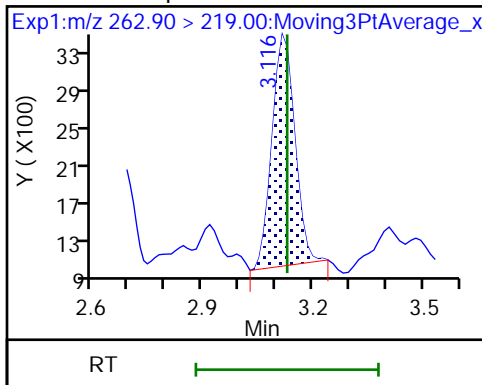
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

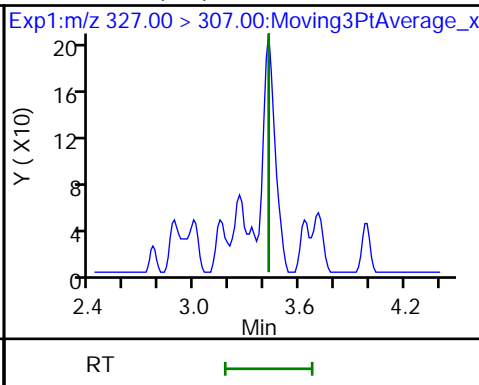
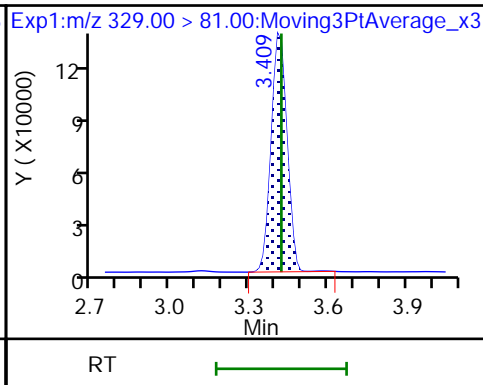
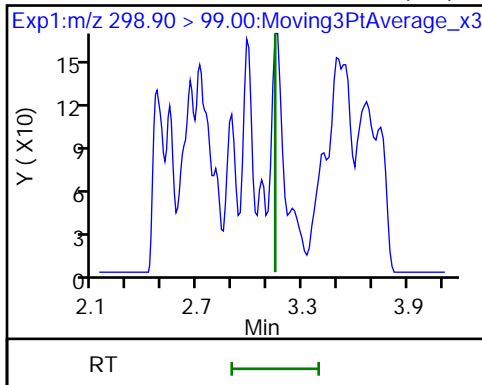
5 Perfluorobutanesulfonic acid (ND)



5 Perfluorobutanesulfonic acid (ND)

D 8 M2-4:2 FTS

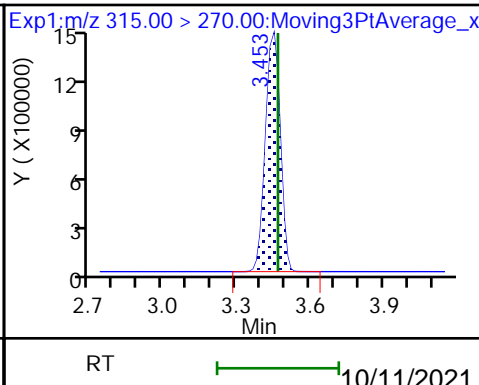
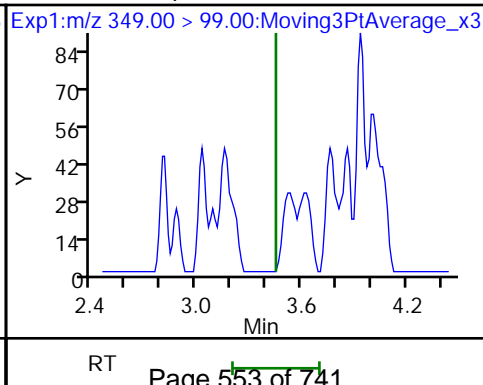
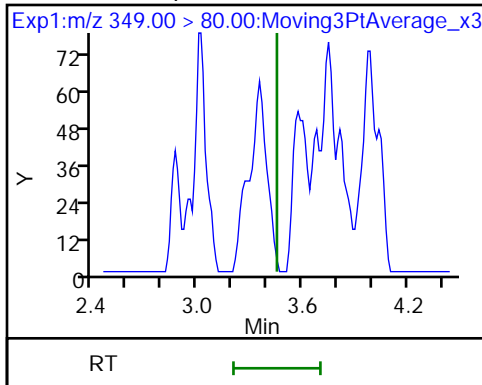
7 4:2 FTS (ND)

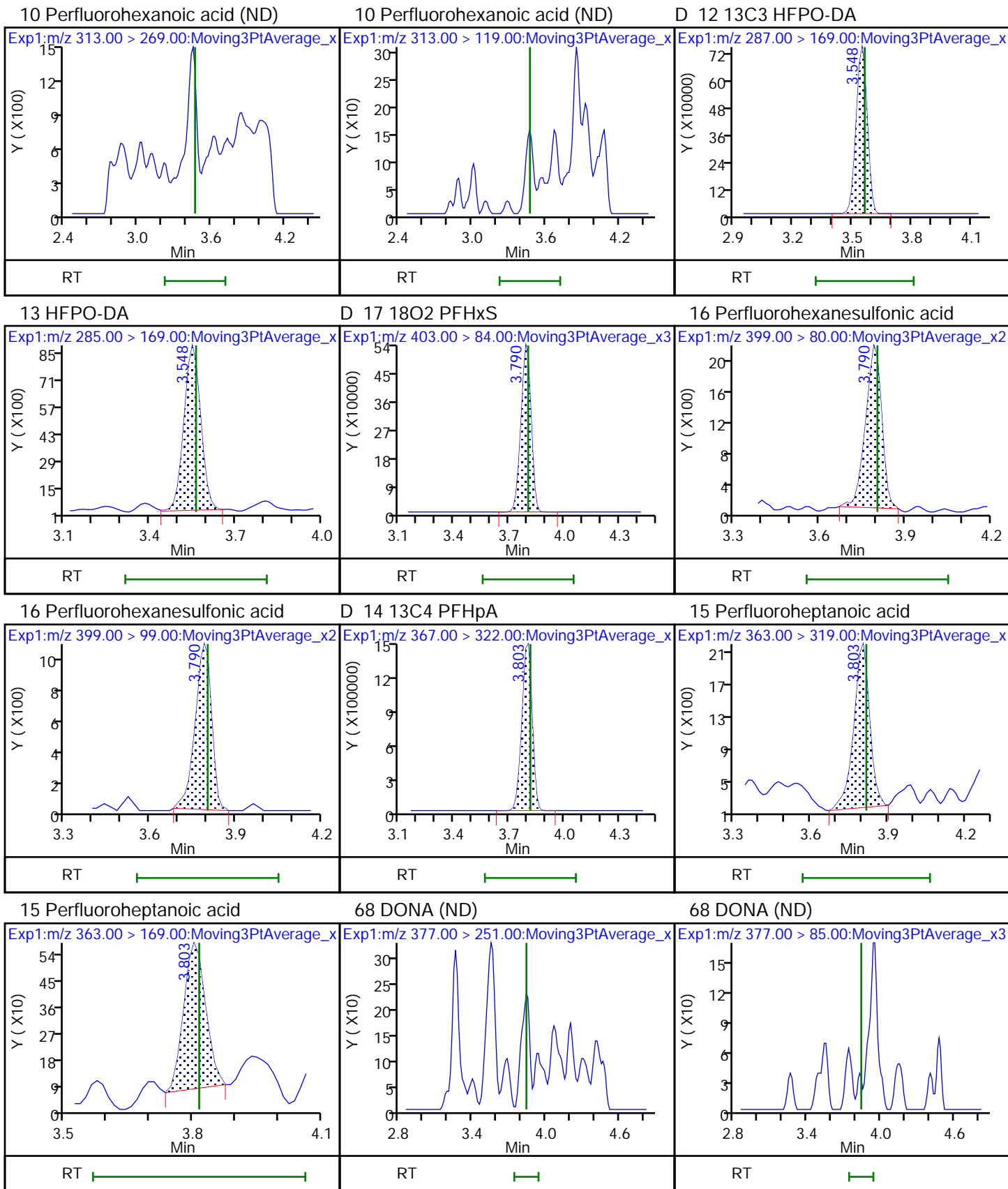


11 Perfluoropentanesulfonic acid (ND)

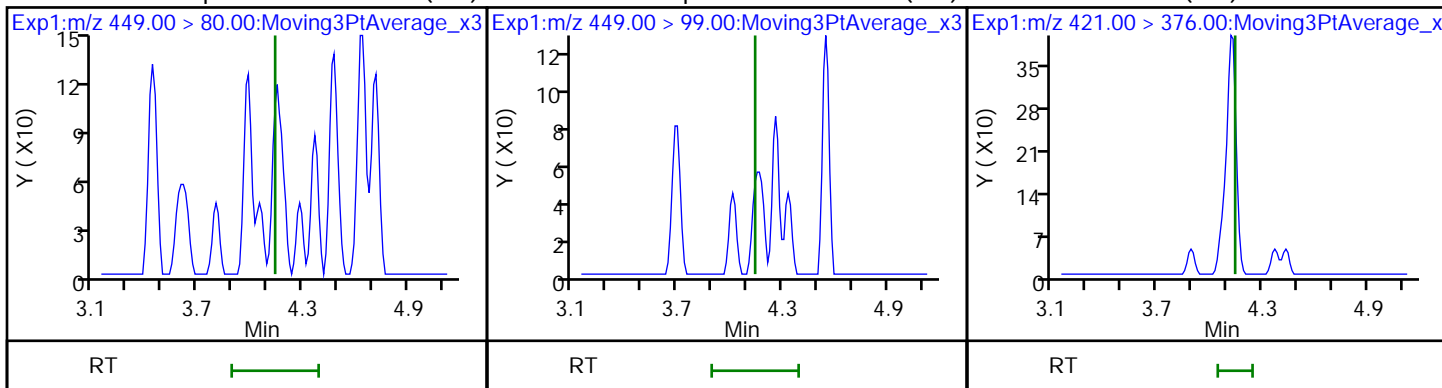
11 Perfluoropentanesulfonic acid (ND)

D 9 13C2 PFHxA





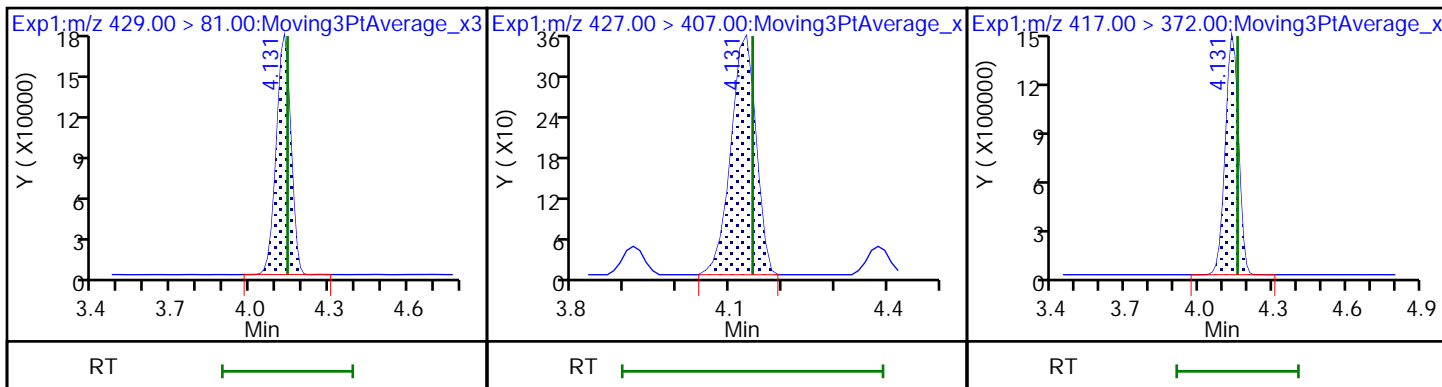
20 Perfluoroheptanesulfonic acid (ND) 20 Perfluoroheptanesulfonic acid (ND) \$ 48 13C8 PFOA (ND)



D 18 M2-6:2 FTS

19 6:2 FTS

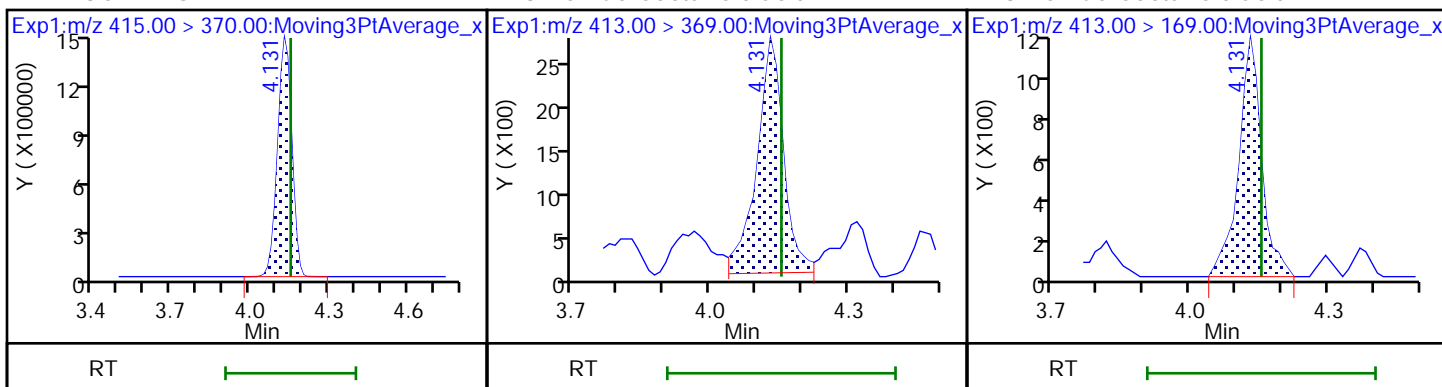
D 21 13C4 PFOA



* 22 13C2 PFOA

23 Perfluorooctanoic acid

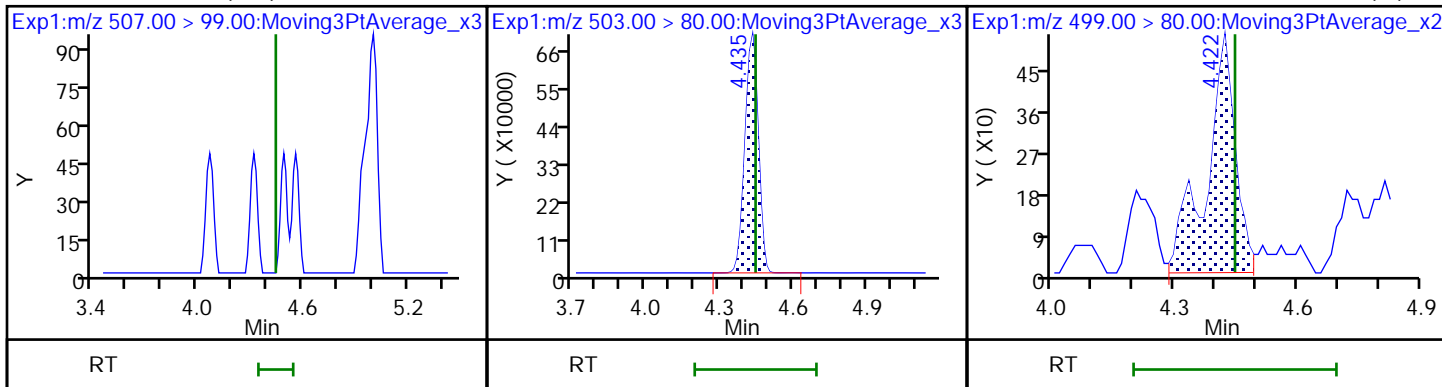
23 Perfluorooctanoic acid

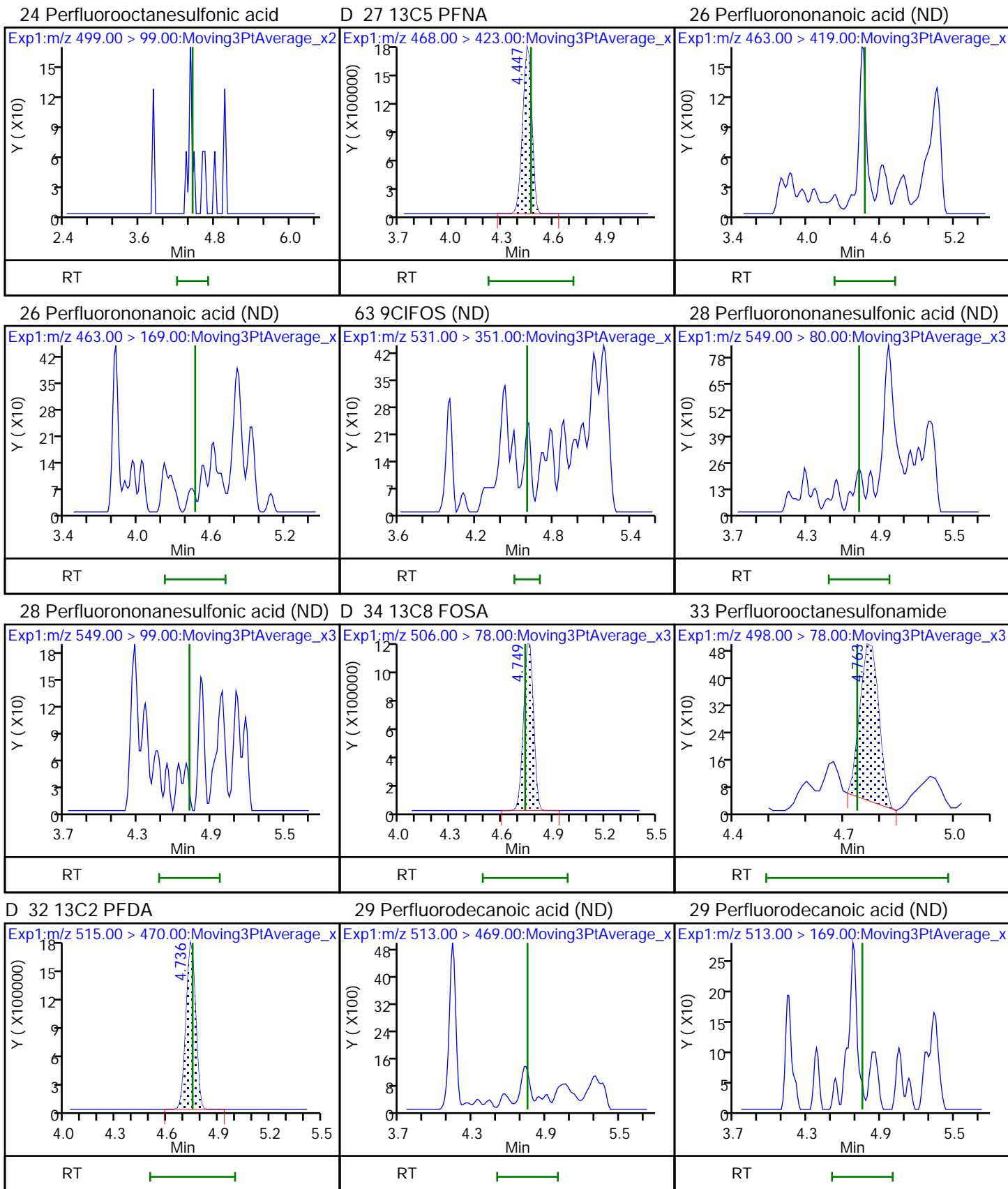


\$ 47 13C8 PFOS (ND)

D 25 13C4 PFOS

24 Perfluorooctanesulfonic acid (M)

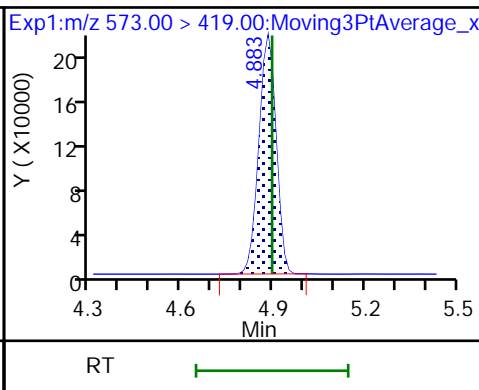
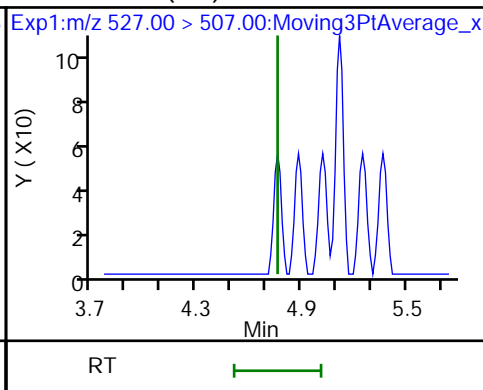
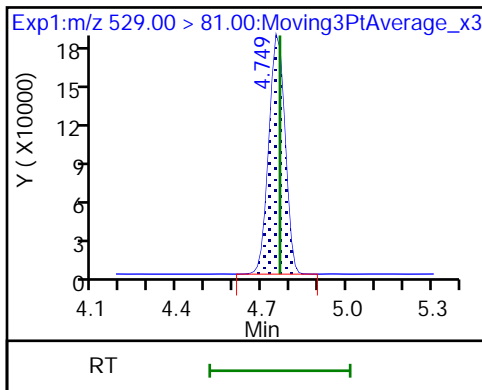




D 30 M2-8:2 FTS

31 8:2 FTS (ND)

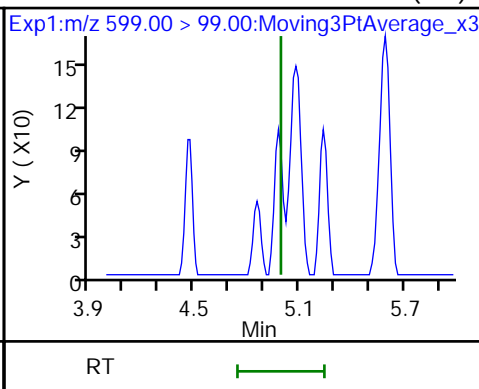
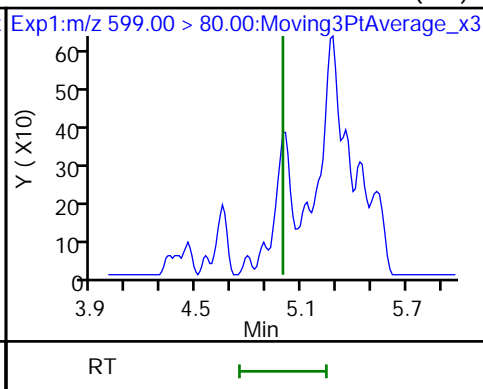
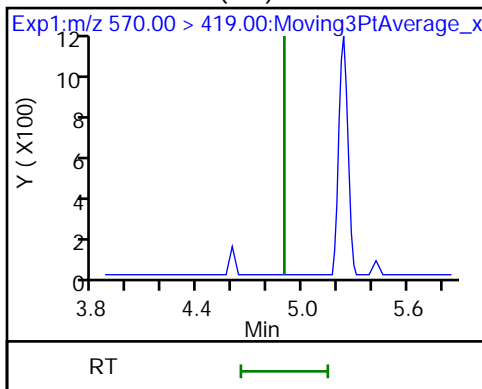
D 35 d3-NMeFOSAA



36 NMeFOSAA (ND)

37 Perfluorodecanesulfonic acid (ND)

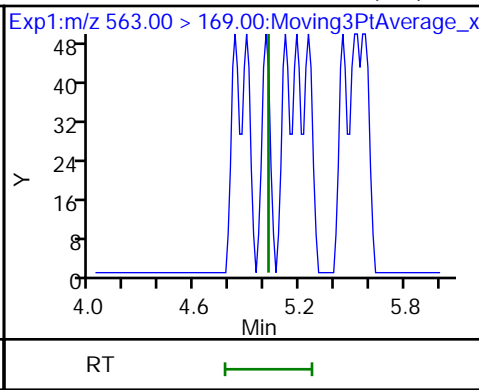
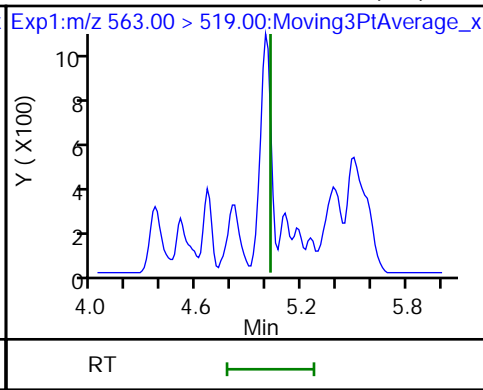
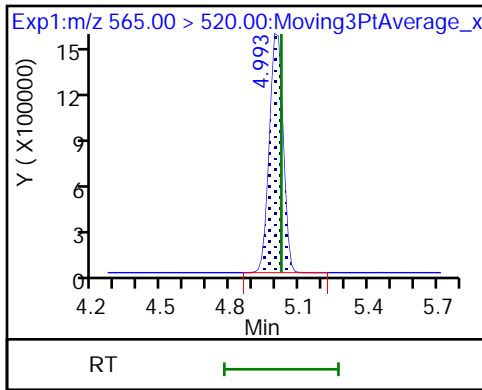
37 Perfluorodecanesulfonic acid (ND)



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid (ND)

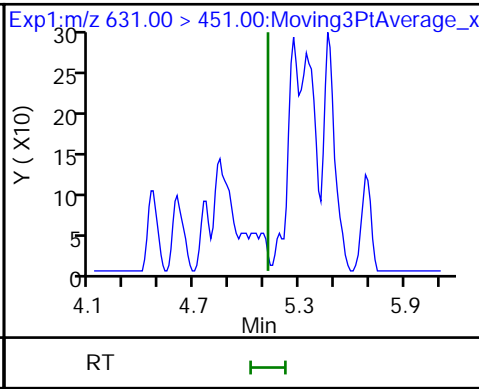
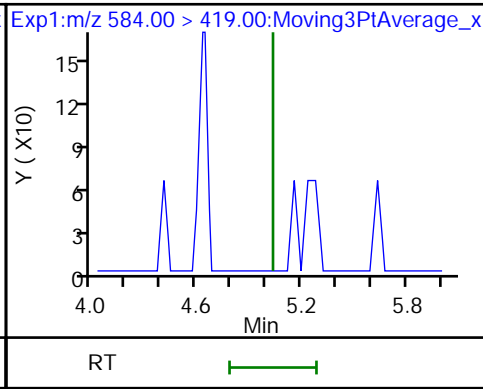
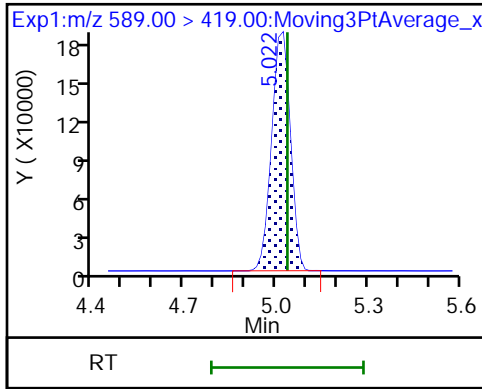
38 Perfluoroundecanoic acid (ND)



D 41 d5-NEtFOSAA

40 NEtFOSA (ND)

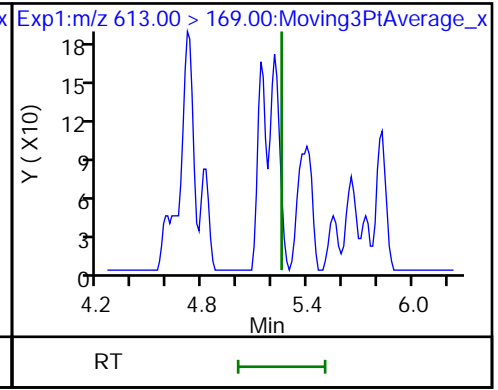
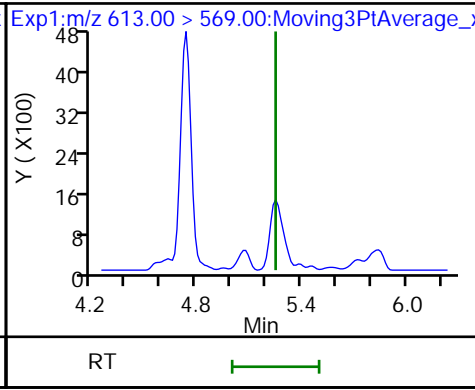
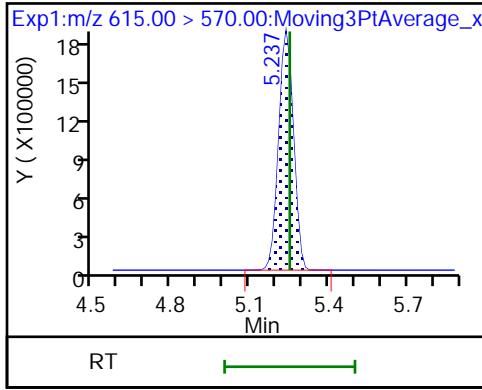
57 11C1FOS (ND)



D 43 13C2 PFDaA

42 Perfluorododecanoic acid (ND)

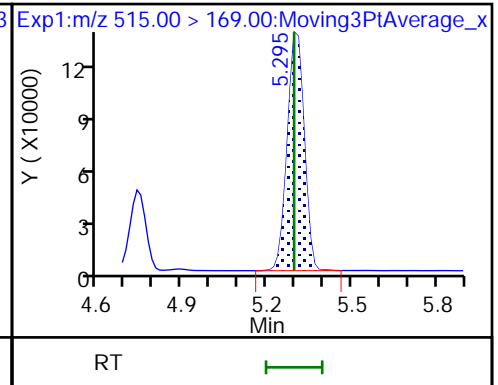
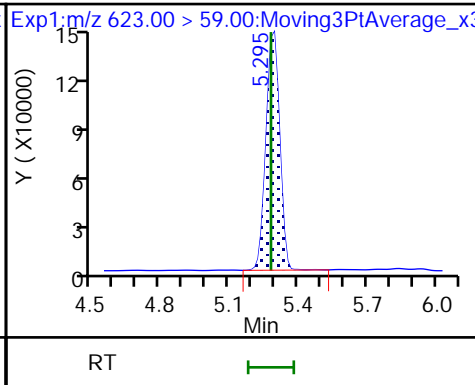
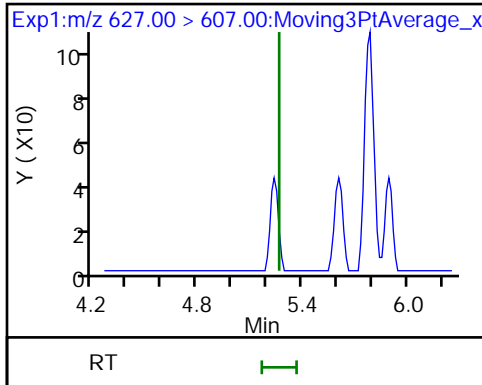
42 Perfluorododecanoic acid (ND)



50 10:2 FTS (ND)

D 51 d7-N-MeFOSE-M

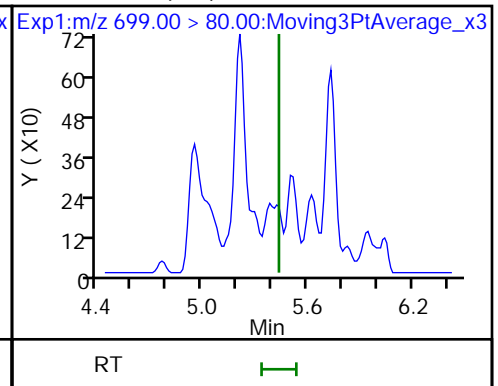
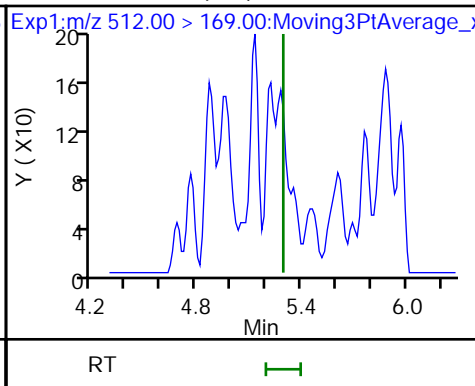
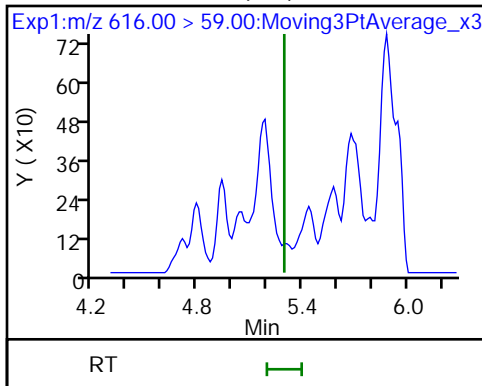
D 58 d-N-MeFOSA-M



49 N-MeFOSE-M (ND)

61 NMeFOSA (ND)

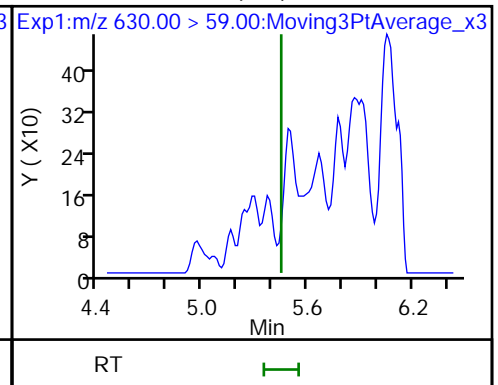
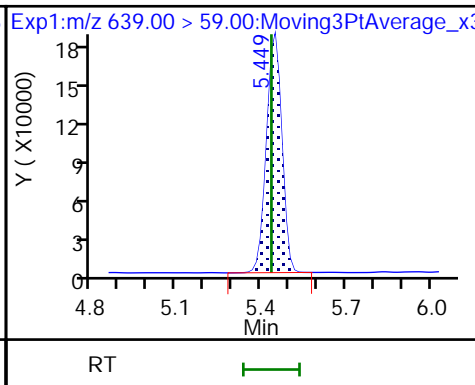
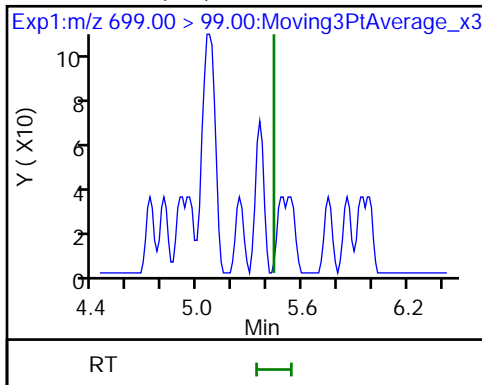
54 PFDoS (ND)



54 PFDoS (ND)

D 53 d9-N-EtFOSE-M

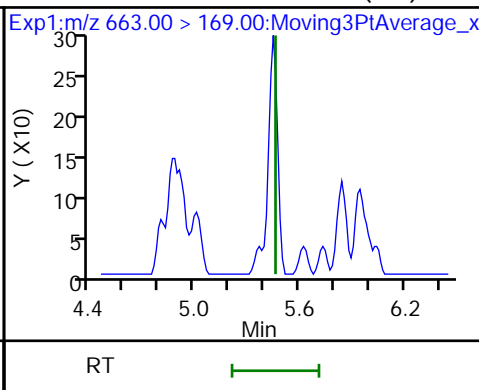
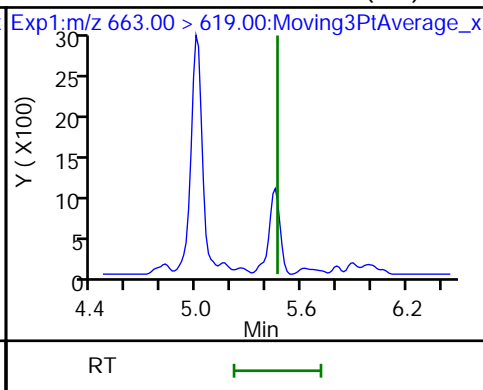
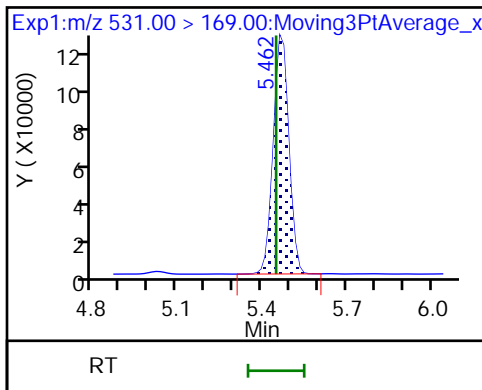
62 N-EtFOSE-M (ND)



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid (ND)

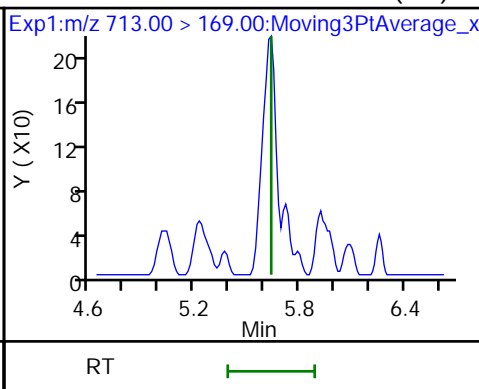
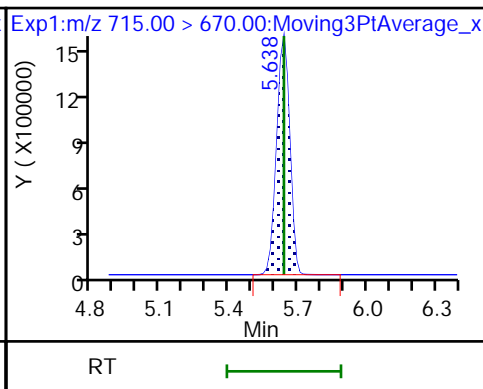
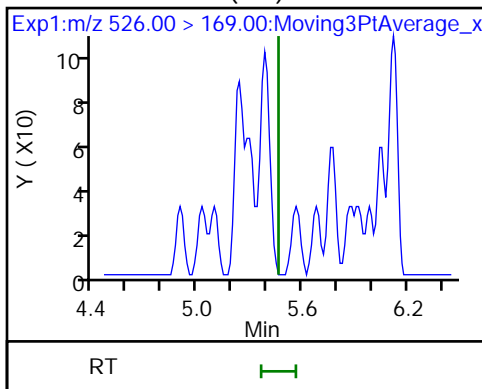
44 Perfluorotridecanoic acid (ND)



56 N-EtFOSA-M (ND)

D 46 13C2 PFTeDA

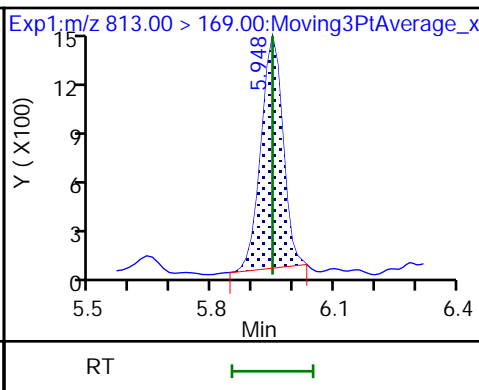
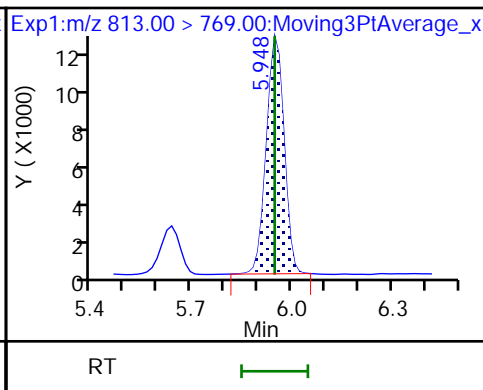
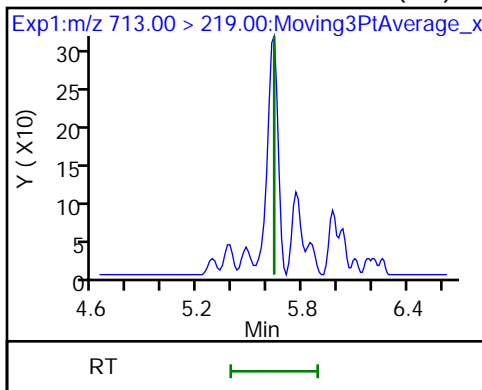
45 Perfluorotetradecanoic acid (ND)



45 Perfluorotetradecanoic acid (ND)

55 Perfluorohexadecanoic acid

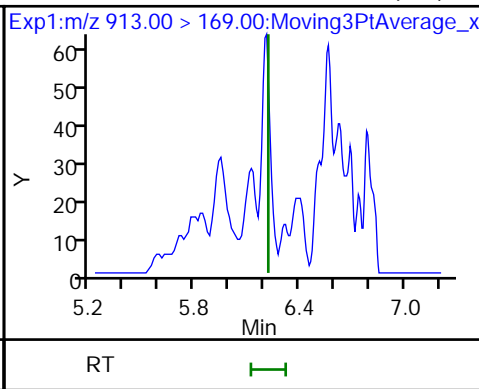
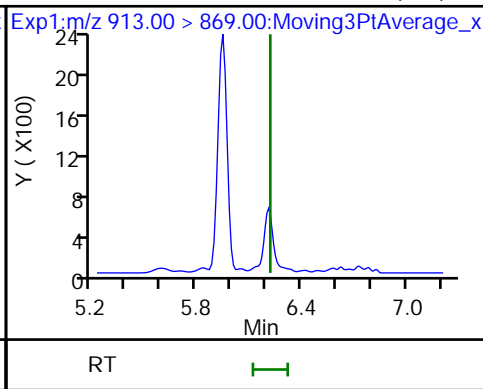
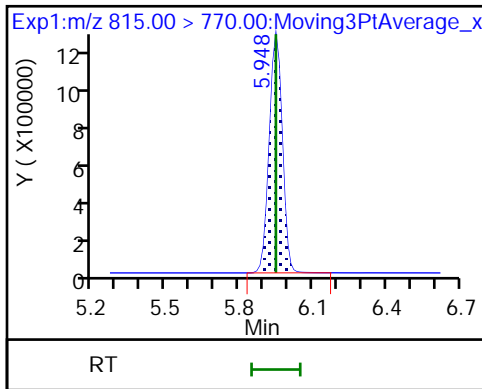
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid (ND)

60 Perfluorooctadecanoic acid (ND)



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-54177/14-B
 Matrix: Air Lab File ID: 108.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: None Date Extracted: 09/24/2021 09:38
 Sample wt/vol: 1 (Sample) Date Analyzed: 10/07/2021 12:21
 Con. Extract Vol.: 50 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: GeminiC18 3x100 ID: 3 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54568 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	ND		0.00100	0.000580

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	94		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_108.d
 Lims ID: MB 140-54177/14-B
 Client ID:
 Sample Type: MB
 Inject. Date: 07-Oct-2021 12:21:55 ALS Bottle#: 54 Worklist Smp#: 108
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-108 mb 140-54177/14-b
 Misc. Info.: Plate: 11 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 18:17:38 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 18:15:17
 Ratio Calibration: None

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
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D 1 13C4 PFBA
 217.00 > 172.00 2.801 2.801 0.0 0.678 6273152 1.19 94.9 10792
 2 Perfluorobutanoic acid 7M
 212.90 > 169.00 2.812 2.812 0.0 1.004 26667 0.006765 4.6 7M
 LOD = 0.0100

D 3 13C5 PFPeA
 267.90 > 223.00 3.116 3.129 -0.013 0.754 5120035 1.18 94.3 10994
 4 Perfluoropentanoic acid 7
 262.90 > 219.00 3.116 3.129 -0.013 1.000 7215 0.001739 2.4 7
 LOD = 0.006500

D 6 13C3 PFBS
 301.90 > 80.00 3.129 3.129 0.0 0.758 3255837 1.16 99.9 6676
 5 Perfluorobutanesulfonic acid
 298.90 > 80.00 3.143 ND
 298.90 > 99.00 3.143

D 8 M2-4:2 FTS
 329.00 > 81.00 3.409 3.423 -0.014 0.825 439335 1.05 89.5 720
 7 4:2 FTS
 327.00 > 307.00 3.423 ND
 11 Perfluoropentanesulfonic acid
 349.00 > 80.00 3.453 ND
 349.00 > 99.00 3.453

D 9 13C2 PFHxA
 315.00 > 270.00 3.437 3.469 -0.032 0.832 5398779 1.21 96.9 16908
 10 Perfluorohexanoic acid
 313.00 > 269.00 3.469 ND
 313.00 > 119.00 3.469

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.548	3.561	-0.013	0.859	2693289	1.18		94.4	3583	
13 HFPO-DA										
285.00 > 169.00	3.548	3.561	-0.013	1.000	52089	0.0113		29.7		M
S 65 ADONA										
377.00 > 251.00		3.592				0				
D 17 18O2 PFHxS										
403.00 > 84.00	3.790	3.803	-0.013	0.918	1987590	1.17		99.1	16958	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.790	3.803	-0.013	1.000	8545	-0.001332	Target=2.96	38.5		7
399.00 > 99.00	3.790	3.803	-0.013	1.000	2647		3.23(1.48-4.44)	15.9		7
LOD = 0.005000										
D 14 13C4 PFHpA										
367.00 > 322.00	3.790	3.815	-0.025	0.918	5189399	1.17		93.4	12800	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.790	3.815	-0.025	1.000	6968	-0.003098	Target=3.35	6.9		7
363.00 > 169.00	3.803	3.815	-0.012	1.003	3149		2.21(1.67-5.02)	5.7		
LOD = 0.004250										
68 DONA										
377.00 > 251.00	3.815	3.840	-0.025	0.860	2213	0.000316	Target=1.49	5.0		7M
377.00 > 85.00	3.840	3.840	0.0	0.000	0		0.00(0.74-2.23)			7M
LOD = 0.005750										
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00		4.143				ND				
449.00 > 99.00		4.143								
\$ 48 13C8 PFOA										
421.00 > 376.00		4.143				ND				
D 18 M2-6:2 FTS										
429.00 > 81.00	4.131	4.143	-0.012	1.000	471985	1.10		92.3	4471	
19 6:2 FTS										
427.00 > 407.00		4.143				ND				
D 21 13C4 PFOA										
417.00 > 372.00	4.131	4.155	-0.024	1.000	4892357	1.22		97.3	16062	
* 22 13C2 PFOA										
415.00 > 370.00	4.131	4.155	-0.024		4992247	1.25			24675	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.131	4.155	-0.024	1.000	11286	-0.006033	Target=2.40	6.9		7M
413.00 > 169.00	4.131	4.155	-0.024	1.000	3257		3.47(1.20-3.61)	9.8		
LOD = 0.007800										
\$ 47 13C8 PFOS										
507.00 > 99.00		4.447				ND				
D 25 13C4 PFOS										
503.00 > 80.00	4.434	4.447	-0.012	1.074	2582219	1.10		92.5	9260	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.434	4.447	-0.012	1.000	8078	0.003399	Target=3.83	5.5		7M
499.00 > 99.00	4.447	4.447	0.0	0.000	0		0.00(1.91-5.74)			
LOD = 0.005500										

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 27 13C5 PFNA										
468.00 > 423.00	4.446	4.470	-0.024	1.076	5901262	1.15		92.4	18423	
26 Perfluorononanoic acid										
463.00 > 419.00		4.470				ND				
463.00 > 169.00		4.470								
63 9CIFOS										
531.00 > 351.00		4.596				ND				
28 Perfluorononanesulfonic acid										
549.00 > 80.00		4.722				ND				
549.00 > 99.00		4.722								
D 34 13C8 FOSA										
506.00 > 78.00	4.736	4.736	0.0	1.146	3592632	1.05		83.8	6539	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.722	4.736	-0.014	0.997	2168	0.000785		7.1	7	7
LOD = 0.004400										
D 32 13C2 PFDA										
515.00 > 470.00	4.736	4.749	-0.013	1.146	5797058	1.12		89.6	18886	
29 Perfluorodecanoic acid										
513.00 > 469.00		4.749				ND				
513.00 > 169.00		4.749								
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.763	-0.014	1.150	491519	0.9350		78.1	2061	
31 8:2 FTS										
527.00 > 507.00		4.763				ND				
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.882	4.896	-0.014	1.182	664595	0.9382		75.1	3259	
36 NMeFOSAA										
570.00 > 419.00		4.896				ND				
37 Perfluorodecanesulfonic acid										
599.00 > 80.00		4.993				ND				
599.00 > 99.00		4.993								
69 Perfluoro-3,6,9-trioxatridecanoic acid										
561.00 > 467.00	4.964	4.994	-0.030	1.120	4323	NC	Target=0.00		0.9	
561.00 > 235.00	4.922	4.994	-0.072	1.110	1101		3.93(0.00-0.00)		0.6	
D 39 13C2 PFUnA										
565.00 > 520.00	4.993	5.022	-0.029	1.209	5709374	1.16		92.4	15606	
38 Perfluoroundecanoic acid										
563.00 > 519.00		5.022				ND				
563.00 > 169.00		5.022								
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.007	5.036	-0.029	1.212	782590	1.15		91.9	3607	
40 NEtFOSA										
584.00 > 419.00		5.036				ND				
57 11CIFOS										
631.00 > 451.00		5.119				ND				
D 43 13C2 PFDaA										
615.00 > 570.00	5.223	5.251	-0.028	1.265	6226538	1.18		94.5	17648	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
42 Perfluorododecanoic acid										
613.00 > 569.00		5.251				ND				
613.00 > 169.00		5.251								
50 10:2 FTS										
627.00 > 607.00		5.266				ND				
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.295	5.281	0.014	1.282	547512	1.27		102	335	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.282	453758	1.01		81.2	40.1	
49 N-MeFOSE-M										
616.00 > 59.00		5.295				ND				
61 NMeFOSA										
512.00 > 169.00		5.295				ND				
54 PFDoS										
699.00 > 80.00		5.436				ND				
699.00 > 99.00		5.436								
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.449	5.436	0.013	1.319	629990	1.38		110	621	
62 N-EtFOSE-M										
630.00 > 59.00		5.449				ND				
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.449	0.013	1.322	469286	1.25		99.8	388	
44 Perfluorotridecanoic acid										
663.00 > 619.00		5.462				ND				
663.00 > 169.00		5.462								
56 N-EtFOSA-M										
526.00 > 169.00		5.462				ND				
D 46 13C2 PFTeDA										
715.00 > 670.00	5.623	5.637	-0.014	1.361	5848340	1.21		96.8	15143	
45 Perfluorotetradecanoic acid										
713.00 > 169.00		5.637				ND				
713.00 > 219.00		5.637								
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.935	5.948	-0.013	1.000	45546	-0.001832	Target=7.50	158	7	7
813.00 > 169.00	5.935	5.948	-0.013	1.000	4982		9.14(3.75-11.26)	33.6		
LOD = 0.009000										
D 59 13C2 PFHxDA										
815.00 > 770.00	5.935	5.948	-0.013	1.437	4528403	1.29		103	9366	
60 Perfluorooctadecanoic acid										
913.00 > 869.00		6.221				ND				
913.00 > 169.00		6.221								
S 66 F-53B										
212.90 > 169.00		0.0				0				
S 67 NaDONA										
377.00 > 251.00						0.000316				

QC Flag Legend

Processing Flags

NC - Not Calibrated

ND - Not Detected or Marked ND

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_108.d

Injection Date: 07-Oct-2021 12:21:55

Instrument ID: LCA

Lims ID: MB 140-54177/14-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 54

Worklist Smp#: 108

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

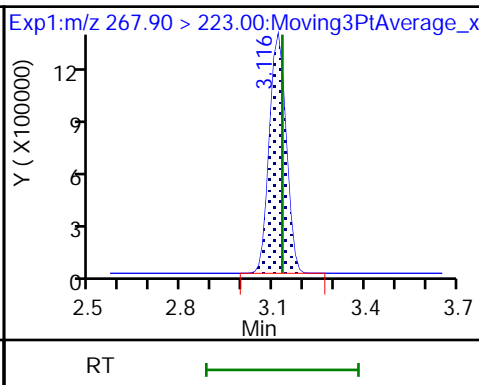
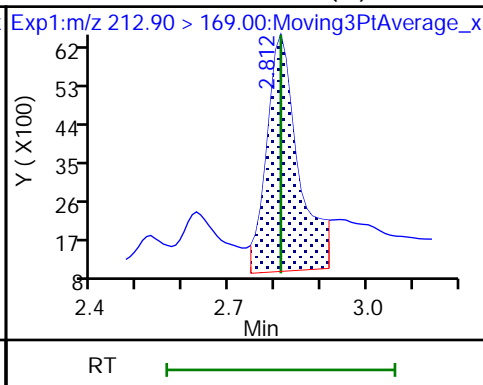
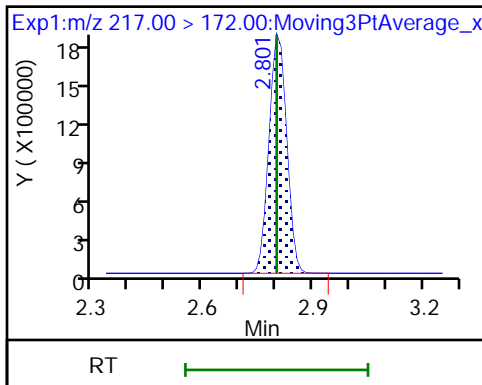
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid (M)

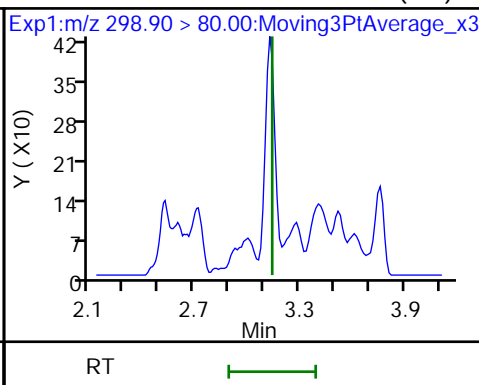
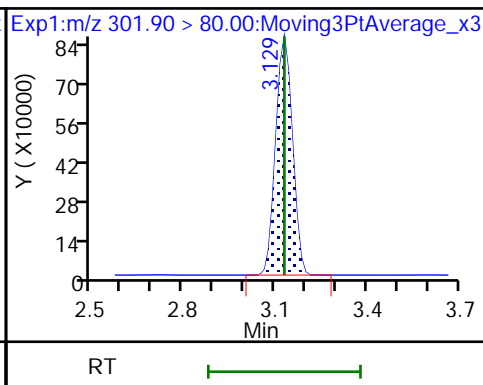
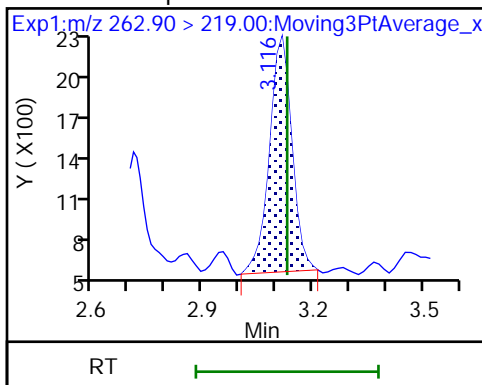
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

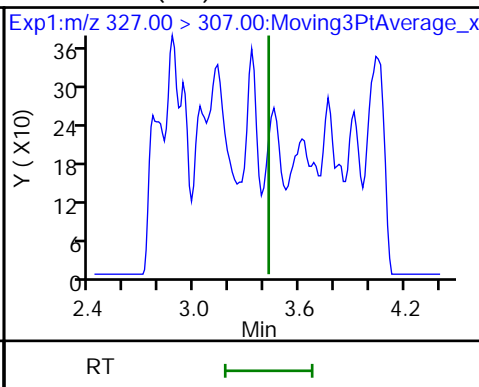
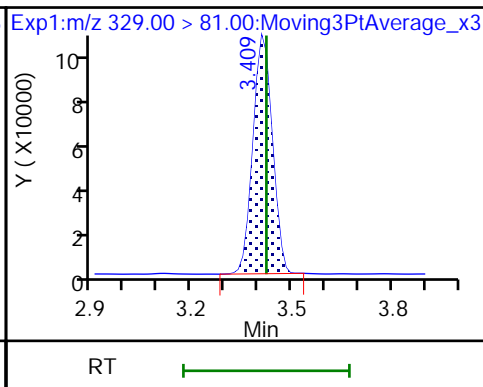
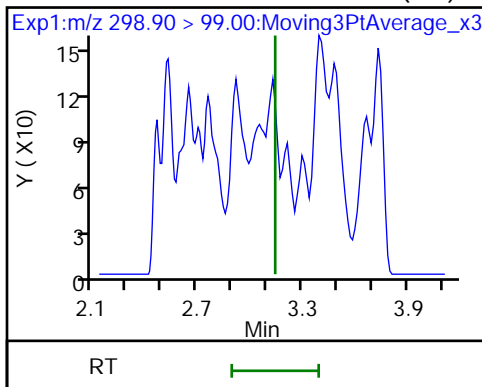
5 Perfluorobutanesulfonic acid (ND)



5 Perfluorobutanesulfonic acid (ND)

D 8 M2-4:2 FTS

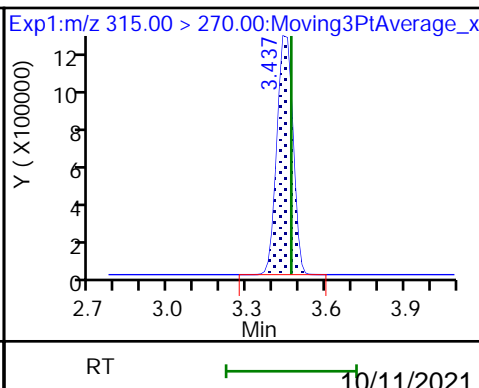
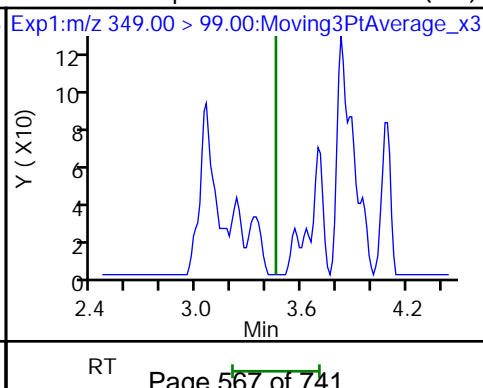
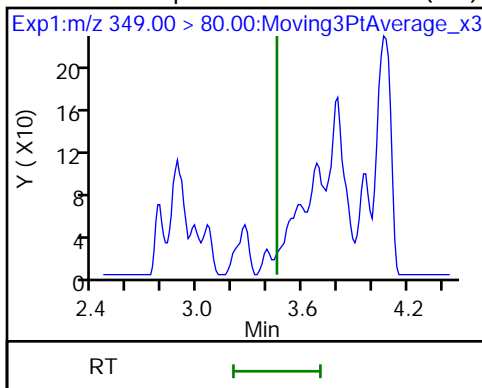
7 4:2 FTS (ND)

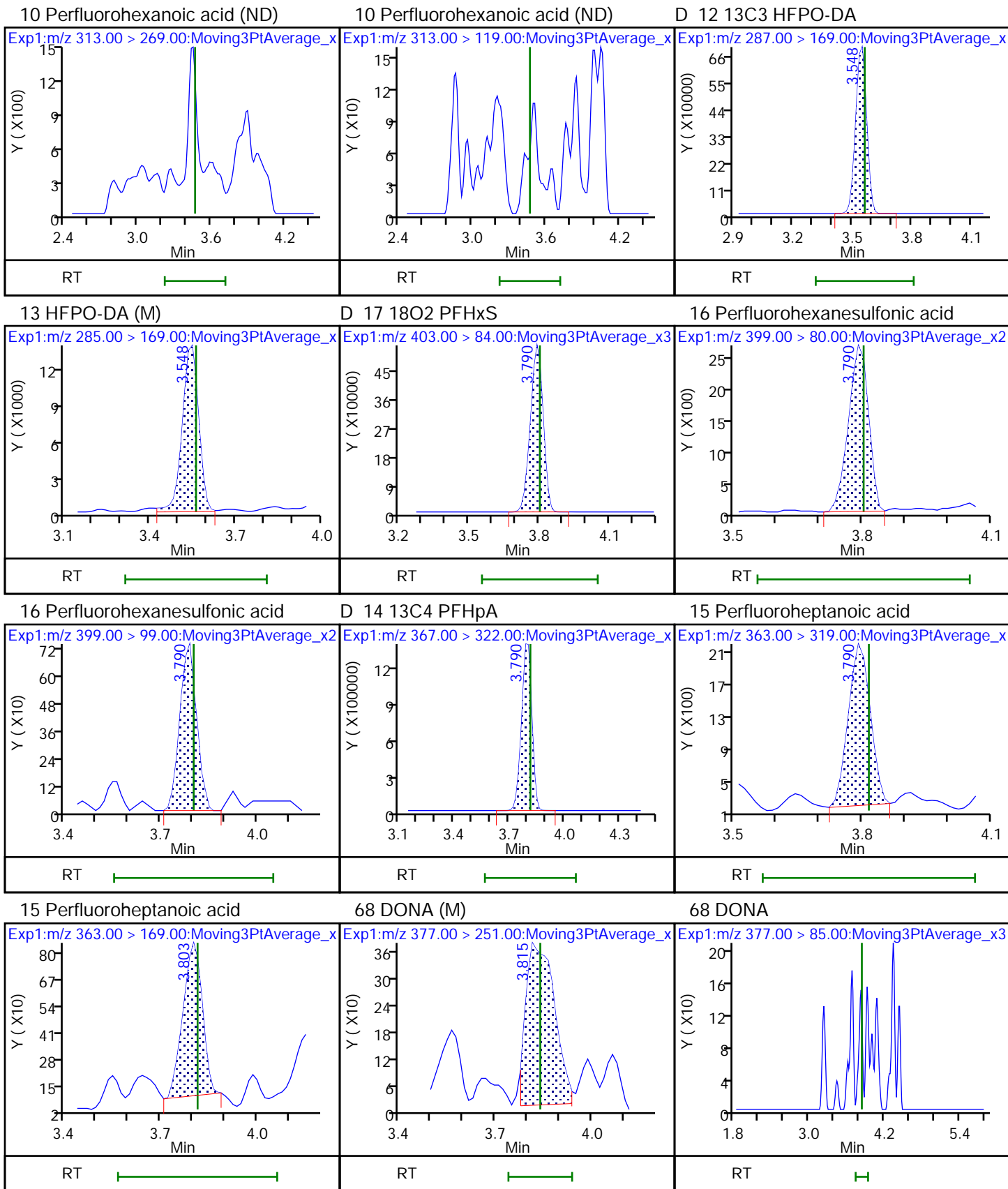


11 Perfluoropentanesulfonic acid (ND)

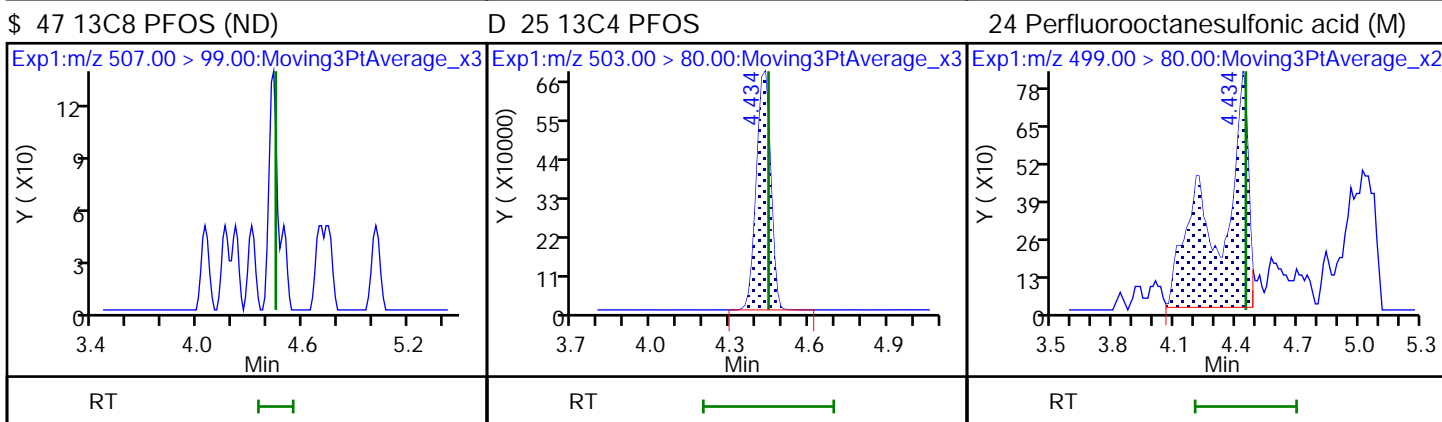
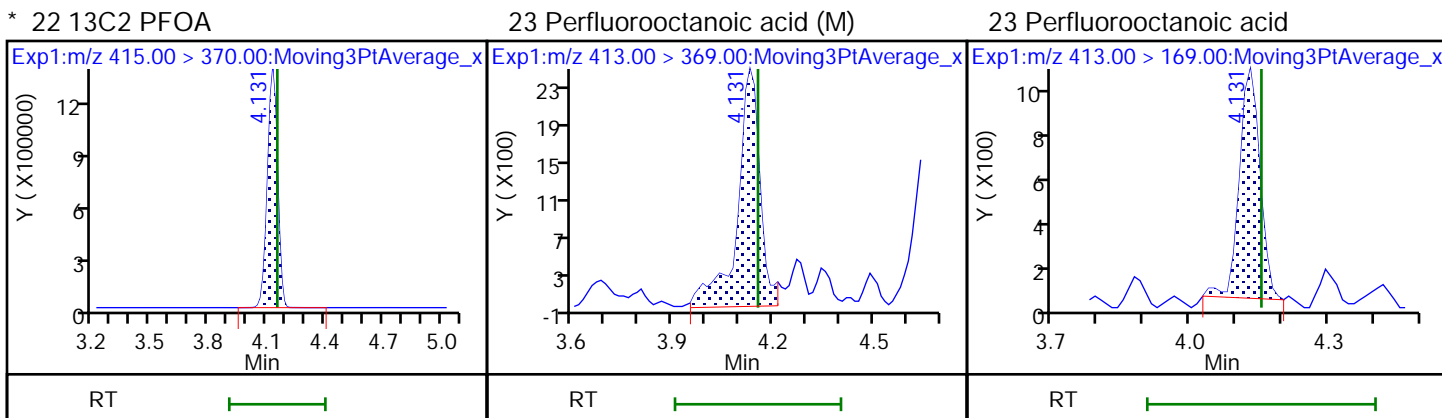
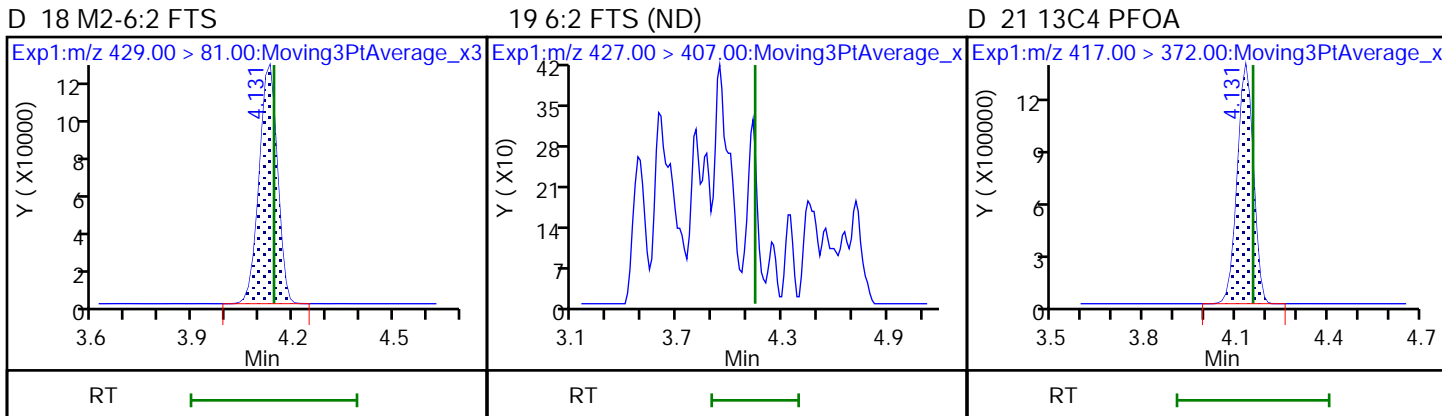
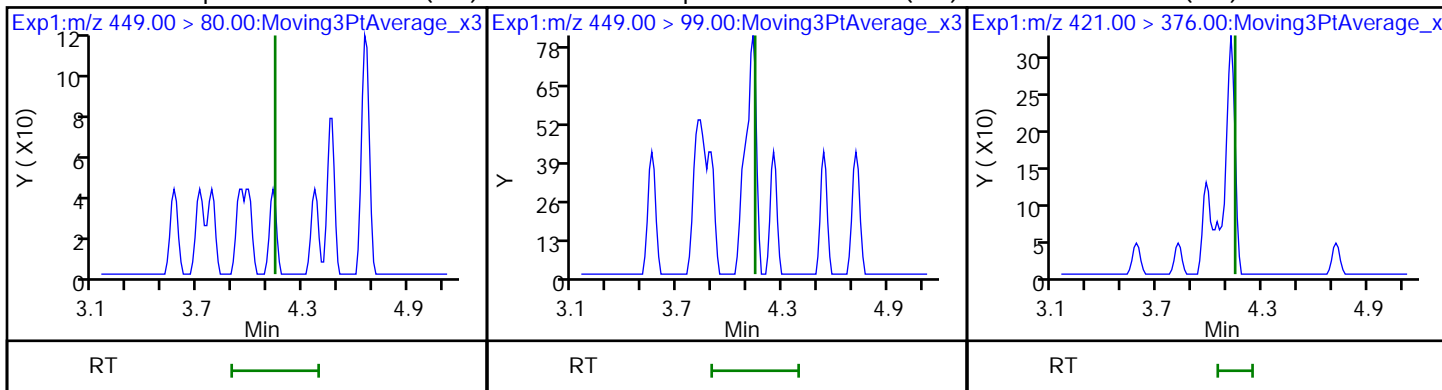
11 Perfluoropentanesulfonic acid (ND)

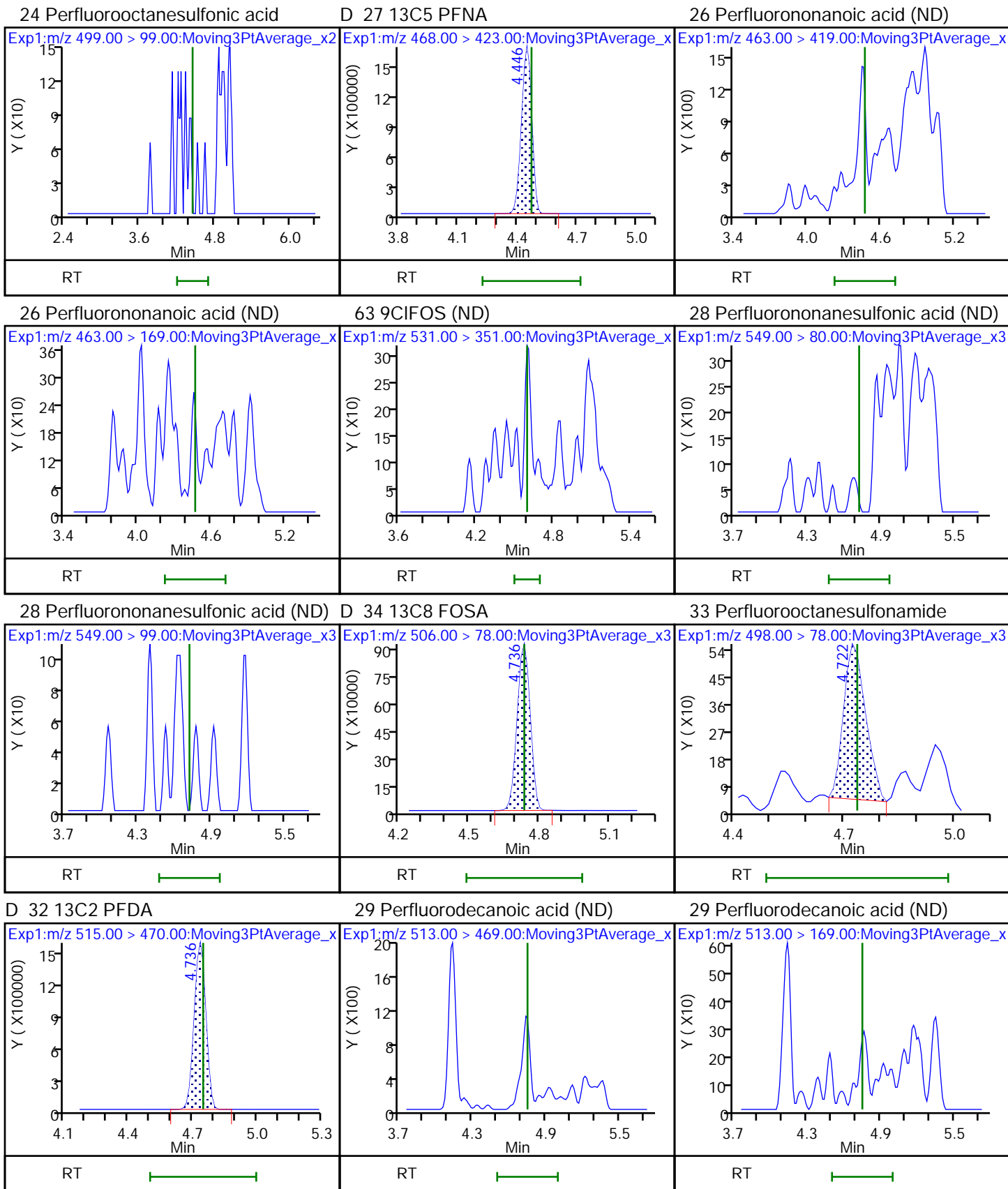
D 9 13C2 PFXhA





20 Perfluoroheptanesulfonic acid (ND) 20 Perfluoroheptanesulfonic acid (ND) \$ 48 13C8 PFOA (ND)

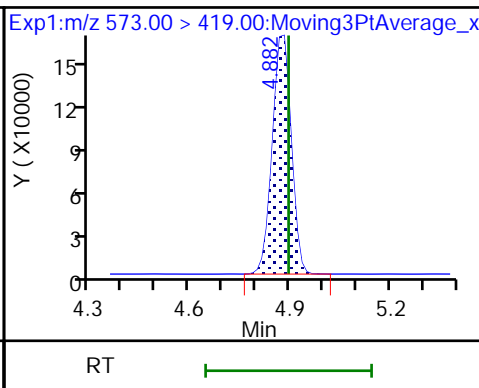
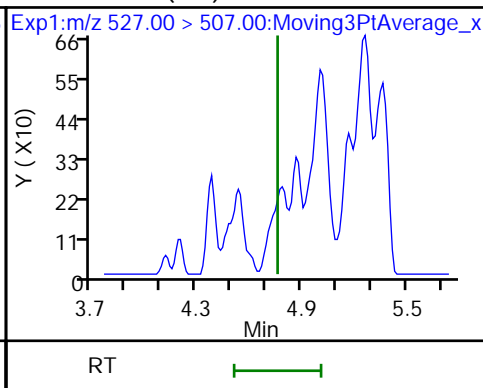
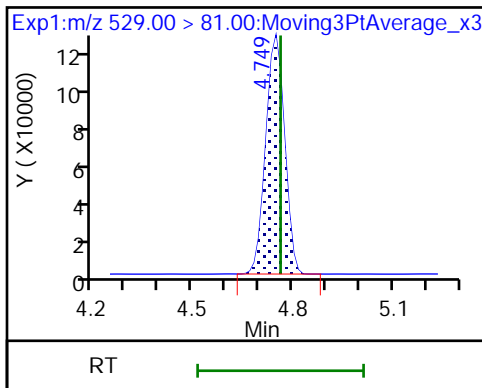




D 30 M2-8:2 FTS

31 8:2 FTS (ND)

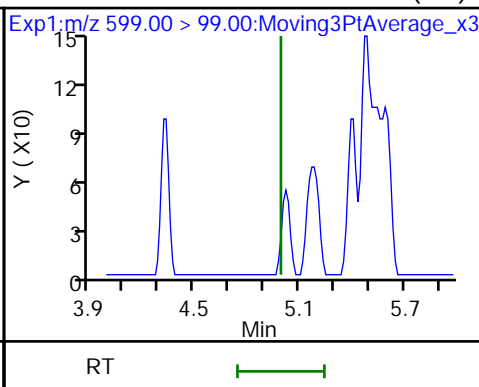
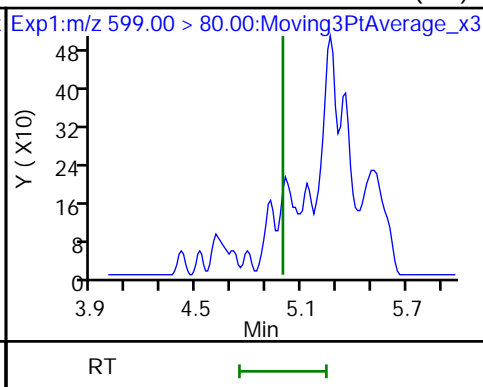
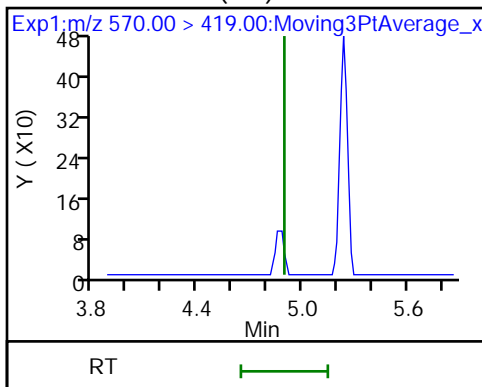
D 35 d3-NMeFOSAA



36 NMeFOSAA (ND)

37 Perfluorodecanesulfonic acid (ND)

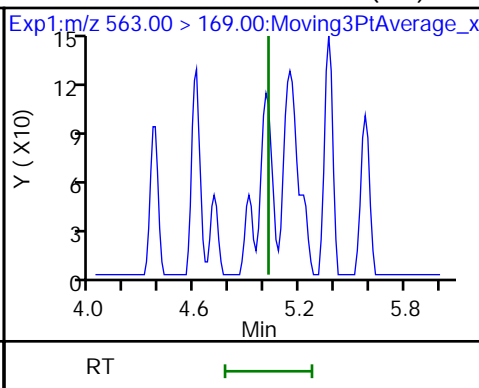
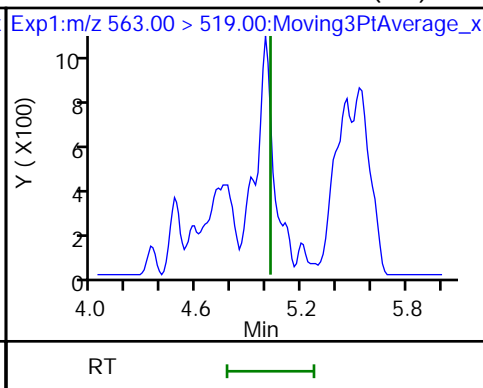
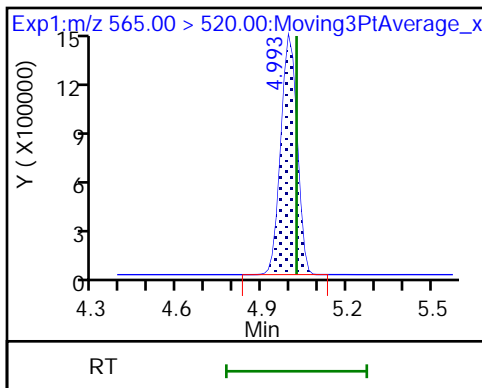
37 Perfluorodecanesulfonic acid (ND)



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid (ND)

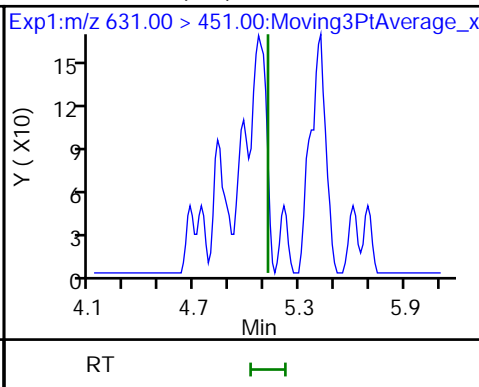
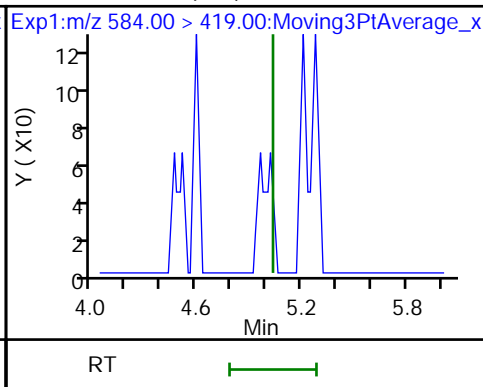
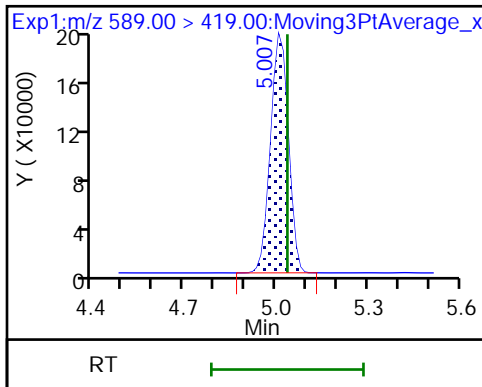
38 Perfluoroundecanoic acid (ND)



D 41 d5-NEtFOSAA

40 NEtFOSA (ND)

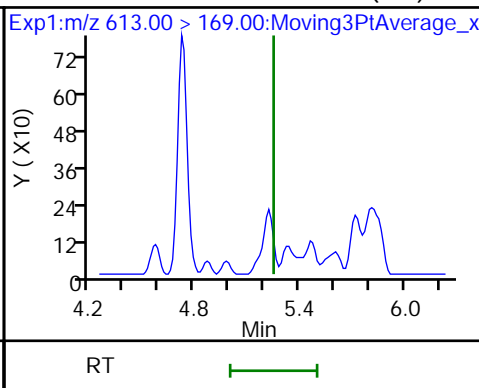
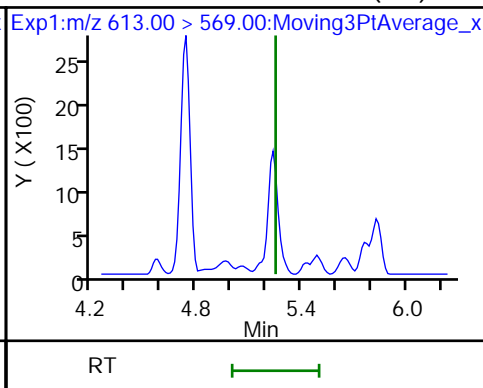
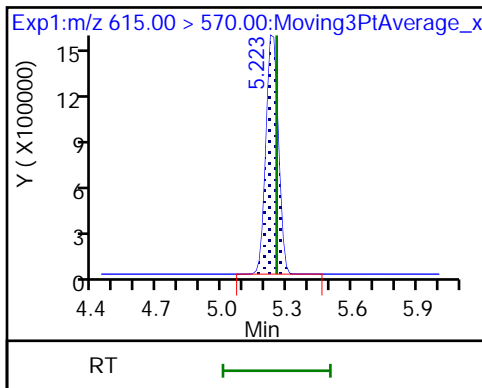
57 11C1FOS (ND)



D 43 13C2 PFDoA

42 Perfluorododecanoic acid (ND)

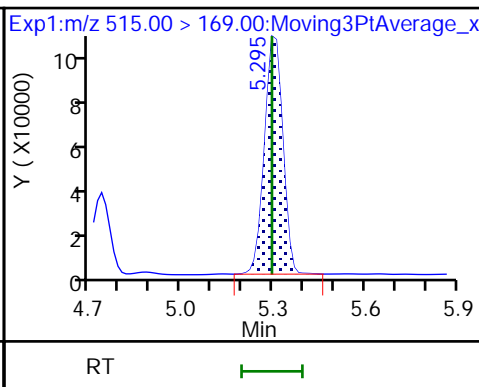
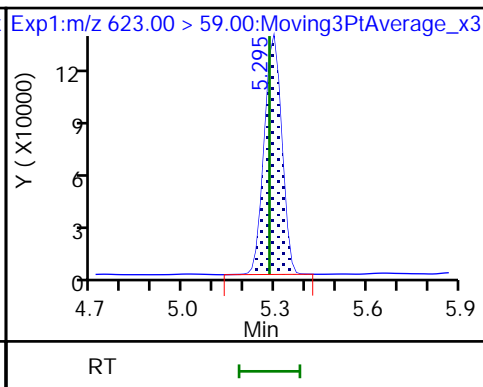
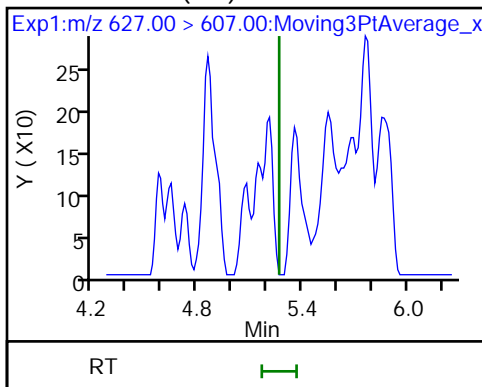
42 Perfluorododecanoic acid (ND)



50 10:2 FTS (ND)

D 51 d7-N-MeFOSE-M

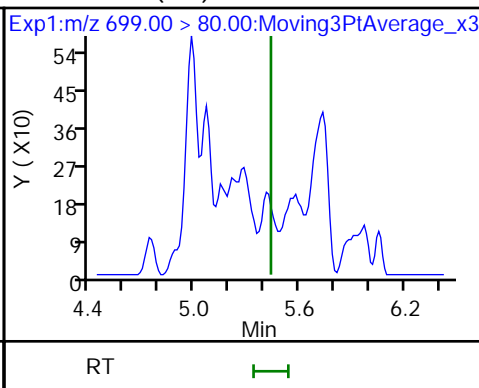
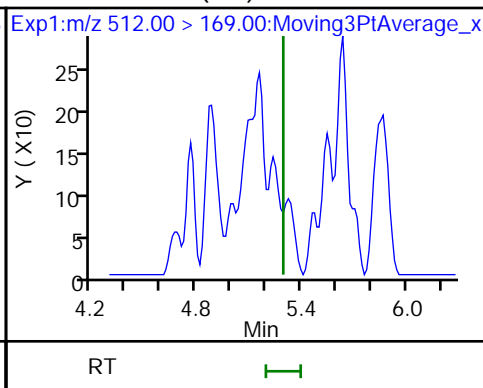
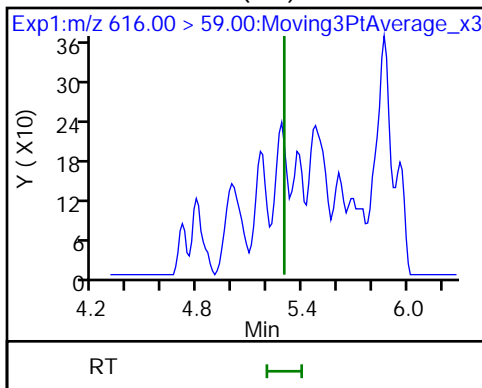
D 58 d-N-MeFOSA-M



49 N-MeFOSE-M (ND)

61 NMeFOSA (ND)

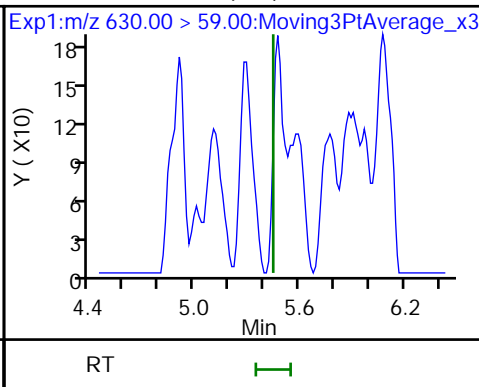
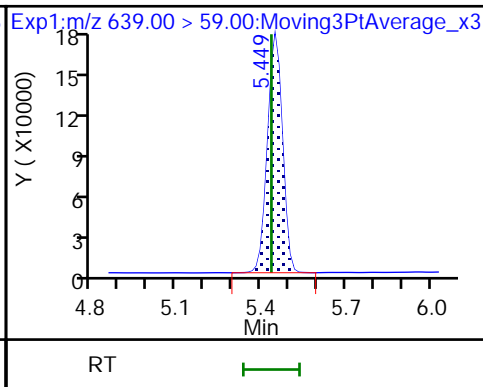
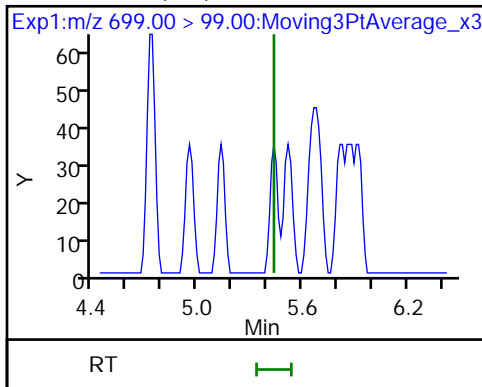
54 PFDoS (ND)



54 PFDoS (ND)

D 53 d9-N-EtFOSE-M

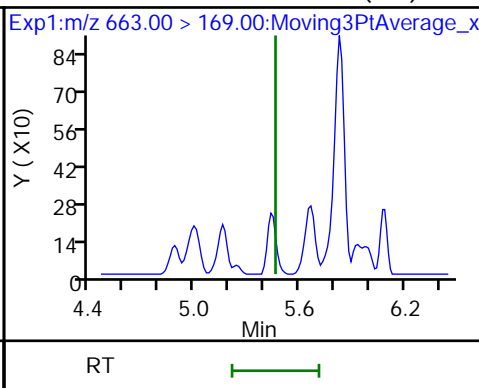
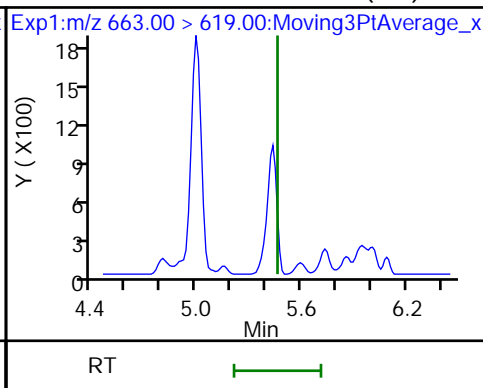
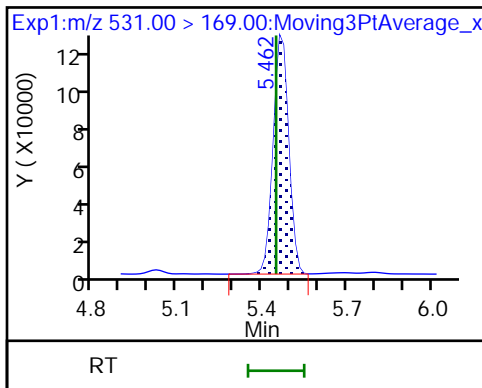
62 N-EtFOSE-M (ND)



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid (ND)

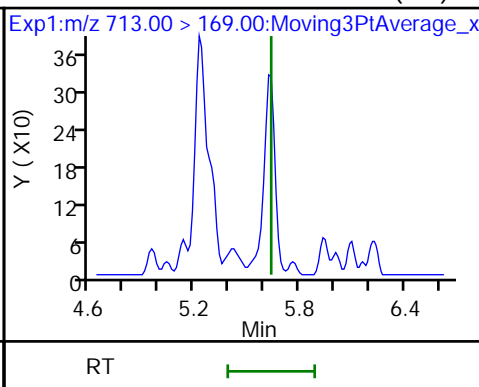
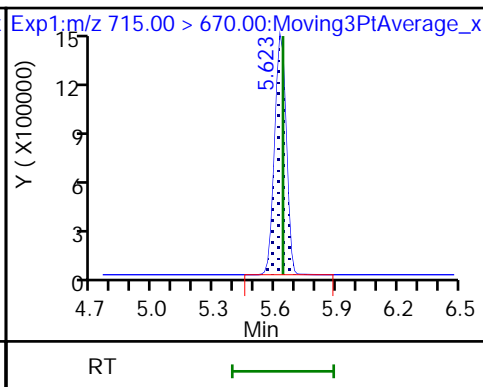
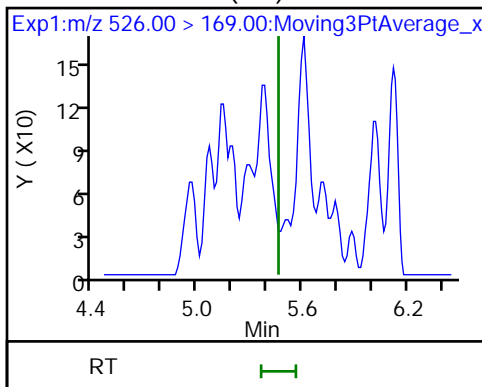
44 Perfluorotridecanoic acid (ND)



56 N-EtFOSA-M (ND)

D 46 13C2 PFTeDA

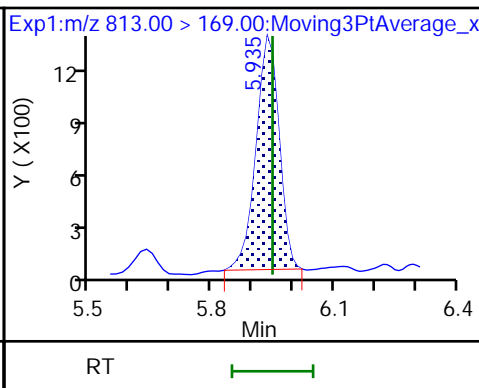
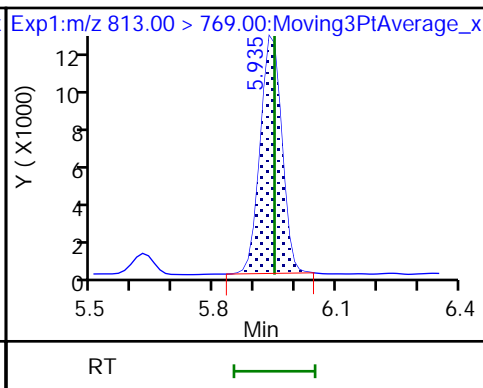
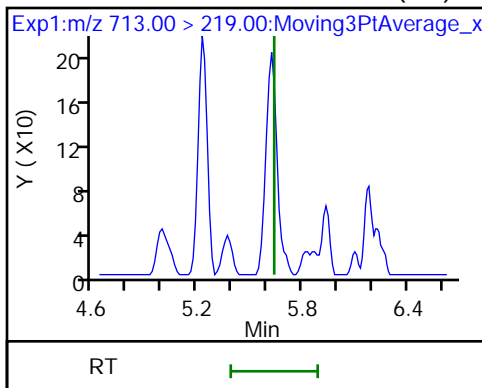
45 Perfluorotetradecanoic acid (ND)



45 Perfluorotetradecanoic acid (ND)

55 Perfluorohexadecanoic acid

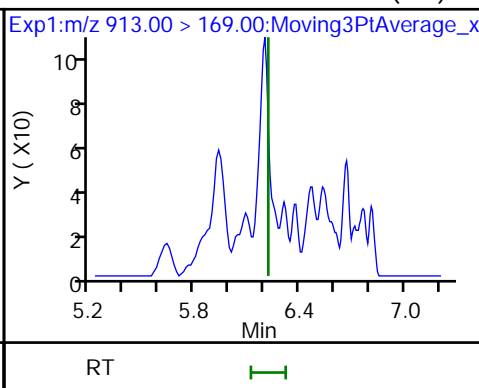
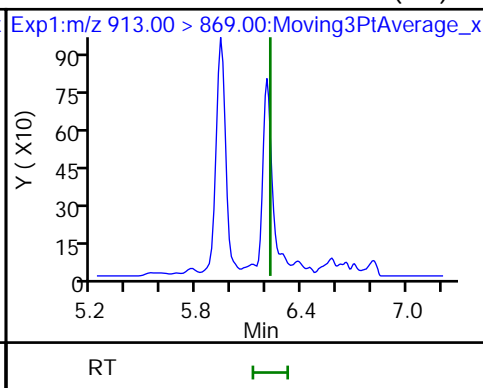
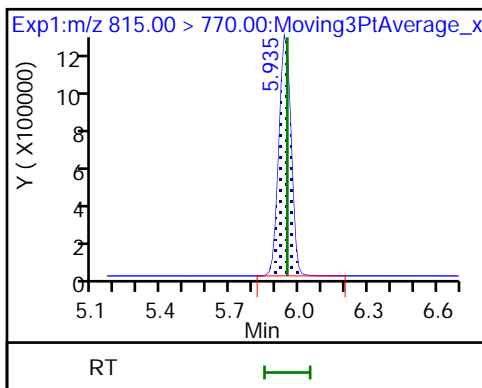
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid (ND)

60 Perfluorooctadecanoic acid (ND)



Eurofins TestAmerica, Knoxville

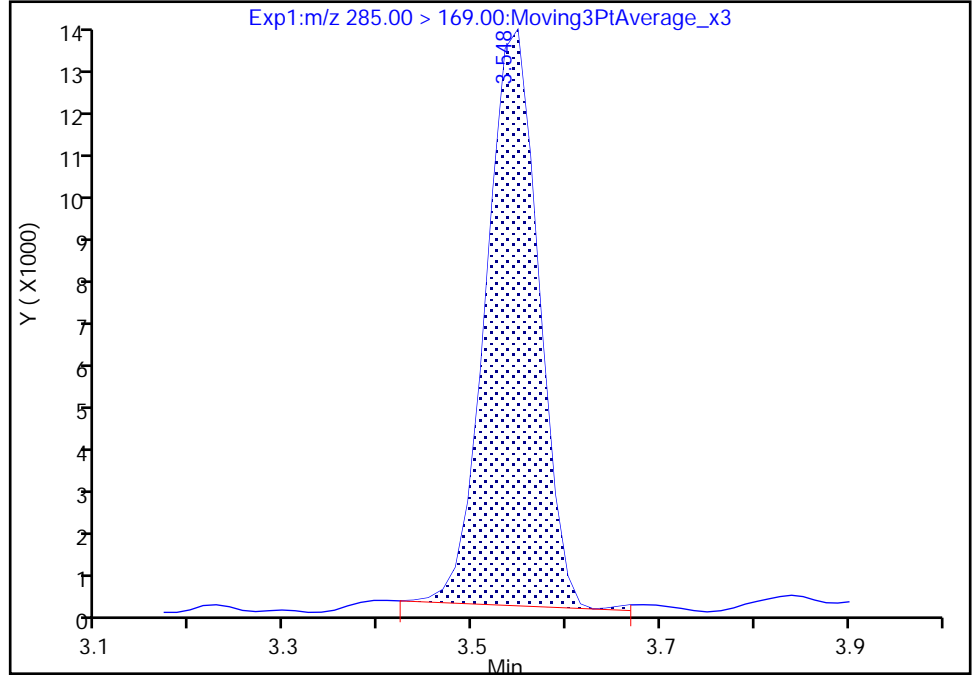
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_108.d
Injection Date: 07-Oct-2021 12:21:55 Instrument ID: LCA
Lims ID: MB 140-54177/14-B
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 54 Worklist Smp#: 108
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

13 HFPO-DA, CAS: 13252-13-6

Signal: 1

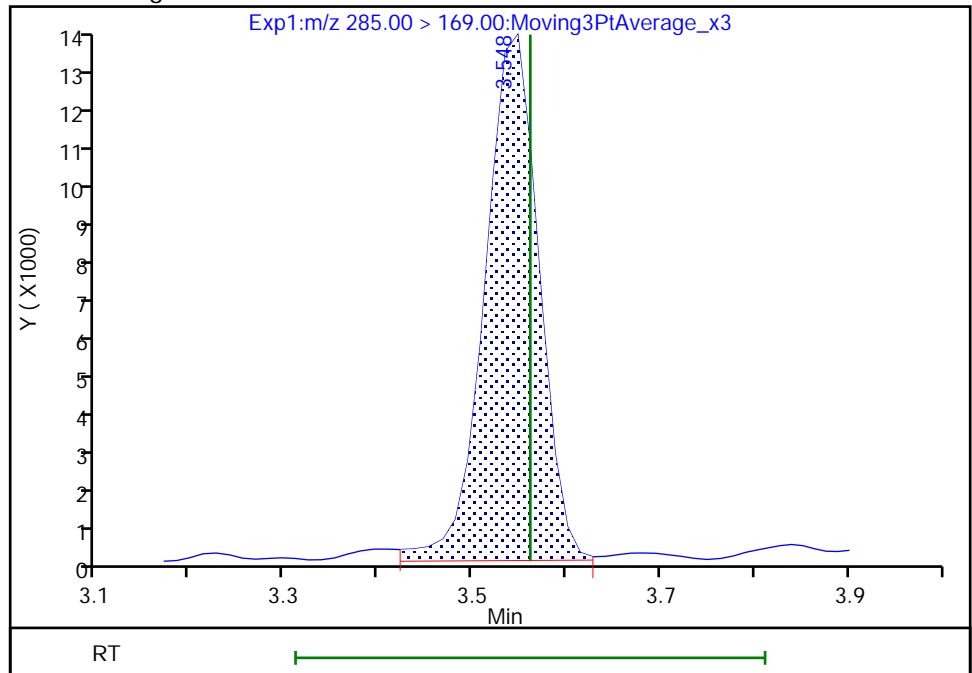
RT: 3.55
Area: 49957
Amount: 0.010558
Amount Units: ng/ml

Processing Integration Results



RT: 3.55
Area: 52089
Amount: 0.011277
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 18:14:35
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-54326/1-B
 Matrix: Air Lab File ID: _030.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: None Date Extracted: 09/29/2021 13:10
 Sample wt/vol: 1(Sample) Date Analyzed: 10/08/2021 16:05
 Con. Extract Vol.: 360(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: GeminiC18 3x100 ID: 3(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54642 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	ND		0.00160	0.00140

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	88		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_030.d
 Lims ID: MB 140-54326/1-B
 Client ID:
 Sample Type: MB
 Inject. Date: 08-Oct-2021 16:05:53 ALS Bottle#: 1 Worklist Smp#: 30
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0021001-030 mb 140-54326/1-b
 Misc. Info.: Plate: 8 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 11:11:30 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 10:28:12

Ratio Calibration: None

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	2.812	2.812	0.0	0.681	6084000	0.9699	77.6	10696	
2 Perfluorobutanoic acid	212.90 > 169.00	2.812	2.812	0.0	1.000	105895	0.0277		3.5	
D 3 13C5 PFPeA	267.90 > 223.00	3.116	3.129	-0.013	0.754	5661921	1.10	88.0	9491	
4 Perfluoropentanoic acid	262.90 > 219.00	3.116	3.129	-0.013	1.000	15757	0.003434		1.5	7
LOD = 0.006500										
D 6 13C3 PFBS	301.90 > 80.00	3.129	3.143	-0.014	0.758	2357758	0.7091	61.0	2397	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.143	3.143	0.0	1.004	10865	0.004757	Target=3.06	9.4	
	298.90 > 99.00	3.129	3.143	-0.014	1.000	4549		2.39(1.53-4.59)	3.4	
D 8 M2-4:2 FTS	329.00 > 81.00	3.423	3.423	0.0	0.829	659768	1.32	113	585	
7 4:2 FTS	327.00 > 307.00		3.423				ND			
11 Perfluoropentanesulfonic acid	349.00 > 80.00		3.469				ND			
	349.00 > 99.00		3.469							
D 9 13C2 PFHxA	315.00 > 270.00	3.453	3.469	-0.016	0.836	6096429	1.15	92.2	15640	
10 Perfluorohexanoic acid	313.00 > 269.00	3.453	3.469	-0.016	1.000	28642	0.006851	Target=9.74	5.6	7
	313.00 > 119.00	3.453	3.469	-0.016	1.000	2120		13.51(4.87-14.61)	2.7	
LOD = 0.008000										

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.548	3.561	-0.013	0.859	2966566	1.10		87.7	9930	
13 HFPO-DA										
285.00 > 169.00	3.548	3.561	-0.013	1.000	9724	-0.003315		11.1	7	7
LOD = 0.008250										
S 65 ADONA										
377.00 > 251.00		3.592				0				
D 17 18O2 PFHxS										
403.00 > 84.00	3.790	3.803	-0.013	0.918	1517860	0.7543		63.8	17372	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.803	3.803	0.0	1.003	7830	-0.000580	Target=2.96	18.3	7	7
399.00 > 99.00	3.790	3.803	-0.013	1.000	2955		2.65(1.48-4.44)	12.3		
LOD = 0.005000										
D 14 13C4 PFHpA										
367.00 > 322.00	3.803	3.815	-0.012	0.921	5913380	1.12		89.7	19945	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.803	3.815	-0.012	1.000	140207	0.0235	Target=3.35	34.2		
363.00 > 169.00	3.803	3.815	-0.012	1.000	44016		3.19(1.67-5.02)	147		
68 DONA										
377.00 > 251.00		3.840				ND				
377.00 > 85.00		3.840								
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00		4.143				ND				
449.00 > 99.00		4.143								
\$ 48 13C8 PFOA										
421.00 > 376.00		4.143				ND				U
D 18 M2-6:2 FTS										
429.00 > 81.00	4.131	4.143	-0.012	1.000	681055	1.33		112	2548	
19 6:2 FTS										
427.00 > 407.00	4.131	4.143	-0.012	1.000	5865	-0.001894		30.6	7	7
LOD = 0.005000										
D 21 13C4 PFOA										
417.00 > 372.00	4.131	4.155	-0.024	1.000	5655181	1.19		94.9	23331	
* 22 13C2 PFOA										
415.00 > 370.00	4.131	4.155	-0.024		5921457	1.25			15753	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.131	4.155	-0.024	1.000	20328	-0.004569	Target=2.40	7.3		R7M
413.00 > 169.00	4.131	4.155	-0.024	1.000	5452		3.73(1.20-3.61)	11.6		M
LOD = 0.007800										
\$ 47 13C8 PFOS										
507.00 > 99.00		4.447				ND				
D 25 13C4 PFOS										
503.00 > 80.00	4.434	4.447	-0.013	1.074	1870413	0.6747		56.5	4026	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00		4.447				ND				
499.00 > 99.00		4.447								
D 27 13C5 PFNA										
468.00 > 423.00	4.446	4.470	-0.024	1.076	6947734	1.15		91.7	15263	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
26 Perfluorononanoic acid										
463.00 > 419.00		4.470				ND				
463.00 > 169.00		4.470								
63 9CIFOS										
531.00 > 351.00		4.596				ND				
28 Perfluorononanesulfonic acid										
549.00 > 80.00		4.722				ND				
549.00 > 99.00		4.722								
D 34 13C8 FOSA										
506.00 > 78.00	4.762	4.736	0.026	1.153	3993495	0.9813		78.5	5736	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.762	4.736	0.026	1.000	5087	0.001658		8.1	7	7
LOD = 0.004400										
D 32 13C2 PFDA										
515.00 > 470.00	4.735	4.749	-0.014	1.146	6873830	1.12		89.6	39128	
29 Perfluorodecanoic acid										
513.00 > 469.00		4.749				ND				
513.00 > 169.00		4.749								
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.763	-0.014	1.150	776364	1.25		104	2379	
31 8:2 FTS										
527.00 > 507.00		4.763				ND				
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.882	4.896	-0.014	1.182	888989	1.06		84.6	4249	
36 NMeFOSAA										
570.00 > 419.00		4.896				ND				
37 Perfluorodecanesulfonic acid										
599.00 > 80.00		4.993				ND				
599.00 > 99.00		4.993								
69 Perfluoro-3,6,9-trioxatridecanoic acid										
561.00 > 467.00	4.936	4.994	-0.058	1.113	1580	NC	Target=0.00		0.5	
561.00 > 235.00	4.922	4.994	-0.072	1.110	4532		0.35(0.00-0.00)		1.2	
D 39 13C2 PFUnA										
565.00 > 520.00	5.007	5.008	-0.001	1.212	6764602	1.15		92.3	14460	
38 Perfluoroundecanoic acid										
563.00 > 519.00		5.008				ND				
563.00 > 169.00		5.008								
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.022	5.022	0.0	1.216	915964	1.13		90.7	3700	
40 NEtFOSA										
584.00 > 419.00		5.036				ND				
57 11CIFOS										
631.00 > 451.00		5.119				ND				
D 43 13C2 PFDaA										
615.00 > 570.00	5.236	5.251	-0.015	1.268	7450925	1.19		95.4	32321	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
42 Perfluorododecanoic acid										
613.00 > 569.00		5.251				ND				
613.00 > 169.00		5.251								
50 10:2 FTS										
627.00 > 607.00		5.266				ND				
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.280	5.295	-0.015	1.278	778467	1.53		122	336	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.282	265069	0.4998		40.0	20.9	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.295	0.0	1.003	2826	-0.004203		2.3		7M
LOD = 0.008600										
61 NMeFOSA										
512.00 > 169.00		5.295				ND				
54 PFDoS										
699.00 > 80.00		5.436				ND				
699.00 > 99.00		5.436								
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.436	5.449	-0.013	1.316	637169	1.17		93.9	512	
62 N-EtFOSE-M										
630.00 > 59.00	5.462	5.462	0.0	1.005	2360	-0.000830		3.4		7M
LOD = 0.006000										
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.462	0.0	1.322	189246	0.4240		33.9	266	
44 Perfluorotridecanoic acid										
663.00 > 619.00		5.462				ND				
663.00 > 169.00		5.462								
56 N-EtFOSA-M										
526.00 > 169.00		5.462				ND				
D 46 13C2 PFTeDA										
715.00 > 670.00	5.637	5.637	0.0	1.365	5932681	1.03		82.7	21278	
45 Perfluorotetradecanoic acid										
713.00 > 169.00		5.637				ND				
713.00 > 219.00		5.637								
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.948	5.948	0.0	1.000	22635	-0.001699	Target=7.50	38.2		7
813.00 > 169.00	5.948	5.948	0.0	1.000	2955		7.66(3.75-11.26)	28.6		7
LOD = 0.009000										
D 59 13C2 PFHxDA										
815.00 > 770.00	5.948	5.948	0.0	1.440	2224681	0.5348		42.8	5856	
60 Perfluorooctadecanoic acid										
913.00 > 869.00		6.221				ND				
913.00 > 169.00		6.221								
S 66 F-53B										
212.90 > 169.00		0.0				0				

Ratio Calibration: None

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
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S 67 NaDONA

377.00 > 251.00 0.0 0

377.00 > 85.00 0.0

QC Flag Legend

Processing Flags

NC - Not Calibrated

ND - Not Detected or Marked ND

R - Failed Signal Ratio Test

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

U - Marked Undetected

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_030.d

Injection Date: 08-Oct-2021 16:05:53

Instrument ID: LCA

Lims ID: MB 140-54326/1-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 1

Worklist Smp#: 30

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

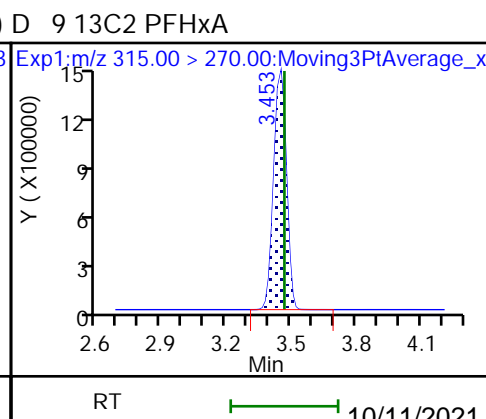
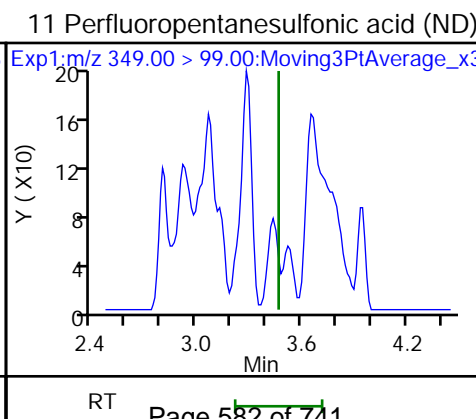
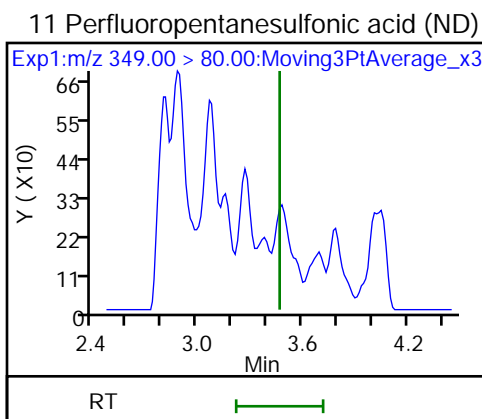
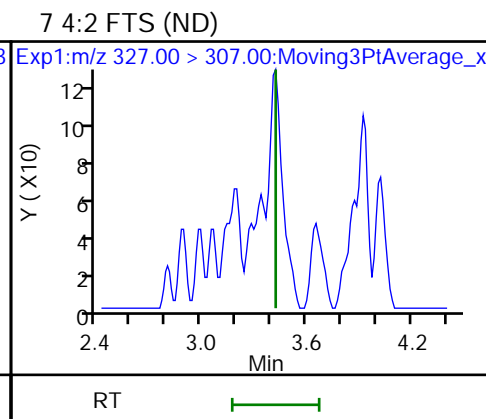
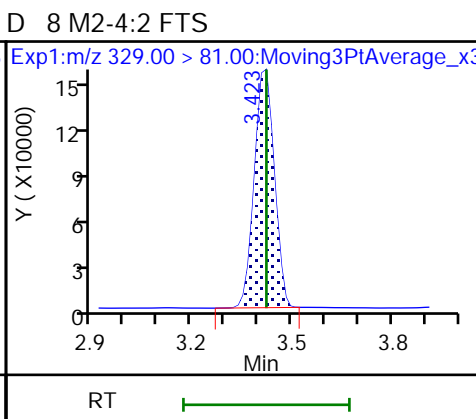
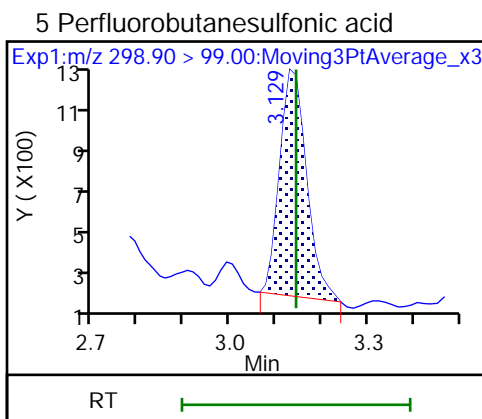
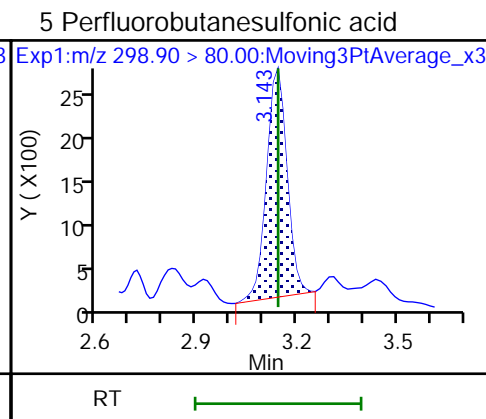
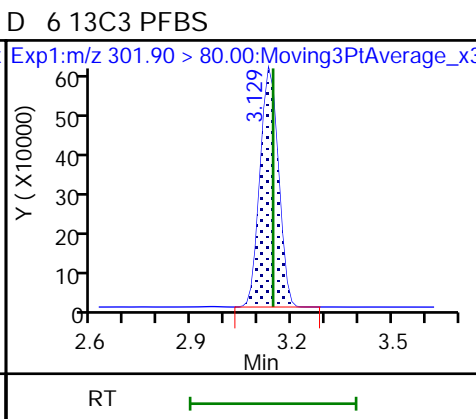
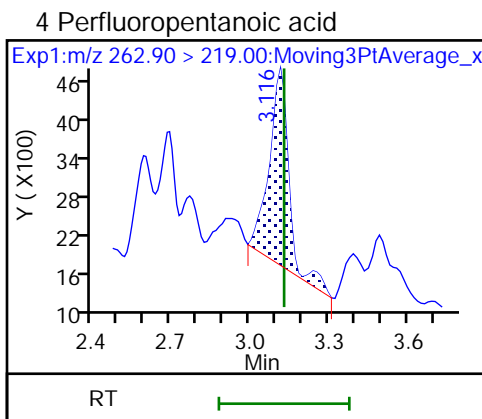
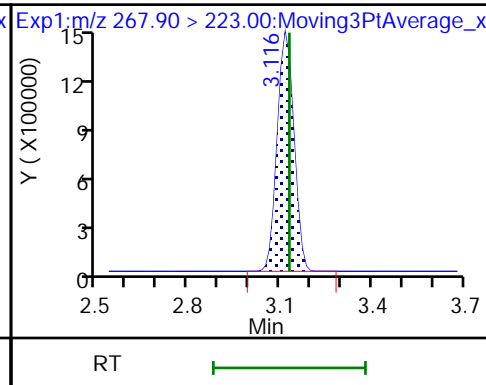
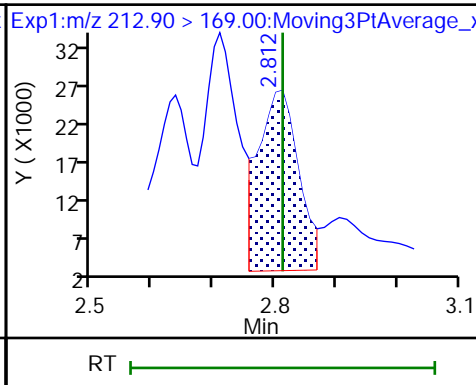
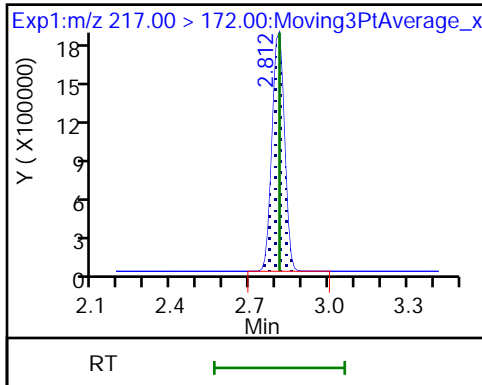
Method: PFC_LCA

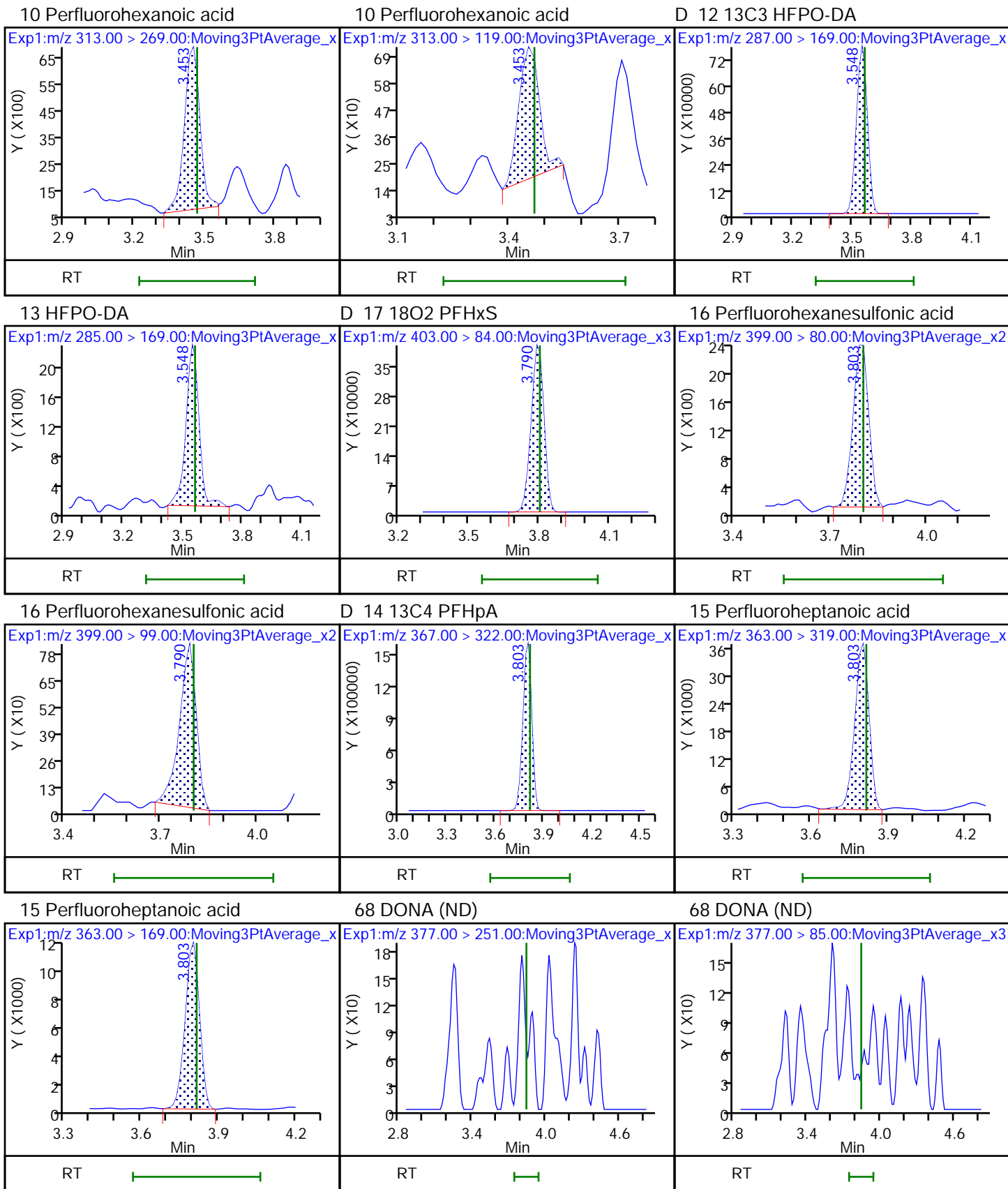
Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

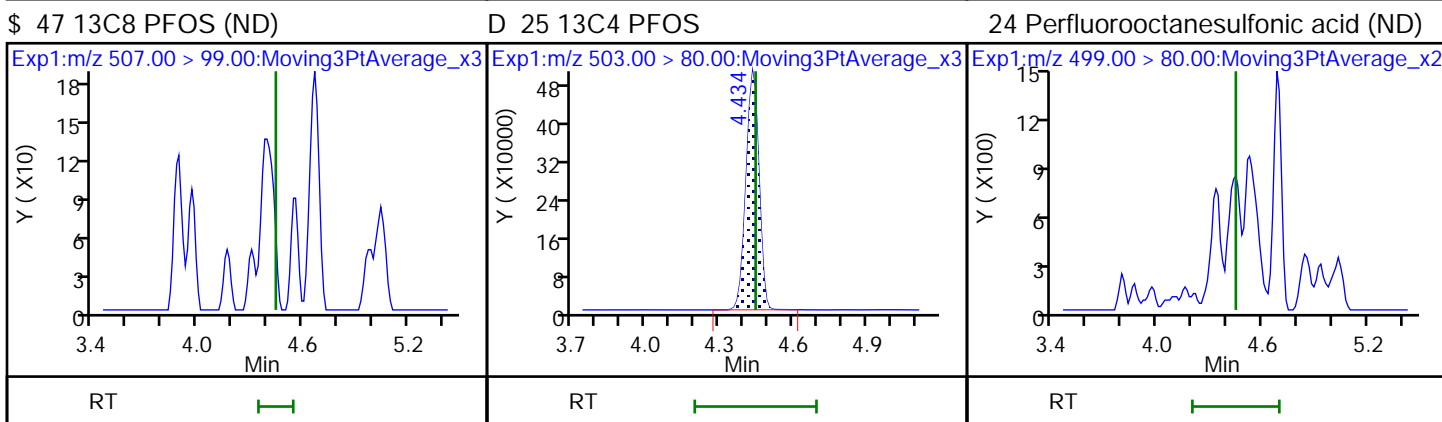
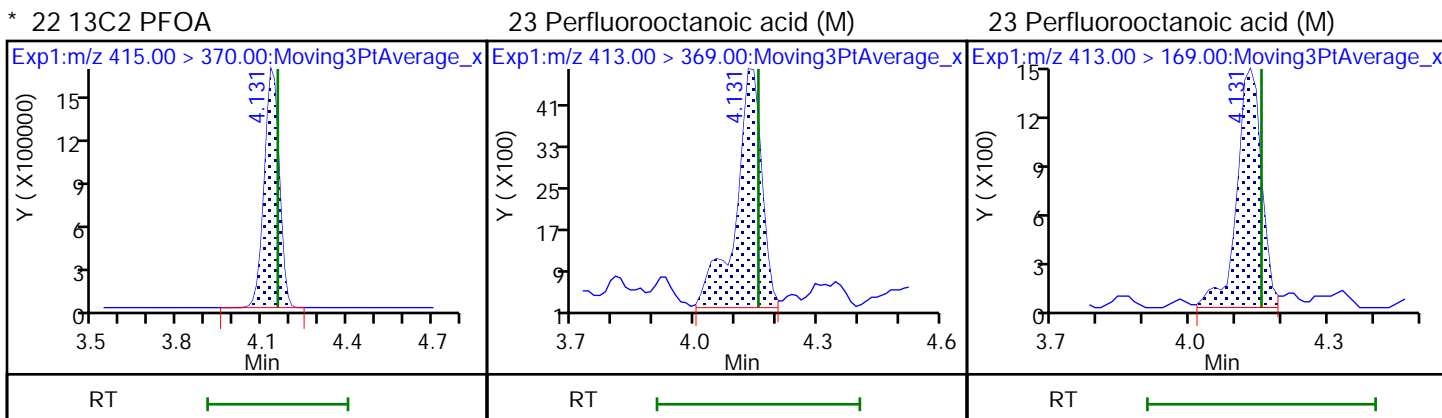
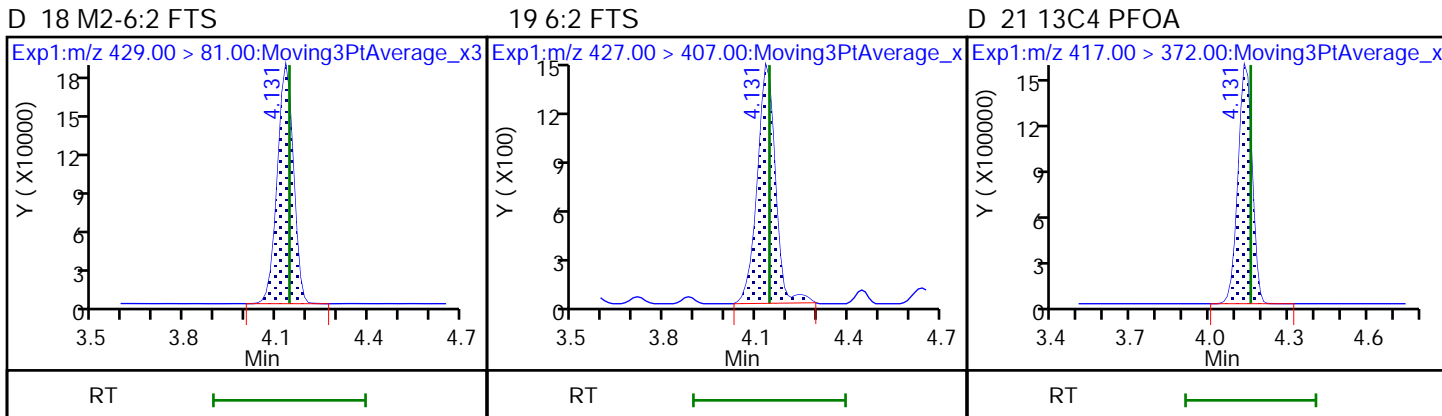
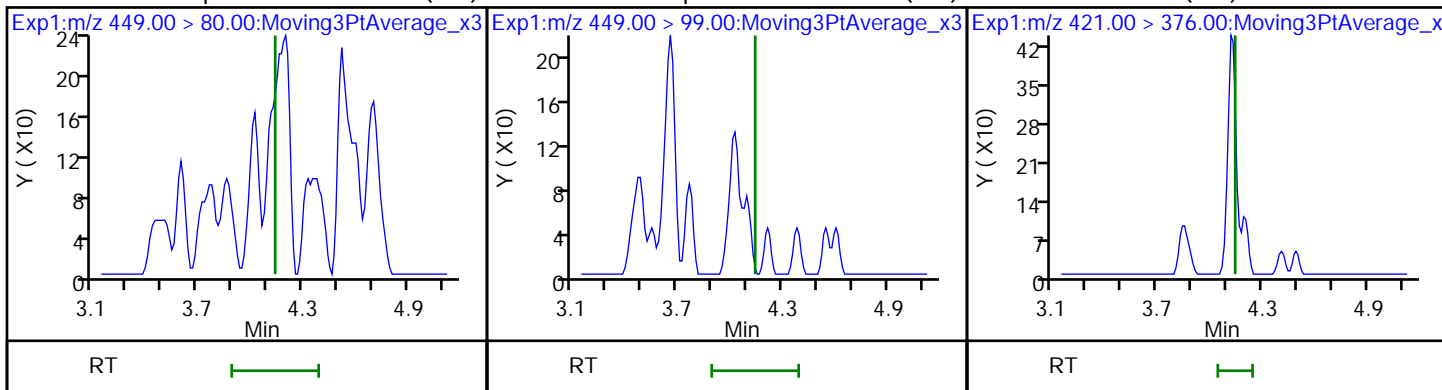
2 Perfluorobutanoic acid

D 3 13C5 PFPeA

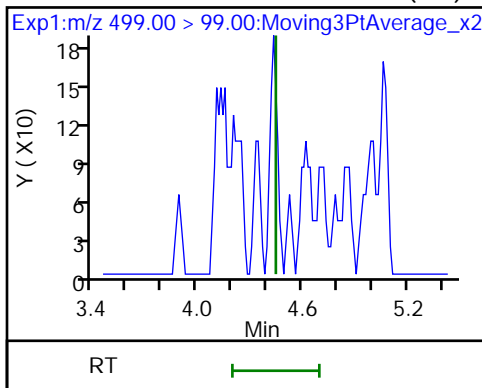




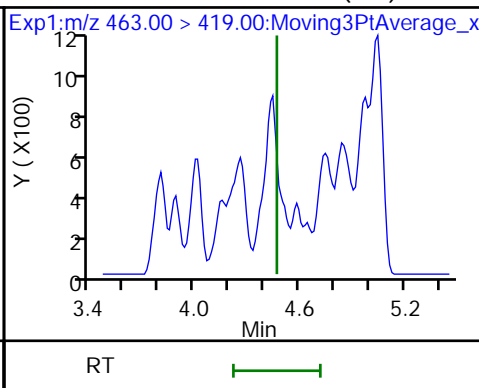
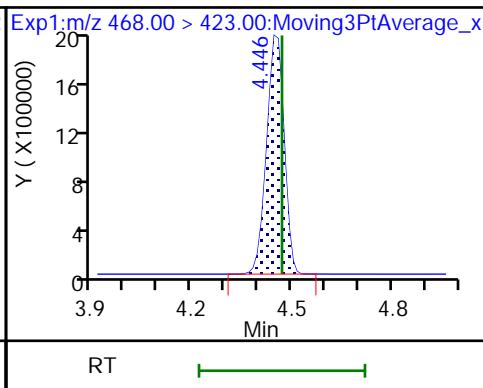
20 Perfluoroheptanesulfonic acid (ND) 20 Perfluoroheptanesulfonic acid (ND) \$ 48 13C8 PFOA (ND)



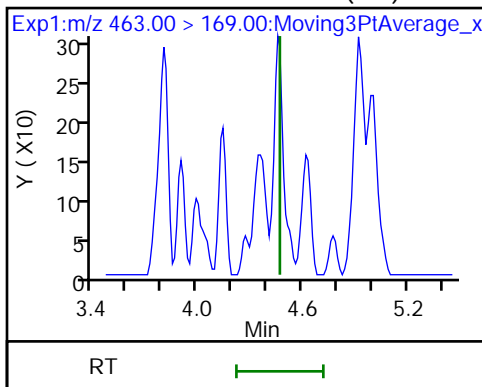
24 Perfluorooctanesulfonic acid (ND) D 27 13C5 PFNA



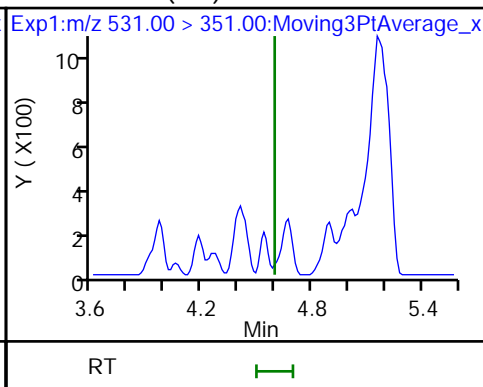
26 Perfluorononanoic acid (ND)



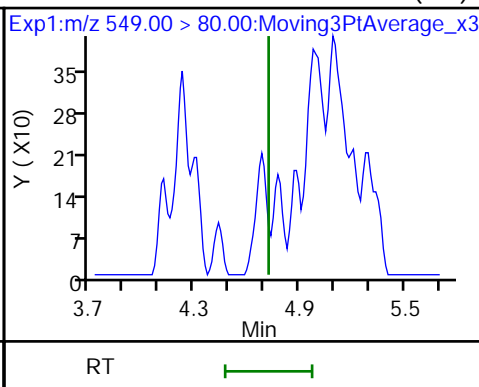
26 Perfluorononanoic acid (ND)



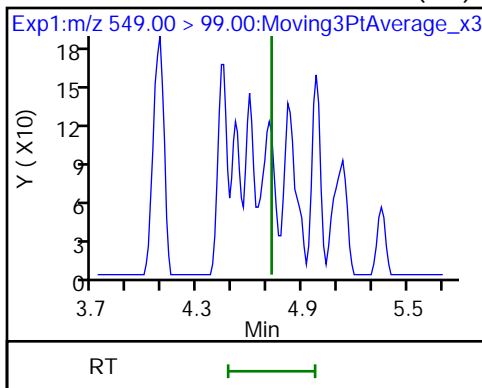
63 9CIFOS (ND)



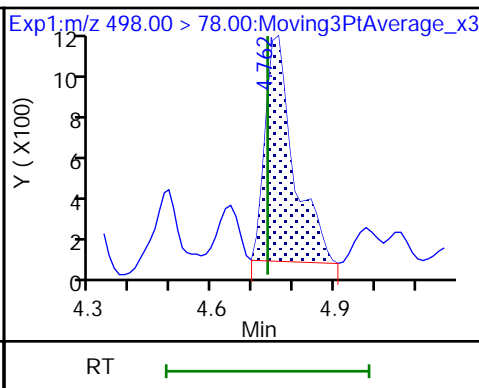
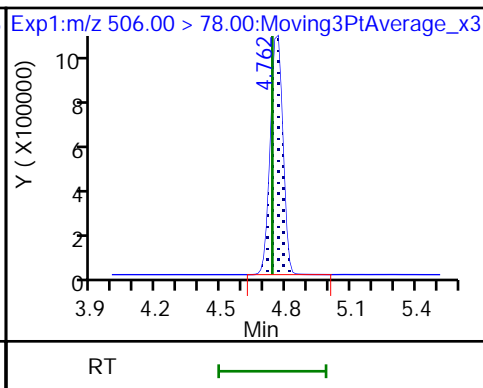
28 Perfluoronanesulfonic acid (ND)



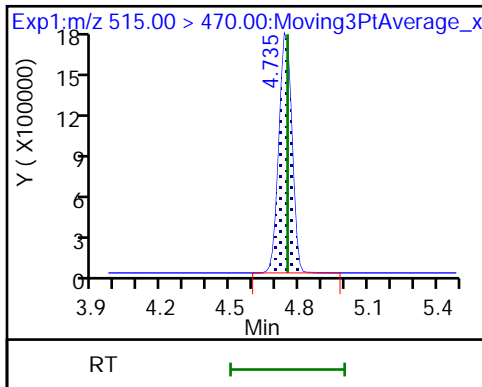
28 Perfluoronanesulfonic acid (ND) D 34 13C8 FOSA



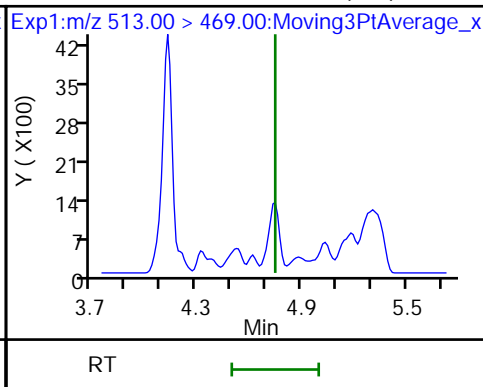
33 Perfluorooctanesulfonamide



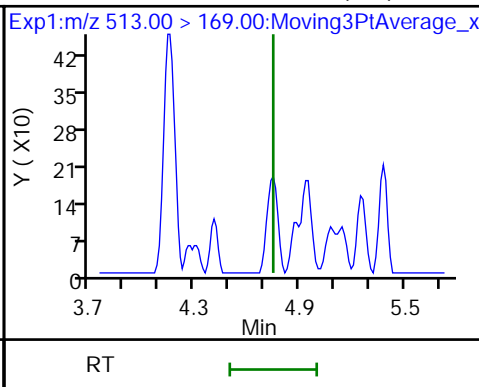
D 32 13C2 PFDA



29 Perfluorodecanoic acid (ND)



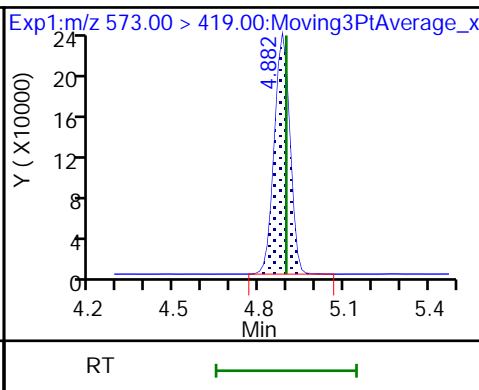
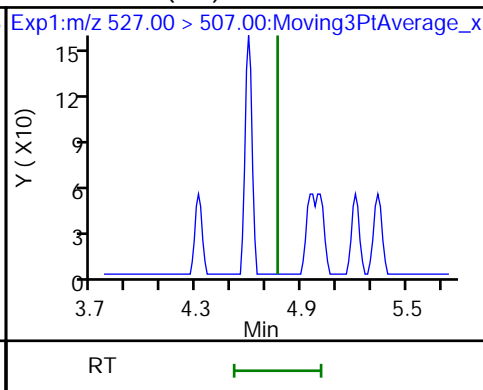
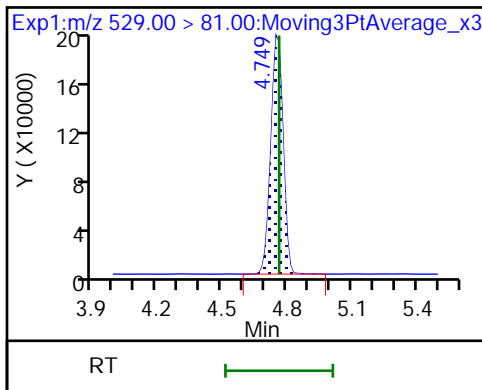
29 Perfluorodecanoic acid (ND)



D 30 M2-8:2 FTS

31 8:2 FTS (ND)

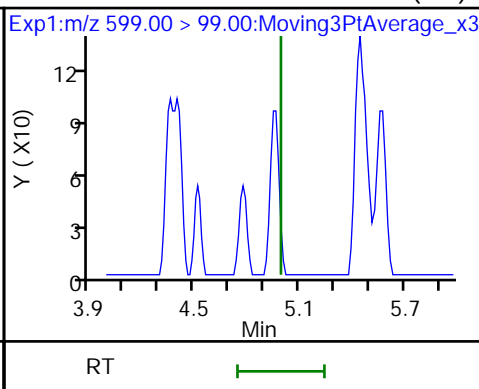
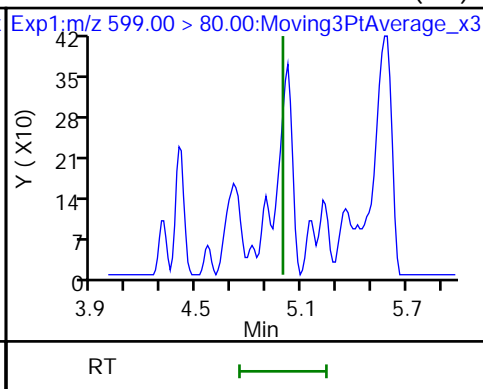
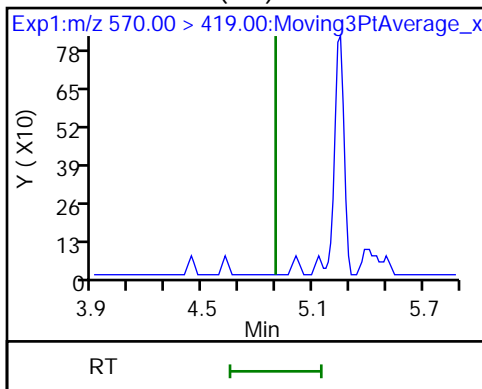
D 35 d3-NMeFOSAA



36 NMeFOSAA (ND)

37 Perfluorodecanesulfonic acid (ND)

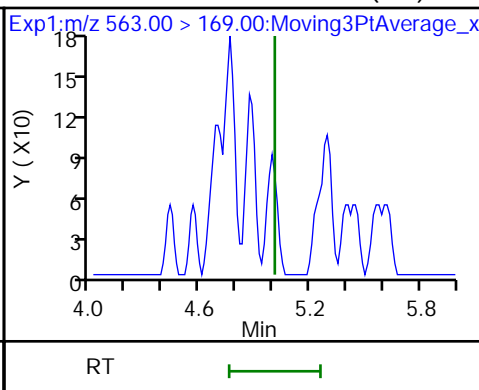
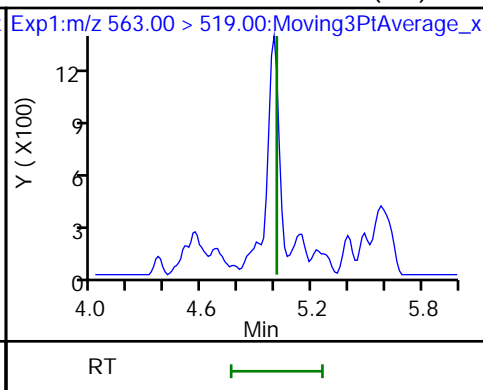
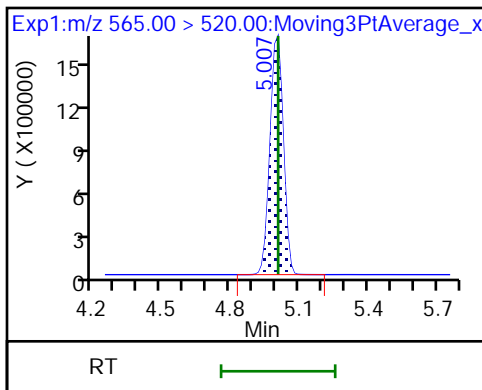
37 Perfluorodecanesulfonic acid (ND)



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid (ND)

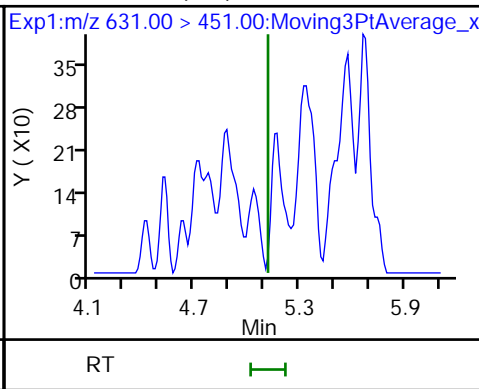
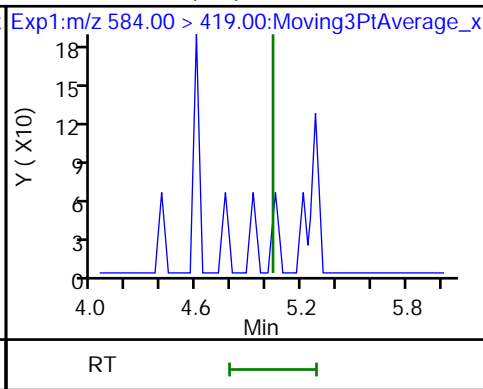
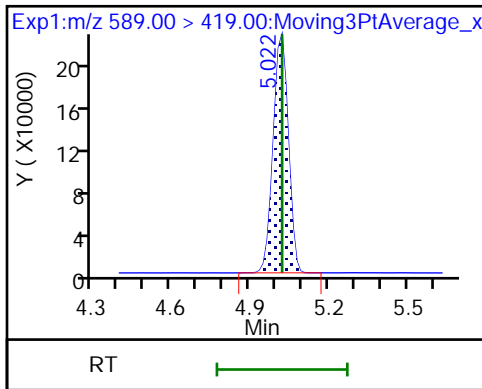
38 Perfluoroundecanoic acid (ND)



D 41 d5-NEtFOSAA

40 NEtFOSA (ND)

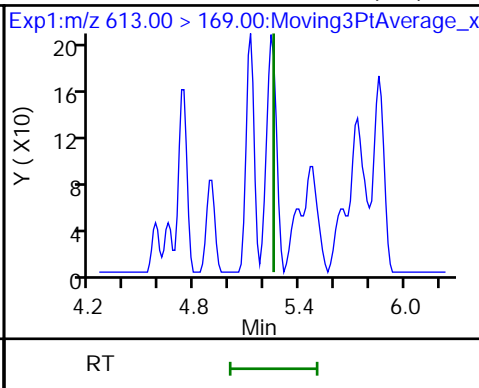
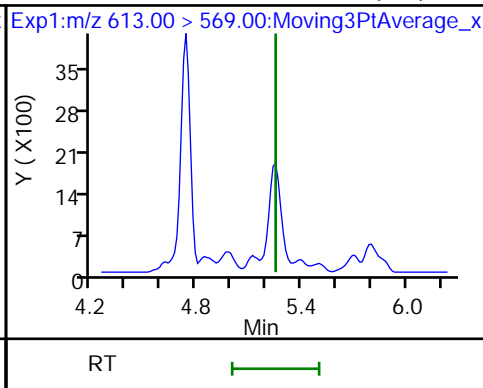
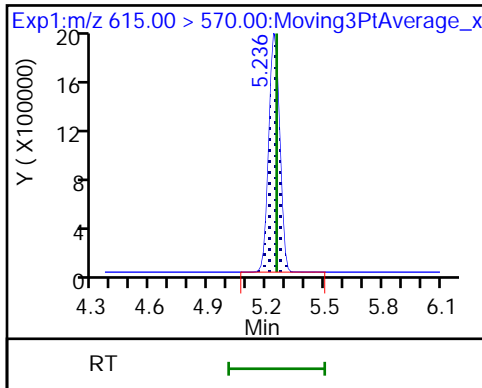
57 11CIFOS (ND)



D 43 13C2 PFDaA

42 Perfluorododecanoic acid (ND)

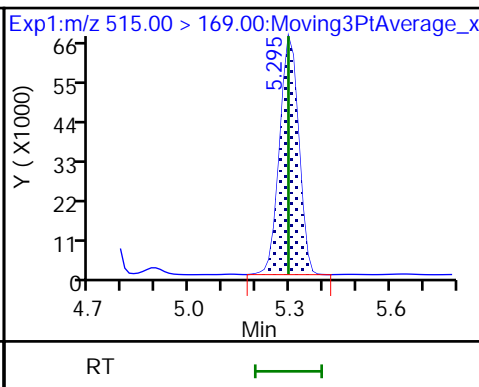
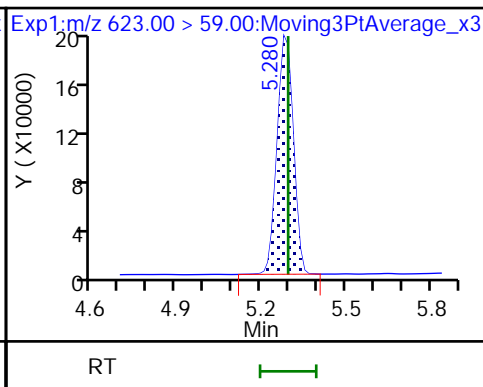
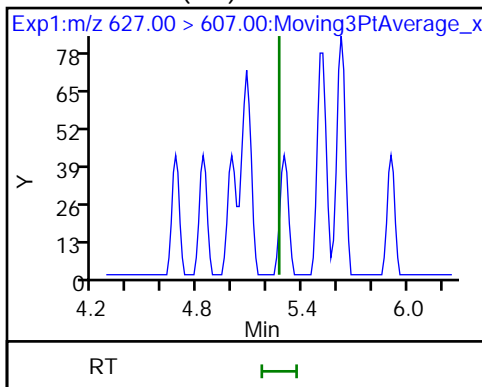
42 Perfluorododecanoic acid (ND)



50 10:2 FTS (ND)

D 51 d7-N-MeFOSE-M

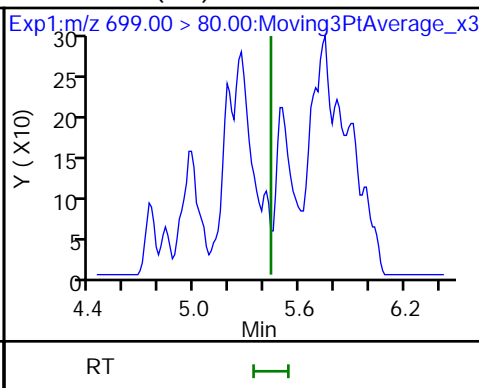
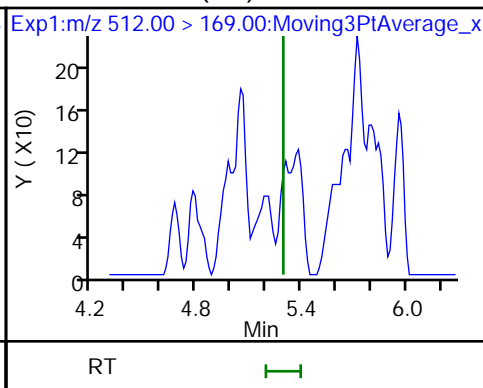
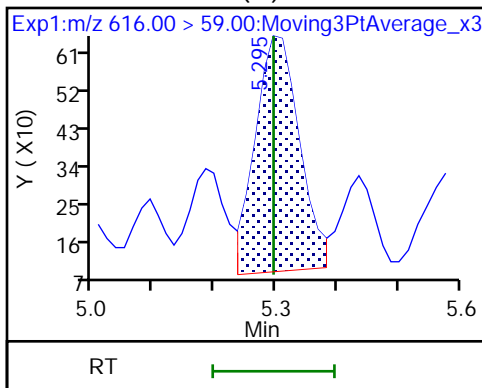
D 58 d-N-MeFOSA-M



49 N-MeFOSE-M (M)

61 NMeFOSA (ND)

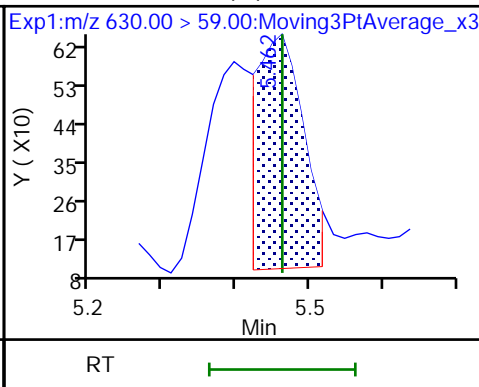
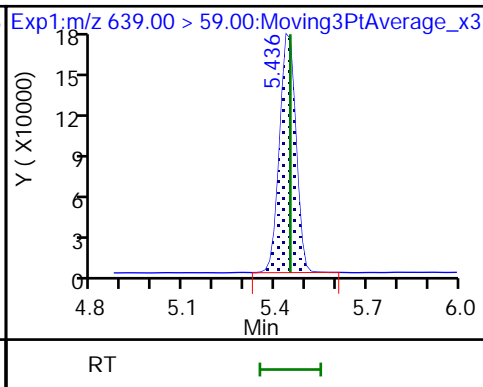
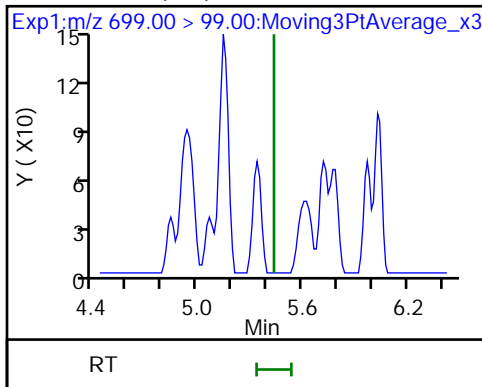
54 PFDoS (ND)



54 PFDoS (ND)

D 53 d9-N-EtFOSE-M

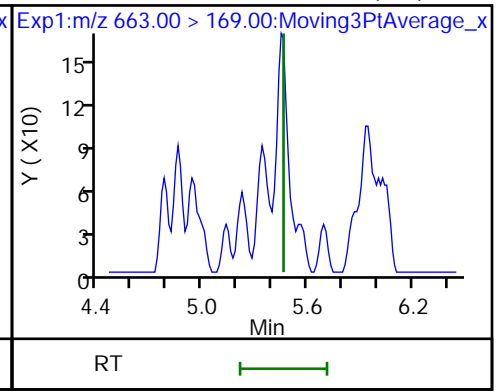
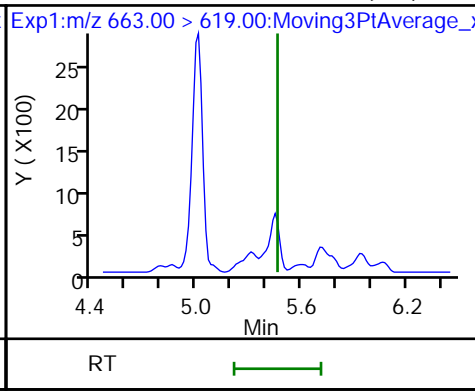
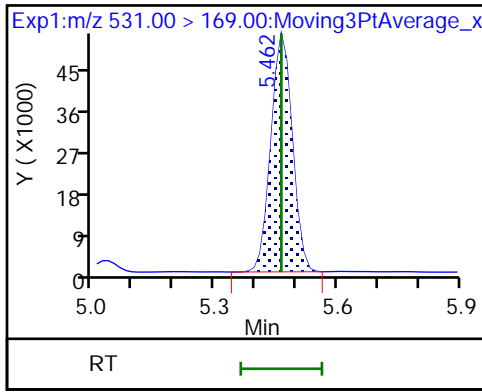
62 N-EtFOSE-M (M)



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid (ND)

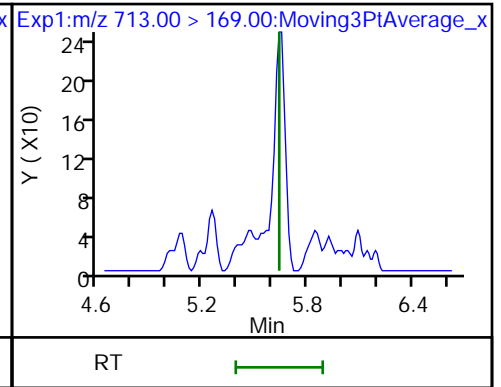
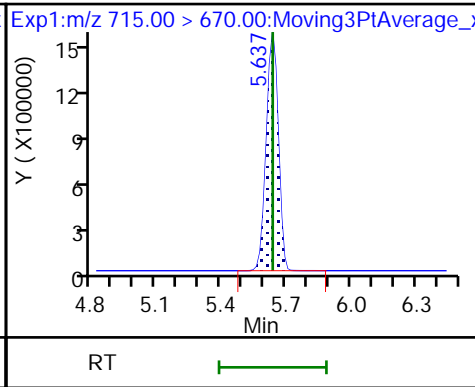
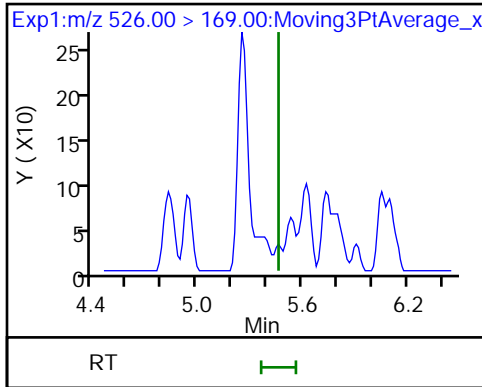
44 Perfluorotridecanoic acid (ND)



56 N-EtFOSA-M (ND)

D 46 13C2 PFTeDA

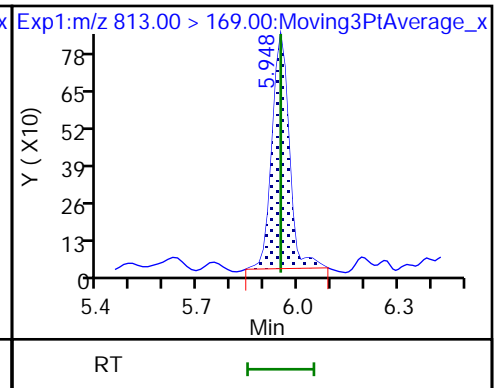
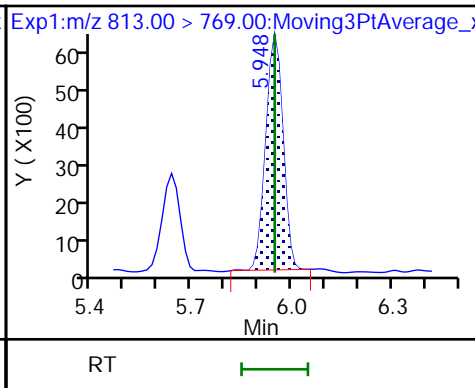
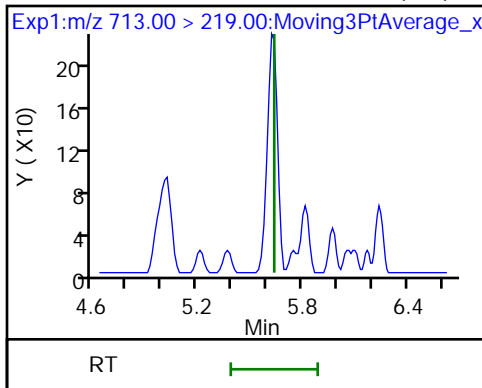
45 Perfluorotetradecanoic acid (ND)



45 Perfluorotetradecanoic acid (ND)

55 Perfluorohexadecanoic acid

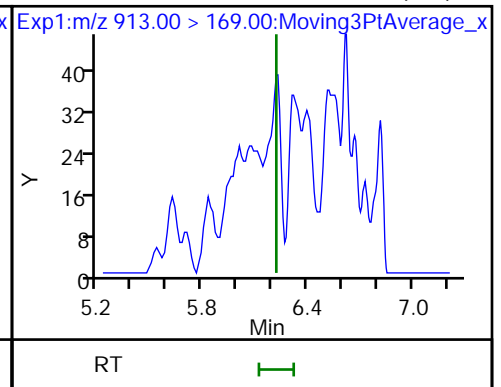
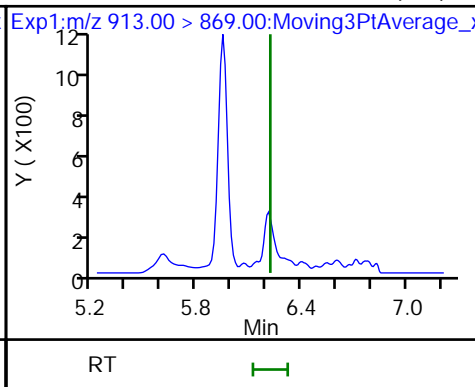
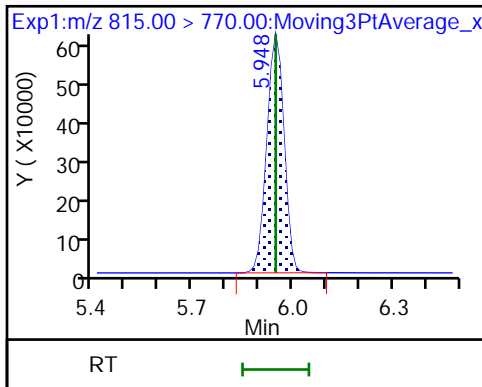
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid (ND)

60 Perfluorooctadecanoic acid (ND)



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-54348/1-B
 Matrix: Air Lab File ID: _039.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: None Date Extracted: 09/30/2021 08:55
 Sample wt/vol: 1(Sample) Date Analyzed: 10/07/2021 02:10
 Con. Extract Vol.: 10(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: GeminiC18 3x100 ID: 3(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54568 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	ND		0.000500	0.0000825

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	84		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_039.d
 Lims ID: MB 140-54348/1-B
 Client ID:
 Sample Type: MB
 Inject. Date: 07-Oct-2021 02:10:12 ALS Bottle#: 39 Worklist Smp#: 39
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-039 mb 140-54348/1-b
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 17:25:19 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675
 First Level Reviewer: cochranj Date: 09-Oct-2021 17:21:15
 Ratio Calibration: None

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	2.801	2.801	0.0	0.678	7534544	1.09		87.5	17165	
2 Perfluorobutanoic acid										7
212.90 > 169.00	2.801	2.812	-0.011	1.000	4041	0.000854		1.0	7	
LOD = 0.0100										
D 3 13C5 PFPeA										
267.90 > 223.00	3.116	3.129	-0.013	0.754	6218354	1.10		87.9	13538	
4 Perfluoropentanoic acid										7
262.90 > 219.00	3.116	3.129	-0.013	1.000	10018	0.001988		2.5	7	
LOD = 0.006500										
D 6 13C3 PFBS										
301.90 > 80.00	3.130	3.129	0.001	0.758	3585069	0.9816		84.4	21505	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00		3.143				ND				
298.90 > 99.00		3.143								
D 8 M2-4:2 FTS										
329.00 > 81.00	3.409	3.423	-0.014	0.825	597864	1.09		93.5	1278	
7 4:2 FTS										
327.00 > 307.00		3.423				ND				
11 Perfluoropentanesulfonic acid										
349.00 > 80.00		3.453				ND				
349.00 > 99.00		3.453								
D 9 13C2 PFHxA										
315.00 > 270.00	3.437	3.469	-0.032	0.832	6300907	1.08		86.8	19209	
10 Perfluorohexanoic acid										
313.00 > 269.00		3.469				ND				
313.00 > 119.00		3.469								

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.535	3.561	-0.026	0.856	3121917	1.05		84.0	9245	
13 HFPO-DA										
285.00 > 169.00	3.548	3.561	-0.013	1.004	4933	-0.004857		4.1	7	7
LOD = 0.008250										
S 65 ADONA										
377.00 > 251.00		3.592				0				
D 17 18O2 PFHxS										
403.00 > 84.00	3.791	3.803	-0.012	0.918	2256334	1.02		86.3	14534	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.791	3.803	-0.012	1.000	7605	-0.002145	Target=2.96	34.7	7	7
399.00 > 99.00	3.791	3.803	-0.012	1.000	2449		3.11(1.48-4.44)	24.9		
LOD = 0.005000										
D 14 13C4 PFHpA										
367.00 > 322.00	3.791	3.815	-0.024	0.918	6375339	1.10		88.1	16249	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.791	3.815	-0.024	1.000	6786	-0.003429	Target=3.35	6.3	7	7
363.00 > 169.00	3.803	3.815	-0.012	1.003	2508		2.71(1.67-5.02)	20.6		
LOD = 0.004250										
68 DONA										
377.00 > 251.00		3.840				ND				
377.00 > 85.00		3.840								
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00		4.143				ND				
449.00 > 99.00		4.143								
\$ 48 13C8 PFOA										
421.00 > 376.00		4.143				ND				U
D 18 M2-6:2 FTS										
429.00 > 81.00	4.118	4.143	-0.025	0.997	656121	1.17		98.5	4553	
19 6:2 FTS										
427.00 > 407.00		4.143				ND				
D 21 13C4 PFOA										
417.00 > 372.00	4.130	4.155	-0.025	1.000	5877903	1.12		89.8	18877	
* 22 13C2 PFOA										
415.00 > 370.00	4.130	4.155	-0.025		6504302	1.25			20548	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.118	4.155	-0.037	0.997	9214	-0.006874	Target=2.40	3.9	7M	7M
413.00 > 169.00	4.130	4.155	-0.025	1.000	2721		3.39(1.20-3.61)	6.9		
LOD = 0.007800										
\$ 47 13C8 PFOS										
507.00 > 99.00		4.447				ND				
D 25 13C4 PFOS										
503.00 > 80.00	4.421	4.447	-0.025	1.070	3113427	1.02		85.6	11633	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00		4.447				ND				
499.00 > 99.00		4.447								
D 27 13C5 PFNA										
468.00 > 423.00	4.446	4.470	-0.024	1.077	7257264	1.09		87.2	26033	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
26 Perfluorononanoic acid										
463.00 > 419.00		4.470				ND				
463.00 > 169.00		4.470								
63 9CIFOS										
531.00 > 351.00		4.596				ND				
28 Perfluorononanesulfonic acid										
549.00 > 80.00		4.722				ND				
549.00 > 99.00		4.722								
D 34 13C8 FOSA										
506.00 > 78.00	4.722	4.736	-0.014	1.143	4925762	1.10		88.2	6168	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.722	4.736	-0.014	1.000	2732	0.000722		6.8	7M	7M
LOD = 0.004400										
D 32 13C2 PFDA										
515.00 > 470.00	4.735	4.749	-0.014	1.146	7378676	1.09		87.6	18436	
29 Perfluorodecanoic acid										
513.00 > 469.00		4.749				ND				
513.00 > 169.00		4.749								
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.763	-0.014	1.150	744843	1.09		90.8	3846	
31 8:2 FTS										
527.00 > 507.00		4.763				ND				
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.869	4.896	-0.027	1.179	1007326	1.09		87.3	3763	
36 NMeFOSAA										
570.00 > 419.00		4.896				ND				
37 Perfluorodecanesulfonic acid										
599.00 > 80.00		4.993				ND				
599.00 > 99.00		4.993								
69 Perfluoro-3,6,9-trioxatridecanoic acid										
561.00 > 467.00	4.935	4.994	-0.059	1.116	2603	NC	Target=0.00		0.5	
561.00 > 235.00	4.922	4.994	-0.072	1.113	2419		1.08(0.00-0.00)		0.8	
D 39 13C2 PFUnA										
565.00 > 520.00	4.993	5.022	-0.029	1.209	6780632	1.05		84.3	10488	
38 Perfluoroundecanoic acid										
563.00 > 519.00		5.022				ND				
563.00 > 169.00		5.022								
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.007	5.036	-0.029	1.212	937707	1.06		84.6	4080	
40 NEtFOSA										
584.00 > 419.00		5.036				ND				
57 11CIFOS										
631.00 > 451.00		5.119				ND				
D 43 13C2 PFDaA										
615.00 > 570.00	5.223	5.251	-0.028	1.265	7809192	1.14		91.0	30202	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
42 Perfluorododecanoic acid										
613.00 > 569.00		5.251				ND				
613.00 > 169.00		5.251								
50 10:2 FTS										
627.00 > 607.00		5.266				ND				
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.280	5.281	-0.001	1.278	660718	1.18		94.5	433	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.282	604271	1.04		83.0	36.0	
49 N-MeFOSE-M										
616.00 > 59.00		5.295				ND				
61 NMeFOSA										
512.00 > 169.00		5.295				ND				
54 PFDoS										
699.00 > 80.00		5.436				ND				
699.00 > 99.00		5.436								
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.435	5.436	-0.001	1.316	703698	1.18		94.4	771	
62 N-EtFOSE-M										
630.00 > 59.00		5.449				ND				
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.449	0.013	1.322	535378	1.09		87.4	814	
44 Perfluorotridecanoic acid										
663.00 > 619.00		5.462				ND				
663.00 > 169.00		5.462								
56 N-EtFOSA-M										
526.00 > 169.00		5.462				ND				
D 46 13C2 PFTeDA										
715.00 > 670.00	5.623	5.637	-0.014	1.361	6663643	1.06		84.6	29226	
45 Perfluorotetradecanoic acid										
713.00 > 169.00		5.637				ND				
713.00 > 219.00		5.637								
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.935	5.948	-0.013	1.000	49130	-0.002093	Target=7.50	56.3	7	7
813.00 > 169.00	5.935	5.948	-0.013	1.000	5438		9.03(3.75-11.26)	49.2		
LOD = 0.009000										
D 59 13C2 PFHxDA										
815.00 > 770.00	5.935	5.948	-0.013	1.437	4997792	1.09		87.5	6106	
60 Perfluorooctadecanoic acid										
913.00 > 869.00		6.221				ND				
913.00 > 169.00		6.221								
S 66 F-53B										
212.90 > 169.00		0.0				0				
S 67 NaDONA										
377.00 > 251.00		0.0				0				
377.00 > 85.00		0.0								

QC Flag Legend

Processing Flags

NC - Not Calibrated

ND - Not Detected or Marked ND

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

U - Marked Undetected

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_039.d

Injection Date: 07-Oct-2021 02:10:12

Instrument ID: LCA

Lims ID: MB 140-54348/1-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 39

Worklist Smp#: 39

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

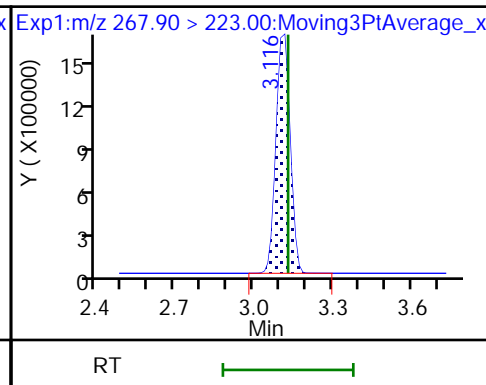
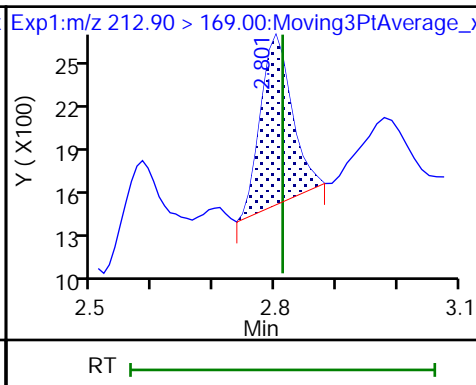
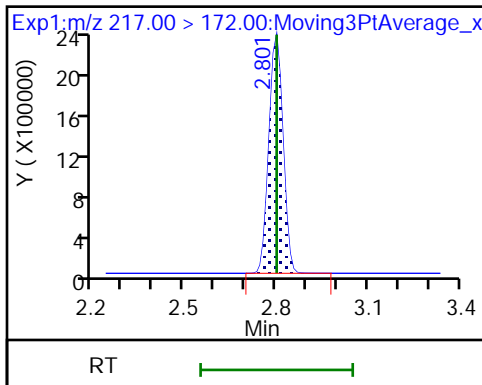
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

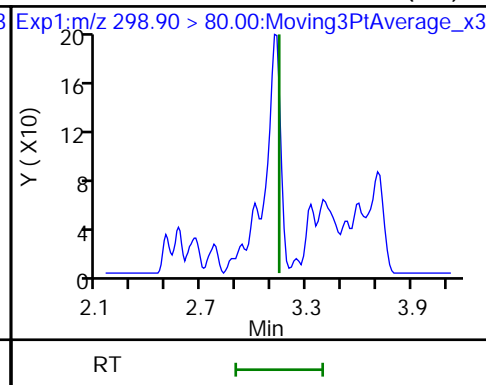
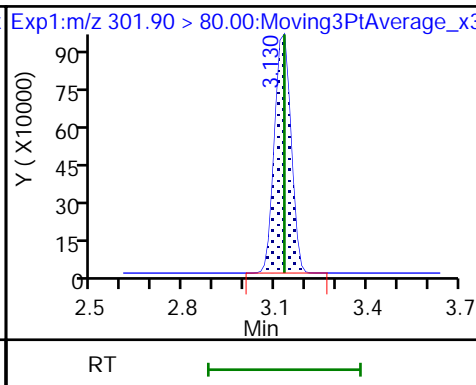
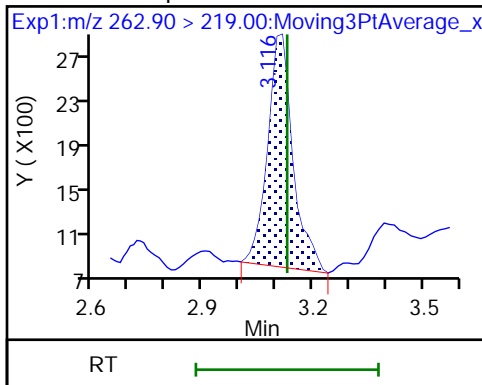
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

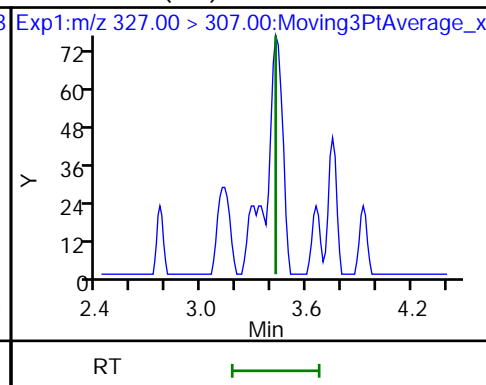
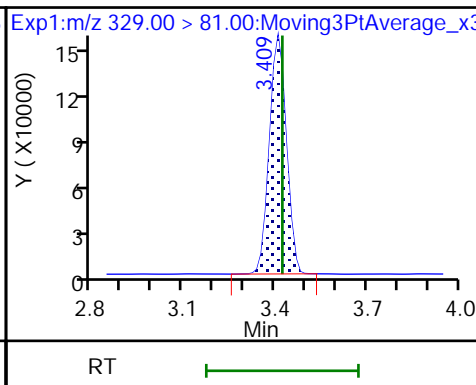
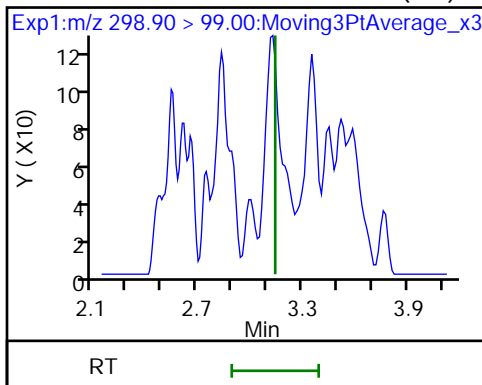
5 Perfluorobutanesulfonic acid (ND)



5 Perfluorobutanesulfonic acid (ND)

D 8 M2-4:2 FTS

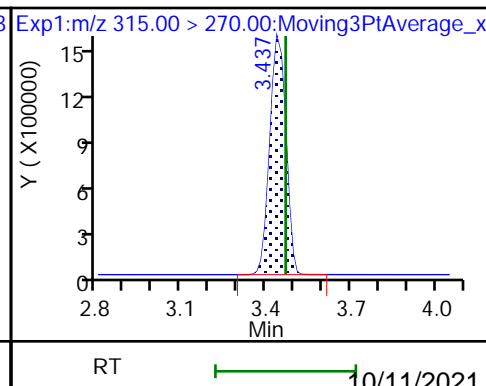
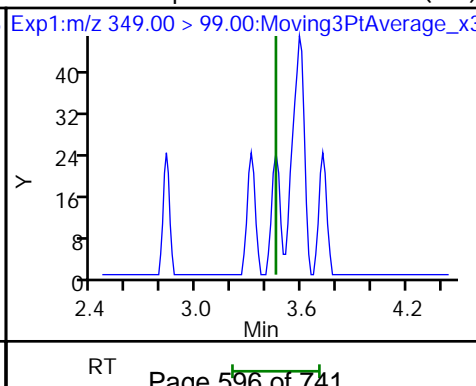
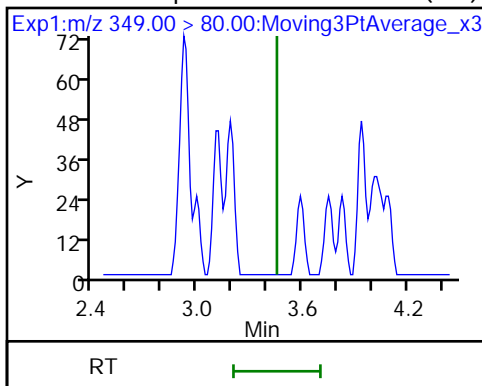
7 4:2 FTS (ND)

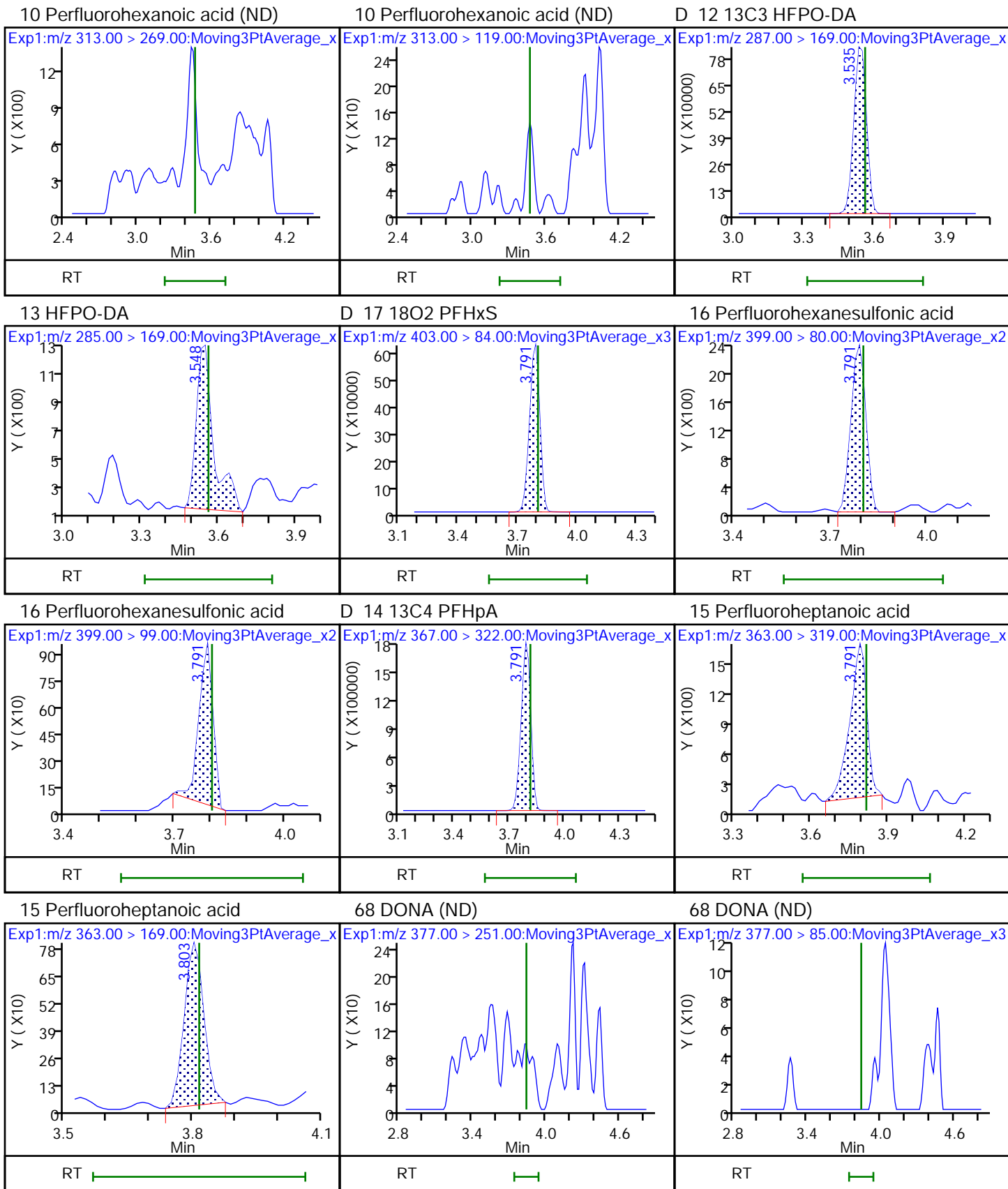


11 Perfluoropentanesulfonic acid (ND)

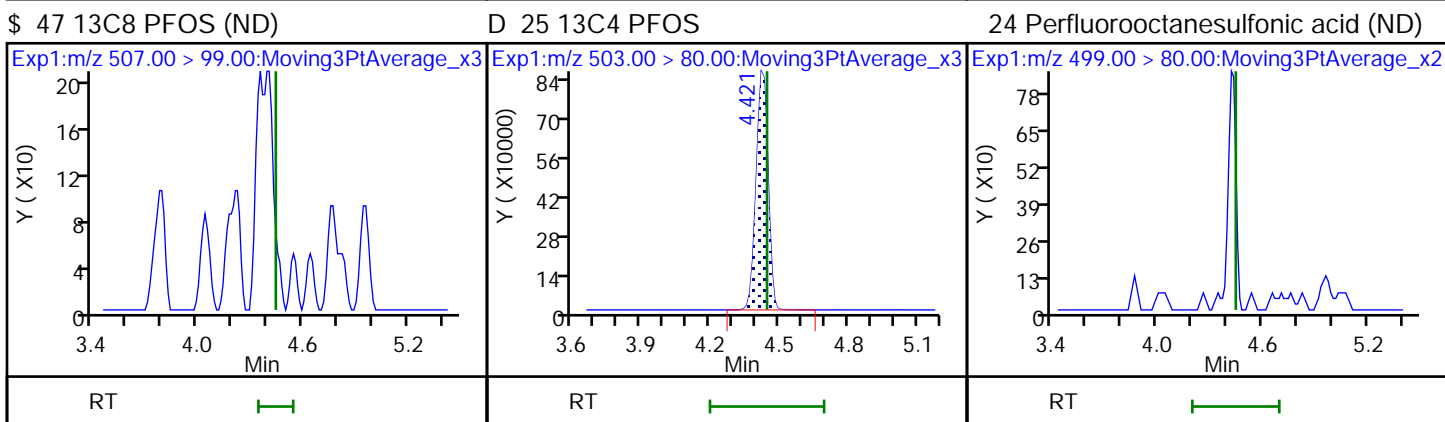
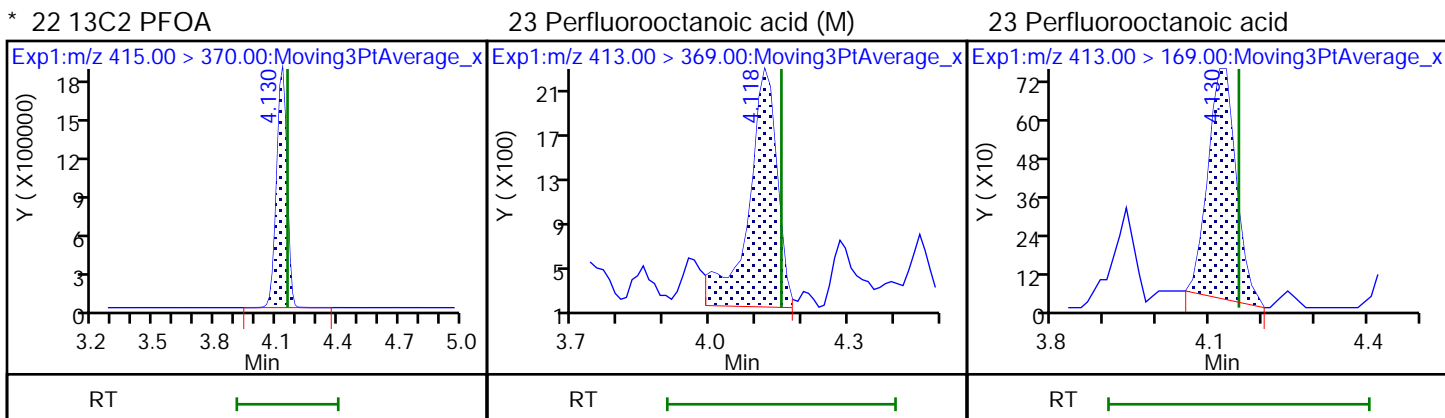
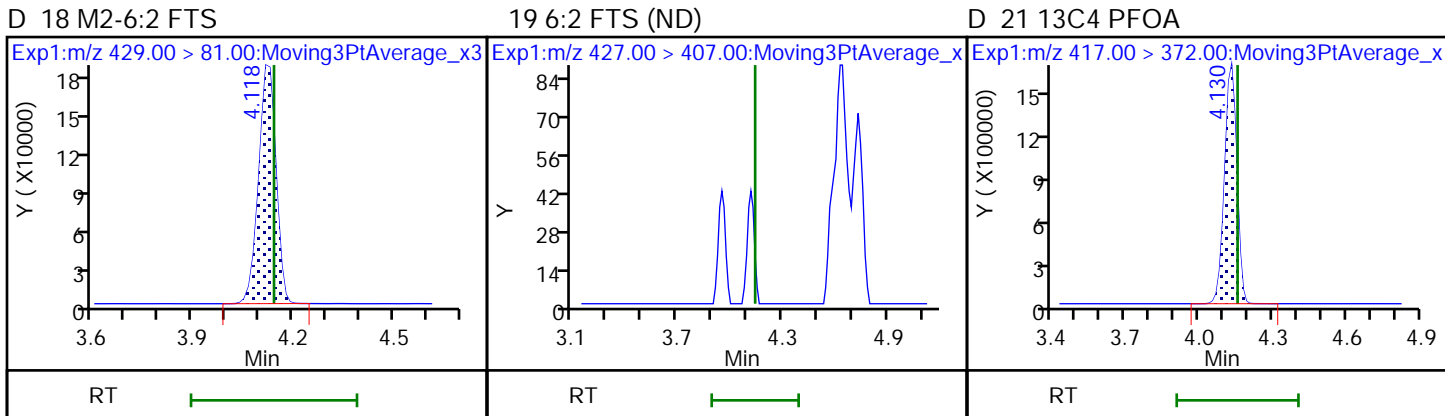
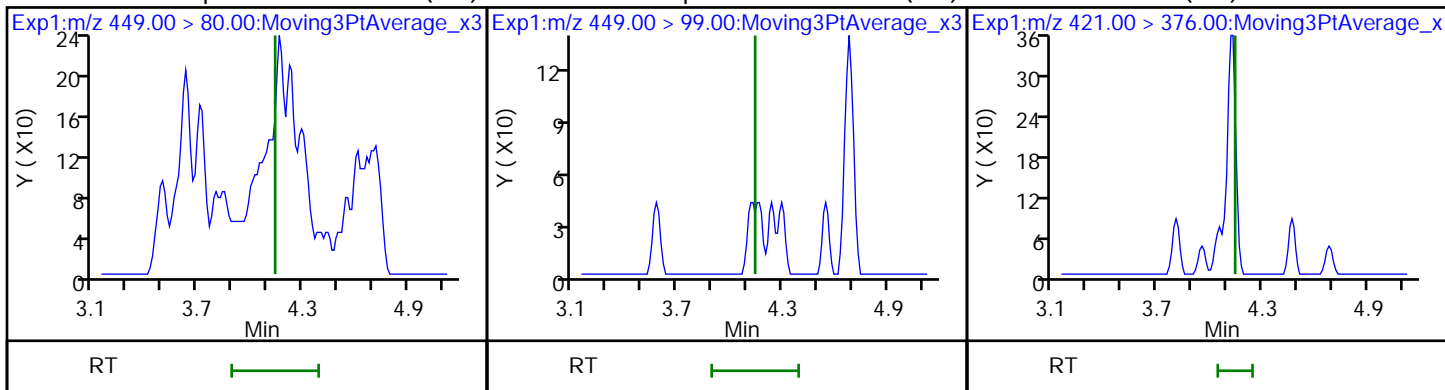
11 Perfluoropentanesulfonic acid (ND)

D 9 13C2 PFHxA

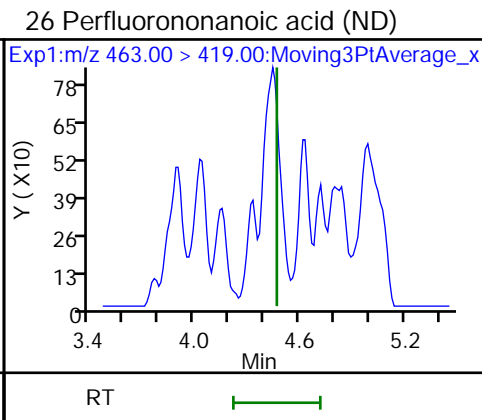
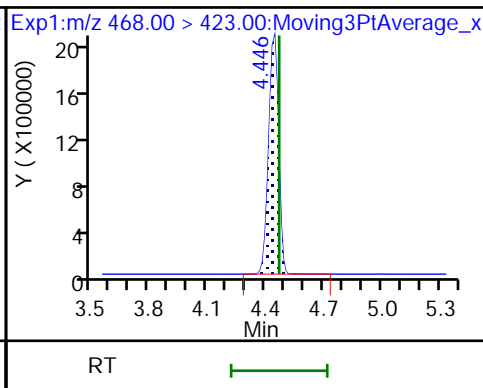
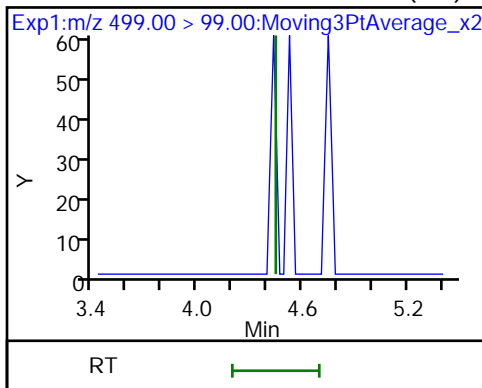




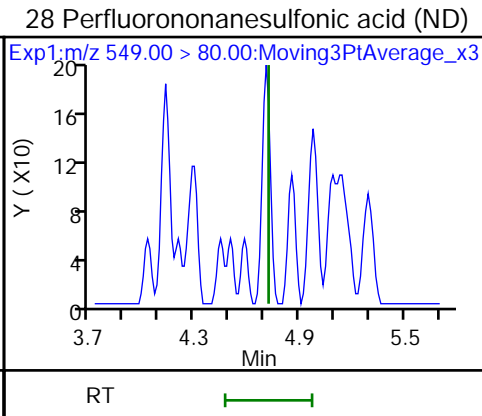
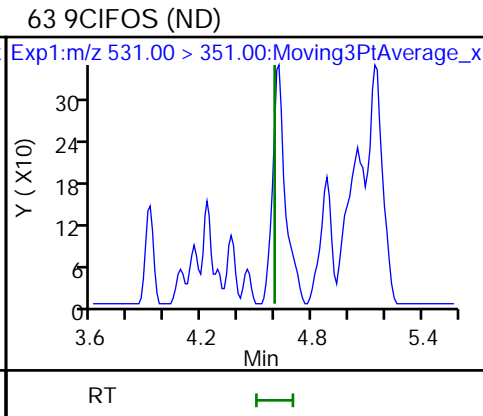
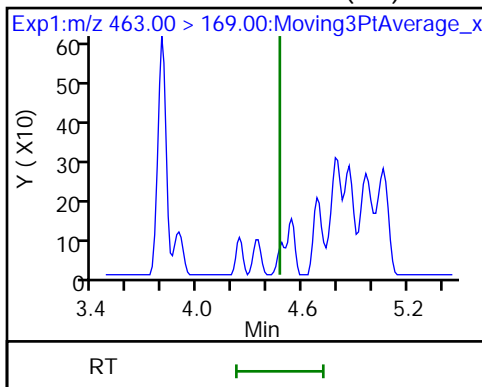
20 Perfluoroheptanesulfonic acid (ND) 20 Perfluoroheptanesulfonic acid (ND) \$ 48 13C8 PFOA (ND)



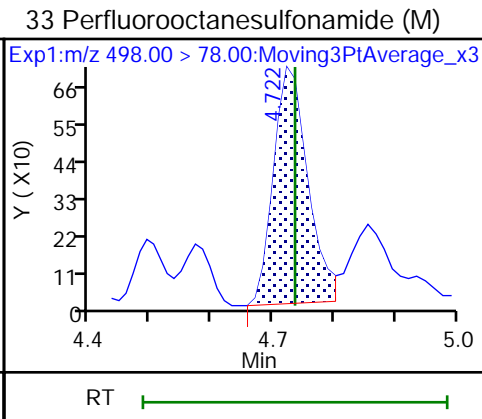
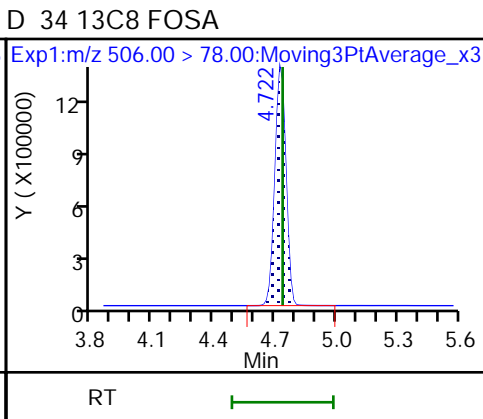
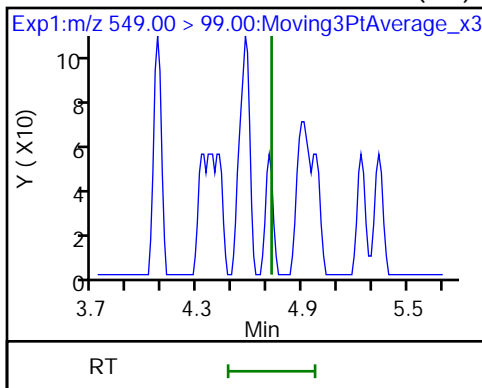
24 Perfluorooctanesulfonic acid (ND) D 27 13C5 PFNA



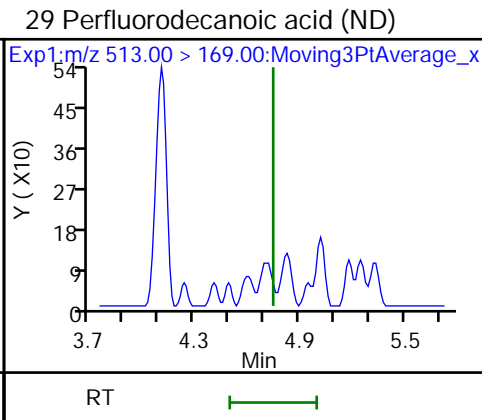
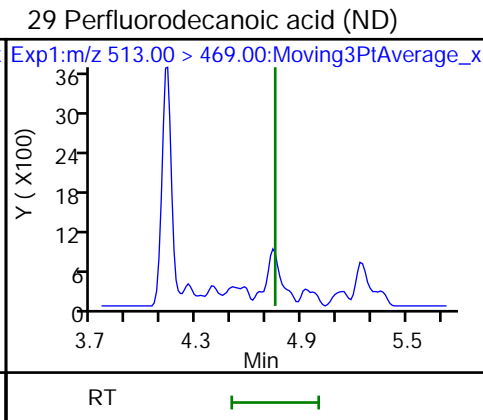
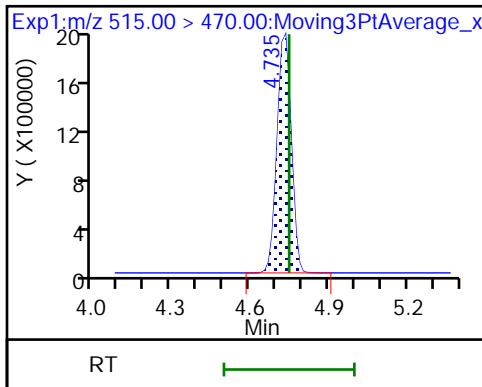
26 Perfluorononanoic acid (ND)



28 Perfluoronanesulfonic acid (ND) D 34 13C8 FOSA



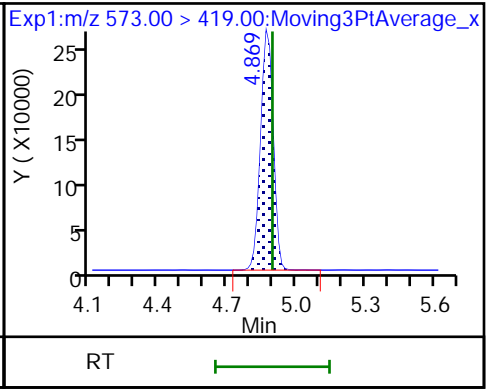
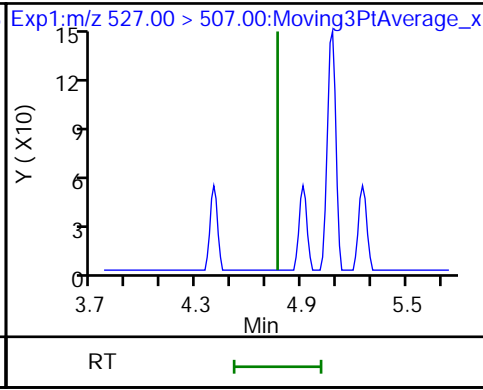
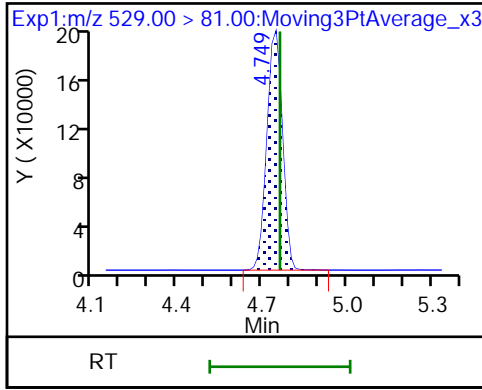
D 32 13C2 PFDA



D 30 M2-8:2 FTS

31 8:2 FTS (ND)

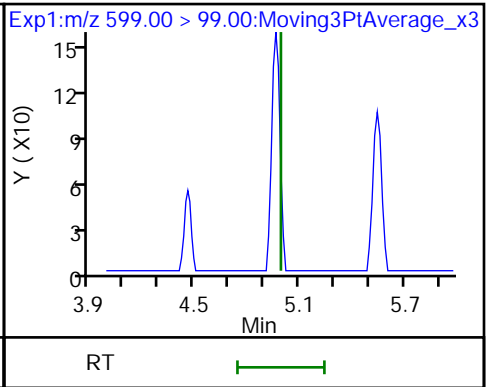
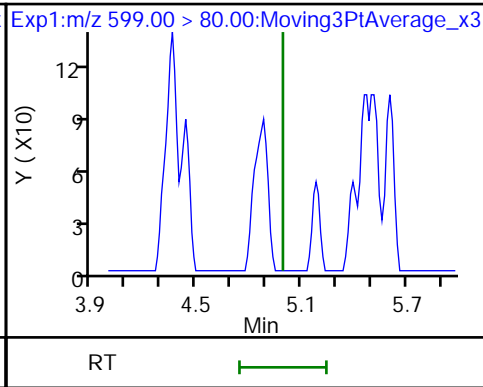
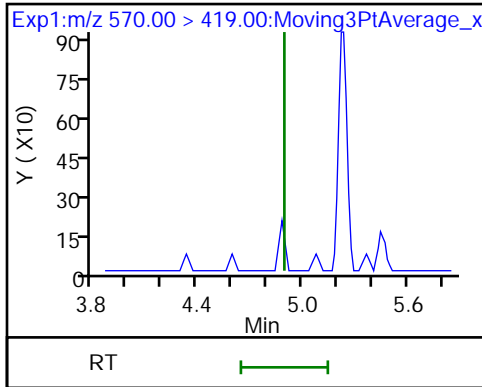
D 35 d3-NMeFOSAA



36 NMeFOSAA (ND)

37 Perfluorodecanesulfonic acid (ND)

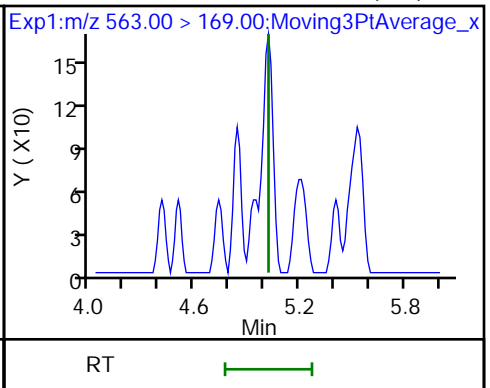
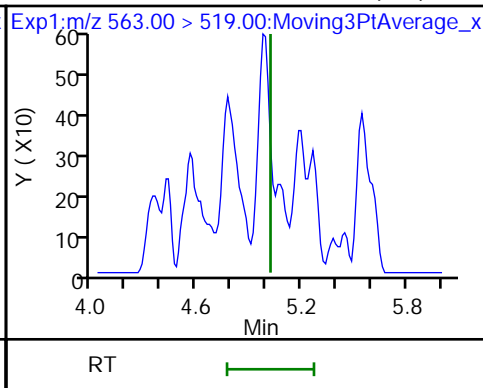
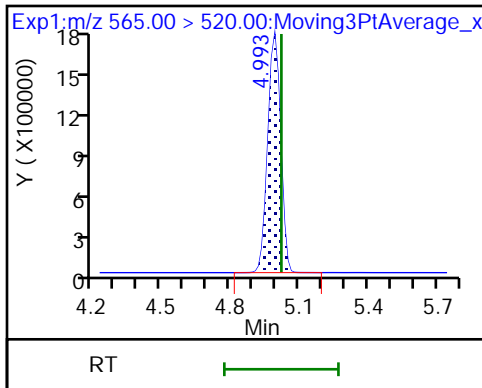
37 Perfluorodecanesulfonic acid (ND)



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid (ND)

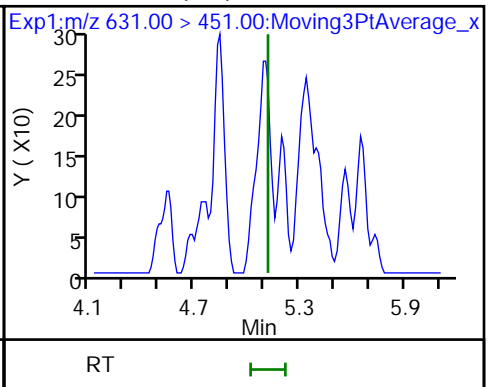
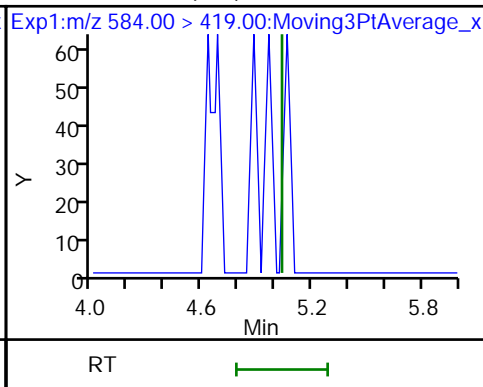
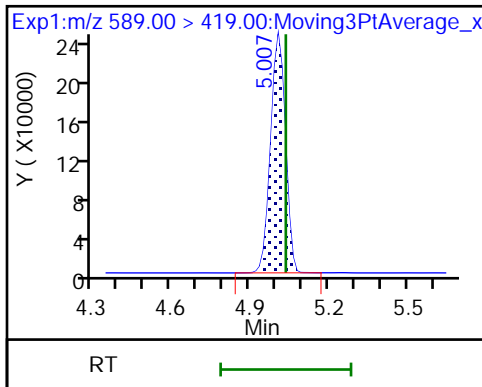
38 Perfluoroundecanoic acid (ND)



D 41 d5-NEtFOSAA

40 NEtFOSA (ND)

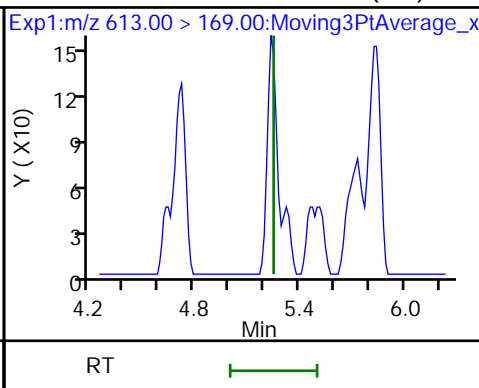
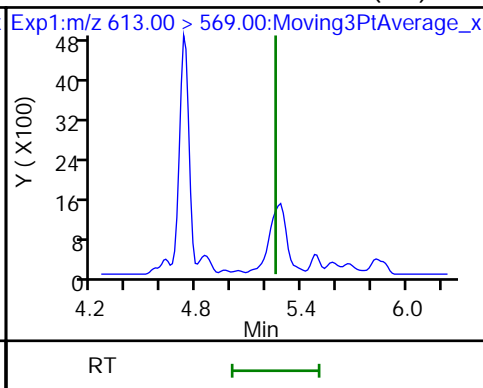
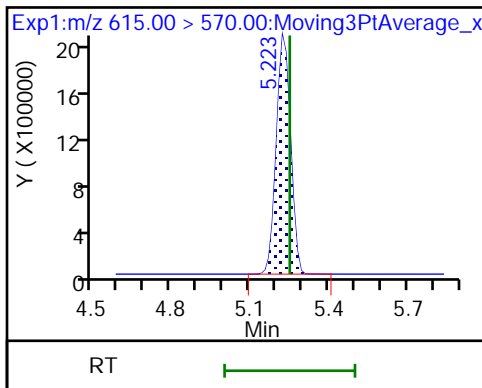
57 11CIFOS (ND)



D 43 13C2 PFDaA

42 Perfluorododecanoic acid (ND)

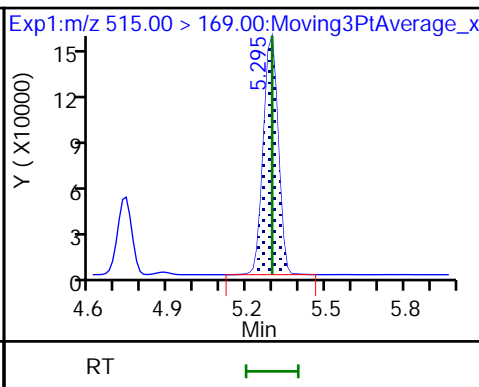
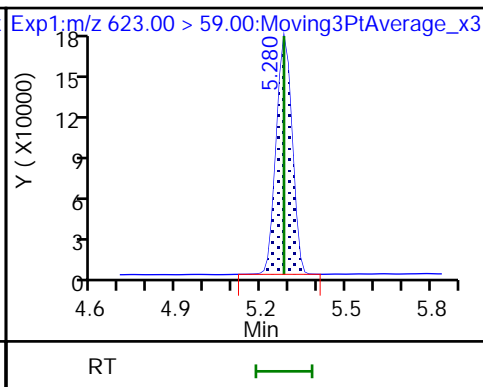
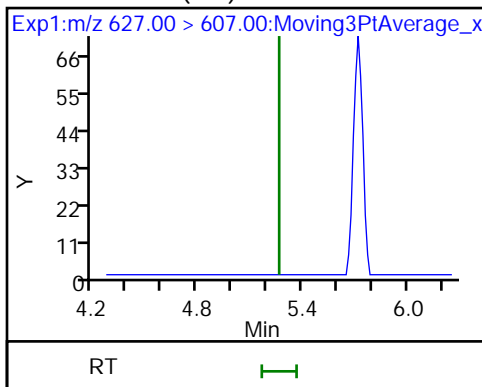
42 Perfluorododecanoic acid (ND)



50 10:2 FTS (ND)

D 51 d7-N-MeFOSE-M

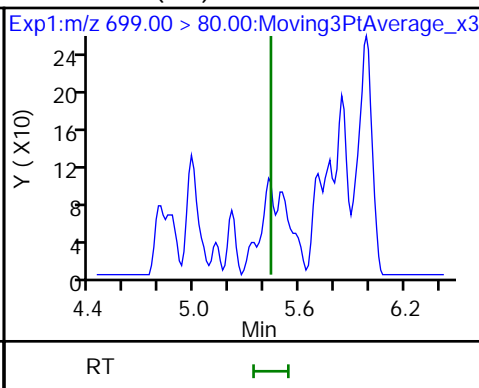
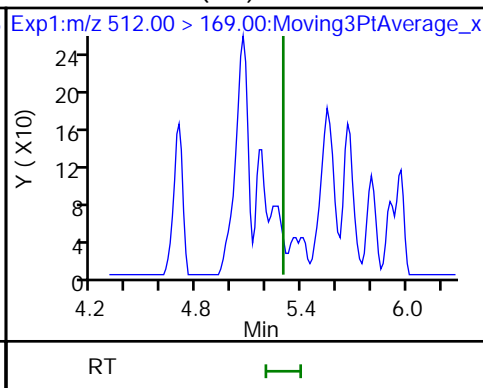
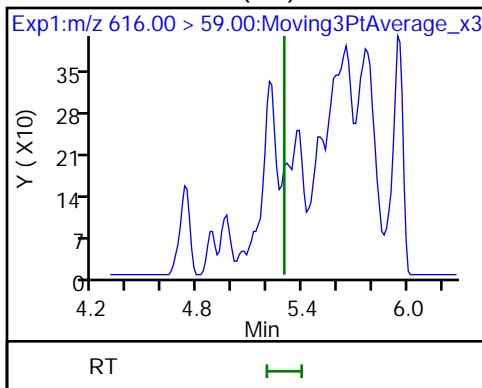
D 58 d-N-MeFOSE-M



49 N-MeFOSE-M (ND)

61 NMeFOSE (ND)

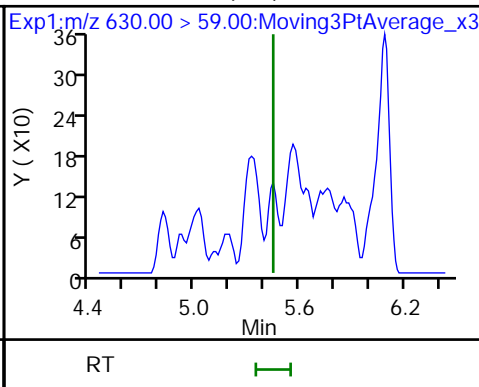
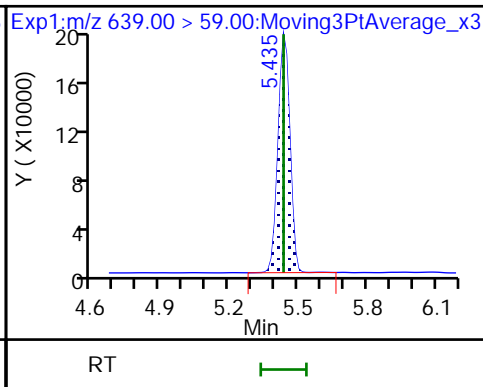
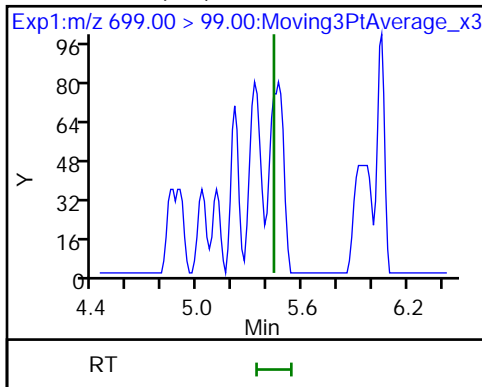
54 PFDoS (ND)



54 PFDoS (ND)

D 53 d9-N-EtFOSE-M

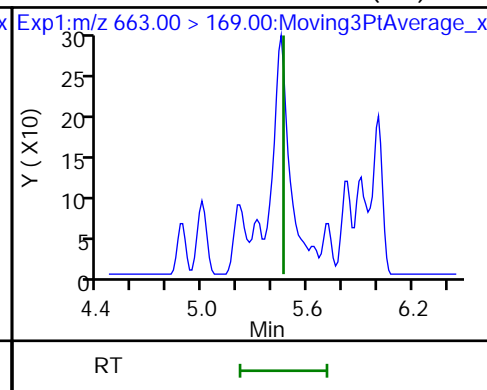
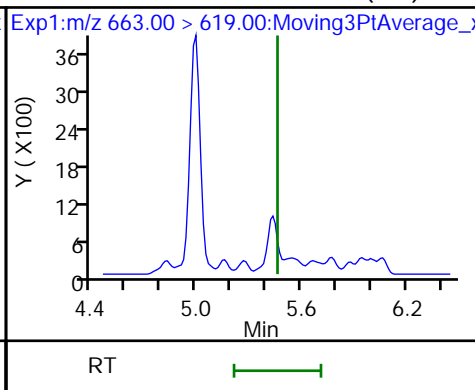
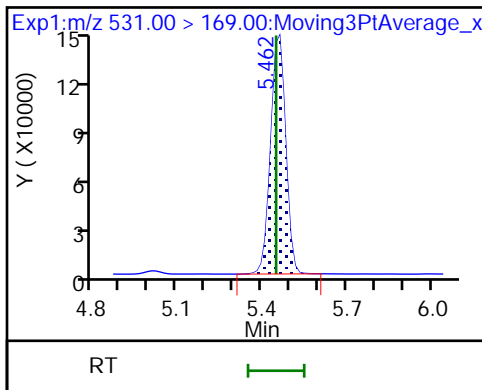
62 N-EtFOSE-M (ND)



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid (ND)

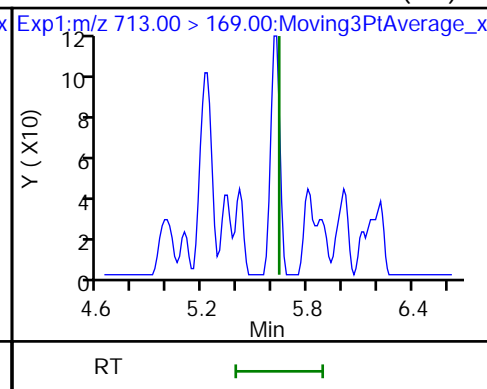
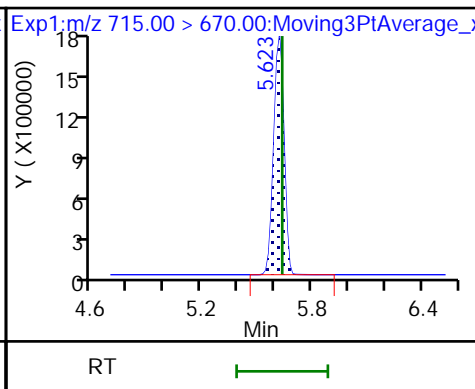
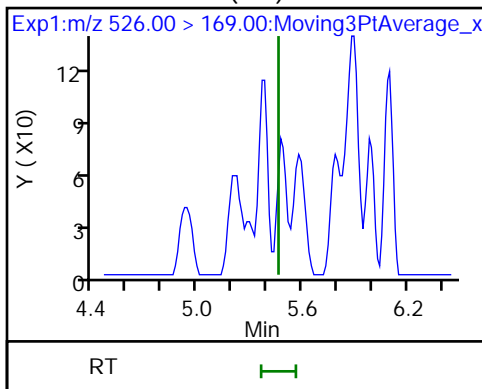
44 Perfluorotridecanoic acid (ND)



56 N-EtFOSA-M (ND)

D 46 13C2 PFTeDA

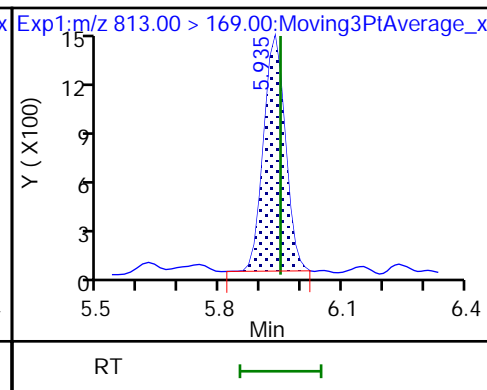
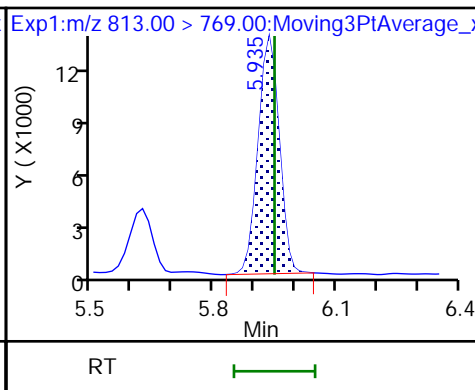
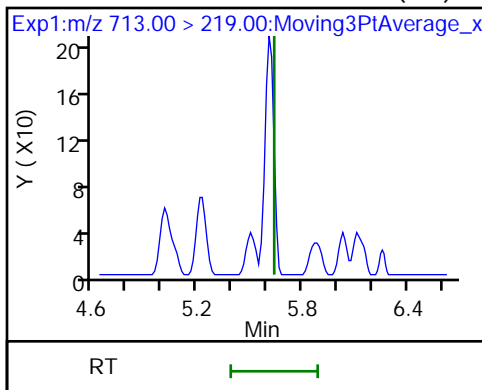
45 Perfluorotetradecanoic acid (ND)



45 Perfluorotetradecanoic acid (ND)

55 Perfluorohexadecanoic acid

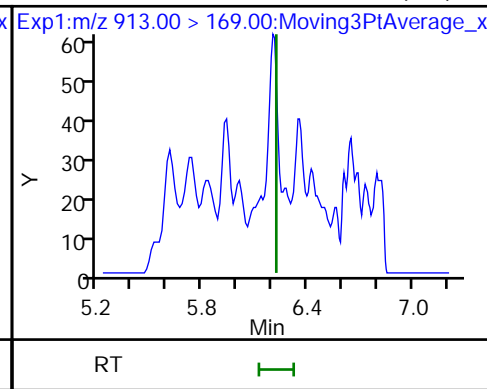
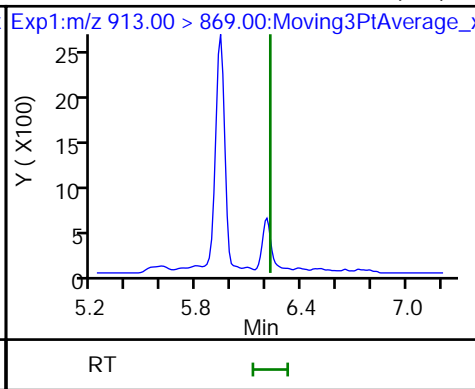
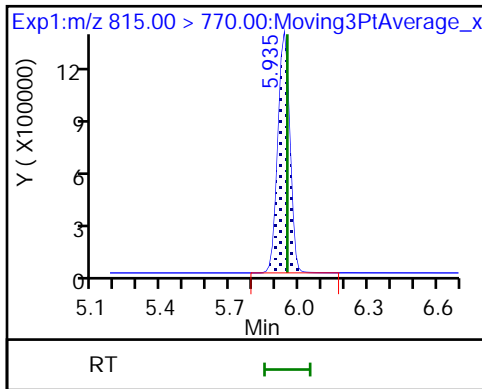
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid (ND)

60 Perfluorooctadecanoic acid (ND)



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-54602/1-B
 Matrix: Air Lab File ID: 008.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: None Date Extracted: 10/07/2021 13:59
 Sample wt/vol: 1 (Sample) Date Analyzed: 10/08/2021 12:52
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: GeminiC18 3x100 ID: 3 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54642 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	ND		0.000500	0.0000825

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	94		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_008.d
 Lims ID: MB 140-54602/1-B
 Client ID:
 Sample Type: MB
 Inject. Date: 08-Oct-2021 12:52:13 ALS Bottle#: 8 Worklist Smp#: 8
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0021001-008 mb 140-54602/1-b
 Misc. Info.: Plate: 7 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 11:11:08 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675
 First Level Reviewer: cochranj Date: 09-Oct-2021 10:04:53
 Ratio Calibration: None

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	2.801	2.812	-0.011	0.678	6670336	1.15	91.6	15839	
2 Perfluorobutanoic acid										7
212.90 > 169.00	2.790	2.812	-0.022	0.996	2938	0.000701		0.6	7	
LOD = 0.0100										
D 3 13C5 PFPeA	267.90 > 223.00	3.116	3.129	-0.013	0.754	5617808	1.17	94.0	15064	
4 Perfluoropentanoic acid										7
262.90 > 219.00	3.116	3.129	-0.013	1.000	7927	0.001741		2.6	7	
LOD = 0.006500										
D 6 13C3 PFBS	301.90 > 80.00	3.129	3.143	-0.014	0.758	3478357	1.13	96.9	24905	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00		3.143				ND				
298.90 > 99.00		3.143								
D 8 M2-4:2 FTS	329.00 > 81.00	3.409	3.423	-0.014	0.825	540145	1.17	99.9	1217	
7 4:2 FTS										
327.00 > 307.00		3.423				ND				
11 Perfluoropentanesulfonic acid										
349.00 > 80.00		3.469				ND				
349.00 > 99.00		3.469								
D 9 13C2 PFHxA	315.00 > 270.00	3.437	3.469	-0.032	0.832	5788562	1.18	94.3	19452	
10 Perfluorohexanoic acid										
313.00 > 269.00		3.469				ND				
313.00 > 119.00		3.469								

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.548	3.561	-0.013	0.859	2957465	1.18		94.1	11035	
13 HFPO-DA										
285.00 > 169.00	3.548	3.561	-0.013	1.000	3051	-0.005355		4.7	7	7
LOD = 0.008250										
S 65 ADONA										
377.00 > 251.00		3.592				0				
D 17 18O2 PFHxS										
403.00 > 84.00	3.791	3.803	-0.013	0.918	2160585	1.16		97.8	13973	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.791	3.803	-0.013	1.000	8663	-0.001586	Target=2.96	66.4	7	7
399.00 > 99.00	3.791	3.803	-0.013	1.000	2091		4.14(1.48-4.44)	24.1		
LOD = 0.005000										
D 14 13C4 PFHpA										
367.00 > 322.00	3.791	3.815	-0.025	0.918	5361599	1.10		87.6	26846	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.791	3.815	-0.025	1.000	5504	-0.003474	Target=3.35	6.0	7	7
363.00 > 169.00	3.803	3.815	-0.012	1.003	1438		3.83(1.67-5.02)	6.8		
LOD = 0.004250										
68 DONA										
377.00 > 251.00		3.840				ND				
377.00 > 85.00		3.840								
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00		4.143				ND				
449.00 > 99.00		4.143								
\$ 48 13C8 PFOA										
421.00 > 376.00		4.143				ND				
D 18 M2-6:2 FTS										
429.00 > 81.00	4.131	4.143	-0.012	1.000	549633	1.16		97.6	3771	
19 6:2 FTS										
427.00 > 407.00		4.143				ND				
D 21 13C4 PFOA										
417.00 > 372.00	4.131	4.155	-0.024	1.000	5253742	1.19		94.9	19814	
* 22 13C2 PFOA										
415.00 > 370.00	4.131	4.155	-0.024		5497949	1.25			23978	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.131	4.155	-0.024	1.000	12215	-0.006012	Target=2.40	5.1	R7	R7
413.00 > 169.00	4.131	4.155	-0.024	1.000	2344		5.21(1.20-3.61)	7.8		
LOD = 0.007800										
\$ 47 13C8 PFOS										
507.00 > 99.00		4.447				ND				
D 25 13C4 PFOS										
503.00 > 80.00	4.434	4.447	-0.013	1.074	2895408	1.12		94.1	10653	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00		4.447				ND				
499.00 > 99.00		4.447								
D 27 13C5 PFNA										
468.00 > 423.00	4.447	4.470	-0.023	1.076	6563416	1.17		93.3	22636	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
26 Perfluorononanoic acid										
463.00 > 419.00		4.470				ND				
463.00 > 169.00		4.470								
63 9CIFOS										
531.00 > 351.00		4.596				ND				
28 Perfluorononanesulfonic acid										
549.00 > 80.00		4.722				ND				
549.00 > 99.00		4.722								
D 34 13C8 FOSA										
506.00 > 78.00	4.722	4.736	-0.014	1.143	4697279	1.24		99.5	7114	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.722	4.736	-0.014	1.000	3331	0.000923		10.2	7M	7M
LOD = 0.004400										
D 32 13C2 PFDA										
515.00 > 470.00	4.736	4.749	-0.013	1.146	6473912	1.14		90.9	17093	
29 Perfluorodecanoic acid										
513.00 > 469.00		4.749				ND				
513.00 > 169.00		4.749								
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.763	-0.014	1.150	666552	1.15		96.1	2515	
31 8:2 FTS										
527.00 > 507.00		4.763				ND				
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.869	4.896	-0.027	1.179	1003085	1.29		103	6484	
36 NMeFOSAA										
570.00 > 419.00		4.896				ND				
37 Perfluorodecanesulfonic acid										
599.00 > 80.00		4.993				ND				
599.00 > 99.00		4.993								
69 Perfluoro-3,6,9-trioxatridecanoic acid										
561.00 > 467.00		4.994				ND				
561.00 > 235.00		4.994								
D 39 13C2 PFUnA										
565.00 > 520.00	4.993	5.008	-0.015	1.209	6001697	1.10		88.2	14904	
38 Perfluoroundecanoic acid										
563.00 > 519.00		5.008				ND				
563.00 > 169.00		5.008								
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.007	5.022	-0.015	1.212	952289	1.27		102	5958	
40 NEtFOSA										
584.00 > 419.00		5.036				ND				
57 11CIFOS										
631.00 > 451.00		5.119				ND				
D 43 13C2 PFDaA										
615.00 > 570.00	5.223	5.251	-0.028	1.265	7152156	1.23		98.6	37799	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
42 Perfluorododecanoic acid										
613.00 > 569.00		5.251				ND				
613.00 > 169.00		5.251								
50 10:2 FTS										
627.00 > 607.00		5.266				ND				
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.266	5.295	-0.029	1.275	704346	1.49		119	439	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.281	5.295	-0.014	1.278	585996	1.19		95.2	40.1	
49 N-MeFOSE-M										
616.00 > 59.00	5.310	5.295	0.015	1.008	1892	-0.005230		1.5		7
LOD = 0.008600										
61 NMeFOSA										
512.00 > 169.00		5.295				ND				
54 PFDoS										
699.00 > 80.00		5.436				ND				
699.00 > 99.00		5.436								
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.423	5.449	-0.026	1.313	726777	1.44		115	699	
62 N-EtFOSE-M										
630.00 > 59.00		5.462				ND				
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.449	5.462	-0.013	1.319	504140	1.22		97.3	921	
44 Perfluorotridecanoic acid										
663.00 > 619.00		5.462				ND				
663.00 > 169.00		5.462								
56 N-EtFOSA-M										
526.00 > 169.00		5.462				ND				
D 46 13C2 PFTeDA										
715.00 > 670.00	5.623	5.637	-0.014	1.361	6213363	1.17		93.3	15233	
45 Perfluorotetradecanoic acid										
713.00 > 169.00		5.637				ND				
713.00 > 219.00		5.637								
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.935	5.948	-0.013	1.000	48118	-0.001898	Target=7.50	62.9		7
813.00 > 169.00	5.935	5.948	-0.013	1.000	4917		9.79(3.75-11.26)	39.6		
LOD = 0.009000										
D 59 13C2 PFHxDA										
815.00 > 770.00	5.935	5.948	-0.013	1.437	4811529	1.25		99.7	9162	
60 Perfluorooctadecanoic acid										
913.00 > 869.00		6.221				ND				
913.00 > 169.00		6.221								
S 66 F-53B										
212.90 > 169.00		0.0				0				
S 67 NaDONA										
377.00 > 251.00		0.0				0				
377.00 > 85.00		0.0								

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

R - Failed Signal Ratio Test

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_008.d

Injection Date: 08-Oct-2021 12:52:13

Instrument ID: LCA

Lims ID: MB 140-54602/1-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 8

Worklist Smp#: 8

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

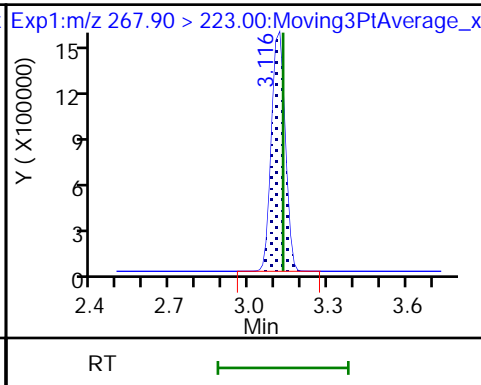
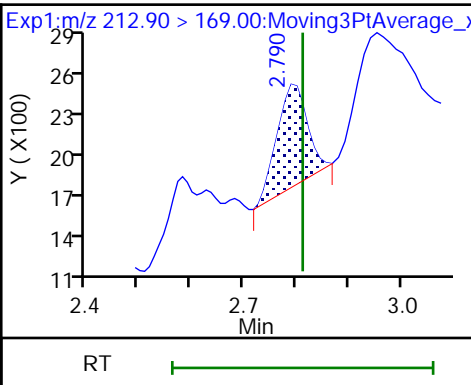
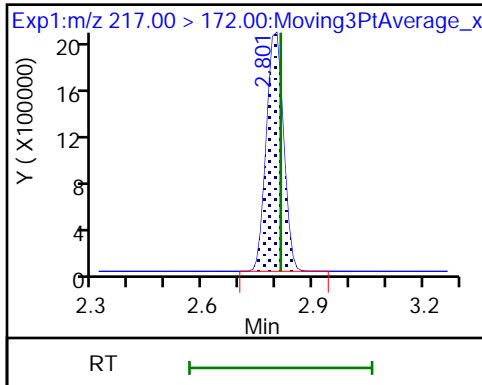
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

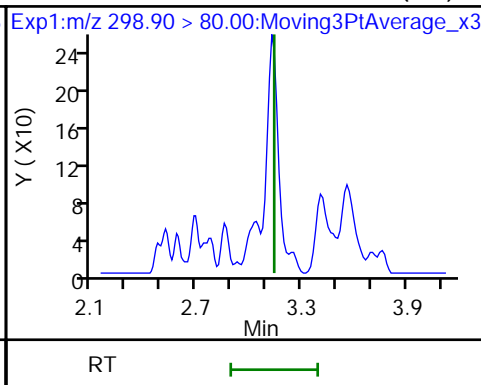
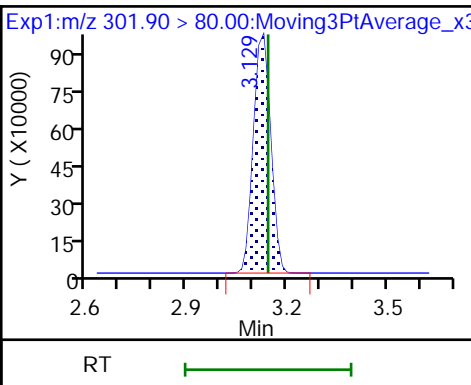
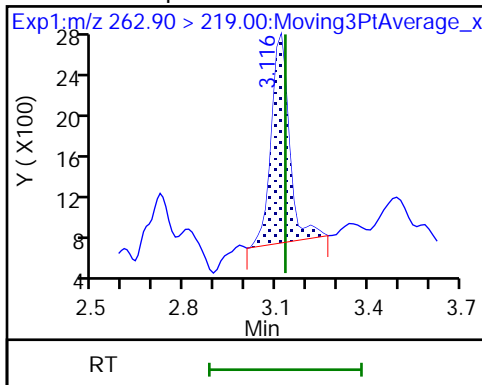
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

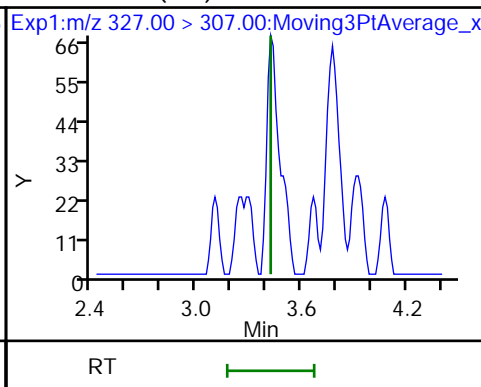
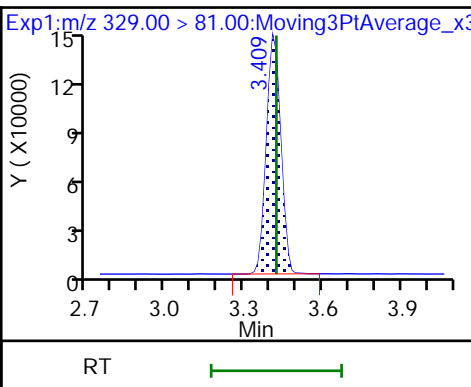
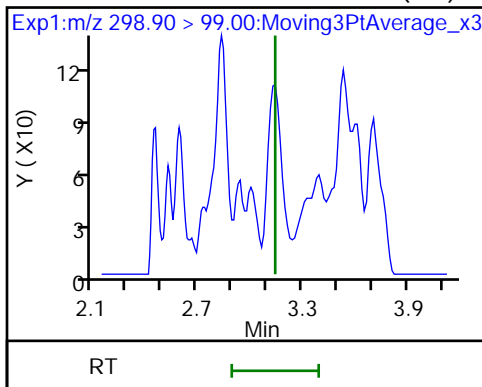
5 Perfluorobutanesulfonic acid (ND)



5 Perfluorobutanesulfonic acid (ND)

D 8 M2-4:2 FTS

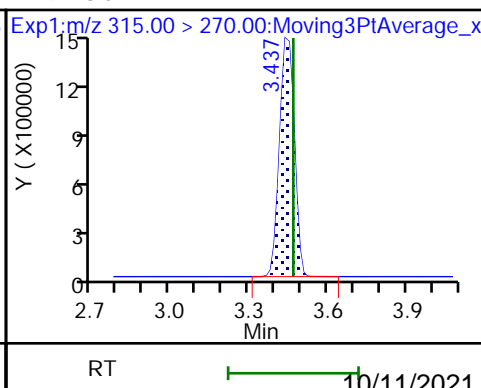
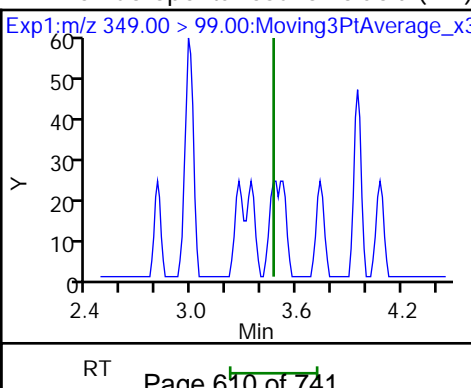
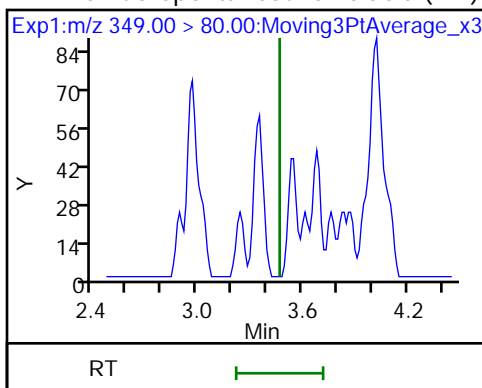
7 4:2 FTS (ND)

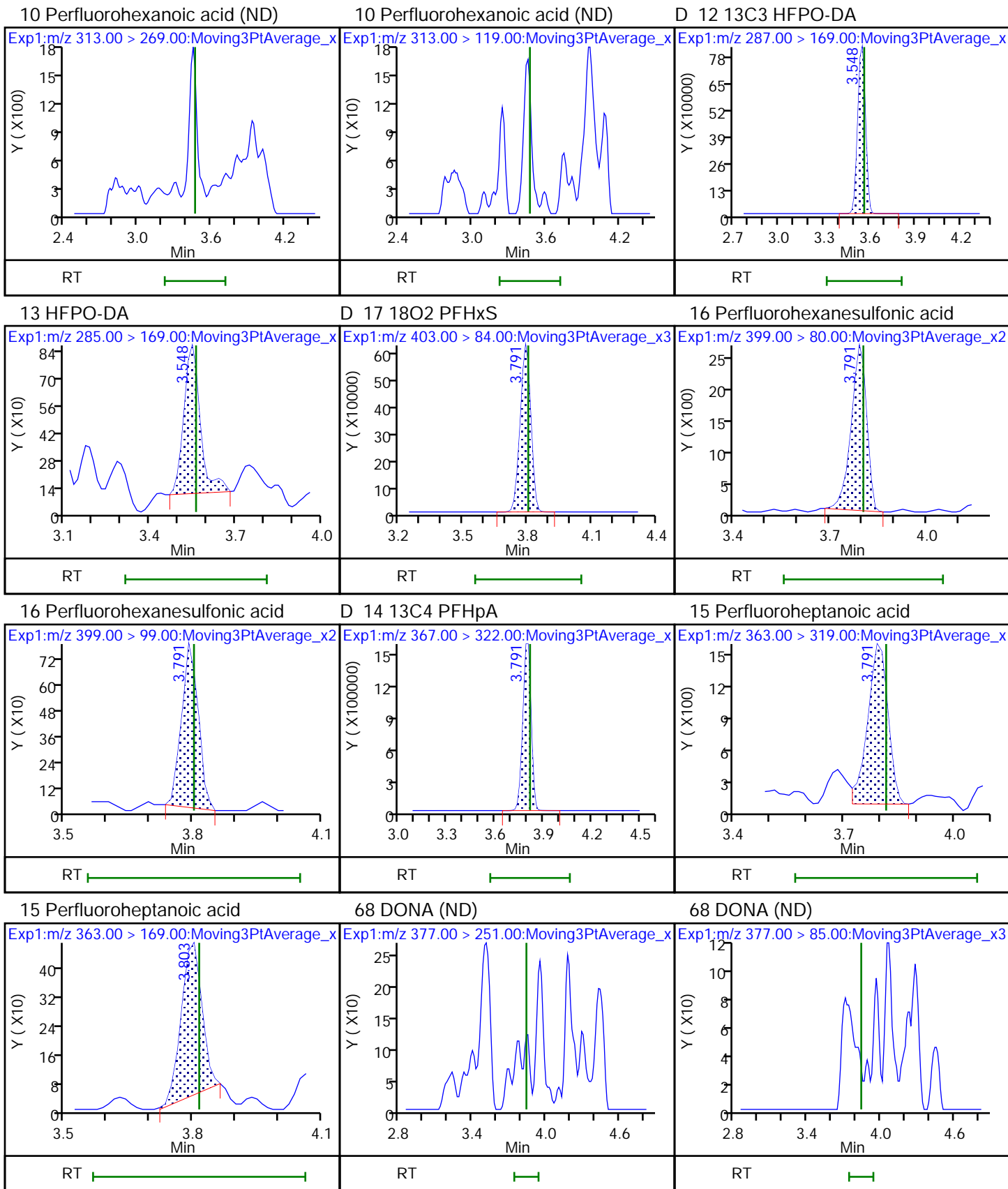


11 Perfluoropentanesulfonic acid (ND)

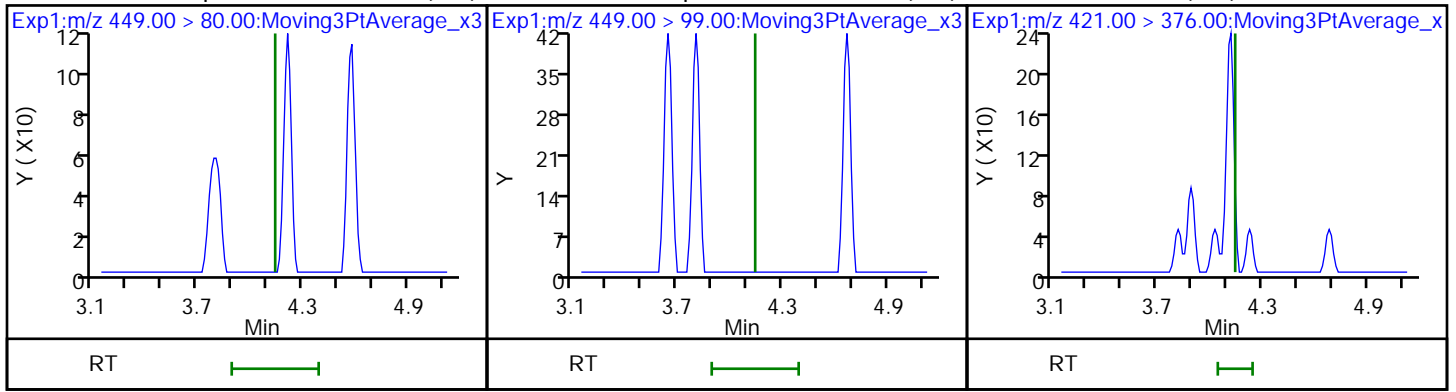
11 Perfluoropentanesulfonic acid (ND)

D 9 13C2 PFHxA





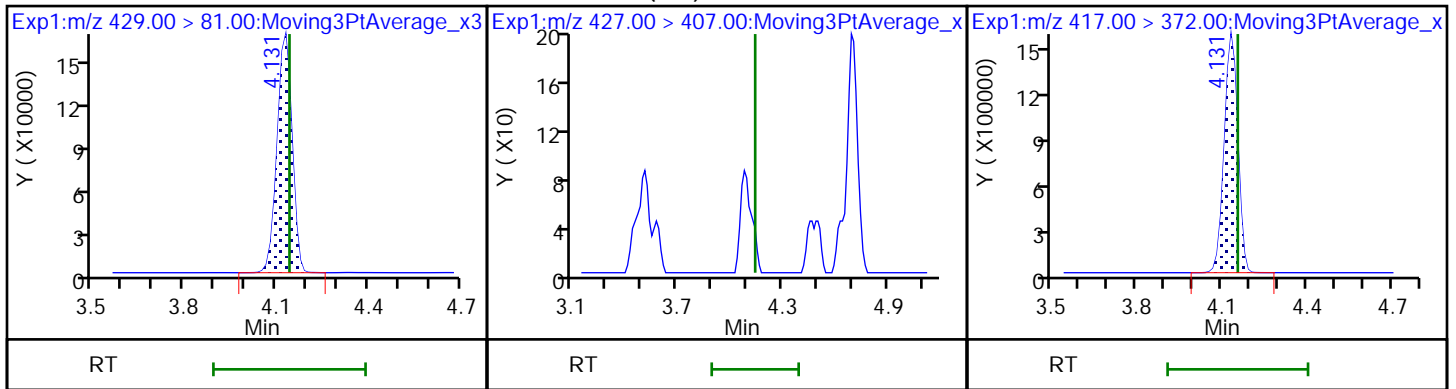
20 Perfluoroheptanesulfonic acid (ND) 20 Perfluoroheptanesulfonic acid (ND) \$ 48 13C8 PFOA (ND)



D 18 M2-6:2 FTS

19 6:2 FTS (ND)

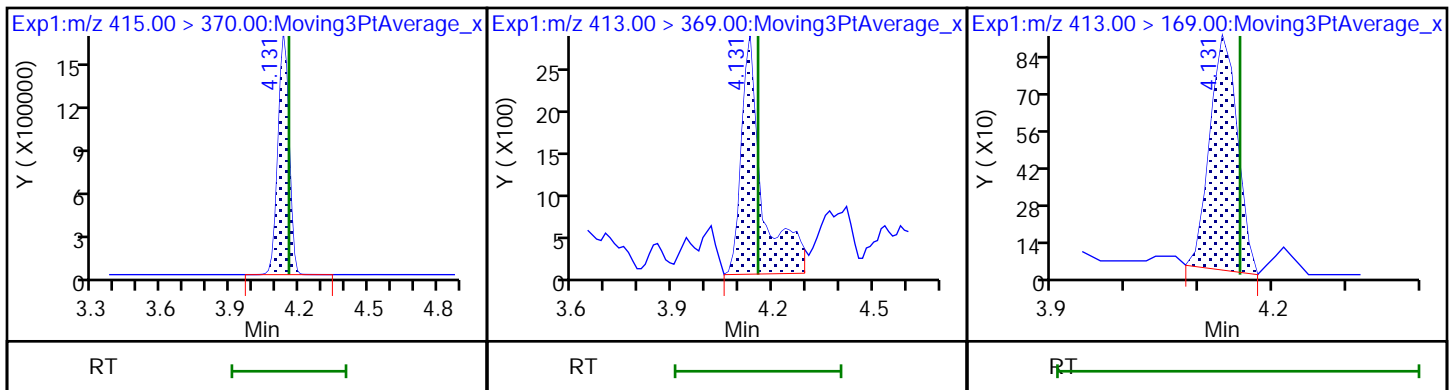
D 21 13C4 PFOA



* 22 13C2 PFOA

23 Perfluorooctanoic acid

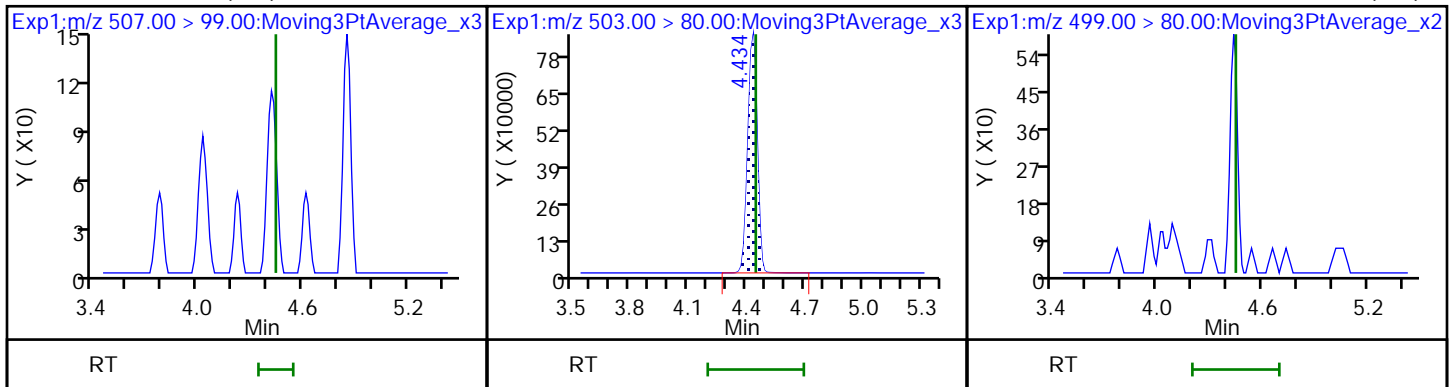
23 Perfluorooctanoic acid



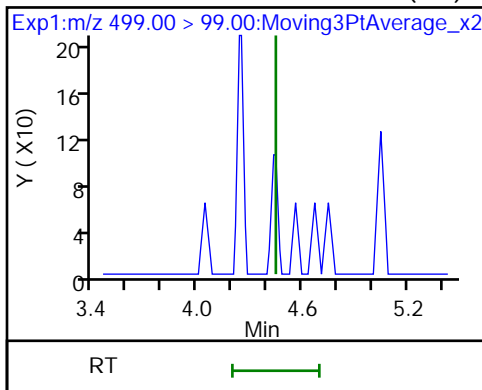
\$ 47 13C8 PFOS (ND)

D 25 13C4 PFOS

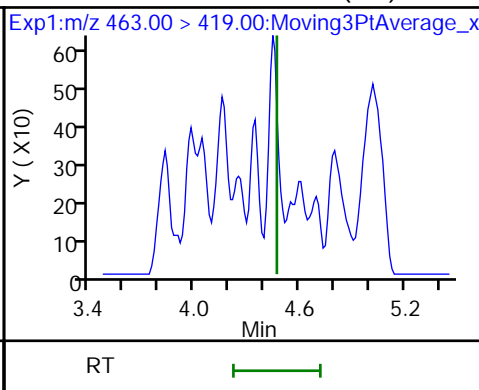
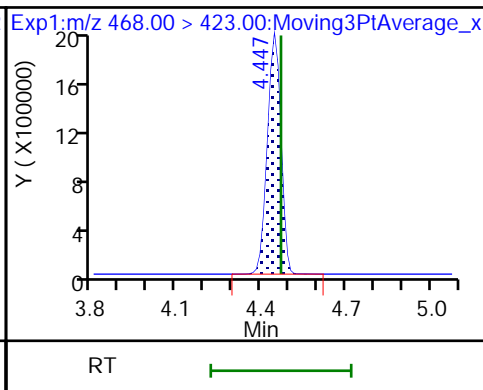
24 Perfluorooctanesulfonic acid (ND)



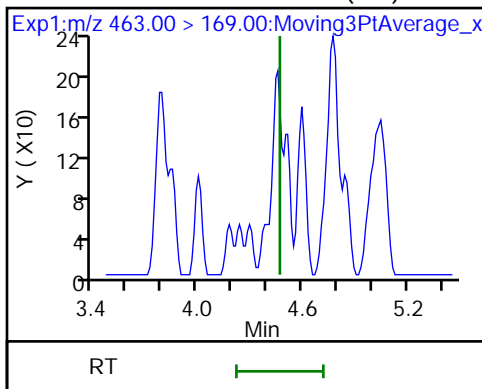
24 Perfluorooctanesulfonic acid (ND) D 27 13C5 PFNA



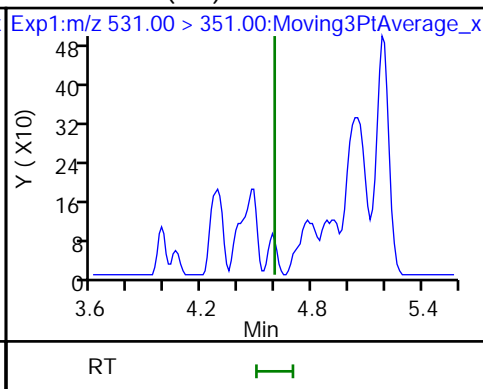
26 Perfluorononanoic acid (ND)



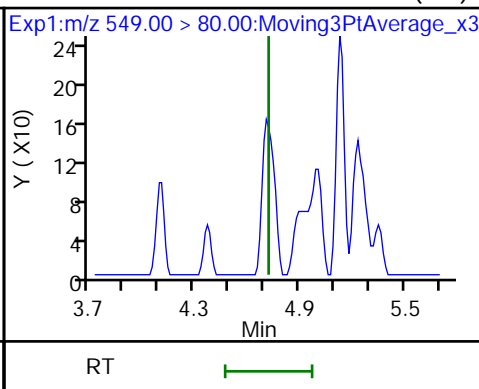
26 Perfluorononanoic acid (ND)



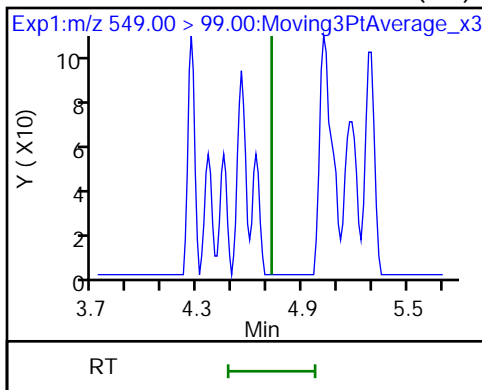
63 9CIFOS (ND)



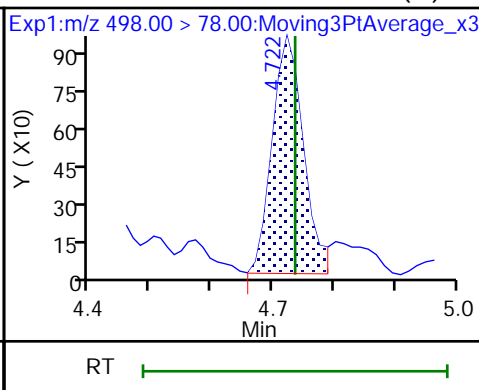
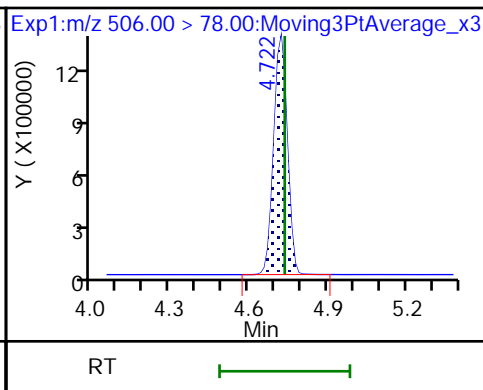
28 Perfluorononanesulfonic acid (ND)



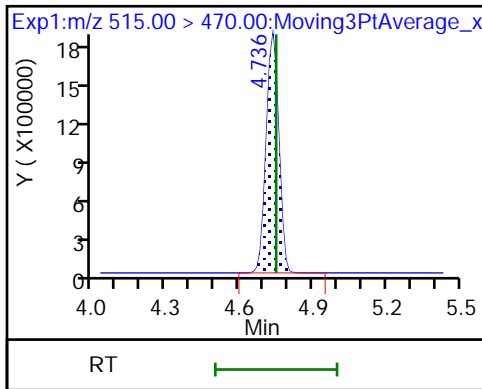
28 Perfluorononanesulfonic acid (ND) D 34 13C8 FOSA



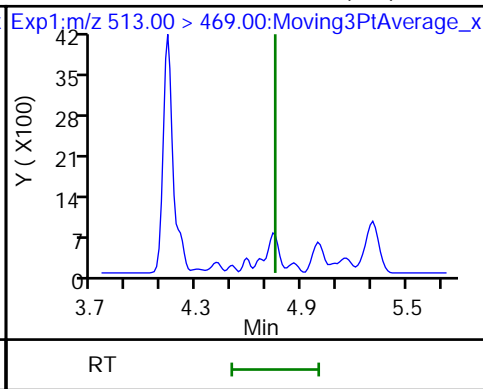
33 Perfluorooctanesulfonamide (M)



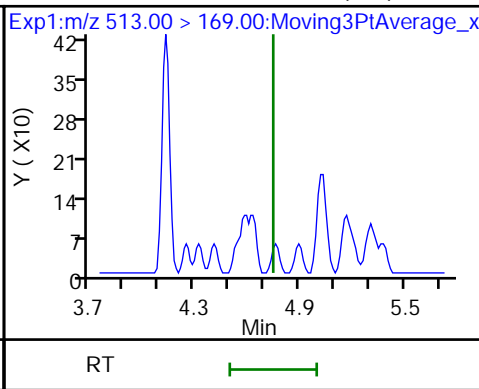
D 32 13C2 PFDA



29 Perfluorodecanoic acid (ND)



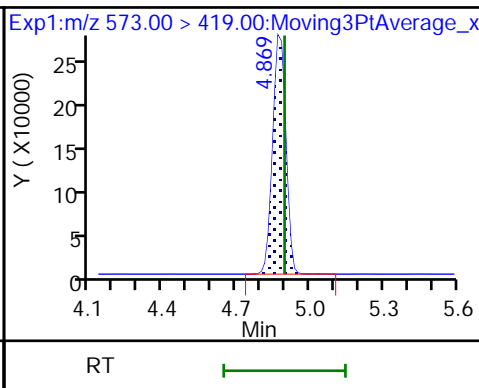
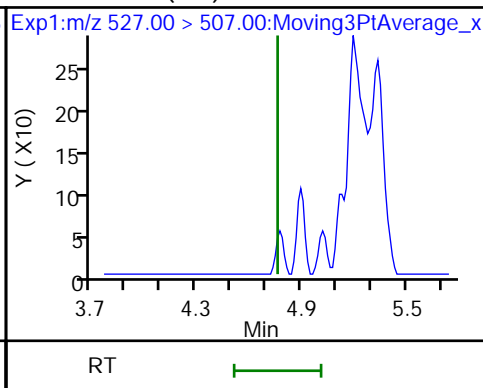
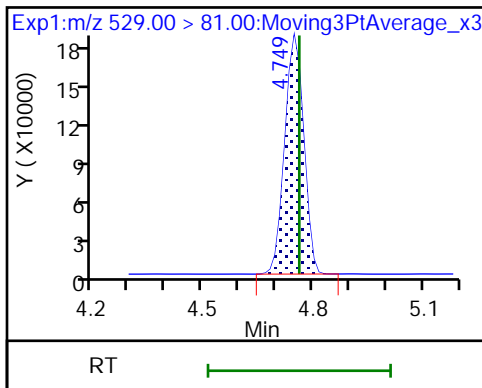
29 Perfluorodecanoic acid (ND)



D 30 M2-8:2 FTS

31 8:2 FTS (ND)

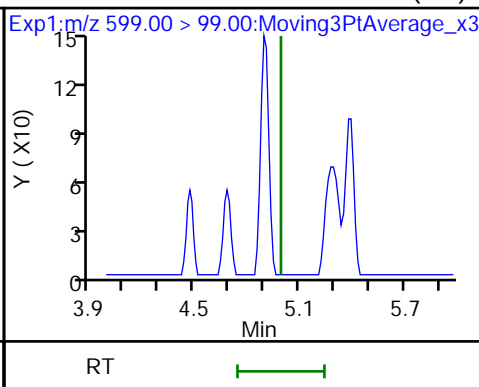
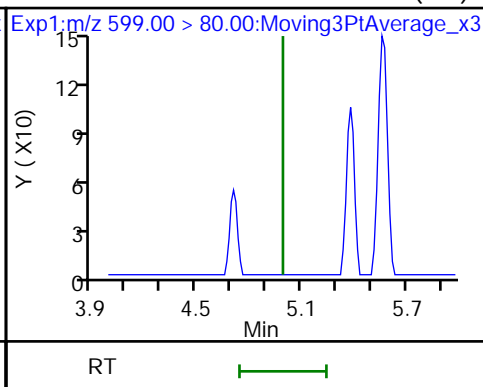
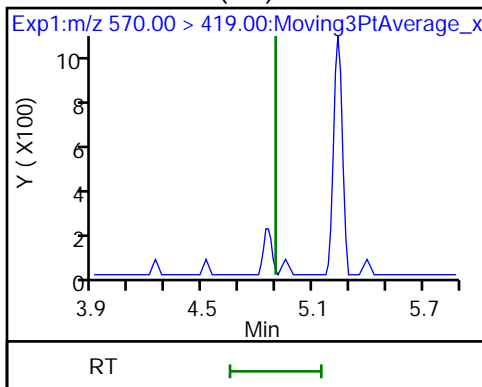
D 35 d3-NMeFOSAA



36 NMeFOSAA (ND)

37 Perfluorodecanesulfonic acid (ND)

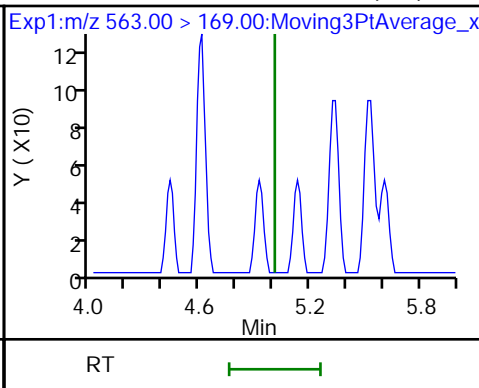
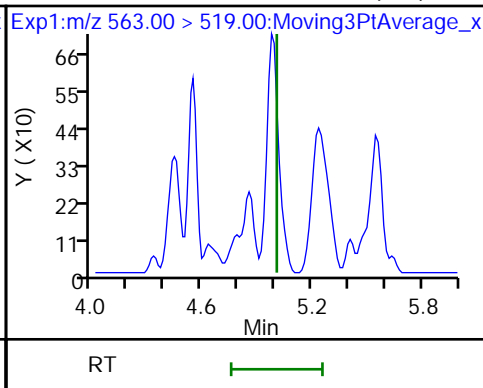
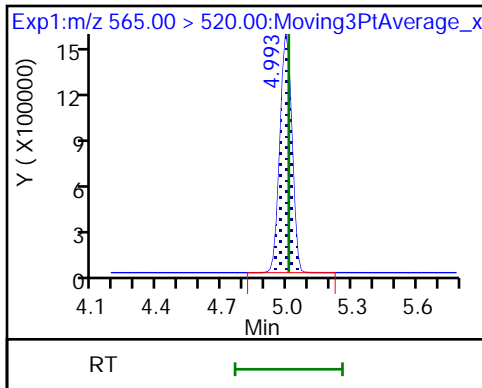
37 Perfluorodecanesulfonic acid (ND)



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid (ND)

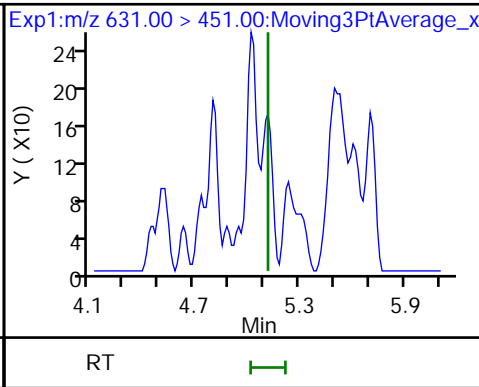
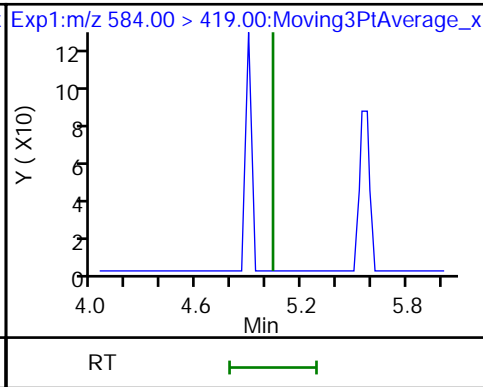
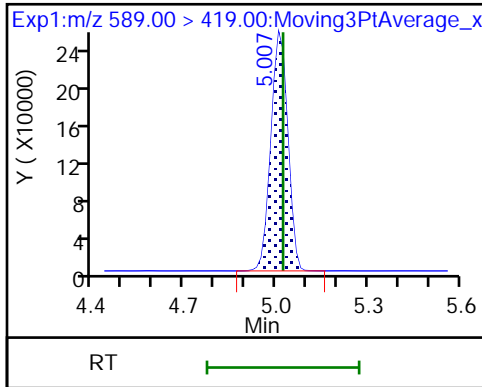
38 Perfluoroundecanoic acid (ND)



D 41 d5-NEtFOSAA

40 NEtFOSA (ND)

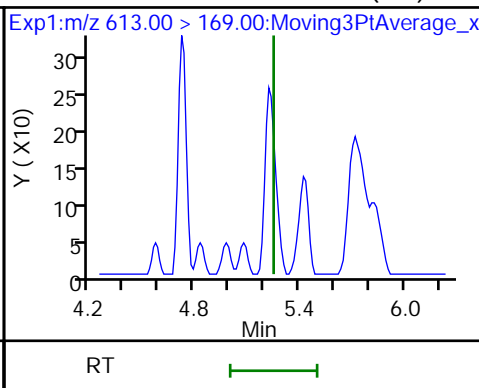
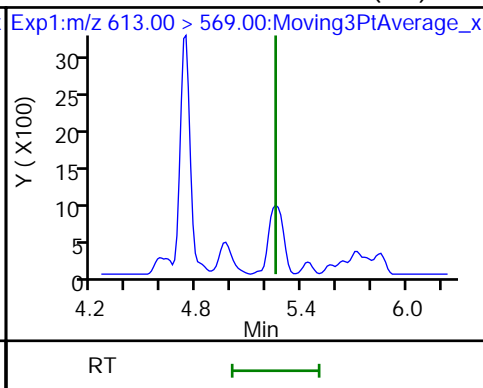
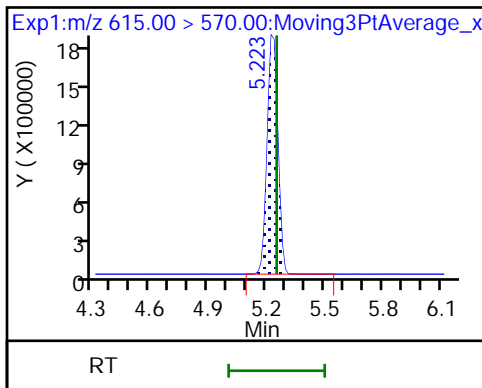
57 11C1FOS (ND)



D 43 13C2 PFDaA

42 Perfluorododecanoic acid (ND)

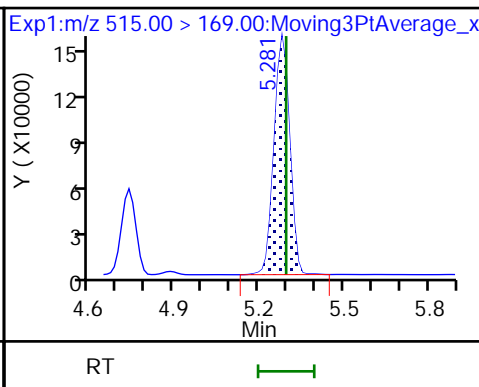
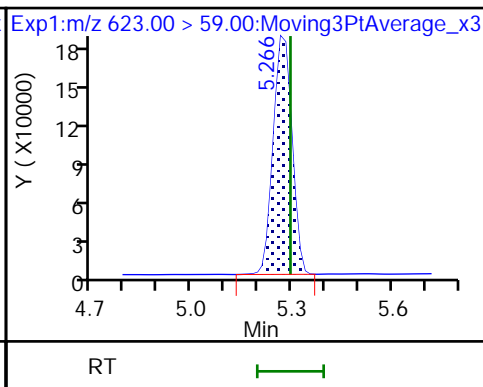
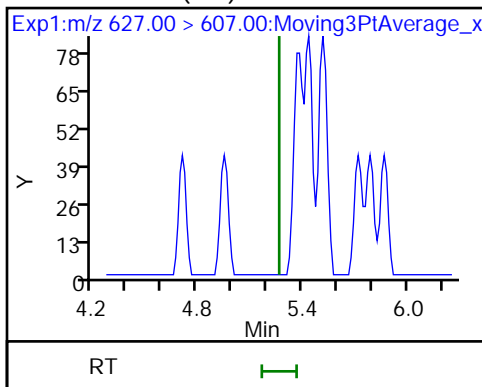
42 Perfluorododecanoic acid (ND)



50 10:2 FTS (ND)

D 51 d7-N-MeFOSE-M

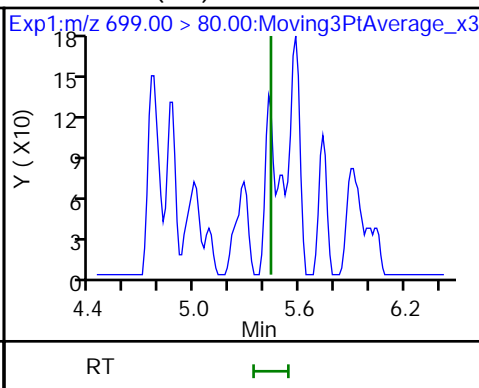
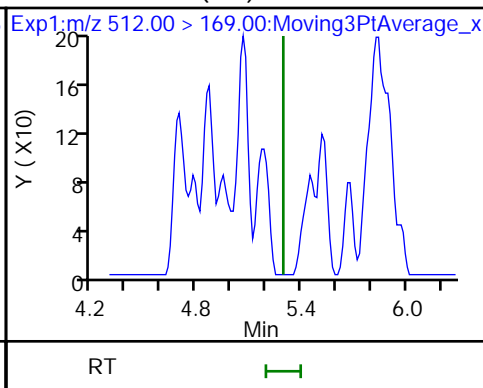
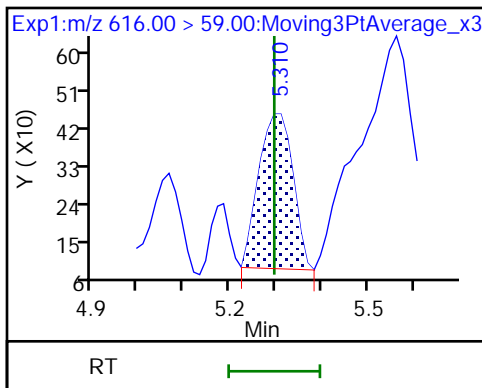
D 58 d-N-MeFOSA-M



49 N-MeFOSE-M

61 NMeFOSA (ND)

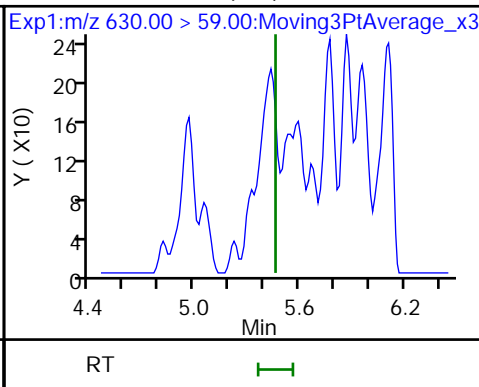
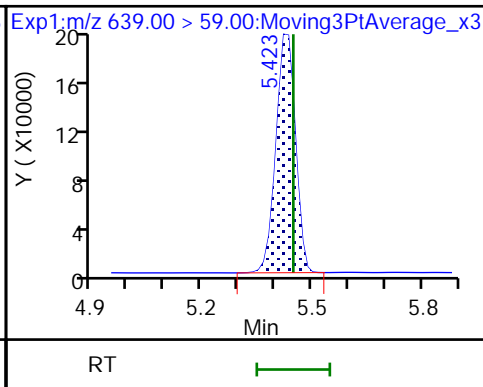
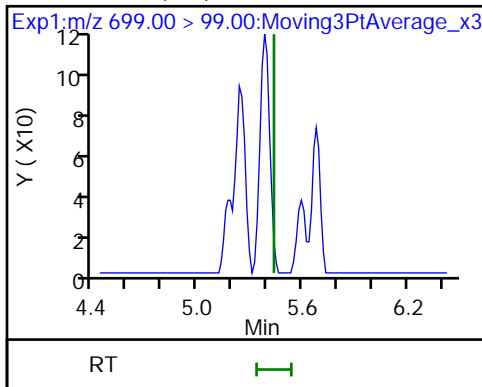
54 PFDoS (ND)



54 PFDoS (ND)

D 53 d9-N-EtFOSE-M

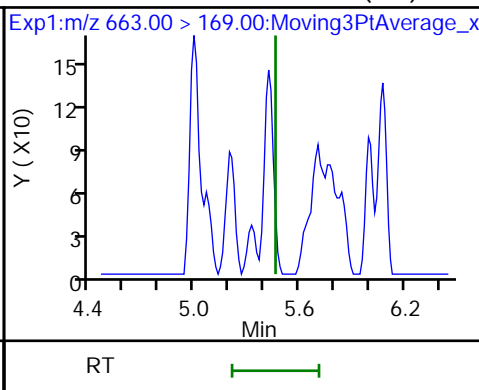
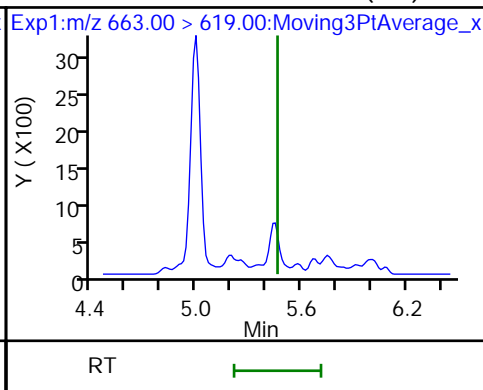
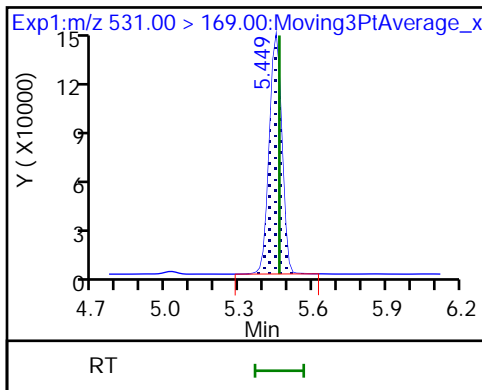
62 N-EtFOSE-M (ND)



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid (ND)

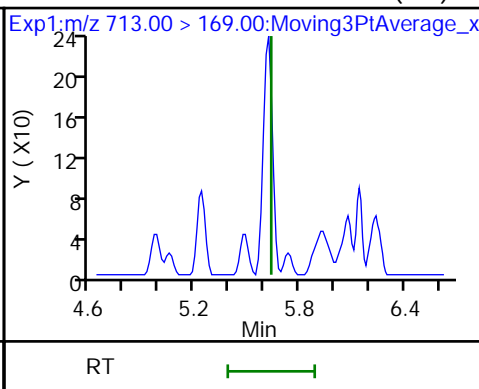
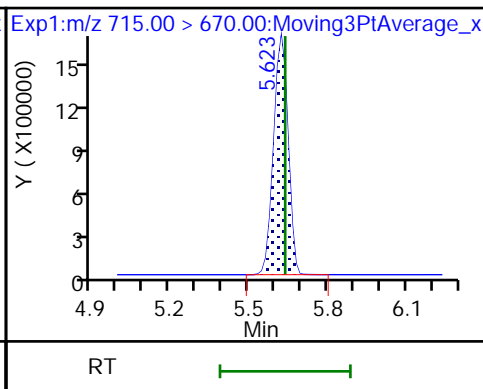
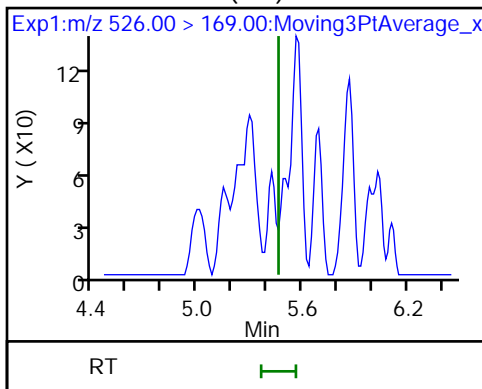
44 Perfluorotridecanoic acid (ND)



56 N-EtFOSA-M (ND)

D 46 13C2 PFTeDA

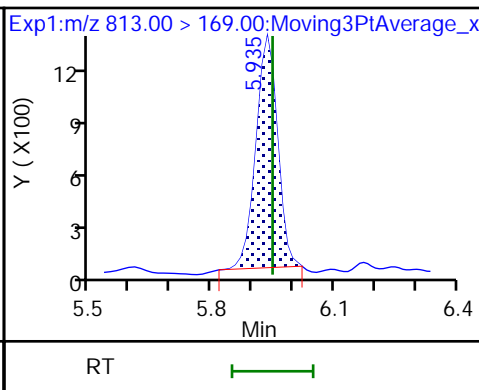
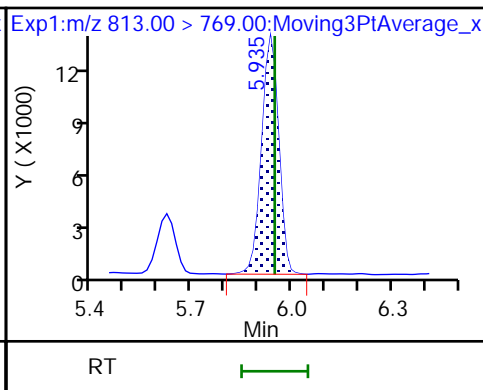
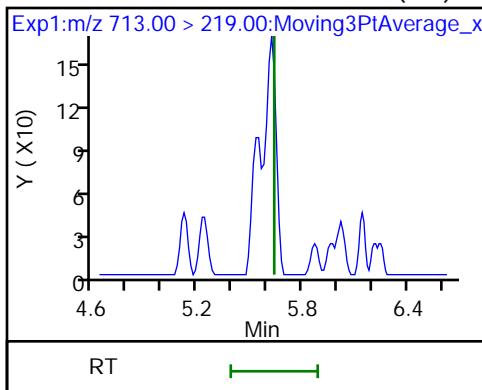
45 Perfluorotetradecanoic acid (ND)



45 Perfluorotetradecanoic acid (ND)

55 Perfluorohexadecanoic acid

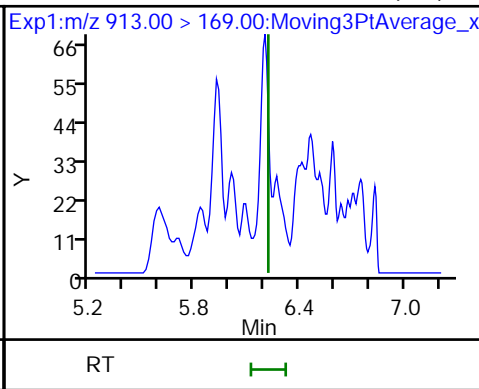
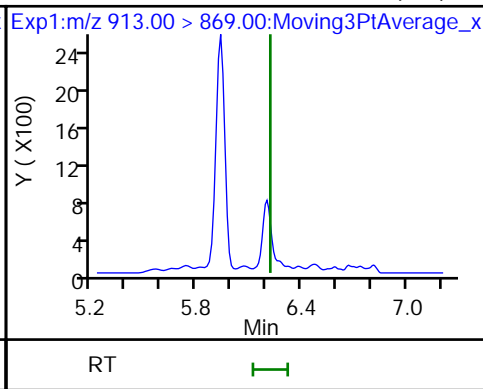
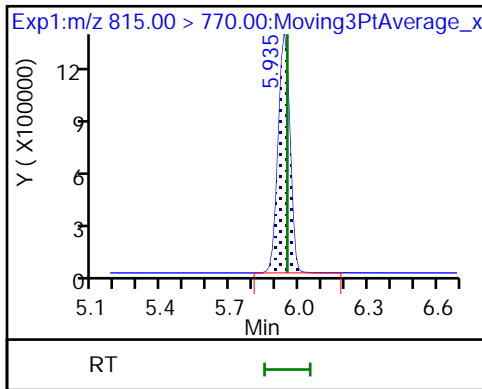
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid (ND)

60 Perfluorooctadecanoic acid (ND)



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-54177/2-B
 Matrix: Air Lab File ID: _092.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: None Date Extracted: 09/24/2021 09:38
 Sample wt/vol: 1(Sample) Date Analyzed: 10/07/2021 09:59
 Con. Extract Vol.: 50(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: GeminiC18 3x100 ID: 3(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54568 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.01930		0.00100	0.000580

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	91		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_092.d
 Lims ID: LCS 140-54177/2-B
 Client ID:
 Sample Type: LCS
 Inject. Date: 07-Oct-2021 09:59:31 ALS Bottle#: 38 Worklist Smp#: 92
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-092 lcs 140-54177/2-b
 Misc. Info.: Plate: 11 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 18:07:45 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675
 First Level Reviewer: cochranj Date: 09-Oct-2021 18:05:15
 Ratio Calibration: None

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	2.812	2.801	0.011	0.681	6694222	1.14	91.6	17278	
2 Perfluorobutanoic acid	212.90 > 169.00	2.812	2.812	0.0	1.000	4091501	0.9727	97.3	869	
D 3 13C5 PFPeA	267.90 > 223.00	3.116	3.129	-0.013	0.754	5609460	1.17	93.5	13889	
4 Perfluoropentanoic acid	262.90 > 219.00	3.116	3.129	-0.013	1.000	4325026	0.9514	95.1	1108	
D 6 13C3 PFBS	301.90 > 80.00	3.129	3.129	0.0	0.758	3343013	1.08	92.8	16908	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.143	3.143	0.0	1.004	2750258	0.8493	Target=3.06	96.1	10719
	298.90 > 99.00	3.143	3.143	0.0	1.004	1044334		2.63(1.53-4.59)		3895
D 8 M2-4:2 FTS	329.00 > 81.00	3.409	3.423	-0.014	0.825	567940	1.22	105	666	
7 4:2 FTS	327.00 > 307.00	3.409	3.423	-0.014	1.000	1075663	0.8845	94.7	10409	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.453	3.453	0.0	1.103	2296538	0.9297	Target=3.47	99.1	9986
	349.00 > 99.00	3.453	3.453	0.0	1.103	680656		3.37(1.73-5.20)		6155
D 9 13C2 PFHxA	315.00 > 270.00	3.453	3.469	-0.016	0.836	6118019	1.24	99.3	27058	
10 Perfluorohexanoic acid	313.00 > 269.00	3.453	3.469	-0.016	1.000	3676731	0.8764	Target=9.74	87.6	1781
	313.00 > 119.00	3.453	3.469	-0.016	1.000	303973		12.10(4.87-14.61)		808
D 12 13C3 HFPO-DA	287.00 > 169.00	3.548	3.561	-0.013	0.859	2868811	1.14	90.9	8742	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.548	3.561	-0.013	1.000	3067107	0.9649		96.5	2542	
D 17 18O2 PFHxS										
403.00 > 84.00	3.790	3.803	-0.013	0.918	2107476	1.12		95.0	20835	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.790	3.803	-0.013	1.000	2075353	0.8568	Target=2.96	94.2	6900	M
399.00 > 99.00	3.790	3.803	-0.013	1.000	599399		3.46(1.48-4.44)		4784	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.803	3.815	-0.012	0.921	5814290	1.18		94.6	21924	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.803	3.815	-0.012	1.000	4869185	0.99	Target=3.35	99.0	3697	
363.00 > 169.00	3.803	3.815	-0.012	1.000	1443742		3.37(1.67-5.02)		5179	
68 DONA										
377.00 > 251.00	3.827	3.840	-0.013	0.863	7030381	0.8733	Target=1.49	92.7	18066	
377.00 > 85.00	3.827	3.840	-0.013	0.863	3711037		1.89(0.74-2.23)		21662	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.119	4.143	-0.024	0.929	2186871	0.8857	Target=3.73	93.0	11069	
449.00 > 99.00	4.119	4.143	-0.024	0.929	558813		3.91(1.87-5.61)		5334	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.131	4.143	-0.012	1.000	673186	1.41		119	2476	
19 6:2 FTS										
427.00 > 407.00	4.131	4.143	-0.012	1.000	1029649	0.9024		95.2	6417	
D 21 13C4 PFOA										
417.00 > 372.00	4.131	4.155	-0.024	1.000	5225145	1.18		94.0	18443	
* 22 13C2 PFOA										
415.00 > 370.00	4.131	4.155	-0.024		5521347	1.25			22260	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.131	4.155	-0.024	1.000	4587111	0.9896	Target=2.40	99.0	2306	
413.00 > 169.00	4.131	4.155	-0.024	1.000	1756895		2.61(1.20-3.61)		2804	
D 25 13C4 PFOS										
503.00 > 80.00	4.434	4.447	-0.012	1.074	2966084	1.15		96.0	7273	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.434	4.447	-0.012	1.000	2339604	0.8571	Target=3.83	92.4	4473	M
499.00 > 99.00	4.434	4.447	-0.012	1.000	534906		4.37(1.91-5.74)		2767	M
D 27 13C5 PFNA										
468.00 > 423.00	4.447	4.470	-0.023	1.076	7127612	1.26		101	19461	
26 Perfluorononanoic acid										
463.00 > 419.00	4.447	4.470	-0.023	1.000	4643920	0.9756	Target=3.68	97.6	3848	
463.00 > 169.00	4.447	4.470	-0.023	1.000	1037250		4.48(1.84-5.52)		2813	
63 9CIFOS										
531.00 > 351.00	4.584	4.596	-0.012	1.110	4906211	0.8565		91.9	5553	
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.709	4.722	-0.013	1.062	2283576	0.8827	Target=3.97	92.0	3244	
549.00 > 99.00	4.709	4.722	-0.013	1.062	588159		3.88(1.99-5.96)		2223	
D 34 13C8 FOSA										
506.00 > 78.00	4.762	4.736	0.026	1.153	4718615	1.24		99.5	11881	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.762	4.736	0.026	1.000	3298176	0.9096		91.0	6274	10/11/2021

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 32 13C2 PFDA										
515.00 > 470.00	4.736	4.749	-0.013	1.146	6825367	1.19		95.4	26558	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.736	4.749	-0.013	1.000	5045568	0.9723	Target=10.11	97.2	2603	
513.00 > 169.00	4.736	4.749	-0.013	1.000	410107		12.30(5.06-15.17)		437	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.763	-0.014	1.150	762781	1.31		110	3464	
31 8:2 FTS										
527.00 > 507.00	4.749	4.763	-0.014	1.000	1028913	0.9056		94.5	7897	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.882	4.896	-0.014	1.182	859037	1.10		87.7	2468	
36 NMeFOSAA										
570.00 > 419.00	4.882	4.896	-0.014	1.000	566034	0.8949		89.5	1249	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.979	4.993	-0.014	1.123	2003958	0.8433	Target=3.80	87.5	2690	
599.00 > 99.00	4.979	4.993	-0.014	1.123	574150		3.49(1.90-5.70)		4972	
D 39 13C2 PFUnA										
565.00 > 520.00	5.007	5.022	-0.015	1.212	6603015	1.21		96.7	29452	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.007	5.022	-0.015	1.000	5069256	0.9479	Target=7.45	94.8	6818	
563.00 > 169.00	5.007	5.022	-0.015	1.000	592195		8.56(3.78-11.33)		3238	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.022	5.036	-0.014	1.216	839598	1.11		89.2	3308	
40 NEtFOSA										
584.00 > 419.00	5.022	5.036	-0.014	1.000	615276	0.9648		96.5	749	M
57 11CIFOS										
631.00 > 451.00	5.106	5.119	-0.013	1.151	3908525	0.8474		90.0	7099	
D 43 13C2 PFDoA										
615.00 > 570.00	5.237	5.251	-0.014	1.268	7244894	1.24		99.4	7466	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.237	5.251	-0.014	1.000	5599321	0.9247	Target=5.33	92.5	3569	
613.00 > 169.00	5.237	5.251	-0.014	1.000	807937		6.93(2.66-7.99)		3060	
50 10:2 FTS										
627.00 > 607.00	5.266	5.266	0.0	1.109	1490514	1.05		109	7951	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.281	5.281	0.0	1.278	620537	1.31		105	270	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.282	527108	1.07		85.3	39.7	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.295	0.0	1.003	544740	0.9473		94.7	701	
61 NMeFOSA										
512.00 > 169.00	5.310	5.295	0.015	1.003	453220	1.03		103	642	
54 PFDoS										
699.00 > 80.00	5.436	5.436	0.0	1.226	2149369	0.8766	Target=4.32	90.6	2613	
699.00 > 99.00	5.436	5.436	0.0	1.226	486410		4.42(2.19-6.58)		3261	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.436	5.436	0.0	1.316	704799	1.39		111	426	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
62 N-EtFOSE-M										
630.00 > 59.00	5.449	5.449	0.0	1.002	639835	0.8983		89.8	1161	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.449	0.013	1.322	480345	1.15		92.3	687	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.449	5.462	-0.013	1.041	4835169	0.9435	Target=5.66	94.3	4389	
663.00 > 169.00	5.449	5.462	-0.013	1.041	770822		6.27(2.83-8.48)		3950	
56 N-EtFOSA-M										
526.00 > 169.00	5.475	5.462	0.013	1.002	424405	0.9452		94.5	656	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.637	5.637	0.0	1.365	6218548	1.16		93.0	13543	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.637	5.637	0.0	1.000	584913	0.9317	Target=1.07	93.2	3725	
713.00 > 219.00	5.637	5.637	0.0	1.000	569040		1.03(0.53-1.60)		4681	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.948	5.948	0.0	1.000	3812680	0.9215	Target=7.50	92.2	3748	
813.00 > 169.00	5.948	5.948	0.0	1.000	452209		8.43(3.75-11.26)		2530	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.948	5.948	0.0	1.440	4721620	1.22		97.4	8980	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.211	6.221	-0.010	1.044	3281395	0.9571	Target=9.98	95.7	3117	
913.00 > 169.00	6.211	6.221	-0.010	1.044	275312		11.92(5.14-15.41)		1681	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_092.d

Injection Date: 07-Oct-2021 09:59:31

Instrument ID: LCA

Lims ID: LCS 140-54177/2-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 38

Worklist Smp#: 92

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

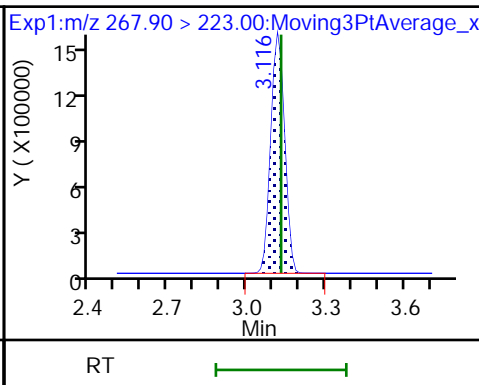
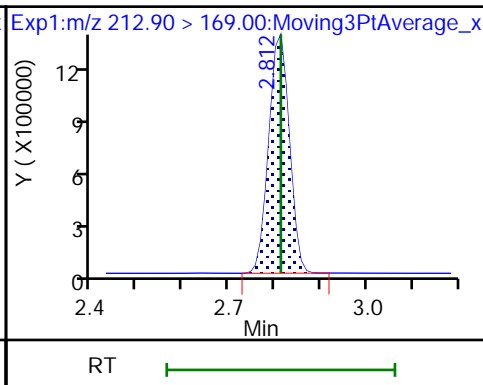
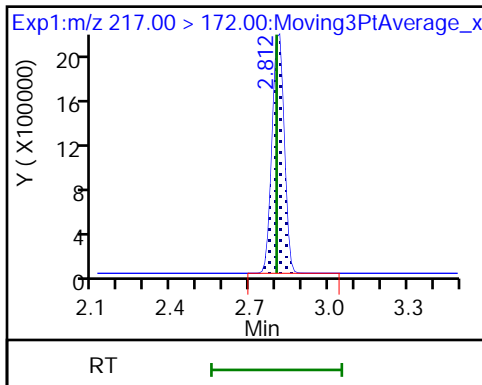
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

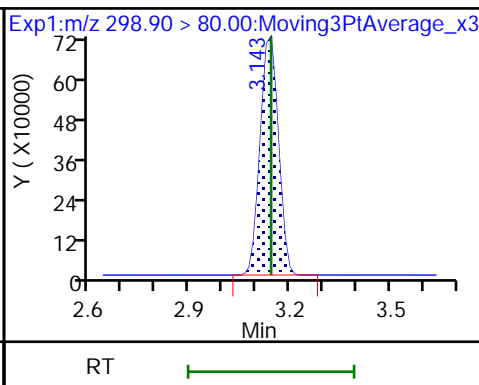
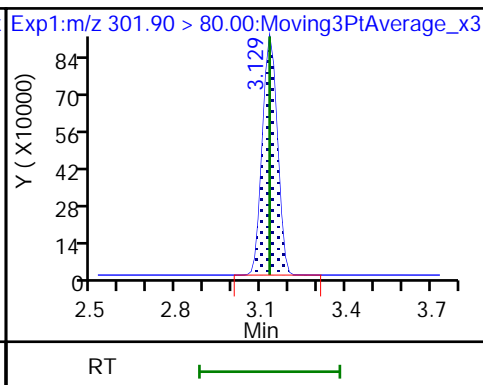
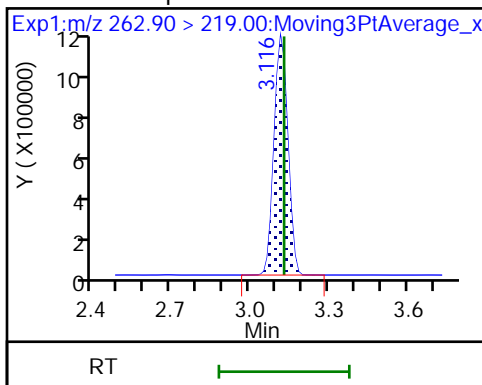
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

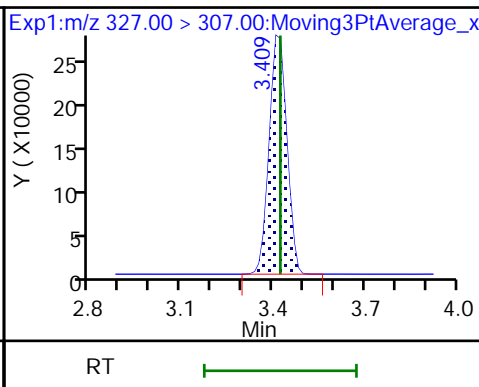
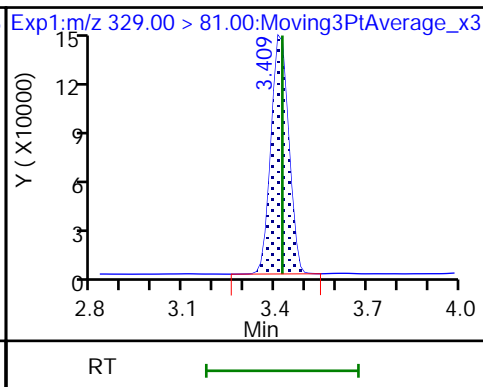
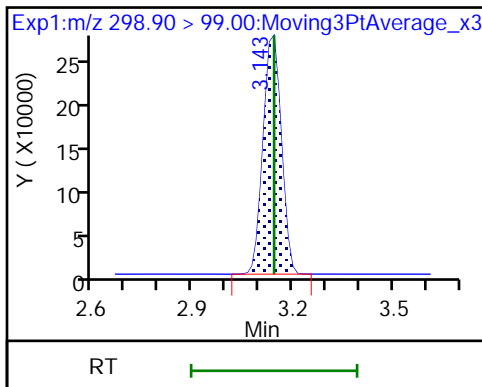
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

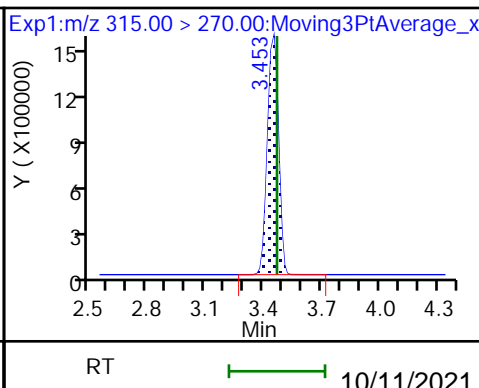
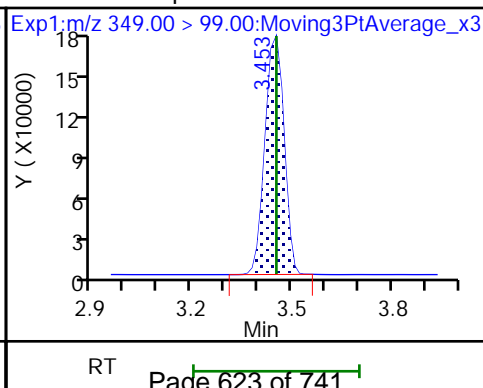
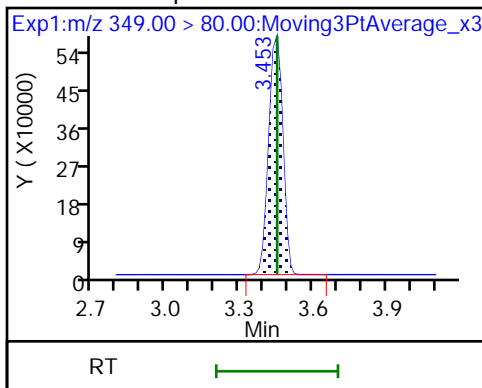
7 4:2 FTS

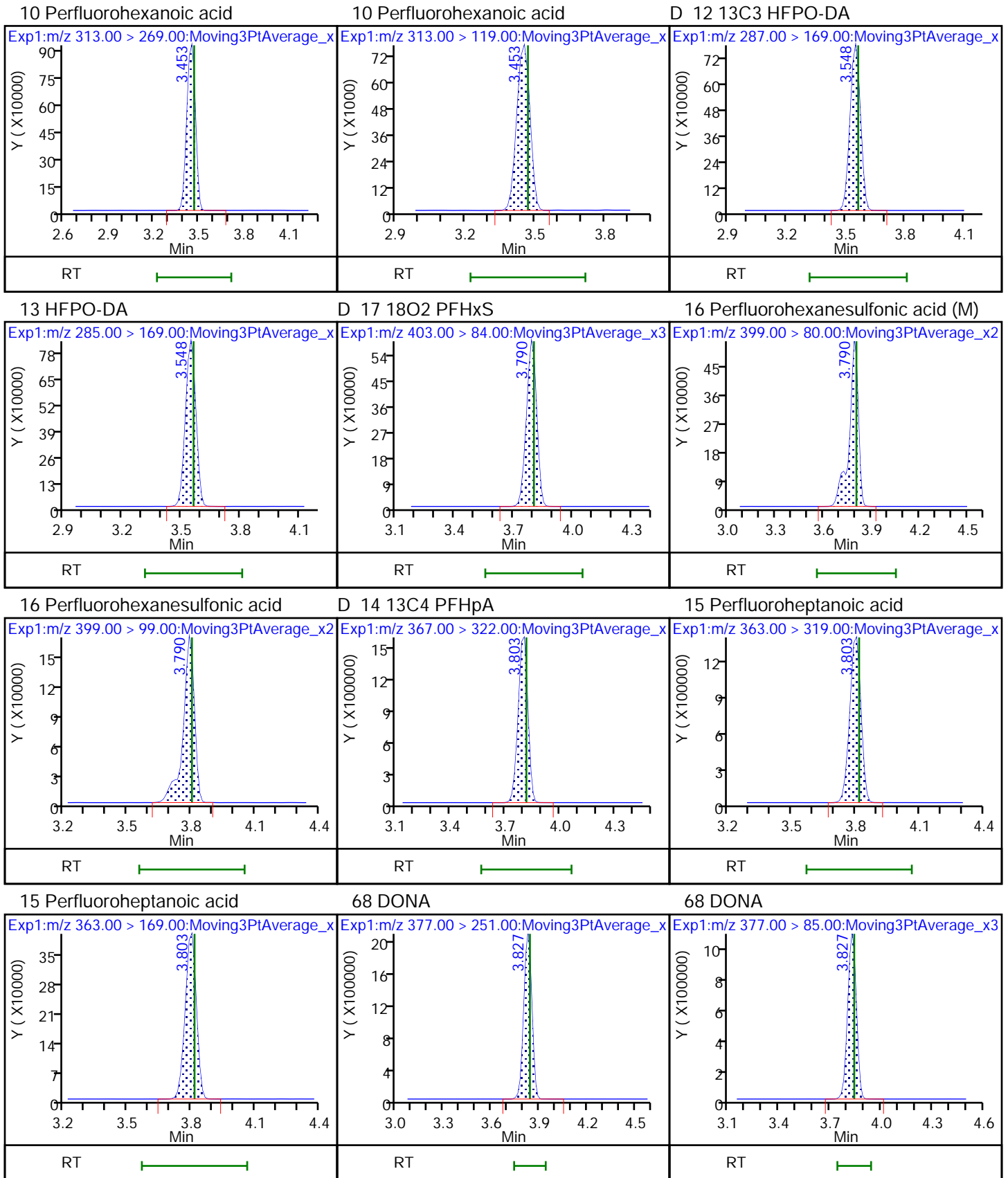


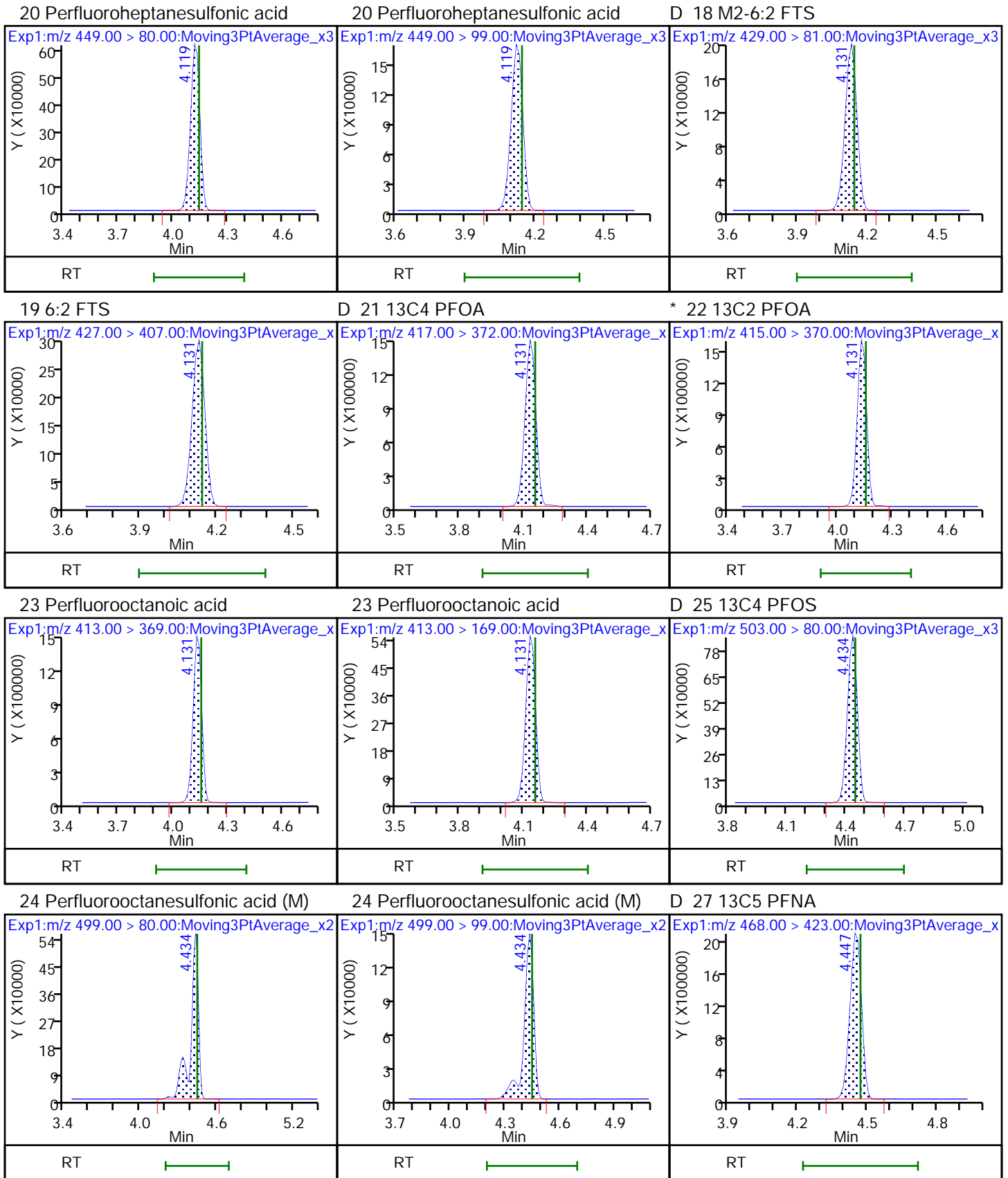
11 Perfluoropentanesulfonic acid

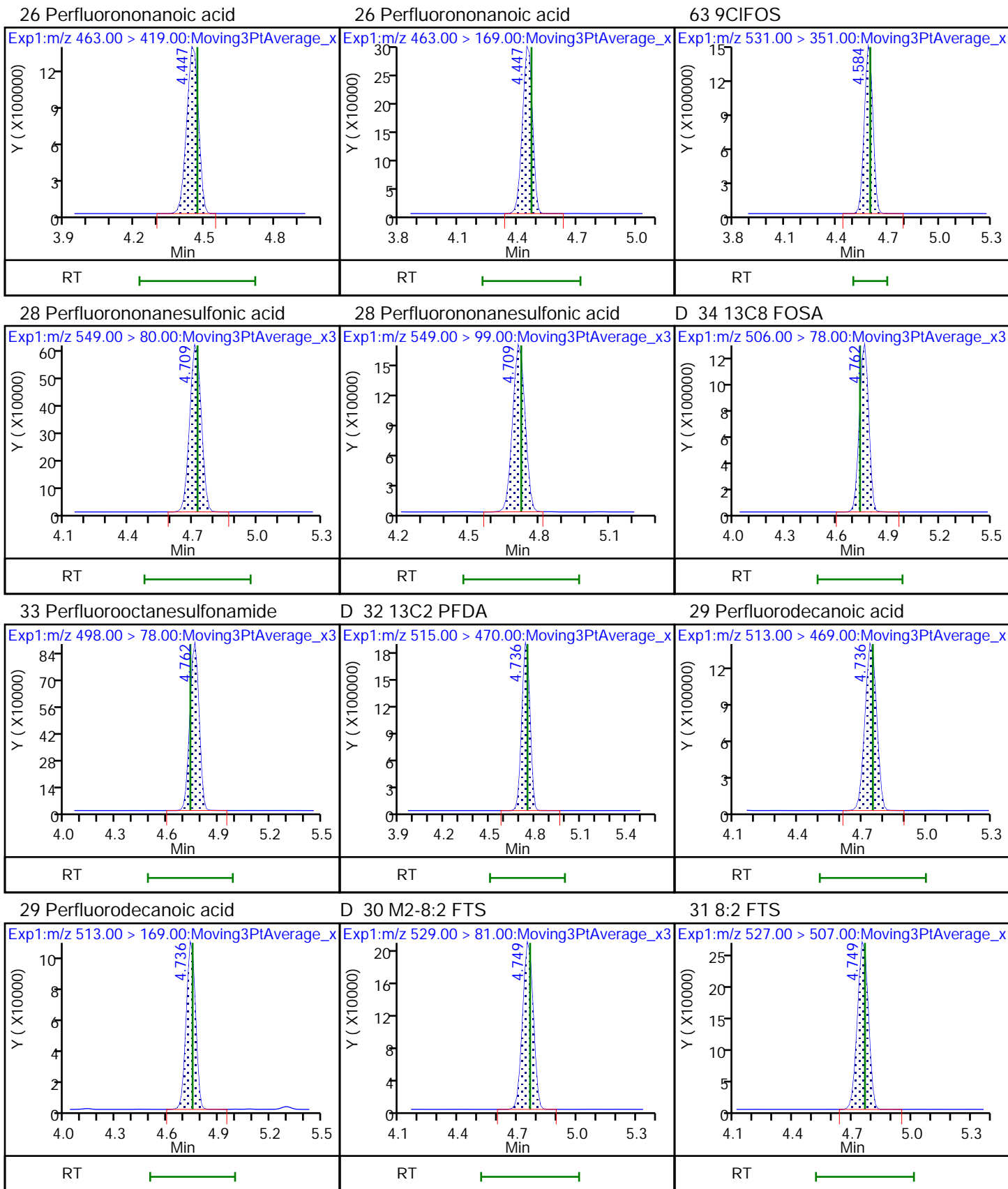
11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA





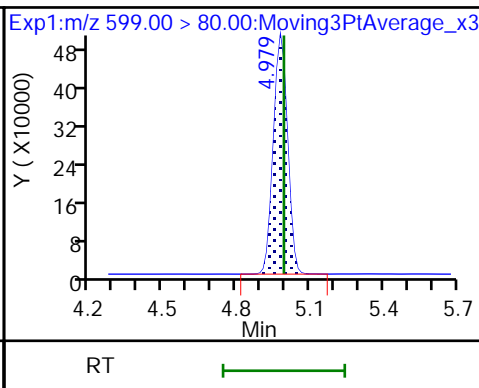
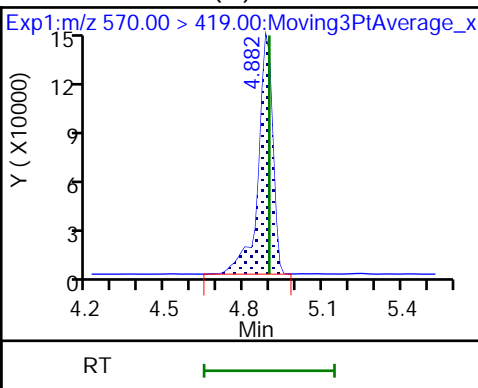
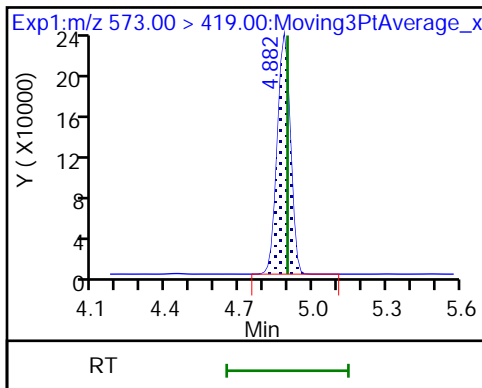




D 35 d3-NMeFOSAA

36 NMeFOSAA (M)

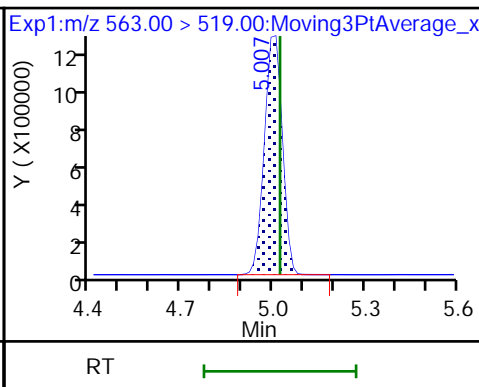
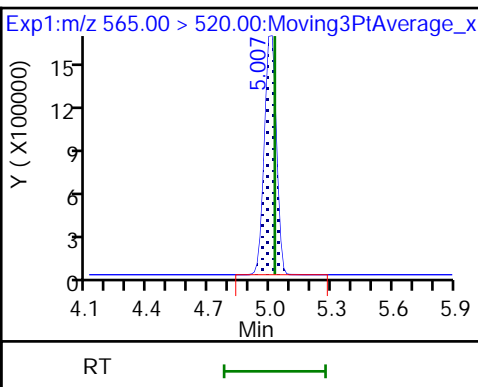
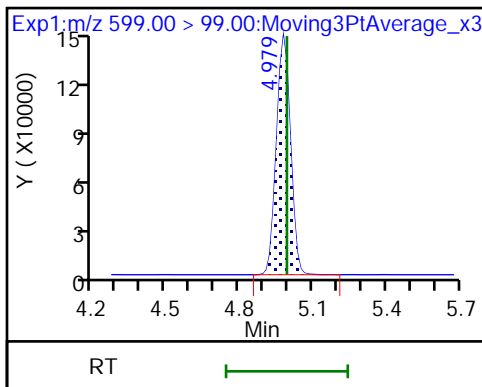
37 Perfluorodecanesulfonic acid



37 Perfluorodecanesulfonic acid

D 39 13C2 PFUoA

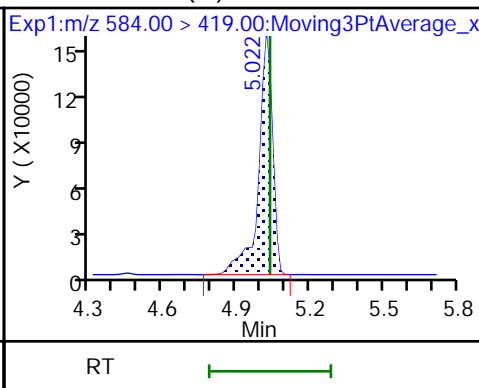
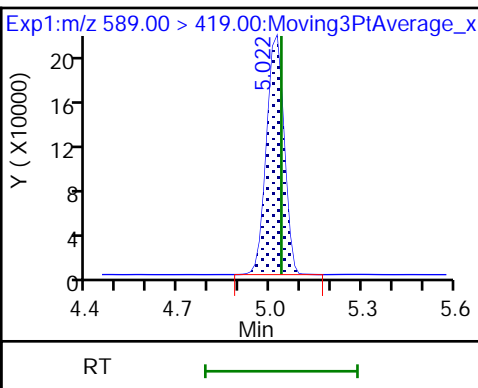
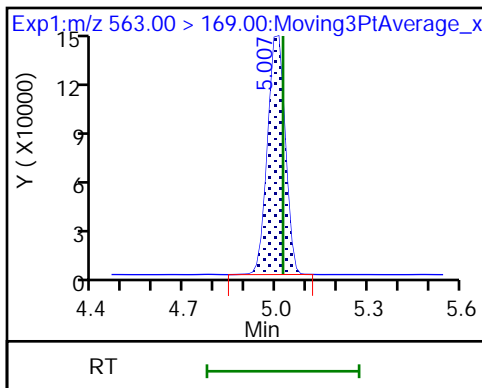
38 Perfluoroundecanoic acid



38 Perfluoroundecanoic acid

D 41 d5-NEtFOSAA

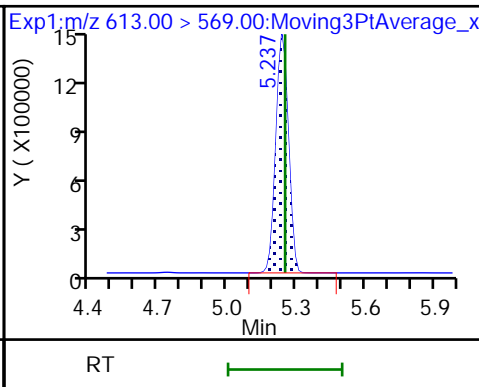
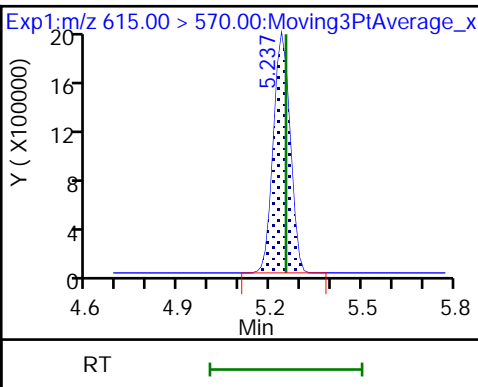
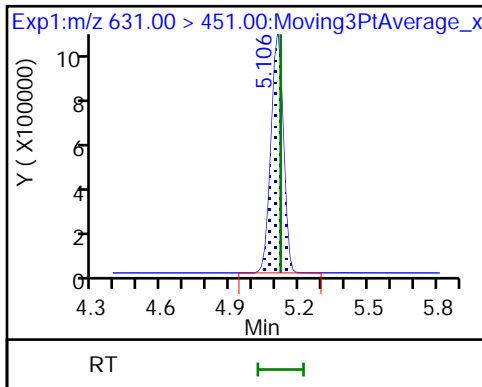
40 NEtFOSA (M)

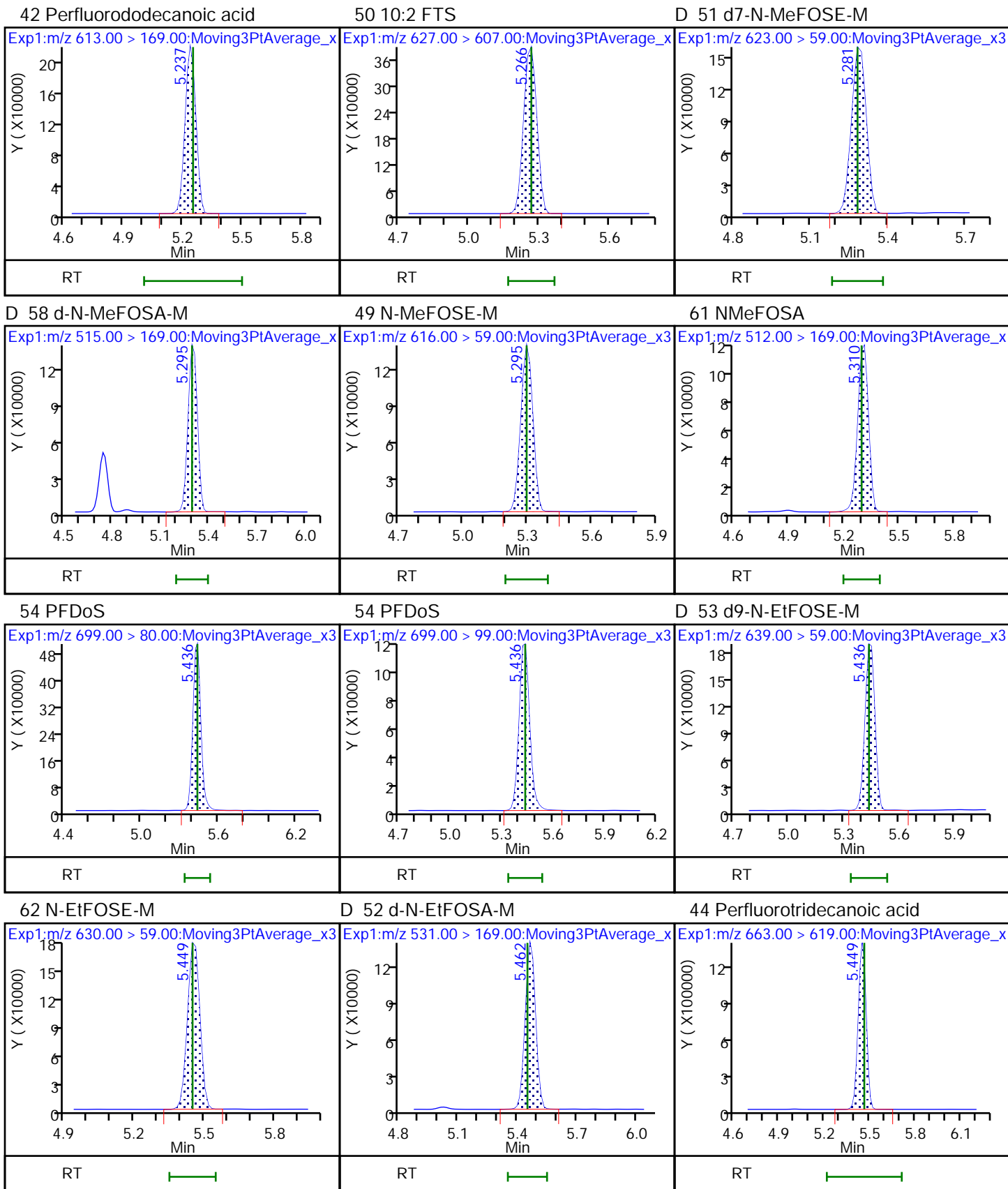


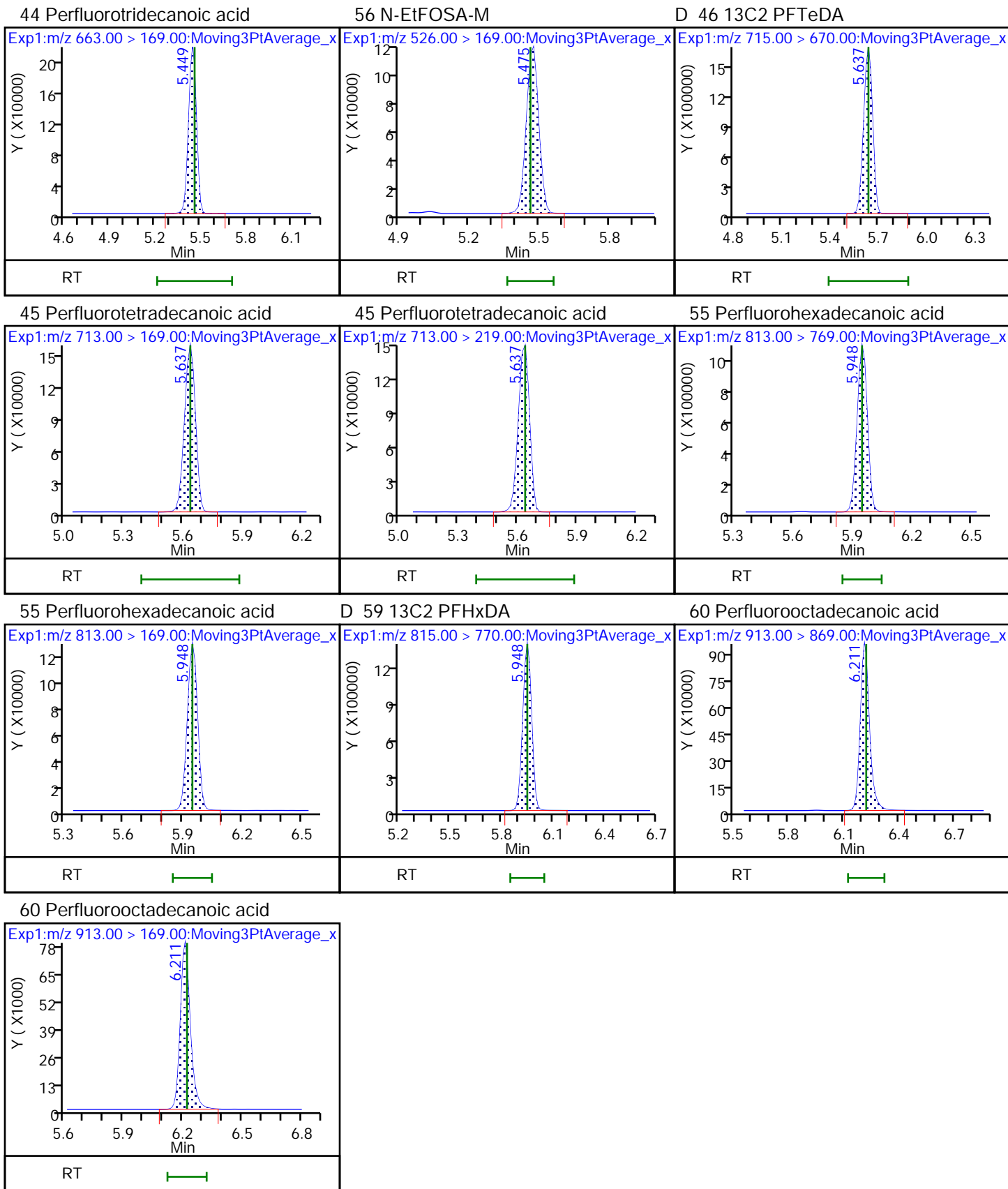
57 11CIFOS

D 43 13C2 PFDoA

42 Perfluorododecanoic acid







FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-54326/2-B
 Matrix: Air Lab File ID: _031.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: None Date Extracted: 09/29/2021 13:10
 Sample wt/vol: 1(Sample) Date Analyzed: 10/08/2021 16:16
 Con. Extract Vol.: 360(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: GeminiC18 3x100 ID: 3(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54642 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.01843		0.00160	0.00140

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	99		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_031.d
 Lims ID: LCS 140-54326/2-B
 Client ID:
 Sample Type: LCS
 Inject. Date: 08-Oct-2021 16:16:02 ALS Bottle#: 2 Worklist Smp#: 31
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0021001-031 lcs 140-54326/2-b
 Misc. Info.: Plate: 8 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 11:11:30 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675
 First Level Reviewer: cochranj Date: 09-Oct-2021 10:29:03
 Ratio Calibration: None

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	2.801	2.812	-0.011	0.678	6889639	1.24	99.2	11294	
2 Perfluorobutanoic acid	212.90 > 169.00	2.812	2.812	0.0	1.004	4201426	0.9705	97.0	279	
D 3 13C5 PFPeA	267.90 > 223.00	3.116	3.129	-0.013	0.754	5966102	1.31	105	11840	
4 Perfluoropentanoic acid	262.90 > 219.00	3.116	3.129	-0.013	1.000	4496914	0.9301	93.0	736	
D 6 13C3 PFBS	301.90 > 80.00	3.130	3.143	-0.013	0.758	2605248	0.8849	76.1	3307	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.143	3.143	0.0	1.004	2188311	0.8671	Target=3.06	98.1	2789
	298.90 > 99.00	3.143	3.143	0.0	1.004	833497		2.63(1.53-4.59)		965
D 8 M2-4:2 FTS	329.00 > 81.00	3.423	3.423	0.0	0.829	626466	1.42	122	690	
7 4:2 FTS	327.00 > 307.00	3.423	3.423	0.0	1.000	1163064	0.8671	92.8	9105	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.453	3.469	-0.016	1.103	1679208	0.8719	Target=3.47	93.0	1801
	349.00 > 99.00	3.453	3.469	-0.016	1.103	496531		3.38(1.73-5.20)		2519
D 9 13C2 PFHxA	315.00 > 270.00	3.453	3.469	-0.016	0.836	5916867	1.26	101	16366	
10 Perfluorohexanoic acid	313.00 > 269.00	3.453	3.469	-0.016	1.000	3651946	0.9000	Target=9.74	90.0	985
	313.00 > 119.00	3.453	3.469	-0.016	1.000	295060		12.38(4.87-14.61)		533
D 12 13C3 HFPO-DA	287.00 > 169.00	3.548	3.561	-0.013	0.859	2958864	1.23	98.8	9387	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.548	3.561	-0.013	1.000	3021572	0.9214		92.1	3845	
D 17 18O2 PFHxS										
403.00 > 84.00	3.790	3.803	-0.013	0.918	1651856	0.9272		78.4	9507	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.790	3.803	-0.013	1.000	1564522	0.8238	Target=2.96	90.5	2560	M
399.00 > 99.00	3.790	3.803	-0.013	1.000	461087		3.39(1.48-4.44)		2481	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.803	3.815	-0.012	0.921	5971634	1.28		102	14691	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.803	3.815	-0.012	1.000	4840125	0.9585	Target=3.35	95.8	1587	
363.00 > 169.00	3.803	3.815	-0.012	1.000	1460885		3.31(1.67-5.02)		6573	
68 DONA										
377.00 > 251.00	3.827	3.840	-0.013	0.863	7003407	1.33	Target=1.49	142	22982	
377.00 > 85.00	3.827	3.840	-0.013	0.863	3802846		1.84(0.74-2.23)		16610	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.119	4.143	-0.024	0.929	1574232	0.9778	Target=3.73	103	4828	
449.00 > 99.00	4.119	4.143	-0.024	0.929	401452		3.92(1.87-5.61)		2163	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.131	4.143	-0.012	1.000	629093	1.39		117	2313	
19 6:2 FTS										
427.00 > 407.00	4.131	4.143	-0.012	1.000	873532	0.8186		86.4	5223	
D 21 13C4 PFOA										
417.00 > 372.00	4.131	4.155	-0.024	1.000	5278755	1.25		100	21540	
* 22 13C2 PFOA										
415.00 > 370.00	4.131	4.155	-0.024		5242787	1.25			18946	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.131	4.155	-0.024	1.000	4344016	0.9271	Target=2.40	92.7	1743	
413.00 > 169.00	4.131	4.155	-0.024	1.000	1705596		2.55(1.20-3.61)		3208	
D 25 13C4 PFOS										
503.00 > 80.00	4.434	4.447	-0.013	1.074	1934131	0.7880		65.9	4325	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.434	4.447	-0.013	1.000	1546293	0.8687	Target=3.83	93.6	1932	M
499.00 > 99.00	4.434	4.447	-0.013	1.000	344033		4.49(1.91-5.74)		1406	M
D 27 13C5 PFNA										
468.00 > 423.00	4.447	4.470	-0.023	1.076	7031670	1.31		105	32238	
26 Perfluorononanoic acid										
463.00 > 419.00	4.447	4.470	-0.023	1.000	4441526	0.9457	Target=3.68	94.6	3756	
463.00 > 169.00	4.447	4.470	-0.023	1.000	974224		4.56(1.84-5.52)		2933	
63 9CIFOS										
531.00 > 351.00	4.584	4.596	-0.012	1.110	3624873	0.9704		104	4719	
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.709	4.722	-0.013	1.062	1267281	0.7513	Target=3.97	78.3	2765	
549.00 > 99.00	4.709	4.722	-0.013	1.062	323461		3.92(1.99-5.96)		1093	
D 34 13C8 FOSA										
506.00 > 78.00	4.736	4.736	0.0	1.146	4409666	1.22		97.9	5087	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.736	4.736	0.0	1.000	290530	1.8826		88.3	4909	10/11/2021

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 32 13C2 PFDA										
515.00 > 470.00	4.736	4.749	-0.013	1.146	6996235	1.29		103	22216	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.736	4.749	-0.013	1.000	5137438	0.9657	Target=10.11	96.6	2696	
513.00 > 169.00	4.736	4.749	-0.013	1.000	401919		12.78(5.06-15.17)		563	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.763	-0.014	1.150	782506	1.42		118	2707	
31 8:2 FTS										
527.00 > 507.00	4.749	4.763	-0.014	1.000	1011650	0.8679		90.6	2735	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.882	4.896	-0.014	1.182	985924	1.33		106	2190	
36 NMeFOSAA										
570.00 > 419.00	4.882	4.896	-0.014	1.000	694392	0.9570		95.7	1260	
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.979	4.993	-0.014	1.123	924294	0.5965	Target=3.80	61.9	2202	
599.00 > 99.00	4.979	4.993	-0.014	1.123	252266		3.66(1.90-5.70)		1151	
D 39 13C2 PFUnA										
565.00 > 520.00	4.993	5.008	-0.015	1.209	6292620	1.21		97.0	18099	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.993	5.008	-0.015	1.000	5092653	1.00	Target=7.45	100.0	8333	
563.00 > 169.00	4.993	5.008	-0.015	1.000	534582		9.53(3.78-11.33)		3452	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.007	5.022	-0.015	1.212	1055670	1.48		118	3100	
40 NEtFOSA										
584.00 > 419.00	5.022	5.036	-0.014	1.003	695480	0.8674		86.7	1008	
57 11CIFOS										
631.00 > 451.00	5.106	5.119	-0.013	1.151	2166372	0.7203		76.5	4513	
D 43 13C2 PFDoA										
615.00 > 570.00	5.237	5.251	-0.014	1.268	6919465	1.25		100	19189	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.237	5.251	-0.014	1.000	5455199	0.9436	Target=5.33	94.4	3871	
613.00 > 169.00	5.237	5.251	-0.014	1.000	756047		7.22(2.66-7.99)		4029	
50 10:2 FTS										
627.00 > 607.00	5.251	5.266	-0.015	1.106	1349659	0.9299		96.5	8033	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.281	5.295	-0.014	1.278	824663	1.83		146	398	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.282	606836	1.29		103	46.4	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.295	0.0	1.003	674851	0.8825		88.2	689	
61 NMeFOSA										
512.00 > 169.00	5.295	5.295	0.0	1.000	496923	0.9777		97.8	574	
54 PFDoS										
699.00 > 80.00	5.423	5.436	-0.013	1.223	257754	0.1612	Target=4.32	16.7	529	
699.00 > 99.00	5.423	5.436	-0.013	1.223	69374		3.72(2.19-6.58)		411	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.436	5.449	-0.013	1.316	705140	1.47		117	538	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
62 N-EtFOSE-M										
630.00 > 59.00	5.449	5.462	-0.013	1.002	677421	0.9509		95.1	1068	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.462	0.0	1.322	489092	1.24		99.0	700	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.436	5.462	-0.026	1.038	4641024	0.9482	Target=5.66	94.8	3781	
663.00 > 169.00	5.436	5.462	-0.026	1.038	772048		6.01(2.83-8.48)		4114	
56 N-EtFOSA-M										
526.00 > 169.00	5.462	5.462	0.0	1.000	439830	0.9621		96.2	443	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.623	5.637	-0.014	1.361	5276310	1.04		83.1	21164	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.623	5.637	-0.014	1.000	509106	0.9559	Target=1.07	95.6	2789	
713.00 > 219.00	5.623	5.637	-0.014	1.000	513004		0.99(0.53-1.60)		4146	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.935	5.948	-0.013	1.000	1088013	0.9412	Target=7.50	94.1	1419	
813.00 > 169.00	5.935	5.948	-0.013	1.000	134350		8.10(3.75-11.26)		1021	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.935	5.948	-0.013	1.437	1319940	0.3584		28.7	3801	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.201	6.221	-0.020	1.045	182405	0.1903	Target=9.98	19.0	658	
913.00 > 169.00	6.201	6.221	-0.020	1.045	15822		11.53(5.14-15.41)		253	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_031.d

Injection Date: 08-Oct-2021 16:16:02 Instrument ID: LCA

Lims ID: LCS 140-54326/2-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 2

Worklist Smp#: 31

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

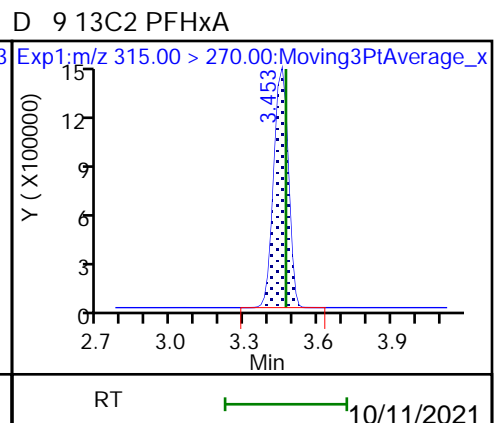
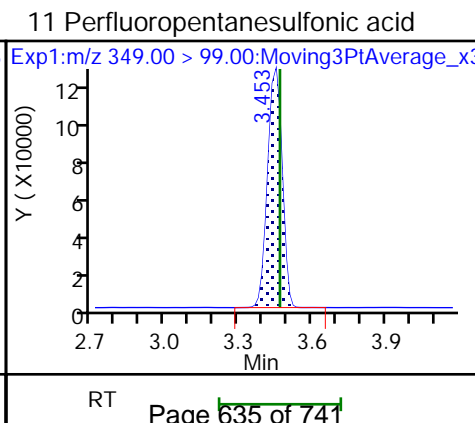
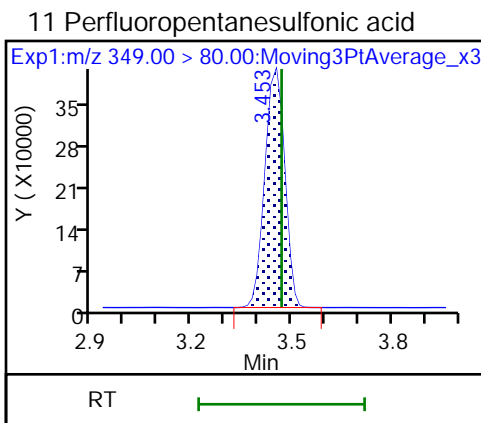
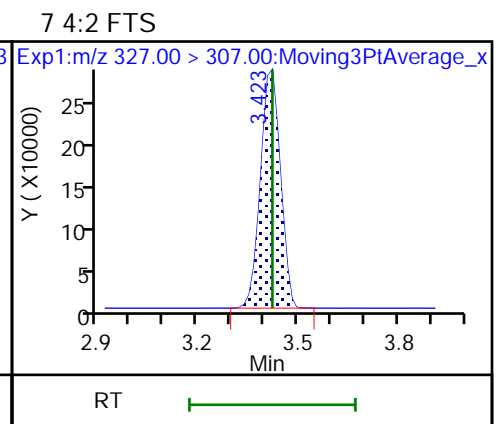
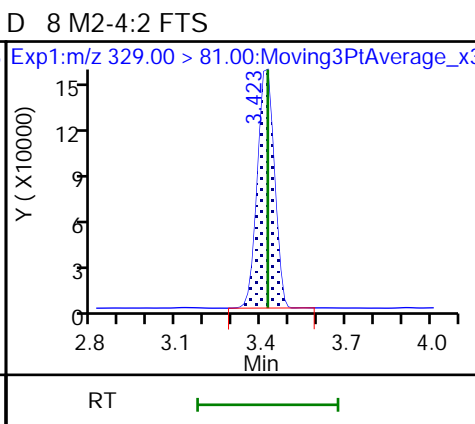
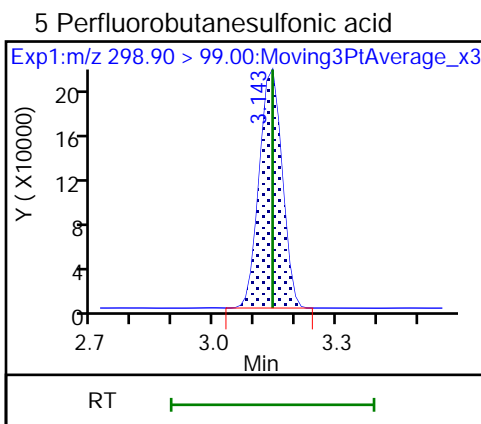
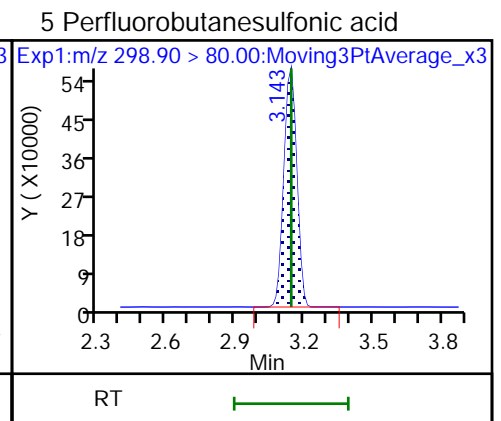
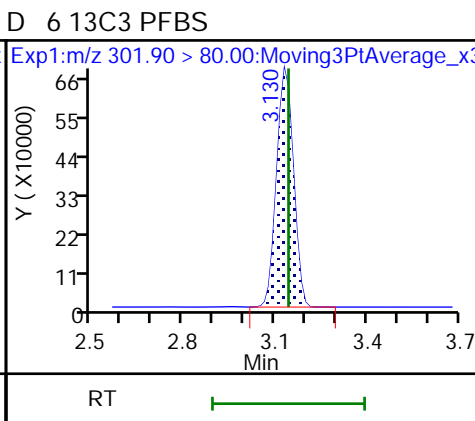
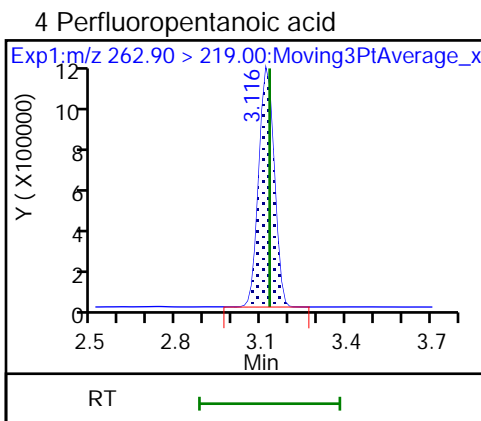
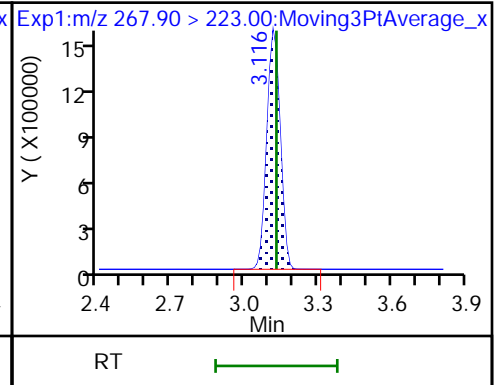
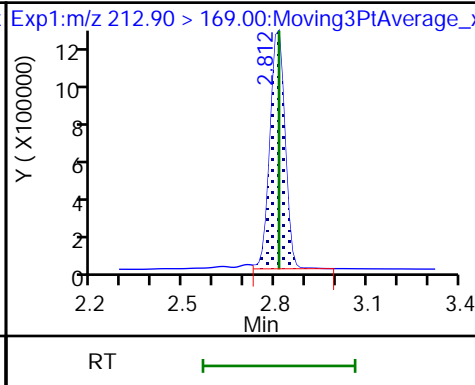
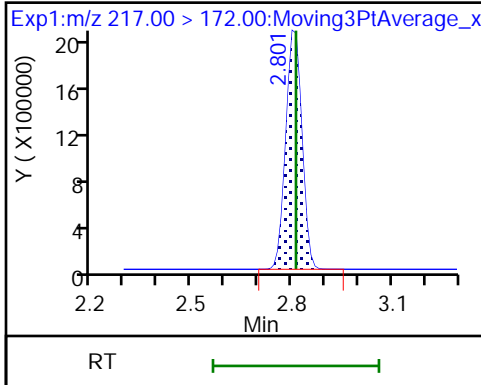
Method: PFC_LCA

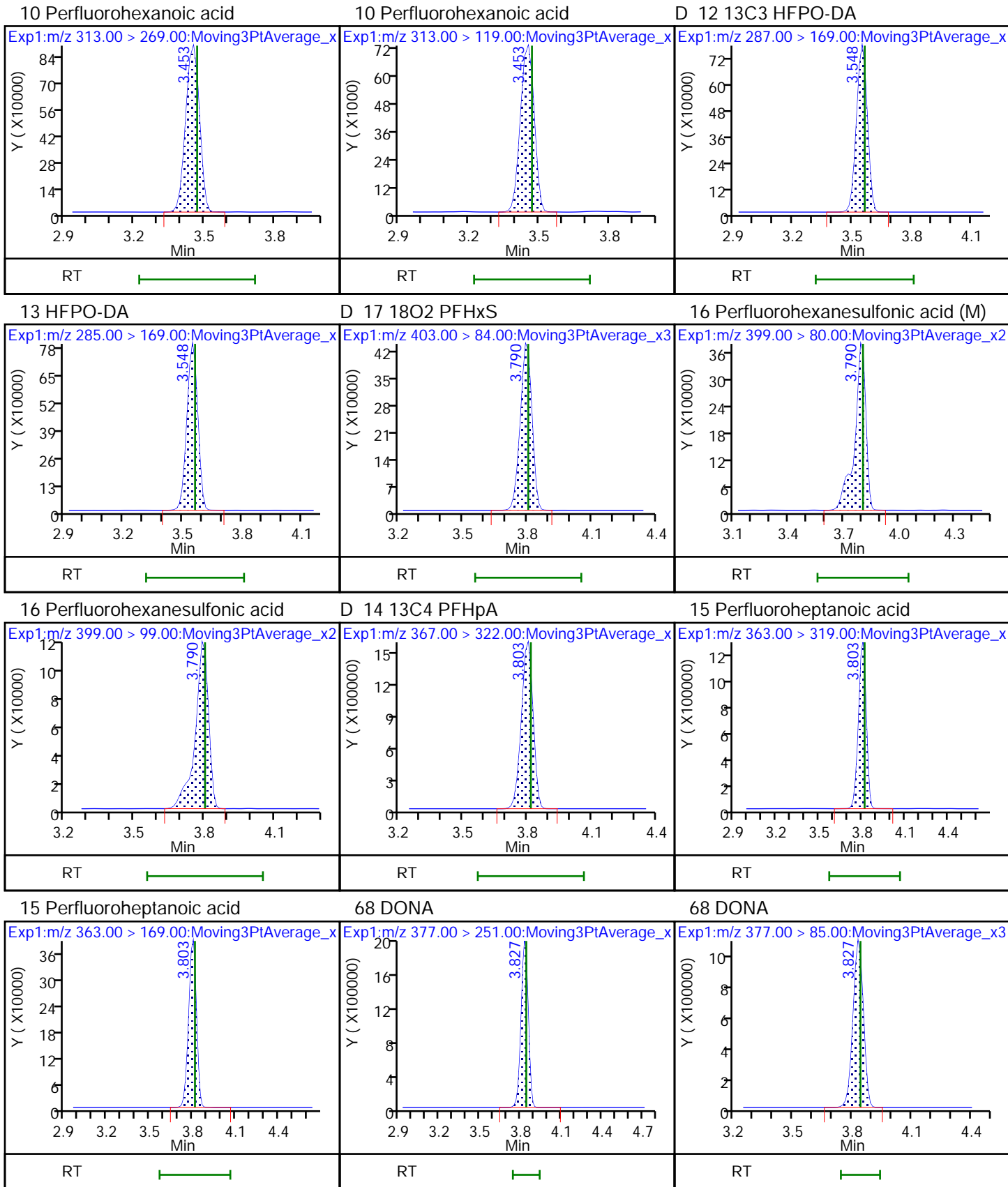
Limit Group: LC - PFC- ICAL

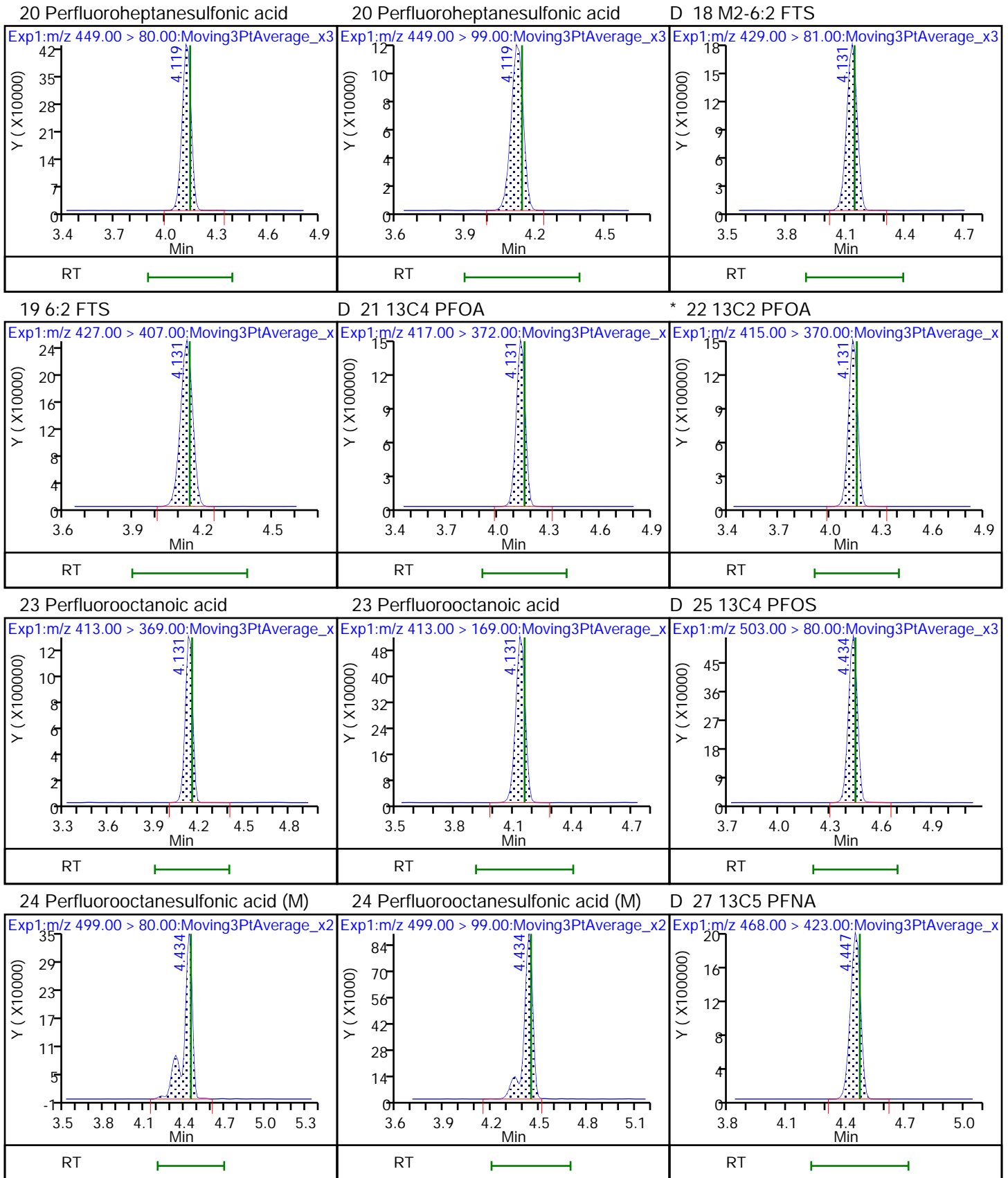
D 1 13C4 PFBA

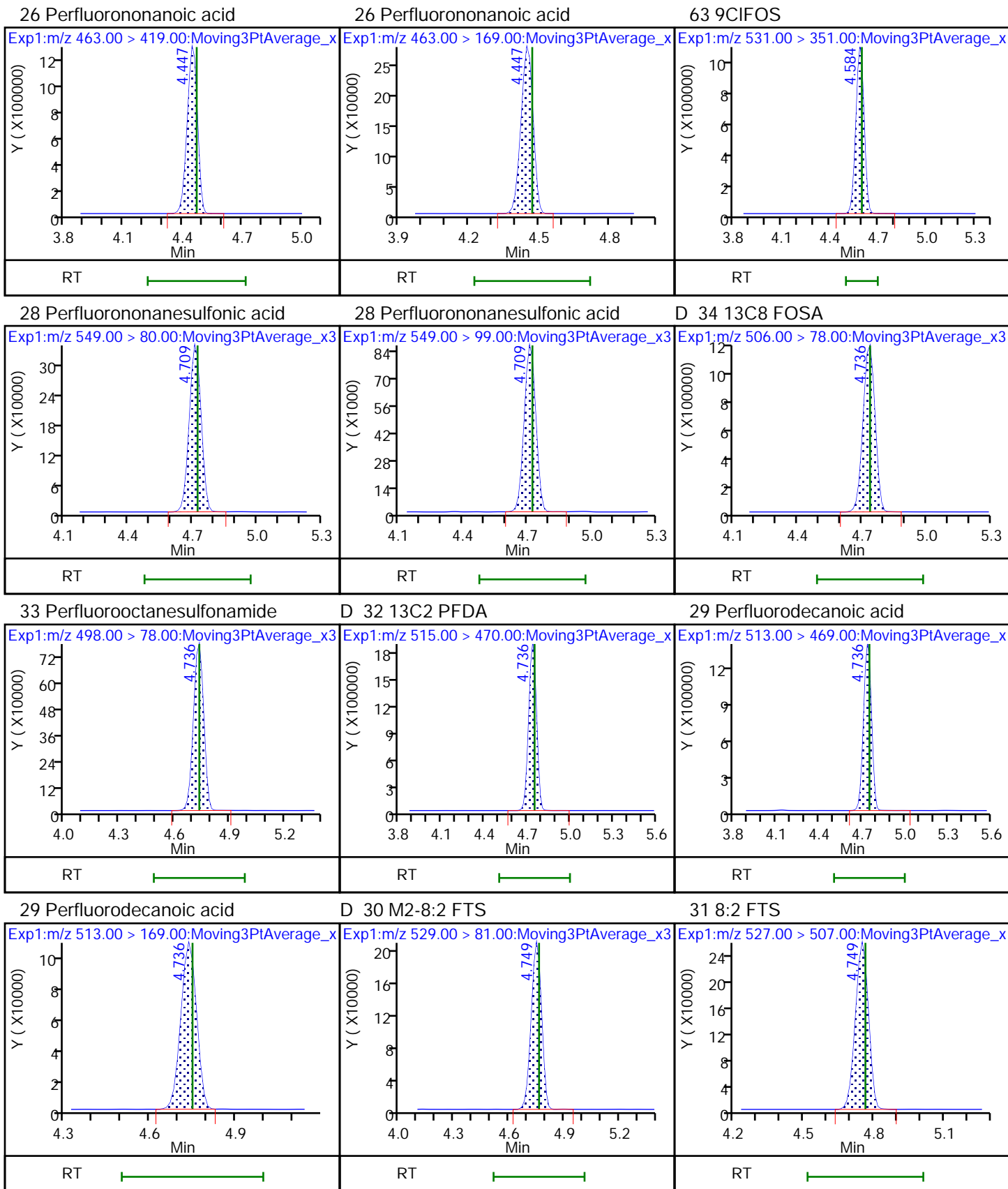
2 Perfluorobutanoic acid

D 3 13C5 PFPeA





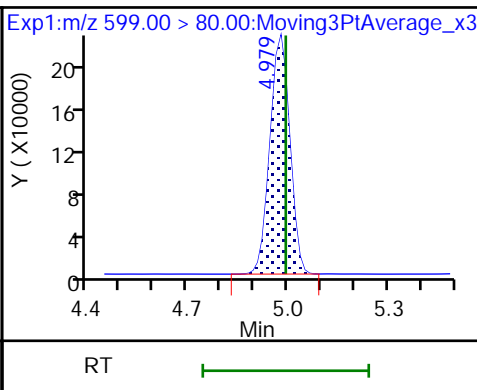
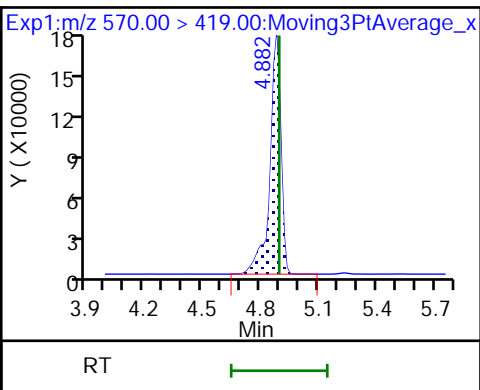
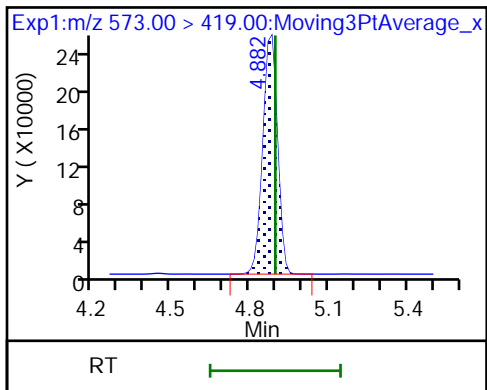




D 35 d3-NMeFOSAA

36 NMeFOSAA

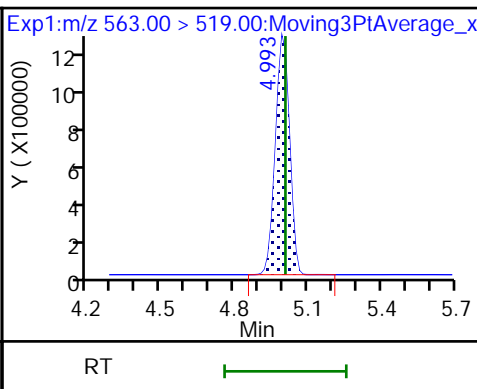
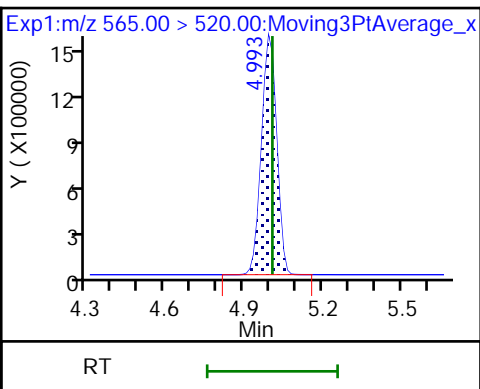
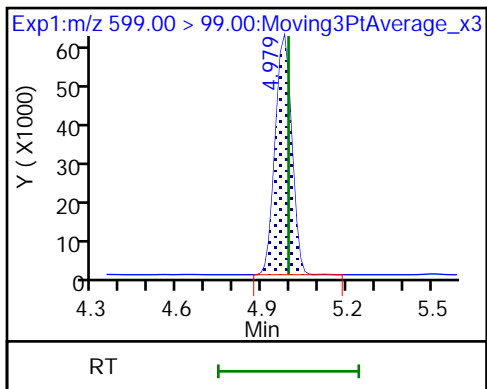
37 Perfluorodecanesulfonic acid



37 Perfluorodecanesulfonic acid

D 39 13C2 PFUoA

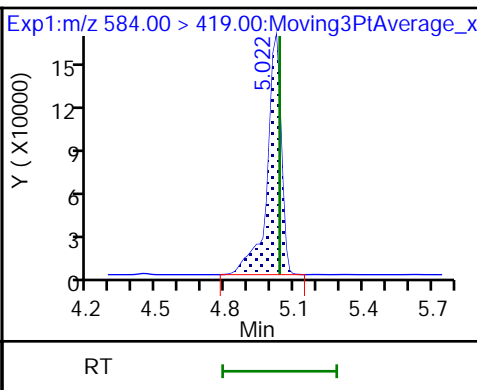
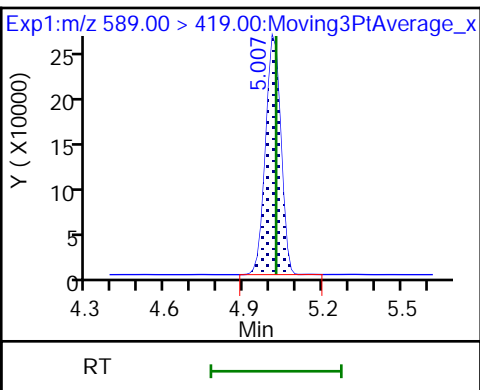
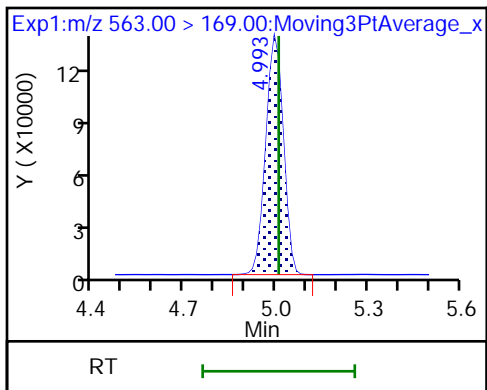
38 Perfluoroundecanoic acid



38 Perfluoroundecanoic acid

D 41 d5-NEtFOSAA

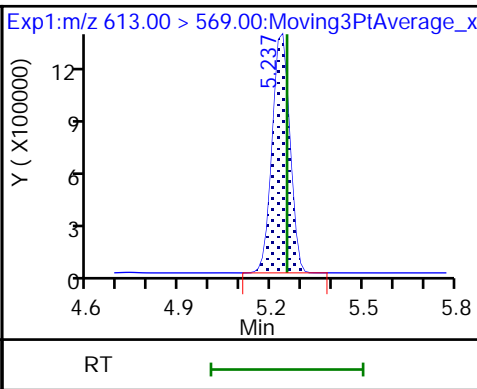
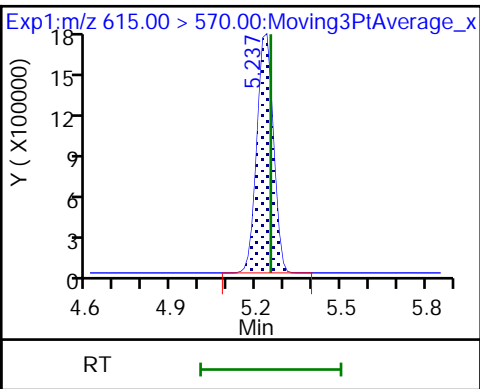
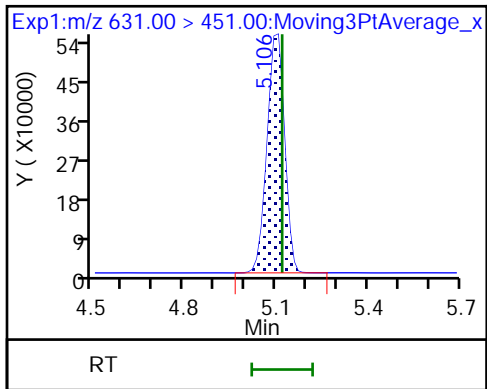
40 NEtFOSA

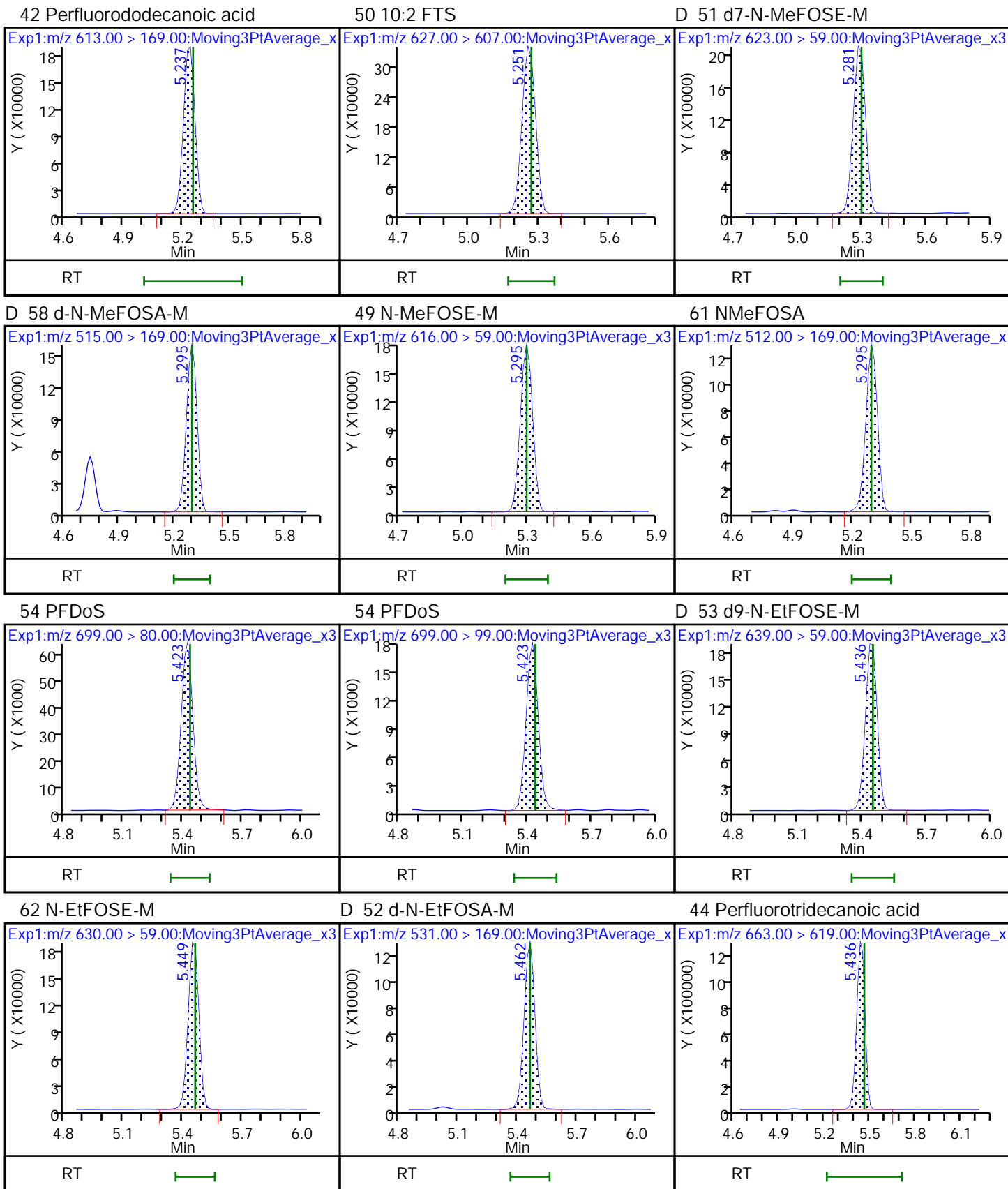


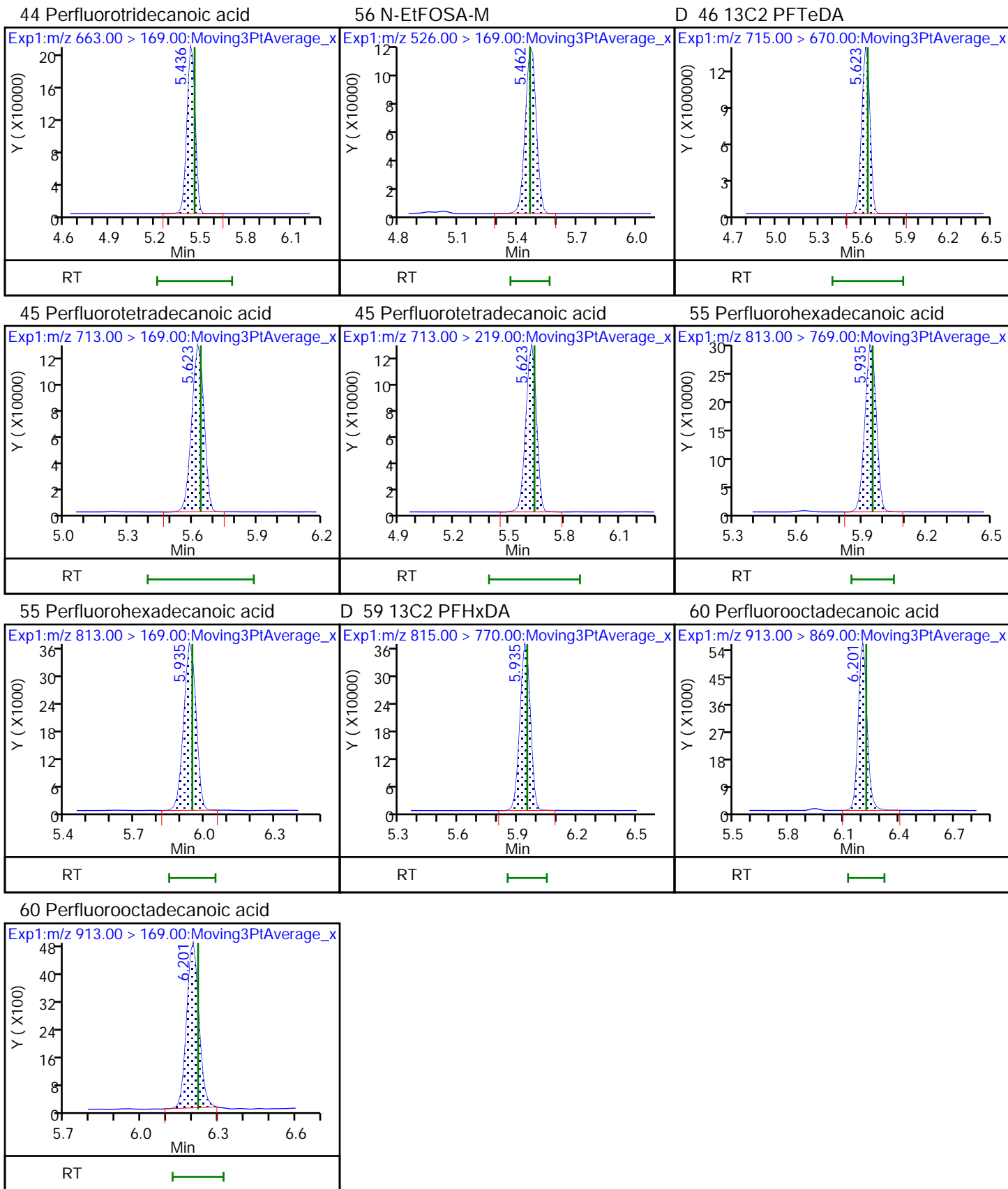
57 11CIFOS

D 43 13C2 PFDoA

42 Perfluorododecanoic acid







FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-54348/2-B
 Matrix: Air Lab File ID: _040.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: None Date Extracted: 09/30/2021 08:55
 Sample wt/vol: 1(Sample) Date Analyzed: 10/07/2021 02:19
 Con. Extract Vol.: 10(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: GeminiC18 3x100 ID: 3(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54568 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.009386		0.000500	0.0000825

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	91		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_040.d
 Lims ID: LCS 140-54348/2-B
 Client ID:
 Sample Type: LCS
 Inject. Date: 07-Oct-2021 02:19:00 ALS Bottle#: 40 Worklist Smp#: 40
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-040 lcs 140-54348/2-b
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 17:25:19 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675
 First Level Reviewer: cochranj Date: 09-Oct-2021 17:22:01
 Ratio Calibration: None

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	2.790	2.801	-0.011	0.677	7758709	1.18	94.5	16766	
2 Perfluorobutanoic acid	212.90 > 169.00	2.790	2.812	-0.022	1.000	4489008	0.9207	92.1	1248	
D 3 13C5 PFPeA	267.90 > 223.00	3.102	3.129	-0.027	0.753	6383318	1.18	94.7	14177	
4 Perfluoropentanoic acid	262.90 > 219.00	3.102	3.129	-0.027	1.000	4724592	0.9133	91.3	1363	
D 6 13C3 PFBS	301.90 > 80.00	3.116	3.129	-0.013	0.757	3670642	1.05	90.7	25865	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.116	3.143	-0.027	1.000	3197363	0.8992	Target=3.06	102	15764
	298.90 > 99.00	3.116	3.143	-0.027	1.000	1164587		2.75(1.53-4.59)		4750
D 8 M2-4:2 FTS	329.00 > 81.00	3.395	3.423	-0.028	0.824	642987	1.23	105	1226	
7 4:2 FTS	327.00 > 307.00	3.395	3.423	-0.028	1.000	1161316	0.8435	90.3	14308	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.423	3.453	-0.030	1.099	2632044	0.9706	Target=3.47	103	9473
	349.00 > 99.00	3.423	3.453	-0.030	1.099	753339		3.49(1.73-5.20)		7824
D 9 13C2 PFHxA	315.00 > 270.00	3.437	3.469	-0.032	0.835	6417132	1.16	92.7	14530	
10 Perfluorohexanoic acid	313.00 > 269.00	3.437	3.469	-0.032	1.000	4050482	0.9204	Target=9.74	92.0	2637
	313.00 > 119.00	3.423	3.469	-0.046	0.996	324449		12.48(4.87-14.61)		1072
D 12 13C3 HFPO-DA	287.00 > 169.00	3.535	3.561	-0.026	0.858	3236648	1.14	91.3	7876	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.535	3.561	-0.026	1.000	3366565	0.9386		93.9	3336	
D 17 18O2 PFHxS										
403.00 > 84.00	3.778	3.803	-0.025	0.917	2344966	1.11		94.1	6815	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.778	3.803	-0.025	1.000	2352639	0.8730	Target=2.96	95.9	6658	
399.00 > 99.00	3.778	3.803	-0.025	1.000	691157		3.40(1.48-4.44)		3917	
D 14 13C4 PFHpA										
367.00 > 322.00	3.778	3.815	-0.037	0.917	6347745	1.15		91.9	16716	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.778	3.815	-0.037	1.000	5287860	0.9852	Target=3.35	98.5	5272	
363.00 > 169.00	3.778	3.815	-0.037	1.000	1572323		3.36(1.67-5.02)		9396	
68 DONA										
377.00 > 251.00	3.815	3.840	-0.025	0.864	7915716	0.9278	Target=1.49	98.5	12818	
377.00 > 85.00	3.815	3.840	-0.025	0.864	4237638		1.87(0.74-2.23)		11511	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.107	4.143	-0.036	0.931	2302075	0.8798	Target=3.73	92.4	4650	
449.00 > 99.00	4.107	4.143	-0.036	0.931	599431		3.84(1.87-5.61)		2564	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.107	4.143	-0.036	0.997	655906	1.23		103	2212	
19 6:2 FTS										
427.00 > 407.00	4.119	4.143	-0.024	1.003	1039595	0.9354		98.7	4934	
D 21 13C4 PFOA										
417.00 > 372.00	4.119	4.155	-0.036	1.000	6116579	1.22		98.0	22582	
* 22 13C2 PFOA										
415.00 > 370.00	4.119	4.155	-0.036		6201956	1.25			14899	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.119	4.155	-0.036	1.000	4980422	0.9173	Target=2.40	91.7	2536	
413.00 > 169.00	4.119	4.155	-0.036	1.000	1982798		2.51(1.20-3.61)		3575	
D 25 13C4 PFOS										
503.00 > 80.00	4.413	4.447	-0.033	1.072	3143423	1.08		90.6	6054	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.413	4.447	-0.033	1.000	2522146	0.8718	Target=3.83	93.9	1653	M
499.00 > 99.00	4.413	4.447	-0.033	1.000	561538		4.49(1.91-5.74)		1319	M
D 27 13C5 PFNA										
468.00 > 423.00	4.426	4.470	-0.044	1.075	7466925	1.18		94.1	24468	
26 Perfluorononanoic acid										
463.00 > 419.00	4.426	4.470	-0.044	1.000	4756437	0.9537	Target=3.68	95.4	4605	
463.00 > 169.00	4.426	4.470	-0.044	1.000	1037029		4.59(1.84-5.52)		2118	
63 9CIFOS										
531.00 > 351.00	4.564	4.596	-0.032	1.108	5422235	0.8932		95.8	8656	
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.700	4.722	-0.022	1.065	2517260	0.9182	Target=3.97	95.6	5202	
549.00 > 99.00	4.700	4.722	-0.022	1.065	667591		3.77(1.99-5.96)		3540	
D 34 13C8 FOSA										
506.00 > 78.00	4.713	4.736	-0.023	1.144	5090394	1.19		95.5	8213	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.713	4.736	-0.023	1.000	4440521	0.9367		93.7	5439	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 32 13C2 PFDA										
515.00 > 470.00	4.713	4.749	-0.036	1.144	7498949	1.17		93.3	11755	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.713	4.749	-0.036	1.000	5402644	0.9473	Target=10.11	94.7	2740	
513.00 > 169.00	4.726	4.749	-0.023	1.003	451596		11.96(5.06-15.17)		494	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.739	4.763	-0.024	1.151	834415	1.28		107	3874	
31 8:2 FTS										
527.00 > 507.00	4.739	4.763	-0.024	1.000	1088817	0.8760		91.4	8417	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.859	4.896	-0.037	1.180	992195	1.13		90.2	2070	
36 NMeFOSAA										
570.00 > 419.00	4.859	4.896	-0.037	1.000	720165	0.9865		98.6	560	
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.954	4.993	-0.039	1.123	2282422	0.9063	Target=3.80	94.0	6788	
599.00 > 99.00	4.954	4.993	-0.039	1.123	651968		3.50(1.90-5.70)		3188	
D 39 13C2 PFUnA										
565.00 > 520.00	4.983	5.022	-0.039	1.210	7243426	1.18		94.4	12376	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.983	5.022	-0.039	1.000	5632520	0.9602	Target=7.45	96.0	8159	
563.00 > 169.00	4.983	5.022	-0.039	1.000	617039		9.13(3.78-11.33)		2134	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.997	5.036	-0.039	1.213	999340	1.18		94.5	3605	
40 NEtFOSA										
584.00 > 419.00	4.997	5.036	-0.039	1.000	709255	0.9344		93.4	1206	
57 11CIFOS										
631.00 > 451.00	5.082	5.119	-0.037	1.152	4421396	0.9045		96.0	8636	
D 43 13C2 PFDoA										
615.00 > 570.00	5.214	5.251	-0.037	1.266	7966897	1.22		97.4	22609	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.214	5.251	-0.037	1.000	6066022	0.9107	Target=5.33	91.1	3905	
613.00 > 169.00	5.214	5.251	-0.037	1.000	837564		7.24(2.66-7.99)		3071	
50 10:2 FTS										
627.00 > 607.00	5.240	5.266	-0.026	1.106	1395409	0.9016		93.5	7781	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.269	5.281	-0.012	1.279	694633	1.30		104	389	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.284	5.295	-0.011	1.283	631897	1.14		91.0	39.8	
49 N-MeFOSE-M										
616.00 > 59.00	5.284	5.295	-0.011	1.003	615406	0.9561		95.6	952	
61 NMeFOSA										
512.00 > 169.00	5.284	5.295	-0.011	1.000	514573	0.9722		97.2	639	
54 PFDoS										
699.00 > 80.00	5.399	5.436	-0.037	1.223	2371142	0.9125	Target=4.32	94.3	4263	
699.00 > 99.00	5.399	5.436	-0.037	1.223	560253		4.23(2.19-6.58)		4093	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.426	5.436	-0.010	1.317	754148	1.33		106	715	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
62 N-EtFOSE-M										
630.00 > 59.00	5.439	5.449	-0.010	1.002	729581	0.9576		95.8	1556	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.452	5.449	0.003	1.324	514037	1.10		88.0	718	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.426	5.462	-0.036	1.041	5213853	0.9251	Target=5.66	92.5	3672	
663.00 > 169.00	5.426	5.462	-0.036	1.041	889600		5.86(2.83-8.48)		3507	
56 N-EtFOSA-M										
526.00 > 169.00	5.452	5.462	-0.010	1.000	490466	1.02		102	671	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.611	5.637	-0.026	1.362	7209398	1.20		96.0	22085	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.611	5.637	-0.026	1.000	679179	0.9332	Target=1.07	93.3	4622	
713.00 > 219.00	5.611	5.637	-0.026	1.000	655532		1.04(0.53-1.60)		4185	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.925	5.948	-0.023	1.000	4068525	0.9104	Target=7.50	91.0	2778	
813.00 > 169.00	5.925	5.948	-0.023	1.000	498124		8.17(3.75-11.26)		2531	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.925	5.948	-0.023	1.439	5098483	1.17		93.6	5308	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.185	6.221	-0.036	1.044	3468995	0.9371	Target=9.98	93.7	2394	
913.00 > 169.00	6.185	6.221	-0.036	1.044	303733		11.42(5.14-15.41)		1793	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_040.d

Injection Date: 07-Oct-2021 02:19:00

Instrument ID: LCA

Lims ID: LCS 140-54348/2-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 40

Worklist Smp#: 40

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

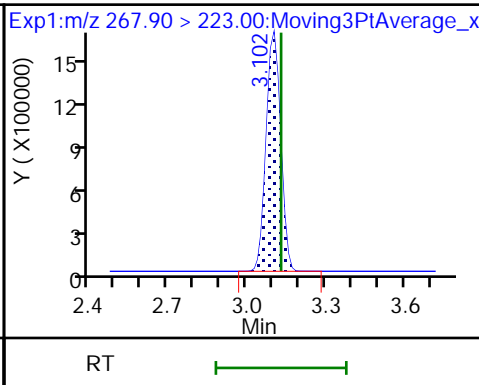
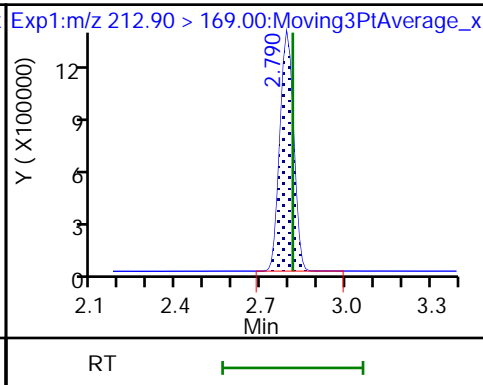
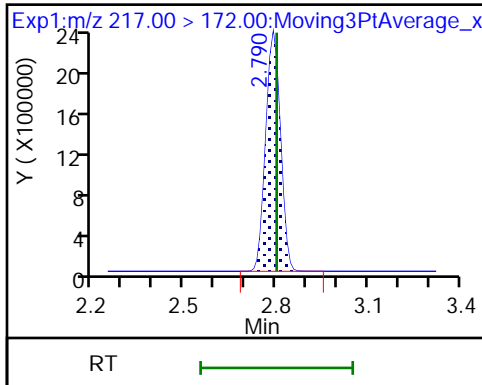
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

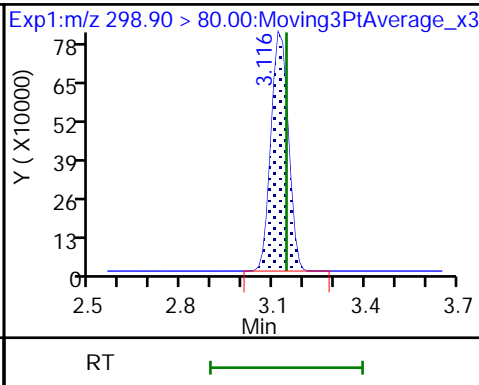
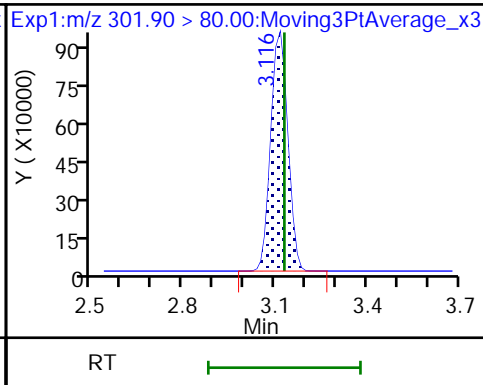
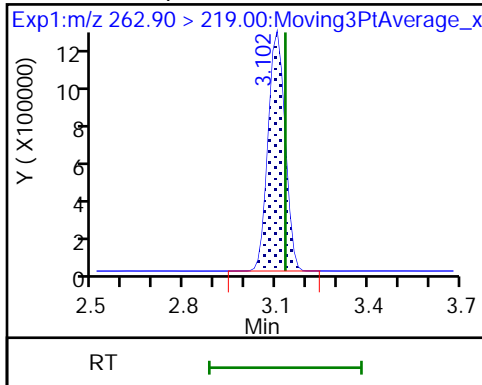
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

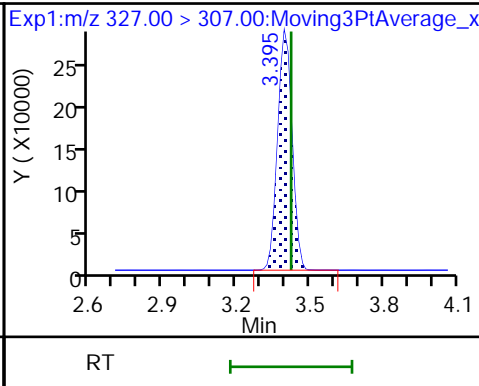
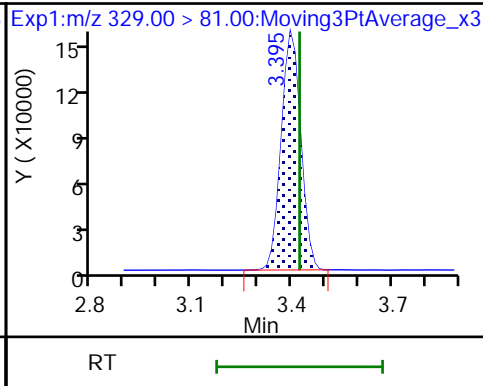
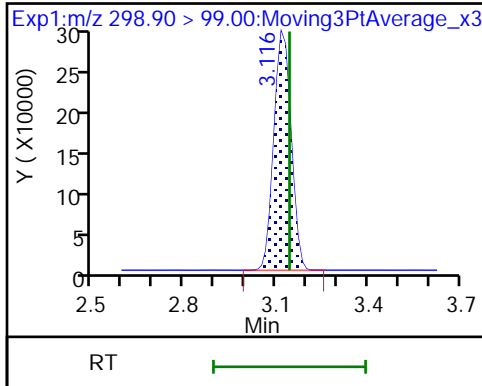
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

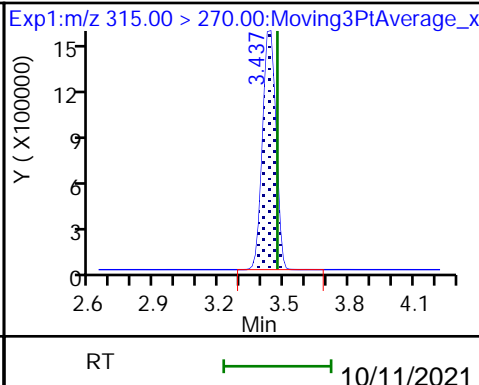
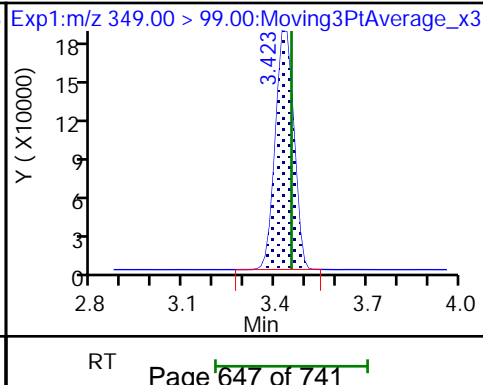
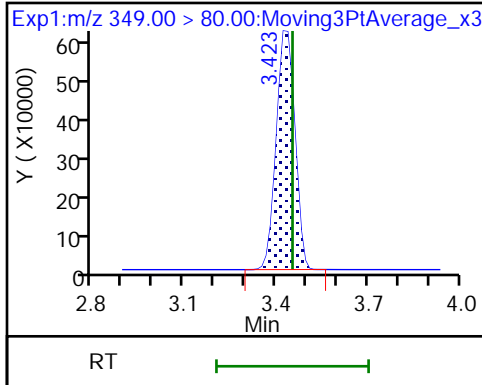
7 4:2 FTS

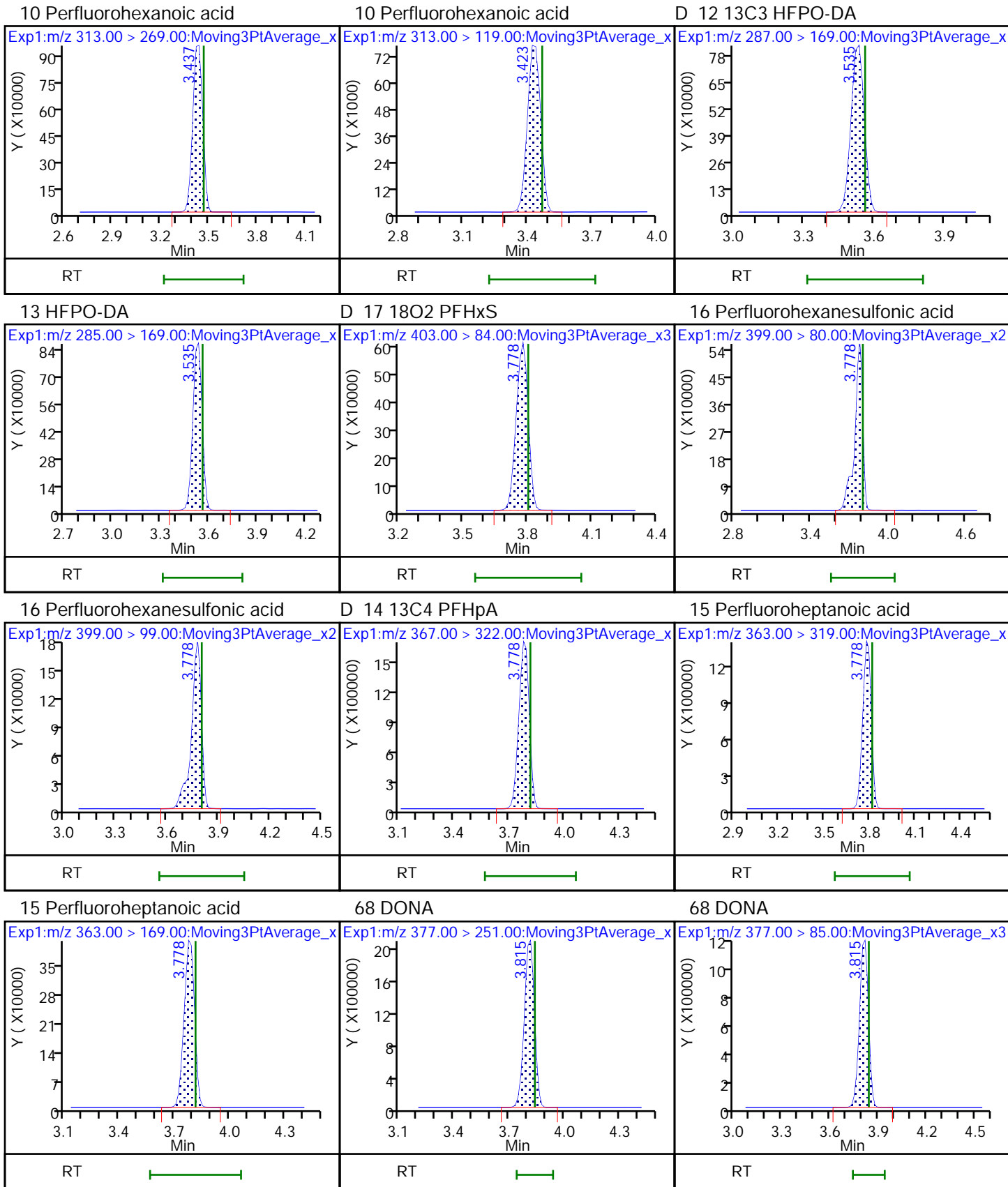


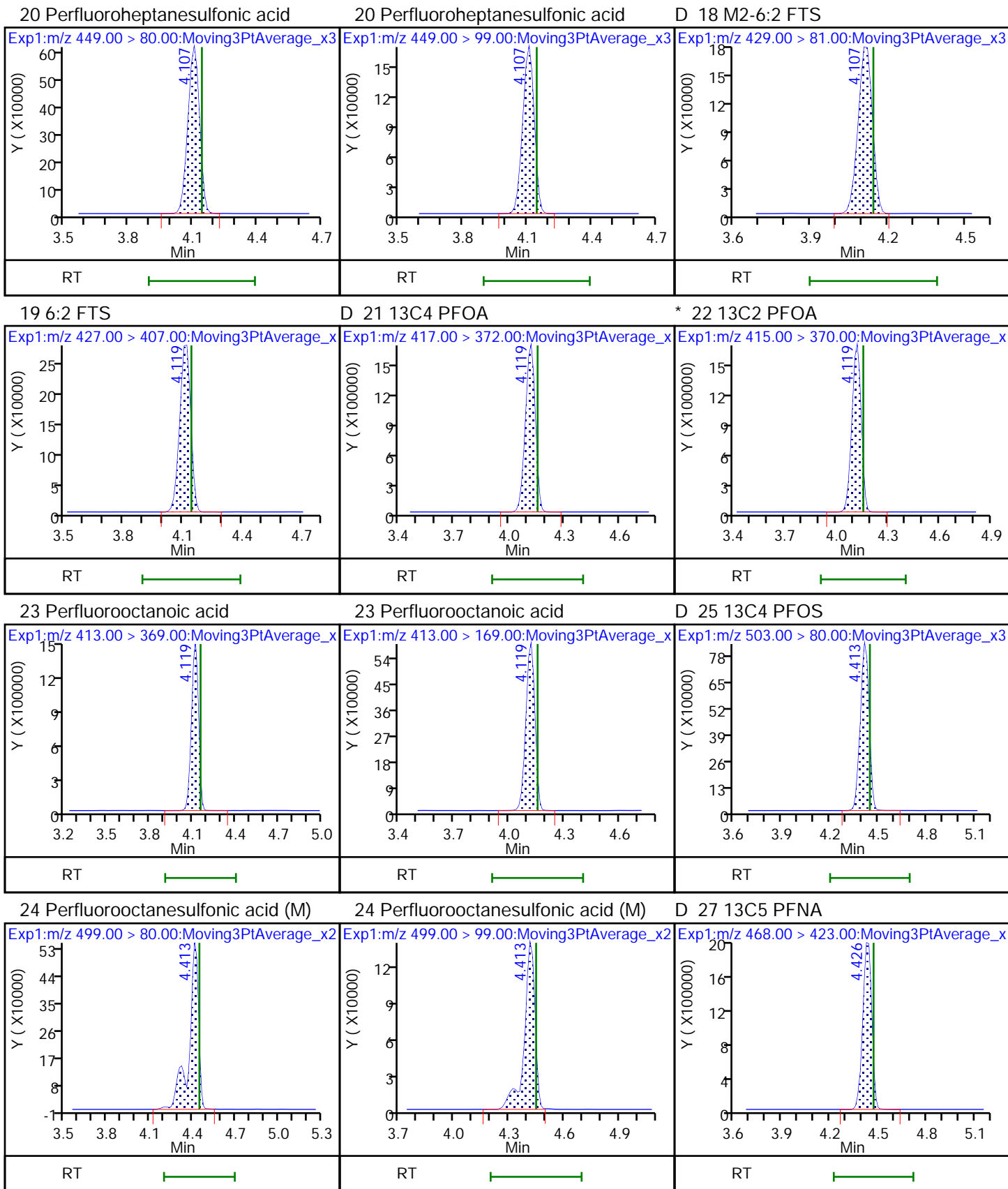
11 Perfluoropentanesulfonic acid

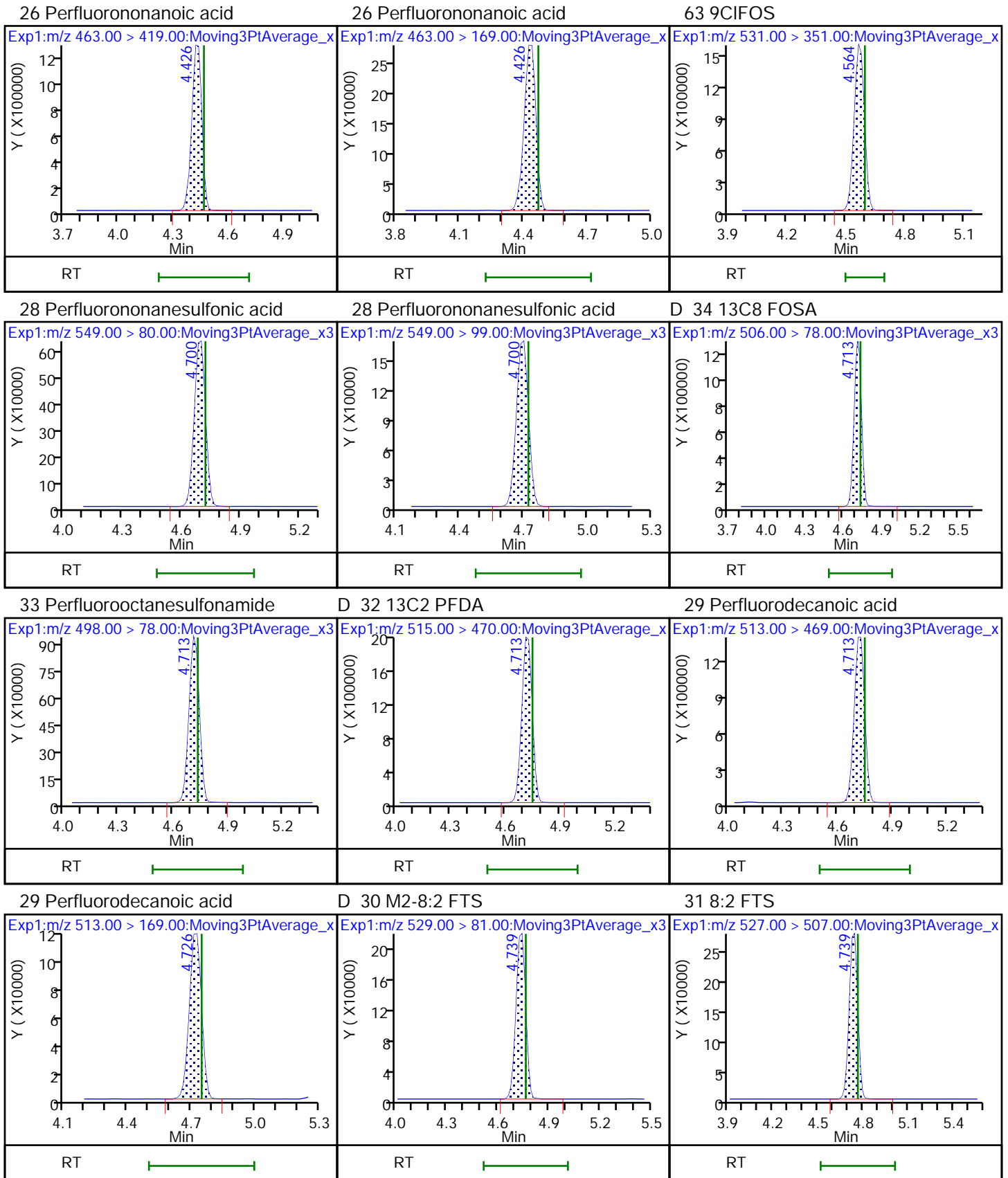
11 Perfluoropentanesulfonic acid

D 9 13C2 PFXa





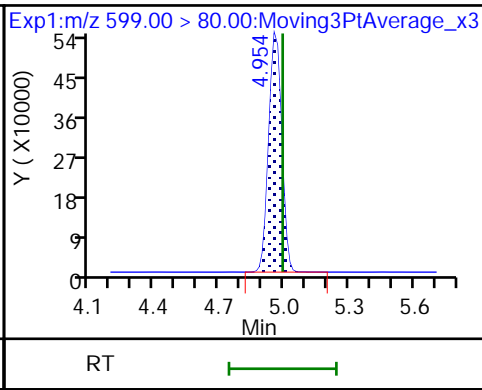
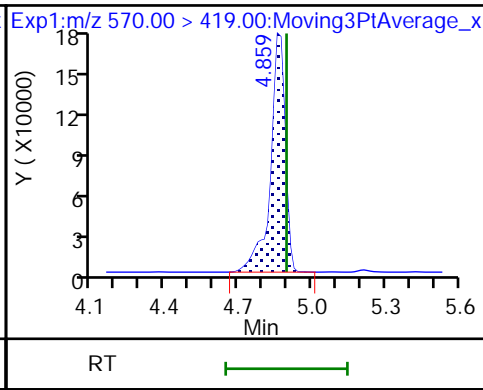
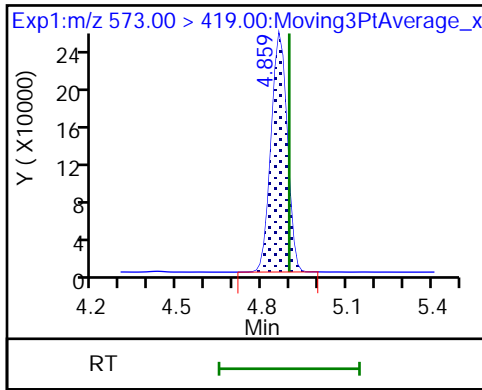




