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# Source Test Report

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

Sources Tested: VEN Carbon Bed  
Test Date: December 16, 2021

AST Project No. 2021-3126

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Prepared By  
Alliance Source Testing, LLC  
6515A Basile Rowe  
East Syracuse, NY 13057



**CORPORATE OFFICE**  
255 Grant St. SE, Suite 600  
Decatur, AL 35601  
(256) 351-0121

**SOURCE TESTING**  
[stacktest.com](http://stacktest.com)

**EMISSIONS MONITORING**  
[alliance-em.com](http://alliance-em.com)

**ANALYTICAL SERVICES**  
[allianceanalyticalservices.com](http://allianceanalyticalservices.com)

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**Regulatory Information**

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*Permit No.* Title V Permit No. 03735T48

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**Source Information**

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

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**Contact Information**

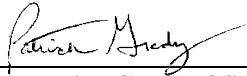
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<i>Test Location</i>	<i>Test Company</i>	<i>Analytical Laboratory</i>
The Chemours Company, FC, LLC 22828 Highway 87W Fayetteville, NC 28306	Alliance Source Testing, LLC 6515A Basile Rowe East Syracuse, NY 13057	Eurofins TestAmerica 5815 Middlebrook Pike Knoxville, TN 37921 Courtney Adkins
Facility Contact Christel E. Compton christel.e.compton@chemours.com	Project Manager/Field Team Leader Patrick Grady patrick.grady@stacktest.com	Courtney.adkins@testamericainc.com
	QA/QC Manager Heather Morgan heather.morgan@stacktest.com	
	Report Coordinator Leslie Ashley leslie.ashley@stacktest.com	

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.



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**Patrick Grady, QSTI**  
**Project Manager**  
**Alliance Source Testing, LLC**

January 19, 2022

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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. 03735T48. Source emissions testing was 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).

**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**

<b>Chemours Personnel</b>	Eddie Vega Dianne Fields
<b>NCDEQ Personnel</b>	Gary Saunders
<b>AST Personnel</b>	Patrick Grady Kathleen DeMong 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 December 16, 2021. Testing consisted of determining the emission rates of HFPO-DA at the inlet and outlet of the VEN carbon bed. The VEN unit was running a campaign of PSEPVE during the test program.

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	12/16/21	12/16/21	12/16/21	--
<b>HFPO-DA Data</b>				
Outlet Emission Rate, lb/hr	8.6E-05	4.6E-05	6.6E-05	6.6E-05
Inlet Emission Rate, lb/hr	2.9E-02	2.4E-02	2.5E-02	2.6E-02
Reduction Efficiency, %	99.7	99.8	99.7	99.7



## 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. H<sub>2</sub>O.
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% NH<sub>4</sub>OH) 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% NH<sub>4</sub>OH 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% NH<sub>4</sub>OH 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% NH<sub>4</sub>OH 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 Inlet  
**Project No.:** 2021-3126  
**Run No.:** 1  
**Parameter:** HFPO-DA

**Meter Pressure (Pm), in. Hg**

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

where,

$P_b \frac{30.32}{\text{in. Hg}}$  = barometric pressure, in. Hg  
 $\Delta H \frac{1.988}{\text{in. H}_2\text{O}}$  = pressure differential of orifice, in H<sub>2</sub>O  
 $P_m \frac{30.47}{\text{in. Hg}}$  = in. Hg

**Absolute Stack Gas Pressure (Ps), in. Hg**

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

where,

$P_b \frac{30.32}{\text{in. Hg}}$  = barometric pressure, in. Hg  
 $P_g \frac{-8.50}{\text{in. H}_2\text{O}}$  = static pressure, in. H<sub>2</sub>O  
 $P_s \frac{29.70}{\text{in. Hg}}$  = in. Hg

**Standard Meter Volume (Vmstd), dscf**

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

where,

$Y \frac{0.991}{\text{dimensionless}}$  = meter correction factor  
 $V_m \frac{70.955}{\text{cf}}$  = meter volume, cf  
 $P_m \frac{30.47}{\text{in. Hg}}$  = absolute meter pressure, in. Hg  
 $T_m \frac{513.8}{\text{°R}}$  = absolute meter temperature, °R  
 $Vmstd \frac{73.539}{\text{dscf}}$  = dscf

**Standard Wet Volume (Vwstd), scf**

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

where,

$V_{lc} \frac{35.7}{\text{ml}}$  = volume of H<sub>2</sub>O collected, ml  
 $Vwstd \frac{1.684}{\text{scf}}$  = 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,

$T_s \frac{78.0}{\text{°F}}$  = stack temperature, °F  
 $P_s \frac{29.70}{\text{in. Hg}}$  = absolute stack gas pressure, in. Hg  
 $BWS_{sat} \frac{0.032}{\text{dimensionless}}$  = dimensionless

**Moisture Fraction (BWS), dimensionless (measured)**

$$BWS = \frac{Vwstd}{(Vwstd + Vmstd)}$$

where,

$Vwstd \frac{1.684}{\text{scf}}$  = standard wet volume, scf  
 $Vmstd \frac{73.539}{\text{dscf}}$  = standard meter volume, dscf  
 $BWS \frac{0.022}{\text{dimensionless}}$  = dimensionless

**Moisture Fraction (BWS), dimensionless**

$$BWS = BWS_{msd} \text{ unless } BWS_{sat} < BWS_{msd}$$

where,

$BWS_{sat} \frac{0.032}{\text{dimensionless}}$  = moisture fraction (theoretical at saturated conditions)  
 $BWS_{msd} \frac{0.022}{\text{dimensionless}}$  = moisture fraction (measured)  
 $BWS \frac{0.022}{\text{dimensionless}}$

**Location:** Chemours Company - Fayetteville Works Facility, NC  
**Source:** VEN Carbon Bed Inlet  
**Project No.:** 2021-3126  
**Run No.:** 1  
**Parameter:** HFPO-DA

**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,

$CO_2$	$\frac{0.1}{28.85}$	= carbon dioxide concentration, %
$O_2$	$\frac{20.9}{28.85}$	= oxygen concentration, %
$Md$	$\frac{28.85}{28.85}$	= lb/lb mol

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

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

where,

$Md$	$\frac{28.85}{28.61}$	= molecular weight (DRY), lb/lb mol
$BWS$	$\frac{0.022}{28.61}$	= moisture fraction, dimensionless
$Ms$	$\frac{28.61}{28.61}$	= 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,

$Cp$	$\frac{0.840}{0.669}$	= pitot tube coefficient
$\Delta P^{1/2}$	$\frac{0.669}{537.7}$	= velocity head of stack gas, (in. H <sub>2</sub> O) <sup>1/2</sup>
$Ts$	$\frac{537.7}{29.70}$	= absolute stack temperature, °R
$Ps$	$\frac{29.70}{28.61}$	= absolute stack gas pressure, in. Hg
$Ms$	$\frac{28.61}{38.2}$	= molecular weight of stack gas, lb/lb mol
$Vs$	$\frac{38.2}{38.2}$	= ft/sec

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

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

where,

$Vs$	$\frac{38.2}{16.218}$	= stack gas velocity, ft/sec
$As$	$\frac{7.07}{16.218}$	= cross-sectional area of stack, ft <sup>2</sup>
$Qa$	$\frac{16.218}{16.218}$	= acfm

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

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

where,

$Qa$	$\frac{16.218}{15.443}$	= average stack gas flow at stack conditions, acfm
$BWS$	$\frac{0.022}{15.443}$	= moisture fraction, dimensionless
$Ps$	$\frac{29.70}{537.7}$	= absolute stack gas pressure, in. Hg
$Ts$	$\frac{537.7}{15.443}$	= absolute stack temperature, °R
$Qs$	$\frac{15.443}{15.443}$	= dscfm

**Dry Gas Meter Calibration Check (Yqa), dimensionless**

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

where,

$Y$	$\frac{0.991}{96}$	= meter correction factor, dimensionless
$\Theta$	$\frac{96}{70.955}$	= run time, min.
$V_m$	$\frac{70.955}{513.8}$	= total meter volume, dcf
$T_m$	$\frac{513.8}{1.88}$	= absolute meter temperature, °R
$\Delta H_{@}$	$\frac{1.88}{30.32}$	= orifice meter calibration coefficient, in. H <sub>2</sub> O
$P_b$	$\frac{30.32}{1.988}$	= barometric pressure, in. Hg
$\Delta H_{avg}$	$\frac{1.988}{28.85}$	= average pressure differential of orifice, in H <sub>2</sub> O
$M_d$	$\frac{28.85}{1.397}$	= molecular weight (DRY), lb/lb mol
$(\Delta H)^{1/2}$	$\frac{1.397}{-2.3}$	= average squareroot pressure differential of orifice, (in. H <sub>2</sub> O) <sup>1/2</sup>
$Y_{qa}$	$\frac{-2.3}{-2.3}$	= dimensionless

**Location:** Chemours Company - Fayetteville Works Facility, NC  
**Source:** VEN Carbon Bed Inlet  
**Project No.:** 2021-3126  
**Run No.:** 1  
**Parameter:** HFPO-DA

Volume of Nozzle (Vn), ft<sup>3</sup>

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

where,

Ts	537.7	= absolute stack temperature, °R
Ps	29.70	= absolute stack gas pressure, in. Hg
Vlc	35.7	= volume of H <sub>2</sub> O collected, ml
Vm	70.955	= meter volume, cf
Pm	30.47	= absolute meter pressure, in. Hg
Y	0.991	= meter correction factor, unitless
Tm	513.8	= absolute meter temperature, °R
Vn	77.226	= volume of nozzle, ft <sup>3</sup>

Isokinetic Sampling Rate (I), %

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

where,

Vn	77.226	= nozzle volume, ft <sup>3</sup>
θ	96.0	= run time, minutes
An	0.00036	= area of nozzle, ft <sup>2</sup>
Vs	38.2	= average velocity, ft/sec
I	98.1	= %

HFPO-DA Concentration (C), ng/dscm

$$C = \frac{M \times 35.313}{Vmstd}$$

where,

M	1,059,100	= HFPO-DA mass, ng
Vmstd	73.539	= standard meter volume, dscf
C <sub>NH3</sub>	508596.03	= ng/dscm

HFPO-DA Emission Rate (ER), lb/hr

$$ER = \frac{M \times Q_s \times 60}{Vmstd \times 4.54E + 11}$$

where,

M	1,059,100	= HFPO-DA mass, ng
Qs	15,443	= average stack gas flow at standard conditions, dscfm
Vmstd	73.539	= standard meter volume, dscf
ER	0.03	= lb/hr

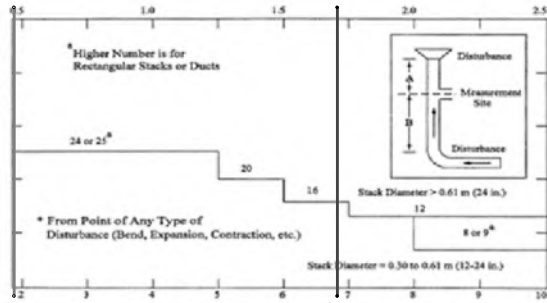
## Appendix B



Location Chemours Company - Fayetteville Works Facility, NC  
 Source VEN Carbon Bed Inlet  
 Project No. 2021-3126  
 Date: 12/15/21

**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 ft<sup>2</sup>  
 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 12/15/21  
 Reviewer (Initial and Date): JS 12/15/21



**CIRCULAR DUCT**

**LOCATION OF TRAVERSE POINTS**

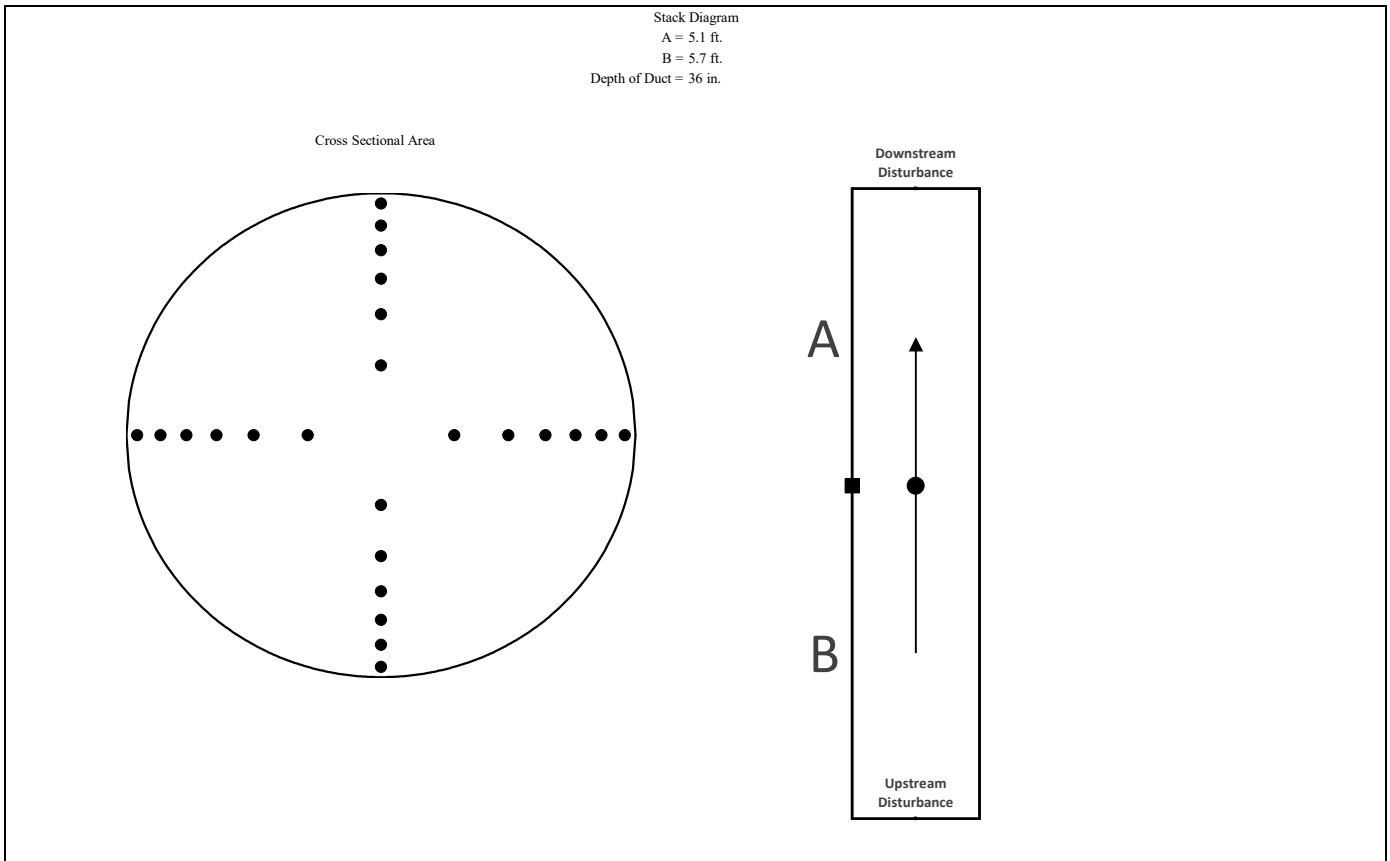
Number of traverse points on a diameter

	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.



**Location** Chemours Company - Fayetteville Works Facility, NC  
**Source** VEN Carbon Bed Inlet  
**Project No.** 2021-3126  
**Date** 12/16/21

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

**Location** Chemours Company - Fayetteville Works Facility, NC  
**Source** VEN Carbon Bed Inlet  
**Project No.** 2021-3126  
**Parameter** HFPO-DA

Run Number		Run 1	Run 2	Run 3	Average
Date		12/16/21	12/16/21	12/16/21	--
Start Time		9:23	12:08	14:44	--
Stop Time		11:28	14:08	16:46	--
Run Time, min	( $\theta$ )	96.0	96.0	96.0	96.0
<b>INPUT DATA</b>					
Barometric Pressure, in. Hg	(Pb)	30.32	30.32	30.32	30.32
Meter Correction Factor	(Y)	0.991	0.991	0.991	0.991
Orifice Calibration Value	( $\Delta H @$ )	1.880	1.880	1.880	1.880
Meter Volume, ft <sup>3</sup>	(Vm)	70.955	76.616	73.962	73.844
Meter Temperature, °F	(Tm)	54.1	70.8	75.5	66.8
Meter Temperature, °R	(Tm)	513.8	530.4	535.2	526.5
Meter Orifice Pressure, in. WC	( $\Delta H$ )	1.988	2.160	1.999	2.049
Volume H <sub>2</sub> O Collected, mL	(Vlc)	35.7	41.2	40.8	39.2
Nozzle Diameter, in	(Dn)	0.256	0.256	0.256	0.256
Area of Nozzle, ft <sup>2</sup>	(An)	0.0004	0.0004	0.0004	0.0004
FH HFPO-DA Mass, ng	M <sub>(HFPODA)</sub>	100,000.0	84,700.0	84,300.0	89,666.7
BH HFPO-DA Mass, ng	M <sub>(HFPODA)</sub>	937,000.0	765,000.0	797,000.0	833,000.0
Imp HFPO-DA Mass, ng	M <sub>(HFPODA)</sub>	20,700.0	34,100.0	21,300.0	25,366.7
Breakthrough HFPO-DA Mass, ng	M <sub>(HFPODA)</sub>	1,400.0	632.0	2,080.0	1,370.67
Total HFPO-DA Mass, ng	M <sub>(HFPODA)</sub>	1,059,100.0	884,432.0	904,680.0	949,404.0
<b>ISOKINETIC DATA</b>					
Standard Meter Volume, ft <sup>3</sup>	(Vmstd)	73.539	76.943	73.585	74.689
Standard Water Volume, ft <sup>3</sup>	(Vwstd)	1.684	1.943	1.924	1.850
Moisture Fraction Measured	(BWSmsd)	0.022	0.025	0.025	0.024
Moisture Fraction @ Saturation	(BWSsat)	0.032	0.044	0.050	0.042
Moisture Fraction	(BWS)	0.022	0.025	0.025	0.024
Meter Pressure, in Hg	(Pm)	30.47	30.48	30.47	30.47
Volume at Nozzle, ft <sup>3</sup>	(Vn)	77.226	82.449	79.534	79.74
Isokinetic Sampling Rate, (%)	(I)	98.1	100.3	100.0	99.5
DGM Calibration Check Value, (+/- 5%)	(Y <sub>qa</sub> )	-2.3	-0.3	-0.5	-1.0
<b>EMISSION CALCULATIONS</b>					
HFPO-DA Concentration, ng/dscm	C <sub>(HFPODA)</sub>	5.1E+05	4.1E+05	4.3E+05	4.5E+05
HFPO-DA Emission Rate, lb/hr	ER <sub>(HFPODA)</sub>	2.9E-02	2.4E-02	2.5E-02	2.6E-02

**Location** Chemours Company - Fayetteville Works Facility, NC  
**Source** VEN Carbon Bed Inlet  
**Project No.** 2021-3126  
**Parameter** HFPO-DA

Run Number		Run 1	Run 2	Run 3	Average
Date		12/16/21	12/16/21	12/16/21	--
Start Time		9:23	12:08	14:44	--
Stop Time		11:28	14:08	16:46	--
Run Time, min		96.0	96.0	96.0	96.0
<b>VELOCITY HEAD, in. WC</b>					
Point 1		0.22	0.24	0.24	0.23
Point 2		0.39	0.36	0.29	0.35
Point 3		0.51	0.46	0.40	0.46
Point 4		0.53	0.52	0.50	0.52
Point 5		0.52	0.52	0.53	0.52
Point 6		0.48	0.50	0.52	0.50
Point 7		0.46	0.49	0.48	0.48
Point 8		0.46	0.49	0.47	0.47
Point 9		0.46	0.52	0.45	0.48
Point 10		0.48	0.54	0.46	0.49
Point 11		0.48	0.56	0.45	0.50
Point 12		0.50	0.52	0.48	0.50
Point 13		0.18	0.21	0.21	0.20
Point 14		0.19	0.24	0.24	0.22
Point 15		0.45	0.45	0.36	0.42
Point 16		0.51	0.56	0.45	0.51
Point 17		0.61	0.65	0.59	0.62
Point 18		0.63	0.67	0.64	0.65
Point 19		0.57	0.58	0.64	0.60
Point 20		0.49	0.52	0.55	0.52
Point 21		0.46	0.52	0.50	0.49
Point 22		0.46	0.52	0.49	0.49
Point 23		0.47	0.54	0.48	0.50
Point 24		0.45	0.52	0.46	0.48
<b>CALCULATED DATA</b>					
Square Root of $\Delta P$ , (in. WC) <sup>1/2</sup>	( $\Delta P$ )	0.669	0.692	0.667	0.676
Pitot Tube Coefficient	(Cp)	0.840	0.840	0.840	0.840
Barometric Pressure, in. Hg	(Pb)	30.32	30.32	30.32	30.32
Static Pressure, in. WC	(Pg)	-8.50	-8.50	-9.00	-8.67
Stack Pressure, in. Hg	(Ps)	29.70	29.70	29.66	29.68
Stack Cross-sectional Area, ft <sup>2</sup>	(As)	7.07	7.07	7.07	7.07
Temperature, °F	(Ts)	78.0	87.7	91.3	85.7
Temperature, °R	(Ts)	537.7	547.4	551.0	545.337
Moisture Fraction Measured	(BWSmsd)	0.022	0.025	0.025	0.024
Moisture Fraction @ Saturation	(BWSsat)	0.032	0.044	0.050	0.042
Moisture Fraction	(BWS)	0.022	0.025	0.025	0.024
O <sub>2</sub> Concentration, %	(O <sub>2</sub> )	20.9	20.9	20.9	20.9
CO <sub>2</sub> Concentration, %	(CO <sub>2</sub> )	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)	28.61	28.59	28.58	28.59
Velocity, ft/sec	(Vs)	38.2	39.9	38.6	38.9
<b>VOLUMETRIC FLOW RATE</b>					
At Stack Conditions, acfm	(Qa)	16,218	16,932	16,386	16,512
At Standard Conditions, dscfm	(Qs)	15,443	15,801	15,160	15,468

**Location** Chemours Company - Fayetteville Works Facility, NC  
**Source** VEN Carbon Bed Inlet  
**Project No.** 2021-3126  
**Parameter** HFPO-DA  
**Analysis** Gravimetric

Run 1	Date: 12/16/21								
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	282.6	466.8	758.6	753.4	762.5	477.0	316.2	872.2	4689.3
Final Mass, g	297.6	469.6	758.4	752.8	761.8	478.4	321.0	885.4	4725.0
Gain	15.0	2.8	-0.2	-0.6	-0.7	1.4	4.8	13.2	35.7
Run 2	Date: 12/16/21								
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	297.0	499.4	765.0	766.6	758.4	477.8	314.2	896.0	4774.4
Final Mass, g	307.8	505.0	763.0	765.8	758.6	480.2	324.2	911.0	4815.6
Gain	10.8	5.6	-2.0	-0.8	0.2	2.4	10.0	15.0	41.2
Run 3	Date: 12/16/21								
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	307.4	467.4	771.6	751.4	762.0	477.6	298.8	862.4	4698.6
Final Mass, g	322.4	470.2	770.4	751.4	762.0	478.6	305.8	878.6	4739.4
Gain	15.0	2.8	-1.2	0.0	0.0	1.0	7.0	16.2	40.8

Location: Chemours Company - Fayetteville Works Facility, N		Start Time: 9:23		Source: VEN Carbon Bed Inlet		Parameter: HFPO-DA					
Date: 12/16/21		Run 1		Project No.: 2021-3126		Project No.: 2021-3126					
VALID		VALID		11:28		11:28					
STACK DATA (EST)		EQUIPMENT		STACK DATA (EST)		FILTER NO.		STACK DATA (FINAL)		MOIST. DATA	
Moisture: 2.5 % est.		Meter Box ID: 5		Est. Tm: 55 °F				Pb: 30.32 in. Hg		V/c (ml)	
Barometric: 30.40 in. Hg		Y: 0.991		Est. Ts: 92 °F				Pg: -8.50 in. WC		35.7	
Static Press: -6.80 in. WC		ΔH @ (in. WC): 1.880		Est. ΔP: 0.62 in. WC				O <sub>2</sub> : 20.9 %		K-FACTOR	
Stack Press: 29.90 in. Hg		Probe ID: TC 7D		Est. Dn: 0.243 in.				CO <sub>2</sub> : 0.1 %		4.229	
CO <sub>2</sub> : 0.1 %		Liner Material: glass		Target Rate: 0.78 scfm				Check Pt. Initial		Final	
O <sub>2</sub> : 20.9 %		Pitot ID: P4-1		LEAK CHECK: Pre Mid 1 Mid 2 Mid 3 Post				Mid 1 (cf) 406.472		406.568	
N <sub>2</sub> /CO: 79.0 %		Pitot Cp/Type: 0.840		Leak Rate (cfm): 0.005 0.005 0.004 -- 0.006				Mid 2 (cf) 406.568		406.654	
Md: 28.85 lb/lb-mole		Nozzle ID: G-1		Vacuum (in Hg): 8 8 9 -- 12				Mid 3 (cf)		--	
Ms: 28.58 lb/lb-mole		Nozzle Dn (in.): 0.256		Pitot Tube: Pass -- -- --				Mid-Point Leak Check Vol (cf):		0.182	

Sample Pt	Sample Time (minutes)		Dry Gas Meter Reading (ft <sup>3</sup> )	Pitot Tube ΔP (in WC)	Gas Temperatures (°F)		Orifice Press. ΔH (in. WC)	Pump Vac (in. Hg)	Gas Temperatures (°F)			Vs (fps)			
	Begin	End			DGM Average	Stack			Probe	Filter	Imp Exit		Aux	% ISO	
					Amb.	Amb.	Ideal	Actual	Amb.	Amb.	Amb.	Amb.			
A1	0:00	4:00	370.915	0.22	43	70	0.95	0.96	4	75	75	50	43	104.9	26.52
2	4:00	8:00	373.100	0.39	44	74	1.67	1.70	5	78	78	42	40	104.9	35.44
3	8:00	12:00	376.000	0.51	45	76	2.18	2.20	6	78	78	43	38	95.0	40.60
4	12:00	16:00	379.000	0.53	45	76	2.26	2.30	6	81	83	44	40	99.4	41.39
5	16:00	20:00	382.200	0.52	47	76	2.23	2.20	6	83	85	45	39	96.8	41.00
6	20:00	24:00	385.300	0.48	49	77	2.06	2.10	6	83	84	45	39	94.0	39.43
7	24:00	28:00	388.200	0.46	49	77	1.98	2.00	6	82	83	44	39	96.0	38.60
8	28:00	32:00	391.100	0.46	49	77	1.98	2.00	6	82	84	42	39	102.6	38.60
9	32:00	36:00	394.200	0.46	51	77	1.98	2.00	6	83	84	43	40	98.9	38.60
10	36:00	40:00	397.200	0.48	53	77	2.08	2.10	6	83	83	44	38	102.9	39.43
11	40:00	44:00	400.400	0.48	54	78	2.08	2.10	6	83	84	44	40	99.6	39.46
12	44:00	48:00	403.500	0.50	54	78	2.16	2.20	6	83	83	44	40	93.6	40.28
B1	48:00	52:00	406.472	0.18	54	70	0.79	0.80	4	83	85	47	37	105.2	23.99
2	52:00	56:00	408.500	0.19	55	74	0.83	0.84	4	85	86	43	37	101.2	24.74
3	56:00	60:00	410.500	0.45	55	78	1.95	2.00	5	85	86	41	38	96.0	38.21
4	60:00	64:00	413.400	0.51	55	80	2.20	2.20	6	85	86	41	38	93.5	40.75
5	64:00	68:00	416.400	0.61	57	80	2.64	2.60	8	85	85	42	35	93.8	44.57
6	68:00	72:00	419.700	0.63	60	82	2.73	2.70	9	88	87	43	37	97.5	45.38
7	72:00	76:00	423.200	0.57	61	82	2.48	2.50	8	87	86	44	38	102.3	43.16
8	76:00	80:00	426.700	0.49	62	82	2.14	2.10	8	87	86	45	37	100.5	40.02
9	80:00	84:00	429.900	0.46	64	82	2.02	2.00	8	87	86	45	39	106.6	38.78
10	84:00	88:00	433.200	0.46	64	83	2.01	2.00	8	87	87	45	40	93.7	38.81
11	88:00	92:00	436.100	0.47	64	83	2.05	2.10	8	87	86	46	40	96.0	39.23
12	92:00	96:00	439.100	0.45	64	83	1.97	2.00	8	87	86	46	40	96.5	38.39
<b>Final DGM:</b> 442.052															

RESULTS											
Run Time	V <sub>m</sub>	ΔP	T <sub>m</sub>	T <sub>s</sub>	Max Vac	ΔH	%ISO	BWS	V <sub>qa</sub>		
96.0 min	70.955 ft <sup>3</sup>	0.46 in. WC	54.1 °F	78.0 °F	9	1.988 in. WC	98.1	0.022	-2.3		

# Isokinetic Field Data

Location: Chemours Company - Fayetteville Works Facility, N		Start Time: 12:08		Source: VEN Carbon Bed Inlet	
Date: 12/16/21		End Time: 14:08		Project No.: 2021-3126	
Run 2		VALID		Parameter: HFPO-DA	
STACK DATA (EST)		EQUIPMENT		STACK DATA (FINAL)	
Moisture: 2.5 % est.	Meter Box ID: 5	Est. Tm: 54 °F	Filter No.	Pb: 30.32 in. Hg	MOIST. DATA
Barometric: 30.40 in. Hg	Y: 0.991	Est. Ts: 78 °F		Pg: -8.50 in. WC	V/c (ml)
Static Press: -6.80 in. WC	AH @ (in. WC): 1.880	Est. ΔP: 0.46 in. WC		O <sub>2</sub> : 20.9 %	K-FACTOR
Stack Press: 29.90 in. Hg	Probe ID: TC 7D	Est. Dn: 0.261 in.		CO <sub>2</sub> : 0.1 %	4.33
CO <sub>2</sub> : 0.1 %	Liner Material: glass	Target Rate: 0.78 scfm		Check Pt. Initial	Final
O <sub>2</sub> : 20.9 %	Pitot ID: P4-1	LEAK CHECK: Pre Mid 1 Mid 2 Mid 3 Post		Mid 1 (cf) 480.358	0.184
N <sub>2</sub> /CO: 79.0 %	Pitot Cp/Type: 0.840	Leak Rate (cfm): 0.012 0.010 0.010 0.010		Mid 2 (cf) 480.358	0.160
Md: 28.85 lb/lb-mole	Nozzle ID: G-1	Vacuum (in Hg): 12 15 12		Mid 3 (cf)	--
Ms: 28.58 lb/lb-mole	Nozzle Dn (in.): 0.256	Pitot Tube: Pass		Mid-Point Leak Check Vol (cf):	0.344

Sample Pt	Sample Time (minutes)		Dry Gas Meter Reading (ft <sup>3</sup> )	Pitot Tube ΔP (in WC)	Gas Temperatures (°F)		Orifice Press. ΔH (in. WC)	Pump Vac (in. Hg)	Gas Temperatures (°F)			Vs (fps)		
	Begin	End			DGM Average	Stack			Probe	Filter	Imp Exit		Aux	% ISO
A1	0:00	4:00	442.432	0.24	--	84	1.05	6	90	94	60	48	106.2	28.06
2	4:00	8:00	444.800	0.36	64	84	1.57	6	91	92	52	41	98.7	34.37
3	8:00	12:00	447.500	0.46	66	85	2.01	6	89	92	51	43	96.8	38.88
4	12:00	16:00	450.500	0.52	66	86	2.27	8	90	92	50	42	97.3	41.38
5	16:00	20:00	453.700	0.52	68	87	2.27	8	95	95	52	40	100.0	41.42
6	20:00	24:00	457.000	0.50	68	87	2.19	8	95	95	53	38	102.0	40.61
7	24:00	28:00	460.300	0.49	68	87	2.14	8	98	95	52	41	96.7	40.21
8	28:00	32:00	463.400	0.49	69	87	2.15	8	94	95	53	41	102.8	40.21
9	32:00	36:00	466.700	0.52	69	87	2.28	9	94	94	53	43	102.8	41.42
10	36:00	40:00	470.100	0.54	71	87	2.37	9	94	94	52	39	97.6	42.21
11	40:00	44:00	473.400	0.56	71	87	2.46	9	95	95	52	42	98.8	42.98
12	44:00	48:00	476.800	0.52	71	87	2.29	9	95	94	53	42	101.7	41.42
B1	48:00	52:00	480.174	0.21	70	86	0.93	5	95	95	58	48	105.3	26.30
2	52:00	56:00	482.400	0.24	72	86	1.06	5	95	96	54	47	101.4	28.11
3	56:00	60:00	484.700	0.45	72	88	1.98	8	95	97	50	46	103.5	38.56
4	60:00	64:00	487.900	0.56	72	90	2.45	9	95	95	50	43	98.9	43.10
5	64:00	68:00	491.300	0.65	74	90	2.85	10	95	94	50	37	96.9	46.43
6	68:00	72:00	494.900	0.67	75	90	2.95	10	95	95	50	37	105.9	47.14
7	72:00	76:00	498.900	0.58	75	90	2.55	10	95	95	49	36	99.5	43.86
8	76:00	80:00	502.400	0.52	75	90	2.29	10	95	94	49	38	105.0	41.53
9	80:00	84:00	505.900	0.52	75	90	2.29	10	95	95	48	38	99.0	41.53
10	84:00	88:00	509.200	0.52	75	90	2.29	10	95	94	50	39	96.0	41.53
11	88:00	92:00	512.400	0.54	75	90	2.38	10	95	95	50	39	103.0	42.32
12	92:00	96:00	515.900	0.52	75	90	2.29	10	94	94	50	39	104.7	41.53
Final DGM:			519.392											

RESULTS											
Run Time	V <sub>m</sub>	ΔP	T <sub>m</sub>	T <sub>s</sub>	Max Vac	ΔH	%ISO	BWS	Y <sub>qa</sub>		
96.0 min	76.616 ft <sup>3</sup>	0.49 in. WC	70.8 °F	87.7 °F	10	2.160 in. WC	100.3	0.025	-0.3		

# Isokinetic Field Data

Location: Chemours Company - Fayetteville Works Facility, N			Start Time: 14:44			Source: VEN Carbon Bed Inlet			Parameter: HFPO-DA					
Date: 12/16/21			Run 3			VALID			Project No.: 2021-3126					
Stack Data (EST)			Equipment			Stack Data (EST)			Filter No.					
Moisture:	2.5	% est.	Meter Box ID:	5	Est. Tm:	71	°F	Pb:	30.32	in. Hg	MOIST. DATA			
Barometric:	30.40	in. Hg	Y:	0.991	Est. Ts:	88	°F	Pg:	-9.00	in. WC	V/c (ml)			
Static Press:	-6.80	in. WC	AH @ (in. WC):	1.880	Est. ΔP:	0.49	in. WC	O <sub>2</sub> :	20.9	%	K-FACTOR			
Stack Press:	29.90	in. Hg	Probe ID:	TC 7D	Est. Dn:	0.254	in.	CO <sub>2</sub> :	0.1	%	4.392			
CO <sub>2</sub> :	0.1	%	Liner Material:	glass	Target Rate:	0.78	scfm	Check Pt.	Initial	Final	Corr.			
O <sub>2</sub> :	20.9	%	Pitot ID:	P4-1	LEAK CHECK:	Pre	Mid 1	Mid 2	Mid 3	Post	Mid 1 (cf)	556.374	556.468	0.094
N <sub>2</sub> /CO:	79.0	%	Pitot Cp/Type:	0.840	S-type	0.006	0.005	0.007	--	0.006	Mid 2 (cf)	556.468	556.574	0.106
Md:	28.85	lb/lb-mole	Nozzle ID:	G-1	glass	Vacuum (in Hg):	12	12	12	14	Mid 3 (cf)			
Ms:	28.58	lb/lb-mole	Nozzle Dn (in.):	0.256		Pitot Tube:	Pass	--	--	Pass	Mid-Point Leak Check Vol (cf):			0.200