D 35 d3-NMeFOSAA

36 NMeFOSAA

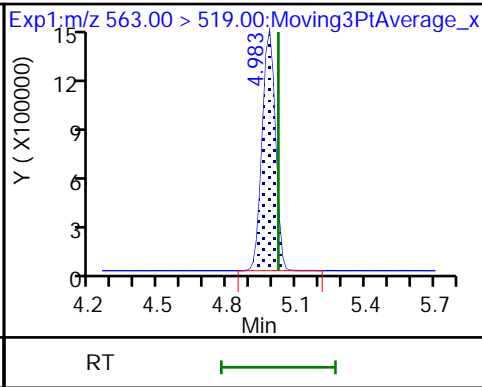
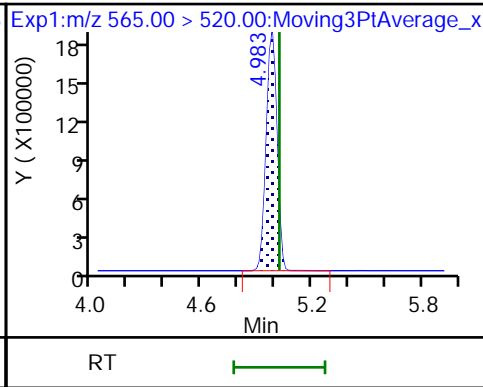
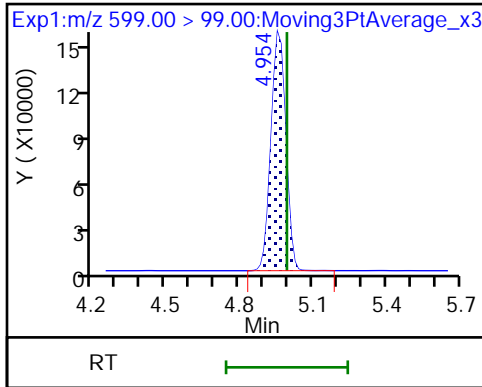
37 Perfluorodecanesulfonic acid



37 Perfluorodecanesulfonic acid

D 39 13C2 PFUoA

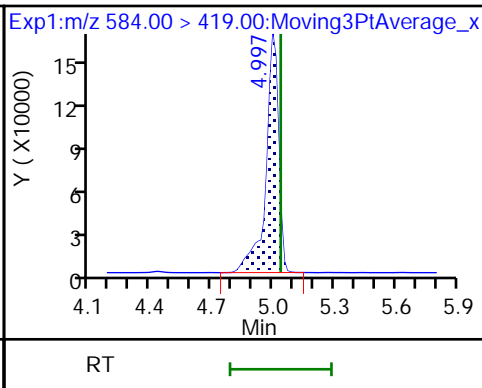
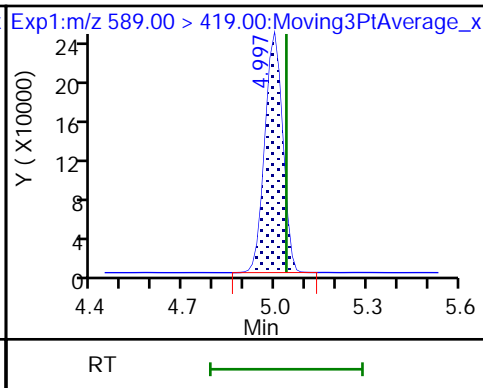
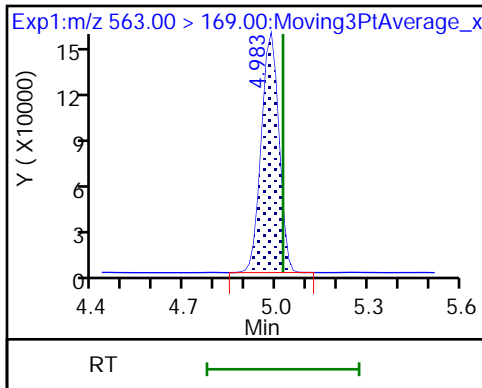
38 Perfluoroundecanoic acid



38 Perfluoroundecanoic acid

D 41 d5-NEtFOSAA

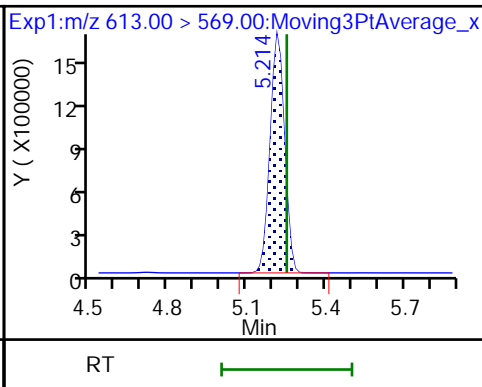
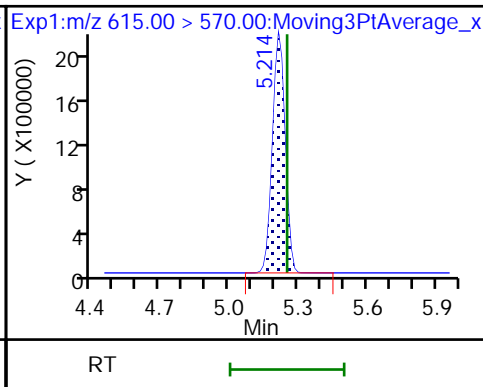
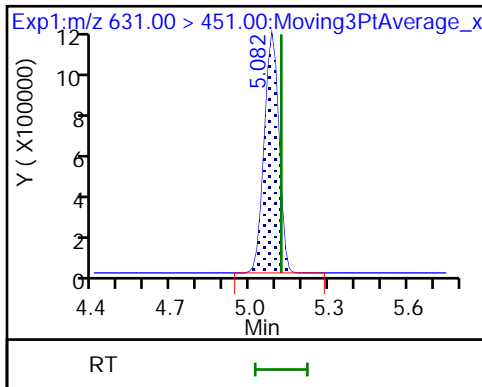
40 NEtFOSA

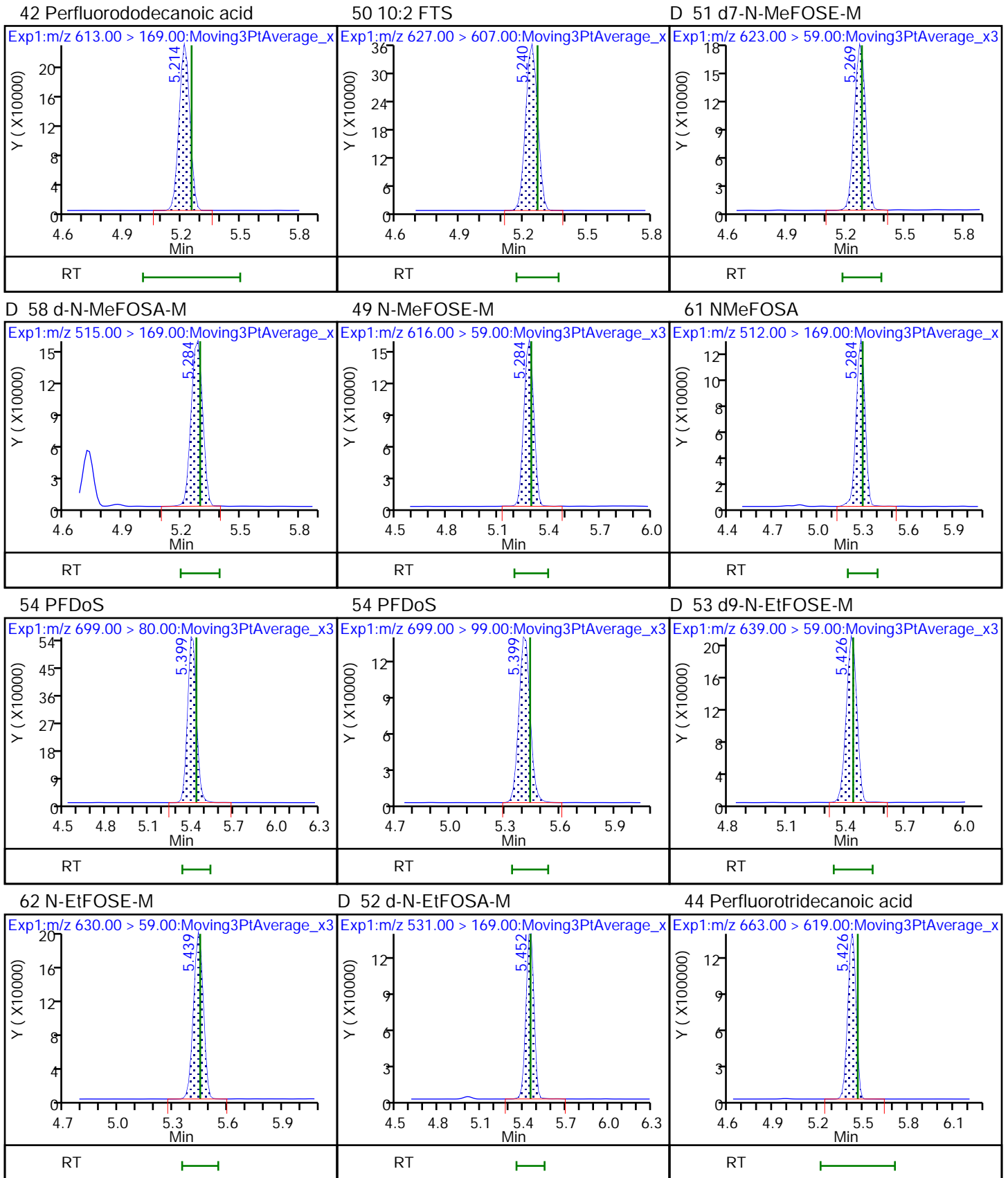


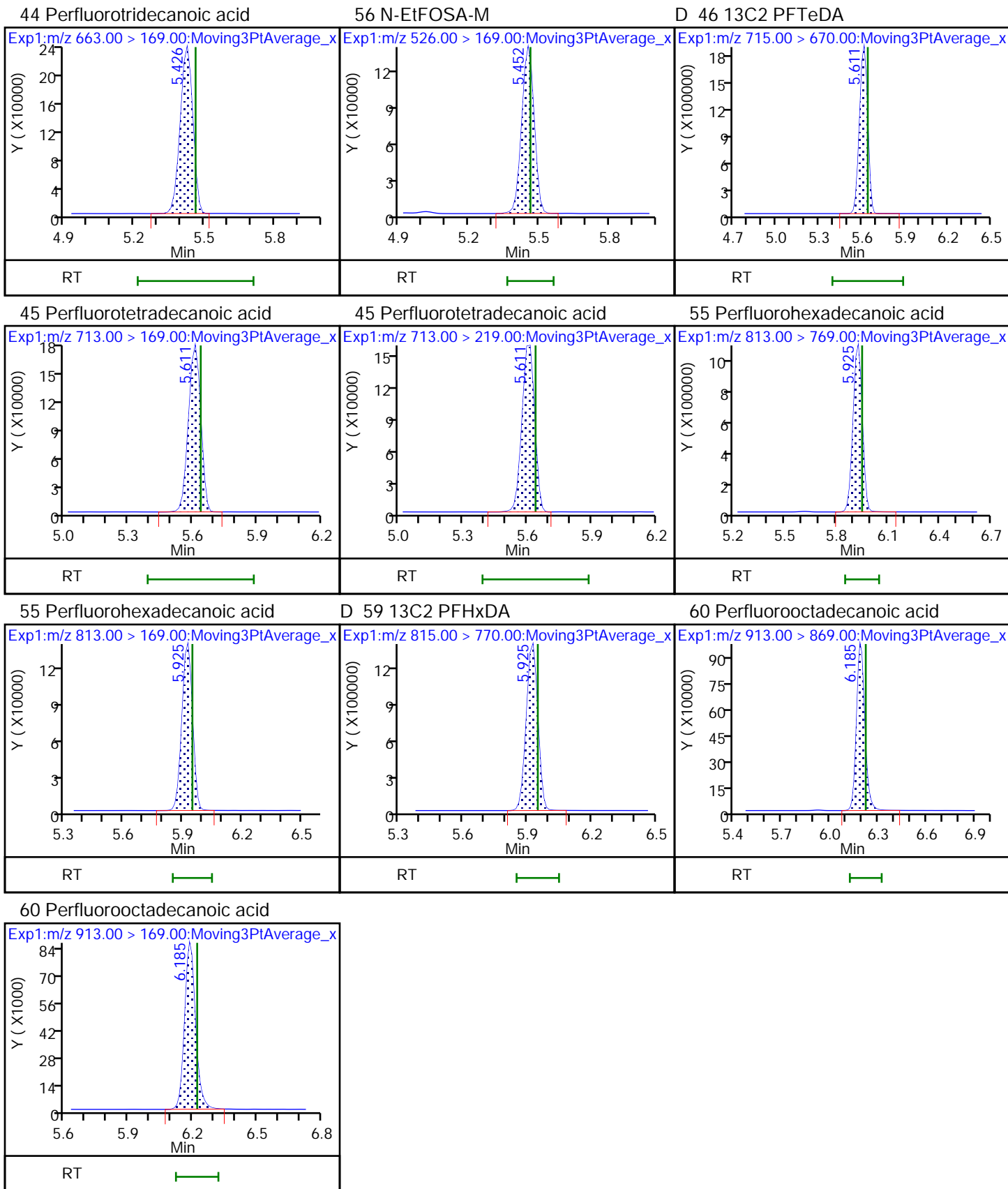
57 11CIFOS

D 43 13C2 PFDoA

42 Perfluorododecanoic acid







FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-54602/2-B
 Matrix: Air Lab File ID: 009.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: None Date Extracted: 10/07/2021 13:59
 Sample wt/vol: 1(Sample) Date Analyzed: 10/08/2021 13:00
 Con. Extract Vol.: 10(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: GeminiC18 3x100 ID: 3(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54642 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.009438		0.000500	0.0000825

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	96		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_009.d
 Lims ID: LCS 140-54602/2-B
 Client ID:
 Sample Type: LCS
 Inject. Date: 08-Oct-2021 13:00:59 ALS Bottle#: 9 Worklist Smp#: 9
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0021001-009 lcs 140-54602/2-b
 Misc. Info.: Plate: 7 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 11:11:08 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675
 First Level Reviewer: cochranj Date: 09-Oct-2021 10:06:07
 Ratio Calibration: None

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	2.812	2.812	0.0	0.679	6869412	1.14	91.4	15442	
2 Perfluorobutanoic acid	212.90 > 169.00	2.812	2.812	0.0	1.000	3990458	0.9244	92.4	938	
D 3 13C5 PFPeA	267.90 > 223.00	3.129	3.129	0.0	0.755	5681489	1.15	92.0	14415	
4 Perfluoropentanoic acid	262.90 > 219.00	3.129	3.129	0.0	1.000	4292394	0.9323	93.2	1536	
D 6 13C3 PFBS	301.90 > 80.00	3.143	3.143	0.0	0.759	3409464	1.07	92.0	27133	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.143	3.143	0.0	1.000	2891670	0.8756	Target=3.06	99.0	17722
	298.90 > 99.00	3.143	3.143	0.0	1.000	1053258		2.75(1.53-4.59)		5111
D 8 M2-4:2 FTS	329.00 > 81.00	3.423	3.423	0.0	0.826	528384	1.11	94.7	1193	
7 4:2 FTS	327.00 > 307.00	3.423	3.423	0.0	1.000	1041137	0.9202	98.5	8070	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.453	3.469	-0.016	1.099	2310587	0.9171	Target=3.47	97.8	14998
	349.00 > 99.00	3.453	3.469	-0.016	1.099	666404		3.47(1.73-5.20)		6233
D 9 13C2 PFHxA	315.00 > 270.00	3.453	3.469	-0.016	0.833	5805370	1.14	91.6	17950	
10 Perfluorohexanoic acid	313.00 > 269.00	3.453	3.469	-0.016	1.000	3651824	0.9173	Target=9.74	91.7	2499
	313.00 > 119.00	3.453	3.469	-0.016	1.000	305213		11.96(4.87-14.61)		1599
D 12 13C3 HFPO-DA	287.00 > 169.00	3.561	3.561	0.0	0.860	3124302	1.20	96.3	13400	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.561	3.561	0.0	1.000	3267735	0.9438		94.4	5211	
D 17 18O2 PFHxS										
403.00 > 84.00	3.802	3.803	-0.001	0.918	2007020	1.04		88.0	14457	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.802	3.803	-0.001	1.000	2204220	0.9561	Target=2.96	105	6698	M
399.00 > 99.00	3.802	3.803	-0.001	1.000	617123		3.57(1.48-4.44)		4956	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.815	3.815	0.0	0.921	5844482	1.16		92.5	21658	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.815	3.815	0.0	1.000	4823775	0.9761	Target=3.35	97.6	4729	
363.00 > 169.00	3.815	3.815	0.0	1.000	1471261		3.28(1.67-5.02)		12281	
68 DONA										
377.00 > 251.00	3.839	3.840	-0.001	0.864	6862736	0.8656	Target=1.49	91.9	16419	
377.00 > 85.00	3.839	3.840	-0.001	0.864	3807874		1.80(0.74-2.23)		18043	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.130	4.143	-0.013	0.929	2184200	0.8982	Target=3.73	94.4	16419	
449.00 > 99.00	4.130	4.143	-0.013	0.929	563556		3.88(1.87-5.61)		2060	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.142	4.143	-0.001	1.000	560098	1.14		96.3	3339	
19 6:2 FTS										
427.00 > 407.00	4.142	4.143	-0.001	1.000	854445	0.9000		94.9	6599	
D 21 13C4 PFOA										
417.00 > 372.00	4.142	4.155	-0.013	1.000	5186267	1.13		90.7	19995	
* 22 13C2 PFOA										
415.00 > 370.00	4.142	4.155	-0.013		5678382	1.25			20704	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.142	4.155	-0.013	1.000	4722540	1.03	Target=2.40	103	2820	
413.00 > 169.00	4.142	4.155	-0.013	1.000	1810758		2.61(1.20-3.61)		5912	
D 25 13C4 PFOS										
503.00 > 80.00	4.446	4.447	-0.001	1.073	2921179	1.10		92.0	10938	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.446	4.447	-0.001	1.000	2352390	0.8750	Target=3.83	94.3	8094	M
499.00 > 99.00	4.446	4.447	-0.001	1.000	547639		4.30(1.91-5.74)		3036	M
D 27 13C5 PFNA										
468.00 > 423.00	4.457	4.470	-0.013	1.076	6428645	1.11		88.5	20999	
26 Perfluorononanoic acid										
463.00 > 419.00	4.457	4.470	-0.013	1.000	4496676	1.05	Target=3.68	105	5203	
463.00 > 169.00	4.457	4.470	-0.013	1.000	978902		4.59(1.84-5.52)		2334	
63 9CIFOS										
531.00 > 351.00	4.595	4.596	-0.001	1.109	5154775	0.9137		98.0	10871	
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.721	4.722	-0.001	1.062	2361488	0.9269	Target=3.97	96.6	5631	
549.00 > 99.00	4.721	4.722	-0.001	1.062	617458		3.82(1.99-5.96)		2766	
D 34 13C8 FOSA										
506.00 > 78.00	4.735	4.736	-0.001	1.143	4588039	1.18		94.1	6157	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.735	4.736	-0.001	1.000	4588039	0.9269		92.7	5510	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 32 13C2 PFDA										
515.00 > 470.00	4.748	4.749	-0.001	1.146	6725635	1.14		91.4	24790	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.748	4.749	-0.001	1.000	5141541	1.01	Target=10.11	101	3219	
513.00 > 169.00	4.748	4.749	-0.001	1.000	420973		12.21(5.06-15.17)		530	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.762	4.763	-0.001	1.149	683364	1.14		95.4	3995	
31 8:2 FTS										
527.00 > 507.00	4.762	4.763	-0.001	1.000	884963	0.8694		90.7	3329	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.881	4.896	-0.015	1.178	999410	1.24		99.2	1799	
36 NMeFOSAA										
570.00 > 419.00	4.895	4.896	-0.001	1.003	791097	1.08		108	1307	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.992	4.993	-0.001	1.123	2174535	0.9292	Target=3.80	96.4	11949	
599.00 > 99.00	4.978	4.993	-0.015	1.120	566168		3.84(1.90-5.70)		2755	
D 39 13C2 PFUnA										
565.00 > 520.00	5.007	5.008	-0.001	1.209	6473268	1.15		92.1	13584	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.007	5.008	-0.001	1.000	5441993	1.04	Target=7.45	104	9776	
563.00 > 169.00	5.007	5.008	-0.001	1.000	588770		9.24(3.78-11.33)		3475	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.021	5.022	-0.001	1.212	994615	1.28		103	4313	
40 NEtFOSA										
584.00 > 419.00	5.021	5.036	-0.015	1.000	684794	0.9065		90.6	635	
57 11CIFOS										
631.00 > 451.00	5.105	5.119	-0.014	1.148	4111137	0.9050		96.1	12875	
D 43 13C2 PFDoA										
615.00 > 570.00	5.236	5.251	-0.015	1.264	7414537	1.24		99.0	28033	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.236	5.251	-0.015	1.000	5748172	0.9276	Target=5.33	92.8	3617	
613.00 > 169.00	5.236	5.251	-0.015	1.000	849895		6.76(2.66-7.99)		3217	
50 10:2 FTS										
627.00 > 607.00	5.265	5.266	-0.001	1.106	1340855	1.06		110	6074	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.280	5.295	-0.015	1.275	694446	1.42		114	459	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.294	5.295	-0.001	1.278	633563	1.25		99.7	47.2	
49 N-MeFOSE-M										
616.00 > 59.00	5.294	5.295	-0.001	1.003	631717	0.9819		98.2	583	
61 NMeFOSA										
512.00 > 169.00	5.294	5.295	-0.001	1.000	506600	0.9546		95.5	555	
54 PFDoS										
699.00 > 80.00	5.435	5.436	-0.001	1.222	2247801	0.9308	Target=4.32	96.2	7925	
699.00 > 99.00	5.435	5.436	-0.001	1.222	521947		4.31(2.19-6.58)		3077	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.448	5.449	-0.001	1.315	779019	1.50		120	929	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
62 N-EtFOSE-M										
630.00 > 59.00	5.461	5.462	-0.001	1.002	753446	0.9573		95.7	1619	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.461	5.462	-0.001	1.318	530343	1.24		99.1	784	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.448	5.462	-0.014	1.041	5191021	0.99	Target=5.66	99.0	4523	
663.00 > 169.00	5.448	5.462	-0.014	1.041	830248		6.25(2.83-8.48)		4973	
56 N-EtFOSA-M										
526.00 > 169.00	5.474	5.462	0.012	1.002	484372	0.9771		97.7	643	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.637	5.637	0.0	1.361	6677724	1.21		97.1	26155	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.637	5.637	0.0	1.000	675635	1.00	Target=1.07	100	5620	
713.00 > 219.00	5.637	5.637	0.0	1.000	646111		1.05(0.53-1.60)		7256	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.947	5.948	-0.001	1.000	4189445	1.00	Target=7.50	100.0	3848	
813.00 > 169.00	5.947	5.948	-0.001	1.000	489797		8.55(3.75-11.26)		2520	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.947	5.948	-0.001	1.436	4792907	1.20		96.1	11014	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.210	6.221	-0.011	1.044	3537249	1.02	Target=9.98	102	3031	
913.00 > 169.00	6.210	6.221	-0.011	1.044	301149		11.75(5.14-15.41)		2283	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_009.d

Injection Date: 08-Oct-2021 13:00:59

Instrument ID: LCA

Lims ID: LCS 140-54602/2-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 9

Worklist Smp#: 9

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

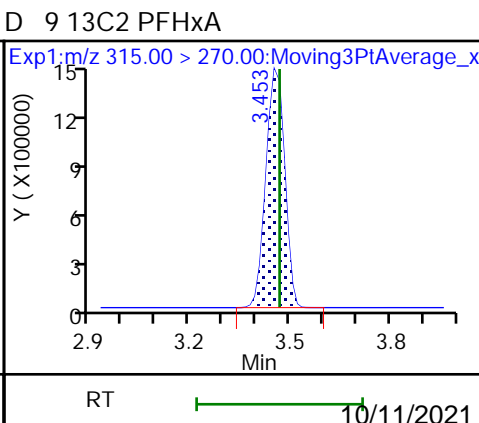
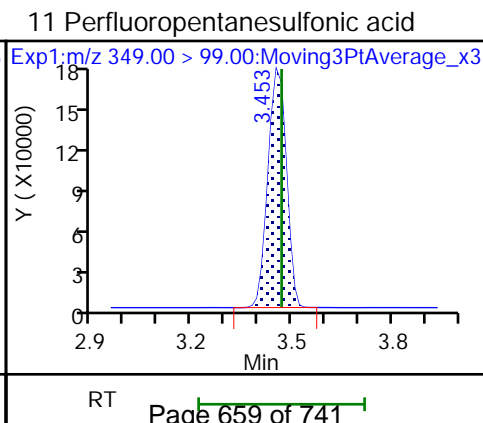
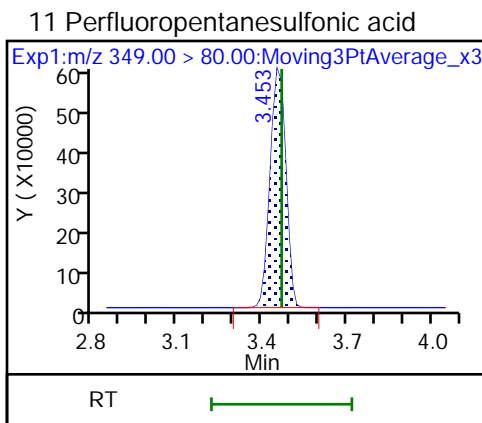
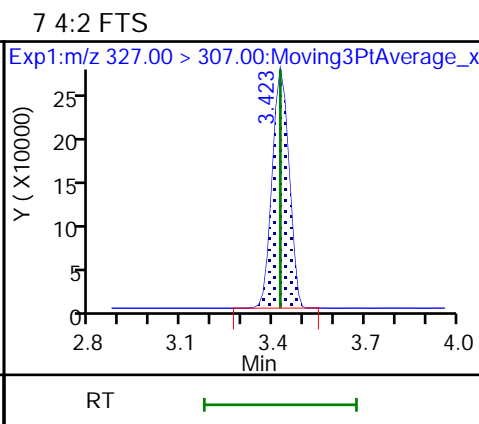
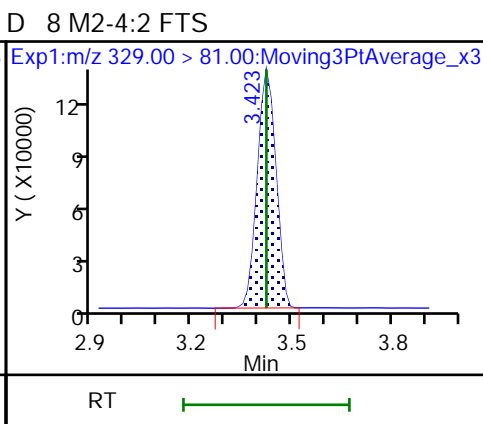
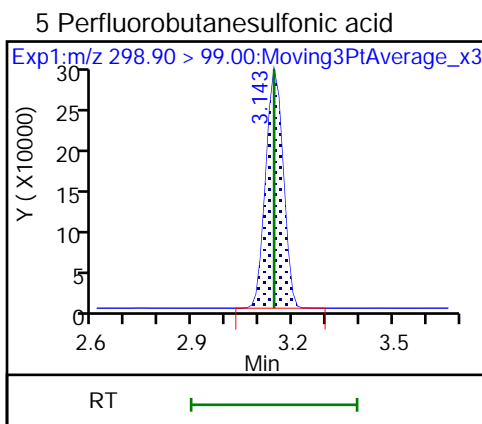
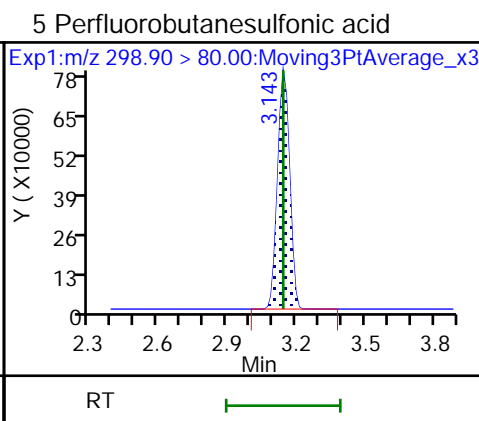
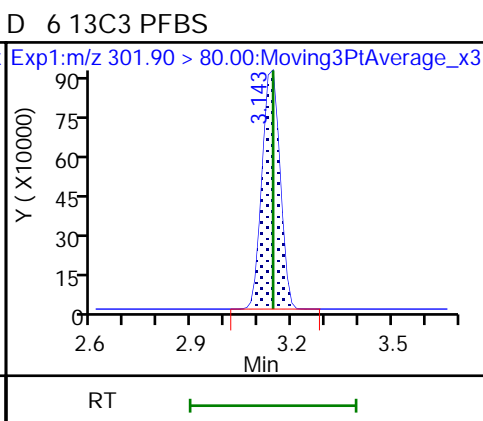
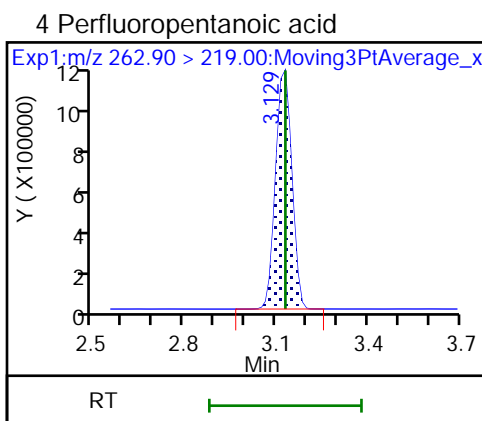
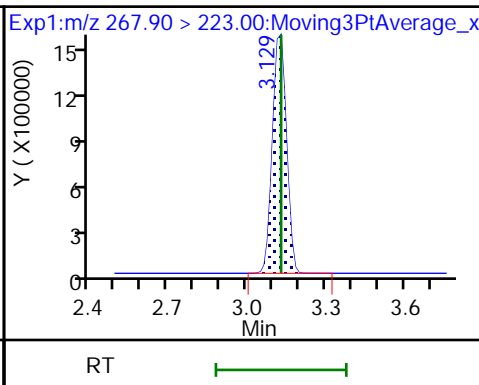
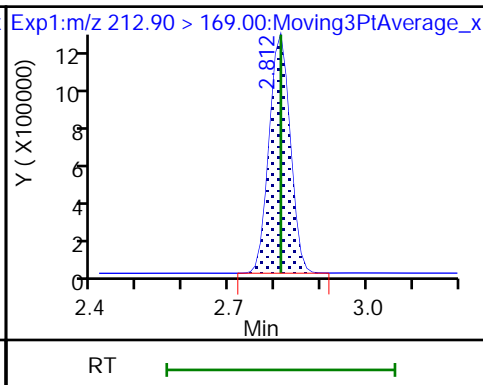
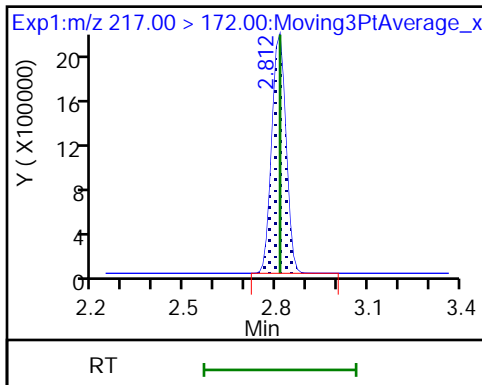
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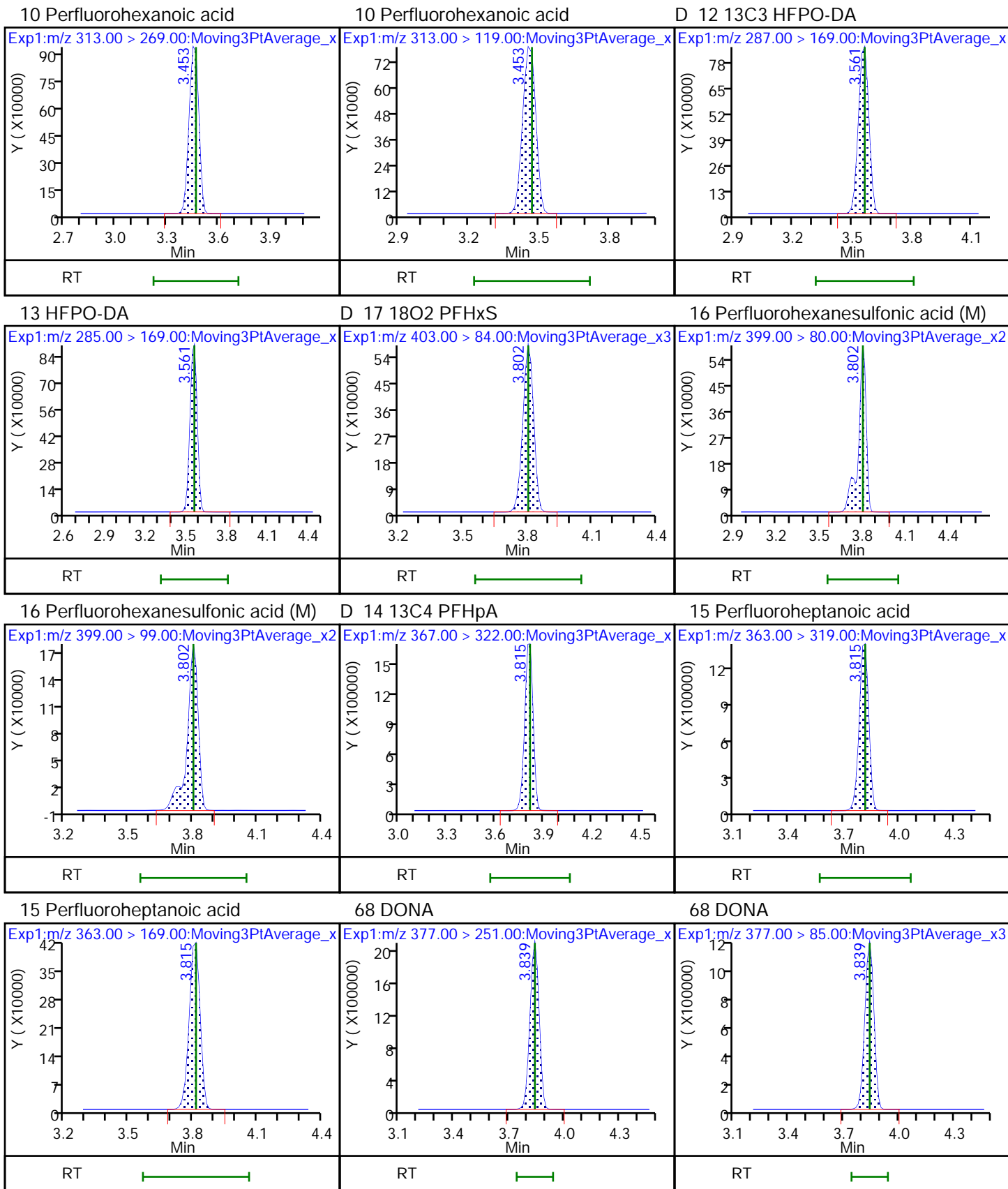
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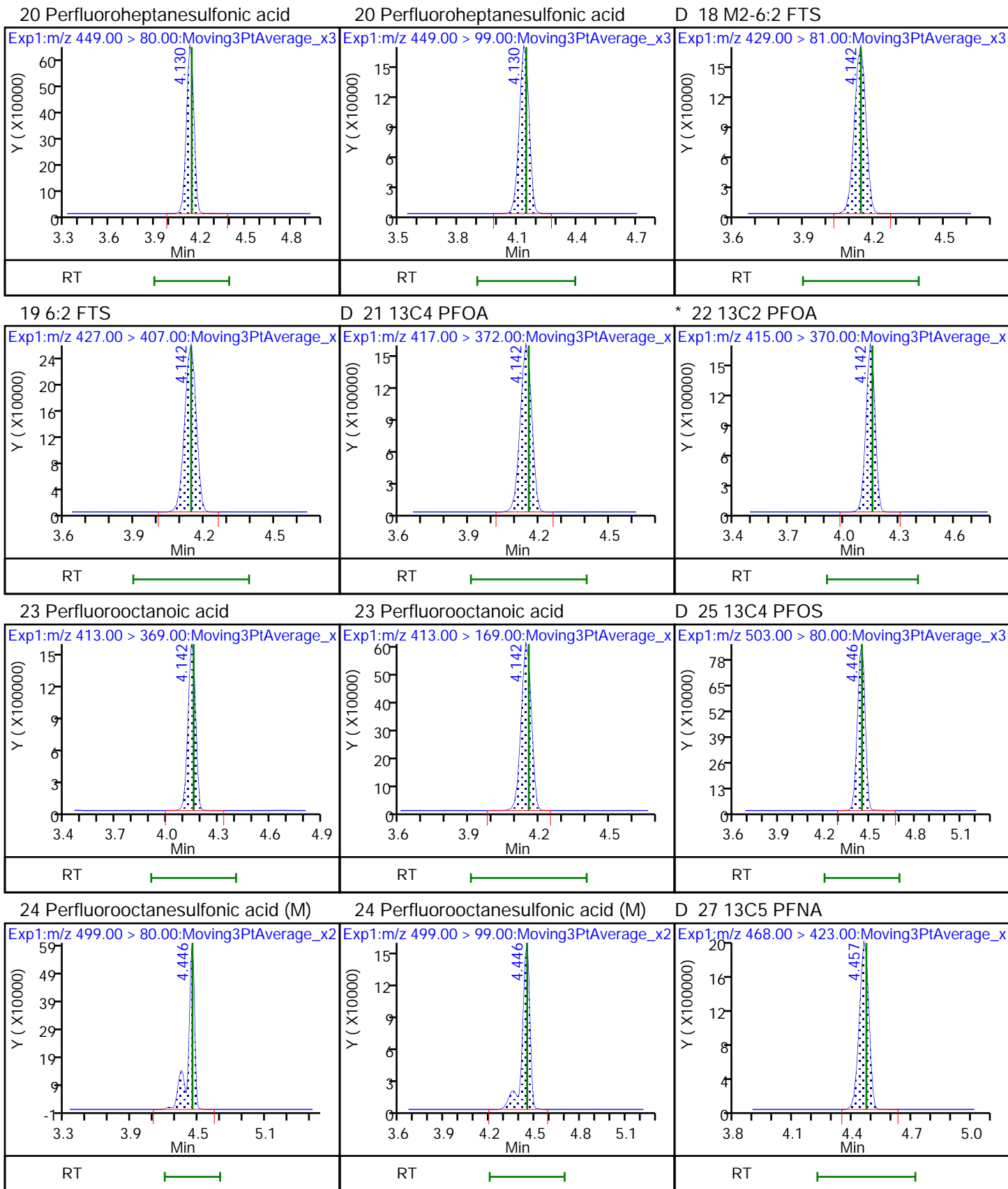
D 1 13C4 PFBA

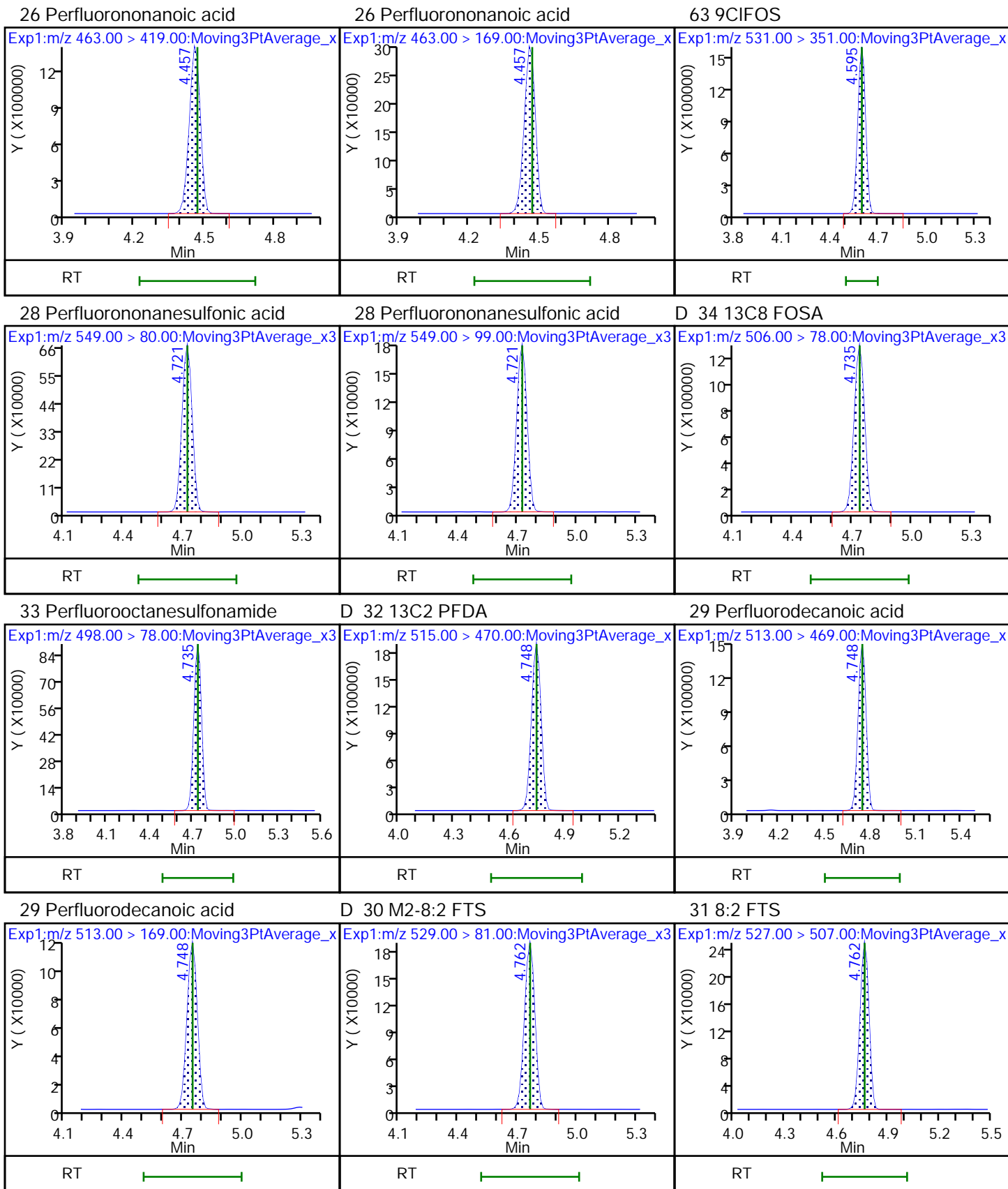
2 Perfluorobutanoic acid

D 3 13C5 PFPeA





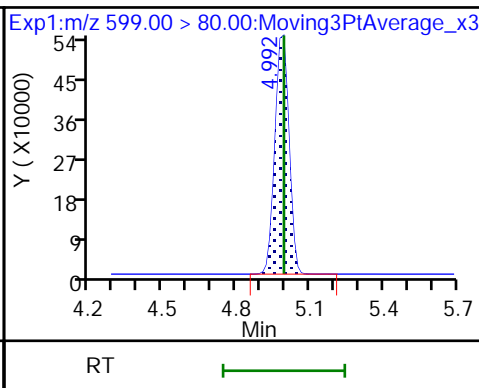
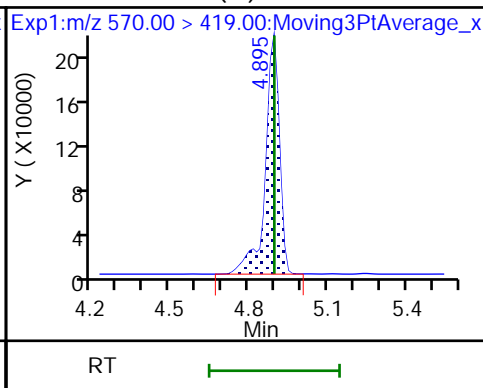
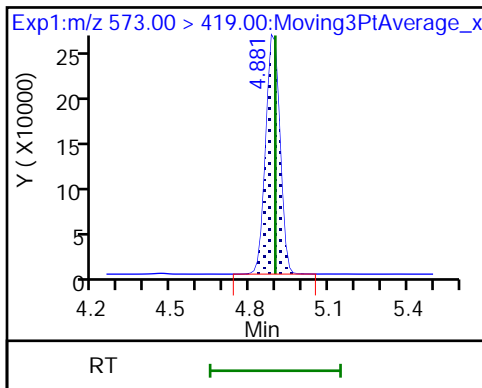




D 35 d3-NMeFOSAA

36 NMeFOSAA (M)

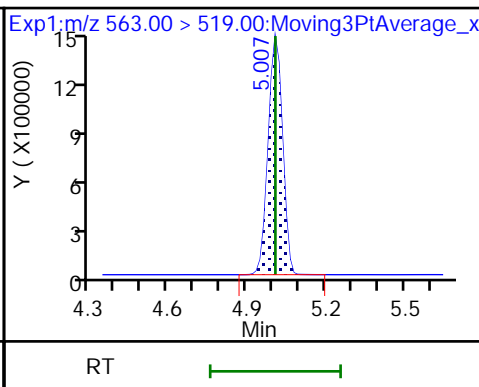
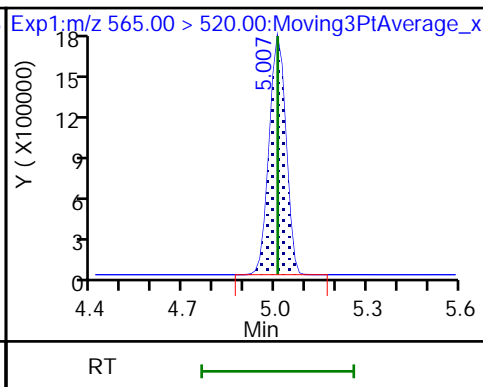
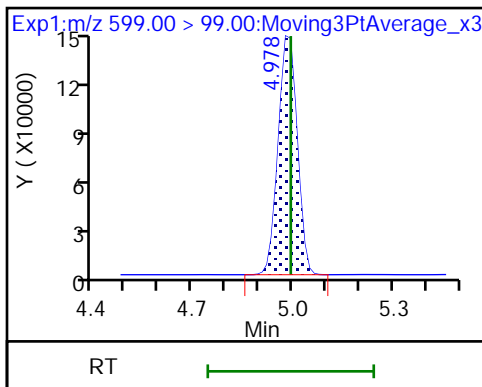
37 Perfluorodecanesulfonic acid



37 Perfluorodecanesulfonic acid

D 39 13C2 PFUoA

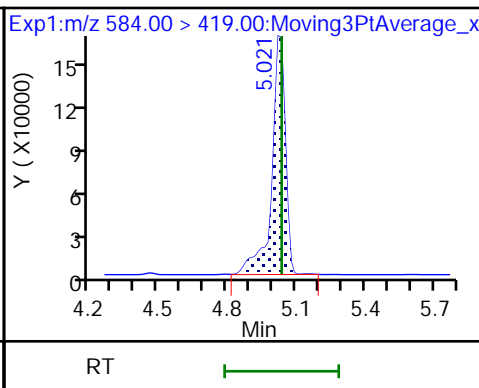
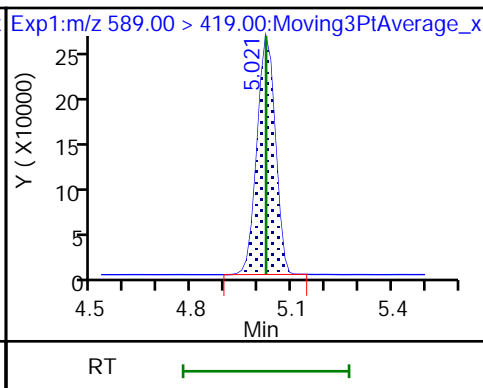
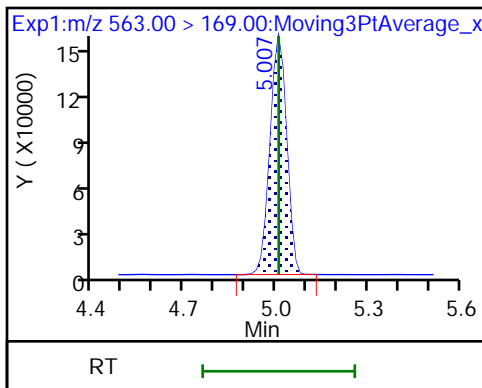
38 Perfluoroundecanoic acid



38 Perfluoroundecanoic acid

D 41 d5-NEtFOSAA

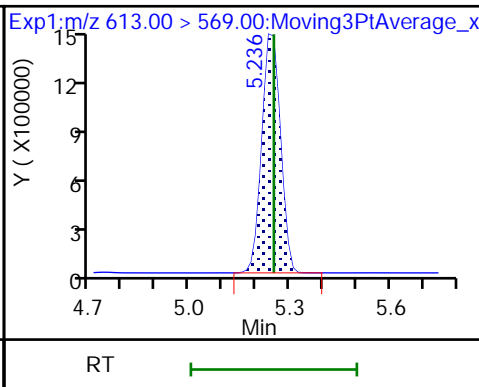
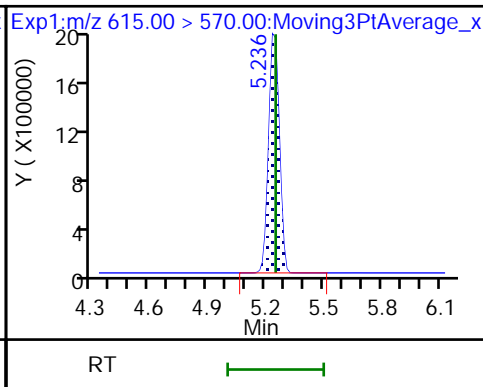
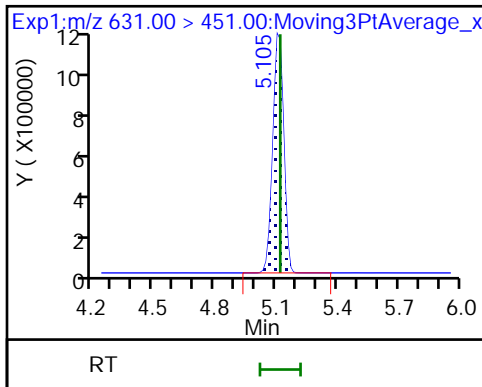
40 NEtFOSA

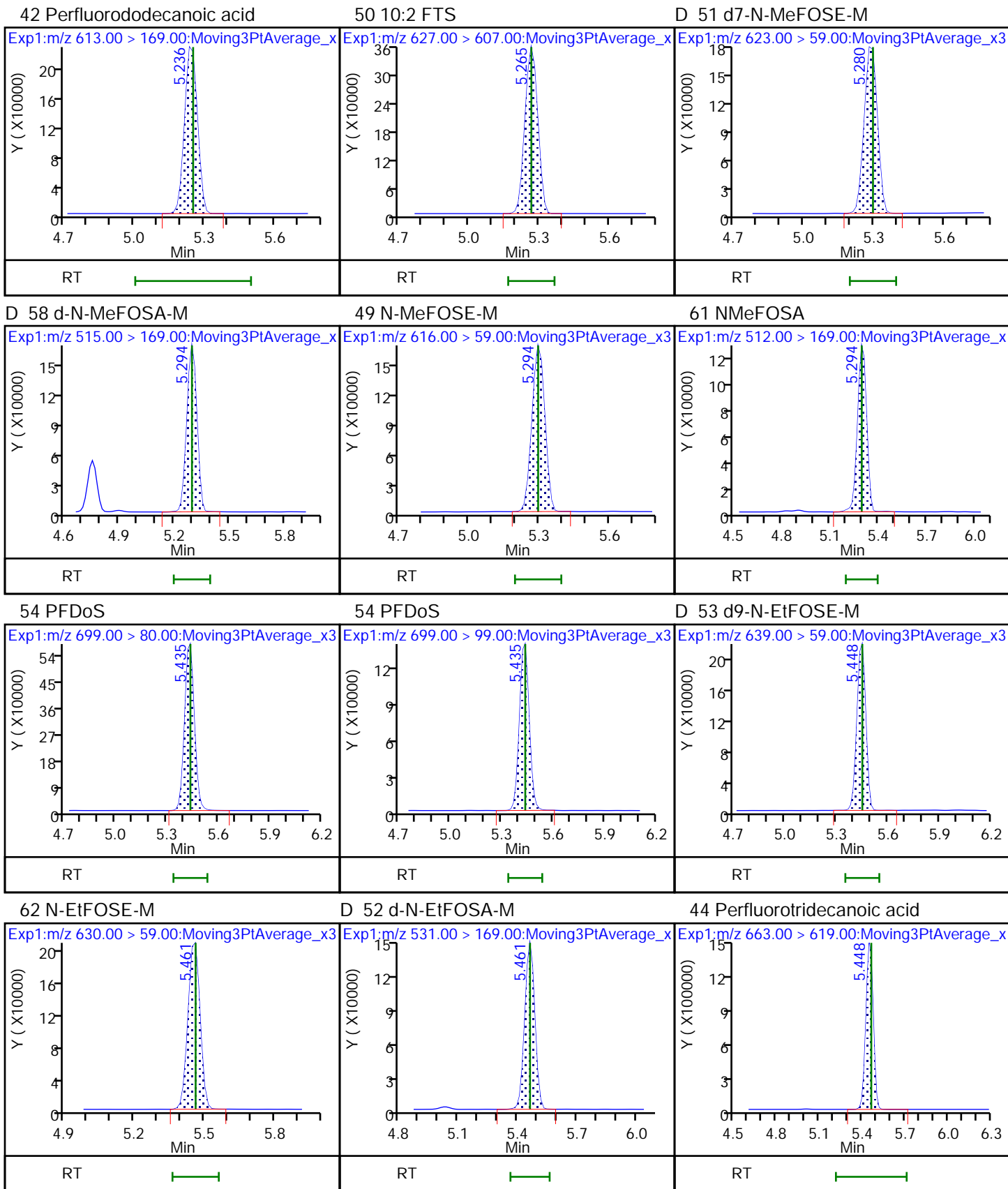


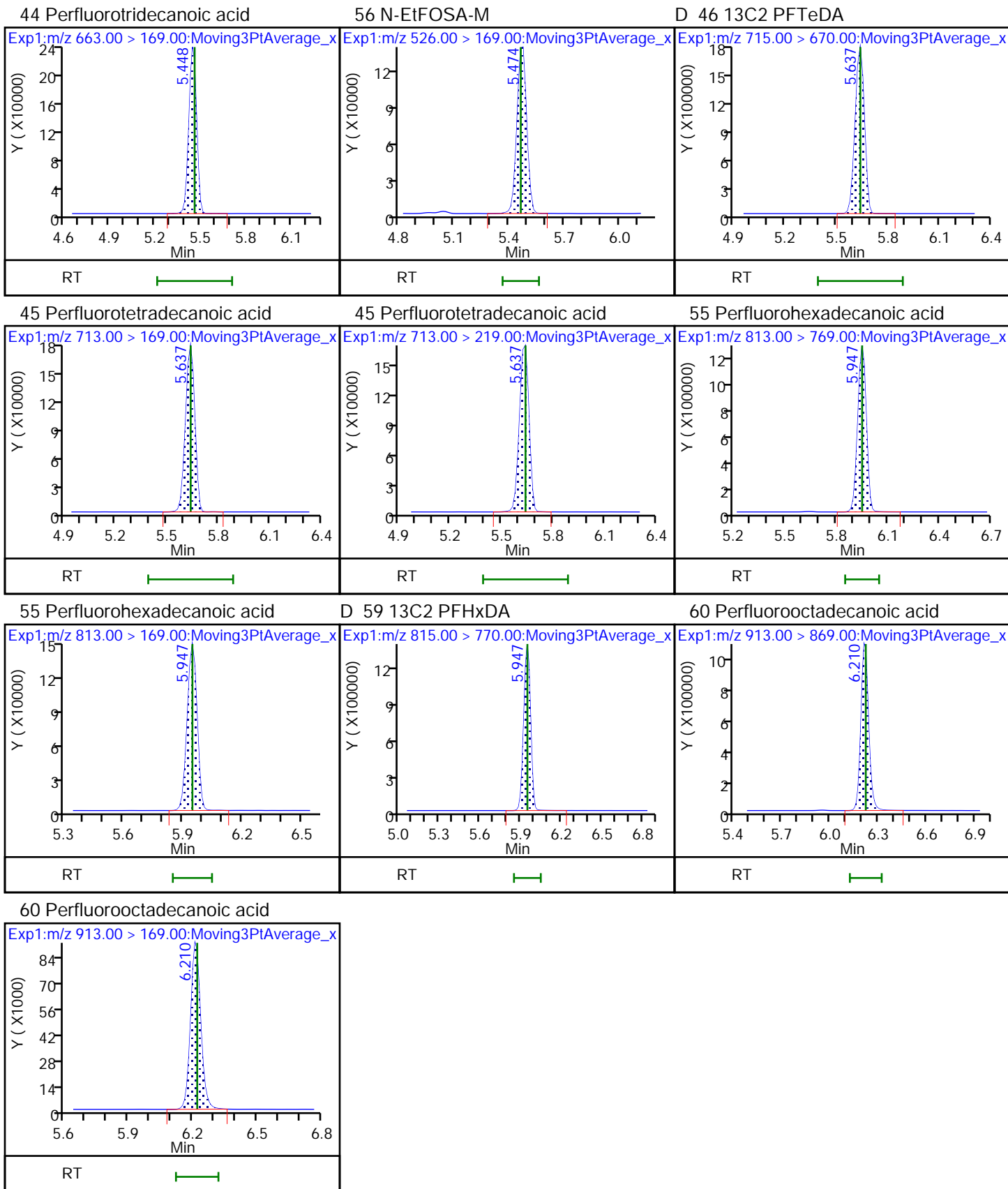
57 11CIFOS

D 43 13C2 PFDoA

42 Perfluorododecanoic acid







FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCSD 140-54177/3-B
 Matrix: Air Lab File ID: _093.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: None Date Extracted: 09/24/2021 09:38
 Sample wt/vol: 1(Sample) Date Analyzed: 10/07/2021 10:09
 Con. Extract Vol.: 50(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: GeminiC18 3x100 ID: 3(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54568 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.02071		0.00100	0.000580

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	97		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_093.d
 Lims ID: LCSD 140-54177/3-B
 Client ID:
 Sample Type: LCSD
 Inject. Date: 07-Oct-2021 10:09:49 ALS Bottle#: 39 Worklist Smp#: 93
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-093 lcsd 140-54177/3-b
 Misc. Info.: Plate: 11 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 18:07:45 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675
 First Level Reviewer: cochranj Date: 09-Oct-2021 18:06:44
 Ratio Calibration: None

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	2.801	2.801	0.0	0.678	6828144	1.25	99.8	13961	
2 Perfluorobutanoic acid	212.90 > 169.00	2.812	2.812	0.0	1.004	4185130	0.9754	97.5	835	
D 3 13C5 PFPeA	267.90 > 223.00	3.116	3.129	-0.013	0.754	5558986	1.24	98.9	14289	
4 Perfluoropentanoic acid	262.90 > 219.00	3.116	3.129	-0.013	1.000	4449810	0.9878	98.8	969	
D 6 13C3 PFBS	301.90 > 80.00	3.129	3.129	0.0	0.758	3254386	1.12	96.4	12479	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.143	3.143	0.0	1.004	2877211	0.9127	Target=3.06	103	7295
	298.90 > 99.00	3.143	3.143	0.0	1.004	1058452		2.72(1.53-4.59)		3415
D 8 M2-4:2 FTS	329.00 > 81.00	3.423	3.423	0.0	0.829	602745	1.39	119	724	
7 4:2 FTS	327.00 > 307.00	3.423	3.423	0.0	1.000	1155243	0.8951	95.8	9211	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.453	3.453	0.0	1.103	2371939	0.9867	Target=3.47	105	8315
	349.00 > 99.00	3.453	3.453	0.0	1.103	685904		3.46(1.73-5.20)		6507
D 9 13C2 PFHxA	315.00 > 270.00	3.453	3.469	-0.016	0.836	5609183	1.22	97.2	13457	
10 Perfluorohexanoic acid	313.00 > 269.00	3.453	3.469	-0.016	1.000	3737681	0.9717	Target=9.74	97.2	1857
	313.00 > 119.00	3.453	3.469	-0.016	1.000	290519		12.87(4.87-14.61)		1133
D 12 13C3 HFPO-DA	287.00 > 169.00	3.548	3.561	-0.013	0.859	2851771	1.21	96.6	7949	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.548	3.561	-0.013	1.000	3269885	1.04		104	2973	
D 17 18O2 PFHxS										
403.00 > 84.00	3.790	3.803	-0.013	0.918	1991064	1.13		95.9	15151	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.790	3.803	-0.013	1.000	2121704	0.9275	Target=2.96	102	4034	M
399.00 > 99.00	3.790	3.803	-0.013	1.000	621180		3.42(1.48-4.44)		4025	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.803	3.815	-0.012	0.921	5633718	1.22		97.9	25257	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.803	3.815	-0.012	1.000	4938121	1.04	Target=3.35	104	3354	
363.00 > 169.00	3.803	3.815	-0.012	1.000	1543432		3.20(1.67-5.02)		6862	
68 DONA										
377.00 > 251.00	3.827	3.840	-0.013	0.863	7037897	1.00	Target=1.49	106	17320	
377.00 > 85.00	3.827	3.840	-0.013	0.863	4062719		1.73(0.74-2.23)		20710	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.118	4.143	-0.025	0.929	2156671	0.99	Target=3.73	104	7706	
449.00 > 99.00	4.118	4.143	-0.025	0.929	527852		4.09(1.87-5.61)		5069	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.131	4.143	-0.013	1.000	591088	1.33		112	2006	
19 6:2 FTS										
427.00 > 407.00	4.131	4.143	-0.013	1.000	948847	0.9474		99.9	5632	
D 21 13C4 PFOA										
417.00 > 372.00	4.131	4.155	-0.025	1.000	5030079	1.21		96.7	24437	
* 22 13C2 PFOA										
415.00 > 370.00	4.131	4.155	-0.025		5169003	1.25			24132	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.131	4.155	-0.025	1.000	4548146	1.02	Target=2.40	102	2246	
413.00 > 169.00	4.131	4.155	-0.025	1.000	1742130		2.61(1.20-3.61)		3214	
D 25 13C4 PFOS										
503.00 > 80.00	4.434	4.447	-0.012	1.074	2605623	1.08		90.1	10484	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.434	4.447	-0.012	1.000	2294025	0.9567	Target=3.83	103	3512	M
499.00 > 99.00	4.434	4.447	-0.012	1.000	512344		4.48(1.91-5.74)		1619	M
D 27 13C5 PFNA										
468.00 > 423.00	4.446	4.470	-0.024	1.076	6162936	1.16		93.2	22161	
26 Perfluorononanoic acid										
463.00 > 419.00	4.446	4.470	-0.024	1.000	4496922	1.09	Target=3.68	109	4338	
463.00 > 169.00	4.446	4.470	-0.024	1.000	982084		4.58(1.84-5.52)		2707	
63 9CIFOS										
531.00 > 351.00	4.584	4.596	-0.012	1.110	5222638	1.04		111	8974	
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.709	4.722	-0.013	1.062	2293551	1.01	Target=3.97	105	3075	
549.00 > 99.00	4.709	4.722	-0.013	1.062	571922		4.01(1.99-5.96)		3507	
D 34 13C8 FOSA										
506.00 > 78.00	4.736	4.736	0.0	1.146	4369222	1.23		98.4	6340	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.736	4.736	0.0	1.000	3281728	0.9774		97.7	6492	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 32 13C2 PFDA										
515.00 > 470.00	4.736	4.749	-0.013	1.146	6436162	1.20		96.1	20191	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.736	4.749	-0.013	1.000	5067101	1.04	Target=10.11	104	2611	
513.00 > 169.00	4.736	4.749	-0.013	1.000	412753		12.28(5.06-15.17)		488	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.763	-0.014	1.150	745768	1.37		114	4811	
31 8:2 FTS										
527.00 > 507.00	4.749	4.763	-0.014	1.000	1033259	0.9301		97.1	4693	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.882	4.896	-0.014	1.182	886826	1.21		96.7	787	
36 NMeFOSAA										
570.00 > 419.00	4.882	4.896	-0.014	1.000	645080	0.9886		98.9	1060	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.979	4.993	-0.014	1.123	2085019	1.00	Target=3.80	104	3473	
599.00 > 99.00	4.979	4.993	-0.014	1.123	560008		3.72(1.90-5.70)		2503	
D 39 13C2 PFUnA										
565.00 > 520.00	4.993	5.022	-0.029	1.209	6169629	1.21		96.5	11453	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.993	5.022	-0.029	1.000	5040195	1.01	Target=7.45	101	6194	
563.00 > 169.00	4.993	5.022	-0.029	1.000	562088		8.97(3.78-11.33)		2919	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.007	5.036	-0.029	1.212	878053	1.25		99.6	6343	
40 NEtFOSA										
584.00 > 419.00	5.022	5.036	-0.014	1.003	672270	1.01		101	1503	
57 11CIFOS										
631.00 > 451.00	5.106	5.119	-0.013	1.151	3897487	0.9619		102	9487	
D 43 13C2 PFDoA										
615.00 > 570.00	5.237	5.251	-0.014	1.268	6460078	1.18		94.7	20557	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.237	5.251	-0.014	1.000	5305742	0.9838	Target=5.33	98.4	3123	
613.00 > 169.00	5.237	5.251	-0.014	1.000	777690		6.82(2.66-7.99)		3179	
50 10:2 FTS										
627.00 > 607.00	5.251	5.266	-0.015	1.106	1692942	1.22		127	16597	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.295	5.281	0.014	1.282	580455	1.31		104	259	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.282	555176	1.20		95.9	38.7	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.295	0.0	1.000	557955	1.04		104	577	
61 NMeFOSA										
512.00 > 169.00	5.295	5.295	0.0	1.000	435521	0.9366		93.7	470	
54 PFDoS										
699.00 > 80.00	5.423	5.436	-0.013	1.223	2045932	0.9498	Target=4.32	98.1	2127	
699.00 > 99.00	5.423	5.436	-0.013	1.223	484941		4.22(2.19-6.58)		3865	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.449	5.436	0.013	1.319	639146	1.35		108	427	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
62 N-EtFOSE-M										
630.00 > 59.00	5.462	5.449	0.013	1.002	667033	1.03		103	876	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.449	0.013	1.322	490190	1.26		101	758	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.436	5.462	-0.026	1.038	4970070	1.09	Target=5.66	109	5076	
663.00 > 169.00	5.436	5.462	-0.026	1.038	813160		6.11(2.83-8.48)		3867	
56 N-EtFOSA-M										
526.00 > 169.00	5.475	5.462	0.013	1.002	448903	0.9797		98.0	532	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.623	5.637	-0.014	1.361	5863276	1.17		93.7	17109	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.623	5.637	-0.014	1.000	585642	0.9898	Target=1.07	99.0	3429	
713.00 > 219.00	5.623	5.637	-0.014	1.000	592003		0.99(0.53-1.60)		4657	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.935	5.948	-0.013	1.000	3838856	1.00	Target=7.50	100	4201	
813.00 > 169.00	5.935	5.948	-0.013	1.000	470361		8.16(3.75-11.26)		2821	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.935	5.948	-0.013	1.437	4386462	1.21		96.6	11164	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.201	6.221	-0.020	1.045	3225021	1.01	Target=9.98	101	3218	
913.00 > 169.00	6.201	6.221	-0.020	1.045	280164		11.51(5.14-15.41)		1953	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_093.d

Injection Date: 07-Oct-2021 10:09:49

Instrument ID: LCA

Lims ID: LCSD 140-54177/3-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 39

Worklist Smp#: 93

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

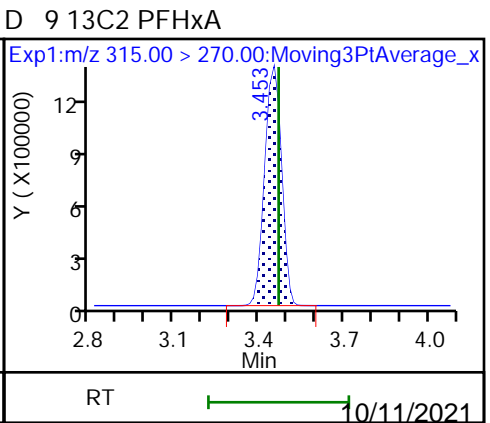
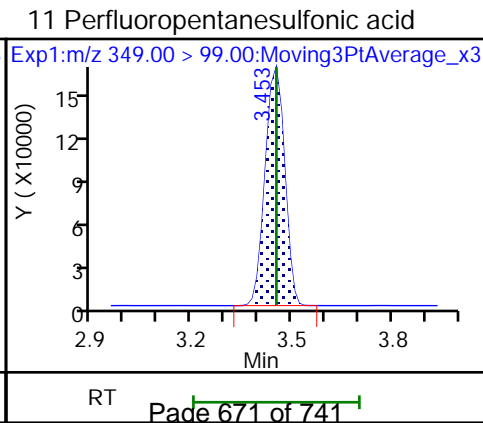
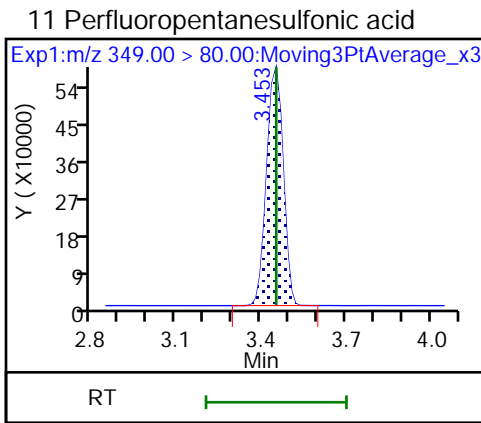
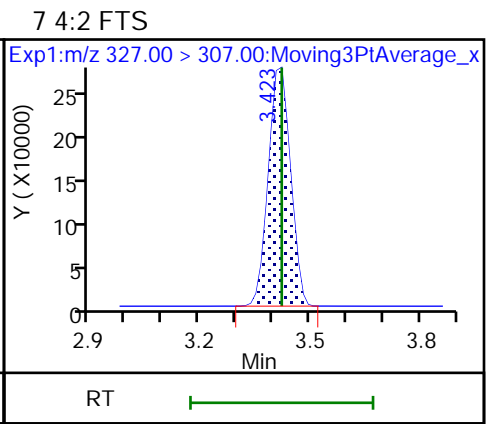
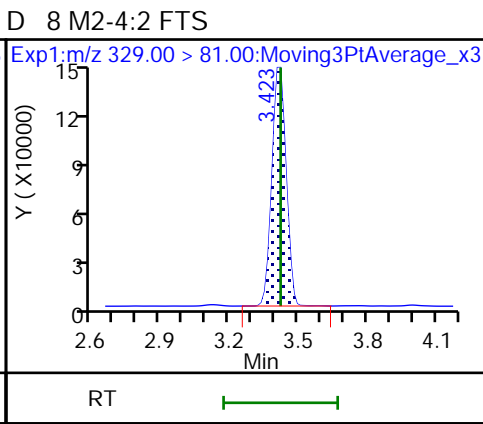
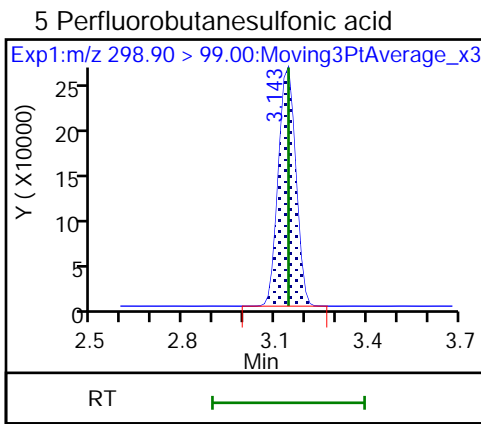
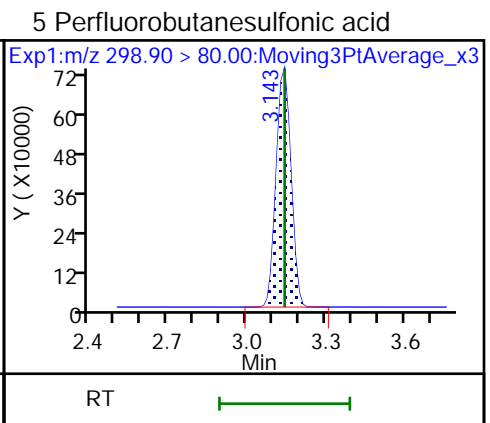
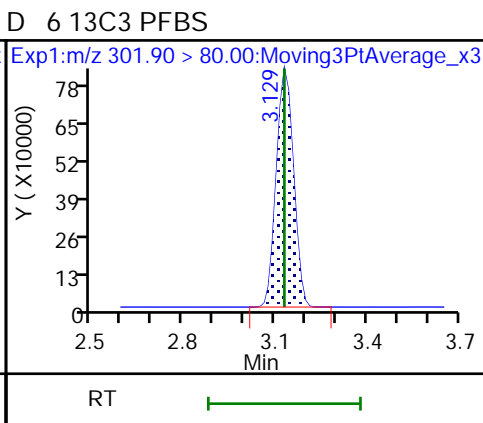
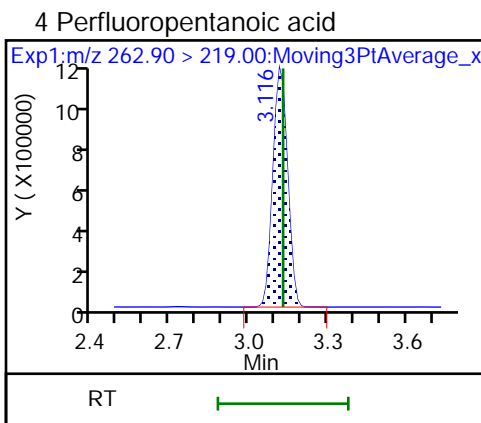
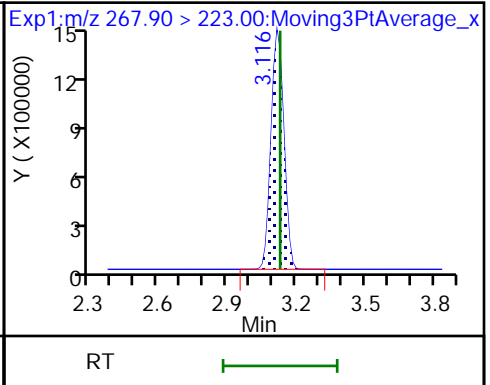
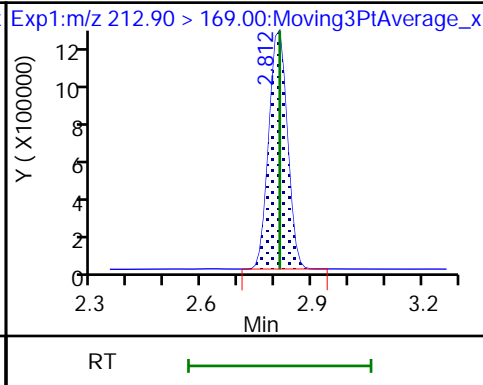
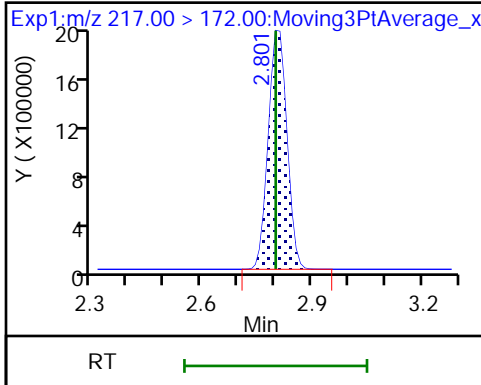
Method: PFC_LCA

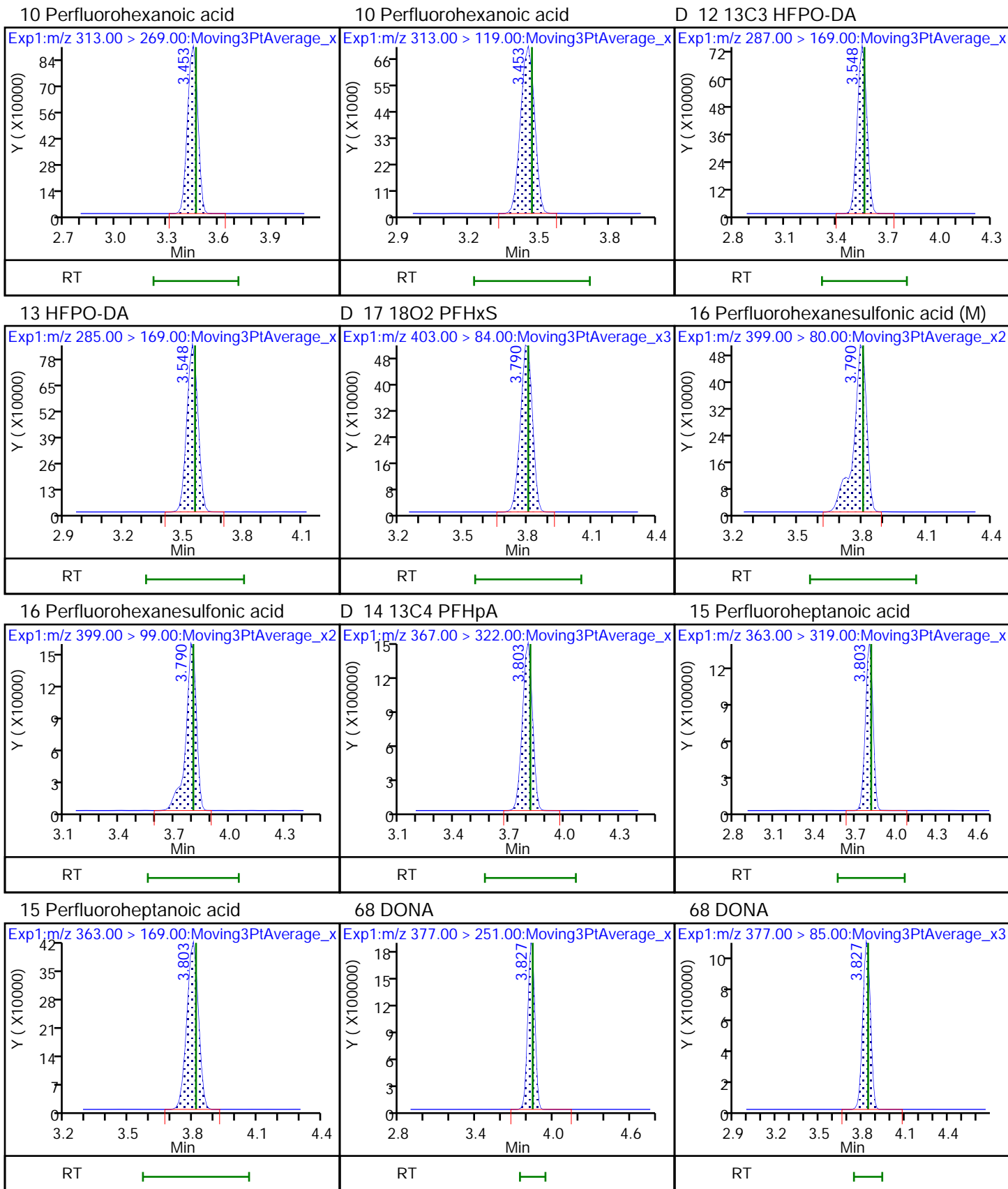
Limit Group: LC - PFC- ICAL

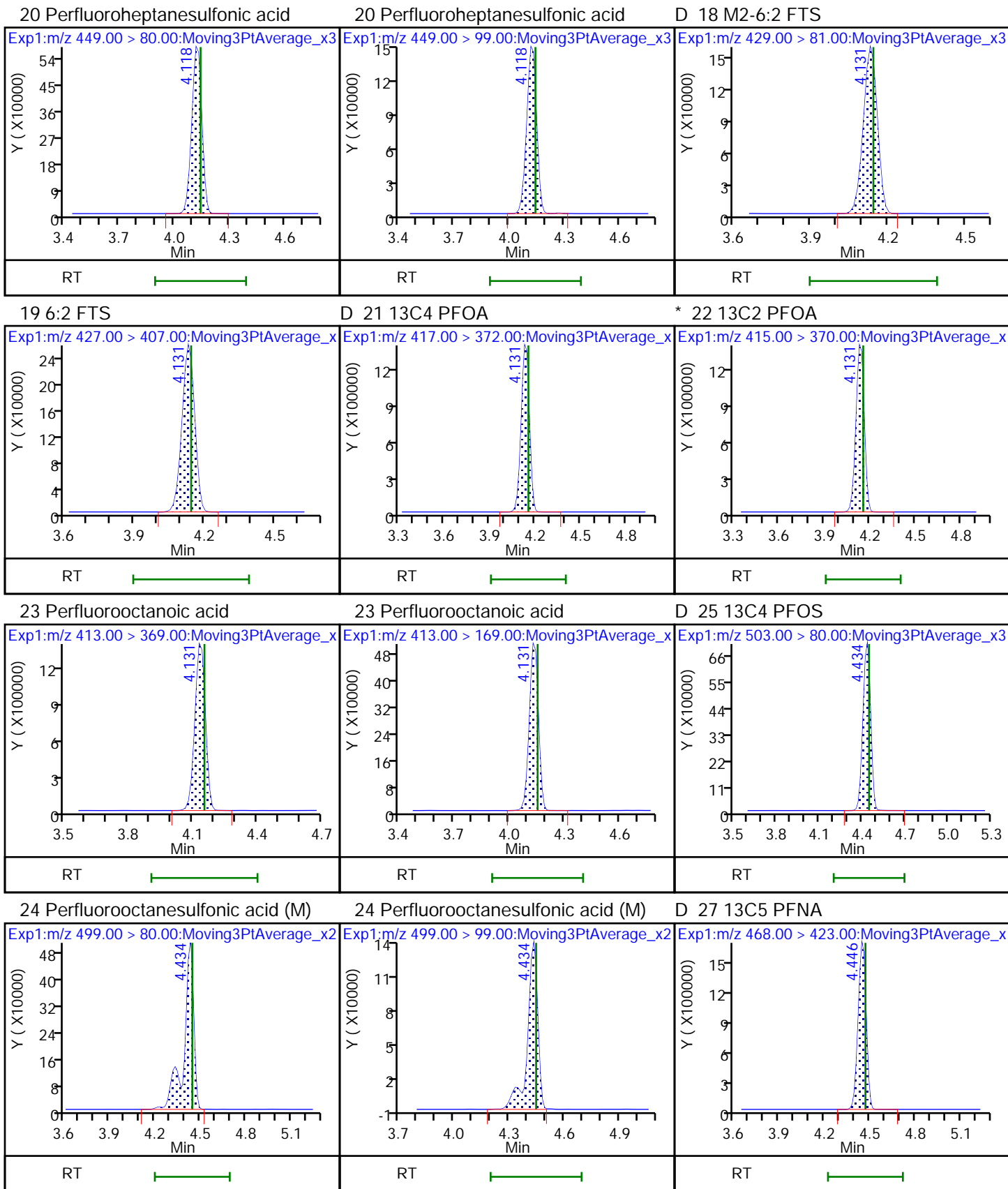
D 1 13C4 PFBA

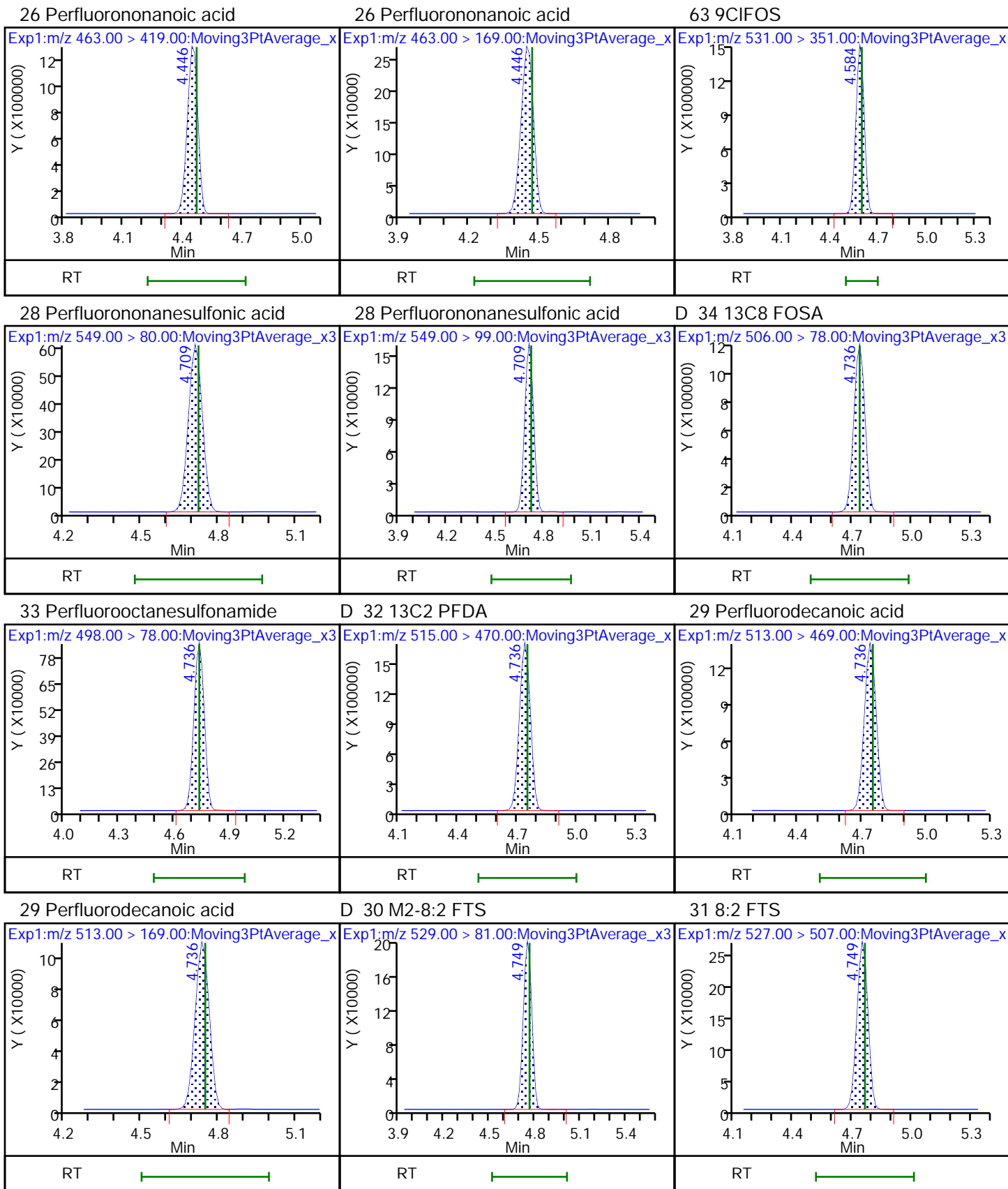
2 Perfluorobutanoic acid

D 3 13C5 PFPeA





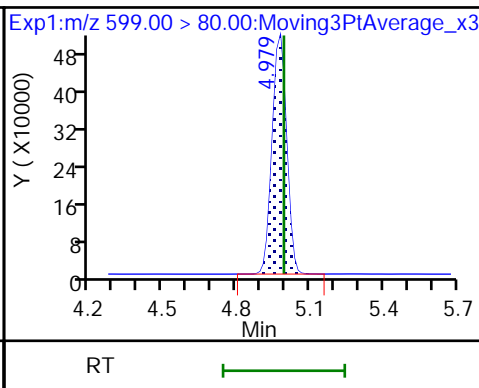
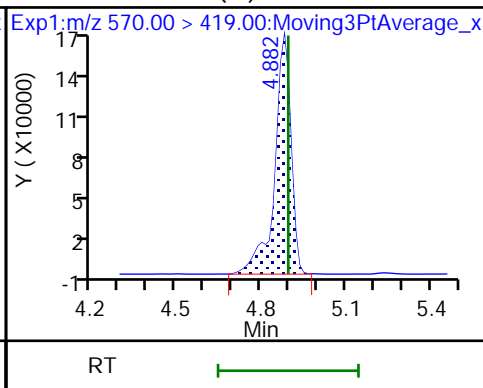
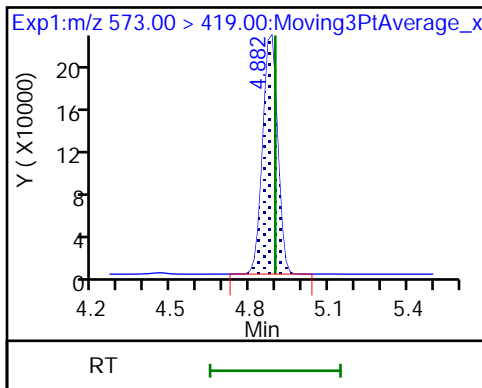




D 35 d3-NMeFOSAA

36 NMeFOSAA (M)

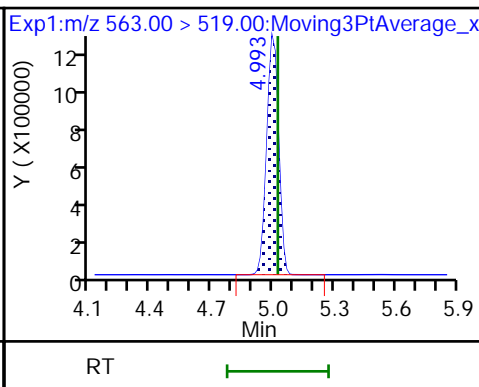
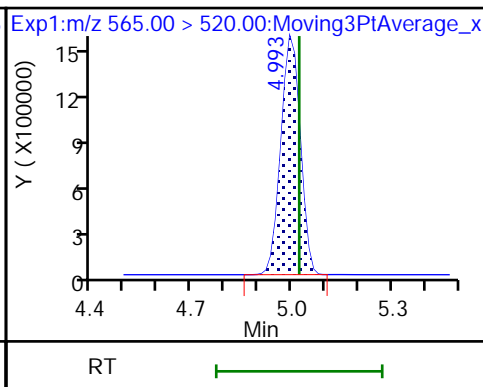
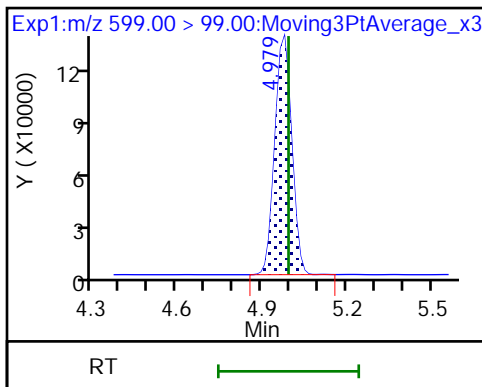
37 Perfluorodecanesulfonic acid



37 Perfluorodecanesulfonic acid

D 39 13C2 PFUoA

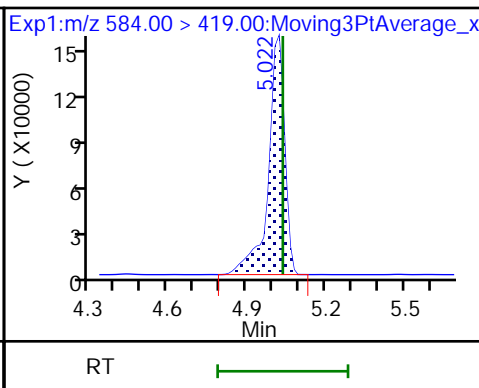
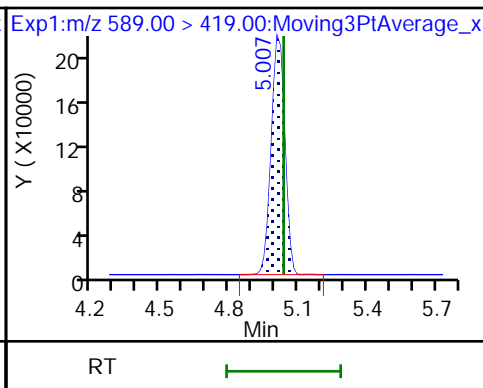
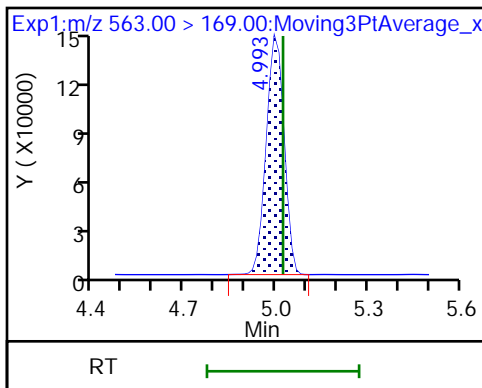
38 Perfluoroundecanoic acid



38 Perfluoroundecanoic acid

D 41 d5-NEtFOSAA

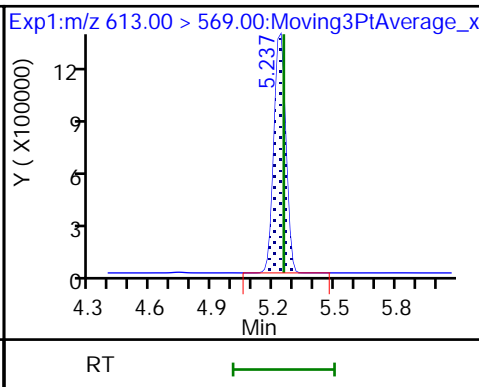
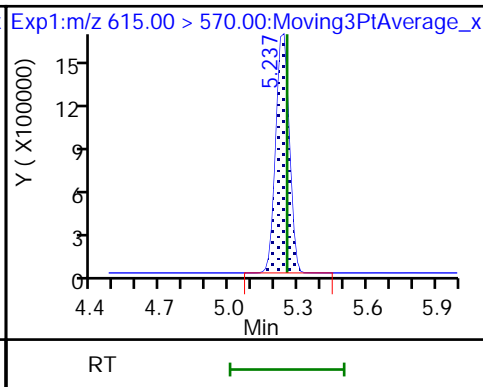
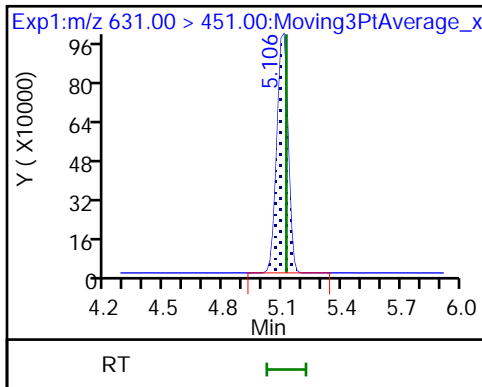
40 NEtFOSA

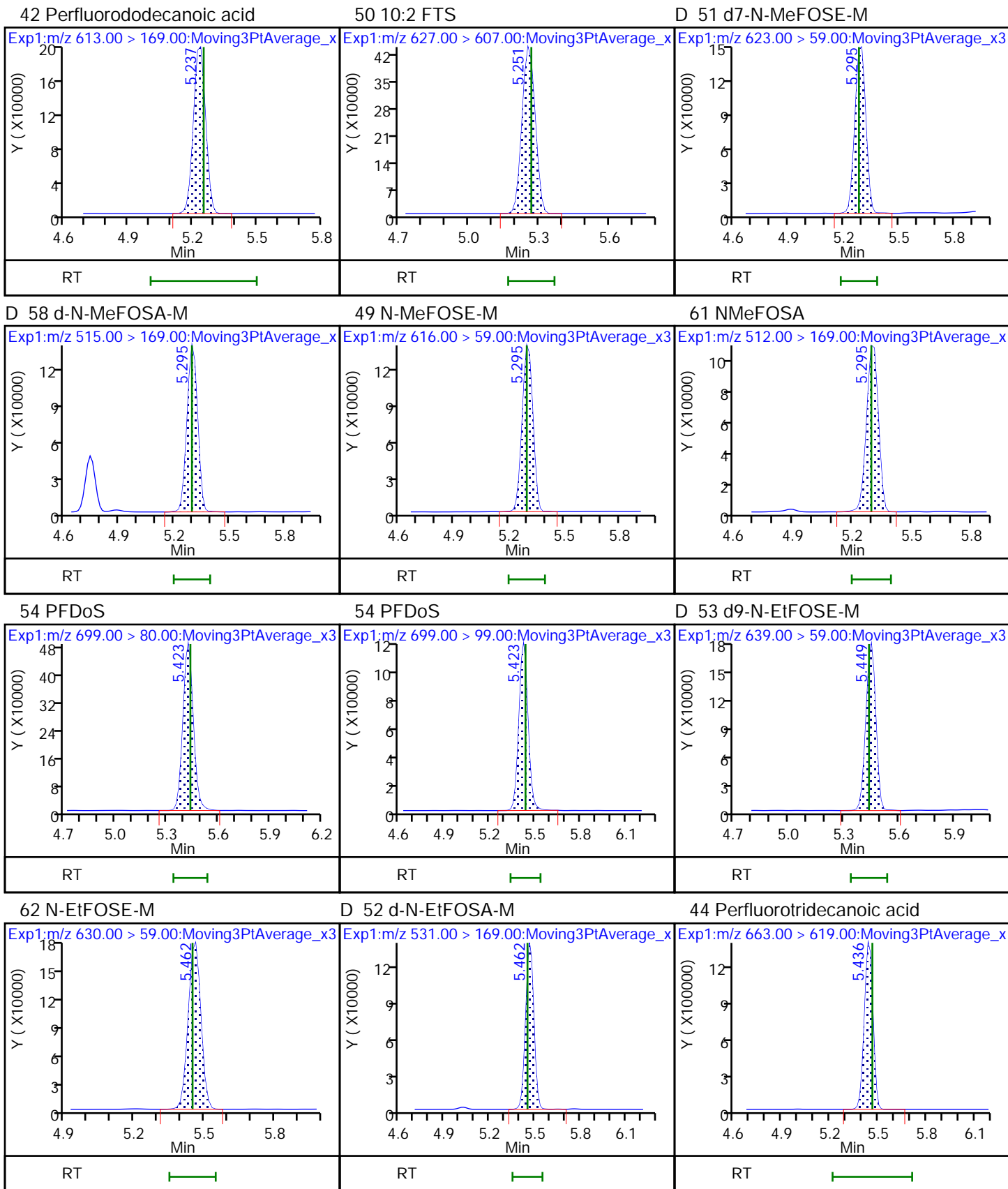


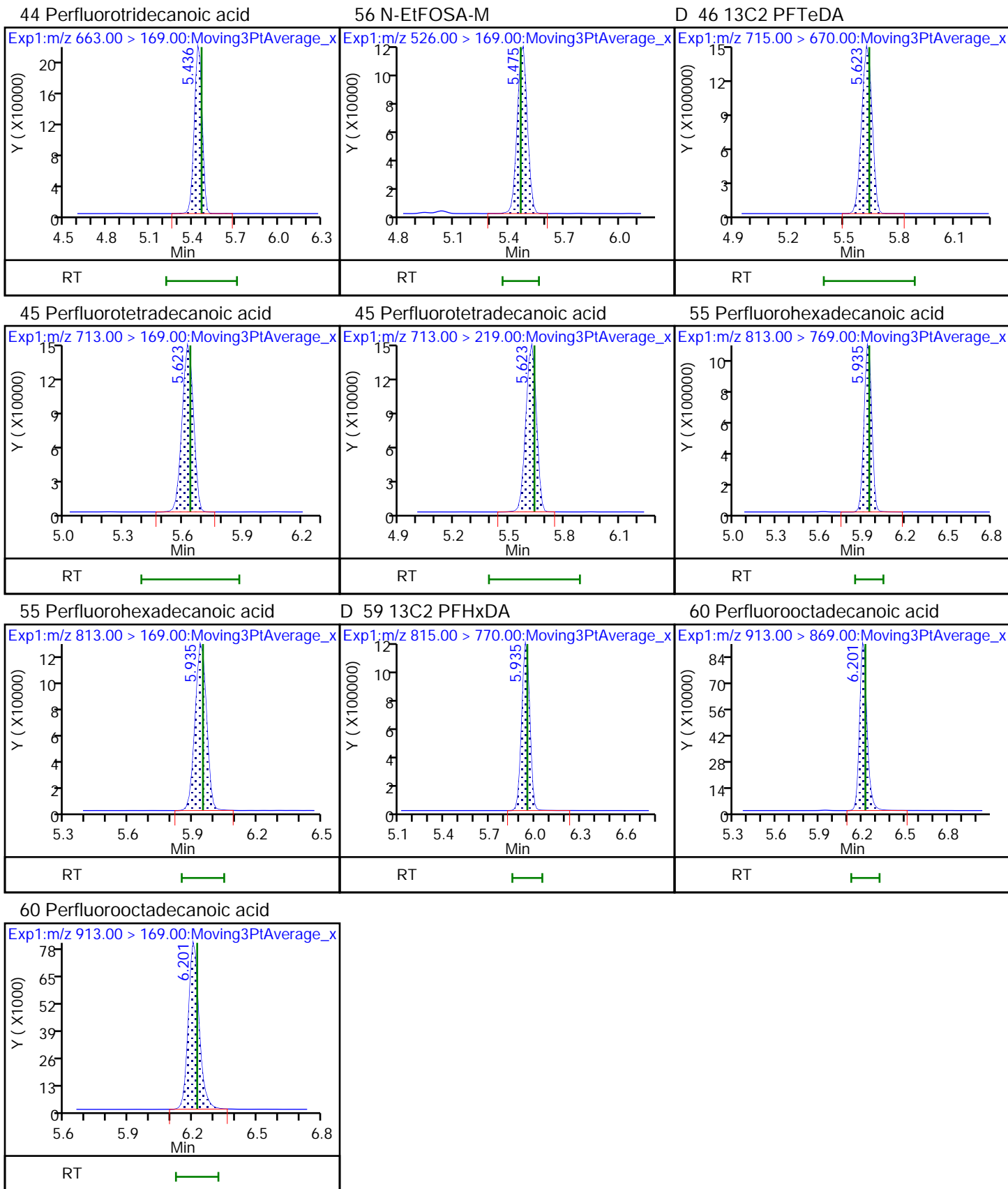
57 11CIFOS

D 43 13C2 PFDoA

42 Perfluorododecanoic acid







FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCSD 140-54326/3-B
 Matrix: Air Lab File ID: _032.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: None Date Extracted: 09/29/2021 13:10
 Sample wt/vol: 1(Sample) Date Analyzed: 10/08/2021 16:24
 Con. Extract Vol.: 360(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: GeminiC18 3x100 ID: 3(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54642 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.01935		0.00160	0.00140

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	90		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_032.d
 Lims ID: LCSD 140-54326/3-B
 Client ID:
 Sample Type: LCSD
 Inject. Date: 08-Oct-2021 16:24:53 ALS Bottle#: 3 Worklist Smp#: 32
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0021001-032 lcsd 140-54326/3-b
 Misc. Info.: Plate: 8 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 11:11:30 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675
 First Level Reviewer: cochranj Date: 09-Oct-2021 10:30:13
 Ratio Calibration: None

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	2.800	2.812	-0.012	0.678	6316703	1.07	85.6	11123	
2 Perfluorobutanoic acid	212.90 > 169.00	2.800	2.812	-0.012	1.000	4060263	1.02	102	275	
D 3 13C5 PFPeA	267.90 > 223.00	3.113	3.129	-0.016	0.754	5691916	1.18	94.0	10711	
4 Perfluoropentanoic acid	262.90 > 219.00	3.113	3.129	-0.016	1.000	4410347	0.9561	95.6	706	
D 6 13C3 PFBS	301.90 > 80.00	3.127	3.143	-0.016	0.757	2727664	0.8721	75.0	3445	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.141	3.143	-0.003	1.004	2299378	0.8703	Target=3.06	98.4	2476
	298.90 > 99.00	3.141	3.143	-0.003	1.004	841329		2.73(1.53-4.59)		870
D 8 M2-4:2 FTS	329.00 > 81.00	3.406	3.423	-0.017	0.825	591903	1.26	108	585	
7 4:2 FTS	327.00 > 307.00	3.406	3.423	-0.017	1.000	1195899	0.9436	101	12036	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.450	3.469	-0.019	1.103	1836686	0.9111	Target=3.47	97.1	1986
	349.00 > 99.00	3.450	3.469	-0.019	1.103	517994		3.55(1.73-5.20)		2815
D 9 13C2 PFHxA	315.00 > 270.00	3.450	3.469	-0.019	0.835	6107978	1.23	98.2	15367	
10 Perfluorohexanoic acid	313.00 > 269.00	3.450	3.469	-0.019	1.000	4107409	0.9806	Target=9.74	98.1	1207
	313.00 > 119.00	3.450	3.469	-0.019	1.000	324096		12.67(4.87-14.61)		523
D 12 13C3 HFPO-DA	287.00 > 169.00	3.545	3.561	-0.016	0.859	2854557	1.12	89.7	8379	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.545	3.561	-0.016	1.000	3060236	0.9676		96.8	4510	
D 17 18O2 PFHxS										
403.00 > 84.00	3.789	3.803	-0.015	0.918	1614004	0.8527		72.1	12910	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.789	3.803	-0.015	1.000	1674878	0.9031	Target=2.96	99.2	2703	M
399.00 > 99.00	3.789	3.803	-0.015	1.000	499673		3.35(1.48-4.44)		2839	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.801	3.815	-0.014	0.921	5847242	1.18		94.3	17700	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.801	3.815	-0.014	1.000	5030332	1.02	Target=3.35	102	1762	
363.00 > 169.00	3.801	3.815	-0.014	1.000	1483199		3.39(1.67-5.02)		5108	
68 DONA										
377.00 > 251.00	3.825	3.840	-0.015	0.863	6997381	1.20	Target=1.49	128	18020	
377.00 > 85.00	3.825	3.840	-0.015	0.863	3824016		1.83(0.74-2.23)		12580	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.117	4.143	-0.026	0.929	1742544	0.9782	Target=3.73	103	5198	
449.00 > 99.00	4.117	4.143	-0.026	0.929	406599		4.29(1.87-5.61)		2068	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.129	4.143	-0.014	1.000	600441	1.25		105	2345	
19 6:2 FTS										
427.00 > 407.00	4.129	4.143	-0.014	1.000	947042	0.9308		98.2	5116	
D 21 13C4 PFOA										
417.00 > 372.00	4.129	4.155	-0.026	1.000	5334878	1.19		95.1	25450	
* 22 13C2 PFOA										
415.00 > 370.00	4.129	4.155	-0.026		5569768	1.25			20223	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.129	4.155	-0.026	1.000	4723424	1.00	Target=2.40	99.8	2396	
413.00 > 169.00	4.129	4.155	-0.026	1.000	1886259		2.50(1.20-3.61)		4856	
D 25 13C4 PFOS										
503.00 > 80.00	4.432	4.447	-0.015	1.073	2139959	0.8207		68.7	6193	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.432	4.447	-0.015	1.000	1780108	0.9039	Target=3.83	97.4	1742	M
499.00 > 99.00	4.432	4.447	-0.015	1.000	410363		4.34(1.91-5.74)		1719	M
D 27 13C5 PFNA										
468.00 > 423.00	4.444	4.470	-0.026	1.076	6533732	1.15		91.7	21661	
26 Perfluorononanoic acid										
463.00 > 419.00	4.444	4.470	-0.026	1.000	4552478	1.04	Target=3.68	104	4089	
463.00 > 169.00	4.444	4.470	-0.026	1.000	978114		4.65(1.84-5.52)		3173	
63 9CIFOS										
531.00 > 351.00	4.581	4.596	-0.015	1.109	4027939	0.9746		105	7773	
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.706	4.722	-0.016	1.062	1512164	0.8102	Target=3.97	84.4	2636	
549.00 > 99.00	4.706	4.722	-0.016	1.062	398898		3.79(1.99-5.96)		2822	
D 34 13C8 FOSA										
506.00 > 78.00	4.732	4.736	-0.004	1.146	4194040	1.10		87.7	7042	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.732	4.736	-0.004	1.000	443157	0.9753		97.5	4204	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 32 13C2 PFDA										
515.00 > 470.00	4.732	4.749	-0.017	1.146	6767080	1.17		93.8	27087	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.732	4.749	-0.017	1.000	5281258	1.03	Target=10.11	103	2263	
513.00 > 169.00	4.732	4.749	-0.017	1.000	433482		12.18(5.06-15.17)		513	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.745	4.763	-0.018	1.149	703753	1.20		100	2110	
31 8:2 FTS										
527.00 > 507.00	4.745	4.763	-0.018	1.000	1016021	0.9692		101	6836	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.878	4.896	-0.018	1.181	958474	1.21		97.0	2046	
36 NMeFOSAA										
570.00 > 419.00	4.878	4.896	-0.018	1.000	718613	1.02		102	1003	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.975	4.993	-0.018	1.123	1240516	0.7236	Target=3.80	75.1	3910	
599.00 > 99.00	4.975	4.993	-0.018	1.123	319375		3.88(1.90-5.70)		2539	
D 39 13C2 PFUnA										
565.00 > 520.00	4.989	5.008	-0.019	1.208	6364718	1.15		92.4	11220	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.989	5.008	-0.019	1.000	5224310	1.01	Target=7.45	101	9779	
563.00 > 169.00	4.989	5.008	-0.019	1.000	577897		9.04(3.78-11.33)		3561	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.003	5.022	-0.019	1.212	924798	1.22		97.4	2962	
40 NEtFOSA										
584.00 > 419.00	5.018	5.036	-0.018	1.003	755432	1.08		108	1169	
57 11CIFOS										
631.00 > 451.00	5.102	5.119	-0.017	1.151	2634104	0.7915		84.0	6787	
D 43 13C2 PFDoA										
615.00 > 570.00	5.233	5.251	-0.018	1.267	6885384	1.17		93.7	13755	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.233	5.251	-0.018	1.000	5627467	0.9789	Target=5.33	97.9	3607	
613.00 > 169.00	5.233	5.251	-0.018	1.000	824945		6.82(2.66-7.99)		3976	
50 10:2 FTS										
627.00 > 607.00	5.260	5.266	-0.006	1.108	1458323	1.12		116	9083	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.290	5.295	-0.005	1.281	858489	1.79		143	442	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.290	5.295	-0.005	1.281	598542	1.20		96.0	47.0	
49 N-MeFOSE-M										
616.00 > 59.00	5.290	5.295	-0.005	1.000	828380	1.04		104	769	
61 NMeFOSA										
512.00 > 169.00	5.290	5.295	-0.005	1.000	509095	1.02		102	620	
54 PFDoS										
699.00 > 80.00	5.417	5.436	-0.019	1.222	536894	0.3035	Target=4.32	31.4	1392	
699.00 > 99.00	5.417	5.436	-0.019	1.222	128374		4.18(2.19-6.58)		1201	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.443	5.449	-0.006	1.318	702246	1.38		110	507	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
62 N-EtFOSE-M										
630.00 > 59.00	5.456	5.462	-0.006	1.002	702044	0.9897		99.0	1227	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.456	5.462	-0.006	1.321	472511	1.13		90.0	666	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.443	5.462	-0.019	1.040	4762192	0.9780	Target=5.66	97.8	3107	
663.00 > 169.00	5.430	5.462	-0.032	1.038	778548		6.12(2.83-8.48)		3968	
56 N-EtFOSA-M										
526.00 > 169.00	5.470	5.462	0.008	1.002	449409	1.02		102	594	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.618	5.637	-0.019	1.361	5409100	1.00		80.2	22843	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.618	5.637	-0.019	1.000	540756	0.99	Target=1.07	99.1	4692	
713.00 > 219.00	5.618	5.637	-0.019	1.000	533734		1.01(0.53-1.60)		5949	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.930	5.948	-0.018	1.000	1283795	0.99	Target=7.50	99.2	1619	
813.00 > 169.00	5.930	5.948	-0.018	1.000	156854		8.18(3.75-11.26)		1432	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.930	5.948	-0.018	1.436	1480381	0.3783		30.3	4729	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.198	6.221	-0.023	1.045	103523	0.0963	Target=9.98	9.6	411	
913.00 > 169.00	6.198	6.221	-0.023	1.045	8661		11.95(5.14-15.41)		138	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_032.d

Injection Date: 08-Oct-2021 16:24:53

Instrument ID: LCA

Lims ID: LCSD 140-54326/3-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 3

Worklist Smp#: 32

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

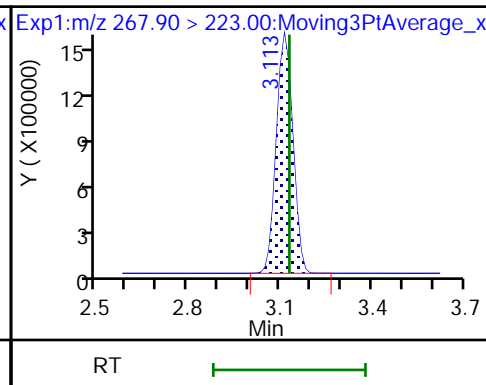
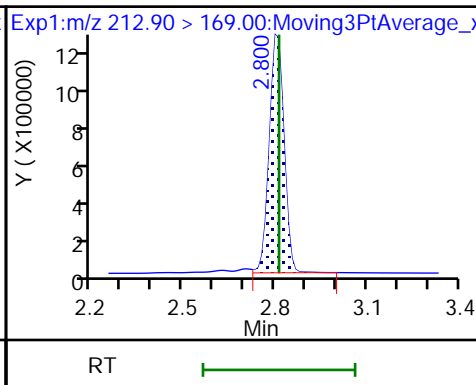
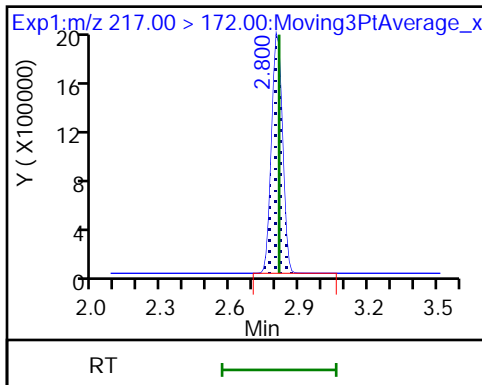
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

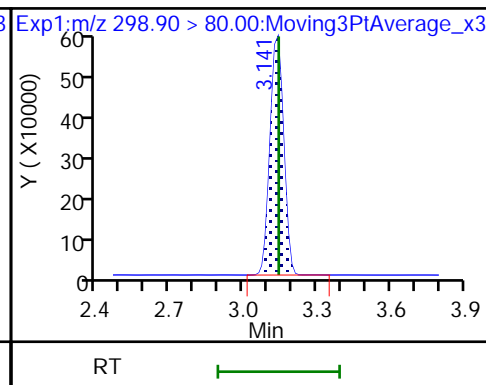
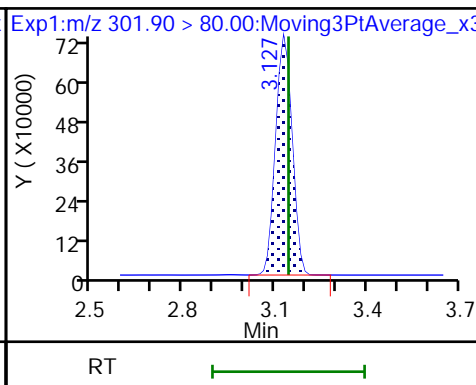
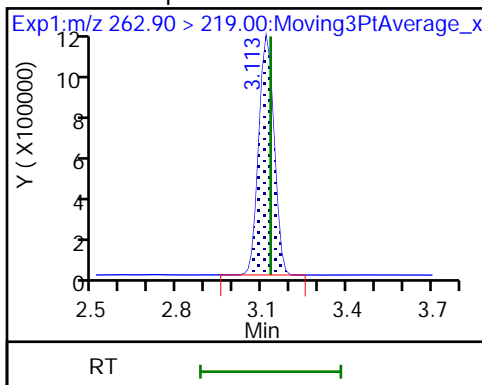
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

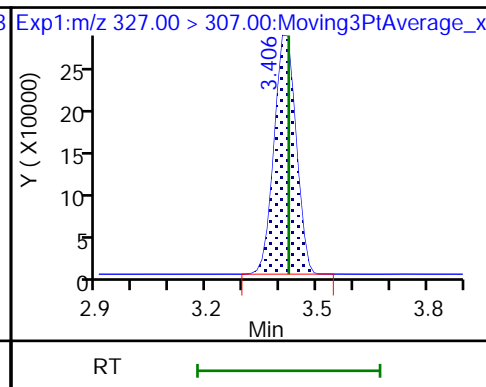
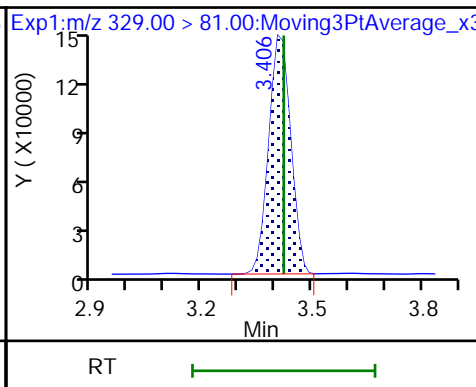
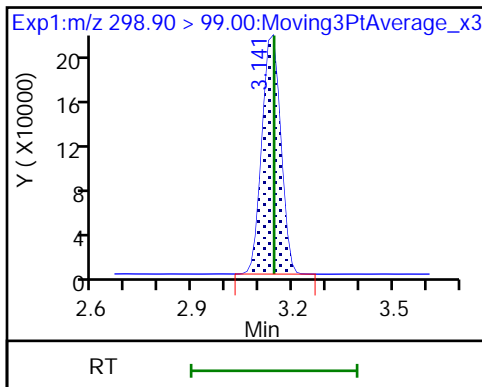
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

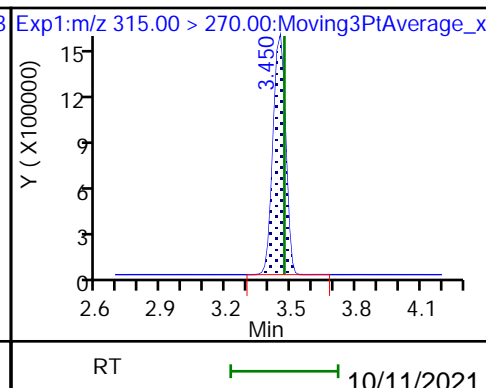
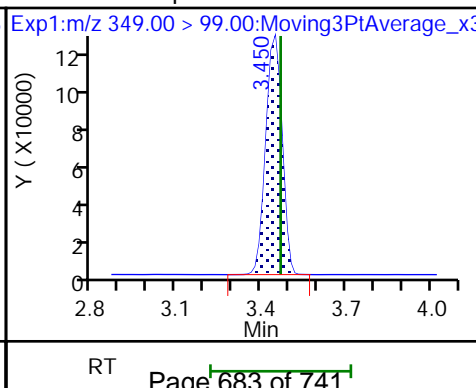
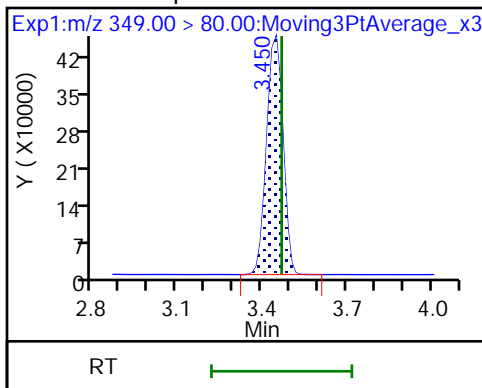
7 4:2 FTS

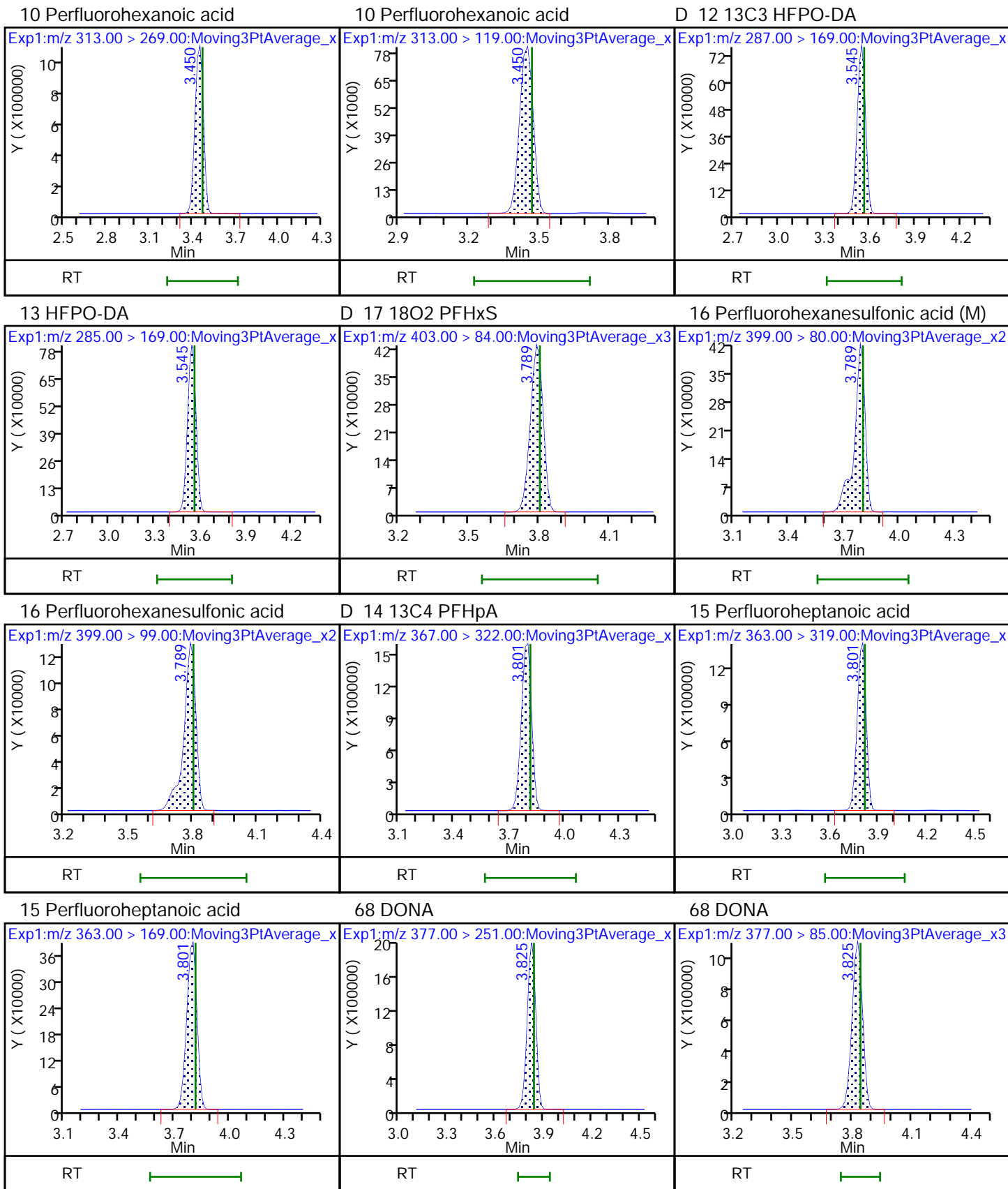


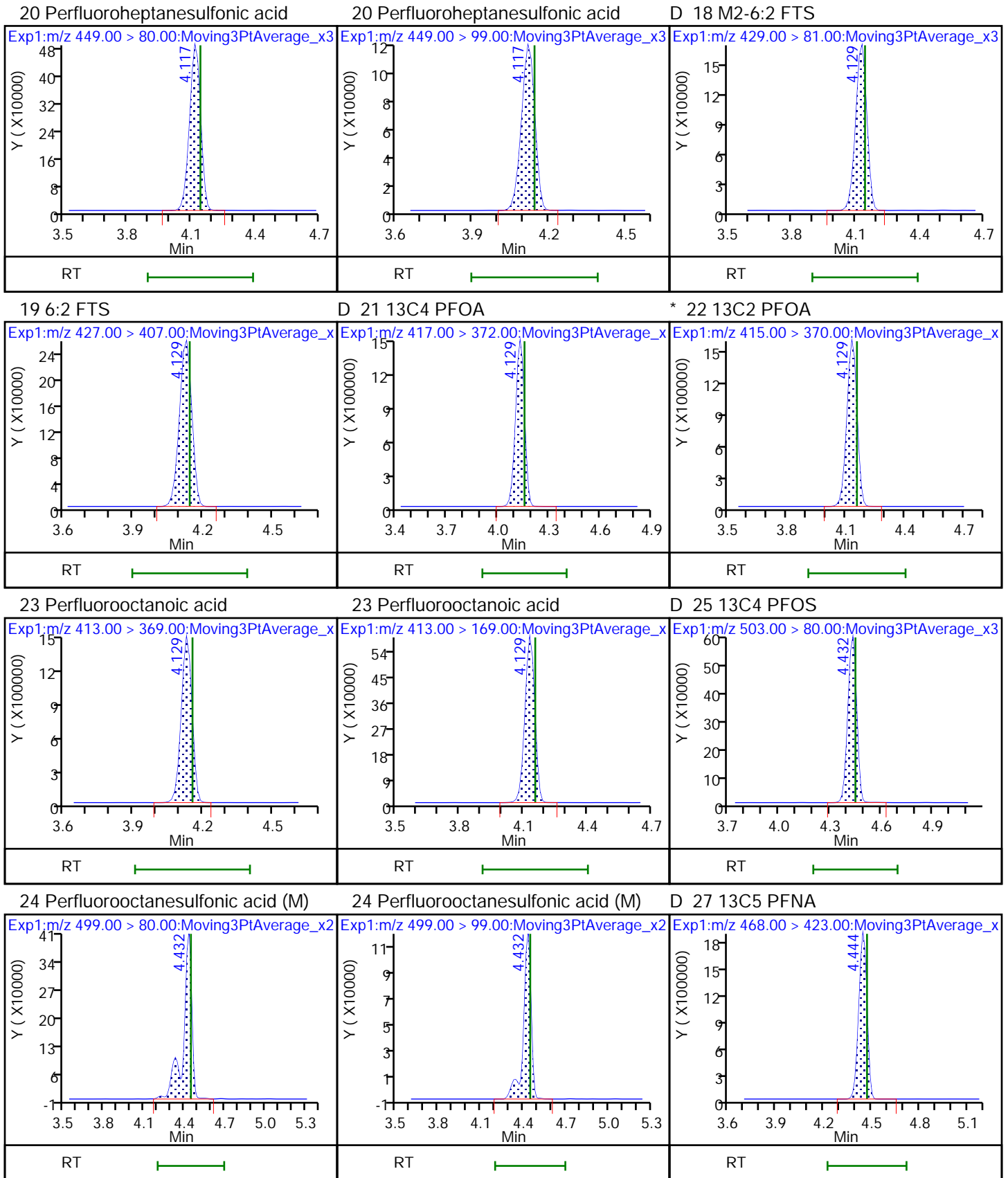
11 Perfluoropentanesulfonic acid

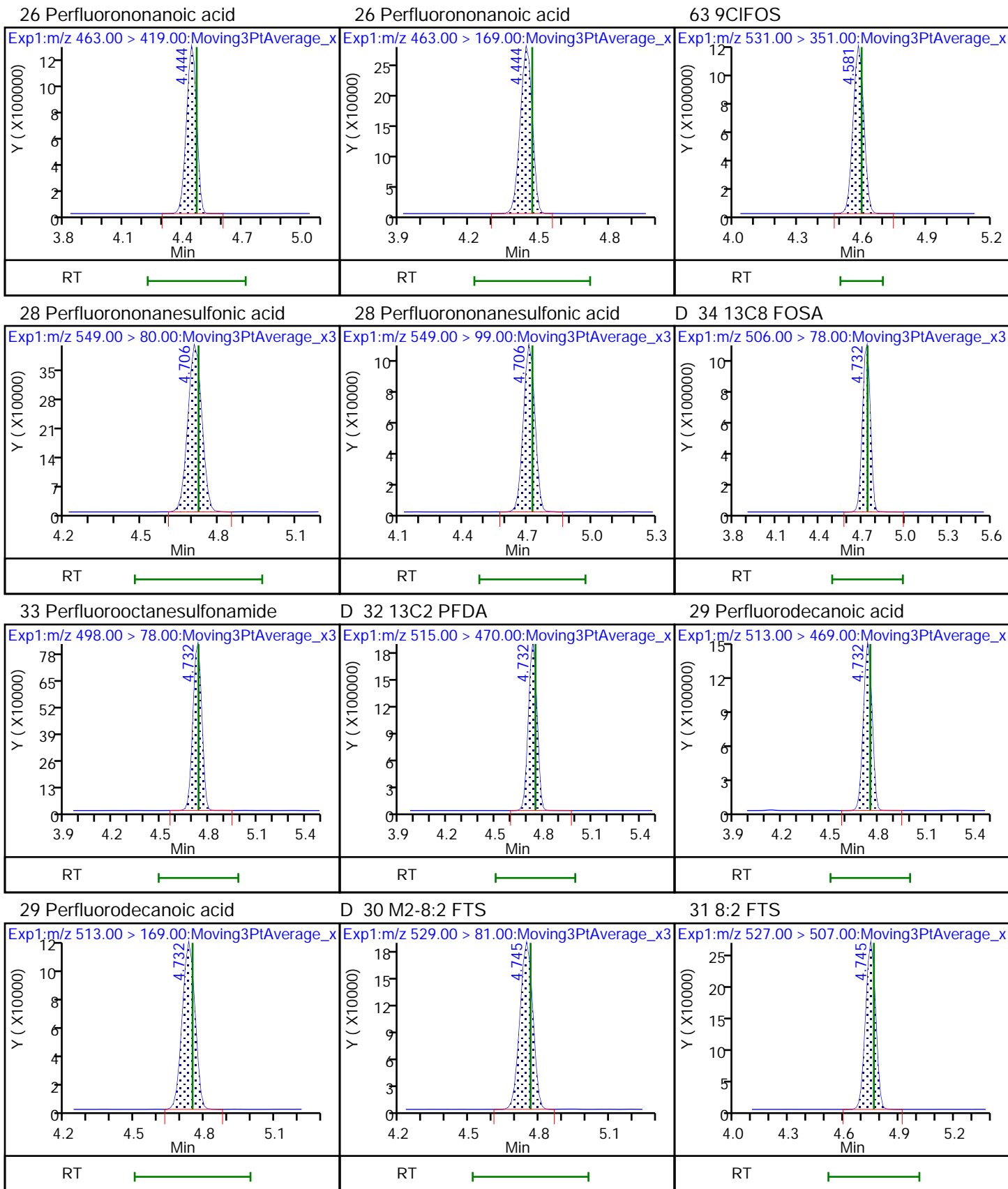
11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA





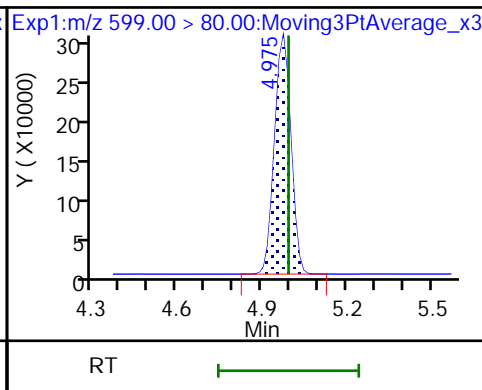
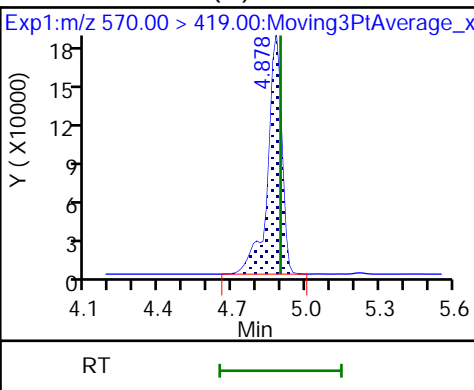
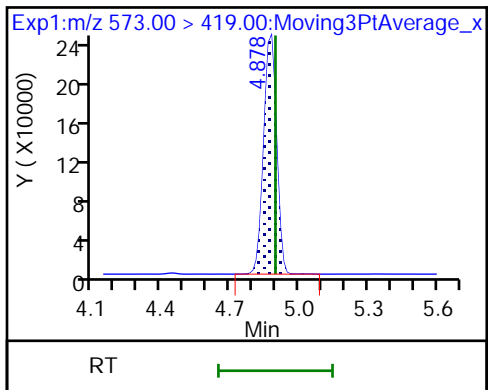




D 35 d3-NMeFOSAA

36 NMeFOSAA (M)

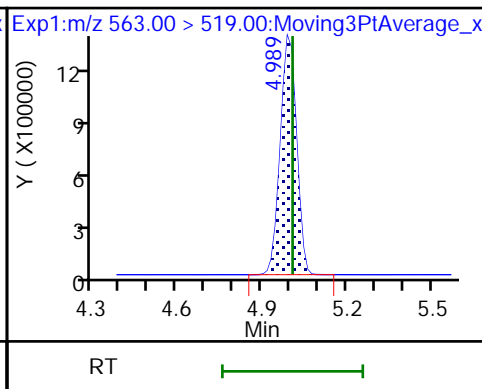
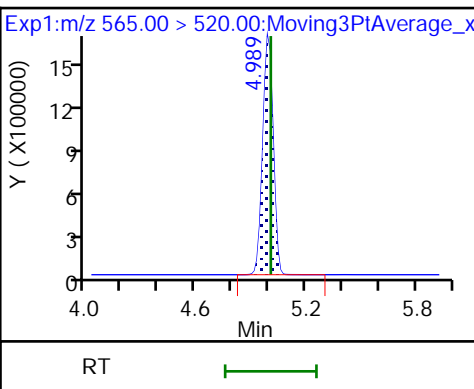
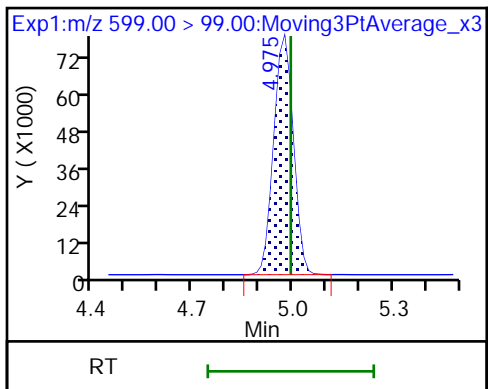
37 Perfluorodecanesulfonic acid



37 Perfluorodecanesulfonic acid

D 39 13C2 PFUnA

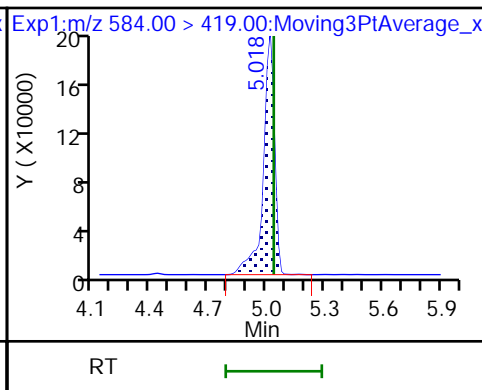
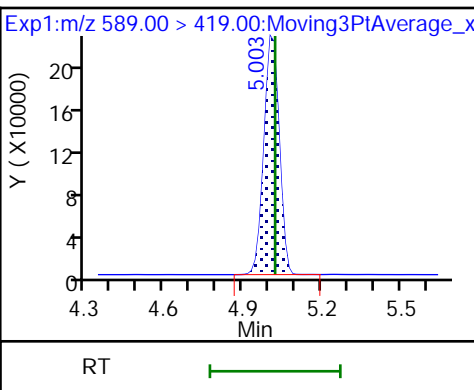
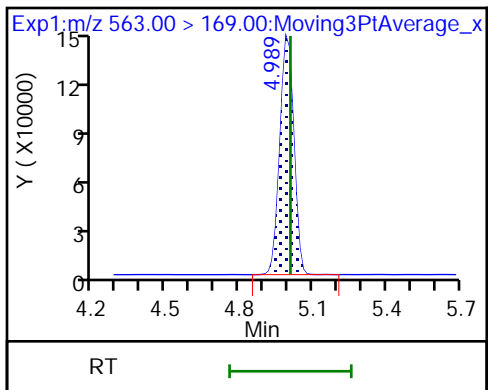
38 Perfluoroundecanoic acid



38 Perfluoroundecanoic acid

D 41 d5-NEtFOSAA

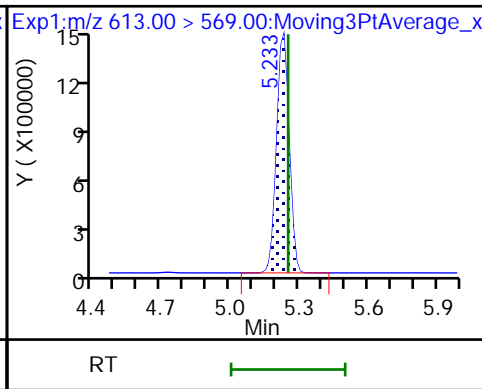
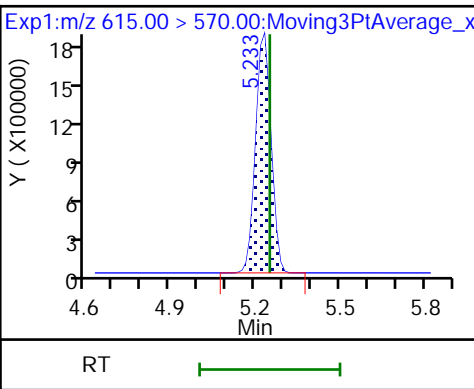
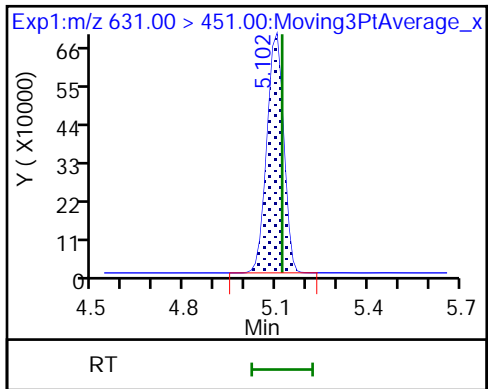
40 NEtFOSA

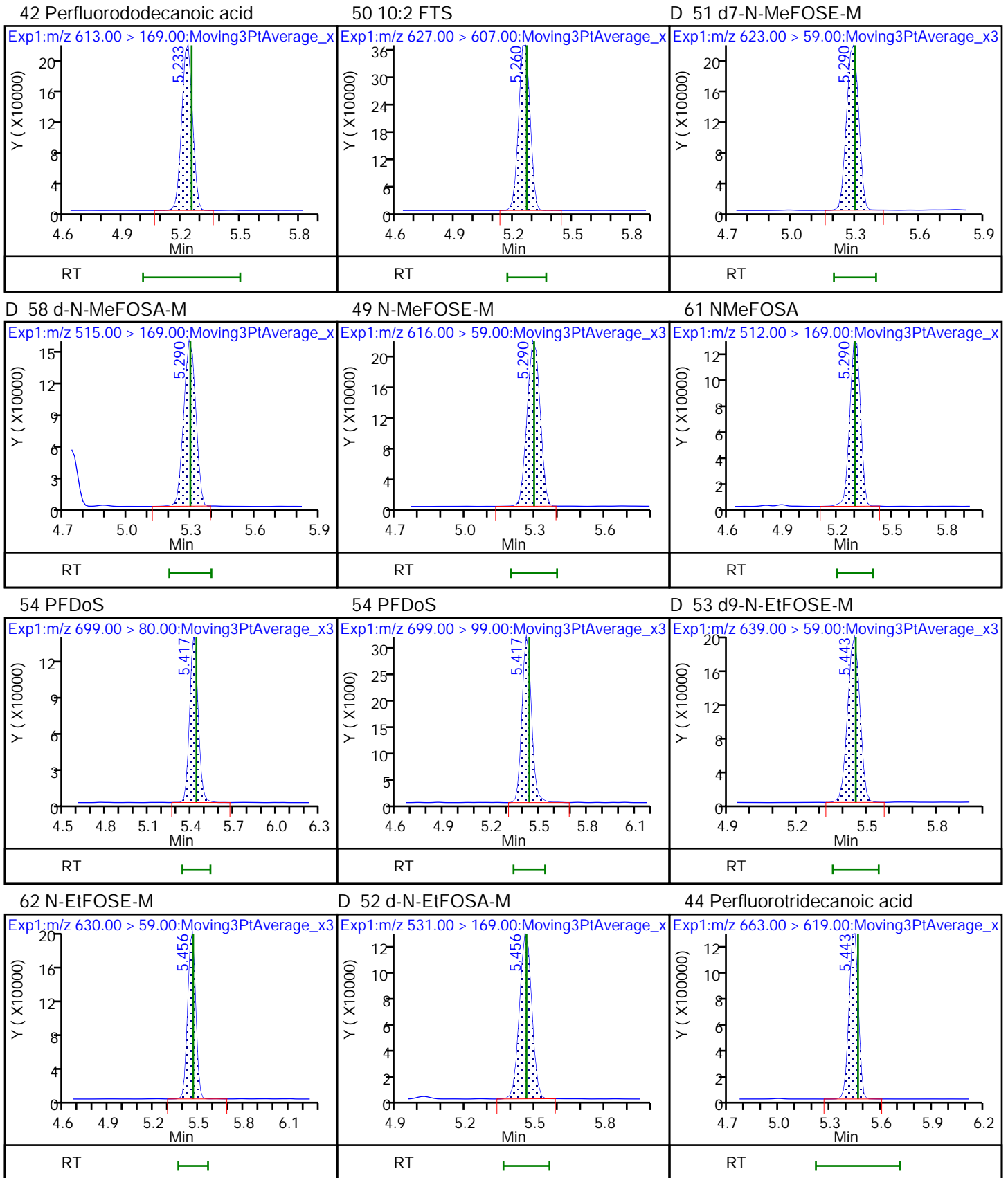


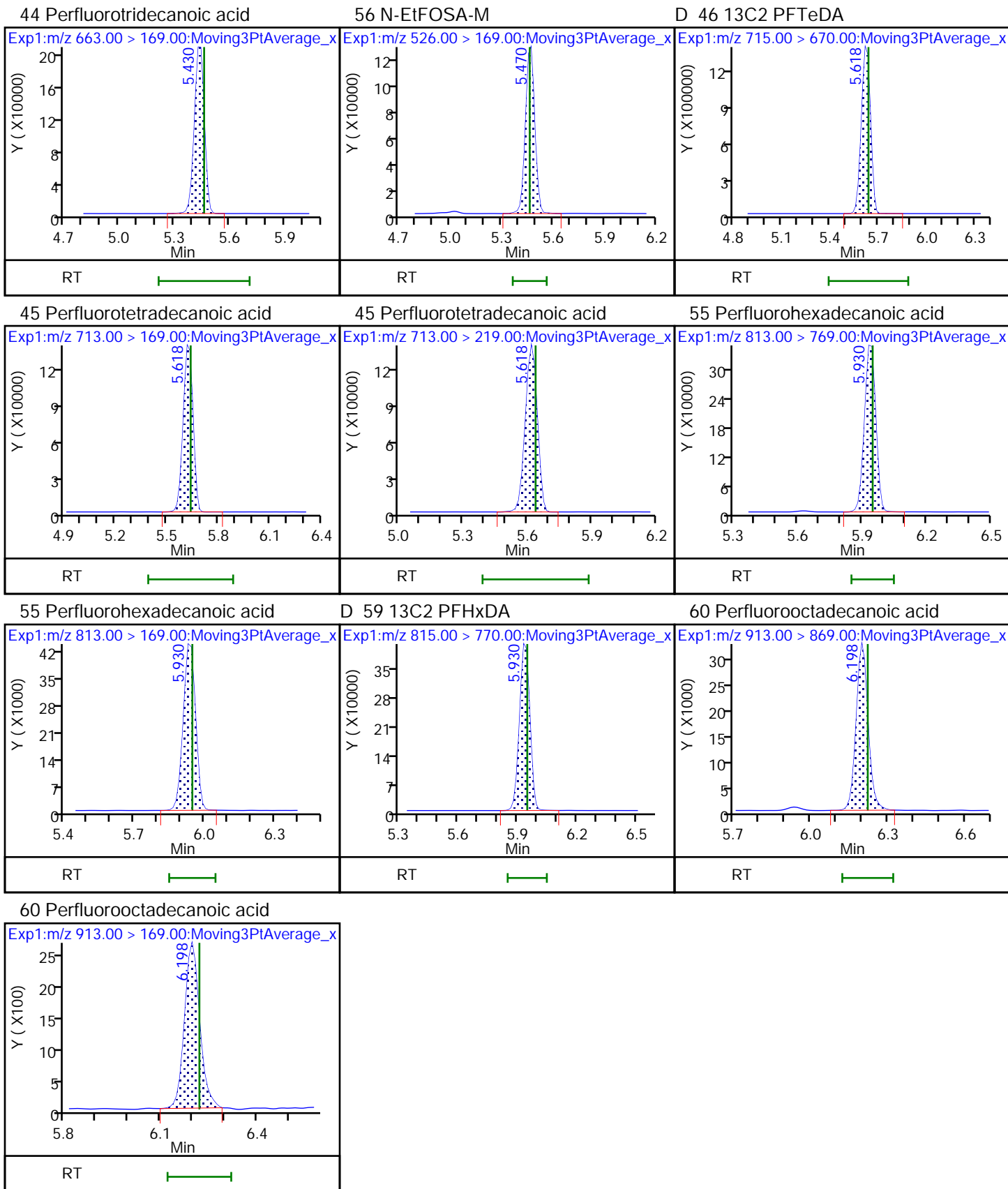
57 11CIFOS

D 43 13C2 PFDaA

42 Perfluorododecanoic acid







FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCSD 140-54348/3-B
 Matrix: Air Lab File ID: _041.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: None Date Extracted: 09/30/2021 08:55
 Sample wt/vol: 1 (Sample) Date Analyzed: 10/07/2021 02:27
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: GeminiC18 3x100 ID: 3 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54568 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.009247		0.000500	0.0000825

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	96		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_041.d
 Lims ID: LCSD 140-54348/3-B
 Client ID:
 Sample Type: LCSD
 Inject. Date: 07-Oct-2021 02:27:53 ALS Bottle#: 41 Worklist Smp#: 41
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-041 lcsd 140-54348/3-b
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 17:25:19 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675
 First Level Reviewer: cochranj Date: 09-Oct-2021 17:23:13
 Ratio Calibration: None

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	2.801	2.801	0.0	0.678	7584070	1.20	96.0	19287	
2 Perfluorobutanoic acid	212.90 > 169.00	2.801	2.812	-0.011	1.000	4555972	0.9560	95.6	1307	
D 3 13C5 PFPeA	267.90 > 223.00	3.116	3.129	-0.013	0.754	6472226	1.25	99.8	19745	
4 Perfluoropentanoic acid	262.90 > 219.00	3.116	3.129	-0.013	1.000	4779937	0.9113	91.1	1454	
D 6 13C3 PFBS	301.90 > 80.00	3.129	3.129	0.0	0.758	3811940	1.14	97.9	29208	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.129	3.143	-0.014	1.000	3149939	0.8531	Target=3.06	96.5	14562
	298.90 > 99.00	3.129	3.143	-0.014	1.000	1152699		2.73(1.53-4.59)		5138
D 8 M2-4:2 FTS	329.00 > 81.00	3.409	3.423	-0.014	0.825	663868	1.32	113	1164	
7 4:2 FTS	327.00 > 307.00	3.409	3.423	-0.014	1.000	1183579	0.8326	89.1	10062	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.437	3.453	-0.016	1.098	2588237	0.9188	Target=3.47	98.0	14126
	349.00 > 99.00	3.437	3.453	-0.016	1.098	747417		3.46(1.73-5.20)		7435
D 9 13C2 PFHxA	315.00 > 270.00	3.437	3.469	-0.032	0.832	6563217	1.23	98.6	12862	
10 Perfluorohexanoic acid	313.00 > 269.00	3.453	3.469	-0.016	1.005	4028090	0.8950	Target=9.74	89.5	2373
	313.00 > 119.00	3.437	3.469	-0.032	1.000	336307		11.98(4.87-14.61)		1241
D 12 13C3 HFPO-DA	287.00 > 169.00	3.548	3.561	-0.013	0.859	3281424	1.20	96.3	12145	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.548	3.561	-0.013	1.000	3362938	0.9247		92.5	3123	
D 17 18O2 PFHxS										
403.00 > 84.00	3.790	3.803	-0.013	0.918	2378299	1.17		99.2	11814	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.790	3.803	-0.013	1.000	2379403	0.8705	Target=2.96	95.7	8601	M
399.00 > 99.00	3.790	3.803	-0.013	1.000	670456		3.55(1.48-4.44)		3534	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.790	3.815	-0.025	0.918	6529222	1.23		98.3	15589	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.790	3.815	-0.025	1.000	5349090	0.9688	Target=3.35	96.9	4645	
363.00 > 169.00	3.790	3.815	-0.025	1.000	1617327		3.31(1.67-5.02)		7925	
68 DONA										
377.00 > 251.00	3.827	3.840	-0.013	0.863	7704177	0.8727	Target=1.49	92.6	20178	
377.00 > 85.00	3.827	3.840	-0.013	0.863	4312080		1.79(0.74-2.23)		26960	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.119	4.143	-0.024	0.929	2402776	0.8874	Target=3.73	93.2	7411	
449.00 > 99.00	4.119	4.143	-0.024	0.929	626955		3.83(1.87-5.61)		3223	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.131	4.143	-0.012	1.000	668704	1.30		110	3839	
19 6:2 FTS										
427.00 > 407.00	4.131	4.143	-0.012	1.000	1020118	0.9000		94.9	6011	
D 21 13C4 PFOA										
417.00 > 372.00	4.131	4.155	-0.024	1.000	5803228	1.21		96.6	25399	
* 22 13C2 PFOA										
415.00 > 370.00	4.131	4.155	-0.024		5964477	1.25			22434	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.131	4.155	-0.024	1.000	5171655	1.00	Target=2.40	100	2624	
413.00 > 169.00	4.131	4.155	-0.024	1.000	1878628		2.75(1.20-3.61)		3303	
D 25 13C4 PFOS										
503.00 > 80.00	4.434	4.447	-0.012	1.074	3252600	1.16		97.5	10453	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.434	4.447	-0.012	1.000	2755241	0.9204	Target=3.83	99.2	584	M
499.00 > 99.00	4.434	4.447	-0.012	1.000	606717		4.54(1.91-5.74)		2730	M
D 27 13C5 PFNA										
468.00 > 423.00	4.447	4.470	-0.023	1.077	7697050	1.26		101	35858	
26 Perfluorononanoic acid										
463.00 > 419.00	4.447	4.470	-0.023	1.000	4895103	0.9522	Target=3.68	95.2	5897	
463.00 > 169.00	4.447	4.470	-0.023	1.000	1102407		4.44(1.84-5.52)		2971	
63 9CIFOS										
531.00 > 351.00	4.584	4.596	-0.012	1.110	5558179	0.8848		94.9	9163	
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.709	4.722	-0.013	1.062	2501927	0.8820	Target=3.97	91.9	6423	
549.00 > 99.00	4.709	4.722	-0.013	1.062	620077		4.03(1.99-5.96)		2780	
D 34 13C8 FOSA										
506.00 > 78.00	4.722	4.736	-0.014	1.143	5058666	1.23		98.7	5134	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.736	4.736	0.0	1.003	3582797	0.9217		92.2	5493	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 32 13C2 PFDA										
515.00 > 470.00	4.736	4.749	-0.013	1.146	7277716	1.18		94.2	30372	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.736	4.749	-0.013	1.000	5363062	0.9692	Target=10.11	96.9	2728	
513.00 > 169.00	4.736	4.749	-0.013	1.000	461693		11.62(5.06-15.17)		562	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.763	-0.014	1.150	779565	1.24		104	4026	
31 8:2 FTS										
527.00 > 507.00	4.749	4.763	-0.014	1.000	1032786	0.8894		92.8	5810	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.869	4.896	-0.027	1.179	1071794	1.27		101	1447	
36 NMeFOSAA										
570.00 > 419.00	4.882	4.896	-0.014	1.003	728149	0.9229		92.3	965	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.979	4.993	-0.014	1.123	2430023	0.9325	Target=3.80	96.7	6976	
599.00 > 99.00	4.965	4.993	-0.028	1.120	640830		3.79(1.90-5.70)		3738	
D 39 13C2 PFUnA										
565.00 > 520.00	4.993	5.022	-0.029	1.209	6968210	1.18		94.4	29274	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.993	5.022	-0.029	1.000	5459152	0.9675	Target=7.45	96.7	7645	
563.00 > 169.00	4.993	5.022	-0.029	1.000	594572		9.18(3.78-11.33)		3137	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.007	5.036	-0.029	1.212	1014433	1.25		99.7	4781	
40 NEtFOSA										
584.00 > 419.00	5.007	5.036	-0.029	1.000	686945	0.8916		89.2	974	M
57 11CIFOS										
631.00 > 451.00	5.093	5.119	-0.026	1.148	4666340	0.9225		97.9	9787	
D 43 13C2 PFDaA										
615.00 > 570.00	5.224	5.251	-0.027	1.265	8214492	1.30		104	19072	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.224	5.251	-0.027	1.000	5984288	0.8707	Target=5.33	87.1	3683	
613.00 > 169.00	5.224	5.251	-0.027	1.000	862831		6.94(2.66-7.99)		3118	
50 10:2 FTS										
627.00 > 607.00	5.251	5.266	-0.015	1.106	1408249	0.9740		101	12056	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.281	5.281	0.0	1.278	678401	1.32		106	472	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.282	616958	1.15		92.4	36.9	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.295	0.0	1.003	597431	0.9503		95.0	851	
61 NMeFOSA										
512.00 > 169.00	5.295	5.295	0.0	1.000	512621	0.99		99.2	710	
54 PFDoS										
699.00 > 80.00	5.423	5.436	-0.013	1.223	2468828	0.9182	Target=4.32	94.9	6519	
699.00 > 99.00	5.423	5.436	-0.013	1.223	591392		4.17(2.19-6.58)		2448	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.449	5.436	0.013	1.319	730407	1.34		107	766	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
62 N-EtFOSE-M										
630.00 > 59.00	5.449	5.449	0.0	1.000	699774	0.9483		94.8	1486	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.449	0.013	1.322	519068	1.15		92.4	620	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.436	5.462	-0.026	1.041	5507287	0.9478	Target=5.66	94.8	3824	
663.00 > 169.00	5.436	5.462	-0.026	1.041	846908		6.50(2.83-8.48)		4150	
56 N-EtFOSA-M										
526.00 > 169.00	5.462	5.462	0.0	1.000	479613	0.9885		98.9	528	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.623	5.637	-0.014	1.361	7185556	1.24		99.5	20704	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.623	5.637	-0.014	1.000	670115	0.9237	Target=1.07	92.4	3793	
713.00 > 219.00	5.623	5.637	-0.014	1.000	670129		1.00(0.53-1.60)		4157	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.935	5.948	-0.013	1.000	4064821	0.8972	Target=7.50	89.7	2936	
813.00 > 169.00	5.935	5.948	-0.013	1.000	510782		7.96(3.75-11.26)		2993	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.935	5.948	-0.013	1.437	5166943	1.23		98.6	6725	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.201	6.221	-0.020	1.045	3618471	0.9645	Target=9.98	96.4	2933	
913.00 > 169.00	6.201	6.221	-0.020	1.045	308682		11.72(5.14-15.41)		2015	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_041.d

Injection Date: 07-Oct-2021 02:27:53

Instrument ID: LCA

Lims ID: LCSD 140-54348/3-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 41

Worklist Smp#: 41

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

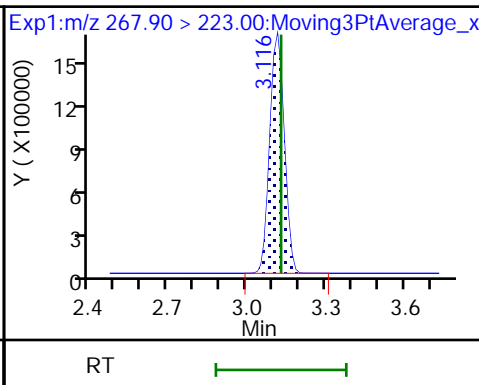
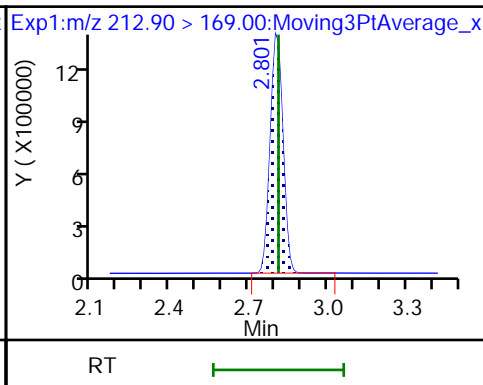
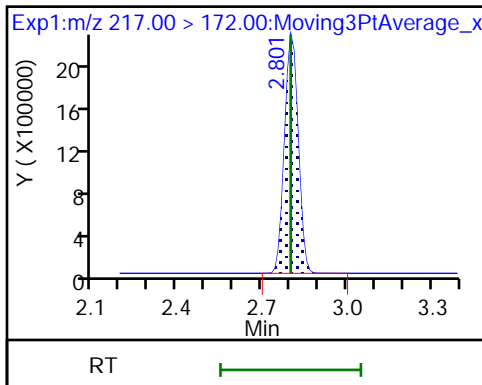
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

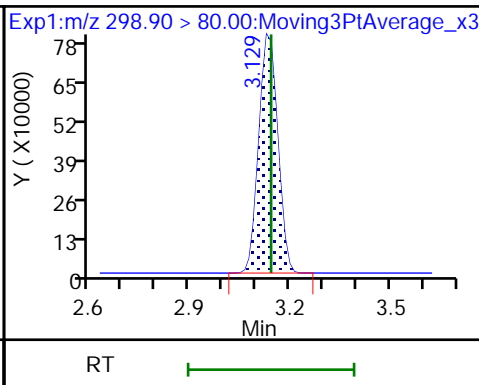
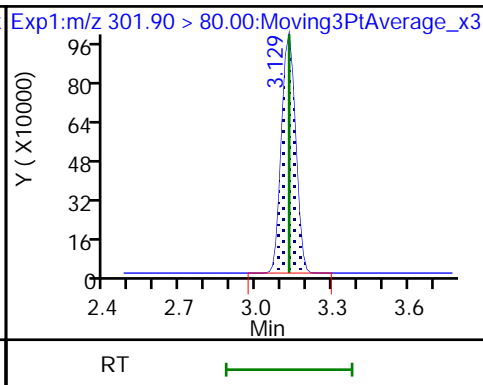
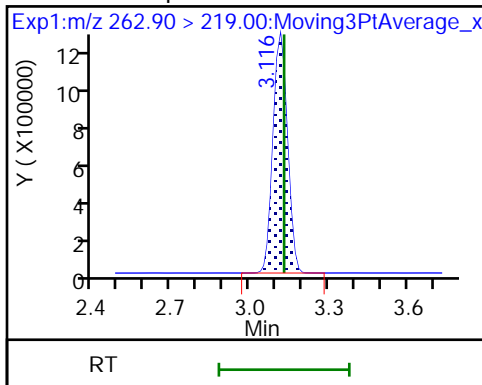
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

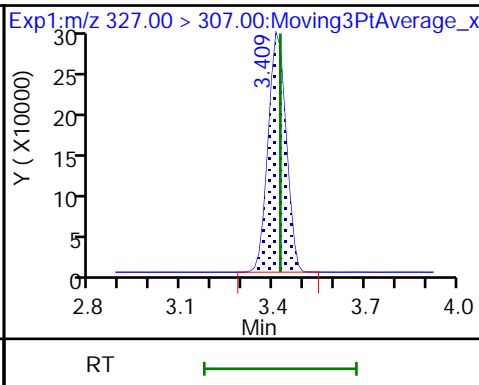
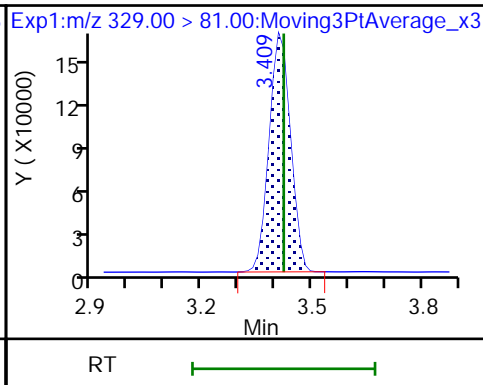
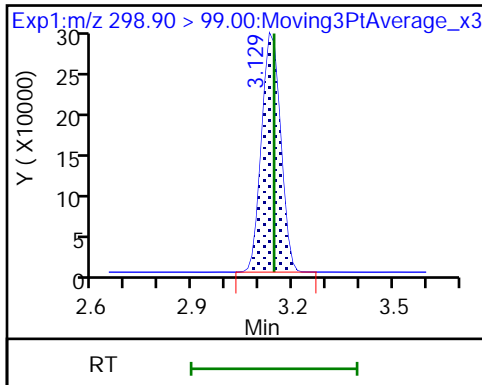
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

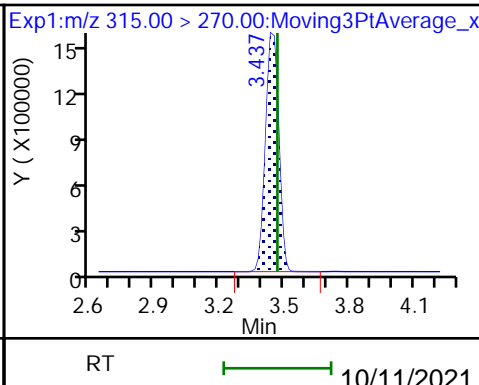
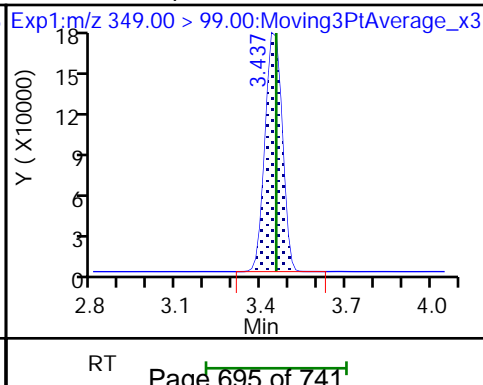
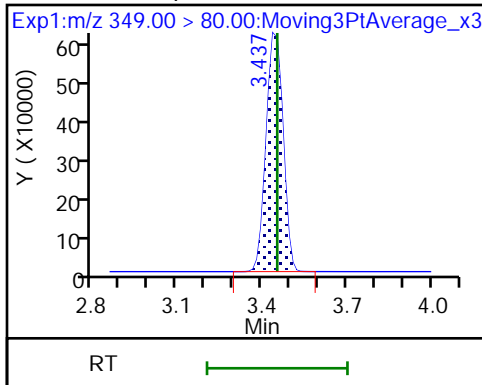
7 4:2 FTS

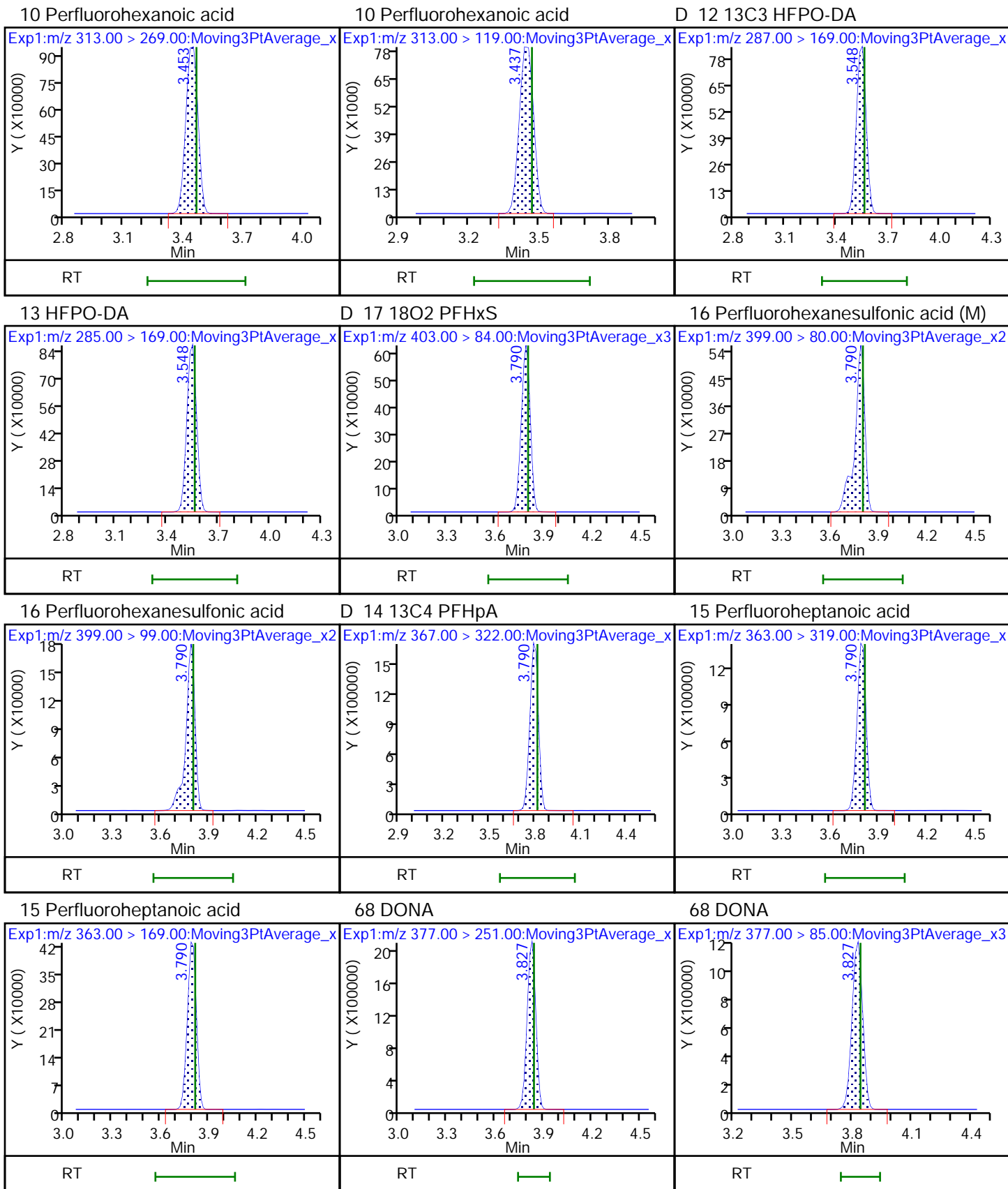


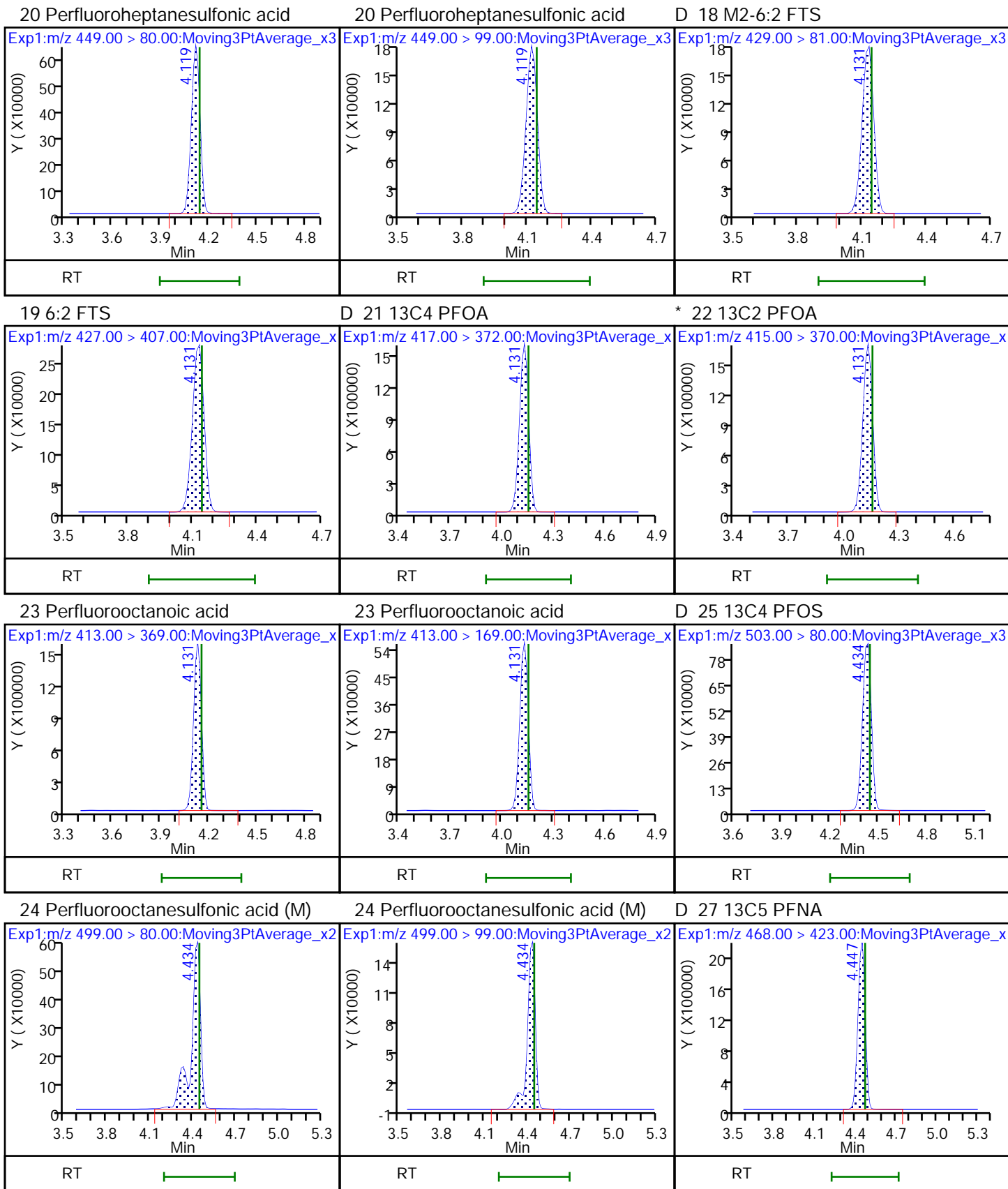
11 Perfluoropentanesulfonic acid

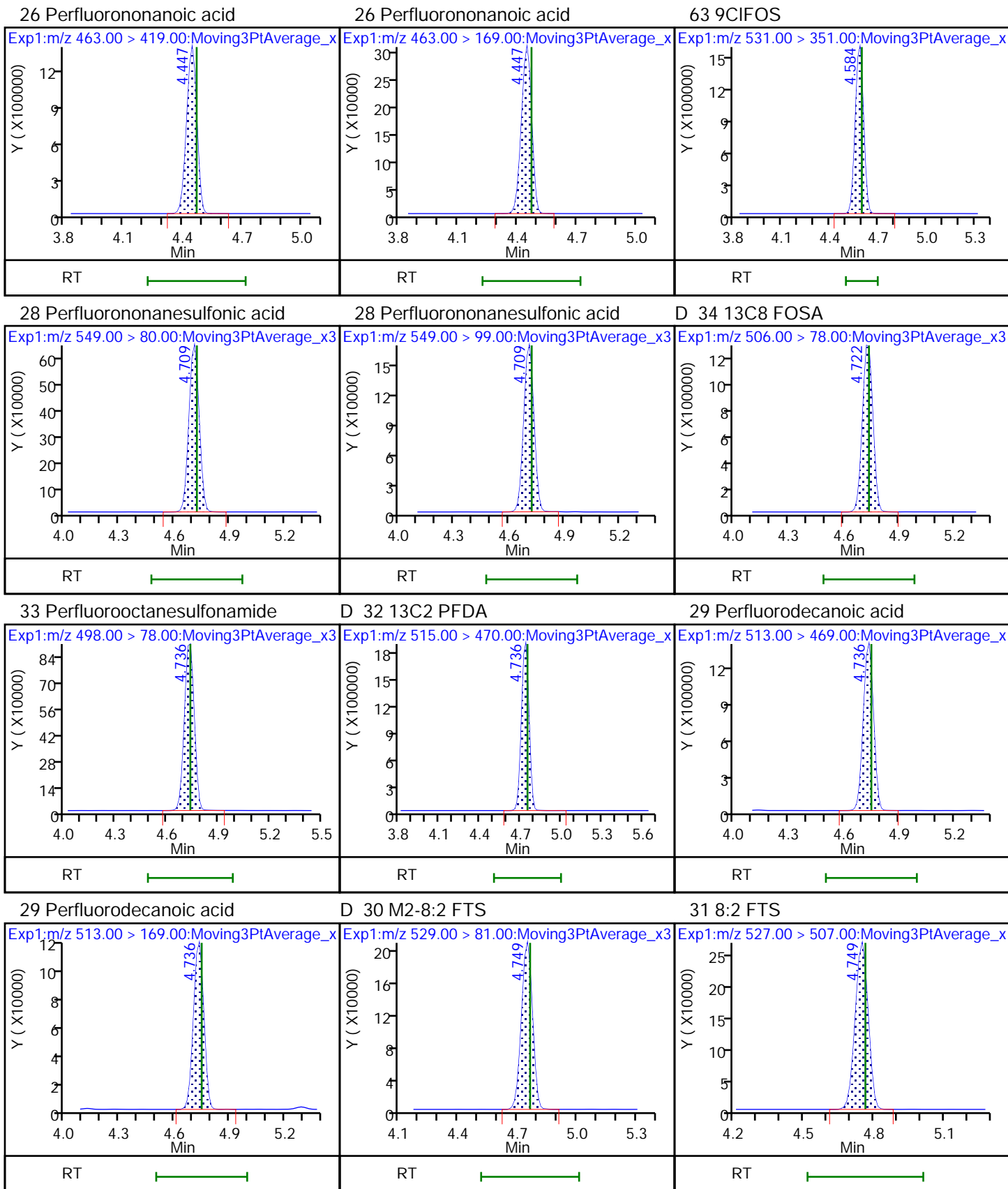
11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA





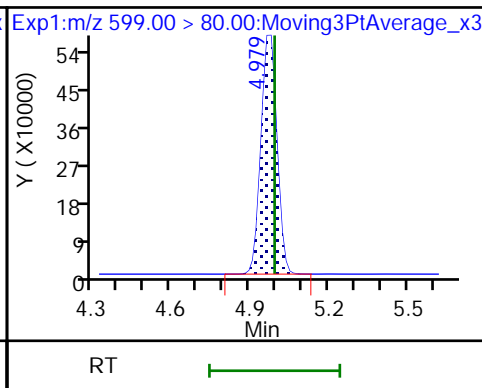
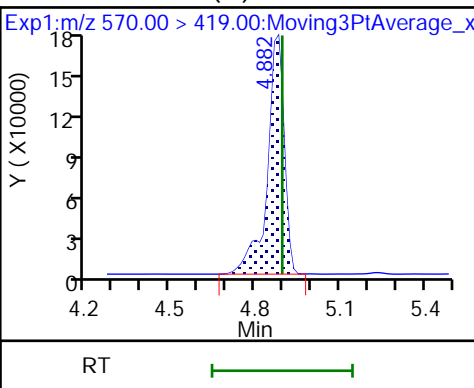
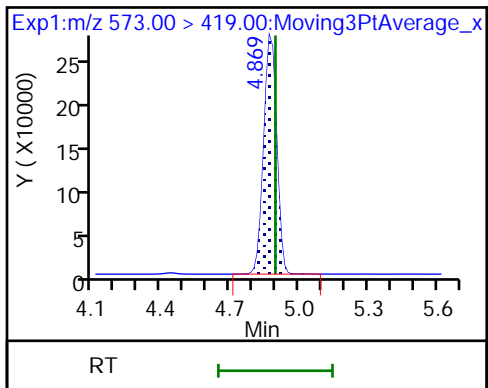




D 35 d3-NMeFOSAA

36 NMeFOSAA (M)

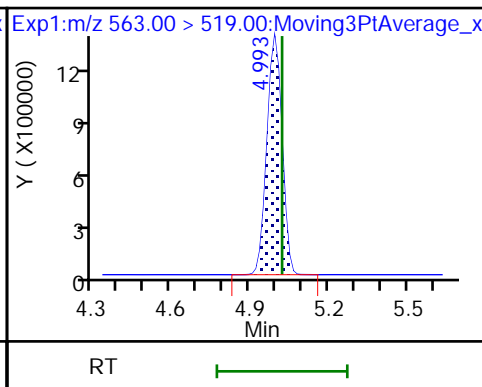
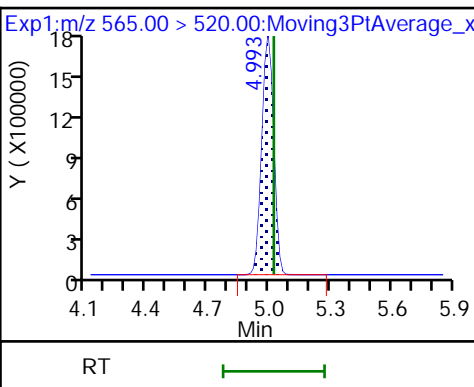
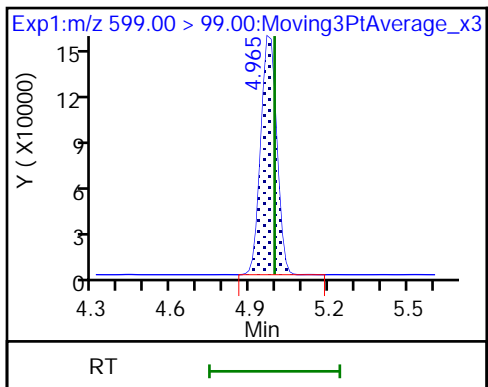
37 Perfluorodecanesulfonic acid



37 Perfluorodecanesulfonic acid

D 39 13C2 PFUoA

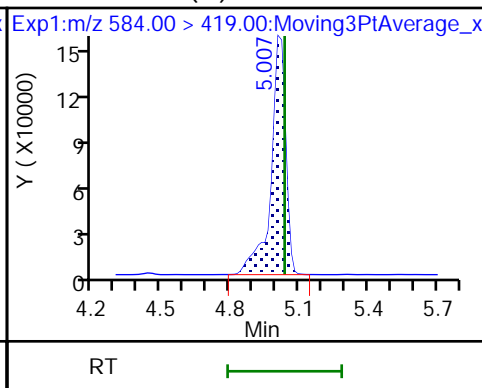
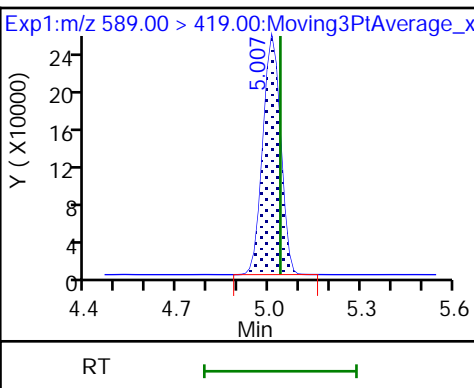
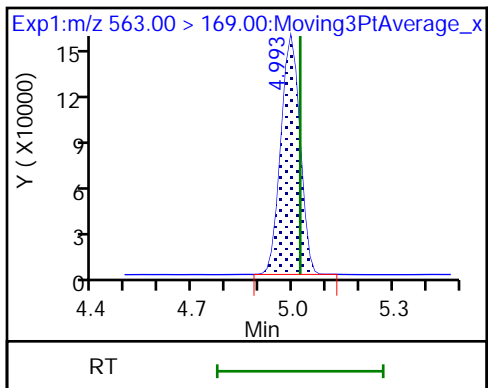
38 Perfluoroundecanoic acid



38 Perfluoroundecanoic acid

D 41 d5-NEtFOSAA

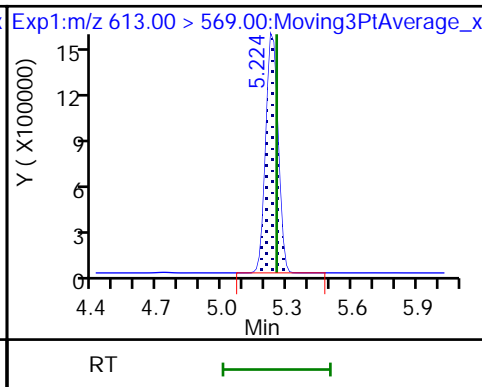
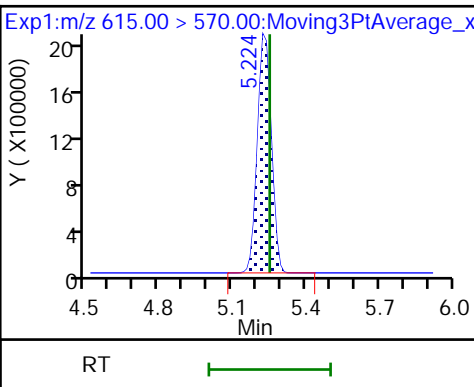
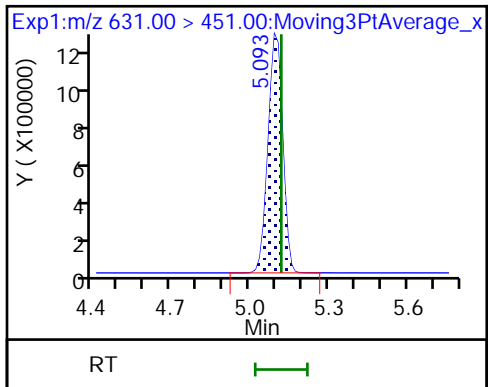
40 NEtFOSA (M)

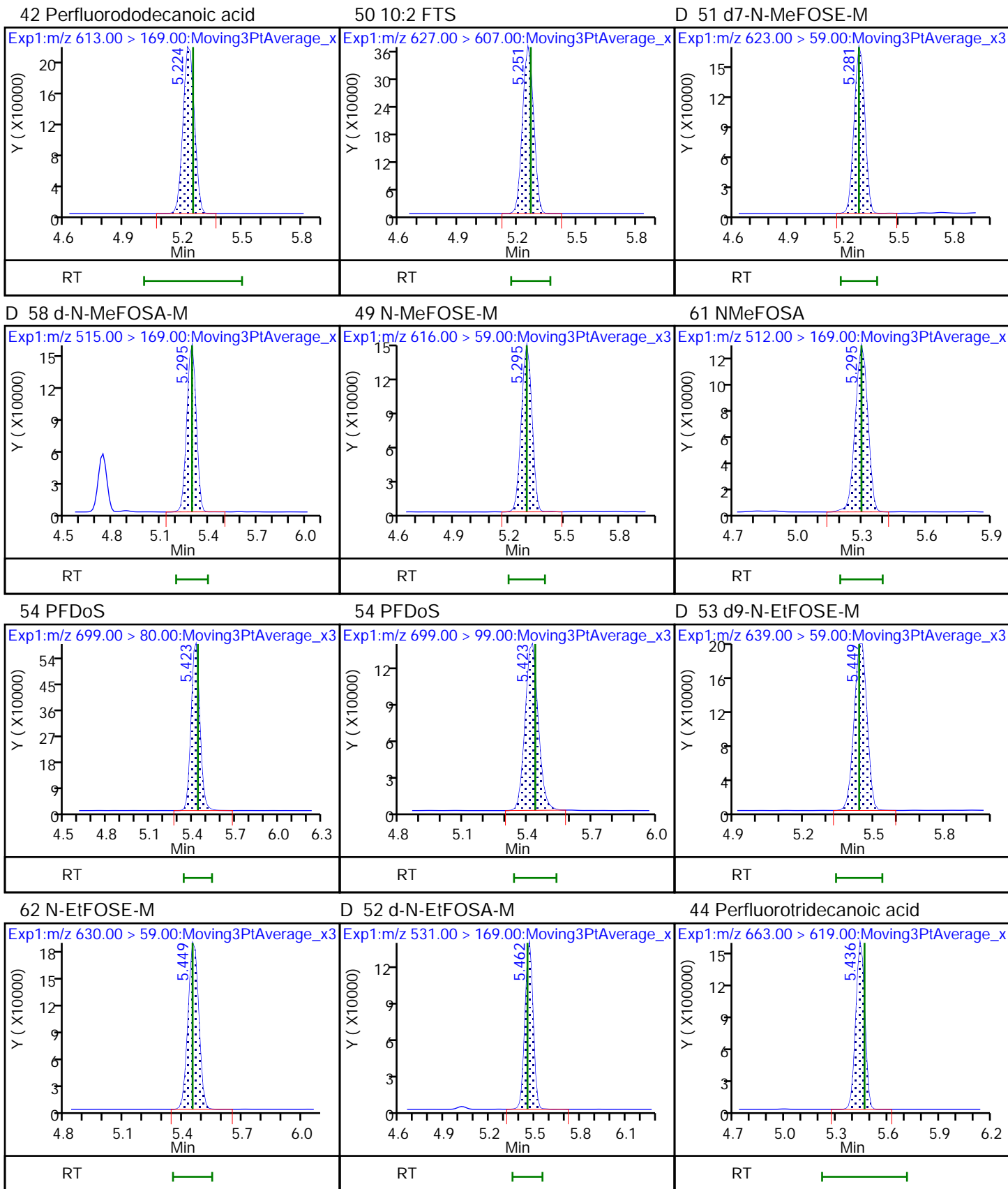


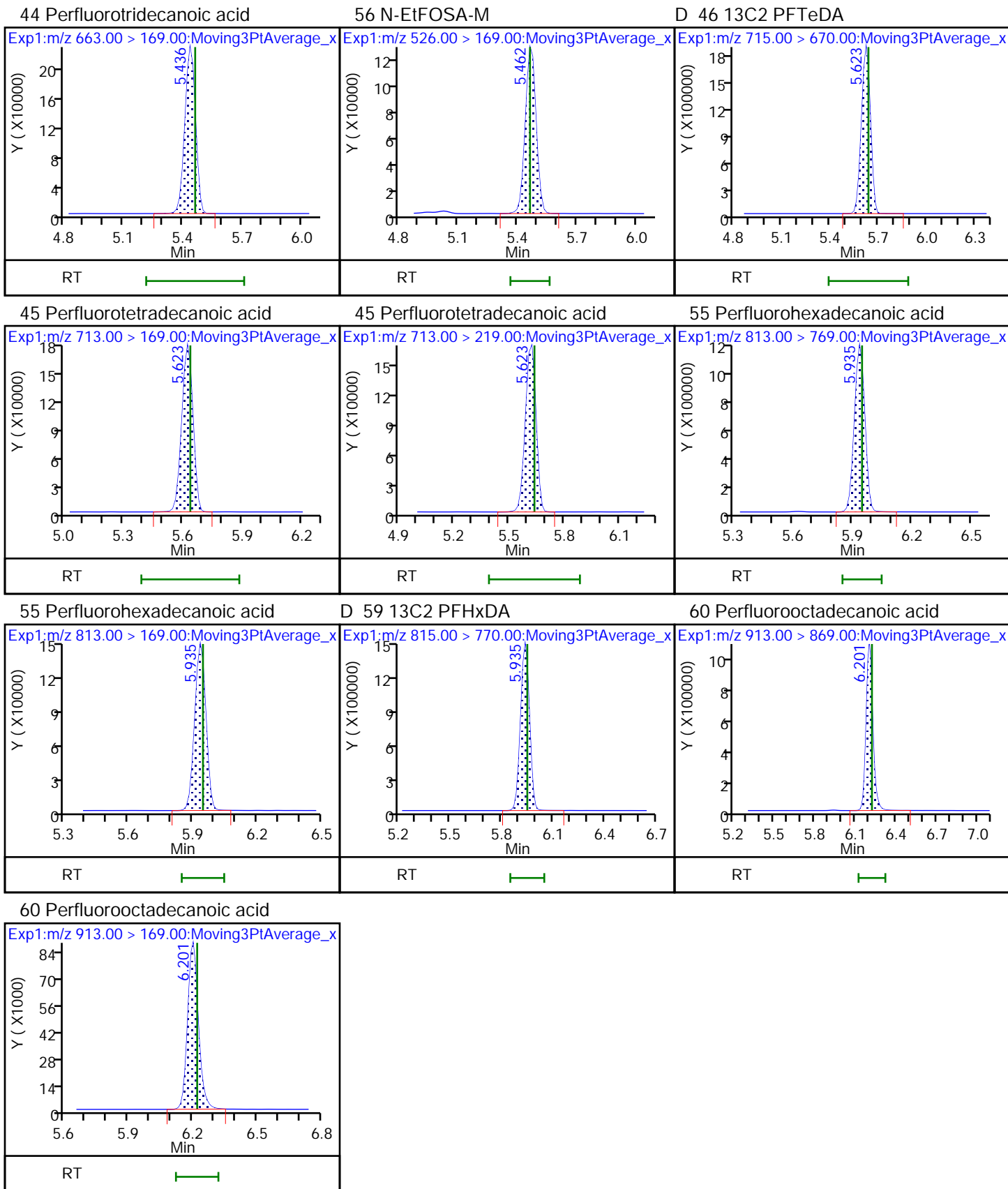
57 11CIFOS

D 43 13C2 PFDoA

42 Perfluorododecanoic acid







FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCSD 140-54602/3-B
 Matrix: Air Lab File ID: _010.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: None Date Extracted: 10/07/2021 13:59
 Sample wt/vol: 1(Sample) Date Analyzed: 10/08/2021 13:09
 Con. Extract Vol.: 10(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: GeminiC18 3x100 ID: 3(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54642 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.009795		0.000500	0.0000825

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	92		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_010.d
 Lims ID: LCSD 140-54602/3-B
 Client ID:
 Sample Type: LCSD
 Inject. Date: 08-Oct-2021 13:09:46 ALS Bottle#: 10 Worklist Smp#: 10
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0021001-010 lcsd 140-54602/3-b
 Misc. Info.: Plate: 7 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 11:11:08 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675
 First Level Reviewer: cochranj Date: 09-Oct-2021 10:07:35
 Ratio Calibration: None

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	2.812	2.812	0.0	0.679	6908394	1.11	88.9	12803	
2 Perfluorobutanoic acid	212.90 > 169.00	2.812	2.812	0.0	1.000	4204394	0.9685	96.9	891	
D 3 13C5 PFPeA	267.90 > 223.00	3.130	3.129	0.001	0.755	5780539	1.13	90.6	11131	
4 Perfluoropentanoic acid	262.90 > 219.00	3.130	3.129	0.001	1.000	4579909	0.9777	97.8	1291	
D 6 13C3 PFBS	301.90 > 80.00	3.143	3.143	0.0	0.759	3413650	1.04	89.1	19081	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.143	3.143	0.0	1.000	2936672	0.8881	Target=3.06	100	14753
	298.90 > 99.00	3.143	3.143	0.0	1.000	1075264		2.73(1.53-4.59)		4924
D 8 M2-4:2 FTS	329.00 > 81.00	3.423	3.423	0.0	0.826	543048	1.10	94.1	1117	
7 4:2 FTS	327.00 > 307.00	3.423	3.423	0.0	1.000	1050514	0.9035	96.7	6822	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.453	3.469	-0.016	1.099	2351453	0.9322	Target=3.47	99.4	13239
	349.00 > 99.00	3.453	3.469	-0.016	1.099	681992		3.45(1.73-5.20)		5160
D 9 13C2 PFHxA	315.00 > 270.00	3.453	3.469	-0.016	0.833	5961372	1.14	90.9	17156	
10 Perfluorohexanoic acid	313.00 > 269.00	3.453	3.469	-0.016	1.000	3846173	0.9408	Target=9.74	94.1	2077
	313.00 > 119.00	3.453	3.469	-0.016	1.000	300576		12.80(4.87-14.61)		998
D 12 13C3 HFPO-DA	287.00 > 169.00	3.561	3.561	0.0	0.860	3099645	1.15	92.4	9100	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.561	3.561	0.0	1.000	3363594	0.9795		97.9	4284	
D 17 18O2 PFHxS										
403.00 > 84.00	3.803	3.803	0.0	0.918	2094421	1.05		88.8	19832	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.803	3.803	0.0	1.000	2232439	0.9278	Target=2.96	102	7523	
399.00 > 99.00	3.803	3.803	0.0	1.000	641089		3.48(1.48-4.44)		2947	
D 14 13C4 PFHpA										
367.00 > 322.00	3.803	3.815	-0.012	0.918	5890484	1.13		90.1	15643	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.803	3.815	-0.012	1.000	5123926	1.03	Target=3.35	103	5511	
363.00 > 169.00	3.803	3.815	-0.012	1.000	1533305		3.34(1.67-5.02)		4897	
68 DONA										
377.00 > 251.00	3.840	3.840	0.0	0.863	7339525	0.9284	Target=1.49	98.6	17404	
377.00 > 85.00	3.840	3.840	0.0	0.863	4134157		1.78(0.74-2.23)		13868	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.131	4.143	-0.012	0.929	2213996	0.9131	Target=3.73	95.9	6808	
449.00 > 99.00	4.131	4.143	-0.012	0.929	573903		3.86(1.87-5.61)		2570	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.143	4.143	0.0	1.000	562920	1.11		93.6	2937	
19 6:2 FTS										
427.00 > 407.00	4.143	4.143	0.0	1.000	860972	0.9024		95.2	5819	
D 21 13C4 PFOA										
417.00 > 372.00	4.143	4.155	-0.012	1.000	5478256	1.16		92.7	17357	
* 22 13C2 PFOA										
415.00 > 370.00	4.143	4.155	-0.012		5871567	1.25			13592	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.143	4.155	-0.012	1.000	4930662	1.01	Target=2.40	101	2468	
413.00 > 169.00	4.143	4.155	-0.012	1.000	1897837		2.60(1.20-3.61)		5277	
D 25 13C4 PFOS										
503.00 > 80.00	4.447	4.447	0.0	1.073	2912814	1.06		88.7	7511	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.447	4.447	0.0	1.000	2448367	0.9133	Target=3.83	98.4	3440	M
499.00 > 99.00	4.447	4.447	0.0	1.000	579858		4.22(1.91-5.74)		1945	M
D 27 13C5 PFNA										
468.00 > 423.00	4.458	4.470	-0.012	1.076	6820625	1.13		90.8	50884	
26 Perfluorononanoic acid										
463.00 > 419.00	4.458	4.470	-0.012	1.000	4831509	1.06	Target=3.68	106	5360	
463.00 > 169.00	4.458	4.470	-0.012	1.000	1035331		4.67(1.84-5.52)		2590	
63 9CIFOS										
531.00 > 351.00	4.596	4.596	0.0	1.109	5200441	0.9245		99.2	10041	
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.722	4.722	0.0	1.062	2260290	0.8897	Target=3.97	92.7	6185	
549.00 > 99.00	4.722	4.722	0.0	1.062	594086		3.80(1.99-5.96)		3166	
D 34 13C8 FOSA										
506.00 > 78.00	4.736	4.736	0.0	1.143	4769956	1.18		94.6	6852	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.736	4.736	0.0	1.000	3460473	0.9277		92.8	5255	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 32 13C2 PFDA										
515.00 > 470.00	4.749	4.749	0.0	1.146	6882775	1.13		90.5	29756	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.749	4.749	0.0	1.000	5292281	1.01	Target=10.11	101	3378	
513.00 > 169.00	4.749	4.749	0.0	1.000	436462		12.13(5.06-15.17)		596	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.763	4.763	0.0	1.150	676146	1.09		91.3	6244	
31 8:2 FTS										
527.00 > 507.00	4.763	4.763	0.0	1.000	884542	0.8782		91.7	5950	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.883	4.896	-0.013	1.179	957120	1.15		91.9	1712	
36 NMeFOSAA										
570.00 > 419.00	4.896	4.896	0.0	1.003	771674	1.10		110	1279	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.979	4.993	-0.014	1.120	2179613	0.9340	Target=3.80	96.9	8473	
599.00 > 99.00	4.979	4.993	-0.014	1.120	579880		3.76(1.90-5.70)		2425	
D 39 13C2 PFUnA										
565.00 > 520.00	5.008	5.008	0.0	1.209	6264789	1.08		86.2	23404	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.008	5.008	0.0	1.000	5398385	1.06	Target=7.45	106	7520	
563.00 > 169.00	5.008	5.008	0.0	1.000	613799		8.80(3.78-11.33)		3257	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.022	5.022	0.0	1.212	915087	1.14		91.4	3347	
40 NEtFOSA										
584.00 > 419.00	5.022	5.036	-0.014	1.000	729177	1.05		105	708	
57 11CIFOS										
631.00 > 451.00	5.106	5.119	-0.013	1.148	4467109	0.9862		105	10076	
D 43 13C2 PFDoA										
615.00 > 570.00	5.237	5.251	-0.014	1.264	7783059	1.26		100	23607	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.237	5.251	-0.014	1.000	6055474	0.9310	Target=5.33	93.1	3687	
613.00 > 169.00	5.237	5.251	-0.014	1.000	847685		7.14(2.66-7.99)		3209	
50 10:2 FTS										
627.00 > 607.00	5.266	5.266	0.0	1.106	1411195	1.13		117	6379	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.281	5.295	-0.014	1.275	744978	1.47		118	426	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.296	5.295	0.001	1.278	587548	1.12		89.4	39.3	
49 N-MeFOSE-M										
616.00 > 59.00	5.296	5.295	0.001	1.003	675851	0.9792		97.9	696	
61 NMeFOSA										
512.00 > 169.00	5.296	5.295	0.001	1.000	510349	1.04		104	750	
54 PFDoS										
699.00 > 80.00	5.423	5.436	-0.013	1.220	2367303	0.9831	Target=4.32	102	6652	
699.00 > 99.00	5.423	5.436	-0.013	1.220	532976		4.44(2.19-6.58)		2861	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.449	5.449	0.0	1.315	777927	1.44		116	771	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
62 N-EtFOSE-M										
630.00 > 59.00	5.462	5.462	0.0	1.002	760839	0.9681		96.8	1795	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.462	0.0	1.319	514249	1.16		92.9	709	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.449	5.462	-0.013	1.041	5302575	0.9633	Target=5.66	96.3	3986	
663.00 > 169.00	5.449	5.462	-0.013	1.041	856585		6.19(2.83-8.48)		3634	
56 N-EtFOSA-M										
526.00 > 169.00	5.462	5.462	0.0	1.000	485681	1.01		101	701	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.638	5.637	0.001	1.361	6662557	1.17		93.7	25363	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.638	5.637	0.001	1.000	685547	1.02	Target=1.07	102	3739	
713.00 > 219.00	5.623	5.637	-0.014	0.997	675175		1.02(0.53-1.60)		3839	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.948	5.948	0.0	1.000	4068259	0.9197	Target=7.50	92.0	3311	
813.00 > 169.00	5.948	5.948	0.0	1.000	508425		8.00(3.75-11.26)		2449	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.948	5.948	0.0	1.436	5047868	1.22		97.9	11180	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.211	6.221	-0.010	1.044	3649611	1.00	Target=9.98	99.6	2740	
913.00 > 169.00	6.211	6.221	-0.010	1.044	307312		11.88(5.14-15.41)		1862	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211008-21001.b_010.d

Injection Date: 08-Oct-2021 13:09:46

Instrument ID: LCA

Lims ID: LCSD 140-54602/3-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 10

Worklist Smp#: 10

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

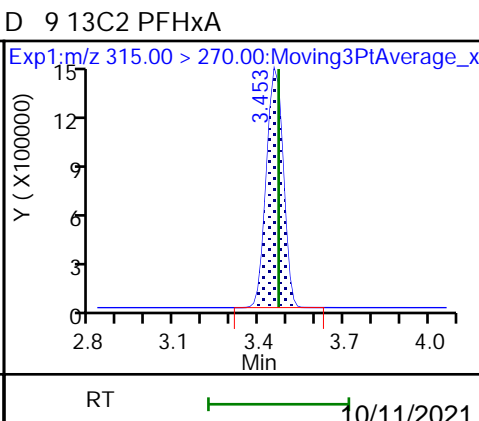
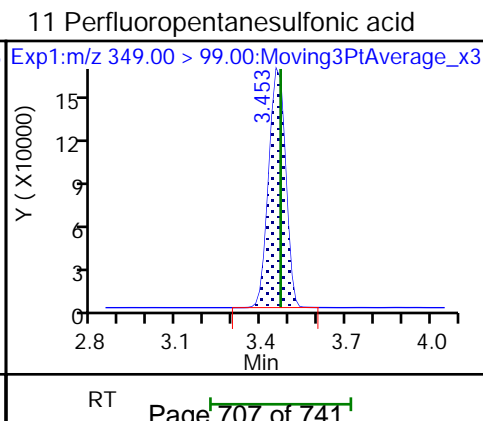
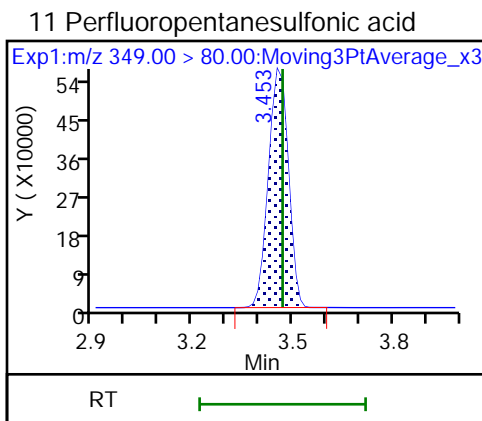
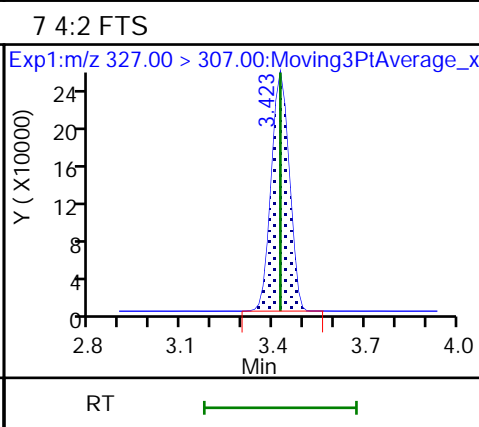
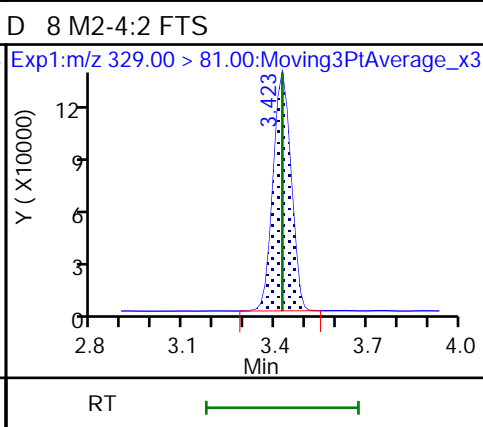
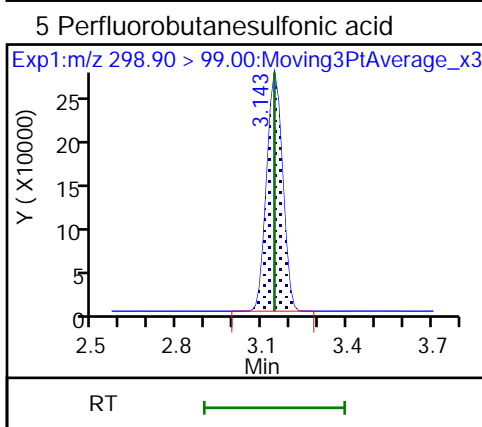
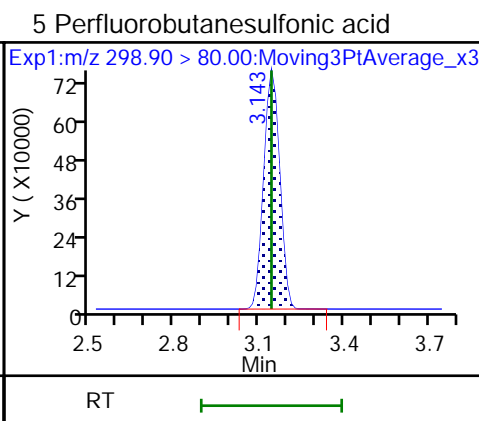
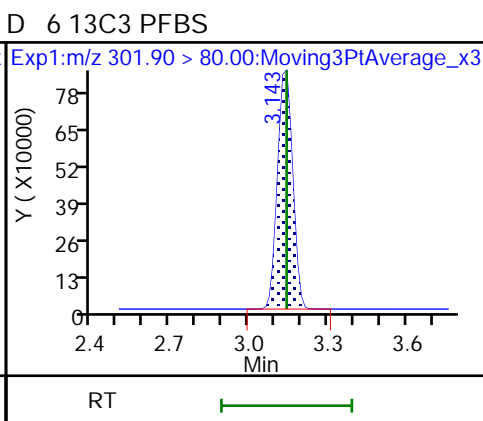
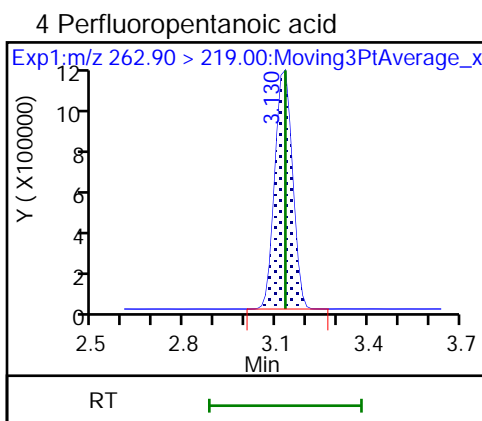
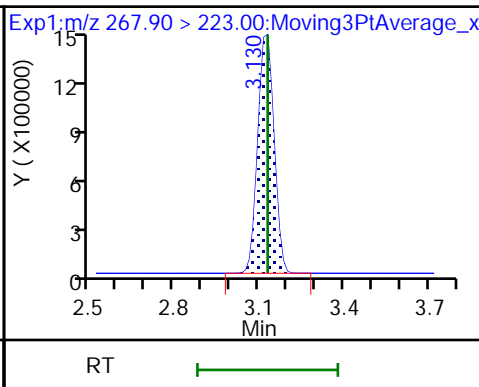
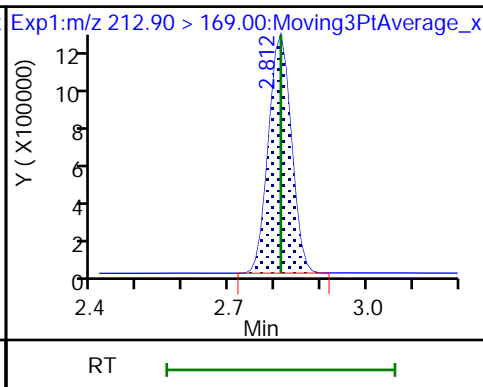
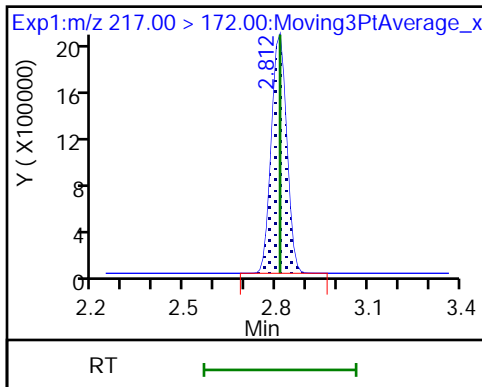
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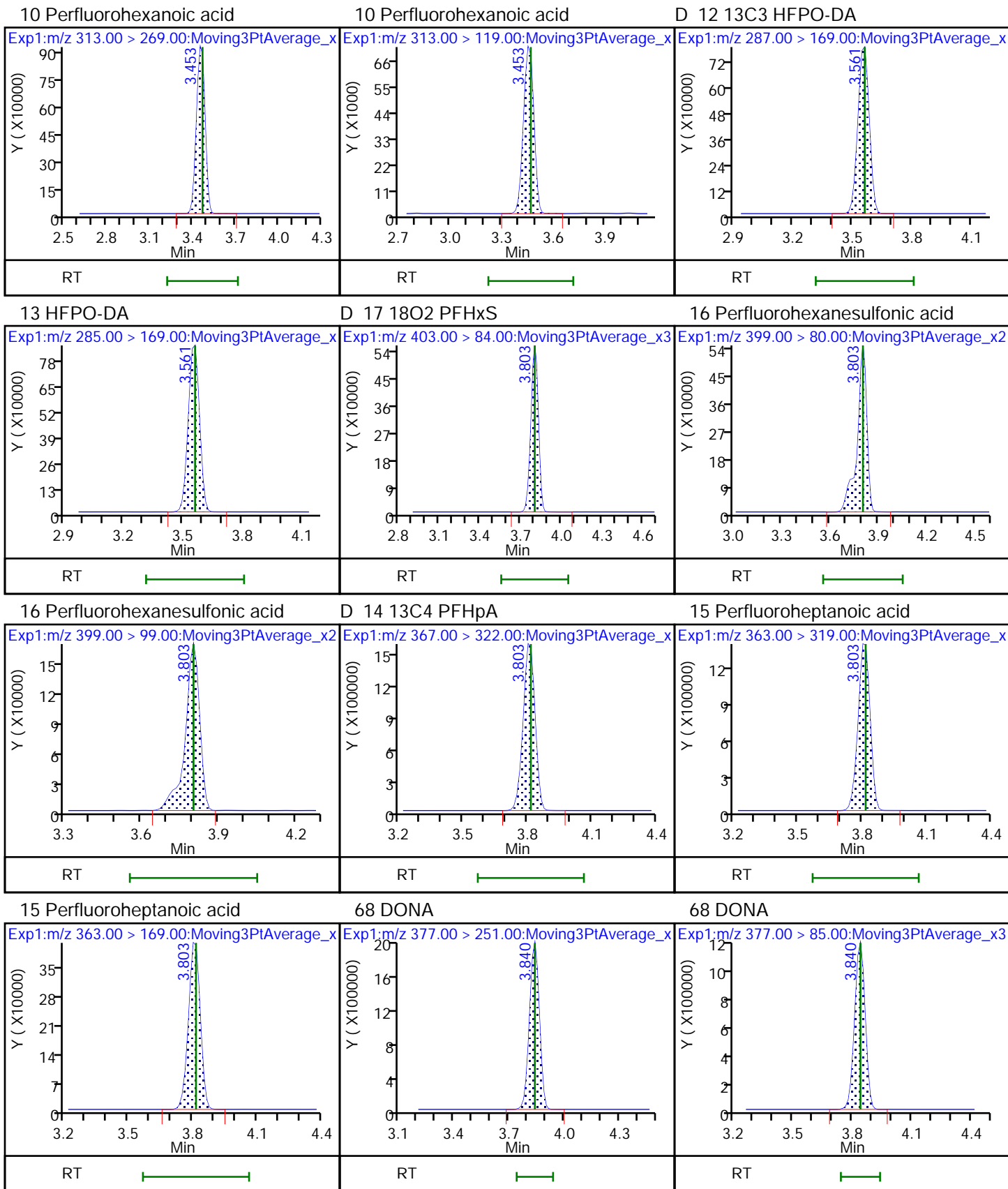
Limit Group: LC - PFC- ICAL

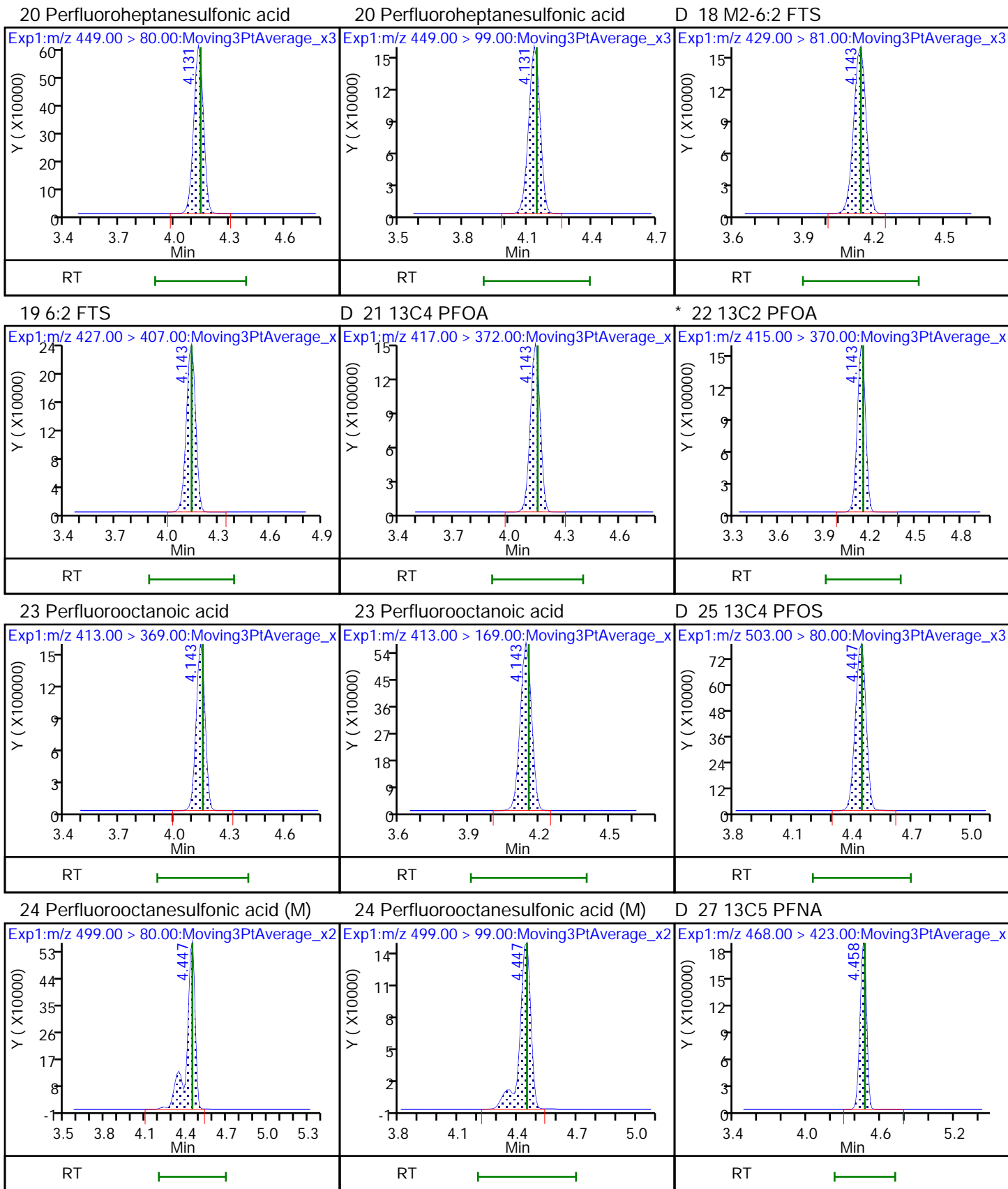
D 1 13C4 PFBA

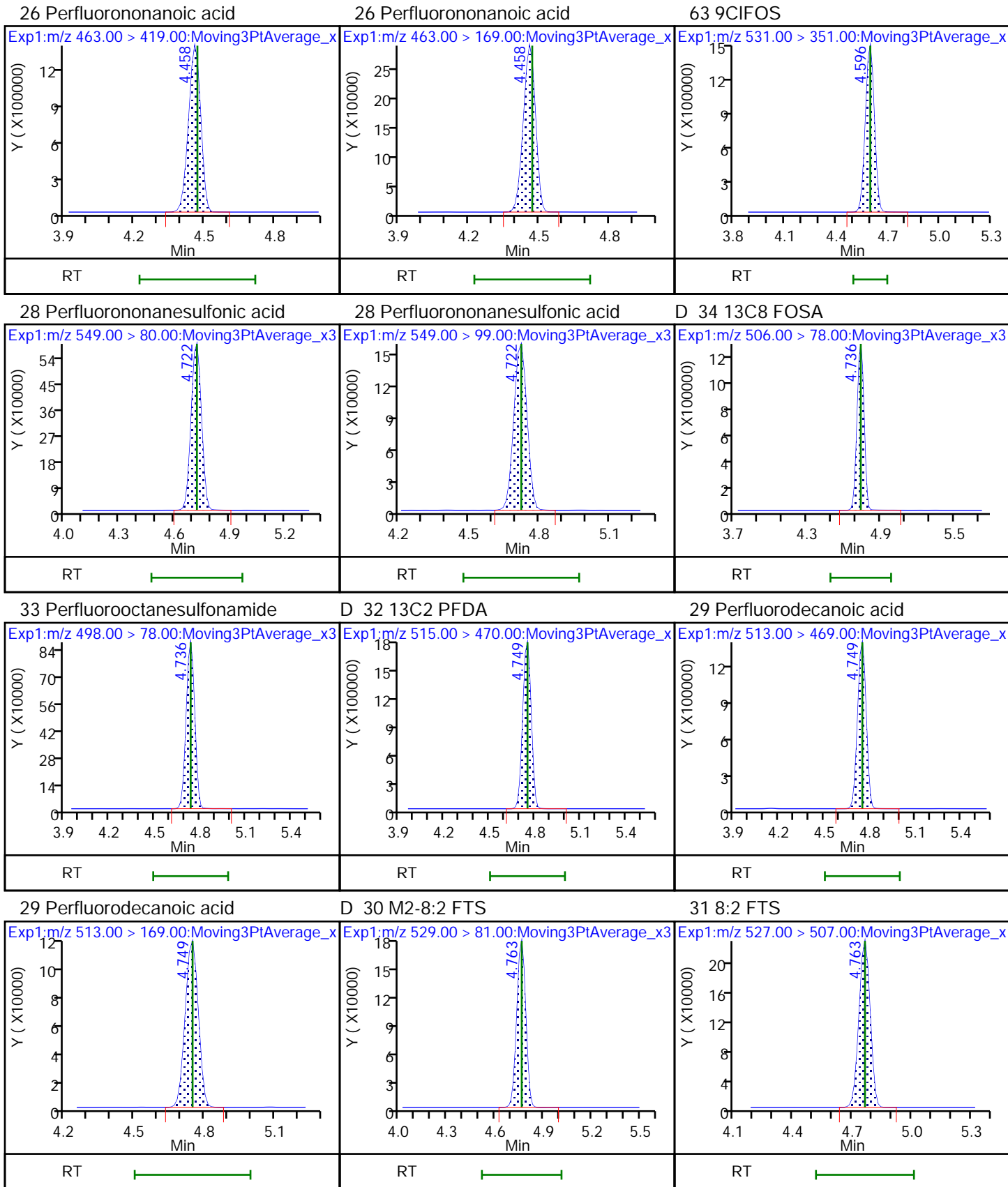
2 Perfluorobutanoic acid

D 3 13C5 PFPeA





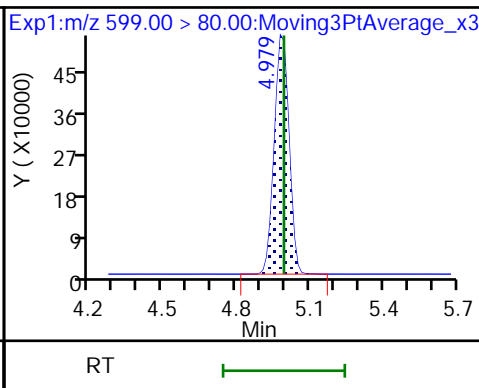
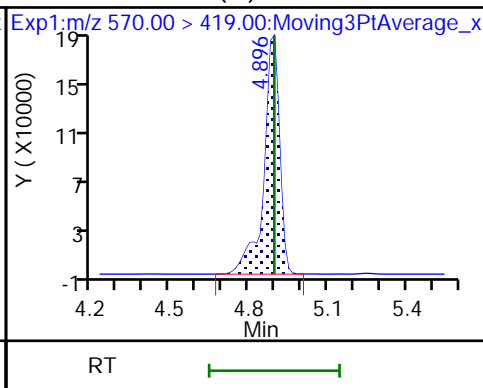
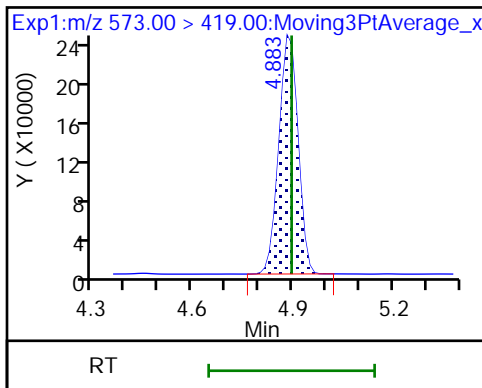




D 35 d3-NMeFOSAA

36 NMeFOSAA (M)

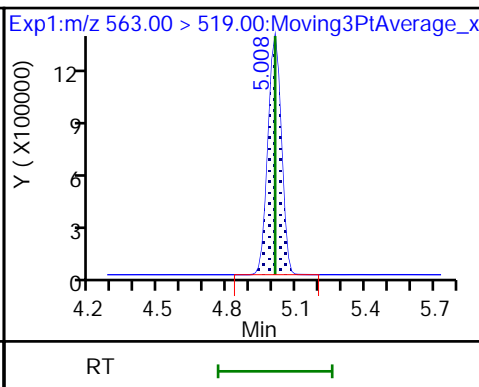
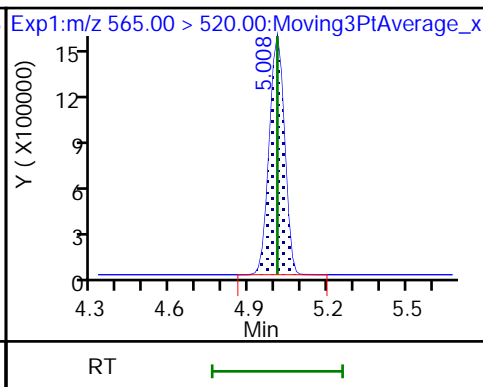
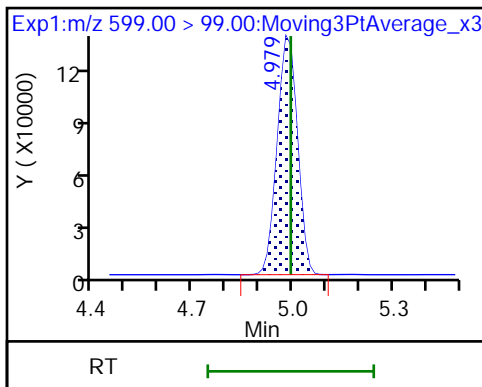
37 Perfluorodecanesulfonic acid



37 Perfluorodecanesulfonic acid

D 39 13C2 PFUoA

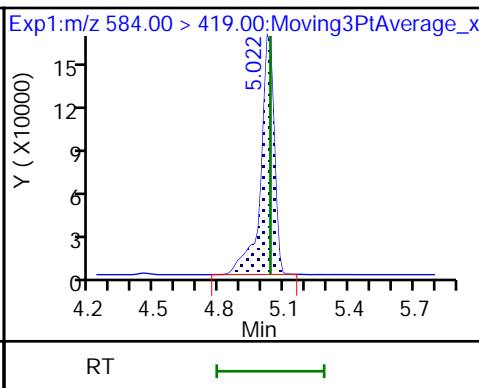
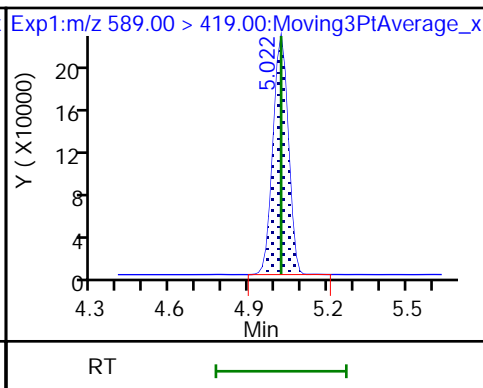
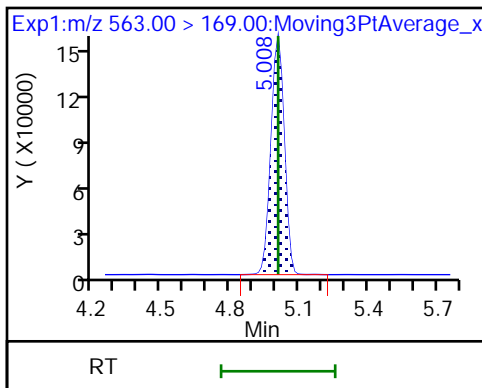
38 Perfluoroundecanoic acid



38 Perfluoroundecanoic acid

D 41 d5-NEtFOSAA

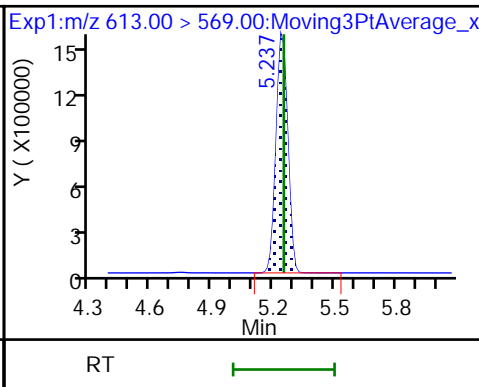
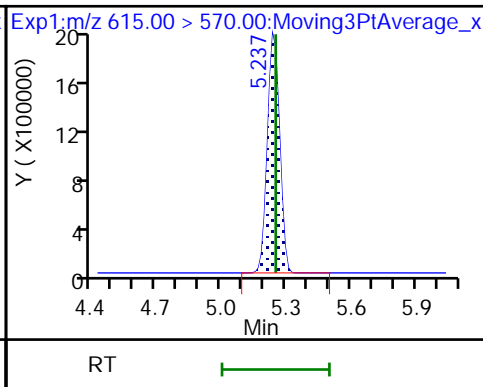
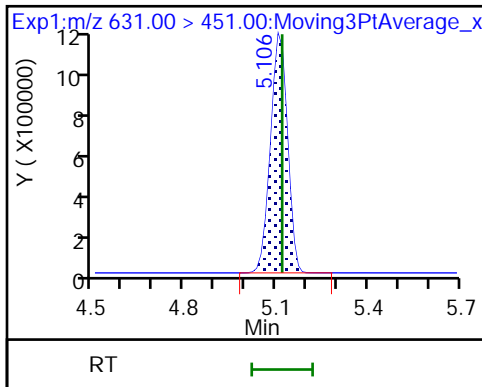
40 NEtFOSA

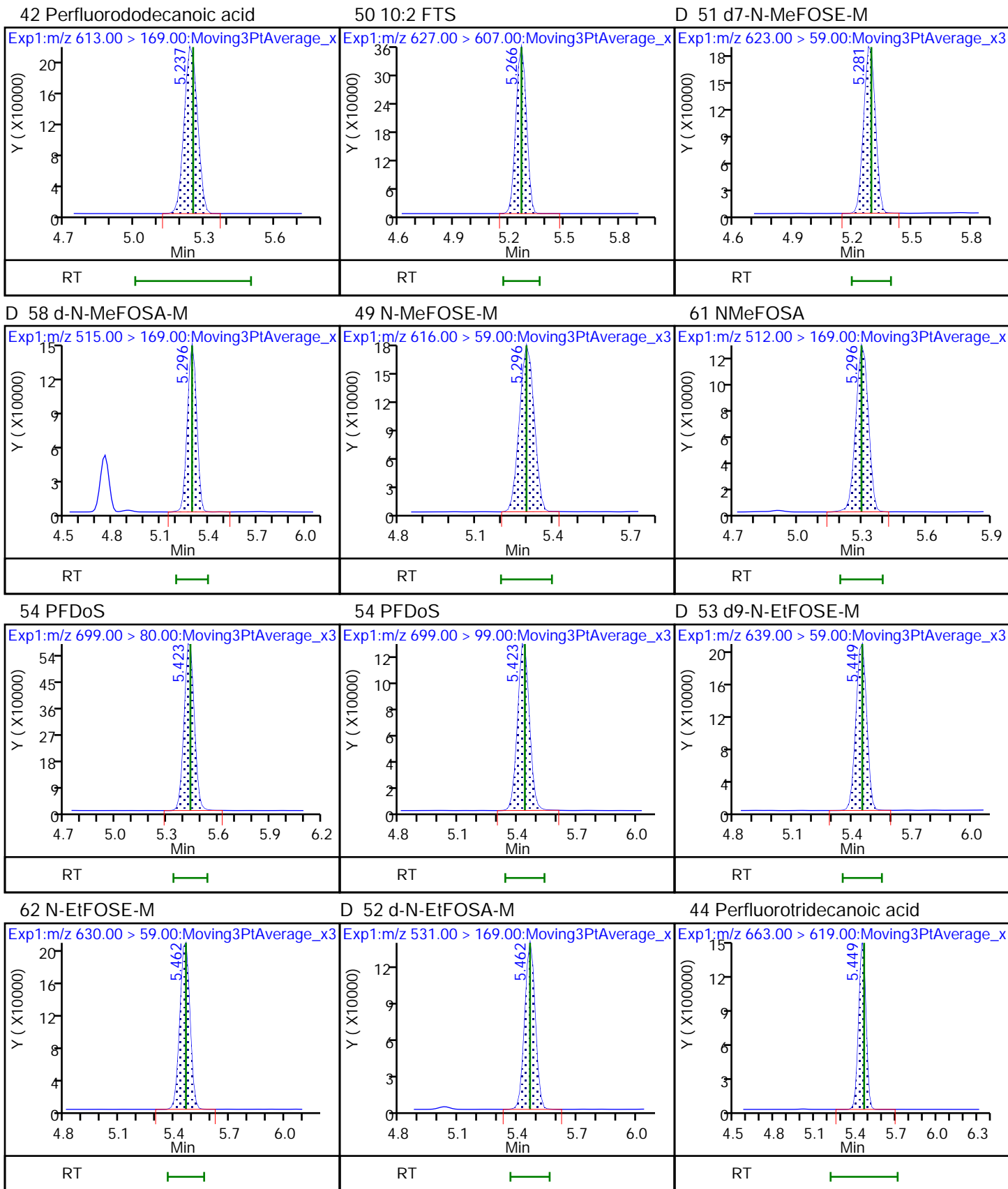


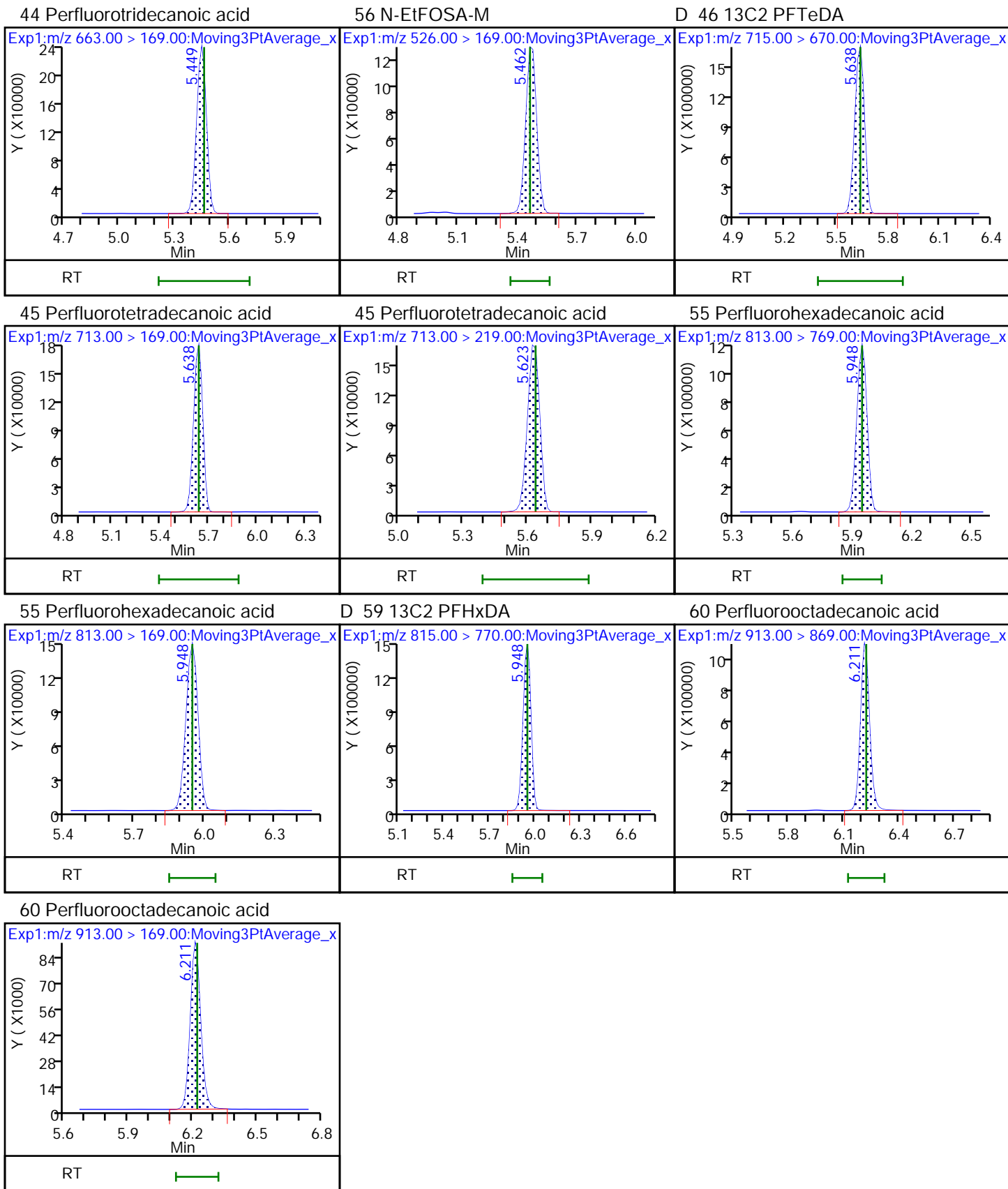
57 11CIFOS

D 43 13C2 PFDoA

42 Perfluorododecanoic acid







PFAS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1

SDG No.:

Batch Number: 54177 Batch Start Date: 09/24/21 09:38 Batch Analyst: Stout, David W

Batch Method: None Batch End Date: 09/27/21 15:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	CalcMsg	63xxMPFC_IDA 00029	63xxPFC3LSP 00004
MB 140-54177/1		None, Split, 537 (modified)		1 Sample	50 mL	CALC NOT SET TO RUN	0.5 mL	
LCS 140-54177/2		None, Split, 537 (modified)		1 Sample	50 mL	CALC NOT SET TO RUN	0.5 mL	1 mL
LCS 140-54177/3		None, Split, 537 (modified)		1 Sample	50 mL	CALC NOT SET TO RUN	0.5 mL	1 mL
MB 140-54177/14		None, Split, 537 (modified)		1 Sample	50 mL	CALC NOT SET TO RUN	0.5 mL	

Batch Notes	
Extraction End time	09:05
Extraction End Date	09/25/2021
Analyst ID - Extraction	DWS
Extraction Start time	13:05
Extraction Start Date	09/24/2021
Filter ID	418901
Hot Block ID	F
Methanol ID	5% NH4OH / MeOH 418754
Oven, Bath or Block Temperature 1	60 Degrees C
Analyst ID - Spike Analyst	DWS
Analyst ID - Spike Witness Analyst	MSP

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.

PFAS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1

SDG No.:

Batch Number: 54177 Batch Start Date: 09/24/21 09:38 Batch Analyst: Stout, David W

Batch Method: None Batch End Date: 09/27/21 15:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	CalcMsg	63xxMPFC_IDA 00029
140-24649-A-1	P-2642,2643 VEN CARBON BED OUTLET R1 OTM-45 FH	None, Split, Dilution, 537 (modified)	T	1 Sample	78 mL	CALC NOT SET TO RUN	0.5 mL
140-24649-A-5	P-2649,2650 VEN CARBON BED OUTLET R2 OTM-45 FH	None, Split, Dilution, 537 (modified)	T	1 Sample	87 mL	CALC NOT SET TO RUN	0.5 mL
140-24649-A-9	P-2656,2657 VEN CARBON BED OUTLET R3 OTM-45 FH	None, Split, Dilution, 537 (modified)	T	1 Sample	100 mL	CALC NOT SET TO RUN	0.5 mL

Batch Notes	
Extraction End time	09:05
Extraction End Date	09/25/2021
Analyst ID - Extraction	DWS
Extraction Start time	13:05
Extraction Start Date	09/24/2021
Filter ID	418901
Hot Block ID	F
Methanol ID	5% NH4OH / MeOH 418754
Oven, Bath or Block Temperature 1	60 Degrees C
Analyst ID - Spike Analyst	DWS
Analyst ID - Spike Witness Analyst	MSP

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.

PFAS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1

SDG No.:

Batch Number: 54245 Batch Start Date: 09/27/21 15:06 Batch Analyst: Stout, David W

Batch Method: Split Batch End Date: 09/28/21 15:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	63xxMPFOA-IS 00035
MB 140-54177/1-A		Split, 537 (modified)		25 mL	10 mL	0.25 mL
LCS 140-54177/2-A		Split, 537 (modified)		25 mL	10 mL	0.25 mL
LCS 140-54177/3-A		Split, 537 (modified)		25 mL	10 mL	0.25 mL
MB 140-54177/14-A		Split, 537 (modified)		25 mL	10 mL	0.25 mL

Batch Notes	
Analyst ID - Spike Analyst	DWS
Analyst ID - Spike Witness Analyst	CAC

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.

PFAS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1

SDG No.:

Batch Number: 54245 Batch Start Date: 09/27/21 15:06 Batch Analyst: Stout, David W

Batch Method: Split Batch End Date: 09/28/21 15:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	63xxMPFOA-IS 00035
140-24649-A-1-A	P-2642,2643 VEN CARBON BED OUTLET R1 OTM-45 FH	Split, Dilution, 537 (modified)	T	39 mL	10 mL	0.25 mL
140-24649-A-5-A	P-2649,2650 VEN CARBON BED OUTLET R2 OTM-45 FH	Split, Dilution, 537 (modified)	T	44 mL	10 mL	0.25 mL
140-24649-A-9-A	P-2656,2657 VEN CARBON BED OUTLET R3 OTM-45 FH	Split, Dilution, 537 (modified)	T	50 mL	10 mL	0.25 mL

Batch Notes	
Analyst ID - Spike Analyst	DWS
Analyst ID - Spike Witness Analyst	CAC

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.

Eurofins TestAmerica Knoxville Extraction Sheet
PFAS in Source Air Front Half Fraction

Prep Batch Number: 140-54177

Split Batch Number: 54245

TALS Prep Chain: LCMS_FH_Prep --> Split_SA_LCMS

Sample ID	Measure associated rinses using a graduated cylinder and record volume (mL)	Push down filter with tweezers in bottle	Create MB and LCS/D by using clean filter and placing in 125mL container	Add 50 ng/mL IS (IDA) to all samples & QC. Record volume in TALS.	Add 20 ng/mL native spike (TA) to LCS/D. Record volume in TALS.	Add rinses and MeOH/5% NH4OH to the appropriate volume. Record volume of extraction solvent (mL)	Extract on shaker table for 18hr minimum	Filter sample using filter paper and plastic funnel	Place on hotblock at 60 deg C. Concentrate to <10mL.	Transfer to 10mL polypropylene tube. Place on N-EVAP and concentrate to near dryness. Add 2mL DI water.	Add 50ng/mL internal standard. Record volume in TALS. Bring to final volume in methanol. Filter using plastic syringe and 0.45µm PVDF filter disk.
MB 140-54177/1	NA	✓	✓	✓	NA	50	✓	✓	✓	✓	✓
LCS 140-54177/2	79	✓	✓	✓	NA	79	✓	✓	✓	✓	✓
LCS/D 140-54177/3	69	✓	✓	✓	NA	69	✓	✓	✓	✓	✓
140-24646-A-1 (140-424633)	74	✓	✓	✓	NA	74	✓	✓	✓	✓	✓
140-24646-A-5 (140-424640)	120	✓	✓	✓	NA	120	✓	✓	✓	✓	✓
140-24646-A-9 (140-424647)	98	✓	✓	✓	NA	98	✓	✓	✓	✓	✓
140-24647-A-1 (140-424655)	52	✓	✓	✓	NA	52	✓	✓	✓	✓	✓
140-24647-A-5 (140-424662)	52	✓	✓	✓	NA	52	✓	✓	✓	✓	✓
140-24647-A-9 (140-424669)	51	✓	✓	✓	NA	51	✓	✓	✓	✓	✓
140-24648-A-1 (140-424677)	88	✓	✓	✓	NA	88	✓	✓	✓	✓	✓
140-24648-A-5 (140-424684)	87	✓	✓	✓	NA	87	✓	✓	✓	✓	✓
140-24648-A-9 (140-424691)	66	✓	✓	✓	NA	66	✓	✓	✓	✓	✓
140-24649-A-1 (140-424698)	100	✓	✓	✓	NA	100	✓	✓	✓	✓	✓
MB 140-54177/14	43	✓	✓	✓	NA	43	✓	✓	✓	✓	✓
140-24649-A-5 (140-424705)	66	✓	✓	✓	NA	66	✓	✓	✓	✓	✓
140-24649-A-9 (140-424712)	66	✓	✓	✓	NA	66	✓	✓	✓	✓	✓
140-24650-A-1 (140-424728)	59	✓	✓	✓	NA	59	✓	✓	✓	✓	✓
140-24650-A-5 (140-424735)	66	✓	✓	✓	NA	66	✓	✓	✓	✓	✓
140-24650-A-9 (140-424742)	9124	✓	✓	✓	NA	9124	✓	✓	✓	✓	✓
<p>9/29/21</p>											

PFAS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1

SDG No.:

Batch Number: 54326 Batch Start Date: 09/29/21 13:10 Batch Analyst: Stout, David W

Batch Method: None Batch End Date: 10/04/21 11:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	63xxMPFC_IDA 00029	63xxPF3LSP 00004
MB 140-54326/1		None, Split, 537 (modified)		1 Sample	360 mL	0.5 mL	
LCS 140-54326/2		None, Split, 537 (modified)		1 Sample	360 mL	0.5 mL	1 mL
LCS 140-54326/3		None, Split, 537 (modified)		1 Sample	360 mL	0.5 mL	1 mL
140-24649-A-2	P-2644,2645,2647 VEN CARBON BED OUTLET R1 OTM-45 BH	None, Split, 537 (modified)	T	1 Sample	360 mL	0.5 mL	
140-24649-A-4	P-2648 VEN CARBON BED OUTLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	None, Split, 537 (modified)	T	1 Sample	360 mL	0.5 mL	
140-24649-A-6	P-2651,2652,2654 VEN CARBON BED OUTLET R2 OTM-45 BH	None, Split, 537 (modified)	T	1 Sample	360 mL	0.5 mL	
140-24649-A-8	P-2655 VEN CARBON BED OUTLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	None, Split, 537 (modified)	T	1 Sample	360 mL	0.5 mL	
140-24649-A-10	P-2658,2659,2661 VEN CARBON BED OUTLET R3 OTM-45 BH	None, Split, 537 (modified)	T	1 Sample	360 mL	0.5 mL	
140-24649-A-12	P-2662 VEN CARBON BED OUTLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	None, Split, 537 (modified)	T	1 Sample	360 mL	0.5 mL	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

PFAS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1

SDG No.:

Batch Number: 54326 Batch Start Date: 09/29/21 13:10 Batch Analyst: Stout, David W

Batch Method: None Batch End Date: 10/04/21 11:00

Batch Notes	
Analyst ID - Extraction	DWS/CAC
Extraction 1 End Time	09/30/2021 15:45
Extraction 1 Start Time	09/29/2021 15:10
Hot Block ID	F/G
Methanol ID	5% NH4OH / MeOH 418754
Oven, Bath or Block Temperature 1	60 Degrees C
Extraction 2 End Time	10/04/2021 10:10
Extraction 2 Start Time	10/03/2021 06:15
Analyst ID - Spike Analyst	DWS
Analyst ID - Spike Witness Analyst	CAC
XAD ID	418882

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.

PFAS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1

SDG No.:

Batch Number: 54348 Batch Start Date: 09/30/21 08:55 Batch Analyst: Stout, David W

Batch Method: None Batch End Date: 10/03/21 03:40

Lab Sample ID	Client Sample ID	Method Chain	Basis	VolumeCollect	VolCondUsed	InitialAmount	FinalAmount	63xxMPFC_IDA	63xxMPFOA-IS
MB 140-54348/1		None, Split, 537 (modified)				1 Sample	10 mL	0.25 mL	0.25 mL
LCS 140-54348/2		None, Split, 537 (modified)				1 Sample	10 mL	0.25 mL	0.25 mL
LCS 140-54348/3		None, Split, 537 (modified)				1 Sample	10 mL	0.25 mL	0.25 mL
140-24649-A-3	P-2646 VEN CARBON BED OUTLET R1 OTM-45 IMPINGERS 1,2&3 COND	None, Split, 537 (modified)	T	325 mL	2 mL	0.00615 Sample	10 mL	0.25 mL	0.25 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	VolumeCollect	VolCondUsed	InitialAmount	FinalAmount	63xxMPFC_IDA	63xxMPFOA-IS
MB 140-54348/1		None, Split, 537 (modified)		63xxPF3LSP 00004					
LCS 140-54348/2		None, Split, 537 (modified)		0.5 mL					
LCS 140-54348/3		None, Split, 537 (modified)		0.5 mL					
140-24649-A-3	P-2646 VEN CARBON BED OUTLET R1 OTM-45 IMPINGERS 1,2&3 COND	None, Split, 537 (modified)	T						

Batch Notes	
Analyst ID - Spike Analyst	DWS
Analyst ID - Spike Witness Analyst	DWS

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.

PFAS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1

SDG No.:

Batch Number: 54427 Batch Start Date: 10/03/21 03:45 Batch Analyst: Stout, David W

Batch Method: Split Batch End Date: 10/03/21 03:46

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount
MB 140-54348/1-A		Split, 537 (modified)		10 mL	10 mL
LCS 140-54348/2-A		Split, 537 (modified)		10 mL	10 mL
LCS 140-54348/3-A		Split, 537 (modified)		10 mL	10 mL
140-24649-A-3-A	P-2646 VEN CARBON BED OUTLET R1 OTM-45 IMPINGERS 1,2&3 COND	Split, 537 (modified)	T	10 mL	10 mL

Batch Notes	

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.

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 140-54348

Analyst: Stout, David W

Batch Open: 9/30/2021 8:55:00AM

Method Code: 140-LCMS_COND_Prep-140

Batch End:

Leaching Procedure for Condensate

Input Sample Lab ID (Analytical Method)	SDG (Job #)	GrossWt TareWt	InitAmnt FinAmnt	Rcvd	PHs		Due Date	Analytical TAT	Div Rank	Comments	Output Sample Lab ID
					Adj1	Adj2					
1 MB-140-54348/1 N/A	N/A		1 Sample				N/A	N/A	N/A		MB-140-54348/1-A
2 LCS-140-54348/2 N/A	N/A		1 Sample				N/A	N/A	N/A		LCS-140-54348/2-A
3 LCSD-140-54348/3 N/A	N/A		1 Sample				N/A	N/A	N/A		LCSD-140-54348/3-A
4 140-24646-A-3 (PFC_IDA)	N/A (140-24646-1)	310 mL					10/6/21	12_Days	4		140-24646-A-3-A
4 140-24646-A-3 (PFC_IDA)	N/A (140-24646-2)						10/6/21	12_Days	4		140-24646-A-3-A
5 140-24646-A-7 (PFC_IDA)	N/A (140-24646-1)	295 mL					10/6/21	12_Days	4		140-24646-A-7-A
5 140-24646-A-7 (PFC_IDA)	N/A (140-24646-2)						10/6/21	12_Days	4		140-24646-A-7-A
6 140-24646-A-11 (PFC_IDA)	N/A (140-24646-1)	300 mL					10/6/21	12_Days	4		140-24646-A-11-A
6 140-24646-A-11 (PFC_IDA)	N/A (140-24646-2)						10/6/21	12_Days	4		140-24646-A-11-A
7 140-24647-A-3 (PFC_IDA)	N/A (140-24647-1)	305 mL					10/6/21	12_Days	4		140-24647-A-3-A

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)










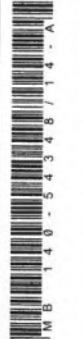


Batch Number: 140-54348

Analyst: Stout, David W

Batch Open: 9/30/2021 8:55:00AM

Method Code: 140-LCMS_COND_Prep-140

Batch End:

7	140-24647-A-3 (PFC_IDA)	N/A (140-24647-2)							10/6/21	12_Days	4	
8	140-24647-A-7 (PFC_IDA)	N/A (140-24647-1)					315 mL		10/6/21	12_Days	4	
8	140-24647-A-7 (PFC_IDA)	N/A (140-24647-2)							10/6/21	12_Days	4	
9	140-24647-A-11 (PFC_IDA)	N/A (140-24647-1)					305 mL		10/6/21	12_Days	4	
9	140-24647-A-11 (PFC_IDA)	N/A (140-24647-2)							10/6/21	12_Days	4	
10	140-24648-A-3 (PFC_IDA)	N/A (140-24648-1)					325 mL		10/6/21	12_Days	4	
11	140-24648-A-7 (PFC_IDA)	N/A (140-24648-1)					320 mL		10/6/21	12_Days	4	
12	140-24648-A-11 (PFC_IDA)	N/A (140-24648-1)					320 mL		10/6/21	12_Days	4	
13	140-24649-A-3 (PFC_IDA)	N/A (140-24649-1)					325 mL		10/6/21	12_Days	4	
14	MB-140-54348/14 N/A	N/A							N/A	N/A	N/A	
15	140-24649-A-7 (PFC_IDA)	N/A (140-24649-1)					325 mL		10/6/21	12_Days	4	
16	140-24649-A-11 (PFC_IDA)	N/A (140-24649-1)					325 mL		10/6/21	12_Days	4	

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)




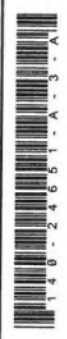
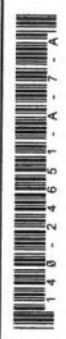

Batch Number: 140-54348

Analyst: Stout, David W

Batch Open: 9/30/2021 8:55:00AM

Method Code: 140-LCMS_COND_Prep-140

Batch End:

17	140-24650-A-3 (PFC_IDA)	N/A (140-24650-1)	310mL	✓					10/6/21	12_Days	4	
18	140-24650-A-7 (PFC_IDA)	N/A (140-24650-1)	310mL	✓					10/6/21	12_Days	4	
19	140-24650-A-11 (PFC_IDA)	N/A (140-24650-1)	305mL	✓					10/6/21	12_Days	4	
20	140-24651-A-3 (PFC_IDA)	N/A (140-24651-1)	305mL	✓					10/6/21	12_Days	4	
21	140-24651-A-7 (PFC_IDA)	N/A (140-24651-1)	305mL	✓					10/6/21	12_Days	4	
22	140-24651-A-11 (PFC_IDA)	N/A (140-24651-1)	305mL	✓					10/6/21	12_Days	4	

PFAS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1

SDG No.:

Batch Number: 54458 Batch Start Date: 10/04/21 11:10 Batch Analyst: Stout, David W

Batch Method: Split Batch End Date: 10/07/21 13:50

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	63xxMPFOA-IS 00036
MB	140-54326/1-A	Split, 537 (modified)		180 mL	10 mL	0.25 mL
LCS	140-54326/2-A	Split, 537 (modified)		180 mL	10 mL	0.25 mL
LCS D	140-54326/3-A	Split, 537 (modified)		180 mL	10 mL	0.25 mL
140-24649-A-2-A	P-2644,2645,2647 VEN CARBON BED OUTLET R1 OTM-45 BH	Split, 537 (modified)	T	180 mL	10 mL	0.25 mL
140-24649-A-4-A	P-2648 VEN CARBON BED OUTLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Split, 537 (modified)	T	180 mL	10 mL	0.25 mL
140-24649-A-6-A	P-2651,2652,2654 VEN CARBON BED OUTLET R2 OTM-45 BH	Split, 537 (modified)	T	180 mL	10 mL	0.25 mL
140-24649-A-8-A	P-2655 VEN CARBON BED OUTLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Split, 537 (modified)	T	180 mL	10 mL	0.25 mL
140-24649-A-10-A	P-2658,2659,2661 VEN CARBON BED OUTLET R3 OTM-45 BH	Split, 537 (modified)	T	180 mL	10 mL	0.25 mL
140-24649-A-12-A	P-2662 VEN CARBON BED OUTLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Split, 537 (modified)	T	180 mL	10 mL	0.25 mL

Batch Notes	
Analyst ID - IS Reagent Drop	DWS
Analyst ID - IS Reagent Drop Witness	DWS

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.

PFAS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1

SDG No.:

Batch Number: 54458 Batch Start Date: 10/04/21 11:10 Batch Analyst: Stout, David W

Batch Method: Split Batch End Date: 10/07/21 13:50

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.

**Eurofins TestAmerica Knoxville Extraction Sheet
PFAS in Source Air Back Half Fraction**

Prep Batch Number: 140-54326
 Split Batch Number: **54326**

TALS Prep Chain: LOMS_BH_Prep -> Split_SA_LCMS

Sample ID	Measure associated rinses using a graduated cylinder and record volume (mL)	Create MB and LCS/D by using clean XAD and placing in 50mL Nalgene container	Empty all XAD from traps into 500mL Nalgene containers	Add 50 ng/mL IS (IDA) to all samples & GC. Record volume in TALS.	Add 20 ng/mL native spike (TA) to LCS/D.	Add rinses and MeOH/5% NH4OH to the appropriate volume. Record volume of extraction solvent (mL)	Extraction 1 on shaker table for 18hr minimum	Decant solvent from 1st extraction into a separate Nalgene container	Add remaining rinses and MeOH/5% NH4OH to the appropriate volume. Record volume of extraction solvent (mL)	Extraction 2 on shaker table for 18hr minimum	Combine 1st extraction solvent with the 2nd extraction solvent	Place on hotblock at 60 deg C. Concentrate to < 10mL.	Transfer to 10mL polypropylene tube. Place on N-EVAP and concentrate to near dryness. Add 2mL DI water.	Add 50ng/mL internal standard. Record volume in TALS. Bring to final volume in methanol. Filter using plastic syringe and 0.45um PVDF filter disk.
MB 140-54326/1	NA	✓	✓	✓	NA	180	✓	✓	180	✓	✓	✓	✓	✓
LCS 140-54326/2	↓	✓	✓	✓	NA	180	✓	✓	180	✓	✓	✓	✓	✓
LCS/D 140-54326/3	↓	✓	✓	✓	NA	180	✓	✓	180	✓	✓	✓	✓	✓
140-24649-A-2 (140-424700)	240	NA	✓	✓	NA	180	✓	✓	180	✓	✓	✓	✓	✓
140-24649-A-4 (140-424704)	NA	✓	✓	✓	NA	180	✓	✓	180	✓	✓	✓	✓	✓
140-24649-A-6 (140-424707)	236	✓	✓	✓	NA	180	✓	✓	180	✓	✓	✓	✓	✓
140-24649-A-8 (140-424711)	NA	✓	✓	✓	NA	180	✓	✓	180	✓	✓	✓	✓	✓
140-24649-A-10 (140-424714)	198	✓	✓	✓	NA	180	✓	✓	180	✓	✓	✓	✓	✓
140-24649-A-12 (140-424718)	NA	✓	✓	✓	NA	180	✓	✓	180	✓	✓	✓	✓	✓
140-24650-A-2 (140-424730)	186	✓	✓	✓	NA	180	✓	✓	180	✓	✓	✓	✓	✓
140-24650-A-4 (140-424734)	NA	✓	✓	✓	NA	180	✓	✓	180	✓	✓	✓	✓	✓
140-24650-A-6 (140-424737)	260	✓	✓	✓	NA	180	✓	✓	180	✓	✓	✓	✓	✓
140-24650-A-8 (140-424741)	NA	✓	✓	✓	NA	180	✓	✓	180	✓	✓	✓	✓	✓
MB 140-54326/14	↓	✓	✓	✓	NA	180	✓	✓	180	✓	✓	✓	✓	✓
140-24650-A-10 (140-424744)	220	NA	✓	✓	NA	180	✓	✓	180	✓	✓	✓	✓	✓
140-24650-A-12 (140-424748)	NA	✓	✓	✓	NA	180	✓	✓	180	✓	✓	✓	✓	✓
140-24651-A-2 (140-424752)	232	✓	✓	✓	NA	180	✓	✓	180	✓	✓	✓	✓	✓
140-24651-A-4 (140-424756)	NA	✓	✓	✓	NA	180	✓	✓	180	✓	✓	✓	✓	✓
140-24651-A-6 (140-424759)	206	✓	✓	✓	NA	180	✓	✓	180	✓	✓	✓	✓	✓
140-24651-A-8 (140-424763)	NA	✓	✓	✓	NA	180	✓	✓	180	✓	✓	✓	✓	✓
140-24651-A-10 (140-424766)	304	✓	✓	✓	NA	180	✓	✓	180	✓	✓	✓	✓	✓
140-24651-A-12 (140-424770)	NA	✓	✓	✓	NA	180	✓	✓	180	✓	✓	✓	✓	✓

10/1/21

PFAS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1

SDG No.:

Batch Number: 54569 Batch Start Date: 10/06/21 19:06 Batch Analyst: Cochran, James R

Batch Method: Dilution Batch End Date: 10/06/21 19:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialVolume1	FinalVolume1	DilutionFactor	CalcMsg	63xxMPFC_IDA 00030	63xxMPFOA-IS 00036
140-24649-A-1-B	P-2642,2643 VEN CARBON BED OUTLET R1 OTM-45 FH	Dilution, 537 (modified)	T	100 uL	10000 uL	100 No Unit	OK	0.25 mL	0.25 mL
140-24649-A-5-B	P-2649,2650 VEN CARBON BED OUTLET R2 OTM-45 FH	Dilution, 537 (modified)	T	100 uL	10000 uL	100 No Unit	OK	0.25 mL	0.25 mL
140-24649-A-9-B	P-2656,2657 VEN CARBON BED OUTLET R3 OTM-45 FH	Dilution, 537 (modified)	T	100 uL	10000 uL	100 No Unit	OK	0.25 mL	0.25 mL

Batch Notes	

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.

PFAS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1

SDG No.:

Batch Number: 54602 Batch Start Date: 10/07/21 13:59 Batch Analyst: Stout, David W

Batch Method: None Batch End Date: 10/07/21 15:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	VolumeCollect	VolCondUsed	InitialAmount	FinalAmount	63xxMPFC_IDA 00031	63xxMPFOA-IS 00036
MB 140-54602/1		None, Split, 537 (modified)				1 Sample	10 mL	0.25 mL	0.25 mL
LCS 140-54602/2		None, Split, 537 (modified)				1 Sample	10 mL	0.25 mL	0.25 mL
LCSD 140-54602/3		None, Split, 537 (modified)				1 Sample	10 mL	0.25 mL	0.25 mL
140-24649-A-7	P-2653 VEN CARBON BED OUTLET R2 OTM-45 IMPINGERS 1,2&3 COND	None, Split, 537 (modified)	T	325 mL	2 mL	0.00615 Sample	10 mL	0.25 mL	0.25 mL
140-24649-A-11	P-2660 VEN CARBON BED OUTLET R3 OTM-45 IMPINGERS 1,2&3 COND	None, Split, 537 (modified)	T	325 mL	2 mL	0.00615 Sample	10 mL	0.25 mL	0.25 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	VolumeCollect	VolCondUsed	InitialAmount	FinalAmount	63xxMPFC_IDA 00031	63xxMPFOA-IS 00036
MB 140-54602/1		None, Split, 537 (modified)							
LCS 140-54602/2		None, Split, 537 (modified)		0.5 mL					
LCSD 140-54602/3		None, Split, 537 (modified)		0.5 mL					
140-24649-A-7	P-2653 VEN CARBON BED OUTLET R2 OTM-45 IMPINGERS 1,2&3 COND	None, Split, 537 (modified)	T						
140-24649-A-11	P-2660 VEN CARBON BED OUTLET R3 OTM-45 IMPINGERS 1,2&3 COND	None, Split, 537 (modified)	T						

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.

PFAS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1

SDG No.:

Batch Number: 54602 Batch Start Date: 10/07/21 13:59 Batch Analyst: Stout, David W

Batch Method: None Batch End Date: 10/07/21 15:30

Batch Notes	
Analyst ID - Spike Analyst	DWS
Analyst ID - Spike Witness Analyst	DWS

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.

PFAS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24649-1

SDG No.:

Batch Number: 54614 Batch Start Date: 10/07/21 15:40 Batch Analyst: Stout, David W

Batch Method: Split Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount		
MB 140-54602/1-A		Split, 537 (modified)		10 mL	10 mL		
LCS 140-54602/2-A		Split, 537 (modified)		10 mL	10 mL		
LCS 140-54602/3-A		Split, 537 (modified)		10 mL	10 mL		
140-24649-A-7-C	P-2653 VEN CARBON BED OUTLET R2 OTM-45 IMPINGERS 1,2&3 COND	Split, 537 (modified)	T	10 mL	10 mL		
140-24649-A-11-C	P-2660 VEN CARBON BED OUTLET R3 OTM-45 IMPINGERS 1,2&3 COND	Split, 537 (modified)	T	10 mL	10 mL		

Batch Notes	

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.

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

Analyst: Stout, David W

Batch Open: 10/7/2021 1:59:00PM

Batch End:

Batch Number: 140-54602
 Method Code: 140-LCMS_COND_Prep-140

Leaching Procedure for Condensate

Input Sample Lab ID (Analytical Method)	SDG (Job #)	GrossWt TareWt	InitAmnt FinAmnt	Rcvd	PHs		Due Date	Analytical TAT	Div Rank	Comments	Output Sample Lab ID
					Adj1	Adj2					
1 MB-140-54602/1 N/A	N/A		1 Sample				N/A	N/A	N/A		MB-140-54602/1-A
2 LCS-140-54602/2 N/A	N/A		1 Sample				N/A	N/A	N/A		LCS-140-54602/2-A
3 LCS-140-54602/3 N/A	N/A		1 Sample				N/A	N/A	N/A		LCS-140-54602/3-A
4 140-24649-A-7 (PFC_IDA)	N/A (140-24649-1)	325 mL					10/6/21	12_Days	4		140-24649-A-7-C
5 140-24649-A-11 (PFC_IDA)	N/A (140-24649-1)	325 mL					10/6/21	12_Days	4		140-24649-A-11-C
6 140-24653-A-3 (PFC_IDA)	N/A (140-24653-1)	(300 mL)	1 Sample				10/6/21	12_Day_Rush	4		140-24653-A-3-A
7 140-24653-A-3 (PFC_IDA)	N/A (140-24653-2)		1 Sample				10/6/21	12_Day_Rush	4		140-24653-A-3-A
8 140-24653-A-5 (PFC_IDA)	N/A (140-24653-1)	(200 mL)	1 Sample				10/6/21	12_Day_Rush	4		140-24653-A-5-A
9 140-24653-A-5 (PFC_IDA)	N/A (140-24653-2)		1 Sample				10/6/21	12_Day_Rush	4		140-24653-A-5-A
10 140-24653-A-9 (PFC_IDA)	N/A (140-24653-1)	(200 mL)	1 Sample				10/6/21	12_Day_Rush	4		140-24653-A-9-A

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)










Batch Number: 140-54602

Analyst: Stout, David W

Batch Open: 10/7/2021 1:59:00PM

Method Code: 140-LCMS_COND_Prep-140

Batch End:

8	140-24653-A-9 (PFC_IDA)	N/A (140-24653-2)	1 Sample				10/6/21	12_Day_Rush	4	
9	140-24653-A-11 (PFC_IDA)	N/A (140-24653-1)	1 Sample <i>(360mg)</i>				10/6/21	12_Day_Rush	4	
9	140-24653-A-11 (PFC_IDA)	N/A (140-24653-2)	1 Sample				10/6/21	12_Day_Rush	4	
10	N/A	N/A	1 Sample				N/A	N/A	N/A	
11	N/A	N/A	1 Sample				N/A	N/A	N/A	
12	N/A	N/A	1 Sample				N/A	N/A	N/A	
13	N/A	N/A	1 Sample				N/A	N/A	N/A	
14	N/A	N/A	1 Sample				N/A	N/A	N/A	
15	N/A	N/A	1 Sample				N/A	N/A	N/A	


Shipping and Receiving Documents

Request for Analysis/Chain-of-Custody – RFA/COC #004
The Chemours Company – Fayetteville NC
VEN Carbon Bed Outlet



Environment Testing
 TestAmerica

Project Identification:	Chemours Emissions Test
Client Name:	The Chemours Company FC, LLC
Client Contact:	Ms. Christel Compton Office: (910) 678-1213 Cell: (910) 975-3386
TestAmerica Project Manager:	Ms. Courtney Adkins Office: (865) 291-3019
TestAmerica Program Manager:	Mr. Billy Anderson Office: (865) 291-3080 Cell: (865) 206-9004

Laboratory Deliverable Turnaround Requirements:	
Analytical Due Date: (Review-Released Data)	21 Days from Lab Receipt
Data Package D	 140-24649 Chain of Custody

Analytical Testing QC Requirements:
 The Legend for Project-Specific Quality Control Testing is designated in the "QC" column as follows: "BT" = Blank Train, "RB" = Reagent Blank, "MS" = Matrix Spike, "MSD" = Matrix Spike Duplicate, "DUP" = Duplicate, "PB" = Proof Blank, "TB" = Trip Blank

Laboratory Destination:	Eurofins TestAmerica 5815 Middlebrook Pike Knoxville, TN
Lab Phone Number:	(865) 291-3000
Courier:	Hand Deliver

Project Deliverables:
 Report analytical results on TALS Report form Std_Tal_L4. Include "Field Sample Number", "Sample Type", and "Run Number" on all TALS Reports.

Analytical Parameter:	Holding Time Requirements:	Preservation Requirements:
HFPO-DA (CAS No. 13252-13-6)	14 Days to Extraction; 40 Days to Analysis	Cool, 4°C

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Requirements	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
P-2642 VEN CB Outlet R1 OTM-45 Filter (Combine with P-2643)	1	9/18/21		125 mL HDPE Wide-Mouth Bottle	Particulate Filter (82.6 mm Whatman Glass Microfiber) OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Front-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using Method 8321A-HFPO.
P-2643 VEN CB Outlet R1 OTM-45 FH of Filter Holder & Probe Methanol Rinse (Combine with P-2642)	1	9/18/21		125 mL HDPE Wide-Mouth Bottle	Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse OTM-45 Train HFPO-DA Analysis	Knoxville: Use this solvent sample in the Particulate Filter extraction.
P-2644 VEN CB Outlet R1 OTM-45 XAD-2 Resin Tube	1	9/18/21		XAD-2 Resin Tube	XAD-2 Resin Tube OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Back-Half Glassware Rinse and the Impinger Glassware Methanol Rinse to assist the solvent extraction of the XAD-2 resin sample. Analyze for HFPO-DA using Method 8321A-HFPO.

Request for Analysis/Chain-of-Custody – RFA/COC #004
 The Chemours Company – Fayetteville NC
 VEN Carbon Bed Outlet



Environment Testing
 TestAmerica

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Requirements	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
P-2645 VEN CB Outlet R1 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with P-2644)	1	9/18/21		125 mL HDPE Wide-Mouth Bottle	Back Half of Filter Holder & Coil Condenser Methanol/5% Ammonium Hydroxide Rinse OTM-45 Train HFPO-DA Analysis	Knoxville: Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction. Analyze for HFPO-DA using Method 8321A-HFPO.
P-2646 VEN CB Outlet R1 OTM-45 Impingers 1,2 & 3 Condensate	1	9/18/21		500 mL HDPE Wide-Mouth Bottle	Impinger #1, #2 & #3 Condensate OTM-45 Train HFPO-DA Analysis	Knoxville: Analyze the sample for HFPO-DA.
P-2647 VEN CB Outlet R1 OTM-45 Impinger Glassware MeOH Rinse (Combine with P-2644)	1	9/18/21		250 mL HDPE Wide-Mouth Bottle	Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse OTM-45 Train HFPO-DA Analysis	Knoxville: Use this solvent sample in the XAD-2 Resin Extraction.
P-2648 VEN CB Outlet R1 OTM-45 Breakthrough XAD-2 Resin Tube	1	9/18/21		XAD-2 Resin Tube	Breakthrough XAD-2 Resin Tube OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level and perform the regular XAD-2 Resin Extraction. Analyze for HFPO-DA using Method 8321A-HFPO.
P-2649 VEN CB Outlet R2 OTM-45 Filter (Combine with P-2650)	2	9/18/21		125 mL HDPE Wide-Mouth Bottle	Particulate Filter (82.6 mm Whatman Glass Microfiber) OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Front-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using Method 8321A-HFPO.
P-2650 VEN CB Outlet R2 OTM-45 Front Half of Filter Holder & Probe Methanol Rinse (Combine with P-2649)	2	9/18/21		125 mL HDPE Wide-Mouth Bottle	Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse OTM-45 Train HFPO-DA Analysis	Knoxville: Use this solvent sample in the Particulate Filter extraction.

Request for Analysis/Chain-of-Custody – RFA/COC #004
The Chemours Company – Fayetteville NC
VEN Carbon Bed Outlet



Environment Testing
 TestAmerica

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Requirements	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
P-2651 VEN CB Outlet R2 OTM-45 XAD-2 Resin Tube	2	9/18/21		XAD-2 Resin Tube	XAD-2 Resin Tube OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Back-Half Glassware Rinse and the Impinger Glassware Methanol Rinse to assist the solvent extraction of the XAD-2 resin sample. Analyze for HFPO-DA using Method 8321A-HFPO.
P-2652 VEN CB Outlet R2 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with P-2651)	2	9/18/21		125 mL HDPE Wide-Mouth Bottle	Back Half of Filter Holder & Coil Condenser Methanol/5% Ammonium Hydroxide Rinse OTM-45 Train HFPO-DA Analysis	Knoxville: Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction. Analyze for HFPO-DA using Method 8321A-HFPO.
P-2653 VEN CB Outlet R2 OTM-45 Impingers 1,2 & 3 Condensate	2	9/18/21		500 mL HDPE Wide-Mouth Bottle	Impinger #1, #2 & #3 Condensate OTM-45 Train HFPO-DA Analysis	Knoxville: Analyze the sample for HFPO-DA.
P-2654 VEN CB Outlet R2 OTM-45 Impinger Glassware MeOH Rinse (Combine with P-2651)	2	9/18/21		250 mL HDPE Wide-Mouth Bottle	Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse OTM-45 Train HFPO-DA Analysis	Knoxville: Use this solvent sample in the XAD-2 Resin Extraction.
P-2655 VEN CB Outlet R2 OTM-45 Breakthrough XAD-2 Resin Tube	2	9/18/21		XAD-2 Resin Tube	Breakthrough XAD-2 Resin Tube OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level and perform the regular XAD-2 Resin Extraction. Analyze for HFPO-DA using Method 8321A-HFPO.
P-2656 VEN CB Outlet R3 OTM-45 Filter (Combine with P-2657)	3	9/18/21		125 mL HDPE Wide-Mouth Bottle	Particulate Filter (82.6 mm Whatman Glass Microfiber) OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Front-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using Method 8321A-HFPO.

Request for Analysis/Chain-of-Custody – RFA/COC #004
The Chemours Company – Fayetteville NC
VEN Carbon Bed Outlet



Environment Testing
 TestAmerica

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Requirements	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
P-2657 VEN CB Outlet R3 OTM-45 Front Half of Filter Holder & Probe Methanol Rinse (Combine with P-2656)	3	9/18/21		125 mL HDPE Wide-Mouth Bottle	Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse OTM-45 Train HFPO-DA Analysis	Knoxville: Use this solvent sample in the Particulate Filter extraction.
P-2658 VEN CB Outlet R3 OTM-45 XAD-2 Resin Tube	3	9/18/21		XAD-2 Resin Tube	XAD-2 Resin Tube OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Back-Half Glassware Rinse and the Impinger Glassware Methanol Rinse to assist the solvent extraction of the XAD-2 resin sample. Analyze for HFPO-DA using Method 8321A-HFPO.
P-2659 VEN CB Outlet R3 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with P-2658)	3	9/18/21		125 mL HDPE Wide-Mouth Bottle	Back Half of Filter Holder & Coil Condenser Methanol/5% Ammonium Hydroxide Rinse OTM-45 Train HFPO-DA Analysis	Knoxville: Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction. Analyze for HFPO-DA using Method 8321A-HFPO.
P-2660 VEN CB Outlet R3 OTM-45 Impingers 1,2 & 3 Condensate	3	9/18/21		500 mL HDPE Wide-Mouth Bottle	Impinger #1, #2 & #3 Condensate OTM-45 Train HFPO-DA Analysis	Knoxville: Analyze the sample for HFPO-DA.
P-2661 VEN CB Outlet R3 OTM-45 Impinger Glassware MeOH Rinse (Combine with P-2658)	3	9/18/21		250 mL HDPE Wide-Mouth Bottle	Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse OTM-45 Train HFPO-DA Analysis	Knoxville: Use this solvent sample in the XAD-2 Resin Extraction.
P-2662 VEN CB Outlet R3 OTM-45 Breakthrough XAD-2 Resin Tube	3	9/18/21		XAD-2 Resin Tube	Breakthrough XAD-2 Resin Tube OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level and perform the regular XAD-2 Resin Extraction. Analyze for HFPO-DA using Method 8321A-HFPO.

Sample Receipt Log and Condition of the Samples Upon Receipt:

Please fill in the following information:

Comments

(Please write "NONE" if no comment applicable)

- (1) Record the identities of any samples that were listed on the RFA but were not found in the sample shipment. NONE
- (2) Record the sample shipping cooler temperature of all coolers transporting samples listed on this RFA: RT 0.7 / CT 0.8 C
- (3) Record any apparent sample loss/breakage. NONE
- (4) Record any unidentified samples transported with this shipment of samples: NONE
- (5) Indicate if all samples were received according to the project's required specifications (i.e. no nonconformances): HAND DELIVERED, NO CUSTODY SEAL

Custody Transfer:

Relinquished By:	<u>Patricia [Signature]</u> Name	<u>Alliance</u> Company	<u>9/18/21</u> Date/Time
Accepted By:	<u>Dorey [Signature]</u> Name	<u>ETA KNOX</u> Company	<u>9/18/21 1815</u> Date/Time
Relinquished By:	<u>Dorey [Signature]</u> Name	<u>ETA KNOX</u> Company	<u>9/19/21 1400</u> Date/Time
Accepted By:	<u>[Signature]</u> Name	<u>ETA KNOX</u> Company	<u>9-20-21 08:00</u> Date/Time
Relinquished By:	_____ Name	_____ Company	_____ Date/Time
Accepted By:	_____ Name	_____ Company	_____ Date/Time
Relinquished By:	_____ Name	_____ Company	_____ Date/Time
Accepted By:	_____ Name	_____ Company	_____ Date/Time

EUROFINS/TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	/			<input type="checkbox"/> Containers, Broken	
2. Were ambient air containers received intact?			/	<input type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?			/	<input type="checkbox"/> Yes <input type="checkbox"/> NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6°C, VOST: 10°C) Thermometer ID : <u>SC11</u> Correction factor: <u>40.1 c</u>	/			<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	/			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	/			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	/			<input type="checkbox"/> COC & Samples Do Not Match <input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	/			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	/			<input type="checkbox"/> COC; No Date/Time; Client Contacted	
10. Was the sampler identified on the COC?	/		/	<input type="checkbox"/> Sampler Not Listed on COC	
11. Is the client and project name/# identified?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	/			<input type="checkbox"/> COC No tests on COC	
13. Is the matrix of the samples noted?	/			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	/			<input type="checkbox"/> COC Incorrect/Incomplete	
15. Were samples received within holding time?	/			<input type="checkbox"/> Holding Time - Receipt	
16. Were samples received with correct chemical preservative (excluding Encore)?	/		/	<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	
17. Were VOA samples received without headspace?			/	<input type="checkbox"/> Headspace (VOA only) <input type="checkbox"/> Residual Chlorine	
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			/		
19. For 1613B water samples is pH<9?			/	<input type="checkbox"/> If no, notify lab to adjust	
20. For rad samples was sample activity info. Provided?			/	<input type="checkbox"/> Project missing info	
Project #: _____ PM Instructions: _____					

Labeling Verified by: _____ Date: _____

pH test strip lot number: _____

Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative: _____	
Lot Number: _____	
Exp Date: _____	
Analyst: _____	
Date: _____	
Time: _____	

Sample Receiving Associate: [Signature] Date: 9.21.11 QA026R32.doc, 062719

ANALYTICAL REPORT

Job Number: 140-24648-1

Job Description: Fayetteville VEN Carbon Bed Inlet

Contract Number: LBIO-67048

For:

The Chemours Company FC, LLC

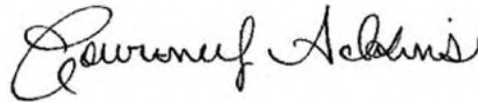
c/o AECOM

Sabre Building, Suite 300

4051 Ogletown Road

Newark, DE 19713

Attention: Michael Aucoin



Approved for release.
Courtney M Adkins
Project Manager II
10/11/2021 11:20 AM

Courtney M Adkins, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3019
courtney.adkins@eurofinset.com
10/11/2021

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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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Definitions/Glossary

Client: The Chemours Company FC, LLC
Project/Site: Fayetteville VEN Carbon Bed Inlet

Job ID: 140-24648-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*5+	Isotope dilution analyte is outside acceptance limits, high biased.

Glossary

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

Method Summary

Client: The Chemours Company FC, LLC
Project/Site: Fayetteville VEN Carbon Bed Inlet

Job ID: 140-24648-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL KNX
Dilution	Dilution and Re-fortification of Standards	None	TAL KNX
None	Leaching Procedure	TAL SOP	TAL KNX
None	Leaching Procedure for Condensate	TAL SOP	TAL KNX
None	Leaching Procedure for Filter	TAL SOP	TAL KNX
Split	Source Air Split	None	TAL KNX

Protocol References:

- EPA = US Environmental Protection Agency
- None = None
- TAL SOP = TestAmerica Laboratories, Standard Operating Procedure

Laboratory References:

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

Sample Summary

Client: The Chemours Company FC, LLC
 Project/Site: Fayetteville VEN Carbon Bed Inlet

Job ID: 140-24648-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-24648-1	K-1975,1976 VEN CARBON BED INLET R1 OTM-45 FH	Air	09/18/21 00:00	09/20/21 08:00
140-24648-2	K-1977, 1978,1980 VEN CARBON BED INLET R1 OTM-45 BH	Air	09/18/21 00:00	09/20/21 08:00
140-24648-3	K-1979 VEN CARBON BED INLET R1 OTM-45 IMPINGERS 1,2&3 COND	Air	09/18/21 00:00	09/20/21 08:00
140-24648-4	K-1981 VEN CARBON BED INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Air	09/18/21 00:00	09/20/21 08:00
140-24648-5	K-1982,1983 VEN CARBON BED INLET R2 OTM-45 FH	Air	09/18/21 00:00	09/20/21 08:00
140-24648-6	K-1984,1985,1987 VEN CARBON BED INLET R2 OTM-45 BH	Air	09/18/21 00:00	09/20/21 08:00
140-24648-7	K-1986 VEN CARBON BED INLET R2 OTM-45 IMPINGERS 1,2&3 COND	Air	09/18/21 00:00	09/20/21 08:00
140-24648-8	K-1988 VEN CARBON BED INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Air	09/18/21 00:00	09/20/21 08:00
140-24648-9	K-1989,1990 VEN CARBON BED INLET R3 OTM-45 FH	Air	09/18/21 00:00	09/20/21 08:00
140-24648-10	K-1991,1992,1994 VEN CARBON BED INLET R3 OTM-45 BH	Air	09/18/21 00:00	09/20/21 08:00
140-24648-11	K-1993 VEN CARBON BED INLET R3 OTM-45 IMPINGERS 1,2&3 COND	Air	09/18/21 00:00	09/20/21 08:00
140-24648-12	K-1995 VEN CARBON BED INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Air	09/18/21 00:00	09/20/21 08:00

Job Narrative 140-24648-1

Receipt

The samples were received on 9/20/2021 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.2° C.

LCMS

LC/MS/MS Sampling Train Preparation and Analysis: The sampling train components are extracted and analyzed for Per- and Polyfluorinated Alkyl Substances (PFAS) using Eurofins TestAmerica Knoxville standard operating procedures KNOX-OP-0026 and KNOX-LC-0007.

The sampling trains are prepared as four analytical fractions: The particulate filter and front half of the filter holder, nozzle and probe solvent rinses are combined for one analytical fraction. The XAD-2 resin trap and back half of the filter holder, coil condenser and connecting glassware solvent rinses are also combined as a separate analytical fraction. The condensate, impinger contents and their related glassware DI water rinses make up the third analytical fraction. The breakthrough XAD module makes up the fourth analytical fraction.

The filters and XAD components are spiked with isotope dilution internal standards and the components are extracted with methanol/ammonium hydroxide by shaking for at least 18 hours. The extracts are concentrated to 10 mL and analyzed by HPLC/MS/MS. The condensates are spiked with the isotope dilution internal standards and extracted using either Solid-Phase Extraction (SPE) or diluting the water sample for analysis. Each extract at its final volume is 80:20 methanol:water

Sample results were calculated using the following equation:

$$\text{Result, ng/sample} = (\text{on-column concentration, ng/mL}) \times (\text{nominal final volume of extract (10 mL) / 1 sample}) \times \text{DF} \times \text{SF}$$

Where:

DF = Instrument dilution factor

SF = Extraction Split Factor = (final volume of extract in the initial extraction batch / initial volume of extract in the "Split" batch)

For condensate, if less than the entire sample is extracted, the fraction of sample used replaces "1 sample"

Method 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following samples: K-1986 VEN CARBON BED INLET R2 OTM-45 IMPINGERS 1,2&3 COND (140-24648-7). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

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

Organic Prep

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

QC Association Summary

Client: The Chemours Company FC, LLC
 Project/Site: Fayetteville VEN Carbon Bed Inlet

Job ID: 140-24648-1

LCMS

Prep Batch: 54177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24648-1	K-1975,1976 VEN CARBON BED INLET R1 OTM	Total/NA	Air	None	
140-24648-5	K-1982,1983 VEN CARBON BED INLET R2 OTM	Total/NA	Air	None	
140-24648-9	K-1989,1990 VEN CARBON BED INLET R3 OTM	Total/NA	Air	None	
MB 140-54177/1-B	Method Blank	Total/NA	Air	None	
LCS 140-54177/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-54177/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Prep Batch: 54178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24648-2	K-1977,1978,1980 VEN CARBON BED INLET R	Total/NA	Air	None	
140-24648-4	K-1981 VEN CARBON BED INLET R1 OTM-45 E	Total/NA	Air	None	
140-24648-6	K-1984,1985,1987 VEN CARBON BED INLET R	Total/NA	Air	None	
140-24648-8	K-1988 VEN CARBON BED INLET R2 OTM-45 E	Total/NA	Air	None	
140-24648-10	K-1991,1992,1994 VEN CARBON BED INLET R	Total/NA	Air	None	
140-24648-12	K-1995 VEN CARBON BED INLET R3 OTM-45 E	Total/NA	Air	None	
MB 140-54178/14-B	Method Blank	Total/NA	Air	None	
MB 140-54178/1-B	Method Blank	Total/NA	Air	None	
LCS 140-54178/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-54178/3-B	Lab Control Sample Dup	Total/NA	Air	None	

Cleanup Batch: 54245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24648-1	K-1975,1976 VEN CARBON BED INLET R1 OTM	Total/NA	Air	Split	54177
140-24648-5	K-1982,1983 VEN CARBON BED INLET R2 OTM	Total/NA	Air	Split	54177
140-24648-9	K-1989,1990 VEN CARBON BED INLET R3 OTM	Total/NA	Air	Split	54177
MB 140-54177/1-B	Method Blank	Total/NA	Air	Split	54177
LCS 140-54177/2-B	Lab Control Sample	Total/NA	Air	Split	54177
LCSD 140-54177/3-B	Lab Control Sample Dup	Total/NA	Air	Split	54177

Cleanup Batch: 54317

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24648-2	K-1977,1978,1980 VEN CARBON BED INLET R	Total/NA	Air	Split	54178
140-24648-4	K-1981 VEN CARBON BED INLET R1 OTM-45 E	Total/NA	Air	Split	54178
140-24648-6	K-1984,1985,1987 VEN CARBON BED INLET R	Total/NA	Air	Split	54178
140-24648-8	K-1988 VEN CARBON BED INLET R2 OTM-45 E	Total/NA	Air	Split	54178
140-24648-10	K-1991,1992,1994 VEN CARBON BED INLET R	Total/NA	Air	Split	54178
140-24648-12	K-1995 VEN CARBON BED INLET R3 OTM-45 E	Total/NA	Air	Split	54178
MB 140-54178/14-B	Method Blank	Total/NA	Air	Split	54178
MB 140-54178/1-B	Method Blank	Total/NA	Air	Split	54178
LCS 140-54178/2-B	Lab Control Sample	Total/NA	Air	Split	54178
LCSD 140-54178/3-B	Lab Control Sample Dup	Total/NA	Air	Split	54178

Prep Batch: 54348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24648-3	K-1979 VEN CARBON BED INLET R1 OTM-45 II	Total/NA	Air	None	
140-24648-7	K-1986 VEN CARBON BED INLET R2 OTM-45 II	Total/NA	Air	None	
140-24648-11	K-1993 VEN CARBON BED INLET R3 OTM-45 II	Total/NA	Air	None	
MB 140-54348/1-B	Method Blank	Total/NA	Air	None	
LCS 140-54348/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-54348/3-B	Lab Control Sample Dup	Total/NA	Air	None	

QC Association Summary

Client: The Chemours Company FC, LLC
 Project/Site: Fayetteville VEN Carbon Bed Inlet

Job ID: 140-24648-1

LCMS

Cleanup Batch: 54427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24648-3	K-1979 VEN CARBON BED INLET R1 OTM-45 II	Total/NA	Air	Split	54348
140-24648-7	K-1986 VEN CARBON BED INLET R2 OTM-45 II	Total/NA	Air	Split	54348
140-24648-11	K-1993 VEN CARBON BED INLET R3 OTM-45 II	Total/NA	Air	Split	54348
MB 140-54348/1-B	Method Blank	Total/NA	Air	Split	54348
LCS 140-54348/2-B	Lab Control Sample	Total/NA	Air	Split	54348
LCSD 140-54348/3-B	Lab Control Sample Dup	Total/NA	Air	Split	54348

Analysis Batch: 54568

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24648-1	K-1975,1976 VEN CARBON BED INLET R1 OTM	Total/NA	Air	537 (modified)	54569
140-24648-3	K-1979 VEN CARBON BED INLET R1 OTM-45 II	Total/NA	Air	537 (modified)	54427
140-24648-4	K-1981 VEN CARBON BED INLET R1 OTM-45 E	Total/NA	Air	537 (modified)	54569
140-24648-5	K-1982,1983 VEN CARBON BED INLET R2 OTM	Total/NA	Air	537 (modified)	54569
140-24648-7	K-1986 VEN CARBON BED INLET R2 OTM-45 II	Total/NA	Air	537 (modified)	54427
140-24648-8	K-1988 VEN CARBON BED INLET R2 OTM-45 E	Total/NA	Air	537 (modified)	54569
140-24648-11	K-1993 VEN CARBON BED INLET R3 OTM-45 II	Total/NA	Air	537 (modified)	54427
140-24648-12	K-1995 VEN CARBON BED INLET R3 OTM-45 E	Total/NA	Air	537 (modified)	54569
MB 140-54177/1-B	Method Blank	Total/NA	Air	537 (modified)	54245
MB 140-54178/14-B	Method Blank	Total/NA	Air	537 (modified)	54317
MB 140-54178/1-B	Method Blank	Total/NA	Air	537 (modified)	54317
MB 140-54348/1-B	Method Blank	Total/NA	Air	537 (modified)	54427
LCS 140-54177/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	54245
LCS 140-54178/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	54317
LCS 140-54348/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	54427
LCSD 140-54177/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	54245
LCSD 140-54178/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	54317
LCSD 140-54348/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	54427

Cleanup Batch: 54569

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24648-1	K-1975,1976 VEN CARBON BED INLET R1 OTM	Total/NA	Air	Dilution	54245
140-24648-2	K-1977,1978,1980 VEN CARBON BED INLET R	Total/NA	Air	Dilution	54317
140-24648-4	K-1981 VEN CARBON BED INLET R1 OTM-45 E	Total/NA	Air	Dilution	54317
140-24648-5	K-1982,1983 VEN CARBON BED INLET R2 OTM	Total/NA	Air	Dilution	54245
140-24648-6	K-1984,1985,1987 VEN CARBON BED INLET R	Total/NA	Air	Dilution	54317
140-24648-8	K-1988 VEN CARBON BED INLET R2 OTM-45 E	Total/NA	Air	Dilution	54317
140-24648-9	K-1989,1990 VEN CARBON BED INLET R3 OTM	Total/NA	Air	Dilution	54245
140-24648-10	K-1991,1992,1994 VEN CARBON BED INLET R	Total/NA	Air	Dilution	54317
140-24648-12	K-1995 VEN CARBON BED INLET R3 OTM-45 E	Total/NA	Air	Dilution	54317

Analysis Batch: 54661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-24648-2	K-1977,1978,1980 VEN CARBON BED INLET R	Total/NA	Air	537 (modified)	54569
140-24648-6	K-1984,1985,1987 VEN CARBON BED INLET R	Total/NA	Air	537 (modified)	54569
140-24648-9	K-1989,1990 VEN CARBON BED INLET R3 OTM	Total/NA	Air	537 (modified)	54569
140-24648-10	K-1991,1992,1994 VEN CARBON BED INLET R	Total/NA	Air	537 (modified)	54569

Client Sample Results

Client: The Chemours Company FC, LLC
 Project/Site: Fayetteville VEN Carbon Bed Inlet

Job ID: 140-24648-1

Client Sample ID: K-1975,1976 VEN CARBON BED INLET R1

Lab Sample ID: 140-24648-1

OTM-45 FH

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	123		1.30	0.754	ug/Sample		09/24/21 09:38	10/07/21 11:29	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	94		25 - 150				09/24/21 09:38	10/07/21 11:29	1

Client Sample ID: K-1977,1978,1980 VEN CARBON BED INLET

Lab Sample ID: 140-24648-2

R1 OTM-45 BH

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	4590		72.0	63.0	ug/Sample		09/24/21 09:41	10/09/21 17:17	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	89		25 - 150				09/24/21 09:41	10/09/21 17:17	1

Client Sample ID: K-1979 VEN CARBON BED INLET R1

Lab Sample ID: 140-24648-3

OTM-45 IMPINGERS 1,2&3 COND

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	322		2.03	0.335	ug/Sample		09/30/21 08:55	10/07/21 03:47	25
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	139		25 - 150				09/30/21 08:55	10/07/21 03:47	25

Client Sample ID: K-1981 VEN CARBON BED INLET R1

Lab Sample ID: 140-24648-4

OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	9.03		0.160	0.140	ug/Sample		09/24/21 09:41	10/07/21 08:55	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	91		25 - 150				09/24/21 09:41	10/07/21 08:55	1

Client Sample Results

Client: The Chemours Company FC, LLC
 Project/Site: Fayetteville VEN Carbon Bed Inlet

Job ID: 140-24648-1

Client Sample ID: K-1982,1983 VEN CARBON BED INLET R2

Lab Sample ID: 140-24648-5

OTM-45 FH

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	43.1		0.638	0.370	ug/Sample		09/24/21 09:38	10/07/21 11:37	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	86		25 - 150				09/24/21 09:38	10/07/21 11:37	1

Client Sample ID: K-1984,1985,1987 VEN CARBON BED INLET

Lab Sample ID: 140-24648-6

R2 OTM-45 BH

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	7290		72.0	63.0	ug/Sample		09/24/21 09:41	10/09/21 17:27	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	91		25 - 150				09/24/21 09:41	10/09/21 17:27	1

Client Sample ID: K-1986 VEN CARBON BED INLET R2

Lab Sample ID: 140-24648-7

OTM-45 IMPINGERS 1,2&3 COND

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	466		4.00	0.660	ug/Sample		09/30/21 08:55	10/07/21 03:56	50
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	194	*5+	25 - 150				09/30/21 08:55	10/07/21 03:56	50

Client Sample ID: K-1988 VEN CARBON BED INLET R2

Lab Sample ID: 140-24648-8

OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	22.9		0.800	0.700	ug/Sample		09/24/21 09:41	10/07/21 09:14	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	78		25 - 150				09/24/21 09:41	10/07/21 09:14	1

Client Sample Results

Client: The Chemours Company FC, LLC
 Project/Site: Fayetteville VEN Carbon Bed Inlet

Job ID: 140-24648-1

Client Sample ID: K-1989,1990 VEN CARBON BED INLET R3

Lab Sample ID: 140-24648-9

OTM-45 FH

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	89.9		0.880	0.510	ug/Sample		09/24/21 09:38	10/09/21 18:20	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	92		25 - 150				09/24/21 09:38	10/09/21 18:20	1

Client Sample ID: K-1991,1992,1994 VEN CARBON BED INLET

Lab Sample ID: 140-24648-10

R3 OTM-45 BH

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	4130		72.0	63.0	ug/Sample		09/24/21 09:41	10/09/21 17:36	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	91		25 - 150				09/24/21 09:41	10/09/21 17:36	1

Client Sample ID: K-1993 VEN CARBON BED INLET R3

Lab Sample ID: 140-24648-11

OTM-45 IMPINGERS 1,2&3 COND

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	293		2.00	0.330	ug/Sample		09/30/21 08:55	10/07/21 04:04	25
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	140		25 - 150				09/30/21 08:55	10/07/21 04:04	25

Client Sample ID: K-1995 VEN CARBON BED INLET R3

Lab Sample ID: 140-24648-12

OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Sample Container: Air Train

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	29.0		0.800	0.700	ug/Sample		09/24/21 09:41	10/07/21 09:31	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	91		25 - 150				09/24/21 09:41	10/07/21 09:31	1

Default Detection Limits

Client: The Chemours Company FC, LLC
Project/Site: Fayetteville VEN Carbon Bed Inlet

Job ID: 140-24648-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Prep: None

Analyte	RL	MDL	Units
HFPO-DA	0.00100	0.000580	ug/Sample
HFPO-DA	0.00160	0.00140	ug/Sample
HFPO-DA	0.00200	0.000330	ug/Sample

Isotope Dilution Summary

Client: The Chemours Company FC, LLC
 Project/Site: Fayetteville VEN Carbon Bed Inlet

Job ID: 140-24648-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Air

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)			
		HFPODA (25-150)			
140-24648-1	K-1975,1976 VEN CARBON BE	94			
140-24648-2	K-1977,1978,1980 VEN CARBON BED INLET R1	89			
140-24648-3	OTM-45 BH K-1979 VEN CARBON BED INLET R1 OTM-45 IMPINGERS	139			
140-24648-4	1,2&3 COND K-1981 VEN CARBON BED INLET R1 OTM-45	91			
140-24648-5	BREAKTHROUGH XAD-2 RESI TUBE K-1982,1983 VEN CARBON BED INLET R2 OTM-45 FH	86			
140-24648-6	K-1984,1985,1987 VEN CARBON BED INLET R2	91			
140-24648-7	OTM-45 BH K-1986 VEN CARBON BED INLET R2 OTM-45 IMPINGERS	194 *5+			
140-24648-8	1,2&3 COND K-1988 VEN CARBON BED INLET R2 OTM-45	78			
140-24648-9	BREAKTHROUGH XAD-2 RESI TUBE K-1989,1990 VEN CARBON BED INLET R3 OTM-45 FH	92			
140-24648-10	K-1991,1992,1994 VEN CARBON BED INLET R3	91			
140-24648-11	OTM-45 BH K-1993 VEN CARBON BED INLET R3 OTM-45 IMPINGERS	140			
140-24648-12	1,2&3 COND K-1995 VEN CARBON BED INLET R3 OTM-45	91			
LCS 140-54177/2-B	BREAKTHROUGH XAD-2 RESI TUBE Lab Control Sample	91			
LCS 140-54178/2-B	Lab Control Sample	90			
LCS 140-54348/2-B	Lab Control Sample	91			
LCSD 140-54177/3-B	Lab Control Sample Dup	97			
LCSD 140-54178/3-B	Lab Control Sample Dup	93			
LCSD 140-54348/3-B	Lab Control Sample Dup	96			
MB 140-54177/1-B	Method Blank	94			
MB 140-54178/14-B	Method Blank	95			
MB 140-54178/1-B	Method Blank	87			
MB 140-54348/1-B	Method Blank	84			

Surrogate Legend

HFPODA = 13C3 HFPO-DA

QC Sample Results

Client: The Chemours Company FC, LLC
 Project/Site: Fayetteville VEN Carbon Bed Inlet

Job ID: 140-24648-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 140-54177/1-B
Matrix: Air
Analysis Batch: 54568

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54177

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00100	0.000580	ug/Sample		09/24/21 09:38	10/07/21 09:49	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
¹³ C3 HFPO-DA	94		25 - 150				09/24/21 09:38	10/07/21 09:49	1

Lab Sample ID: LCS 140-54177/2-B
Matrix: Air
Analysis Batch: 54568

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54177

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HFPO-DA	0.0200	0.01930		ug/Sample		96	60 - 140
Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits				
¹³ C3 HFPO-DA	91		25 - 150				

Lab Sample ID: LCSD 140-54177/3-B
Matrix: Air
Analysis Batch: 54568

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 54177

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HFPO-DA	0.0200	0.02071		ug/Sample		104	60 - 140	7	30
Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits						
¹³ C3 HFPO-DA	97		25 - 150						

Lab Sample ID: MB 140-54178/14-B
Matrix: Air
Analysis Batch: 54568

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54178

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00160	0.00140	ug/Sample		09/24/21 09:41	10/07/21 08:02	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
¹³ C3 HFPO-DA	95		25 - 150				09/24/21 09:41	10/07/21 08:02	1

Lab Sample ID: MB 140-54178/1-B
Matrix: Air
Analysis Batch: 54568

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54178

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00160	0.00140	ug/Sample		09/24/21 09:41	10/07/21 05:50	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
¹³ C3 HFPO-DA	87		25 - 150				09/24/21 09:41	10/07/21 05:50	1

QC Sample Results

Client: The Chemours Company FC, LLC
 Project/Site: Fayetteville VEN Carbon Bed Inlet

Job ID: 140-24648-1

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

Lab Sample ID: LCS 140-54178/2-B
Matrix: Air
Analysis Batch: 54568

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54178

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HFPO-DA	0.0200	0.01826		ug/Sample		91	60 - 140
<i>Isotope Dilution</i>		<i>%Recovery</i>	<i>Qualifier</i>				<i>Limits</i>
13C3 HFPO-DA		90					25 - 150

Lab Sample ID: LCSD 140-54178/3-B
Matrix: Air
Analysis Batch: 54568

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 54178

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HFPO-DA	0.0200	0.01818		ug/Sample		91	60 - 140	0	30
<i>Isotope Dilution</i>		<i>%Recovery</i>	<i>Qualifier</i>				<i>Limits</i>		
13C3 HFPO-DA		93					25 - 150		

Lab Sample ID: MB 140-54348/1-B
Matrix: Air
Analysis Batch: 54568

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54348

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.0000825	ug/Sample		09/30/21 08:55	10/07/21 02:10	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
13C3 HFPO-DA	84		25 - 150				09/30/21 08:55	10/07/21 02:10	1

Lab Sample ID: LCS 140-54348/2-B
Matrix: Air
Analysis Batch: 54568

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54348

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HFPO-DA	0.0100	0.009386		ug/Sample		94	60 - 140
<i>Isotope Dilution</i>		<i>%Recovery</i>	<i>Qualifier</i>				<i>Limits</i>
13C3 HFPO-DA		91					25 - 150

Lab Sample ID: LCSD 140-54348/3-B
Matrix: Air
Analysis Batch: 54568

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 54348

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HFPO-DA	0.0100	0.009247		ug/Sample		92	60 - 140	1	30
<i>Isotope Dilution</i>		<i>%Recovery</i>	<i>Qualifier</i>				<i>Limits</i>		
13C3 HFPO-DA		96					25 - 150		

Lab Chronicle

Client: The Chemours Company FC, LLC
 Project/Site: Fayetteville VEN Carbon Bed Inlet

Job ID: 140-24648-1

Client Sample ID: K-1975,1976 VEN CARBON BED INLET R1

Lab Sample ID: 140-24648-1

OTM-45 FH

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	52 mL	54177	09/24/21 09:38	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	54245	09/27/21 15:06	DWS	TAL KNX
Total/NA	Cleanup	Dilution			20 uL	10000 uL	54569	10/06/21 19:06	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			54568	10/07/21 11:29	JRC	TAL KNX

Instrument ID: LCA

Client Sample ID: K-1977,1978,1980 VEN CARBON BED INLET R1 OTM-45 BH

Lab Sample ID: 140-24648-2

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	54178	09/24/21 09:41	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	54317	09/29/21 11:00	DWS	TAL KNX
Total/NA	Cleanup	Dilution			4 uL	10000 uL	54569	10/06/21 19:06	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			54661	10/09/21 17:17	JRC	TAL KNX

Instrument ID: LCA

Client Sample ID: K-1979 VEN CARBON BED INLET R1 OTM-45 IMPINGERS 1,2&3 COND

Lab Sample ID: 140-24648-3

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			0.00615 Sample	10 mL	54348	09/30/21 08:55	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	54427	10/03/21 03:45	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		25			54568	10/07/21 03:47	JRC	TAL KNX

Instrument ID: LCA

Client Sample ID: K-1981 VEN CARBON BED INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Lab Sample ID: 140-24648-4

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	54178	09/24/21 09:41	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	54317	09/29/21 11:00	DWS	TAL KNX
Total/NA	Cleanup	Dilution			100 uL	10000 uL	54569	10/06/21 19:06	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			54568	10/07/21 08:55	JRC	TAL KNX

Instrument ID: LCA

Lab Chronicle

Client: The Chemours Company FC, LLC
Project/Site: Fayetteville VEN Carbon Bed Inlet

Job ID: 140-24648-1

Client Sample ID: K-1982,1983 VEN CARBON BED INLET R2

Lab Sample ID: 140-24648-5

OTM-45 FH

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	51 mL	54177	09/24/21 09:38	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	54245	09/27/21 15:06	DWS	TAL KNX
Total/NA	Cleanup	Dilution			40 uL	10000 uL	54569	10/06/21 19:06	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			54568	10/07/21 11:37	JRC	TAL KNX

Instrument ID: LCA

Client Sample ID: K-1984,1985,1987 VEN CARBON BED INLET

Lab Sample ID: 140-24648-6

R2 OTM-45 BH

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	54178	09/24/21 09:41	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	54317	09/29/21 11:00	DWS	TAL KNX
Total/NA	Cleanup	Dilution			4 uL	10000 uL	54569	10/06/21 19:06	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			54661	10/09/21 17:27	JRC	TAL KNX

Instrument ID: LCA

Client Sample ID: K-1986 VEN CARBON BED INLET R2

Lab Sample ID: 140-24648-7

OTM-45 IMPINGERS 1,2&3 COND

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			0.00625 Sample	10 mL	54348	09/30/21 08:55	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	54427	10/03/21 03:45	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		50			54568	10/07/21 03:56	JRC	TAL KNX

Instrument ID: LCA

Client Sample ID: K-1988 VEN CARBON BED INLET R2

Lab Sample ID: 140-24648-8

OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	54178	09/24/21 09:41	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	54317	09/29/21 11:00	DWS	TAL KNX
Total/NA	Cleanup	Dilution			20 uL	10000 uL	54569	10/06/21 19:06	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			54568	10/07/21 09:14	JRC	TAL KNX

Instrument ID: LCA

Lab Chronicle

Client: The Chemours Company FC, LLC
 Project/Site: Fayetteville VEN Carbon Bed Inlet

Job ID: 140-24648-1

**Client Sample ID: K-1989,1990 VEN CARBON BED INLET R3
 OTM-45 FH**

Lab Sample ID: 140-24648-9

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	88 mL	54177	09/24/21 09:38	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	54245	09/27/21 15:06	DWS	TAL KNX
Total/NA	Cleanup	Dilution			50 uL	10000 uL	54569	10/06/21 19:06	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			54661	10/09/21 18:20	JRC	TAL KNX

Instrument ID: LCA

**Client Sample ID: K-1991,1992,1994 VEN CARBON BED INLET
 R3 OTM-45 BH**

Lab Sample ID: 140-24648-10

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	54178	09/24/21 09:41	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	54317	09/29/21 11:00	DWS	TAL KNX
Total/NA	Cleanup	Dilution			4 uL	10000 uL	54569	10/06/21 19:06	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			54661	10/09/21 17:36	JRC	TAL KNX

Instrument ID: LCA

**Client Sample ID: K-1993 VEN CARBON BED INLET R3
 OTM-45 IMPINGERS 1,2&3 COND**

Lab Sample ID: 140-24648-11

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			0.00625 Sample	10 mL	54348	09/30/21 08:55	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	54427	10/03/21 03:45	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		25			54568	10/07/21 04:04	JRC	TAL KNX

Instrument ID: LCA

**Client Sample ID: K-1995 VEN CARBON BED INLET R3
 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE**

Lab Sample ID: 140-24648-12

Date Collected: 09/18/21 00:00

Matrix: Air

Date Received: 09/20/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	54178	09/24/21 09:41	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	54317	09/29/21 11:00	DWS	TAL KNX
Total/NA	Cleanup	Dilution			20 uL	10000 uL	54569	10/06/21 19:06	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			54568	10/07/21 09:31	JRC	TAL KNX

Instrument ID: LCA

Lab Chronicle

Client: The Chemours Company FC, LLC
Project/Site: Fayetteville VEN Carbon Bed Inlet

Job ID: 140-24648-1

Client Sample ID: Method Blank

Lab Sample ID: MB 140-54177/1-B

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	50 mL	54177	09/24/21 09:38	DWS	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	54245	09/27/21 15:06	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			54568	10/07/21 09:49	JRC	TAL KNX
Instrument ID: LCA										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-54178/14-B

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	54178	09/24/21 09:41	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	54317	09/29/21 11:00	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			54568	10/07/21 08:02	JRC	TAL KNX
Instrument ID: LCA										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-54178/1-B

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	54178	09/24/21 09:41	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	54317	09/29/21 11:00	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			54568	10/07/21 05:50	JRC	TAL KNX
Instrument ID: LCA										

Client Sample ID: Method Blank

Lab Sample ID: MB 140-54348/1-B

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	10 mL	54348	09/30/21 08:55	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	54427	10/03/21 03:45	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			54568	10/07/21 02:10	JRC	TAL KNX
Instrument ID: LCA										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-54177/2-B

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	50 mL	54177	09/24/21 09:38	DWS	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	54245	09/27/21 15:06	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			54568	10/07/21 09:59	JRC	TAL KNX
Instrument ID: LCA										

Lab Chronicle

Client: The Chemours Company FC, LLC
 Project/Site: Fayetteville VEN Carbon Bed Inlet

Job ID: 140-24648-1

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-54178/2-B

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	54178	09/24/21 09:41	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	54317	09/29/21 11:00	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			54568	10/07/21 05:59	JRC	TAL KNX
Instrument ID: LCA										

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-54348/2-B

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	10 mL	54348	09/30/21 08:55	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	54427	10/03/21 03:45	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			54568	10/07/21 02:19	JRC	TAL KNX
Instrument ID: LCA										

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-54177/3-B

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	50 mL	54177	09/24/21 09:38	DWS	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	54245	09/27/21 15:06	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			54568	10/07/21 10:09	JRC	TAL KNX
Instrument ID: LCA										

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-54178/3-B

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	360 mL	54178	09/24/21 09:41	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	54317	09/29/21 11:00	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			54568	10/07/21 06:08	JRC	TAL KNX
Instrument ID: LCA										

Client Sample ID: Lab Control Sample Dup

Lab Sample ID: LCSD 140-54348/3-B

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			1 Sample	10 mL	54348	09/30/21 08:55	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	54427	10/03/21 03:45	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			54568	10/07/21 02:27	JRC	TAL KNX
Instrument ID: LCA										

Laboratory References:

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

Eurofins TestAmerica, Knoxville

Accreditation/Certification Summary

Client: The Chemours Company FC, LLC
 Project/Site: Fayetteville VEN Carbon Bed Inlet

Job ID: 140-24648-1

Laboratory: Eurofins TestAmerica, Knoxville

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	N/A	
ANAB	Dept. of Defense ELAP	L2311	02-13-22
ANAB	Dept. of Energy	L2311.01	02-13-22
ANAB	ISO/IEC 17025	L2311	02-13-22
Arkansas DEQ	State	88-0688	06-17-22
California	State	2423	06-30-22
Colorado	State	TN00009	02-28-22
Connecticut	State	PH-0223	09-30-21 *
Florida	NELAP	E87177	06-30-22
Georgia (DW)	State	906	12-11-22
Hawaii	State	NA	12-11-21
Kansas	NELAP	E-10349	10-31-21
Kentucky (DW)	State	90101	12-31-21
Louisiana	NELAP	83979	06-30-22
Louisiana (DW)	State	LA019	12-31-21
Maryland	State	277	03-31-22
Michigan	State	9933	12-11-22
Nevada	State	TN00009	07-31-22
New Hampshire	NELAP	299919	01-17-22
New Jersey	NELAP	TN001	06-30-22
New York	NELAP	10781	03-31-22
North Carolina (DW)	State	21705	07-31-22
North Carolina (WW/SW)	State	64	12-31-21
Ohio VAP	State	CL0059	06-02-23
Oklahoma	State	9415	08-31-22
Oregon	NELAP	TNI0189	01-01-22
Pennsylvania	NELAP	68-00576	12-31-21
Tennessee	State	02014	12-11-22
Texas	NELAP	T104704380-18-12	08-31-22
US Fish & Wildlife	US Federal Programs	058448	07-31-22
USDA	US Federal Programs	P330-19-00236	08-20-22
Utah	NELAP	TN00009	07-31-22
Virginia	NELAP	460176	09-14-22
Washington	State	C593	01-19-22
West Virginia (DW)	State	9955C	01-02-22
West Virginia DEP	State	345	04-30-22
Wisconsin	State	998044300	08-31-22

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

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1

SDG No.:

Instrument ID: LCA Analysis Batch Number: 54515

Lab Sample ID: IC 140-54515/6 Client Sample ID:

Date Analyzed: 10/05/21 22:00 Lab File ID: 006.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.82	Baseline	cochranj	10/06/21 15:49
Perfluorooctanesulfonic acid (PFOS)	4.46	Baseline	cochranj	10/06/21 15:49
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.91	Baseline	cochranj	10/06/21 15:50
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.05	Baseline	cochranj	10/06/21 15:50
Perfluorohexadecanoic acid	5.97	Baseline	cochranj	10/06/21 16:15
Perfluorooctadecanoic acid	6.24	Baseline	cochranj	10/06/21 15:51

Lab Sample ID: IC 140-54515/7 Client Sample ID:

Date Analyzed: 10/05/21 22:09 Lab File ID: 007.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanoic acid (PFHxA)	3.48	Split Peak	cochranj	10/06/21 15:57
Perfluorohexanesulfonic acid (PFHxS)	3.83	Baseline	cochranj	10/06/21 15:57
Perfluorooctanesulfonic acid (PFOS)	4.47	Baseline	cochranj	10/06/21 15:57
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.91	Baseline	cochranj	10/06/21 15:58
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.05	Baseline	cochranj	10/06/21 15:58
2-(N-ethylperfluoro-1-octanesulfona mido) ethanol	5.46	Split Peak	cochranj	10/06/21 15:58
Perfluorohexadecanoic acid	5.96	Baseline	cochranj	10/06/21 16:15

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1

SDG No.:

Instrument ID: LCA Analysis Batch Number: 54515

Lab Sample ID: IC 140-54515/8 Client Sample ID:

Date Analyzed: 10/05/21 22:18 Lab File ID: 008.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION	
		REASON	ANALYST DATE
Perfluorohexanesulfonic acid (PFHxS)	3.80	Baseline	cochranj 10/06/21 15:59
Perfluorooctanesulfonic acid (PFOS)	4.45	Baseline	cochranj 10/06/21 15:59
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.90	Baseline	cochranj 10/06/21 15:59
Perfluorohexadecanoic acid	5.95	Baseline	cochranj 10/06/21 16:14

Lab Sample ID: ICIS 140-54515/9 Client Sample ID:

Date Analyzed: 10/05/21 22:27 Lab File ID: 009.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION	
		REASON	ANALYST DATE
Perfluorohexanesulfonic acid (PFHxS)	3.82	Baseline	cochranj 10/06/21 16:00
Perfluorooctanesulfonic acid (PFOS)	4.45	Baseline	cochranj 10/06/21 16:00
Perfluorohexadecanoic acid	5.96	Baseline	cochranj 10/06/21 16:14

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1

SDG No.:

Instrument ID: LCA Analysis Batch Number: 54515

Lab Sample ID: IC 140-54515/10 Client Sample ID:

Date Analyzed: 10/05/21 22:36 Lab File ID: 010.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION	
		REASON	ANALYST
Perfluorohexanesulfonic acid (PFHxS)	3.82	Baseline	cochranj
Perfluorooctanesulfonic acid (PFOS)	4.45	Baseline	cochranj
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.90	Baseline	cochranj
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.04	Baseline	cochranj
Perfluorohexadecanoic acid	5.96	Baseline	cochranj

Lab Sample ID: IC 140-54515/11 Client Sample ID:

Date Analyzed: 10/05/21 22:44 Lab File ID: 011.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION	
		REASON	ANALYST
Perfluorohexanesulfonic acid (PFHxS)	3.80	Baseline	cochranj
Perfluorooctanesulfonic acid (PFOS)	4.45	Baseline	cochranj
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.90	Baseline	cochranj
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.04	Baseline	cochranj
Perfluorohexadecanoic acid	5.96	Baseline	cochranj

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1

SDG No.: _____

Instrument ID: LCA Analysis Batch Number: 54515

Lab Sample ID: IC 140-54515/12 Client Sample ID: _____

Date Analyzed: 10/05/21 22:53 Lab File ID: 012.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION	
		REASON	ANALYST DATE
Perfluorohexanesulfonic acid (PFHxS)	3.82	Baseline	cochranj 10/06/21 16:05
Perfluorooctanesulfonic acid (PFOS)	4.45	Baseline	cochranj 10/06/21 16:05

Lab Sample ID: ICV 140-54515/14 Client Sample ID: _____

Date Analyzed: 10/05/21 23:11 Lab File ID: 014.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION	
		REASON	ANALYST DATE
Perfluorooctanesulfonic acid (PFOS)	4.44	Baseline	cochranj 10/06/21 16:22

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1

SDG No.:

Instrument ID: ICA Analysis Batch Number: 54568

Lab Sample ID: CCVL 140-54568/6 Client Sample ID:

Date Analyzed: 10/06/21 21:10 Lab File ID: 006.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.83	Incomplete Integration	mcwhirter 1	10/07/21 02:31
Perfluorooctanesulfonic acid (PFOS)	4.47	Incomplete Integration	mcwhirter 1	10/07/21 02:31
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.92	Incomplete Integration	mcwhirter 1	10/07/21 02:32
N-ethylperfluorooctanesulfonamid oacetic acid (NEtFOSAA)	5.07	Incomplete Integration	mcwhirter 1	10/07/21 02:32

Lab Sample ID: CCVIS 140-54568/7 Client Sample ID:

Date Analyzed: 10/06/21 21:19 Lab File ID: 007.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorooctanesulfonic acid (PFOS)	4.45	Incomplete Integration	mcwhirter 1	10/07/21 02:34

Lab Sample ID: CCV 140-54568/32 Client Sample ID:

Date Analyzed: 10/07/21 01:08 Lab File ID: 032.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorooctanesulfonic acid (PFOS)	4.43	Baseline	cochranj	10/09/21 16:45
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.88	Baseline	cochranj	10/09/21 16:46

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1

SDG No.:

Instrument ID: ICA Analysis Batch Number: 54568

Lab Sample ID: CCV 140-54568/45 Client Sample ID:

Date Analyzed: 10/07/21 03:03 Lab File ID: 045.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.78	Baseline	cochranj	10/09/21 17:24
Perfluorooctanesulfonic acid (PFOS)	4.42	Baseline	cochranj	10/09/21 17:24
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.87	Baseline	cochranj	10/09/21 17:24
N-ethylperfluorooctanesulfonamid oacetic acid (NEtFOSAA)	5.01	Baseline	cochranj	10/09/21 17:25

Lab Sample ID: CCV 140-54568/58 Client Sample ID:

Date Analyzed: 10/07/21 04:57 Lab File ID: 058.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.79	Baseline	cochranj	10/09/21 17:30
Perfluorooctanesulfonic acid (PFOS)	4.42	Baseline	cochranj	10/09/21 17:31
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.87	Baseline	cochranj	10/09/21 17:31

Lab Sample ID: CCV 140-54568/71 Client Sample ID:

Date Analyzed: 10/07/21 06:52 Lab File ID: 071.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.78	Baseline	cochranj	10/09/21 17:49
Perfluorooctanesulfonic acid (PFOS)	4.42	Baseline	cochranj	10/09/21 17:49
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.87	Baseline	cochranj	10/09/21 17:49

537 (modified)

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1

SDG No.:

Instrument ID: LCA Analysis Batch Number: 54568

Lab Sample ID: CCV 140-54568/83 Client Sample ID:

Date Analyzed: 10/07/21 08:37 Lab File ID: 083.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.79	Baseline	cochranj	10/09/21 17:57
Perfluorooctanesulfonic acid (PFOS)	4.42	Baseline	cochranj	10/09/21 17:57
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.87	Baseline	cochranj	10/09/21 17:57

Lab Sample ID: CCV 140-54568/95 Client Sample ID:

Date Analyzed: 10/07/21 10:27 Lab File ID: 095.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.79	Baseline	cochranj	10/09/21 18:07
Perfluorooctanesulfonic acid (PFOS)	4.42	Baseline	cochranj	10/09/21 18:07
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.87	Baseline	cochranj	10/09/21 18:07

Lab Sample ID: CCV 140-54568/107 Client Sample ID:

Date Analyzed: 10/07/21 12:13 Lab File ID: 107.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.79	Baseline	cochranj	10/09/21 18:12
Perfluorooctanesulfonic acid (PFOS)	4.43	Baseline	cochranj	10/09/21 18:12
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.87	Baseline	cochranj	10/09/21 18:12

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1

SDG No.:

Instrument ID: ICA Analysis Batch Number: 54661

Lab Sample ID: CCVL 140-54661/6 Client Sample ID:

Date Analyzed: 10/09/21 15:12 Lab File ID: 006.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION	
		REASON	ANALYST DATE
Perfluorohexanesulfonic acid (PFHxS)	3.82	Baseline	cochranj 10/09/21 15:25
Perfluorooctanoic acid (PFOA)	4.16	Baseline	cochranj 10/09/21 15:25
Perfluorooctanesulfonic acid (PFOS)	4.46	Baseline	cochranj 10/09/21 15:26
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.91	Baseline	cochranj 10/09/21 15:26
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.05	Baseline	cochranj 10/09/21 15:26
2-(N-methylperfluoro-1-octanesulfon amido) ethanol	5.30	Baseline	cochranj 10/09/21 15:26

Lab Sample ID: CCVIS 140-54661/7 Client Sample ID:

Date Analyzed: 10/09/21 15:21 Lab File ID: 007.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION	
		REASON	ANALYST DATE
Perfluorohexanesulfonic acid (PFHxS)	3.82	Baseline	cochranj 10/09/21 15:47
Perfluorooctanesulfonic acid (PFOS)	4.46	Baseline	cochranj 10/09/21 15:47
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.91	Baseline	cochranj 10/09/21 15:47

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1

SDG No.:

Instrument ID: ICA Analysis Batch Number: 54661

Lab Sample ID: CCV 140-54661/19 Client Sample ID:

Date Analyzed: 10/09/21 17:09 Lab File ID: 019.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION	
		REASON	ANALYST DATE
Perfluorohexanesulfonic acid (PFHxS)	3.80	Baseline	cochranj 10/09/21 18:00
Perfluorooctanesulfonic acid (PFOS)	4.43	Baseline	cochranj 10/09/21 18:00
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.88	Baseline	cochranj 10/09/21 18:00

Lab Sample ID: CCV 140-54661/30 Client Sample ID:

Date Analyzed: 10/09/21 18:47 Lab File ID: 030.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION	
		REASON	ANALYST DATE
Perfluorohexanesulfonic acid (PFHxS)	3.79	Baseline	cochranj 10/09/21 19:19
Perfluorooctanesulfonic acid (PFOS)	4.43	Baseline	cochranj 10/09/21 19:19
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.88	Baseline	cochranj 10/09/21 19:20

Method PFC IDA

Fluorinated Hydrocarbons by Method
PFAS IDA

FORM II
PFAS SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Knoxville

Job No.: 140-24648-1

SDG No.: _____

Matrix: Air

Level: Low

GC Column (1): GeminiC18 3 ID: 3 (mm)

Client Sample ID	Lab Sample ID	HFPODA #
K-1975,1976 VEN CARBON BED INLET R1 OTM-45 FH	140-24648-1	94
K-1977,1978,1980 VEN CARBON BED INLET R1 OTM-45 BH	140-24648-2	89
K-1979 VEN CARBON BED INLET R1 OTM-45 IMPINGERS 1,2&3 COND	140-24648-3	139
K-1981 VEN CARBON BED INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	140-24648-4	91
K-1982,1983 VEN CARBON BED INLET R2 OTM-45 FH	140-24648-5	86
K-1984,1985,1987 VEN CARBON BED INLET R2 OTM-45 BH	140-24648-6	91
K-1986 VEN CARBON BED INLET R2 OTM-45 IMPINGERS 1,2&3 COND	140-24648-7	194 *5+
K-1988 VEN CARBON BED INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	140-24648-8	78
K-1989,1990 VEN CARBON BED INLET R3 OTM-45 FH	140-24648-9	92
K-1991,1992,1994 VEN CARBON BED INLET R3 OTM-45 BH	140-24648-10	91
K-1993 VEN CARBON BED INLET R3 OTM-45 IMPINGERS 1,2&3 COND	140-24648-11	140
K-1995 VEN CARBON BED INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	140-24648-12	91
	MB 140-54177/1-B	94
	MB 140-54178/1-B	87

HFPODA = 13C3 HFPO-DA

QC LIMITS
25-150

Column to be used to flag recovery values

FORM II 537 (modified)

FORM II
PFAS SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Knoxville

Job No.: 140-24648-1

SDG No.: _____

Matrix: Air

Level: Low

GC Column (1): GeminiC18 3 ID: 3 (mm)

Client Sample ID	Lab Sample ID	HFPODA #
	MB 140-54178/14-B	95
	MB 140-54348/1-B	84
	LCS 140-54177/2-B	91
	LCS 140-54178/2-B	90
	LCS 140-54348/2-B	91
	LCSD 140-54177/3-B	97
	LCSD 140-54178/3-B	93
	LCSD 140-54348/3-B	96

HFPODA = 13C3 HFPO-DA

QC LIMITS
25-150

Column to be used to flag recovery values

FORM II 537 (modified)

FORM III
PFAS LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: _092.d
 Lab ID: LCS 140-54177/2-B Client ID: _____

COMPOUND	SPIKE ADDED (ug/Sample)	LCS CONCENTRATION (ug/Sample)	LCS % REC	QC LIMITS REC	#
HFPO-DA	0.0200	0.01930	96	60-140	
13C3 HFPO-DA	0.0250	0.02273	91	25-150	

Column to be used to flag recovery and RPD values
 FORM III 537 (modified)

FORM III
PFAS LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: _065.d
 Lab ID: LCS 140-54178/2-B Client ID: _____

COMPOUND	SPIKE ADDED (ug/Sample)	LCS CONCENTRATION (ug/Sample)	LCS % REC	QC LIMITS REC	#
HFPO-DA	0.0200	0.01826	91	60-140	
13C3 HFPO-DA	0.0250	0.02253	90	25-150	

Column to be used to flag recovery and RPD values
 FORM III 537 (modified)

FORM III
PFAS LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: _040.d
 Lab ID: LCS 140-54348/2-B Client ID: _____

COMPOUND	SPIKE ADDED (ug/Sample)	LCS CONCENTRATION (ug/Sample)	LCS % REC	QC LIMITS REC	#
HFPO-DA	0.0100	0.009386	94	60-140	
13C3 HFPO-DA	0.0125	0.01142	91	25-150	

Column to be used to flag recovery and RPD values
 FORM III 537 (modified)

FORM III
 PFAS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: _093.d
 Lab ID: LCSD 140-54177/3-B Client ID: _____

COMPOUND	SPIKE ADDED (ug/Sample)	LCSD CONCENTRATION (ug/Sample)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
HFPO-DA	0.0200	0.02071	104	7	30	60-140	
13C3 HFPO-DA	0.0250	0.02414	97			25-150	

Column to be used to flag recovery and RPD values
 FORM III 537 (modified)

FORM III
 PFAS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: _066.d
 Lab ID: LCSD 140-54178/3-B Client ID: _____

COMPOUND	SPIKE ADDED (ug/Sample)	LCSD CONCENTRATION (ug/Sample)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
HFPO-DA	0.0200	0.01818	91	0	30	60-140	
13C3 HFPO-DA	0.0250	0.02319	93			25-150	

Column to be used to flag recovery and RPD values
 FORM III 537 (modified)

FORM III
 PFAS LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: _041.d
 Lab ID: LCSD 140-54348/3-B Client ID: _____

COMPOUND	SPIKE ADDED (ug/Sample)	LCSD CONCENTRATION (ug/Sample)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
HFPO-DA	0.0100	0.009247	92	1	30	60-140	
13C3 HFPO-DA	0.0125	0.01204	96			25-150	

Column to be used to flag recovery and RPD values
 FORM III 537 (modified)

FORM IV
PFAS METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Lab File ID: _091.d Lab Sample ID: MB 140-54177/1-B
 Matrix: Air Date Extracted: 09/24/2021 09:38
 Instrument ID: LCA Date Analyzed: 10/07/2021 09:49
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-54177/2-B	_092.d	10/07/2021 09:59
	LCSD 140-54177/3-B	_093.d	10/07/2021 10:09
K-1975,1976 VEN CARBON BED INLET R1 OTM-45 FH	140-24648-1	_102.d	10/07/2021 11:29
K-1982,1983 VEN CARBON BED INLET R2 OTM-45 FH	140-24648-5	_103.d	10/07/2021 11:37
K-1989,1990 VEN CARBON BED INLET R3 OTM-45 FH	140-24648-9	_027.d	10/09/2021 18:20

FORM IV
PFAS METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Lab File ID: _064.d Lab Sample ID: MB 140-54178/1-B
 Matrix: Air Date Extracted: 09/24/2021 09:41
 Instrument ID: LCA Date Analyzed: 10/07/2021 05:50
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-54178/2-B	_065.d	10/07/2021 05:59
	LCSD 140-54178/3-B	_066.d	10/07/2021 06:08

FORM IV
PFAS METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Lab File ID: _079.d Lab Sample ID: MB 140-54178/14-B
 Matrix: Air Date Extracted: 09/24/2021 09:41
 Instrument ID: LCA Date Analyzed: 10/07/2021 08:02
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
K-1981 VEN CARBON BED INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	140-24648-4	_085.d	10/07/2021 08:55
K-1988 VEN CARBON BED INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	140-24648-8	_087.d	10/07/2021 09:14
K-1995 VEN CARBON BED INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	140-24648-12	_089.d	10/07/2021 09:31
K-1977,1978,1980 VEN CARBON BED INLET R1 OTM-45 BH	140-24648-2	_020.d	10/09/2021 17:17
K-1984,1985,1987 VEN CARBON BED INLET R2 OTM-45 BH	140-24648-6	_021.d	10/09/2021 17:27
K-1991,1992,1994 VEN CARBON BED INLET R3 OTM-45 BH	140-24648-10	_022.d	10/09/2021 17:36

FORM IV
PFAS METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Lab File ID: _039.d Lab Sample ID: MB 140-54348/1-B
 Matrix: Air Date Extracted: 09/30/2021 08:55
 Instrument ID: LCA Date Analyzed: 10/07/2021 02:10
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-54348/2-B	_040.d	10/07/2021 02:19
	LCSD 140-54348/3-B	_041.d	10/07/2021 02:27
K-1979 VEN CARBON BED INLET R1 OTM-45 IMPINGERS 1,2&3 COND	140-24648-3	_050.d	10/07/2021 03:47
K-1986 VEN CARBON BED INLET R2 OTM-45 IMPINGERS 1,2&3 COND	140-24648-7	_051.d	10/07/2021 03:56
K-1993 VEN CARBON BED INLET R3 OTM-45 IMPINGERS 1,2&3 COND	140-24648-11	_052.d	10/07/2021 04:04

FORM VIII
PFAS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Sample No.: ICIS 140-54515/9 Date Analyzed: 10/05/2021 22:27
 Instrument ID: LCA GC Column: GeminiC18 3x100 ID: 3 (mm)
 Lab File ID (Standard): 009.d Heated Purge: (Y/N) N
 Calibration ID: 3272

	13PFOA		#	RT #	#	RT #
	AREA #	RT #				
INITIAL CALIBRATION MID-POINT	5652969	4.16				
UPPER LIMIT	8479454	4.36				
LOWER LIMIT	2826485	3.96				
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-54515/14		4987828	4.14			
CCVIS 140-54568/7		5905342	4.16			
CCVIS 140-54661/7		5675379	4.16			

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
PFAS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Sample No.: CCVIS 140-54568/7 Date Analyzed: 10/06/2021 21:19
 Instrument ID: LCA GC Column: GeminiC18 3x100 ID: 3 (mm)
 Lab File ID (Standard): 007.d Heated Purge: (Y/N) N
 Calibration ID: 3272

		13PFOA					
		AREA #	RT #	#	RT #	#	RT #
12/24 HOUR STD		5905342	4.16				
UPPER LIMIT		8858013	4.36				
LOWER LIMIT		2952671	3.96				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 140-54568/32		5828723	4.13				
MB 140-54348/1-B		6504302	4.13				
LCS 140-54348/2-B		6201956	4.12				
LCSD 140-54348/3-B		5964477	4.13				
CCV 140-54568/45		5159434	4.12				
140-24648-3	K-1979 VEN CARBON BED INLET R1 OTM-45 IMPINGERS 1,2&3 COND	228477*3	4.12				
140-24648-7	K-1986 VEN CARBON BED INLET R2 OTM-45 IMPINGERS 1,2&3 COND	124885*3	4.13				
140-24648-11	K-1993 VEN CARBON BED INLET R3 OTM-45 IMPINGERS 1,2&3 COND	229389*3	4.13				
CCV 140-54568/58		5666590	4.13				
MB 140-54178/1-B		5778922	4.13				
LCS 140-54178/2-B		5706659	4.13				
LCSD 140-54178/3-B		5642554	4.12				
CCV 140-54568/71		5432689	4.12				
MB 140-54178/14-B		5577386	4.12				
CCV 140-54568/83		5232999	4.13				
140-24648-4	K-1981 VEN CARBON BED INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	5951202	4.13				
140-24648-8	K-1988 VEN CARBON BED INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	6144559	4.13				
140-24648-12	K-1995 VEN CARBON BED INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	5711079	4.13				
MB 140-54177/1-B		5399146	4.13				

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
PFAS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Sample No.: CCVIS 140-54568/7 Date Analyzed: 10/06/2021 21:19
 Instrument ID: LCA GC Column: GeminiC18 3x100 ID: 3 (mm)
 Lab File ID (Standard): 007.d Heated Purge: (Y/N) N
 Calibration ID: 3272

	13PFOA		#	RT #	#	RT #
	AREA #	RT #				
12/24 HOUR STD	5905342	4.16				
UPPER LIMIT	8858013	4.36				
LOWER LIMIT	2952671	3.96				
LAB SAMPLE ID	CLIENT SAMPLE ID					
LCS 140-54177/2-B		5521347	4.13			
LCSD 140-54177/3-B		5169003	4.13			
CCV 140-54568/95		5328787	4.13			
140-24648-1	K-1975,1976 VEN CARBON BED INLET R1 OTM-45 FH	5632202	4.12			
140-24648-5	K-1982,1983 VEN CARBON BED INLET R2 OTM-45 FH	6759740	4.13			
CCV 140-54568/107		4965965	4.12			

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
PFAS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Sample No.: CCVIS 140-54661/7 Date Analyzed: 10/09/2021 15:21
 Instrument ID: LCA GC Column: GeminiC18 3x100 ID: 3 (mm)
 Lab File ID (Standard): 007.d Heated Purge: (Y/N) N
 Calibration ID: 3272

		13PFOA					
		AREA #	RT #	#	RT #	#	RT #
12/24 HOUR STD		5675379	4.16				
UPPER LIMIT		8513069	4.36				
LOWER LIMIT		2837690	3.96				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 140-54661/19		5140273	4.13				
140-24648-2	K-1977,1978,1980 VEN CARBON BED INLET R1 OTM-45 BH	5899100	4.14				
140-24648-6	K-1984,1985,1987 VEN CARBON BED INLET R2 OTM-45 BH	5923641	4.14				
140-24648-10	K-1991,1992,1994 VEN CARBON BED INLET R3 OTM-45 BH	5914399	4.13				
140-24648-9	K-1989,1990 VEN CARBON BED INLET R3 OTM-45 FH	5634996	4.13				
CCV 140-54661/30		5302106	4.13				

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 I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Eurofins TestAmerica, Knoxville</u>	Job No.: <u>140-24648-1</u>
SDG No.: _____	
Client Sample ID: <u>K-1975,1976 VEN CARBON BED INLET R1 OTM-45 FH</u>	Lab Sample ID: <u>140-24648-1</u>
Matrix: <u>Air</u>	Lab File ID: <u>_102.d</u>
Analysis Method: <u>537 (modified)</u>	Date Collected: <u>09/18/2021 00:00</u>
Extraction Method: <u>None</u>	Date Extracted: <u>09/24/2021 09:38</u>
Sample wt/vol: <u>1(Sample)</u>	Date Analyzed: <u>10/07/2021 11:29</u>
Con. Extract Vol.: <u>52(mL)</u>	Dilution Factor: <u>1</u>
Injection Volume: <u>1(uL)</u>	GC Column: <u>GeminiC18 3x100 ID: 3(mm)</u>
% Moisture: _____	GPC Cleanup: (Y/N) <u>N</u>
Analysis Batch No.: <u>54568</u>	Units: <u>ug/Sample</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	123		1.30	0.754

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	94		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_102.d
 Lims ID: 140-24648-A-1-C
 Client ID: K-1975,1976 VEN CARBON BED INLET R1 OTM-45 FH
 Sample Type: Client
 Inject. Date: 07-Oct-2021 11:29:06 ALS Bottle#: 48 Worklist Smp#: 102
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-102 140-24648-a-1-c
 Misc. Info.: Plate: 11 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 18:12:51 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 18:11:09
 Ratio Calibration: None

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA	287.00 > 169.00	3.535	3.561	-0.026	0.858	3014829	1.17	93.8	8528	
13 HFPO-DA	285.00 > 169.00	3.535	3.561	-0.026	1.000	15715349	4.73		13715	
* 22 13C2 PFOA	415.00 > 370.00	4.119	4.155	-0.036		5632202	1.25		21575	

QC Flag Legend
Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_102.d

Injection Date: 07-Oct-2021 11:29:06

Instrument ID: LCA

Lims ID: 140-24648-A-1-C

Lab Sample ID: 140-24648-1

Client ID: K-1975,1976 VEN CARBON BED INLET R1 OTM-45 FH

Operator ID: Cochran, Bobby

ALS Bottle#: 48

Worklist Smp#: 102

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

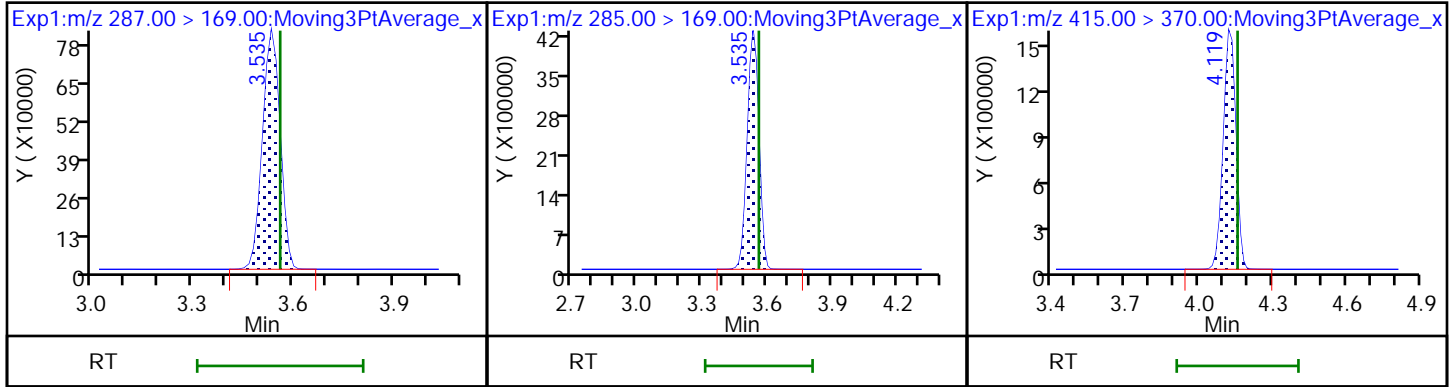
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 12 13C3 HFPO-DA

13 HFPO-DA

* 22 13C2 PFOA



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Client Sample ID: K-1977,1978,1980 VEN Lab Sample ID: 140-24648-2
 CARBON BED INLET R1
 OTM-45 BH
 Matrix: Air Lab File ID: _020.d
 Analysis Method: 537 (modified) Date Collected: 09/18/2021 00:00
 Extraction Method: None Date Extracted: 09/24/2021 09:41
 Sample wt/vol: 1(Sample) Date Analyzed: 10/09/2021 17:17
 Con. Extract Vol.: 360(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: GeminiC18 3x100 ID: 3(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54661 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	4590		72.0	63.0

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	89		25-150

Eurofins TestAmerica, Knoxville
 Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b_020.d
 Lims ID: 140-24648-A-2-C
 Client ID: K-1977,1978,1980 VEN CARBON BED INLET R1 OTM-45 BH
 Sample Type: Client
 Inject. Date: 09-Oct-2021 17:17:58 ALS Bottle#: 20 Worklist Smp#: 20
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0021009-020 140-24648-a-2-c
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 10-Oct-2021 08:27:43 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1620

First Level Reviewer: cochranj Date: 10-Oct-2021 08:16:39
 Ratio Calibration: None

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
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D 12 13C3 HFPO-DA	287.00 > 169.00	3.548	3.575	-0.027	0.856	3008713	1.12	89.3	3884	
13 HFPO-DA	285.00 > 169.00	3.548	3.575	-0.027	1.000	16922354	5.10		8188	
* 22 13C2 PFOA	415.00 > 370.00	4.143	4.155	-0.012		5899100	1.25		13187	

QC Flag Legend
 Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b_020.d

Injection Date: 09-Oct-2021 17:17:58

Instrument ID: LCA

Lims ID: 140-24648-A-2-C

Lab Sample ID: 140-24648-2

Client ID: K-1977,1978,1980 VEN CARBON BED INLET R1 OTM-45 BH

Operator ID: Cochran, Bobby

ALS Bottle#: 20

Worklist Smp#: 20

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

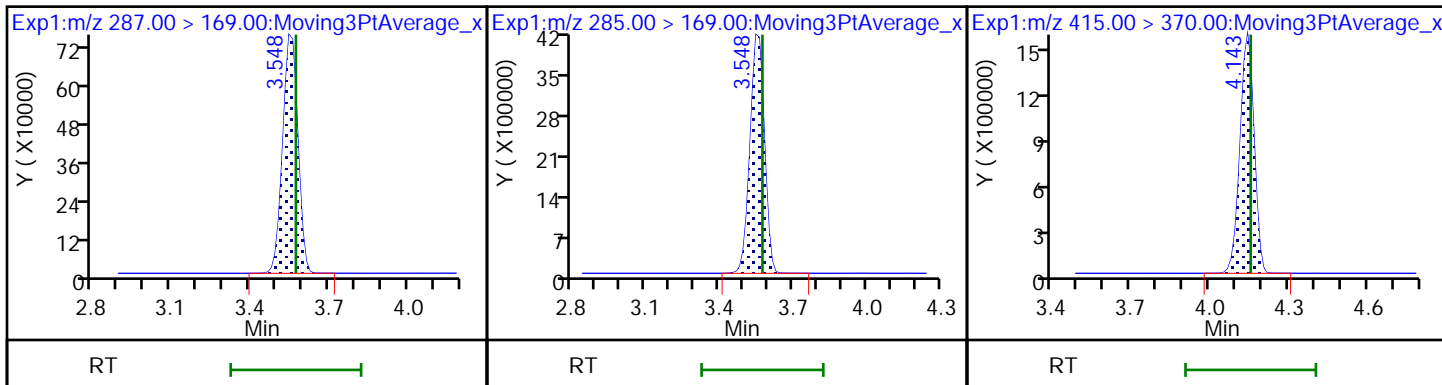
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 12 13C3 HFPO-DA

13 HFPO-DA

* 22 13C2 PFOA



Eurofins TestAmerica, Knoxville
Recovery Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b_020.d
 Lims ID: 140-24648-A-2-C
 Client ID: K-1977,1978,1980 VEN CARBON BED INLET R1 OTM-45 BH
 Sample Type: Client
 Inject. Date: 09-Oct-2021 17:17:58 ALS Bottle#: 20 Worklist Smp#: 20
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0021009-020 140-24648-a-2-c
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 10-Oct-2021 08:27:43 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1620

First Level Reviewer: cochranj Date: 10-Oct-2021 08:16:39

Compound	Amount Added	Amount Recovered	% Rec.
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FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Client Sample ID: K-1979 VEN CARBON BED Lab Sample ID: 140-24648-3
 INLET R1 OTM-45 IMPINGERS
 1,2&3 COND
 Matrix: Air Lab File ID: _050.d
 Analysis Method: 537 (modified) Date Collected: 09/18/2021 00:00
 Extraction Method: None Date Extracted: 09/30/2021 08:55
 Sample wt/vol: 0.00615 (Sample) Date Analyzed: 10/07/2021 03:47
 Con. Extract Vol.: 10 (mL) Dilution Factor: 25
 Injection Volume: 1 (uL) GC Column: GeminiC18 3x100 ID: 3 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54568 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	322		2.03	0.335

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	139		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_050.d
 Lims ID: 140-24648-A-3-B
 Client ID: K-1979 VEN CARBON BED INLET R1 OTM-45 IMPINGERS 1,2&3 COND
 Sample Type: Client
 Inject. Date: 07-Oct-2021 03:47:13 ALS Bottle#: 50 Worklist Smp#: 50
 Injection Vol: 1.0 ul Dil. Factor: 25.0000
 Sample Info: 140-0020973-050 140-24648-a-3-b
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 17:31:28 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675
 First Level Reviewer: cochranj Date: 09-Oct-2021 17:28:56
 Ratio Calibration: None

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA	287.00 > 169.00	3.535	3.561	-0.026	0.858	181683	0.0696	139	757	
13 HFPO-DA	285.00 > 169.00	3.535	3.561	-0.026	1.000	39688858	7.93		31720	
* 22 13C2 PFOA	415.00 > 370.00	4.119	4.155	-0.036		228477	0.0500		1273	

[QC Flag Legend](#)
Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_050.d

Injection Date: 07-Oct-2021 03:47:13

Instrument ID: LCA

Lims ID: 140-24648-A-3-B

Lab Sample ID: 140-24648-3

Client ID: K-1979 VEN CARBON BED INLET R1 OTM-45 IMPINGERS 1,2&3 COND

Operator ID: Cochran, Bobby

ALS Bottle#: 50 Worklist Smp#: 50

Injection Vol: 1.0 ul

Dil. Factor: 25.0000

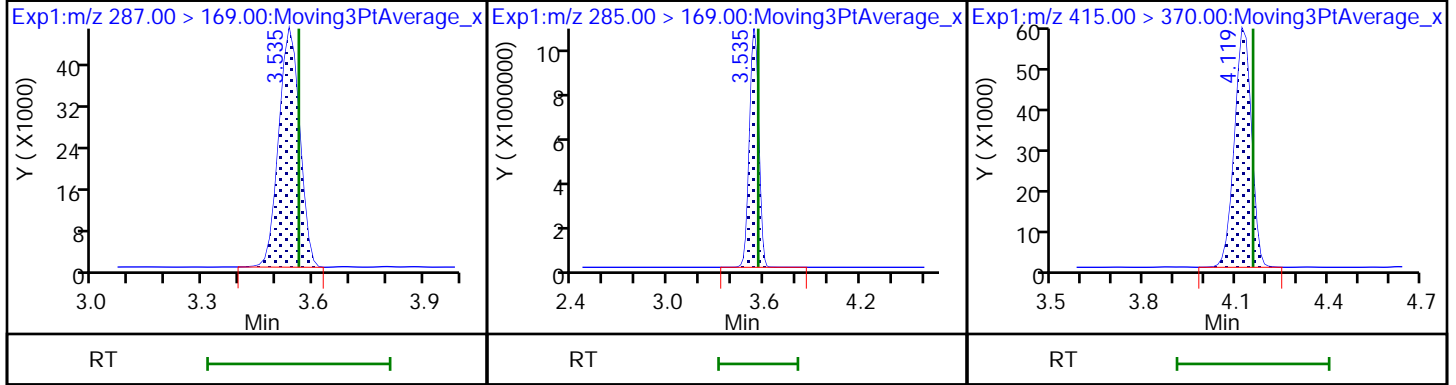
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 12 13C3 HFPO-DA

13 HFPO-DA

* 22 13C2 PFOA



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Client Sample ID: K-1981 VEN CARBON BED Lab Sample ID: 140-24648-4
 INLET R1 OTM-45
 BREAKTHROUGH XAD-2 RESIN
 TUBE
 Matrix: Air Lab File ID: _085.d
 Analysis Method: 537 (modified) Date Collected: 09/18/2021 00:00
 Extraction Method: None Date Extracted: 09/24/2021 09:41
 Sample wt/vol: 1 (Sample) Date Analyzed: 10/07/2021 08:55
 Con. Extract Vol.: 360 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: GeminiC18 3x100 ID: 3 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54568 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	9.03		0.160	0.140

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	91		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_085.d
 Lims ID: 140-24648-A-4-C
 Client ID: K-1981 VEN CARBON BED INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE
 Sample Type: Client
 Inject. Date: 07-Oct-2021 08:55:32 ALS Bottle#: 31 Worklist Smp#: 85
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-085 140-24648-a-4-c
 Misc. Info.: Plate: 11 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 18:07:45 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675
 Ratio Calibration: None

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA	287.00 > 169.00	3.535	3.561	-0.026	0.856	3100484	1.15	91.2	10663	
13 HFPO-DA	285.00 > 169.00	3.535	3.561	-0.026	1.000	15270053	4.51		10323	
* 22 13C2 PFOA	415.00 > 370.00	4.130	4.155	-0.025		5951202	1.26		23490	

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_085.d

Injection Date: 07-Oct-2021 08:55:32

Instrument ID: LCA

Lims ID: 140-24648-A-4-C

Lab Sample ID: 140-24648-4

Client ID: K-1981 VEN CARBON BED INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Operator ID: Cochran, Bobby

ALS Bottle#: 31 Worklist Smp#: 85

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

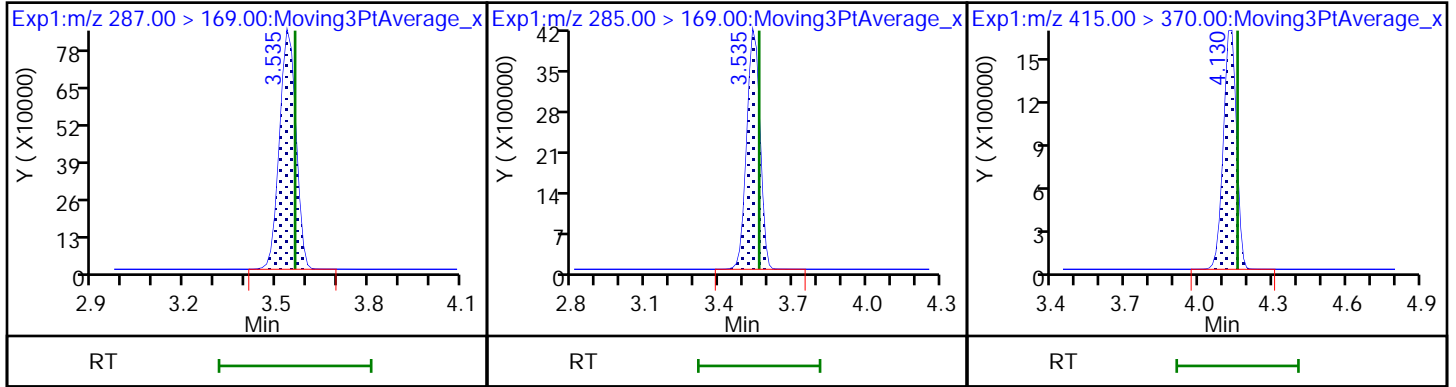
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 12 13C3 HFPO-DA

13 HFPO-DA

* 22 13C2 PFOA



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Client Sample ID: K-1982,1983 VEN CARBON Lab Sample ID: 140-24648-5
 BED INLET R2 OTM-45 FH
 Matrix: Air Lab File ID: _103.d
 Analysis Method: 537 (modified) Date Collected: 09/18/2021 00:00
 Extraction Method: None Date Extracted: 09/24/2021 09:38
 Sample wt/vol: 1(Sample) Date Analyzed: 10/07/2021 11:37
 Con. Extract Vol.: 51(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: GeminiC18 3x100 ID: 3(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54568 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	43.1		0.638	0.370

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	86		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_103.d
 Lims ID: 140-24648-A-5-C
 Client ID: K-1982,1983 VEN CARBON BED INLET R2 OTM-45 FH
 Sample Type: Client
 Inject. Date: 07-Oct-2021 11:37:54 ALS Bottle#: 49 Worklist Smp#: 103
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-103 140-24648-a-5-c
 Misc. Info.: Plate: 11 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 18:12:51 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675
 First Level Reviewer: cochranj Date: 09-Oct-2021 18:11:18
 Ratio Calibration: None

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA	287.00 > 169.00	3.535	3.561	-0.026	0.856	3331082	1.08	86.5	9822	
13 HFPO-DA	285.00 > 169.00	3.548	3.561	-0.013	1.004	12385609	3.38		8933	
* 22 13C2 PFOA	415.00 > 370.00	4.130	4.155	-0.025		6759740	1.26		28994	

QC Flag Legend
Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_103.d

Injection Date: 07-Oct-2021 11:37:54

Instrument ID: LCA

Lims ID: 140-24648-A-5-C

Lab Sample ID: 140-24648-5

Client ID: K-1982,1983 VEN CARBON BED INLET R2 OTM-45 FH

Operator ID: Cochran, Bobby

ALS Bottle#: 49

Worklist Smp#: 103

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

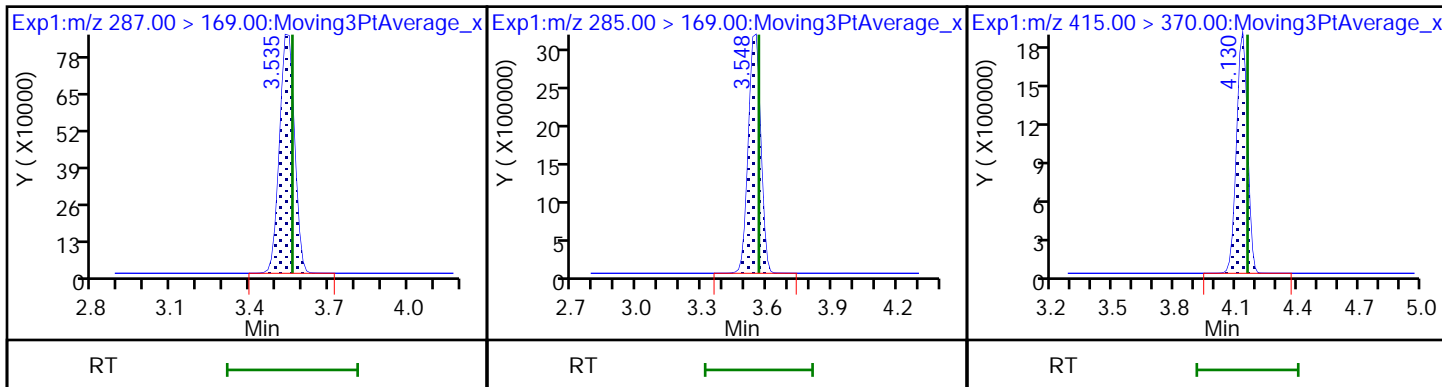
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 12 13C3 HFPO-DA

13 HFPO-DA

* 22 13C2 PFOA



Eurofins TestAmerica, Knoxville
Recovery Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_103.d
 Lims ID: 140-24648-A-5-C
 Client ID: K-1982,1983 VEN CARBON BED INLET R2 OTM-45 FH
 Sample Type: Client
 Inject. Date: 07-Oct-2021 11:37:54 ALS Bottle#: 49 Worklist Smp#: 103
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-103 140-24648-a-5-c
 Misc. Info.: Plate: 11 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 18:12:51 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 18:11:18

Compound	Amount Added	Amount Recovered	% Rec.
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FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>Eurofins TestAmerica, Knoxville</u>	Job No.: <u>140-24648-1</u>
SDG No.: _____	
Client Sample ID: <u>K-1984,1985,1987 VEN</u> <u>CARBON BED INLET R2</u> <u>OTM-45 BH</u>	Lab Sample ID: <u>140-24648-6</u>
Matrix: <u>Air</u>	Lab File ID: <u>021.d</u>
Analysis Method: <u>537 (modified)</u>	Date Collected: <u>09/18/2021 00:00</u>
Extraction Method: <u>None</u>	Date Extracted: <u>09/24/2021 09:41</u>
Sample wt/vol: <u>1(Sample)</u>	Date Analyzed: <u>10/09/2021 17:27</u>
Con. Extract Vol.: <u>360(mL)</u>	Dilution Factor: <u>1</u>
Injection Volume: <u>1(uL)</u>	GC Column: <u>GeminiC18 3x100 ID: 3(mm)</u>
% Moisture: _____	GPC Cleanup: (Y/N) <u>N</u>
Analysis Batch No.: <u>54661</u>	Units: <u>ug/Sample</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	7290		72.0	63.0

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	91		25-150

Eurofins TestAmerica, Knoxville
 Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b_021.d
 Lims ID: 140-24648-A-6-C
 Client ID: K-1984,1985,1987 VEN CARBON BED INLET R2 OTM-45 BH
 Sample Type: Client
 Inject. Date: 09-Oct-2021 17:27:59 ALS Bottle#: 21 Worklist Smp#: 21
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0021009-021 140-24648-a-6-c
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 10-Oct-2021 08:27:43 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1620

First Level Reviewer: cochranj Date: 09-Oct-2021 18:01:38
 Ratio Calibration: None

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
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D 12 13C3 HFPO-DA	287.00 > 169.00	3.548	3.575	-0.027	0.856	3074434	1.14	90.9	4867	
13 HFPO-DA	285.00 > 169.00	3.548	3.575	-0.027	1.000	27423073	8.10		7917	
* 22 13C2 PFOA	415.00 > 370.00	4.143	4.155	-0.012		5923641	1.25		13737	

[QC Flag Legend](#)
 Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b_021.d

Injection Date: 09-Oct-2021 17:27:59

Instrument ID: LCA

Lims ID: 140-24648-A-6-C

Lab Sample ID: 140-24648-6

Client ID: K-1984,1985,1987 VEN CARBON BED INLET R2 OTM-45 BH

Operator ID: Cochran, Bobby

ALS Bottle#: 21

Worklist Smp#: 21

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

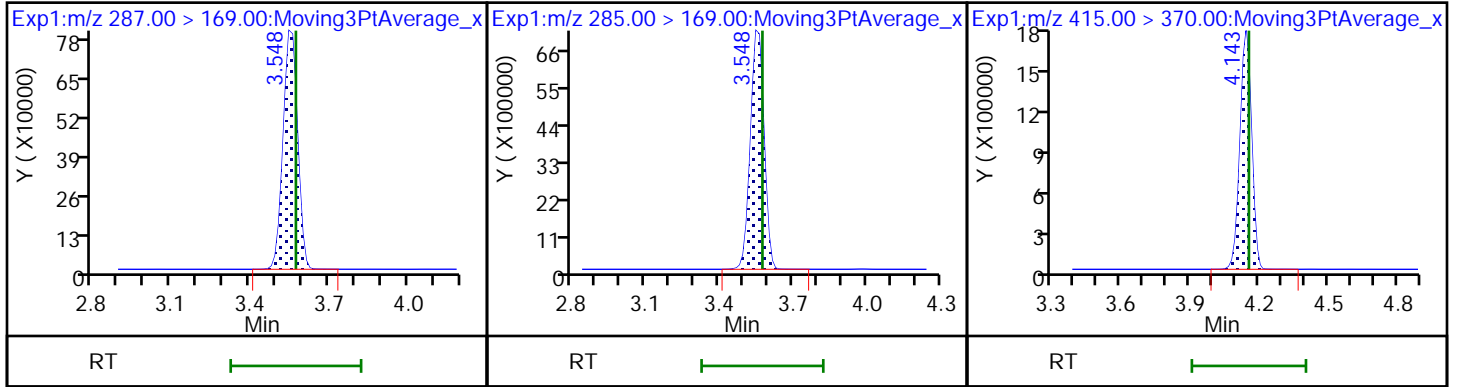
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 12 13C3 HFPO-DA

13 HFPO-DA

* 22 13C2 PFOA



Eurofins TestAmerica, Knoxville
Recovery Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b_021.d
 Lims ID: 140-24648-A-6-C
 Client ID: K-1984,1985,1987 VEN CARBON BED INLET R2 OTM-45 BH
 Sample Type: Client
 Inject. Date: 09-Oct-2021 17:27:59 ALS Bottle#: 21 Worklist Smp#: 21
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0021009-021 140-24648-a-6-c
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 10-Oct-2021 08:27:43 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1620

First Level Reviewer: cochranj Date: 09-Oct-2021 18:01:38

Compound	Amount Added	Amount Recovered	% Rec.
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FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Client Sample ID: K-1986 VEN CARBON BED Lab Sample ID: 140-24648-7
 INLET R2 OTM-45 IMPINGERS
 1,2&3 COND
 Matrix: Air Lab File ID: _051.d
 Analysis Method: 537 (modified) Date Collected: 09/18/2021 00:00
 Extraction Method: None Date Extracted: 09/30/2021 08:55
 Sample wt/vol: 0.00625 (Sample) Date Analyzed: 10/07/2021 03:56
 Con. Extract Vol.: 10 (mL) Dilution Factor: 50
 Injection Volume: 1 (uL) GC Column: GeminiC18 3x100 ID: 3 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54568 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	466		4.00	0.660

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	194	*5+	25-150

Eurofins TestAmerica, Knoxville
 Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_051.d
 Lims ID: 140-24648-A-7-B
 Client ID: K-1986 VEN CARBON BED INLET R2 OTM-45 IMPINGERS 1,2&3 COND
 Sample Type: Client
 Inject. Date: 07-Oct-2021 03:56:03 ALS Bottle#: 51 Worklist Smp#: 51
 Injection Vol: 1.0 ul Dil. Factor: 50.0000
 Sample Info: 140-0020973-051 140-24648-a-7-b
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 17:31:28 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675
 First Level Reviewer: cochranj Date: 09-Oct-2021 17:29:17
 Ratio Calibration: None

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA	287.00 > 169.00	3.548	3.561	-0.013	0.859	138124	0.0484	194	729	
13 HFPO-DA	285.00 > 169.00	3.548	3.561	-0.013	1.000	44289316	5.82		30533	
* 22 13C2 PFOA	415.00 > 370.00	4.130	4.155	-0.025		124885	0.0250		698	

QC Flag Legend
 Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_051.d

Injection Date: 07-Oct-2021 03:56:03

Instrument ID: LCA

Lims ID: 140-24648-A-7-B

Lab Sample ID: 140-24648-7

Client ID: K-1986 VEN CARBON BED INLET R2 OTM-45 IMPINGERS 1,2&3 COND

Operator ID: Cochran, Bobby

ALS Bottle#: 51

Worklist Smp#: 51

Injection Vol: 1.0 ul

Dil. Factor: 50.0000

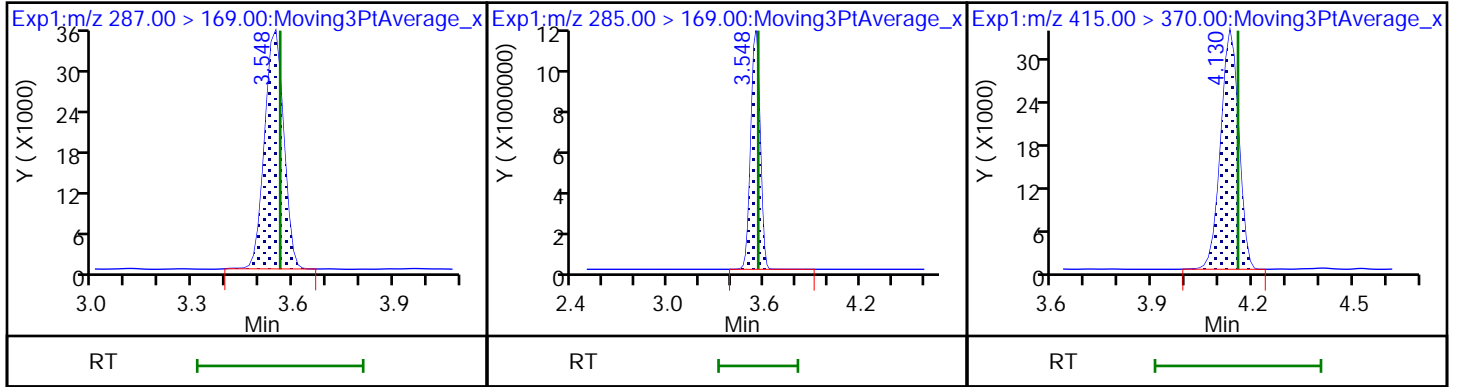
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 12 13C3 HFPO-DA

13 HFPO-DA

* 22 13C2 PFOA



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Client Sample ID: K-1988 VEN CARBON BED Lab Sample ID: 140-24648-8
 INLET R2 OTM-45
 BREAKTHROUGH XAD-2 RESIN
 TUBE
 Matrix: Air Lab File ID: _087.d
 Analysis Method: 537 (modified) Date Collected: 09/18/2021 00:00
 Extraction Method: None Date Extracted: 09/24/2021 09:41
 Sample wt/vol: 1 (Sample) Date Analyzed: 10/07/2021 09:14
 Con. Extract Vol.: 360 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: GeminiC18 3x100 ID: 3 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54568 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	22.9		0.800	0.700

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	78		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_087.d
 Lims ID: 140-24648-A-8-C
 Client ID: K-1988 VEN CARBON BED INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE
 Sample Type: Client
 Inject. Date: 07-Oct-2021 09:14:20 ALS Bottle#: 33 Worklist Smp#: 87
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-087 140-24648-a-8-c
 Misc. Info.: Plate: 11 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 18:07:45 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1

Process Host: CTX1675

Ratio Calibration: None

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA	287.00 > 169.00	3.535	3.561	-0.026	0.856	2751187	0.9815	78.4	10287	
13 HFPO-DA	285.00 > 169.00	3.535	3.561	-0.026	1.000	6949908	2.29		4741	
* 22 13C2 PFOA	415.00 > 370.00	4.131	4.155	-0.024		6144559	1.25		28510	

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_087.d

Injection Date: 07-Oct-2021 09:14:20

Instrument ID: LCA

Lims ID: 140-24648-A-8-C

Lab Sample ID: 140-24648-8

Client ID: K-1988 VEN CARBON BED INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Operator ID: Cochran, Bobby

ALS Bottle#: 33 Worklist Smp#: 87

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

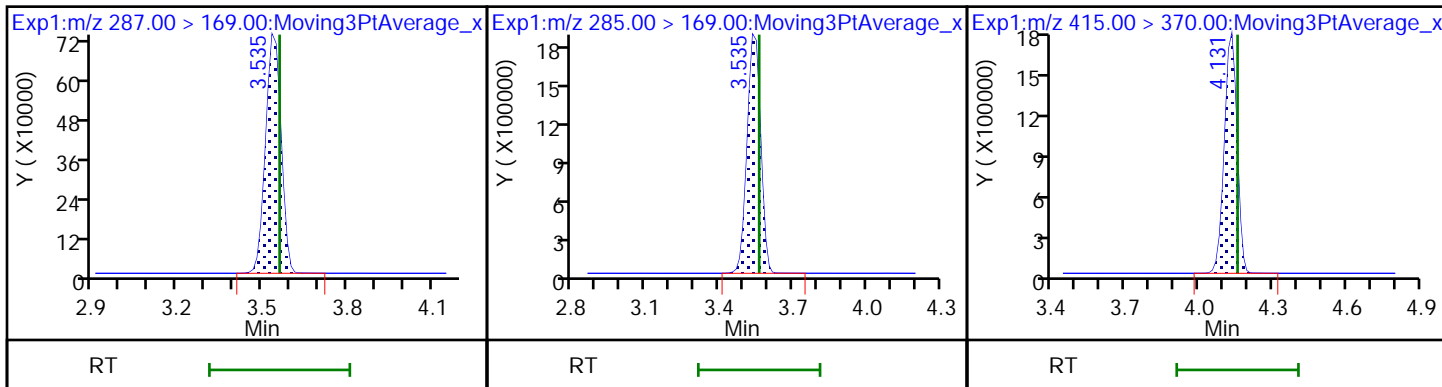
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 12 13C3 HFPO-DA

13 HFPO-DA

* 22 13C2 PFOA



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
SDG No.: _____
Client Sample ID: K-1989,1990 VEN CARBON Lab Sample ID: 140-24648-9
 BED INLET R3 OTM-45 FH
Matrix: Air Lab File ID: _027.d
Analysis Method: 537 (modified) Date Collected: 09/18/2021 00:00
Extraction Method: None Date Extracted: 09/24/2021 09:38
Sample wt/vol: 1(Sample) Date Analyzed: 10/09/2021 18:20
Con. Extract Vol.: 88(mL) Dilution Factor: 1
Injection Volume: 1(uL) GC Column: GeminiC18 3x100 ID: 3(mm)
% Moisture: _____ GPC Cleanup: (Y/N) N
Analysis Batch No.: 54661 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	89.9		0.880	0.510

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	92		25-150

Eurofins TestAmerica, Knoxville
 Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b_027.d
 Lims ID: 140-24648-A-9-C
 Client ID: K-1989,1990 VEN CARBON BED INLET R3 OTM-45 FH
 Sample Type: Client
 Inject. Date: 09-Oct-2021 18:20:50 ALS Bottle#: 27 Worklist Smp#: 27
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0021009-027 140-24648-a-9-c
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 10-Oct-2021 08:27:43 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1620
 First Level Reviewer: cochranj Date: 10-Oct-2021 08:19:23
 Ratio Calibration: None

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA	287.00 > 169.00	3.535	3.575	-0.040	0.856	2956346	1.15	92.2	4274	
13 HFPO-DA	285.00 > 169.00	3.535	3.575	-0.040	1.000	16628651	5.11		7700	
* 22 13C2 PFOA	415.00 > 370.00	4.130	4.155	-0.025		5634996	1.26		7627	

QC Flag Legend
 Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b_027.d

Injection Date: 09-Oct-2021 18:20:50

Instrument ID: LCA

Lims ID: 140-24648-A-9-C

Lab Sample ID: 140-24648-9

Client ID: K-1989,1990 VEN CARBON BED INLET R3 OTM-45 FH

Operator ID: Cochran, Bobby

ALS Bottle#: 27

Worklist Smp#: 27

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

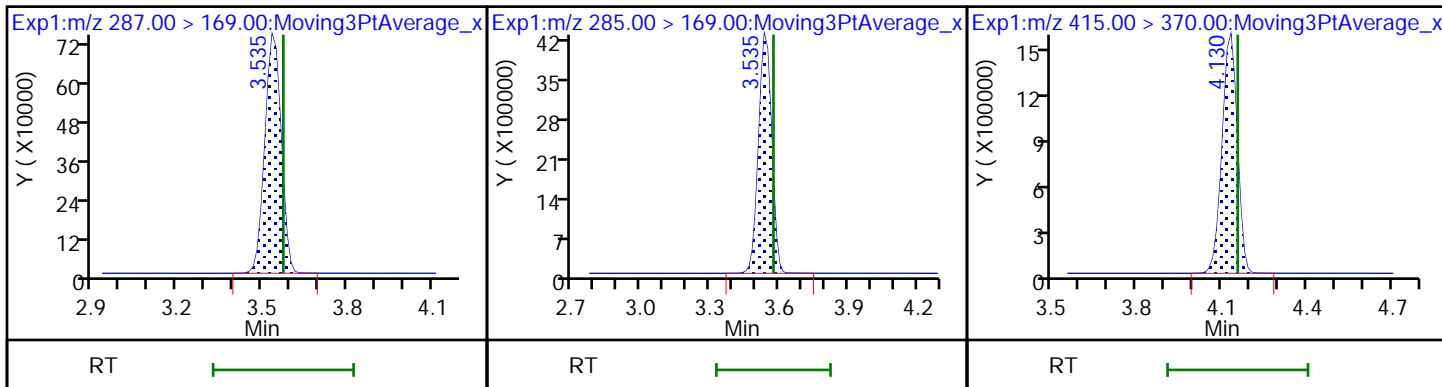
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 12 13C3 HFPO-DA

13 HFPO-DA

* 22 13C2 PFOA



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Client Sample ID: K-1991,1992,1994 VEN Lab Sample ID: 140-24648-10
 CARBON BED INLET R3
 OTM-45 BH
 Matrix: Air Lab File ID: _022.d
 Analysis Method: 537 (modified) Date Collected: 09/18/2021 00:00
 Extraction Method: None Date Extracted: 09/24/2021 09:41
 Sample wt/vol: 1(Sample) Date Analyzed: 10/09/2021 17:36
 Con. Extract Vol.: 360(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: GeminiC18 3x100 ID: 3(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54661 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	4130		72.0	63.0

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	91		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b_022.d
 Lims ID: 140-24648-A-10-C
 Client ID: K-1991,1992,1994 VEN CARBON BED INLET R3 OTM-45 BH
 Sample Type: Client
 Inject. Date: 09-Oct-2021 17:36:50 ALS Bottle#: 22 Worklist Smp#: 22
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0021009-022 140-24648-a-10-c
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 10-Oct-2021 08:27:43 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1620
 First Level Reviewer: cochranj Date: 10-Oct-2021 08:17:45
 Ratio Calibration: None

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA	287.00 > 169.00	3.548	3.575	-0.027	0.859	3063933	1.13	90.7	4697	
13 HFPO-DA	285.00 > 169.00	3.548	3.575	-0.027	1.000	15500984	4.59		6459	
* 22 13C2 PFOA	415.00 > 370.00	4.131	4.155	-0.024		5914399	1.25		17146	

[QC Flag Legend](#)
Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b_022.d

Injection Date: 09-Oct-2021 17:36:50

Instrument ID: LCA

Lims ID: 140-24648-A-10-C

Lab Sample ID: 140-24648-10

Client ID: K-1991,1992,1994 VEN CARBON BED INLET R3 OTM-45 BH

Operator ID: Cochran, Bobby

ALS Bottle#: 22

Worklist Smp#: 22

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

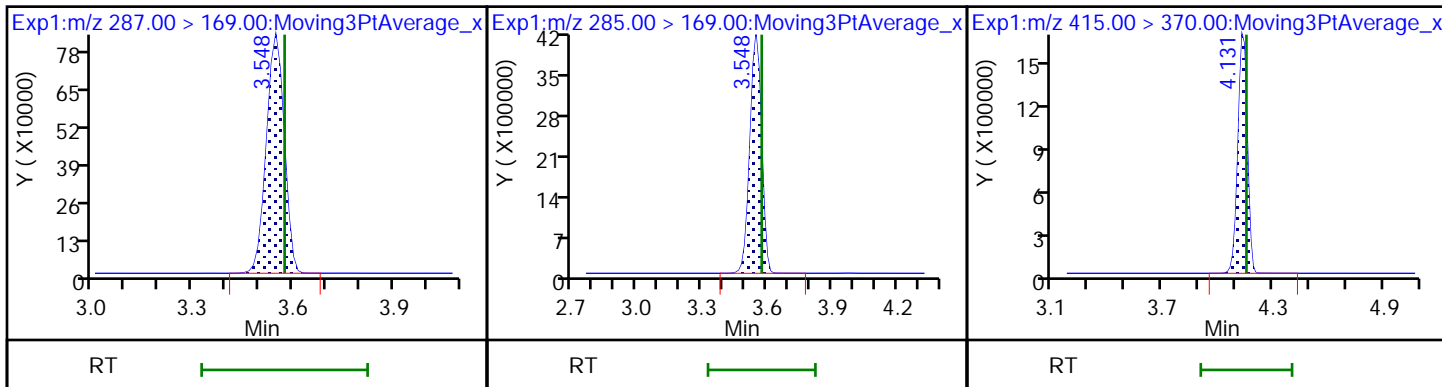
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 12 13C3 HFPO-DA

13 HFPO-DA

* 22 13C2 PFOA



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Client Sample ID: K-1993 VEN CARBON BED Lab Sample ID: 140-24648-11
 INLET R3 OTM-45 IMPINGERS
 1,2&3 COND
 Matrix: Air Lab File ID: _052.d
 Analysis Method: 537 (modified) Date Collected: 09/18/2021 00:00
 Extraction Method: None Date Extracted: 09/30/2021 08:55
 Sample wt/vol: 0.00625 (Sample) Date Analyzed: 10/07/2021 04:04
 Con. Extract Vol.: 10 (mL) Dilution Factor: 25
 Injection Volume: 1 (uL) GC Column: GeminiC18 3x100 ID: 3 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54568 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	293		2.00	0.330

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	140		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_052.d
 Lims ID: 140-24648-A-11-B
 Client ID: K-1993 VEN CARBON BED INLET R3 OTM-45 IMPINGERS 1,2&3 COND
 Sample Type: Client
 Inject. Date: 07-Oct-2021 04:04:53 ALS Bottle#: 52 Worklist Smp#: 52
 Injection Vol: 1.0 ul Dil. Factor: 25.0000
 Sample Info: 140-0020973-052 140-24648-a-11-b
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 17:31:28 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675
 First Level Reviewer: cochranj Date: 09-Oct-2021 17:29:27
 Ratio Calibration: None

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA	287.00 > 169.00	3.535	3.561	-0.026	0.856	184069	0.0702	140	821	
13 HFPO-DA	285.00 > 169.00	3.535	3.561	-0.026	1.000	37089227	7.32		13106	
* 22 13C2 PFOA	415.00 > 370.00	4.130	4.155	-0.025		229389	0.0500		1192	

QC Flag Legend
Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_052.d

Injection Date: 07-Oct-2021 04:04:53

Instrument ID: LCA

Lims ID: 140-24648-A-11-B

Lab Sample ID: 140-24648-11

Client ID: K-1993 VEN CARBON BED INLET R3 OTM-45 IMPINGERS 1,2&3 COND

Operator ID: Cochran, Bobby

ALS Bottle#: 52 Worklist Smp#: 52

Injection Vol: 1.0 ul

Dil. Factor: 25.0000

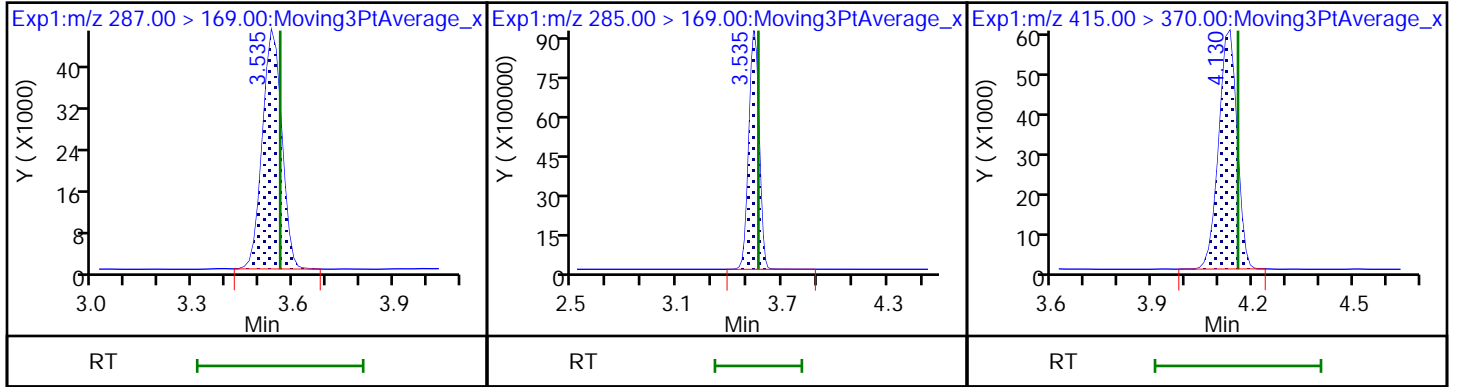
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 12 13C3 HFPO-DA

13 HFPO-DA

* 22 13C2 PFOA



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Client Sample ID: K-1995 VEN CARBON BED Lab Sample ID: 140-24648-12
 INLET R3 OTM-45
 BREAKTHROUGH XAD-2 RESIN
 TUBE
 Matrix: Air Lab File ID: _089.d
 Analysis Method: 537 (modified) Date Collected: 09/18/2021 00:00
 Extraction Method: None Date Extracted: 09/24/2021 09:41
 Sample wt/vol: 1 (Sample) Date Analyzed: 10/07/2021 09:31
 Con. Extract Vol.: 360 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: GeminiC18 3x100 ID: 3 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54568 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	29.0		0.800	0.700

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	91		25-150

Eurofins TestAmerica, Knoxville
 Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_089.d
 Lims ID: 140-24648-A-12-C
 Client ID: K-1995 VEN CARBON BED INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE
 Sample Type: Client
 Inject. Date: 07-Oct-2021 09:31:57 ALS Bottle#: 35 Worklist Smp#: 89
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-089 140-24648-a-12-c
 Misc. Info.: Plate: 11 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 18:07:45 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1

Process Host: CTX1675

Ratio Calibration: None

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA	287.00 > 169.00	3.535	3.561	-0.026	0.856	2963839	1.14	90.8	10392	
13 HFPO-DA	285.00 > 169.00	3.535	3.561	-0.026	1.000	9475893	2.90		6221	
* 22 13C2 PFOA	415.00 > 370.00	4.130	4.155	-0.025		5711079	1.25		12738	

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_089.d

Injection Date: 07-Oct-2021 09:31:57

Instrument ID: LCA

Lims ID: 140-24648-A-12-C

Lab Sample ID: 140-24648-12

Client ID: K-1995 VEN CARBON BED INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Operator ID: Cochran, Bobby

ALS Bottle#: 35 Worklist Smp#: 89

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

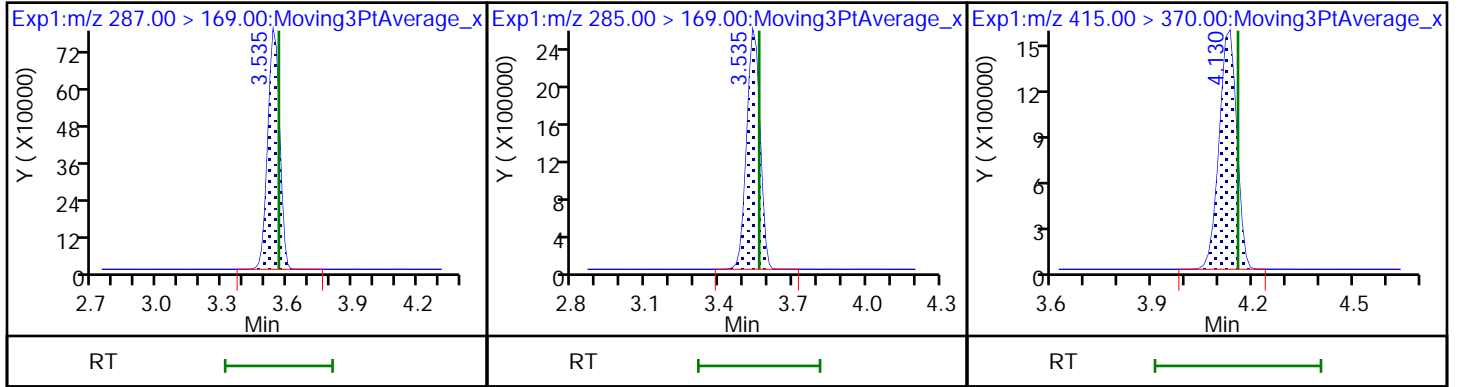
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 12 13C3 HFPO-DA

13 HFPO-DA

* 22 13C2 PFOA



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

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1 Analy Batch No.: 54515

SDG No.: _____

Instrument ID: LCA GC Column: GeminiC18 3 ID: 3 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/05/2021 22:00 Calibration End Date: 10/05/2021 22:53 Calibration ID: 3272

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-54515/6	006.d
Level 2	IC 140-54515/7	007.d
Level 3	IC 140-54515/8	008.d
Level 4	ICIS 140-54515/9	009.d
Level 5	IC 140-54515/10	010.d
Level 6	IC 140-54515/11	011.d
Level 7	IC 140-54515/12	012.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 7	LVL 3	LVL 4	LVL 5	B	M1		M2									
Perfluorobutanoic acid (PFBA)	0.8442 0.7694	0.8406 0.7549	0.7872	0.7662	0.7358		AveI D	0.785 5			5.3		35.0					
Perfluoropentanoic acid (PFPeA)	1.1043 0.9727	1.0981 0.9491	1.0517	0.9707	0.9443		AveI D	1.013 0			6.9		35.0					
Perfluorobutanesulfonic acid (PFBS)	1.2247 1.1027	1.1847 1.1071	1.1366	1.1038	1.0228		AveI D	1.126 1			5.8		35.0					
4:2 FTS	2.4811 2.5807	2.7194 0.9919	2.5360	2.5345	2.2945		AveI D	2.499 9			5.7		35.0					
Perfluoropentanesulfonic acid (PFPeS)	1.0214 0.8505	0.9919 0.8413	0.8993	0.8497	0.8384		L2ID	0.004 5	0.854 2				0.9990				0.9900	
Perfluorohexanoic acid (PFHxA)	0.9338 0.8230	0.9308 0.8238	0.8920	0.8220	0.7750		AveI D	0.857 2			7.2		35.0					
HFPO-DA	1.7244 1.3525	1.5356 1.4242	1.4676	1.3649	1.3316		L2ID	0.008 7	1.376 0				0.9990				0.9900	
Perfluorohexanesulfonic acid (PFHxS)	1.6415 1.3643	1.5174 1.3708	1.4440	1.3125	1.3042		L2ID	0.006 9	1.351 1				0.9990				0.9900	
Perfluoroheptanoic acid (PFHpA)	1.2260 1.0253	1.1901 1.0468	1.1124	1.0523	1.0347		L2ID	0.004 9	1.051 9				0.9990				0.9900	
DONA	3.3260 3.0563	3.5814 2.9684	3.3127	3.3890	3.0699		AveI D	3.243 4			6.8		35.0					
Perfluoroheptanesulfonic Acid (PFHpS)	1.0498 0.9829	1.0948 0.9519	1.0032	0.9624	0.9183		AveI D	0.994 7			6.1		35.0					
6:2 FTS	2.4958 2.0128	2.4734 1.9305	2.0914	1.9739	1.9734		L2ID	0.014 0	1.997 2				0.9970				0.9900	
Perfluorooctanoic acid (PFOA)	1.4828 1.0697	1.2770 1.1154	1.1688	1.1272	1.0789		L2ID	0.009 5	1.099 2				0.9990				0.9900	

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

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

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1 Analy Batch No.: 54515

SDG No.: _____

Instrument ID: LCA GC Column: GeminiC18 3 ID: 3 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/05/2021 22:00 Calibration End Date: 10/05/2021 22:53 Calibration ID: 3272

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 7	LVL 3	LVL 4	LVL 5	B	M1		M2									
Perfluorooctanesulfonic acid (PFOS)	1.1355 1.0480	1.1309 1.1074	1.1289	1.0964	1.0511			AveI D	1.099 8				35.0					
Perfluorononanoic acid (PFNA)	1.0076 0.8482	0.9183 0.8104	0.8536	0.8325	0.8327	0.004 4	0.830	L2ID						1.0000				0.9900
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	2.3673 2.2089	2.4028 2.2323	2.4317	2.3301	2.1817		2.307 8	AveI D	2.307 8				4.3		35.0			
Perfluorononanesulfonic acid (PFNS)	1.1500 1.0046	1.1202 0.9989	1.0220	0.9743	1.0256		1.042 2	AveI D	1.042 2				6.4		35.0			
Perfluorooctanesulfonamide (FOSA)	0.9985 0.9395	0.9617 0.9793	0.9790	0.9253	0.9406		0.960 6	AveI D	0.960 6				2.8		35.0			
Perfluorodecanoic acid (PFDA)	1.3337 0.9459	1.1533 0.9008	1.0527	0.9458	0.9140	0.010 1	0.940 0	L2ID	0.940 1							0.9980		0.9900
8:2 FTS	1.9042 1.6929	1.8419 1.7053	1.9403	1.7186	1.6832		1.783 8	AveI D	1.783 8				6.1		35.0			
N-methylperfluorooctanesulfonamido acetic acid (NMeFOSAA)	1.1962 0.9189	1.0132 0.9018	1.0046	0.9006	0.9005	0.006 8	0.912 8	L2ID	0.912 8							0.9980		0.9900
Perfluorodecanesulfonic acid (PFDS)	0.9734 0.9008	1.0761 0.9277	0.9897	0.9653	0.8687		0.957 4	AveI D	0.957 4				7.1		35.0			
Perfluoroundecanoic acid (PFUnA)	1.2015 0.9816	1.1321 0.9900	1.0782	1.0130	0.9957	0.005 2	1.006 8	L2ID	1.006 8							0.9990		0.9900
N-ethylperfluorooctanesulfonamido acetic acid (NEFOSAA)	0.9751 0.8901	1.1154 0.9350	0.9193	0.9324	0.8786		0.949 4	AveI D	0.949 4				8.4		35.0			
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid	1.9527 1.7237	2.0484 1.7281	1.9850	1.8557	1.7149		1.858 4	AveI D	1.858 4				7.5		35.0			
Perfluorododecanoic acid (PFDoA)	1.1008 0.9272	1.1987 0.9164	1.1236	1.0045	0.9550	0.002 3	1.058 9	Q2ID	1.058 9							0.9950		0.9900
10:2 FTS	2.3033 2.2288	2.3231 2.1563	2.2551	2.1315	2.1494		2.221 1	AveI D	2.221 1				3.5		35.0			
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	1.4548 1.1038	1.4555 1.1606	1.2970	1.0790	1.1040	0.009 4	1.148 5	L2ID	1.148 5							0.9930		0.9900
NMeFOSA	1.1961 0.9903	1.1338 1.0119	1.0173	1.0100	0.9694		1.047 0	AveI D	1.047 0				8.0		35.0			
Perfluorododecanesulfonic acid (PFDoS)	1.0129 1.0114	1.0268 0.9571	1.0365	0.9489	0.9216		0.987 9	AveI D	0.987 9				4.5		35.0			

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

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

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1 Analy Batch No.: 54515

SDG No.: _____

Instrument ID: LCA GC Column: GeminiC18 3 ID: 3 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/05/2021 22:00 Calibration End Date: 10/05/2021 22:53 Calibration ID: 3272

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 7	LVL 3		LVL 4	LVL 5	B							
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	1.4715 1.1994	1.3913 1.2926	1.2932	1.3081	1.2150	0.0057	1.2569					0.9990		0.9900
Perfluorotridecanoic acid (PFTrIA)	1.0525 0.8258	1.0477 0.8436	0.9558	0.8777	0.8937	0.0053	0.8786					0.9970		0.9900
N-ethylperfluoro-1-octanesulfonamide	1.1668 1.1121	1.2609 1.1667	1.2170	1.1491	1.1063		1.1684		4.7		35.0			
Perfluorotetradecanoic acid (PFTeA)	0.1574 0.1231	0.1488 0.1274	0.1342	0.1232	0.1209	0.0009	0.1252					0.9980		0.9900
Perfluorohexadecanoic acid (PFHeA)	1.6548 0.9539	1.4111 1.0074	1.2004	1.0959	1.0288	0.0146	1.0915					0.9980		0.9900
Perfluorooctadecanoic acid	0.9702 0.8276	0.9754 0.8564	0.9529	0.9144	0.8564		0.9076		6.7		35.0			
13C4 PFBA	1.3239 1.3078	1.2914 1.3654	1.3716	1.2896	1.3201		1.3242		2.5		50.0			
13C5 PFPeA	1.1120 1.0556	1.0670 1.1072	1.1478	1.0514	1.0692		1.0872		3.3		50.0			
13C3 PFBS	0.7175 0.6744	0.6863 0.7415	0.7191	0.6694	0.7051		0.7019		3.8		50.0			
M2-4:2 FTS	0.1166 0.0948	0.1085 0.0997	0.1129	0.0982	0.1061		0.1052		7.6		50.0			
13C2 PFHxA	1.1593 1.0890	1.1086 1.1182	1.1296	1.0820	1.1277		1.1164		2.4		50.0			
13C3 HFPO-DA	0.5685 0.5761	0.5481 0.5793	0.5823	0.5601	0.5851		0.5714		2.3		50.0			
18O2 PFHxS	0.4337 0.4153	0.4245 0.4328	0.4289	0.4243	0.4139		0.4248		1.8		50.0			
13C4 PFHpA	1.1229 1.1202	1.1044 1.0891	1.1584	1.1135	1.0837		1.1132		2.2		50.0			
M2-6:2 FTS	0.1107 0.1015	0.1123 0.1038	0.1155	0.1070	0.1036		0.1078		4.8		50.0			
13C4 PFOA	0.9934 1.0232	1.0259 0.9635	1.0266	0.9940	1.0204		1.0067		2.4		50.0			
13C4 PFOS	0.5952 0.5815	0.5614 0.6135	0.6042	0.5652	0.5753		0.5852		3.4		50.0			

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

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1 Analy Batch No.: 54515

SDG No.: _____

Instrument ID: LCA GC Column: GeminiC18 3 ID: 3 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/05/2021 22:00 Calibration End Date: 10/05/2021 22:53 Calibration ID: 3272

ANALYTE	RRF							CURVE TYPE	B	COEFFICIENT		#	MIN RRF	%RSD	#	R^2 OR COD	MIN R^2 OR COD
	LVL 1 LVL_6	LVL 2 LVL_7	LVL 3	LVL 4	LVL 5	M1	M2										
13C5 PFNA	1.2663 1.2579	1.1959 1.2838	1.3750	1.2783	1.2990	1.279 5			4.2		50.0						
13C8 FOSA	0.9299 0.8117	0.8740 0.7850	0.9389	0.8576	0.8163	0.859 1			6.9		50.0						
13C2 PFDA	1.3216 1.2685	1.3057 1.2326	1.3764	1.2933	1.2707	1.295 5			3.5		50.0						
M2-8:2 FTS	0.1403 0.1264	0.1385 0.1224	0.1370	0.1283	0.1285	0.131 6			5.2		50.0						
d3-NMeFOSAA	0.1702 0.1748	0.1753 0.1912	0.1707	0.1844	0.1750	0.177 4			4.3		50.0						
13C2 PFUnA	1.2343 1.2637	1.2043 1.1770	1.2993	1.2394	1.2417	1.237 1			3.2		50.0						
d5-NEtFOSAA	0.1810 0.1679	0.1701 0.1617	0.1814	0.1635	0.1680	0.170 5			4.6		50.0						
13C2 PFDoA	1.3648 1.3209	1.2339 1.3408	1.4107	1.3057	1.2595	1.319 5			4.6		50.0						
d7-N-MeFOSE-M	0.1071 0.1113	0.1022 0.1116	0.1077	0.1086	0.1043	0.107 5			3.2		50.0						
d-N-MeFOSA-M	0.1110 0.1170	0.1073 0.1174	0.1138	0.1087	0.1085	0.112 0			3.7		50.0						
d9-N-EtFOSE-M	0.1119 0.1198	0.1148 0.1099	0.1185	0.1116	0.1158	0.114 6			3.2		50.0						
d-N-EtFOSA-M	0.0963 0.0987	0.0918 0.0958	0.0932	0.0907	0.0931	0.094 2			3.0		50.0						
13C2 PFTeDA	1.2302 1.2008	1.1463 1.2259	1.2836	1.1988	1.1902	1.210 8			3.5		50.0						
13C2 PFHxDA	0.8721 0.9263	0.8341 0.9163	0.8948	0.8429	0.8609	0.878 2			4.0		50.0						
13C8 PFOA	0.9998 0.9711	0.9932 0.9951	1.0244	0.9582	0.9785	0.988 6			2.2		50.0						
13C8 PFOS	0.1295 0.1211	0.1232 0.1288	0.1293	0.1217	0.1254	0.125 6			2.9		50.0						

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

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1 Analy Batch No.: 54515

SDG No.: _____

Instrument ID: LCA GC Column: GeminiC18 3 ID: 3 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/05/2021 22:00 Calibration End Date: 10/05/2021 22:53 Calibration ID: 3272

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-54515/6	006.d
Level 2	IC 140-54515/7	007.d
Level 3	IC 140-54515/8	008.d
Level 4	ICIS 140-54515/9	009.d
Level 5	IC 140-54515/10	010.d
Level 6	IC 140-54515/11	011.d
Level 7	IC 140-54515/12	012.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Perfluorobutanoic acid (PFBA)		AveI D	120569 20710345	244540 39839183	1138114	4468418	10441309	0.0250	0.0500	0.250	1.00	2.50
Perfluoropentanoic acid (PFPeA)		AveI D	132485 21134542	263929 40614146	1272508	4615308	10852858	0.0250	0.0500	0.250	1.00	2.50
Perfluorobutanesulfonic acid (PFBS)		AveI D	83808 13531845	161928 28048729	761606	2953898	6852855	0.0221	0.0442	0.221	0.884	2.21
4:2 FTS		AveI D	29140 4703298	62062 8466918	282001	1050887	2443233	0.0234	0.0467	0.234	0.934	2.34
Perfluoropentanesulfonic acid (PFPeS)		L2ID	74167 11073888	143856 22616554	639381	2412870	5960167	0.0235	0.0469	0.235	0.938	2.35
Perfluorohexanoic acid (PFHxA)		AveI D	116796 18447950	232467 35602644	1062073	4022201	9394999	0.0250	0.0500	0.250	1.00	2.50
HFPO-DA		L2ID	105764 16036699	189596 31885892	900885	3457493	8376090	0.0250	0.0500	0.250	1.00	2.50
Perfluorohexanesulfonic acid (PFHxS)		L2ID	69897 10611543	132033 20867517	594032	2292161	5280667	0.0228	0.0455	0.228	0.910	2.28
Perfluorohexanoic acid (PFHpA)		L2ID	148523 23641761	296091 44063826	1358343	5299224	12053684	0.0250	0.0500	0.250	1.00	2.50
DONA		AveI D	201171	426633	1987545	8159890	17882462	0.0236	0.0471	0.236	0.942	2.36

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

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1 Analy Batch No.: 54515

SDG No.:

Instrument ID: LCA GC Column: GeminiC18 3 ID: 3 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/05/2021 22:00 Calibration End Date: 10/05/2021 22:53 Calibration ID: 3272

ANALYTE	IS REF	CURVE TYPE	RESPONSE							CONCENTRATION (NG/ML)						
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5				
Perfluoroheptanesulfonic Acid (PFHps)		AveI D	34461769 64170	66306425 131799	608296	2341758	5405819	4.71 0.0238	9.42 0.0476	0.238	0.952	2.38				
6:2 FTS		L2ID	11200331 28268	21488703 59326	241304	905258	2082865	4.76 0.0237	9.52 0.0474	0.237	0.948	2.37				
Perfluorooctanoic acid (PFOA)		L2ID	3986787 158921	7345217 295123	1264785	5067237	11834254	4.74 0.0250	9.48 0.0500	0.250	1.00	2.50				
Perfluorooctanesulfonic acid (PFOS)		AveI D	22528349 67658	41535789 132719	667256	2600759	6031664	5.00 0.0232	10.0 0.0464	0.232	0.928	2.32				
Perfluorononanoic acid (PFNA)		L2ID	11641795 137647	24369559 247402	1237218	4812773	11627018	4.64 0.0250	9.28 0.0500	0.250	1.00	2.50				
9-Chlorohexadecafluoro-3-oxanona ne-1-sulfonic acid		AveI D	21961402 141666	40209311 283194	1443521	5550758	12573714	5.00 0.0233	10.0 0.0466	0.233	0.932	2.33				
Perfluorononanesulfonic acid (PFNS)		AveI D	24643016 70887	49335058 135991	624876	2390809	6088408	4.66 0.0240	9.32 0.0480	0.240	0.960	2.40				
Perfluorooctanesulfonamide (FOSA)		AveI D	11544387 100166	22739383 189353	968946	3588461	8253604	4.80 0.0250	9.60 0.0500	0.250	1.00	2.50				
Perfluorodecanoic acid (PFDA)		L2ID	15696244 190158	29712974 339239	1527349	5531515	12485057	5.00 0.0250	10.0 0.0500	0.250	1.00	2.50				
8:2 FTS		AveI D	24696030 27611	42913494 55047	268508	955136	2228105	5.00 0.0240	10.0 0.0479	0.240	0.958	2.40				
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)		L2ID	4218955 21967	7727315 40014	180751	750862	1693902	4.79 0.0250	9.58 0.0500	0.250	1.00	2.50				
Perfluorodecanesulfonic acid (PFDS)		AveI D	3306213 60252	6665393 131183	607648	2378581	5178406	5.00 0.0241	10.0 0.0482	0.241	0.964	2.41				
Perfluoroundecanoic acid (PFUnA)		L2ID	10394826 159986	21205557 307117	1476790	5677846	13290080	4.82 0.0250	9.64 0.0500	0.250	1.00	2.50				
			25533444	45034155				5.00	10.0							

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

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1 Analy Batch No.: 54515

SDG No.: _____

Instrument ID: LCA GC Column: GeminiC18 3 ID: 3 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/05/2021 22:00 Calibration End Date: 10/05/2021 22:53 Calibration ID: 3272

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
N-ethylperfluorooctanesulfonamid oacetic acid (NETFOSAA)		AveI D	19038	42754	175791	689486	1586439	0.0250	0.0500	0.250	1.00	2.50
11-Chloroeicosafuoro-3-oxaundec ane-1-sulfonic acid		AveI D	3076062	5841454	1190988	4468073	9989503	0.0236	0.0471	0.236	0.942	2.36
Perfluorododecanoic acid (PFDoA)		Q2ID	19435719	38600586	1670808	5931269	12930212	4.71	9.42	0.250	1.00	2.50
10:2 FTS		AveI D	162084	333197	314026	1192076	2863089	5.00	10.0	0.241	0.964	2.41
2- (N-methylperfluoro-1-octanesulfo namido) ethanol		L2ID	5589408	9831765	147243	530157	1237379	4.82	9.64	0.250	1.00	2.50
NMeFOSA		AveI D	16817	33495	121993	496513	1130206	5.00	10.0	0.250	1.00	2.50
Perfluorododecanesulfonic acid (PFDoS)		AveI D	2528011	5008224	639069	2347772	5516594	0.0250	0.0500	0.242	0.968	2.42
2- (N-ethylperfluoro-1-octanesulfon amido) ethanol		L2ID	2384386	4593149	161487	660212	1512862	5.00	10.0	0.250	1.00	2.50
Perfluorotridecanoic acid (PFTriA)		L2ID	62954	125689	1421298	5182810	12100663	4.84	9.68	0.0484	1.00	2.50
N-ethylperfluoro-1-octanesulfona mide		AveI D	11718637	21969563	119604	471510	1106784	0.0250	0.0500	0.250	1.00	2.50
Perfluorotetradecanoic acid (PFTeA)		L2ID	22450214	43719274	181597	667705	1546553	5.00	10.0	0.250	1.00	2.50
Perfluorohexadecanoic acid		Q2ID	12127	26074	1132217	417724	9520842	0.0250	0.0500	0.250	1.00	2.50
			2258394	4319144	1132217	417724	9520842	5.00	10.0	0.250	1.00	2.50
			20886	38423	181597	667705	1546553	0.0250	0.0500	0.250	1.00	2.50
			3043028	6036068	1132217	417724	9520842	5.00	10.0	0.250	1.00	2.50
			155694	265142	1132217	417724	9520842	0.0250	0.0500	0.250	1.00	2.50
			18185862	35675947	1132217	417724	9520842	5.00	10.0	0.250	1.00	2.50

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

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1 Analy Batch No.: 54515

SDG No.:

Instrument ID: LCA GC Column: GeminiC18 3 ID: 3 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/05/2021 22:00 Calibration End Date: 10/05/2021 22:53 Calibration ID: 3272

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Perfluorooctadecanoic acid		AveI D	91283	1832269	898794	3485638	7925788	0.0250	0.0500	0.250	1.00	2.50
13C4 PFBA	13PF OA	Ave	15778779	30330955	7228968	7289844	7094947	5.00	10.0	1.25	1.25	1.25
13C5 PFPeA	13PF OA	Ave	6729747	6596355	6049600	5943333	5746550	1.25	1.25	1.25	1.25	1.25
13C3 PFBS	13PF OA	Ave	5431895	5348940	3524723	3519158	3524311	1.25	1.25	1.16	1.16	1.16
M2-4:2 FTS	13PF OA	Ave	3227418	3331755	556004	518286	532409	1.17	1.17	1.17	1.17	1.17
13C2 PFHxA	13PF OA	Ave	587242	570559	5953465	6116663	6061274	1.17	1.17	1.25	1.25	1.25
13C3 HFPO-DA	13PF OA	Ave	455617	449831	3069191	3166510	3145011	1.25	1.25	1.25	1.25	1.25
18C2 PFHxS	13PF OA	Ave	6253583	6243564	2138254	2269288	2104634	1.25	1.25	1.18	1.18	1.18
13C4 PFHpA	13PF OA	Ave	5603980	5402140	6105640	6294659	5824750	1.25	1.25	1.25	1.25	1.25
M2-6:2 FTS	13PF OA	Ave	3066694	3086719	578119	574488	528850	1.25	1.25	1.19	1.19	1.19
13C4 PFOA	13PF OA	Ave	2964356	2798495	5410657	5619219	5484596	1.25	1.25	1.25	1.25	1.25
13C4 PFOS	13PF OA	Ave	2213335	2261386	3044513	3054456	2955831	1.25	1.25	1.20	1.20	1.20
		Ave	2021420	1978127	2833668			1.18	1.18	1.18	1.18	1.18
		Ave	6057062	6219868				1.18	1.18	1.25	1.25	1.25
		Ave	5764452	5261701				1.25	1.25	1.25	1.25	1.25
		Ave	567503	600900				1.19	1.19	1.19	1.19	1.19
		Ave	496216	476601				1.19	1.19	1.25	1.25	1.25
		Ave	5358656	5777544				1.25	1.25	1.25	1.25	1.25
		Ave	5265292	4654864				1.25	1.25	1.25	1.25	1.25
		Ave	3069142	3022370				1.20	1.20	1.20	1.20	1.20
		Ave	2860822	2833668				1.20	1.20	1.20	1.20	1.20

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

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1 Analy Batch No.: 54515

SDG No.: _____

Instrument ID: LCA GC Column: GeminiC18 3 ID: 3 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/05/2021 22:00 Calibration End Date: 10/05/2021 22:53 Calibration ID: 3272

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)						
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		
13C5 PFNA	13PF OA	Ave	6830452	6735203	7247107	7226283	6981917	1.25	1.25	1.25	1.25	1.25	1.25	1.25
13C8 FOSA	13PF OA	Ave	6472750	6202112	4948768	4847961	4387447	1.25	1.25	1.25	1.25	1.25	1.25	1.25
13C2 PFDA	13PF OA	Ave	4176620	3792608	7254432	7310968	6829600	1.25	1.25	1.25	1.25	1.25	1.25	1.25
M2-8:2 FTS	13PF OA	Ave	6527325	5955015	691926	694718	661877	1.25	1.25	1.25	1.25	1.25	1.25	1.25
d3-NMeFOSAA	13PF OA	Ave	725011	747134	899632	1042167	940501	1.25	1.25	1.25	1.25	1.25	1.25	1.25
13C2 PFUnA	13PF OA	Ave	623050	566408	6848234	7006211	6673920	1.25	1.25	1.25	1.25	1.25	1.25	1.25
d5-NEtFOSAA	13PF OA	Ave	899537	923936	956097	924381	902846	1.25	1.25	1.25	1.25	1.25	1.25	1.25
13C2 PFDoA	13PF OA	Ave	6657852	6782308	7435382	7381117	6769707	1.25	1.25	1.25	1.25	1.25	1.25	1.25
d7-N-MeFOSE-M	13PF OA	Ave	6502949	5686115	567624	614171	560383	1.25	1.25	1.25	1.25	1.25	1.25	1.25
d-N-MeFOSA-M	13PF OA	Ave	976252	958230	575299	604340	582914	1.25	1.25	1.25	1.25	1.25	1.25	1.25
d9-N-EtFOSE-M	13PF OA	Ave	863924	780959	624358	630903	622602	1.25	1.25	1.25	1.25	1.25	1.25	1.25
d-N-EtFOSA-M	13PF OA	Ave	7362218	6949236	491391	512905	500239	1.25	1.25	1.25	1.25	1.25	1.25	1.25
		Ave	6796811	6477734	599582	614480	582914	1.25	1.25	1.25	1.25	1.25	1.25	1.25
		Ave	577982	575299	567624	614171	560383	1.25	1.25	1.25	1.25	1.25	1.25	1.25
		Ave	572551	539386	604340	614480	582914	1.25	1.25	1.25	1.25	1.25	1.25	1.25
		Ave	598816	604340	599582	614480	582914	1.25	1.25	1.25	1.25	1.25	1.25	1.25
		Ave	601939	567405	624358	630903	622602	1.25	1.25	1.25	1.25	1.25	1.25	1.25
		Ave	603776	646520	624358	630903	622602	1.25	1.25	1.25	1.25	1.25	1.25	1.25
		Ave	616316	531061	491391	512905	500239	1.25	1.25	1.25	1.25	1.25	1.25	1.25
		Ave	519654	516960	491391	512905	500239	1.25	1.25	1.25	1.25	1.25	1.25	1.25
		Ave	507678	462772	462772	462772	462772	1.25	1.25	1.25	1.25	1.25	1.25	1.25

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

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1 Analy Batch No.: 54515

SDG No.: _____

Instrument ID: LCA GC Column: GeminiC18 3 ID: 3 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/05/2021 22:00 Calibration End Date: 10/05/2021 22:53 Calibration ID: 3272

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)					
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	
13C2 PFTeDA	13PF OA	Ave	6635881	6455611	6765277	6776597	6396884	1.25	1.25	1.25	1.25	1.25	1.25
13C2 PFHxDA	13PF OA	Ave	6178920	5922620	4715970	4764988	4627358	1.25	1.25	1.25	1.25	1.25	1.25
13C8 PFOA	13PF OA	Ave	4766428	4426886	5399320	5416582	5259329	1.25	1.25	1.25	1.25	1.25	1.25
13C8 PFOS	13PF OA	Ave	5393077	5593233	651731	657677	644134	1.25	1.25	1.25	1.25	1.25	1.25
			4997107	4807435				1.25	1.25	1.25	1.25	1.25	1.25
			667645	663148				1.25	1.25	1.25	1.25	1.25	1.25
			595505	594930				1.25	1.25	1.25	1.25	1.25	1.25

Curve Type Legend
Ave = Average ISTD
AveID = Average isotope dilution
L2ID = Linear 1/conc^2 Isodil
Q2ID = Quadratic 1/conc^2 Isodil

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_006.d
 Lims ID: IC 1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 05-Oct-2021 22:00:59 ALS Bottle#: 6 Worklist Smp#: 6
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020953-006 ic 1
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15
 Method: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 07-Oct-2021 14:20:57 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1613

First Level Reviewer: cochranj Date: 06-Oct-2021 15:51:29

Ratio Calibration: None

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	2.812	2.812	0.0	0.677	7141181	1.25	100.0	16142	
2 Perfluorobutanoic acid	212.90 > 169.00	2.812	2.812	0.0	1.000	120569	0.0269	107	16.1	
D 3 13C5 PFPeA	267.90 > 223.00	3.129	3.130	-0.001	0.753	5998363	1.28	102	16661	
4 Perfluoropentanoic acid	262.90 > 219.00	3.129	3.131	-0.002	1.000	132485	0.0273	109	30.7	
D 6 13C3 PFBS	301.90 > 80.00	3.143	3.143	0.0	0.756	3599561	1.19	102	29886	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.157	3.151	0.006	1.004	83808	0.0240	Target=3.06	109	281
	298.90 > 99.00	3.157	3.151	0.006	1.004	32492		2.58(1.53-4.59)	109	88.4
D 8 M2-4:2 FTS	329.00 > 81.00	3.437	3.431	0.006	0.827	587242	1.29	111	711	
7 4:2 FTS	327.00 > 307.00	3.437	3.431	0.006	1.000	29140	0.0232	99.2	483	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.469	3.468	0.001	1.104	74167	0.0228	Target=3.47	97.3	630
	349.00 > 99.00	3.469	3.468	0.001	1.104	21820		3.40(1.73-5.20)	97.3	250
D 9 13C2 PFHxA	315.00 > 270.00	3.469	3.471	-0.002	0.835	6253583	1.30	104	19233	
10 Perfluorohexanoic acid	313.00 > 269.00	3.469	3.471	-0.002	1.000	116796	0.0272	Target=9.74	109	70.4
	313.00 > 119.00	3.469	3.471	-0.002	1.000	8027		14.55(4.87-14.61)	109	32.0
D 12 13C3 HFPO-DA	287.00 > 169.00	3.575	3.565	0.010	0.860	3066694	1.24	99.5	11896	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.575	3.565	0.010	1.000	105764	0.0250		100	61.7	
D 17 18O2 PFHxS										
403.00 > 84.00	3.815	3.813	0.002	0.918	2213335	1.21		102	15718	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.815	3.813	0.002	1.000	69897	0.0225	Target=2.96	99.1	346	M
399.00 > 99.00	3.815	3.813	0.002	1.000	22102		3.16(1.48-4.44)	99.1	122	
D 14 13C4 PFHpA										
367.00 > 322.00	3.827	3.819	0.008	0.921	6057062	1.26		101	20055	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.827	3.819	0.008	1.000	148523	0.0244	Target=3.35	97.8	121	
363.00 > 169.00	3.827	3.819	0.008	1.000	45055		3.30(1.67-5.02)	97.8	228	
68 DONA										
377.00 > 251.00	3.852	3.850	0.002	0.864	201171	0.0242	Target=1.49	103	638	
377.00 > 85.00	3.852	3.850	0.002	0.864	115256		1.75(0.74-2.23)	103	945	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.143	4.143	0.0	0.929	64170	0.0251	Target=3.73	106	443	
449.00 > 99.00	4.143	4.143	0.0	0.929	16411		3.91(1.87-5.61)	106	117	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.155	4.146	0.009	1.000	5393077	1.26		101	34589	
19 6:2 FTS										
427.00 > 407.00	4.155	4.151	0.004	1.000	28268	0.0226		95.4	119	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.155	4.151	0.004	1.000	567503	1.22		103	811	
* 22 13C2 PFOA										
415.00 > 370.00	4.155	4.155	0.0		5394236	1.25			31023	
D 21 13C4 PFOA										
417.00 > 372.00	4.155	4.155	0.0	1.000	5358656	1.23		98.7	19938	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.167	4.156	0.011	1.003	158921	0.0251	Target=2.40	100	50.3	
413.00 > 169.00	4.167	4.156	0.011	1.003	59057		2.69(1.20-3.61)	100	98.2	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.458	4.446	0.012	1.073	667645	1.23		103	2154	
D 25 13C4 PFOS										
503.00 > 80.00	4.458	4.451	0.007	1.073	3069142	1.22		102	11975	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.458	4.451	0.007	1.000	67658	0.0240	Target=3.83	103	131	M
499.00 > 99.00	4.470	4.451	0.019	1.003	16161		4.19(1.91-5.74)	103	73.6	M
D 27 13C5 PFNA										
468.00 > 423.00	4.481	4.471	0.010	1.079	6830452	1.24		99.0	18820	
26 Perfluorononanoic acid										
463.00 > 419.00	4.481	4.471	0.010	1.000	137647	0.0250	Target=3.68	100.0	97.6	
463.00 > 169.00	4.481	4.471	0.010	1.000	27411		5.02(1.84-5.52)	100.0	92.4	
63 9CIFOS										
531.00 > 351.00	4.608	4.606	0.002	1.109	141666	0.0239		103	267	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.735	4.728	0.007	1.062	70887	0.0265	Target=3.97	110	337	
549.00 > 99.00	4.735	4.728	0.007	1.062	14821		4.78(1.99-5.96)	110	74.1	
D 34 13C8 FOSA										
506.00 > 78.00	4.749	4.743	0.006	1.143	5016067	1.35		108	5189	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.749	4.745	0.004	1.000	100166	0.0260		104	208	
D 32 13C2 PFDA										
515.00 > 470.00	4.762	4.758	0.004	1.146	7129138	1.28		102	20021	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.762	4.760	0.002	1.000	190158	0.0247	Target=10.11	98.7	105	
513.00 > 169.00	4.762	4.760	0.002	1.000	17292		11.00(5.06-15.17)	98.7	57.7	
31 8:2 FTS										
527.00 > 507.00	4.776	4.774	0.002	1.000	27611	0.0256		107	277	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.776	4.774	0.002	1.149	725011	1.28		107	2324	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.909	4.899	0.010	1.182	918162	1.20		96.0	3530	
36 NMeFOSAA										
570.00 > 419.00	4.909	4.899	0.010	1.000	21967	0.0253		101	43.0	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	5.007	4.997	0.010	1.123	60252	0.0245	Target=3.80	102	439	
599.00 > 99.00	5.007	4.997	0.010	1.123	13934		4.32(1.90-5.70)	102	60.1	
D 39 13C2 PFUnA										
565.00 > 520.00	5.022	5.015	0.007	1.209	6657852	1.25		99.8	22196	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.022	5.018	0.004	1.000	159986	0.0246	Target=7.45	98.5	107	
563.00 > 169.00	5.022	5.018	0.004	1.000	20400		7.84(3.78-11.33)	98.5	87.6	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.036	5.034	0.002	1.212	976252	1.33		106	5056	
40 NEtFOSA										
584.00 > 419.00	5.050	5.040	0.010	1.003	19038	0.0257		103	97.7	M
57 11CIFOS										
631.00 > 451.00	5.132	5.122	0.010	1.151	118107	0.0247		105	286	
D 43 13C2 PFDoA										
615.00 > 570.00	5.266	5.255	0.011	1.267	7362218	1.29		103	20244	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.266	5.255	0.011	1.000	162084	0.0238	Target=5.33	95.2	81.3	
613.00 > 169.00	5.266	5.255	0.011	1.000	20373		7.96(2.66-7.99)	95.2	104	
50 10:2 FTS										
627.00 > 607.00	5.280	5.274	0.006	1.106	33608	0.0250		104	354	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.295	5.289	0.006	1.274	577982	1.25		99.6	375	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.274	598816	1.24		99.2	35.4	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.297	-0.002	1.000	16817	0.0235		94.1	16.7	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.310	5.301	0.009	1.003	14325	0.0286		114	45.2	
54 PFDoS										
699.00 > 80.00	5.449	5.439	0.010	1.222	62954	0.0248	Target=4.32	103	278	
699.00 > 99.00	5.449	5.439	0.010	1.222	14779		4.26(2.19-6.58)	103	115	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.449	5.445	0.004	1.311	603776	1.22		97.7	731	
62 N-EtFOSE-M										
630.00 > 59.00	5.462	5.458	0.004	1.002	17769	0.0248		99.0	42.8	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.460	0.002	1.315	519654	1.28		102	610	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.475	5.462	0.013	1.040	154981	0.0239	Target=5.66	95.8	84.6	
663.00 > 169.00	5.475	5.462	0.013	1.040	20905		7.41(2.83-8.48)	95.8	125	
56 N-EtFOSA-M										
526.00 > 169.00	5.475	5.469	0.006	1.002	12127	0.0250		99.9	54.8	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.651	5.643	0.008	1.000	20886	0.0243	Target=1.07	97.3	156	
713.00 > 219.00	5.651	5.643	0.008	1.000	18790		1.11(0.53-1.60)	97.3	255	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.651	5.643	0.008	1.360	6635881	1.27		102	19352	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.973	5.961	0.012	1.438	4704223	1.24		99.3	6891	
55 Perfluorohexadecanoic acid										M
813.00 > 769.00	5.973	5.966	0.007	1.000	155694	0.0246	Target=7.50	98.2	131	M
813.00 > 169.00	5.973	5.966	0.007	1.000	18066		8.62(3.75-11.26)	98.2	115	
60 Perfluorooctadecanoic acid										M
913.00 > 869.00	6.240	6.226	0.014	1.045	91283	0.0267	Target=9.98	107	134	
913.00 > 169.00	6.240	6.226	0.014	1.045	7844		11.64(5.14-15.41)	107	118	M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L1PFC2_00002

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_006.d

Injection Date: 05-Oct-2021 22:00:59

Instrument ID: LCA

Lims ID: IC 1

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 6

Worklist Smp#: 6

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

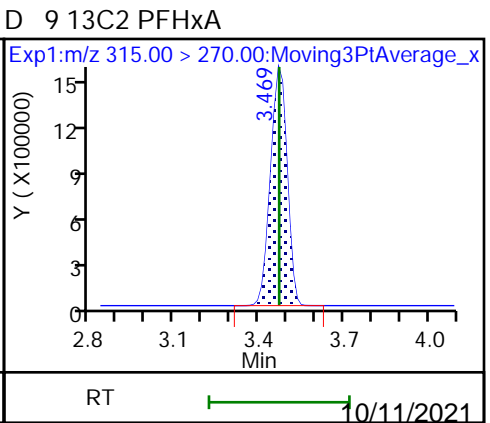
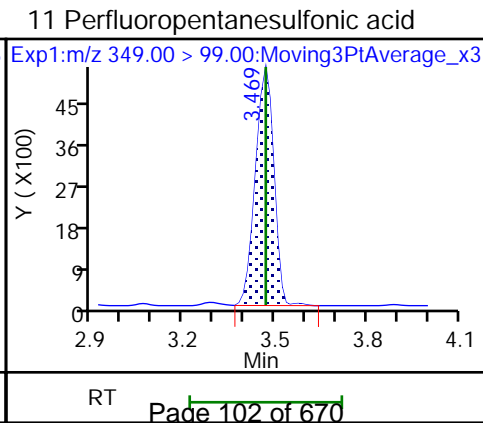
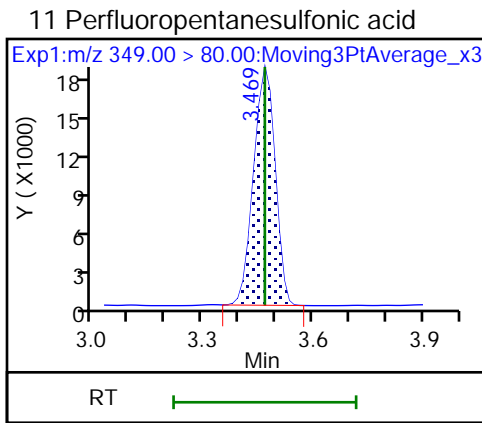
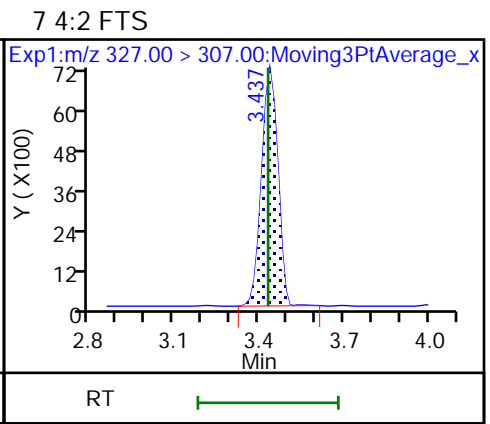
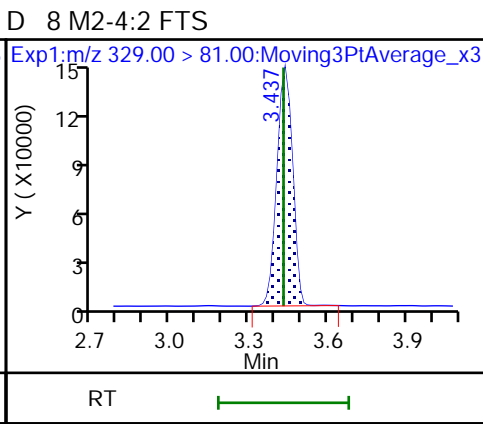
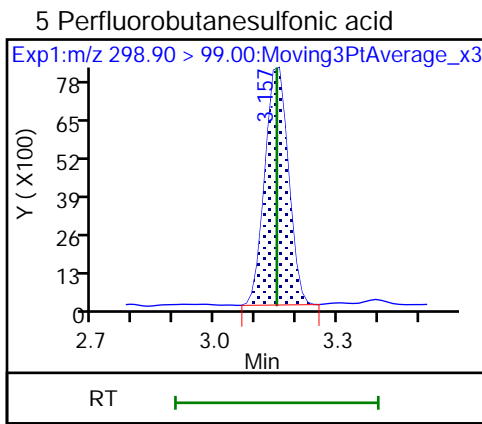
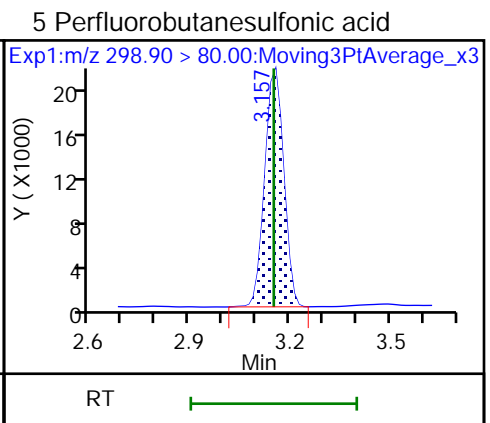
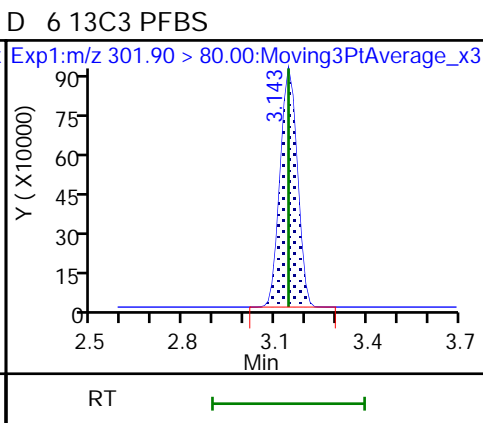
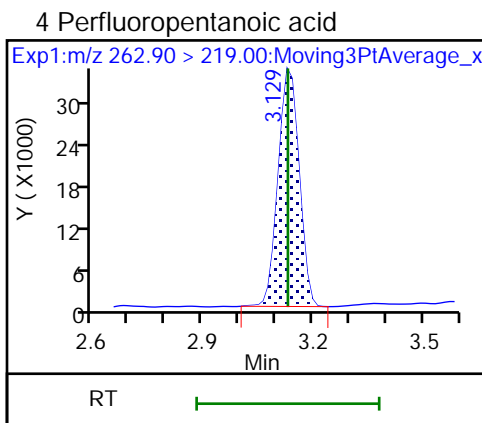
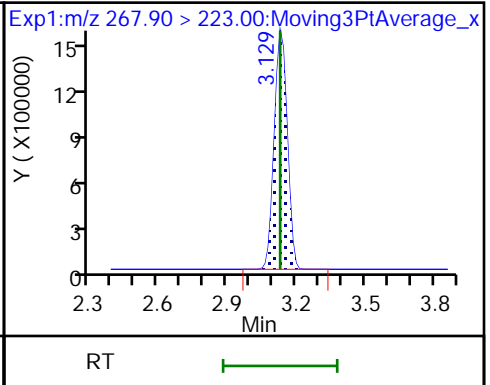
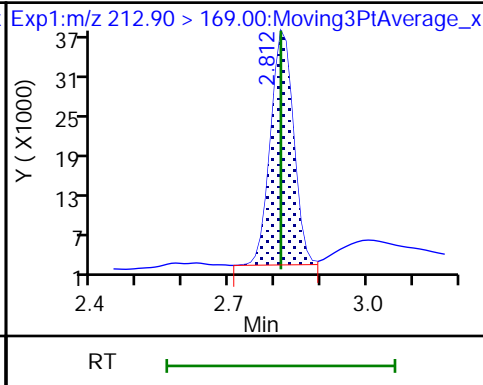
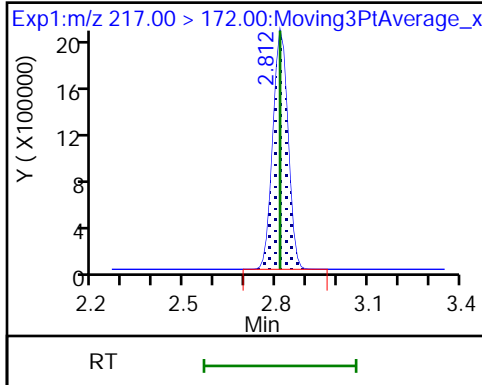
Method: PFC_LCA

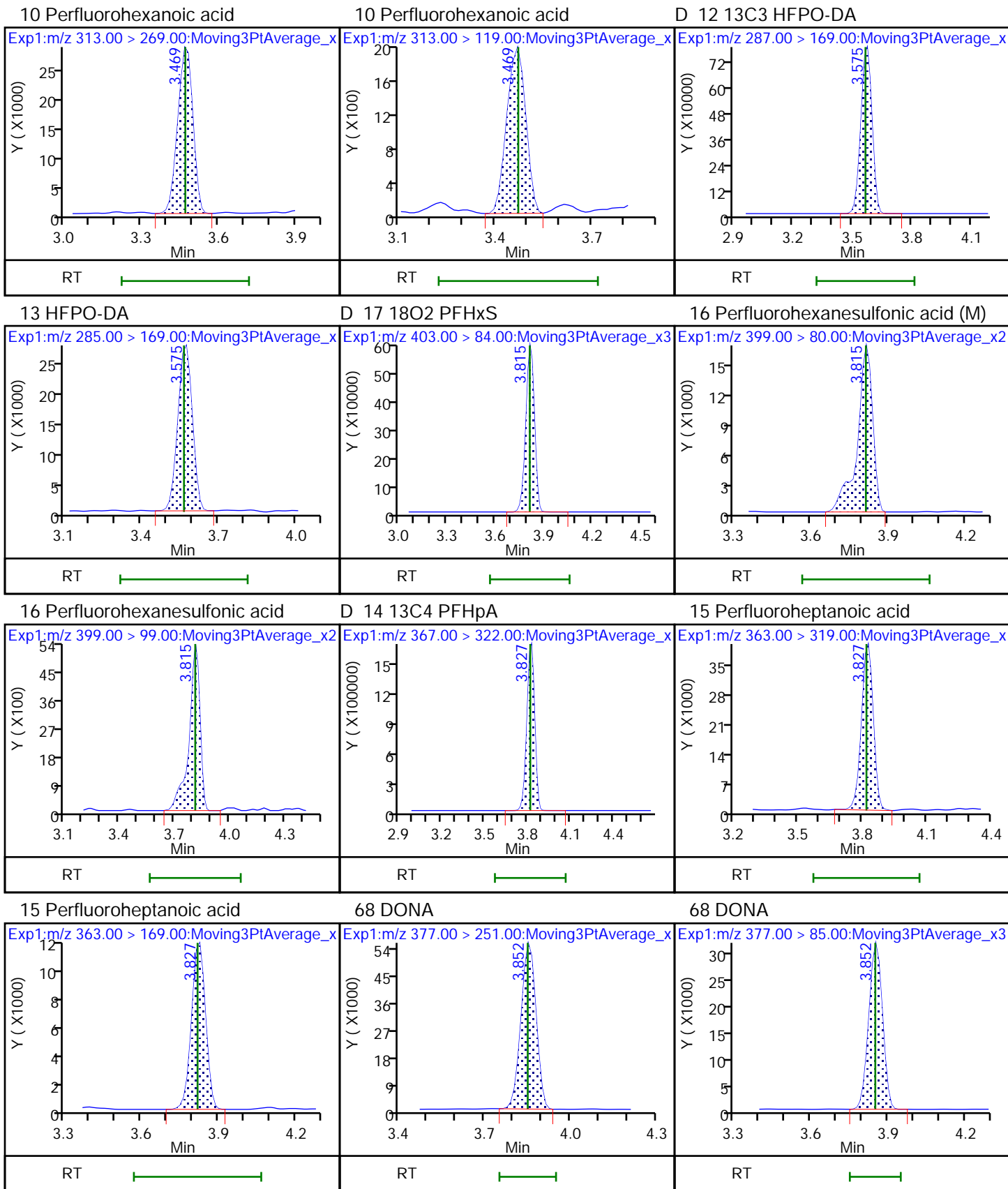
Limit Group: LC - PFC- ICAL

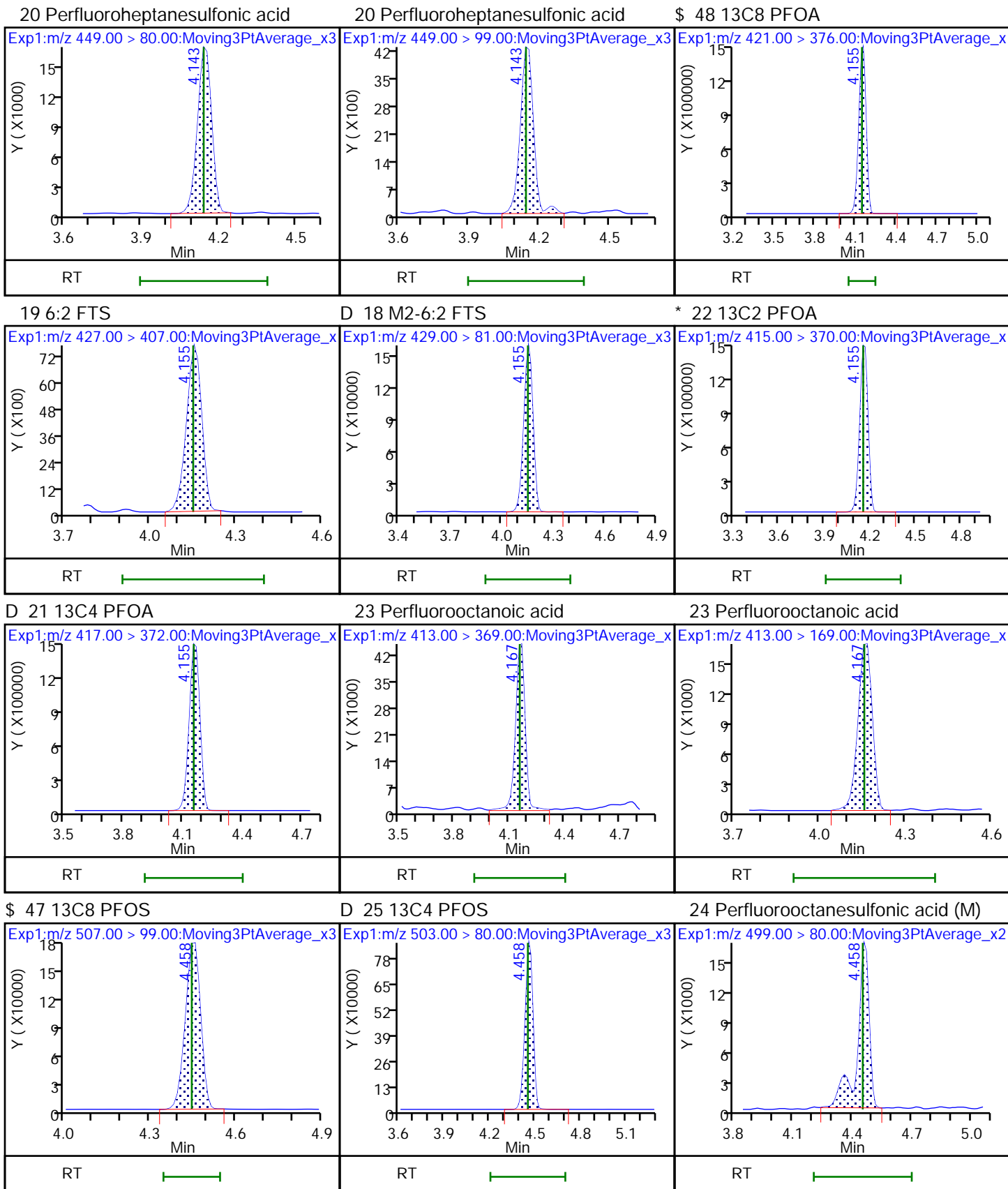
D 1 13C4 PFBA

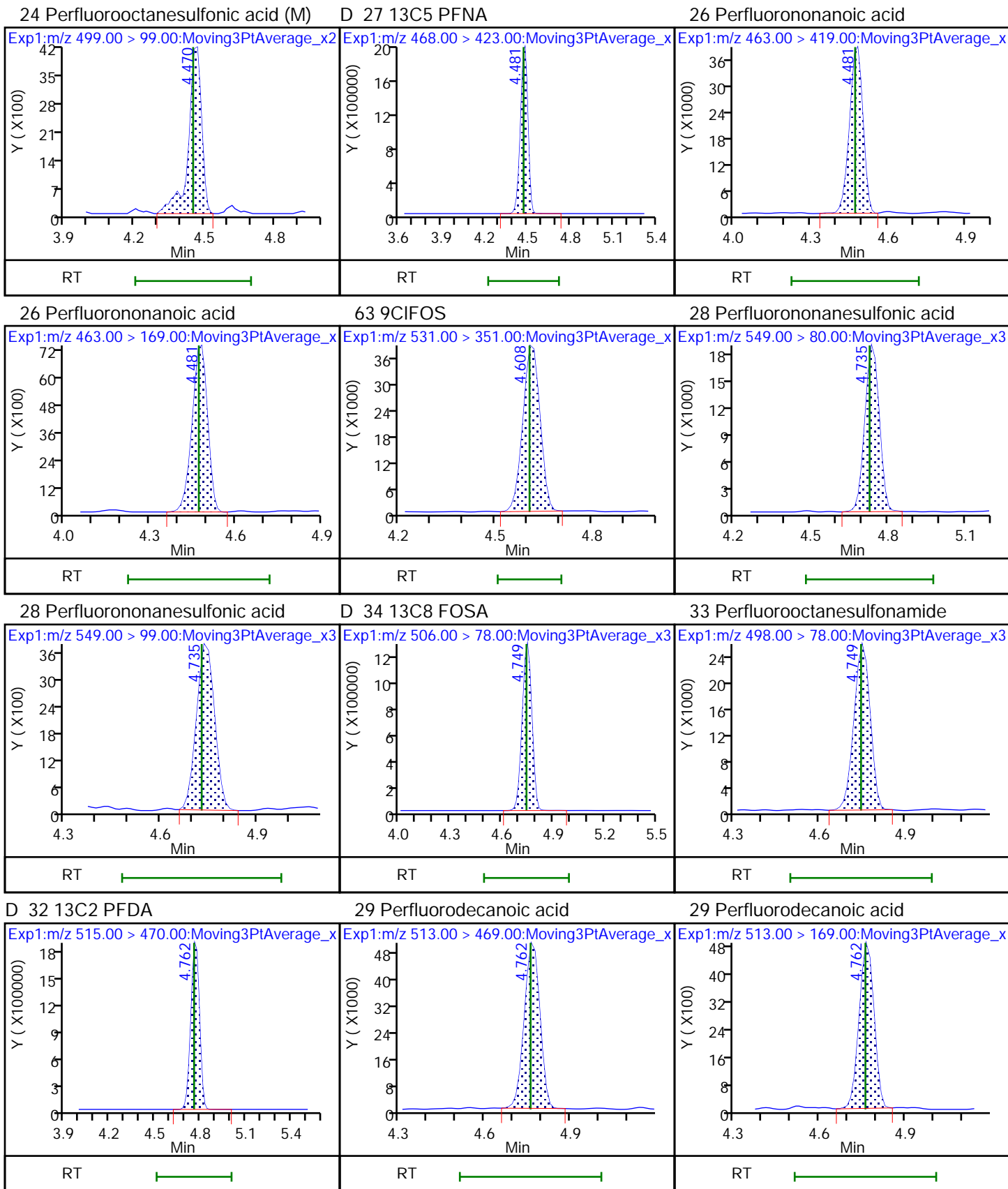
2 Perfluorobutanoic acid

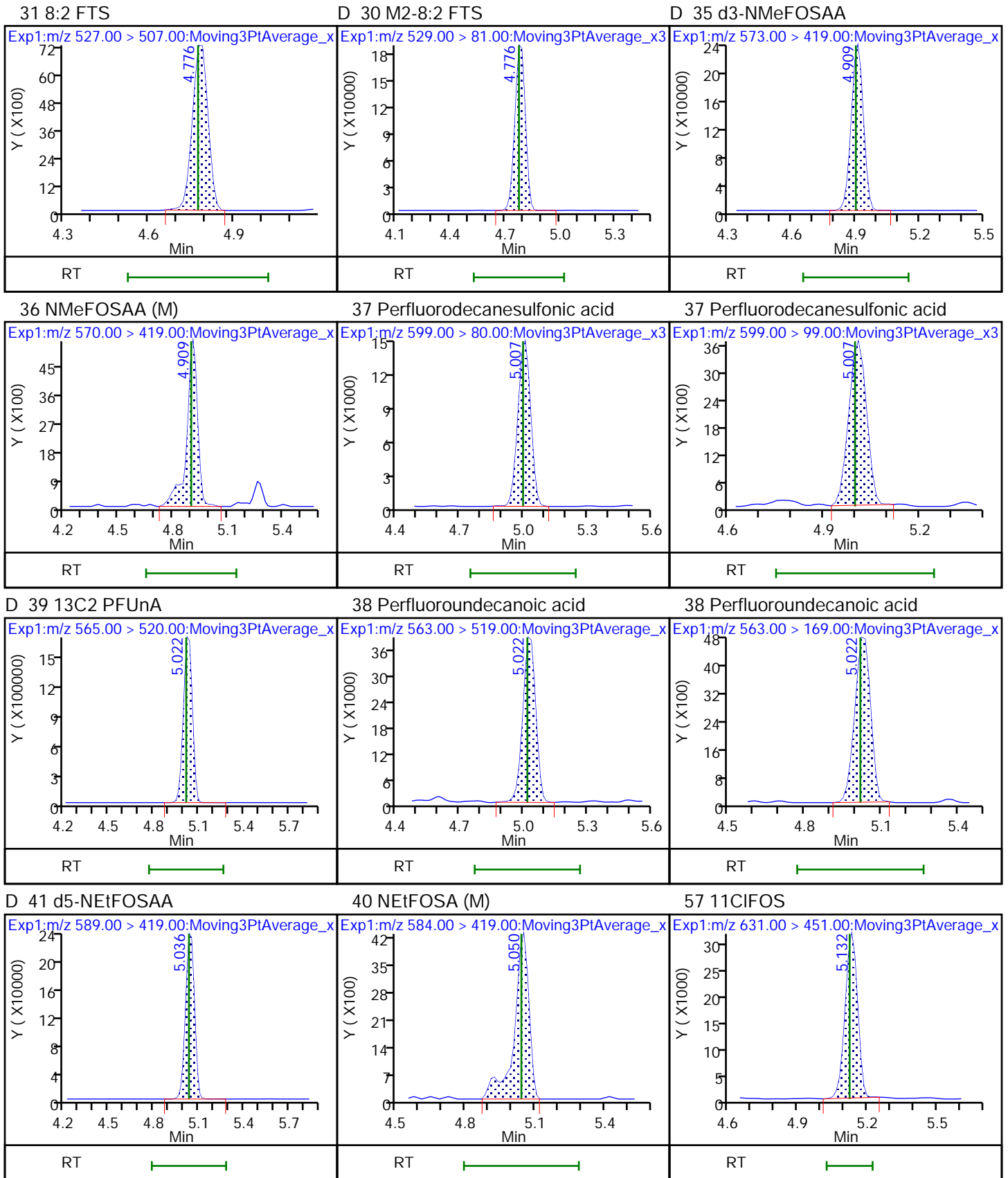
D 3 13C5 PFPeA







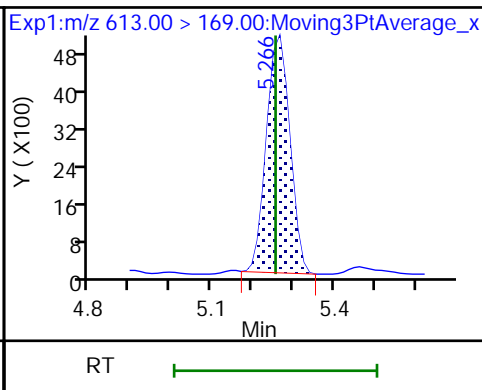
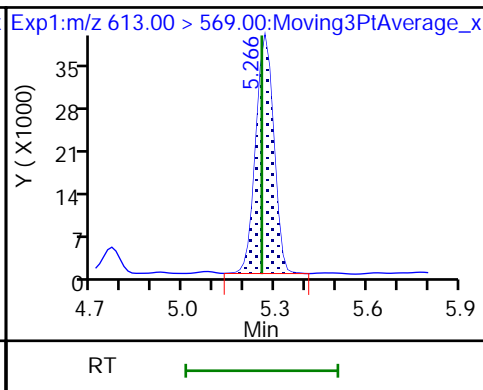
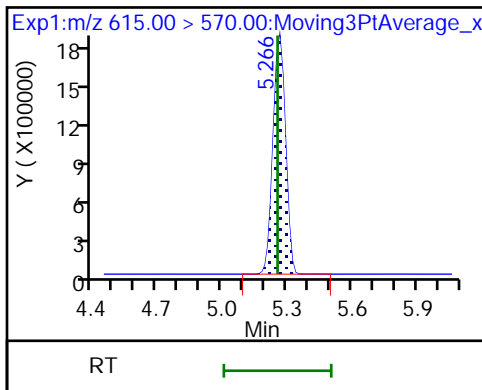




D 43 13C2 PFDaA

42 Perfluorododecanoic acid

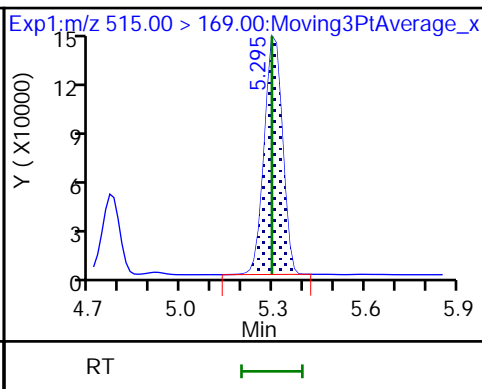
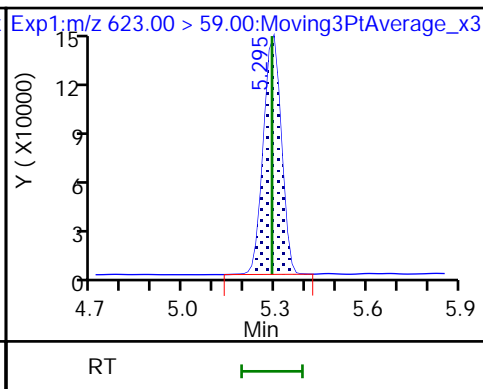
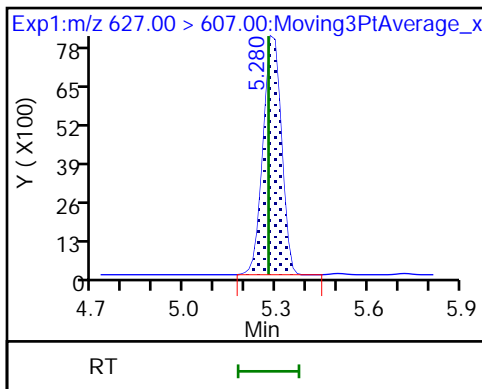
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

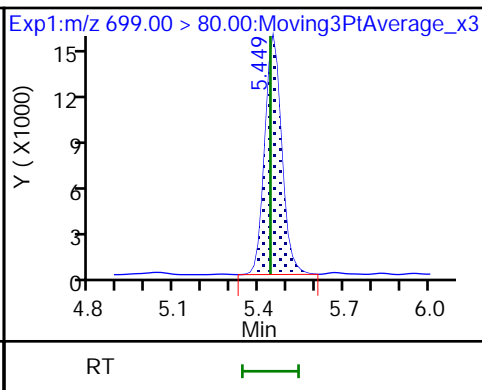
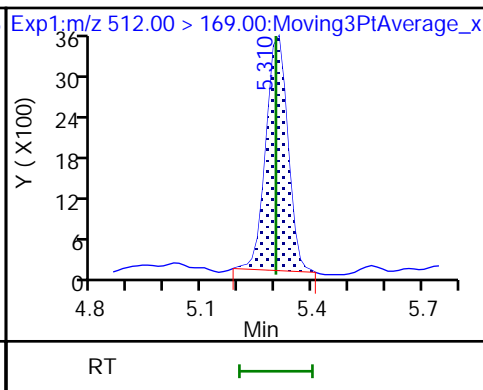
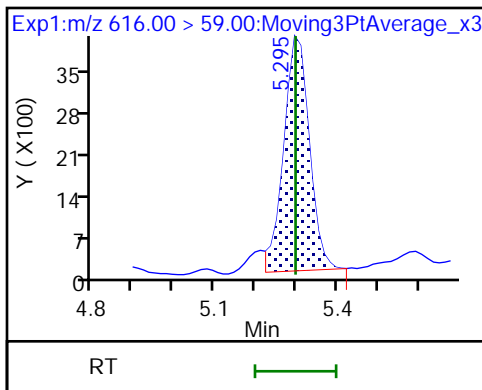
D 58 d-N-MeFOSA-M



49 N-MeFOSE-M

61 NMeFOSA

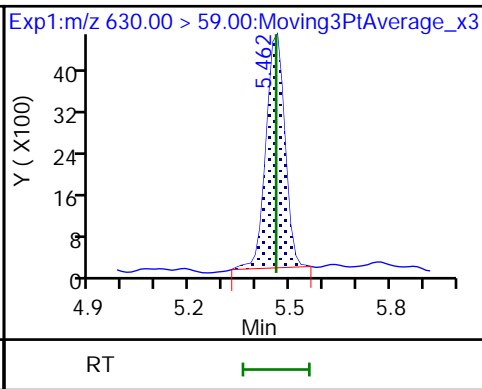
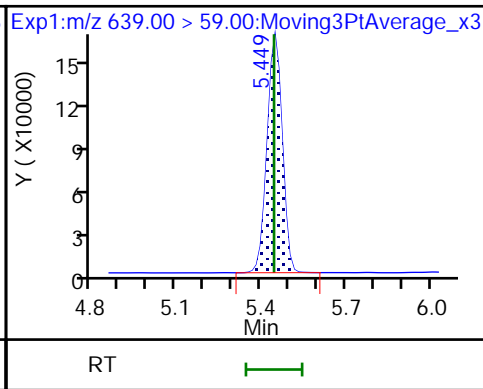
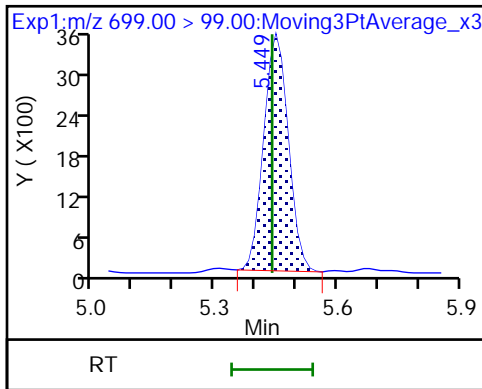
54 PFDoS



54 PFDoS

D 53 d9-N-EtFOSE-M

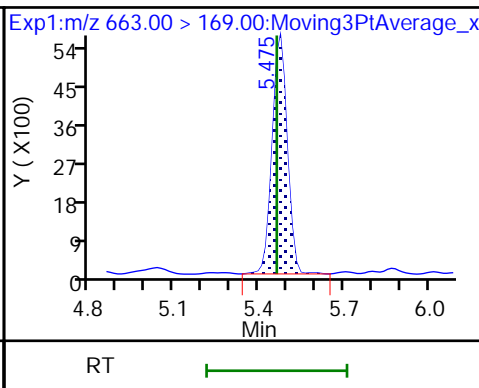
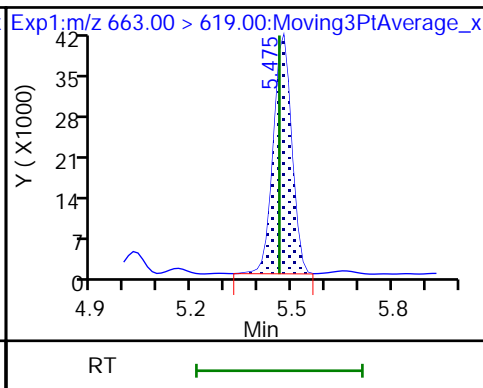
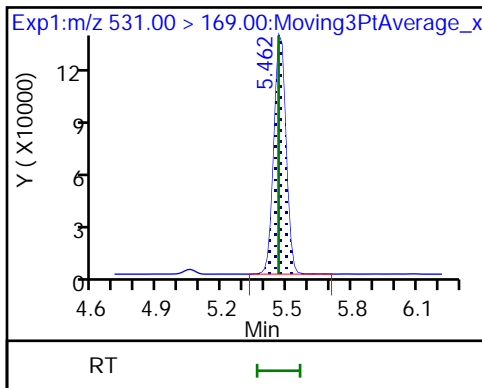
62 N-EtFOSE-M



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid

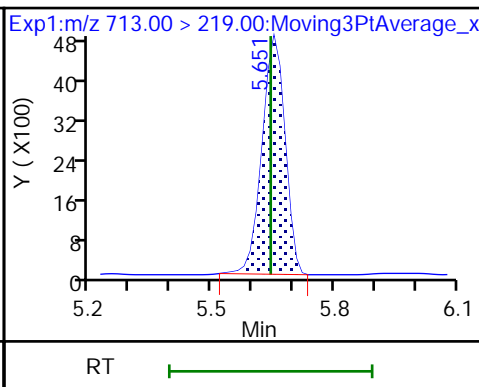
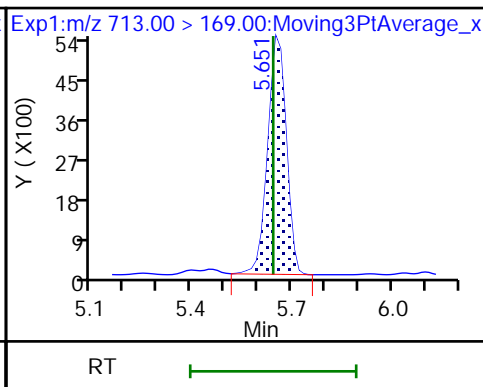
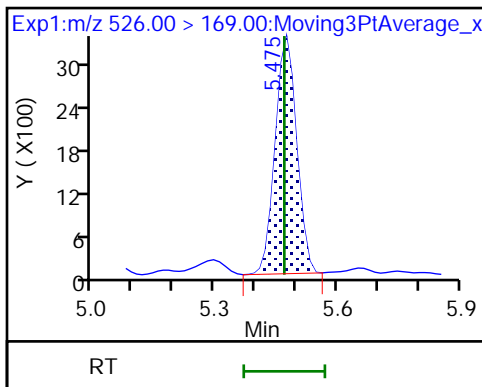
44 Perfluorotridecanoic acid



56 N-EtFOSA-M

45 Perfluorotetradecanoic acid

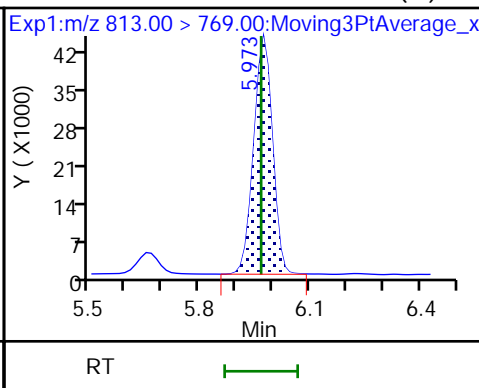
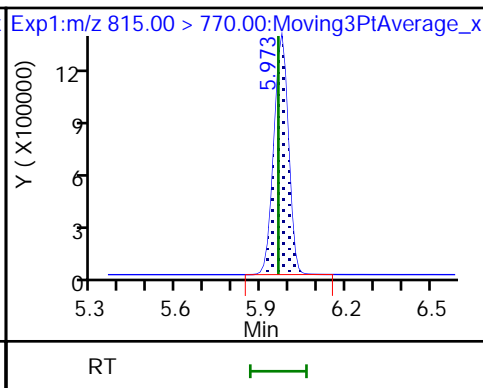
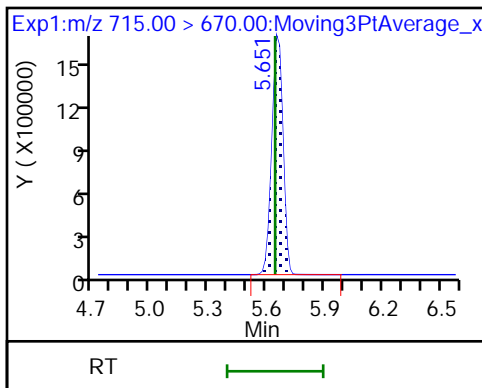
45 Perfluorotetradecanoic acid



D 46 13C2 PFTeDA

D 59 13C2 PFHxDA

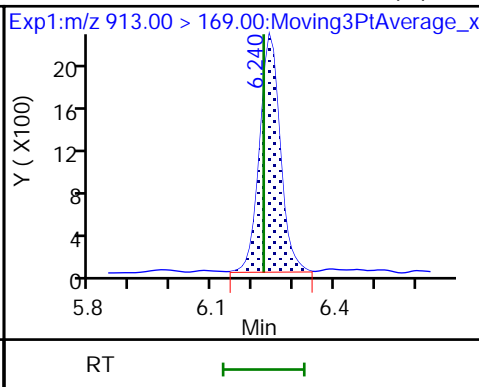
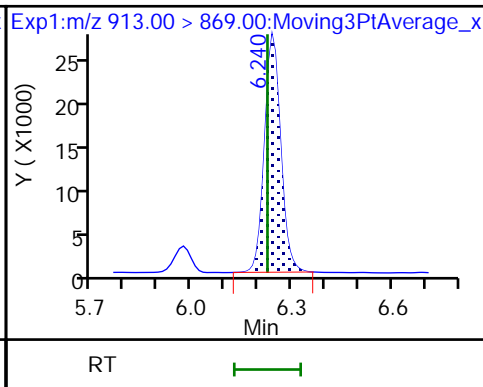
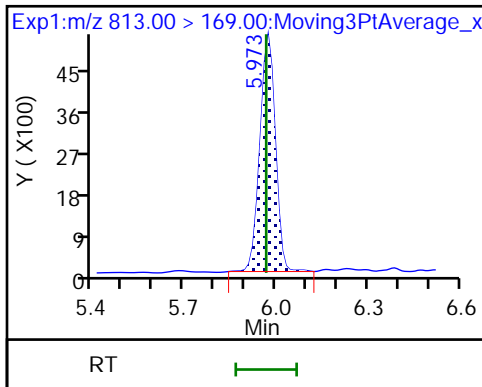
55 Perfluorohexadecanoic acid (M)



55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid (M)



Eurofins TestAmerica, Knoxville

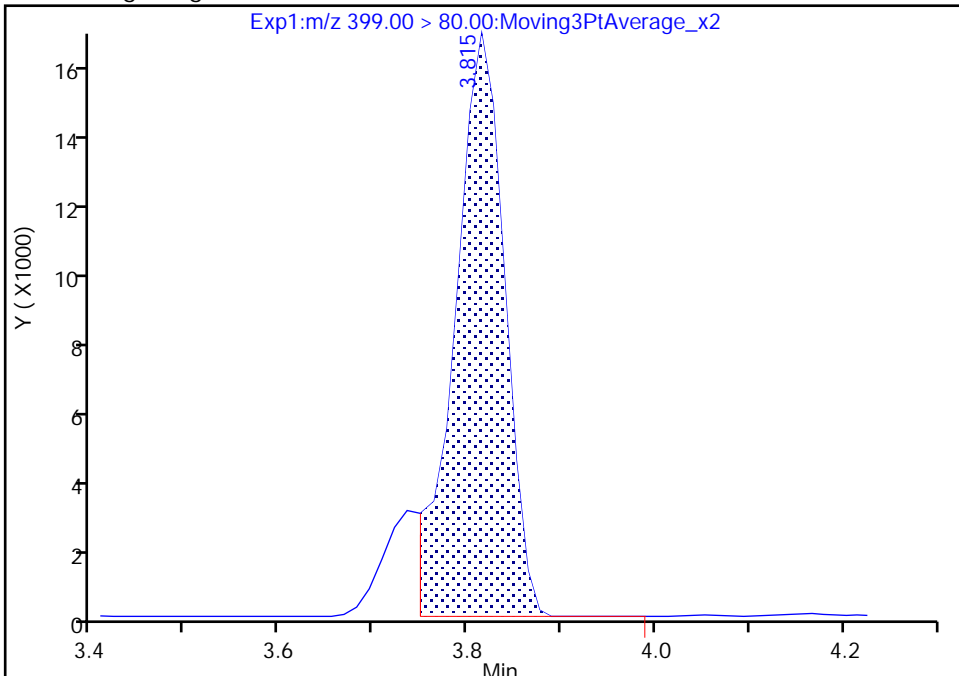
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_006.d
Injection Date: 05-Oct-2021 22:00:59 Instrument ID: LCA
Lims ID: IC 1
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

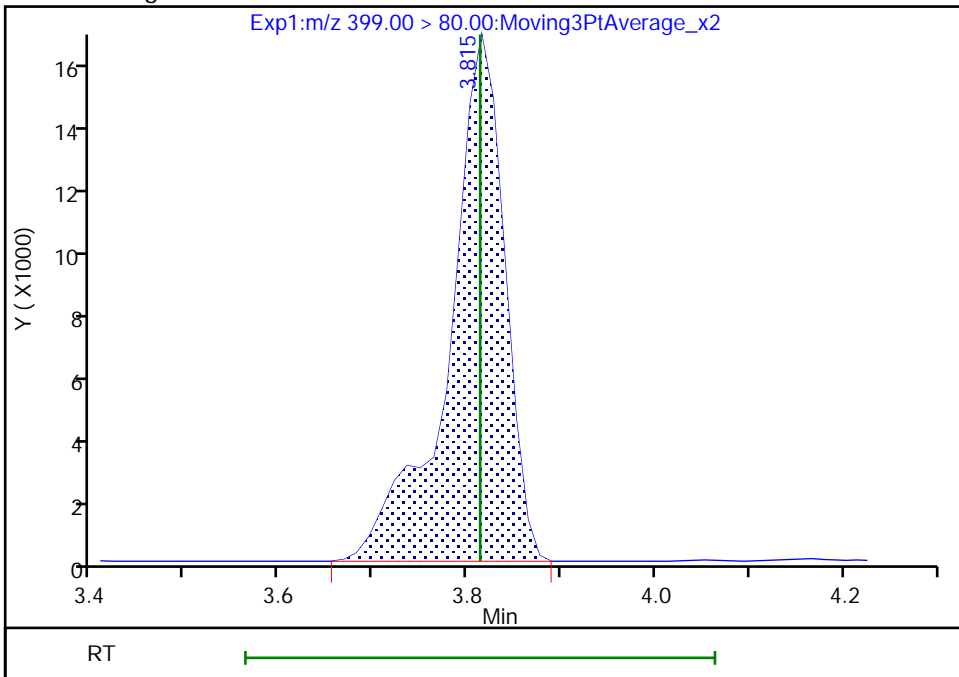
RT: 3.81
Area: 61724
Amount: 0.027054
Amount Units: ng/ml

Processing Integration Results



RT: 3.81
Area: 69897
Amount: 0.022544
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:49:35
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

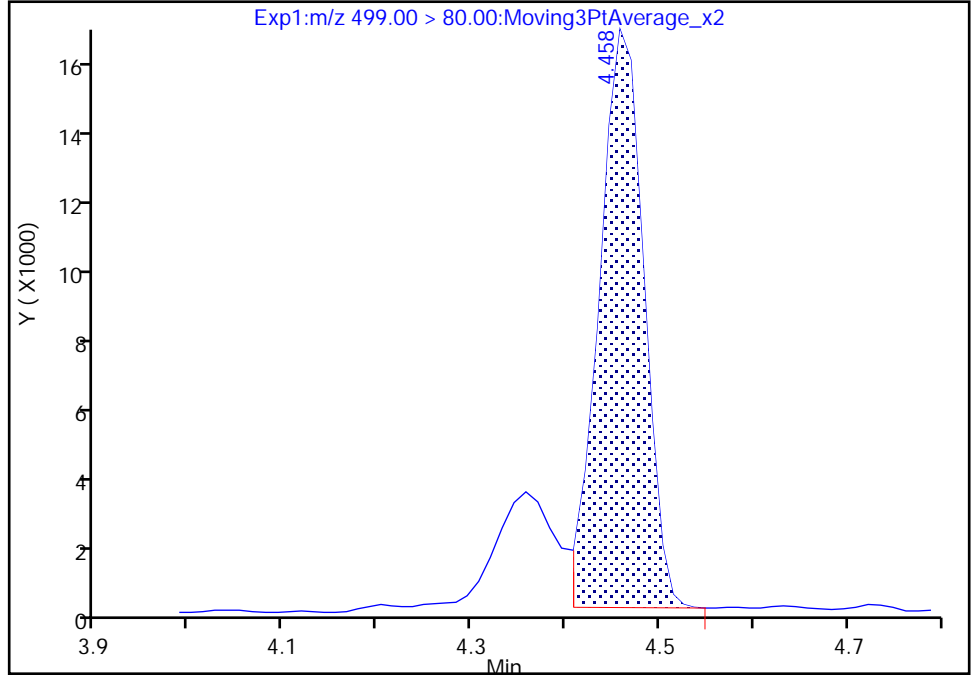
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_006.d
Injection Date: 05-Oct-2021 22:00:59 Instrument ID: LCA
Lims ID: IC 1
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

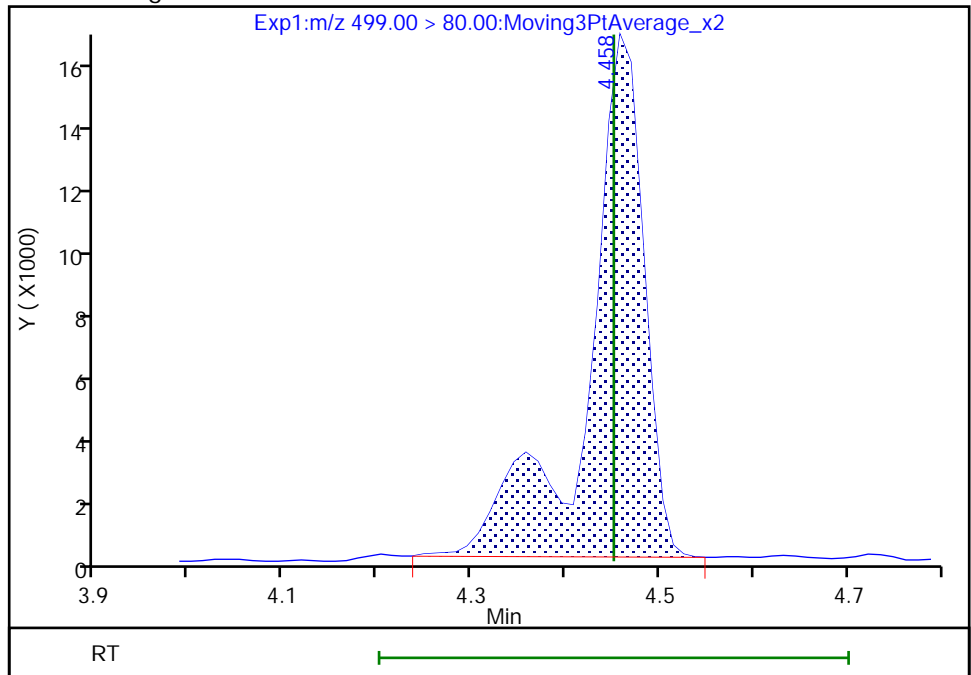
RT: 4.46
Area: 53289
Amount: 0.024771
Amount Units: ng/ml

Processing Integration Results



RT: 4.46
Area: 67658
Amount: 0.023954
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:49:55
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

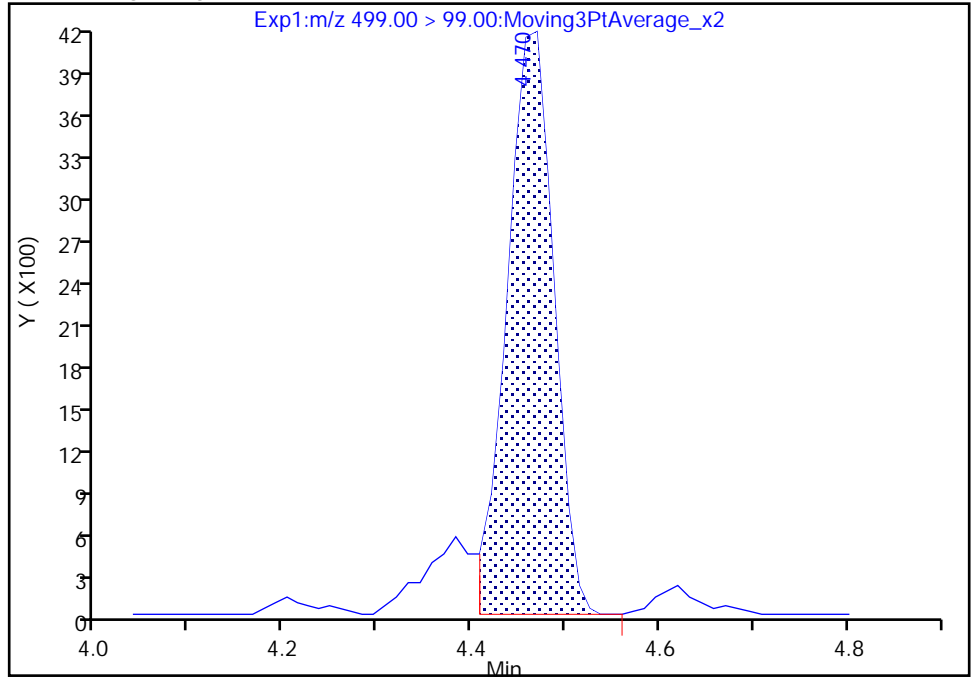
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_006.d
Injection Date: 05-Oct-2021 22:00:59 Instrument ID: LCA
Lims ID: IC 1
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

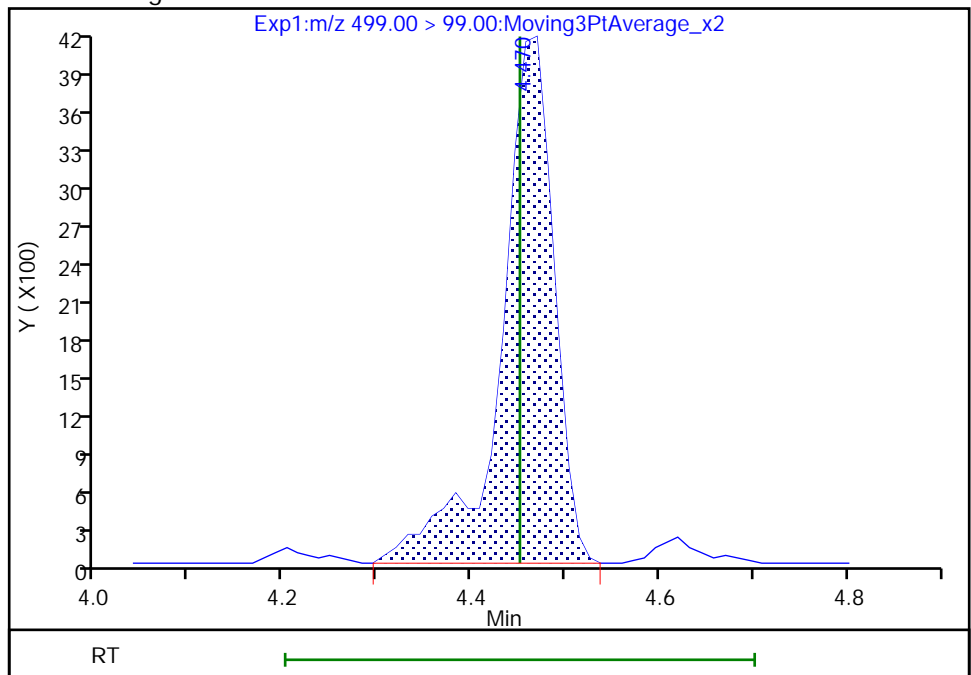
RT: 4.47
Area: 14174
Amount: 0.024771
Amount Units: ng/ml

Processing Integration Results



RT: 4.47
Area: 16161
Amount: 0.023954
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:50:04

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

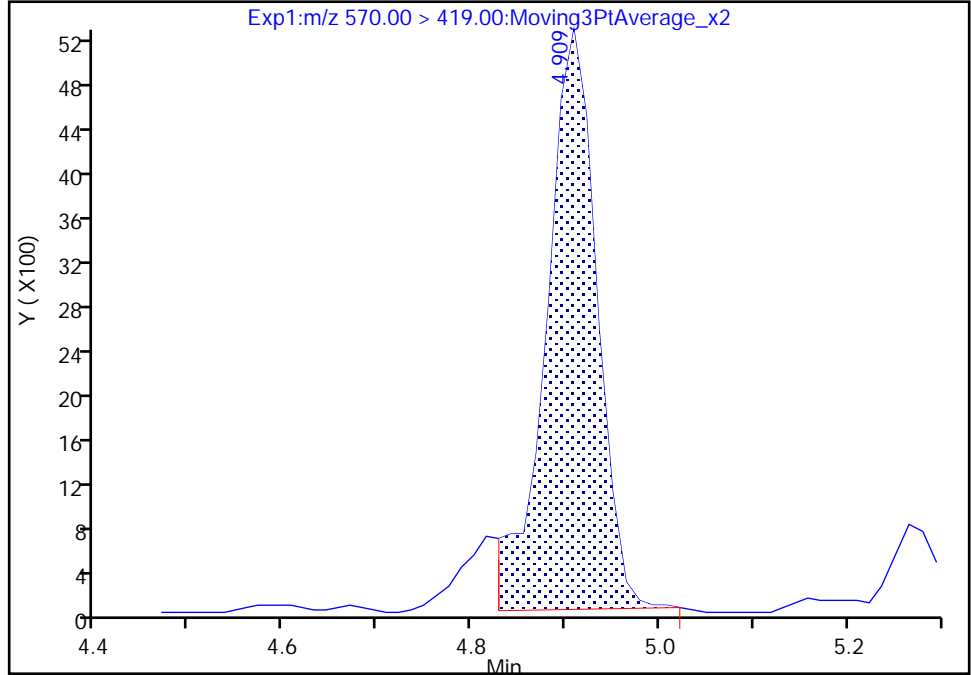
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_006.d
Injection Date: 05-Oct-2021 22:00:59 Instrument ID: LCA
Lims ID: IC 1
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

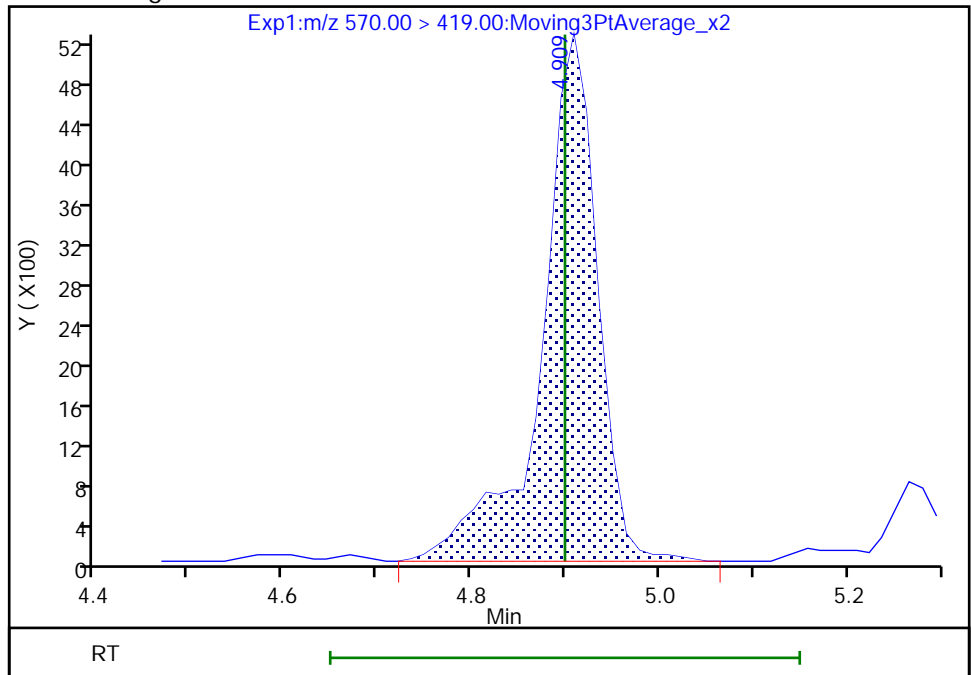
RT: 4.91
Area: 19644
Amount: 0.029858
Amount Units: ng/ml

Processing Integration Results



RT: 4.91
Area: 21967
Amount: 0.025325
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:50:20
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

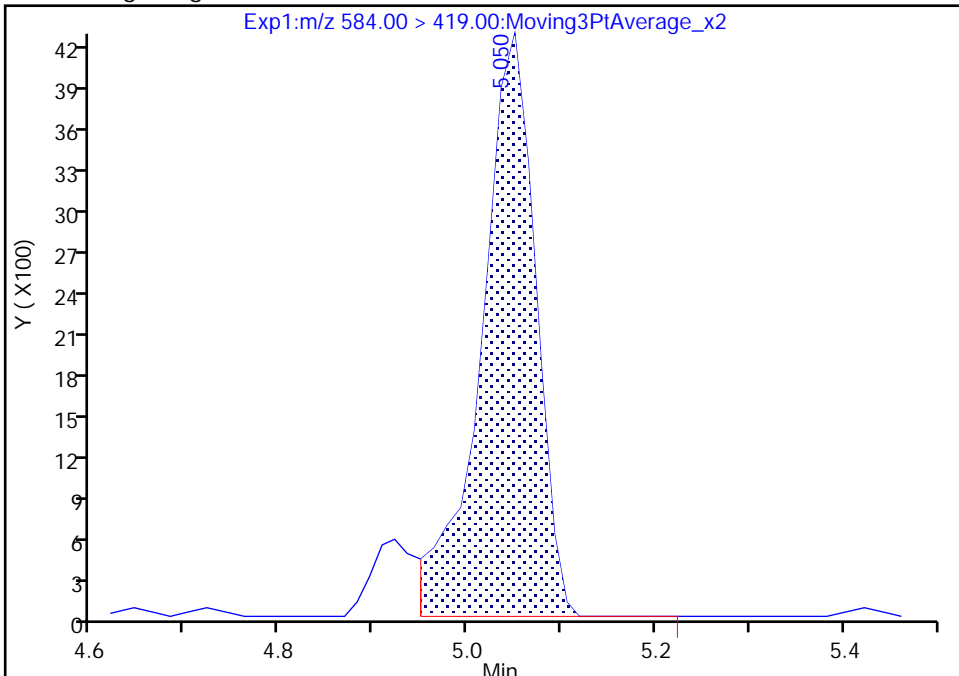
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_006.d
Injection Date: 05-Oct-2021 22:00:59 Instrument ID: LCA
Lims ID: IC 1
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

40 NEtFOSA, CAS: 2991-50-6

Signal: 1

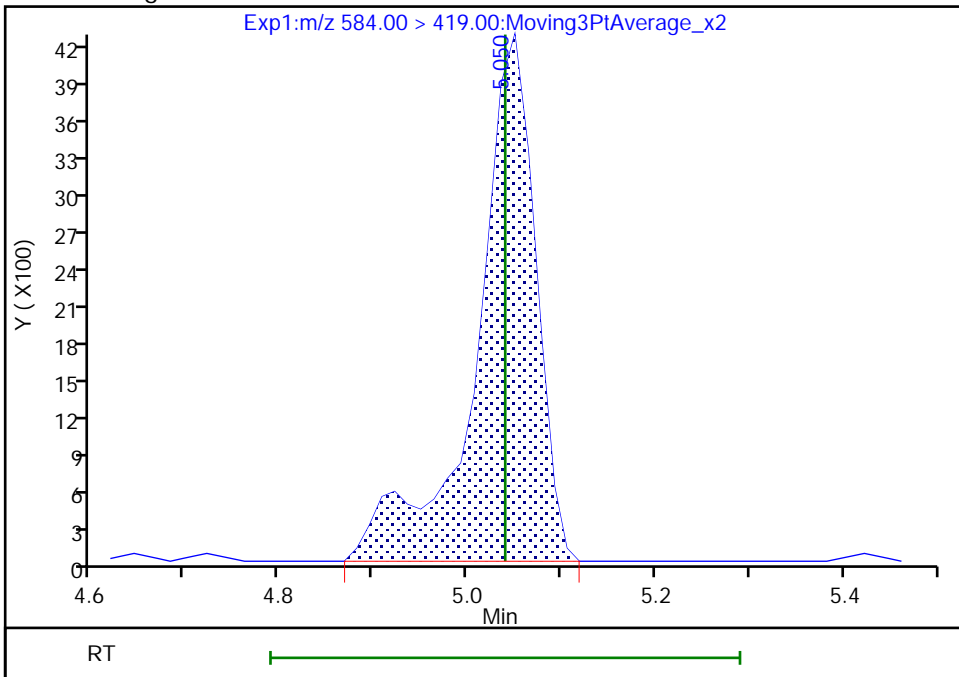
RT: 5.05
Area: 17270
Amount: 0.024713
Amount Units: ng/ml

Processing Integration Results



RT: 5.05
Area: 19038
Amount: 0.025675
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:50:30
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

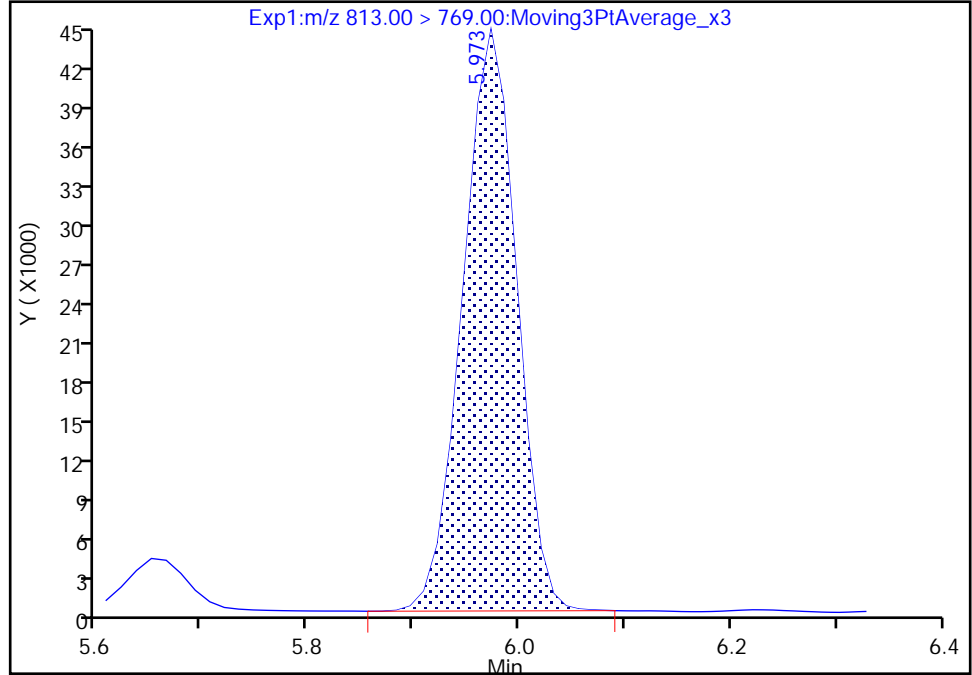
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_006.d
Injection Date: 05-Oct-2021 22:00:59 Instrument ID: LCA
Lims ID: IC 1
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

55 Perfluorohexadecanoic acid, CAS: 67905-19-5

Signal: 1

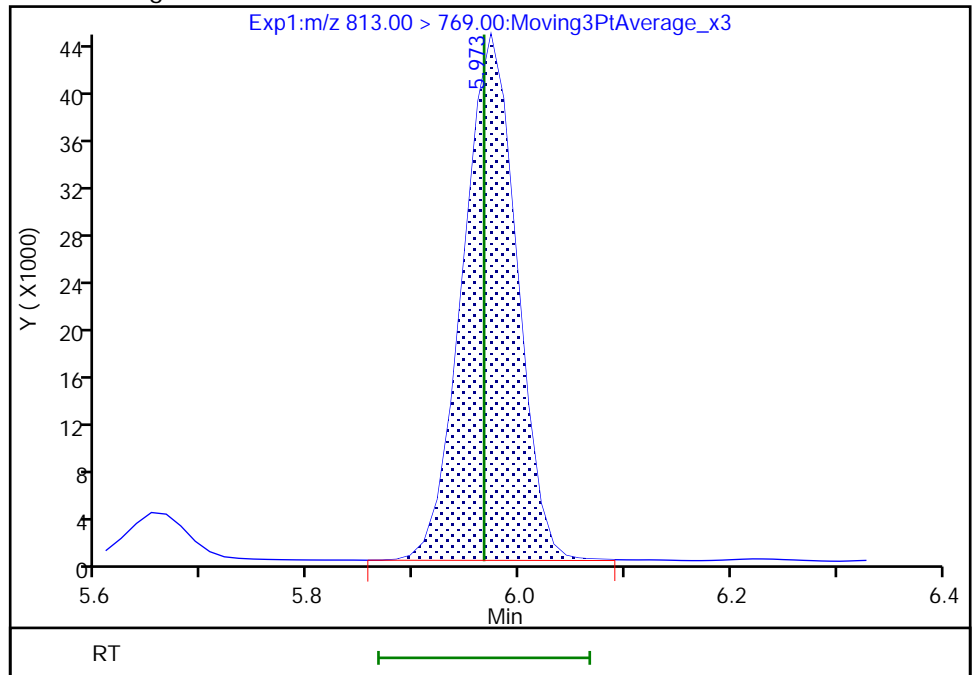
RT: 5.97
Area: 155218
Amount: 0.034588
Amount Units: ng/ml

Processing Integration Results



RT: 5.97
Area: 155694
Amount: 0.024559
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:15:35
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

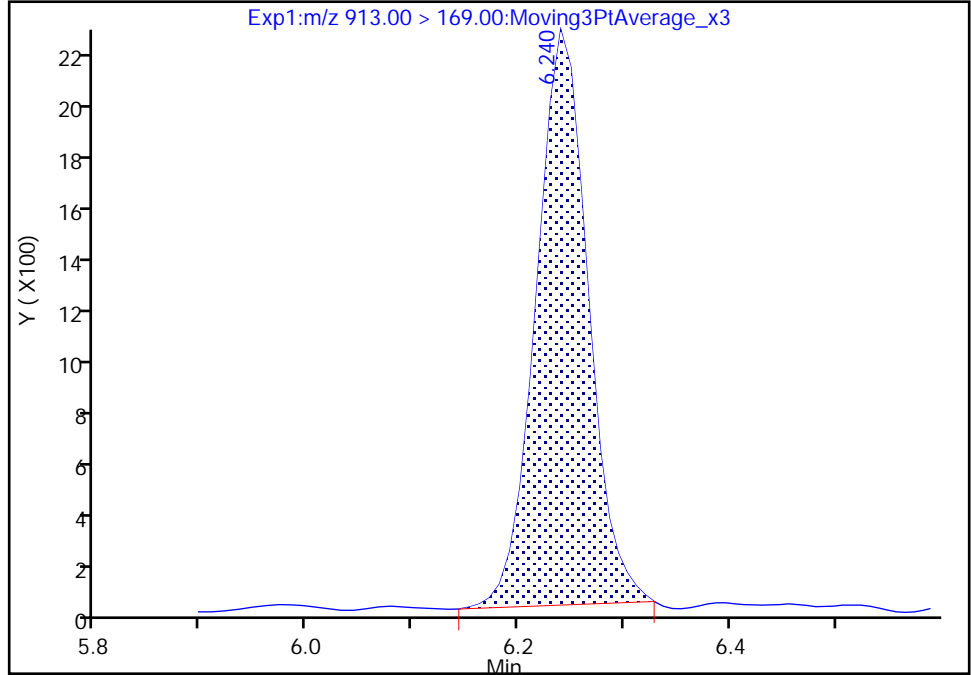
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_006.d
Injection Date: 05-Oct-2021 22:00:59 Instrument ID: LCA
Lims ID: IC 1
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

60 Perfluorooctadecanoic acid, CAS: 16517-11-6

Signal: 2

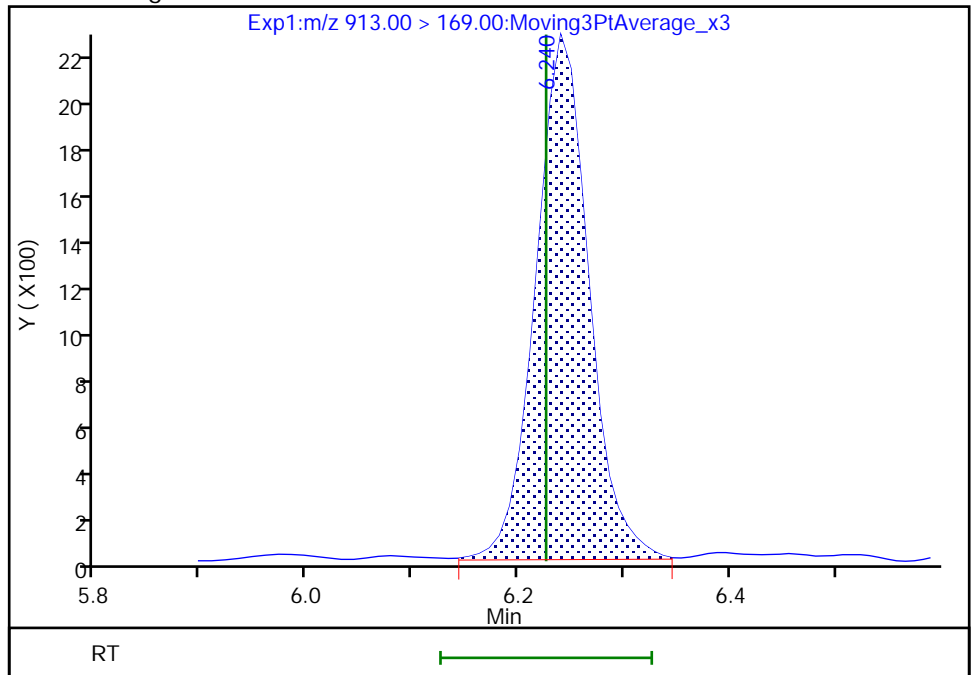
RT: 6.24
Area: 7596
Amount: 0.026724
Amount Units: ng/ml

Processing Integration Results



RT: 6.24
Area: 7844
Amount: 0.026724
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:51:18
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_007.d
 Lims ID: IC 2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 05-Oct-2021 22:09:48 ALS Bottle#: 7 Worklist Smp#: 7
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020953-007 ic 2
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15

Method: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 07-Oct-2021 14:21:00 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1613

First Level Reviewer: cochranj Date: 06-Oct-2021 15:58:50

Ratio Calibration: None

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	2.812	2.812	0.0	1.000	244540	0.0535		107	32.9	
D 1 13C4 PFBA										
217.00 > 172.00	2.812	2.812	0.0	0.675	7272665	1.22		97.5	13790	
D 3 13C5 PFPeA										
267.90 > 223.00	3.129	3.130	-0.001	0.751	6008895	1.23		98.1	9439	
4 Perfluoropentanoic acid										
262.90 > 219.00	3.143	3.131	0.012	1.004	263929	0.0542		108	60.9	
D 6 13C3 PFBS										
301.90 > 80.00	3.143	3.143	0.0	0.754	3594749	1.14		97.8	17676	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	3.157	3.151	0.006	1.004	161928	0.0465	Target=3.06	105	475	
298.90 > 99.00	3.157	3.151	0.006	1.004	59880		2.70(1.53-4.59)	105	180	
7 4:2 FTS										
327.00 > 307.00	3.437	3.431	0.006	1.000	62062	0.0508		109	1086	
D 8 M2-4:2 FTS										
329.00 > 81.00	3.437	3.431	0.006	0.825	570559	1.20		103	606	
11 Perfluoropentanesulfonic acid										
349.00 > 80.00	3.482	3.468	0.014	1.108	143856	0.0492	Target=3.47	105	1601	
349.00 > 99.00	3.469	3.468	0.001	1.104	42142		3.41(1.73-5.20)	105	749	
D 9 13C2 PFHxA										
315.00 > 270.00	3.482	3.471	0.011	0.836	6243564	1.24		99.3	9485	
10 Perfluorohexanoic acid										
313.00 > 269.00	3.482	3.471	0.011	1.000	232467	0.0543	Target=9.74	109	129	M
313.00 > 119.00	3.482	3.471	0.011	1.000	17423		13.34(4.87-14.61)	109	63.8	M
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.575	3.565	0.010	0.858	3086719	1.20		95.9	8153	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.575	3.565	0.010	1.000	189596	0.0495		99.0	120	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.827	3.813	0.014	1.000	132033	0.0460	Target=2.96	101	476	M
399.00 > 99.00	3.827	3.813	0.014	1.000	40366		3.27(1.48-4.44)	101	422	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.827	3.813	0.014	0.919	2261386	1.18		99.9	9829	
D 14 13C4 PFHpA										
367.00 > 322.00	3.827	3.819	0.008	0.919	6219868	1.24		99.2	11381	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.827	3.819	0.008	1.000	296091	0.0519	Target=3.35	104	246	
363.00 > 169.00	3.827	3.819	0.008	1.000	82042		3.61(1.67-5.02)	104	571	
68 DONA										
377.00 > 251.00	3.864	3.850	0.014	0.865	426633	0.0520	Target=1.49	110	1178	
377.00 > 85.00	3.864	3.850	0.014	0.865	232688		1.83(0.74-2.23)	110	1349	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.155	4.143	0.012	0.930	131799	0.0524	Target=3.73	110	831	
449.00 > 99.00	4.155	4.143	0.012	0.930	32047		4.11(1.87-5.61)	110	223	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.167	4.151	0.016	1.000	600900	1.24		104	823	
D 21 13C4 PFOA										
417.00 > 372.00	4.167	4.155	0.012	1.000	5777544	1.27		102	19276	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.155	4.146	0.009	0.997	5593233	1.26		100	22703	
19 6:2 FTS										
427.00 > 407.00	4.167	4.151	0.016	1.000	59326	0.0517		109	402	
* 22 13C2 PFOA										
415.00 > 370.00	4.167	4.155	0.012		5631791	1.25			12126	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.167	4.156	0.011	1.000	295123	0.0494	Target=2.40	98.9	98.1	
413.00 > 169.00	4.167	4.156	0.011	1.000	105261		2.80(1.20-3.61)	98.9	253	
D 25 13C4 PFOS										
503.00 > 80.00	4.470	4.451	0.019	1.073	3022370	1.15		95.9	8839	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.458	4.446	0.012	1.070	663148	1.17		98.1	3312	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.470	4.451	0.019	1.000	132719	0.0477	Target=3.83	103	217	M
499.00 > 99.00	4.470	4.451	0.019	1.000	31095		4.27(1.91-5.74)	103	139	M
D 27 13C5 PFNA										
468.00 > 423.00	4.481	4.471	0.010	1.075	6735203	1.17		93.5	22183	
26 Perfluorononanoic acid										
463.00 > 419.00	4.481	4.471	0.010	1.000	247402	0.0500	Target=3.68	99.9	171	
463.00 > 169.00	4.481	4.471	0.010	1.000	49675		4.98(1.84-5.52)	99.9	180	
63 9CIFOS										
531.00 > 351.00	4.620	4.606	0.014	1.109	283194	0.0485		104	497	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.736	4.728	0.008	1.059	135991	0.0516	Target=3.97	107	800	
549.00 > 99.00	4.736	4.728	0.008	1.059	32881		4.14(1.99-5.96)	107	173	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.749	4.745	0.004	1.000	189353	0.0501		100	372	
D 34 13C8 FOSA										
506.00 > 78.00	4.749	4.743	0.006	1.140	4922112	1.27		102	5425	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.776	4.760	0.016	1.000	339239	0.0506	Target=10.11	101	185	
513.00 > 169.00	4.776	4.760	0.016	1.000	27194		12.47(5.06-15.17)	101	78.3	
D 32 13C2 PFDA										
515.00 > 470.00	4.776	4.758	0.018	1.146	7353570	1.26		101	33155	
31 8:2 FTS										
527.00 > 507.00	4.789	4.774	0.015	1.000	55047	0.0495		103	523	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.789	4.774	0.015	1.149	747134	1.26		105	1720	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.909	4.899	0.010	1.178	987298	1.24		98.8	3910	
36 NMeFOSAA										
570.00 > 419.00	4.909	4.899	0.010	1.000	40014	0.0481		96.1	68.3	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	5.007	4.997	0.010	1.120	131183	0.0542	Target=3.80	112	734	
599.00 > 99.00	5.007	4.997	0.010	1.120	33172		3.95(1.90-5.70)	112	212	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.022	5.018	0.004	1.000	307117	0.0510	Target=7.45	102	266	
563.00 > 169.00	5.022	5.018	0.004	1.000	34044		9.02(3.78-11.33)	102	190	
D 39 13C2 PFUnA										
565.00 > 520.00	5.022	5.015	0.007	1.205	6782308	1.22		97.3	39549	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.050	5.034	0.016	1.212	958230	1.25		99.8	3708	
40 NEtFOSA										
584.00 > 419.00	5.050	5.040	0.010	1.000	42754	0.0587		117	177	M
57 11C1FOS										
631.00 > 451.00	5.132	5.122	0.010	1.148	244018	0.0519		110	636	
D 43 13C2 PFDa										
615.00 > 570.00	5.266	5.255	0.011	1.264	6949236	1.17		93.5	19527	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.266	5.255	0.011	1.000	333197	0.0544	Target=5.33	109	176	
613.00 > 169.00	5.266	5.255	0.011	1.000	42680		7.81(2.66-7.99)	109	108	
50 10:2 FTS										
627.00 > 607.00	5.280	5.274	0.006	1.103	69862	0.0504		105	799	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.295	5.289	0.006	1.271	575299	1.19		95.0	365	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.271	604340	1.20		95.9	42.2	
49 N-MeFOSE-M										
616.00 > 59.00	5.310	5.297	0.013	1.003	33495	0.0552		110	34.0	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.310	5.301	0.009	1.003	27409	0.0541		108	101	
54 PFDoS										
699.00 > 80.00	5.449	5.439	0.010	1.219	125689	0.0503	Target=4.32	104	582	
699.00 > 99.00	5.449	5.439	0.010	1.219	29825		4.21(2.19-6.58)	104	210	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.449	5.445	0.004	1.308	646520	1.25		100	680	
62 N-EtFOSE-M										M
630.00 > 59.00	5.462	5.458	0.004	1.002	35981	0.0508		102	86.6	M
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.460	0.002	1.311	516960	1.22		97.4	681	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.462	5.462	0.0	1.037	291224	0.0536	Target=5.66	107	134	
663.00 > 169.00	5.462	5.462	0.0	1.037	45187		6.44(2.83-8.48)	107	200	
56 N-EtFOSA-M										
526.00 > 169.00	5.475	5.469	0.006	1.002	26074	0.0540		108	158	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.651	5.643	0.008	1.356	6455611	1.18		94.7	25317	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.651	5.643	0.008	1.000	38423	0.0523	Target=1.07	105	351	
713.00 > 219.00	5.651	5.643	0.008	1.000	33621		1.14(0.53-1.60)	105	471	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.961	5.961	0.0	1.430	4697373	1.19		95.0	7884	
55 Perfluorohexadecanoic acid										M
813.00 > 769.00	5.961	5.967	-0.006	1.000	265142	0.0513	Target=7.50	103	223	M
813.00 > 169.00	5.961	5.967	-0.006	1.000	33449		7.93(3.75-11.26)	103	188	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.230	6.226	0.004	1.045	183269	0.0537	Target=9.98	107	248	
913.00 > 169.00	6.230	6.226	0.004	1.045	15307		11.97(5.14-15.41)	107	234	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L2PFC2_00003

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_007.d

Injection Date: 05-Oct-2021 22:09:48

Instrument ID: LCA

Lims ID: IC 2

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 7

Worklist Smp#: 7

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

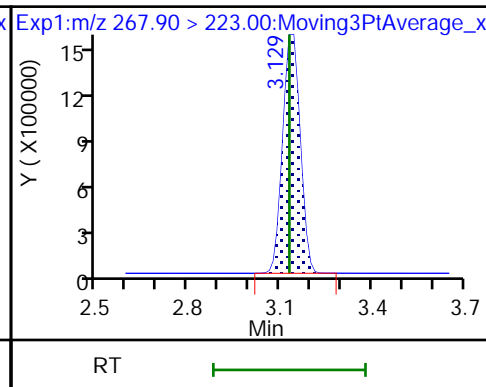
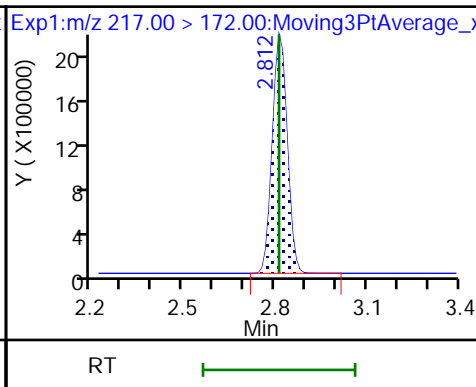
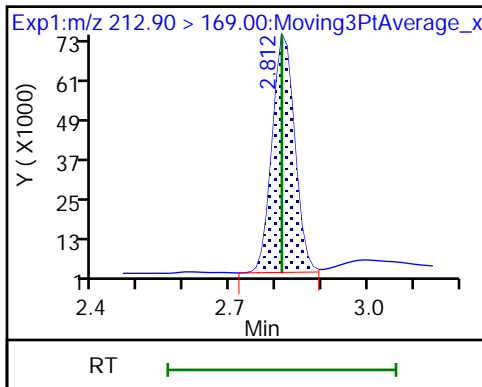
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

2 Perfluorobutanoic acid

D 1 13C4 PFBA

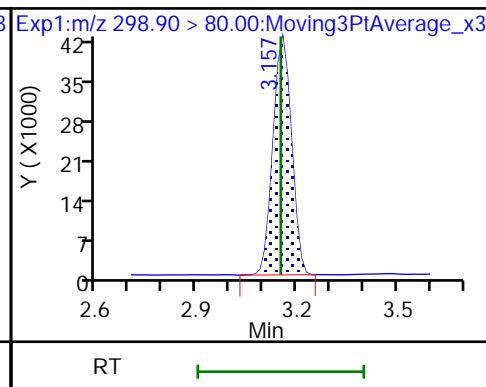
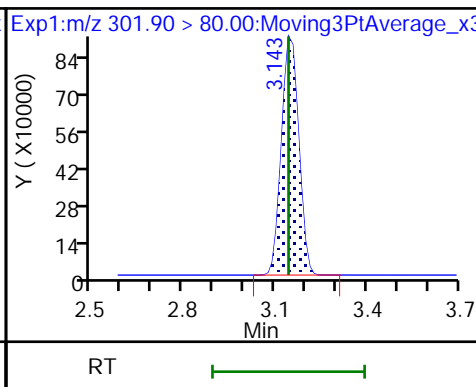
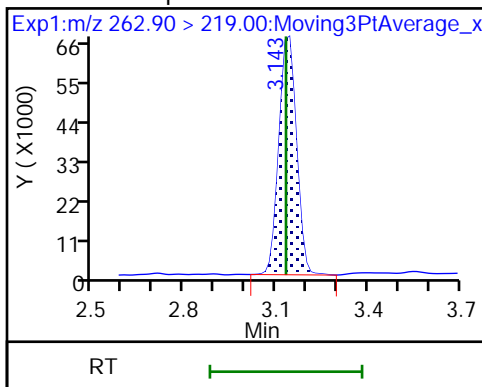
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

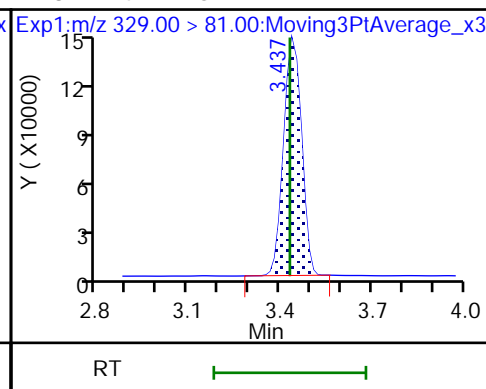
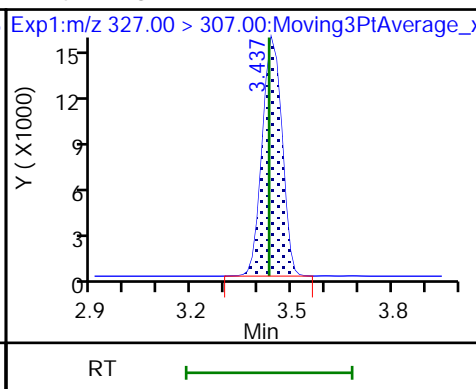
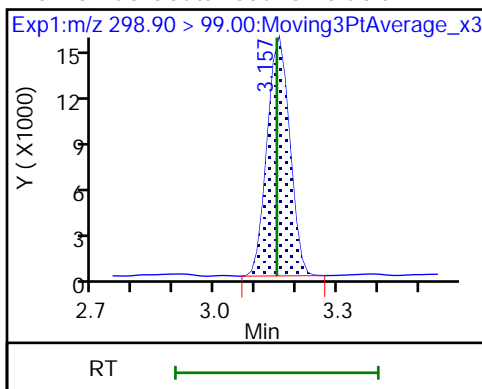
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

7 4:2 FTS

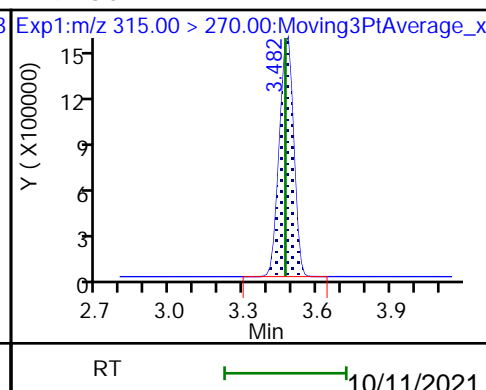
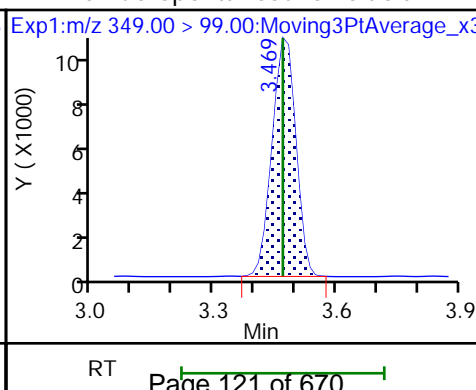
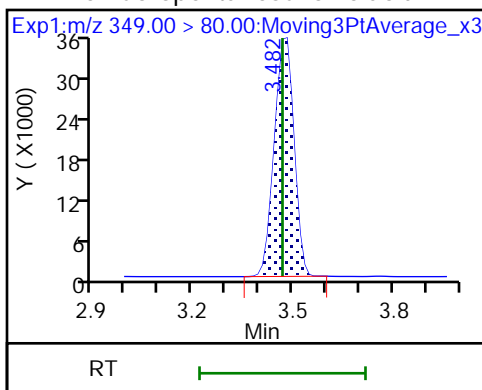
D 8 M2-4:2 FTS

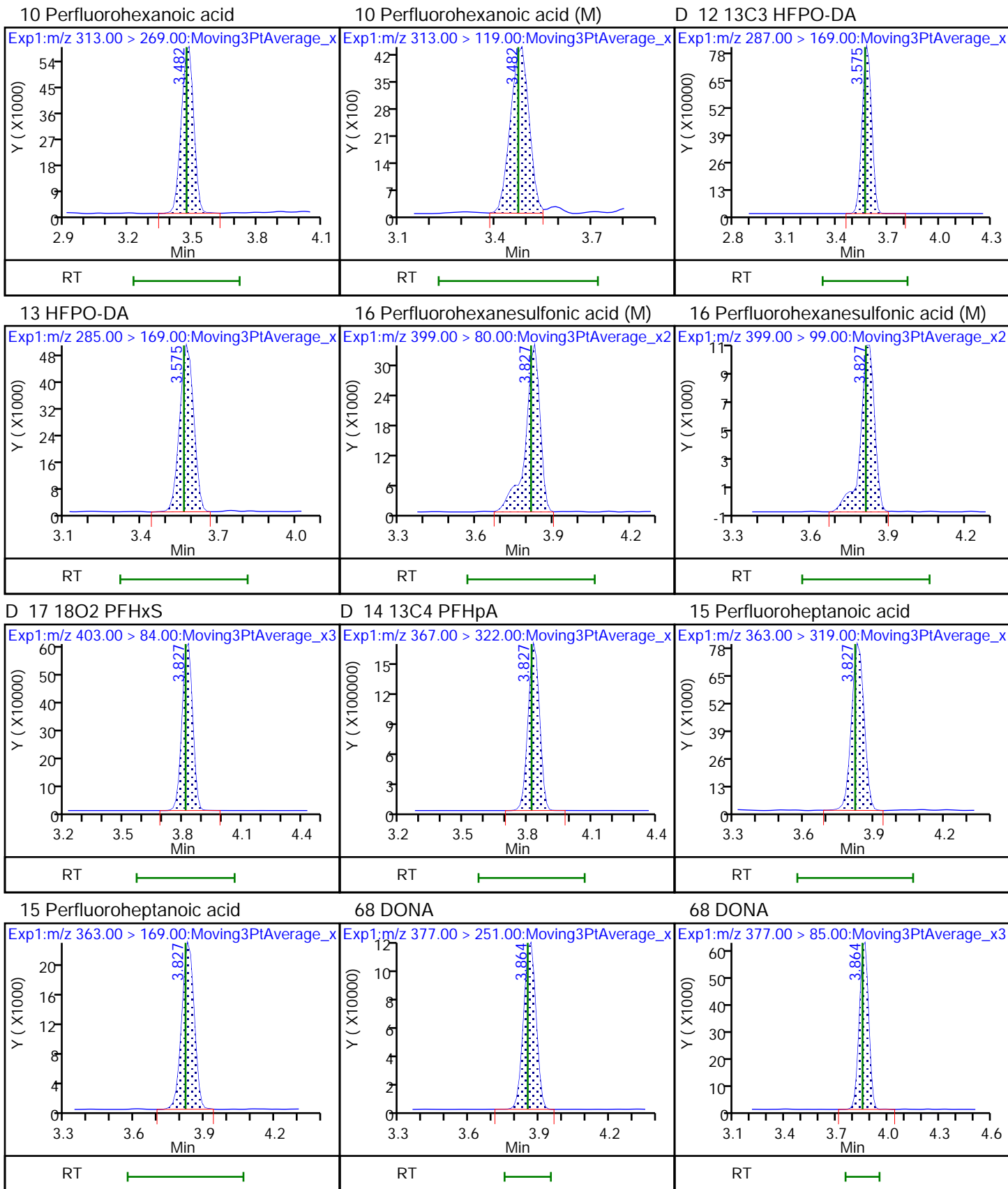


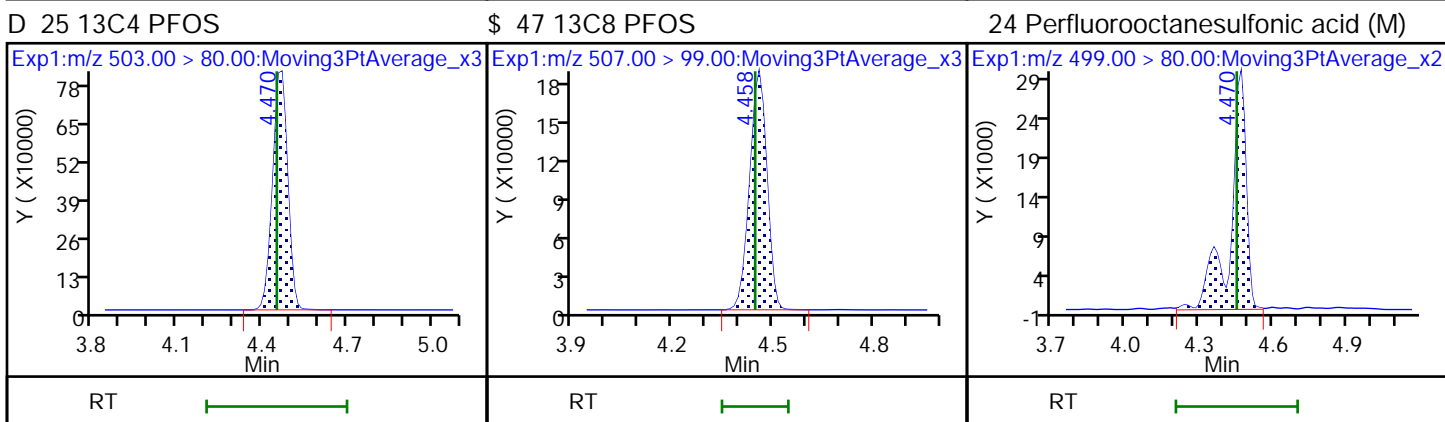
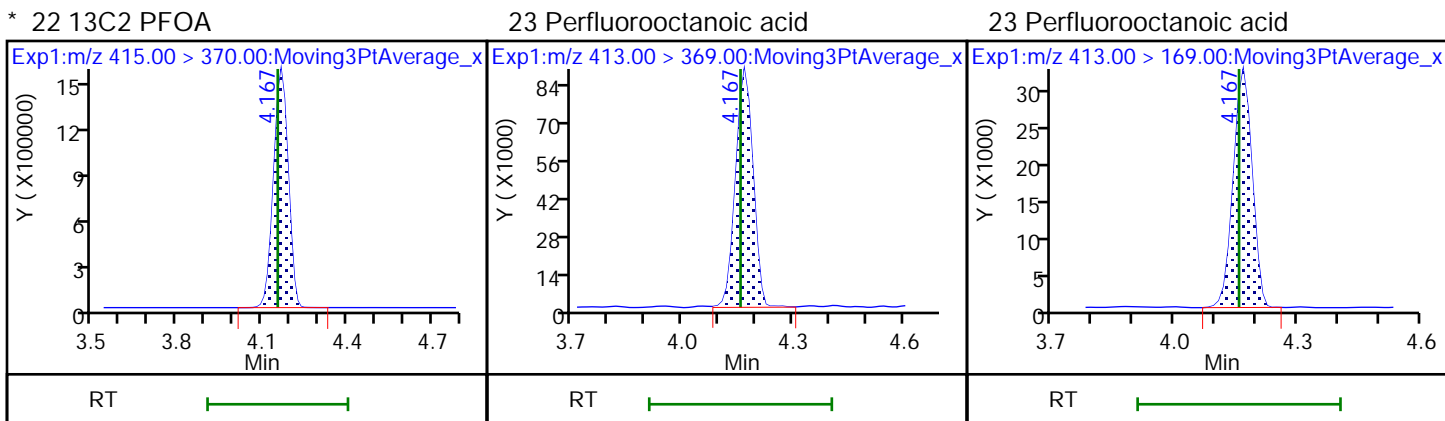
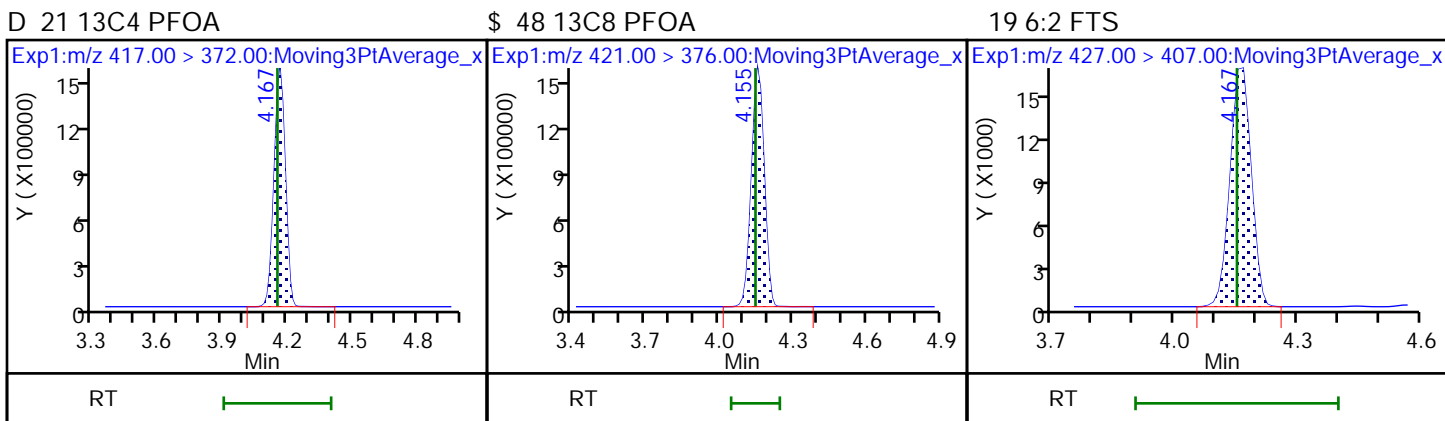
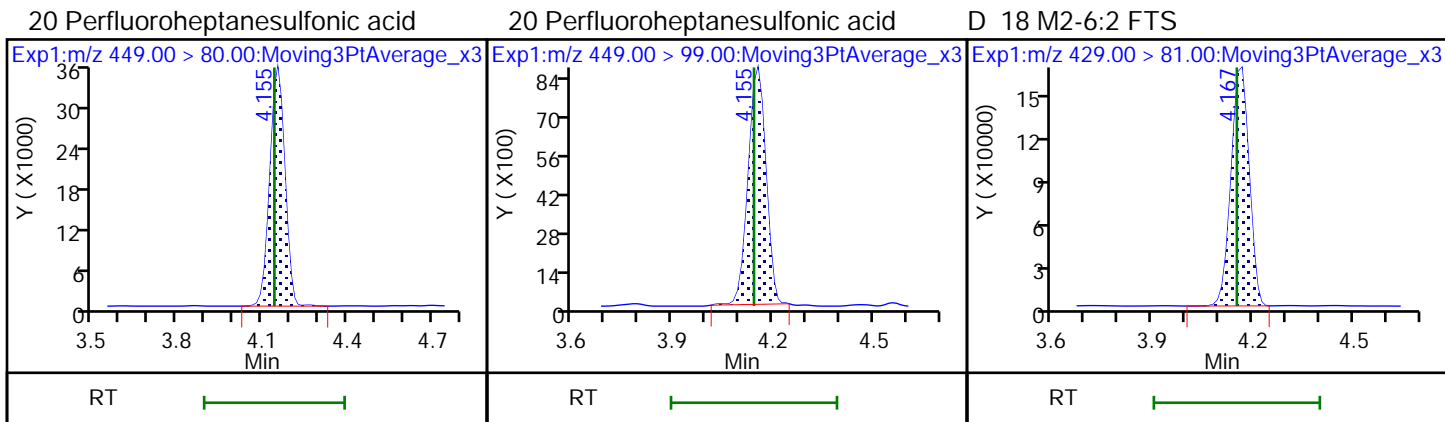
11 Perfluoropentanesulfonic acid

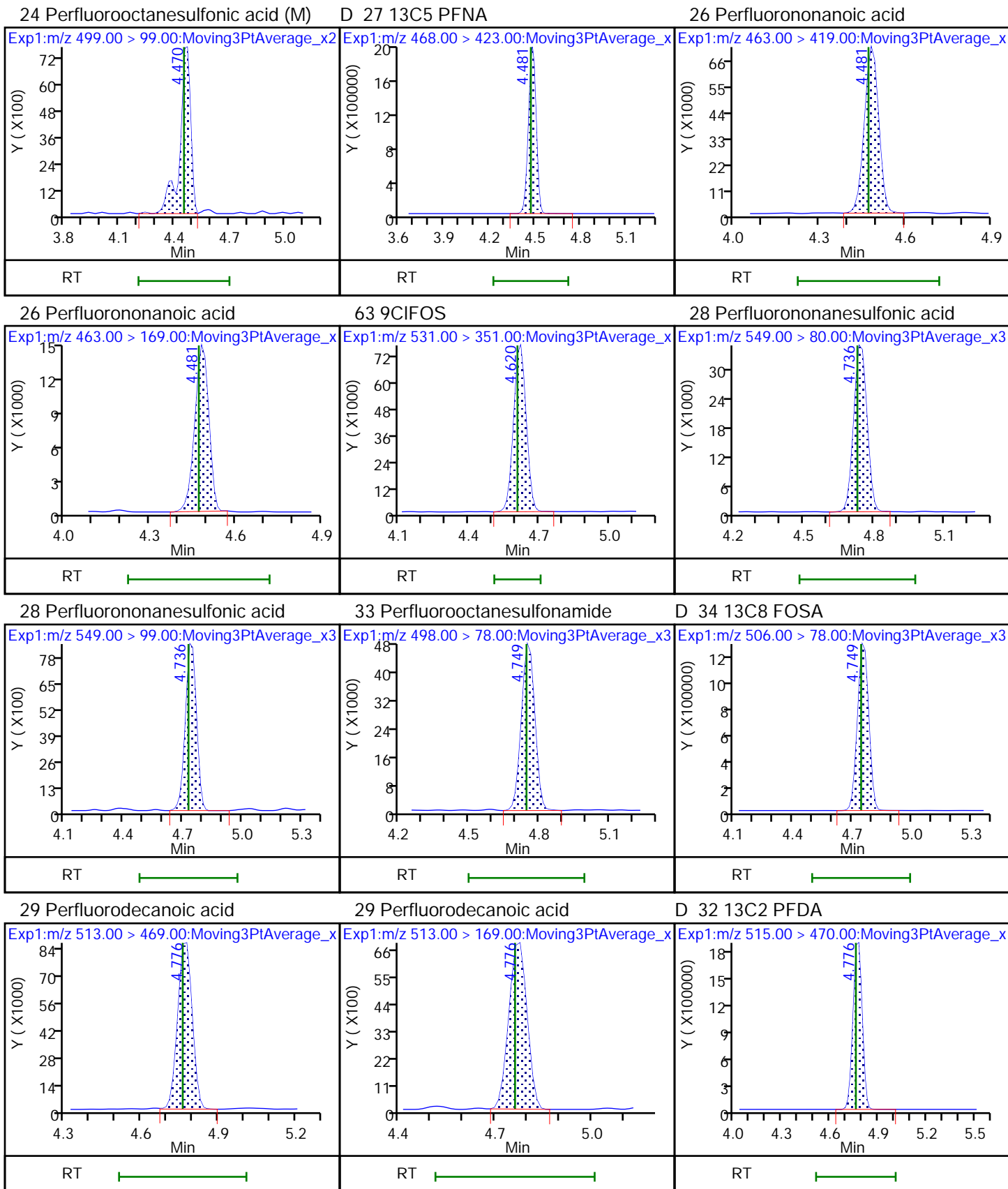
11 Perfluoropentanesulfonic acid

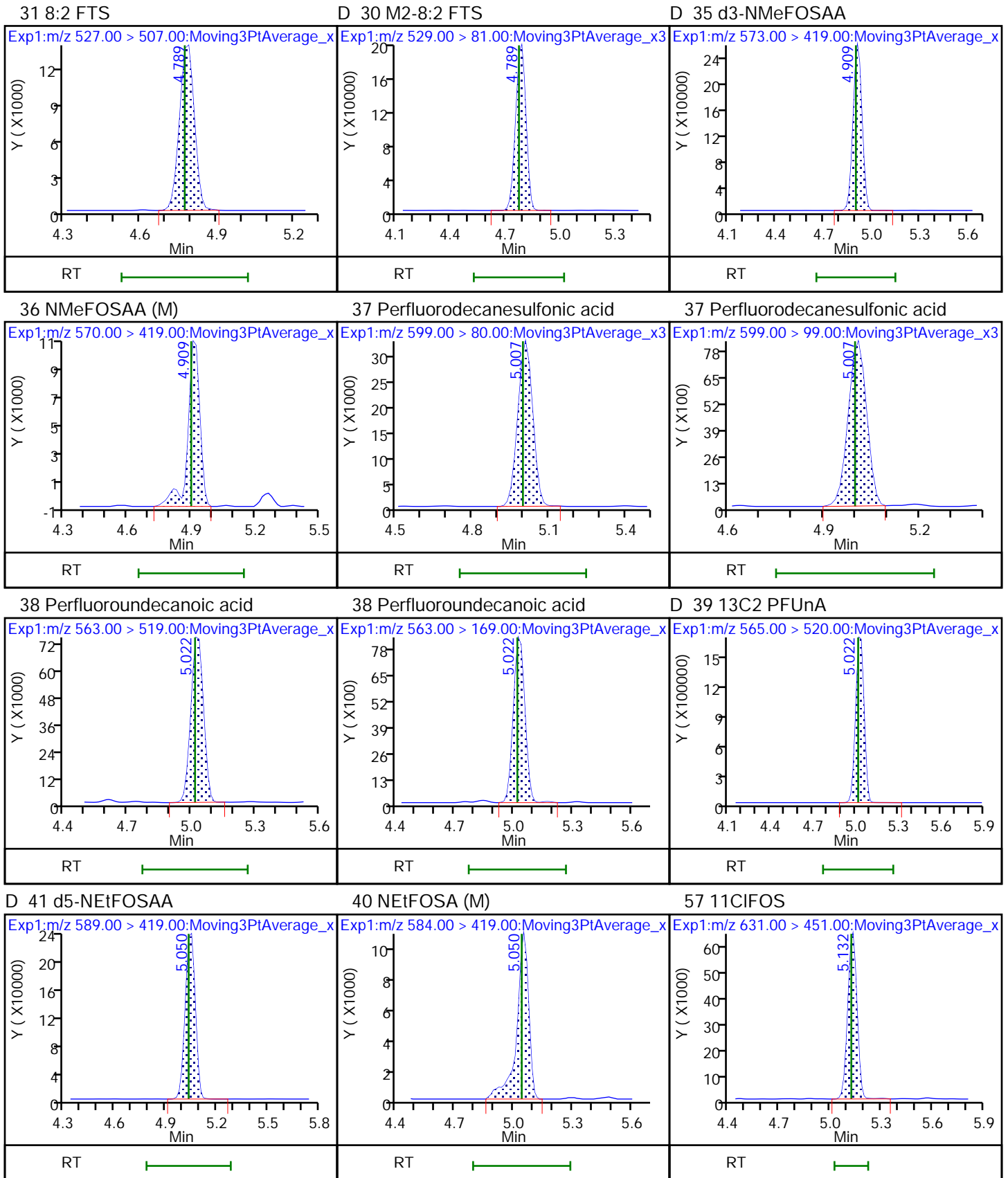
D 9 13C2 PFHxA







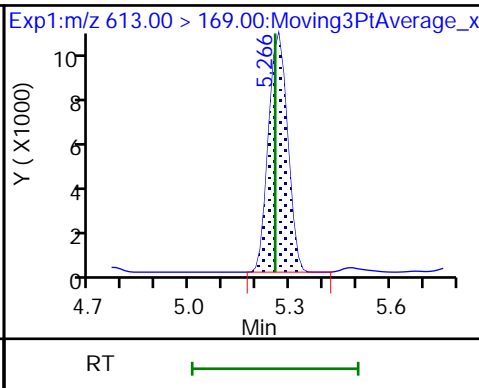
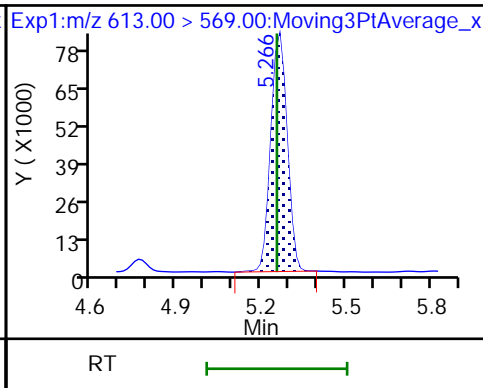
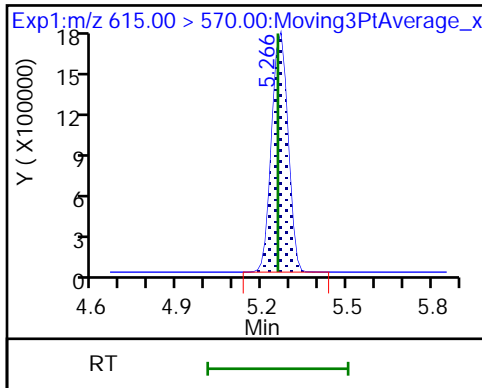




D 43 13C2 PFDaA

42 Perfluorododecanoic acid

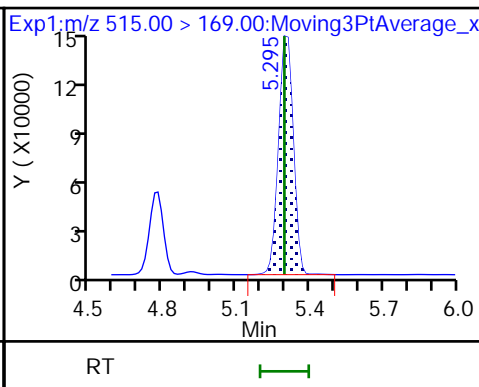
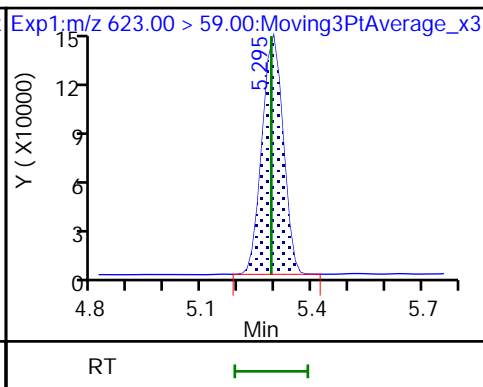
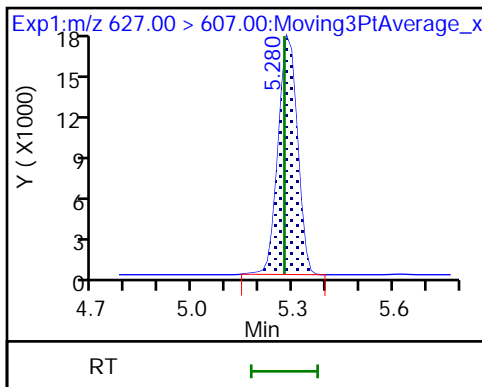
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

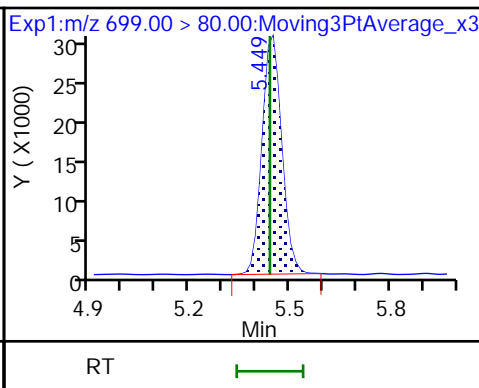
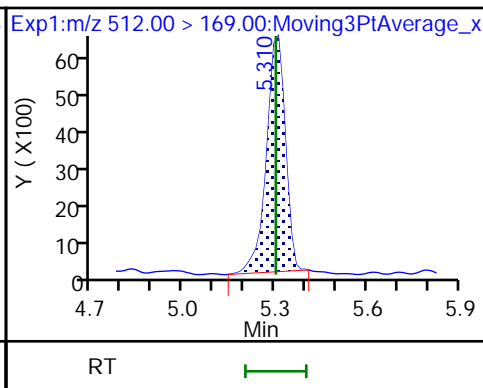
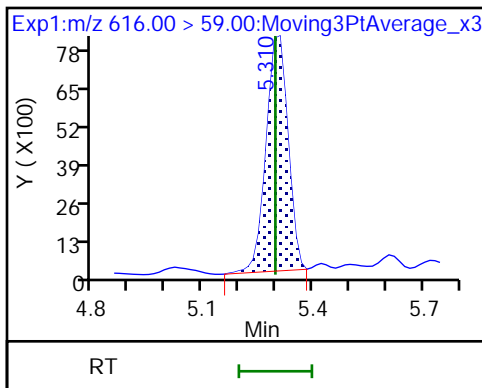
D 58 d-N-MeFOSEA-M



49 N-MeFOSE-M

61 NMeFOSEA

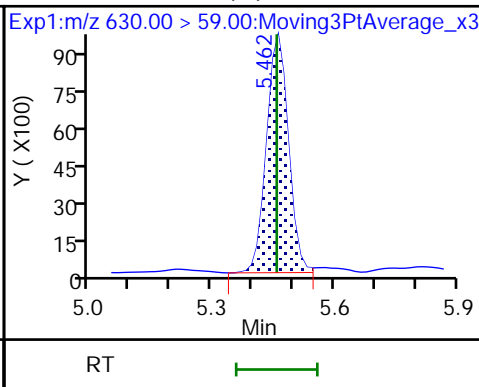
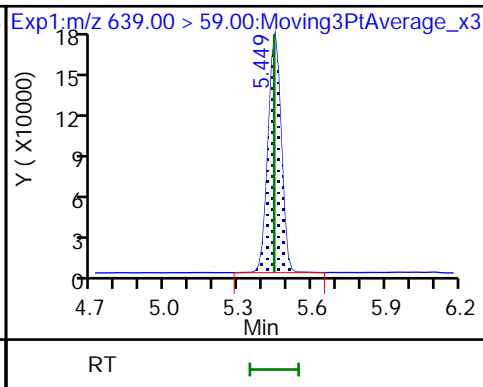
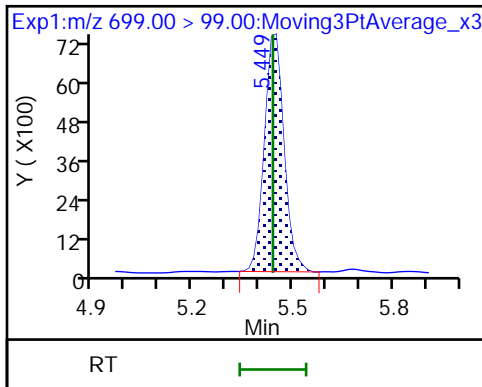
54 PFDoS



54 PFDoS

D 53 d9-N-EtFOSE-M

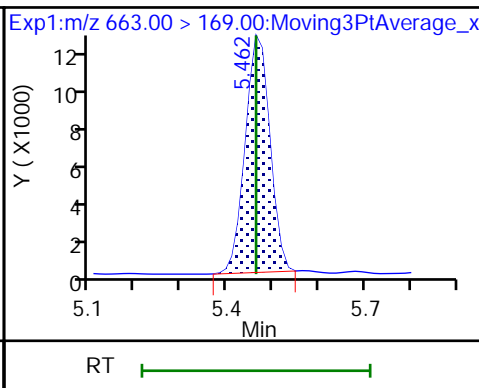
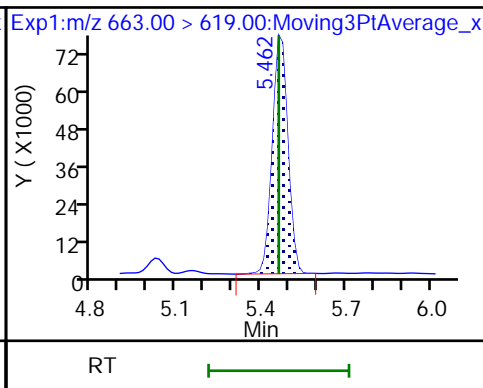
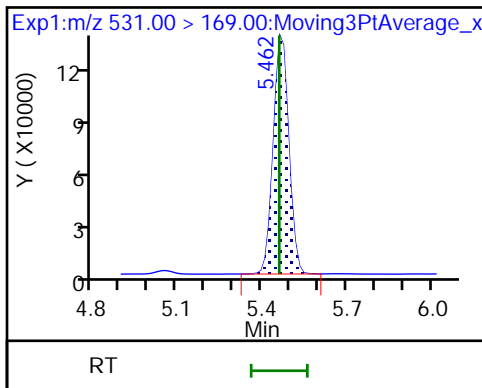
62 N-EtFOSE-M (M)



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid

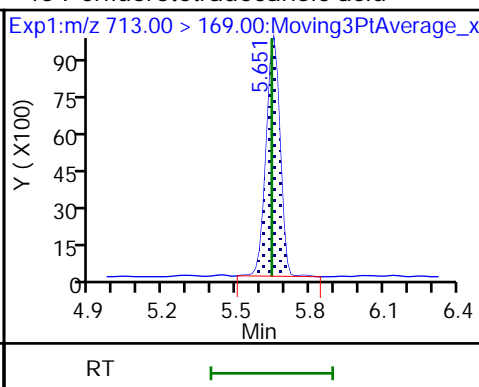
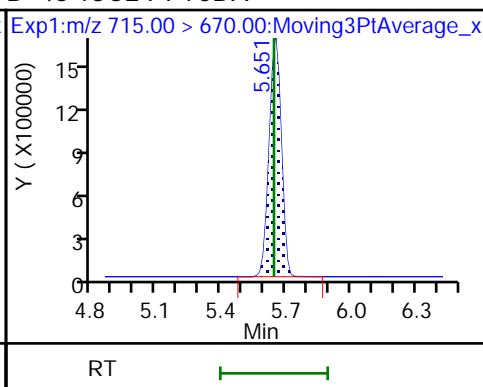
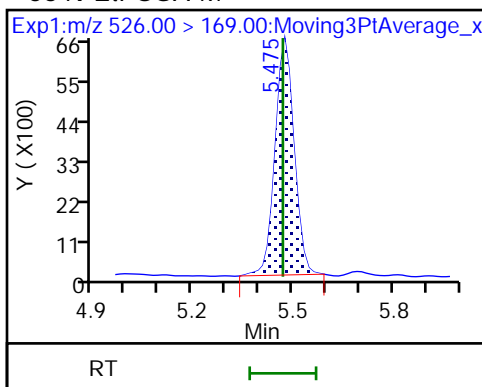
44 Perfluorotridecanoic acid



56 N-EtFOSA-M

D 46 13C2 PFTeDA

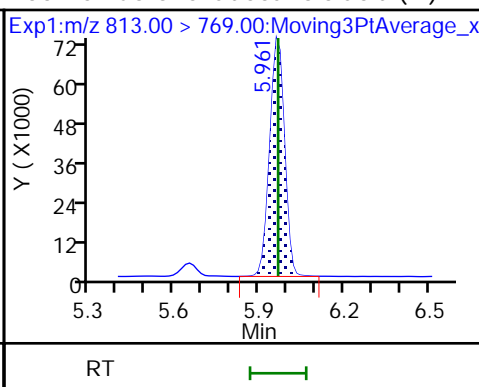
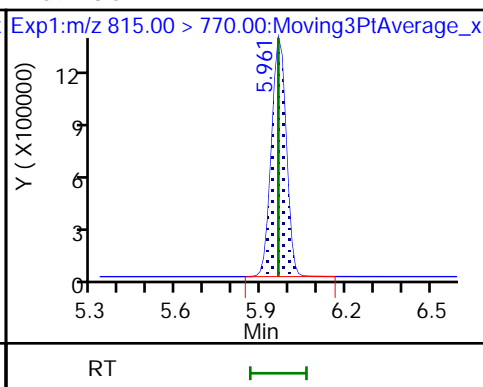
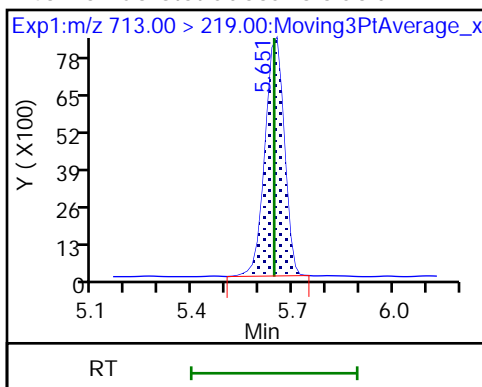
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

D 59 13C2 PFHxDA

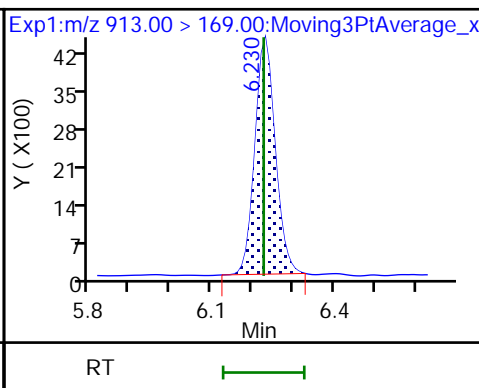
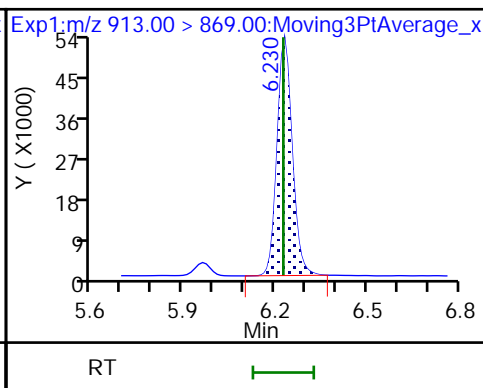
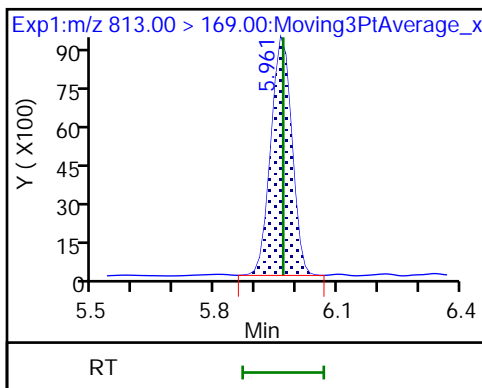
55 Perfluorohexadecanoic acid (M)



55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid



Eurofins TestAmerica, Knoxville

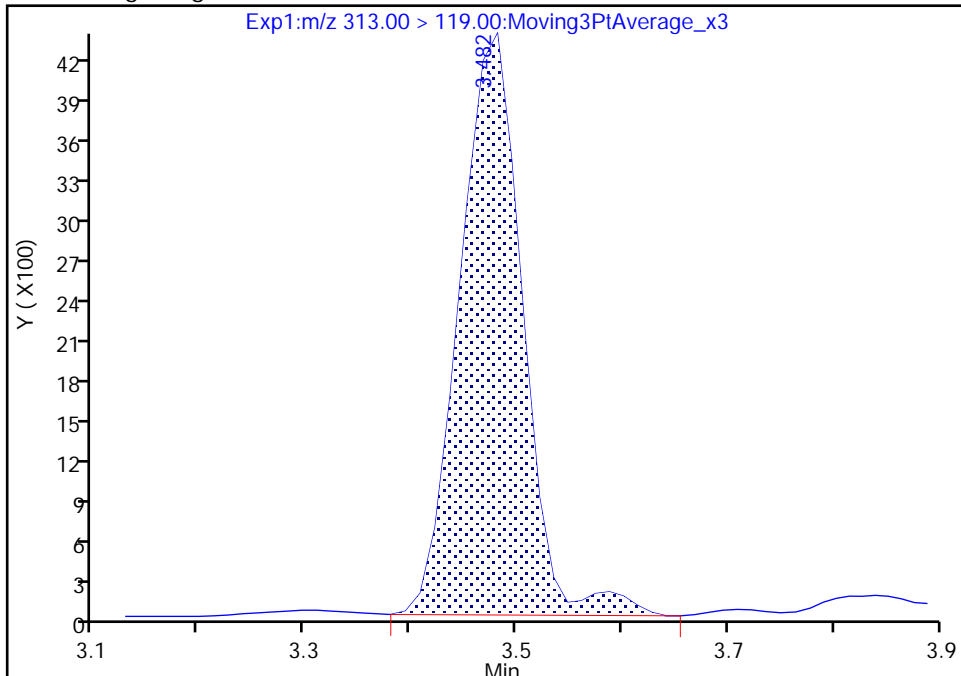
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Injection Date: 05-Oct-2021 22:09:48 Instrument ID: LCA
Lims ID: IC 2
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

10 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 2

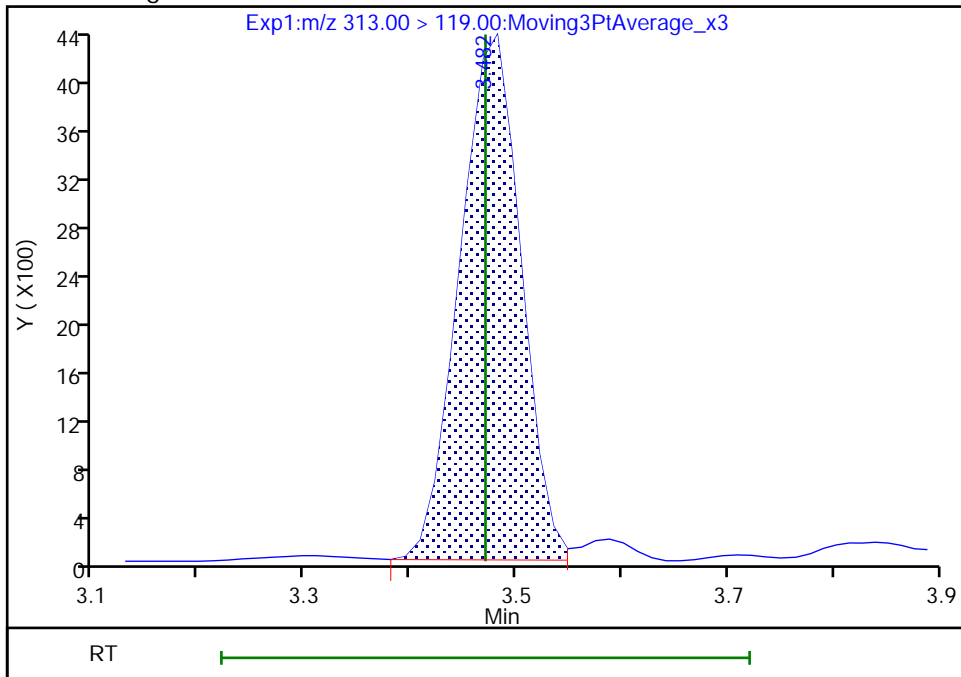
RT: 3.48
Area: 18019
Amount: 0.049919
Amount Units: ng/ml

Processing Integration Results



RT: 3.48
Area: 17423
Amount: 0.054295
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:57:03
Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Knoxville

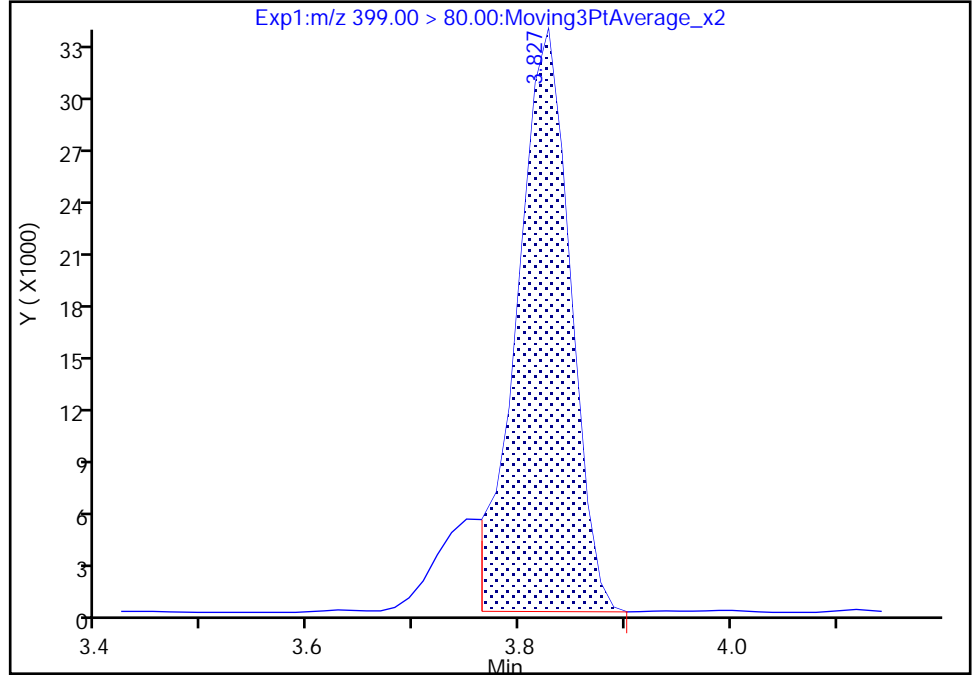
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Lims ID: IC 2
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

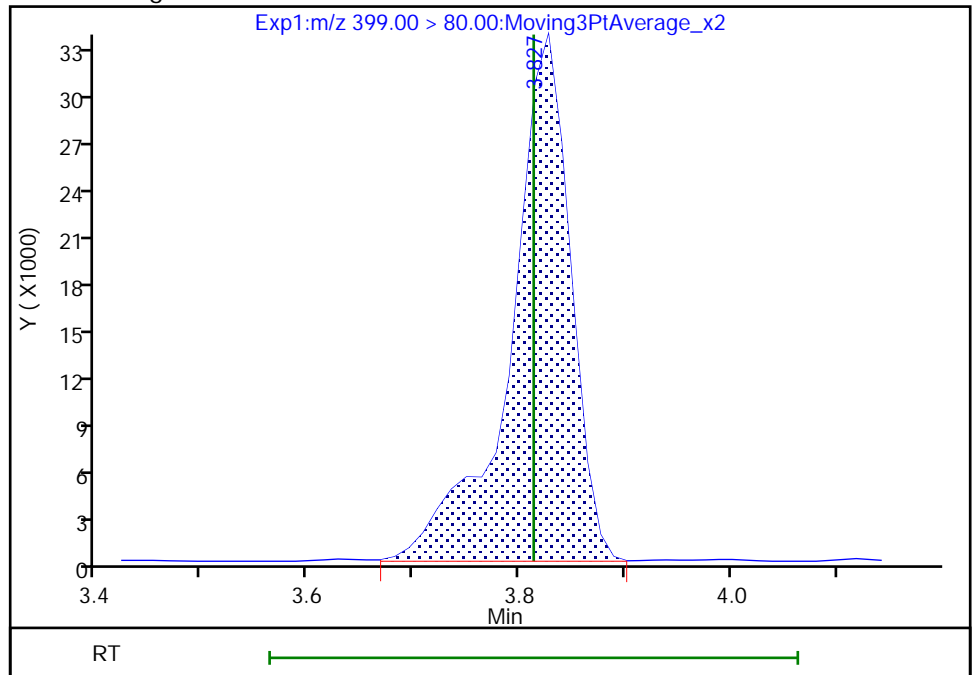
RT: 3.83
Area: 115981
Amount: 0.040780
Amount Units: ng/ml

Processing Integration Results



RT: 3.83
Area: 132033
Amount: 0.046005
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:57:35
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

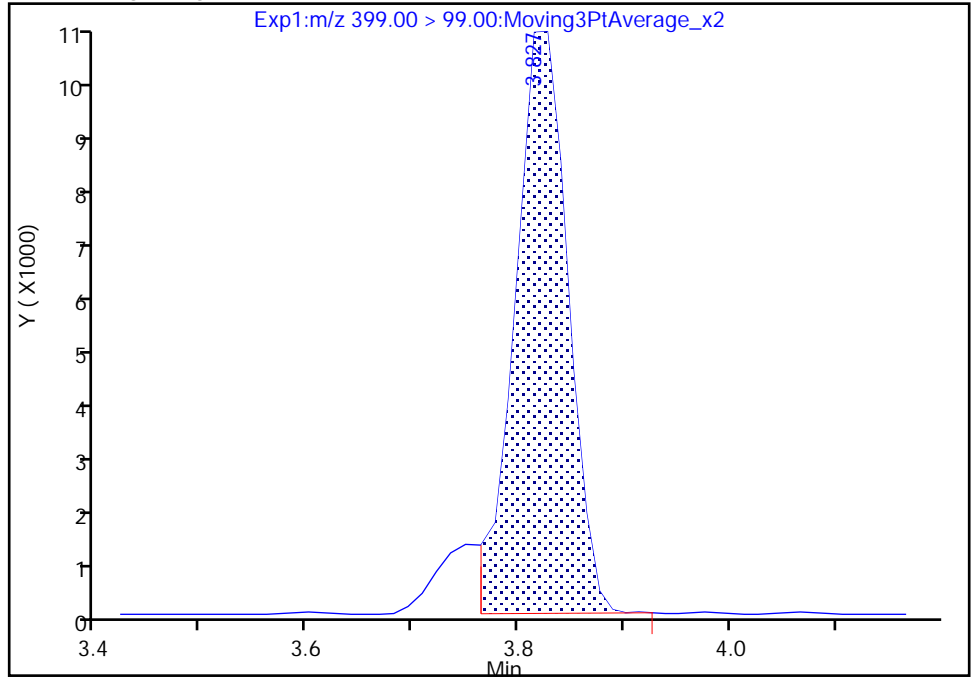
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_007.d
Injection Date: 05-Oct-2021 22:09:48 Instrument ID: LCA
Lims ID: IC 2
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

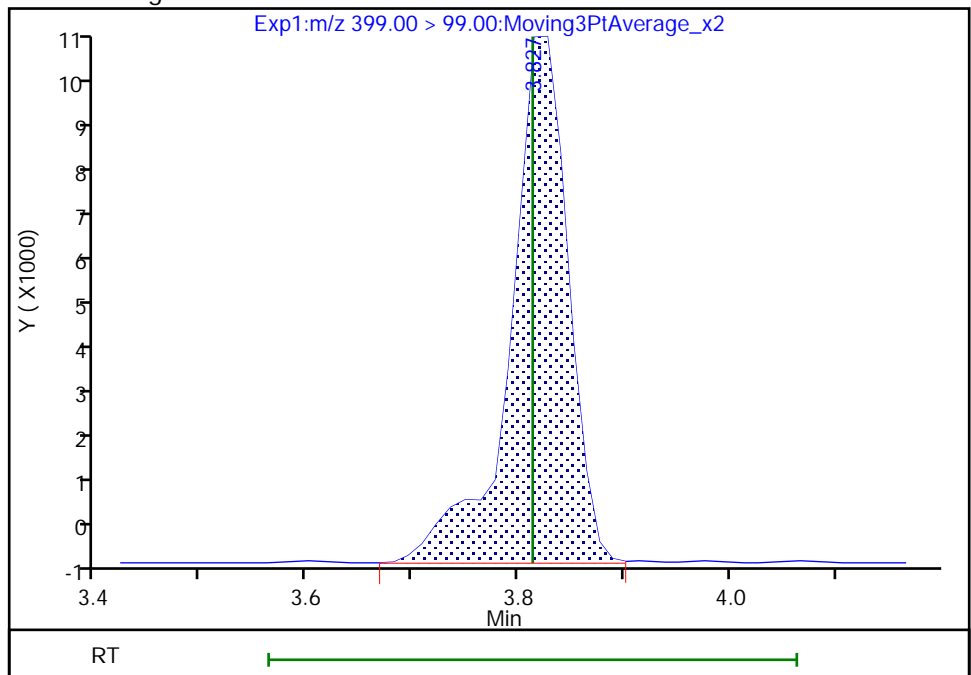
RT: 3.83
Area: 36537
Amount: 0.040780
Amount Units: ng/ml

Processing Integration Results



RT: 3.83
Area: 40366
Amount: 0.046005
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:57:39

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

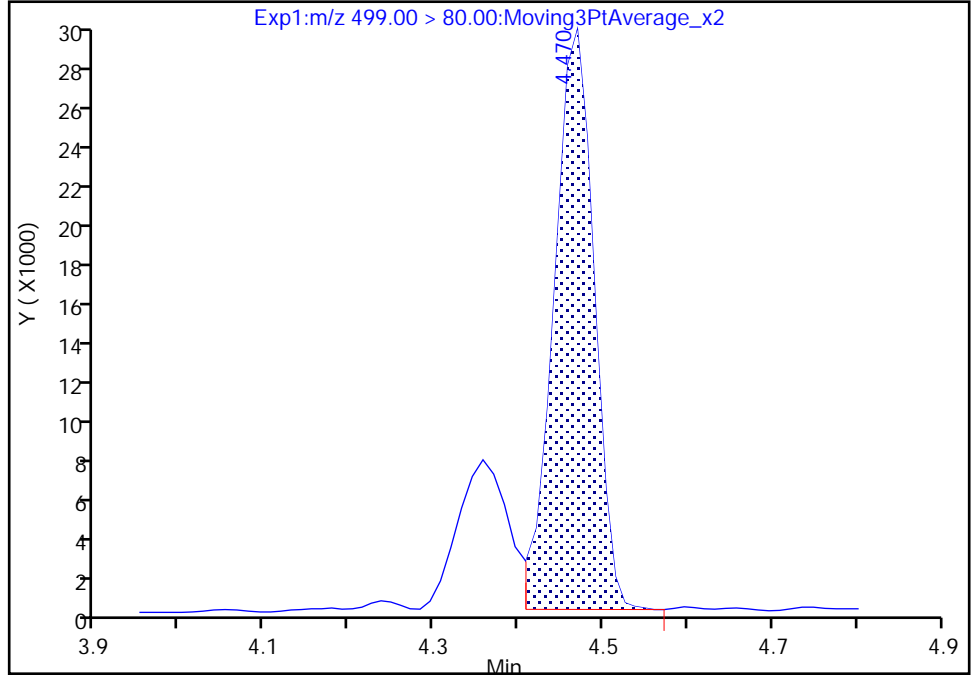
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_007.d
Injection Date: 05-Oct-2021 22:09:48 Instrument ID: LCA
Lims ID: IC 2
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC - ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

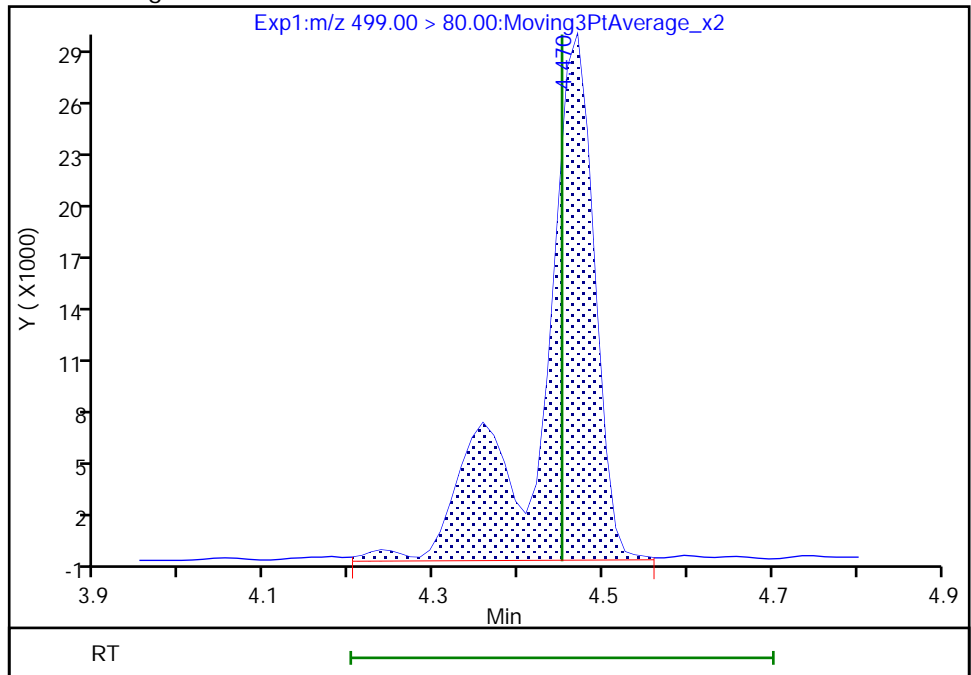
RT: 4.47
Area: 96975
Amount: 0.039088
Amount Units: ng/ml

Processing Integration Results



RT: 4.47
Area: 132719
Amount: 0.047715
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:57:52
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

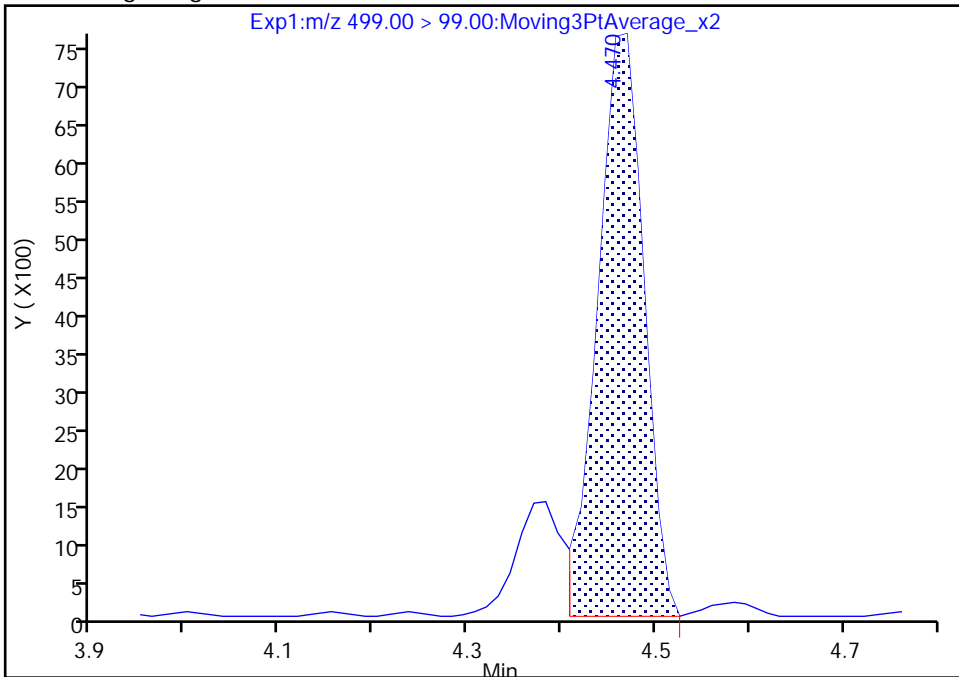
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_007.d
Injection Date: 05-Oct-2021 22:09:48 Instrument ID: LCA
Lims ID: IC 2
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

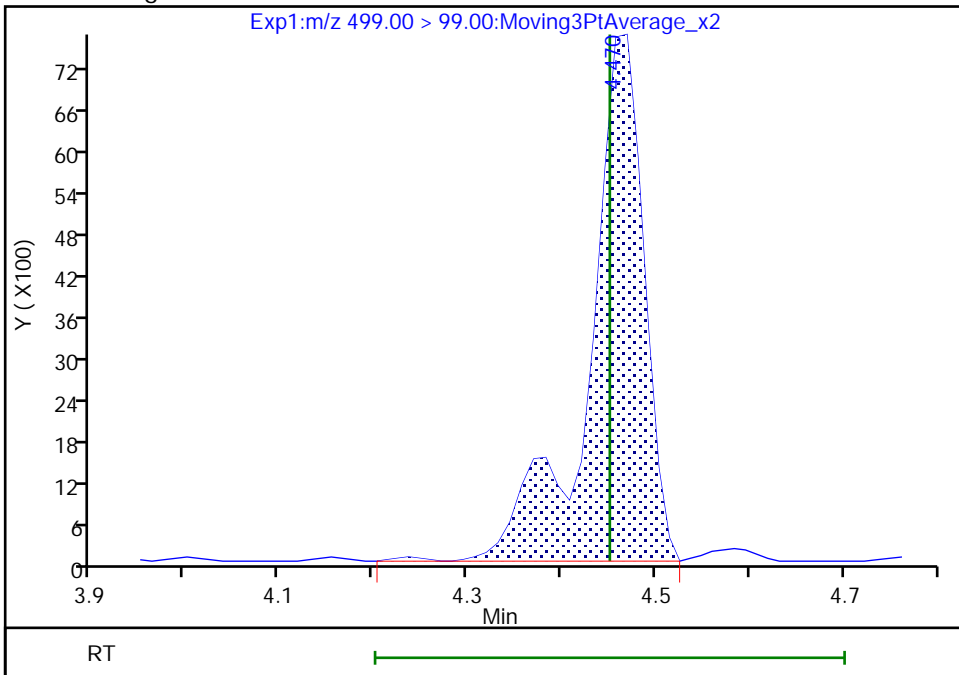
RT: 4.47
Area: 25915
Amount: 0.039088
Amount Units: ng/ml

Processing Integration Results



RT: 4.47
Area: 31095
Amount: 0.047715
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:57:57

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

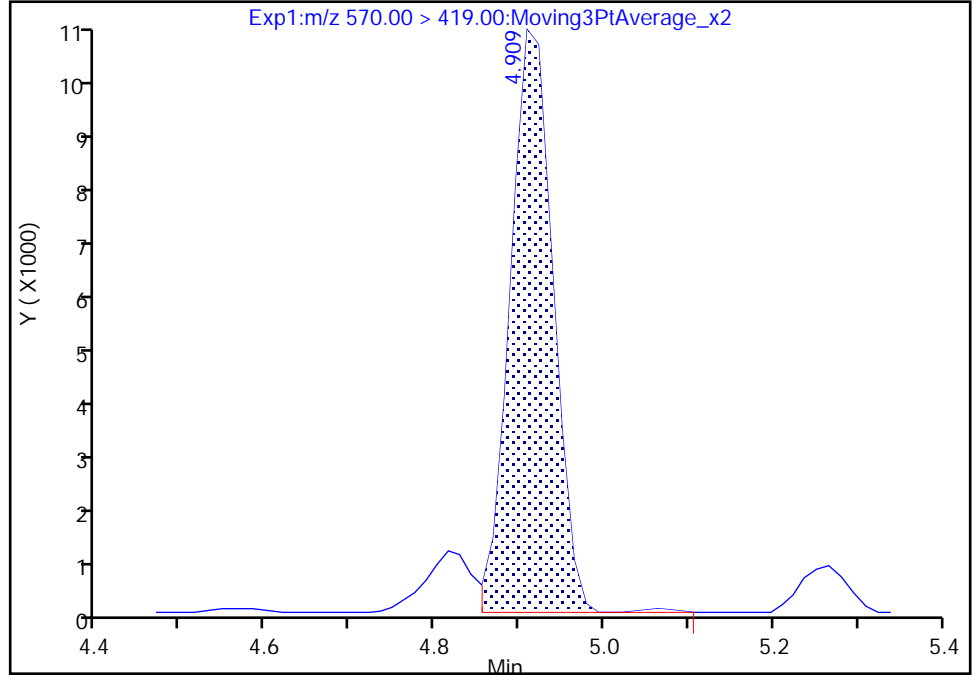
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_007.d
Injection Date: 05-Oct-2021 22:09:48 Instrument ID: LCA
Lims ID: IC 2
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

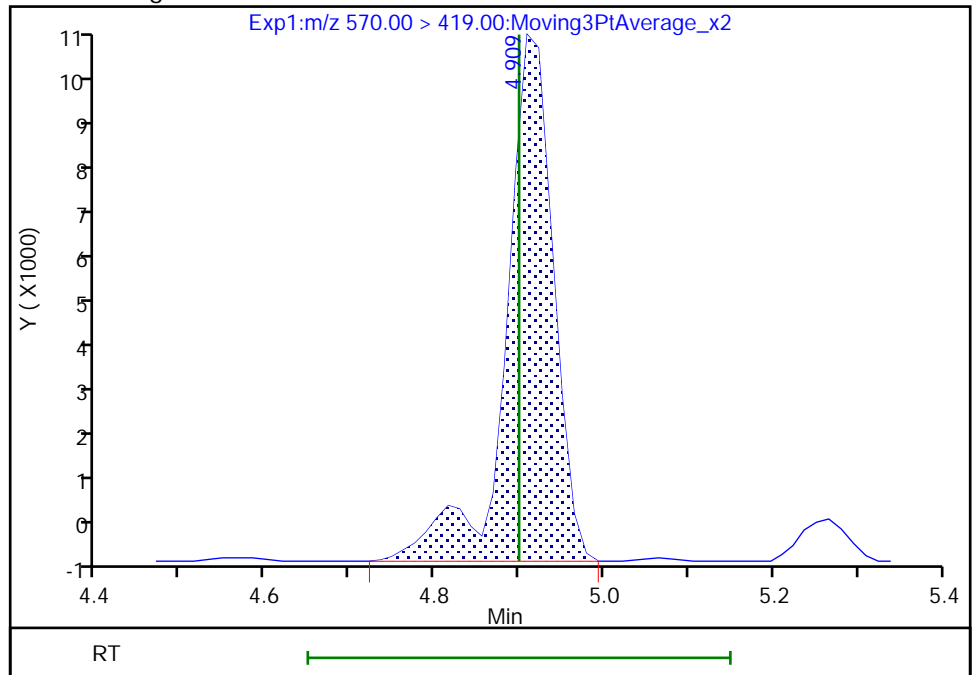
RT: 4.91
Area: 36106
Amount: 0.043319
Amount Units: ng/ml

Processing Integration Results



RT: 4.91
Area: 40014
Amount: 0.048062
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:58:09
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

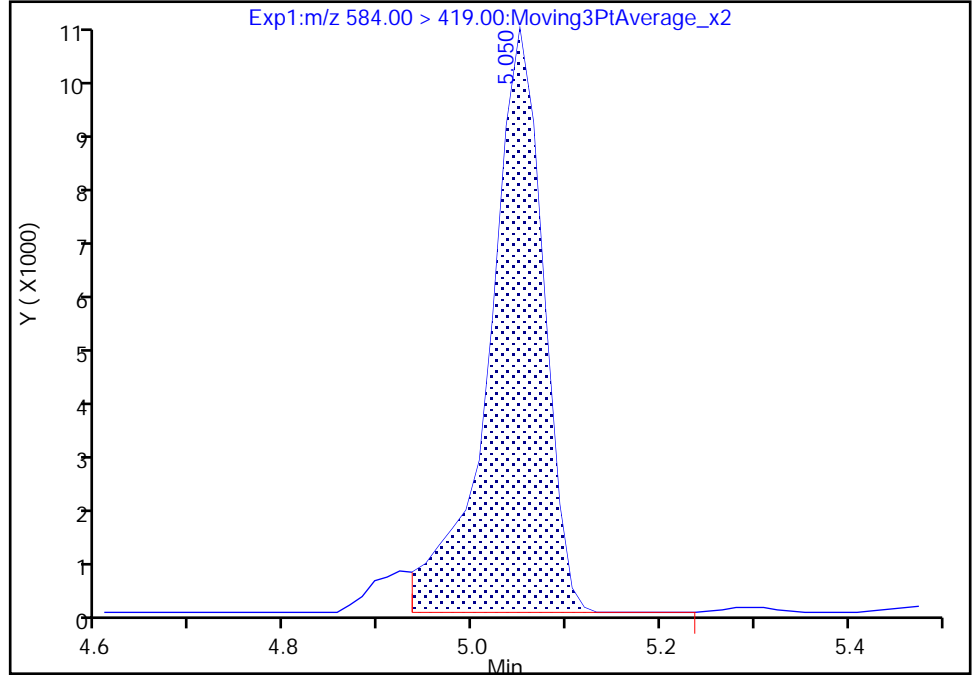
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_007.d
Injection Date: 05-Oct-2021 22:09:48 Instrument ID: LCA
Lims ID: IC 2
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

40 NEtFOSA, CAS: 2991-50-6

Signal: 1

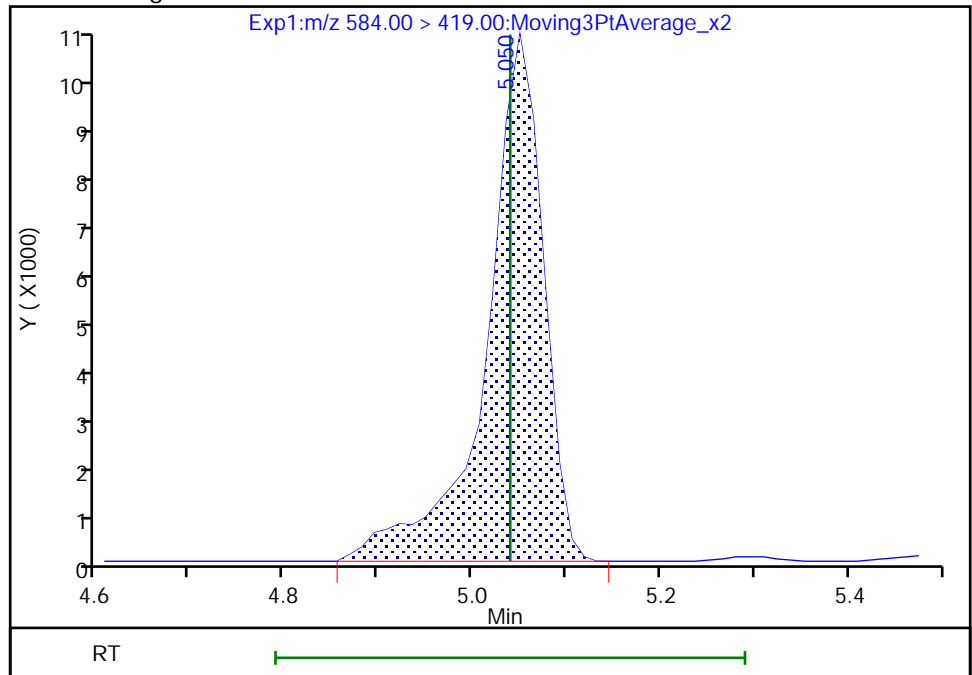
RT: 5.05
Area: 40642
Amount: 0.052095
Amount Units: ng/ml

Processing Integration Results



RT: 5.05
Area: 42754
Amount: 0.058744
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:58:19
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

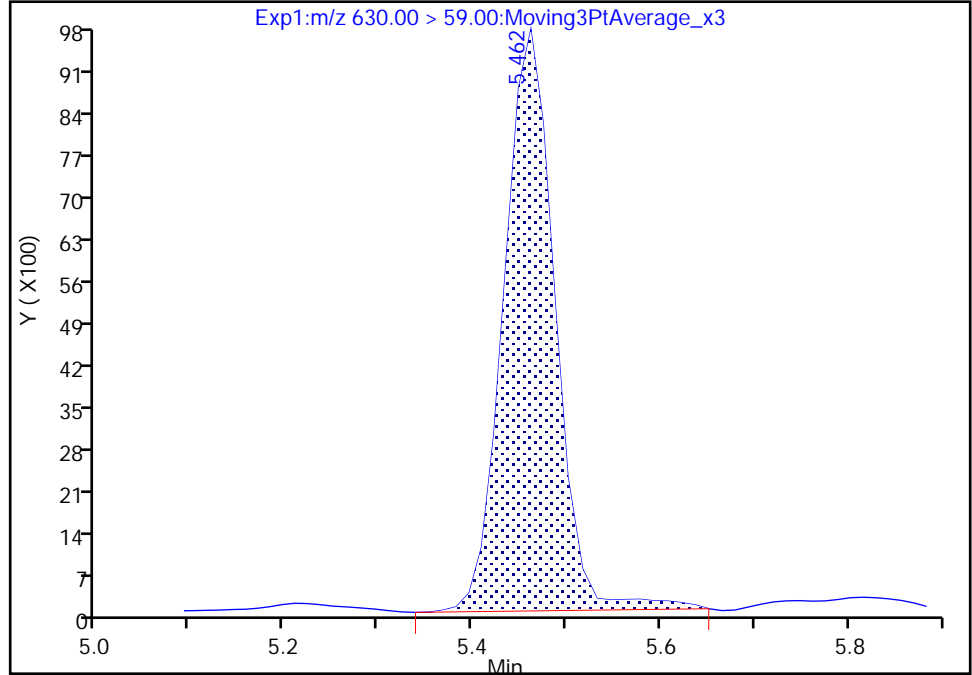
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b\007.d
Injection Date: 05-Oct-2021 22:09:48 Instrument ID: LCA
Lims ID: IC 2
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

62 N-EtFOSE-M, CAS: 1691-99-2

Signal: 1

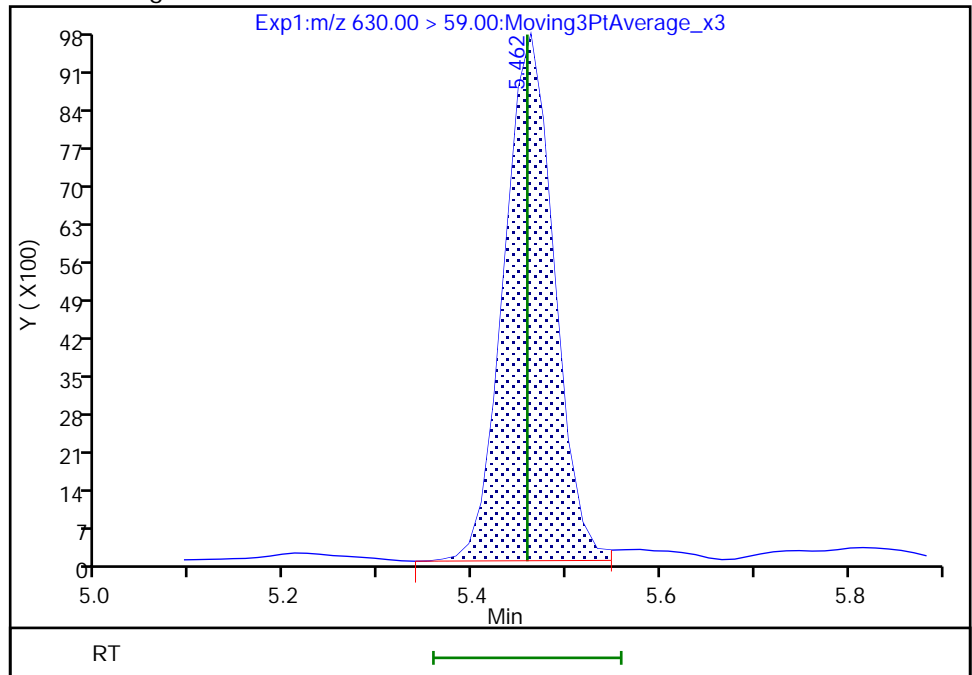
RT: 5.46
Area: 36612
Amount: 0.049034
Amount Units: ng/ml

Processing Integration Results



RT: 5.46
Area: 35981
Amount: 0.050834
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:58:41
Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Knoxville

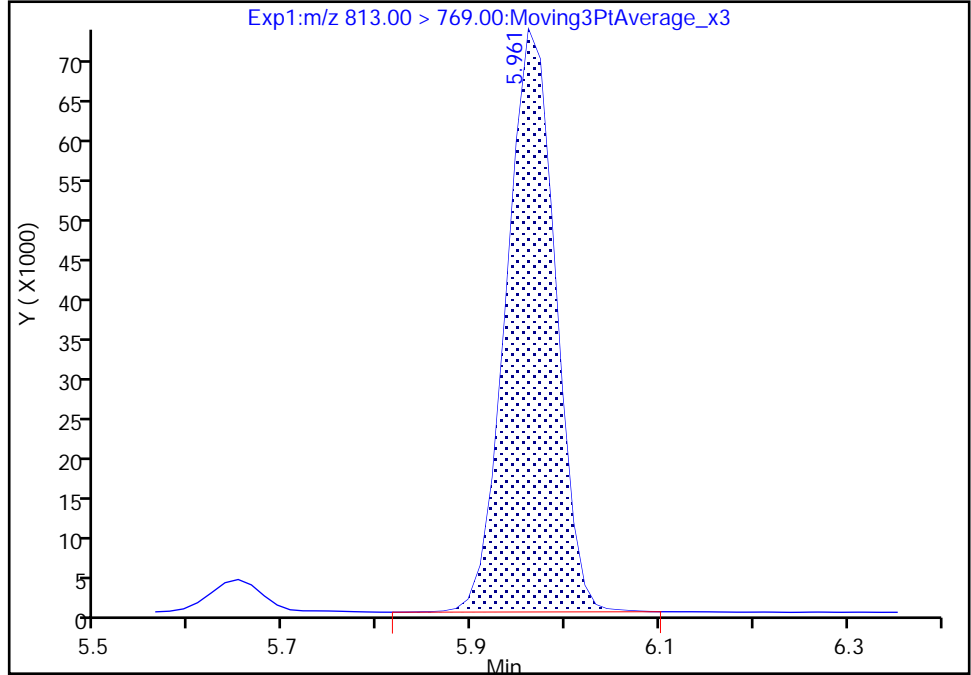
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_007.d
Injection Date: 05-Oct-2021 22:09:48 Instrument ID: LCA
Lims ID: IC 2
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

55 Perfluorohexadecanoic acid, CAS: 67905-19-5

Signal: 1

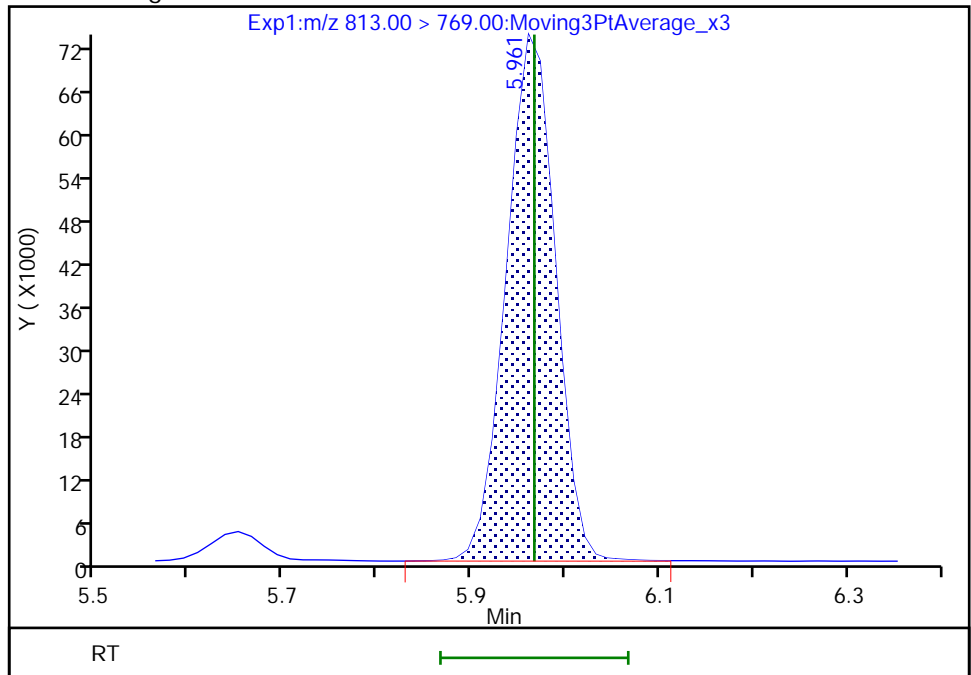
RT: 5.96
Area: 264564
Amount: 0.059061
Amount Units: ng/ml

Processing Integration Results



RT: 5.96
Area: 265142
Amount: 0.051322
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:15:18
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_008.d
 Lims ID: IC 3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 05-Oct-2021 22:18:36 ALS Bottle#: 8 Worklist Smp#: 8
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020953-008 ic 3
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15

Method: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 07-Oct-2021 14:21:02 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1613

First Level Reviewer: cochranj Date: 06-Oct-2021 16:00:06

Ratio Calibration: None

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	2.812	2.812	0.0	0.679	7228968	1.29	104	16985	
2 Perfluorobutanoic acid	212.90 > 169.00	2.812	2.812	0.0	1.000	1138114	0.2505	100	155	
D 3 13C5 PFPeA	267.90 > 223.00	3.130	3.130	0.0	0.755	6049600	1.32	106	15094	
4 Perfluoropentanoic acid	262.90 > 219.00	3.130	3.131	-0.001	1.000	1272508	0.2596	104	251	
D 6 13C3 PFBS	301.90 > 80.00	3.143	3.143	0.0	0.759	3524723	1.19	102	28599	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.143	3.151	-0.008	1.000	761606	0.2231	Target=3.06	101	2547
	298.90 > 99.00	3.143	3.151	-0.008	1.000	293397		2.60(1.53-4.59)	101	736
7 4:2 FTS	327.00 > 307.00	3.423	3.431	-0.008	1.000	282001	0.2369	101	4191	
D 8 M2-4:2 FTS	329.00 > 81.00	3.423	3.431	-0.008	0.826	556004	1.25	107	614	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.453	3.468	-0.015	1.099	639381	0.2416	Target=3.47	103	5692
	349.00 > 99.00	3.453	3.468	-0.015	1.099	181235		3.53(1.73-5.20)	103	1906
D 9 13C2 PFHxA	315.00 > 270.00	3.469	3.471	-0.002	0.837	5953465	1.26	101	17535	
10 Perfluorohexanoic acid	313.00 > 269.00	3.469	3.471	-0.002	1.000	1062073	0.2601	Target=9.74	104	578
	313.00 > 119.00	3.469	3.471	-0.002	1.000	77008		13.79(4.87-14.61)	104	396
13 HFPO-DA	285.00 > 169.00	3.562	3.565	-0.003	1.000	900885	0.2604	104	584	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.562	3.565	-0.003	0.860	3069191	1.27		102	13112	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.803	3.813	-0.010	1.000	594032	0.2380	Target=2.96	105	2112	M
399.00 > 99.00	3.803	3.813	-0.010	1.000	173544		3.42(1.48-4.44)	105	1311	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.803	3.813	-0.010	0.918	2138254	1.19		101	20520	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.815	3.819	-0.004	1.000	1358343	0.2597	Target=3.35	104	1153	
363.00 > 169.00	3.815	3.819	-0.004	1.000	414309		3.28(1.67-5.02)	104	3164	
D 14 13C4 PFHpA										
367.00 > 322.00	3.815	3.819	-0.004	0.921	6105640	1.30		104	19044	
68 DONA										
377.00 > 251.00	3.840	3.850	-0.010	0.864	1987545	0.2405	Target=1.49	102	4329	
377.00 > 85.00	3.840	3.850	-0.010	0.864	1066028		1.86(0.74-2.23)	102	4041	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.131	4.143	-0.012	0.929	608296	0.2400	Target=3.73	101	3355	
449.00 > 99.00	4.131	4.143	-0.012	0.929	164039		3.71(1.87-5.61)	101	1991	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.143	4.146	-0.003	1.000	5399320	1.30		104	40593	
19 6:2 FTS										
427.00 > 407.00	4.143	4.151	-0.008	1.000	241304	0.2412		102	2044	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.143	4.151	-0.008	1.000	578119	1.27		107	859	
D 21 13C4 PFOA										
417.00 > 372.00	4.143	4.155	-0.012	1.000	5410657	1.27		102	16536	
* 22 13C2 PFOA										
415.00 > 370.00	4.143	4.155	-0.012		5270606	1.25			24481	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.143	4.156	-0.013	1.000	1264785	0.2572	Target=2.40	103	385	
413.00 > 169.00	4.143	4.156	-0.013	1.000	498329		2.54(1.20-3.61)	103	987	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.435	4.446	-0.011	1.070	651731	1.23		103	2718	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.447	4.451	-0.004	1.000	667256	0.2381	Target=3.83	103	1716	M
499.00 > 99.00	4.447	4.451	-0.004	1.000	142904		4.67(1.91-5.74)	103	479	M
D 25 13C4 PFOS										
503.00 > 80.00	4.447	4.451	-0.004	1.073	3044513	1.23		103	11424	
26 Perfluorononanoic acid										
463.00 > 419.00	4.458	4.471	-0.013	1.000	1237218	0.2517	Target=3.68	101	946	
463.00 > 169.00	4.458	4.471	-0.013	1.000	273095		4.53(1.84-5.52)	101	836	
D 27 13C5 PFNA										
468.00 > 423.00	4.458	4.471	-0.013	1.076	7247107	1.34		107	25912	
63 9CIFOS										
531.00 > 351.00	4.596	4.606	-0.010	1.109	1443521	0.2455		105	3708	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.723	4.728	-0.005	1.062	624876	0.2353	Target=3.97	98.1	2859	
549.00 > 99.00	4.723	4.728	-0.005	1.062	172599		3.62(1.99-5.96)	98.1	738	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.736	4.745	-0.009	1.000	968946	0.2548		102	2175	
D 34 13C8 FOSA										
506.00 > 78.00	4.736	4.743	-0.007	1.143	4948768	1.37		109	8985	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.749	4.760	-0.011	1.000	1527349	0.2692	Target=10.11	108	718	
513.00 > 169.00	4.749	4.760	-0.011	1.000	114129		13.38(5.06-15.17)	108	236	
D 32 13C2 PFDA										
515.00 > 470.00	4.749	4.758	-0.009	1.146	7254432	1.33		106	37476	
31 8:2 FTS										
527.00 > 507.00	4.763	4.774	-0.011	1.000	268508	0.2605		109	2054	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.763	4.774	-0.011	1.150	691926	1.25		104	2613	
36 NMeFOSAA										
570.00 > 419.00	4.896	4.899	-0.003	1.000	180751	0.2677		107	155	M
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.896	4.899	-0.003	1.182	899632	1.20		96.2	3828	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.993	4.997	-0.004	1.123	607648	0.2491	Target=3.80	103	2944	
599.00 > 99.00	4.993	4.997	-0.004	1.123	166446		3.65(1.90-5.70)	103	1088	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.008	5.018	-0.010	1.000	1476790	0.2625	Target=7.45	105	1033	
563.00 > 169.00	5.008	5.018	-0.010	1.000	164802		8.96(3.78-11.33)	105	886	
D 39 13C2 PFUnA										
565.00 > 520.00	5.008	5.015	-0.007	1.209	6848234	1.31		105	21126	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.022	5.034	-0.012	1.212	956097	1.33		106	3920	
40 NEtFOSA										
584.00 > 419.00	5.036	5.040	-0.004	1.003	175791	0.2421		96.8	373	
57 11CIFOS										
631.00 > 451.00	5.119	5.122	-0.003	1.151	1190988	0.2516		107	2875	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.251	5.255	-0.004	1.000	1670808	0.2642	Target=5.33	106	649	R
613.00 > 169.00	5.251	5.255	-0.004	1.000	205992		8.11(2.66-7.99)	106	1257	R
D 43 13C2 PFDoA										
615.00 > 570.00	5.251	5.255	-0.004	1.268	7435382	1.34		107	22411	
50 10:2 FTS										
627.00 > 607.00	5.266	5.274	-0.008	1.106	314026	0.2447		102	2458	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.281	5.289	-0.008	1.275	567624	1.25		100	420	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.278	599582	1.27		102	43.7	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.297	-0.002	1.003	147243	0.2742		110	147	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.295	5.301	-0.006	1.000	121993	0.2429		97.2	279	
54 PFDoS										
699.00 > 80.00	5.436	5.439	-0.003	1.222	639069	0.2539	Target=4.32	105	1916	
699.00 > 99.00	5.436	5.439	-0.003	1.222	143873		4.44(2.19-6.58)	105	1096	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.436	5.445	-0.009	1.312	624358	1.29		103	684	
62 N-EtFOSE-M										
630.00 > 59.00	5.449	5.458	-0.009	1.002	161487	0.2527		101	390	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.449	5.460	-0.011	1.315	491391	1.24		98.9	673	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.449	5.462	-0.013	1.038	1421298	0.2659	Target=5.66	106	714	
663.00 > 169.00	5.449	5.462	-0.013	1.038	224087		6.34(2.83-8.48)	106	1196	
56 N-EtFOSA-M										
526.00 > 169.00	5.462	5.469	-0.007	1.002	119604	0.2604		104	540	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.638	5.643	-0.005	1.000	181597	0.2608	Target=1.07	104	1730	
713.00 > 219.00	5.638	5.643	-0.005	1.000	172746		1.05(0.53-1.60)	104	1660	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.638	5.643	-0.005	1.361	6765277	1.33		106	14418	
55 Perfluorohexadecanoic acid										M
813.00 > 769.00	5.948	5.961	-0.013	1.000	1132217	0.2624	Target=7.50	105	928	M
813.00 > 169.00	5.948	5.961	-0.013	1.000	138791		8.16(3.75-11.26)	105	829	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.948	5.961	-0.013	1.436	4715970	1.27		102	6248	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.221	6.226	-0.005	1.046	898794	0.2625	Target=9.98	105	993	
913.00 > 169.00	6.221	6.226	-0.005	1.046	75575		11.89(5.14-15.41)	105	879	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Review Flags

M - Manually Integrated

Reagents:

63L3PFC2_00002

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_008.d

Injection Date: 05-Oct-2021 22:18:36

Instrument ID: LCA

Lims ID: IC 3

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 8

Worklist Smp#: 8

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

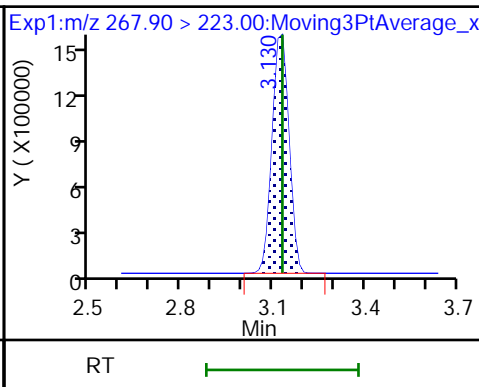
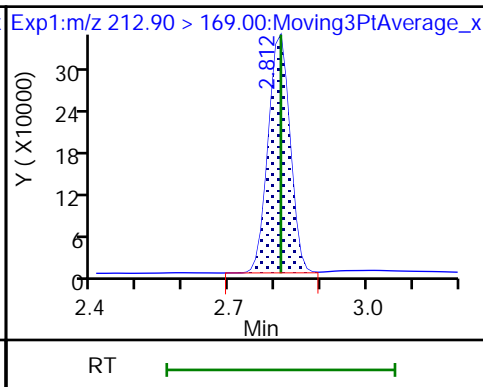
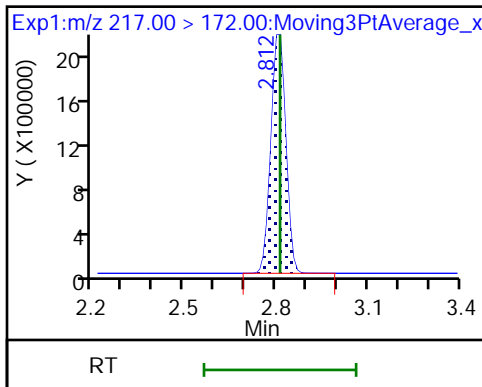
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

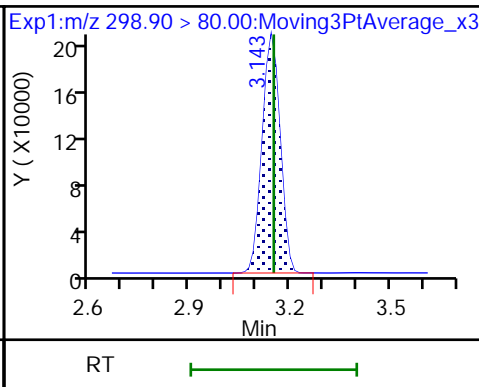
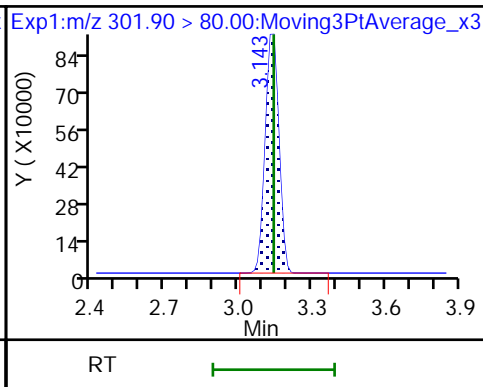
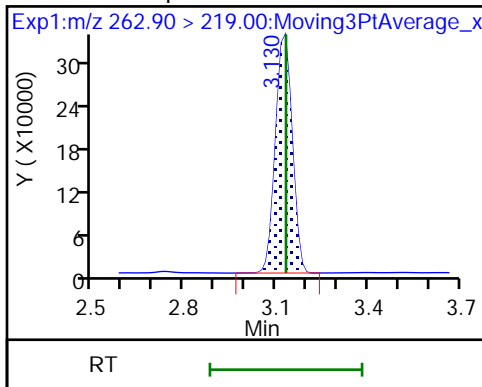
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

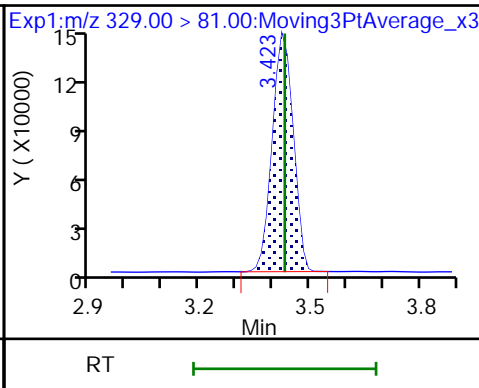
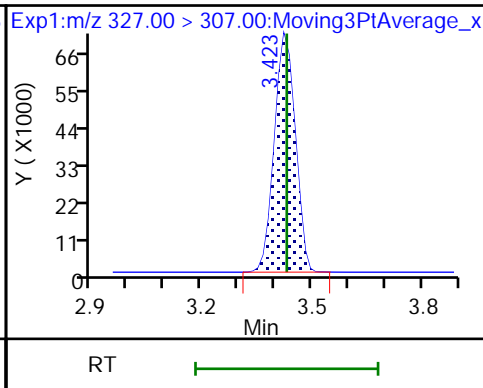
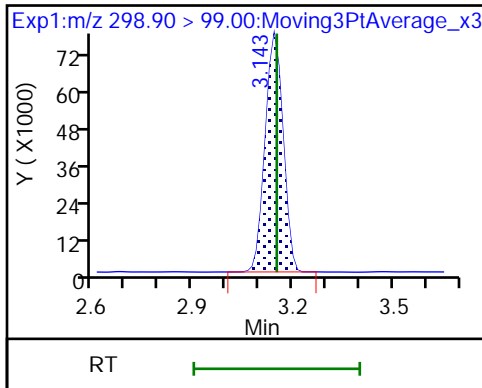
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

7 4:2 FTS

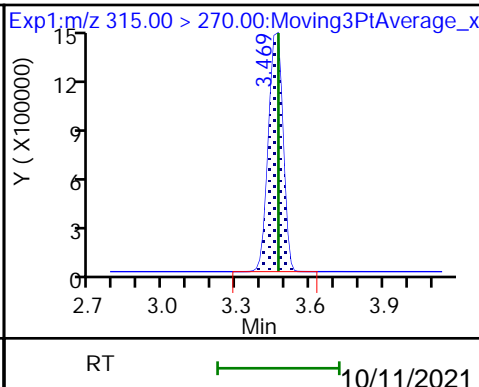
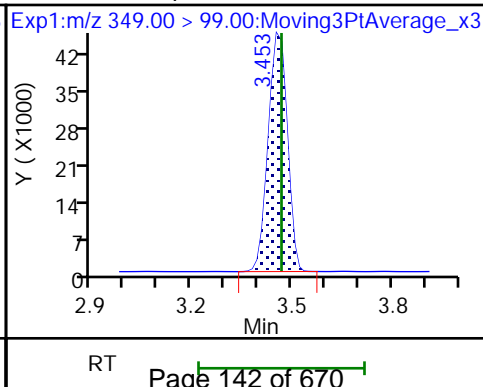
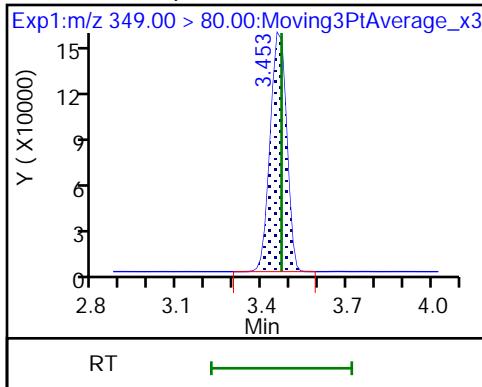
D 8 M2-4:2 FTS

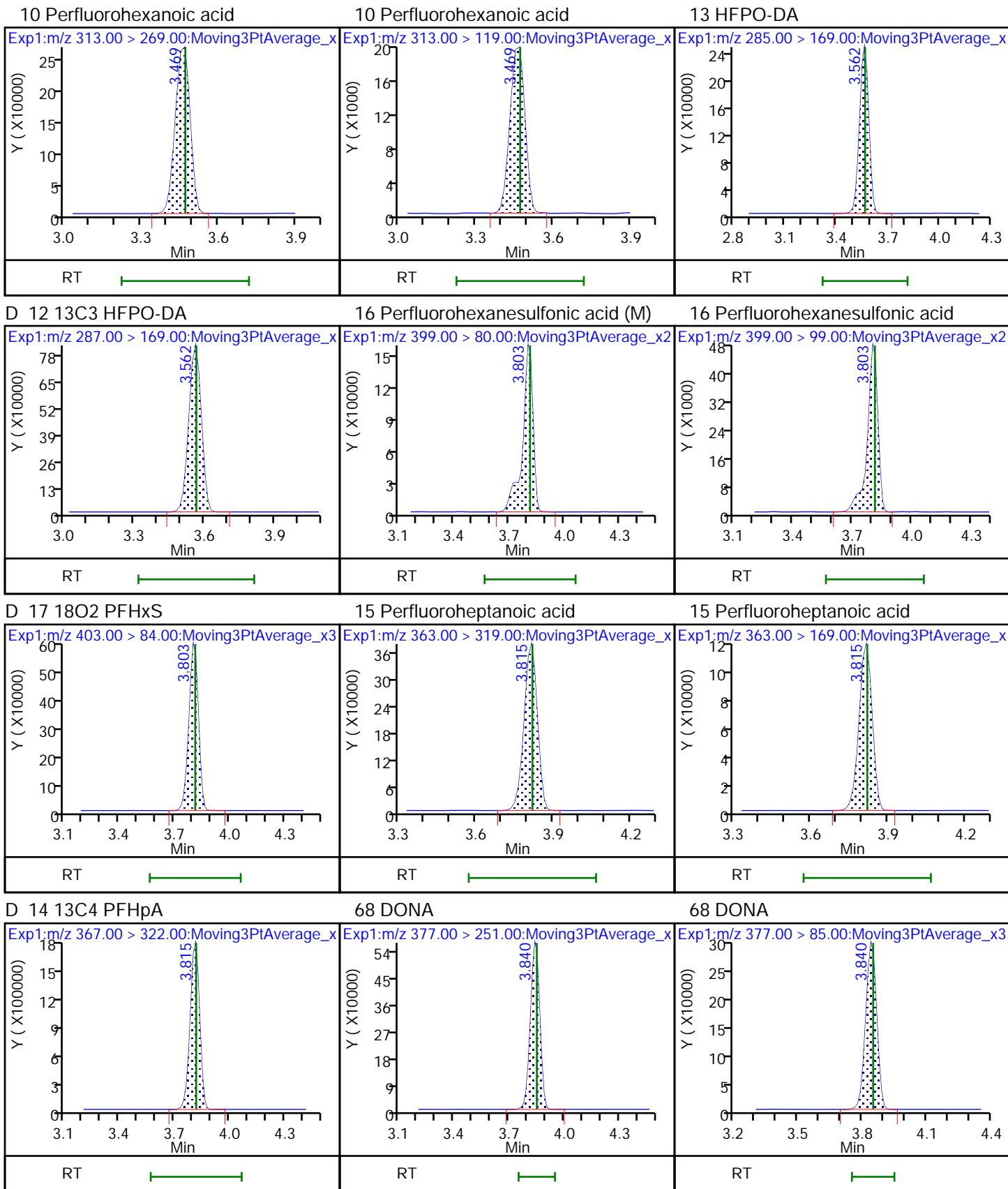


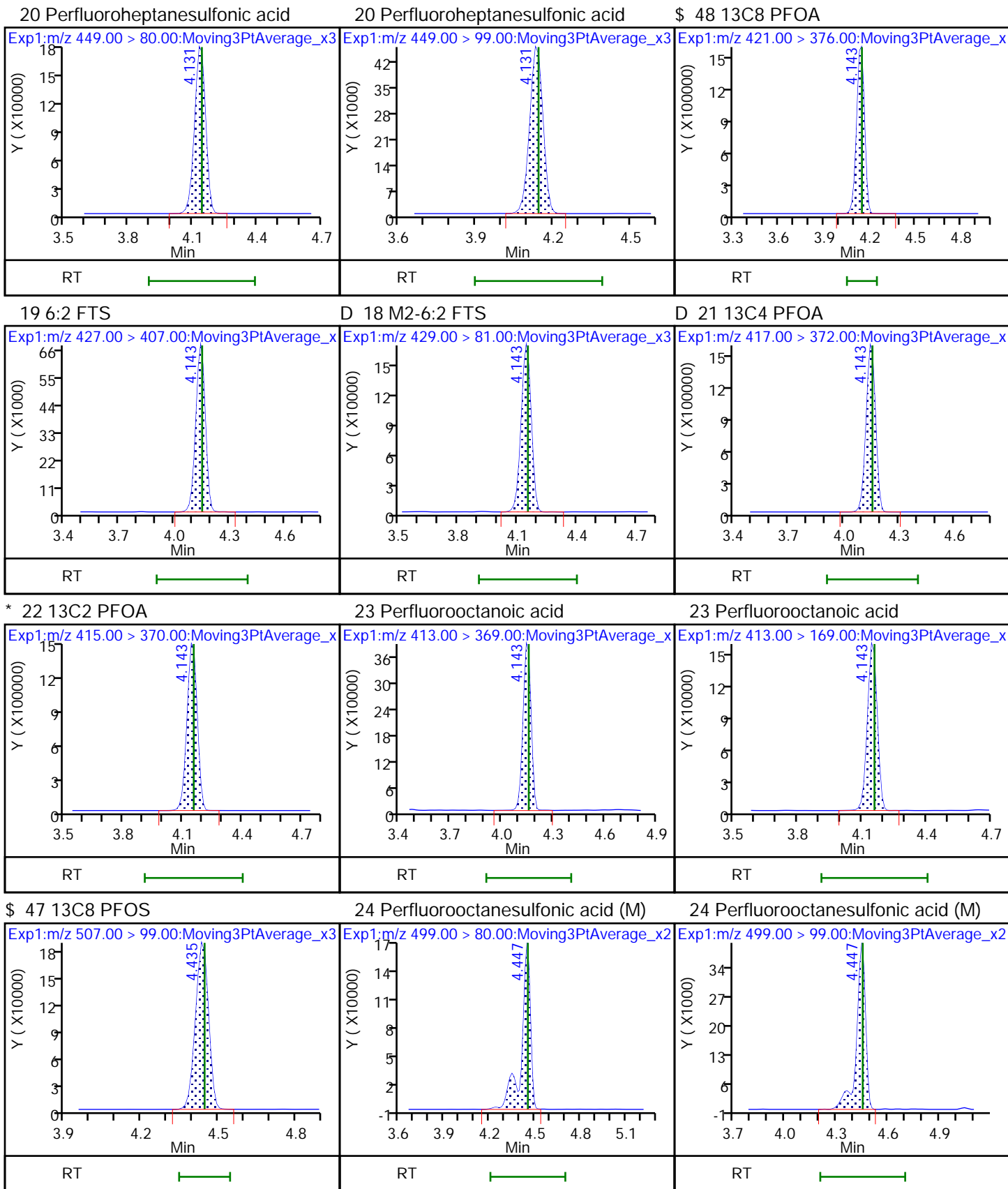
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA



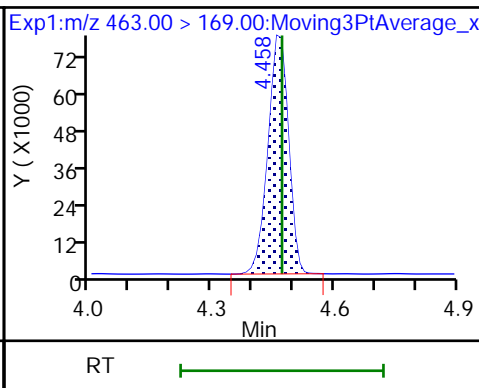
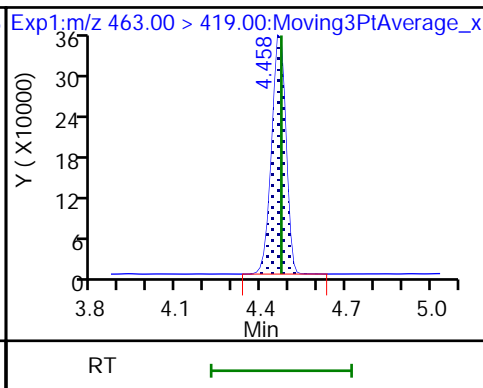
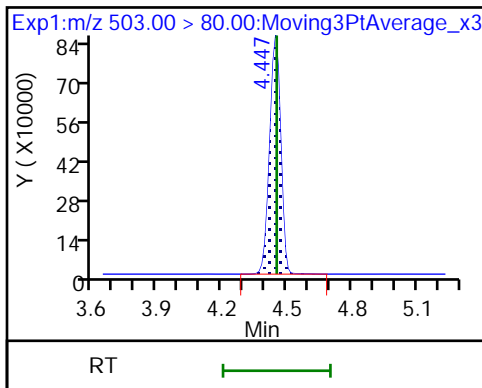




D 25 13C4 PFOS

26 Perfluorononanoic acid

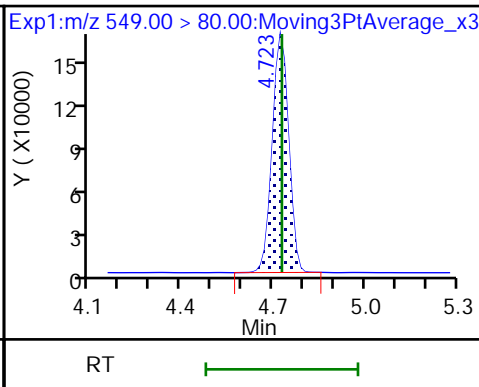
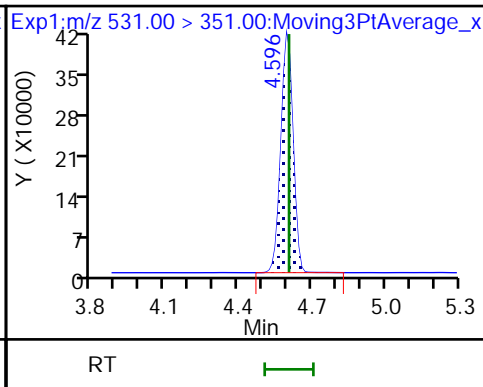
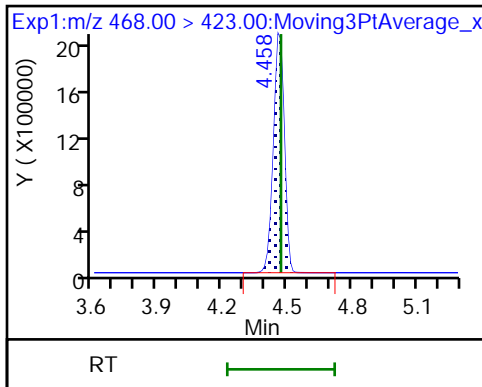
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS

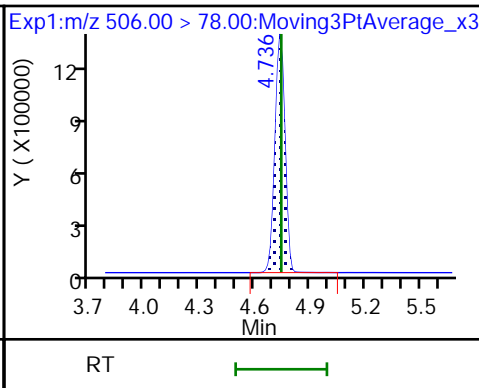
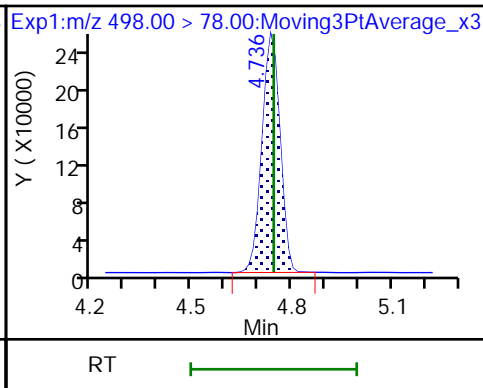
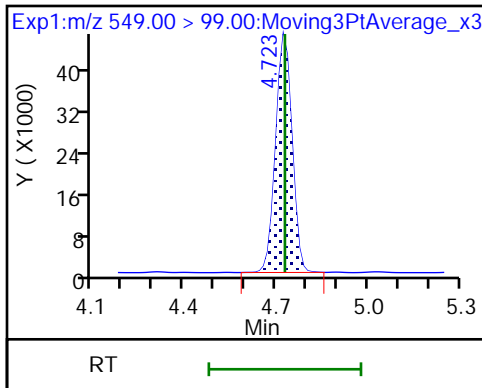
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

33 Perfluorooctanesulfonamide

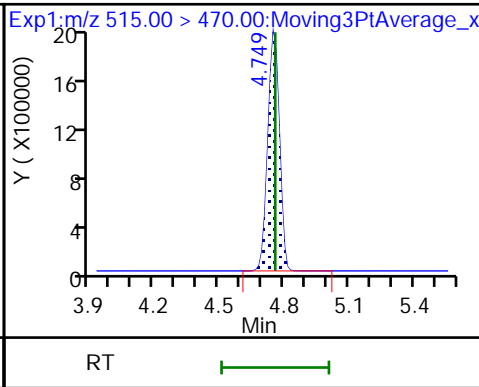
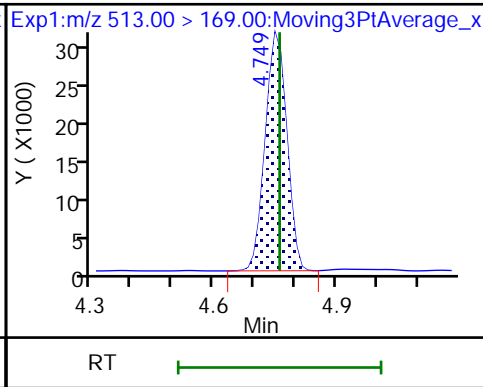
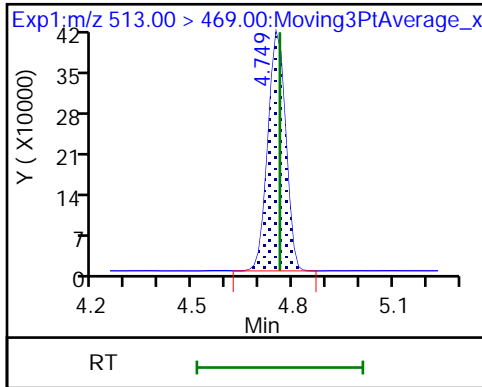
D 34 13C8 FOSA

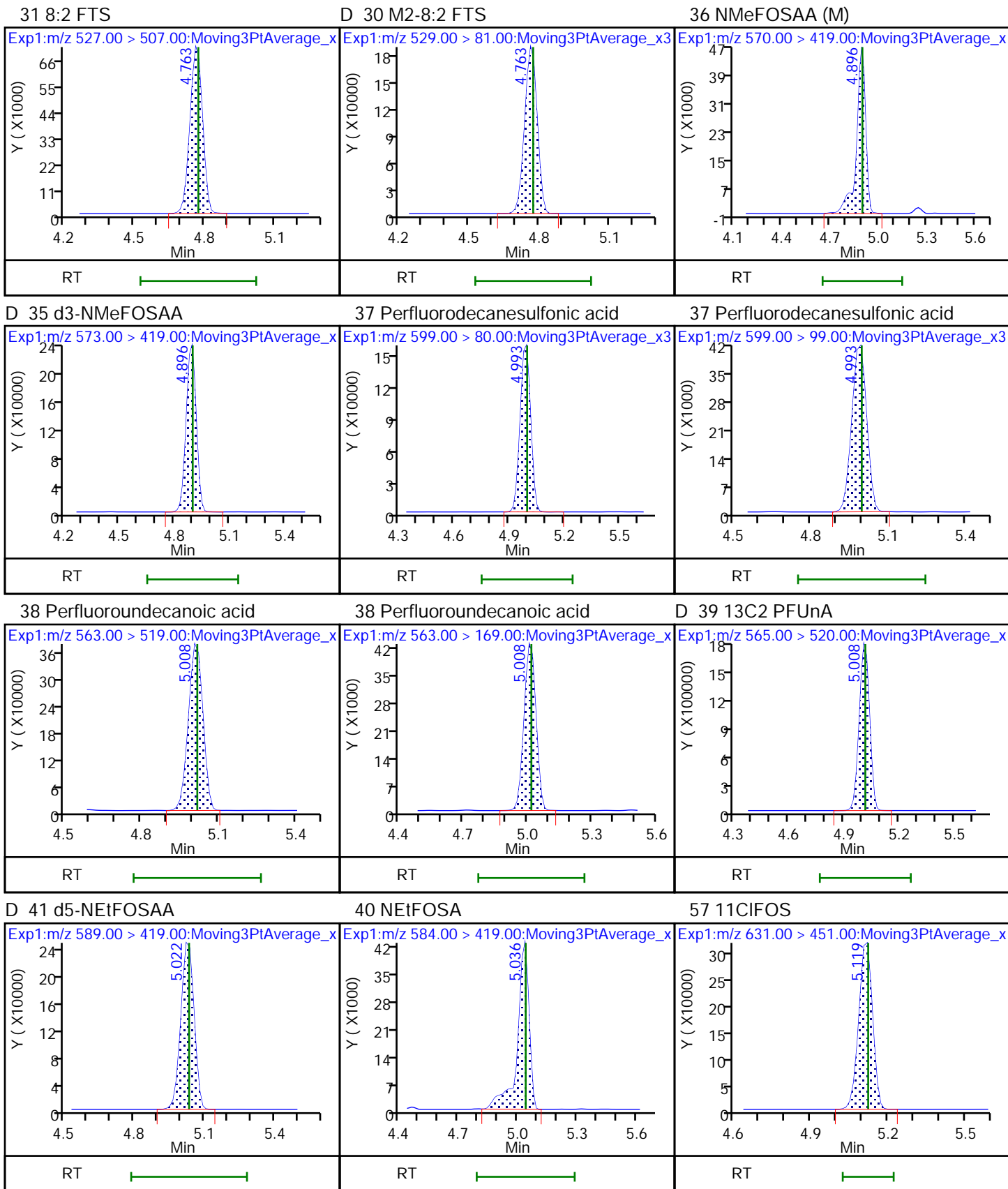


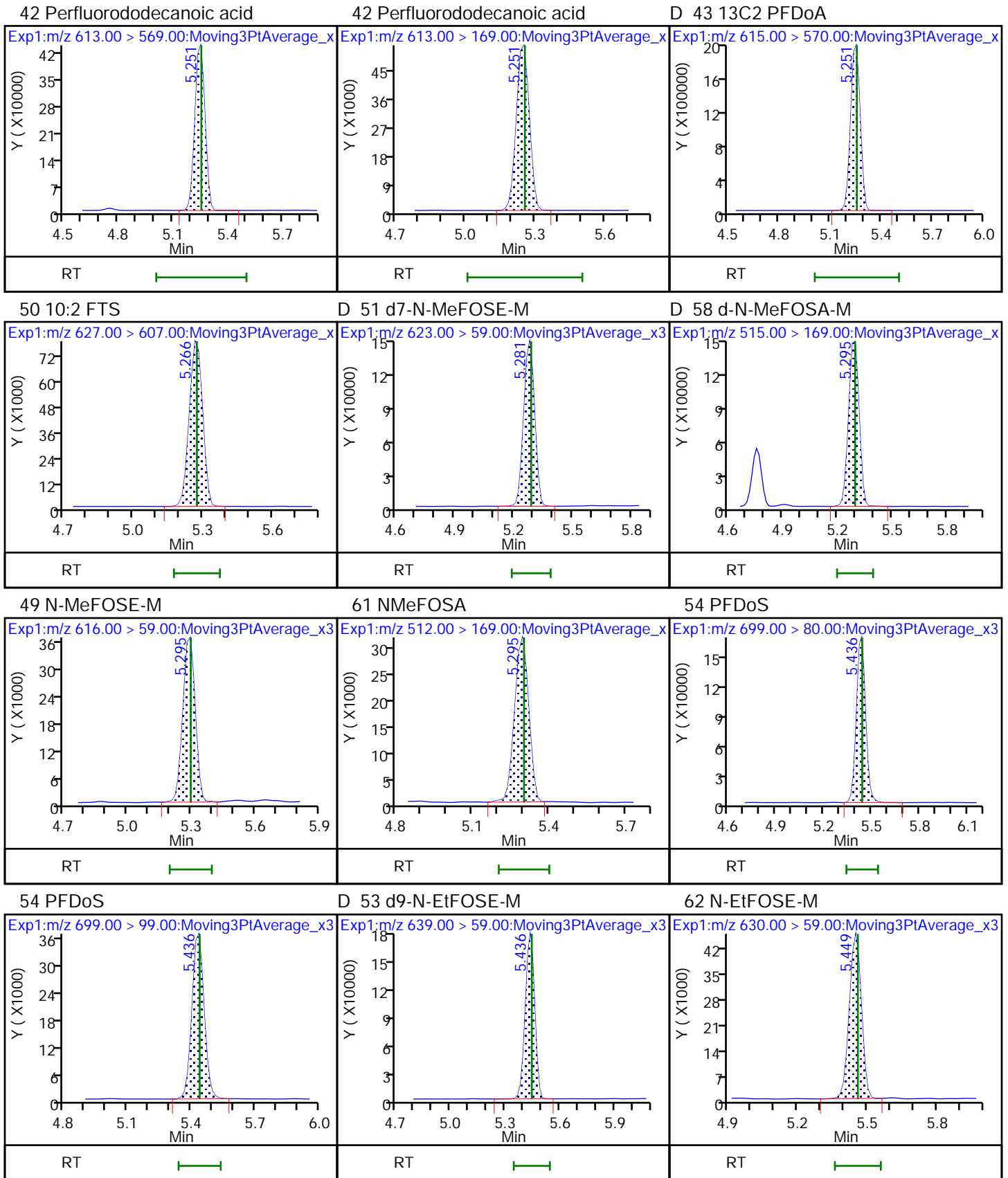
29 Perfluorodecanoic acid

29 Perfluorodecanoic acid

D 32 13C2 PFDA



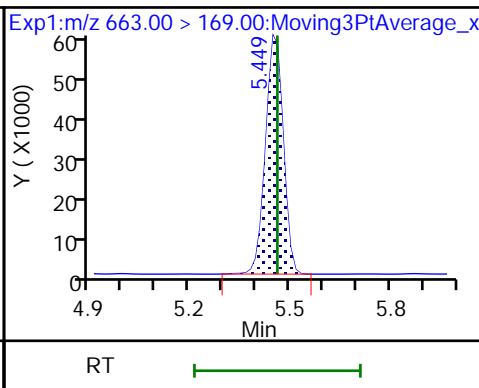
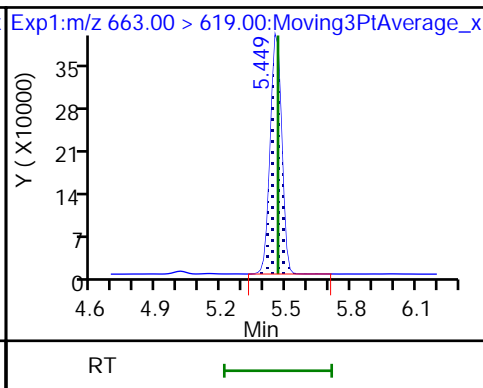
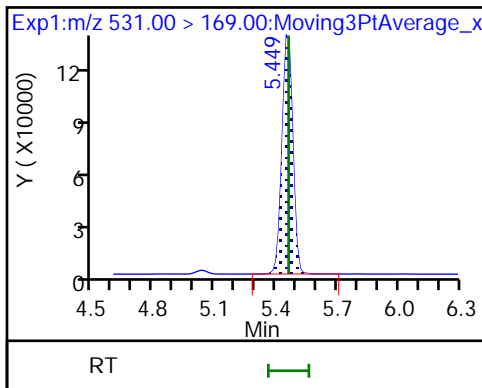




D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid

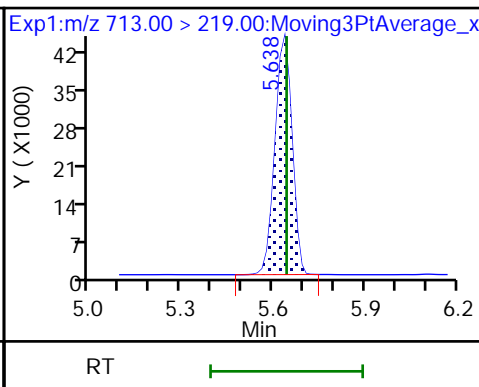
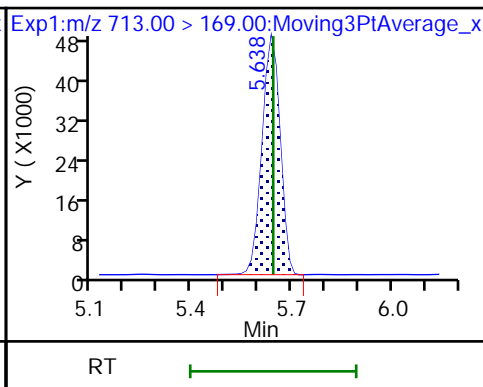
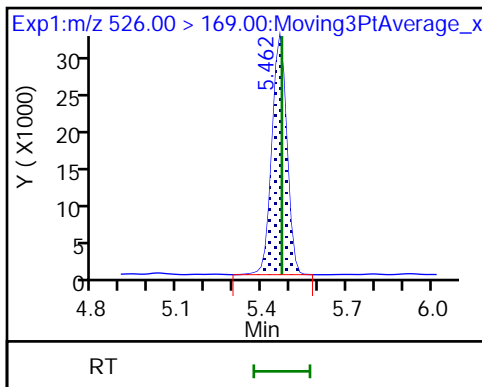
44 Perfluorotridecanoic acid



56 N-EtFOSA-M

45 Perfluorotetradecanoic acid

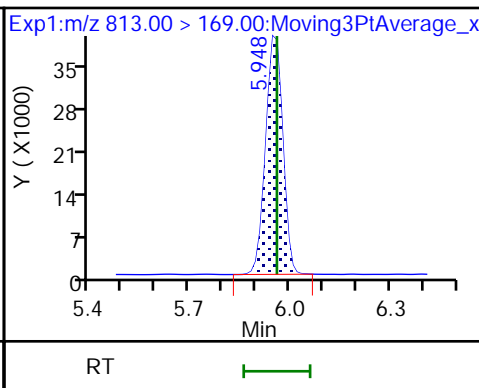
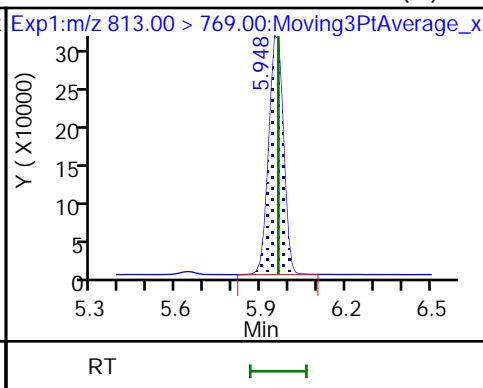
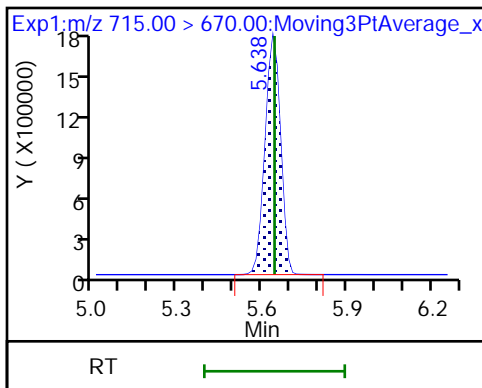
45 Perfluorotetradecanoic acid



D 46 13C2 PFTeDA

55 Perfluorohexadecanoic acid (M)

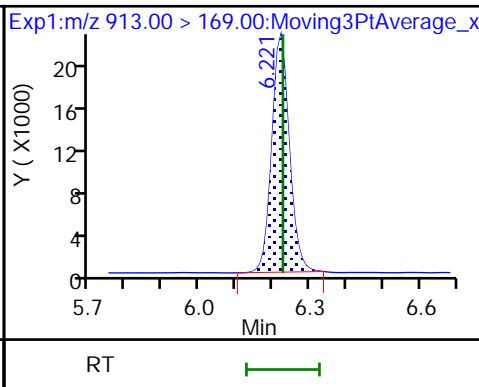
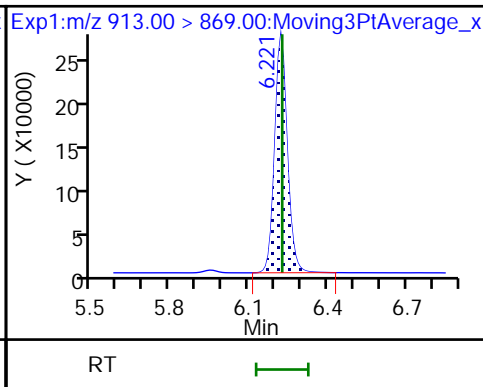
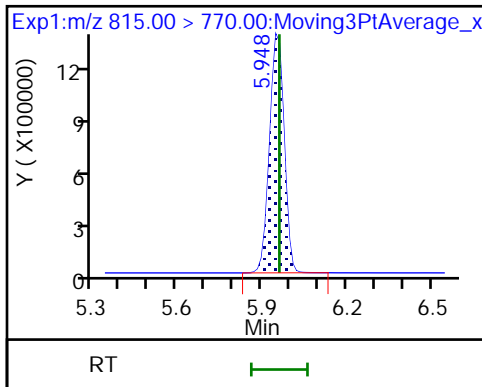
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid



Eurofins TestAmerica, Knoxville

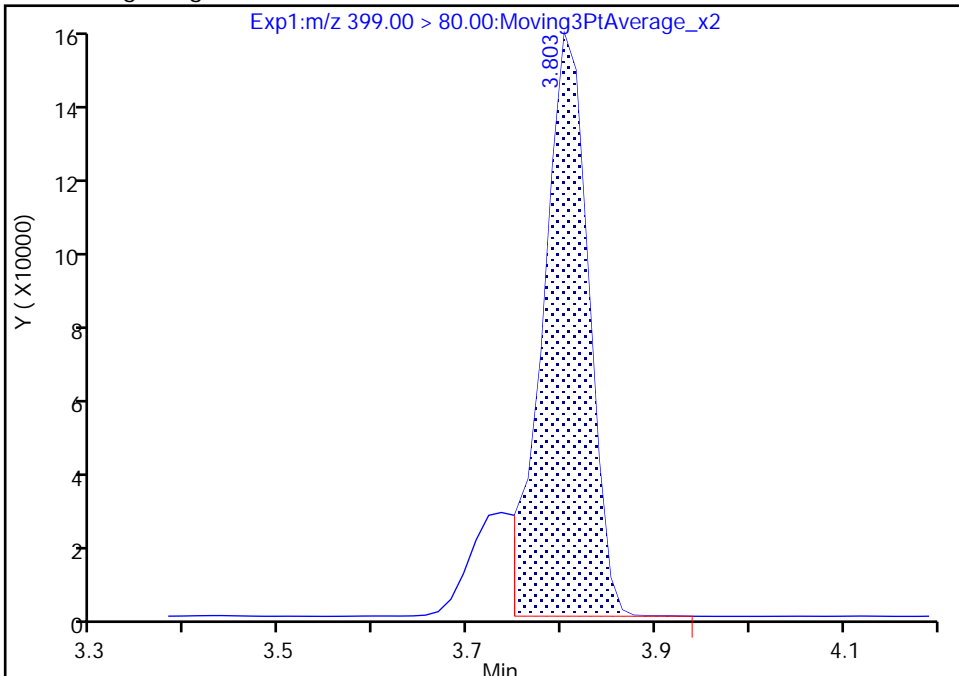
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_008.d
Injection Date: 05-Oct-2021 22:18:36 Instrument ID: LCA
Lims ID: IC 3
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

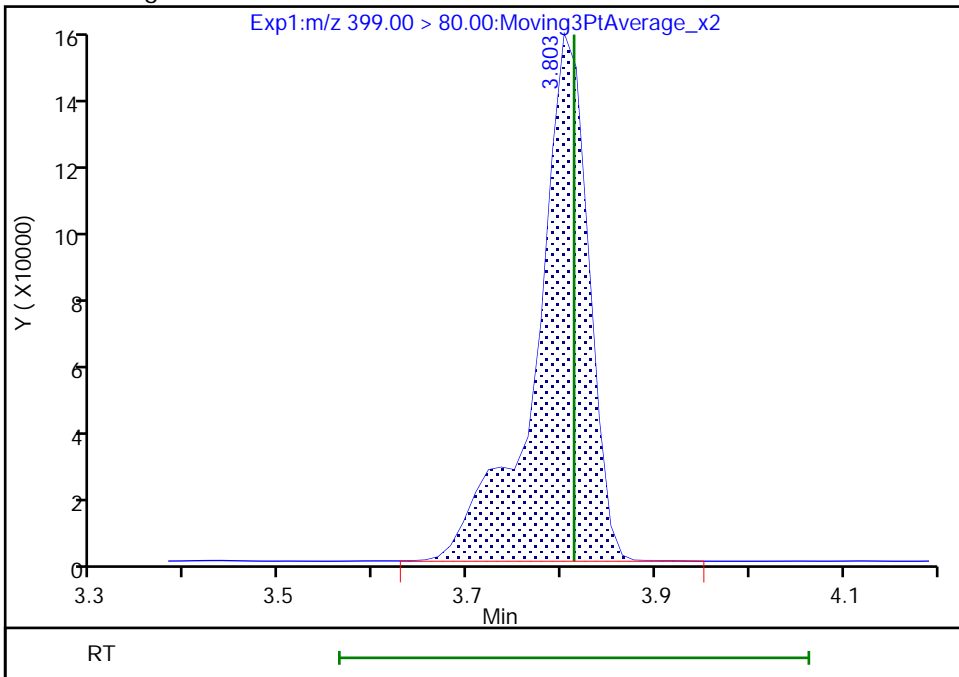
RT: 3.80
Area: 508505
Amount: 0.227500
Amount Units: ng/ml

Processing Integration Results



RT: 3.80
Area: 594032
Amount: 0.238050
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:59:17
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

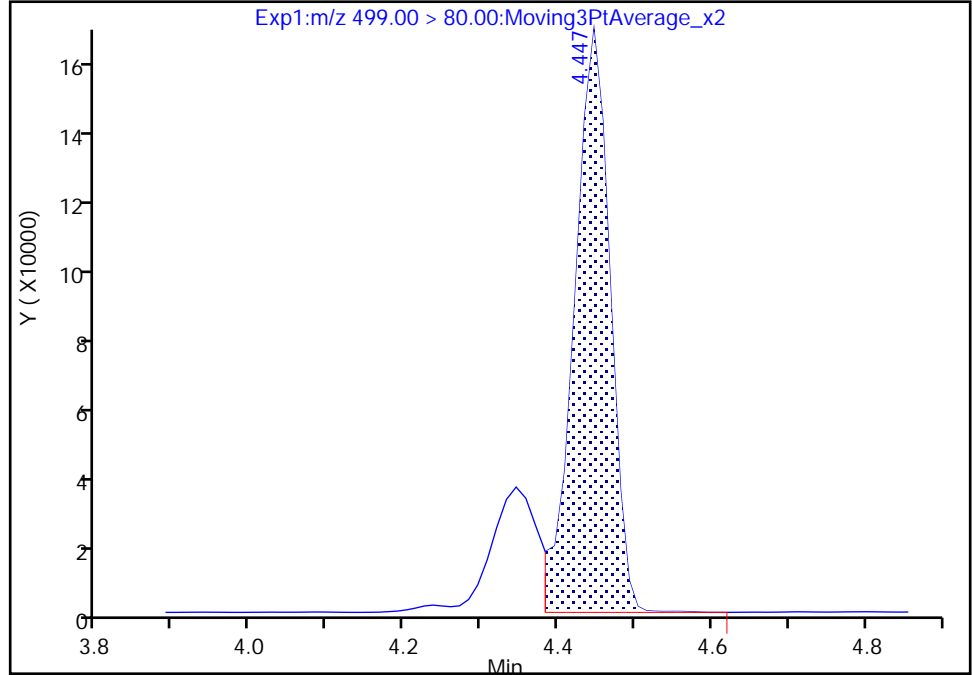
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_008.d
Injection Date: 05-Oct-2021 22:18:36 Instrument ID: LCA
Lims ID: IC 3
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

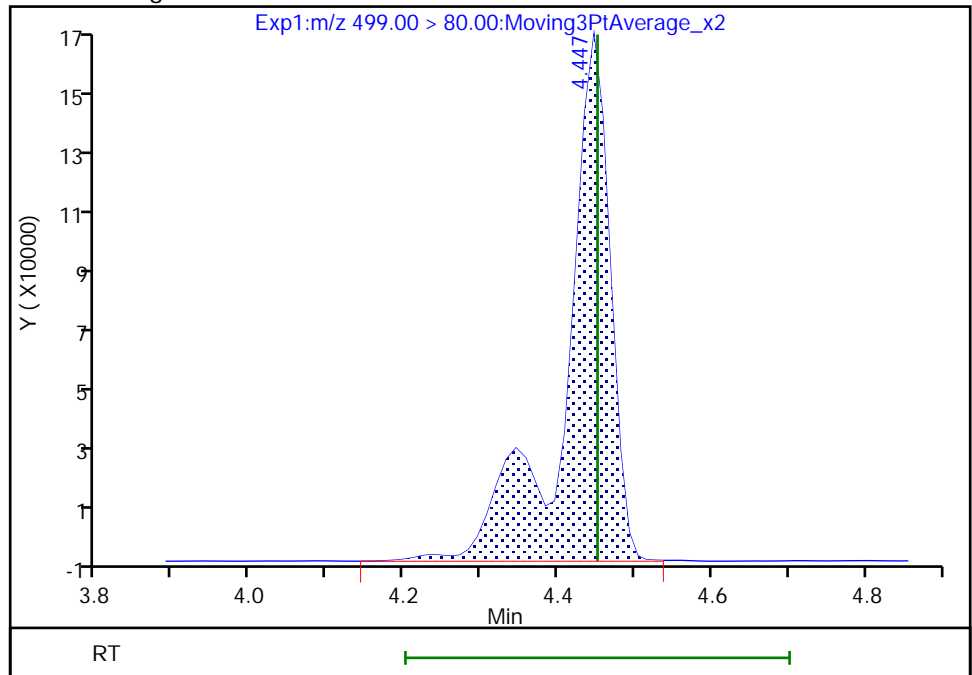
RT: 4.45
Area: 523125
Amount: 0.195463
Amount Units: ng/ml

Processing Integration Results



RT: 4.45
Area: 667256
Amount: 0.238147
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:59:29
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

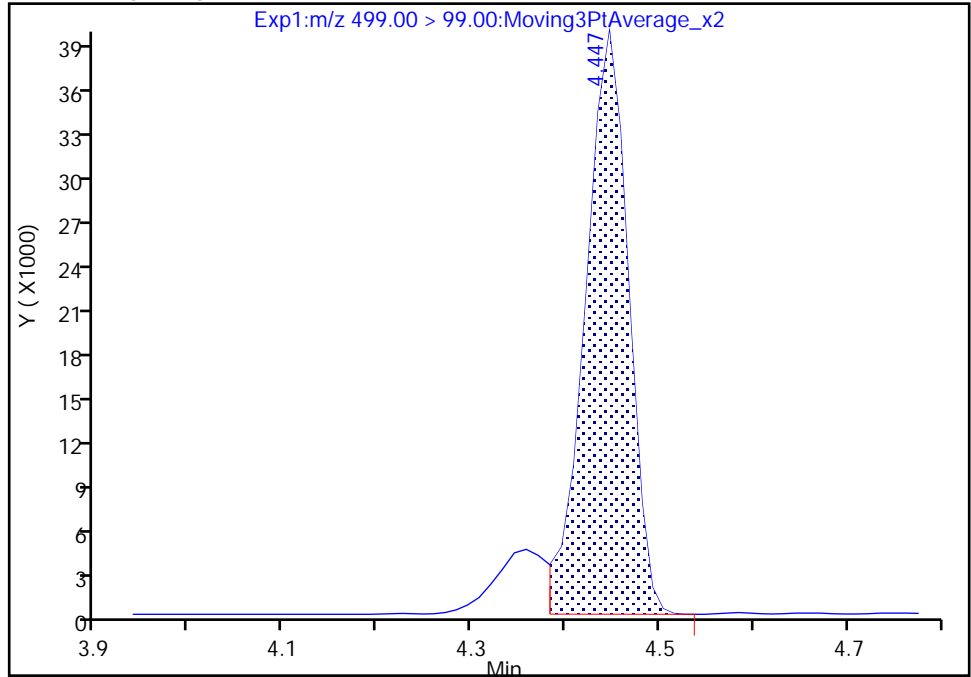
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Injection Date: 05-Oct-2021 22:18:36 Instrument ID: LCA
Lims ID: IC 3
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

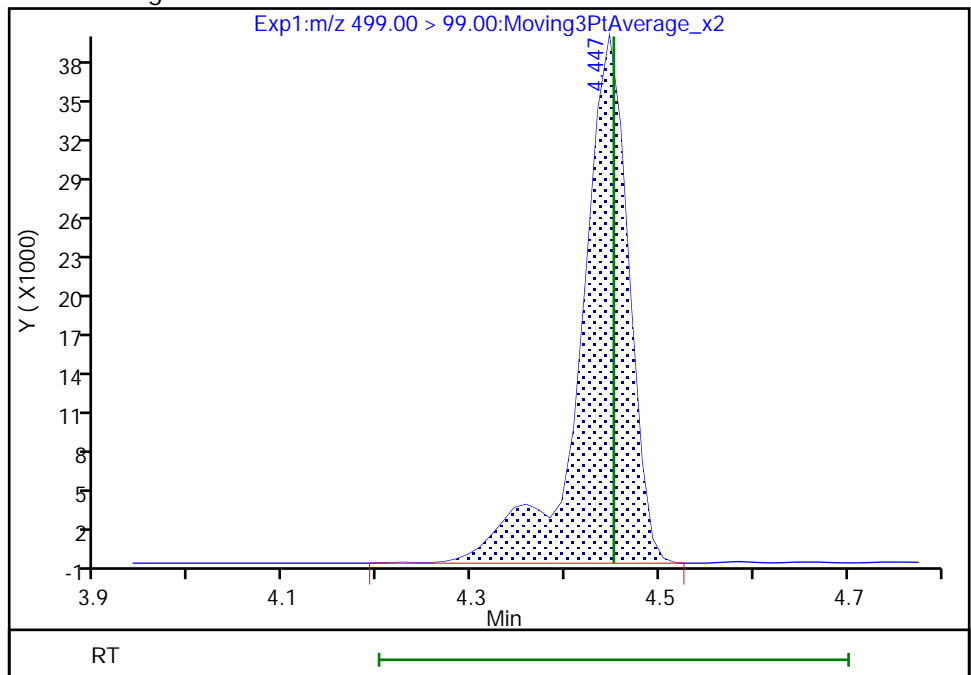
RT: 4.45
Area: 126358
Amount: 0.195463
Amount Units: ng/ml

Processing Integration Results



RT: 4.45
Area: 142904
Amount: 0.238147
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:59:36

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

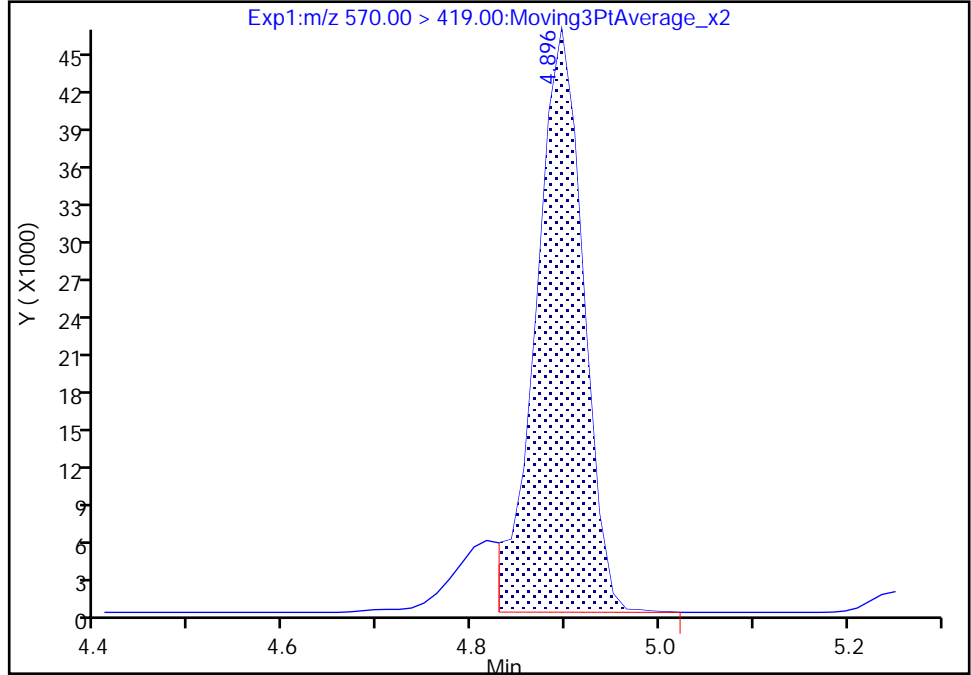
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Injection Date: 05-Oct-2021 22:18:36 Instrument ID: LCA
Lims ID: IC 3
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

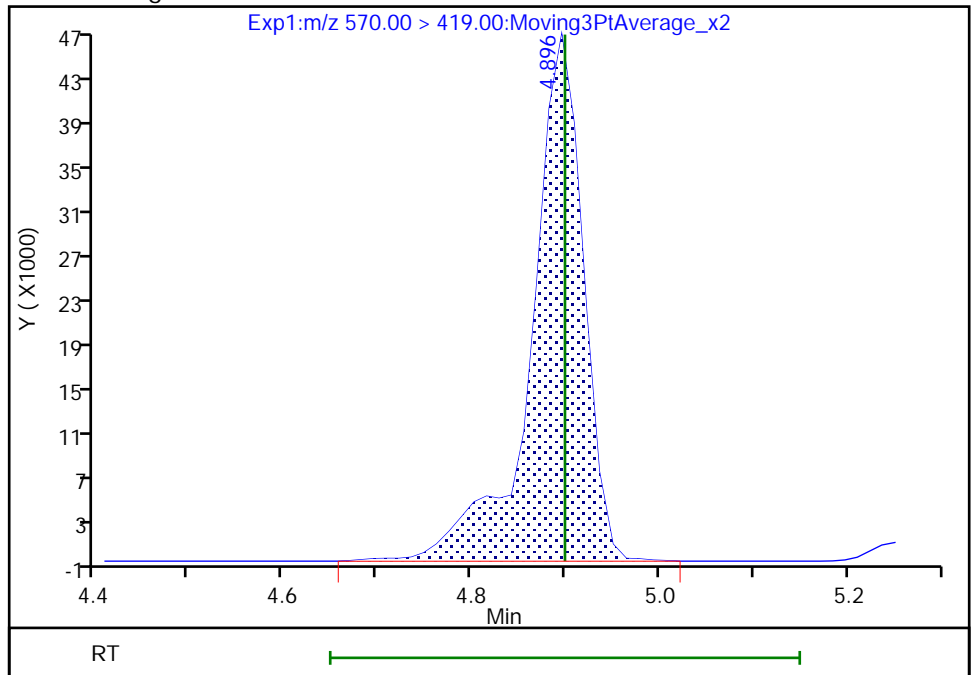
RT: 4.90
Area: 161530
Amount: 0.250000
Amount Units: ng/ml

Processing Integration Results



RT: 4.90
Area: 180751
Amount: 0.267693
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 15:59:49
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

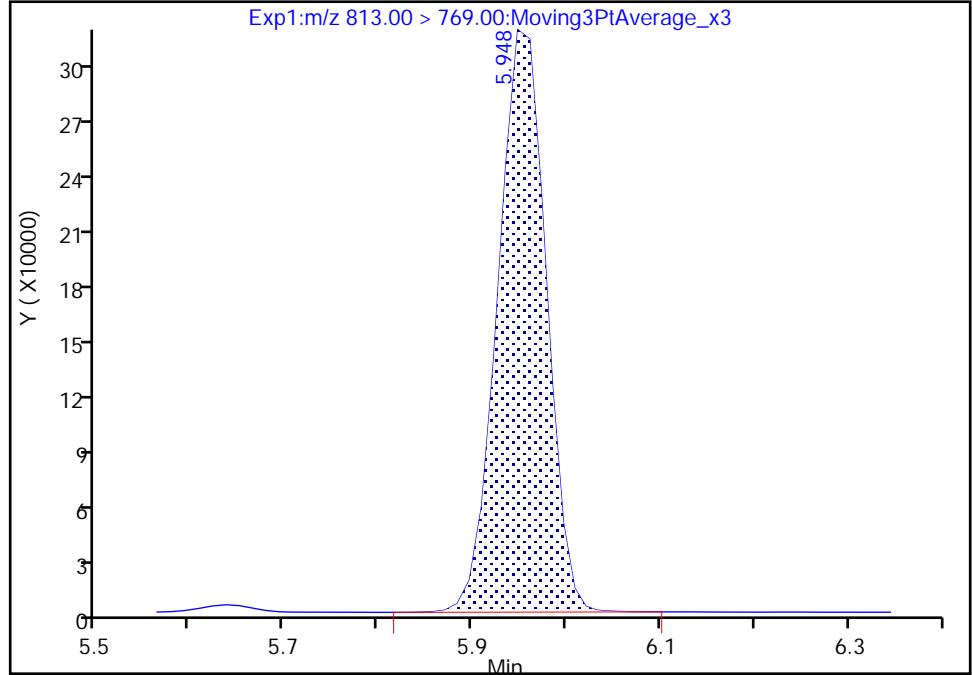
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_008.d
Injection Date: 05-Oct-2021 22:18:36 Instrument ID: LCA
Lims ID: IC 3
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

55 Perfluorohexadecanoic acid, CAS: 67905-19-5

Signal: 1

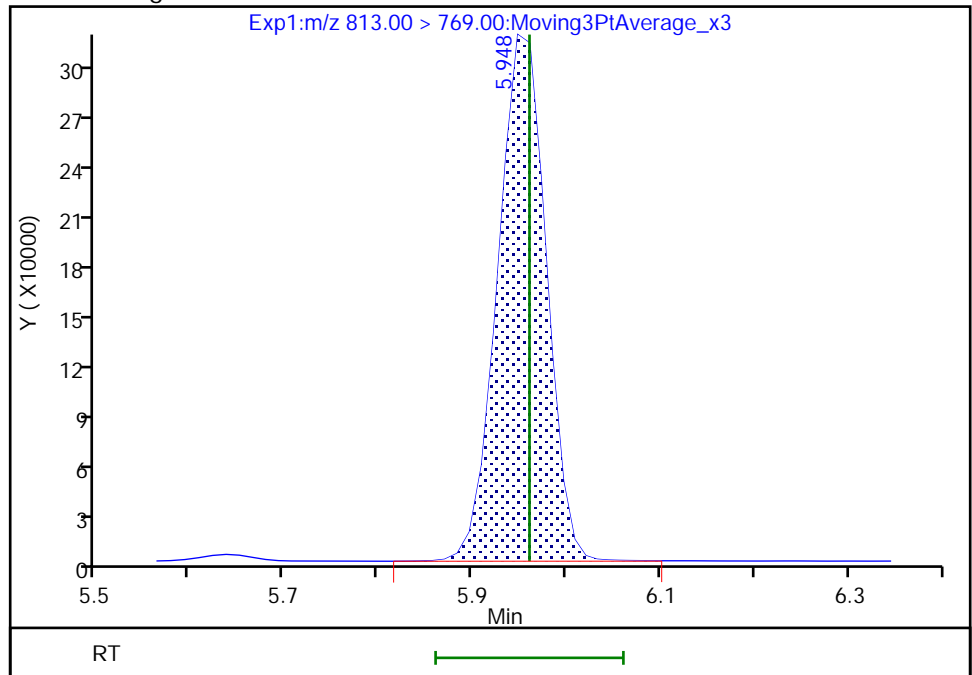
RT: 5.95
Area: 1130161
Amount: 0.251368
Amount Units: ng/ml

Processing Integration Results



RT: 5.95
Area: 1132217
Amount: 0.262415
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:14:59
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_009.d
 Lims ID: ICIS
 Client ID:
 Sample Type: ICIS Calib Level: 4
 Inject. Date: 05-Oct-2021 22:27:23 ALS Bottle#: 9 Worklist Smp#: 9
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020953-009 icis
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15
 Method: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 07-Oct-2021 14:21:06 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1613

First Level Reviewer: cochranj Date: 06-Oct-2021 16:01:12

Ratio Calibration: None

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	2.812	2.812	0.0	0.677	7289844	1.22	97.4	16005	
2 Perfluorobutanoic acid	212.90 > 169.00	2.812	2.812	0.0	1.000	4468418	0.9755	97.5	574	
D 3 13C5 PFPeA	267.90 > 223.00	3.129	3.130	-0.001	0.753	5943333	1.21	96.7	13688	
4 Perfluoropentanoic acid	262.90 > 219.00	3.129	3.131	-0.002	1.000	4615308	0.9582	95.8	1056	
D 6 13C3 PFBS	301.90 > 80.00	3.143	3.143	0.0	0.756	3519158	1.11	95.4	26115	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.143	3.151	-0.008	1.000	2953898	0.8665	Target=3.06	98.0	8808
	298.90 > 99.00	3.143	3.151	-0.008	1.000	1118824		2.64(1.53-4.59)	98.0	2775
7 4:2 FTS	327.00 > 307.00	3.423	3.431	-0.008	1.000	1050887	0.9470		101	9112
D 8 M2-4:2 FTS	329.00 > 81.00	3.423	3.431	-0.008	0.824	518286	1.09		93.3	480
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.469	3.468	0.001	1.104	2412870	0.9279	Target=3.47	98.9	11598
	349.00 > 99.00	3.469	3.468	0.001	1.104	679986		3.55(1.73-5.20)	98.9	7713
10 Perfluorohexanoic acid	313.00 > 269.00	3.469	3.471	-0.002	1.000	4022201	0.9589	Target=9.74	95.9	1871
	313.00 > 119.00	3.469	3.471	-0.002	1.000	323554		12.43(4.87-14.61)	95.9	1561
D 9 13C2 PFHxA	315.00 > 270.00	3.469	3.471	-0.002	0.835	6116663	1.21		96.9	19679
13 HFPO-DA	285.00 > 169.00	3.561	3.565	-0.004	1.000	3457493	0.9856		98.6	2276

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.561	3.565	-0.004	0.857	3166510	1.23		98.0	11810	
D 17 18O2 PFHxS										
403.00 > 84.00	3.815	3.813	0.002	0.918	2269288	1.18		99.9	9756	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.815	3.813	0.002	1.000	2292161	0.8789	Target=2.96	96.6	6542	M
399.00 > 99.00	3.815	3.813	0.002	1.000	665596		3.44(1.48-4.44)	96.6	3758	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.815	3.819	-0.004	1.000	5299224	1.00	Target=3.35	99.6	3193	
363.00 > 169.00	3.815	3.819	-0.004	1.000	1615663		3.28(1.67-5.02)	99.6	6725	
D 14 13C4 PFHpA										
367.00 > 322.00	3.815	3.819	-0.004	0.918	6294659	1.25		100	18492	
68 DONA										
377.00 > 251.00	3.852	3.850	0.002	0.866	8159890	0.9843	Target=1.49	104	15833	
377.00 > 85.00	3.852	3.850	0.002	0.866	4252443		1.92(0.74-2.23)	104	6029	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.143	4.143	0.0	0.932	2341758	0.9210	Target=3.73	96.7	9023	
449.00 > 99.00	4.143	4.143	0.0	0.932	600330		3.90(1.87-5.61)	96.7	5216	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.155	4.156	-0.001	1.000	5067237	1.02	Target=2.40	102	1572	
413.00 > 169.00	4.155	4.156	-0.001	1.000	2006775		2.53(1.20-3.61)	102	3710	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.143	4.146	-0.003	0.997	5416582	1.21		96.9	24454	
19 6:2 FTS										
427.00 > 407.00	4.155	4.151	0.004	1.003	905258	0.9299		98.1	6785	
* 22 13C2 PFOA										
415.00 > 370.00	4.155	4.155	0.0		5652969	1.25			14547	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.143	4.151	-0.008	0.997	574488	1.18		99.3	738	
D 21 13C4 PFOA										
417.00 > 372.00	4.155	4.155	0.0	1.000	5619219	1.23		98.7	27097	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.447	4.446	0.0	1.070	657677	1.16		96.9	4109	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.447	4.451	-0.005	1.000	2600759	0.9252	Target=3.83	99.7	3124	M
499.00 > 99.00	4.447	4.451	-0.005	1.000	571705		4.55(1.91-5.74)	99.7	2576	M
D 25 13C4 PFOS										
503.00 > 80.00	4.447	4.451	-0.005	1.070	3054456	1.15		96.6	9604	
26 Perfluorononanoic acid										
463.00 > 419.00	4.470	4.471	-0.001	1.000	4812773	1.00	Target=3.68	99.7	3288	
463.00 > 169.00	4.470	4.471	-0.001	1.000	1055178		4.56(1.84-5.52)	99.7	3798	
D 27 13C5 PFNA										
468.00 > 423.00	4.470	4.471	-0.001	1.076	7226283	1.25		99.9	30078	
63 9CIFOS										
531.00 > 351.00	4.608	4.606	0.002	1.109	5550758	0.9410		101	10741	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.722	4.728	-0.006	1.062	2390809	0.8975	Target=3.97	93.5	8373	
549.00 > 99.00	4.722	4.728	-0.006	1.062	624360		3.83(1.99-5.96)	93.5	2794	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.736	4.745	-0.009	1.000	3588461	0.9632		96.3	4464	
D 34 13C8 FOSA										
506.00 > 78.00	4.736	4.743	-0.007	1.140	4847961	1.25		99.8	6653	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.762	4.760	0.002	1.003	5531515	1.00	Target=10.11	99.5	2321	
513.00 > 169.00	4.749	4.760	-0.011	1.000	467474		11.83(5.06-15.17)	99.5	449	
D 32 13C2 PFDA										
515.00 > 470.00	4.749	4.758	-0.009	1.143	7310968	1.25		99.8	23779	
31 8:2 FTS										
527.00 > 507.00	4.776	4.774	0.002	1.000	955136	0.9230		96.3	5270	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.776	4.774	0.002	1.149	694718	1.17		97.5	2940	
36 NMeFOSAA										
570.00 > 419.00	4.896	4.899	-0.003	1.000	750862	0.9792		97.9	1069	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.896	4.899	-0.003	1.178	1042167	1.30		104	2722	
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.993	4.997	-0.004	1.123	2378581	0.9720	Target=3.80	101	8625	
599.00 > 99.00	4.993	4.997	-0.004	1.123	651235		3.65(1.90-5.70)	101	3090	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.022	5.018	0.004	1.003	5677846	1.00	Target=7.45	100	3880	
563.00 > 169.00	5.022	5.018	0.004	1.003	615172		9.23(3.78-11.33)	100	3649	
D 39 13C2 PFUnA										
565.00 > 520.00	5.007	5.015	-0.008	1.205	7006211	1.25		100	22211	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.036	5.034	0.002	1.212	924381	1.20		95.9	2699	
40 NEtFOSA										
584.00 > 419.00	5.036	5.040	-0.004	1.000	689486	0.9820		98.2	867	
57 11C1FOS										
631.00 > 451.00	5.119	5.122	-0.003	1.151	4468073	0.9406		99.9	9988	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.251	5.255	-0.004	1.000	5931269	0.9622	Target=5.33	96.2	2551	
613.00 > 169.00	5.251	5.255	-0.004	1.000	838904		7.07(2.66-7.99)	96.2	6384	
D 43 13C2 PFDoA										
615.00 > 570.00	5.251	5.255	-0.004	1.264	7381117	1.24		99.0	18925	
50 10:2 FTS										
627.00 > 607.00	5.266	5.274	-0.008	1.103	1192076	0.9251		96.0	4562	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.280	5.289	-0.009	1.271	614171	1.26		101	359	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.274	614480	1.21		97.1	43.4	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.297	-0.002	1.003	530157	0.9313		93.1	584	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.295	5.301	-0.006	1.000	496513	0.9647		96.5	763	
54 PFDoS										
699.00 > 80.00	5.436	5.439	-0.003	1.222	2347772	0.9298	Target=4.32	96.1	6677	
699.00 > 99.00	5.436	5.439	-0.003	1.222	574923		4.08(2.19-6.58)	96.1	3426	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.436	5.445	-0.009	1.308	630903	1.22		97.4	544	
62 N-EtFOSE-M										
630.00 > 59.00	5.449	5.458	-0.009	1.002	660212	1.04		104	1077	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.462	5.462	0.0	1.040	5182810	0.99	Target=5.66	99.3	2195	
663.00 > 169.00	5.462	5.462	0.0	1.040	865750		5.99(2.83-8.48)	99.3	5801	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.460	0.002	1.315	512905	1.20		96.3	847	
56 N-EtFOSA-M										
526.00 > 169.00	5.462	5.469	-0.007	1.000	471510	0.9835		98.3	621	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.637	5.643	-0.006	1.000	667705	0.9763	Target=1.07	97.6	4677	
713.00 > 219.00	5.637	5.643	-0.006	1.000	667385		1.00(0.53-1.60)	97.6	5495	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.637	5.643	-0.006	1.357	6776597	1.24		99.0	18426	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.961	5.961	0.0	1.435	4764988	1.20		96.0	8789	
55 Perfluorohexadecanoic acid										M
813.00 > 769.00	5.961	5.961	0.0	1.000	4177724	1.00	Target=7.50	100	2599	M
813.00 > 169.00	5.961	5.961	0.0	1.000	494952		8.44(3.75-11.26)	100	2415	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.221	6.226	-0.005	1.044	3485638	1.01	Target=9.98	101	2407	
913.00 > 169.00	6.221	6.226	-0.005	1.044	294960		11.82(5.14-15.41)	101	1990	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L4PFC2_00003

Amount Added: 1.00

Units: mL

Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_009.d

Injection Date: 05-Oct-2021 22:27:23

Instrument ID: LCA

Lims ID: ICIS

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 9

Worklist Smp#: 9

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

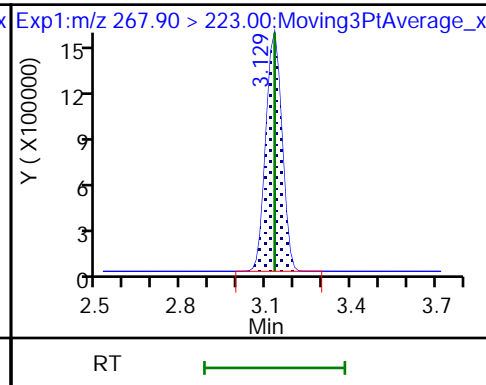
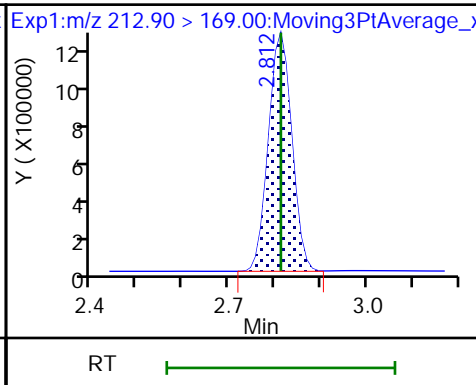
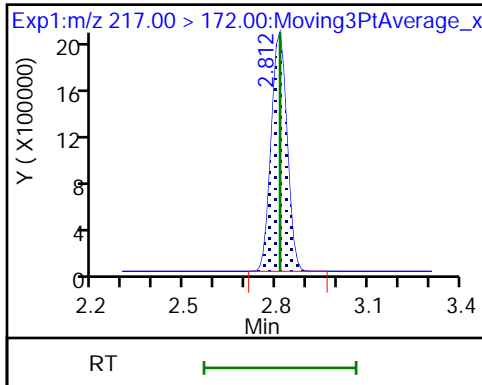
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

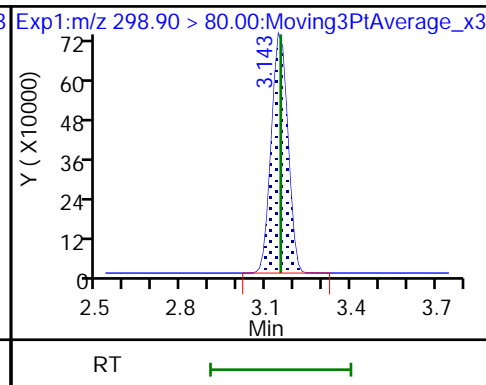
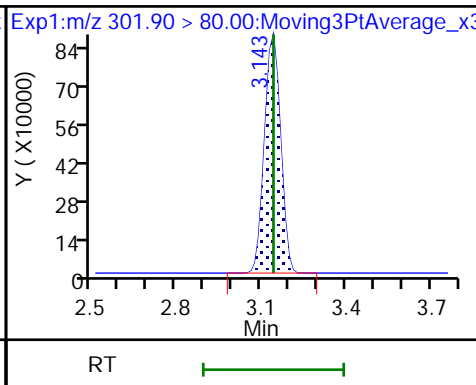
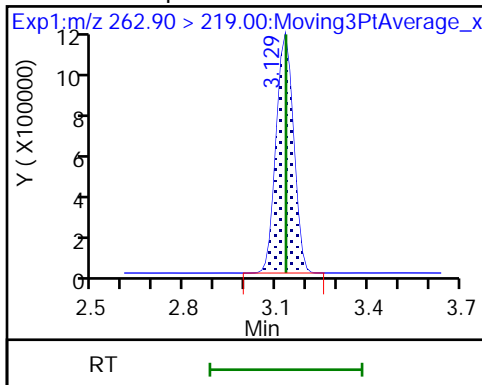
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

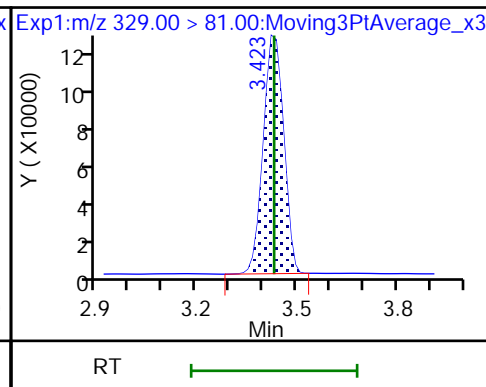
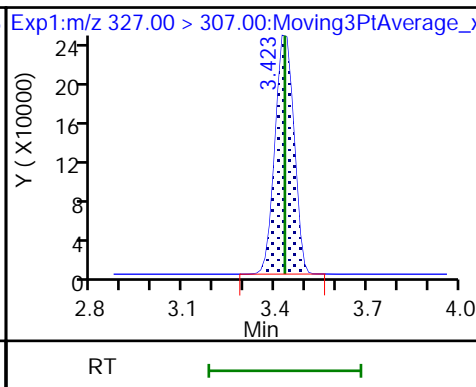
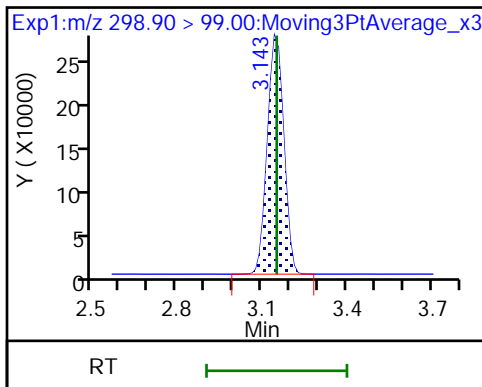
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

7 4:2 FTS

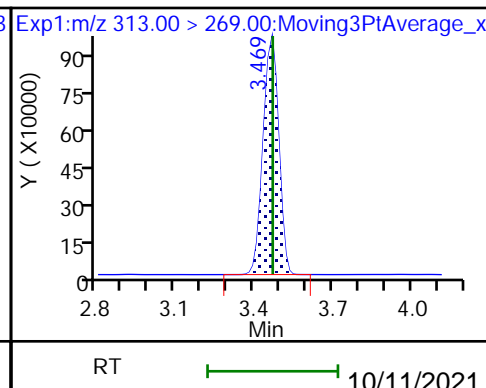
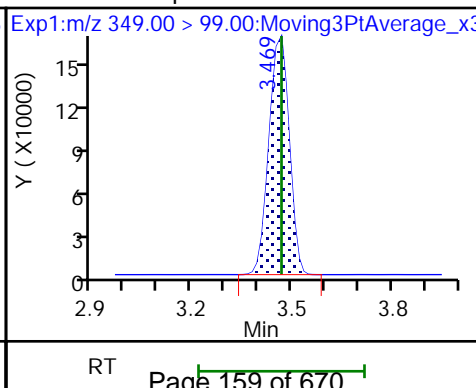
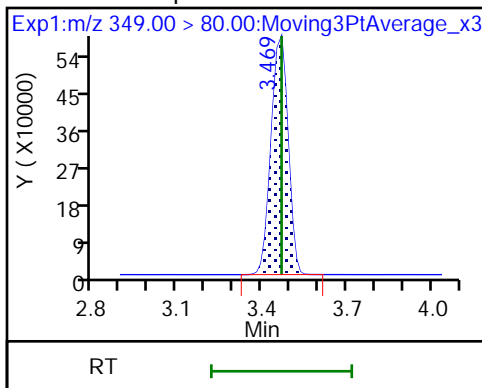
D 8 M2-4:2 FTS

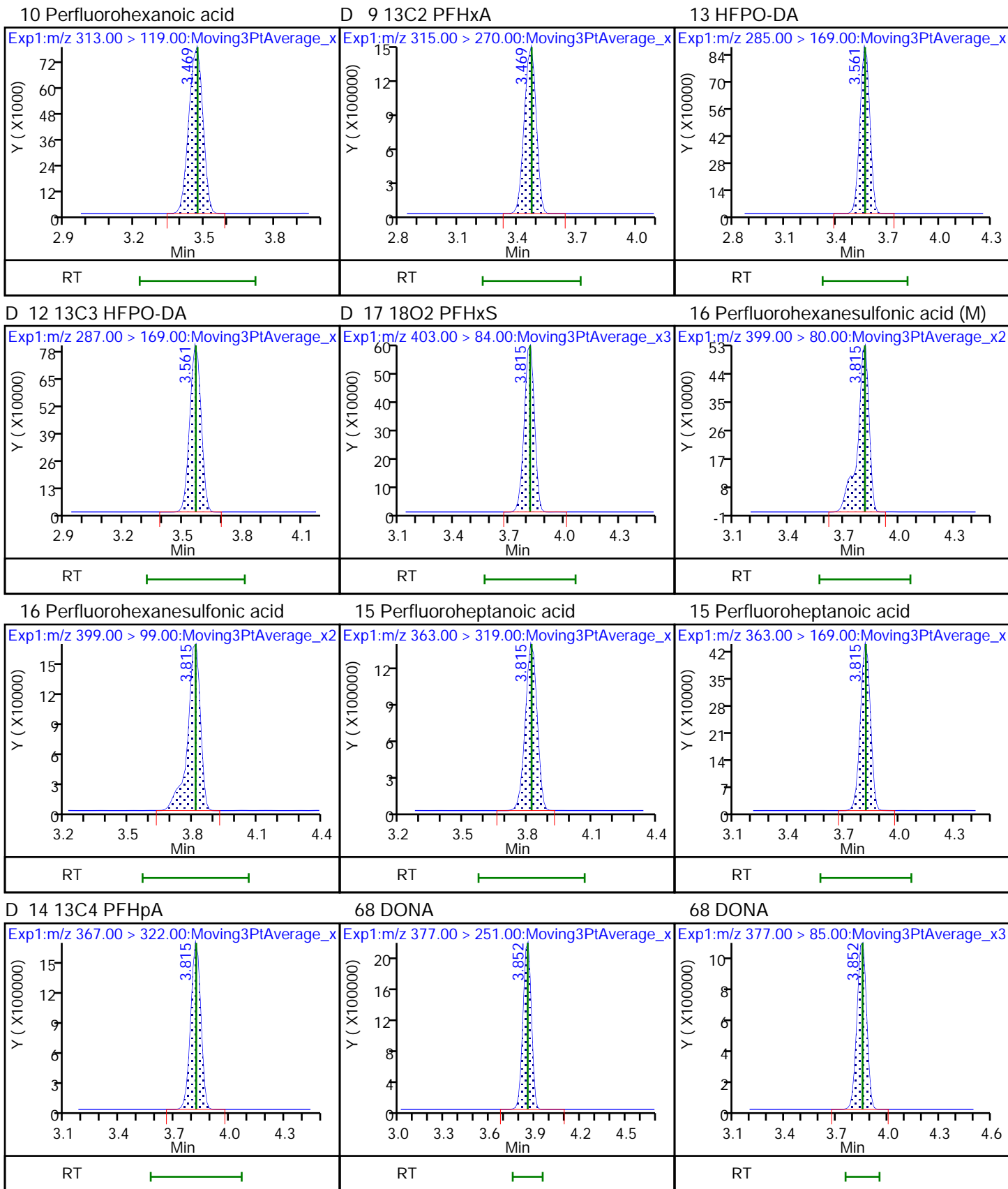


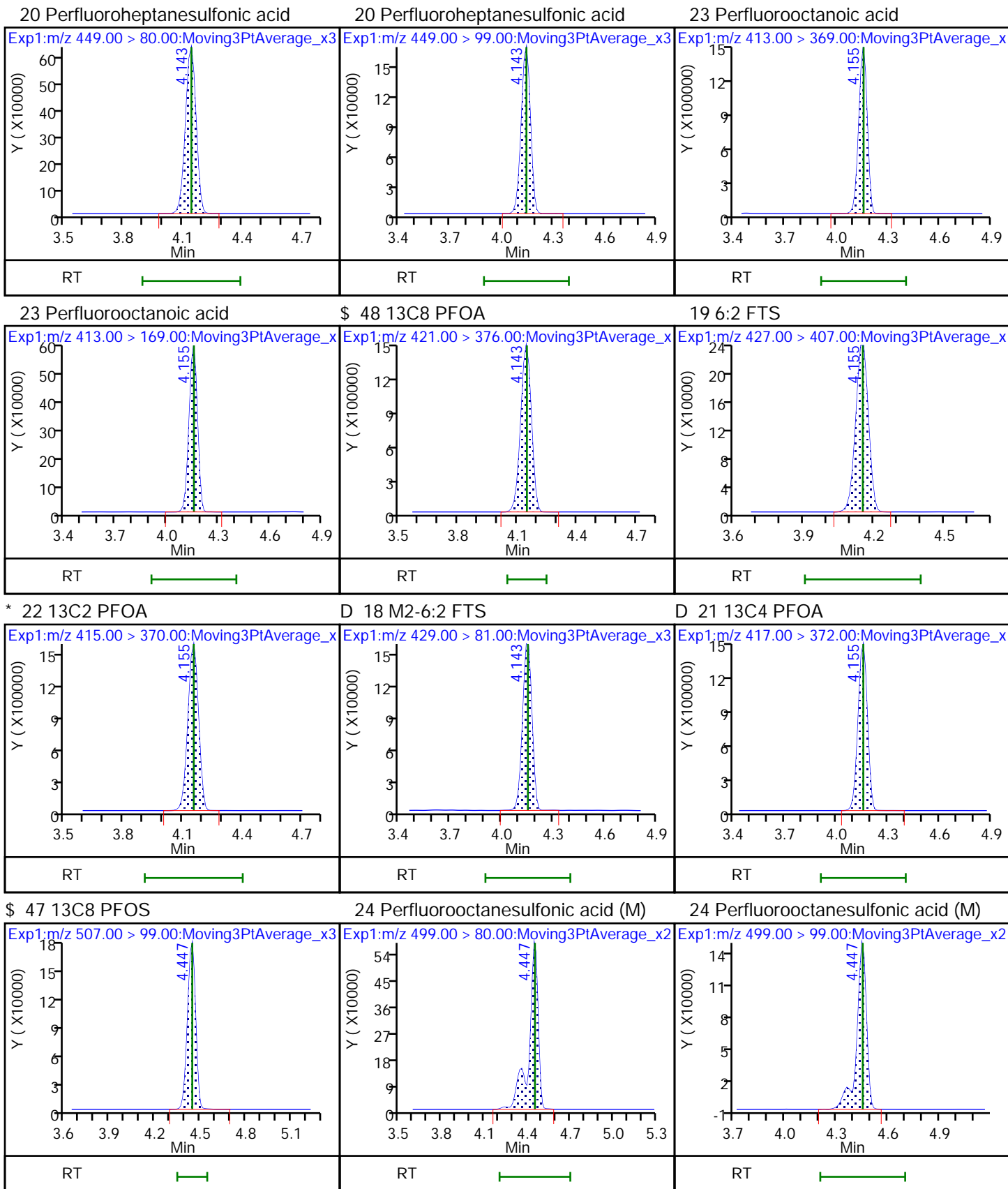
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

10 Perfluorohexanoic acid



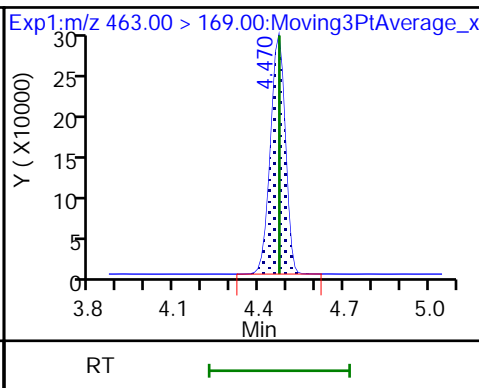
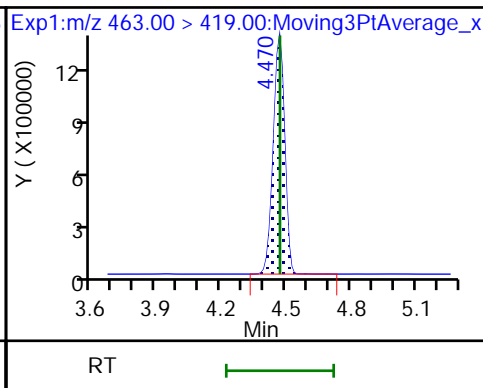
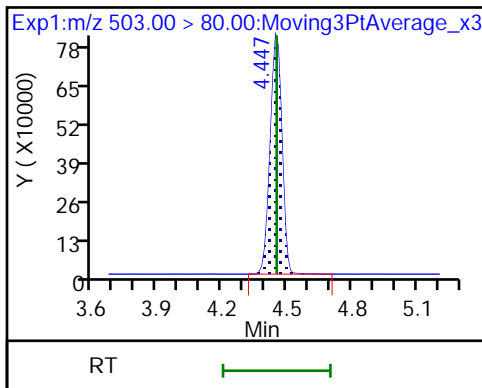




D 25 13C4 PFOS

26 Perfluorononanoic acid

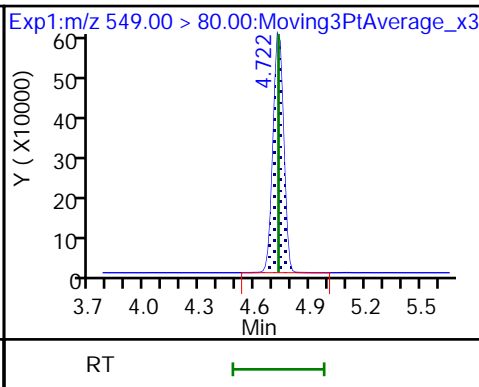
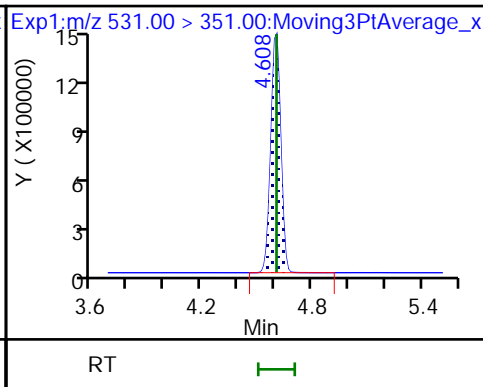
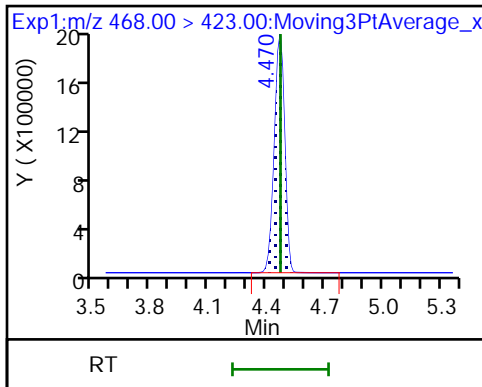
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS

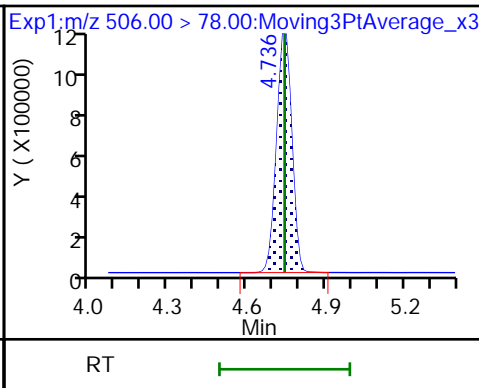
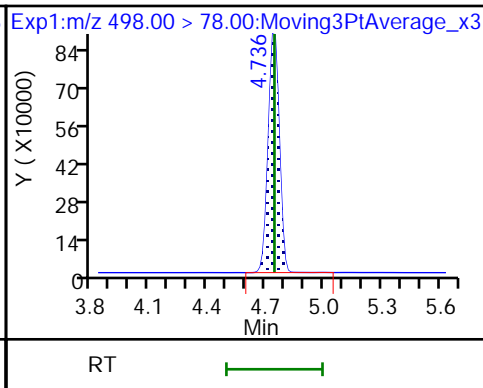
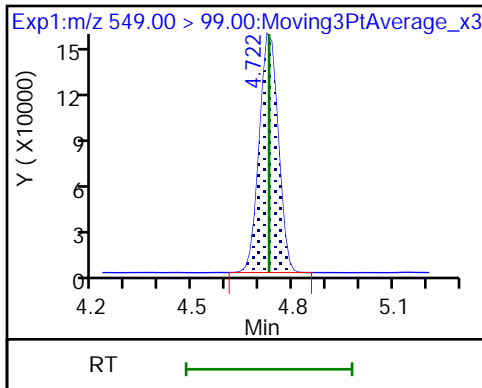
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

33 Perfluorooctanesulfonamide

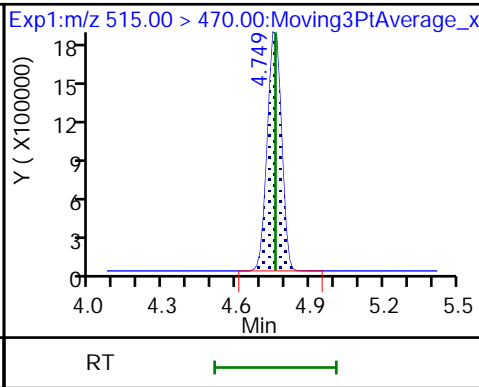
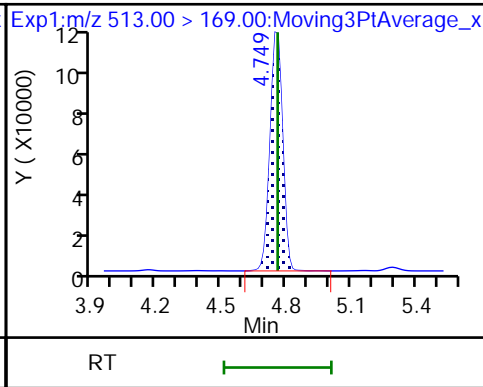
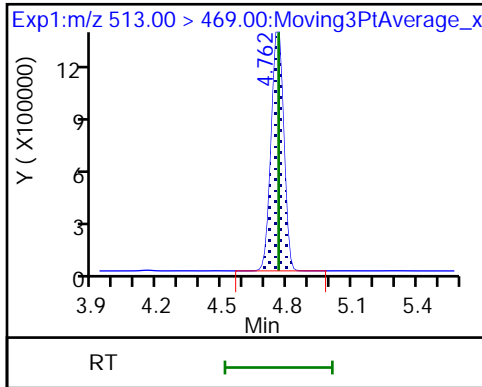
D 34 13C8 FOSA

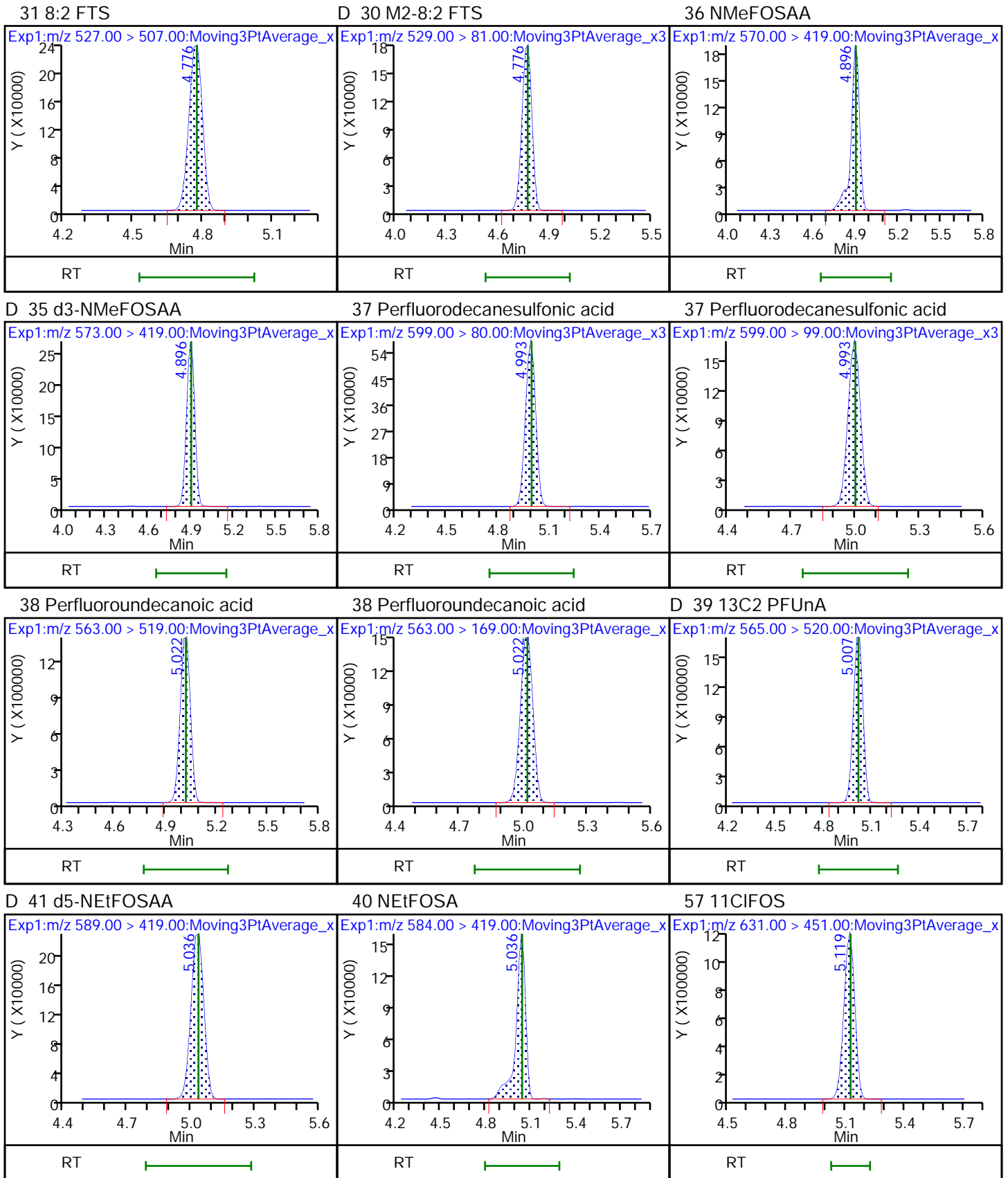


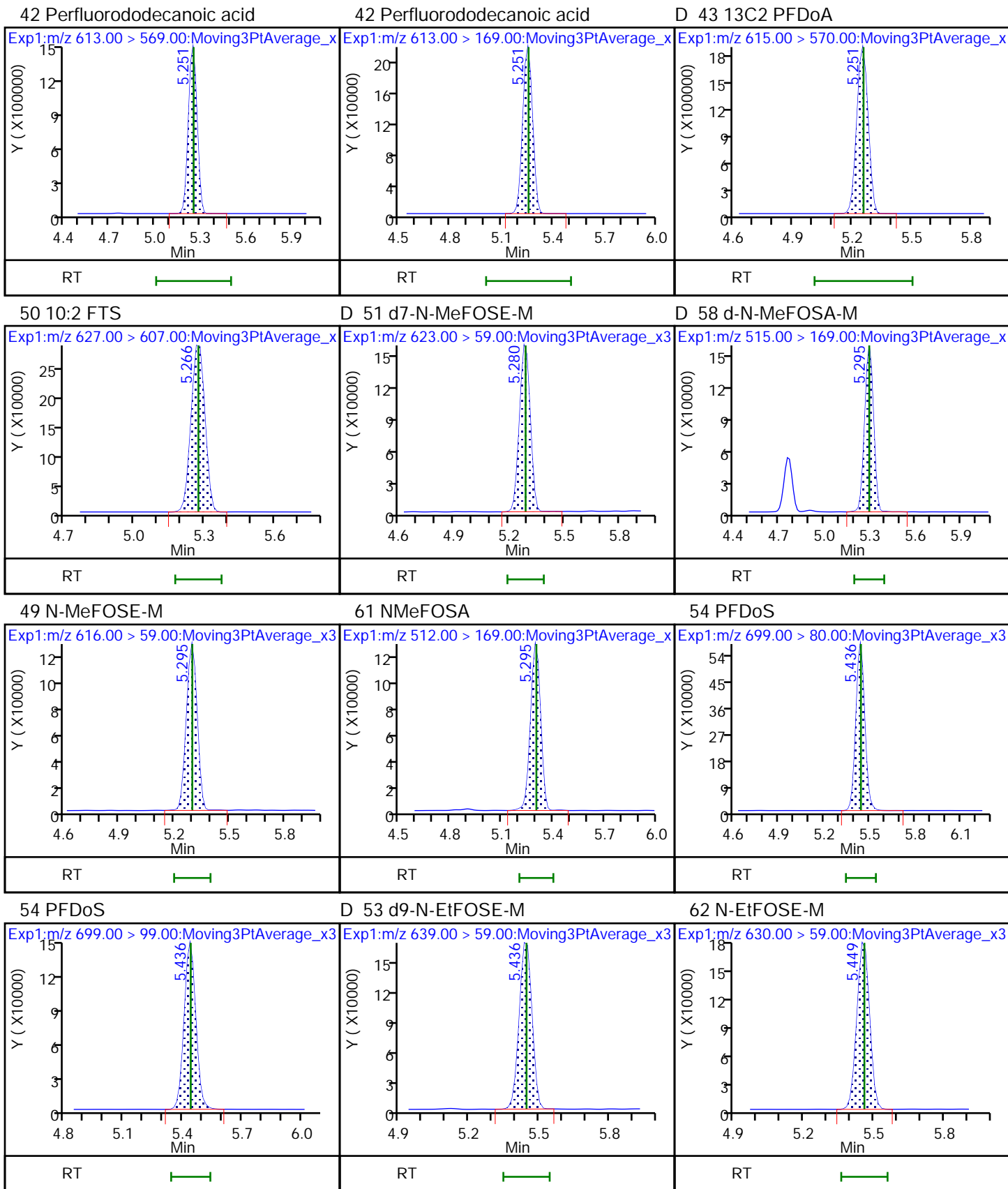
29 Perfluorodecanoic acid

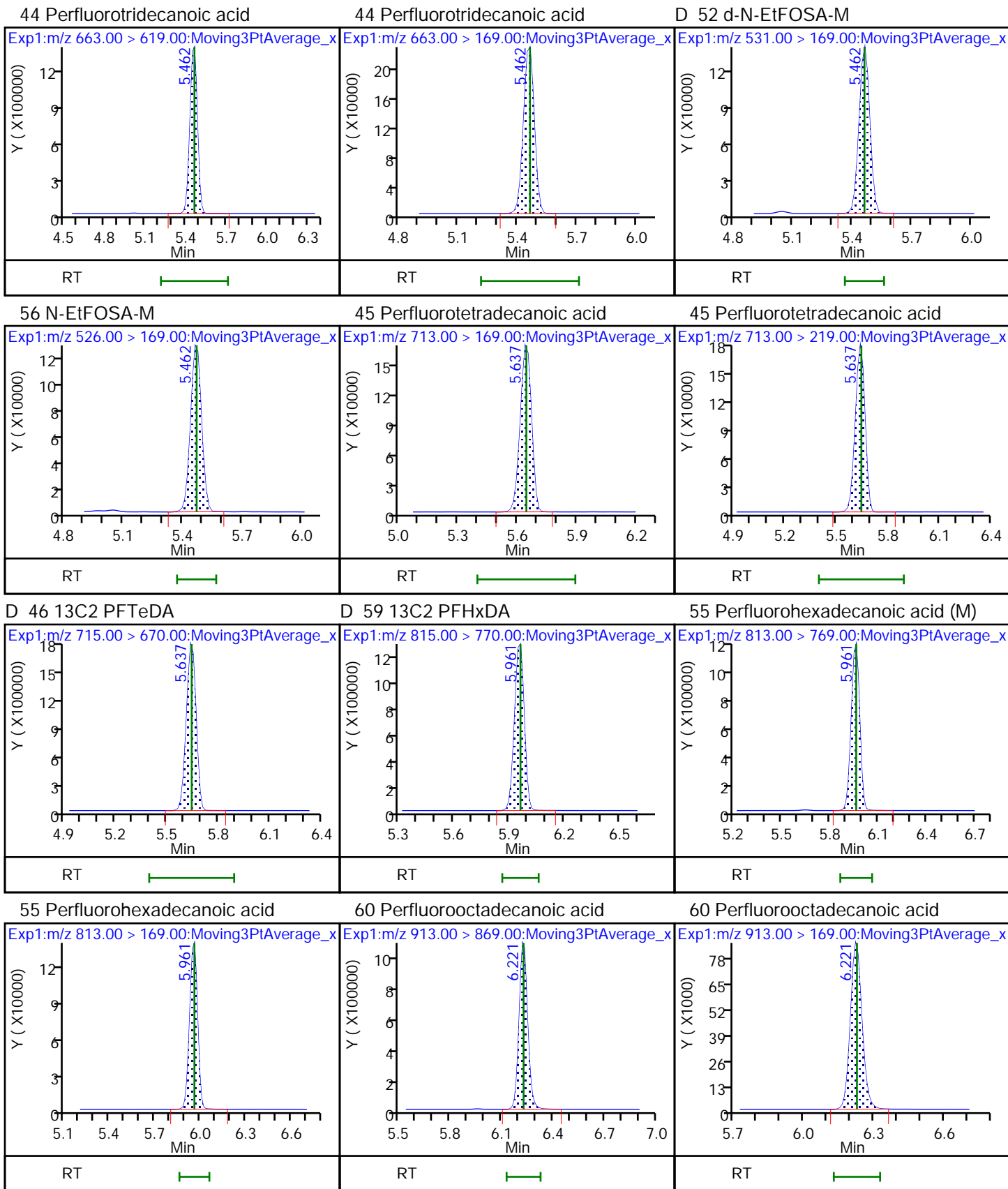
29 Perfluorodecanoic acid

D 32 13C2 PFDA









Eurofins TestAmerica, Knoxville

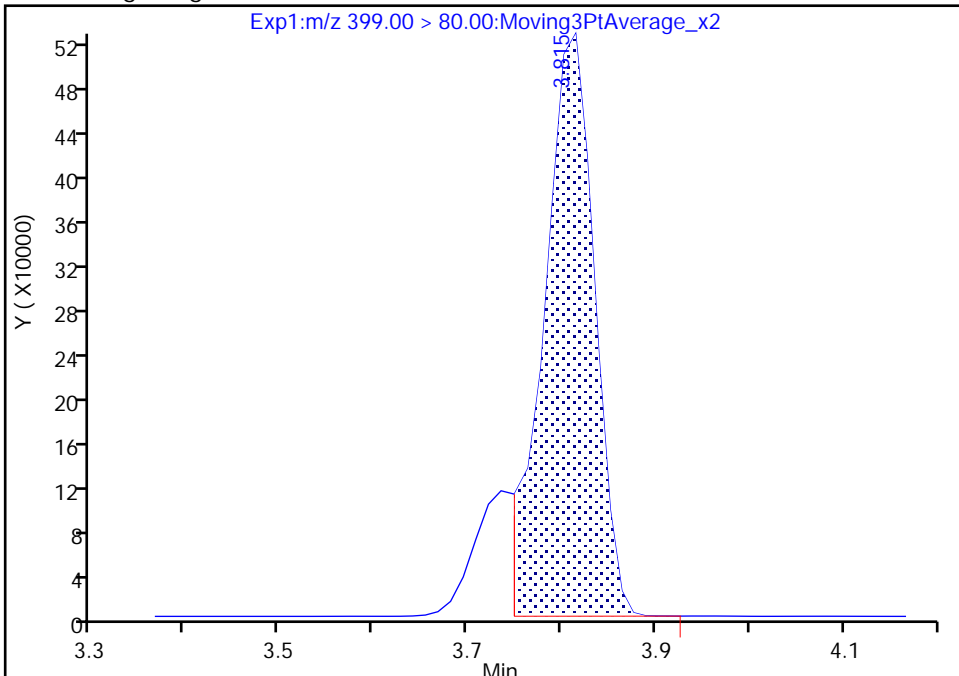
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Injection Date: 05-Oct-2021 22:27:23 Instrument ID: LCA
Lims ID: ICIS
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

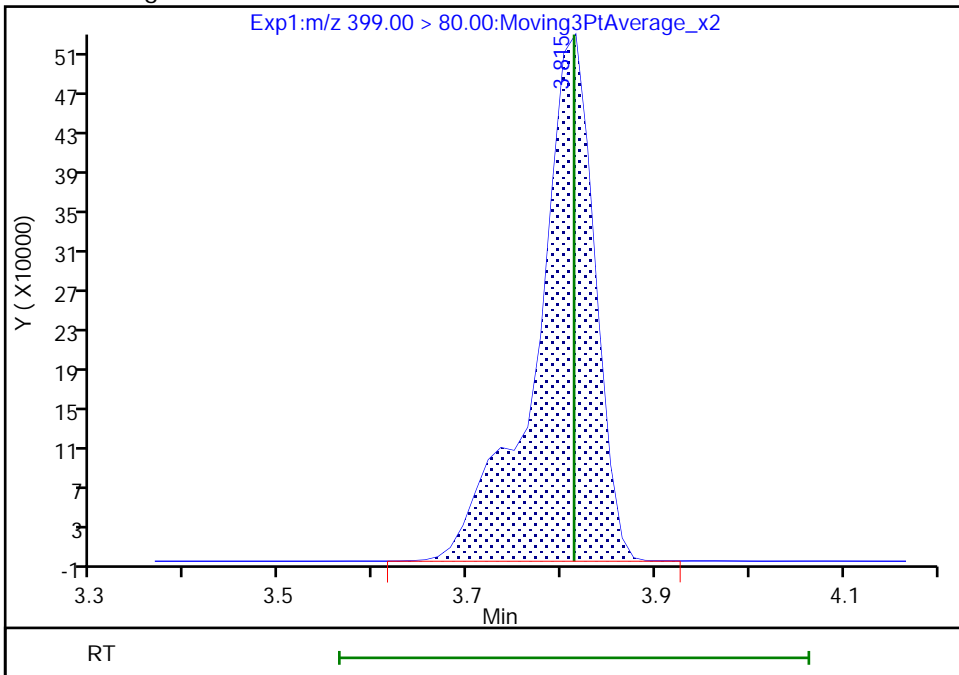
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Area: 1964246
Amount: 0.904580
Amount Units: ng/ml

Processing Integration Results



RT: 3.82
Area: 2292161
Amount: 0.878940
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:00:32
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

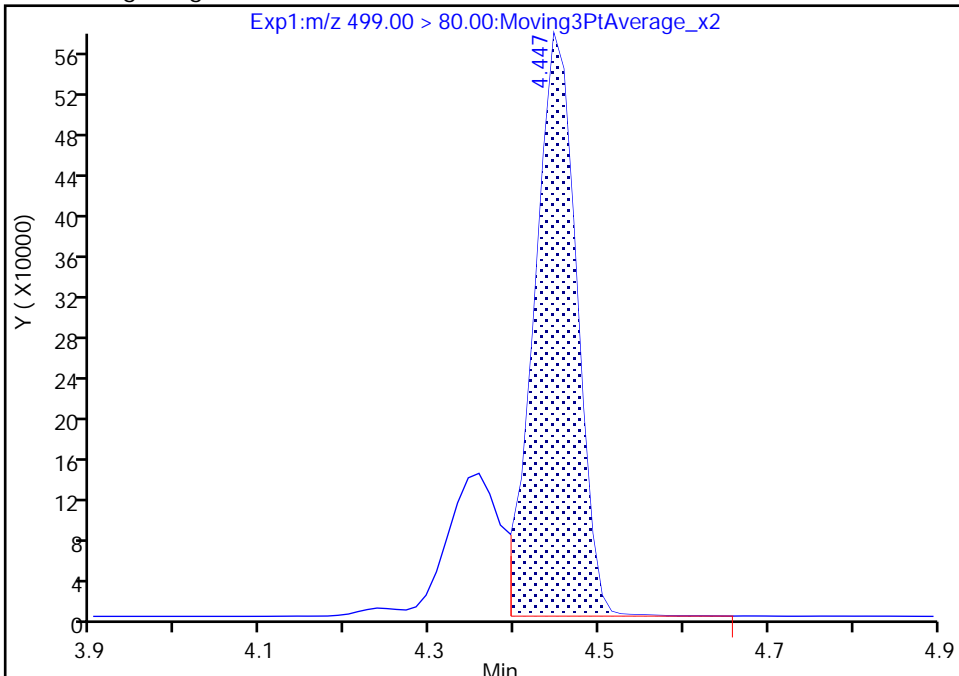
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Injection Date: 05-Oct-2021 22:27:23 Instrument ID: LCA
Lims ID: ICIS
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

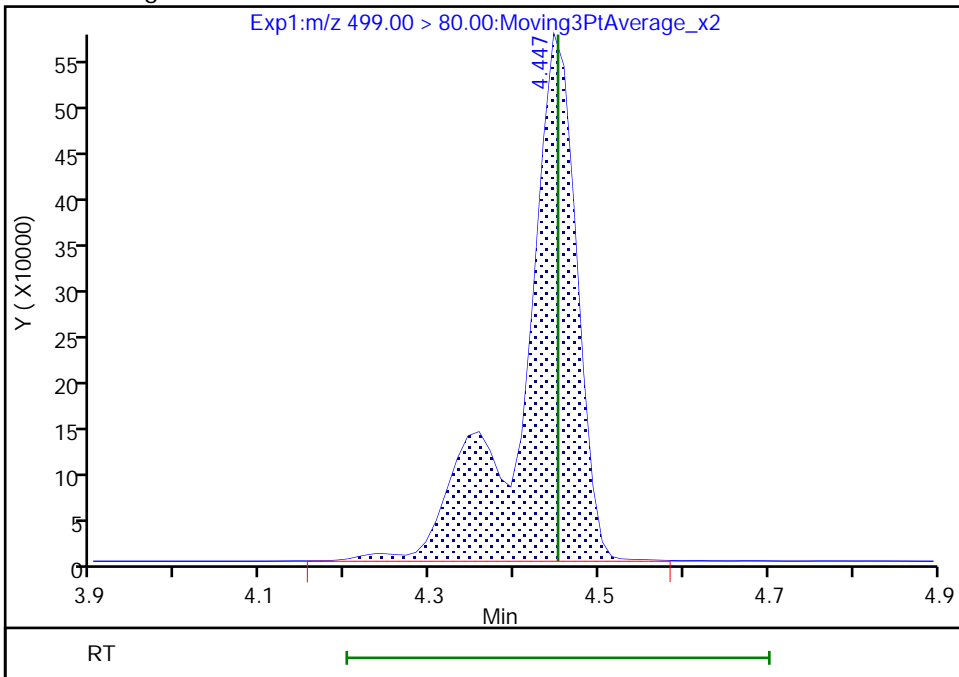
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Area: 1968825
Amount: 0.729188
Amount Units: ng/ml

Processing Integration Results



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Area: 2600759
Amount: 0.925201
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:00:45
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

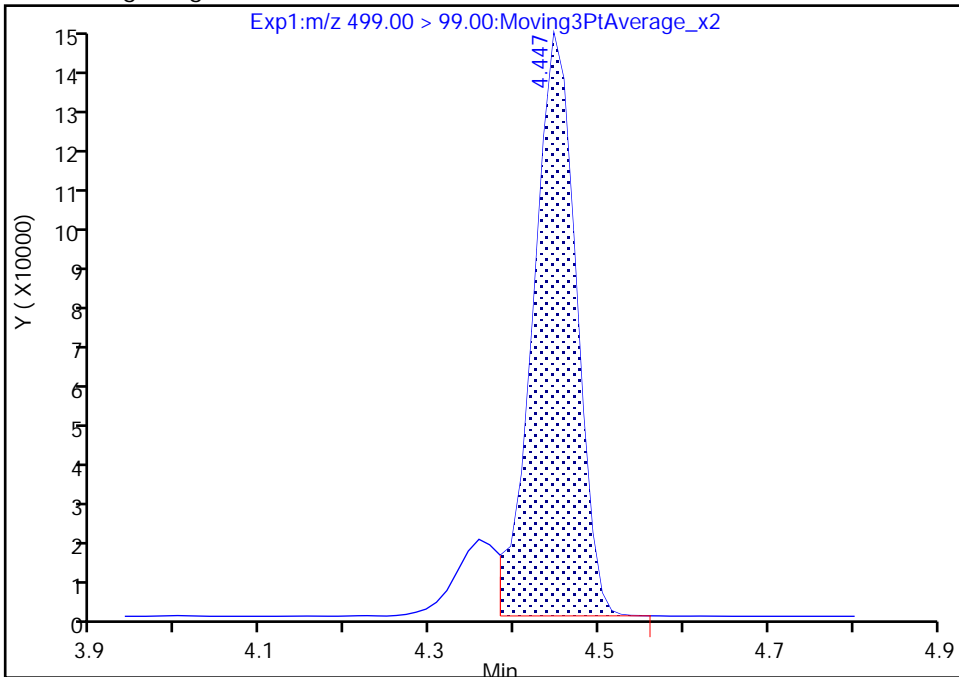
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Lims ID: ICIS
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

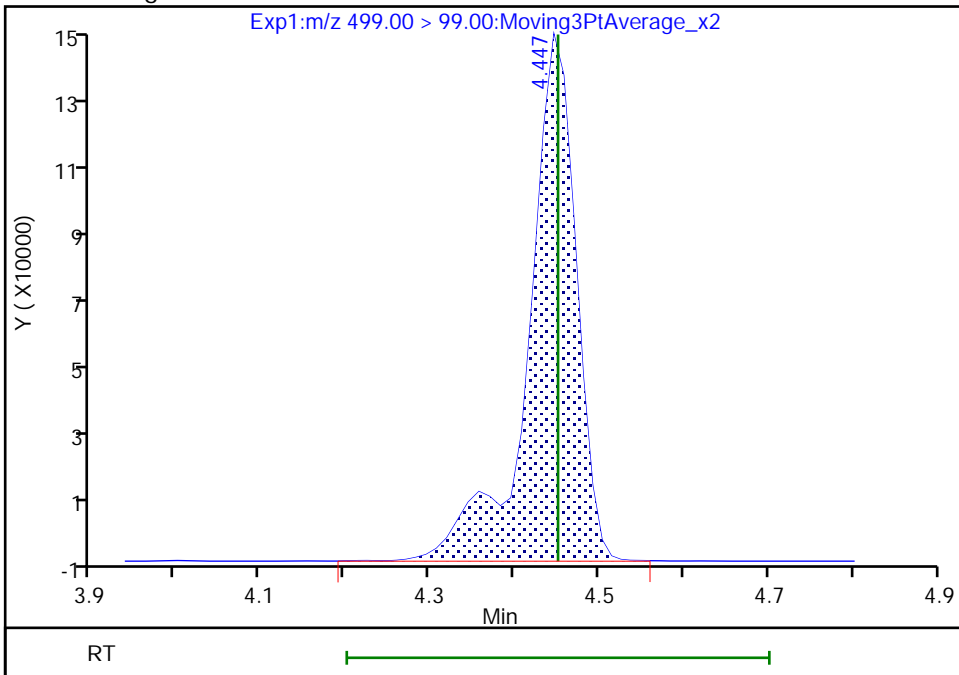
RT: 4.45
Area: 505754
Amount: 0.729188
Amount Units: ng/ml

Processing Integration Results



RT: 4.45
Area: 571705
Amount: 0.925201
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:00:52

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

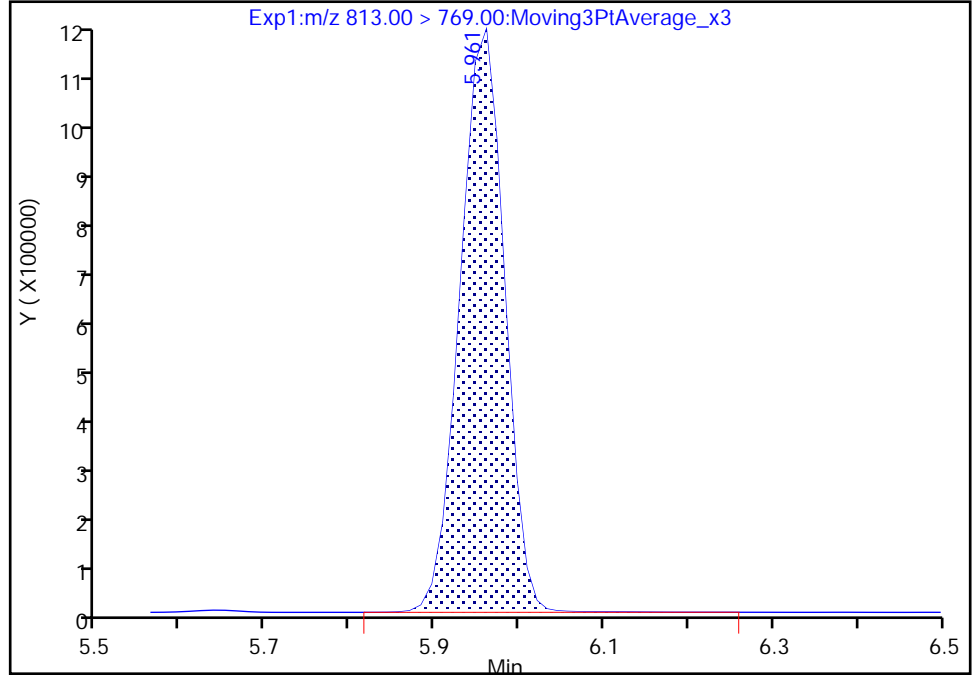
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Lims ID: ICIS
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

55 Perfluorohexadecanoic acid, CAS: 67905-19-5

Signal: 1

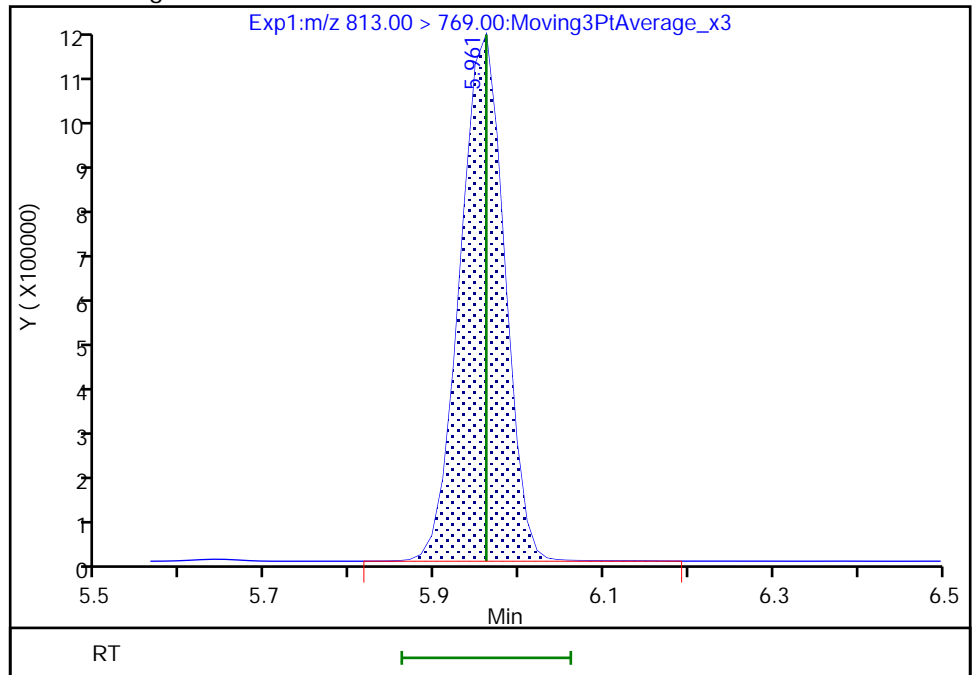
RT: 5.96
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Amount: 0.919423
Amount Units: ng/ml

Processing Integration Results



RT: 5.96
Area: 4177724
Amount: 1.002735
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:14:38
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_010.d
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 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 05-Oct-2021 22:36:10 ALS Bottle#: 10 Worklist Smp#: 10
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020953-010 ic 5
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15

Method: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 07-Oct-2021 14:21:08 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1613

First Level Reviewer: cochranj Date: 06-Oct-2021 16:02:46

Ratio Calibration: None

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	2.812	2.812	0.0	1.000	10441309	2.34		93.7	1439	
D 1 13C4 PFBA										
217.00 > 172.00	2.812	2.812	0.0	0.677	7094947	1.25		99.7	16482	
D 3 13C5 PFPeA										
267.90 > 223.00	3.130	3.130	0.0	0.753	5746550	1.23		98.3	13358	
4 Perfluoropentanoic acid										
262.90 > 219.00	3.130	3.131	-0.001	1.000	10852858	2.33		93.2	2497	
D 6 13C3 PFBS										
301.90 > 80.00	3.143	3.143	0.0	0.756	3524311	1.17		100	24619	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	3.157	3.151	0.006	1.004	6852855	2.01	Target=3.06	90.8	15630	
298.90 > 99.00	3.157	3.151	0.006	1.004	2604355		2.63(1.53-4.59)	90.8	7911	
D 8 M2-4:2 FTS										
329.00 > 81.00	3.437	3.431	0.006	0.827	532409	1.18		101	579	
7 4:2 FTS										
327.00 > 307.00	3.437	3.431	0.006	1.000	2443233	2.14		91.8	32351	
11 Perfluoropentanesulfonic acid										
349.00 > 80.00	3.469	3.468	0.001	1.104	5960167	2.30	Target=3.47	97.9	31574	
349.00 > 99.00	3.469	3.468	0.001	1.104	1670398		3.57(1.73-5.20)	97.9	16633	
D 9 13C2 PFHxA										
315.00 > 270.00	3.469	3.471	-0.002	0.835	6061274	1.26		101	18497	
10 Perfluorohexanoic acid										
313.00 > 269.00	3.469	3.471	-0.002	1.000	9394999	2.26	Target=9.74	90.4	4433	
313.00 > 119.00	3.469	3.471	-0.002	1.000	732195		12.83(4.87-14.61)	90.4	2093	
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.561	3.565	-0.004	0.857	3145011	1.28		102	12167	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.561	3.565	-0.004	1.000	8376090	2.41		96.5	5826	
D 17 18O2 PFHxS										
403.00 > 84.00	3.815	3.813	0.002	0.918	2104634	1.15		97.4	8865	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.815	3.813	0.002	1.000	5280667	2.19	Target=2.96	96.3	14209	M
399.00 > 99.00	3.815	3.813	0.002	1.000	1553610		3.40(1.48-4.44)	96.3	10949	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.815	3.819	-0.004	0.918	5824750	1.22		97.4	18059	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.815	3.819	-0.004	1.000	12053684	2.45	Target=3.35	98.2	6120	
363.00 > 169.00	3.815	3.819	-0.004	1.000	3696669		3.26(1.67-5.02)	98.2	17372	
68 DONA										
377.00 > 251.00	3.852	3.850	0.002	0.866	17882462	2.23	Target=1.49	94.7	33527	
377.00 > 85.00	3.852	3.850	0.002	0.866	10226407		1.75(0.74-2.23)	94.7	7758	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.143	4.143	0.0	0.932	5405819	2.20	Target=3.73	92.3	13393	
449.00 > 99.00	4.143	4.143	0.0	0.932	1355722		3.99(1.87-5.61)	92.3	6283	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.155	4.151	0.004	1.000	528850	1.14		96.1	893	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.143	4.146	-0.003	0.997	5259329	1.24		99.0	22928	
D 21 13C4 PFOA										
417.00 > 372.00	4.155	4.155	0.0	1.000	5484596	1.27		101	20050	
19 6:2 FTS										
427.00 > 407.00	4.155	4.151	0.004	1.000	2082865	2.33		98.5	9698	
* 22 13C2 PFOA										
415.00 > 370.00	4.155	4.155	0.0		5374730	1.25			24316	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.155	4.156	-0.001	1.000	11834254	2.45	Target=2.40	97.8	3878	
413.00 > 169.00	4.155	4.156	-0.001	1.000	4438078		2.67(1.20-3.61)	97.8	6008	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.447	4.446	0.001	1.070	644134	1.19		99.8	4177	
D 25 13C4 PFOS										
503.00 > 80.00	4.447	4.451	-0.004	1.070	2955831	1.17		98.3	8199	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.447	4.451	-0.004	1.000	6031664	2.22	Target=3.83	95.6	5140	M
499.00 > 99.00	4.447	4.451	-0.004	1.000	1370743		4.40(1.91-5.74)	95.6	7354	M
D 27 13C5 PFNA										
468.00 > 423.00	4.470	4.471	-0.001	1.076	6981917	1.27		102	24140	
26 Perfluorononanoic acid										
463.00 > 419.00	4.470	4.471	-0.001	1.000	11627018	2.50	Target=3.68	100	8452	
463.00 > 169.00	4.470	4.471	-0.001	1.000	2445628		4.75(1.84-5.52)	100	6352	
63 9CIFOS										
531.00 > 351.00	4.608	4.606	0.002	1.109	12573714	2.20		94.5	28414	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.736	4.728	0.008	1.065	6088408	2.36	Target=3.97	98.4	13871	
549.00 > 99.00	4.722	4.728	-0.006	1.062	1513409		4.02(1.99-5.96)	98.4	6037	
D 34 13C8 FOSA										
506.00 > 78.00	4.749	4.743	0.006	1.143	4387447	1.19		95.0	5611	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.749	4.745	0.004	1.000	8253604	2.45		97.9	6445	
D 32 13C2 PFDA										
515.00 > 470.00	4.763	4.758	0.005	1.146	6829600	1.23		98.1	18569	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.763	4.760	0.003	1.000	12485057	2.42	Target=10.11	96.8	5940	
513.00 > 169.00	4.763	4.760	0.003	1.000	1025857		12.17(5.06-15.17)	96.8	618	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.776	4.774	0.002	1.149	661877	1.17		97.7	1662	
31 8:2 FTS										
527.00 > 507.00	4.776	4.774	0.002	1.000	2228105	2.26		94.4	13430	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.896	4.899	-0.003	1.178	940501	1.23		98.7	1992	
36 NMeFOSAA										
570.00 > 419.00	4.896	4.899	-0.003	1.000	1693902	2.46		98.4	2868	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.993	4.997	-0.004	1.123	5178406	2.19	Target=3.80	90.7	26324	
599.00 > 99.00	4.993	4.997	-0.004	1.123	1392200		3.72(1.90-5.70)	90.7	4629	
D 39 13C2 PFUnA										
565.00 > 520.00	5.022	5.015	0.007	1.209	6673920	1.25		100	17764	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.022	5.018	0.004	1.000	13290080	2.47	Target=7.45	98.7	9687	
563.00 > 169.00	5.022	5.018	0.004	1.000	1456143		9.13(3.78-11.33)	98.7	7641	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.036	5.034	0.002	1.212	902846	1.23		98.5	3037	
40 NEtFOSA										
584.00 > 419.00	5.036	5.040	-0.004	1.000	1586439	2.31		92.5	594	M
57 11CIFOS										
631.00 > 451.00	5.119	5.122	-0.003	1.151	9989503	2.17		92.3	25300	
D 43 13C2 PFDaA										
615.00 > 570.00	5.251	5.255	-0.004	1.264	6769707	1.19		95.5	27101	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.251	5.255	-0.004	1.000	12930212	2.35	Target=5.33	93.9	5196	
613.00 > 169.00	5.251	5.255	-0.004	1.000	1927173		6.71(2.66-7.99)	93.9	6907	
50 10:2 FTS										
627.00 > 607.00	5.281	5.274	0.007	1.106	2863089	2.33		96.8	20723	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.295	5.289	0.006	1.274	560383	1.21		96.9	340	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.274	582914	1.21		96.9	47.7	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.297	-0.002	1.000	1237379	2.40		95.8	1250	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.295	5.301	-0.006	1.000	1130206	2.31		92.6	697	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.449	5.445	0.004	1.311	622602	1.26		101	410	
54 PFDoS										
699.00 > 80.00	5.436	5.439	-0.003	1.222	5516594	2.26	Target=4.32	93.3	11356	
699.00 > 99.00	5.436	5.439	-0.003	1.222	1270424		4.34(2.19-6.58)	93.3	5984	
62 N-EtFOSE-M										
630.00 > 59.00	5.462	5.458	0.004	1.002	1512862	2.41		96.5	2472	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.460	0.002	1.315	500239	1.23		98.8	560	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.462	5.462	0.0	1.040	12100663	2.54	Target=5.66	101	5555	
663.00 > 169.00	5.462	5.462	0.0	1.040	1928662		6.27(2.83-8.48)	101	8077	
56 N-EtFOSA-M										
526.00 > 169.00	5.475	5.469	0.006	1.002	1106784	2.37		94.7	749	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.652	5.643	0.009	1.360	6396884	1.23		98.3	41786	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.652	5.643	0.009	1.000	1546553	2.41	Target=1.07	96.2	10379	
713.00 > 219.00	5.637	5.643	-0.006	0.998	1575904		0.98(0.53-1.60)	96.2	16478	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.961	5.961	0.0	1.435	4627358	1.23		98.0	9675	
55 Perfluorohexadecanoic acid										M
813.00 > 769.00	5.961	5.961	0.0	1.000	9520842	2.41	Target=7.50	96.5	4950	M
813.00 > 169.00	5.961	5.961	0.0	1.000	1160505		8.20(3.75-11.26)	96.5	4597	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.230	6.226	0.004	1.045	7925788	2.36	Target=9.98	94.4	4149	
913.00 > 169.00	6.230	6.226	0.004	1.045	694616		11.41(5.14-15.41)	94.4	3245	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L5PFC2_00002

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_010.d

Injection Date: 05-Oct-2021 22:36:10

Instrument ID: LCA

Lims ID: IC 5

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 10

Worklist Smp#: 10

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

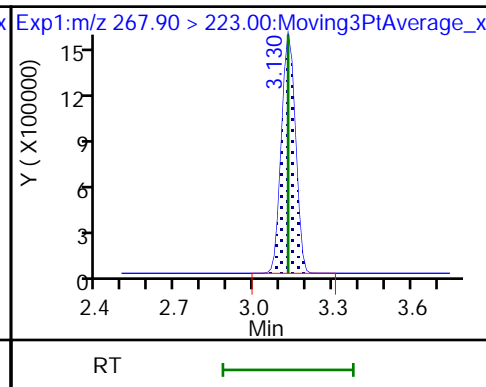
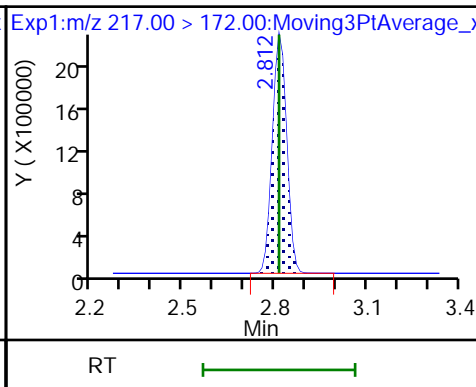
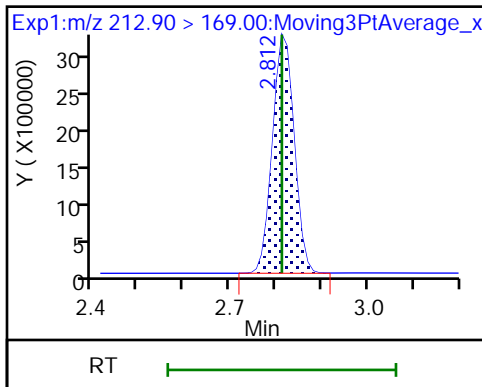
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

2 Perfluorobutanoic acid

D 1 13C4 PFBA

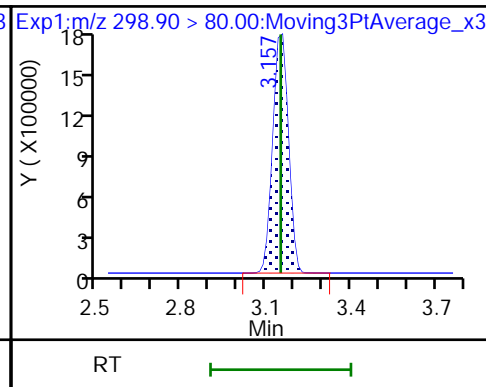
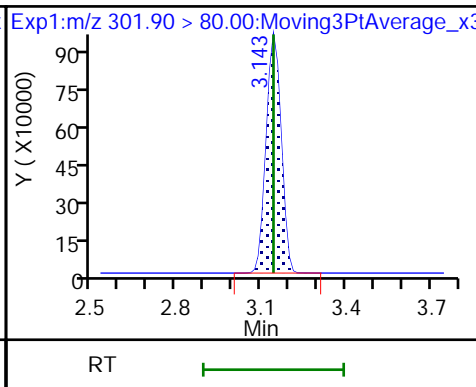
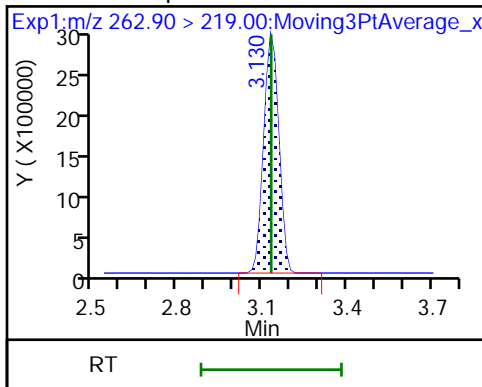
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

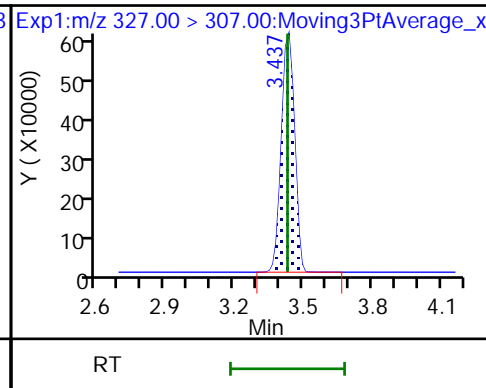
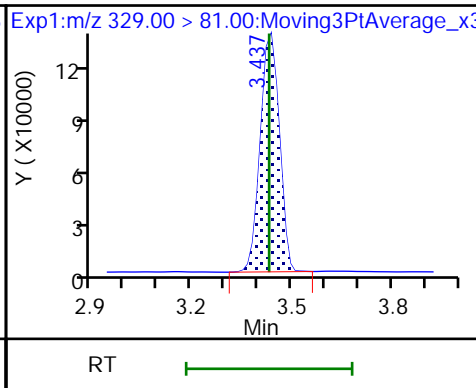
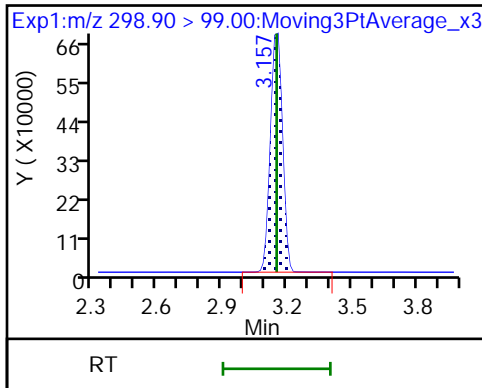
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

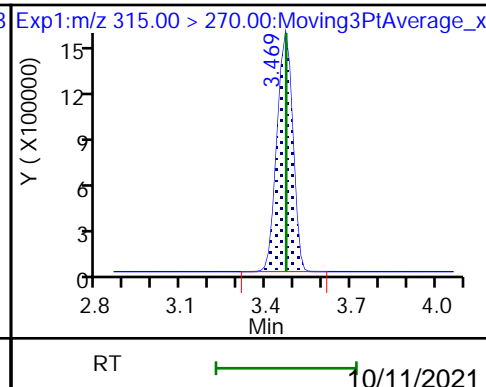
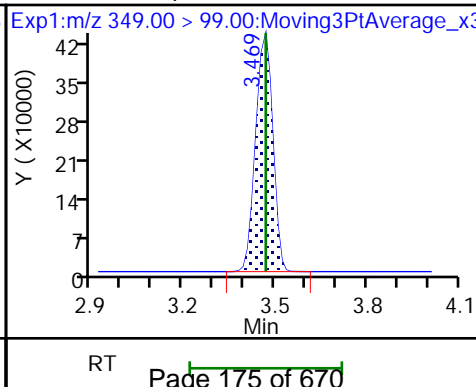
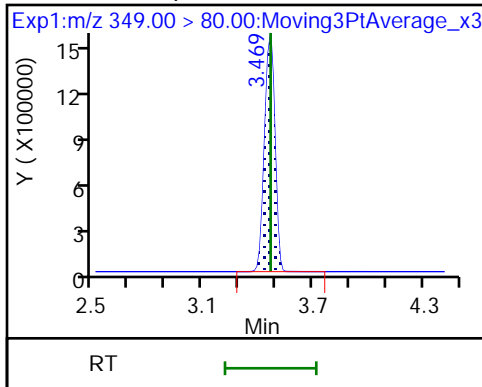
7 4:2 FTS

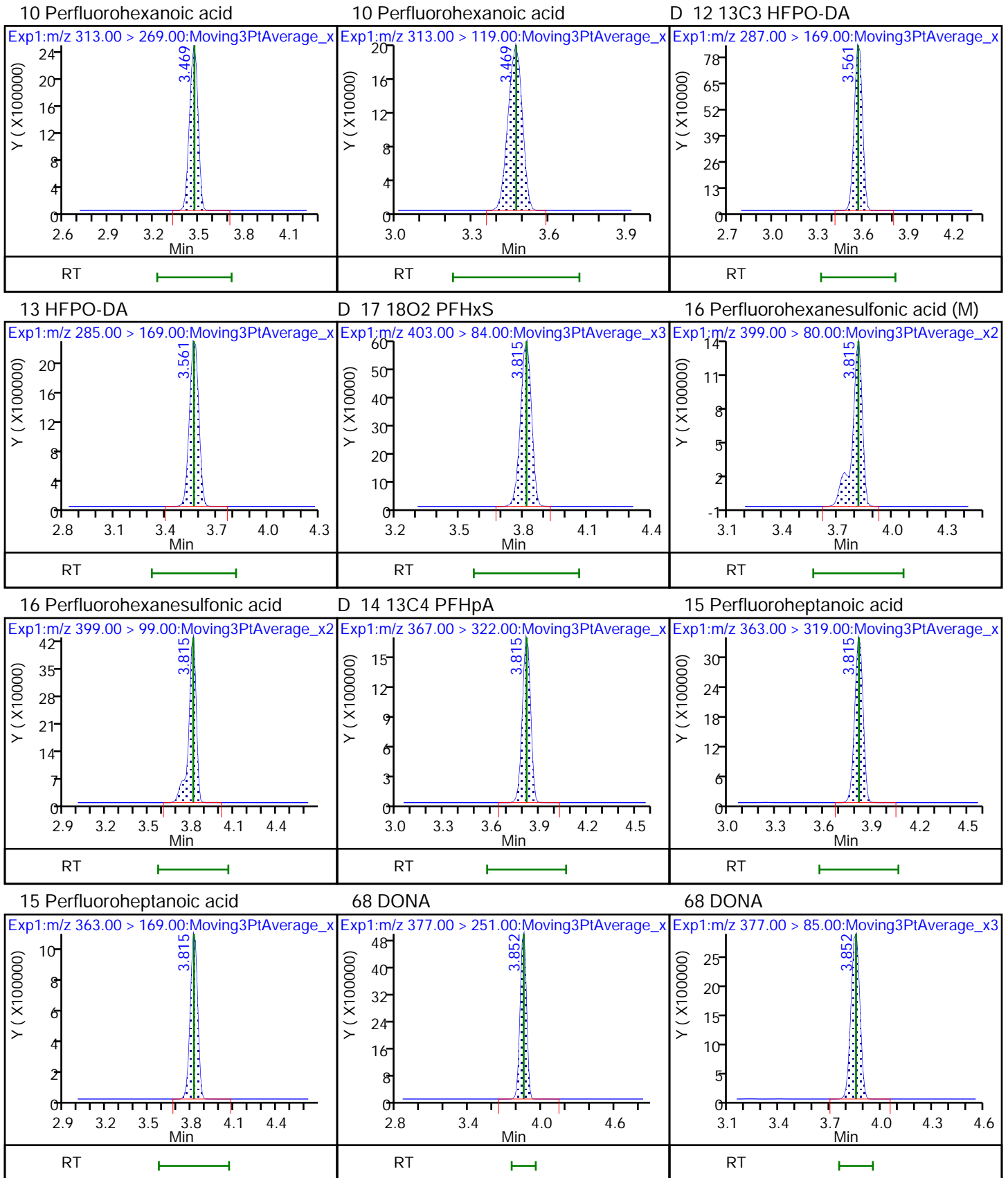


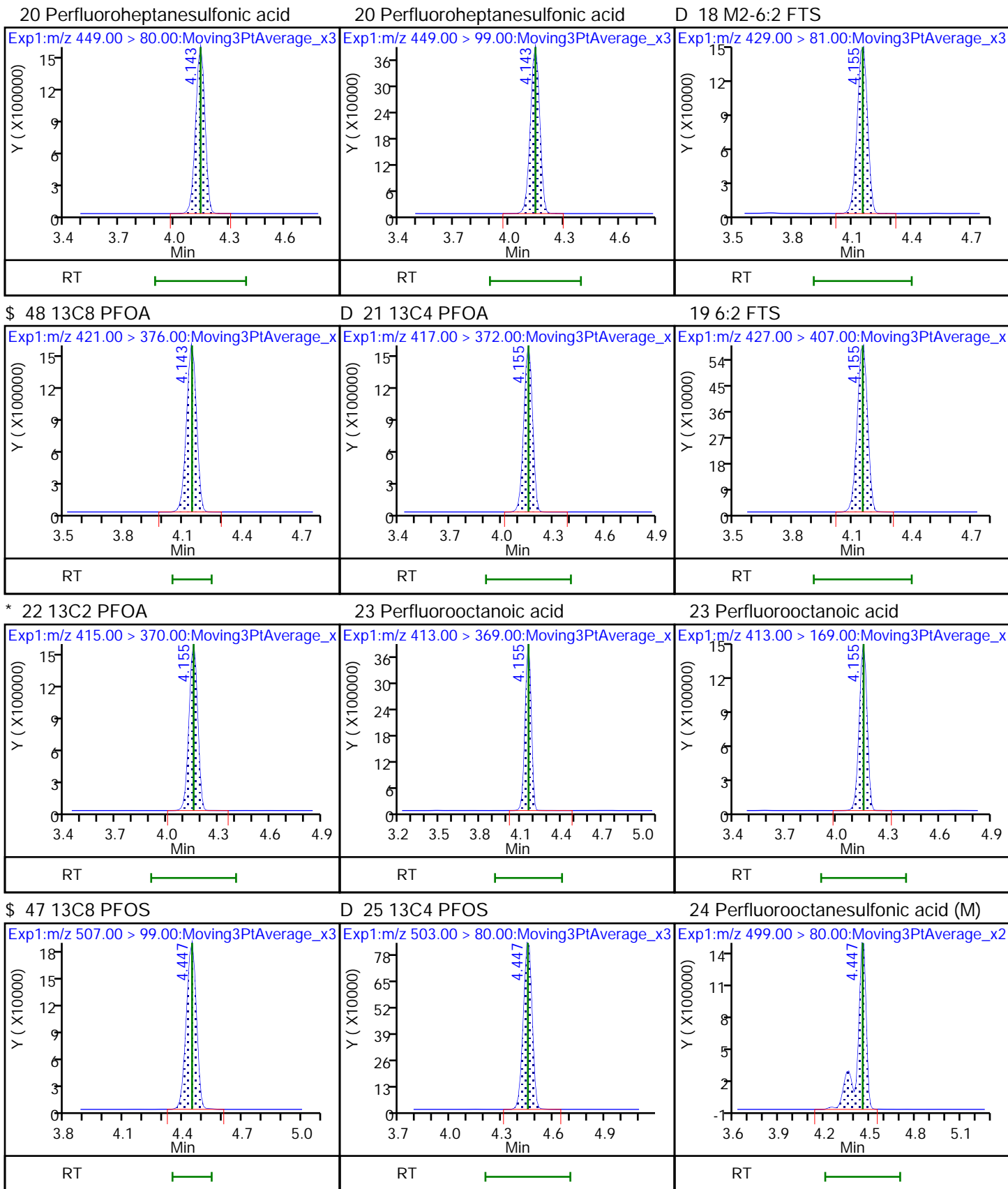
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

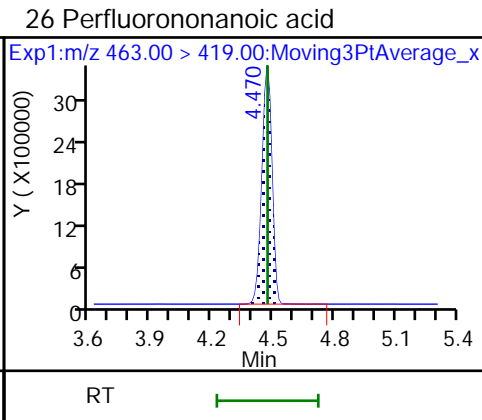
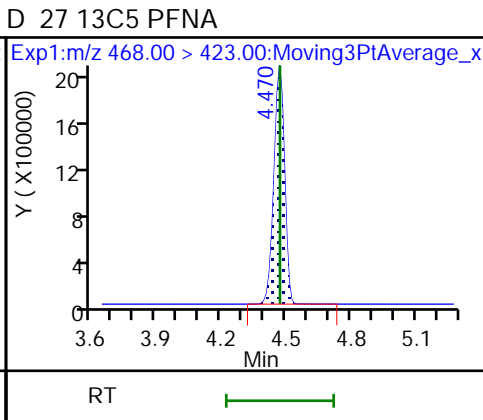
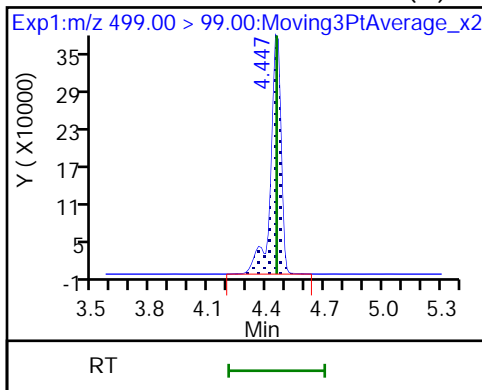
D 9 13C2 PFHxA







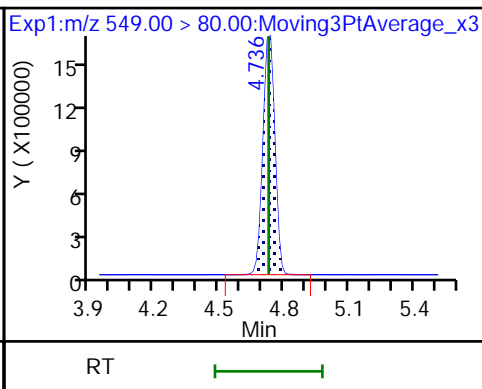
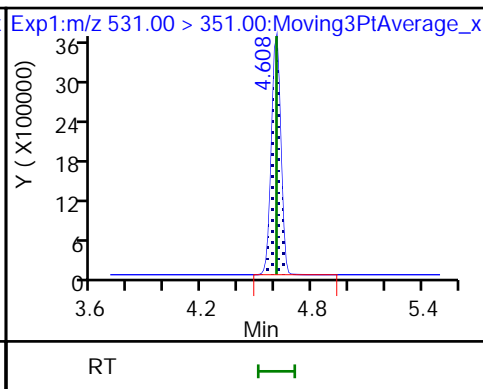
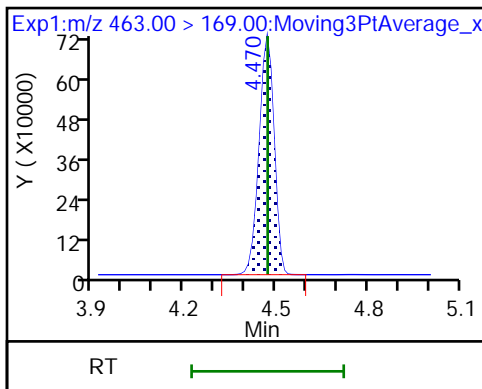
24 Perfluorooctanesulfonic acid (M) D 27 13C5 PFNA



26 Perfluorononanoic acid

63 9CIFOS

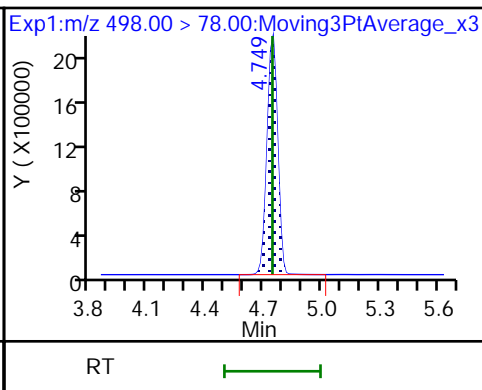
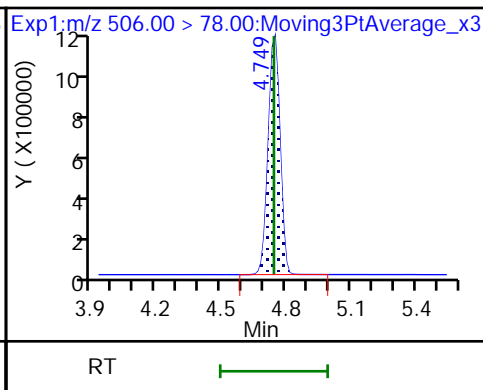
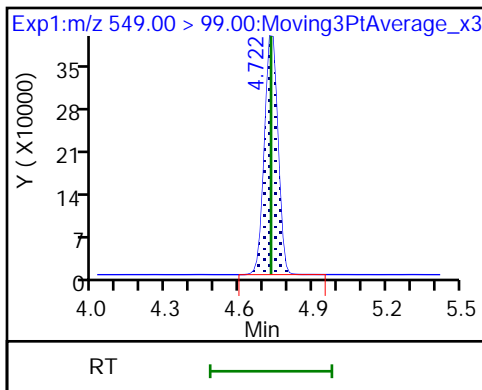
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

D 34 13C8 FOSA

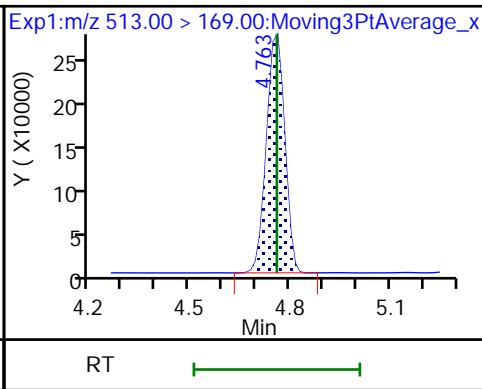
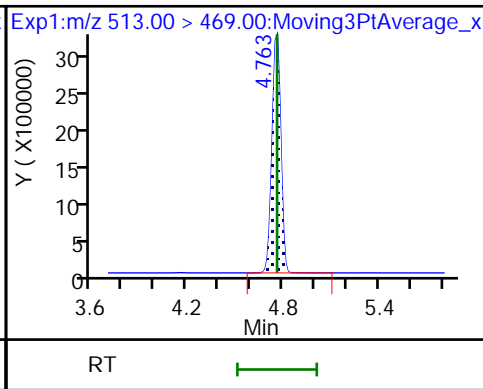
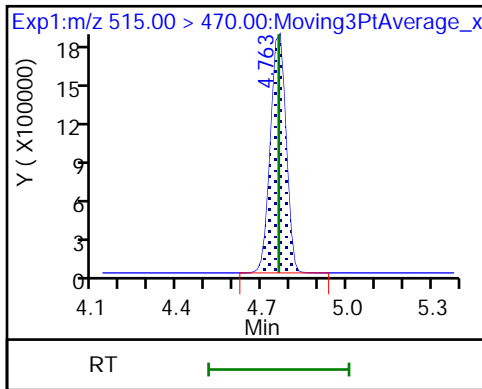
33 Perfluorooctanesulfonamide



D 32 13C2 PFDA

29 Perfluorodecanoic acid

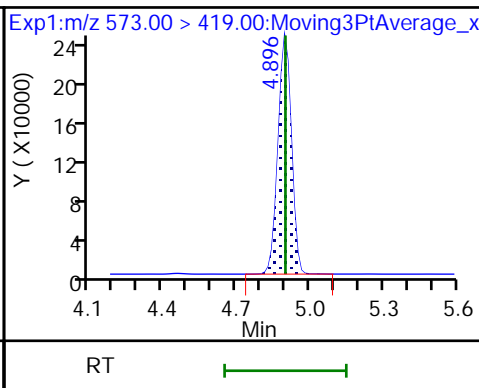
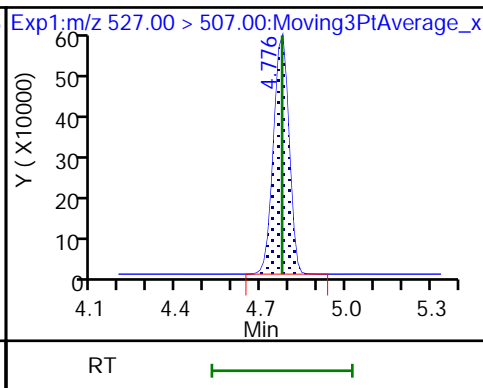
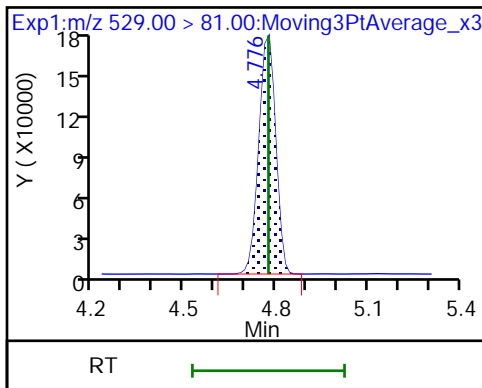
29 Perfluorodecanoic acid



D 30 M2-8:2 FTS

31 8:2 FTS

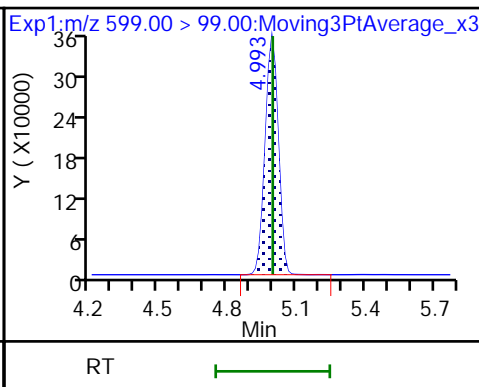
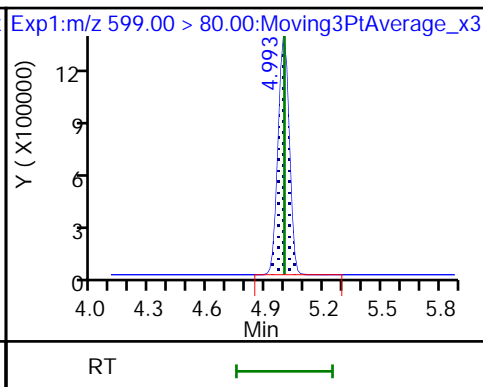
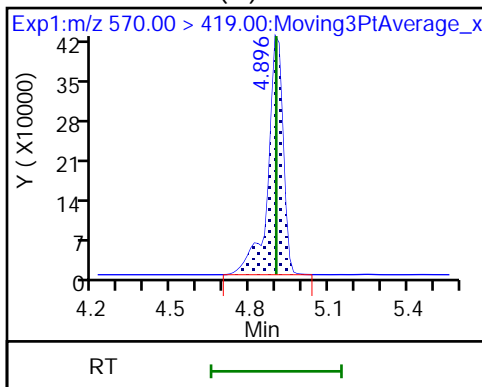
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

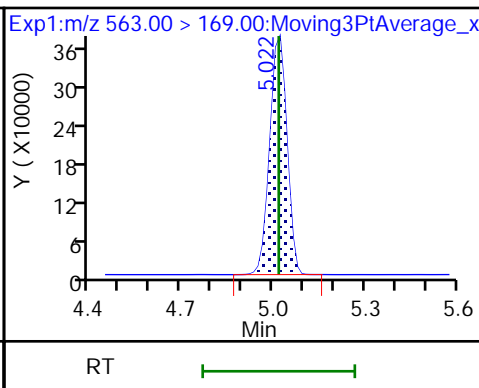
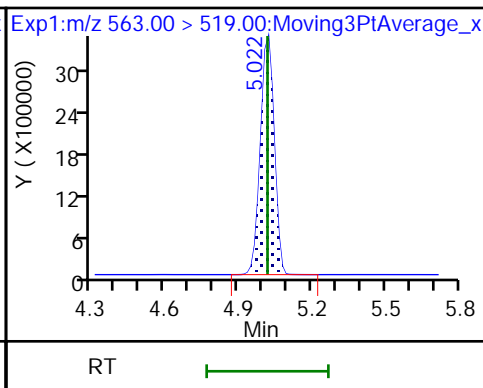
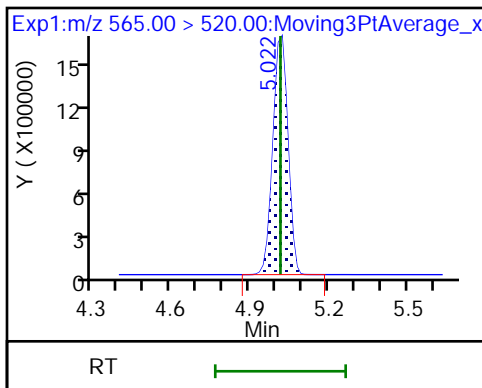
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

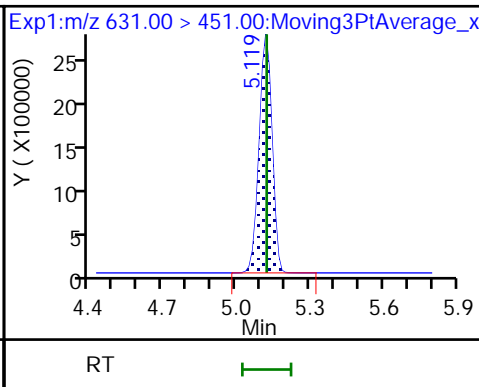
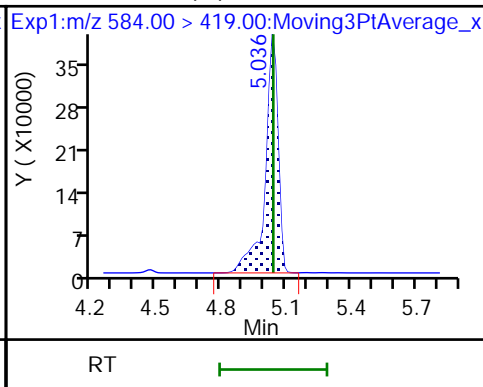
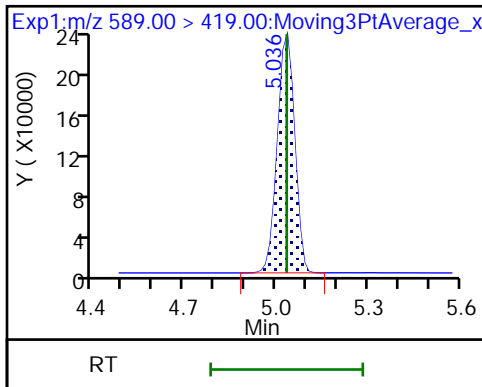
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA (M)

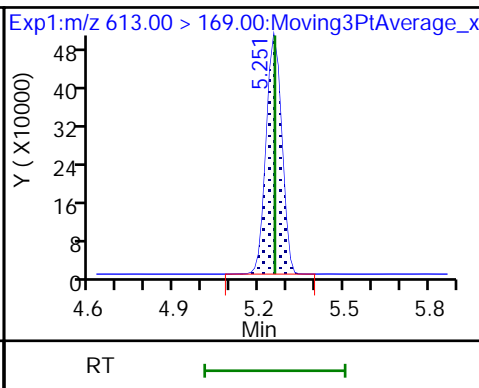
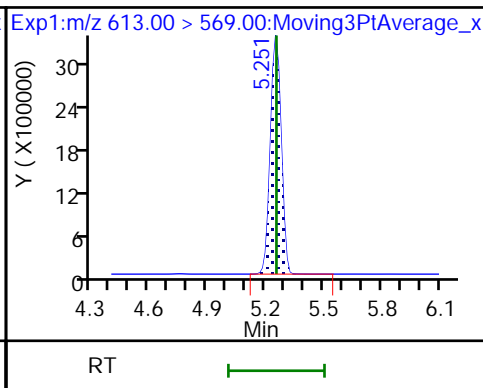
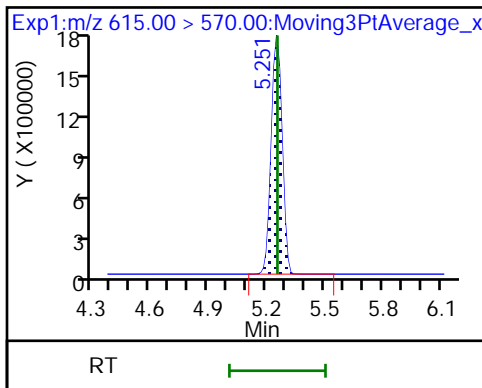
57 11CIFOS



D 43 13C2 PFDoA

42 Perfluorododecanoic acid

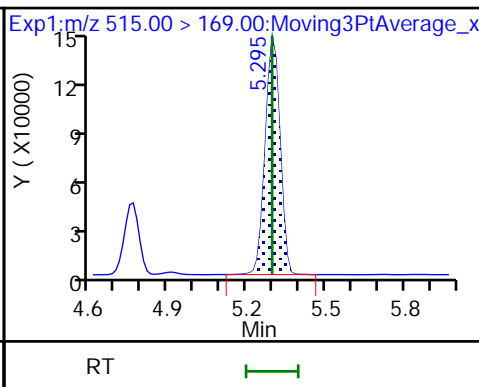
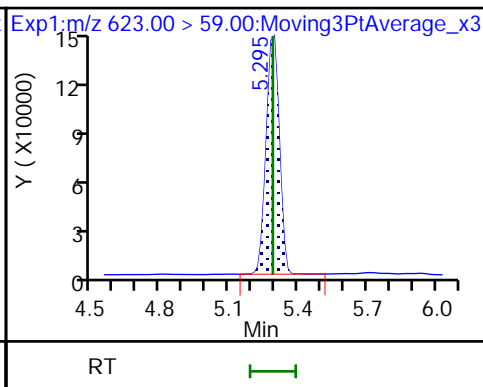
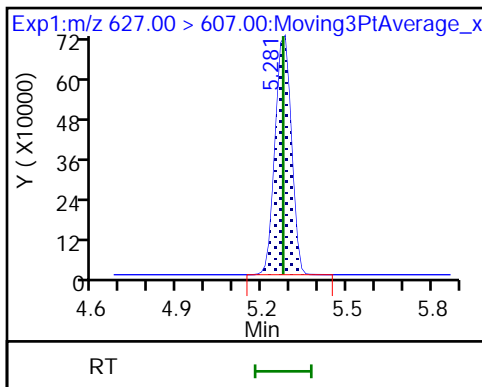
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

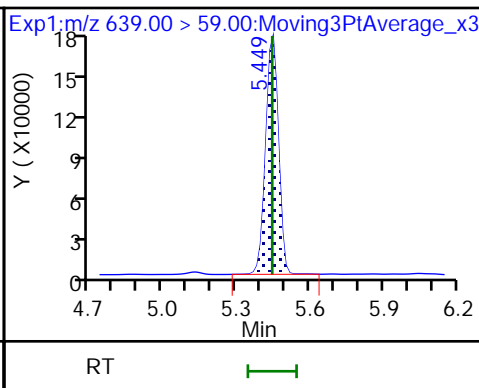
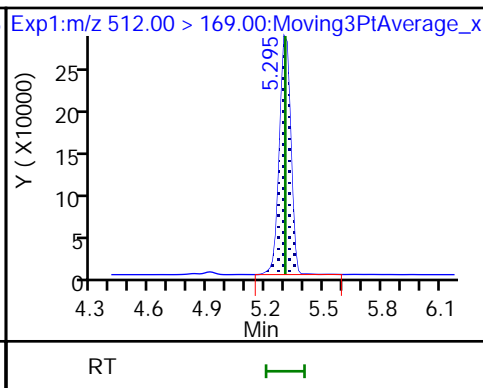
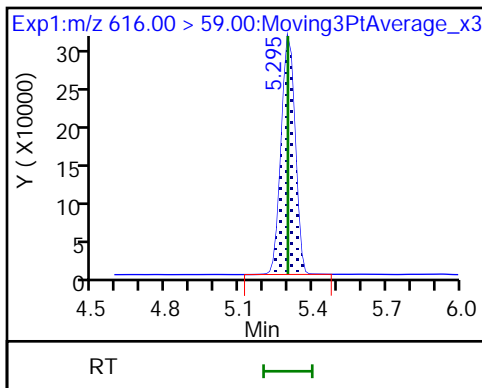
D 58 d-N-MeFOSE-M



49 N-MeFOSE-M

61 NMeFOSE

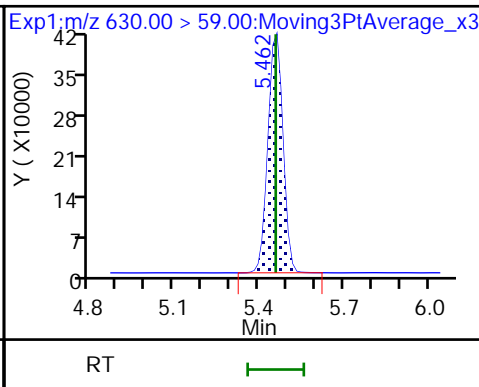
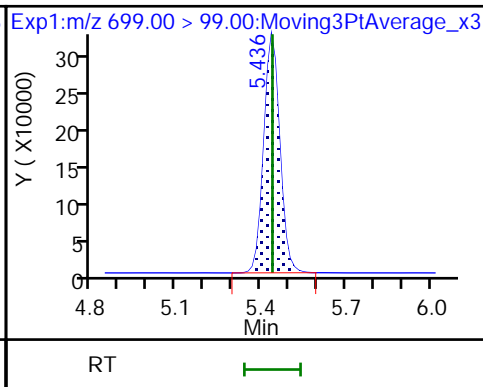
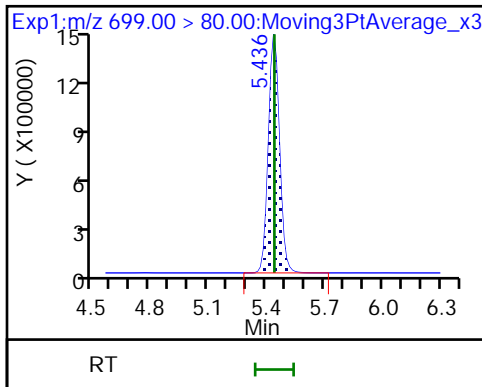
D 53 d9-N-EtFOSE-M



54 PFDoS

54 PFDoS

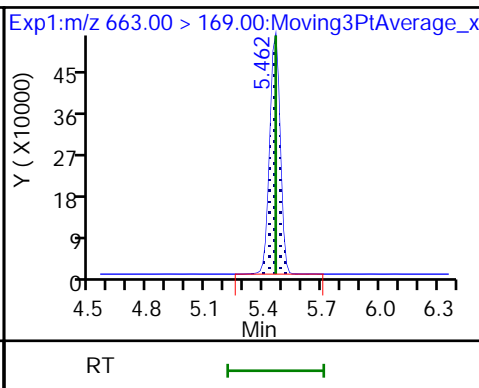
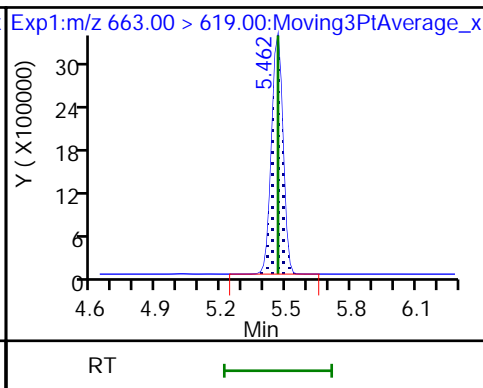
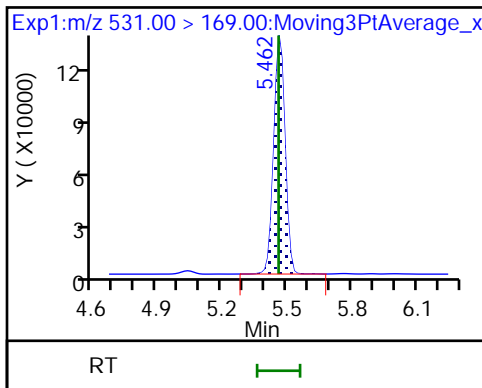
62 N-EtFOSE-M



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid

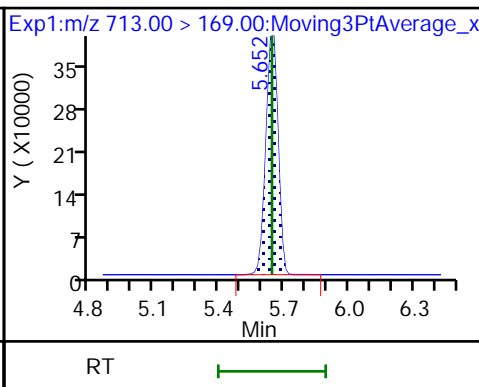
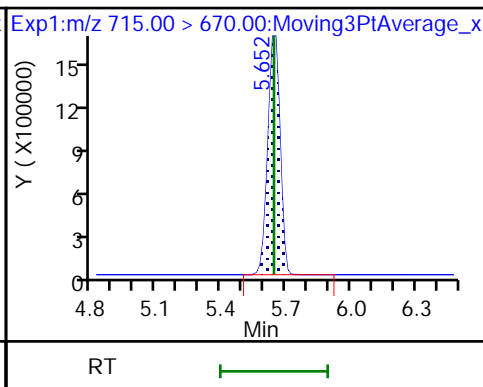
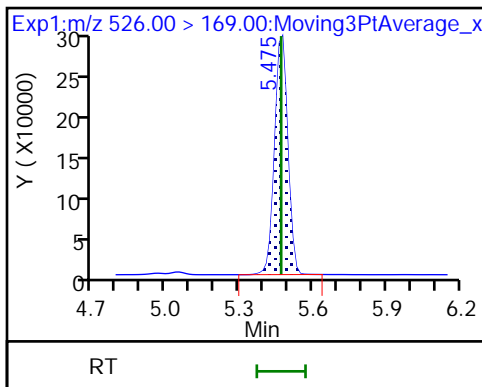
44 Perfluorotridecanoic acid



56 N-EtFOSA-M

D 46 13C2 PFTeDA

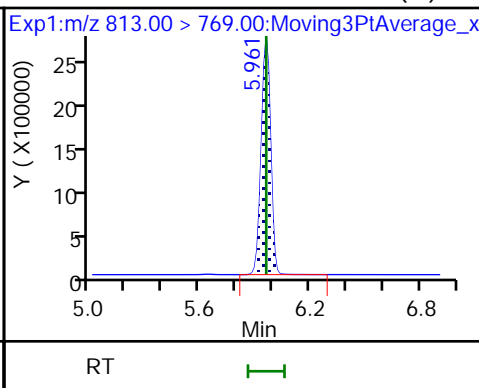
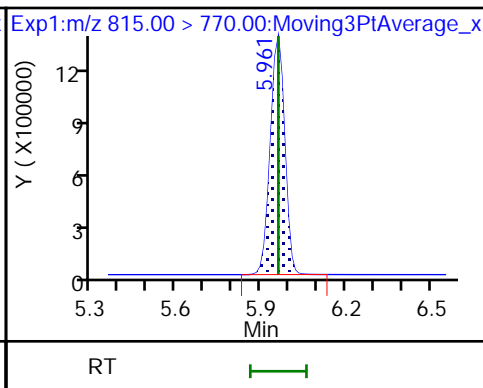
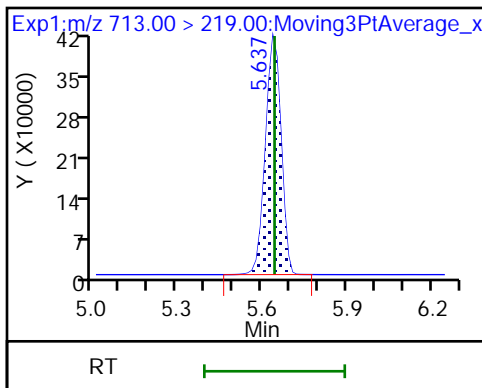
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

D 59 13C2 PFHxDA

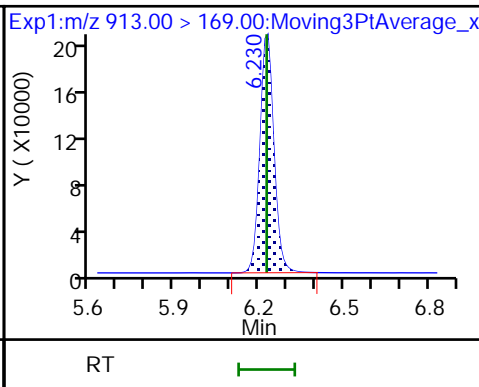
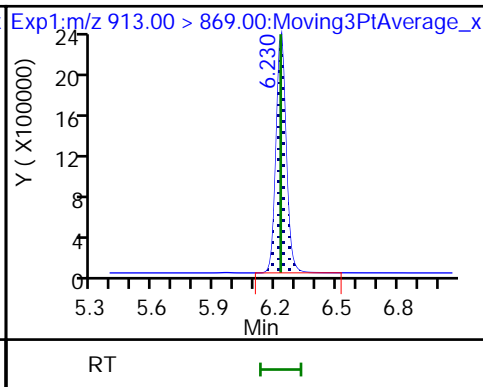
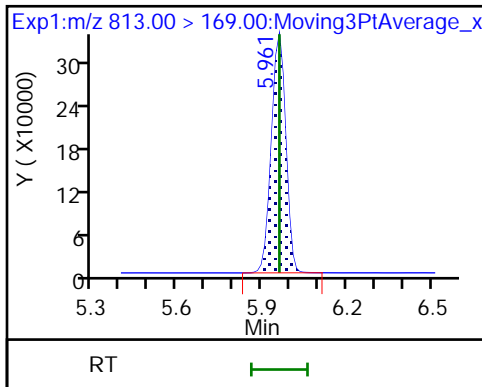
55 Perfluorohexadecanoic acid (M)



55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid



Eurofins TestAmerica, Knoxville

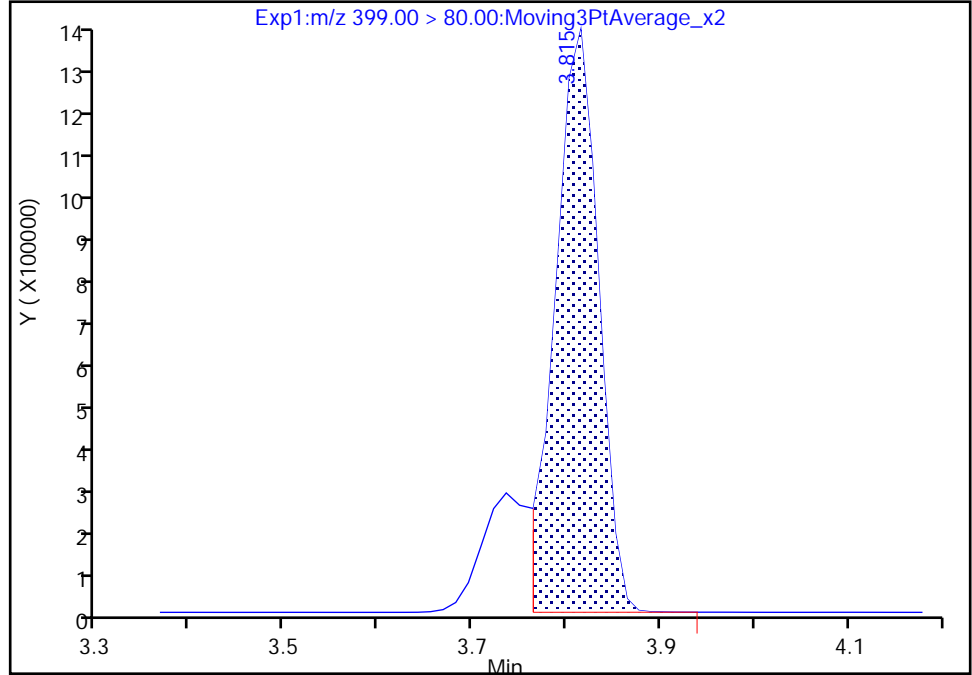
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_010.d
Injection Date: 05-Oct-2021 22:36:10 Instrument ID: LCA
Lims ID: IC 5
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

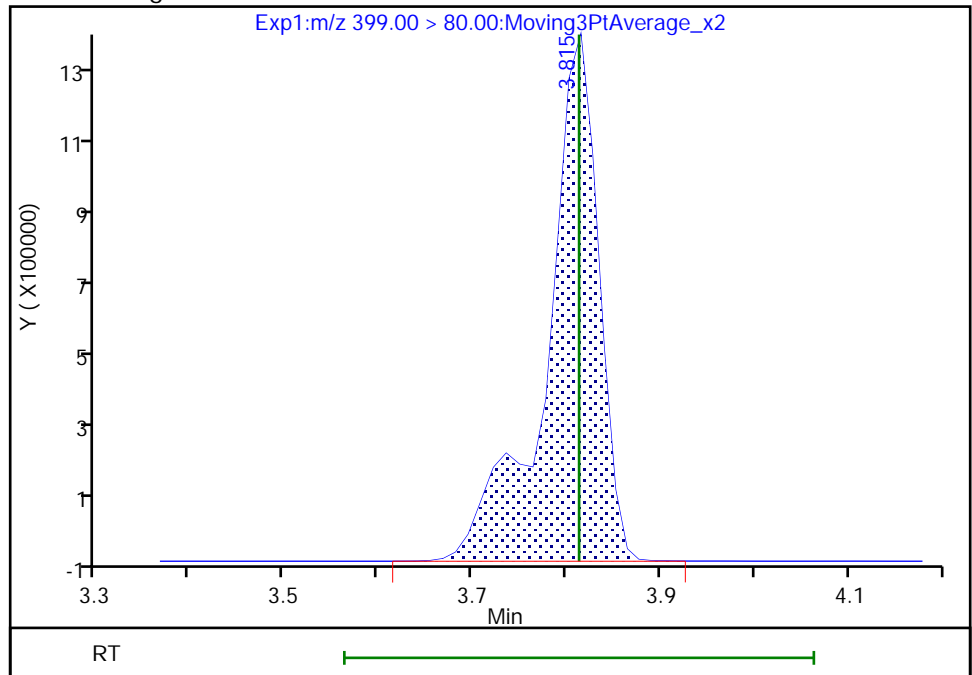
RT: 3.82
Area: 4323281
Amount: 1.739233
Amount Units: ng/ml

Processing Integration Results



RT: 3.82
Area: 5280667
Amount: 2.190873
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:01:51
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

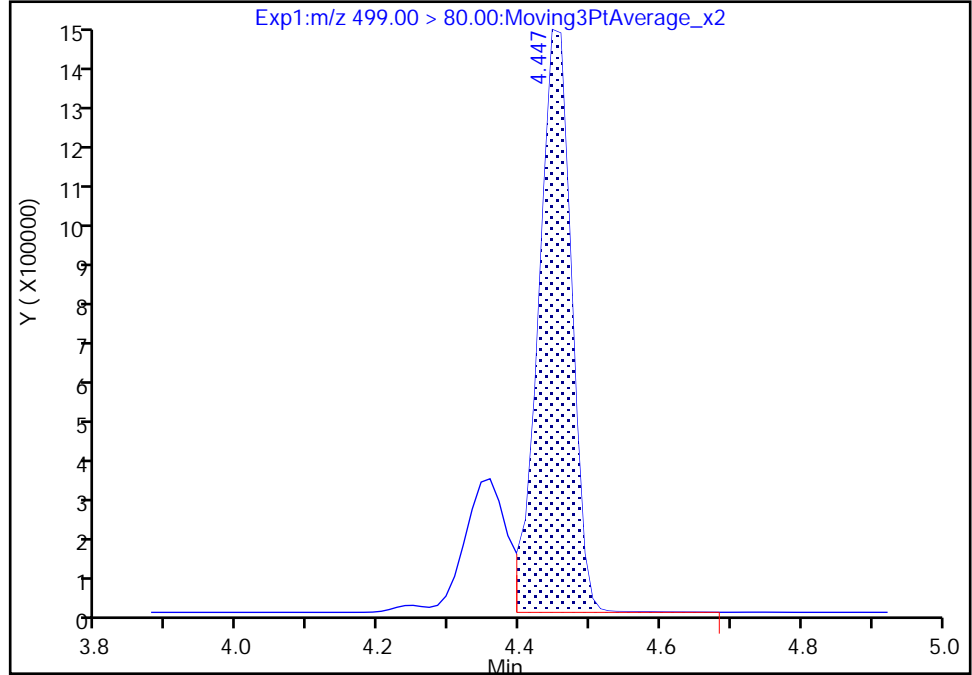
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_010.d
Injection Date: 05-Oct-2021 22:36:10 Instrument ID: LCA
Lims ID: IC 5
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

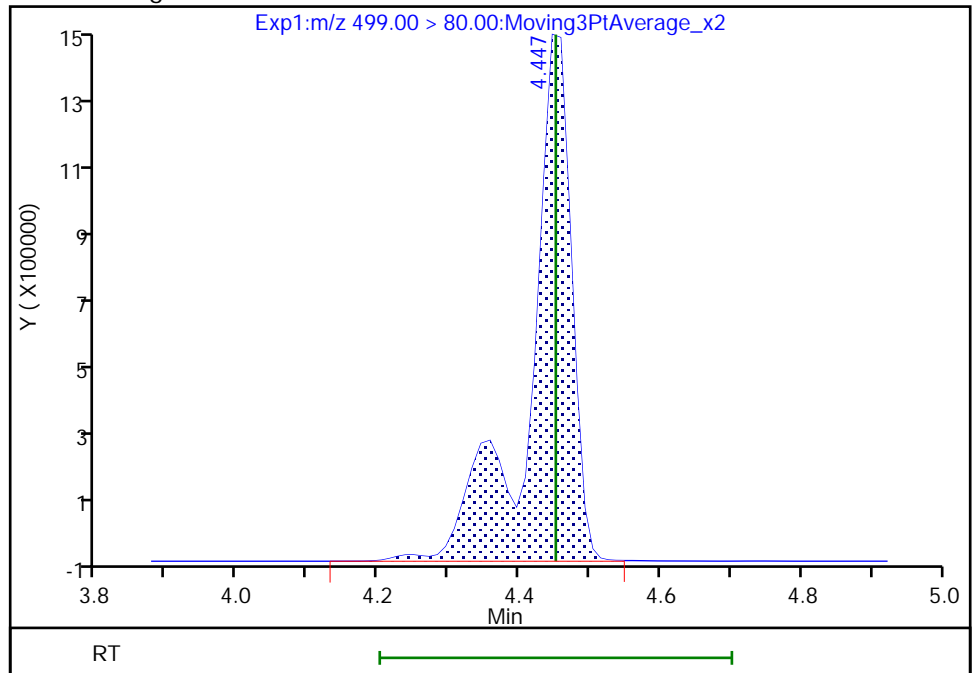
RT: 4.45
Area: 4640684
Amount: 1.769815
Amount Units: ng/ml

Processing Integration Results



RT: 4.45
Area: 6031664
Amount: 2.217316
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:02:03
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

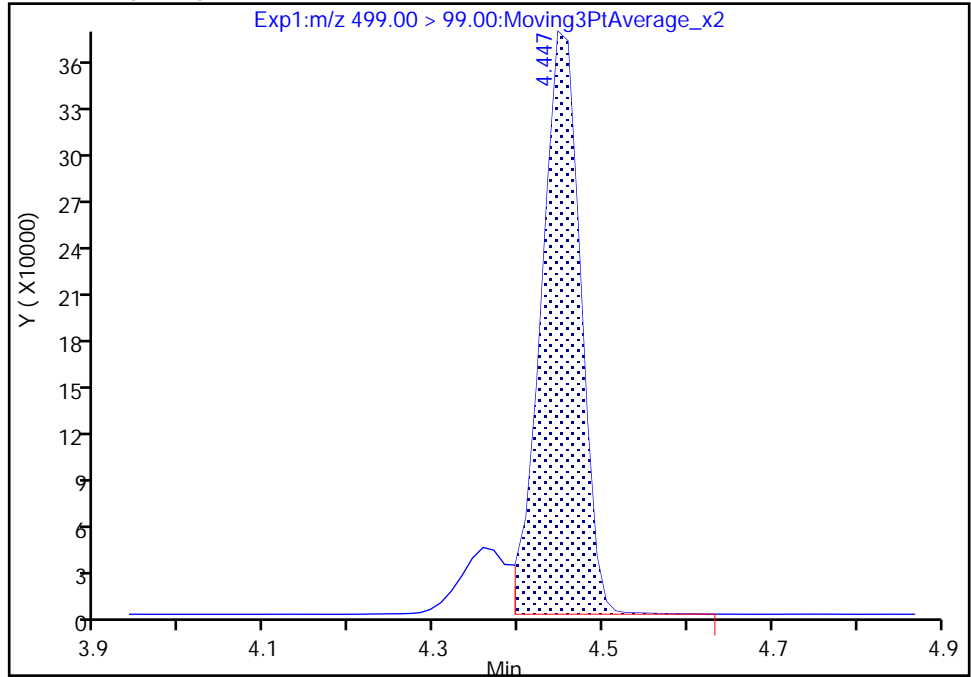
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_010.d
Injection Date: 05-Oct-2021 22:36:10 Instrument ID: LCA
Lims ID: IC 5
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

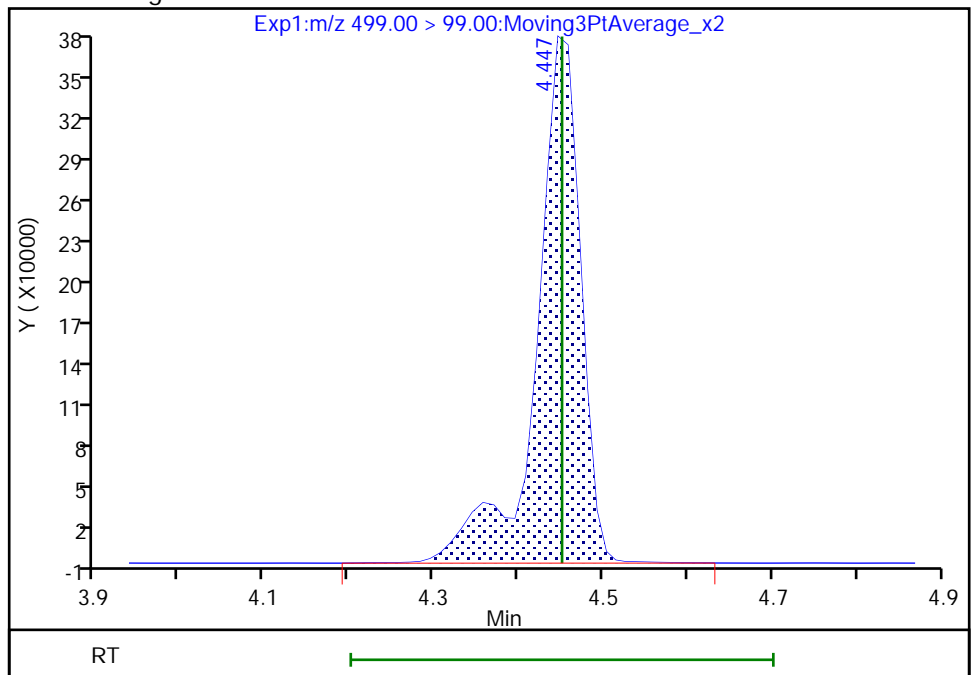
RT: 4.45
Area: 1202559
Amount: 1.769815
Amount Units: ng/ml

Processing Integration Results



RT: 4.45
Area: 1370743
Amount: 2.217316
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:02:09

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

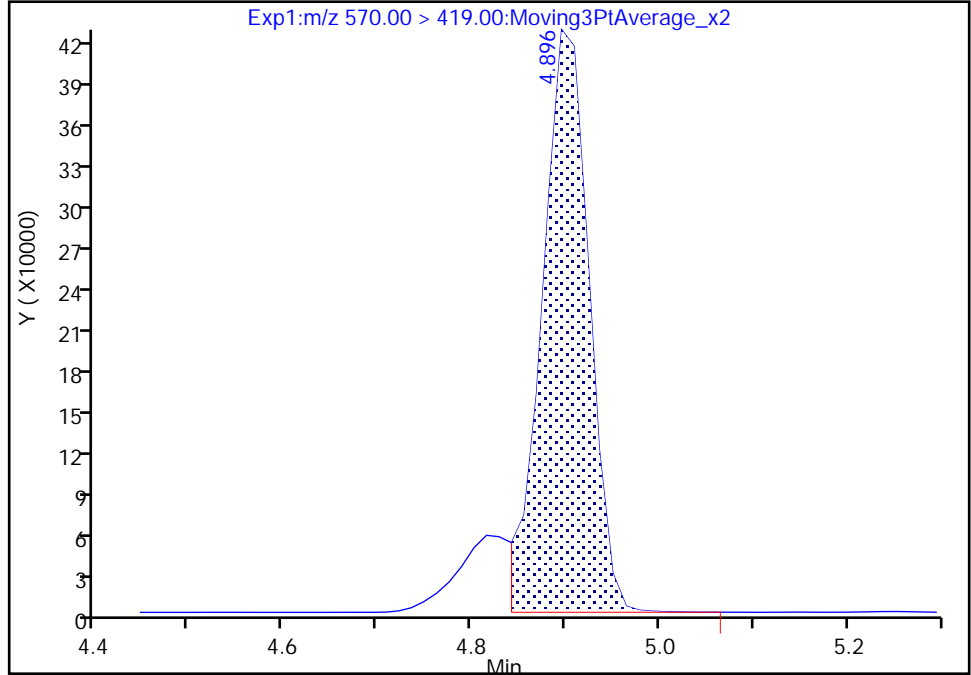
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_010.d
Injection Date: 05-Oct-2021 22:36:10 Instrument ID: LCA
Lims ID: IC 5
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

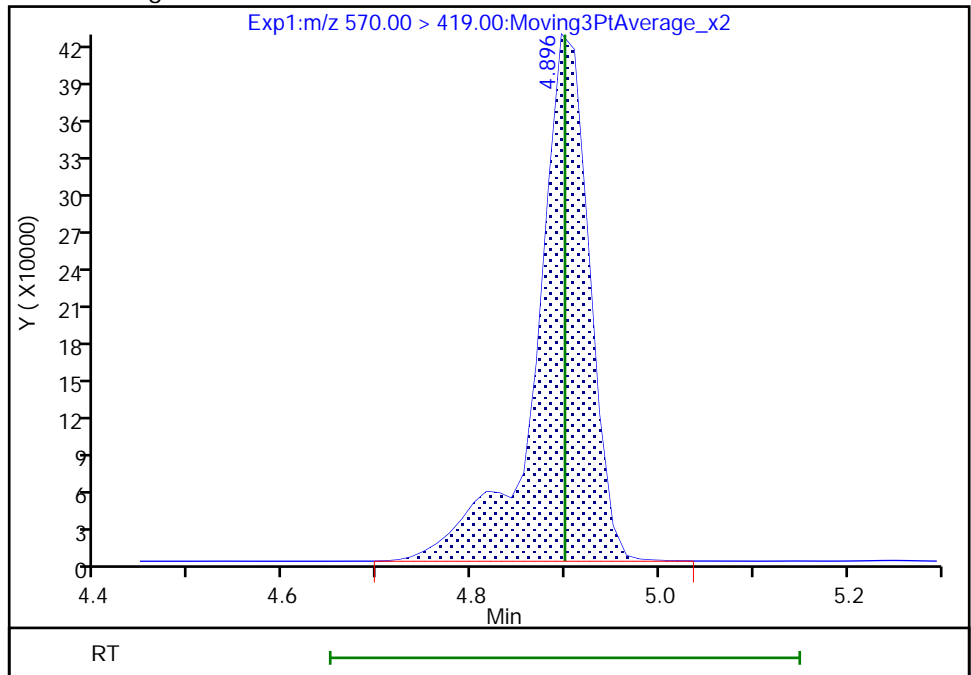
RT: 4.90
Area: 1479143
Amount: 2.005604
Amount Units: ng/ml

Processing Integration Results



RT: 4.90
Area: 1693902
Amount: 2.458892
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:02:21
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

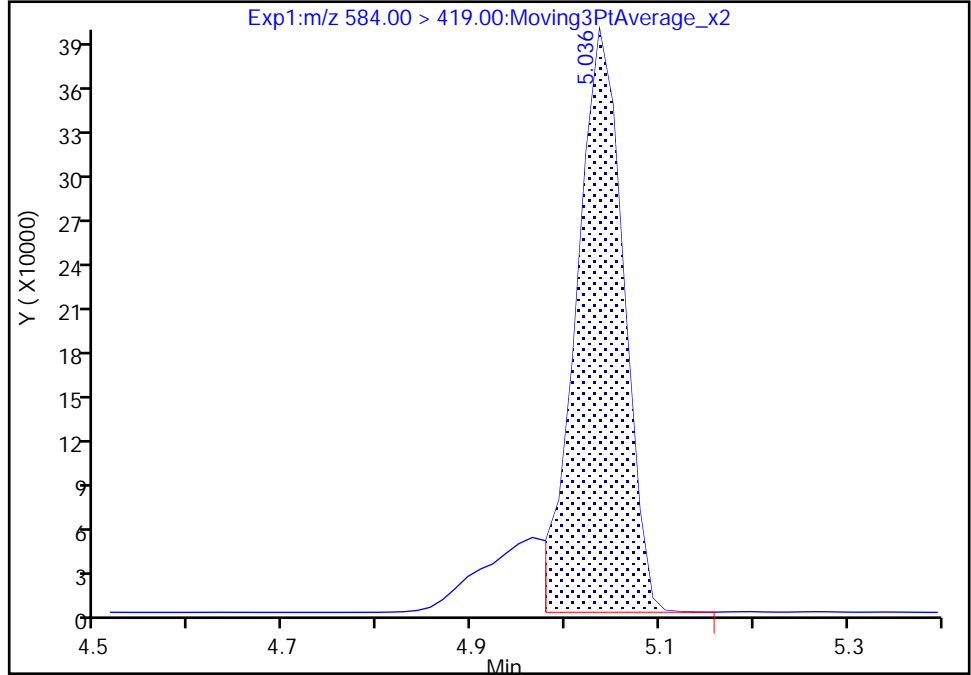
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_010.d
Injection Date: 05-Oct-2021 22:36:10 Instrument ID: LCA
Lims ID: IC 5
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

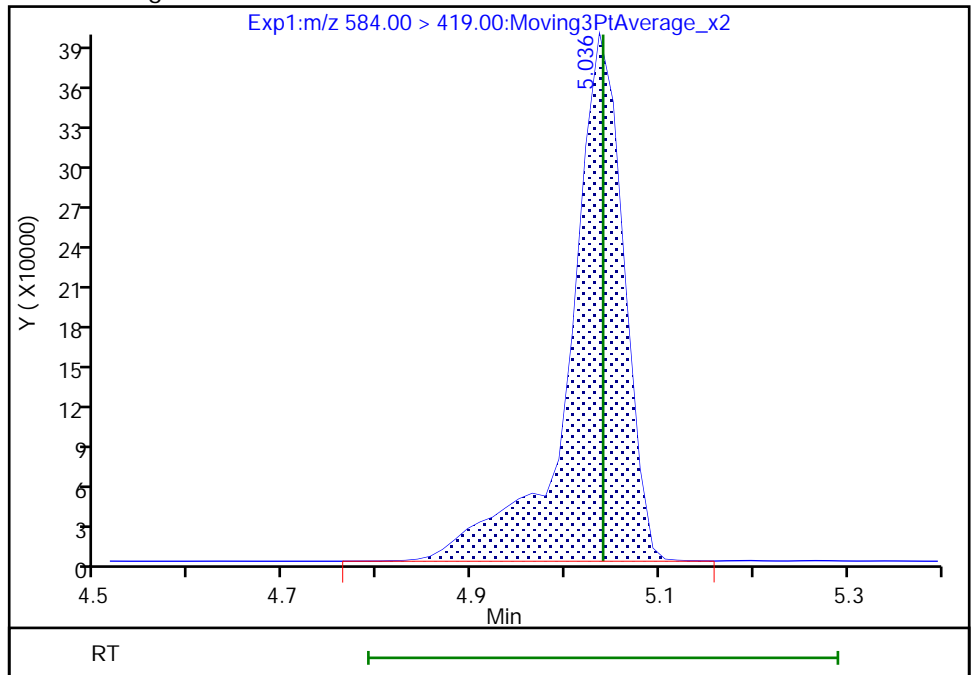
RT: 5.04
Area: 1356875
Amount: 2.001236
Amount Units: ng/ml

Processing Integration Results



RT: 5.04
Area: 1586439
Amount: 2.313479
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:02:32
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