Sample Pt	Sample Time (minutes)		Dry Gas Meter Reading (ft <sup>3</sup> )	Pitot Tube ΔP (in WC)	Gas Temperatures (°F)		Orifice Press. ΔH (in. WC)	Pump Vac (in. Hg)	Gas Temperatures (°F)			Vs (fps)		
	Begin	End			DGM Average	Stack			Probe	Filter	Imp Exit		Aux	% ISO
A1	0.00	4.00	519.682	0.24	--	--	Ideal	Actual	96	97	58	50	102.3	28.14
2	4.00	8.00	522.000	0.29	72	87	1.06	1.10	96	97	58	47	100.6	31.04
3	8.00	12.00	524.500	0.40	73	91	1.27	1.30	97	99	58	42	99.4	36.49
4	12.00	16.00	527.400	0.50	74	92	1.75	1.75	98	98	60	42	101.3	40.80
5	16.00	20.00	530.700	0.53	74	92	2.19	2.20	98	98	57	41	95.1	42.00
6	20.00	24.00	533.900	0.52	76	92	2.33	2.30	98	97	55	41	99.0	41.61
7	24.00	28.00	537.200	0.48	76	92	2.29	2.30	98	99	55	41	103.0	39.97
8	28.00	32.00	540.500	0.47	76	92	2.11	2.10	98	97	54	44	100.9	39.56
9	32.00	36.00	543.700	0.45	77	92	2.07	2.10	98	98	52	45	102.9	38.71
10	36.00	40.00	546.900	0.46	77	92	1.98	2.00	98	98	53	45	98.6	39.13
11	40.00	44.00	550.000	0.45	77	92	2.03	2.00	97	98	52	43	99.7	38.71
12	44.00	48.00	553.100	0.48	78	92	1.98	2.00	97	98	52	43	101.8	39.97
B1	48.00	52.00	556.374	0.21	73	88	2.12	2.10	96	97	51	44	104.9	26.34
2	52.00	56.00	558.600	0.24	74	88	0.93	0.93	96	97	57	44	101.2	28.16
3	56.00	60.00	560.900	0.36	74	91	1.06	1.10	97	96	48	42	97.4	34.59
4	60.00	64.00	563.600	0.45	75	92	1.58	1.60	96	97	44	41	100.0	38.71
5	64.00	68.00	566.700	0.59	75	92	1.98	2.00	97	98	44	41	98.8	44.32
6	68.00	72.00	570.200	0.64	76	92	2.59	2.60	96	98	45	41	102.8	46.16
7	72.00	76.00	574.000	0.64	76	92	2.81	2.80	97	96	45	42	94.5	46.16
8	76.00	80.00	577.500	0.55	77	92	2.82	2.80	97	96	46	42	104.8	42.79
9	80.00	84.00	581.100	0.50	77	92	2.42	2.40	97	96	46	40	97.7	40.80
10	84.00	88.00	584.300	0.49	77	92	2.20	2.20	97	96	46	40	95.6	40.39
11	88.00	92.00	587.400	0.48	76	91	2.16	2.20	96	98	47	40	102.9	39.94
12	92.00	96.00	590.700	0.46	76	91	2.12	2.10	96	97	46	40	100.1	39.10
Final DGM:			593.844											

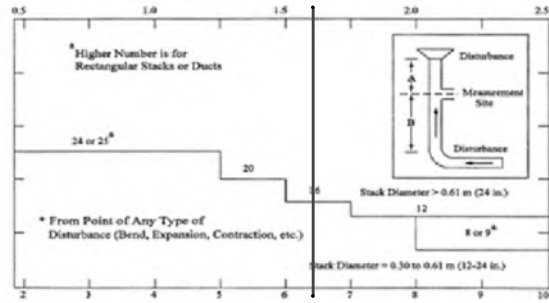
RESULTS		Run Time	V <sub>m</sub>	ΔP	T <sub>m</sub>	T <sub>s</sub>	Max Vac	ΔH	%ISO	BWS	V <sub>qa</sub>			
96.0	min	73.962	ft <sup>3</sup>	0.45	in. WC	75.5	°F	91.3	°F	1.999	in. WC	100.0	0.025	-0.5



Location Chemours Company - Fayetteville Works Facility, NC  
 Source VEN Carbon Bed Outlet  
 Project No. 2021-3126  
 Date: 12/15/21

**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 ft<sup>2</sup>  
 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 12/15/21  
 Reviewer (Initial and Date): JS 12/15/21



**CIRCULAR DUCT**

**LOCATION OF TRAVERSE POINTS**

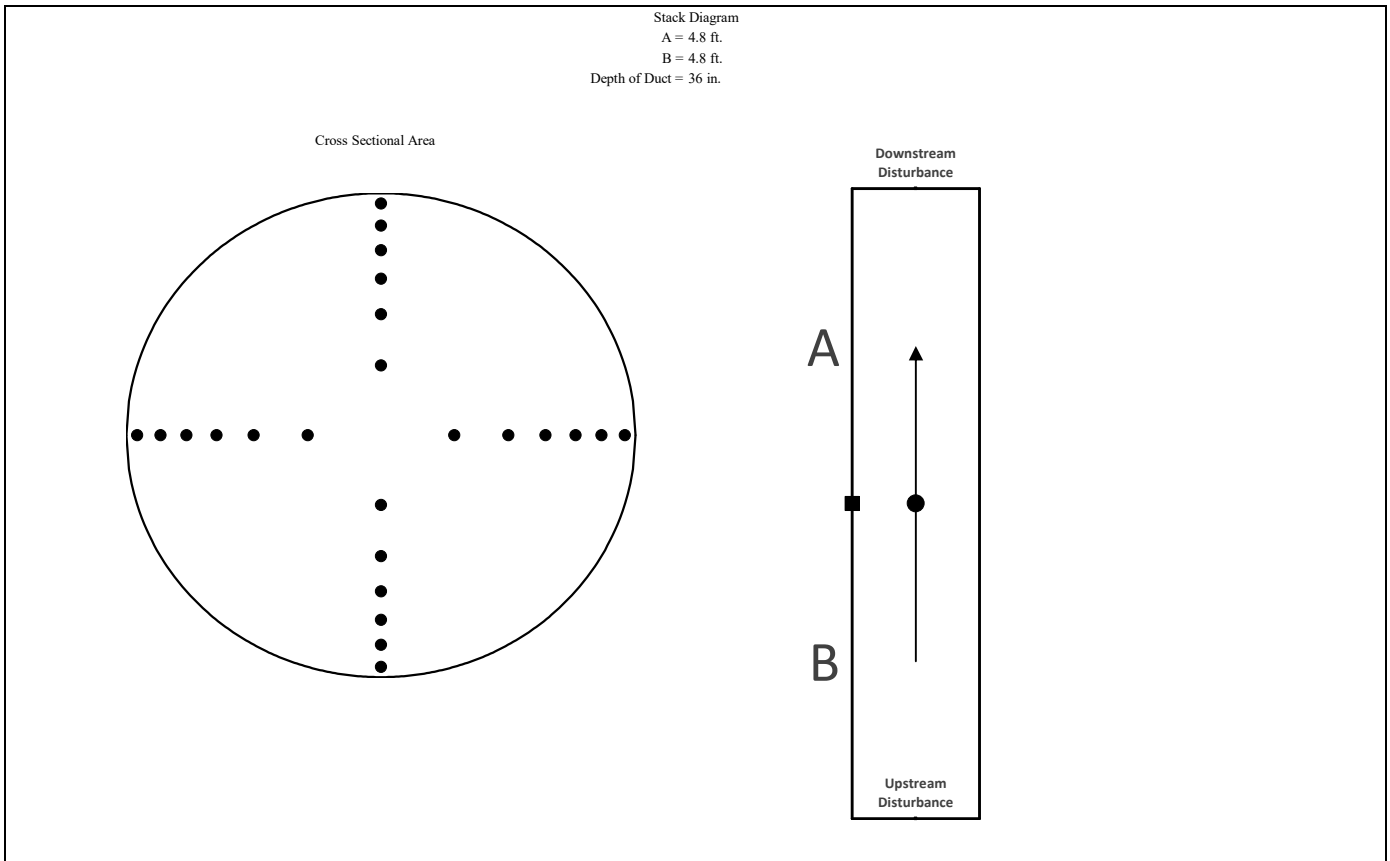
Number of traverse points on a diameter

	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.



Location Chemours Company - Fayetteville Works Facility, NC  
 Source VEN Carbon Bed Outlet  
 Project No. 2021-3126  
 Date 12/16/21

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

**Location** Chemours Company - Fayetteville Works Facility, NC  
**Source** VEN Carbon Bed Outlet  
**Project No.** 2021-3126  
**Parameter** HFPO-DA

Run Number		Run 1	Run 2	Run 3	Average
Date		12/16/21	12/16/21	12/16/21	--
Start Time		9:23	12:08	14:44	--
Stop Time		11:28	14:08	16:46	--
Run Time, min	( $\theta$ )	96.0	96.0	96.0	96.0
<b>INPUT DATA</b>					
Barometric Pressure, in. Hg	(Pb)	30.32	30.32	30.32	30.32
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 <sup>3</sup>	(Vm)	74.695	77.910	77.553	76.719
Meter Temperature, °F	(Tm)	50.1	67.5	72.6	63.4
Meter Temperature, °R	(Tm)	509.8	527.2	532.3	523.1
Meter Orifice Pressure, in. WC	( $\Delta H$ )	2.013	2.211	2.112	2.112
Volume H <sub>2</sub> O Collected, mL	(Vlc)	36.0	52.9	48.2	45.7
Nozzle Diameter, in	(Dn)	0.255	0.255	0.255	0.255
Area of Nozzle, ft <sup>2</sup>	(An)	0.0004	0.0004	0.0004	0.0004
FH HFPO-DA Mass, ng	M <sub>(HFPODA)</sub>	2,920.0	1,521.0	2,180.0	2,207.0
BH HFPO-DA Mass, ng	M <sub>(HFPODA)</sub>	196.0	157.0	185.0	179.3
Imp HFPO-DA Mass, ng	M <sub>(HFPODA)</sub>	52.7	0.0	83.6	45.4
Breakthrough HFPO-DA Mass, ng	M <sub>(HFPODA)</sub>	12.8	6.2	6.6	8.53
Total HFPO-DA Mass, ng	M <sub>(HFPODA)</sub>	3,181.5	1,684.2	2,455.2	2,440.3
<b>ISOKINETIC DATA</b>					
Standard Meter Volume, ft <sup>3</sup>	(Vmstd)	80.698	81.436	80.270	80.801
Standard Water Volume, ft <sup>3</sup>	(Vwstd)	1.698	2.495	2.273	1.781
Moisture Fraction Measured	(BWSmsd)	0.021	0.030	0.028	0.026
Moisture Fraction @ Saturation	(BWSsat)	0.041	0.053	0.058	0.051
Moisture Fraction	(BWS)	0.021	0.030	0.028	0.026
Meter Pressure, in Hg	(Pm)	30.47	30.48	30.48	30.48
Volume at Nozzle, ft <sup>3</sup>	(Vn)	83.604	86.434	85.464	85.17
Isokinetic Sampling Rate, (%)	(I)	101.6	100.9	102.2	101.6
DGM Calibration Check Value, (+/- 5%)	(Y <sub>qa</sub> )	1.8	0.0	1.6	1.1
<b>EMISSION CALCULATIONS</b>					
HFPO-DA Concentration, ng/dscm	C <sub>(HFPODA)</sub>	1.4E+03	7.3E+02	1.1E+03	1.1E+03
HFPO-DA Emission Rate, lb/hr	ER <sub>(HFPODA)</sub>	8.6E-05	4.6E-05	6.6E-05	6.6E-05
<b>REDUCTION CALCULATIONS</b>					
Inlet HFPO-DA Emission Rate, lb/hr	ER <sub>(HFPODA)</sub>	2.9E-02	2.4E-02	2.5E-02	2.6E-02
HFPO-DA Reduction Efficiency, %	ER <sub>(HFPODA)</sub>	99.7	99.8	99.7	99.7

**Location** Chemours Company - Fayetteville Works Facility, NC  
**Source** VEN Carbon Bed Outlet  
**Project No.** 2021-3126  
**Parameter** HFPO-DA

Run Number		Run 1	Run 2	Run 3	Average
Date		12/16/21	12/16/21	12/16/21	--
Start Time		9:23	12:08	14:44	--
Stop Time		11:28	14:08	16:46	--
Run Time, min		96.0	96.0	96.0	96.0
<b>VELOCITY HEAD, in. WC</b>					
Point 1		0.34	0.22	0.18	0.25
Point 2		0.35	0.32	0.24	0.30
Point 3		0.36	0.34	0.28	0.33
Point 4		0.37	0.35	0.32	0.35
Point 5		0.40	0.39	0.34	0.38
Point 6		0.44	0.42	0.39	0.42
Point 7		0.57	0.54	0.52	0.54
Point 8		0.57	0.54	0.52	0.54
Point 9		0.57	0.52	0.52	0.54
Point 10		0.56	0.55	0.51	0.54
Point 11		0.55	0.56	0.54	0.55
Point 12		0.54	0.56	0.54	0.55
Point 13		0.40	0.84	0.84	0.69
Point 14		0.41	0.83	0.83	0.69
Point 15		0.41	0.85	0.83	0.70
Point 16		0.43	0.84	0.85	0.71
Point 17		0.48	0.81	0.81	0.70
Point 18		0.56	0.84	0.76	0.72
Point 19		0.80	0.74	0.60	0.71
Point 20		0.85	0.52	0.49	0.62
Point 21		0.86	0.45	0.45	0.59
Point 22		0.84	0.43	0.44	0.57
Point 23		0.35	0.40	0.42	0.39
Point 24		0.35	0.39	0.43	0.39
<b>CALCULATED DATA</b>					
Square Root of $\Delta P$ , (in. WC) <sup>1/2</sup>	( $\Delta P$ )	0.709	0.732	0.713	0.718
Pitot Tube Coefficient	(Cp)	0.840	0.840	0.840	0.840
Barometric Pressure, in. Hg	(Pb)	30.32	30.32	30.32	30.32
Static Pressure, in. WC	(Pg)	2.60	2.60	2.60	2.60
Stack Pressure, in. Hg	(Ps)	30.51	30.51	30.51	30.51
Stack Cross-sectional Area, ft <sup>2</sup>	(As)	7.07	7.07	7.07	7.07
Temperature, °F	(Ts)	86.3	94.5	97.5	92.8
Temperature, °R	(Ts)	546.0	554.2	557.2	552.448
Moisture Fraction Measured	(BWSmsd)	0.021	0.030	0.028	0.026
Moisture Fraction @ Saturation	(BWSsat)	0.041	0.053	0.058	0.051
Moisture Fraction	(BWS)	0.021	0.030	0.028	0.026
O <sub>2</sub> Concentration, %	(O <sub>2</sub> )	20.9	20.9	20.9	20.9
CO <sub>2</sub> Concentration, %	(CO <sub>2</sub> )	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)	28.63	28.53	28.55	28.57
Velocity, ft/sec	(Vs)	40.3	41.9	40.9	41.0
<b>VOLUMETRIC FLOW RATE</b>					
At Stack Conditions, acfm	(Qa)	17,078	17,779	17,363	17,406
At Standard Conditions, dscfm	(Qs)	16,484	16,750	16,307	16,513

**Location** Chemours Company - Fayetteville Works Facility, NC  
**Source** VEN Carbon Bed Outlet  
**Project No.** 2021-3126  
**Parameter** HFPO-DA  
**Analysis** Gravimetric

Run 1	Date: 12/16/21								
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	284.6	511.8	702.2	784.2	765.2	484.2	324.8	843.4	4700.4
Final Mass, g	296.6	512.2	701.0	783.6	765.0	485.0	335.8	857.2	4736.4
Gain	12.0	0.4	-1.2	-0.6	-0.2	0.8	11.0	13.8	36.0
Run 2	Date: 12/16/21								
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	304.4	469.4	758.0	775.8	781.3	446.4	320.6	887.2	4743.1
Final Mass, g	321.0	476.0	754.8	775.6	782.0	448.8	333.6	904.2	4796.0
Gain	16.6	6.6	-3.2	-0.2	0.7	2.4	13.0	17.0	52.9
Run 3	Date: 12/16/21								
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	298.8	512.6	712.0	782.0	765.2	484.6	305.8	769.8	4630.8
Final Mass, g	315.6	513.4	709.4	781.6	765.6	486.6	318.6	788.2	4679.0
Gain	16.8	0.8	-2.6	-0.4	0.4	2.0	12.8	18.4	48.2

# Isokinetic Field Data

Location: Chemours Company - Fayetteville Works Facility, N		Start Time: 9:23	Source: VEN Carbon Bed Outlet
Date: 12/16/21	Run 1	End Time: 11:28	Project No.: 2021-3126
VALID		Parameter: HPPO-DA	
<b>STACK DATA (EST)</b>		<b>STACK DATA (FINAL)</b>	
Moisture: 2.5 % est.	Meter Box ID: 15	Pb: 30.32 in. Hg	MOIST. DATA
Barometric: 30.40 in. Hg	Y: 1.025	Pg: 2.60 in. WC	Vlc (ml)
Static Press: 2.80 in. WC	AH @ (in. WC): 1.720	O <sub>2</sub> : 20.9 %	K-FACTOR
Stack Press: 30.61 in. Hg	Probe ID: TC 5D	CO <sub>2</sub> : 0.1 %	3.893
CO <sub>2</sub> : 0.1 %	Liner Material: glass	Check Pt. Initial	Final
O <sub>2</sub> : 20.9 %	Pitot ID: P4-2	Mid 1 (cf)	383.500
N <sub>2</sub> /CO: 79.0 %	Pitot Cp/Type: 0.840	Mid 2 (cf)	383.518
Md: 28.85 lb/lb-mole	Nozzle ID: G-2	Mid 3 (cf)	0.081
Ms: 28.58 lb/lb-mole	Nozzle Dn (in.): 0.255	Mid-Point/Leak Check Vol (cf):	0.200

Sample Pt	Sample Time (minutes)		Dry Gas Meter Reading (ft <sup>3</sup> )	Pitot Tube ΔP (in WC)	Gas Temperatures (°F)		Orifice Press. ΔH (in. WC)	Pump Vac (in. Hg)	Gas Temperatures (°F)			Vs (fps)		
	Begin	End			DGM Average	Stack			Probe	Filter	Imp Exit		Aux	% ISO
A1	0.00	4.00	347.930	0.34	45	82	1.32	5	45	45	45	45	98.6	32.95
2	4.00	8.00	350.380	0.35	43	83	1.36	6	90	90	44	41	97.3	33.46
3	8.00	12.00	352.830	0.36	43	83	1.40	6	90	90	43	40	103.8	33.94
4	12.00	16.00	355.480	0.37	44	83	1.44	6	90	90	42	40	103.7	34.41
5	16.00	20.00	358.170	0.40	45	84	1.55	6	90	90	42	40	103.8	35.81
6	20.00	24.00	360.970	0.44	45	84	1.71	6	90	90	42	40	98.5	37.55
7	24.00	28.00	363.757	0.57	46	84	2.21	8	90	90	42	40	100.0	42.74
8	28.00	32.00	366.980	0.57	47	85	2.21	8	90	90	41	40	102.3	42.78
9	32.00	36.00	370.280	0.57	48	85	2.22	8	90	90	42	40	104.6	42.78
10	36.00	40.00	373.660	0.56	48	84	2.18	8	90	90	42	40	101.5	42.37
11	40.00	44.00	376.915	0.55	48	85	2.14	8	90	90	42	41	103.4	42.02
12	44.00	48.00	380.200	0.54	49	85	2.11	8	90	90	42	41	104.7	41.64
B1	48.00	52.00	383.500	0.40	52	87	1.57	7	96	90	49	46	106.3	35.90
2	52.00	56.00	386.400	0.41	53	88	1.60	7	92	91	42	46	99.8	36.38
3	56.00	60.00	389.160	0.41	53	88	1.60	7	90	93	42	44	101.3	36.38
4	60.00	64.00	391.960	0.43	54	88	1.69	7	90	93	44	47	104.0	37.26
5	64.00	68.00	394.910	0.48	54	89	1.88	7	90	93	46	48	102.2	39.40
6	68.00	72.00	397.970	0.56	47	89	2.16	8	95	95	47	48	100.1	42.56
7	72.00	76.00	401.160	0.80	55	89	3.13	11	95	98	48	47	102.1	50.87
8	76.00	80.00	405.100	0.85	56	90	3.32	11	95	96	50	50	102.5	52.48
9	80.00	84.00	409.182	0.86	57	90	3.37	11	95	94	53	50	102.7	52.79
10	84.00	88.00	413.300	0.84	57	90	3.29	11	95	96	54	50	107.4	52.17
11	88.00	92.00	417.560	0.35	58	87	1.39	6	95	94	54	49	102.2	33.59
12	92.00	96.00	420.200	0.35	58	90	1.38	5	95	95	53	45	101.9	33.68
<b>Final DGM:</b>			422.825											

RESULTS		Run Time	V <sub>m</sub>	ΔP	T <sub>m</sub>	T <sub>s</sub>	Max Vac	ΔH	%ISO	BWS	Y <sub>sp</sub>	
96.0	min	74.695	ft <sup>3</sup>	0.52	°F	86.3	°F	11	in. WC	101.6	0.021	1.8

# Isokinetic Field Data

Location: Chemours Company - Fayetteville Works Facility, Nc		Start Time: 12:08	Source: VEN Carbon Bed Outlet
Date: 12/16/21	Run 2	End Time: 14:08	Project No.: 2021-3126
VALID		Parameter: HFPO-DA	

STACK DATA (EST)		EQUIPMENT		STACK DATA (EST)		FILTER NO.		STACK DATA (FINAL)		MOIST. DATA	
Moisture:	2.5 % est.	Meter Box ID:	15	Est. Tm:	50 °F			Pb:	30.32 in. Hg		Vlc (ml)
Barometric:	30.40 in. Hg	Y:	1.025	Est. Ts:	86 °F			Pg:	2.60 in. WC		52.9
Static Press:	2.80 in. WC	AH @ (in. WC):	1.720	Est. AP:	0.52 in. WC			O <sub>2</sub> :	20.9 %		K-FACTOR
Stack Press:	30.61 in. Hg	Probe ID:	TC 5D	Est. Dn:	0.254 in.			CO <sub>2</sub> :	0.1 %		3.90
CO <sub>2</sub> :	0.1 %	Liner Material:	glass	Target Rate:	0.78 scfm			Check Pt.	Initial	Final	Corr.
O <sub>2</sub> :	20.9 %	Pitot ID:	P4-2	LEAK CHECK:	Pre Mid 1 Mid 2 Mid 3 Post			Mid 1 (cf)	458.120	458.188	0.068
N <sub>2</sub> /CO:	79.0 %	Pitot Cp/Type:	0.840 S-type	Leak Rate (cfm):	0.000 0.000 0.000 0.000			Mid 2 (cf)	458.188	458.299	0.111
Md:	28.85 lb/lb-mole	Nozzle ID:	G-2 glass	Vacuum (in. Hg):	7 10 10 14			Mid 3 (cf)			--
Ms:	28.58 lb/lb-mole	Nozzle Dn (in.):	0.255	Pitot Tube:	Pass Pass Pass Pass			Mid-Point Leak Check Vol (cf):			0.179

Sample Pt	Sample Time (minutes)		Dry Gas Meter Reading (ft <sup>3</sup> )	Pitot Tube ΔP (in WC)	Gas Temperatures (°F)		Orifice Press. ΔH (in. WC)	Pump Vac (in. Hg)	Gas Temperatures (°F)			Vs (fps)				
	Begin	End			DGM Average	Stack			Amb.	Probe	Filter		Imp Exit	Aux	Amb.	% ISO
A1	0:00	4:00	423.065	0.22	61	91	0.87	3	95	95	60	48	99.0	26.72		
2	4:00	8:00	425.100	0.32	62	93	1.26	5	95	102	59	46	98.9	32.29		
3	8:00	12:00	427.550	0.34	63	93	1.35	5	95	101	58	44	103.7	33.28		
4	12:00	16:00	430.200	0.35	64	93	1.39	5	95	97	57	42	102.0	33.77		
5	16:00	20:00	432.850	0.39	64	93	1.55	5	95	95	56	44	100.3	35.65		
6	20:00	24:00	435.600	0.42	64	93	1.66	5	95	97	54	45	101.6	36.99		
7	24:00	28:00	438.490	0.54	65	93	2.14	6	95	96	53	43	102.5	41.95		
8	28:00	32:00	441.800	0.54	66	93	2.14	7	95	95	53	42	102.0	41.95		
9	32:00	36:00	445.100	0.52	66	94	2.06	6	95	94	53	42	101.5	41.20		
10	36:00	40:00	448.320	0.55	67	94	2.18	7	95	95	53	44	100.4	42.37		
11	40:00	44:00	451.600	0.56	67	94	2.22	7	95	95	53	43	103.4	42.75		
12	44:00	48:00	455.010	0.56	68	94	2.23	7	95	95	54	43	94.2	42.75		
B1	48:00	52:00	458.120	0.84	68	93	3.34	12	95	95	58	47	102.8	52.32		
2	52:00	56:00	462.270	0.83	69	93	3.31	11	95	95	52	45	97.7	52.00		
3	56:00	60:00	466.200	0.85	69	96	3.37	12	99	99	55	49	101.0	52.77		
4	60:00	64:00	470.300	0.84	70	96	3.33	11	100	102	58	49	98.9	52.46		
5	64:00	68:00	474.300	0.81	70	96	3.22	11	100	100	59	45	103.3	51.51		
6	68:00	72:00	478.400	0.84	70	96	3.33	11	100	100	58	44	101.4	52.46		
7	72:00	76:00	482.500	0.74	71	96	2.95	11	100	101	55	43	97.3	49.24		
8	76:00	80:00	486.200	0.52	71	96	2.07	8	100	101	54	44	100.1	41.27		
9	80:00	84:00	489.400	0.45	71	97	1.79	8	100	100	53	45	102.9	38.43		
10	84:00	88:00	492.460	0.43	71	97	1.71	7	100	100	54	46	98.4	37.57		
11	88:00	92:00	495.320	0.40	71	97	1.59	7	100	100	54	46	102.7	36.23		
12	92:00	96:00	498.200	0.39	72	97	1.56	7	100	100	55	46	106.5	35.78		
<b>Final DGM:</b>			501.154													

RESULTS		Run Time	V <sub>m</sub>	ΔP	T <sub>m</sub>	T <sub>s</sub>	Max Vac	ΔH	%ISO	BWS	Y <sub>sp</sub>				
96.0	min	77.910	ft <sup>3</sup>	0.55	in. WC	67.5	°F	94.5	°F	12	2.211	in. WC	100.9	0.030	0.0

Location: Chemours Company - Fayetteville Works Facility, N		Start Time: 14:44		Source: VEN Carbon Bed Outlet		Parameter: HFPO-DA	
Date: 12/16/21		End Time: 16:46		Project No.: 2021-3126			
Run 3		VALID					

STACK DATA (EST)		EQUIPMENT		STACK DATA (EST)		FILTER NO.		STACK DATA (FINAL)		MOIST. DATA	
Moisture: 2.5 % est.	Meter Box ID: I5	Est. Tm: 68 °F		Est. Ts: 95 °F		Pb: 30.32 in. Hg		Vlc (ml)			
Barometric: 30.40 in. Hg	Y: 1.025	Est. AP: 0.55 in. WC		Est. Dn: 0.246 in.		CO <sub>2</sub> : 0.1 %		Check Pt. Initial			
Static Press: 2.80 in. WC	AH @ (in. WC): 1.720	LEAK CHECK: Pre Mid 1 Mid 2 Mid 3 Post		Leak Rate (cfm): 0.000 0.000 0.000 0.000		Mid 1 (cf) 535.478		Final			
Stack Press: 30.61 in. Hg	Probe ID: TC.5D	Pitot Cp/Type: 0.840	S-type	Vacuum (in. Hg): 8 10 10 14		Mid 2 (cf) 535.541		Corr.			
CO <sub>2</sub> : 0.1 %	Liner Material: glass	Nozzle ID: G-2	glass	Pitot Tube: Pass Pass Pass Pass		Mid 3 (cf)					
O <sub>2</sub> : 20.9 %	Pitot ID: P4-2	Nozzle Dn (in.): 0.255				Mid-Point Leak Check Vol (cf): 0.090					
N <sub>2</sub> /CO: 79.0 %											
Mid: 28.85 lb/lb-mole											
Ms: 28.58 lb/lb-mole											

Sample Pt	Sample Time (minutes)		Dry Gas Meter Reading (ft <sup>3</sup> )	Pitot Tube ΔP (in WC)	Gas Temperatures (°F)		Orifice Press. ΔH (in. WC)	Pump Vac (in. Hg)	Gas Temperatures (°F)			Vs (fps)		
	Begin	End			DGM Average	Stack			Probe	Filter	Imp Exit		Aux	% ISO
A1	0:00	4:00	501.357	0.18	71	92	0.73	4	100	101	62	60	97.3	24.20
2	4:00	8:00	503.200	0.24	71	96	0.96	5	103	107	56	57	101.7	28.04
3	8:00	12:00	505.415	0.28	72	97	1.12	5	100	107	54	56	101.3	30.31
4	12:00	16:00	507.800	0.32	72	98	1.28	5	100	101	55	56	103.5	32.44
5	16:00	20:00	510.400	0.34	72	98	1.36	6	100	102	56	59	100.4	33.43
6	20:00	24:00	513.000	0.39	73	98	1.56	6	100	100	57	59	104.4	35.81
7	24:00	28:00	515.900	0.52	73	97	2.08	8	100	100	59	60	103.0	41.31
8	28:00	32:00	519.200	0.52	74	99	2.07	8	100	100	59	60	99.8	41.38
9	32:00	36:00	522.400	0.52	74	98	2.08	8	100	100	58	57	99.7	41.35
10	36:00	40:00	525.600	0.51	74	98	2.04	8	100	100	58	57	103.8	40.95
11	40:00	44:00	528.900	0.54	74	98	2.16	8	100	100	58	57	101.0	42.13
12	44:00	48:00	532.200	0.54	74	97	2.16	8	100	100	57	57	100.2	42.10
B1	48:00	52:00	535.478	0.84	72	98	3.34	11	100	100	60	59	99.8	52.55
2	52:00	56:00	539.520	0.83	73	98	3.30	11	100	100	59	55	101.1	52.24
3	56:00	60:00	543.599	0.83	73	98	3.30	11	100	102	58	54	101.7	52.24
4	60:00	64:00	547.700	0.85	73	98	3.38	12	100	100	56	54	102.9	52.86
5	64:00	68:00	551.900	0.81	73	98	3.22	12	100	100	55	54	103.1	51.60
6	68:00	72:00	556.010	0.76	72	98	3.02	12	100	100	54	52	100.6	49.99
7	72:00	76:00	559.890	0.60	72	98	2.39	12	100	100	54	53	105.2	44.41
8	76:00	80:00	563.500	0.49	72	98	1.95	11	100	100	53	54	108.7	40.14
9	80:00	84:00	566.875	0.45	72	98	1.79	10	100	100	54	54	105.0	38.46
10	84:00	88:00	570.000	0.44	72	98	1.75	10	100	100	54	55	105.4	38.03
11	88:00	92:00	573.100	0.42	72	97	1.68	9	100	100	55	55	99.4	37.13
12	92:00	96:00	575.960	0.43	72	97	1.72	9	100	100	55	55	104.4	37.57
Final DGM: 579.000														

RESULTS		Run Time	Vm	ΔP	Tm	Ts	Max Vac	ΔH	%ISO	BWS	Y <sub>qa</sub>	
96.0	min	77.553	ft <sup>3</sup>	0.53	°F	97.5	°F	12	in. WC	102.2	0.028	1.6



## Appendix C

## ANALYTICAL REPORT

Job Number: 140-25858-1

Job Description: Fayetteville Q2 Carbon Bed Field QC

Contract Number: LBIO-67048

For:

The Chemours Company FC, LLC

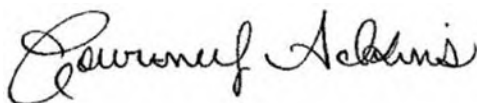
c/o AECOM

Sabre Building, Suite 300

4051 Ogletown Road

Newark, DE 19713

Attention: Michael Aucoin



Approved for release.  
Courtney M Adkins  
Project Manager II  
1/17/2022 8:13 AM

---

Courtney M Adkins, Project Manager II  
5815 Middlebrook Pike, Knoxville, TN, 37921  
(865)291-3019  
courtney.adkins@eurofinset.com  
01/17/2022

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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 Q2 Carbon Bed Field QC

Job ID: 140-25858-1

## 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 Q2 Carbon Bed Field QC

Job ID: 140-25858-1

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<b>Method</b>	<b>Method Description</b>	<b>Protocol</b>	<b>Laboratory</b>
537 (modified)	Fluorinated Alkyl Substances	EPA	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 Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

# Sample Summary

Client: The Chemours Company FC, LLC  
Project/Site: Fayetteville Q2 Carbon Bed Field QC

Job ID: 140-25858-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-25858-1	R-1589,1590 QC OTM-45 CB FH PBT	Air	12/16/21 00:00	12/18/21 16:30
140-25858-2	R-1591,1592,1594 QC OTM-45 CB BH PBT	Air	12/16/21 00:00	12/18/21 16:30
140-25858-3	R-1593 QC OTM-45 IMPINGERS 1,2&3 COND PBT	Air	12/16/21 00:00	12/18/21 16:30
140-25858-4	R-1595 QC OTM-45 CB IMPINGERS BREAKTHROUGH XAD-2 RESIN TUBE PBT	Air	12/16/21 00:00	12/18/21 16:30
140-25858-5	R-1596 QC OTM-45 CB DI WATER RB	Air	12/16/21 00:00	12/18/21 16:30
140-25858-6	R-1597 QC OTM-45 CB MEOH WITH 5% NH4OH RB	Air	12/16/21 00:00	12/18/21 16:30
140-25858-7	R-1598,1599 QC OTM-45 CB FH BT	Air	12/16/21 00:00	12/18/21 16:30
140-25858-8	R-1600,1601,1603 QC OTM-45 CB BH BT	Air	12/16/21 00:00	12/18/21 16:30
140-25858-9	R-1603 QC OTM-45 CB IMPINGERS 1,2&3 COND BT	Air	12/16/21 00:00	12/18/21 16:30
140-25858-10	R-1604 QC OTM-45 CB BREAKTHROUGH XAD-2 RESIN TUBE BT	Air	12/16/21 00:00	12/18/21 16:30
140-25858-12	C-2506 MEDIA CHECK XAD	Air	12/16/21 00:00	12/18/21 16:30
140-25858-13	C-2507 MEDIA CHECK FILTER	Air	12/16/21 00:00	12/18/21 16:30

**Job Narrative**  
**140-25858-1**

**Comments**

No additional comments.