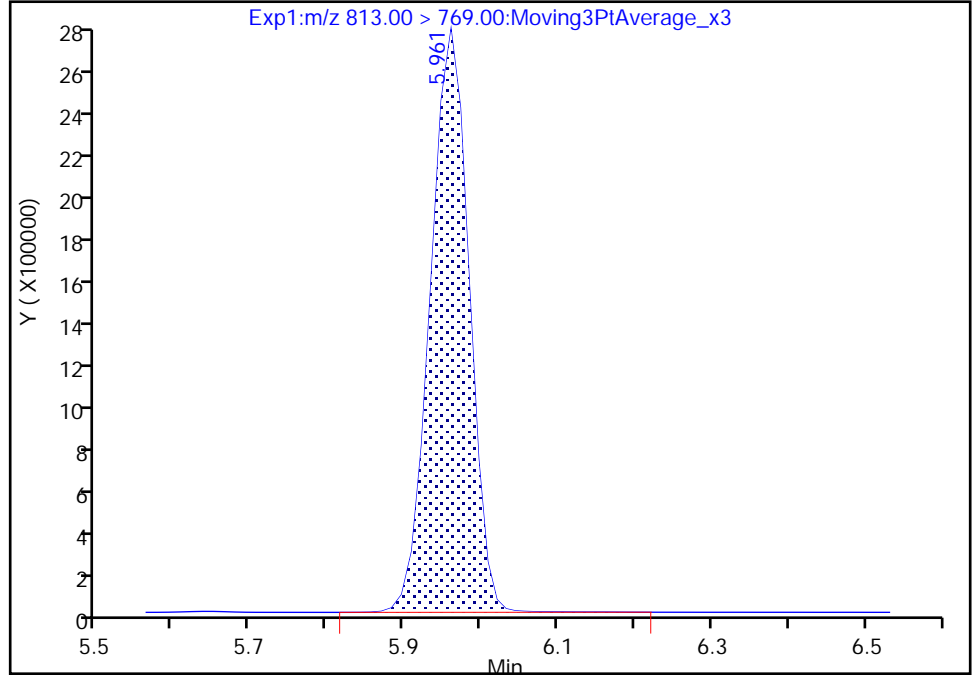
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_010.d
Injection Date: 05-Oct-2021 22:36:10 Instrument ID: LCA
Lims ID: IC 5
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

55 Perfluorohexadecanoic acid, CAS: 67905-19-5

Signal: 1

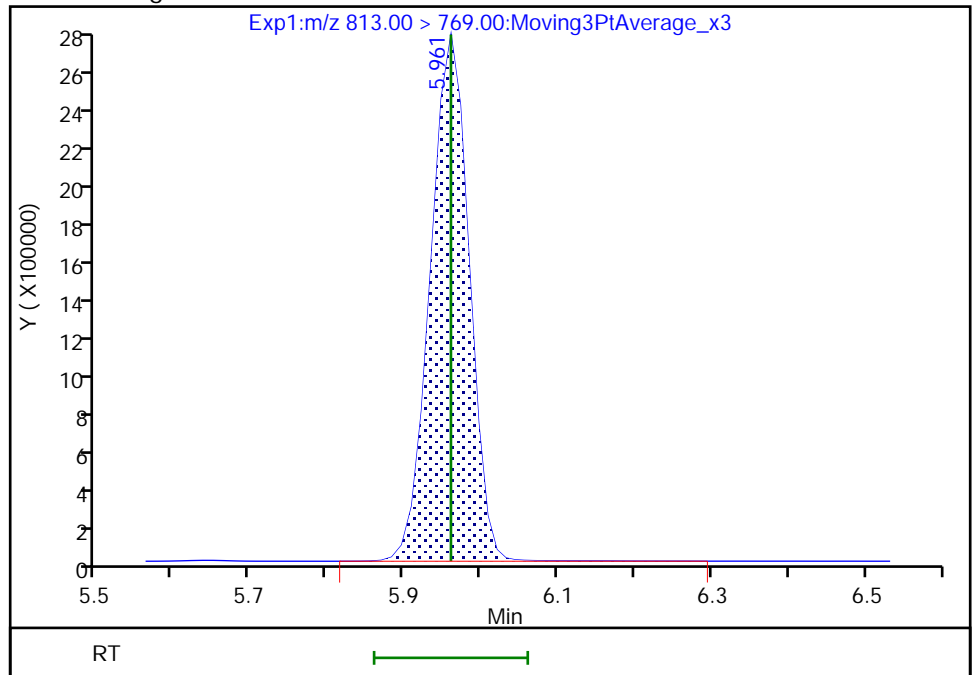
RT: 5.96
Area: 9512813
Amount: 2.156635
Amount Units: ng/ml

Processing Integration Results



RT: 5.96
Area: 9520842
Amount: 2.412512
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:14:12
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_011.d
 Lims ID: IC 6
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 05-Oct-2021 22:44:57 ALS Bottle#: 11 Worklist Smp#: 11
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020953-011 ic 6
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15

Method: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 07-Oct-2021 14:21:11 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1613

First Level Reviewer: cochranj Date: 06-Oct-2021 16:05:02

Ratio Calibration: None

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	2.812	2.812	0.0	0.677	6729747	1.23	98.8	13366	
2 Perfluorobutanoic acid	212.90 > 169.00	2.812	2.812	0.0	1.000	20710345	4.90	97.9	2585	
D 3 13C5 PFPeA	267.90 > 223.00	3.129	3.130	-0.001	0.753	5431895	1.21	97.1	11786	
4 Perfluoropentanoic acid	262.90 > 219.00	3.129	3.131	-0.002	1.000	21134542	4.80	96.0	4261	
D 6 13C3 PFBS	301.90 > 80.00	3.143	3.143	0.0	0.756	3227418	1.12	96.1	26621	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.143	3.151	-0.008	1.000	13531845	4.33	Target=3.06	97.9	29834
	298.90 > 99.00	3.143	3.151	-0.008	1.000	5156114		2.62(1.53-4.59)	97.9	12101
D 8 M2-4:2 FTS	329.00 > 81.00	3.423	3.431	-0.008	0.824	455617	1.05	90.1	566	
7 4:2 FTS	327.00 > 307.00	3.423	3.431	-0.008	1.000	4703298	4.82	103	22646	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.469	3.468	0.001	1.104	11073888	4.66	Target=3.47	99.5	30025
	349.00 > 99.00	3.469	3.468	0.001	1.104	3101548		3.57(1.73-5.20)	99.5	16652
D 9 13C2 PFHxA	315.00 > 270.00	3.469	3.471	-0.002	0.835	5603980	1.22	97.6	16105	
10 Perfluorohexanoic acid	313.00 > 269.00	3.469	3.471	-0.002	1.000	18447950	4.80	Target=9.74	96.0	5773
	313.00 > 119.00	3.469	3.471	-0.002	1.000	1449123		12.73(4.87-14.61)	96.0	2827
D 12 13C3 HFPO-DA	287.00 > 169.00	3.561	3.565	-0.004	0.857	2964356	1.26	101	11397	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.561	3.565	-0.004	1.000	16036699	4.91		98.2	8359	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.803	3.813	-0.010	1.000	10611543	4.59	Target=2.96	101	17201	M
399.00 > 99.00	3.803	3.813	-0.010	1.000	3129687		3.39(1.48-4.44)	101	9581	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.803	3.813	-0.010	0.915	2021420	1.16		97.8	16937	
D 14 13C4 PFHpA										
367.00 > 322.00	3.815	3.819	-0.004	0.918	5764452	1.26		101	16766	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.815	3.819	-0.004	1.000	23641761	4.87	Target=3.35	97.4	8685	
363.00 > 169.00	3.815	3.819	-0.004	1.000	7270525		3.25(1.67-5.02)	97.4	31666	
68 DONA										
377.00 > 251.00	3.840	3.850	-0.010	0.864	34461769	4.44	Target=1.49	94.2	36853	
377.00 > 85.00	3.840	3.850	-0.010	0.864	19687267		1.75(0.74-2.23)	94.2	6935	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.143	4.143	0.0	0.932	11200331	4.70	Target=3.73	98.8	32774	
449.00 > 99.00	4.143	4.143	0.0	0.932	2840371		3.94(1.87-5.61)	98.8	6253	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.143	4.146	-0.003	0.997	4997107	1.23		98.2	20785	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.143	4.151	-0.008	0.997	496216	1.12		94.2	864	
19 6:2 FTS										
427.00 > 407.00	4.143	4.151	-0.008	1.000	3986787	4.77		101	23180	
D 21 13C4 PFOA										
417.00 > 372.00	4.155	4.155	0.0	1.000	5265292	1.27		102	22673	
* 22 13C2 PFOA										
415.00 > 370.00	4.155	4.155	0.0		5145778	1.25			27355	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.155	4.156	-0.001	1.000	22528349	4.86	Target=2.40	97.1	6583	
413.00 > 169.00	4.155	4.156	-0.001	1.000	8638416		2.61(1.20-3.61)	97.1	9379	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.434	4.446	-0.012	1.067	595505	1.15		96.4	2692	
D 25 13C4 PFOS										
503.00 > 80.00	4.446	4.451	-0.005	1.070	2860822	1.19		99.4	5990	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.446	4.451	-0.005	1.000	11641795	4.42	Target=3.83	95.3	16616	M
499.00 > 99.00	4.446	4.451	-0.005	1.000	2629068		4.43(1.91-5.74)	95.3	9039	M
D 27 13C5 PFNA										
468.00 > 423.00	4.470	4.471	-0.001	1.076	6472750	1.23		98.3	18962	
26 Perfluorononanoic acid										
463.00 > 419.00	4.470	4.471	-0.001	1.000	21961402	5.10	Target=3.68	102	13226	
463.00 > 169.00	4.470	4.471	-0.001	1.000	4765402		4.61(1.84-5.52)	102	12027	
63 9CIFOS										
531.00 > 351.00	4.596	4.606	-0.010	1.106	24643016	4.46		95.7	21684	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.722	4.728	-0.006	1.062	11544387	4.63	Target=3.97	96.4	18490	
549.00 > 99.00	4.722	4.728	-0.006	1.062	2876872		4.01(1.99-5.96)	96.4	13200	
D 34 13C8 FOSA										
506.00 > 78.00	4.736	4.743	-0.007	1.140	4176620	1.18		94.5	3595	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.749	4.745	0.004	1.003	15696244	4.89		97.8	8417	
D 32 13C2 PFDA										
515.00 > 470.00	4.749	4.758	-0.009	1.143	6527325	1.22		97.9	20149	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.749	4.760	-0.011	1.000	24696030	5.02	Target=10.11	100	12098	
513.00 > 169.00	4.749	4.760	-0.011	1.000	2008044		12.30(5.06-15.17)	100	606	
31 8:2 FTS										
527.00 > 507.00	4.762	4.774	-0.012	1.000	4218955	4.55		94.9	26258	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.762	4.774	-0.012	1.146	623050	1.15		96.0	2297	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.896	4.899	-0.003	1.178	899537	1.23		98.6	742	
36 NMeFOSAA										
570.00 > 419.00	4.896	4.899	-0.003	1.000	3306213	5.03		101	4651	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.993	4.997	-0.004	1.123	10394826	4.54	Target=3.80	94.1	21800	
599.00 > 99.00	4.993	4.997	-0.004	1.123	2822458		3.68(1.90-5.70)	94.1	10985	
D 39 13C2 PFUnA										
565.00 > 520.00	5.007	5.015	-0.008	1.205	6502949	1.28		102	18292	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.007	5.018	-0.011	1.000	25533444	4.87	Target=7.45	97.4	13673	
563.00 > 169.00	5.007	5.018	-0.011	1.000	2799969		9.12(3.78-11.33)	97.4	11390	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.022	5.034	-0.012	1.209	863924	1.23		98.5	2162	
40 NEtFOSA										
584.00 > 419.00	5.036	5.040	-0.004	1.003	3076062	4.69		93.8	993	M
57 11CIFOS										
631.00 > 451.00	5.119	5.122	-0.003	1.151	19435719	4.37		92.8	41153	
D 43 13C2 PFDaA										
615.00 > 570.00	5.251	5.255	-0.004	1.264	6796811	1.25		100	22079	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.251	5.255	-0.004	1.000	25206941	4.76	Target=5.33	95.3	10028	
613.00 > 169.00	5.251	5.255	-0.004	1.000	3911957		6.44(2.66-7.99)	95.3	10696	
50 10:2 FTS										
627.00 > 607.00	5.266	5.274	-0.008	1.106	5589408	4.84		100	17253	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.280	5.289	-0.009	1.271	572551	1.29		103	293	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.274	601939	1.31		104	52.1	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.297	-0.002	1.003	2528011	4.80		95.9	1784	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.295	5.301	-0.006	1.000	2384386	4.73		94.6	891	
54 PFDoS										
699.00 > 80.00	5.436	5.439	-0.003	1.223	11718637	4.96	Target=4.32	102	13249	
699.00 > 99.00	5.436	5.439	-0.003	1.223	2770601		4.23(2.19-6.58)	102	14711	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.449	5.445	0.004	1.312	616316	1.31		104	327	
62 N-EtFOSE-M										
630.00 > 59.00	5.462	5.458	0.004	1.002	2956824	4.77		95.3	3736	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.462	5.462	0.0	1.040	22450214	4.69	Target=5.66	93.9	8691	
663.00 > 169.00	5.449	5.462	-0.013	1.038	3719227		6.04(2.83-8.48)	93.9	14844	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.460	0.002	1.315	507678	1.31		105	684	
56 N-EtFOSA-M										
526.00 > 169.00	5.462	5.469	-0.007	1.000	2258394	4.76		95.2	742	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.637	5.643	-0.006	1.357	6178920	1.24		99.2	25735	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.637	5.643	-0.006	1.000	3043028	4.91	Target=1.07	98.2	12023	
713.00 > 219.00	5.637	5.643	-0.006	1.000	3046353		1.00(0.53-1.60)	98.2	20196	
55 Perfluorohexadecanoic acid										M
813.00 > 769.00	5.961	5.961	0.0	1.000	18185862	4.61	Target=7.50	92.2	6552	M
813.00 > 169.00	5.961	5.961	0.0	1.000	2354564		7.72(3.75-11.26)	92.2	5592	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.961	5.961	0.0	1.435	4766428	1.32		105	9998	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.221	6.226	-0.005	1.044	15778779	4.56	Target=9.98	91.2	5451	
913.00 > 169.00	6.221	6.226	-0.005	1.044	1402787		11.25(5.14-15.41)	91.2	3952	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L6PFC2_00002

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_011.d

Injection Date: 05-Oct-2021 22:44:57

Instrument ID: LCA

Lims ID: IC 6

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 11

Worklist Smp#: 11

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

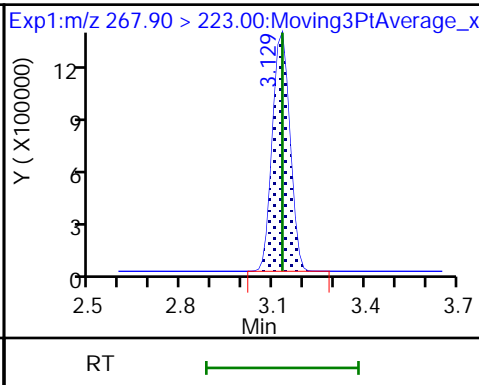
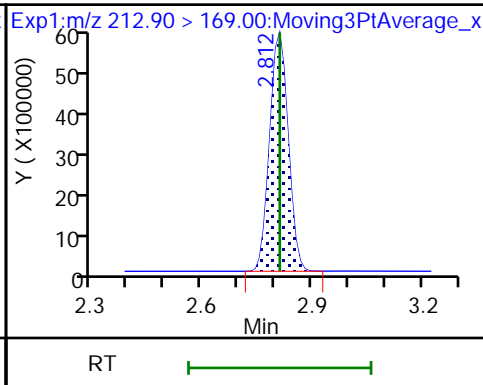
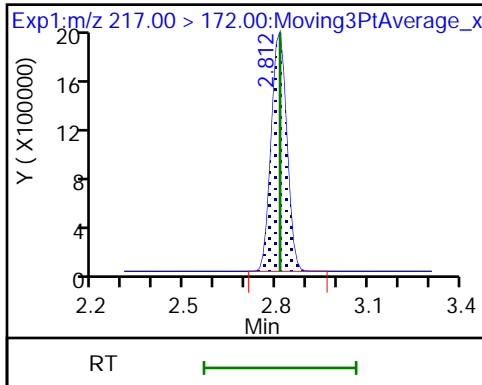
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

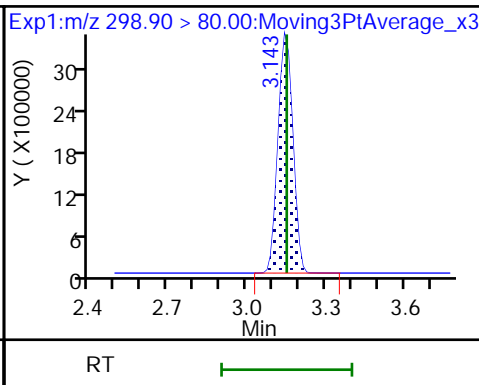
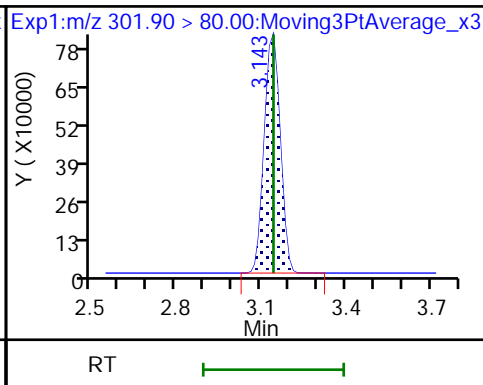
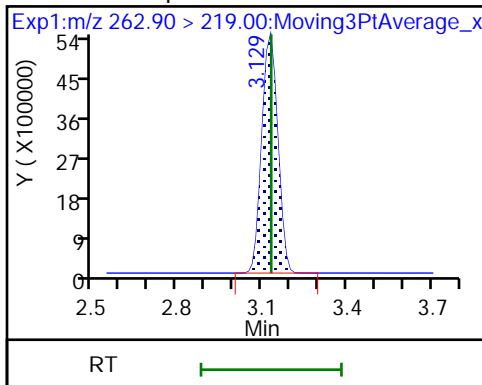
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

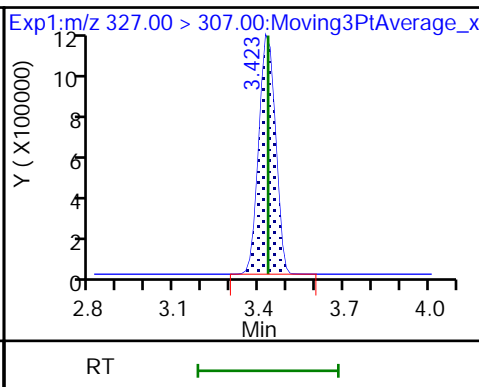
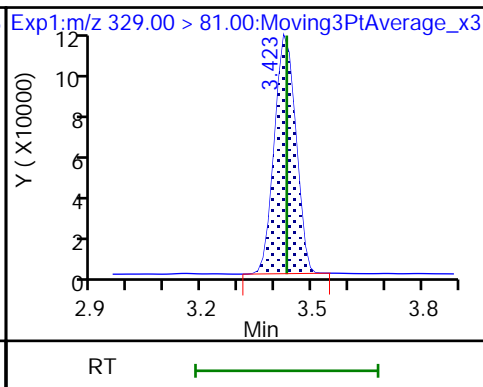
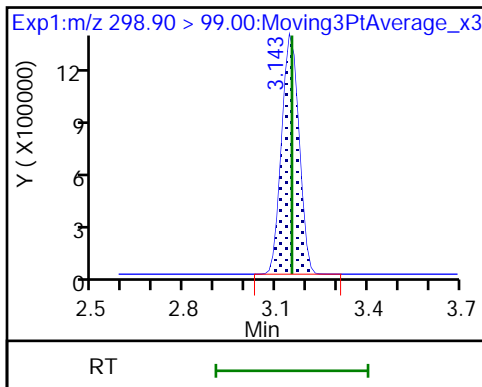
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

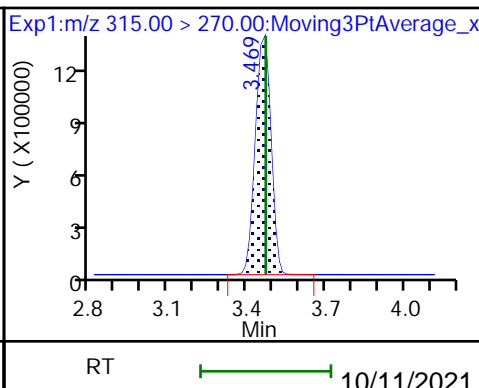
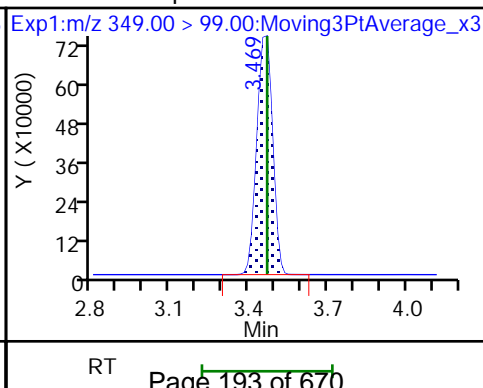
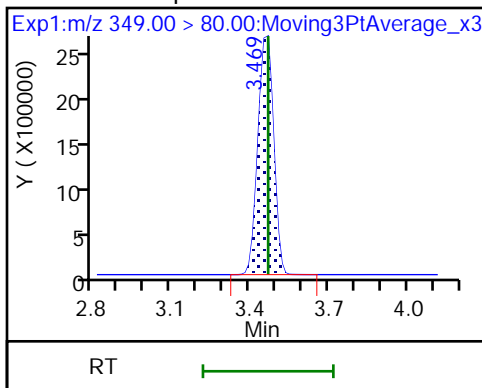
7 4:2 FTS

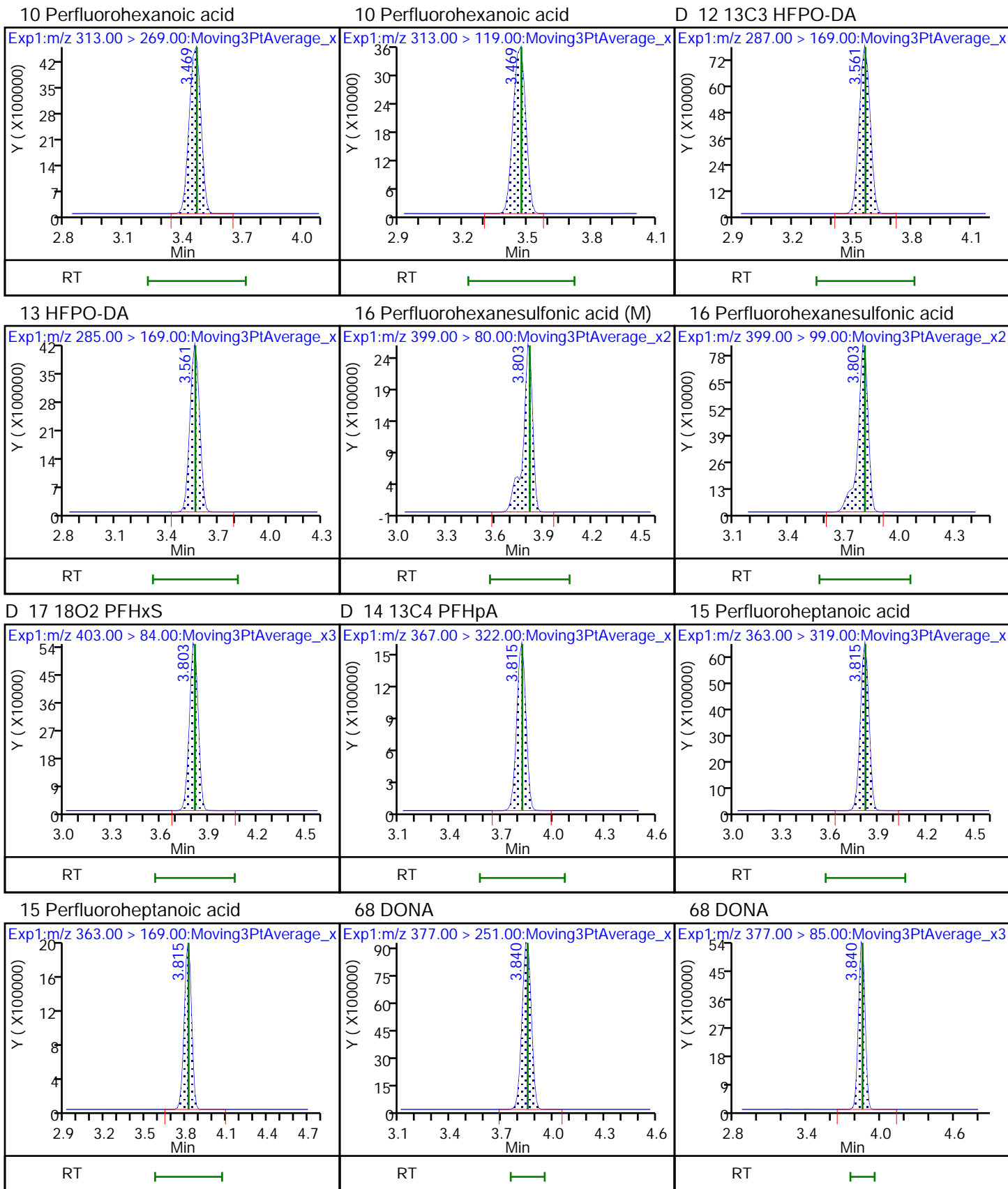


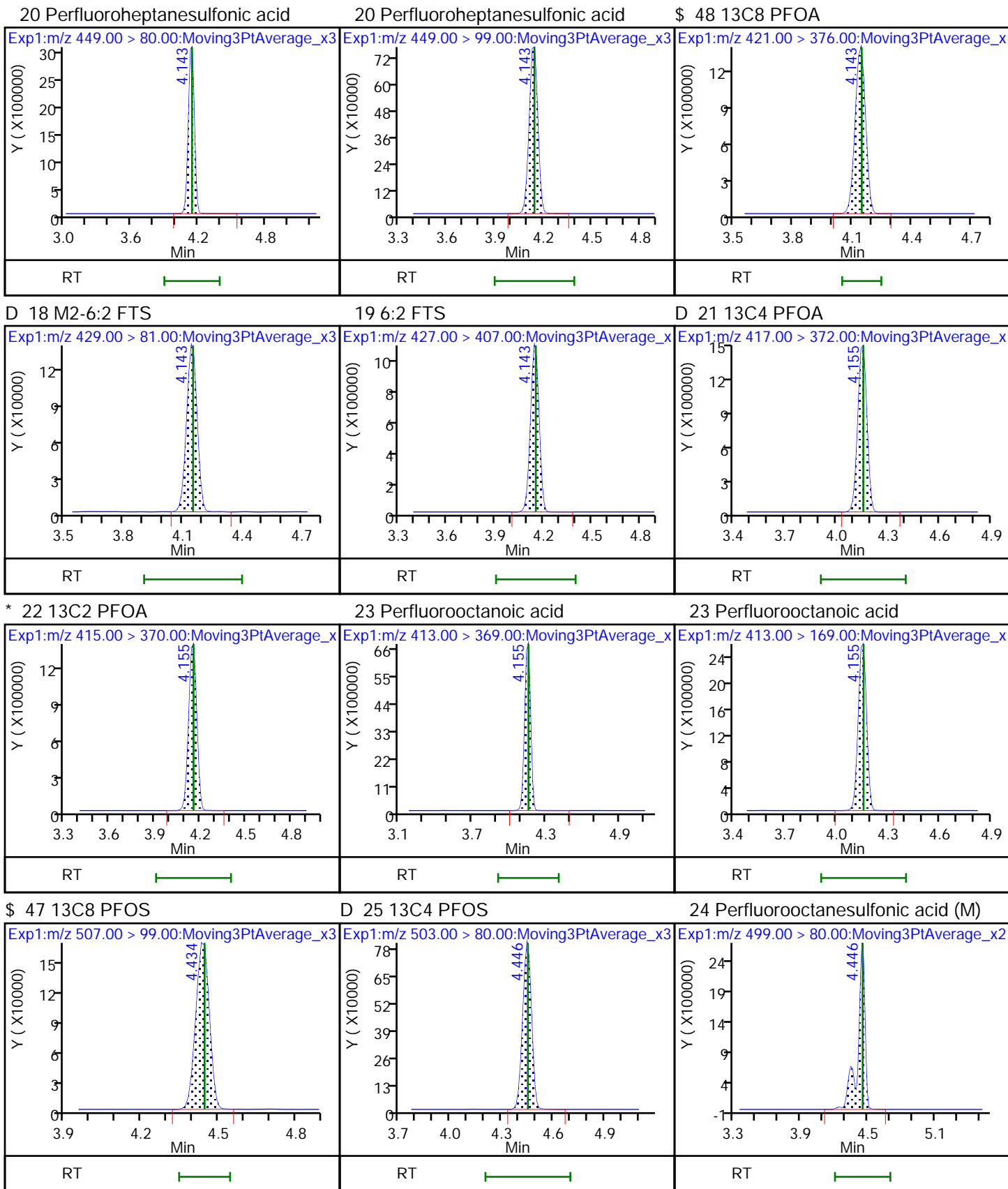
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA



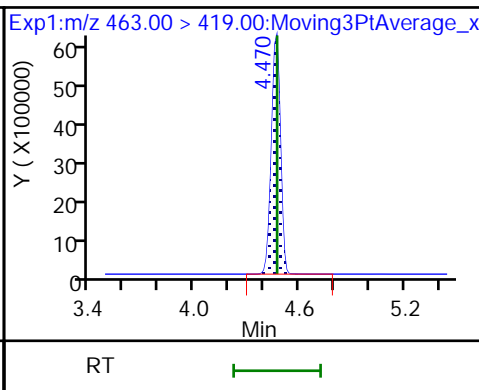
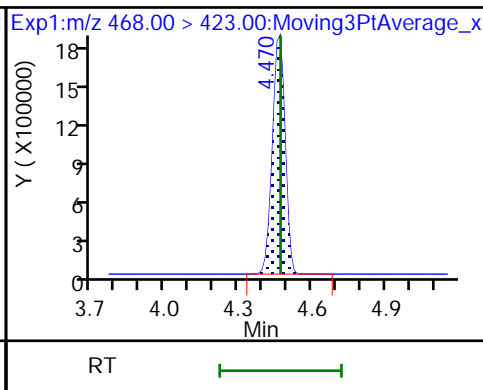
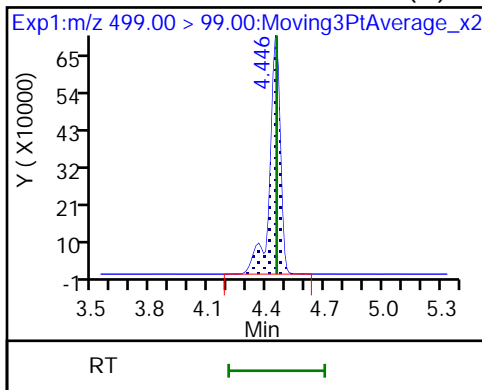




24 Perfluorooctanesulfonic acid (M)

D 27 13C5 PFNA

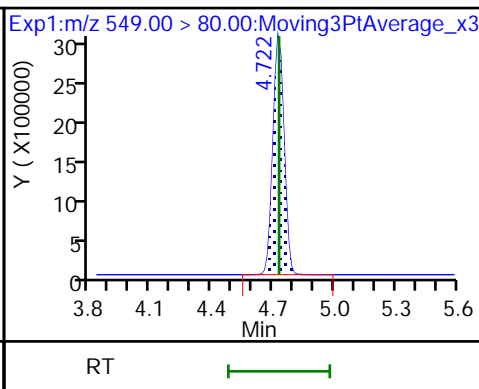
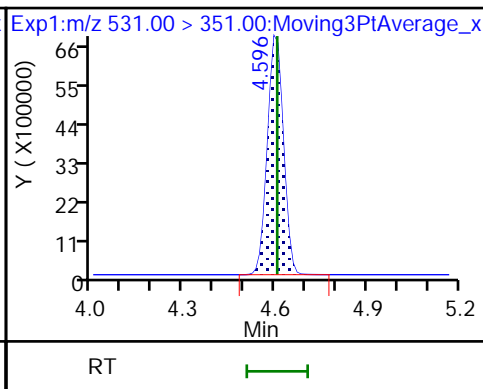
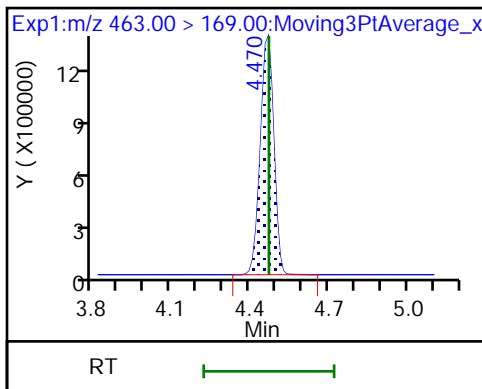
26 Perfluorononanoic acid



26 Perfluorononanoic acid

63 9CIFOS

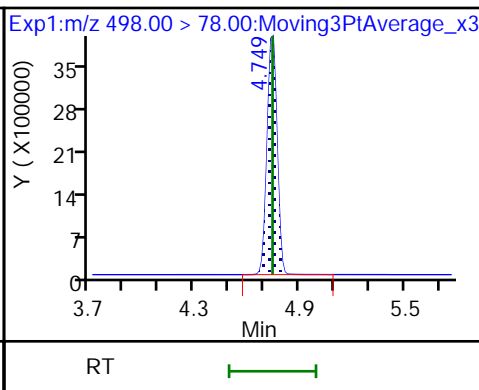
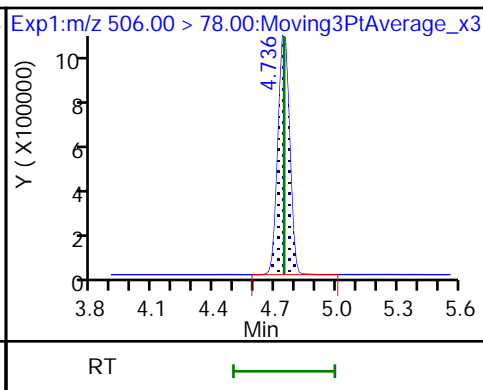
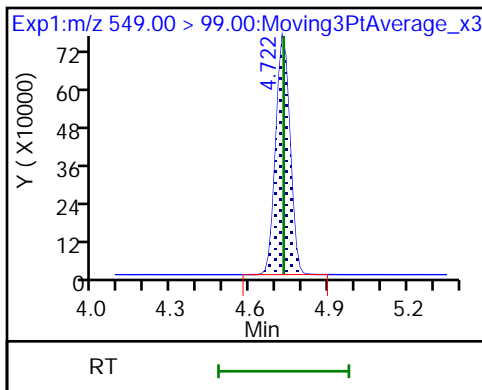
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

D 34 13C8 FOSA

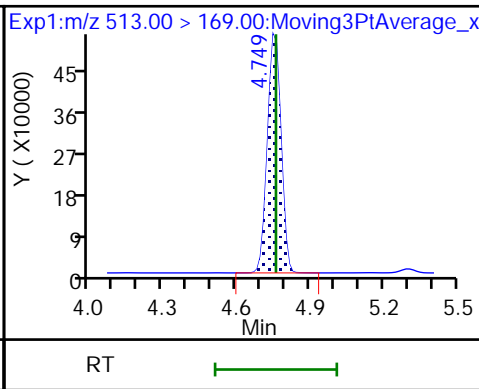
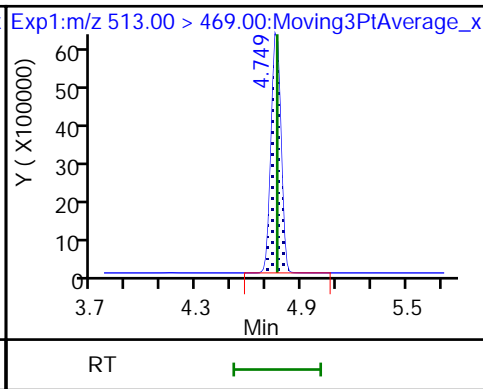
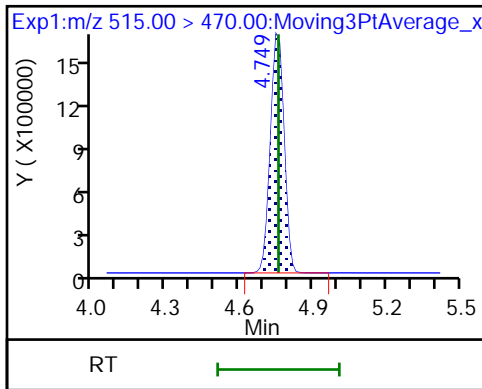
33 Perfluorooctanesulfonamide

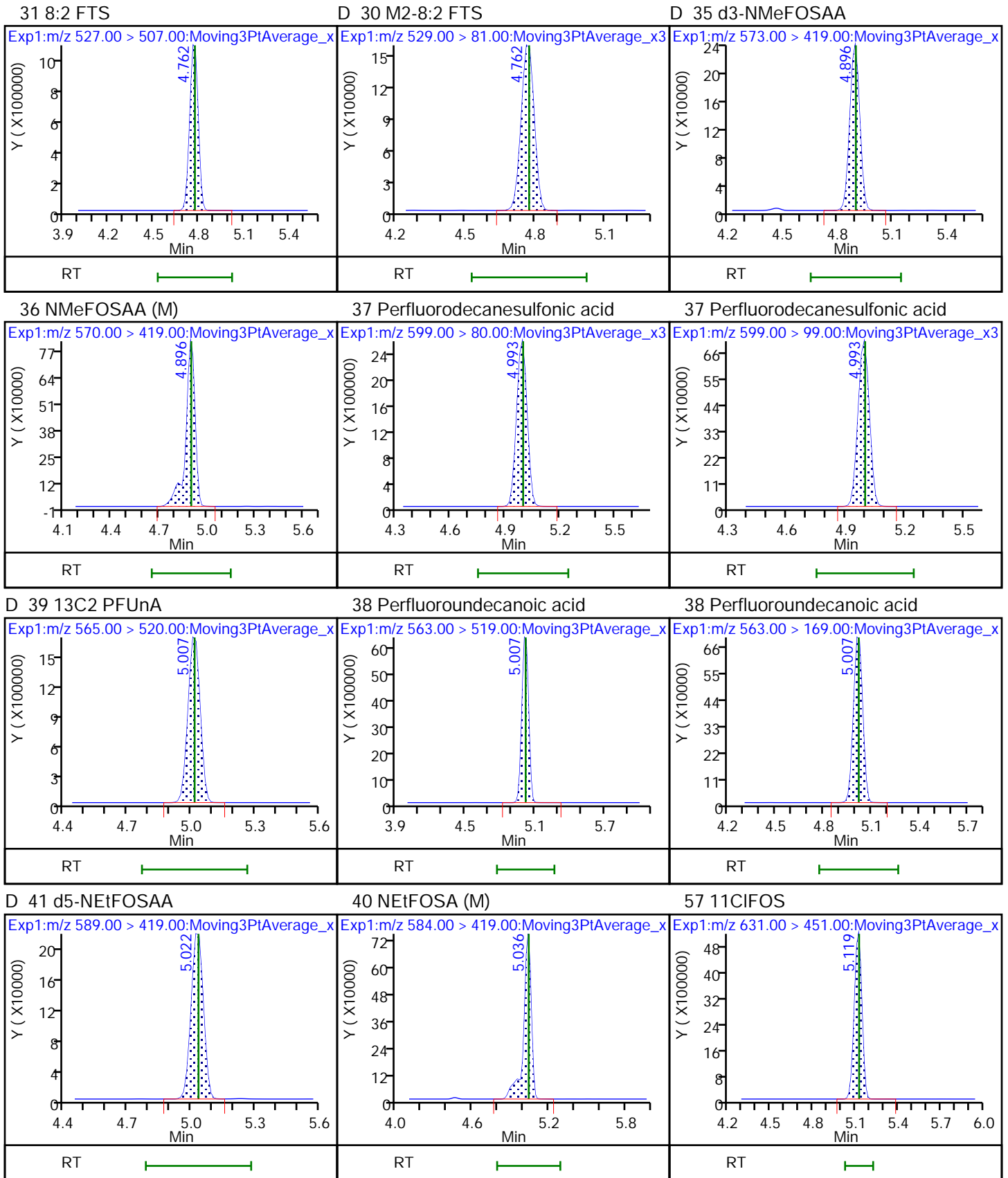


D 32 13C2 PFDA

29 Perfluorodecanoic acid

29 Perfluorodecanoic acid

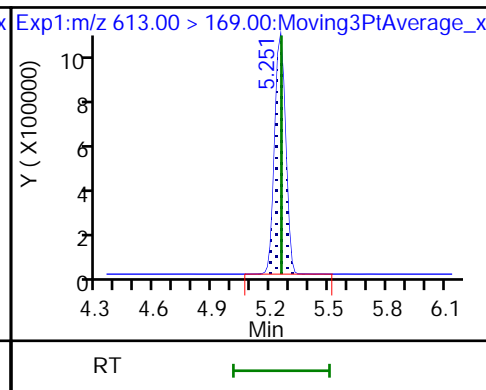
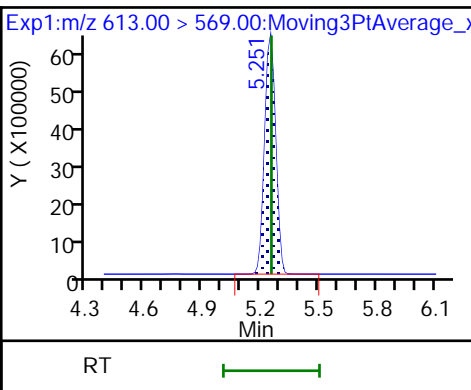
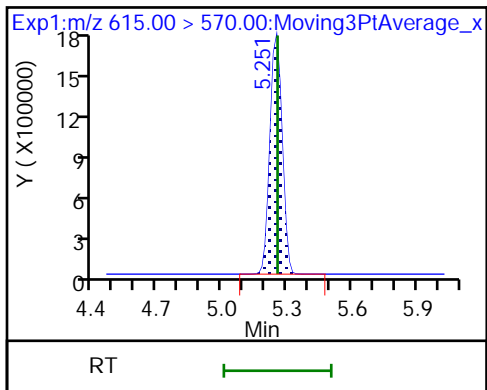




D 43 13C2 PFDoA

42 Perfluorododecanoic acid

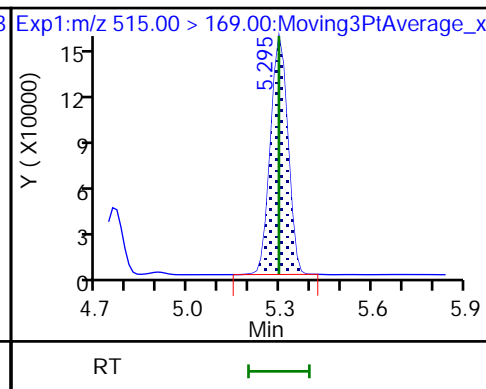
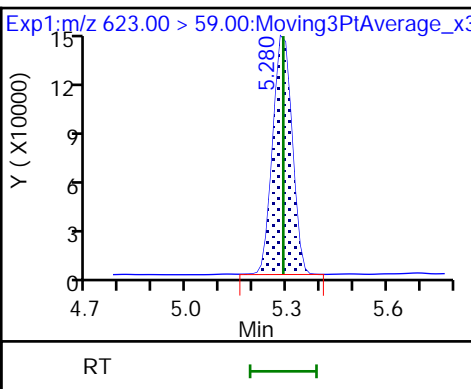
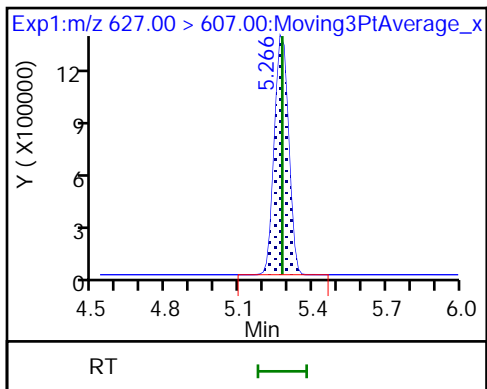
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

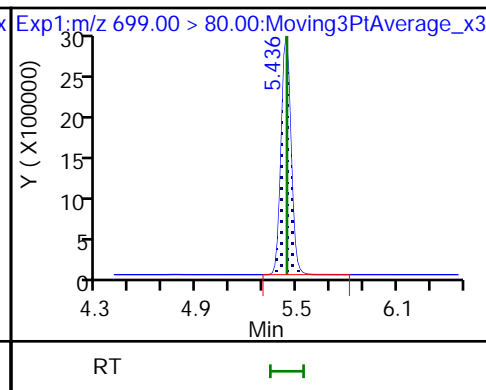
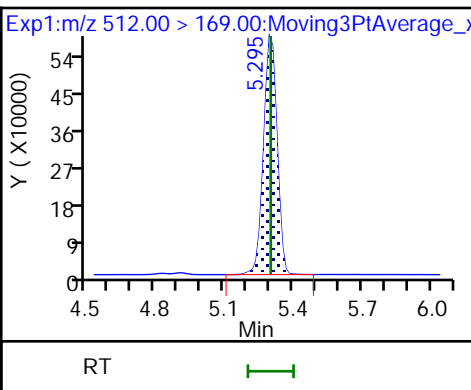
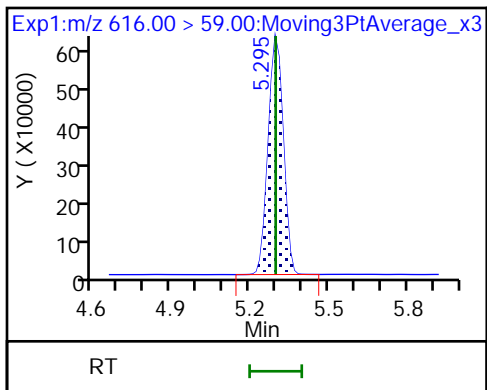
D 58 d-N-MeFOSA-M



49 N-MeFOSE-M

61 NMeFOSA

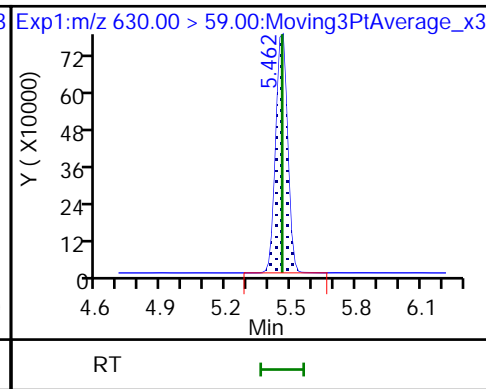
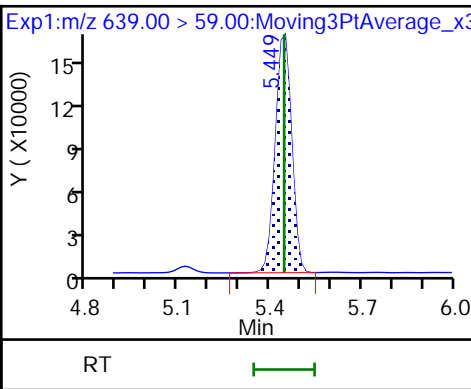
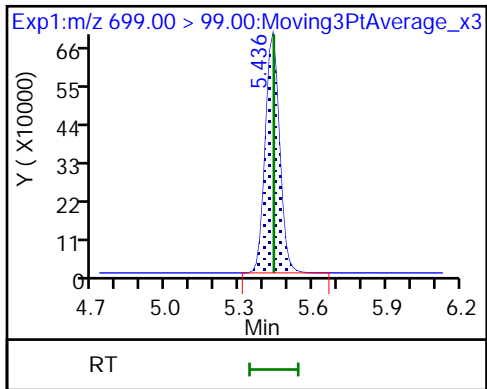
54 PFDoS

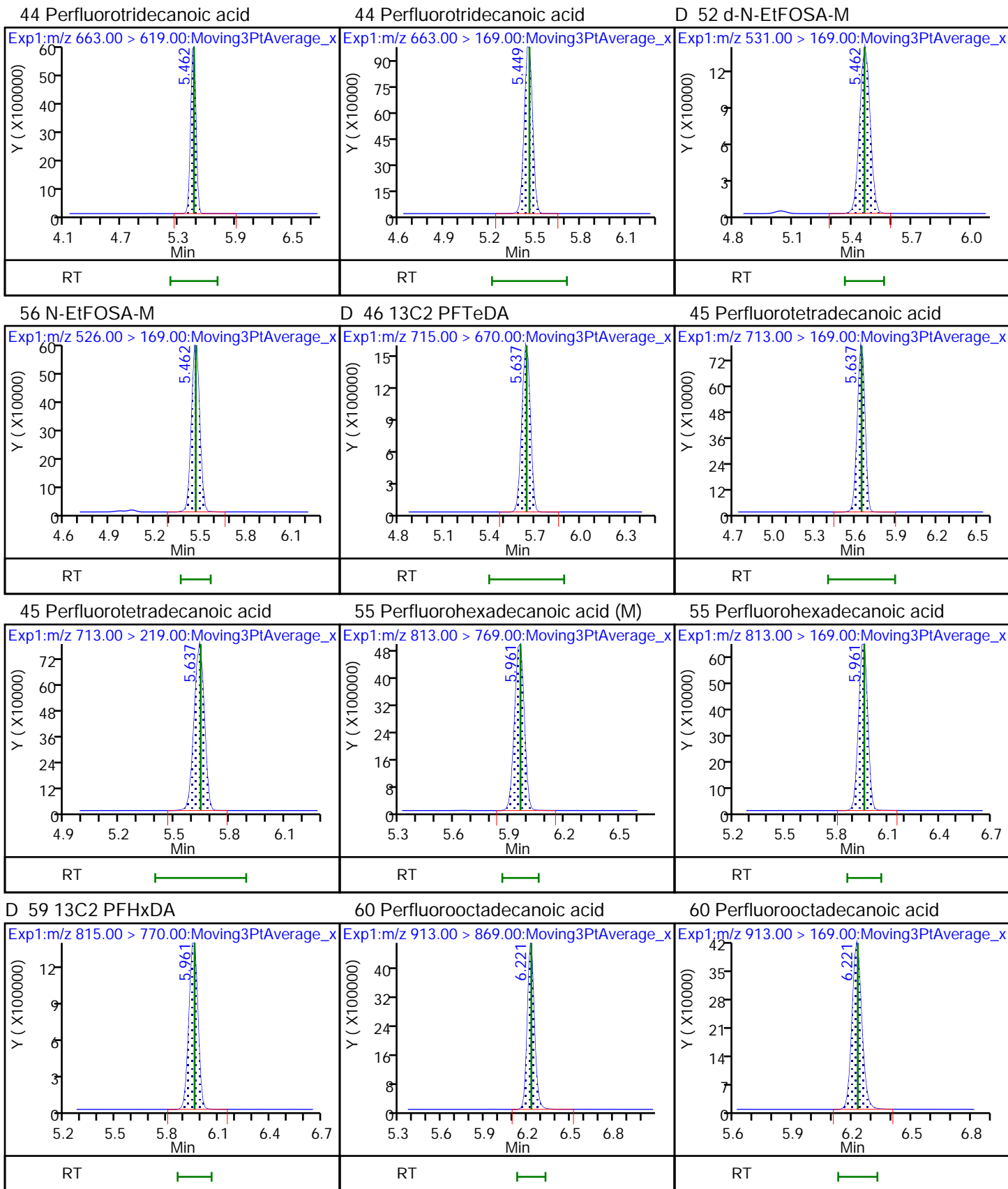


54 PFDoS

D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M





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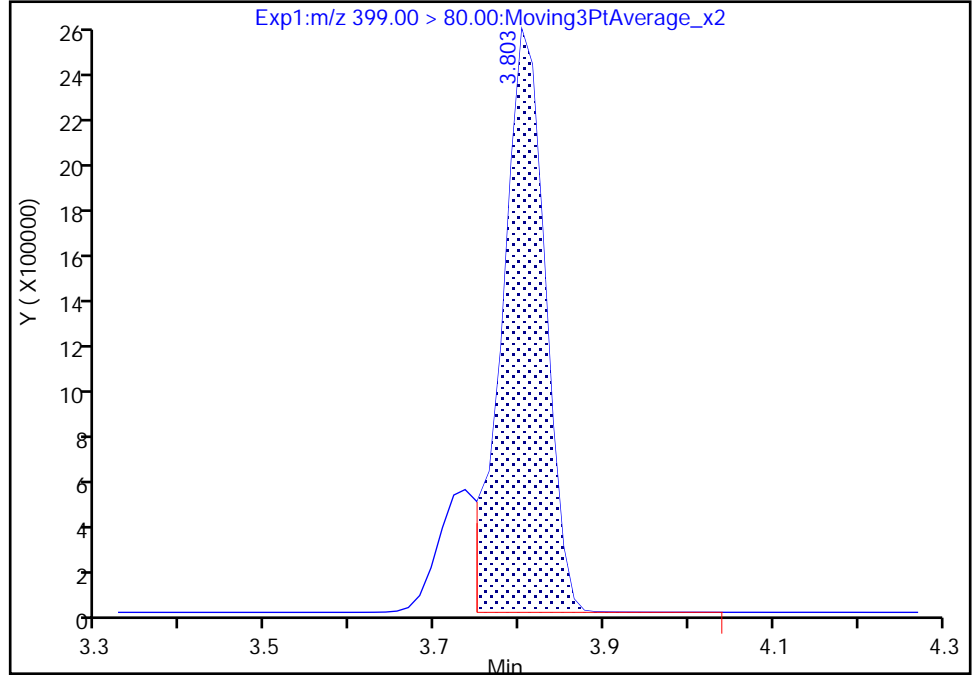
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Injection Date: 05-Oct-2021 22:44:57 Instrument ID: LCA
Lims ID: IC 6
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

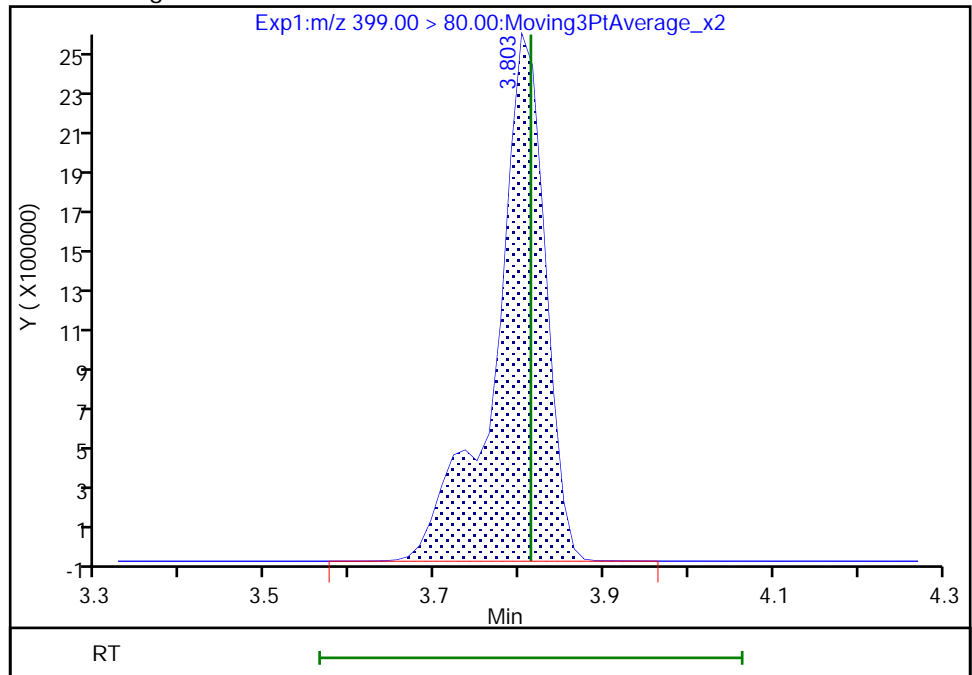
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Area: 8986327
Amount: 3.766143
Amount Units: ng/ml

Processing Integration Results



RT: 3.80
Area: 10611543
Amount: 4.589378
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:03:51
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

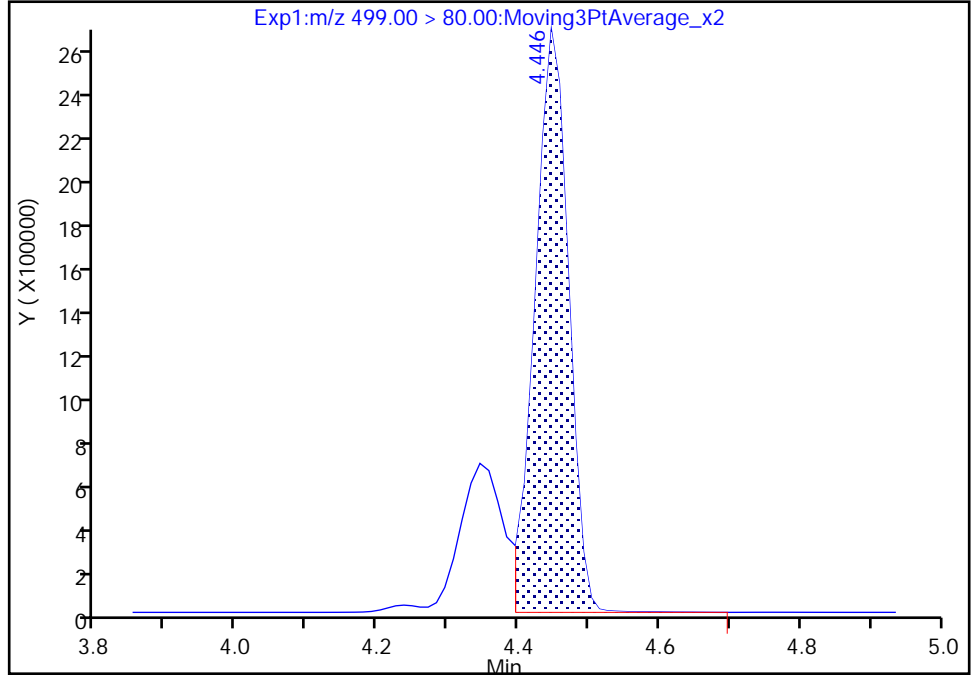
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Injection Date: 05-Oct-2021 22:44:57 Instrument ID: LCA
Lims ID: IC 6
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

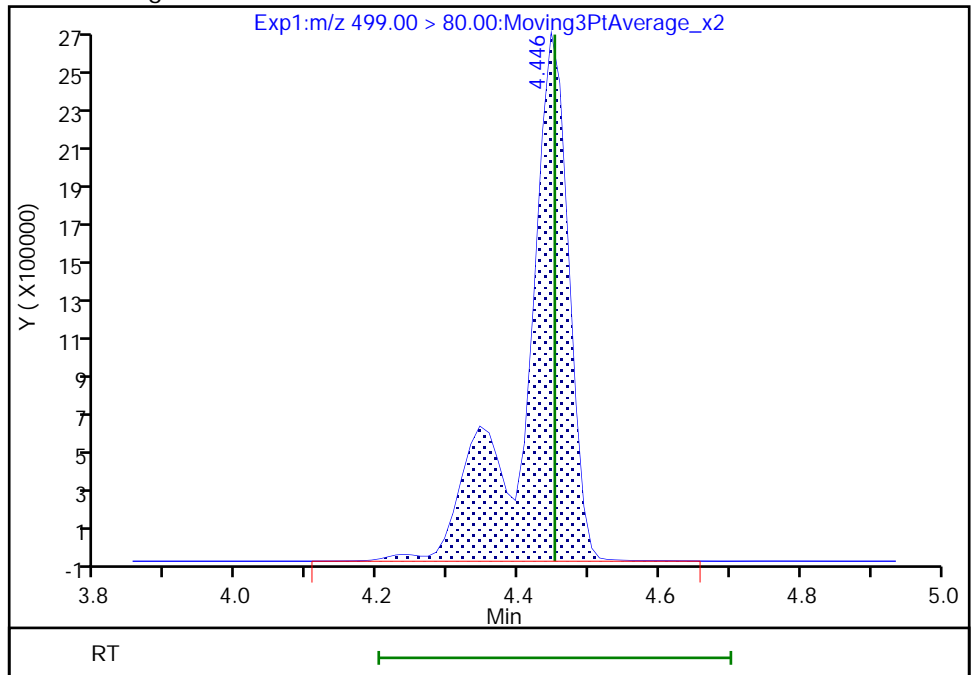
RT: 4.45
Area: 8689691
Amount: 3.443211
Amount Units: ng/ml

Processing Integration Results



RT: 4.45
Area: 11641795
Amount: 4.421800
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:04:02
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

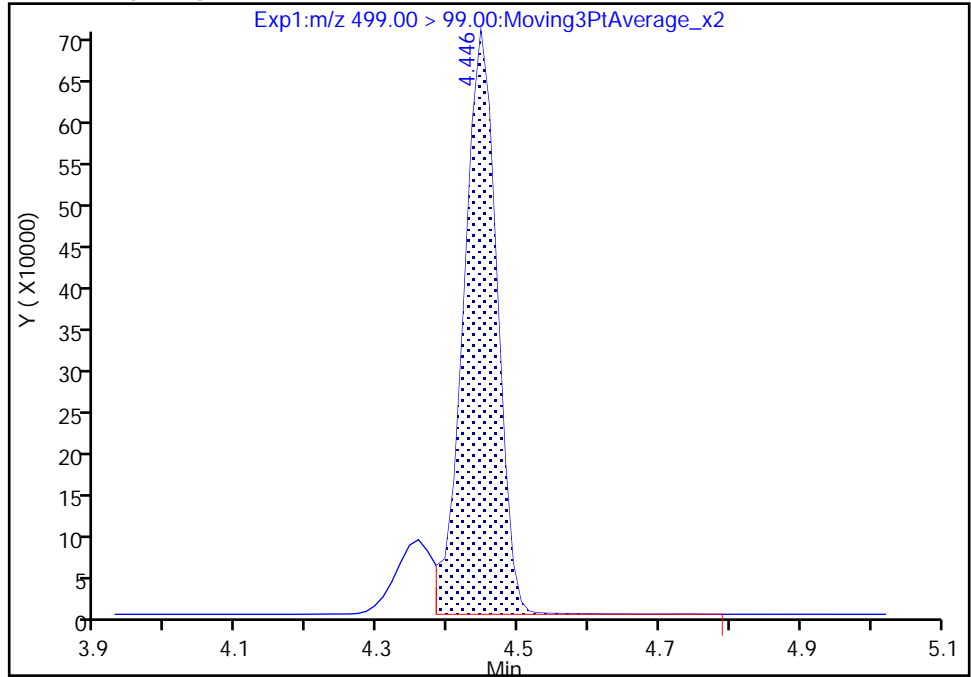
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Injection Date: 05-Oct-2021 22:44:57 Instrument ID: LCA
Lims ID: IC 6
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

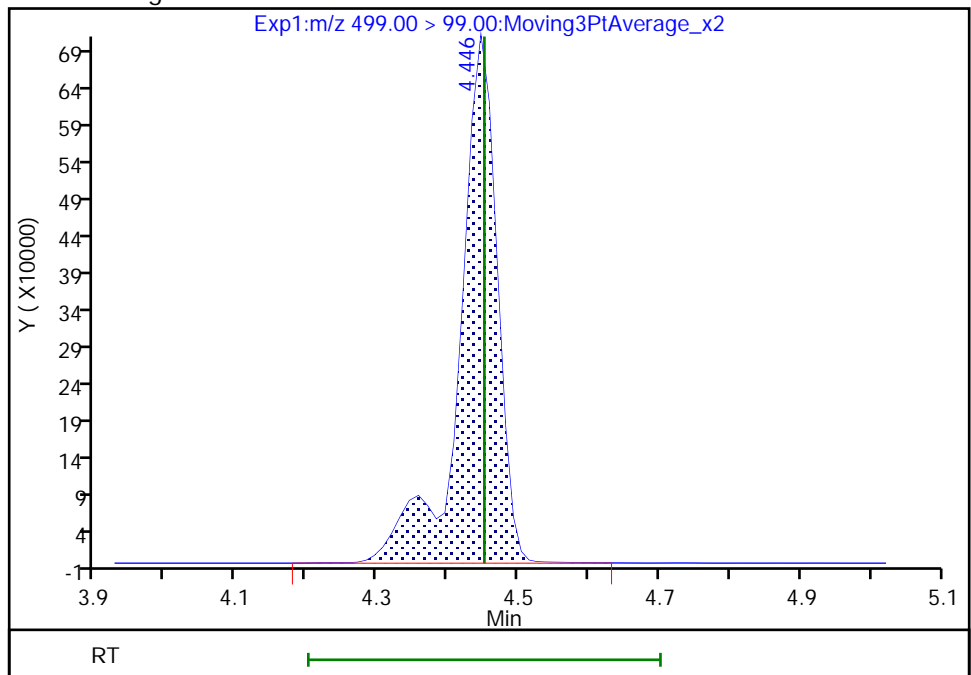
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Area: 2312926
Amount: 3.443211
Amount Units: ng/ml

Processing Integration Results



RT: 4.45
Area: 2629068
Amount: 4.421800
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:04:09

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

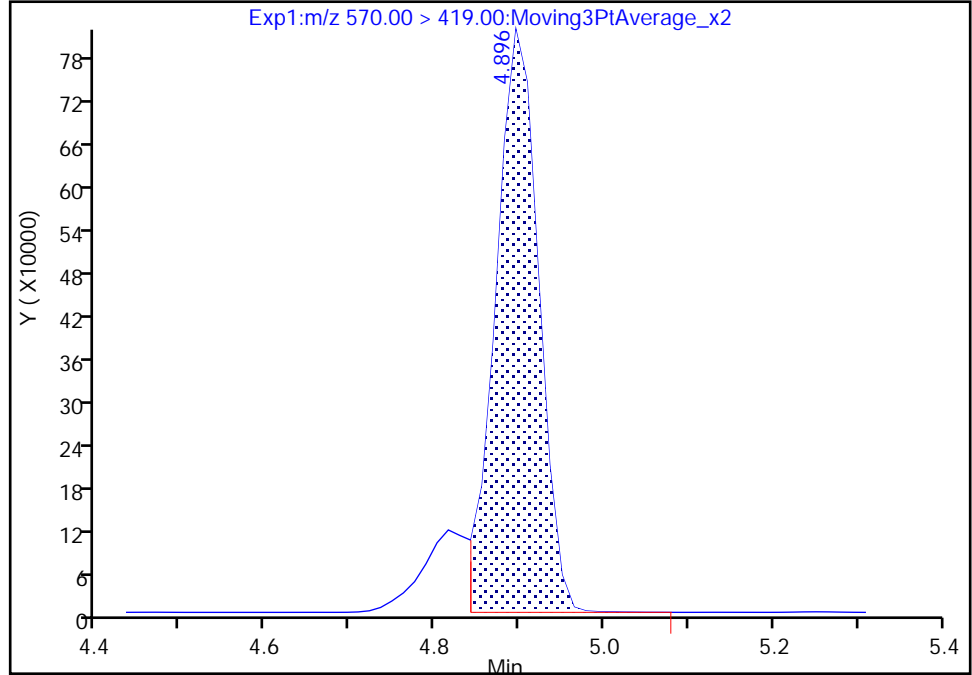
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_011.d
Injection Date: 05-Oct-2021 22:44:57 Instrument ID: LCA
Lims ID: IC 6
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

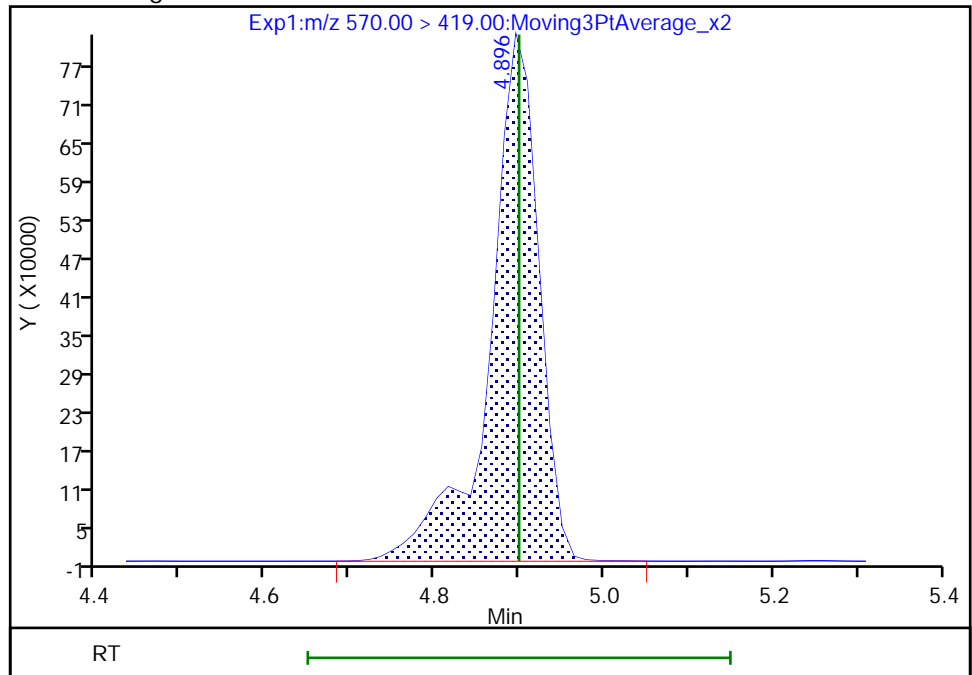
RT: 4.90
Area: 2876549
Amount: 4.124690
Amount Units: ng/ml

Processing Integration Results



RT: 4.90
Area: 3306213
Amount: 5.025643
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:04:24
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

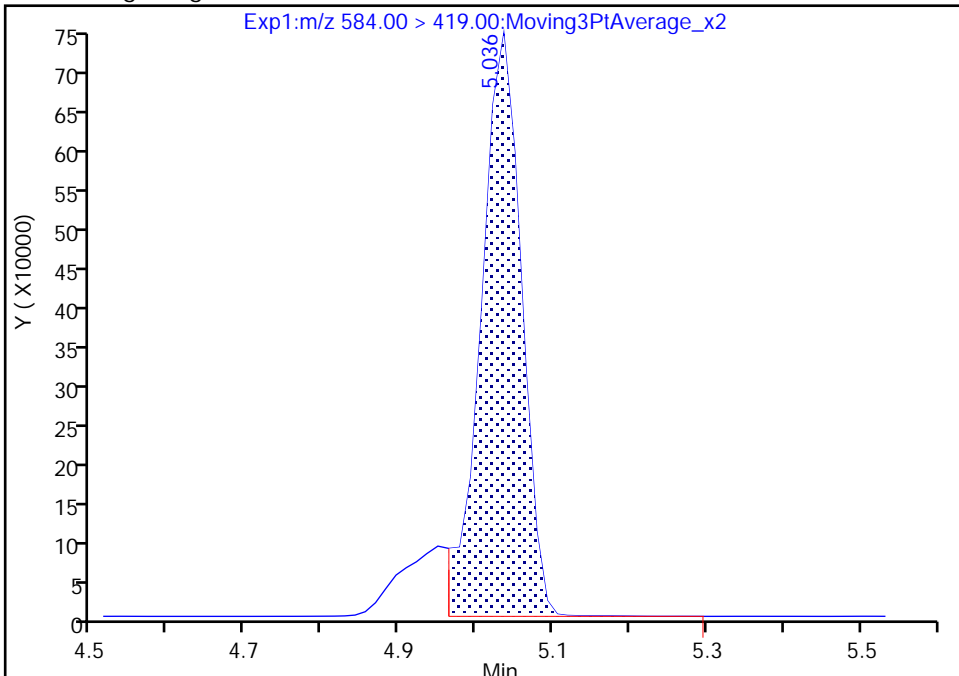
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Injection Date: 05-Oct-2021 22:44:57 Instrument ID: LCA
Lims ID: IC 6
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

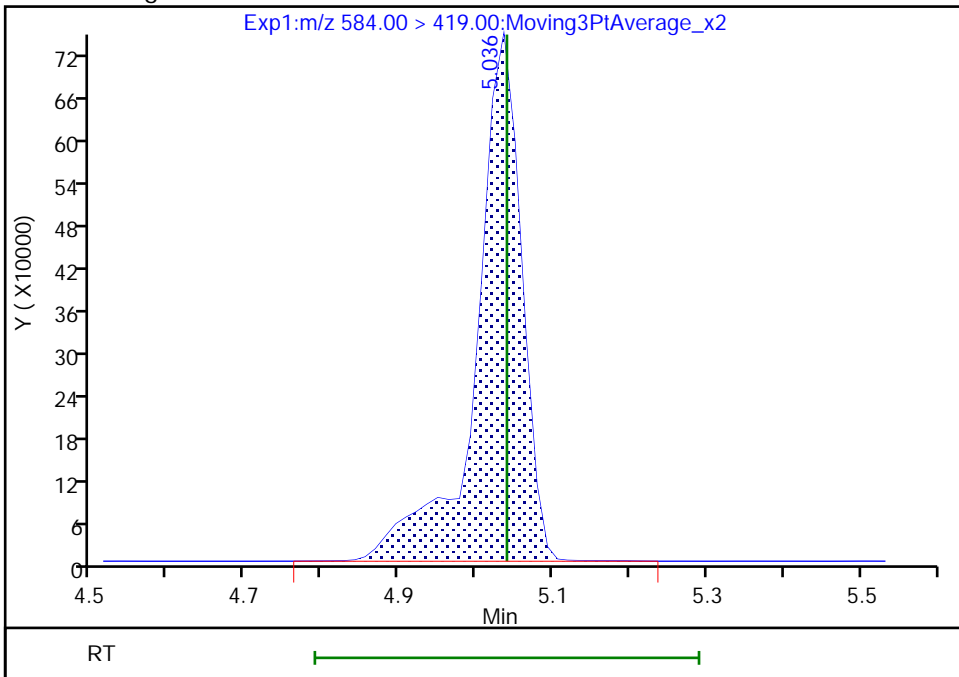
RT: 5.04
Area: 2697499
Amount: 4.180753
Amount Units: ng/ml

Processing Integration Results



RT: 5.04
Area: 3076062
Amount: 4.687868
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:04:33
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

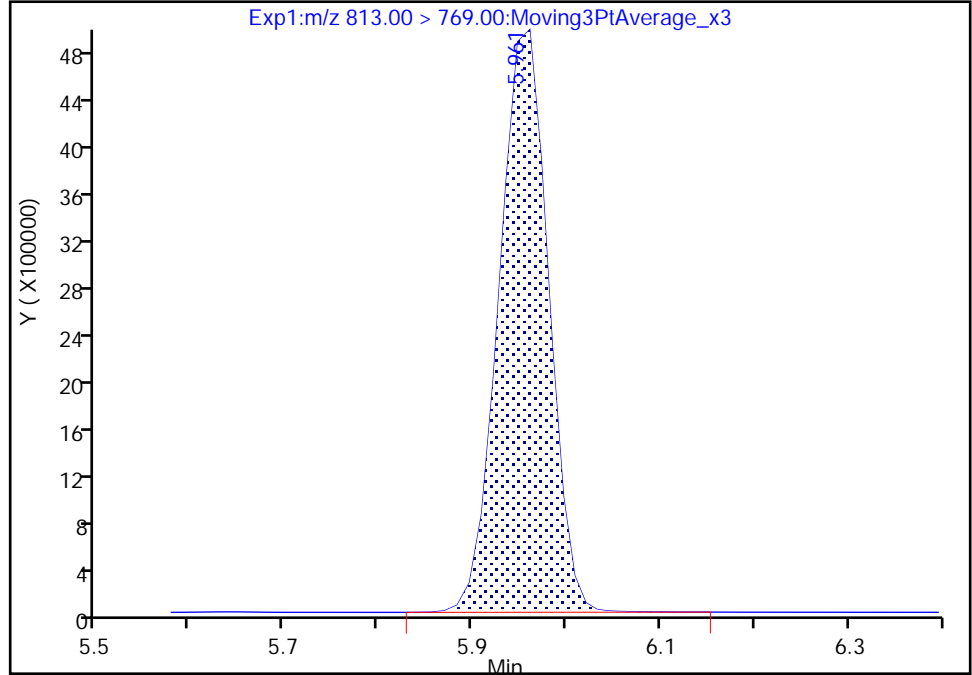
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Injection Date: 05-Oct-2021 22:44:57 Instrument ID: LCA
Lims ID: IC 6
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

55 Perfluorohexadecanoic acid, CAS: 67905-19-5

Signal: 1

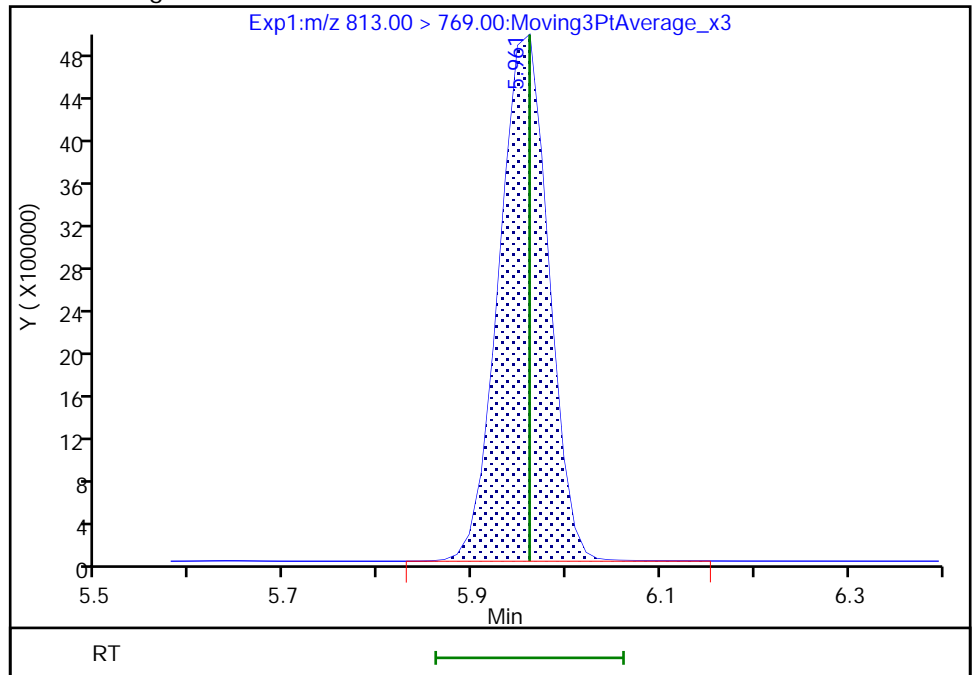
RT: 5.96
Area: 18169501
Amount: 3.999405
Amount Units: ng/ml

Processing Integration Results



RT: 5.96
Area: 18185862
Amount: 4.610203
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:13:20
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Lims ID: IC 7
 Client ID:
 Sample Type: IC Calib Level: 7
 Inject. Date: 05-Oct-2021 22:53:45 ALS Bottle#: 12 Worklist Smp#: 12
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020953-012 ic 7
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15

Method: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 07-Oct-2021 14:21:13 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1613

First Level Reviewer: cochranj Date: 06-Oct-2021 16:06:12

Ratio Calibration: None

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	2.812	2.812	0.0	0.677	6596355	1.29	103	14044	
2 Perfluorobutanoic acid	212.90 > 169.00	2.812	2.812	0.0	1.000	39839183	9.61	96.1	4834	
D 3 13C5 PFPeA	267.90 > 223.00	3.130	3.130	0.0	0.753	5348940	1.27	102	13447	
4 Perfluoropentanoic acid	262.90 > 219.00	3.130	3.131	-0.001	1.000	40614146	9.37	93.7	7827	
D 6 13C3 PFBS	301.90 > 80.00	3.143	3.143	0.0	0.757	3331755	1.23	106	28041	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.157	3.151	0.006	1.004	28048729	8.69	Target=3.06	98.3	42426
	298.90 > 99.00	3.157	3.151	0.006	1.004	10561274		2.66(1.53-4.59)	98.3	19065
7 4:2 FTS	327.00 > 307.00	3.437	3.431	0.006	1.000	8466918	8.79	94.1	45656	
D 8 M2-4:2 FTS	329.00 > 81.00	3.437	3.431	0.006	0.827	449831	1.11	94.7	525	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.469	3.468	0.001	1.104	22616554	9.23	Target=3.47	98.4	34855
	349.00 > 99.00	3.469	3.468	0.001	1.104	6302587		3.59(1.73-5.20)	98.4	27937
D 9 13C2 PFHxA	315.00 > 270.00	3.469	3.471	-0.002	0.835	5402140	1.25	100	13799	
10 Perfluorohexanoic acid	313.00 > 269.00	3.469	3.471	-0.002	1.000	35602644	9.61	Target=9.74	96.1	7663
	313.00 > 119.00	3.469	3.471	-0.002	1.000	2792461		12.75(4.87-14.61)	96.1	4539
D 12 13C3 HFPO-DA	287.00 > 169.00	3.562	3.565	-0.003	0.857	2798495	1.27	101	9697	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.562	3.565	-0.003	1.000	31885892	10.3		103	15510	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.815	3.813	0.002	1.000	20867517	9.23	Target=2.96	101	27209	M
399.00 > 99.00	3.815	3.813	0.002	1.000	6190880		3.37(1.48-4.44)	101	16827	
D 17 18O2 PFHxS										
403.00 > 84.00	3.815	3.813	0.002	0.918	1978127	1.20		102	17304	
D 14 13C4 PFHpA										
367.00 > 322.00	3.815	3.819	-0.004	0.918	5261701	1.22		97.8	12601	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.815	3.819	-0.004	1.000	44063826	9.95	Target=3.35	99.5	10628	
363.00 > 169.00	3.815	3.819	-0.004	1.000	14241351		3.09(1.67-5.02)	99.5	30983	
68 DONA										
377.00 > 251.00	3.852	3.850	0.002	0.866	66306425	8.62	Target=1.49	91.5	47285	
377.00 > 85.00	3.852	3.850	0.002	0.866	38619689		1.72(0.74-2.23)	91.5	7478	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.154	4.151	0.003	1.000	476601	1.14		96.4	673	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.142	4.143	-0.001	0.932	21488703	9.11	Target=3.73	95.7	27451	
449.00 > 99.00	4.142	4.143	-0.001	0.932	5435144		3.95(1.87-5.61)	95.7	19683	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.142	4.146	-0.004	0.997	4807435	1.26		101	18261	
19 6:2 FTS										
427.00 > 407.00	4.142	4.151	-0.009	0.997	7345217	9.16		96.6	14754	
* 22 13C2 PFOA										
415.00 > 370.00	4.154	4.155	-0.001		4831158	1.25			12847	
D 21 13C4 PFOA										
417.00 > 372.00	4.154	4.155	-0.001	1.000	4654864	1.20		95.7	13364	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.154	4.156	-0.002	1.000	41535789	10.1	Target=2.40	101	9481	
413.00 > 169.00	4.154	4.156	-0.002	1.000	16614950		2.50(1.20-3.61)	101	8127	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.446	4.446	0.0	1.070	594930	1.23		103	2257	
D 25 13C4 PFOS										
503.00 > 80.00	4.446	4.451	-0.005	1.070	2833668	1.25		105	3976	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.446	4.451	-0.005	1.000	24369559	9.34	Target=3.83	101	12434	M
499.00 > 99.00	4.446	4.451	-0.005	1.000	5504556		4.43(1.91-5.74)	101	10598	M
D 27 13C5 PFNA										
468.00 > 423.00	4.469	4.471	-0.002	1.076	6202112	1.25		100	25154	
26 Perfluorononanoic acid										
463.00 > 419.00	4.469	4.471	-0.002	1.000	40209311	9.76	Target=3.68	97.6	20448	
463.00 > 169.00	4.469	4.471	-0.002	1.000	9164022		4.39(1.84-5.52)	97.6	21242	
63 9CIFOS										
531.00 > 351.00	4.607	4.606	0.001	1.109	49335058	9.02		96.7	53380	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.721	4.728	-0.007	1.062	22739383	9.20	Target=3.97	95.8	24949	
549.00 > 99.00	4.721	4.728	-0.007	1.062	5847953		3.89(1.99-5.96)	95.8	20451	
D 34 13C8 FOSA										
506.00 > 78.00	4.748	4.743	0.005	1.143	3792608	1.14		91.4	4855	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.748	4.745	0.003	1.000	29712974	10.2		102	9371	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.762	4.760	0.002	1.000	42913494	9.57	Target=10.11	95.7	16864	
513.00 > 169.00	4.762	4.760	0.002	1.000	3740556		11.47(5.06-15.17)	95.7	591	
D 32 13C2 PFDA										
515.00 > 470.00	4.762	4.758	0.004	1.146	5955015	1.19		95.1	16114	
31 8:2 FTS										
527.00 > 507.00	4.775	4.774	0.001	1.000	7727315	9.16		95.6	18830	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.775	4.774	0.001	1.149	566408	1.11		93.0	1717	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.895	4.899	-0.004	1.178	923936	1.35		108	531	
36 NMeFOSAA										
570.00 > 419.00	4.895	4.899	-0.004	1.000	6665393	9.87		98.7	6195	
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.992	4.997	-0.005	1.123	21205557	9.34	Target=3.80	96.9	32841	
599.00 > 99.00	4.992	4.997	-0.005	1.123	5779847		3.67(1.90-5.70)	96.9	19310	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.021	5.018	0.003	1.000	45034155	9.83	Target=7.45	98.3	18724	
563.00 > 169.00	5.021	5.018	0.003	1.000	5130652		8.78(3.78-11.33)	98.3	11495	
D 39 13C2 PFUnA										
565.00 > 520.00	5.021	5.015	0.006	1.209	5686115	1.19		95.1	14018	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.035	5.034	0.001	1.212	780959	1.19		94.8	2747	
40 NEtFOSA										
584.00 > 419.00	5.035	5.040	-0.005	1.000	5841454	9.85		98.5	1665	
57 11CIFOS										
631.00 > 451.00	5.118	5.122	-0.004	1.151	38600586	8.76		93.0	40731	
D 43 13C2 PFDaA										
615.00 > 570.00	5.250	5.255	-0.005	1.264	6477734	1.27		102	16981	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.250	5.255	-0.005	1.000	47491148	10.6	Target=5.33	106	16990	
613.00 > 169.00	5.250	5.255	-0.005	1.000	7273008		6.53(2.66-7.99)	106	17336	
50 10:2 FTS										
627.00 > 607.00	5.280	5.274	0.006	1.106	9831765	9.36		97.1	29286	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.294	5.289	0.005	1.274	539386	1.30		104	330	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.294	5.295	-0.001	1.274	567405	1.31		105	51.1	
49 N-MeFOSE-M										
616.00 > 59.00	5.294	5.297	-0.003	1.000	5008224	10.1		101	2946	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.309	5.301	0.008	1.003	4593149	9.66		96.6	853	
54 PFDoS										
699.00 > 80.00	5.435	5.439	-0.004	1.223	21969563	9.38	Target=4.32	96.9	17924	
699.00 > 99.00	5.435	5.439	-0.004	1.223	5440342		4.04(2.19-6.58)	96.9	20020	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.448	5.445	0.003	1.311	531061	1.20		95.9	218	
62 N-EtFOSE-M										
630.00 > 59.00	5.461	5.458	0.003	1.002	5491561	10.3		103	5304	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.461	5.462	-0.001	1.040	43719274	9.60	Target=5.66	96.0	16915	
663.00 > 169.00	5.461	5.462	-0.001	1.040	7012213		6.23(2.83-8.48)	96.0	26579	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.461	5.460	0.001	1.315	462772	1.27		102	694	
56 N-EtFOSA-M										
526.00 > 169.00	5.474	5.469	0.005	1.002	4319144	9.98		99.8	681	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.637	5.643	-0.006	1.000	6036068	10.2	Target=1.07	102	16016	
713.00 > 219.00	5.637	5.643	-0.006	1.000	5846732		1.03(0.53-1.60)	102	16861	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.637	5.643	-0.006	1.357	5922620	1.27		101	22248	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.960	5.961	-0.001	1.000	35675947	10.5	Target=7.50	105	10913	
813.00 > 169.00	5.960	5.961	-0.001	1.000	4606690		7.74(3.75-11.26)	105	9079	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.960	5.961	-0.001	1.435	4426886	1.30		104	11108	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.220	6.226	-0.006	1.044	30330955	9.44	Target=9.98	94.4	8530	
913.00 > 169.00	6.220	6.226	-0.006	1.044	2735872		11.09(5.14-15.41)	94.4	5219	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L7PFC2_00002

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Injection Date: 05-Oct-2021 22:53:45

Instrument ID: LCA

Lims ID: IC 7

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 12

Worklist Smp#: 12

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

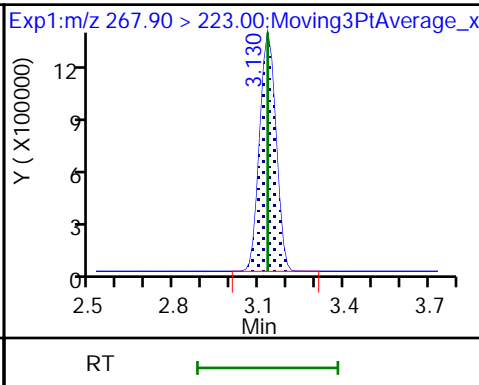
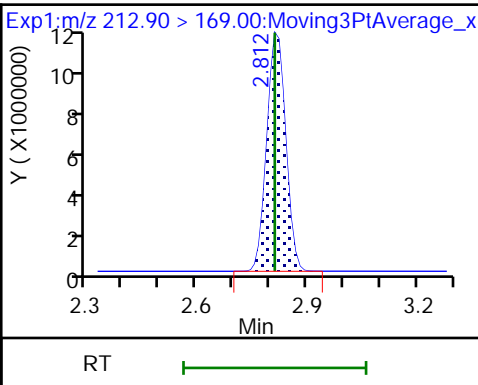
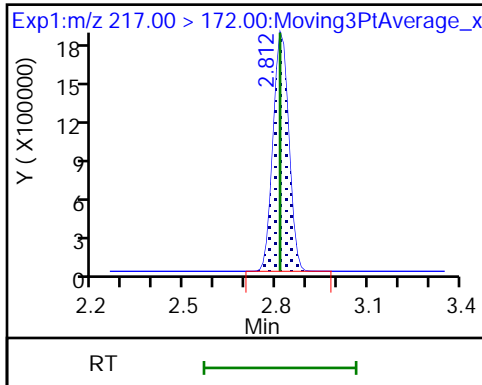
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

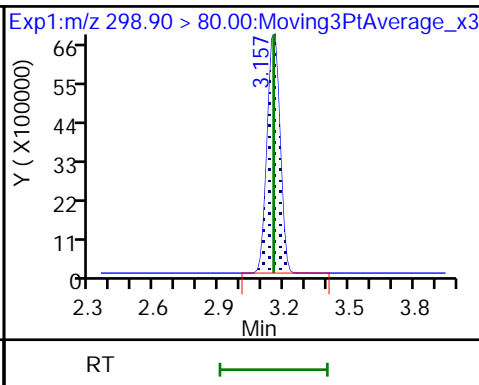
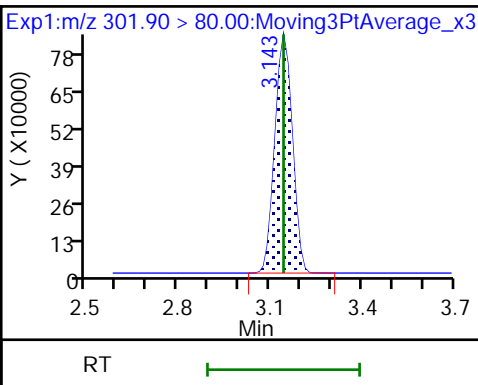
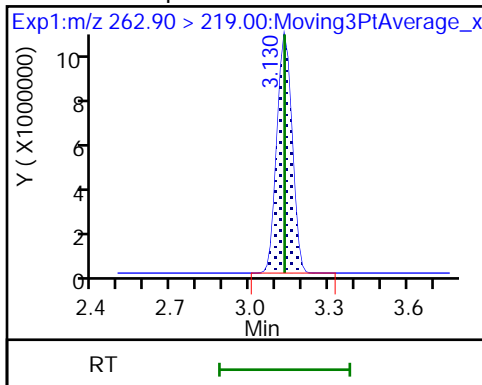
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

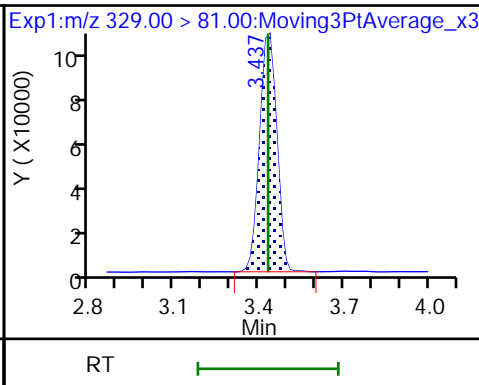
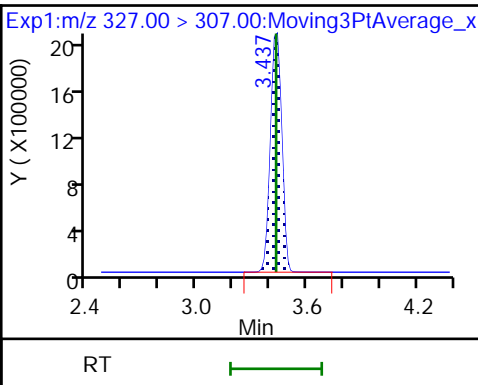
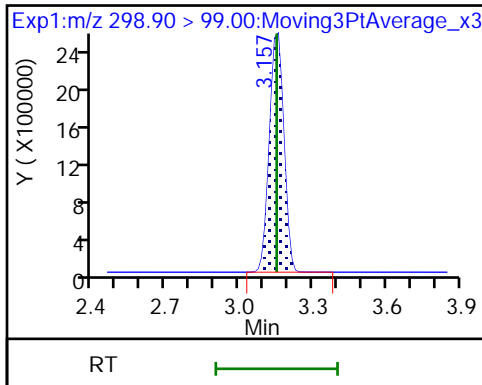
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

7 4:2 FTS

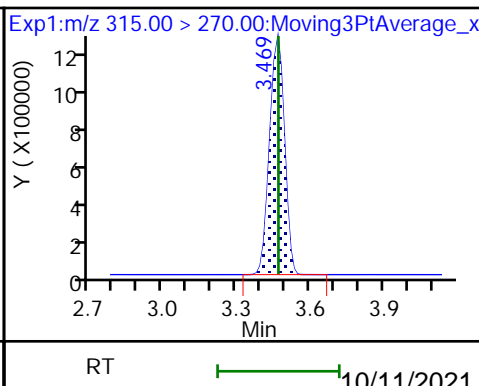
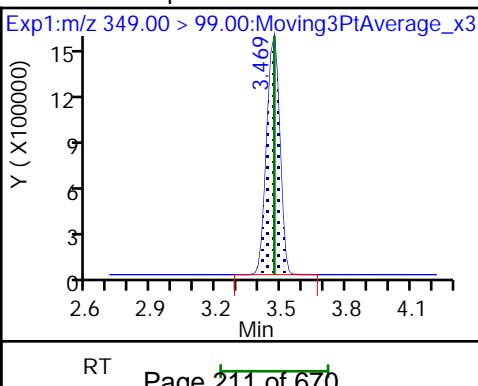
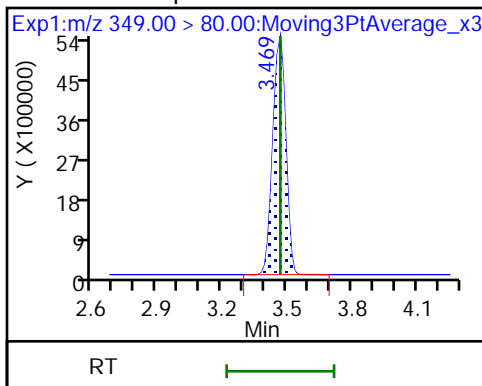
D 8 M2-4:2 FTS

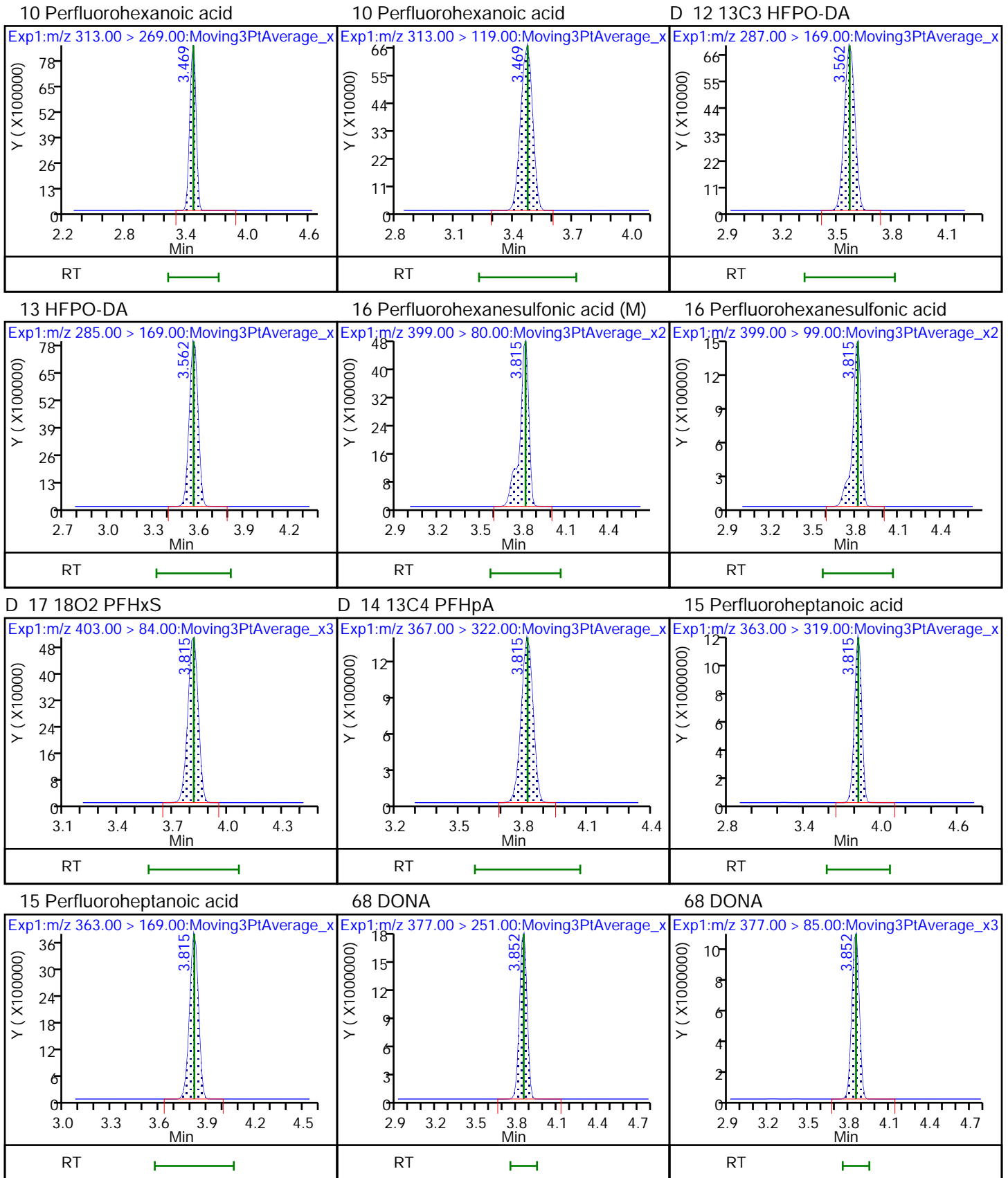


11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA

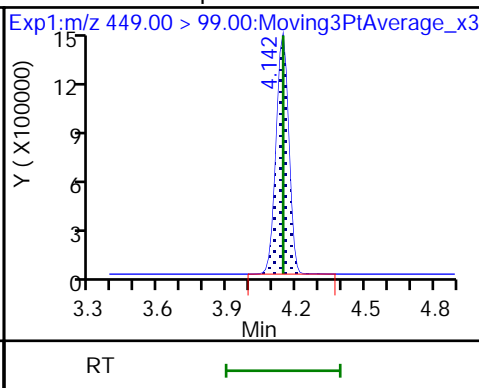
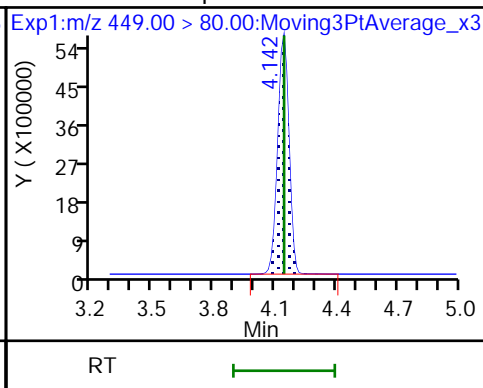
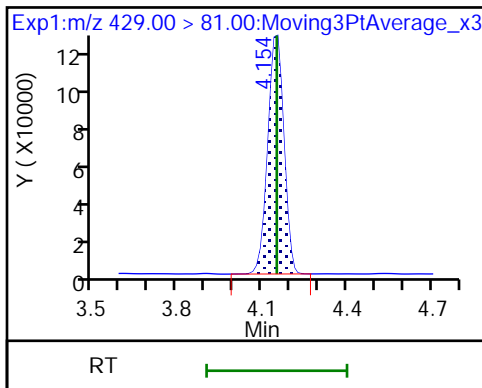




D 18 M2-6:2 FTS

20 Perfluoroheptanesulfonic acid

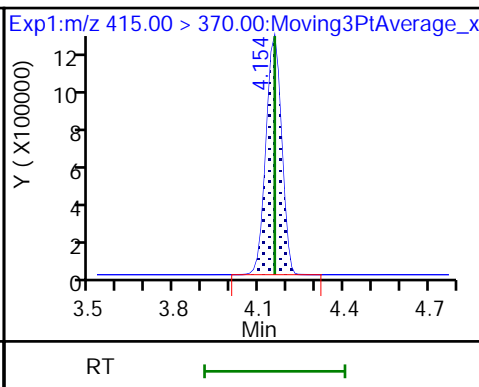
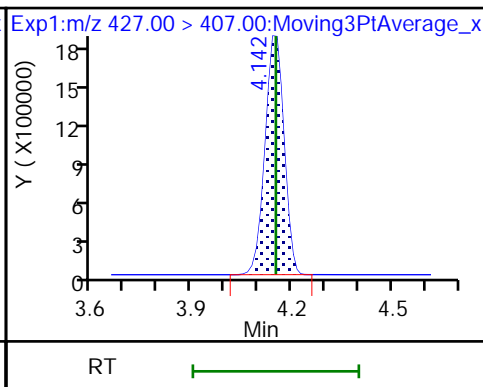
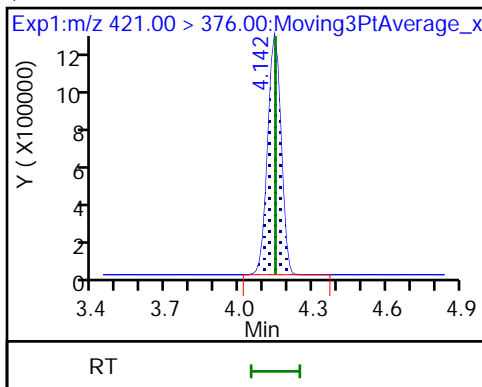
20 Perfluoroheptanesulfonic acid



\$ 48 13C8 PFOA

19 6:2 FTS

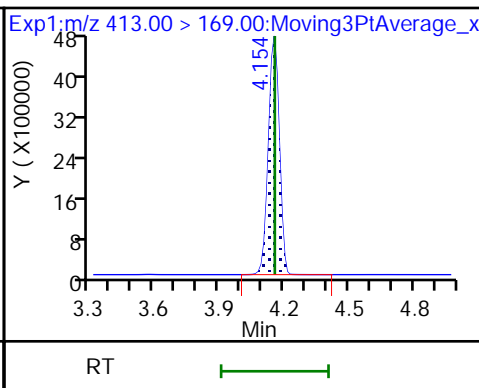
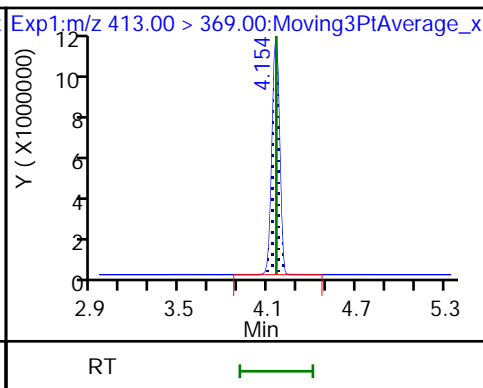
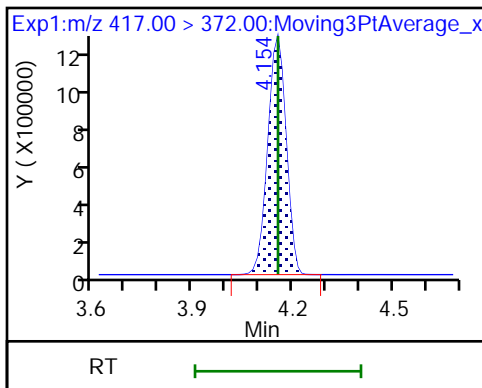
* 22 13C2 PFOA



D 21 13C4 PFOA

23 Perfluorooctanoic acid

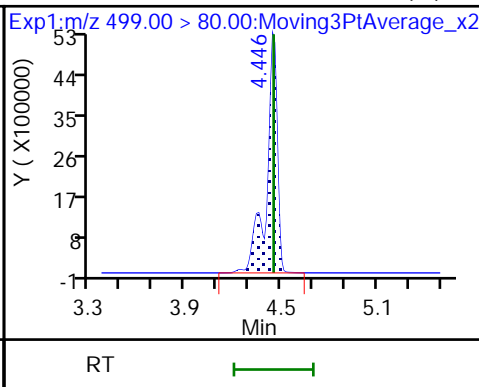
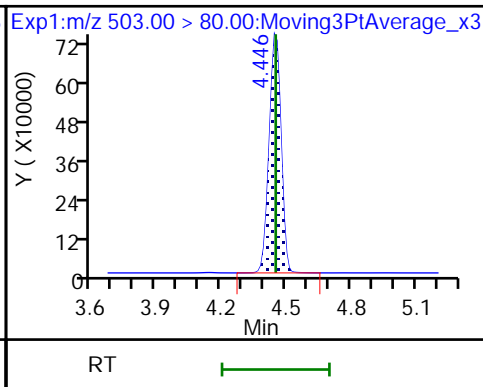
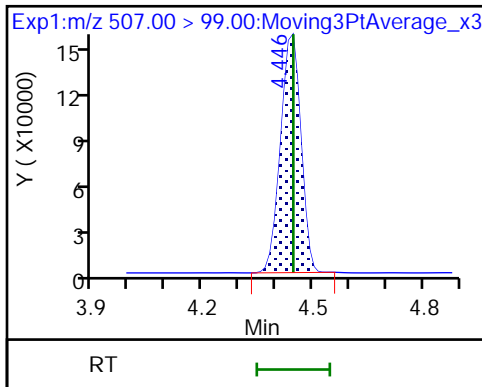
23 Perfluorooctanoic acid

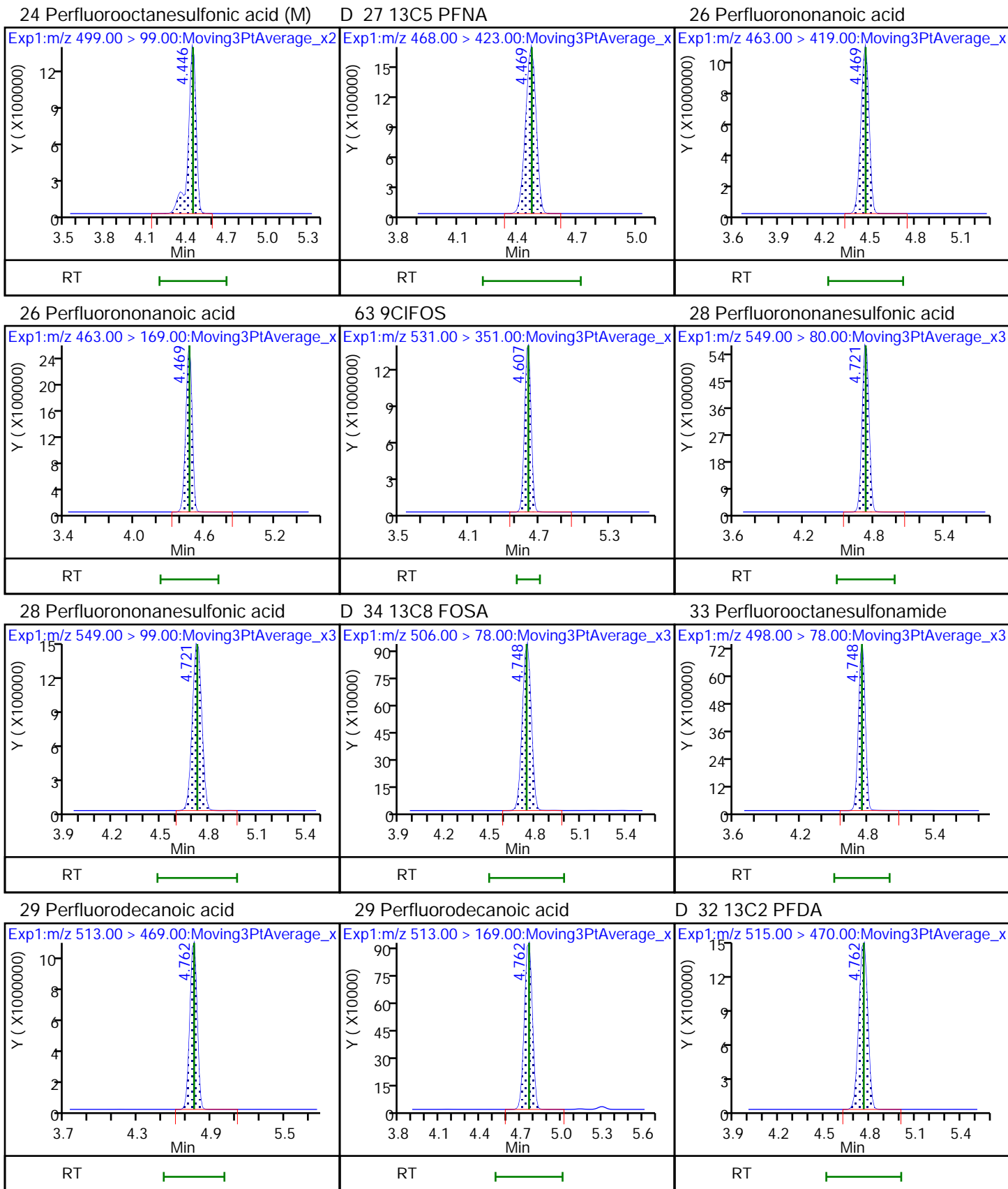


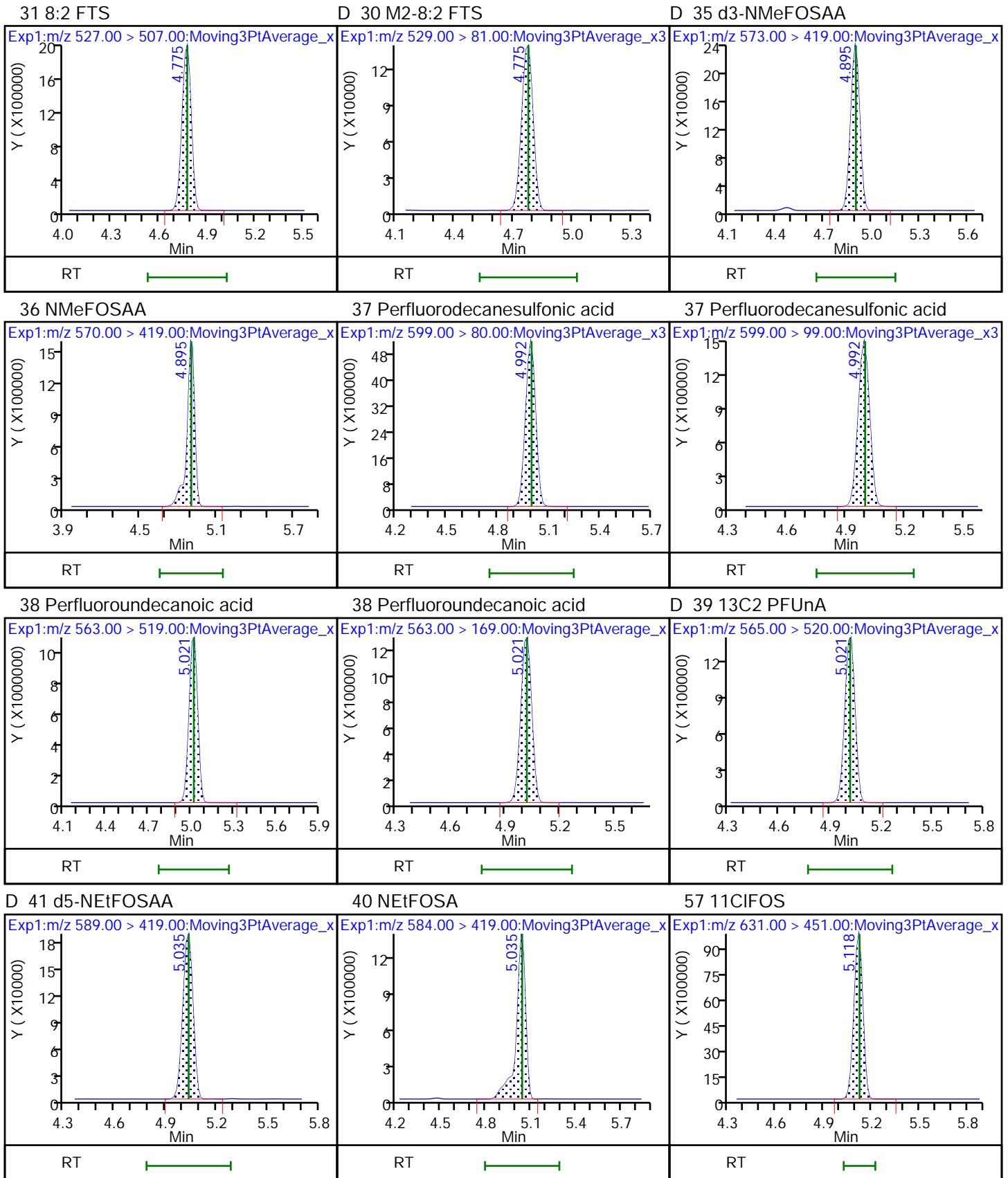
\$ 47 13C8 PFOS

D 25 13C4 PFOS

24 Perfluorooctanesulfonic acid (M)



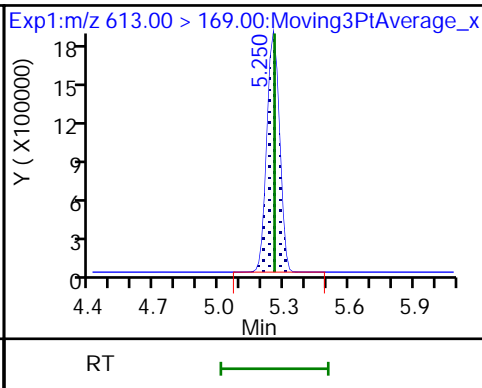
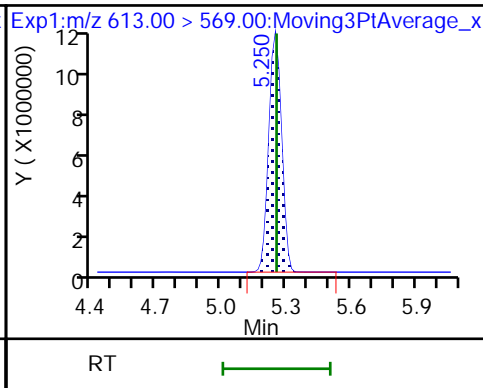
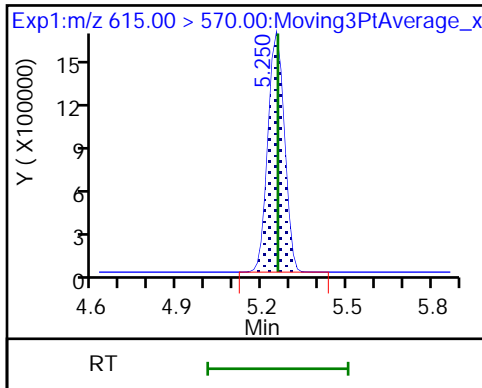




D 43 13C2 PFDoA

42 Perfluorododecanoic acid

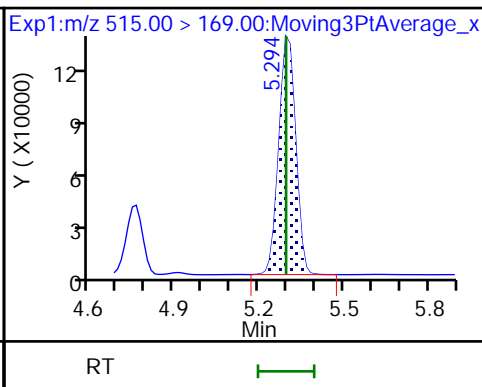
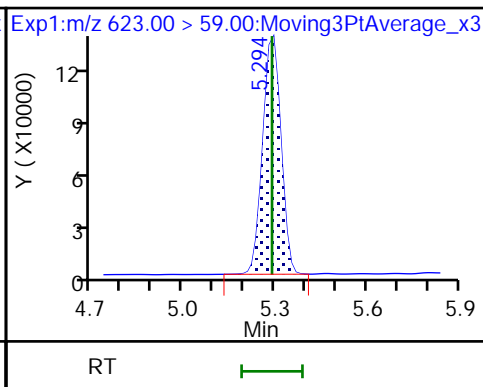
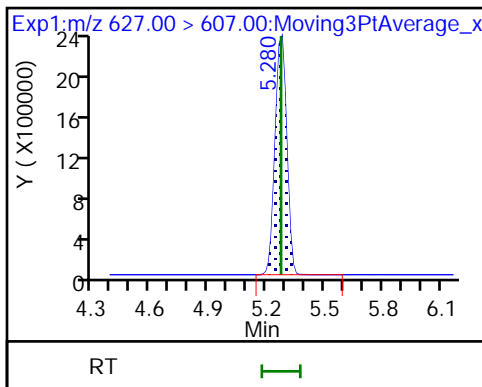
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

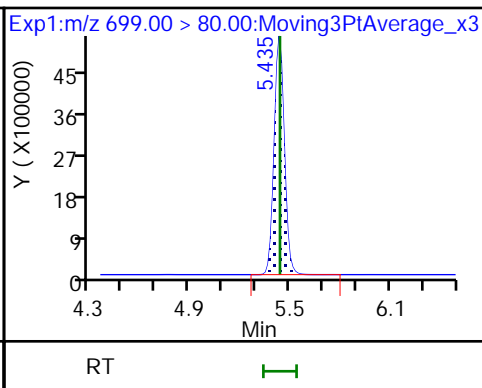
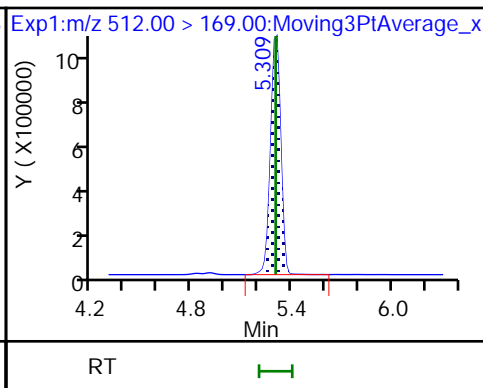
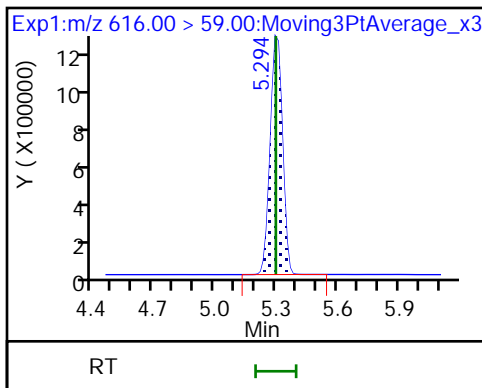
D 58 d-N-MeFOSEA-M



49 N-MeFOSE-M

61 NMeFOSEA

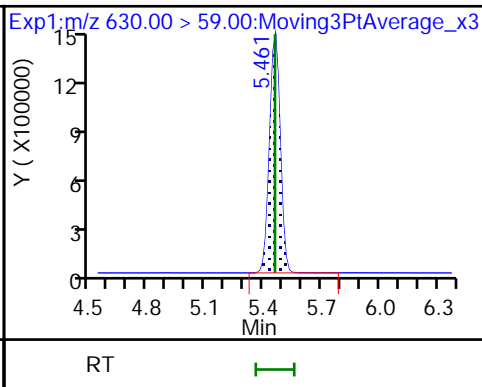
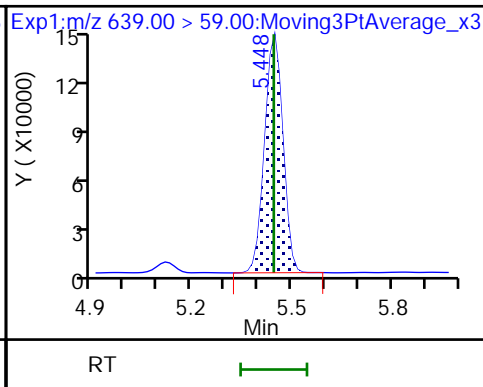
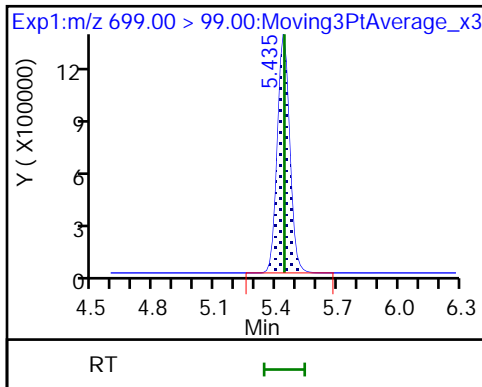
54 PFDoS

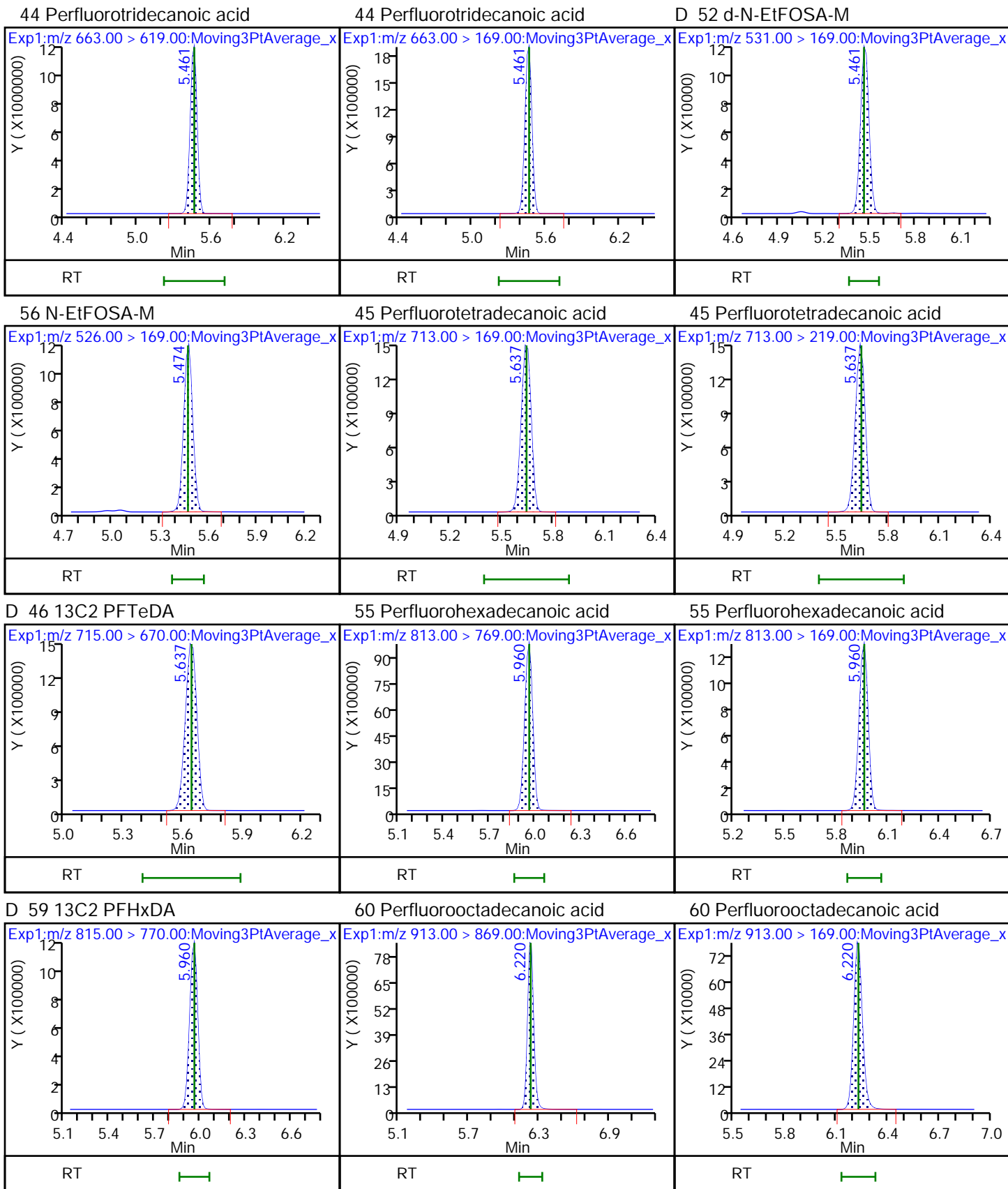


54 PFDoS

D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M





Eurofins TestAmerica, Knoxville

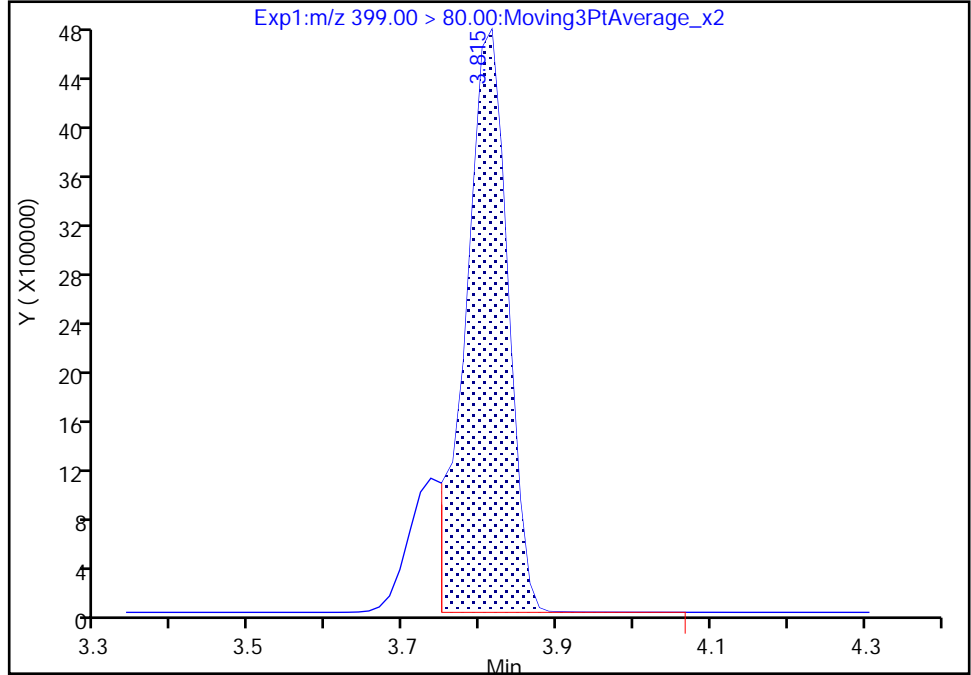
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
Injection Date: 05-Oct-2021 22:53:45 Instrument ID: LCA
Lims ID: IC 7
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

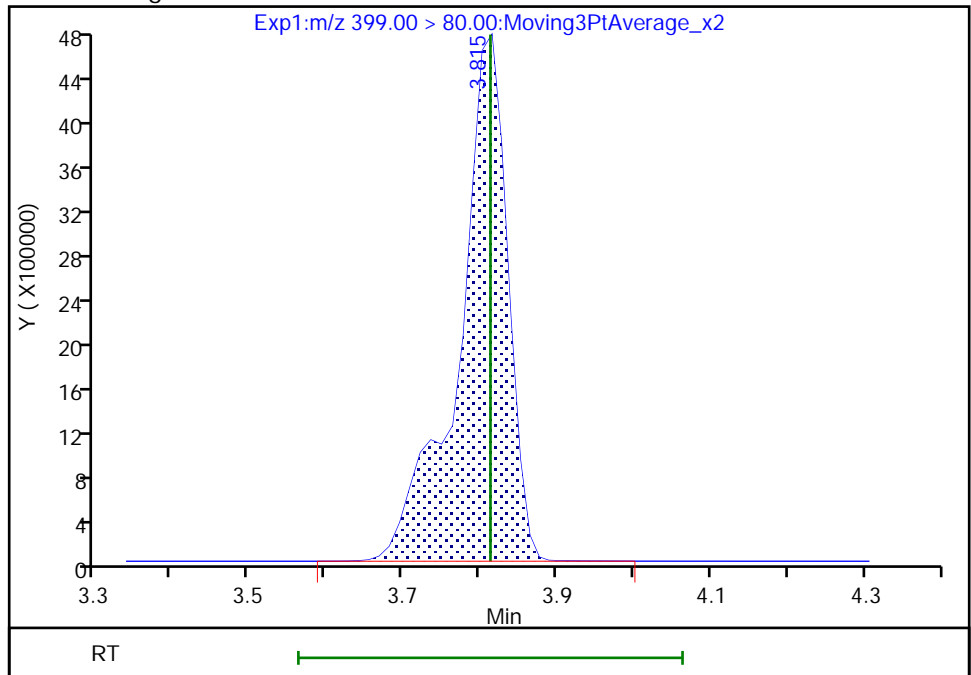
RT: 3.82
Area: 17752237
Amount: 7.618888
Amount Units: ng/ml

Processing Integration Results



RT: 3.82
Area: 20867517
Amount: 9.227640
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:05:31
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

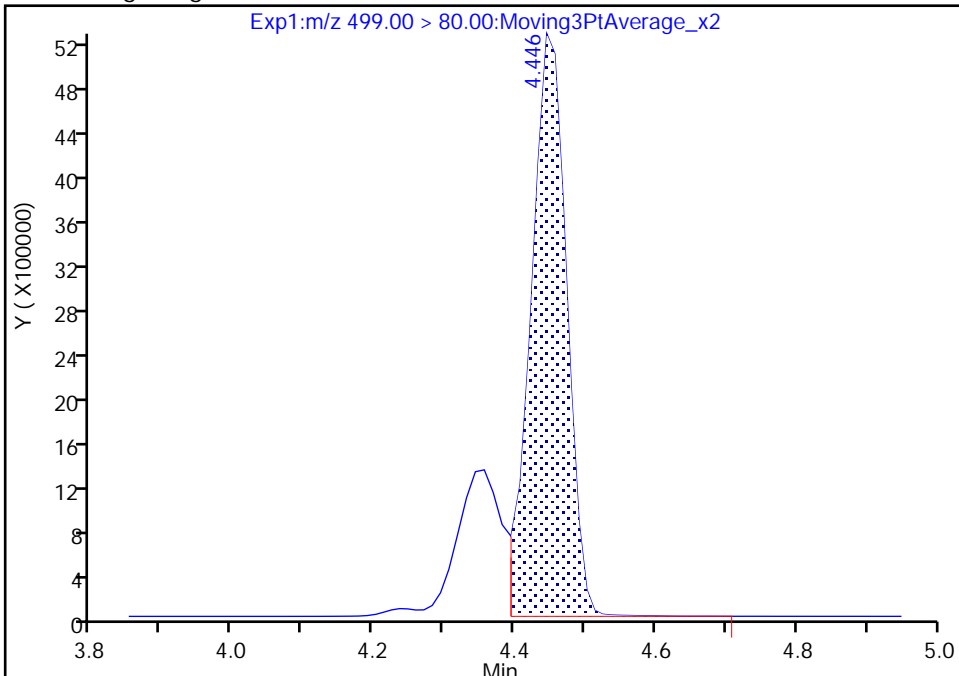
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
Injection Date: 05-Oct-2021 22:53:45 Instrument ID: LCA
Lims ID: IC 7
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

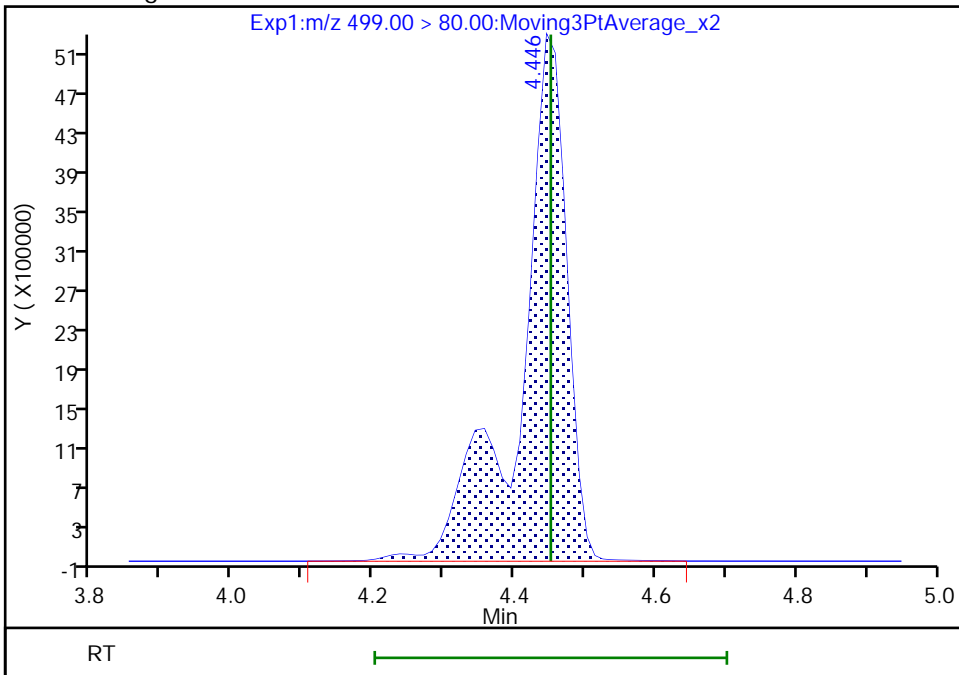
RT: 4.45
Area: 18406903
Amount: 7.315827
Amount Units: ng/ml

Processing Integration Results



RT: 4.45
Area: 24369559
Amount: 9.344772
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:05:44
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

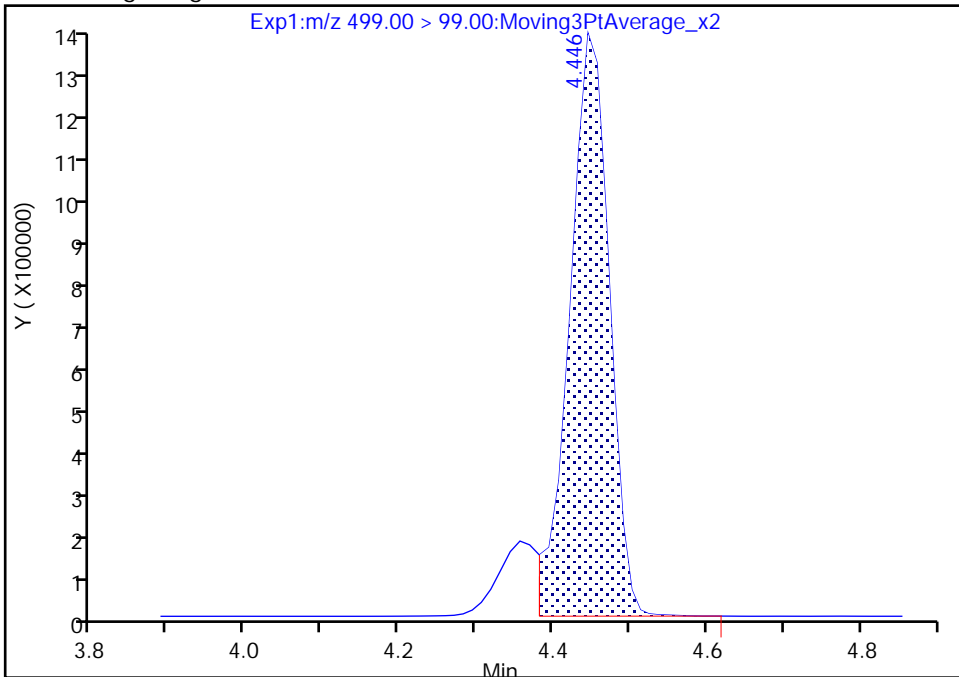
Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
Injection Date: 05-Oct-2021 22:53:45 Instrument ID: LCA
Lims ID: IC 7
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

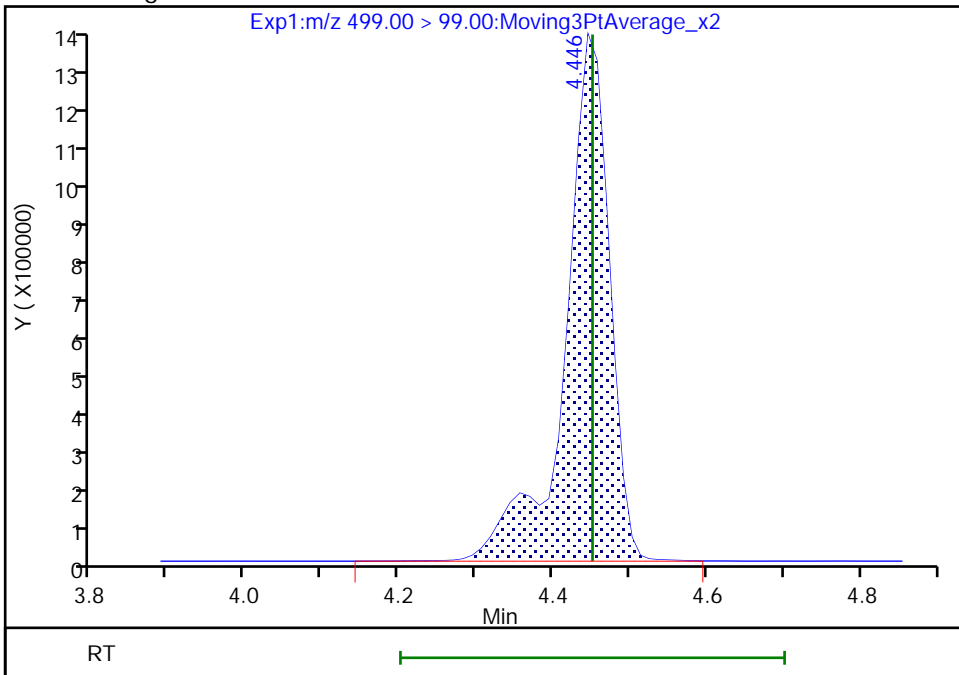
RT: 4.45
Area: 4892596
Amount: 7.315827
Amount Units: ng/ml

Processing Integration Results



RT: 4.45
Area: 5504556
Amount: 9.344772
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:05:54

Audit Action: Manually Integrated

Audit Reason: Baseline

Calibration

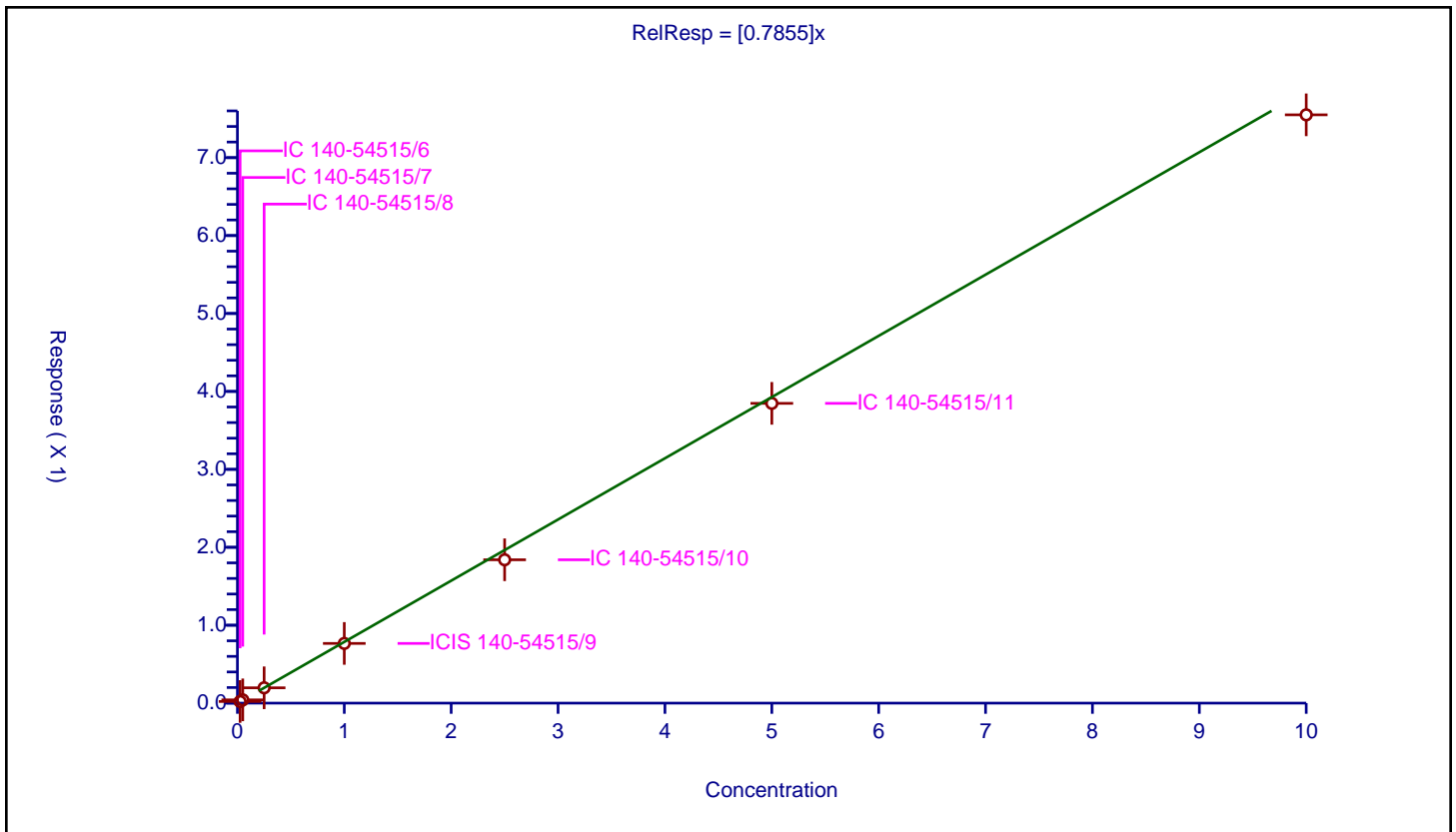
/ Perfluorobutanoic acid

Curve Type: Average
 Weighting: Conc_Sq
 Origin: Force
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.7855

Error Coefficients	
Standard Error:	18900000
Relative Standard Error:	5.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.021105	1.25	7141181.0	0.844181	Y
2	IC 140-54515/7	0.05	0.042031	1.25	7272665.0	0.840613	Y
3	IC 140-54515/8	0.25	0.196797	1.25	7228968.0	0.78719	Y
4	ICIS 140-54515/9	1.0	0.766206	1.25	7289844.0	0.766206	Y
5	IC 140-54515/10	2.5	1.839568	1.25	7094947.0	0.735827	Y
6	IC 140-54515/11	5.0	3.846791	1.25	6729747.0	0.769358	Y
7	IC 140-54515/12	10.0	7.549469	1.25	6596355.0	0.754947	Y



Calibration

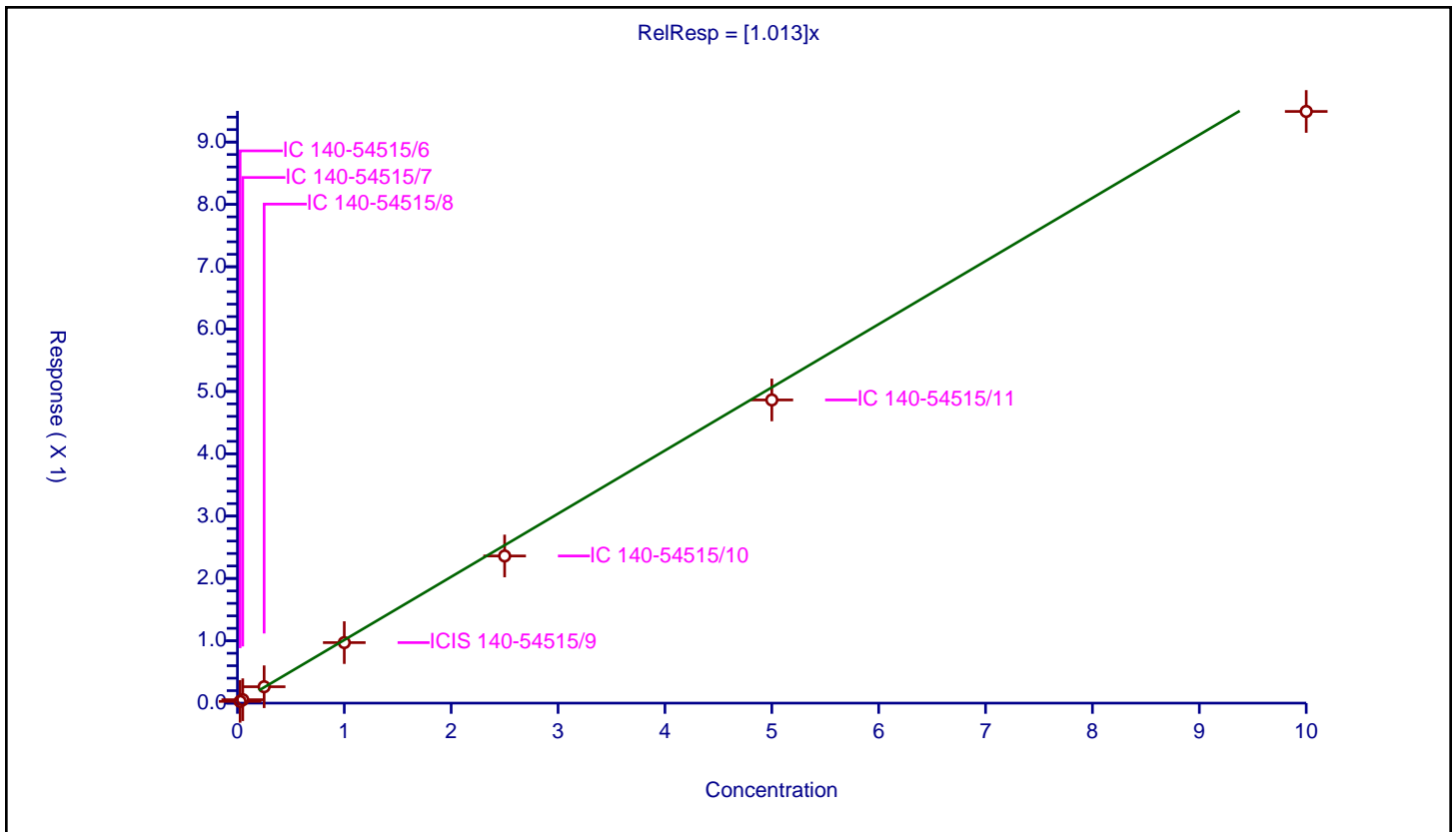
/ Perfluoropentanoic acid

Curve Type: Average
 Weighting: Conc_Sq
 Origin: Force
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.013

Error Coefficients	
Standard Error:	19300000
Relative Standard Error:	6.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.027609	1.25	5998363.0	1.104343	Y
2	IC 140-54515/7	0.05	0.054904	1.25	6008895.0	1.098076	Y
3	IC 140-54515/8	0.25	0.262932	1.25	6049600.0	1.051729	Y
4	ICIS 140-54515/9	1.0	0.97069	1.25	5943333.0	0.97069	Y
5	IC 140-54515/10	2.5	2.360733	1.25	5746550.0	0.944293	Y
6	IC 140-54515/11	5.0	4.863529	1.25	5431895.0	0.972706	Y
7	IC 140-54515/12	10.0	9.491167	1.25	5348940.0	0.949117	Y



Calibration

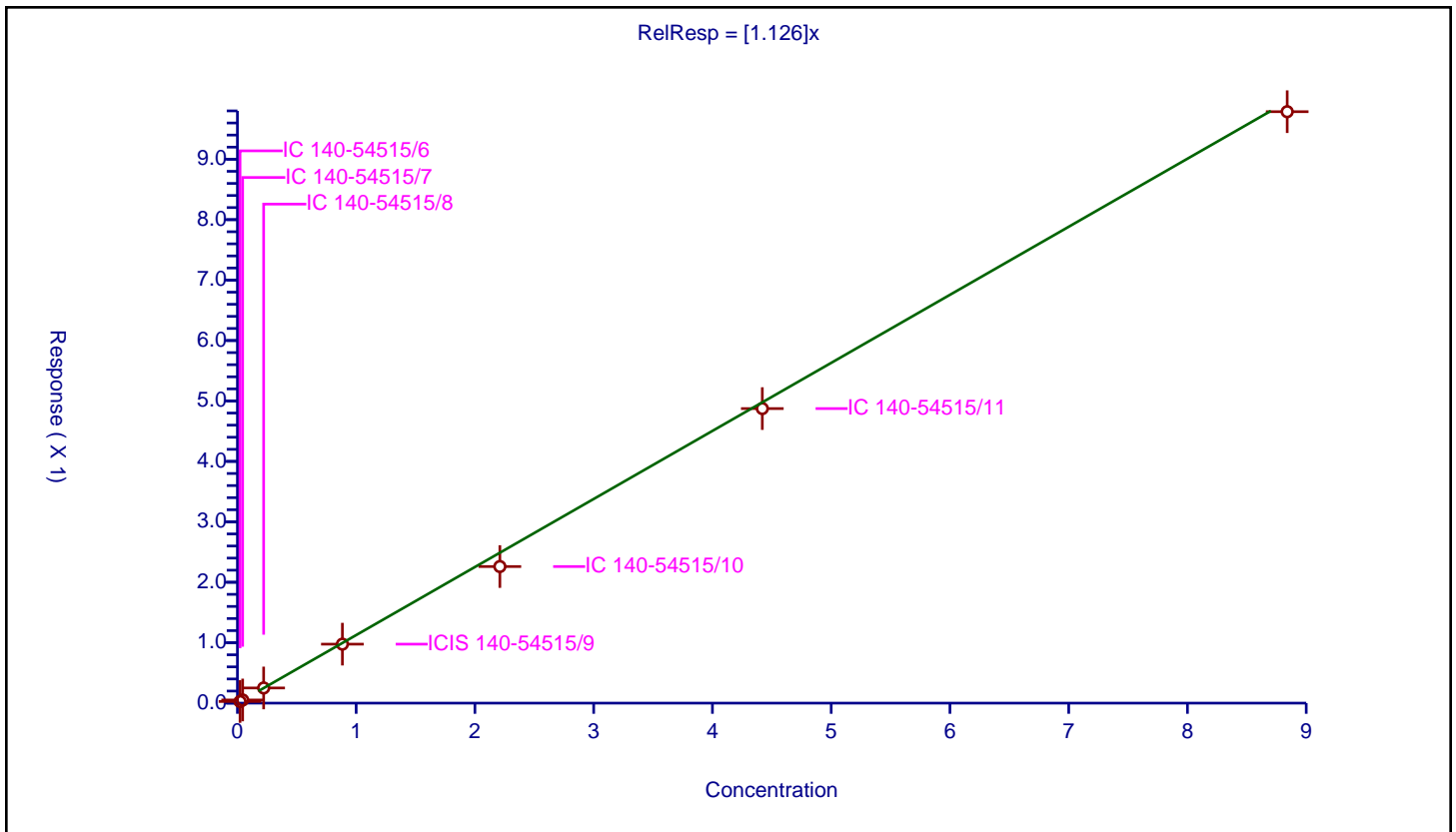
/ Perfluorobutanesulfonic acid

Curve Type: Average
 Weighting: Conc_Sq
 Origin: Force
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.126

Error Coefficients	
Standard Error:	13100000
Relative Standard Error:	5.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.0221	0.027066	1.1625	3599561.0	1.224719	Y
2	IC 140-54515/7	0.0442	0.052366	1.1625	3594749.0	1.184743	Y
3	IC 140-54515/8	0.221	0.251188	1.1625	3524723.0	1.136596	Y
4	ICIS 140-54515/9	0.884	0.975775	1.1625	3519158.0	1.103818	Y
5	IC 140-54515/10	2.21	2.260426	1.1625	3524311.0	1.022817	Y
6	IC 140-54515/11	4.42	4.874104	1.1625	3227418.0	1.102738	Y
7	IC 140-54515/12	8.84	9.786628	1.1625	3331755.0	1.107085	Y



Calibration

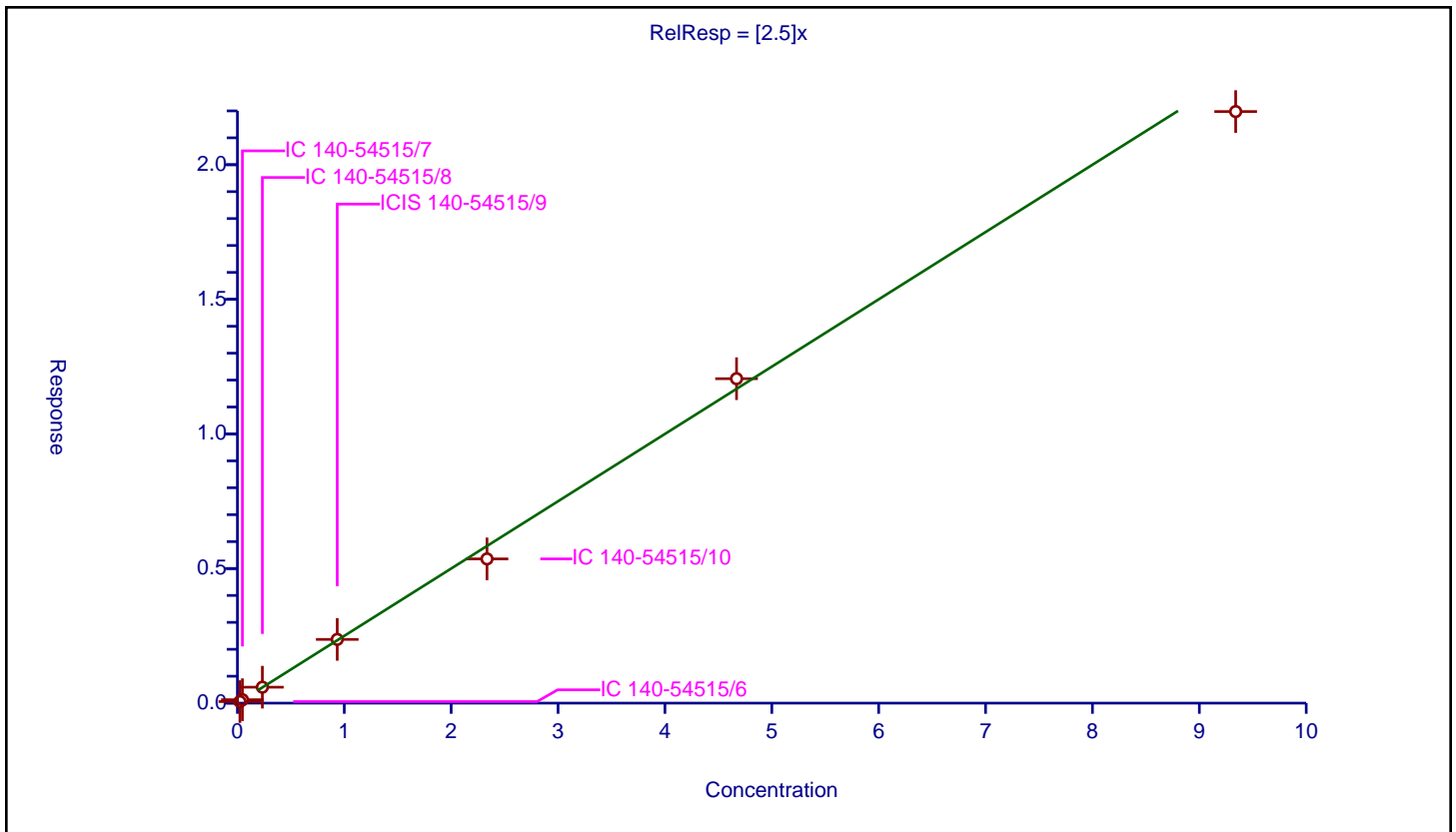
/ 1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2)

Curve Type: Average
 Weighting: Conc_Sq
 Origin: Force
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	2.5

Error Coefficients	
Standard Error:	4100000
Relative Standard Error:	5.7
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.02335	0.057933	1.1675	587242.0	2.48109	Y
2	IC 140-54515/7	0.0467	0.126994	1.1675	570559.0	2.719351	Y
3	IC 140-54515/8	0.2335	0.592147	1.1675	556004.0	2.535962	Y
4	ICIS 140-54515/9	0.934	2.367246	1.1675	518286.0	2.534525	Y
5	IC 140-54515/10	2.335	5.357675	1.1675	532409.0	2.294508	Y
6	IC 140-54515/11	4.67	12.05201	1.1675	455617.0	2.58073	Y
7	IC 140-54515/12	9.34	21.975201	1.1675	449831.0	2.352805	Y



Calibration

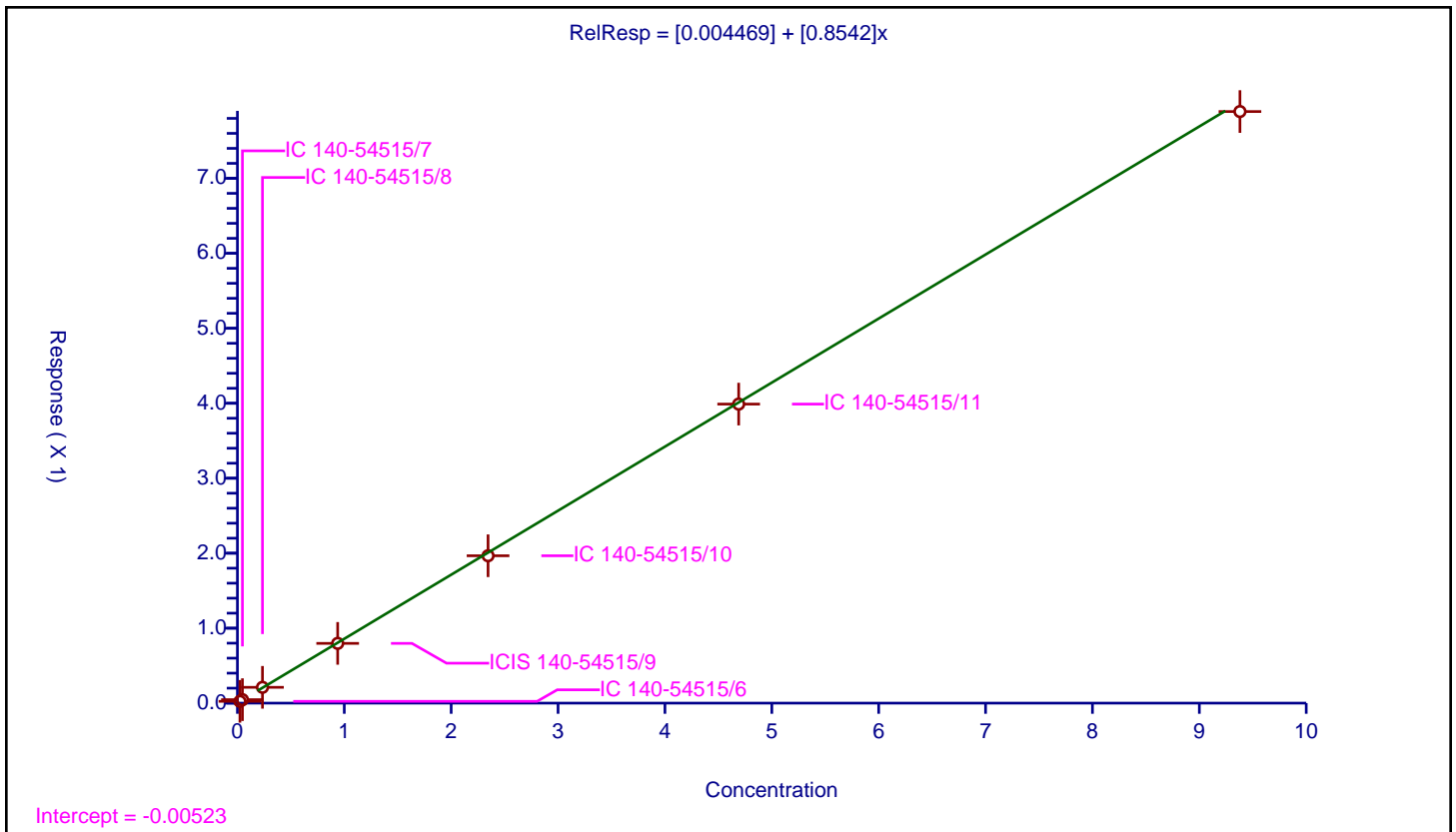
/ Perfluoropentanesulfonic acid

Curve Type: Linear
 Weighting: Conc_Sq
 Origin: None
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.004469
Slope:	0.8542

Error Coefficients	
Standard Error:	11600000
Relative Standard Error:	3.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.02345	0.023953	1.1625	3599561.0	1.021436	Y
2	IC 140-54515/7	0.0469	0.046521	1.1625	3594749.0	0.991927	Y
3	IC 140-54515/8	0.2345	0.210876	1.1625	3524723.0	0.899259	Y
4	ICIS 140-54515/9	0.938	0.797055	1.1625	3519158.0	0.849738	Y
5	IC 140-54515/10	2.345	1.965971	1.1625	3524311.0	0.838367	Y
6	IC 140-54515/11	4.69	3.98876	1.1625	3227418.0	0.850482	Y
7	IC 140-54515/12	9.38	7.89126	1.1625	3331755.0	0.841286	Y



Calibration

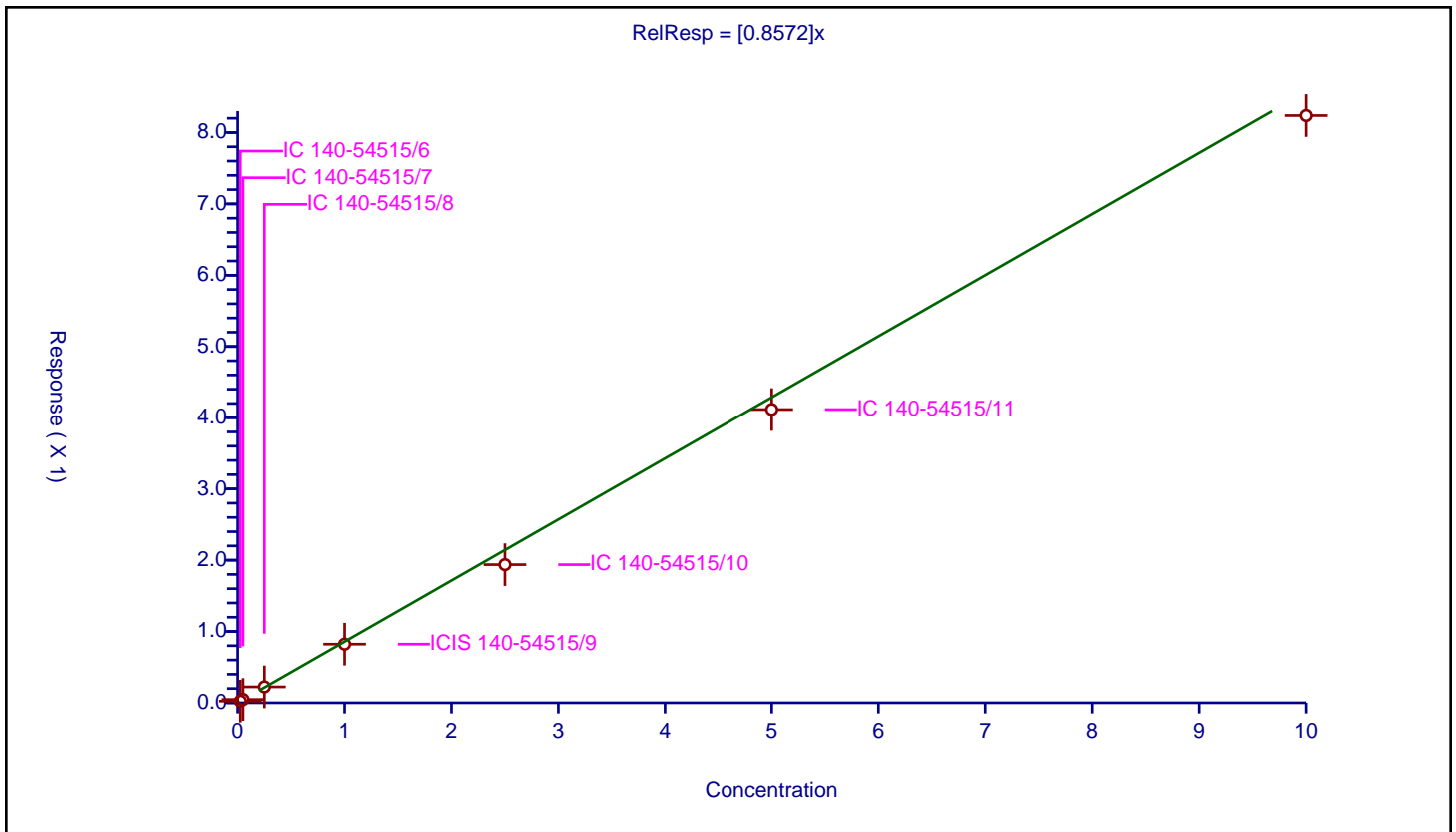
/ Perfluorohexanoic acid

Curve Type: Average
 Weighting: Conc_Sq
 Origin: Force
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.8572

Error Coefficients	
Standard Error:	16900000
Relative Standard Error:	7.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.023346	1.25	6253583.0	0.933833	Y
2	IC 140-54515/7	0.05	0.046541	1.25	6243564.0	0.930827	Y
3	IC 140-54515/8	0.25	0.222995	1.25	5953465.0	0.891979	Y
4	ICIS 140-54515/9	1.0	0.821976	1.25	6116663.0	0.821976	Y
5	IC 140-54515/10	2.5	1.937505	1.25	6061274.0	0.775002	Y
6	IC 140-54515/11	5.0	4.114921	1.25	5603980.0	0.822984	Y
7	IC 140-54515/12	10.0	8.238088	1.25	5402140.0	0.823809	Y



Calibration

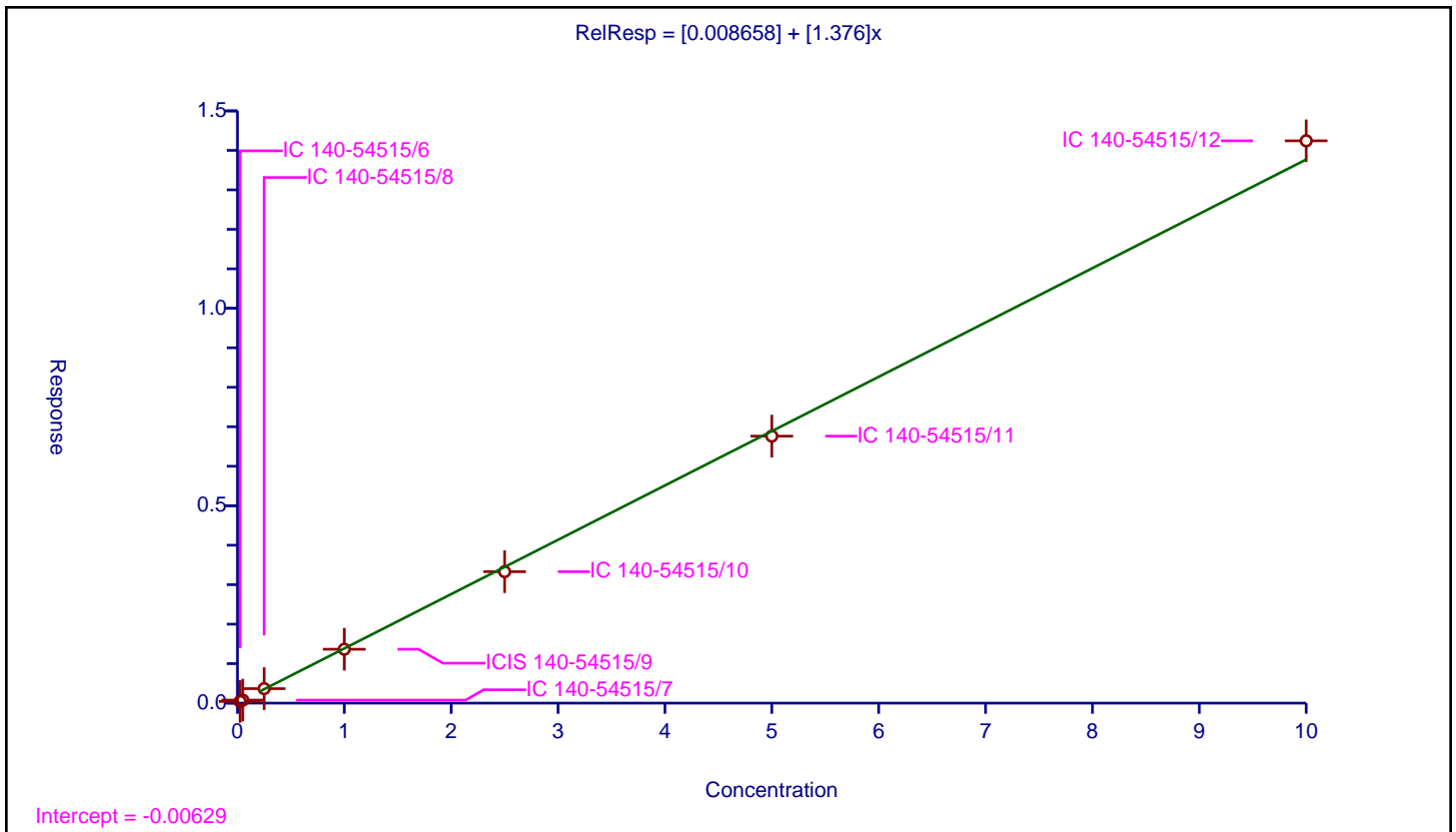
/ Perfluoro(2-propoxypropanoic) acid

Curve Type: Linear
Weighting: Conc_Sq
Origin: None
Dependency: Response
Calib Mode: IsoDil
Response Base: AREA
RF Rounding: 0

Curve Coefficients	
Intercept:	0.008658
Slope:	1.376

Error Coefficients	
Standard Error:	16500000
Relative Standard Error:	3.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.04311	1.25	3066694.0	1.724398	Y
2	IC 140-54515/7	0.05	0.076779	1.25	3086719.0	1.535579	Y
3	IC 140-54515/8	0.25	0.366907	1.25	3069191.0	1.467626	Y
4	ICIS 140-54515/9	1.0	1.364867	1.25	3166510.0	1.364867	Y
5	IC 140-54515/10	2.5	3.329118	1.25	3145011.0	1.331647	Y
6	IC 140-54515/11	5.0	6.762303	1.25	2964356.0	1.352461	Y
7	IC 140-54515/12	10.0	14.242429	1.25	2798495.0	1.424243	Y



Calibration

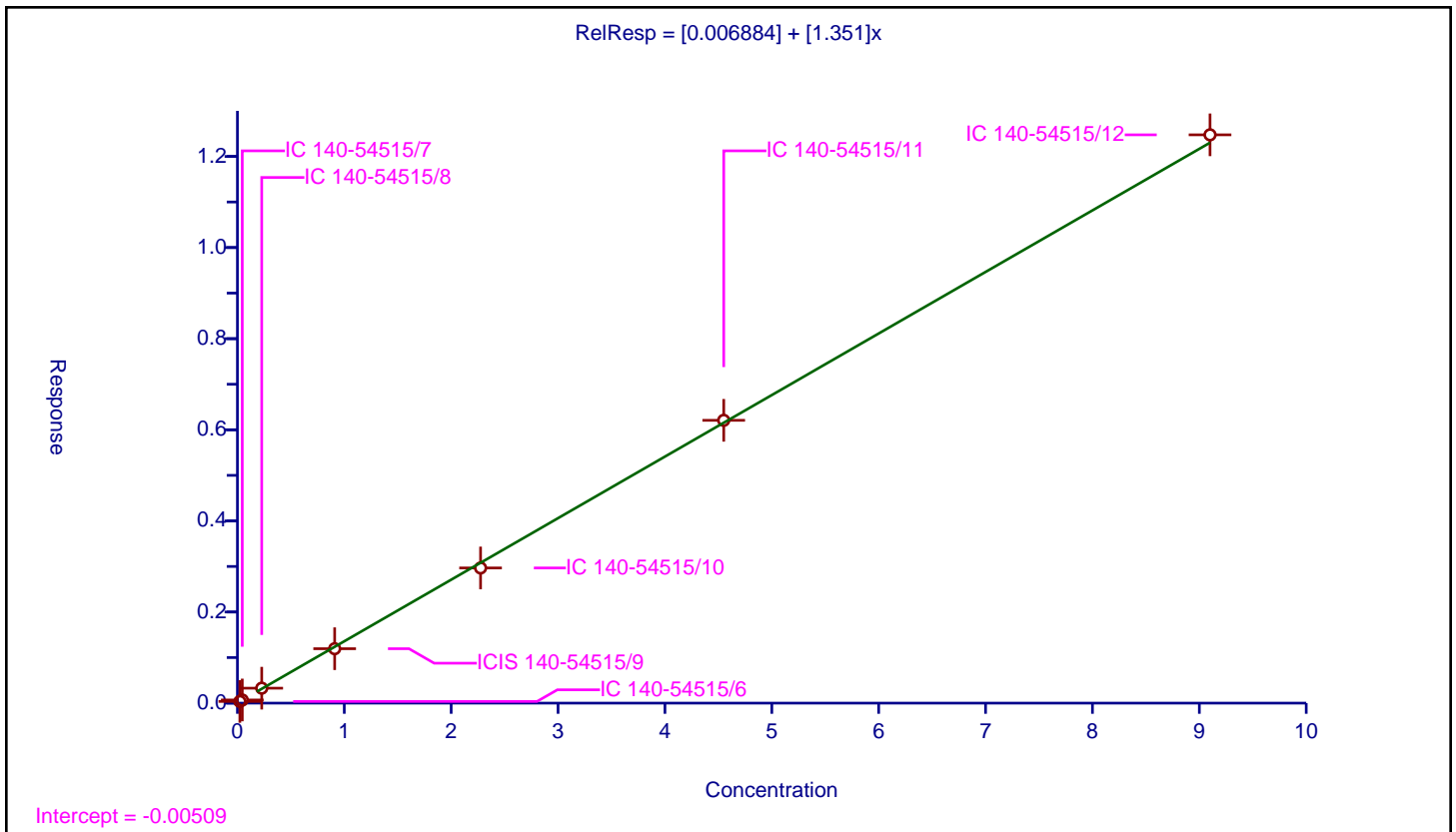
/ Perfluorohexanesulfonic acid

Curve Type: Linear
Weighting: Conc_Sq
Origin: None
Dependency: Response
Calib Mode: IsoDil
Response Base: AREA
RF Rounding: 0

Curve Coefficients	
Intercept:	0.006884
Slope:	1.351

Error Coefficients	
Standard Error:	10800000
Relative Standard Error:	3.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.02275	0.037343	1.1825	2213335.0	1.641463	Y
2	IC 140-54515/7	0.0455	0.069041	1.1825	2261386.0	1.517391	Y
3	IC 140-54515/8	0.2275	0.328512	1.1825	2138254.0	1.44401	Y
4	ICIS 140-54515/9	0.91	1.194419	1.1825	2269288.0	1.312548	Y
5	IC 140-54515/10	2.275	2.966971	1.1825	2104634.0	1.304163	Y
6	IC 140-54515/11	4.55	6.207591	1.1825	2021420.0	1.364306	Y
7	IC 140-54515/12	9.1	12.474345	1.1825	1978127.0	1.370807	Y



Calibration

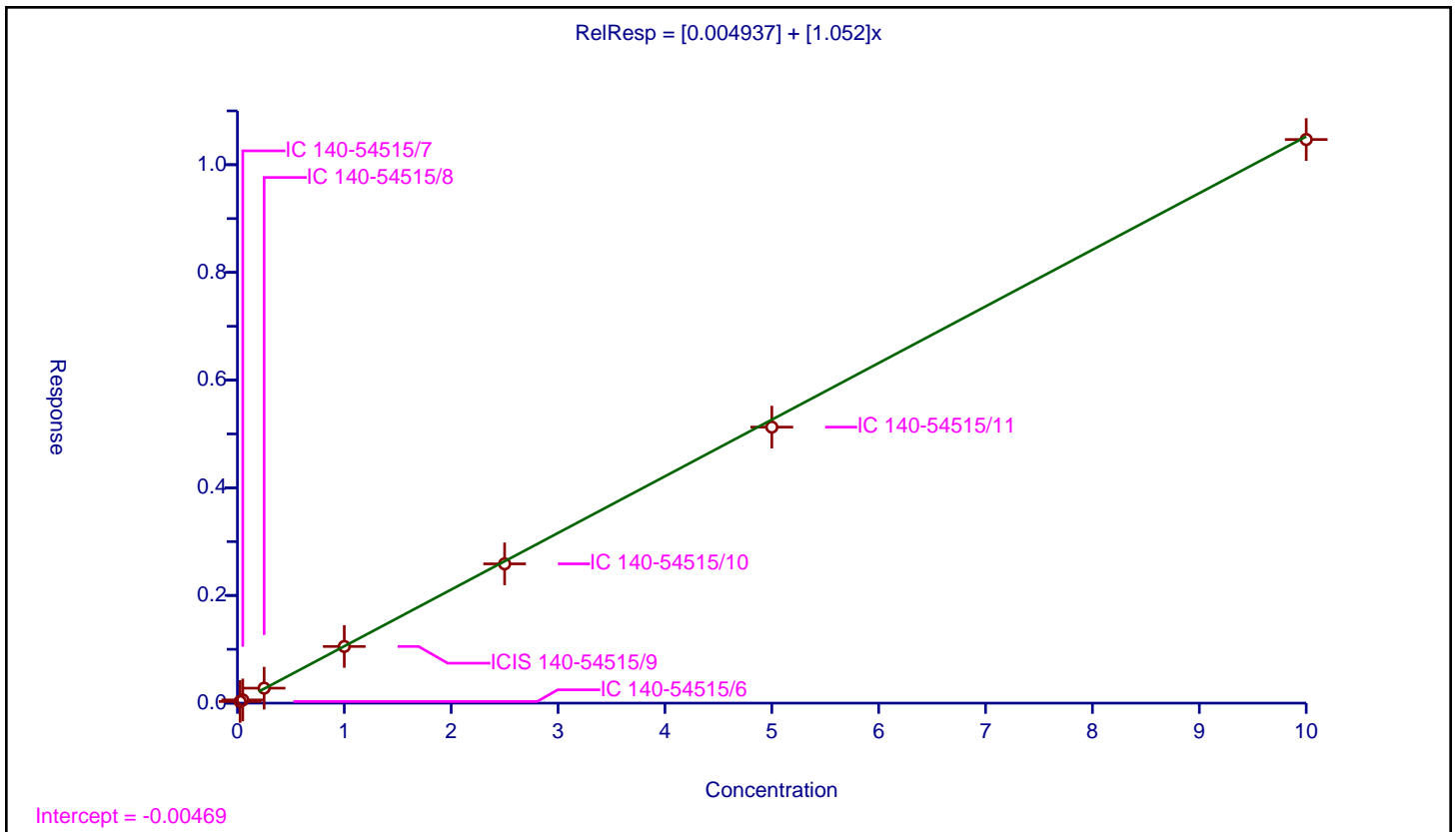
/ Perfluoroheptanoic acid

Curve Type: Linear
 Weighting: Conc_Sq
 Origin: None
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.004937
Slope:	1.052

Error Coefficients	
Standard Error:	23100000
Relative Standard Error:	3.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.030651	1.25	6057062.0	1.226032	Y
2	IC 140-54515/7	0.05	0.059505	1.25	6219868.0	1.190102	Y
3	IC 140-54515/8	0.25	0.278092	1.25	6105640.0	1.112367	Y
4	ICIS 140-54515/9	1.0	1.052325	1.25	6294659.0	1.052325	Y
5	IC 140-54515/10	2.5	2.586738	1.25	5824750.0	1.034695	Y
6	IC 140-54515/11	5.0	5.126628	1.25	5764452.0	1.025326	Y
7	IC 140-54515/12	10.0	10.468056	1.25	5261701.0	1.046806	Y



Calibration

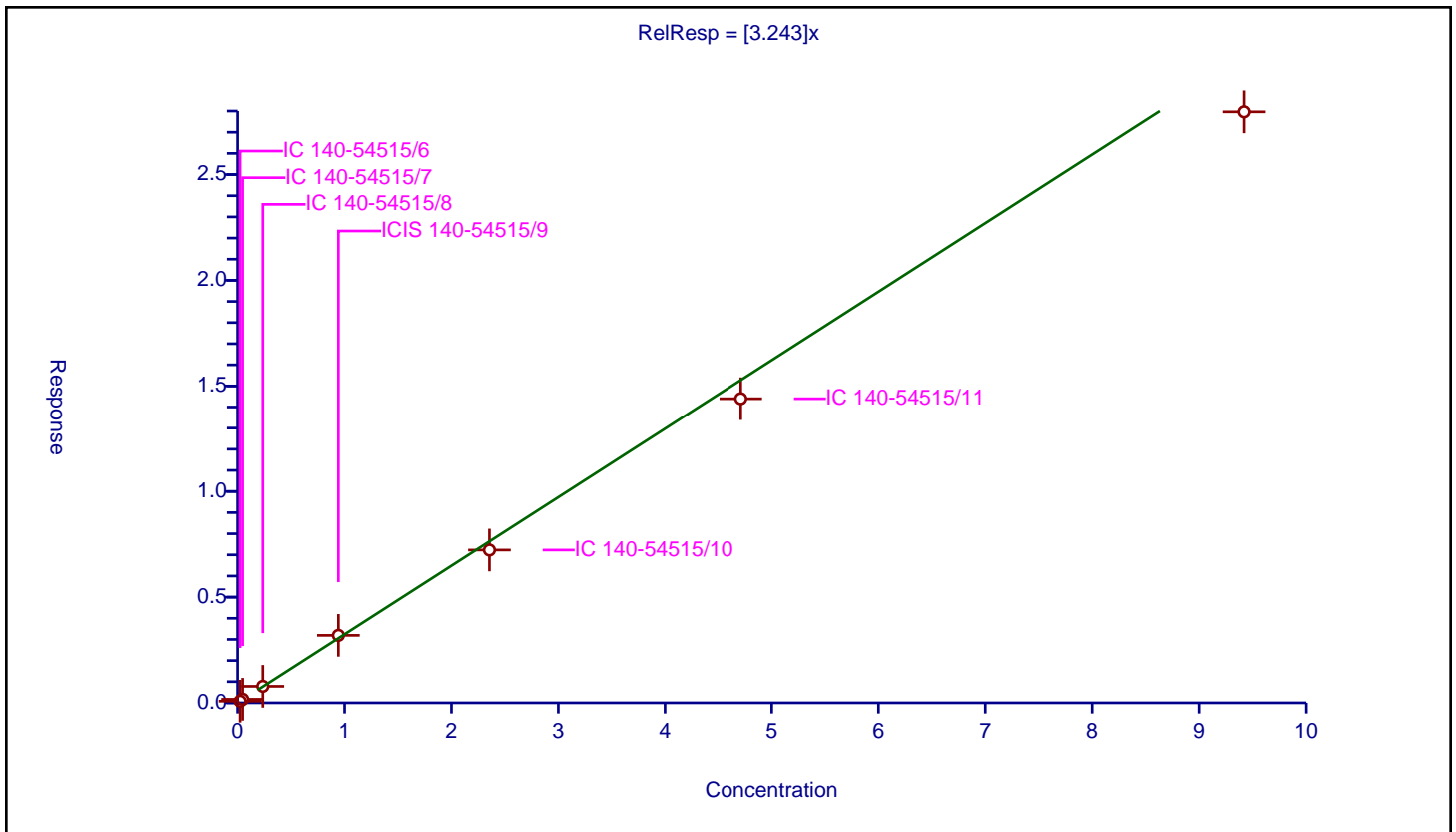
/ DONA

Curve Type: Average
 Weighting: Conc_Sq
 Origin: Force
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	3.243

Error Coefficients	
Standard Error:	31600000
Relative Standard Error:	6.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.02355	0.078328	1.195	3069142.0	3.326024	Y
2	IC 140-54515/7	0.0471	0.168684	1.195	3022370.0	3.581408	Y
3	IC 140-54515/8	0.2355	0.78013	1.195	3044513.0	3.312654	Y
4	ICIS 140-54515/9	0.942	3.192408	1.195	3054456.0	3.388968	Y
5	IC 140-54515/10	2.355	7.229622	1.195	2955831.0	3.069903	Y
6	IC 140-54515/11	4.71	14.395098	1.195	2860822.0	3.056284	Y
7	IC 140-54515/12	9.42	27.962407	1.195	2833668.0	2.968408	Y



Calibration

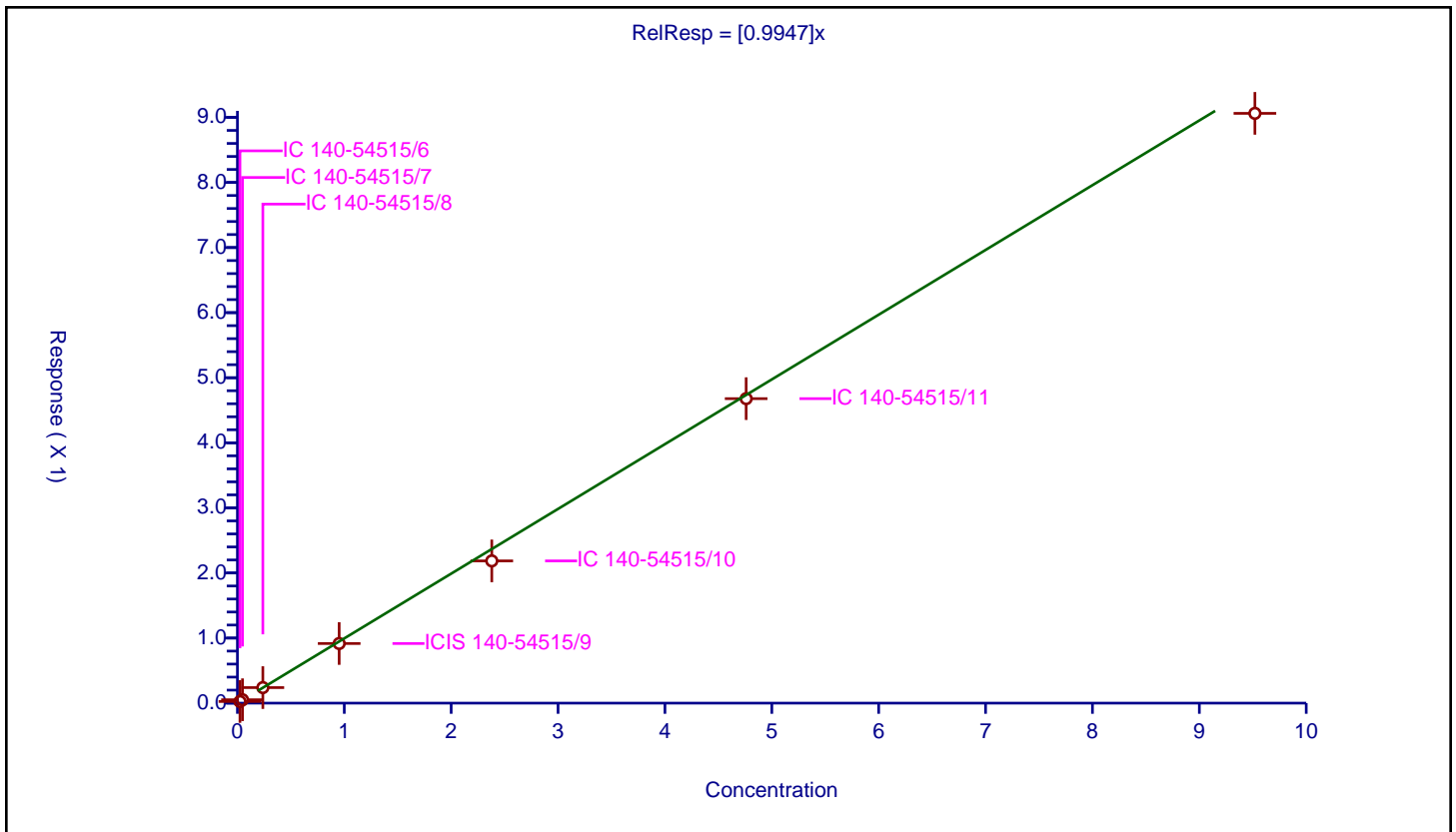
/ Perfluoroheptanesulfonic acid

Curve Type: Average
 Weighting: Conc_Sq
 Origin: Force
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.9947

Error Coefficients	
Standard Error:	10200000
Relative Standard Error:	6.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.0238	0.024985	1.195	3069142.0	1.049799	Y
2	IC 140-54515/7	0.0476	0.052111	1.195	3022370.0	1.094776	Y
3	IC 140-54515/8	0.238	0.238762	1.195	3044513.0	1.003201	Y
4	ICIS 140-54515/9	0.952	0.91617	1.195	3054456.0	0.962363	Y
5	IC 140-54515/10	2.38	2.185495	1.195	2955831.0	0.918275	Y
6	IC 140-54515/11	4.76	4.678514	1.195	2860822.0	0.982881	Y
7	IC 140-54515/12	9.52	9.062106	1.195	2833668.0	0.951902	Y



Calibration

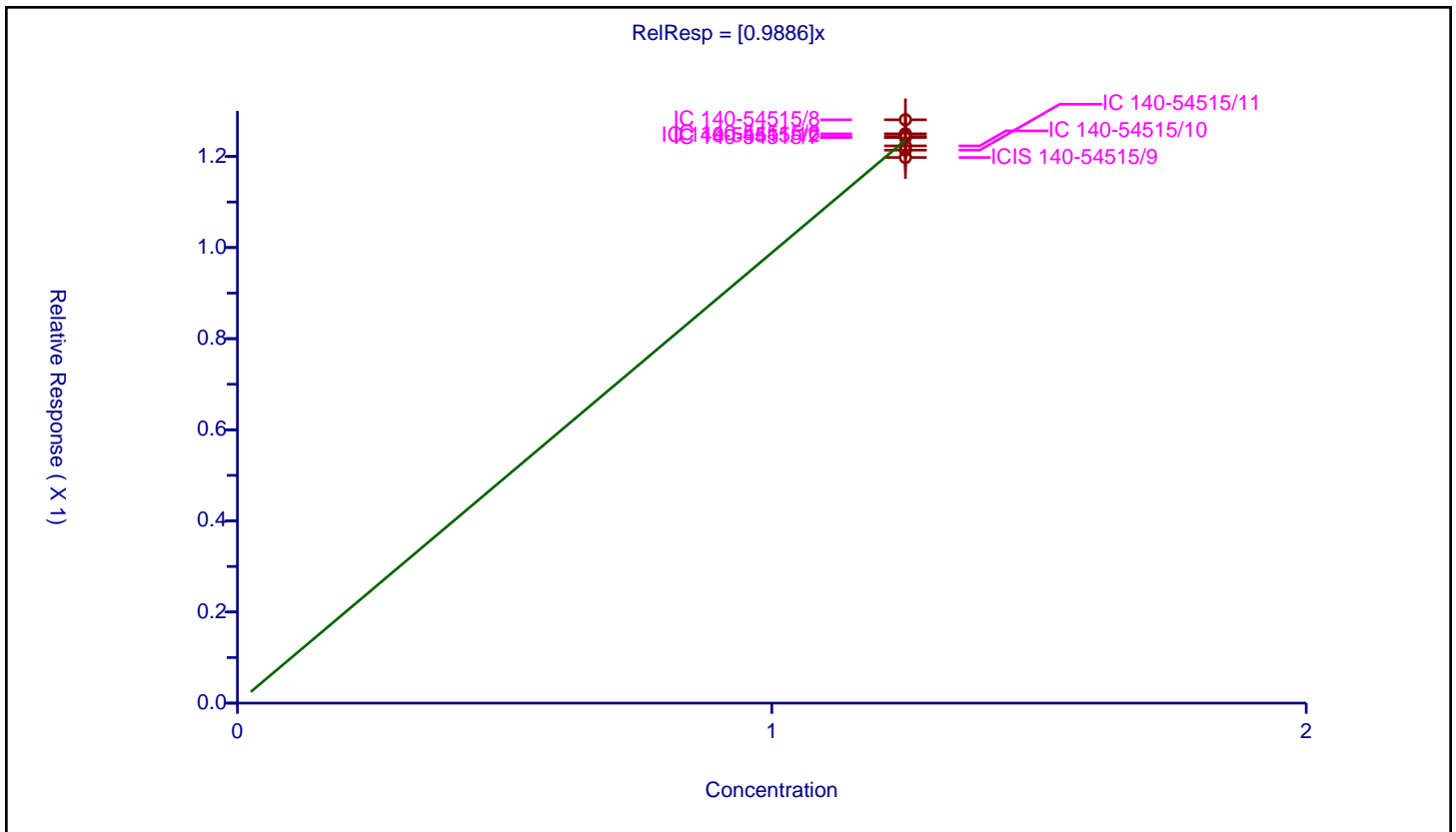
/ 13C8 PFOA

Curve Type: Average
Weighting: Conc_Sq
Origin: Force
Dependency: Response
Calib Mode: ISTD
Response Base: AREA
RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.9886

Error Coefficients	
Standard Error:	5700000
Relative Standard Error:	2.2
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	1.25	1.249731	1.25	5394236.0	0.999785	Y
2	IC 140-54515/7	1.25	1.241442	1.25	5631791.0	0.993154	Y
3	IC 140-54515/8	1.25	1.280526	1.25	5270606.0	1.024421	Y
4	ICIS 140-54515/9	1.25	1.197729	1.25	5652969.0	0.958184	Y
5	IC 140-54515/10	1.25	1.223161	1.25	5374730.0	0.978529	Y
6	IC 140-54515/11	1.25	1.213885	1.25	5145778.0	0.971108	Y
7	IC 140-54515/12	1.25	1.243862	1.25	4831158.0	0.99509	Y



Calibration

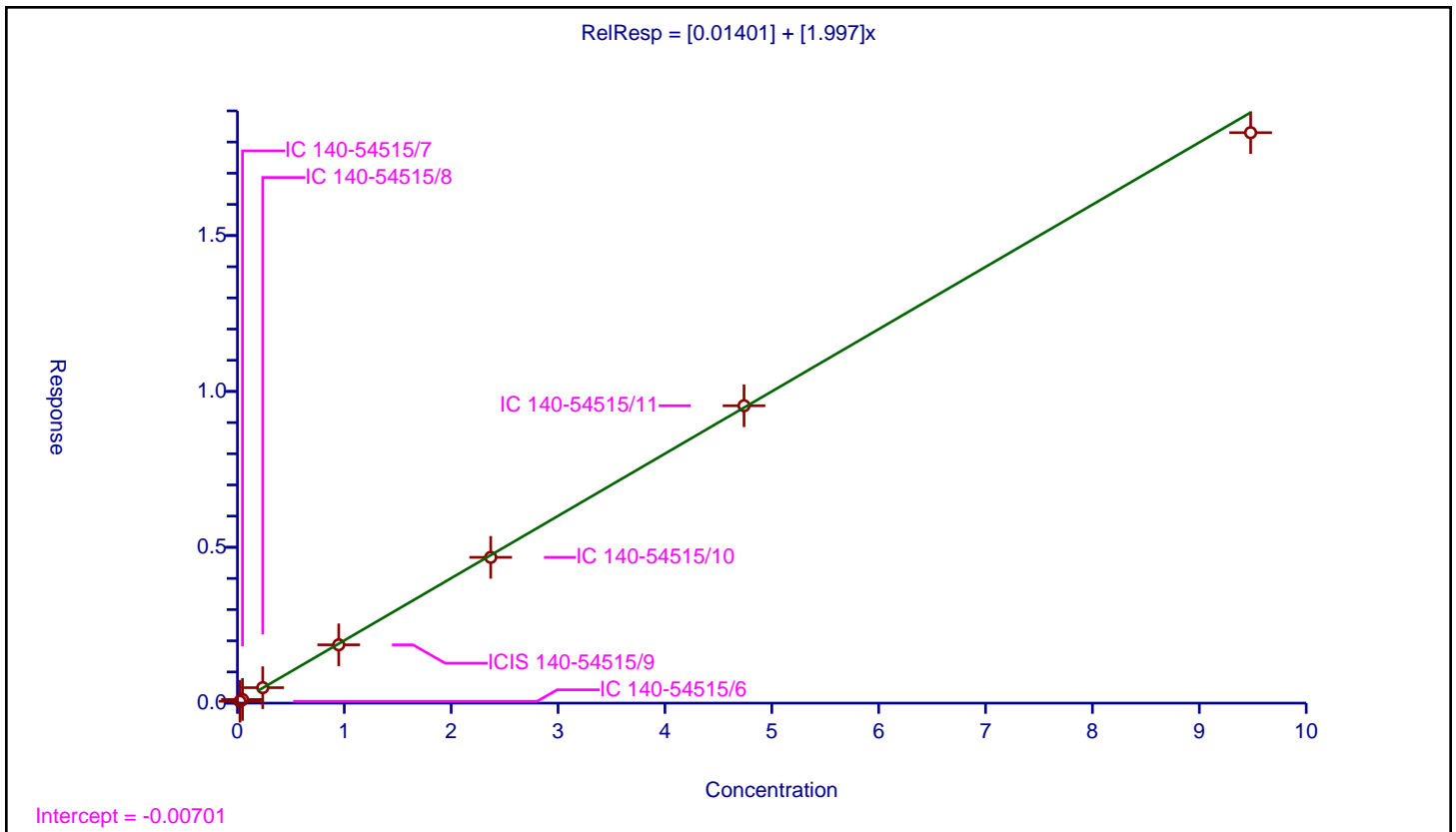
/ 1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)

Curve Type: Linear
 Weighting: Conc_Sq
 Origin: None
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.01401
Slope:	1.997

Error Coefficients	
Standard Error:	3870000
Relative Standard Error:	5.0
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.0237	0.059151	1.1875	567503.0	2.495814	Y
2	IC 140-54515/7	0.0474	0.11724	1.1875	600900.0	2.473422	Y
3	IC 140-54515/8	0.237	0.495657	1.1875	578119.0	2.091378	Y
4	ICIS 140-54515/9	0.948	1.871221	1.1875	574488.0	1.973862	Y
5	IC 140-54515/10	2.37	4.676945	1.1875	528850.0	1.973394	Y
6	IC 140-54515/11	4.74	9.540824	1.1875	496216.0	2.012832	Y
7	IC 140-54515/12	9.48	18.301357	1.1875	476601.0	1.930523	Y



Calibration

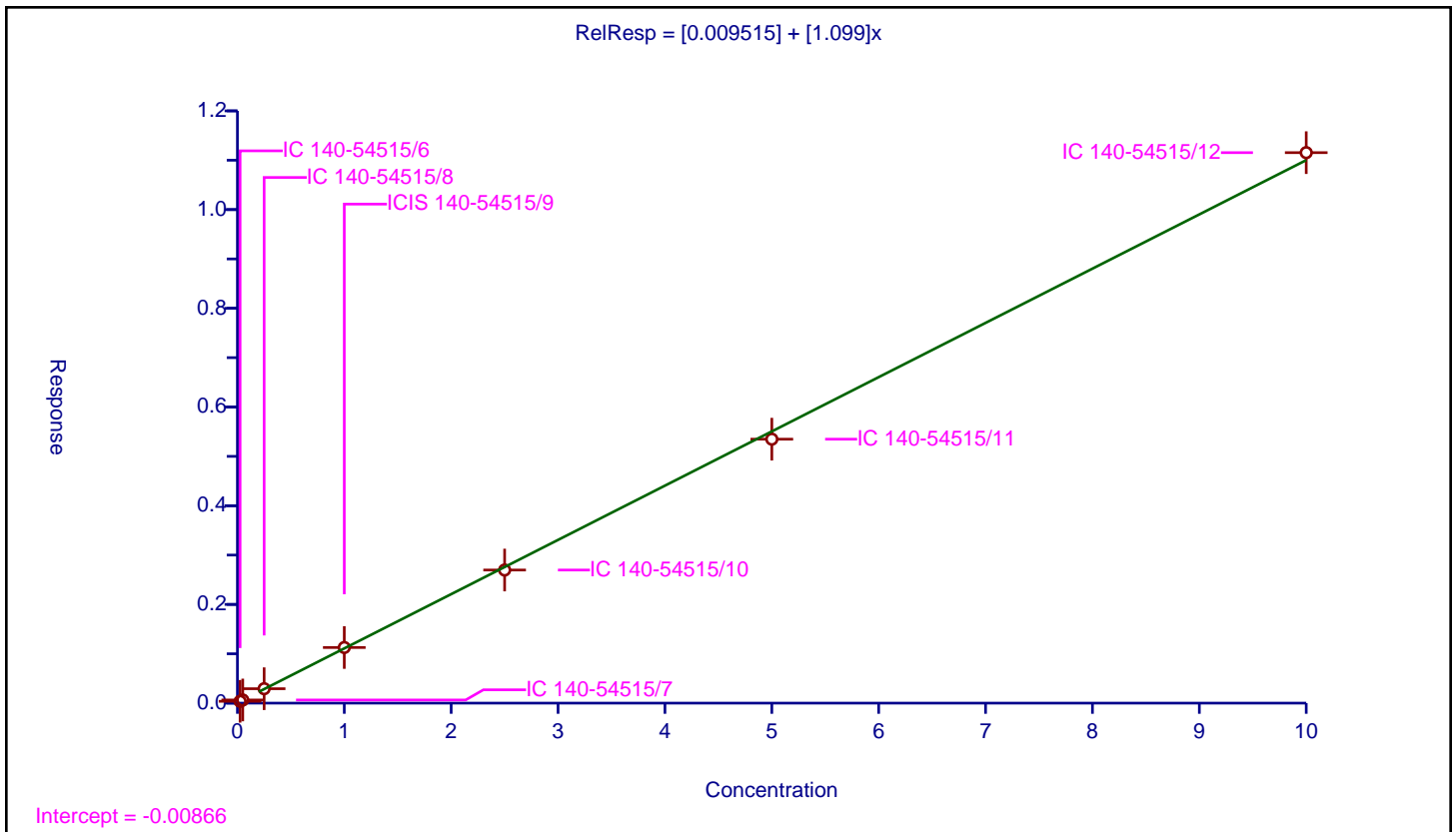
/ Perfluorooctanoic acid

Curve Type: Linear
 Weighting: Conc_Sq
 Origin: None
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.009515
Slope:	1.099

Error Coefficients	
Standard Error:	21900000
Relative Standard Error:	2.3
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.037071	1.25	5358656.0	1.482844	Y
2	IC 140-54515/7	0.05	0.063851	1.25	5777544.0	1.277026	Y
3	IC 140-54515/8	0.25	0.292198	1.25	5410657.0	1.168791	Y
4	ICIS 140-54515/9	1.0	1.127211	1.25	5619219.0	1.127211	Y
5	IC 140-54515/10	2.5	2.697157	1.25	5484596.0	1.078863	Y
6	IC 140-54515/11	5.0	5.348314	1.25	5265292.0	1.069663	Y
7	IC 140-54515/12	10.0	11.153867	1.25	4654864.0	1.115387	Y



Calibration

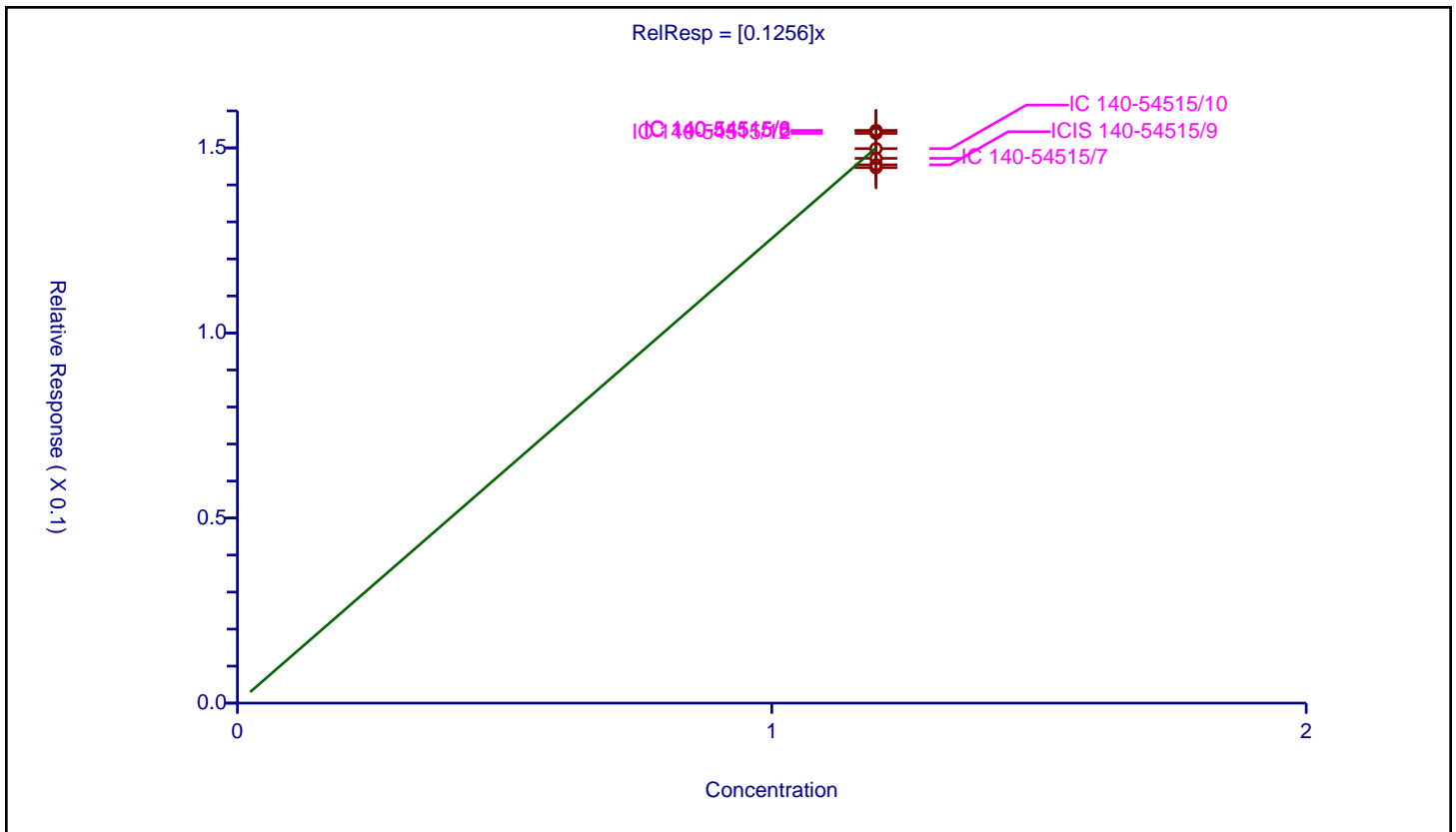
/ 13C8 PFOS

Curve Type: Average
 Weighting: Conc_Sq
 Origin: Force
 Dependency: Response
 Calib Mode: ISTD
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.1256

Error Coefficients	
Standard Error:	691000
Relative Standard Error:	2.9
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	1.195	0.154713	1.25	5394236.0	0.129467	Y
2	IC 140-54515/7	1.195	0.147189	1.25	5631791.0	0.12317	Y
3	IC 140-54515/8	1.195	0.154567	1.25	5270606.0	0.129345	Y
4	ICIS 140-54515/9	1.195	0.145427	1.25	5652969.0	0.121697	Y
5	IC 140-54515/10	1.195	0.149806	1.25	5374730.0	0.125361	Y
6	IC 140-54515/11	1.195	0.144659	1.25	5145778.0	0.121053	Y
7	IC 140-54515/12	1.195	0.15393	1.25	4831158.0	0.128812	Y



Calibration

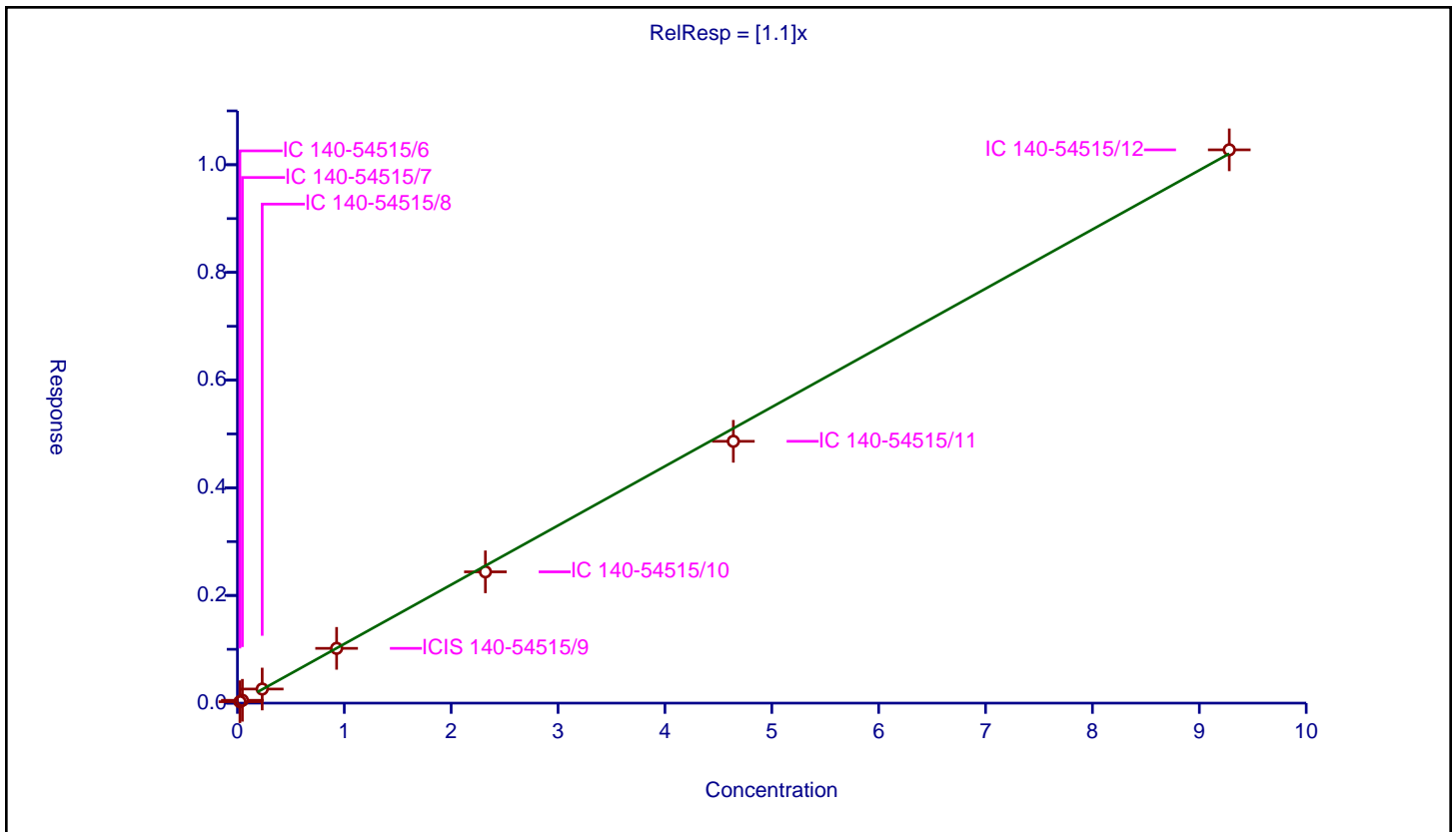
/ Perfluorooctanesulfonic acid

Curve Type: Average
 Weighting: Conc_Sq
 Origin: Force
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.1

Error Coefficients	
Standard Error:	11400000
Relative Standard Error:	3.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.0232	0.026343	1.195	3069142.0	1.135487	Y
2	IC 140-54515/7	0.0464	0.052475	1.195	3022370.0	1.130929	Y
3	IC 140-54515/8	0.232	0.261904	1.195	3044513.0	1.128898	Y
4	ICIS 140-54515/9	0.928	1.017499	1.195	3054456.0	1.096443	Y
5	IC 140-54515/10	2.32	2.438515	1.195	2955831.0	1.051084	Y
6	IC 140-54515/11	4.64	4.862919	1.195	2860822.0	1.048043	Y
7	IC 140-54515/12	9.28	10.277006	1.195	2833668.0	1.107436	Y



Calibration

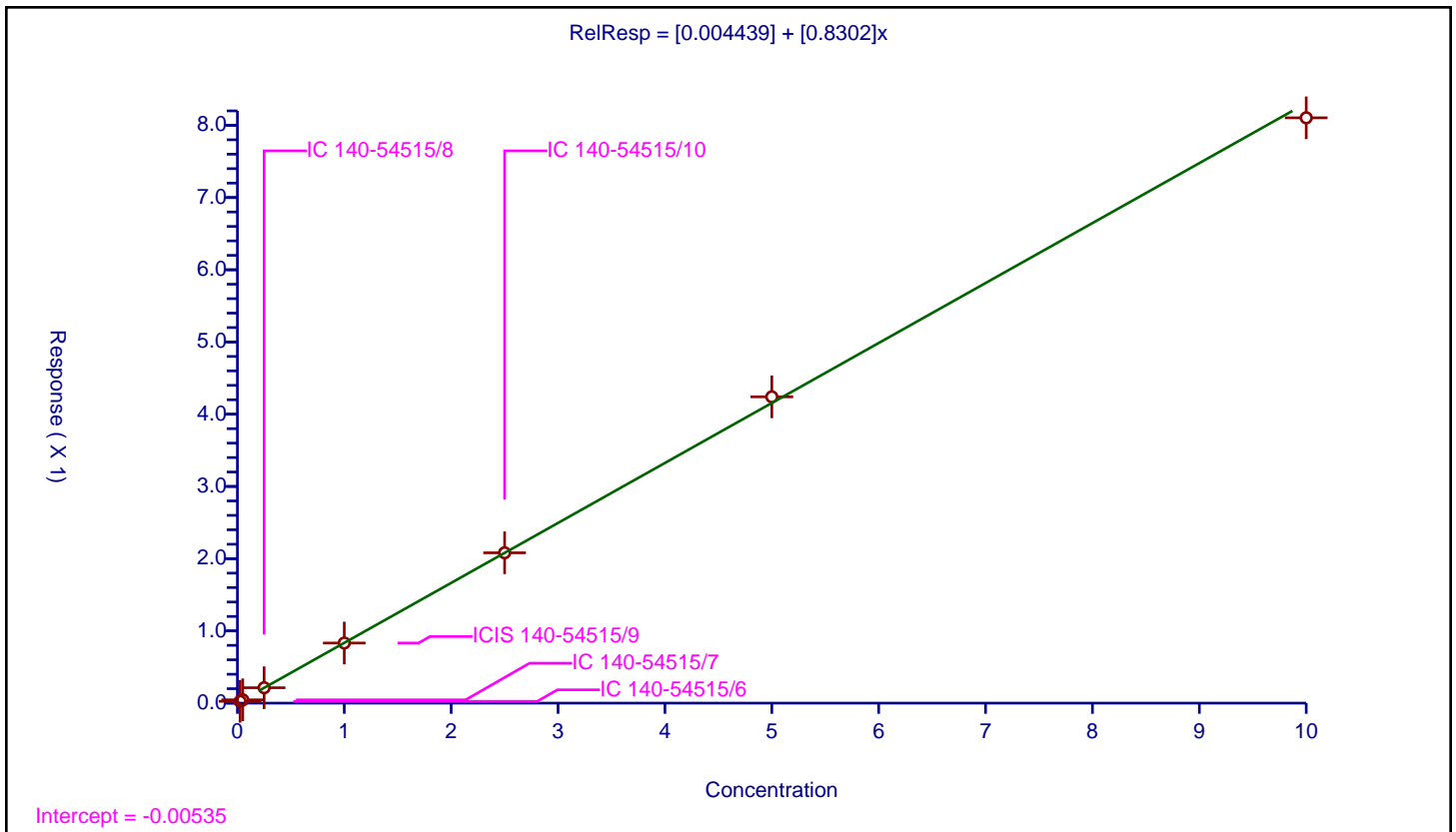
/ Perfluorononanoic acid

Curve Type: Linear
 Weighting: Conc_Sq
 Origin: None
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.004439
Slope:	0.8302

Error Coefficients	
Standard Error:	21300000
Relative Standard Error:	1.5
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.02519	1.25	6830452.0	1.007598	Y
2	IC 140-54515/7	0.05	0.045916	1.25	6735203.0	0.918317	Y
3	IC 140-54515/8	0.25	0.213399	1.25	7247107.0	0.853594	Y
4	ICIS 140-54515/9	1.0	0.832512	1.25	7226283.0	0.832512	Y
5	IC 140-54515/10	2.5	2.081631	1.25	6981917.0	0.832652	Y
6	IC 140-54515/11	5.0	4.241127	1.25	6472750.0	0.848225	Y
7	IC 140-54515/12	10.0	8.103955	1.25	6202112.0	0.810396	Y



Calibration

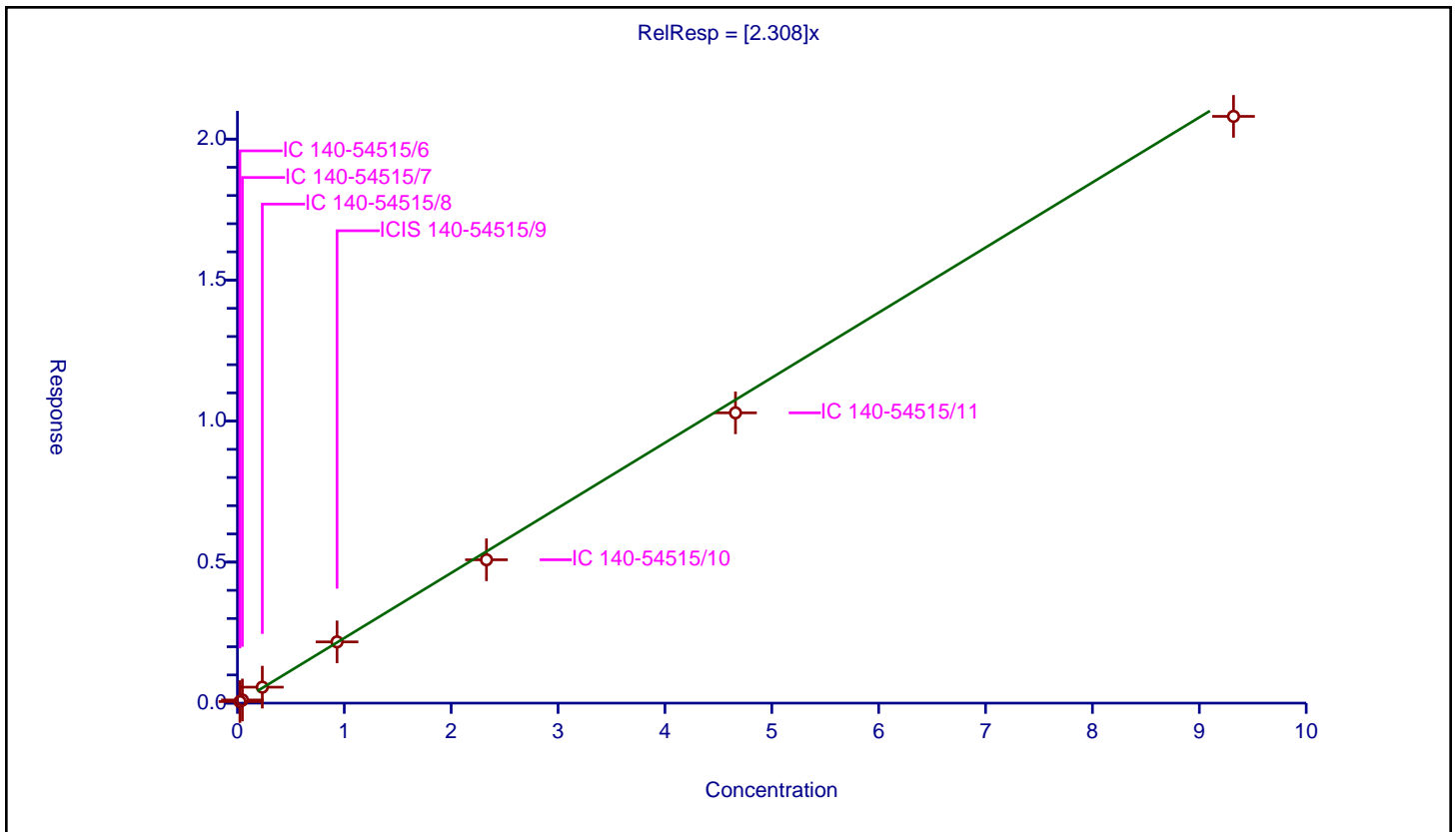
/ 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid

Curve Type: Average
Weighting: Conc_Sq
Origin: Force
Dependency: Response
Calib Mode: IsoDil
Response Base: AREA
RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	2.308

Error Coefficients	
Standard Error:	23200000
Relative Standard Error:	4.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.0233	0.055159	1.195	3069142.0	2.36734	Y
2	IC 140-54515/7	0.0466	0.111971	1.195	3022370.0	2.402804	Y
3	IC 140-54515/8	0.233	0.566596	1.195	3044513.0	2.431741	Y
4	ICIS 140-54515/9	0.932	2.171632	1.195	3054456.0	2.330078	Y
5	IC 140-54515/10	2.33	5.083372	1.195	2955831.0	2.181705	Y
6	IC 140-54515/11	4.66	10.293686	1.195	2860822.0	2.208946	Y
7	IC 140-54515/12	9.32	20.805329	1.195	2833668.0	2.232331	Y



Calibration

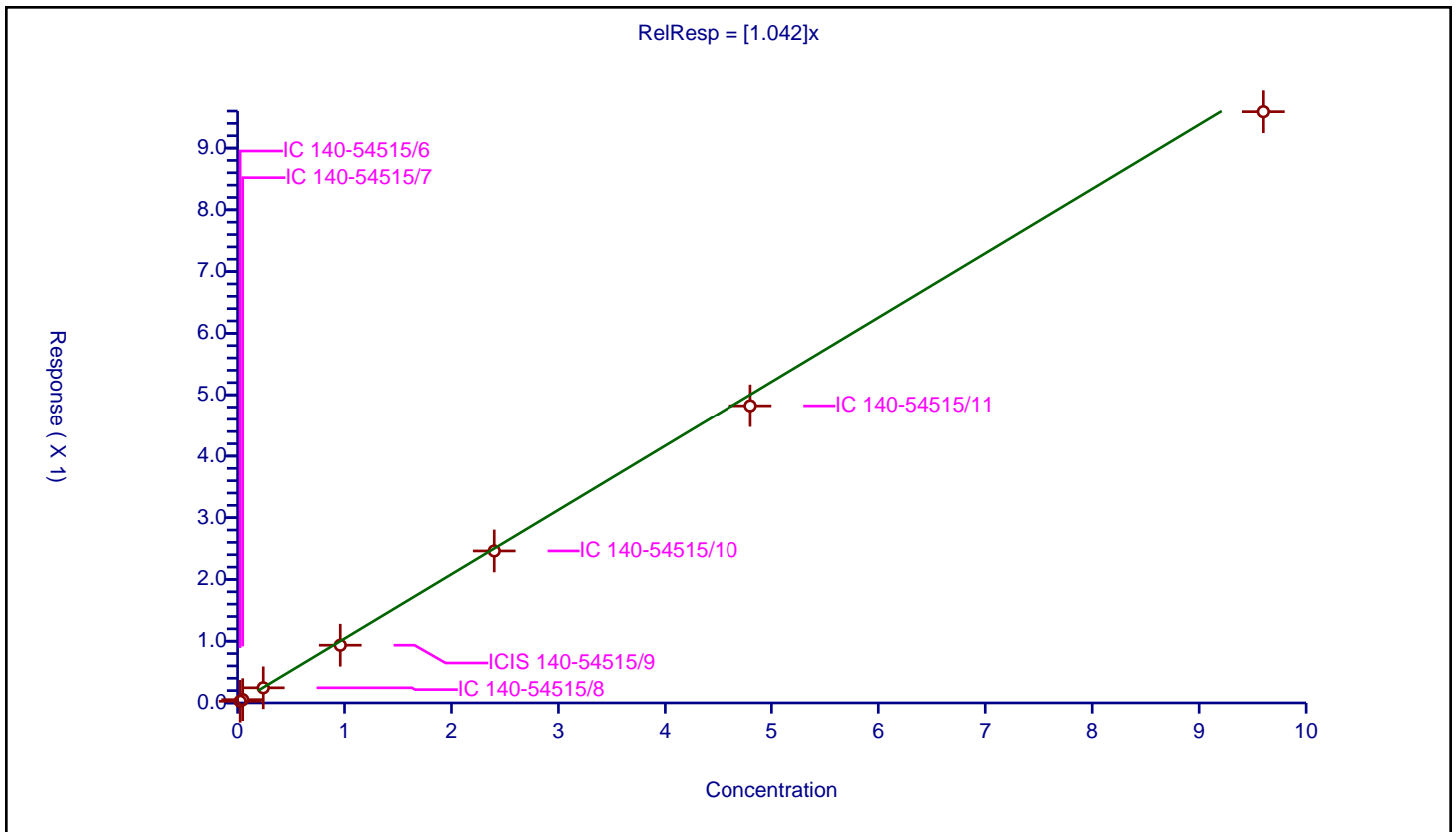
/ Perfluorononanesulfonic acid

Curve Type: Average
Weighting: Conc_Sq
Origin: Force
Dependency: Response
Calib Mode: IsoDil
Response Base: AREA
RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.042

Error Coefficients	
Standard Error:	10800000
Relative Standard Error:	6.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.024	0.027601	1.195	3069142.0	1.150022	Y
2	IC 140-54515/7	0.048	0.053769	1.195	3022370.0	1.120184	Y
3	IC 140-54515/8	0.24	0.24527	1.195	3044513.0	1.021957	Y
4	ICIS 140-54515/9	0.96	0.93536	1.195	3054456.0	0.974334	Y
5	IC 140-54515/10	2.4	2.461456	1.195	2955831.0	1.025607	Y
6	IC 140-54515/11	4.8	4.82223	1.195	2860822.0	1.004631	Y
7	IC 140-54515/12	9.6	9.589536	1.195	2833668.0	0.99891	Y



Calibration

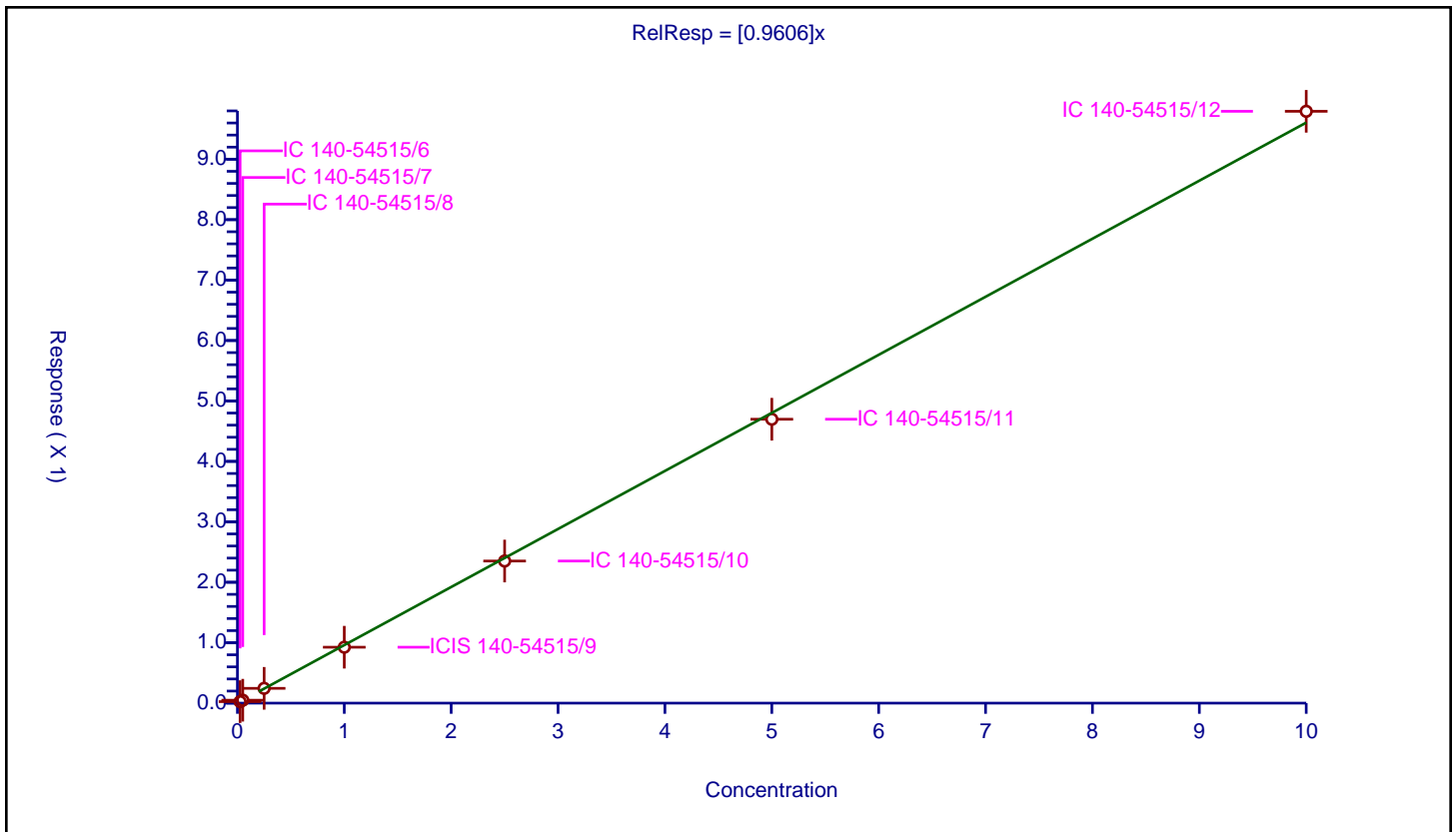
/ Perfluorooctanesulfonamide

Curve Type: Average
Weighting: Conc_Sq
Origin: Force
Dependency: Response
Calib Mode: IsoDil
Response Base: AREA
RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.9606

Error Coefficients	
Standard Error:	14200000
Relative Standard Error:	2.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.024961	1.25	5016067.0	0.998452	Y
2	IC 140-54515/7	0.05	0.048087	1.25	4922112.0	0.961747	Y
3	IC 140-54515/8	0.25	0.244744	1.25	4948768.0	0.978977	Y
4	ICIS 140-54515/9	1.0	0.92525	1.25	4847961.0	0.92525	Y
5	IC 140-54515/10	2.5	2.351483	1.25	4387447.0	0.940593	Y
6	IC 140-54515/11	5.0	4.697651	1.25	4176620.0	0.93953	Y
7	IC 140-54515/12	10.0	9.793055	1.25	3792608.0	0.979305	Y



Calibration

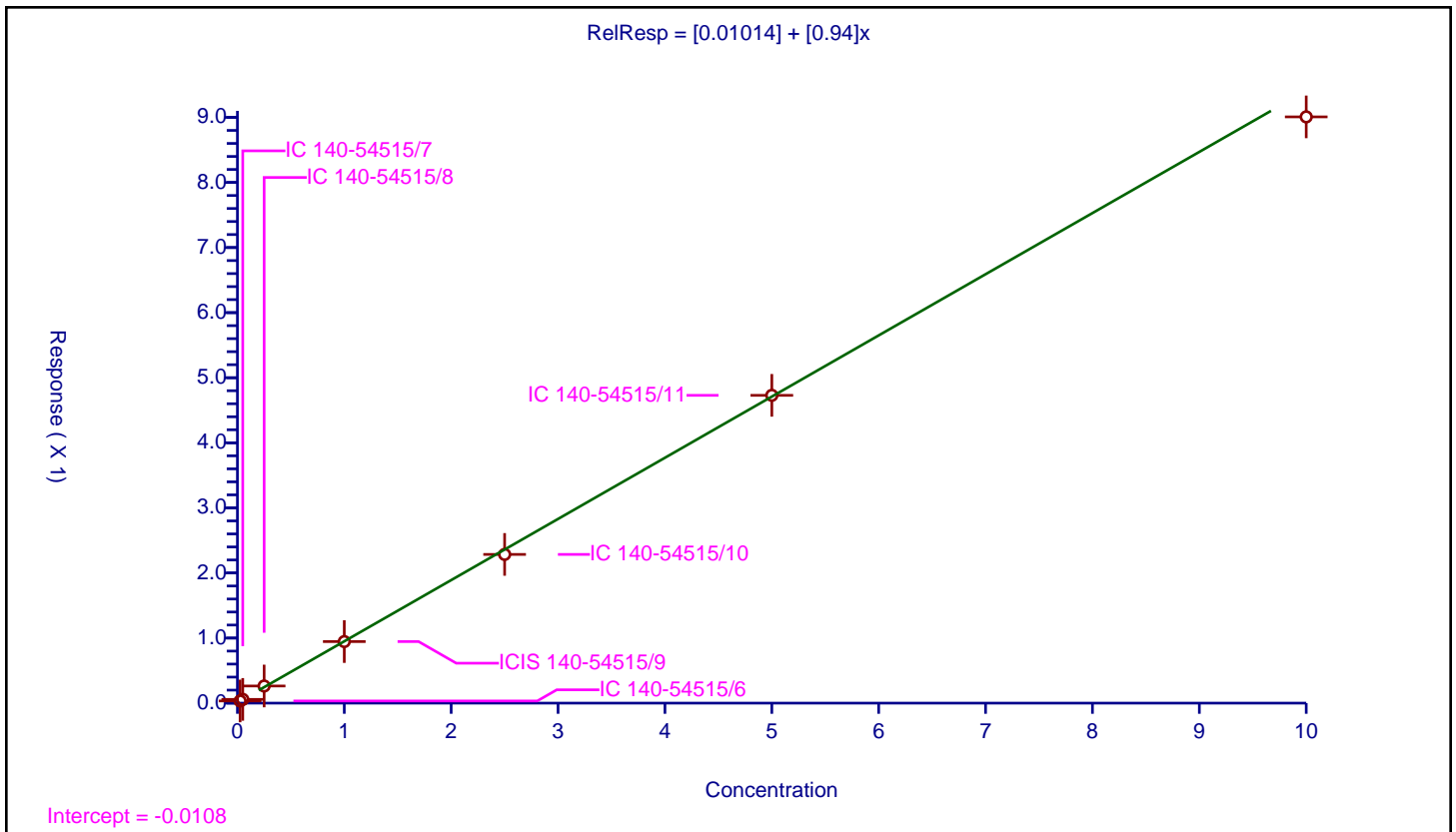
/ Perfluorodecanoic acid

Curve Type: Linear
 Weighting: Conc_Sq
 Origin: None
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.01014
Slope:	0.94

Error Coefficients	
Standard Error:	23000000
Relative Standard Error:	4.3
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.033342	1.25	7129138.0	1.333668	Y
2	IC 140-54515/7	0.05	0.057666	1.25	7353570.0	1.153314	Y
3	IC 140-54515/8	0.25	0.263175	1.25	7254432.0	1.052701	Y
4	ICIS 140-54515/9	1.0	0.945756	1.25	7310968.0	0.945756	Y
5	IC 140-54515/10	2.5	2.2851	1.25	6829600.0	0.91404	Y
6	IC 140-54515/11	5.0	4.729355	1.25	6527325.0	0.945871	Y
7	IC 140-54515/12	10.0	9.007848	1.25	5955015.0	0.900785	Y



Calibration

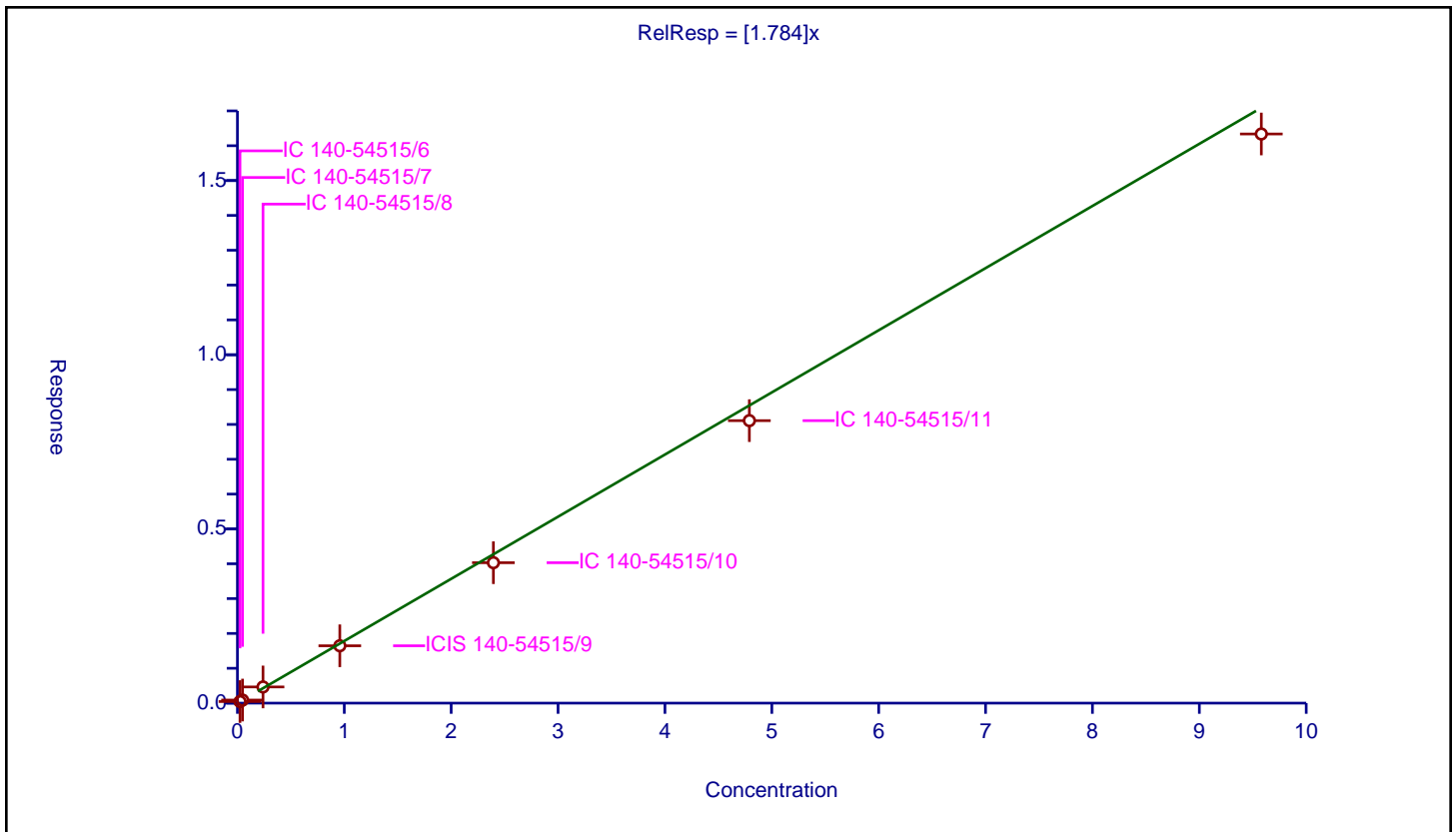
/ 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)

Curve Type: Average
 Weighting: Conc_Sq
 Origin: Force
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.784

Error Coefficients	
Standard Error:	3730000
Relative Standard Error:	6.1
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.02395	0.045605	1.1975	725011.0	1.904178	Y
2	IC 140-54515/7	0.0479	0.088229	1.1975	747134.0	1.841939	Y
3	IC 140-54515/8	0.2395	0.4647	1.1975	691926.0	1.940294	Y
4	ICIS 140-54515/9	0.958	1.646388	1.1975	694718.0	1.718568	Y
5	IC 140-54515/10	2.395	4.031196	1.1975	661877.0	1.683171	Y
6	IC 140-54515/11	4.79	8.108817	1.1975	623050.0	1.692864	Y
7	IC 140-54515/12	9.58	16.337092	1.1975	566408.0	1.705333	Y



Calibration

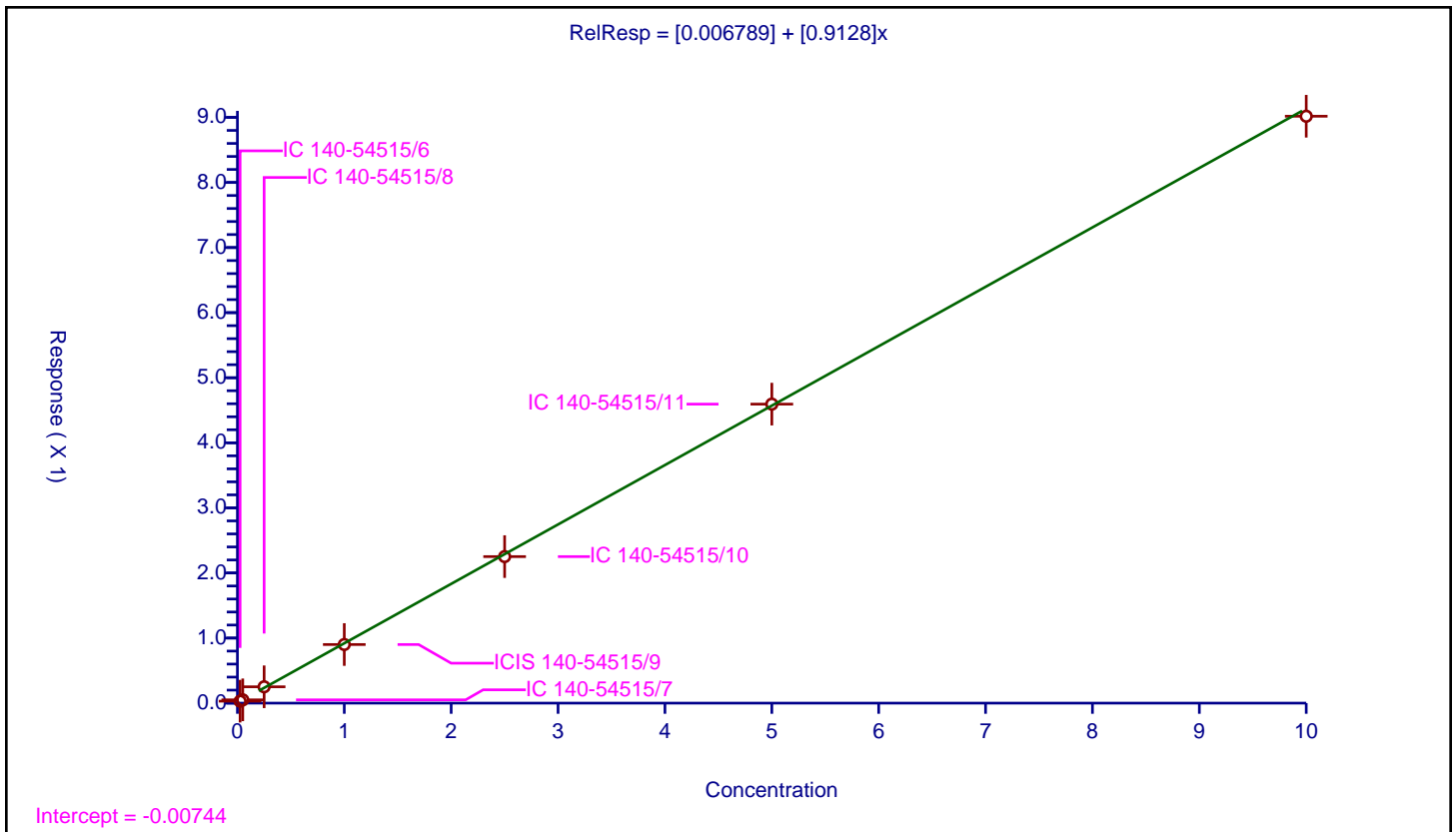
/ N-methylperfluorooctanesulfonamidoacetic acid

Curve Type: Linear
 Weighting: Conc_Sq
 Origin: None
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.006789
Slope:	0.9128

Error Coefficients	
Standard Error:	3430000
Relative Standard Error:	3.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.029906	1.25	918162.0	1.196249	Y
2	IC 140-54515/7	0.05	0.050661	1.25	987298.0	1.01322	Y
3	IC 140-54515/8	0.25	0.251146	1.25	899632.0	1.004583	Y
4	ICIS 140-54515/9	1.0	0.900602	1.25	1042167.0	0.900602	Y
5	IC 140-54515/10	2.5	2.251329	1.25	940501.0	0.900532	Y
6	IC 140-54515/11	5.0	4.594326	1.25	899537.0	0.918865	Y
7	IC 140-54515/12	10.0	9.017661	1.25	923936.0	0.901766	Y



Calibration

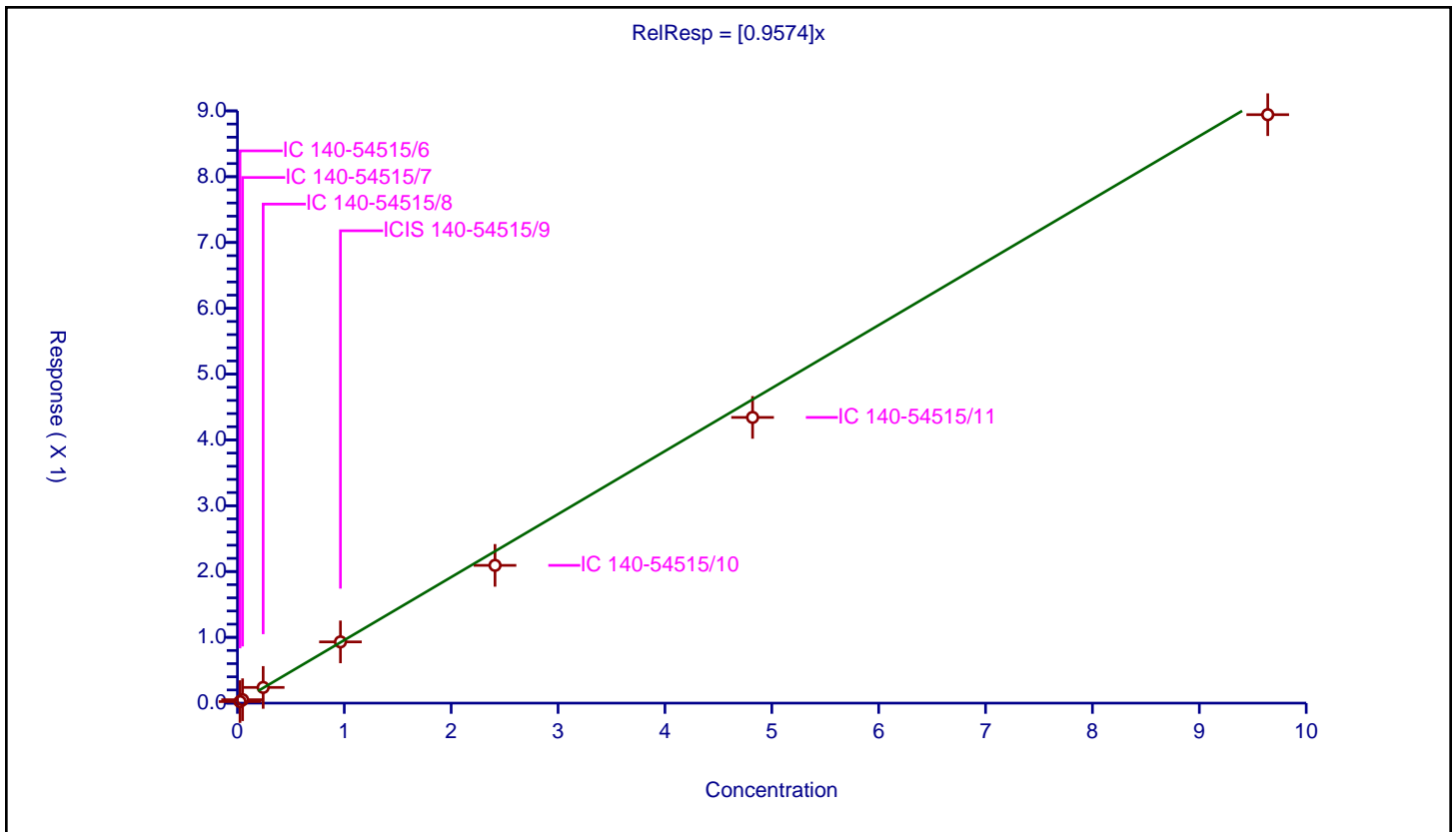
/ Perfluorodecanesulfonic acid

Curve Type: Average
 Weighting: Conc_Sq
 Origin: Force
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.9574

Error Coefficients	
Standard Error:	9920000
Relative Standard Error:	7.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.0241	0.02346	1.195	3069142.0	0.973431	Y
2	IC 140-54515/7	0.0482	0.051868	1.195	3022370.0	1.076095	Y
3	IC 140-54515/8	0.241	0.238508	1.195	3044513.0	0.989658	Y
4	ICIS 140-54515/9	0.964	0.930576	1.195	3054456.0	0.965328	Y
5	IC 140-54515/10	2.41	2.093555	1.195	2955831.0	0.868695	Y
6	IC 140-54515/11	4.82	4.342045	1.195	2860822.0	0.900839	Y
7	IC 140-54515/12	9.64	8.942699	1.195	2833668.0	0.927666	Y



Calibration

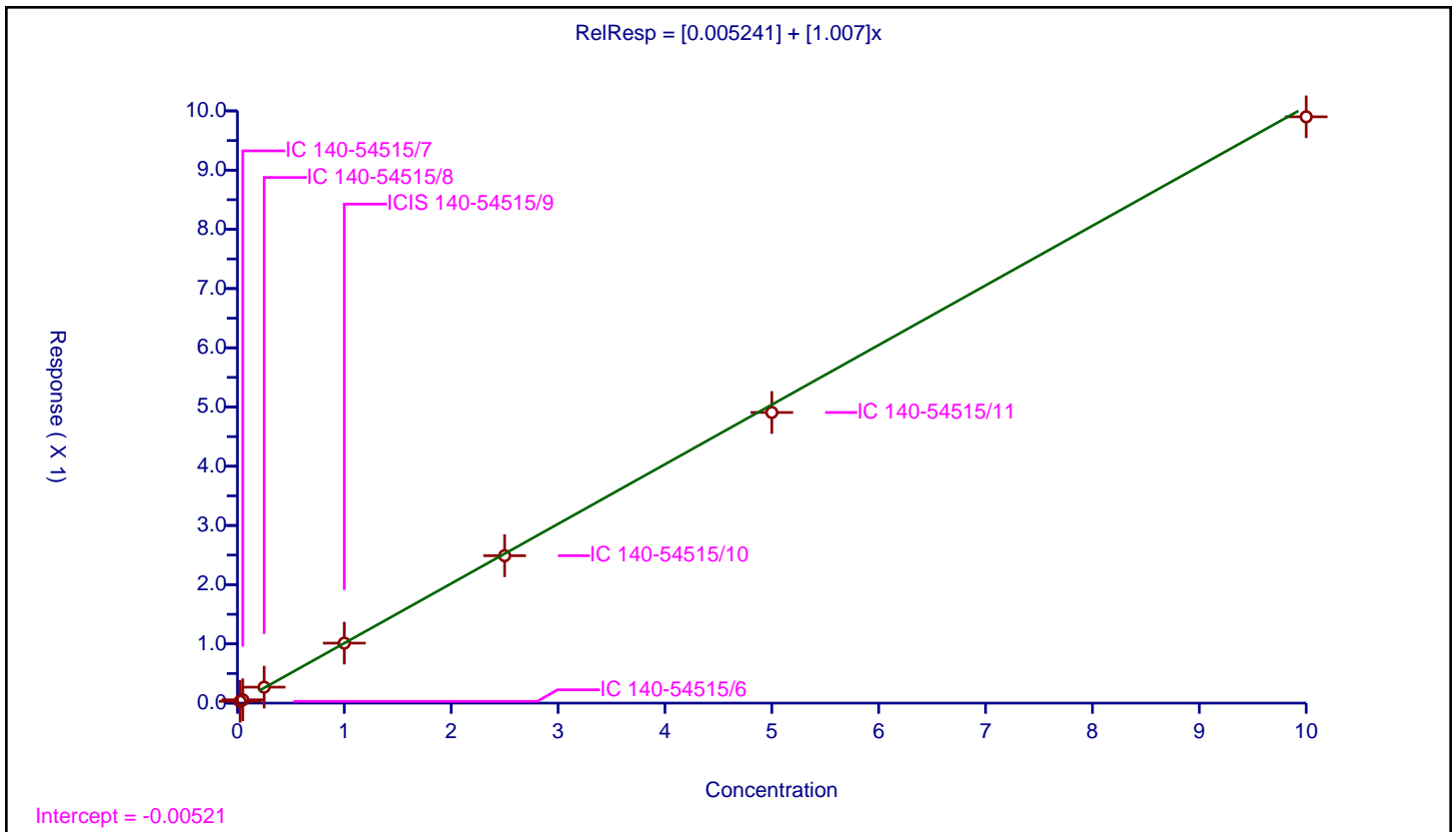
/ Perfluoroundecanoic acid

Curve Type: Linear
 Weighting: Conc_Sq
 Origin: None
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.005241
Slope:	1.007

Error Coefficients	
Standard Error:	24000000
Relative Standard Error:	2.9
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.030037	1.25	6657852.0	1.201484	Y
2	IC 140-54515/7	0.05	0.056603	1.25	6782308.0	1.132052	Y
3	IC 140-54515/8	0.25	0.269557	1.25	6848234.0	1.078227	Y
4	ICIS 140-54515/9	1.0	1.013002	1.25	7006211.0	1.013002	Y
5	IC 140-54515/10	2.5	2.489182	1.25	6673920.0	0.995673	Y
6	IC 140-54515/11	5.0	4.908051	1.25	6502949.0	0.98161	Y
7	IC 140-54515/12	10.0	9.900027	1.25	5686115.0	0.990003	Y



Calibration

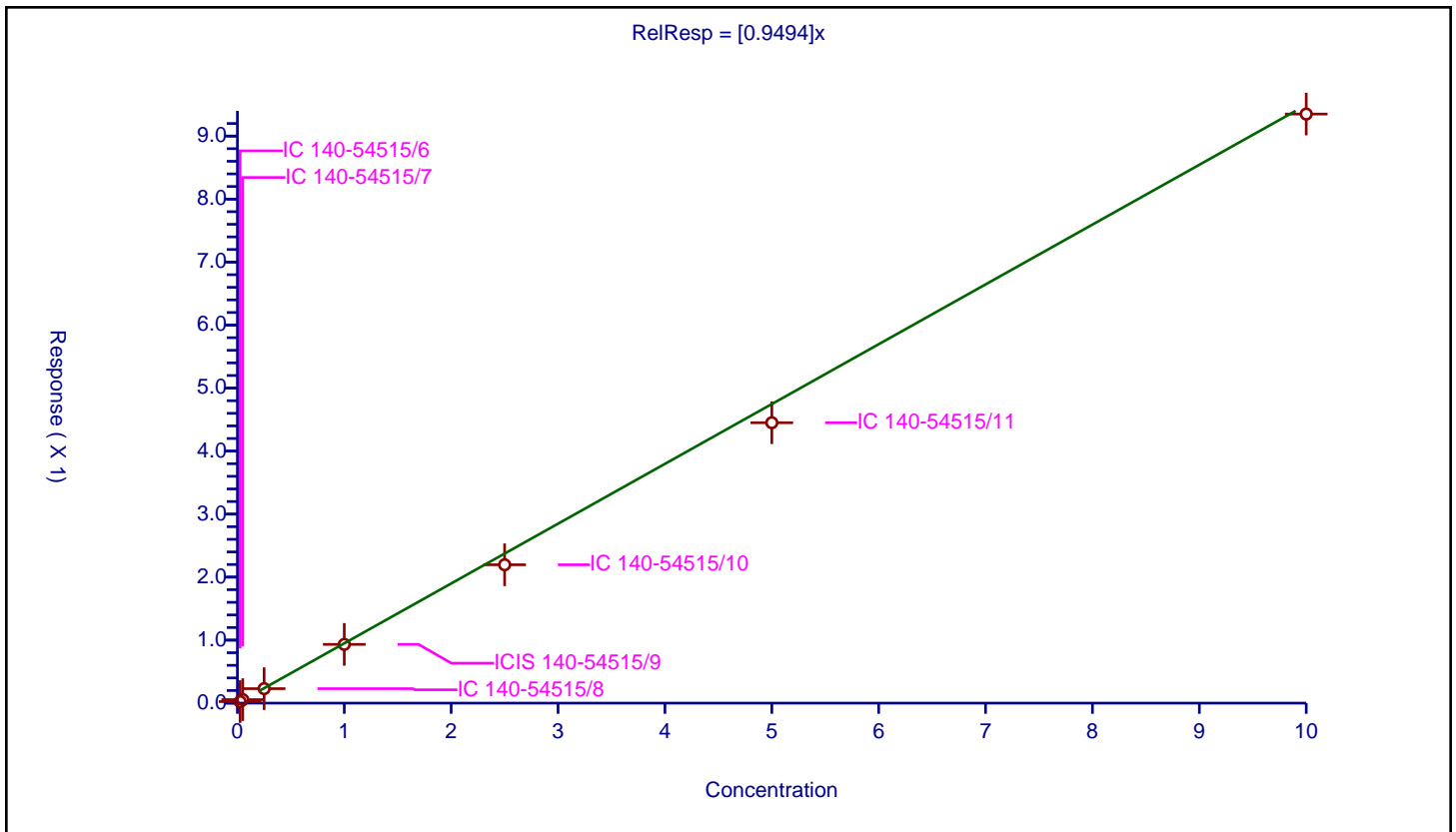
/ N-ethylperfluorooctanesulfonamidoacetic acid

Curve Type: Average
Weighting: Conc_Sq
Origin: Force
Dependency: Response
Calib Mode: IsoDil
Response Base: AREA
RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.9494

Error Coefficients	
Standard Error:	2790000
Relative Standard Error:	8.4
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.024376	1.25	976252.0	0.975056	Y
2	IC 140-54515/7	0.05	0.055772	1.25	958230.0	1.115442	Y
3	IC 140-54515/8	0.25	0.229829	1.25	956097.0	0.919316	Y
4	ICIS 140-54515/9	1.0	0.932362	1.25	924381.0	0.932362	Y
5	IC 140-54515/10	2.5	2.196442	1.25	902846.0	0.878577	Y
6	IC 140-54515/11	5.0	4.450713	1.25	863924.0	0.890143	Y
7	IC 140-54515/12	10.0	9.349809	1.25	780959.0	0.934981	Y



Calibration

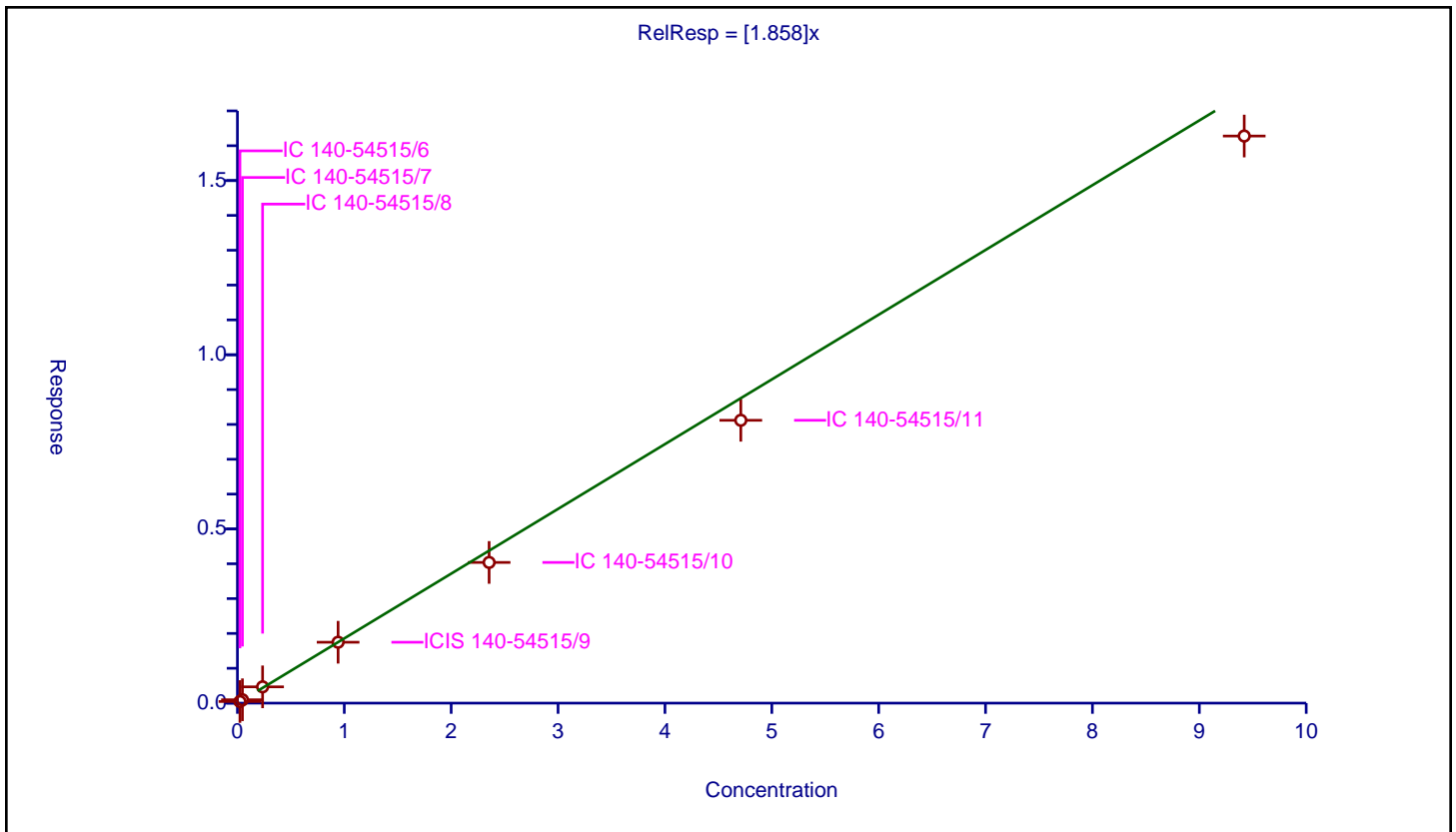
/ 11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid

Curve Type: Average
Weighting: Conc_Sq
Origin: Force
Dependency: Response
Calib Mode: IsoDil
Response Base: AREA
RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.858

Error Coefficients	
Standard Error:	18200000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.02355	0.045986	1.195	3069142.0	1.952701	Y
2	IC 140-54515/7	0.0471	0.096481	1.195	3022370.0	2.04843	Y
3	IC 140-54515/8	0.2355	0.467474	1.195	3044513.0	1.985028	Y
4	ICIS 140-54515/9	0.942	1.748052	1.195	3054456.0	1.855681	Y
5	IC 140-54515/10	2.355	4.038613	1.195	2955831.0	1.71491	Y
6	IC 140-54515/11	4.71	8.118535	1.195	2860822.0	1.723681	Y
7	IC 140-54515/12	9.42	16.278442	1.195	2833668.0	1.728072	Y



Calibration

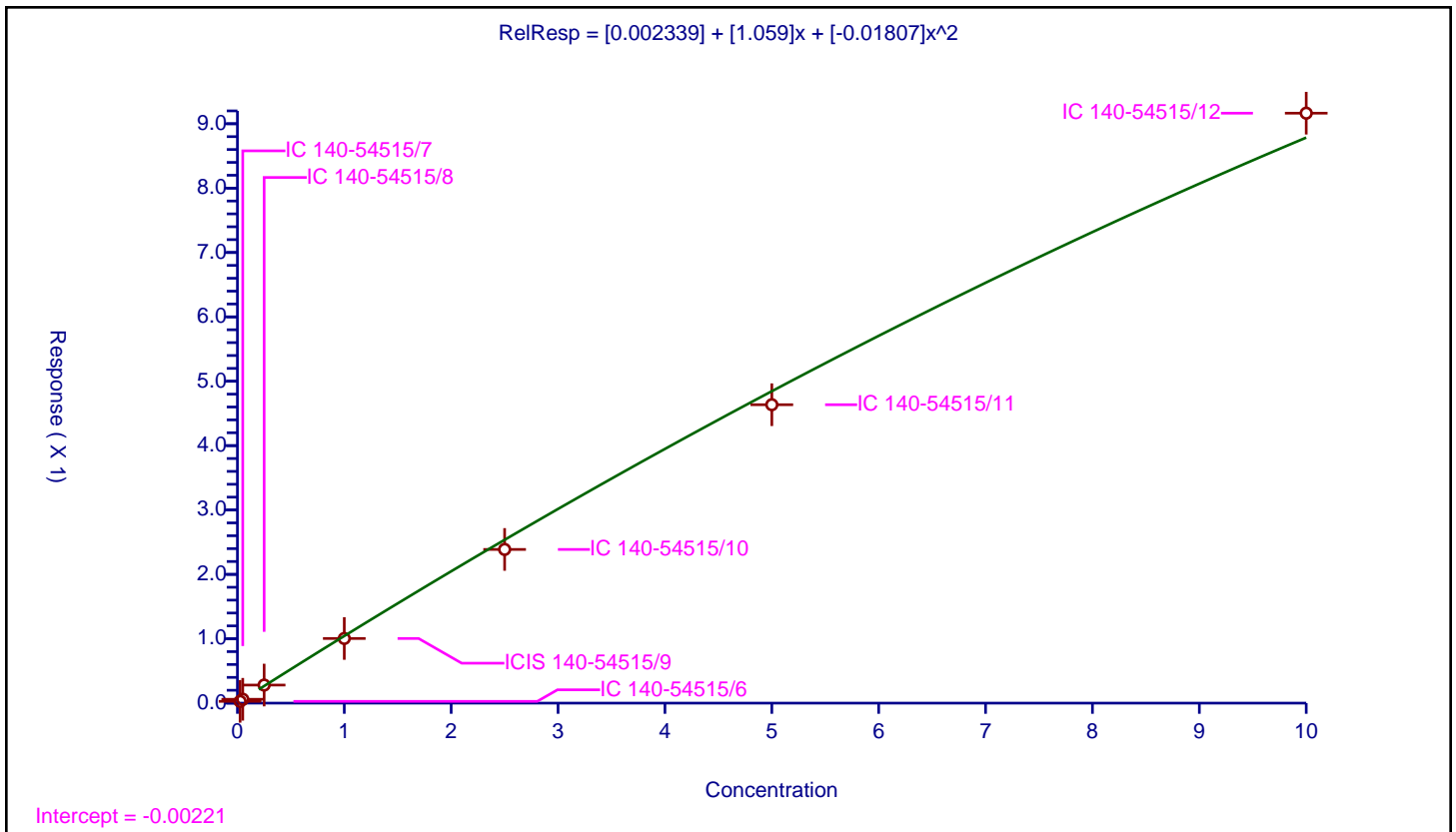
/ Perfluorododecanoic acid

Curve Type: Quadratic
 Weighting: Conc_Sq
 Origin: None
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.002339
Slope:	1.059
Second Order:	-0.01807

Error Coefficients	
Standard Error:	27800000
Relative Standard Error:	7.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.02752	1.25	7362218.0	1.100782	Y
2	IC 140-54515/7	0.05	0.059934	1.25	6949236.0	1.198682	Y
3	IC 140-54515/8	0.25	0.280888	1.25	7435382.0	1.123552	Y
4	ICIS 140-54515/9	1.0	1.004467	1.25	7381117.0	1.004467	Y
5	IC 140-54515/10	2.5	2.387513	1.25	6769707.0	0.955005	Y
6	IC 140-54515/11	5.0	4.635803	1.25	6796811.0	0.927161	Y
7	IC 140-54515/12	10.0	9.164306	1.25	6477734.0	0.916431	Y



Calibration

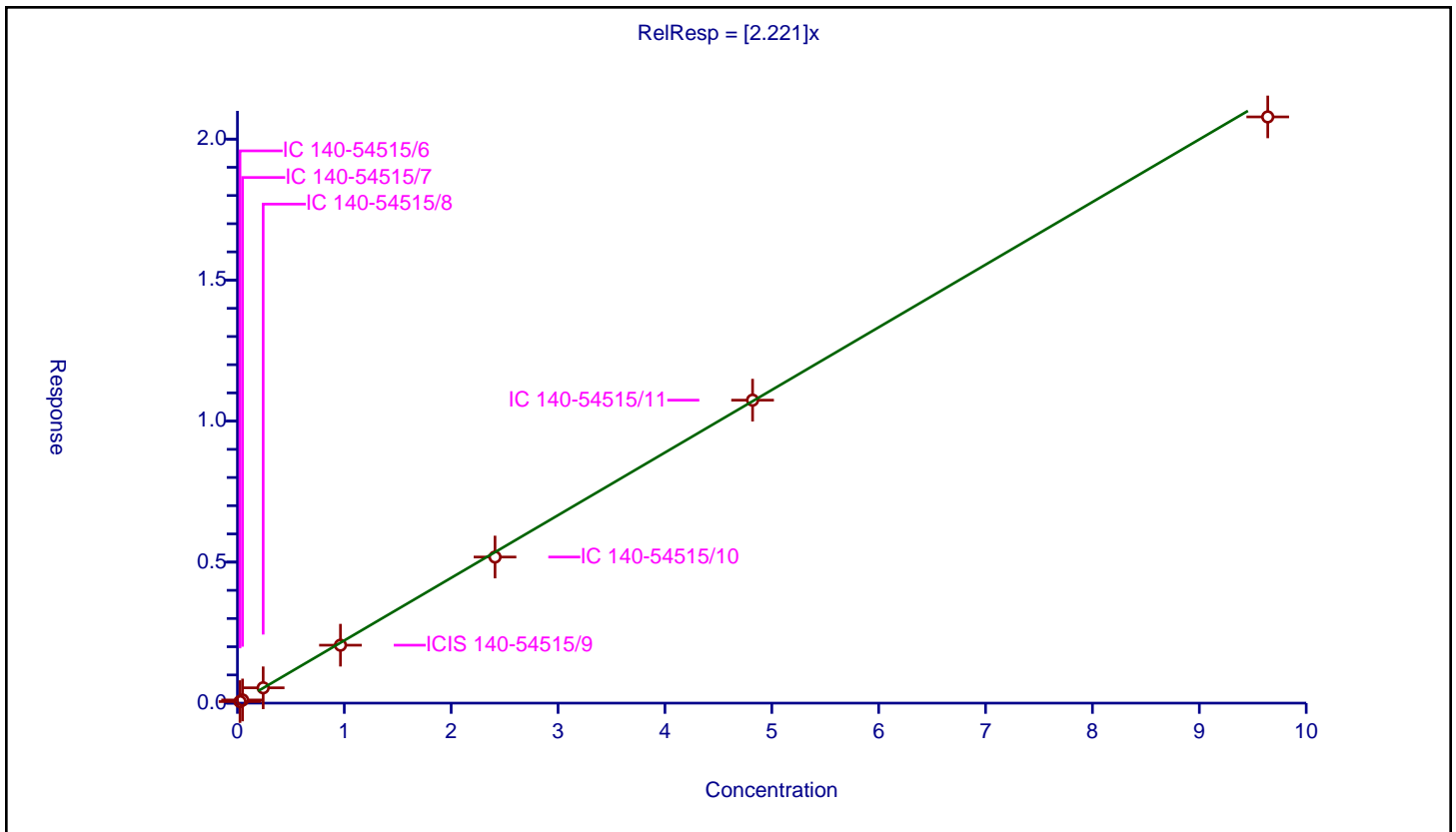
/ 1H,1H,2H,2H-perfluorododecanesulfonic acid (10:2)

Curve Type: Average
 Weighting: Conc_Sq
 Origin: Force
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	2.221

Error Coefficients	
Standard Error:	4790000
Relative Standard Error:	3.5
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.0241	0.05551	1.1975	725011.0	2.303332	Y
2	IC 140-54515/7	0.0482	0.111974	1.1975	747134.0	2.323117	Y
3	IC 140-54515/8	0.241	0.543477	1.1975	691926.0	2.255093	Y
4	ICIS 140-54515/9	0.964	2.054806	1.1975	694718.0	2.131542	Y
5	IC 140-54515/10	2.41	5.18004	1.1975	661877.0	2.149394	Y
6	IC 140-54515/11	4.82	10.742823	1.1975	623050.0	2.228802	Y
7	IC 140-54515/12	9.64	20.786321	1.1975	566408.0	2.156257	Y



Calibration

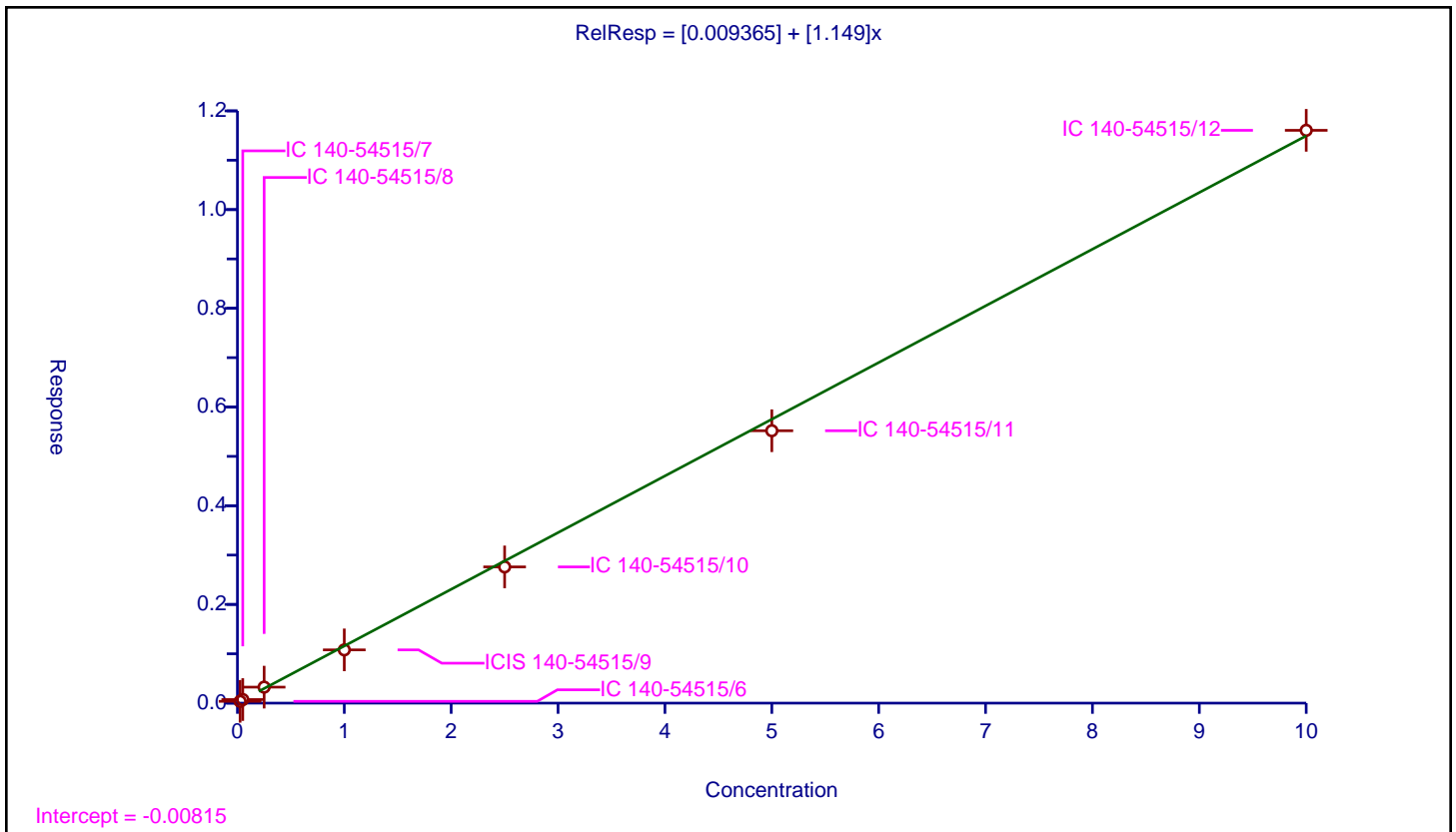
/ 2-(N-methylperfluoro-1-octanesulfonamido) ethanol

Curve Type: Linear
Weighting: Conc_Sq
Origin: None
Dependency: Response
Calib Mode: IsoDil
Response Base: AREA
RF Rounding: 0

Curve Coefficients	
Intercept:	0.009365
Slope:	1.149

Error Coefficients	
Standard Error:	2580000
Relative Standard Error:	8.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.03637	1.25	577982.0	1.454803	Y
2	IC 140-54515/7	0.05	0.072777	1.25	575299.0	1.455547	Y
3	IC 140-54515/8	0.25	0.324253	1.25	567624.0	1.297012	Y
4	ICIS 140-54515/9	1.0	1.079009	1.25	614171.0	1.079009	Y
5	IC 140-54515/10	2.5	2.760119	1.25	560383.0	1.104048	Y
6	IC 140-54515/11	5.0	5.519183	1.25	572551.0	1.103837	Y
7	IC 140-54515/12	10.0	11.606308	1.25	539386.0	1.160631	Y



Calibration

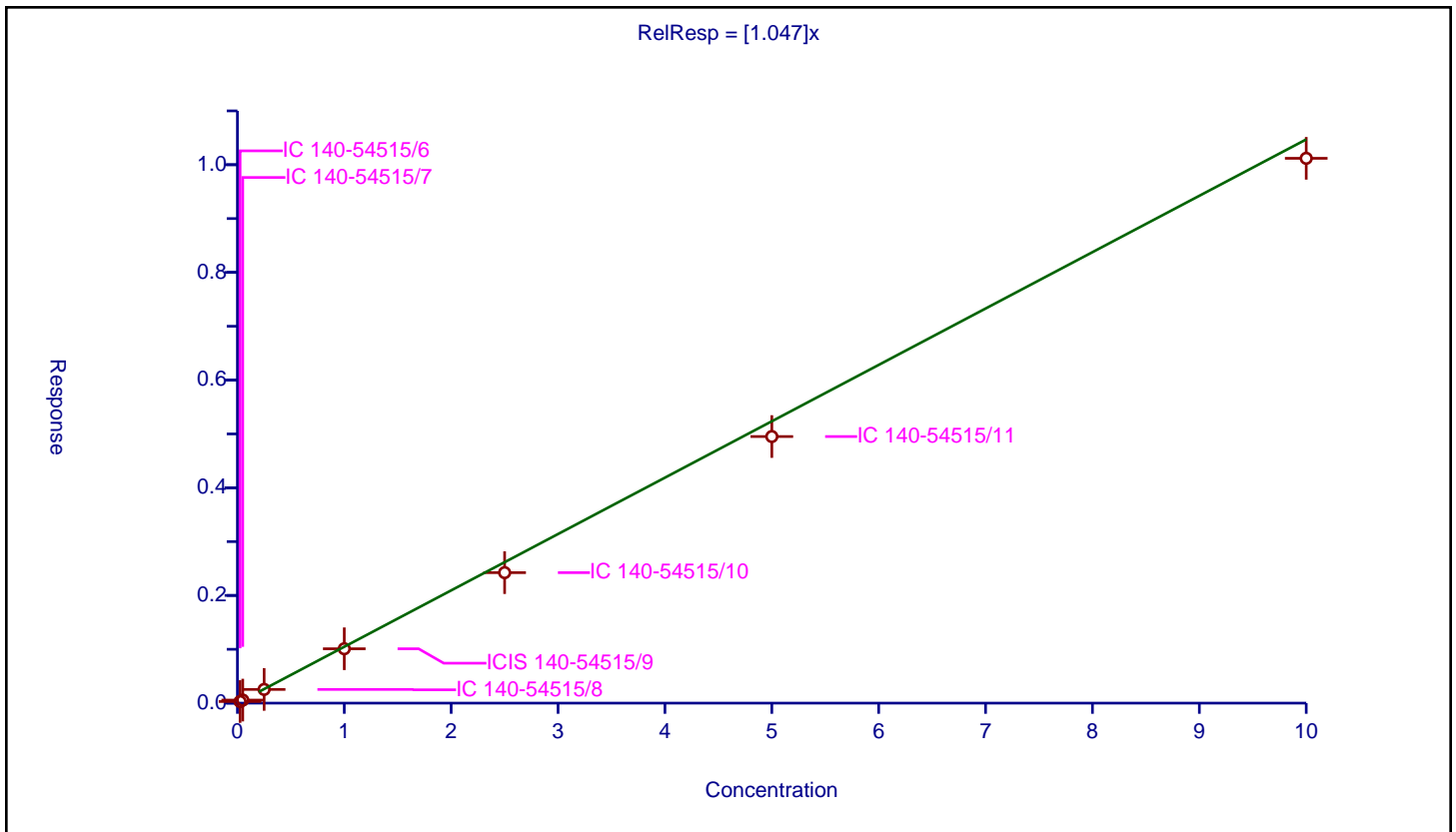
/ NMeFOSA

Curve Type: Average
 Weighting: Conc_Sq
 Origin: Force
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.047

Error Coefficients	
Standard Error:	2170000
Relative Standard Error:	8.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.029903	1.25	598816.0	1.19611	Y
2	IC 140-54515/7	0.05	0.056692	1.25	604340.0	1.13384	Y
3	IC 140-54515/8	0.25	0.254329	1.25	599582.0	1.017317	Y
4	ICIS 140-54515/9	1.0	1.010027	1.25	614480.0	1.010027	Y
5	IC 140-54515/10	2.5	2.423612	1.25	582914.0	0.969445	Y
6	IC 140-54515/11	5.0	4.951469	1.25	601939.0	0.990294	Y
7	IC 140-54515/12	10.0	10.118762	1.25	567405.0	1.011876	Y



Calibration

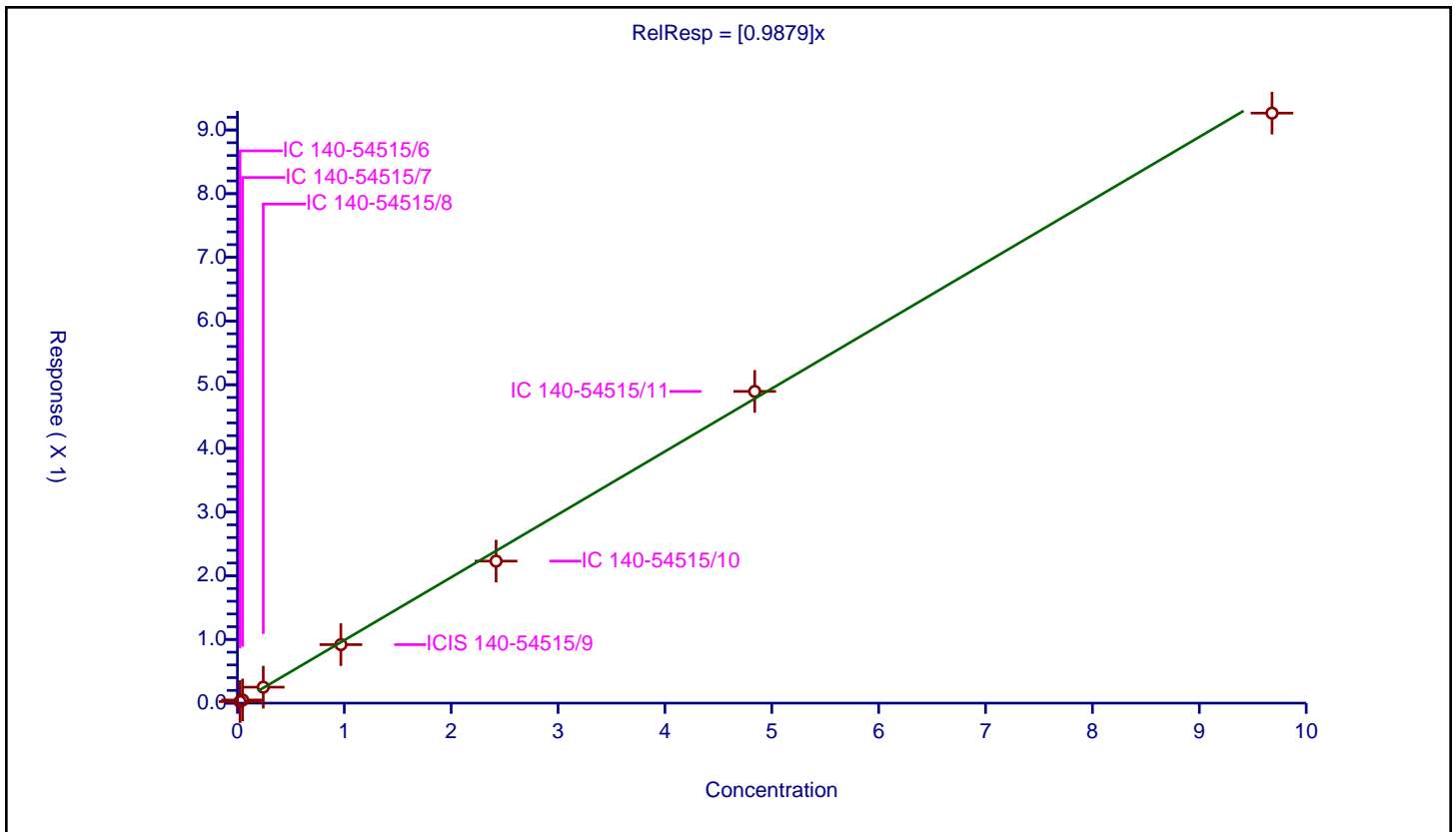
/ Perfluorododecanesulfonic acid (PFDoS)

Curve Type: Average
Weighting: Conc_Sq
Origin: Force
Dependency: Response
Calib Mode: IsoDil
Response Base: AREA
RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.9879

Error Coefficients	
Standard Error:	10500000
Relative Standard Error:	4.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.0242	0.024512	1.195	3069142.0	1.012882	Y
2	IC 140-54515/7	0.0484	0.049696	1.195	3022370.0	1.026768	Y
3	IC 140-54515/8	0.242	0.250841	1.195	3044513.0	1.036531	Y
4	ICIS 140-54515/9	0.968	0.918523	1.195	3054456.0	0.948887	Y
5	IC 140-54515/10	2.42	2.23028	1.195	2955831.0	0.921603	Y
6	IC 140-54515/11	4.84	4.895017	1.195	2860822.0	1.011367	Y
7	IC 140-54515/12	9.68	9.264892	1.195	2833668.0	0.957117	Y



Calibration

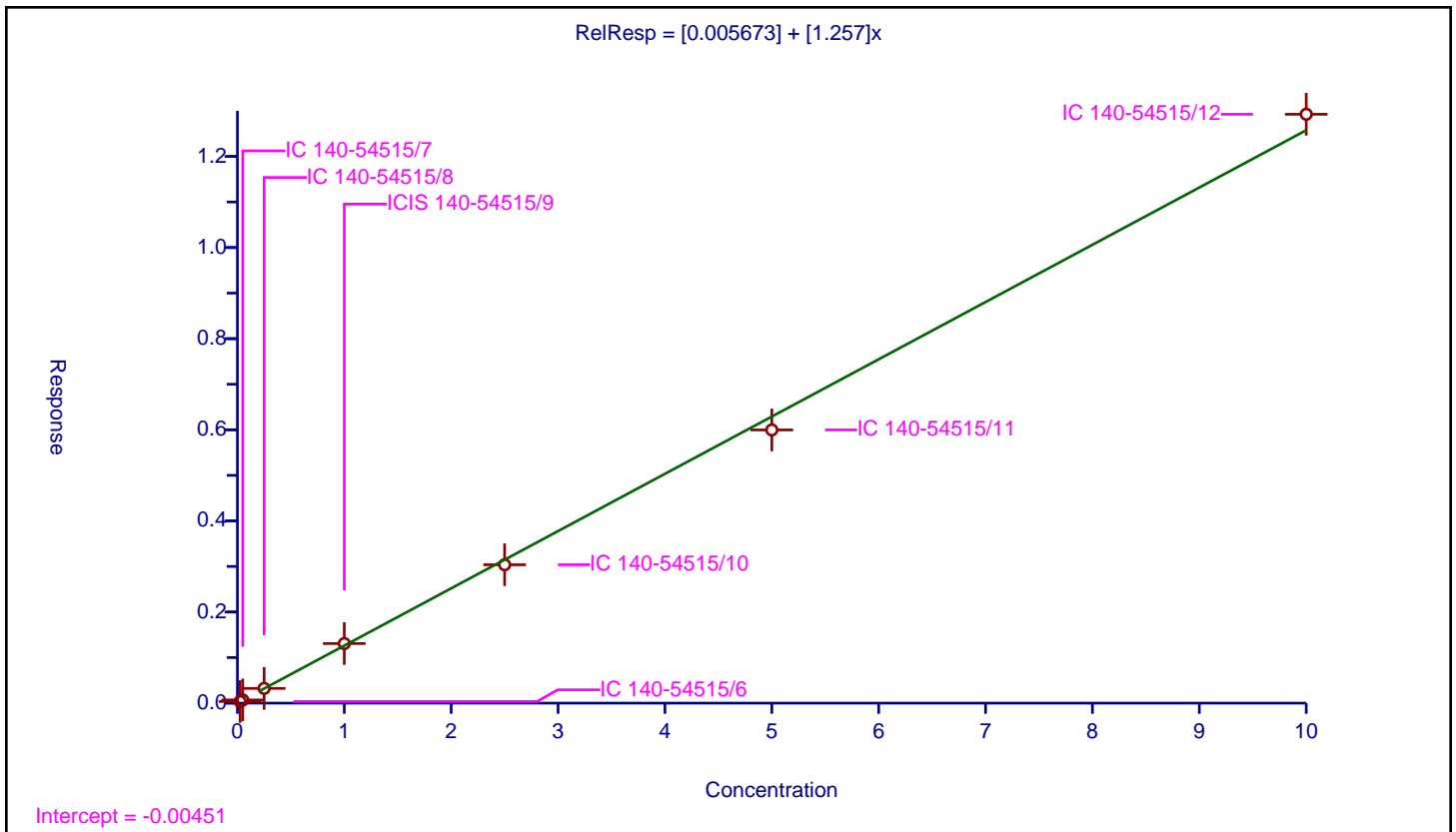
/ 2-(N-ethylperfluoro-1-octanesulfonamido) ethanol

Curve Type: Linear
Weighting: Conc_Sq
Origin: None
Dependency: Response
Calib Mode: IsoDil
Response Base: AREA
RF Rounding: 0

Curve Coefficients	
Intercept:	0.005673
Slope:	1.257

Error Coefficients	
Standard Error:	2890000
Relative Standard Error:	3.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.036787	1.25	603776.0	1.471489	Y
2	IC 140-54515/7	0.05	0.069567	1.25	646520.0	1.391334	Y
3	IC 140-54515/8	0.25	0.323306	1.25	624358.0	1.293224	Y
4	ICIS 140-54515/9	1.0	1.30807	1.25	630903.0	1.30807	Y
5	IC 140-54515/10	2.5	3.037378	1.25	622602.0	1.214951	Y
6	IC 140-54515/11	5.0	5.996972	1.25	616316.0	1.199394	Y
7	IC 140-54515/12	10.0	12.925919	1.25	531061.0	1.292592	Y



Calibration

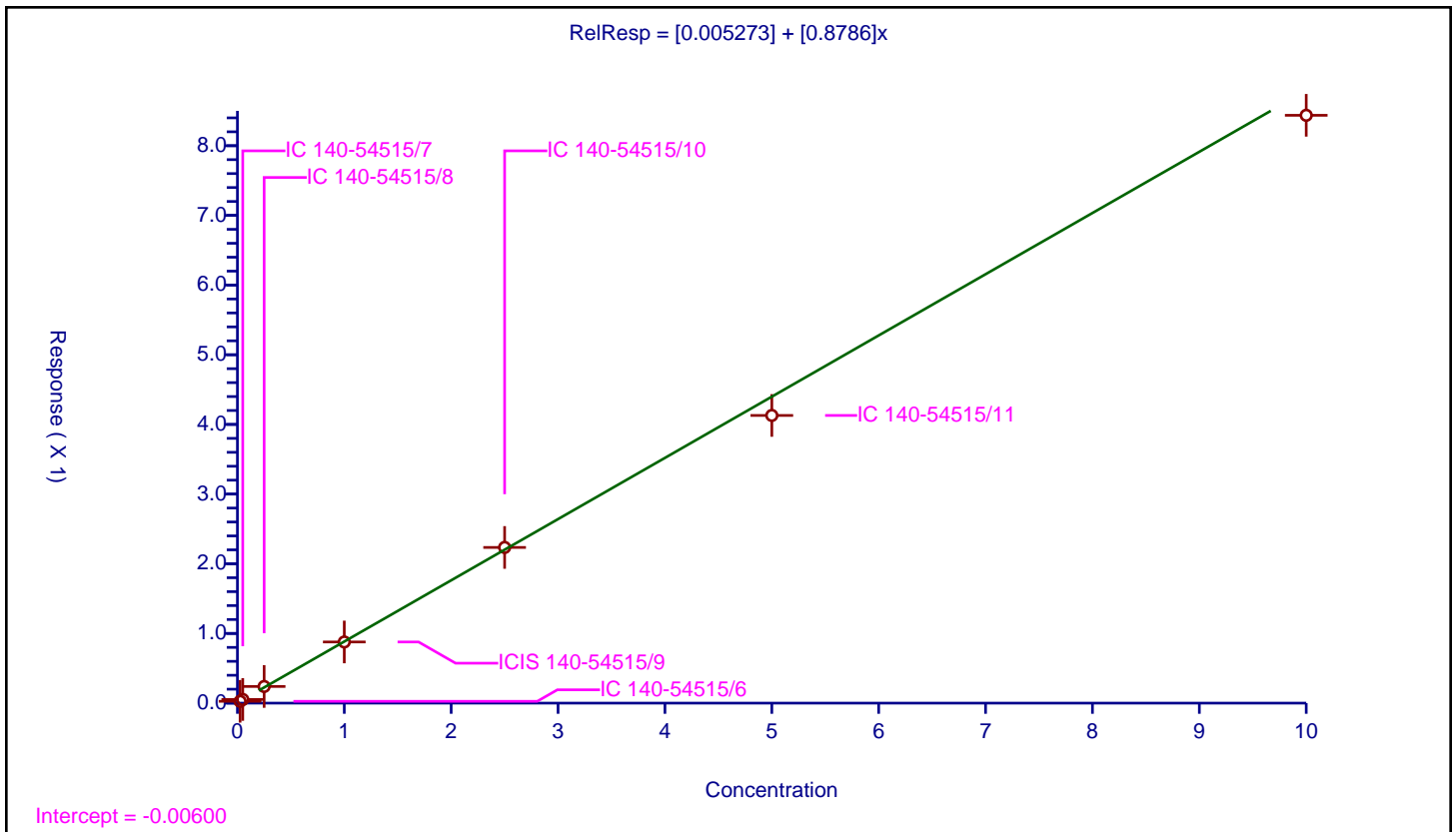
/ Perfluorotridecanoic acid

Curve Type: Linear
 Weighting: Conc_Sq
 Origin: None
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.005273
Slope:	0.8786

Error Coefficients	
Standard Error:	22800000
Relative Standard Error:	5.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.026314	1.25	7362218.0	1.052543	Y
2	IC 140-54515/7	0.05	0.052384	1.25	6949236.0	1.047684	Y
3	IC 140-54515/8	0.25	0.238942	1.25	7435382.0	0.955767	Y
4	ICIS 140-54515/9	1.0	0.877714	1.25	7381117.0	0.877714	Y
5	IC 140-54515/10	2.5	2.23434	1.25	6769707.0	0.893736	Y
6	IC 140-54515/11	5.0	4.128814	1.25	6796811.0	0.825763	Y
7	IC 140-54515/12	10.0	8.436452	1.25	6477734.0	0.843645	Y



Calibration

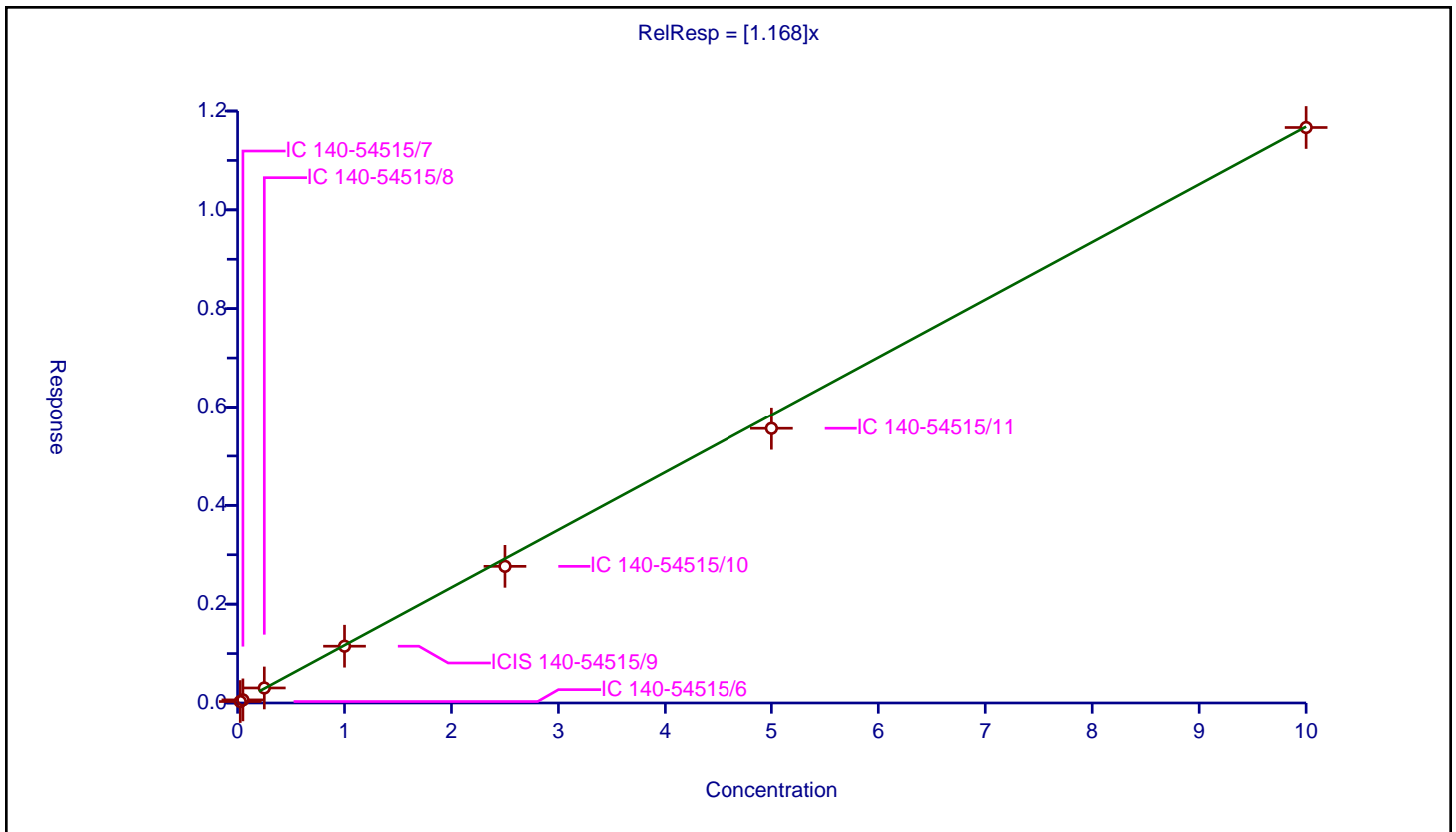
/ N-ethylperfluoro-1-octanesulfonamide

Curve Type: Average
Weighting: Conc_Sq
Origin: Force
Dependency: Response
Calib Mode: IsoDil
Response Base: AREA
RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.168

Error Coefficients	
Standard Error:	2050000
Relative Standard Error:	4.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.029171	1.25	519654.0	1.166834	Y
2	IC 140-54515/7	0.05	0.063046	1.25	516960.0	1.260929	Y
3	IC 140-54515/8	0.25	0.304249	1.25	491391.0	1.216994	Y
4	ICIS 140-54515/9	1.0	1.149116	1.25	512905.0	1.149116	Y
5	IC 140-54515/10	2.5	2.765638	1.25	500239.0	1.106255	Y
6	IC 140-54515/11	5.0	5.560596	1.25	507678.0	1.112119	Y
7	IC 140-54515/12	10.0	11.666501	1.25	462772.0	1.16665	Y



Calibration

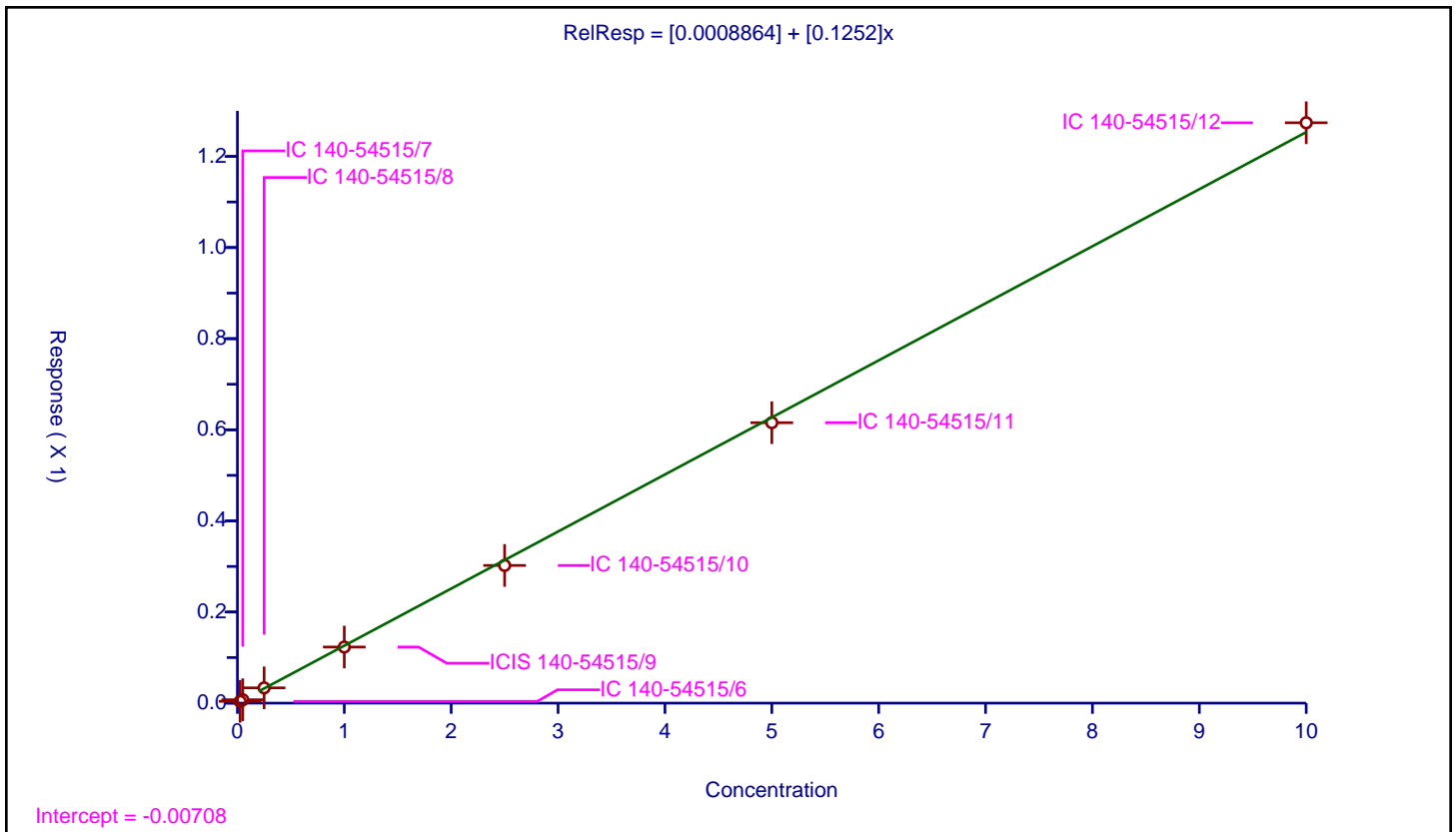
/ Perfluorotetradecanoic acid

Curve Type: Linear
 Weighting: Conc_Sq
 Origin: None
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.0008864
Slope:	0.1252

Error Coefficients	
Standard Error:	3120000
Relative Standard Error:	3.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.003934	1.25	6635881.0	0.157372	Y
2	IC 140-54515/7	0.05	0.00744	1.25	6455611.0	0.148797	Y
3	IC 140-54515/8	0.25	0.033553	1.25	6765277.0	0.134213	Y
4	ICIS 140-54515/9	1.0	0.123164	1.25	6776597.0	0.123164	Y
5	IC 140-54515/10	2.5	0.302208	1.25	6396884.0	0.120883	Y
6	IC 140-54515/11	5.0	0.615607	1.25	6178920.0	0.123121	Y
7	IC 140-54515/12	10.0	1.273944	1.25	5922620.0	0.127394	Y



Calibration

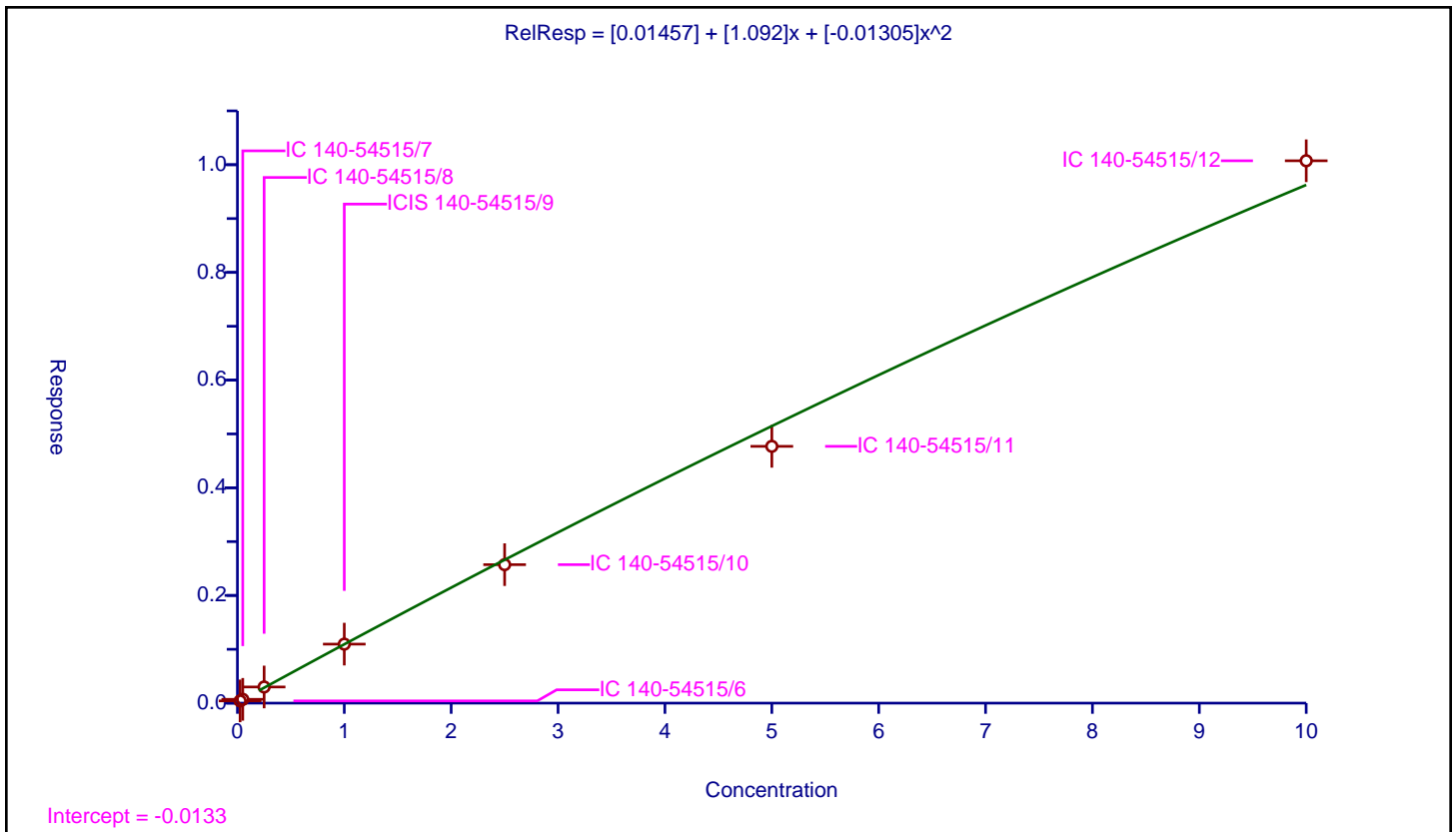
/ Perfluorohexadecanoic acid

Curve Type: Quadratic
 Weighting: Conc_Sq
 Origin: None
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.01457
Slope:	1.092
Second Order:	-0.01305

Error Coefficients	
Standard Error:	20700000
Relative Standard Error:	5.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.041371	1.25	4704223.0	1.654832	Y
2	IC 140-54515/7	0.05	0.070556	1.25	4697373.0	1.411119	Y
3	IC 140-54515/8	0.25	0.300102	1.25	4715970.0	1.200407	Y
4	ICIS 140-54515/9	1.0	1.095943	1.25	4764988.0	1.095943	Y
5	IC 140-54515/10	2.5	2.571889	1.25	4627358.0	1.028756	Y
6	IC 140-54515/11	5.0	4.769259	1.25	4766428.0	0.953852	Y
7	IC 140-54515/12	10.0	10.073658	1.25	4426886.0	1.007366	Y



Calibration

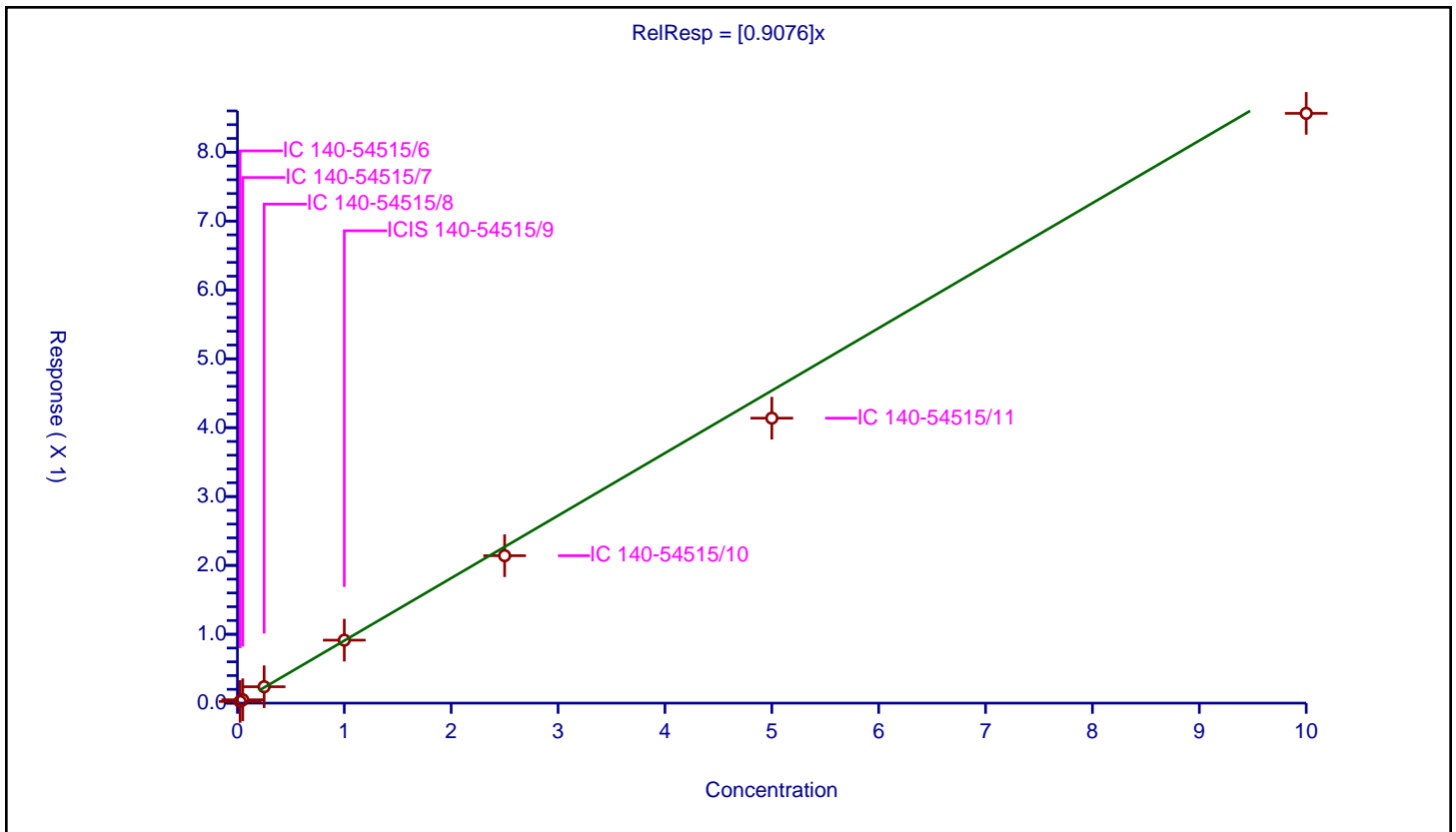
/ Perfluorooctadecanoic acid

Curve Type: Average
 Weighting: Conc_Sq
 Origin: Force
 Dependency: Response
 Calib Mode: IsoDil
 Response Base: AREA
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.9076

Error Coefficients	
Standard Error:	14400000
Relative Standard Error:	6.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-54515/6	0.025	0.024256	1.25	4704223.0	0.970224	Y
2	IC 140-54515/7	0.05	0.048769	1.25	4697373.0	0.97538	Y
3	IC 140-54515/8	0.25	0.238231	1.25	4715970.0	0.952926	Y
4	ICIS 140-54515/9	1.0	0.914388	1.25	4764988.0	0.914388	Y
5	IC 140-54515/10	2.5	2.141013	1.25	4627358.0	0.856405	Y
6	IC 140-54515/11	5.0	4.137999	1.25	4766428.0	0.8276	Y
7	IC 140-54515/12	10.0	8.564416	1.25	4426886.0	0.856442	Y



FORM VII
PFAS CONTINUING CALIBRATION DATA

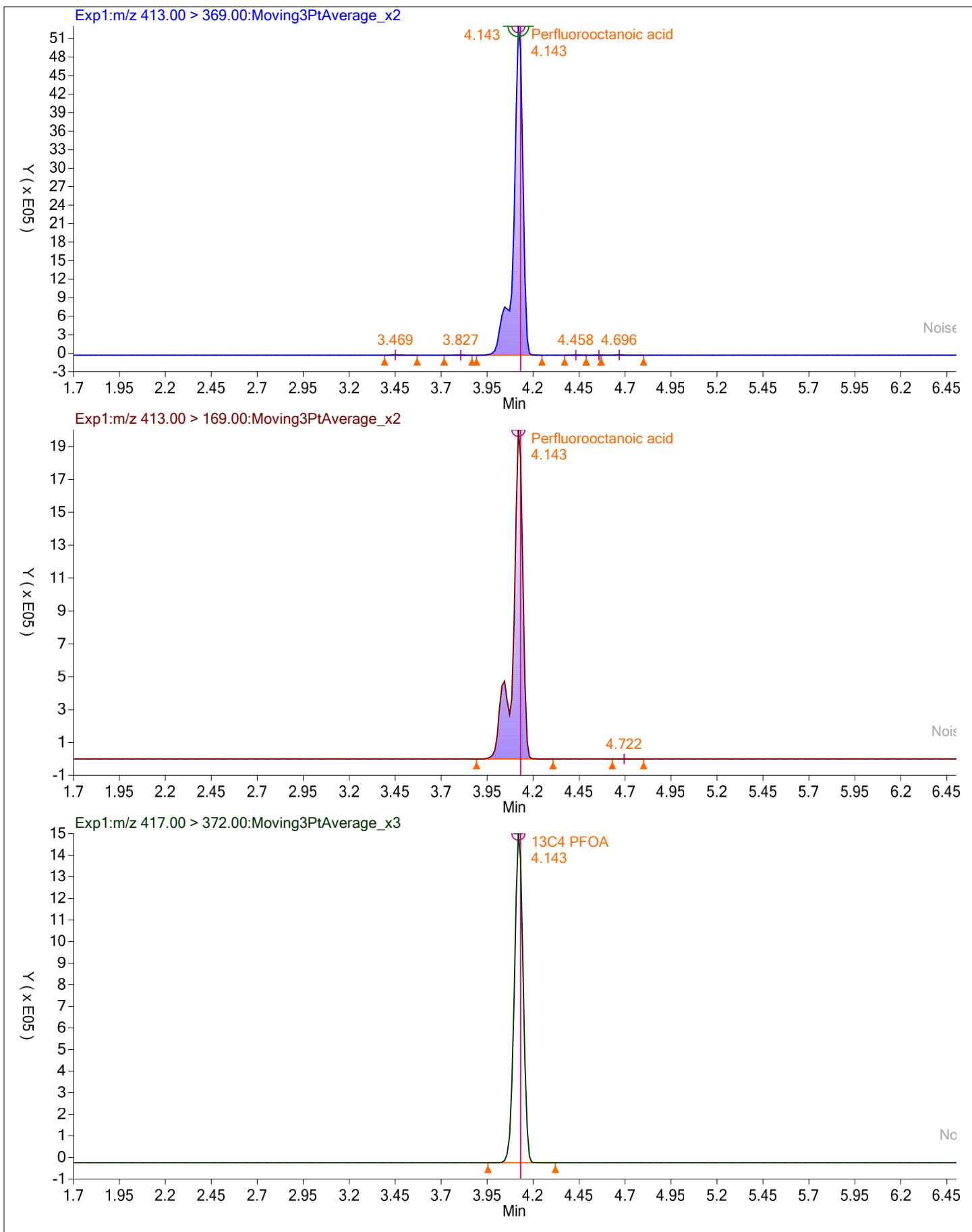
Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Lab Sample ID: ICV 140-54515/14 Calibration Date: 10/05/2021 23:11
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _014.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7855	0.7959		4.12	4.06	1.3	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.013	1.021		4.17	4.14	0.8	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.126	1.138		4.55	4.50	1.1	40.0
4:2 FTS	AveID	2.500	2.560		4.31	4.20	2.4	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8572	0.8761		4.60	4.50	2.2	40.0
Perfluoropentanesulfonic acid (PFPeS)	L2ID		0.7930		3.91	4.22	-7.3	50.0
HFPO-DA	L2ID		1.365		4.46	4.50	-1.0	40.0
Perfluoroheptanoic acid (PFHpA)	L2ID		1.088		4.65	4.50	3.3	40.0
Perfluorohexanesulfonic acid (PFHxS)	L2ID		1.439		4.79	4.50	6.4	40.0
DONA	AveID	3.243	2.958		4.10	4.50	-8.8	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9947	1.007		4.34	4.28	1.3	40.0
6:2 FTS	L2ID		1.993		4.26	4.27	-0.4	40.0
Perfluorooctanoic acid (PFOA)	L2ID		1.111		4.54	4.50	0.8	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.100	1.014		4.15	4.50	-7.8	40.0
Perfluorononanoic acid (PFNA)	L2ID		0.8983		4.86	4.50	8.1	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	2.308	2.159		4.21	4.50	-6.5	40.0
Perfluorononanesulfonic acid (PFNS)	AveID	1.042	0.997		4.13	4.32	-4.3	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9606	0.9165		4.29	4.50	-4.6	40.0
Perfluorodecanoic acid (PFDA)	L2ID		0.9947		4.75	4.50	5.6	40.0
8:2 FTS	AveID	1.784	1.657		4.13	4.44	-7.1	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	L2ID		0.9249		4.55	4.50	1.2	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.9574	1.012		4.59	4.34	5.8	40.0
Perfluoroundecanoic acid (PFUnA)	L2ID		0.9723		4.34	4.50	-3.5	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.9494	0.9477		4.49	4.50	-0.2	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.858	1.630		3.95	4.50	-12.3	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9075		4.15	4.50	-7.8	40.0
10:2 FTS	AveID	2.221	2.279		4.45	4.34	2.6	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.181		4.62	4.50	2.6	40.0
NMeFOSA	AveID	1.047	1.106		4.75	4.50	5.6	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9879	1.036		4.57	4.36	4.9	40.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Lab Sample ID: ICV 140-54515/14 Calibration Date: 10/05/2021 23:11
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _014.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.354		4.84	4.50	7.6	40.0
Perfluorotridecanoic acid (PFTrIA)	L2ID		0.7947		4.06	4.50	-9.7	50.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.168	1.354		5.21	4.50	15.8	40.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.1322		4.74	4.50	5.4	40.0
Perfluorohexadecanoic acid	Q2ID		0.9779		4.23	4.50	-5.9	40.0
Perfluorooctadecanoic acid	AveID	0.9076	0.8326		4.13	4.50	-8.3	40.0
13C4 PFBA	Ave	1.324	1.401		1.32	1.25	5.8	50.0
13C5 PFPeA	Ave	1.087	1.133		1.30	1.25	4.2	50.0
13C3 PFBS	Ave	0.7019	0.7471		1.24	1.16	6.4	50.0
M2-4:2 FTS	Ave	0.1052	0.1083		1.20	1.17	2.9	50.0
13C2 PFHxA	Ave	1.116	1.175		1.32	1.25	5.3	50.0
13C3 HFPO-DA	Ave	0.5714	0.6040		1.32	1.25	5.7	50.0
13C4 PFHpA	Ave	1.113	1.113		1.25	1.25	0.0	50.0
18O2 PFHxS	Ave	0.4248	0.4178		1.16	1.18	-1.6	50.0
13C4 PFOA	Ave	1.007	1.037		1.29	1.25	3.0	50.0
M2-6:2 FTS	Ave	0.1078	0.1040		1.15	1.19	-3.5	50.0
13C4 PFOS	Ave	0.5852	0.6176		1.26	1.20	5.5	50.0
13C5 PFNA	Ave	1.279	1.342		1.31	1.25	4.9	50.0
13C8 FOSA	Ave	0.8591	0.8674		1.26	1.25	1.0	50.0
13C2 PFDA	Ave	1.296	1.265		1.22	1.25	-2.3	50.0
M2-8:2 FTS	Ave	0.1316	0.1340		1.22	1.20	1.8	50.0
d3-NMeFOSAA	Ave	0.1774	0.1981		1.40	1.25	11.7	50.0
13C2 PFUnA	Ave	1.237	1.287		1.30	1.25	4.1	50.0
d5-NEtFOSAA	Ave	0.1705	0.1702		1.25	1.25	-0.2	50.0
13C2 PFDoA	Ave	1.319	1.395		1.32	1.25	5.8	50.0
d7-N-MeFOSE-M	Ave	0.1075	0.1105		1.28	1.25	2.7	50.0
d-N-MeFOSA-M	Ave	0.1120	0.1167		1.30	1.25	4.3	50.0
d9-N-EtFOSE-M	Ave	0.1146	0.1147		1.25	1.25	0.1	50.0
d-N-EtFOSA-M	Ave	0.0942	0.0944		1.25	1.25	0.2	50.0
13C2 PFTeDA	Ave	1.211	1.242		1.28	1.25	2.6	50.0
13C2 PFHxDA	Ave	0.8782	0.9190		1.31	1.25	4.6	50.0
13C8 PFOA	Ave	0.9886	1.012		1.28	1.25	2.4	50.0
13C8 PFOS	Ave	0.1256	0.1396		1.33	1.20	11.2	50.0



Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_014.d
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 05-Oct-2021 23:11:18 ALS Bottle#: 14 Worklist Smp#: 14
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020953-014 icv
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist:

Method: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 07-Oct-2021 14:48:19 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1613

First Level Reviewer: cochranj Date: 06-Oct-2021 16:23:03

Ratio Calibration: None

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	2.812	2.812	0.0	0.679	6987039	1.32	106	8889	
2 Perfluorobutanoic acid	212.90 > 169.00	2.812	2.812	0.0	1.000	18069189	4.12		2079	
D 3 13C5 PFPeA	267.90 > 223.00	3.117	3.130	-0.013	0.752	5650264	1.30	104	8813	
4 Perfluoropentanoic acid	262.90 > 219.00	3.117	3.130	-0.013	1.000	19103937	4.17		3736	
D 6 13C3 PFBS	301.90 > 80.00	3.131	3.143	-0.012	0.756	3465403	1.24	106	12340	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.144	3.157	-0.013	1.004	15270909	4.55	Target=3.06	15626	
	298.90 > 99.00	3.144	3.157	-0.013	1.004	5685973		2.69(1.53-4.59)	8867	
D 8 M2-4:2 FTS	329.00 > 81.00	3.424	3.437	-0.013	0.826	504483	1.20	103	566	
7 4:2 FTS	327.00 > 307.00	3.424	3.437	-0.013	1.000	4651534	4.31		7059	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.454	3.469	-0.015	1.103	9978124	3.91	Target=3.47	12664	
	349.00 > 99.00	3.454	3.469	-0.015	1.103	2692222		3.71(1.73-5.20)	8814	
D 9 13C2 PFHxA	315.00 > 270.00	3.454	3.469	-0.015	0.834	5861764	1.32	105	10194	
10 Perfluorohexanoic acid	313.00 > 269.00	3.454	3.469	-0.015	1.000	18486876	4.60	Target=9.74	5135	
	313.00 > 119.00	3.454	3.469	-0.015	1.000	1482669		12.47(4.87-14.61)	3641	
D 12 13C3 HFPO-DA	287.00 > 169.00	3.549	3.562	-0.013	0.857	3012775	1.32	106	7880	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.549	3.562	-0.013	1.000	14802746	4.46			6689	
D 17 18O2 PFHxS										
403.00 > 84.00	3.804	3.815	-0.011	0.918	1971320	1.16		98.4	8722	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.804	3.815	-0.011	1.000	10795264	4.79	Target=2.96		28139	
399.00 > 99.00	3.804	3.815	-0.011	1.000	3104032		3.48(1.48-4.44)		12693	
D 14 13C4 PFHpA										
367.00 > 322.00	3.804	3.815	-0.011	0.918	5553860	1.25		100	12353	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.804	3.815	-0.011	1.000	21751688	4.65	Target=3.35		7257	
363.00 > 169.00	3.804	3.815	-0.011	1.000	6606867		3.29(1.67-5.02)		12851	
68 DONA										
377.00 > 251.00	3.841	3.852	-0.011	0.866	32804430	4.10	Target=1.49		32741	
377.00 > 85.00	3.841	3.852	-0.011	0.866	18407919		1.78(0.74-2.23)		8812	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.131	4.142	-0.011	0.932	10633717	4.34	Target=3.73		19779	
449.00 > 99.00	4.131	4.142	-0.011	0.932	2751374		3.86(1.87-5.61)		13922	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.131	4.142	-0.011	0.997	5047497	1.28		102	17786	
19 6:2 FTS										
427.00 > 407.00	4.143	4.142	0.001	1.000	3533924	4.26			12032	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.143	4.154	-0.011	1.000	492988	1.15		96.5	922	
D 21 13C4 PFOA										
417.00 > 372.00	4.143	4.154	-0.011	1.000	5170463	1.29		103	11773	
* 22 13C2 PFOA										
415.00 > 370.00	4.143	4.154	-0.011		4987828	1.25			16494	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.143	4.154	-0.011	1.000	20672770	4.54	Target=2.40		5405	
413.00 > 169.00	4.143	4.154	-0.011	1.000	8120302		2.55(1.20-3.61)		7970	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.435	4.446	-0.011	1.070	665766	1.33		111	2272	
D 25 13C4 PFOS										
503.00 > 80.00	4.435	4.446	-0.011	1.070	2944786	1.26		106	6261	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.435	4.446	-0.011	1.000	11246828	4.15	Target=3.83		14052	M
499.00 > 99.00	4.435	4.446	-0.011	1.000	2502390		4.49(1.91-5.74)		7816	M
D 27 13C5 PFNA										
468.00 > 423.00	4.459	4.469	-0.010	1.076	6694326	1.31		105	30145	
26 Perfluorononanoic acid										
463.00 > 419.00	4.459	4.469	-0.010	1.000	21648409	4.86	Target=3.68		12194	
463.00 > 169.00	4.459	4.469	-0.010	1.000	4805427		4.50(1.84-5.52)		8901	
63 9CIFOS										
531.00 > 351.00	4.596	4.607	-0.011	1.109	23938826	4.21			40891	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.723	4.721	0.002	1.065	10616061	4.13	Target=3.97		21527	
549.00 > 99.00	4.723	4.721	0.002	1.065	2705275		3.92(1.99-5.96)		12411	
D 34 13C8 FOSA										
506.00 > 78.00	4.736	4.748	-0.012	1.143	4326566	1.26		101	5281	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.736	4.748	-0.012	1.000	14274954	4.29			8020	
D 32 13C2 PFDA										
515.00 > 470.00	4.749	4.762	-0.013	1.146	6310941	1.22		97.7	22677	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.749	4.762	-0.013	1.000	22599592	4.75	Target=10.11		8621	
513.00 > 169.00	4.749	4.762	-0.013	1.000	1869525		12.09(5.06-15.17)		626	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.763	4.775	-0.012	1.150	640118	1.22		102	1418	
31 8:2 FTS										
527.00 > 507.00	4.763	4.775	-0.012	1.000	3933432	4.13			16014	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.883	4.895	-0.012	1.178	987986	1.40		112	932	
36 NMeFOSAA										
570.00 > 419.00	4.883	4.895	-0.012	1.000	3289538	4.55			3417	
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.979	4.992	-0.013	1.123	10823230	4.59	Target=3.80		41537	
599.00 > 99.00	4.979	4.992	-0.013	1.123	2836335		3.82(1.90-5.70)		6420	
D 39 13C2 PFUnA										
565.00 > 520.00	5.008	5.021	-0.013	1.209	6420735	1.30		104	25293	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.008	5.021	-0.013	1.000	22474598	4.34	Target=7.45		9493	
563.00 > 169.00	5.008	5.021	-0.013	1.000	2533028		8.87(3.78-11.33)		12115	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.022	5.035	-0.013	1.212	848788	1.25		99.8	3066	
40 NEtFOSA										
584.00 > 419.00	5.022	5.035	-0.013	1.000	2895758	4.49			1100	
57 11CIFOS										
631.00 > 451.00	5.106	5.118	-0.012	1.151	18070139	3.95			31562	
D 43 13C2 PFDaA										
615.00 > 570.00	5.237	5.250	-0.013	1.264	6960212	1.32		106	20316	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.237	5.250	-0.013	1.000	22738327	4.15	Target=5.33		7799	
613.00 > 169.00	5.237	5.250	-0.013	1.000	3497949		6.50(2.66-7.99)		11106	
50 10:2 FTS										
627.00 > 607.00	5.266	5.280	-0.014	1.106	5288521	4.45			10468	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.281	5.294	-0.013	1.275	551142	1.28		103	330	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.296	5.294	0.002	1.278	582246	1.30		104	36.9	
49 N-MeFOSE-M										
616.00 > 59.00	5.296	5.294	0.002	1.003	2342398	4.62			1311	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.296	5.309	-0.013	1.000	2317704	4.75			929	
54 PFDoS										
699.00 > 80.00	5.423	5.435	-0.012	1.223	11124791	4.57	Target=4.32		9986	
699.00 > 99.00	5.423	5.435	-0.012	1.223	2677059		4.16(2.19-6.58)		15557	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.436	5.448	-0.012	1.312	572334	1.25		100	344	
62 N-EtFOSE-M										
630.00 > 59.00	5.449	5.461	-0.012	1.002	2788942	4.84			2230	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.449	5.461	-0.012	1.041	19912502	4.06	Target=5.66		6741	
663.00 > 169.00	5.449	5.461	-0.012	1.041	3278499		6.07(2.83-8.48)		8782	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.463	5.461	0.002	1.318	470738	1.25		100	351	
56 N-EtFOSA-M										
526.00 > 169.00	5.463	5.474	-0.011	1.000	2293882	5.21			520	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.638	5.637	0.001	1.361	6193342	1.28		103	17405	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.638	5.637	0.001	1.000	2947717	4.74	Target=1.07		12526	
713.00 > 219.00	5.623	5.637	-0.014	0.997	3021778		0.98(0.53-1.60)		11463	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.948	5.960	-0.012	1.000	16136895	4.23	Target=7.50		5801	
813.00 > 169.00	5.948	5.960	-0.012	1.000	2033565		7.94(3.75-11.26)		4505	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.948	5.960	-0.012	1.436	4583991	1.31		105	7494	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.211	6.220	-0.009	1.044	13739225	4.13	Target=9.98		4619	
913.00 > 169.00	6.211	6.220	-0.009	1.044	1254723		10.95(5.14-15.41)		3381	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63ICVPFC2_FUL_00002

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_014.d

Injection Date: 05-Oct-2021 23:11:18

Instrument ID: LCA

Lims ID: ICV

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 14

Worklist Smp#: 14

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

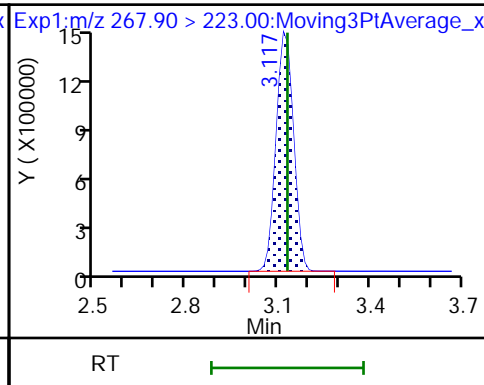
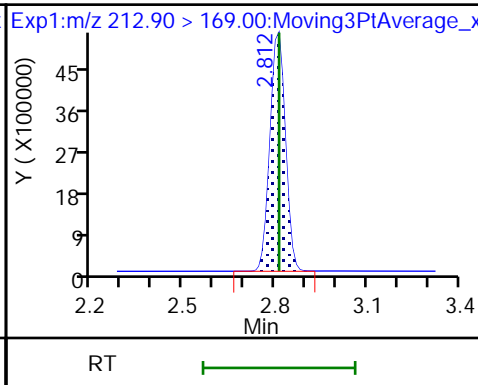
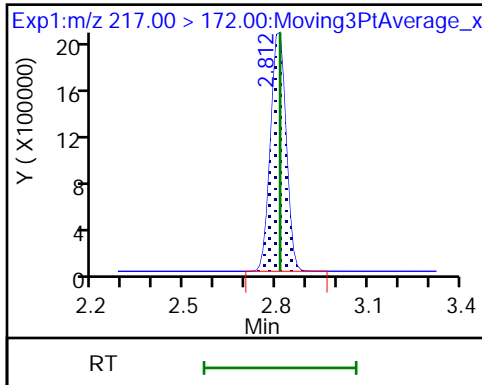
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

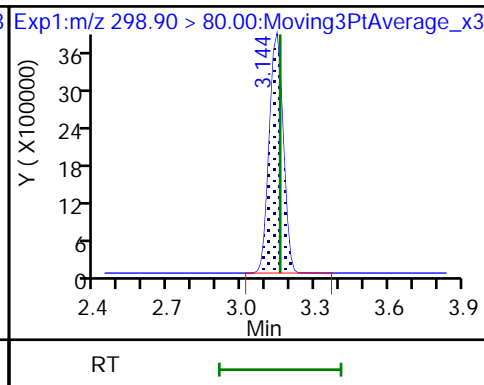
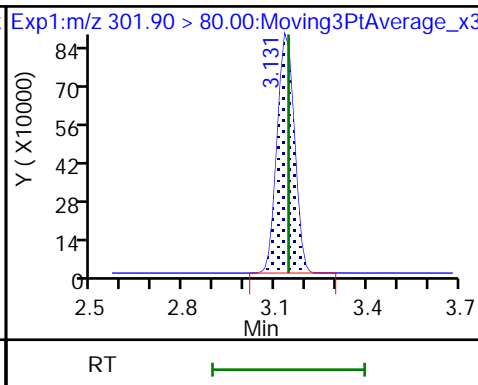
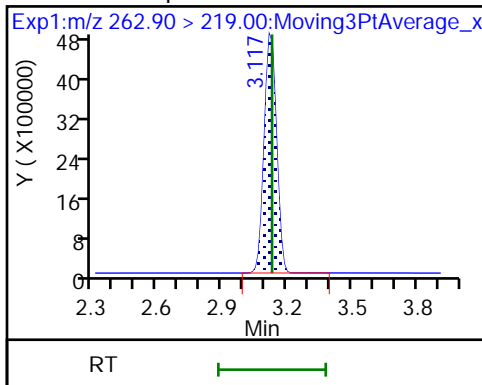
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

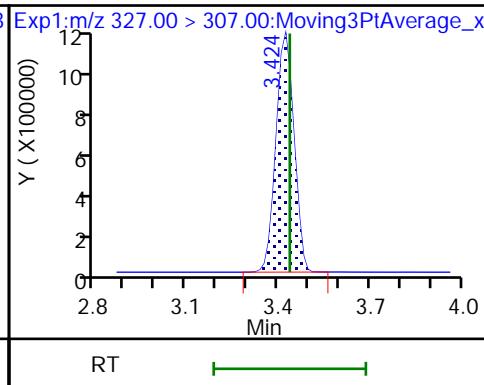
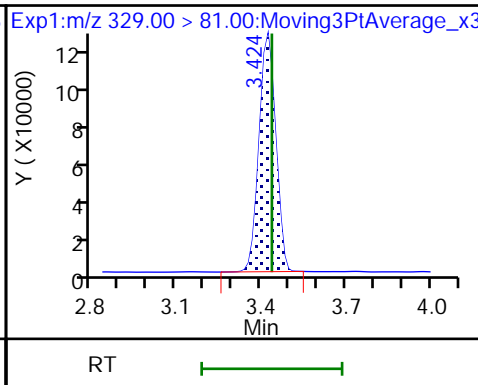
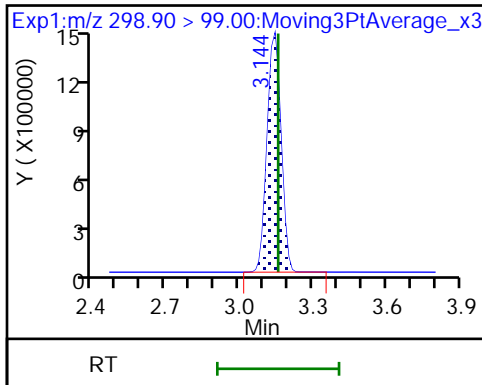
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

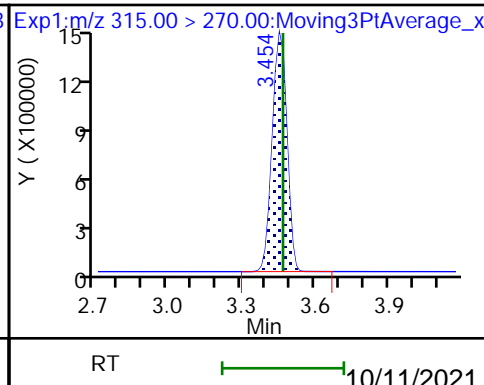
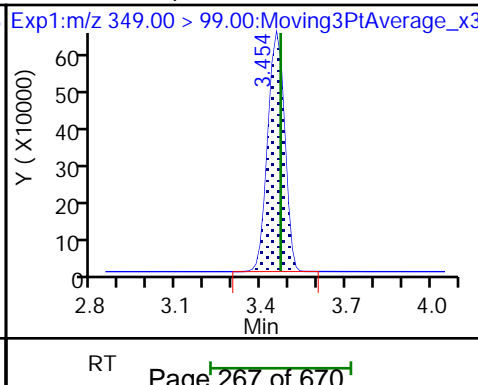
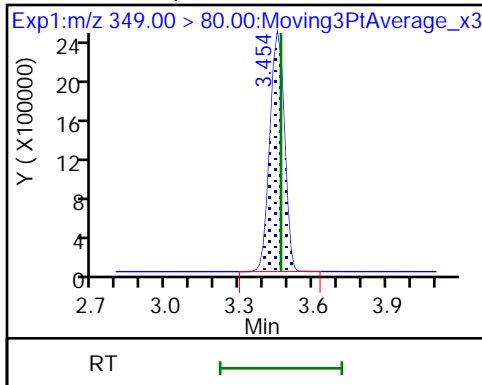
7 4:2 FTS

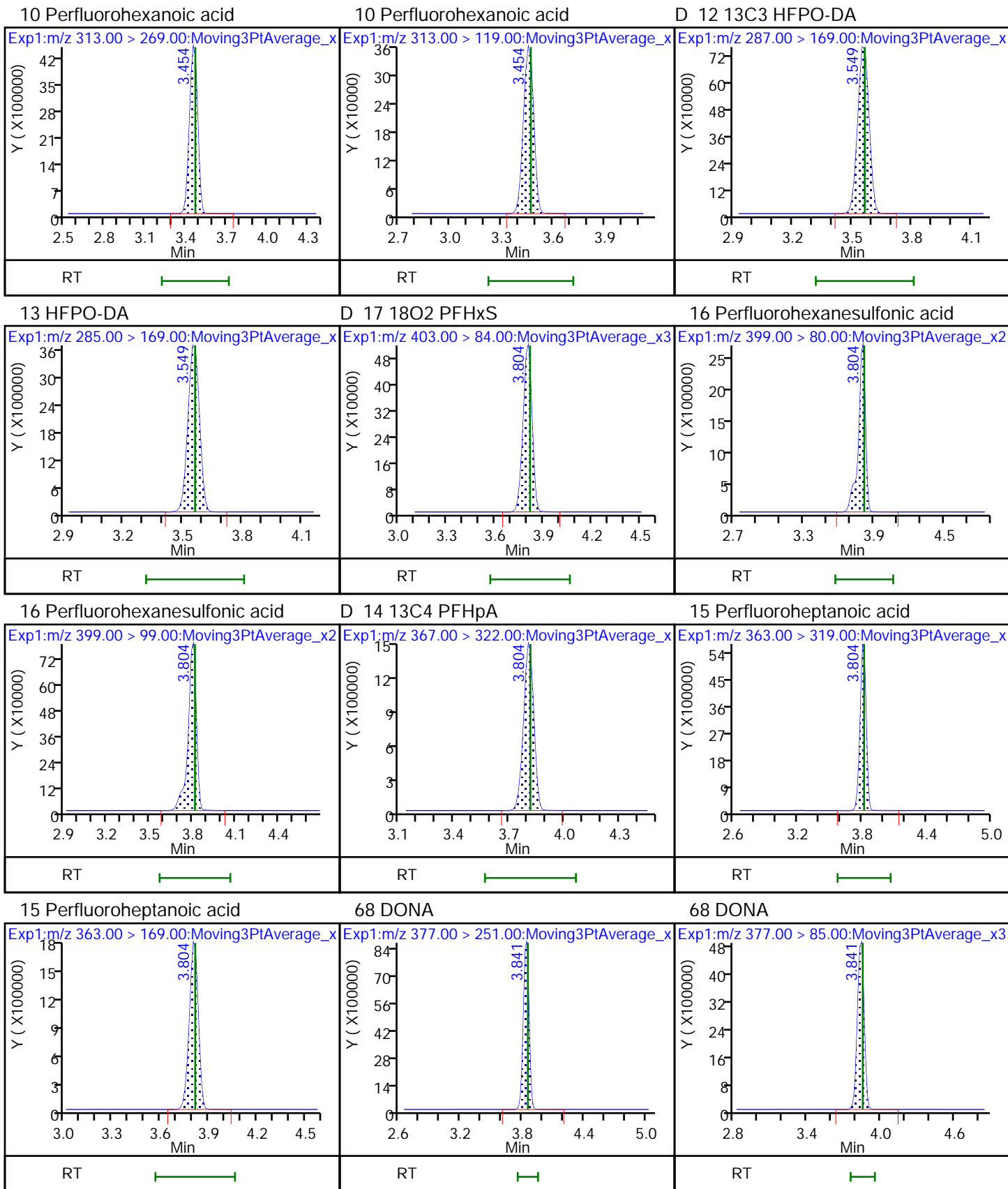


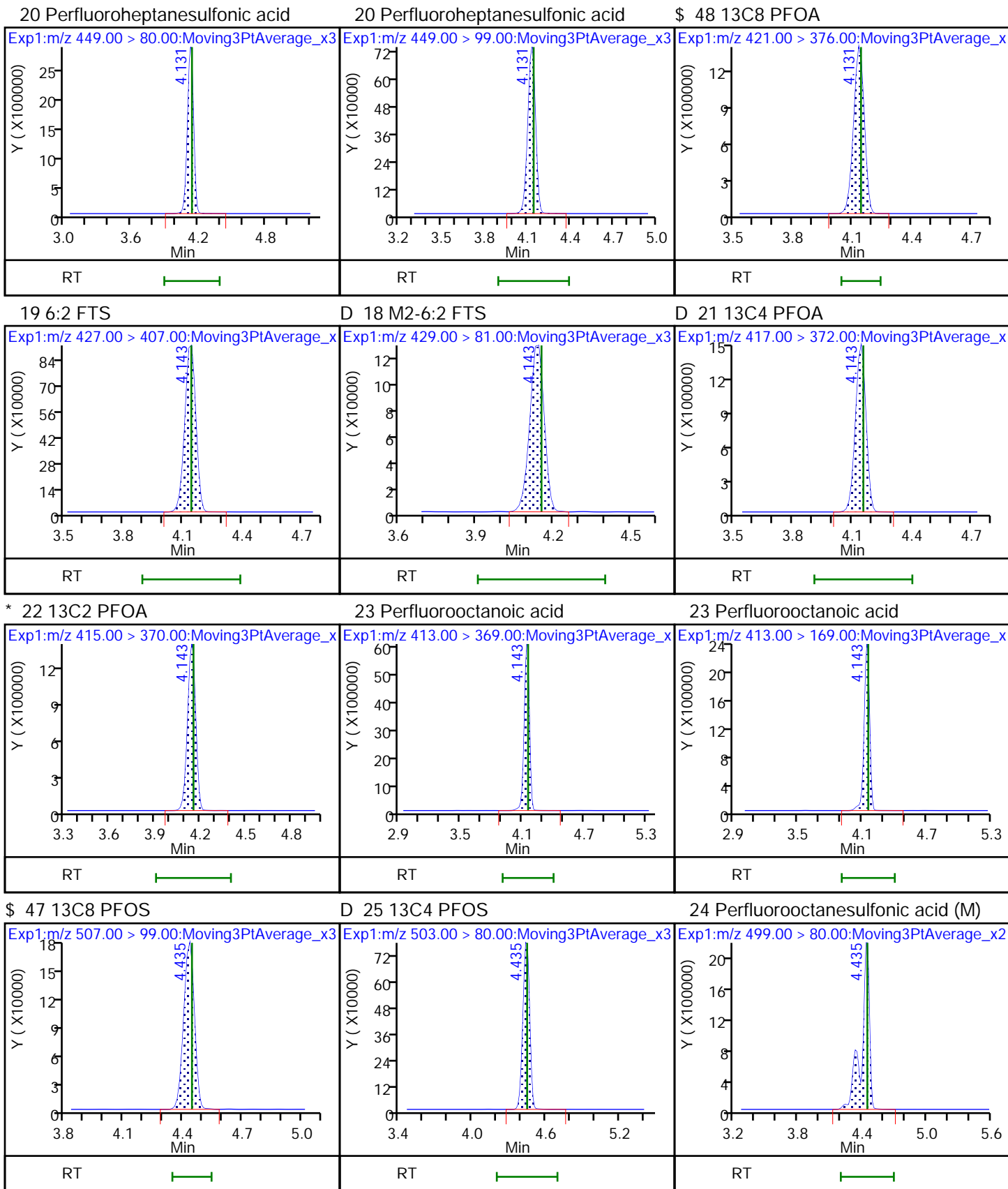
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

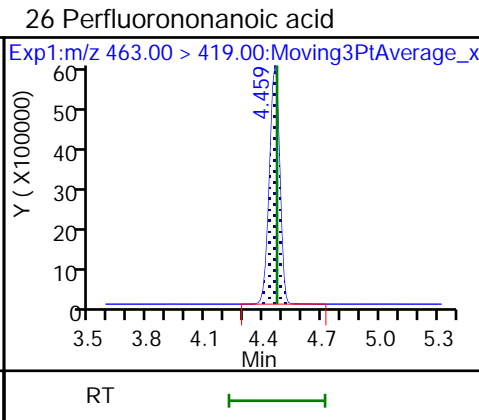
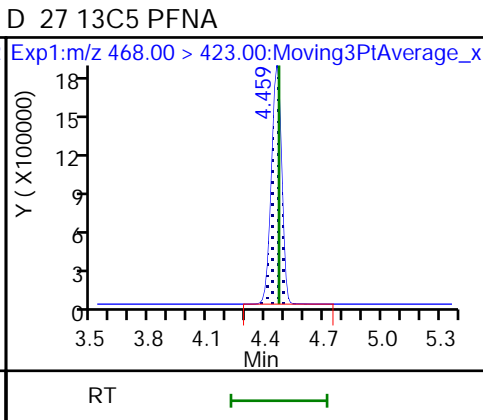
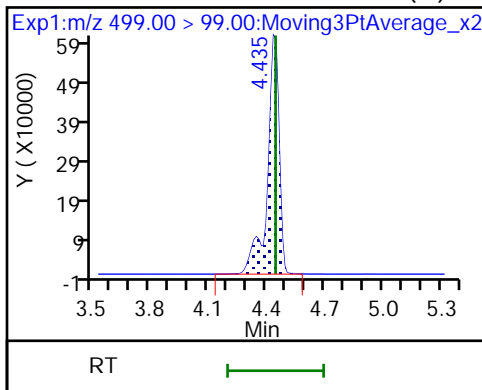
D 9 13C2 PFHxA







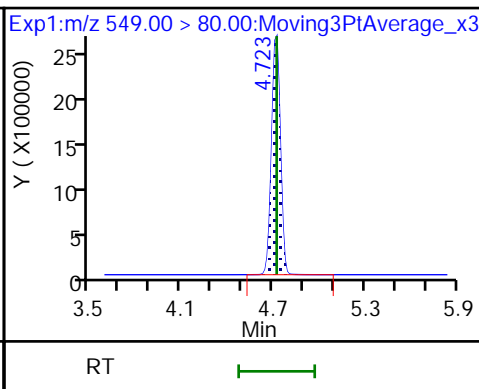
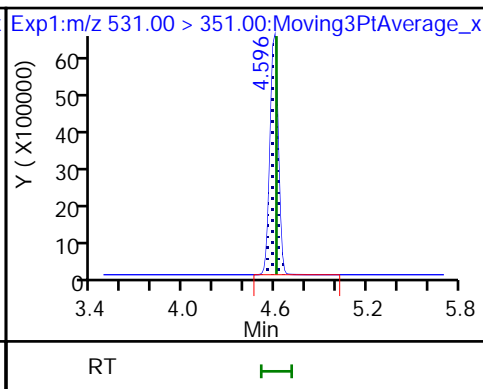
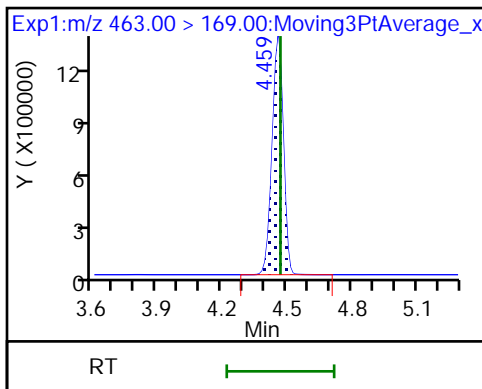
24 Perfluorooctanesulfonic acid (M) D 27 13C5 PFNA



26 Perfluorononanoic acid

63 9CIFOS

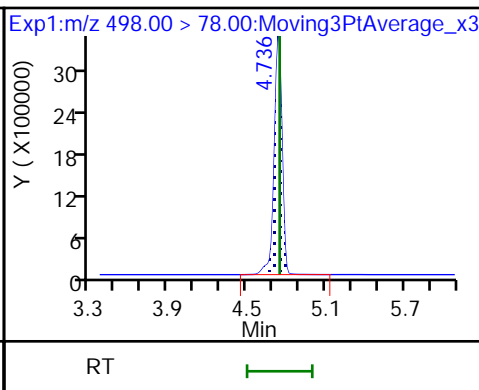
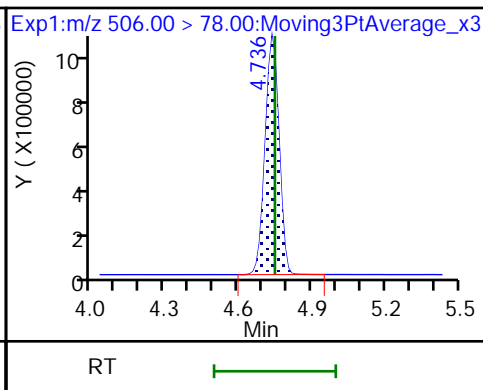
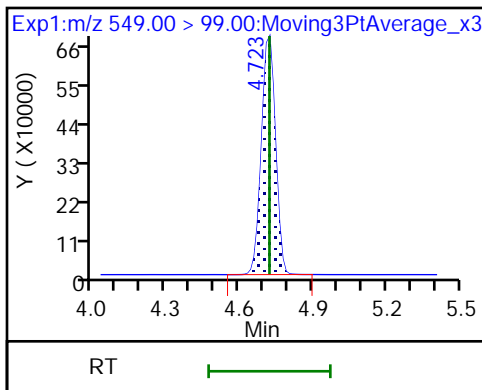
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

D 34 13C8 FOSA

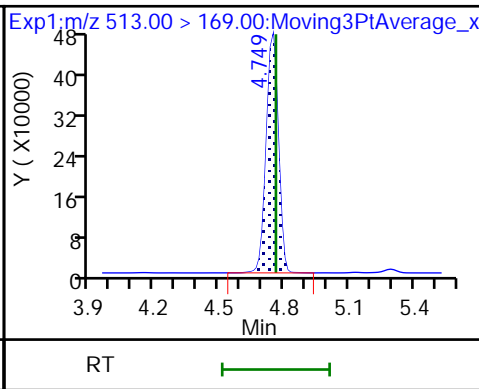
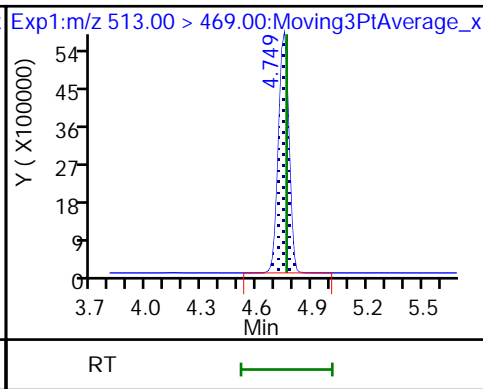
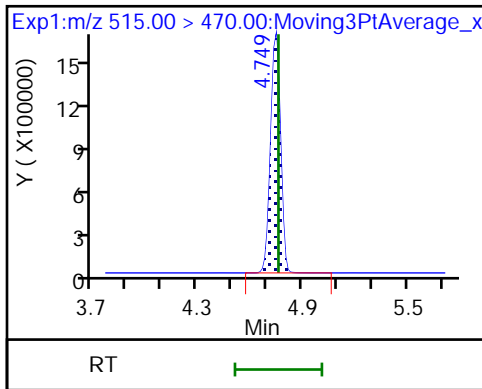
33 Perfluorooctanesulfonamide



D 32 13C2 PFDA

29 Perfluorodecanoic acid

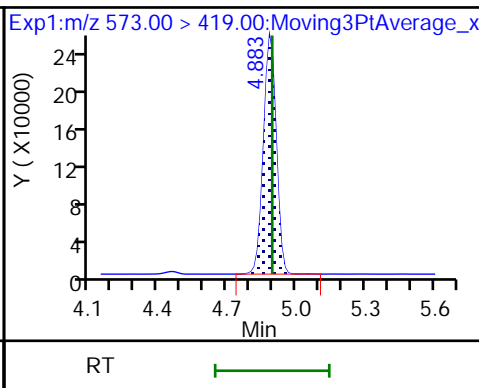
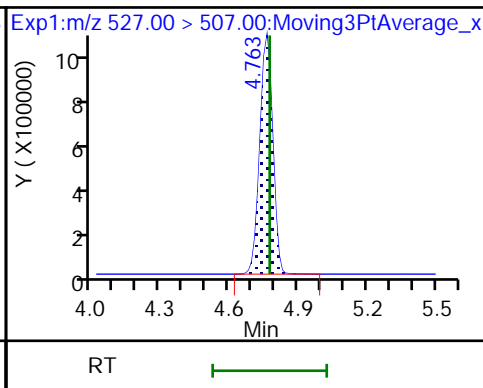
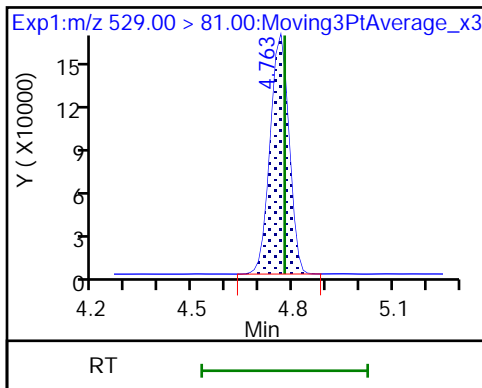
29 Perfluorodecanoic acid



D 30 M2-8:2 FTS

31 8:2 FTS

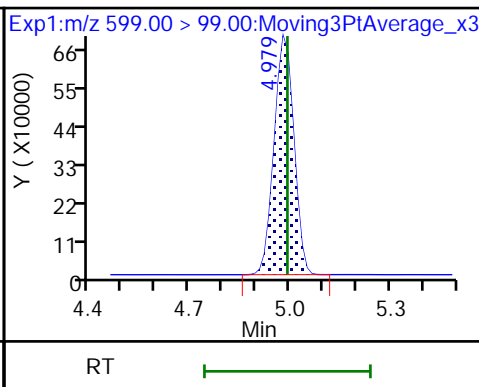
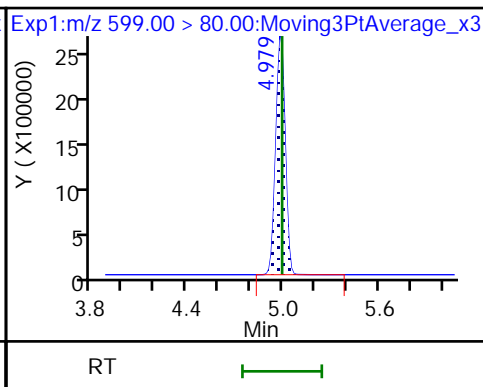
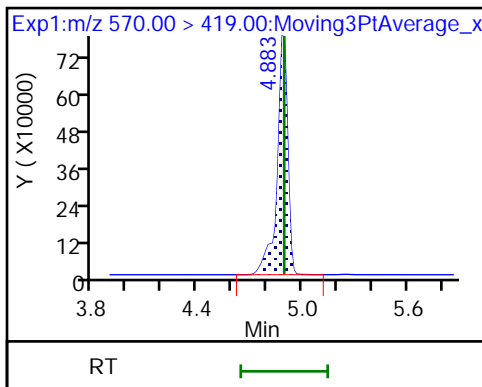
D 35 d3-NMeFOSAA



36 NMeFOSAA

37 Perfluorodecanesulfonic acid

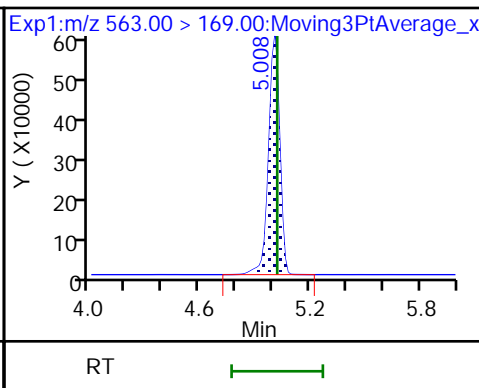
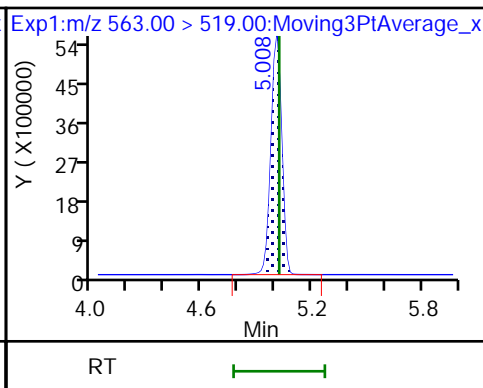
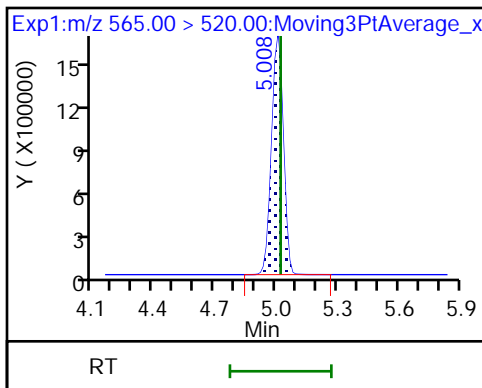
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

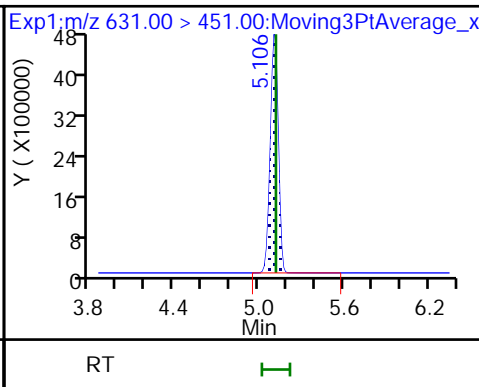
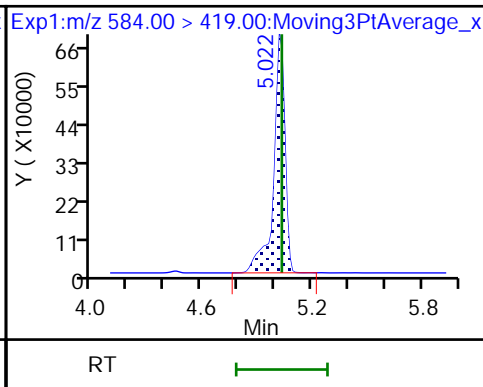
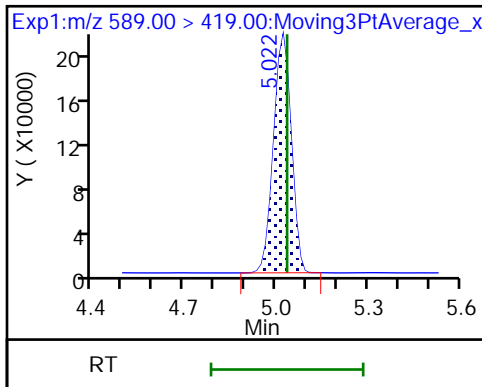
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA

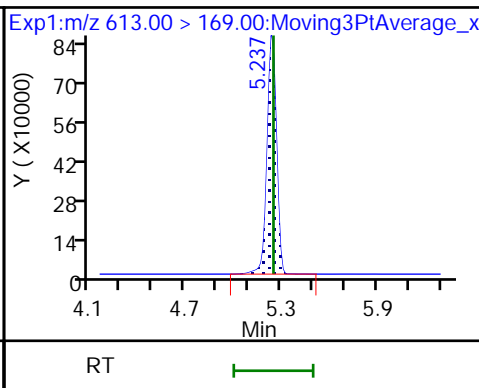
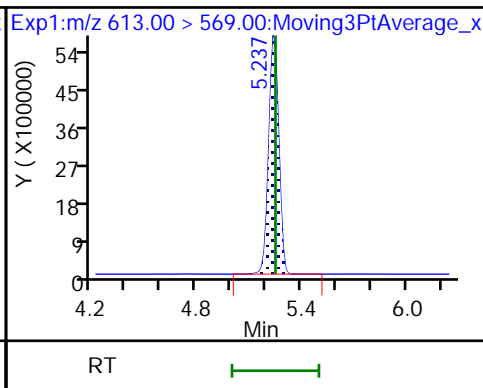
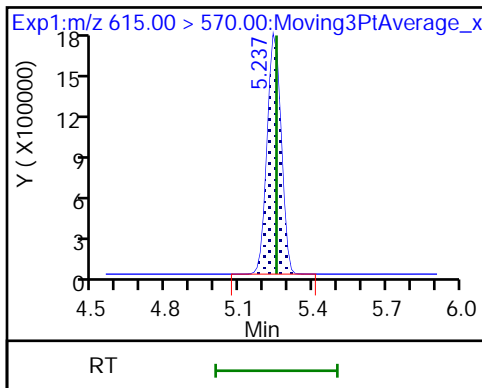
57 11C1FOS



D 43 13C2 PFDoA

42 Perfluorododecanoic acid

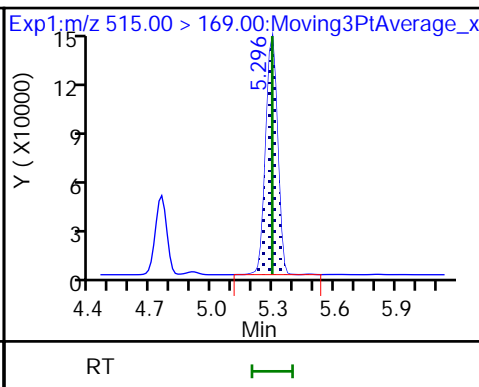
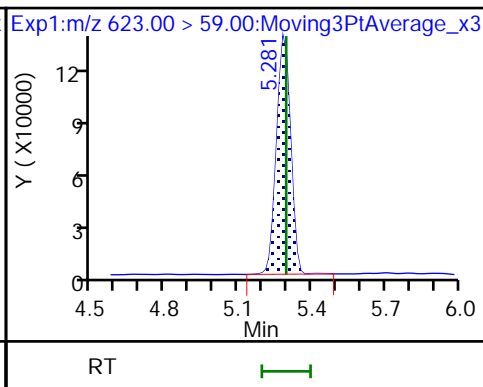
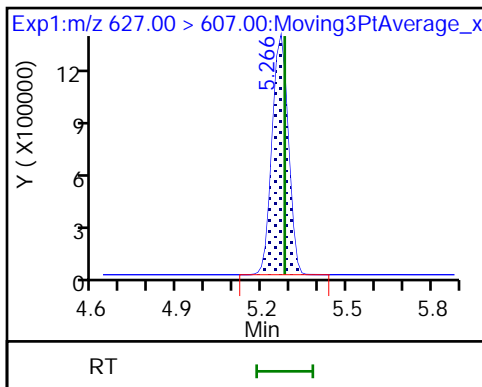
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

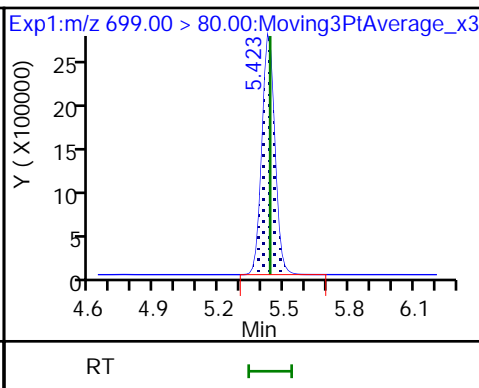
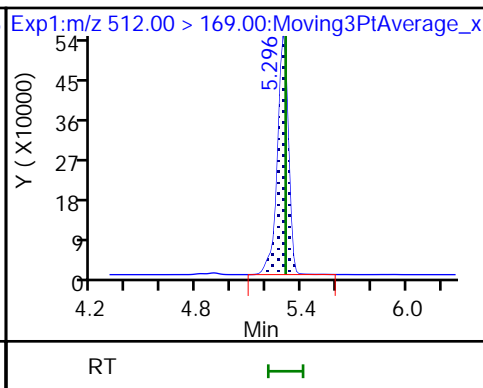
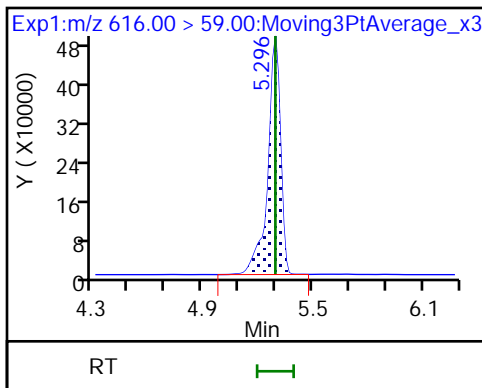
D 58 d-N-MeFOSA-M



49 N-MeFOSE-M

61 NMeFOSA

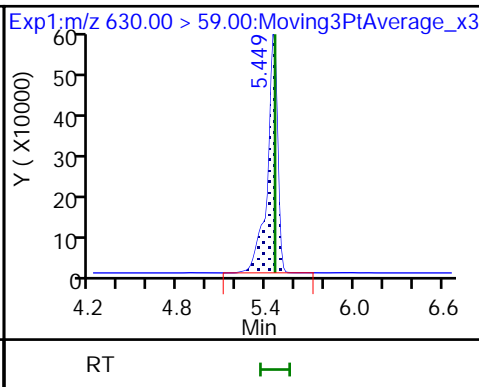
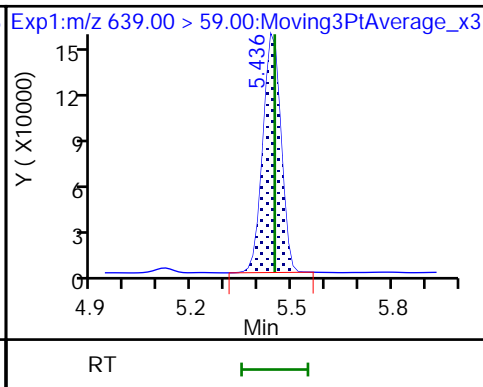
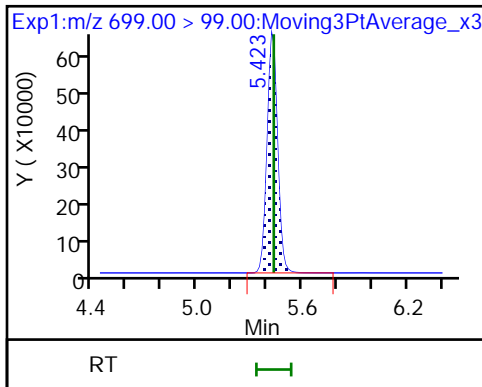
54 PFDoS

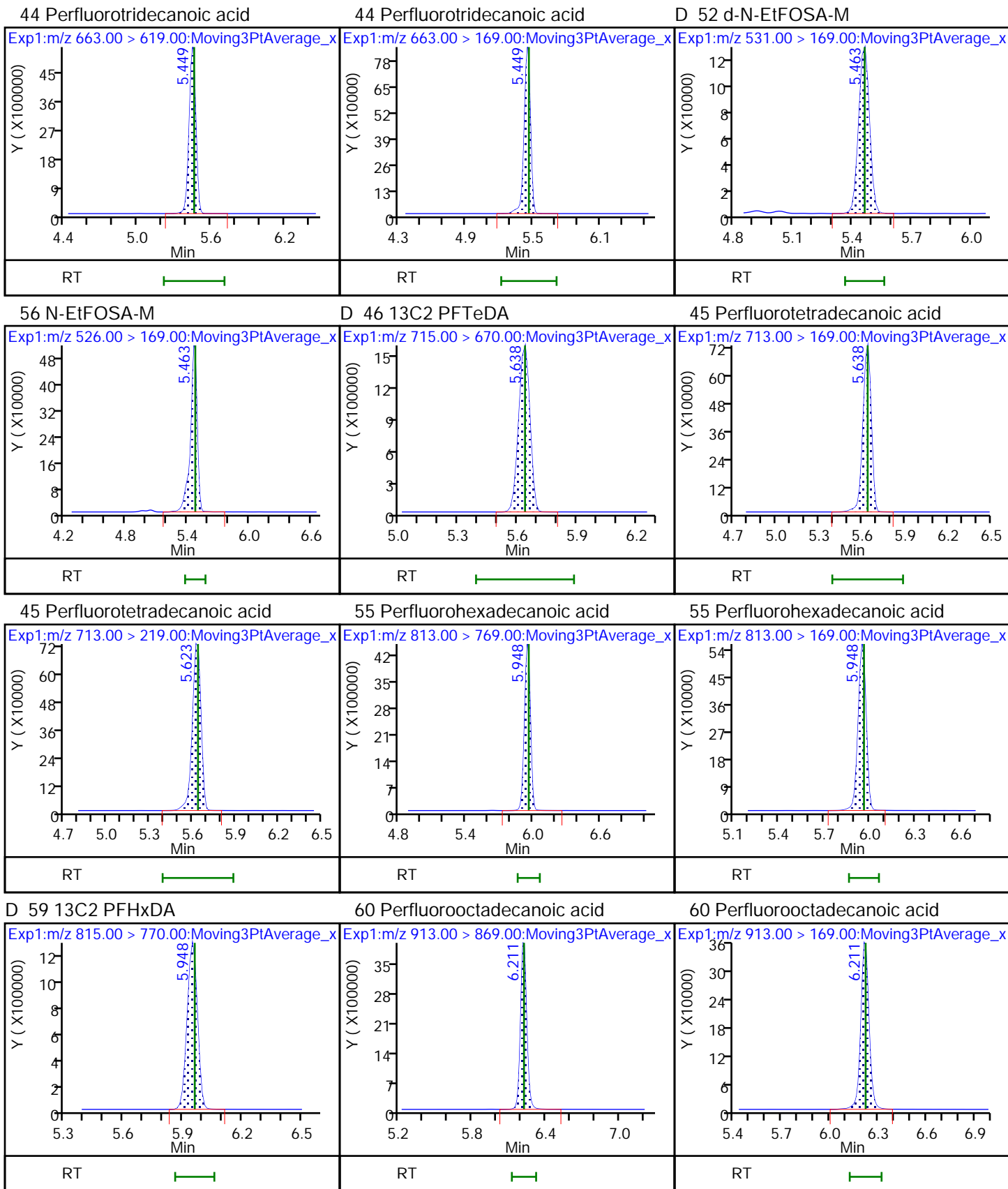


54 PFDoS

D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M





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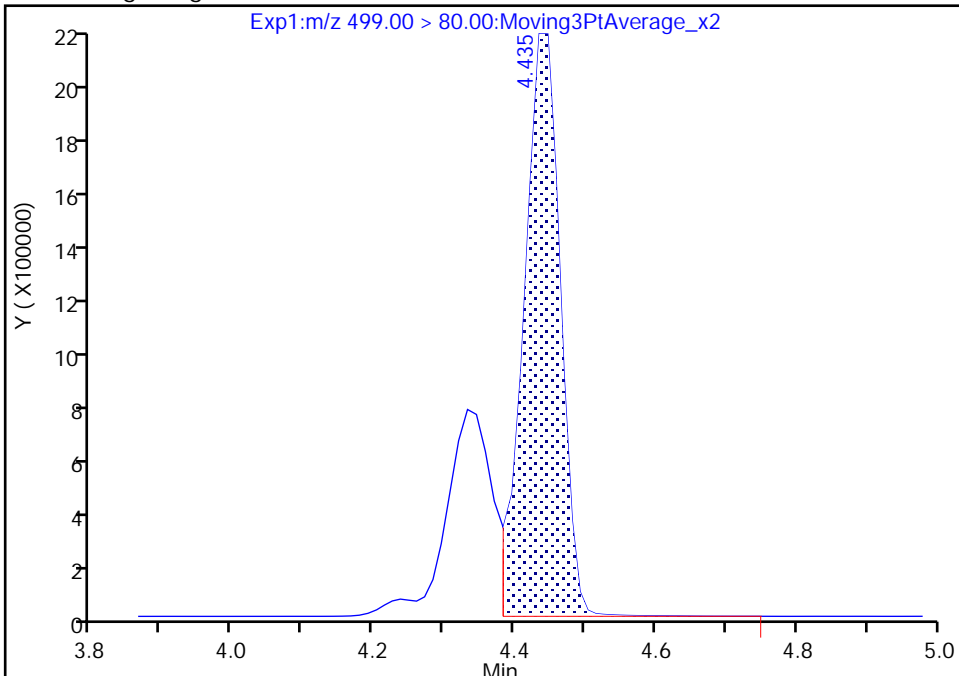
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Injection Date: 05-Oct-2021 23:11:18 Instrument ID: LCA
Lims ID: ICV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

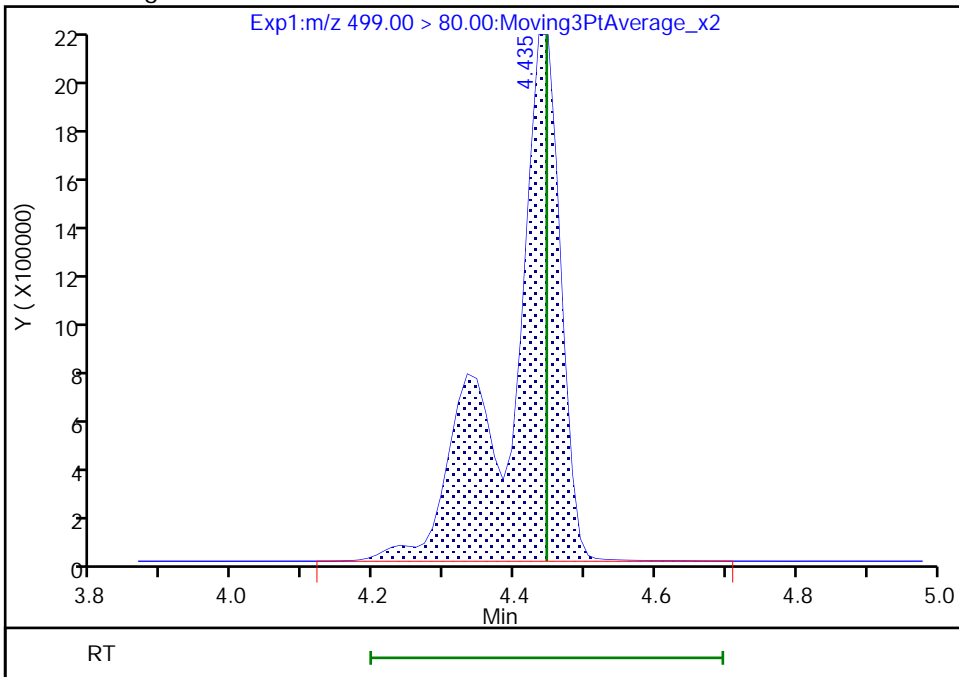
RT: 4.43
Area: 7756717
Amount: 2.862162
Amount Units: ng/ml

Processing Integration Results



RT: 4.43
Area: 11246828
Amount: 4.149983
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:22:41
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

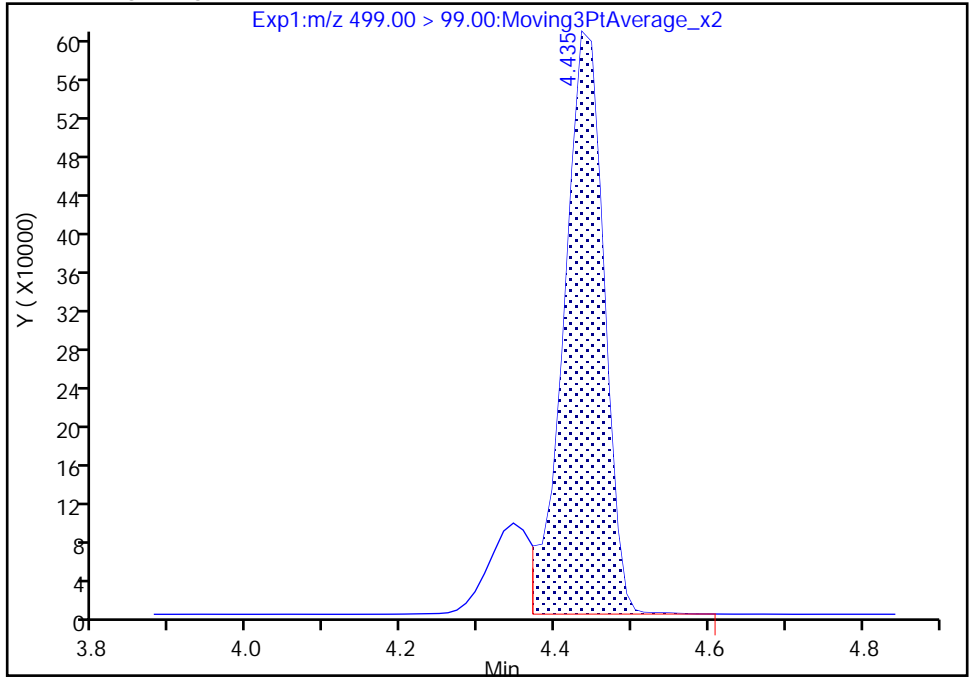
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Injection Date: 05-Oct-2021 23:11:18 Instrument ID: LCA
Lims ID: ICV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

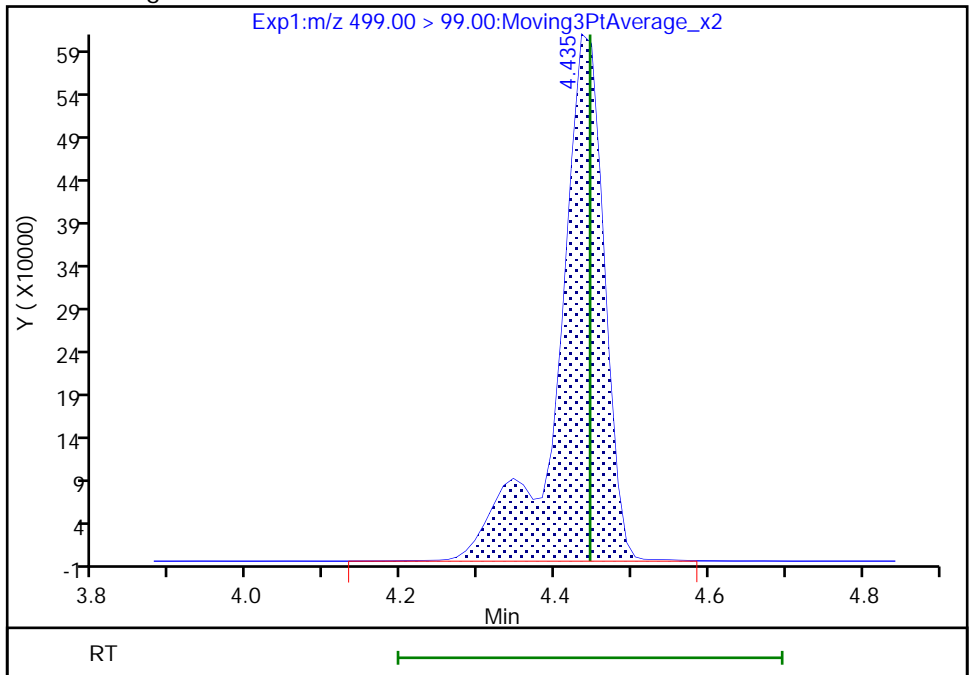
RT: 4.43
Area: 2159866
Amount: 2.862162
Amount Units: ng/ml

Processing Integration Results



RT: 4.43
Area: 2502390
Amount: 4.149983
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 06-Oct-2021 16:22:51

Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Lab Sample ID: CCVL 140-54568/6 Calibration Date: 10/06/2021 21:10
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _006.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7855	0.8433		0.0537	0.0500	7.4	50.0
Perfluoropentanoic acid (PFPeA)	AveID	1.013	1.112		0.0549	0.0500	9.8	50.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.126	1.245		0.0489	0.0442	10.6	50.0
4:2 FTS	AveID	2.500	2.584		0.0483	0.0467	3.4	50.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8572	0.8921		0.0520	0.0500	4.1	50.0
Perfluoropentanesulfonic acid (PFPeS)	L2ID		1.026		0.0511	0.0469	9.0	50.0
HFPO-DA	L2ID		1.556		0.0502	0.0500	0.5	50.0
Perfluorohexanesulfonic acid (PFHxS)	L2ID		1.580		0.0481	0.0455	5.7	50.0
Perfluoroheptanoic acid (PFHpA)	L2ID		1.206		0.0527	0.0500	5.3	50.0
DONA	AveID	3.243	3.337		0.0485	0.0471	2.9	50.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9947	1.085		0.0519	0.0476	9.0	50.0
6:2 FTS	L2ID		2.250		0.0464	0.0474	-2.1	50.0
Perfluorooctanoic acid (PFOA)	L2ID		1.281		0.0496	0.0500	-0.8	50.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.100	1.171		0.0494	0.0464	6.5	50.0
Perfluorononanoic acid (PFNA)	L2ID		0.9614		0.0526	0.0500	5.1	50.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	2.308	2.509		0.0507	0.0466	8.7	50.0
Perfluorononanesulfonic acid (PFNS)	AveID	1.042	1.102		0.0507	0.0480	5.7	50.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9606	0.9871		0.0514	0.0500	2.8	50.0
Perfluorodecanoic acid (PFDA)	L2ID		1.212		0.0537	0.0500	7.3	50.0
8:2 FTS	AveID	1.784	2.056		0.0552	0.0479	15.3	50.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	L2ID		0.9282		0.0434	0.0500	-13.2	50.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.9574	0.9534		0.0480	0.0482	-0.4	50.0
Perfluoroundecanoic acid (PFUnA)	L2ID		1.074		0.0481	0.0500	-3.8	50.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.9494	0.9756		0.0514	0.0500	2.8	50.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.858	2.105		0.0534	0.0471	13.3	50.0
Perfluorododecanoic acid (PFDoA)	Q2ID		1.164		0.0528	0.0500	5.6	50.0
10:2 FTS	AveID	2.221	2.797		0.0607	0.0482	25.9	50.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.303		0.0486	0.0500	-2.8	50.0
NMeFOSA	AveID	1.047	1.051		0.0502	0.0500	0.4	50.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9879	1.067		0.0523	0.0484	8.0	50.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1

SDG No.: _____

Lab Sample ID: CCVL 140-54568/6 Calibration Date: 10/06/2021 21:10

Instrument ID: LCA Calib Start Date: 10/05/2021 22:00

GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53

Lab File ID: _006.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.263		0.0458	0.0500	-8.5	50.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.168	1.311		0.0561	0.0500	12.2	50.0
Perfluorotridecanoic acid (PFTriA)	L2ID		1.024		0.0523	0.0500	4.6	50.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.1445		0.0506	0.0500	1.2	50.0
Perfluorohexadecanoic acid	Q2ID		1.475		0.0543	0.0500	8.5	50.0
Perfluorooctadecanoic acid	AveID	0.9076	1.000		0.0551	0.0500	10.2	50.0
13C4 PFBA	Ave	1.324	1.290		1.22	1.25	-2.6	50.0
13C5 PFPeA	Ave	1.087	1.056		1.22	1.25	-2.8	50.0
13C3 PFBS	Ave	0.7019	0.6716		1.11	1.16	-4.3	50.0
M2-4:2 FTS	Ave	0.1052	0.1109		1.23	1.17	5.4	50.0
13C2 PFHxA	Ave	1.116	1.104		1.24	1.25	-1.1	50.0
13C3 HFPO-DA	Ave	0.5714	0.5448		1.19	1.25	-4.7	50.0
13C4 PFHpA	Ave	1.113	1.055		1.19	1.25	-5.2	50.0
18O2 PFHxS	Ave	0.4248	0.4185		1.17	1.18	-1.5	50.0
13C4 PFOA	Ave	1.007	0.9936		1.23	1.25	-1.3	50.0
M2-6:2 FTS	Ave	0.1078	0.1284		1.42	1.19	19.1	50.0
13C4 PFOS	Ave	0.5852	0.5657		1.16	1.20	-3.3	50.0
13C5 PFNA	Ave	1.279	1.209		1.18	1.25	-5.5	50.0
13C8 FOSA	Ave	0.8591	0.9198		1.34	1.25	7.1	50.0
13C2 PFDA	Ave	1.296	1.290		1.25	1.25	-0.4	50.0
M2-8:2 FTS	Ave	0.1316	0.1489		1.35	1.20	13.1	50.0
d3-NMeFOSAA	Ave	0.1774	0.1631		1.15	1.25	-8.0	50.0
13C2 PFUnA	Ave	1.237	1.200		1.21	1.25	-3.0	50.0
d5-NEtFOSAA	Ave	0.1705	0.1693		1.24	1.25	-0.7	50.0
13C2 PFDoA	Ave	1.319	1.239		1.17	1.25	-6.1	50.0
d7-N-MeFOSE-M	Ave	0.1075	0.1225		1.42	1.25	13.9	50.0
d-N-MeFOSA-M	Ave	0.1120	0.1066		1.19	1.25	-4.8	50.0
d9-N-EtFOSE-M	Ave	0.1146	0.1348		1.47	1.25	17.6	50.0
d-N-EtFOSA-M	Ave	0.0942	0.0929		1.23	1.25	-1.4	50.0
13C2 PFTeDA	Ave	1.211	1.164		1.20	1.25	-3.8	50.0
13C2 PFHxDA	Ave	0.8782	0.8416		1.20	1.25	-4.2	50.0
13C8 PFOA	Ave	0.9886	0.9132		1.16	1.25	-7.6	50.0
13C8 PFOS	Ave	0.1256	0.1210		1.15	1.20	-3.7	50.0

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_006.d
 Lims ID: CCVL
 Client ID:
 Sample Type: CCVL
 Inject. Date: 06-Oct-2021 21:10:55 ALS Bottle#: 6 Worklist Smp#: 6
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-006 ccvl
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 16:11:14 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: mcwhirterl Date: 07-Oct-2021 02:34:03

Ratio Calibration: None

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	2.823	2.801	0.022	0.677	7213479	1.22	97.4	18869	
2 Perfluorobutanoic acid	212.90 > 169.00	2.823	2.812	0.011	1.000	243321	0.0537	107	64.4	
D 3 13C5 PFPeA	267.90 > 223.00	3.143	3.129	0.014	0.754	5906848	1.21	97.2	13449	
4 Perfluoropentanoic acid	262.90 > 219.00	3.143	3.129	0.014	1.000	262708	0.0549	110	80.4	
D 6 13C3 PFBS	301.90 > 80.00	3.157	3.129	0.028	0.758	3492442	1.11	95.7	19824	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.157	3.143	0.014	1.000	165387	0.0489	Target=3.06	111	932
	298.90 > 99.00	3.157	3.143	0.014	1.000	59333		2.79(1.53-4.59)		294
D 8 M2-4:2 FTS	329.00 > 81.00	3.437	3.423	0.014	0.825	579049	1.23	105	1097	
7 4:2 FTS	327.00 > 307.00	3.437	3.423	0.014	1.000	59842	0.0483	103	591	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.482	3.453	0.029	1.103	144583	0.0511	Target=3.47	109	1005
	349.00 > 99.00	3.482	3.453	0.029	1.103	39115		3.70(1.73-5.20)		654
D 9 13C2 PFHxA	315.00 > 270.00	3.482	3.469	0.013	0.836	6172511	1.24	98.9	13346	
10 Perfluorohexanoic acid	313.00 > 269.00	3.482	3.469	0.013	1.000	220267	0.0520	Target=9.74	104	138
	313.00 > 119.00	3.482	3.469	0.013	1.000	16875		13.05(4.87-14.61)		64.3
D 12 13C3 HFPO-DA	287.00 > 169.00	3.575	3.561	0.014	0.858	3046183	1.19	95.3	8937	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.575	3.561	0.014	1.000	189539	0.0502		100	169	
D 17 18O2 PFHxS										
403.00 > 84.00	3.827	3.803	0.024	0.919	2213911	1.17		98.5	7861	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.827	3.803	0.024	1.000	134584	0.0481	Target=2.96	106	563	M
399.00 > 99.00	3.827	3.803	0.024	1.000	40287		3.34(1.48-4.44)		248	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.827	3.815	0.012	0.919	5900208	1.18		94.8	12037	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.840	3.815	0.025	1.003	284741	0.0527	Target=3.35	105	296	
363.00 > 169.00	3.827	3.815	0.012	1.000	82138		3.47(1.67-5.02)		375	
68 DONA										
377.00 > 251.00	3.864	3.840	0.024	0.865	397768	0.0485	Target=1.49	103	997	
377.00 > 85.00	3.864	3.840	0.024	0.865	228454		1.74(0.74-2.23)		1418	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.155	4.143	0.012	0.930	130663	0.0519	Target=3.73	109	877	
449.00 > 99.00	4.155	4.143	0.012	0.930	34640		3.77(1.87-5.61)		337	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.155	4.143	0.012	0.997	5106384	1.15		92.4	8641	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.167	4.143	0.024	1.000	682013	1.41		119	3536	
19 6:2 FTS										
427.00 > 407.00	4.167	4.143	0.024	1.000	61264	0.0464		97.9	441	
D 21 13C4 PFOA										
417.00 > 372.00	4.167	4.155	0.012	1.000	5555687	1.23		98.7	10768	
* 22 13C2 PFOA										
415.00 > 370.00	4.167	4.155	0.012		5591588	1.25			13580	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.167	4.155	0.012	1.000	284731	0.0496	Target=2.40	99.2	145	
413.00 > 169.00	4.167	4.155	0.012	1.000	113475		2.51(1.20-3.61)		389	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.458	4.447	0.012	1.070	646642	1.15		96.3	3189	
D 25 13C4 PFOS										
503.00 > 80.00	4.470	4.447	0.024	1.073	3024018	1.16		96.7	12467	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.470	4.447	0.024	1.000	137468	0.0494	Target=3.83	106	293	M
499.00 > 99.00	4.470	4.447	0.024	1.000	30724		4.47(1.91-5.74)		237	M
D 27 13C5 PFNA										
468.00 > 423.00	4.481	4.470	0.011	1.075	6761626	1.18		94.5	13358	
26 Perfluorononanoic acid										
463.00 > 419.00	4.481	4.470	0.011	1.000	260033	0.0526	Target=3.68	105	237	
463.00 > 169.00	4.481	4.470	0.011	1.000	54939		4.73(1.84-5.52)		128	
63 9CIFOS										
531.00 > 351.00	4.620	4.596	0.024	1.109	295849	0.0507		109	497	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.749	4.722	0.027	1.062	133818	0.0507	Target=3.97	106	534	
549.00 > 99.00	4.749	4.722	0.027	1.062	34650		3.86(1.99-5.96)		227	
D 34 13C8 FOSA										
506.00 > 78.00	4.749	4.736	0.013	1.140	5142999	1.34		107	7044	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.749	4.736	0.013	1.000	203063	0.0514		103	430	
D 32 13C2 PFDA										
515.00 > 470.00	4.776	4.749	0.027	1.146	7214657	1.24		99.6	12457	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.776	4.749	0.027	1.000	349728	0.0537	Target=10.11	107	253	
513.00 > 169.00	4.776	4.749	0.027	1.000	28538		12.25(5.06-15.17)		53.6	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.790	4.763	0.027	1.149	797447	1.35		113	3552	
31 8:2 FTS										
527.00 > 507.00	4.790	4.763	0.027	1.000	65592	0.0552		115	18113	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.909	4.896	0.013	1.178	912130	1.15		92.0	2425	
36 NMeFOSAA										
570.00 > 419.00	4.923	4.896	0.027	1.003	33866	0.0434		86.8	50.0	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	5.008	4.993	0.015	1.120	116290	0.0480	Target=3.80	99.6	776	
599.00 > 99.00	5.008	4.993	0.015	1.120	33880		3.43(1.90-5.70)		249	
D 39 13C2 PFUnA										
565.00 > 520.00	5.036	5.022	0.014	1.209	6709341	1.21		97.0	14014	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.036	5.022	0.014	1.000	288195	0.0481	Target=7.45	96.2	437	
563.00 > 169.00	5.036	5.022	0.014	1.000	35546		8.11(3.78-11.33)		201	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.051	5.036	0.015	1.212	946452	1.24		99.3	4083	
40 NEtFOSA										
584.00 > 419.00	5.065	5.036	0.029	1.003	36936	0.0514		103	151	M
57 11CIFOS										
631.00 > 451.00	5.132	5.119	0.013	1.148	250869	0.0533		113	950	
D 43 13C2 PFDaA										
615.00 > 570.00	5.266	5.251	0.015	1.264	6926812	1.17		93.9	16090	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.266	5.251	0.015	1.000	322605	0.0528	Target=5.33	106	261	
613.00 > 169.00	5.266	5.251	0.015	1.000	47933		6.73(2.66-7.99)		215	
50 10:2 FTS										
627.00 > 607.00	5.295	5.266	0.029	1.106	89788	0.0607		126	585	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.295	5.281	0.014	1.271	684887	1.42		114	378	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.310	5.295	0.015	1.274	596174	1.19		95.2	42.2	
49 N-MeFOSE-M										
616.00 > 59.00	5.310	5.295	0.015	1.003	35707	0.0486		97.2	46.8	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.310	5.295	0.015	1.000	25057	0.0502		100	91.0	
54 PFDoS										
699.00 > 80.00	5.449	5.436	0.013	1.219	130726	0.0523	Target=4.32	108	512	
699.00 > 99.00	5.449	5.436	0.013	1.219	28154		4.64(2.19-6.58)		228	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.449	5.436	0.013	1.308	753571	1.47		118	713	
62 N-EtFOSE-M										
630.00 > 59.00	5.462	5.449	0.013	1.002	38083	0.0457		91.5	91.9	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.475	5.449	0.026	1.314	519414	1.23		98.6	668	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.475	5.462	0.013	1.040	283786	0.0523	Target=5.66	105	220	
663.00 > 169.00	5.475	5.462	0.013	1.040	39027		7.27(2.83-8.48)		220	
56 N-EtFOSA-M										
526.00 > 169.00	5.475	5.462	0.013	1.000	27234	0.0561		112	128	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.666	5.637	0.029	1.360	6510677	1.20		96.2	16436	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.666	5.637	0.029	1.000	37637	0.0506	Target=1.07	101	268	
713.00 > 219.00	5.652	5.637	0.015	0.998	38949		0.97(0.53-1.60)		401	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.973	5.948	0.025	1.000	277656	0.0543	Target=7.50	109	395	
813.00 > 169.00	5.973	5.948	0.025	1.000	32361		8.58(3.75-11.26)		192	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.973	5.948	0.025	1.433	4706074	1.20		95.8	14870	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.240	6.221	0.019	1.045	188252	0.0551	Target=9.98	110	398	
913.00 > 169.00	6.240	6.221	0.019	1.045	15416		12.21(5.14-15.41)		230	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L2PFC2_00003

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_006.d

Injection Date: 06-Oct-2021 21:10:55

Instrument ID: LCA

Lims ID: CCVL

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 6

Worklist Smp#: 6

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

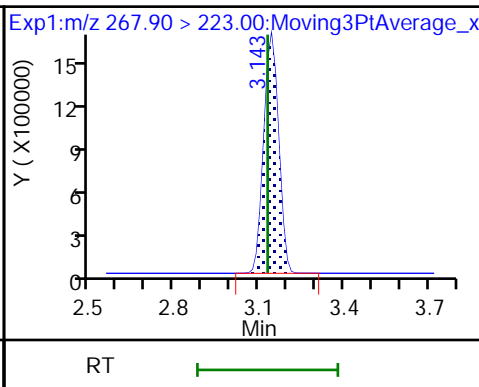
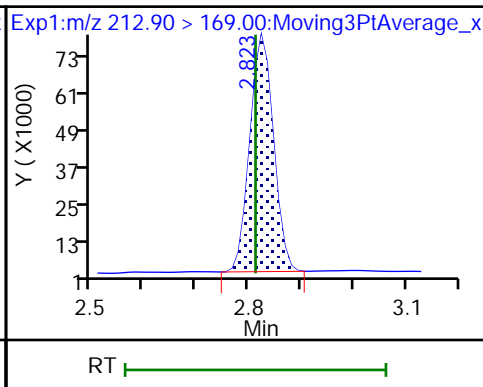
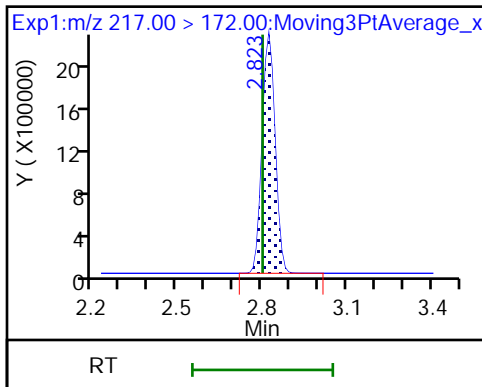
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

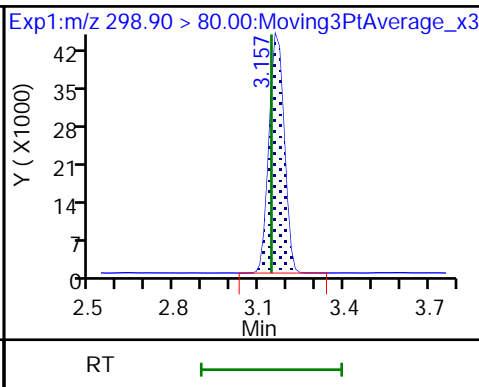
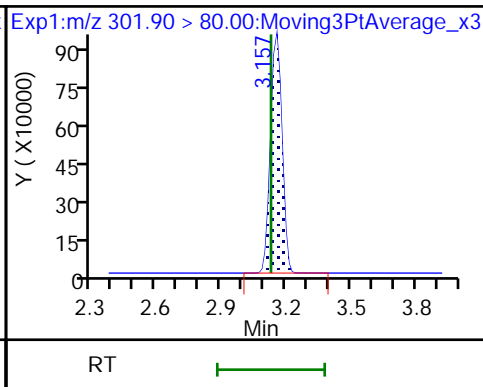
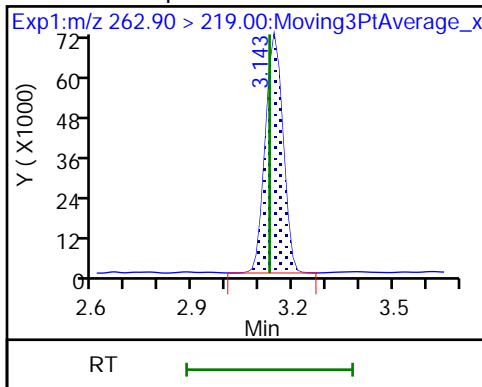
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

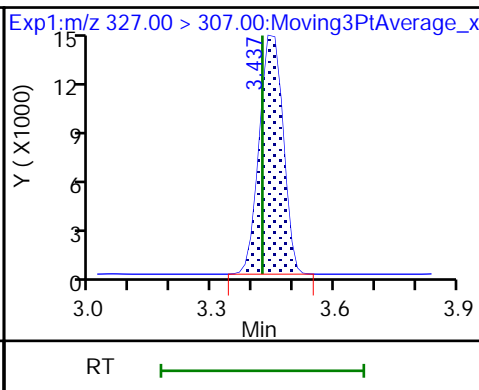
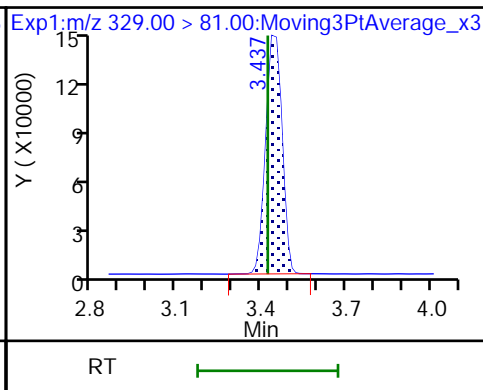
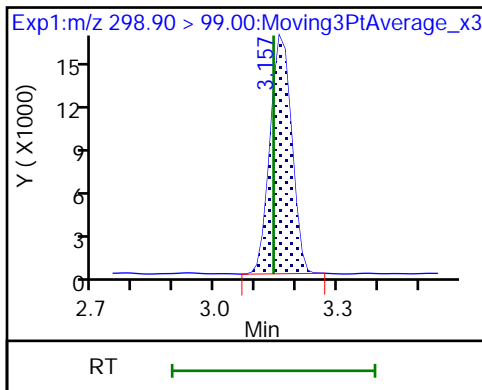
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

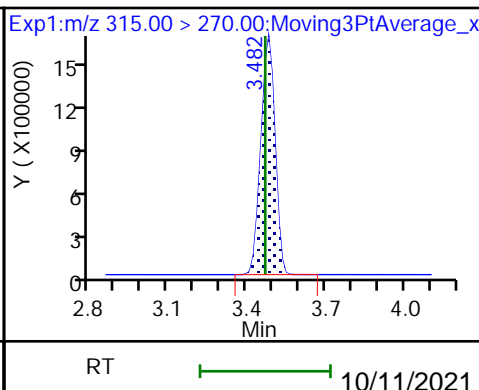
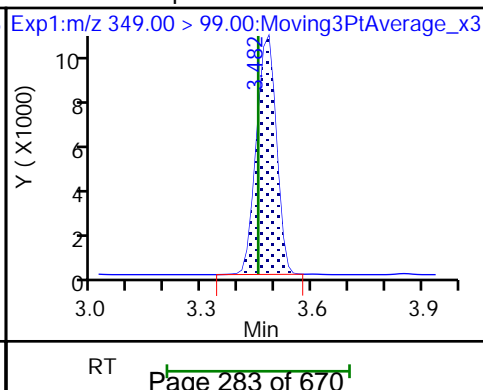
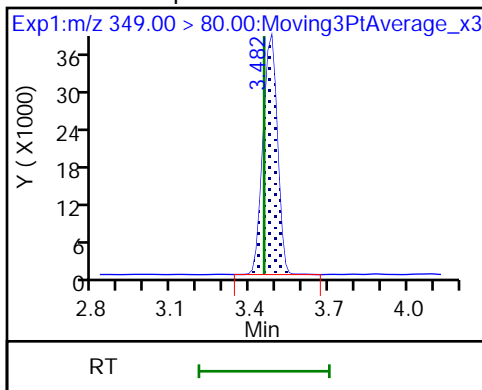
7 4:2 FTS

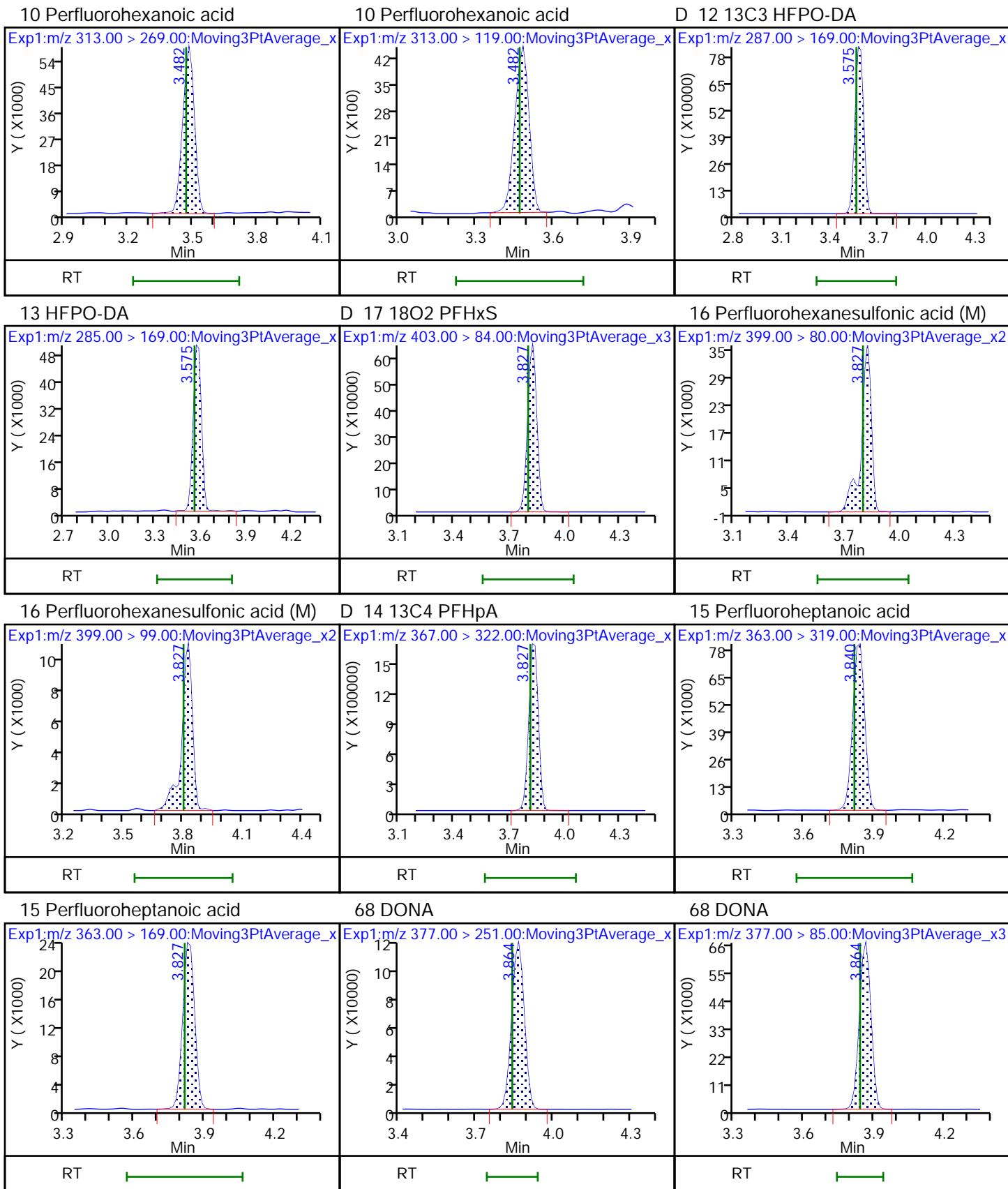


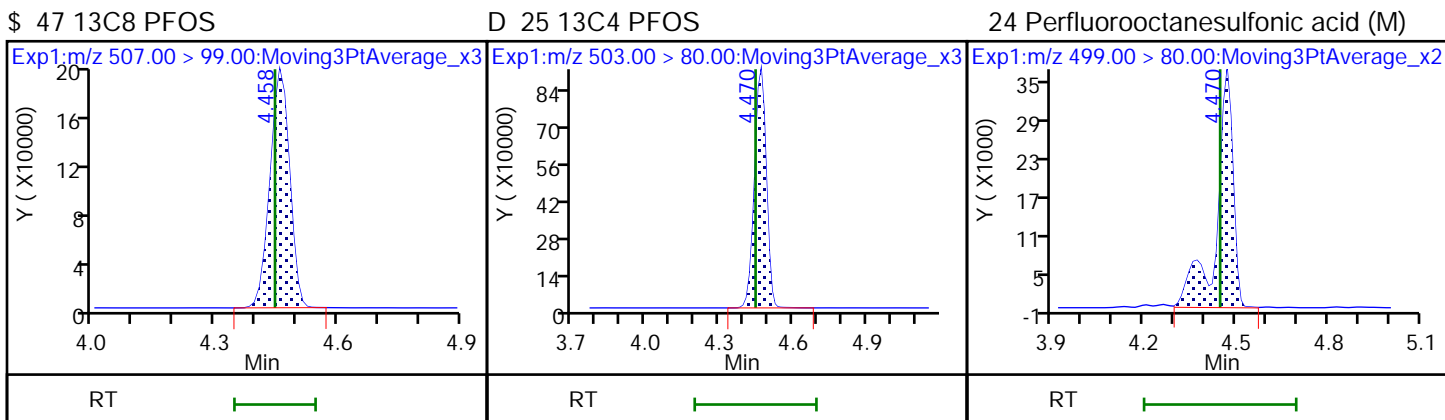
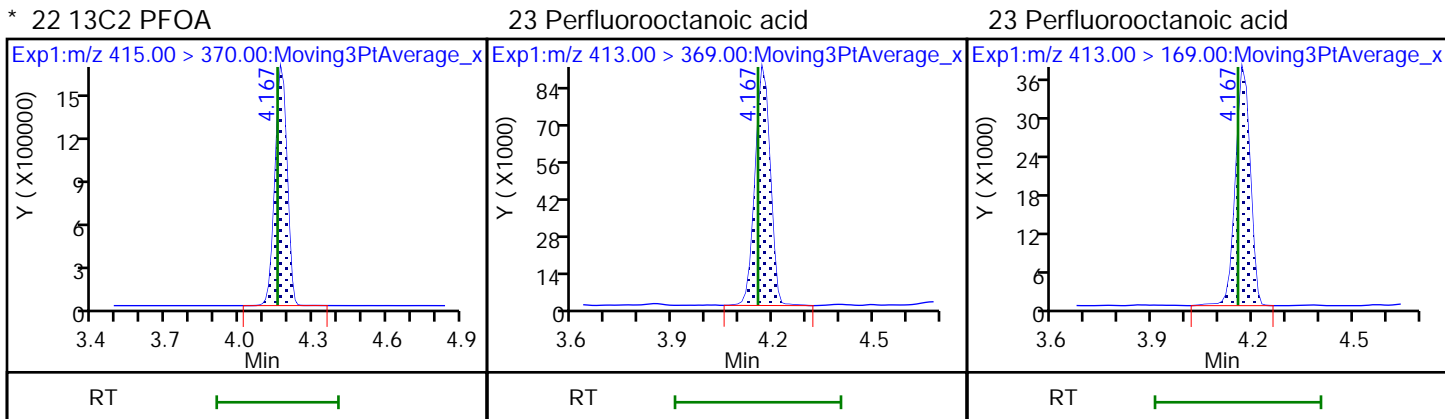
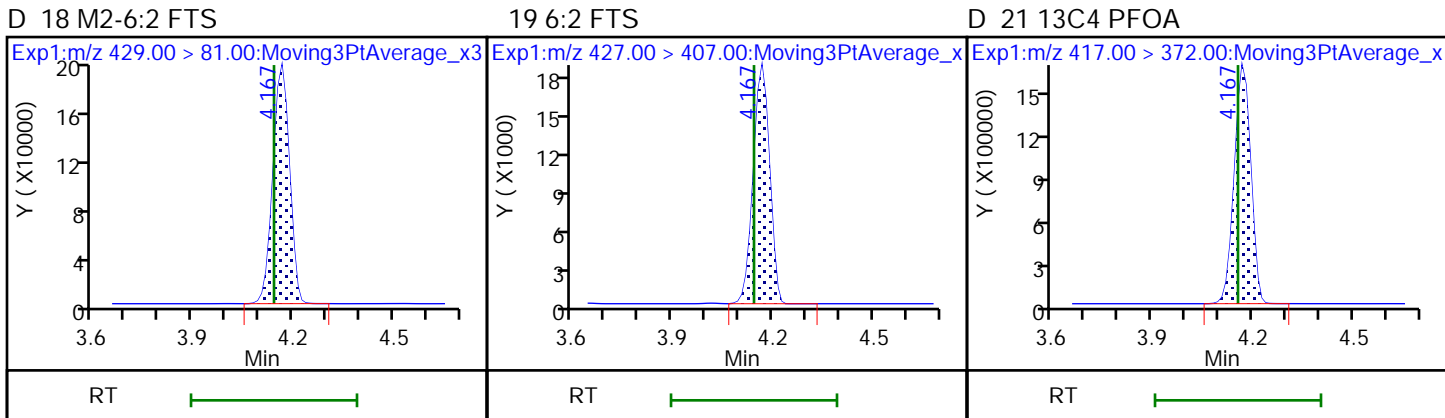
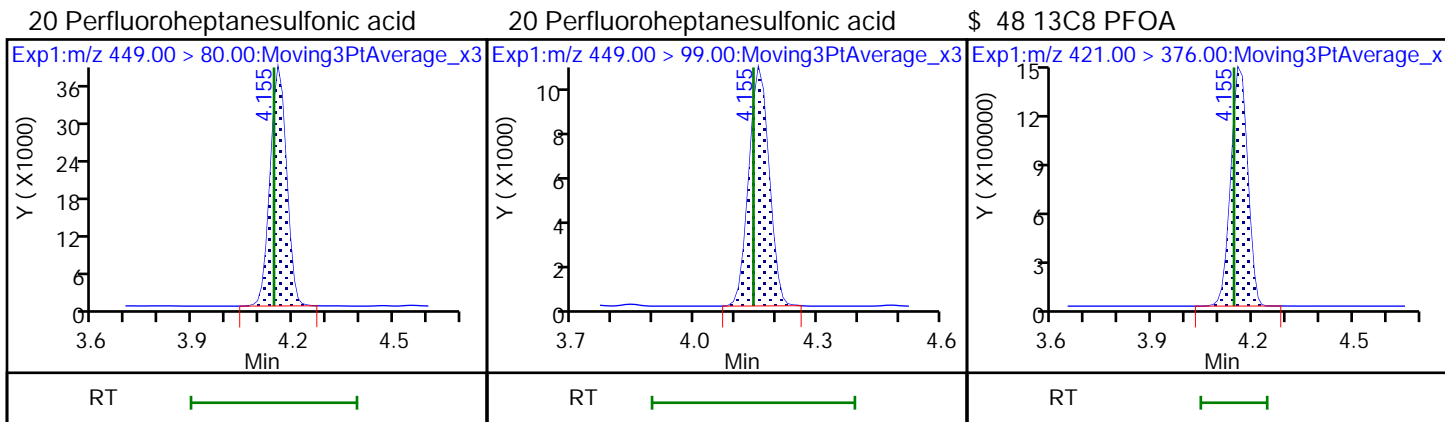
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

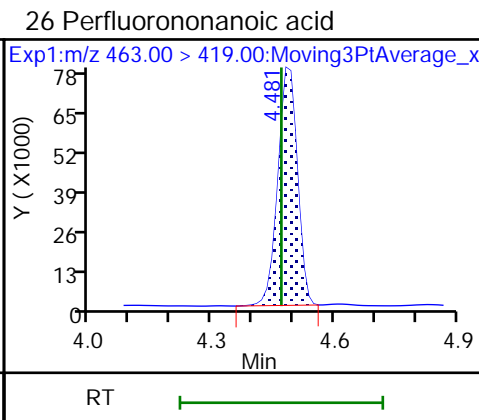
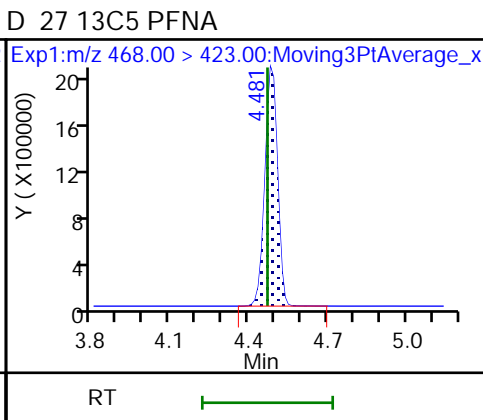
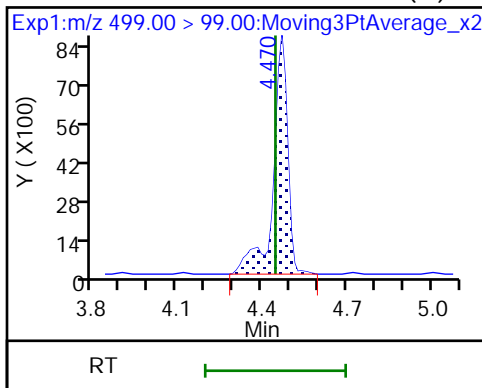
D 9 13C2 PFXa







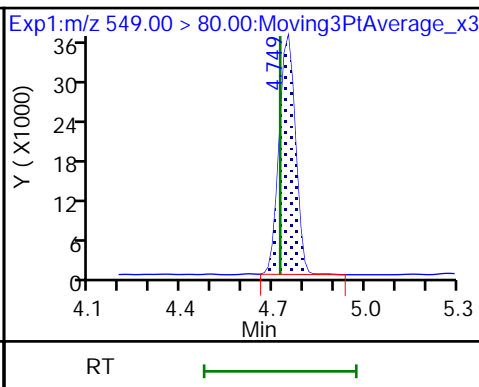
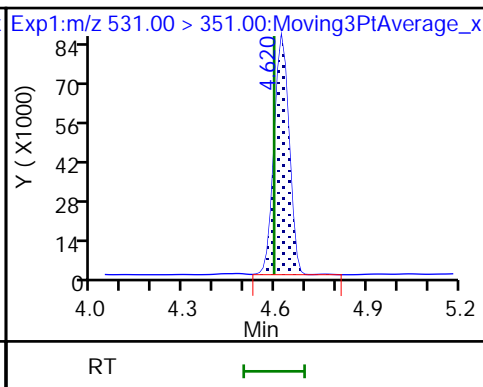
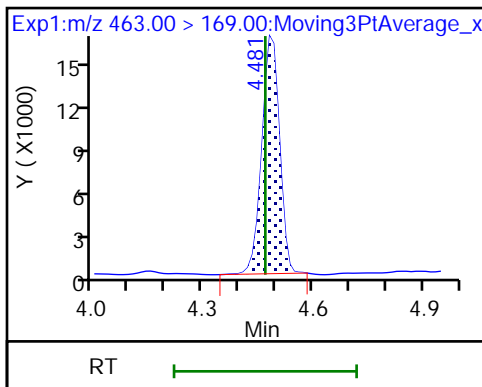
24 Perfluorooctanesulfonic acid (M) D 27 13C5 PFNA



26 Perfluorononanoic acid

63 9CIFOS

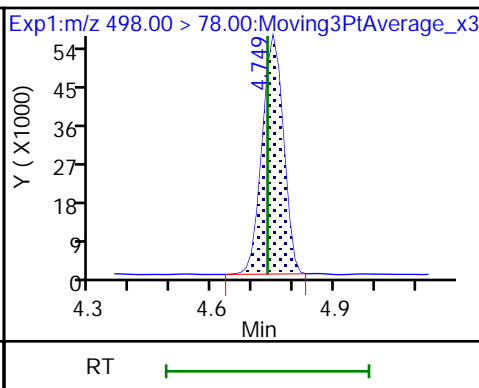
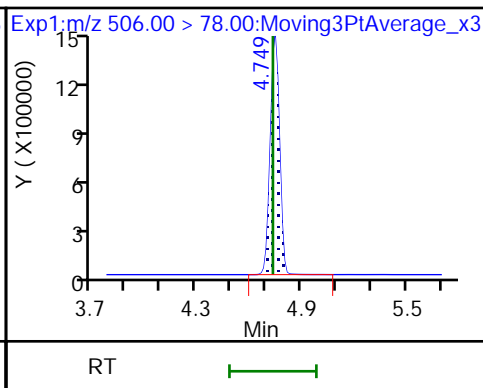
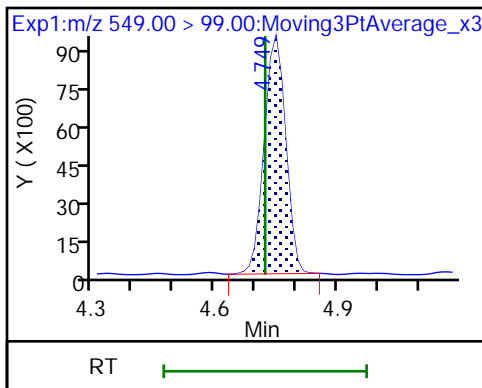
28 Perfluoronanesulfonic acid



28 Perfluoronanesulfonic acid

D 34 13C8 FOSA

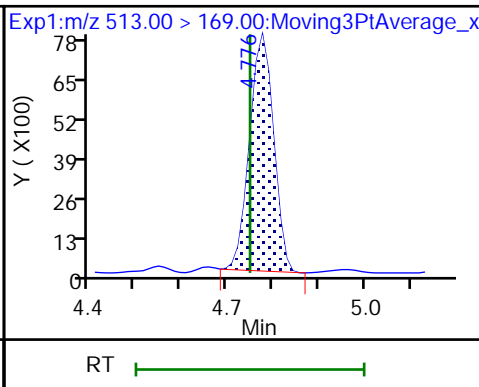
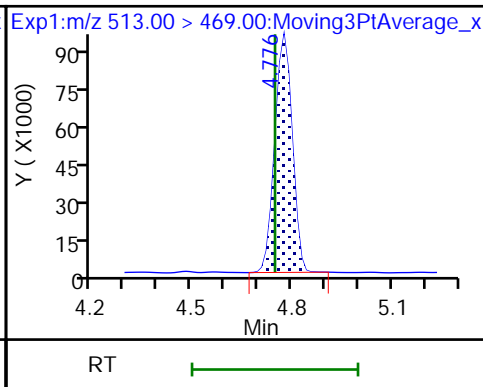
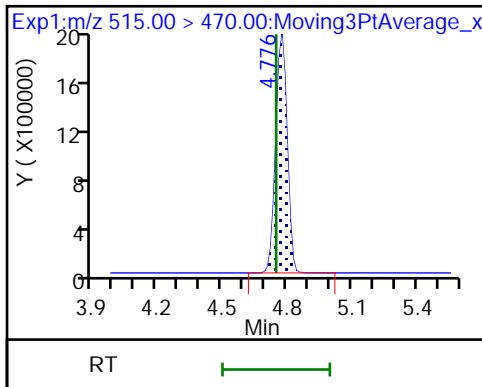
33 Perfluorooctanesulfonamide



D 32 13C2 PFDA

29 Perfluorodecanoic acid

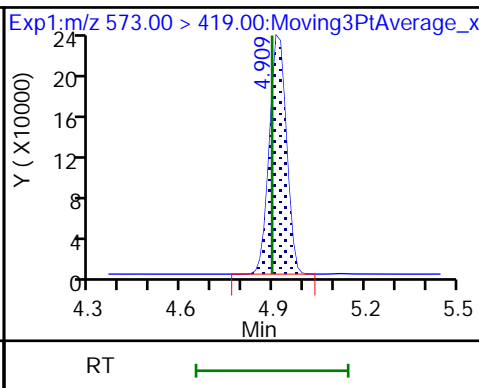
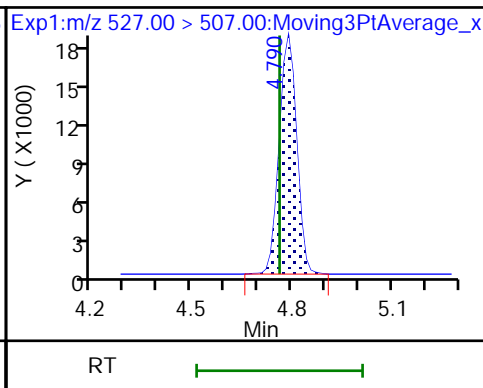
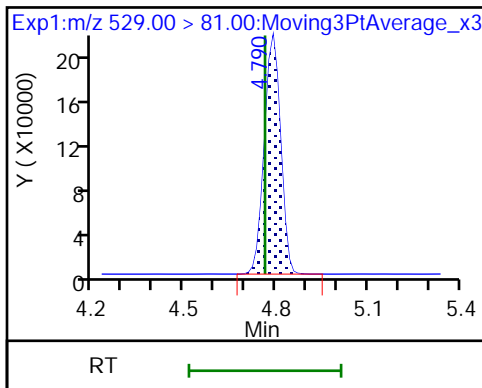
29 Perfluorodecanoic acid



D 30 M2-8:2 FTS

31 8:2 FTS

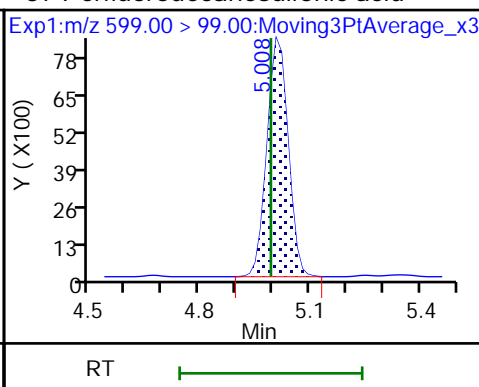
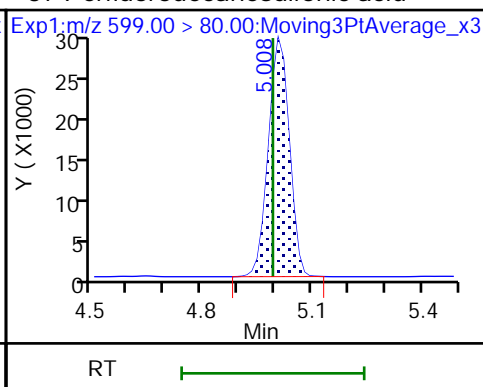
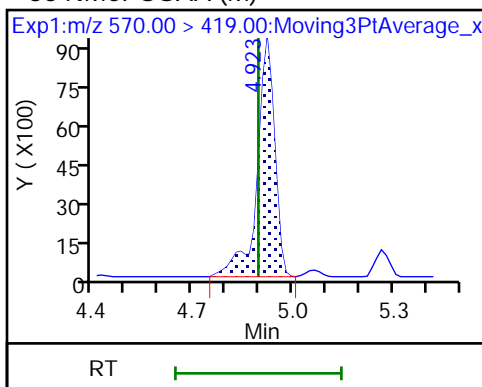
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

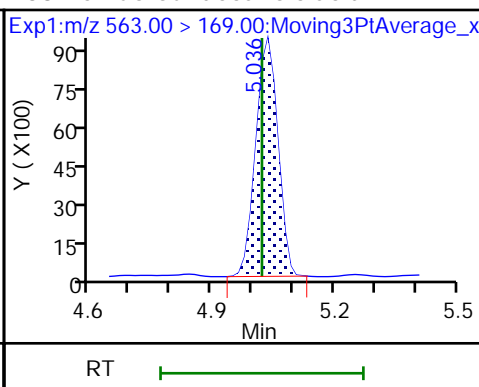
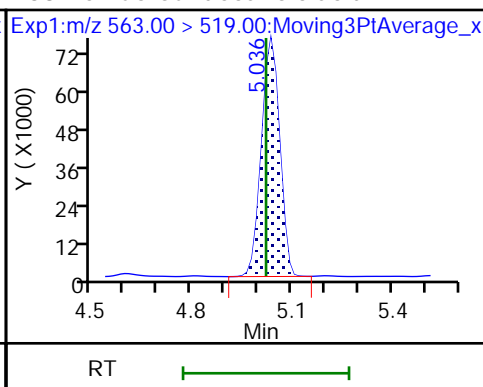
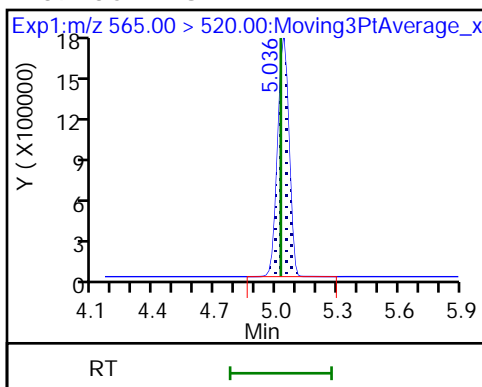
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

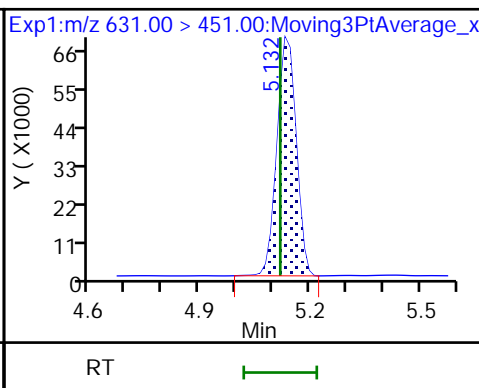
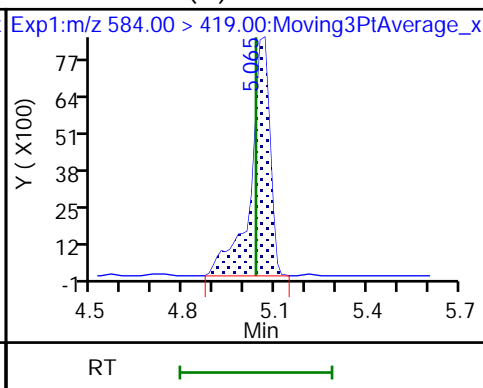
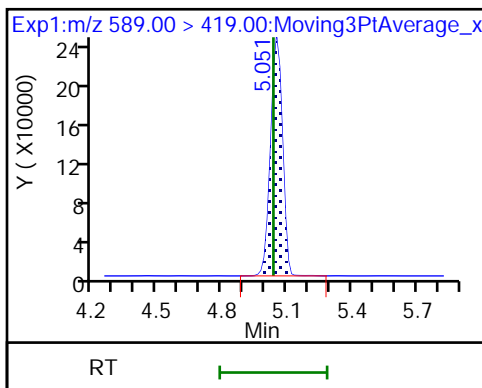
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA (M)

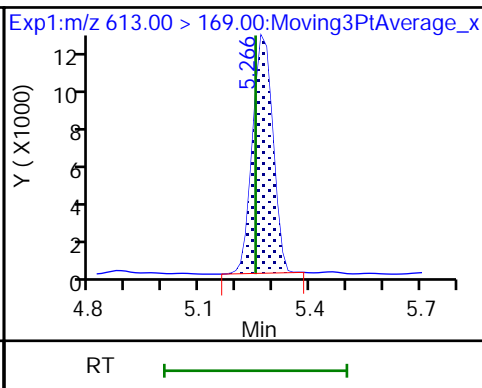
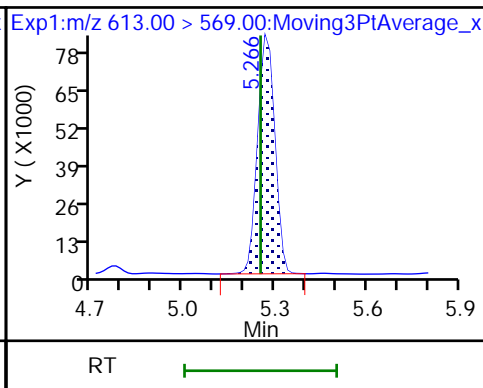
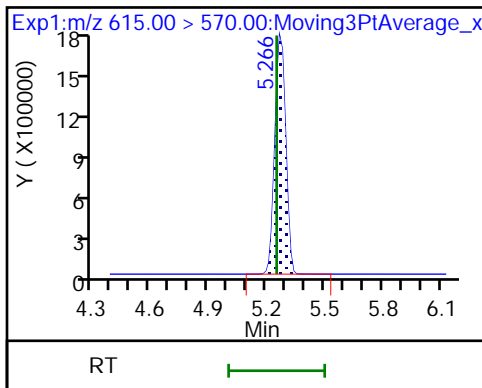
57 11C1FOS



D 43 13C2 PFDoA

42 Perfluorododecanoic acid

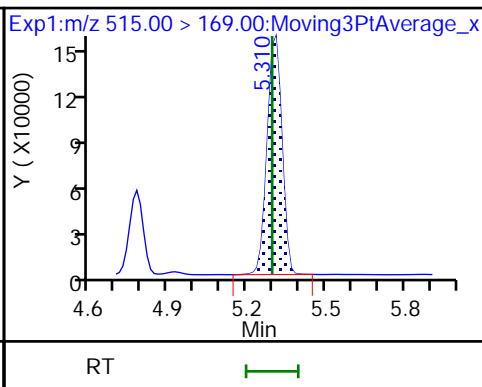
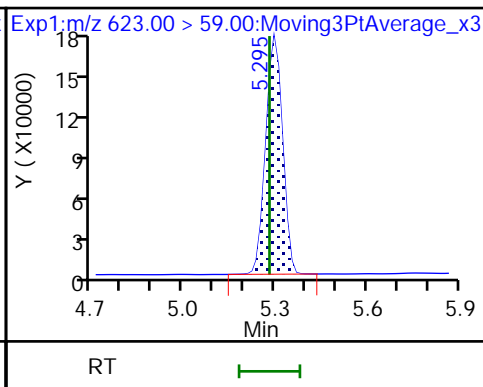
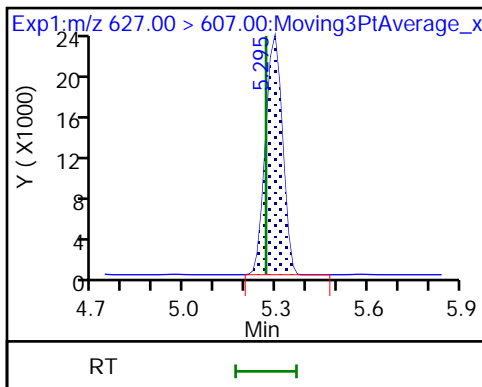
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

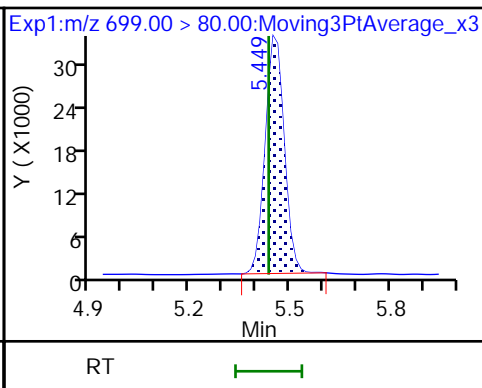
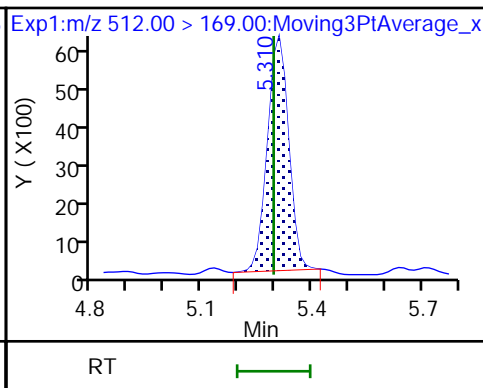
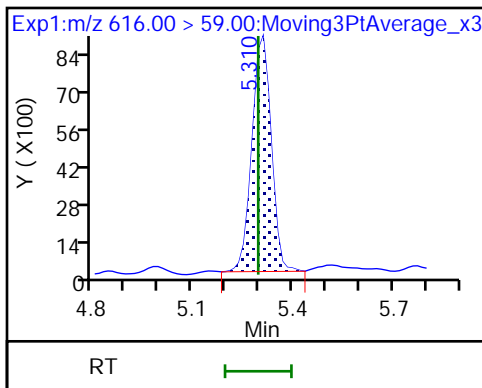
D 58 d-N-MeFOSA-M



49 N-MeFOSE-M

61 NMeFOSA

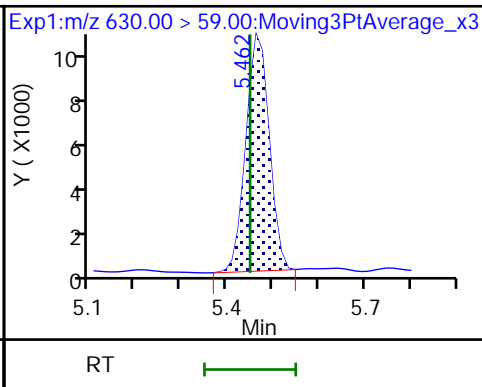
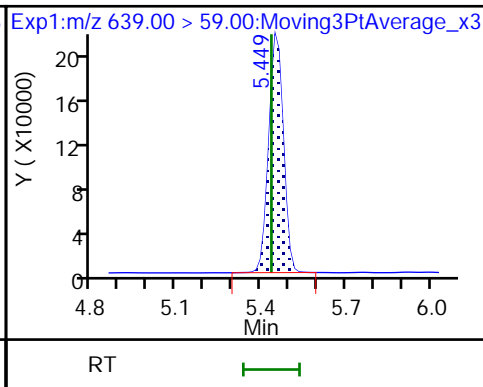
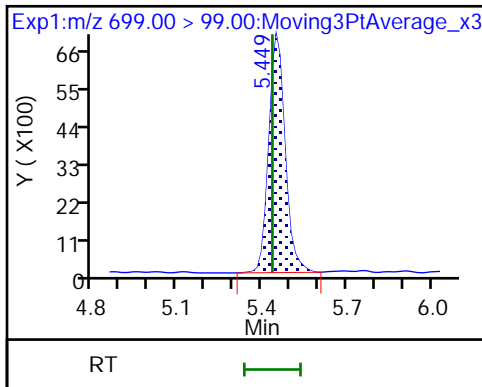
54 PFDoS



54 PFDoS

D 53 d9-N-EtFOSE-M

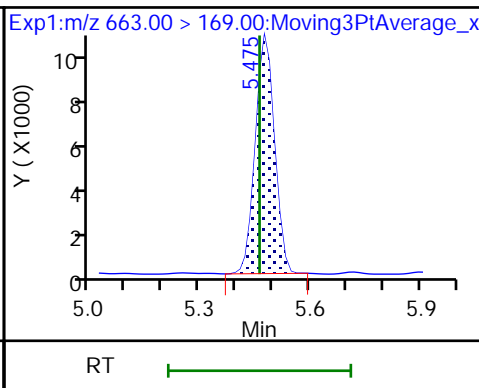
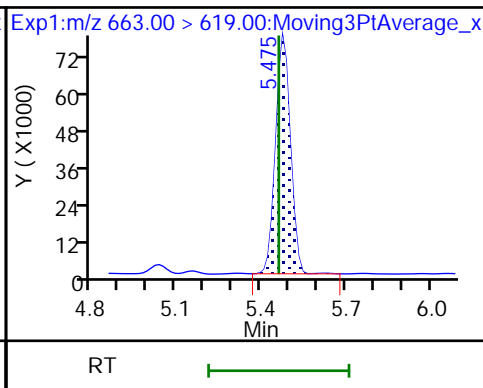
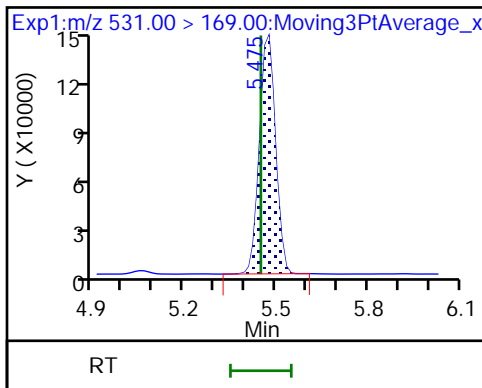
62 N-EtFOSE-M



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid

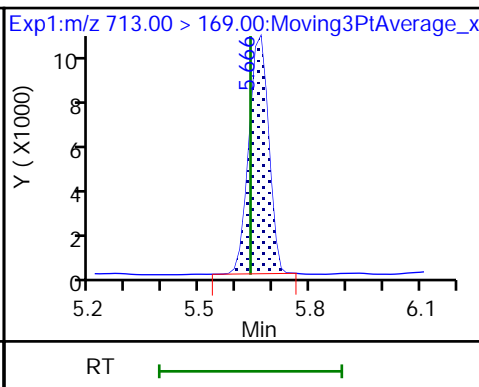
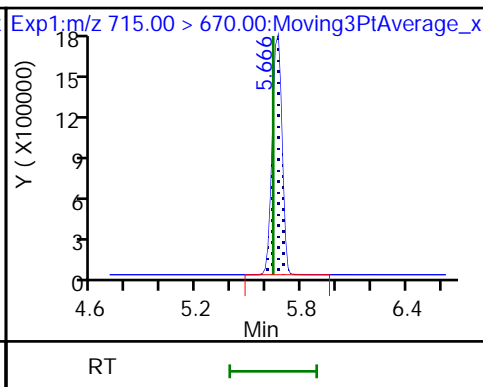
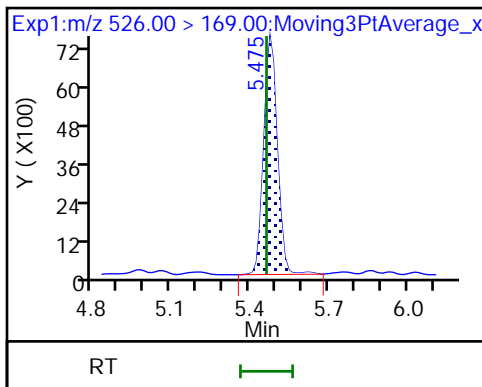
44 Perfluorotridecanoic acid



56 N-EtFOSA-M

D 46 13C2 PFTeDA

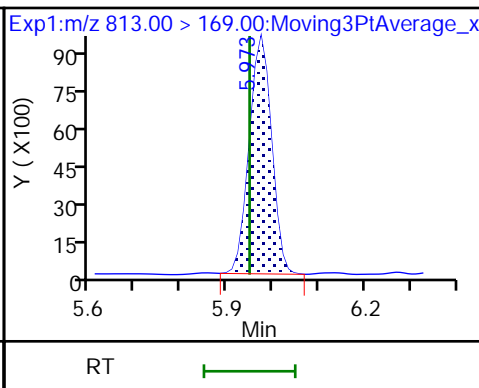
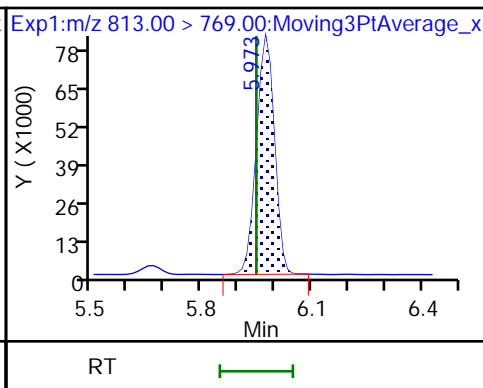
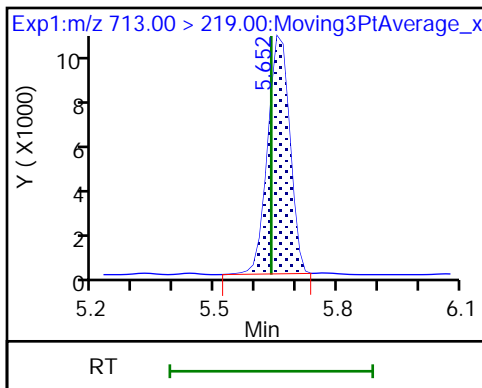
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

55 Perfluorohexadecanoic acid

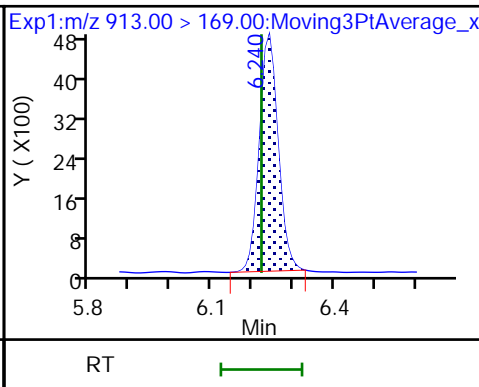
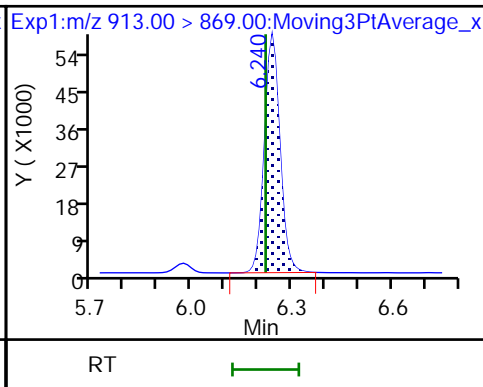
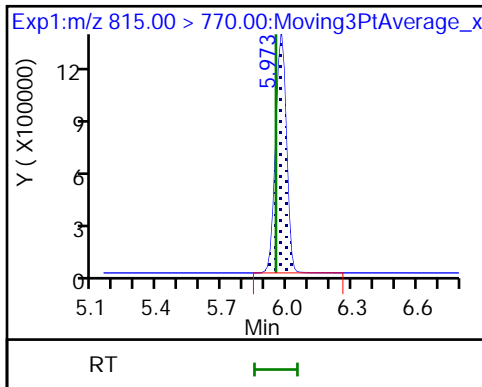
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid



Eurofins TestAmerica, Knoxville

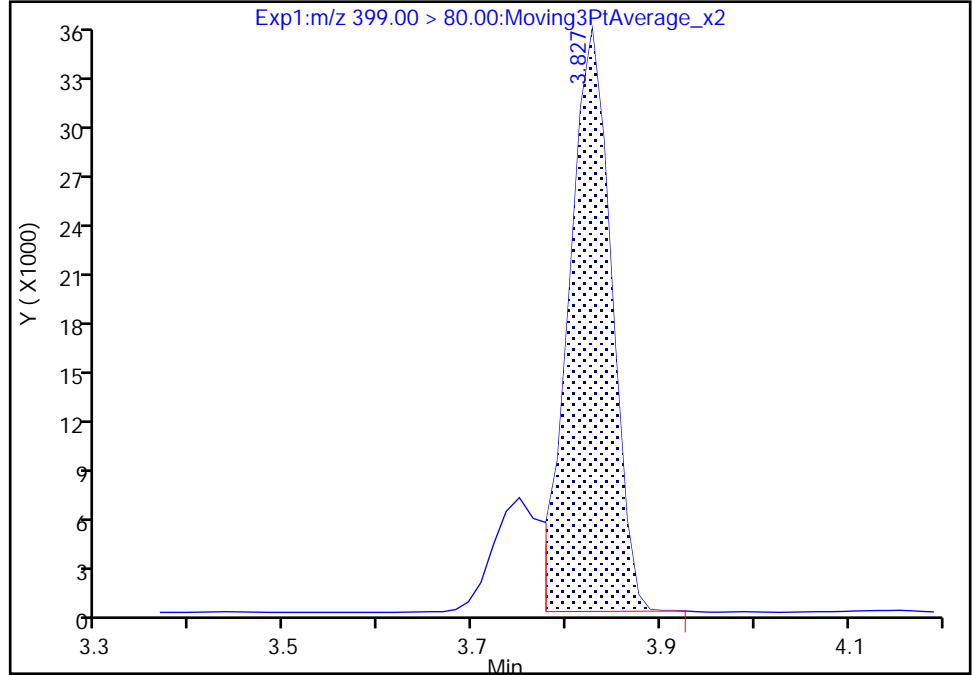
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Injection Date: 06-Oct-2021 21:10:55 Instrument ID: LCA
Lims ID: CCVL
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

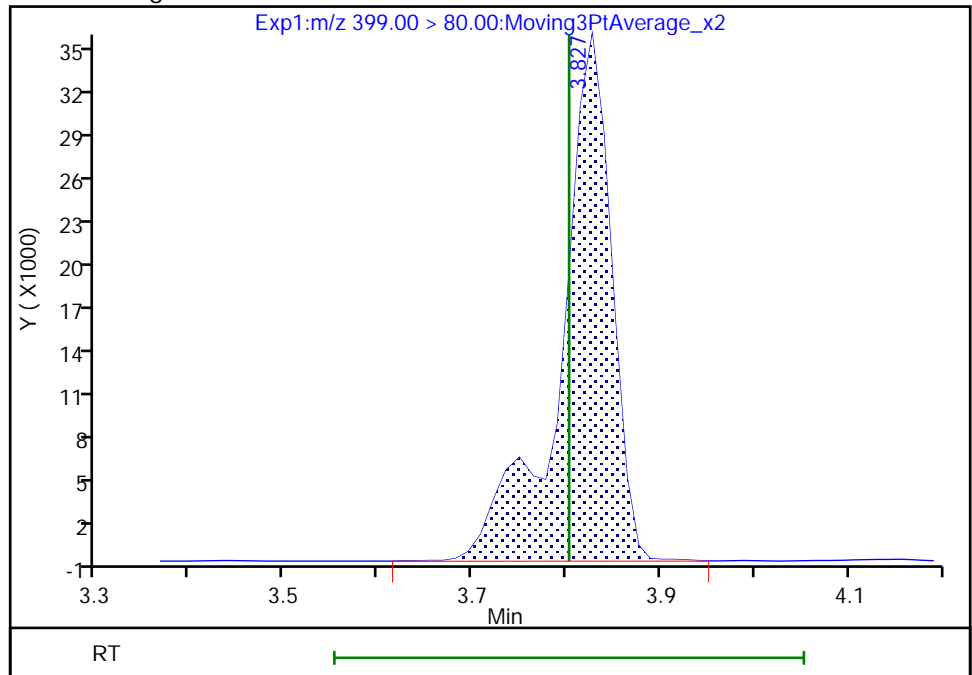
RT: 3.83
Area: 110197
Amount: 0.038469
Amount Units: ng/ml

Processing Integration Results



RT: 3.83
Area: 134584
Amount: 0.048109
Amount Units: ng/ml

Manual Integration Results



Reviewer: mcwhirterl, 07-Oct-2021 02:31:01
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Knoxville

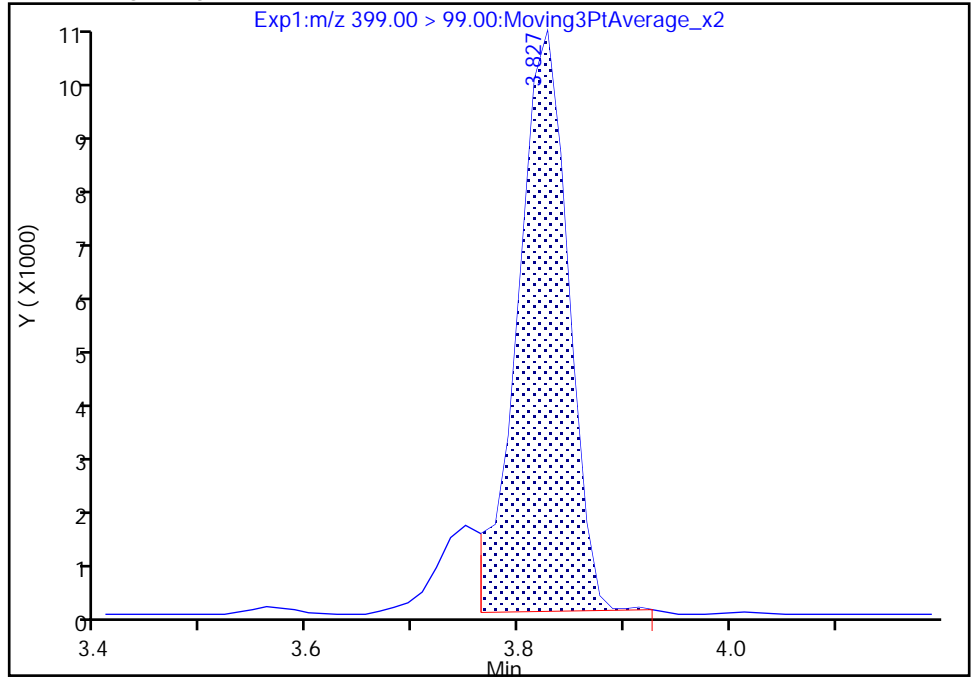
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Lims ID: CCVL
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

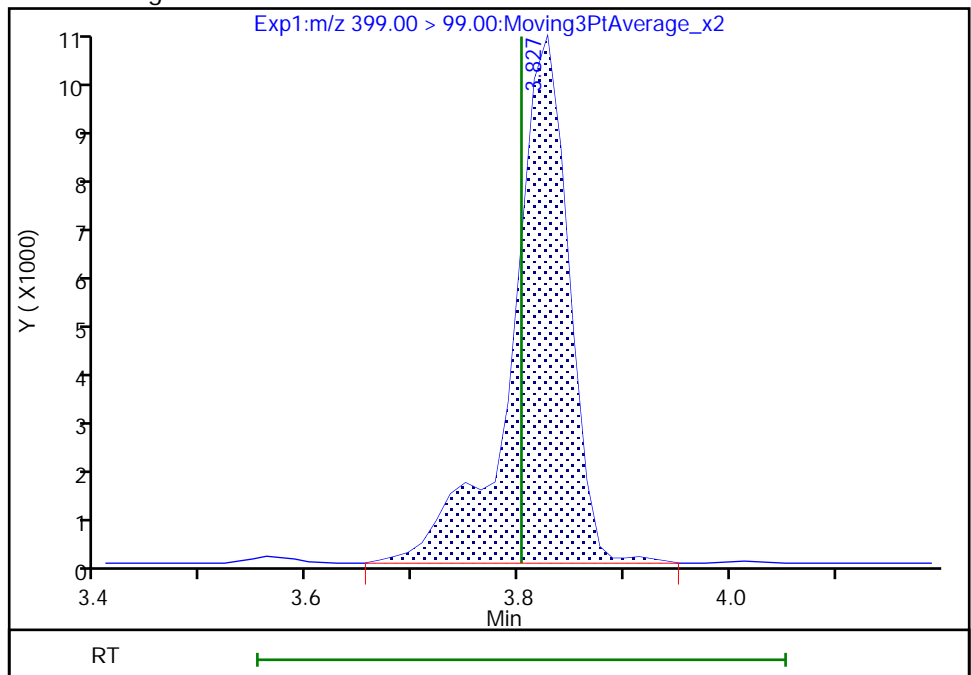
RT: 3.83
Area: 35105
Amount: 0.038469
Amount Units: ng/ml

Processing Integration Results



RT: 3.83
Area: 40287
Amount: 0.048109
Amount Units: ng/ml

Manual Integration Results



Reviewer: mcwhirterl, 07-Oct-2021 02:31:10

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Knoxville

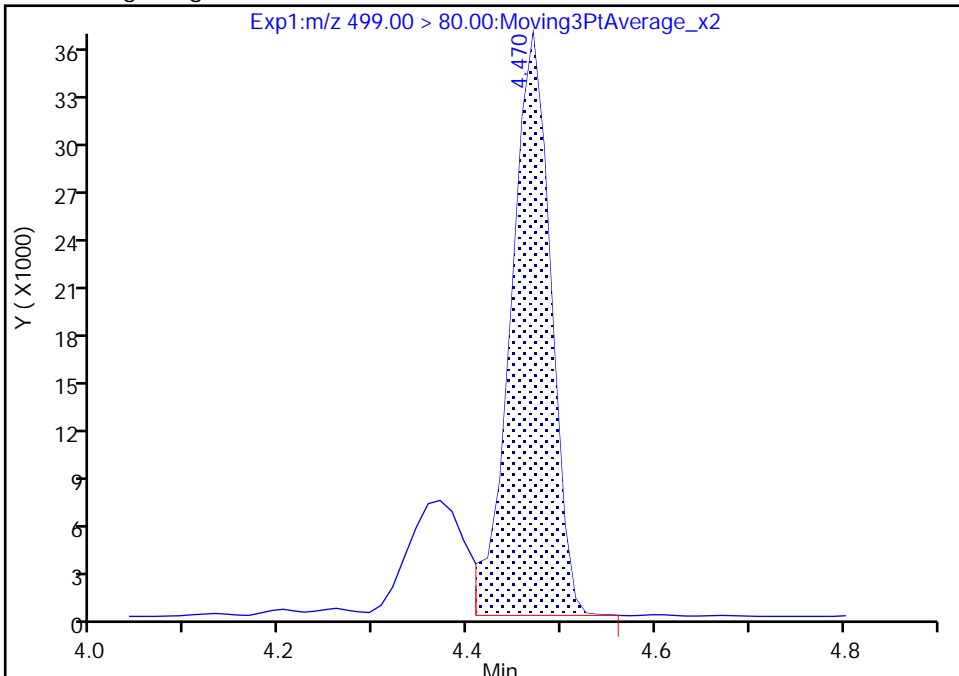
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Lims ID: CCVL
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

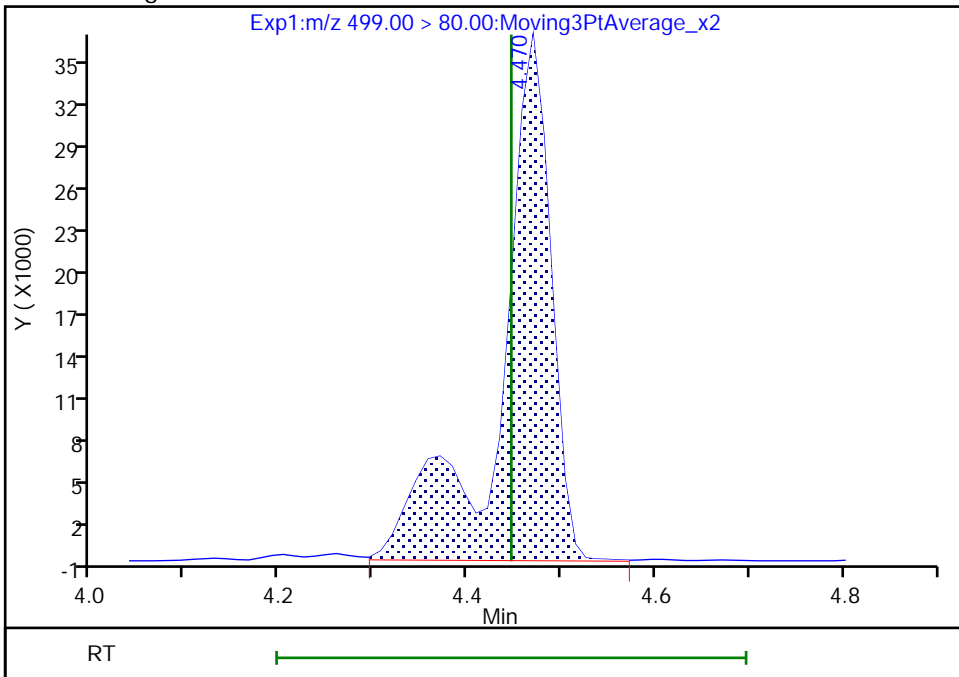
RT: 4.47
Area: 107273
Amount: 0.038546
Amount Units: ng/ml

Processing Integration Results



RT: 4.47
Area: 137468
Amount: 0.049395
Amount Units: ng/ml

Manual Integration Results



Reviewer: mcwhirterl, 07-Oct-2021 02:31:44
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Knoxville

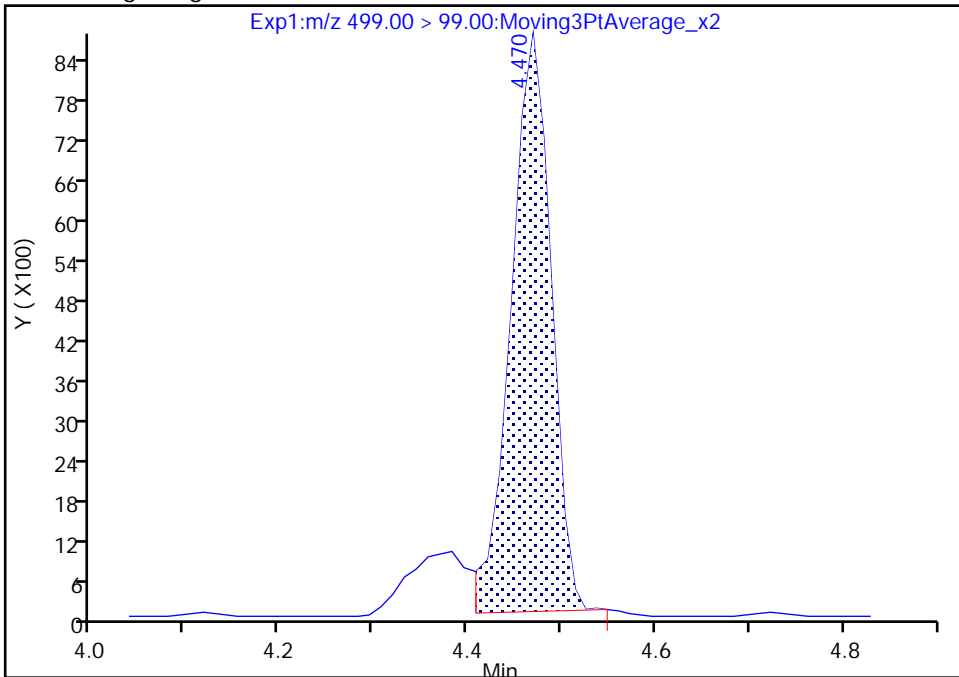
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Injection Date: 06-Oct-2021 21:10:55 Instrument ID: LCA
Lims ID: CCVL
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

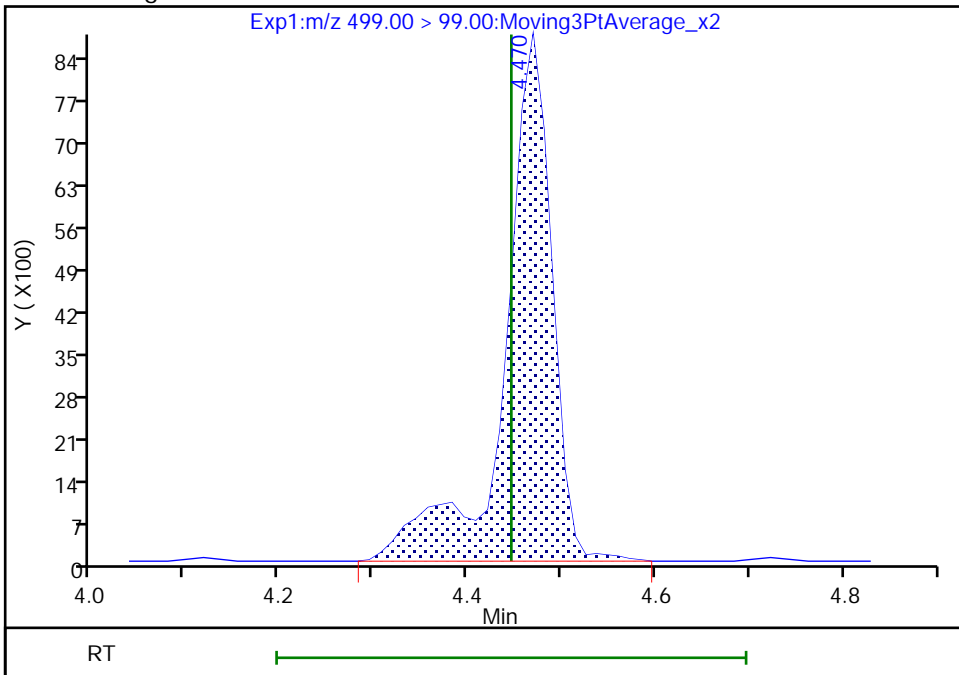
RT: 4.47
Area: 25665
Amount: 0.038546
Amount Units: ng/ml

Processing Integration Results



RT: 4.47
Area: 30724
Amount: 0.049395
Amount Units: ng/ml

Manual Integration Results



Reviewer: mcwhirterl, 07-Oct-2021 02:31:50

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Knoxville

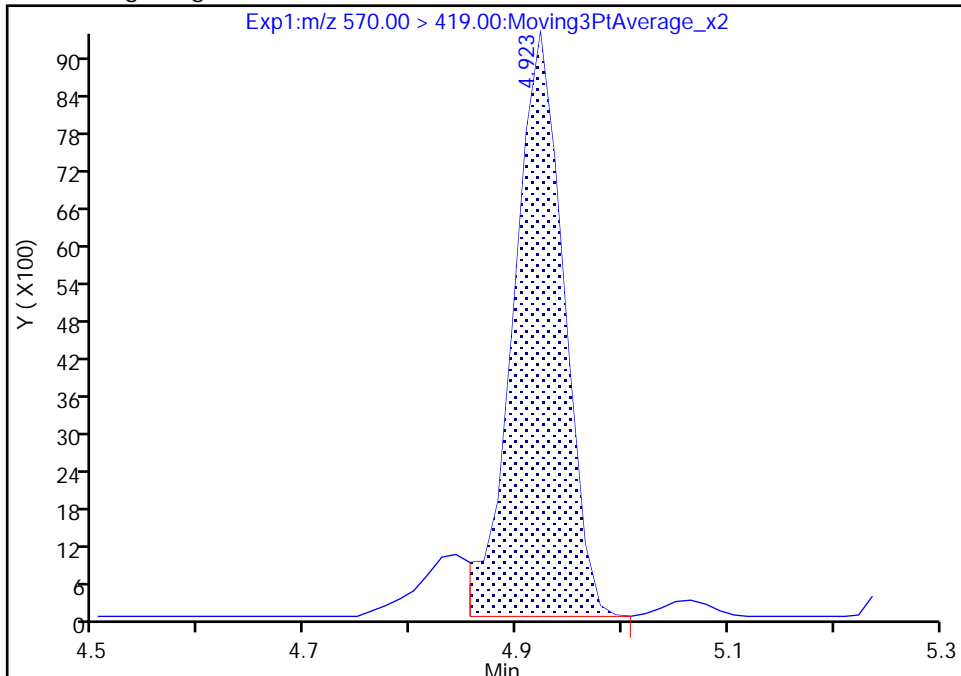
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Lims ID: CCVL
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

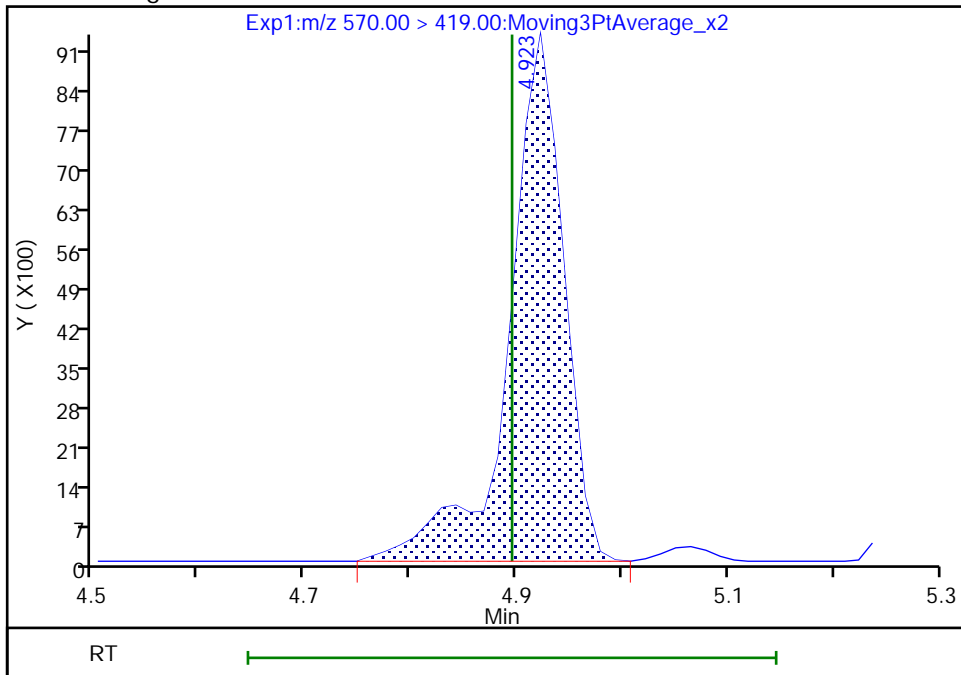
RT: 4.92
Area: 30670
Amount: 0.038607
Amount Units: ng/ml

Processing Integration Results



RT: 4.92
Area: 33866
Amount: 0.043405
Amount Units: ng/ml

Manual Integration Results



Reviewer: mcwhirterl, 07-Oct-2021 02:32:15
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Knoxville

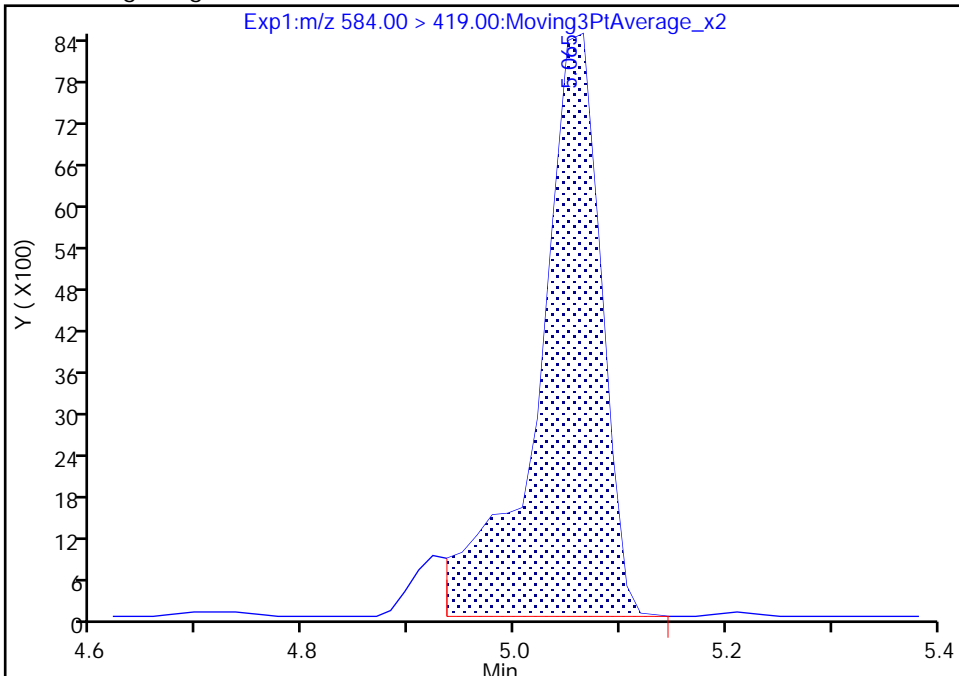
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Injection Date: 06-Oct-2021 21:10:55 Instrument ID: LCA
Lims ID: CCVL
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

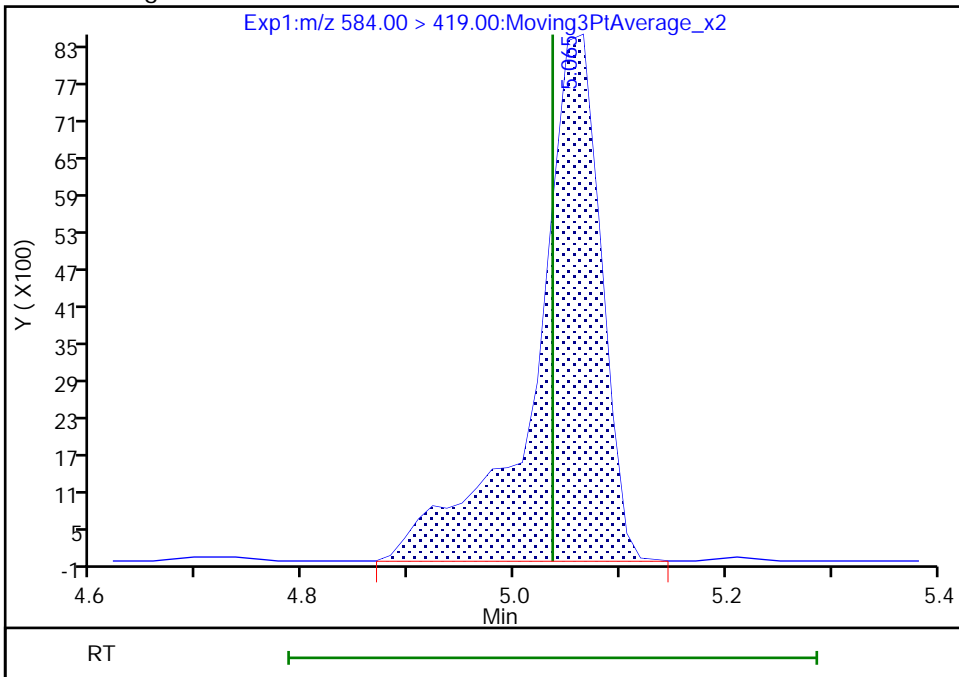
RT: 5.06
Area: 34915
Amount: 0.048570
Amount Units: ng/ml

Processing Integration Results



RT: 5.06
Area: 36936
Amount: 0.051382
Amount Units: ng/ml

Manual Integration Results



Reviewer: mcwhirterl, 07-Oct-2021 02:32:29
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-54568/7 Calibration Date: 10/06/2021 21:19
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _007.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7855	0.7718		0.983	1.00	-1.7	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.013	0.9542		0.942	1.00	-5.8	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.126	1.168		0.917	0.884	3.7	40.0
4:2 FTS	AveID	2.500	2.428		0.907	0.934	-2.9	40.0
Perfluoropentanesulfonic acid (PFPeS)	L2ID		0.8890		0.971	0.938	3.5	50.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8572	0.8192		0.956	1.00	-4.4	40.0
HFPO-DA	L2ID		1.363		0.984	1.00	-1.6	40.0
Perfluorohexanesulfonic acid (PFHxS)	L2ID		1.317		0.882	0.910	-3.1	40.0
Perfluoroheptanoic acid (PFHpA)	L2ID		1.116		1.06	1.00	5.6	40.0
DONA	AveID	3.243	3.356		0.975	0.942	3.5	40.0
6:2 FTS	L2ID		1.847		0.870	0.948	-8.2	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9947	0.9937		0.951	0.952	-0.1	40.0
Perfluorooctanoic acid (PFOA)	L2ID		1.139		1.03	1.00	2.7	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.100	1.080		0.911	0.928	-1.8	40.0
Perfluorononanoic acid (PFNA)	L2ID		0.8176		0.980	1.00	-2.1	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	2.308	2.393		0.966	0.932	3.7	40.0
Perfluorononanesulfonic acid (PFNS)	AveID	1.042	1.075		0.990	0.960	3.2	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9606	0.9321		0.970	1.00	-3.0	40.0
Perfluorodecanoic acid (PFDA)	L2ID		0.9706		1.02	1.00	2.2	40.0
8:2 FTS	AveID	1.784	1.698		0.912	0.958	-4.8	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	L2ID		0.8876		0.965	1.00	-3.5	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.9574	0.9553		0.962	0.964	-0.2	40.0
Perfluoroundecanoic acid (PFUnA)	L2ID		1.072		1.06	1.00	5.9	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.9494	0.8713		0.918	1.00	-8.2	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.858	1.845		0.935	0.942	-0.7	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9774		0.936	1.00	-6.4	40.0
10:2 FTS	AveID	2.221	2.027		0.880	0.964	-8.7	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.118		0.965	1.00	-3.5	40.0
NMeFOSA	AveID	1.047	1.107		1.06	1.00	5.7	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9879	1.006		0.986	0.968	1.8	40.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1

SDG No.: _____

Lab Sample ID: CCVIS 140-54568/7 Calibration Date: 10/06/2021 21:19

Instrument ID: LCA Calib Start Date: 10/05/2021 22:00

GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53

Lab File ID: _007.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.314		1.04	1.00	4.1	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.168	1.259		1.08	1.00	7.8	40.0
Perfluorotridecanoic acid (PFTriA)	L2ID		0.8817		0.998	1.00	-0.3	50.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.1257		0.996	1.00	-0.4	40.0
Perfluorohexadecanoic acid	Q2ID		1.107		1.01	1.00	1.3	40.0
Perfluorooctadecanoic acid	AveID	0.9076	0.9185		1.01	1.00	1.2	40.0
13C4 PFBA	Ave	1.324	1.250		1.18	1.25	-5.6	50.0
13C3 PFBS	Ave	0.7019	0.6697		1.11	1.16	-4.6	50.0
13C5 PFPeA	Ave	1.087	1.085		1.25	1.25	-0.2	50.0
M2-4:2 FTS	Ave	0.1052	0.1119		1.24	1.17	6.3	50.0
13C2 PFHxA	Ave	1.116	1.089		1.22	1.25	-2.4	50.0
13C3 HFPO-DA	Ave	0.5714	0.5345		1.17	1.25	-6.5	50.0
18O2 PFHxS	Ave	0.4248	0.4217		1.17	1.18	-0.7	50.0
13C4 PFHpA	Ave	1.113	1.055		1.19	1.25	-5.2	50.0
M2-6:2 FTS	Ave	0.1078	0.1191		1.31	1.19	10.5	50.0
13C4 PFOA	Ave	1.007	0.9834		1.22	1.25	-2.3	50.0
13C4 PFOS	Ave	0.5852	0.5409		1.11	1.20	-7.6	50.0
13C5 PFNA	Ave	1.279	1.273		1.24	1.25	-0.5	50.0
13C8 FOSA	Ave	0.8591	0.8366		1.22	1.25	-2.6	50.0
13C2 PFDA	Ave	1.296	1.285		1.24	1.25	-0.8	50.0
M2-8:2 FTS	Ave	0.1316	0.1464		1.33	1.20	11.2	50.0
d3-NMeFOSAA	Ave	0.1774	0.1710		1.21	1.25	-3.6	50.0
13C2 PFUnA	Ave	1.237	1.216		1.23	1.25	-1.7	50.0
d5-NEtFOSAA	Ave	0.1705	0.1791		1.31	1.25	5.0	50.0
13C2 PFDoA	Ave	1.319	1.337		1.27	1.25	1.3	50.0
d7-N-MeFOSE-M	Ave	0.1075	0.1173		1.36	1.25	9.1	50.0
d-N-MeFOSA-M	Ave	0.1120	0.1030		1.15	1.25	-8.0	50.0
d9-N-EtFOSE-M	Ave	0.1146	0.1228		1.34	1.25	7.1	50.0
d-N-EtFOSA-M	Ave	0.0942	0.0852		1.13	1.25	-9.6	50.0
13C2 PFTeDA	Ave	1.211	1.121		1.16	1.25	-7.4	50.0
13C2 PFHxDA	Ave	0.8782	0.8067		1.15	1.25	-8.1	50.0
13C8 PFOA	Ave	0.9886	0.9894		1.25	1.25	0.0	50.0
13C8 PFOS	Ave	0.1256	0.1224		1.17	1.20	-2.5	50.0

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

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 Client ID:
 Sample Type: CCVIS
 Inject. Date: 06-Oct-2021 21:19:43 ALS Bottle#: 7 Worklist Smp#: 7
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-007 ccvis
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 16:11:16 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: mcwhirterl Date: 07-Oct-2021 02:35:36

Ratio Calibration: None

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	2.801	2.801	0.0	0.674	7384045	1.18	94.4	12942	
2 Perfluorobutanoic acid	212.90 > 169.00	2.812	2.812	0.0	1.004	4559427	0.9826	98.3	1067	
D 3 13C5 PFPeA	267.90 > 223.00	3.129	3.129	0.0	0.753	6406187	1.25	99.8	13565	
4 Perfluoropentanoic acid	262.90 > 219.00	3.129	3.129	0.0	1.000	4890388	0.9420	94.2	1326	
D 6 13C3 PFBS	301.90 > 80.00	3.129	3.129	0.0	0.753	3678151	1.11	95.4	19507	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.143	3.143	0.0	1.004	3266040	0.9167	Target=3.06	104	12116
	298.90 > 99.00	3.143	3.143	0.0	1.004	1195956		2.73(1.53-4.59)		4944
D 8 M2-4:2 FTS	329.00 > 81.00	3.423	3.423	0.0	0.824	617217	1.24	106	1041	
7 4:2 FTS	327.00 > 307.00	3.423	3.423	0.0	1.000	1199084	0.9073	97.1	10019	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.453	3.453	0.0	1.103	2638277	0.9709	Target=3.47	104	10061
	349.00 > 99.00	3.453	3.453	0.0	1.103	733210		3.60(1.73-5.20)		10849
D 9 13C2 PFHxA	315.00 > 270.00	3.469	3.469	0.0	0.835	6431734	1.22	97.6	14789	
10 Perfluorohexanoic acid	313.00 > 269.00	3.469	3.469	0.0	1.000	4215039	0.9557	Target=9.74	95.6	1978
	313.00 > 119.00	3.469	3.469	0.0	1.000	340103		12.39(4.87-14.61)		868
D 12 13C3 HFPO-DA	287.00 > 169.00	3.561	3.561	0.0	0.857	3156311	1.17	93.5	8109	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.561	3.561	0.0	1.000	3441944	0.9843		98.4	2810	
D 17 18O2 PFHxS										
403.00 > 84.00	3.803	3.803	0.0	0.915	2356033	1.17		99.3	14897	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.803	3.803	0.0	1.000	2387846	0.8819	Target=2.96	96.9	6595	
399.00 > 99.00	3.803	3.803	0.0	1.000	708406		3.37(1.48-4.44)		4033	
D 14 13C4 PFHpA										
367.00 > 322.00	3.815	3.815	0.0	0.918	6232404	1.19		94.8	14163	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.815	3.815	0.0	1.000	5565391	1.06	Target=3.35	106	4173	
363.00 > 169.00	3.815	3.815	0.0	1.000	1672654		3.33(1.67-5.02)		3883	
68 DONA										
377.00 > 251.00	3.840	3.840	0.0	0.864	8077532	0.9746	Target=1.49	103	14194	
377.00 > 85.00	3.840	3.840	0.0	0.864	4449864		1.82(0.74-2.23)		5797	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.143	4.143	0.0	0.932	2417379	0.9510	Target=3.73	99.9	9937	
449.00 > 99.00	4.143	4.143	0.0	0.932	627291		3.85(1.87-5.61)		5610	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.143	4.143	0.0	0.997	5842763	1.25		100	17305	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.143	4.143	0.0	0.997	667939	1.31		110	3074	
19 6:2 FTS										
427.00 > 407.00	4.143	4.143	0.0	1.000	985025	0.8698		91.8	4215	
D 21 13C4 PFOA										
417.00 > 372.00	4.155	4.155	0.0	1.000	5807600	1.22		97.7	14096	
* 22 13C2 PFOA										
415.00 > 370.00	4.155	4.155	0.0		5905342	1.25			16310	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.155	4.155	0.0	1.000	5289917	1.03	Target=2.40	103	2199	
413.00 > 169.00	4.155	4.155	0.0	1.000	2013058		2.63(1.20-3.61)		2909	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.447	4.447	0.0	1.070	691091	1.17		97.5	3090	
D 25 13C4 PFOS										
503.00 > 80.00	4.447	4.447	0.0	1.070	3053591	1.10		92.4	6101	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.447	4.447	0.0	1.000	2560226	0.9110	Target=3.83	98.2	3223	M
499.00 > 99.00	4.447	4.447	0.0	1.000	577710		4.43(1.91-5.74)		2793	M
D 27 13C5 PFNA										
468.00 > 423.00	4.470	4.470	0.0	1.076	7520440	1.24		99.5	16511	
26 Perfluorononanoic acid										
463.00 > 419.00	4.470	4.470	0.0	1.000	4919101	0.9795	Target=3.68	97.9	4155	
463.00 > 169.00	4.470	4.470	0.0	1.000	1080554		4.55(1.84-5.52)		2175	
63 9CIFOS										
531.00 > 351.00	4.596	4.596	0.0	1.106	5698891	0.9664		104	11170	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.722	4.722	0.0	1.062	2637439	0.99	Target=3.97	103	10579	
549.00 > 99.00	4.722	4.722	0.0	1.062	641737		4.11(1.99-5.96)		2928	
D 34 13C8 FOSA										
506.00 > 78.00	4.736	4.736	0.0	1.140	4940241	1.22		97.4	7246	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.736	4.736	0.0	1.000	3683811	0.9704		97.0	4418	
D 32 13C2 PFDA										
515.00 > 470.00	4.749	4.749	0.0	1.143	7588872	1.24		99.2	29050	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.749	4.749	0.0	1.000	5892908	1.02	Target=10.11	102	3418	
513.00 > 169.00	4.749	4.749	0.0	1.000	474932		12.41(5.06-15.17)		492	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.763	4.763	0.0	1.146	828441	1.33		111	3204	
31 8:2 FTS										
527.00 > 507.00	4.763	4.763	0.0	1.000	1125330	0.9119		95.2	9046	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.896	4.896	0.0	1.178	1009819	1.21		96.4	1422	
36 NMeFOSAA										
570.00 > 419.00	4.896	4.896	0.0	1.000	717061	0.9649		96.5	1199	
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.993	4.993	0.0	1.123	2353305	0.9619	Target=3.80	99.8	8332	
599.00 > 99.00	4.993	4.993	0.0	1.123	638101		3.69(1.90-5.70)		4882	
D 39 13C2 PFUnA										
565.00 > 520.00	5.022	5.022	0.0	1.209	7183493	1.23		98.3	20480	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.022	5.022	0.0	1.000	6158338	1.06	Target=7.45	106	7874	
563.00 > 169.00	5.022	5.022	0.0	1.000	662444		9.30(3.78-11.33)		2001	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.036	5.036	0.0	1.212	1057417	1.31		105	3636	
40 NEtFOSA										
584.00 > 419.00	5.036	5.036	0.0	1.000	737099	0.9178		91.8	808	
57 11C1FOS										
631.00 > 451.00	5.119	5.119	0.0	1.151	4441355	0.9353		99.3	10223	
D 43 13C2 PFDaA										
615.00 > 570.00	5.251	5.251	0.0	1.264	7896183	1.27		101	29590	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.251	5.251	0.0	1.000	6174104	0.9357	Target=5.33	93.6	3325	
613.00 > 169.00	5.251	5.251	0.0	1.000	848216		7.28(2.66-7.99)		1854	
50 10:2 FTS										
627.00 > 607.00	5.266	5.266	0.0	1.106	1352013	0.8799		91.3	6083	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.281	5.281	0.0	1.271	692604	1.36		109	361	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.274	608049	1.15		92.0	37.7	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.295	0.0	1.003	619279	0.9650		96.5	662	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA	512.00 > 169.00	5.295	5.295	0.0	1.000	538324	1.06	106	485	
54 PFDoS	699.00 > 80.00	5.436	5.436	0.0	1.222	2488715	0.9859	102	6355	
	699.00 > 99.00	5.436	5.436	0.0	1.222	598829	4.16(2.19-6.58)		3839	
D 53 d9-N-EtFOSE-M	639.00 > 59.00	5.436	5.436	0.0	1.308	725221	1.34	107	538	
62 N-EtFOSE-M	630.00 > 59.00	5.449	5.449	0.0	1.002	762162	1.04	104	1840	
D 52 d-N-EtFOSA-M	531.00 > 169.00	5.449	5.449	0.0	1.311	503007	1.13	90.4	588	
44 Perfluorotridecanoic acid	663.00 > 619.00	5.462	5.462	0.0	1.040	5569591	1.00	99.7	3357	
	663.00 > 169.00	5.462	5.462	0.0	1.040	870172	6.40(2.83-8.48)		2437	
56 N-EtFOSA-M	526.00 > 169.00	5.462	5.462	0.0	1.002	506701	1.08	108	585	
D 46 13C2 PFTeDA	715.00 > 670.00	5.637	5.637	0.0	1.357	6619599	1.16	92.6	16037	
45 Perfluorotetradecanoic acid	713.00 > 169.00	5.637	5.637	0.0	1.000	665503	1.00	99.6	3981	
	713.00 > 219.00	5.637	5.637	0.0	1.000	695181	0.96(0.53-1.60)		7122	
55 Perfluorohexadecanoic acid	813.00 > 769.00	5.948	5.948	0.0	1.000	4218077	1.01	101	3550	
	813.00 > 169.00	5.948	5.948	0.0	1.000	517075	8.16(3.75-11.26)		1778	
D 59 13C2 PFHxDA	815.00 > 770.00	5.948	5.948	0.0	1.432	4763666	1.15	91.9	10358	
60 Perfluorooctadecanoic acid	913.00 > 869.00	6.221	6.221	0.0	1.046	3500222	1.01	101	3148	
	913.00 > 169.00	6.221	6.221	0.0	1.046	301373	11.61(5.14-15.41)		1991	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L4PFC2_00003

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_007.d

Injection Date: 06-Oct-2021 21:19:43

Instrument ID: LCA

Lims ID: CCVIS

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 7

Worklist Smp#: 7

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

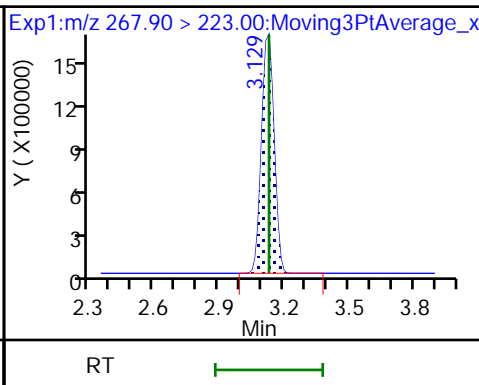
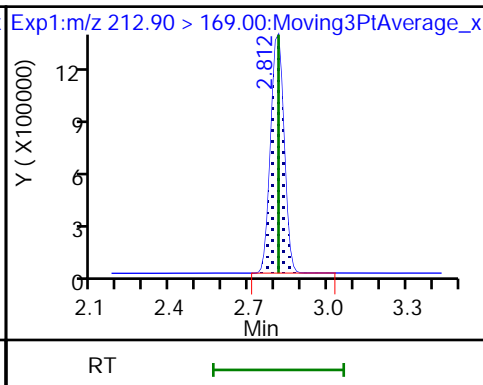
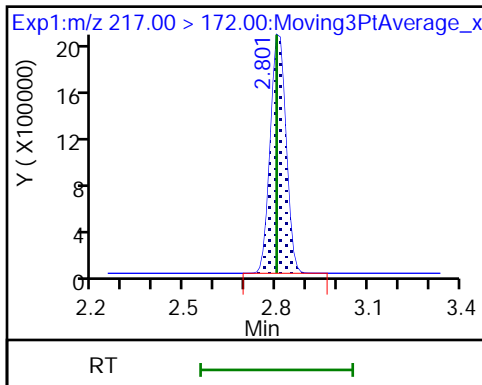
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Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

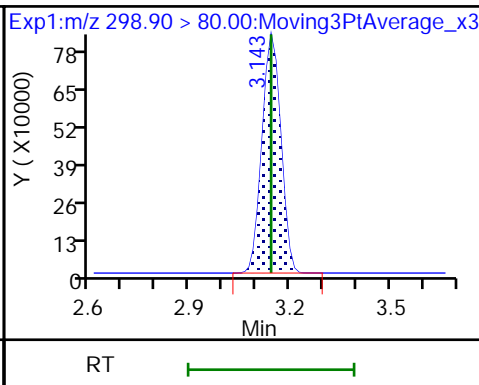
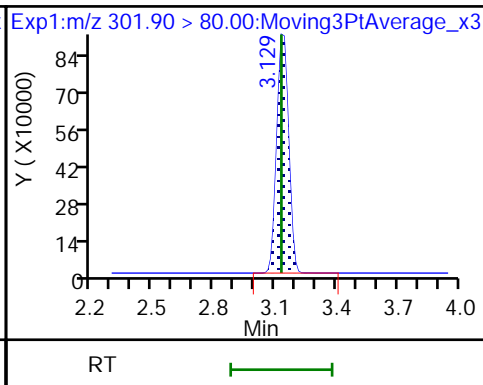
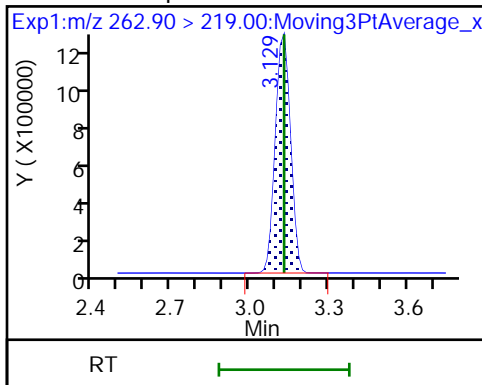
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

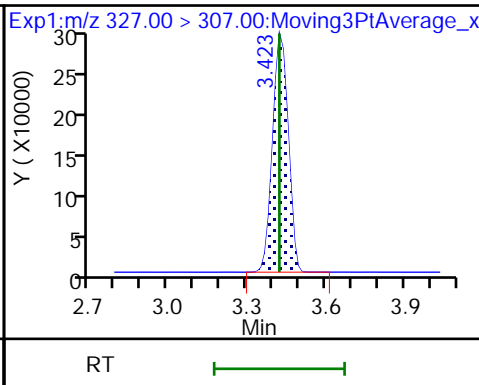
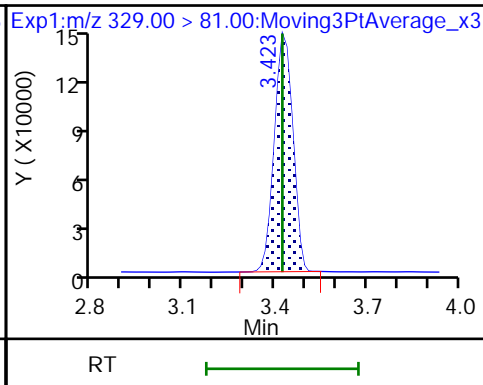
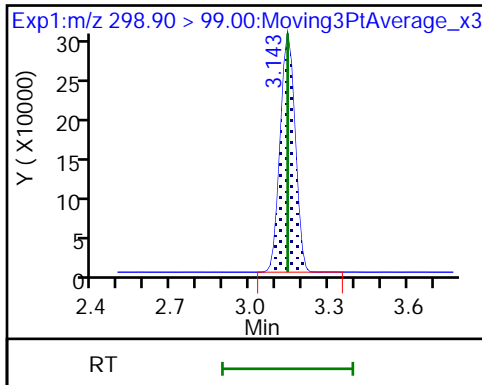
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

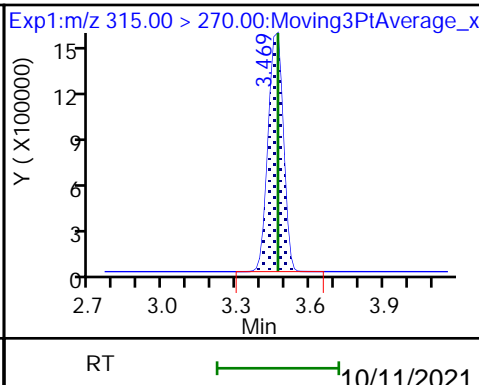
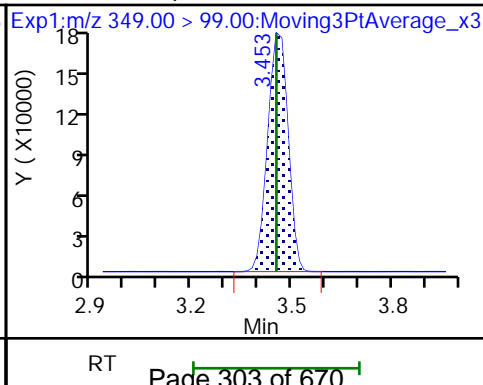
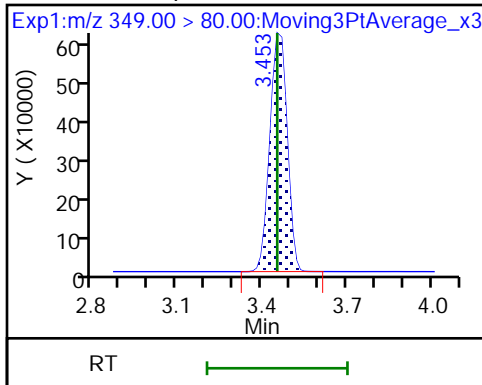
7 4:2 FTS

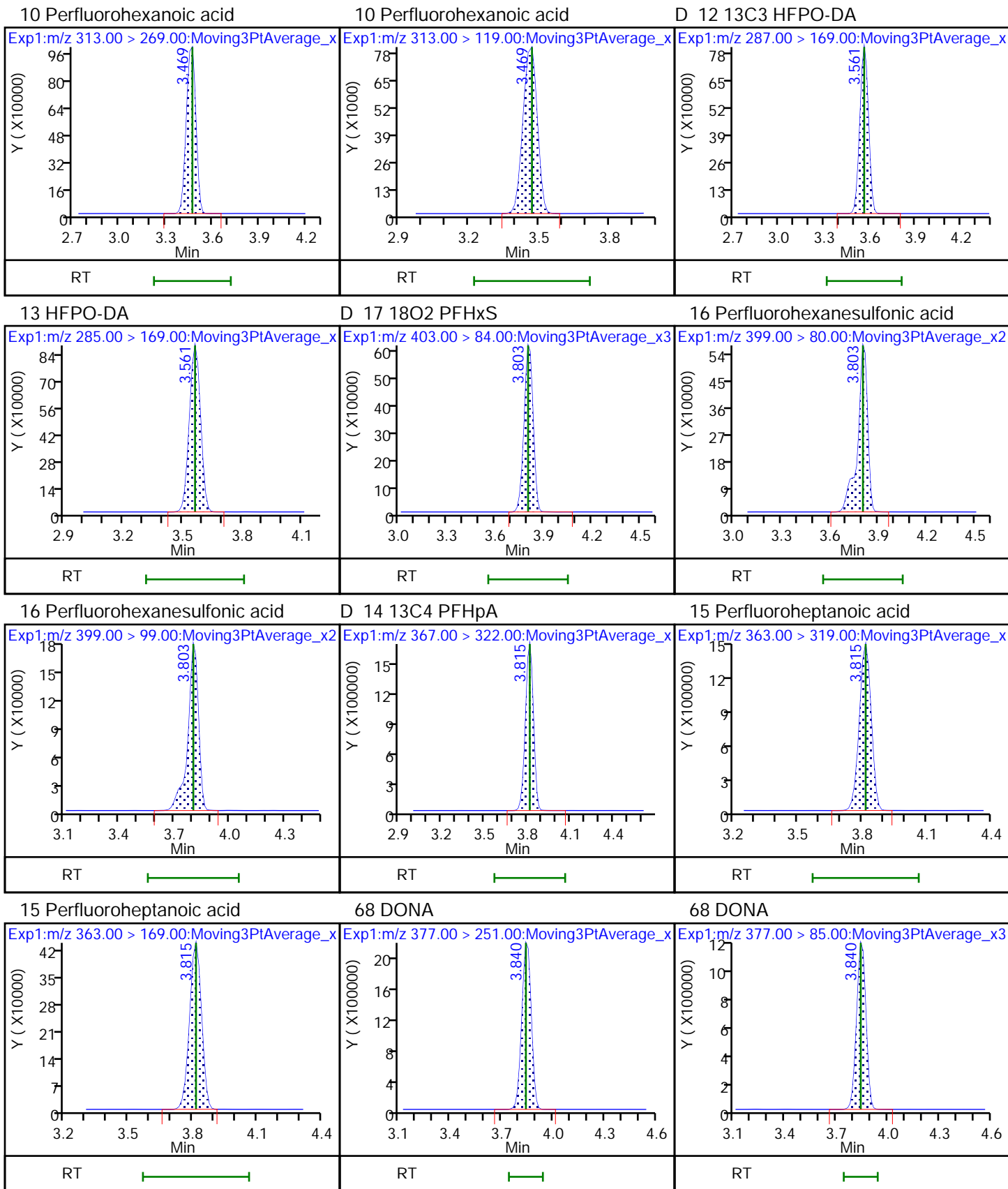


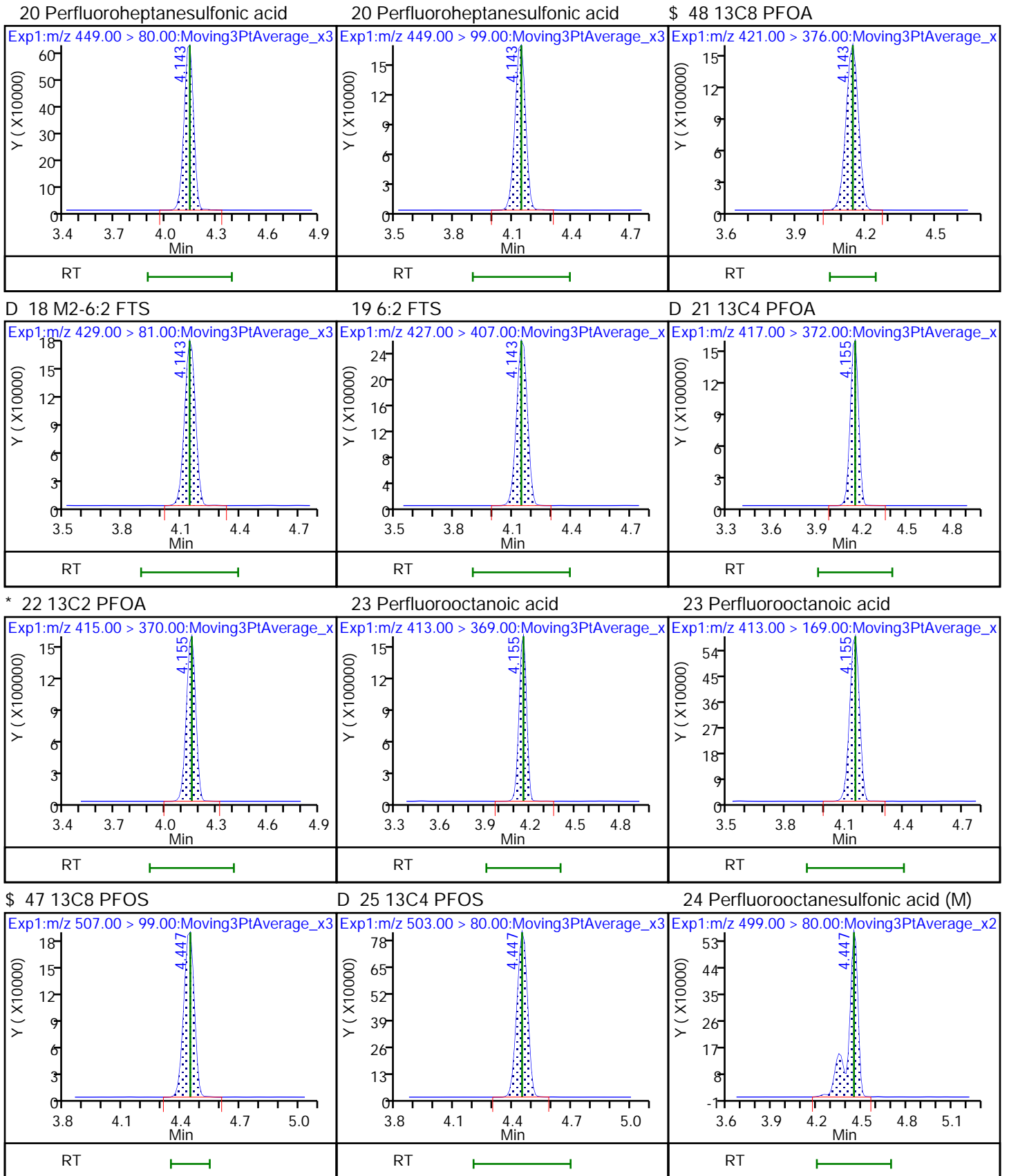
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA



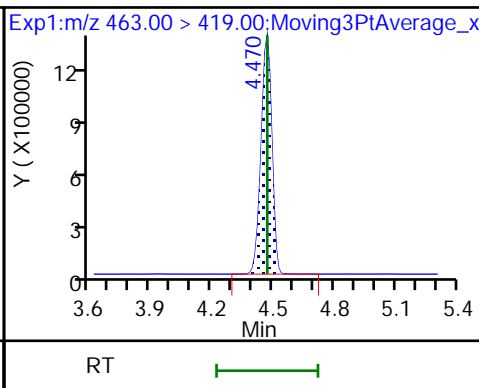
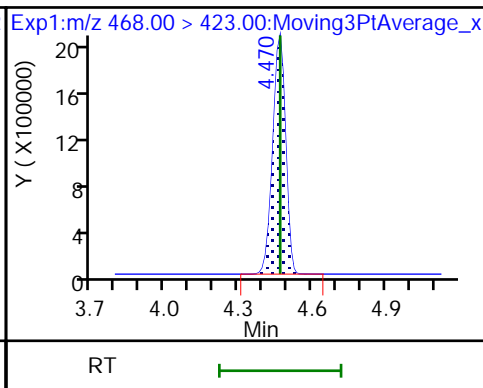
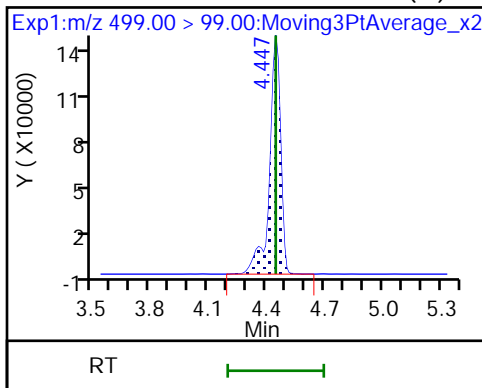




24 Perfluorooctanesulfonic acid (M)

D 27 13C5 PFNA

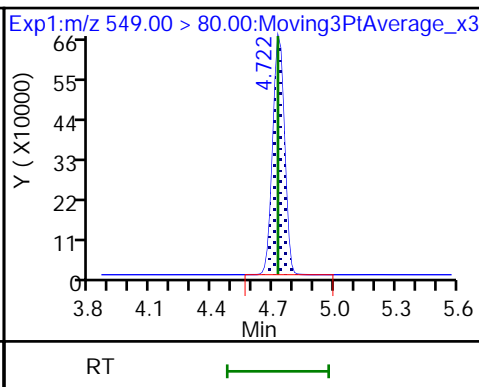
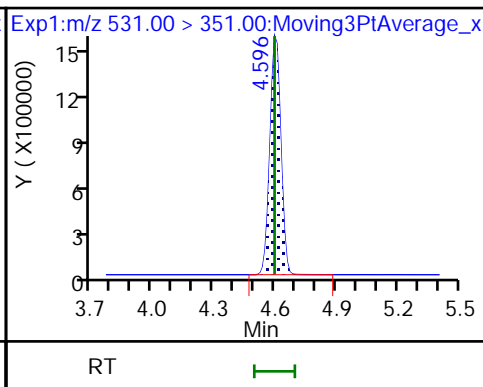
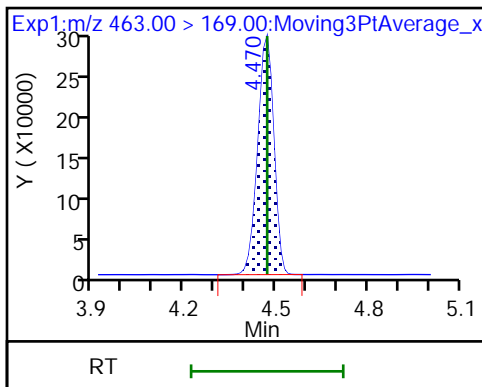
26 Perfluorononanoic acid



26 Perfluorononanoic acid

63 9CIFOS

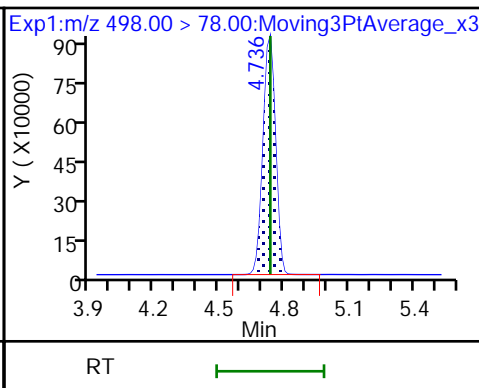
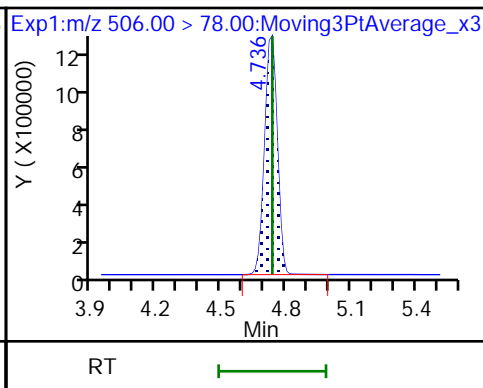
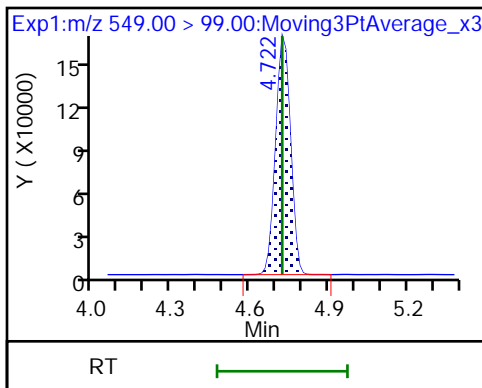
28 Perfluoronanesulfonic acid



28 Perfluoronanesulfonic acid

D 34 13C8 FOSA

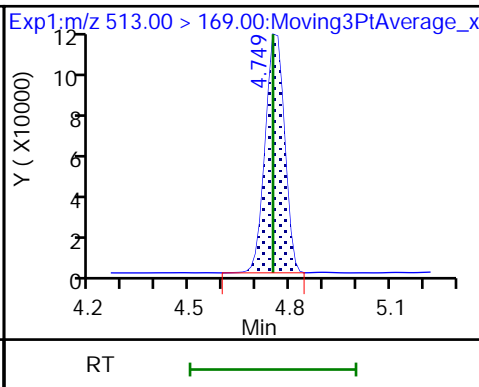
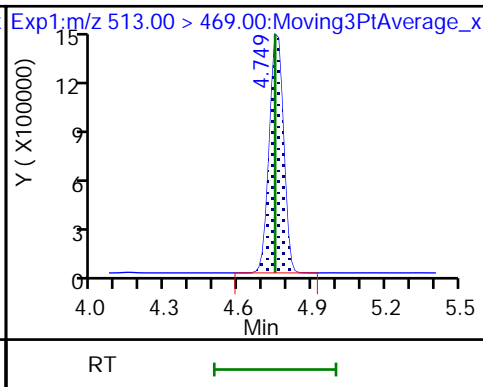
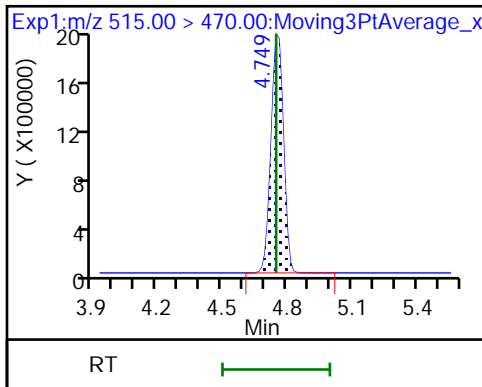
33 Perfluorooctanesulfonamide



D 32 13C2 PFDA

29 Perfluorodecanoic acid

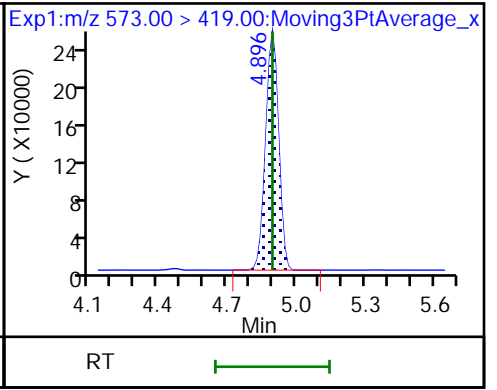
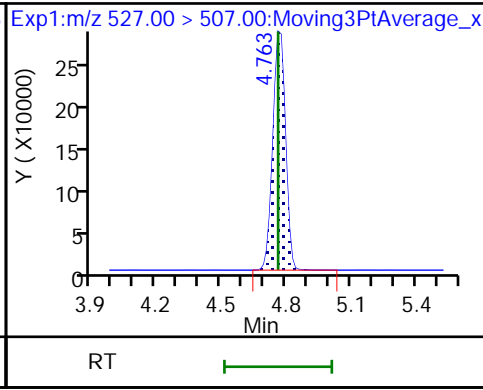
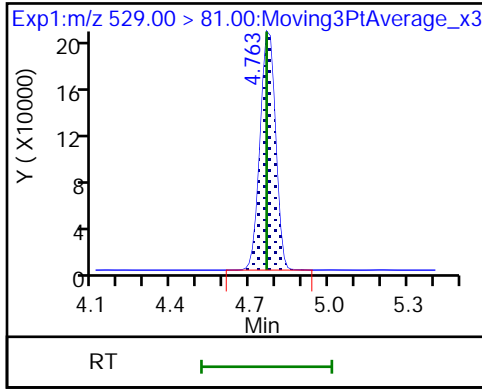
29 Perfluorodecanoic acid



D 30 M2-8:2 FTS

31 8:2 FTS

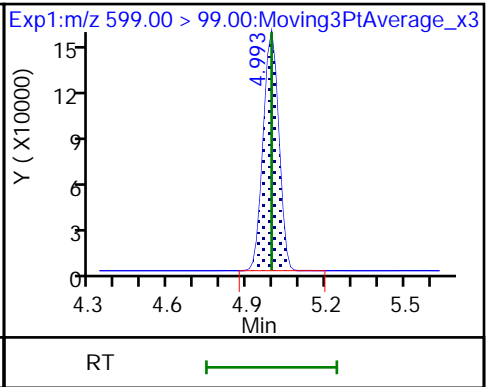
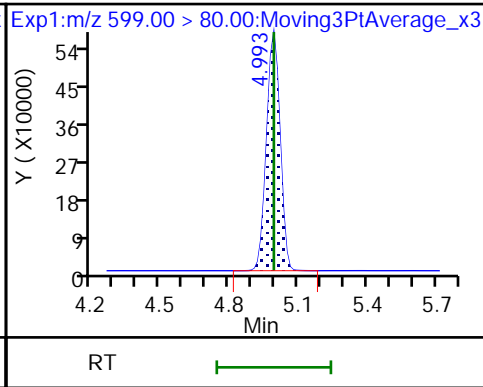
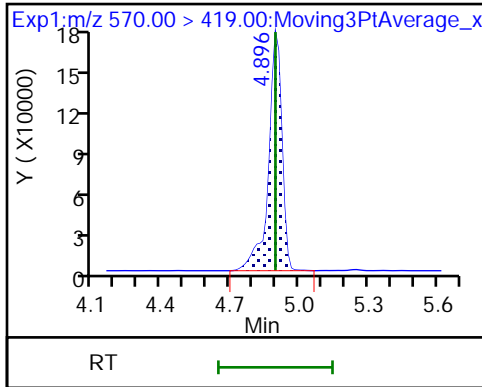
D 35 d3-NMeFOSAA



36 NMeFOSAA

37 Perfluorodecanesulfonic acid

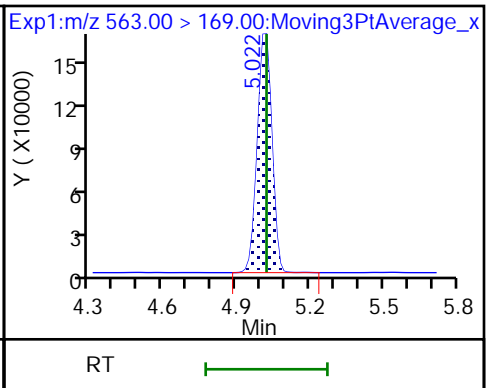
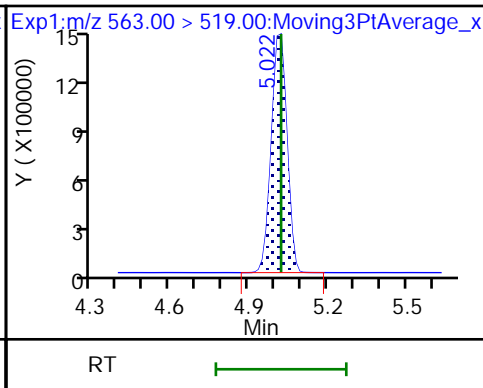
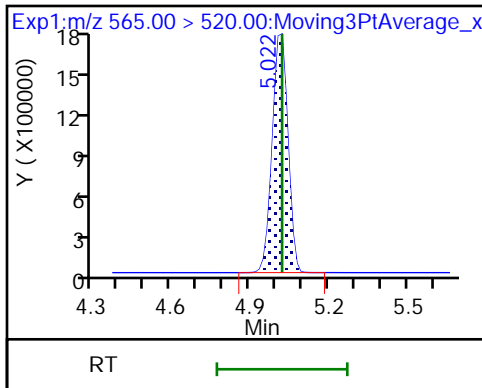
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

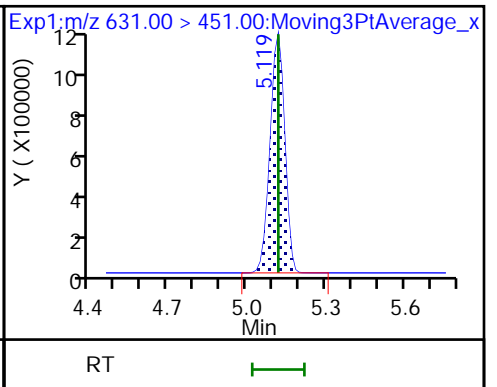
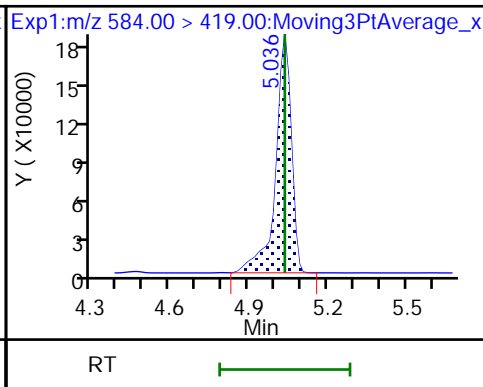
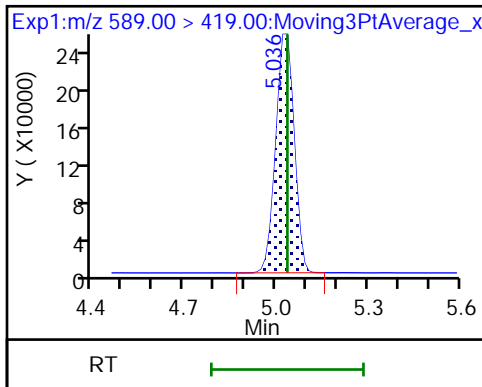
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA

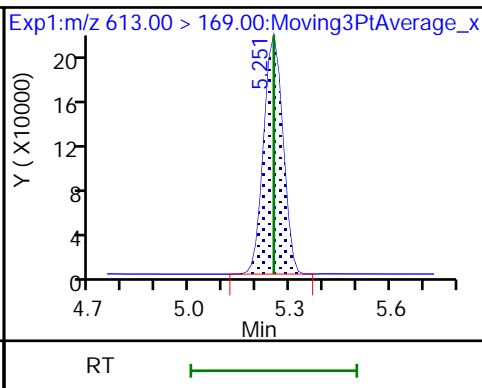
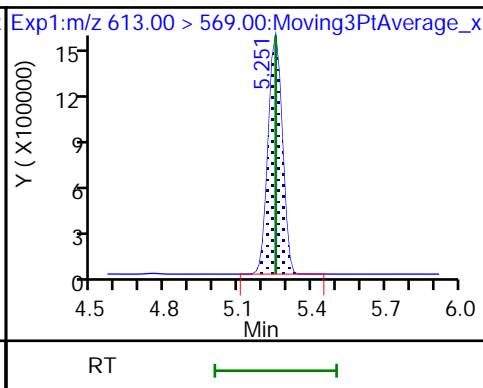
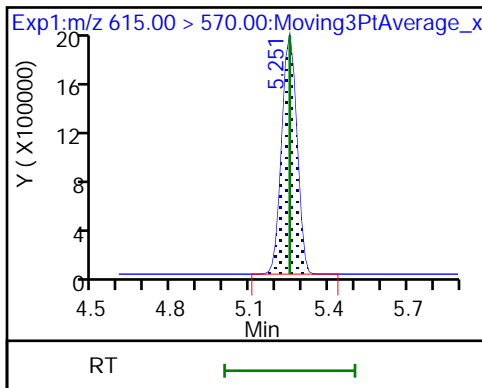
57 11C1FOS



D 43 13C2 PFDaA

42 Perfluorododecanoic acid

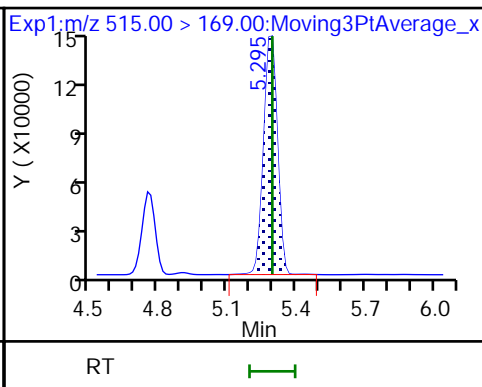
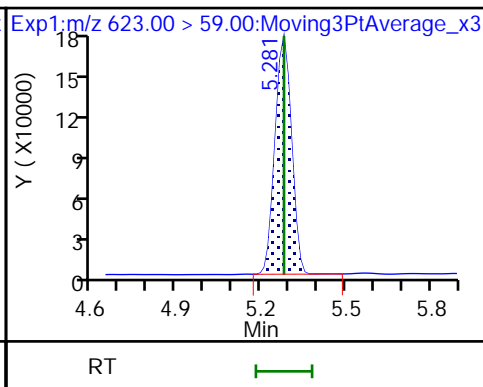
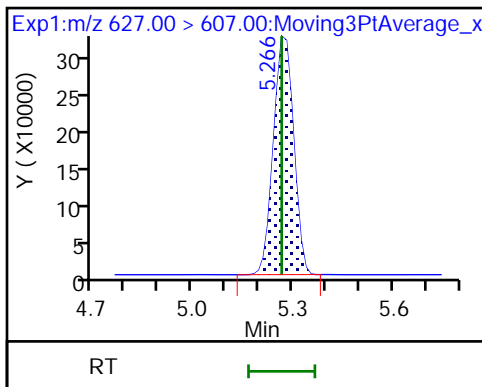
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

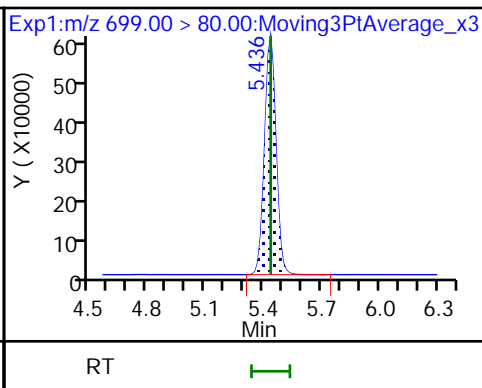
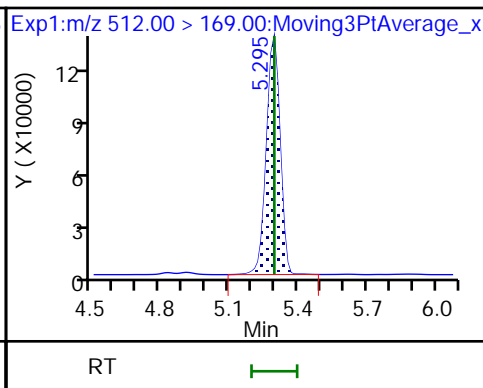
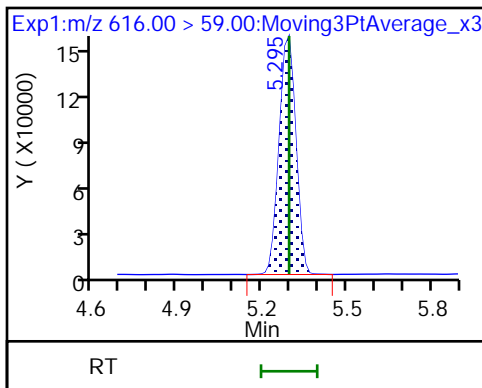
D 58 d-N-MeFOSA-M



49 N-MeFOSE-M

61 NMeFOSA

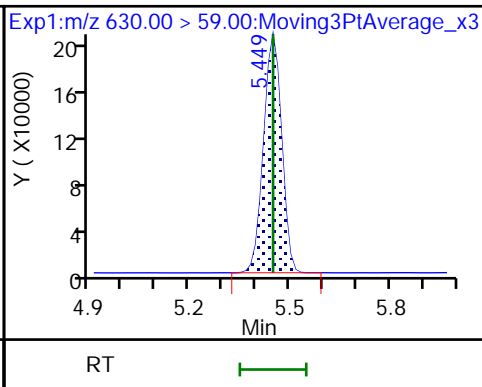
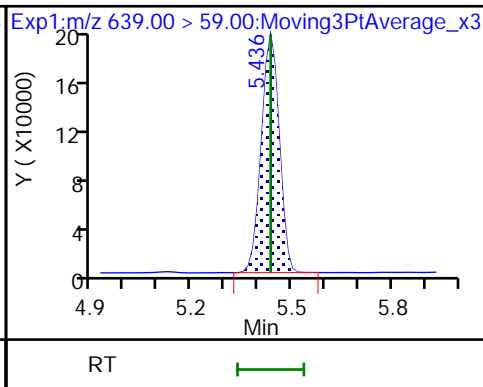
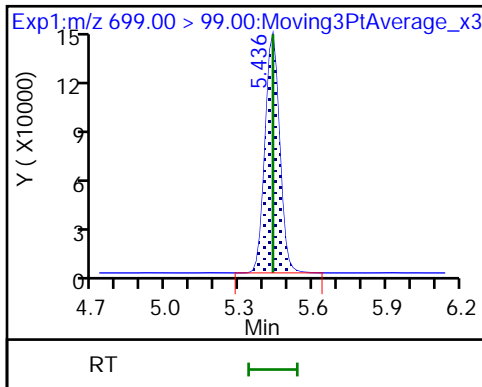
54 PFDoS



54 PFDoS

D 53 d9-N-EtFOSE-M

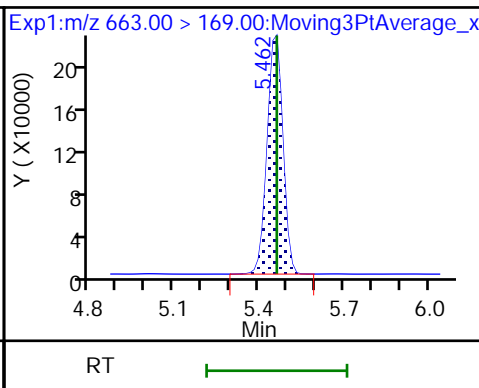
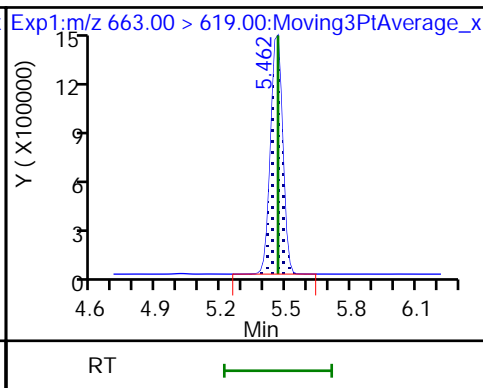
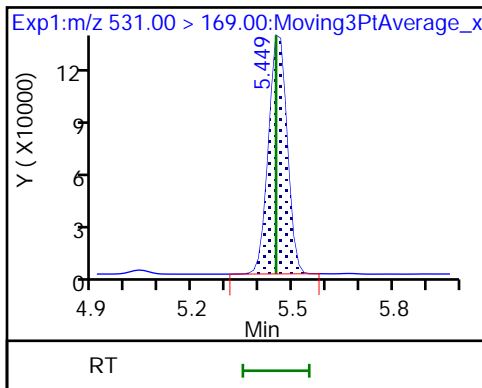
62 N-EtFOSE-M



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid

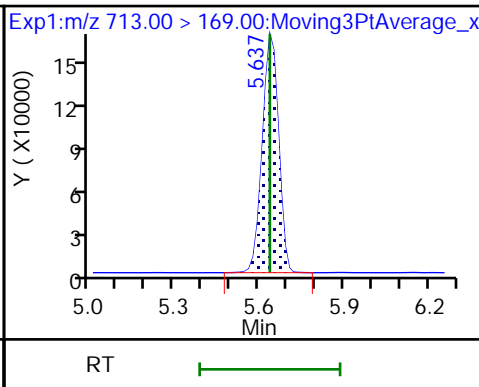
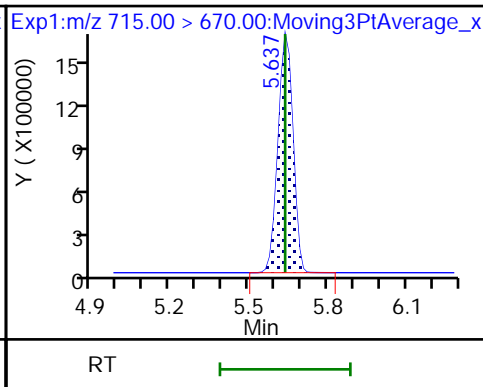
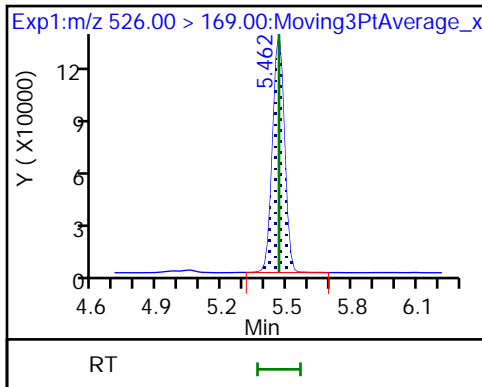
44 Perfluorotridecanoic acid



56 N-EtFOSA-M

D 46 13C2 PFTeDA

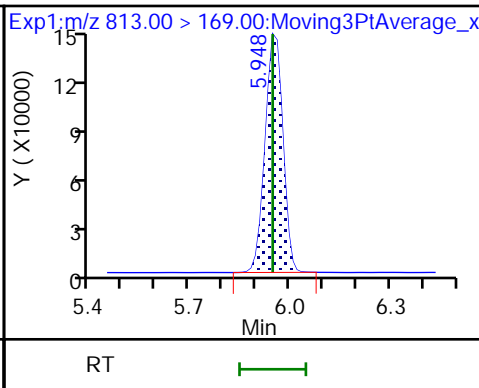
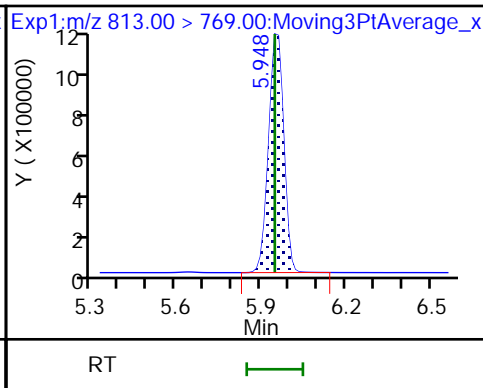
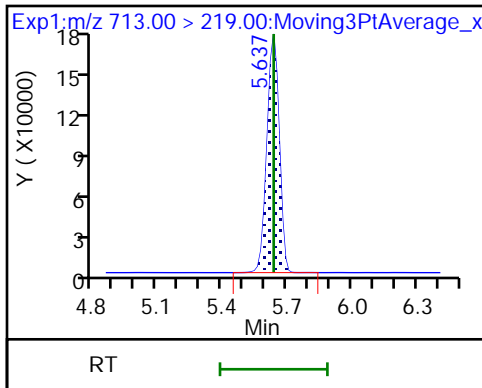
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

55 Perfluorohexadecanoic acid

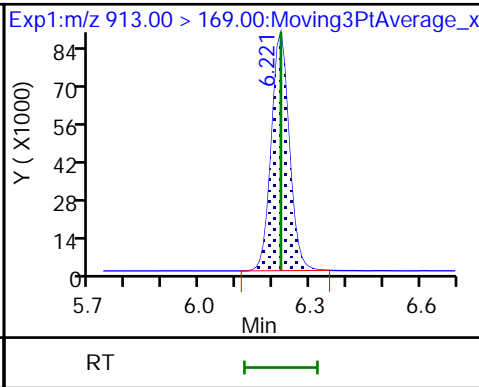
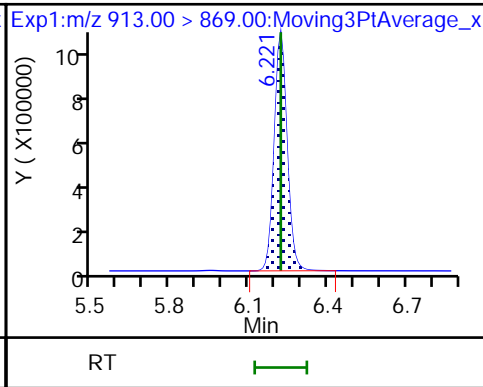
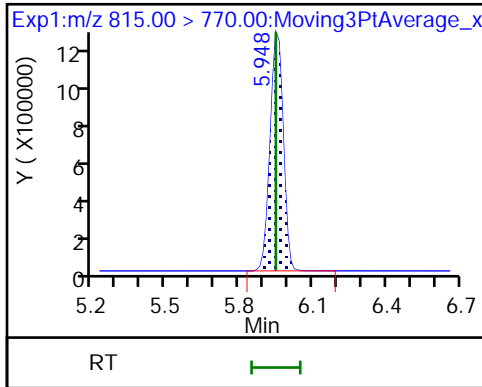
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid



Eurofins TestAmerica, Knoxville

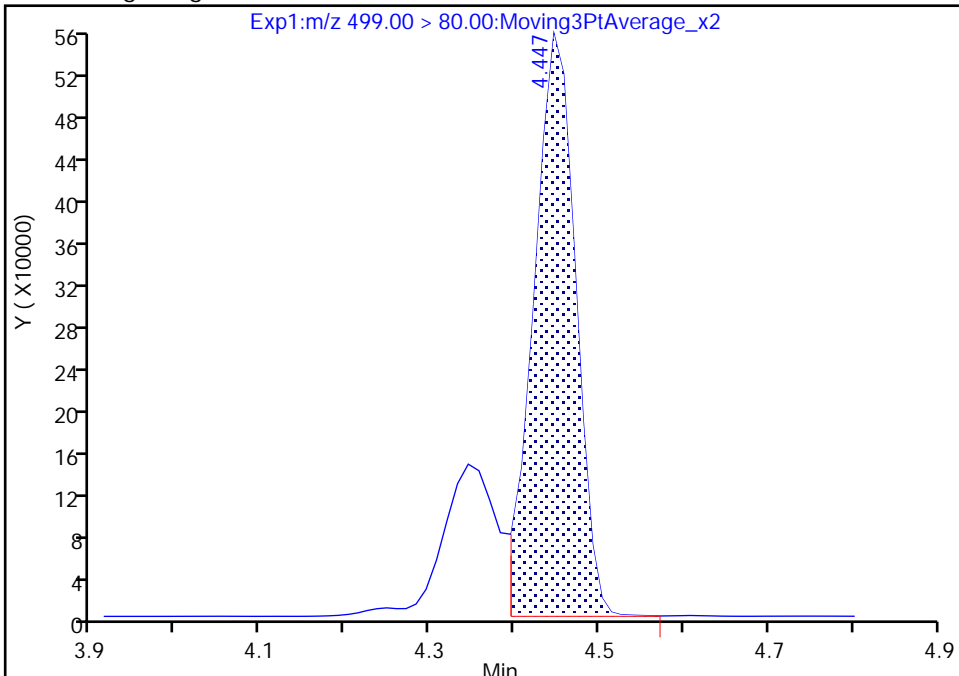
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_007.d
Injection Date: 06-Oct-2021 21:19:43 Instrument ID: LCA
Lims ID: CCVIS
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

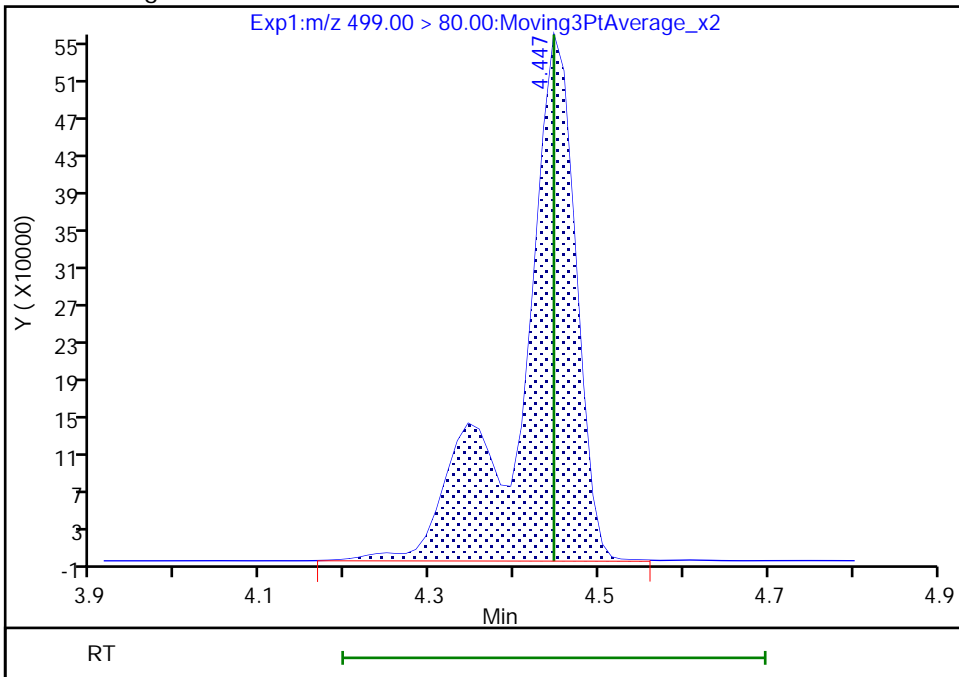
RT: 4.45
Area: 1901952
Amount: 0.676797
Amount Units: ng/ml

Processing Integration Results



RT: 4.45
Area: 2560226
Amount: 0.911040
Amount Units: ng/ml

Manual Integration Results



Reviewer: mcwhirterl, 07-Oct-2021 02:34:57
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Knoxville

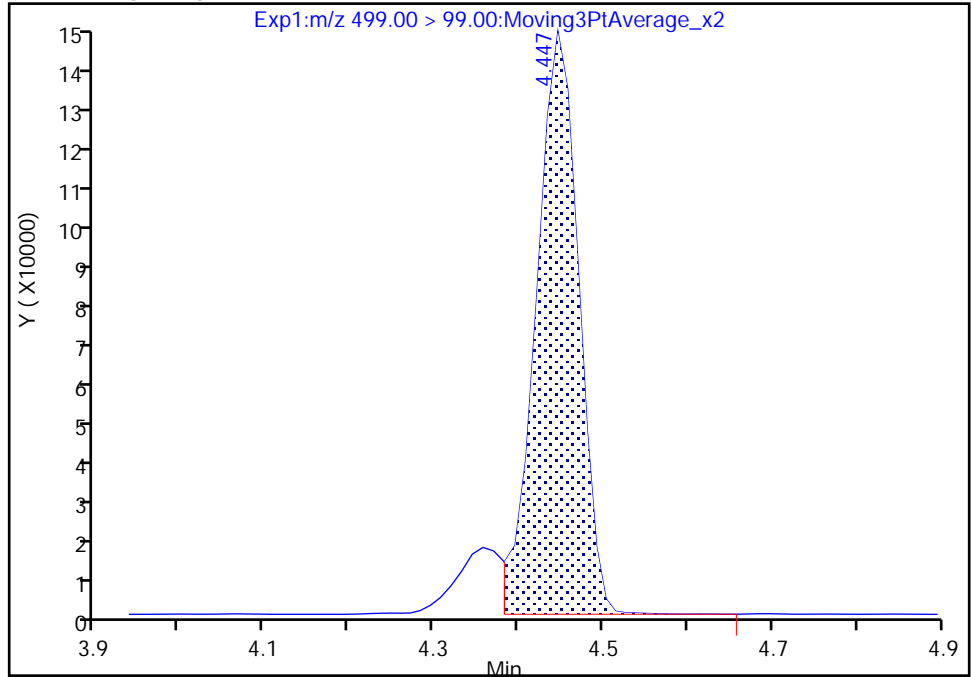
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_007.d
Injection Date: 06-Oct-2021 21:19:43 Instrument ID: LCA
Lims ID: CCVIS
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

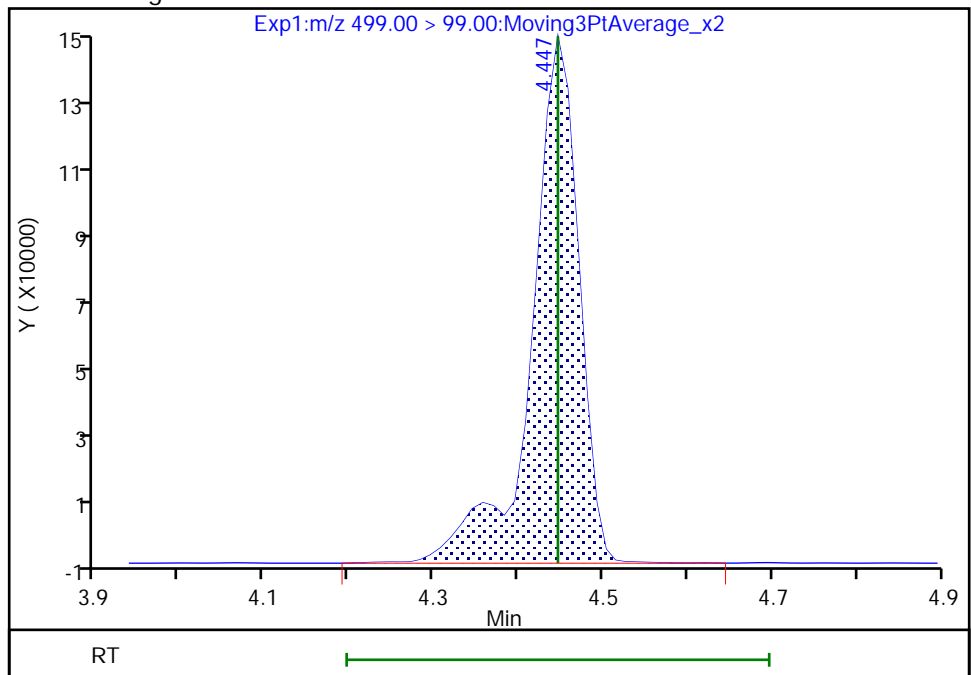
RT: 4.45
Area: 515466
Amount: 0.676797
Amount Units: ng/ml

Processing Integration Results



RT: 4.45
Area: 577710
Amount: 0.911040
Amount Units: ng/ml

Manual Integration Results



Reviewer: mcwhirterl, 07-Oct-2021 02:35:06

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54568/32 Calibration Date: 10/07/2021 01:08
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _032.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7855	0.7836		0.998	1.00	-0.2	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.013	0.9930		0.980	1.00	-2.0	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.126	1.099		0.863	0.884	-2.4	40.0
4:2 FTS	AveID	2.500	2.293		0.857	0.934	-8.3	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8572	0.8198		0.956	1.00	-4.4	40.0
Perfluoropentanesulfonic acid (PFPeS)	L2ID		0.8308		0.907	0.938	-3.3	50.0
HFPO-DA	L2ID		1.289		0.930	1.00	-7.0	40.0
Perfluorohexanesulfonic acid (PFHxS)	L2ID		1.357		0.909	0.910	-0.1	40.0
Perfluoroheptanoic acid (PFHpA)	L2ID		1.065		1.01	1.00	0.8	40.0
DONA	AveID	3.243	3.138		0.911	0.942	-3.2	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9947	1.004		0.961	0.952	0.9	40.0
6:2 FTS	L2ID		1.973		0.929	0.948	-2.0	40.0
Perfluorooctanoic acid (PFOA)	L2ID		1.116		1.01	1.00	0.7	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.100	1.057		0.892	0.928	-3.9	40.0
Perfluorononanoic acid (PFNA)	L2ID		0.8493		1.02	1.00	1.8	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	2.308	2.280		0.921	0.932	-1.2	40.0
Perfluorononanesulfonic acid (PFNS)	AveID	1.042	0.999		0.920	0.960	-4.2	40.0
Perfluorodecanoic acid (PFDA)	L2ID		0.999		1.05	1.00	5.2	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9606	0.9807		1.02	1.00	2.1	40.0
8:2 FTS	AveID	1.784	1.762		0.946	0.958	-1.2	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	L2ID		0.9748		1.06	1.00	6.0	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.9574	0.9264		0.933	0.964	-3.2	40.0
Perfluoroundecanoic acid (PFUnA)	L2ID		1.030		1.02	1.00	1.8	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.9494	0.8951		0.943	1.00	-5.7	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.858	1.743		0.883	0.942	-6.2	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		1.025		0.982	1.00	-1.8	40.0
10:2 FTS	AveID	2.221	2.537		1.10	0.964	14.2	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.135		0.980	1.00	-2.0	40.0
NMeFOSA	AveID	1.047	1.008		0.962	1.00	-3.8	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9879	0.9774		0.958	0.968	-1.1	40.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54568/32 Calibration Date: 10/07/2021 01:08
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _032.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTrIA)	L2ID		0.8578		0.970	1.00	-3.0	50.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.383		1.10	1.00	9.6	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.168	1.135		0.971	1.00	-2.9	40.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.1258		0.997	1.00	-0.3	40.0
Perfluorohexadecanoic acid	Q2ID		1.079		0.986	1.00	-1.4	40.0
Perfluorooctadecanoic acid	AveID	0.9076	0.9237		1.02	1.00	1.8	40.0
13C4 PFBA	Ave	1.324	1.270		1.20	1.25	-4.1	50.0
13C5 PFPeA	Ave	1.087	1.032		1.19	1.25	-5.1	50.0
13C3 PFBS	Ave	0.7019	0.6835		1.13	1.16	-2.6	50.0
M2-4:2 FTS	Ave	0.1052	0.1150		1.28	1.17	9.3	50.0
13C2 PFHxA	Ave	1.116	1.073		1.20	1.25	-3.9	50.0
13C3 HFPO-DA	Ave	0.5714	0.5343		1.17	1.25	-6.5	50.0
18O2 PFHxS	Ave	0.4248	0.4103		1.14	1.18	-3.4	50.0
13C4 PFHpA	Ave	1.113	1.073		1.21	1.25	-3.6	50.0
13C4 PFOA	Ave	1.007	0.9819		1.22	1.25	-2.5	50.0
M2-6:2 FTS	Ave	0.1078	0.1186		1.31	1.19	10.0	50.0
13C4 PFOS	Ave	0.5852	0.5634		1.15	1.20	-3.7	50.0
13C5 PFNA	Ave	1.279	1.225		1.20	1.25	-4.3	50.0
13C2 PFDA	Ave	1.296	1.184		1.14	1.25	-8.6	50.0
13C8 FOSA	Ave	0.8591	0.8070		1.17	1.25	-6.1	50.0
M2-8:2 FTS	Ave	0.1316	0.1353		1.23	1.20	2.8	50.0
d3-NMeFOSAA	Ave	0.1774	0.1607		1.13	1.25	-9.4	50.0
13C2 PFUnA	Ave	1.237	1.207		1.22	1.25	-2.4	50.0
d5-NEtFOSAA	Ave	0.1705	0.1679		1.23	1.25	-1.5	50.0
13C2 PFDoA	Ave	1.319	1.309		1.24	1.25	-0.8	50.0
d7-N-MeFOSE-M	Ave	0.1075	0.1209		1.41	1.25	12.4	50.0
d-N-MeFOSA-M	Ave	0.1120	0.1073		1.20	1.25	-4.2	50.0
d9-N-EtFOSE-M	Ave	0.1146	0.1192		1.30	1.25	4.0	50.0
d-N-EtFOSA-M	Ave	0.0942	0.0930		1.23	1.25	-1.3	50.0
13C2 PFTeDA	Ave	1.211	1.205		1.24	1.25	-0.5	50.0
13C2 PFHxDA	Ave	0.8782	0.8279		1.18	1.25	-5.7	50.0
13C8 PFOA	Ave	0.9886	0.9256		1.17	1.25	-6.4	50.0
13C8 PFOS	Ave	0.1256	0.1164		1.11	1.20	-7.3	50.0

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_032.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 07-Oct-2021 01:08:28 ALS Bottle#: 32 Worklist Smp#: 32
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-032 ccv
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 16:47:37 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 16:46:28

Ratio Calibration: None

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	2.801	2.801	0.0	0.678	7405051	1.20	95.9	18960	
2 Perfluorobutanoic acid	212.90 > 169.00	2.801	2.812	-0.011	1.000	4642257	1.00	99.8	1205	
D 3 13C5 PFPeA	267.90 > 223.00	3.116	3.129	-0.013	0.754	6014902	1.19	94.9	18250	
4 Perfluoropentanoic acid	262.90 > 219.00	3.116	3.129	-0.013	1.000	4778047	0.9802	98.0	1451	
D 6 13C3 PFBS	301.90 > 80.00	3.130	3.129	0.001	0.758	3705293	1.13	97.4	30599	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.130	3.143	-0.013	1.000	3096195	0.8626	Target=3.06	97.6	18618
	298.90 > 99.00	3.130	3.143	-0.013	1.000	1183351		2.62(1.53-4.59)		7529
D 8 M2-4:2 FTS	329.00 > 81.00	3.409	3.423	-0.014	0.825	626085	1.28	109	1262	
7 4:2 FTS	327.00 > 307.00	3.409	3.423	-0.014	1.000	1148641	0.8568	91.7	10958	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.453	3.453	0.0	1.103	2483958	0.9071	Target=3.47	96.7	13386
	349.00 > 99.00	3.453	3.453	0.0	1.103	710545		3.50(1.73-5.20)		10397
D 9 13C2 PFHxA	315.00 > 270.00	3.453	3.469	-0.016	0.836	6252800	1.20	96.1	21695	
10 Perfluorohexanoic acid	313.00 > 269.00	3.453	3.469	-0.016	1.000	4100919	0.9564	Target=9.74	95.6	2303
	313.00 > 119.00	3.453	3.469	-0.016	1.000	329560		12.44(4.87-14.61)		1293
D 12 13C3 HFPO-DA	287.00 > 169.00	3.549	3.561	-0.013	0.859	3114257	1.17	93.5	10831	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.549	3.561	-0.013	1.000	3210373	0.9302		93.0	2904	
D 17 18O2 PFHxS										
403.00 > 84.00	3.791	3.803	-0.012	0.918	2262640	1.14		96.6	7754	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.791	3.803	-0.012	1.000	2362481	0.9087	Target=2.96	99.9	6682	
399.00 > 99.00	3.791	3.803	-0.012	1.000	663355		3.56(1.48-4.44)		4900	
D 14 13C4 PFHpA										
367.00 > 322.00	3.803	3.815	-0.012	0.921	6254017	1.20		96.4	32634	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.803	3.815	-0.012	1.000	5327616	1.01	Target=3.35	101	4346	
363.00 > 169.00	3.803	3.815	-0.012	1.000	1626293		3.28(1.67-5.02)		5124	
68 DONA										
377.00 > 251.00	3.828	3.840	-0.012	0.863	7765534	0.9114	Target=1.49	96.8	16175	
377.00 > 85.00	3.828	3.840	-0.012	0.863	4275034		1.82(0.74-2.23)		7407	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.118	4.143	-0.025	0.929	2510294	0.9607	Target=3.73	101	10859	
449.00 > 99.00	4.118	4.143	-0.025	0.929	628587		3.99(1.87-5.61)		3896	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.118	4.143	-0.025	0.997	5395062	1.17		93.6	28867	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.130	4.143	-0.013	1.000	656492	1.31		110	3779	
19 6:2 FTS										
427.00 > 407.00	4.130	4.143	-0.013	1.000	1033871	0.9294		98.0	4852	
D 21 13C4 PFOA										
417.00 > 372.00	4.130	4.155	-0.025	1.000	5723371	1.22		97.5	22206	
* 22 13C2 PFOA										
415.00 > 370.00	4.130	4.155	-0.025		5828723	1.25			23965	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.130	4.155	-0.025	1.000	5110427	1.01	Target=2.40	101	2180	
413.00 > 169.00	4.130	4.155	-0.025	1.000	1942975		2.63(1.20-3.61)		2851	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.421	4.447	-0.025	1.070	648861	1.11		92.7	3313	
D 25 13C4 PFOS										
503.00 > 80.00	4.434	4.447	-0.012	1.074	3139139	1.15		96.3	5629	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.434	4.447	-0.012	1.000	2575510	0.8915	Target=3.83	96.1	1726	M
499.00 > 99.00	4.434	4.447	-0.012	1.000	580777		4.43(1.91-5.74)		2615	M
D 27 13C5 PFNA										
468.00 > 423.00	4.446	4.470	-0.024	1.076	7138005	1.20		95.7	24463	
26 Perfluorononanoic acid										
463.00 > 419.00	4.446	4.470	-0.024	1.000	4849767	1.02	Target=3.68	102	4500	
463.00 > 169.00	4.446	4.470	-0.024	1.000	1081572		4.48(1.84-5.52)		2349	
63 9CIFOS										
531.00 > 351.00	4.584	4.596	-0.012	1.110	5583112	0.9209		98.8	7113	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.709	4.722	-0.013	1.062	2518654	0.9199	Target=3.97	95.8	5250	
549.00 > 99.00	4.709	4.722	-0.013	1.062	641224		3.93(1.99-5.96)		2475	
D 34 13C8 FOSA										
506.00 > 78.00	4.736	4.736	0.0	1.146	4703742	1.17		93.9	4782	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.736	4.736	0.0	1.000	3690378	1.02		102	5008	
D 32 13C2 PFDA										
515.00 > 470.00	4.736	4.749	-0.013	1.146	6899316	1.14		91.4	18281	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.736	4.749	-0.013	1.000	5514481	1.05	Target=10.11	105	4019	
513.00 > 169.00	4.736	4.749	-0.013	1.000	474726		11.62(5.06-15.17)		474	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.763	-0.014	1.150	755497	1.23		103	3205	
31 8:2 FTS										
527.00 > 507.00	4.749	4.763	-0.014	1.000	1065066	0.9464		98.8	3875	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.882	4.896	-0.014	1.182	936957	1.13		90.6	1608	
36 NMeFOSAA										
570.00 > 419.00	4.882	4.896	-0.014	1.000	730676	1.06		106	1445	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.979	4.993	-0.014	1.123	2345986	0.9328	Target=3.80	96.8	6358	
599.00 > 99.00	4.979	4.993	-0.014	1.123	618497		3.79(1.90-5.70)		4610	
D 39 13C2 PFUnA										
565.00 > 520.00	4.993	5.022	-0.029	1.209	7035346	1.22		97.6	20636	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.993	5.022	-0.029	1.000	5799494	1.02	Target=7.45	102	4419	
563.00 > 169.00	4.993	5.022	-0.029	1.000	616688		9.40(3.78-11.33)		1573	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.007	5.036	-0.029	1.212	978808	1.23		98.5	2977	
40 NEtFOSA										
584.00 > 419.00	5.022	5.036	-0.014	1.003	700937	0.9428		94.3	709	
57 11CIFOS										
631.00 > 451.00	5.106	5.119	-0.013	1.151	4312526	0.8834		93.8	8355	
D 43 13C2 PFDaA										
615.00 > 570.00	5.237	5.251	-0.014	1.268	7630157	1.24		99.2	16472	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.237	5.251	-0.014	1.000	6258132	0.9824	Target=5.33	98.2	3608	
613.00 > 169.00	5.237	5.251	-0.014	1.000	872034		7.18(2.66-7.99)		2257	
50 10:2 FTS										
627.00 > 607.00	5.251	5.266	-0.015	1.106	1543079	1.10		114	9464	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.281	5.281	-0.001	1.278	704718	1.41		112	400	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.282	625214	1.20		95.8	45.5	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.295	0.0	1.003	639995	0.9802		98.0	752	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA	512.00 > 169.00	5.295	5.295	0.0	1.000	503957	0.9624	96.2	685	
54 PFDoS	699.00 > 80.00	5.423	5.436	-0.013	1.223	2485350	0.9577	Target=4.32	98.9	5600
	699.00 > 99.00	5.423	5.436	-0.013	1.223	578260		4.30(2.19-6.58)		3532
D 53 d9-N-EtFOSE-M	639.00 > 59.00	5.449	5.436	0.013	1.319	694994	1.30	104	613	
62 N-EtFOSE-M	630.00 > 59.00	5.462	5.449	0.013	1.002	769216	1.10	110	2509	
D 52 d-N-EtFOSA-M	531.00 > 169.00	5.462	5.449	0.013	1.322	542274	1.23	98.7	815	
44 Perfluorotridecanoic acid	663.00 > 619.00	5.436	5.462	-0.026	1.038	5236157	0.9703	Target=5.66	97.0	2749
	663.00 > 169.00	5.436	5.462	-0.026	1.038	884522		5.92(2.83-8.48)		4830
56 N-EtFOSA-M	526.00 > 169.00	5.462	5.462	0.0	1.000	492170	0.9710	97.1	578	
D 46 13C2 PFTeDA	715.00 > 670.00	5.623	5.637	-0.014	1.361	7023097	1.24	99.5	11626	
45 Perfluorotetradecanoic acid	713.00 > 169.00	5.623	5.637	-0.014	1.000	706732	1.00	Target=1.07	99.7	4016
	713.00 > 219.00	5.623	5.637	-0.014	1.000	635690		1.11(0.53-1.60)		4604
55 Perfluorohexadecanoic acid	813.00 > 769.00	5.935	5.948	-0.013	1.000	4163833	0.9864	Target=7.50	98.6	2974
	813.00 > 169.00	5.935	5.948	-0.013	1.000	512284		8.13(3.75-11.26)		2553
D 59 13C2 PFHxDA	815.00 > 770.00	5.935	5.948	-0.013	1.437	4825769	1.18	94.3	7736	
60 Perfluorooctadecanoic acid	913.00 > 869.00	6.201	6.221	-0.020	1.045	3566022	1.02	Target=9.98	102	2858
	913.00 > 169.00	6.201	6.221	-0.020	1.045	306284		11.64(5.14-15.41)		2148

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L4PFC2_00003

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_032.d

Injection Date: 07-Oct-2021 01:08:28

Instrument ID: LCA

Lims ID: CCV

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 32

Worklist Smp#: 32

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

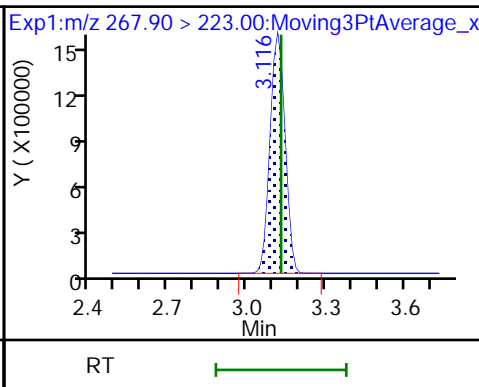
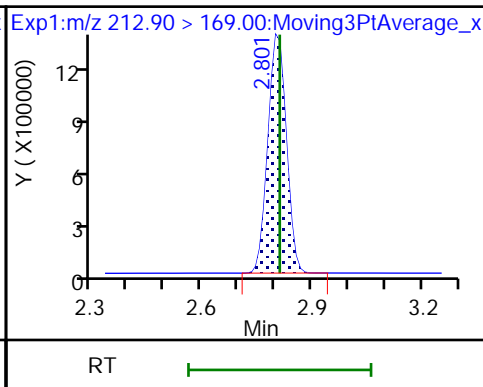
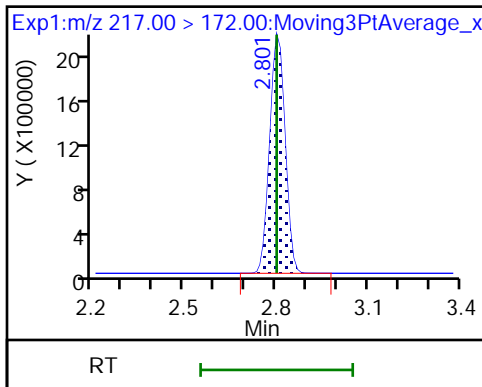
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

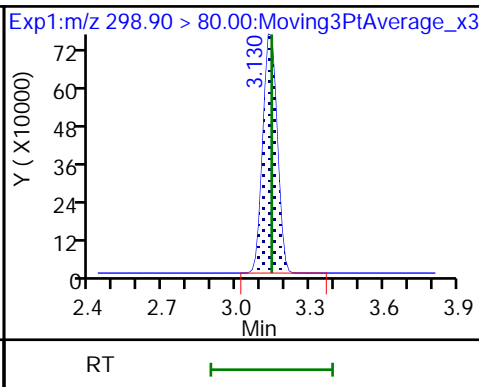
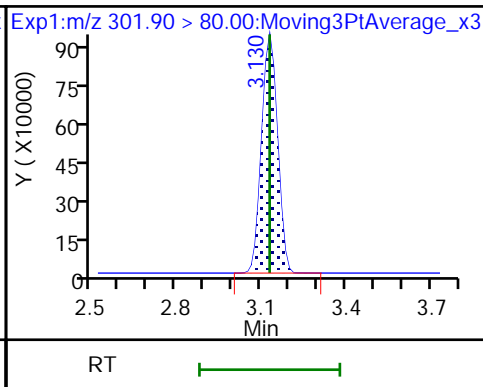
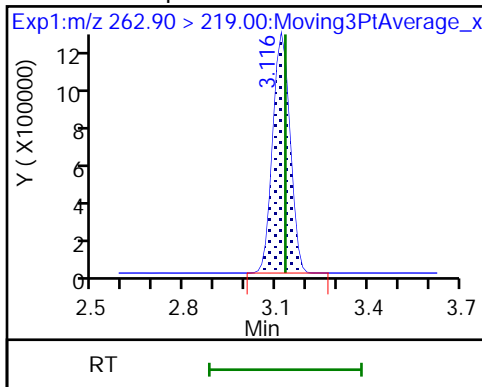
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

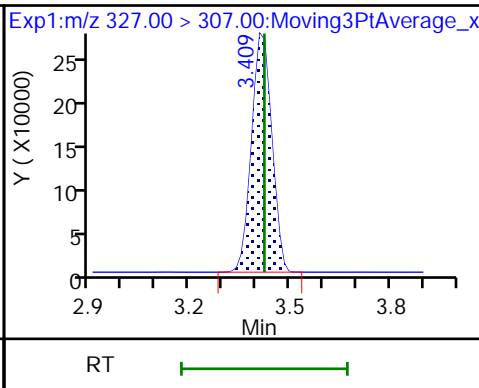
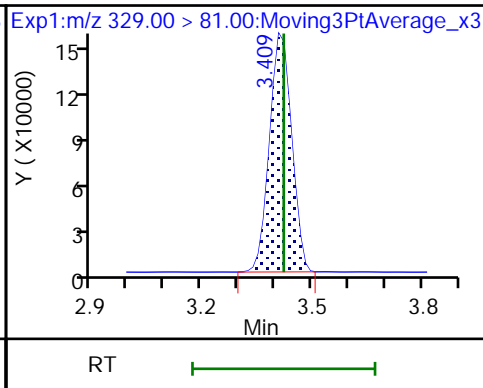
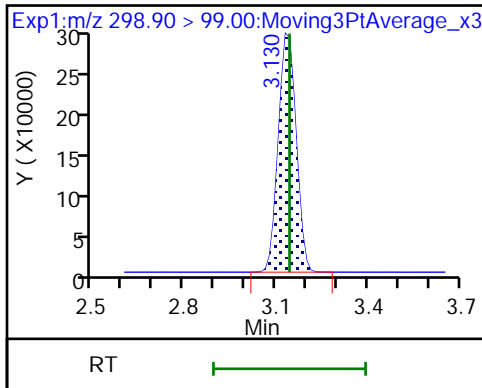
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

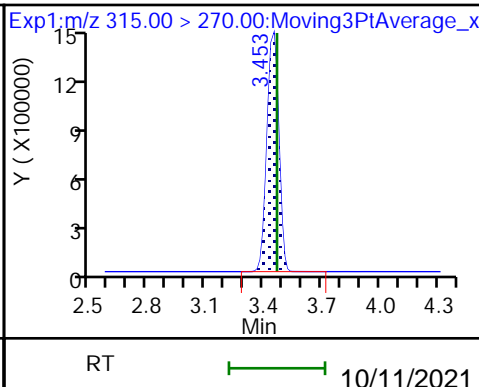
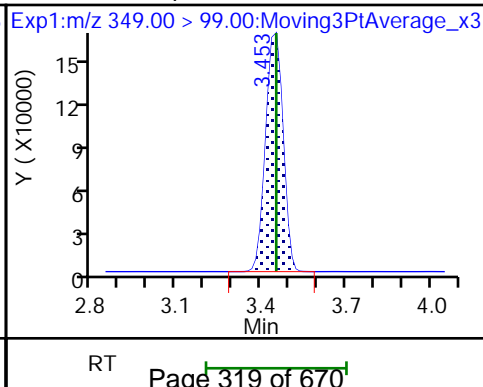
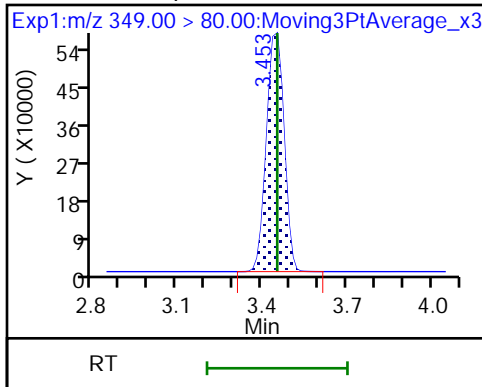
7 4:2 FTS

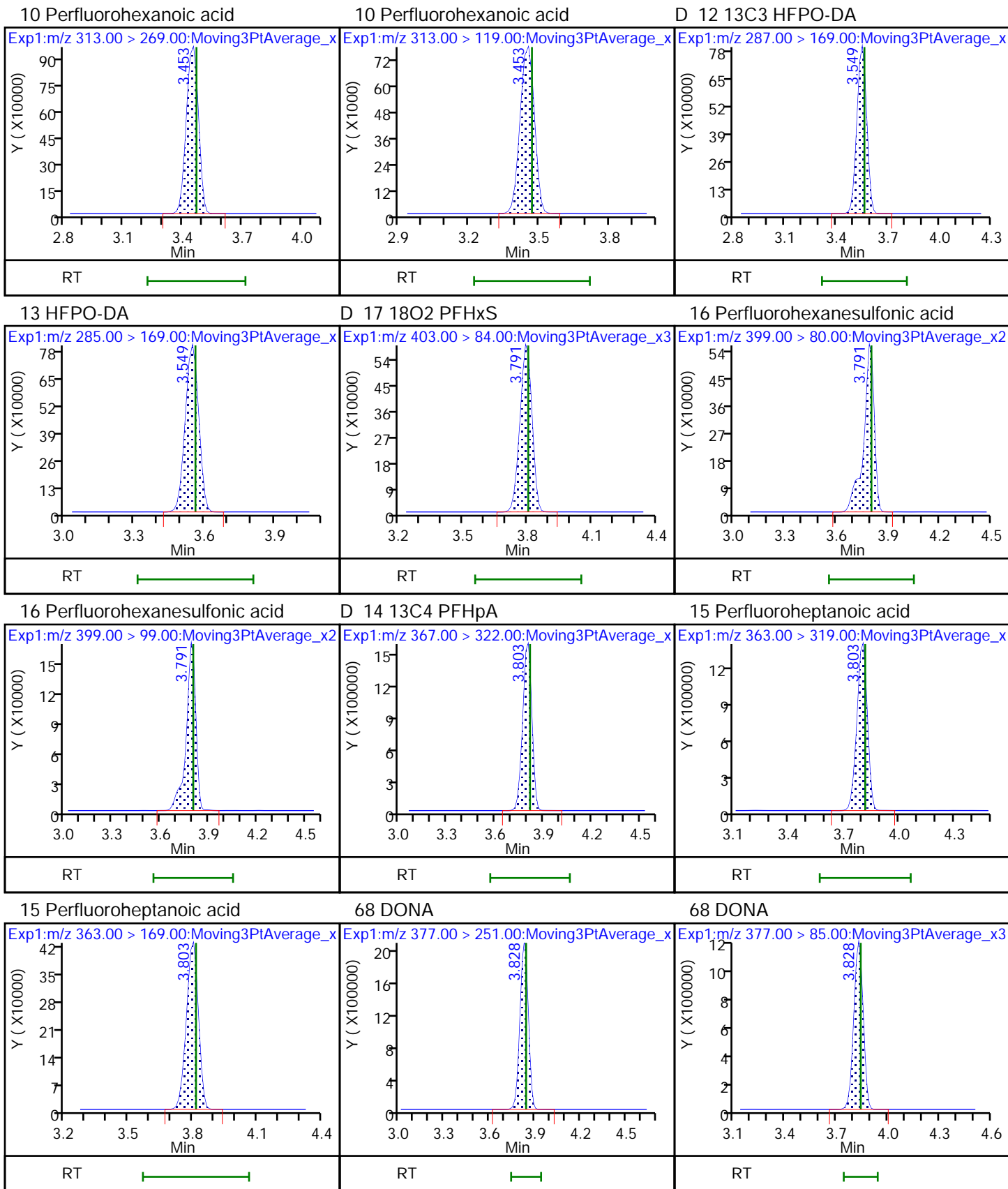


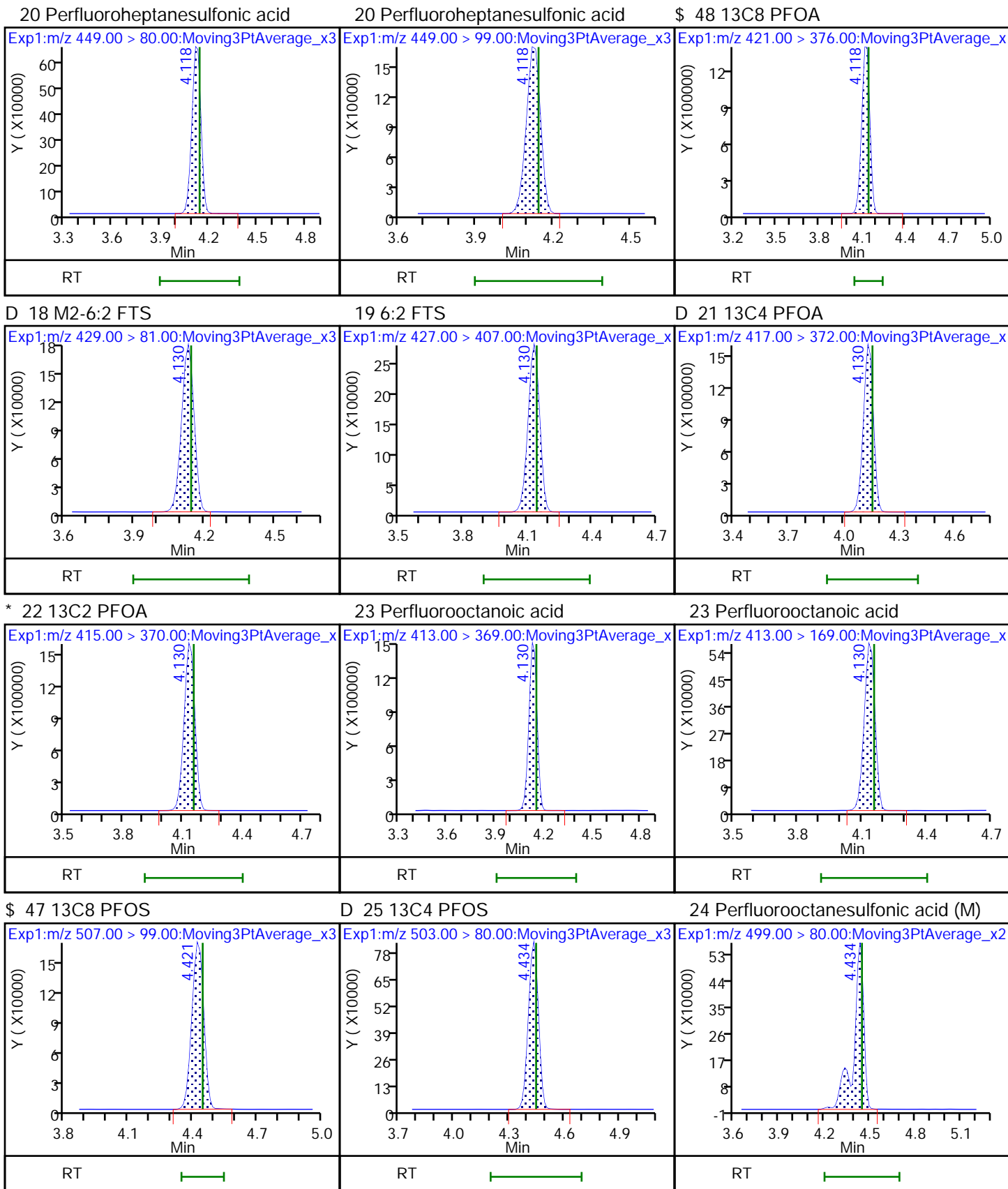
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA



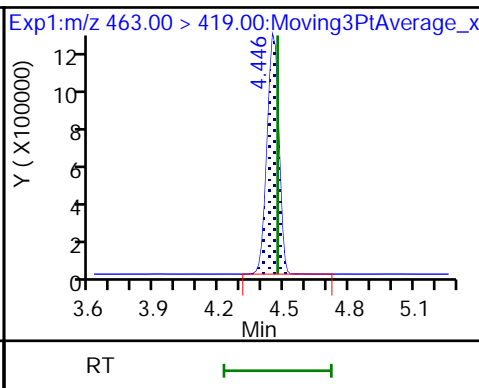
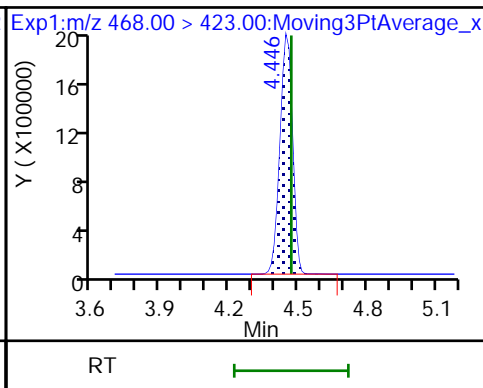
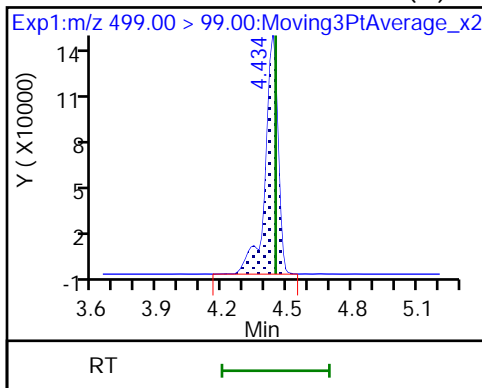




24 Perfluorooctanesulfonic acid (M)

D 27 13C5 PFNA

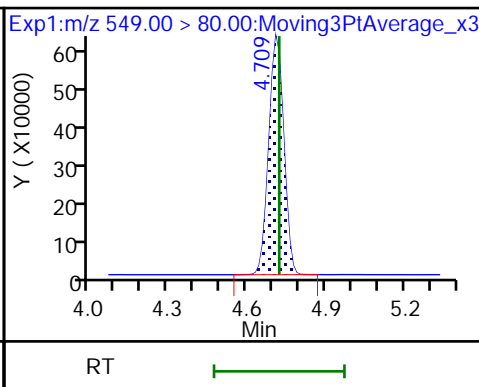
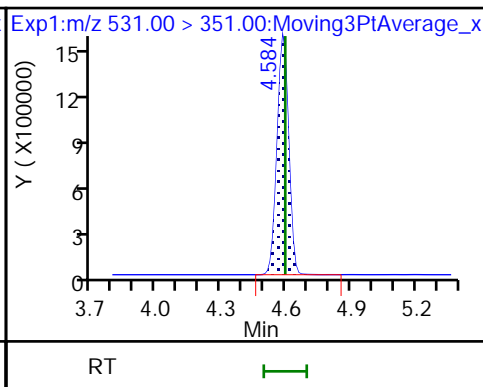
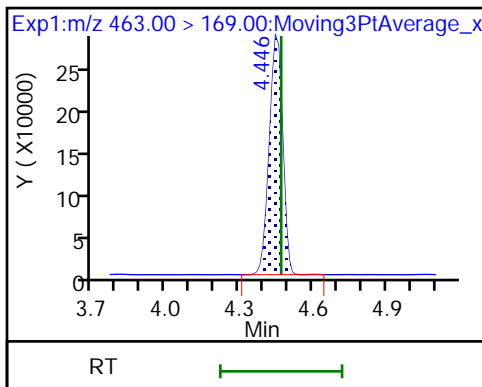
26 Perfluorononanoic acid



26 Perfluorononanoic acid

63 9CIFOS

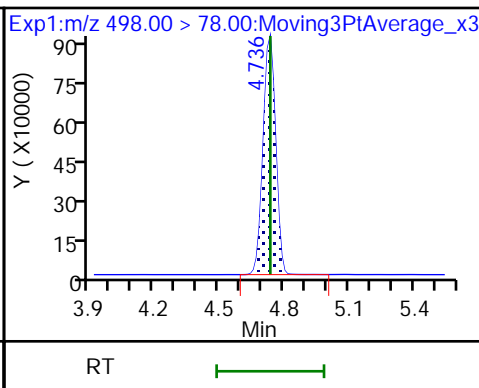
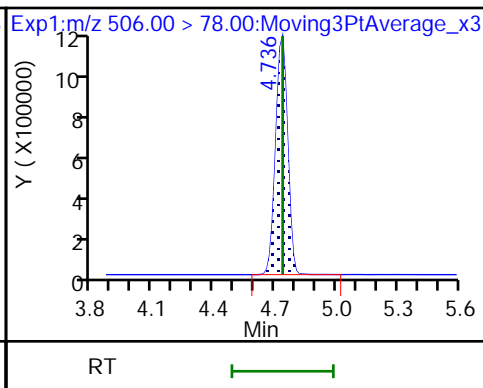
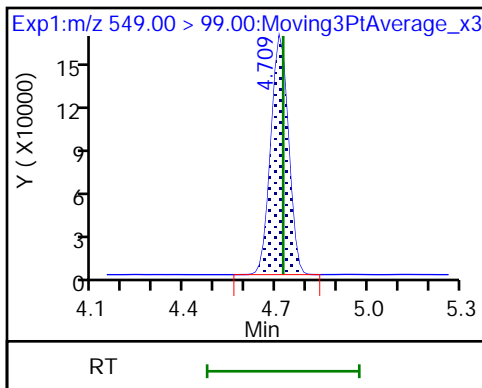
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

D 34 13C8 FOSA

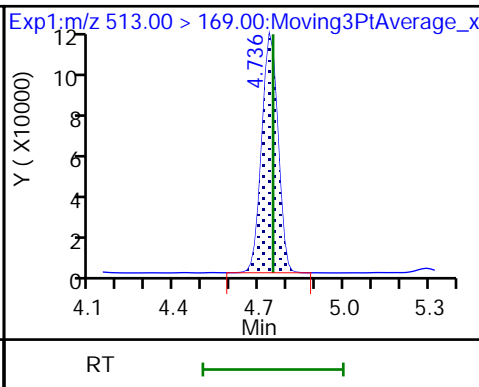
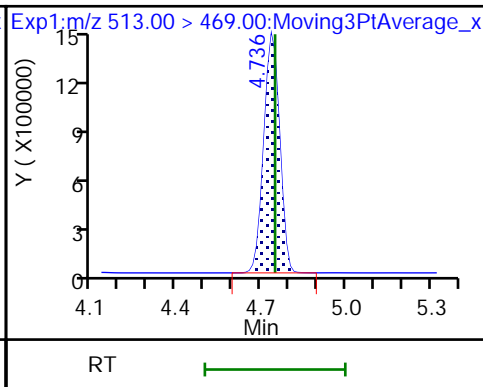
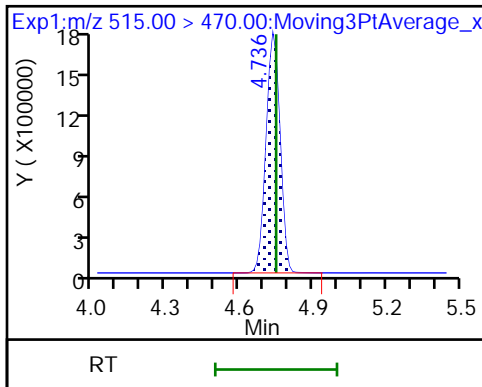
33 Perfluorooctanesulfonamide



D 32 13C2 PFDA

29 Perfluorodecanoic acid

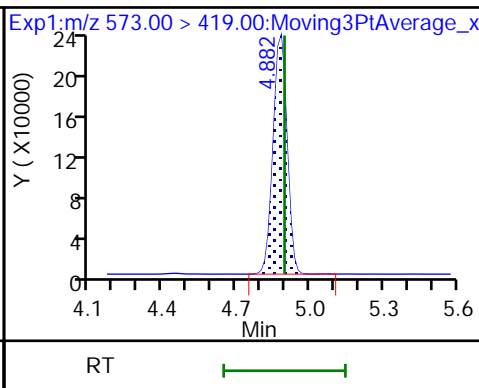
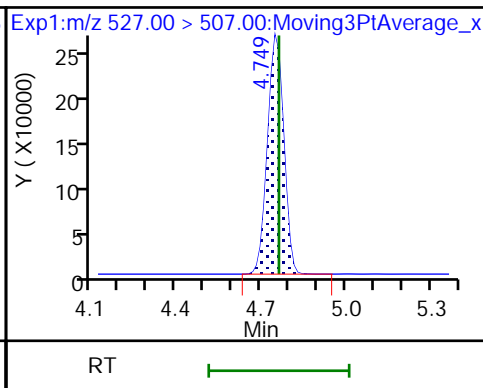
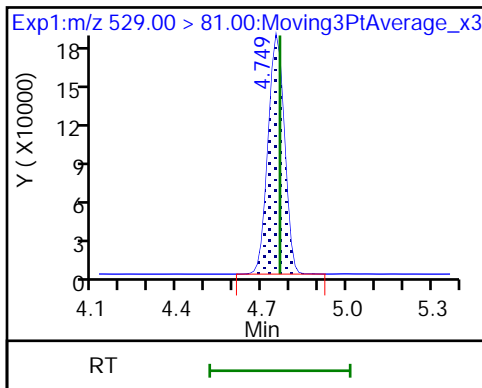
29 Perfluorodecanoic acid



D 30 M2-8:2 FTS

31 8:2 FTS

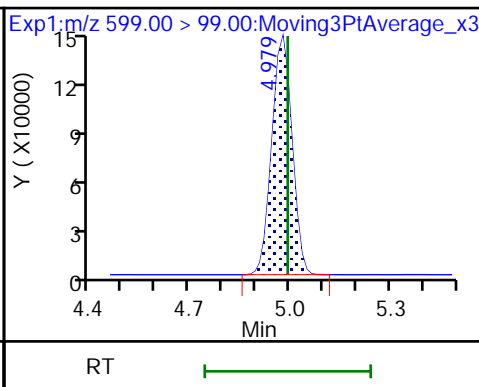
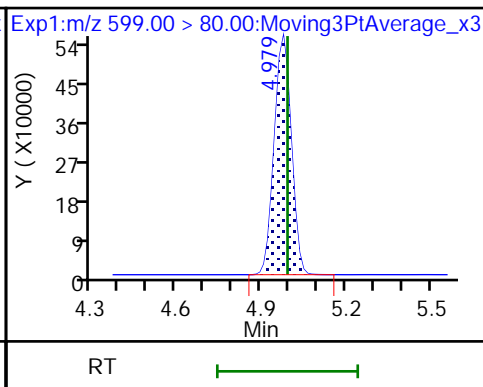
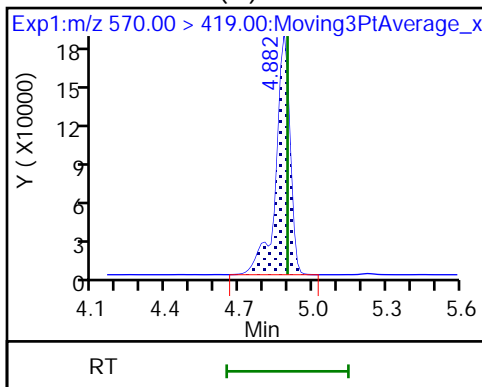
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

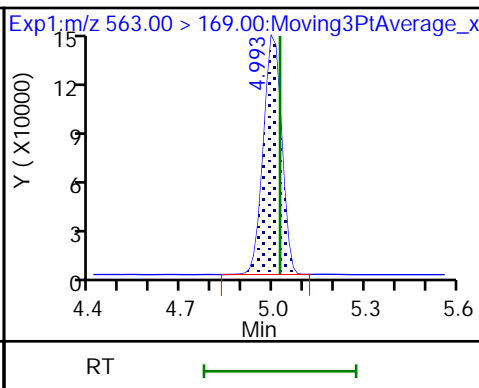
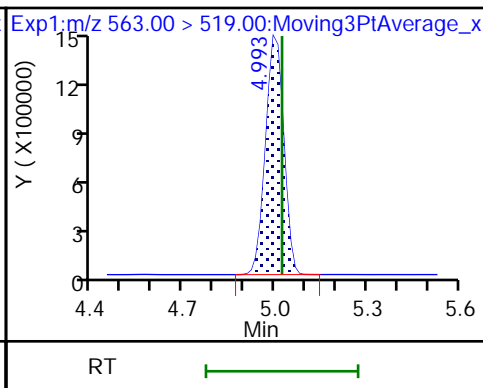
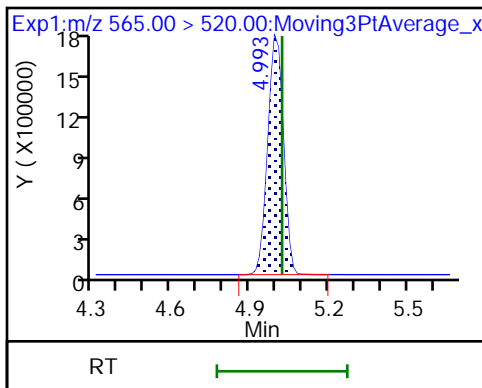
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

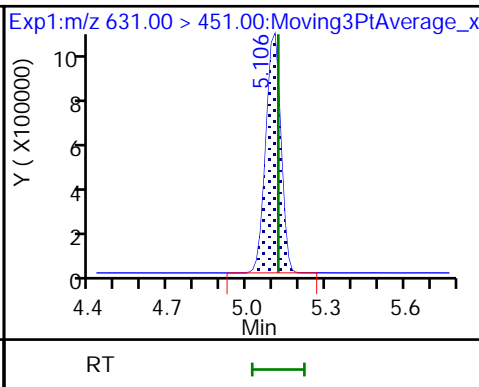
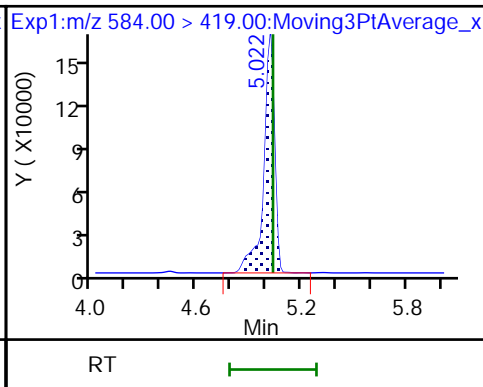
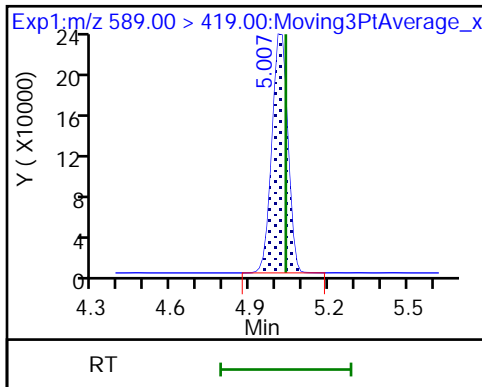
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA

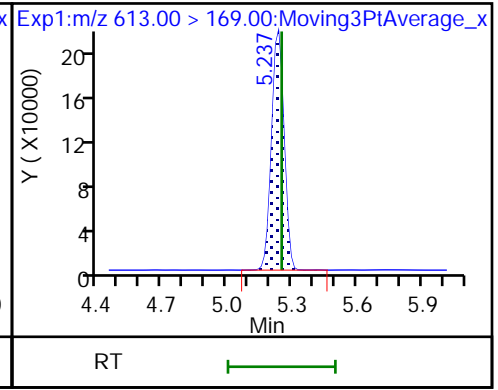
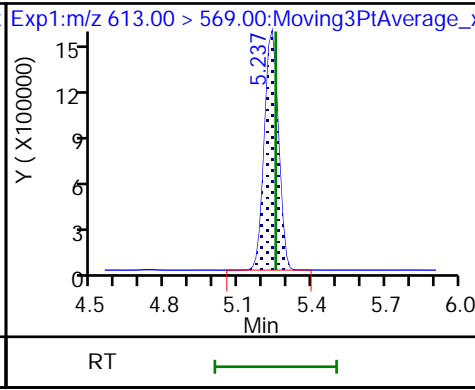
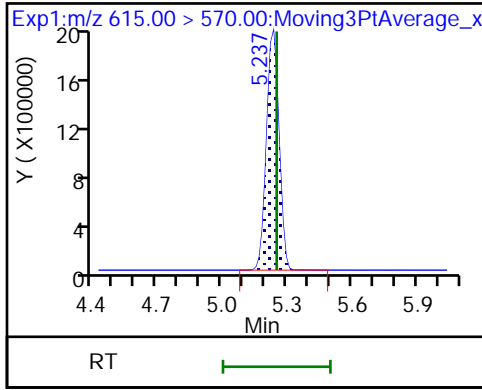
57 11CIFOS



D 43 13C2 PFDaA

42 Perfluorododecanoic acid

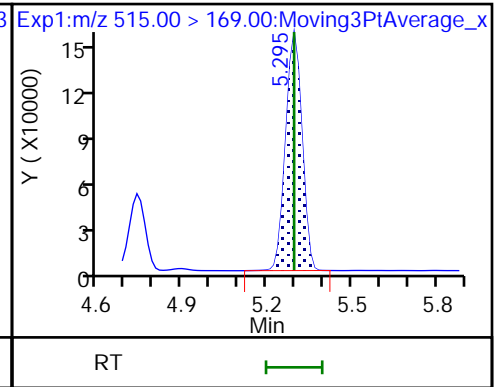
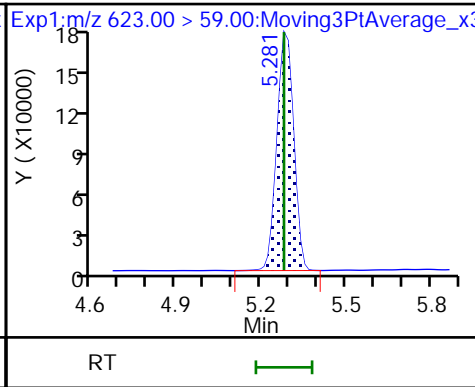
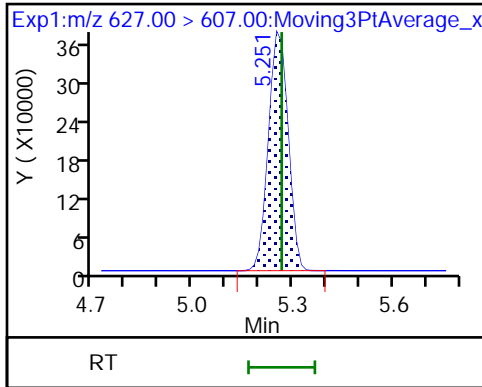
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

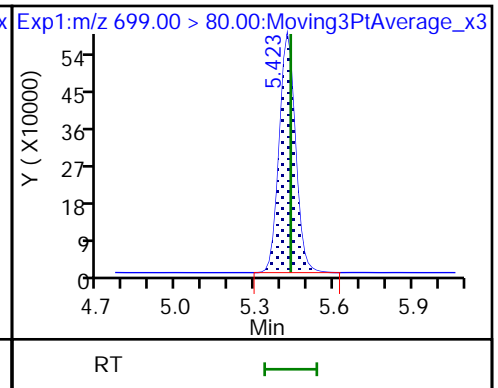
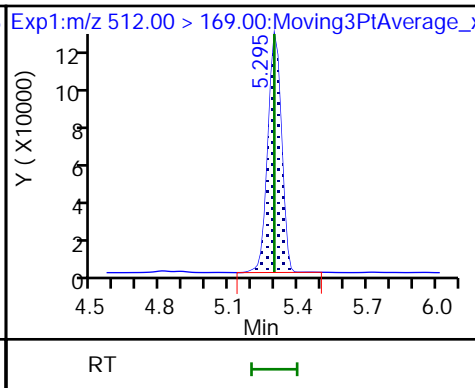
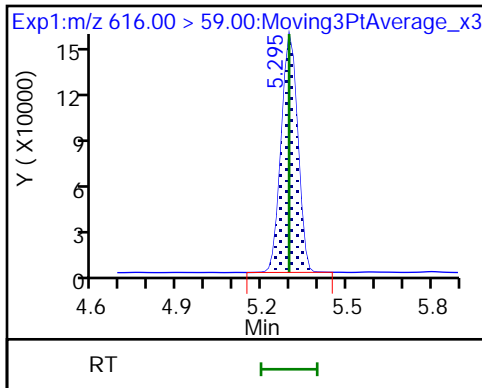
D 58 d-N-MeFOSEA-M



49 N-MeFOSE-M

61 NMeFOSEA

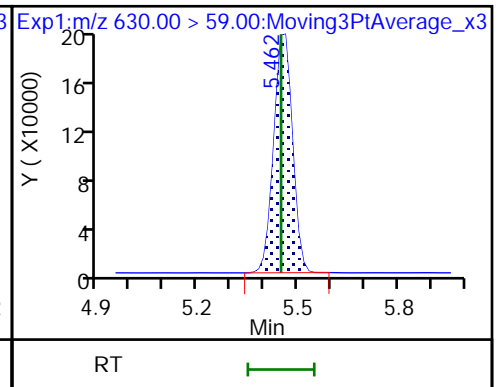
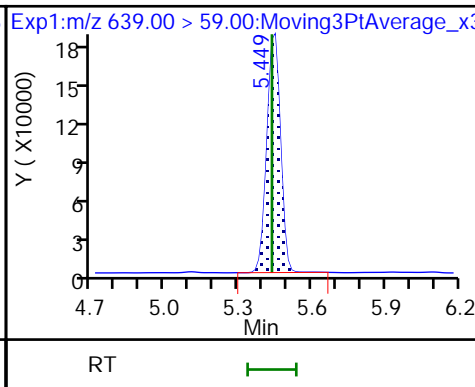
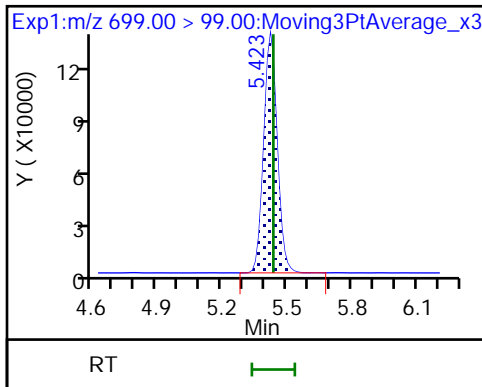
54 PFDoS



54 PFDoS

D 53 d9-N-EtFOSE-M

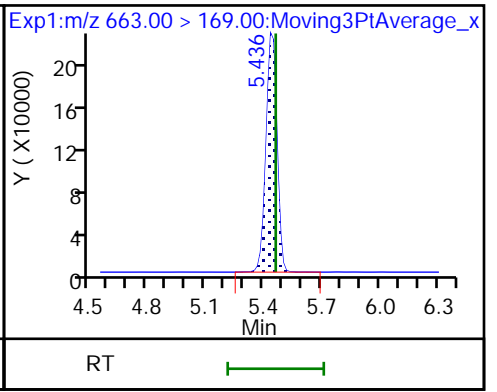
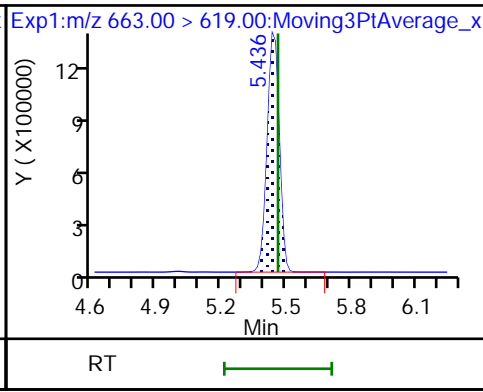
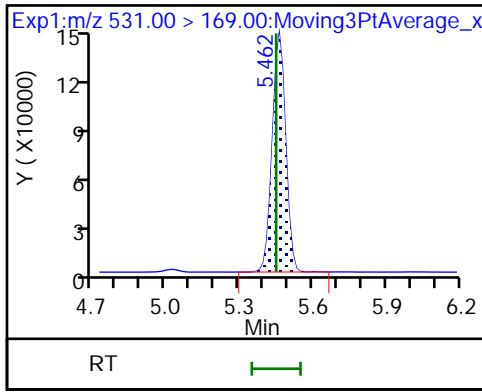
62 N-EtFOSE-M



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid

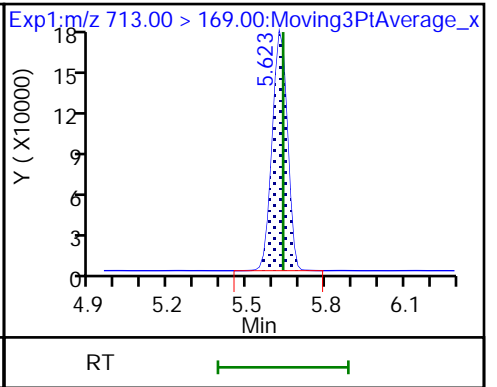
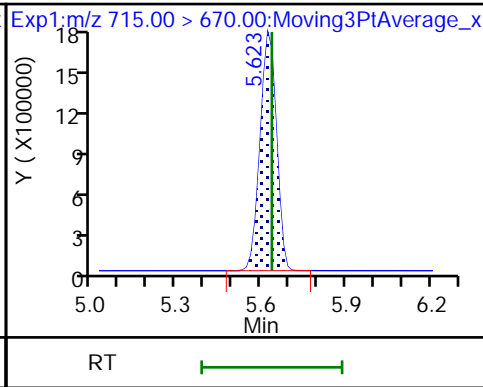
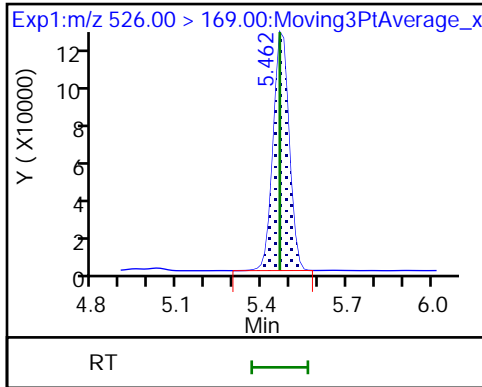
44 Perfluorotridecanoic acid



56 N-EtFOSA-M

D 46 13C2 PFTeDA

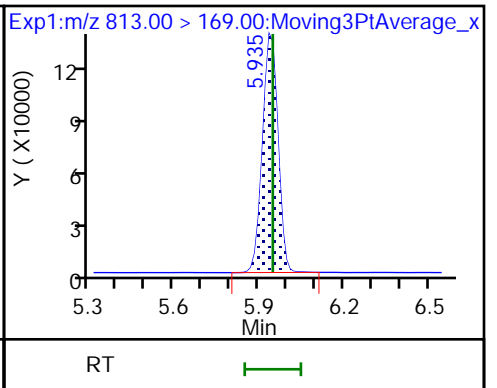
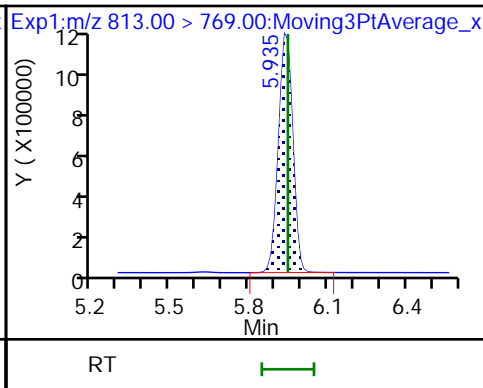
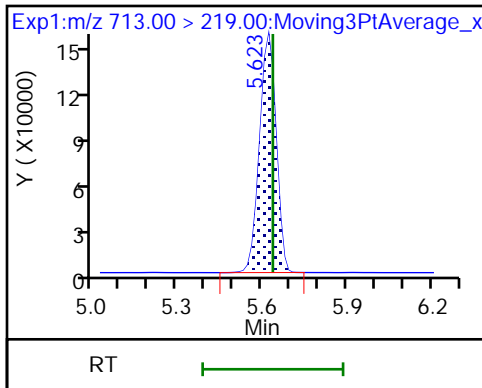
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

55 Perfluorohexadecanoic acid

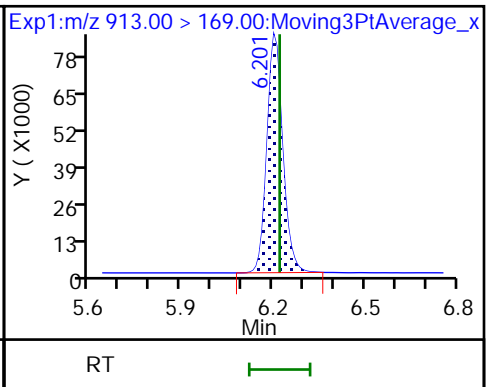
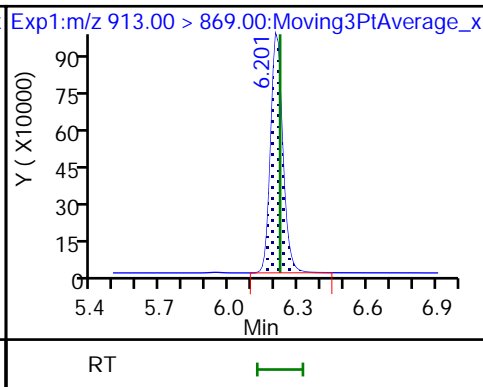
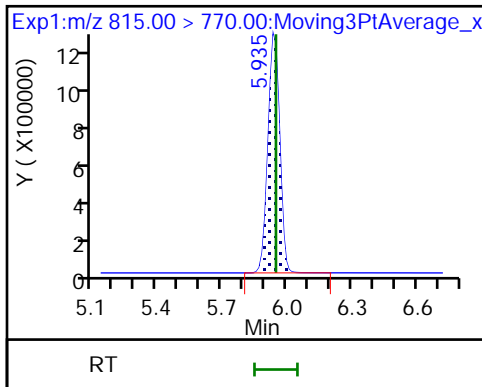
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid



Eurofins TestAmerica, Knoxville

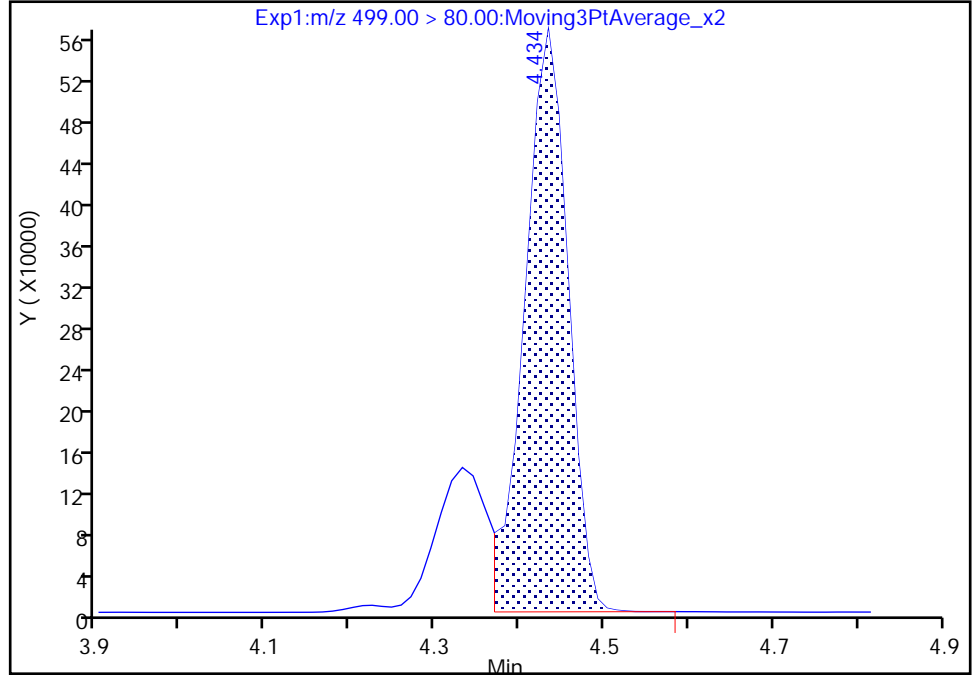
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_032.d
Injection Date: 07-Oct-2021 01:08:28 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 32 Worklist Smp#: 32
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

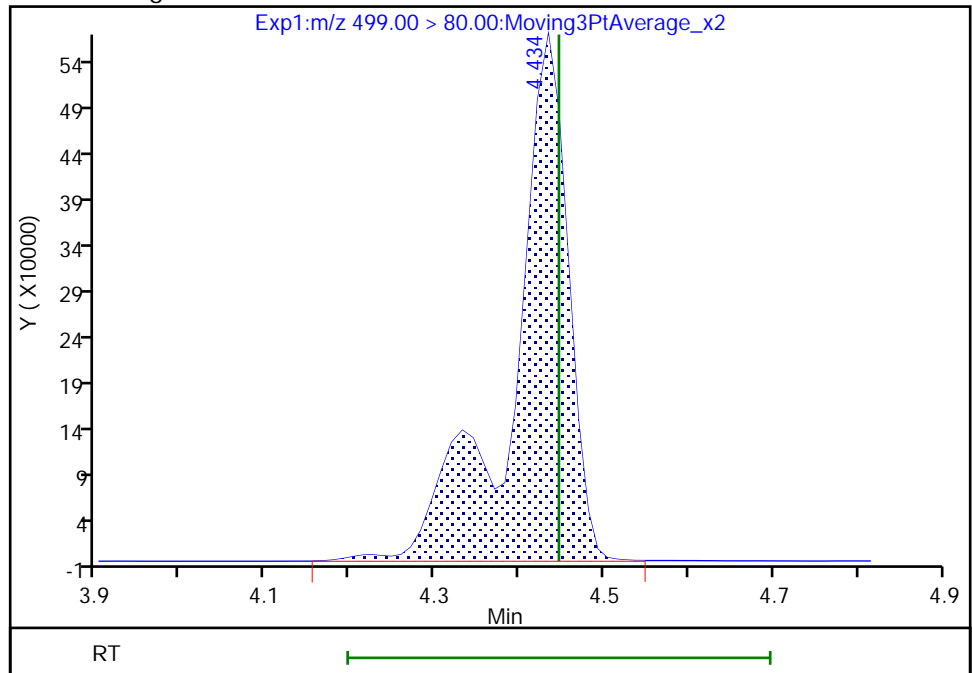
RT: 4.43
Area: 1984021
Amount: 0.686761
Amount Units: ng/ml

Processing Integration Results



RT: 4.43
Area: 2575510
Amount: 0.891503
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 16:45:59
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

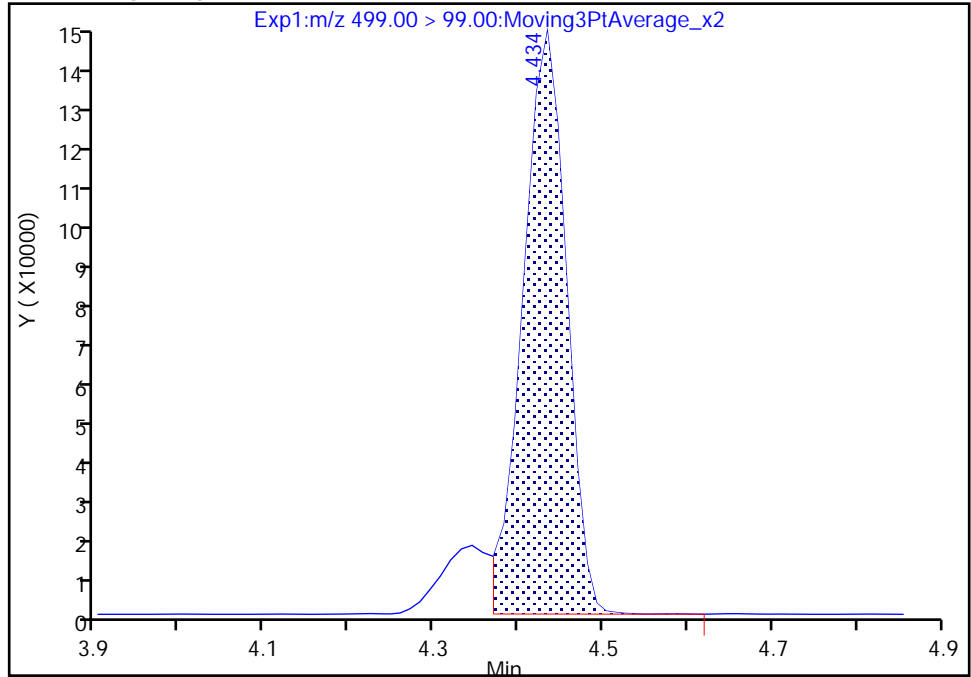
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_032.d
Injection Date: 07-Oct-2021 01:08:28 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 32 Worklist Smp#: 32
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

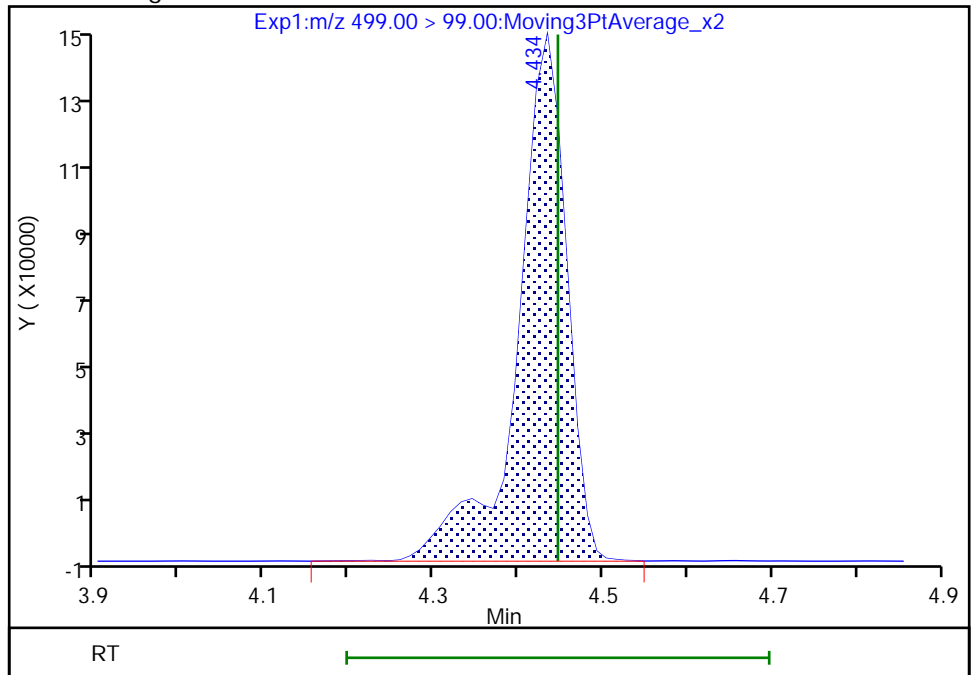
RT: 4.43
Area: 512814
Amount: 0.686761
Amount Units: ng/ml

Processing Integration Results



RT: 4.43
Area: 580777
Amount: 0.891503
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 16:46:06

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

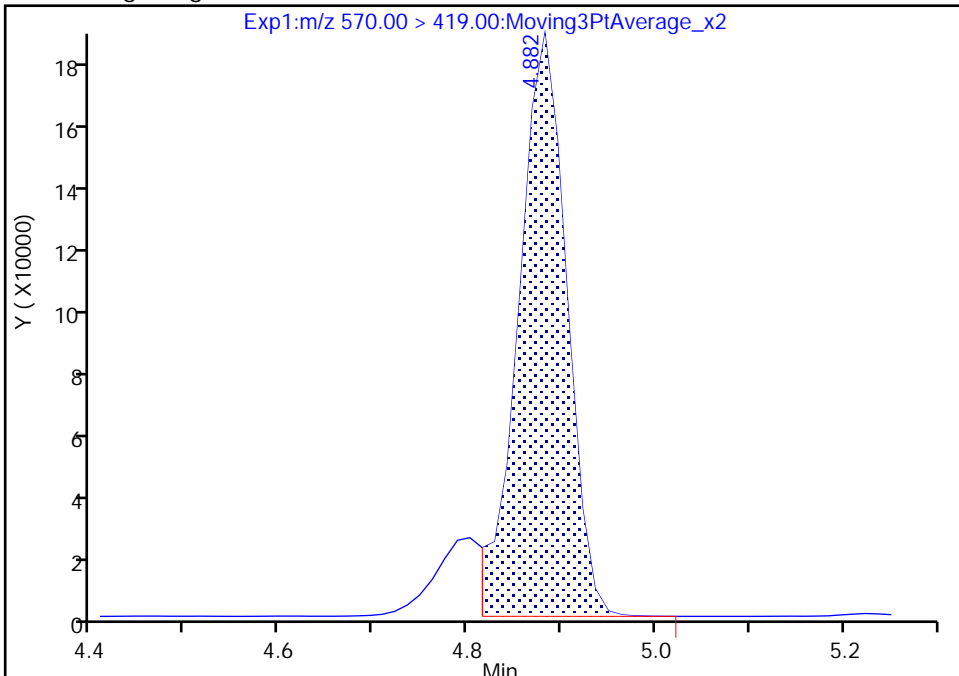
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_032.d
Injection Date: 07-Oct-2021 01:08:28 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 32 Worklist Smp#: 32
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

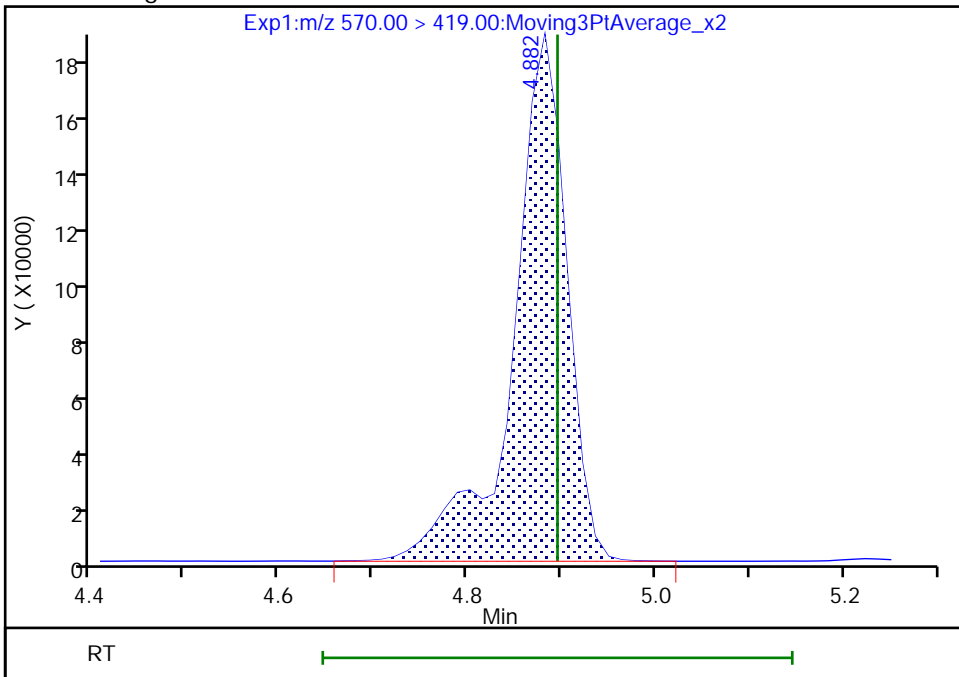
RT: 4.88
Area: 648556
Amount: 0.940435
Amount Units: ng/ml

Processing Integration Results



RT: 4.88
Area: 730676
Amount: 1.060455
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 16:46:17
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54568/45 Calibration Date: 10/07/2021 03:03
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _045.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7855	0.7622		2.43	2.50	-3.0	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.013	0.9227		2.28	2.50	-8.9	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.126	1.055		2.07	2.21	-6.3	40.0
4:2 FTS	AveID	2.500	2.346		2.19	2.34	-6.1	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8572	0.7578		2.21	2.50	-11.6	40.0
Perfluoropentanesulfonic acid (PFPeS)	L2ID		0.8592		2.35	2.35	0.4	50.0
HFPO-DA	L2ID		1.270		2.30	2.50	-8.0	40.0
Perfluorohexanesulfonic acid (PFHxS)	L2ID		1.304		2.19	2.28	-3.7	40.0
Perfluoroheptanoic acid (PFHpA)	L2ID		1.038		2.46	2.50	-1.5	40.0
DONA	AveID	3.243	3.246		2.36	2.36	0.0	40.0
6:2 FTS	L2ID		1.895		2.24	2.37	-5.4	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9947	0.9410		2.25	2.38	-5.4	40.0
Perfluorooctanoic acid (PFOA)	L2ID		1.082		2.45	2.50	-1.9	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.100	1.122		2.37	2.32	2.1	40.0
Perfluorononanoic acid (PFNA)	L2ID		0.8160		2.45	2.50	-1.9	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	2.308	2.279		2.30	2.33	-1.3	40.0
Perfluorononanesulfonic acid (PFNS)	AveID	1.042	1.005		2.31	2.40	-3.6	40.0
Perfluorodecanoic acid (PFDA)	L2ID		0.8989		2.38	2.50	-4.8	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9606	0.9007		2.34	2.50	-6.2	40.0
8:2 FTS	AveID	1.784	1.795		2.41	2.40	0.7	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	L2ID		0.9364		2.56	2.50	2.3	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.9574	0.9292		2.34	2.41	-2.9	40.0
Perfluoroundecanoic acid (PFUnA)	L2ID		0.9737		2.41	2.50	-3.5	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.9494	0.9066		2.39	2.50	-4.5	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.858	1.873		2.37	2.36	0.8	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9702		2.39	2.50	-4.6	40.0
10:2 FTS	AveID	2.221	2.309		2.51	2.41	4.0	40.0
2- (N-methylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.116		2.42	2.50	-3.1	40.0
NMeFOSA	AveID	1.047	0.9815		2.34	2.50	-6.3	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9879	0.9678		2.37	2.42	-2.0	40.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54568/45 Calibration Date: 10/07/2021 03:03
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _045.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTrIA)	L2ID		0.8166		2.32	2.50	-7.3	50.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.298		2.58	2.50	3.1	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.168	1.060		2.27	2.50	-9.3	40.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.1192		2.37	2.50	-5.1	40.0
Perfluorohexadecanoic acid	Q2ID		1.048		2.46	2.50	-1.6	40.0
Perfluorooctadecanoic acid	AveID	0.9076	0.8786		2.42	2.50	-3.2	40.0
13C4 PFBA	Ave	1.324	1.358		1.28	1.25	2.6	50.0
13C5 PFPeA	Ave	1.087	1.158		1.33	1.25	6.5	50.0
13C3 PFBS	Ave	0.7019	0.7155		1.19	1.16	1.9	50.0
M2-4:2 FTS	Ave	0.1052	0.1224		1.36	1.17	16.3	50.0
13C2 PFHxA	Ave	1.116	1.204		1.35	1.25	7.9	50.0
13C3 HFPO-DA	Ave	0.5714	0.5935		1.30	1.25	3.9	50.0
18O2 PFHxS	Ave	0.4248	0.4316		1.20	1.18	1.6	50.0
13C4 PFHpA	Ave	1.113	1.119		1.26	1.25	0.5	50.0
13C4 PFOA	Ave	1.007	1.020		1.27	1.25	1.3	50.0
M2-6:2 FTS	Ave	0.1078	0.1145		1.26	1.19	6.3	50.0
13C4 PFOS	Ave	0.5852	0.5579		1.14	1.20	-4.7	50.0
13C5 PFNA	Ave	1.279	1.348		1.32	1.25	5.4	50.0
13C2 PFDA	Ave	1.296	1.368		1.32	1.25	5.6	50.0
13C8 FOSA	Ave	0.8591	0.8582		1.25	1.25	-0.1	50.0
M2-8:2 FTS	Ave	0.1316	0.1349		1.23	1.20	2.5	50.0
d3-NMeFOSAA	Ave	0.1774	0.1780		1.26	1.25	0.4	50.0
13C2 PFUnA	Ave	1.237	1.276		1.29	1.25	3.1	50.0
d5-NEtFOSAA	Ave	0.1705	0.1737		1.27	1.25	1.8	50.0
13C2 PFDoA	Ave	1.319	1.408		1.33	1.25	6.7	50.0
d7-N-MeFOSE-M	Ave	0.1075	0.1335		1.55	1.25	24.1	50.0
d-N-MeFOSA-M	Ave	0.1120	0.1159		1.29	1.25	3.5	50.0
d9-N-EtFOSE-M	Ave	0.1146	0.1333		1.45	1.25	16.3	50.0
d-N-EtFOSA-M	Ave	0.0942	0.1026		1.36	1.25	8.8	50.0
13C2 PFTeDA	Ave	1.211	1.233		1.27	1.25	1.8	50.0
13C2 PFHxDA	Ave	0.8782	0.9131		1.30	1.25	4.0	50.0
13C8 PFOA	Ave	0.9886	1.013		1.28	1.25	2.5	50.0
13C8 PFOS	Ave	0.1256	0.1255		1.19	1.20	-0.0	50.0

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_045.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 07-Oct-2021 03:03:10 ALS Bottle#: 45 Worklist Smp#: 45
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-045 ccv
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 17:26:12 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 17:25:19

Ratio Calibration: None

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	2.801	2.801	0.0	0.680	7008980	1.28	103	19462	
2 Perfluorobutanoic acid	212.90 > 169.00	2.801	2.812	-0.011	1.000	10684881	2.43	97.0	3381	
D 3 13C5 PFPeA	267.90 > 223.00	3.102	3.129	-0.027	0.753	5976115	1.33	107	17865	
4 Perfluoropentanoic acid	262.90 > 219.00	3.102	3.129	-0.027	1.000	11028662	2.28	91.1	3210	
D 6 13C3 PFBS	301.90 > 80.00	3.116	3.129	-0.013	0.757	3432927	1.18	102	26697	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.130	3.143	-0.013	1.004	6884309	2.07	Target=3.06	93.7	28854
	298.90 > 99.00	3.130	3.143	-0.013	1.004	2611802		2.64(1.53-4.59)		11645
D 8 M2-4:2 FTS	329.00 > 81.00	3.409	3.423	-0.014	0.828	590027	1.36	116	1320	
7 4:2 FTS	327.00 > 307.00	3.409	3.423	-0.014	1.000	2768547	2.19	93.9	26588	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.437	3.453	-0.016	1.103	5949810	2.35	Target=3.47	100	29070
	349.00 > 99.00	3.437	3.453	-0.016	1.103	1707809		3.48(1.73-5.20)		13415
D 9 13C2 PFHxA	315.00 > 270.00	3.437	3.469	-0.032	0.835	6212619	1.35	108	20433	
10 Perfluorohexanoic acid	313.00 > 269.00	3.437	3.469	-0.032	1.000	9416306	2.21	Target=9.74	88.4	4485
	313.00 > 119.00	3.437	3.469	-0.032	1.000	738867		12.74(4.87-14.61)		2325
D 12 13C3 HFPO-DA	287.00 > 169.00	3.535	3.561	-0.026	0.858	3062261	1.30	104	9873	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.535	3.561	-0.026	1.000	7776741	2.30		92.0	8173	
D 17 18O2 PFHxS										
403.00 > 84.00	3.778	3.803	-0.025	0.917	2106669	1.20		102	8661	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.778	3.803	-0.025	1.000	5286977	2.19	Target=2.96	96.3	12138	M
399.00 > 99.00	3.778	3.803	-0.025	1.000	1513732		3.49(1.48-4.44)		8074	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.791	3.815	-0.024	0.920	5773416	1.26		101	25165	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.791	3.815	-0.024	1.000	11986462	2.46	Target=3.35	98.5	7456	
363.00 > 169.00	3.791	3.815	-0.024	1.000	3693975		3.24(1.67-5.02)		17722	
68 DONA										
377.00 > 251.00	3.815	3.840	-0.025	0.863	17605568	2.36	Target=1.49	100	26739	
377.00 > 85.00	3.815	3.840	-0.025	0.863	9683672		1.82(0.74-2.23)		7683	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.118	4.143	-0.025	0.932	5157611	2.25	Target=3.73	94.6	24049	
449.00 > 99.00	4.118	4.143	-0.025	0.932	1383811		3.73(1.87-5.61)		5651	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.118	4.143	-0.025	1.000	5226457	1.28		102	18262	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.118	4.143	-0.025	1.000	561279	1.26		106	3465	
19 6:2 FTS										
427.00 > 407.00	4.118	4.143	-0.025	1.000	2123299	2.24		94.6	7276	
D 21 13C4 PFOA										
417.00 > 372.00	4.118	4.155	-0.037	1.000	5261938	1.27		101	19427	
* 22 13C2 PFOA										
415.00 > 370.00	4.118	4.155	-0.037		5159434	1.25			19795	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.118	4.155	-0.037	1.000	11387062	2.45	Target=2.40	98.1	5773	
413.00 > 169.00	4.118	4.155	-0.037	1.000	4234756		2.69(1.20-3.61)		6505	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.408	4.447	-0.038	1.070	618962	1.19		99.9	2526	
D 25 13C4 PFOS										
503.00 > 80.00	4.421	4.447	-0.025	1.073	2752041	1.14		95.3	8400	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.421	4.447	-0.025	1.000	5997300	2.37	Target=3.83	102	13195	M
499.00 > 99.00	4.421	4.447	-0.025	1.000	1326022		4.52(1.91-5.74)		3758	M
D 27 13C5 PFNA										
468.00 > 423.00	4.434	4.470	-0.036	1.077	6956325	1.32		105	17906	
26 Perfluorononanoic acid										
463.00 > 419.00	4.446	4.470	-0.024	1.003	11352351	2.45	Target=3.68	98.1	8017	
463.00 > 169.00	4.434	4.470	-0.036	1.000	2485555		4.57(1.84-5.52)		5401	
63 9CIFOS										
531.00 > 351.00	4.571	4.596	-0.025	1.110	12227346	2.30		98.7	18301	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.695	4.722	-0.027	1.062	5553781	2.31	Target=3.97	96.4	13707	
549.00 > 99.00	4.695	4.722	-0.027	1.062	1345262		4.13(1.99-5.96)		5569	
D 34 13C8 FOSA										
506.00 > 78.00	4.721	4.736	-0.015	1.146	4427983	1.25		99.9	6256	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.721	4.736	-0.015	1.000	7976335	2.34		93.8	9983	
D 32 13C2 PFDA										
515.00 > 470.00	4.721	4.749	-0.028	1.146	7056529	1.32		106	30472	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.721	4.749	-0.028	1.000	12686910	2.38	Target=10.11	95.2	6509	
513.00 > 169.00	4.721	4.749	-0.028	1.000	1067576		11.88(5.06-15.17)		913	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.735	4.763	-0.028	1.150	666951	1.23		103	2642	
31 8:2 FTS										
527.00 > 507.00	4.735	4.763	-0.028	1.000	2394842	2.41		101	16272	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.868	4.896	-0.028	1.182	918449	1.25		100	1294	
36 NMeFOSAA										
570.00 > 419.00	4.868	4.896	-0.028	1.000	1720148	2.56		102	3590	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.964	4.993	-0.029	1.123	5157432	2.34	Target=3.80	97.1	17782	
599.00 > 99.00	4.964	4.993	-0.029	1.123	1389926		3.71(1.90-5.70)		7264	
D 39 13C2 PFUnA										
565.00 > 520.00	4.992	5.022	-0.030	1.212	6583679	1.29		103	18629	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.992	5.022	-0.030	1.000	12820619	2.41	Target=7.45	96.5	11119	
563.00 > 169.00	4.992	5.022	-0.030	1.000	1351380		9.49(3.78-11.33)		8604	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.007	5.036	-0.029	1.216	895943	1.27		102	5453	
40 NEtFOSA										
584.00 > 419.00	5.007	5.036	-0.029	1.000	1624588	2.39		95.5	2136	M
57 11C1FOS										
631.00 > 451.00	5.092	5.119	-0.027	1.152	10155818	2.37		101	24553	
D 43 13C2 PFDaA										
615.00 > 570.00	5.223	5.251	-0.028	1.268	7263121	1.33		107	18158	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.223	5.251	-0.028	1.000	14093474	2.39	Target=5.33	95.4	7351	
613.00 > 169.00	5.223	5.251	-0.028	1.000	2021572		6.97(2.66-7.99)		6449	
50 10:2 FTS										
627.00 > 607.00	5.252	5.266	-0.014	1.109	3099772	2.51		104	16144	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.282	5.281	0.001	1.282	688597	1.55		124	430	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.282	5.295	-0.013	1.282	598036	1.29		104	53.5	
49 N-MeFOSE-M										
616.00 > 59.00	5.296	5.295	0.001	1.003	1537573	2.42		96.9	1660	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.296	5.295	0.001	1.003	1173914	2.34		93.7	921	
54 PFDoS										
699.00 > 80.00	5.411	5.436	-0.025	1.224	5393847	2.37	Target=4.32	98.0	7196	
699.00 > 99.00	5.411	5.436	-0.025	1.224	1265815		4.26(2.19-6.58)		7247	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.437	5.436	0.001	1.320	687686	1.45		116	530	
62 N-EtFOSE-M										
630.00 > 59.00	5.450	5.449	0.001	1.002	1785295	2.58		103	3183	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.450	5.449	0.001	1.323	529175	1.36		109	753	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.437	5.462	-0.025	1.041	11862208	2.32	Target=5.66	92.7	6021	
663.00 > 169.00	5.437	5.462	-0.025	1.041	1918067		6.18(2.83-8.48)		7293	
56 N-EtFOSA-M										
526.00 > 169.00	5.463	5.462	0.001	1.002	1121724	2.27		90.7	692	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.609	5.637	-0.028	1.362	6360137	1.27		102	18559	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.609	5.637	-0.028	1.000	1516617	2.37	Target=1.07	94.9	5920	
713.00 > 219.00	5.609	5.637	-0.028	1.000	1567003		0.97(0.53-1.60)		10489	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.936	5.948	-0.012	1.002	9874027	2.46	Target=7.50	98.4	5539	
813.00 > 169.00	5.936	5.948	-0.012	1.002	1190518		8.29(3.75-11.26)		4467	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.923	5.948	-0.025	1.438	4711273	1.30		104	8430	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.192	6.221	-0.029	1.045	8278380	2.42	Target=9.98	96.8	4412	
913.00 > 169.00	6.192	6.221	-0.029	1.045	687654		12.04(5.14-15.41)		2764	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L5PFC2_00002

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_045.d

Injection Date: 07-Oct-2021 03:03:10

Instrument ID: LCA

Lims ID: CCV

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 45

Worklist Smp#: 45

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

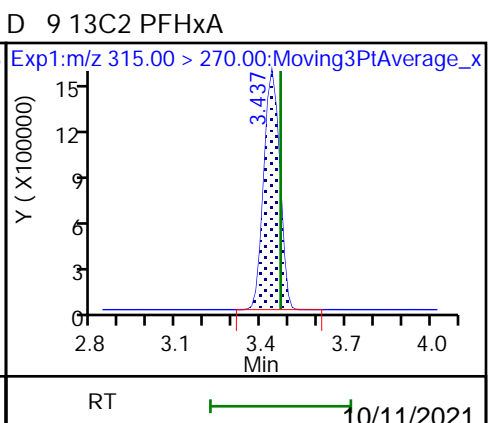
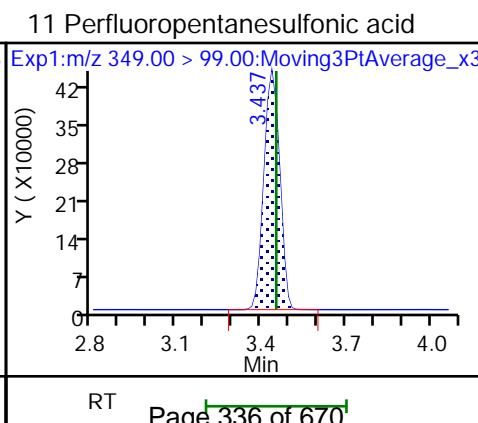
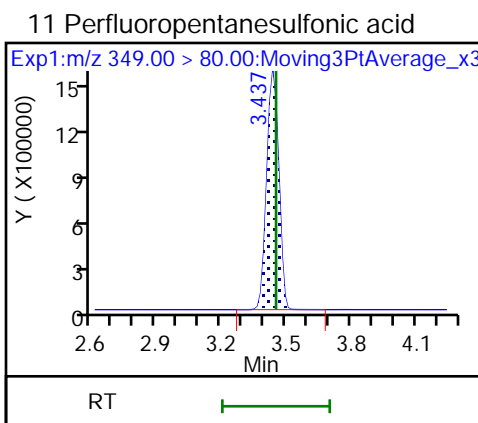
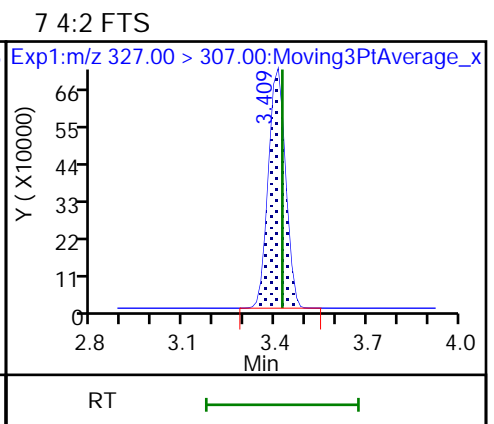
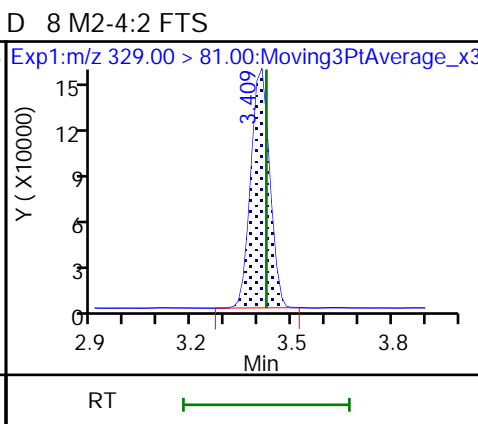
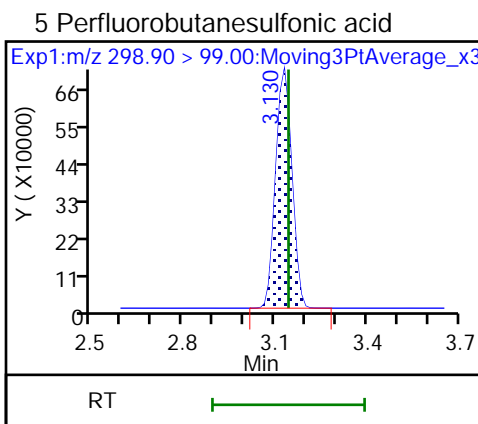
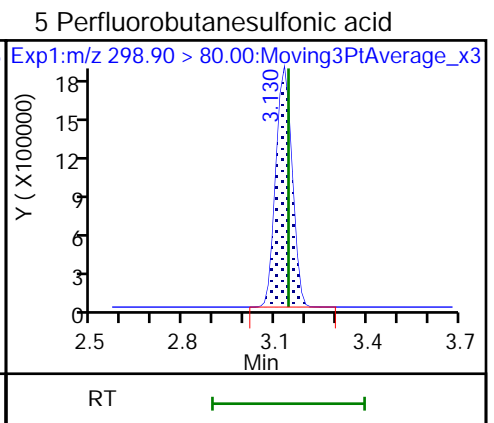
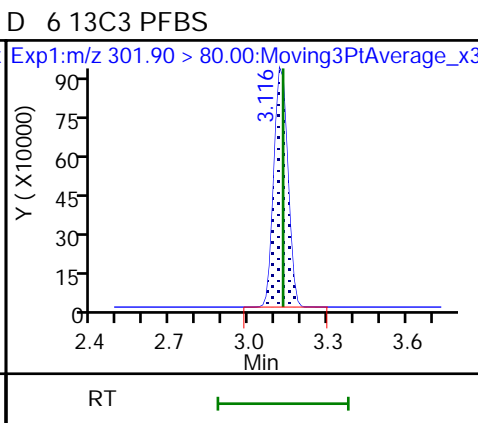
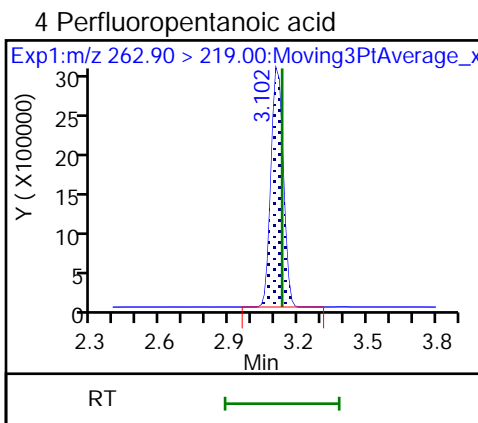
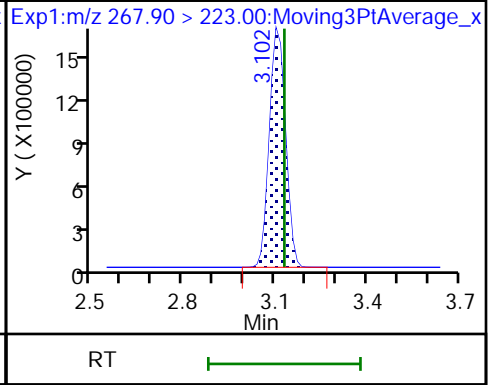
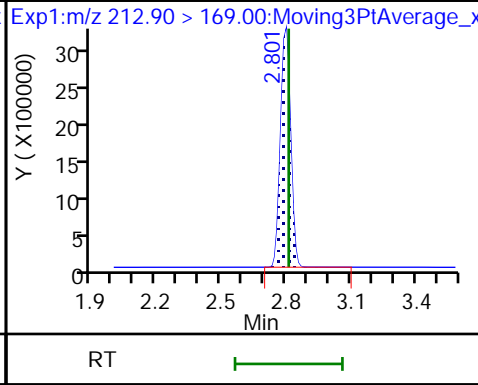
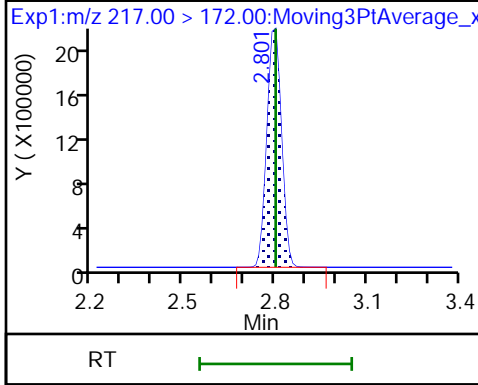
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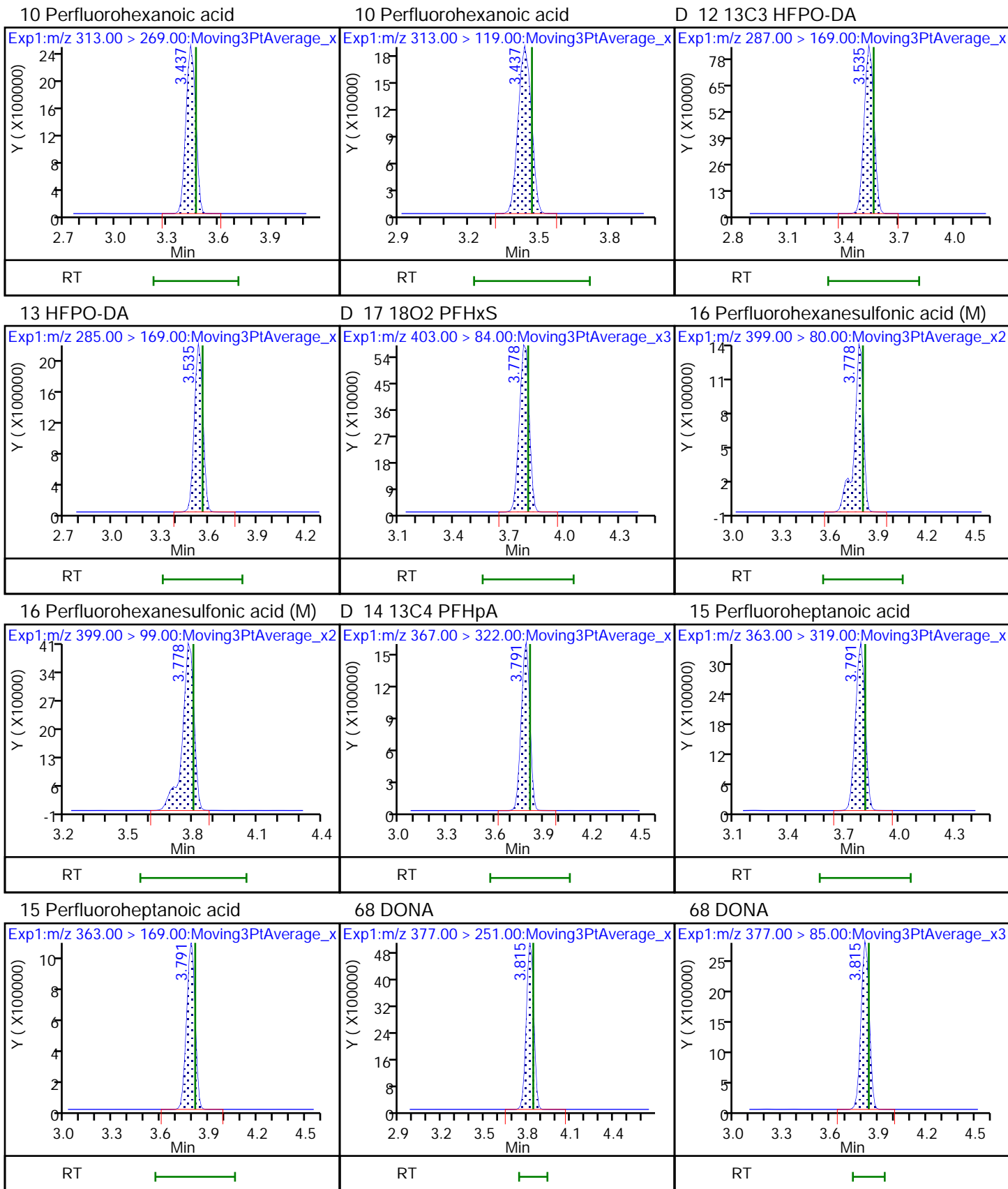
Limit Group: LC - PFC- ICAL

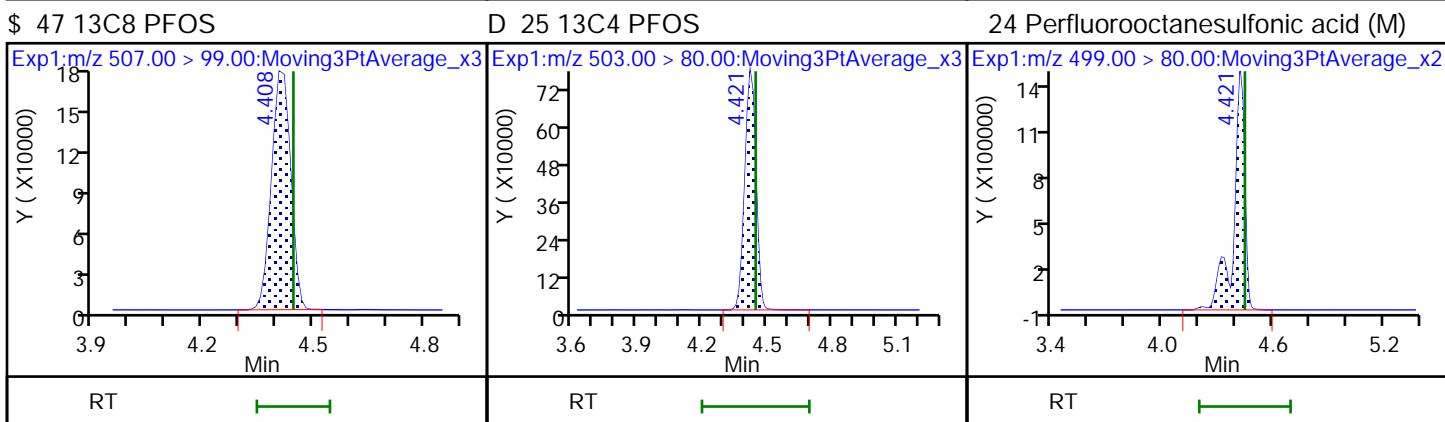
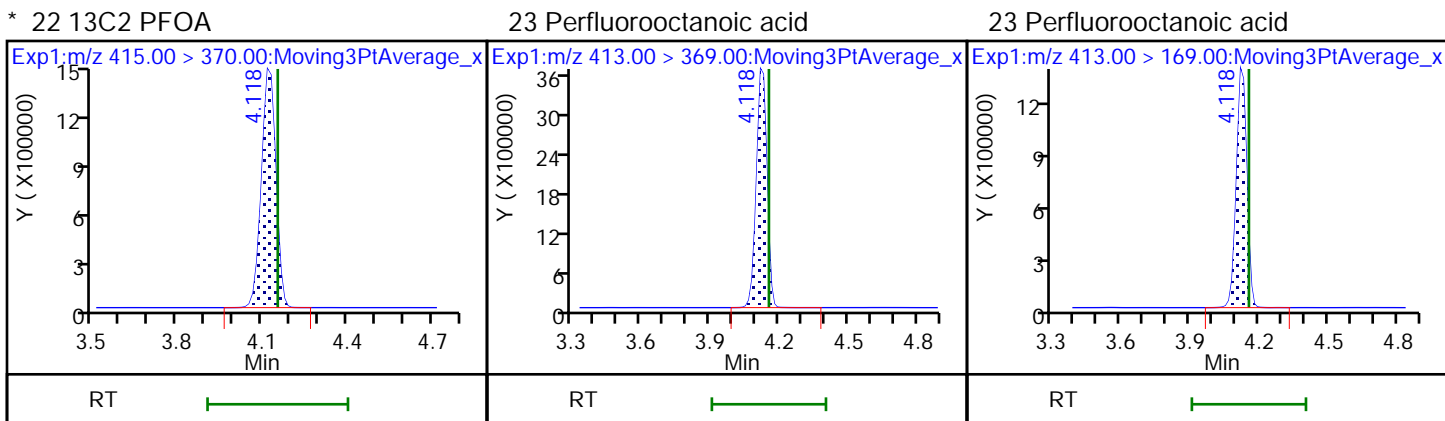
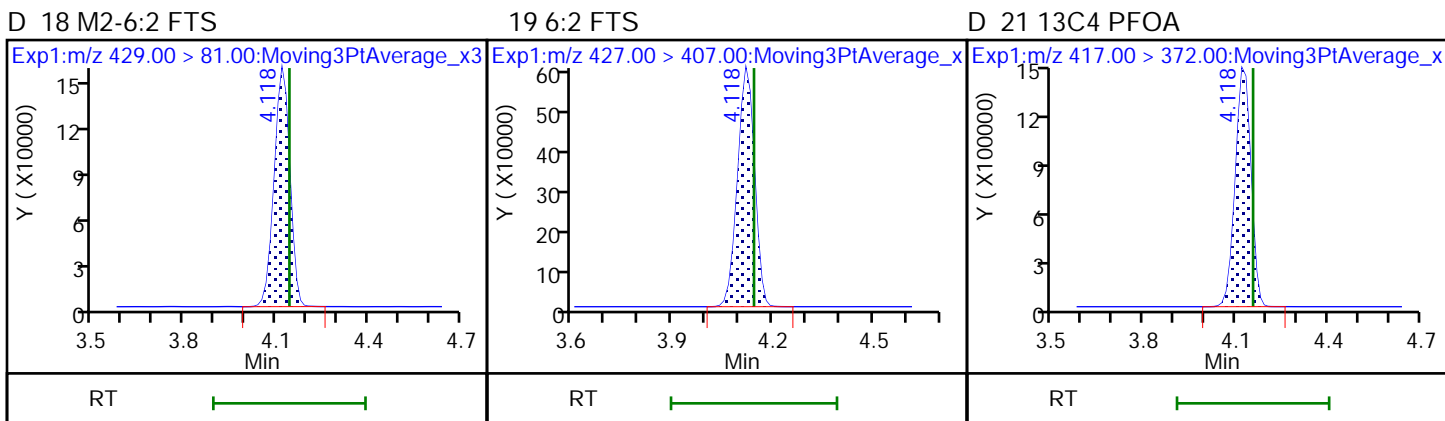
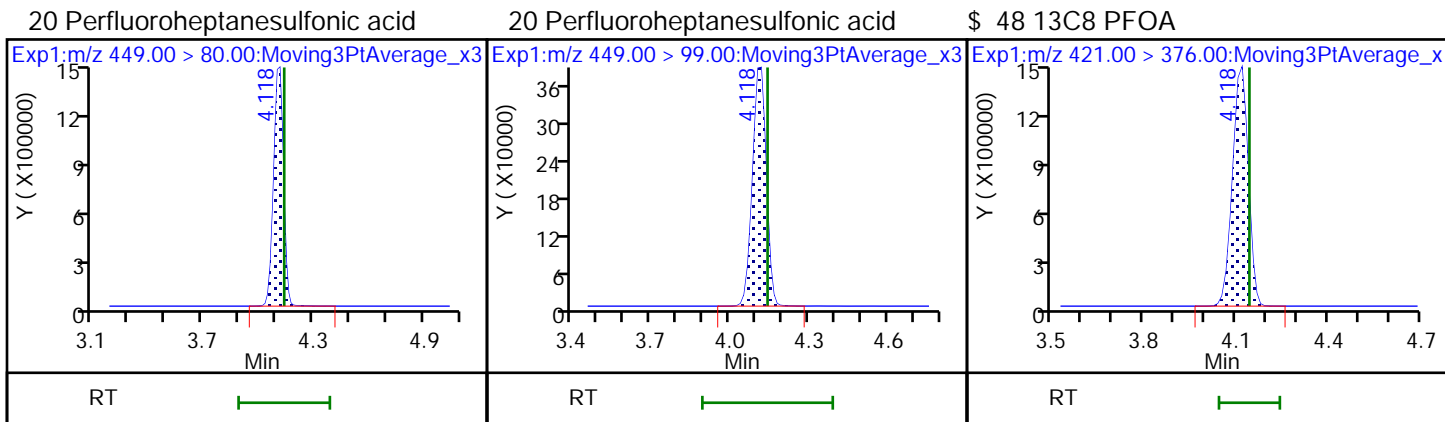
D 1 13C4 PFBA

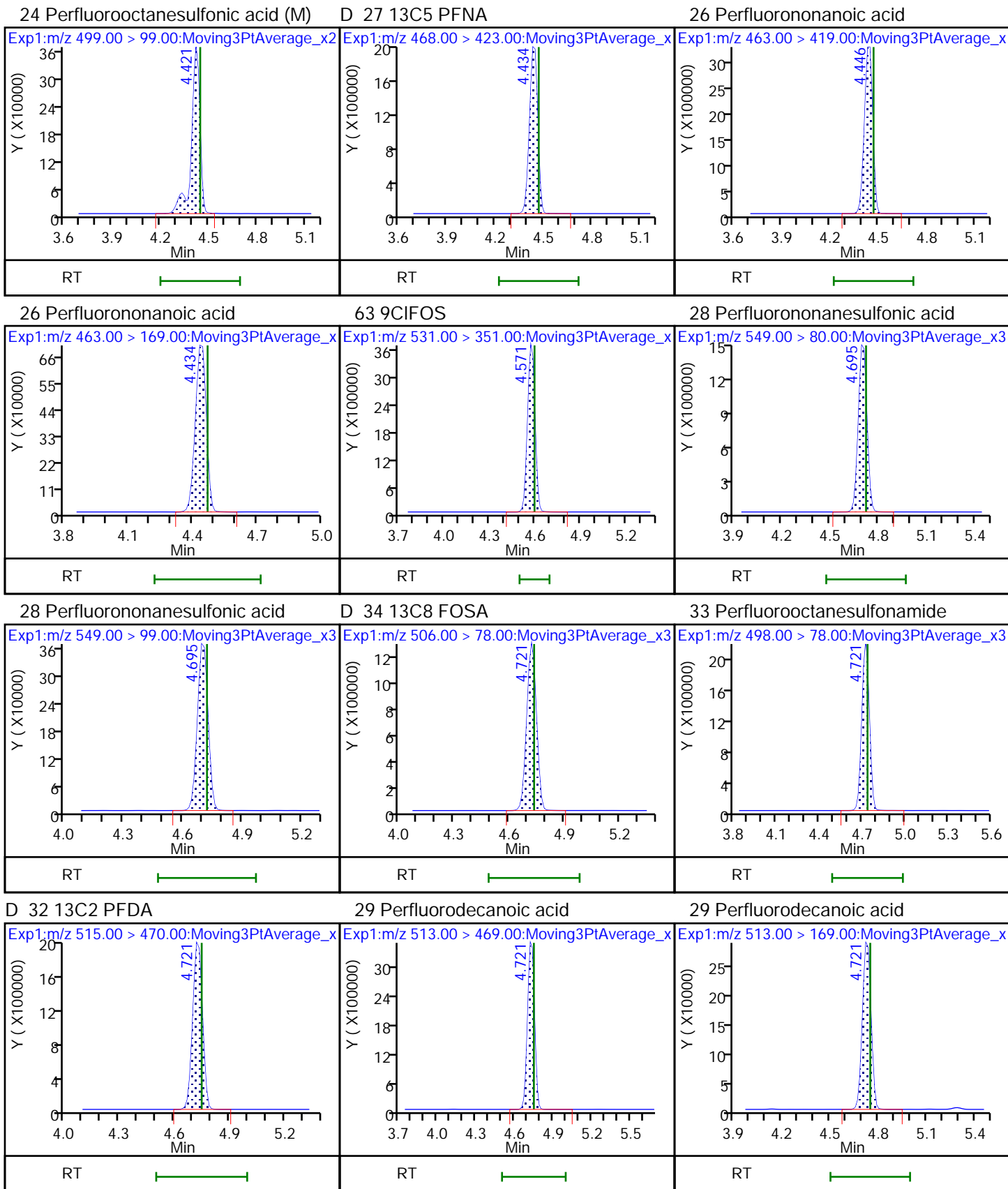
2 Perfluorobutanoic acid

D 3 13C5 PFPeA





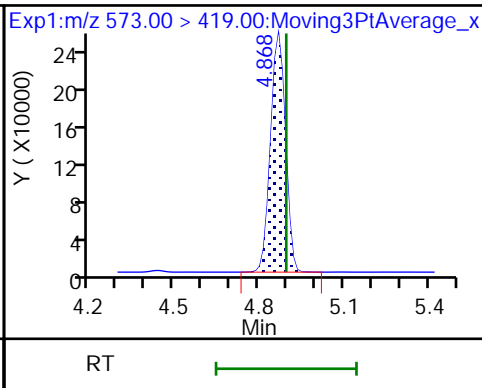
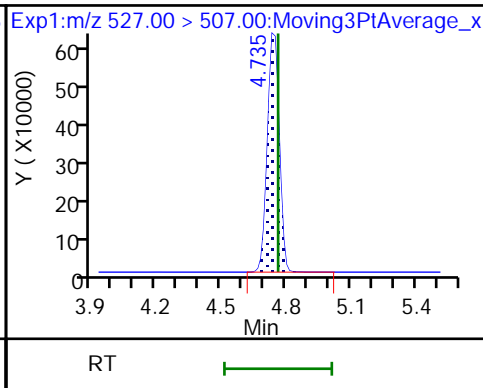
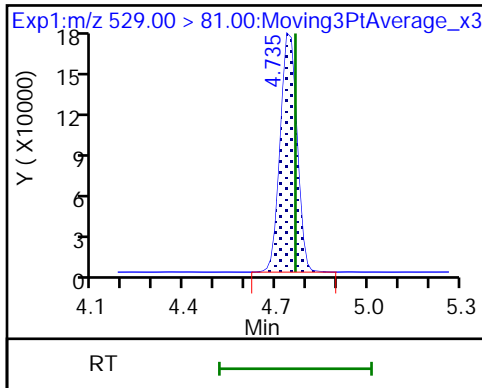




D 30 M2-8:2 FTS

31 8:2 FTS

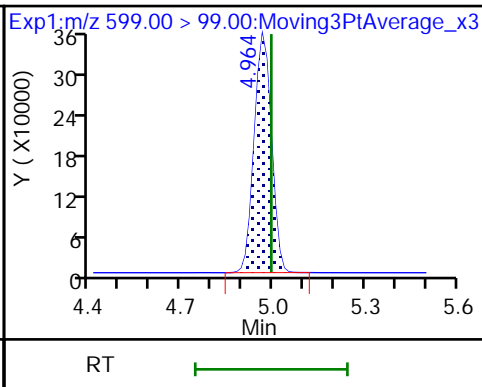
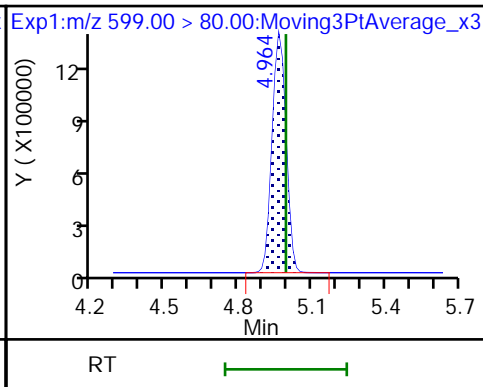
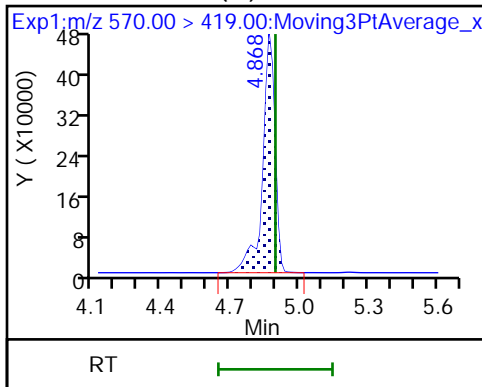
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

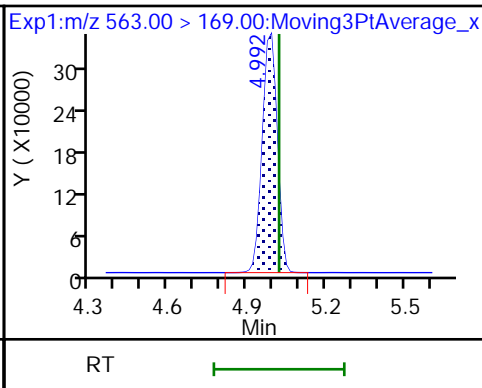
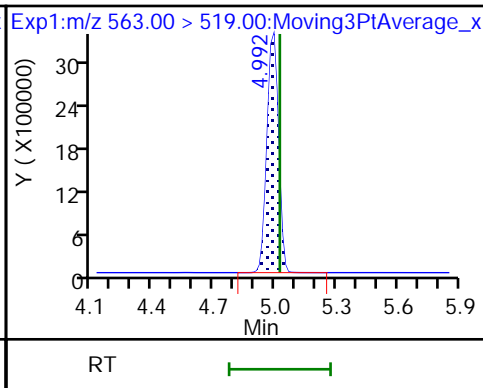
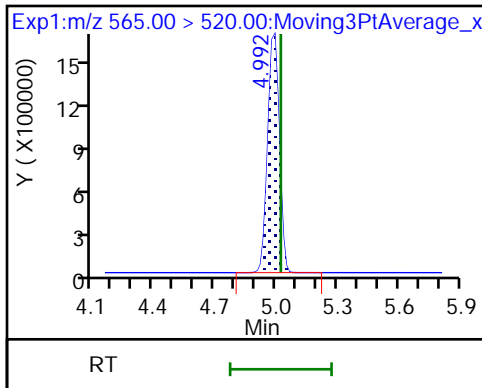
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

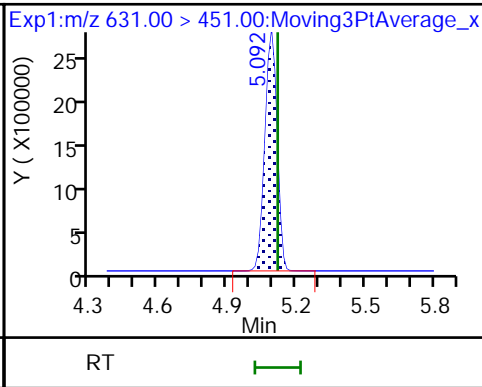
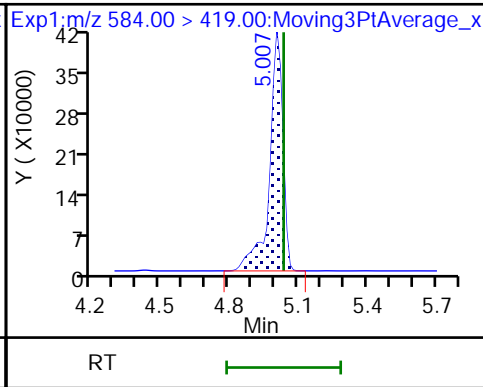
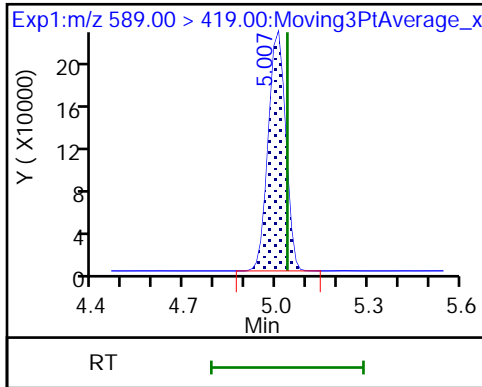
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA (M)

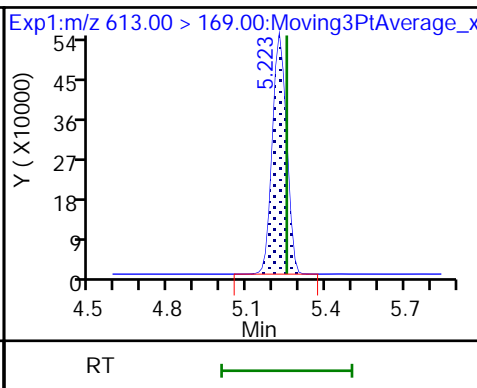
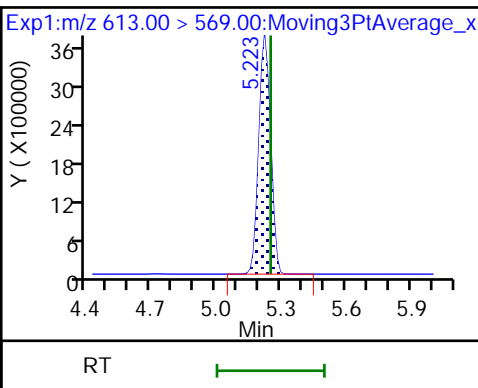
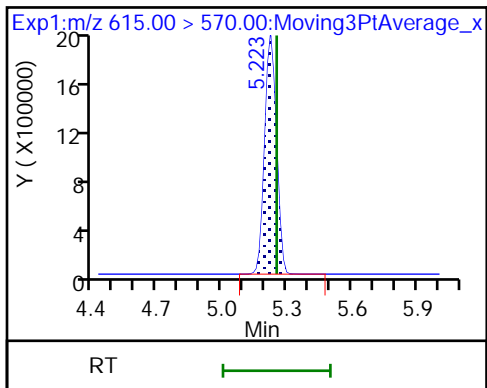
57 11CIFOS



D 43 13C2 PFDoA

42 Perfluorododecanoic acid

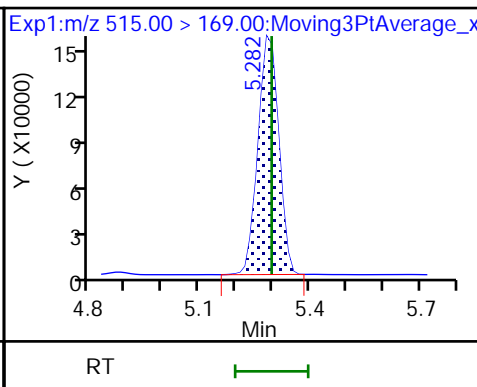
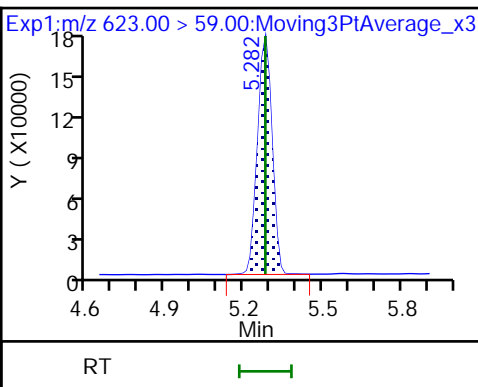
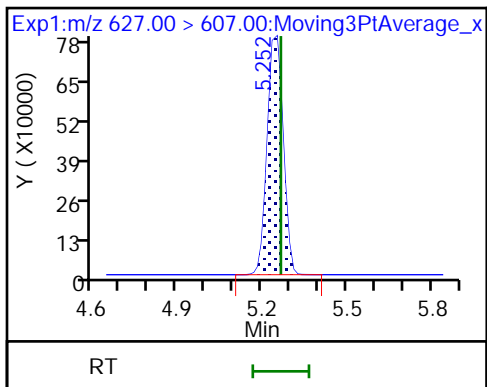
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

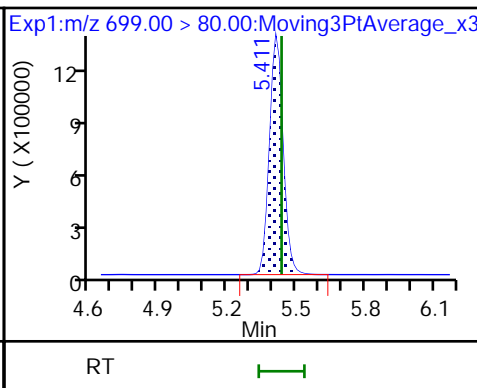
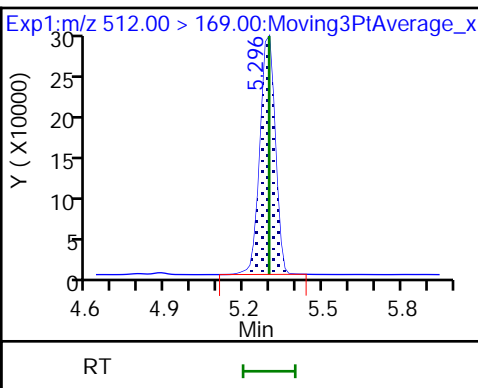
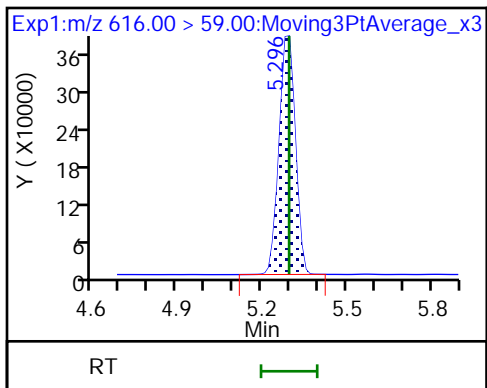
D 58 d-N-MeFOSA-M



49 N-MeFOSE-M

61 NMeFOSA

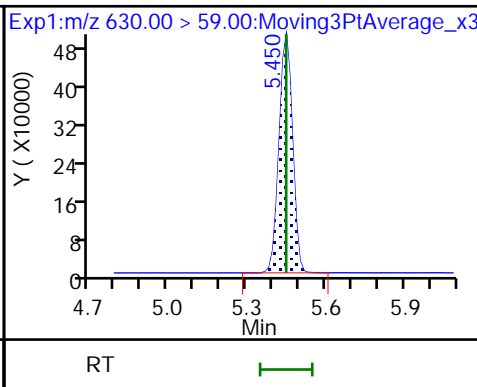
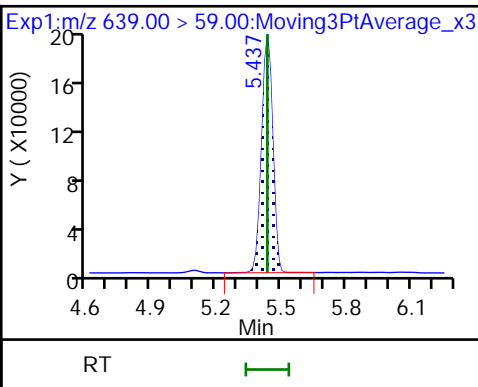
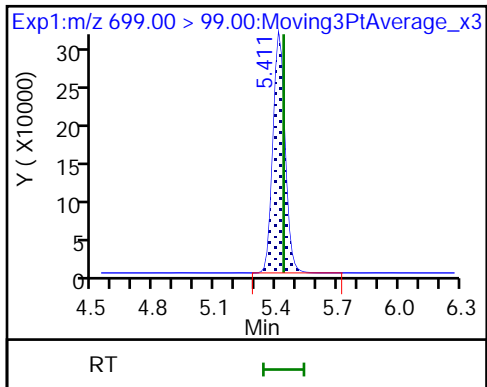
54 PFDoS



54 PFDoS

D 53 d9-N-EtFOSE-M

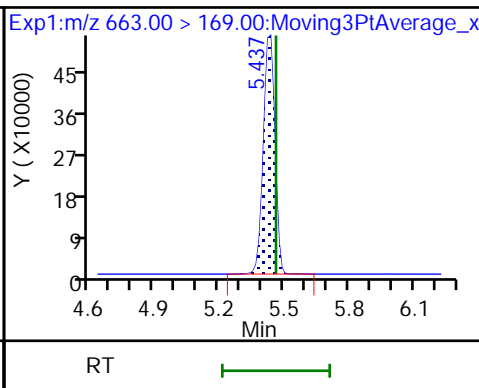
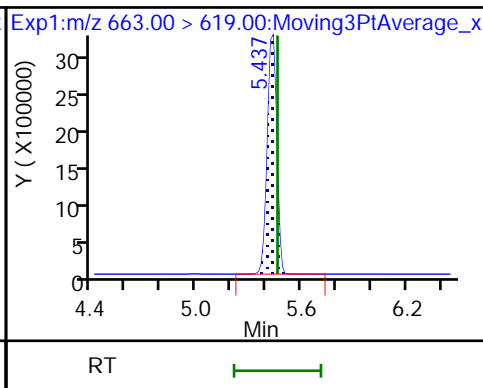
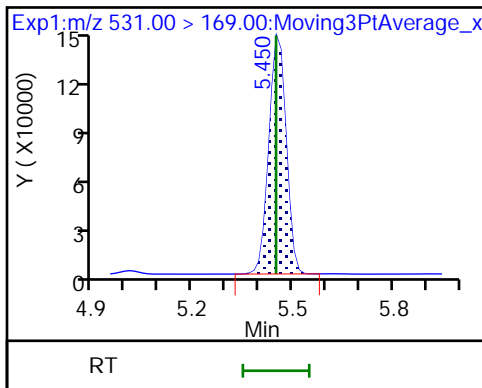
62 N-EtFOSE-M



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid

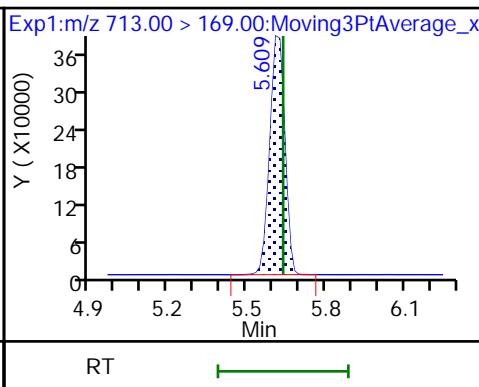
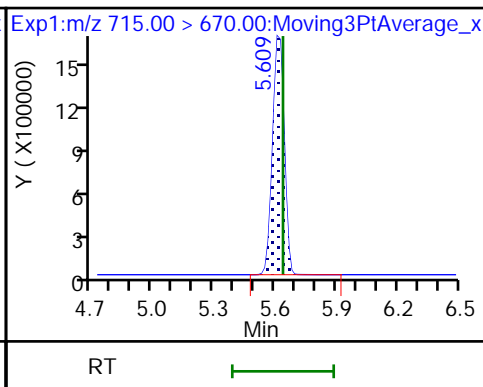
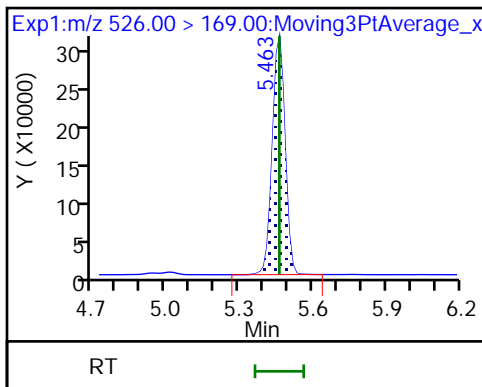
44 Perfluorotridecanoic acid



56 N-EtFOSA-M

D 46 13C2 PFTeDA

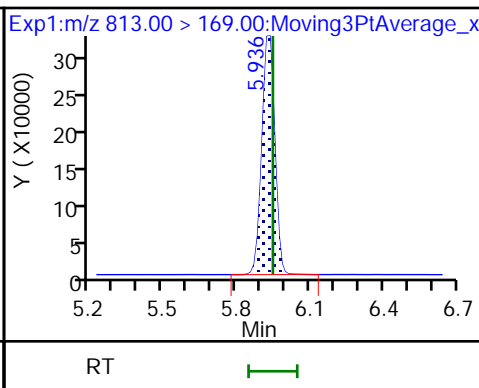
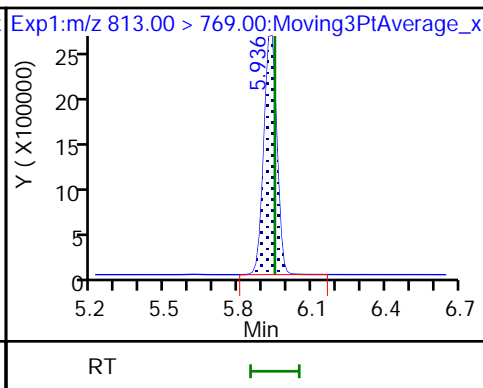
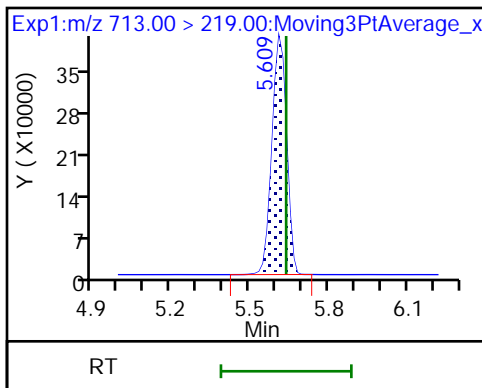
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

55 Perfluorohexadecanoic acid

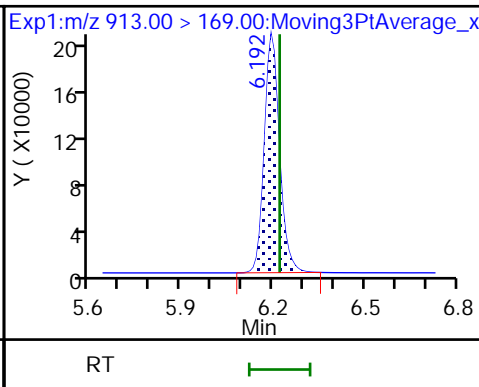
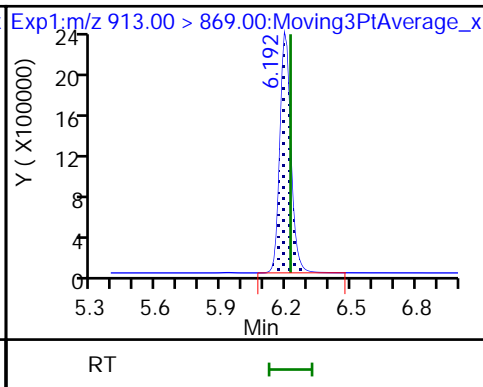
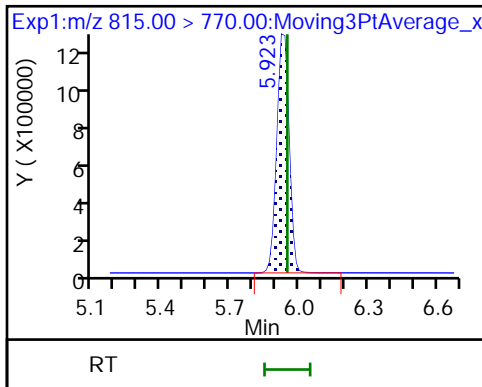
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid



Eurofins TestAmerica, Knoxville

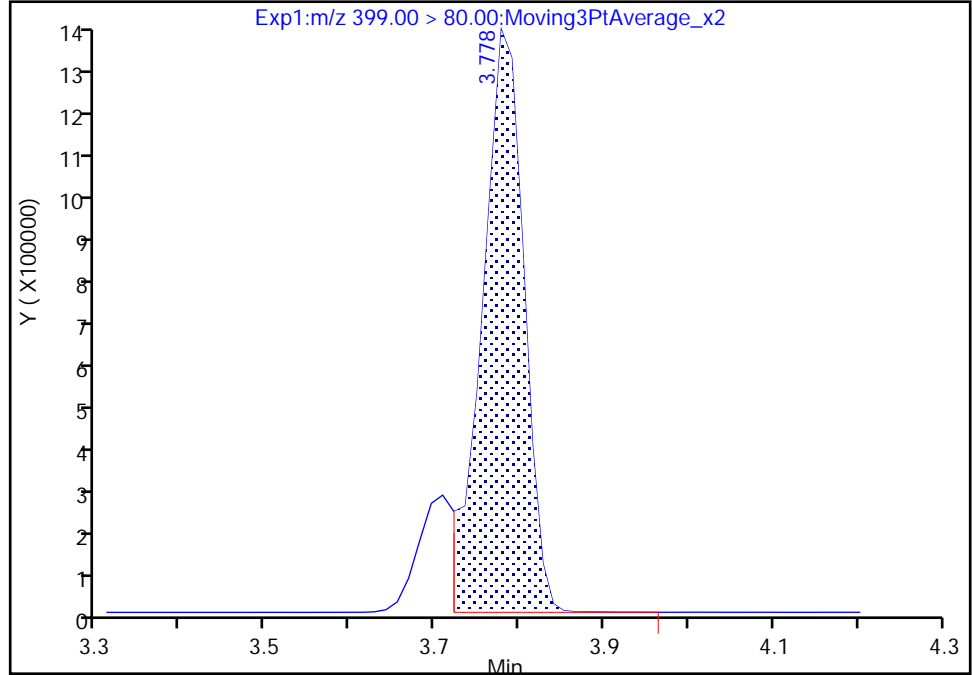
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Injection Date: 07-Oct-2021 03:03:10 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 45 Worklist Smp#: 45
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

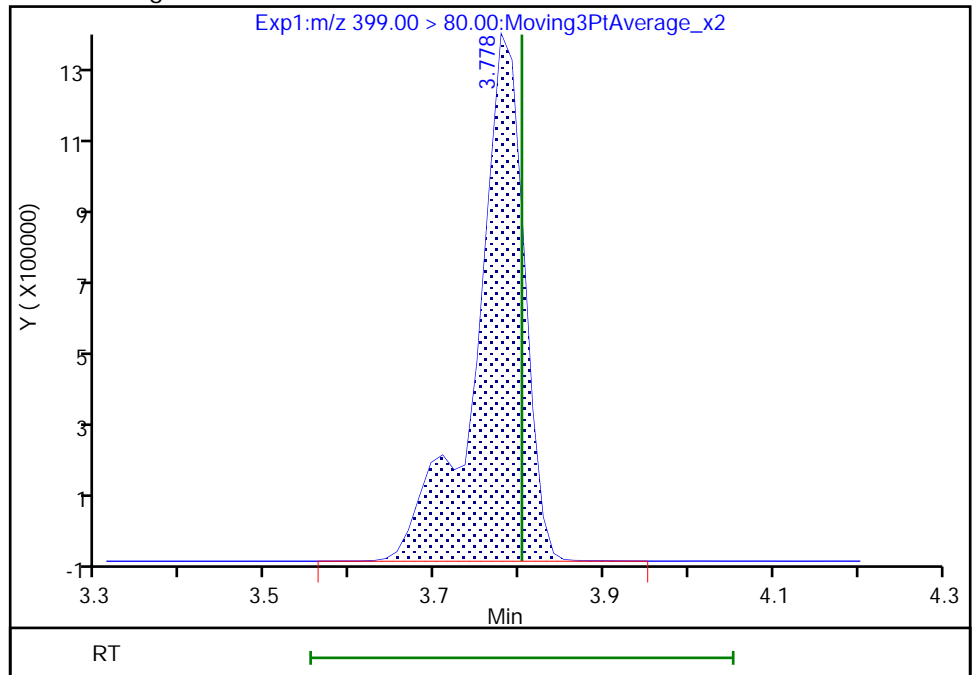
RT: 3.78
Area: 4552150
Amount: 1.886090
Amount Units: ng/ml

Processing Integration Results



RT: 3.78
Area: 5286977
Amount: 2.191373
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:24:27
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

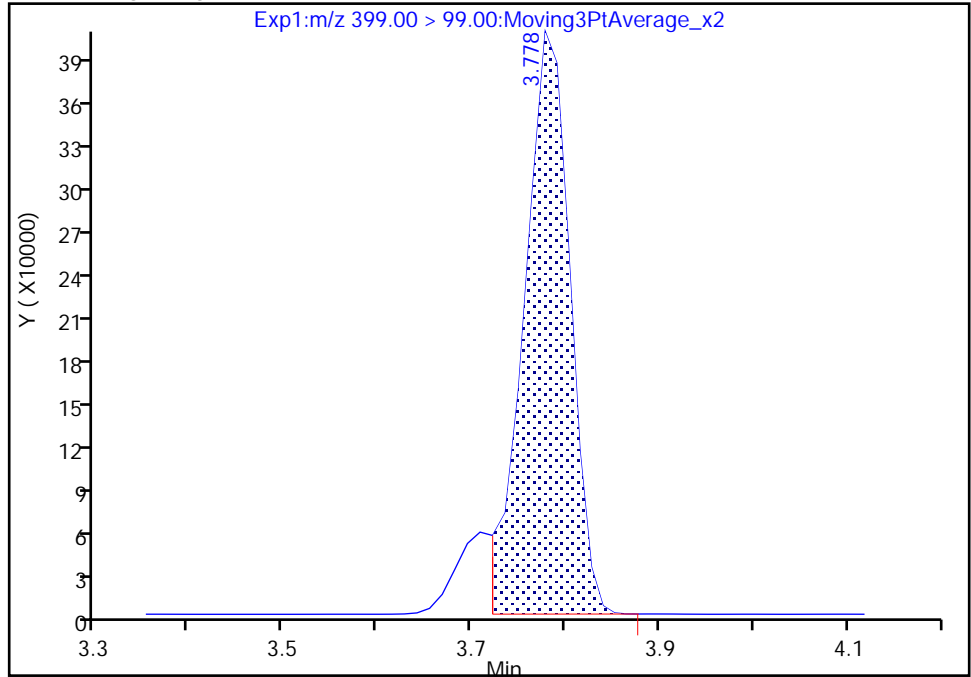
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Injection Date: 07-Oct-2021 03:03:10 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 45 Worklist Smp#: 45
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

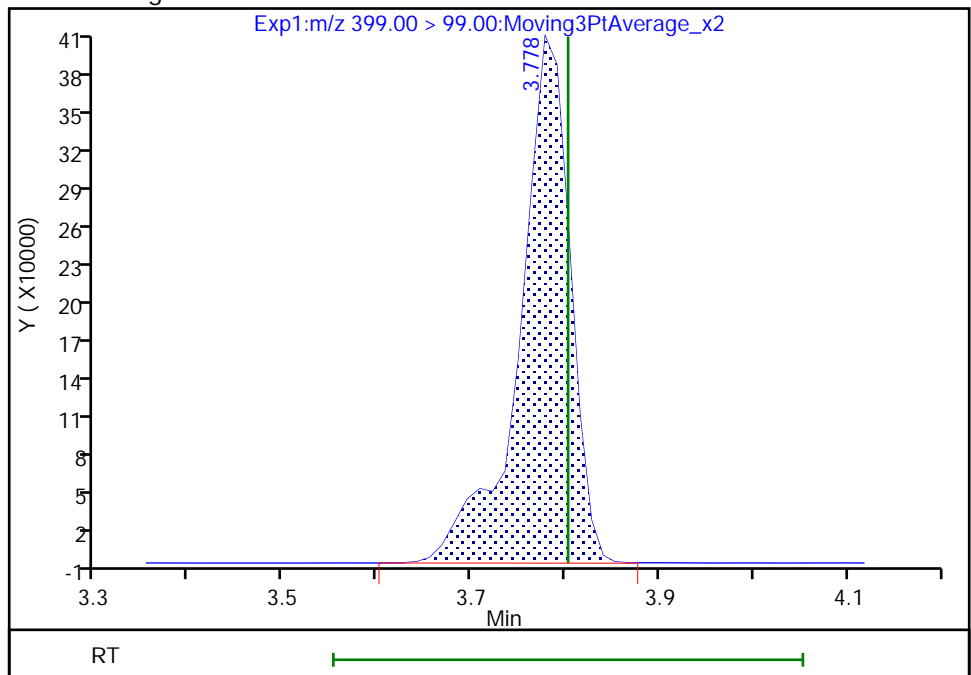
RT: 3.78
Area: 1363517
Amount: 1.886090
Amount Units: ng/ml

Processing Integration Results



RT: 3.78
Area: 1513732
Amount: 2.191373
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:24:31

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

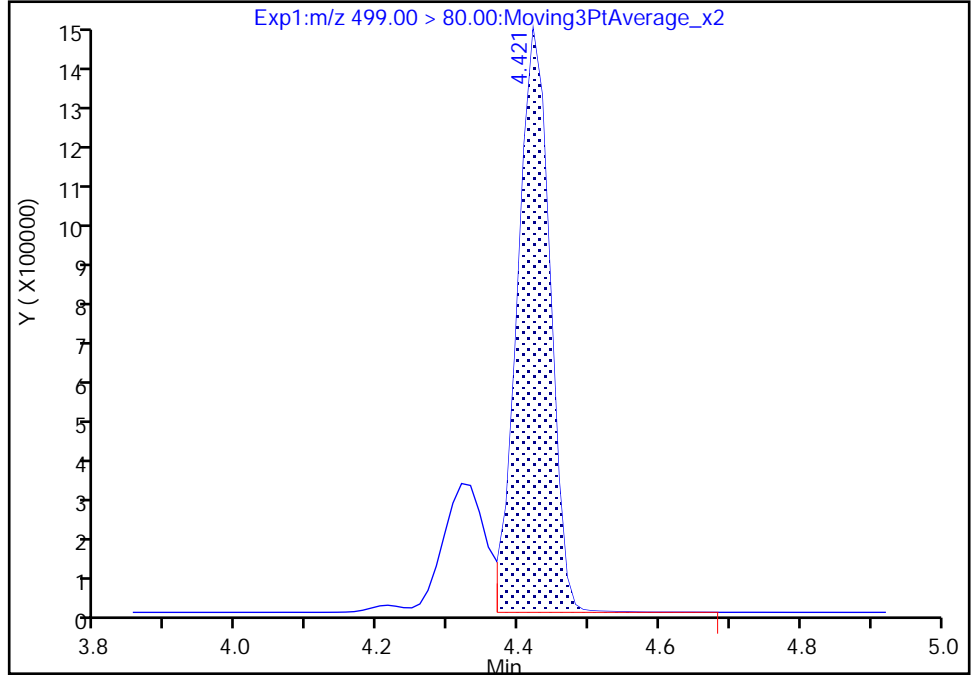
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Injection Date: 07-Oct-2021 03:03:10 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 45 Worklist Smp#: 45
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

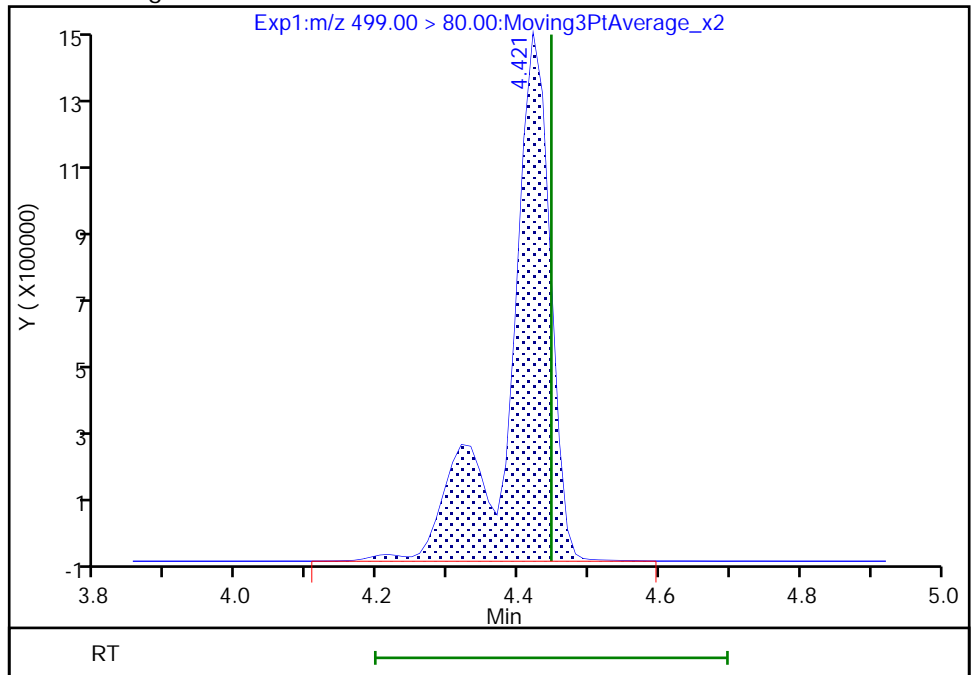
RT: 4.42
Area: 4622760
Amount: 1.825225
Amount Units: ng/ml

Processing Integration Results



RT: 4.42
Area: 5997300
Amount: 2.367941
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:24:41
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

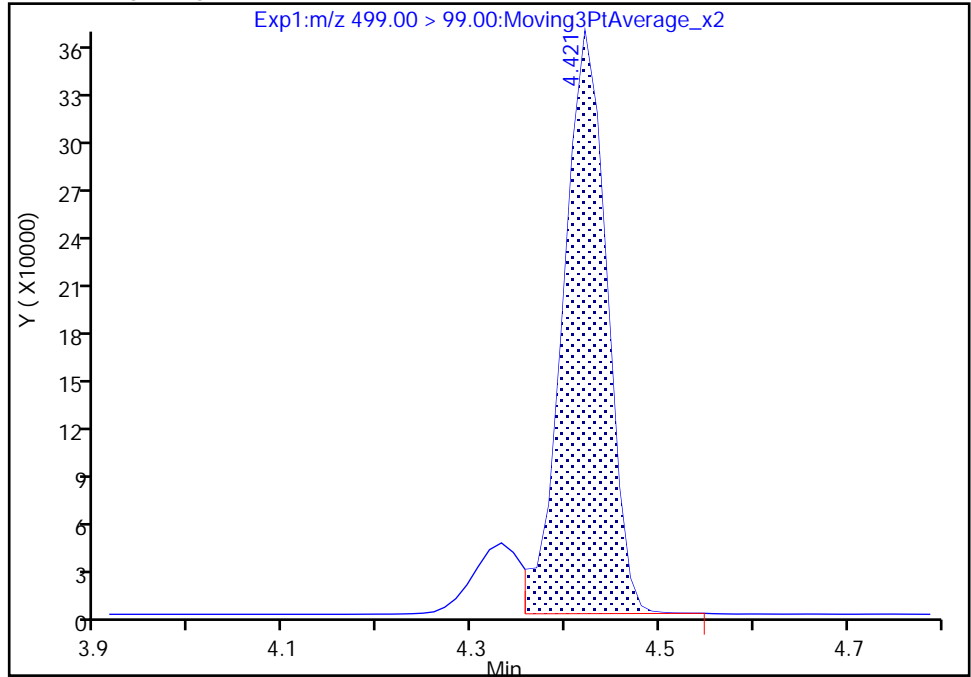
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_045.d
Injection Date: 07-Oct-2021 03:03:10 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 45 Worklist Smp#: 45
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

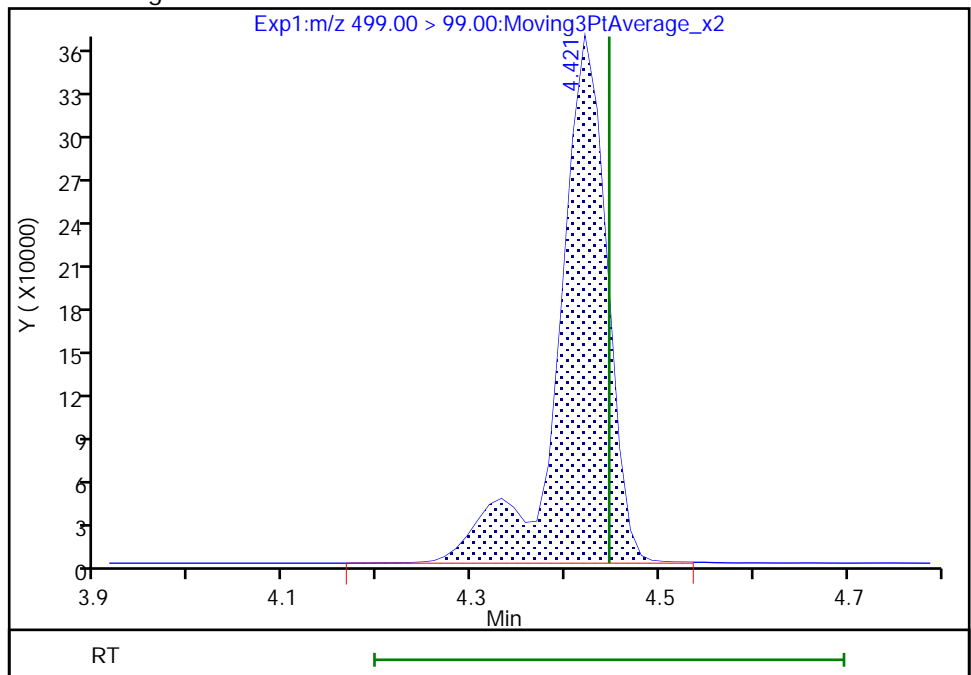
RT: 4.42
Area: 1170502
Amount: 1.825225
Amount Units: ng/ml

Processing Integration Results



RT: 4.42
Area: 1326022
Amount: 2.367941
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:24:47

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

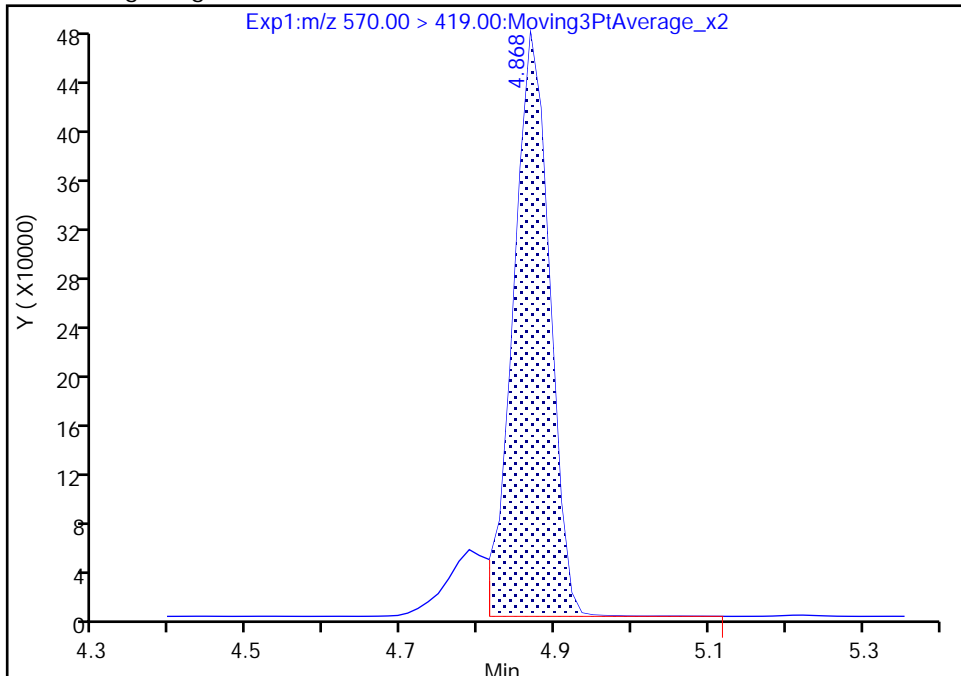
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Injection Date:	07-Oct-2021 03:03:10	Instrument ID:	LCA
Lims ID:	CCV		
Client ID:			
Operator ID:	Cochran, Bobby	ALS Bottle#:	45
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	PFC_LCA	Limit Group:	LC - PFC- ICAL
Column:		Detector:	EXP1
		Worklist Smp#:	45

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

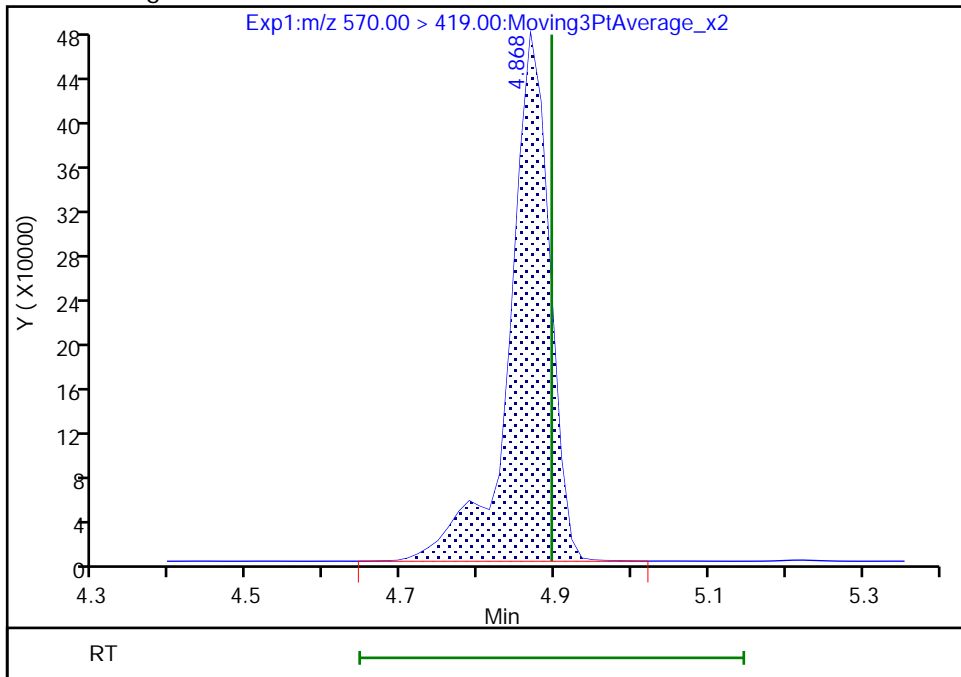
RT: 4.87
 Area: 1527633
 Amount: 2.270208
 Amount Units: ng/ml

Processing Integration Results



RT: 4.87
 Area: 1720148
 Amount: 2.557241
 Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:24:58
 Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

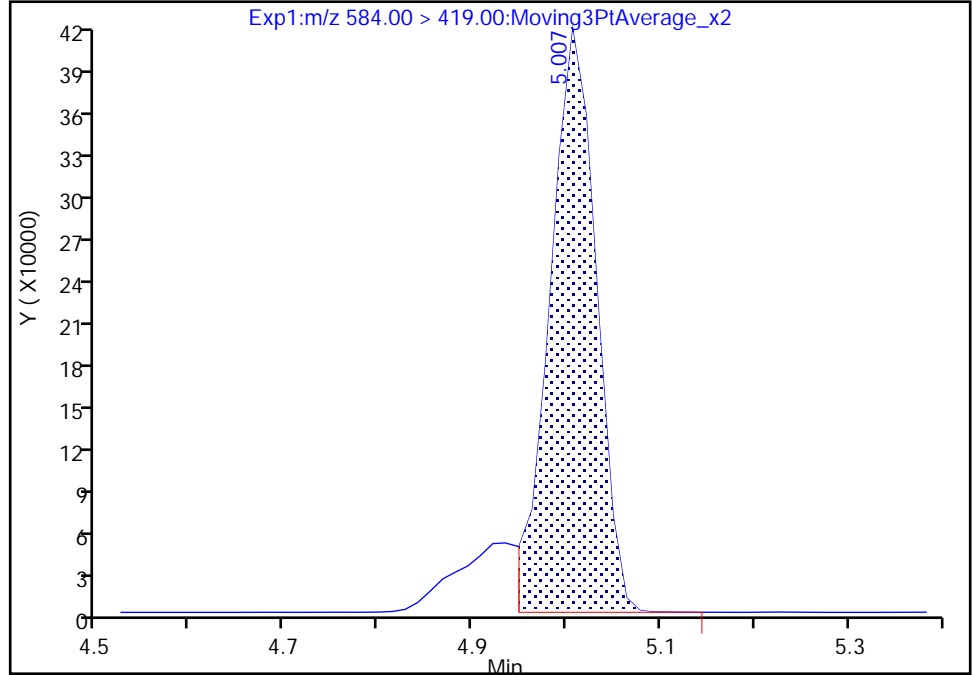
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_045.d
Injection Date: 07-Oct-2021 03:03:10 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 45 Worklist Smp#: 45
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

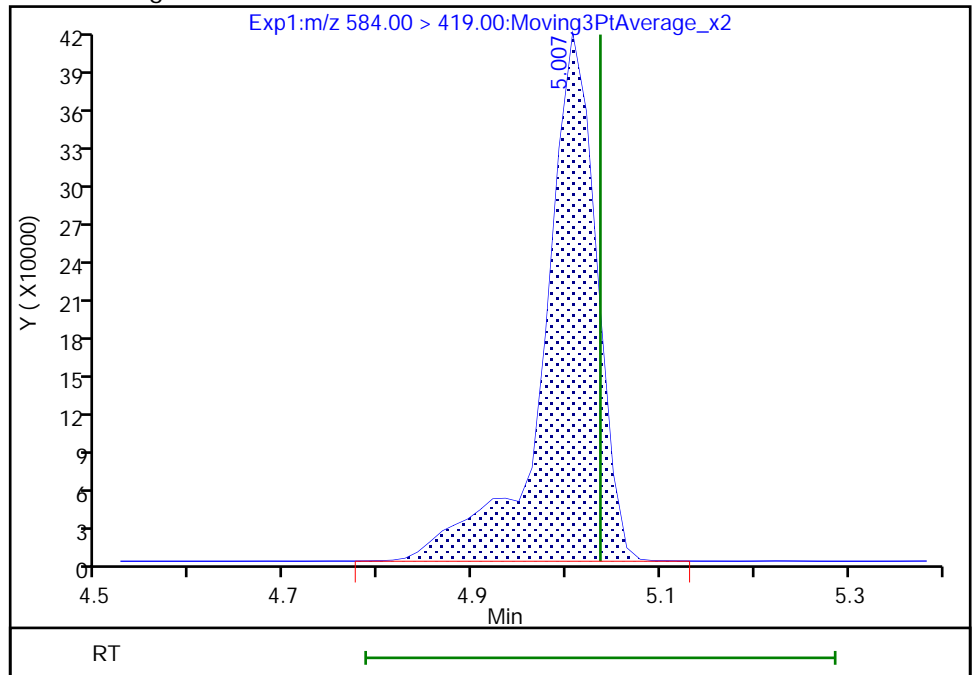
RT: 5.01
Area: 1404862
Amount: 2.064473
Amount Units: ng/ml

Processing Integration Results



RT: 5.01
Area: 1624588
Amount: 2.387364
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:25:08
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54568/58 Calibration Date: 10/07/2021 04:57
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _058.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7855	0.7779		0.990	1.00	-1.0	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.013	0.9538		0.942	1.00	-5.8	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.126	1.124		0.883	0.884	-0.2	40.0
4:2 FTS	AveID	2.500	2.483		0.928	0.934	-0.7	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8572	0.8396		0.980	1.00	-2.1	40.0
Perfluoropentanesulfonic acid (PFPeS)	L2ID		0.9255		1.01	0.938	7.8	50.0
HFPO-DA	L2ID		1.262		0.911	1.00	-8.9	40.0
Perfluoroheptanoic acid (PFHpA)	L2ID		1.052		0.996	1.00	-0.4	40.0
Perfluorohexanesulfonic acid (PFHxS)	L2ID		1.333		0.893	0.910	-1.9	40.0
DONA	AveID	3.243	3.359		0.976	0.942	3.6	40.0
6:2 FTS	L2ID		1.987		0.936	0.948	-1.3	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9947	0.9737		0.932	0.952	-2.1	40.0
Perfluorooctanoic acid (PFOA)	L2ID		1.135		1.02	1.00	2.4	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.100	1.064		0.898	0.928	-3.2	40.0
Perfluorononanoic acid (PFNA)	L2ID		0.8738		1.05	1.00	4.7	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	2.308	2.259		0.912	0.932	-2.1	40.0
Perfluorononanesulfonic acid (PFNS)	AveID	1.042	0.9932		0.915	0.960	-4.7	40.0
Perfluorodecanoic acid (PFDA)	L2ID		0.9689		1.02	1.00	2.0	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9606	0.9466		0.986	1.00	-1.5	40.0
8:2 FTS	AveID	1.784	1.857		0.998	0.958	4.1	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	L2ID		0.9816		1.07	1.00	6.8	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.9574	0.9678		0.975	0.964	1.1	40.0
Perfluoroundecanoic acid (PFUnA)	L2ID		1.031		1.02	1.00	1.9	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.9494	0.9785		1.03	1.00	3.1	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.858	1.827		0.926	0.942	-1.7	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9811		0.939	1.00	-6.1	40.0
10:2 FTS	AveID	2.221	2.452		1.06	0.964	10.4	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.147		0.991	1.00	-0.9	40.0
NMeFOSA	AveID	1.047	1.014		0.968	1.00	-3.2	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9879	0.9662		0.947	0.968	-2.2	40.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54568/58 Calibration Date: 10/07/2021 04:57
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _058.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTrIA)	L2ID		0.8889		1.01	1.00	0.6	50.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.369		1.08	1.00	8.4	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.168	1.172		1.00	1.00	0.3	40.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.1358		1.08	1.00	7.7	40.0
Perfluorohexadecanoic acid	Q2ID		1.066		0.975	1.00	-2.5	40.0
Perfluorooctadecanoic acid	AveID	0.9076	0.9083		1.00	1.00	0.0	40.0
13C4 PFBA	Ave	1.324	1.281		1.21	1.25	-3.3	50.0
13C5 PFPeA	Ave	1.087	1.084		1.25	1.25	-0.3	50.0
13C3 PFBS	Ave	0.7019	0.6499		1.08	1.16	-7.4	50.0
M2-4:2 FTS	Ave	0.1052	0.1138		1.26	1.17	8.1	50.0
13C2 PFHxA	Ave	1.116	1.062		1.19	1.25	-4.8	50.0
13C3 HFPO-DA	Ave	0.5714	0.5666		1.24	1.25	-0.8	50.0
13C4 PFHpA	Ave	1.113	1.121		1.26	1.25	0.7	50.0
18O2 PFHxS	Ave	0.4248	0.4230		1.18	1.18	-0.4	50.0
M2-6:2 FTS	Ave	0.1078	0.1113		1.23	1.19	3.3	50.0
13C4 PFOA	Ave	1.007	0.9703		1.21	1.25	-3.6	50.0
13C4 PFOS	Ave	0.5852	0.5549		1.13	1.20	-5.2	50.0
13C5 PFNA	Ave	1.279	1.257		1.23	1.25	-1.7	50.0
13C2 PFDA	Ave	1.296	1.231		1.19	1.25	-5.0	50.0
13C8 FOSA	Ave	0.8591	0.8434		1.23	1.25	-1.8	50.0
M2-8:2 FTS	Ave	0.1316	0.1296		1.18	1.20	-1.5	50.0
d3-NMeFOSAA	Ave	0.1774	0.1667		1.18	1.25	-6.0	50.0
13C2 PFUnA	Ave	1.237	1.209		1.22	1.25	-2.3	50.0
d5-NEtFOSAA	Ave	0.1705	0.1557		1.14	1.25	-8.7	50.0
13C2 PFDoA	Ave	1.319	1.384		1.31	1.25	4.9	50.0
d7-N-MeFOSE-M	Ave	0.1075	0.1223		1.42	1.25	13.7	50.0
d-N-MeFOSA-M	Ave	0.1120	0.1062		1.19	1.25	-5.1	50.0
d9-N-EtFOSE-M	Ave	0.1146	0.1270		1.39	1.25	10.8	50.0
d-N-EtFOSA-M	Ave	0.0942	0.0910		1.21	1.25	-3.5	50.0
13C2 PFTeDA	Ave	1.211	1.126		1.16	1.25	-7.0	50.0
13C2 PFHxDA	Ave	0.8782	0.8758		1.25	1.25	-0.3	50.0
13C8 PFOA	Ave	0.9886	0.9460		1.20	1.25	-4.3	50.0
13C8 PFOS	Ave	0.1256	0.1188		1.13	1.20	-5.4	50.0

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_058.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 07-Oct-2021 04:57:45 ALS Bottle#: 4 Worklist Smp#: 58
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-058 ccv
 Misc. Info.: Plate: 11 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 17:32:03 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 17:31:28

Ratio Calibration: None

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	2.801	2.801	0.0	0.678	7256193	1.21	96.7	19788	
2 Perfluorobutanoic acid	212.90 > 169.00	2.801	2.812	-0.011	1.000	4515817	0.99	99.0	1506	
D 3 13C5 PFPeA	267.90 > 223.00	3.102	3.129	-0.027	0.751	6140349	1.25	99.7	18127	
4 Perfluoropentanoic acid	262.90 > 219.00	3.102	3.129	-0.027	1.000	4685245	0.9415	94.2	1376	
D 6 13C3 PFBS	301.90 > 80.00	3.116	3.129	-0.013	0.754	3424942	1.08	92.6	35317	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.129	3.143	-0.014	1.004	2927739	0.8825	Target=3.06	99.8	19736
	298.90 > 99.00	3.129	3.143	-0.014	1.004	1103257		2.65(1.53-4.59)		7059
D 8 M2-4:2 FTS	329.00 > 81.00	3.409	3.423	-0.014	0.825	602234	1.26	108	1357	
7 4:2 FTS	327.00 > 307.00	3.409	3.423	-0.014	1.000	1196331	0.9277	99.3	11466	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.437	3.453	-0.016	1.103	2557618	1.01	Target=3.47	108	18193
	349.00 > 99.00	3.437	3.453	-0.016	1.103	687611		3.72(1.73-5.20)		5320
D 9 13C2 PFHxA	315.00 > 270.00	3.437	3.469	-0.032	0.832	6020494	1.19	95.2	26770	
10 Perfluorohexanoic acid	313.00 > 269.00	3.437	3.469	-0.032	1.000	4043981	0.9795	Target=9.74	97.9	2256
	313.00 > 119.00	3.437	3.469	-0.032	1.000	311403		12.99(4.87-14.61)		1232

D 12 13C3 HFPO-DA

287.00 > 169.00 3.535 3.561 -0.026 0.856 3210964 1.24 99.2 9930

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.535	3.561	-0.026	1.000	3241092	0.9107		91.1	3970	
D 17 18O2 PFHxS										
403.00 > 84.00	3.790	3.803	-0.013	0.918	2267548	1.18		99.6	11014	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.790	3.803	-0.013	1.000	2325418	0.8925	Target=2.96	98.1	6633	M
399.00 > 99.00	3.790	3.803	-0.013	1.000	680611		3.42(1.48-4.44)		3911	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.790	3.815	-0.025	0.918	6352913	1.26		101	28631	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.790	3.815	-0.025	1.000	5347948	1.00	Target=3.35	99.6	3787	
363.00 > 169.00	3.790	3.815	-0.025	1.000	1617719		3.31(1.67-5.02)		7686	
68 DONA										
377.00 > 251.00	3.815	3.840	-0.025	0.863	7960097	0.9756	Target=1.49	104	22659	
377.00 > 85.00	3.815	3.840	-0.025	0.863	4353933		1.83(0.74-2.23)		7376	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.119	4.143	-0.024	0.931	2331850	0.9318	Target=3.73	97.9	6887	
449.00 > 99.00	4.119	4.143	-0.024	0.931	602050		3.87(1.87-5.61)		3936	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.119	4.143	-0.024	0.997	5360561	1.20		95.7	19144	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.119	4.143	-0.024	0.997	599420	1.23		103	4041	
19 6:2 FTS										
427.00 > 407.00	4.119	4.143	-0.024	1.000	950797	0.9361		98.7	8594	
D 21 13C4 PFOA										
417.00 > 372.00	4.131	4.155	-0.024	1.000	5498453	1.20		96.4	16525	
* 22 13C2 PFOA										
415.00 > 370.00	4.131	4.155	-0.024		5666590	1.25			20687	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.131	4.155	-0.024	1.000	4992180	1.02	Target=2.40	102	2513	
413.00 > 169.00	4.131	4.155	-0.024	1.000	1980807		2.52(1.20-3.61)		3183	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.422	4.447	-0.024	1.070	643739	1.13		94.6	2273	
D 25 13C4 PFOS										
503.00 > 80.00	4.422	4.447	-0.024	1.070	3006220	1.13		94.8	10120	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.422	4.447	-0.024	1.000	2484243	0.8979	Target=3.83	96.8	5167	M
499.00 > 99.00	4.422	4.447	-0.024	1.000	584679		4.25(1.91-5.74)		2651	M
D 27 13C5 PFNA										
468.00 > 423.00	4.447	4.470	-0.023	1.077	7124166	1.23		98.3	20144	
26 Perfluorononanoic acid										
463.00 > 419.00	4.447	4.470	-0.023	1.000	4980237	1.05	Target=3.68	105	3244	
463.00 > 169.00	4.447	4.470	-0.023	1.000	1073279		4.64(1.84-5.52)		3370	
63 9CIFOS										
531.00 > 351.00	4.572	4.596	-0.024	1.107	5296021	0.9122		97.9	9682	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.696	4.722	-0.026	1.062	2398691	0.9149	Target=3.97	95.3	7727	
549.00 > 99.00	4.696	4.722	-0.026	1.062	636567		3.77(1.99-5.96)		4422	
D 34 13C8 FOSA										
506.00 > 78.00	4.723	4.736	-0.013	1.143	4778933	1.23		98.2	5437	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.723	4.736	-0.013	1.000	3619052	0.9855		98.5	5695	
D 32 13C2 PFDA										
515.00 > 470.00	4.723	4.749	-0.026	1.143	6973556	1.19		95.0	22455	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.723	4.749	-0.026	1.000	5405286	1.02	Target=10.11	102	2767	
513.00 > 169.00	4.723	4.749	-0.026	1.000	454453		11.89(5.06-15.17)		373	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.736	4.763	-0.027	1.147	703570	1.18		98.5	2794	
31 8:2 FTS										
527.00 > 507.00	4.736	4.763	-0.027	1.000	1045413	1.00		104	6678	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.869	4.896	-0.027	1.179	944661	1.17		94.0	1562	
36 NMeFOSAA										
570.00 > 419.00	4.869	4.896	-0.027	1.000	741826	1.07		107	1400	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.965	4.993	-0.028	1.123	2347132	0.9745	Target=3.80	101	8517	
599.00 > 99.00	4.965	4.993	-0.028	1.123	584937		4.01(1.90-5.70)		2608	
D 39 13C2 PFUnA										
565.00 > 520.00	4.993	5.022	-0.029	1.209	6848496	1.22		97.7	20039	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.993	5.022	-0.029	1.000	5650776	1.02	Target=7.45	102	5389	
563.00 > 169.00	4.993	5.022	-0.029	1.000	604319		9.35(3.78-11.33)		2201	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.008	5.036	-0.028	1.212	882335	1.14		91.3	4539	
40 NEtFOSA										
584.00 > 419.00	5.008	5.036	-0.028	1.000	690710	1.03		103	956	
57 11CIFOS										
631.00 > 451.00	5.093	5.119	-0.026	1.152	4330078	0.9262		98.3	11128	
D 43 13C2 PFDaA										
615.00 > 570.00	5.224	5.251	-0.027	1.265	7842337	1.31		105	28350	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.224	5.251	-0.027	1.000	6155251	0.9393	Target=5.33	93.9	4370	
613.00 > 169.00	5.224	5.251	-0.027	1.000	864167		7.12(2.66-7.99)		2509	
50 10:2 FTS										
627.00 > 607.00	5.251	5.266	-0.015	1.109	1388782	1.06		110	15714	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.281	5.281	0.0	1.278	692940	1.42		114	441	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.282	601858	1.19		94.9	43.5	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.295	0.0	1.003	636054	0.99		99.1	903	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA	512.00 > 169.00	5.295	5.295	0.0	1.000	487987	0.9680	96.8	661	
54 PFDoS	699.00 > 80.00	5.410	5.436	-0.026	1.223	2352787	0.9467	Target=4.32	97.8	4915
	699.00 > 99.00	5.410	5.436	-0.026	1.223	557941		4.22(2.19-6.58)		3014
D 53 d9-N-EtFOSE-M	639.00 > 59.00	5.436	5.436	0.0	1.316	719403	1.38	111	480	
62 N-EtFOSE-M	630.00 > 59.00	5.449	5.449	0.0	1.002	787727	1.08	108	1811	
D 52 d-N-EtFOSA-M	531.00 > 169.00	5.449	5.449	0.0	1.319	515465	1.21	96.5	697	
44 Perfluorotridecanoic acid	663.00 > 619.00	5.436	5.462	-0.026	1.041	5576839	1.01	Target=5.66	101	3019
	663.00 > 169.00	5.436	5.462	-0.026	1.041	904538		6.17(2.83-8.48)		3359
56 N-EtFOSA-M	526.00 > 169.00	5.462	5.462	0.0	1.002	483254	1.00	100	656	
D 46 13C2 PFTeDA	715.00 > 670.00	5.608	5.637	-0.029	1.358	6380378	1.16	93.0	16268	
45 Perfluorotetradecanoic acid	713.00 > 169.00	5.623	5.637	-0.014	1.003	692997	1.08	Target=1.07	108	4084
	713.00 > 219.00	5.608	5.637	-0.029	1.000	671678		1.03(0.53-1.60)		4219
55 Perfluorohexadecanoic acid	813.00 > 769.00	5.935	5.948	-0.013	1.002	4231854	0.9745	Target=7.50	97.5	3100
	813.00 > 169.00	5.922	5.948	-0.026	1.000	498711		8.49(3.75-11.26)		3683
D 59 13C2 PFHxDA	815.00 > 770.00	5.922	5.948	-0.026	1.434	4962759	1.25	99.7	9890	
60 Perfluorooctadecanoic acid	913.00 > 869.00	6.192	6.221	-0.029	1.045	3606175	1.00	Target=9.98	100	2916
	913.00 > 169.00	6.192	6.221	-0.029	1.045	298657		12.07(5.14-15.41)		2167

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L4PFC2_00003

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_058.d

Injection Date: 07-Oct-2021 04:57:45

Instrument ID: LCA

Lims ID: CCV

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 4

Worklist Smp#: 58

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

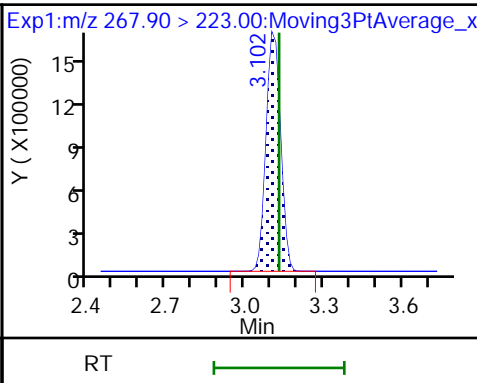
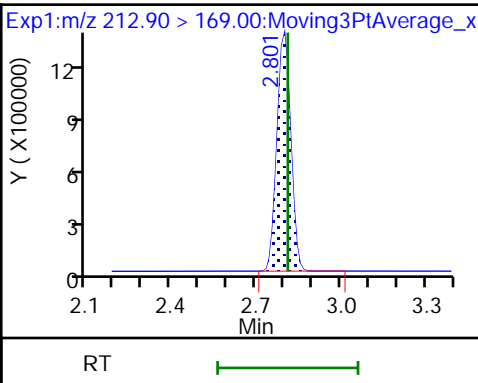
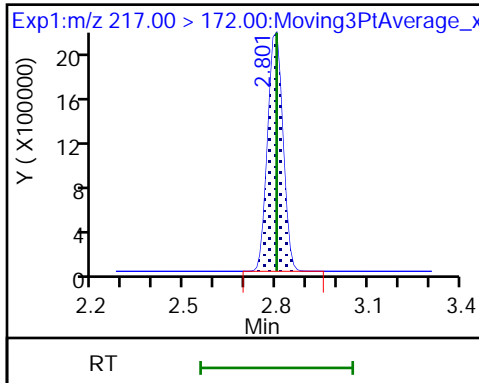
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

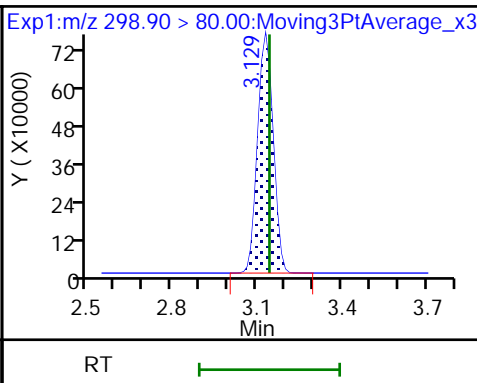
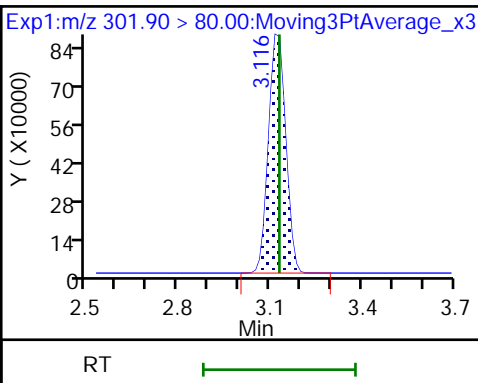
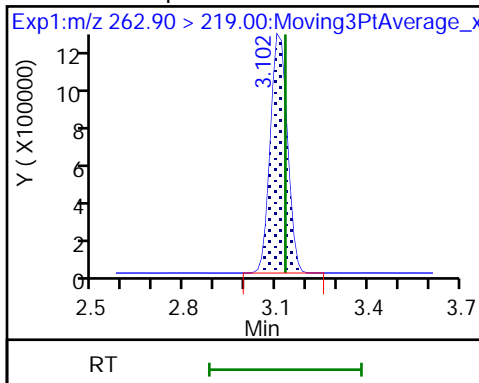
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

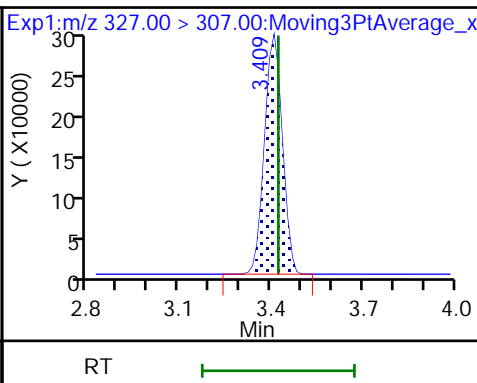
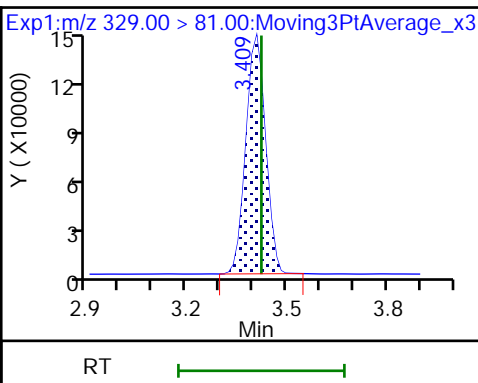
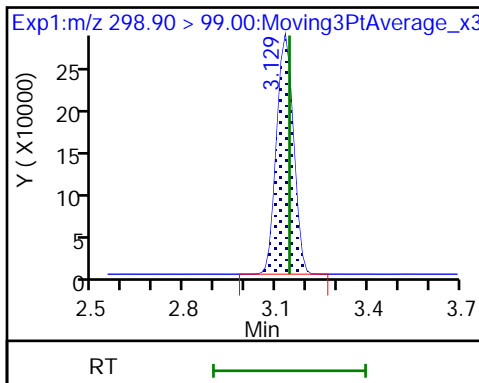
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

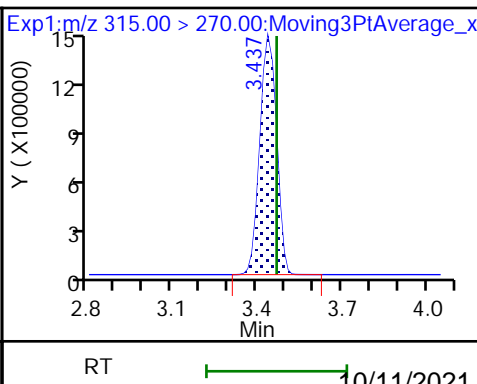
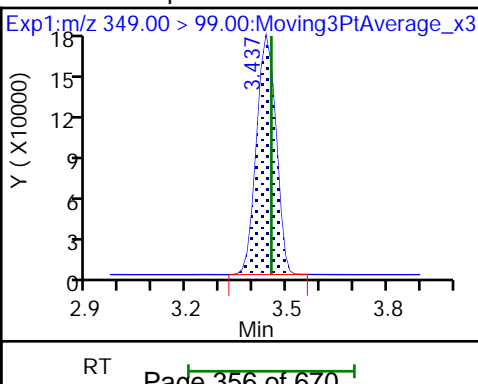
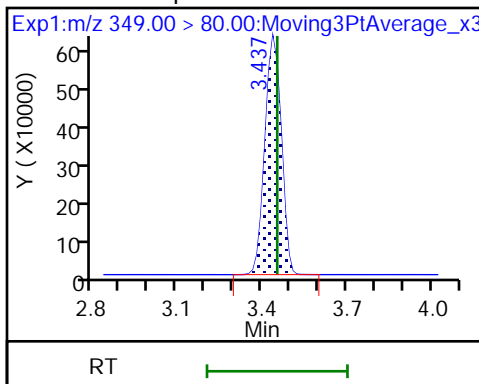
7 4:2 FTS

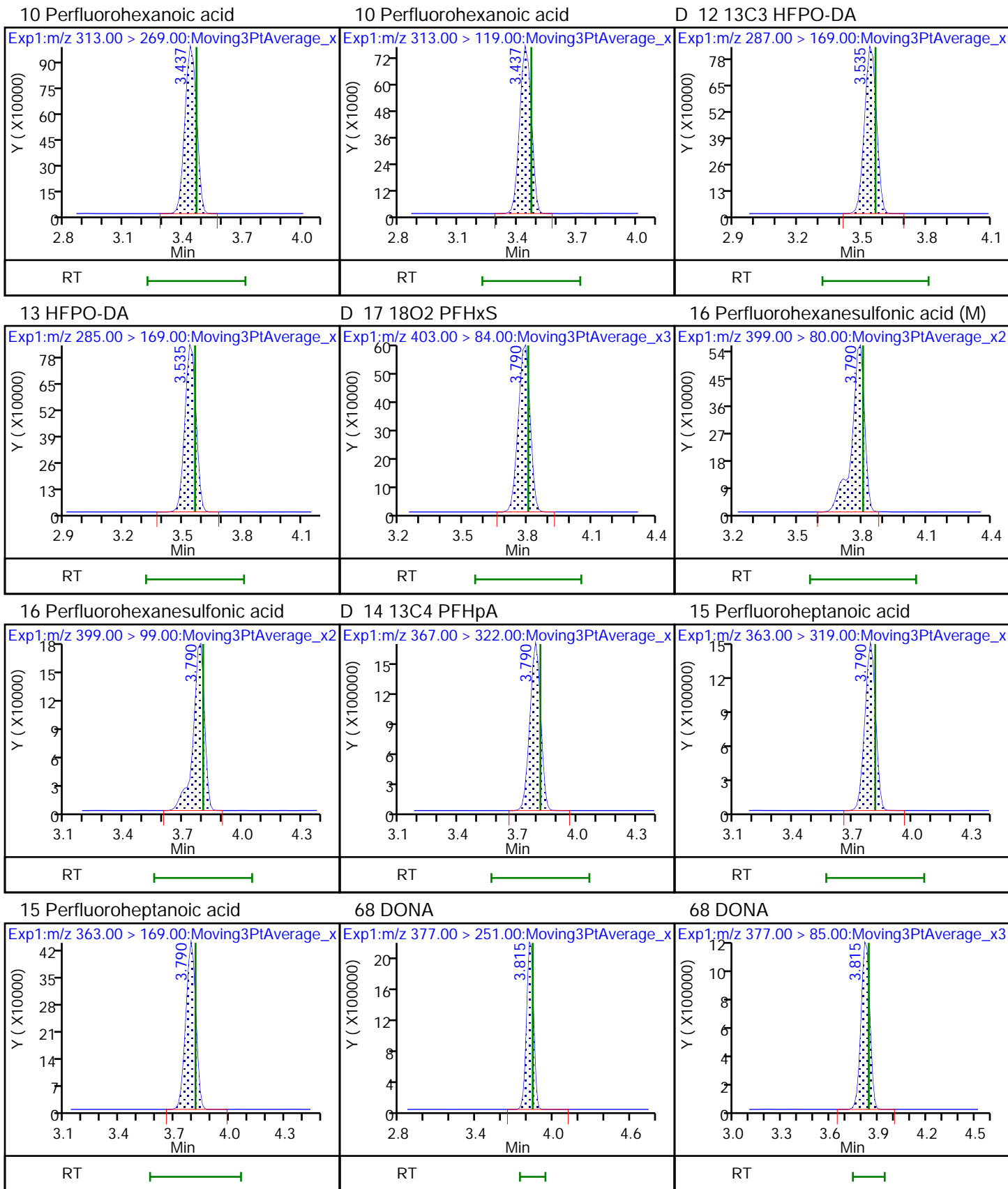


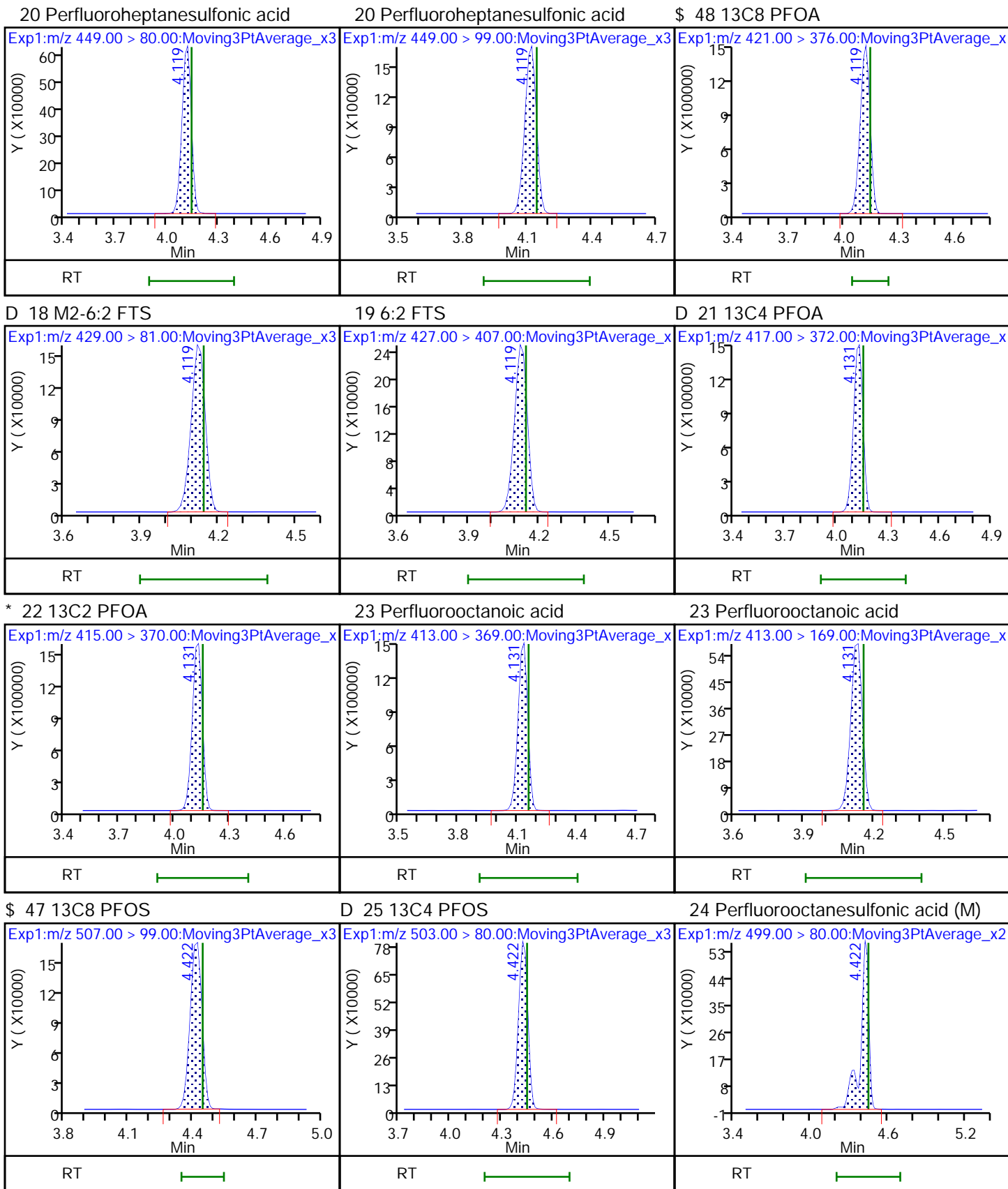
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA

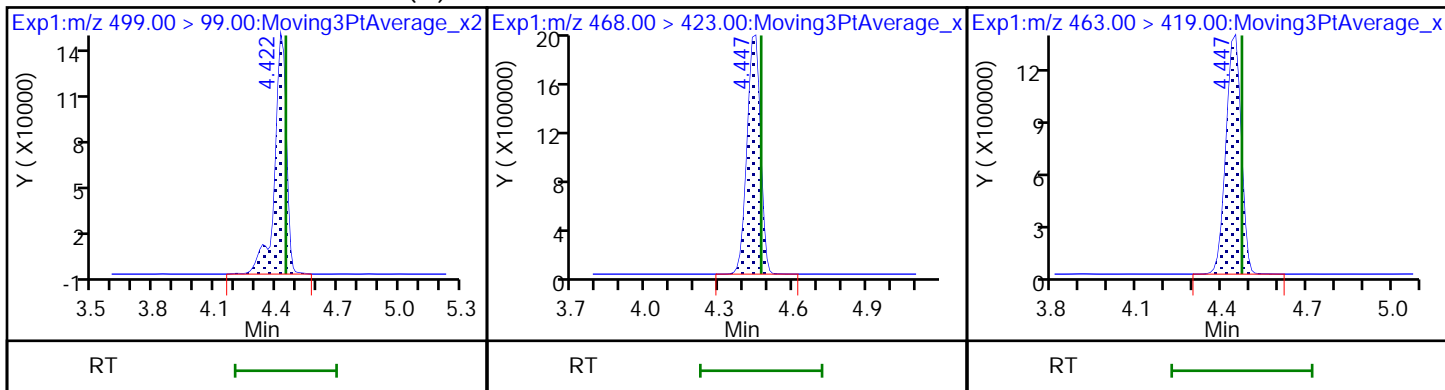






24 Perfluorooctanesulfonic acid (M) D 27 13C5 PFNA

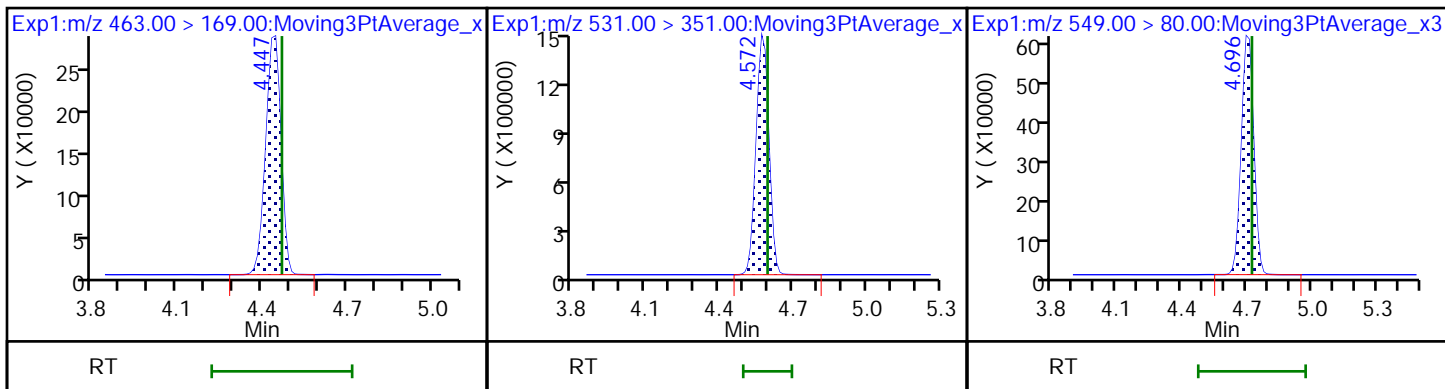
26 Perfluorononanoic acid



26 Perfluorononanoic acid

63 9CIFOS

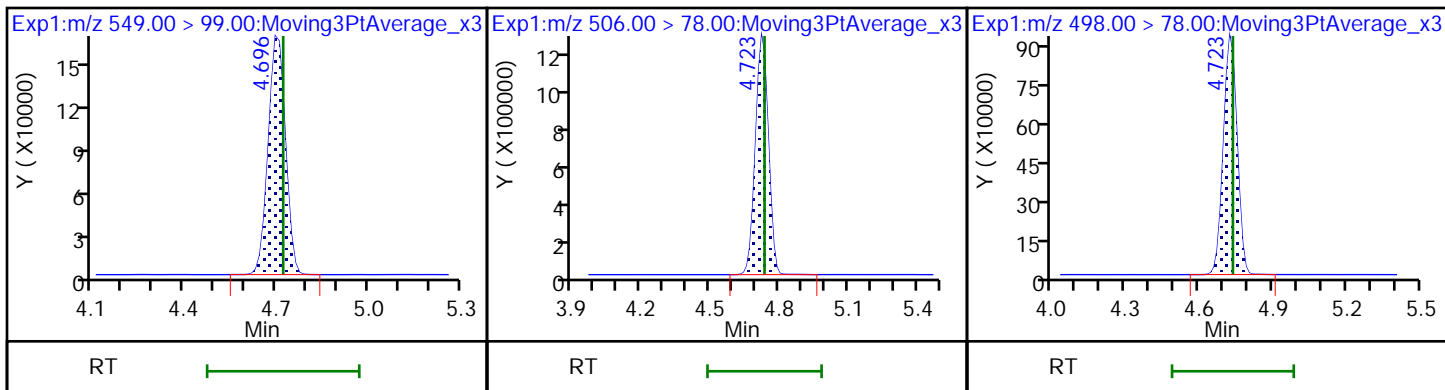
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

D 34 13C8 FOSA

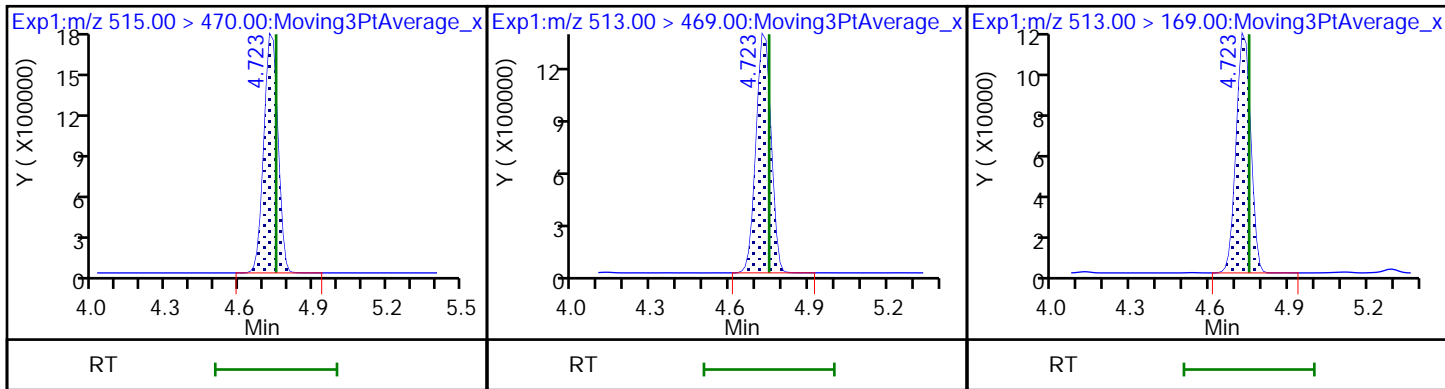
33 Perfluorooctanesulfonamide



D 32 13C2 PFDA

29 Perfluorodecanoic acid

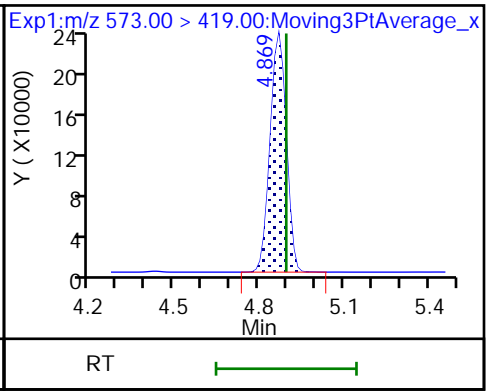
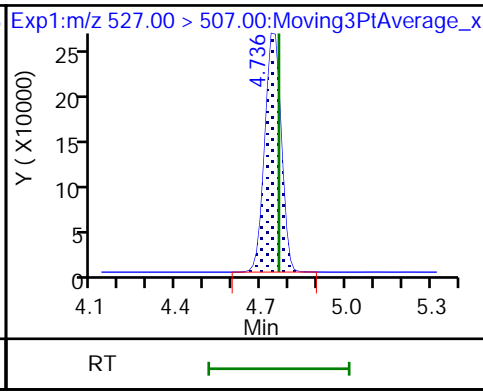
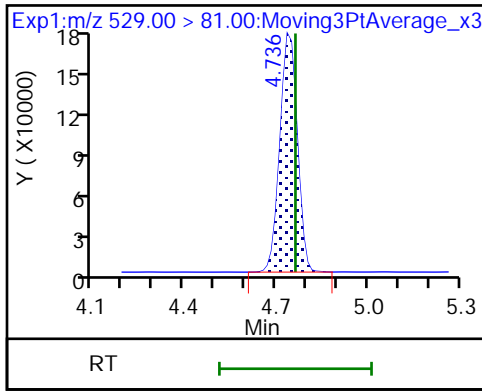
29 Perfluorodecanoic acid



D 30 M2-8:2 FTS

31 8:2 FTS

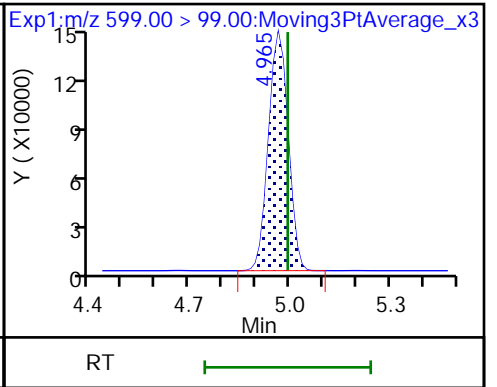
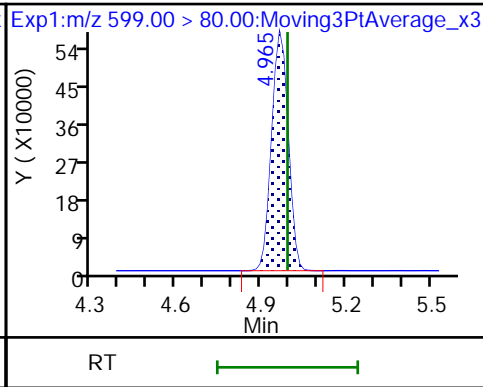
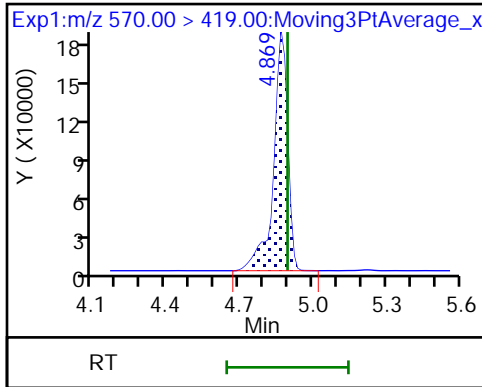
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

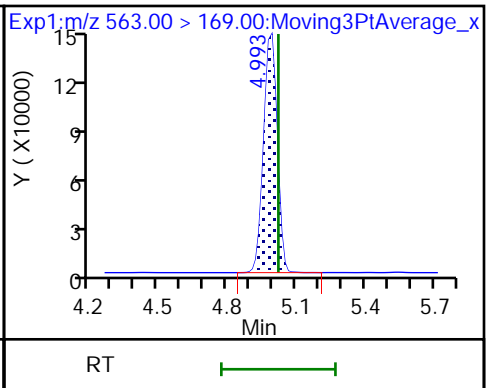
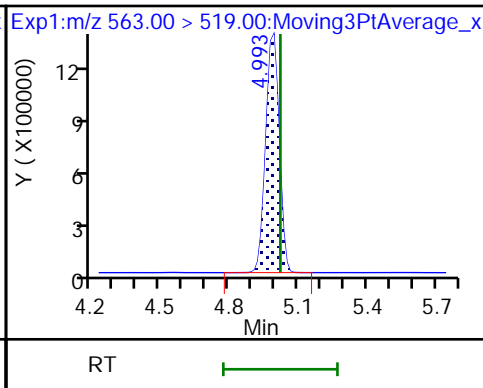
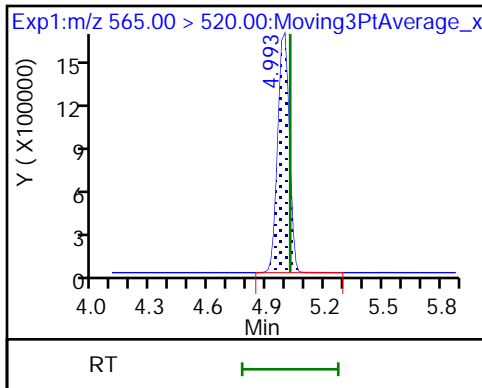
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

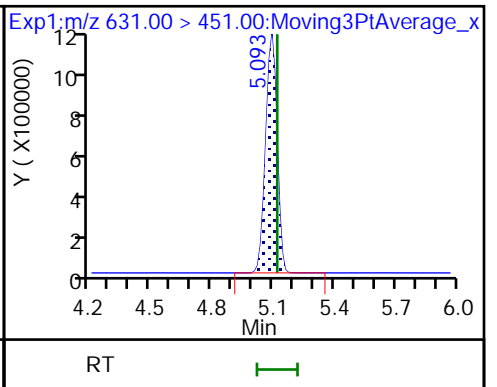
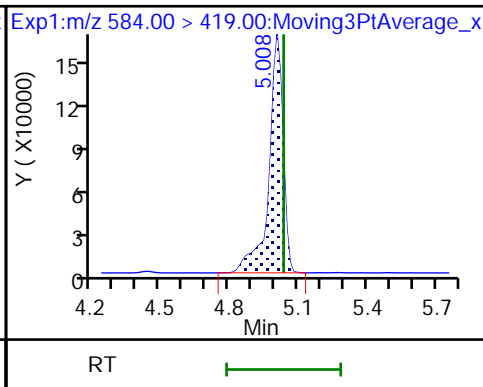
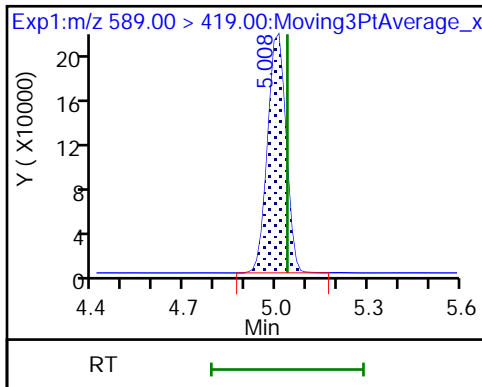
38 Perfluoroundecanoic acid

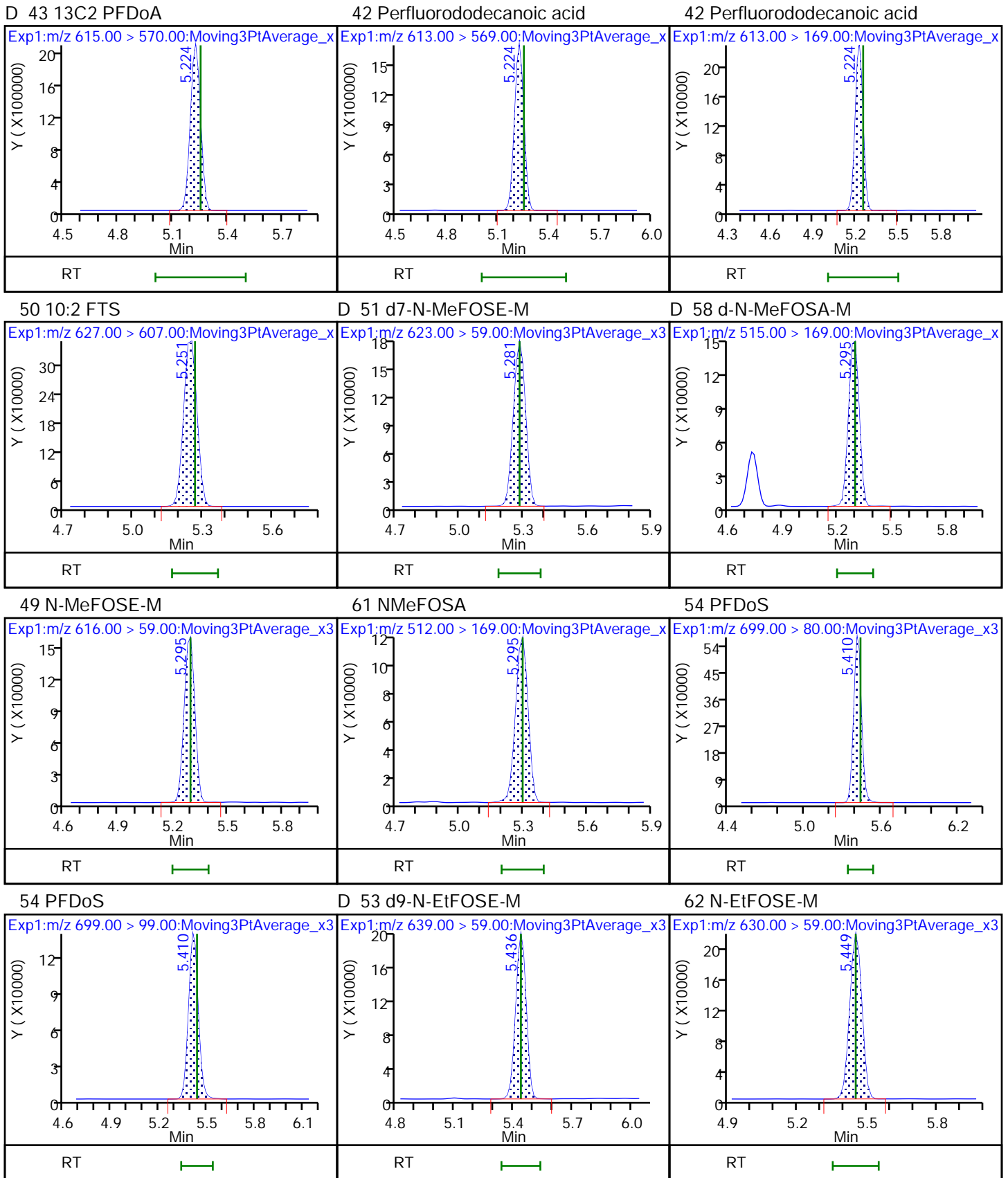


D 41 d5-NEtFOSAA

40 NEtFOSA

57 11C1FOS

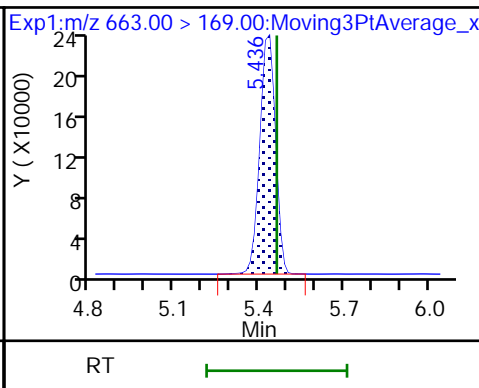
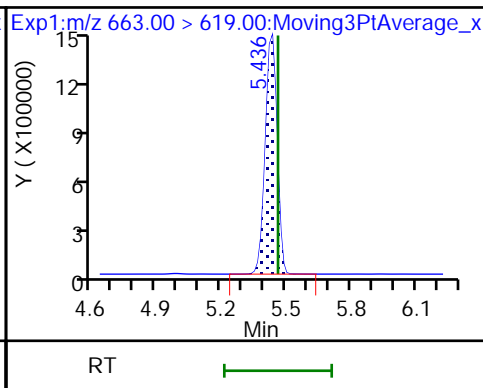
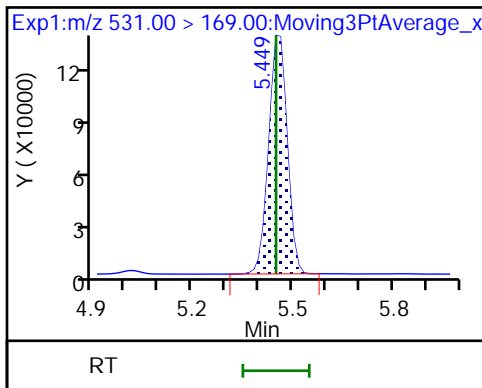




D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid

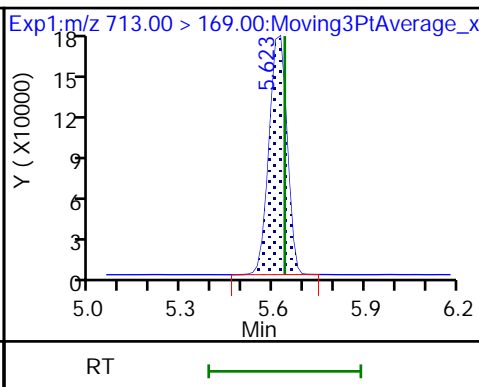
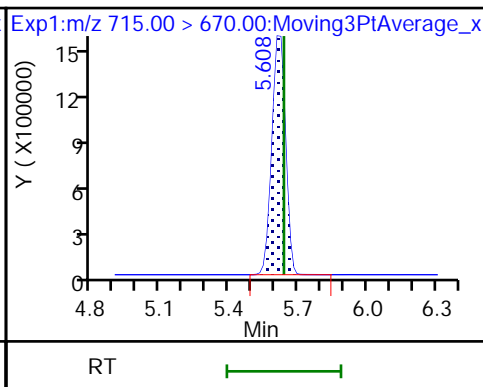
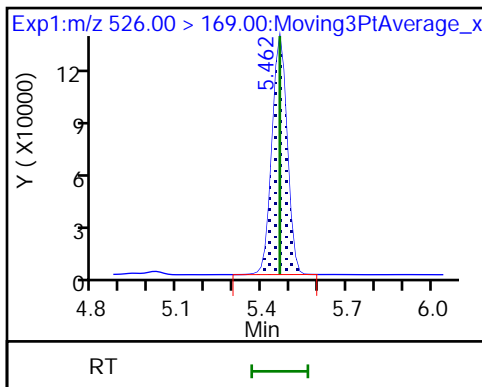
44 Perfluorotridecanoic acid



56 N-EtFOSA-M

D 46 13C2 PFTeDA

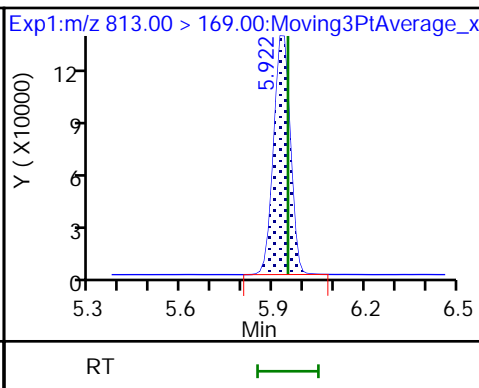
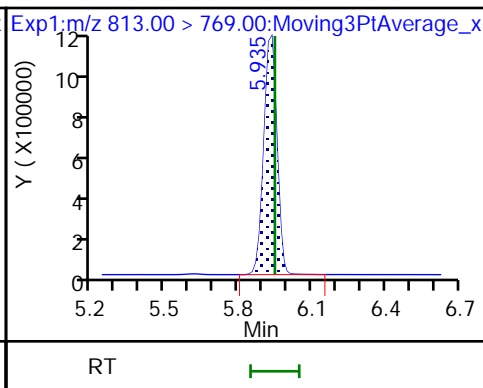
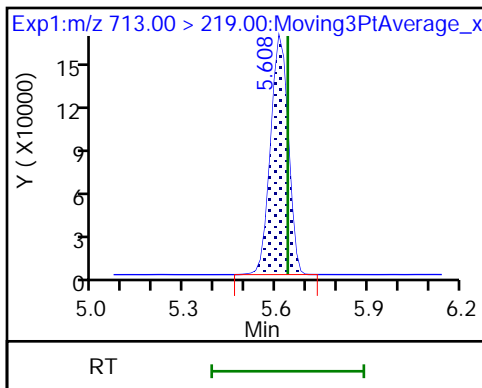
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

55 Perfluorohexadecanoic acid

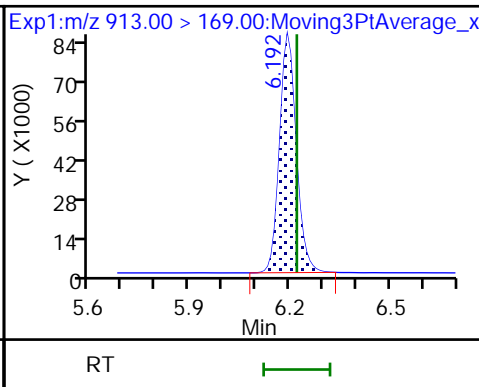
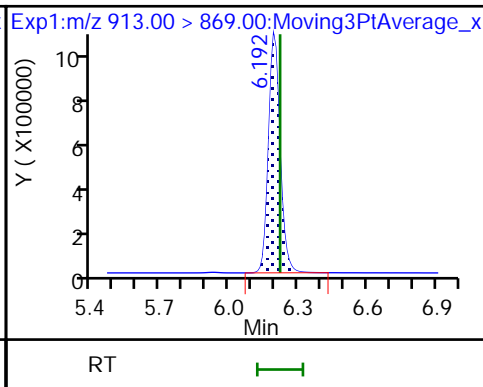
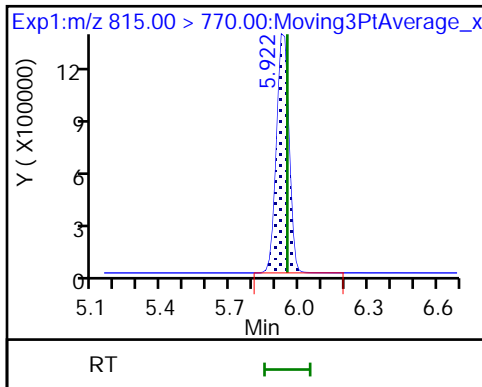
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid



Eurofins TestAmerica, Knoxville

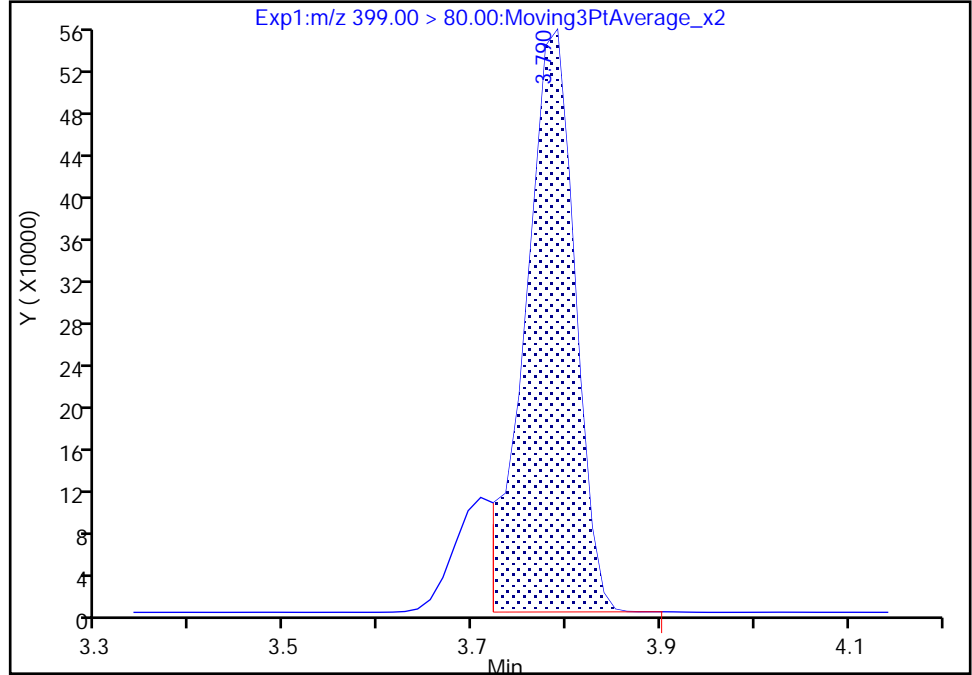
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Injection Date: 07-Oct-2021 04:57:45 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 4 Worklist Smp#: 58
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

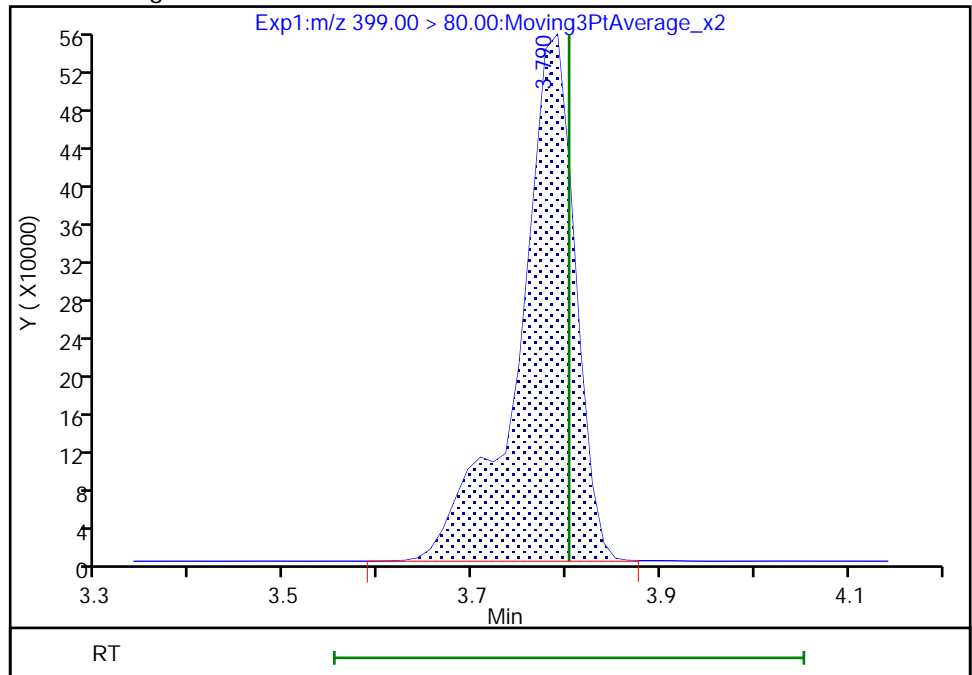
RT: 3.79
Area: 2019472
Amount: 0.774367
Amount Units: ng/ml

Processing Integration Results



RT: 3.79
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Amount: 0.892454
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:30:51
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

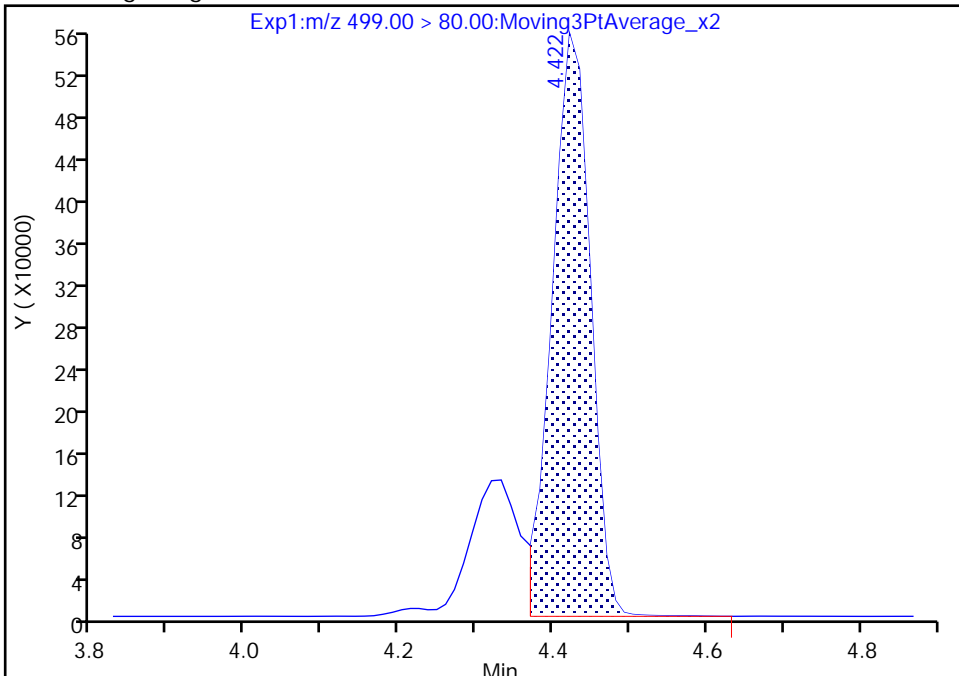
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_058.d
Injection Date: 07-Oct-2021 04:57:45 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 4 Worklist Smp#: 58
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

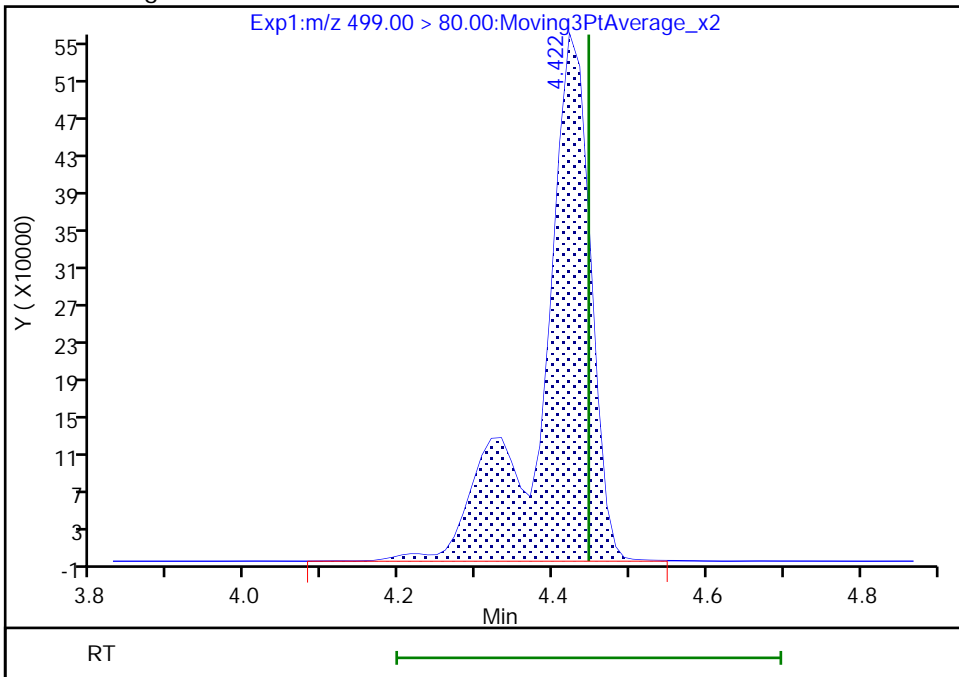
RT: 4.42
Area: 1897383
Amount: 0.685811
Amount Units: ng/ml

Processing Integration Results



RT: 4.42
Area: 2484243
Amount: 0.897932
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:31:03
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

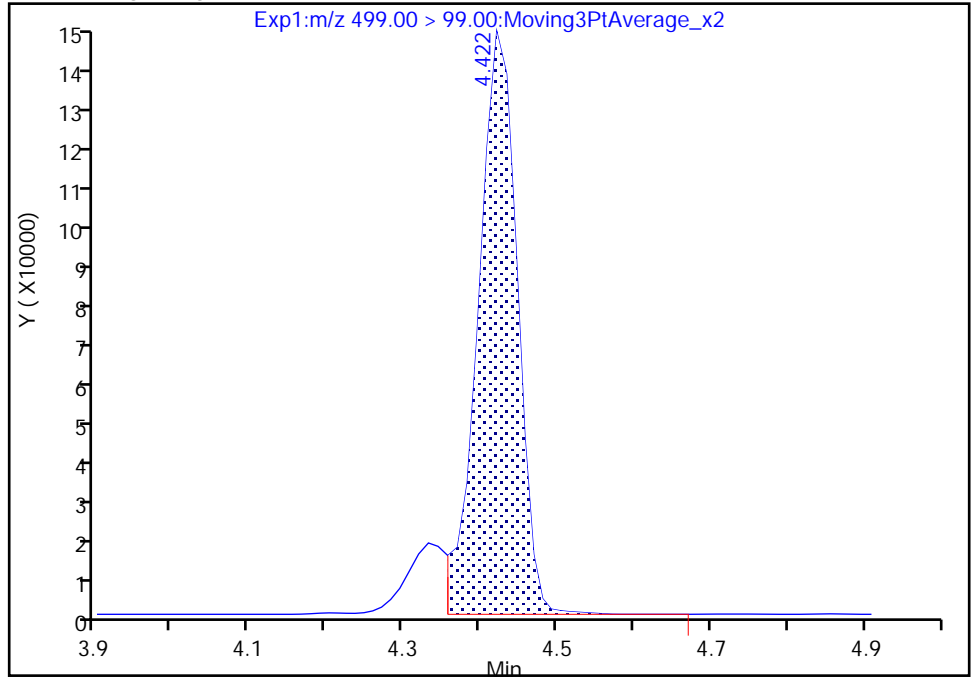
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_058.d
Injection Date: 07-Oct-2021 04:57:45 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 4 Worklist Smp#: 58
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

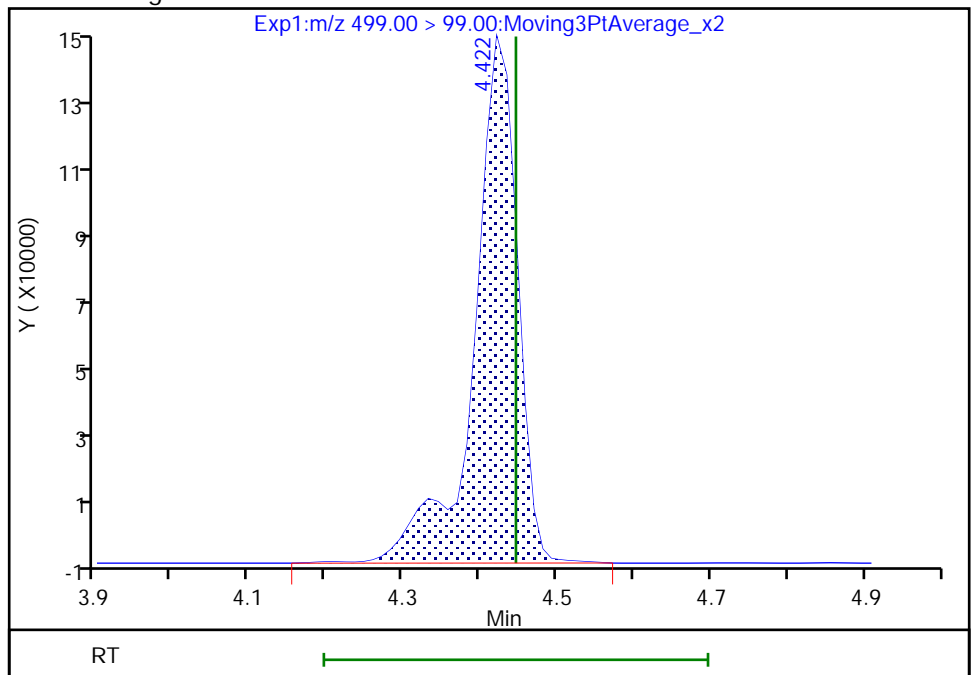
RT: 4.42
Area: 522108
Amount: 0.685811
Amount Units: ng/ml

Processing Integration Results



RT: 4.42
Area: 584679
Amount: 0.897932
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:31:08

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

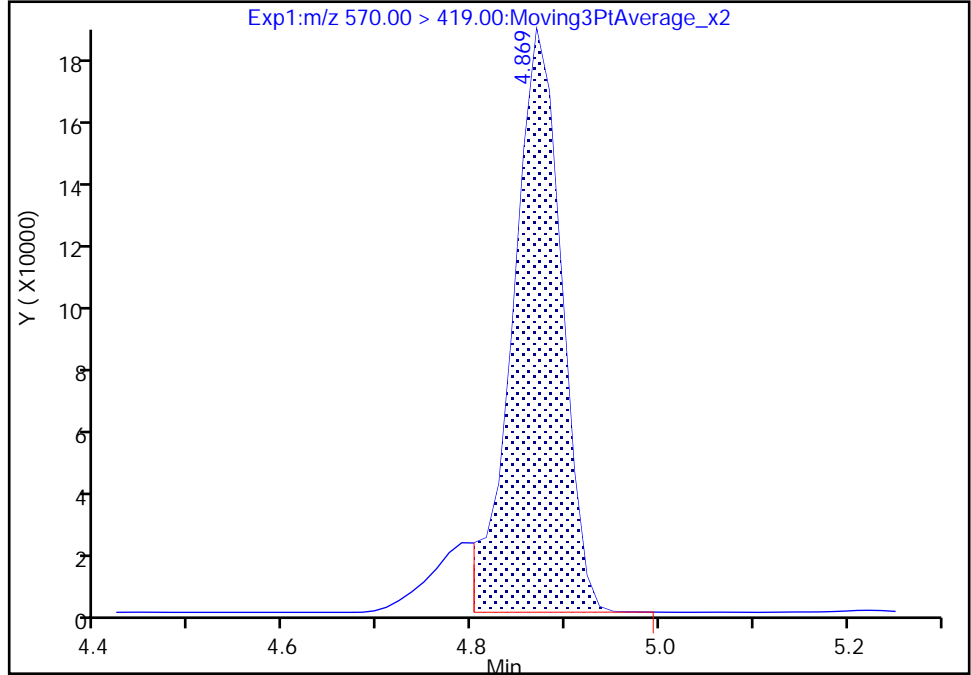
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_058.d
Injection Date: 07-Oct-2021 04:57:45 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 4 Worklist Smp#: 58
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

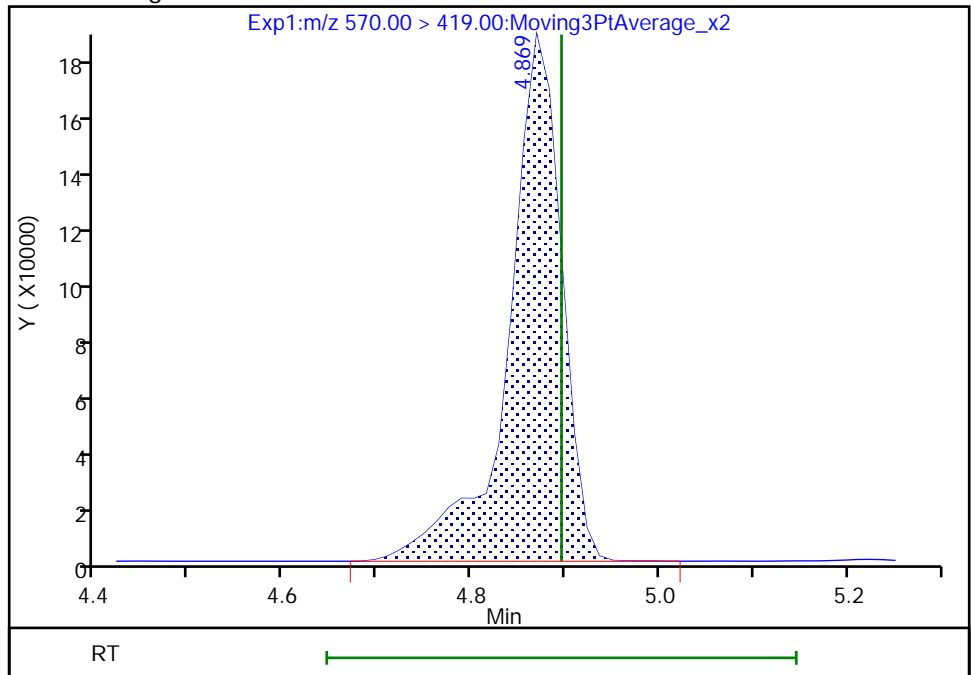
RT: 4.87
Area: 669698
Amount: 0.963352
Amount Units: ng/ml

Processing Integration Results



RT: 4.87
Area: 741826
Amount: 1.067909
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:31:18
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54568/71 Calibration Date: 10/07/2021 06:52
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _071.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7855	0.7269		2.31	2.50	-7.5	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.013	0.9413		2.32	2.50	-7.1	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.126	1.079		2.12	2.21	-4.1	40.0
4:2 FTS	AveID	2.500	2.204		2.06	2.34	-11.8	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8572	0.7821		2.28	2.50	-8.8	40.0
Perfluoropentanesulfonic acid (PFPeS)	L2ID		0.8576		2.35	2.35	0.2	50.0
HFPO-DA	L2ID		1.267		2.30	2.50	-8.2	40.0
Perfluorohexanesulfonic acid (PFHxS)	L2ID		1.280		2.15	2.28	-5.5	40.0
Perfluoroheptanoic acid (PFHpA)	L2ID		0.9925		2.35	2.50	-5.8	40.0
DONA	AveID	3.243	2.995		2.18	2.36	-7.6	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9947	0.8977		2.15	2.38	-9.8	40.0
6:2 FTS	L2ID		1.847		2.19	2.37	-7.8	40.0
Perfluorooctanoic acid (PFOA)	L2ID		1.045		2.37	2.50	-5.3	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.100	1.016		2.14	2.32	-7.6	40.0
Perfluorononanoic acid (PFNA)	L2ID		0.8255		2.48	2.50	-0.8	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	2.308	2.166		2.19	2.33	-6.1	40.0
Perfluorononanesulfonic acid (PFNS)	AveID	1.042	0.9769		2.25	2.40	-6.3	40.0
Perfluorodecanoic acid (PFDA)	L2ID		0.9377		2.48	2.50	-0.7	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9606	0.8741		2.28	2.50	-9.0	40.0
8:2 FTS	AveID	1.784	1.601		2.15	2.40	-10.2	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	L2ID		0.9213		2.52	2.50	0.6	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.9574	0.8697		2.19	2.41	-9.2	40.0
Perfluoroundecanoic acid (PFUnA)	L2ID		0.9619		2.38	2.50	-4.7	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.9494	0.8291		2.18	2.50	-12.7	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.858	1.811		2.30	2.36	-2.5	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9143		2.24	2.50	-10.3	40.0
10:2 FTS	AveID	2.221	2.306		2.50	2.41	3.8	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.117		2.42	2.50	-3.1	40.0
NMeFOSA	AveID	1.047	0.9421		2.25	2.50	-10.0	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9879	0.9253		2.27	2.42	-6.3	40.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54568/71 Calibration Date: 10/07/2021 06:52
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _071.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTrIA)	L2ID		0.8117		2.30	2.50	-7.9	50.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.219		2.42	2.50	-3.2	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.168	1.104		2.36	2.50	-5.5	40.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.1206		2.40	2.50	-4.0	40.0
Perfluorohexadecanoic acid	Q2ID		0.997		2.34	2.50	-6.6	40.0
Perfluorooctadecanoic acid	AveID	0.9076	0.8979		2.47	2.50	-1.1	40.0
13C4 PFBA	Ave	1.324	1.300		1.23	1.25	-1.9	50.0
13C5 PFPeA	Ave	1.087	1.086		1.25	1.25	-0.0	50.0
13C3 PFBS	Ave	0.7019	0.6698		1.11	1.16	-4.6	50.0
M2-4:2 FTS	Ave	0.1052	0.1156		1.28	1.17	9.8	50.0
13C2 PFHxA	Ave	1.116	1.126		1.26	1.25	0.9	50.0
13C3 HFPO-DA	Ave	0.5714	0.5736		1.26	1.25	0.4	50.0
18O2 PFHxS	Ave	0.4248	0.4001		1.11	1.18	-5.8	50.0
13C4 PFHpA	Ave	1.113	1.068		1.20	1.25	-4.1	50.0
13C4 PFOA	Ave	1.007	1.003		1.25	1.25	-0.4	50.0
M2-6:2 FTS	Ave	0.1078	0.1185		1.31	1.19	9.9	50.0
13C4 PFOS	Ave	0.5852	0.5727		1.17	1.20	-2.1	50.0
13C5 PFNA	Ave	1.279	1.261		1.23	1.25	-1.5	50.0
13C2 PFDA	Ave	1.296	1.242		1.20	1.25	-4.1	50.0
13C8 FOSA	Ave	0.8591	0.8482		1.23	1.25	-1.3	50.0
M2-8:2 FTS	Ave	0.1316	0.1357		1.23	1.20	3.1	50.0
d3-NMeFOSAA	Ave	0.1774	0.1796		1.27	1.25	1.3	50.0
13C2 PFUnA	Ave	1.237	1.258		1.27	1.25	1.7	50.0
d5-NEtFOSAA	Ave	0.1705	0.1765		1.29	1.25	3.5	50.0
13C2 PFDoA	Ave	1.319	1.358		1.29	1.25	2.9	50.0
d7-N-MeFOSE-M	Ave	0.1075	0.1169		1.36	1.25	8.7	50.0
d-N-MeFOSA-M	Ave	0.1120	0.1132		1.26	1.25	1.2	50.0
d9-N-EtFOSE-M	Ave	0.1146	0.1391		1.52	1.25	21.3	50.0
d-N-EtFOSA-M	Ave	0.0942	0.0953		1.26	1.25	1.1	50.0
13C2 PFTeDA	Ave	1.211	1.188		1.23	1.25	-1.9	50.0
13C2 PFHxDA	Ave	0.8782	0.8871		1.26	1.25	1.0	50.0
13C8 PFOA	Ave	0.9886	0.9849		1.25	1.25	-0.4	50.0
13C8 PFOS	Ave	0.1256	0.1200		1.14	1.20	-4.4	50.0

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_071.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 07-Oct-2021 06:52:14 ALS Bottle#: 17 Worklist Smp#: 71
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-071 ccv
 Misc. Info.: Plate: 11 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15

Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 17:51:24 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 17:50:07