**Receipt**

The samples were received on 12/18/2021 4:30 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.1° 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 Q2 Carbon Bed Field QC

Job ID: 140-25858-1

## LCMS

### Prep Batch: 57611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-25858-1	R-1589,1590 QC OTM-45 CB FH PBT	Total/NA	Air	None	
140-25858-7	R-1598,1599 QC OTM-45 CB FH BT	Total/NA	Air	None	
140-25858-13	C-2507 MEDIA CHECK FILTER	Total/NA	Air	None	
MB 140-57611/1-B	Method Blank	Total/NA	Air	None	
LCS 140-57611/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-57611/3-B	Lab Control Sample Dup	Total/NA	Air	None	

### Prep Batch: 57613

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-25858-2	R-1591,1592,1594 QC OTM-45 CB BH PBT	Total/NA	Air	None	
140-25858-4	R-1595 QC OTM-45 CB IMPINGERS BREAKTH	Total/NA	Air	None	
140-25858-6	R-1597 QC OTM-45 CB MEOH WITH 5% NH4O	Total/NA	Air	None	
140-25858-8	R-1600,1601,1603 QC OTM-45 CB BH BT	Total/NA	Air	None	
140-25858-10	R-1604 QC OTM-45 CB BREAKTHROUGH XAD	Total/NA	Air	None	
140-25858-12	C-2506 MEDIA CHECK XAD	Total/NA	Air	None	
MB 140-57613/1-B	Method Blank	Total/NA	Air	None	
LCS 140-57613/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-57613/3-B	Lab Control Sample Dup	Total/NA	Air	None	

### Prep Batch: 57645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-25858-3	R-1593 QC OTM-45 IMPINGERS 1,2&3 COND F	Total/NA	Air	None	
140-25858-5	R-1596 QC OTM-45 CB DI WATER RB	Total/NA	Air	None	
140-25858-9	R-1603 QC OTM-45 CB IMPINGERS 1,2&3 CON	Total/NA	Air	None	
MB 140-57645/1-B	Method Blank	Total/NA	Air	None	
LCS 140-57645/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-57645/3-B	Lab Control Sample Dup	Total/NA	Air	None	

### Cleanup Batch: 57659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-25858-3	R-1593 QC OTM-45 IMPINGERS 1,2&3 COND F	Total/NA	Air	Split	57645
140-25858-5	R-1596 QC OTM-45 CB DI WATER RB	Total/NA	Air	Split	57645
140-25858-9	R-1603 QC OTM-45 CB IMPINGERS 1,2&3 CON	Total/NA	Air	Split	57645
MB 140-57645/1-B	Method Blank	Total/NA	Air	Split	57645
LCS 140-57645/2-B	Lab Control Sample	Total/NA	Air	Split	57645
LCSD 140-57645/3-B	Lab Control Sample Dup	Total/NA	Air	Split	57645

### Cleanup Batch: 57685

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-25858-1	R-1589,1590 QC OTM-45 CB FH PBT	Total/NA	Air	Split	57611
140-25858-7	R-1598,1599 QC OTM-45 CB FH BT	Total/NA	Air	Split	57611
140-25858-13	C-2507 MEDIA CHECK FILTER	Total/NA	Air	Split	57611
MB 140-57611/1-B	Method Blank	Total/NA	Air	Split	57611
LCS 140-57611/2-B	Lab Control Sample	Total/NA	Air	Split	57611
LCSD 140-57611/3-B	Lab Control Sample Dup	Total/NA	Air	Split	57611

### Analysis Batch: 57742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-25858-3	R-1593 QC OTM-45 IMPINGERS 1,2&3 COND F	Total/NA	Air	537 (modified)	57659
140-25858-5	R-1596 QC OTM-45 CB DI WATER RB	Total/NA	Air	537 (modified)	57659
140-25858-9	R-1603 QC OTM-45 CB IMPINGERS 1,2&3 CON	Total/NA	Air	537 (modified)	57659

# QC Association Summary

Client: The Chemours Company FC, LLC  
Project/Site: Fayetteville Q2 Carbon Bed Field QC

Job ID: 140-25858-1

## LCMS (Continued)

### Analysis Batch: 57742 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 140-57645/1-B	Method Blank	Total/NA	Air	537 (modified)	57659
LCS 140-57645/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	57659
LCSD 140-57645/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	57659

### Cleanup Batch: 57746

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-25858-2	R-1591,1592,1594 QC OTM-45 CB BH PBT	Total/NA	Air	Split	57613
140-25858-4	R-1595 QC OTM-45 CB IMPINGERS BREAKTHI	Total/NA	Air	Split	57613
140-25858-6	R-1597 QC OTM-45 CB MEOH WITH 5% NH4OI	Total/NA	Air	Split	57613
140-25858-8	R-1600,1601,1603 QC OTM-45 CB BH BT	Total/NA	Air	Split	57613
140-25858-10	R-1604 QC OTM-45 CB BREAKTHROUGH XAD	Total/NA	Air	Split	57613
140-25858-12	C-2506 MEDIA CHECK XAD	Total/NA	Air	Split	57613
MB 140-57613/1-B	Method Blank	Total/NA	Air	Split	57613
LCS 140-57613/2-B	Lab Control Sample	Total/NA	Air	Split	57613
LCSD 140-57613/3-B	Lab Control Sample Dup	Total/NA	Air	Split	57613

### Analysis Batch: 57822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-25858-1	R-1589,1590 QC OTM-45 CB FH PBT	Total/NA	Air	537 (modified)	57685
140-25858-7	R-1598,1599 QC OTM-45 CB FH BT	Total/NA	Air	537 (modified)	57685
140-25858-13	C-2507 MEDIA CHECK FILTER	Total/NA	Air	537 (modified)	57685
MB 140-57611/1-B	Method Blank	Total/NA	Air	537 (modified)	57685
LCS 140-57611/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	57685
LCSD 140-57611/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	57685

### Analysis Batch: 57865

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-25858-2	R-1591,1592,1594 QC OTM-45 CB BH PBT	Total/NA	Air	537 (modified)	57746
140-25858-4	R-1595 QC OTM-45 CB IMPINGERS BREAKTHI	Total/NA	Air	537 (modified)	57746
140-25858-6	R-1597 QC OTM-45 CB MEOH WITH 5% NH4OI	Total/NA	Air	537 (modified)	57746
140-25858-8	R-1600,1601,1603 QC OTM-45 CB BH BT	Total/NA	Air	537 (modified)	57746
140-25858-10	R-1604 QC OTM-45 CB BREAKTHROUGH XAD	Total/NA	Air	537 (modified)	57746
140-25858-12	C-2506 MEDIA CHECK XAD	Total/NA	Air	537 (modified)	57746
MB 140-57613/1-B	Method Blank	Total/NA	Air	537 (modified)	57746
LCS 140-57613/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	57746
LCSD 140-57613/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	57746

# Client Sample Results

Client: The Chemours Company FC, LLC  
 Project/Site: Fayetteville Q2 Carbon Bed Field QC

Job ID: 140-25858-1

## Client Sample ID: R-1589,1590 QC OTM-45 CB FH PBT

Lab Sample ID: 140-25858-1

Date Collected: 12/16/21 00:00

Matrix: Air

Date Received: 12/18/21 16:30

Sample Container: Air Train

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.00432		0.00100	0.000580	ug/Sample		01/04/22 08:32	01/11/22 18:49	1
Isotope Dilution	%Recovery	Qualifier	Limits						
<sup>13</sup> C3 HFPO-DA	88		25 - 150						
							Prepared	Analyzed	Dil Fac
							01/04/22 08:32	01/11/22 18:49	1

## Client Sample ID: R-1591,1592,1594 QC OTM-45 CB BH PBT

Lab Sample ID: 140-25858-2

Date Collected: 12/16/21 00:00

Matrix: Air

Date Received: 12/18/21 16:30

Sample Container: Air Train

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.00171		0.00160	0.00140	ug/Sample		01/04/22 08:59	01/12/22 20:38	1
Isotope Dilution	%Recovery	Qualifier	Limits						
<sup>13</sup> C3 HFPO-DA	95		25 - 150						
							Prepared	Analyzed	Dil Fac
							01/04/22 08:59	01/12/22 20:38	1

## Client Sample ID: R-1593 QC OTM-45 IMPINGERS 1,2&3 COND PBT

Lab Sample ID: 140-25858-3

Date Collected: 12/16/21 00:00

Matrix: Air

Date Received: 12/18/21 16:30

Sample Container: Air Train

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.0000825	ug/Sample		01/04/22 14:49	01/09/22 13:24	1
Isotope Dilution	%Recovery	Qualifier	Limits						
<sup>13</sup> C3 HFPO-DA	106		25 - 150						
							Prepared	Analyzed	Dil Fac
							01/04/22 14:49	01/09/22 13:24	1

## Client Sample ID: R-1595 QC OTM-45 CB IMPINGERS BREAKTHROUGH XAD-2 RESIN TUBE PBT

Lab Sample ID: 140-25858-4

Date Collected: 12/16/21 00:00

Matrix: Air

Date Received: 12/18/21 16:30

Sample Container: Air Train

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.00423		0.00160	0.00140	ug/Sample		01/04/22 08:59	01/12/22 20:47	1
Isotope Dilution	%Recovery	Qualifier	Limits						
<sup>13</sup> C3 HFPO-DA	93		25 - 150						
							Prepared	Analyzed	Dil Fac
							01/04/22 08:59	01/12/22 20:47	1

## Client Sample ID: R-1596 QC OTM-45 CB DI WATER RB

Lab Sample ID: 140-25858-5

Date Collected: 12/16/21 00:00

Matrix: Air

Date Received: 12/18/21 16:30

Sample Container: Air Train

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.0000825	ug/Sample		01/04/22 14:49	01/09/22 13:33	1
Isotope Dilution	%Recovery	Qualifier	Limits						
<sup>13</sup> C3 HFPO-DA	105		25 - 150						
							Prepared	Analyzed	Dil Fac
							01/04/22 14:49	01/09/22 13:33	1

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# Client Sample Results

Client: The Chemours Company FC, LLC  
 Project/Site: Fayetteville Q2 Carbon Bed Field QC

Job ID: 140-25858-1

**Client Sample ID: R-1597 QC OTM-45 CB MEOH WITH 5% NH4OH RB**

**Lab Sample ID: 140-25858-6**

Date Collected: 12/16/21 00:00  
 Date Received: 12/18/21 16:30  
 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	ND		0.00160	0.00140	ug/Sample		01/04/22 08:59	01/12/22 20:56	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>13C3 HFPO-DA</i>	93		25 - 150				01/04/22 08:59	01/12/22 20:56	1

**Client Sample ID: R-1598,1599 QC OTM-45 CB FH BT**

**Lab Sample ID: 140-25858-7**

Date Collected: 12/16/21 00:00  
 Date Received: 12/18/21 16:30  
 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	0.0382		0.00100	0.000580	ug/Sample		01/04/22 08:32	01/11/22 18:58	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>13C3 HFPO-DA</i>	86		25 - 150				01/04/22 08:32	01/11/22 18:58	1

**Client Sample ID: R-1600,1601,1603 QC OTM-45 CB BH BT**

**Lab Sample ID: 140-25858-8**

Date Collected: 12/16/21 00:00  
 Date Received: 12/18/21 16:30  
 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	0.00213		0.00160	0.00140	ug/Sample		01/04/22 08:59	01/12/22 21:05	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>13C3 HFPO-DA</i>	96		25 - 150				01/04/22 08:59	01/12/22 21:05	1

**Client Sample ID: R-1603 QC OTM-45 CB IMPINGERS 1,2&3 COND BT**

**Lab Sample ID: 140-25858-9**

Date Collected: 12/16/21 00:00  
 Date Received: 12/18/21 16:30  
 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	ND		0.000500	0.0000825	ug/Sample		01/04/22 14:49	01/09/22 13:42	1
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>13C3 HFPO-DA</i>	98		25 - 150				01/04/22 14:49	01/09/22 13:42	1

**Client Sample ID: R-1604 QC OTM-45 CB BREAKTHROUGH XAD-2 RESIN TUBE BT**

**Lab Sample ID: 140-25858-10**

Date Collected: 12/16/21 00:00  
 Date Received: 12/18/21 16:30  
 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	0.00169		0.00160	0.00140	ug/Sample		01/04/22 08:59	01/12/22 21:14	1

# Client Sample Results

Client: The Chemours Company FC, LLC  
 Project/Site: Fayetteville Q2 Carbon Bed Field QC

Job ID: 140-25858-1

## Client Sample ID: R-1604 QC OTM-45 CB BREAKTHROUGH

Lab Sample ID: 140-25858-10

### XAD-2 RESIN TUBE BT

Date Collected: 12/16/21 00:00

Matrix: Air

Date Received: 12/18/21 16:30

Sample Container: Air Train

<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	01/04/22 08:59	01/12/22 21:14	1

## Client Sample ID: C-2506 MEDIA CHECK XAD

Lab Sample ID: 140-25858-12

Date Collected: 12/16/21 00:00

Matrix: Air

Date Received: 12/18/21 16:30

Sample Container: Air Train

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00160	0.00140	ug/Sample		01/04/22 08:59	01/12/22 21:23	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	99		25 - 150	01/04/22 08:59	01/12/22 21:23	1

## Client Sample ID: C-2507 MEDIA CHECK FILTER

Lab Sample ID: 140-25858-13

Date Collected: 12/16/21 00:00

Matrix: Air

Date Received: 12/18/21 16:30

Sample Container: Air Train

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00100	0.000580	ug/Sample		01/04/22 08:32	01/11/22 19:07	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	01/04/22 08:32	01/11/22 19:07	1

# Default Detection Limits

Client: The Chemours Company FC, LLC  
Project/Site: Fayetteville Q2 Carbon Bed Field QC

Job ID: 140-25858-1

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

Prep: None

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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 Q2 Carbon Bed Field QC

Job ID: 140-25858-1

## 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)	
140-25858-1	R-1589,1590 QC OTM-45 CB FI	88	
140-25858-2	R-1591,1592,1594 QC OTM-45 CB BH PBT	95	
140-25858-3	R-1593 QC OTM-45 IMPINGER 1,2&3 COND PBT	106	
140-25858-4	R-1595 QC OTM-45 CB IMPINGERS BREAKTHROUGH XAD-2 RESIN TUBE PBT	93	
140-25858-5	R-1596 QC OTM-45 CB DI WATER RB	105	
140-25858-6	R-1597 QC OTM-45 CB MEOH WITH 5% NH4OH RB	93	
140-25858-7	R-1598,1599 QC OTM-45 CB FH BT	86	
140-25858-8	R-1600,1601,1603 QC OTM-45 CB BH BT	96	
140-25858-9	R-1603 QC OTM-45 CB IMPINGERS 1,2&3 COND BT	98	
140-25858-10	R-1604 QC OTM-45 CB BREAKTHROUGH XAD-2 RESI TUBE BT	94	
140-25858-12	C-2506 MEDIA CHECK XAD	99	
140-25858-13	C-2507 MEDIA CHECK FILTER	94	
LCS 140-57611/2-B	Lab Control Sample	88	
LCS 140-57613/2-B	Lab Control Sample	95	
LCS 140-57645/2-B	Lab Control Sample	103	
LCSD 140-57611/3-B	Lab Control Sample Dup	86	
LCSD 140-57613/3-B	Lab Control Sample Dup	103	
LCSD 140-57645/3-B	Lab Control Sample Dup	101	
MB 140-57611/1-B	Method Blank	83	
MB 140-57613/1-B	Method Blank	95	
MB 140-57645/1-B	Method Blank	102	

**Surrogate Legend**  
 HFPODA = 13C3 HFPO-DA

# QC Sample Results

Client: The Chemours Company FC, LLC  
 Project/Site: Fayetteville Q2 Carbon Bed Field QC

Job ID: 140-25858-1

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

**Lab Sample ID: MB 140-57611/1-B**  
**Matrix: Air**  
**Analysis Batch: 57822**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 57611**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00100	0.000580	ug/Sample		01/04/22 08:32	01/11/22 18:14	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
<sup>13</sup> C3 HFPO-DA	83		25 - 150				01/04/22 08:32	01/11/22 18:14	1

**Lab Sample ID: LCS 140-57611/2-B**  
**Matrix: Air**  
**Analysis Batch: 57822**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 57611**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HFPO-DA	0.0200	0.02126		ug/Sample		106	60 - 140
Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits				
<sup>13</sup> C3 HFPO-DA	88		25 - 150				

**Lab Sample ID: LCSD 140-57611/3-B**  
**Matrix: Air**  
**Analysis Batch: 57822**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 57611**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HFPO-DA	0.0200	0.02252		ug/Sample		113	60 - 140	6	30
Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits						
<sup>13</sup> C3 HFPO-DA	86		25 - 150						

**Lab Sample ID: MB 140-57613/1-B**  
**Matrix: Air**  
**Analysis Batch: 57865**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 57613**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00160	0.00140	ug/Sample		01/04/22 08:59	01/12/22 18:44	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
<sup>13</sup> C3 HFPO-DA	95		25 - 150				01/04/22 08:59	01/12/22 18:44	1

**Lab Sample ID: LCS 140-57613/2-B**  
**Matrix: Air**  
**Analysis Batch: 57865**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 57613**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HFPO-DA	0.0200	0.01948		ug/Sample		97	60 - 140
Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits				
<sup>13</sup> C3 HFPO-DA	95		25 - 150				



# QC Sample Results

Client: The Chemours Company FC, LLC  
 Project/Site: Fayetteville Q2 Carbon Bed Field QC

Job ID: 140-25858-1

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

**Lab Sample ID: LCSD 140-57613/3-B**  
**Matrix: Air**  
**Analysis Batch: 57865**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 57613**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HFPO-DA	0.0200	0.02130		ug/Sample		106	60 - 140	9	30
<i>Isotope Dilution</i>		<i>%Recovery</i>	<i>Qualifier</i>						<i>Limits</i>
<i>13C3 HFPO-DA</i>		<i>103</i>							<i>25 - 150</i>

**Lab Sample ID: MB 140-57645/1-B**  
**Matrix: Air**  
**Analysis Batch: 57742**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 57645**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.0000825	ug/Sample		01/04/22 14:49	01/09/22 12:49	1
<i>Isotope Dilution</i>		<i>%Recovery</i>					<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>13C3 HFPO-DA</i>		<i>102</i>					<i>01/04/22 14:49</i>	<i>01/09/22 12:49</i>	<i>1</i>

**Lab Sample ID: LCS 140-57645/2-B**  
**Matrix: Air**  
**Analysis Batch: 57742**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 57645**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HFPO-DA	0.0100	0.009965		ug/Sample		100	60 - 140
<i>Isotope Dilution</i>		<i>%Recovery</i>	<i>Qualifier</i>				<i>Limits</i>
<i>13C3 HFPO-DA</i>		<i>103</i>					<i>25 - 150</i>