Ratio Calibration: None

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	2.790	2.801	-0.011	0.677	7060527	1.23	98.1	17352	
2 Perfluorobutanoic acid	212.90 > 169.00	2.790	2.812	-0.022	1.000	10264580	2.31	92.5	2975	
D 3 13C5 PFPeA	267.90 > 223.00	3.102	3.129	-0.027	0.753	5902455	1.25	99.9	14741	
4 Perfluoropentanoic acid	262.90 > 219.00	3.102	3.129	-0.027	1.000	11112014	2.32	92.9	3136	
D 6 13C3 PFBS	301.90 > 80.00	3.116	3.129	-0.013	0.757	3384306	1.11	95.4	26451	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.130	3.143	-0.013	1.004	6944741	2.12	Target=3.06	95.9	29515
	298.90 > 99.00	3.130	3.143	-0.013	1.004	2619090		2.65(1.53-4.59)		10590
D 8 M2-4:2 FTS	329.00 > 81.00	3.409	3.423	-0.014	0.828	586316	1.28	110	944	
7 4:2 FTS	327.00 > 307.00	3.409	3.423	-0.014	1.000	2584109	2.06	88.2	13364	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.437	3.453	-0.016	1.103	5854810	2.35	Target=3.47	100	26360
	349.00 > 99.00	3.437	3.453	-0.016	1.103	1669553		3.51(1.73-5.20)		11548
D 9 13C2 PFHxA	315.00 > 270.00	3.437	3.469	-0.032	0.835	6118587	1.26	101	20168	
10 Perfluorohexanoic acid	313.00 > 269.00	3.437	3.469	-0.032	1.000	9570630	2.28	Target=9.74	91.2	3705
	313.00 > 119.00	3.437	3.469	-0.032	1.000	780622		12.26(4.87-14.61)		2440
D 12 13C3 HFPO-DA	287.00 > 169.00	3.535	3.561	-0.026	0.858	3116313	1.25	100	7988	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.535	3.561	-0.026	1.000	7893660	2.29		91.8	4926	
D 17 18O2 PFHxS										
403.00 > 84.00	3.778	3.803	-0.025	0.917	2056046	1.11		94.2	13763	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.778	3.803	-0.025	1.000	5061901	2.15	Target=2.96	94.5	9227	M
399.00 > 99.00	3.778	3.803	-0.025	1.000	1494599		3.39(1.48-4.44)		5831	
D 14 13C4 PFHpA										
367.00 > 322.00	3.790	3.815	-0.025	0.920	5802522	1.20		95.9	13941	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.790	3.815	-0.025	1.000	11517702	2.35	Target=3.35	94.2	6701	
363.00 > 169.00	3.790	3.815	-0.025	1.000	3652257		3.15(1.67-5.02)		14961	
68 DONA										
377.00 > 251.00	3.815	3.840	-0.025	0.863	17557116	2.17	Target=1.49	92.4	28904	
377.00 > 85.00	3.815	3.840	-0.025	0.863	9928657		1.77(0.74-2.23)		7018	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.107	4.143	-0.036	0.929	5317802	2.15	Target=3.73	90.2	8173	
449.00 > 99.00	4.107	4.143	-0.036	0.929	1397209		3.81(1.87-5.61)		7700	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.107	4.143	-0.036	0.997	5350927	1.25		99.6	23037	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.119	4.143	-0.024	1.000	611525	1.31		110	3382	
19 6:2 FTS										
427.00 > 407.00	4.119	4.143	-0.024	1.000	2253968	2.18		92.2	10756	
D 21 13C4 PFOA										
417.00 > 372.00	4.119	4.155	-0.036	1.000	5447630	1.25		99.6	44334	
* 22 13C2 PFOA										
415.00 > 370.00	4.119	4.155	-0.036		5432689	1.25			29152	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.119	4.155	-0.036	1.000	11387776	2.37	Target=2.40	94.7	5135	
413.00 > 169.00	4.119	4.155	-0.036	1.000	4415820		2.58(1.20-3.61)		6656	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.409	4.447	-0.037	1.070	623487	1.14		95.6	4205	
D 25 13C4 PFOS										
503.00 > 80.00	4.422	4.447	-0.024	1.074	2974289	1.17		97.9	6126	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.422	4.447	-0.024	1.000	5869457	2.14	Target=3.83	92.4	13506	M
499.00 > 99.00	4.422	4.447	-0.024	1.000	1343232		4.37(1.91-5.74)		3421	M
D 27 13C5 PFNA										
468.00 > 423.00	4.434	4.470	-0.036	1.077	6849859	1.23		98.5	19137	
26 Perfluorononanoic acid										
463.00 > 419.00	4.434	4.470	-0.036	1.000	11309560	2.48	Target=3.68	99.2	7342	
463.00 > 169.00	4.434	4.470	-0.036	1.000	2501551		4.52(1.84-5.52)		6298	
63 9CIFOS										
531.00 > 351.00	4.572	4.596	-0.024	1.110	12561724	2.19		93.9	20268	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.696	4.722	-0.026	1.062	5835672	2.25	Target=3.97	93.7	9947	
549.00 > 99.00	4.696	4.722	-0.026	1.062	1475449		3.96(1.99-5.96)		6678	
D 34 13C8 FOSA										
506.00 > 78.00	4.722	4.736	-0.014	1.147	4607797	1.23		98.7	6136	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.722	4.736	-0.014	1.000	8055267	2.27		91.0	10057	
D 32 13C2 PFDA										
515.00 > 470.00	4.722	4.749	-0.027	1.147	6748252	1.20		95.9	16640	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.722	4.749	-0.027	1.000	12656110	2.48	Target=10.11	99.3	5648	
513.00 > 169.00	4.722	4.749	-0.027	1.000	1042792		12.14(5.06-15.17)		738	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.736	4.763	-0.027	1.150	706213	1.23		103	2905	
31 8:2 FTS										
527.00 > 507.00	4.736	4.763	-0.027	1.000	2261606	2.15		89.8	8051	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.869	4.896	-0.027	1.182	975914	1.27		101	953	
36 NMeFOSAA										
570.00 > 419.00	4.869	4.896	-0.027	1.000	1798203	2.52		101	2025	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.965	4.993	-0.028	1.123	5216548	2.19	Target=3.80	90.8	15369	
599.00 > 99.00	4.965	4.993	-0.028	1.123	1398571		3.73(1.90-5.70)		4327	
D 39 13C2 PFUnA										
565.00 > 520.00	4.979	5.022	-0.043	1.209	6832124	1.27		102	24455	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.979	5.022	-0.043	1.000	13143977	2.38	Target=7.45	95.3	11989	
563.00 > 169.00	4.979	5.022	-0.043	1.000	1441364		9.12(3.78-11.33)		4853	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.993	5.036	-0.043	1.212	959126	1.29		104	4331	
40 NEtFOSA										
584.00 > 419.00	5.007	5.036	-0.029	1.003	1590360	2.18		87.3	1044	
57 11C1FOS										
631.00 > 451.00	5.093	5.119	-0.026	1.152	10615417	2.30		97.5	21321	
D 43 13C2 PFDaA										
615.00 > 570.00	5.224	5.251	-0.027	1.268	7375845	1.29		103	24919	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.224	5.251	-0.027	1.000	13488033	2.24	Target=5.33	89.7	6063	
613.00 > 169.00	5.224	5.251	-0.027	1.000	1987031		6.79(2.66-7.99)		6750	
50 10:2 FTS										
627.00 > 607.00	5.237	5.266	-0.029	1.106	3277760	2.50		104	7361	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.281	5.281	0.0	1.282	634914	1.36		109	368	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.281	5.295	-0.014	1.282	615213	1.26		101	42.1	
49 N-MeFOSE-M										
616.00 > 59.00	5.281	5.295	-0.014	1.000	1418497	2.42		96.9	1262	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.295	5.295	0.0	1.003	1159144	2.25		90.0	731	
54 PFDoS										
699.00 > 80.00	5.410	5.436	-0.026	1.223	5573527	2.27	Target=4.32	93.7	11163	
699.00 > 99.00	5.410	5.436	-0.026	1.223	1285687		4.34(2.19-6.58)		7495	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.436	5.436	0.0	1.320	755516	1.52		121	497	
62 N-EtFOSE-M										
630.00 > 59.00	5.449	5.449	0.0	1.002	1841865	2.42		96.8	3785	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.449	5.449	0.0	1.323	517581	1.26		101	648	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.423	5.462	-0.039	1.038	11974323	2.30	Target=5.66	92.1	5089	
663.00 > 169.00	5.423	5.462	-0.039	1.038	1976723		6.06(2.83-8.48)		6922	
56 N-EtFOSA-M										
526.00 > 169.00	5.462	5.462	0.0	1.002	1142777	2.36		94.5	612	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.608	5.637	-0.029	1.362	6453605	1.23		98.1	14156	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.608	5.637	-0.029	1.000	1556363	2.40	Target=1.07	96.0	7570	
713.00 > 219.00	5.608	5.637	-0.029	1.000	1523628		1.02(0.53-1.60)		13000	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.922	5.948	-0.026	1.000	9608552	2.34	Target=7.50	93.4	5222	
813.00 > 169.00	5.922	5.948	-0.026	1.000	1170190		8.21(3.75-11.26)		5122	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.922	5.948	-0.026	1.438	4819119	1.26		101	11065	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.192	6.221	-0.029	1.045	8654292	2.47	Target=9.98	98.9	4350	
913.00 > 169.00	6.192	6.221	-0.029	1.045	726245		11.92(5.14-15.41)		2720	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L5PFC2_00002

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_071.d

Injection Date: 07-Oct-2021 06:52:14

Instrument ID: LCA

Lims ID: CCV

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 17

Worklist Smp#: 71

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

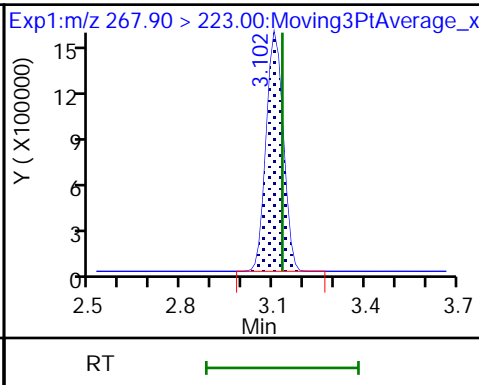
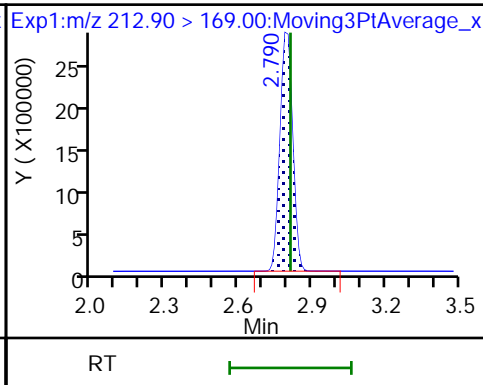
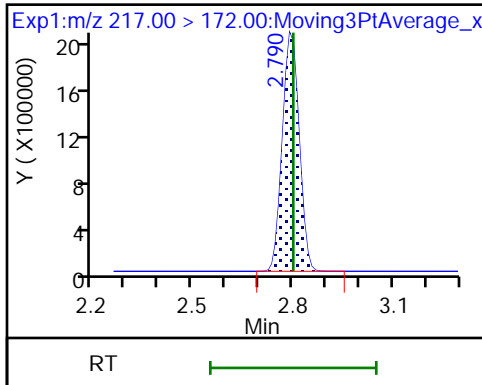
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

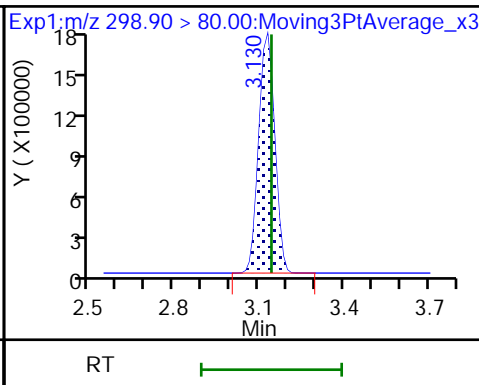
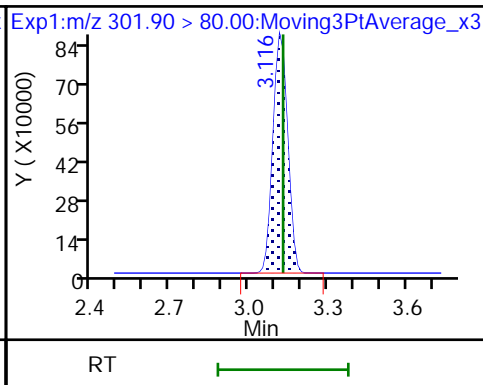
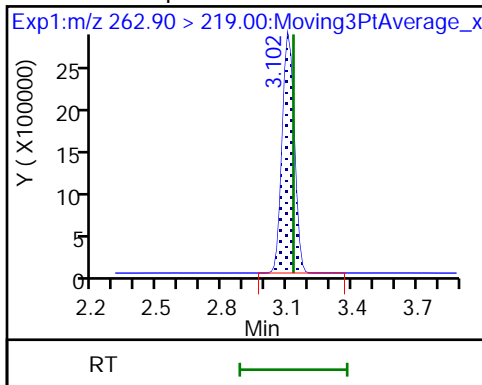
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

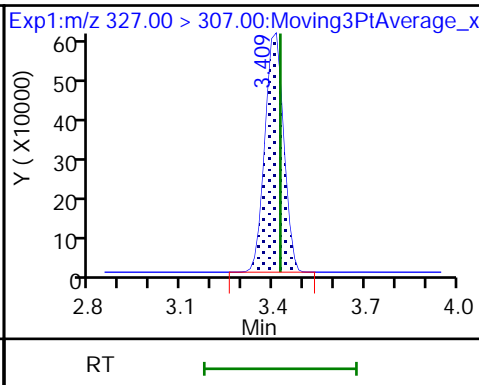
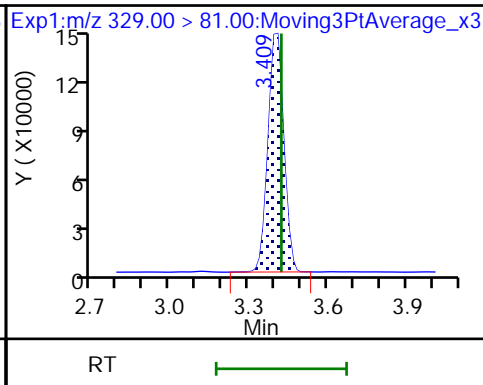
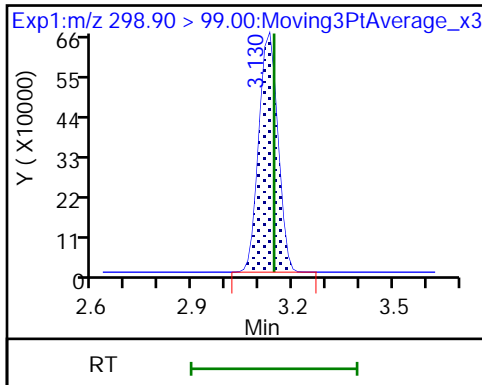
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

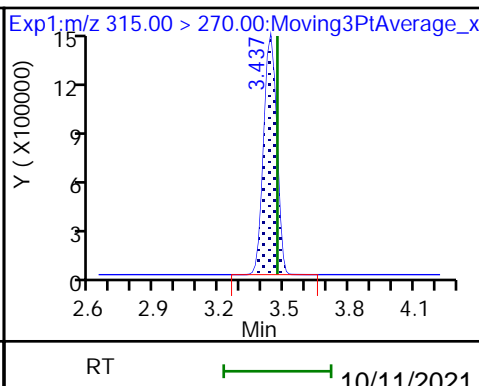
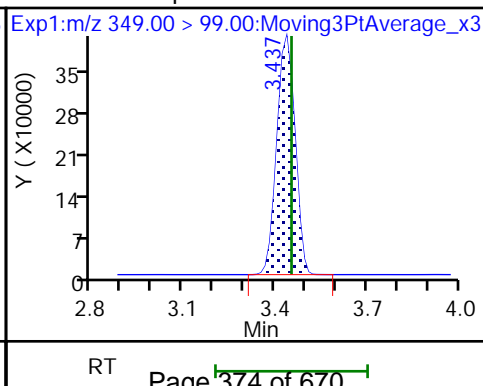
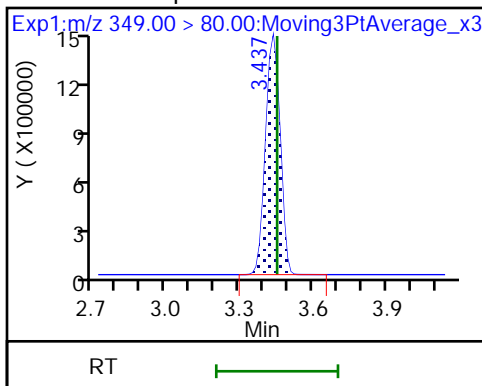
7 4:2 FTS

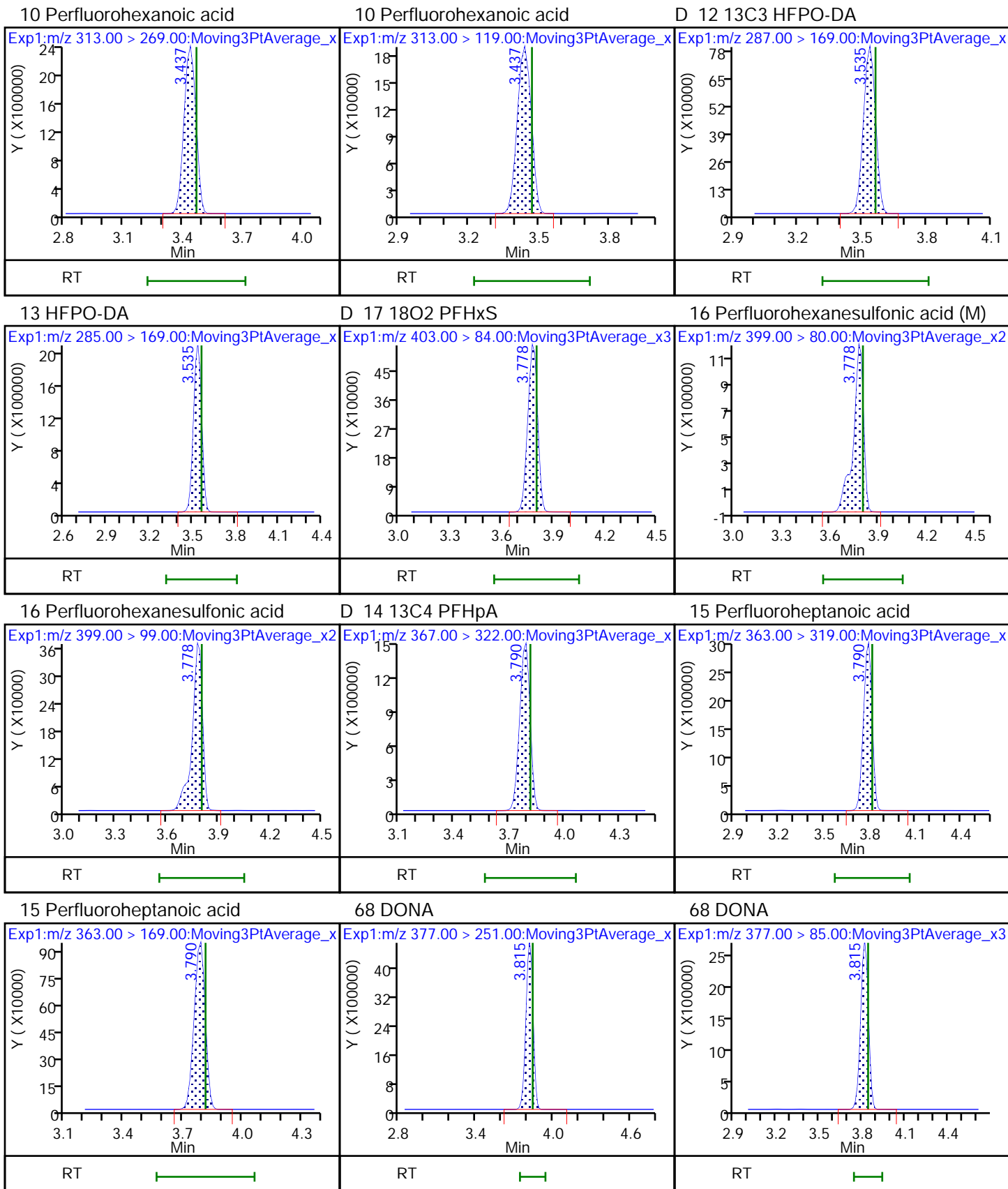


11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA

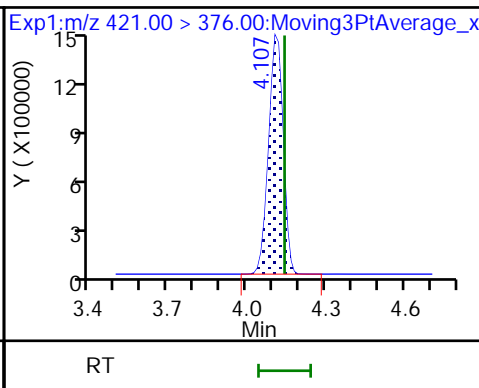
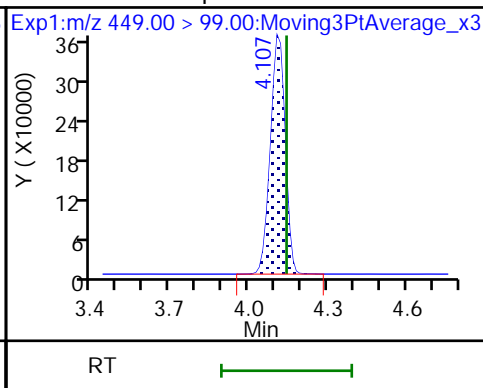
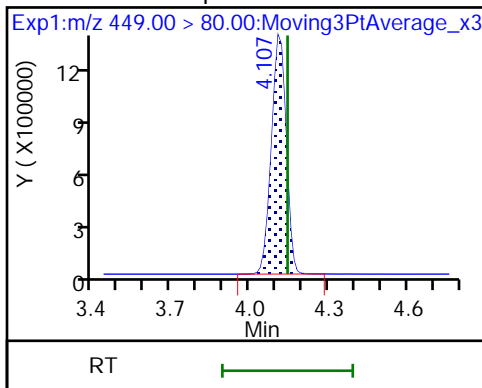




20 Perfluoroheptanesulfonic acid

20 Perfluoroheptanesulfonic acid

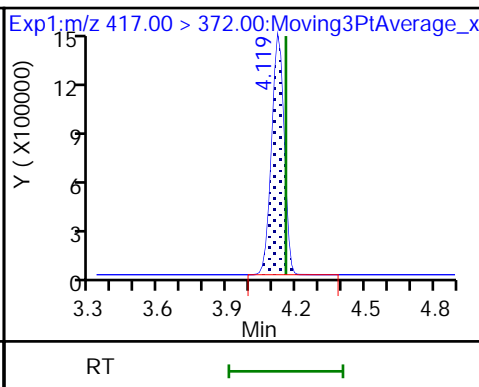
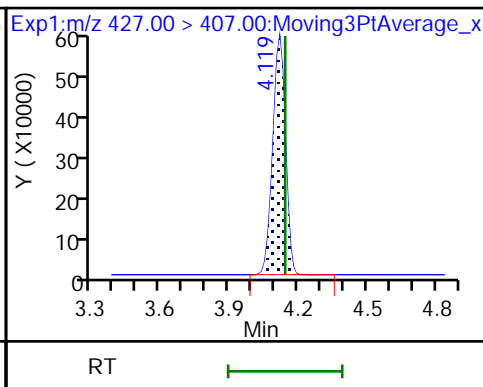
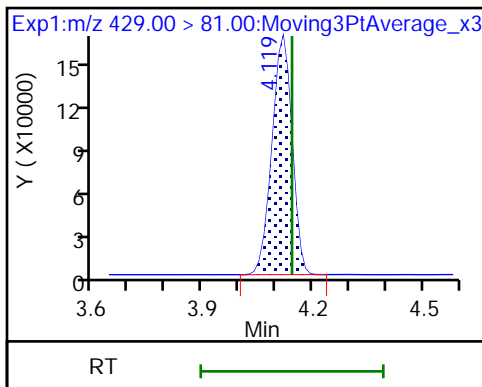
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D 18 M2-6:2 FTS

19 6:2 FTS

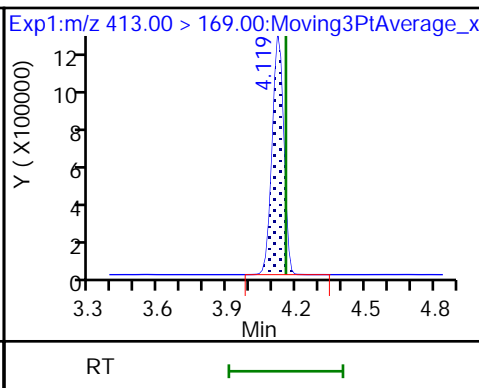
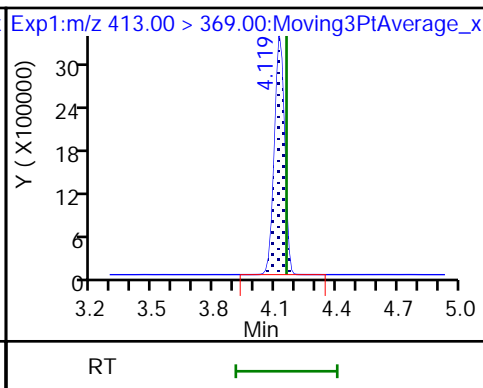
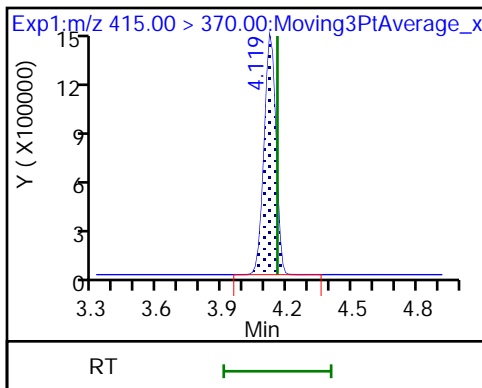
D 21 13C4 PFOA



* 22 13C2 PFOA

23 Perfluorooctanoic acid

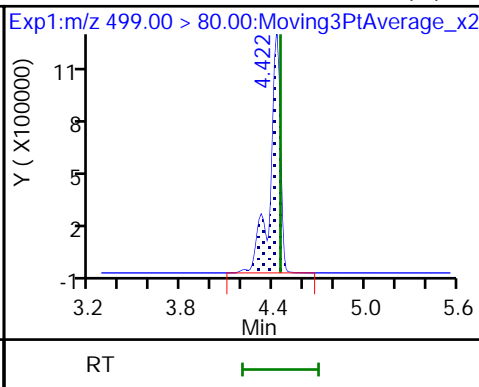
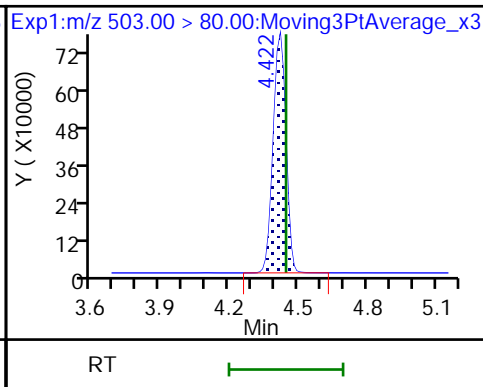
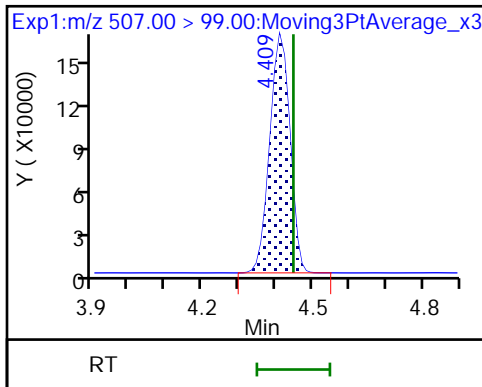
23 Perfluorooctanoic acid



\$ 47 13C8 PFOS

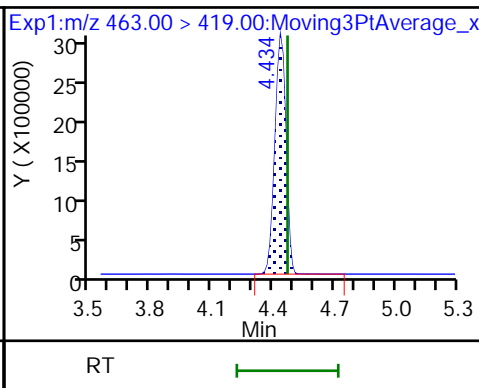
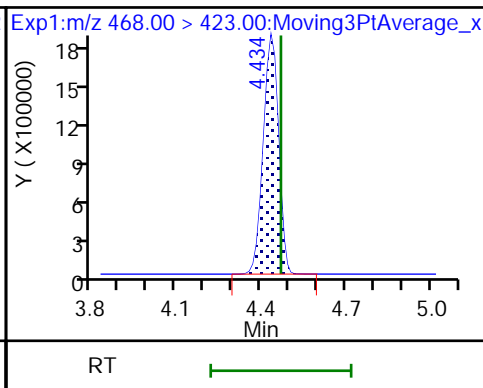
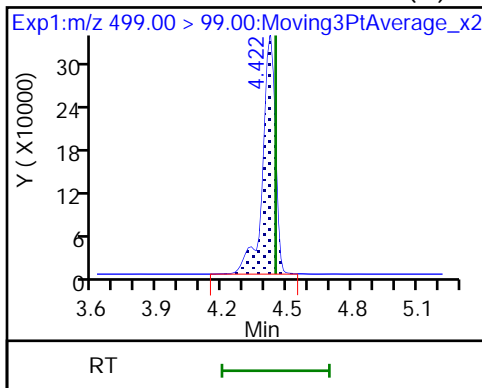
D 25 13C4 PFOS

24 Perfluorooctanesulfonic acid (M)



24 Perfluorooctanesulfonic acid (M) D 27 13C5 PFNA

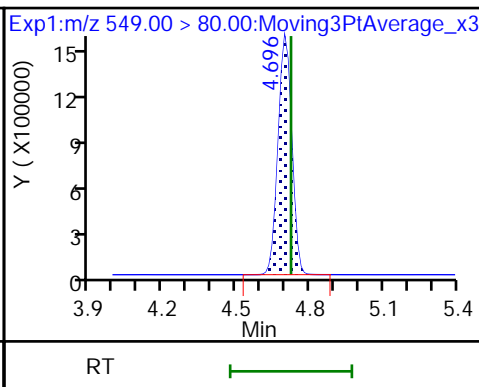
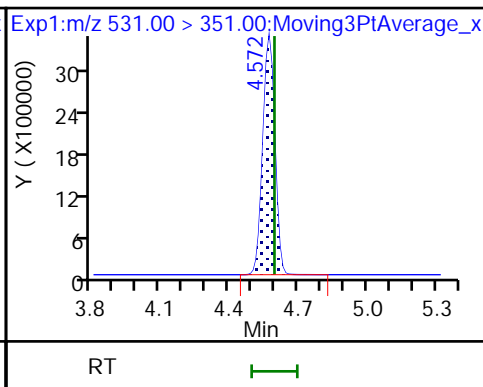
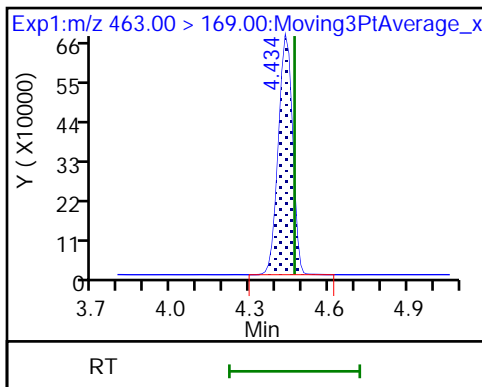
26 Perfluorononanoic acid



26 Perfluorononanoic acid

63 9CIFOS

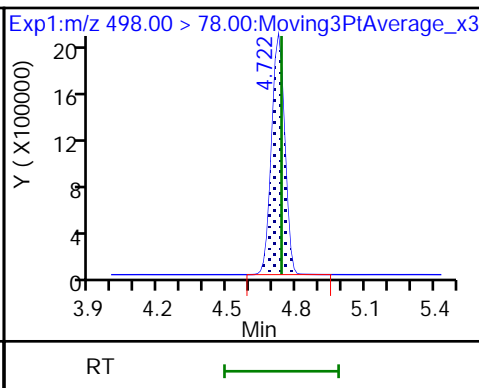
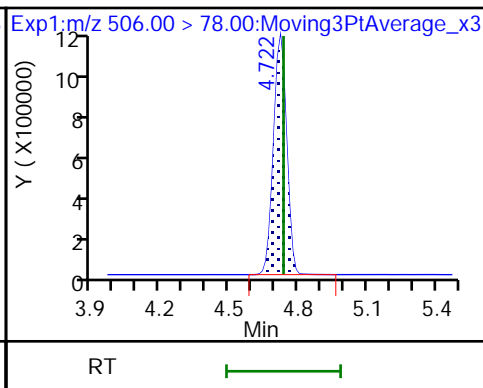
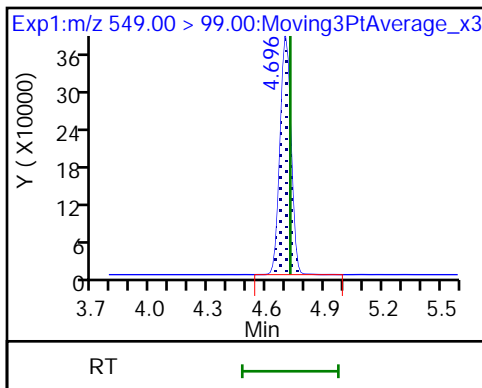
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

D 34 13C8 FOSA

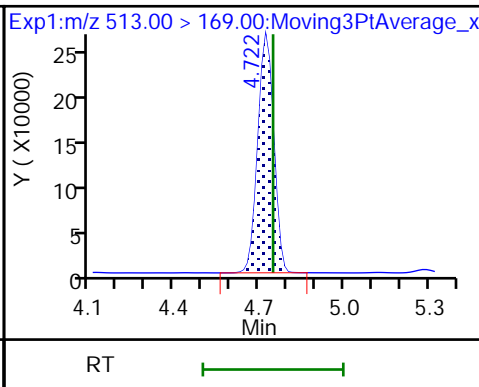
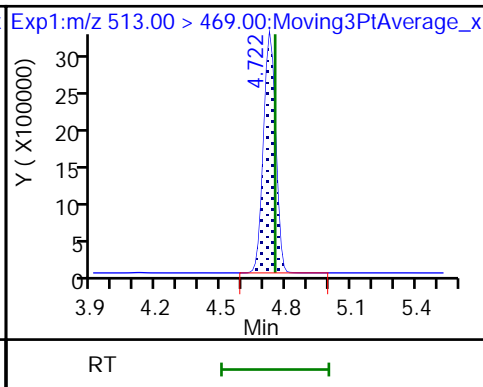
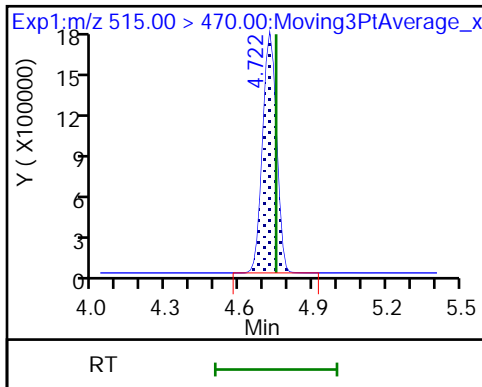
33 Perfluorooctanesulfonamide



D 32 13C2 PFDA

29 Perfluorodecanoic acid

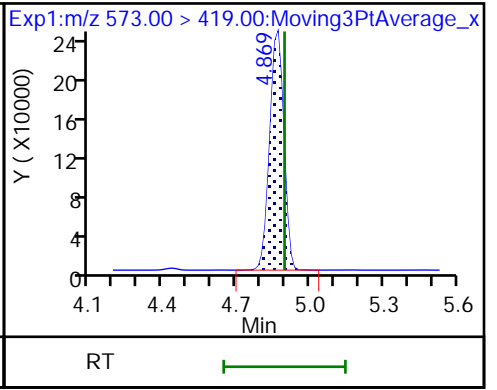
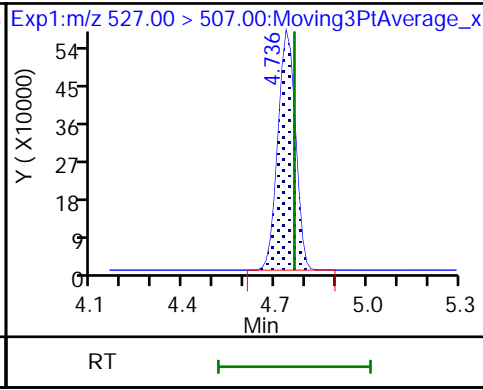
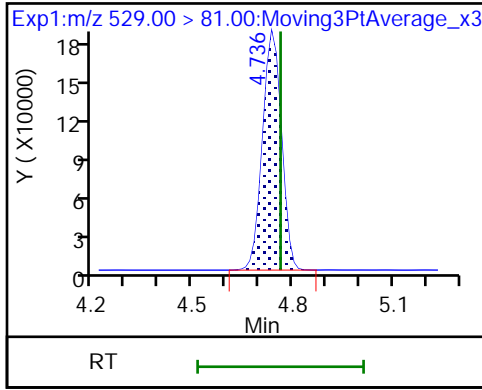
29 Perfluorodecanoic acid



D 30 M2-8:2 FTS

31 8:2 FTS

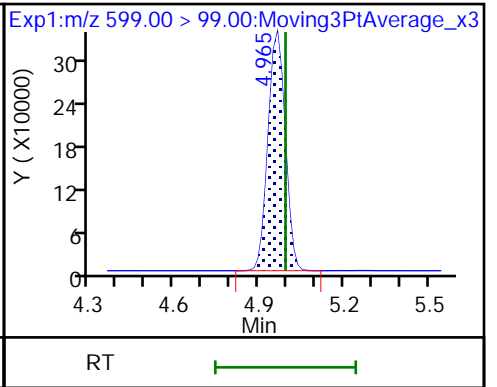
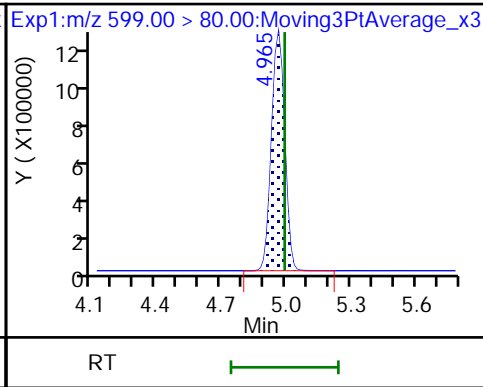
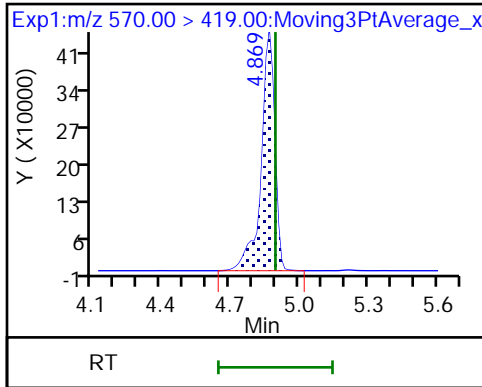
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

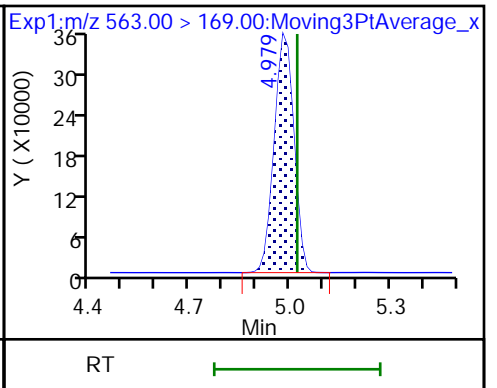
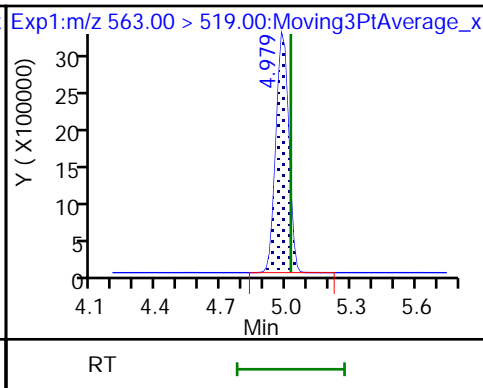
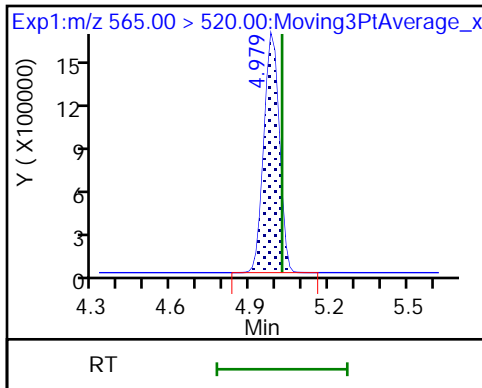
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

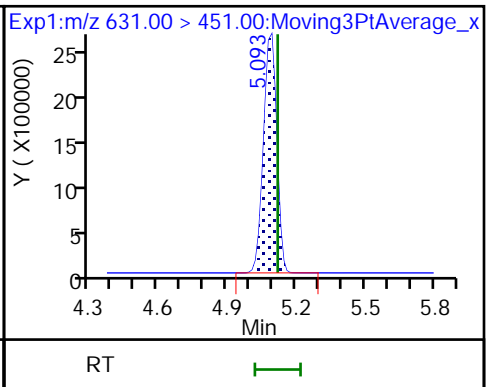
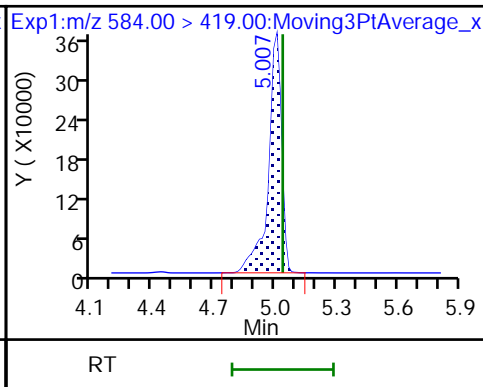
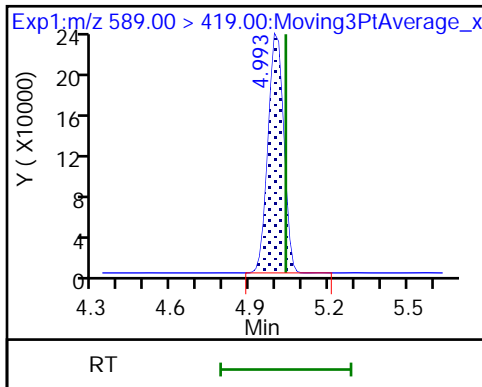
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA

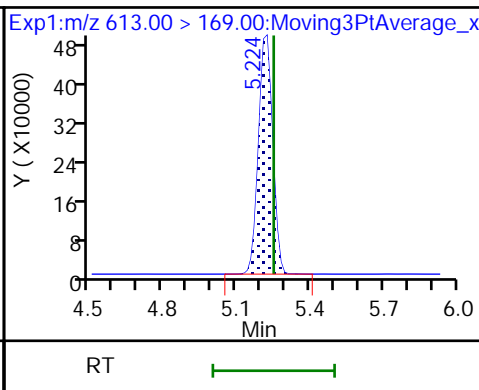
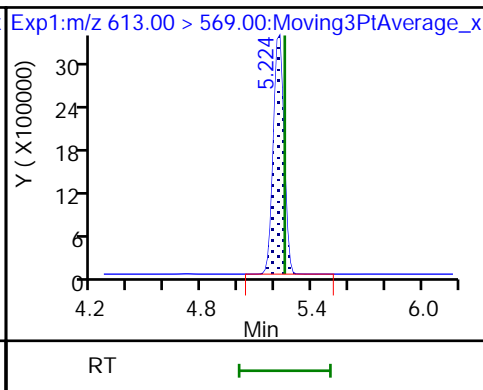
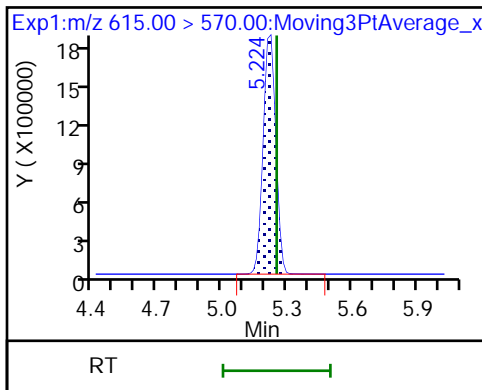
57 11C1FOS



D 43 13C2 PFDaA

42 Perfluorododecanoic acid

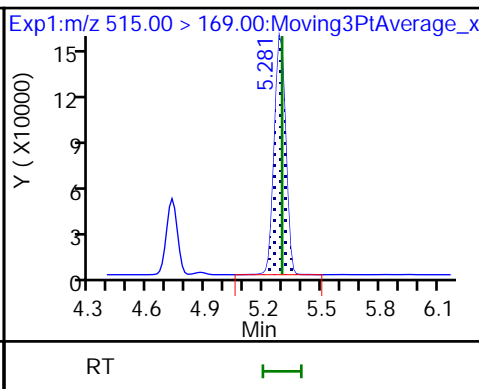
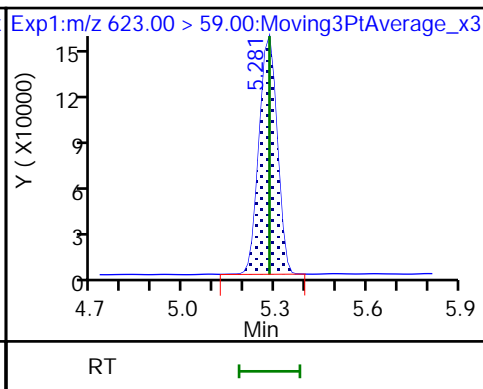
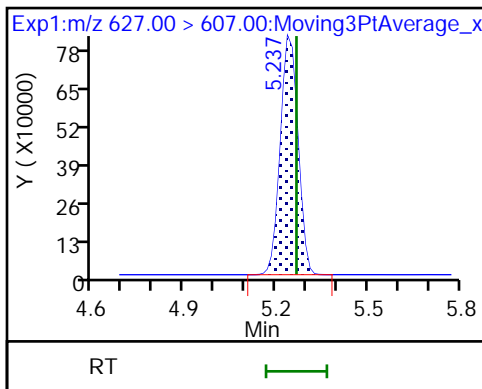
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

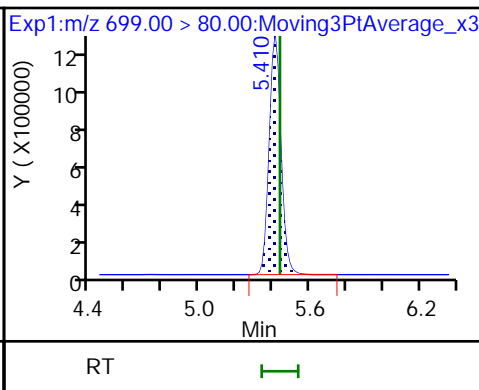
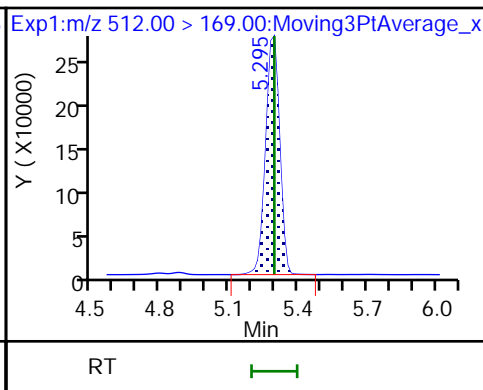
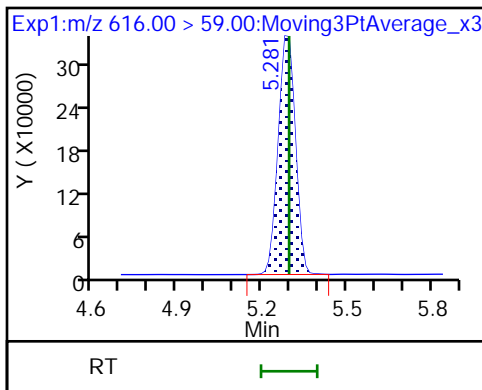
D 58 d-N-MeFOSEA-M



49 N-MeFOSE-M

61 NMeFOSEA

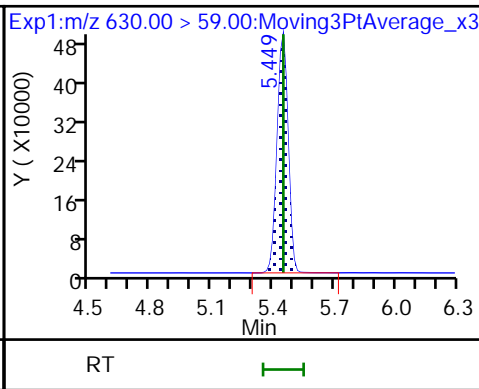
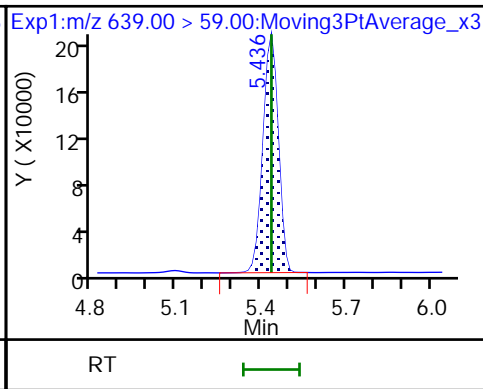
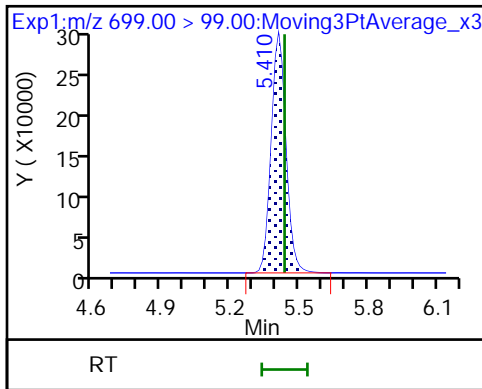
54 PFDoS



54 PFDoS

D 53 d9-N-EtFOSE-M

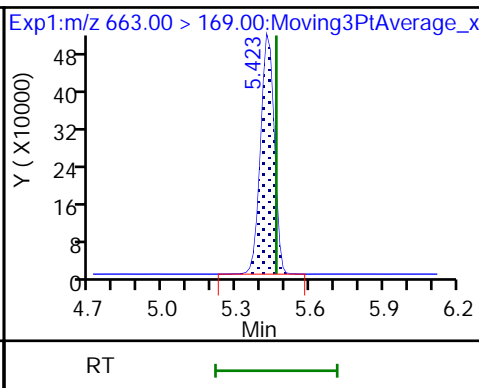
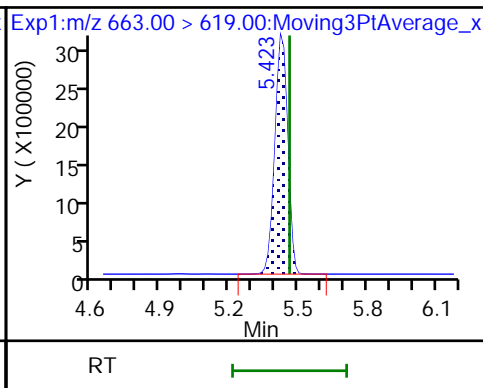
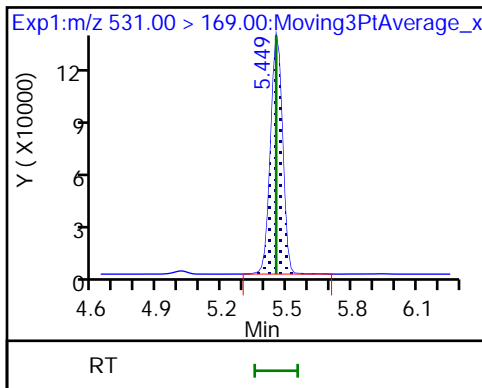
62 N-EtFOSE-M



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid

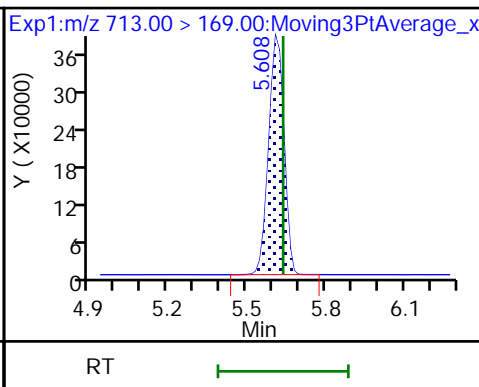
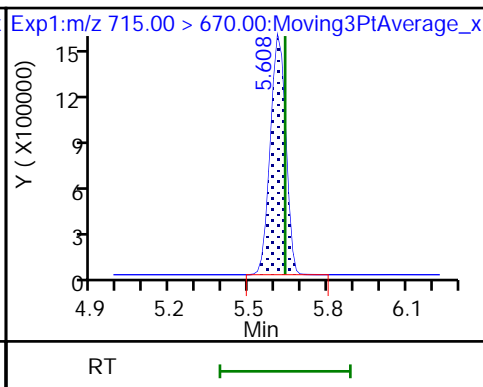
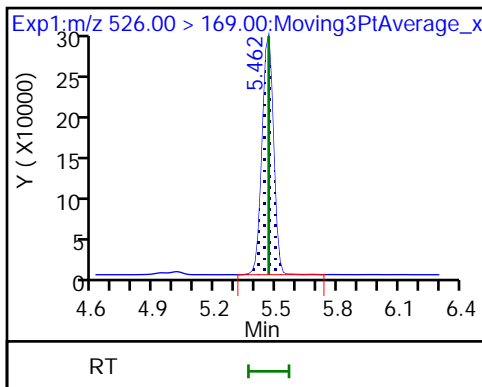
44 Perfluorotridecanoic acid



56 N-EtFOSA-M

D 46 13C2 PFTeDA

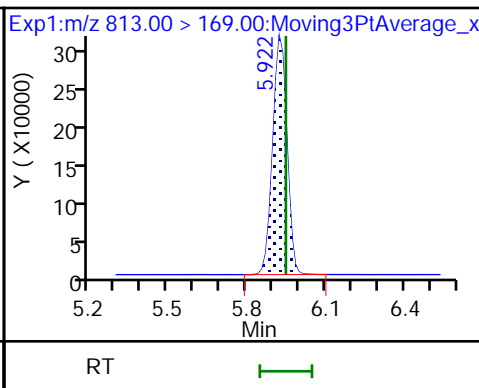
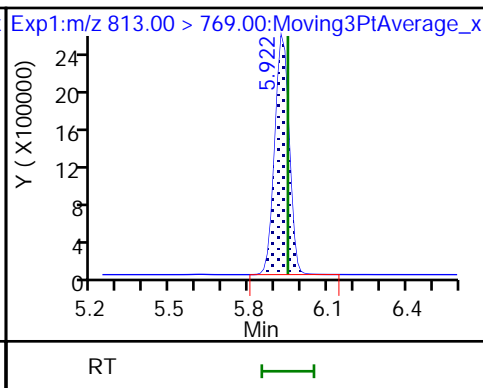
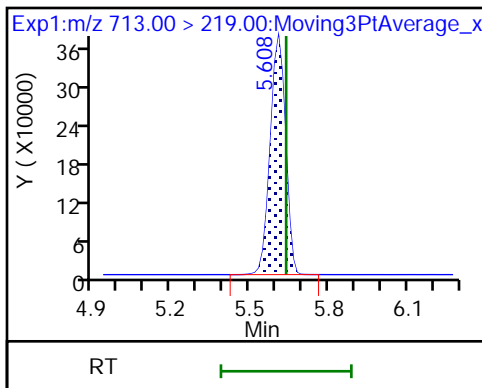
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

55 Perfluorohexadecanoic acid

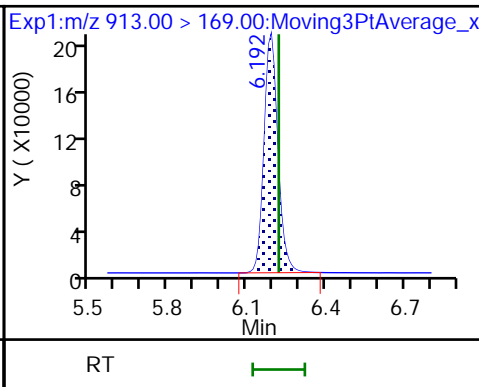
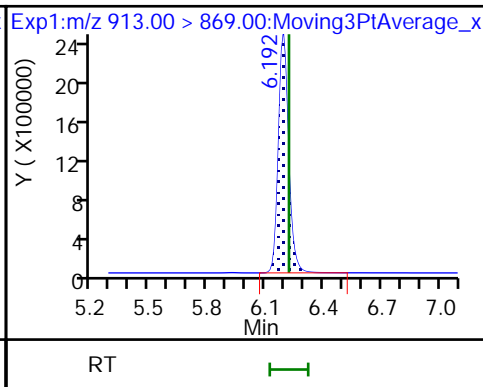
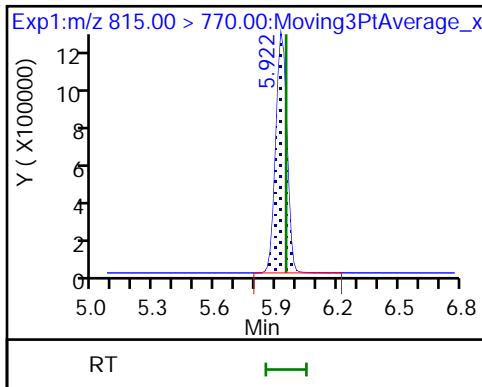
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid



Eurofins TestAmerica, Knoxville

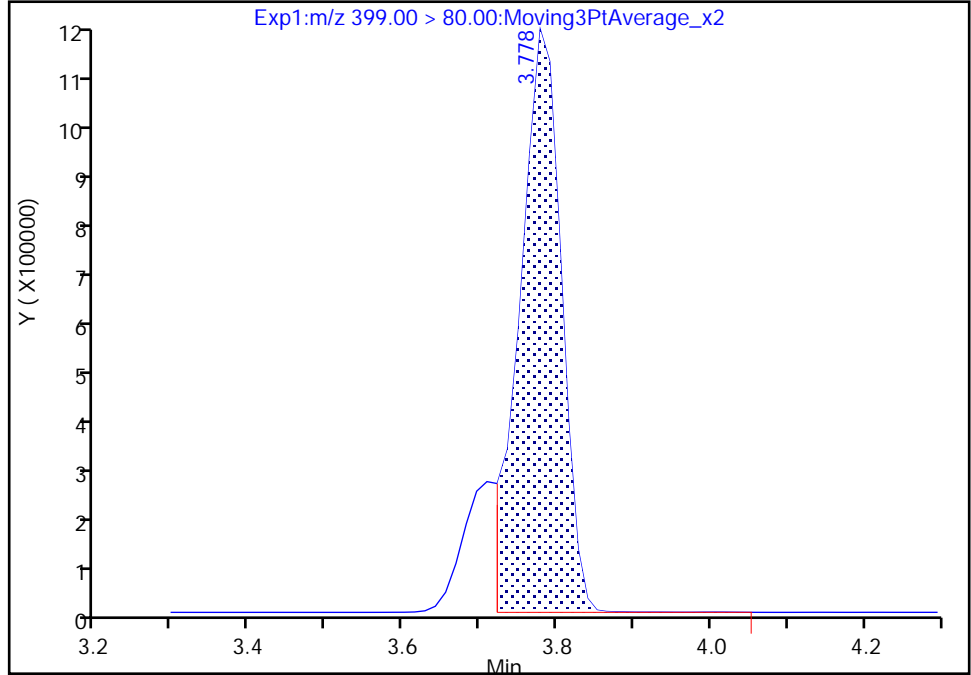
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_071.d
Injection Date: 07-Oct-2021 06:52:14 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 17 Worklist Smp#: 71
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

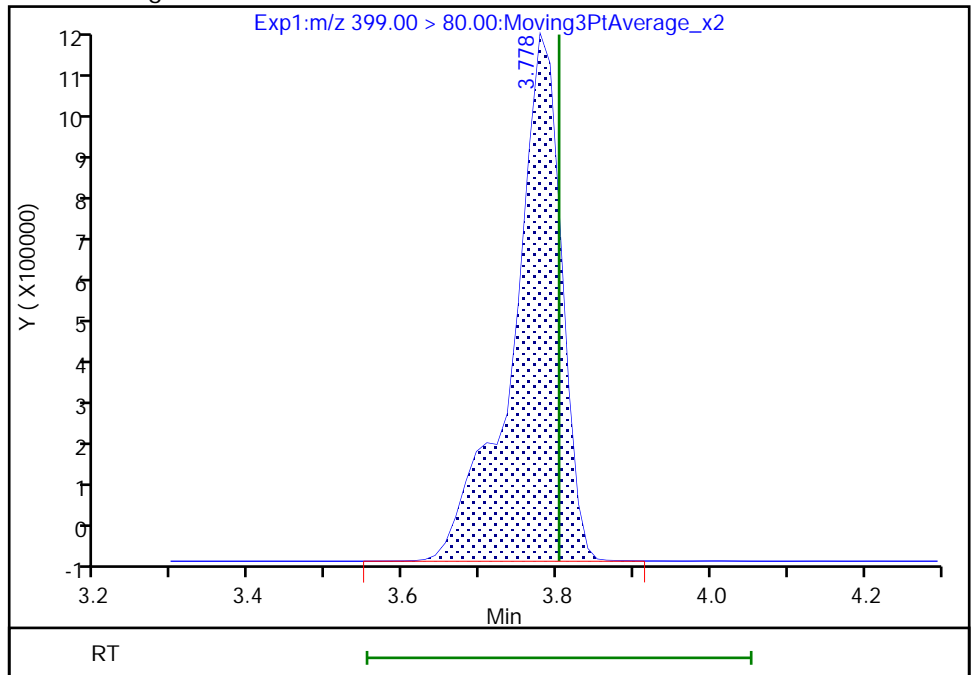
RT: 3.78
Area: 4293529
Amount: 1.822565
Amount Units: ng/ml

Processing Integration Results



RT: 3.78
Area: 5061901
Amount: 2.149644
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:49:27
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

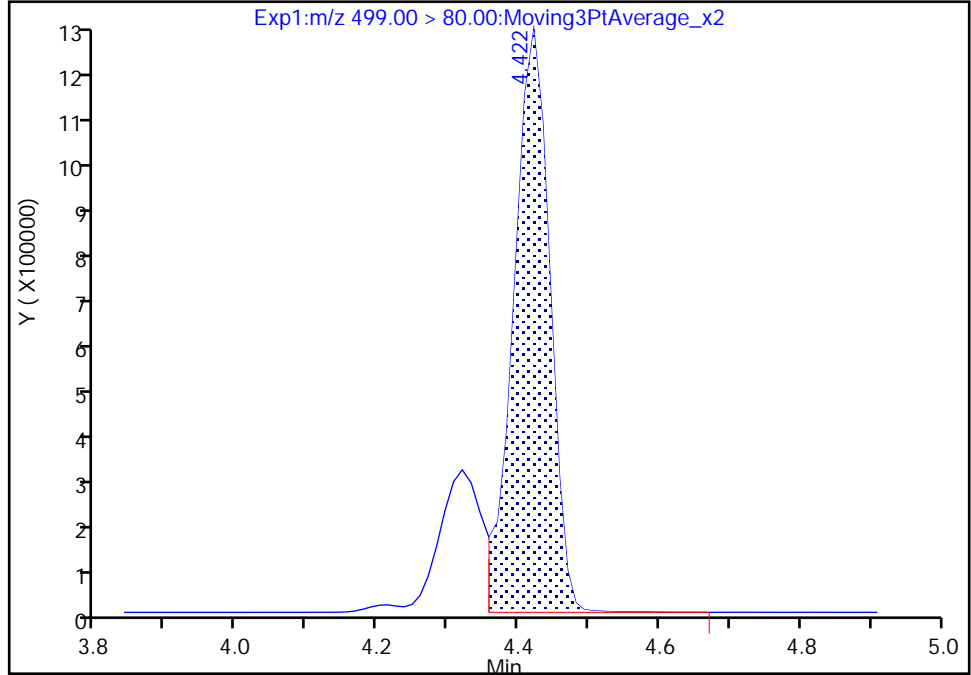
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Injection Date: 07-Oct-2021 06:52:14 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 17 Worklist Smp#: 71
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

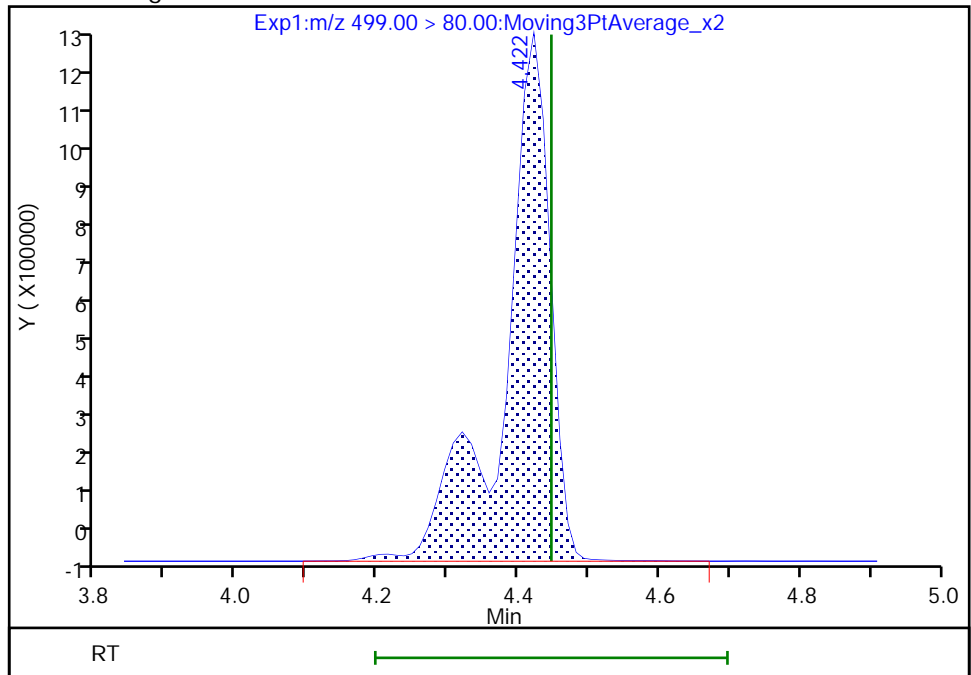
RT: 4.42
Area: 4559619
Amount: 1.665771
Amount Units: ng/ml

Processing Integration Results



RT: 4.42
Area: 5869457
Amount: 2.144296
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:49:38
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

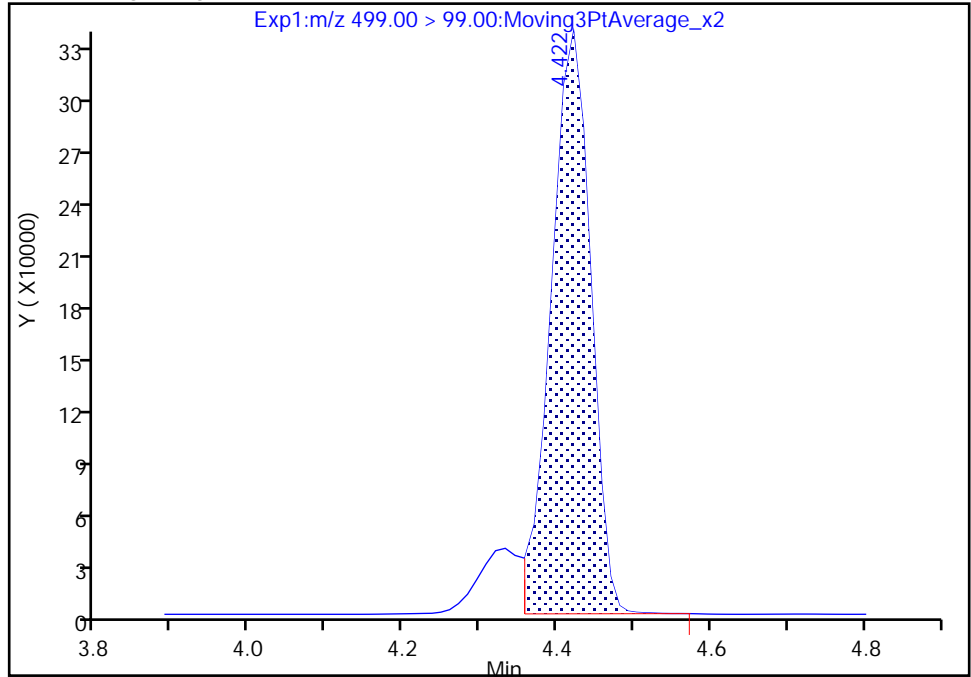
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_071.d
Injection Date: 07-Oct-2021 06:52:14 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 17 Worklist Smp#: 71
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

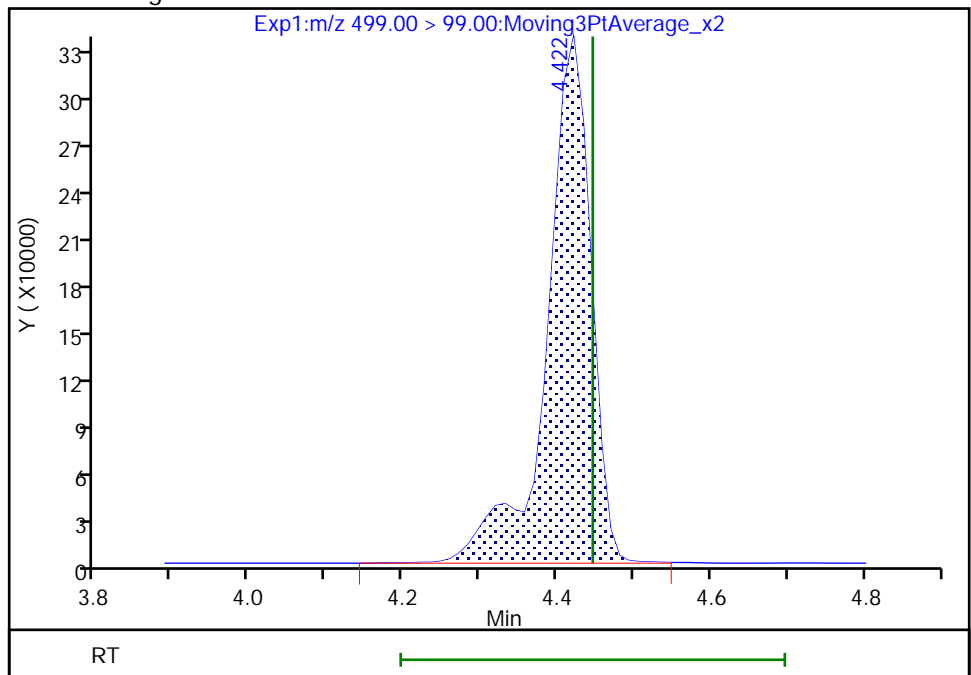
RT: 4.42
Area: 1193201
Amount: 1.665771
Amount Units: ng/ml

Processing Integration Results



RT: 4.42
Area: 1343232
Amount: 2.144296
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:49:44

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

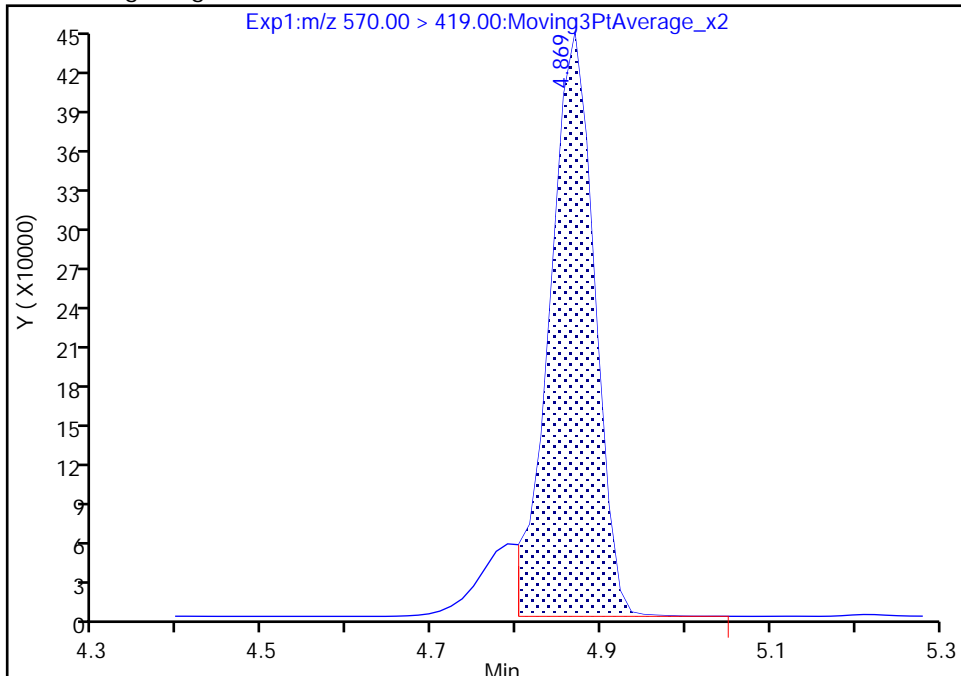
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Injection Date: 07-Oct-2021 06:52:14 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 17 Worklist Smp#: 71
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

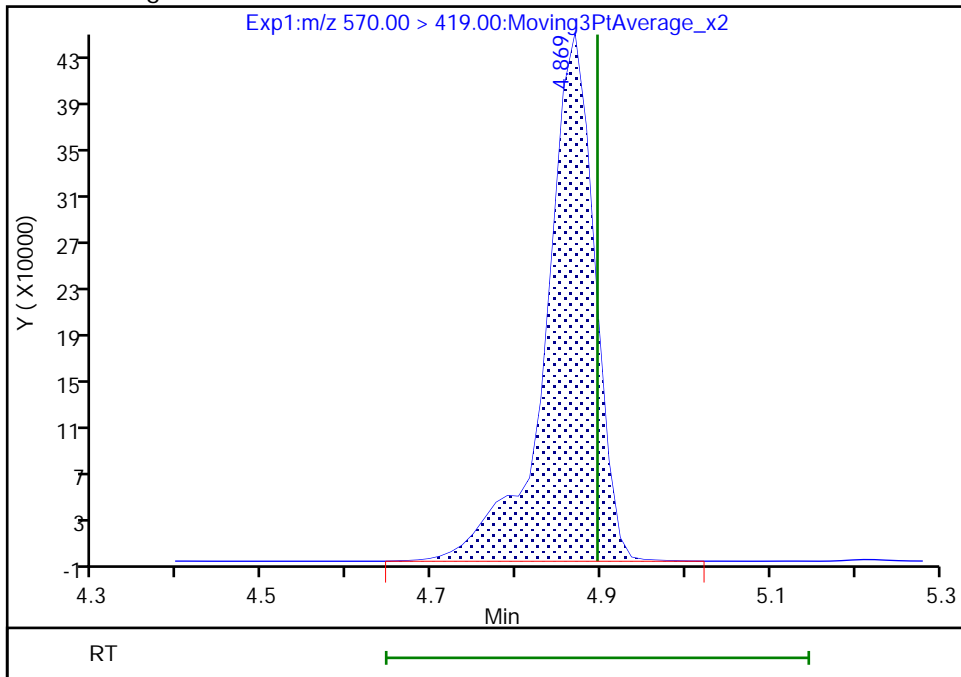
RT: 4.87
Area: 1621949
Amount: 2.268434
Amount Units: ng/ml

Processing Integration Results



RT: 4.87
Area: 1798203
Amount: 2.515749
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:49:56
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54568/83 Calibration Date: 10/07/2021 08:37
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _083.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7855	0.7851		1.000	1.00	-0.0	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.013	0.9637		0.951	1.00	-4.9	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.126	1.115		0.876	0.884	-1.0	40.0
4:2 FTS	AveID	2.500	2.372		0.886	0.934	-5.1	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8572	0.8035		0.937	1.00	-6.3	40.0
Perfluoropentanesulfonic acid (PFPeS)	L2ID		0.8539		0.933	0.938	-0.6	50.0
HFPO-DA	L2ID		1.367		0.988	1.00	-1.2	40.0
Perfluoroheptanoic acid (PFHpA)	L2ID		1.061		1.00	1.00	0.4	40.0
Perfluorohexanesulfonic acid (PFHxS)	L2ID		1.386		0.928	0.910	2.0	40.0
DONA	AveID	3.243	3.013		0.875	0.942	-7.1	40.0
6:2 FTS	L2ID		2.040		0.961	0.948	1.4	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9947	0.9348		0.895	0.952	-6.0	40.0
Perfluorooctanoic acid (PFOA)	L2ID		1.094		0.986	1.00	-1.4	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.100	1.058		0.893	0.928	-3.8	40.0
Perfluorononanoic acid (PFNA)	L2ID		0.8196		0.982	1.00	-1.8	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	2.308	2.311		0.933	0.932	0.1	40.0
Perfluorononanesulfonic acid (PFNS)	AveID	1.042	1.030		0.949	0.960	-1.1	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9606	0.9485		0.987	1.00	-1.3	40.0
Perfluorodecanoic acid (PFDA)	L2ID		0.9465		0.996	1.00	-0.4	40.0
8:2 FTS	AveID	1.784	1.723		0.925	0.958	-3.4	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	L2ID		0.9627		1.05	1.00	4.7	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.9574	0.9571		0.964	0.964	-0.0	40.0
Perfluoroundecanoic acid (PFUnA)	L2ID		1.067		1.05	1.00	5.4	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.9494	0.9213		0.970	1.00	-3.0	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.858	1.855		0.940	0.942	-0.2	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9815		0.940	1.00	-6.0	40.0
10:2 FTS	AveID	2.221	2.442		1.06	0.964	9.9	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.125		0.972	1.00	-2.8	40.0
NMeFOSA	AveID	1.047	1.048		1.00	1.00	0.1	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9879	0.9271		0.909	0.968	-6.2	40.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54568/83 Calibration Date: 10/07/2021 08:37
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _083.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTrIA)	L2ID		0.8621		0.975	1.00	-2.5	50.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.302		1.03	1.00	3.1	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.168	1.151		0.985	1.00	-1.5	40.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.1253		0.993	1.00	-0.7	40.0
Perfluorohexadecanoic acid	Q2ID		1.123		1.03	1.00	2.8	40.0
Perfluorooctadecanoic acid	AveID	0.9076	0.9161		1.01	1.00	0.9	40.0
13C4 PFBA	Ave	1.324	1.392		1.31	1.25	5.1	50.0
13C5 PFPeA	Ave	1.087	1.166		1.34	1.25	7.3	50.0
13C3 PFBS	Ave	0.7019	0.7373		1.22	1.16	5.0	50.0
M2-4:2 FTS	Ave	0.1052	0.1311		1.45	1.17	24.6	50.0
13C2 PFHxA	Ave	1.116	1.168		1.31	1.25	4.6	50.0
13C3 HFPO-DA	Ave	0.5714	0.5927		1.30	1.25	3.7	50.0
13C4 PFHpA	Ave	1.113	1.163		1.31	1.25	4.5	50.0
18O2 PFHxS	Ave	0.4248	0.4224		1.18	1.18	-0.5	50.0
M2-6:2 FTS	Ave	0.1078	0.1197		1.32	1.19	11.1	50.0
13C4 PFOA	Ave	1.007	1.034		1.28	1.25	2.7	50.0
13C4 PFOS	Ave	0.5852	0.6063		1.24	1.20	3.6	50.0
13C5 PFNA	Ave	1.279	1.400		1.37	1.25	9.4	50.0
13C2 PFDA	Ave	1.296	1.283		1.24	1.25	-1.0	50.0
13C8 FOSA	Ave	0.8591	0.8878		1.29	1.25	3.3	50.0
M2-8:2 FTS	Ave	0.1316	0.1408		1.28	1.20	7.0	50.0
d3-NMeFOSAA	Ave	0.1774	0.1912		1.35	1.25	7.8	50.0
13C2 PFUnA	Ave	1.237	1.248		1.26	1.25	0.9	50.0
d5-NEtFOSAA	Ave	0.1705	0.1839		1.35	1.25	7.9	50.0
13C2 PFDoA	Ave	1.319	1.487		1.41	1.25	12.7	50.0
d7-N-MeFOSE-M	Ave	0.1075	0.1381		1.61	1.25	28.4	50.0
d-N-MeFOSA-M	Ave	0.1120	0.1160		1.30	1.25	3.6	50.0
d9-N-EtFOSE-M	Ave	0.1146	0.1422		1.55	1.25	24.0	50.0
d-N-EtFOSA-M	Ave	0.0942	0.1004		1.33	1.25	6.5	50.0
13C2 PFTeDA	Ave	1.211	1.279		1.32	1.25	5.6	50.0
13C2 PFHxDA	Ave	0.8782	0.9300		1.32	1.25	5.9	50.0
13C8 PFOA	Ave	0.9886	1.018		1.29	1.25	3.0	50.0
13C8 PFOS	Ave	0.1256	0.1298		1.24	1.20	3.4	50.0

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_083.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 07-Oct-2021 08:37:56 ALS Bottle#: 29 Worklist Smp#: 83
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-083 ccv
 Misc. Info.: Plate: 11 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 17:58:55 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 17:57:56

Ratio Calibration: None

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	2.801	2.801	0.0	0.678	7281916	1.31	105	12722	
2 Perfluorobutanoic acid	212.90 > 169.00	2.801	2.812	-0.011	1.000	4573851	1.00	100.0	1321	
D 3 13C5 PFPeA	267.90 > 223.00	3.116	3.129	-0.013	0.754	6102054	1.34	107	12033	
4 Perfluoropentanoic acid	262.90 > 219.00	3.116	3.129	-0.013	1.000	4704548	0.9514	95.1	1422	
D 6 13C3 PFBS	301.90 > 80.00	3.130	3.129	0.001	0.758	3588068	1.22	105	15931	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.130	3.143	-0.013	1.000	3043149	0.8756	Target=3.06	99.0	11675
	298.90 > 99.00	3.130	3.143	-0.013	1.000	1124840		2.71(1.53-4.59)		4886
D 8 M2-4:2 FTS	329.00 > 81.00	3.409	3.423	-0.014	0.825	640673	1.45	125	1235	
7 4:2 FTS	327.00 > 307.00	3.409	3.423	-0.014	1.000	1215674	0.8862	94.9	11260	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.437	3.453	-0.016	1.098	2472292	0.9325	Target=3.47	99.4	9680
	349.00 > 99.00	3.437	3.453	-0.016	1.098	685695		3.61(1.73-5.20)		6799
D 9 13C2 PFHxA	315.00 > 270.00	3.437	3.469	-0.032	0.832	6109635	1.31	105	10801	
10 Perfluorohexanoic acid	313.00 > 269.00	3.437	3.469	-0.032	1.000	3927219	0.9373	Target=9.74	93.7	2020
	313.00 > 119.00	3.437	3.469	-0.032	1.000	329364		11.92(4.87-14.61)		960
D 12 13C3 HFPO-DA	287.00 > 169.00	3.535	3.561	-0.026	0.856	3101847	1.30	104	9445	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.535	3.561	-0.026	1.000	3393404	0.9875		98.8	3050	
D 17 18O2 PFHxS										
403.00 > 84.00	3.790	3.803	-0.013	0.918	2091292	1.18		99.5	5827	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.790	3.803	-0.013	1.000	2230426	0.9283	Target=2.96	102	5403	M
399.00 > 99.00	3.790	3.803	-0.013	1.000	641305		3.48(1.48-4.44)		2915	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.790	3.815	-0.025	0.918	6087015	1.31		104	15521	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.790	3.815	-0.025	1.000	5166001	1.00	Target=3.35	100	3914	
363.00 > 169.00	3.790	3.815	-0.025	1.000	1580638		3.27(1.67-5.02)		5343	
68 DONA										
377.00 > 251.00	3.815	3.840	-0.025	0.863	7204145	0.8751	Target=1.49	92.9	10871	
377.00 > 85.00	3.815	3.840	-0.025	0.863	4182517		1.72(0.74-2.23)		4794	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.119	4.143	-0.024	0.932	2258927	0.8946	Target=3.73	94.0	8065	
449.00 > 99.00	4.119	4.143	-0.024	0.932	566002		3.99(1.87-5.61)		2958	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.119	4.143	-0.024	0.997	5327359	1.29		103	14414	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.119	4.143	-0.024	0.997	595204	1.32		111	2383	
19 6:2 FTS										
427.00 > 407.00	4.119	4.143	-0.024	1.000	969444	0.9614		101	5121	
D 21 13C4 PFOA										
417.00 > 372.00	4.131	4.155	-0.024	1.000	5410903	1.28		103	7025	
* 22 13C2 PFOA										
415.00 > 370.00	4.131	4.155	-0.024		5232999	1.25			10741	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.131	4.155	-0.024	1.000	4734425	0.9863	Target=2.40	98.6	2335	
413.00 > 169.00	4.131	4.155	-0.024	1.000	1889334		2.51(1.20-3.61)		3779	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.422	4.447	-0.024	1.070	649561	1.24		103	2853	
D 25 13C4 PFOS										
503.00 > 80.00	4.422	4.447	-0.024	1.070	3033281	1.24		104	7651	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.422	4.447	-0.024	1.000	2491346	0.8925	Target=3.83	96.2	3740	M
499.00 > 99.00	4.422	4.447	-0.024	1.000	578391		4.31(1.91-5.74)		2118	M
D 27 13C5 PFNA										
468.00 > 423.00	4.447	4.470	-0.023	1.076	7325496	1.37		109	16144	
26 Perfluorononanoic acid										
463.00 > 419.00	4.447	4.470	-0.023	1.000	4803057	0.9818	Target=3.68	98.2	4029	
463.00 > 169.00	4.447	4.470	-0.023	1.000	1085625		4.42(1.84-5.52)		3086	
63 9CIFOS										
531.00 > 351.00	4.572	4.596	-0.024	1.107	5467138	0.9333		100	10602	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.709	4.722	-0.013	1.065	2510706	0.9490	Target=3.97	98.9	7689	
549.00 > 99.00	4.709	4.722	-0.013	1.065	653466		3.84(1.99-5.96)		2740	
D 34 13C8 FOSA										
506.00 > 78.00	4.722	4.736	-0.014	1.143	4645991	1.29		103	3728	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.722	4.736	-0.014	1.000	3525331	0.9874		98.7	5229	
D 32 13C2 PFDA										
515.00 > 470.00	4.722	4.749	-0.027	1.143	6711543	1.24		99.0	9484	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.736	4.749	-0.013	1.003	5081718	1.00	Target=10.11	99.6	2739	
513.00 > 169.00	4.722	4.749	-0.027	1.000	439219		11.57(5.06-15.17)		476	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.763	-0.014	1.150	705920	1.28		107	3057	
31 8:2 FTS										
527.00 > 507.00	4.749	4.763	-0.014	1.000	973099	0.9254		96.6	5243	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.869	4.896	-0.027	1.179	1000510	1.35		108	2262	
36 NMeFOSAA										
570.00 > 419.00	4.869	4.896	-0.027	1.000	770545	1.05		105	1324	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.965	4.993	-0.028	1.123	2342019	0.9637	Target=3.80	100.0	4918	
599.00 > 99.00	4.965	4.993	-0.028	1.123	616447		3.80(1.90-5.70)		3417	
D 39 13C2 PFUnA										
565.00 > 520.00	4.993	5.022	-0.029	1.209	6530046	1.26		101	13248	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.993	5.022	-0.029	1.000	5571583	1.05	Target=7.45	105	5211	
563.00 > 169.00	4.993	5.022	-0.029	1.000	576362		9.67(3.78-11.33)		3362	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.007	5.036	-0.029	1.212	962485	1.35		108	2748	
40 NEtFOSA										
584.00 > 419.00	5.007	5.036	-0.029	1.000	709371	0.9704		97.0	754	
57 11CIFOS										
631.00 > 451.00	5.093	5.119	-0.026	1.152	4434981	0.9402		99.8	9654	
D 43 13C2 PFDaA										
615.00 > 570.00	5.224	5.251	-0.027	1.265	7779346	1.41		113	16019	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.224	5.251	-0.027	1.000	6108059	0.9397	Target=5.33	94.0	3350	
613.00 > 169.00	5.224	5.251	-0.027	1.000	885152		6.90(2.66-7.99)		3248	
50 10:2 FTS										
627.00 > 607.00	5.251	5.266	-0.015	1.106	1387754	1.06		110	5216	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.281	5.281	0.0	1.278	722508	1.60		128	423	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.282	606995	1.30		104	43.8	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.295	0.0	1.003	650404	0.9716		97.2	779	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.295	5.295	0.0	1.000	509032	1.00		100	689	
54 PFDoS										
699.00 > 80.00	5.423	5.436	-0.013	1.226	2278023	0.9085	Target=4.32	93.8	4078	
699.00 > 99.00	5.423	5.436	-0.013	1.226	558348		4.08(2.19-6.58)		2948	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.436	5.436	0.0	1.316	743935	1.55		124	633	
62 N-EtFOSE-M										
630.00 > 59.00	5.449	5.449	0.0	1.002	774792	1.03		103	2173	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.449	0.013	1.322	525189	1.33		107	868	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.436	5.462	-0.026	1.041	5365011	0.9751	Target=5.66	97.5	2885	
663.00 > 169.00	5.436	5.462	-0.026	1.041	846511		6.34(2.83-8.48)		4930	
56 N-EtFOSA-M										
526.00 > 169.00	5.462	5.462	0.0	1.000	483744	0.9854		98.5	575	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.623	5.637	-0.014	1.361	6691783	1.32		106	13746	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.623	5.637	-0.014	1.000	670557	0.99	Target=1.07	99.3	3230	
713.00 > 219.00	5.608	5.637	-0.029	0.997	676057		0.99(0.53-1.60)		4733	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.935	5.948	-0.013	1.000	4372745	1.03	Target=7.50	103	3469	
813.00 > 169.00	5.935	5.948	-0.013	1.000	515080		8.49(3.75-11.26)		2831	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.935	5.948	-0.013	1.437	4866869	1.32		106	6241	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.201	6.221	-0.020	1.045	3566833	1.01	Target=9.98	101	2592	
913.00 > 169.00	6.201	6.221	-0.020	1.045	308200		11.57(5.14-15.41)		2100	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L4PFC2_00003

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_083.d

Injection Date: 07-Oct-2021 08:37:56

Instrument ID: LCA

Lims ID: CCV

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 29

Worklist Smp#: 83

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

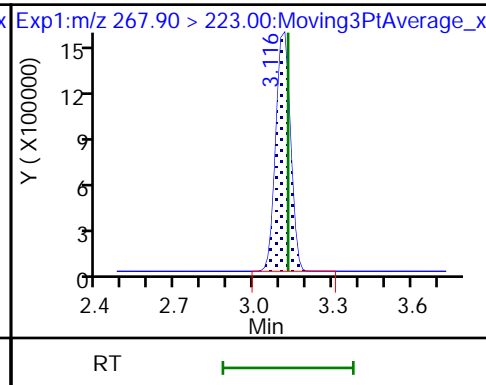
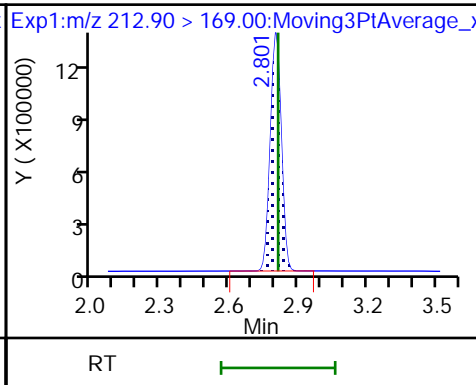
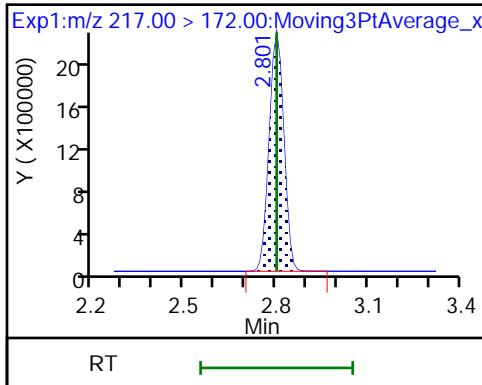
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

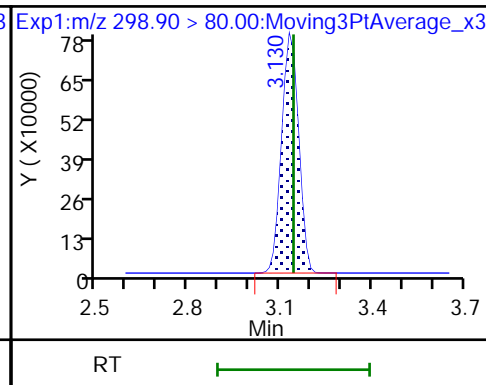
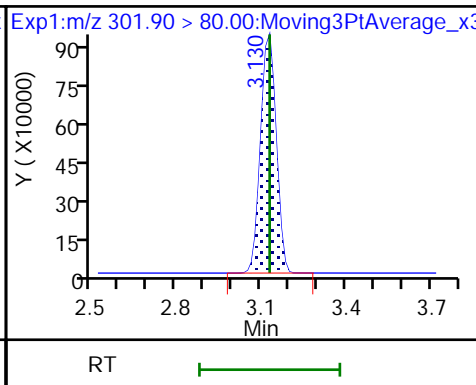
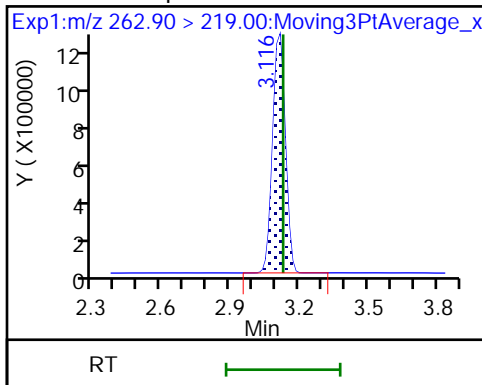
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

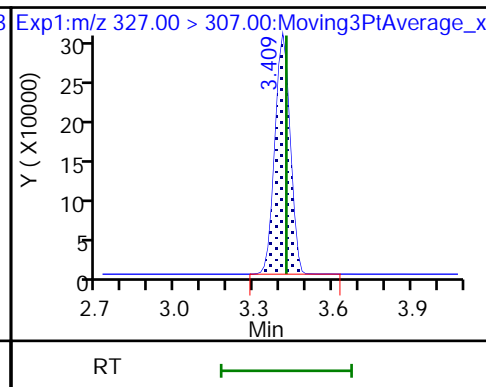
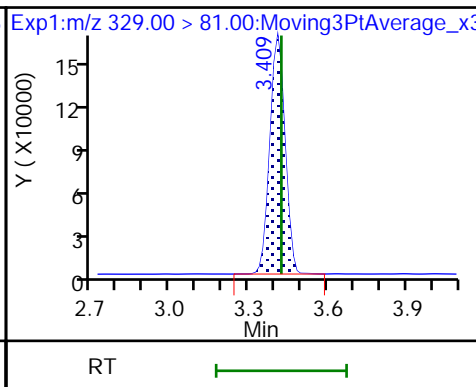
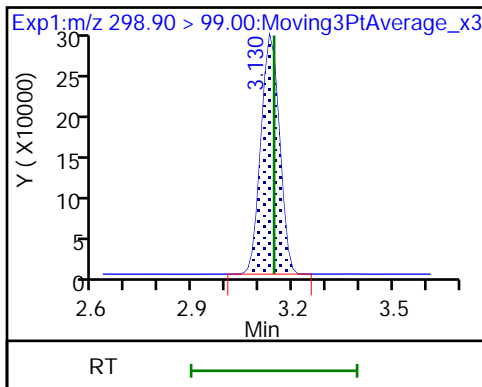
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

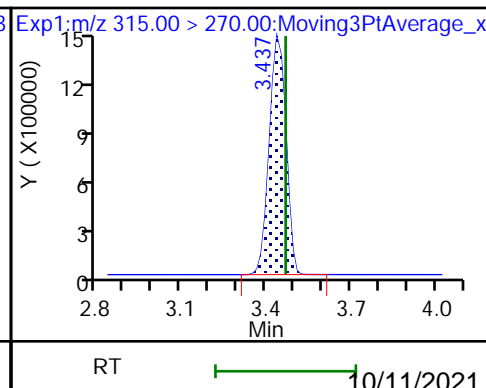
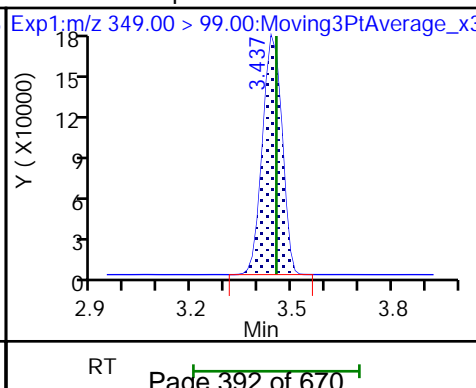
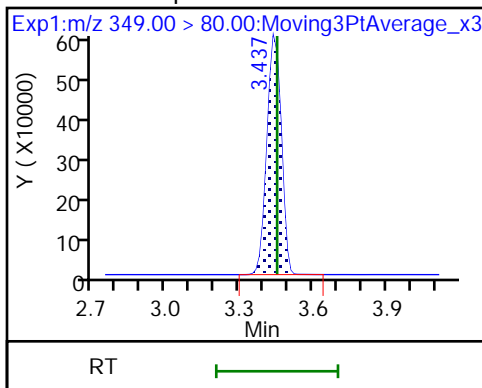
7 4:2 FTS

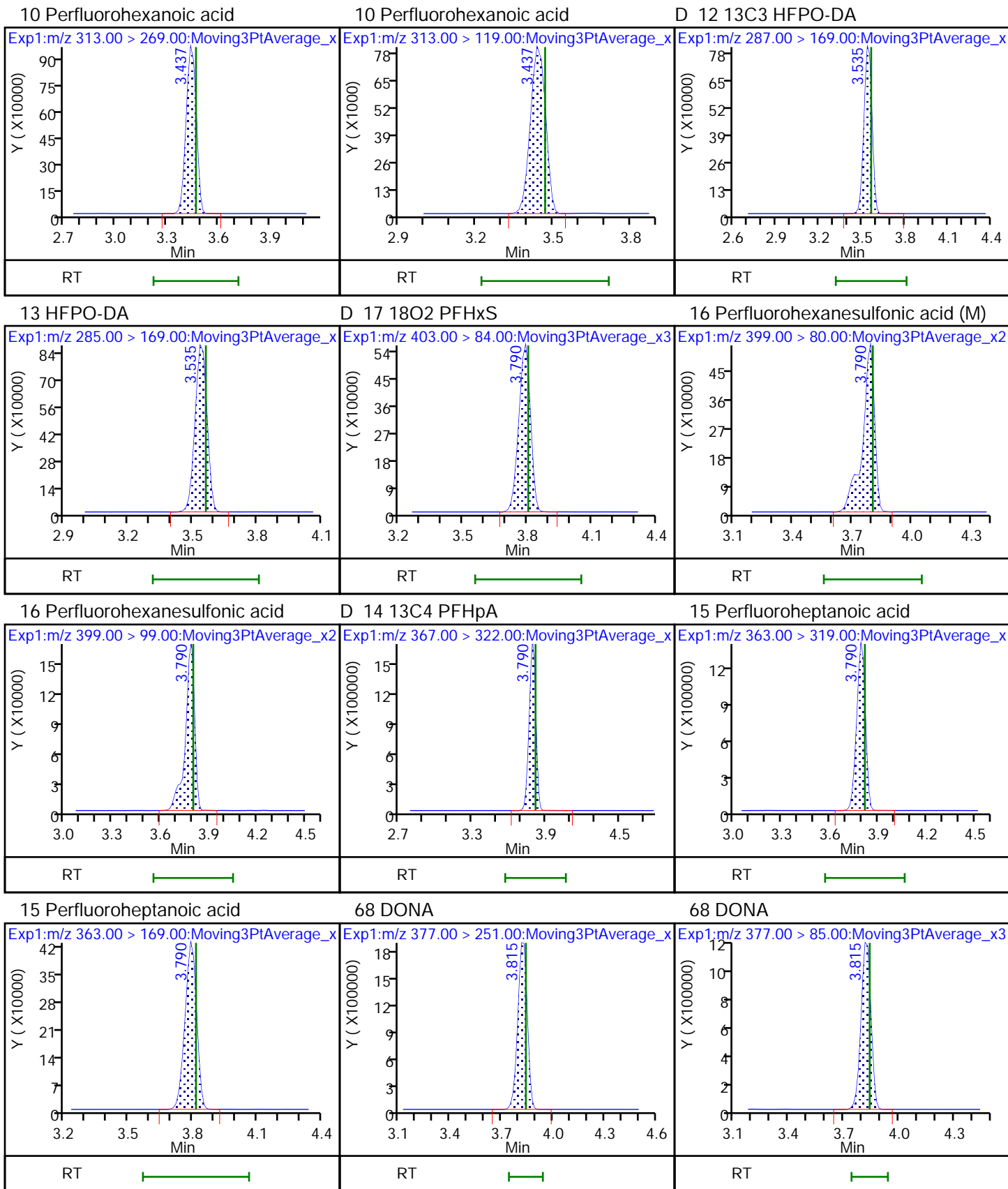


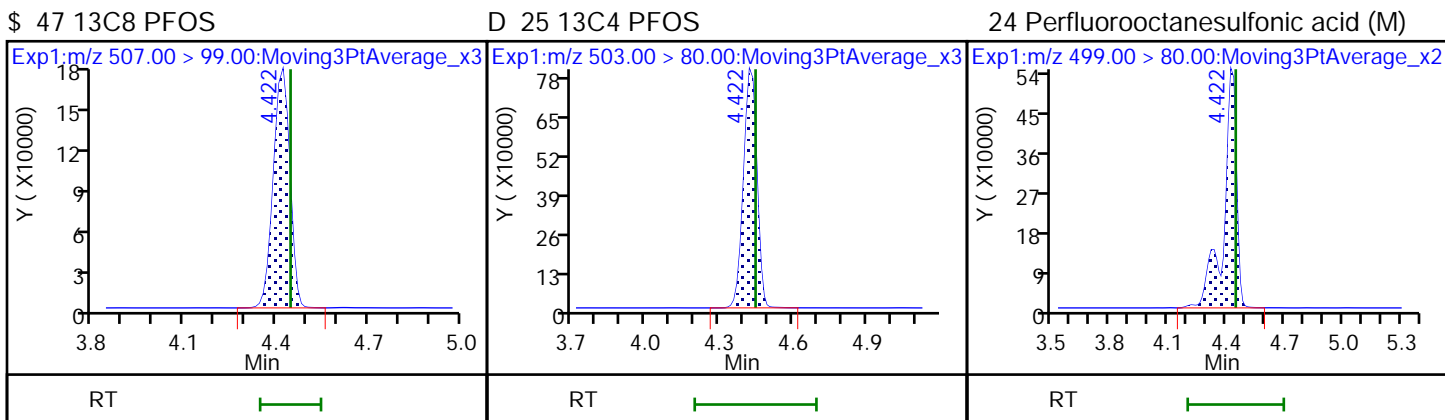
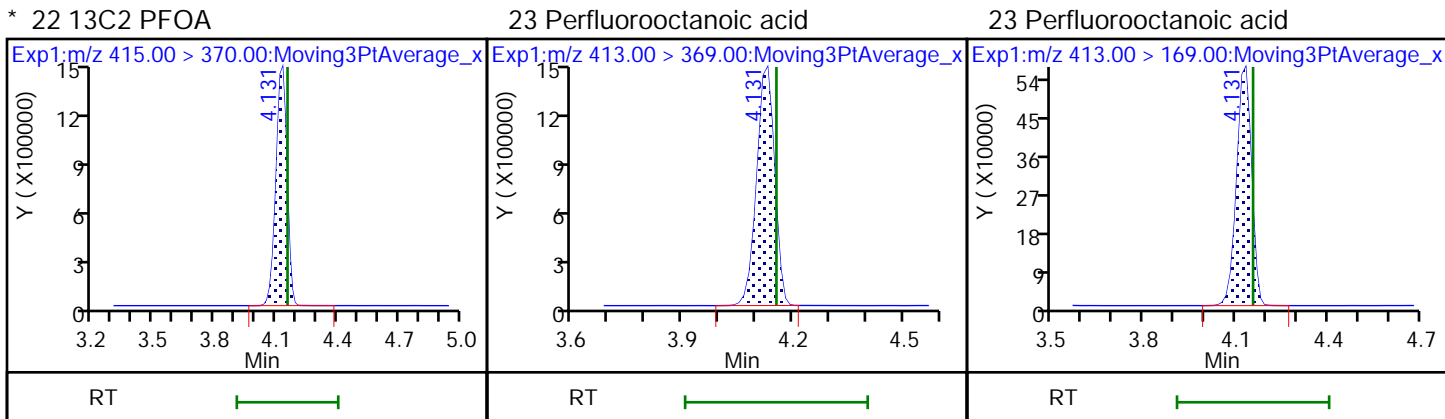
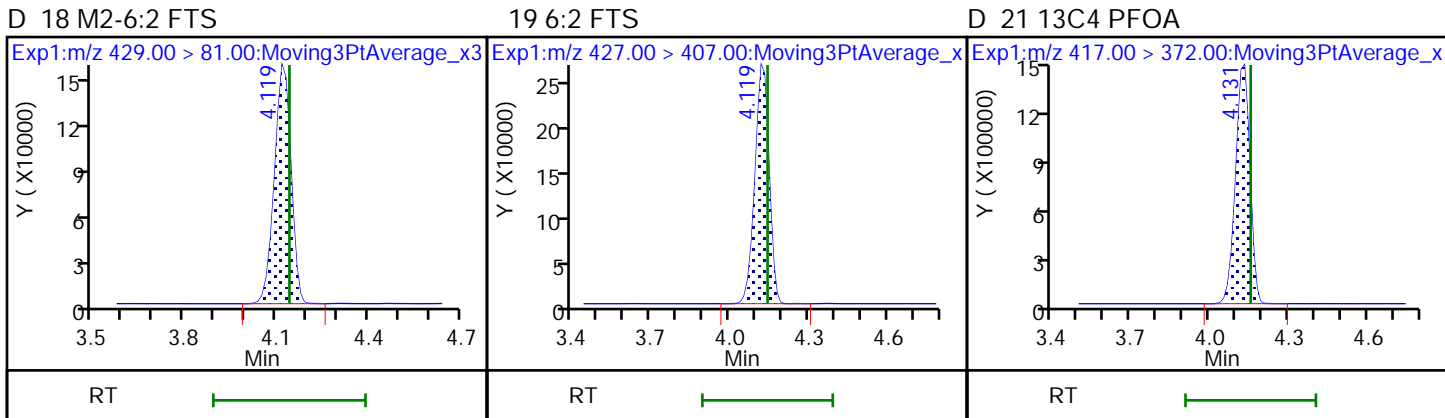
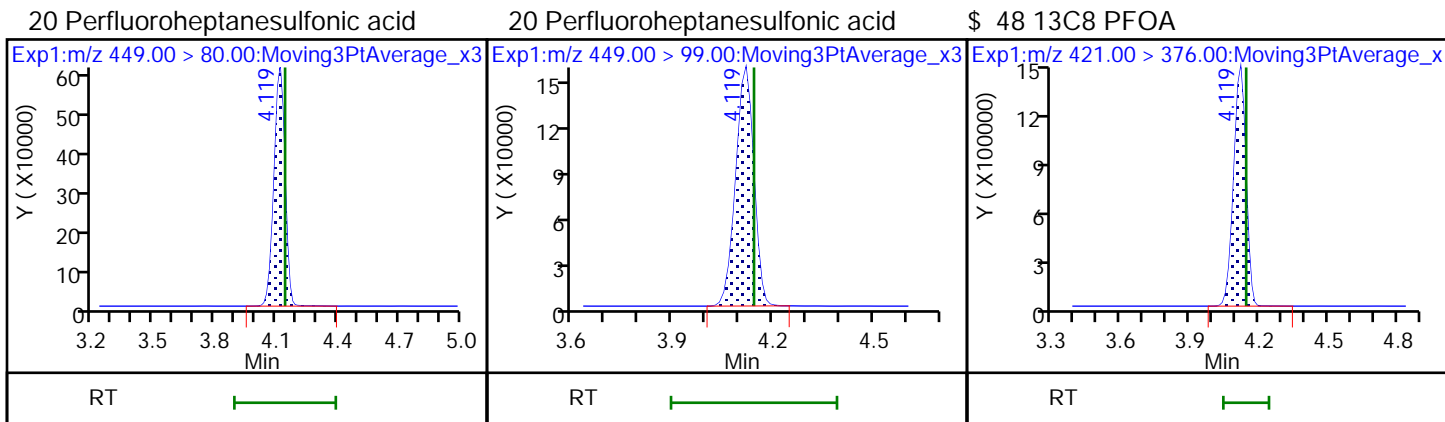
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

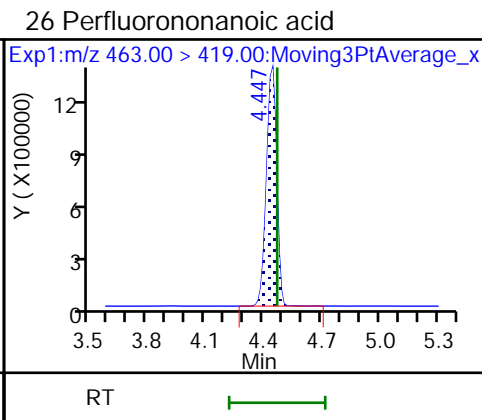
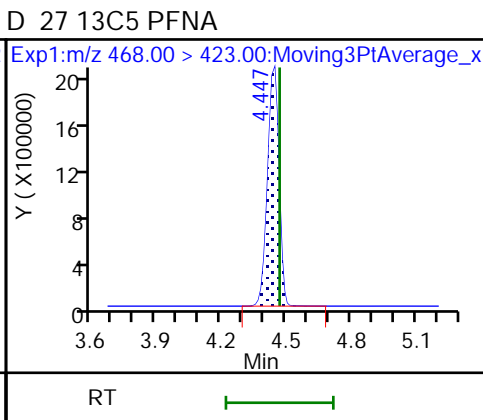
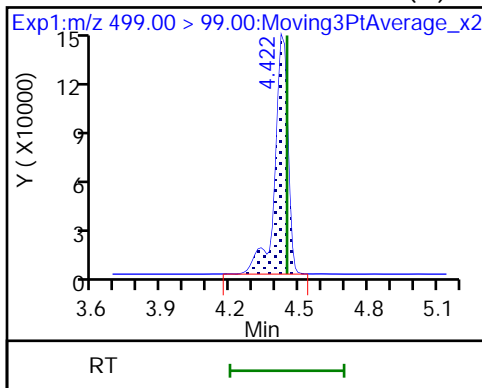
D 9 13C2 PFHxA







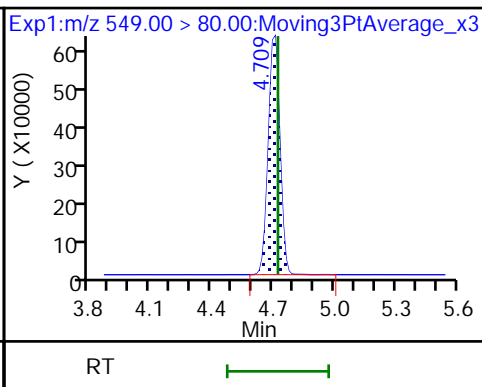
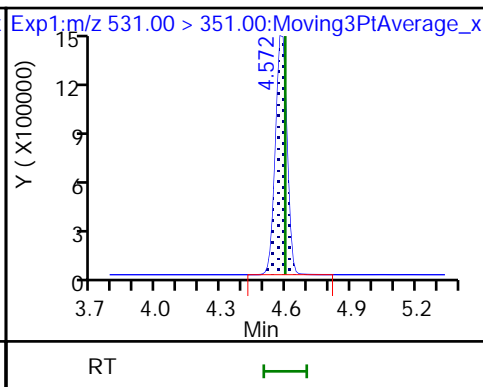
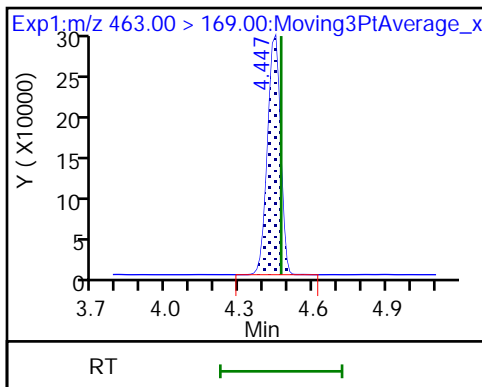
24 Perfluorooctanesulfonic acid (M) D 27 13C5 PFNA



26 Perfluorononanoic acid

63 9CIFOS

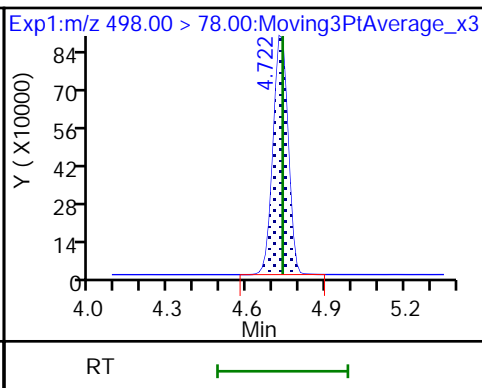
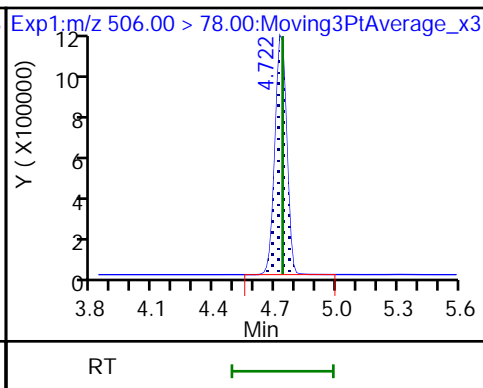
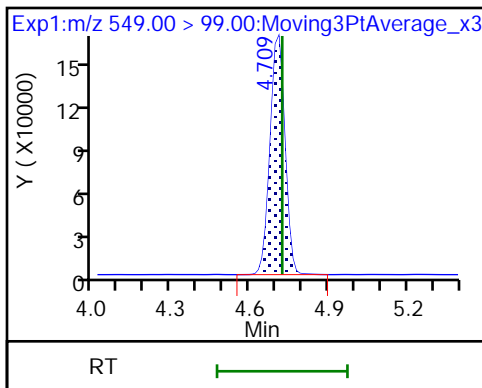
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

D 34 13C8 FOSA

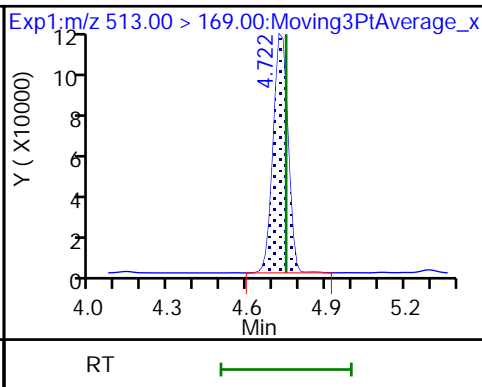
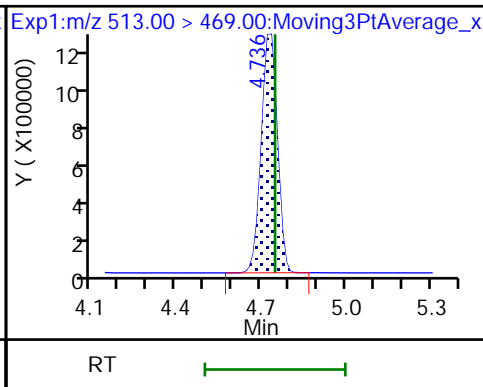
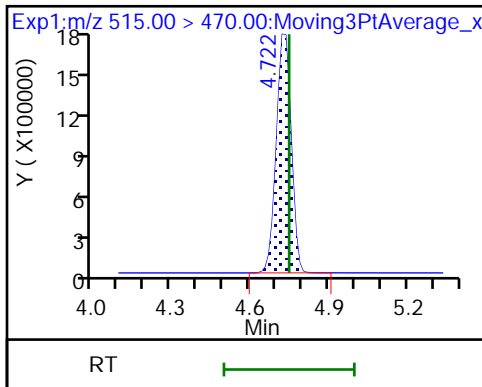
33 Perfluorooctanesulfonamide



D 32 13C2 PFDA

29 Perfluorodecanoic acid

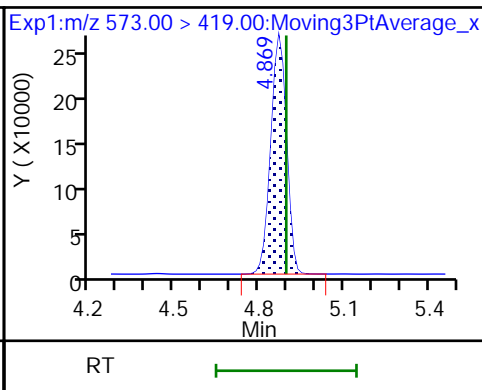
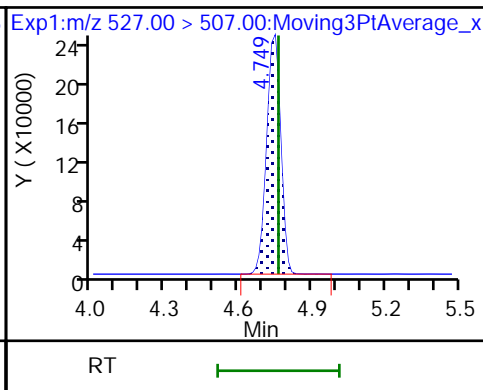
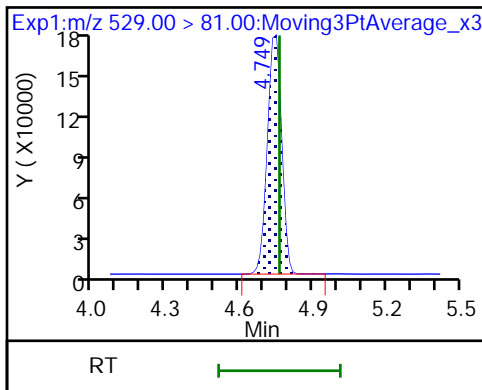
29 Perfluorodecanoic acid



D 30 M2-8:2 FTS

31 8:2 FTS

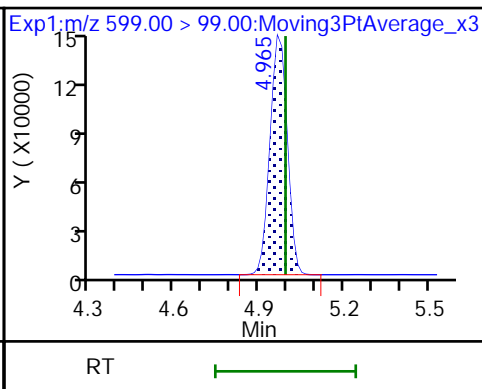
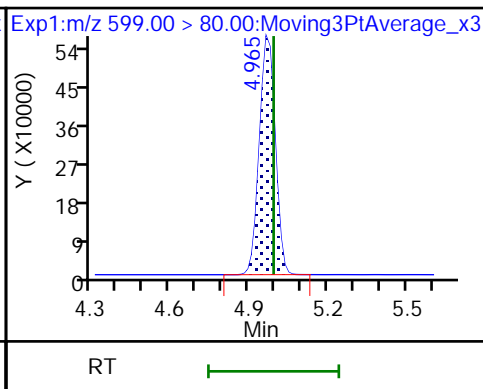
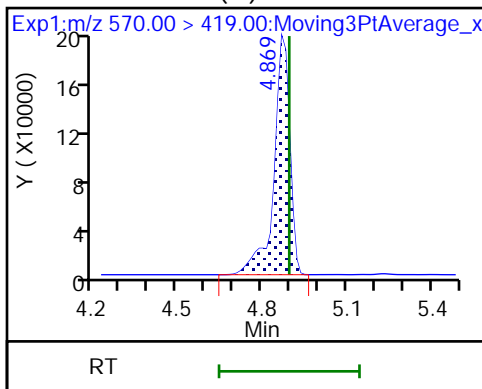
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

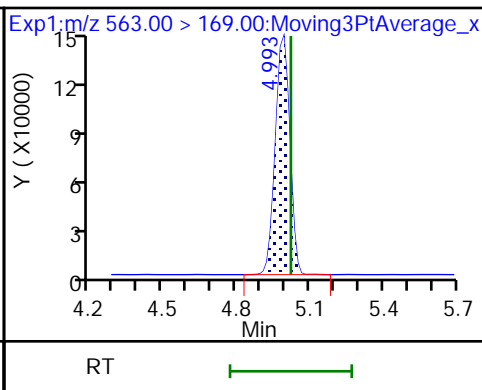
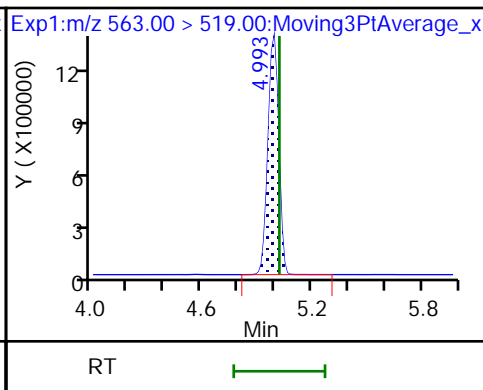
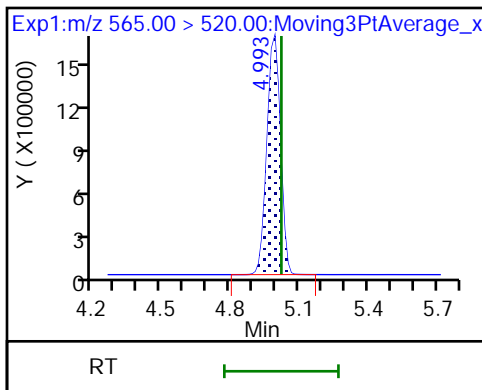
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

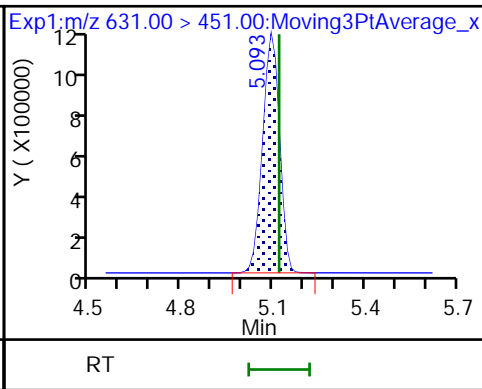
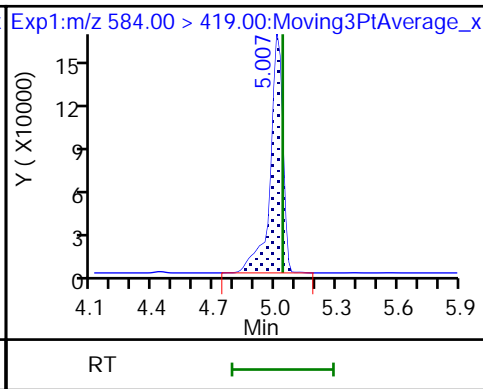
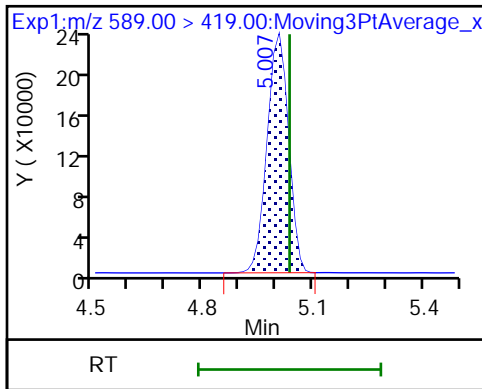
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA

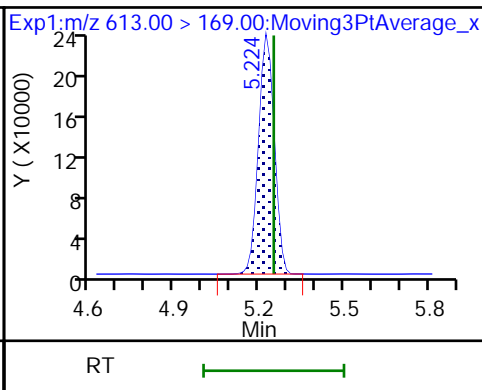
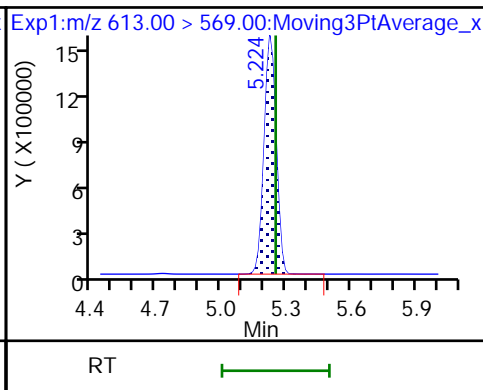
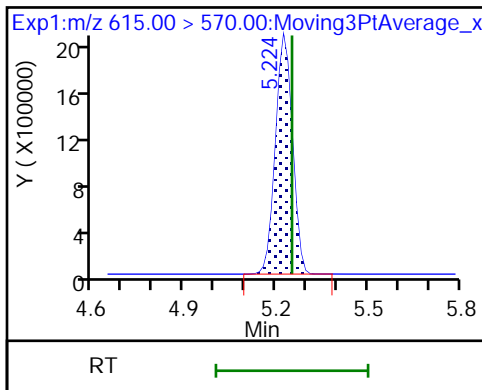
57 11CIFOS



D 43 13C2 PFDaA

42 Perfluorododecanoic acid

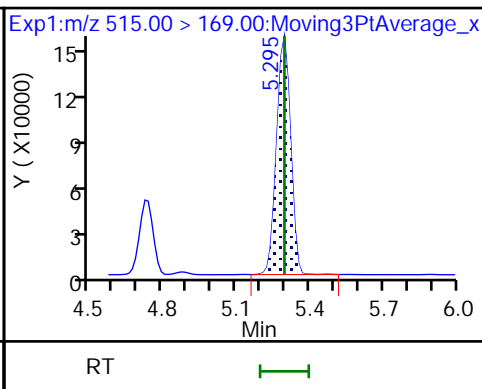
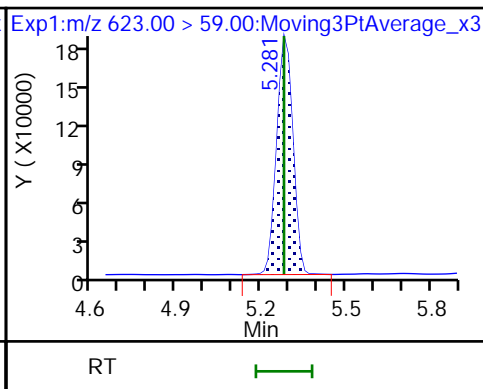
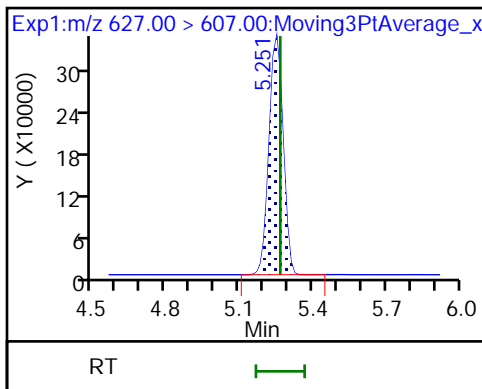
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

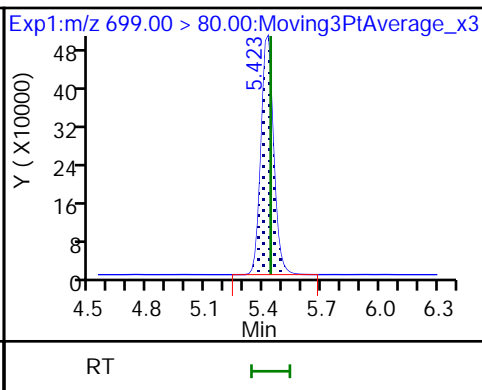
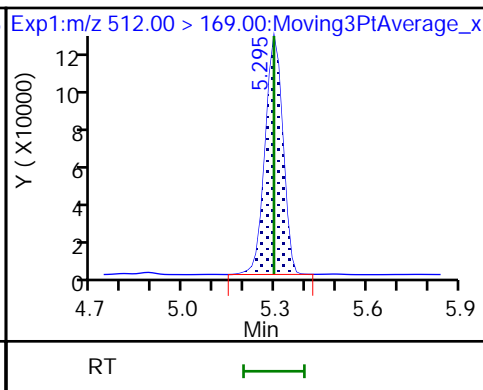
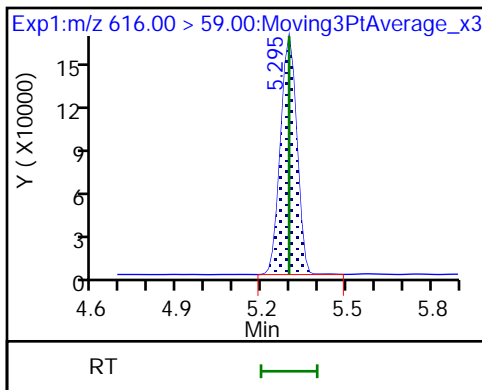
D 58 d-N-MeFOSA-M



49 N-MeFOSE-M

61 NMeFOSA

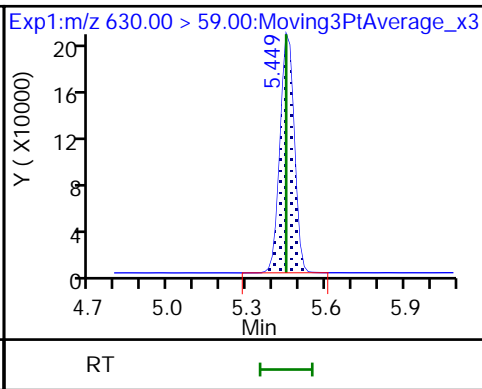
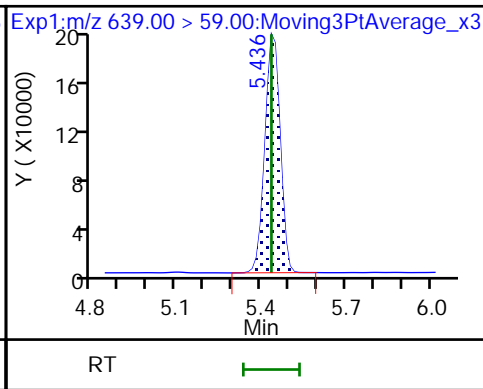
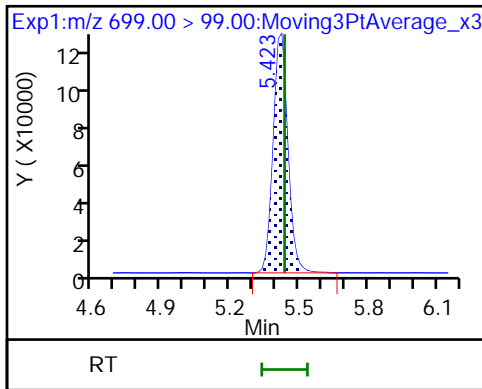
54 PFDoS



54 PFDoS

D 53 d9-N-EtFOSE-M

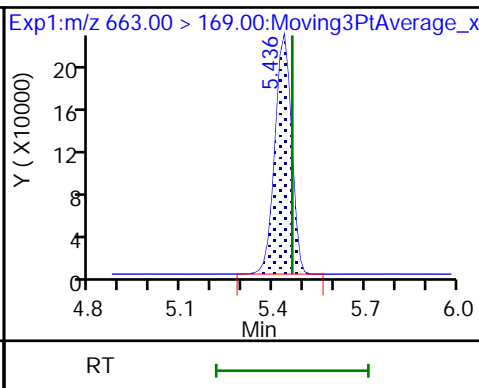
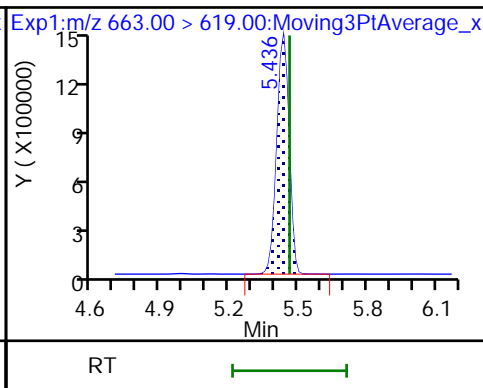
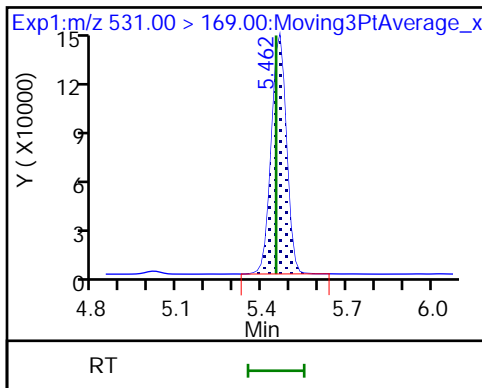
62 N-EtFOSE-M



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid

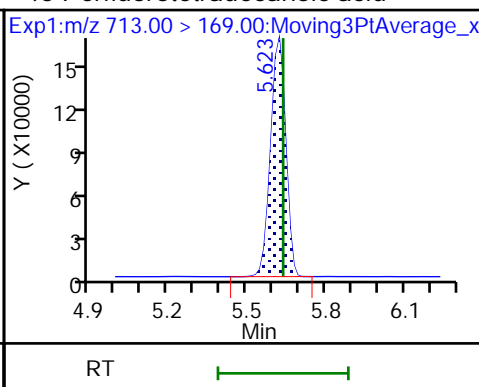
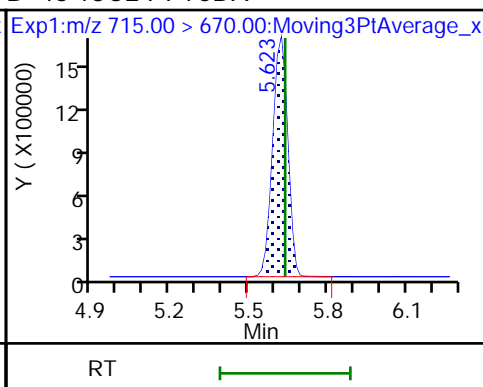
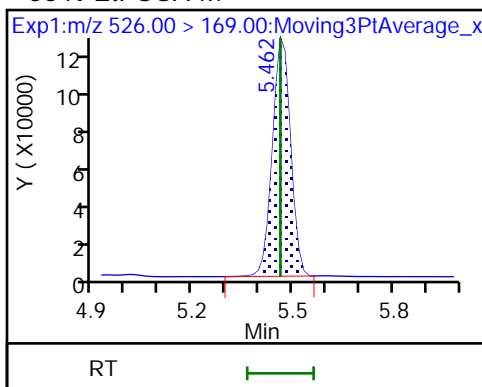
44 Perfluorotridecanoic acid



56 N-EtFOSA-M

D 46 13C2 PFTeDA

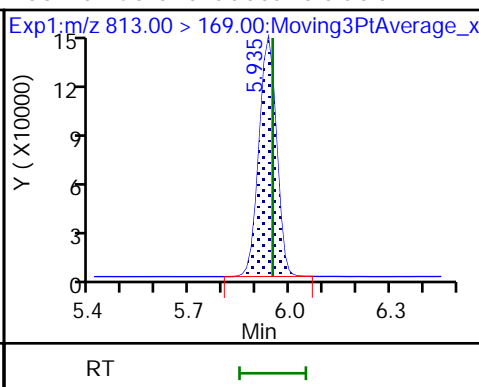
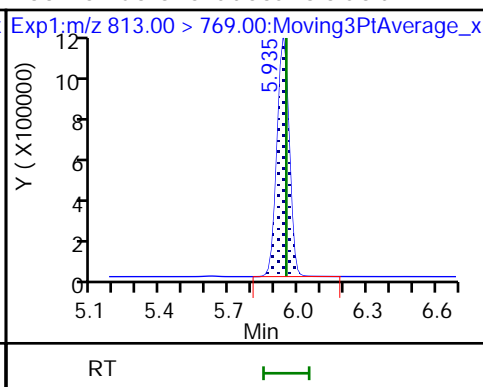
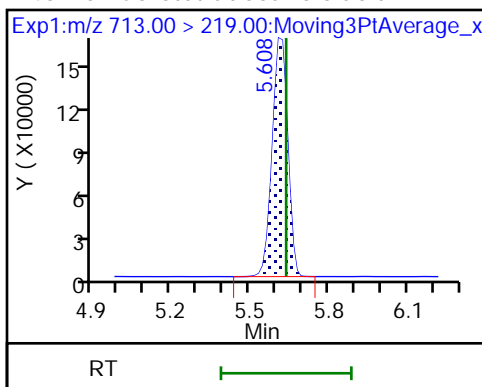
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

55 Perfluorohexadecanoic acid

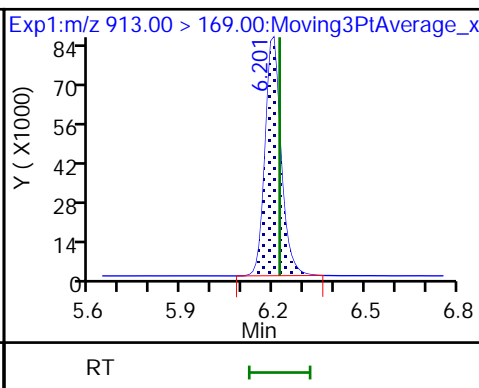
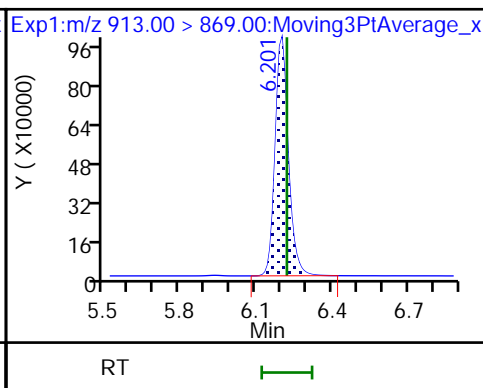
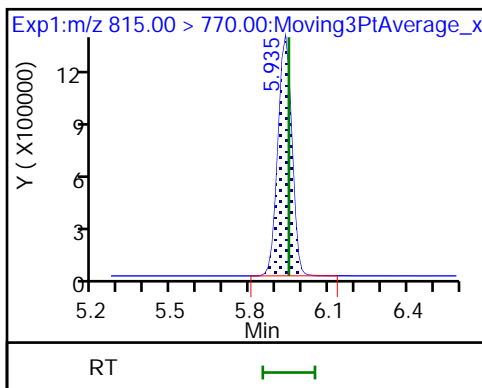
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid



Eurofins TestAmerica, Knoxville

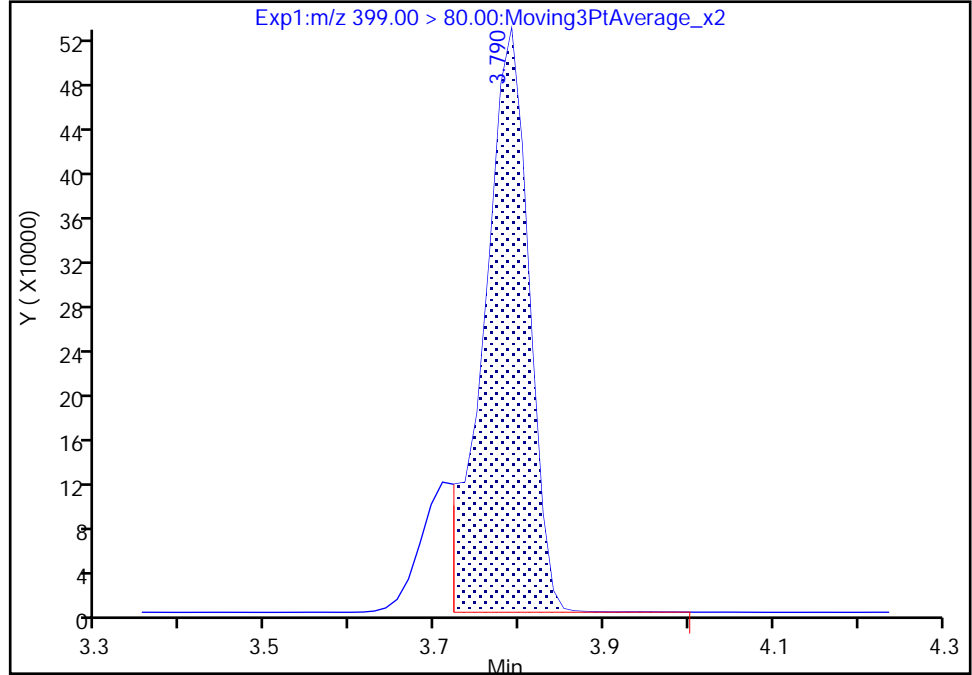
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_083.d
Injection Date: 07-Oct-2021 08:37:56 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 29 Worklist Smp#: 83
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

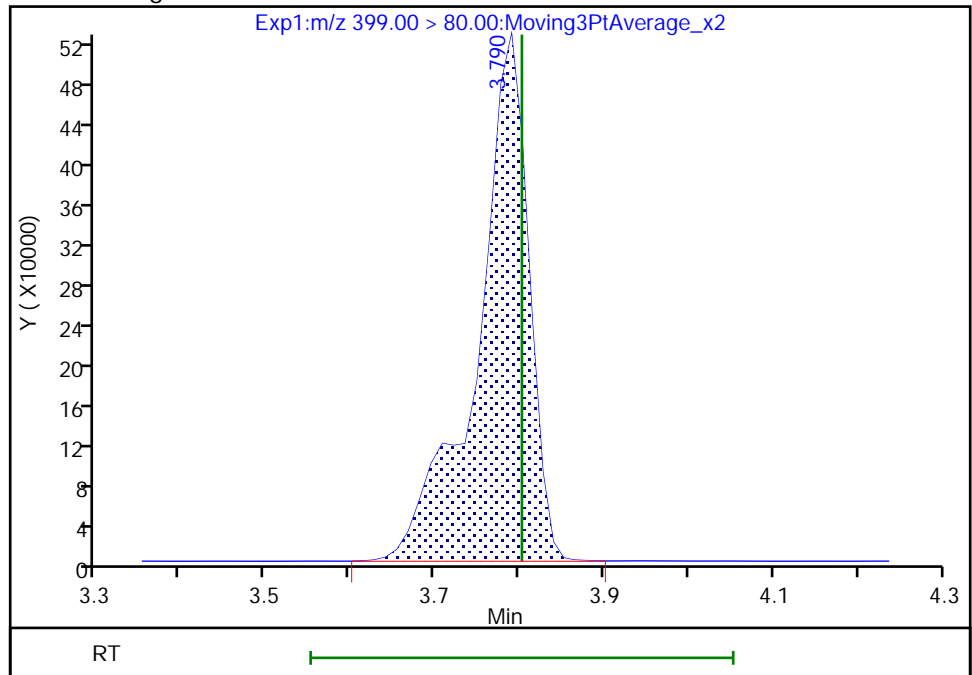
RT: 3.79
Area: 1919719
Amount: 0.798314
Amount Units: ng/ml

Processing Integration Results



RT: 3.79
Area: 2230426
Amount: 0.928346
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:57:18
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

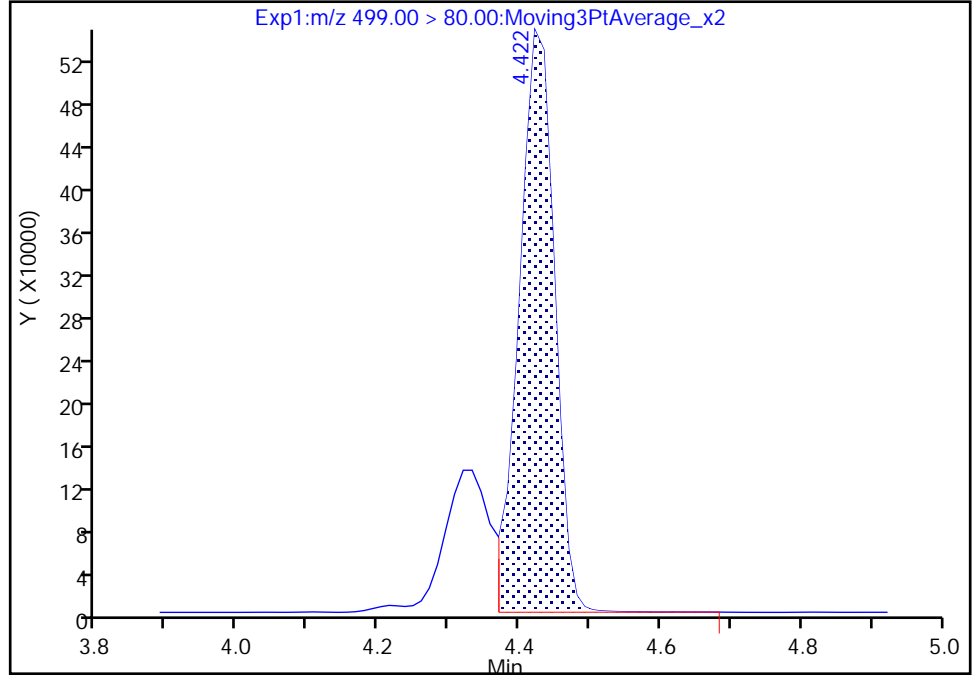
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\083.d
Injection Date: 07-Oct-2021 08:37:56 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 29 Worklist Smp#: 83
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

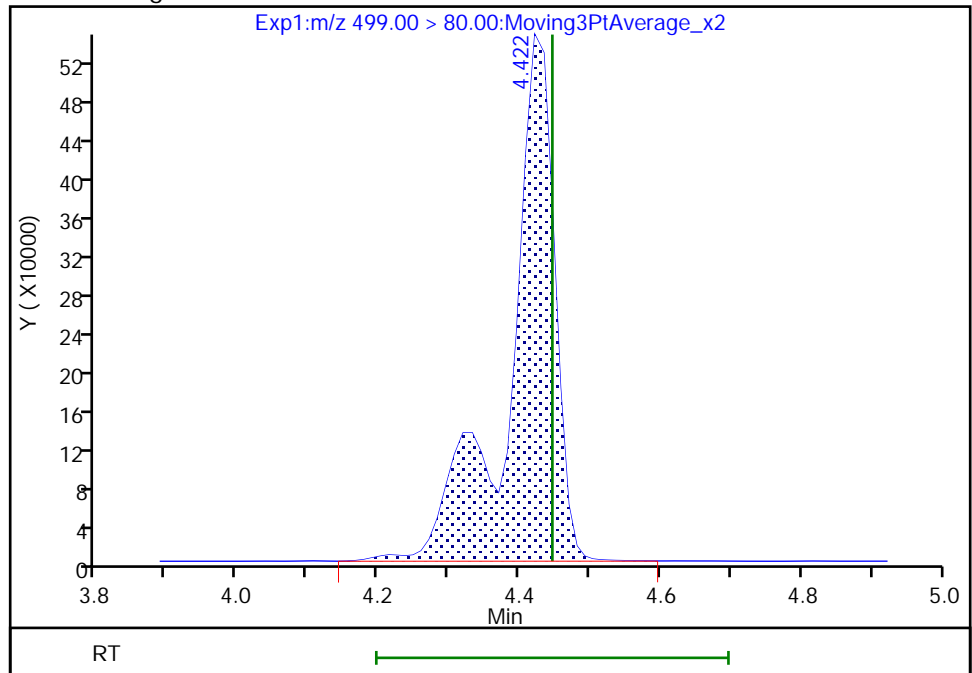
RT: 4.42
Area: 1891987
Amount: 0.677759
Amount Units: ng/ml

Processing Integration Results



RT: 4.42
Area: 2491346
Amount: 0.892465
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:57:28
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

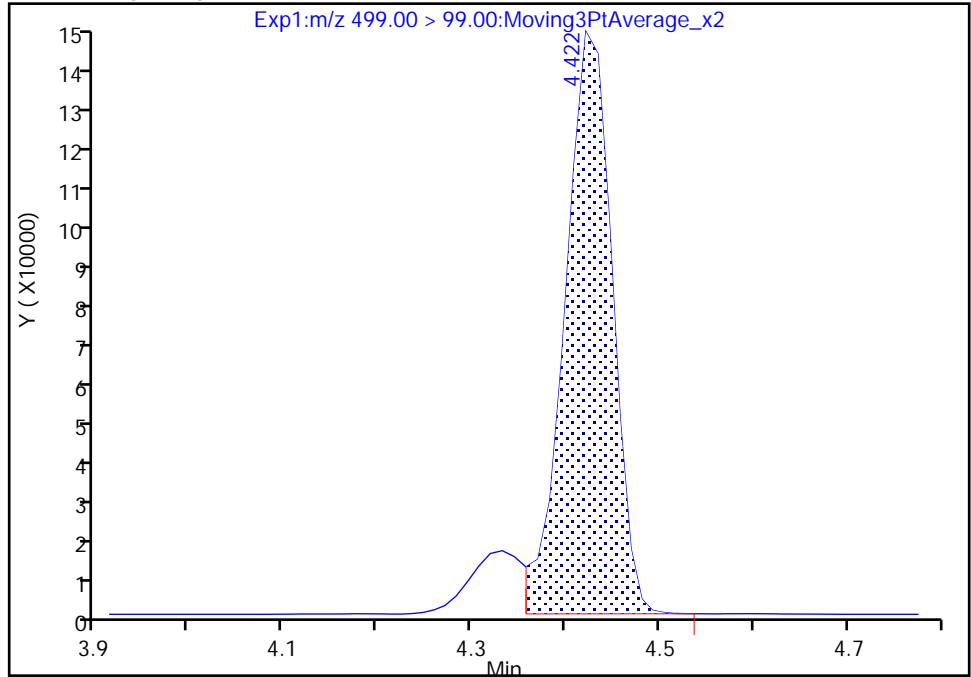
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_083.d
Injection Date: 07-Oct-2021 08:37:56 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 29 Worklist Smp#: 83
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

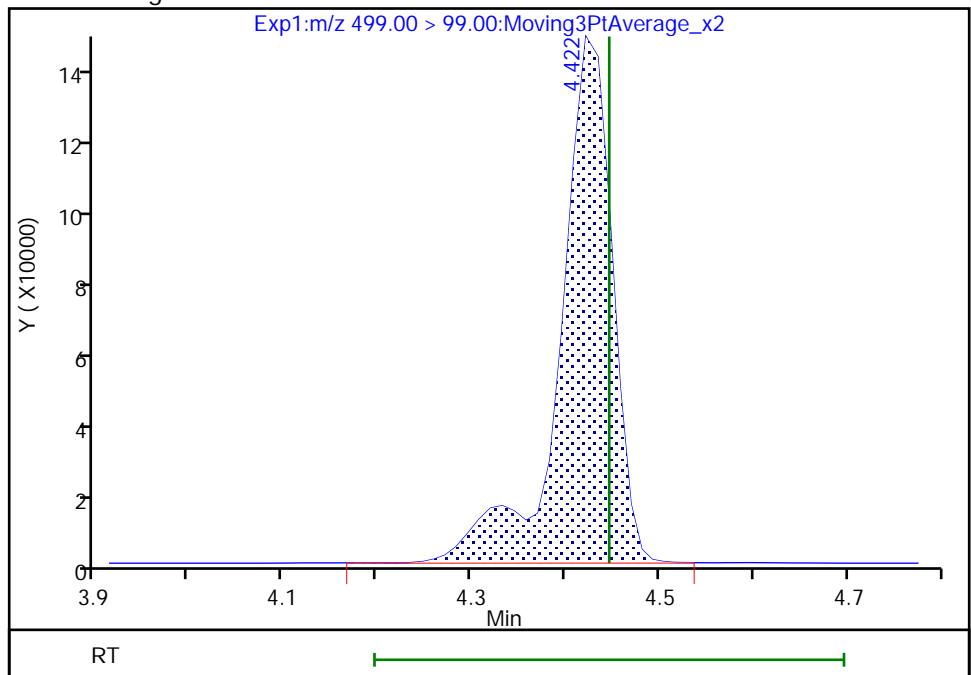
RT: 4.42
Area: 516378
Amount: 0.677759
Amount Units: ng/ml

Processing Integration Results



RT: 4.42
Area: 578391
Amount: 0.892465
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:57:35

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

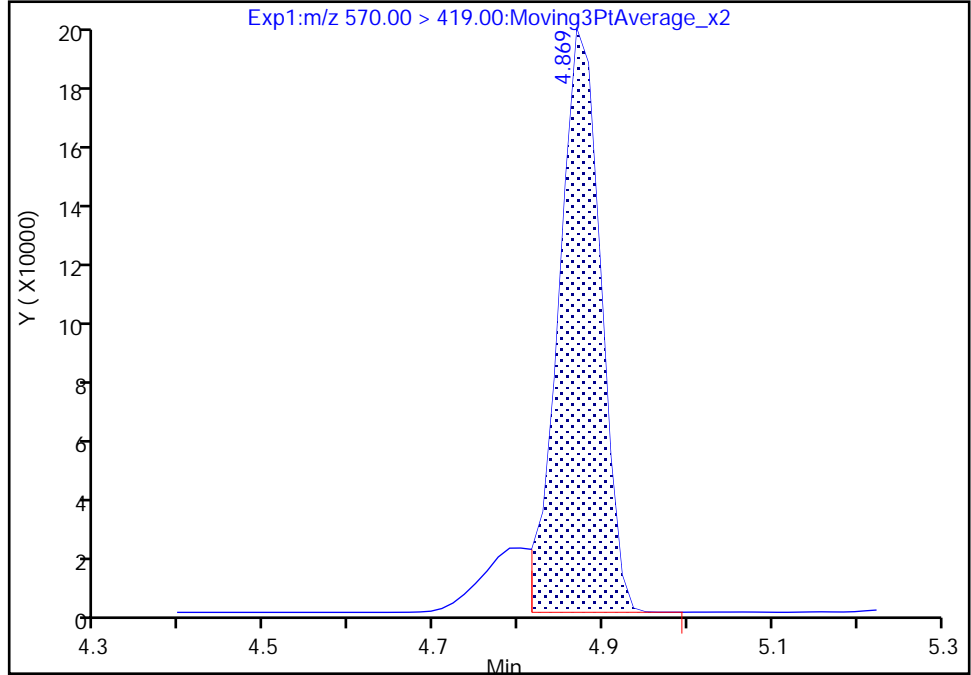
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Injection Date: 07-Oct-2021 08:37:56 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 29 Worklist Smp#: 83
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

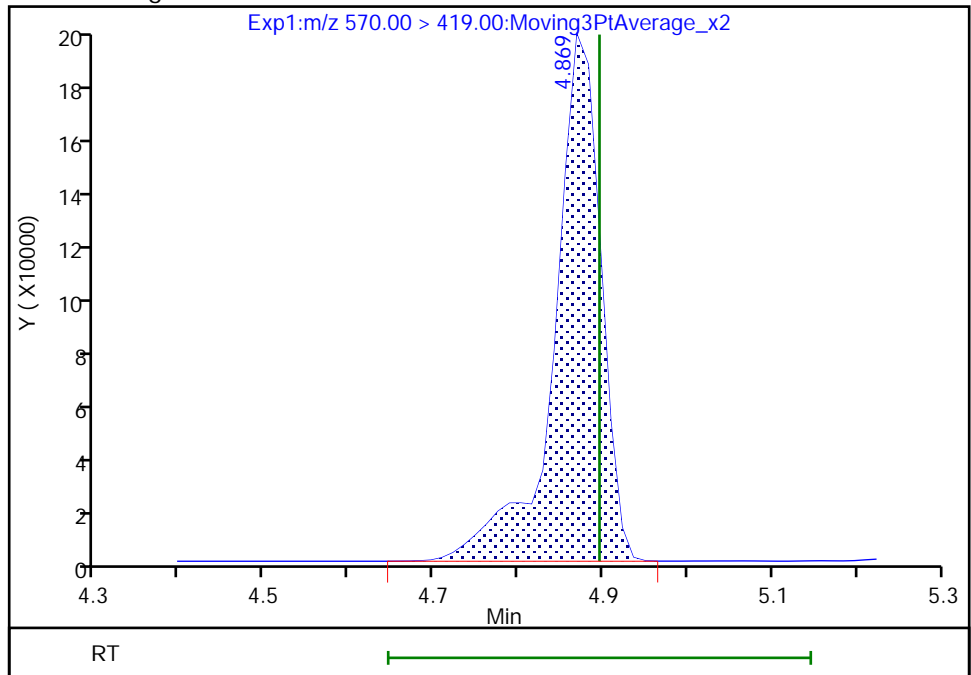
RT: 4.87
Area: 682921
Amount: 0.927260
Amount Units: ng/ml

Processing Integration Results



RT: 4.87
Area: 770545
Amount: 1.047189
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 17:57:46
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54568/95 Calibration Date: 10/07/2021 10:27
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _095.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7855	0.7488		2.38	2.50	-4.7	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.013	0.9098		2.25	2.50	-10.2	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.126	1.104		2.17	2.21	-1.9	40.0
4:2 FTS	AveID	2.500	2.282		2.13	2.34	-8.7	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8572	0.7933		2.31	2.50	-7.5	40.0
Perfluoropentanesulfonic acid (PFPeS)	L2ID		0.8262		2.26	2.35	-3.5	50.0
HFPO-DA	L2ID		1.295		2.35	2.50	-6.2	40.0
Perfluoroheptanoic acid (PFHpA)	L2ID		0.9915		2.35	2.50	-5.9	40.0
Perfluorohexanesulfonic acid (PFHxS)	L2ID		1.272		2.14	2.28	-6.1	40.0
DONA	AveID	3.243	3.094		2.25	2.36	-4.6	40.0
6:2 FTS	L2ID		1.968		2.33	2.37	-1.8	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9947	0.8723		2.09	2.38	-12.3	40.0
Perfluorooctanoic acid (PFOA)	L2ID		1.069		2.42	2.50	-3.1	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.100	1.007		2.12	2.32	-8.5	40.0
Perfluorononanoic acid (PFNA)	L2ID		0.7982		2.40	2.50	-4.1	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	2.308	2.151		2.17	2.33	-6.8	40.0
Perfluorononanesulfonic acid (PFNS)	AveID	1.042	0.9392		2.16	2.40	-9.9	40.0
Perfluorodecanoic acid (PFDA)	L2ID		0.9072		2.40	2.50	-3.9	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9606	0.8416		2.19	2.50	-12.4	40.0
8:2 FTS	AveID	1.784	1.637		2.20	2.40	-8.2	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	L2ID		0.8319		2.27	2.50	-9.2	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.9574	0.8914		2.24	2.41	-6.9	40.0
Perfluoroundecanoic acid (PFUnA)	L2ID		0.9604		2.38	2.50	-4.8	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.9494	0.9279		2.44	2.50	-2.3	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.858	1.701		2.16	2.36	-8.5	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9097		2.23	2.50	-10.8	40.0
10:2 FTS	AveID	2.221	2.413		2.62	2.41	8.7	40.0
2- (N-methylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.126		2.44	2.50	-2.3	40.0
NMeFOSA	AveID	1.047	0.9607		2.29	2.50	-8.2	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9879	0.9578		2.35	2.42	-3.0	40.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54568/95 Calibration Date: 10/07/2021 10:27
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _095.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTrIA)	L2ID		0.8109		2.30	2.50	-7.9	50.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.293		2.57	2.50	2.7	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.168	1.144		2.45	2.50	-2.1	40.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.1217		2.42	2.50	-3.1	40.0
Perfluorohexadecanoic acid	Q2ID		1.030		2.42	2.50	-3.4	40.0
Perfluorooctadecanoic acid	AveID	0.9076	0.8941		2.46	2.50	-1.5	40.0
13C4 PFBA	Ave	1.324	1.276		1.20	1.25	-3.7	50.0
13C5 PFPeA	Ave	1.087	1.149		1.32	1.25	5.7	50.0
13C3 PFBS	Ave	0.7019	0.6690		1.11	1.16	-4.7	50.0
M2-4:2 FTS	Ave	0.1052	0.1137		1.26	1.17	8.1	50.0
13C2 PFHxA	Ave	1.116	1.150		1.29	1.25	3.0	50.0
13C3 HFPO-DA	Ave	0.5714	0.5659		1.24	1.25	-1.0	50.0
13C4 PFHpA	Ave	1.113	1.101		1.24	1.25	-1.1	50.0
18O2 PFHxS	Ave	0.4248	0.4130		1.15	1.18	-2.8	50.0
M2-6:2 FTS	Ave	0.1078	0.1030		1.14	1.19	-4.4	50.0
13C4 PFOA	Ave	1.007	1.002		1.24	1.25	-0.4	50.0
13C4 PFOS	Ave	0.5852	0.5730		1.17	1.20	-2.1	50.0
13C5 PFNA	Ave	1.279	1.294		1.26	1.25	1.1	50.0
13C2 PFDA	Ave	1.296	1.274		1.23	1.25	-1.7	50.0
13C8 FOSA	Ave	0.8591	0.8507		1.24	1.25	-1.0	50.0
M2-8:2 FTS	Ave	0.1316	0.1287		1.17	1.20	-2.2	50.0
d3-NMeFOSAA	Ave	0.1774	0.1865		1.32	1.25	5.2	50.0
13C2 PFUnA	Ave	1.237	1.196		1.21	1.25	-3.3	50.0
d5-NEtFOSAA	Ave	0.1705	0.1659		1.22	1.25	-2.7	50.0
13C2 PFDoA	Ave	1.319	1.409		1.34	1.25	6.8	50.0
d7-N-MeFOSE-M	Ave	0.1075	0.1265		1.47	1.25	17.6	50.0
d-N-MeFOSA-M	Ave	0.1120	0.1145		1.28	1.25	2.3	50.0
d9-N-EtFOSE-M	Ave	0.1146	0.1294		1.41	1.25	12.9	50.0
d-N-EtFOSA-M	Ave	0.0942	0.0950		1.26	1.25	0.8	50.0
13C2 PFTeDA	Ave	1.211	1.238		1.28	1.25	2.2	50.0
13C2 PFHxDA	Ave	0.8782	0.8717		1.24	1.25	-0.7	50.0
13C8 PFOA	Ave	0.9886	0.9502		1.20	1.25	-3.9	50.0
13C8 PFOS	Ave	0.1256	0.1163		1.11	1.20	-7.4	50.0

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_095.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 07-Oct-2021 10:27:25 ALS Bottle#: 41 Worklist Smp#: 95
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-095 ccv
 Misc. Info.: Plate: 11 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 18:08:34 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 18:07:45

Ratio Calibration: None

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	2.801	2.801	0.0	0.678	6798933	1.20	96.3	11883	
2 Perfluorobutanoic acid	212.90 > 169.00	2.801	2.812	-0.011	1.000	10182160	2.38	95.3	2665	
D 3 13C5 PFPeA	267.90 > 223.00	3.102	3.129	-0.027	0.751	6121718	1.32	106	16800	
4 Perfluoropentanoic acid	262.90 > 219.00	3.102	3.129	-0.027	1.000	11139551	2.25	89.8	3845	
D 6 13C3 PFBS	301.90 > 80.00	3.116	3.129	-0.013	0.754	3315532	1.11	95.3	26948	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.130	3.143	-0.013	1.004	6960780	2.17	Target=3.06	98.1	23939
	298.90 > 99.00	3.130	3.143	-0.013	1.004	2608757		2.67(1.53-4.59)		10389
D 8 M2-4:2 FTS	329.00 > 81.00	3.409	3.423	-0.014	0.825	566141	1.26	108	1127	
7 4:2 FTS	327.00 > 307.00	3.409	3.423	-0.014	1.000	2584131	2.13	91.3	25790	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.437	3.453	-0.016	1.103	5525630	2.26	Target=3.47	96.5	18676
	349.00 > 99.00	3.437	3.453	-0.016	1.103	1551555		3.56(1.73-5.20)		10912
D 9 13C2 PFHxA	315.00 > 270.00	3.437	3.469	-0.032	0.832	6125993	1.29	103	13022	
10 Perfluorohexanoic acid	313.00 > 269.00	3.437	3.469	-0.032	1.000	9719128	2.31	Target=9.74	92.5	4372
	313.00 > 119.00	3.437	3.469	-0.032	1.000	767735		12.66(4.87-14.61)		2196
D 12 13C3 HFPO-DA	287.00 > 169.00	3.535	3.561	-0.026	0.856	3015641	1.24	99.0	7364	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.535	3.561	-0.026	1.000	7807976	2.35		93.8	6892	
D 17 18O2 PFHxS										
403.00 > 84.00	3.791	3.803	-0.012	0.918	2081723	1.15		97.2	11819	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.791	3.803	-0.012	1.000	5095151	2.14	Target=2.96	93.9	11727	M
399.00 > 99.00	3.791	3.803	-0.012	1.000	1452369		3.51(1.48-4.44)		7343	
D 14 13C4 PFHpA										
367.00 > 322.00	3.791	3.815	-0.024	0.918	5866346	1.24		98.9	17205	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.791	3.815	-0.024	1.000	11633313	2.35	Target=3.35	94.1	6440	
363.00 > 169.00	3.791	3.815	-0.024	1.000	3573172		3.26(1.67-5.02)		16530	
68 DONA										
377.00 > 251.00	3.815	3.840	-0.025	0.863	17799852	2.25	Target=1.49	95.4	33162	
377.00 > 85.00	3.815	3.840	-0.025	0.863	9661113		1.84(0.74-2.23)		6851	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.119	4.143	-0.024	0.932	5071272	2.09	Target=3.73	87.7	14057	
449.00 > 99.00	4.119	4.143	-0.024	0.932	1363486		3.72(1.87-5.61)		4912	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.119	4.143	-0.024	0.997	5063613	1.20		96.1	18534	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.119	4.143	-0.024	0.997	521617	1.14		95.6	2095	
19 6:2 FTS										
427.00 > 407.00	4.119	4.143	-0.024	1.000	2048637	2.33		98.2	9422	
D 21 13C4 PFOA										
417.00 > 372.00	4.131	4.155	-0.024	1.000	5340610	1.24		99.6	16907	
* 22 13C2 PFOA										
415.00 > 370.00	4.131	4.155	-0.024		5328787	1.25			13211	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.119	4.155	-0.036	0.997	11416530	2.42	Target=2.40	96.9	6222	
413.00 > 169.00	4.131	4.155	-0.024	1.000	4352903		2.62(1.20-3.61)		5110	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.422	4.447	-0.024	1.070	592595	1.11		92.6	3779	
D 25 13C4 PFOS										
503.00 > 80.00	4.422	4.447	-0.024	1.070	2919039	1.17		97.9	10235	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.422	4.447	-0.024	1.000	5704266	2.12	Target=3.83	91.5	9604	M
499.00 > 99.00	4.422	4.447	-0.024	1.000	1310731		4.35(1.91-5.74)		2816	M
D 27 13C5 PFNA										
468.00 > 423.00	4.435	4.470	-0.035	1.073	6895606	1.26		101	30250	
26 Perfluorononanoic acid										
463.00 > 419.00	4.435	4.470	-0.035	1.000	11008630	2.40	Target=3.68	95.9	10282	
463.00 > 169.00	4.435	4.470	-0.035	1.000	2390172		4.61(1.84-5.52)		4234	
63 9CIFOS										
531.00 > 351.00	4.572	4.596	-0.024	1.107	12245203	2.17		93.2	17471	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.696	4.722	-0.026	1.062	5506341	2.16	Target=3.97	90.1	18514	
549.00 > 99.00	4.696	4.722	-0.026	1.062	1479895		3.72(1.99-5.96)		4747	
D 34 13C8 FOSA										
506.00 > 78.00	4.723	4.736	-0.013	1.143	4533181	1.24		99.0	6052	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.723	4.736	-0.013	1.000	7630129	2.19		87.6	7653	
D 32 13C2 PFDA										
515.00 > 470.00	4.723	4.749	-0.026	1.143	6786524	1.23		98.3	33061	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.723	4.749	-0.026	1.000	12313607	2.40	Target=10.11	96.1	7299	
513.00 > 169.00	4.723	4.749	-0.026	1.000	1048767		11.74(5.06-15.17)		733	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.736	4.763	-0.027	1.146	656909	1.17		97.8	3771	
31 8:2 FTS										
527.00 > 507.00	4.736	4.763	-0.027	1.000	2150642	2.20		91.8	7547	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.869	4.896	-0.027	1.179	994045	1.31		105	1196	
36 NMeFOSAA										
570.00 > 419.00	4.869	4.896	-0.027	1.000	1653923	2.27		90.8	2586	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.965	4.993	-0.028	1.123	5247885	2.24	Target=3.80	93.1	16662	
599.00 > 99.00	4.965	4.993	-0.028	1.123	1350048		3.89(1.90-5.70)		8019	
D 39 13C2 PFUnA										
565.00 > 520.00	4.993	5.022	-0.029	1.209	6374543	1.21		96.7	20338	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.993	5.022	-0.029	1.000	12244609	2.38	Target=7.45	95.2	10990	
563.00 > 169.00	4.993	5.022	-0.029	1.000	1390998		8.80(3.78-11.33)		5998	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.008	5.036	-0.028	1.212	883931	1.22		97.3	2930	
40 NEtFOSA										
584.00 > 419.00	5.008	5.036	-0.028	1.000	1640470	2.44		97.7	1500	
57 11CIFOS										
631.00 > 451.00	5.093	5.119	-0.026	1.152	9784816	2.16		91.5	21489	
D 43 13C2 PFDaA										
615.00 > 570.00	5.224	5.251	-0.027	1.265	7508223	1.33		107	21015	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.224	5.251	-0.027	1.000	13660116	2.23	Target=5.33	89.2	8869	
613.00 > 169.00	5.224	5.251	-0.027	1.000	1955506		6.99(2.66-7.99)		7609	
50 10:2 FTS										
627.00 > 607.00	5.251	5.266	-0.015	1.109	3190548	2.62		109	19756	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.281	5.281	0.0	1.278	674126	1.47		118	422	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.282	610283	1.28		102	48.7	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.295	0.0	1.003	1518024	2.44		97.7	1702	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.295	5.295	0.0	1.000	1172538	2.29		91.8	712	
54 PFDoS										
699.00 > 80.00	5.410	5.436	-0.026	1.223	5662033	2.35	Target=4.32	97.0	10917	
699.00 > 99.00	5.410	5.436	-0.026	1.223	1314342		4.31(2.19-6.58)		12436	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.436	5.436	0.0	1.316	689630	1.41		113	433	
62 N-EtFOSE-M										
630.00 > 59.00	5.449	5.449	0.0	1.002	1783083	2.57		103	3354	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.449	0.013	1.322	506122	1.26		101	751	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.436	5.462	-0.026	1.041	12177204	2.30	Target=5.66	92.1	8066	
663.00 > 169.00	5.436	5.462	-0.026	1.041	1978480		6.15(2.83-8.48)		8418	
56 N-EtFOSA-M										
526.00 > 169.00	5.462	5.462	0.0	1.000	1157689	2.45		97.9	670	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.623	5.637	-0.014	1.361	6594474	1.28		102	20379	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.623	5.637	-0.014	1.000	1604679	2.42	Target=1.07	96.9	8679	
713.00 > 219.00	5.608	5.637	-0.029	0.997	1585611		1.01(0.53-1.60)		14258	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.935	5.948	-0.013	1.000	9566745	2.42	Target=7.50	96.6	5848	
813.00 > 169.00	5.935	5.948	-0.013	1.000	1161483		8.24(3.75-11.26)		4802	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.935	5.948	-0.013	1.437	4644911	1.24		99.3	7556	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.192	6.221	-0.029	1.043	8306324	2.46	Target=9.98	98.5	3923	
913.00 > 169.00	6.192	6.221	-0.029	1.043	727921		11.41(5.14-15.41)		2910	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L5PFC2_00002

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_095.d

Injection Date: 07-Oct-2021 10:27:25

Instrument ID: LCA

Lims ID: CCV

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 41

Worklist Smp#: 95

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

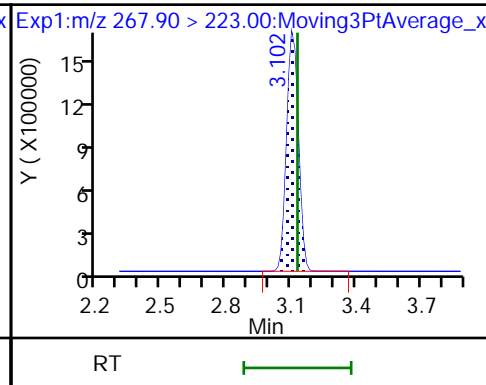
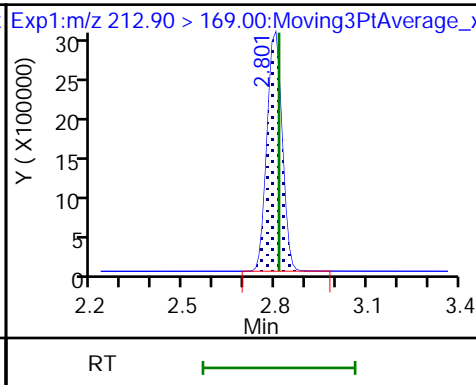
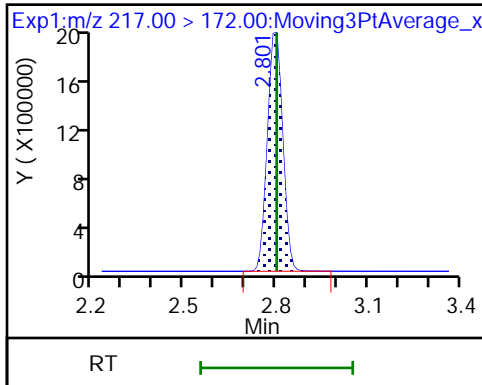
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

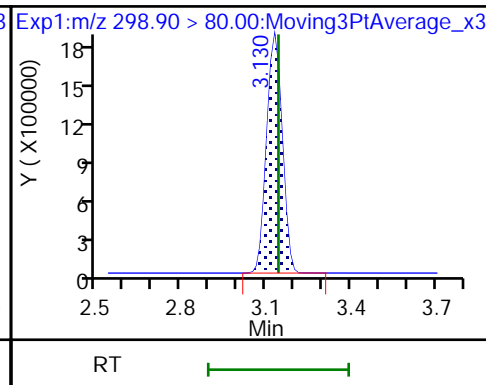
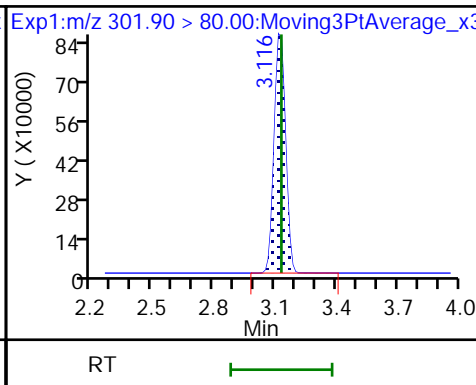
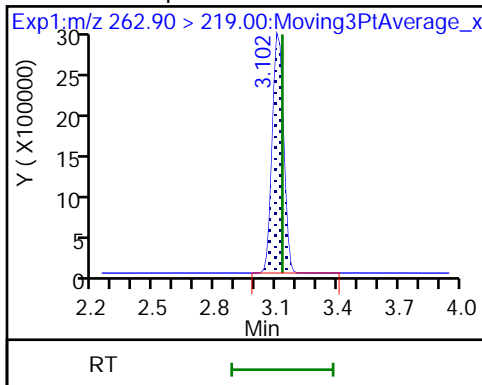
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

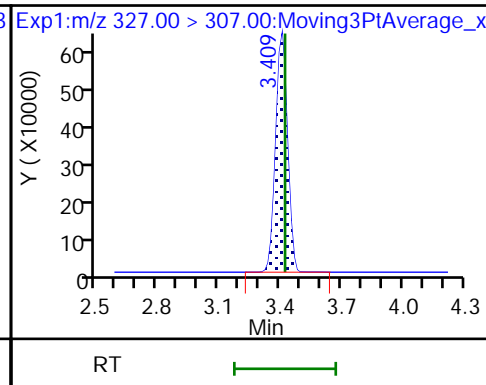
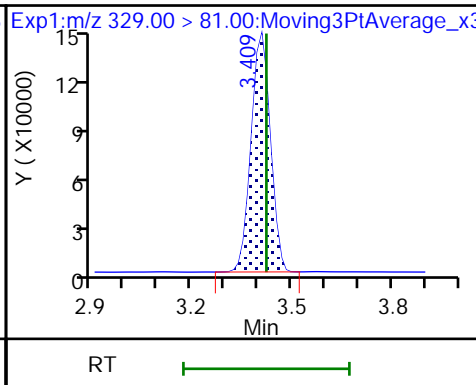
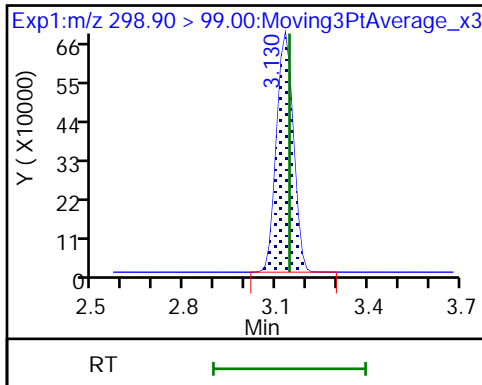
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

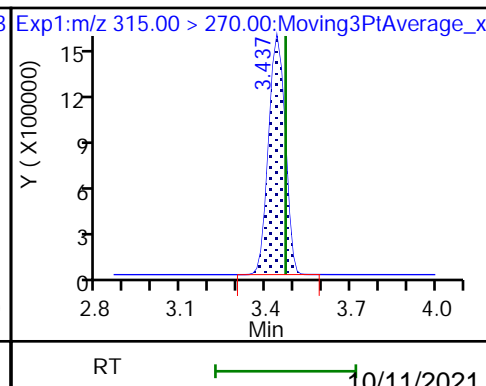
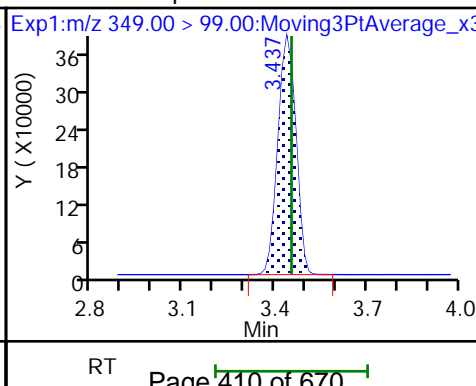
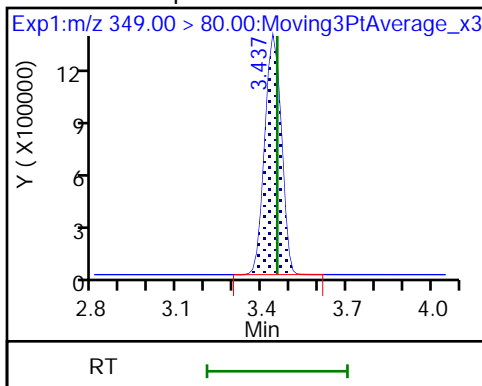
7 4:2 FTS

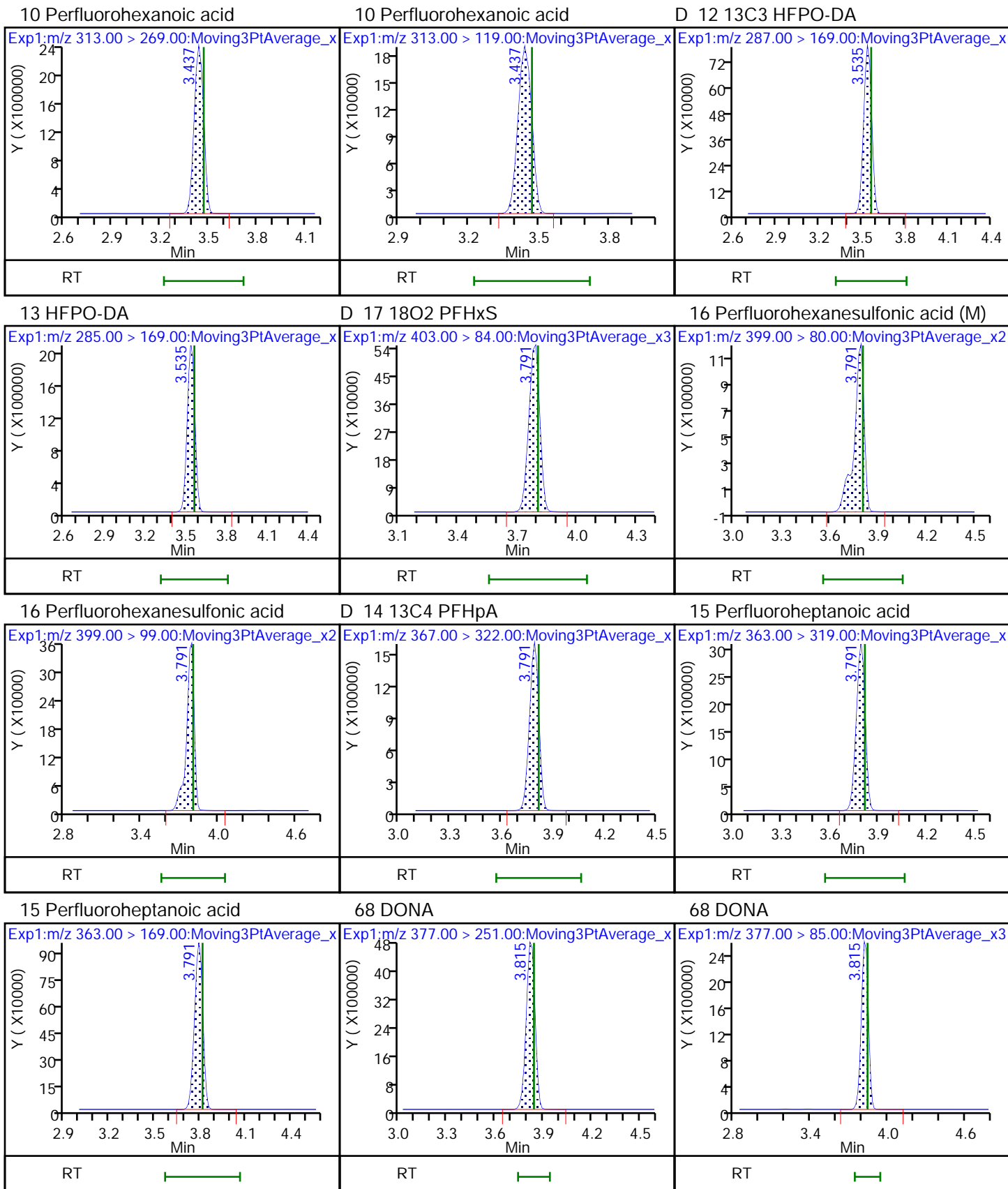


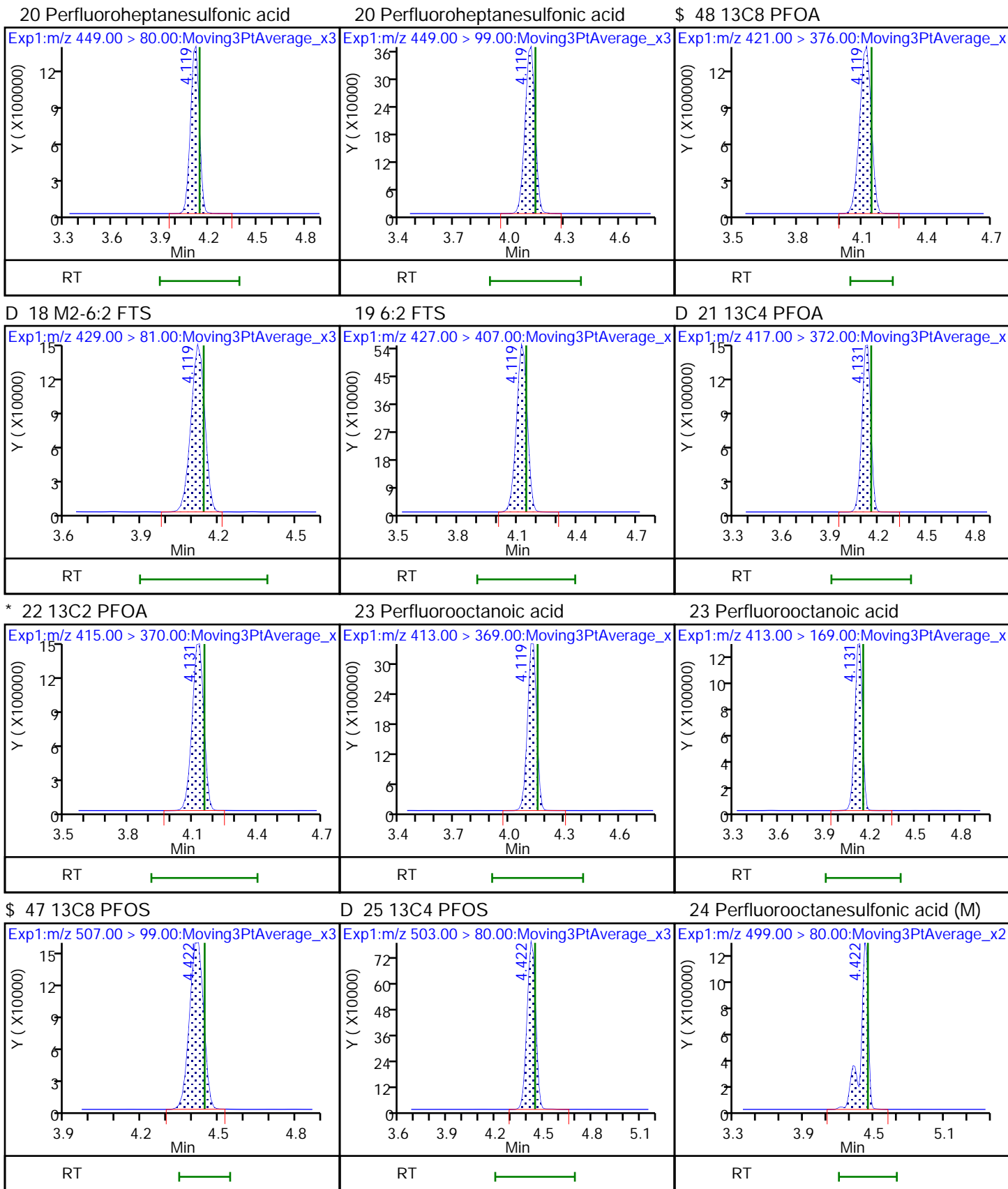
11 Perfluoropentanesulfonic acid

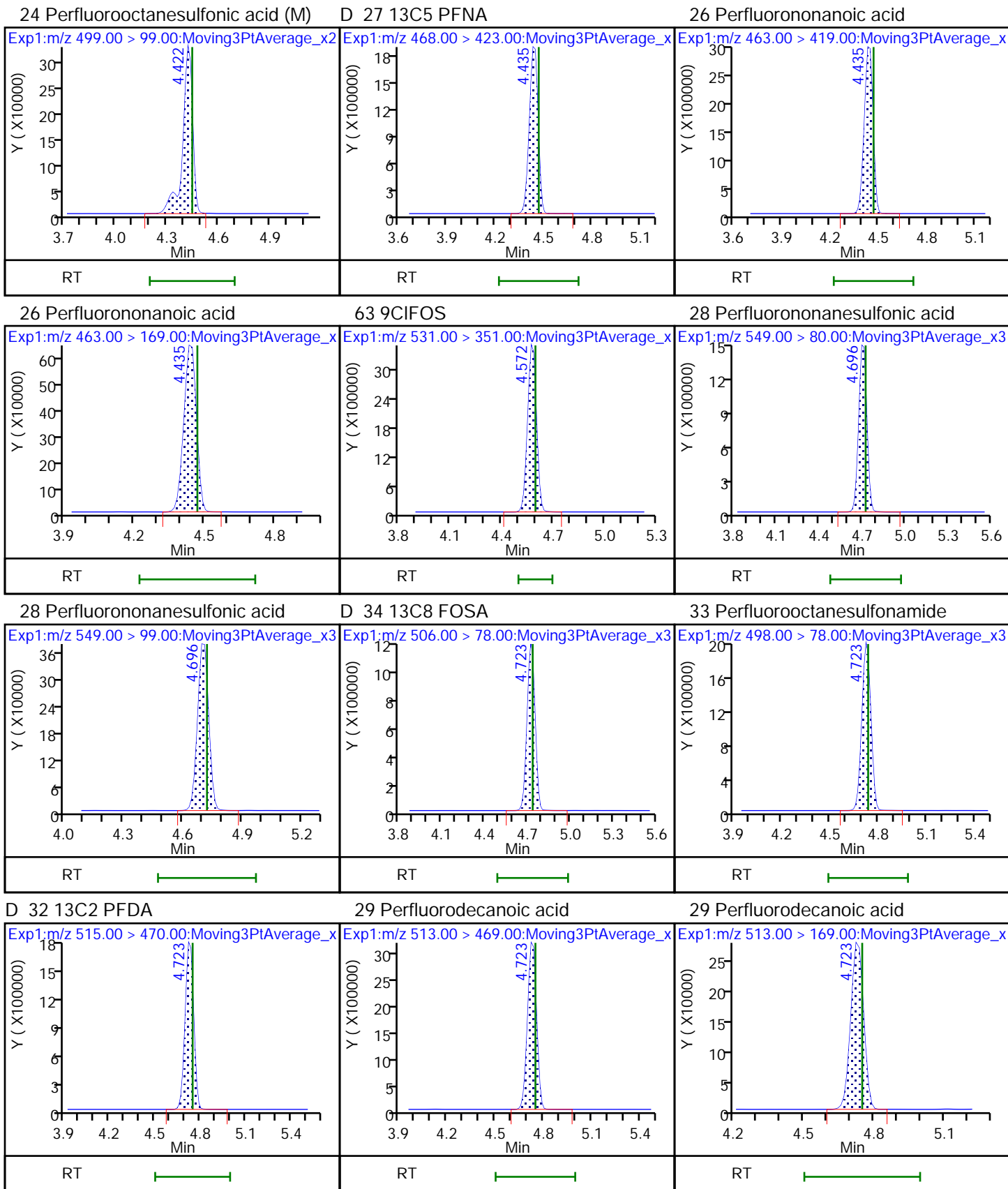
11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA





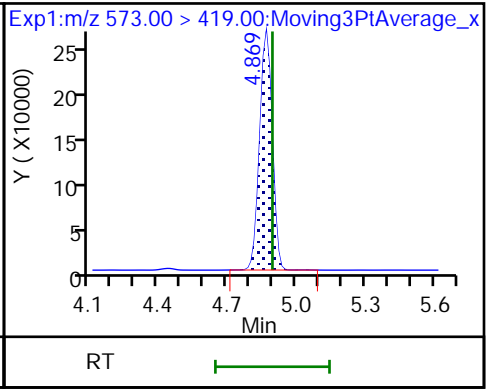
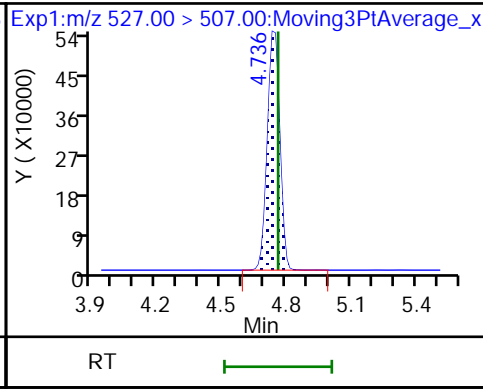
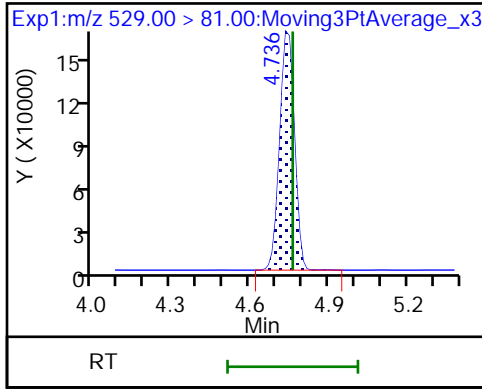




D 30 M2-8:2 FTS

31 8:2 FTS

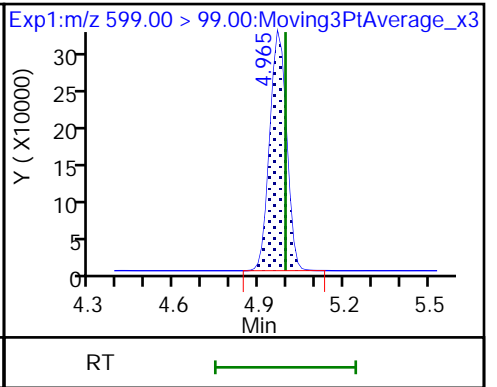
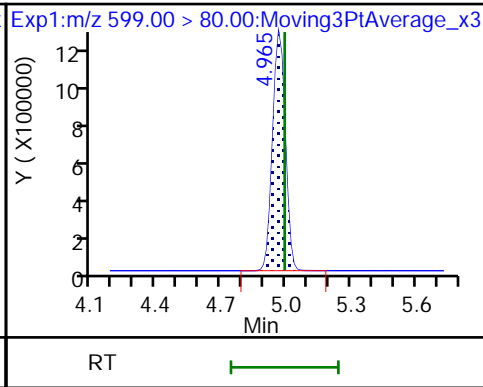
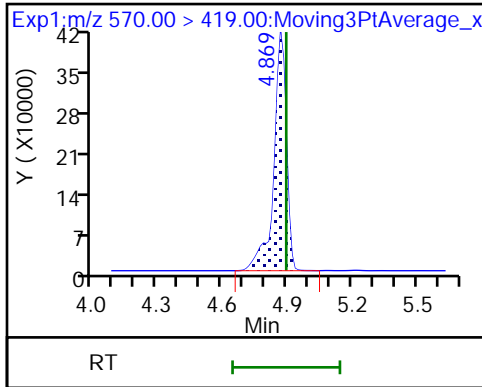
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

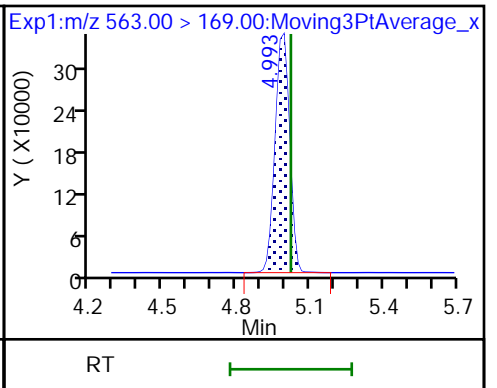
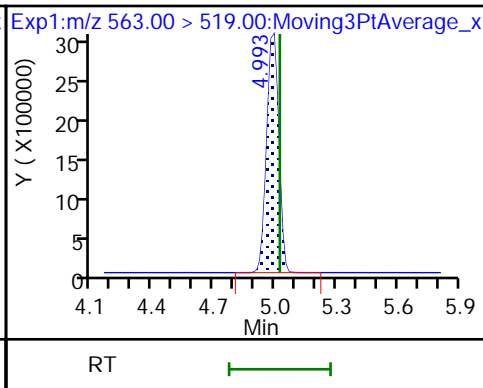
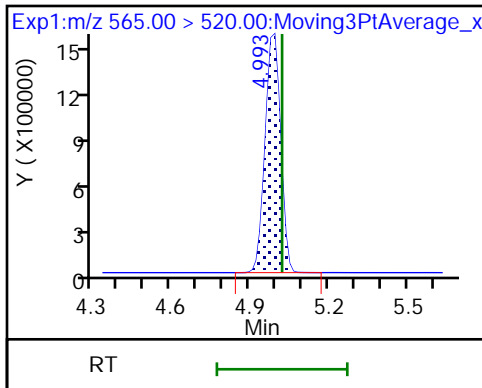
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

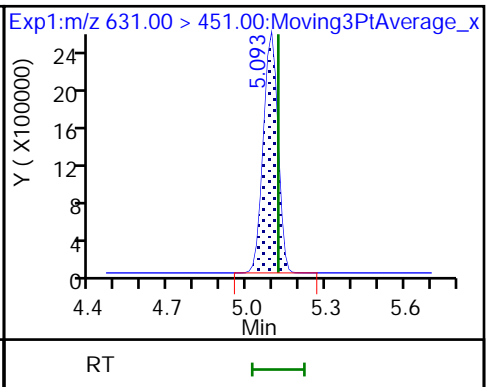
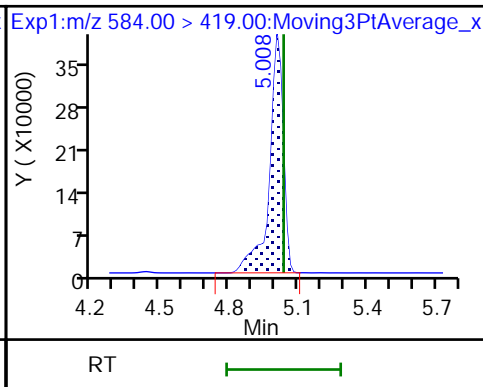
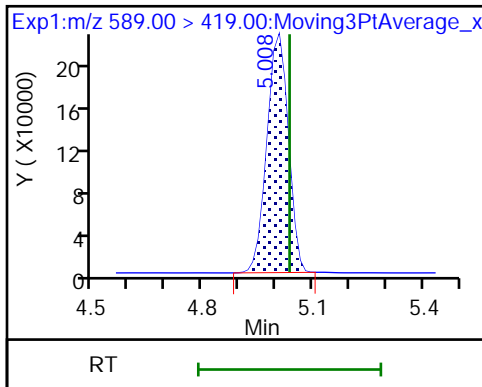
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA

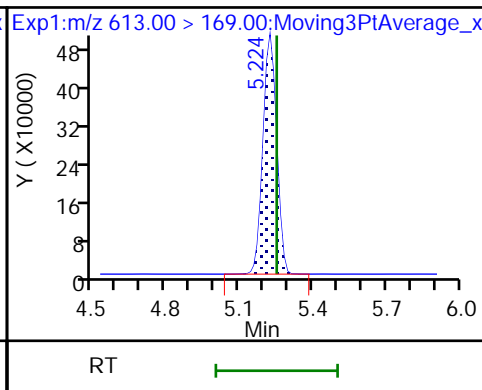
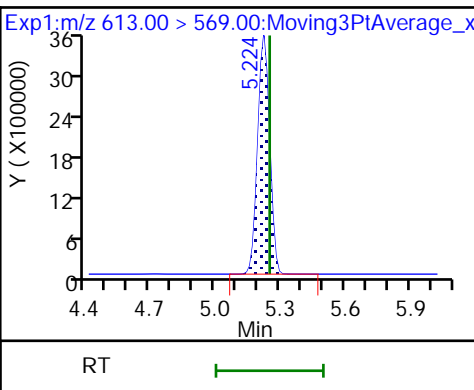
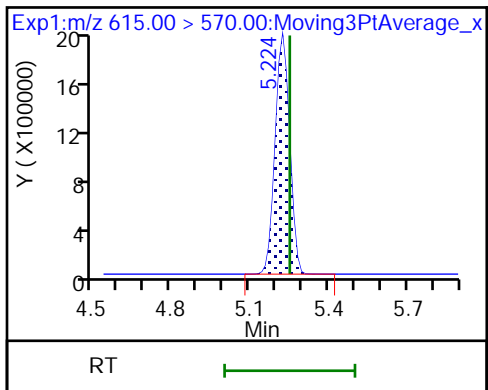
57 11C1FOS



D 43 13C2 PFDoA

42 Perfluorododecanoic acid

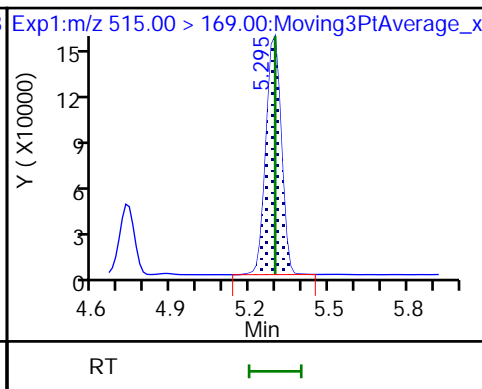
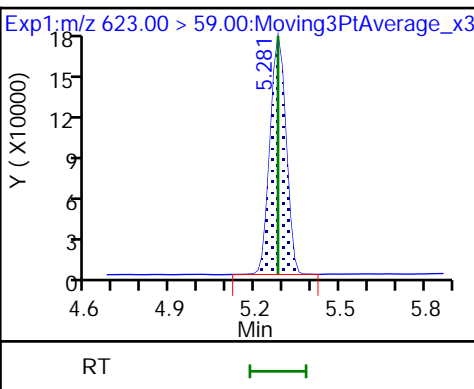
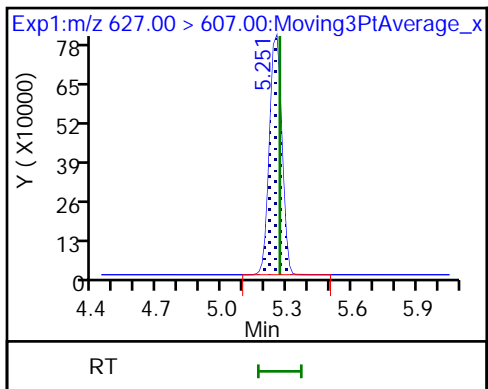
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

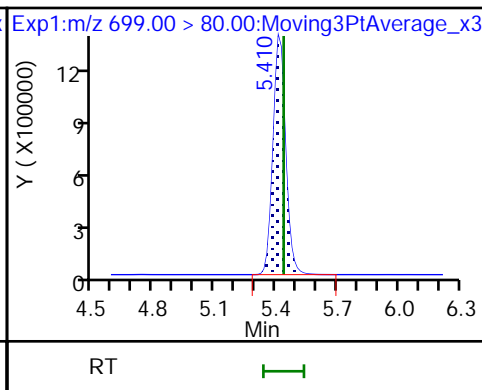
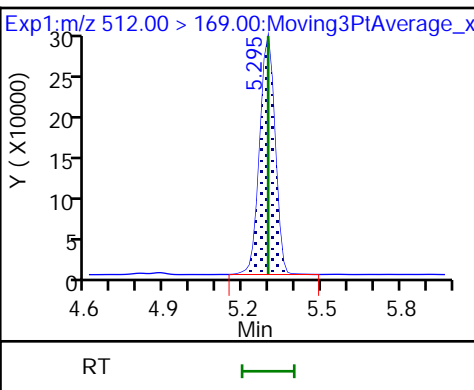
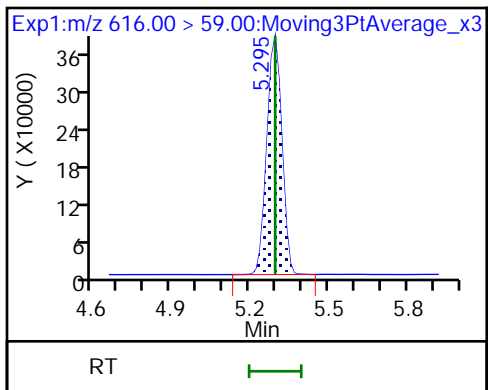
D 58 d-N-MeFOSA-M



49 N-MeFOSE-M

61 NMeFOSA

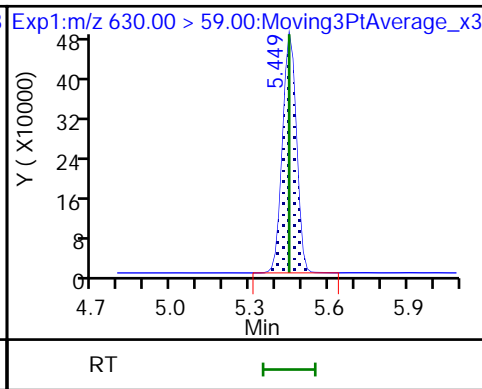
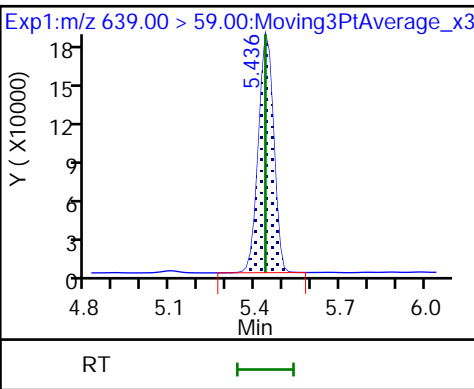
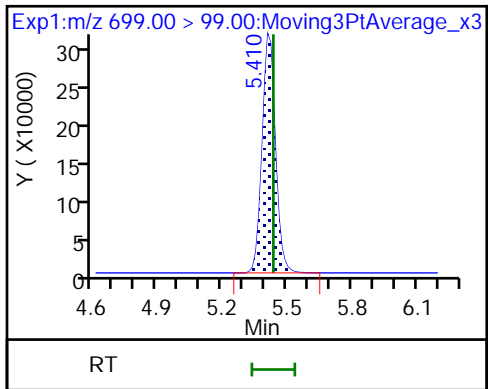
54 PFDoS



54 PFDoS

D 53 d9-N-EtFOSE-M

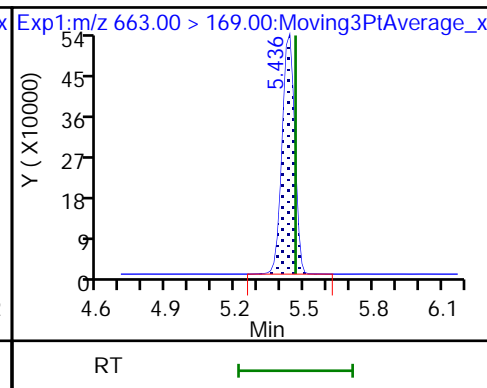
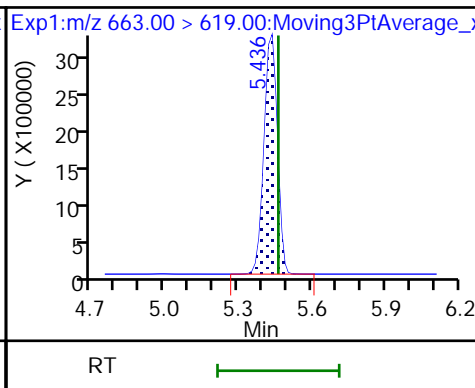
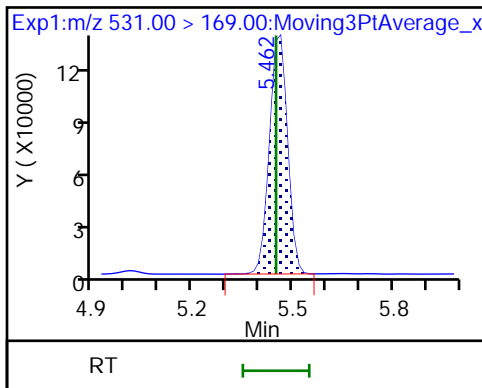
62 N-EtFOSE-M



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid

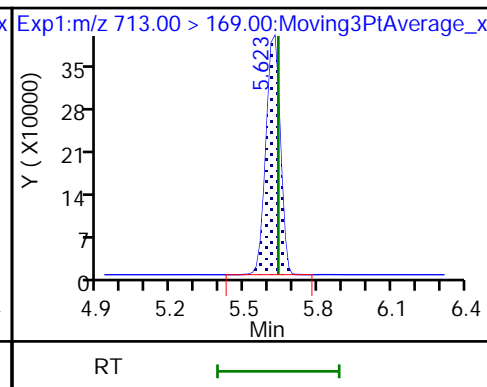
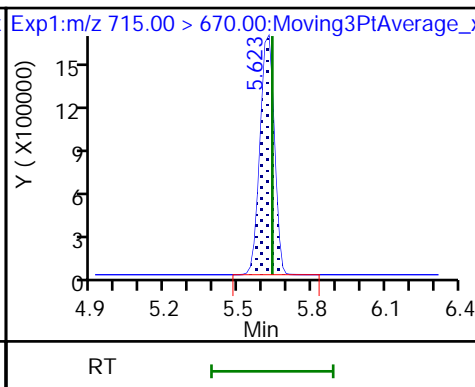
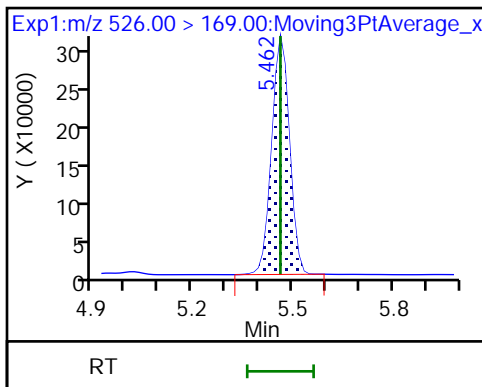
44 Perfluorotridecanoic acid



56 N-EtFOSA-M

D 46 13C2 PFTeDA

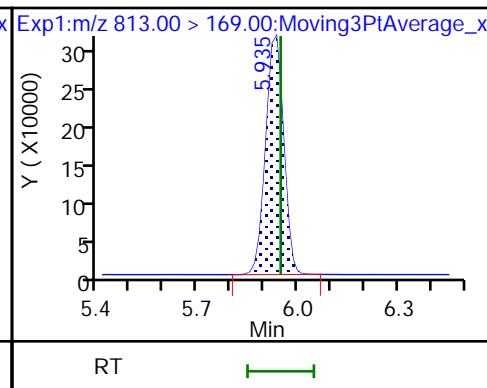
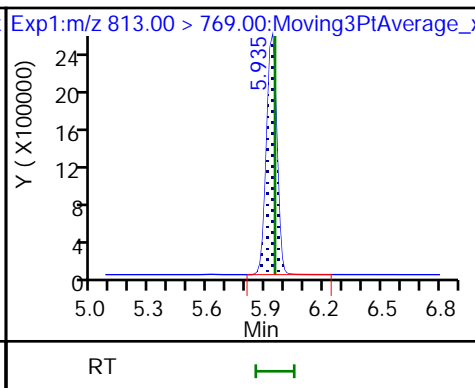
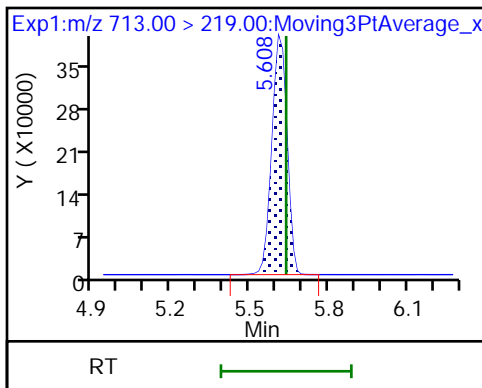
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

55 Perfluorohexadecanoic acid

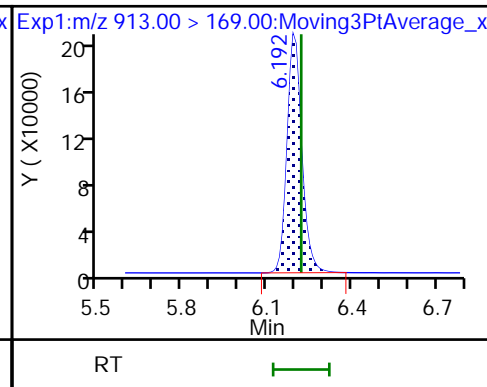
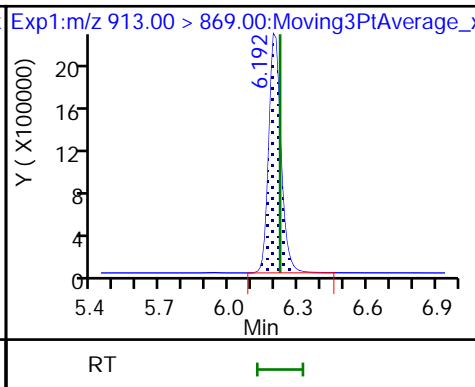
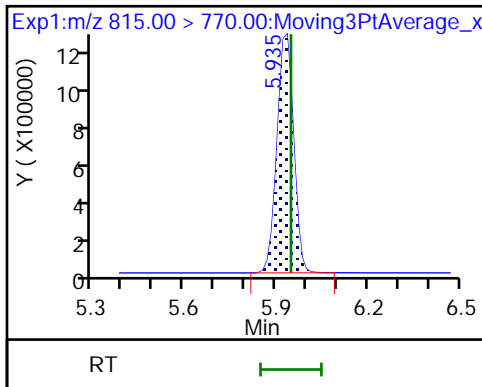
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid



Eurofins TestAmerica, Knoxville

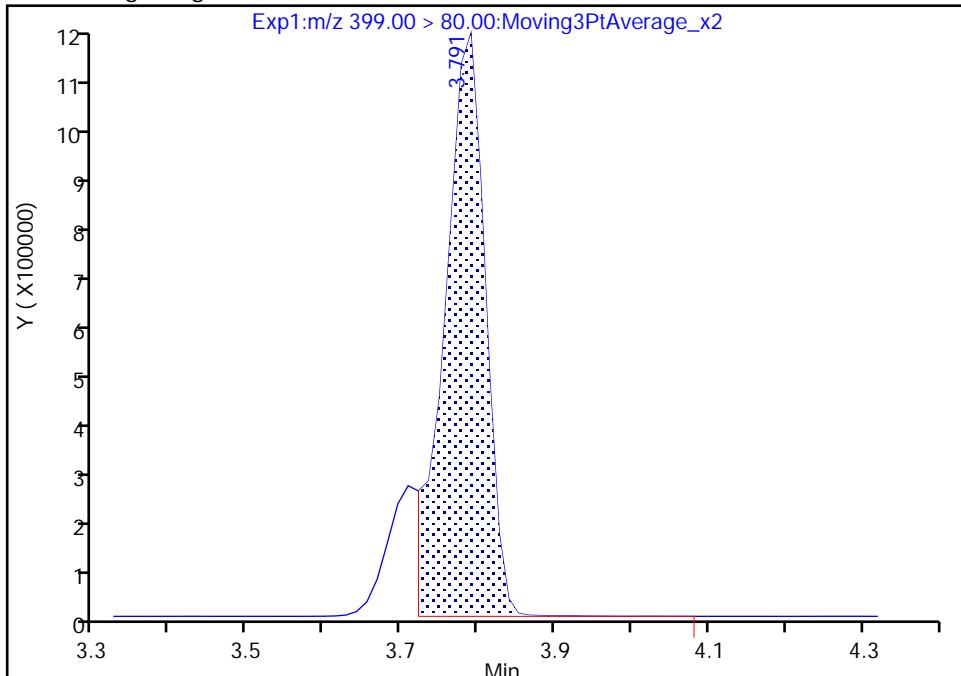
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Injection Date: 07-Oct-2021 10:27:25 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 41 Worklist Smp#: 95
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

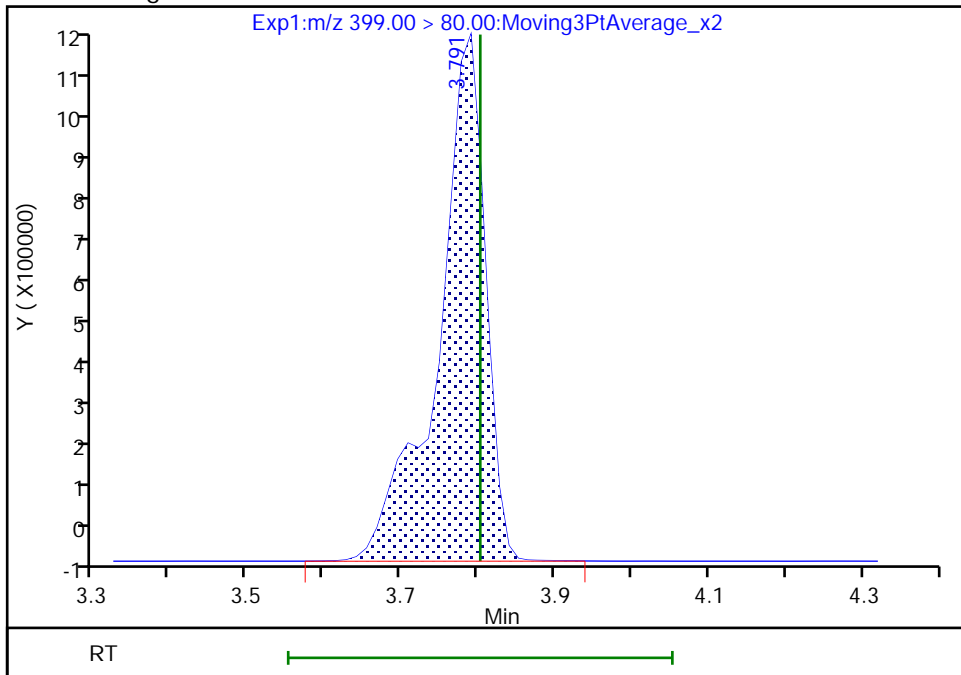
RT: 3.79
Area: 4370509
Amount: 1.832386
Amount Units: ng/ml

Processing Integration Results



RT: 3.79
Area: 5095151
Amount: 2.137045
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 18:07:07
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

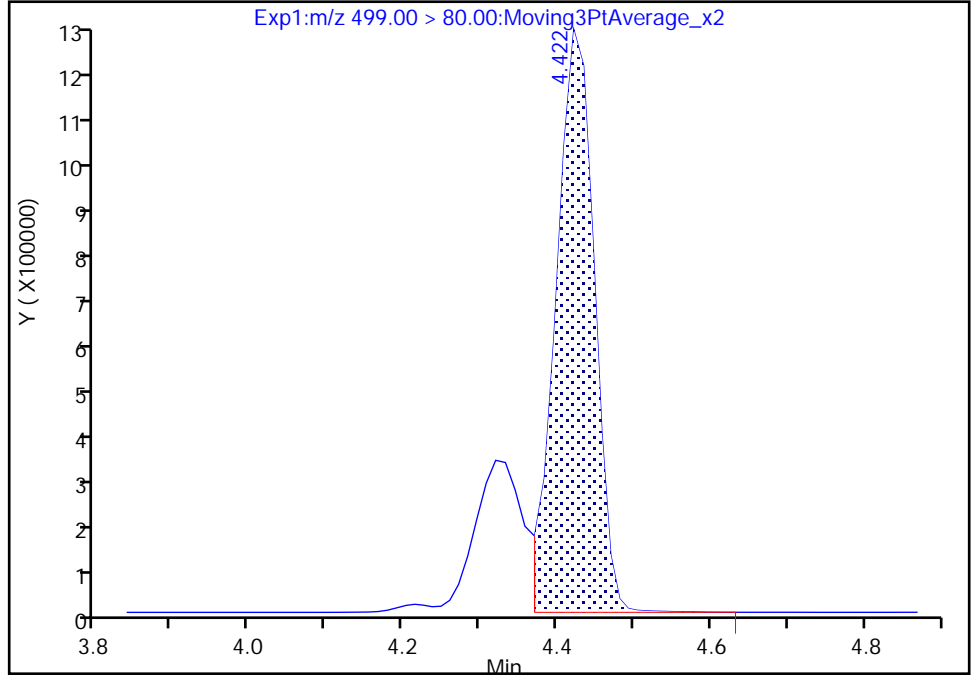
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Injection Date: 07-Oct-2021 10:27:25 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 41 Worklist Smp#: 95
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

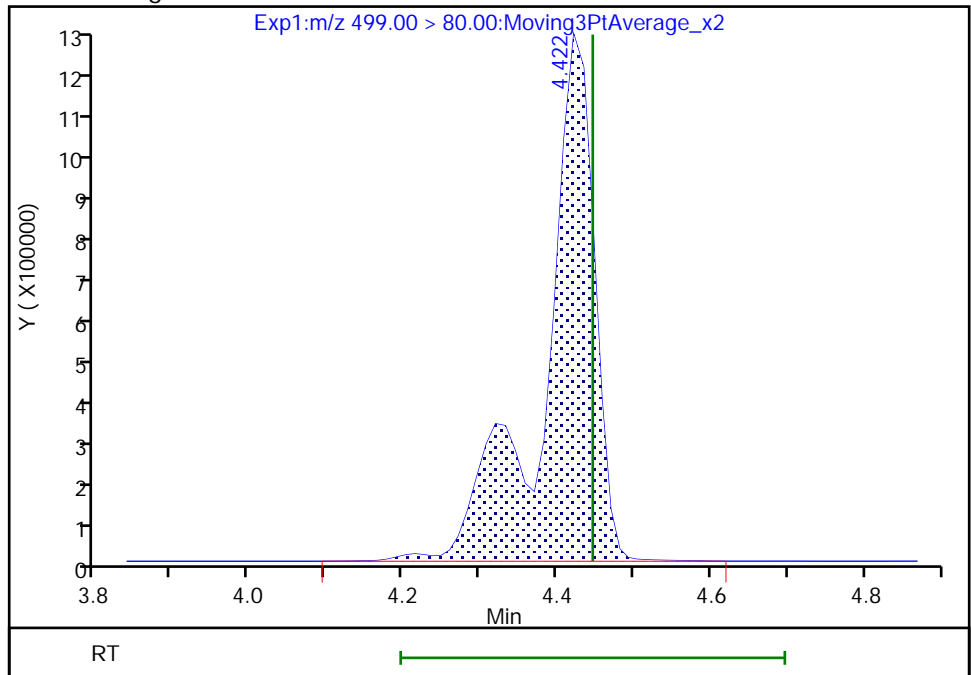
RT: 4.42
Area: 4266281
Amount: 1.588106
Amount Units: ng/ml

Processing Integration Results



RT: 4.42
Area: 5704266
Amount: 2.123390
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 18:07:16
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

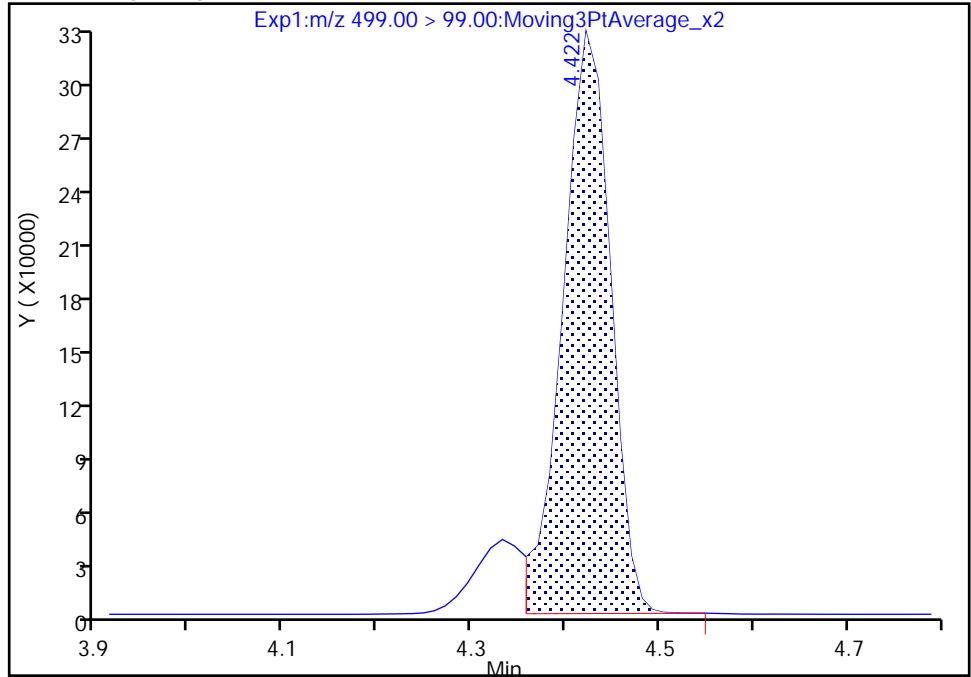
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Injection Date: 07-Oct-2021 10:27:25 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 41 Worklist Smp#: 95
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

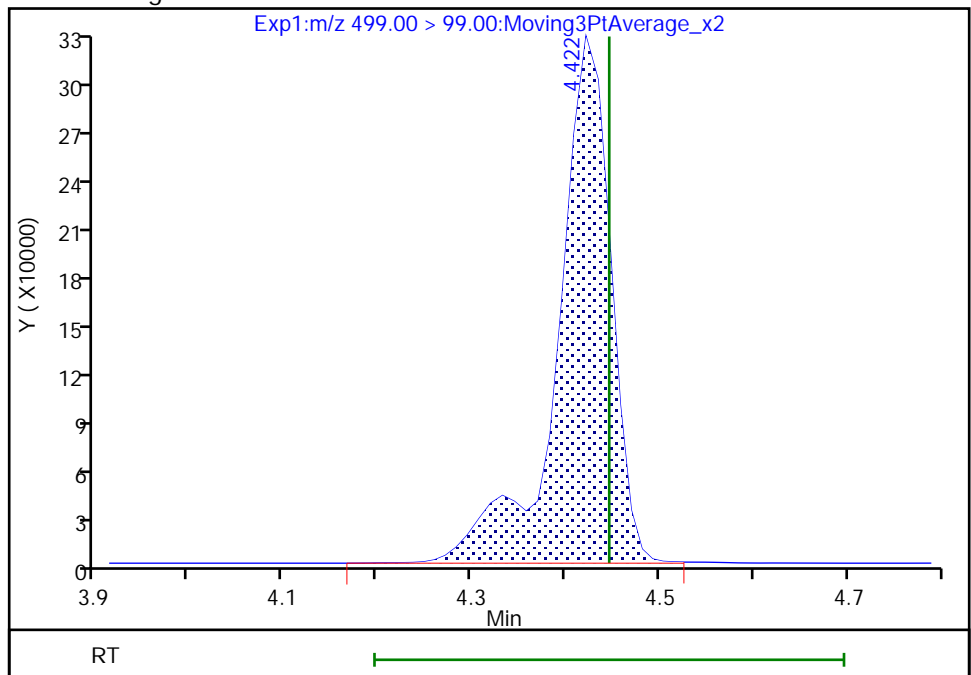
RT: 4.42
Area: 1157886
Amount: 1.588106
Amount Units: ng/ml

Processing Integration Results



RT: 4.42
Area: 1310731
Amount: 2.123390
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 18:07:22

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

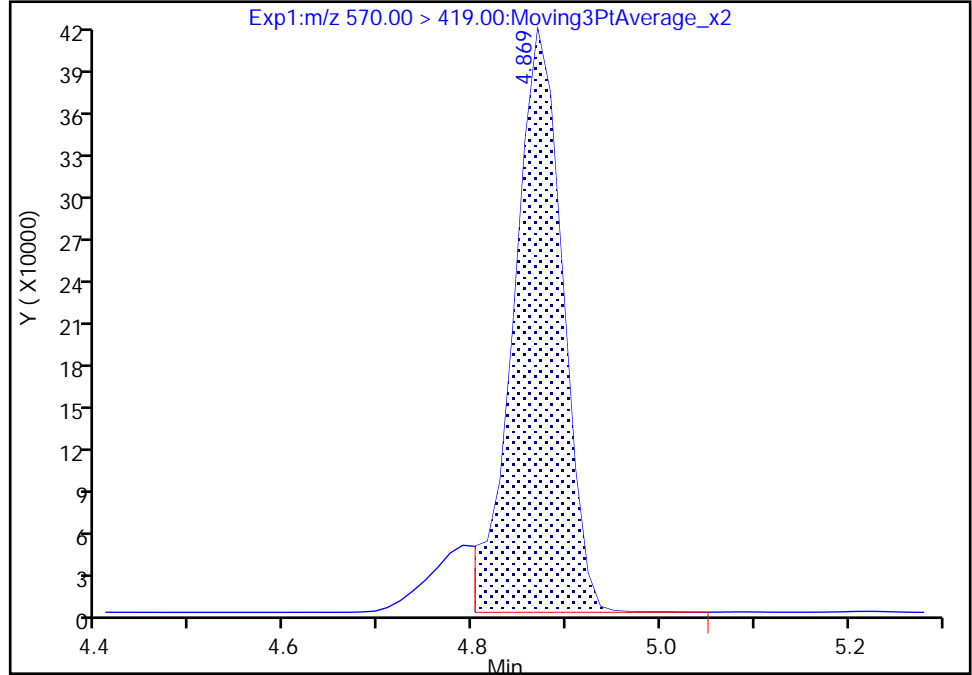
Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_095.d
Injection Date: 07-Oct-2021 10:27:25 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 41 Worklist Smp#: 95
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

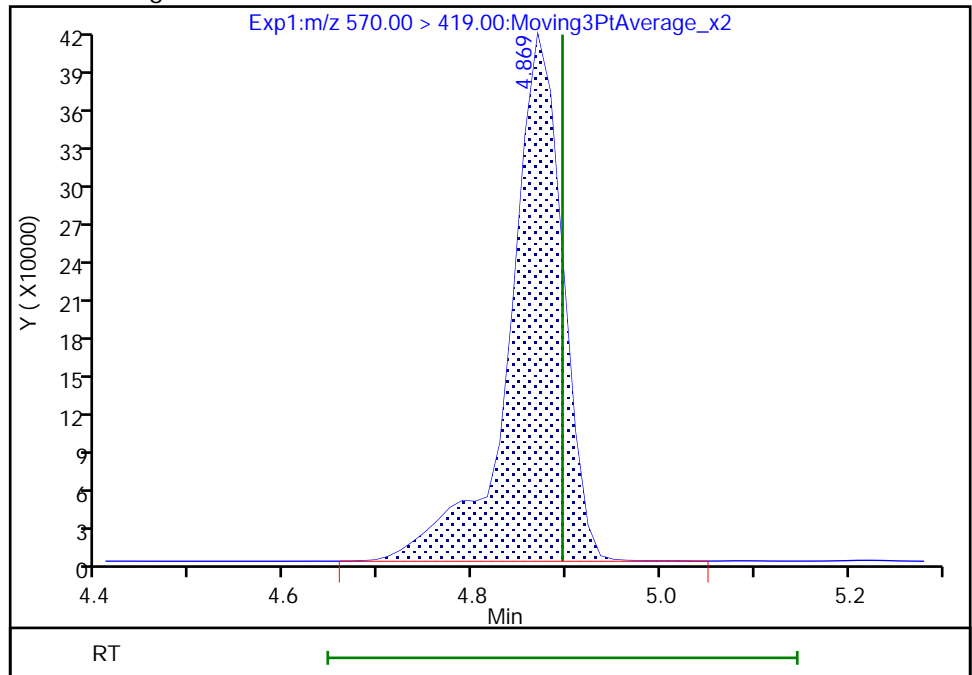
RT: 4.87
Area: 1495008
Amount: 2.052052
Amount Units: ng/ml

Processing Integration Results



RT: 4.87
Area: 1653923
Amount: 2.270970
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 18:07:32
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54568/107 Calibration Date: 10/07/2021 12:13
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _107.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7855	0.7635		0.972	1.00	-2.8	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.013	0.9764		0.964	1.00	-3.6	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.126	1.130		0.887	0.884	0.4	40.0
4:2 FTS	AveID	2.500	2.520		0.942	0.934	0.8	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8572	0.7962		0.929	1.00	-7.1	40.0
Perfluoropentanesulfonic acid (PFPeS)	L2ID		0.8694		0.950	0.938	1.2	50.0
HFPO-DA	L2ID		1.326		0.958	1.00	-4.2	40.0
Perfluorohexanesulfonic acid (PFHxS)	L2ID		1.338		0.896	0.910	-1.5	40.0
Perfluoroheptanoic acid (PFHpA)	L2ID		1.054		0.998	1.00	-0.2	40.0
DONA	AveID	3.243	3.391		0.985	0.942	4.6	40.0
6:2 FTS	L2ID		1.946		0.917	0.948	-3.3	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9947	1.021		0.977	0.952	2.6	40.0
Perfluorooctanoic acid (PFOA)	L2ID		1.086		0.980	1.00	-2.0	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.100	1.067		0.900	0.928	-3.0	40.0
Perfluorononanoic acid (PFNA)	L2ID		0.8447		1.01	1.00	1.2	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	2.308	2.248		0.908	0.932	-2.6	40.0
Perfluorononanesulfonic acid (PFNS)	AveID	1.042	1.021		0.940	0.960	-2.0	40.0
Perfluorodecanoic acid (PFDA)	L2ID		0.9860		1.04	1.00	3.8	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9606	0.9340		0.972	1.00	-2.8	40.0
8:2 FTS	AveID	1.784	1.728		0.928	0.958	-3.1	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	L2ID		1.008		1.10	1.00	9.7	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.9574	0.9416		0.948	0.964	-1.7	40.0
Perfluoroundecanoic acid (PFUnA)	L2ID		0.9932		0.981	1.00	-1.9	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.9494	0.8727		0.919	1.00	-8.1	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.858	1.977		1.00	0.942	6.4	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		1.020		0.977	1.00	-2.3	40.0
10:2 FTS	AveID	2.221	2.373		1.03	0.964	6.8	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.198		1.04	1.00	3.5	40.0
NMeFOSA	AveID	1.047	1.031		0.985	1.00	-1.5	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9879	0.9808		0.961	0.968	-0.7	40.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54568/107 Calibration Date: 10/07/2021 12:13
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _107.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTrIA)	L2ID		0.9069		1.03	1.00	2.6	50.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.271		1.01	1.00	0.7	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.168	1.090		0.933	1.00	-6.7	40.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.1287		1.02	1.00	2.0	40.0
Perfluorohexadecanoic acid	Q2ID		1.095		1.00	1.00	0.2	40.0
Perfluorooctadecanoic acid	AveID	0.9076	0.9848		1.09	1.00	8.5	40.0
13C4 PFBA	Ave	1.324	1.387		1.31	1.25	4.8	50.0
13C5 PFPeA	Ave	1.087	1.159		1.33	1.25	6.6	50.0
13C3 PFBS	Ave	0.7019	0.7348		1.22	1.16	4.7	50.0
M2-4:2 FTS	Ave	0.1052	0.1005		1.12	1.17	-4.5	50.0
13C2 PFHxA	Ave	1.116	1.183		1.33	1.25	6.0	50.0
13C3 HFPO-DA	Ave	0.5714	0.5910		1.29	1.25	3.4	50.0
18O2 PFHxS	Ave	0.4248	0.4372		1.22	1.18	2.9	50.0
13C4 PFHpA	Ave	1.113	1.180		1.33	1.25	6.0	50.0
13C4 PFOA	Ave	1.007	1.017		1.26	1.25	1.0	50.0
M2-6:2 FTS	Ave	0.1078	0.1040		1.15	1.19	-3.5	50.0
13C4 PFOS	Ave	0.5852	0.5729		1.17	1.20	-2.1	50.0
13C5 PFNA	Ave	1.279	1.240		1.21	1.25	-3.1	50.0
13C8 FOSA	Ave	0.8591	0.7392		1.08	1.25	-14.0	50.0
13C2 PFDA	Ave	1.296	1.172		1.13	1.25	-9.5	50.0
M2-8:2 FTS	Ave	0.1316	0.1002		0.912	1.20	-23.9	50.0
d3-NMeFOSAA	Ave	0.1774	0.1372		0.967	1.25	-22.6	50.0
13C2 PFUnA	Ave	1.237	1.124		1.14	1.25	-9.1	50.0
d5-NEtFOSAA	Ave	0.1705	0.1505		1.10	1.25	-11.7	50.0
13C2 PFDoA	Ave	1.319	1.308		1.24	1.25	-0.9	50.0
d7-N-MeFOSE-M	Ave	0.1075	0.1262		1.47	1.25	17.3	50.0
d-N-MeFOSA-M	Ave	0.1120	0.1223		1.37	1.25	9.2	50.0
d9-N-EtFOSE-M	Ave	0.1146	0.1395		1.52	1.25	21.7	50.0
d-N-EtFOSA-M	Ave	0.0942	0.1034		1.37	1.25	9.7	50.0
13C2 PFTeDA	Ave	1.211	1.225		1.26	1.25	1.2	50.0
13C2 PFHxDA	Ave	0.8782	0.8961		1.28	1.25	2.0	50.0
13C8 PFOA	Ave	0.9886	0.9662		1.22	1.25	-2.3	50.0
13C8 PFOS	Ave	0.1256	0.1304		1.24	1.20	3.8	50.0

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_107.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 07-Oct-2021 12:13:06 ALS Bottle#: 53 Worklist Smp#: 107
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-107 ccv
 Misc. Info.: Plate: 11 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 18:13:43 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 18:12:51

Ratio Calibration: None

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	2.796	2.801	-0.005	0.678	6889834	1.31	105	15228	
2 Perfluorobutanoic acid	212.90 > 169.00	2.796	2.812	-0.016	1.000	4208505	0.9721	97.2	1213	
D 3 13C5 PFPeA	267.90 > 223.00	3.109	3.129	-0.020	0.754	5756336	1.33	107	12673	
4 Perfluoropentanoic acid	262.90 > 219.00	3.109	3.129	-0.020	1.000	4496598	0.9639	96.4	2402	
D 6 13C3 PFBS	301.90 > 80.00	3.123	3.129	-0.006	0.757	3393637	1.22	105	27284	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.137	3.143	-0.006	1.004	2916256	0.8871	Target=3.06	100	17682
	298.90 > 99.00	3.137	3.143	-0.006	1.004	1076650		2.71(1.53-4.59)		3691
D 8 M2-4:2 FTS	329.00 > 81.00	3.402	3.423	-0.021	0.825	466067	1.11	95.5	964	
7 4:2 FTS	327.00 > 307.00	3.416	3.423	-0.007	1.004	939703	0.9416	101	1340	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.446	3.453	-0.007	1.103	2380764	0.9495	Target=3.47	101	12733
	349.00 > 99.00	3.446	3.453	-0.007	1.103	676590		3.52(1.73-5.20)		5677
D 9 13C2 PFHxA	315.00 > 270.00	3.446	3.469	-0.023	0.835	5874819	1.32	106	15914	
10 Perfluorohexanoic acid	313.00 > 269.00	3.446	3.469	-0.023	1.000	3741972	0.9288	Target=9.74	92.9	2804
	313.00 > 119.00	3.446	3.469	-0.023	1.000	303481		12.33(4.87-14.61)		916
D 12 13C3 HFPO-DA	287.00 > 169.00	3.541	3.561	-0.020	0.859	2934953	1.29	103	6055	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.541	3.561	-0.020	1.000	3114097	0.9576		95.8	2378	
D 17 18O2 PFHxS										
403.00 > 84.00	3.785	3.803	-0.018	0.918	2053691	1.22		103	13964	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.785	3.803	-0.018	1.000	2114892	0.8962	Target=2.96	98.5	5457	M
399.00 > 99.00	3.785	3.803	-0.018	1.000	616141		3.43(1.48-4.44)		2599	
D 14 13C4 PFHpA										
367.00 > 322.00	3.797	3.815	-0.018	0.921	5861472	1.33		106	19878	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.797	3.815	-0.018	1.000	4943553	1.00	Target=3.35	99.8	5625	
363.00 > 169.00	3.797	3.815	-0.018	1.000	1498828		3.30(1.67-5.02)		3887	
68 DONA										
377.00 > 251.00	3.822	3.840	-0.018	0.863	7270169	0.9849	Target=1.49	105	16345	
377.00 > 85.00	3.822	3.840	-0.018	0.863	3956156		1.84(0.74-2.23)		2431	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.124	4.143	-0.019	0.932	2211856	0.9770	Target=3.73	103	7156	
449.00 > 99.00	4.124	4.143	-0.019	0.932	564811		3.92(1.87-5.61)		3502	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.124	4.143	-0.019	1.000	4798067	1.22		97.7	30345	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.124	4.143	-0.019	1.000	490488	1.15		96.5	2946	
19 6:2 FTS										
427.00 > 407.00	4.124	4.143	-0.019	1.000	762094	0.9168		96.7	1305	
D 21 13C4 PFOA										
417.00 > 372.00	4.124	4.155	-0.031	1.000	5051178	1.26		101	15822	
* 22 13C2 PFOA										
415.00 > 370.00	4.124	4.155	-0.031		4965965	1.25			25070	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.124	4.155	-0.031	1.000	4389720	0.9796	Target=2.40	98.0	3508	
413.00 > 169.00	4.124	4.155	-0.031	1.000	1708046		2.57(1.20-3.61)		3250	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.426	4.447	-0.020	1.073	618988	1.24		104	5129	
D 25 13C4 PFOS										
503.00 > 80.00	4.426	4.447	-0.020	1.073	2719810	1.17		97.9	6899	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.426	4.447	-0.020	1.000	2253625	0.9004	Target=3.83	97.0	2403	M
499.00 > 99.00	4.426	4.447	-0.020	1.000	508561		4.43(1.91-5.74)		2105	M
D 27 13C5 PFNA										
468.00 > 423.00	4.450	4.470	-0.020	1.079	6159036	1.21		96.9	33145	
26 Perfluorononanoic acid										
463.00 > 419.00	4.450	4.470	-0.020	1.000	4162192	1.01	Target=3.68	101	1964	
463.00 > 169.00	4.450	4.470	-0.020	1.000	906860		4.59(1.84-5.52)		1089	
63 9CIFOS										
531.00 > 351.00	4.576	4.596	-0.020	1.109	4769133	0.9079		97.4	13077	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.713	4.722	-0.009	1.065	2230753	0.9404	Target=3.97	98.0	6144	
549.00 > 99.00	4.713	4.722	-0.009	1.065	585907		3.81(1.99-5.96)		2226	
D 34 13C8 FOSA										
506.00 > 78.00	4.726	4.736	-0.010	1.146	3670787	1.08		86.0	7038	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.726	4.736	-0.010	1.000	2742805	0.9724		97.2	4008	
D 32 13C2 PFDA										
515.00 > 470.00	4.739	4.749	-0.010	1.149	5821806	1.13		90.5	19953	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.726	4.749	-0.023	0.997	4592323	1.04	Target=10.11	104	4261	
513.00 > 169.00	4.739	4.749	-0.010	1.000	365538		12.56(5.06-15.17)		245	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.753	4.763	-0.010	1.152	476833	0.9118		76.1	1681	
31 8:2 FTS										
527.00 > 507.00	4.753	4.763	-0.010	1.000	659130	0.9280		96.9	704	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.872	4.896	-0.024	1.181	681574	0.9672		77.4	2017	
36 NMeFOSAA										
570.00 > 419.00	4.872	4.896	-0.024	1.000	549823	1.10		110	1137	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.969	4.993	-0.024	1.123	2065839	0.9481	Target=3.80	98.3	7604	
599.00 > 99.00	4.969	4.993	-0.024	1.123	575796		3.59(1.90-5.70)		3157	
D 39 13C2 PFUnA										
565.00 > 520.00	4.997	5.022	-0.025	1.212	5582352	1.14		90.9	12803	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.997	5.022	-0.025	1.000	4435396	0.9812	Target=7.45	98.1	1582	
563.00 > 169.00	4.997	5.022	-0.025	1.000	503233		8.81(3.78-11.33)		438	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.012	5.036	-0.024	1.215	747302	1.10		88.3	3174	
40 NEtFOSA										
584.00 > 419.00	5.012	5.036	-0.024	1.000	521740	0.9192		91.9	930	
57 11CIFOS										
631.00 > 451.00	5.096	5.119	-0.023	1.151	4239555	1.00		106	25303	
D 43 13C2 PFDaA										
615.00 > 570.00	5.227	5.251	-0.024	1.267	6494762	1.24		99.1	16815	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.227	5.251	-0.024	1.000	5298484	0.9771	Target=5.33	97.7	6031	
613.00 > 169.00	5.227	5.251	-0.024	1.000	743489		7.13(2.66-7.99)		701	
50 10:2 FTS										
627.00 > 607.00	5.255	5.266	-0.011	1.106	910784	1.03		107	1621	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.284	5.281	0.003	1.281	626489	1.47		117	573	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.299	5.295	0.004	1.285	607132	1.37		109	51.4	
49 N-MeFOSE-M										
616.00 > 59.00	5.299	5.295	0.004	1.003	600581	1.04		104	917	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.299	5.295	0.004	1.000	500838	0.9849		98.5	602	
54 PFDoS										
699.00 > 80.00	5.413	5.436	-0.023	1.223	2160870	0.9611	Target=4.32	99.3	6526	
699.00 > 99.00	5.413	5.436	-0.023	1.223	518349		4.17(2.19-6.58)		3606	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.439	5.436	0.003	1.319	692718	1.52		122	883	
62 N-EtFOSE-M										
630.00 > 59.00	5.452	5.449	0.003	1.002	704437	1.01		101	2040	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.465	5.449	0.016	1.325	513286	1.37		110	683	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.439	5.462	-0.023	1.041	4712190	1.03	Target=5.66	103	4970	
663.00 > 169.00	5.439	5.462	-0.023	1.041	760259		6.20(2.83-8.48)		1501	
56 N-EtFOSA-M										
526.00 > 169.00	5.465	5.462	0.003	1.000	447484	0.9327		93.3	638	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.626	5.637	-0.011	1.364	6082307	1.26		101	21686	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.626	5.637	-0.011	1.000	626158	1.02	Target=1.07	102	1409	
713.00 > 219.00	5.612	5.637	-0.025	0.997	599342		1.04(0.53-1.60)		1593	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.938	5.948	-0.010	1.000	3898698	1.00	Target=7.50	100	5503	
813.00 > 169.00	5.938	5.948	-0.010	1.000	460945		8.46(3.75-11.26)		1673	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.938	5.948	-0.010	1.440	4450008	1.28		102	9583	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.204	6.221	-0.017	1.045	3505765	1.08	Target=9.98	108	4000	
913.00 > 169.00	6.204	6.221	-0.017	1.045	289954		12.09(5.14-15.41)		1702	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L4PFC2_00003

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_107.d

Injection Date: 07-Oct-2021 12:13:06

Instrument ID: LCA

Lims ID: CCV

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 53

Worklist Smp#: 107

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

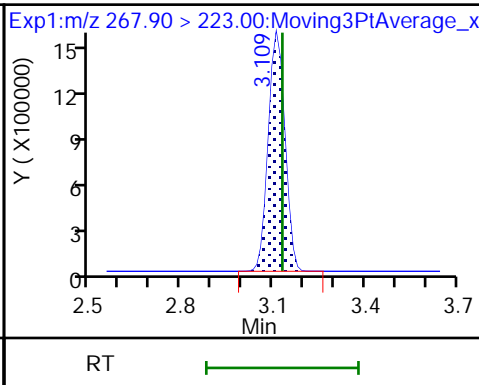
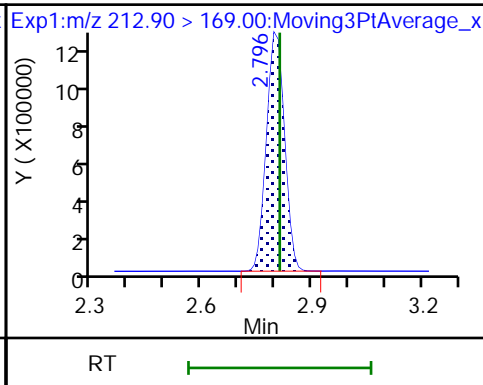
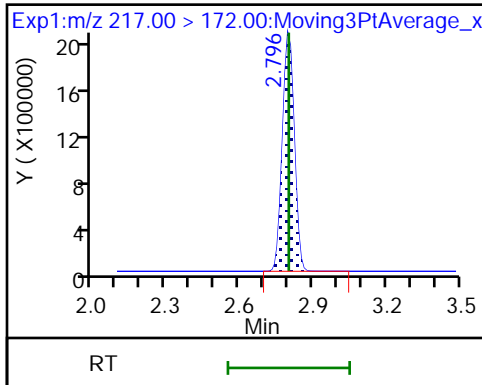
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

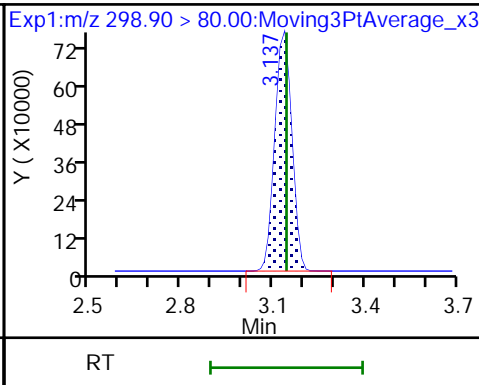
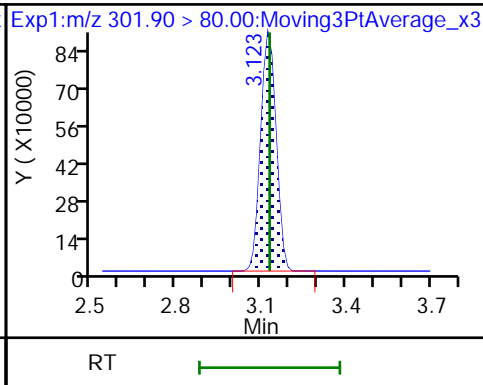
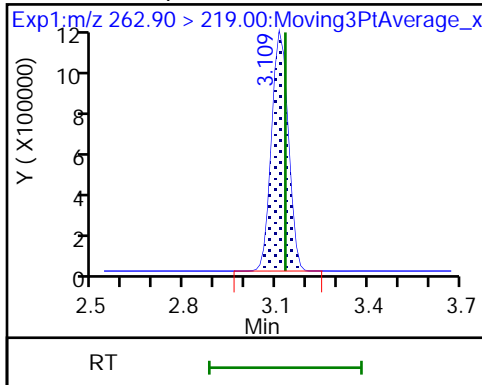
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

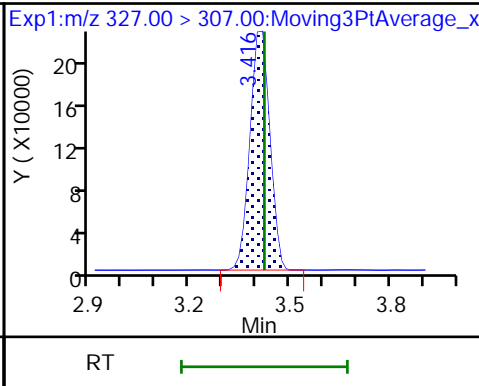
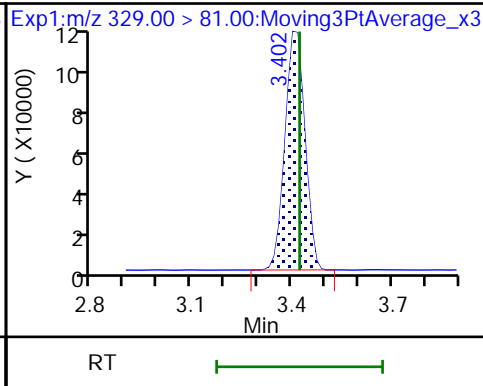
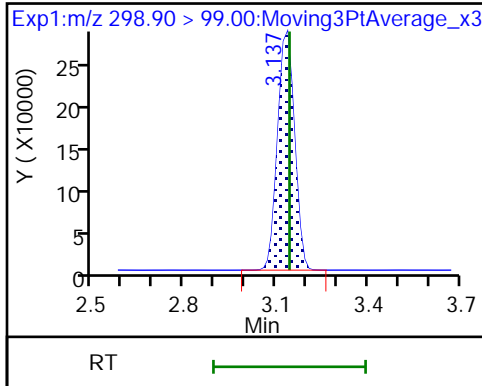
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

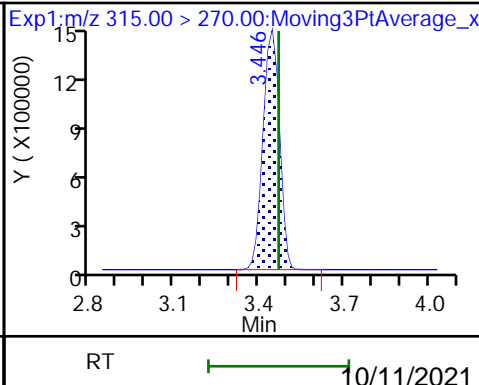
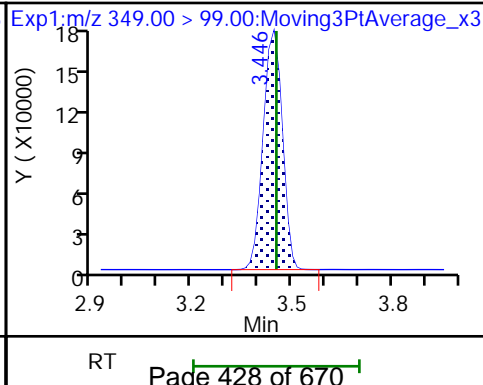
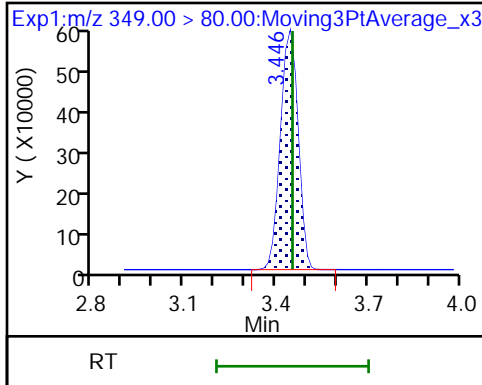
7 4:2 FTS

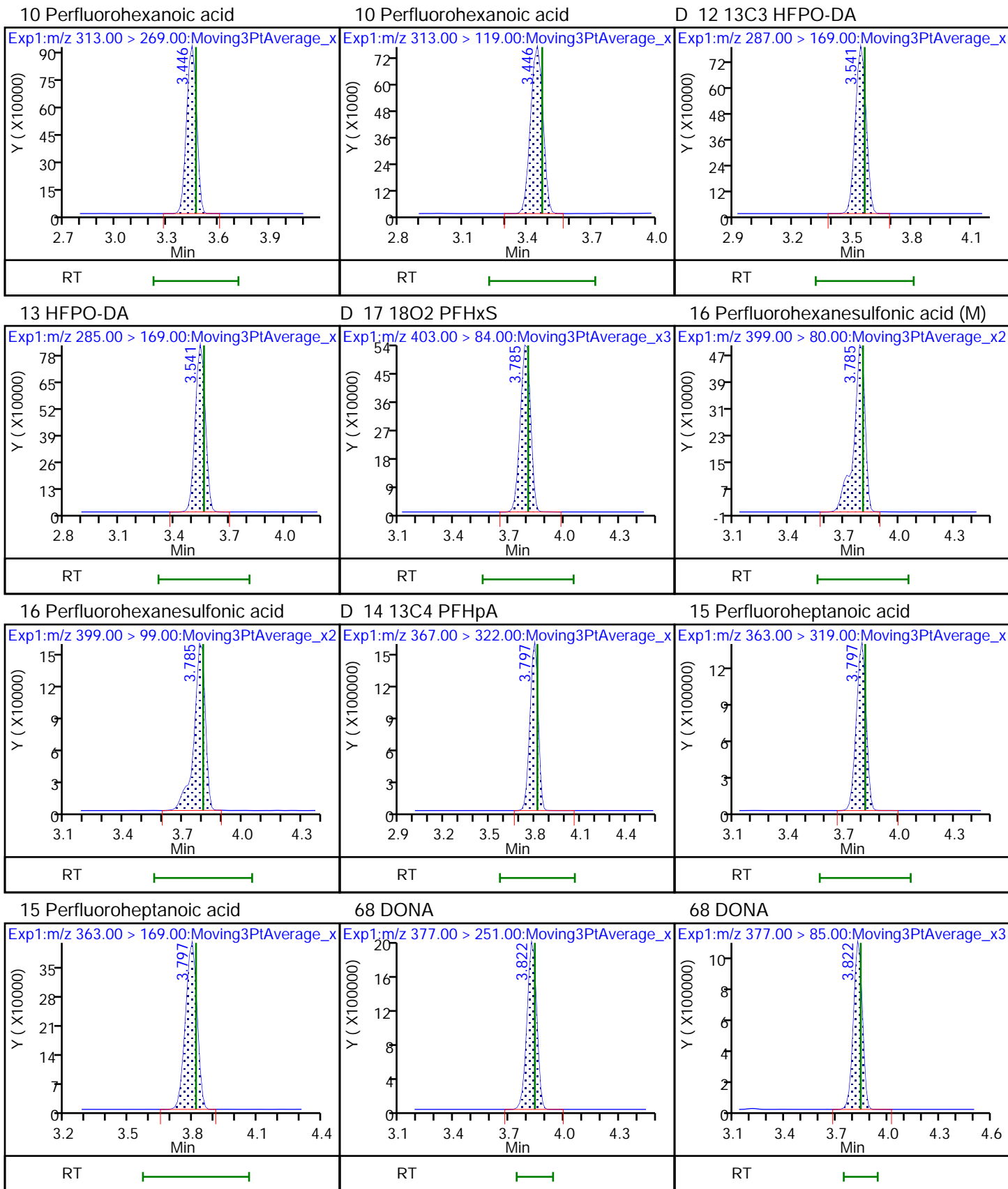


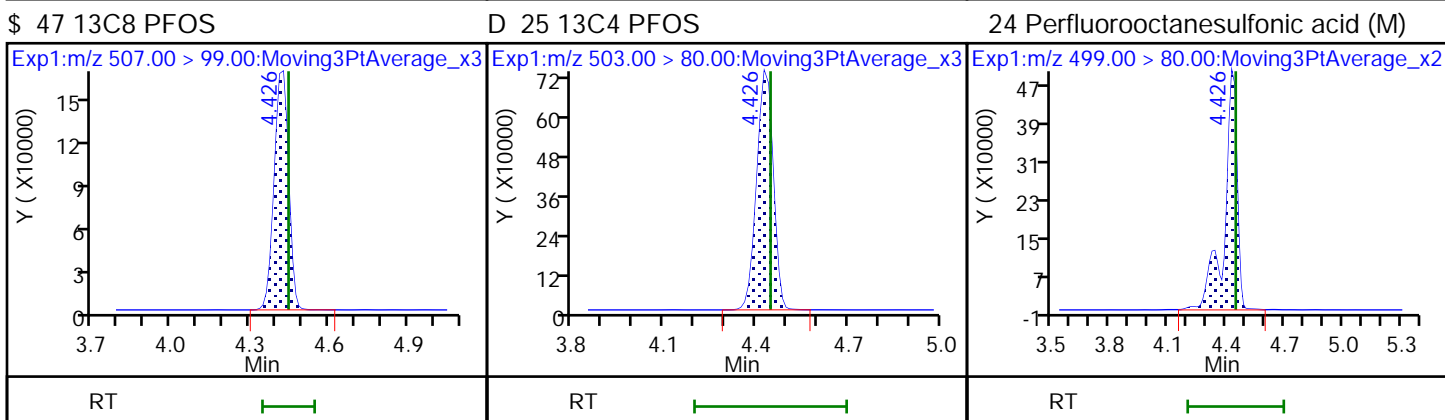
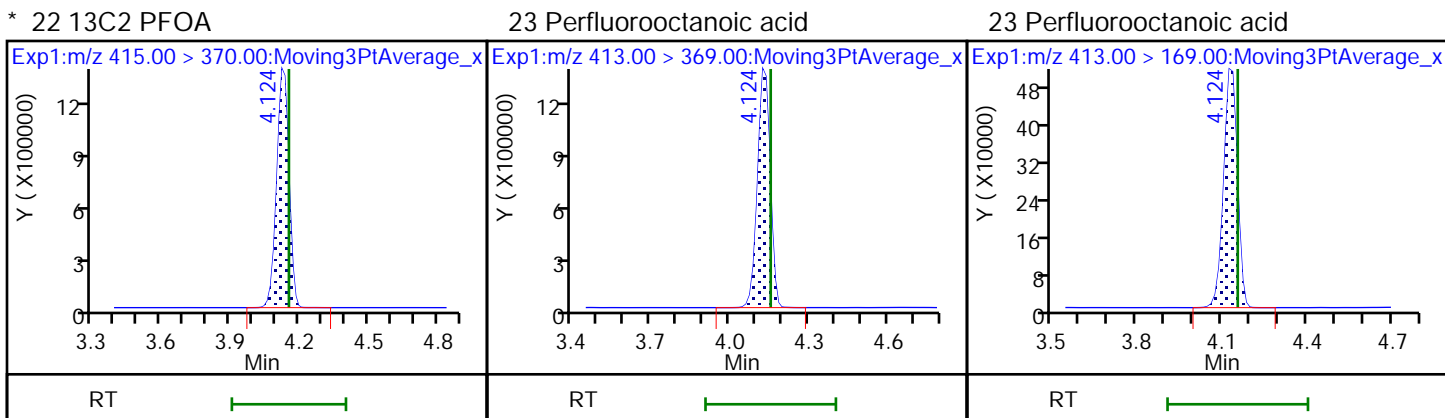
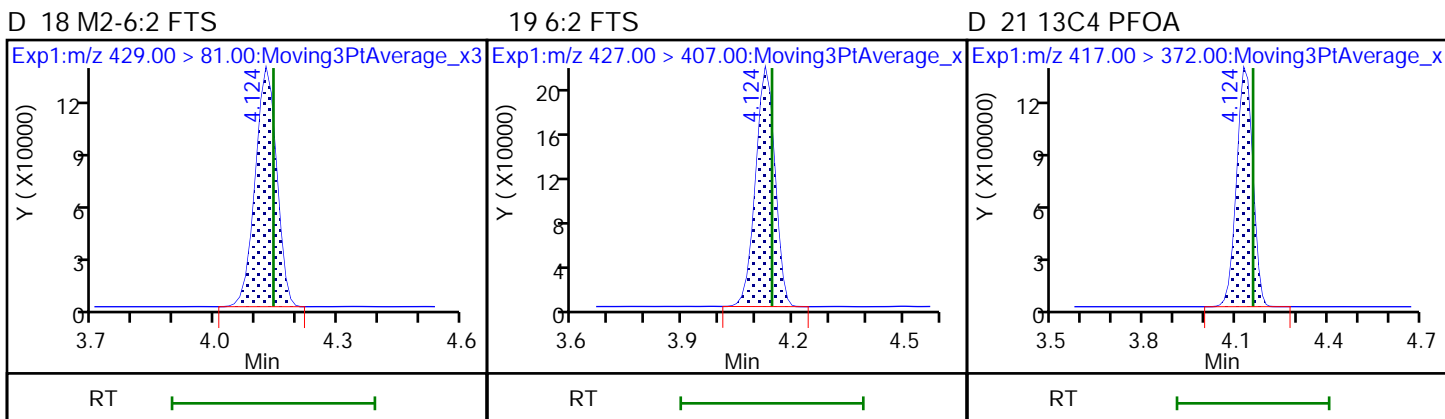
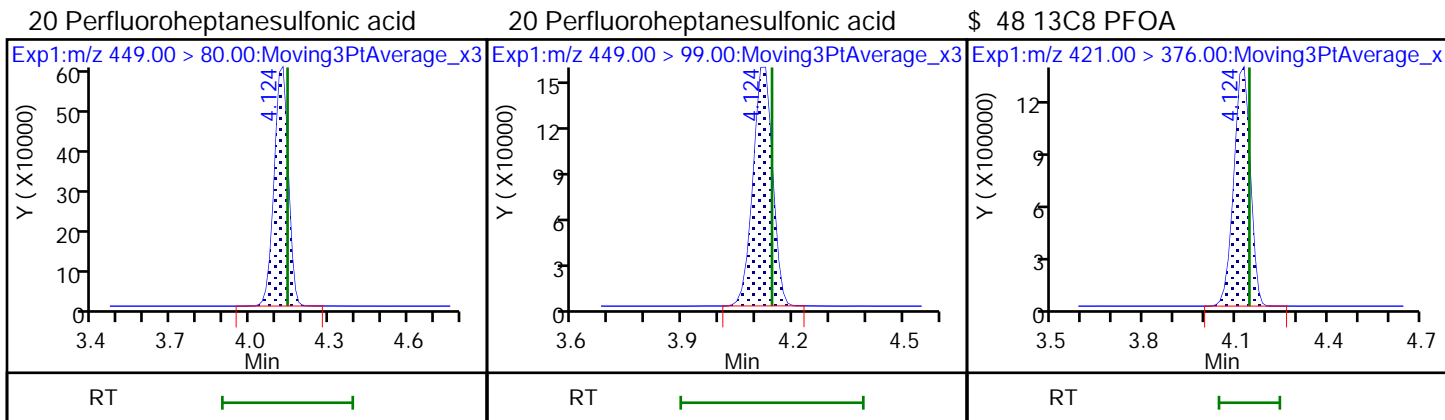
11 Perfluoropentanesulfonic acid

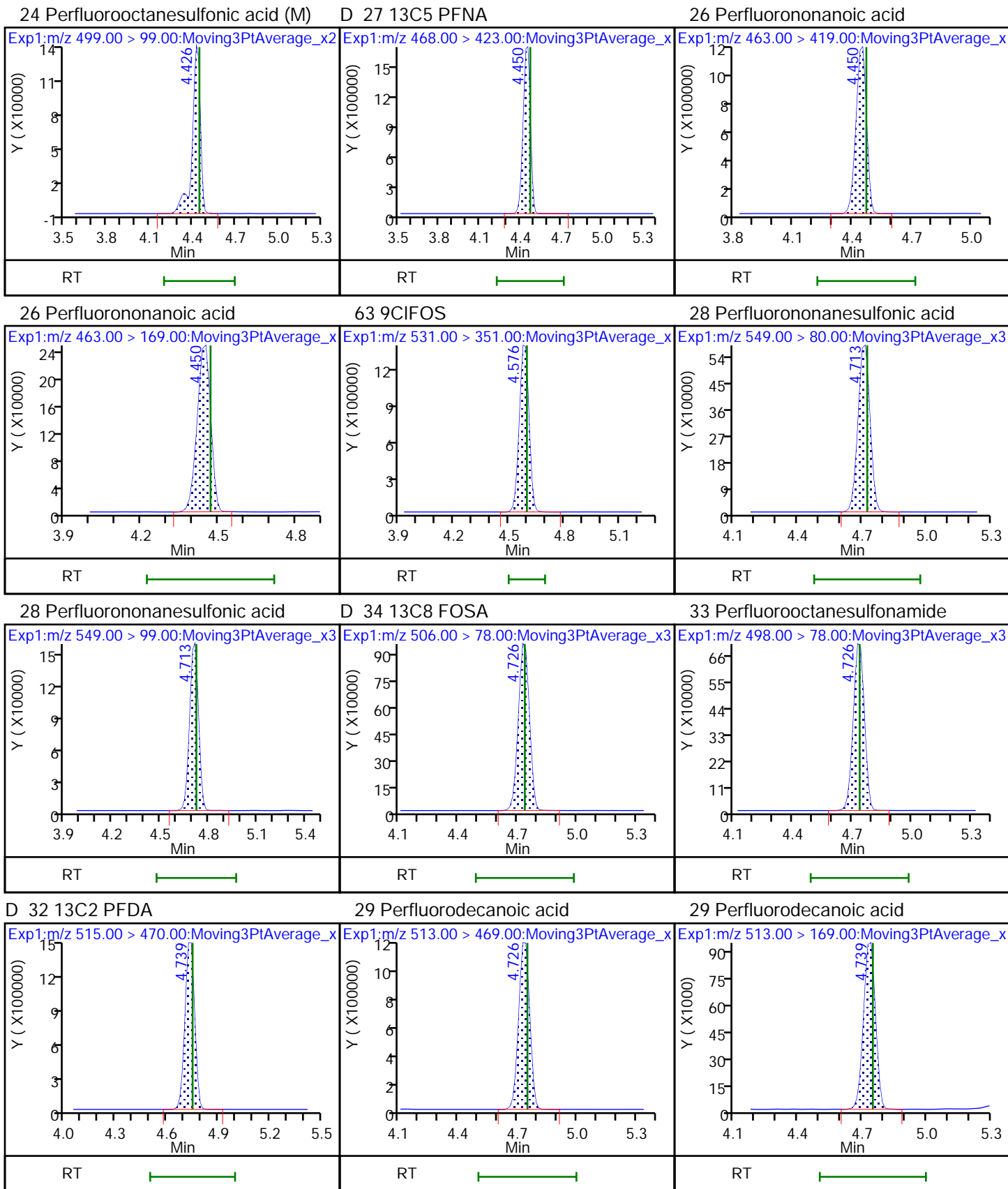
11 Perfluoropentanesulfonic acid

D 9 13C2 PFXhA





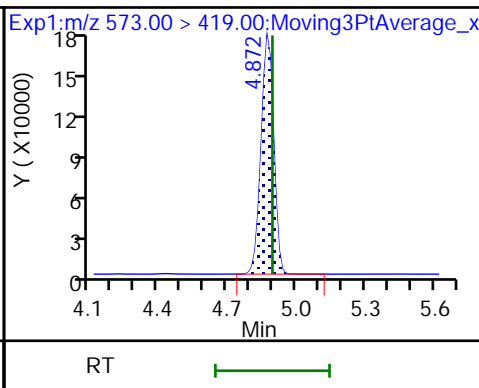
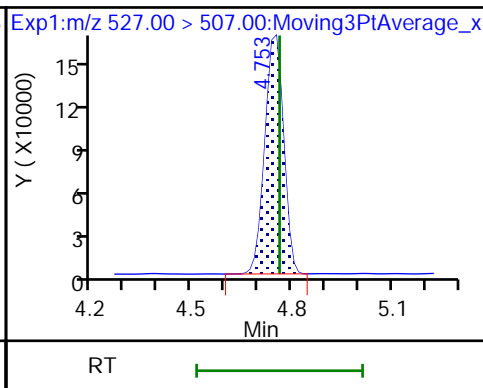
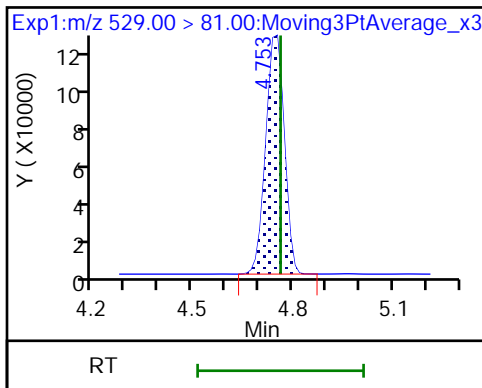




D 30 M2-8:2 FTS

31 8:2 FTS

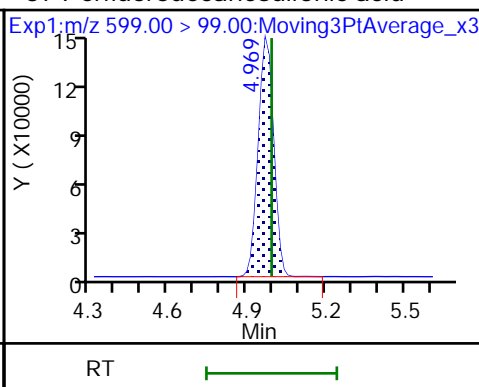
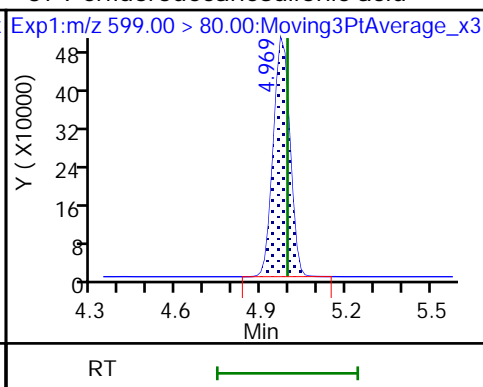
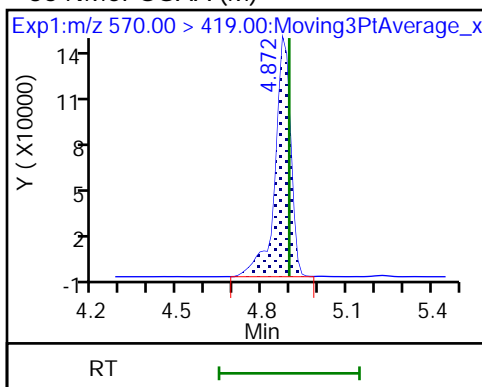
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

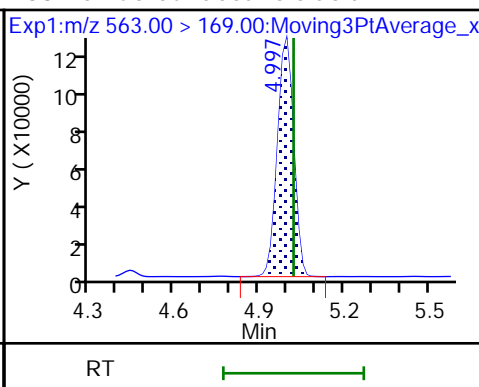
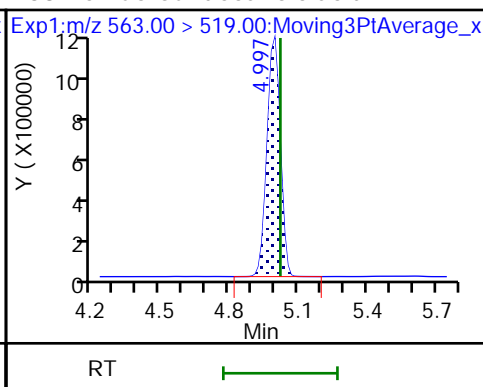
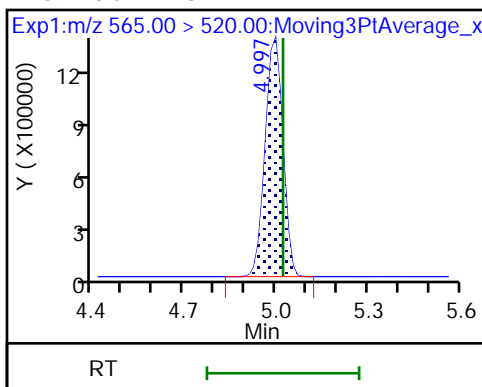
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

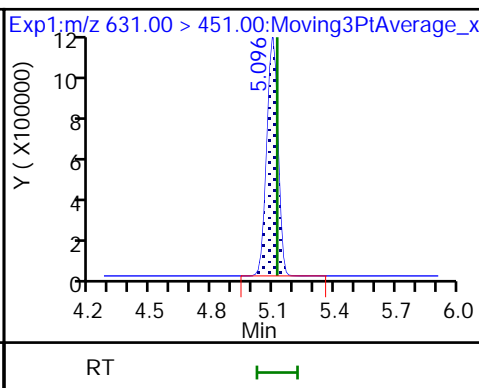
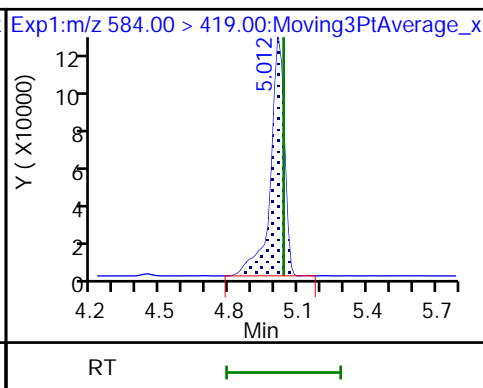
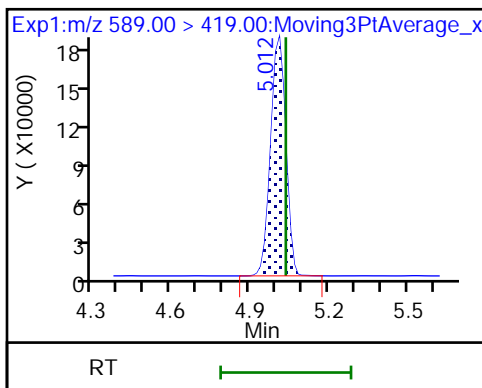
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA

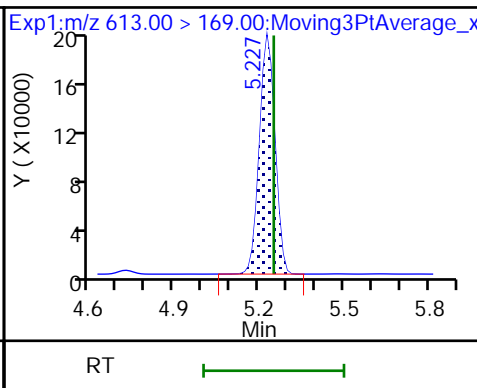
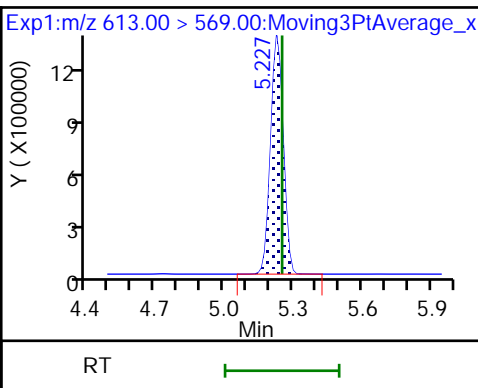
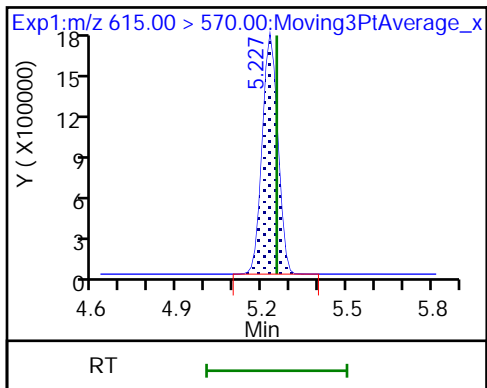
57 11C1FOS



D 43 13C2 PFDaA

42 Perfluorododecanoic acid

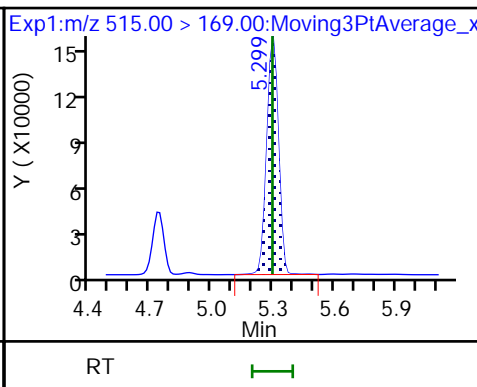
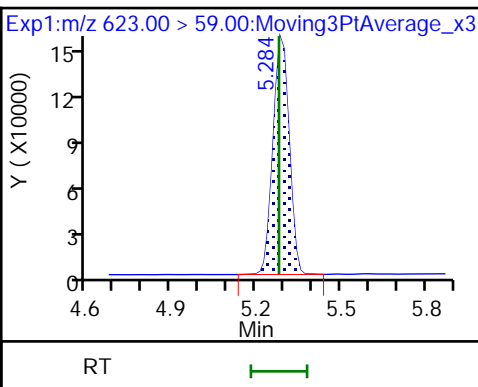
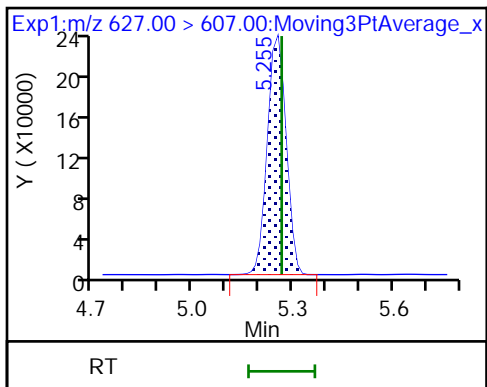
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

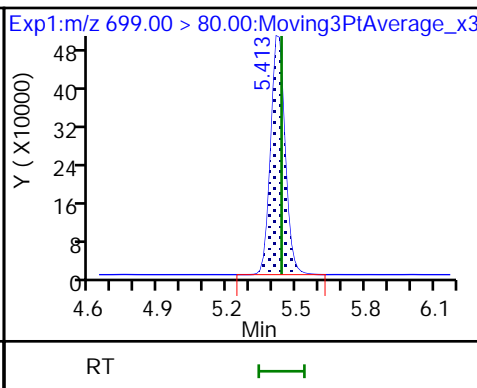
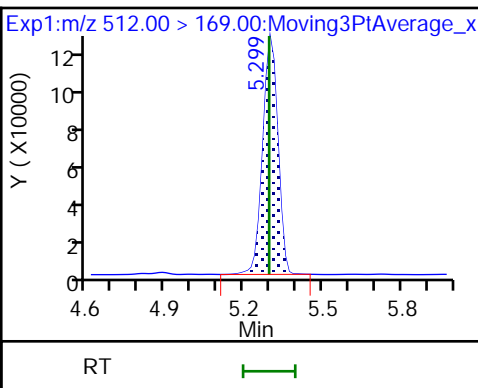
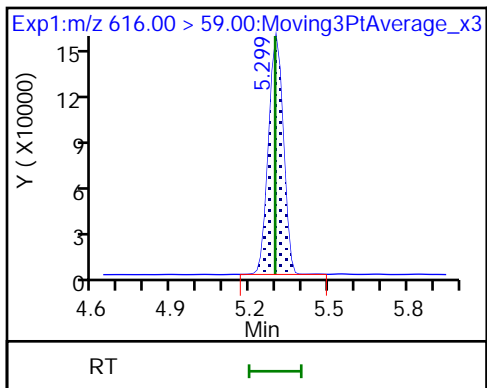
D 58 d-N-MeFOSA-M



49 N-MeFOSE-M

61 NMeFOSA

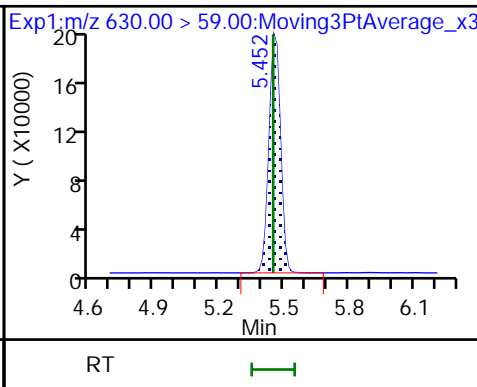
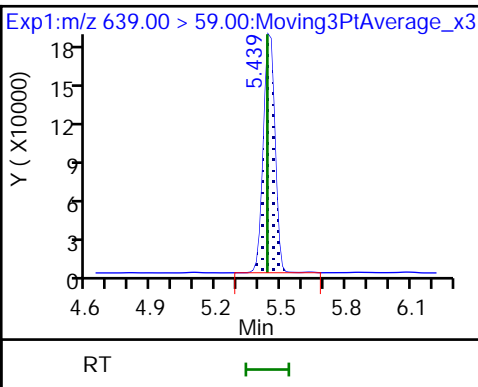
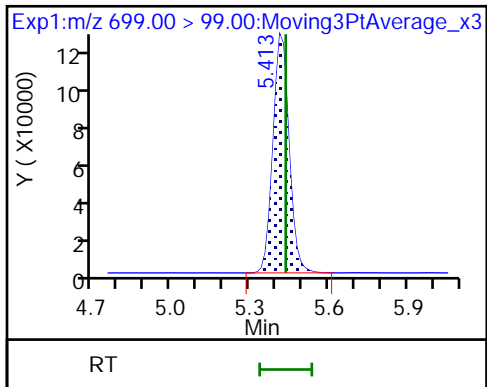
54 PFDoS



54 PFDoS

D 53 d9-N-EtFOSE-M

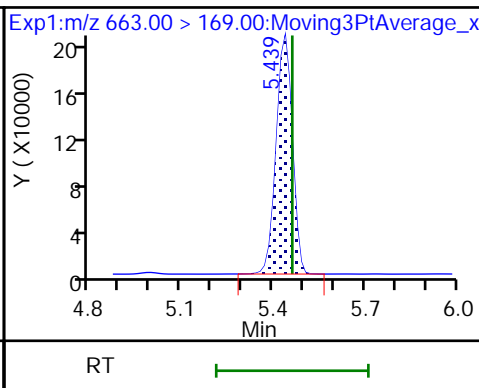
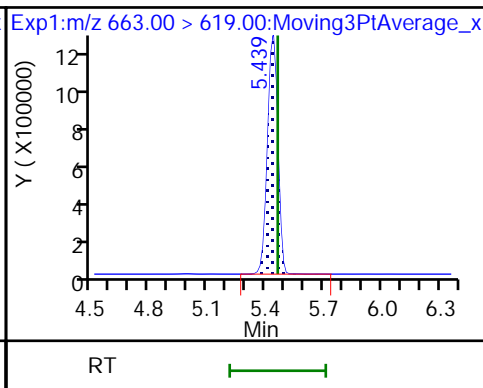
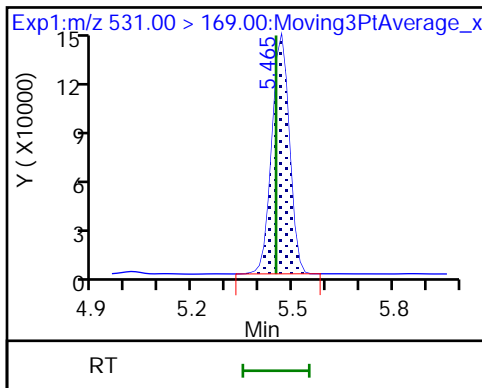
62 N-EtFOSE-M



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid

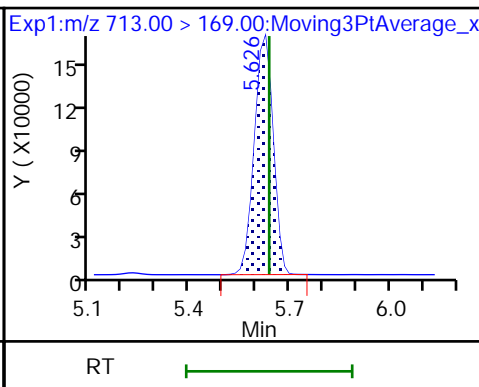
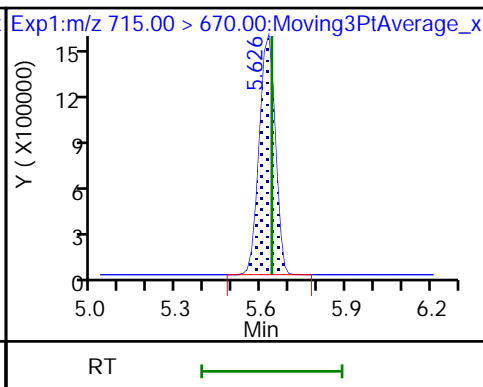
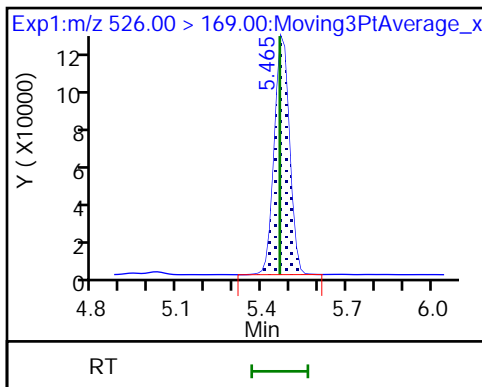
44 Perfluorotridecanoic acid



56 N-EtFOSA-M

D 46 13C2 PFTeDA

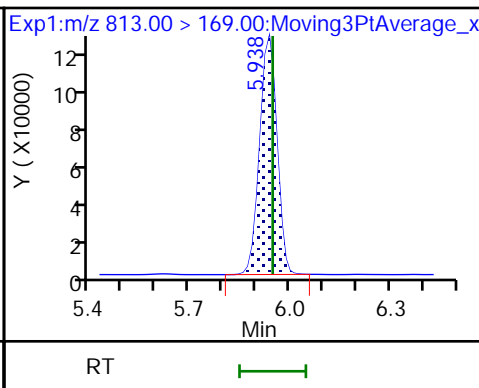
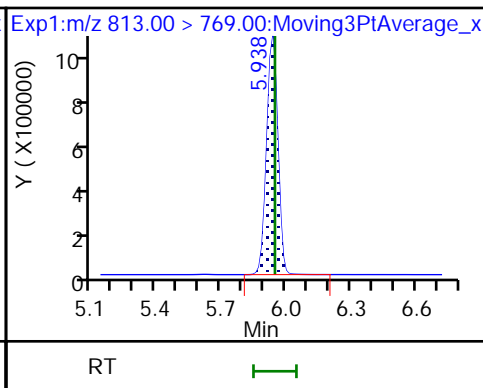
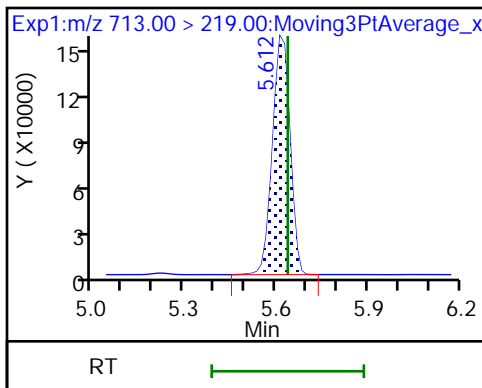
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

55 Perfluorohexadecanoic acid

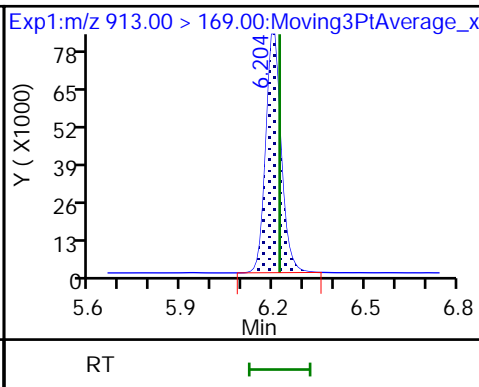
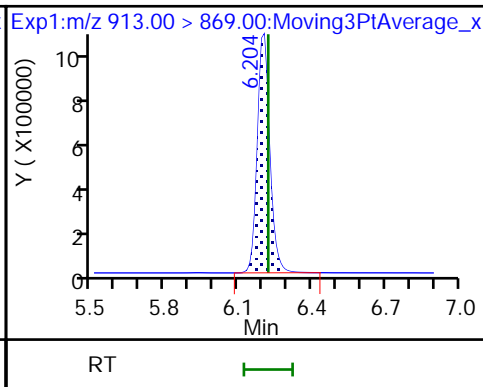
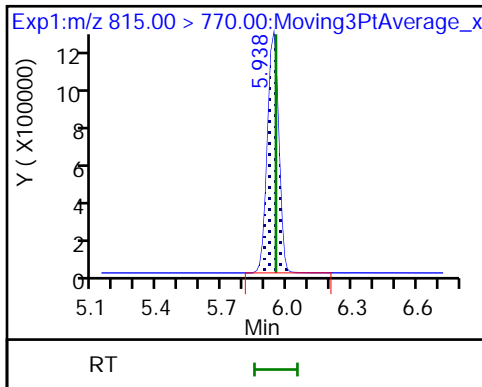
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid



Eurofins TestAmerica, Knoxville

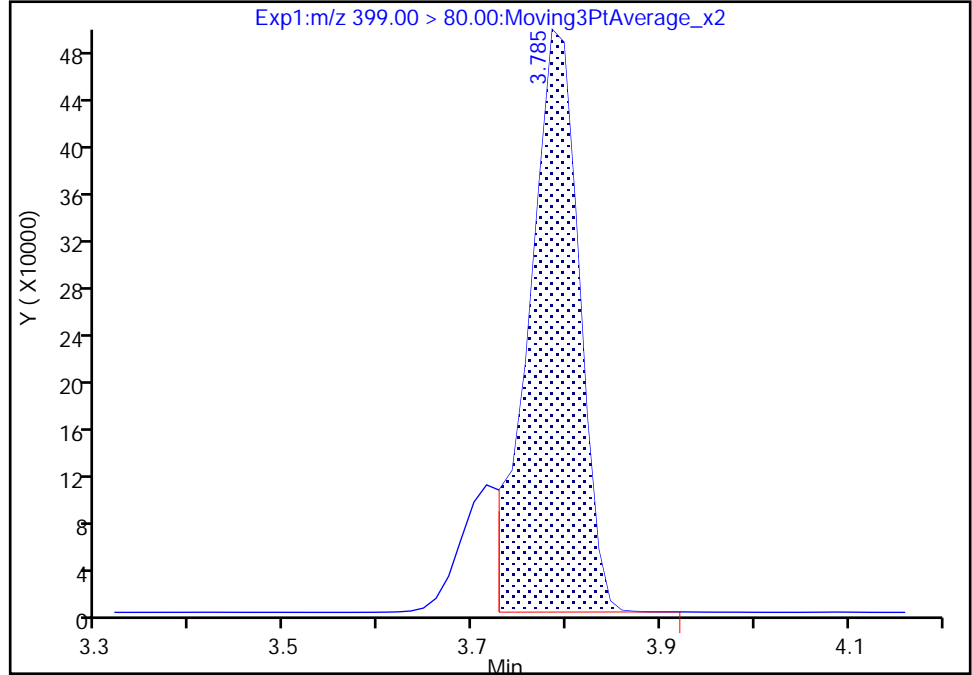
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Injection Date: 07-Oct-2021 12:13:06 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 53 Worklist Smp#: 107
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

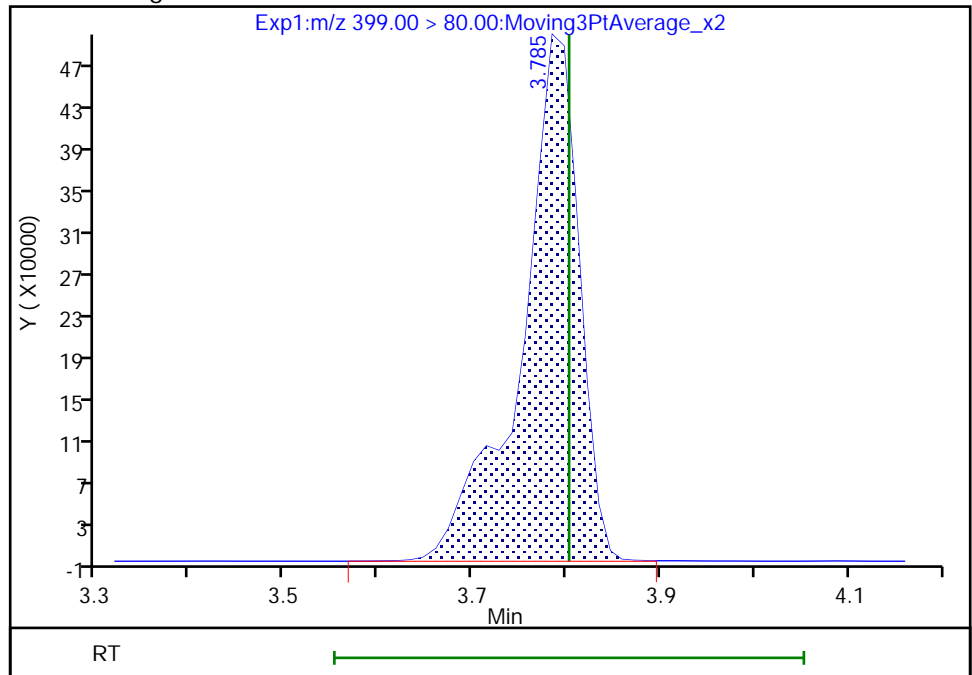
RT: 3.78
Area: 1815312
Amount: 0.768529
Amount Units: ng/ml

Processing Integration Results



RT: 3.78
Area: 2114892
Amount: 0.896200
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 18:12:09
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

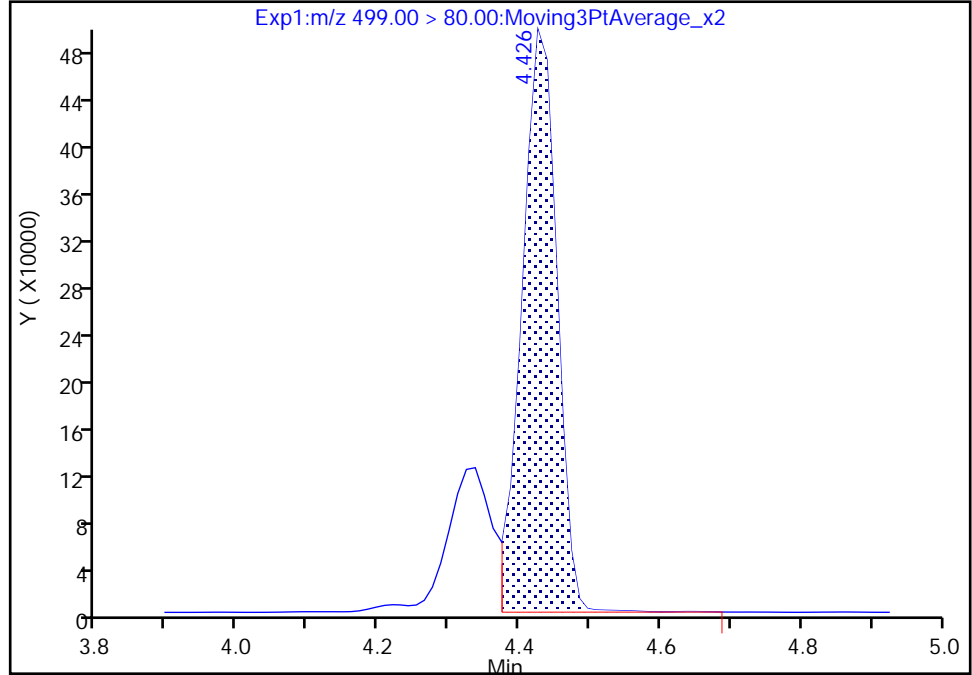
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Injection Date: 07-Oct-2021 12:13:06 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 53 Worklist Smp#: 107
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

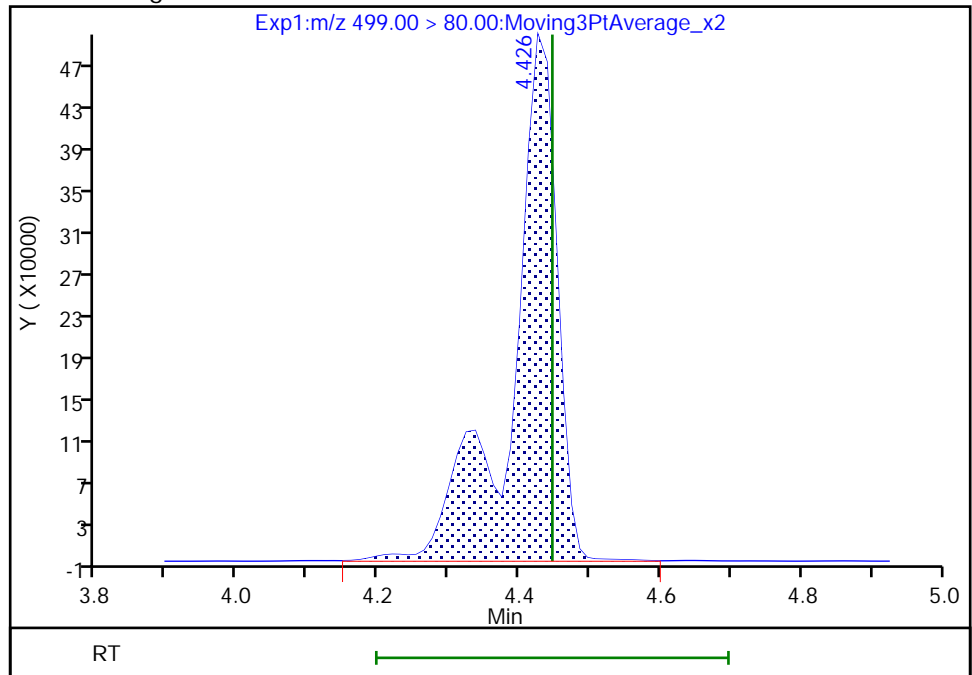
RT: 4.43
Area: 1705265
Amount: 0.681276
Amount Units: ng/ml

Processing Integration Results



RT: 4.43
Area: 2253625
Amount: 0.900354
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 18:12:19
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

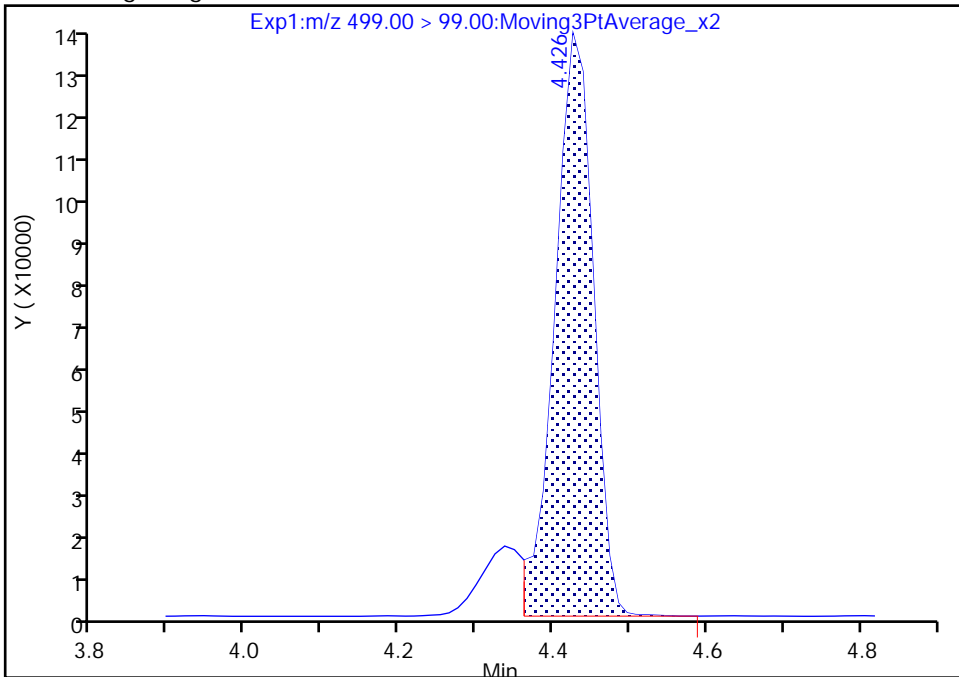
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Injection Date: 07-Oct-2021 12:13:06 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 53 Worklist Smp#: 107
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

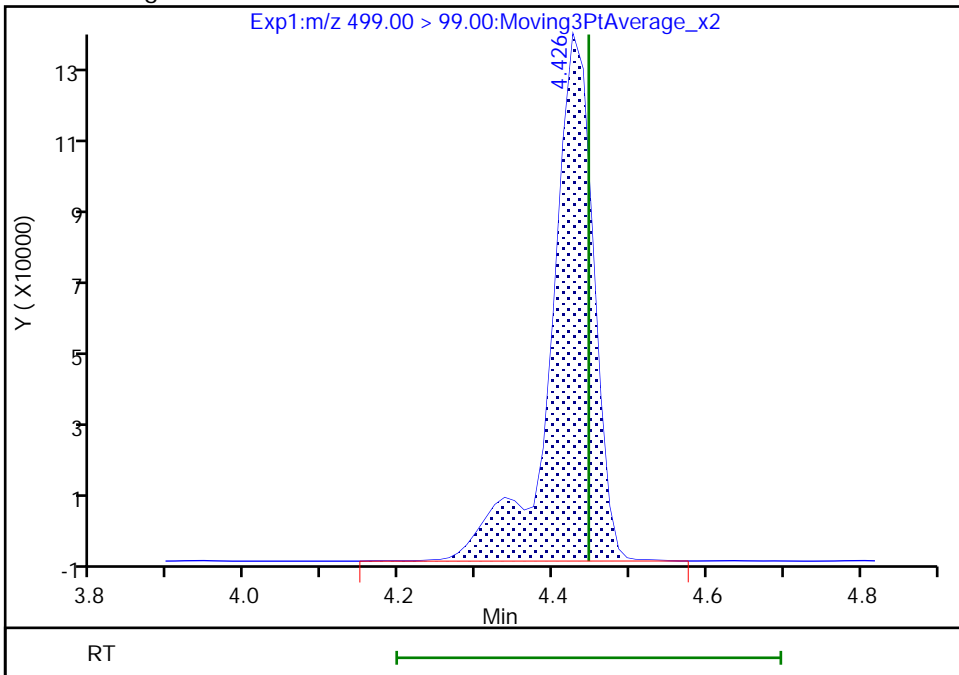
RT: 4.43
Area: 451558
Amount: 0.681276
Amount Units: ng/ml

Processing Integration Results



RT: 4.43
Area: 508561
Amount: 0.900354
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 18:12:26

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

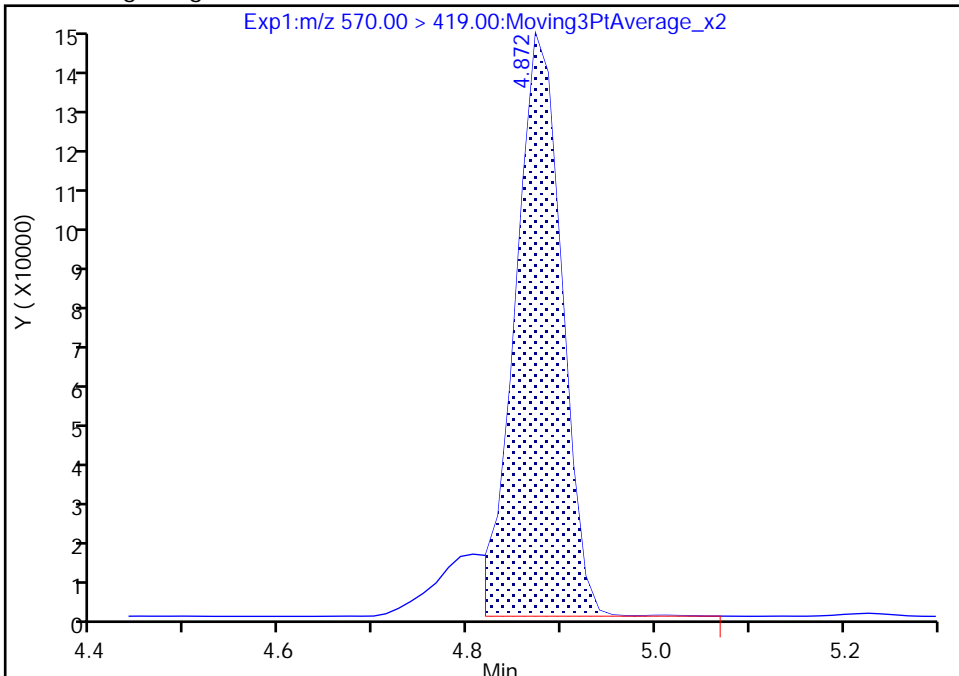
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Injection Date: 07-Oct-2021 12:13:06 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 53 Worklist Smp#: 107
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

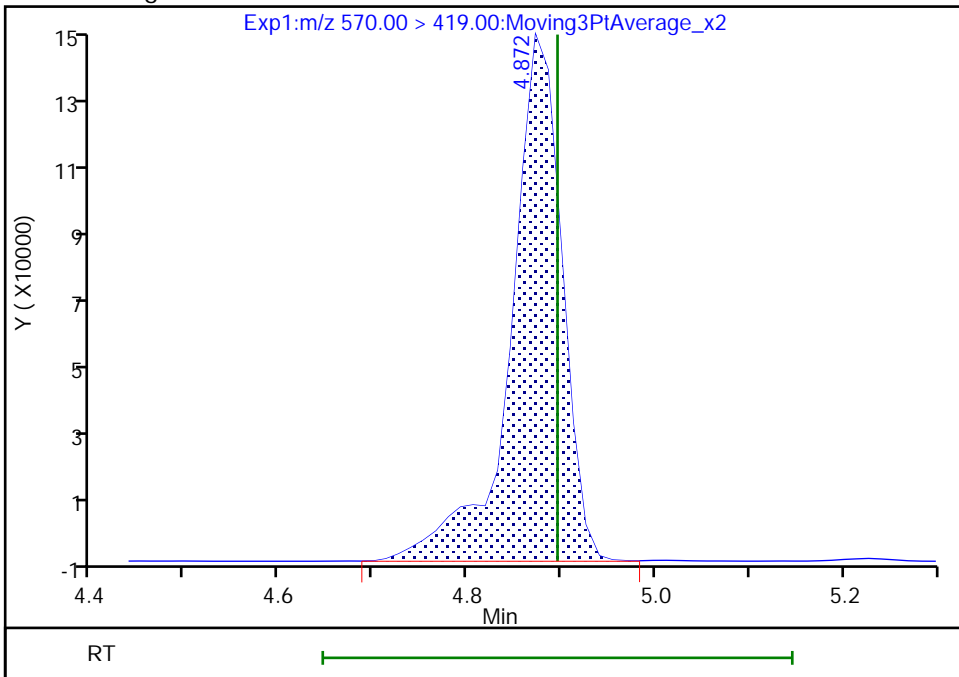
RT: 4.87
Area: 494037
Amount: 0.985150
Amount Units: ng/ml

Processing Integration Results



RT: 4.87
Area: 549823
Amount: 1.097231
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 18:12:40
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Lab Sample ID: CCVL 140-54661/6 Calibration Date: 10/09/2021 15:12
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _006.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7855	0.8593		0.0547	0.0500	9.4	50.0
Perfluoropentanoic acid (PFPeA)	AveID	1.013	1.083		0.0534	0.0500	6.9	50.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.126	1.209		0.0474	0.0442	7.3	50.0
4:2 FTS	AveID	2.500	2.610		0.0488	0.0467	4.4	50.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8572	0.9178		0.0535	0.0500	7.1	50.0
Perfluoropentanesulfonic acid (PFPeS)	L2ID		1.000		0.0497	0.0469	5.9	50.0
HFPO-DA	L2ID		1.590		0.0515	0.0500	3.0	50.0
Perfluorohexanesulfonic acid (PFHxS)	L2ID		1.582		0.0482	0.0455	5.9	50.0
Perfluoroheptanoic acid (PFHpA)	L2ID		1.159		0.0504	0.0500	0.8	50.0
DONA	AveID	3.243	3.460		0.0503	0.0471	6.7	50.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9947	1.045		0.0500	0.0476	5.1	50.0
6:2 FTS	L2ID		2.312		0.0479	0.0474	1.0	50.0
Perfluorooctanoic acid (PFOA)	L2ID		1.243		0.0479	0.0500	-4.2	50.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.100	1.173		0.0495	0.0464	6.6	50.0
Perfluorononanoic acid (PFNA)	L2ID		0.9466		0.0517	0.0500	3.3	50.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	2.308	2.379		0.0480	0.0466	3.1	50.0
Perfluorononanesulfonic acid (PFNS)	AveID	1.042	1.147		0.0528	0.0480	10.1	50.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9606	1.027		0.0534	0.0500	6.9	50.0
Perfluorodecanoic acid (PFDA)	L2ID		1.214		0.0538	0.0500	7.6	50.0
8:2 FTS	AveID	1.784	1.786		0.0480	0.0479	0.1	50.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	L2ID		0.9029		0.0420	0.0500	-16.0	50.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.9574	1.095		0.0552	0.0482	14.4	50.0
Perfluoroundecanoic acid (PFUnA)	L2ID		1.106		0.0497	0.0500	-0.6	50.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.9494	1.078		0.0568	0.0500	13.5	50.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.858	2.000		0.0507	0.0471	7.6	50.0
Perfluorododecanoic acid (PFDoA)	Q2ID		1.106		0.0500	0.0500	0.0	50.0
10:2 FTS	AveID	2.221	2.854		0.0620	0.0482	28.5	50.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.215		0.0448	0.0500	-10.5	50.0
NMeFOSA	AveID	1.047	1.314		0.0627	0.0500	25.5	50.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9879	0.9298		0.0456	0.0484	-5.9	50.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Lab Sample ID: CCVL 140-54661/6 Calibration Date: 10/09/2021 15:12
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _006.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.299		0.0472	0.0500	-5.7	50.0
Perfluorotridecanoic acid (PFTriA)	L2ID		1.100		0.0566	0.0500	13.1	50.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.168	1.347		0.0576	0.0500	15.3	50.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.1399		0.0488	0.0500	-2.5	50.0
Perfluorohexadecanoic acid	Q2ID		1.404		0.0510	0.0500	2.0	50.0
Perfluorooctadecanoic acid	AveID	0.9076	0.9852		0.0543	0.0500	8.5	50.0
13C4 PFBA	Ave	1.324	1.210		1.14	1.25	-8.6	50.0
13C5 PFPeA	Ave	1.087	0.9860		1.13	1.25	-9.3	50.0
13C3 PFBS	Ave	0.7019	0.6545		1.08	1.16	-6.7	50.0
M2-4:2 FTS	Ave	0.1052	0.1199		1.33	1.17	13.9	50.0
13C2 PFHxA	Ave	1.116	1.035		1.16	1.25	-7.2	50.0
13C3 HFPO-DA	Ave	0.5714	0.5199		1.14	1.25	-9.0	50.0
18O2 PFHxS	Ave	0.4248	0.3991		1.11	1.18	-6.0	50.0
13C4 PFHpA	Ave	1.113	1.058		1.19	1.25	-5.0	50.0
13C4 PFOA	Ave	1.007	1.018		1.26	1.25	1.1	50.0
M2-6:2 FTS	Ave	0.1078	0.1120		1.23	1.19	3.9	50.0
13C4 PFOS	Ave	0.5852	0.5417		1.11	1.20	-7.4	50.0
13C5 PFNA	Ave	1.279	1.258		1.23	1.25	-1.6	50.0
13C8 FOSA	Ave	0.8591	0.8552		1.24	1.25	-0.5	50.0
13C2 PFDA	Ave	1.296	1.253		1.21	1.25	-3.3	50.0
M2-8:2 FTS	Ave	0.1316	0.1232		1.12	1.20	-6.4	50.0
d3-NMeFOSAA	Ave	0.1774	0.1492		1.05	1.25	-15.9	50.0
13C2 PFUnA	Ave	1.237	1.152		1.16	1.25	-6.9	50.0
d5-NEtFOSAA	Ave	0.1705	0.1576		1.16	1.25	-7.5	50.0
13C2 PFDoA	Ave	1.319	1.252		1.19	1.25	-5.1	50.0
d7-N-MeFOSE-M	Ave	0.1075	0.1494		1.74	1.25	38.9	50.0
d-N-MeFOSA-M	Ave	0.1120	0.1033		1.15	1.25	-7.7	50.0
d9-N-EtFOSE-M	Ave	0.1146	0.1540		1.68	1.25	34.4	50.0
d-N-EtFOSA-M	Ave	0.0942	0.0943		1.25	1.25	0.0	50.0
13C2 PFTeDA	Ave	1.211	1.116		1.15	1.25	-7.8	50.0
13C2 PFHxDA	Ave	0.8782	0.8407		1.20	1.25	-4.3	50.0
13C8 PFOA	Ave	0.9886	0.9162		1.16	1.25	-7.3	50.0
13C8 PFOS	Ave	0.1256	0.1184		1.13	1.20	-5.7	50.0

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b_006.d
 Lims ID: CCVL
 Client ID:
 Sample Type: CCVL
 Inject. Date: 09-Oct-2021 15:12:23 ALS Bottle#: 6 Worklist Smp#: 6
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0021009-006 ccvl
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15
 Method: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 10-Oct-2021 08:27:31 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1620

First Level Reviewer: cochranj Date: 09-Oct-2021 15:46:40

Ratio Calibration: None

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	2.812	2.823	-0.011	0.677	6857261	1.14	91.4	12251	
2 Perfluorobutanoic acid	212.90 > 169.00	2.812	2.823	-0.011	1.000	235697	0.0547	109	36.4	
D 3 13C5 PFPeA	267.90 > 223.00	3.130	3.129	0.001	0.753	5587516	1.13	90.7	8196	
4 Perfluoropentanoic acid	262.90 > 219.00	3.130	3.143	-0.013	1.000	241970	0.0534	107	68.1	
D 6 13C3 PFBS	301.90 > 80.00	3.143	3.143	0.0	0.757	3449585	1.08	93.3	15738	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.157	3.157	0.0	1.004	158521	0.0474	Target=3.06	107	505
	298.90 > 99.00	3.157	3.157	0.0	1.004	61487		2.58(1.53-4.59)		150
D 8 M2-4:2 FTS	329.00 > 81.00	3.438	3.437	0.001	0.827	634440	1.33	114	1146	
7 4:2 FTS	327.00 > 307.00	3.438	3.437	0.001	1.000	66230	0.0488	104	623	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.469	3.469	0.0	1.104	139165	0.0497	Target=3.47	106	633
	349.00 > 99.00	3.469	3.469	0.0	1.104	39825		3.49(1.73-5.20)		541
D 9 13C2 PFHxA	315.00 > 270.00	3.469	3.469	0.0	0.835	5867642	1.16	92.8	10828	
10 Perfluorohexanoic acid	313.00 > 269.00	3.469	3.469	0.0	1.000	215417	0.0535	Target=9.74	107	118
	313.00 > 119.00	3.469	3.469	0.0	1.000	15884		13.56(4.87-14.61)		59.7
D 12 13C3 HFPO-DA	287.00 > 169.00	3.575	3.575	0.0	0.861	2946039	1.14	91.0	6044	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.575	3.575	0.0	1.000	187358	0.0515		103	169	
D 17 18O2 PFHxS										
403.00 > 84.00	3.815	3.815	0.0	0.918	2139371	1.11		94.0	11501	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.815	3.815	0.0	1.000	130263	0.0482	Target=2.96	106	153	M
399.00 > 99.00	3.815	3.815	0.0	1.000	38968		3.34(1.48-4.44)		204	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.828	3.827	0.001	0.921	5994008	1.19		95.0	16665	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.828	3.827	0.001	1.000	277934	0.0504	Target=3.35	101	237	
363.00 > 169.00	3.828	3.827	0.001	1.000	88030		3.16(1.67-5.02)		362	
68 DONA										
377.00 > 251.00	3.852	3.852	0.0	0.864	400220	0.0502	Target=1.49	107	1447	
377.00 > 85.00	3.852	3.852	0.0	0.864	225314		1.78(0.74-2.23)		1353	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.143	4.155	-0.013	0.997	5192143	1.16		92.7	20083	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.155	4.155	0.0	1.000	603060	1.23		104	463	
19 6:2 FTS										
427.00 > 407.00	4.155	4.155	0.0	1.000	55661	0.0479		101	293	
D 21 13C4 PFOA										
417.00 > 372.00	4.155	4.155	0.0	1.000	5767801	1.26		101	22295	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.143	4.155	-0.013	0.929	122214	0.0500	Target=3.73	105	94.7	
449.00 > 99.00	4.155	4.155	0.0	0.932	32278		3.79(1.87-5.61)		378	
* 22 13C2 PFOA										
415.00 > 370.00	4.155	4.155	0.0		5666845	1.25			15003	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.155	4.155	0.0	1.000	286776	0.0479	Target=2.40	95.8	177	M
413.00 > 169.00	4.155	4.155	0.0	1.000	110190		2.60(1.20-3.61)		348	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.446	4.458	-0.012	1.070	641629	1.13		94.3	2335	
D 25 13C4 PFOS										
503.00 > 80.00	4.457	4.458	-0.001	1.073	2934714	1.11		92.6	2567	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.457	4.458	-0.001	1.000	133628	0.0495	Target=3.83	107	202	M
499.00 > 99.00	4.457	4.458	-0.001	1.000	29611		4.51(1.91-5.74)		185	M
D 27 13C5 PFNA										
468.00 > 423.00	4.469	4.481	-0.012	1.076	7131224	1.23		98.4	23762	
26 Perfluorononanoic acid										
463.00 > 419.00	4.469	4.481	-0.012	1.000	270018	0.0517	Target=3.68	103	271	
463.00 > 169.00	4.469	4.481	-0.012	1.000	55082		4.90(1.84-5.52)		78.9	
63 9CIFOS										
531.00 > 351.00	4.607	4.608	-0.001	1.109	272210	0.0480		103	689	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.735	4.736	-0.001	1.062	135208	0.0528	Target=3.97	110	117	
549.00 > 99.00	4.735	4.736	-0.001	1.062	33574		4.03(1.99-5.96)		148	
D 34 13C8 FOSA										
506.00 > 78.00	4.748	4.749	-0.001	1.143	4846085	1.24		99.5	8070	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.748	4.749	-0.001	1.000	199010	0.0534		107	530	
D 32 13C2 PFDA										
515.00 > 470.00	4.762	4.762	0.0	1.146	7100023	1.21		96.7	21104	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.762	4.762	0.0	1.000	344764	0.0538	Target=10.11	108	293	
513.00 > 169.00	4.762	4.762	0.0	1.000	26496		13.01(5.06-15.17)		78.1	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.779	4.776	0.003	1.150	668941	1.12		93.6	1388	
31 8:2 FTS										
527.00 > 507.00	4.779	4.776	0.003	1.000	47787	0.0480		100	351	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.911	4.909	0.002	1.182	845315	1.05		84.1	3755	
36 NMeFOSAA										
570.00 > 419.00	4.911	4.909	0.002	1.000	30530	0.0420		84.0	55.6	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	5.009	5.007	0.002	1.124	129673	0.0552	Target=3.80	114	167	
599.00 > 99.00	5.009	5.007	0.002	1.124	30500		4.25(1.90-5.70)		270	
D 39 13C2 PFUnA										
565.00 > 520.00	5.024	5.022	0.002	1.209	6525980	1.16		93.1	16529	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.024	5.022	0.002	1.000	288728	0.0497	Target=7.45	99.4	320	
563.00 > 169.00	5.024	5.022	0.002	1.000	33841		8.53(3.78-11.33)		166	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.038	5.036	0.002	1.213	893318	1.16		92.5	6111	
40 NEtFOSA										
584.00 > 419.00	5.052	5.050	0.002	1.003	38511	0.0568		114	224	M
57 11C1FOS										
631.00 > 451.00	5.134	5.132	0.002	1.152	231283	0.0507		108	933	
D 43 13C2 PFDaA										
615.00 > 570.00	5.253	5.266	-0.013	1.264	7092968	1.19		94.9	28091	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.253	5.266	-0.013	1.000	313721	0.0500	Target=5.33	100	223	
613.00 > 169.00	5.253	5.266	-0.013	1.000	42859		7.32(2.66-7.99)		158	
50 10:2 FTS										
627.00 > 607.00	5.282	5.280	0.002	1.105	76857	0.0619		129	826	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.297	5.295	0.002	1.275	846500	1.74		139	420	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.297	5.310	-0.013	1.275	585526	1.15		92.3	47.3	
49 N-MeFOSE-M										
616.00 > 59.00	5.297	5.310	-0.013	1.000	41148	0.0448		89.5	37.4	M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.297	5.310	-0.013	1.000	30771	0.0627		125	103	
54 PFDoS										
699.00 > 80.00	5.451	5.449	0.002	1.223	110514	0.0456	Target=4.32	94.1	104	
699.00 > 99.00	5.451	5.449	0.002	1.223	27128		4.07(2.19-6.58)		182	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.451	5.449	0.002	1.312	872636	1.68		134	682	
62 N-EtFOSE-M										
630.00 > 59.00	5.464	5.462	0.002	1.002	45337	0.0472		94.3	127	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.464	5.462	0.002	1.040	311957	0.0566	Target=5.66	113	246	
663.00 > 169.00	5.464	5.462	0.002	1.040	46998		6.64(2.83-8.48)		186	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.464	5.475	-0.011	1.315	534325	1.25		100	851	
56 N-EtFOSA-M										
526.00 > 169.00	5.477	5.475	0.002	1.002	28788	0.0576		115	197	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.653	5.651	0.002	1.361	6325888	1.15		92.2	18493	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.653	5.651	0.002	1.000	35391	0.0488	Target=1.07	97.5	221	
713.00 > 219.00	5.639	5.651	-0.012	0.998	37106		0.95(0.53-1.60)		321	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.962	5.961	0.001	1.000	267479	0.0510	Target=7.50	102	393	
813.00 > 169.00	5.962	5.961	0.001	1.000	29450		9.08(3.75-11.26)		125	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.962	5.961	0.001	1.435	4764096	1.20		95.7	9260	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.222	6.230	-0.008	1.044	187737	0.0543	Target=9.98	109	370	
913.00 > 169.00	6.222	6.230	-0.008	1.044	14049		13.36(5.14-15.41)		172	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L2PFC2_00003

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b_006.d

Injection Date: 09-Oct-2021 15:12:23

Instrument ID: LCA

Lims ID: CCVL

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 6

Worklist Smp#: 6

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

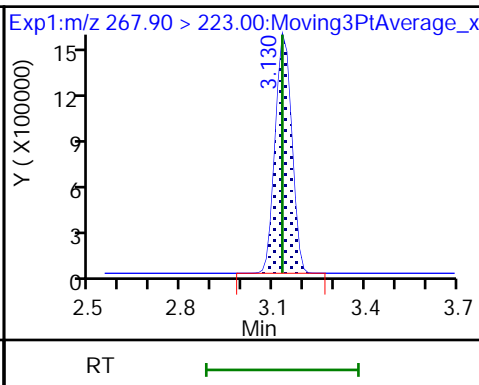
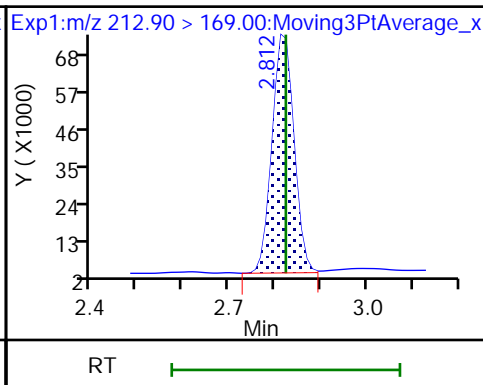
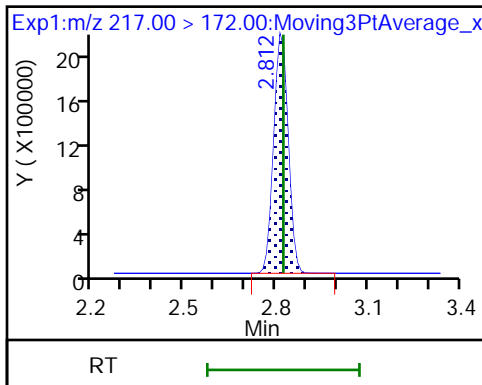
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

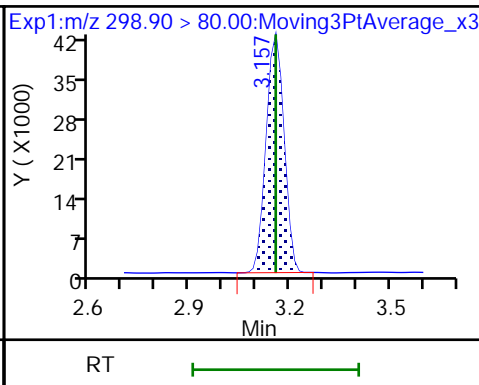
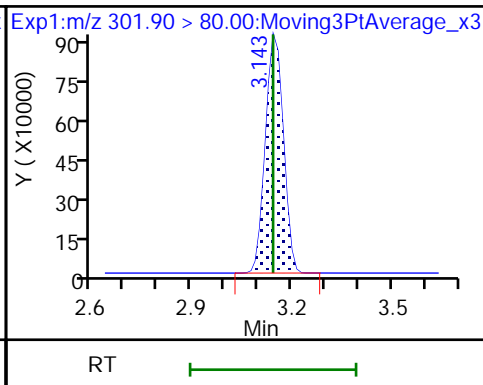
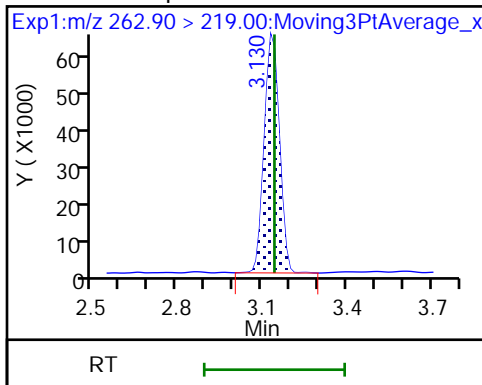
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

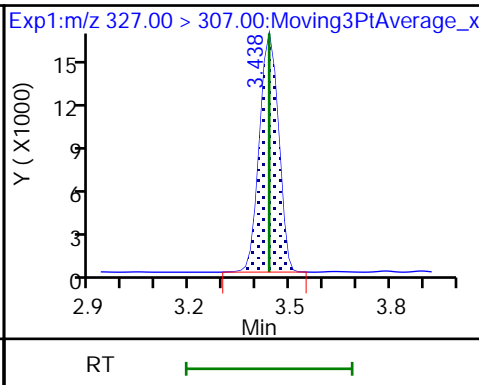
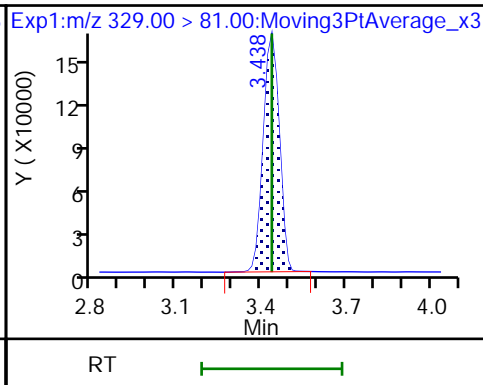
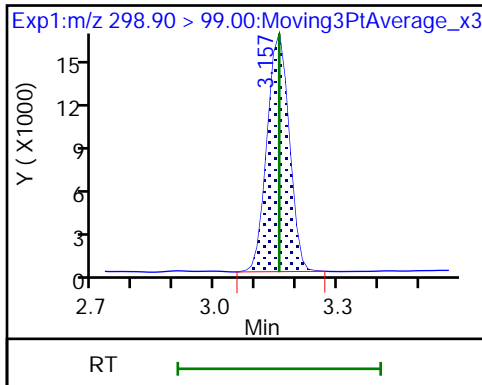
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

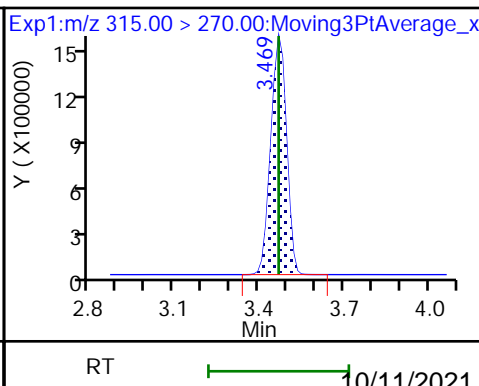
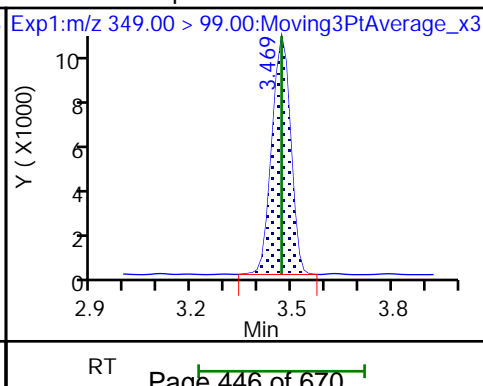
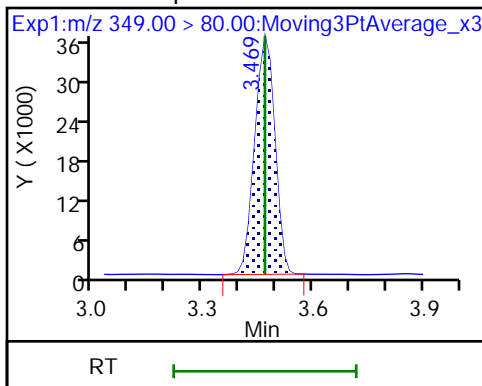
7 4:2 FTS

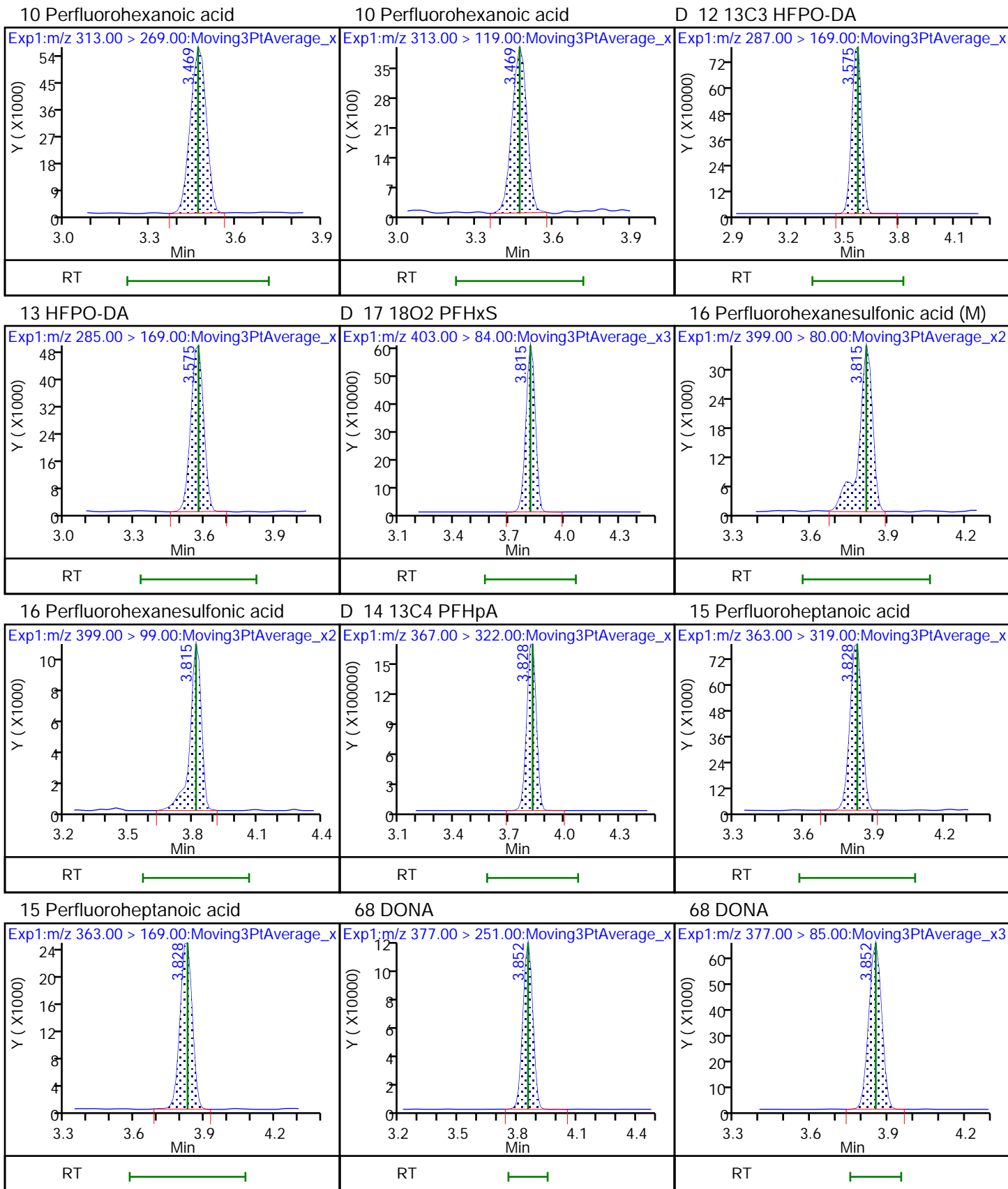


11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA

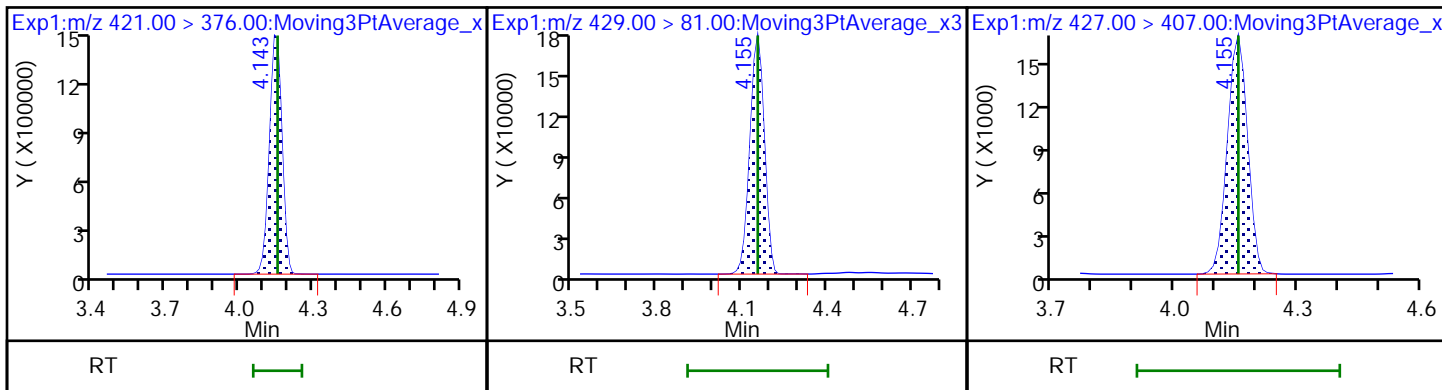




\$ 48 13C8 PFOA

D 18 M2-6:2 FTS

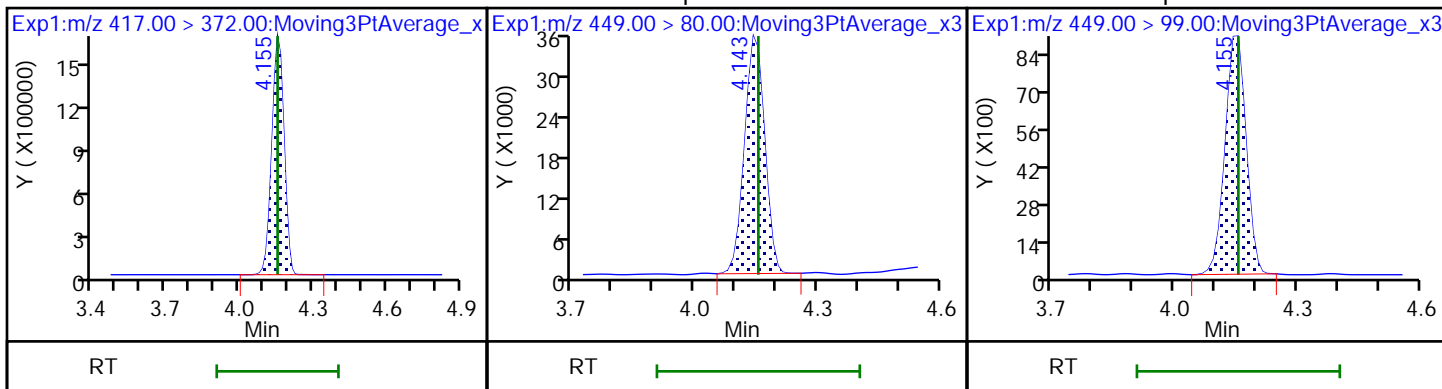
19 6:2 FTS



D 21 13C4 PFOA

20 Perfluoroheptanesulfonic acid

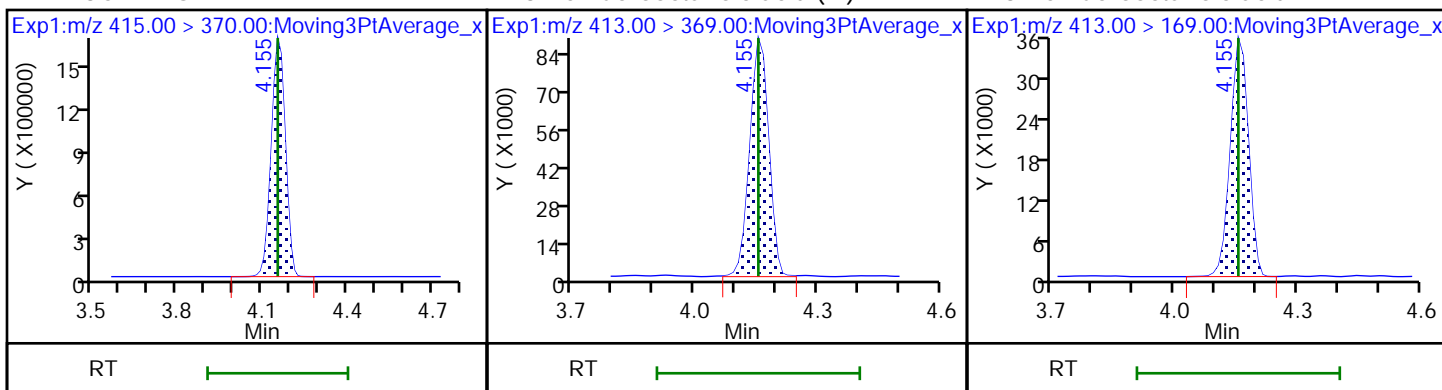
20 Perfluoroheptanesulfonic acid



* 22 13C2 PFOA

23 Perfluorooctanoic acid (M)

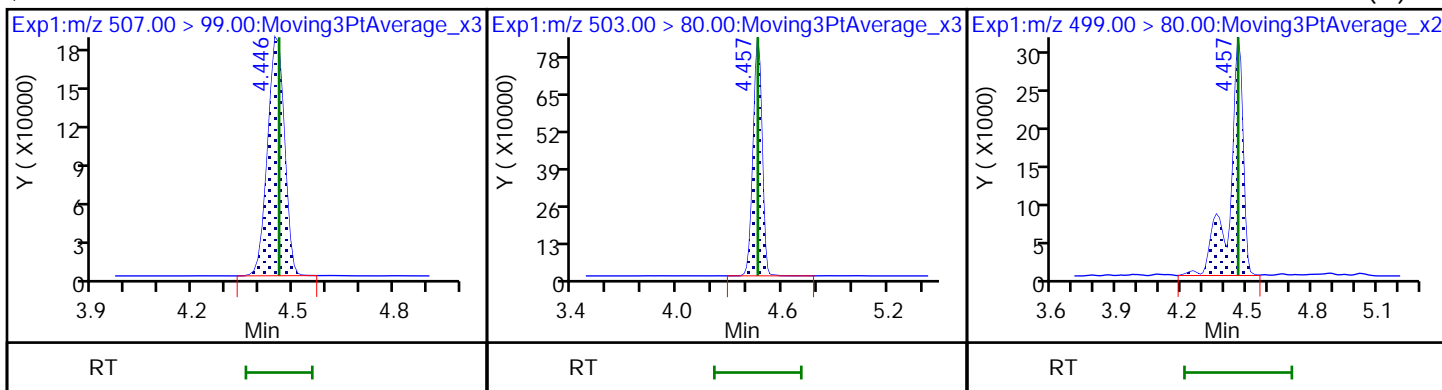
23 Perfluorooctanoic acid



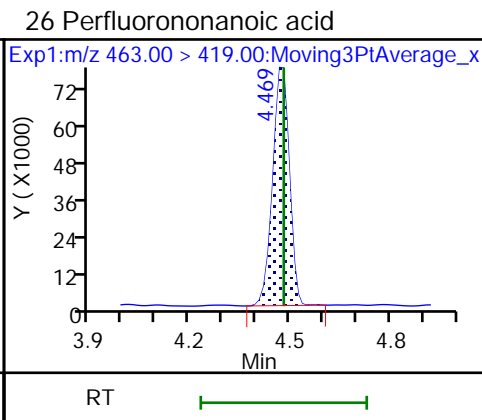
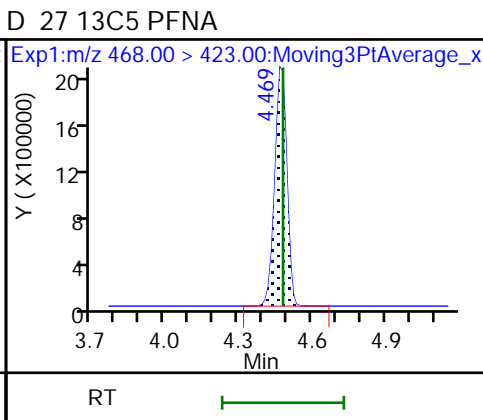
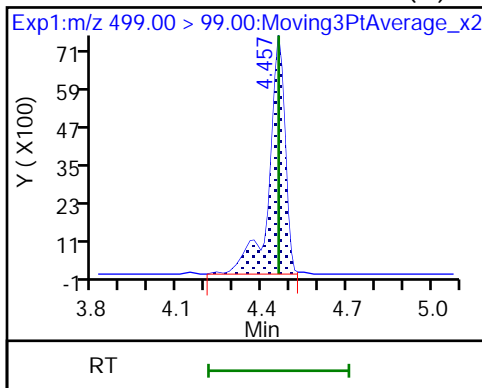
\$ 47 13C8 PFOS

D 25 13C4 PFOS

24 Perfluorooctanesulfonic acid (M)



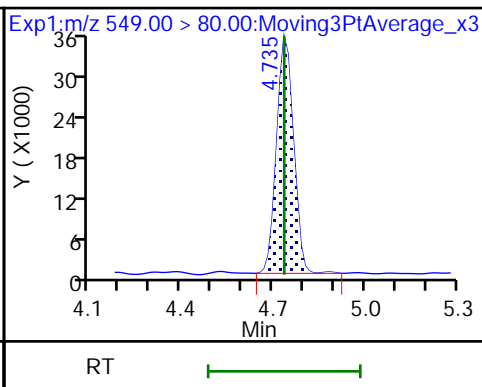
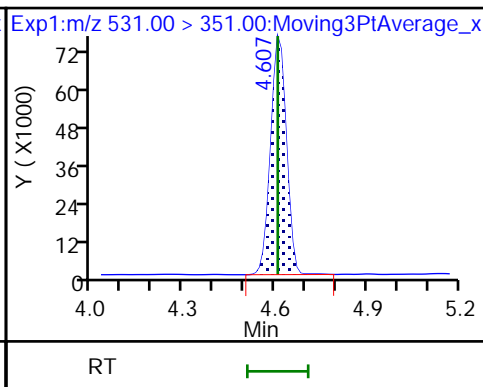
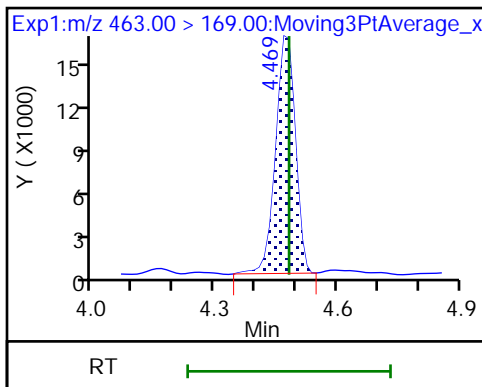
24 Perfluorooctanesulfonic acid (M) D 27 13C5 PFNA



26 Perfluorononanoic acid

63 9CIFOS

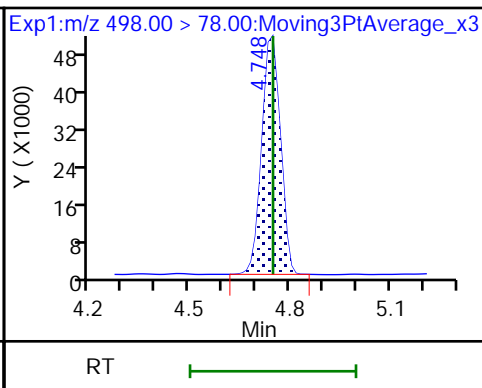
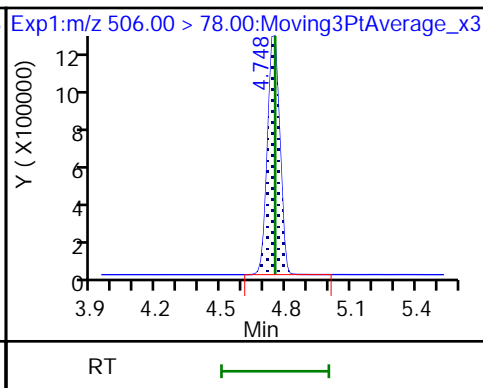
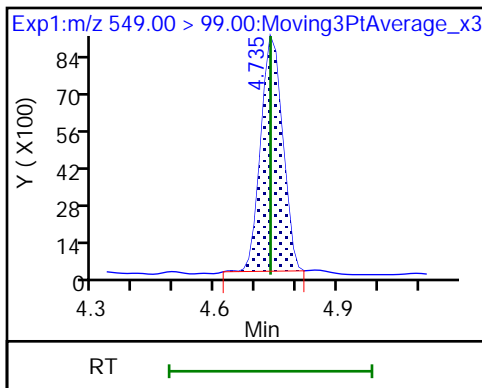
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

D 34 13C8 FOSA

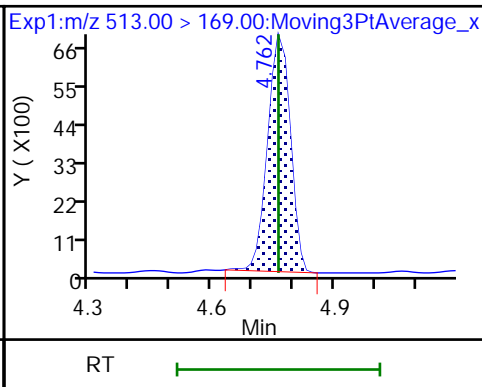
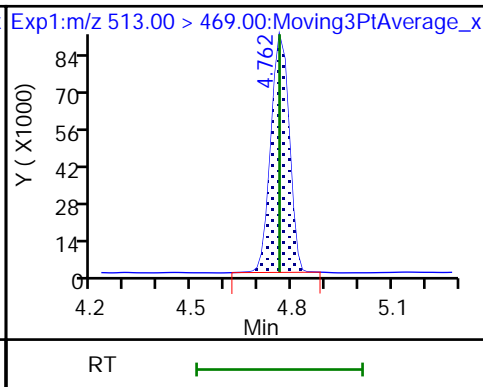
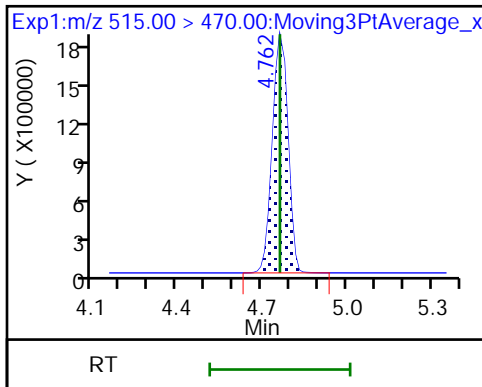
33 Perfluorooctanesulfonamide



D 32 13C2 PFDA

29 Perfluorodecanoic acid

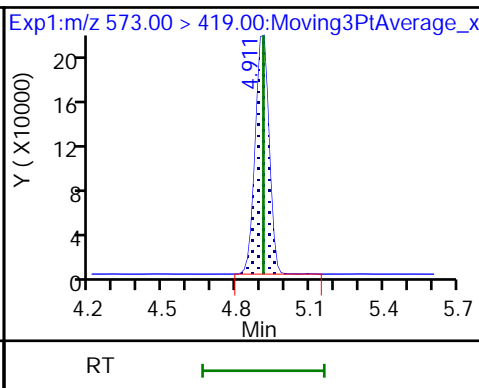
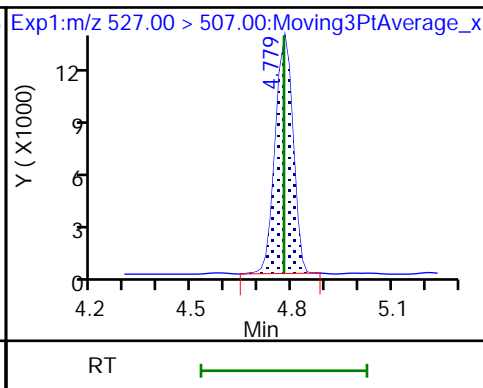
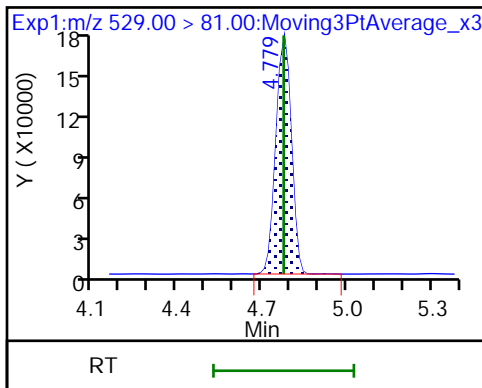
29 Perfluorodecanoic acid



D 30 M2-8:2 FTS

31 8:2 FTS

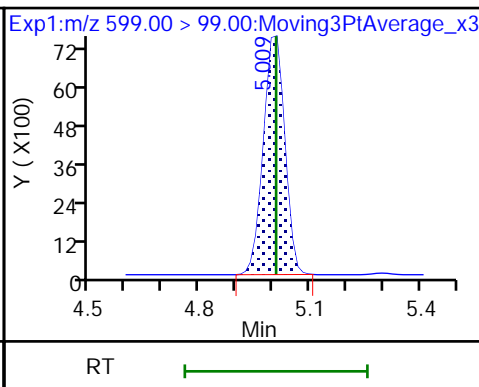
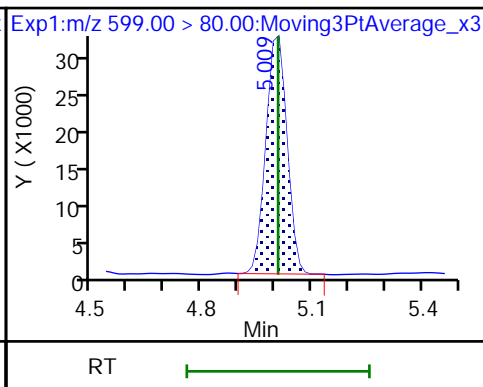
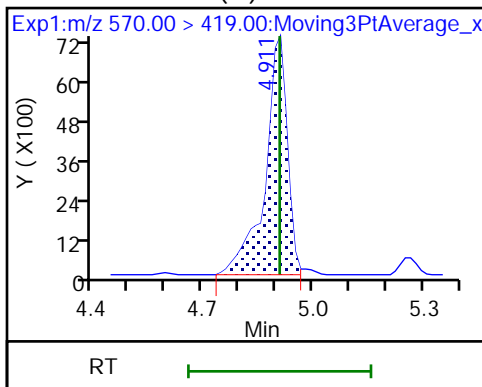
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

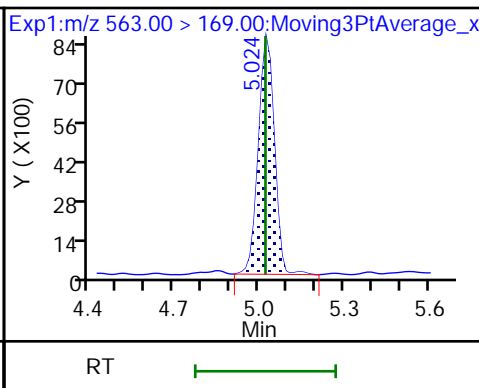
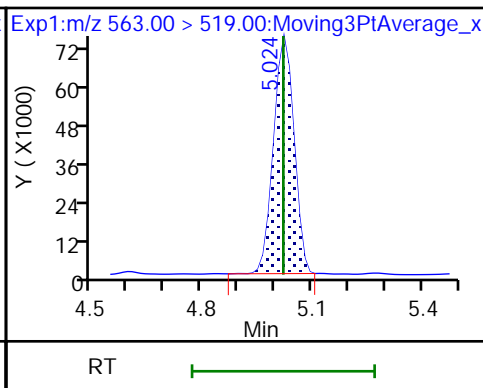
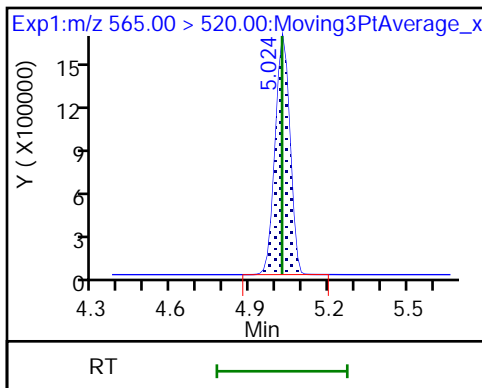
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

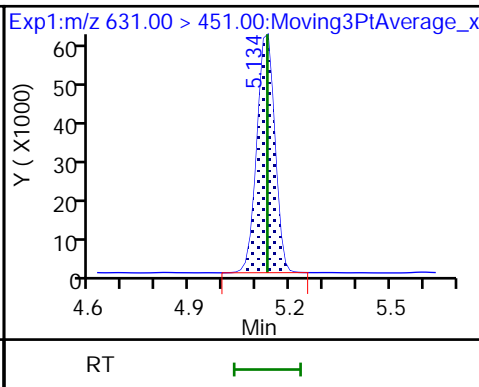
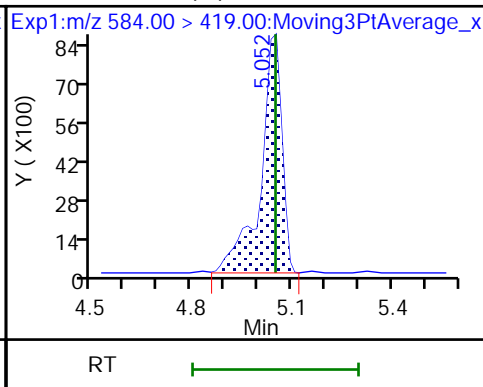
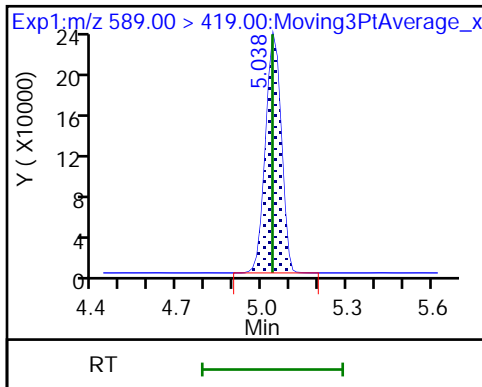
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA (M)

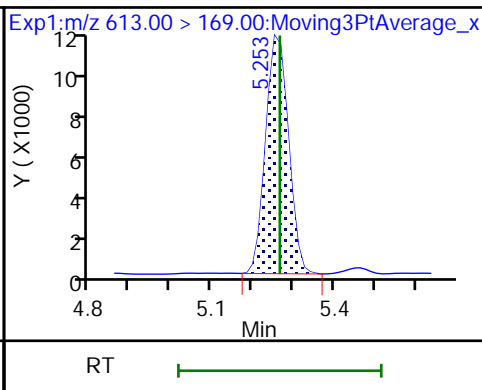
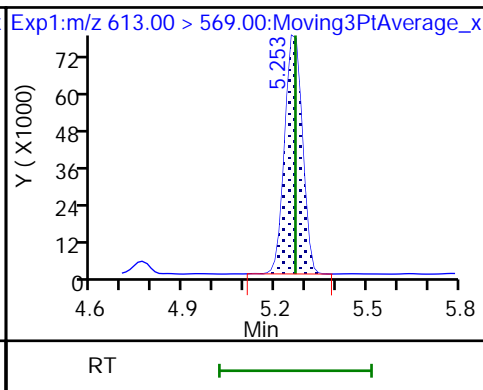
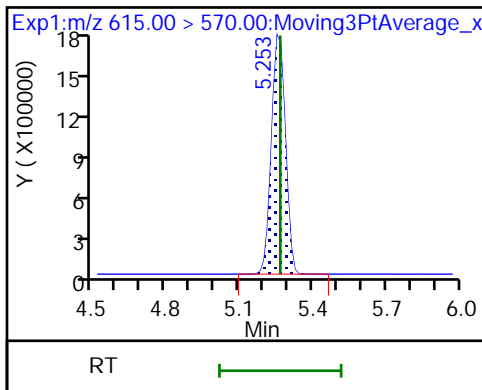
57 11C1FOS



D 43 13C2 PFDaA

42 Perfluorododecanoic acid

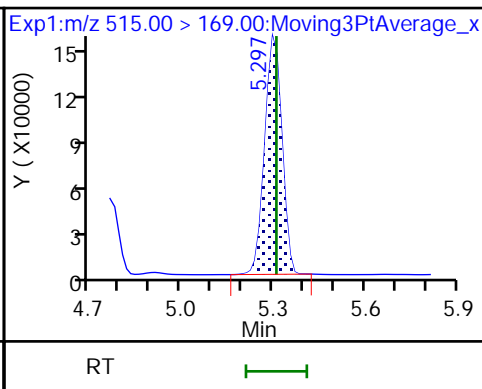
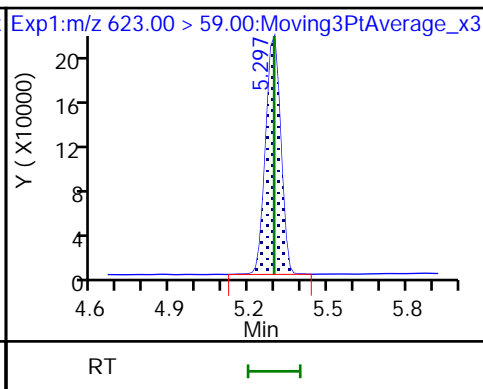
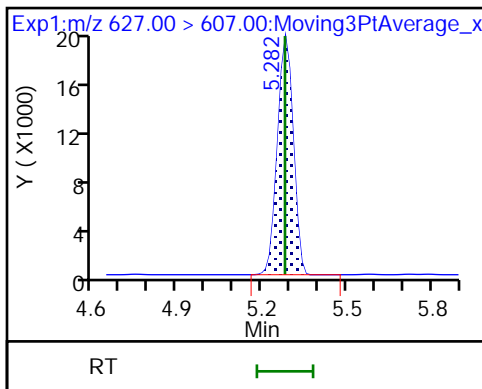
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

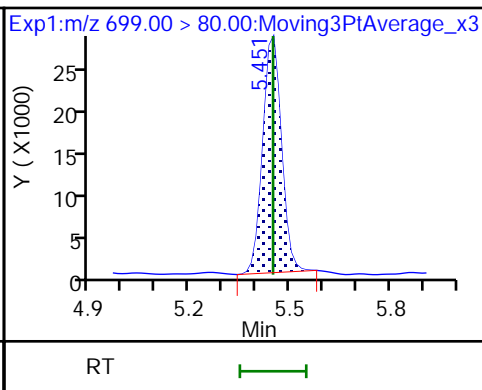
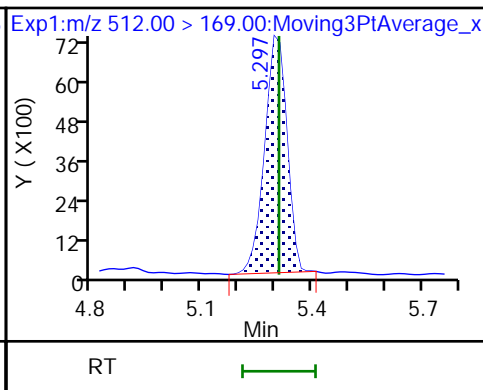
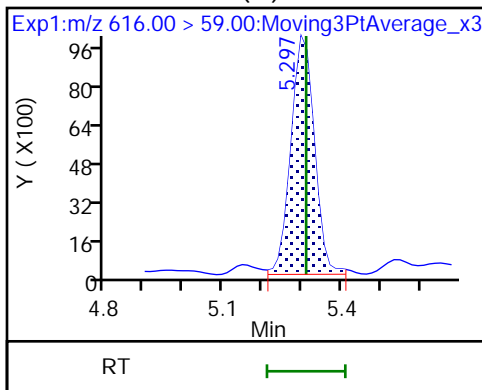
D 58 d-N-MeFOSE-M



49 N-MeFOSE-M (M)

61 NMeFOSE

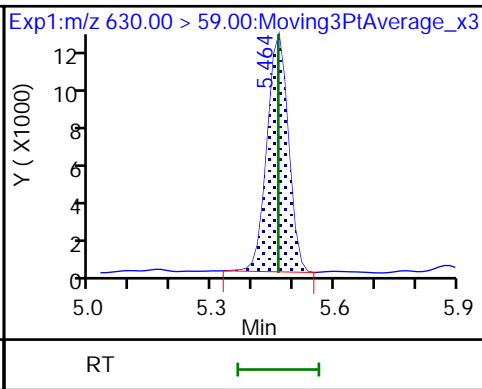
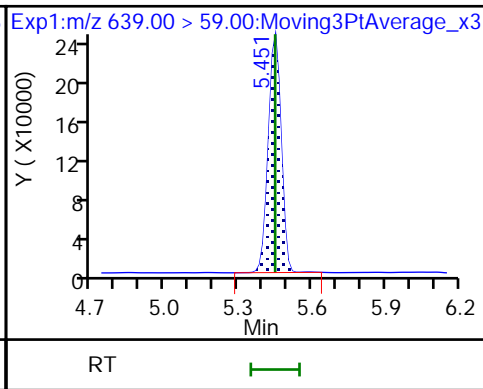
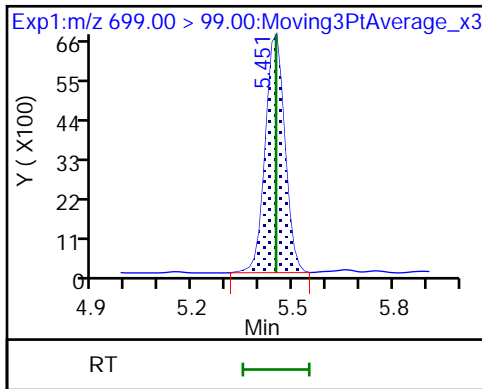
54 PFDoS

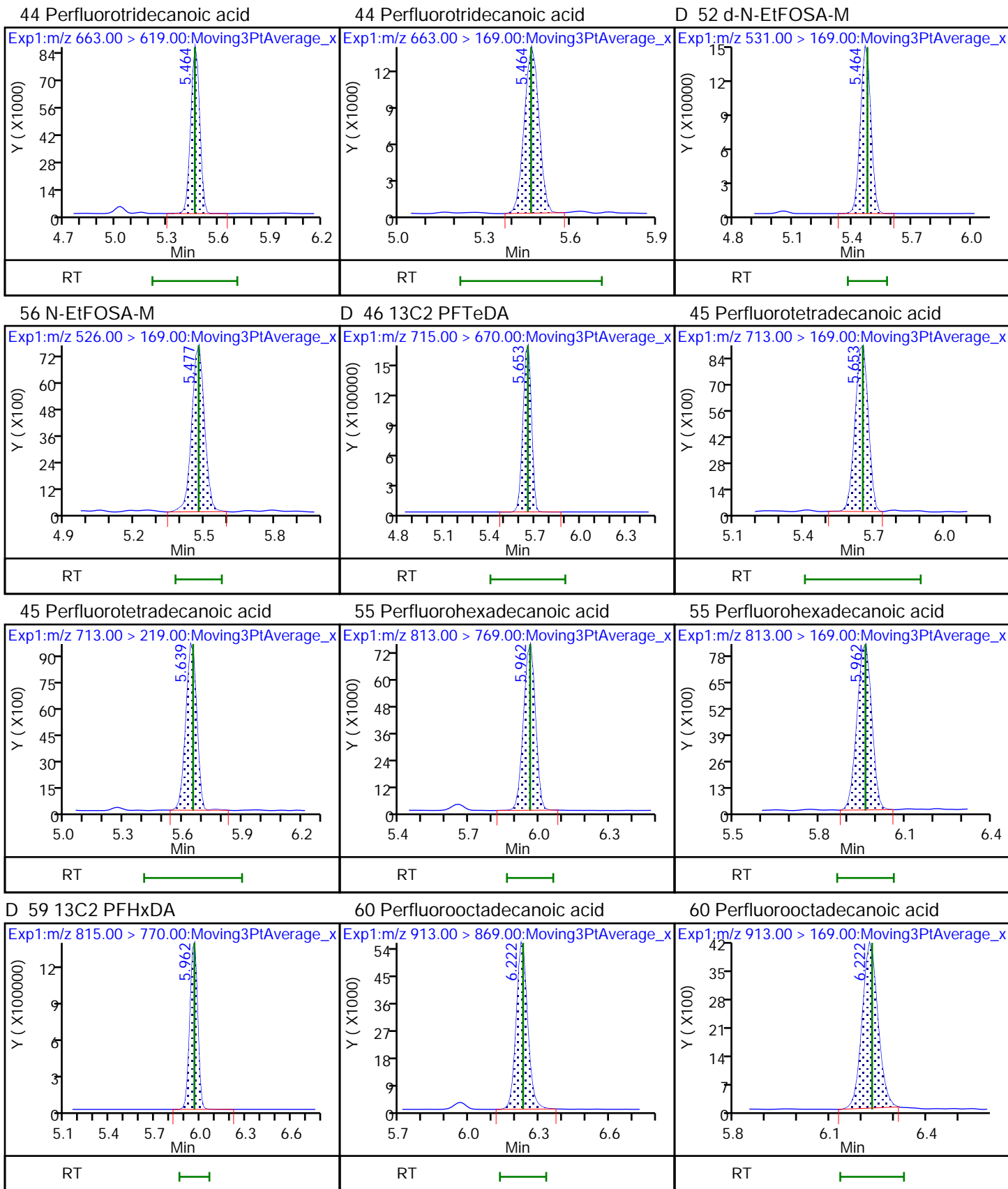


54 PFDoS

D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M





Eurofins TestAmerica, Knoxville

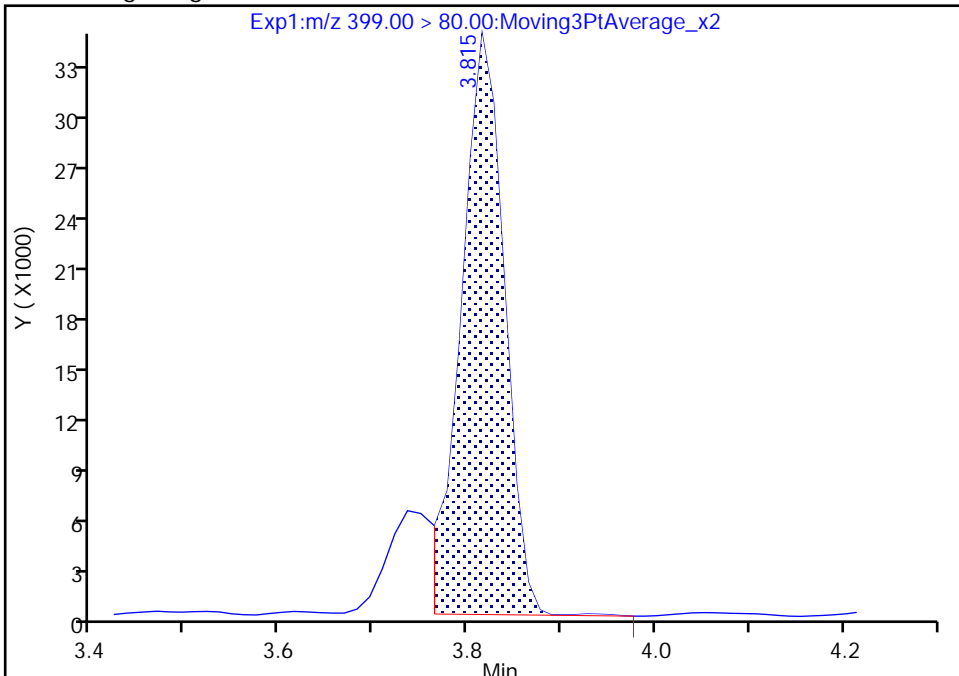
Data File: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b_006.d
Injection Date: 09-Oct-2021 15:12:23 Instrument ID: LCA
Lims ID: CCVL
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

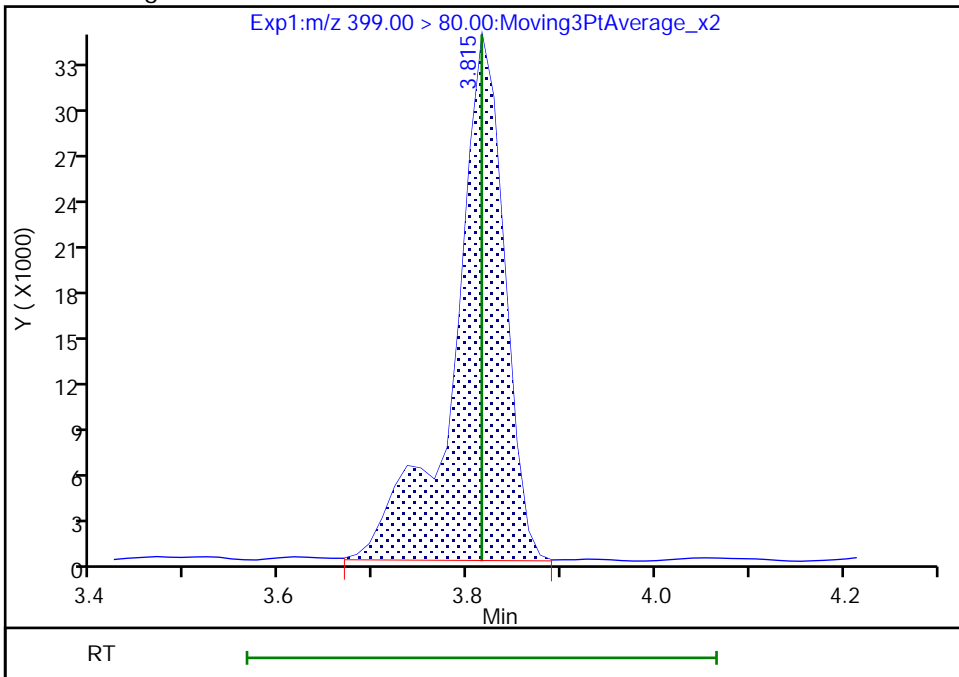
RT: 3.82
Area: 110072
Amount: 0.039935
Amount Units: ng/ml

Processing Integration Results



RT: 3.82
Area: 130263
Amount: 0.048195
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 15:25:52
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

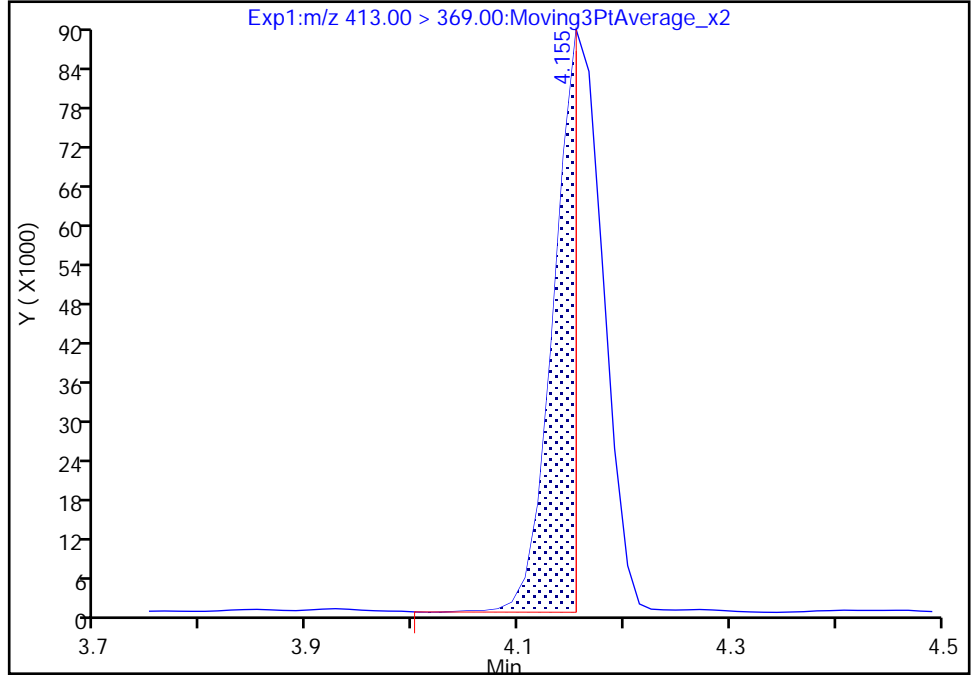
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Injection Date: 09-Oct-2021 15:12:23 Instrument ID: LCA
Lims ID: CCVL
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

23 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

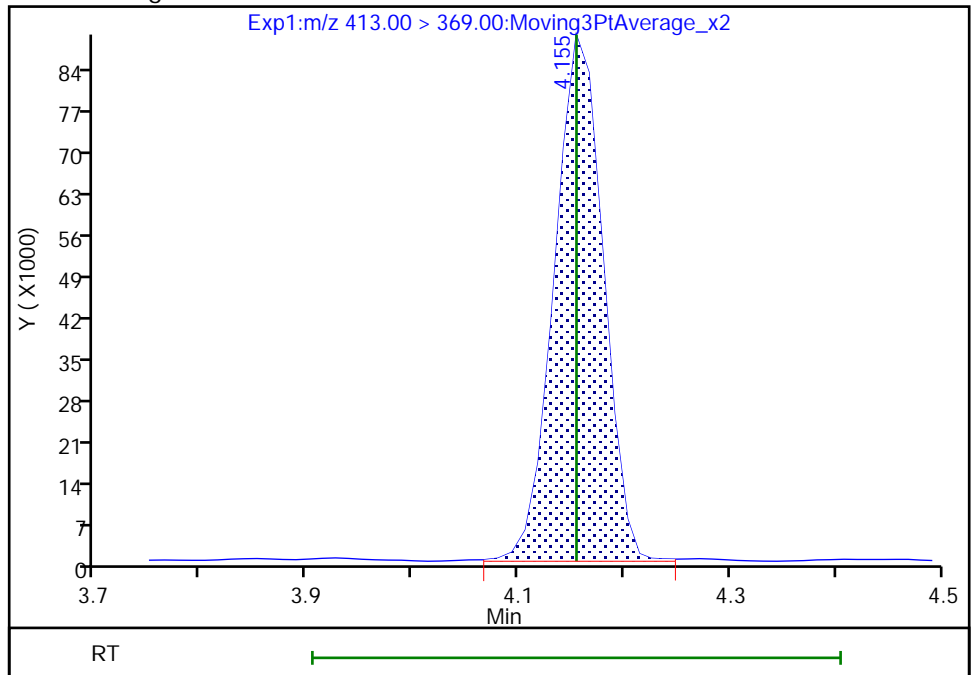
RT: 4.15
Area: 129580
Amount: 0.016891
Amount Units: ng/ml

Processing Integration Results



RT: 4.15
Area: 286776
Amount: 0.047883
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 15:25:39
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

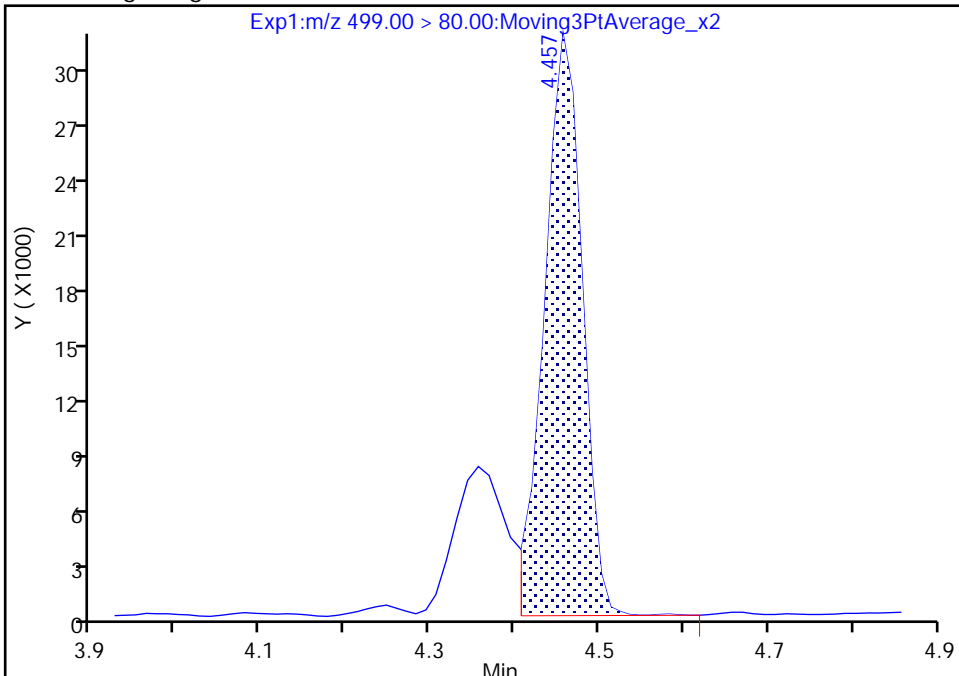
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Injection Date: 09-Oct-2021 15:12:23 Instrument ID: LCA
Lims ID: CCVL
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

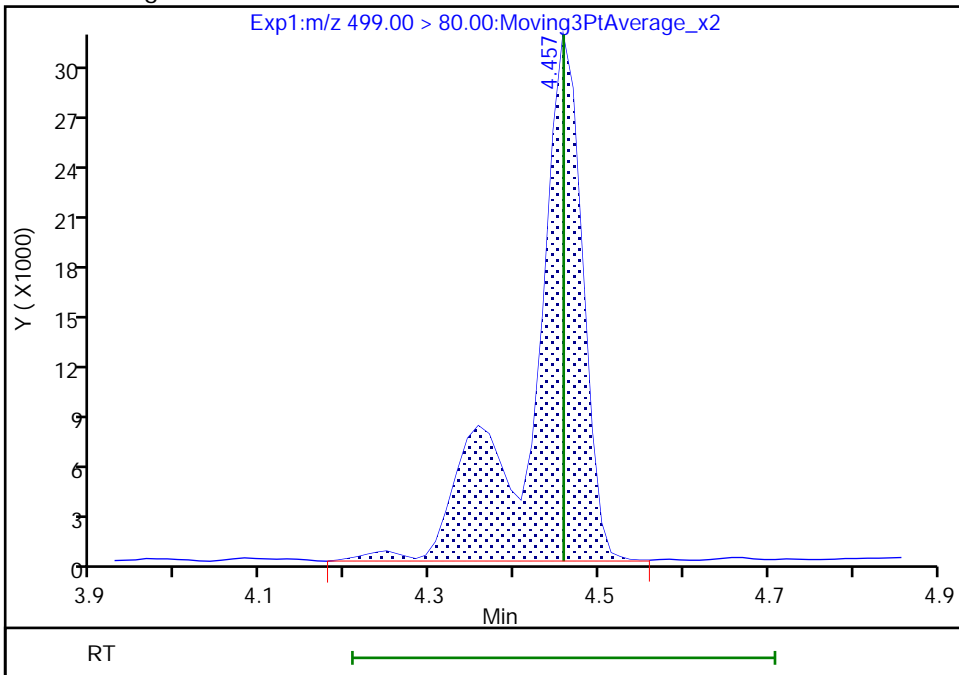
RT: 4.46
Area: 97450
Amount: 0.036082
Amount Units: ng/ml

Processing Integration Results



RT: 4.46
Area: 133628
Amount: 0.049477
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 15:26:01
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

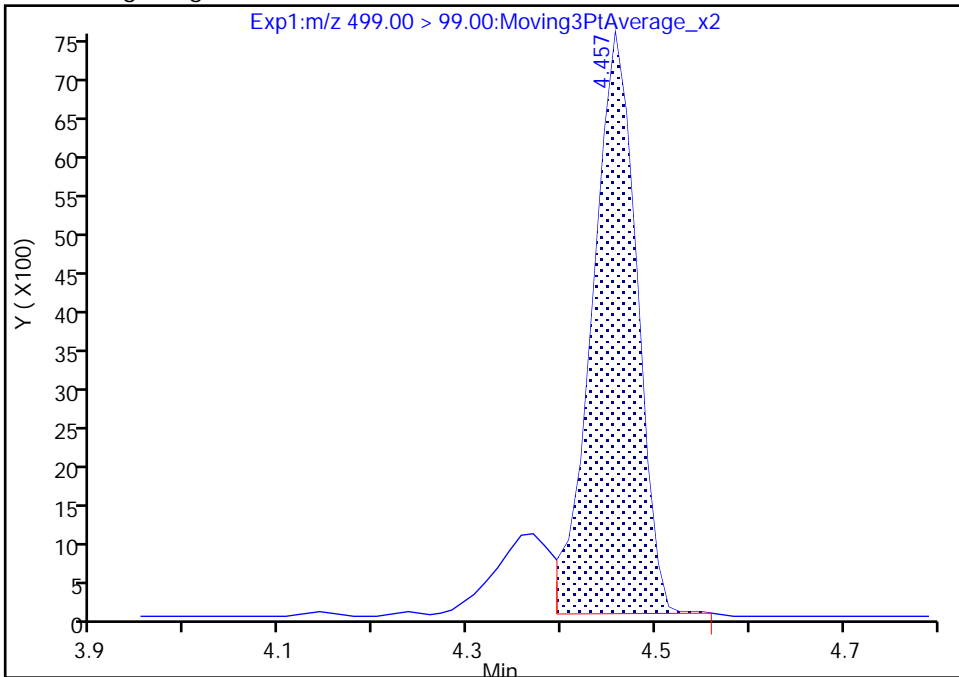
Data File: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b_006.d
Injection Date: 09-Oct-2021 15:12:23 Instrument ID: LCA
Lims ID: CCVL
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

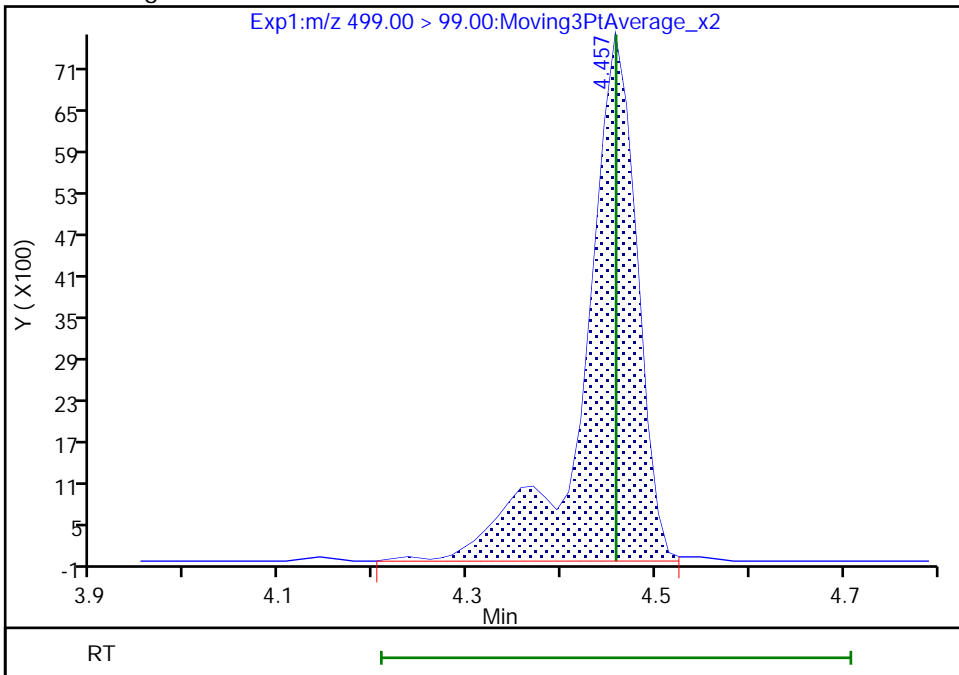
RT: 4.46
Area: 24773
Amount: 0.036082
Amount Units: ng/ml

Processing Integration Results



RT: 4.46
Area: 29611
Amount: 0.049477
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 15:26:05

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

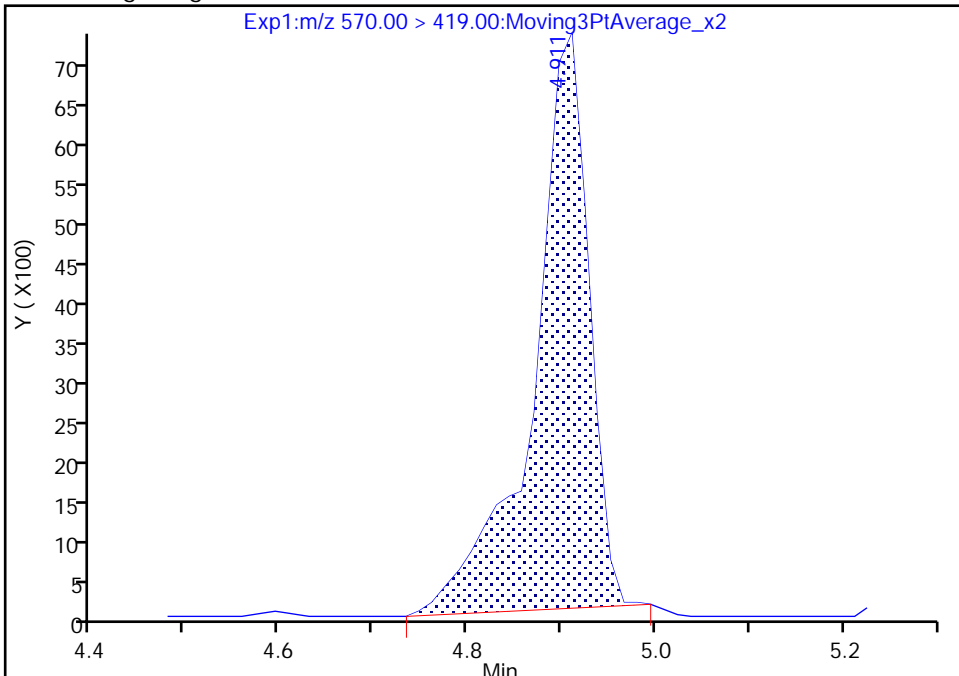
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Injection Date: 09-Oct-2021 15:12:23 Instrument ID: LCA
Lims ID: CCVL
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

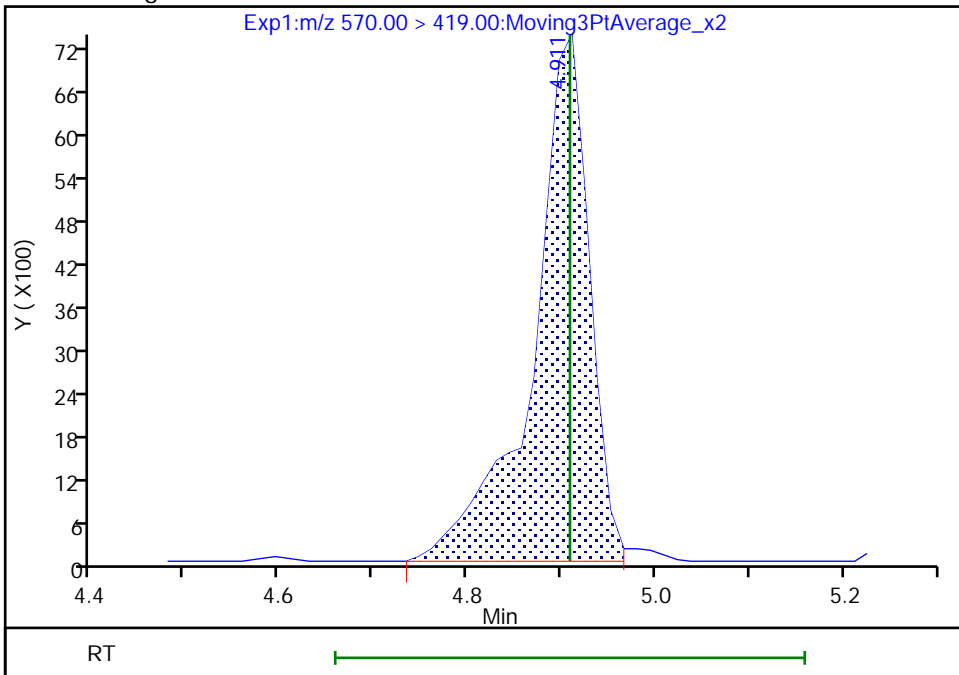
RT: 4.91
Area: 29633
Amount: 0.040567
Amount Units: ng/ml

Processing Integration Results



RT: 4.91
Area: 30530
Amount: 0.042020
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 15:26:16
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

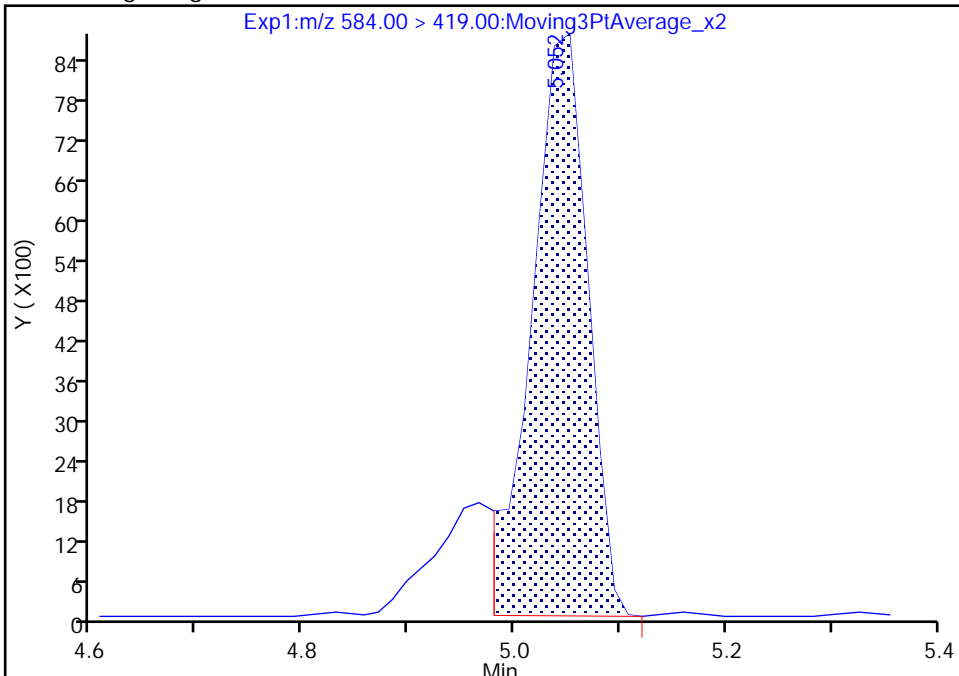
Data File: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b_006.d
Injection Date: 09-Oct-2021 15:12:23 Instrument ID: LCA
Lims ID: CCVL
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

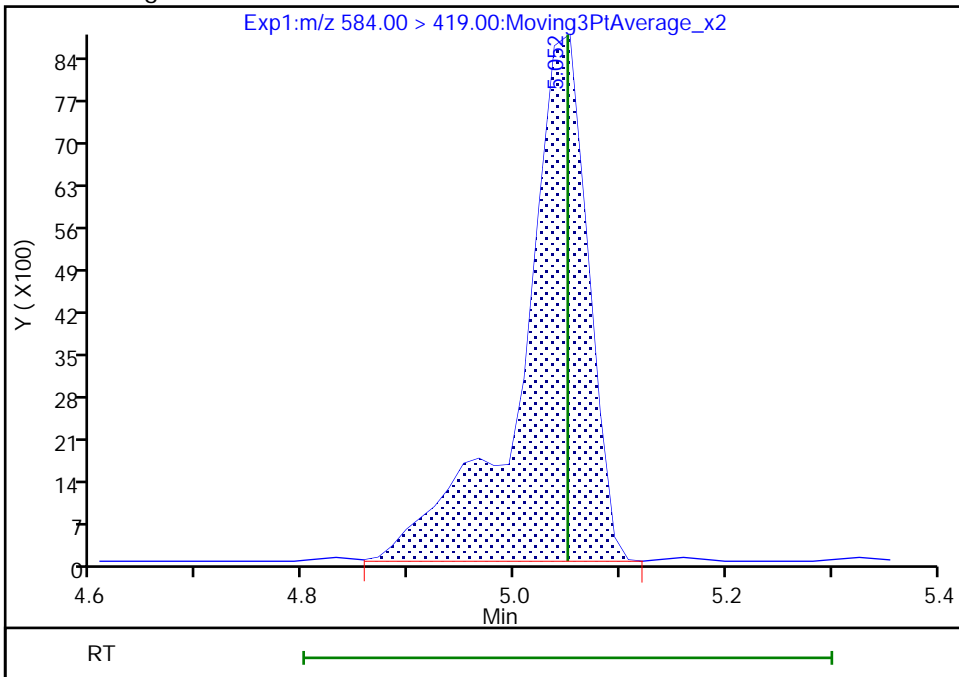
RT: 5.05
Area: 31936
Amount: 0.047068
Amount Units: ng/ml

Processing Integration Results



RT: 5.05
Area: 38511
Amount: 0.056759
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 15:26:24
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