**Lab Sample ID: LCSD 140-57645/3-B**  
**Matrix: Air**  
**Analysis Batch: 57742**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 57645**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HFPO-DA	0.0100	0.009816		ug/Sample		98	60 - 140	2	30
<i>Isotope Dilution</i>		<i>%Recovery</i>	<i>Qualifier</i>						<i>Limits</i>
<i>13C3 HFPO-DA</i>		<i>101</i>							<i>25 - 150</i>

# Lab Chronicle

Client: The Chemours Company FC, LLC  
Project/Site: Fayetteville Q2 Carbon Bed Field QC

Job ID: 140-25858-1

**Client Sample ID: R-1589,1590 QC OTM-45 CB FH PBT**

**Lab Sample ID: 140-25858-1**

**Date Collected: 12/16/21 00:00**

**Matrix: Air**

**Date Received: 12/18/21 16:30**

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	57611	01/04/22 08:32	DWS	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	57685	01/05/22 15:08	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			57822	01/11/22 18:49	JRC	TAL KNX
Instrument ID: LCA										

**Client Sample ID: R-1591,1592,1594 QC OTM-45 CB BH PBT**

**Lab Sample ID: 140-25858-2**

**Date Collected: 12/16/21 00:00**

**Matrix: Air**

**Date Received: 12/18/21 16:30**

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	57613	01/04/22 08:59	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	57746	01/09/22 13:05	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			57865	01/12/22 20:38	JRC	TAL KNX
Instrument ID: LCA										

**Client Sample ID: R-1593 QC OTM-45 IMPINGERS 1,2&3 COND PBT**

**Lab Sample ID: 140-25858-3**

**Date Collected: 12/16/21 00:00**

**Matrix: Air**

**Date Received: 12/18/21 16:30**

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	57645	01/04/22 14:49	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	57659	01/05/22 09:07	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			57742	01/09/22 13:24	JRC	TAL KNX
Instrument ID: LCA										

**Client Sample ID: R-1595 QC OTM-45 CB IMPINGERS BREAKTHROUGH XAD-2 RESIN TUBE PBT**

**Lab Sample ID: 140-25858-4**

**Date Collected: 12/16/21 00:00**

**Matrix: Air**

**Date Received: 12/18/21 16:30**

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	57613	01/04/22 08:59	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	57746	01/09/22 13:05	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			57865	01/12/22 20:47	JRC	TAL KNX
Instrument ID: LCA										

**Client Sample ID: R-1596 QC OTM-45 CB DI WATER RB**

**Lab Sample ID: 140-25858-5**

**Date Collected: 12/16/21 00:00**

**Matrix: Air**

**Date Received: 12/18/21 16:30**

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	57645	01/04/22 14:49	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	57659	01/05/22 09:07	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			57742	01/09/22 13:33	JRC	TAL KNX
Instrument ID: LCA										

# Lab Chronicle

Client: The Chemours Company FC, LLC  
Project/Site: Fayetteville Q2 Carbon Bed Field QC

Job ID: 140-25858-1

**Client Sample ID: R-1597 QC OTM-45 CB MEOH WITH 5% NH4OH RB**

**Lab Sample ID: 140-25858-6**

Date Collected: 12/16/21 00:00

Matrix: Air

Date Received: 12/18/21 16:30

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	57613	01/04/22 08:59	DWS	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	57746	01/09/22 13:05	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			57865	01/12/22 20:56	JRC	TAL KNX

Instrument ID: LCA

**Client Sample ID: R-1598,1599 QC OTM-45 CB FH BT**

**Lab Sample ID: 140-25858-7**

Date Collected: 12/16/21 00:00

Matrix: Air

Date Received: 12/18/21 16:30

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	57611	01/04/22 08:32	DWS	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	57685	01/05/22 15:08	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			57822	01/11/22 18:58	JRC	TAL KNX

Instrument ID: LCA

**Client Sample ID: R-1600,1601,1603 QC OTM-45 CB BH BT**

**Lab Sample ID: 140-25858-8**

Date Collected: 12/16/21 00:00

Matrix: Air

Date Received: 12/18/21 16:30

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	57613	01/04/22 08:59	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	57746	01/09/22 13:05	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			57865	01/12/22 21:05	JRC	TAL KNX

Instrument ID: LCA

**Client Sample ID: R-1603 QC OTM-45 CB IMPINGERS 1,2&3 COND BT**

**Lab Sample ID: 140-25858-9**

Date Collected: 12/16/21 00:00

Matrix: Air

Date Received: 12/18/21 16:30

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	57645	01/04/22 14:49	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	57659	01/05/22 09:07	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			57742	01/09/22 13:42	JRC	TAL KNX

Instrument ID: LCA

**Client Sample ID: R-1604 QC OTM-45 CB BREAKTHROUGH XAD-2 RESIN TUBE BT**

**Lab Sample ID: 140-25858-10**

Date Collected: 12/16/21 00:00

Matrix: Air

Date Received: 12/18/21 16:30

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	57613	01/04/22 08:59	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	57746	01/09/22 13:05	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			57865	01/12/22 21:14	JRC	TAL KNX

Instrument ID: LCA

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# Lab Chronicle

Client: The Chemours Company FC, LLC  
 Project/Site: Fayetteville Q2 Carbon Bed Field QC

Job ID: 140-25858-1

**Client Sample ID: C-2506 MEDIA CHECK XAD**

**Lab Sample ID: 140-25858-12**

**Date Collected: 12/16/21 00:00**

**Matrix: Air**

**Date Received: 12/18/21 16:30**

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	57613	01/04/22 08:59	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	57746	01/09/22 13:05	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			57865	01/12/22 21:23	JRC	TAL KNX
Instrument ID: LCA										

**Client Sample ID: C-2507 MEDIA CHECK FILTER**

**Lab Sample ID: 140-25858-13**

**Date Collected: 12/16/21 00:00**

**Matrix: Air**

**Date Received: 12/18/21 16:30**

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	57611	01/04/22 08:32	DWS	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	57685	01/05/22 15:08	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			57822	01/11/22 19:07	JRC	TAL KNX
Instrument ID: LCA										

**Client Sample ID: Method Blank**

**Lab Sample ID: MB 140-57611/1-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	57611	01/04/22 08:32	DWS	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	57685	01/05/22 15:08	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			57822	01/11/22 18:14	JRC	TAL KNX
Instrument ID: LCA										

**Client Sample ID: Method Blank**

**Lab Sample ID: MB 140-57613/1-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	57613	01/04/22 08:59	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	57746	01/09/22 13:05	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			57865	01/12/22 18:44	JRC	TAL KNX
Instrument ID: LCA										

**Client Sample ID: Method Blank**

**Lab Sample ID: MB 140-57645/1-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	57645	01/04/22 14:49	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	57659	01/05/22 09:07	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			57742	01/09/22 12:49	JRC	TAL KNX
Instrument ID: LCA										

# Lab Chronicle

Client: The Chemours Company FC, LLC  
 Project/Site: Fayetteville Q2 Carbon Bed Field QC

Job ID: 140-25858-1

**Client Sample ID: Lab Control Sample**

**Lab Sample ID: LCS 140-57611/2-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	57611	01/04/22 08:32	DWS	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	57685	01/05/22 15:08	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			57822	01/11/22 18:23	JRC	TAL KNX
Instrument ID: LCA										

**Client Sample ID: Lab Control Sample**

**Lab Sample ID: LCS 140-57613/2-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	57613	01/04/22 08:59	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	57746	01/09/22 13:05	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			57865	01/12/22 18:53	JRC	TAL KNX
Instrument ID: LCA										

**Client Sample ID: Lab Control Sample**

**Lab Sample ID: LCS 140-57645/2-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	57645	01/04/22 14:49	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	57659	01/05/22 09:07	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			57742	01/09/22 12:58	JRC	TAL KNX
Instrument ID: LCA										

**Client Sample ID: Lab Control Sample Dup**

**Lab Sample ID: LCSD 140-57611/3-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	57611	01/04/22 08:32	DWS	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	57685	01/05/22 15:08	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			57822	01/11/22 18:32	JRC	TAL KNX
Instrument ID: LCA										

**Client Sample ID: Lab Control Sample Dup**

**Lab Sample ID: LCSD 140-57613/3-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	57613	01/04/22 08:59	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	57746	01/09/22 13:05	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			57865	01/12/22 19:02	JRC	TAL KNX
Instrument ID: LCA										

# Lab Chronicle

Client: The Chemours Company FC, LLC  
Project/Site: Fayetteville Q2 Carbon Bed Field QC

Job ID: 140-25858-1

**Client Sample ID: Lab Control Sample Dup**

**Lab Sample ID: LCSD 140-57645/3-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	57645	01/04/22 14:49	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	57659	01/05/22 09:07	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			57742	01/09/22 13:07	JRC	TAL KNX

Instrument ID: LCA

**Laboratory References:**

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

# Accreditation/Certification Summary

Client: The Chemours Company FC, LLC  
 Project/Site: Fayetteville Q2 Carbon Bed Field QC

Job ID: 140-25858-1

## Laboratory: Eurofins Knoxville

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

Authority	Program	Identification Number	Expiration Date
	AFCEE	N/A	
ANAB	Dept. of Defense ELAP	L2311	02-13-22
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	02-28-22
Florida	NELAP	E87177	06-30-22
Georgia (DW)	State	906	12-11-22
Hawaii	State	NA	12-11-22
Kansas	NELAP	E-10349	10-31-22
Kentucky (DW)	State	90101	12-31-21 *
Louisiana	NELAP	83979	06-30-22
Louisiana (DW)	State	LA019	12-31-22
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	12-31-22
Ohio VAP	State	CL0059	06-02-23
Oklahoma	State	9415	08-31-22
Oregon	NELAP	TNI0189	12-31-22
Pennsylvania	NELAP	68-00576	12-31-22
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 Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Instrument ID: ICA Analysis Batch Number: 57741  
 Lab Sample ID: IC 140-57741/6 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 01/09/22 10:35 Lab File ID: 006.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.77	Baseline	cochranj	01/09/22 11:15
Perfluorooctanesulfonic acid (PFOS)	4.41	Baseline	cochranj	01/09/22 11:15
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.87	Baseline	cochranj	01/09/22 11:44
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.00	Baseline	cochranj	01/09/22 11:16
2-(N-methylperfluoro-1-octanesulfon amido) ethanol	5.30	Baseline	cochranj	01/09/22 11:16

Lab Sample ID: IC 140-57741/7 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 01/09/22 10:44 Lab File ID: 007.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.76	Baseline	cochranj	01/09/22 11:17
Perfluorooctanesulfonic acid (PFOS)	4.40	Baseline	cochranj	01/09/22 11:18
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.86	Baseline	cochranj	01/09/22 11:18
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	4.99	Baseline	cochranj	01/09/22 11:18
NMeFOSA	5.28	Baseline	cochranj	01/09/22 11:18



PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Instrument ID: LCA Analysis Batch Number: 57741  
 Lab Sample ID: IC 140-57741/8 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 01/09/22 10:53 Lab File ID: 008.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.75	Baseline	cochranj	01/09/22 11:19
Perfluorooctanesulfonic acid (PFOS)	4.39	Baseline	cochranj	01/09/22 11:20
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.85	Baseline	cochranj	01/09/22 11:20
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	4.98	Baseline	cochranj	01/09/22 11:20

Lab Sample ID: ICIS 140-57741/9 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 01/09/22 11:02 Lab File ID: 009.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.76	Baseline	cochranj	01/09/22 11:21
Perfluorooctanesulfonic acid (PFOS)	4.40	Baseline	cochranj	01/09/22 11:21
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.86	Baseline	cochranj	01/09/22 11:22
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.00	Baseline	cochranj	01/09/22 11:22

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Instrument ID: LCA Analysis Batch Number: 57741  
 Lab Sample ID: IC 140-57741/10 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 01/09/22 11:11 Lab File ID: 010.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION	
		REASON	ANALYST DATE
Perfluorohexanesulfonic acid (PFHxS)	3.76	Baseline	cochranj 01/09/22 11:22
Perfluorooctanesulfonic acid (PFOS)	4.40	Baseline	cochranj 01/09/22 11:23
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.86	Baseline	cochranj 01/09/22 11:23
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.00	Baseline	cochranj 01/09/22 11:23

Lab Sample ID: IC 140-57741/11 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 01/09/22 11:19 Lab File ID: 011.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION	
		REASON	ANALYST DATE
Perfluorohexanesulfonic acid (PFHxS)	3.76	Baseline	cochranj 01/09/22 11:36
Perfluorooctanesulfonic acid (PFOS)	4.39	Baseline	cochranj 01/09/22 11:37
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.85	Baseline	cochranj 01/09/22 11:37
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	4.99	Baseline	cochranj 01/09/22 11:37

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-25858-1

SDG No.: Instrument ID: LCA Analysis Batch Number: 57741

Lab Sample ID: IC 140-57741/12 Client Sample ID:

Date Analyzed: 01/09/22 11:28 Lab File ID: 012.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.76	Baseline	cochranj	01/09/22 11:40
Perfluorooctanesulfonic acid (PFOS)	4.39	Baseline	cochranj	01/09/22 11:40
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.85	Baseline	cochranj	01/09/22 11:41
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	4.99	Baseline	cochranj	01/09/22 11:41

Lab Sample ID: ICV 140-57741/14 Client Sample ID:

Date Analyzed: 01/09/22 11:46 Lab File ID: 014.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.76	Baseline	cochranj	01/09/22 11:58
Perfluorooctanesulfonic acid (PFOS)	4.40	Baseline	cochranj	01/09/22 11:59
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.86	Baseline	cochranj	01/09/22 11:59
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.00	Baseline	cochranj	01/09/22 11:59

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Instrument ID: ICA Analysis Batch Number: 57742  
 Lab Sample ID: CCVL 140-57742/4 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 01/09/22 12:31 Lab File ID: 004.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.76	Baseline	cochranj	01/09/22 12:42
Perfluorooctanesulfonic acid (PFOS)	4.40	Baseline	cochranj	01/09/22 12:42
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.86	Baseline	cochranj	01/09/22 12:42
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	4.99	Baseline	cochranj	01/09/22 12:42

Lab Sample ID: CCVIS 140-57742/5 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 01/09/22 12:40 Lab File ID: 005.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.76	Baseline	cochranj	01/10/22 09:10
Perfluorooctanesulfonic acid (PFOS)	4.40	Baseline	cochranj	01/10/22 09:10
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.86	Baseline	cochranj	01/10/22 09:10
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	4.99	Baseline	cochranj	01/10/22 09:11

Lab Sample ID: MB 140-57645/1-B Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 01/09/22 12:49 Lab File ID: 006.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HFPO-DA	3.52	Baseline	cochranj	01/10/22 09:13

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Instrument ID: ICA Analysis Batch Number: 57742  
 Lab Sample ID: 140-25858-5 Client Sample ID: R-1596 QC OTM-45 CB DI WATER RB  
 Date Analyzed: 01/09/22 13:33 Lab File ID: 011.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION	
		REASON	ANALYST DATE
HFPO-DA	3.53	Baseline	cochranj 01/10/22 13:31

Lab Sample ID: CCV 140-57742/17 Client Sample ID: \_\_\_\_\_

Date Analyzed: 01/09/22 14:26 Lab File ID: 017.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION	
		REASON	ANALYST DATE
Perfluorohexanesulfonic acid (PFHxS)	3.75	Baseline	cochranj 01/10/22 13:35
Perfluorooctanesulfonic acid (PFOS)	4.39	Baseline	cochranj 01/10/22 13:36
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.84	Baseline	cochranj 01/10/22 13:36
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	4.98	Baseline	cochranj 01/10/22 13:36

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-25858-1

SDG No.:

Instrument ID: ICA Analysis Batch Number: 57822

Lab Sample ID: CCVL 140-57822/6 Client Sample ID:

Date Analyzed: 01/11/22 17:39 Lab File ID: 006.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.81	Baseline	cochranj	01/11/22 17:59
Perfluorooctanesulfonic acid (PFOS)	4.45	Baseline	cochranj	01/11/22 18:00
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.91	Baseline	cochranj	01/11/22 18:00
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.04	Baseline	cochranj	01/11/22 18:00

Lab Sample ID: CCVIS 140-57822/7 Client Sample ID:

Date Analyzed: 01/11/22 17:48 Lab File ID: 007.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.81	Baseline	cochranj	01/11/22 18:01
Perfluorooctanesulfonic acid (PFOS)	4.45	Baseline	cochranj	01/11/22 18:02
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.91	Baseline	cochranj	01/11/22 18:02
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.04	Baseline	cochranj	01/11/22 18:02

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Instrument ID: ICA Analysis Batch Number: 57822  
 Lab Sample ID: CCV 140-57822/19 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 01/11/22 19:33 Lab File ID: 019.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION	
		REASON	ANALYST
Perfluorohexanesulfonic acid (PFHxS)	3.77	Baseline	cochranj
Perfluorooctanesulfonic acid (PFOS)	4.40	Baseline	cochranj
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.86	Baseline	cochranj
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	4.99	Baseline	cochranj

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-25858-1

SDG No.:

Instrument ID: ICA Analysis Batch Number: 57865

Lab Sample ID: CCVL 140-57865/6 Client Sample ID:

Date Analyzed: 01/12/22 18:27 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	01/15/22 09:36
Perfluorooctanesulfonic acid (PFOS)	4.44	Baseline	cochranj	01/15/22 09:37
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.90	Baseline	cochranj	01/15/22 09:38
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.03	Baseline	cochranj	01/15/22 09:38

Lab Sample ID: CCVIS 140-57865/7 Client Sample ID:

Date Analyzed: 01/12/22 18:35 Lab File ID: 007.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.79	Baseline	cochranj	01/15/22 09:39
Perfluorooctanesulfonic acid (PFOS)	4.43	Baseline	cochranj	01/15/22 09:39
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.89	Baseline	cochranj	01/15/22 09:39
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.02	Baseline	cochranj	01/15/22 09:39



PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Instrument ID: ICA Analysis Batch Number: 57865  
 Lab Sample ID: CCV 140-57865/19 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 01/12/22 20:21 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	01/15/22 10:01
Perfluorooctanesulfonic acid (PFOS)	4.44	Baseline	cochranj	01/15/22 10:02
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.90	Baseline	cochranj	01/15/22 10:02
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.03	Baseline	cochranj	01/15/22 10:02

Lab Sample ID: CCV 140-57865/31 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 01/12/22 22:06 Lab File ID: 031.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.78	Baseline	cochranj	01/15/22 10:06
Perfluorooctanesulfonic acid (PFOS)	4.42	Baseline	cochranj	01/15/22 10:06
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.88	Baseline	cochranj	01/15/22 10:07
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.01	Baseline	cochranj	01/15/22 10:08

# Method PFC IDA

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Fluorinated Hydrocarbons by Method  
PFAS IDA

FORM II  
PFAS SURROGATE RECOVERY

Lab Name: Eurofins Knoxville

Job No.: 140-25858-1

SDG No.: \_\_\_\_\_

Matrix: Air

Level: Low

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

Client Sample ID	Lab Sample ID	HFPODA #
R-1589,1590 QC OTM-45 CB FH PBT	140-25858-1	88
R-1591,1592,1594 QC OTM-45 CB BH PBT	140-25858-2	95
R-1593 QC OTM-45 IMPINGERS 1,2&3 COND PBT	140-25858-3	106
R-1595 QC OTM-45 CB IMPINGERS BREAKTHROUGH XAD-2 RESIN TUBE PBT	140-25858-4	93
R-1596 QC OTM-45 CB DI WATER RB	140-25858-5	105
R-1597 QC OTM-45 CB MEOH WITH 5% NH4OH RB	140-25858-6	93
R-1598,1599 QC OTM-45 CB FH BT	140-25858-7	86
R-1600,1601,1603 QC OTM-45 CB BH BT	140-25858-8	96
R-1603 QC OTM-45 CB IMPINGERS 1,2&3 COND BT	140-25858-9	98
R-1604 QC OTM-45 CB BREAKTHROUGH XAD-2 RESIN TUBE BT	140-25858-10	94
C-2506 MEDIA CHECK XAD	140-25858-12	99
C-2507 MEDIA CHECK FILTER	140-25858-13	94
	MB 140-57611/1-B	83
	MB 140-57613/1-B	95
	MB 140-57645/1-B	102
	LCS 140-57611/2-B	88
	LCS 140-57613/2-B	95
	LCS 140-57645/2-B	103
	LCSD 140-57611/3-B	86
	LCSD 140-57613/3-B	103
	LCSD 140-57645/3-B	101

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 Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: \_011.d  
 Lab ID: LCS 140-57611/2-B Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Sample)	LCS CONCENTRATION (ug/Sample)	LCS % REC	QC LIMITS REC	#
HFPO-DA	0.0200	0.02126	106	60-140	
13C3 HFPO-DA	0.0250	0.02195	88	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 Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: \_009.d  
 Lab ID: LCS 140-57613/2-B Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Sample)	LCS CONCENTRATION (ug/Sample)	LCS % REC	QC LIMITS REC	#
HFPO-DA	0.0200	0.01948	97	60-140	
13C3 HFPO-DA	0.0250	0.02376	95	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 Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: \_007.d  
 Lab ID: LCS 140-57645/2-B Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Sample)	LCS CONCENTRATION (ug/Sample)	LCS % REC	QC LIMITS REC	#
HFPO-DA	0.0100	0.009965	100	60-140	
13C3 HFPO-DA	0.0125	0.01292	103	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 Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: \_012.d  
 Lab ID: LCSD 140-57611/3-B Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Sample)	LCSD CONCENTRATION (ug/Sample)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
HFPO-DA	0.0200	0.02252	113	6	30	60-140	
13C3 HFPO-DA	0.0250	0.02140	86			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 Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: \_010.d  
 Lab ID: LCSD 140-57613/3-B Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Sample)	LCSD CONCENTRATION (ug/Sample)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
HFPO-DA	0.0200	0.02130	106	9	30	60-140	
13C3 HFPO-DA	0.0250	0.02570	103			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 Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: \_008.d  
 Lab ID: LCSD 140-57645/3-B Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Sample)	LCSD CONCENTRATION (ug/Sample)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
HFPO-DA	0.0100	0.009816	98	2	30	60-140	
13C3 HFPO-DA	0.0125	0.01262	101			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 Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: \_010.d Lab Sample ID: MB 140-57611/1-B  
 Matrix: Air Date Extracted: 01/04/2022 08:32  
 Instrument ID: LCA Date Analyzed: 01/11/2022 18:14  
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-57611/2-B	_011.d	01/11/2022 18:23
	LCSD 140-57611/3-B	_012.d	01/11/2022 18:32
R-1589,1590 QC OTM-45 CB FH PBT	140-25858-1	_014.d	01/11/2022 18:49
R-1598,1599 QC OTM-45 CB FH BT	140-25858-7	_015.d	01/11/2022 18:58
C-2507 MEDIA CHECK FILTER	140-25858-13	_016.d	01/11/2022 19:07

FORM IV  
PFAS METHOD BLANK SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: \_008.d Lab Sample ID: MB 140-57613/1-B  
 Matrix: Air Date Extracted: 01/04/2022 08:59  
 Instrument ID: LCA Date Analyzed: 01/12/2022 18:44  
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-57613/2-B	_009.d	01/12/2022 18:53
	LCSD 140-57613/3-B	_010.d	01/12/2022 19:02
R-1591,1592,1594 QC OTM-45 CB BH PBT	140-25858-2	_021.d	01/12/2022 20:38
R-1595 QC OTM-45 CB IMPINGERS BREAKTHROUGH XAD-2 RESIN TUBE PBT	140-25858-4	_022.d	01/12/2022 20:47
R-1597 QC OTM-45 CB MEOH WITH 5% NH4OH RB	140-25858-6	_023.d	01/12/2022 20:56
R-1600,1601,1603 QC OTM-45 CB BH BT	140-25858-8	_024.d	01/12/2022 21:05
R-1604 QC OTM-45 CB BREAKTHROUGH XAD-2 RESIN TUBE BT	140-25858-10	_025.d	01/12/2022 21:14
C-2506 MEDIA CHECK XAD	140-25858-12	_026.d	01/12/2022 21:23

FORM IV  
PFAS METHOD BLANK SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: \_006.d Lab Sample ID: MB 140-57645/1-B  
 Matrix: Air Date Extracted: 01/04/2022 14:49  
 Instrument ID: LCA Date Analyzed: 01/09/2022 12:49  
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-57645/2-B	_007.d	01/09/2022 12:58
	LCSD 140-57645/3-B	_008.d	01/09/2022 13:07
R-1593 QC OTM-45 IMPINGERS 1,2&3 COND PBT	140-25858-3	_010.d	01/09/2022 13:24
R-1596 QC OTM-45 CB DI WATER RB	140-25858-5	_011.d	01/09/2022 13:33
R-1603 QC OTM-45 CB IMPINGERS 1,2&3 COND BT	140-25858-9	_012.d	01/09/2022 13:42

FORM VIII  
PFAS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: ICIS 140-57741/9 Date Analyzed: 01/09/2022 11:02  
 Instrument ID: LCA GC Column: GeminiC18 3x100 ID: 3 (mm)  
 Lab File ID (Standard): \_009.d Heated Purge: (Y/N) N  
 Calibration ID: 3496

	13PFOA		#	RT #	#	RT #
	AREA #	RT #				
INITIAL CALIBRATION MID-POINT	5559029	4.12				
UPPER LIMIT	8338544	4.32				
LOWER LIMIT	2779515	3.92				
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-57741/14		4910276	4.12			
CCVIS 140-57742/5		5659179	4.11			
CCVIS 140-57822/7		5501943	4.16			
CCVIS 140-57865/7		5484136	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 Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVIS 140-57742/5 Date Analyzed: 01/09/2022 12:40  
 Instrument ID: LCA GC Column: GeminiC18 3x100 ID: 3 (mm)  
 Lab File ID (Standard): 005.d Heated Purge: (Y/N) N  
 Calibration ID: 3496

		13PFOA					
		AREA #	RT #	#	RT #	#	RT #
12/24 HOUR STD		5659179	4.11				
UPPER LIMIT		8488769	4.31				
LOWER LIMIT		2829590	3.91				
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 140-57645/1-B		5489432	4.10				
LCS 140-57645/2-B		5356156	4.10				
LCSD 140-57645/3-B		5459523	4.10				
140-25858-3	R-1593 QC OTM-45 IMPINGERS 1,2&3 COND PBT	5488099	4.11				
140-25858-5	R-1596 QC OTM-45 CB DI WATER RB	5570951	4.11				
140-25858-9	R-1603 QC OTM-45 CB IMPINGERS 1,2&3 COND BT	5604494	4.11				
CCV 140-57742/17		5325263	4.10				

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 Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVIS 140-57822/7 Date Analyzed: 01/11/2022 17:48  
 Instrument ID: LCA GC Column: GeminiC18 3x100 ID: 3 (mm)  
 Lab File ID (Standard): 007.d Heated Purge: (Y/N) N  
 Calibration ID: 3496

		13PFOA					
		AREA #	RT #	#	RT #	#	RT #
12/24 HOUR STD		5501943	4.16				
UPPER LIMIT		8252915	4.36				
LOWER LIMIT		2750972	3.96				
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 140-57611/1-B		5442494	4.14				
LCS 140-57611/2-B		5240791	4.13				
LCSD 140-57611/3-B		5373279	4.12				
140-25858-1	R-1589,1590 QC OTM-45 CB FH PBT	5434354	4.12				
140-25858-7	R-1598,1599 QC OTM-45 CB FH BT	5407468	4.12				
140-25858-13	C-2507 MEDIA CHECK FILTER	5310508	4.12				
CCV 140-57822/19		5360856	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 Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVIS 140-57865/7 Date Analyzed: 01/12/2022 18:35  
 Instrument ID: LCA GC Column: GeminiC18 3x100 ID: 3 (mm)  
 Lab File ID (Standard): 007.d Heated Purge: (Y/N) N  
 Calibration ID: 3496

		13PFOA					
		AREA #	RT #	#	RT #	#	RT #
12/24 HOUR STD		5484136	4.13				
UPPER LIMIT		8226204	4.33				
LOWER LIMIT		2742068	3.93				
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 140-57613/1-B		5153682	4.14				
LCS 140-57613/2-B		5364999	4.13				
LCSD 140-57613/3-B		5070128	4.15				
CCV 140-57865/19		5312145	4.15				
140-25858-2	R-1591,1592,1594 QC OTM-45 CB BH PBT	5135215	4.14				
140-25858-4	R-1595 QC OTM-45 CB IMPINGERS BREAKTHROUGH XAD-2 RESIN TUBE PBT	4917794	4.13				
140-25858-6	R-1597 QC OTM-45 CB MEOH WITH 5% NH4OH RB	5272240	4.12				
140-25858-8	R-1600,1601,1603 QC OTM-45 CB BH BT	4988788	4.14				
140-25858-10	R-1604 QC OTM-45 CB BREAKTHROUGH XAD-2 RESIN TUBE BT	5186616	4.13				
140-25858-12	C-2506 MEDIA CHECK XAD	5291356	4.12				
CCV 140-57865/31		5466439	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 Knoxville Job No.: 140-25858-1  
SDG No.: \_\_\_\_\_  
Client Sample ID: R-1589,1590 QC OTM-45 CB Lab Sample ID: 140-25858-1  
FH PBT  
Matrix: Air Lab File ID: \_014.d  
Analysis Method: 537 (modified) Date Collected: 12/16/2021 00:00  
Extraction Method: None Date Extracted: 01/04/2022 08:32  
Sample wt/vol: 1(Sample) Date Analyzed: 01/11/2022 18:49  
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.: 57822 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.00432		0.00100	0.000580

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\20220111-22220.b\_014.d  
 Lims ID: 140-25858-A-1-B  
 Client ID: R-1589,1590 QC OTM-45 CB FH PBT  
 Sample Type: Client  
 Inject. Date: 11-Jan-2022 18:49:44 ALS Bottle#: 14 Worklist Smp#: 14  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022220-014 140-25858-a-1-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 12-Jan-2022 18:43:11 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1648

First Level Reviewer: cochranj Date: 12-Jan-2022 18:40:23  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_007.d

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	3.547	3.574	-0.028	0.860	2175516	1.10	87.9	4572	
13 HFPO-DA	285.00 > 169.00	3.547	3.574	-0.028	1.000	508233	0.2159		659	
* 22 13C2 PFOA	415.00 > 370.00	4.123	4.156	-0.033		5434354	1.25		8915	

**QC Flag Legend**  
Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_014.d

Injection Date: 11-Jan-2022 18:49:44

Instrument ID: LCA

Lims ID: 140-25858-A-1-B

Lab Sample ID: 140-25858-1

Client ID: R-1589,1590 QC OTM-45 CB FH PBT

Operator ID: Cochran, Bobby

ALS Bottle#: 14

Worklist Smp#: 14

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

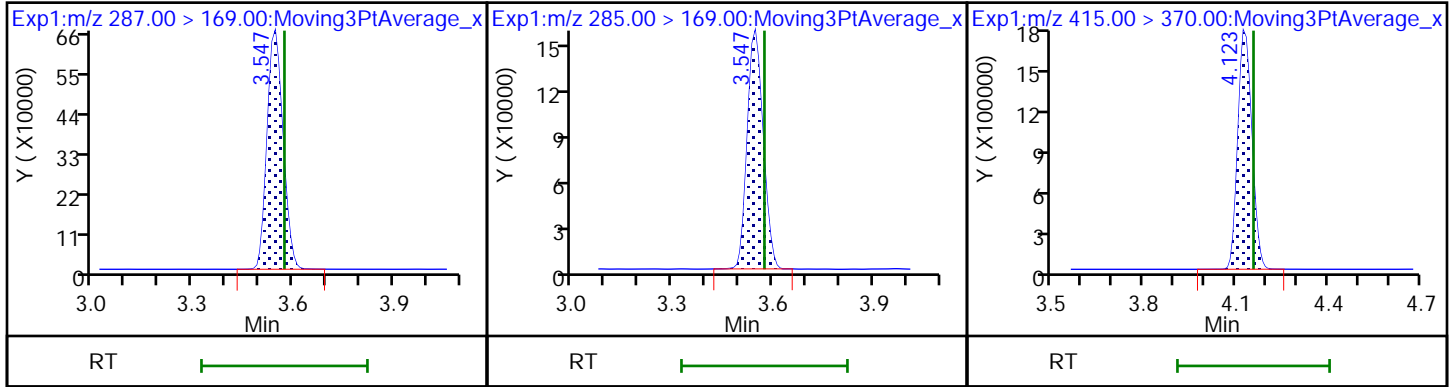
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

D 12 13C3 HFPO-DA

13 HFPO-DA

\* 22 13C2 PFOA



FORM I  
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: R-1591,1592,1594 QC Lab Sample ID: 140-25858-2  
                                   OTM-45 CB BH PBT  
 Matrix: Air Lab File ID: \_021.d  
 Analysis Method: 537 (modified) Date Collected: 12/16/2021 00:00  
 Extraction Method: None Date Extracted: 01/04/2022 08:59  
 Sample wt/vol: 1(Sample) Date Analyzed: 01/12/2022 20:38  
 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.: 57865 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.00171		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\20220112-22237.b\_021.d  
 Lims ID: 140-25858-A-2-B  
 Client ID: R-1591,1592,1594 QC OTM-45 CB BH PBT  
 Sample Type: Client  
 Inject. Date: 12-Jan-2022 20:38:59 ALS Bottle#: 21 Worklist Smp#: 21  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022237-021 140-25858-a-2-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:15:30 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 10:03:55  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_019.d

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	3.555	3.548	0.007	0.859	2216232	1.18	94.7	5746	
13 HFPO-DA	285.00 > 169.00	3.555	3.548	0.007	1.000	205327	0.0856		140	
* 22 13C2 PFOA	415.00 > 370.00	4.140	4.132	0.008		5135215	1.25		9307	

**QC Flag Legend**  
 Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\\_021.d

Injection Date: 12-Jan-2022 20:38:59

Instrument ID: LCA

Lims ID: 140-25858-A-2-B

Lab Sample ID: 140-25858-2

Client ID: R-1591,1592,1594 QC OTM-45 CB BH PBT

Operator ID: Cochran, Bobby

ALS Bottle#: 21

Worklist Smp#: 21

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

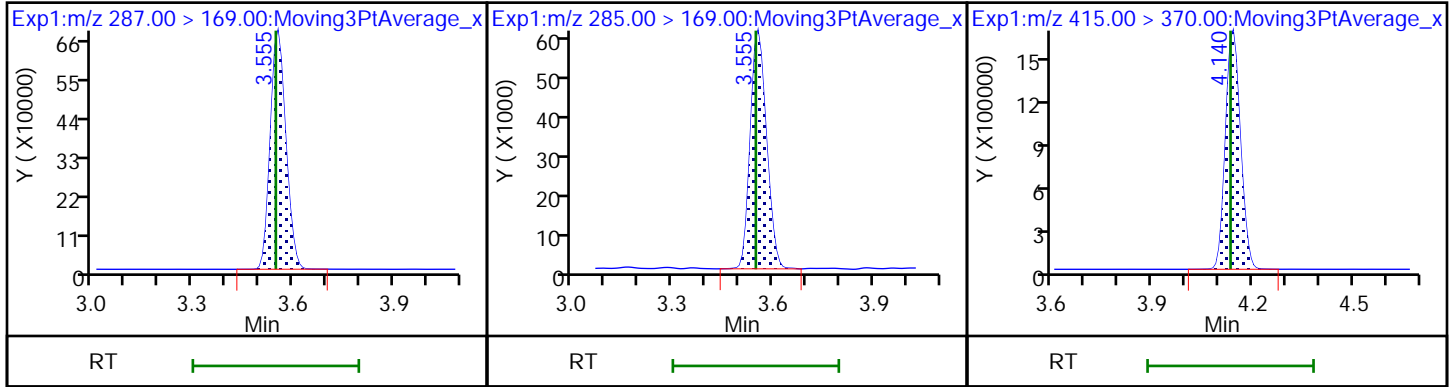
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

D 12 13C3 HFPO-DA

13 HFPO-DA

\* 22 13C2 PFOA



FORM I  
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-25858-1

SDG No.: \_\_\_\_\_

Client Sample ID: R-1593 QC OTM-45 Lab Sample ID: 140-25858-3  
IMPINGERS 1,2&3 COND PBT