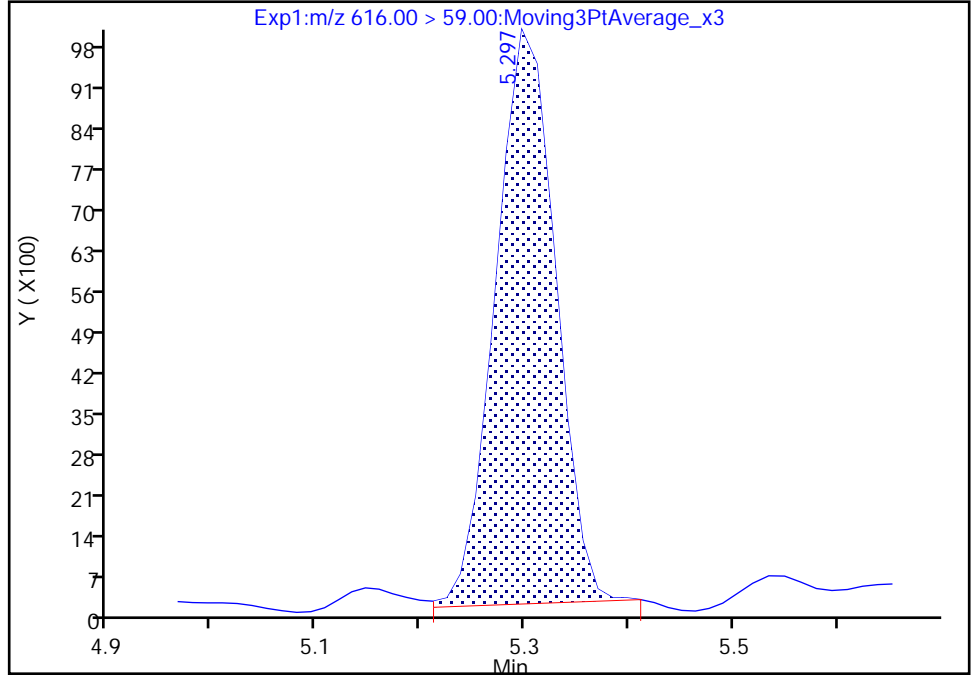
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Injection Date: 09-Oct-2021 15:12:23 Instrument ID: LCA
Lims ID: CCVL
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

49 N-MeFOSE-M, CAS: 24448-09-7

Signal: 1

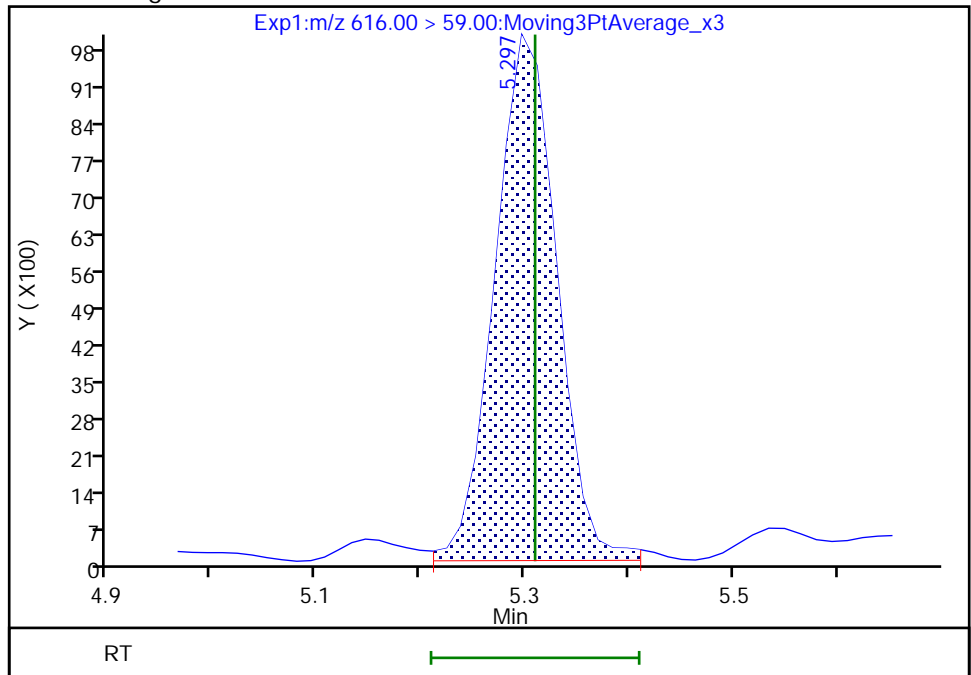
RT: 5.30
Area: 39476
Amount: 0.042601
Amount Units: ng/ml

Processing Integration Results



RT: 5.30
Area: 41148
Amount: 0.044751
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 15:26:34
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-54661/7 Calibration Date: 10/09/2021 15:21
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _007.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7855	0.7830		0.997	1.00	-0.3	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.013	0.9622		0.950	1.00	-5.0	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.126	1.095		0.860	0.884	-2.7	40.0
4:2 FTS	AveID	2.500	2.418		0.904	0.934	-3.3	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8572	0.8119		0.947	1.00	-5.3	40.0
Perfluoropentanesulfonic acid (PFPeS)	L2ID		0.8730		0.953	0.938	1.6	50.0
HFPO-DA	L2ID		1.358		0.981	1.00	-1.9	40.0
Perfluorohexanesulfonic acid (PFHxS)	L2ID		1.352		0.906	0.910	-0.5	40.0
Perfluoroheptanoic acid (PFHpA)	L2ID		1.087		1.03	1.00	2.8	40.0
DONA	AveID	3.243	3.358		0.975	0.942	3.5	40.0
6:2 FTS	L2ID		1.988		0.937	0.948	-1.2	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9947	0.997		0.954	0.952	0.2	40.0
Perfluorooctanoic acid (PFOA)	L2ID		1.140		1.03	1.00	2.8	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.100	1.105		0.932	0.928	0.5	40.0
Perfluorononanoic acid (PFNA)	L2ID		0.8053		0.965	1.00	-3.5	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	2.308	2.327		0.940	0.932	0.8	40.0
Perfluorononanesulfonic acid (PFNS)	AveID	1.042	1.056		0.972	0.960	1.3	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9606	0.9350		0.973	1.00	-2.7	40.0
Perfluorodecanoic acid (PFDA)	L2ID		0.9480		0.998	1.00	-0.2	40.0
8:2 FTS	AveID	1.784	1.696		0.911	0.958	-4.9	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	L2ID		0.9581		1.04	1.00	4.2	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.9574	0.9403		0.947	0.964	-1.8	40.0
Perfluoroundecanoic acid (PFUnA)	L2ID		1.034		1.02	1.00	2.2	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.9494	0.9314		0.981	1.00	-1.9	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.858	1.921		0.974	0.942	3.4	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9536		0.913	1.00	-8.7	40.0
10:2 FTS	AveID	2.221	2.311		1.00	0.964	4.0	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.123		0.970	1.00	-3.0	40.0
NMeFOSA	AveID	1.047	1.042		0.996	1.00	-0.4	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9879	0.9866		0.967	0.968	-0.1	40.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-54661/7 Calibration Date: 10/09/2021 15:21
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _007.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.277		1.01	1.00	1.2	40.0
Perfluorotridecanoic acid (PFTriA)	L2ID		0.9088		1.03	1.00	2.8	50.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.168	1.235		1.06	1.00	5.7	40.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.1317		1.04	1.00	4.4	40.0
Perfluorohexadecanoic acid	Q2ID		1.070		0.978	1.00	-2.2	40.0
Perfluorooctadecanoic acid	AveID	0.9076	0.9356		1.03	1.00	3.1	40.0
13C4 PFBA	Ave	1.324	1.231		1.16	1.25	-7.0	50.0
13C5 PFPeA	Ave	1.087	1.039		1.20	1.25	-4.4	50.0
13C3 PFBS	Ave	0.7019	0.6649		1.10	1.16	-5.3	50.0
M2-4:2 FTS	Ave	0.1052	0.1169		1.30	1.17	11.1	50.0
13C2 PFHxA	Ave	1.116	1.071		1.20	1.25	-4.1	50.0
13C3 HFPO-DA	Ave	0.5714	0.5532		1.21	1.25	-3.2	50.0
18O2 PFHxS	Ave	0.4248	0.3898		1.09	1.18	-8.2	50.0
13C4 PFHpA	Ave	1.113	1.085		1.22	1.25	-2.5	50.0
13C4 PFOA	Ave	1.007	0.999		1.24	1.25	-0.7	50.0
M2-6:2 FTS	Ave	0.1078	0.1149		1.27	1.19	6.6	50.0
13C4 PFOS	Ave	0.5852	0.5298		1.08	1.20	-9.5	50.0
13C5 PFNA	Ave	1.279	1.262		1.23	1.25	-1.4	50.0
13C8 FOSA	Ave	0.8591	0.7936		1.16	1.25	-7.6	50.0
13C2 PFDA	Ave	1.296	1.229		1.19	1.25	-5.1	50.0
M2-8:2 FTS	Ave	0.1316	0.1304		1.19	1.20	-1.0	50.0
d3-NMeFOSAA	Ave	0.1774	0.1476		1.04	1.25	-16.8	50.0
13C2 PFUnA	Ave	1.237	1.209		1.22	1.25	-2.3	50.0
d5-NEtFOSAA	Ave	0.1705	0.1498		1.10	1.25	-12.2	50.0
13C2 PFDoA	Ave	1.319	1.307		1.24	1.25	-1.0	50.0
d7-N-MeFOSE-M	Ave	0.1075	0.1508		1.75	1.25	40.2	50.0
d-N-MeFOSA-M	Ave	0.1120	0.1092		1.22	1.25	-2.5	50.0
d9-N-EtFOSE-M	Ave	0.1146	0.1646		1.80	1.25	43.6	50.0
d-N-EtFOSA-M	Ave	0.0942	0.0942		1.25	1.25	-0.0	50.0
13C2 PFTeDA	Ave	1.211	1.175		1.21	1.25	-3.0	50.0
13C2 PFHxDA	Ave	0.8782	0.8364		1.19	1.25	-4.8	50.0
13C8 PFOA	Ave	0.9886	0.9265		1.17	1.25	-6.3	50.0
13C8 PFOS	Ave	0.1256	0.1166		1.11	1.20	-7.2	50.0

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b_007.d
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 09-Oct-2021 15:21:11 ALS Bottle#: 7 Worklist Smp#: 7
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0021009-007 ccvis
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15
 Method: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 10-Oct-2021 08:27:33 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1620

First Level Reviewer: cochranj Date: 09-Oct-2021 15:52:18

Ratio Calibration: None

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	2.823	2.823	0.0	0.679	6989066	1.16	93.0	8740	
2 Perfluorobutanoic acid	212.90 > 169.00	2.823	2.823	0.0	1.000	4378056	1.00	99.7	629	
D 3 13C5 PFPeA	267.90 > 223.00	3.129	3.129	0.0	0.753	5896397	1.19	95.6	8004	
4 Perfluoropentanoic acid	262.90 > 219.00	3.143	3.143	0.0	1.004	4538992	0.9499	95.0	1219	
D 6 13C3 PFBS	301.90 > 80.00	3.143	3.143	0.0	0.756	3509601	1.10	94.7	11595	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.157	3.157	0.0	1.004	2922958	0.8598	Target=3.06	97.3	7144
	298.90 > 99.00	3.157	3.157	0.0	1.004	1045324		2.80(1.53-4.59)		2220
D 8 M2-4:2 FTS	329.00 > 81.00	3.437	3.437	0.0	0.827	619656	1.30	111	1085	
7 4:2 FTS	327.00 > 307.00	3.437	3.437	0.0	1.000	1198849	0.9036	96.7	7603	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.469	3.469	0.0	1.104	2472285	0.9534	Target=3.47	102	7062
	349.00 > 99.00	3.469	3.469	0.0	1.104	721839		3.42(1.73-5.20)		4587
D 9 13C2 PFHxA	315.00 > 270.00	3.469	3.469	0.0	0.835	6078307	1.20	95.9	12774	
10 Perfluorohexanoic acid	313.00 > 269.00	3.469	3.469	0.0	1.000	3947936	0.9471	Target=9.74	94.7	1872
	313.00 > 119.00	3.469	3.469	0.0	1.000	330475		11.95(4.87-14.61)		1183
D 12 13C3 HFPO-DA	287.00 > 169.00	3.575	3.575	0.0	0.860	3139514	1.21	96.8	6193	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.575	3.575	0.0	1.000	3411215	0.9808		98.1	2960	
D 17 18O2 PFHxS										
403.00 > 84.00	3.815	3.815	0.0	0.918	2092806	1.09		91.8	9093	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.815	3.815	0.0	1.000	2177754	0.9056	Target=2.96	99.5	2785	M
399.00 > 99.00	3.815	3.815	0.0	1.000	626534		3.48(1.48-4.44)		2518	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.827	3.827	0.0	0.921	6159924	1.22		97.5	13482	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.827	3.827	0.0	1.000	5354978	1.03	Target=3.35	103	3791	
363.00 > 169.00	3.827	3.827	0.0	1.000	1543232		3.47(1.67-5.02)		4966	
68 DONA										
377.00 > 251.00	3.852	3.852	0.0	0.864	7609080	0.9753	Target=1.49	104	13826	
377.00 > 85.00	3.852	3.852	0.0	0.864	4140875		1.84(0.74-2.23)		5977	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.155	4.155	0.0	1.000	619496	1.27		107	439	
19 6:2 FTS										
427.00 > 407.00	4.155	4.155	0.0	1.000	983281	0.9367		98.8	4251	
D 21 13C4 PFOA										
417.00 > 372.00	4.155	4.155	0.0	1.000	5672504	1.24		99.3	16967	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.155	4.155	0.0	0.932	2283524	0.9543	Target=3.73	100	2407	
449.00 > 99.00	4.155	4.155	0.0	0.932	561517		4.07(1.87-5.61)		2531	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.155	4.155	0.0	1.000	5258011	1.17		93.7	25914	
* 22 13C2 PFOA										
415.00 > 370.00	4.155	4.155	0.0		5675379	1.25			17560	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.155	4.155	0.0	1.000	5172391	1.03	Target=2.40	103	2422	
413.00 > 169.00	4.167	4.155	0.012	1.003	1927621		2.68(1.20-3.61)		4109	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.458	4.458	0.0	1.073	632447	1.11		92.8	4230	
D 25 13C4 PFOS										
503.00 > 80.00	4.458	4.458	0.0	1.073	2874459	1.08		90.5	2547	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.458	4.458	0.0	1.000	2466512	0.9324	Target=3.83	100	3060	M
499.00 > 99.00	4.458	4.458	0.0	1.000	538041		4.58(1.91-5.74)		2803	M
D 27 13C5 PFNA										
468.00 > 423.00	4.481	4.481	0.0	1.079	7161998	1.23		98.6	30592	
26 Perfluorononanoic acid										
463.00 > 419.00	4.481	4.481	0.0	1.000	4613983	0.9646	Target=3.68	96.5	4922	
463.00 > 169.00	4.481	4.481	0.0	1.000	1014358		4.55(1.84-5.52)		1529	
63 9CIFOS										
531.00 > 351.00	4.608	4.608	0.0	1.109	5217382	0.9398		101	10294	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.736	4.736	0.0	1.062	2437359	0.9722	Target=3.97	101	2368	
549.00 > 99.00	4.736	4.736	0.0	1.062	591385		4.12(1.99-5.96)		2218	
D 34 13C8 FOSA										
506.00 > 78.00	4.749	4.749	0.0	1.143	4503981	1.15		92.4	5116	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.749	4.749	0.0	1.000	3368826	0.9734		97.3	6517	
D 32 13C2 PFDA										
515.00 > 470.00	4.762	4.762	0.0	1.146	6976081	1.19		94.9	17624	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.762	4.762	0.0	1.000	5290697	1.00	Target=10.11	99.8	2752	
513.00 > 169.00	4.762	4.762	0.0	1.000	429617		12.31(5.06-15.17)		552	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.776	4.776	0.0	1.149	708769	1.19		99.0	2220	
31 8:2 FTS										
527.00 > 507.00	4.776	4.776	0.0	1.000	961925	0.9111		95.1	3329	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.909	4.909	0.0	1.182	837428	1.04		83.2	1007	
36 NMeFOSAA										
570.00 > 419.00	4.909	4.909	0.0	1.000	641876	1.04		104	1267	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	5.007	5.007	0.0	1.123	2180488	0.9468	Target=3.80	98.2	2453	
599.00 > 99.00	5.007	5.007	0.0	1.123	581050		3.75(1.90-5.70)		3673	
D 39 13C2 PFUnA										
565.00 > 520.00	5.022	5.022	0.0	1.209	6859841	1.22		97.7	12331	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.022	5.022	0.0	1.000	5675511	1.02	Target=7.45	102	5787	
563.00 > 169.00	5.022	5.022	0.0	1.000	637054		8.91(3.78-11.33)		2583	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.036	5.036	0.0	1.212	849936	1.10		87.8	4264	
40 NEtFOSA										
584.00 > 419.00	5.050	5.050	0.0	1.003	633333	0.9811		98.1	817	
57 11CIFOS										
631.00 > 451.00	5.132	5.132	0.0	1.151	4353158	0.9738		103	11444	
D 43 13C2 PFDaA										
615.00 > 570.00	5.266	5.266	0.0	1.267	7415219	1.24		99.0	14057	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.266	5.266	0.0	1.000	5656887	0.9125	Target=5.33	91.3	3058	
613.00 > 169.00	5.266	5.266	0.0	1.000	816449		6.93(2.66-7.99)		3426	
50 10:2 FTS										
627.00 > 607.00	5.280	5.280	0.0	1.106	1318481	1.00		104	6042	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.295	5.295	0.0	1.274	855965	1.75		140	520	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.310	5.310	0.0	1.278	619798	1.22		97.5	45.9	
49 N-MeFOSE-M										
616.00 > 59.00	5.310	5.310	0.0	1.003	768969	0.9696		97.0	773	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA	512.00 > 169.00	5.310	5.310	0.0	1.000	516803	1.00	99.6	672	
54 PFDoS	699.00 > 80.00	5.449	5.449	0.0	1.222	2297128	0.9667	99.9	2103	
	699.00 > 99.00	5.449	5.449	0.0	1.222	526285	4.36(2.19-6.58)		3451	
D 53 d9-N-EtFOSE-M	639.00 > 59.00	5.449	5.449	0.0	1.311	934260	1.80	144	618	
62 N-EtFOSE-M	630.00 > 59.00	5.462	5.462	0.0	1.002	954537	1.01	101	1864	
44 Perfluorotridecanoic acid	663.00 > 619.00	5.462	5.462	0.0	1.037	5391159	1.03	103	3507	
	663.00 > 169.00	5.462	5.462	0.0	1.037	850202	6.34(2.83-8.48)		3673	
D 52 d-N-EtFOSA-M	531.00 > 169.00	5.475	5.475	0.0	1.318	534384	1.25	99.9	738	
56 N-EtFOSA-M	526.00 > 169.00	5.475	5.475	0.0	1.000	528018	1.06	106	730	
D 46 13C2 PFTeDA	715.00 > 670.00	5.651	5.651	0.0	1.360	6668717	1.21	97.0	19713	
45 Perfluorotetradecanoic acid	713.00 > 169.00	5.651	5.651	0.0	1.000	702494	1.04	104	4086	
	713.00 > 219.00	5.651	5.651	0.0	1.000	648678	1.08(0.53-1.60)		4313	
55 Perfluorohexadecanoic acid	813.00 > 769.00	5.961	5.961	0.0	1.000	4063720	0.9784	97.8	3312	
	813.00 > 169.00	5.961	5.961	0.0	1.000	498073	8.16(3.75-11.26)		1624	
D 59 13C2 PFHxDA	815.00 > 770.00	5.961	5.961	0.0	1.435	4747153	1.19	95.2	9390	
60 Perfluorooctadecanoic acid	913.00 > 869.00	6.230	6.230	0.0	1.045	3552986	1.03	103	3337	
	913.00 > 169.00	6.221	6.230	-0.009	1.044	296203	12.00(5.14-15.41)		1768	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L4PFC2_00003

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b_007.d

Injection Date: 09-Oct-2021 15:21:11

Instrument ID: LCA

Lims ID: CCVIS

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 7

Worklist Smp#: 7

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

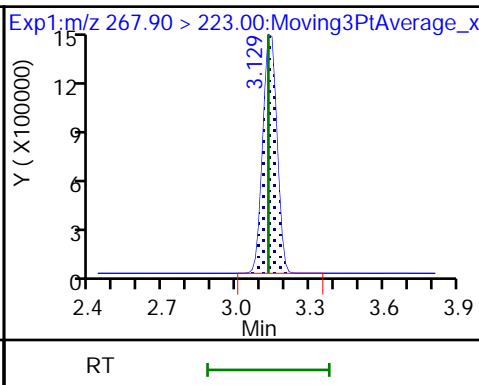
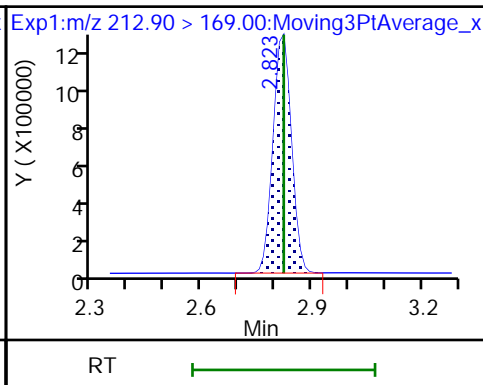
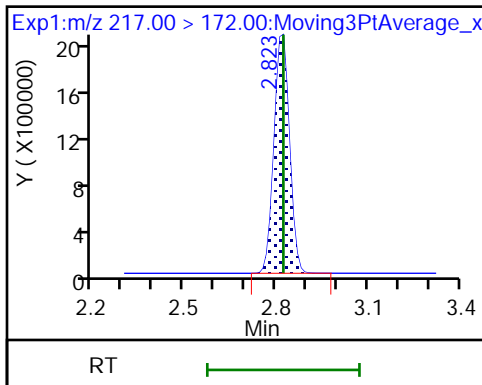
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

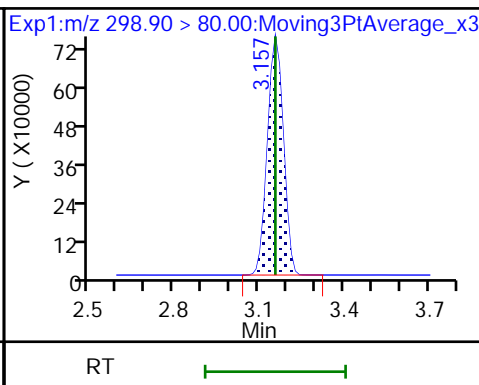
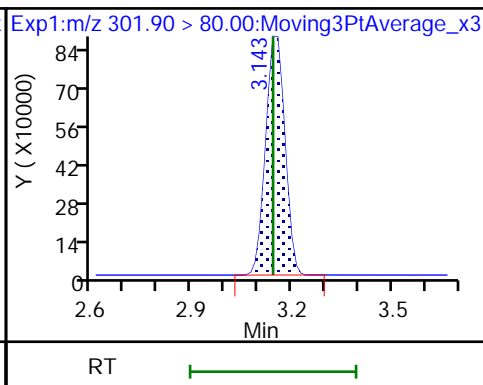
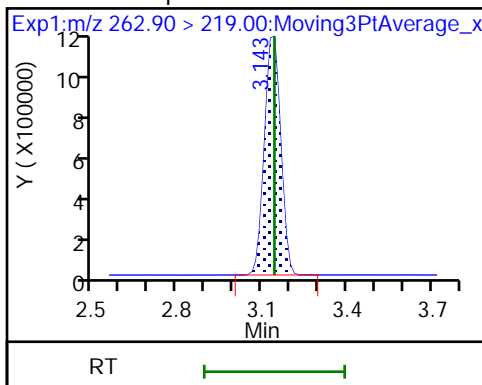
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

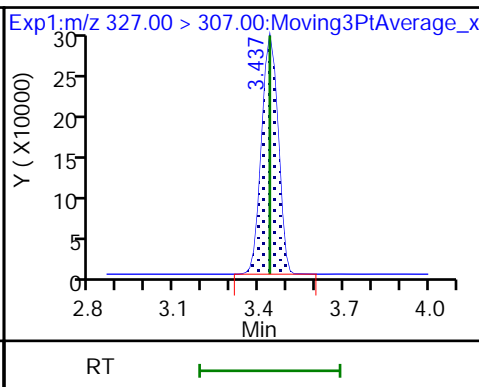
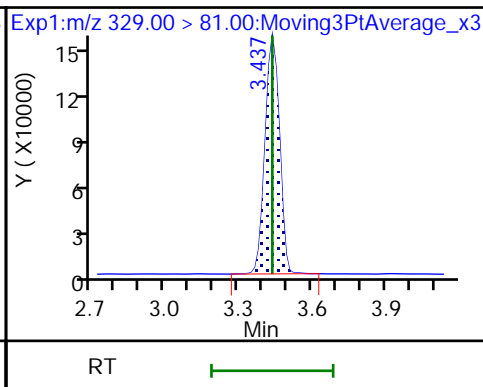
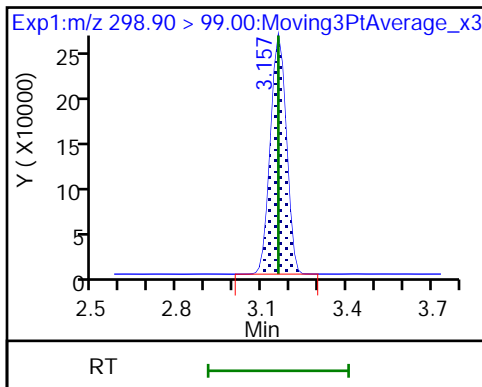
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

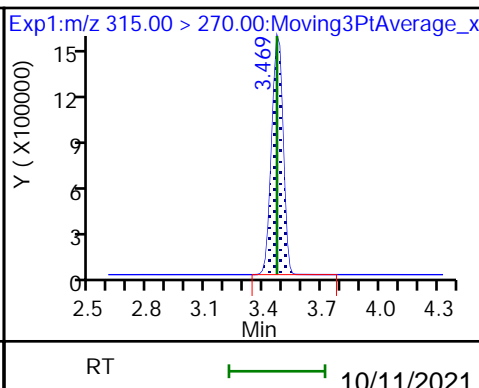
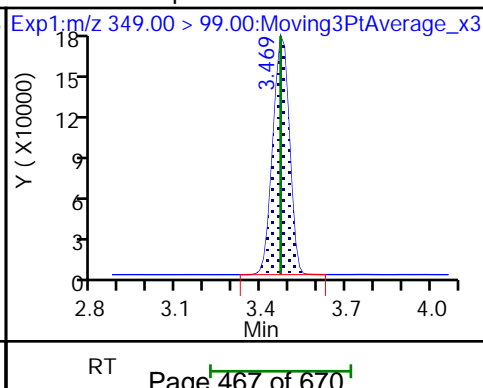
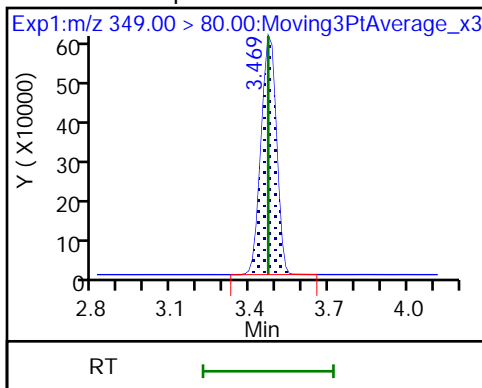
7 4:2 FTS

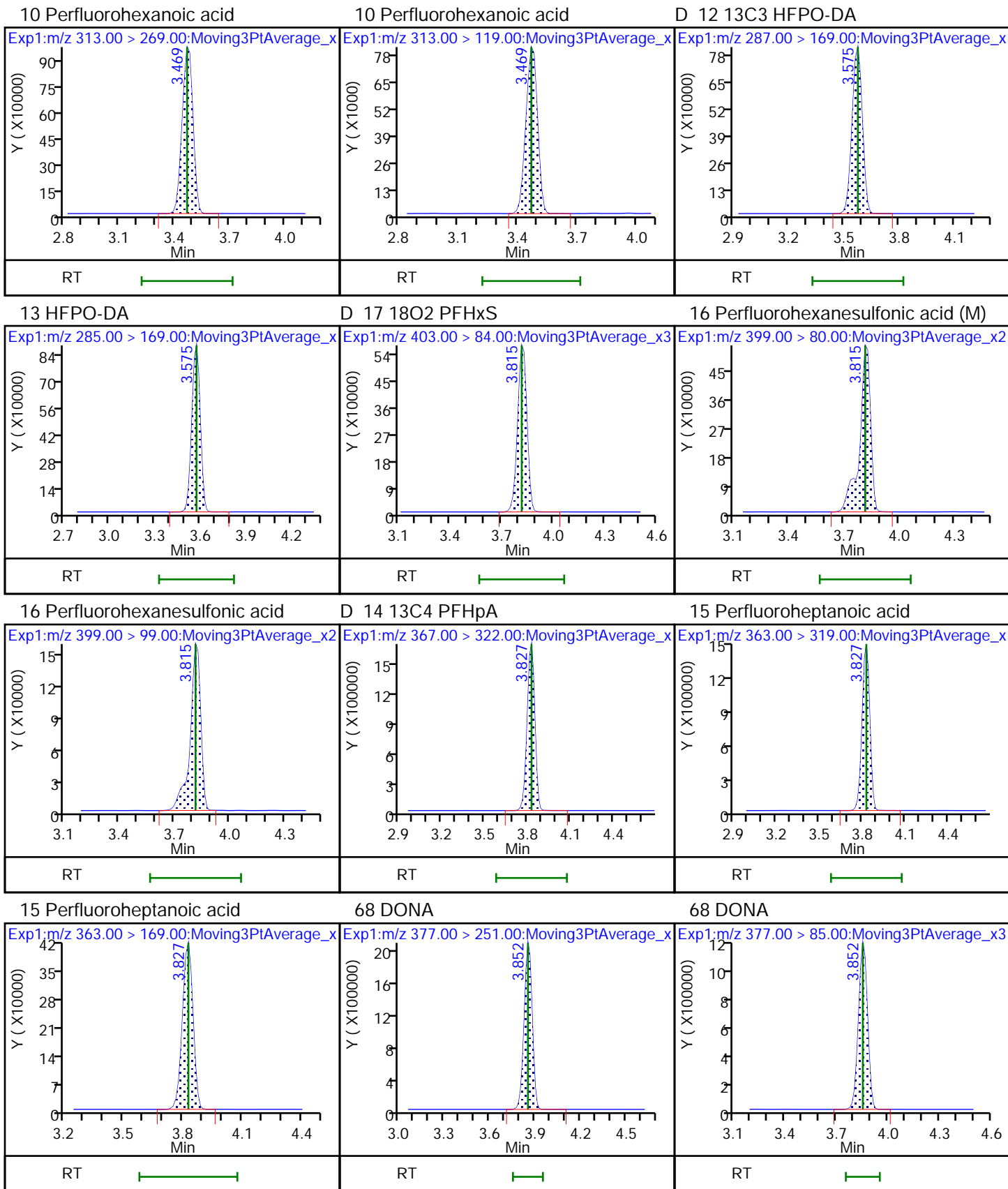


11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA

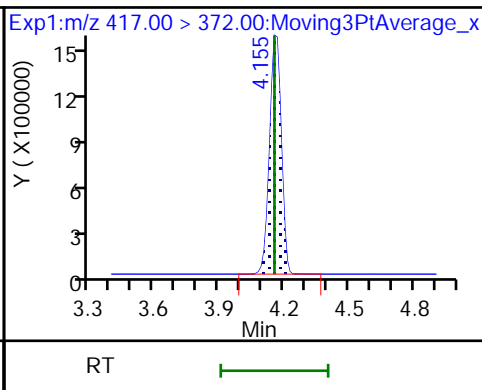
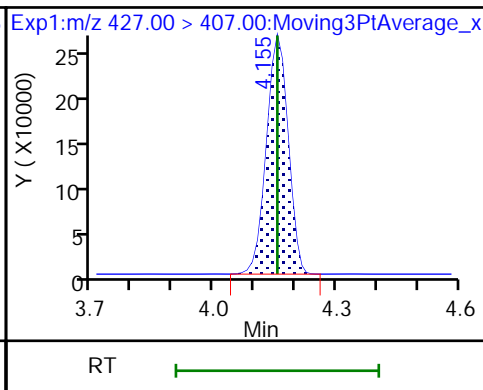
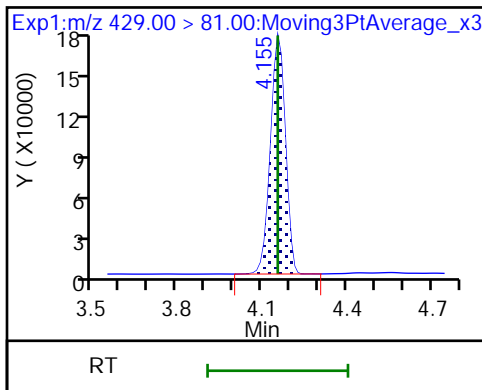




D 18 M2-6:2 FTS

19 6:2 FTS

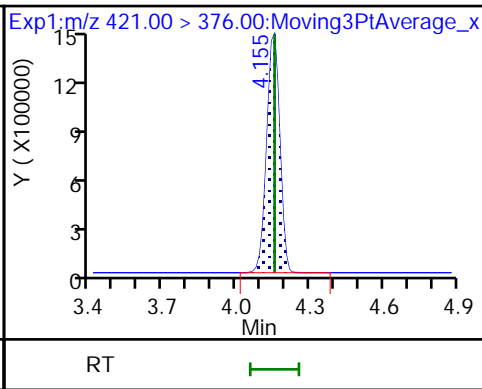
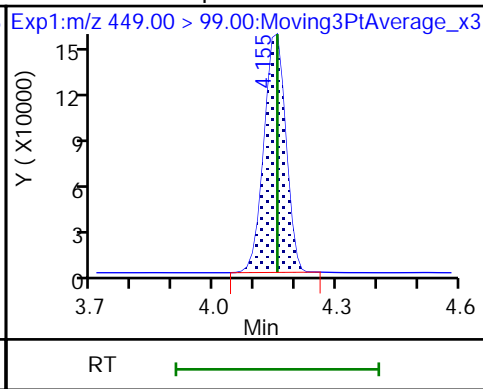
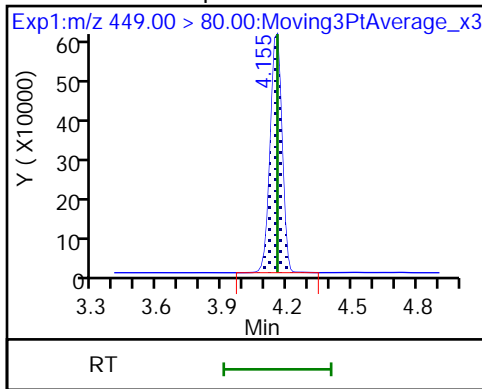
D 21 13C4 PFOA



20 Perfluoroheptanesulfonic acid

20 Perfluoroheptanesulfonic acid

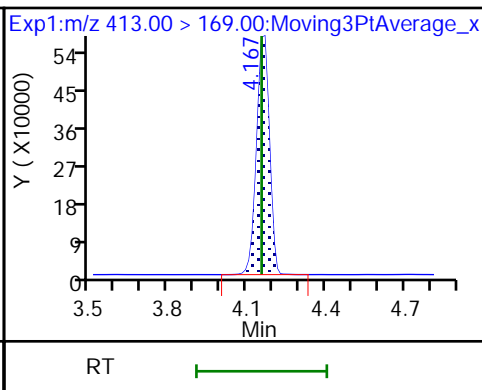
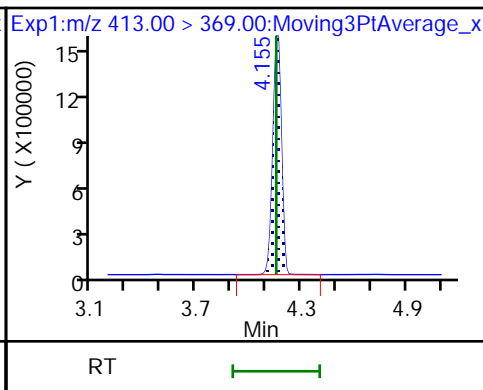
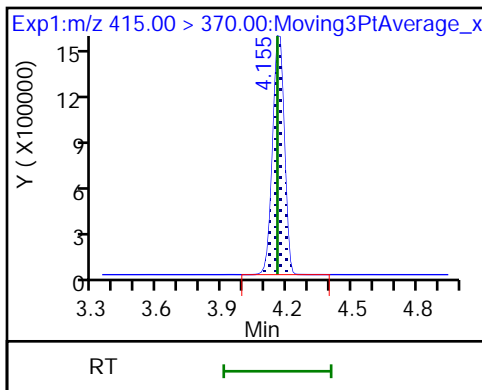
\$ 48 13C8 PFOA



* 22 13C2 PFOA

23 Perfluorooctanoic acid

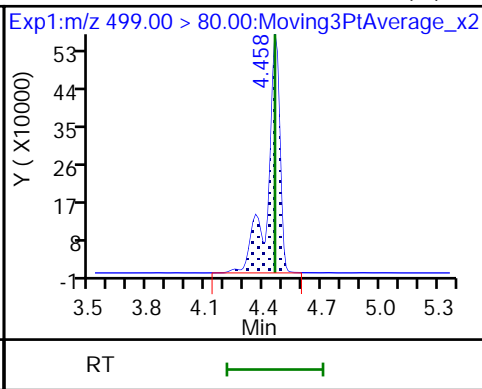
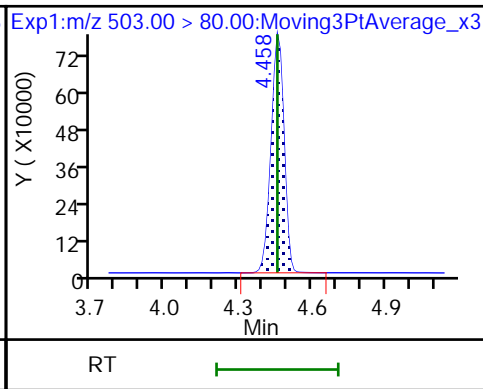
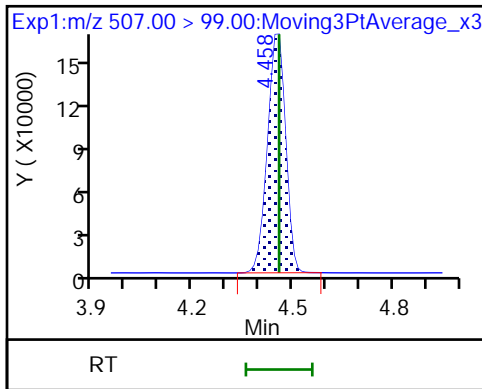
23 Perfluorooctanoic acid



\$ 47 13C8 PFOS

D 25 13C4 PFOS

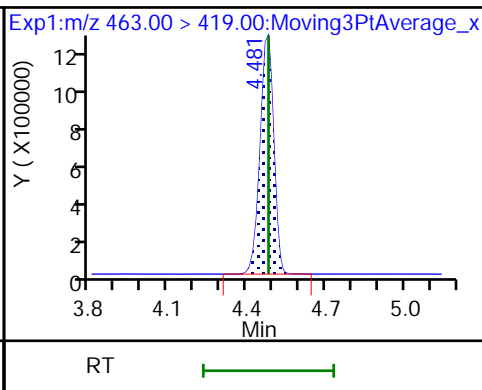
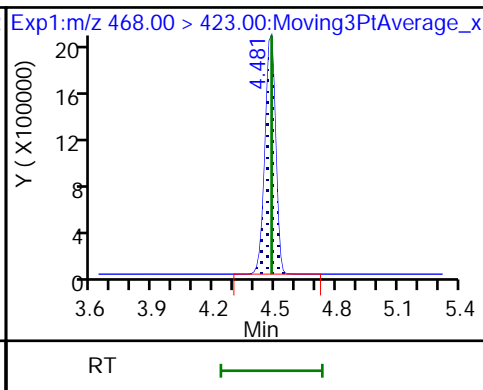
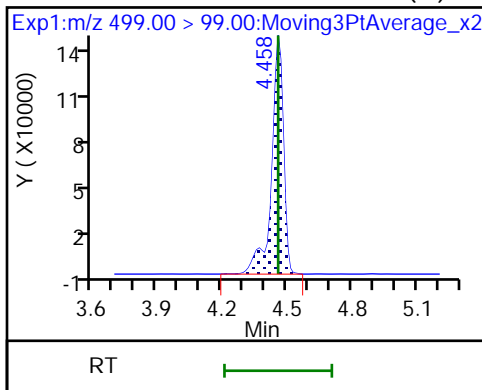
24 Perfluorooctanesulfonic acid (M)



24 Perfluorooctanesulfonic acid (M)

D 27 13C5 PFNA

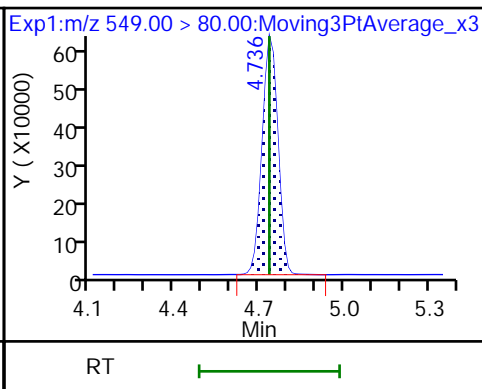
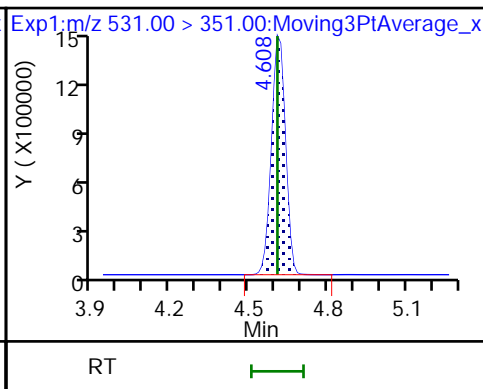
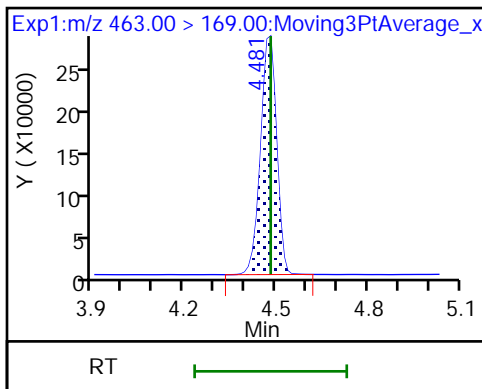
26 Perfluorononanoic acid



26 Perfluorononanoic acid

63 9CIFOS

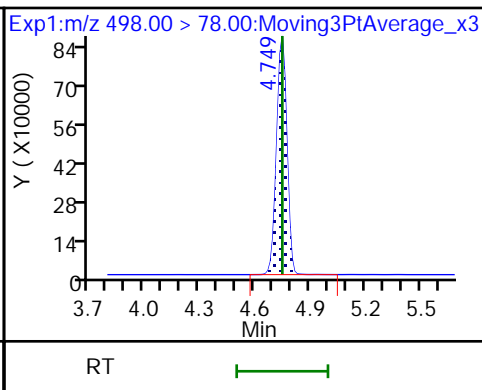
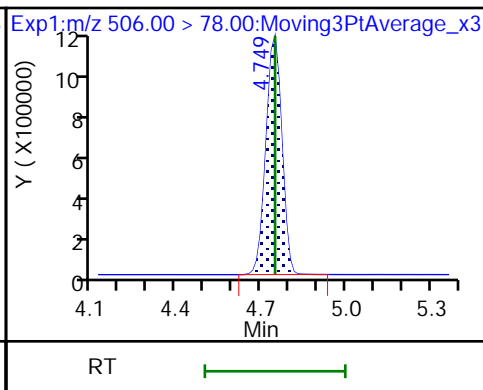
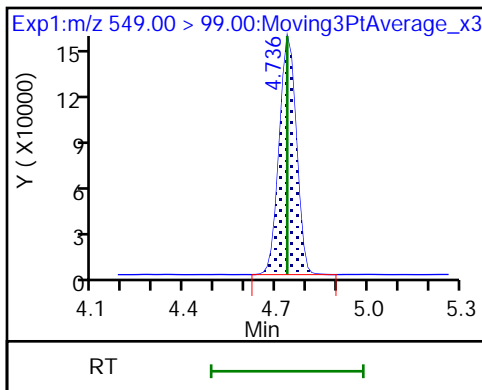
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

D 34 13C8 FOSA

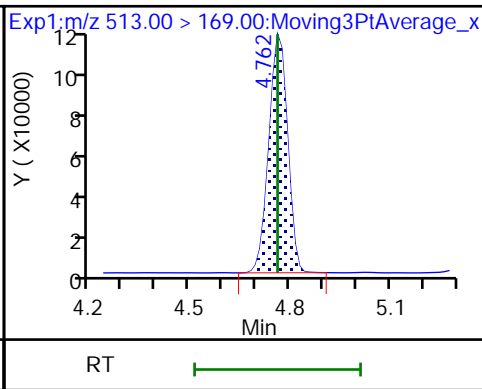
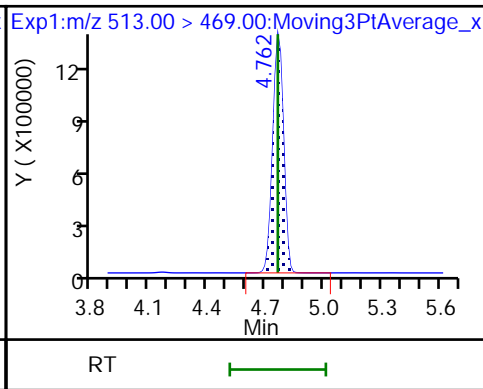
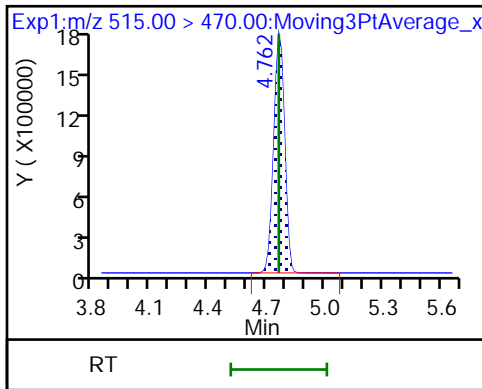
33 Perfluorooctanesulfonamide



D 32 13C2 PFDA

29 Perfluorodecanoic acid

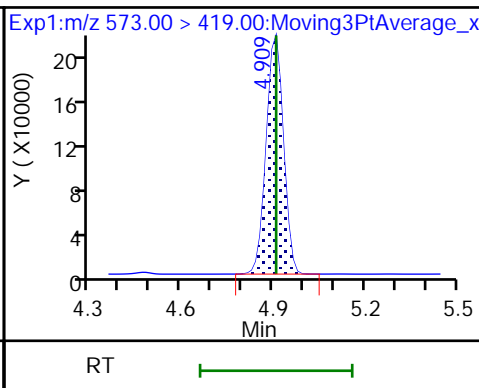
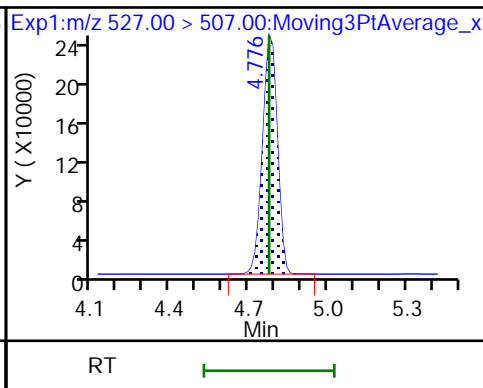
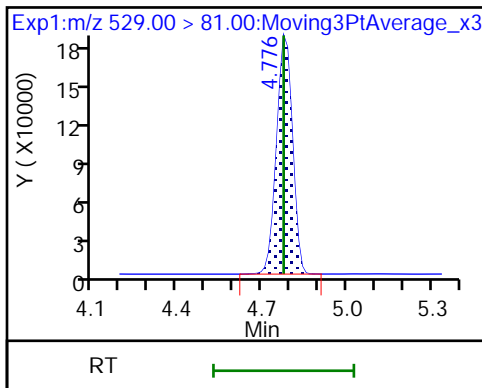
29 Perfluorodecanoic acid



D 30 M2-8:2 FTS

31 8:2 FTS

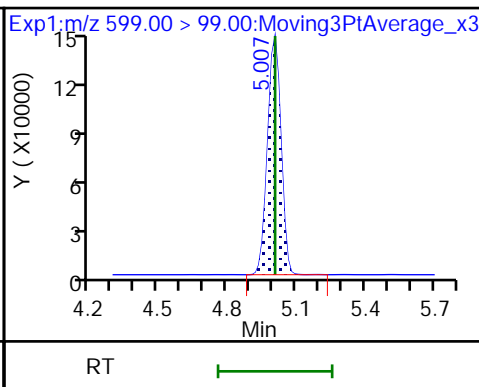
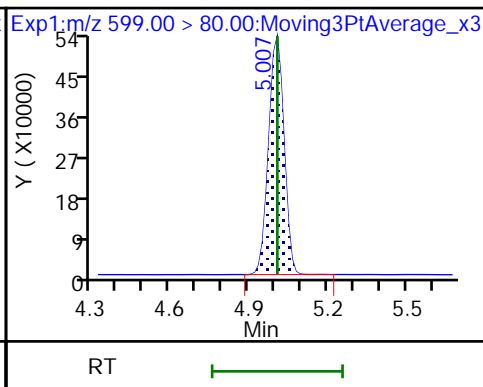
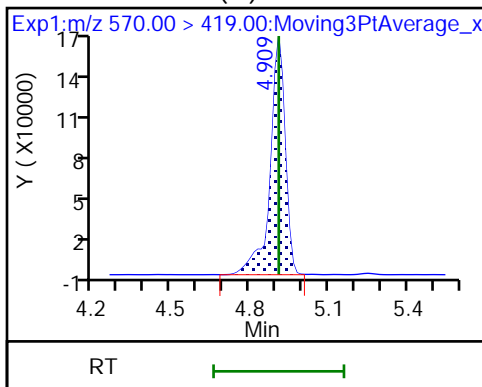
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

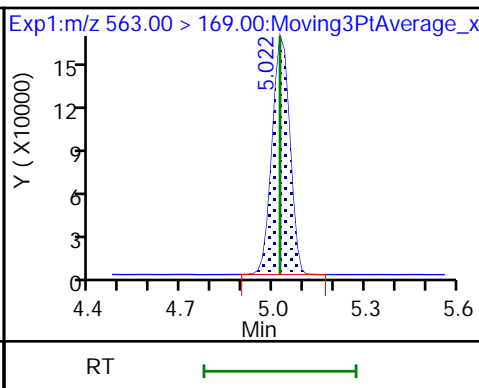
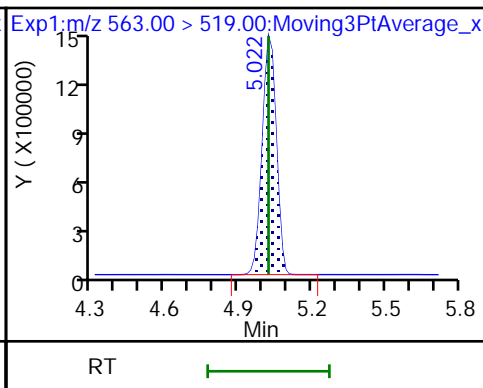
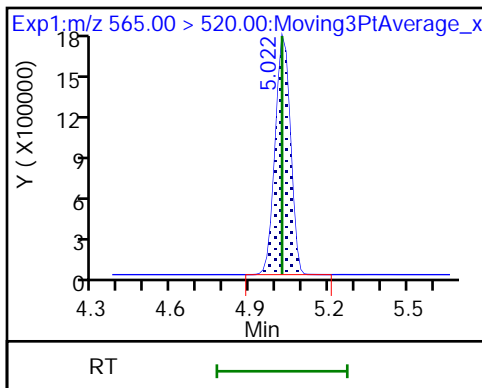
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

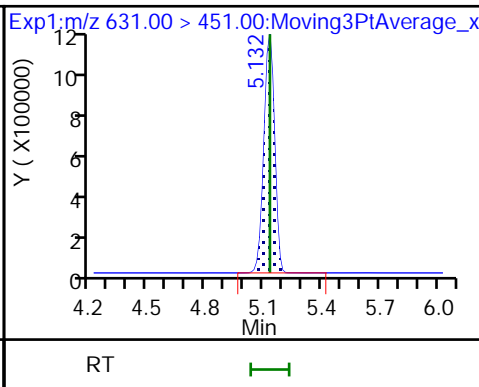
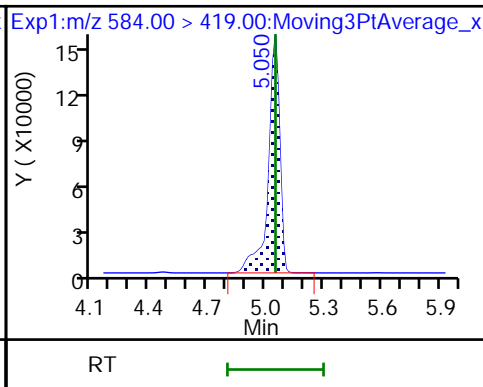
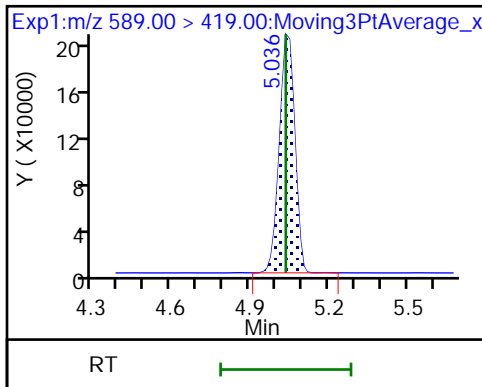
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA

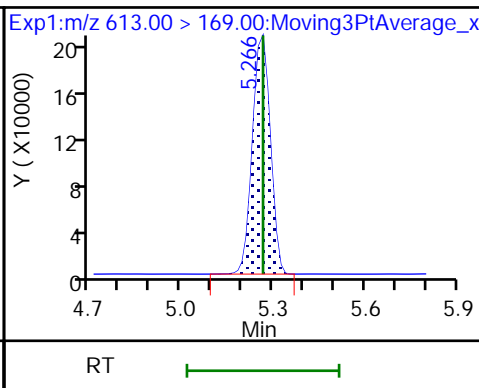
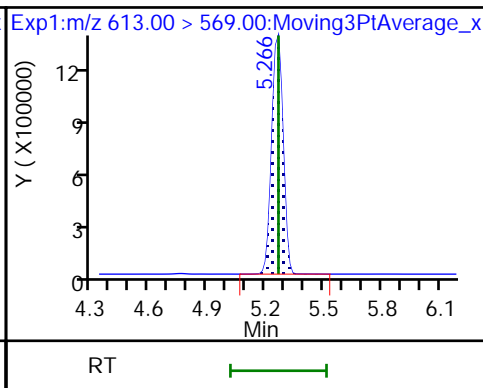
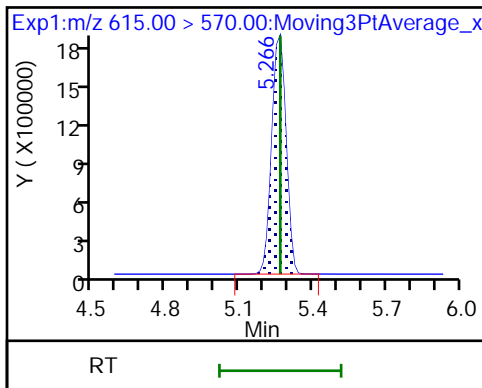
57 11C1FOS



D 43 13C2 PFDoA

42 Perfluorododecanoic acid

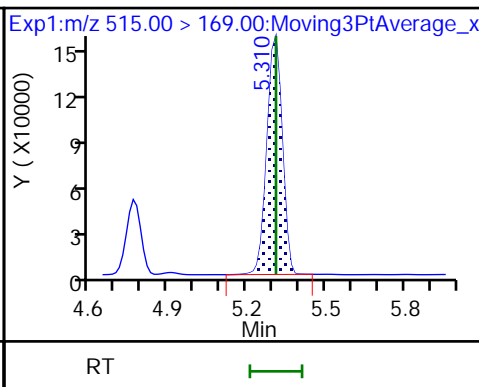
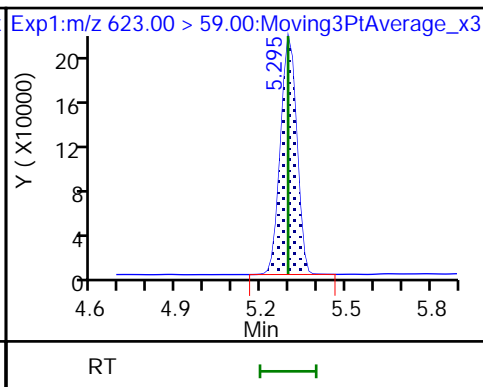
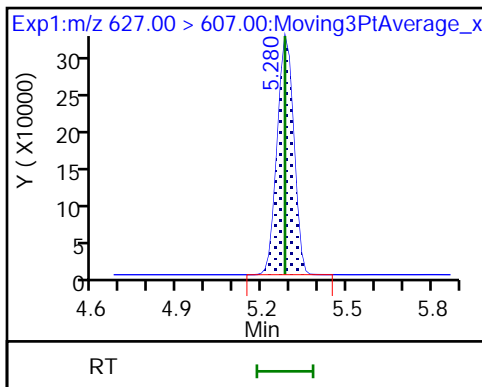
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

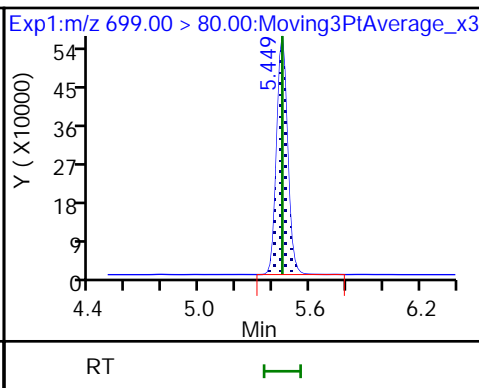
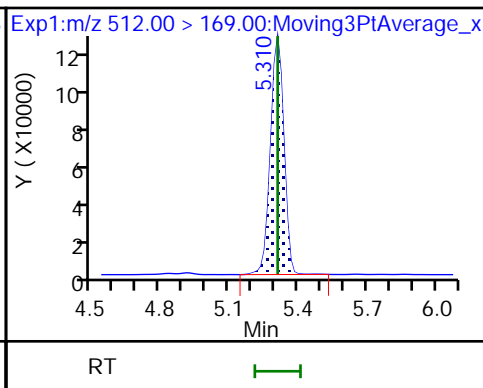
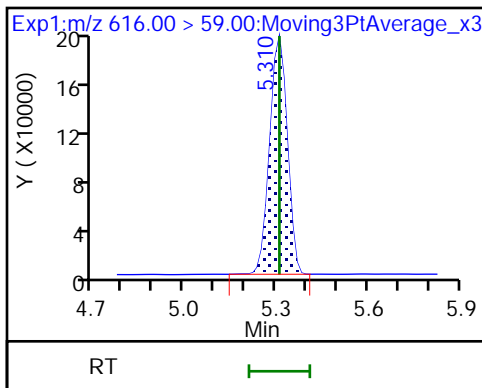
D 58 d-N-MeFOSEA-M



49 N-MeFOSE-M

61 NMeFOSEA

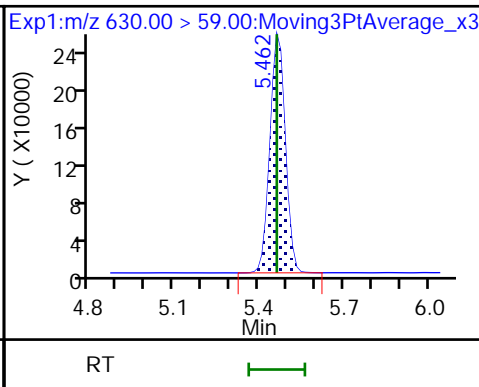
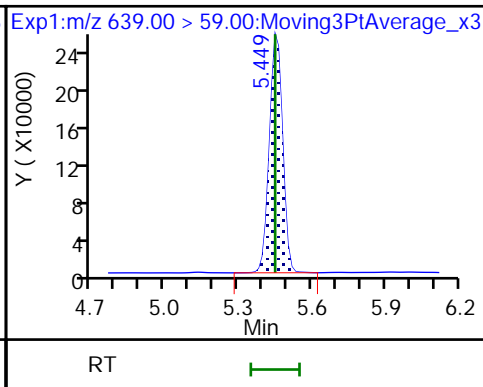
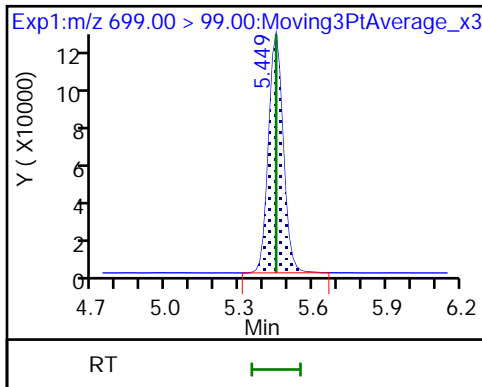
54 PFDoS

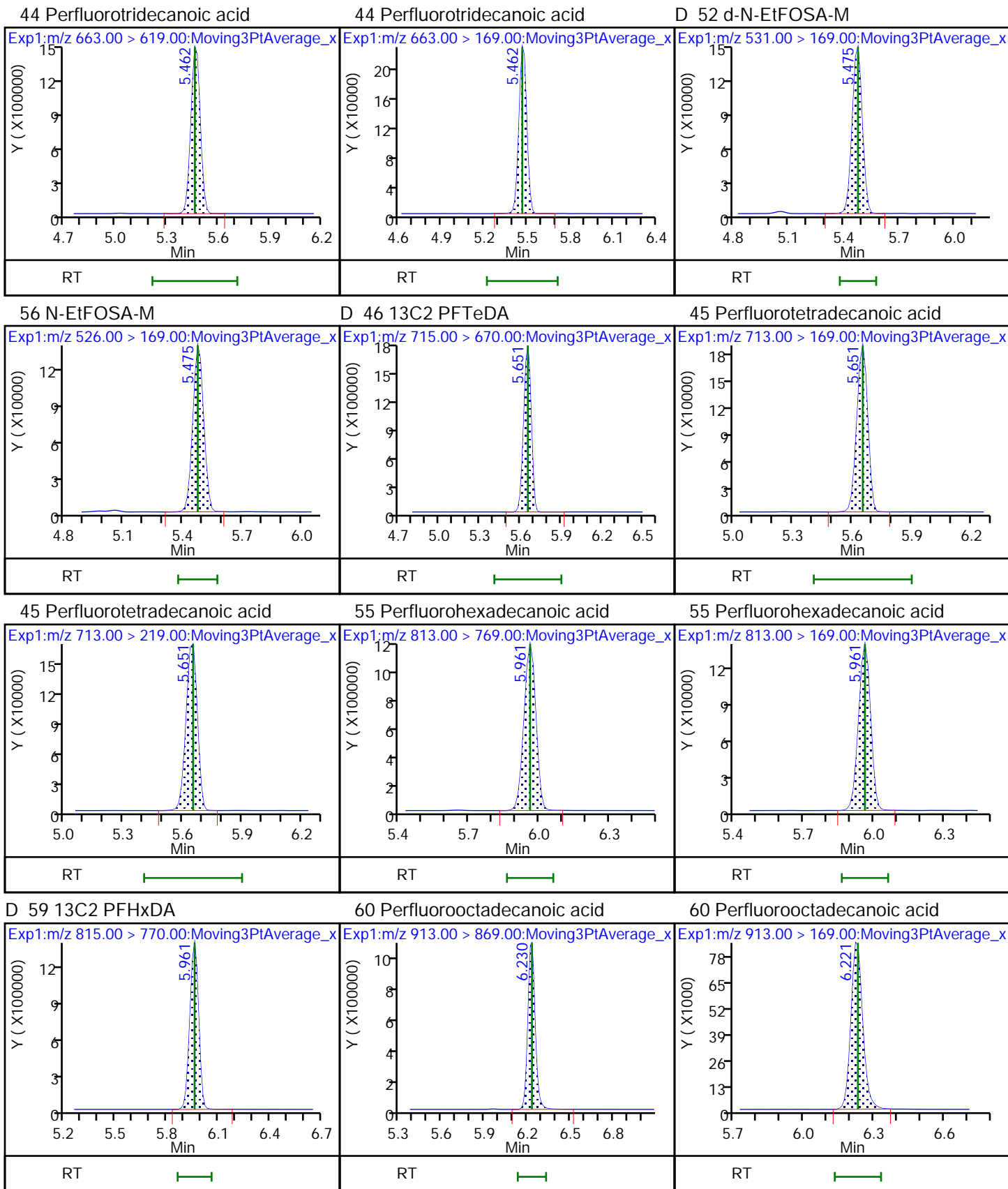


54 PFDoS

D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M





Eurofins TestAmerica, Knoxville

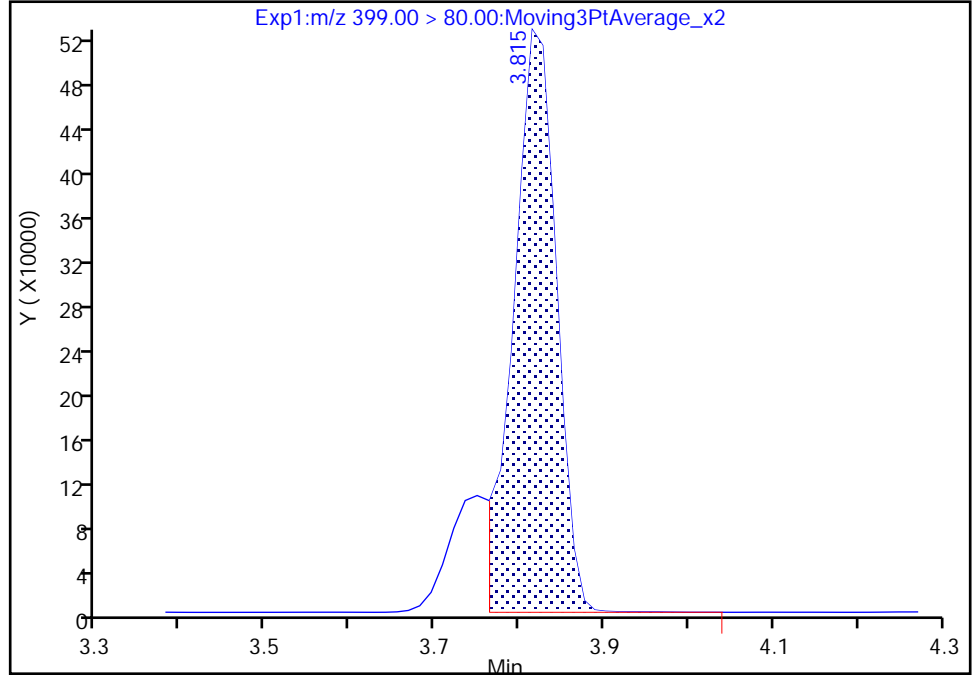
Data File: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b_007.d
Injection Date: 09-Oct-2021 15:21:11 Instrument ID: LCA
Lims ID: CCVIS
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

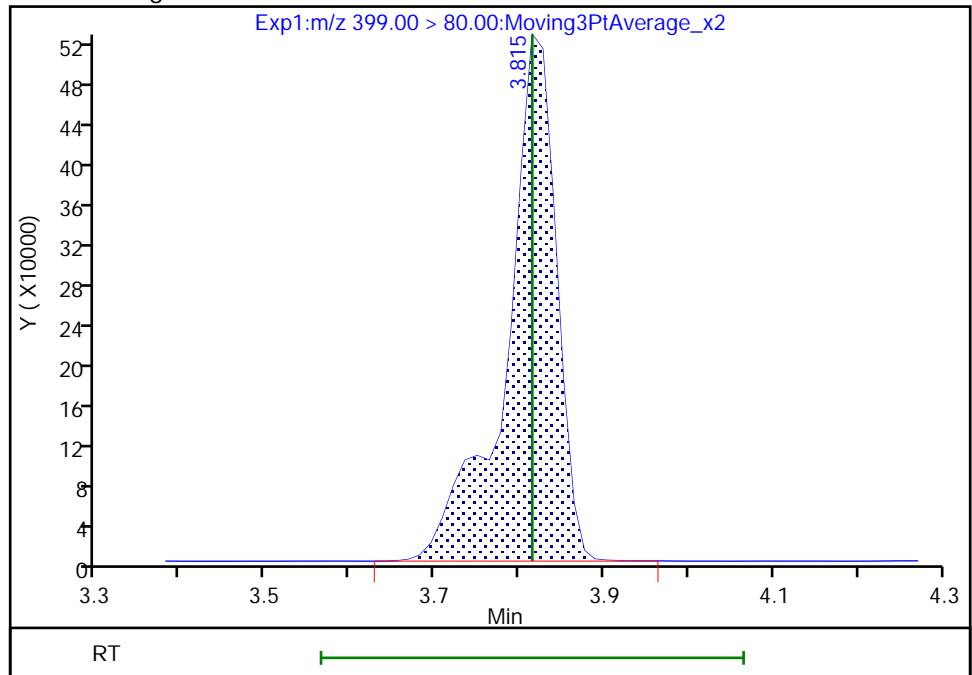
RT: 3.82
Area: 1843361
Amount: 0.765800
Amount Units: ng/ml

Processing Integration Results



RT: 3.82
Area: 2177754
Amount: 0.905643
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 15:47:06
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

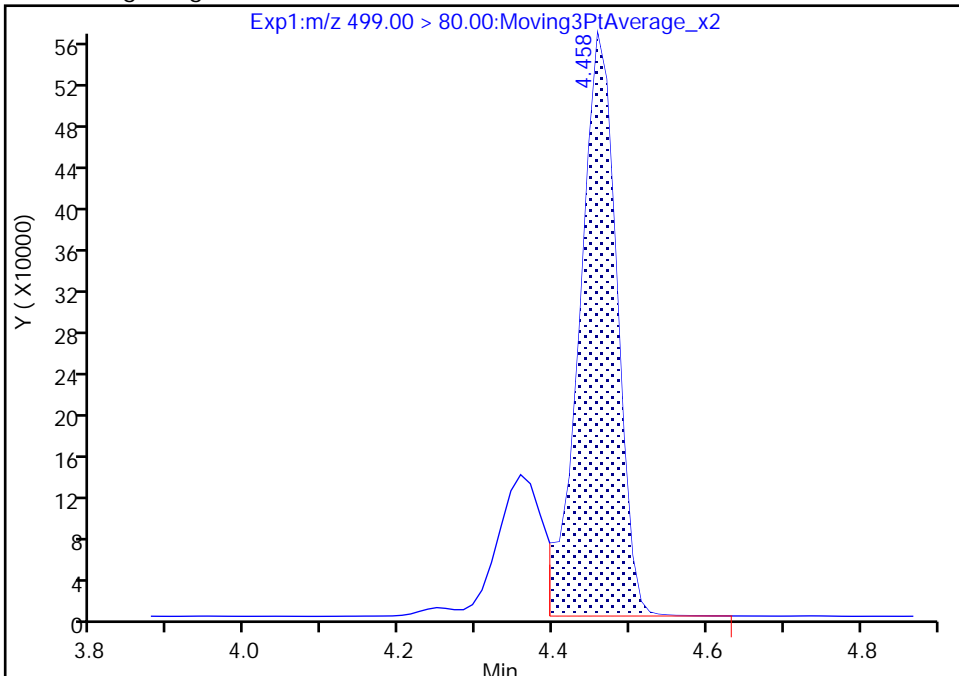
Data File: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b_007.d
Injection Date: 09-Oct-2021 15:21:11 Instrument ID: LCA
Lims ID: CCVIS
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

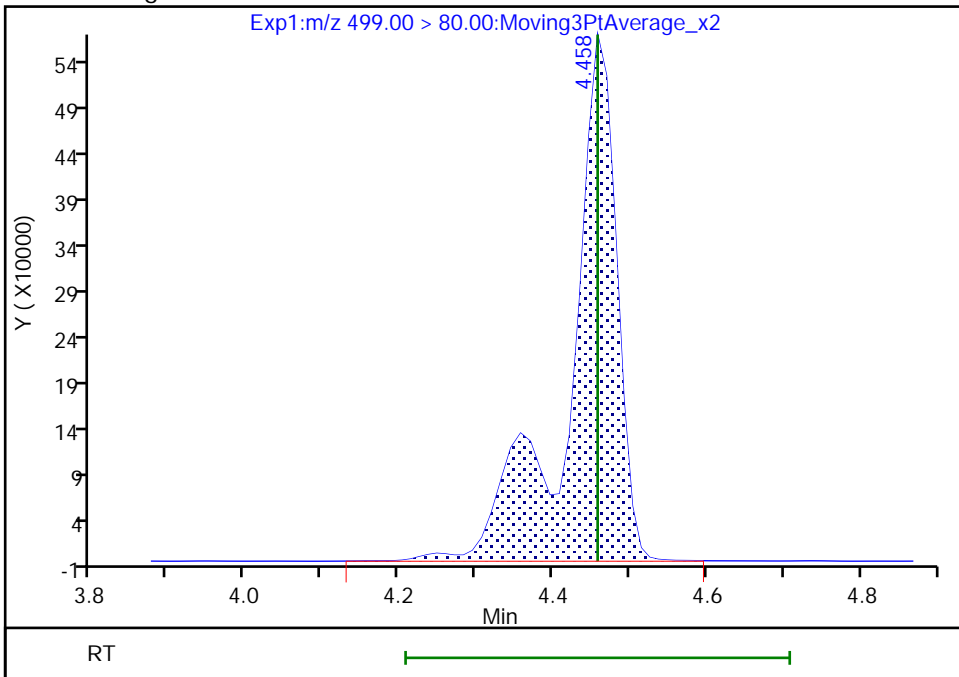
RT: 4.46
Area: 1897518
Amount: 0.717298
Amount Units: ng/ml

Processing Integration Results



RT: 4.46
Area: 2466512
Amount: 0.932389
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 15:47:18
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

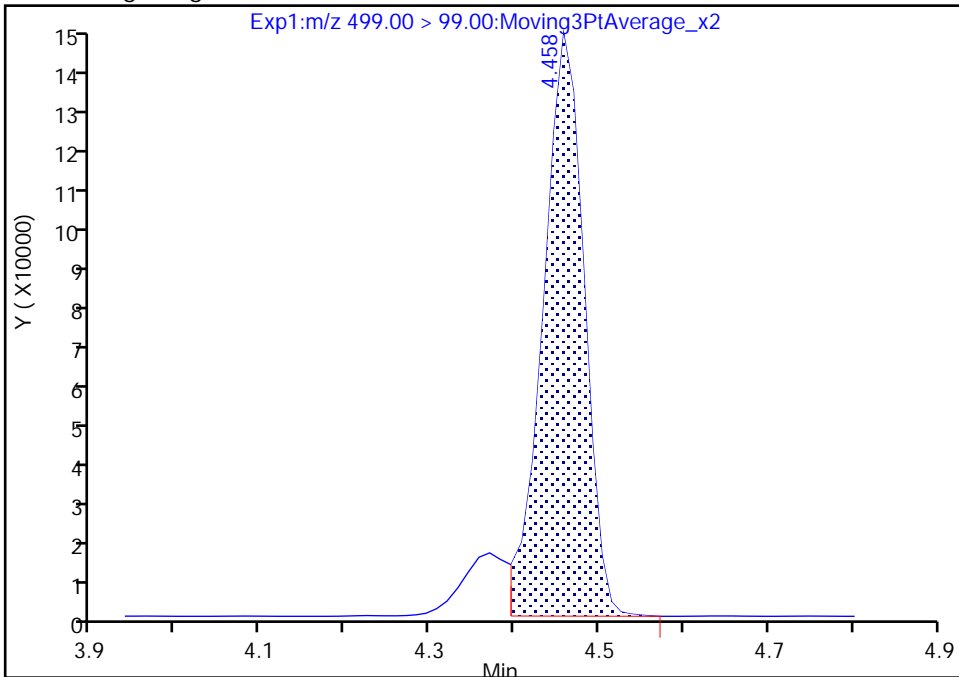
Data File: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b_007.d
Injection Date: 09-Oct-2021 15:21:11 Instrument ID: LCA
Lims ID: CCVIS
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

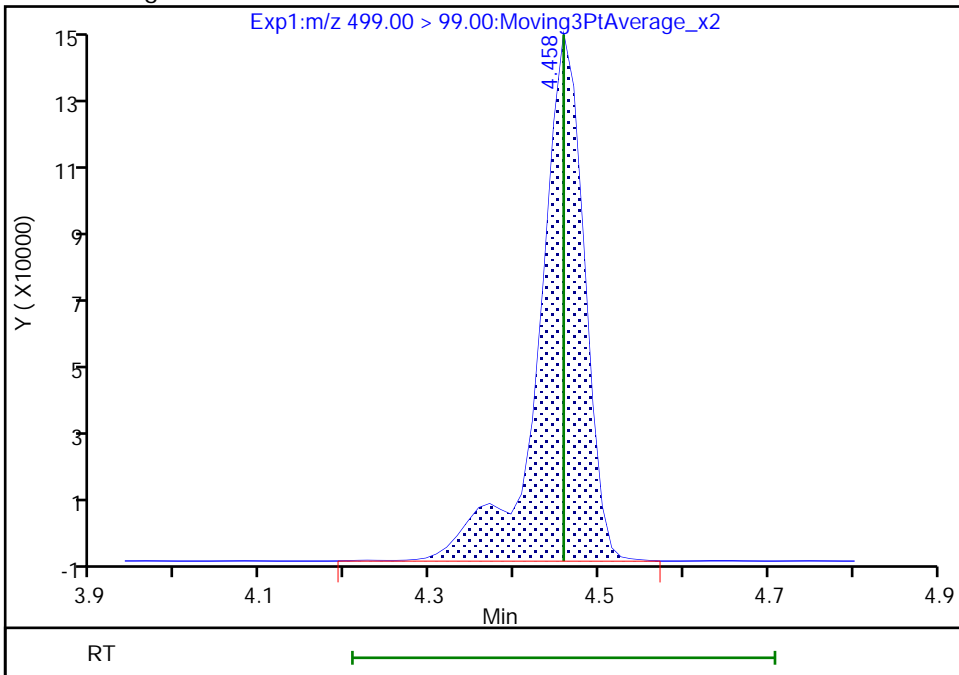
RT: 4.46
Area: 479979
Amount: 0.717298
Amount Units: ng/ml

Processing Integration Results



RT: 4.46
Area: 538041
Amount: 0.932389
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 15:47:23

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

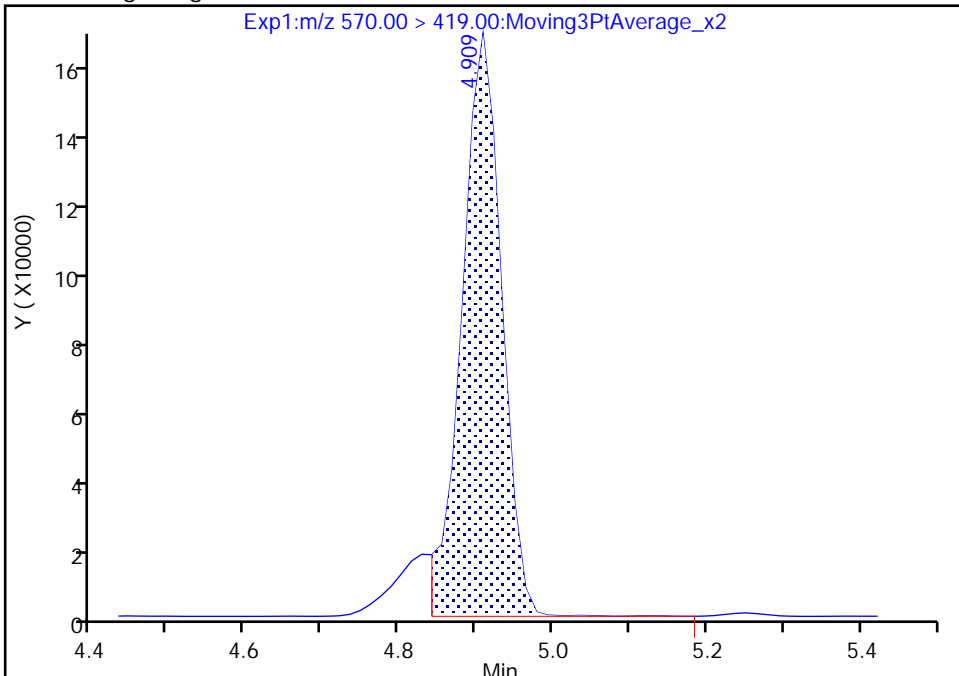
Data File: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b_007.d
Injection Date: 09-Oct-2021 15:21:11 Instrument ID: LCA
Lims ID: CCVIS
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

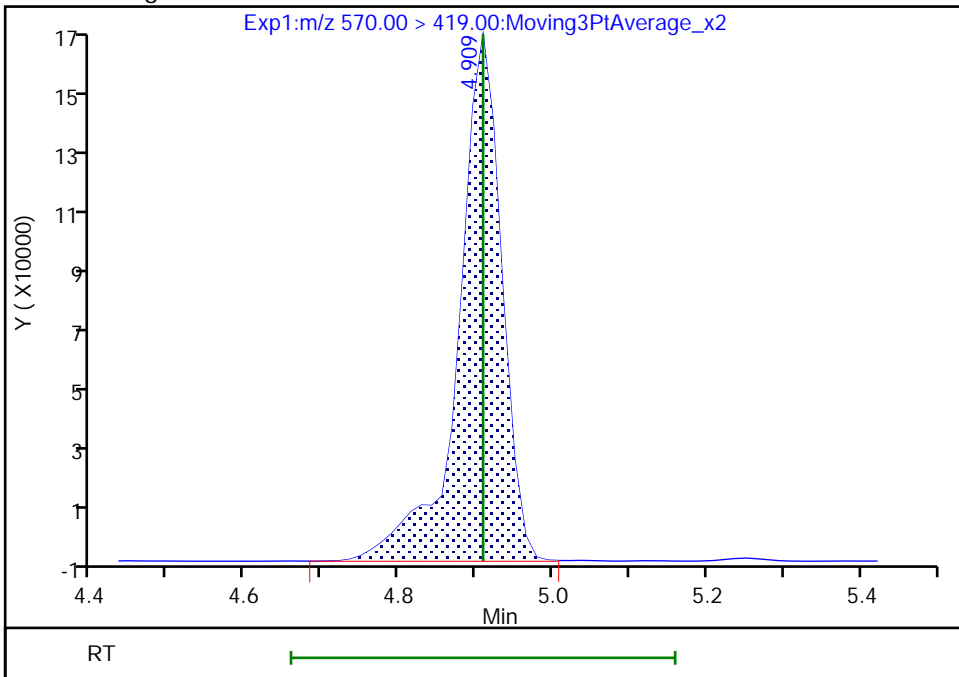
RT: 4.91
Area: 583806
Amount: 0.947210
Amount Units: ng/ml

Processing Integration Results



RT: 4.91
Area: 641876
Amount: 1.042167
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 15:47:32
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54661/19 Calibration Date: 10/09/2021 17:09
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _019.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7855	0.7344		2.34	2.50	-6.5	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.013	0.9383		2.32	2.50	-7.4	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.126	1.078		2.12	2.21	-4.2	40.0
4:2 FTS	AveID	2.500	2.091		1.95	2.34	-16.3	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8572	0.7455		2.17	2.50	-13.0	40.0
Perfluoropentanesulfonic acid (PFPeS)	L2ID		0.7986		2.19	2.35	-6.7	50.0
HFPO-DA	L2ID		1.289		2.34	2.50	-6.6	40.0
Perfluoroheptanoic acid (PFHpA)	L2ID		0.9874		2.34	2.50	-6.3	40.0
Perfluorohexanesulfonic acid (PFHxS)	L2ID		1.303		2.19	2.28	-3.8	40.0
DONA	AveID	3.243	3.109		2.26	2.36	-4.1	40.0
6:2 FTS	L2ID		1.939		2.29	2.37	-3.2	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9947	0.9343		2.24	2.38	-6.1	40.0
Perfluorooctanoic acid (PFOA)	L2ID		1.058		2.40	2.50	-4.1	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.100	1.023		2.16	2.32	-7.0	40.0
Perfluorononanoic acid (PFNA)	L2ID		0.7836		2.35	2.50	-5.8	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	2.308	2.177		2.20	2.33	-5.7	40.0
Perfluorononanesulfonic acid (PFNS)	AveID	1.042	0.9627		2.22	2.40	-7.6	40.0
Perfluorodecanoic acid (PFDA)	L2ID		0.9253		2.45	2.50	-2.0	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9606	0.9040		2.35	2.50	-5.9	40.0
8:2 FTS	AveID	1.784	1.708		2.29	2.40	-4.2	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	L2ID		0.8332		2.27	2.50	-9.0	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.9574	0.9221		2.32	2.41	-3.7	40.0
Perfluoroundecanoic acid (PFUnA)	L2ID		1.013		2.51	2.50	0.4	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.9494	0.8846		2.33	2.50	-6.8	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.858	1.802		2.28	2.36	-3.0	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9867		2.43	2.50	-2.9	40.0
10:2 FTS	AveID	2.221	2.312		2.51	2.41	4.1	40.0
2- (N-methylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.139		2.47	2.50	-1.2	40.0
NMeFOSA	AveID	1.047	0.9592		2.29	2.50	-8.4	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9879	0.9677		2.37	2.42	-2.0	40.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54661/19 Calibration Date: 10/09/2021 17:09
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _019.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.209		2.40	2.50	-4.0	40.0
Perfluorotridecanoic acid (PFTriA)	L2ID		0.8114		2.30	2.50	-7.9	50.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.168	1.117		2.39	2.50	-4.4	40.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.1225		2.44	2.50	-2.5	40.0
Perfluorohexadecanoic acid	Q2ID		1.013		2.38	2.50	-5.0	40.0
Perfluorooctadecanoic acid	AveID	0.9076	0.8871		2.44	2.50	-2.3	40.0
13C4 PFBA	Ave	1.324	1.305		1.23	1.25	-1.4	50.0
13C5 PFPeA	Ave	1.087	1.110		1.28	1.25	2.1	50.0
13C3 PFBS	Ave	0.7019	0.7059		1.17	1.16	0.6	50.0
M2-4:2 FTS	Ave	0.1052	0.1257		1.40	1.17	19.5	50.0
13C2 PFHxA	Ave	1.116	1.143		1.28	1.25	2.3	50.0
13C3 HFPO-DA	Ave	0.5714	0.5883		1.29	1.25	3.0	50.0
18O2 PFHxS	Ave	0.4248	0.4354		1.21	1.18	2.5	50.0
13C4 PFHpA	Ave	1.113	1.143		1.28	1.25	2.6	50.0
13C4 PFOA	Ave	1.007	0.996		1.24	1.25	-1.0	50.0
M2-6:2 FTS	Ave	0.1078	0.1105		1.22	1.19	2.5	50.0
13C4 PFOS	Ave	0.5852	0.5690		1.16	1.20	-2.8	50.0
13C5 PFNA	Ave	1.279	1.322		1.29	1.25	3.3	50.0
13C2 PFDA	Ave	1.296	1.280		1.24	1.25	-1.2	50.0
13C8 FOSA	Ave	0.8591	0.8153		1.19	1.25	-5.1	50.0
M2-8:2 FTS	Ave	0.1316	0.1337		1.22	1.20	1.6	50.0
d3-NMeFOSAA	Ave	0.1774	0.1666		1.17	1.25	-6.1	50.0
13C2 PFUnA	Ave	1.237	1.185		1.20	1.25	-4.2	50.0
d5-NEtFOSAA	Ave	0.1705	0.1546		1.13	1.25	-9.3	50.0
13C2 PFDoA	Ave	1.319	1.396		1.32	1.25	5.8	50.0
d7-N-MeFOSE-M	Ave	0.1075	0.1542		1.79	1.25	43.4	50.0
d-N-MeFOSA-M	Ave	0.1120	0.1214		1.36	1.25	8.4	50.0
d9-N-EtFOSE-M	Ave	0.1146	0.1645		1.79	1.25	43.5	50.0
d-N-EtFOSA-M	Ave	0.0942	0.1034		1.37	1.25	9.7	50.0
13C2 PFTeDA	Ave	1.211	1.229		1.27	1.25	1.5	50.0
13C2 PFHxDA	Ave	0.8782	0.8996		1.28	1.25	2.4	50.0
13C8 PFOA	Ave	0.9886	1.013		1.28	1.25	2.5	50.0
13C8 PFOS	Ave	0.1256	0.1248		1.19	1.20	-0.6	50.0

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b_019.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 09-Oct-2021 17:09:10 ALS Bottle#: 19 Worklist Smp#: 19
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0021009-019 ccv
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15
 Method: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 10-Oct-2021 08:27:43 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1620

First Level Reviewer: cochranj Date: 09-Oct-2021 18:00:57

Ratio Calibration: None

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	2.801	2.823	-0.022	0.678	6708889	1.23	98.6	14980	
2 Perfluorobutanoic acid	212.90 > 169.00	2.801	2.823	-0.022	1.000	9853893	2.34	93.5	1607	
D 3 13C5 PFPeA	267.90 > 223.00	3.116	3.129	-0.013	0.754	5704515	1.28	102	17657	
4 Perfluoropentanoic acid	262.90 > 219.00	3.116	3.143	-0.027	1.000	10705242	2.32	92.6	3031	
D 6 13C3 PFBS	301.90 > 80.00	3.129	3.143	-0.014	0.758	3374317	1.17	101	18671	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.129	3.157	-0.028	1.000	6917724	2.12	Target=3.06	95.8	17664
	298.90 > 99.00	3.129	3.157	-0.028	1.000	2577411		2.68(1.53-4.59)		7057
D 8 M2-4:2 FTS	329.00 > 81.00	3.409	3.437	-0.028	0.825	603588	1.39	119	1177	
7 4:2 FTS	327.00 > 307.00	3.409	3.437	-0.028	1.000	2524602	1.95	83.7	17527	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.453	3.469	-0.016	1.103	5436030	2.19	Target=3.47	93.3	15876
	349.00 > 99.00	3.453	3.469	-0.016	1.103	1616156		3.36(1.73-5.20)		9596
D 9 13C2 PFHxA	315.00 > 270.00	3.453	3.469	-0.016	0.836	5872817	1.28	102	14854	
10 Perfluorohexanoic acid	313.00 > 269.00	3.453	3.469	-0.016	1.000	8756941	2.17	Target=9.74	87.0	3432
	313.00 > 119.00	3.453	3.469	-0.016	1.000	741943		11.80(4.87-14.61)		2050
D 12 13C3 HFPO-DA	287.00 > 169.00	3.548	3.575	-0.027	0.859	3024202	1.29	103	5166	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.548	3.575	-0.027	1.000	7793395	2.33		93.4	5984	
D 17 18O2 PFHxS										
403.00 > 84.00	3.790	3.815	-0.025	0.918	2117195	1.21		103	12480	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.803	3.815	-0.012	1.003	5308663	2.19	Target=2.96	96.2	6621	M
399.00 > 99.00	3.790	3.815	-0.025	1.000	1534010		3.46(1.48-4.44)		8563	
D 14 13C4 PFHpA										
367.00 > 322.00	3.803	3.827	-0.024	0.921	5873023	1.28		103	18203	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.803	3.827	-0.024	1.000	11597979	2.34	Target=3.35	93.7	6409	
363.00 > 169.00	3.803	3.827	-0.024	1.000	3506567		3.31(1.67-5.02)		9551	
68 DONA										
377.00 > 251.00	3.827	3.852	-0.025	0.863	17134881	2.26	Target=1.49	95.9	27424	
377.00 > 85.00	3.827	3.852	-0.025	0.863	9265362		1.85(0.74-2.23)		6113	
19 6:2 FTS										
427.00 > 407.00	4.131	4.155	-0.024	1.000	2088033	2.29		96.8	7152	
D 21 13C4 PFOA										
417.00 > 372.00	4.131	4.155	-0.024	1.000	5121181	1.24		99.0	13989	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.131	4.155	-0.024	0.932	5203515	2.24	Target=3.73	93.9	7183	
449.00 > 99.00	4.131	4.155	-0.024	0.932	1371388		3.79(1.87-5.61)		3232	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.131	4.155	-0.024	1.000	5206830	1.28		102	17393	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.131	4.155	-0.024	1.000	539683	1.22		103	2066	
* 22 13C2 PFOA										
415.00 > 370.00	4.131	4.155	-0.024		5140273	1.25			15955	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.131	4.155	-0.024	1.000	10834396	2.40	Target=2.40	95.9	5729	
413.00 > 169.00	4.131	4.155	-0.024	1.000	4187858		2.59(1.20-3.61)		5596	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.421	4.458	-0.037	1.070	613354	1.19		99.4	4239	
D 25 13C4 PFOS										
503.00 > 80.00	4.434	4.458	-0.024	1.074	2796361	1.16		97.2	3060	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.434	4.458	-0.024	1.000	5551450	2.16	Target=3.83	93.0	7802	M
499.00 > 99.00	4.434	4.458	-0.024	1.000	1256690		4.42(1.91-5.74)		5460	M
D 27 13C5 PFNA										
468.00 > 423.00	4.446	4.481	-0.035	1.076	6796217	1.29		103	24286	
26 Perfluorononanoic acid										
463.00 > 419.00	4.446	4.481	-0.035	1.000	10650981	2.35	Target=3.68	94.2	8009	
463.00 > 169.00	4.446	4.481	-0.035	1.000	2377289		4.48(1.84-5.52)		3307	
63 9CIFOS										
531.00 > 351.00	4.584	4.608	-0.024	1.110	11871277	2.20		94.3	23622	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.709	4.736	-0.027	1.062	5406618	2.22	Target=3.97	92.4	6638	
549.00 > 99.00	4.709	4.736	-0.027	1.062	1357560		3.98(1.99-5.96)		5954	
D 34 13C8 FOSA										
506.00 > 78.00	4.735	4.749	-0.014	1.146	4190710	1.19		94.9	4748	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.735	4.749	-0.014	1.000	7577211	2.35		94.1	5909	
D 32 13C2 PFDA										
515.00 > 470.00	4.735	4.762	-0.027	1.146	6579651	1.24		98.8	21054	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.735	4.762	-0.027	1.000	12176203	2.45	Target=10.11	98.0	5470	
513.00 > 169.00	4.735	4.762	-0.027	1.000	1047426		11.62(5.06-15.17)		503	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.776	-0.027	1.150	658633	1.22		102	2563	
31 8:2 FTS										
527.00 > 507.00	4.749	4.776	-0.027	1.000	2249879	2.29		95.8	10321	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.882	4.909	-0.027	1.182	856543	1.17		93.9	852	
36 NMeFOSAA										
570.00 > 419.00	4.882	4.909	-0.027	1.000	1427328	2.27		91.0	1784	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.979	5.007	-0.028	1.123	5200057	2.32	Target=3.80	96.3	8246	
599.00 > 99.00	4.979	5.007	-0.028	1.123	1376212		3.78(1.90-5.70)		6833	
D 39 13C2 PFUnA										
565.00 > 520.00	5.007	5.022	-0.015	1.212	6090314	1.20		95.8	14369	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.007	5.022	-0.015	1.000	12334351	2.51	Target=7.45	100	12794	
563.00 > 169.00	5.007	5.022	-0.015	1.000	1349671		9.14(3.78-11.33)		5844	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.022	5.036	-0.014	1.216	794526	1.13		90.7	2498	
40 NEtFOSA										
584.00 > 419.00	5.022	5.050	-0.028	1.000	1405603	2.33		93.2	1370	
57 11CIFOS										
631.00 > 451.00	5.106	5.132	-0.026	1.151	9930115	2.28		97.0	22892	
D 43 13C2 PFDaA										
615.00 > 570.00	5.236	5.266	-0.030	1.268	7175247	1.32		106	22920	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.236	5.266	-0.030	1.000	14159763	2.43	Target=5.33	97.1	8905	
613.00 > 169.00	5.236	5.266	-0.030	1.000	1972612		7.18(2.66-7.99)		4962	
50 10:2 FTS										
627.00 > 607.00	5.266	5.280	-0.014	1.109	3064953	2.51		104	11654	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.280	5.295	-0.015	1.278	792488	1.79		143	475	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.310	-0.015	1.282	624046	1.36		108	50.8	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.310	-0.015	1.003	1805188	2.47		98.8	1854	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA										
512.00 > 169.00	5.295	5.310	-0.015	1.000	1197185	2.29		91.6	898	
54 PFDoS										
699.00 > 80.00	5.423	5.449	-0.026	1.223	5480127	2.37	Target=4.32	98.0	5526	
699.00 > 99.00	5.423	5.449	-0.026	1.223	1262045		4.34(2.19-6.58)		10809	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.449	5.449	0.0	1.319	845335	1.79		143	500	
62 N-EtFOSE-M										
630.00 > 59.00	5.449	5.462	-0.013	1.000	2044441	2.40		96.0	3316	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.449	5.462	-0.013	1.041	11643491	2.30	Target=5.66	92.1	7167	
663.00 > 169.00	5.449	5.462	-0.013	1.041	1931459		6.03(2.83-8.48)		5655	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.475	-0.013	1.322	531444	1.37		110	680	
56 N-EtFOSA-M										
526.00 > 169.00	5.462	5.475	-0.013	1.000	1187557	2.39		95.6	904	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.623	5.651	-0.028	1.361	6318341	1.27		102	18405	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.623	5.651	-0.028	1.000	1547668	2.44	Target=1.07	97.5	6391	
713.00 > 219.00	5.623	5.651	-0.028	1.000	1532194		1.01(0.53-1.60)		10787	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.935	5.961	-0.026	1.000	9371223	2.37	Target=7.50	95.0	6036	
813.00 > 169.00	5.935	5.961	-0.026	1.000	1140512		8.22(3.75-11.26)		3761	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.935	5.961	-0.026	1.437	4624387	1.28		102	9234	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.201	6.230	-0.029	1.045	8204570	2.44	Target=9.98	97.7	5416	
913.00 > 169.00	6.201	6.230	-0.029	1.045	708867		11.57(5.14-15.41)		2757	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L5PFC2_00002

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b_019.d

Injection Date: 09-Oct-2021 17:09:10

Instrument ID: LCA

Lims ID: CCV

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 19

Worklist Smp#: 19

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

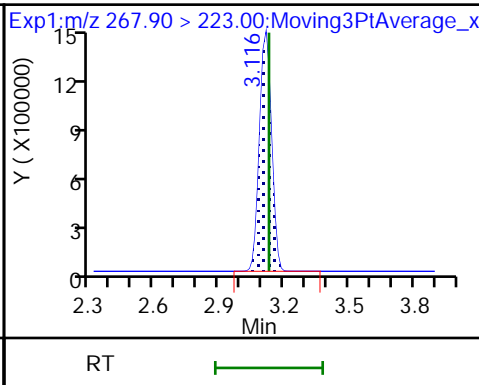
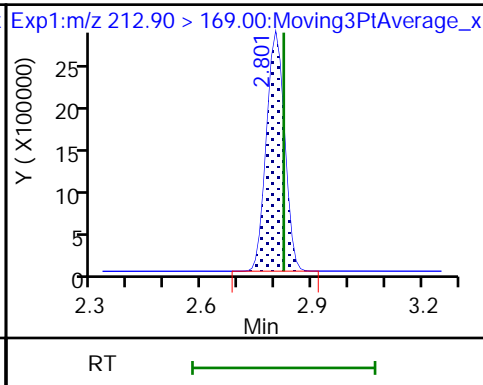
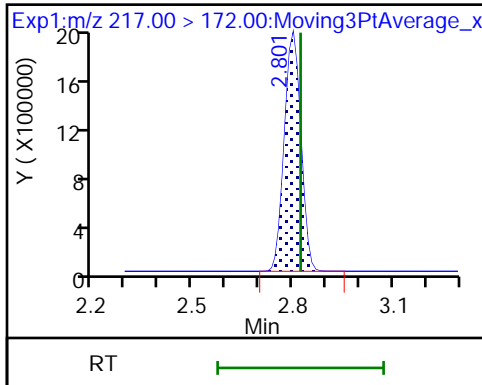
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

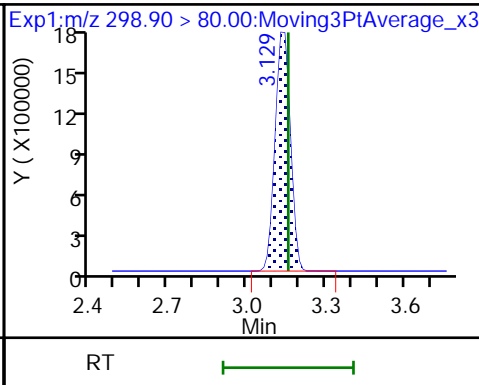
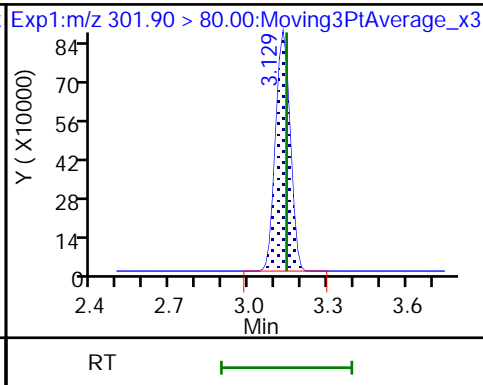
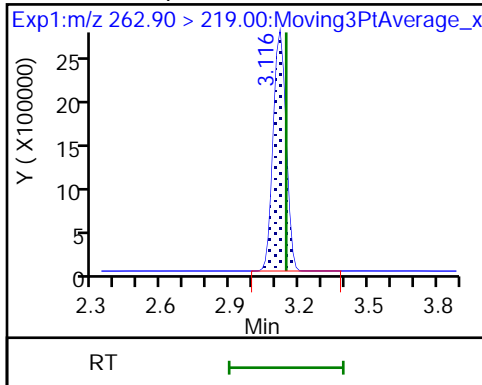
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

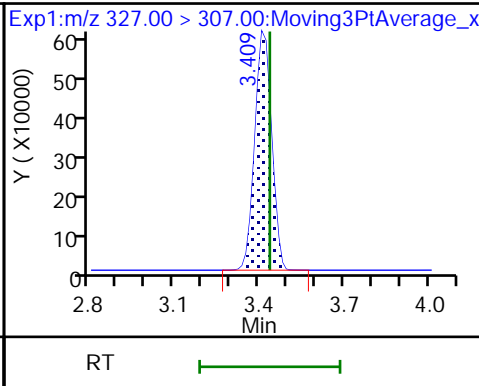
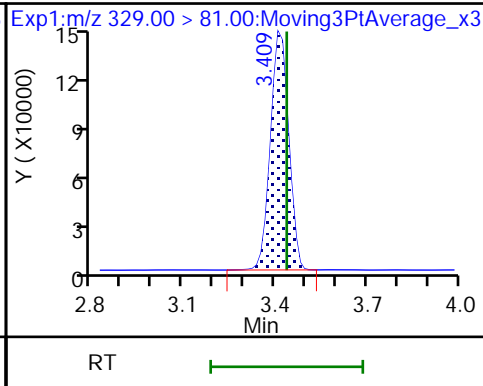
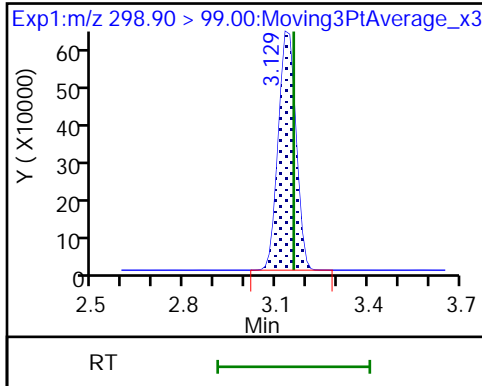
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

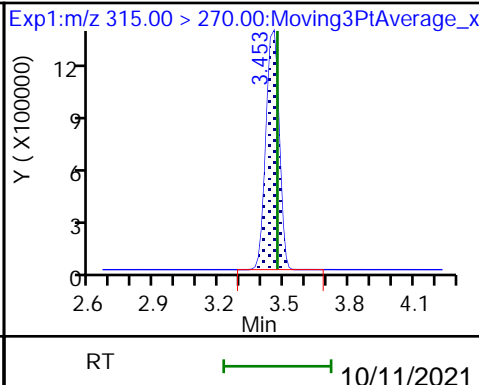
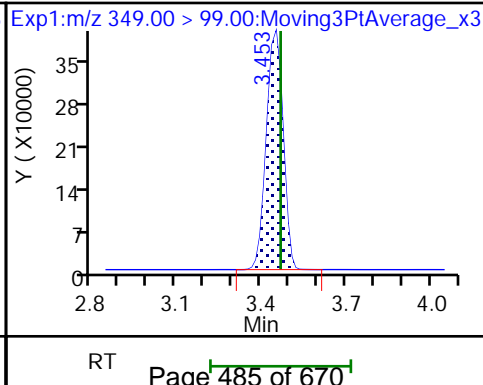
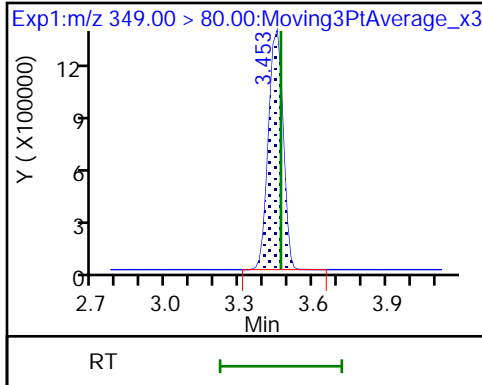
7 4:2 FTS

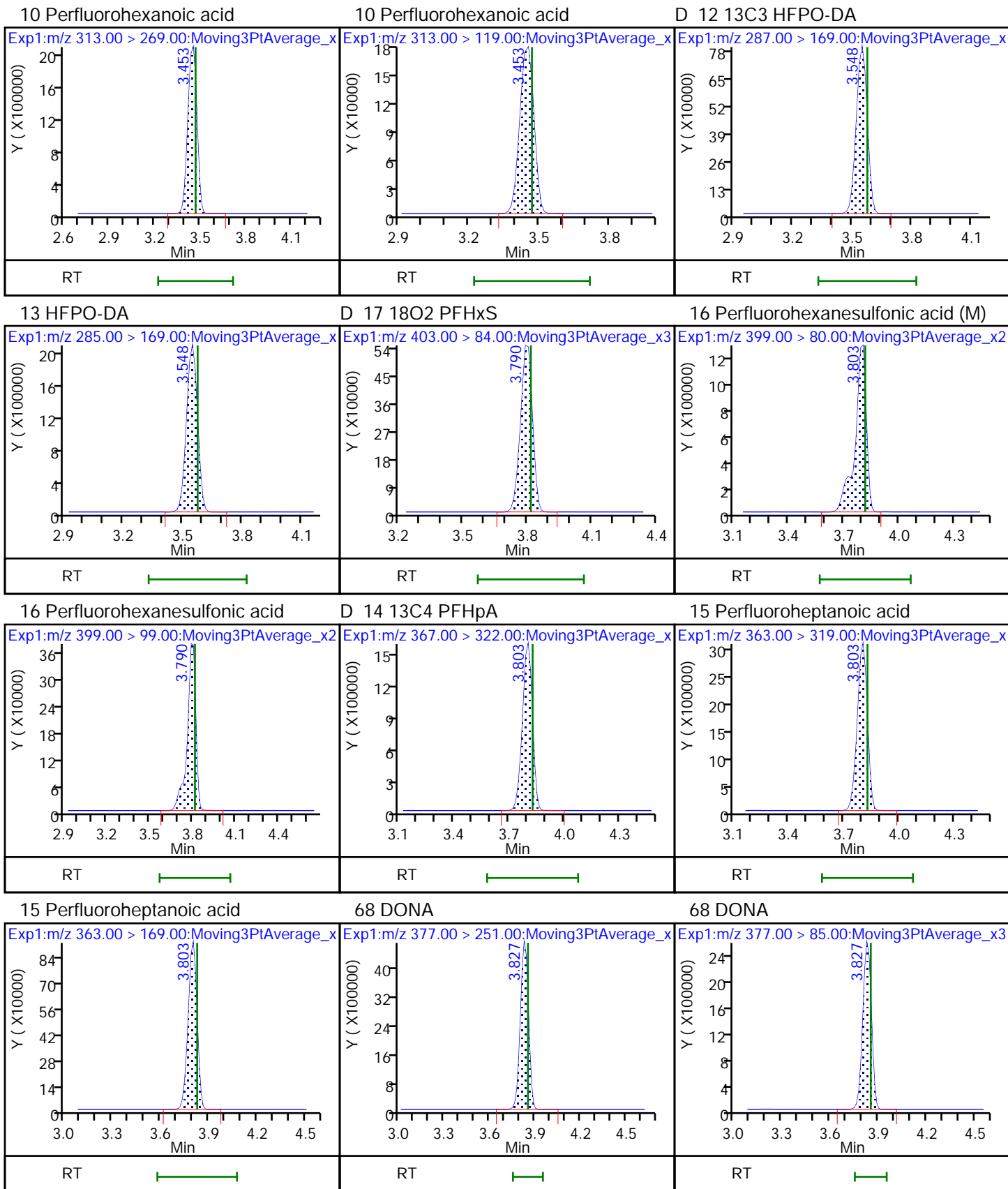


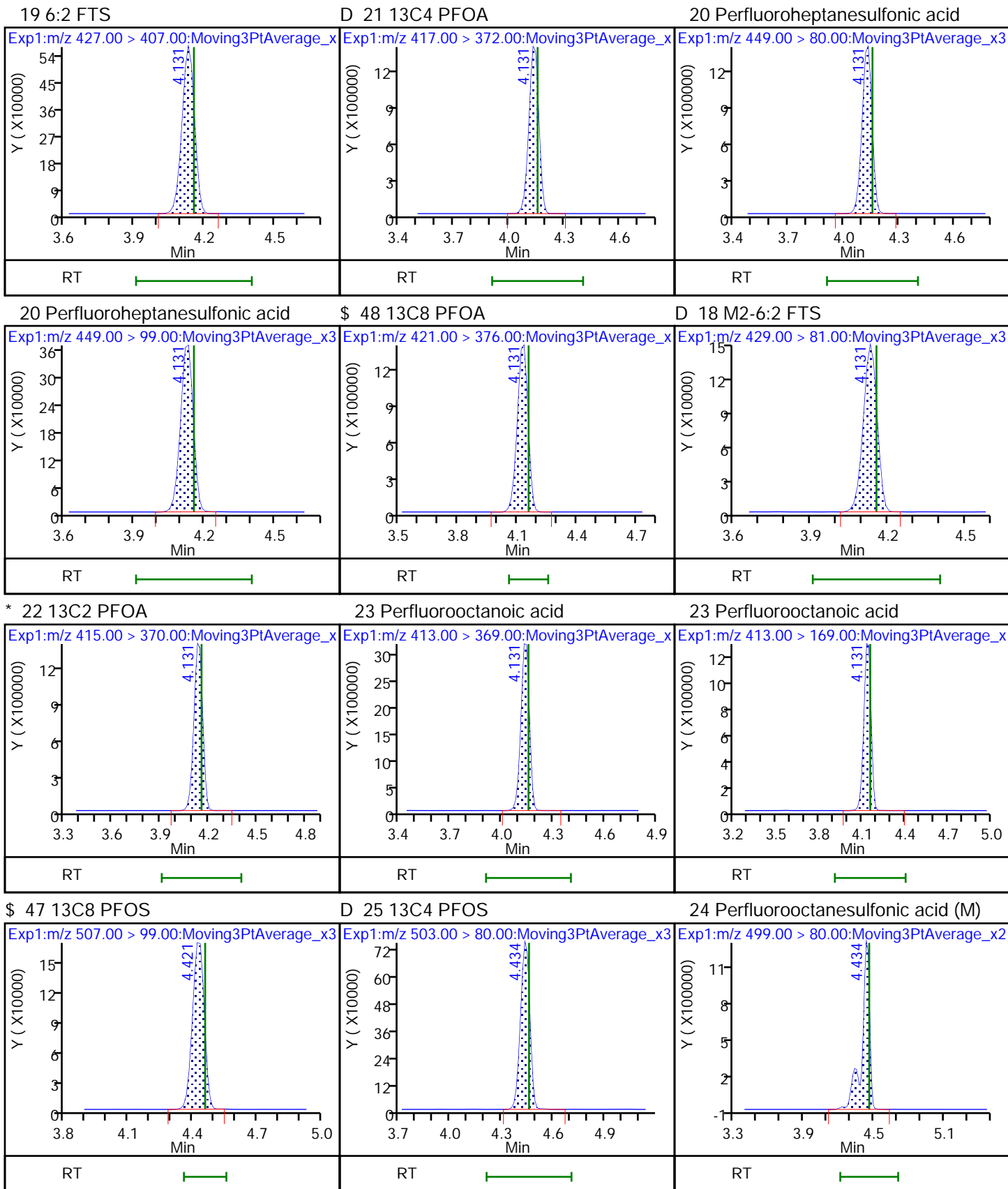
11 Perfluoropentanesulfonic acid

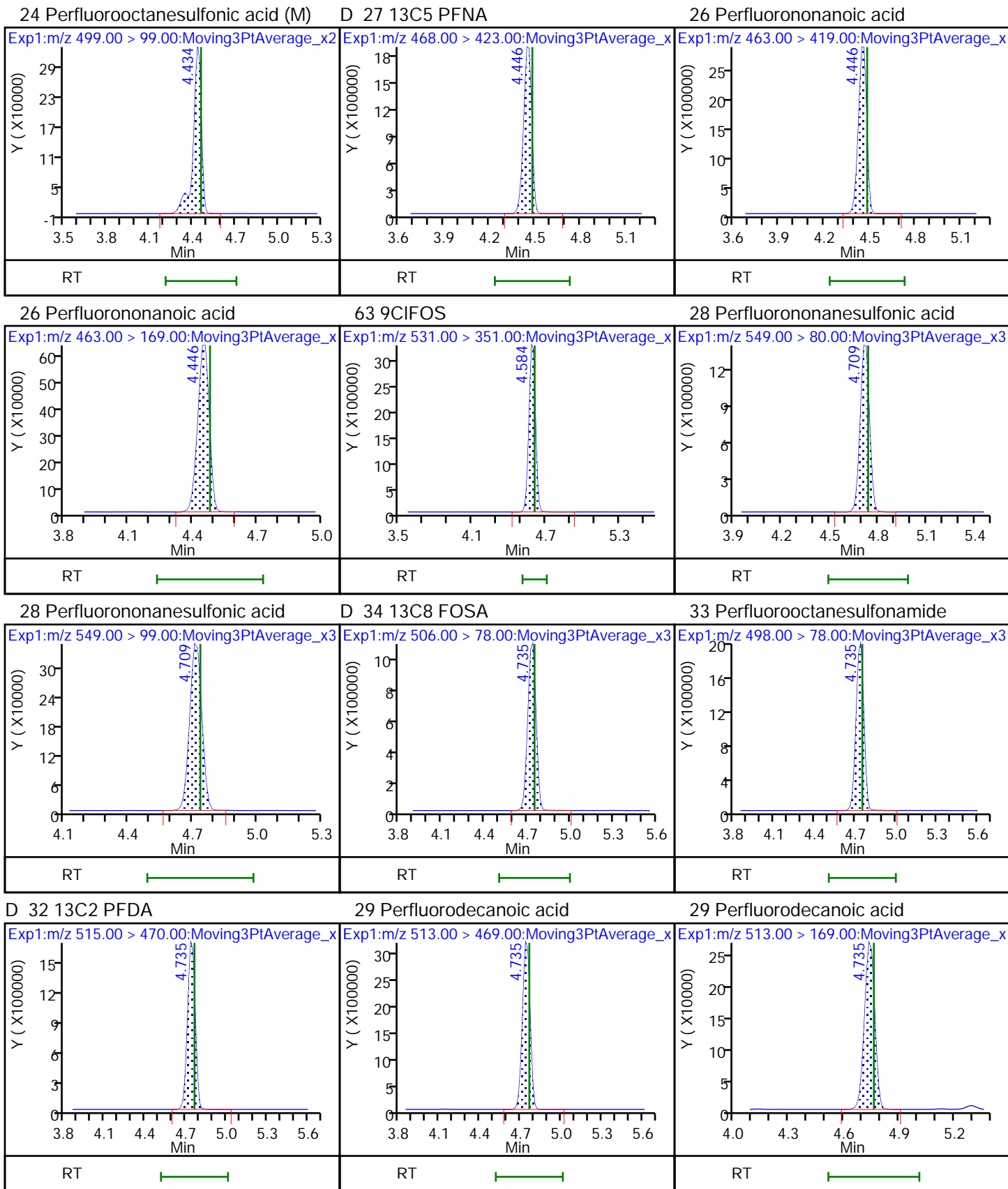
11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA





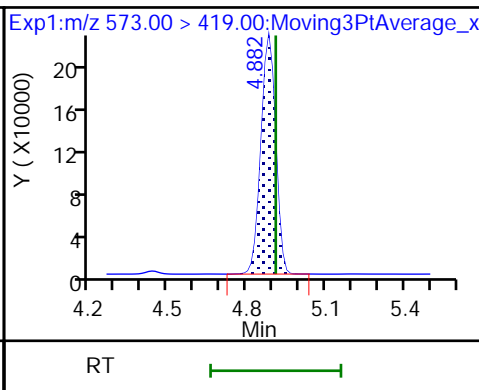
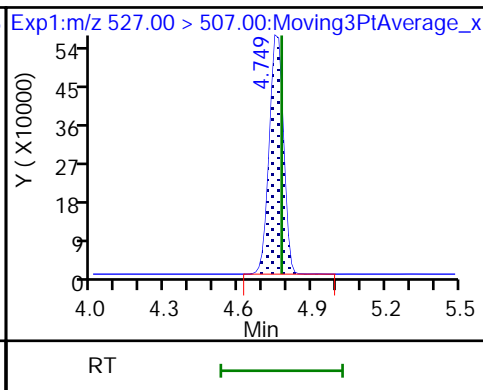
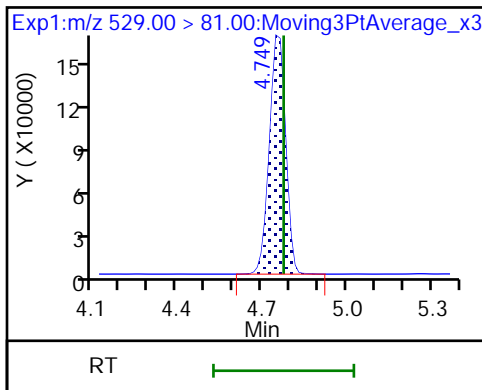




D 30 M2-8:2 FTS

31 8:2 FTS

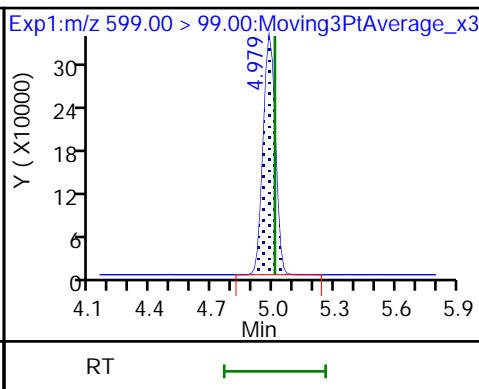
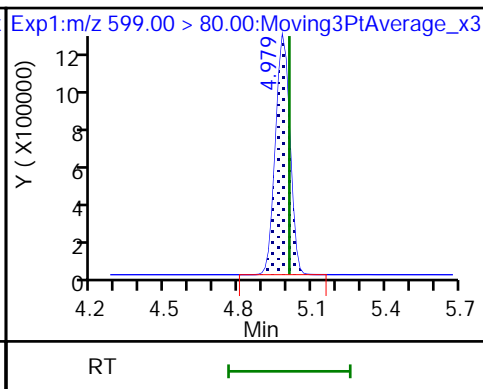
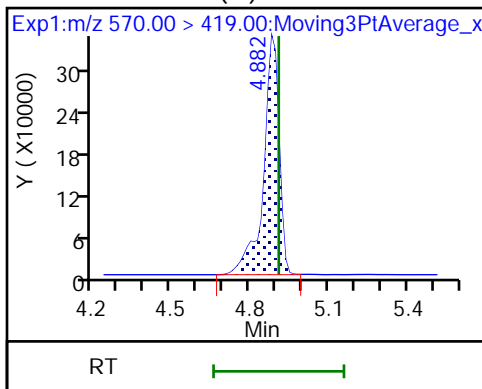
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

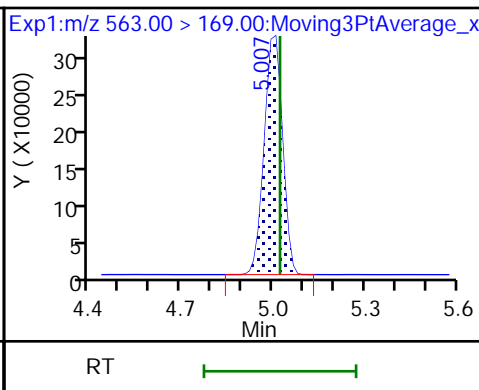
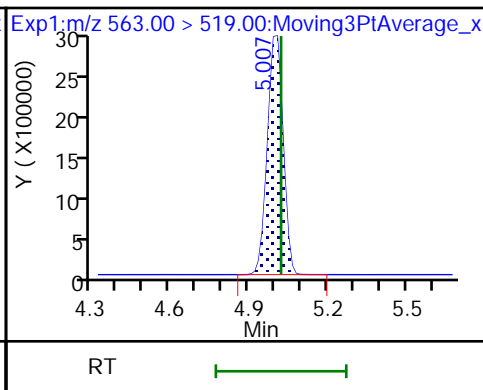
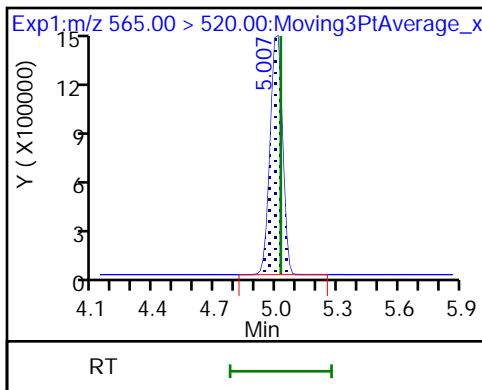
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

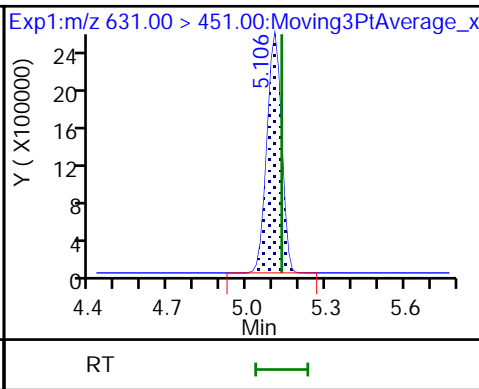
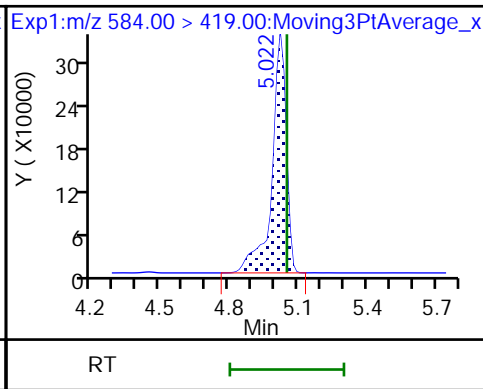
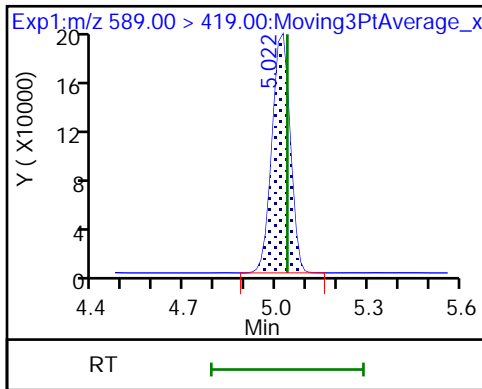
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA

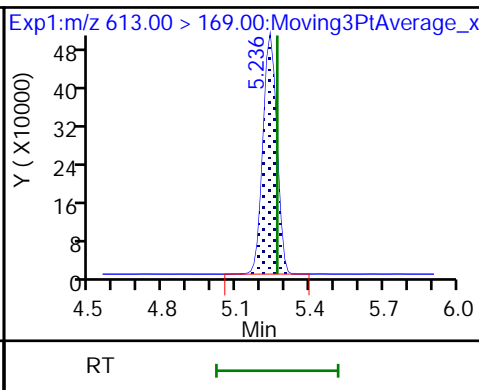
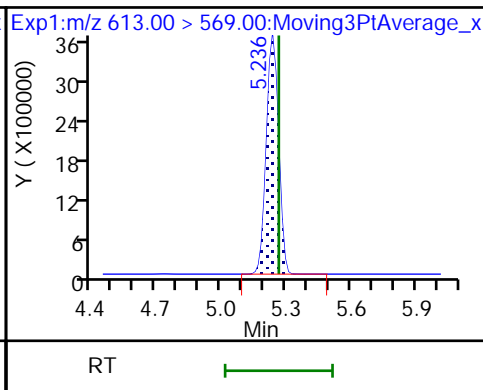
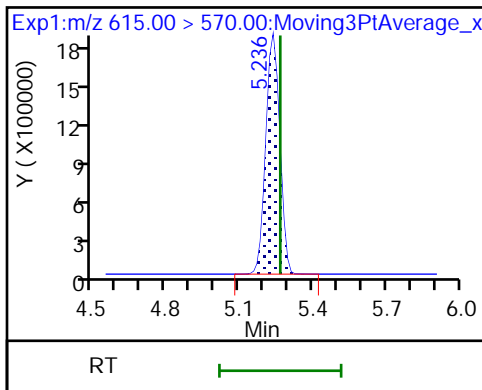
57 11CIFOS



D 43 13C2 PFDoA

42 Perfluorododecanoic acid

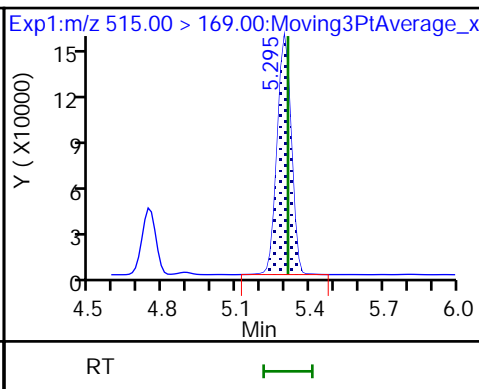
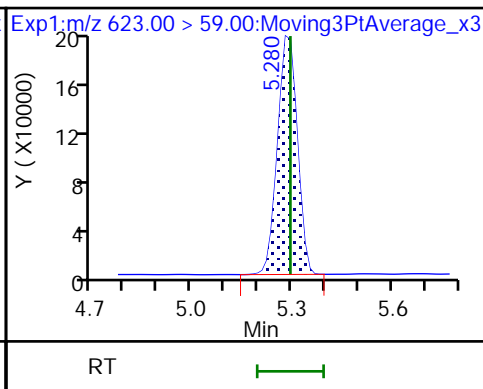
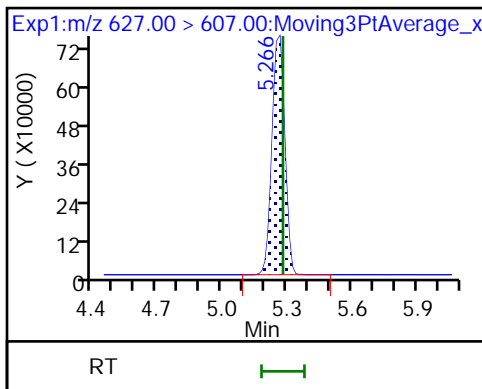
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

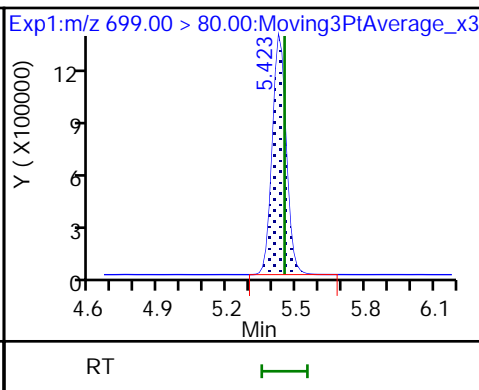
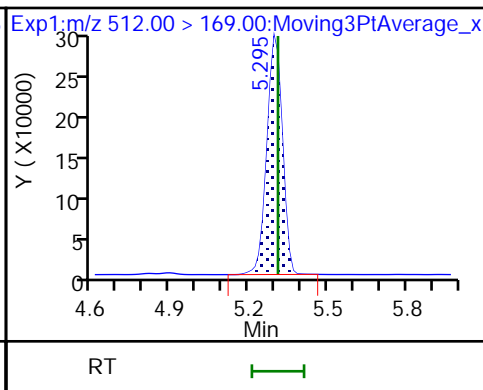
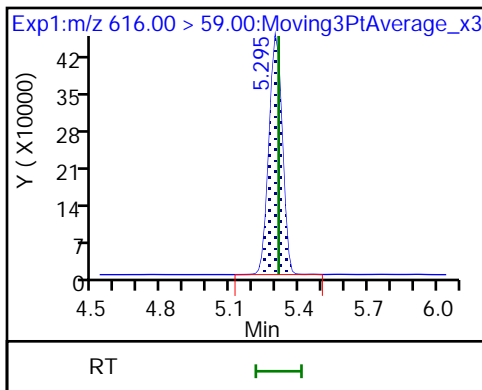
D 58 d-N-MeFOSEA-M



49 N-MeFOSE-M

61 NMeFOSEA

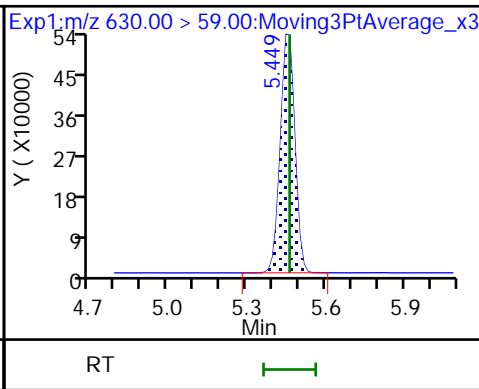
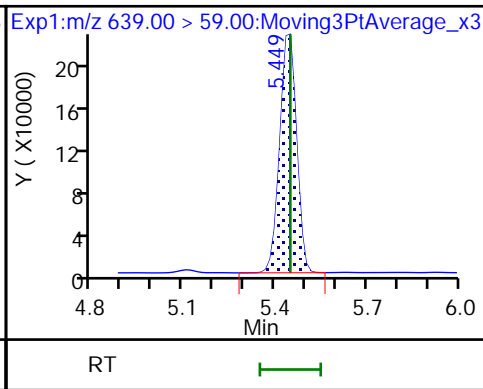
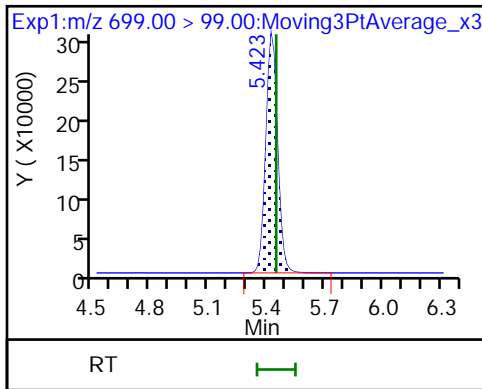
54 PFDoS

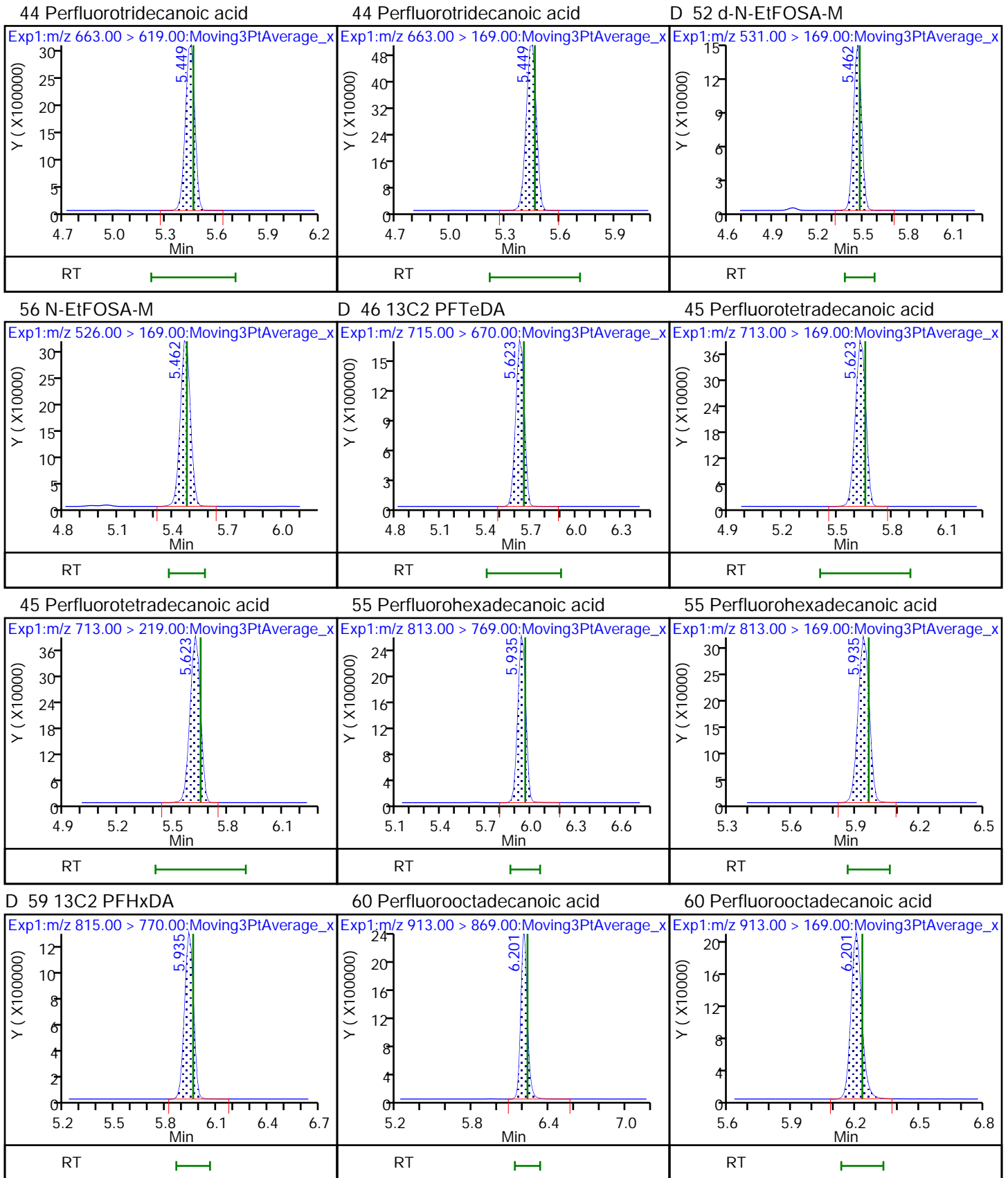


54 PFDoS

D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M





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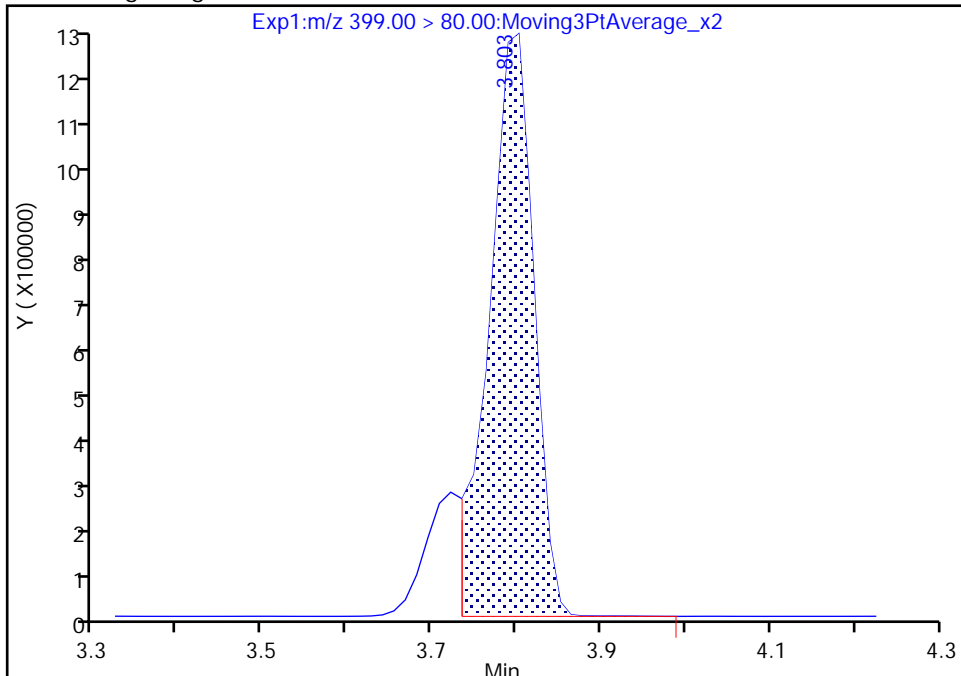
Data File: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b_019.d
Injection Date: 09-Oct-2021 17:09:10 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

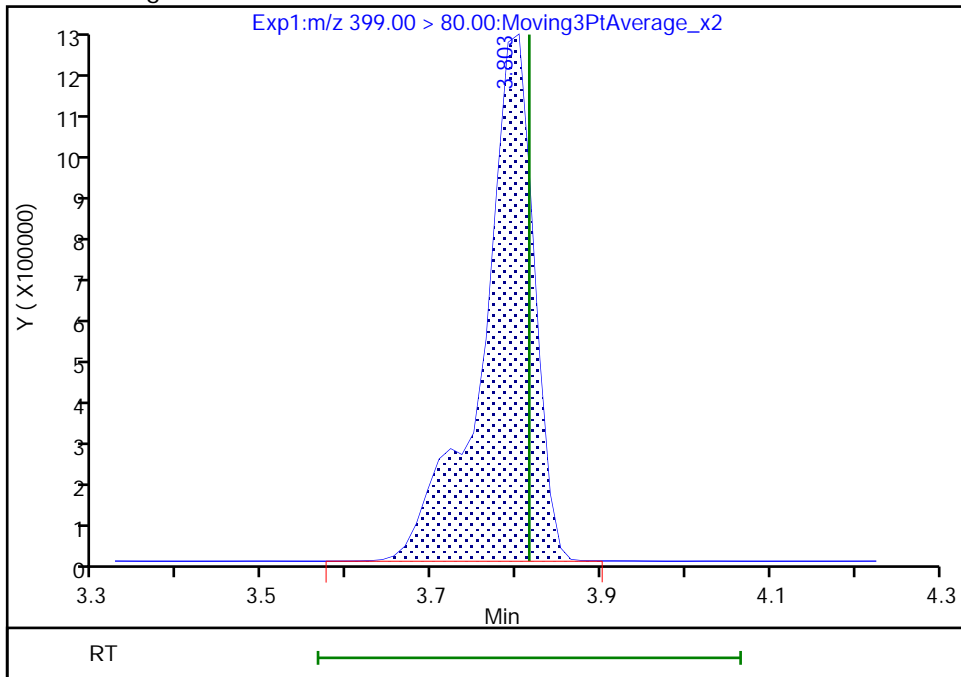
RT: 3.80
Area: 4545548
Amount: 1.873959
Amount Units: ng/ml

Processing Integration Results



RT: 3.80
Area: 5308663
Amount: 2.189418
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 18:00:05
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

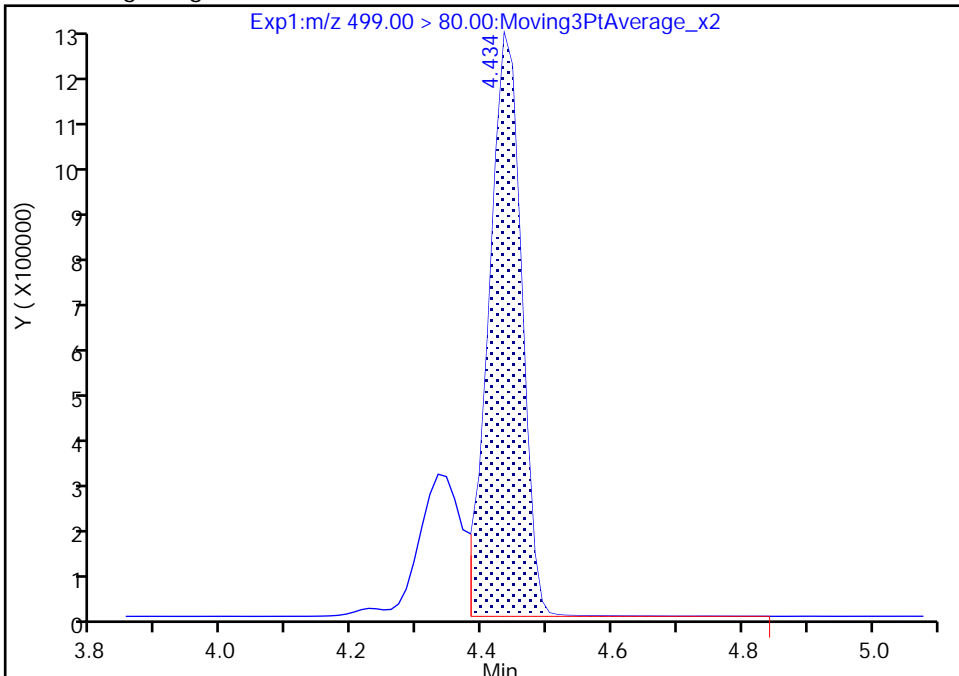
Data File: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b_019.d
Injection Date: 09-Oct-2021 17:09:10 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

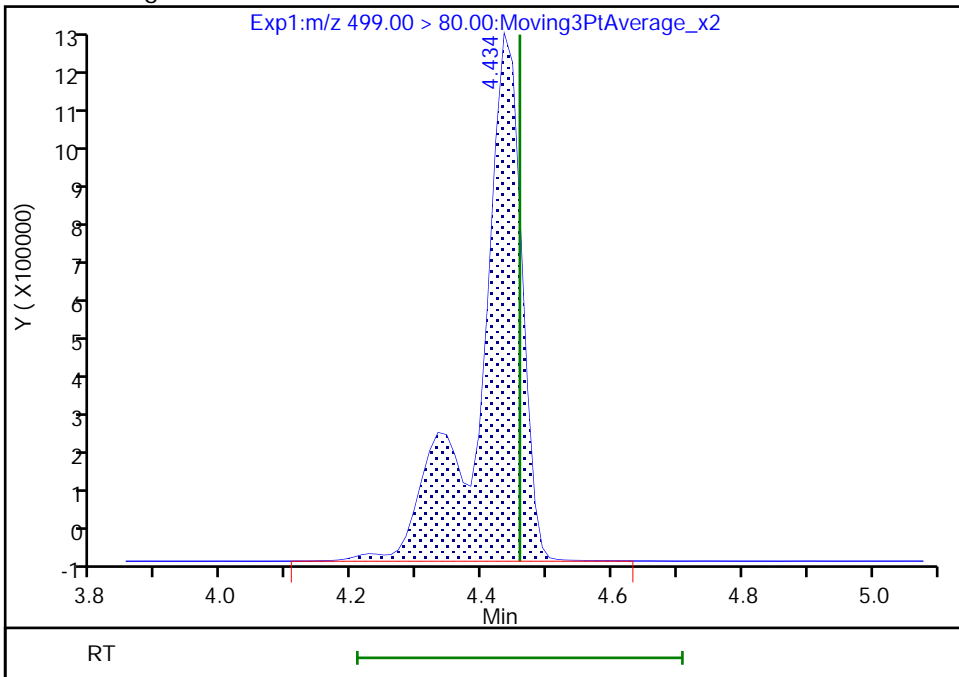
RT: 4.43
Area: 4182051
Amount: 1.625048
Amount Units: ng/ml

Processing Integration Results



RT: 4.43
Area: 5551450
Amount: 2.157164
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 18:00:15
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

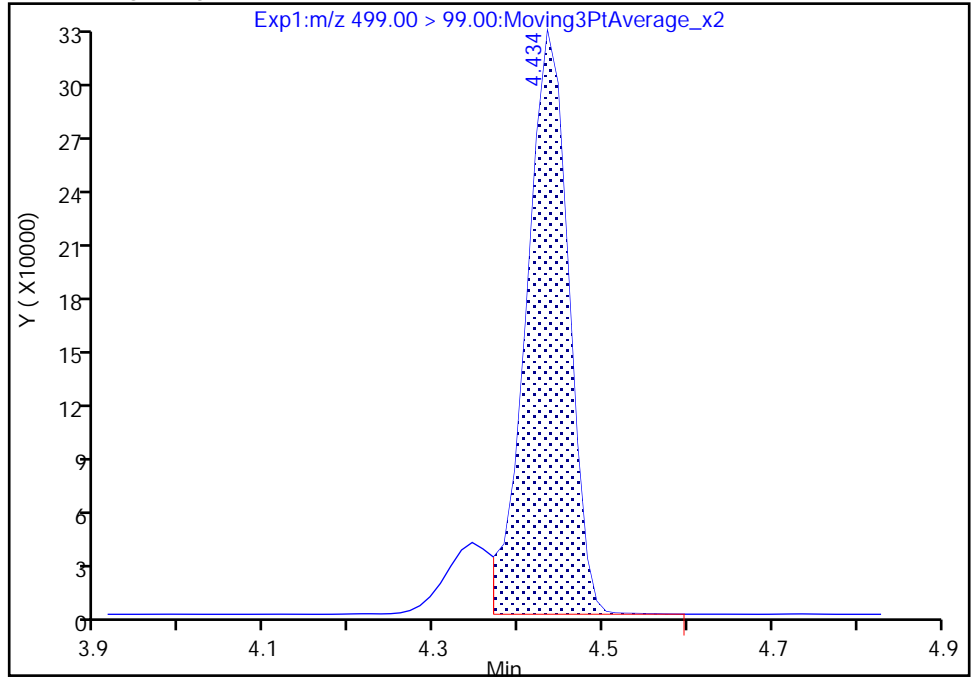
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Injection Date: 09-Oct-2021 17:09:10 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

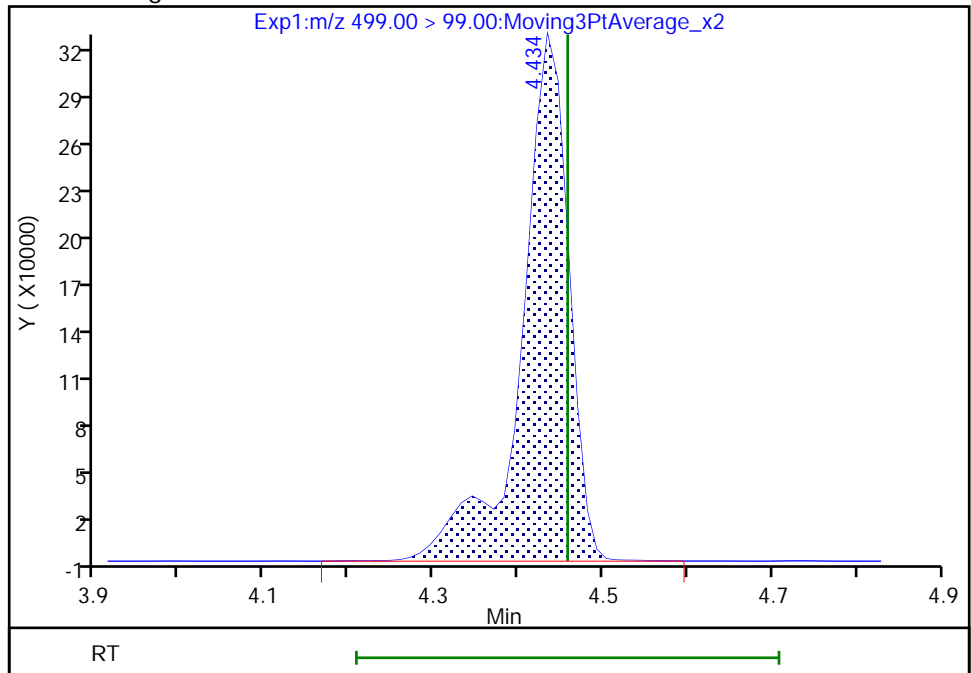
RT: 4.43
Area: 1113062
Amount: 1.625048
Amount Units: ng/ml

Processing Integration Results



RT: 4.43
Area: 1256690
Amount: 2.157164
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 18:00:21

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

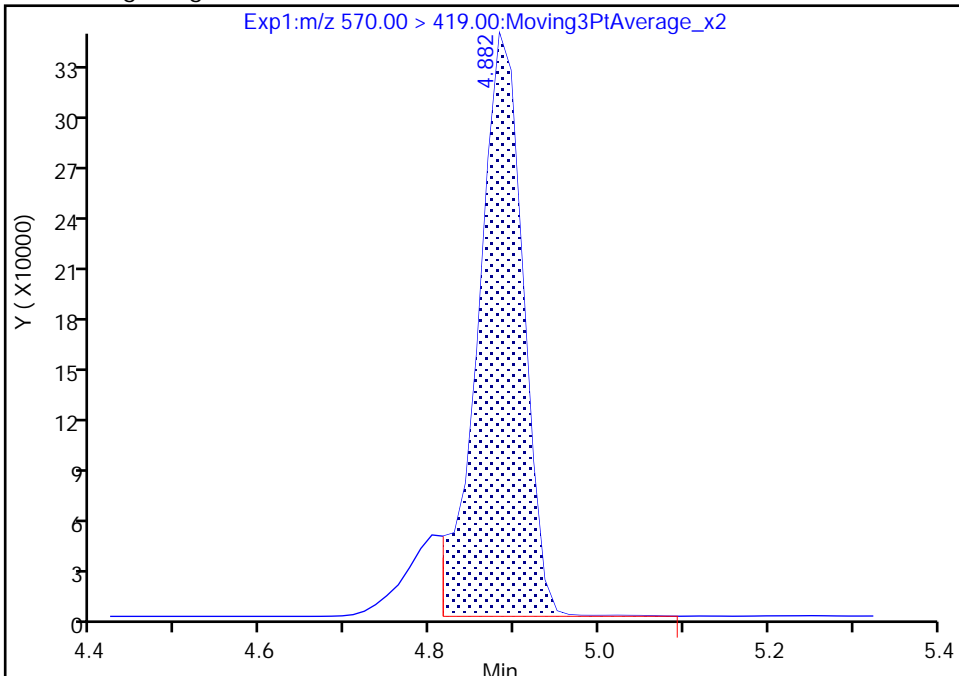
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Injection Date: 09-Oct-2021 17:09:10 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

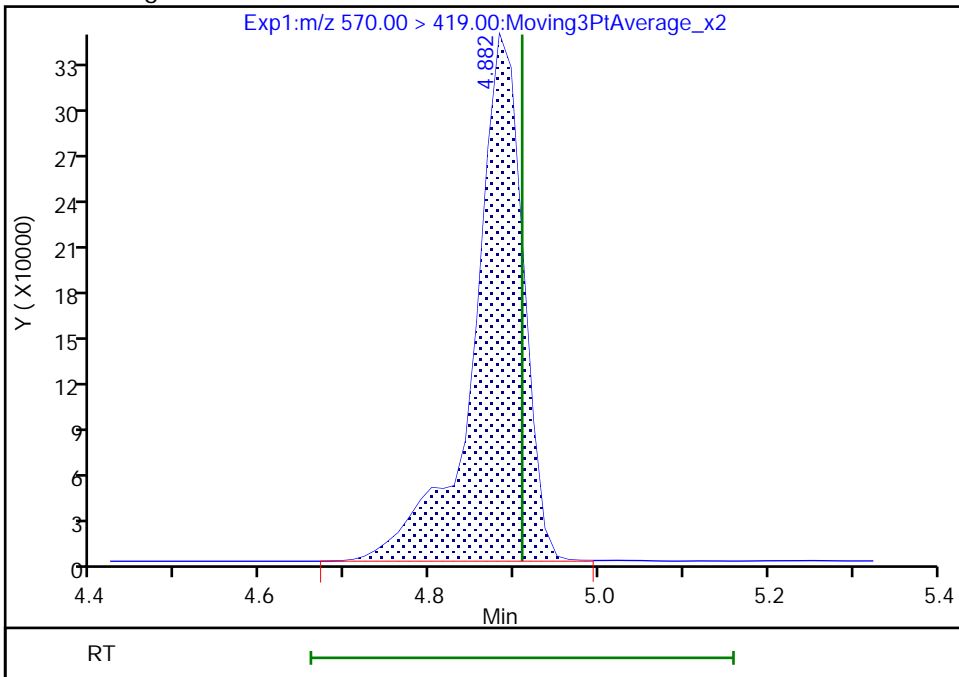
RT: 4.88
Area: 1281609
Amount: 2.041499
Amount Units: ng/ml

Processing Integration Results



RT: 4.88
Area: 1427328
Amount: 2.274463
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 18:00:42
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54661/30 Calibration Date: 10/09/2021 18:47
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _030.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7855	0.7867		1.00	1.00	0.2	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.013	0.9807		0.968	1.00	-3.2	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.126	1.148		0.901	0.884	1.9	40.0
4:2 FTS	AveID	2.500	2.264		0.846	0.934	-9.4	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8572	0.8418		0.982	1.00	-1.8	40.0
Perfluoropentanesulfonic acid (PFPeS)	L2ID		0.8965		0.979	0.938	4.4	50.0
HFPO-DA	L2ID		1.390		1.00	1.00	0.4	40.0
Perfluoroheptanoic acid (PFHpA)	L2ID		1.043		0.987	1.00	-1.3	40.0
Perfluorohexanesulfonic acid (PFHxS)	L2ID		1.316		0.881	0.910	-3.1	40.0
DONA	AveID	3.243	3.172		0.921	0.942	-2.2	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9947	0.9681		0.927	0.952	-2.7	40.0
6:2 FTS	L2ID		1.949		0.918	0.948	-3.2	40.0
Perfluorooctanoic acid (PFOA)	L2ID		1.089		0.982	1.00	-1.8	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.100	1.022		0.863	0.928	-7.1	40.0
Perfluorononanoic acid (PFNA)	L2ID		0.8637		1.04	1.00	3.5	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	2.308	2.233		0.902	0.932	-3.2	40.0
Perfluorononanesulfonic acid (PFNS)	AveID	1.042	1.009		0.929	0.960	-3.2	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9606	0.9300		0.968	1.00	-3.2	40.0
Perfluorodecanoic acid (PFDA)	L2ID		0.9245		0.973	1.00	-2.7	40.0
8:2 FTS	AveID	1.784	1.699		0.912	0.958	-4.8	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	L2ID		0.9916		1.08	1.00	7.9	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.9574	0.9519		0.959	0.964	-0.6	40.0
Perfluoroundecanoic acid (PFUnA)	L2ID		0.9878		0.976	1.00	-2.4	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.9494	0.9370		0.987	1.00	-1.3	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.858	1.877		0.951	0.942	1.0	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9543		0.913	1.00	-8.7	40.0
10:2 FTS	AveID	2.221	2.201		0.955	0.964	-0.9	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.104		0.953	1.00	-4.7	40.0
NMeFOSA	AveID	1.047	1.028		0.982	1.00	-1.8	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9879	0.9746		0.955	0.968	-1.3	40.0

FORM VII
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Lab Sample ID: CCV 140-54661/30 Calibration Date: 10/09/2021 18:47
 Instrument ID: LCA Calib Start Date: 10/05/2021 22:00
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 10/05/2021 22:53
 Lab File ID: _030.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTrIA)	L2ID		0.8995		1.02	1.00	1.8	50.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	L2ID		1.216		0.963	1.00	-3.7	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.168	1.141		0.977	1.00	-2.3	40.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.1253		0.993	1.00	-0.7	40.0
Perfluorohexadecanoic acid	Q2ID		1.108		1.01	1.00	1.4	40.0
Perfluorooctadecanoic acid	AveID	0.9076	0.9695		1.07	1.00	6.8	40.0
13C4 PFBA	Ave	1.324	1.308		1.24	1.25	-1.2	50.0
13C5 PFPeA	Ave	1.087	1.095		1.26	1.25	0.8	50.0
13C3 PFBS	Ave	0.7019	0.6888		1.14	1.16	-1.9	50.0
M2-4:2 FTS	Ave	0.1052	0.1273		1.41	1.17	20.9	50.0
13C2 PFHxA	Ave	1.116	1.110		1.24	1.25	-0.6	50.0
13C3 HFPO-DA	Ave	0.5714	0.5715		1.25	1.25	0.0	50.0
13C4 PFHpA	Ave	1.113	1.142		1.28	1.25	2.6	50.0
18O2 PFHxS	Ave	0.4248	0.4384		1.22	1.18	3.2	50.0
13C4 PFOA	Ave	1.007	1.035		1.29	1.25	2.8	50.0
M2-6:2 FTS	Ave	0.1078	0.1131		1.25	1.19	4.9	50.0
13C4 PFOS	Ave	0.5852	0.5811		1.19	1.20	-0.7	50.0
13C5 PFNA	Ave	1.279	1.258		1.23	1.25	-1.7	50.0
13C8 FOSA	Ave	0.8591	0.8255		1.20	1.25	-3.9	50.0
13C2 PFDA	Ave	1.296	1.269		1.22	1.25	-2.0	50.0
M2-8:2 FTS	Ave	0.1316	0.1375		1.25	1.20	4.5	50.0
d3-NMeFOSAA	Ave	0.1774	0.1647		1.16	1.25	-7.1	50.0
13C2 PFUnA	Ave	1.237	1.240		1.25	1.25	0.2	50.0
d5-NEtFOSAA	Ave	0.1705	0.1611		1.18	1.25	-5.5	50.0
13C2 PFDoA	Ave	1.319	1.428		1.35	1.25	8.3	50.0
d7-N-MeFOSE-M	Ave	0.1075	0.1610		1.87	1.25	49.7	50.0
d-N-MeFOSA-M	Ave	0.1120	0.1224		1.37	1.25	9.4	50.0
d9-N-EtFOSE-M	Ave	0.1146	0.1658		1.81	1.25	44.6	50.0
d-N-EtFOSA-M	Ave	0.0942	0.1024		1.36	1.25	8.6	50.0
13C2 PFTeDA	Ave	1.211	1.239		1.28	1.25	2.3	50.0
13C2 PFHxDA	Ave	0.8782	0.8864		1.26	1.25	0.9	50.0
13C8 PFOA	Ave	0.9886	0.9823		1.24	1.25	-0.6	50.0
13C8 PFOS	Ave	0.1256	0.1214		1.16	1.20	-3.3	50.0

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b_030.d
 Lims ID: CCV
 Client ID:
 Sample Type: CCV
 Inject. Date: 09-Oct-2021 18:47:12 ALS Bottle#: 30 Worklist Smp#: 30
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0021009-030 ccv
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Sublist: chrom-PFC_LCA*sub15
 Method: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 10-Oct-2021 08:27:51 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1620

First Level Reviewer: cochranj Date: 09-Oct-2021 19:20:21

Ratio Calibration: None

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	2.801	2.823	-0.022	0.678	6937035	1.24	98.8	10884	
2 Perfluorobutanoic acid	212.90 > 169.00	2.801	2.823	-0.022	1.000	4365873	1.00	100	838	
D 3 13C5 PFPeA	267.90 > 223.00	3.116	3.129	-0.013	0.754	5808401	1.26	101	8977	
4 Perfluoropentanoic acid	262.90 > 219.00	3.116	3.143	-0.027	1.000	4556957	0.9681	96.8	1383	
D 6 13C3 PFBS	301.90 > 80.00	3.130	3.143	-0.013	0.758	3396346	1.14	98.1	11204	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.130	3.157	-0.027	1.000	2964436	0.9011	Target=3.06	102	6706
	298.90 > 99.00	3.130	3.157	-0.027	1.000	1098480		2.70(1.53-4.59)		3019
D 8 M2-4:2 FTS	329.00 > 81.00	3.409	3.437	-0.028	0.825	630316	1.41	121	1238	
7 4:2 FTS	327.00 > 307.00	3.409	3.437	-0.028	1.000	1141870	0.8461	90.6	6240	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.437	3.469	-0.032	1.098	2456876	0.9792	Target=3.47	104	7979
	349.00 > 99.00	3.437	3.469	-0.032	1.098	700876		3.51(1.73-5.20)		5128
D 9 13C2 PFHxA	315.00 > 270.00	3.437	3.469	-0.032	0.832	5882930	1.24	99.4	10189	
10 Perfluorohexanoic acid	313.00 > 269.00	3.437	3.469	-0.032	1.000	3961934	0.9821	Target=9.74	98.2	1860
	313.00 > 119.00	3.437	3.469	-0.032	1.000	302048		13.12(4.87-14.61)		973
D 12 13C3 HFPO-DA	287.00 > 169.00	3.548	3.575	-0.027	0.859	3030179	1.25	100	4590	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.548	3.575	-0.027	1.000	3368893	1.00		100	2515	
D 17 18O2 PFHxS										
403.00 > 84.00	3.791	3.815	-0.024	0.918	2198757	1.22		103	8480	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.791	3.815	-0.024	1.000	2227079	0.8814	Target=2.96	96.9	3685	M
399.00 > 99.00	3.791	3.815	-0.024	1.000	646140		3.45(1.48-4.44)		4525	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.791	3.827	-0.036	0.918	6055822	1.28		103	9635	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.791	3.827	-0.036	1.000	5052913	0.9868	Target=3.35	98.7	4175	
363.00 > 169.00	3.791	3.827	-0.036	1.000	1553723		3.25(1.67-5.02)		7152	
68 DONA										
377.00 > 251.00	3.827	3.852	-0.025	0.863	7364354	0.9212	Target=1.49	97.8	13899	
377.00 > 85.00	3.827	3.852	-0.025	0.863	4267676		1.73(0.74-2.23)		5555	
D 21 13C4 PFOA										
417.00 > 372.00	4.131	4.155	-0.024	1.000	5486546	1.28		103	17623	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.119	4.155	-0.036	0.929	2271639	0.9265	Target=3.73	97.3	6980	
449.00 > 99.00	4.119	4.155	-0.036	0.929	568209		4.00(1.87-5.61)		2528	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.119	4.155	-0.036	0.997	5208284	1.24		99.4	15998	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.131	4.155	-0.024	1.000	569590	1.25		105	3391	
19 6:2 FTS										
427.00 > 407.00	4.131	4.155	-0.024	1.000	886099	0.9180		96.8	4668	
* 22 13C2 PFOA										
415.00 > 370.00	4.131	4.155	-0.024		5302106	1.25			14158	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.131	4.155	-0.024	1.000	4779456	0.9819	Target=2.40	98.2	2764	
413.00 > 169.00	4.131	4.155	-0.024	1.000	1803453		2.65(1.20-3.61)		3542	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.422	4.458	-0.036	1.070	615205	1.16		96.7	3306	
D 25 13C4 PFOS										
503.00 > 80.00	4.434	4.458	-0.024	1.073	2945337	1.19		99.3	7204	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.434	4.458	-0.024	1.000	2337873	0.8625	Target=3.83	92.9	3886	M
499.00 > 99.00	4.434	4.458	-0.024	1.000	540688		4.32(1.91-5.74)		1472	M
D 27 13C5 PFNA										
468.00 > 423.00	4.447	4.481	-0.034	1.076	6668548	1.23		98.3	16401	
26 Perfluorononanoic acid										
463.00 > 419.00	4.447	4.481	-0.034	1.000	4607748	1.03	Target=3.68	103	3801	
463.00 > 169.00	4.447	4.481	-0.034	1.000	1013720		4.55(1.84-5.52)		1706	
63 9CIFOS										
531.00 > 351.00	4.584	4.608	-0.024	1.110	5130554	0.9020		96.8	8816	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.709	4.736	-0.027	1.062	2386788	0.9291	Target=3.97	96.8	5424	
549.00 > 99.00	4.709	4.736	-0.027	1.062	607262		3.93(1.99-5.96)		3327	
D 34 13C8 FOSA										
506.00 > 78.00	4.722	4.749	-0.027	1.143	4377055	1.20		96.1	4753	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.722	4.749	-0.027	1.000	3256481	0.9682		96.8	4993	
D 32 13C2 PFDA										
515.00 > 470.00	4.736	4.762	-0.026	1.146	6728779	1.22		98.0	29152	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.736	4.762	-0.026	1.000	4976471	0.9727	Target=10.11	97.3	3072	
513.00 > 169.00	4.736	4.762	-0.026	1.000	418463		11.89(5.06-15.17)		455	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.776	-0.027	1.150	698372	1.25		104	2087	
31 8:2 FTS										
527.00 > 507.00	4.749	4.776	-0.027	1.000	949064	0.9123		95.2	4986	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.869	4.909	-0.040	1.179	873423	1.16		92.9	1641	
36 NMeFOSAA										
570.00 > 419.00	4.882	4.909	-0.027	1.003	692892	1.08		108	1703	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.979	5.007	-0.028	1.123	2261818	0.9585	Target=3.80	99.4	5000	
599.00 > 99.00	4.979	5.007	-0.028	1.123	596449		3.79(1.90-5.70)		2240	
D 39 13C2 PFUnA										
565.00 > 520.00	4.993	5.022	-0.029	1.209	6572844	1.25		100	10968	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.993	5.022	-0.029	1.000	5193942	0.9759	Target=7.45	97.6	5247	
563.00 > 169.00	4.993	5.022	-0.029	1.000	591118		8.79(3.78-11.33)		3617	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.007	5.036	-0.029	1.212	854026	1.18		94.5	3165	
40 NEtFOSA										
584.00 > 419.00	5.022	5.050	-0.028	1.003	640154	0.9869		98.7	550	
57 11CIFOS										
631.00 > 451.00	5.093	5.132	-0.039	1.148	4357883	0.9514		101	7461	
D 43 13C2 PFDaA										
615.00 > 570.00	5.224	5.266	-0.042	1.265	7573384	1.35		108	19863	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.224	5.266	-0.042	1.000	5781931	0.9132	Target=5.33	91.3	3573	
613.00 > 169.00	5.224	5.266	-0.042	1.000	837994		6.90(2.66-7.99)		2628	
50 10:2 FTS										
627.00 > 607.00	5.251	5.280	-0.029	1.106	1237358	0.9553		99.1	4658	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.281	5.295	-0.014	1.278	853602	1.87		150	561	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.310	-0.015	1.282	649170	1.37		109	49.8	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.310	-0.015	1.003	754059	0.9533		95.3	932	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA	512.00 > 169.00	5.295	5.310	-0.015	1.000	533854	0.9818	98.2	661	
54 PFDoS	699.00 > 80.00	5.423	5.449	-0.026	1.223	2325315	0.9550	Target=4.32	98.7	3589
	699.00 > 99.00	5.423	5.449	-0.026	1.223	536345		4.34(2.19-6.58)		2532
D 53 d9-N-EtFOSE-M	639.00 > 59.00	5.436	5.449	-0.013	1.316	879005	1.81		145	693
62 N-EtFOSE-M	630.00 > 59.00	5.449	5.462	-0.013	1.002	855114	0.9630		96.3	2088
44 Perfluorotridecanoic acid	663.00 > 619.00	5.436	5.462	-0.026	1.041	5449968	1.02	Target=5.66	102	3901
	663.00 > 169.00	5.436	5.462	-0.026	1.041	865458		6.30(2.83-8.48)		3917
D 52 d-N-EtFOSA-M	531.00 > 169.00	5.462	5.475	-0.013	1.322	542758	1.36		109	908
56 N-EtFOSA-M	526.00 > 169.00	5.462	5.475	-0.013	1.000	495524	0.9767		97.7	729
D 46 13C2 PFTeDA	715.00 > 670.00	5.623	5.651	-0.028	1.361	6567053	1.28		102	20134
45 Perfluorotetradecanoic acid	713.00 > 169.00	5.623	5.651	-0.028	1.000	658031	0.99	Target=1.07	99.3	3975
	713.00 > 219.00	5.623	5.651	-0.028	1.000	650225		1.01(0.53-1.60)		7279
55 Perfluorohexadecanoic acid	813.00 > 769.00	5.935	5.961	-0.026	1.000	4164602	1.01	Target=7.50	101	3523
	813.00 > 169.00	5.935	5.961	-0.026	1.000	504303		8.26(3.75-11.26)		2341
D 59 13C2 PFHxDA	815.00 > 770.00	5.935	5.961	-0.026	1.437	4699852	1.26		101	11154
60 Perfluorooctadecanoic acid	913.00 > 869.00	6.192	6.230	-0.038	1.043	3645237	1.07	Target=9.98	107	2844
	913.00 > 169.00	6.192	6.230	-0.038	1.043	299210		12.18(5.14-15.41)		1865

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L4PFC2_00003

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b_030.d

Injection Date: 09-Oct-2021 18:47:12

Instrument ID: LCA

Lims ID: CCV

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 30

Worklist Smp#: 30

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

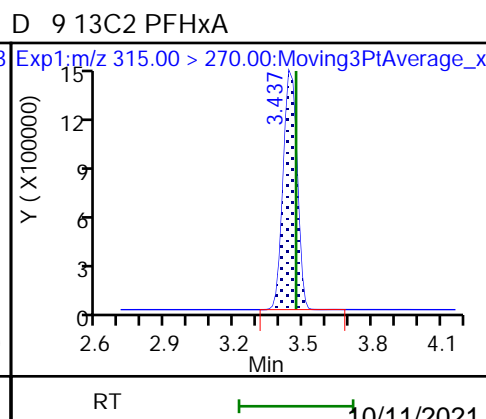
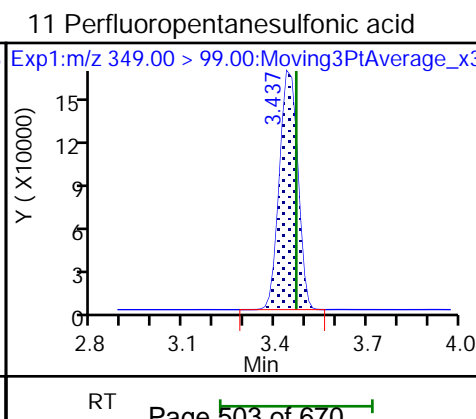
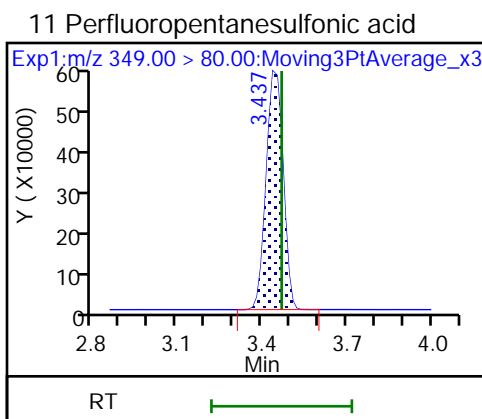
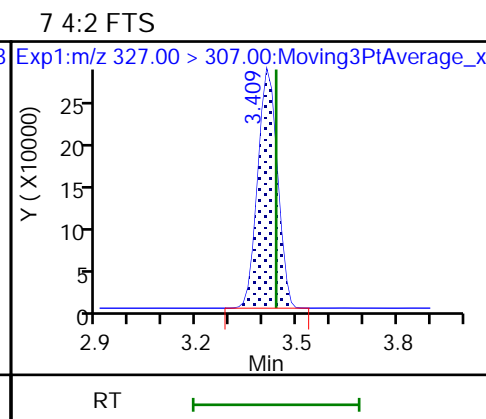
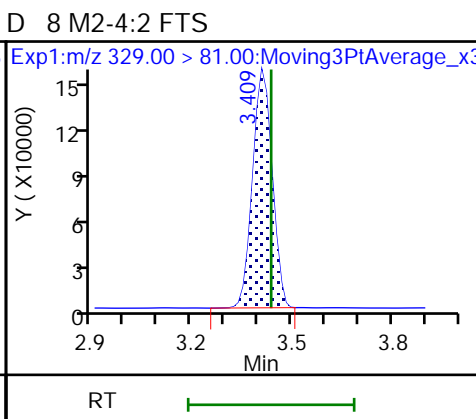
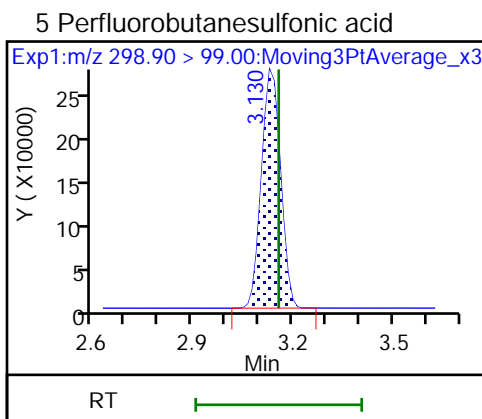
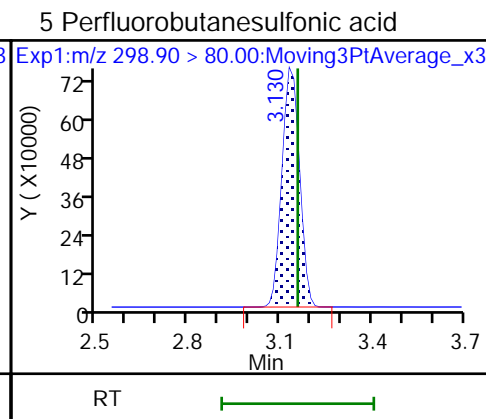
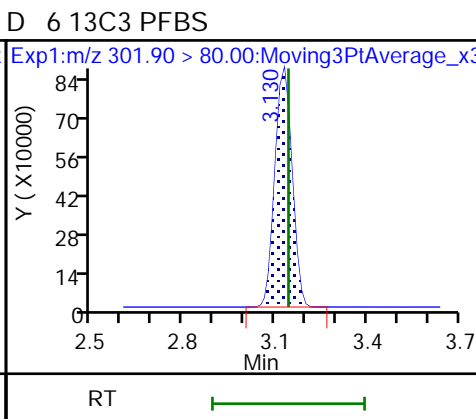
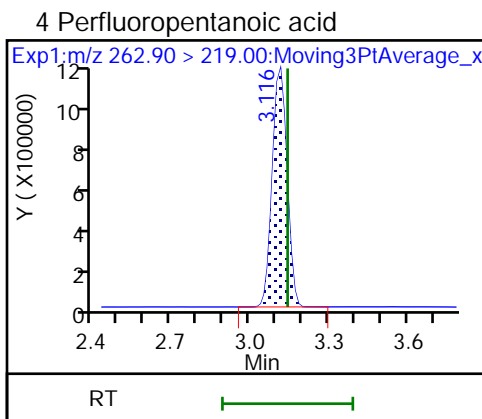
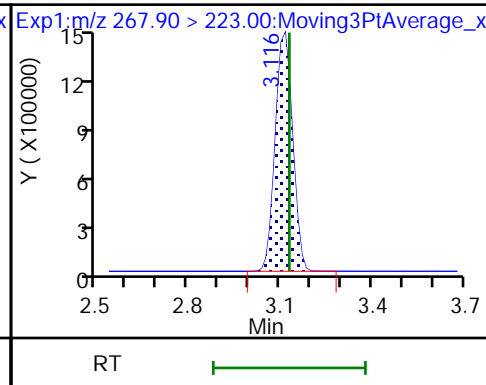
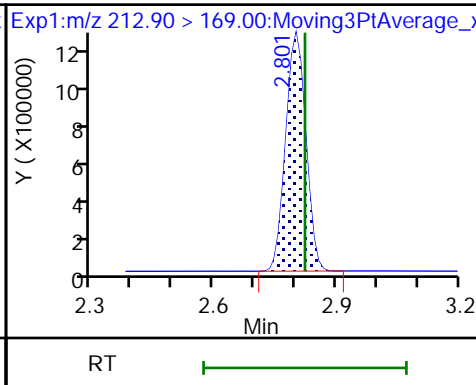
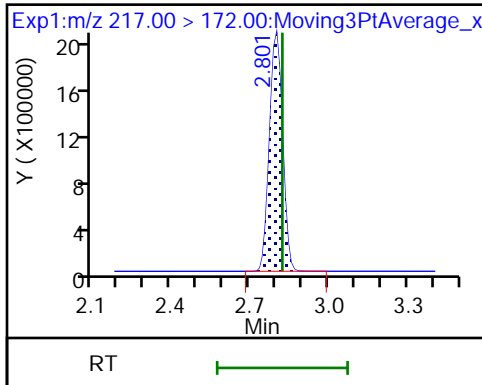
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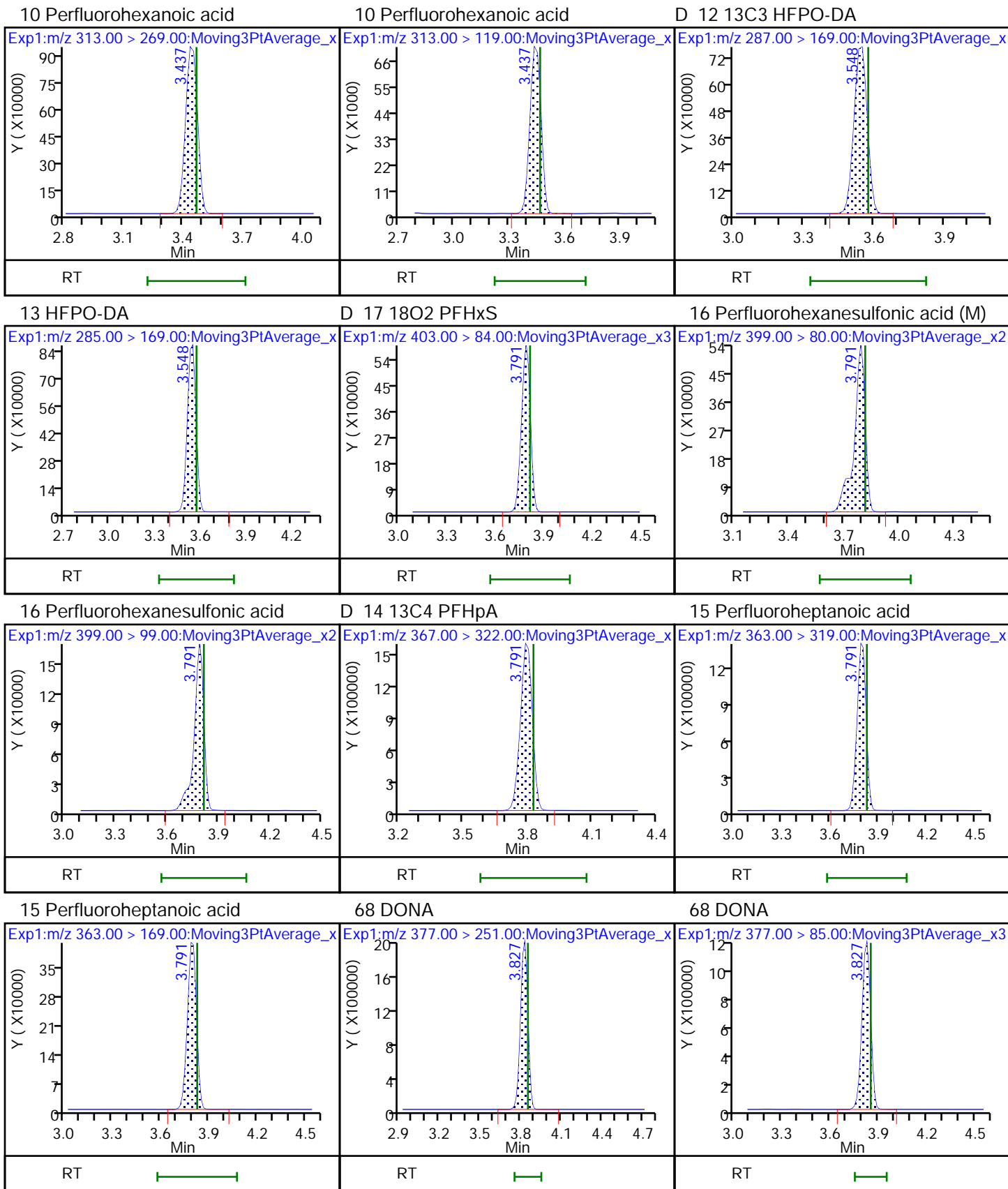
Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

D 3 13C5 PFPeA

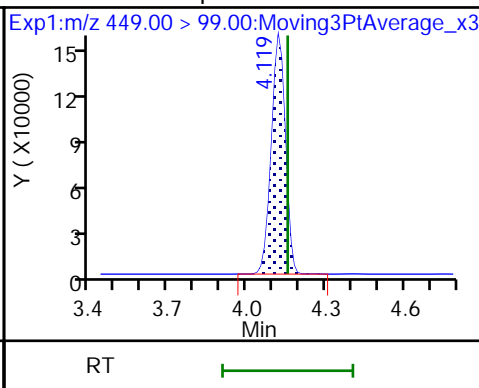
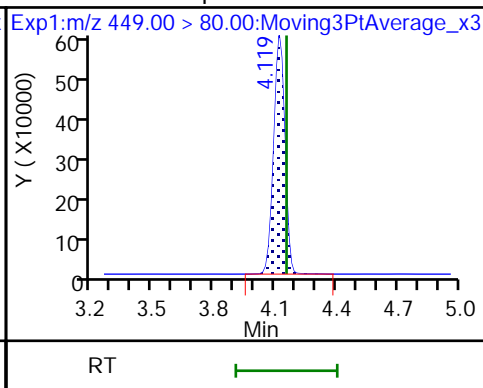
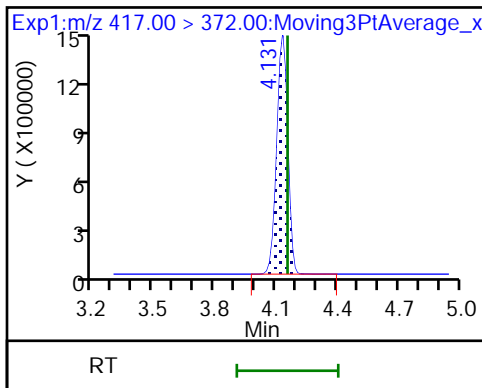




D 21 13C4 PFOA

20 Perfluoroheptanesulfonic acid

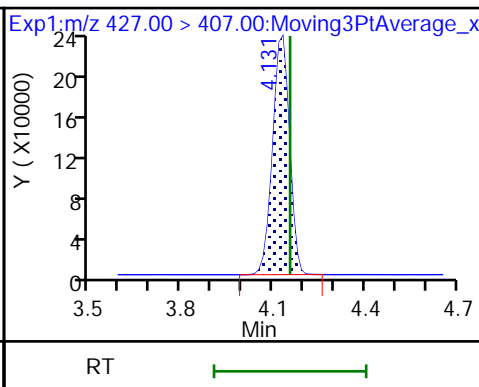
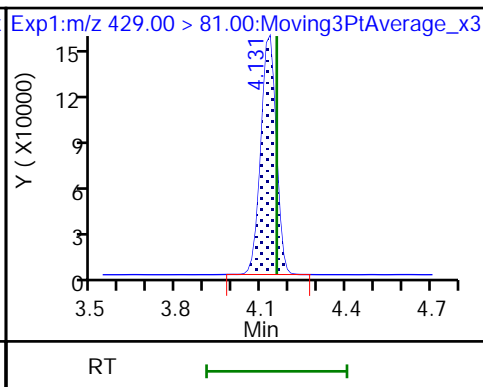
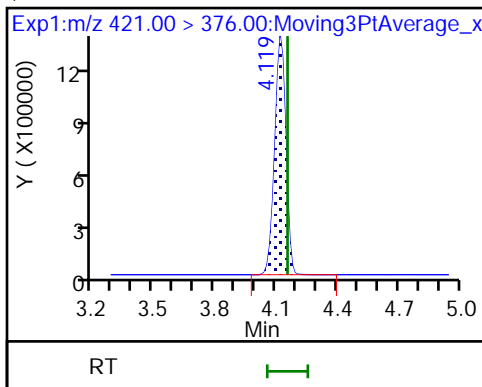
20 Perfluoroheptanesulfonic acid



\$ 48 13C8 PFOA

D 18 M2-6:2 FTS

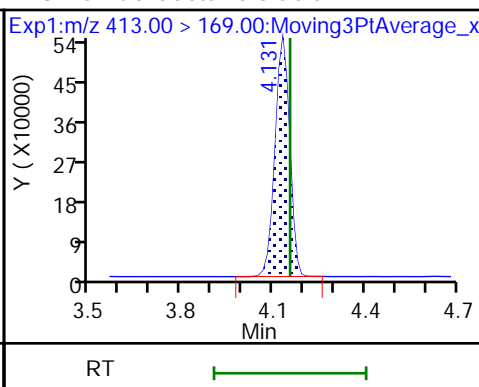
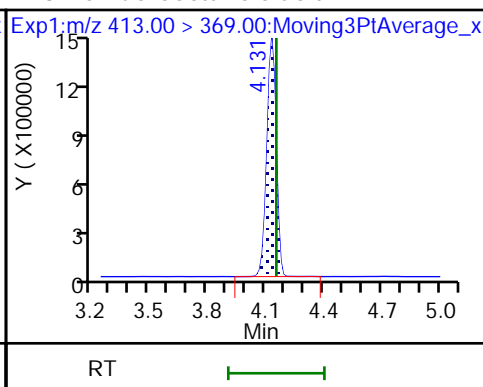
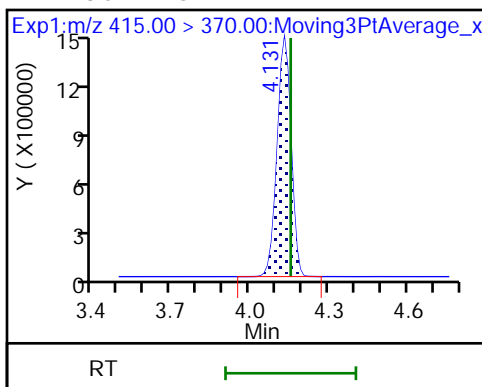
19 6:2 FTS



* 22 13C2 PFOA

23 Perfluorooctanoic acid

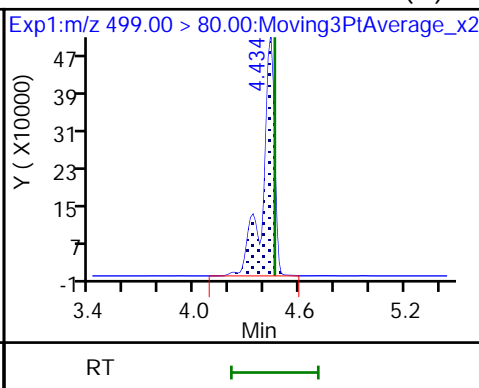
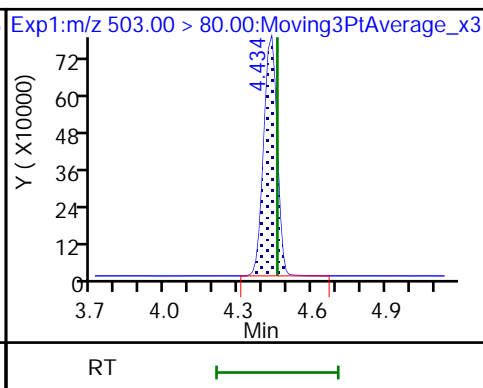
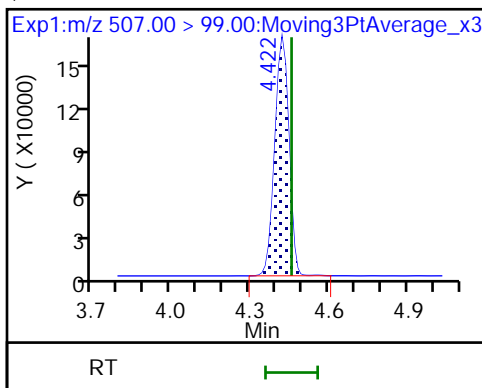
23 Perfluorooctanoic acid

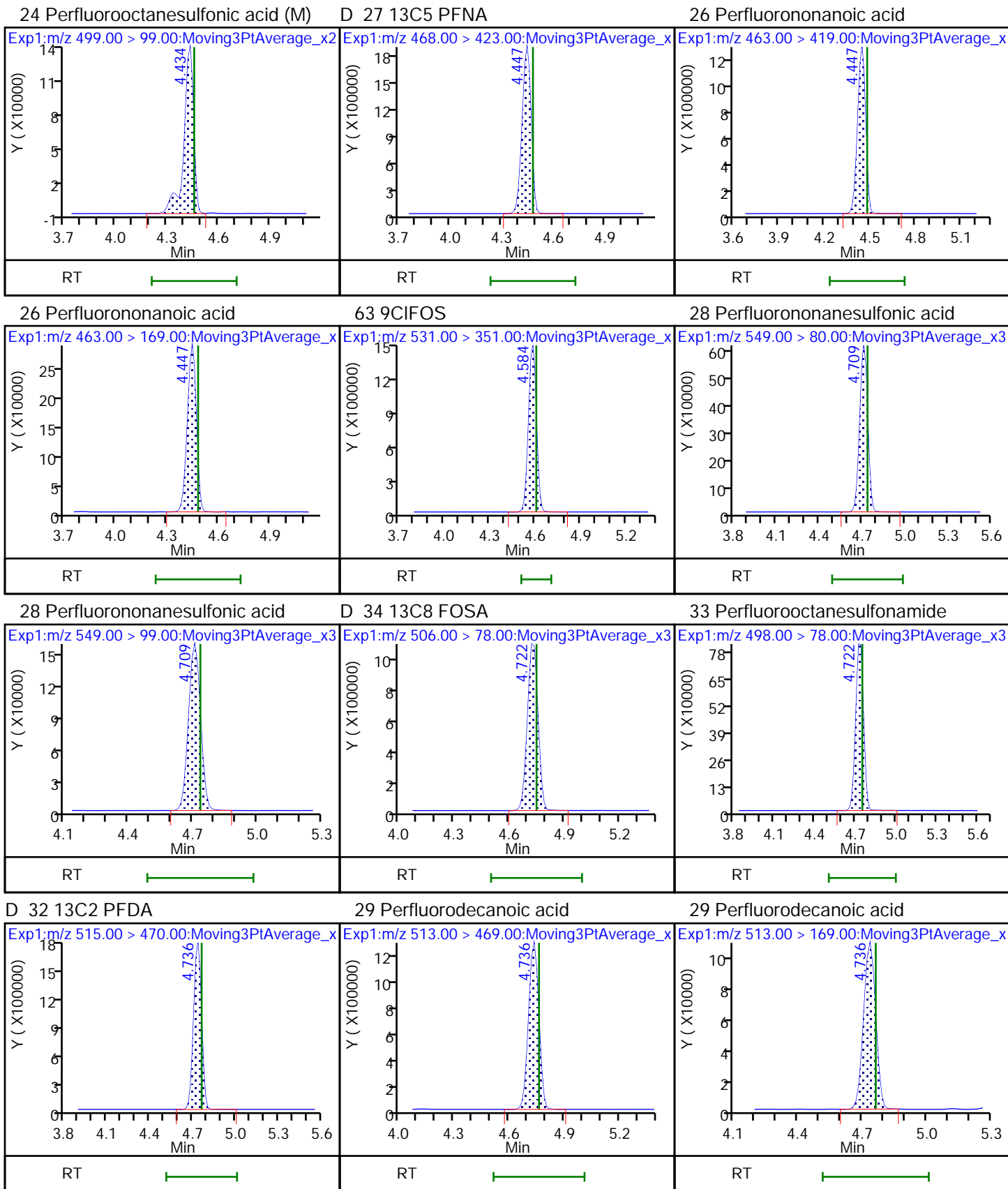


\$ 47 13C8 PFOS

D 25 13C4 PFOS

24 Perfluorooctanesulfonic acid (M)

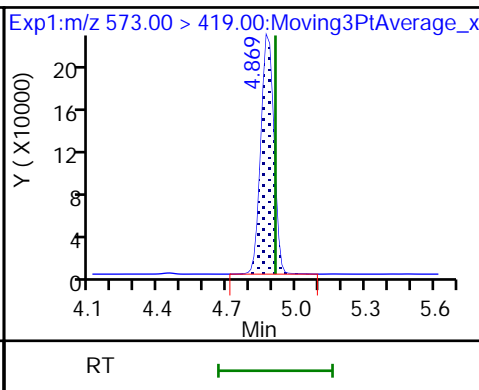
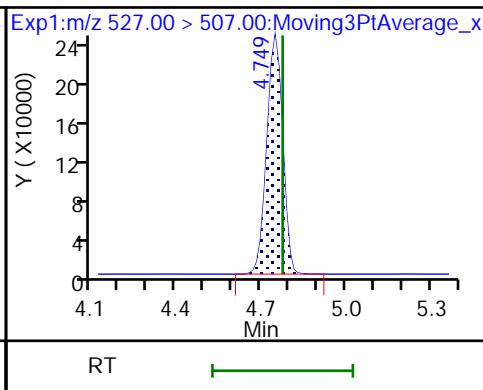
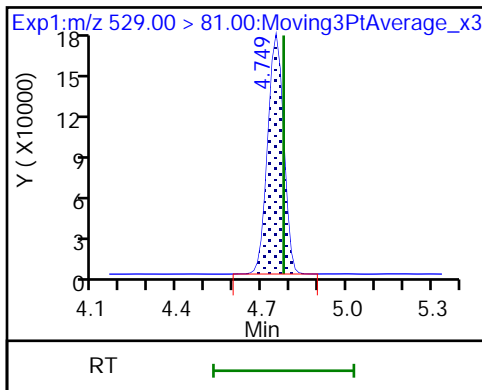




D 30 M2-8:2 FTS

31 8:2 FTS

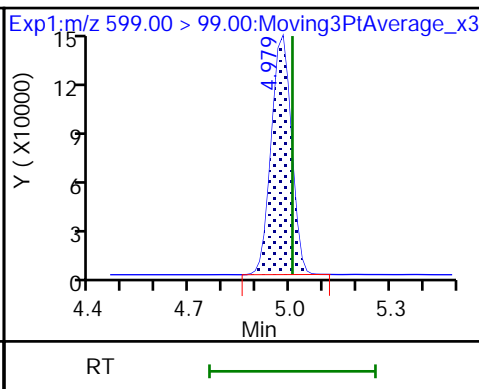
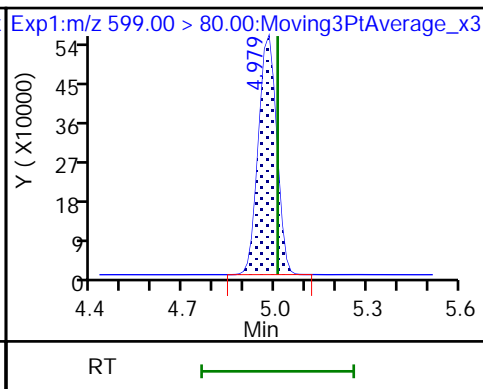
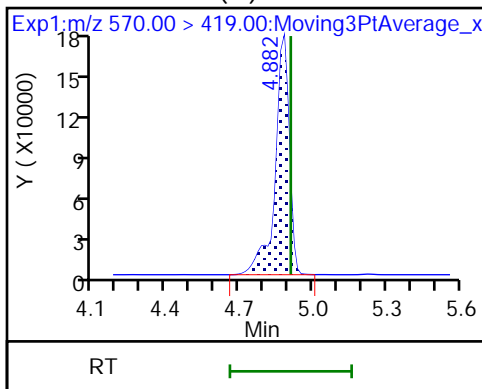
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

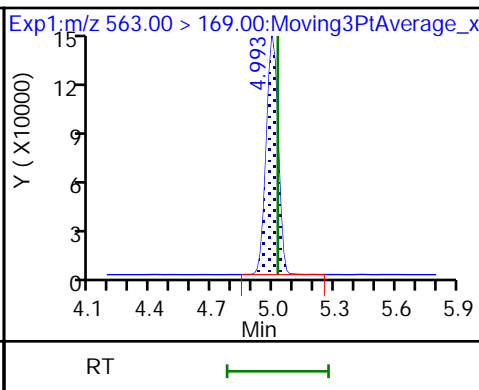
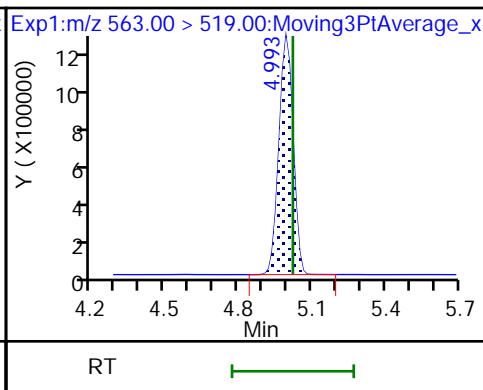
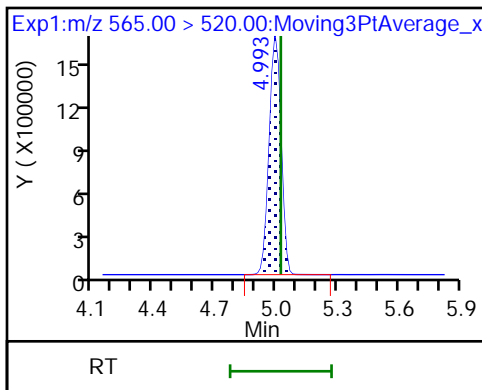
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

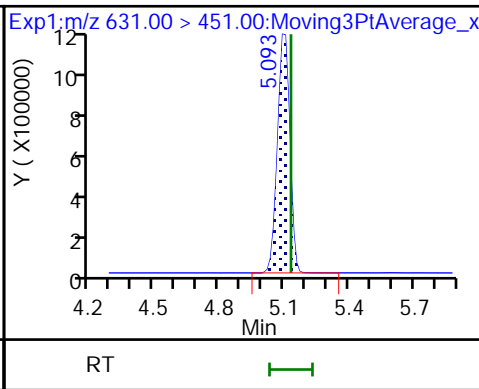
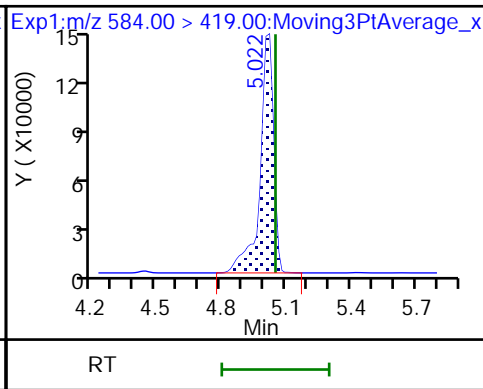
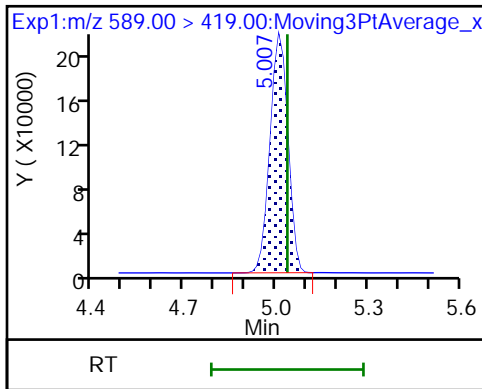
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA

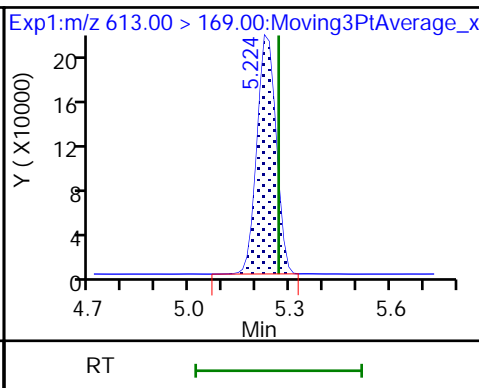
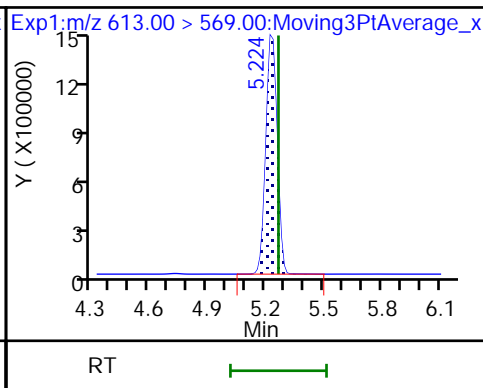
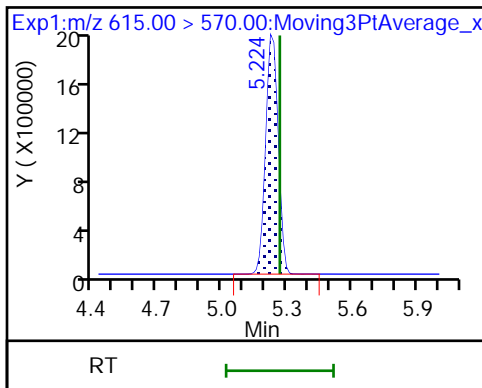
57 11C1FOS



D 43 13C2 PFDaA

42 Perfluorododecanoic acid

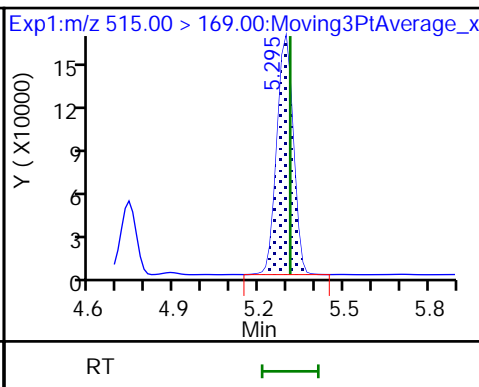
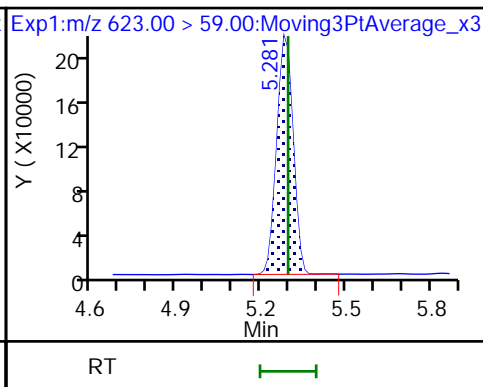
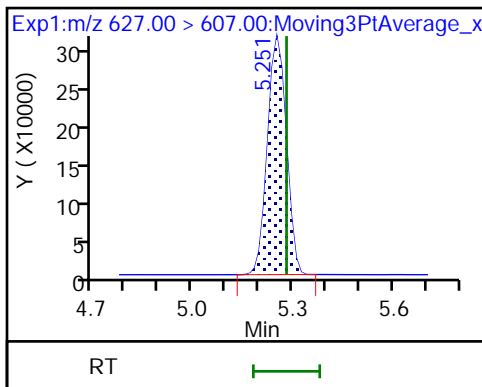
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

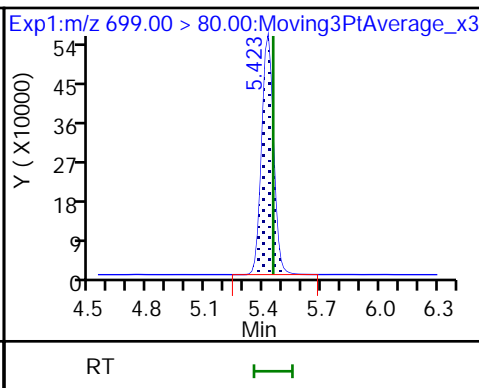
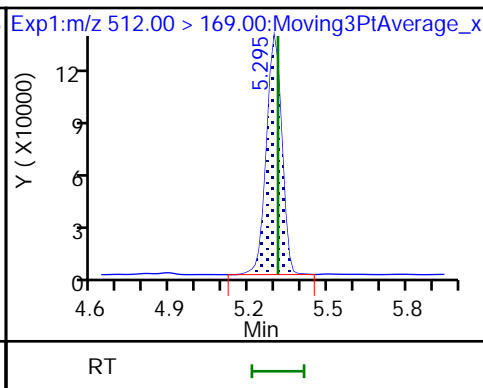
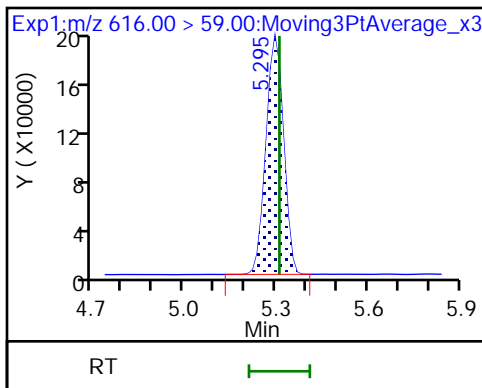
D 58 d-N-MeFOSA-M



49 N-MeFOSE-M

61 NMeFOSA

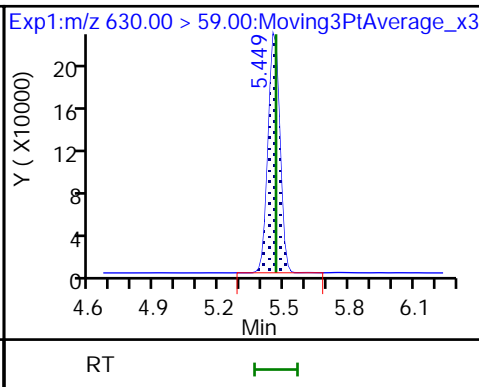
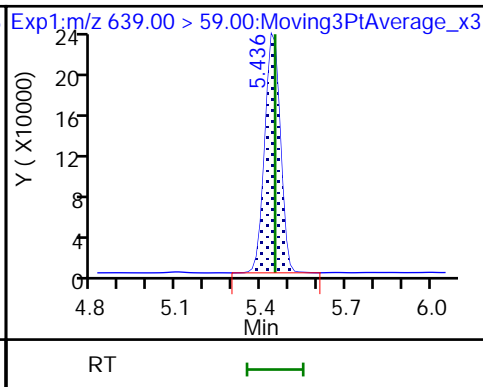
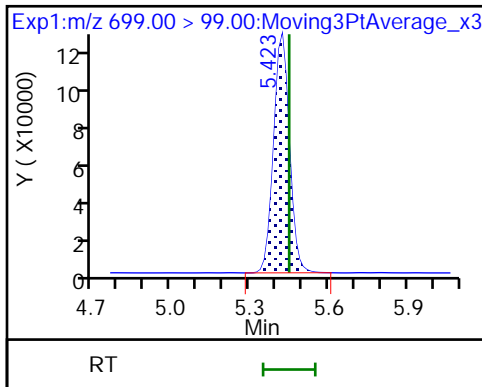
54 PFDoS

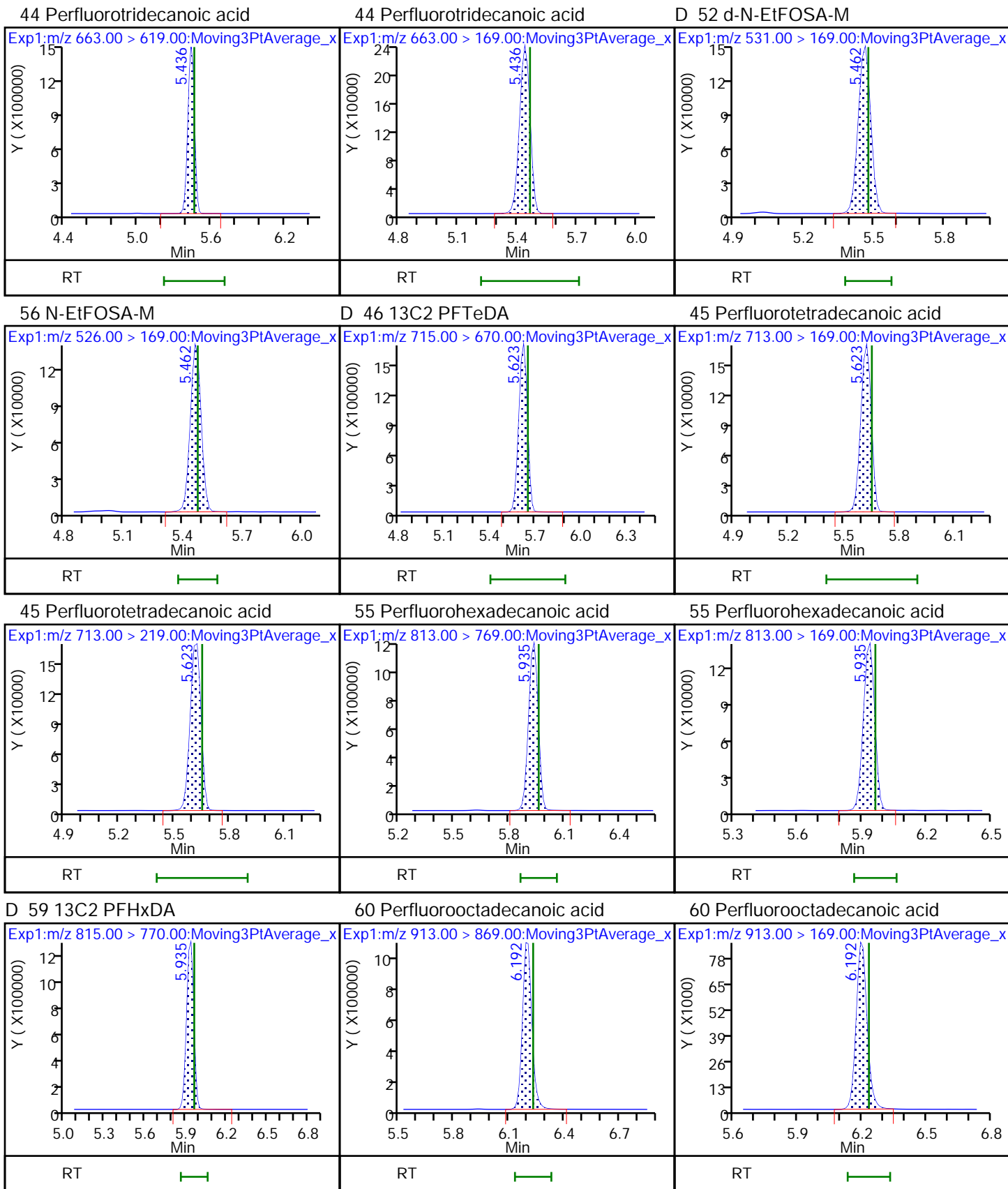


54 PFDoS

D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M





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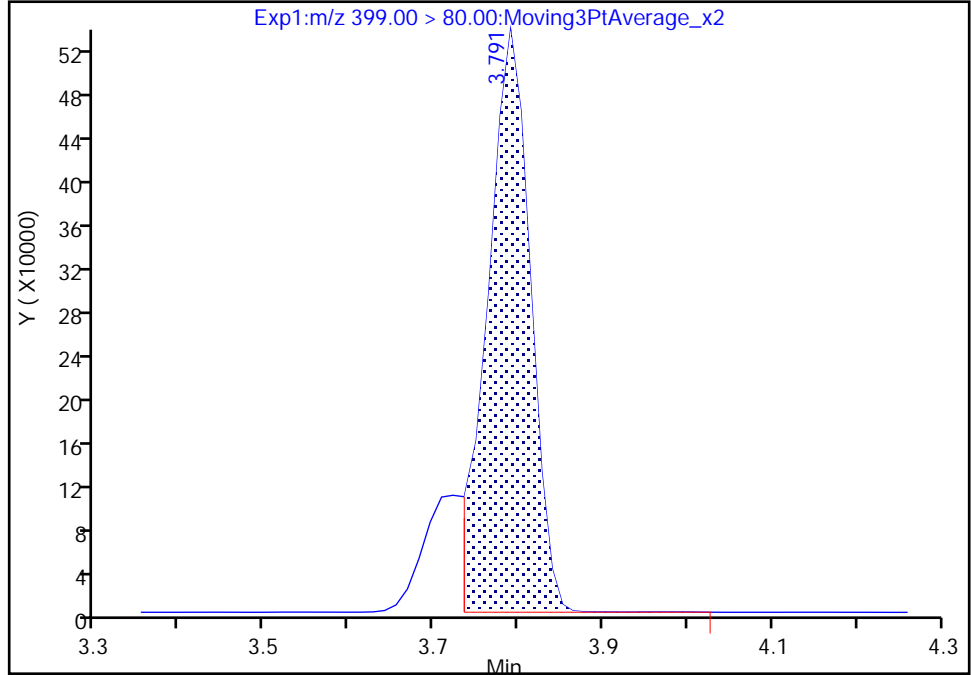
Data File: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b_030.d
Injection Date: 09-Oct-2021 18:47:12 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 30 Worklist Smp#: 30
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

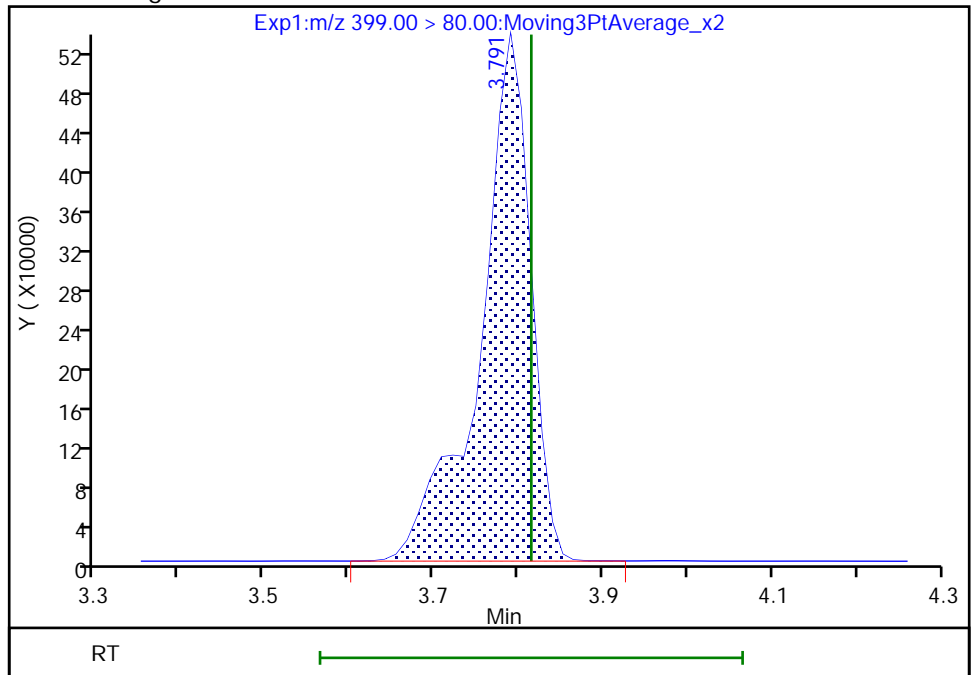
RT: 3.79
Area: 1880071
Amount: 0.743265
Amount Units: ng/ml

Processing Integration Results



RT: 3.79
Area: 2227079
Amount: 0.881392
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 19:19:47
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

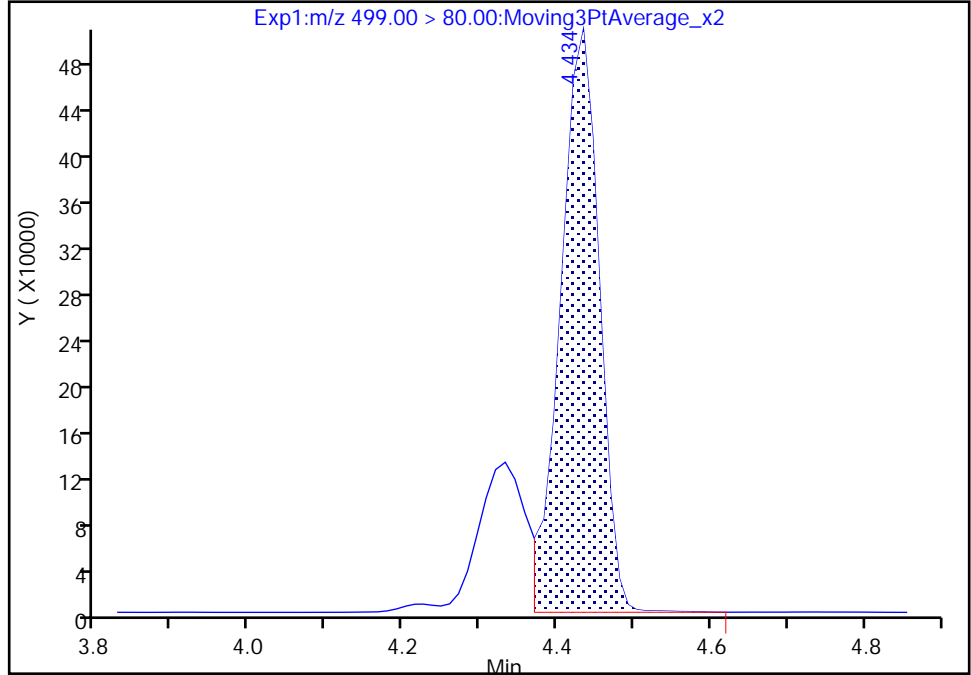
Data File: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b_030.d
Injection Date: 09-Oct-2021 18:47:12 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 30 Worklist Smp#: 30
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

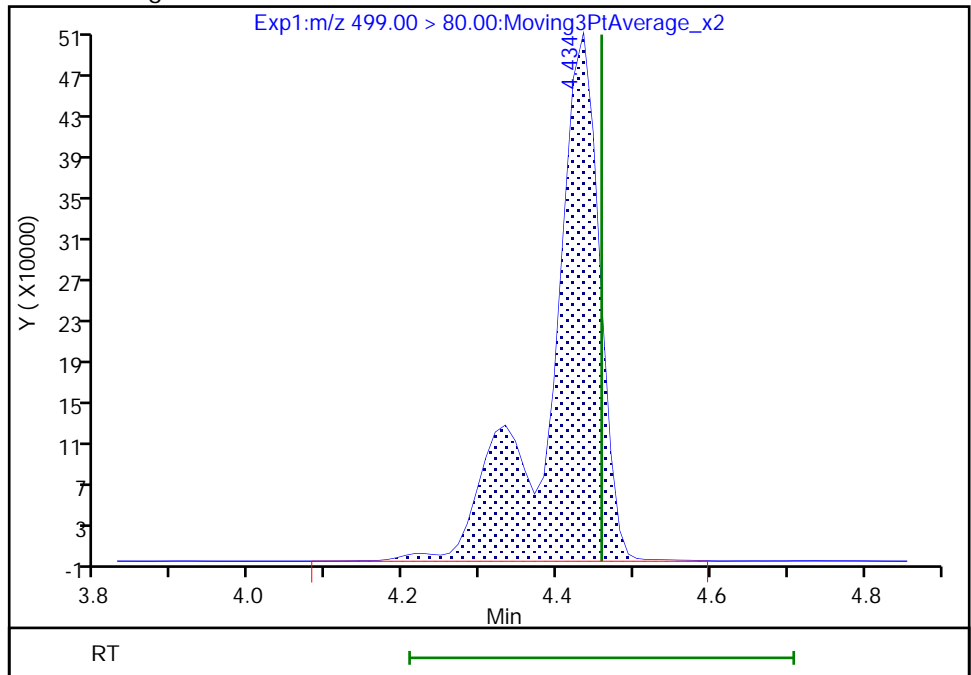
RT: 4.43
Area: 1774140
Amount: 0.654520
Amount Units: ng/ml

Processing Integration Results



RT: 4.43
Area: 2337873
Amount: 0.862494
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 19:19:57
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

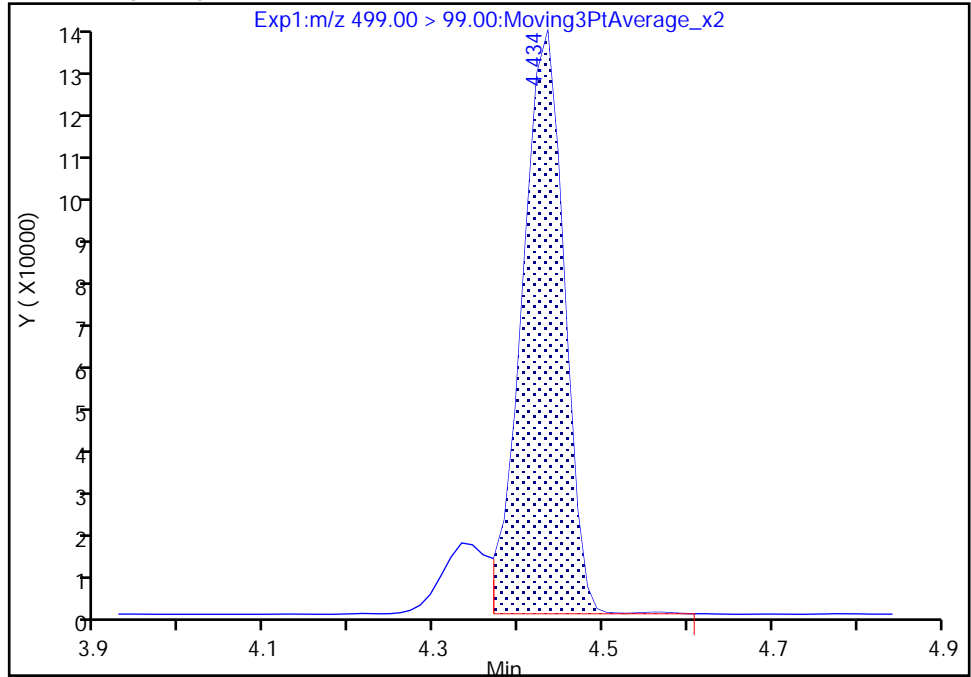
Data File: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b_030.d
Injection Date: 09-Oct-2021 18:47:12 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 30 Worklist Smp#: 30
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

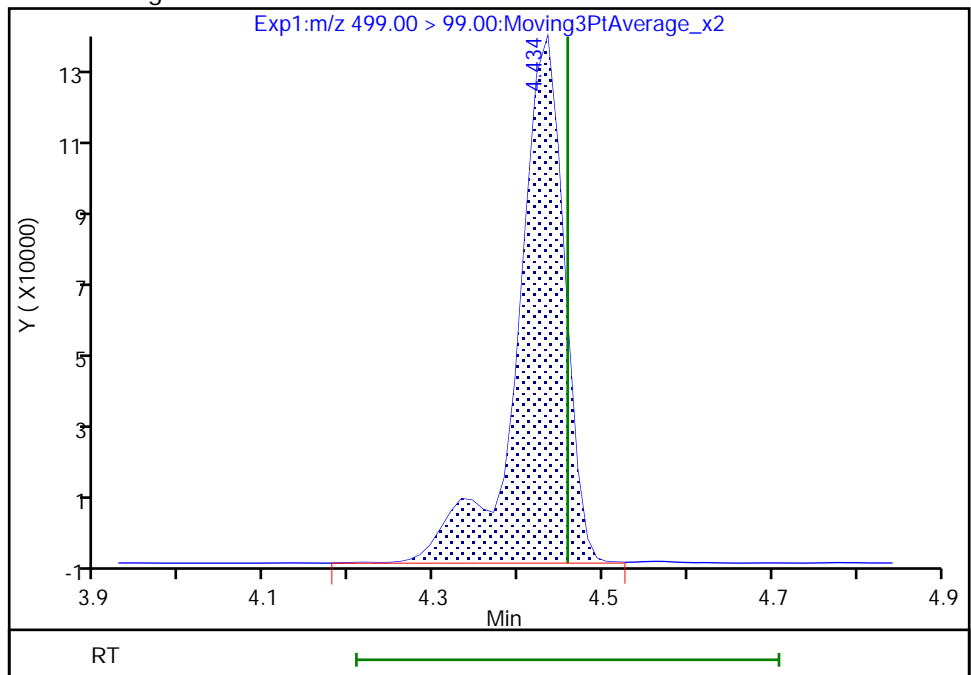
RT: 4.43
Area: 476056
Amount: 0.654520
Amount Units: ng/ml

Processing Integration Results



RT: 4.43
Area: 540688
Amount: 0.862494
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 19:20:02

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

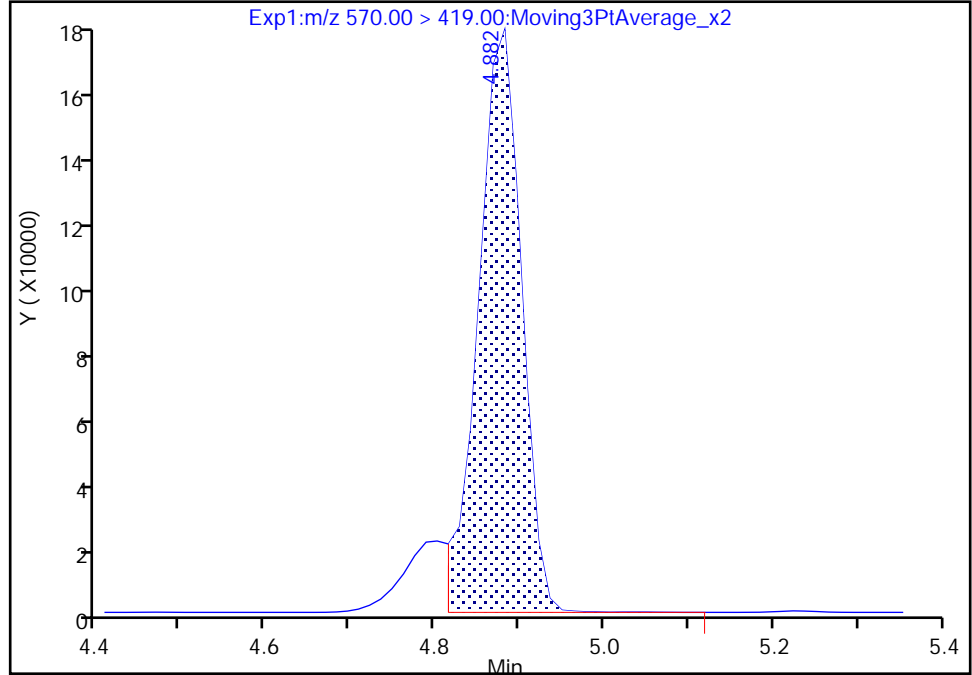
Data File: \\chromfs\Knoxville\ChromData\LCA\20211009-21009.b_030.d
Injection Date: 09-Oct-2021 18:47:12 Instrument ID: LCA
Lims ID: CCV
Client ID:
Operator ID: Cochran, Bobby ALS Bottle#: 30 Worklist Smp#: 30
Injection Vol: 1.0 ul Dil. Factor: 1.0000
Method: PFC_LCA Limit Group: LC - PFC- ICAL
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

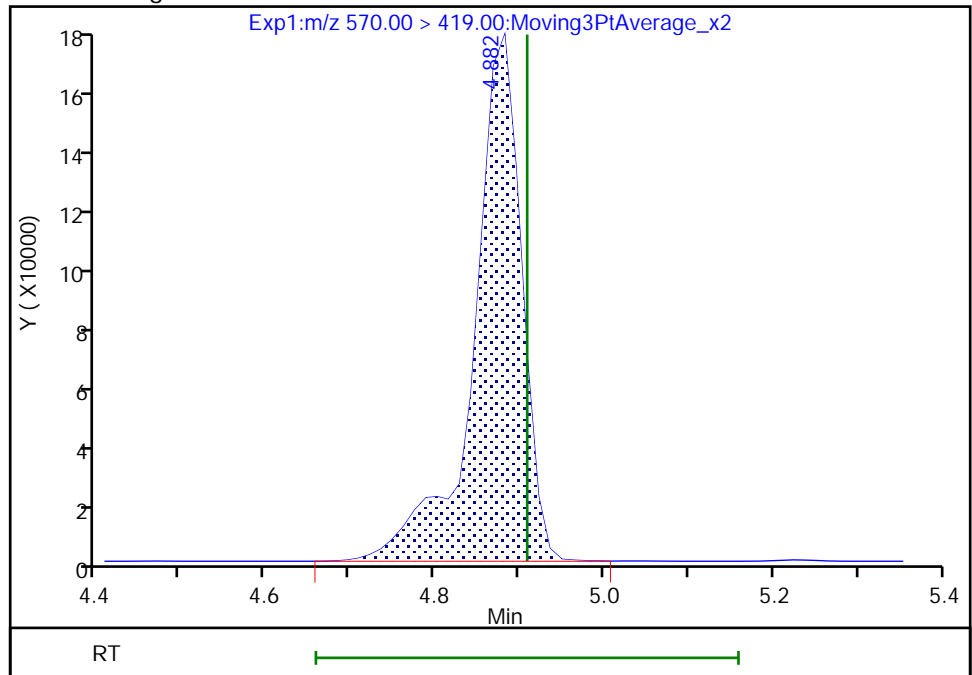
RT: 4.88
Area: 616205
Amount: 0.958664
Amount Units: ng/ml

Processing Integration Results



RT: 4.88
Area: 692892
Amount: 1.078896
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Oct-2021 19:20:12
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-54177/1-B
 Matrix: Air Lab File ID: _091.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: None Date Extracted: 09/24/2021 09:38
 Sample wt/vol: 1 (Sample) Date Analyzed: 10/07/2021 09:49
 Con. Extract Vol.: 50 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: GeminiC18 3x100 ID: 3 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54568 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	ND		0.00100	0.000580

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	94		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_091.d
 Lims ID: MB 140-54177/1-B
 Client ID:
 Sample Type: MB
 Inject. Date: 07-Oct-2021 09:49:31 ALS Bottle#: 37 Worklist Smp#: 91
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-091 mb 140-54177/1-b
 Misc. Info.: Plate: 11 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 18:07:45 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 18:04:11

Ratio Calibration: None

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 2.812 2.801 0.011 0.681 6737936 1.18 94.2 16910
 2 Perfluorobutanoic acid 7M
 212.90 > 169.00 2.812 2.812 0.0 1.000 34739 0.008205 4.7 7M
 LOD = 0.0100

D 3 13C5 PFPeA
 267.90 > 223.00 3.116 3.129 -0.013 0.754 5634700 1.20 96.0 16067
 4 Perfluoropentanoic acid 7
 262.90 > 219.00 3.116 3.129 -0.013 1.000 10744 0.002353 2.2 7
 LOD = 0.006500

D 6 13C3 PFBS
 301.90 > 80.00 3.129 3.129 0.0 0.758 3267795 1.08 92.7 9305
 5 Perfluorobutanesulfonic acid
 298.90 > 80.00 3.143 ND
 298.90 > 99.00 3.143

D 8 M2-4:2 FTS
 329.00 > 81.00 3.409 3.423 -0.014 0.825 567288 1.25 107 654
 7 4:2 FTS
 327.00 > 307.00 3.423 ND
 11 Perfluoropentanesulfonic acid
 349.00 > 80.00 3.453 ND
 349.00 > 99.00 3.453

D 9 13C2 PFHxA
 315.00 > 270.00 3.453 3.469 -0.016 0.836 5931928 1.23 98.4 23186
 10 Perfluorohexanoic acid
 313.00 > 269.00 3.469 ND
 313.00 > 119.00 3.469

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.548	3.561	-0.013	0.859	2894977	1.17		93.8	8434	
13 HFPO-DA										
285.00 > 169.00	3.548	3.561	-0.013	1.000	35049	0.004706		25.9	7	7
LOD = 0.008250										
S 65 ADONA										
377.00 > 251.00		3.592				0				
D 17 18O2 PFHxS										
403.00 > 84.00	3.790	3.803	-0.013	0.918	2047627	1.12		94.4	21442	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.790	3.803	-0.013	1.000	8356	-0.001523	Target=2.96	44.3	7	7
399.00 > 99.00	3.790	3.803	-0.013	1.000	4028		2.07(1.48-4.44)	29.6		
LOD = 0.005000										
D 14 13C4 PFHpA										
367.00 > 322.00	3.803	3.815	-0.012	0.921	5800592	1.21		96.5	15231	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.803	3.815	-0.012	1.000	8170	-0.003020	Target=3.35	4.7	7	7
363.00 > 169.00	3.803	3.815	-0.012	1.000	1810		4.51(1.67-5.02)	7.2		
LOD = 0.004250										
68 DONA										
377.00 > 251.00		3.840				ND				
377.00 > 85.00		3.840								
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00		4.143				ND				
449.00 > 99.00		4.143								
\$ 48 13C8 PFOA										
421.00 > 376.00		4.143				ND				
D 18 M2-6:2 FTS										
429.00 > 81.00	4.131	4.143	-0.012	1.000	654160	1.41		118	2034	
19 6:2 FTS										
427.00 > 407.00	4.131	4.143	-0.012	1.000	1169	-0.005952		5.1	7	7
LOD = 0.005000										
D 21 13C4 PFOA										
417.00 > 372.00	4.131	4.155	-0.024	1.000	5334586	1.23		98.1	22571	
* 22 13C2 PFOA										
415.00 > 370.00	4.131	4.155	-0.024		5399146	1.25			25785	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.131	4.155	-0.024	1.000	10613	-0.006394	Target=2.40	4.3	7	7
413.00 > 169.00	4.131	4.155	-0.024	1.000	4090		2.59(1.20-3.61)	7.1		
LOD = 0.007800										
\$ 47 13C8 PFOS										
507.00 > 99.00		4.447				ND				
D 25 13C4 PFOS										
503.00 > 80.00	4.435	4.447	-0.011	1.074	2684403	1.06		88.9	7692	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.422	4.447	-0.024	0.997	2594	0.001050	Target=3.83	5.1	7M	7M
499.00 > 99.00	4.447	4.447	0.0	0.000	0		0.00(1.91-5.74)			
LOD = 0.005500										

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 27 13C5 PFNA										
468.00 > 423.00	4.447	4.470	-0.023	1.077	6651164	1.20		96.3	15340	
26 Perfluorononanoic acid										
463.00 > 419.00		4.470				ND				
463.00 > 169.00		4.470								
63 9CIFOS										
531.00 > 351.00		4.596				ND				
28 Perfluorononanesulfonic acid										
549.00 > 80.00		4.722				ND				
549.00 > 99.00		4.722								
D 34 13C8 FOSA										
506.00 > 78.00	4.749	4.736	0.013	1.150	4741669	1.28		102	9927	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.763	4.736	0.027	1.003	1690	0.000464		7.8	7	7
LOD = 0.004400										
D 32 13C2 PFDA										
515.00 > 470.00	4.736	4.749	-0.013	1.146	6793582	1.21		97.1	24421	
29 Perfluorodecanoic acid										
513.00 > 469.00		4.749				ND				
513.00 > 169.00		4.749								
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.763	-0.014	1.150	741544	1.30		109	2765	
31 8:2 FTS										
527.00 > 507.00		4.763				ND				
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.883	4.896	-0.013	1.182	822627	1.07		85.9	4329	
36 NMeFOSAA										
570.00 > 419.00		4.896				ND				
37 Perfluorodecanesulfonic acid										
599.00 > 80.00		4.993				ND				
599.00 > 99.00		4.993								
69 Perfluoro-3,6,9-trioxatridecanoic acid										
561.00 > 467.00	4.923	4.994	-0.071	1.110	2456	NC	Target=0.00		0.9	
561.00 > 235.00	4.909	4.994	-0.085	1.107	4133		0.59(0.00-0.00)		0.9	
D 39 13C2 PFUnA										
565.00 > 520.00	4.993	5.022	-0.029	1.209	6420955	1.20		96.1	19151	
38 Perfluoroundecanoic acid										
563.00 > 519.00		5.022				ND				
563.00 > 169.00		5.022								
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.022	5.036	-0.014	1.216	773661	1.05		84.0	3686	
40 NEtFOSA										
584.00 > 419.00		5.036				ND				
57 11CIFOS										
631.00 > 451.00		5.119				ND				
D 43 13C2 PFDoA										
615.00 > 570.00	5.237	5.251	-0.014	1.268	7045689	1.24		98.9	28183	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
42 Perfluorododecanoic acid										
613.00 > 569.00		5.251				ND				
613.00 > 169.00		5.251								
50 10:2 FTS										
627.00 > 607.00		5.266				ND				
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.295	5.281	0.014	1.282	612414	1.32		105	306	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.282	539591	1.12		89.3	45.1	
49 N-MeFOSE-M										
616.00 > 59.00		5.295				ND				
61 NMeFOSA										
512.00 > 169.00		5.295				ND				
54 PFDoS										
699.00 > 80.00		5.436				ND				
699.00 > 99.00		5.436								
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.449	5.436	0.013	1.319	696151	1.41		112	455	
62 N-EtFOSE-M										
630.00 > 59.00		5.449				ND				
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.449	0.013	1.322	475669	1.17		93.5	776	
44 Perfluorotridecanoic acid										
663.00 > 619.00		5.462				ND				
663.00 > 169.00		5.462								
56 N-EtFOSA-M										
526.00 > 169.00		5.462				ND				
D 46 13C2 PFTeDA										
715.00 > 670.00	5.638	5.637	0.001	1.365	6122282	1.17		93.7	14121	
45 Perfluorotetradecanoic acid										
713.00 > 169.00		5.637				ND				
713.00 > 219.00		5.637								
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.948	5.948	0.0	1.000	45782	-0.001924	Target=7.50	79.9	7	7
813.00 > 169.00	5.948	5.948	0.0	1.000	5160		8.87(3.75-11.26)	42.2		
LOD = 0.009000										
D 59 13C2 PFHxDA										
815.00 > 770.00	5.948	5.948	0.0	1.440	4588309	1.21		96.8	8246	
60 Perfluorooctadecanoic acid										
913.00 > 869.00		6.221				ND				
913.00 > 169.00		6.221								
S 66 F-53B										
212.90 > 169.00		0.0				0				
S 67 NaDONA										
377.00 > 251.00		0.0				0				
377.00 > 85.00		0.0								

QC Flag Legend

Processing Flags

NC - Not Calibrated

ND - Not Detected or Marked ND

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_091.d

Injection Date: 07-Oct-2021 09:49:31

Instrument ID: LCA

Lims ID: MB 140-54177/1-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 37

Worklist Smp#: 91

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

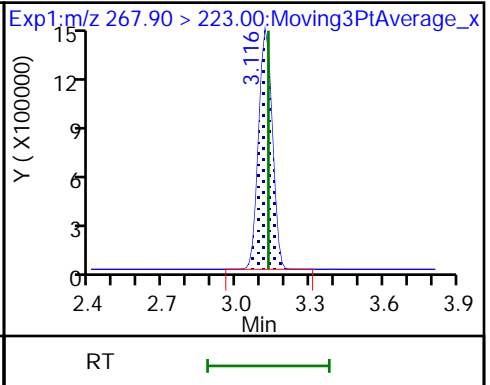
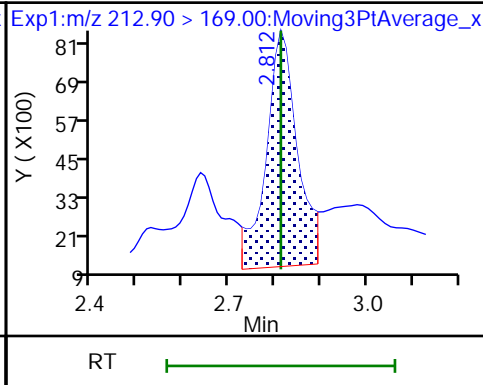
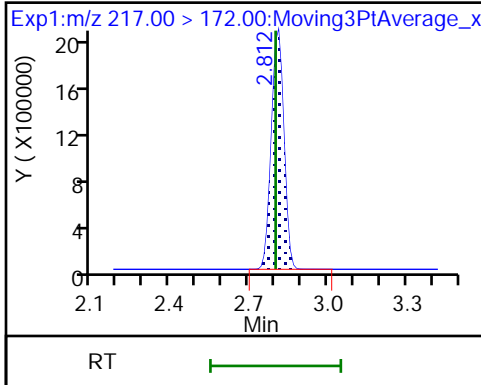
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid (M)

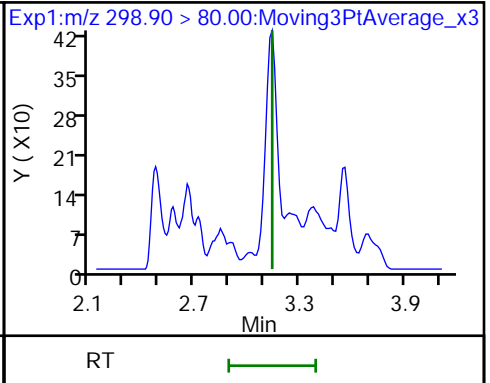
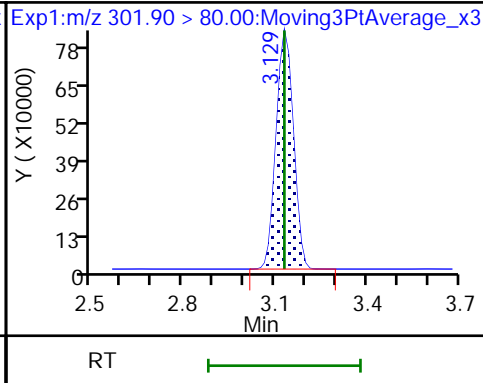
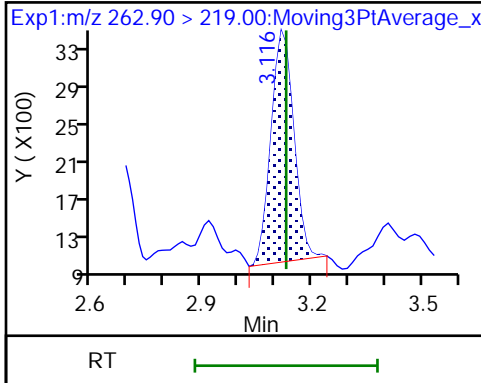
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

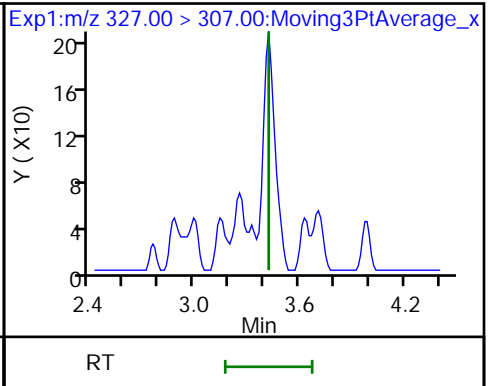
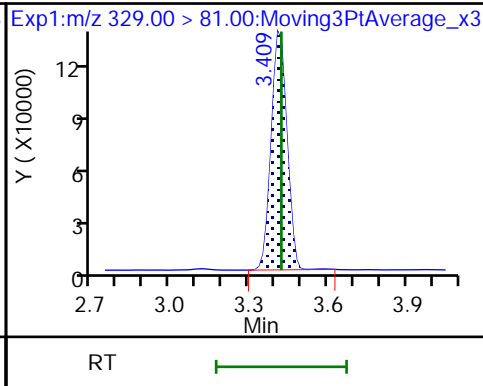
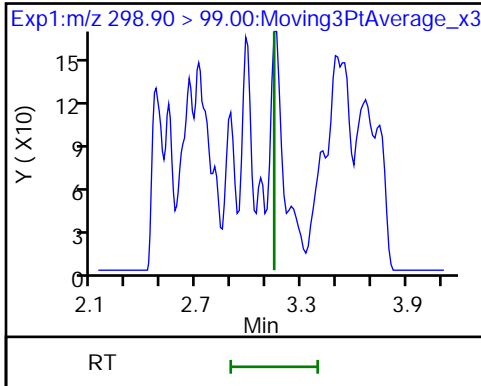
5 Perfluorobutanesulfonic acid (ND)



5 Perfluorobutanesulfonic acid (ND)

D 8 M2-4:2 FTS

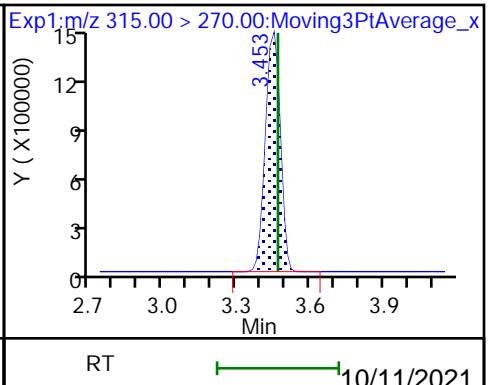
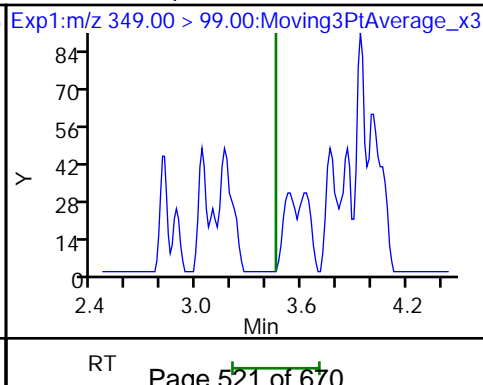
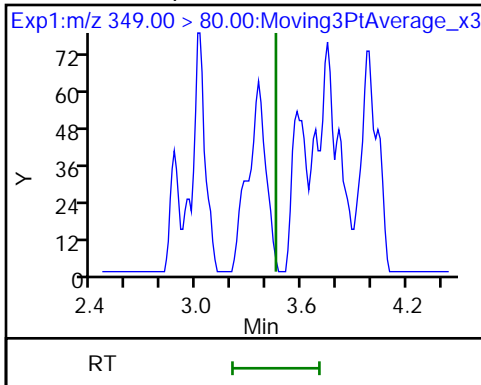
7 4:2 FTS (ND)

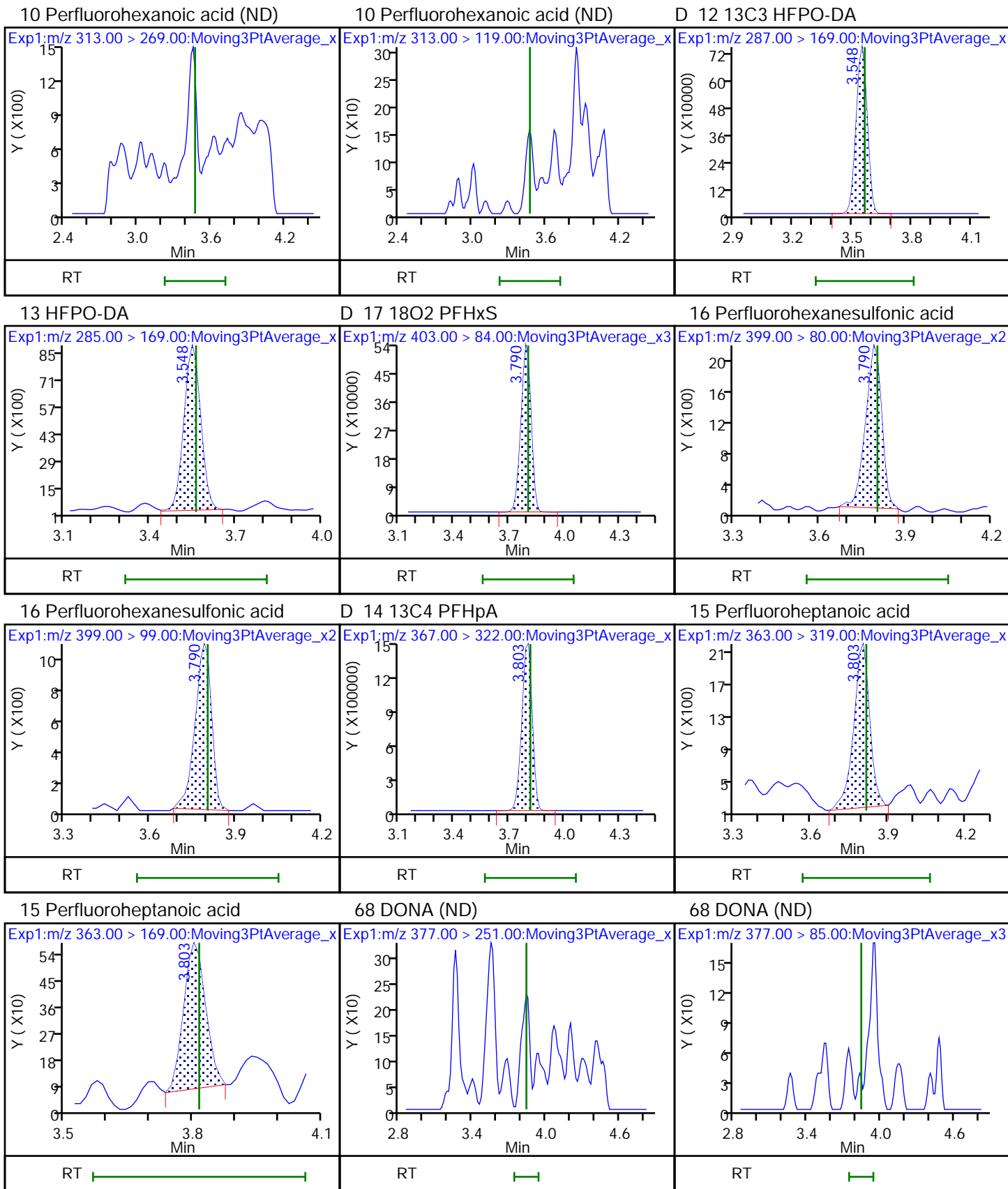


11 Perfluoropentanesulfonic acid (ND)

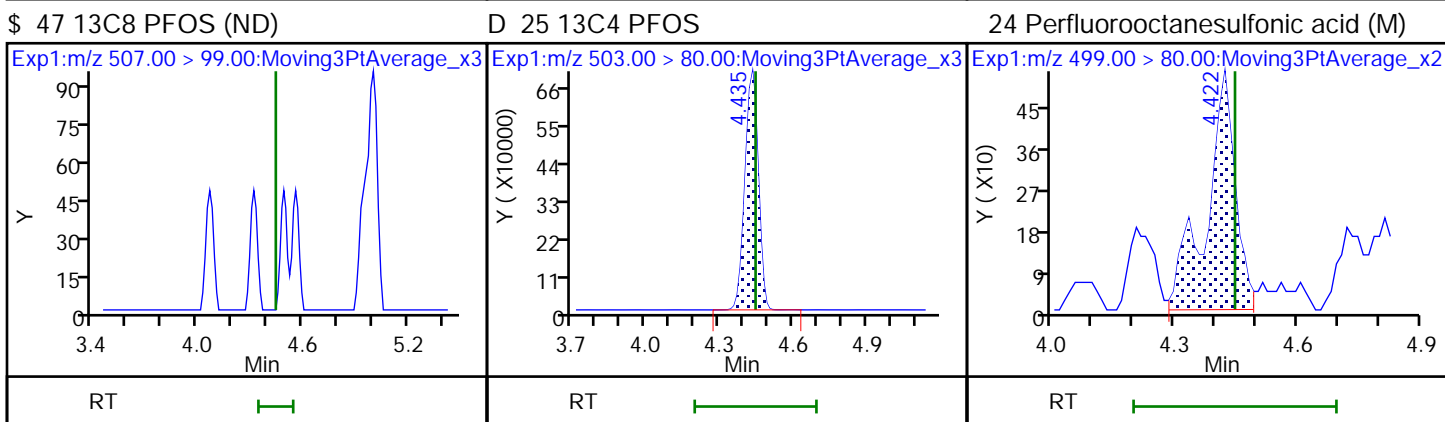
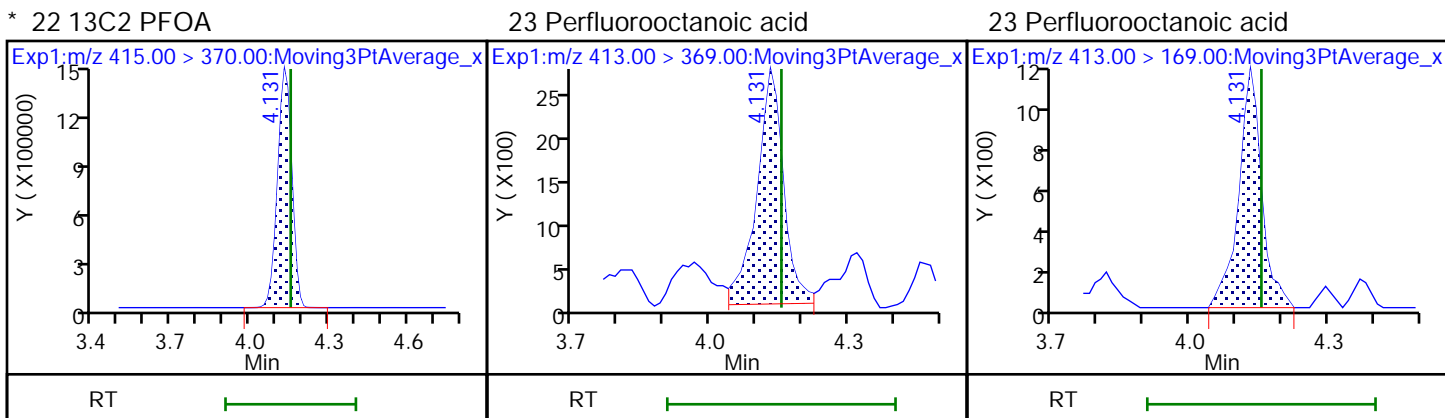
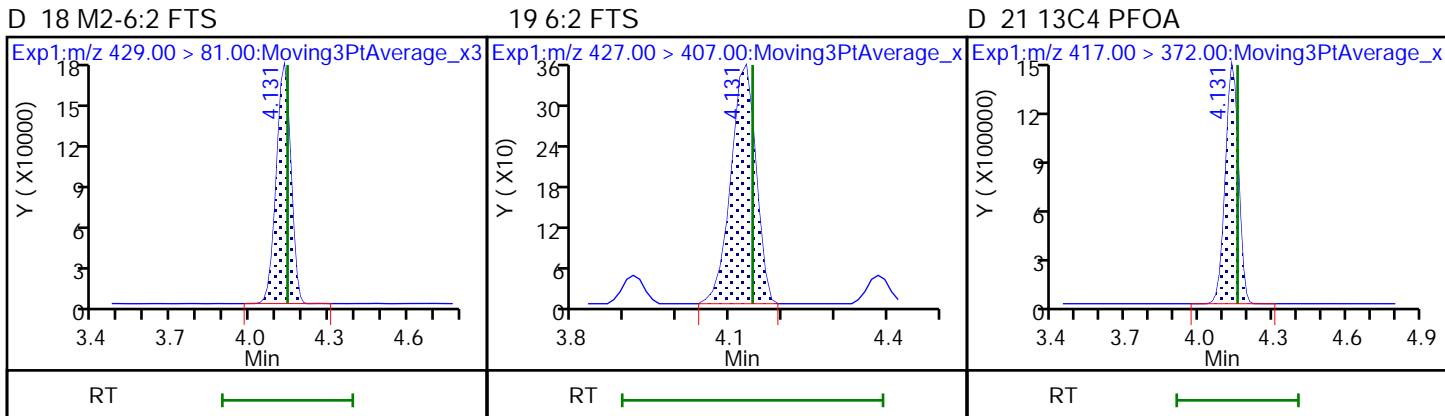
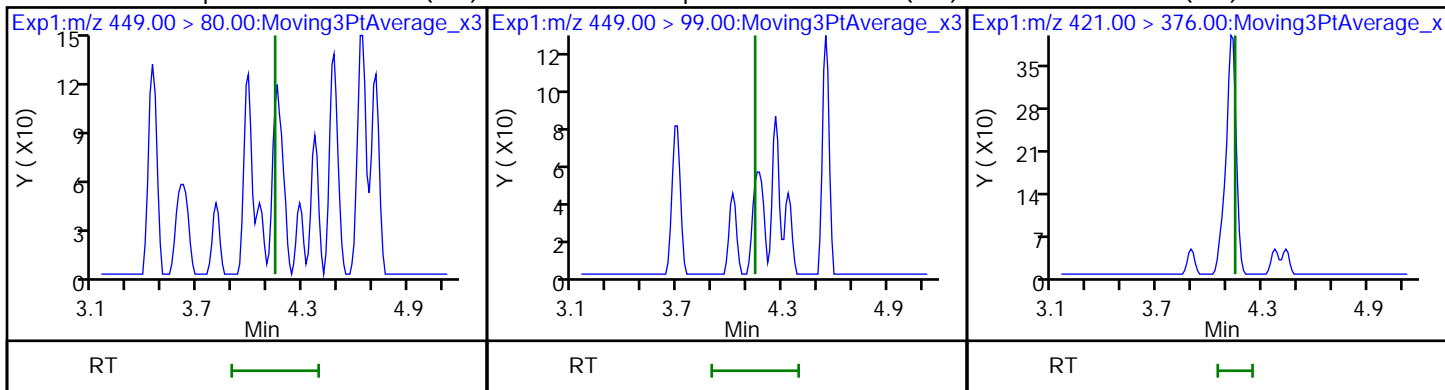
11 Perfluoropentanesulfonic acid (ND)

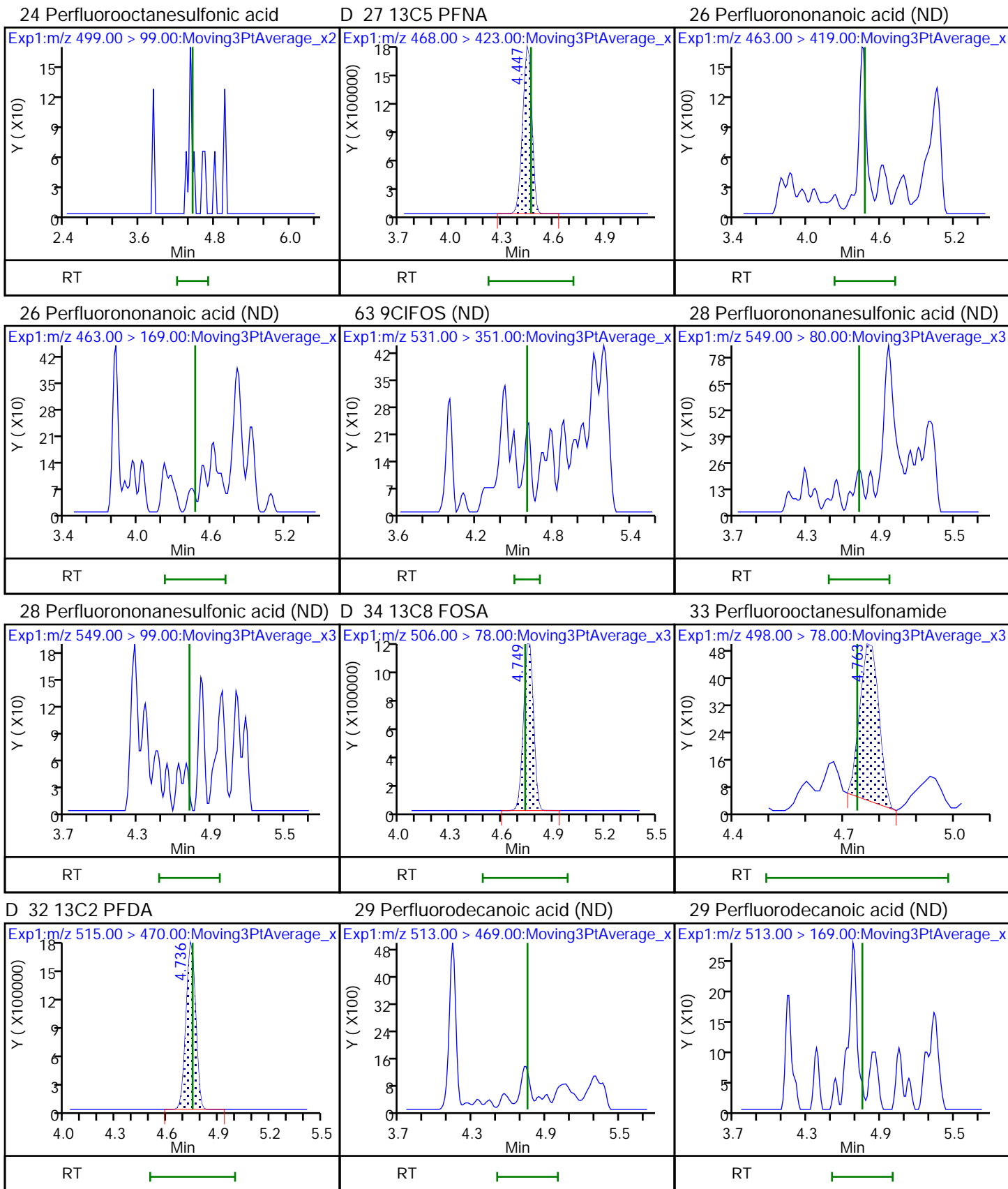
D 9 13C2 PFHxA





20 Perfluoroheptanesulfonic acid (ND) 20 Perfluoroheptanesulfonic acid (ND) \$ 48 13C8 PFOA (ND)

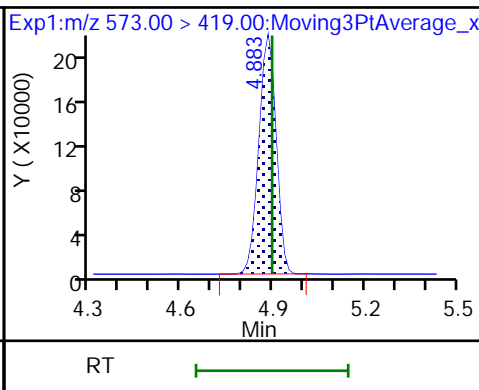
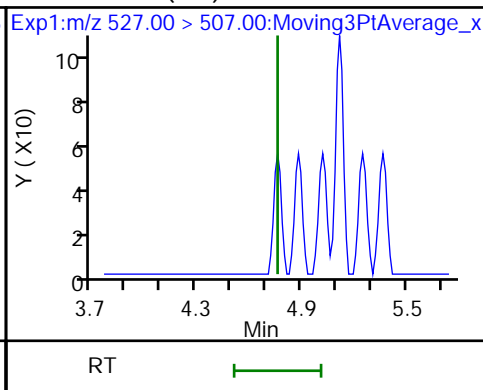
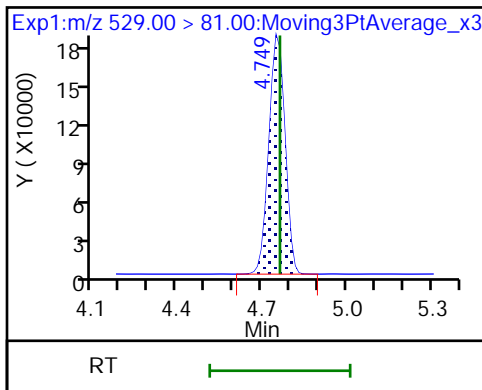




D 30 M2-8:2 FTS

31 8:2 FTS (ND)

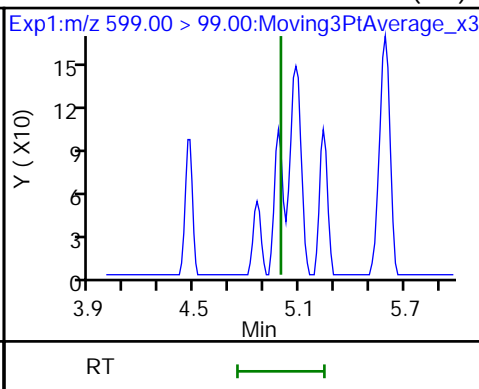
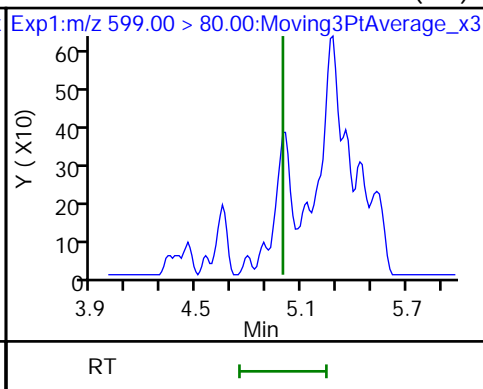
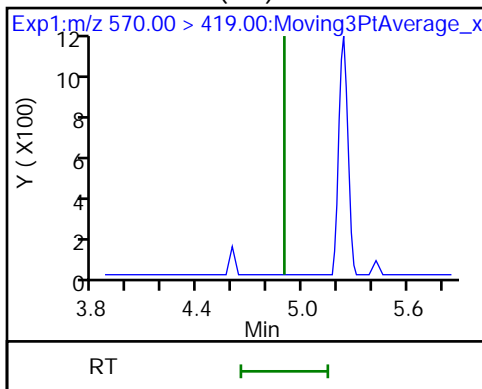
D 35 d3-NMeFOSAA



36 NMeFOSAA (ND)

37 Perfluorodecanesulfonic acid (ND)

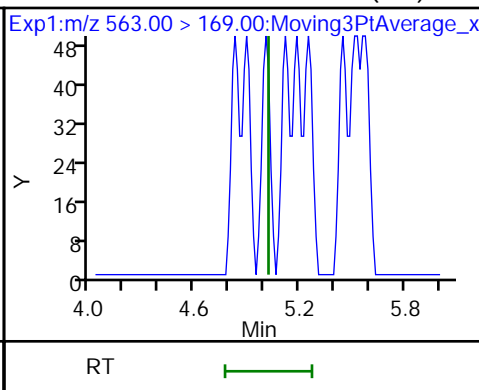
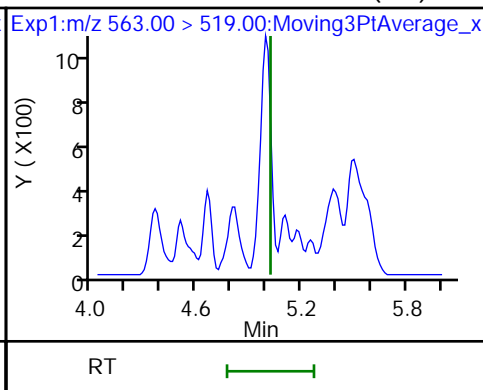
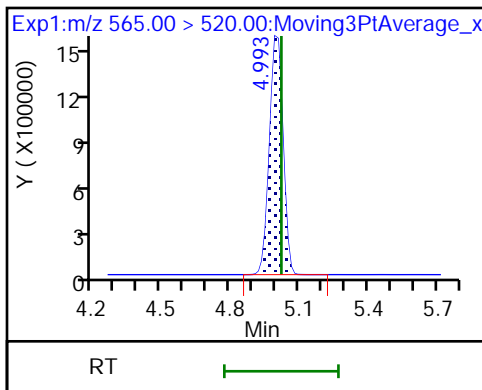
37 Perfluorodecanesulfonic acid (ND)



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid (ND)

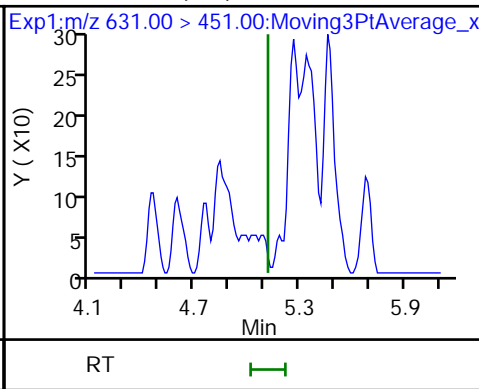
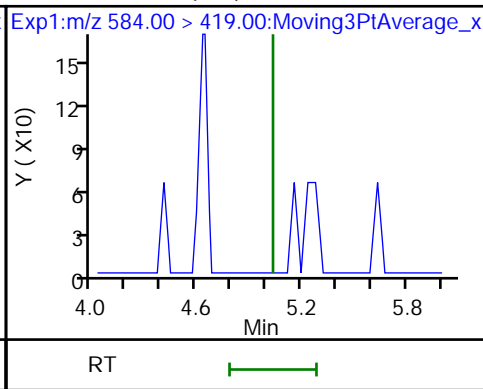
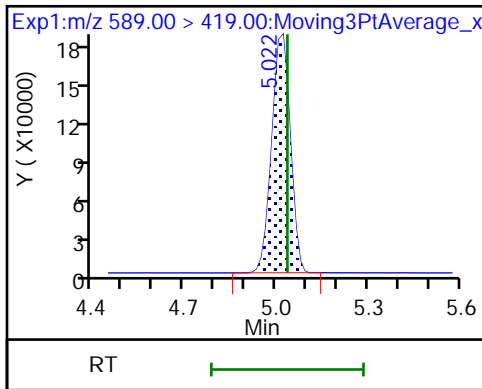
38 Perfluoroundecanoic acid (ND)



D 41 d5-NEtFOSAA

40 NEtFOSA (ND)

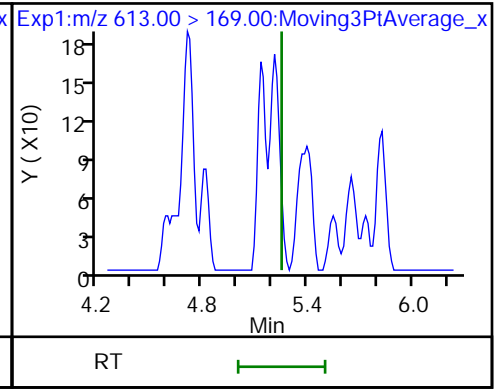
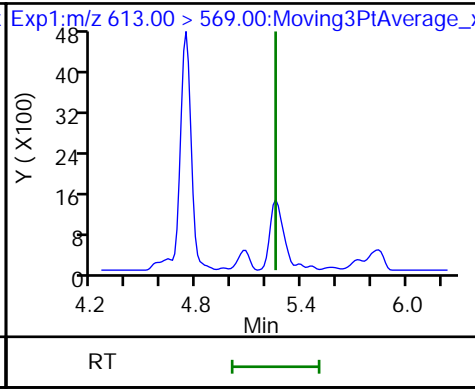
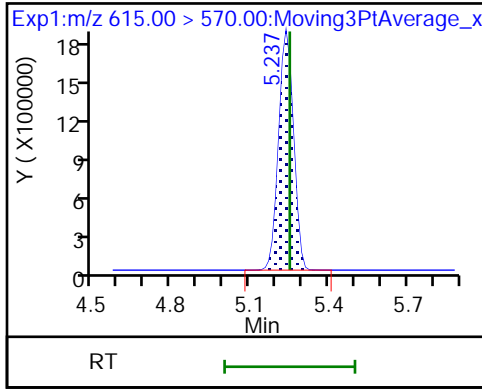
57 11C1FOS (ND)



D 43 13C2 PFDaA

42 Perfluorododecanoic acid (ND)

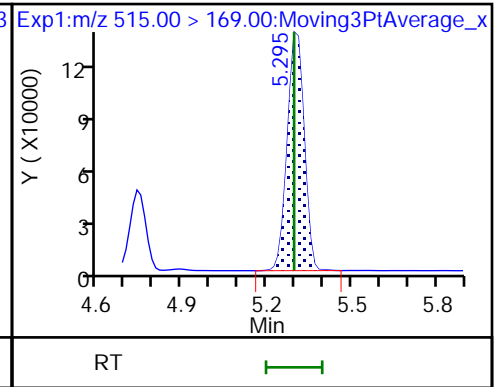
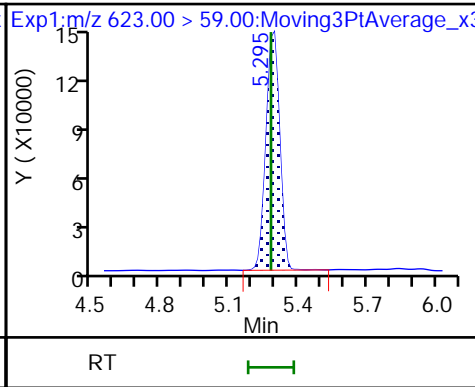
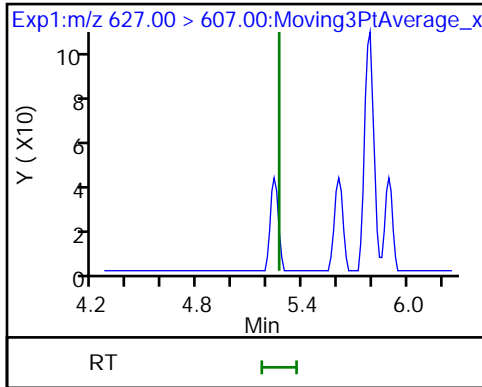
42 Perfluorododecanoic acid (ND)



50 10:2 FTS (ND)

D 51 d7-N-MeFOSE-M

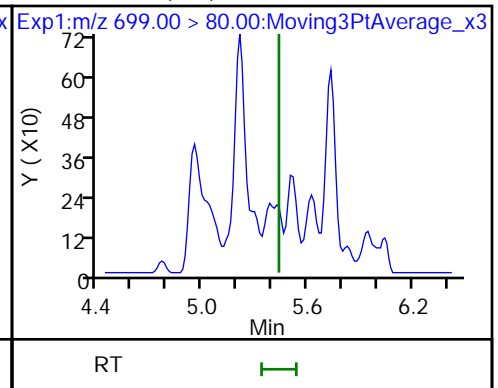
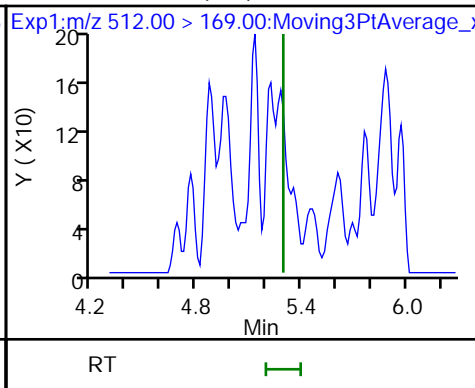
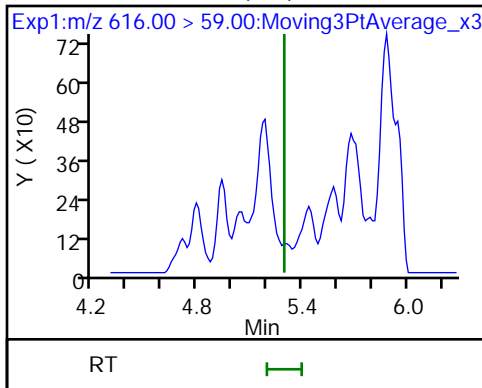
D 58 d-N-MeFOSA-M



49 N-MeFOSE-M (ND)

61 NMeFOSA (ND)

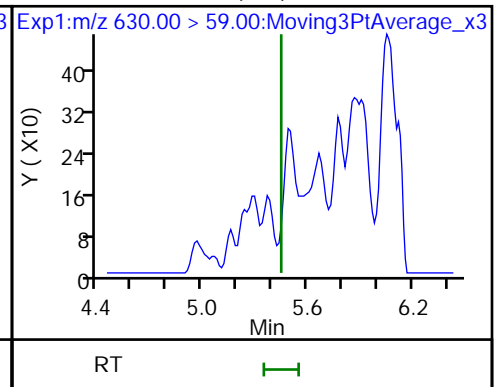
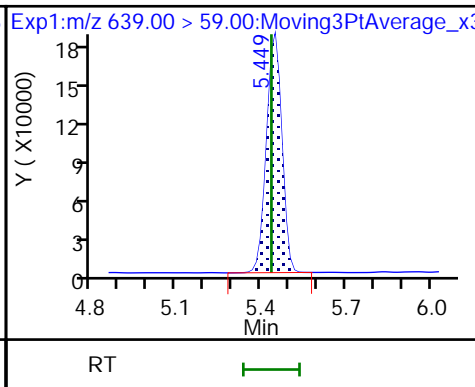
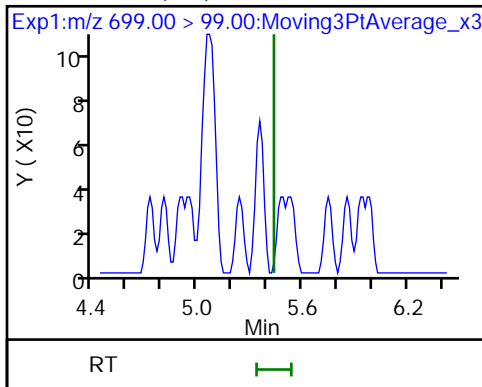
54 PFDoS (ND)



54 PFDoS (ND)

D 53 d9-N-EtFOSE-M

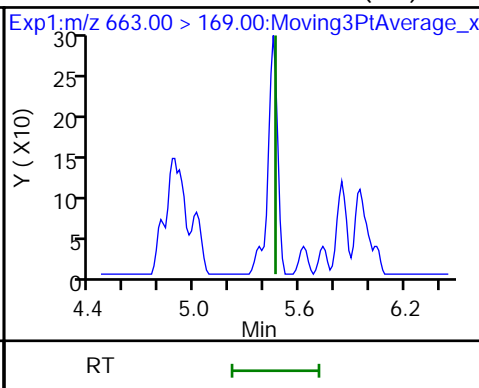
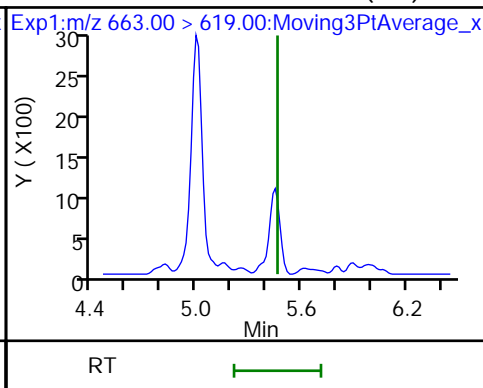
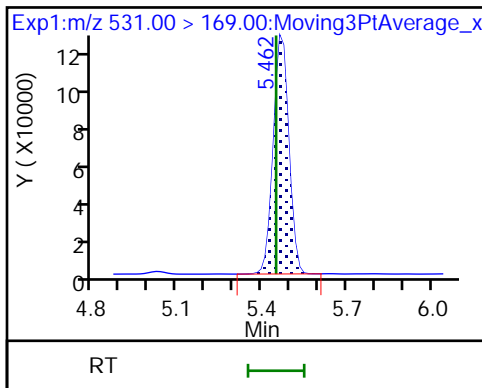
62 N-EtFOSE-M (ND)



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid (ND)

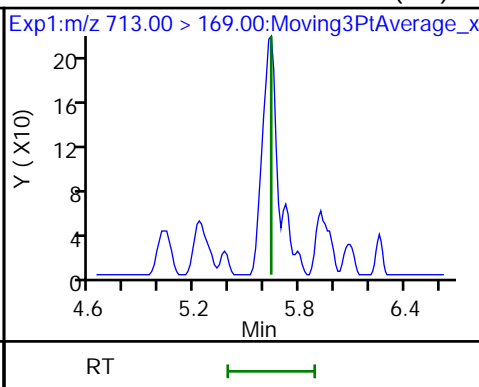
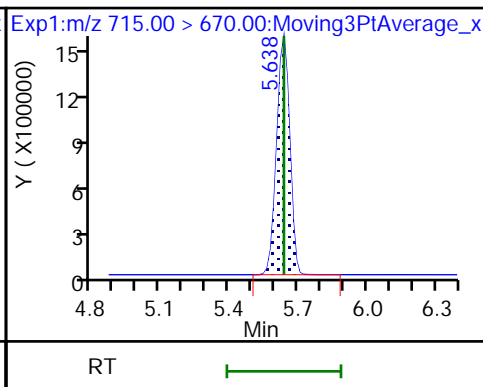
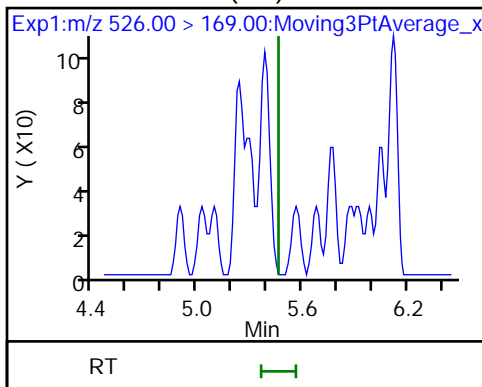
44 Perfluorotridecanoic acid (ND)



56 N-EtFOSA-M (ND)

D 46 13C2 PFTeDA

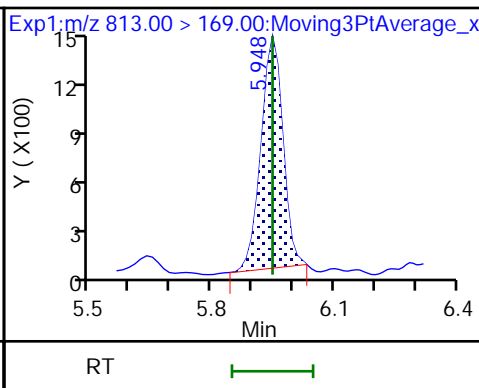
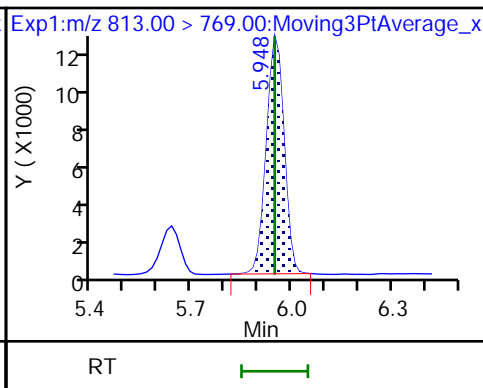
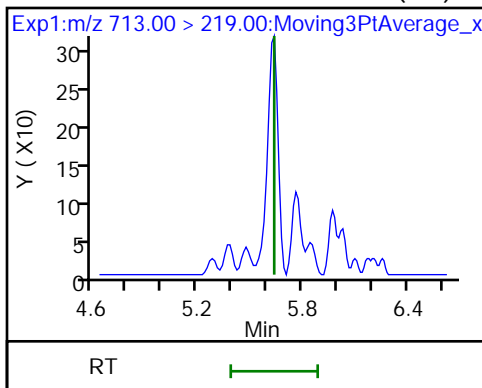
45 Perfluorotetradecanoic acid (ND)



45 Perfluorotetradecanoic acid (ND)

55 Perfluorohexadecanoic acid

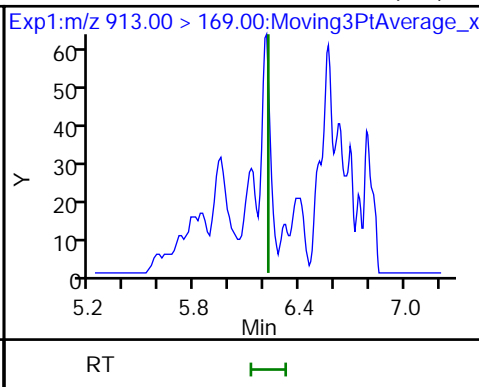
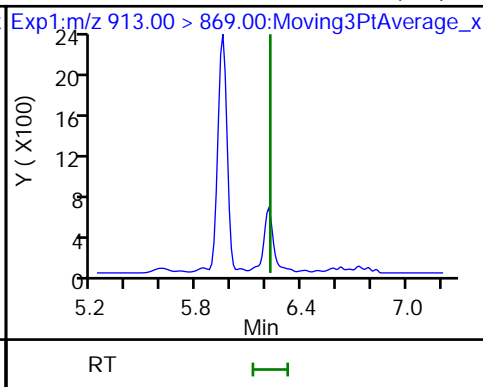
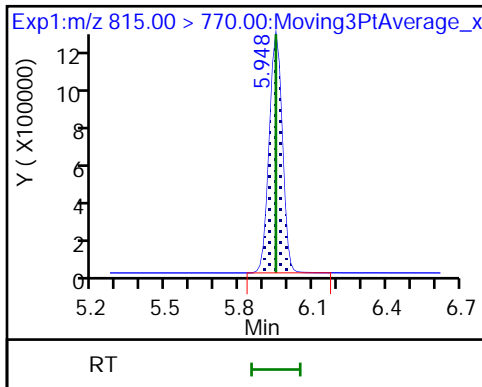
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid (ND)

60 Perfluorooctadecanoic acid (ND)



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-54178/1-B
 Matrix: Air Lab File ID: _064.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: None Date Extracted: 09/24/2021 09:41
 Sample wt/vol: 1(Sample) Date Analyzed: 10/07/2021 05:50
 Con. Extract Vol.: 360(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: GeminiC18 3x100 ID: 3(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54568 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	ND		0.00160	0.00140

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	87		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_064.d
 Lims ID: MB 140-54178/1-B
 Client ID:
 Sample Type: MB
 Inject. Date: 07-Oct-2021 05:50:31 ALS Bottle#: 10 Worklist Smp#: 64
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-064 mb 140-54178/1-b
 Misc. Info.: Plate: 11 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 17:50:07 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 17:43:25

Ratio Calibration: None

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
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D 1 13C4 PFBA	217.00 > 172.00	2.801	2.801	0.0	0.678	6129005	1.00	80.1	12734	
2 Perfluorobutanoic acid										M
212.90 > 169.00	2.801	2.812	-0.011	1.000	122649	0.0318		4.9		M
D 3 13C5 PFPeA	267.90 > 223.00	3.116	3.129	-0.013	0.754	5581026	1.11	88.8	14195	
4 Perfluoropentanoic acid										7M
262.90 > 219.00	3.116	3.129	-0.013	1.000	18063	0.003994		1.5		7M
LOD = 0.006500										
D 6 13C3 PFBS	301.90 > 80.00	3.130	3.129	0.001	0.758	2158010	0.6650	57.2	2115	
5 Perfluorobutanesulfonic acid										M
298.90 > 80.00	3.130	3.143	-0.013	1.000	11341	0.005425	Target=3.06	8.7		M
298.90 > 99.00	3.130	3.143	-0.013	1.000	3834		2.96(1.53-4.59)	3.5		
D 8 M2-4:2 FTS	329.00 > 81.00	3.409	3.423	-0.014	0.825	633198	1.30	111	492	
7 4:2 FTS										
327.00 > 307.00		3.423								ND
11 Perfluoropentanesulfonic acid										
349.00 > 80.00		3.453								ND
349.00 > 99.00		3.453								
D 9 13C2 PFHxA	315.00 > 270.00	3.437	3.469	-0.032	0.832	5719975	1.11	88.7	14542	
10 Perfluorohexanoic acid										7
313.00 > 269.00	3.437	3.469	-0.032	1.000	27597	0.007035	Target=9.74	6.6		7
313.00 > 119.00	3.437	3.469	-0.032	1.000	2585		10.68(4.87-14.61)	4.0		
LOD = 0.008000										

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.535	3.561	-0.026	0.856	2856564	1.08		86.5	12042	
13 HFPO-DA										
285.00 > 169.00	3.535	3.561	-0.026	1.000	16035	-0.001193		21.8	7	7
LOD = 0.008250										
S 65 ADONA										
377.00 > 251.00		3.592				0				
D 17 18O2 PFHxS										
403.00 > 84.00	3.791	3.803	-0.012	0.918	1284448	0.6541		55.3	9540	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.791	3.803	-0.012	1.000	7428	-0.00003354	Target=2.96	17.1	7	7
399.00 > 99.00	3.791	3.803	-0.012	1.000	4377		1.70(1.48-4.44)	17.3		
LOD = 0.005000										
D 14 13C4 PFHpA										
367.00 > 322.00	3.791	3.815	-0.024	0.918	5712210	1.11		88.8	21706	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.791	3.815	-0.024	1.000	136184	0.0236	Target=3.35	36.3		
363.00 > 169.00	3.791	3.815	-0.024	1.000	43925		3.10(1.67-5.02)	217		
68 DONA										
377.00 > 251.00		3.840				ND				
377.00 > 85.00		3.840								
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00		4.143				ND				
449.00 > 99.00		4.143								
\$ 48 13C8 PFOA										
421.00 > 376.00		4.143				ND				
D 18 M2-6:2 FTS										
429.00 > 81.00	4.131	4.143	-0.012	1.000	655486	1.32		111	2648	
19 6:2 FTS										
427.00 > 407.00		4.143				ND				
D 21 13C4 PFOA										
417.00 > 372.00	4.131	4.155	-0.024	1.000	5337205	1.15		91.7	14761	
* 22 13C2 PFOA										
415.00 > 370.00	4.131	4.155	-0.024		5778922	1.25		27515		
23 Perfluorooctanoic acid										
413.00 > 369.00	4.131	4.155	-0.024	1.000	17740	-0.004876	Target=2.40	6.9	R7M	R7M
413.00 > 169.00	4.131	4.155	-0.024	1.000	3800		4.67(1.20-3.61)	10.9		
LOD = 0.007800										
\$ 47 13C8 PFOS										
507.00 > 99.00		4.447				ND				
D 25 13C4 PFOS										
503.00 > 80.00	4.422	4.447	-0.024	1.070	1558647	0.5761		48.2	4951	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.447	4.447	0.001	1.006	9097	0.006342	Target=3.83	6.0	RM	RM
499.00 > 99.00	4.422	4.447	-0.024	1.000	953		9.55(1.91-5.74)	3.6	M	M
D 27 13C5 PFNA										
468.00 > 423.00	4.447	4.470	-0.023	1.076	6428344	1.09		86.9	14157	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
26 Perfluorononanoic acid										
463.00 > 419.00		4.470				ND				
463.00 > 169.00		4.470								
63 9CIFOS										
531.00 > 351.00		4.596				ND				
28 Perfluorononanesulfonic acid										
549.00 > 80.00		4.722				ND				
549.00 > 99.00		4.722								
D 34 13C8 FOSA										
506.00 > 78.00	4.722	4.736	-0.014	1.143	4141829	1.04		83.4	6102	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.736	4.736	0.0	1.003	4834	0.001519		13.6	7M	7M
LOD = 0.004400										
D 32 13C2 PFDA										
515.00 > 470.00	4.736	4.749	-0.013	1.146	6897812	1.15		92.1	19480	
29 Perfluorodecanoic acid										
513.00 > 469.00		4.749				ND				
513.00 > 169.00		4.749								
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.763	-0.014	1.150	812058	1.33		111	2278	
31 8:2 FTS										
527.00 > 507.00		4.763				ND				
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.869	4.896	-0.027	1.179	908468	1.11		88.6	4683	
36 NMeFOSAA										
570.00 > 419.00		4.896				ND				
37 Perfluorodecanesulfonic acid										
599.00 > 80.00		4.993				ND				
599.00 > 99.00		4.993								
69 Perfluoro-3,6,9-trioxatridecanoic acid										
561.00 > 467.00	4.909	4.994	-0.085	1.110	2660	NC	Target=0.00		0.8	
561.00 > 235.00	4.922	4.994	-0.072	1.113	2387		1.11(0.00-0.00)		0.9	
D 39 13C2 PFUnA										
565.00 > 520.00	4.993	5.022	-0.029	1.209	6239547	1.09		87.3	16276	
38 Perfluoroundecanoic acid										
563.00 > 519.00		5.022				ND				
563.00 > 169.00		5.022								
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.008	5.036	-0.028	1.212	884299	1.12		89.7	3497	
40 NEtFOSA										
584.00 > 419.00		5.036				ND				
57 11CIFOS										
631.00 > 451.00		5.119				ND				
D 43 13C2 PFDoA										
615.00 > 570.00	5.224	5.251	-0.027	1.265	6367220	1.04		83.5	22565	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
42 Perfluorododecanoic acid										
613.00 > 569.00		5.251				ND				
613.00 > 169.00		5.251								
50 10:2 FTS										
627.00 > 607.00		5.266				ND				
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.281	5.281	0.0	1.278	684974	1.38		110	387	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.282	509599	0.9846		78.8	41.6	
49 N-MeFOSE-M										
616.00 > 59.00		5.295				ND				
61 NMeFOSA										
512.00 > 169.00		5.295				ND				
54 PFDoS										
699.00 > 80.00		5.436				ND				
699.00 > 99.00		5.436								
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.436	5.436	0.0	1.316	666153	1.26		101	676	
62 N-EtFOSE-M										
630.00 > 59.00	5.396	5.449	-0.053	0.993	2648	-0.000560		4.0		7M
LOD = 0.006000										
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.449	0.013	1.322	452058	1.04		83.0	579	
44 Perfluorotridecanoic acid										
663.00 > 619.00		5.462				ND				
663.00 > 169.00		5.462								
56 N-EtFOSA-M										
526.00 > 169.00		5.462				ND				
D 46 13C2 PFTeDA										
715.00 > 670.00	5.623	5.637	-0.014	1.361	4568256	0.8161		65.3	10736	
45 Perfluorotetradecanoic acid										
713.00 > 169.00		5.637				ND				
713.00 > 219.00		5.637								
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.935	5.948	-0.013	1.000	13054	-0.001210	Target=7.50	21.8		7
813.00 > 169.00	5.935	5.948	-0.013	1.000	1724		7.57(3.75-11.26)	16.6		7
LOD = 0.009000										
D 59 13C2 PFHxDA										
815.00 > 770.00	5.935	5.948	-0.013	1.437	1231410	0.3033		24.3	3886	
60 Perfluorooctadecanoic acid										
913.00 > 869.00		6.221				ND				
913.00 > 169.00		6.221								
S 66 F-53B										
212.90 > 169.00		0.0				0				
S 67 NaDONA										
377.00 > 251.00		0.0				0				
377.00 > 85.00		0.0								

QC Flag Legend

Processing Flags

NC - Not Calibrated

ND - Not Detected or Marked ND

R - Failed Signal Ratio Test

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\064.d

Injection Date: 07-Oct-2021 05:50:31

Instrument ID: LCA

Lims ID: MB 140-54178/1-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 10

Worklist Smp#: 64

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

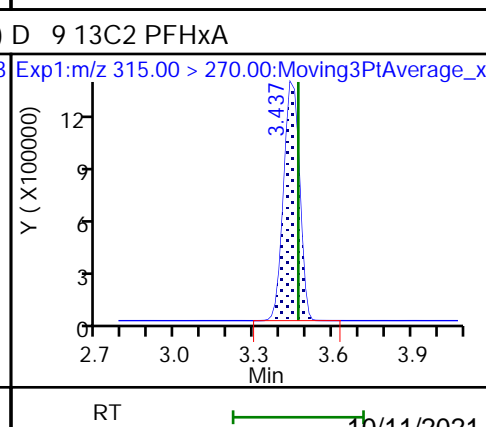
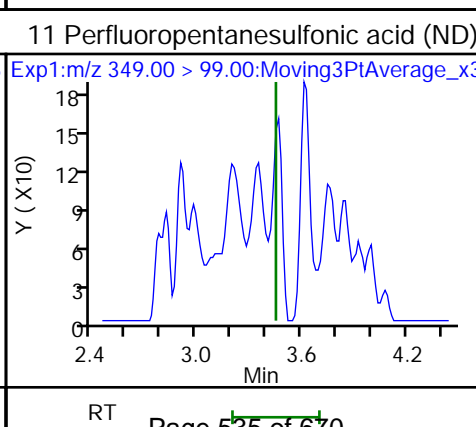
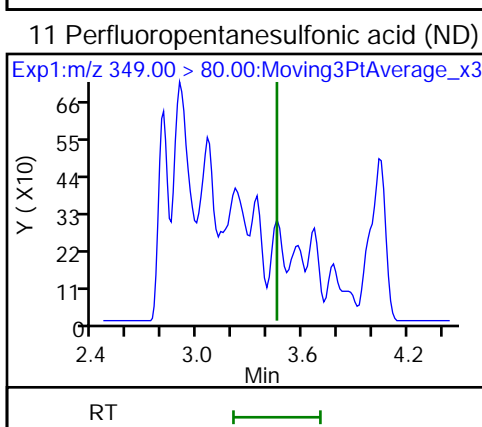
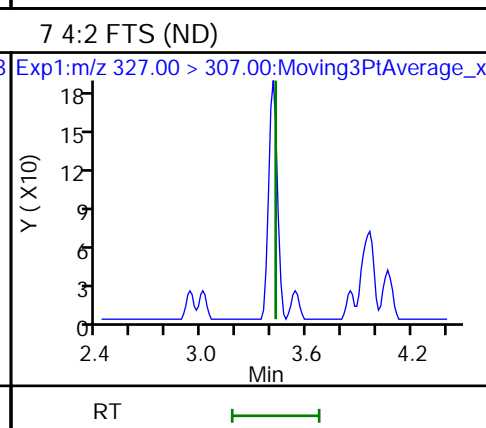
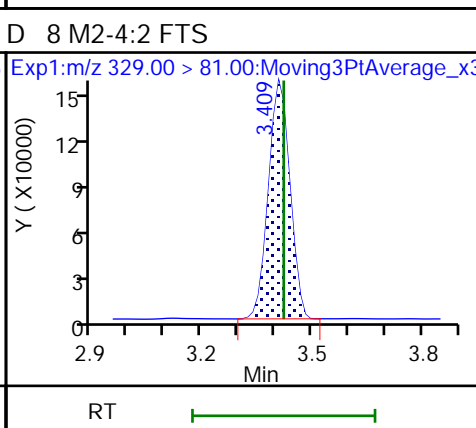
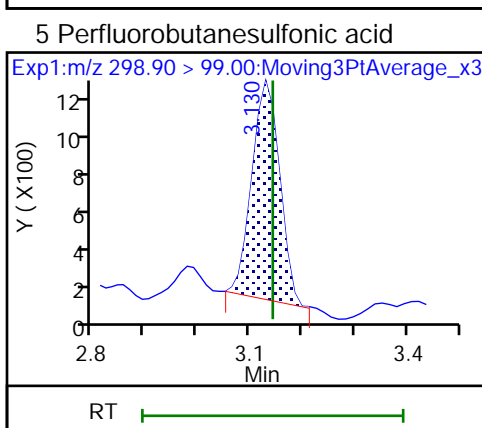
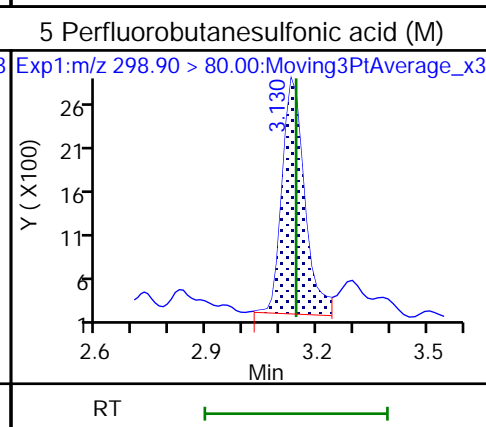
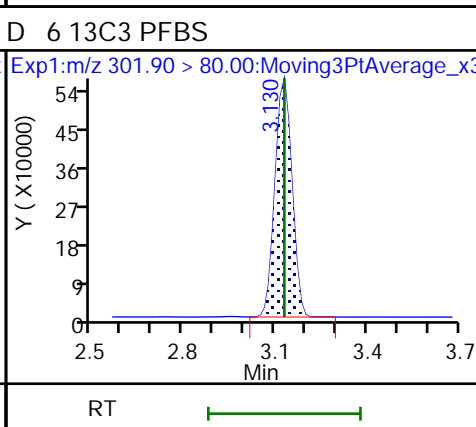
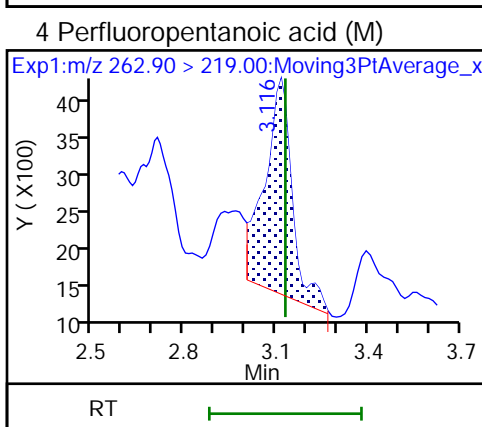
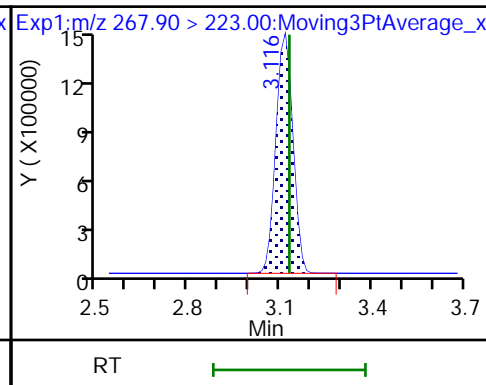
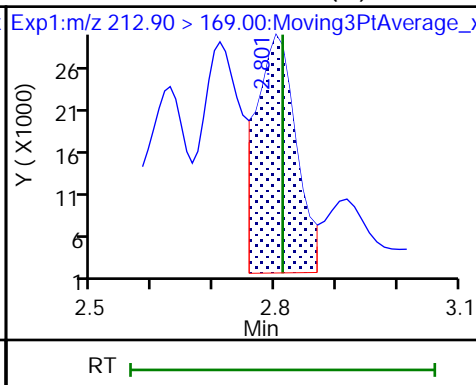
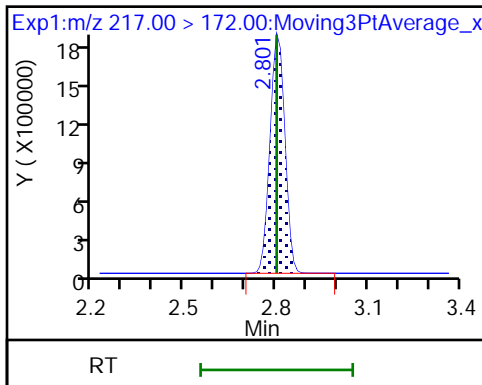
Method: PFC_LCA

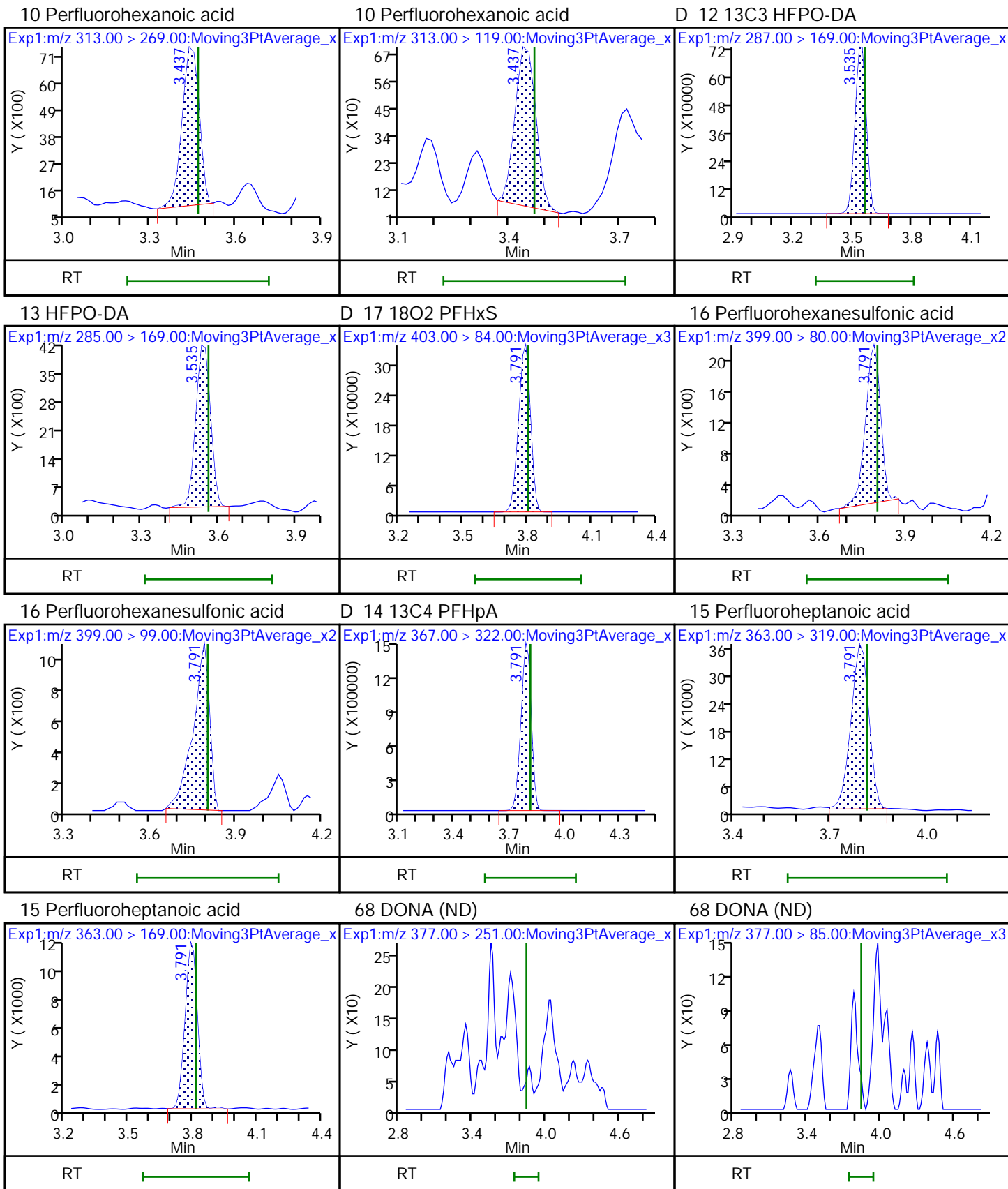
Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

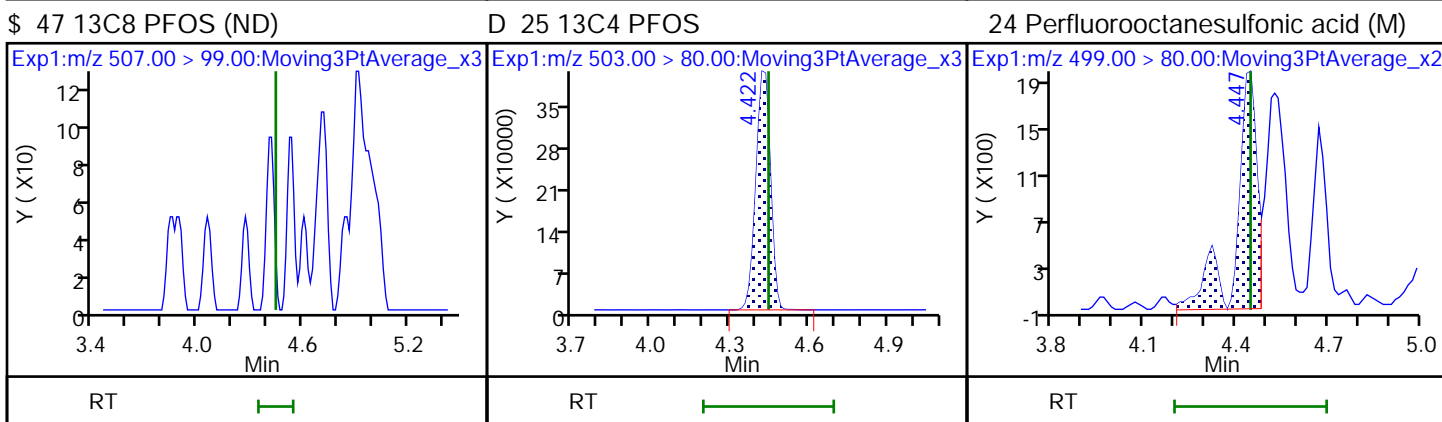
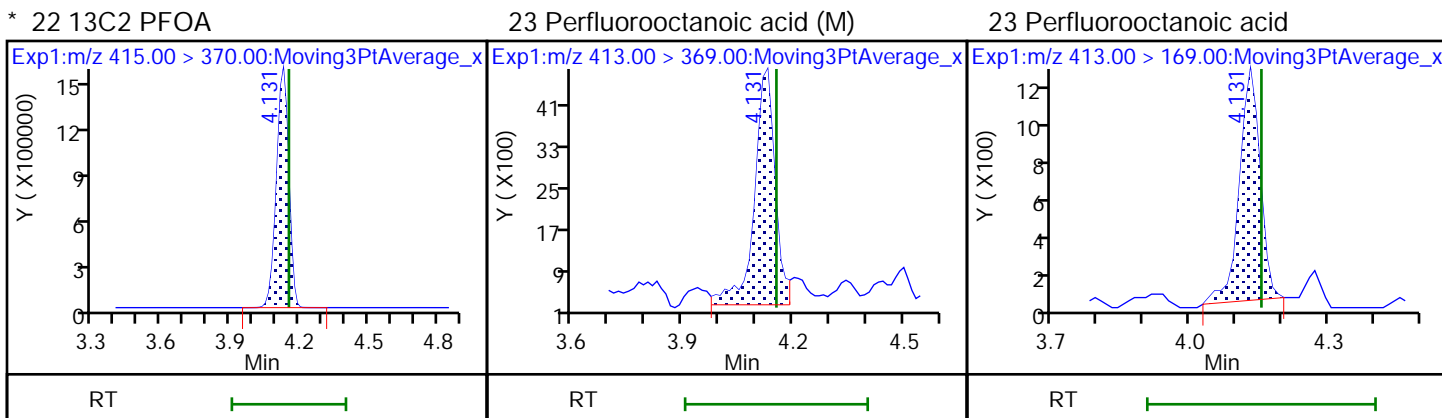
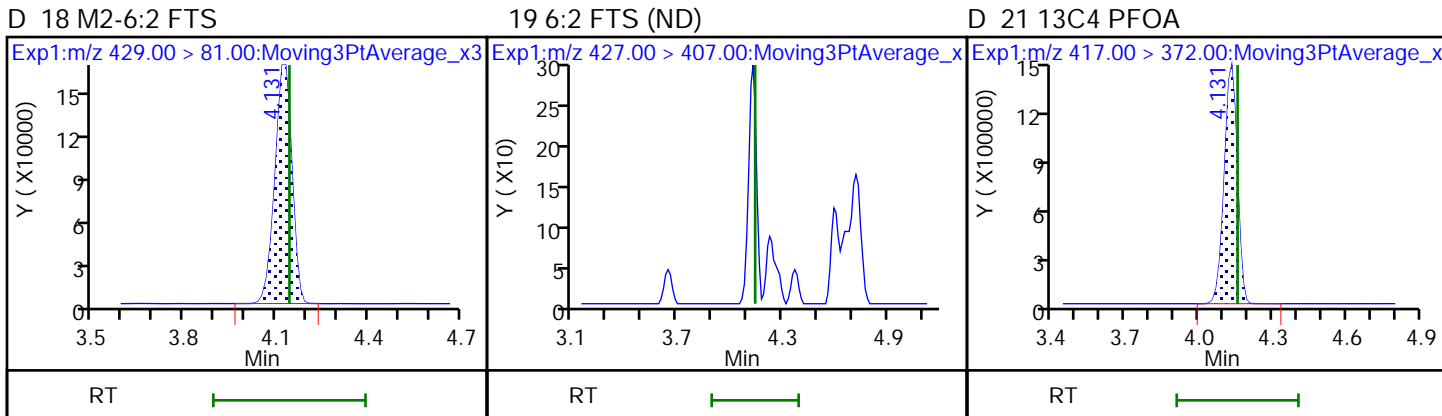
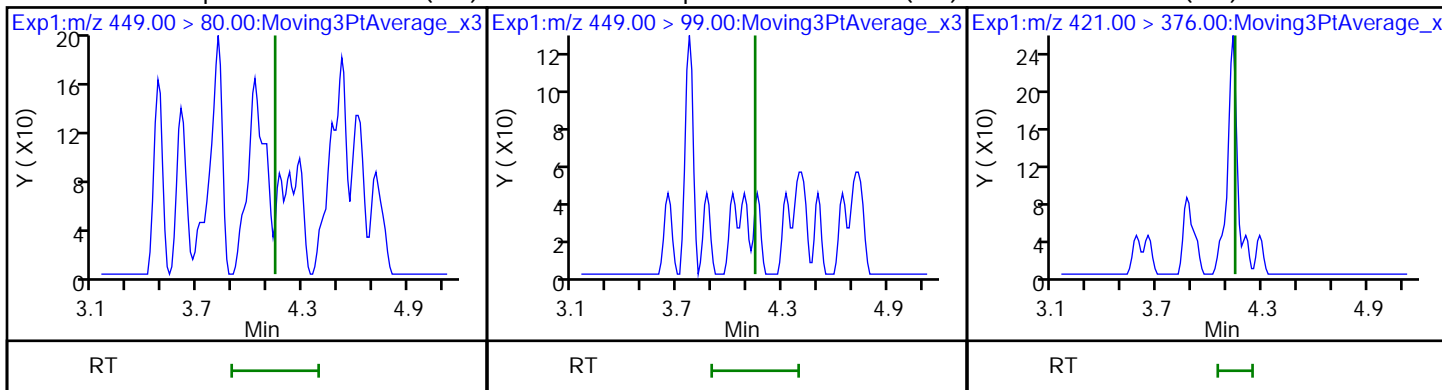
2 Perfluorobutanoic acid (M)

D 3 13C5 PFPeA

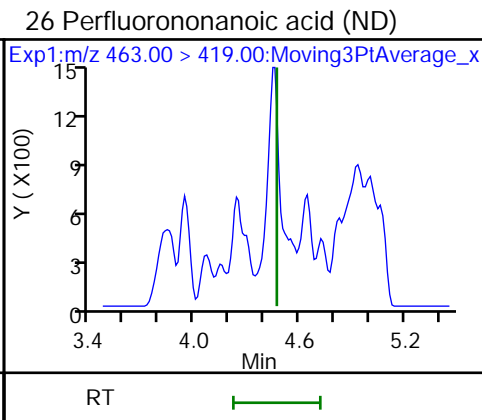
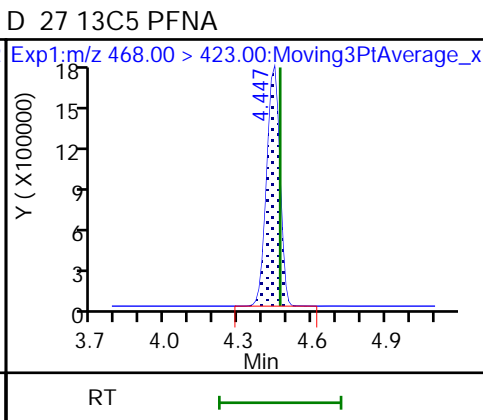
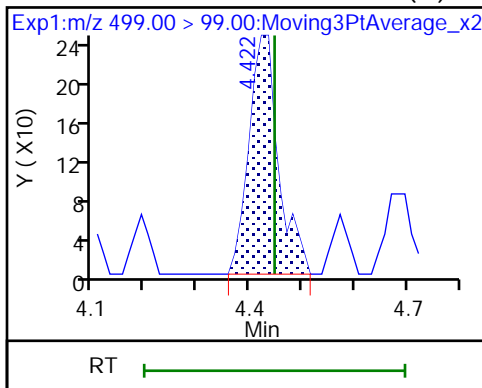




20 Perfluoroheptanesulfonic acid (ND) 20 Perfluoroheptanesulfonic acid (ND) \$ 48 13C8 PFOA (ND)



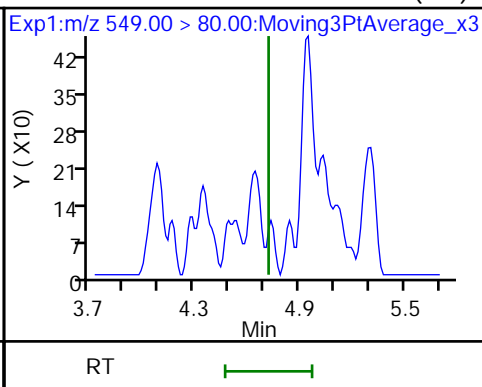
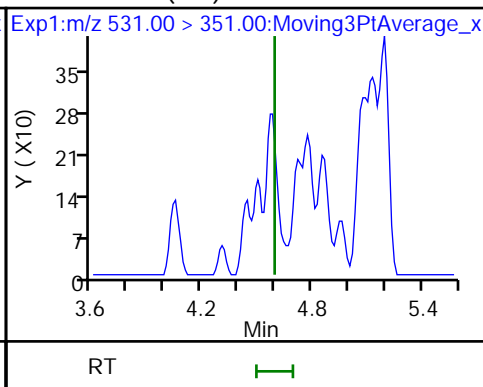
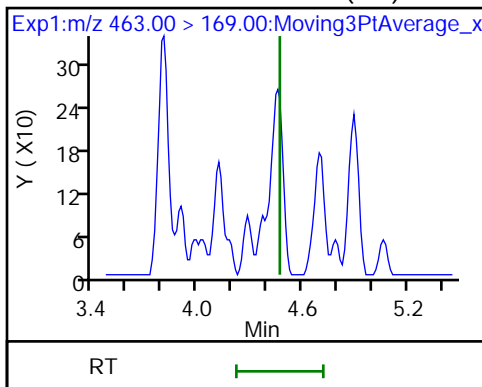
24 Perfluorooctanesulfonic acid (M) D 27 13C5 PFNA



26 Perfluorononanoic acid (ND)

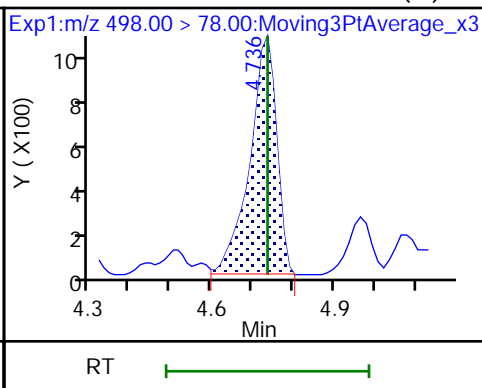
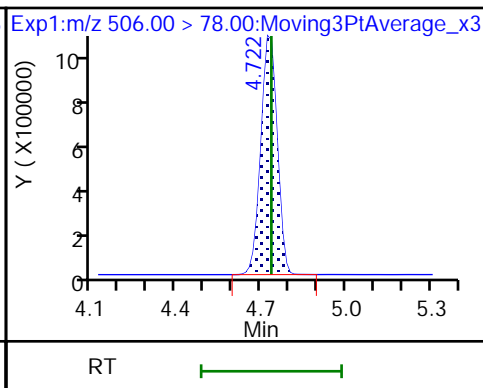
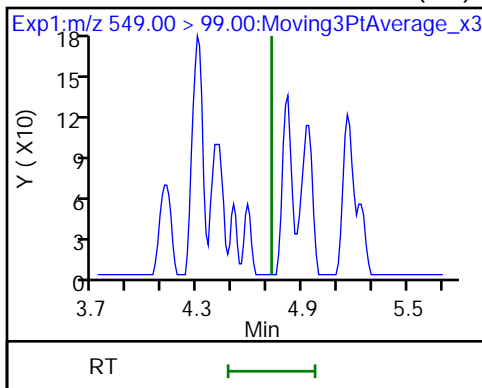
63 9CIFOS (ND)

28 Perfluoronanesulfonic acid (ND)



28 Perfluoronanesulfonic acid (ND) D 34 13C8 FOSA

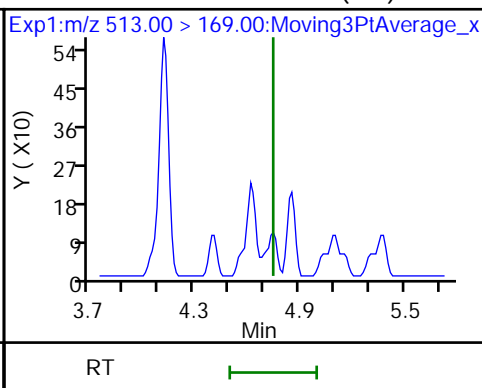
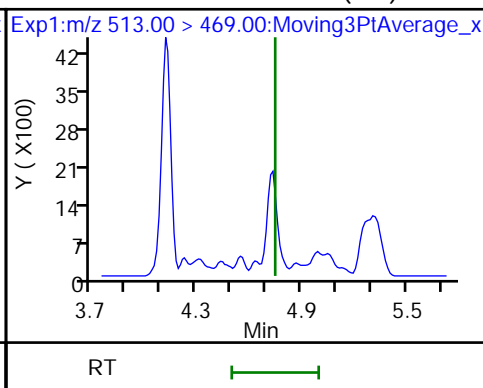
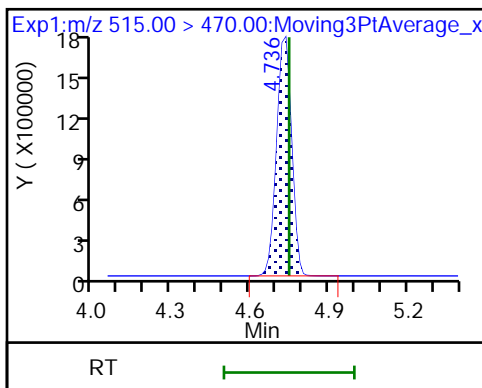
33 Perfluorooctanesulfonamide (M)



D 32 13C2 PFDA

29 Perfluorodecanoic acid (ND)

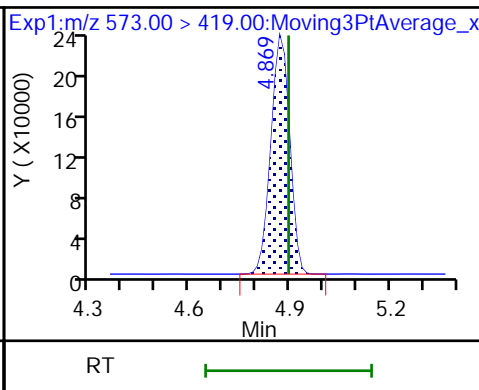
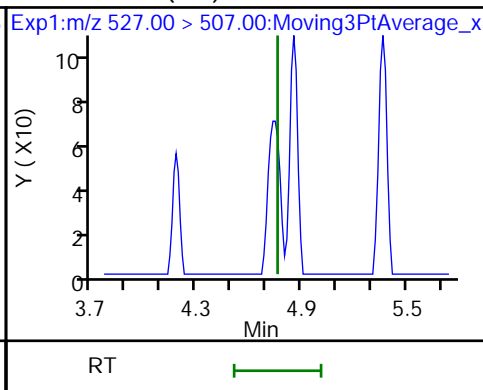
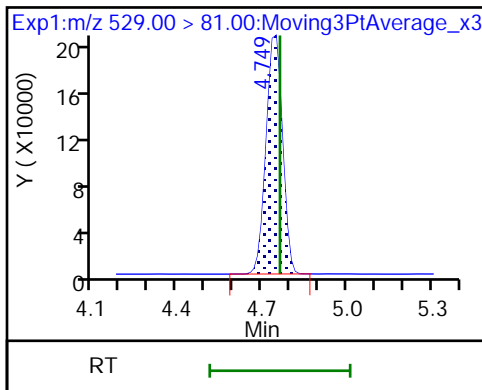
29 Perfluorodecanoic acid (ND)



D 30 M2-8:2 FTS

31 8:2 FTS (ND)

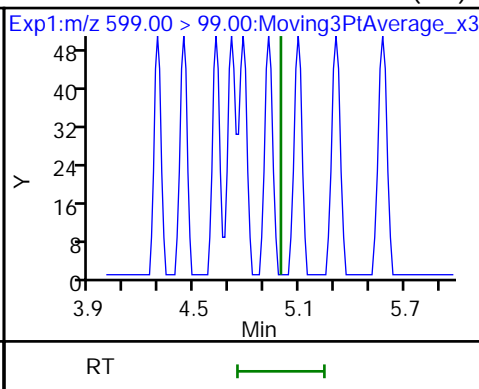
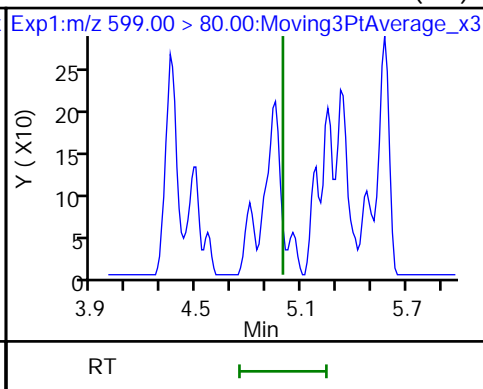
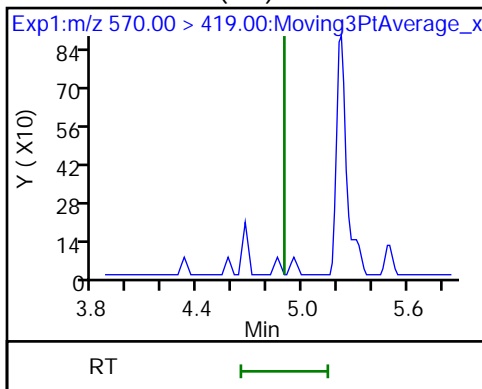
D 35 d3-NMeFOSAA



36 NMeFOSAA (ND)

37 Perfluorodecanesulfonic acid (ND)

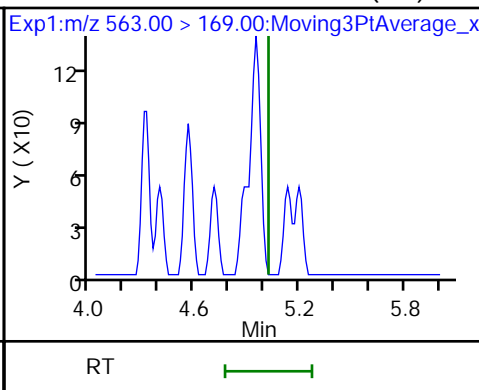
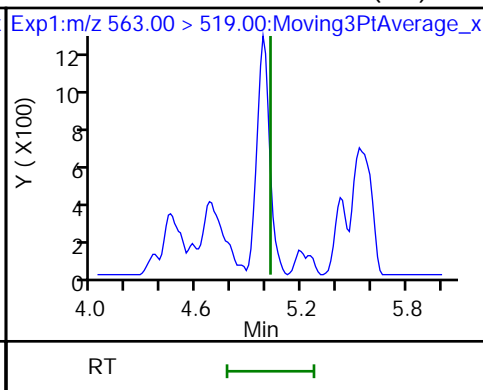
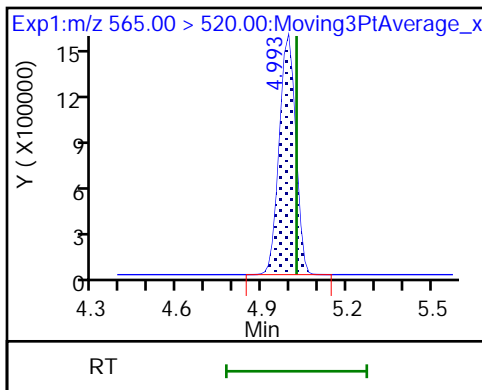
37 Perfluorodecanesulfonic acid (ND)



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid (ND)

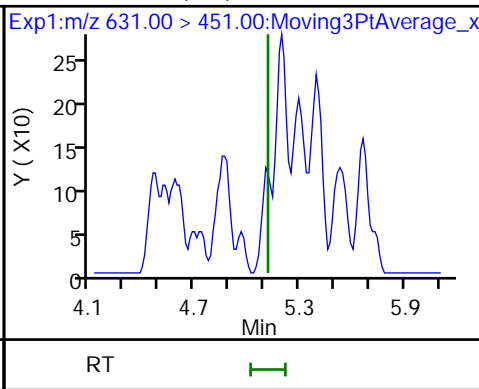
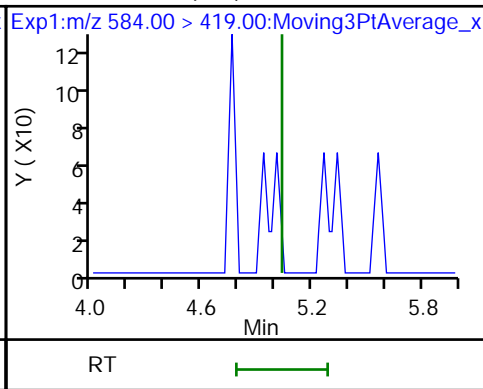
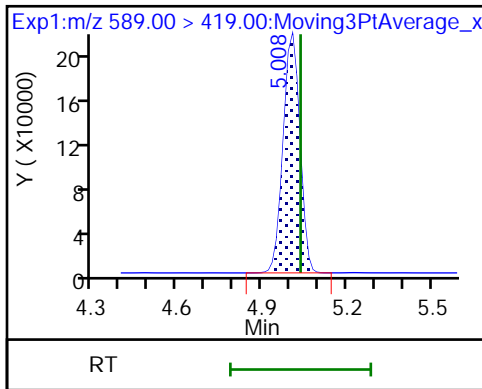
38 Perfluoroundecanoic acid (ND)



D 41 d5-NEtFOSAA

40 NEtFOSA (ND)

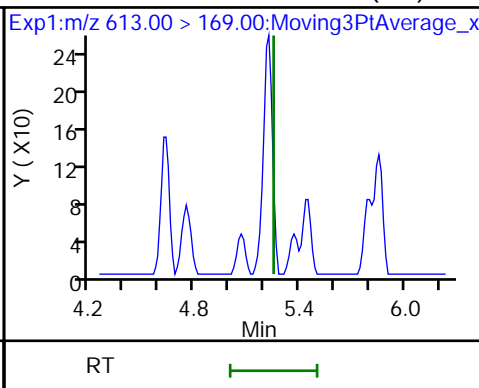
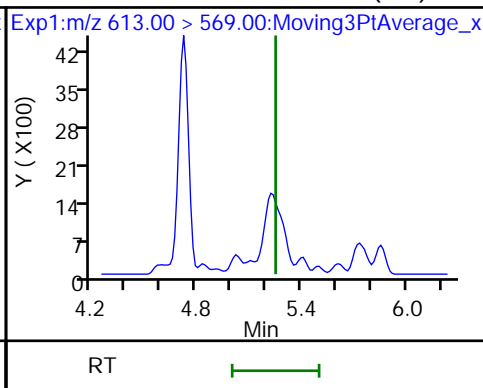
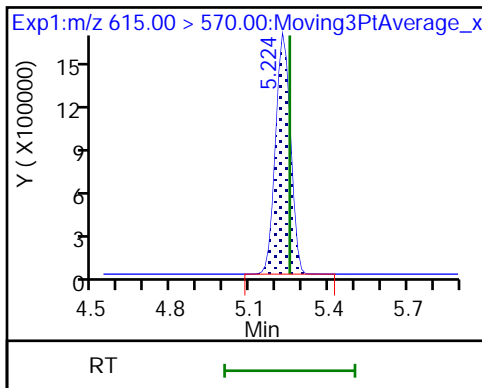
57 11CIFOS (ND)



D 43 13C2 PFDaA

42 Perfluorododecanoic acid (ND)

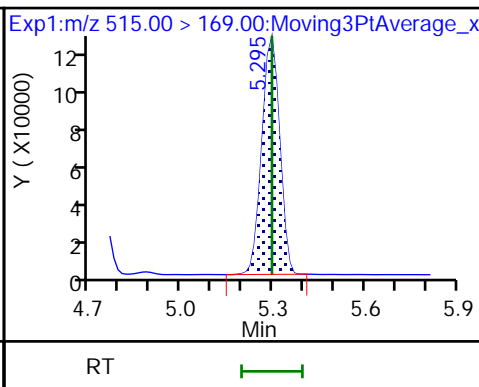
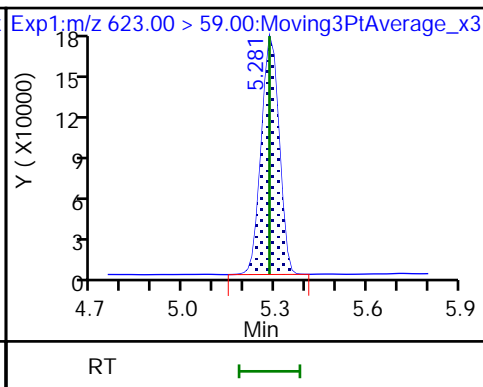
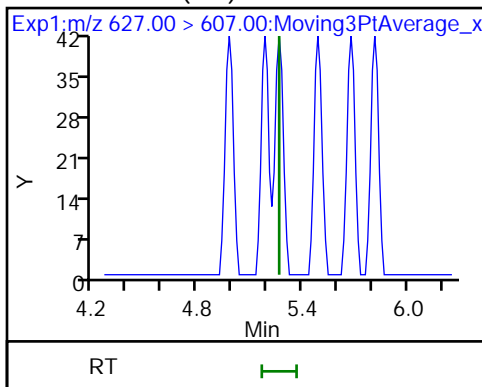
42 Perfluorododecanoic acid (ND)



50 10:2 FTS (ND)

D 51 d7-N-MeFOSE-M

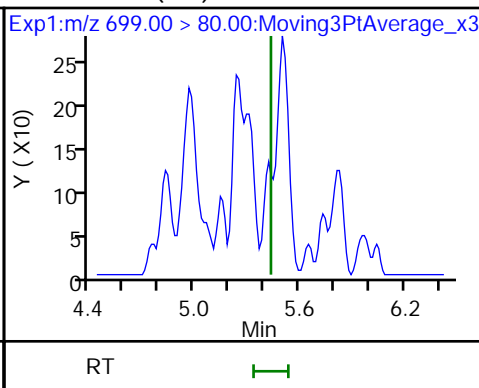
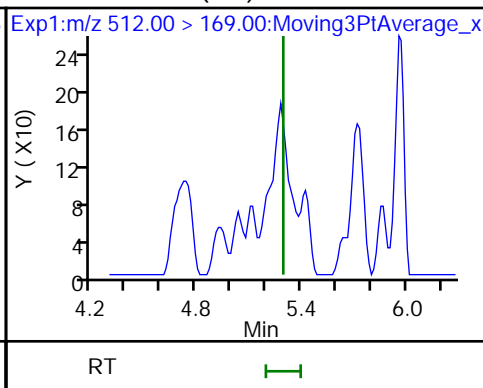
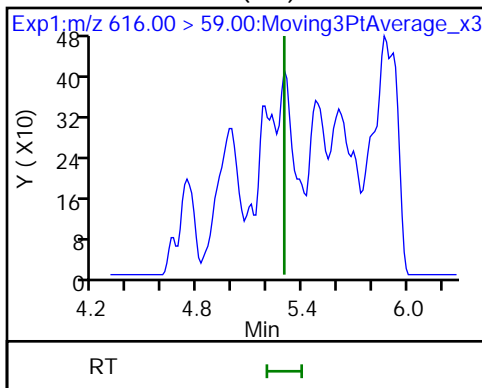
D 58 d-N-MeFOSA-M



49 N-MeFOSE-M (ND)

61 NMeFOSA (ND)

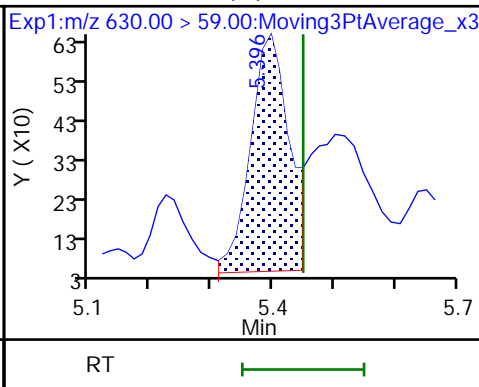
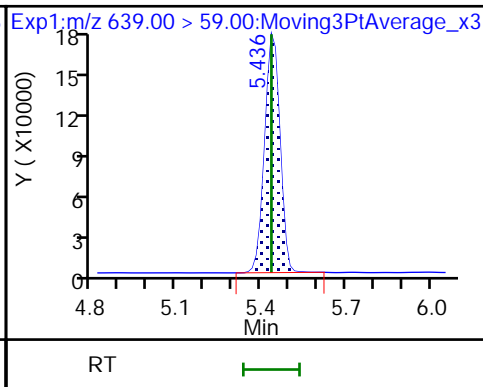
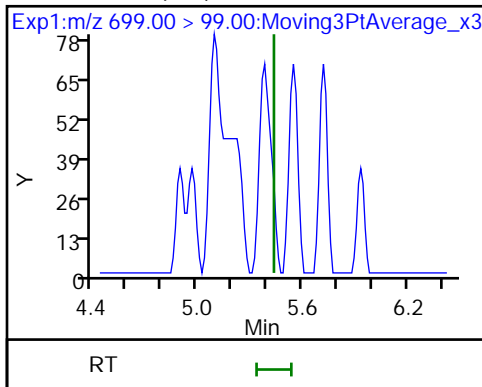
54 PFDoS (ND)



54 PFDoS (ND)

D 53 d9-N-EtFOSE-M

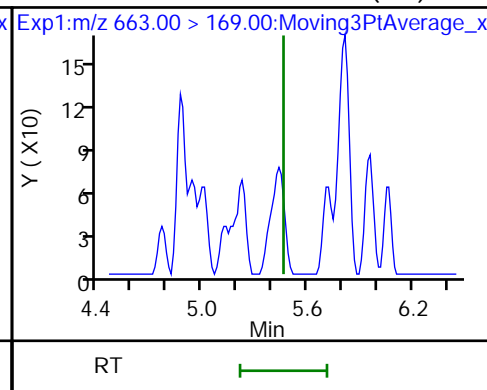
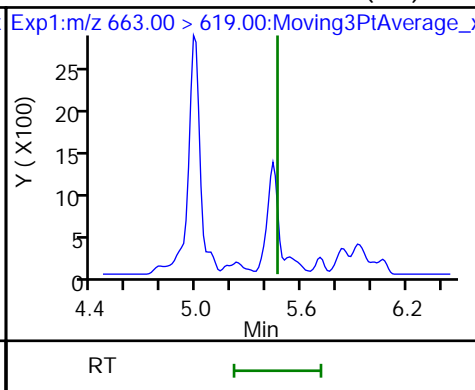
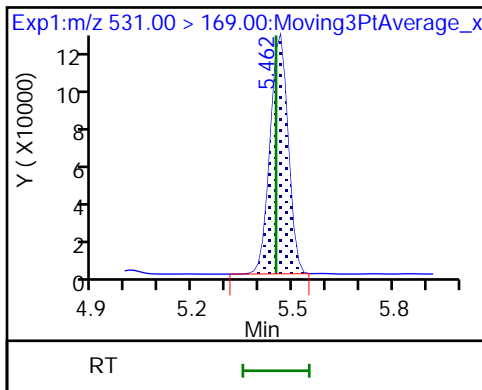
62 N-EtFOSE-M (M)



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid (ND)

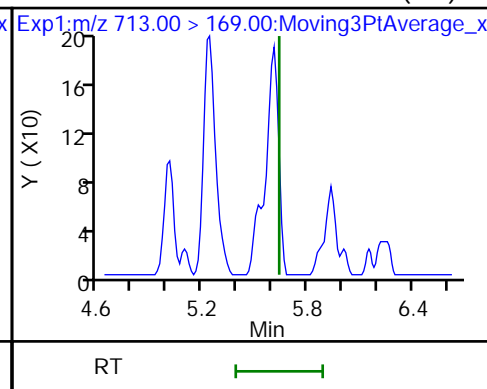
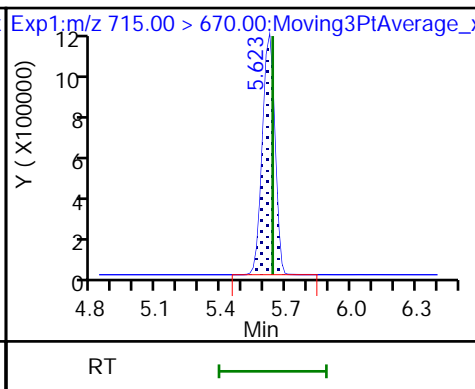
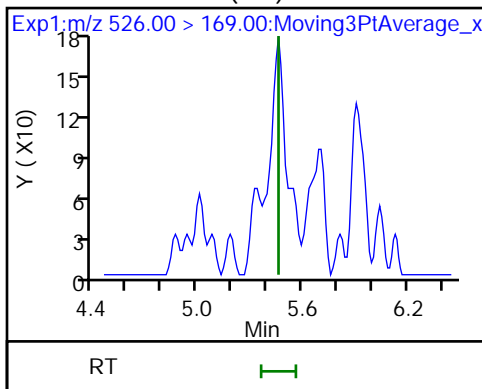
44 Perfluorotridecanoic acid (ND)



56 N-EtFOSA-M (ND)

D 46 13C2 PFTeDA

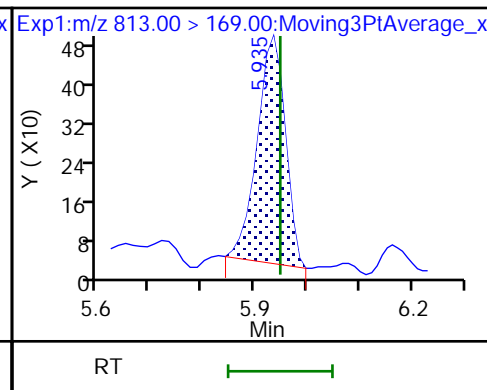
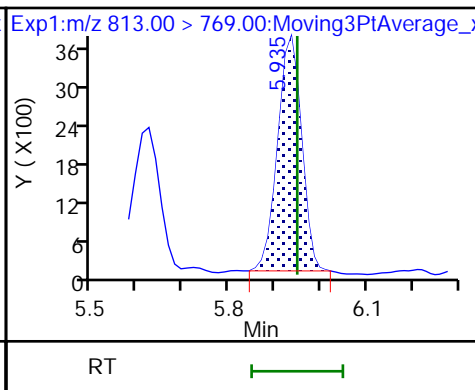
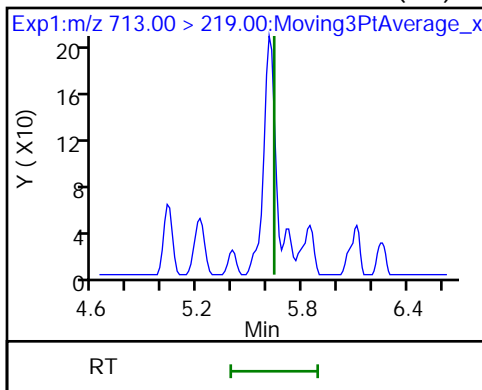
45 Perfluorotetradecanoic acid (ND)



45 Perfluorotetradecanoic acid (ND)

55 Perfluorohexadecanoic acid

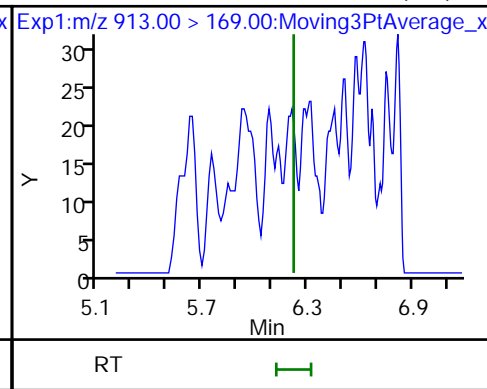
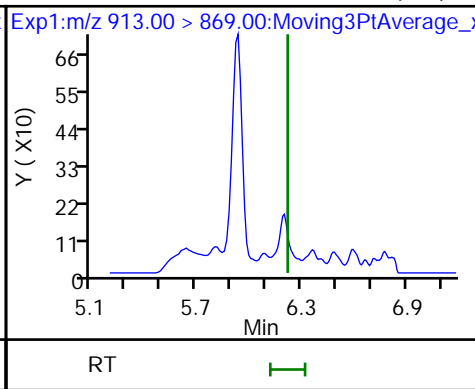
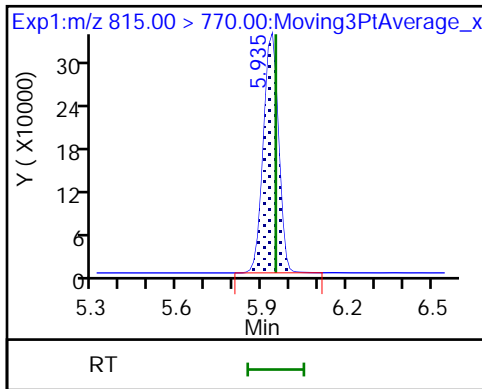
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid (ND)

60 Perfluorooctadecanoic acid (ND)



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-54178/14-B
 Matrix: Air Lab File ID: _079.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: None Date Extracted: 09/24/2021 09:41
 Sample wt/vol: 1(Sample) Date Analyzed: 10/07/2021 08:02
 Con. Extract Vol.: 360(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: GeminiC18 3x100 ID: 3(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54568 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	ND		0.00160	0.00140

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	95		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_079.d
 Lims ID: MB 140-54178/14-B
 Client ID:
 Sample Type: MB
 Inject. Date: 07-Oct-2021 08:02:45 ALS Bottle#: 25 Worklist Smp#: 79
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-079 mb 140-54178/14-b
 Misc. Info.: Plate: 11 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 17:57:56 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 17:56:35

Ratio Calibration: None

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
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D 1 13C4 PFBA	217.00 > 172.00	2.801	2.801	0.0	0.680	6361966	1.08	86.1	13166	
2 Perfluorobutanoic acid										M
212.90 > 169.00	2.801	2.812	-0.011	1.000	110800	0.0277		4.6		M
D 3 13C5 PFPeA	267.90 > 223.00	3.116	3.129	-0.013	0.757	5952626	1.23	98.2	13150	
4 Perfluoropentanoic acid										7
262.90 > 219.00	3.103	3.129	-0.026	0.996	15143	0.003139		1.5		7
LOD = 0.006500										
D 6 13C3 PFBS	301.90 > 80.00	3.130	3.129	0.001	0.760	2287952	0.7305	62.8	2288	
5 Perfluorobutanesulfonic acid										M
298.90 > 80.00	3.130	3.143	-0.013	1.000	11506	0.005192	Target=3.06	10.0		M
298.90 > 99.00	3.130	3.143	-0.013	1.000	3924		2.93(1.53-4.59)	3.8		
D 8 M2-4:2 FTS	329.00 > 81.00	3.409	3.423	-0.014	0.828	646468	1.38	118	587	
7 4:2 FTS										
327.00 > 307.00		3.423					ND			
11 Perfluoropentanesulfonic acid										
349.00 > 80.00		3.453					ND			
349.00 > 99.00		3.453								
D 9 13C2 PFHxA	315.00 > 270.00	3.438	3.469	-0.031	0.835	6128106	1.23	98.4	16956	
10 Perfluorohexanoic acid										7
313.00 > 269.00	3.438	3.469	-0.031	1.000	23043	0.005483	Target=9.74	6.4		7
313.00 > 119.00	3.438	3.469	-0.031	1.000	1821		12.65(4.87-14.61)	3.6		
LOD = 0.008000										

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.535	3.561	-0.026	0.858	3021192	1.19		94.8	11421	
13 HFPO-DA										
285.00 > 169.00	3.535	3.561	-0.026	1.000	43149	0.006682		39.5	7	7
LOD = 0.008250										
S 65 ADONA										
377.00 > 251.00		3.592				0				
D 17 18O2 PFHxS										
403.00 > 84.00	3.778	3.803	-0.025	0.917	1316712	0.6947		58.8	6017	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.791	3.803	-0.012	1.003	8121	0.000303	Target=2.96	17.3		7M
399.00 > 99.00	3.778	3.803	-0.025	1.000	2771		2.93(1.48-4.44)	12.6		M
LOD = 0.005000										
D 14 13C4 PFHpA										
367.00 > 322.00	3.791	3.815	-0.024	0.920	5808169	1.17		93.5	20998	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.791	3.815	-0.024	1.000	133306	0.0226	Target=3.35	37.8		
363.00 > 169.00	3.791	3.815	-0.024	1.000	36182		3.68(1.67-5.02)	154		
68 DONA										
377.00 > 251.00		3.840				ND				
377.00 > 85.00		3.840								
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00		4.143				ND				
449.00 > 99.00		4.143								
\$ 48 13C8 PFOA										
421.00 > 376.00		4.143				ND				
D 18 M2-6:2 FTS										
429.00 > 81.00	4.118	4.143	-0.025	1.000	637165	1.33		112	2929	
19 6:2 FTS										
427.00 > 407.00		4.143				ND				
D 21 13C4 PFOA										
417.00 > 372.00	4.118	4.155	-0.037	1.000	5324581	1.19		94.8	21484	
* 22 13C2 PFOA										
415.00 > 370.00	4.118	4.155	-0.037		5577386	1.25			20549	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.130	4.155	-0.025	1.003	16363	-0.005162	Target=2.40	6.6		7M
413.00 > 169.00	4.130	4.155	-0.025	1.003	6165		2.65(1.20-3.61)	15.5		7M
LOD = 0.007800										
\$ 47 13C8 PFOS										
507.00 > 99.00		4.447				ND				
D 25 13C4 PFOS										
503.00 > 80.00	4.421	4.447	-0.025	1.074	1398470	0.5356		44.8	3820	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00		4.447				ND				
499.00 > 99.00		4.447								
D 27 13C5 PFNA										
468.00 > 423.00	4.434	4.470	-0.036	1.077	6859013	1.20		96.1	14478	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
26 Perfluorononanoic acid										
463.00 > 419.00		4.470				ND				
463.00 > 169.00		4.470								
63 9CIFOS										
531.00 > 351.00		4.596				ND				
28 Perfluorononanesulfonic acid										
549.00 > 80.00		4.722				ND				
549.00 > 99.00		4.722								
D 34 13C8 FOSA										
506.00 > 78.00	4.722	4.736	-0.014	1.147	4332822	1.13		90.4	6055	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.722	4.736	-0.014	1.000	4081	0.001226		10.8		7M
LOD = 0.004400										
D 32 13C2 PFDA										
515.00 > 470.00	4.722	4.749	-0.027	1.147	6816282	1.18		94.3	13467	
29 Perfluorodecanoic acid										
513.00 > 469.00		4.749				ND				
513.00 > 169.00		4.749								
D 30 M2-8:2 FTS										
529.00 > 81.00	4.735	4.763	-0.028	1.150	770442	1.31		110	2803	
31 8:2 FTS										
527.00 > 507.00		4.763				ND				
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.869	4.896	-0.027	1.182	885600	1.12		89.5	6107	
36 NMeFOSAA										
570.00 > 419.00		4.896				ND				
37 Perfluorodecanesulfonic acid										
599.00 > 80.00		4.993				ND				
599.00 > 99.00		4.993								
69 Perfluoro-3,6,9-trioxatridecanoic acid										
561.00 > 467.00	4.922	4.994	-0.072	1.113	2707	NC	Target=0.00		0.8	
561.00 > 235.00	4.909	4.994	-0.085	1.110	2464		1.10(0.00-0.00)		0.8	
D 39 13C2 PFUnA										
565.00 > 520.00	4.979	5.022	-0.044	1.209	6044964	1.10		87.6	18474	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.993	5.022	-0.029	1.003	3152	-0.004558	Target=7.45		4.3	R7
563.00 > 169.00	4.979	5.022	-0.044	1.000	962		3.28(3.78-11.33)		4.7	R7
LOD = 0.006000										
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.007	5.036	-0.029	1.216	897965	1.18		94.4	3562	
40 NEtFOSA										
584.00 > 419.00		5.036				ND				
57 11CIFOS										
631.00 > 451.00		5.119				ND				
D 43 13C2 PFDoA										
615.00 > 570.00	5.223	5.251	-0.028	1.268	6185160	1.05		84.0	16368	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
42 Perfluorododecanoic acid										
613.00 > 569.00		5.251				ND				
613.00 > 169.00		5.251								
50 10:2 FTS										
627.00 > 607.00		5.266				ND				
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.280	5.281	-0.001	1.282	700853	1.46		117	433	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.280	5.295	-0.015	1.282	550090	1.10		88.1	37.0	
49 N-MeFOSE-M										
616.00 > 59.00		5.295				ND				
61 NMeFOSA										
512.00 > 169.00		5.295				ND				
54 PFDoS										
699.00 > 80.00		5.436				ND				
699.00 > 99.00		5.436								
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.435	5.436	-0.001	1.320	714457	1.40		112	662	
62 N-EtFOSE-M										
630.00 > 59.00	5.409	5.449	-0.040	0.995	2418	-0.001148		4.2		7M
LOD = 0.006000										
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.449	5.449	0.0	1.323	484334	1.15		92.2	595	
44 Perfluorotridecanoic acid										
663.00 > 619.00		5.462				ND				
663.00 > 169.00		5.462								
56 N-EtFOSA-M										
526.00 > 169.00		5.462				ND				
D 46 13C2 PFTeDA										
715.00 > 670.00	5.608	5.637	-0.029	1.362	3188575	0.5902		47.2	12211	
45 Perfluorotetradecanoic acid										
713.00 > 169.00		5.637				ND				
713.00 > 219.00		5.637								
55 Perfluorohexadecanoic acid										
813.00 > 769.00		5.948				ND				
813.00 > 169.00		5.948								
D 59 13C2 PFHxDA										
815.00 > 770.00	5.922	5.948	-0.026	1.438	333390	0.0851		6.8	2419	
60 Perfluorooctadecanoic acid										
913.00 > 869.00		6.221				ND				
913.00 > 169.00		6.221								
S 66 F-53B										
212.90 > 169.00		0.0				0				
S 67 NaDONA										
377.00 > 251.00		0.0				0				
377.00 > 85.00		0.0								

QC Flag Legend

Processing Flags

NC - Not Calibrated

ND - Not Detected or Marked ND

R - Failed Signal Ratio Test

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_079.d

Injection Date: 07-Oct-2021 08:02:45

Instrument ID: LCA

Lims ID: MB 140-54178/14-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 25

Worklist Smp#: 79

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

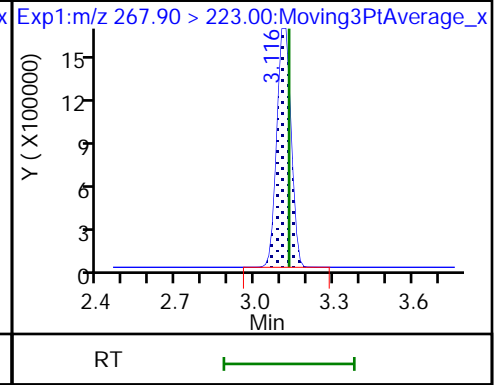
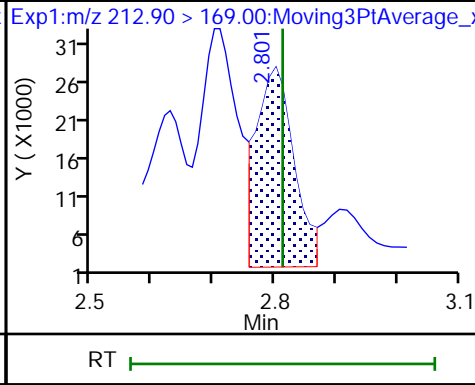
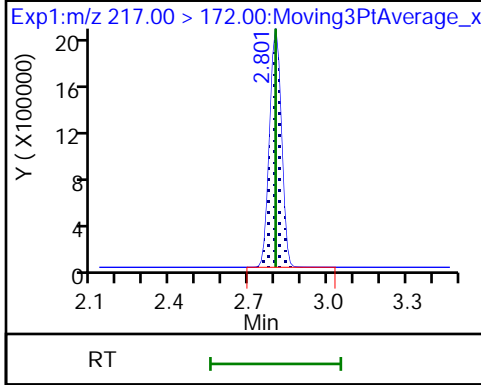
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid (M)

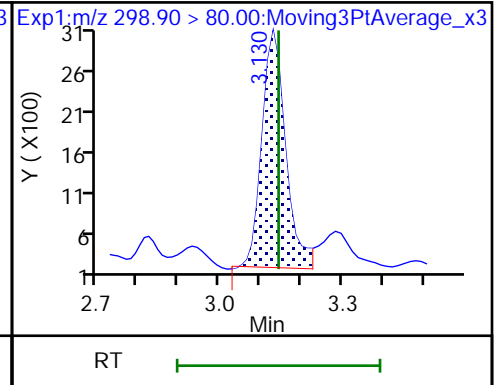
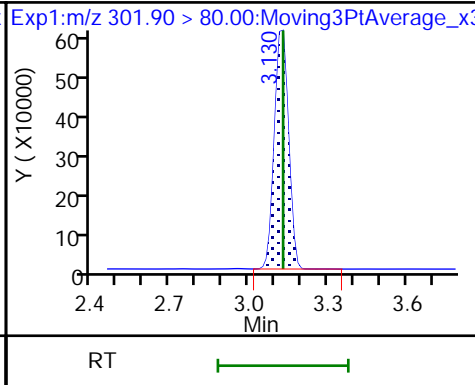
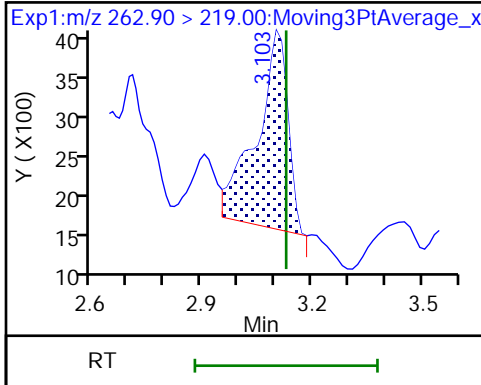
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

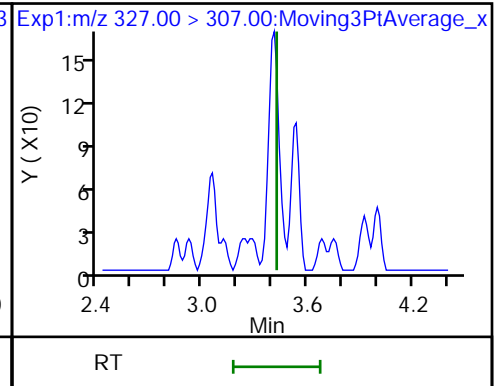
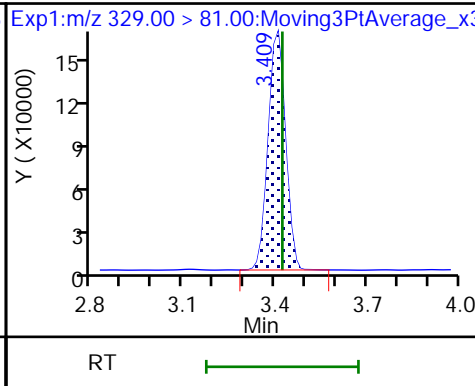
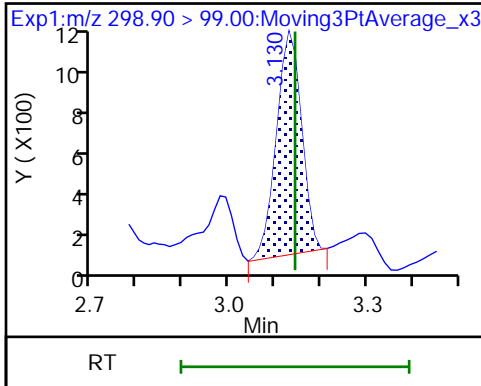
5 Perfluorobutanesulfonic acid (M)



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

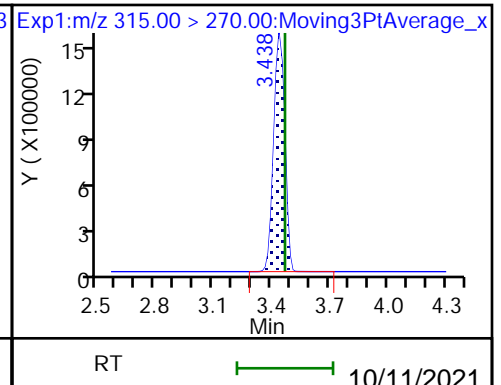
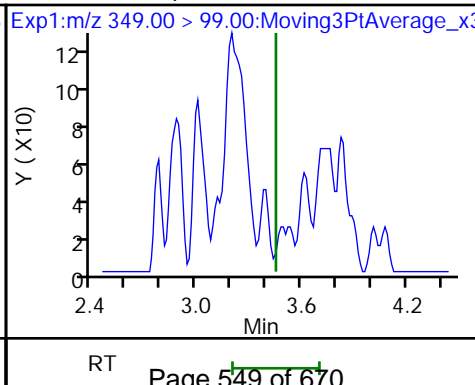
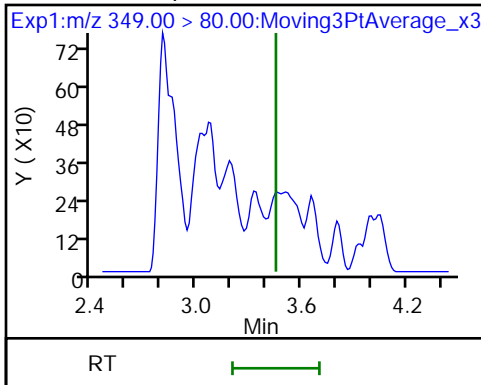
7 4:2 FTS (ND)

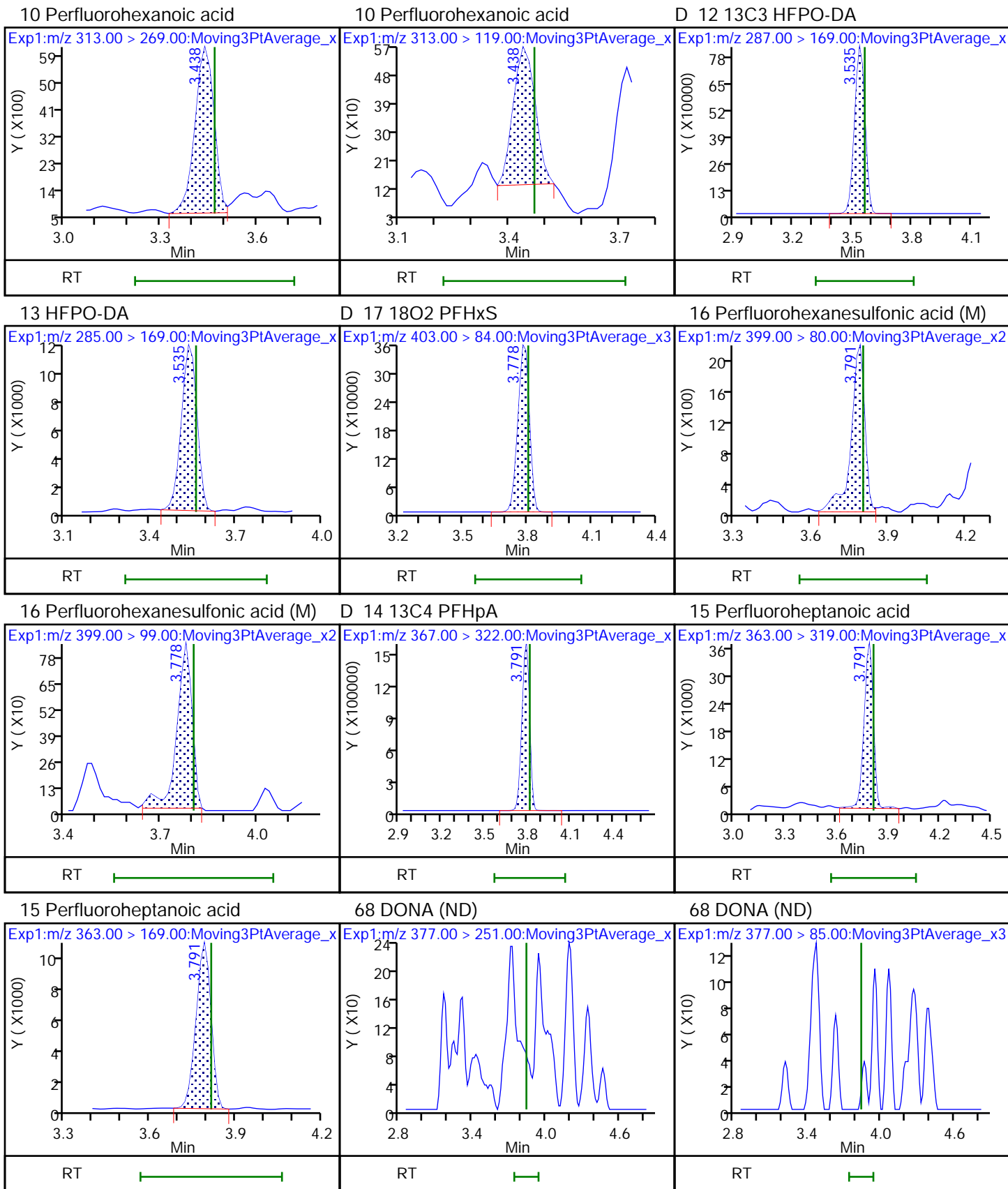


11 Perfluoropentanesulfonic acid (ND)

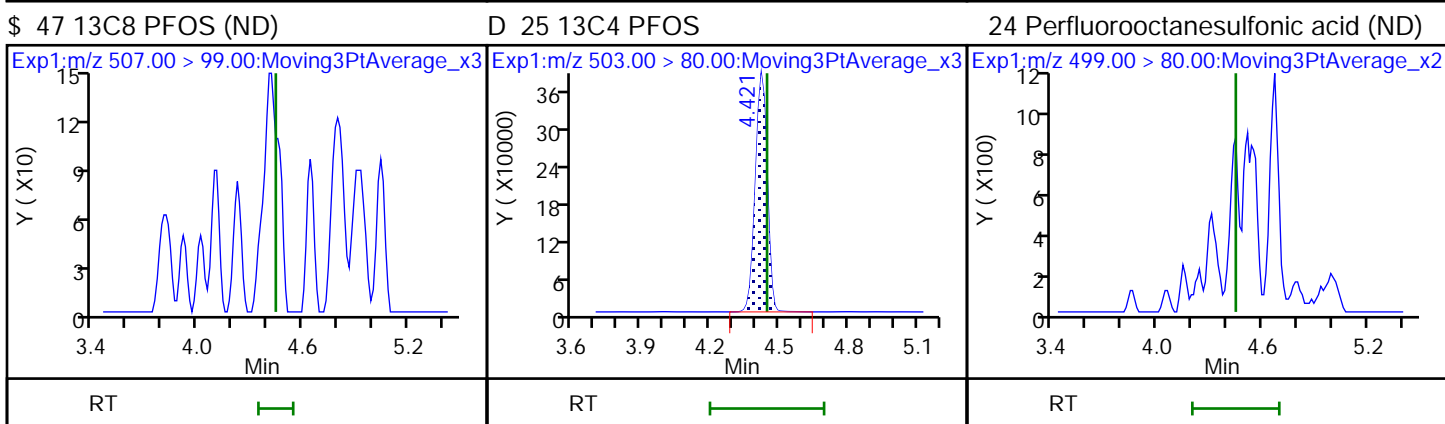
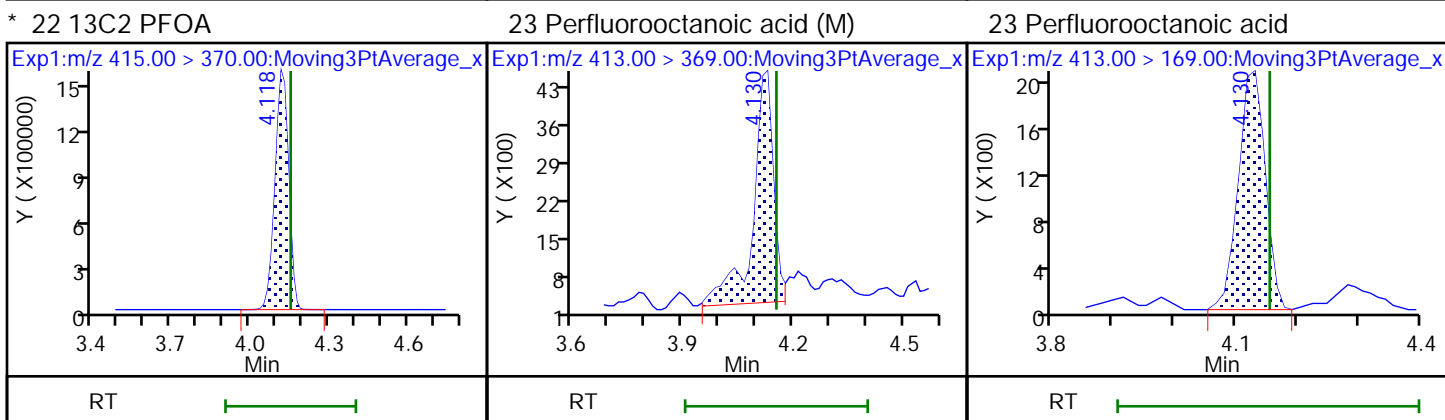
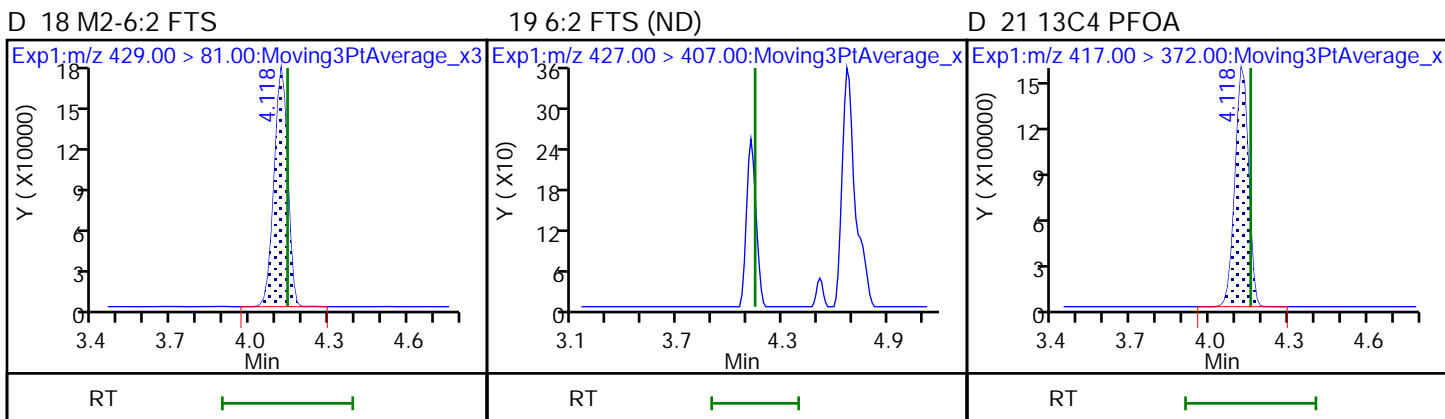
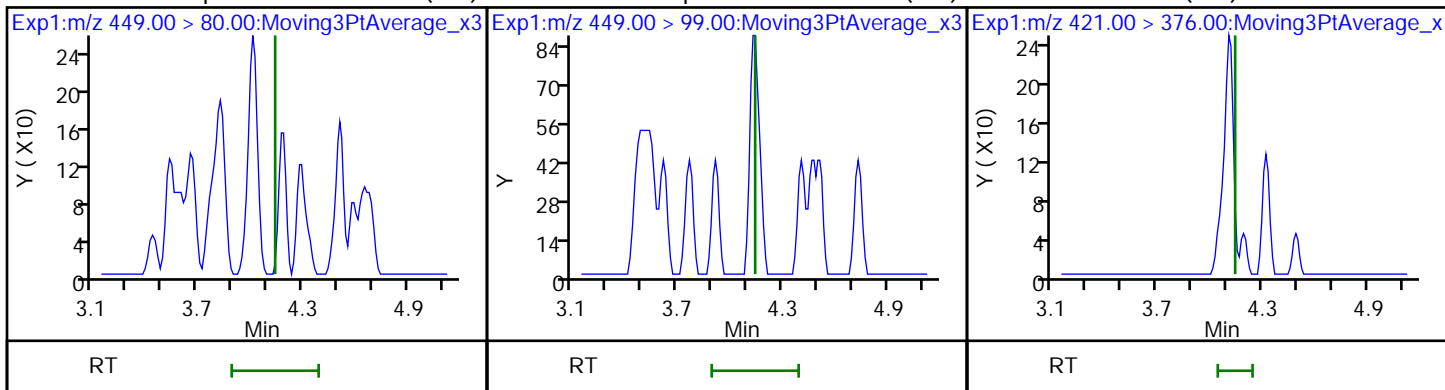
11 Perfluoropentanesulfonic acid (ND)

D 9 13C2 PFHxA

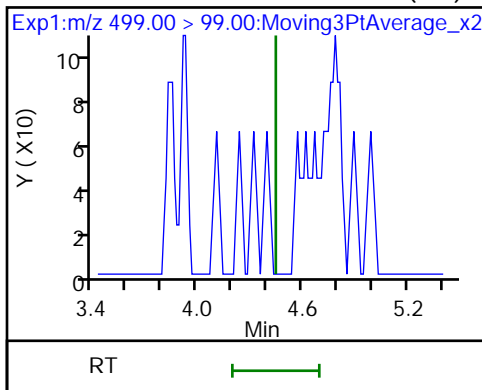




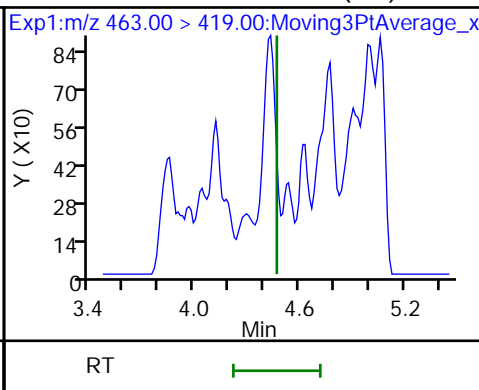
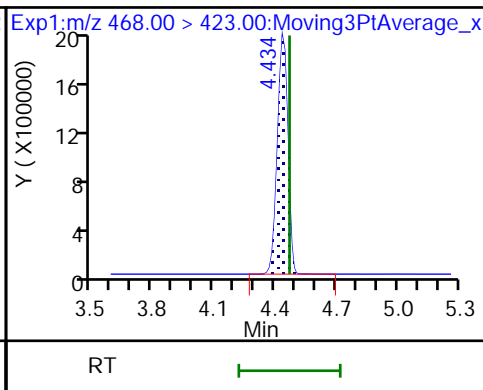
20 Perfluoroheptanesulfonic acid (ND) 20 Perfluoroheptanesulfonic acid (ND) \$ 48 13C8 PFOA (ND)



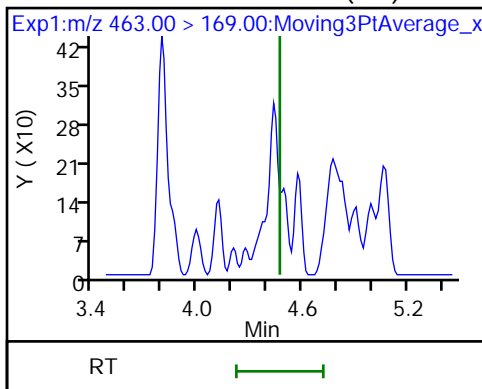
24 Perfluorooctanesulfonic acid (ND) D 27 13C5 PFNA



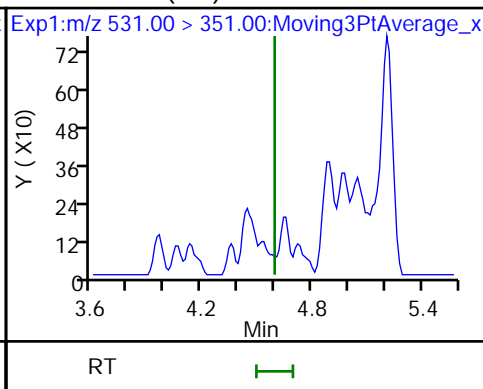
26 Perfluorononanoic acid (ND)



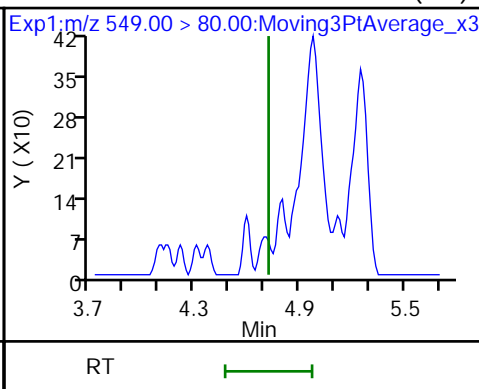
26 Perfluorononanoic acid (ND)



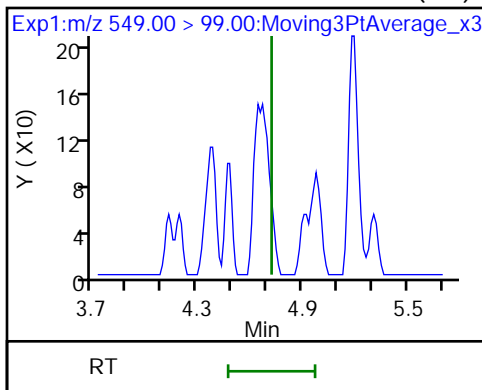
63 9CIFOS (ND)



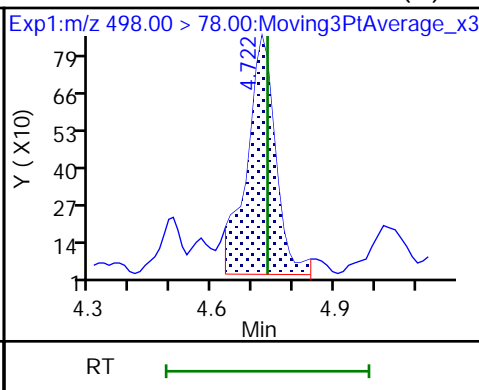
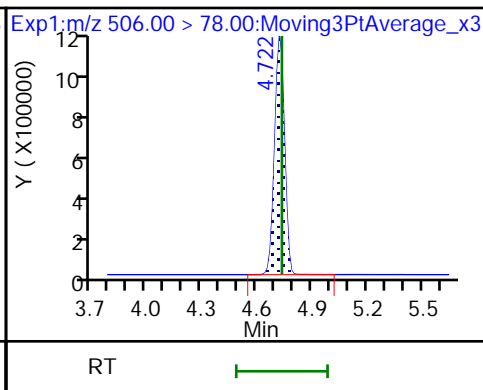
28 Perfluorononanesulfonic acid (ND)



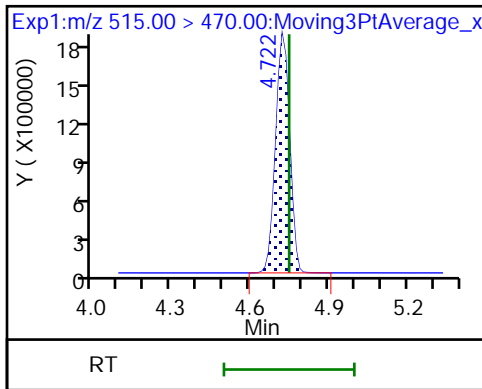
28 Perfluorononanesulfonic acid (ND) D 34 13C8 FOSA



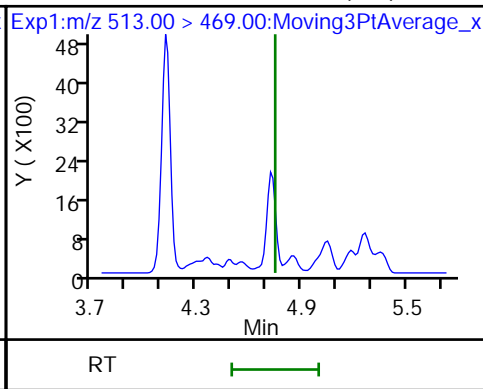
33 Perfluorooctanesulfonamide (M)



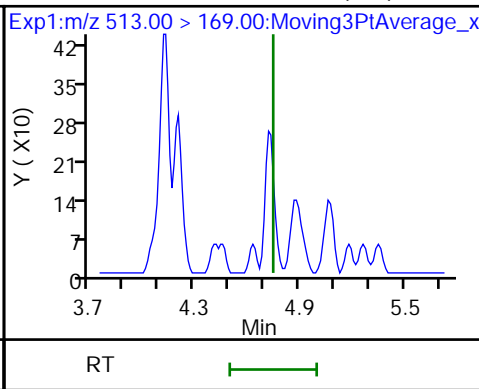
D 32 13C2 PFDA



29 Perfluorodecanoic acid (ND)



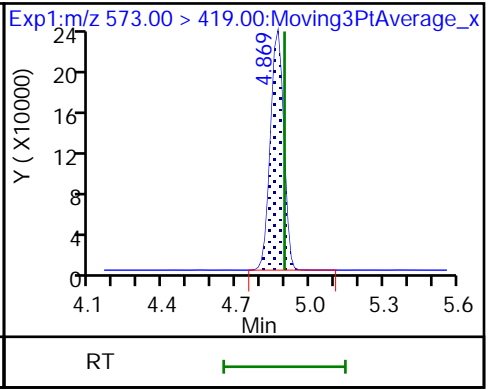
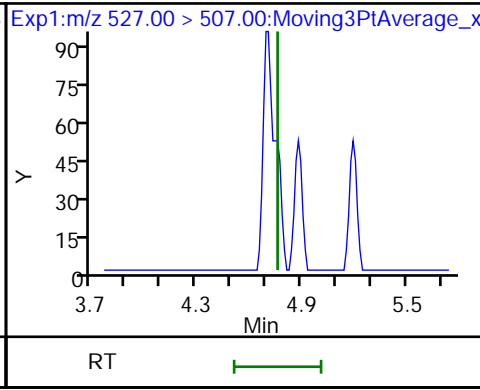
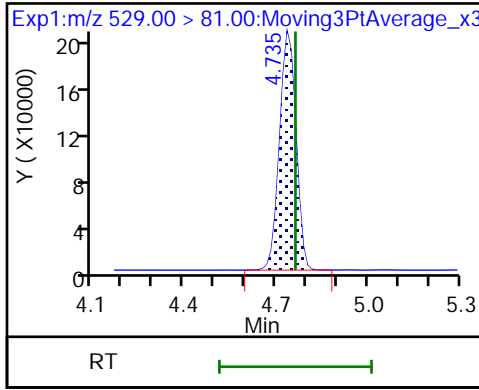
29 Perfluorodecanoic acid (ND)



D 30 M2-8:2 FTS

31 8:2 FTS (ND)

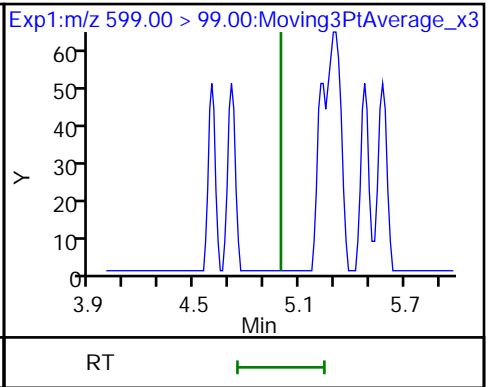
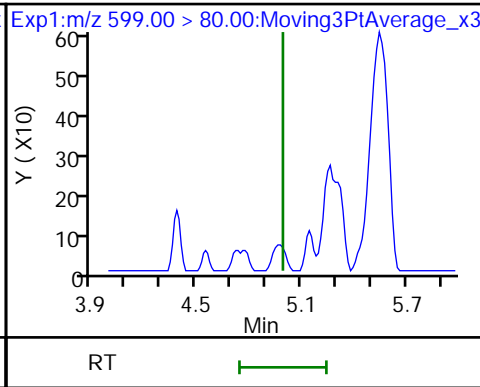
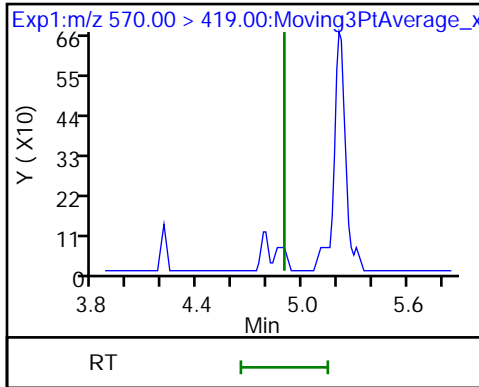
D 35 d3-NMeFOSAA



36 NMeFOSAA (ND)

37 Perfluorodecanesulfonic acid (ND)

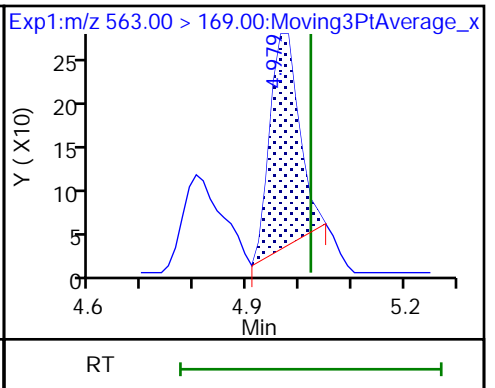
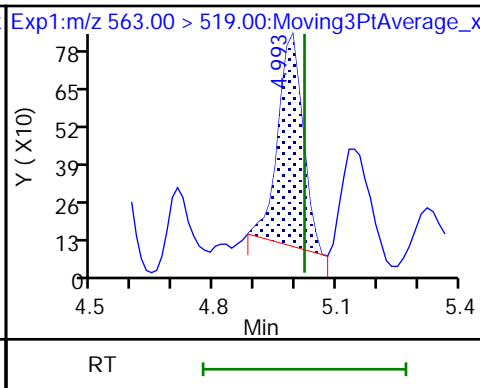
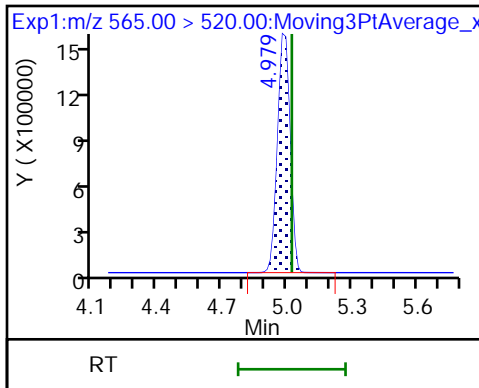
37 Perfluorodecanesulfonic acid (ND)



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

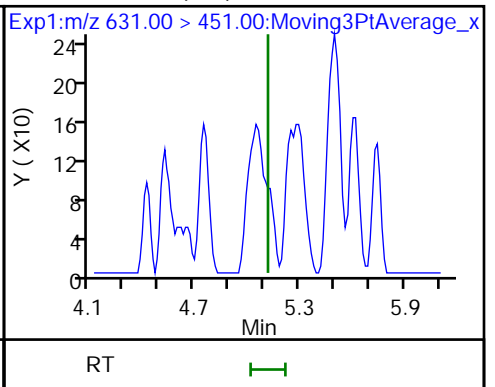
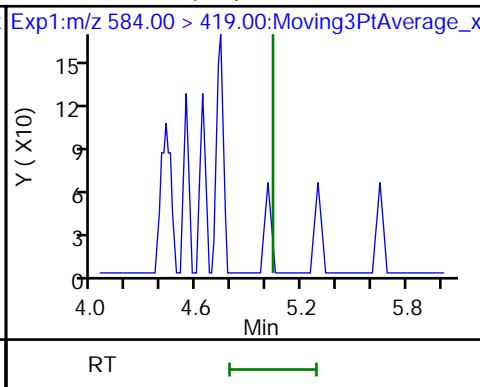
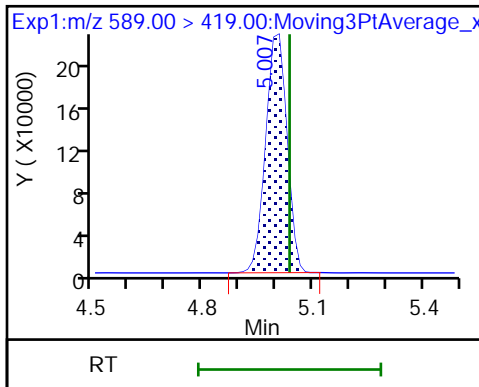
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA (ND)

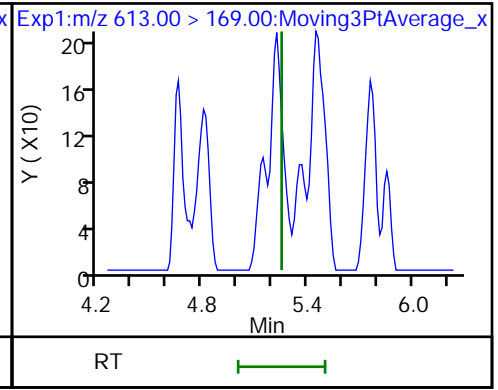
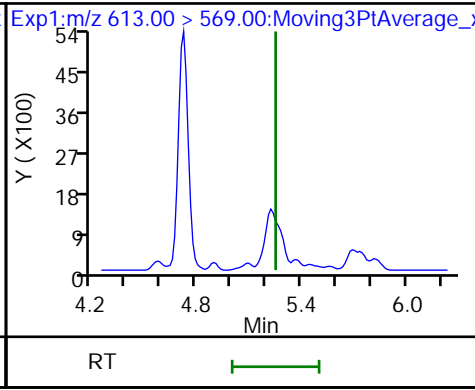
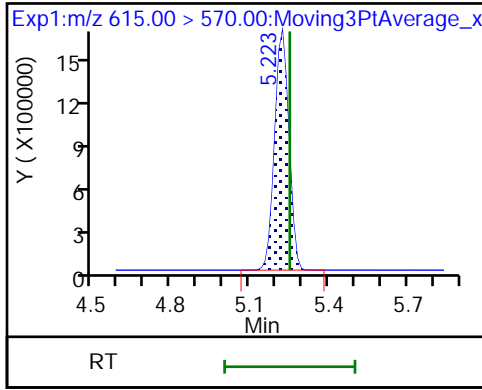
57 11CIFOS (ND)



D 43 13C2 PFDaA

42 Perfluorododecanoic acid (ND)

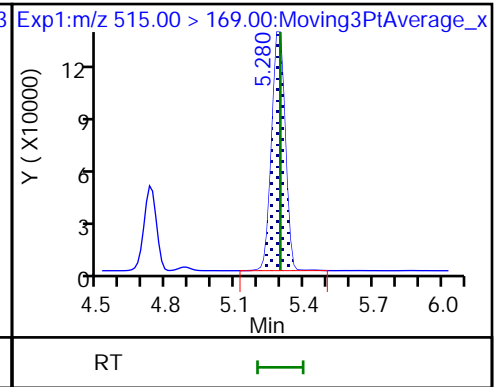
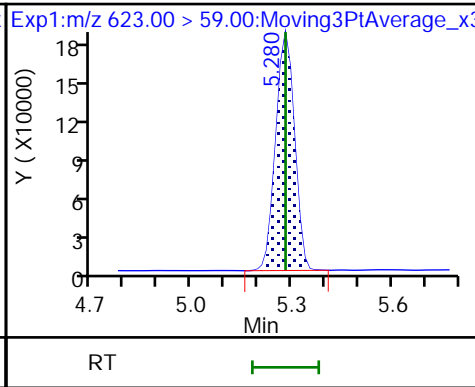
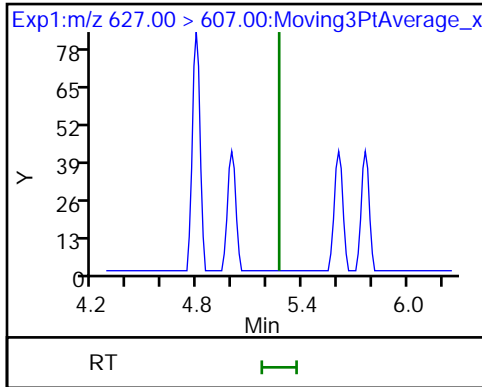
42 Perfluorododecanoic acid (ND)



50 10:2 FTS (ND)

D 51 d7-N-MeFOSE-M

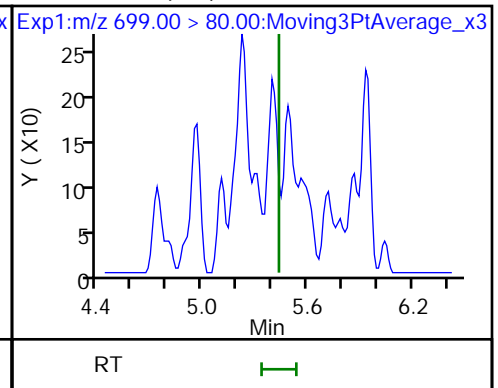
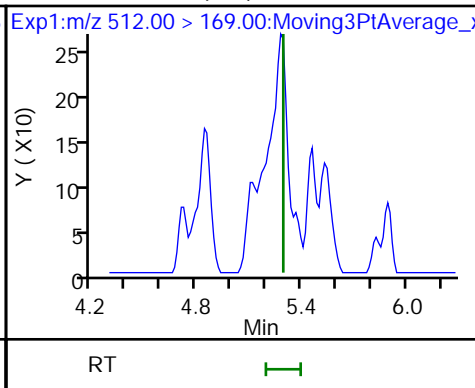
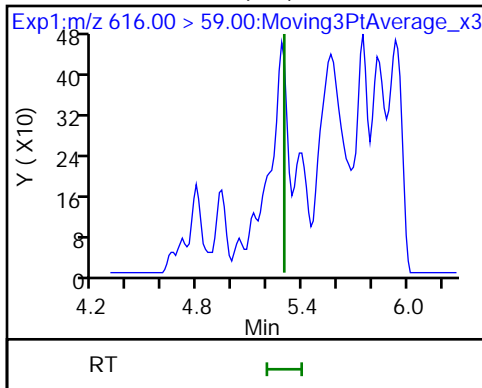
D 58 d-N-MeFOSA-M



49 N-MeFOSE-M (ND)

61 NMeFOSA (ND)

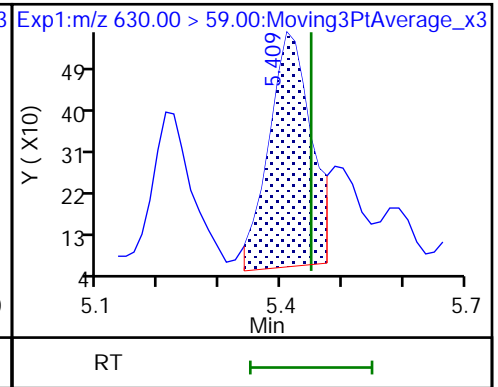
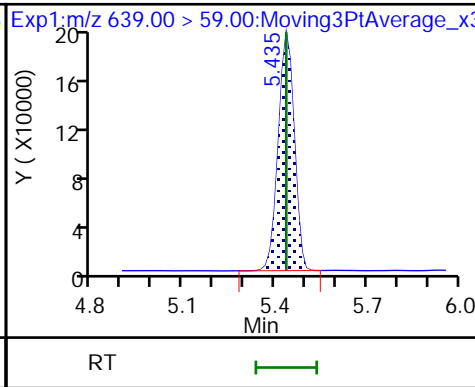
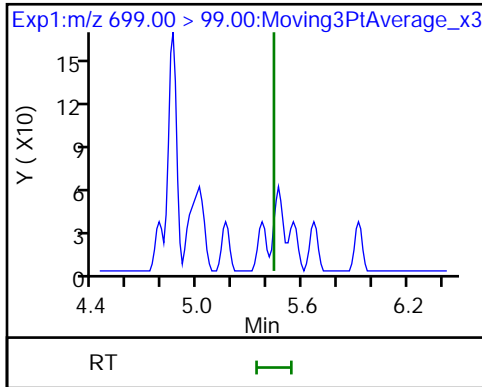
54 PFDoS (ND)



54 PFDoS (ND)

D 53 d9-N-EtFOSE-M

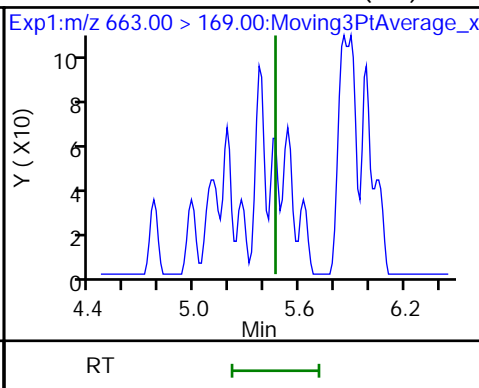
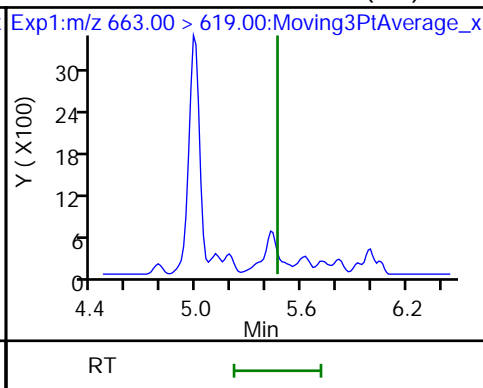
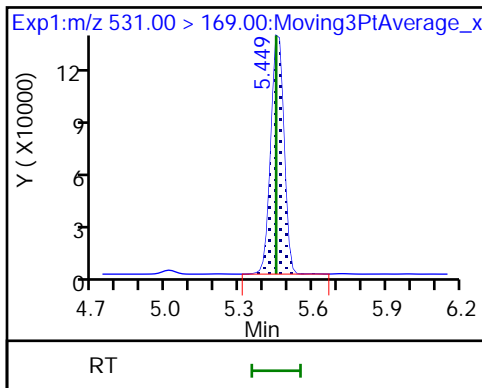
62 N-EtFOSE-M (M)



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid (ND)

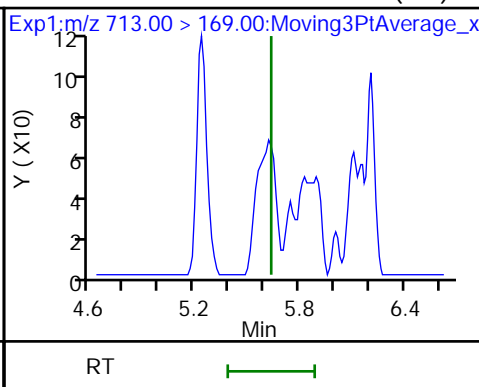
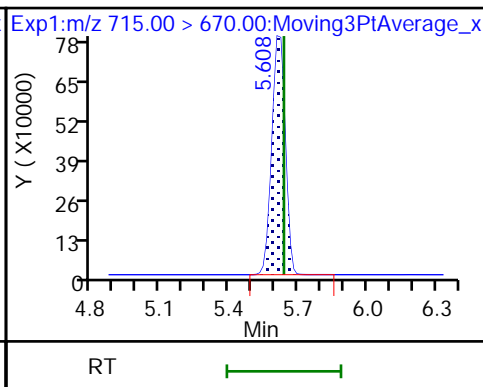
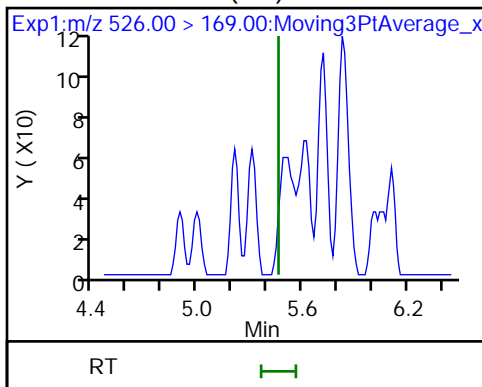
44 Perfluorotridecanoic acid (ND)



56 N-EtFOSA-M (ND)

D 46 13C2 PFTeDA

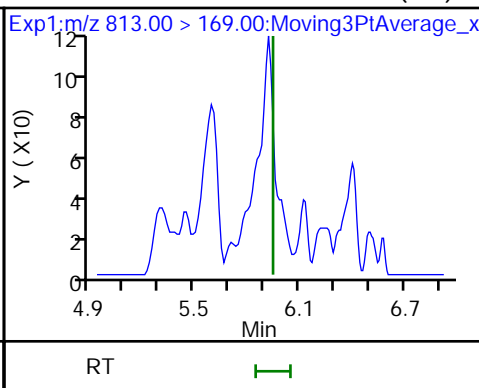
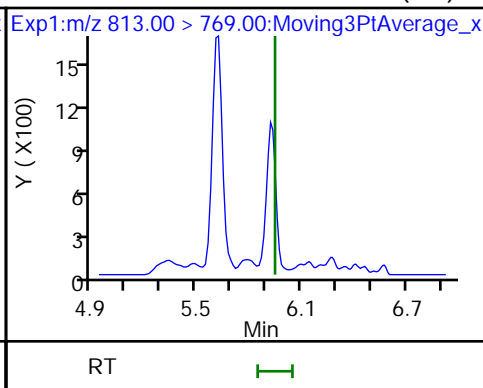
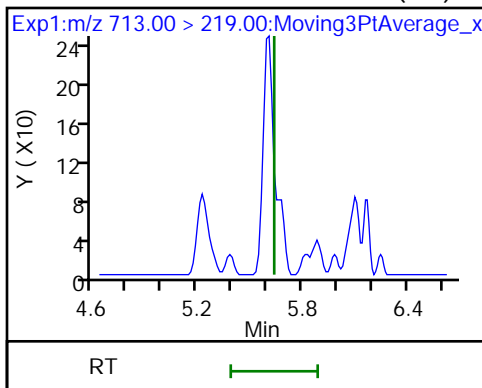
45 Perfluorotetradecanoic acid (ND)



45 Perfluorotetradecanoic acid (ND)

55 Perfluorohexadecanoic acid (ND)

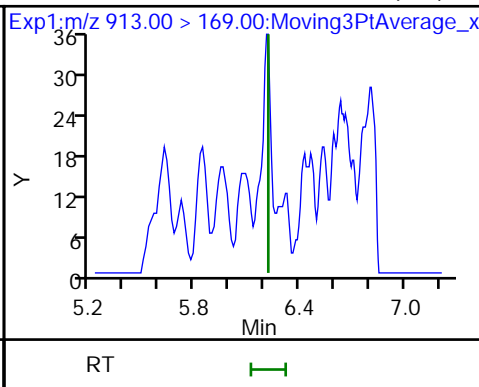
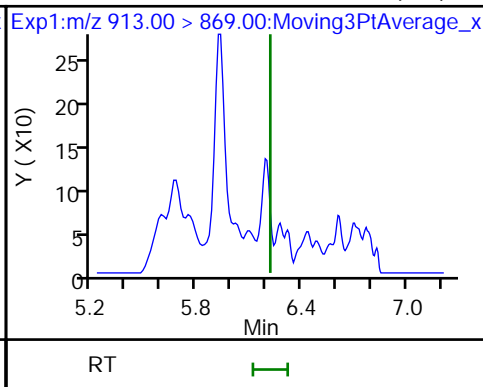
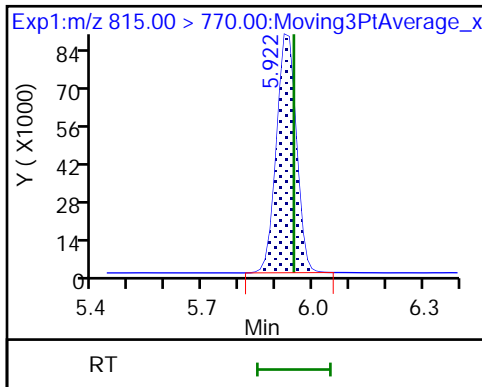
55 Perfluorohexadecanoic acid (ND)



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid (ND)

60 Perfluorooctadecanoic acid (ND)



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-54348/1-B
 Matrix: Air Lab File ID: _039.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: None Date Extracted: 09/30/2021 08:55
 Sample wt/vol: 1(Sample) Date Analyzed: 10/07/2021 02:10
 Con. Extract Vol.: 10(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: GeminiC18 3x100 ID: 3(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54568 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	ND		0.000500	0.0000825

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	84		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_039.d
 Lims ID: MB 140-54348/1-B
 Client ID:
 Sample Type: MB
 Inject. Date: 07-Oct-2021 02:10:12 ALS Bottle#: 39 Worklist Smp#: 39
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-039 mb 140-54348/1-b
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 17:25:19 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d

Column 1 : Det: EXP1
 Process Host: CTX1675

First Level Reviewer: cochranj Date: 09-Oct-2021 17:21:15

Ratio Calibration: None

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
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D 1 13C4 PFBA	217.00 > 172.00	2.801	2.801	0.0	0.678	7534544	1.09	87.5	17165	
2 Perfluorobutanoic acid										7
212.90 > 169.00	2.801	2.812	-0.011	1.000	4041	0.000854		1.0	7	
LOD =	0.0100									
D 3 13C5 PFPeA	267.90 > 223.00	3.116	3.129	-0.013	0.754	6218354	1.10	87.9	13538	
4 Perfluoropentanoic acid										7
262.90 > 219.00	3.116	3.129	-0.013	1.000	10018	0.001988		2.5	7	
LOD =	0.006500									
D 6 13C3 PFBS	301.90 > 80.00	3.130	3.129	0.001	0.758	3585069	0.9816	84.4	21505	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00		3.143					ND			
298.90 > 99.00		3.143								
D 8 M2-4:2 FTS	329.00 > 81.00	3.409	3.423	-0.014	0.825	597864	1.09	93.5	1278	
7 4:2 FTS										
327.00 > 307.00		3.423					ND			
11 Perfluoropentanesulfonic acid										
349.00 > 80.00		3.453					ND			
349.00 > 99.00		3.453								
D 9 13C2 PFHxA	315.00 > 270.00	3.437	3.469	-0.032	0.832	6300907	1.08	86.8	19209	
10 Perfluorohexanoic acid										
313.00 > 269.00		3.469					ND			
313.00 > 119.00		3.469								

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.535	3.561	-0.026	0.856	3121917	1.05		84.0	9245	
13 HFPO-DA										
285.00 > 169.00	3.548	3.561	-0.013	1.004	4933	-0.004857		4.1	7	7
LOD = 0.008250										
S 65 ADONA										
377.00 > 251.00		3.592				0				
D 17 18O2 PFHxS										
403.00 > 84.00	3.791	3.803	-0.012	0.918	2256334	1.02		86.3	14534	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.791	3.803	-0.012	1.000	7605	-0.002145	Target=2.96	34.7	7	7
399.00 > 99.00	3.791	3.803	-0.012	1.000	2449		3.11(1.48-4.44)	24.9		
LOD = 0.005000										
D 14 13C4 PFHpA										
367.00 > 322.00	3.791	3.815	-0.024	0.918	6375339	1.10		88.1	16249	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.791	3.815	-0.024	1.000	6786	-0.003429	Target=3.35	6.3	7	7
363.00 > 169.00	3.803	3.815	-0.012	1.003	2508		2.71(1.67-5.02)	20.6		
LOD = 0.004250										
68 DONA										
377.00 > 251.00		3.840				ND				
377.00 > 85.00		3.840								
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00		4.143				ND				
449.00 > 99.00		4.143								
\$ 48 13C8 PFOA										
421.00 > 376.00		4.143				ND				U
D 18 M2-6:2 FTS										
429.00 > 81.00	4.118	4.143	-0.025	0.997	656121	1.17		98.5	4553	
19 6:2 FTS										
427.00 > 407.00		4.143				ND				
D 21 13C4 PFOA										
417.00 > 372.00	4.130	4.155	-0.025	1.000	5877903	1.12		89.8	18877	
* 22 13C2 PFOA										
415.00 > 370.00	4.130	4.155	-0.025		6504302	1.25			20548	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.118	4.155	-0.037	0.997	9214	-0.006874	Target=2.40	3.9	7M	7M
413.00 > 169.00	4.130	4.155	-0.025	1.000	2721		3.39(1.20-3.61)	6.9		
LOD = 0.007800										
\$ 47 13C8 PFOS										
507.00 > 99.00		4.447				ND				
D 25 13C4 PFOS										
503.00 > 80.00	4.421	4.447	-0.025	1.070	3113427	1.02		85.6	11633	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00		4.447				ND				
499.00 > 99.00		4.447								
D 27 13C5 PFNA										
468.00 > 423.00	4.446	4.470	-0.024	1.077	7257264	1.09		87.2	26033	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
26 Perfluorononanoic acid										
463.00 > 419.00		4.470				ND				
463.00 > 169.00		4.470								
63 9CIFOS										
531.00 > 351.00		4.596				ND				
28 Perfluorononanesulfonic acid										
549.00 > 80.00		4.722				ND				
549.00 > 99.00		4.722								
D 34 13C8 FOSA										
506.00 > 78.00	4.722	4.736	-0.014	1.143	4925762	1.10		88.2	6168	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.722	4.736	-0.014	1.000	2732	0.000722		6.8	7M	7M
LOD = 0.004400										
D 32 13C2 PFDA										
515.00 > 470.00	4.735	4.749	-0.014	1.146	7378676	1.09		87.6	18436	
29 Perfluorodecanoic acid										
513.00 > 469.00		4.749				ND				
513.00 > 169.00		4.749								
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.763	-0.014	1.150	744843	1.09		90.8	3846	
31 8:2 FTS										
527.00 > 507.00		4.763				ND				
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.869	4.896	-0.027	1.179	1007326	1.09		87.3	3763	
36 NMeFOSAA										
570.00 > 419.00		4.896				ND				
37 Perfluorodecanesulfonic acid										
599.00 > 80.00		4.993				ND				
599.00 > 99.00		4.993								
69 Perfluoro-3,6,9-trioxatridecanoic acid										
561.00 > 467.00	4.935	4.994	-0.059	1.116	2603	NC	Target=0.00		0.5	
561.00 > 235.00	4.922	4.994	-0.072	1.113	2419		1.08(0.00-0.00)		0.8	
D 39 13C2 PFUnA										
565.00 > 520.00	4.993	5.022	-0.029	1.209	6780632	1.05		84.3	10488	
38 Perfluoroundecanoic acid										
563.00 > 519.00		5.022				ND				
563.00 > 169.00		5.022								
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.007	5.036	-0.029	1.212	937707	1.06		84.6	4080	
40 NEtFOSA										
584.00 > 419.00		5.036				ND				
57 11CIFOS										
631.00 > 451.00		5.119				ND				
D 43 13C2 PFDaA										
615.00 > 570.00	5.223	5.251	-0.028	1.265	7809192	1.14		91.0	30202	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
42 Perfluorododecanoic acid										
613.00 > 569.00		5.251				ND				
613.00 > 169.00		5.251								
50 10:2 FTS										
627.00 > 607.00		5.266				ND				
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.280	5.281	-0.001	1.278	660718	1.18		94.5	433	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.282	604271	1.04		83.0	36.0	
49 N-MeFOSE-M										
616.00 > 59.00		5.295				ND				
61 NMeFOSA										
512.00 > 169.00		5.295				ND				
54 PFDoS										
699.00 > 80.00		5.436				ND				
699.00 > 99.00		5.436								
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.435	5.436	-0.001	1.316	703698	1.18		94.4	771	
62 N-EtFOSE-M										
630.00 > 59.00		5.449				ND				
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.449	0.013	1.322	535378	1.09		87.4	814	
44 Perfluorotridecanoic acid										
663.00 > 619.00		5.462				ND				
663.00 > 169.00		5.462								
56 N-EtFOSA-M										
526.00 > 169.00		5.462				ND				
D 46 13C2 PFTeDA										
715.00 > 670.00	5.623	5.637	-0.014	1.361	6663643	1.06		84.6	29226	
45 Perfluorotetradecanoic acid										
713.00 > 169.00		5.637				ND				
713.00 > 219.00		5.637								
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.935	5.948	-0.013	1.000	49130	-0.002093	Target=7.50	56.3		7
813.00 > 169.00	5.935	5.948	-0.013	1.000	5438		9.03(3.75-11.26)	49.2		7
LOD = 0.009000										
D 59 13C2 PFHxDA										
815.00 > 770.00	5.935	5.948	-0.013	1.437	4997792	1.09		87.5	6106	
60 Perfluorooctadecanoic acid										
913.00 > 869.00		6.221				ND				
913.00 > 169.00		6.221								
S 66 F-53B										
212.90 > 169.00		0.0				0				
S 67 NaDONA										
377.00 > 251.00		0.0				0				
377.00 > 85.00		0.0								

QC Flag Legend

Processing Flags

NC - Not Calibrated

ND - Not Detected or Marked ND

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

U - Marked Undetected

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_039.d

Injection Date: 07-Oct-2021 02:10:12

Instrument ID: LCA

Lims ID: MB 140-54348/1-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 39

Worklist Smp#: 39

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

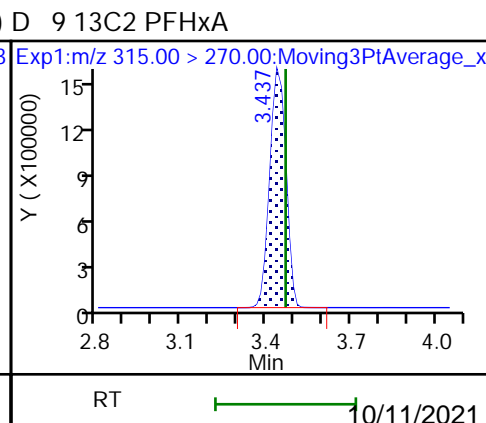
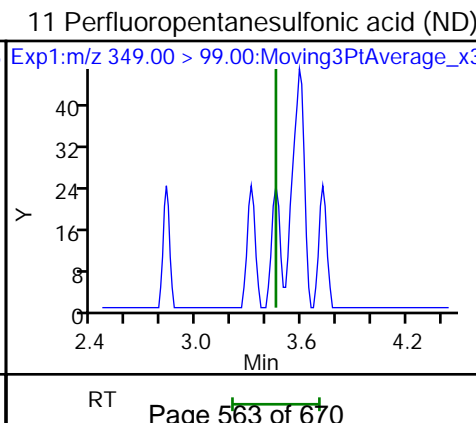
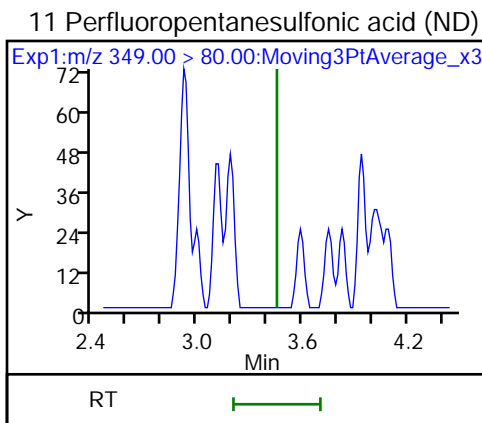
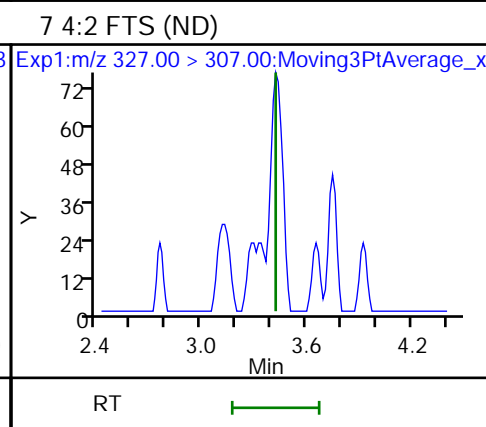
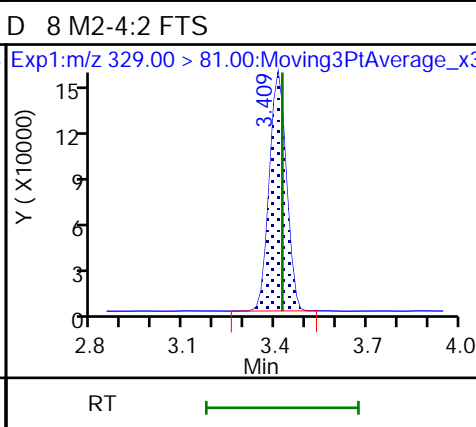
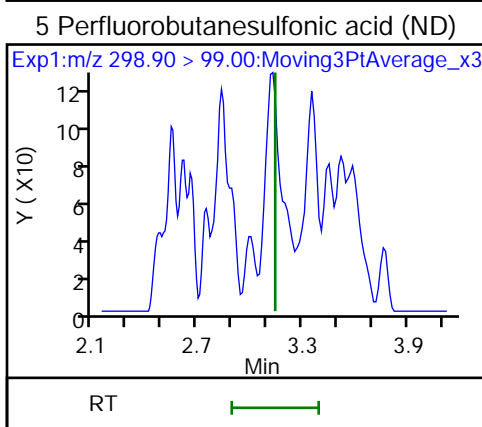
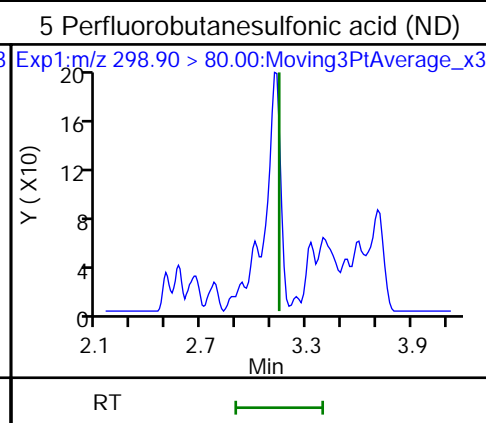
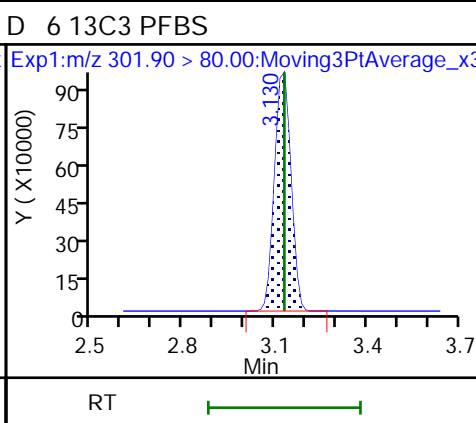
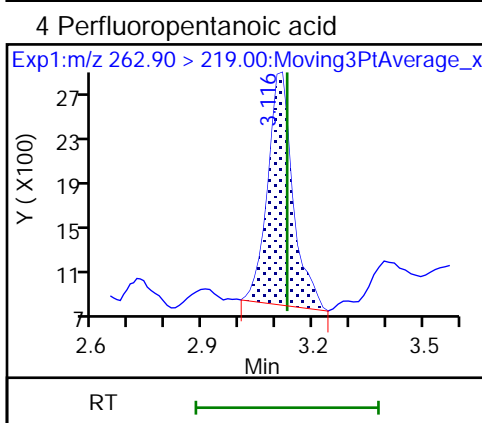
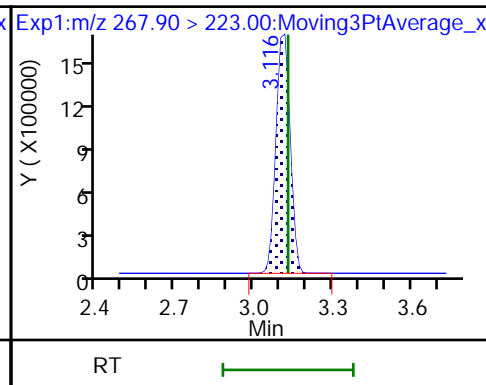
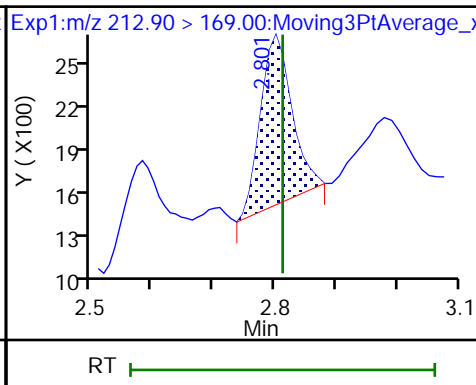
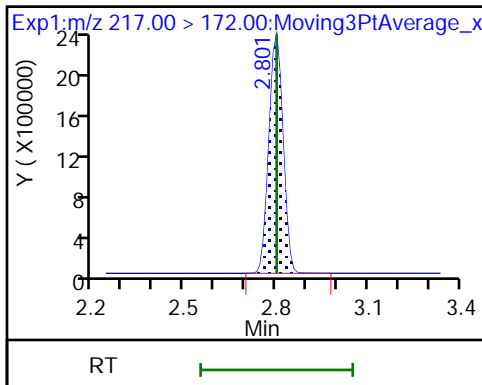
Method: PFC_LCA

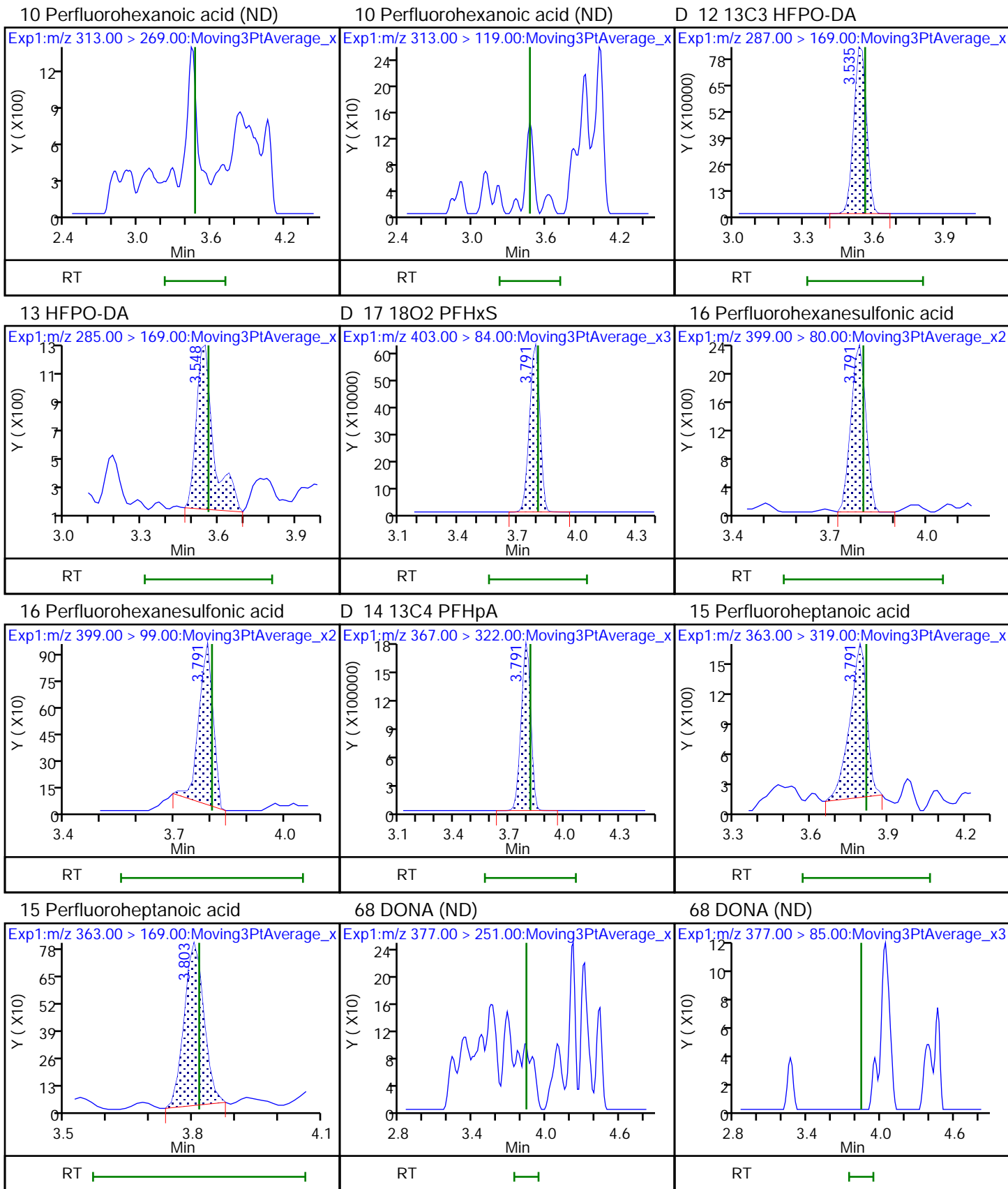
Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

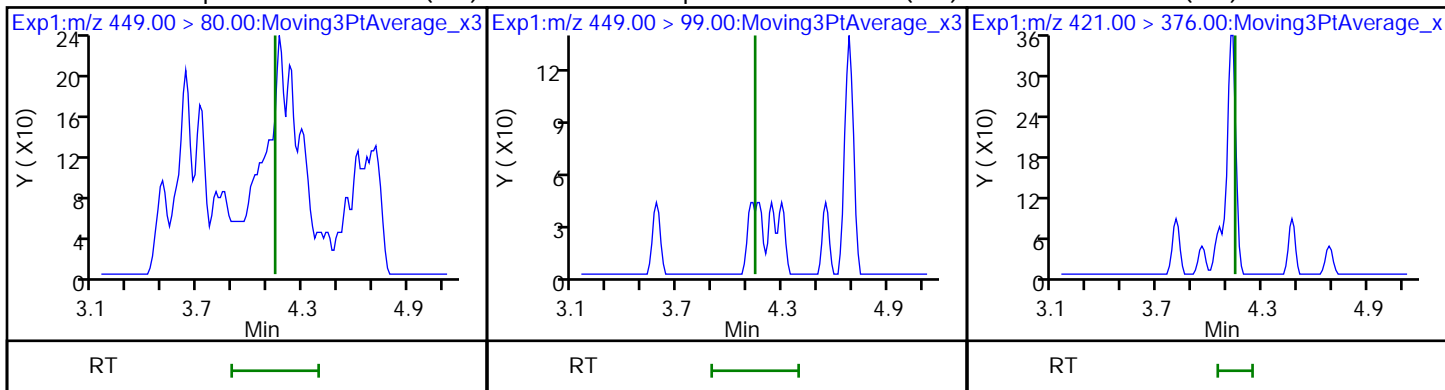
2 Perfluorobutanoic acid

D 3 13C5 PFPeA





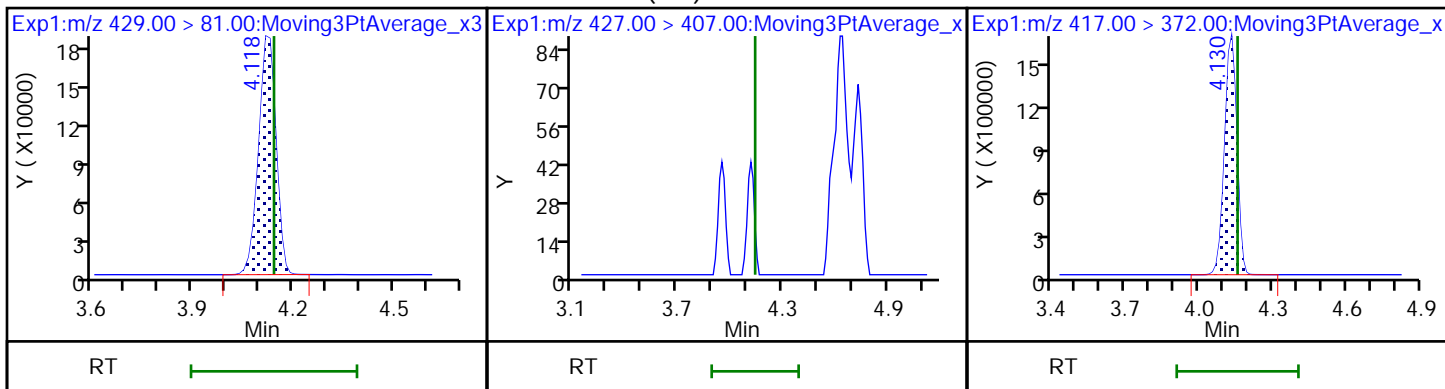
20 Perfluoroheptanesulfonic acid (ND) 20 Perfluoroheptanesulfonic acid (ND) \$ 48 13C8 PFOA (ND)



D 18 M2-6:2 FTS

19 6:2 FTS (ND)

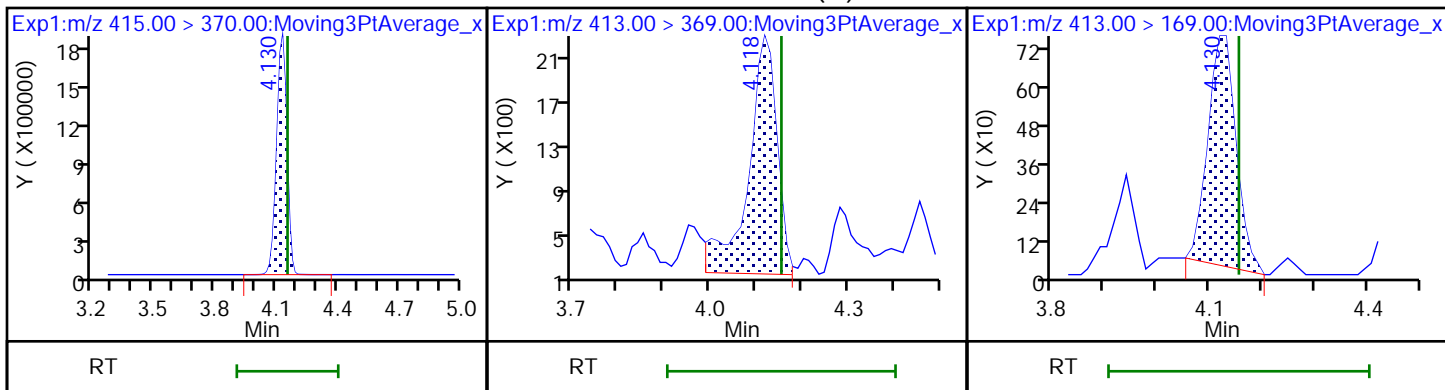
D 21 13C4 PFOA



* 22 13C2 PFOA

23 Perfluorooctanoic acid (M)

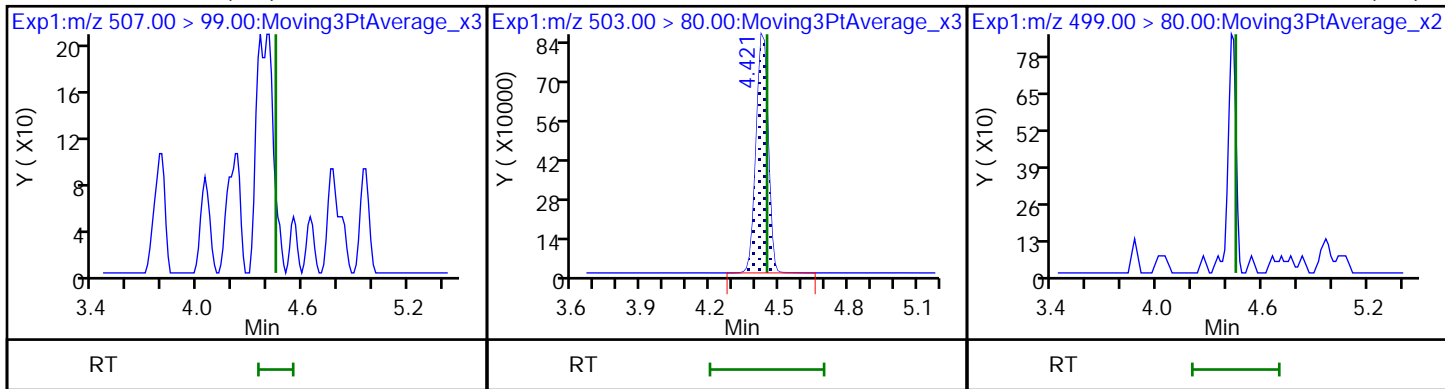
23 Perfluorooctanoic acid



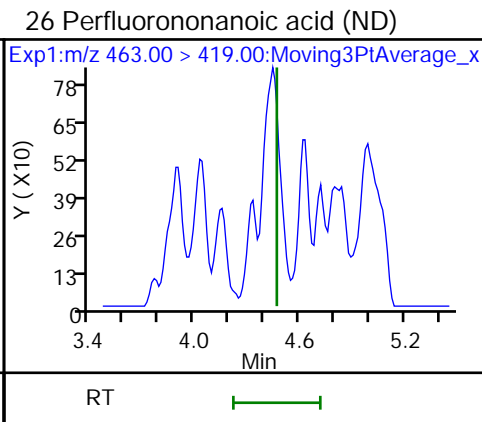
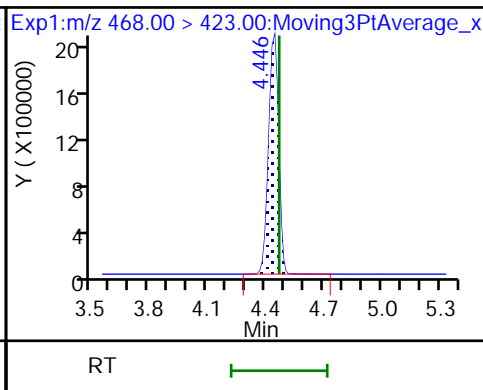
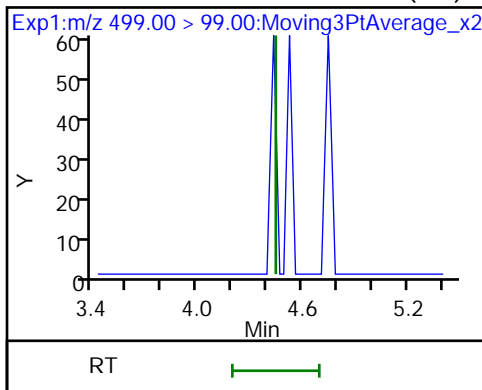
\$ 47 13C8 PFOS (ND)

D 25 13C4 PFOS

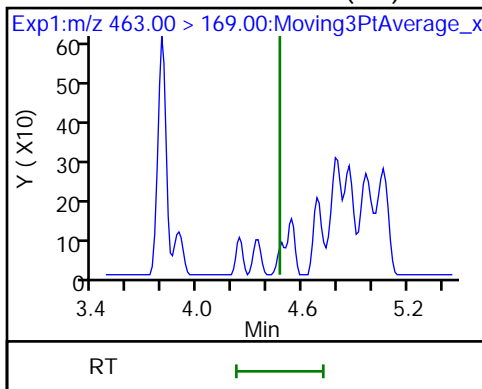
24 Perfluorooctanesulfonic acid (ND)



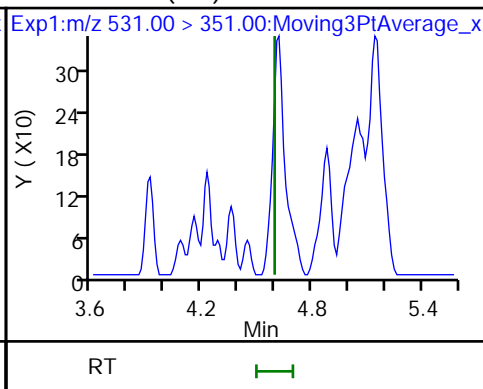
24 Perfluorooctanesulfonic acid (ND) D 27 13C5 PFNA



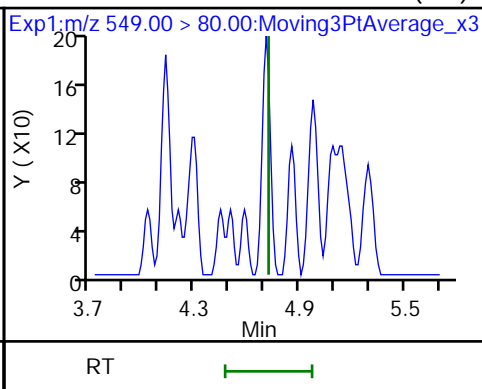
26 Perfluorononanoic acid (ND)



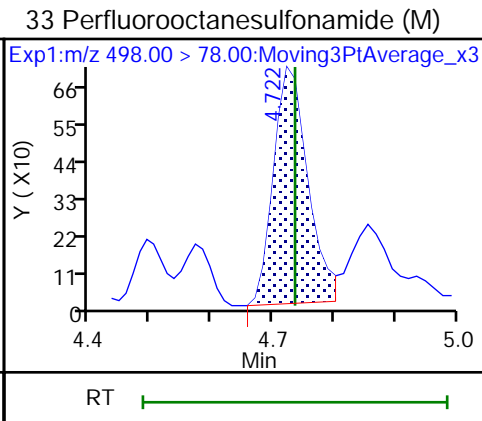
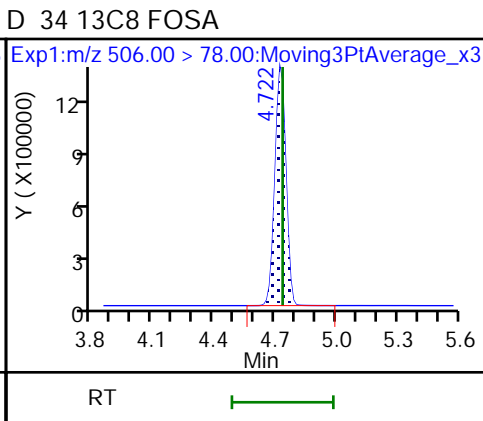
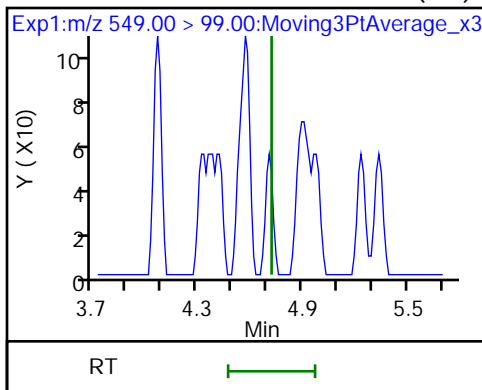
63 9CIFOS (ND)



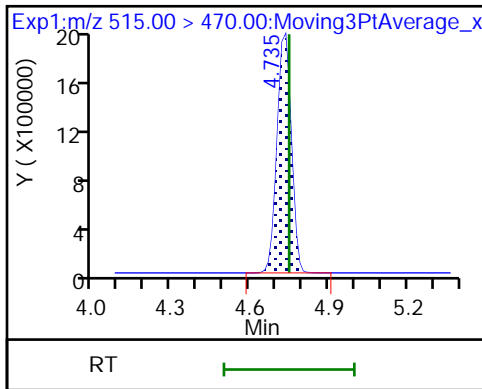
28 Perfluorononanesulfonic acid (ND)



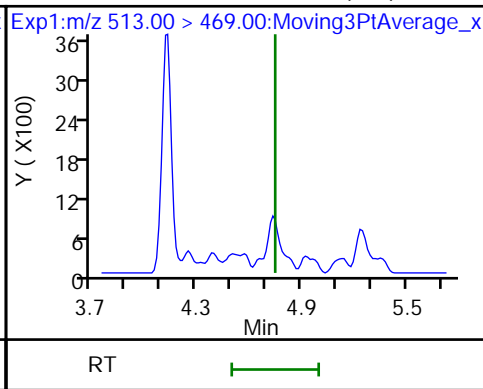
28 Perfluorononanesulfonic acid (ND) D 34 13C8 FOSA



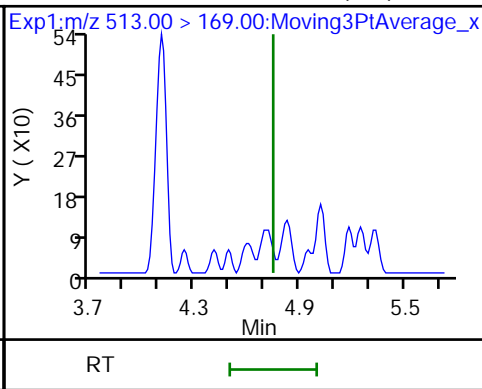
D 32 13C2 PFDA



29 Perfluorodecanoic acid (ND)



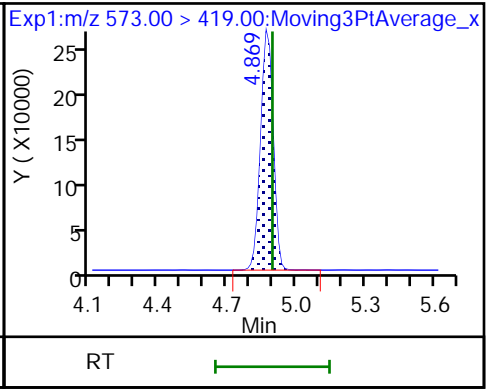
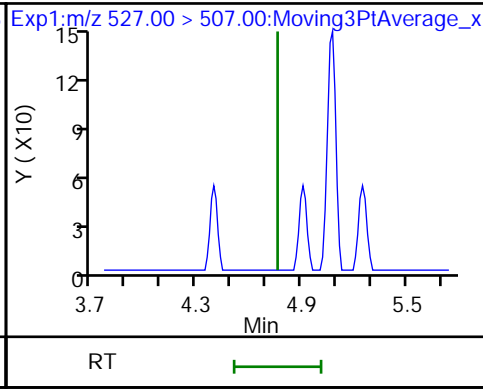
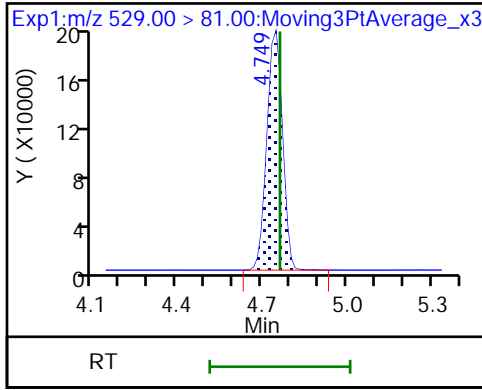
29 Perfluorodecanoic acid (ND)



D 30 M2-8:2 FTS

31 8:2 FTS (ND)

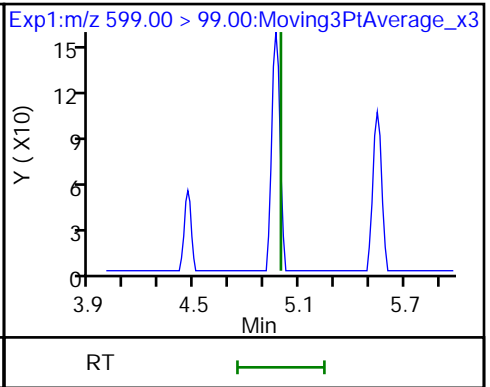
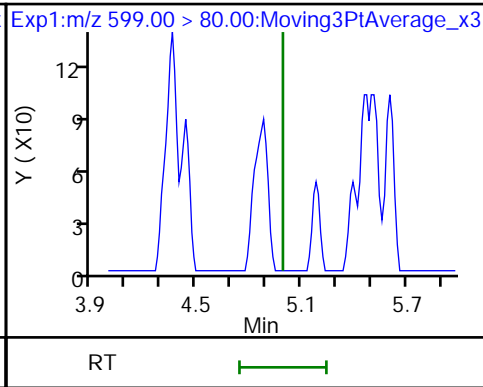
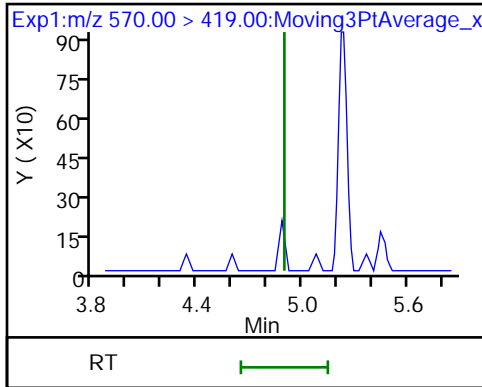
D 35 d3-NMeFOSAA



36 NMeFOSAA (ND)

37 Perfluorodecanesulfonic acid (ND)

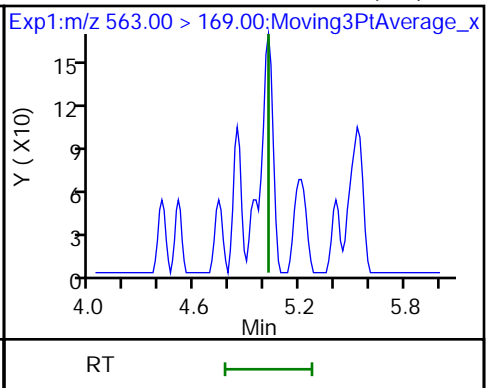
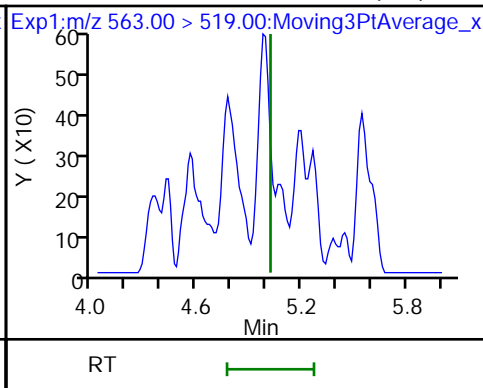
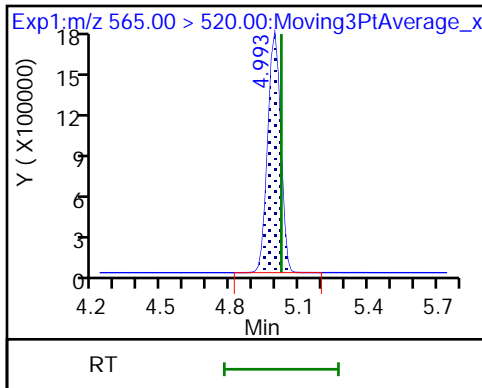
37 Perfluorodecanesulfonic acid (ND)



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid (ND)

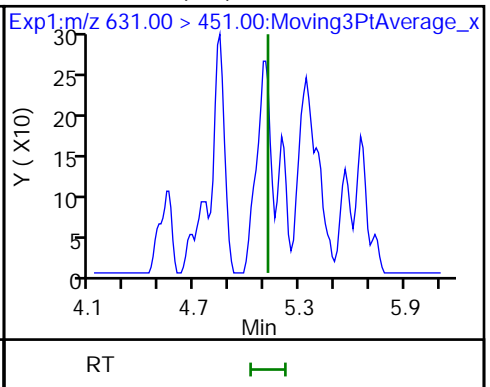
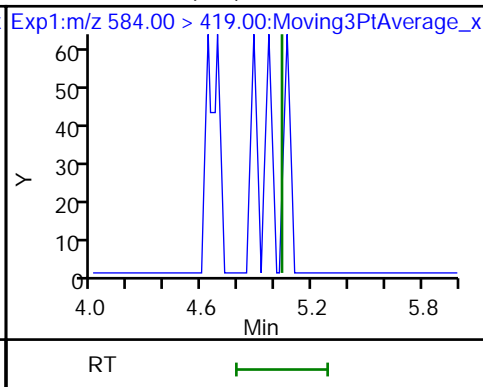
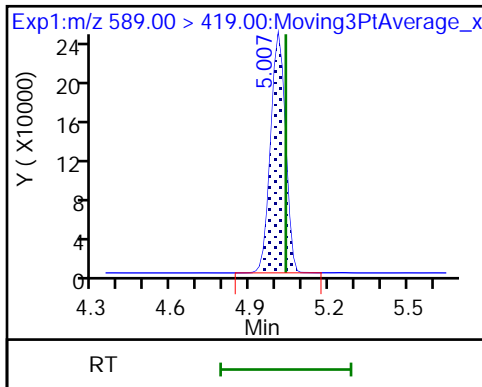
38 Perfluoroundecanoic acid (ND)



D 41 d5-NEtFOSAA

40 NEtFOSA (ND)

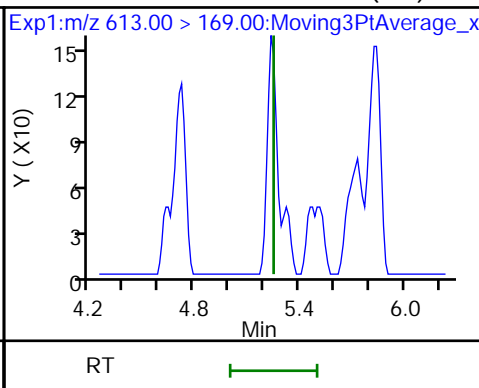
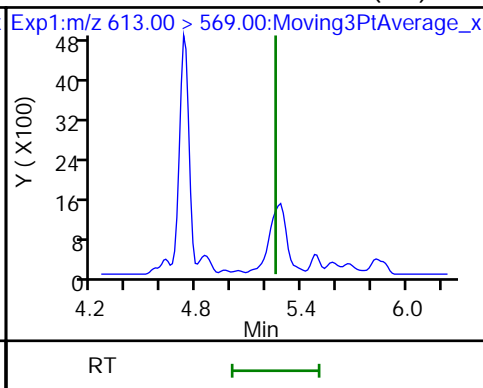
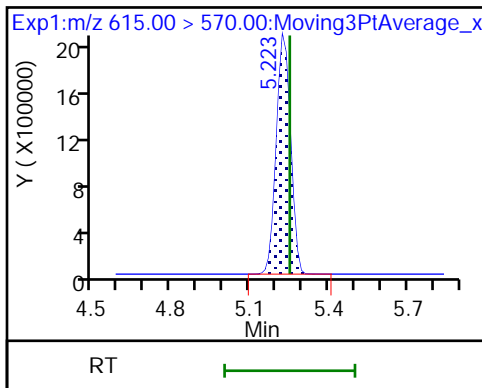
57 11CIFOS (ND)



D 43 13C2 PFDaA

42 Perfluorododecanoic acid (ND)

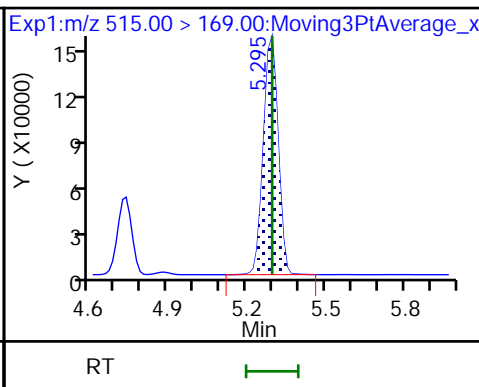
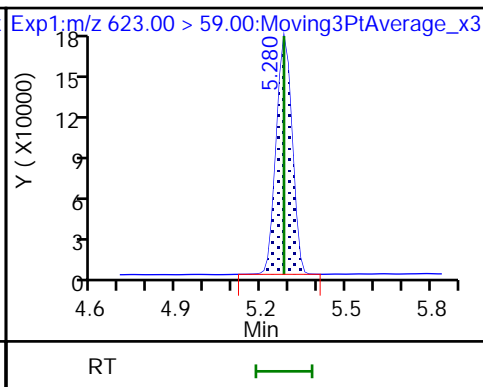
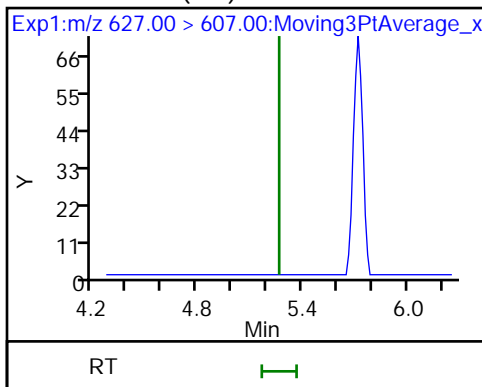
42 Perfluorododecanoic acid (ND)



50 10:2 FTS (ND)

D 51 d7-N-MeFOSE-M

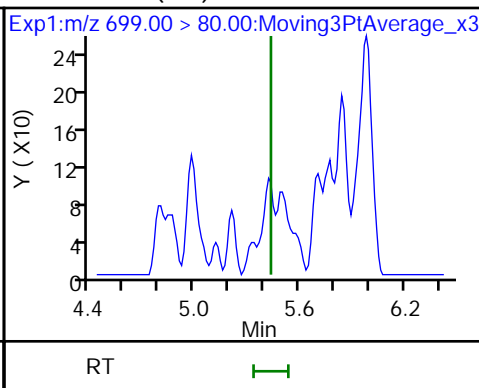
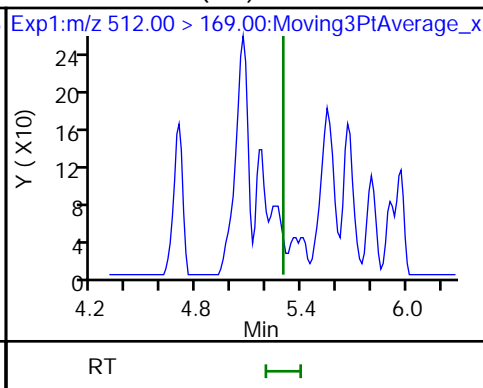
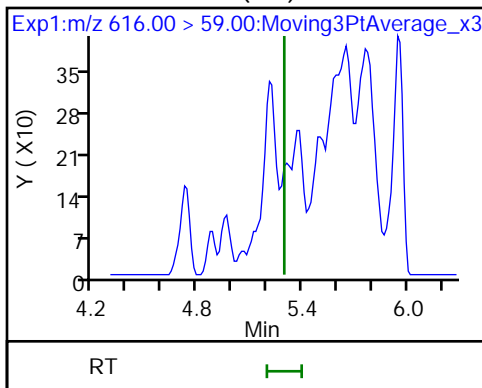
D 58 d-N-MeFOSE-M



49 N-MeFOSE-M (ND)

61 NMeFOSE (ND)

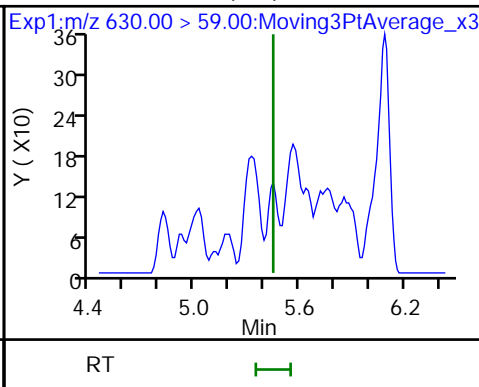
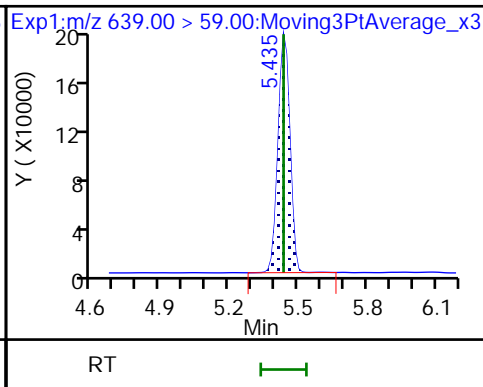
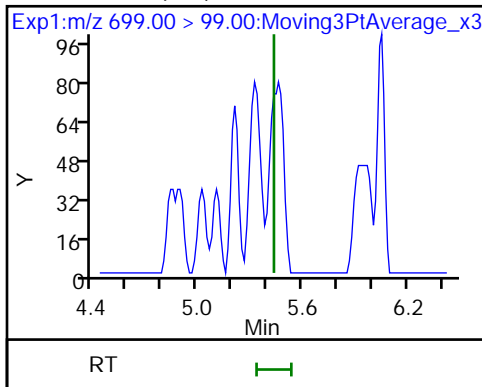
54 PFDoS (ND)



54 PFDoS (ND)

D 53 d9-N-EtFOSE-M

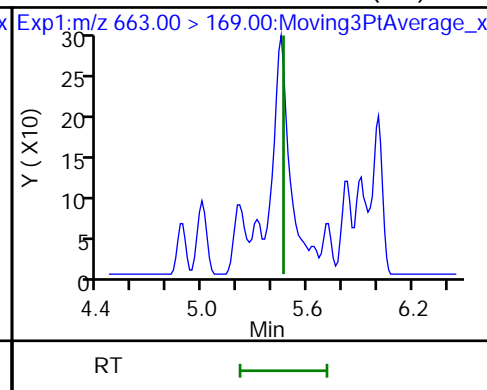
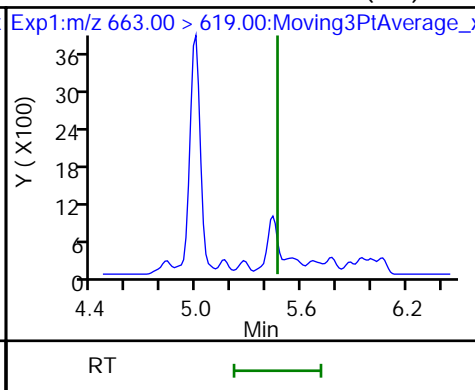
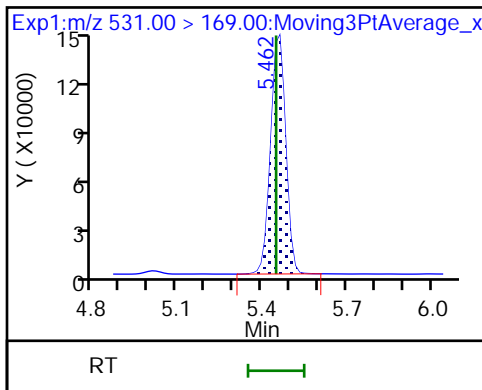
62 N-EtFOSE-M (ND)



D 52 d-N-EtFOSA-M

44 Perfluorotridecanoic acid (ND)

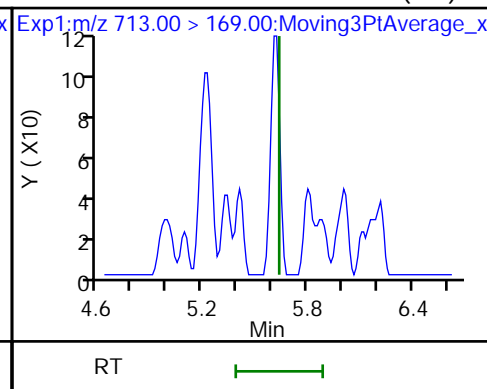
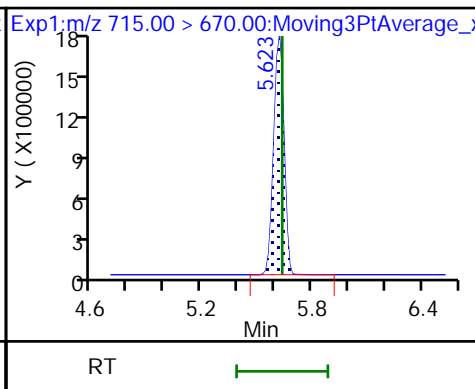
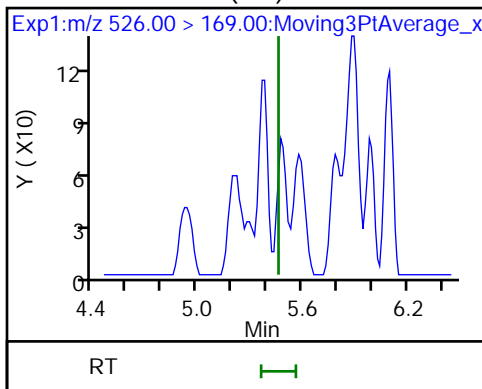
44 Perfluorotridecanoic acid (ND)



56 N-EtFOSA-M (ND)

D 46 13C2 PFTeDA

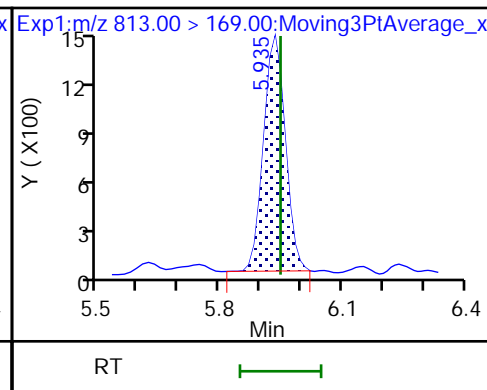
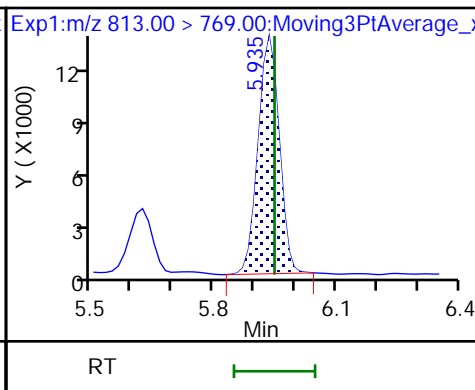
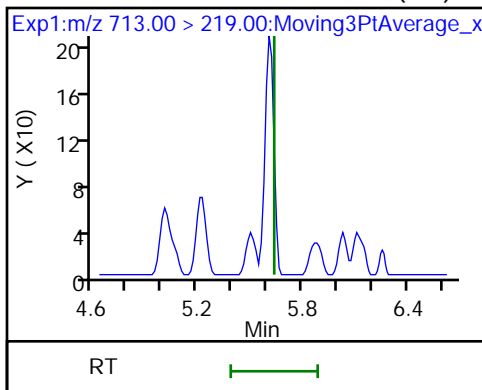
45 Perfluorotetradecanoic acid (ND)



45 Perfluorotetradecanoic acid (ND)

55 Perfluorohexadecanoic acid

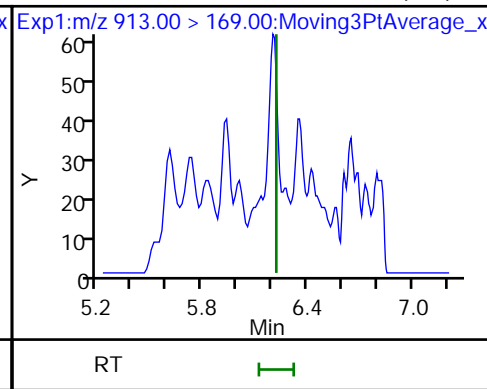
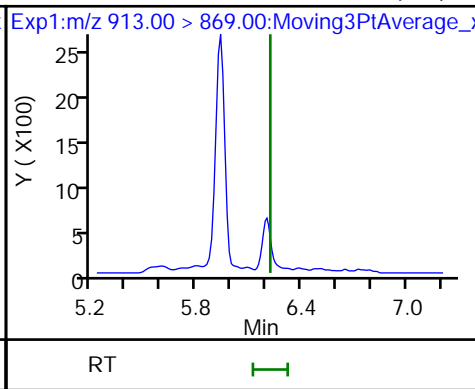
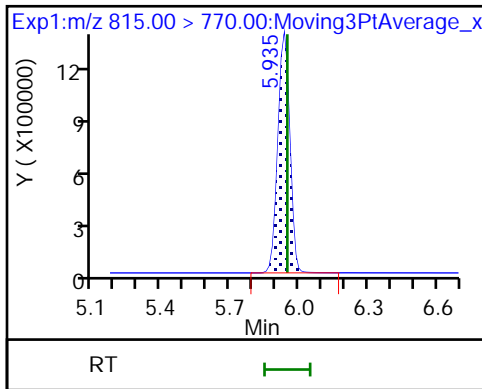
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid (ND)

60 Perfluorooctadecanoic acid (ND)



FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-54177/2-B
 Matrix: Air Lab File ID: 092.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: None Date Extracted: 09/24/2021 09:38
 Sample wt/vol: 1 (Sample) Date Analyzed: 10/07/2021 09:59
 Con. Extract Vol.: 50 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: GeminiC18 3x100 ID: 3 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54568 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.01930		0.00100	0.000580

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	91		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_092.d
 Lims ID: LCS 140-54177/2-B
 Client ID:
 Sample Type: LCS
 Inject. Date: 07-Oct-2021 09:59:31 ALS Bottle#: 38 Worklist Smp#: 92
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-092 lcs 140-54177/2-b
 Misc. Info.: Plate: 11 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 18:07:45 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675
 First Level Reviewer: cochranj Date: 09-Oct-2021 18:05:15
 Ratio Calibration: None

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	2.812	2.801	0.011	0.681	6694222	1.14	91.6	17278	
2 Perfluorobutanoic acid	212.90 > 169.00	2.812	2.812	0.0	1.000	4091501	0.9727	97.3	869	
D 3 13C5 PFPeA	267.90 > 223.00	3.116	3.129	-0.013	0.754	5609460	1.17	93.5	13889	
4 Perfluoropentanoic acid	262.90 > 219.00	3.116	3.129	-0.013	1.000	4325026	0.9514	95.1	1108	
D 6 13C3 PFBS	301.90 > 80.00	3.129	3.129	0.0	0.758	3343013	1.08	92.8	16908	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.143	3.143	0.0	1.004	2750258	0.8493	Target=3.06	96.1	10719
	298.90 > 99.00	3.143	3.143	0.0	1.004	1044334		2.63(1.53-4.59)		3895
D 8 M2-4:2 FTS	329.00 > 81.00	3.409	3.423	-0.014	0.825	567940	1.22	105	666	
7 4:2 FTS	327.00 > 307.00	3.409	3.423	-0.014	1.000	1075663	0.8845	94.7	10409	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.453	3.453	0.0	1.103	2296538	0.9297	Target=3.47	99.1	9986
	349.00 > 99.00	3.453	3.453	0.0	1.103	680656		3.37(1.73-5.20)		6155
D 9 13C2 PFHxA	315.00 > 270.00	3.453	3.469	-0.016	0.836	6118019	1.24	99.3	27058	
10 Perfluorohexanoic acid	313.00 > 269.00	3.453	3.469	-0.016	1.000	3676731	0.8764	Target=9.74	87.6	1781
	313.00 > 119.00	3.453	3.469	-0.016	1.000	303973		12.10(4.87-14.61)		808
D 12 13C3 HFPO-DA	287.00 > 169.00	3.548	3.561	-0.013	0.859	2868811	1.14	90.9	8742	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.548	3.561	-0.013	1.000	3067107	0.9649		96.5	2542	
D 17 18O2 PFHxS										
403.00 > 84.00	3.790	3.803	-0.013	0.918	2107476	1.12		95.0	20835	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.790	3.803	-0.013	1.000	2075353	0.8568	Target=2.96	94.2	6900	M
399.00 > 99.00	3.790	3.803	-0.013	1.000	599399		3.46(1.48-4.44)		4784	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.803	3.815	-0.012	0.921	5814290	1.18		94.6	21924	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.803	3.815	-0.012	1.000	4869185	0.99	Target=3.35	99.0	3697	
363.00 > 169.00	3.803	3.815	-0.012	1.000	1443742		3.37(1.67-5.02)		5179	
68 DONA										
377.00 > 251.00	3.827	3.840	-0.013	0.863	7030381	0.8733	Target=1.49	92.7	18066	
377.00 > 85.00	3.827	3.840	-0.013	0.863	3711037		1.89(0.74-2.23)		21662	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.119	4.143	-0.024	0.929	2186871	0.8857	Target=3.73	93.0	11069	
449.00 > 99.00	4.119	4.143	-0.024	0.929	558813		3.91(1.87-5.61)		5334	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.131	4.143	-0.012	1.000	673186	1.41		119	2476	
19 6:2 FTS										
427.00 > 407.00	4.131	4.143	-0.012	1.000	1029649	0.9024		95.2	6417	
D 21 13C4 PFOA										
417.00 > 372.00	4.131	4.155	-0.024	1.000	5225145	1.18		94.0	18443	
* 22 13C2 PFOA										
415.00 > 370.00	4.131	4.155	-0.024		5521347	1.25			22260	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.131	4.155	-0.024	1.000	4587111	0.9896	Target=2.40	99.0	2306	
413.00 > 169.00	4.131	4.155	-0.024	1.000	1756895		2.61(1.20-3.61)		2804	
D 25 13C4 PFOS										
503.00 > 80.00	4.434	4.447	-0.012	1.074	2966084	1.15		96.0	7273	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.434	4.447	-0.012	1.000	2339604	0.8571	Target=3.83	92.4	4473	M
499.00 > 99.00	4.434	4.447	-0.012	1.000	534906		4.37(1.91-5.74)		2767	M
D 27 13C5 PFNA										
468.00 > 423.00	4.447	4.470	-0.023	1.076	7127612	1.26		101	19461	
26 Perfluorononanoic acid										
463.00 > 419.00	4.447	4.470	-0.023	1.000	4643920	0.9756	Target=3.68	97.6	3848	
463.00 > 169.00	4.447	4.470	-0.023	1.000	1037250		4.48(1.84-5.52)		2813	
63 9CIFOS										
531.00 > 351.00	4.584	4.596	-0.012	1.110	4906211	0.8565		91.9	5553	
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.709	4.722	-0.013	1.062	2283576	0.8827	Target=3.97	92.0	3244	
549.00 > 99.00	4.709	4.722	-0.013	1.062	588159		3.88(1.99-5.96)		2223	
D 34 13C8 FOSA										
506.00 > 78.00	4.762	4.736	0.026	1.153	4718615	1.24		99.5	11881	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.762	4.736	0.026	1.000	3298176	0.9096		91.0	6274	M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 32 13C2 PFDA										
515.00 > 470.00	4.736	4.749	-0.013	1.146	6825367	1.19		95.4	26558	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.736	4.749	-0.013	1.000	5045568	0.9723	Target=10.11	97.2	2603	
513.00 > 169.00	4.736	4.749	-0.013	1.000	410107		12.30(5.06-15.17)		437	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.763	-0.014	1.150	762781	1.31		110	3464	
31 8:2 FTS										
527.00 > 507.00	4.749	4.763	-0.014	1.000	1028913	0.9056		94.5	7897	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.882	4.896	-0.014	1.182	859037	1.10		87.7	2468	
36 NMeFOSAA										
570.00 > 419.00	4.882	4.896	-0.014	1.000	566034	0.8949		89.5	1249	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.979	4.993	-0.014	1.123	2003958	0.8433	Target=3.80	87.5	2690	
599.00 > 99.00	4.979	4.993	-0.014	1.123	574150		3.49(1.90-5.70)		4972	
D 39 13C2 PFUnA										
565.00 > 520.00	5.007	5.022	-0.015	1.212	6603015	1.21		96.7	29452	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.007	5.022	-0.015	1.000	5069256	0.9479	Target=7.45	94.8	6818	
563.00 > 169.00	5.007	5.022	-0.015	1.000	592195		8.56(3.78-11.33)		3238	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.022	5.036	-0.014	1.216	839598	1.11		89.2	3308	
40 NEtFOSA										
584.00 > 419.00	5.022	5.036	-0.014	1.000	615276	0.9648		96.5	749	M
57 11CIFOS										
631.00 > 451.00	5.106	5.119	-0.013	1.151	3908525	0.8474		90.0	7099	
D 43 13C2 PFDoA										
615.00 > 570.00	5.237	5.251	-0.014	1.268	7244894	1.24		99.4	7466	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.237	5.251	-0.014	1.000	5599321	0.9247	Target=5.33	92.5	3569	
613.00 > 169.00	5.237	5.251	-0.014	1.000	807937		6.93(2.66-7.99)		3060	
50 10:2 FTS										
627.00 > 607.00	5.266	5.266	0.0	1.109	1490514	1.05		109	7951	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.281	5.281	0.0	1.278	620537	1.31		105	270	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.282	527108	1.07		85.3	39.7	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.295	0.0	1.003	544740	0.9473		94.7	701	
61 NMeFOSA										
512.00 > 169.00	5.310	5.295	0.015	1.003	453220	1.03		103	642	
54 PFDoS										
699.00 > 80.00	5.436	5.436	0.0	1.226	2149369	0.8766	Target=4.32	90.6	2613	
699.00 > 99.00	5.436	5.436	0.0	1.226	486410		4.42(2.19-6.58)		3261	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.436	5.436	0.0	1.316	704799	1.39		111	426	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
62 N-EtFOSE-M										
630.00 > 59.00	5.449	5.449	0.0	1.002	639835	0.8983		89.8	1161	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.449	0.013	1.322	480345	1.15		92.3	687	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.449	5.462	-0.013	1.041	4835169	0.9435	Target=5.66	94.3	4389	
663.00 > 169.00	5.449	5.462	-0.013	1.041	770822		6.27(2.83-8.48)		3950	
56 N-EtFOSA-M										
526.00 > 169.00	5.475	5.462	0.013	1.002	424405	0.9452		94.5	656	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.637	5.637	0.0	1.365	6218548	1.16		93.0	13543	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.637	5.637	0.0	1.000	584913	0.9317	Target=1.07	93.2	3725	
713.00 > 219.00	5.637	5.637	0.0	1.000	569040		1.03(0.53-1.60)		4681	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.948	5.948	0.0	1.000	3812680	0.9215	Target=7.50	92.2	3748	
813.00 > 169.00	5.948	5.948	0.0	1.000	452209		8.43(3.75-11.26)		2530	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.948	5.948	0.0	1.440	4721620	1.22		97.4	8980	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.211	6.221	-0.010	1.044	3281395	0.9571	Target=9.98	95.7	3117	
913.00 > 169.00	6.211	6.221	-0.010	1.044	275312		11.92(5.14-15.41)		1681	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_092.d

Injection Date: 07-Oct-2021 09:59:31

Instrument ID: LCA

Lims ID: LCS 140-54177/2-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 38

Worklist Smp#: 92

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

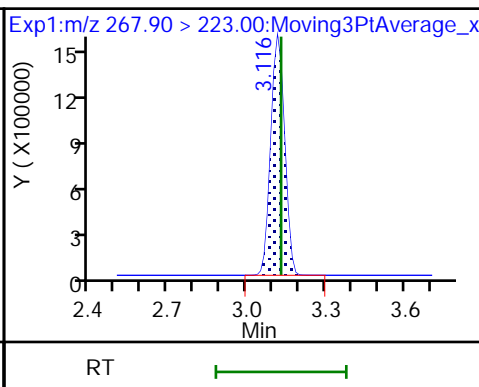
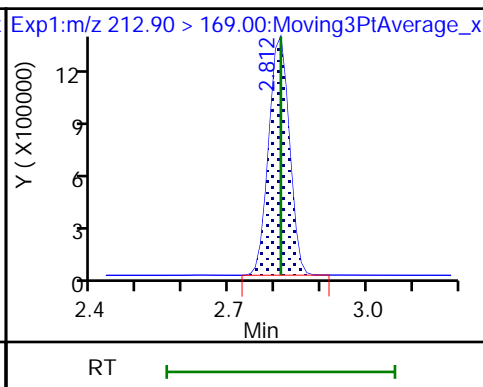
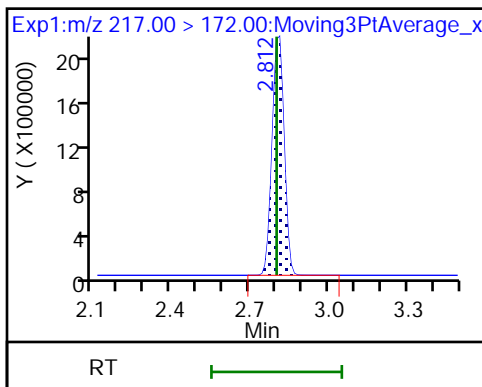
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

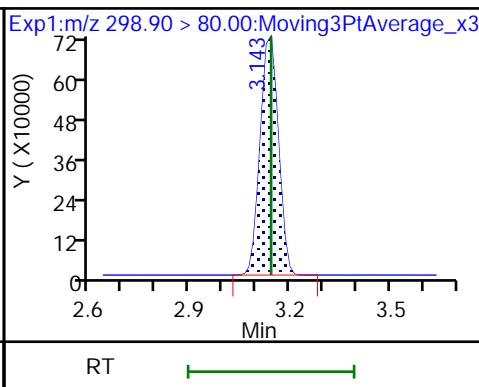
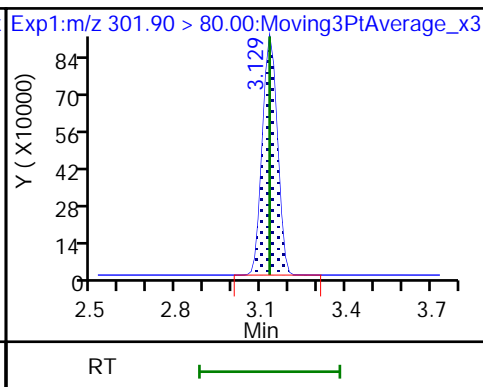
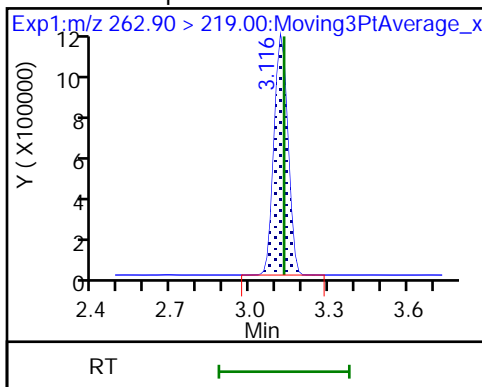
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

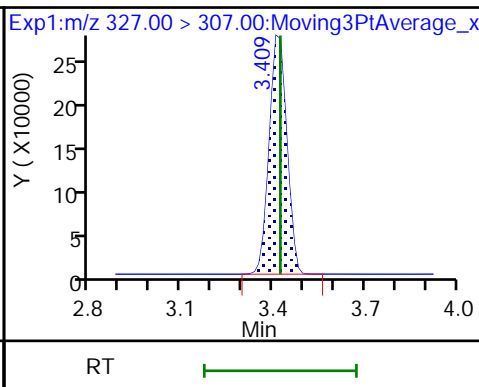
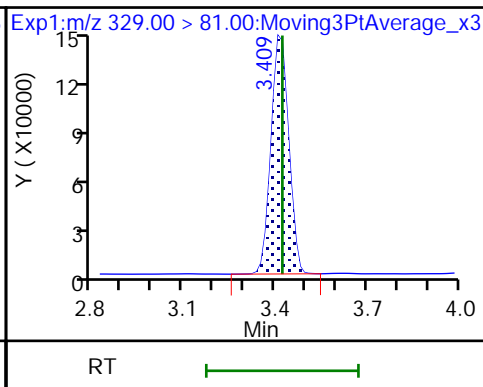
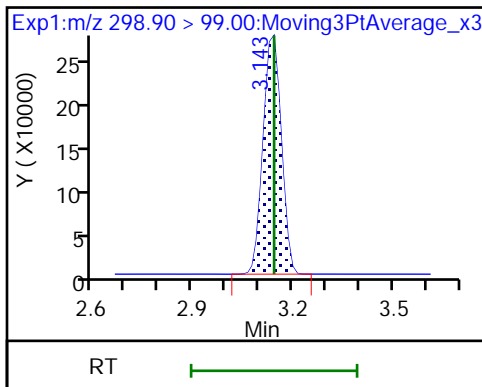
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

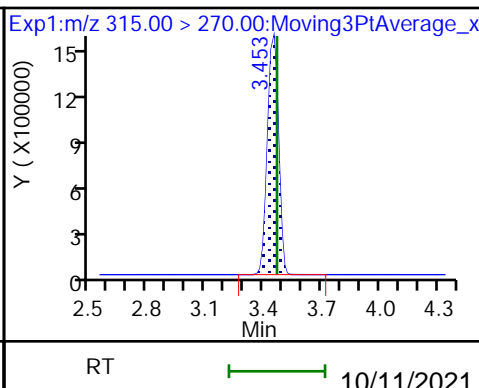
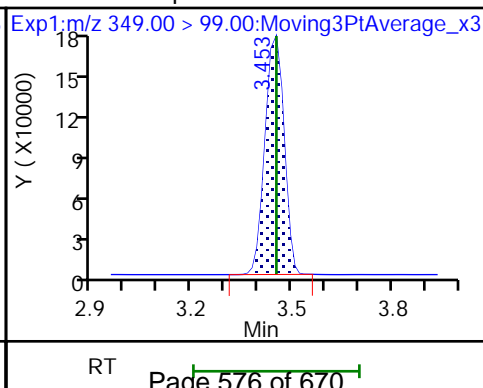
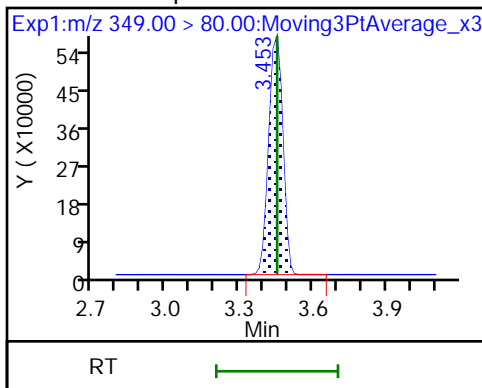
7 4:2 FTS

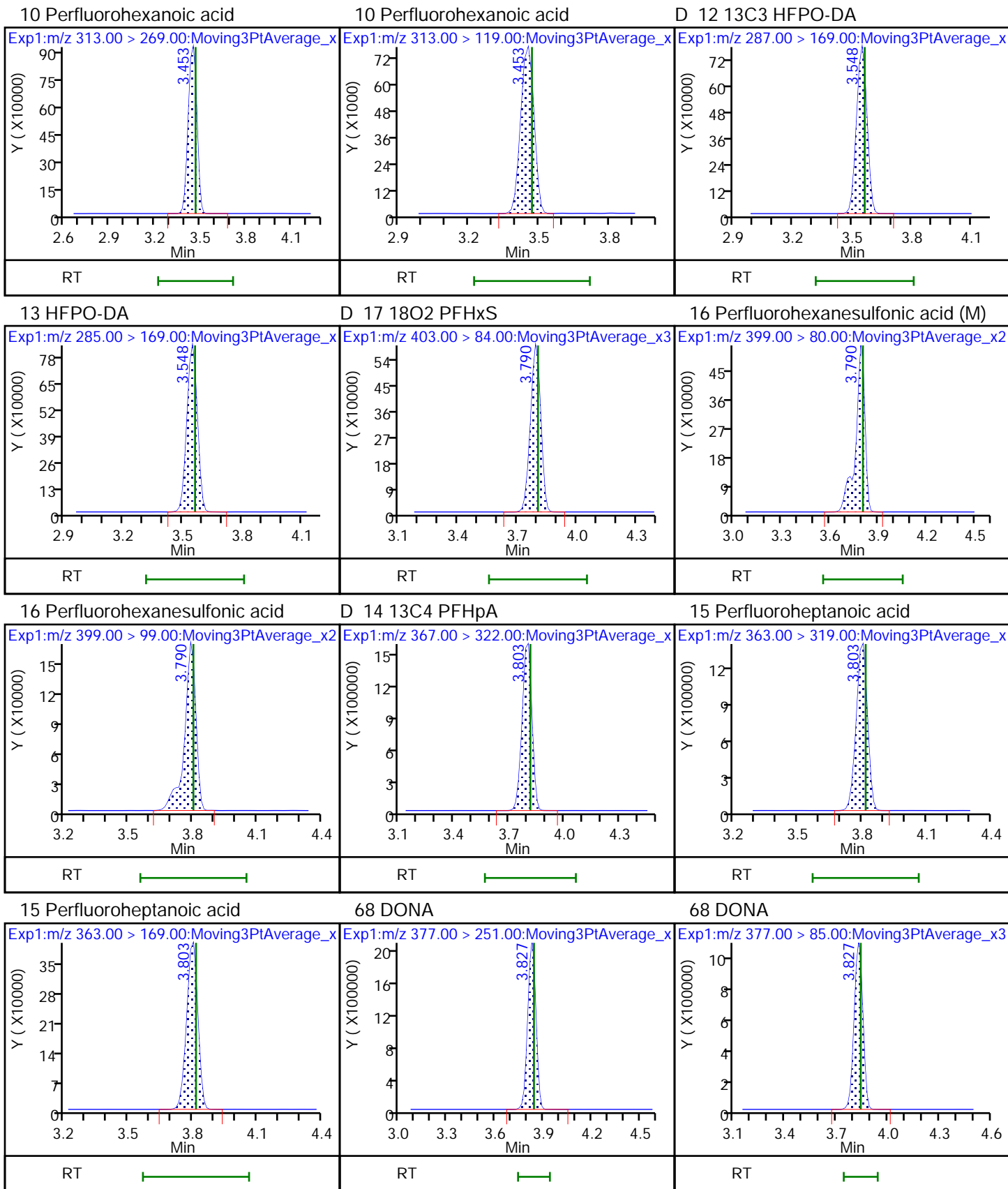


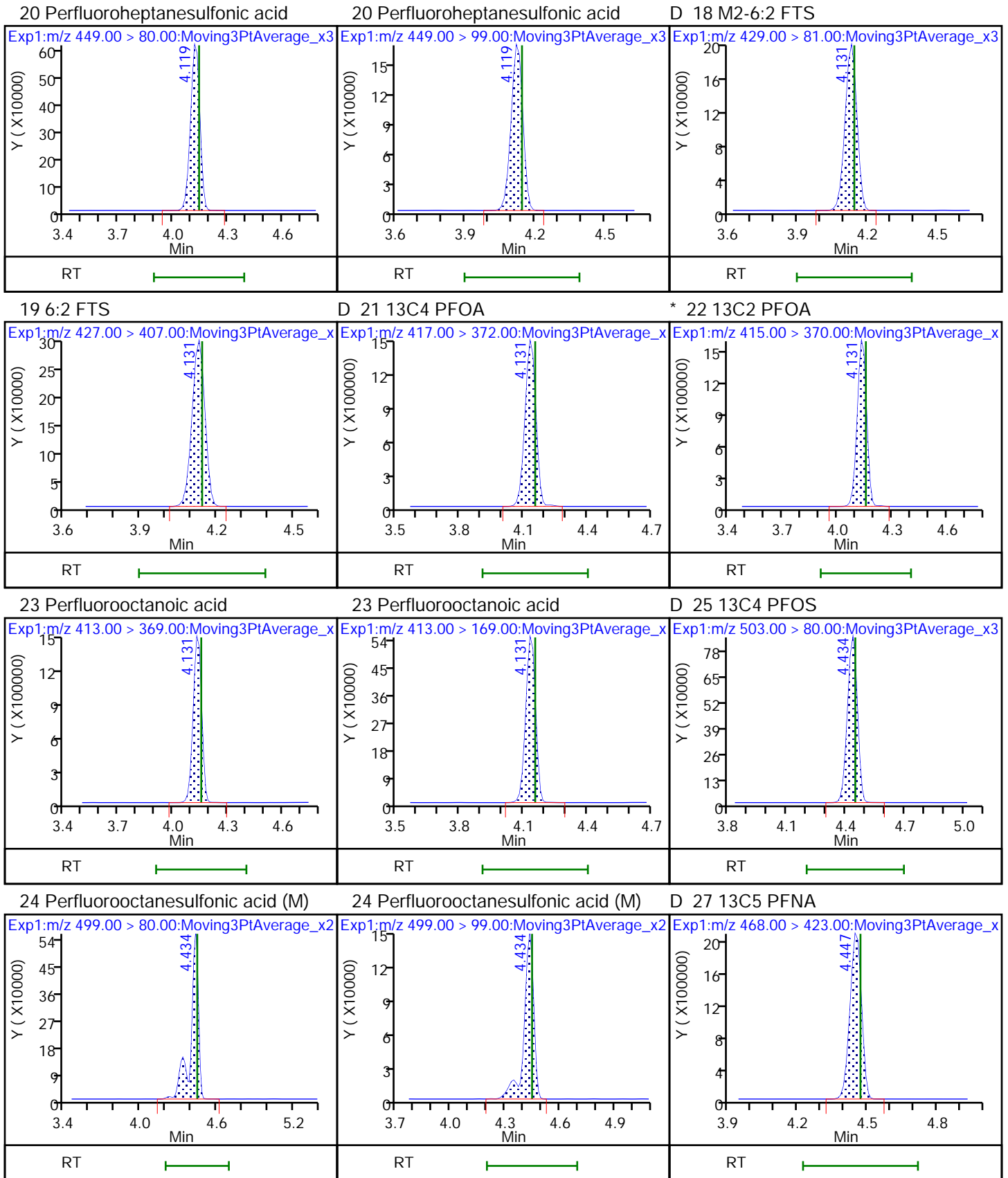
11 Perfluoropentanesulfonic acid

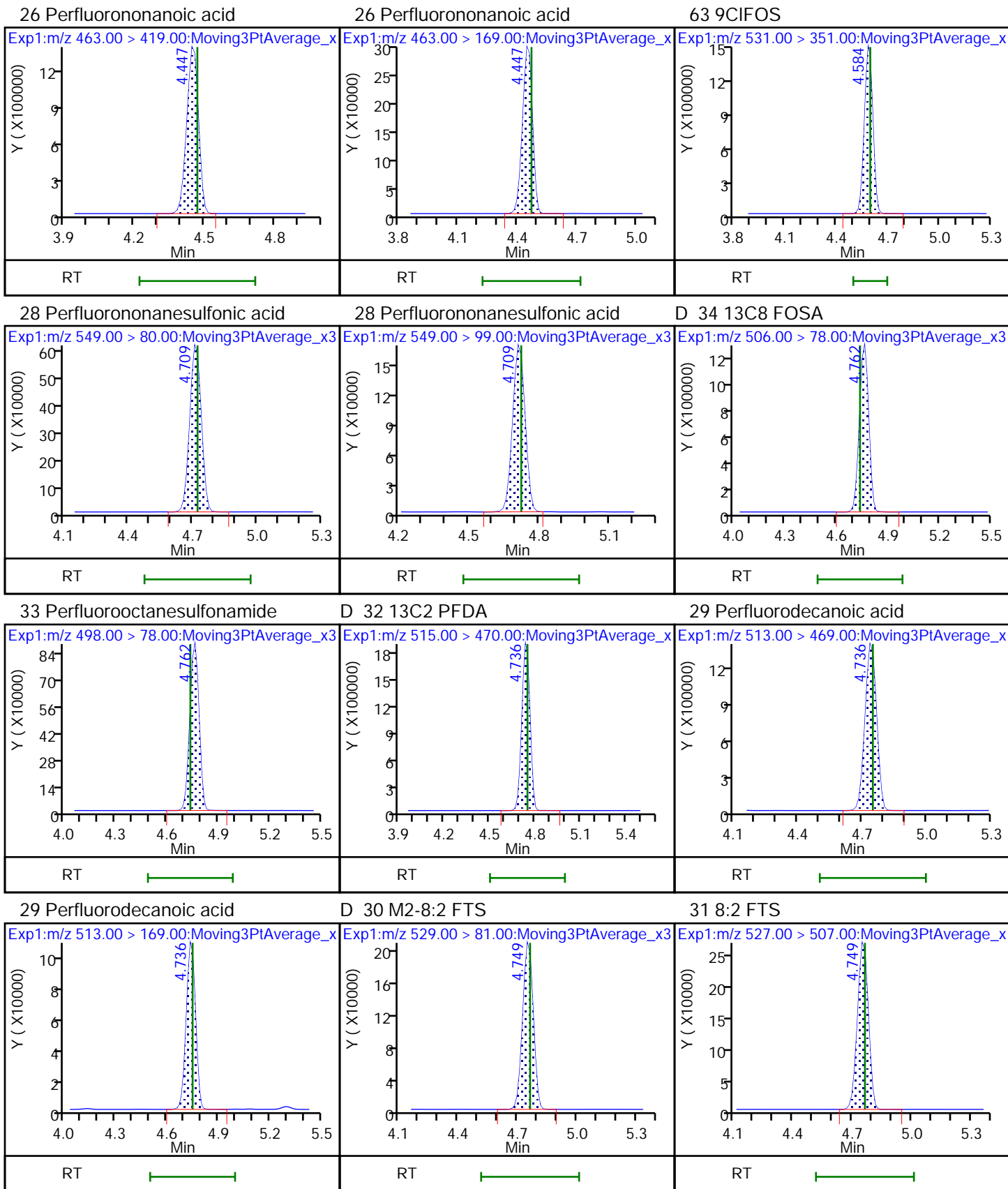
11 Perfluoropentanesulfonic acid

D 9 13C2 PFXa





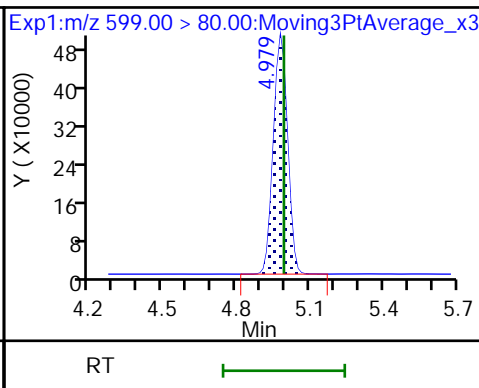
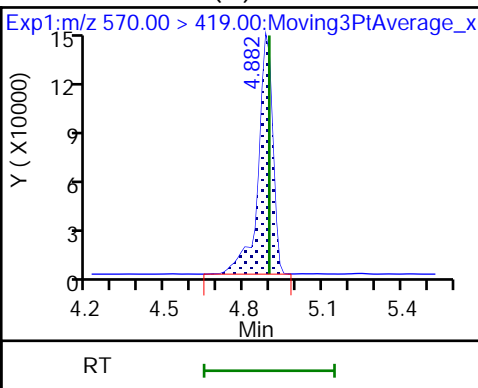
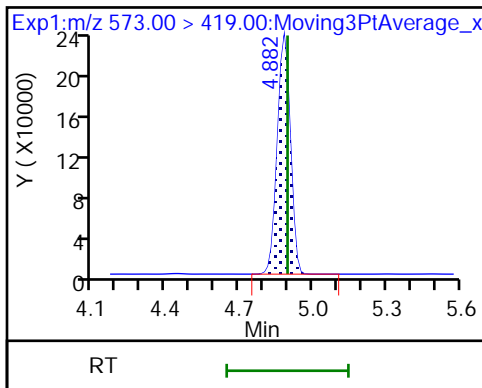




D 35 d3-NMeFOSAA

36 NMeFOSAA (M)

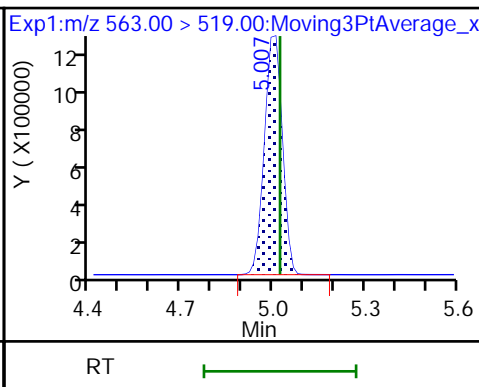
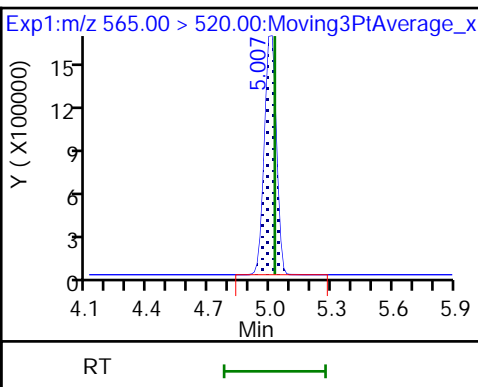
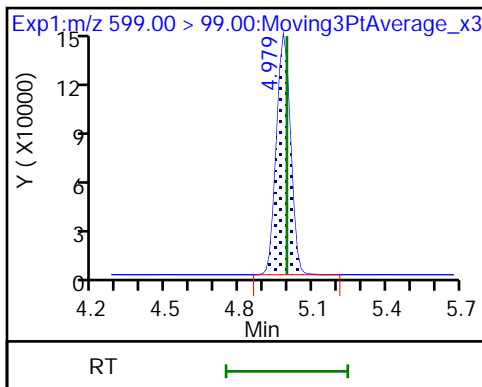
37 Perfluorodecanesulfonic acid



37 Perfluorodecanesulfonic acid

D 39 13C2 PFUoA

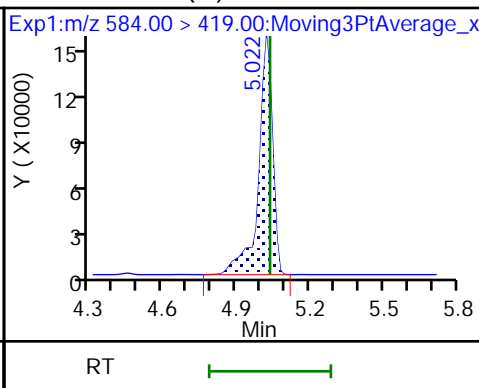
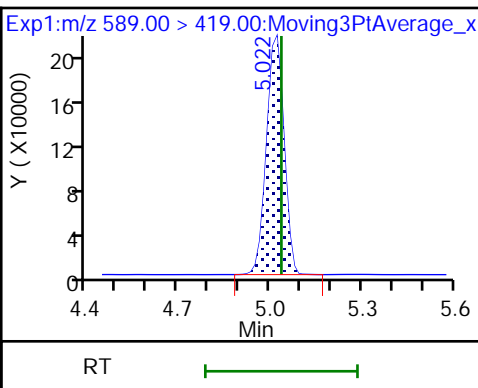
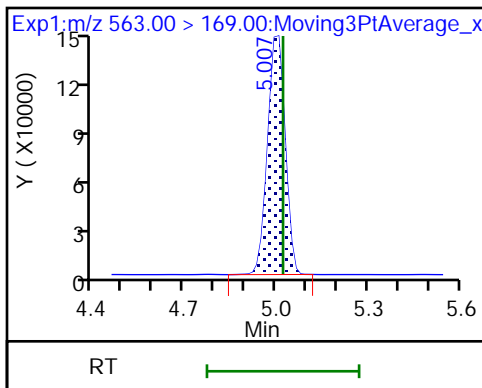
38 Perfluoroundecanoic acid



38 Perfluoroundecanoic acid

D 41 d5-NEtFOSAA

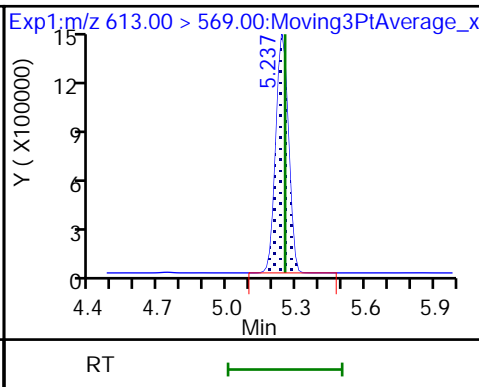
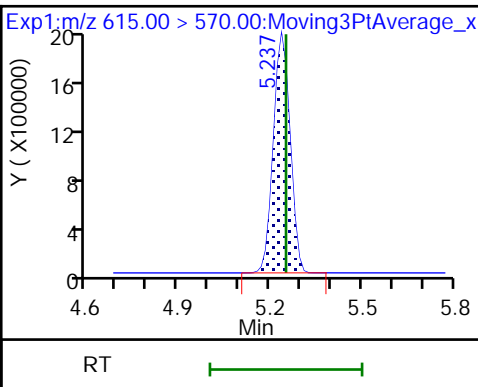
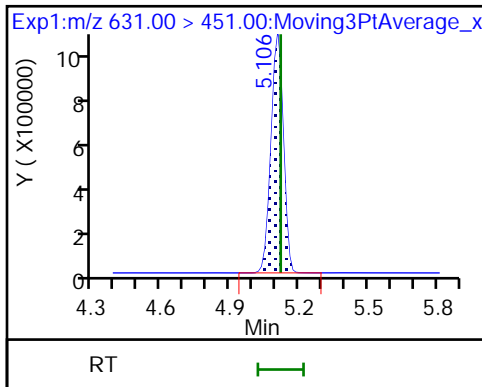
40 NEtFOSA (M)

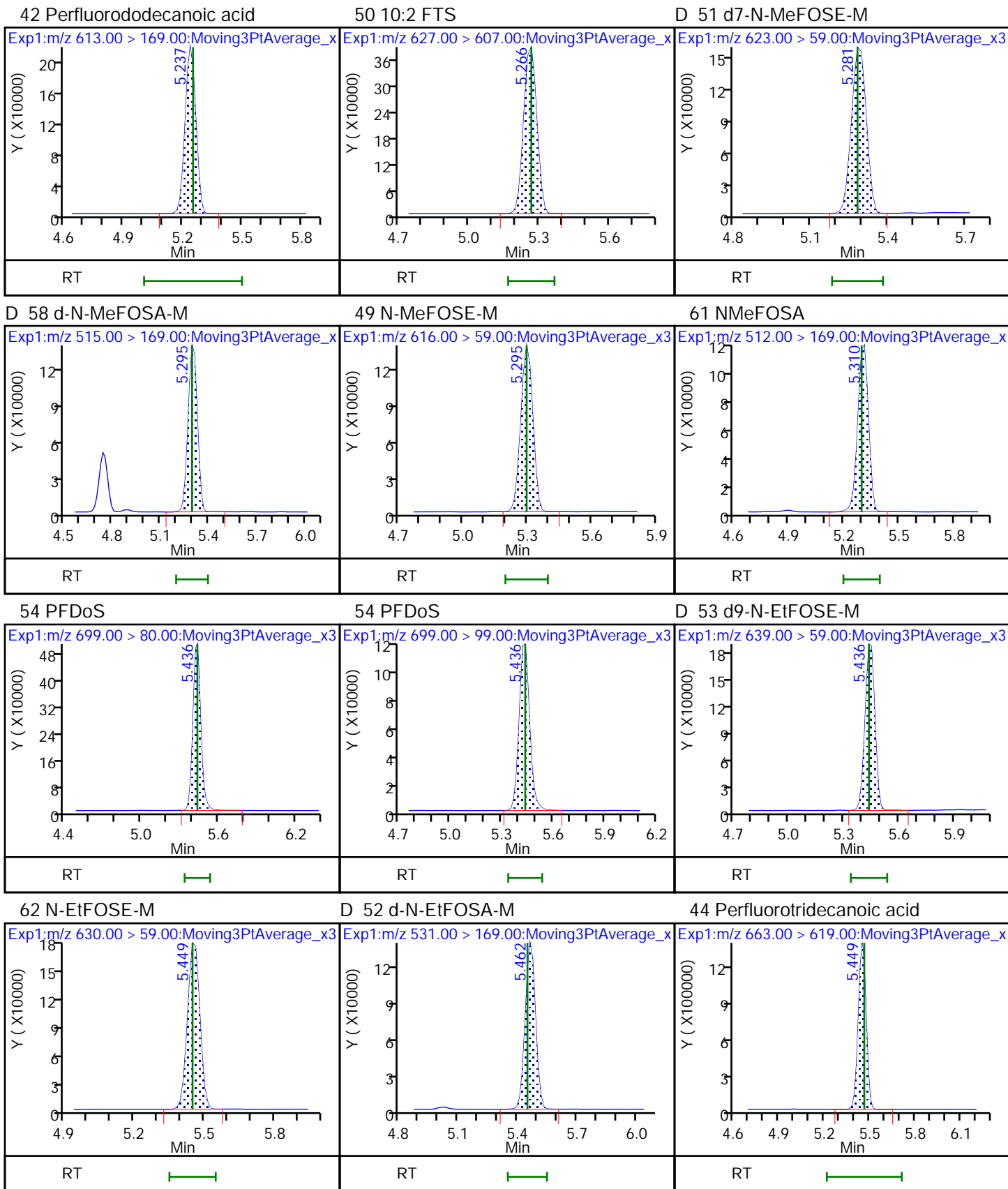


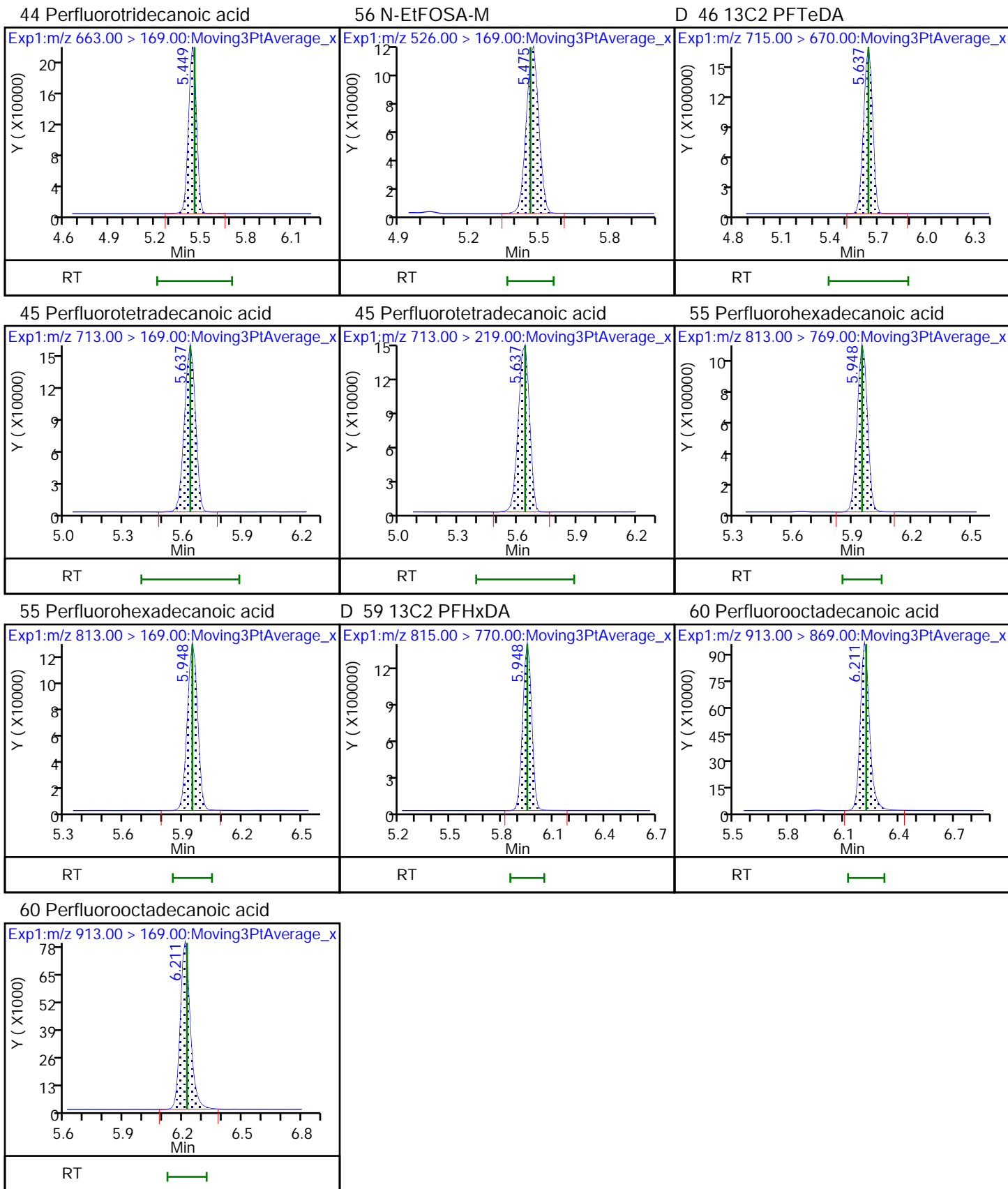
57 11CIFOS

D 43 13C2 PFDoA

42 Perfluorododecanoic acid







FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-54178/2-B
 Matrix: Air Lab File ID: _065.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: None Date Extracted: 09/24/2021 09:41
 Sample wt/vol: 1(Sample) Date Analyzed: 10/07/2021 05:59
 Con. Extract Vol.: 360(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: GeminiC18 3x100 ID: 3(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54568 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.01826		0.00160	0.00140

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	90		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_065.d
 Lims ID: LCS 140-54178/2-B
 Client ID:
 Sample Type: LCS
 Inject. Date: 07-Oct-2021 05:59:22 ALS Bottle#: 11 Worklist Smp#: 65
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-065 lcs 140-54178/2-b
 Misc. Info.: Plate: 11 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 17:50:07 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675
 First Level Reviewer: cochranj Date: 09-Oct-2021 17:45:13
 Ratio Calibration: None

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	2.801	2.801	0.0	0.678	6660551	1.10	88.1	7702	
2 Perfluorobutanoic acid	212.90 > 169.00	2.801	2.812	-0.011	1.000	4070051	0.9725	97.2	274	
D 3 13C5 PFPeA	267.90 > 223.00	3.116	3.129	-0.013	0.754	5685928	1.15	91.6	8766	
4 Perfluoropentanoic acid	262.90 > 219.00	3.116	3.129	-0.013	1.000	4287701	0.9305	93.1	689	
D 6 13C3 PFBS	301.90 > 80.00	3.129	3.129	0.0	0.758	2513602	0.7844	67.5	2482	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.129	3.143	-0.014	1.000	1920811	0.7889	Target=3.06	89.2	1836
	298.90 > 99.00	3.129	3.143	-0.014	1.000	739377		2.60(1.53-4.59)		785
D 8 M2-4:2 FTS	329.00 > 81.00	3.409	3.423	-0.014	0.825	645883	1.34	115	817	
7 4:2 FTS	327.00 > 307.00	3.409	3.423	-0.014	1.000	1202989	0.8699	93.1	8497	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.437	3.453	-0.016	1.098	1601444	0.8618	Target=3.47	91.9	1546
	349.00 > 99.00	3.437	3.453	-0.016	1.098	468481		3.42(1.73-5.20)		1486
D 9 13C2 PFHxA	315.00 > 270.00	3.437	3.469	-0.032	0.832	6154824	1.21	96.6	14093	
10 Perfluorohexanoic acid	313.00 > 269.00	3.437	3.469	-0.032	1.000	3802673	0.9009	Target=9.74	90.1	1050
	313.00 > 119.00	3.437	3.469	-0.032	1.000	301735		12.60(4.87-14.61)		507
D 12 13C3 HFPO-DA	287.00 > 169.00	3.548	3.561	-0.013	0.859	2938842	1.13	90.1	9450	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.548	3.561	-0.013	1.000	2974642	0.9132		91.3	3521	
D 17 18O2 PFHxS										
403.00 > 84.00	3.790	3.803	-0.013	0.918	1461159	0.7535		63.7	8559	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.790	3.803	-0.013	1.000	1450343	0.8636	Target=2.96	94.9	2869	M
399.00 > 99.00	3.790	3.803	-0.013	1.000	417770		3.47(1.48-4.44)		2328	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.790	3.815	-0.025	0.918	6054416	1.19		95.3	15874	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.790	3.815	-0.025	1.000	4857086	0.9486	Target=3.35	94.9	1495	
363.00 > 169.00	3.790	3.815	-0.025	1.000	1465301		3.31(1.67-5.02)		5143	
68 DONA										
377.00 > 251.00	3.827	3.840	-0.013	0.866	6963540	1.55	Target=1.49	165	13392	
377.00 > 85.00	3.827	3.840	-0.013	0.866	3752138		1.86(0.74-2.23)		14040	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.119	4.143	-0.024	0.932	1342525	0.9774	Target=3.73	103	5943	
449.00 > 99.00	4.119	4.143	-0.024	0.932	347405		3.86(1.87-5.61)		2501	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.119	4.143	-0.024	0.997	637875	1.30		109	2243	
19 6:2 FTS										
427.00 > 407.00	4.131	4.143	-0.012	1.003	1022344	0.9459		99.8	3733	
D 21 13C4 PFOA										
417.00 > 372.00	4.131	4.155	-0.024	1.000	5365168	1.17		93.4	26701	
* 22 13C2 PFOA										
415.00 > 370.00	4.131	4.155	-0.024		5706659	1.25			21477	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.131	4.155	-0.024	1.000	4371185	0.9178	Target=2.40	91.8	1990	
413.00 > 169.00	4.131	4.155	-0.024	1.000	1803384		2.42(1.20-3.61)		5272	
D 25 13C4 PFOS										
503.00 > 80.00	4.422	4.447	-0.024	1.070	1650148	0.6177		51.7	6068	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.434	4.447	-0.012	1.003	1388386	0.9142	Target=3.83	98.5	959	M
499.00 > 99.00	4.422	4.447	-0.024	1.000	297155		4.67(1.91-5.74)		1256	M
D 27 13C5 PFNA										
468.00 > 423.00	4.447	4.470	-0.023	1.076	6659780	1.14		91.2	18218	
26 Perfluorononanoic acid										
463.00 > 419.00	4.447	4.470	-0.023	1.000	4552041	1.02	Target=3.68	102	3296	
463.00 > 169.00	4.447	4.470	-0.023	1.000	993799		4.58(1.84-5.52)		3018	
63 9CIFOS										
531.00 > 351.00	4.584	4.596	-0.012	1.110	2969177	0.9317		100.0	6060	
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.709	4.722	-0.013	1.065	1044151	0.7255	Target=3.97	75.6	1879	
549.00 > 99.00	4.709	4.722	-0.013	1.065	269298		3.88(1.99-5.96)		1184	
D 34 13C8 FOSA										
506.00 > 78.00	4.736	4.736	0.0	1.146	4368356	1.11		89.1	11545	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.736	4.736	0.0	1.000	2076485	0.9150		91.5	57590	10/11/2021

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 32 13C2 PFDA										
515.00 > 470.00	4.736	4.749	-0.013	1.146	6492446	1.10		87.8	32167	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.736	4.749	-0.013	1.000	4797555	0.9719	Target=10.11	97.2	2625	
513.00 > 169.00	4.736	4.749	-0.013	1.000	394305		12.17(5.06-15.17)		701	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.763	-0.014	1.150	755338	1.26		105	4170	
31 8:2 FTS										
527.00 > 507.00	4.749	4.763	-0.014	1.000	1040661	0.9249		96.5	5772	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.869	4.896	-0.027	1.179	850783	1.05		84.1	1853	
36 NMeFOSAA										
570.00 > 419.00	4.882	4.896	-0.014	1.003	611452	0.9767		97.7	1431	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.979	4.993	-0.014	1.126	649861	0.4916	Target=3.80	51.0	1888	
599.00 > 99.00	4.965	4.993	-0.029	1.123	179517		3.62(1.90-5.70)		1239	
D 39 13C2 PFUnA										
565.00 > 520.00	4.993	5.022	-0.029	1.209	5695888	1.01		80.7	18834	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.993	5.022	-0.029	1.000	4478788	0.9710	Target=7.45	97.1	5556	
563.00 > 169.00	4.993	5.022	-0.029	1.000	504302		8.88(3.78-11.33)		2775	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.007	5.036	-0.029	1.212	866678	1.11		89.1	2936	
40 NEtFOSA										
584.00 > 419.00	5.007	5.036	-0.029	1.000	583300	0.8861		88.6	1242	M
57 11CIFOS										
631.00 > 451.00	5.093	5.119	-0.026	1.152	1530370	0.5964		63.3	5952	
D 43 13C2 PFDoA										
615.00 > 570.00	5.223	5.251	-0.028	1.265	5710907	0.9480		75.8	24028	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.223	5.251	-0.028	1.000	4257604	0.8914	Target=5.33	89.1	2339	
613.00 > 169.00	5.223	5.251	-0.028	1.000	625246		6.81(2.66-7.99)		2641	
50 10:2 FTS										
627.00 > 607.00	5.251	5.266	-0.015	1.106	1077903	0.7694		79.8	9433	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.281	5.281	0.0	1.278	635153	1.29		103	367	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.282	470228	0.9200		73.6	39.9	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.295	0.0	1.003	532363	0.9041		90.4	626	
61 NMeFOSA										
512.00 > 169.00	5.295	5.295	0.0	1.000	376400	0.9557		95.6	601	
54 PFDoS										
699.00 > 80.00	5.409	5.436	-0.027	1.223	104138	0.0763	Target=4.32	7.9	291	
699.00 > 99.00	5.423	5.436	-0.013	1.226	23047		4.52(2.19-6.58)		159	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.449	5.436	0.013	1.319	667429	1.28		102	688	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
62 N-EtFOSE-M										
630.00 > 59.00	5.449	5.449	0.0	1.000	610634	0.9054		90.5	1080	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.449	0.013	1.322	376567	0.8753		70.0	646	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.436	5.462	-0.026	1.041	3048180	0.7533	Target=5.66	75.3	2558	
663.00 > 169.00	5.436	5.462	-0.026	1.041	491576		6.20(2.83-8.48)		1820	
56 N-EtFOSA-M										
526.00 > 169.00	5.462	5.462	0.0	1.000	330195	0.9381		93.8	468	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.623	5.637	-0.014	1.361	2600441	0.4704		37.6	14114	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.623	5.637	-0.014	1.000	245475	0.9351	Target=1.07	93.5	2285	
713.00 > 219.00	5.623	5.637	-0.014	1.000	255078		0.96(0.53-1.60)		2380	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.935	5.948	-0.013	1.000	214668	0.9625	Target=7.50	96.2	433	
813.00 > 169.00	5.935	5.948	-0.013	1.000	24915		8.62(3.75-11.26)		281	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.935	5.948	-0.013	1.437	254819	0.0636		5.1	2288	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.201	6.221	-0.020	1.045	14577	0.0788	Target=9.98	7.9	70.8	M
913.00 > 169.00	6.192	6.221	-0.029	1.043	1318		11.06(5.14-15.41)		23.0	M

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_065.d

Injection Date: 07-Oct-2021 05:59:22

Instrument ID: LCA

Lims ID: LCS 140-54178/2-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 11

Worklist Smp#: 65

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

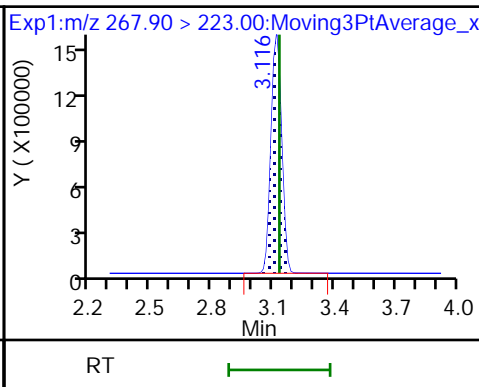
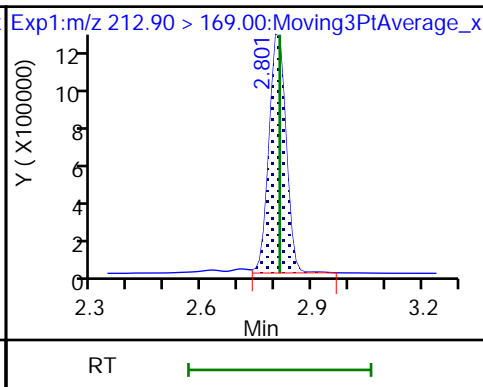
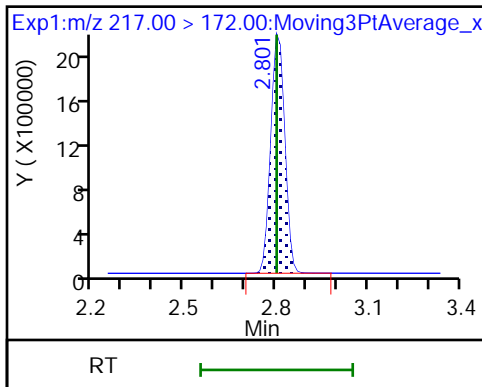
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

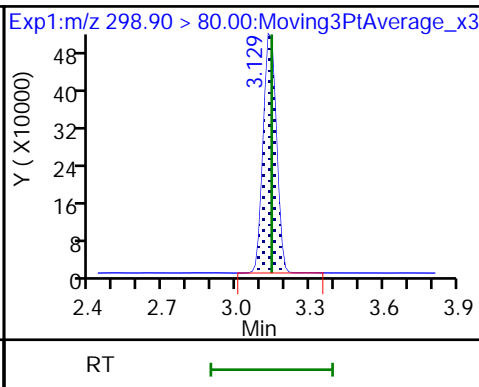
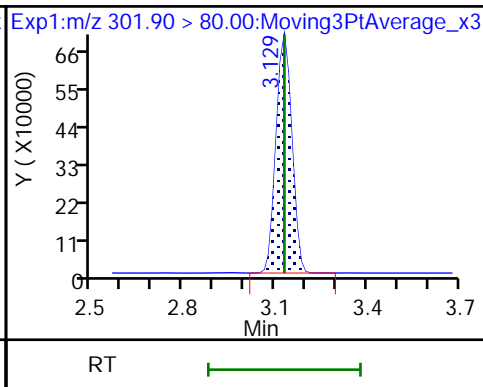
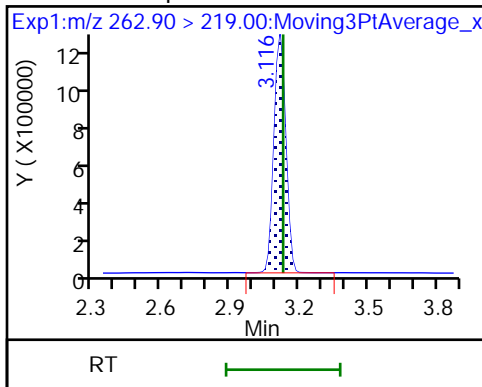
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

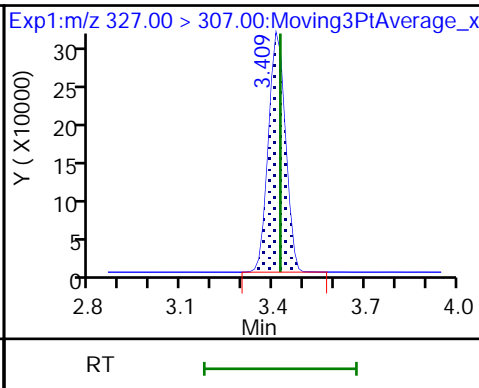
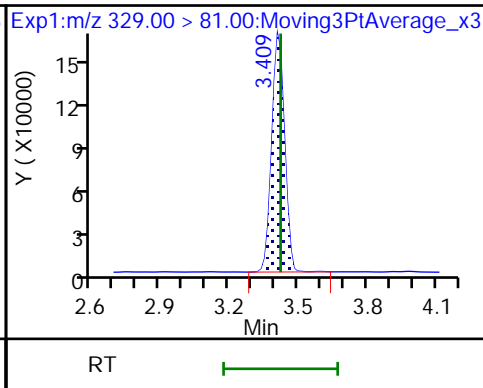
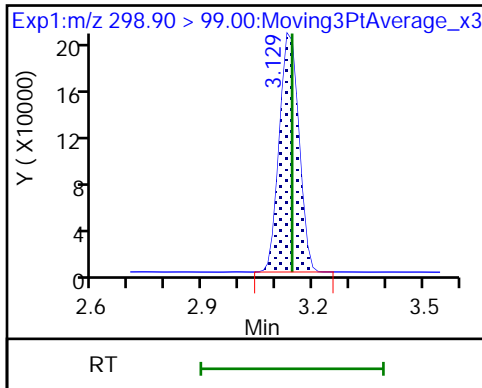
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

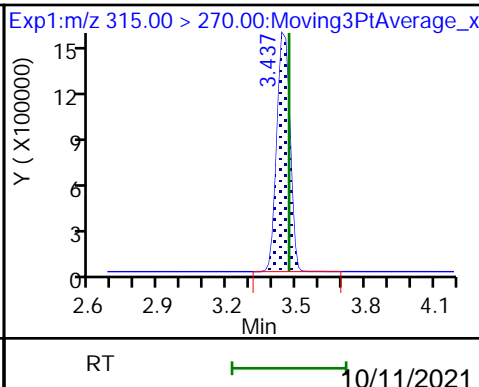
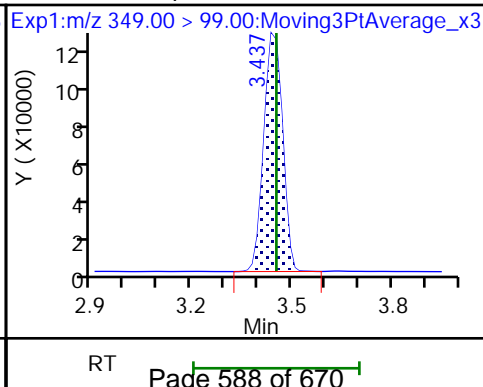
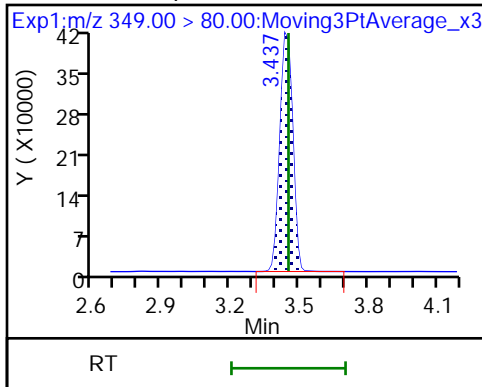
7 4:2 FTS

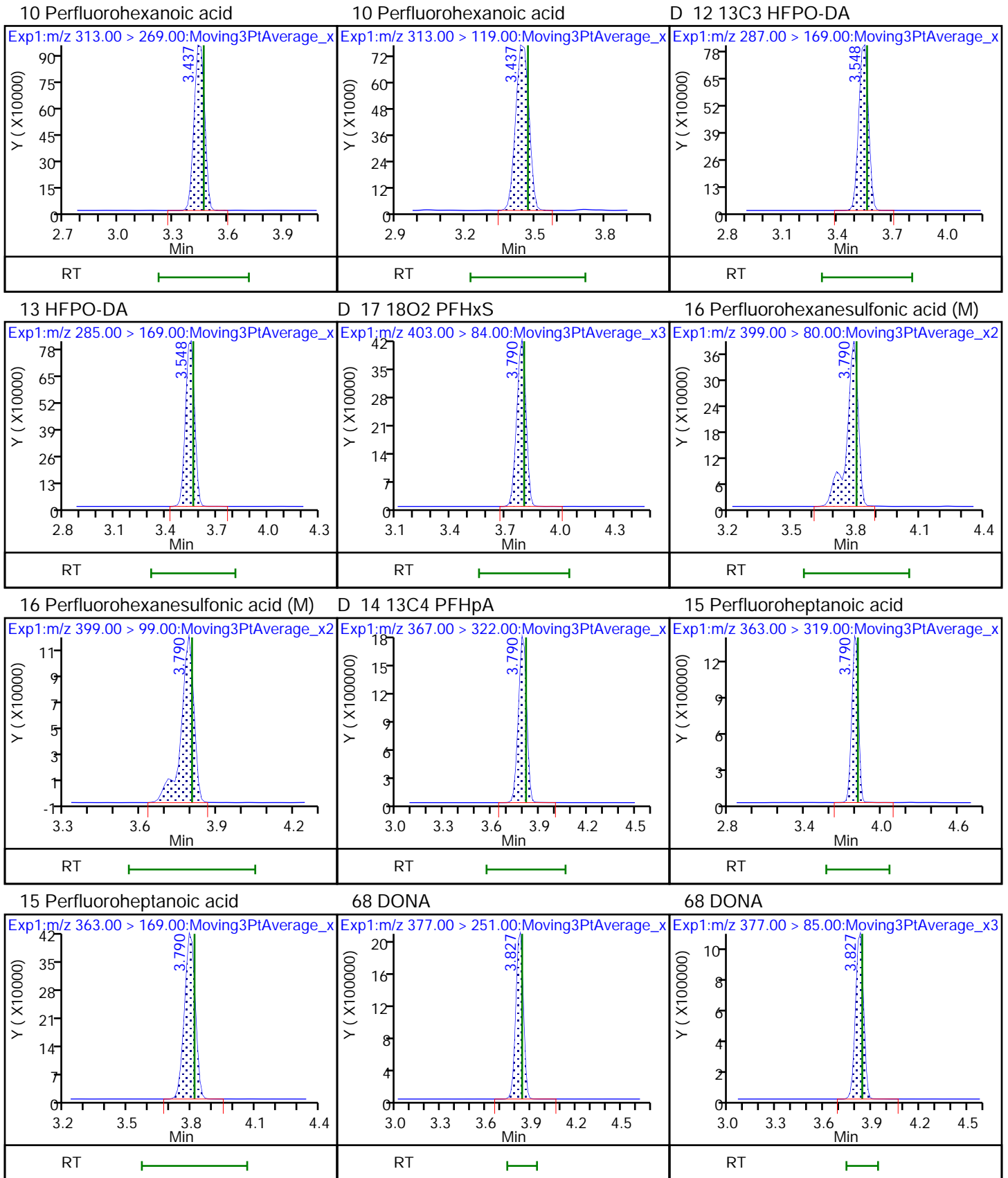


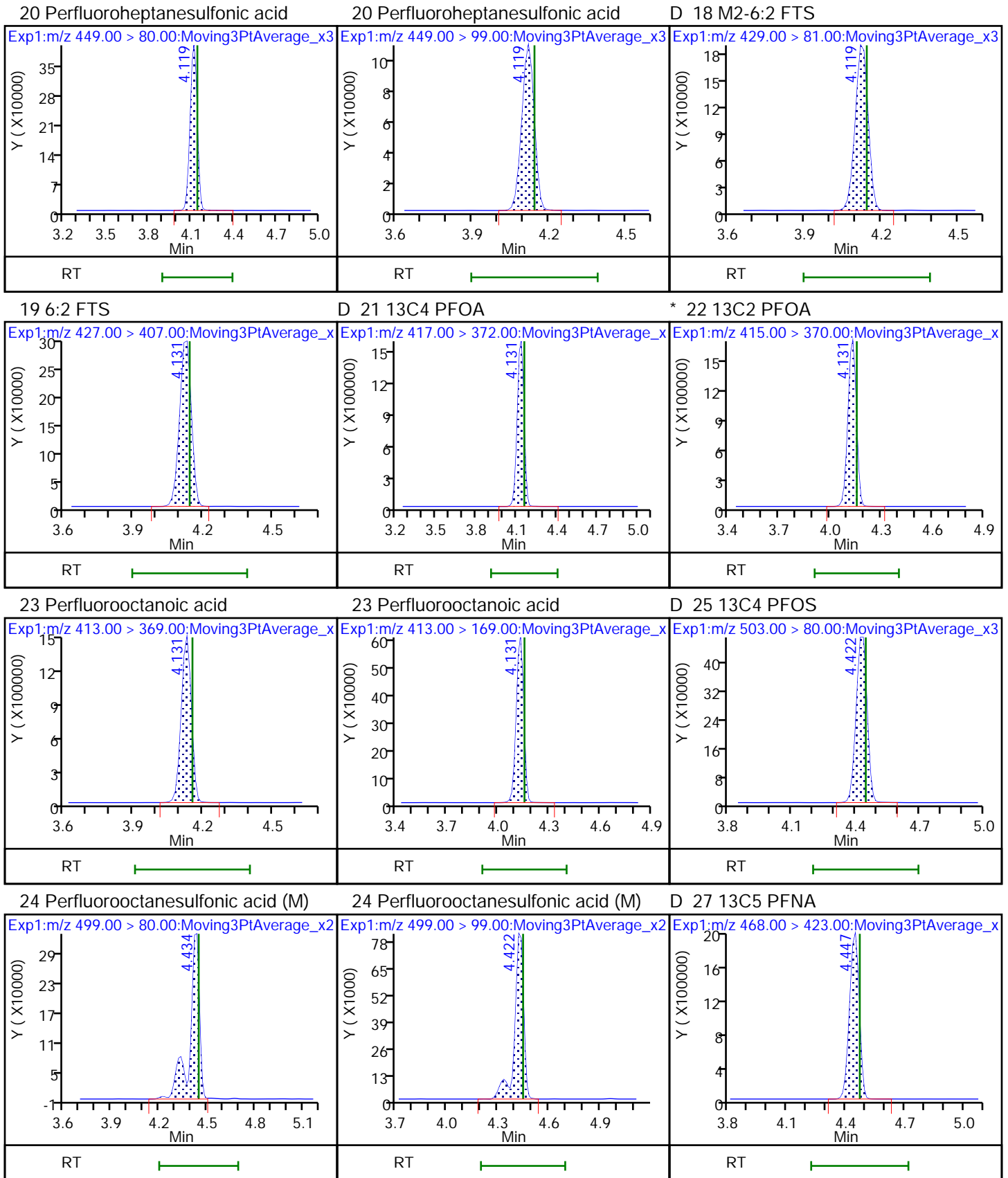
11 Perfluoropentanesulfonic acid

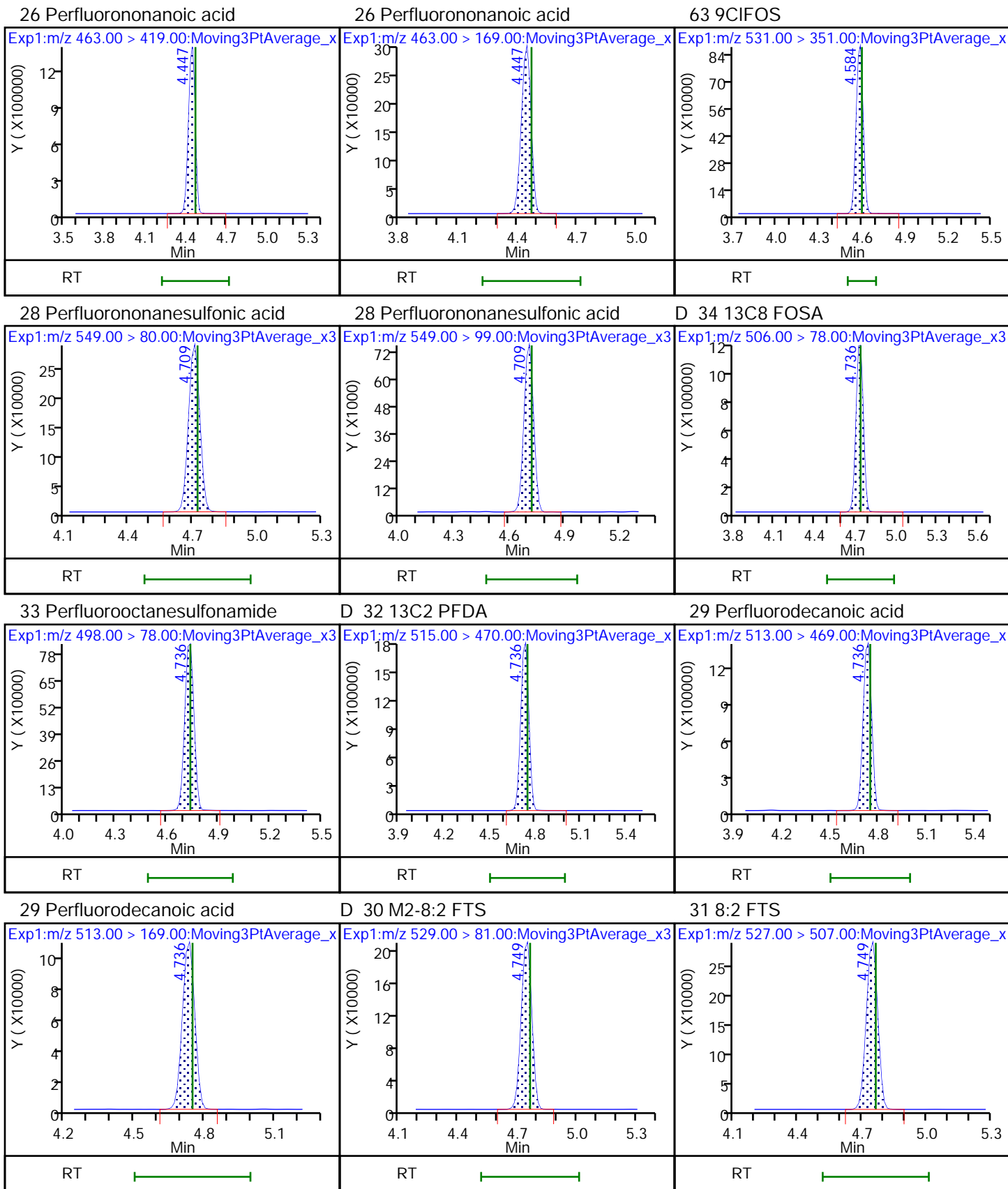
11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA





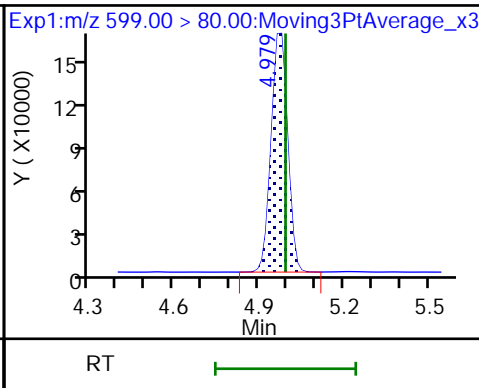
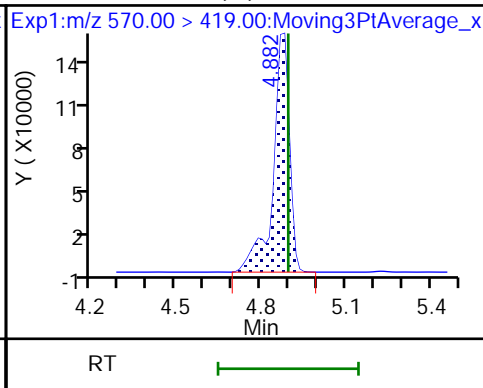
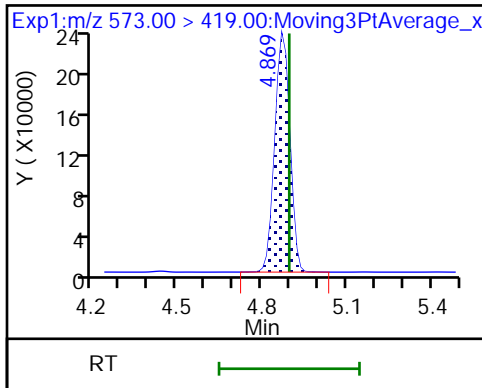




D 35 d3-NMeFOSAA

36 NMeFOSAA (M)

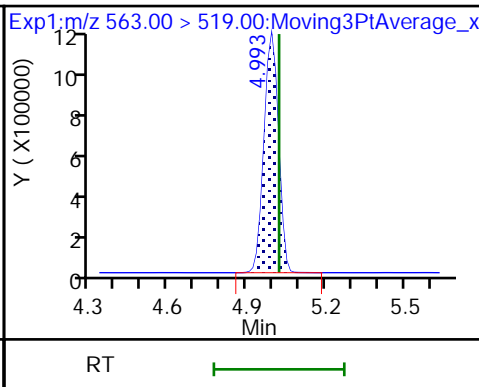
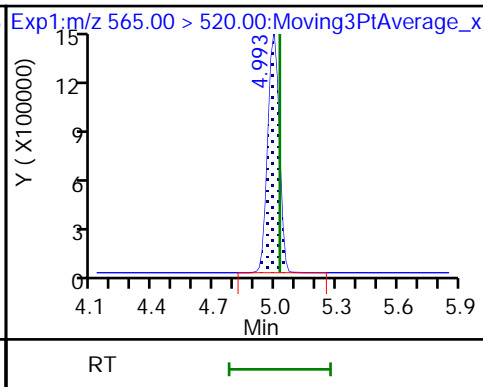
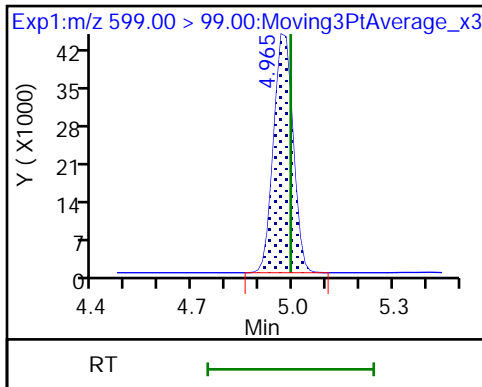
37 Perfluorodecanesulfonic acid



37 Perfluorodecanesulfonic acid

D 39 13C2 PFUoA

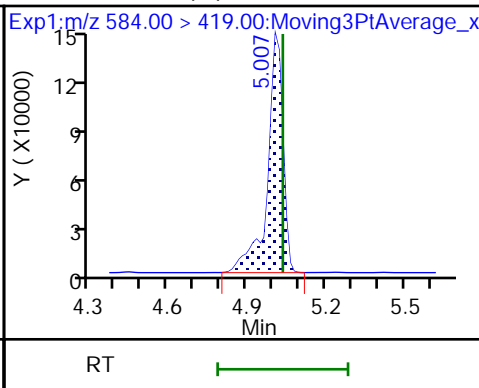
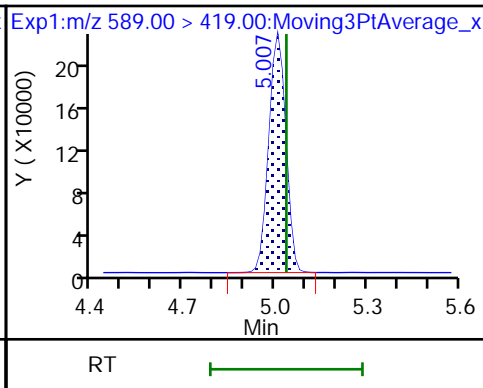
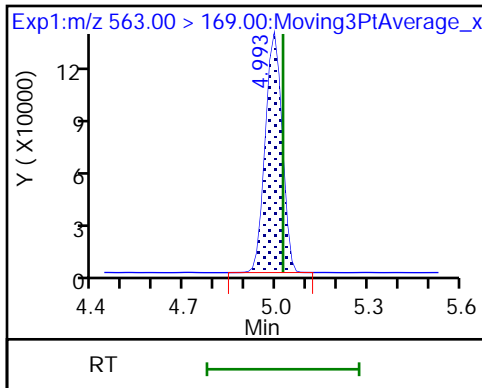
38 Perfluoroundecanoic acid



38 Perfluoroundecanoic acid

D 41 d5-NEtFOSAA

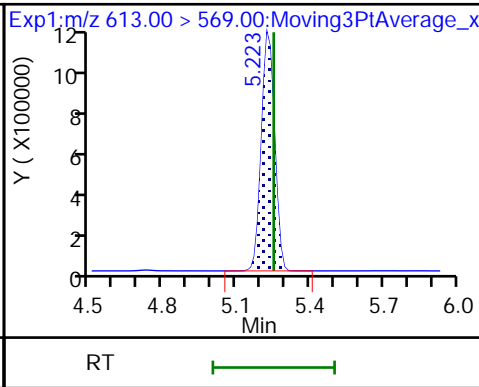
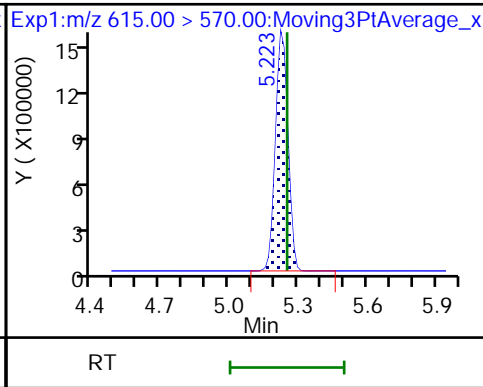
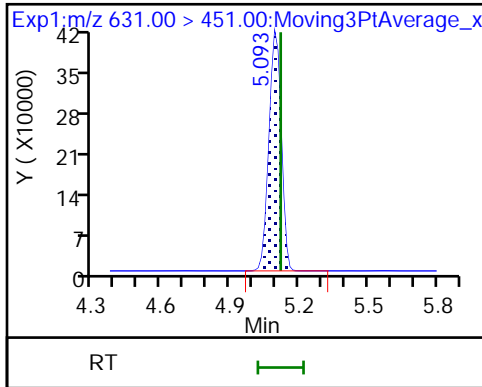
40 NEtFOSA (M)

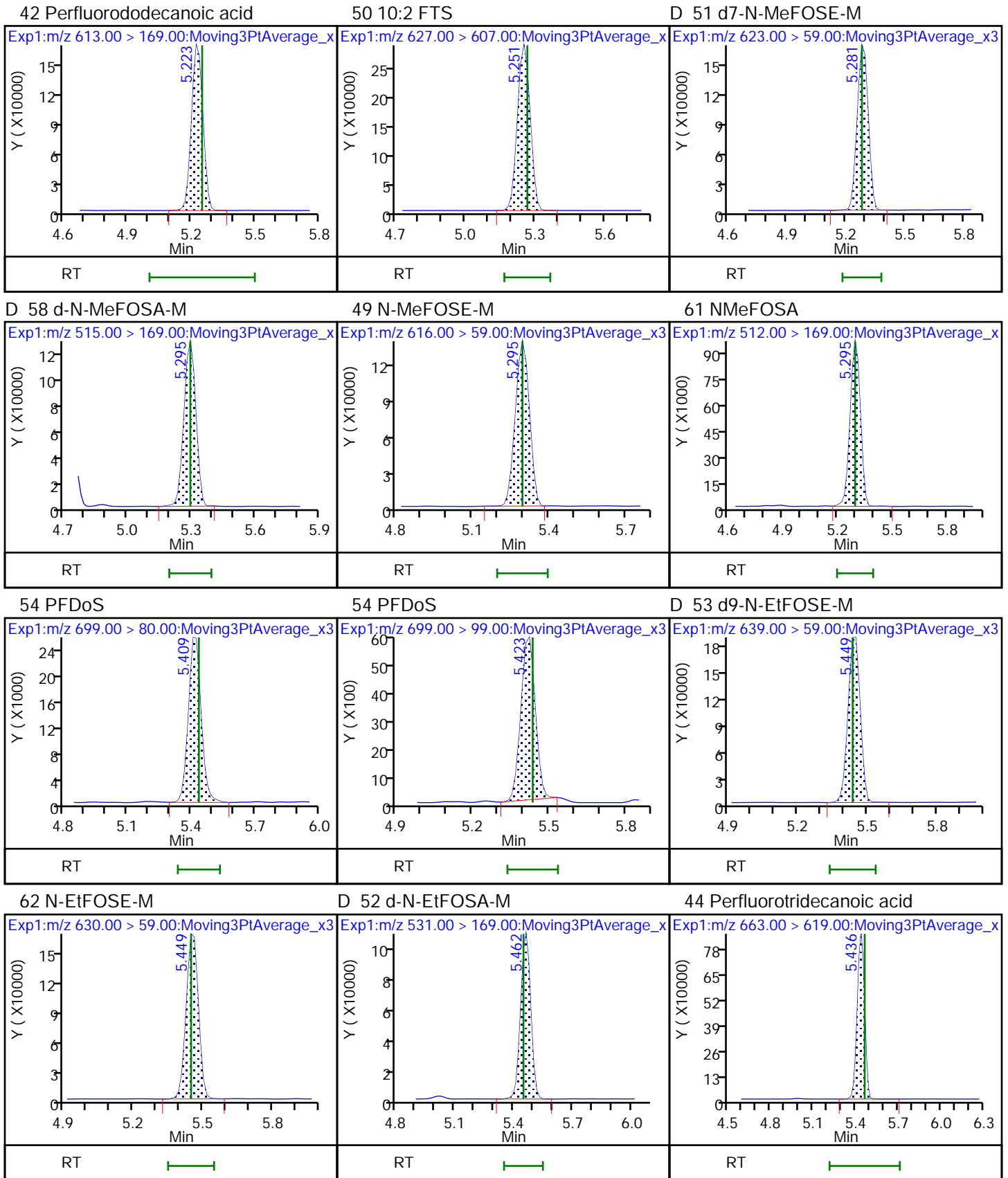


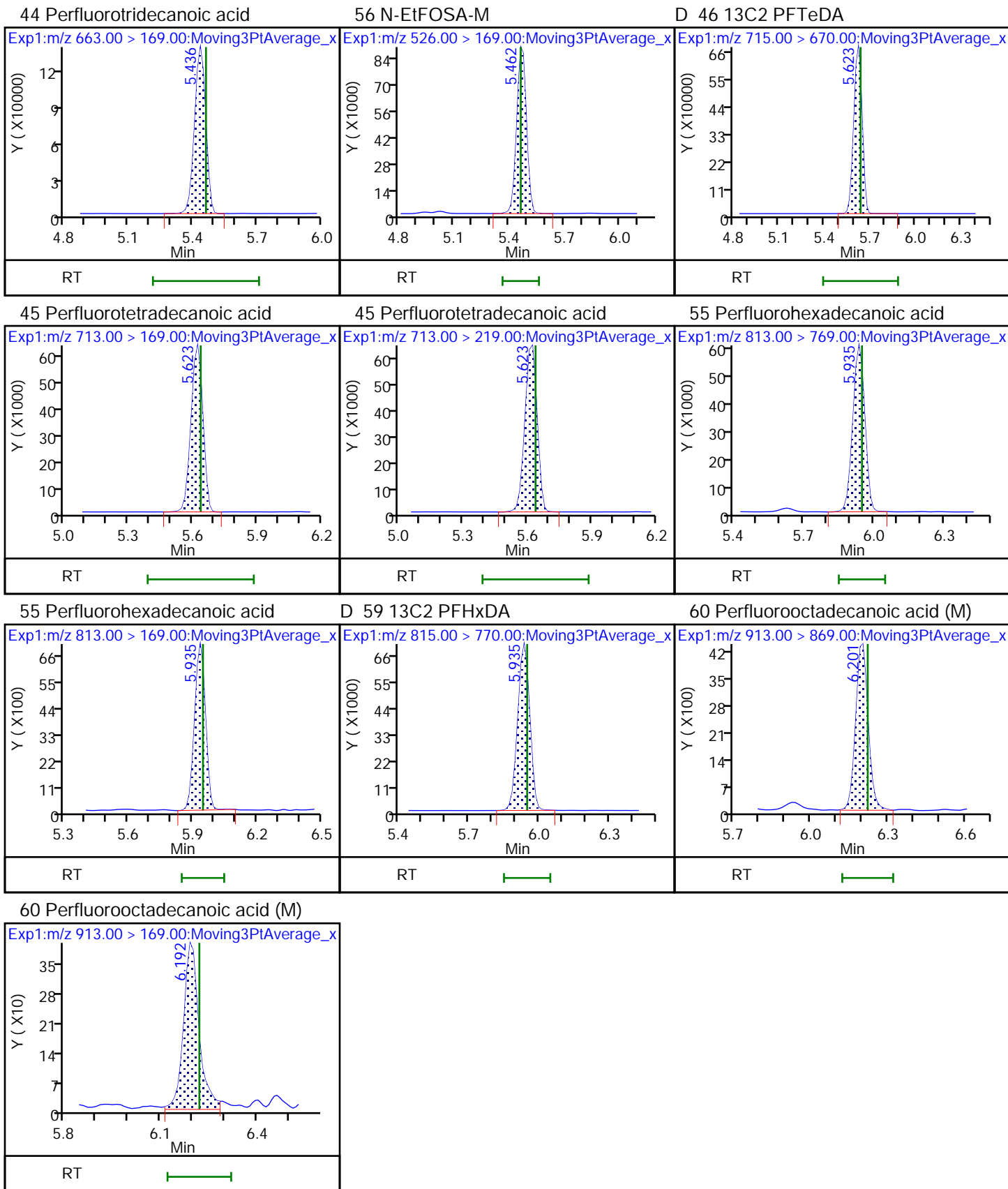
57 11CIFOS

D 43 13C2 PFDoA

42 Perfluorododecanoic acid







FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-54348/2-B
 Matrix: Air Lab File ID: _040.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: None Date Extracted: 09/30/2021 08:55
 Sample wt/vol: 1(Sample) Date Analyzed: 10/07/2021 02:19
 Con. Extract Vol.: 10(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: GeminiC18 3x100 ID: 3(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54568 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.009386		0.000500	0.0000825

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	91		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_040.d
 Lims ID: LCS 140-54348/2-B
 Client ID:
 Sample Type: LCS
 Inject. Date: 07-Oct-2021 02:19:00 ALS Bottle#: 40 Worklist Smp#: 40
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-040 lcs 140-54348/2-b
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 17:25:19 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675
 First Level Reviewer: cochranj Date: 09-Oct-2021 17:22:01
 Ratio Calibration: None

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	2.790	2.801	-0.011	0.677	7758709	1.18	94.5	16766	
2 Perfluorobutanoic acid	212.90 > 169.00	2.790	2.812	-0.022	1.000	4489008	0.9207	92.1	1248	
D 3 13C5 PFPeA	267.90 > 223.00	3.102	3.129	-0.027	0.753	6383318	1.18	94.7	14177	
4 Perfluoropentanoic acid	262.90 > 219.00	3.102	3.129	-0.027	1.000	4724592	0.9133	91.3	1363	
D 6 13C3 PFBS	301.90 > 80.00	3.116	3.129	-0.013	0.757	3670642	1.05	90.7	25865	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.116	3.143	-0.027	1.000	3197363	0.8992	Target=3.06	102	15764
	298.90 > 99.00	3.116	3.143	-0.027	1.000	1164587		2.75(1.53-4.59)		4750
D 8 M2-4:2 FTS	329.00 > 81.00	3.395	3.423	-0.028	0.824	642987	1.23	105	1226	
7 4:2 FTS	327.00 > 307.00	3.395	3.423	-0.028	1.000	1161316	0.8435	90.3	14308	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.423	3.453	-0.030	1.099	2632044	0.9706	Target=3.47	103	9473
	349.00 > 99.00	3.423	3.453	-0.030	1.099	753339		3.49(1.73-5.20)		7824
D 9 13C2 PFHxA	315.00 > 270.00	3.437	3.469	-0.032	0.835	6417132	1.16	92.7	14530	
10 Perfluorohexanoic acid	313.00 > 269.00	3.437	3.469	-0.032	1.000	4050482	0.9204	Target=9.74	92.0	2637
	313.00 > 119.00	3.423	3.469	-0.046	0.996	324449		12.48(4.87-14.61)		1072
D 12 13C3 HFPO-DA	287.00 > 169.00	3.535	3.561	-0.026	0.858	3236648	1.14	91.3	7876	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.535	3.561	-0.026	1.000	3366565	0.9386		93.9	3336	
D 17 18O2 PFHxS										
403.00 > 84.00	3.778	3.803	-0.025	0.917	2344966	1.11		94.1	6815	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.778	3.803	-0.025	1.000	2352639	0.8730	Target=2.96	95.9	6658	
399.00 > 99.00	3.778	3.803	-0.025	1.000	691157		3.40(1.48-4.44)		3917	
D 14 13C4 PFHpA										
367.00 > 322.00	3.778	3.815	-0.037	0.917	6347745	1.15		91.9	16716	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.778	3.815	-0.037	1.000	5287860	0.9852	Target=3.35	98.5	5272	
363.00 > 169.00	3.778	3.815	-0.037	1.000	1572323		3.36(1.67-5.02)		9396	
68 DONA										
377.00 > 251.00	3.815	3.840	-0.025	0.864	7915716	0.9278	Target=1.49	98.5	12818	
377.00 > 85.00	3.815	3.840	-0.025	0.864	4237638		1.87(0.74-2.23)		11511	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.107	4.143	-0.036	0.931	2302075	0.8798	Target=3.73	92.4	4650	
449.00 > 99.00	4.107	4.143	-0.036	0.931	599431		3.84(1.87-5.61)		2564	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.107	4.143	-0.036	0.997	655906	1.23		103	2212	
19 6:2 FTS										
427.00 > 407.00	4.119	4.143	-0.024	1.003	1039595	0.9354		98.7	4934	
D 21 13C4 PFOA										
417.00 > 372.00	4.119	4.155	-0.036	1.000	6116579	1.22		98.0	22582	
* 22 13C2 PFOA										
415.00 > 370.00	4.119	4.155	-0.036		6201956	1.25			14899	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.119	4.155	-0.036	1.000	4980422	0.9173	Target=2.40	91.7	2536	
413.00 > 169.00	4.119	4.155	-0.036	1.000	1982798		2.51(1.20-3.61)		3575	
D 25 13C4 PFOS										
503.00 > 80.00	4.413	4.447	-0.033	1.072	3143423	1.08		90.6	6054	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.413	4.447	-0.033	1.000	2522146	0.8718	Target=3.83	93.9	1653	M
499.00 > 99.00	4.413	4.447	-0.033	1.000	561538		4.49(1.91-5.74)		1319	M
D 27 13C5 PFNA										
468.00 > 423.00	4.426	4.470	-0.044	1.075	7466925	1.18		94.1	24468	
26 Perfluorononanoic acid										
463.00 > 419.00	4.426	4.470	-0.044	1.000	4756437	0.9537	Target=3.68	95.4	4605	
463.00 > 169.00	4.426	4.470	-0.044	1.000	1037029		4.59(1.84-5.52)		2118	
63 9CIFOS										
531.00 > 351.00	4.564	4.596	-0.032	1.108	5422235	0.8932		95.8	8656	
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.700	4.722	-0.022	1.065	2517260	0.9182	Target=3.97	95.6	5202	
549.00 > 99.00	4.700	4.722	-0.022	1.065	667591		3.77(1.99-5.96)		3540	
D 34 13C8 FOSA										
506.00 > 78.00	4.713	4.736	-0.023	1.144	5090394	1.19		95.5	8213	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.713	4.736	-0.023	1.000	444053	0.9367		93.7	5439	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 32 13C2 PFDA										
515.00 > 470.00	4.713	4.749	-0.036	1.144	7498949	1.17		93.3	11755	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.713	4.749	-0.036	1.000	5402644	0.9473	Target=10.11	94.7	2740	
513.00 > 169.00	4.726	4.749	-0.023	1.003	451596		11.96(5.06-15.17)		494	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.739	4.763	-0.024	1.151	834415	1.28		107	3874	
31 8:2 FTS										
527.00 > 507.00	4.739	4.763	-0.024	1.000	1088817	0.8760		91.4	8417	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.859	4.896	-0.037	1.180	992195	1.13		90.2	2070	
36 NMeFOSAA										
570.00 > 419.00	4.859	4.896	-0.037	1.000	720165	0.9865		98.6	560	
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.954	4.993	-0.039	1.123	2282422	0.9063	Target=3.80	94.0	6788	
599.00 > 99.00	4.954	4.993	-0.039	1.123	651968		3.50(1.90-5.70)		3188	
D 39 13C2 PFUnA										
565.00 > 520.00	4.983	5.022	-0.039	1.210	7243426	1.18		94.4	12376	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.983	5.022	-0.039	1.000	5632520	0.9602	Target=7.45	96.0	8159	
563.00 > 169.00	4.983	5.022	-0.039	1.000	617039		9.13(3.78-11.33)		2134	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.997	5.036	-0.039	1.213	999340	1.18		94.5	3605	
40 NEtFOSA										
584.00 > 419.00	4.997	5.036	-0.039	1.000	709255	0.9344		93.4	1206	
57 11CIFOS										
631.00 > 451.00	5.082	5.119	-0.037	1.152	4421396	0.9045		96.0	8636	
D 43 13C2 PFDoA										
615.00 > 570.00	5.214	5.251	-0.037	1.266	7966897	1.22		97.4	22609	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.214	5.251	-0.037	1.000	6066022	0.9107	Target=5.33	91.1	3905	
613.00 > 169.00	5.214	5.251	-0.037	1.000	837564		7.24(2.66-7.99)		3071	
50 10:2 FTS										
627.00 > 607.00	5.240	5.266	-0.026	1.106	1395409	0.9016		93.5	7781	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.269	5.281	-0.012	1.279	694633	1.30		104	389	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.284	5.295	-0.011	1.283	631897	1.14		91.0	39.8	
49 N-MeFOSE-M										
616.00 > 59.00	5.284	5.295	-0.011	1.003	615406	0.9561		95.6	952	
61 NMeFOSA										
512.00 > 169.00	5.284	5.295	-0.011	1.000	514573	0.9722		97.2	639	
54 PFDoS										
699.00 > 80.00	5.399	5.436	-0.037	1.223	2371142	0.9125	Target=4.32	94.3	4263	
699.00 > 99.00	5.399	5.436	-0.037	1.223	560253		4.23(2.19-6.58)		4093	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.426	5.436	-0.010	1.317	754148	1.33		106	715	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
62 N-EtFOSE-M										
630.00 > 59.00	5.439	5.449	-0.010	1.002	729581	0.9576		95.8	1556	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.452	5.449	0.003	1.324	514037	1.10		88.0	718	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.426	5.462	-0.036	1.041	5213853	0.9251	Target=5.66	92.5	3672	
663.00 > 169.00	5.426	5.462	-0.036	1.041	889600		5.86(2.83-8.48)		3507	
56 N-EtFOSA-M										
526.00 > 169.00	5.452	5.462	-0.010	1.000	490466	1.02		102	671	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.611	5.637	-0.026	1.362	7209398	1.20		96.0	22085	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.611	5.637	-0.026	1.000	679179	0.9332	Target=1.07	93.3	4622	
713.00 > 219.00	5.611	5.637	-0.026	1.000	655532		1.04(0.53-1.60)		4185	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.925	5.948	-0.023	1.000	4068525	0.9104	Target=7.50	91.0	2778	
813.00 > 169.00	5.925	5.948	-0.023	1.000	498124		8.17(3.75-11.26)		2531	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.925	5.948	-0.023	1.439	5098483	1.17		93.6	5308	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.185	6.221	-0.036	1.044	3468995	0.9371	Target=9.98	93.7	2394	
913.00 > 169.00	6.185	6.221	-0.036	1.044	303733		11.42(5.14-15.41)		1793	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_040.d

Injection Date: 07-Oct-2021 02:19:00

Instrument ID: LCA

Lims ID: LCS 140-54348/2-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 40

Worklist Smp#: 40

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

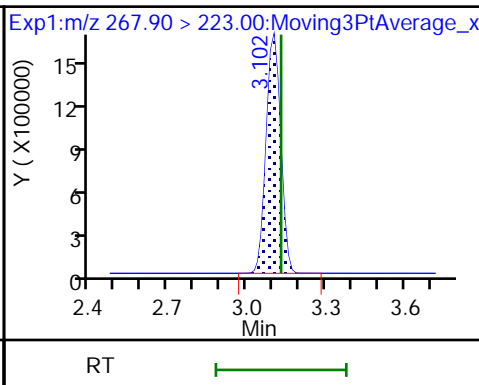
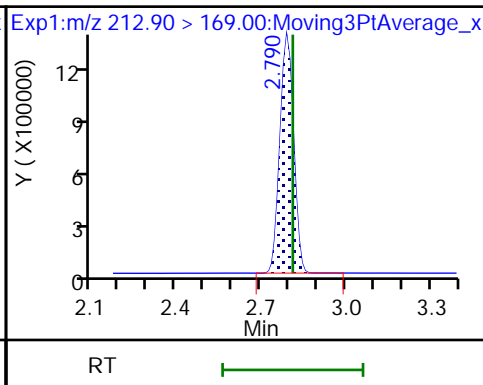
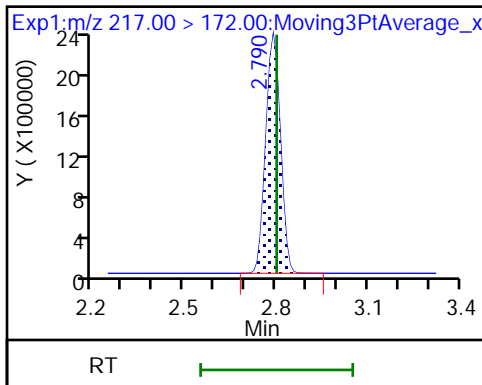
Method: PFC_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

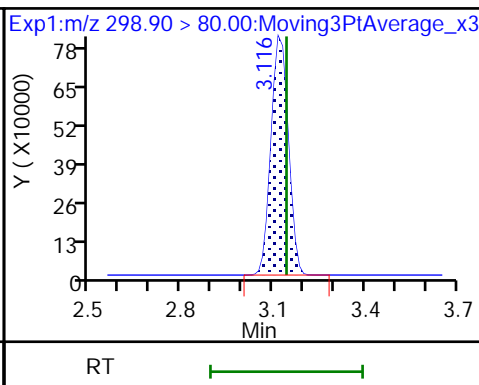
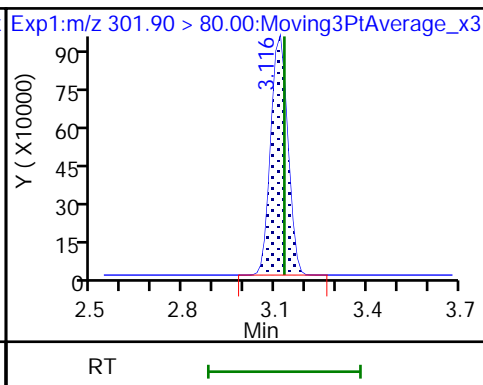
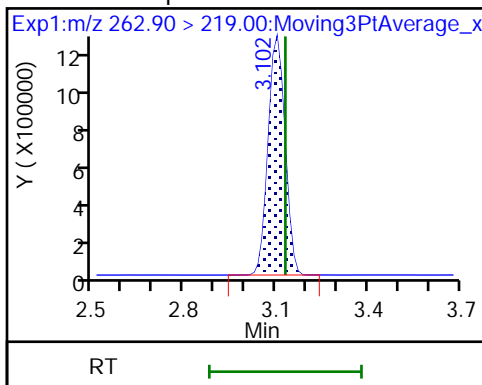
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

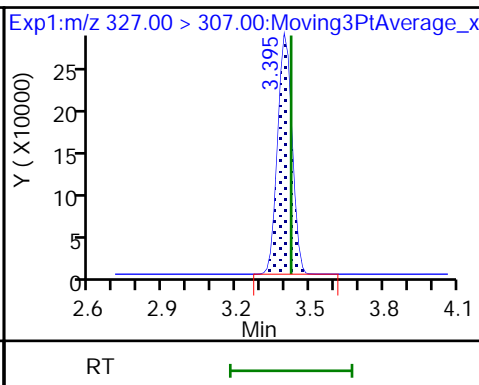
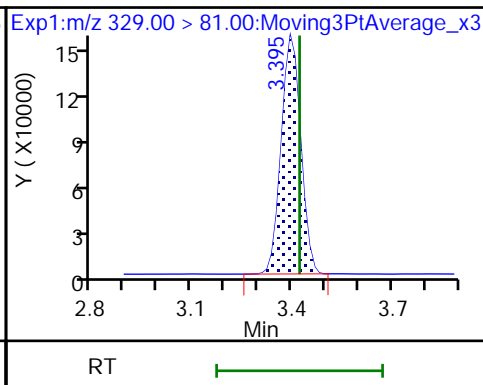
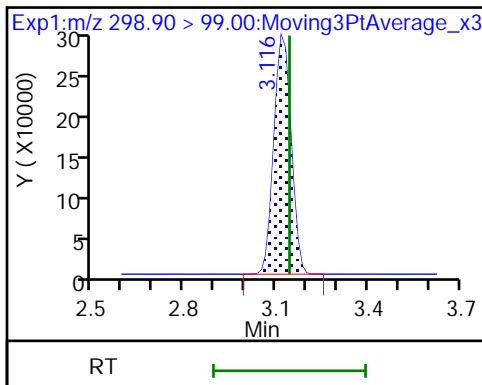
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

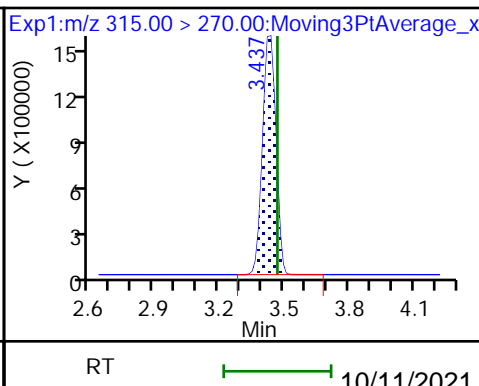
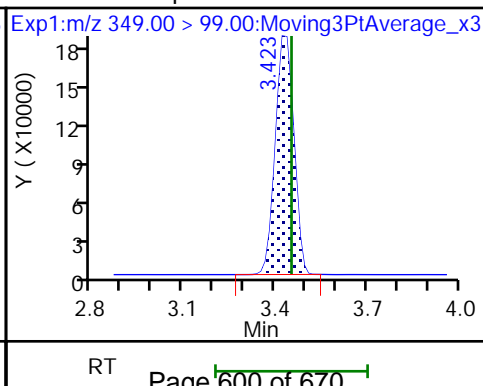
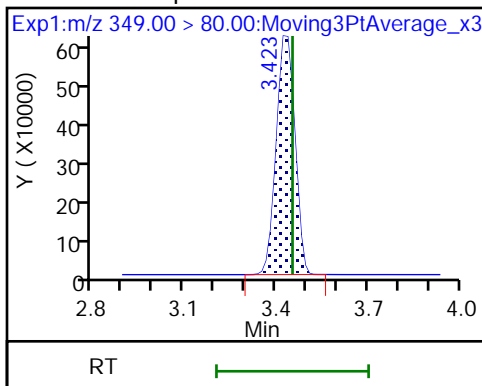
7 4:2 FTS

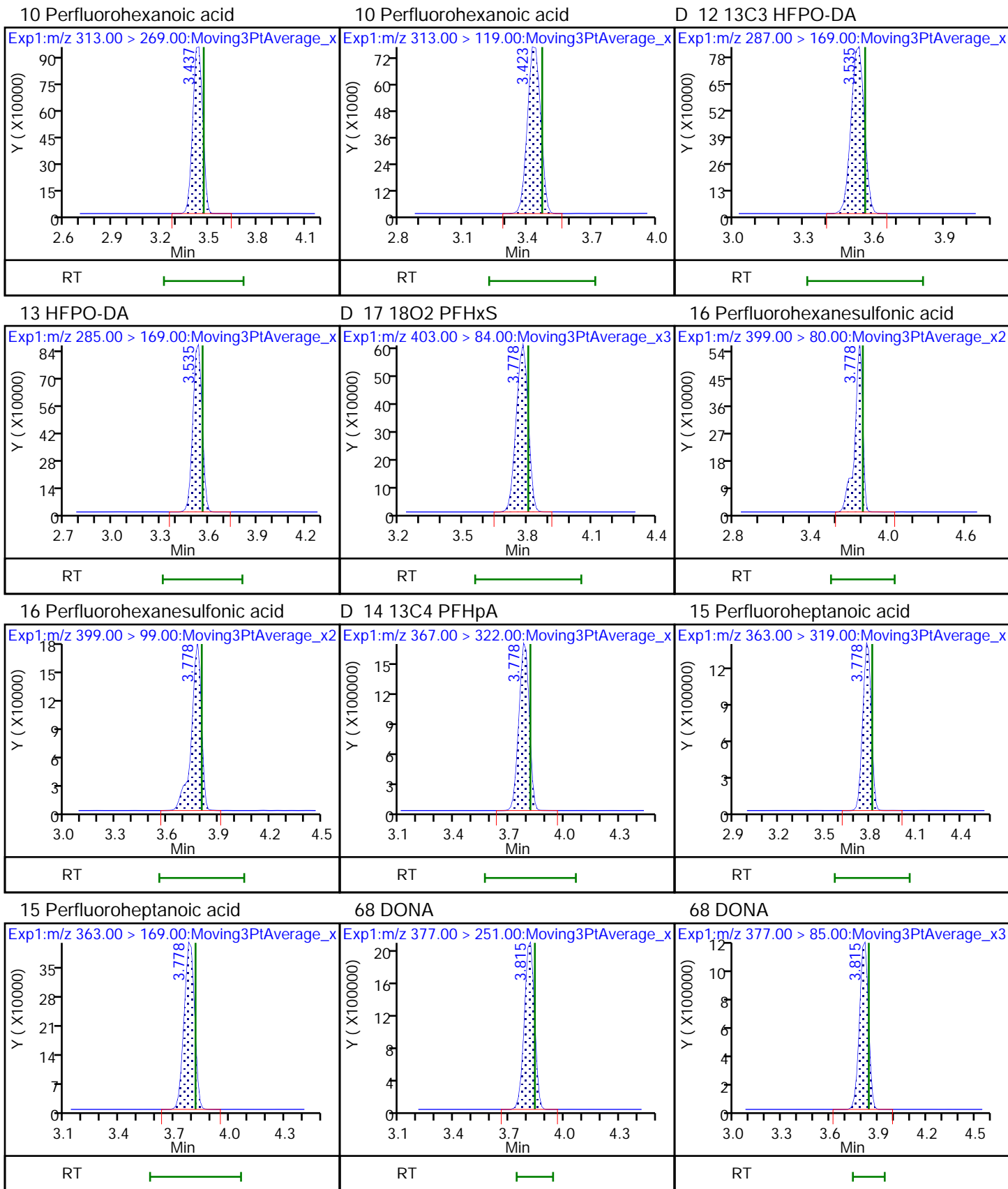


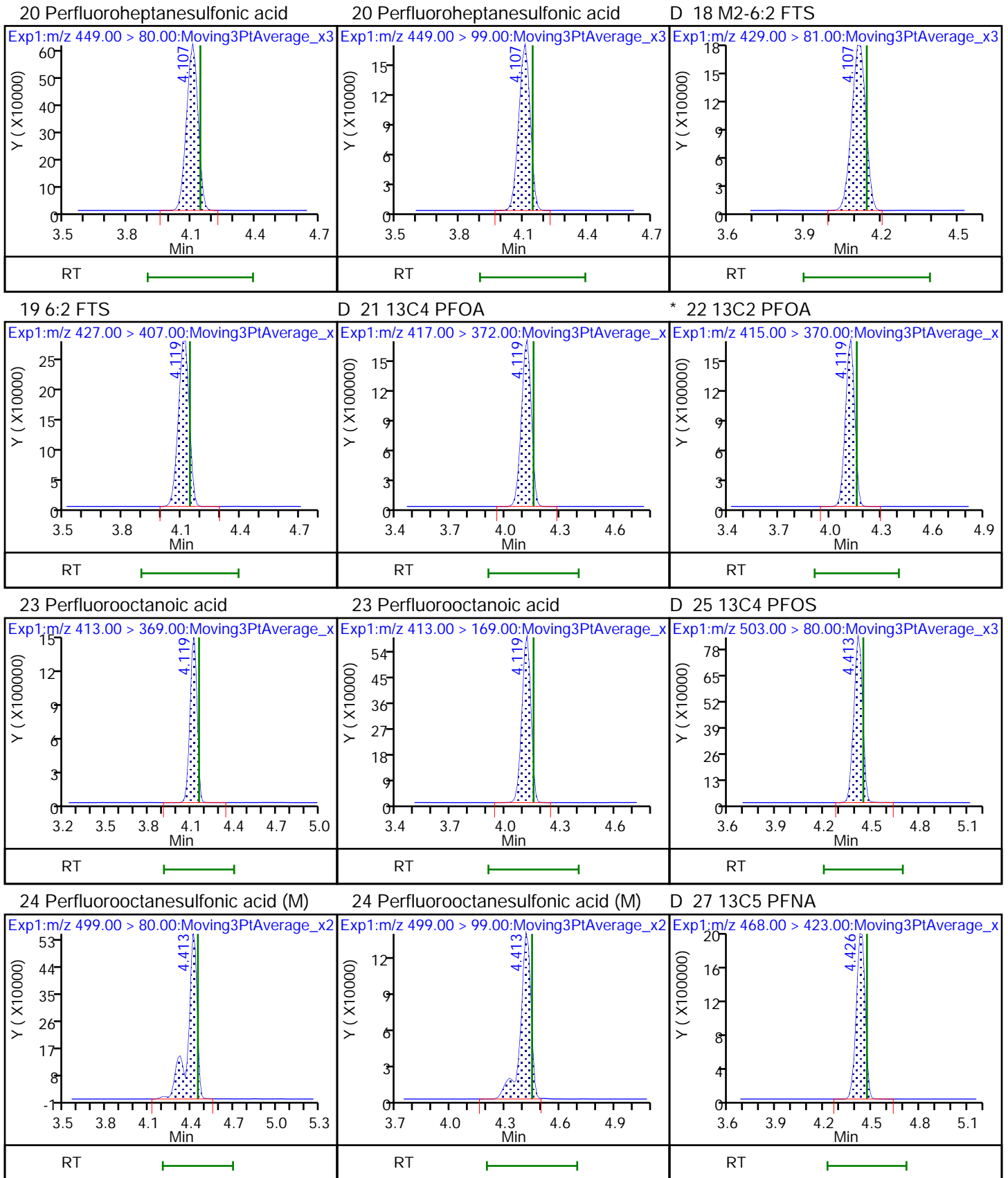
11 Perfluoropentanesulfonic acid

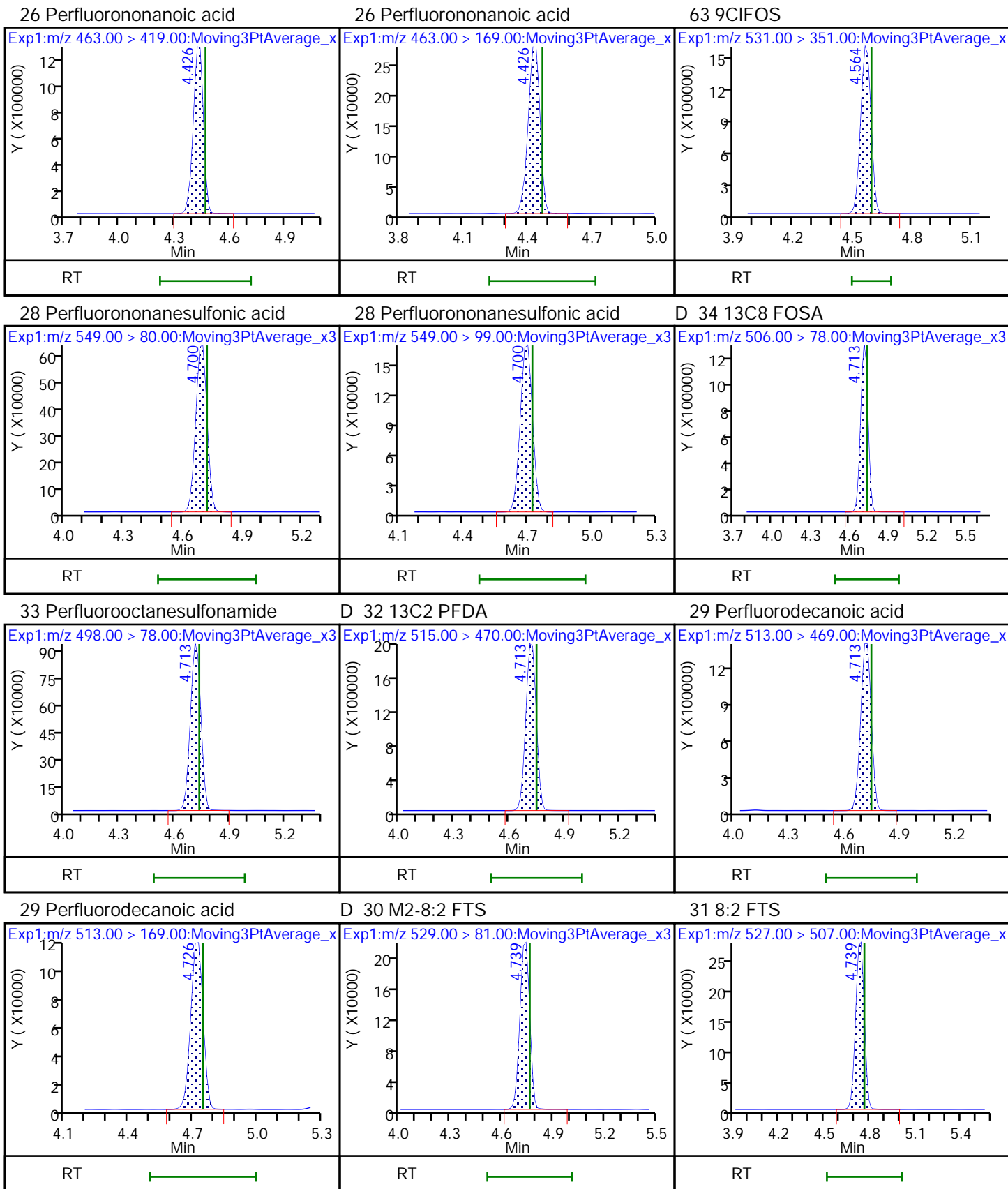
11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA





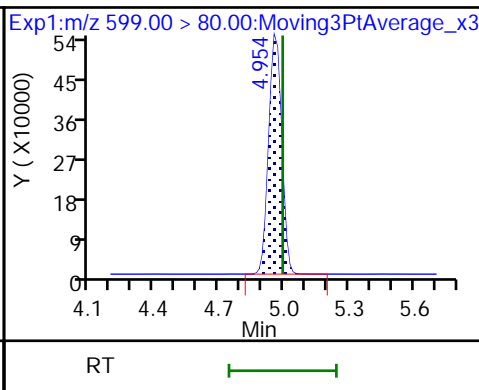
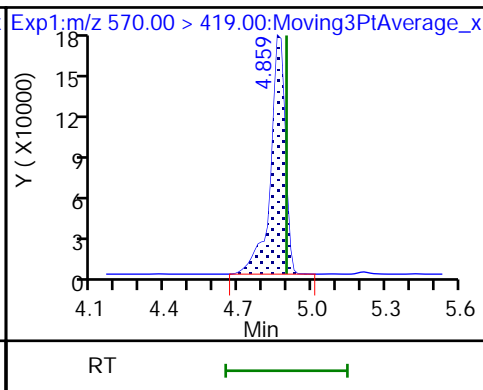
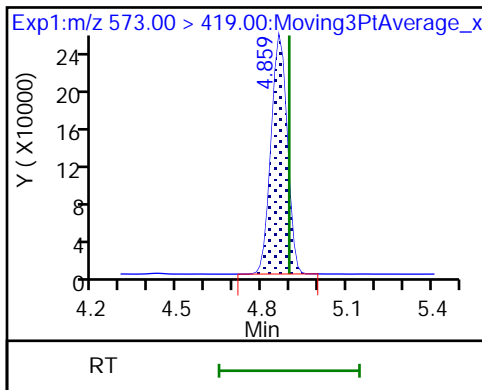




D 35 d3-NMeFOSAA

36 NMeFOSAA

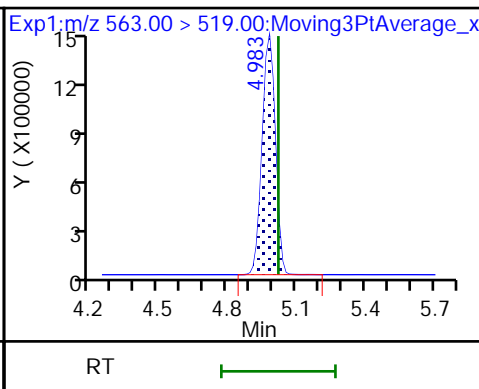
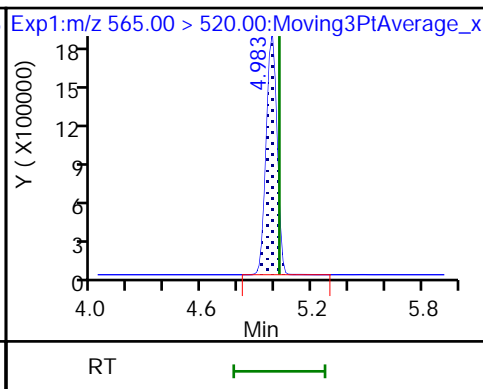
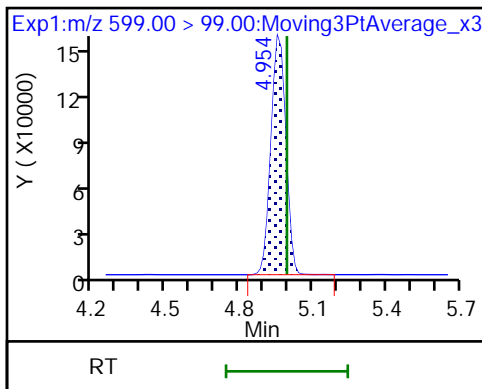
37 Perfluorodecanesulfonic acid



37 Perfluorodecanesulfonic acid

D 39 13C2 PFUoA

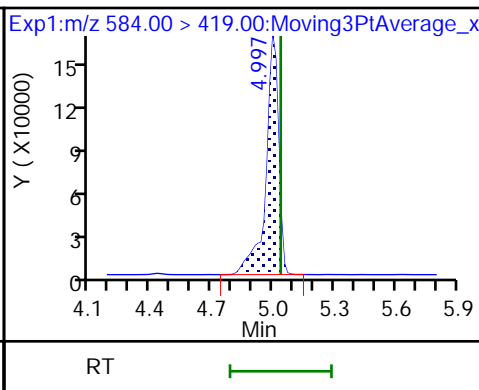
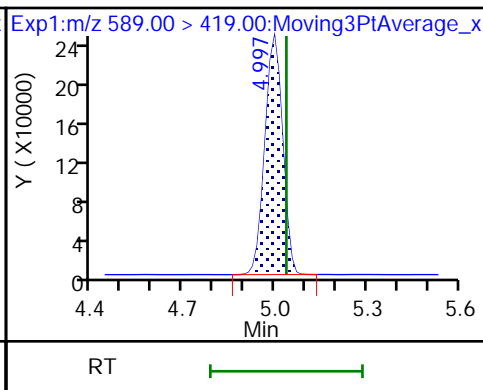
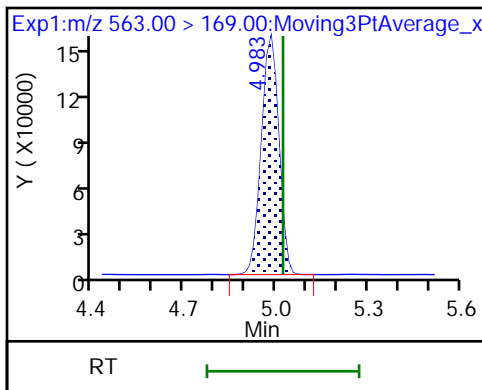
38 Perfluoroundecanoic acid



38 Perfluoroundecanoic acid

D 41 d5-NEtFOSAA

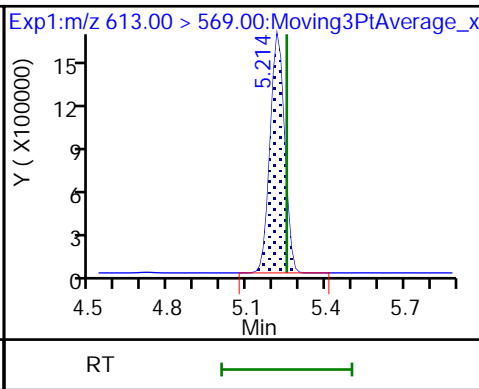
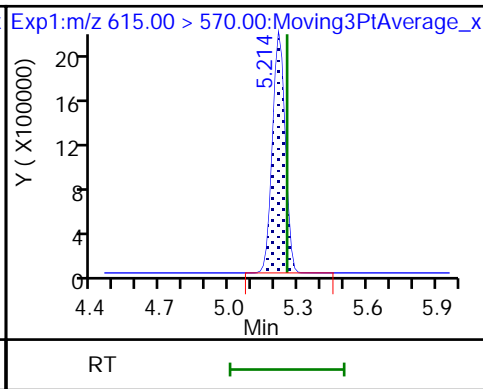
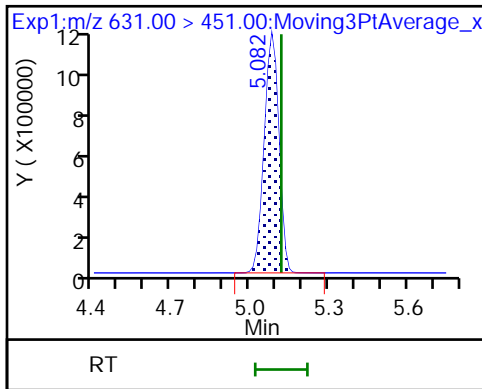
40 NEtFOSA

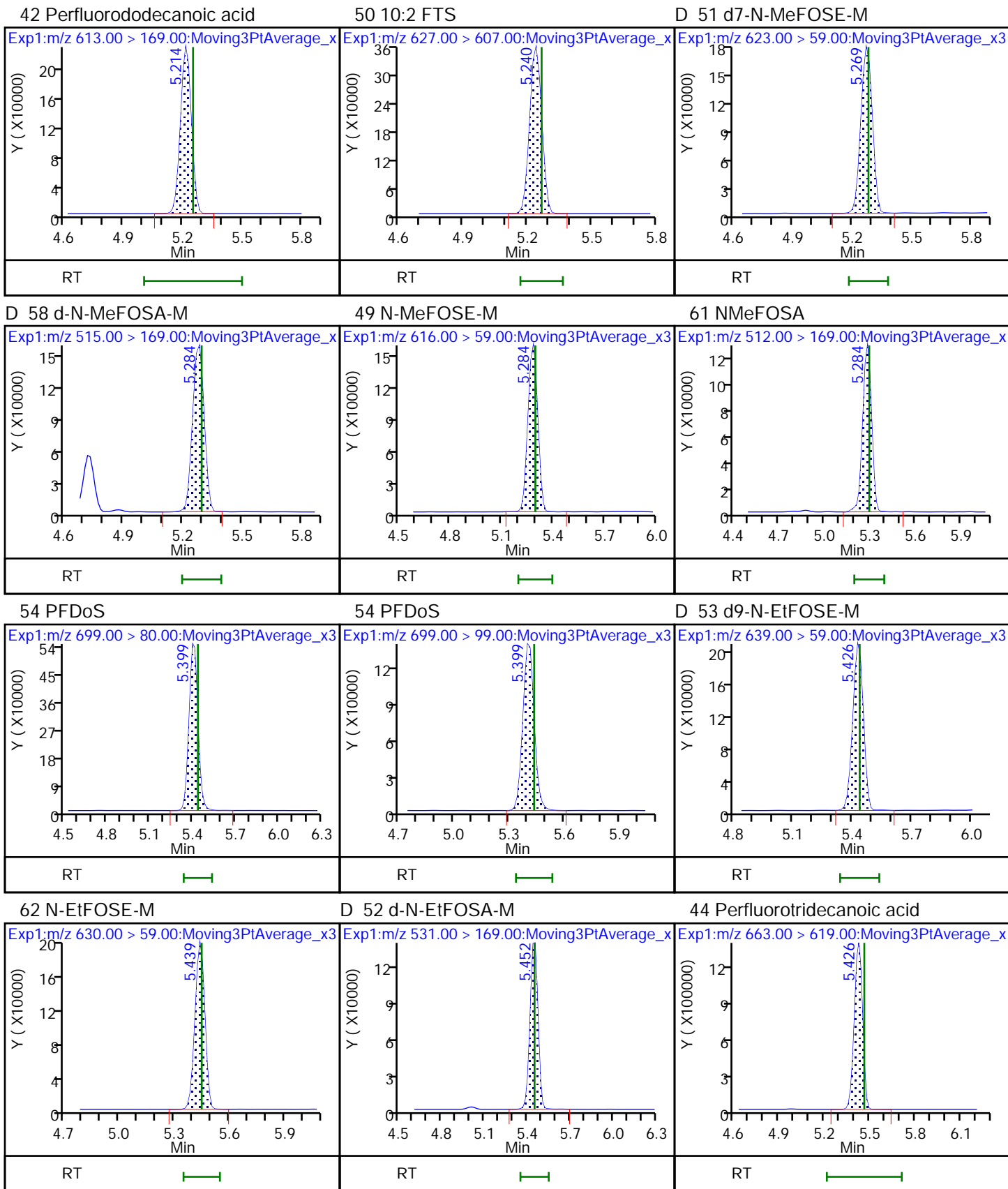


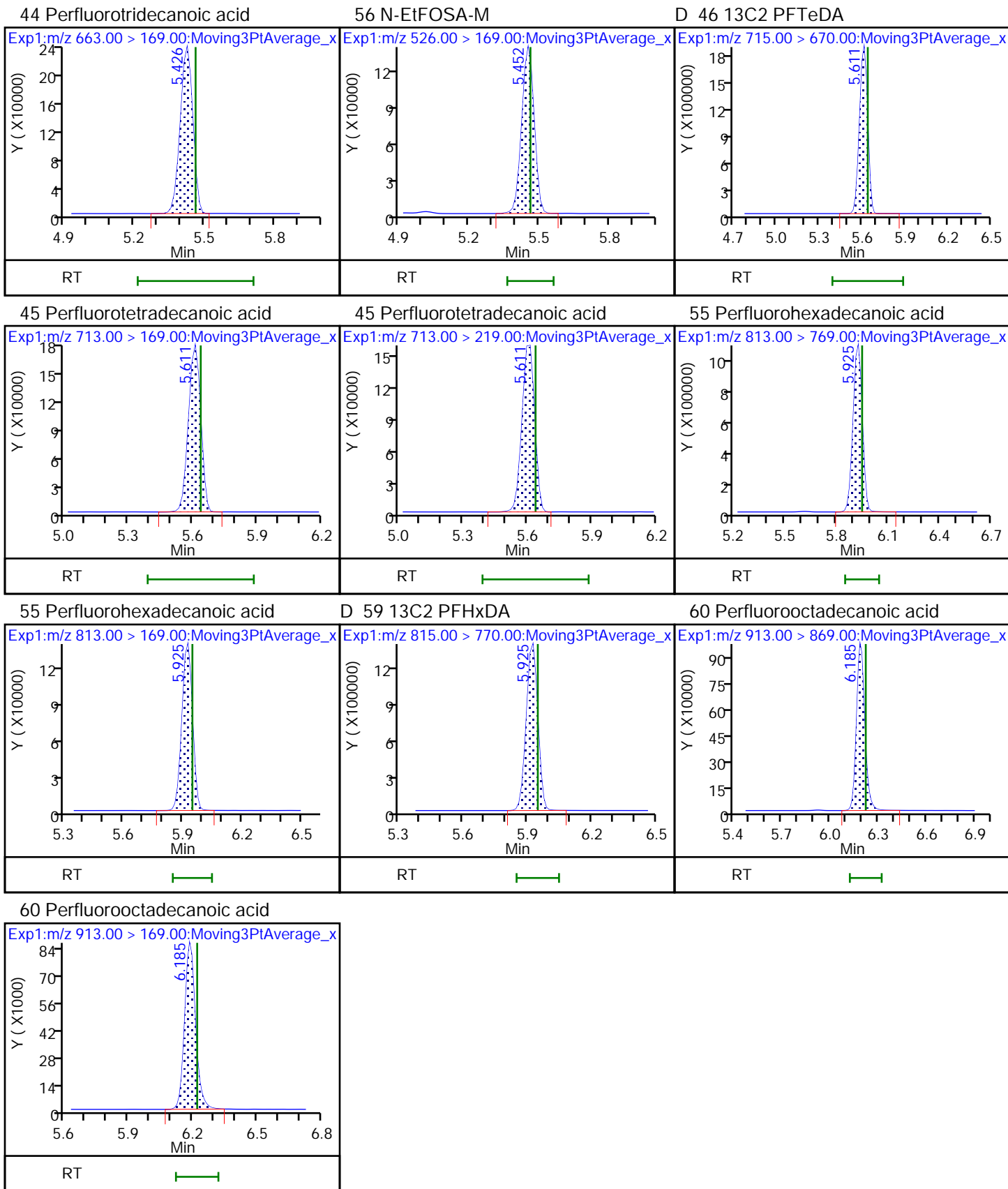
57 11CIFOS

D 43 13C2 PFDoA

42 Perfluorododecanoic acid







FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCSD 140-54177/3-B
 Matrix: Air Lab File ID: 093.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: None Date Extracted: 09/24/2021 09:38
 Sample wt/vol: 1 (Sample) Date Analyzed: 10/07/2021 10:09
 Con. Extract Vol.: 50 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: GeminiC18 3x100 ID: 3 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54568 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.02071		0.00100	0.000580

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	97		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_093.d
 Lims ID: LCSD 140-54177/3-B
 Client ID:
 Sample Type: LCSD
 Inject. Date: 07-Oct-2021 10:09:49 ALS Bottle#: 39 Worklist Smp#: 93
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-093 lcsd 140-54177/3-b
 Misc. Info.: Plate: 11 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 18:07:45 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675
 First Level Reviewer: cochranj Date: 09-Oct-2021 18:06:44
 Ratio Calibration: None

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	2.801	2.801	0.0	0.678	6828144	1.25	99.8	13961	
2 Perfluorobutanoic acid	212.90 > 169.00	2.812	2.812	0.0	1.004	4185130	0.9754	97.5	835	
D 3 13C5 PFPeA	267.90 > 223.00	3.116	3.129	-0.013	0.754	5558986	1.24	98.9	14289	
4 Perfluoropentanoic acid	262.90 > 219.00	3.116	3.129	-0.013	1.000	4449810	0.9878	98.8	969	
D 6 13C3 PFBS	301.90 > 80.00	3.129	3.129	0.0	0.758	3254386	1.12	96.4	12479	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.143	3.143	0.0	1.004	2877211	0.9127	Target=3.06	103	7295
	298.90 > 99.00	3.143	3.143	0.0	1.004	1058452		2.72(1.53-4.59)		3415
D 8 M2-4:2 FTS	329.00 > 81.00	3.423	3.423	0.0	0.829	602745	1.39	119	724	
7 4:2 FTS	327.00 > 307.00	3.423	3.423	0.0	1.000	1155243	0.8951	95.8	9211	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.453	3.453	0.0	1.103	2371939	0.9867	Target=3.47	105	8315
	349.00 > 99.00	3.453	3.453	0.0	1.103	685904		3.46(1.73-5.20)		6507
D 9 13C2 PFHxA	315.00 > 270.00	3.453	3.469	-0.016	0.836	5609183	1.22	97.2	13457	
10 Perfluorohexanoic acid	313.00 > 269.00	3.453	3.469	-0.016	1.000	3737681	0.9717	Target=9.74	97.2	1857
	313.00 > 119.00	3.453	3.469	-0.016	1.000	290519		12.87(4.87-14.61)		1133
D 12 13C3 HFPO-DA	287.00 > 169.00	3.548	3.561	-0.013	0.859	2851771	1.21	96.6	7949	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.548	3.561	-0.013	1.000	3269885	1.04		104	2973	
D 17 18O2 PFHxS										
403.00 > 84.00	3.790	3.803	-0.013	0.918	1991064	1.13		95.9	15151	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.790	3.803	-0.013	1.000	2121704	0.9275	Target=2.96	102	4034	M
399.00 > 99.00	3.790	3.803	-0.013	1.000	621180		3.42(1.48-4.44)		4025	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.803	3.815	-0.012	0.921	5633718	1.22		97.9	25257	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.803	3.815	-0.012	1.000	4938121	1.04	Target=3.35	104	3354	
363.00 > 169.00	3.803	3.815	-0.012	1.000	1543432		3.20(1.67-5.02)		6862	
68 DONA										
377.00 > 251.00	3.827	3.840	-0.013	0.863	7037897	1.00	Target=1.49	106	17320	
377.00 > 85.00	3.827	3.840	-0.013	0.863	4062719		1.73(0.74-2.23)		20710	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.118	4.143	-0.025	0.929	2156671	0.99	Target=3.73	104	7706	
449.00 > 99.00	4.118	4.143	-0.025	0.929	527852		4.09(1.87-5.61)		5069	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.131	4.143	-0.013	1.000	591088	1.33		112	2006	
19 6:2 FTS										
427.00 > 407.00	4.131	4.143	-0.013	1.000	948847	0.9474		99.9	5632	
D 21 13C4 PFOA										
417.00 > 372.00	4.131	4.155	-0.025	1.000	5030079	1.21		96.7	24437	
* 22 13C2 PFOA										
415.00 > 370.00	4.131	4.155	-0.025		5169003	1.25			24132	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.131	4.155	-0.025	1.000	4548146	1.02	Target=2.40	102	2246	
413.00 > 169.00	4.131	4.155	-0.025	1.000	1742130		2.61(1.20-3.61)		3214	
D 25 13C4 PFOS										
503.00 > 80.00	4.434	4.447	-0.012	1.074	2605623	1.08		90.1	10484	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.434	4.447	-0.012	1.000	2294025	0.9567	Target=3.83	103	3512	M
499.00 > 99.00	4.434	4.447	-0.012	1.000	512344		4.48(1.91-5.74)		1619	M
D 27 13C5 PFNA										
468.00 > 423.00	4.446	4.470	-0.024	1.076	6162936	1.16		93.2	22161	
26 Perfluorononanoic acid										
463.00 > 419.00	4.446	4.470	-0.024	1.000	4496922	1.09	Target=3.68	109	4338	
463.00 > 169.00	4.446	4.470	-0.024	1.000	982084		4.58(1.84-5.52)		2707	
63 9CIFOS										
531.00 > 351.00	4.584	4.596	-0.012	1.110	5222638	1.04		111	8974	
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.709	4.722	-0.013	1.062	2293551	1.01	Target=3.97	105	3075	
549.00 > 99.00	4.709	4.722	-0.013	1.062	571922		4.01(1.99-5.96)		3507	
D 34 13C8 FOSA										
506.00 > 78.00	4.736	4.736	0.0	1.146	4369222	1.23		98.4	6340	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.736	4.736	0.0	1.000	3281708	0.670		97.7	6492	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 32 13C2 PFDA										
515.00 > 470.00	4.736	4.749	-0.013	1.146	6436162	1.20		96.1	20191	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.736	4.749	-0.013	1.000	5067101	1.04	Target=10.11	104	2611	
513.00 > 169.00	4.736	4.749	-0.013	1.000	412753		12.28(5.06-15.17)		488	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.763	-0.014	1.150	745768	1.37		114	4811	
31 8:2 FTS										
527.00 > 507.00	4.749	4.763	-0.014	1.000	1033259	0.9301		97.1	4693	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.882	4.896	-0.014	1.182	886826	1.21		96.7	787	
36 NMeFOSAA										
570.00 > 419.00	4.882	4.896	-0.014	1.000	645080	0.9886		98.9	1060	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.979	4.993	-0.014	1.123	2085019	1.00	Target=3.80	104	3473	
599.00 > 99.00	4.979	4.993	-0.014	1.123	560008		3.72(1.90-5.70)		2503	
D 39 13C2 PFUnA										
565.00 > 520.00	4.993	5.022	-0.029	1.209	6169629	1.21		96.5	11453	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.993	5.022	-0.029	1.000	5040195	1.01	Target=7.45	101	6194	
563.00 > 169.00	4.993	5.022	-0.029	1.000	562088		8.97(3.78-11.33)		2919	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.007	5.036	-0.029	1.212	878053	1.25		99.6	6343	
40 NEtFOSA										
584.00 > 419.00	5.022	5.036	-0.014	1.003	672270	1.01		101	1503	
57 11CIFOS										
631.00 > 451.00	5.106	5.119	-0.013	1.151	3897487	0.9619		102	9487	
D 43 13C2 PFDoA										
615.00 > 570.00	5.237	5.251	-0.014	1.268	6460078	1.18		94.7	20557	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.237	5.251	-0.014	1.000	5305742	0.9838	Target=5.33	98.4	3123	
613.00 > 169.00	5.237	5.251	-0.014	1.000	777690		6.82(2.66-7.99)		3179	
50 10:2 FTS										
627.00 > 607.00	5.251	5.266	-0.015	1.106	1692942	1.22		127	16597	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.295	5.281	0.014	1.282	580455	1.31		104	259	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.282	555176	1.20		95.9	38.7	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.295	0.0	1.000	557955	1.04		104	577	
61 NMeFOSA										
512.00 > 169.00	5.295	5.295	0.0	1.000	435521	0.9366		93.7	470	
54 PFDoS										
699.00 > 80.00	5.423	5.436	-0.013	1.223	2045932	0.9498	Target=4.32	98.1	2127	
699.00 > 99.00	5.423	5.436	-0.013	1.223	484941		4.22(2.19-6.58)		3865	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.449	5.436	0.013	1.319	639146	1.35		108	427	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
62 N-EtFOSE-M										
630.00 > 59.00	5.462	5.449	0.013	1.002	667033	1.03		103	876	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.449	0.013	1.322	490190	1.26		101	758	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.436	5.462	-0.026	1.038	4970070	1.09	Target=5.66	109	5076	
663.00 > 169.00	5.436	5.462	-0.026	1.038	813160		6.11(2.83-8.48)		3867	
56 N-EtFOSA-M										
526.00 > 169.00	5.475	5.462	0.013	1.002	448903	0.9797		98.0	532	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.623	5.637	-0.014	1.361	5863276	1.17		93.7	17109	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.623	5.637	-0.014	1.000	585642	0.9898	Target=1.07	99.0	3429	
713.00 > 219.00	5.623	5.637	-0.014	1.000	592003		0.99(0.53-1.60)		4657	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.935	5.948	-0.013	1.000	3838856	1.00	Target=7.50	100	4201	
813.00 > 169.00	5.935	5.948	-0.013	1.000	470361		8.16(3.75-11.26)		2821	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.935	5.948	-0.013	1.437	4386462	1.21		96.6	11164	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.201	6.221	-0.020	1.045	3225021	1.01	Target=9.98	101	3218	
913.00 > 169.00	6.201	6.221	-0.020	1.045	280164		11.51(5.14-15.41)		1953	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_093.d

Injection Date: 07-Oct-2021 10:09:49

Instrument ID: LCA

Lims ID: LCSD 140-54177/3-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 39

Worklist Smp#: 93

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

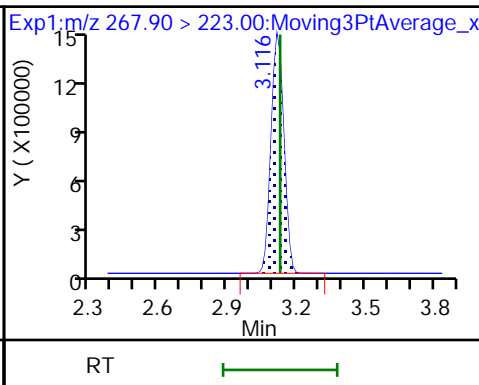
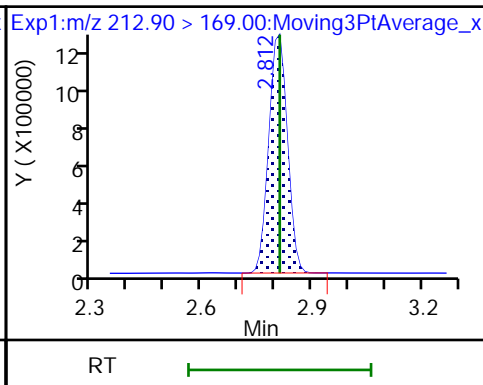
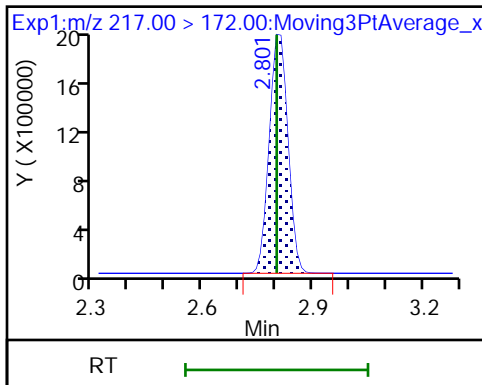
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Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

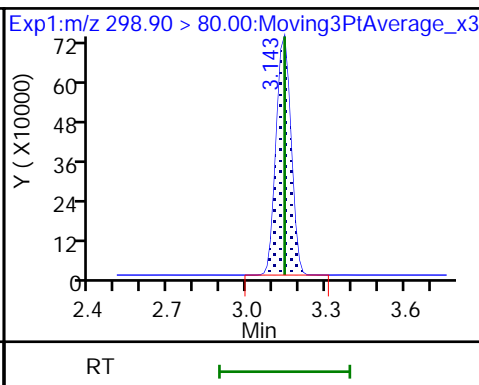
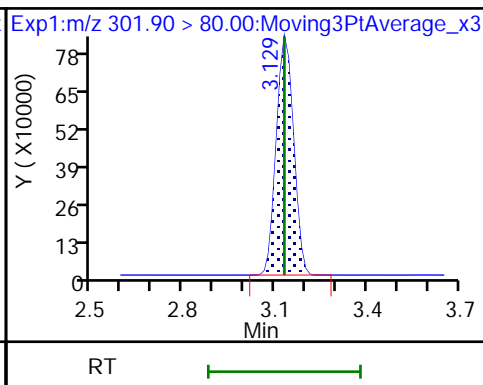
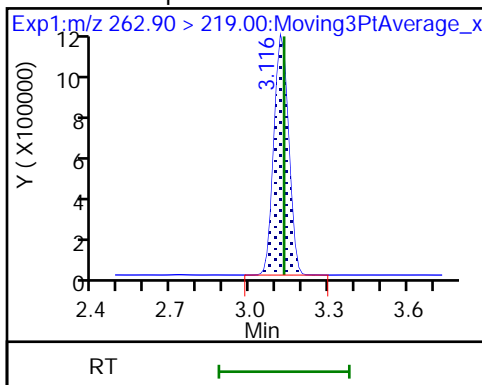
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

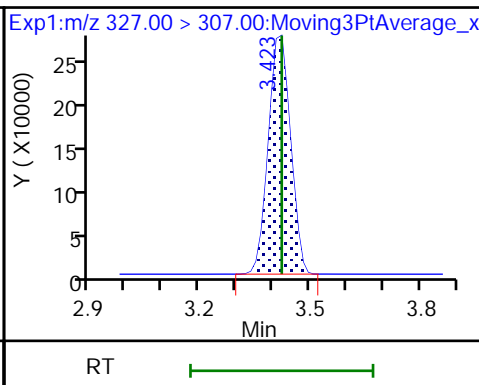
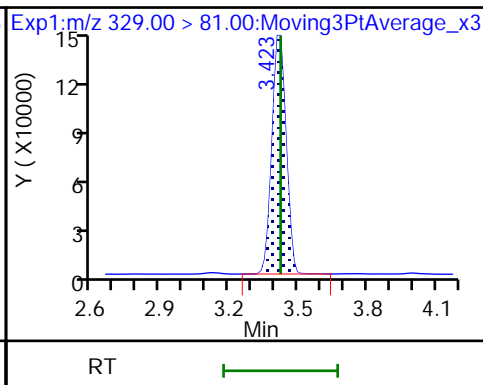
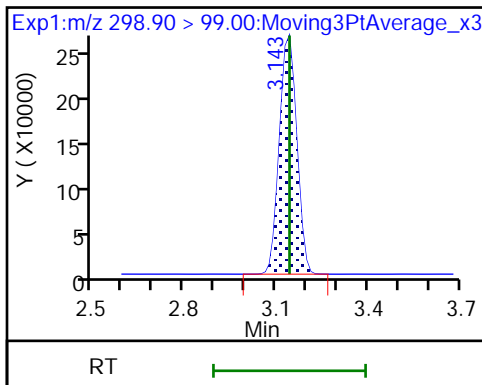
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

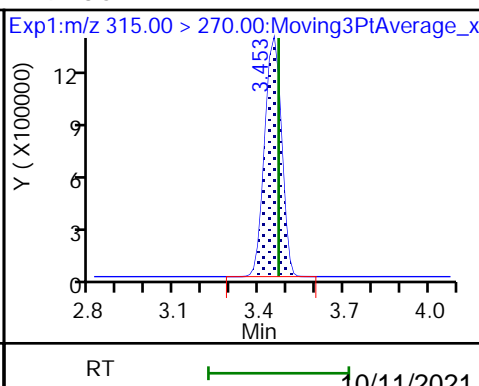
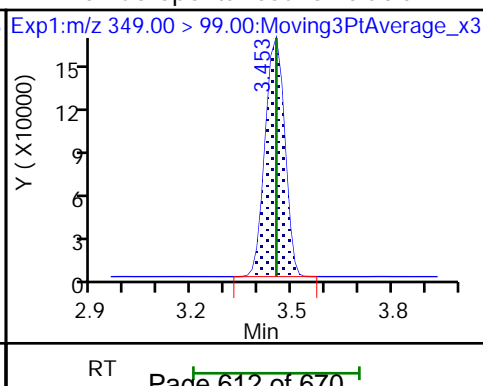
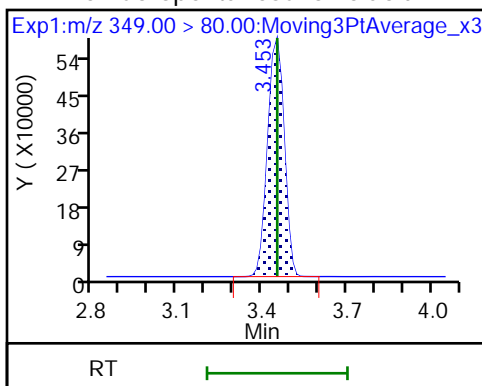
7 4:2 FTS

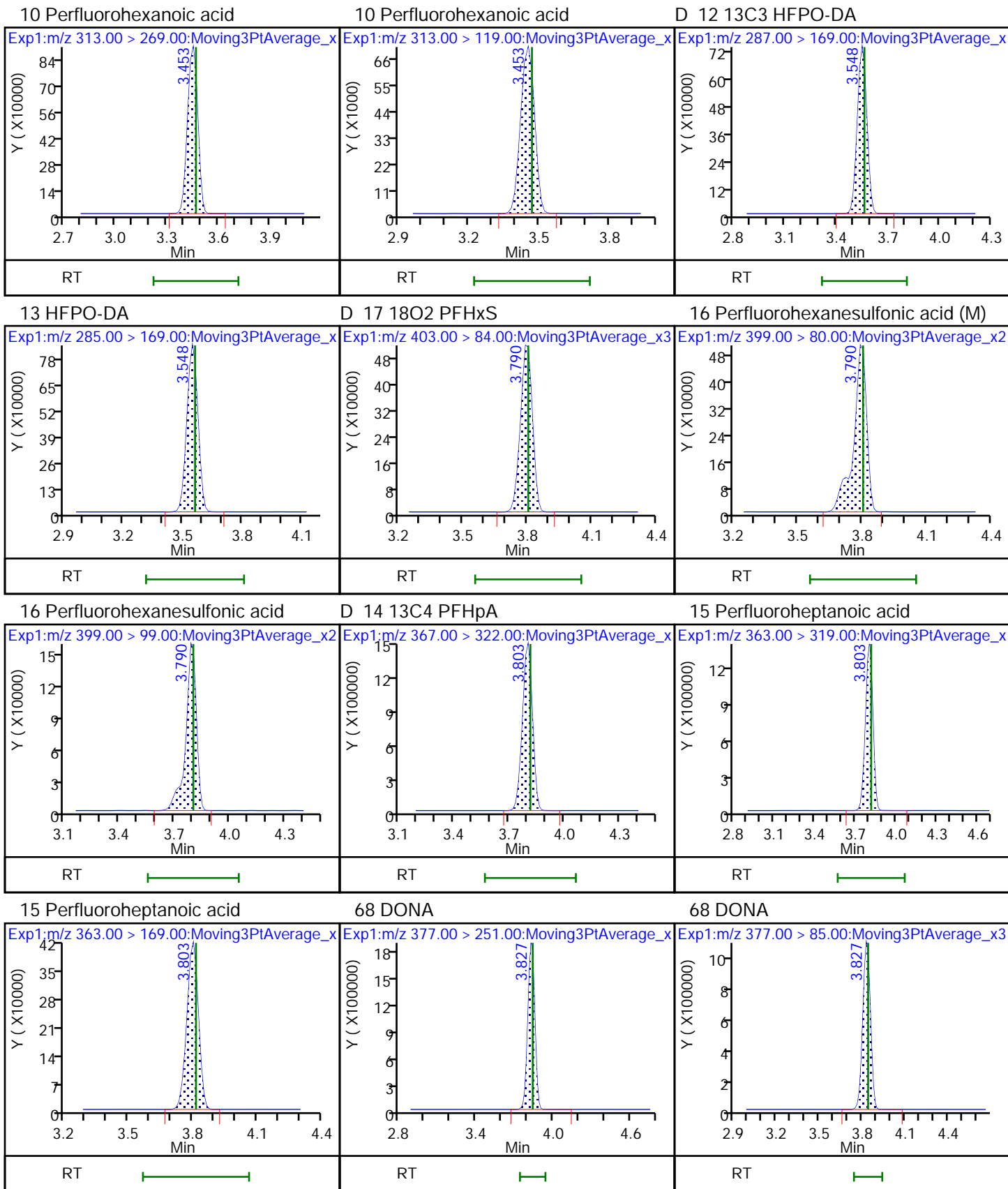


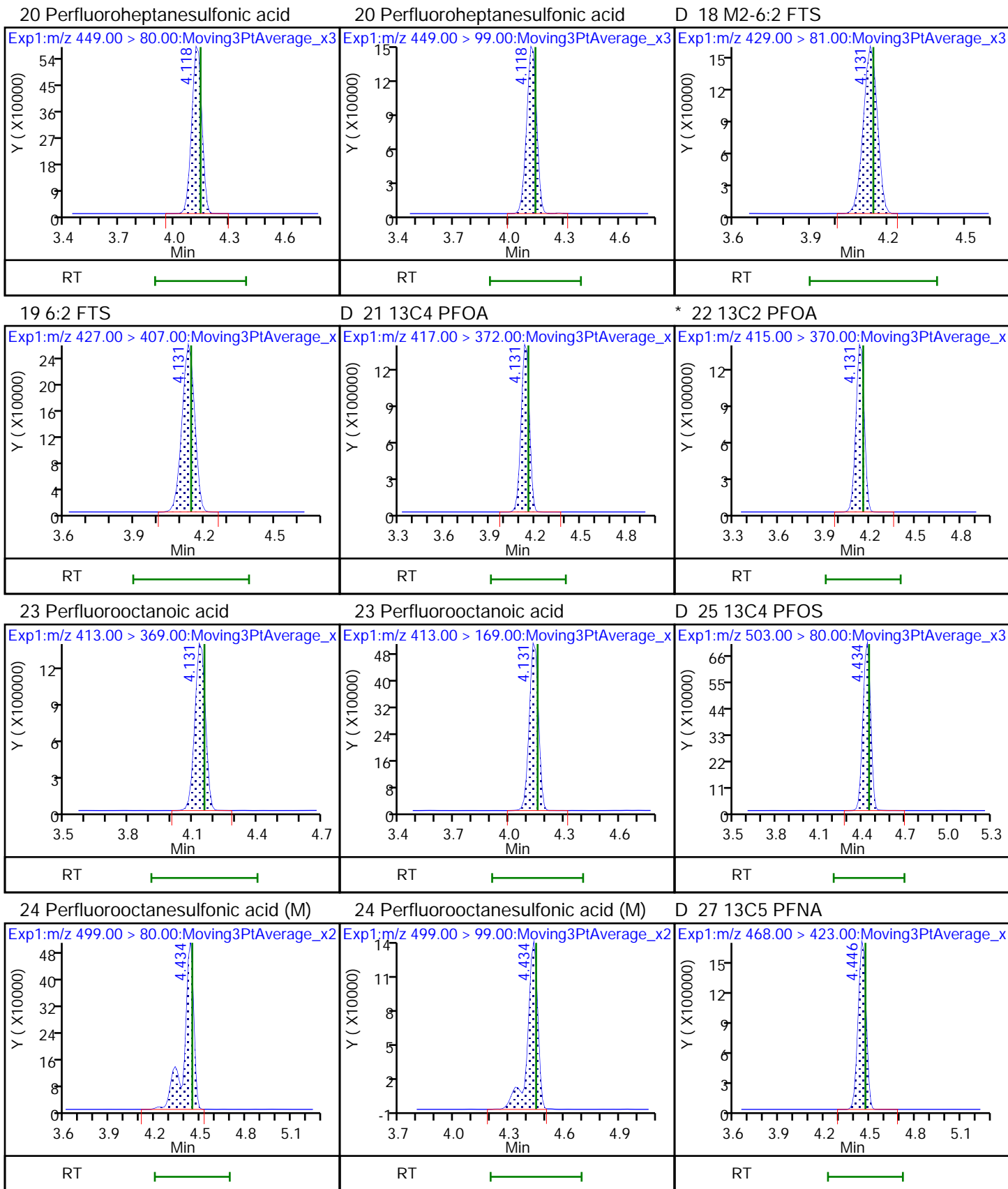
11 Perfluoropentanesulfonic acid

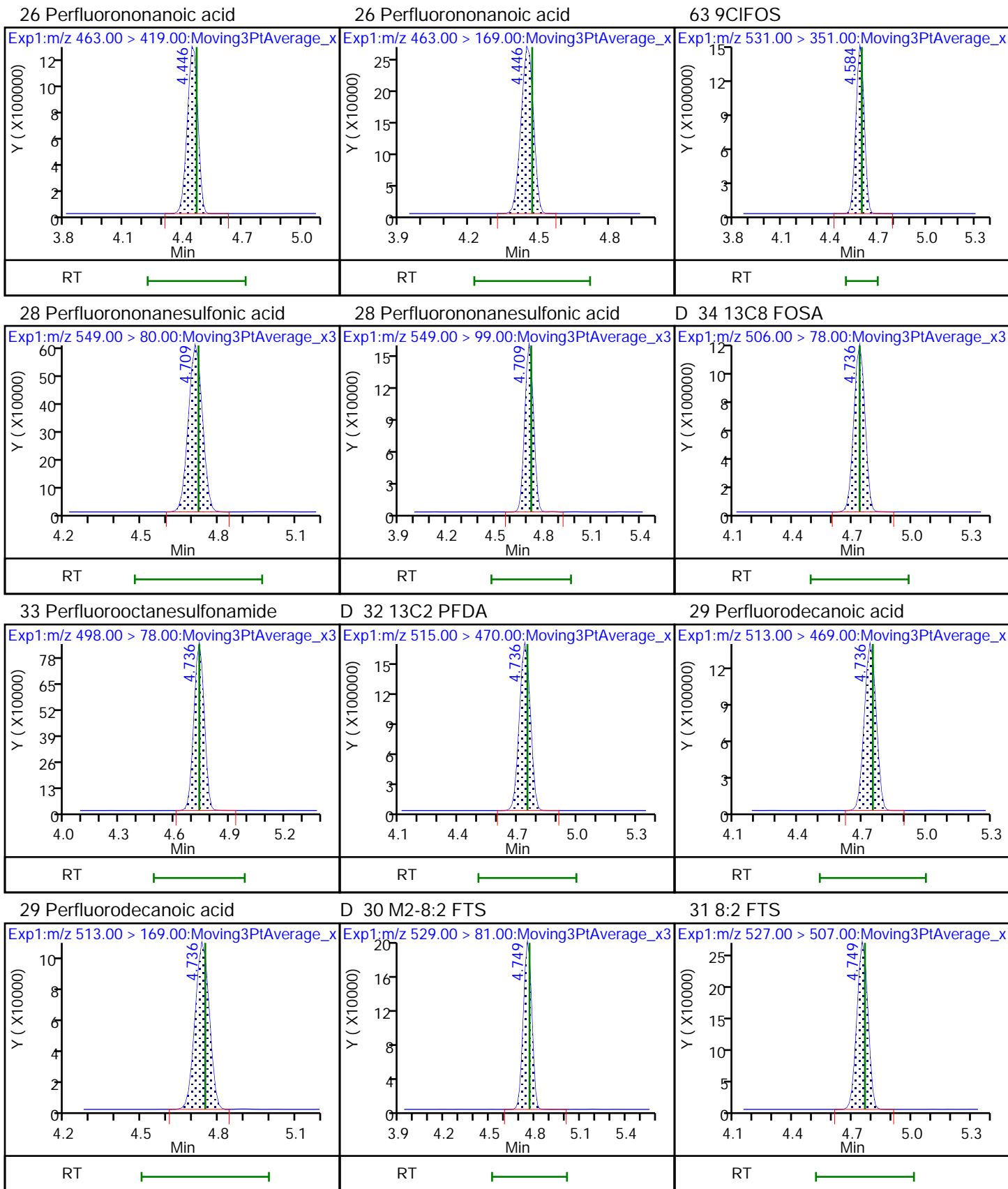
11 Perfluoropentanesulfonic acid

D 9 13C2 PFXa





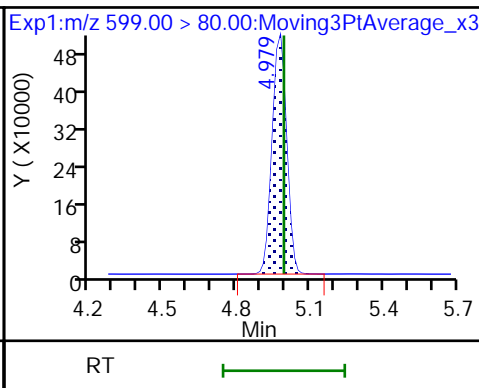
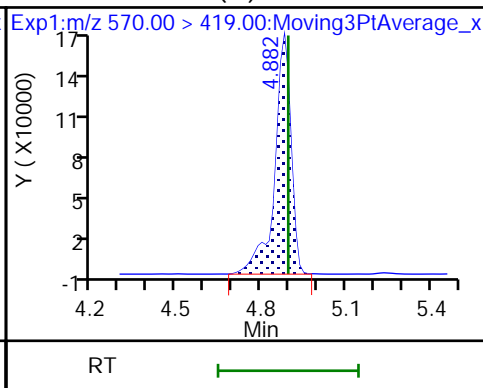
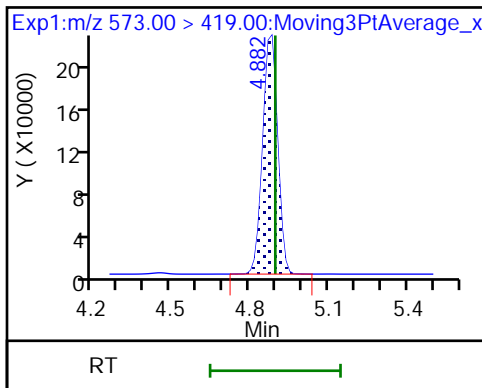




D 35 d3-NMeFOSAA

36 NMeFOSAA (M)

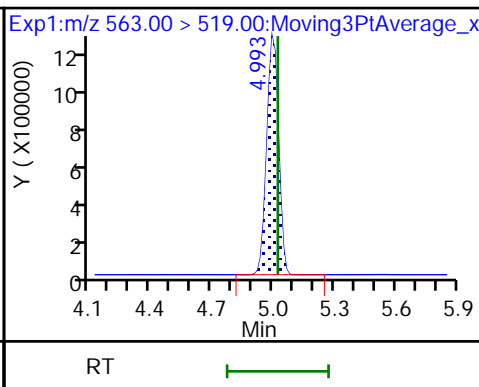
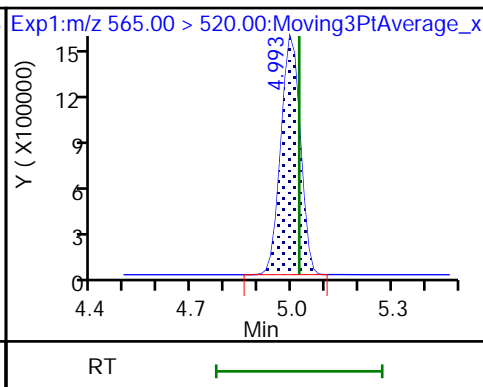
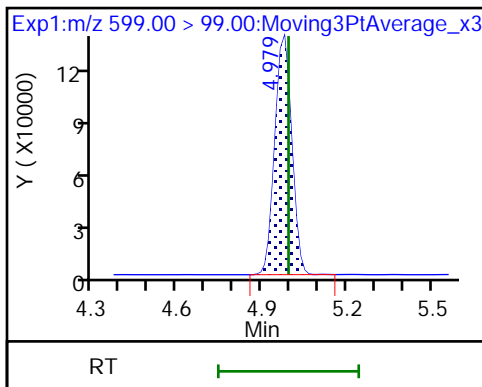
37 Perfluorodecanesulfonic acid



37 Perfluorodecanesulfonic acid

D 39 13C2 PFUoA

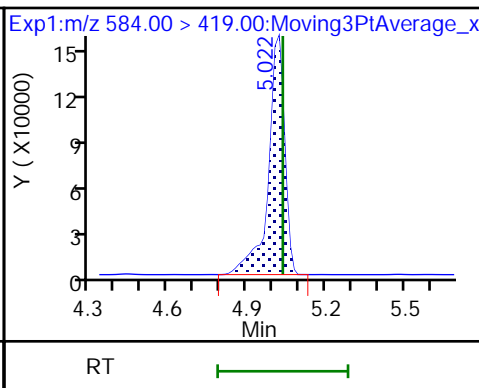
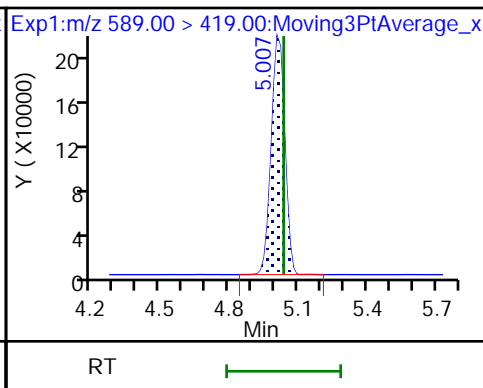
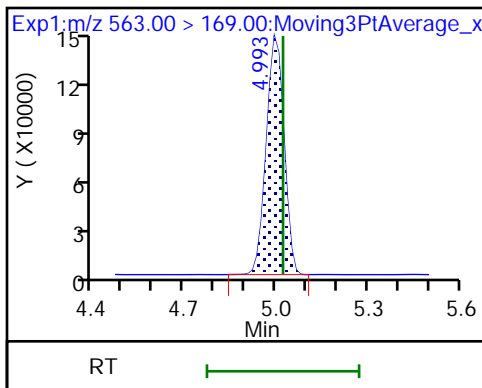
38 Perfluoroundecanoic acid



38 Perfluoroundecanoic acid

D 41 d5-NEtFOSAA

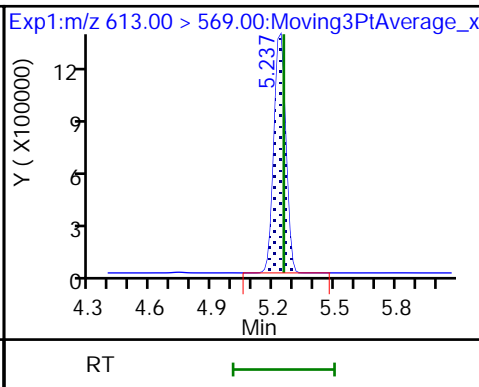
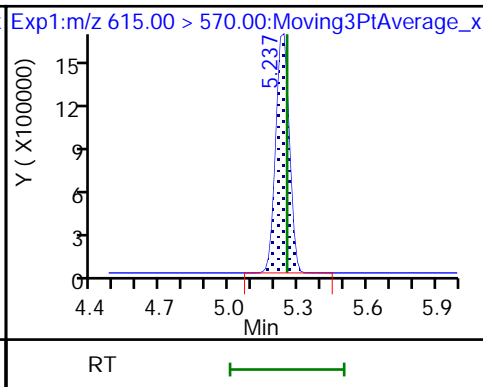
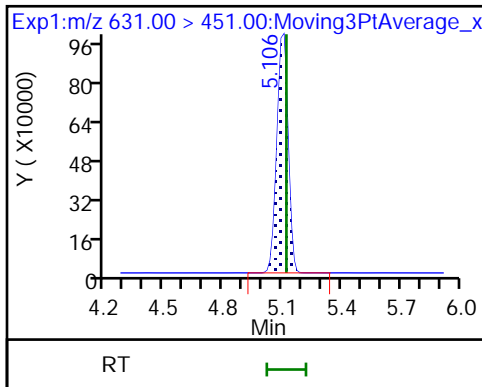
40 NEtFOSA

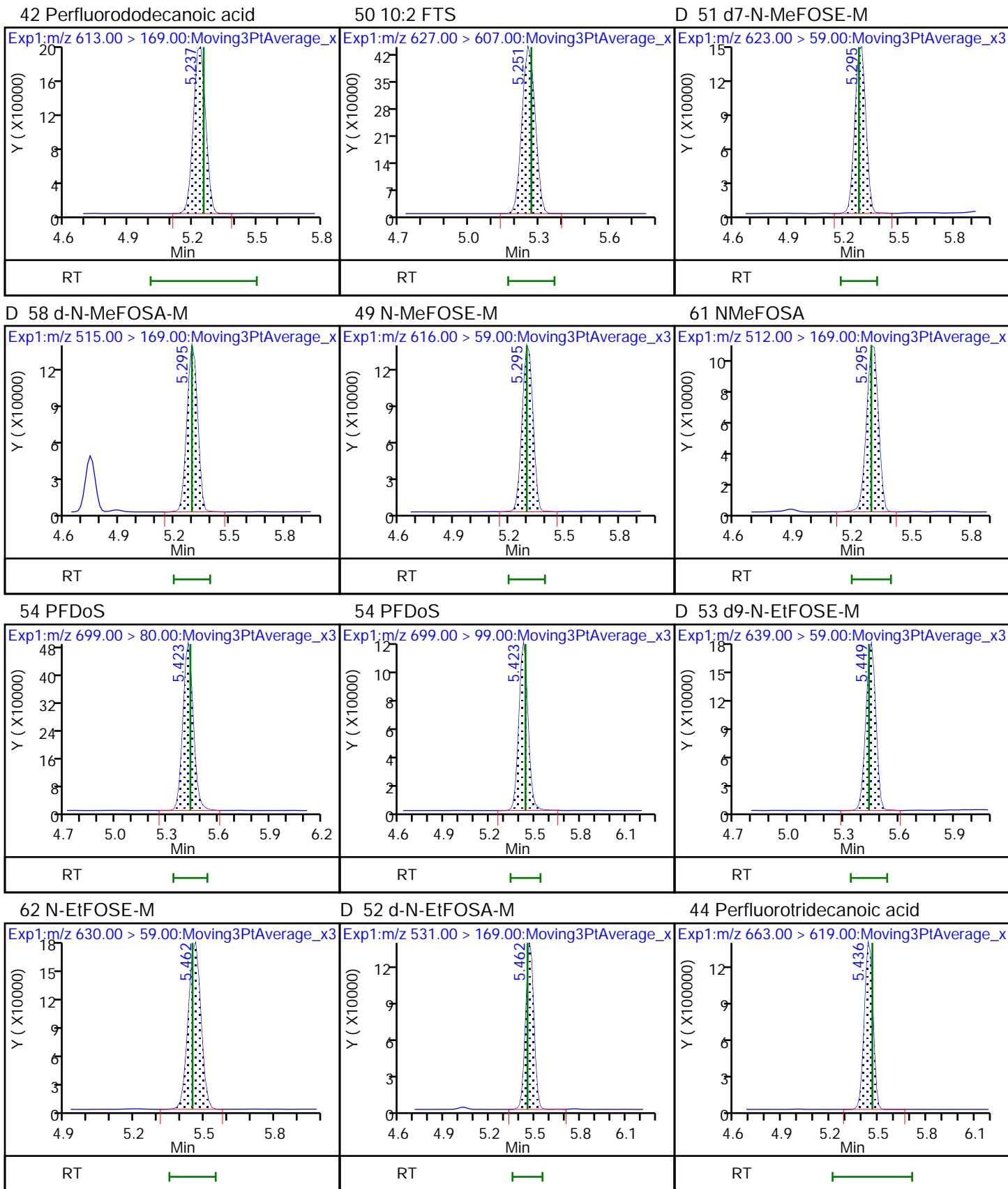


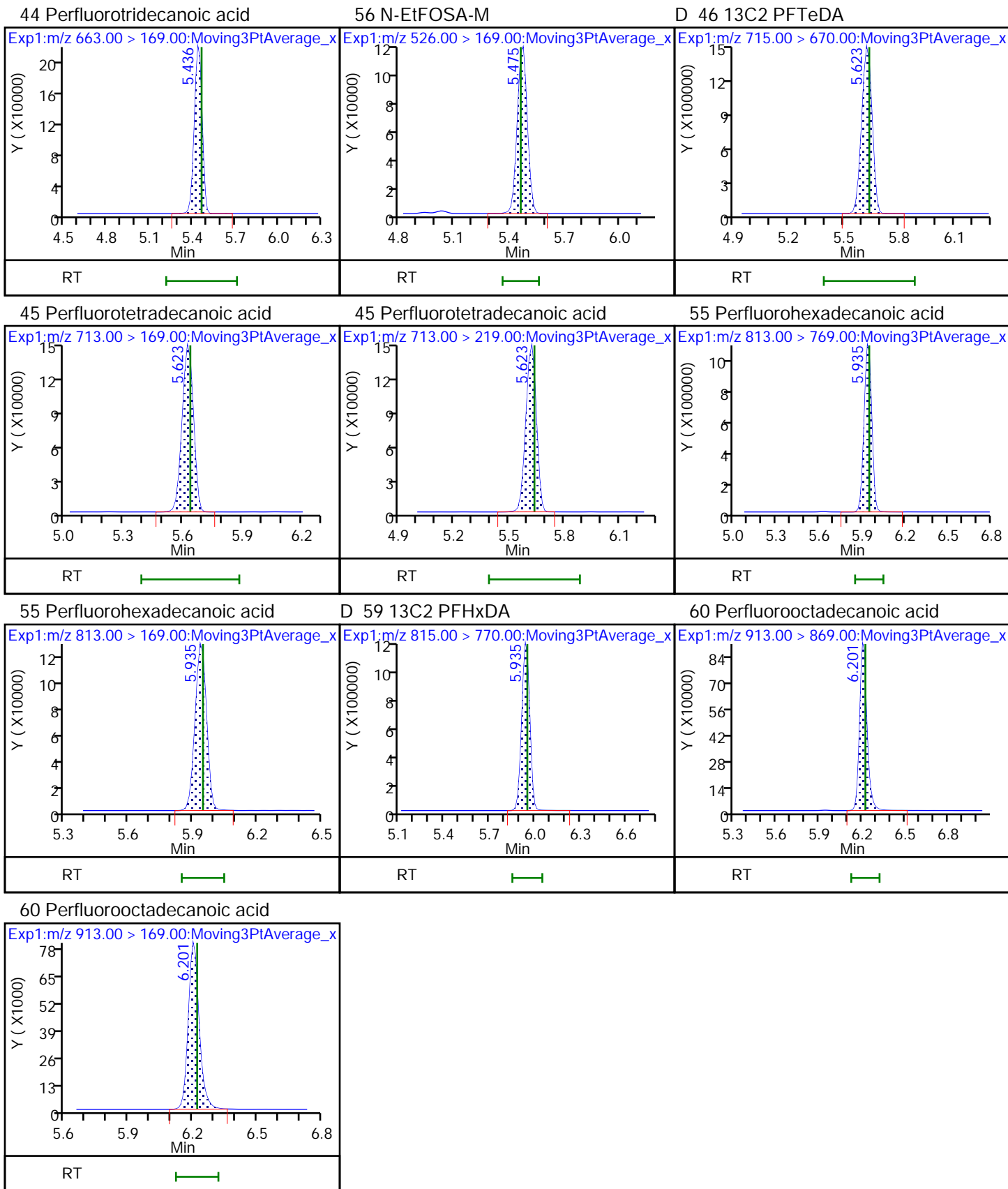
57 11CIFOS

D 43 13C2 PFDoA

42 Perfluorododecanoic acid







FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCSD 140-54178/3-B
 Matrix: Air Lab File ID: 066.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: None Date Extracted: 09/24/2021 09:41
 Sample wt/vol: 1 (Sample) Date Analyzed: 10/07/2021 06:08
 Con. Extract Vol.: 360 (mL) Dilution Factor: 1
 Injection Volume: 1 (uL) GC Column: GeminiC18 3x100 ID: 3 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54568 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.01818		0.00160	0.00140

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	93		25-150

Eurofins TestAmerica, Knoxville
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_066.d
 Lims ID: LCSD 140-54178/3-B
 Client ID:
 Sample Type: LCSD
 Inject. Date: 07-Oct-2021 06:08:10 ALS Bottle#: 12 Worklist Smp#: 66
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-066 lcsd 140-54178/3-b
 Misc. Info.: Plate: 11 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 17:50:07 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675
 First Level Reviewer: cochranj Date: 09-Oct-2021 17:46:33
 Ratio Calibration: None

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	2.796	2.801	-0.005	0.678	6981650	1.17	93.4	15022	
2 Perfluorobutanoic acid	212.90 > 169.00	2.796	2.812	-0.016	1.000	4051466	0.9235	92.3	265	
D 3 13C5 PFPeA	267.90 > 223.00	3.109	3.129	-0.020	0.754	6347133	1.29	103	14146	
4 Perfluoropentanoic acid	262.90 > 219.00	3.109	3.129	-0.020	1.000	4501664	0.8752	87.5	707	
D 6 13C3 PFBS	301.90 > 80.00	3.123	3.129	-0.006	0.757	2516208	0.7941	68.3	2564	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.123	3.143	-0.020	1.000	2069487	0.8491	Target=3.06	96.0	1994
	298.90 > 99.00	3.123	3.143	-0.020	1.000	737770		2.81(1.53-4.59)		753
D 8 M2-4:2 FTS	329.00 > 81.00	3.402	3.423	-0.021	0.825	732825	1.54	132	761	
7 4:2 FTS	327.00 > 307.00	3.402	3.423	-0.021	1.000	1262360	0.8045	86.1	8513	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.430	3.453	-0.023	1.099	1558601	0.8377	Target=3.47	89.3	1457
	349.00 > 99.00	3.430	3.453	-0.023	1.099	440307		3.54(1.73-5.20)		1830
D 9 13C2 PFHxA	315.00 > 270.00	3.430	3.469	-0.039	0.832	6123230	1.22	97.2	15832	
10 Perfluorohexanoic acid	313.00 > 269.00	3.430	3.469	-0.039	1.000	3848248	0.9165	Target=9.74	91.6	1127
	313.00 > 119.00	3.430	3.469	-0.039	1.000	313179		12.29(4.87-14.61)		510
D 12 13C3 HFPO-DA	287.00 > 169.00	3.527	3.561	-0.034	0.855	2990901	1.16	92.8	11539	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.527	3.561	-0.034	1.000	3013394	0.9090		90.9	4758	
D 17 18O2 PFHxS										
403.00 > 84.00	3.784	3.803	-0.019	0.918	1448333	0.7553		63.9	13428	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.784	3.803	-0.019	1.000	1402863	0.8426	Target=2.96	92.6	2472	M
399.00 > 99.00	3.784	3.803	-0.019	1.000	407436		3.44(1.48-4.44)		1910	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.784	3.815	-0.031	0.918	6231324	1.24		99.2	21511	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.784	3.815	-0.031	1.000	4972265	0.9435	Target=3.35	94.4	1611	
363.00 > 169.00	3.784	3.815	-0.031	1.000	1519115		3.27(1.67-5.02)		9447	
68 DONA										
377.00 > 251.00	3.809	3.840	-0.031	0.863	7251420	1.73	Target=1.49	184	25277	
377.00 > 85.00	3.809	3.840	-0.031	0.863	3903649		1.86(0.74-2.23)		15691	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.112	4.143	-0.031	0.932	1301326	1.01	Target=3.73	107	5980	
449.00 > 99.00	4.112	4.143	-0.031	0.932	334083		3.90(1.87-5.61)		2486	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.112	4.143	-0.031	0.997	665968	1.37		115	3167	
19 6:2 FTS										
427.00 > 407.00	4.112	4.143	-0.031	1.000	964215	0.8539		90.1	3459	
D 21 13C4 PFOA										
417.00 > 372.00	4.124	4.155	-0.031	1.000	5753985	1.27		101	20815	
* 22 13C2 PFOA										
415.00 > 370.00	4.124	4.155	-0.031		5642554	1.25			22309	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.124	4.155	-0.031	1.000	4561360	0.8928	Target=2.40	89.3	2091	
413.00 > 169.00	4.124	4.155	-0.031	1.000	1801295		2.53(1.20-3.61)		3462	
D 25 13C4 PFOS										
503.00 > 80.00	4.414	4.447	-0.032	1.070	1541691	0.5836		48.8	3476	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.414	4.447	-0.032	1.000	1230313	0.8671	Target=3.83	93.4	1425	M
499.00 > 99.00	4.414	4.447	-0.032	1.000	266771		4.61(1.91-5.74)		857	M
D 27 13C5 PFNA										
468.00 > 423.00	4.439	4.470	-0.031	1.076	6898614	1.19		95.6	22097	
26 Perfluorononanoic acid										
463.00 > 419.00	4.439	4.470	-0.031	1.000	4222573	0.9162	Target=3.68	91.6	3238	
463.00 > 169.00	4.439	4.470	-0.031	1.000	959095		4.40(1.84-5.52)		3169	
63 9CIFOS										
531.00 > 351.00	4.565	4.596	-0.031	1.107	2775710	0.9323		100	6397	
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.701	4.722	-0.021	1.065	927351	0.6897	Target=3.97	71.8	2471	
549.00 > 99.00	4.701	4.722	-0.021	1.065	235178		3.94(1.99-5.96)		1066	
D 34 13C8 FOSA										
506.00 > 78.00	4.713	4.736	-0.023	1.143	4569502	1.18		94.3	5050	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.713	4.736	-0.023	1.000	4569502	0.8603		86.0	5431	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 32 13C2 PFDA										
515.00 > 470.00	4.727	4.749	-0.022	1.146	6828831	1.17		93.4	25324	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.727	4.749	-0.022	1.000	4797941	0.9235	Target=10.11	92.4	2287	
513.00 > 169.00	4.727	4.749	-0.022	1.000	399158		12.02(5.06-15.17)		641	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.727	4.763	-0.036	1.146	772102	1.30		109	3207	
31 8:2 FTS										
527.00 > 507.00	4.740	4.763	-0.023	1.003	995696	0.8657		90.4	9312	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.859	4.896	-0.037	1.178	951351	1.19		95.1	1855	
36 NMeFOSAA										
570.00 > 419.00	4.872	4.896	-0.024	1.003	614654	0.8773		87.7	1123	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.968	4.993	-0.025	1.126	526417	0.4262	Target=3.80	44.2	1156	
599.00 > 99.00	4.968	4.993	-0.025	1.126	147382		3.57(1.90-5.70)		1202	
D 39 13C2 PFUnA										
565.00 > 520.00	4.983	5.022	-0.039	1.208	6142345	1.10		88.0	20895	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.983	5.022	-0.039	1.000	4409879	0.8862	Target=7.45	88.6	5242	
563.00 > 169.00	4.983	5.022	-0.039	1.000	507293		8.69(3.78-11.33)		2029	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.997	5.036	-0.039	1.212	864550	1.12		89.9	4605	
40 NEtFOSA										
584.00 > 419.00	4.997	5.036	-0.039	1.000	547205	0.8333		83.3	1206	M
57 11CIFOS										
631.00 > 451.00	5.082	5.119	-0.037	1.151	1308997	0.5460		58.0	5162	
D 43 13C2 PFDoA										
615.00 > 570.00	5.214	5.251	-0.037	1.264	5873088	0.9860		78.9	16080	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.214	5.251	-0.037	1.000	4509333	0.9185	Target=5.33	91.9	3129	
613.00 > 169.00	5.214	5.251	-0.037	1.000	582917		7.74(2.66-7.99)		2169	
50 10:2 FTS										
627.00 > 607.00	5.240	5.266	-0.026	1.109	1077832	0.7526		78.1	8878	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.269	5.281	-0.012	1.278	673666	1.39		111	354	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.284	5.295	-0.011	1.281	524398	1.04		83.0	39.1	
49 N-MeFOSE-M										
616.00 > 59.00	5.284	5.295	-0.011	1.003	601016	0.9628		96.3	757	
61 NMeFOSA										
512.00 > 169.00	5.284	5.295	-0.011	1.000	401167	0.9133		91.3	595	
54 PFDoS										
699.00 > 80.00	5.413	5.436	-0.023	1.226	71721	0.0563	Target=4.32	5.8	189	
699.00 > 99.00	5.413	5.436	-0.023	1.226	18144		3.95(2.19-6.58)		88.9	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.439	5.436	0.003	1.319	646955	1.25		100	597	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
62 N-EtFOSE-M										
630.00 > 59.00	5.439	5.449	-0.010	1.000	595486	0.9109		91.1	937	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.452	5.449	0.003	1.322	439978	1.03		82.7	958	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.426	5.462	-0.036	1.041	3167884	0.7614	Target=5.66	76.1	2515	
663.00 > 169.00	5.426	5.462	-0.036	1.041	503349		6.29(2.83-8.48)		2935	
56 N-EtFOSA-M										
526.00 > 169.00	5.452	5.462	-0.010	1.000	378587	0.9206		92.1	465	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.611	5.637	-0.026	1.361	2371976	0.4340		34.7	6961	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.611	5.637	-0.026	1.000	219118	0.9149	Target=1.07	91.5	1608	
713.00 > 219.00	5.611	5.637	-0.026	1.000	206451		1.06(0.53-1.60)		2064	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.925	5.948	-0.023	1.000	109873	0.8135	Target=7.50	81.3	229	
813.00 > 169.00	5.925	5.948	-0.023	1.000	14097		7.79(3.75-11.26)		144	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.925	5.948	-0.023	1.437	153647	0.0388		3.1	1929	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.184	6.221	-0.037	1.044	71043	0.6368	Target=9.98	63.7	432	
913.00 > 169.00	6.184	6.221	-0.037	1.044	5825		12.20(5.14-15.41)		100	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_066.d

Injection Date: 07-Oct-2021 06:08:10

Instrument ID: LCA

Lims ID: LCSD 140-54178/3-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 12

Worklist Smp#: 66

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

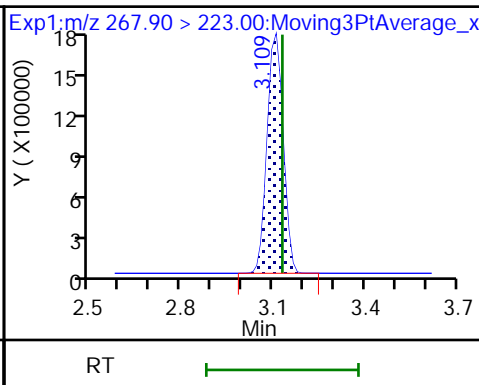
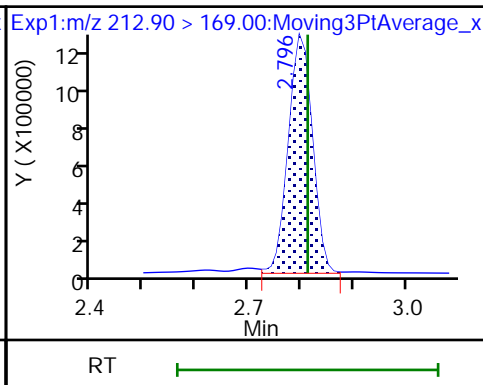
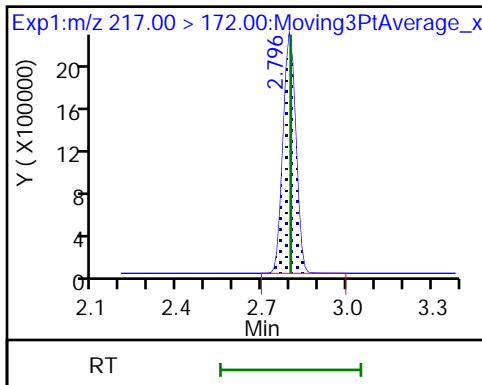
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Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

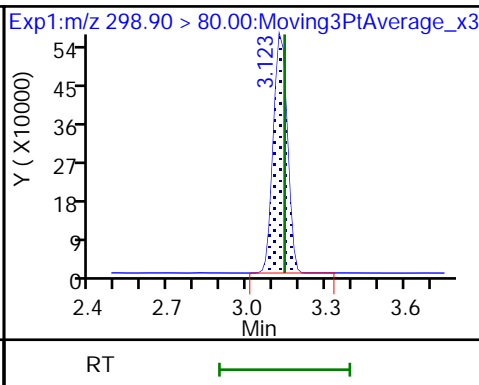
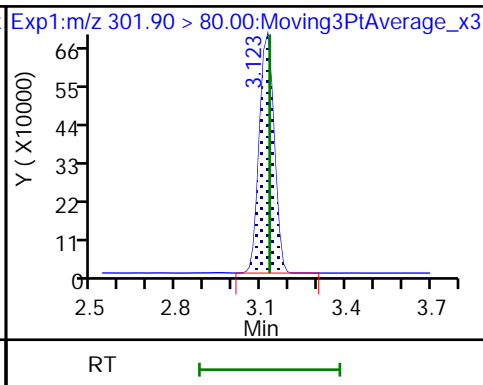
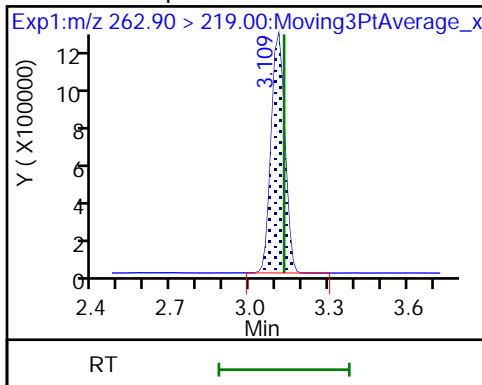
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

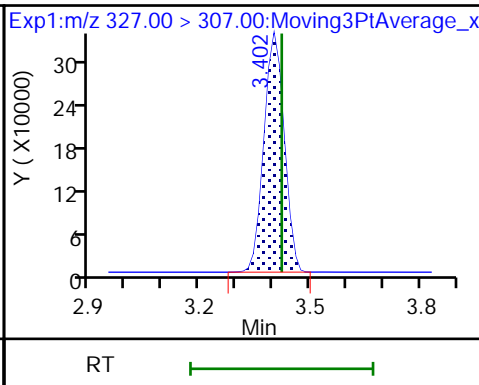
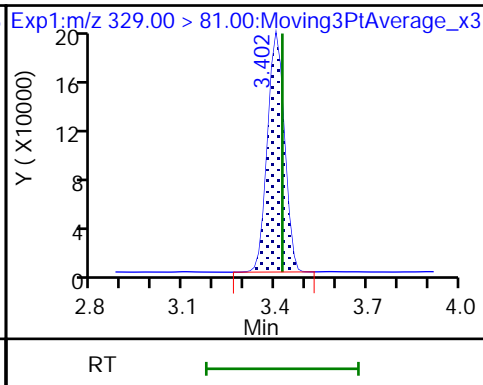
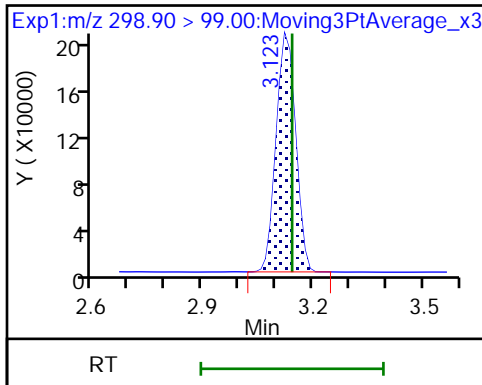
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

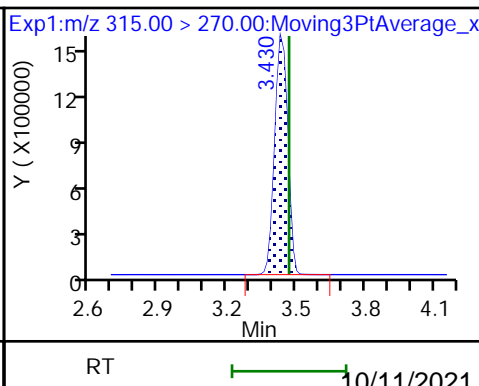
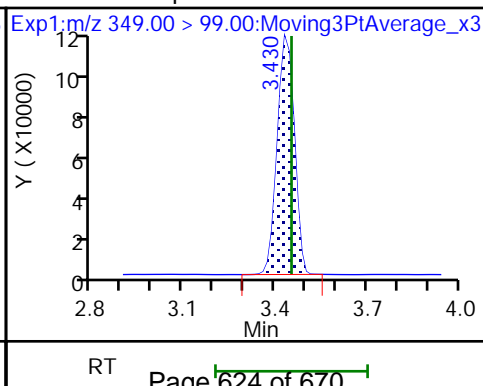
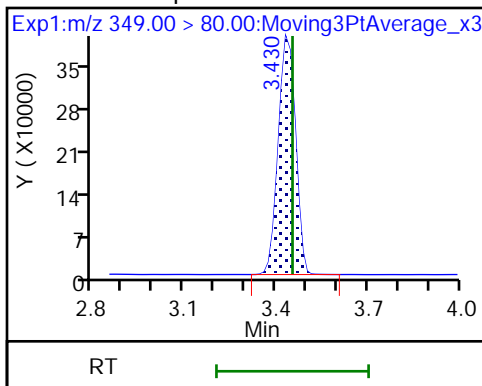
7 4:2 FTS

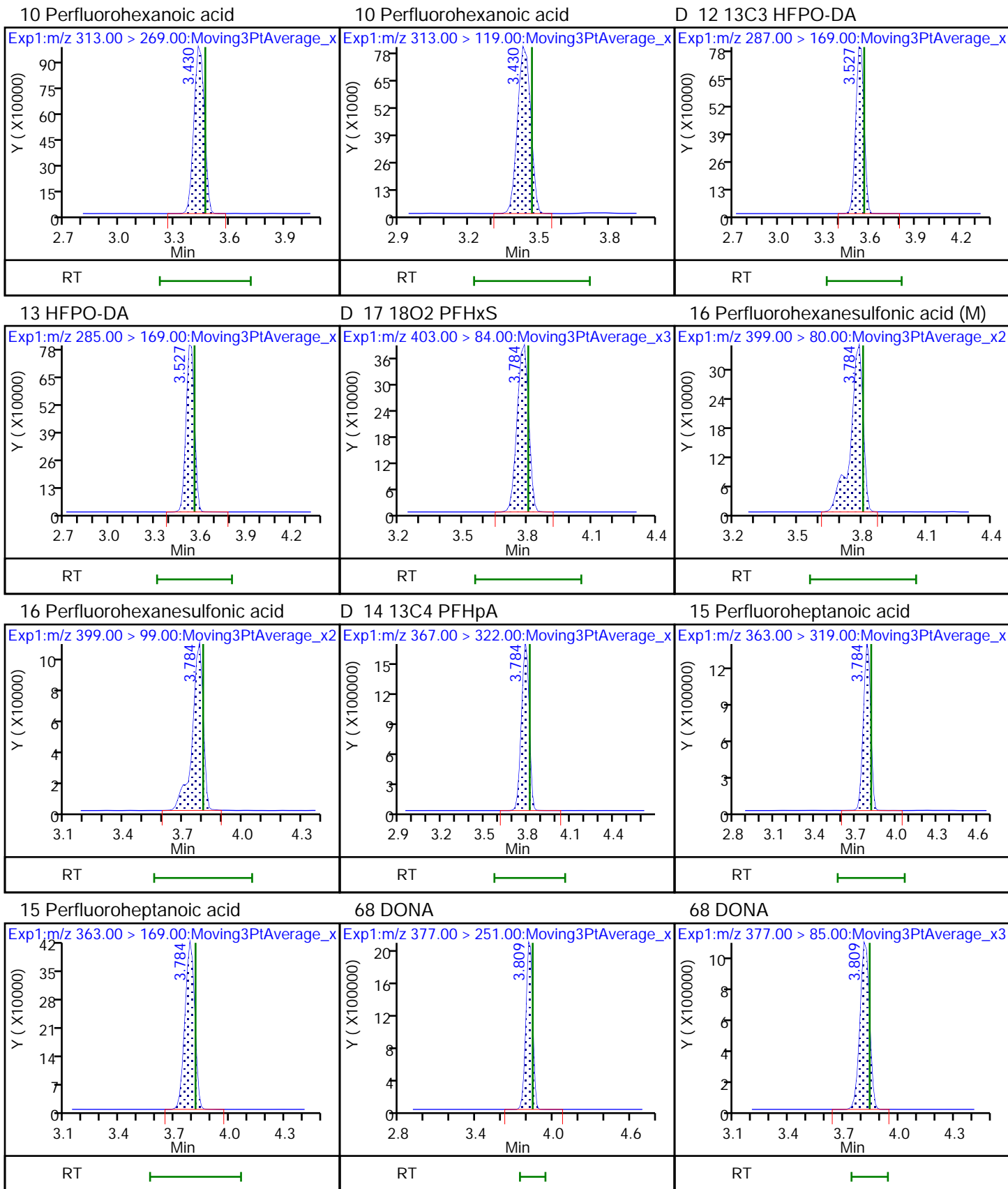


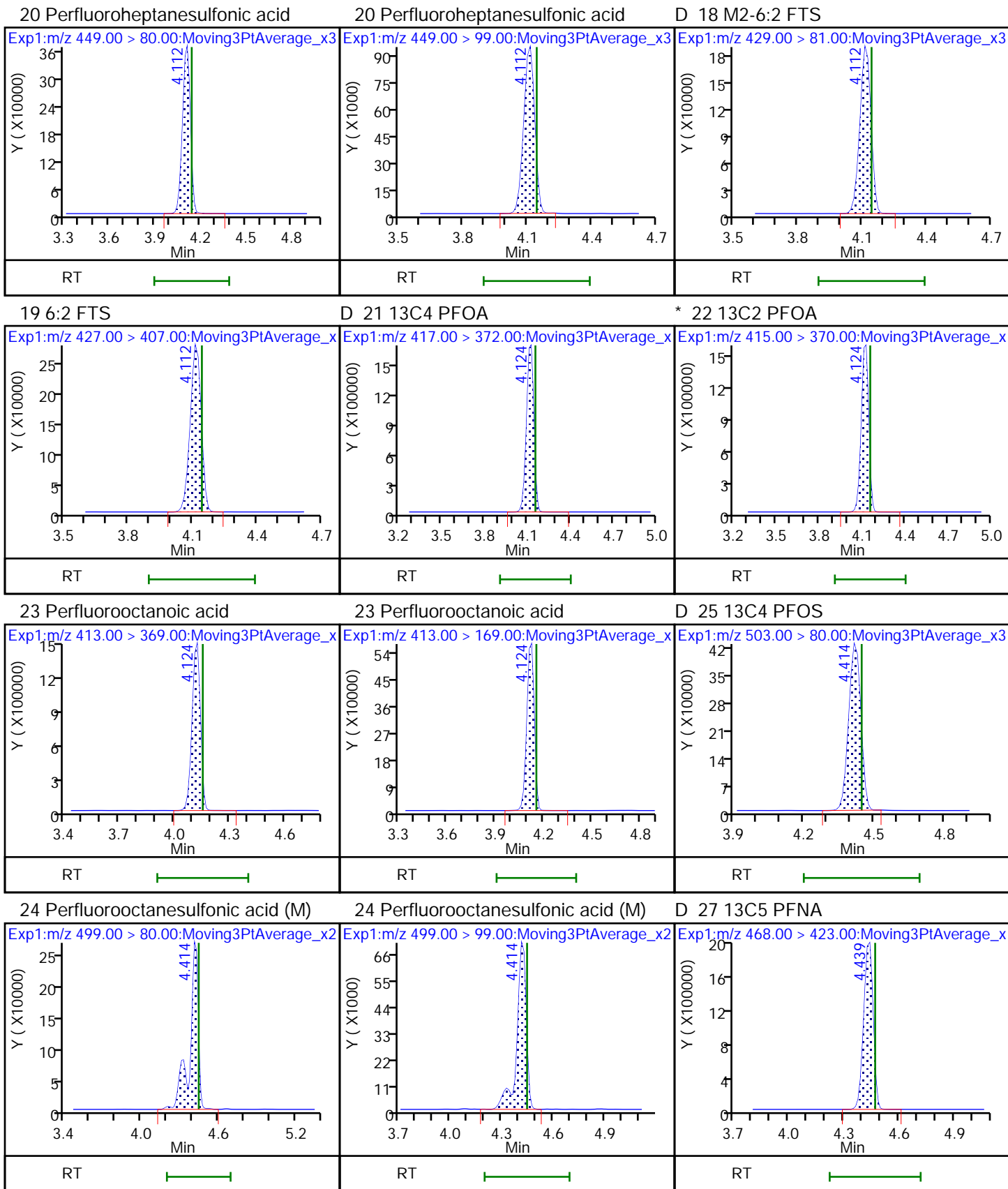
11 Perfluoropentanesulfonic acid

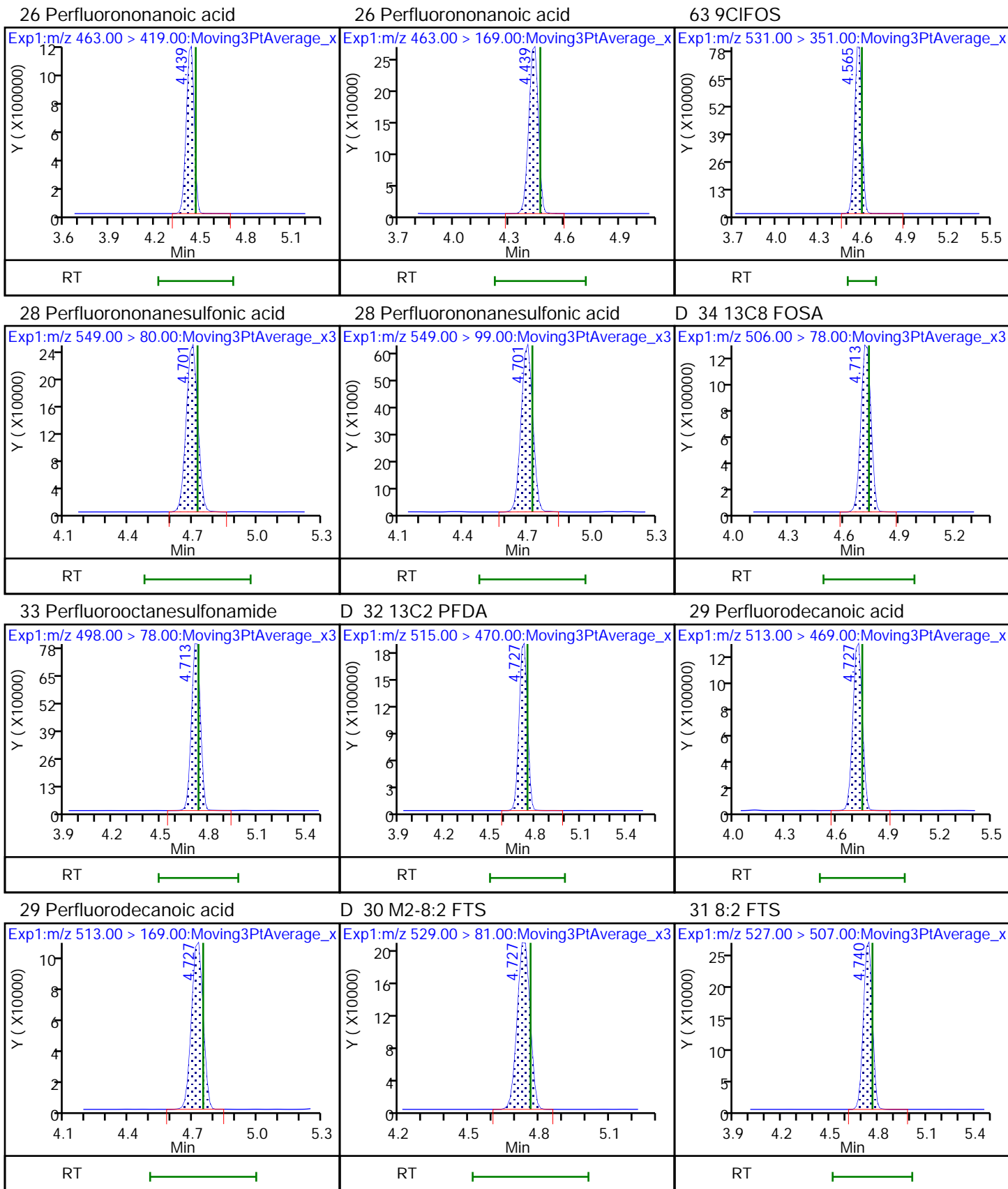
11 Perfluoropentanesulfonic acid

D 9 13C2 PFXa





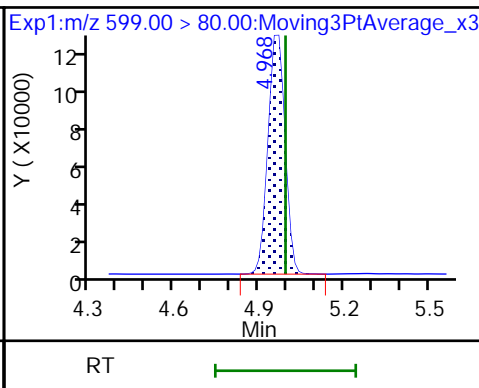
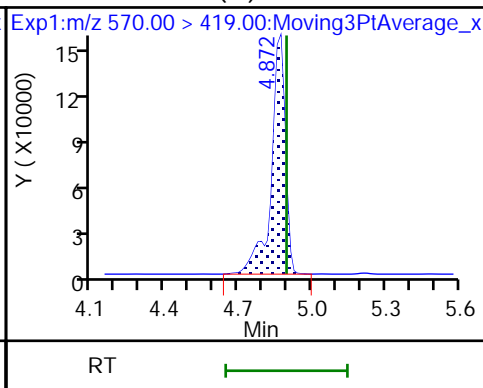
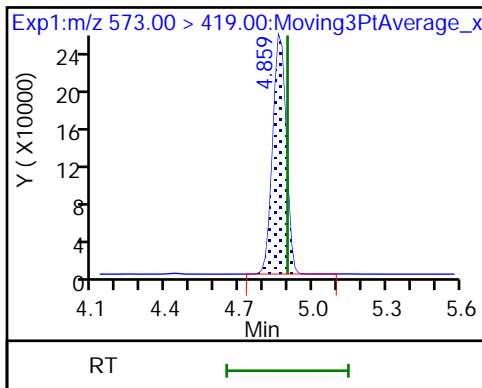




D 35 d3-NMeFOSAA

36 NMeFOSAA (M)

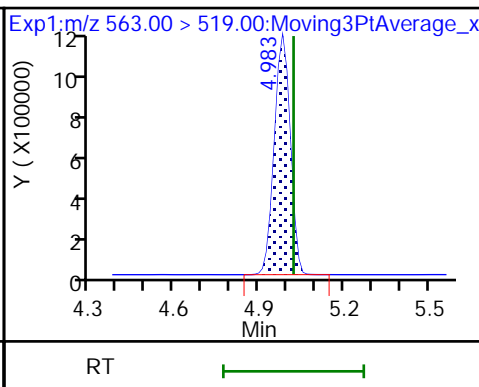
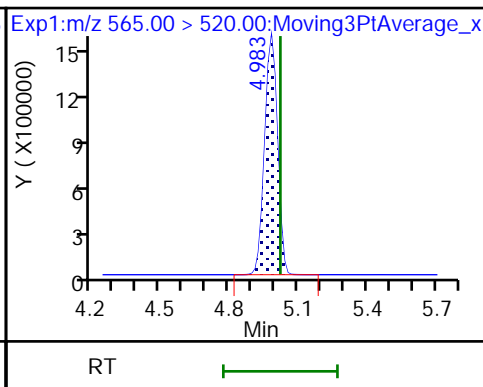
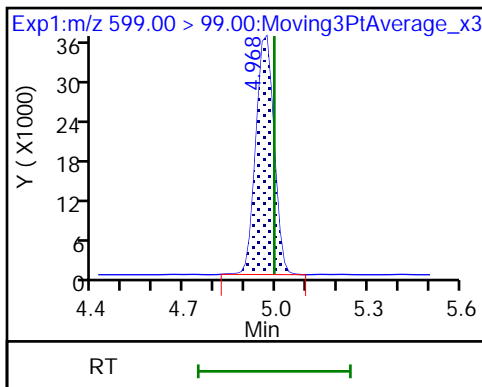
37 Perfluorodecanesulfonic acid



37 Perfluorodecanesulfonic acid

D 39 13C2 PFUoA

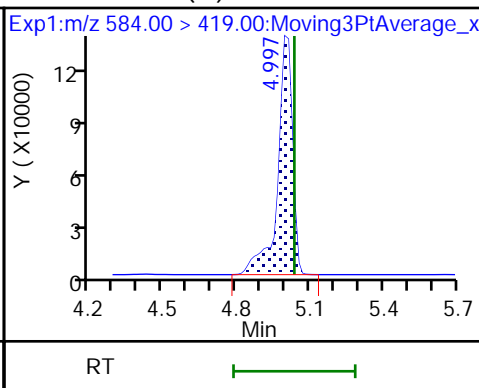
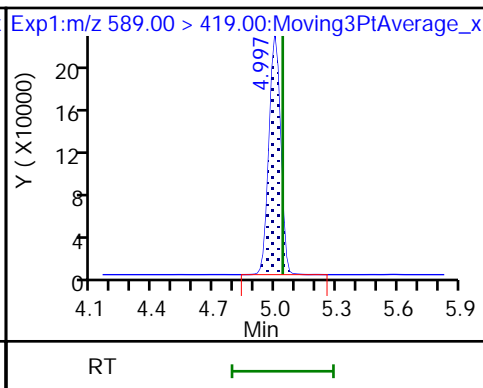
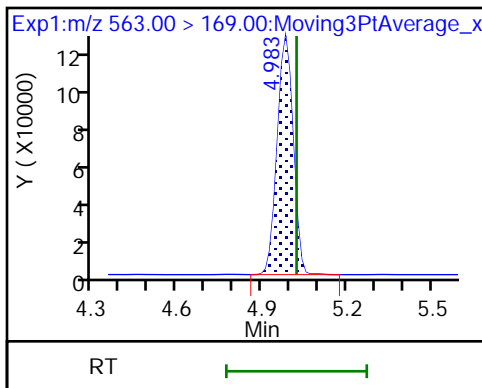
38 Perfluoroundecanoic acid



38 Perfluoroundecanoic acid

D 41 d5-NEtFOSAA

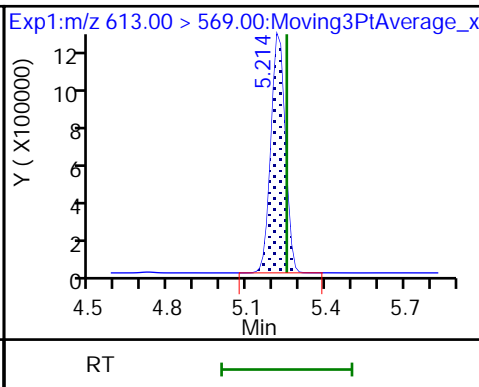
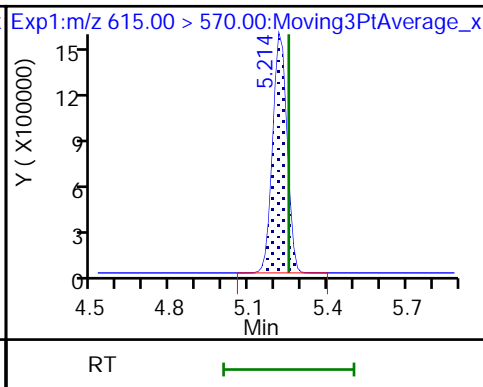
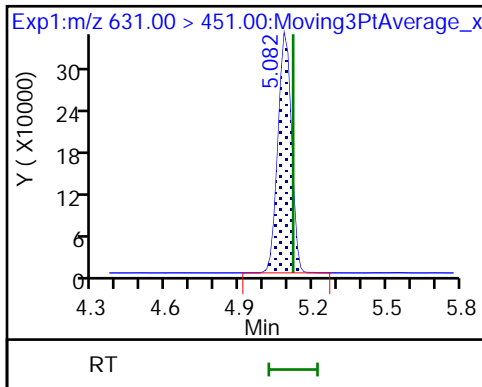
40 NEtFOSA (M)

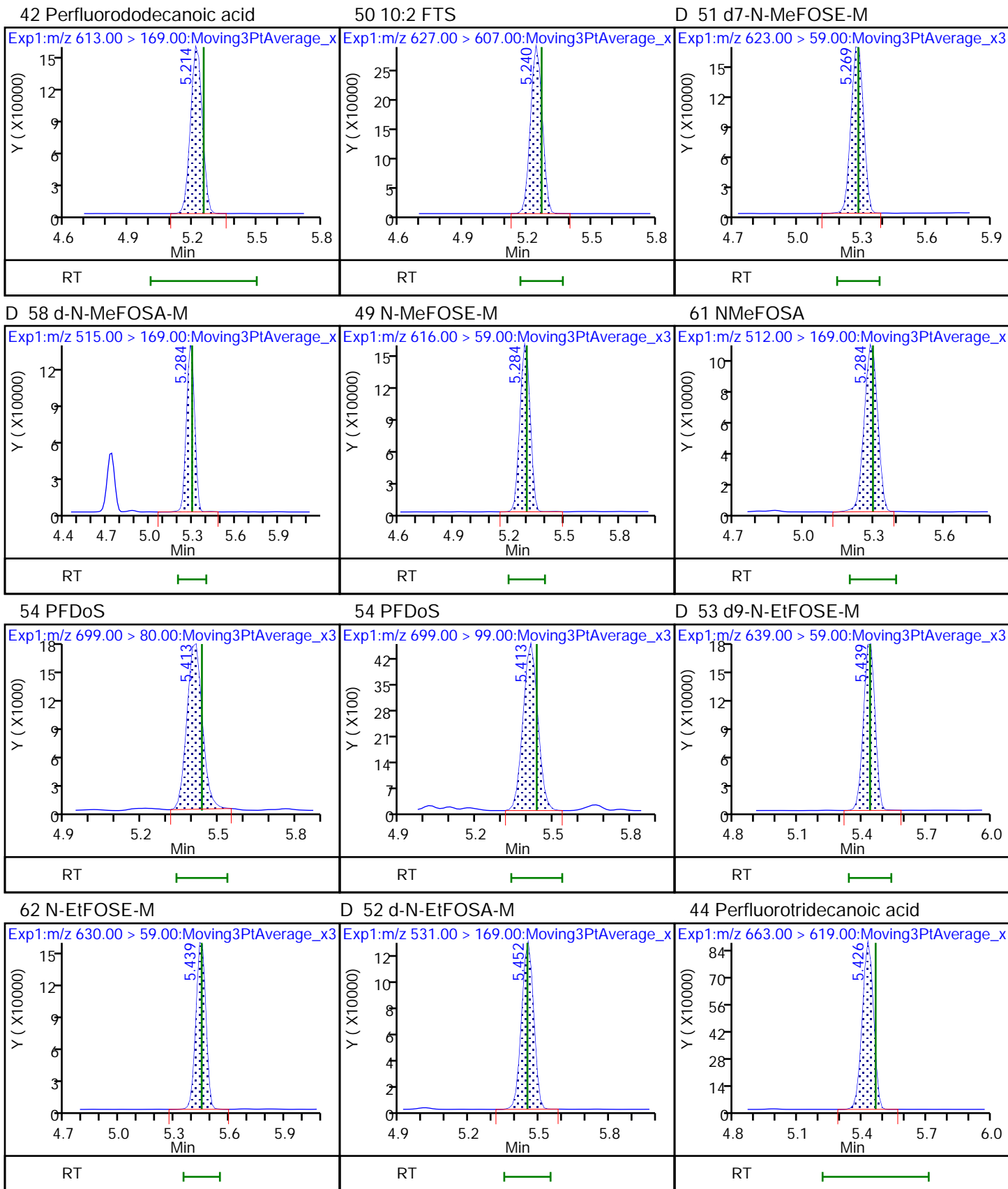


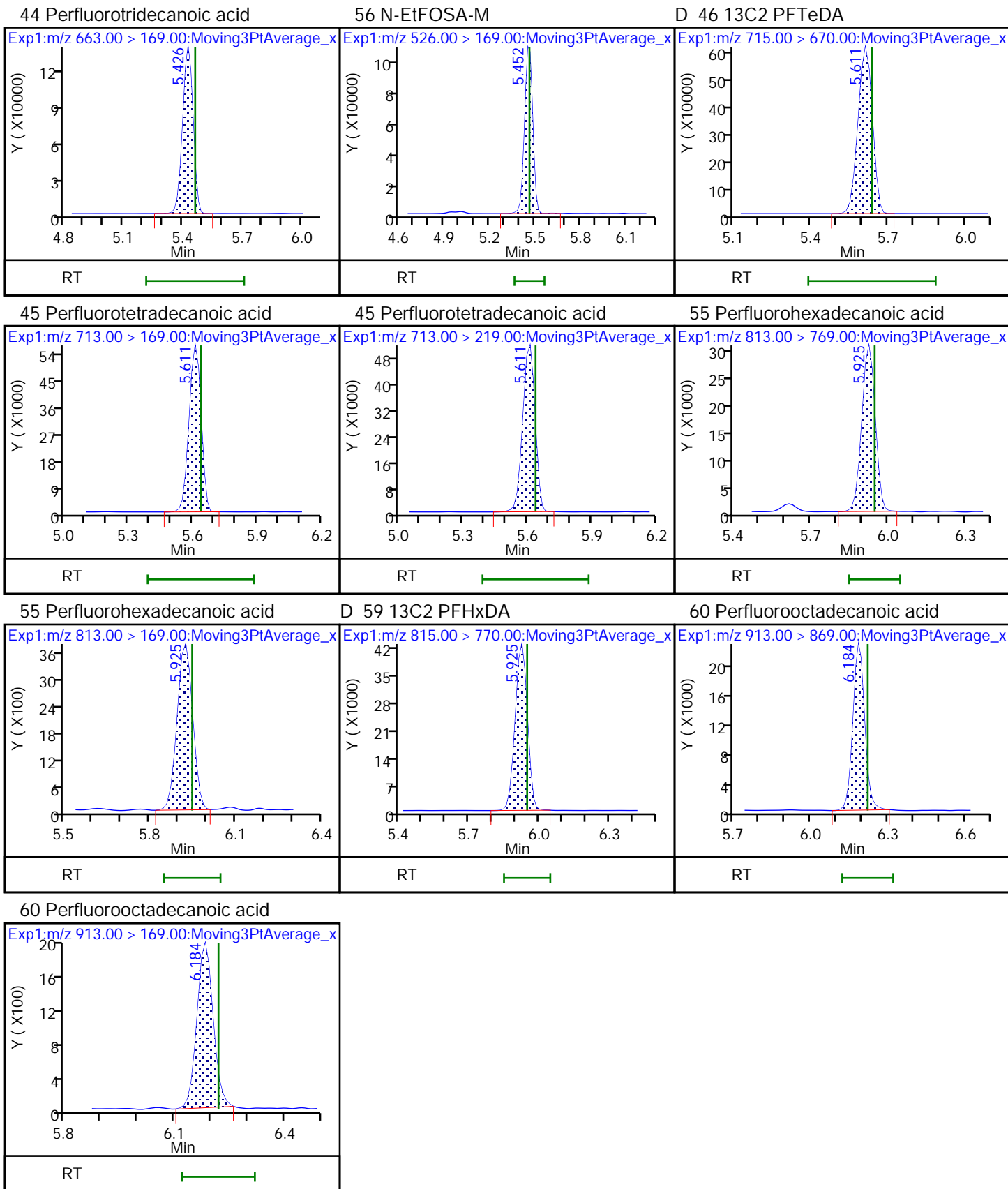
57 11CIFOS

D 43 13C2 PFDoA

42 Perfluorododecanoic acid







FORM I
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCSD 140-54348/3-B
 Matrix: Air Lab File ID: _041.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: None Date Extracted: 09/30/2021 08:55
 Sample wt/vol: 1(Sample) Date Analyzed: 10/07/2021 02:27
 Con. Extract Vol.: 10(mL) Dilution Factor: 1
 Injection Volume: 1(uL) GC Column: GeminiC18 3x100 ID: 3(mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 54568 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.009247		0.000500	0.0000825

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	96		25-150

Eurofins TestAmerica, Knoxville
 Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_041.d
 Lims ID: LCSD 140-54348/3-B
 Client ID:
 Sample Type: LCSD
 Inject. Date: 07-Oct-2021 02:27:53 ALS Bottle#: 41 Worklist Smp#: 41
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 140-0020973-041 lcsd 140-54348/3-b
 Misc. Info.: Plate: 10 Rack: 1
 Operator ID: Cochran, Bobby Instrument ID: LCA
 Method: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b\PFC_LCA.m
 Limit Group: LC - PFC- ICAL
 Last Update: 09-Oct-2021 17:25:19 Calib Date: 05-Oct-2021 22:53:45
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20211005-20953.b_012.d
 Column 1 : Det: EXP1
 Process Host: CTX1675
 First Level Reviewer: cochranj Date: 09-Oct-2021 17:23:13
 Ratio Calibration: None

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	2.801	2.801	0.0	0.678	7584070	1.20	96.0	19287	
2 Perfluorobutanoic acid	212.90 > 169.00	2.801	2.812	-0.011	1.000	4555972	0.9560	95.6	1307	
D 3 13C5 PFPeA	267.90 > 223.00	3.116	3.129	-0.013	0.754	6472226	1.25	99.8	19745	
4 Perfluoropentanoic acid	262.90 > 219.00	3.116	3.129	-0.013	1.000	4779937	0.9113	91.1	1454	
D 6 13C3 PFBS	301.90 > 80.00	3.129	3.129	0.0	0.758	3811940	1.14	97.9	29208	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.129	3.143	-0.014	1.000	3149939	0.8531	Target=3.06	96.5	14562
	298.90 > 99.00	3.129	3.143	-0.014	1.000	1152699		2.73(1.53-4.59)		5138
D 8 M2-4:2 FTS	329.00 > 81.00	3.409	3.423	-0.014	0.825	663868	1.32	113	1164	
7 4:2 FTS	327.00 > 307.00	3.409	3.423	-0.014	1.000	1183579	0.8326	89.1	10062	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.437	3.453	-0.016	1.098	2588237	0.9188	Target=3.47	98.0	14126
	349.00 > 99.00	3.437	3.453	-0.016	1.098	747417		3.46(1.73-5.20)		7435
D 9 13C2 PFHxA	315.00 > 270.00	3.437	3.469	-0.032	0.832	6563217	1.23	98.6	12862	
10 Perfluorohexanoic acid	313.00 > 269.00	3.453	3.469	-0.016	1.005	4028090	0.8950	Target=9.74	89.5	2373
	313.00 > 119.00	3.437	3.469	-0.032	1.000	336307		11.98(4.87-14.61)		1241
D 12 13C3 HFPO-DA	287.00 > 169.00	3.548	3.561	-0.013	0.859	3281424	1.20	96.3	12145	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 HFPO-DA										
285.00 > 169.00	3.548	3.561	-0.013	1.000	3362938	0.9247		92.5	3123	
D 17 18O2 PFHxS										
403.00 > 84.00	3.790	3.803	-0.013	0.918	2378299	1.17		99.2	11814	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.790	3.803	-0.013	1.000	2379403	0.8705	Target=2.96	95.7	8601	M
399.00 > 99.00	3.790	3.803	-0.013	1.000	670456		3.55(1.48-4.44)		3534	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.790	3.815	-0.025	0.918	6529222	1.23		98.3	15589	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.790	3.815	-0.025	1.000	5349090	0.9688	Target=3.35	96.9	4645	
363.00 > 169.00	3.790	3.815	-0.025	1.000	1617327		3.31(1.67-5.02)		7925	
68 DONA										
377.00 > 251.00	3.827	3.840	-0.013	0.863	7704177	0.8727	Target=1.49	92.6	20178	
377.00 > 85.00	3.827	3.840	-0.013	0.863	4312080		1.79(0.74-2.23)		26960	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.119	4.143	-0.024	0.929	2402776	0.8874	Target=3.73	93.2	7411	
449.00 > 99.00	4.119	4.143	-0.024	0.929	626955		3.83(1.87-5.61)		3223	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.131	4.143	-0.012	1.000	668704	1.30		110	3839	
19 6:2 FTS										
427.00 > 407.00	4.131	4.143	-0.012	1.000	1020118	0.9000		94.9	6011	
D 21 13C4 PFOA										
417.00 > 372.00	4.131	4.155	-0.024	1.000	5803228	1.21		96.6	25399	
* 22 13C2 PFOA										
415.00 > 370.00	4.131	4.155	-0.024		5964477	1.25			22434	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.131	4.155	-0.024	1.000	5171655	1.00	Target=2.40	100	2624	
413.00 > 169.00	4.131	4.155	-0.024	1.000	1878628		2.75(1.20-3.61)		3303	
D 25 13C4 PFOS										
503.00 > 80.00	4.434	4.447	-0.012	1.074	3252600	1.16		97.5	10453	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.434	4.447	-0.012	1.000	2755241	0.9204	Target=3.83	99.2	584	M
499.00 > 99.00	4.434	4.447	-0.012	1.000	606717		4.54(1.91-5.74)		2730	M
D 27 13C5 PFNA										
468.00 > 423.00	4.447	4.470	-0.023	1.077	7697050	1.26		101	35858	
26 Perfluorononanoic acid										
463.00 > 419.00	4.447	4.470	-0.023	1.000	4895103	0.9522	Target=3.68	95.2	5897	
463.00 > 169.00	4.447	4.470	-0.023	1.000	1102407		4.44(1.84-5.52)		2971	
63 9CIFOS										
531.00 > 351.00	4.584	4.596	-0.012	1.110	5558179	0.8848		94.9	9163	
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.709	4.722	-0.013	1.062	2501927	0.8820	Target=3.97	91.9	6423	
549.00 > 99.00	4.709	4.722	-0.013	1.062	620077		4.03(1.99-5.96)		2780	
D 34 13C8 FOSA										
506.00 > 78.00	4.722	4.736	-0.014	1.143	5058666	1.23		98.7	5134	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.736	4.736	0.0	1.003	3582737	0.9217		92.2	5493	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 32 13C2 PFDA										
515.00 > 470.00	4.736	4.749	-0.013	1.146	7277716	1.18		94.2	30372	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.736	4.749	-0.013	1.000	5363062	0.9692	Target=10.11	96.9	2728	
513.00 > 169.00	4.736	4.749	-0.013	1.000	461693		11.62(5.06-15.17)		562	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.763	-0.014	1.150	779565	1.24		104	4026	
31 8:2 FTS										
527.00 > 507.00	4.749	4.763	-0.014	1.000	1032786	0.8894		92.8	5810	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.869	4.896	-0.027	1.179	1071794	1.27		101	1447	
36 NMeFOSAA										
570.00 > 419.00	4.882	4.896	-0.014	1.003	728149	0.9229		92.3	965	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.979	4.993	-0.014	1.123	2430023	0.9325	Target=3.80	96.7	6976	
599.00 > 99.00	4.965	4.993	-0.028	1.120	640830		3.79(1.90-5.70)		3738	
D 39 13C2 PFUnA										
565.00 > 520.00	4.993	5.022	-0.029	1.209	6968210	1.18		94.4	29274	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.993	5.022	-0.029	1.000	5459152	0.9675	Target=7.45	96.7	7645	
563.00 > 169.00	4.993	5.022	-0.029	1.000	594572		9.18(3.78-11.33)		3137	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.007	5.036	-0.029	1.212	1014433	1.25		99.7	4781	
40 NEtFOSA										
584.00 > 419.00	5.007	5.036	-0.029	1.000	686945	0.8916		89.2	974	M
57 11CIFOS										
631.00 > 451.00	5.093	5.119	-0.026	1.148	4666340	0.9225		97.9	9787	
D 43 13C2 PFDaA										
615.00 > 570.00	5.224	5.251	-0.027	1.265	8214492	1.30		104	19072	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.224	5.251	-0.027	1.000	5984288	0.8707	Target=5.33	87.1	3683	
613.00 > 169.00	5.224	5.251	-0.027	1.000	862831		6.94(2.66-7.99)		3118	
50 10:2 FTS										
627.00 > 607.00	5.251	5.266	-0.015	1.106	1408249	0.9740		101	12056	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.281	5.281	0.0	1.278	678401	1.32		106	472	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.295	5.295	0.0	1.282	616958	1.15		92.4	36.9	
49 N-MeFOSE-M										
616.00 > 59.00	5.295	5.295	0.0	1.003	597431	0.9503		95.0	851	
61 NMeFOSA										
512.00 > 169.00	5.295	5.295	0.0	1.000	512621	0.99		99.2	710	
54 PFDoS										
699.00 > 80.00	5.423	5.436	-0.013	1.223	2468828	0.9182	Target=4.32	94.9	6519	
699.00 > 99.00	5.423	5.436	-0.013	1.223	591392		4.17(2.19-6.58)		2448	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.449	5.436	0.013	1.319	730407	1.34		107	766	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
62 N-EtFOSE-M										
630.00 > 59.00	5.449	5.449	0.0	1.000	699774	0.9483		94.8	1486	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.462	5.449	0.013	1.322	519068	1.15		92.4	620	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.436	5.462	-0.026	1.041	5507287	0.9478	Target=5.66	94.8	3824	
663.00 > 169.00	5.436	5.462	-0.026	1.041	846908		6.50(2.83-8.48)		4150	
56 N-EtFOSA-M										
526.00 > 169.00	5.462	5.462	0.0	1.000	479613	0.9885		98.9	528	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.623	5.637	-0.014	1.361	7185556	1.24		99.5	20704	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.623	5.637	-0.014	1.000	670115	0.9237	Target=1.07	92.4	3793	
713.00 > 219.00	5.623	5.637	-0.014	1.000	670129		1.00(0.53-1.60)		4157	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.935	5.948	-0.013	1.000	4064821	0.8972	Target=7.50	89.7	2936	
813.00 > 169.00	5.935	5.948	-0.013	1.000	510782		7.96(3.75-11.26)		2993	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.935	5.948	-0.013	1.437	5166943	1.23		98.6	6725	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.201	6.221	-0.020	1.045	3618471	0.9645	Target=9.98	96.4	2933	
913.00 > 169.00	6.201	6.221	-0.020	1.045	308682		11.72(5.14-15.41)		2015	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20211006-20973.b_041.d

Injection Date: 07-Oct-2021 02:27:53

Instrument ID: LCA

Lims ID: LCSD 140-54348/3-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 41

Worklist Smp#: 41

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

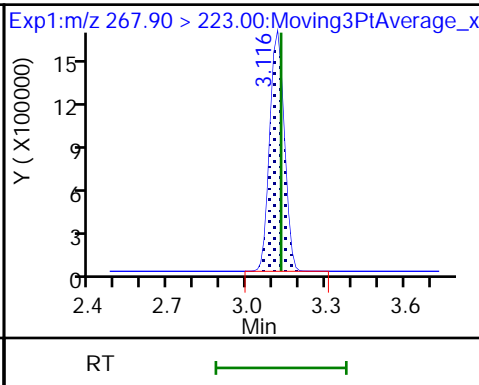
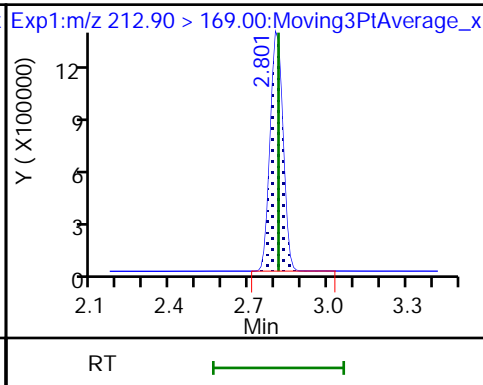
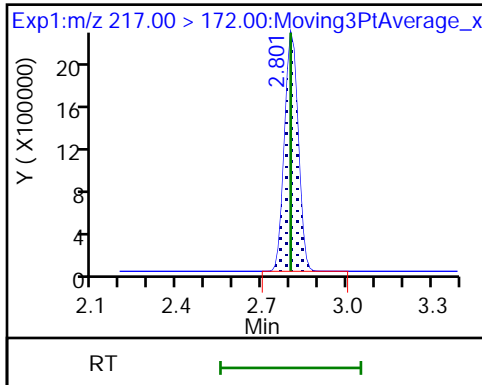
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Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

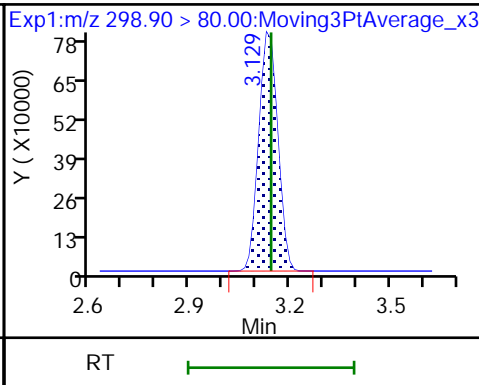
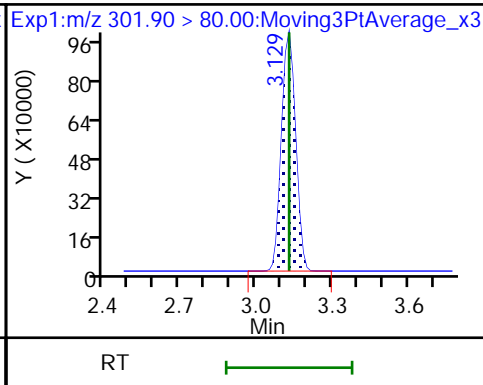
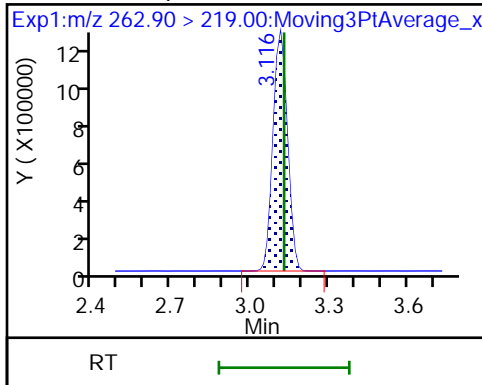
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

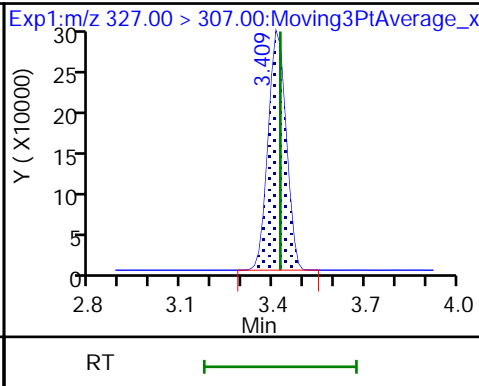
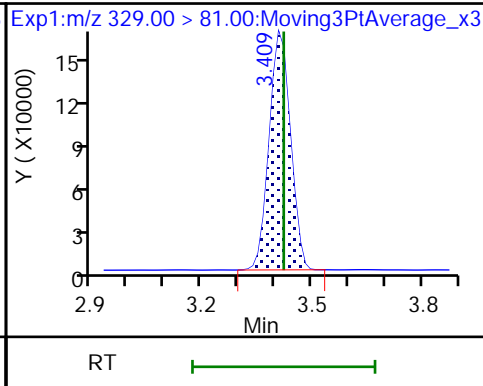
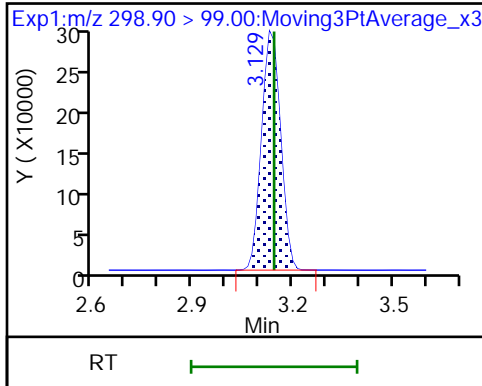
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

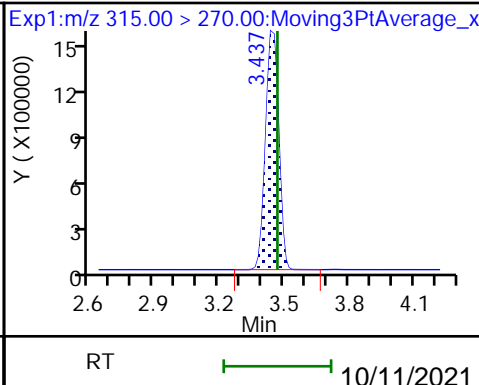
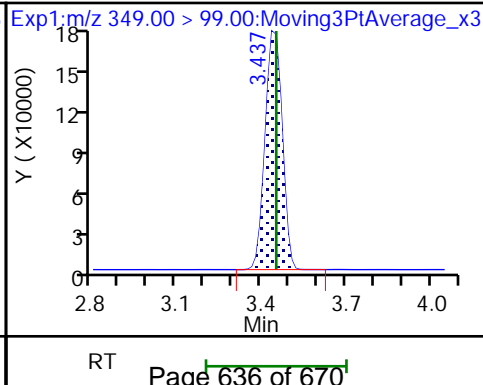
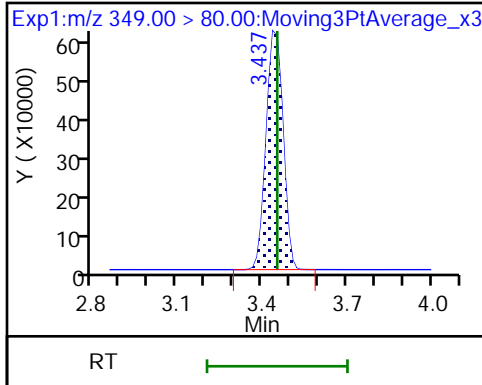
7 4:2 FTS

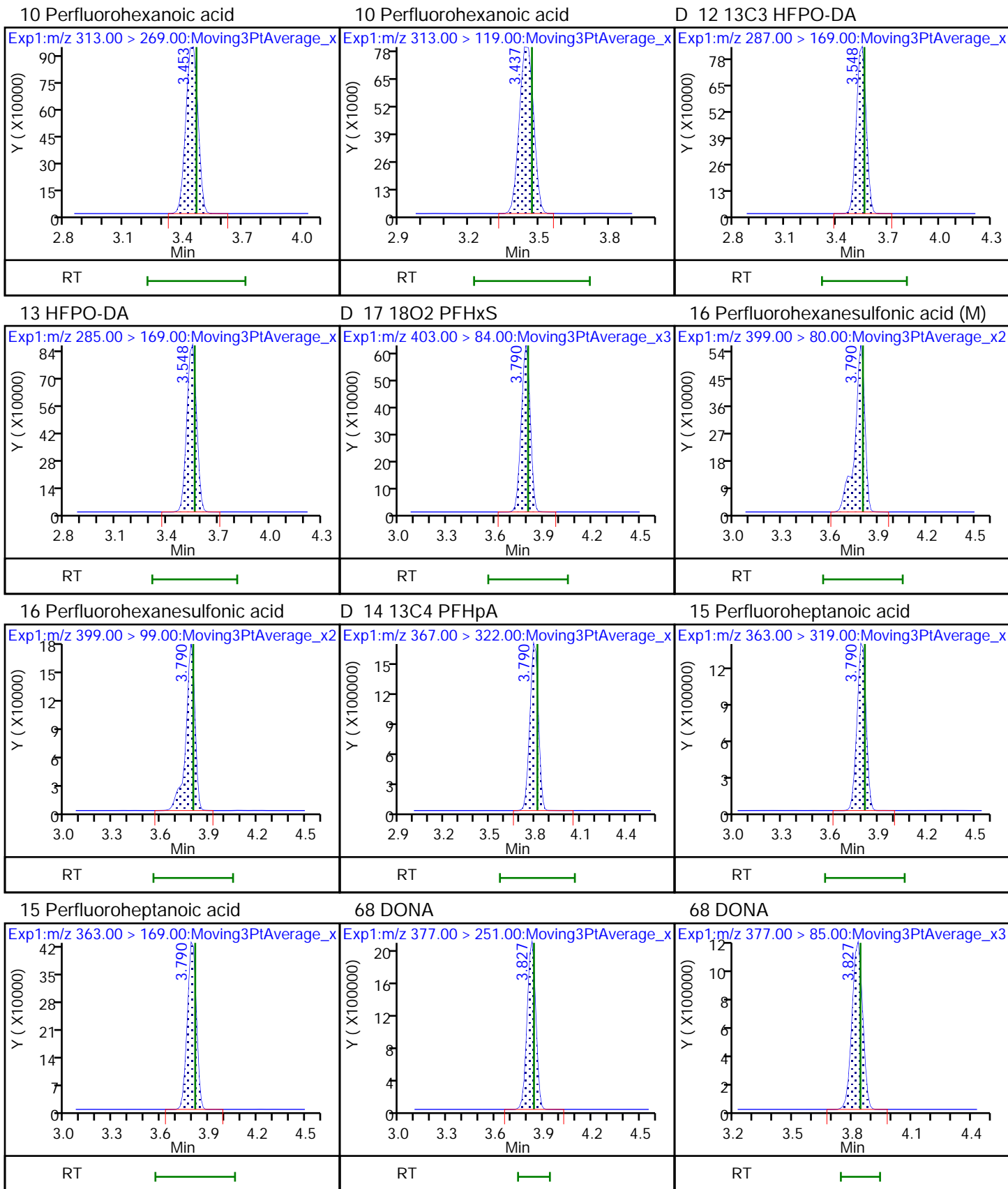


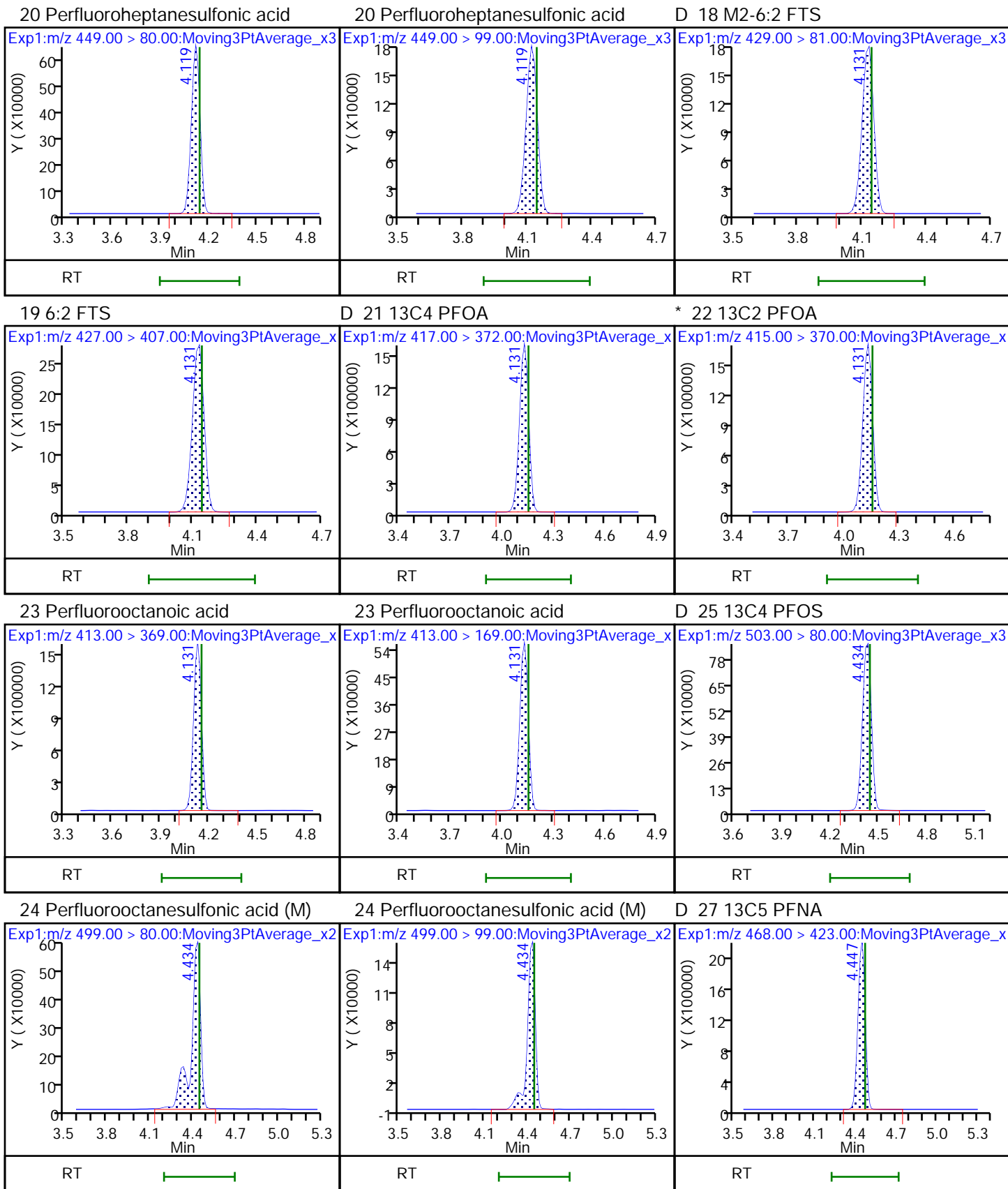
11 Perfluoropentanesulfonic acid

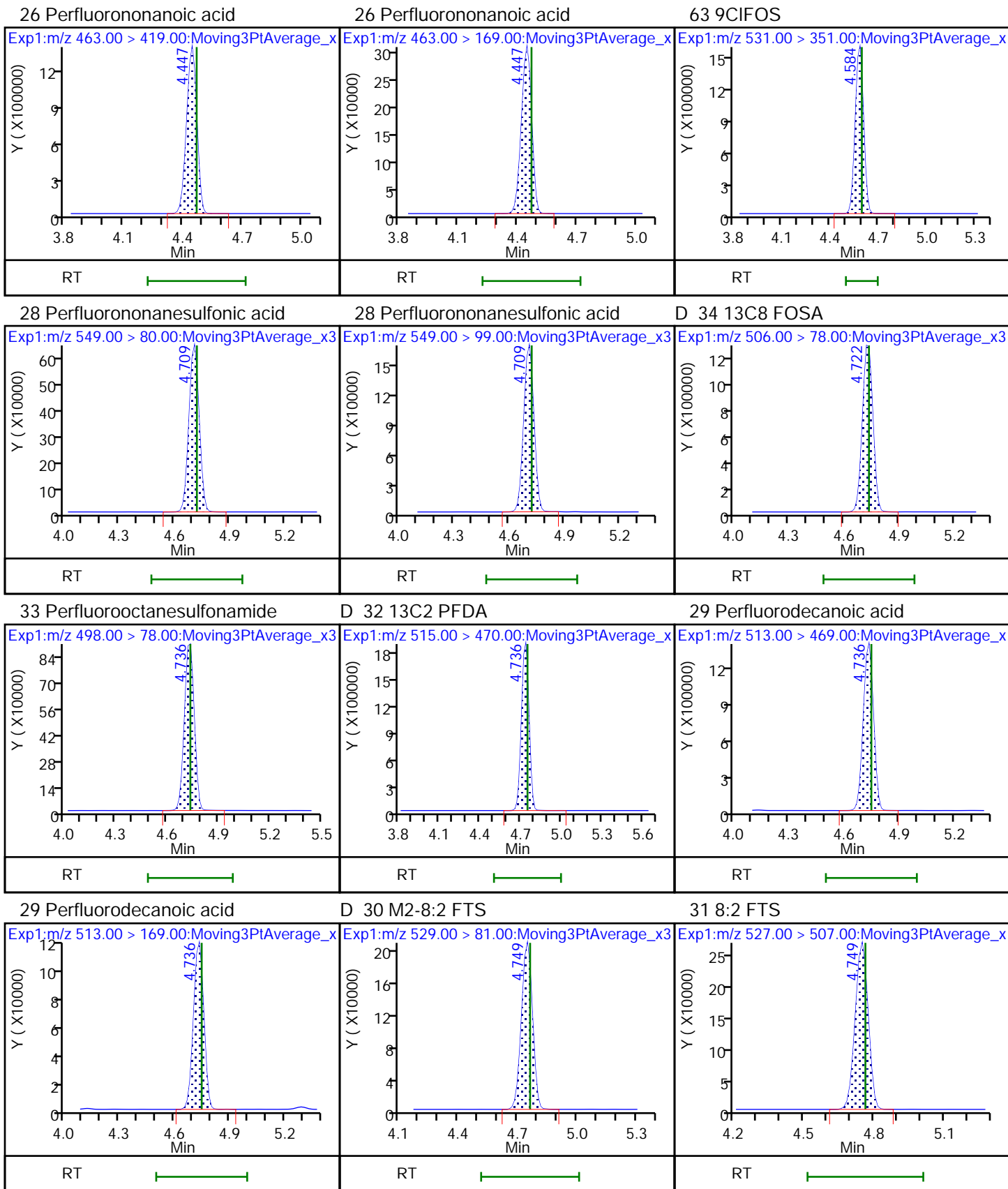
11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA





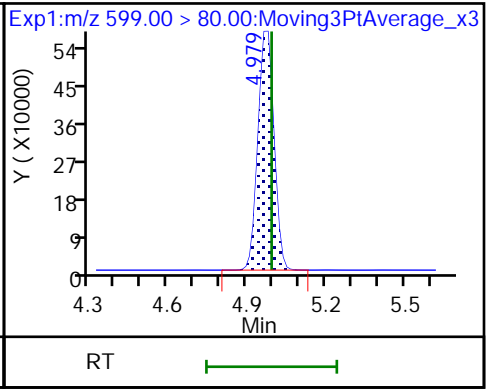
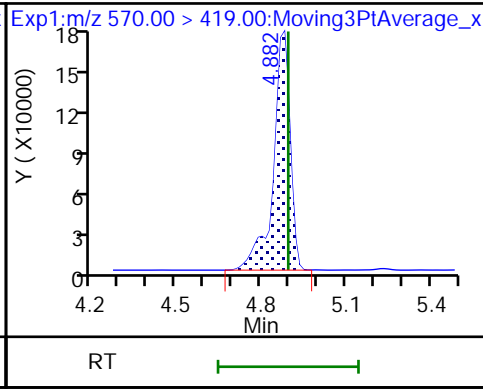
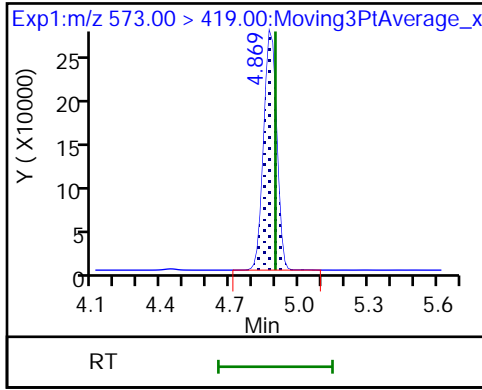




D 35 d3-NMeFOSAA

36 NMeFOSAA (M)

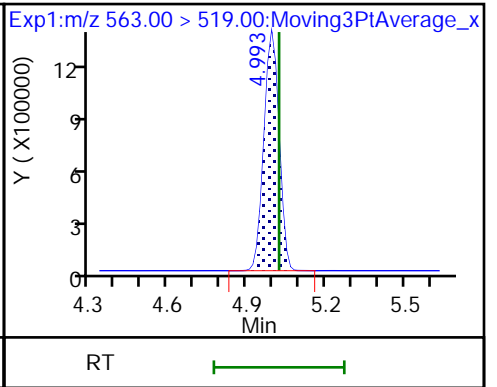
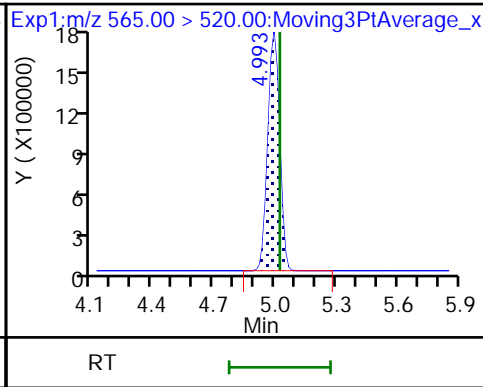
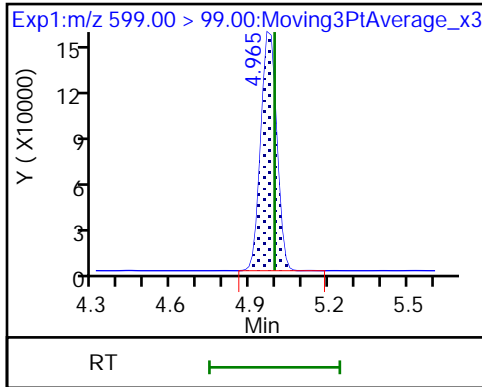
37 Perfluorodecanesulfonic acid



37 Perfluorodecanesulfonic acid

D 39 13C2 PFUoA

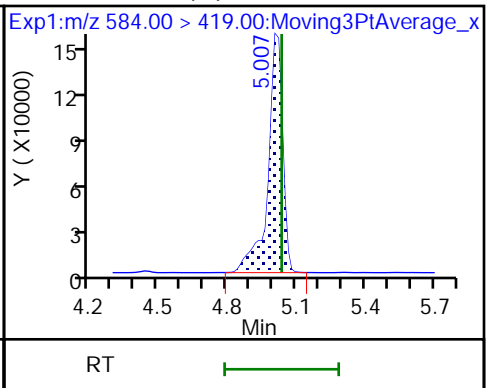
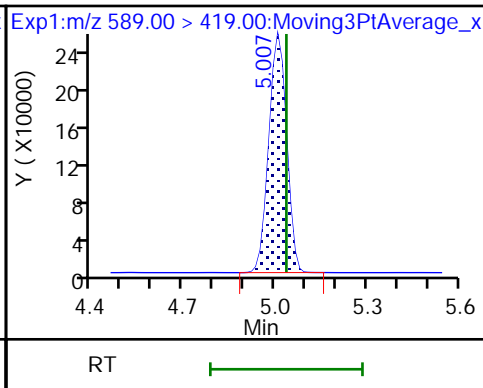
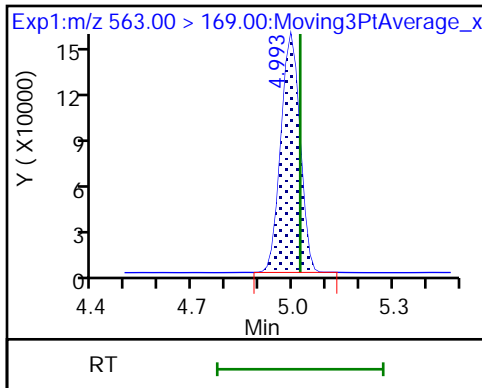
38 Perfluoroundecanoic acid



38 Perfluoroundecanoic acid

D 41 d5-NEtFOSAA

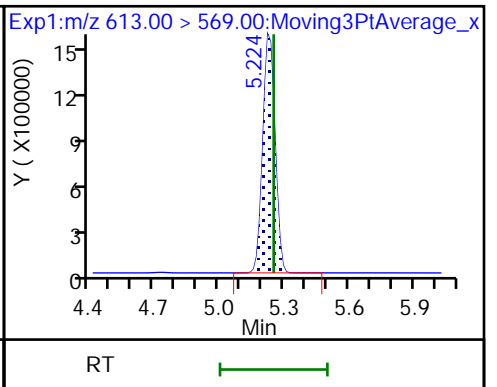
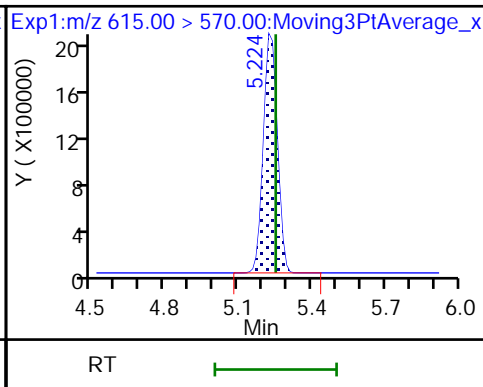
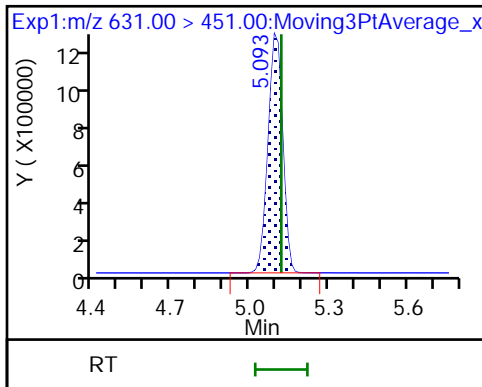
40 NEtFOSA (M)

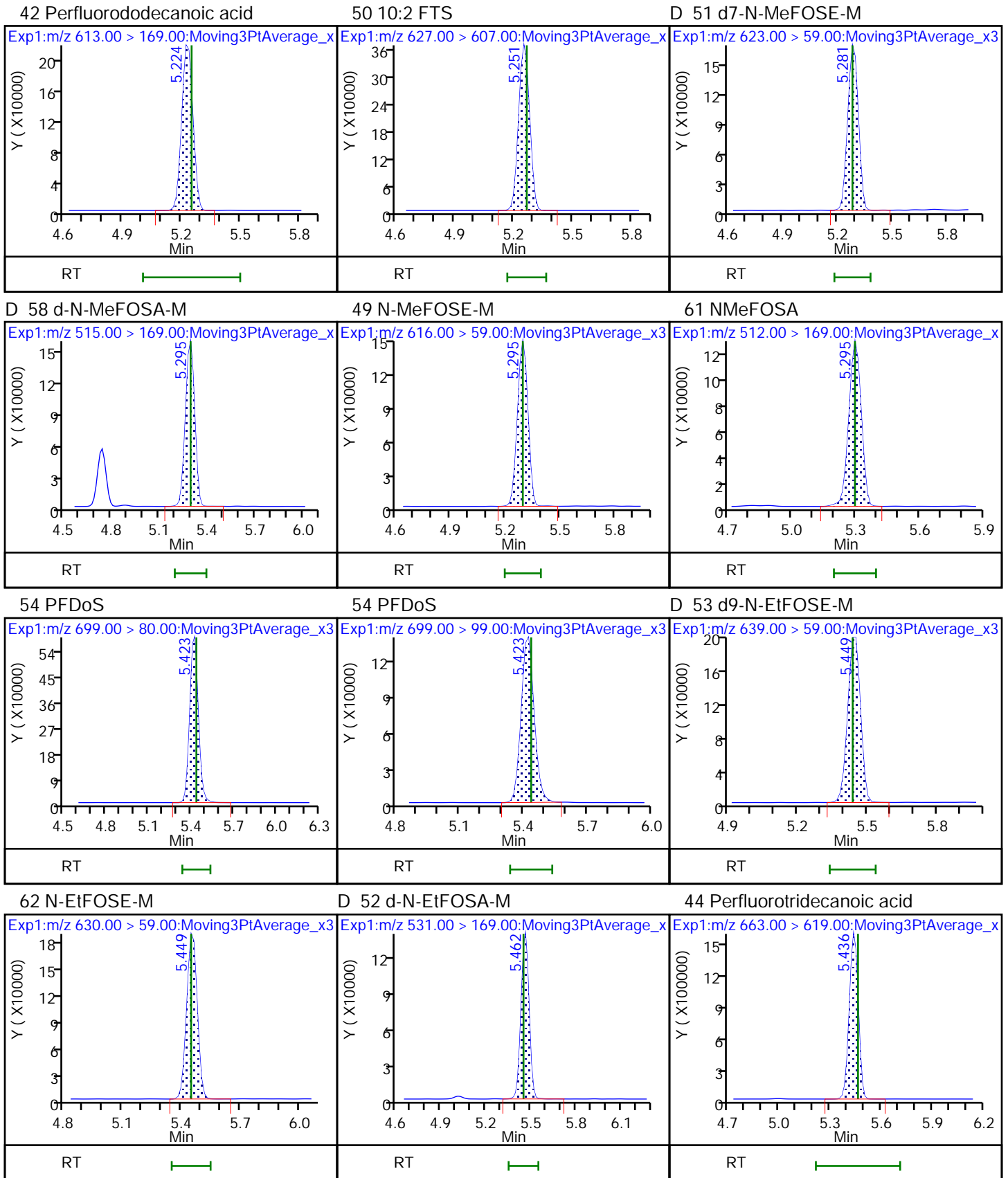


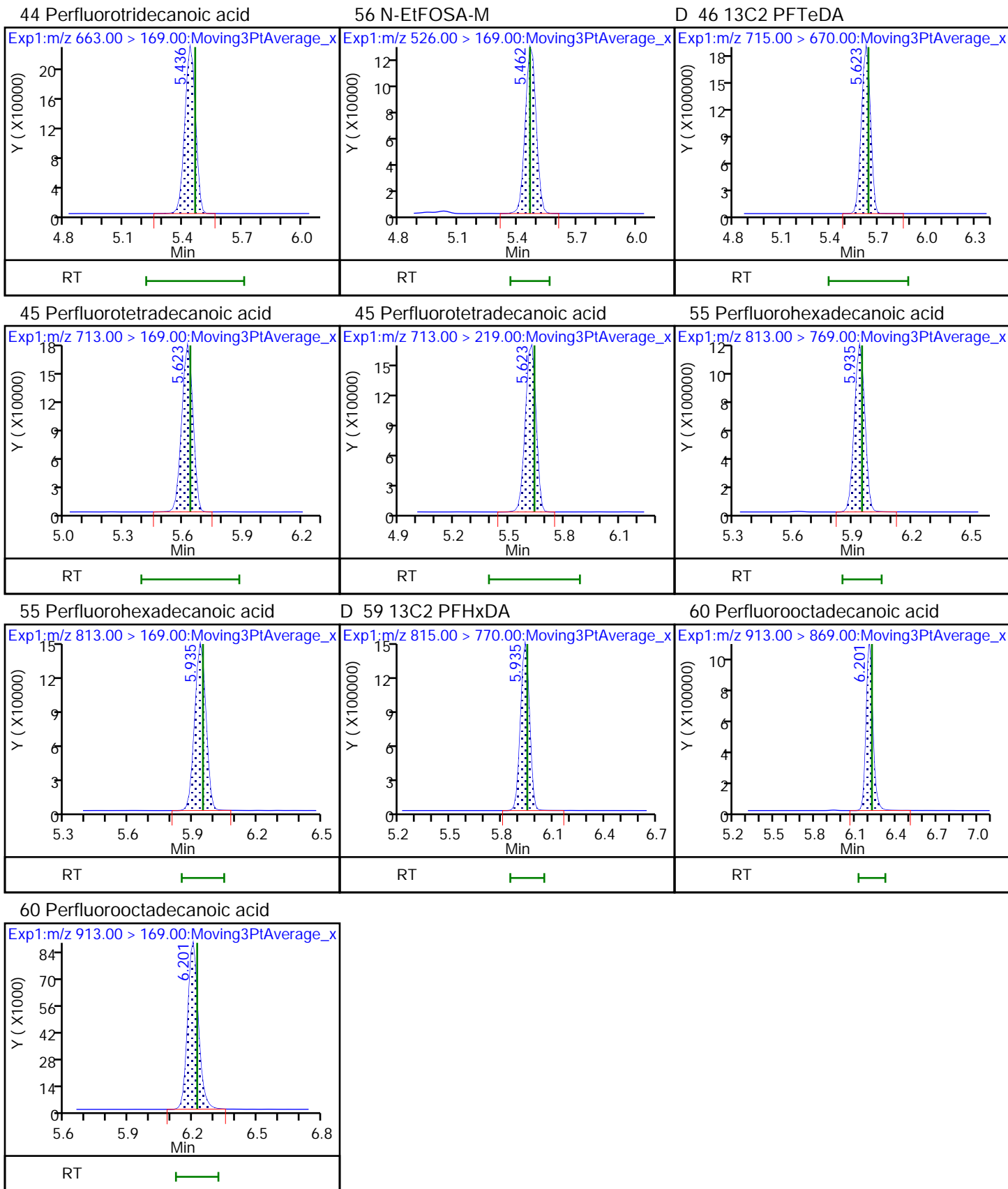
57 11CIFOS

D 43 13C2 PFDoA

42 Perfluorododecanoic acid







PFAS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1

SDG No.:

Batch Number: 54177 Batch Start Date: 09/24/21 09:38 Batch Analyst: Stout, David W

Batch Method: None Batch End Date: 09/27/21 15:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	CalcMsg	63xxMPFC_IDA 00029	63xxPFC3LSP 00004
MB 140-54177/1		None, Split, 537 (modified)		1 Sample	50 mL	CALC NOT SET TO RUN	0.5 mL	
LCS 140-54177/2		None, Split, 537 (modified)		1 Sample	50 mL	CALC NOT SET TO RUN	0.5 mL	1 mL
LCS 140-54177/3		None, Split, 537 (modified)		1 Sample	50 mL	CALC NOT SET TO RUN	0.5 mL	1 mL

Batch Notes	
Extraction End time	09:05
Extraction End Date	09/25/2021
Analyst ID - Extraction	DWS
Extraction Start time	13:05
Extraction Start Date	09/24/2021
Filter ID	418901
Hot Block ID	F
Methanol ID	5% NH4OH / MeOH 418754
Oven, Bath or Block Temperature 1	60 Degrees C
Analyst ID - Spike Analyst	DWS
Analyst ID - Spike Witness Analyst	MSP

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.

PFAS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1

SDG No.:

Batch Number: 54177 Batch Start Date: 09/24/21 09:38 Batch Analyst: Stout, David W

Batch Method: None Batch End Date: 09/27/21 15:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	CalcMsg	63xxMPFC_IDA 00029
140-24648-A-1	K-1975,1976 VEN CARBON BED INLET R1 OTM-45 FH	None, Split, Dilution, 537 (modified)	T	1 Sample	52 mL	CALC NOT SET TO RUN	0.5 mL
140-24648-A-5	K-1982,1983 VEN CARBON BED INLET R2 OTM-45 FH	None, Split, Dilution, 537 (modified)	T	1 Sample	51 mL	CALC NOT SET TO RUN	0.5 mL
140-24648-A-9	K-1989,1990 VEN CARBON BED INLET R3 OTM-45 FH	None, Split, Dilution, 537 (modified)	T	1 Sample	88 mL	CALC NOT SET TO RUN	0.5 mL

Batch Notes	
Extraction End time	09:05
Extraction End Date	09/25/2021
Analyst ID - Extraction	DWS
Extraction Start time	13:05
Extraction Start Date	09/24/2021
Filter ID	418901
Hot Block ID	F
Methanol ID	5% NH4OH / MeOH 418754
Oven, Bath or Block Temperature 1	60 Degrees C
Analyst ID - Spike Analyst	DWS
Analyst ID - Spike Witness Analyst	MSP

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.

PFAS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1

SDG No.:

Batch Number: 54178 Batch Start Date: 09/24/21 09:41 Batch Analyst: Stout, David W

Batch Method: None Batch End Date: 09/29/21 11:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	63xxMPFC_IDA 00029	63xxPF3LSP 00004
MB 140-54178/1		None, Split, 537 (modified)		1 Sample	360 mL	0.5 mL	
LCS 140-54178/2		None, Split, 537 (modified)		1 Sample	360 mL	0.5 mL	1 mL
LCS 140-54178/3		None, Split, 537 (modified)		1 Sample	360 mL	0.5 mL	1 mL
MB 140-54178/14		None, Split, 537 (modified)		1 Sample	360 mL	0.5 mL	

Batch Notes	
Analyt ID - Extraction	DWS
Extraction 1 End Time	09/26/2021 08:30
Extraction 1 Start Time	09/25/2021 09:05
Hot Block ID	F
Methanol ID	5% NH4OH / MeOH 418754
Oven, Bath or Block Temperature 1	60 Degrees C
PVDF Filter ID	423903
Extraction 2 End Time	09/29/2021 10:20
Extraction 2 Start Time	09/28/2021 14:30
Analyt ID - Spike Analyst	DWS
Analyt ID - Spike Witness Analyst	CAC
XAD ID	418882

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.

PFAS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1

SDG No.:

Batch Number: 54178 Batch Start Date: 09/24/21 09:41 Batch Analyst: Stout, David W

Batch Method: None Batch End Date: 09/29/21 11:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	63xMPFC_IDA 00029
140-24648-A-2	K-1977,1978,1980 VEN CARBON BED INLET R1 OTM-45 BH	None, Split, Dilution, 537 (modified)	T	1 Sample	360 mL	0.5 mL
140-24648-A-4	K-1981 VEN CARBON BED INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	None, Split, Dilution, 537 (modified)	T	1 Sample	360 mL	0.5 mL
140-24648-A-6	K-1984,1985,1987 VEN CARBON BED INLET R2 OTM-45 BH	None, Split, Dilution, 537 (modified)	T	1 Sample	360 mL	0.5 mL
140-24648-A-8	K-1988 VEN CARBON BED INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	None, Split, Dilution, 537 (modified)	T	1 Sample	360 mL	0.5 mL
140-24648-A-10	K-1991,1992,1994 VEN CARBON BED INLET R3 OTM-45 BH	None, Split, Dilution, 537 (modified)	T	1 Sample	360 mL	0.5 mL
140-24648-A-12	K-1995 VEN CARBON BED INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	None, Split, Dilution, 537 (modified)	T	1 Sample	360 mL	0.5 mL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

PFAS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1

SDG No.:

Batch Number: 54178 Batch Start Date: 09/24/21 09:41 Batch Analyst: Stout, David W

Batch Method: None Batch End Date: 09/29/21 11:00

Batch Notes	
Analyst ID - Extraction	DWS
Extraction 1 End Time	09/26/2021 08:30
Extraction 1 Start Time	09/25/2021 09:05
Hot Block ID	F
Methanol ID	5% NH4OH / MeOH 418754
Oven, Bath or Block Temperature 1	60 Degrees C
PVDF Filter ID	423903
Extraction 2 End Time	09/29/2021 10:20
Extraction 2 Start Time	09/28/2021 14:30
Analyst ID - Spike Analyst	DWS
Analyst ID - Spike Witness Analyst	CAC
XAD ID	418882

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.

PFAS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1

SDG No.:

Batch Number: 54245 Batch Start Date: 09/27/21 15:06 Batch Analyst: Stout, David W

Batch Method: Split Batch End Date: 09/28/21 15:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	63xxMPFOA-IS 00035
MB 140-54177/1-A		Split, 537 (modified)		25 mL	10 mL	0.25 mL
LCS 140-54177/2-A		Split, 537 (modified)		25 mL	10 mL	0.25 mL
LCS 140-54177/3-A		Split, 537 (modified)		25 mL	10 mL	0.25 mL

Batch Notes	
Analyst ID - Spike Analyst	DWS
Analyst ID - Spike Witness Analyst	CAC

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.

PFAS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1

SDG No.:

Batch Number: 54245 Batch Start Date: 09/27/21 15:06 Batch Analyst: Stout, David W

Batch Method: Split Batch End Date: 09/28/21 15:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	63xxMPFOA-IS 00035
140-24648-A-1-A	K-1975,1976 VEN CARBON BED INLET R1 OTM-45 FH	Split, Dilution, 537 (modified)	T	10 mL	10 mL	0.25 mL
140-24648-A-5-A	K-1982,1983 VEN CARBON BED INLET R2 OTM-45 FH	Split, Dilution, 537 (modified)	T	10 mL	10 mL	0.25 mL
140-24648-A-9-A	K-1989,1990 VEN CARBON BED INLET R3 OTM-45 FH	Split, Dilution, 537 (modified)	T	10 mL	10 mL	0.25 mL

Batch Notes	
Analyst ID - Spike Analyst	DWS
Analyst ID - Spike Witness Analyst	CAC

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.

Eurofins TestAmerica Knoxville Extraction Sheet
PFAS in Source Air Front Half Fraction

Prep Batch Number: 140-54177

Split Batch Number: 54245

TALS Prep Chain: LCMS_FH_Prep --> Split_SA_LCMS

Sample ID	Measure associated rinses using a graduated cylinder and record volume (mL)	Push down filter with tweezers in bottle	Create MB and LCSD by using clean filter and placing in 125mL container	Add 50 ng/mL IS (IDA) to all samples & QC. Record volume in TALS.	Add 20 ng/mL native spike (TA) to LCSD. Record volume in TALS.	Add rinses and MeOH/5% NH4OH to the appropriate volume. Record volume of extraction solvent (mL)	Extract on shaker table for 18hr minimum	Filter sample using filter paper and plastic funnel	Place on hotblock at 60 deg C. Concentrate to <10mL.	Transfer to 10mL polypropylene tube. Place on N-EVAP and concentrate to near dryness. Add 2mL DI water.	Add 50ng/mL internal standard. Record volume in TALS. Bring to final volume in methanol. Filter using plastic syringe and 0.45µm PVDF filter disk.
MB 140-54177/1	NA	✓	✓	✓	NA	50	✓	✓	✓	✓	✓
LCS 140-54177/2	✓	✓	✓	✓	NA	79	✓	✓	✓	✓	✓
LCSD 140-54177/3	79	✓	NA	✓	NA	79	✓	✓	✓	✓	✓
140-24646-A-1 (140-424633)	69	✓	✓	✓	NA	69	✓	✓	✓	✓	✓
140-24646-A-5 (140-424640)	74	✓	✓	✓	NA	74	✓	✓	✓	✓	✓
140-24646-A-9 (140-424647)	120	✓	✓	✓	NA	120	✓	✓	✓	✓	✓
140-24647-A-1 (140-424655)	98	✓	✓	✓	NA	98	✓	✓	✓	✓	✓
140-24647-A-5 (140-424662)	52	✓	✓	✓	NA	52	✓	✓	✓	✓	✓
140-24647-A-9 (140-424669)	51	✓	✓	✓	NA	51	✓	✓	✓	✓	✓
140-24648-A-1 (140-424677)	76	✓	✓	✓	NA	76	✓	✓	✓	✓	✓
140-24648-A-5 (140-424684)	88	✓	✓	✓	NA	88	✓	✓	✓	✓	✓
140-24648-A-9 (140-424691)	NA	✓	✓	✓	NA	NA	✓	✓	✓	✓	✓
140-24649-A-1 (140-424698)	66	✓	✓	✓	NA	66	✓	✓	✓	✓	✓
MB 140-54177/14	66	✓	✓	✓	NA	66	✓	✓	✓	✓	✓
140-24649-A-5 (140-424705)	100	✓	✓	✓	NA	100	✓	✓	✓	✓	✓
140-24649-A-9 (140-424712)	53	✓	✓	✓	NA	53	✓	✓	✓	✓	✓
140-24650-A-1 (140-424728)	66	✓	✓	✓	NA	66	✓	✓	✓	✓	✓
140-24650-A-5 (140-424735)	59	✓	✓	✓	NA	59	✓	✓	✓	✓	✓
140-24650-A-9 (140-424742)	9124	✓	✓	✓	NA	9124	✓	✓	✓	✓	✓
	NA	✓	✓	✓	NA	NA	✓	✓	✓	✓	✓
	NA	✓	✓	✓	NA	NA	✓	✓	✓	✓	✓
	NA	✓	✓	✓	NA	NA	✓	✓	✓	✓	✓
	NA	✓	✓	✓	NA	NA	✓	✓	✓	✓	✓
	NA	✓	✓	✓	NA	NA	✓	✓	✓	✓	✓
	NA	✓	✓	✓	NA	NA	✓	✓	✓	✓	✓
	NA	✓	✓	✓	NA	NA	✓	✓	✓	✓	✓
	NA	✓	✓	✓	NA	NA	✓	✓	✓	✓	✓

PFAS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1

SDG No.:

Batch Number: 54317 Batch Start Date: 09/29/21 11:00 Batch Analyst: Stout, David W

Batch Method: Split Batch End Date: 10/03/21 15:40

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	63xxMPFOA-IS 00036
MB 140-54178/1-A		Split, 537 (modified)		180 mL	10 mL	0.25 mL
LCS 140-54178/2-A		Split, 537 (modified)		180 mL	10 mL	0.25 mL
LCS 140-54178/3-A		Split, 537 (modified)		180 mL	10 mL	0.25 mL
MB 140-54178/14-A		Split, 537 (modified)		180 mL	10 mL	0.25 mL

Batch Notes	
Analyst ID - IS Reagent Drop	DWS
Analyst ID - IS Reagent Drop Witness	DWS

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.

PFAS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1

SDG No.:

Batch Number: 54317 Batch Start Date: 09/29/21 11:00 Batch Analyst: Stout, David W

Batch Method: Split Batch End Date: 10/03/21 15:40

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	63xMPFOA-IS 00036
140-24648-A-2-A	K-1977,1978,1980 VEN CARBON BED INLET R1 OTM-45 BH	Split, Dilution, 537 (modified)	T	10 mL	10 mL	0.25 mL
140-24648-A-4-A	K-1981 VEN CARBON BED INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Split, Dilution, 537 (modified)	T	180 mL	10 mL	0.25 mL
140-24648-A-6-A	K-1984,1985,1987 VEN CARBON BED INLET R2 OTM-45 BH	Split, Dilution, 537 (modified)	T	10 mL	10 mL	0.25 mL
140-24648-A-8-A	K-1988 VEN CARBON BED INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Split, Dilution, 537 (modified)	T	180 mL	10 mL	0.25 mL
140-24648-A-10-A	K-1991,1992,1994 VEN CARBON BED INLET R3 OTM-45 BH	Split, Dilution, 537 (modified)	T	10 mL	10 mL	0.25 mL
140-24648-A-12-A	K-1995 VEN CARBON BED INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Split, Dilution, 537 (modified)	T	180 mL	10 mL	0.25 mL

Batch Notes	
Analyst ID - IS Reagent Drop	DWS
Analyst ID - IS Reagent Drop Witness	DWS

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.

Eurofins TestAmerica Knoxville Extraction Sheet
PFAS in Source Air Back Half Fraction

Prep Batch Number: 140-54178
 Split Batch Number: 54317
 TALS Prep Chain: LCMS_BH_Prep -> Split_SA_LCMS

Sample ID	Measure associated rinses using a graduated cylinder and record volume (mL)	Create MB and LCS/D by using clean XAD and placing in 500mL Nalgene container	Empty all XAD from traps into 500mL Nalgene containers	Add 50 ng/mL IS (IDA) to all samples & QC. Record volume in TALS.	Add 20 ng/mL native spike (TA) to LCS/D. Record volume in TALS.	Add rinses and MeOH/5% NH ₄ OH to the appropriate volume. Record volume of extraction solvent (mL)	Extraction 1 on shaker table for 18hr minimum	Decant solvent from 1st extraction into a separate Nalgene container	Add remaining rinses and MeOH/5% NH ₄ OH to the appropriate volume. Record volume of extraction solvent (mL)	Extraction 2 on shaker table for 18hr minimum	Combine 1st extraction solvent with the 2nd extraction solvent	Place on hotblock at 60 deg C. Concentrate to <10mL.	Transfer to 10mL polypropylene tube. Place on N-EVAP and concentrate to near dryness. Add 2mL DI water.	Add 50ng/mL internal standard. Record volume in TALS. Bring to final volume in methanol. Filter using plastic syringe and 0.45µm PVDE filter disk.
MB 140-54178/1	N/A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
LCS 140-54178/2	21g	✓	✓	✓	✓	180	✓	✓	180	✓	✓	✓	✓	✓
LCSD 140-54178/3	N/A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
140-24646-A-2 (140-424635)	N/A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
140-24646-A-4 (140-424639)	N/A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
140-24646-A-6 (140-424642)	N/A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
140-24646-A-8 (140-424646)	N/A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
140-24646-A-10 (140-424649)	N/A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
140-24646-A-12 (140-424653)	N/A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
140-24647-A-2 (140-424657)	N/A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
140-24647-A-4 (140-424661)	N/A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
140-24647-A-6 (140-424664)	N/A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
140-24647-A-8 (140-424668)	N/A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MB 140-54178/14	217	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
140-24647-A-10 (140-424671)	N/A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
140-24647-A-12 (140-424675)	N/A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
140-24648-A-2 (140-424679)	182	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
140-24648-A-4 (140-424683)	N/A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
140-24648-A-6 (140-424686)	N/A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
140-24648-A-8 (140-424690)	N/A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
140-24648-A-10 (140-424693)	N/A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
140-24648-A-12 (140-424697)	N/A	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

OP136R2 081721 PFAS Back Half (TALS)

PFAS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1

SDG No.:

Batch Number: 54348 Batch Start Date: 09/30/21 08:55 Batch Analyst: Stout, David W

Batch Method: None Batch End Date: 10/03/21 03:40

Lab Sample ID	Client Sample ID	Method Chain	Basis	VolumeCollect	VolCondUsed	InitialAmount	FinalAmount	63xxMPFC_IDA 00029	63xxMPFOA-IS 00036
MB 140-54348/1		None, Split, 537 (modified)				1 Sample	10 mL	0.25 mL	0.25 mL
LCS 140-54348/2		None, Split, 537 (modified)				1 Sample	10 mL	0.25 mL	0.25 mL
LCSD 140-54348/3		None, Split, 537 (modified)				1 Sample	10 mL	0.25 mL	0.25 mL
140-24648-A-3	K-1979 VEN CARBON BED INLET R1 OTM-45 IMPINGERS 1,2&3 COND	None, Split, 537 (modified)	T	325 mL	2 mL	0.00615 Sample	10 mL	0.25 mL	0.25 mL
140-24648-A-7	K-1986 VEN CARBON BED INLET R2 OTM-45 IMPINGERS 1,2&3 COND	None, Split, 537 (modified)	T	320 mL	2 mL	0.00625 Sample	10 mL	0.25 mL	0.25 mL
140-24648-A-11	K-1993 VEN CARBON BED INLET R3 OTM-45 IMPINGERS 1,2&3 COND	None, Split, 537 (modified)	T	320 mL	2 mL	0.00625 Sample	10 mL	0.25 mL	0.25 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	VolumeCollect	VolCondUsed	InitialAmount	FinalAmount	63xxEFC3LSP 00004
MB 140-54348/1		None, Split, 537 (modified)						
LCS 140-54348/2		None, Split, 537 (modified)		0.5 mL				
LCSD 140-54348/3		None, Split, 537 (modified)		0.5 mL				
140-24648-A-3	K-1979 VEN CARBON BED INLET R1 OTM-45 IMPINGERS 1,2&3 COND	None, Split, 537 (modified)	T					

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.

PFAS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1

SDG No.:

Batch Number: 54348 Batch Start Date: 09/30/21 08:55 Batch Analyst: Stout, David W

Batch Method: None Batch End Date: 10/03/21 03:40

Lab Sample ID	Client Sample ID	Method Chain	Basis	63xxPFC3LSP 00004		
140-24648-A-7	K-1986 VEN CARBON BED INLET R2 OTM-45 IMPINGERS 1,2&3 COND	None, Split, 537 (modified)	T			
140-24648-A-11	K-1993 VEN CARBON BED INLET R3 OTM-45 IMPINGERS 1,2&3 COND	None, Split, 537 (modified)	T			

Batch Notes	
Analyst ID - Spike Analyst	DWS
Analyst ID - Spike Witness Analyst	DWS

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.

PFAS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1

SDG No.:

Batch Number: 54427 Batch Start Date: 10/03/21 03:45 Batch Analyst: Stout, David W

Batch Method: Split Batch End Date: 10/03/21 03:46

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount
MB 140-54348/1-A		Split, 537 (modified)		10 mL	10 mL
LCS 140-54348/2-A		Split, 537 (modified)		10 mL	10 mL
LCSD 140-54348/3-A		Split, 537 (modified)		10 mL	10 mL
140-24648-A-3-A	K-1979 VEN CARBON BED INLET R1 OTM-45 IMPINGERS 1,2&3 COND	Split, 537 (modified)	T	10 mL	10 mL
140-24648-A-7-A	K-1986 VEN CARBON BED INLET R2 OTM-45 IMPINGERS 1,2&3 COND	Split, 537 (modified)	T	10 mL	10 mL
140-24648-A-11-A	K-1993 VEN CARBON BED INLET R3 OTM-45 IMPINGERS 1,2&3 COND	Split, 537 (modified)	T	10 mL	10 mL

Batch Notes	

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.

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

Batch Number: 140-54348

Analyst: Stout, David W

Batch Open: 9/30/2021 8:55:00AM

Method Code: 140-LCMS_COND_Prep-140

Batch End:

Leaching Procedure for Condensate

Input Sample Lab ID (Analytical Method)	SDG (Job #)	GrossWt TareWt	InitAmnt FinAmnt	Rcvd	PHs		Due Date	Analytical TAT	Div Rank	Comments	Output Sample Lab ID
					Adj1	Adj2					
1 MB-140-54348/1 N/A	N/A		1 Sample				N/A	N/A	N/A		MB 140-54348/1-A
2 LCS-140-54348/2 N/A	N/A		1 Sample				N/A	N/A	N/A		LCS 140-54348/2-A
3 LCSD-140-54348/3 N/A	N/A		1 Sample				N/A	N/A	N/A		LCSD 140-54348/3-A
4 140-24646-A-3 (PFC_IDA)	N/A (140-24646-1)	310 mL					10/6/21	12_Days	4		140-24646-A-3-A
4 140-24646-A-3 (PFC_IDA)	N/A (140-24646-2)						10/6/21	12_Days	4		140-24646-A-3-A
5 140-24646-A-7 (PFC_IDA)	N/A (140-24646-1)	295 mL					10/6/21	12_Days	4		140-24646-A-7-A
5 140-24646-A-7 (PFC_IDA)	N/A (140-24646-2)						10/6/21	12_Days	4		140-24646-A-7-A
6 140-24646-A-11 (PFC_IDA)	N/A (140-24646-1)	300 mL					10/6/21	12_Days	4		140-24646-A-11-A
6 140-24646-A-11 (PFC_IDA)	N/A (140-24646-2)						10/6/21	12_Days	4		140-24646-A-11-A
7 140-24647-A-3 (PFC_IDA)	N/A (140-24647-1)	305 mL					10/6/21	12_Days	4		140-24647-A-3-A

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

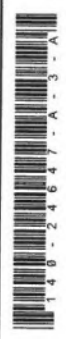

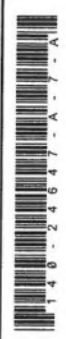

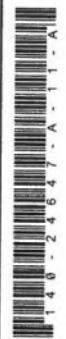





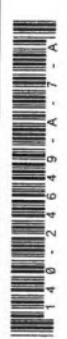

Batch Number: 140-54348

Analyst: Stout, David W

Batch Open: 9/30/2021 8:55:00AM

Method Code: 140-LCMS_COND_Prep-140

Batch End:

7	140-24647-A-3 (PFC_IDA)	N/A (140-24647-2)							10/6/21	12_Days	4	
8	140-24647-A-7 (PFC_IDA)	N/A (140-24647-1)					315mc		10/6/21	12_Days	4	
8	140-24647-A-7 (PFC_IDA)	N/A (140-24647-2)							10/6/21	12_Days	4	
9	140-24647-A-11 (PFC_IDA)	N/A (140-24647-1)					305mc		10/6/21	12_Days	4	
9	140-24647-A-11 (PFC_IDA)	N/A (140-24647-2)							10/6/21	12_Days	4	
10	140-24648-A-3 (PFC_IDA)	N/A (140-24648-1)					325mc		10/6/21	12_Days	4	
11	140-24648-A-7 (PFC_IDA)	N/A (140-24648-1)					320mc		10/6/21	12_Days	4	
12	140-24648-A-11 (PFC_IDA)	N/A (140-24648-1)					320mc		10/6/21	12_Days	4	
13	140-24649-A-3 (PFC_IDA)	N/A (140-24649-1)					325mc		10/6/21	12_Days	4	
14	MB-140-54348/14 N/A	N/A							N/A	N/A	N/A	
15	140-24649-A-7 (PFC_IDA)	N/A (140-24649-1)					325mc		10/6/21	12_Days	4	
16	140-24649-A-11 (PFC_IDA)	N/A (140-24649-1)					325mc		10/6/21	12_Days	4	

Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

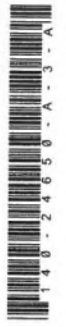





Batch Number: 140-54348

Analyst: Stout, David W

Batch Open: 9/30/2021 8:55:00AM

Method Code: 140-LCMS_COND_Prep-140

Batch End:

17	140-24650-A-3 (PFC_IDA)	N/A (140-24650-1)	310mL ✓					10/6/21	12_Days	4	
18	140-24650-A-7 (PFC_IDA)	N/A (140-24650-1)	310mL ✓					10/6/21	12_Days	4	
19	140-24650-A-11 (PFC_IDA)	N/A (140-24650-1)	305mL ✓					10/6/21	12_Days	4	
20	140-24651-A-3 (PFC_IDA)	N/A (140-24651-1)	305mL ✓					10/6/21	12_Days	4	
21	140-24651-A-7 (PFC_IDA)	N/A (140-24651-1)	305mL ✓					10/6/21	12_Days	4	
22	140-24651-A-11 (PFC_IDA)	N/A (140-24651-1)	305mL ✓					10/6/21	12_Days	4	

PFAS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1

SDG No.:

Batch Number: 54569 Batch Start Date: 10/06/21 19:06 Batch Analyst: Cochran, James R

Batch Method: Dilution Batch End Date: 10/06/21 19:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialVolume1	FinalVolume1	InitialVolume2	FinalVolume2	DilutionFactor	CalcMsg
140-24648-A-2-B	K-1977,1978,1980 VEN CARBON BED INLET R1 OTM-45 BH	Dilution, 537 (modified)	T	200 uL	10000 uL	200 uL	10000 uL	2500 No Unit	OK
140-24648-A-4-B	K-1981 VEN CARBON BED INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Dilution, 537 (modified)	T	100 uL	10000 uL			100 No Unit	OK
140-24648-A-6-B	K-1984,1985,1987 VEN CARBON BED INLET R2 OTM-45 BH	Dilution, 537 (modified)	T	200 uL	10000 uL	200 uL	10000 uL	2500 No Unit	OK
140-24648-A-8-B	K-1988 VEN CARBON BED INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Dilution, 537 (modified)	T	200 uL	10000 uL	1000 uL	10000 uL	500 No Unit	OK
140-24648-A-10-B	K-1991,1992,1994 VEN CARBON BED INLET R3 OTM-45 BH	Dilution, 537 (modified)	T	200 uL	10000 uL	200 uL	10000 uL	2500 No Unit	OK
140-24648-A-12-B	K-1995 VEN CARBON BED INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Dilution, 537 (modified)	T	200 uL	10000 uL	1000 uL	10000 uL	500 No Unit	OK
140-24648-A-1-B	K-1975,1976 VEN CARBON BED INLET R1 OTM-45 FH	Dilution, 537 (modified)	T	200 uL	10000 uL	1000 uL	10000 uL	500 No Unit	OK
140-24648-A-5-B	K-1982,1983 VEN CARBON BED INLET R2 OTM-45 FH	Dilution, 537 (modified)	T	200 uL	10000 uL	2000 uL	10000 uL	250 No Unit	OK
140-24648-A-9-B	K-1989,1990 VEN CARBON BED INLET R3 OTM-45 FH	Dilution, 537 (modified)	T	50 uL	10000 uL			200 No Unit	OK

Lab Sample ID	Client Sample ID	Method Chain	Basis	63xxMPFC_IDA 00030	63xxMPFOA-IS 00036

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.

PFAS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1

SDG No.:

Batch Number: 54569 Batch Start Date: 10/06/21 19:06 Batch Analyst: Cochran, James R

Batch Method: Dilution Batch End Date: 10/06/21 19:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	63xxMPFC_IDA 00030	63xxMPFOA-IS 00036
140-24648-A-2-B	K-1977,1978,1980 VEN CARBON BED INLET R1 OTM-45 BH	Dilution, 537 (modified)	T	0.25 mL	0.25 mL
140-24648-A-4-B	K-1981 VEN CARBON BED INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Dilution, 537 (modified)	T	0.25 mL	0.25 mL
140-24648-A-6-B	K-1984,1985,1987 VEN CARBON BED INLET R2 OTM-45 BH	Dilution, 537 (modified)	T	0.25 mL	0.25 mL
140-24648-A-8-B	K-1988 VEN CARBON BED INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Dilution, 537 (modified)	T	0.25 mL	0.25 mL
140-24648-A-10-B	K-1991,1992,1994 VEN CARBON BED INLET R3 OTM-45 BH	Dilution, 537 (modified)	T	0.25 mL	0.25 mL
140-24648-A-12-B	K-1995 VEN CARBON BED INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Dilution, 537 (modified)	T	0.25 mL	0.25 mL
140-24648-A-1-B	K-1975,1976 VEN CARBON BED INLET R1 OTM-45 FH	Dilution, 537 (modified)	T	0.25 mL	0.25 mL
140-24648-A-5-B	K-1982,1983 VEN CARBON BED INLET R2 OTM-45 FH	Dilution, 537 (modified)	T	0.25 mL	0.25 mL
140-24648-A-9-B	K-1989,1990 VEN CARBON BED INLET R3 OTM-45 FH	Dilution, 537 (modified)	T	0.25 mL	0.25 mL

Batch Notes

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.

PFAS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Knoxville Job No.: 140-24648-1

SDG No.:

Batch Number: 54569 Batch Start Date: 10/06/21 19:06 Batch Analyst: Cochran, James R


Batch Method: Dilution Batch End Date: 10/06/21 19:30

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents

Project Identification:	Chemours Emissions Test
Client Name:	Chemours Company
Client Contact:	Christel Compton (910) 678-1213
TestAmerica Contact:	Courtney Adkins (865) 291-3019
TestAmerica Project Manager:	Billy Anderson (865) 291-3080

Laboratory Deliverable Turnaround Requirements:	
Analytical Due Date:	21 Days from Lab Receipt
(Review-Released Date):	
Data Package Due Date:	140-24648 Chain of Custody

Analytical Testing QC Requirements:
 The Legend for Project-Specific Quality Control Testing is designated in the "QC" column as follows: "BT" = Blank Train, "RB" = Reagent Blank, "MS" = Matrix Spike, "MSD" = Matrix Spike Duplicate, "DUP" = Duplicate, "PB" = Proof Blank, "TB" = Trip Blank

Laboratory Destination:	TestAmerica Laboratories, Inc. 5815 Middlebrook Pike Knoxville, TN 37921
Lab Phone Number:	865.291.3000
Courier:	Hand Deliver

Project Deliverables:
 Report analytical results on TALS Reports and in data packages. Include "Field Sample Number", "Sample Type", and "Run Number" on all TALS Reports.

Analytical Parameter:	Holding Time Requirements:	Preservation Requirements:
HFPO-DA (CAS No. 13252-13-6)	14 Days to Extraction; 40 Days to Analysis	Cool, 4°C

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Requirements	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
K-1975 VEN Carbon Bed Inlet R1 OTM-45 Particulate Filter (Combine with K-1976)	1	9/18/21		125 mL HDPE Wide-Mouth Bottle	Particulate Filter (82.6 mm Whatman Glass Microfiber) OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Front-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using method 8321A-HFPO.
K-1976 VEN Carbon Bed Inlet R1 OTM-45 FH of Filter Holder & Probe Methanol Rinse (Combine with K-1975)	1	9/18/21		125 mL HDPE Wide-Mouth Bottle	Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse OTM-45 Train HFPO-DA Analysis	Knoxville: Use this solvent sample in the Particulate Filter extraction.
K-1977 VEN Carbon Bed Inlet R1 OTM-45 XAD-2 Resin Tube	1	9/18/21		XAD-2 Resin Tube	XAD-2 Resin Tube OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Back-Half Glassware Rinse and the Impinger Glassware Methanol Rinse to assist the solvent extraction of the XAD-2 resin sample. Analyze for HFPO-DA using method 8321A-HFPO.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Requirements	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
K-1978 VEN Carbon Bed Inlet R1 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with K-1977)	1	9/18/21		125 mL HDPE Wide-Mouth Bottle	Back Half of Filter Holder & Coil Condenser Methanol/5% Ammonium Hydroxide Rinse OTM-45 Train HFPO-DA Analysis	Knoxville: Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction.
K-1979 VEN Carbon Bed Inlet R1 OTM-45 Impingers 1,2 & 3 Condensate	1	9/18/21		500 mL HDPE Wide-Mouth Bottle	Impinger #1, #2 & #3 Condensate OTM-45 Train HFPO-DA Analysis	Knoxville: Analyze the sample for HFPO-DA.
K-1980 VEN Carbon Bed Inlet R1 OTM-45 Impinger Glassware MeOH Rinse (Combine with K-1977)	1	9/18/21		250 mL HDPE Wide-Mouth Bottle	Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse OTM-45 Train HFPO-DA Analysis	Knoxville: Use this solvent sample in the XAD-2 Resin Extraction.
K-1981 VEN Carbon Bed Inlet R1 OTM-45 Breakthrough XAD-2 Resin Tube	1	9/18/21		XAD-2 Resin Tube	Breakthrough XAD-2 Resin Tube OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level and perform the regular XAD-2 Resin Extraction. Analyze for HFPO-DA using method 8321A-HFPO.
K-1982 VEN Carbon Bed Inlet R2 OTM-45 Particulate Filter (Combine with K-1983)	2	9/18/21		125 mL HDPE Wide-Mouth Bottle	Particulate Filter (82.6 mm Whatman Glass Microfiber) OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Front-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using method 8321A-HFPO.
K-1983 VEN Carbon Bed Inlet R2 OTM-45 Front Half of Filter Holder & Probe Methanol Rinse (Combine with K-1982)	2	9/18/21		125 mL HDPE Wide-Mouth Bottle	Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse OTM-45 Train HFPO-DA Analysis	Knoxville: Use this solvent sample in the Particulate Filter extraction.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Requirements	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
K-1984 VEN Carbon Bed Inlet R2 OTM-45 XAD-2 Resin Tube	2	9/18/21		XAD-2 Resin Tube	XAD-2 Resin Tube OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Back-Half Glassware Rinse and the Impinger Glassware Methanol Rinse to assist the solvent extraction of the XAD-2 resin sample. Analyze for HFPO-DA using method 8321A-HFPO. Analyze.
K-1985 VEN Carbon Bed Inlet R2 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with K-1984)	2	9/18/21		125 mL HDPE Wide-Mouth Bottle	Back Half of Filter Holder & Coil Condenser Methanol/5% Ammonium Hydroxide Rinse OTM-45 Train HFPO-DA Analysis	Knoxville: Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction.
K-1986 VEN Carbon Bed Inlet R2 OTM-45 Impingers 1,2 & 3 Condensate	2	9/18/21		500 mL HDPE Wide-Mouth Bottle	Impinger #1, #2 & #3 Condensate OTM-45 Train HFPO-DA Analysis	Knoxville: Analyze the sample for HFPO-DA.
K-1987 VEN Carbon Bed Inlet R2 OTM-45 Impinger Glassware MeOH Rinse (Combine with K-1984)	2	9/18/21		250 mL HDPE Wide-Mouth Bottle	Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse OTM-45 Train HFPO-DA Analysis	Knoxville: Use this solvent sample in the XAD-2 Resin Extraction.
K-1988 VEN Carbon Bed Inlet R2 OTM-45 Breakthrough XAD-2 Resin Tube	2	9/18/21		XAD-2 Resin Tube	Breakthrough XAD-2 Resin Tube OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level and perform the regular XAD-2 Resin Extraction. Analyze for HFPO-DA using method 8321A-HFPO.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Requirements	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
K-1989 VEN Carbon Bed Inlet R3 OTM-45 Particulate Filter (Combine with K-1990)	3	9/18/21		125 mL HDPE Wide-Mouth Bottle	Particulate Filter (82.6 mm Whatman Glass Microfiber) OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Front-Half Probe Rinse to assist the solvent extraction of the Particulate Filter sample. Analyze for HFPO-DA using method 8321A-HFPO.
K-1990 VEN Carbon Bed Inlet R3 OTM-45 Front Half of Filter Holder & Probe Methanol Rinse (Combine with K-1989)	3	9/18/21		125 mL HDPE Wide-Mouth Bottle	Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse OTM-45 Train HFPO-DA Analysis	Knoxville: Use this solvent sample in the Particulate Filter extraction.
K-1991 VEN Carbon Bed Inlet R3 OTM-45 XAD-2 Resin Tube	3	9/18/21		XAD-2 Resin Tube	XAD-2 Resin Tube OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level. Use the Back-Half Glassware Rinse and the Impinger Glassware Methanol Rinse to assist the solvent extraction of the XAD-2 resin sample. Analyze for HFPO-DA using method 8321A-HFPO.
K-1992 VEN Carbon Bed Inlet R3 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse (Combine with K-1991)	3	9/18/21		125 mL HDPE Wide-Mouth Bottle	Back Half of Filter Holder & Coil Condenser Methanol/5% Ammonium Hydroxide Rinse OTM-45 Train HFPO-DA Analysis	Knoxville: Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction. Analyze for HFPO-DA using method 8321A-HFPO.
K-1993 VEN Carbon Bed Inlet R3 OTM-45 Impingers 1,2 & 3 Condensate	3	9/18/21		500 mL HDPE Wide-Mouth Bottle	Impinger #1, #2 & #3 Condensate OTM-45 Train HFPO-DA Analysis	Knoxville: Analyze the sample for HFPO-DA.
K-1994 VEN Carbon Bed Inlet R3 OTM-45 Impinger Glassware MeOH Rinse (Combine with K-1991)	3	9/18/21		250 mL HDPE Wide-Mouth Bottle	Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse OTM-45 Train HFPO-DA Analysis	Knoxville: Use this solvent sample in the XAD-2 Resin Extraction.

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Requirements	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
K-1995 VEN Carbon Bed Inlet R3 OTM-45 Breakthrough XAD-2 Resin Tube	3	9/18/21		XAD-2 Resin Tube	Breakthrough XAD-2 Resin Tube OTM-45 Train HFPO-DA Analysis	Knoxville: Spike sample with the Isotope Dilution Internal Standard (IDIS) at the regular level and perform the regular XAD-2 Resin Extraction. Analyze for HFPO-DA using method 8321A-HFPO.

Sample Receipt Log and Condition of the Samples Upon Receipt:

Please fill in the following information:

Comments

(Please write "NONE" if no comment applicable)

- | | |
|---|----------------------------------|
| (1) Record the identities of any samples that were listed on the RFA but were not found in the sample shipment. | NONE |
| (2) Record the sample shipping cooler temperature of all coolers transporting samples listed on this RFA: | RT 1.1 / CT 1.2 C |
| (3) Record any apparent sample loss/breakage. | NONE |
| (4) Record any unidentified samples transported with this shipment of samples: | NONE |
| (5) Indicate if all samples were received according to the project's required specifications (i.e. no nonconformances): | HAND DELIVERED, NO CUSTODY SEALS |

Custody Transfer:

Relinquished By:		Alliance	9/17/21
	Name	Company	Date/Time
Accepted By:		ETA KNOX	9/18/21 1815
	Name	Company	Date/Time
Relinquished By:		ETA KNOX	9/19/21 1400
	Name	Company	Date/Time
Accepted By:		ETA KNOX	9-20-21 08:00
	Name	Company	Date/Time
Relinquished By:	Name	Company	Date/Time
Accepted By:	Name	Company	Date/Time
Relinquished By:	Name	Company	Date/Time
Accepted By:	Name	Company	Date/Time

EUROFINS/TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	<input checked="" type="checkbox"/>			<input type="checkbox"/> Containers, Broken	
2. Were ambient air containers received intact?				<input type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?				<input type="checkbox"/> Yes <input type="checkbox"/> NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID : <u>571</u> Correction factor: <u>+0.1°C</u>	<input checked="" type="checkbox"/>			<input type="checkbox"/> Cooler Out of Temp, Client Contacted, Proceed/Cancel <input type="checkbox"/> Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	<input checked="" type="checkbox"/>			<input type="checkbox"/> Containers, Broken	
6. Were samples received in appropriate containers?	<input checked="" type="checkbox"/>			<input type="checkbox"/> Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	<input checked="" type="checkbox"/>			<input type="checkbox"/> COC & Samples Do Not Match <input type="checkbox"/> COC Incorrect/Incomplete <input type="checkbox"/> COC Not Received	
8. Were all of the samples listed on the COC received?	<input checked="" type="checkbox"/>			<input type="checkbox"/> Sample Received, Not on COC <input type="checkbox"/> Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	<input checked="" type="checkbox"/>			<input type="checkbox"/> COC; No Date/Time; Client Contacted	
10. Was the sampler identified on the COC?	<input checked="" type="checkbox"/>			<input type="checkbox"/> Sampler Not Listed on COC	
11. Is the client and project name/# identified?	<input checked="" type="checkbox"/>			<input type="checkbox"/> COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	<input checked="" type="checkbox"/>			<input type="checkbox"/> COC No tests on COC	
13. Is the matrix of the samples noted?	<input checked="" type="checkbox"/>			<input type="checkbox"/> COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	<input checked="" type="checkbox"/>			<input type="checkbox"/> COC Incorrect/Incomplete	
15. Were samples received within holding time?	<input checked="" type="checkbox"/>			<input type="checkbox"/> Holding Time - Receipt	
16. Were samples received with correct chemical preservative (excluding Encore)?	<input checked="" type="checkbox"/>			<input type="checkbox"/> pH Adjusted, pH Included (See box 16A) <input type="checkbox"/> Incorrect Preservative	
17. Were VOA samples received without headspace?	<input checked="" type="checkbox"/>			<input type="checkbox"/> Headspace (VOA only) <input type="checkbox"/> Residual Chlorine	
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:					
19. For 1613B water samples is pH<9?				<input type="checkbox"/> If no, notify lab to adjust	
20. For rad samples was sample activity info. Provided?				<input type="checkbox"/> Project missing info	
Project #: _____ PM Instructions: _____					

Date: 9.21.21

Sample Receiving Associate: [Signature]

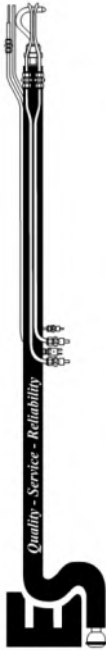
Appendix D

Location Chemours Company - Fayetteville Works Facility, NC
 Source VEN Carbon Bed Outlet
 Project No. 2021-25370
 Parameter HFPO-DA

Date	Nozzle ID	Nozzle Diameter (in.)			Dn (Average)	Difference	Criteria	Material
		#1	#2	#3				
9/17/21	G-5	0.255	0.255	0.255	0.255	0.000	≤ 0.004 in.	glass
Date	Pitot ID	Evidence of damage?	Evidence of mis-alignment?	Calibration or Repair required?				
9/17/21	P4-2	no	no	no				
Date	Probe or Thermocouple ID	Reference Temp. (°F)	Indicated Temp. (°F)	Difference	Criteria	Probe Length		
9/17/21	TC-5D	34.0	35.0	0.2%	± 1.5 % (absolute)	5'		
Field Balance Check								
Date	09/17/21							
Balance ID:	Citizen							
Test Weight ID:	59895							
Certified Weight (g):	200.0							
Measured Weight (g):	199.9							
Weight Difference (g):	0.1	--	--	--	--	--		
Date	Barometric Pressure	Evidence of damage?	Reading Verified	Calibration or Repair required?	Weather Station Location			
9/18/21	Weather Station	NA	NA	NA	Fayetteville, NC			
Date	Meter Box ID	Positive Pressure Leak Check						
9/18/21	4	Pass						
Reagent	Lot#	Field Prep performed	Field Lot	Date	By			
Methanol/Ammonia	213525	No						

Location Chemours Company - Fayetteville Works Facility, NC
 Source VEN Carbon Bed Inlet
 Project No. 2021-25370
 Parameter HFPO-DA

Date	Nozzle ID	Nozzle Diameter (in.)			Dn (Average)	Difference	Criteria	Material
		#1	#2	#3				
9/17/21	G-6	0.255	0.255	0.254	0.255	0.001	≤ 0.004 in.	glass
Date	Pitot ID	Evidence of damage?	Evidence of mis-alignment?	Calibration or Repair required?				
9/17/21	P4-1	no	no	no				
Date	Probe or Thermocouple ID	Reference Temp. (°F)	Indicated Temp. (°F)	Difference	Criteria	Probe Length		
9/17/21	TC-7D	34.0	35.0	0.2%	± 1.5 % (absolute)	5'		
Field Balance Check								
Date	09/17/21							
Balance ID:	Citizen							
Test Weight ID:	59895							
Certified Weight (g):	200.0							
Measured Weight (g):	199.9							
Weight Difference (g):	0.1	--	--	--	--	--		
Date	Barometric Pressure	Evidence of damage?	Reading Verified	Calibration or Repair required?	Weather Station Location			
9/18/21	Weather Station	NA	NA	NA	Fayetteville, NC			
Date	Meter Box ID	Positive Pressure Leak Check						
9/18/21	15	Pass						
Reagent	Lot#	Field Prep performed	Field Lot	Date	By			
Methanol/Ammonia	213525	No						



METHOD 5 DRY GAS METER CALIBRATION USING CRITICAL ORIFICES

- 1) Select three critical orifices to calibrate the dry gas meter which bracket the expected operating range.
- 2) Record barometric pressure before and after calibration procedure.
- 3) Run at tested vacuum (from Orifice Calibration Report), for a period of time necessary to achieve a minimum total volume of 5 cubic feet.
- 4) Record data and information in the GREEN cells, YELLOW cells are calculated.

DATE: 1/6/2021 METER SERIAL #: MB 4
 METER PART #: CRITICAL ORIFICE SET SERIAL #: 1393

INITIAL 29.68 FINAL 29.68
 AVG (P_{bar}) 29.68

ORIFICE #	RUN #	K' FACTOR (AVG)	TESTED VACUUM (in Hg)	DGM READINGS (FT ³)		TEMPERATURES °F			ELAPSED TIME (MIN) θ	DGM ΔH (in H ₂ O)	(1) V _m (STD)	(2) V _c (STD)	(3) Y	Y % Diff to Average Y	Y % Diff with other orifices	ΔH _@	
				INITIAL	FINAL	NET (V _m)	AMBIENT	DGM INLET									DGM OUTLET
11	1	0.306															
	2	0.306	23	795.210	803.315	6.105	70	68	71	68	69	20.00	0.45	8.0352	7.8923	0.982	1.61
	3	0.306				.0					0						
16	1	0.4268															
	2	0.4268	21.5	803.321	809.028	5.707	71	70	72	70	70	10.00	0.88	5.6479	5.4988	0.974	1.62
	3	0.4268				.0					0						
18	1	0.4961															
	2	0.4961	21	809.137	815.770	6.633	72	71	72	71	71	10.00	1.2	6.5602	6.3856	0.973	1.64
	3	0.4961				.0					0						
26	1	0.7131															
	2	0.7131	19	815.820	826.214	10.394	72	72	74	71	72	11.00	2.6	10.2961	10.0967	0.981	1.72
	3	0.7131				.0					0						
31	1	0.8358															
	2	0.8358	17	826.225	837.246	11.021	72	74	76	72	73	10.00	3.6	10.9132	10.7681	0.986	1.73
	3	0.8358				.0					0						

USING THE CRITICAL ORIFICES AS CALIBRATION STANDARDS:

The following equations are used to calculate the standard volumes of air, passed through the DGM, V_c (std), and the critical orifice, V_c (std), and the DGM calibration factor, Y. These equations are automatically calculated in the spreadsheet above.

$$(1) Vm_{(std)} = K_1 * Vm * \frac{Pbar + (\Delta H / 13.6)}{Tm}$$

$$(2) Vcr_{(std)} = K' * w * \frac{Pbar * \theta}{\sqrt{Tamb}}$$

$$(3) Y = \frac{Vcr_{(std)}}{Vm_{(std)}} = \text{DGM calibration factor}$$

= Net volume of gas sample passed through DGM, corrected to standard conditions
 K₁ = 17.64 °R/in. Hg (English), 0.3858 °K/mm Hg (Metric)
 T_m = Absolute DGM avg. temperature (°R - English, °K - Metric)

= Volume of gas sample passed through the critical orifice, corrected to standard conditions
 T_{amb} = Absolute ambient temperature (°R - English, °K - Metric)
 K' = Average K factor from Critical Orifice Calibration

AVERAGE DRY GAS METER CALIBRATION FACTOR, Y = **0.979**

AVERAGE ΔH_@ = **1.66**

$$\Delta H_{@} = \left(\frac{0.75 \theta}{V_{cr}(std)} \right)^2 \Delta H \left(\frac{V_{m}(std)}{V_m} \right)$$



METHOD 5 DRY GAS METER CALIBRATION USING CRITICAL ORIFICES

- 1) Select three critical orifices to calibrate the dry gas meter which bracket the expected operating range.
- 2) Record barometric pressure before and after calibration procedure.
- 3) Run at tested vacuum (from Orifice Calibration Report), for a period of time necessary to achieve a minimum total volume of 5 cubic feet.
- 4) Record data and information in the **GREEN** cells, YELLOW cells are calculated.

ORIFICE #	RUN #	DATE: 1/29/2021		METER SERIAL #:	METER SERIAL #:	METER SERIAL #:	METER SERIAL #:	INITIAL		FINAL		AVG (P _{bar})	ELAPSED TIME (MIN)	DGM DH (in H ₂ O)	(1) V _m (STD)	(2) V _c (STD)	(3) Y	Y % Diff to Average Y	Y % Diff with other orifices	DH _g		
		DATE	TIME					BAROMETRIC PRESSURE (in Hg)	BAROMETRIC PRESSURE (in Hg)	AMBIENT	DGM INLET										DGM OUTLET	DGM AVG
		METER PART #:		METER SERIAL #:		METER SERIAL #:		METER SERIAL #:		METER SERIAL #:		METER SERIAL #:		METER SERIAL #:		METER SERIAL #:		METER SERIAL #:		METER SERIAL #:		
		CRITICAL ORIFICE SET SERIAL #:		CRITICAL ORIFICE SET SERIAL #:		CRITICAL ORIFICE SET SERIAL #:		CRITICAL ORIFICE SET SERIAL #:		CRITICAL ORIFICE SET SERIAL #:		CRITICAL ORIFICE SET SERIAL #:		CRITICAL ORIFICE SET SERIAL #:		CRITICAL ORIFICE SET SERIAL #:		CRITICAL ORIFICE SET SERIAL #:		CRITICAL ORIFICE SET SERIAL #:		
		DGM READINGS (FT ³)		DGM READINGS (FT ³)		DGM READINGS (FT ³)		DGM READINGS (FT ³)		DGM READINGS (FT ³)		DGM READINGS (FT ³)		DGM READINGS (FT ³)		DGM READINGS (FT ³)		DGM READINGS (FT ³)		DGM READINGS (FT ³)		
		INITIAL		FINAL		INITIAL		FINAL		INITIAL		FINAL		INITIAL		FINAL		INITIAL		FINAL		
11	1	0.306	23.5	904.166	911.776	7.610	62	61	63	61	63	62	20.00	0.5	7.8088	8.1214	1.040				1.75	
	2	0.306																				
	3	0.306																				
16	1	0.4268	22.5	911.776	917.160	5.384	62	63	62	63	62	62.5	10.00	1	5.5260	5.6638	1.025	1.47	1.67		1.80	
	2	0.4268																				
	3	0.4268																				
18	1	0.4961	20.5	920.808	927.087	6.279	62	63	64	63	64	63.5	10.00	1.2	6.4354	6.5834	1.023	0.00	0.19		1.60	
	2	0.4961																				
	3	0.4961																				
26	1	0.7131	17.5	927.087	936.166	9.079	62	64	65	64	65	64.5	10.00	2.7	9.3211	9.4630	1.015	-0.19	0.77		1.74	
	2	0.7131																				
	3	0.7131																				
31	1	0.8358	17.5	936.166	946.770	10.604	62	65	66	65	66	65.5	10.03	3.6	10.8892	11.1246	1.022	-0.95	-0.62		1.69	
	2	0.8358																				
	3	0.8358																				

USING THE CRITICAL ORIFICES AS CALIBRATION STANDARDS:

The following equations are used to calculate the standard volumes of air passed through the DGM, V_m (std), and the critical orifice, V_c (std), and the DGM calibration factor, Y. These equations are automatically calculated in the spreadsheet above.

$$(1) Vm_{(std)} = K_1 * Vm * Pbar + (\Delta H / 13.6) / Tm$$

$$(2) Vcr_{(std)} = K_2 * Pbar * \sqrt{Tamb}$$

$$(3) Y = Vcr_{(std)} / Vm_{(std)}$$

= Net volume of gas sample passed through DGM, corrected to standard conditions

K₁ = 17.64 °R/(in. Hg (English), 0.3858 °K/mm Hg (Metric))

T_m = Absolute DGM avg. temperature (°R - English, °K - Metric)

= Volume of gas sample passed through the critical orifice, corrected to standard conditions

T_{amb} = Absolute ambient temperature (°R - English, °K - Metric)

K = Average K' factor from Critical Orifice Calibration

= DGM calibration factor

AVERAGE DRY GAS METER CALIBRATION FACTOR, Y = 1.025

AVERAGE DH_g = 1.72

$$DH_g = \left(\frac{0.75g}{V_{cr}(std)} \right)^2 DH \left(\frac{V_m(std)}{V_m} \right)$$

Initial Sample Probe Calibration Form

 Probe ID P4-1/TC-7D

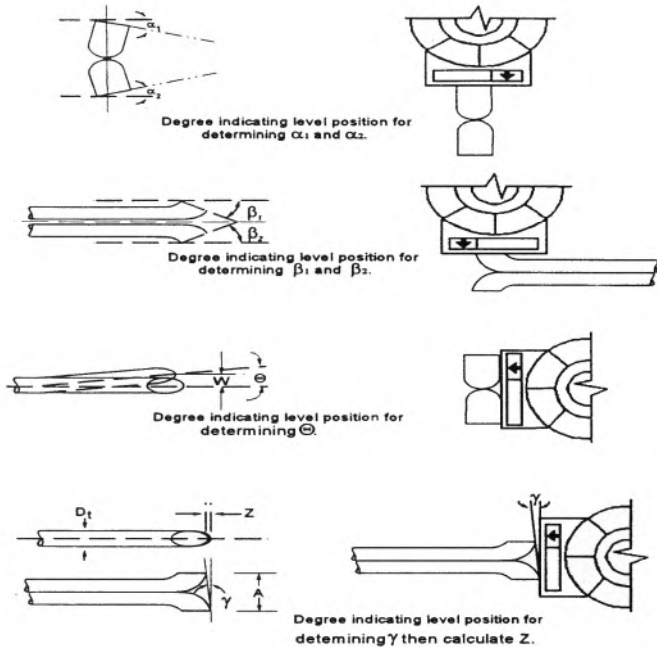
 Date 01/28/21

 Technician S. Waters

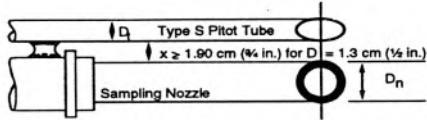
"S" Type Pitot Calibration

Is the Pitot Level and Perpendicular?	Yes
Is There any Obstruction?	No
Is the Pitot Damaged	No
α_1 (-10° = α_1 = + 10°)	1
α_2 (-10° = α_2 = + 10°)	0
β_1 (-5° = β_1 = + 5°)	1
β_2 (-5° = β_2 = + 5°)	1
γ	1
Θ	0
$Z = A \tan \gamma$ (< 0.125")	0.011
$W = A \tan \Theta$ (< 0.03125")	0.0000
D_t (3/16 = D_t = 3/8")	0.252
A	0.655
$A/2D_t$ (1.05 = P_A/D_t = 1.5)	1.300

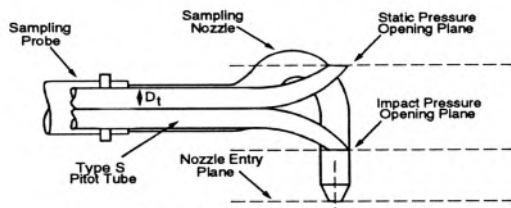
Source: Quality Assurance Handbook for Air Pollution Measurement Systems: Volume III, Stationary Source-Specific Methods. EPA/600/R-94/038c, September 30, 1994



Verification of "S" Type Pitot, Thermocouple and Nozzle Placement

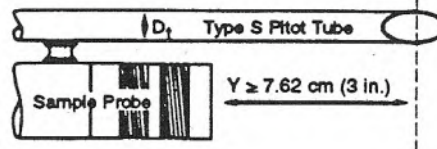


A. Bottom View; showing minimum pitot tube-nozzle separation.



B. Side View; to prevent pitot tube from interfering with gas flow streamlines approaching the nozzle, the impact pressure opening plane of the pitot tube shall be even with or above the nozzle entry plane.

Does X Exceed 0.75 inches? Yes
 Does Y Exceed 3 inches? NA



Thermocouple Calibration

	Ice Bath °R				Ambient °R				Boiling Water °R		
	1	2	3		1	2	3		1	2	3
Reference Temp	492	492	492		526	526	526		672	672	672
Thermocouple Temp	492	492	492		525	525	525		672	672	672
Difference (%)	0.0	0.0	0.0		-0.2	-0.2	-0.2		0.0	0.0	0.0

Temperature values must be within 1.5% of reference temperature

I certify that the probe ID P4-1/TC-7D meets or exceeds all specifications, criteria and/or applicable design features and is hereby assigned a pitot tube calibration factor C_p of 0.84.

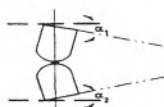
Certified By: S. Waters

Date: 01/28/21

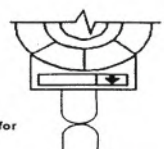
Initial Sample Probe Calibration Form

Probe ID P4-2/TC-5D Date 01/28/21 Technician SRW


"S" Type Pitot Calibration	
Is the Pitot Level and Perpendicular?	Yes
Is There any Obstruction?	No
Is the Pitot Damaged	No
α_1 (-10° = α_1 = + 10°)	2
α_2 (-10° = α_2 = + 10°)	1
β_1 (-5° = β_1 = + 5°)	1
β_2 (-5° = β_2 = + 5°)	1
γ	1
Θ	0
$Z = A \tan \gamma$ (< 0.125")	0.011
$W = A \tan \Theta$ (< 0.03125")	0.0000
D_t (3/16 = D_t = 3/8")	0.251
A	0.650
$A/2D_t$ (1.05 = P_A/D_t = 1.5)	1.295
Source: Quality Assurance Handbook for Air Pollution Measurement Systems: Volume III, Stationary Source-Specific Methods. EPA/600/R-94/038c, September 30, 1994	



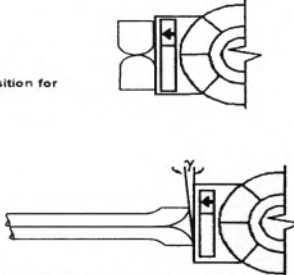
Degree indicating level position for determining α_1 and α_2 .



Degree indicating level position for determining β_1 and β_2 .

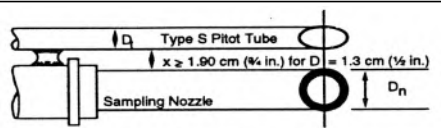


Degree indicating level position for determining Θ .



Degree indicating level position for determining γ then calculate Z.

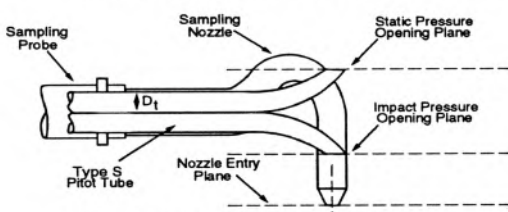
Verification of "S" Type Pitot, Thermocouple and Nozzle Placement



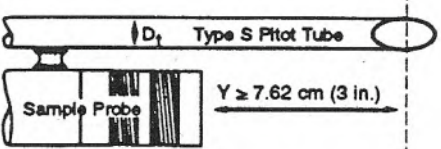
A. Bottom View; showing minimum pitot tube-nozzle separation.

Does X Exceed 0.75 inches? Yes

Does Y Exceed 3 inches? NA



B. Side View; to prevent pitot tube from interfering with gas flow streamlines approaching the nozzle, the impact pressure opening plane of the pitot tube shall be even with or above the nozzle entry plane.



	Ice Bath °R				Ambient °R				Boiling Water °R		
	1	2	3		1	2	3		1	2	3
Reference Temp	493	493	493		525	525	525		672	672	672
Thermocouple Temp	491	491	491		524	524	524		671	671	671
Difference (%)	-0.4	-0.4	-0.4		-0.2	-0.2	-0.2		-0.1	-0.1	-0.1

Temperature values must be within 1.5% of reference temperature

I certify that the probe ID P4-2/TC-5D meets or exceeds all specifications, criteria and/or applicable design features and is hereby assigned a pitot tube calibration factor C_p of 0.84.

Certified By: SRW

Date: 01/28/21

Initial Impinger Outlet Thermocouple Calibration

ID Number	Ice Bath		Ambient		Hot Water Bath		Technician	Date Performed
	Reference Temperature (°Rk)	Thermocouple Temperature (°Rk)	Reference Temperature (°Rk)	Thermocouple Temperature (°Rk)	Reference Temperature (°Rk)	Thermocouple Temperature (°Rk)		
IO-1	494.17	493.87	524.37	523.17	672.17	672.67	SM	03/16/21
IO-2	493.67	493.87	524.57	523.17	671.77	672.67	SM	03/16/21
IO-3	493.57	493.87	521.37	523.17	671.77	672.67	SM	03/16/21
IO-4	493.97	493.87	524.37	523.17	671.17	672.67	SM	03/16/21
IO-5	493.77	493.87	524.07	523.17	672.37	672.67	SM	03/16/21
IO-6	493.97	493.87	522.97	523.17	670.77	672.67	SM	03/16/21
IO-7	493.17	493.87	524.37	523.17	671.37	672.67	SM	03/16/21
IO-8	494.37	493.87	523.67	523.17	670.37	672.67	SM	03/16/21
IO-9								
IO-10	493.77	493.87	524.27	523.17	671.27	672.67	SM	03/16/21
IO-11	494.37	493.87	524.37	523.17	672.27	672.67	SM	03/16/21
IO-12	493.77	493.87	522.17	523.17	671.47	672.67	SM	03/16/21
IO-13								
IO-14	493.87	493.87	524.37	523.17	670.87	672.67	SM	03/16/21
IO-15	494.17	493.87	524.37	523.17	671.47	672.67	SM	03/16/21
IO-16	494.37	493.87	524.37	523.17	671.07	672.67	SM	03/16/21
IO-17	493.37	493.87	522.17	523.17	670.97	672.67	SM	03/16/21
IO-18	494.17	493.87	524.37	523.17	671.27	672.67	SM	03/16/21
IO-19	493.97	493.87	524.77	523.17	672.97	672.67	SM	03/16/21

Reference Thermocouple: Fluke S/N: 83450033 or S/N 90460057 traceable to the United States National Institute of Standards and Technology

*Acceptable Deviation: 1.5%

POST TEST DRY GAS METER CALIBRATION

DATE: **09/22/21** METER BOX #: **4**
 TECHNICIAN: **A.Anderson** CRITICAL ORIFICE SET SERIAL #: **1393**

INITIAL **29.93** FINAL **29.93** AVG (P_{bar}) **29.93**
 BAROMETRIC PRESSURE (in Hg): **29.93**

ORIFICE #	RUN #	K' FACTOR (AVG)	TESTED VACUUM (in Hg)	DGM READINGS (FT ³)		TEMPERATURES °F			ELAPSED TIME (MIN)	DGM DH (in H ₂ O)	(1) V _m (STD)	(2) V _{cor} (STD)	(3) Y	Y % Diff to Average Y	DH®				
				INITIAL	FINAL	NET (V _m)	AMBIENT	DGM INLET								DGM OUTLET	DGM AVG		
	1																		
	2																		
	3																		
	AVG =																		
	1	0.4961	21	646.936	653.477	6.541	71	70	71	70	71	70.5	10.00	1.2	6.5328	6.4455	0.987	-0.13	1.62
	2	0.4961	21	653.477	660.017	6.540	71	71	72	71	71	71.25	10.00	1.2	6.5225	6.4455	0.988	0.03	1.62
	3	0.4961	21	660.017	666.555	6.538	71	72	72	71	71	71.5	10.00	1.2	6.5175	6.4455	0.989	0.10	1.62
	AVG =																		
	1																		
	2																		
	3																		
	AVG =																		

AVERAGE DRY GAS METER CALIBRATION FACTOR, Y = 0.988

PRE-DETERMINED DRY GAS METER CALIBRATION FACTOR, Y = 0.979

PERCENT DIFFERENCE = 0.9

Post-Test Sample Probe Calibration Form

Probe ID P4-1 / TC7D

Visual Inspection

Do pitot tips appear to be damaged?	<u> NO </u>
Do thermocouple wires appear broken or shorted?	<u> NO </u>
Do all components appear to be in good condition?	<u> YES </u>

Post-Test Thermocouple Calibration

Reference Temperature °F	Thermocouple Temperature °F	Difference °F
<u> 68.4 </u>	<u> 68.3 </u>	<u> -0.1 </u>
s		

Reference Thermocouple: Fluke S/N: 83450033 traceable to the United States National Institute of Standards and Technology

Acceptable Deviation +/- 2 °F

<u> X </u>	Acceptable
<u> </u>	Unacceptable

Date 09/22/21

Technician AA

Post-Test Sample Probe Calibration Form

Probe ID P4-2 / TC5D

Visual Inspection

Do pitot tips appear to be damaged?	<u> NO </u>
Do thermocouple wires appear broken or shorted?	<u> NO </u>
Do all components appear to be in good condition?	<u> YES </u>

Post-Test Thermocouple Calibration

Reference Temperature °F	Thermocouple Temperature °F	Difference °F
<u> 68.4 </u>	<u> 68 </u>	<u> -0.4 </u>
s		

Reference Thermocouple: Fluke S/N: 83450033 traceable to the United States National Institute of Standards and Technology

Acceptable Deviation +/- 2 °F

<u> X </u>	Acceptable
<u> </u>	Unacceptable

Date 09/22/21

Technician AA

Appendix E

Vinyl Ethers North Operating Data

VEN	Date	9/18/2021	800	900	1000	1100	1200	1300	1400	1500	1600
Stack Testing			RUN 1: 8:02-9:46				RUN 2: 11:14-13:09		RUN 3: 13:55-15:55		
VEN Product			PPVE								
VEN Precursor											
VEN Condensation (HFPO)											
VEN ABR											
VEN Refining											
Stripper Column Vent											

Last Page of Report