Matrix: Air Lab File ID: \_010.d

Analysis Method: 537 (modified) Date Collected: 12/16/2021 00:00

Extraction Method: None Date Extracted: 01/04/2022 14:49

Sample wt/vol: 1(Sample) Date Analyzed: 01/09/2022 13:24

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.: 57742 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	106		25-150

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_010.d  
 Lims ID: 140-25858-A-3-B  
 Client ID: R-1593 QC OTM-45 IMPINGERS 1,2&3 COND PBT  
 Sample Type: Client  
 Inject. Date: 09-Jan-2022 13:24:40 ALS Bottle#: 10 Worklist Smp#: 10  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022187-010 140-25858-A-3-B  
 Misc. Info.: Plate: 11 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 15:08:06 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1641

First Level Reviewer: cochranj Date: 10-Jan-2022 13:30:57  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_005.d

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	3.529	3.528	0.001	0.860	2659374	1.33		106	4617	
13 HFPO-DA										7
285.00 > 169.00	3.529	3.528	0.001	1.000	1918	0.000667		1.8	7	
LOD = 0.008250										
* 22 13C2 PFOA										
415.00 > 370.00	4.105	4.106	-0.001		5488099	1.25			8173	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection



Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_010.d

Injection Date: 09-Jan-2022 13:24:40

Instrument ID: LCA

Lims ID: 140-25858-A-3-B

Lab Sample ID: 140-25858-3

Client ID: R-1593 QC OTM-45 IMPINGERS 1,2&3 COND PBT

Operator ID: Cochran, Bobby

ALS Bottle#: 10

Worklist Smp#: 10

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

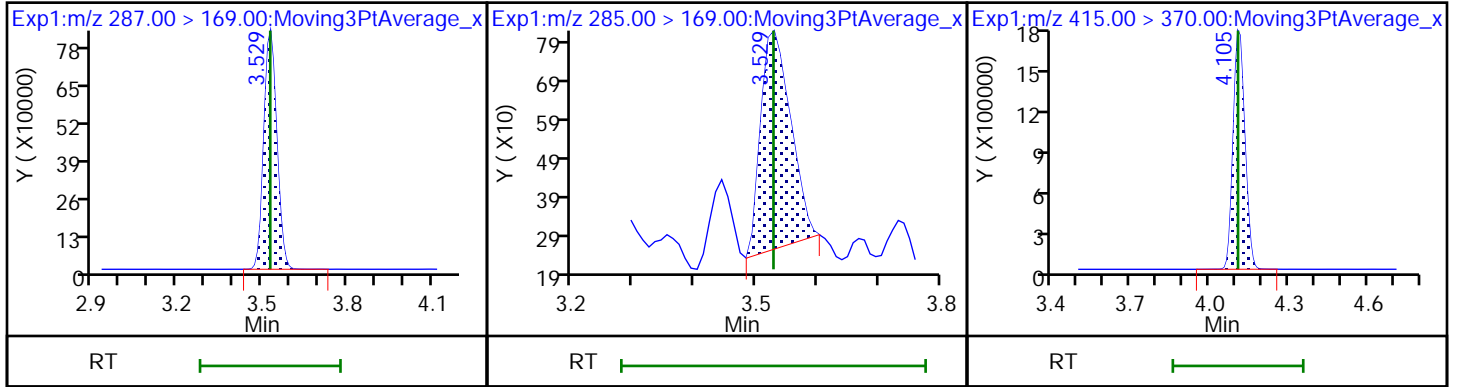
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

D 12 13C3 HFPO-DA

13 HFPO-DA

\* 22 13C2 PFOA



FORM I  
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: R-1595 QC OTM-45 CB Lab Sample ID: 140-25858-4  
                           IMPINGERS BREAKTHROUGH  
                           XAD-2 RESIN TUBE PBT  
 Matrix: Air Lab File ID: 022.d  
 Analysis Method: 537 (modified) Date Collected: 12/16/2021 00:00  
 Extraction Method: None Date Extracted: 01/04/2022 08:59  
 Sample wt/vol: 1 (Sample) Date Analyzed: 01/12/2022 20:47  
 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.: 57865 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.00423		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\20220112-22237.b\_022.d  
 Lims ID: 140-25858-A-4-B  
 Client ID: R-1595 QC OTM-45 CB IMPINGERS BREAKTHROUGH XAD-2 RESIN TUBE PBT  
 Sample Type: Client  
 Inject. Date: 12-Jan-2022 20:47:44 ALS Bottle#: 22 Worklist Smp#: 22  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022237-022 140-25858-a-4-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:15:30 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 10:04:06  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_019.d

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	3.548	0.0	0.859	2080962	1.16	92.9	5552	
13 HFPO-DA	285.00 > 169.00	3.548	3.548	0.0	1.000	476294	0.2115		413	
* 22 13C2 PFOA	415.00 > 370.00	4.132	4.132	0.0		4917794	1.25		8780	

**QC Flag Legend**  
 Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\\_022.d

Injection Date: 12-Jan-2022 20:47:44

Instrument ID: LCA

Lims ID: 140-25858-A-4-B

Lab Sample ID: 140-25858-4

Client ID: R-1595 QC OTM-45 CB IMPINGERS BREAKTHROUGH XAD-2 RESIN TUBE PBT

Operator ID: Cochran, Bobby

ALS Bottle#: 22 Worklist Smp#: 22

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

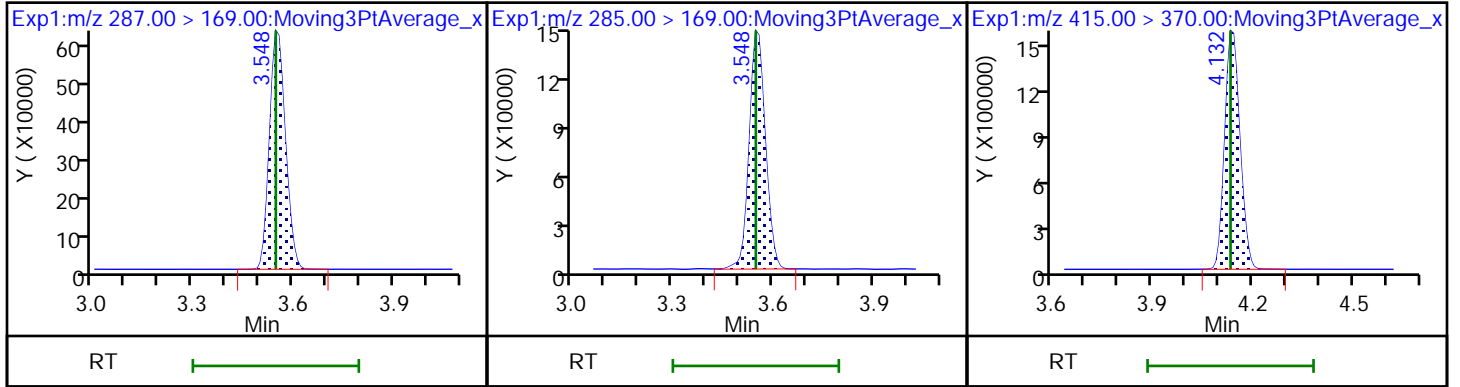
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

D 12 13C3 HFPO-DA

13 HFPO-DA

\* 22 13C2 PFOA



Eurofins TestAmerica, Knoxville  
Recovery Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_022.d  
 Lims ID: 140-25858-A-4-B  
 Client ID: R-1595 QC OTM-45 CB IMPINGERS BREAKTHROUGH XAD-2 RESIN TUBE PBT  
 Sample Type: Client  
 Inject. Date: 12-Jan-2022 20:47:44 ALS Bottle#: 22 Worklist Smp#: 22  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022237-022 140-25858-a-4-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:15:30 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 10:04:06

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

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
SDG No.: \_\_\_\_\_  
Client Sample ID: R-1596 QC OTM-45 CB DI Lab Sample ID: 140-25858-5  
WATER RB  
Matrix: Air Lab File ID: \_011.d  
Analysis Method: 537 (modified) Date Collected: 12/16/2021 00:00  
Extraction Method: None Date Extracted: 01/04/2022 14:49  
Sample wt/vol: 1 (Sample) Date Analyzed: 01/09/2022 13:33  
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.: 57742 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	105		25-150

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_011.d  
 Lims ID: 140-25858-A-5-B  
 Client ID: R-1596 QC OTM-45 CB DI WATER RB  
 Sample Type: Client  
 Inject. Date: 09-Jan-2022 13:33:29 ALS Bottle#: 11 Worklist Smp#: 11  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022187-011 140-25858-A-5-B  
 Misc. Info.: Plate: 11 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 15:08:06 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1641

First Level Reviewer: cochranj Date: 10-Jan-2022 13:31:19  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_005.d

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	3.528	3.528	0.0	0.859	2664226	1.31	105	4339	
13 HFPO-DA	285.00 > 169.00	3.528	3.528	0.0	1.000	3965	0.001375	2.0	7M	7M
LOD = 0.008250										
* 22 13C2 PFOA	415.00 > 370.00	4.106	4.106	0.0		5570951	1.25		9975	

**QC Flag Legend**

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\\_011.d

Injection Date: 09-Jan-2022 13:33:29

Instrument ID: LCA

Lims ID: 140-25858-A-5-B

Lab Sample ID: 140-25858-5

Client ID: R-1596 QC OTM-45 CB DI WATER RB

Operator ID: Cochran, Bobby

ALS Bottle#: 11

Worklist Smp#: 11

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

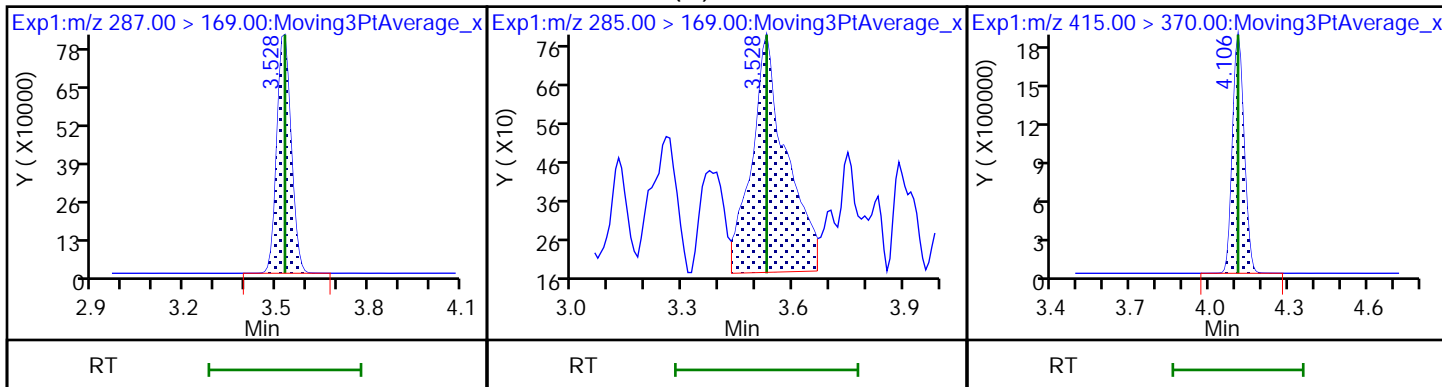
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

D 12 13C3 HFPO-DA

13 HFPO-DA (M)

\* 22 13C2 PFOA





Eurofins TestAmerica, Knoxville

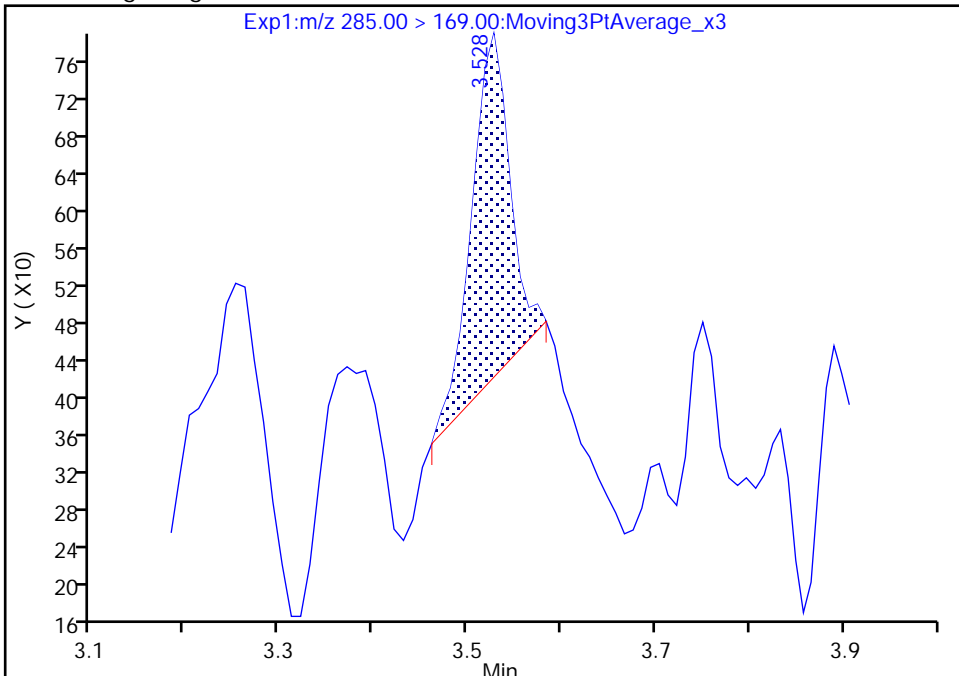
Data File:	\\chromfs\Knoxville\ChromData\LCA\20220109-22187.b_011.d		
Injection Date:	09-Jan-2022 13:33:29	Instrument ID:	LCA
Lims ID:	140-25858-A-5-B	Lab Sample ID:	140-25858-5
Client ID:	R-1596 QC OTM-45 CB DI WATER RB		
Operator ID:	Cochran, Bobby	ALS Bottle#:	11
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	PFC_LCA	Limit Group:	LC - PFC- ICAL
Column:		Detector:	EXP1
		Worklist Smp#:	11

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

Signal: 1

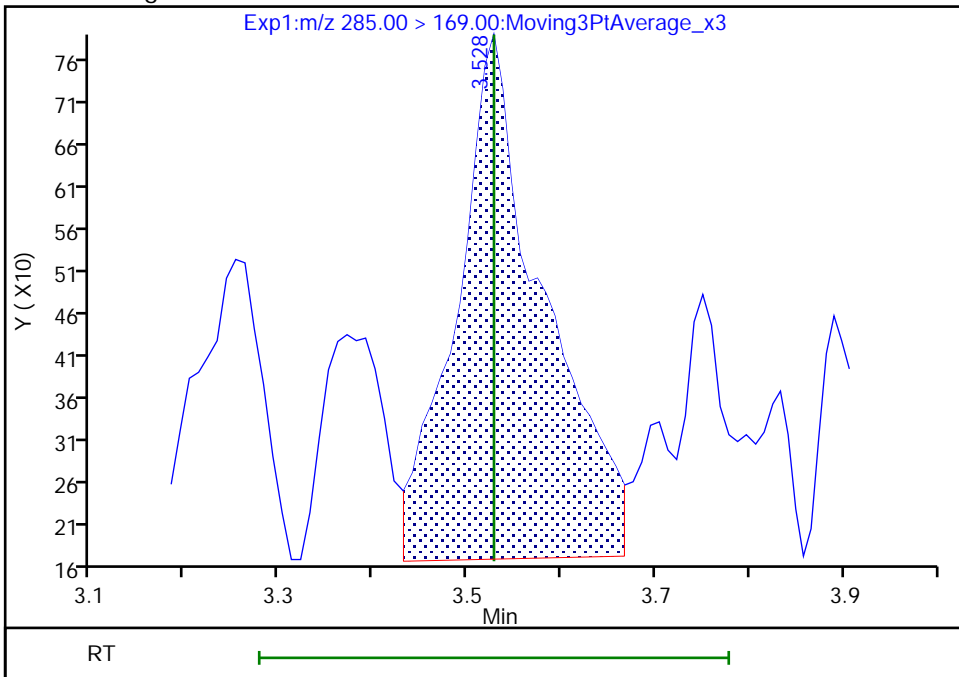
RT: 3.53  
 Area: 1018  
 Amount: 0.000353  
 Amount Units: ng/ml

Processing Integration Results



RT: 3.53  
 Area: 3965  
 Amount: 0.001375  
 Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 13:31:10  
 Audit Action: Manually Integrated

Audit Reason: Baseline

FORM I  
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: R-1597 QC OTM-45 CB MEOH WITH 5% NH4OH RB Lab Sample ID: 140-25858-6  
 Matrix: Air Lab File ID: \_023.d  
 Analysis Method: 537 (modified) Date Collected: 12/16/2021 00:00  
 Extraction Method: None Date Extracted: 01/04/2022 08:59  
 Sample wt/vol: 1 (Sample) Date Analyzed: 01/12/2022 20:56  
 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.: 57865 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	93		25-150

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_023.d  
 Lims ID: 140-25858-A-6-B  
 Client ID: R-1597 QC OTM-45 CB MEOH WITH 5% NH4OH RB  
 Sample Type: Client  
 Inject. Date: 12-Jan-2022 20:56:33 ALS Bottle#: 23 Worklist Smp#: 23  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022237-023 140-25858-a-6-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:15:30 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 10:04:14  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_019.d

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	3.547	3.548	-0.001	0.860	2222321	1.16		92.5	4791	
13 HFPO-DA										7
285.00 > 169.00	3.538	3.548	-0.010	0.997	4019	0.001671		3.1	7	
LOD = 0.008250										
* 22 13C2 PFOA										
415.00 > 370.00	4.124	4.132	-0.008		5272240	1.25			8582	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\\_023.d

Injection Date: 12-Jan-2022 20:56:33

Instrument ID: LCA

Lims ID: 140-25858-A-6-B

Lab Sample ID: 140-25858-6

Client ID: R-1597 QC OTM-45 CB MEOH WITH 5% NH4OH RB

Operator ID: Cochran, Bobby

ALS Bottle#: 23

Worklist Smp#: 23

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

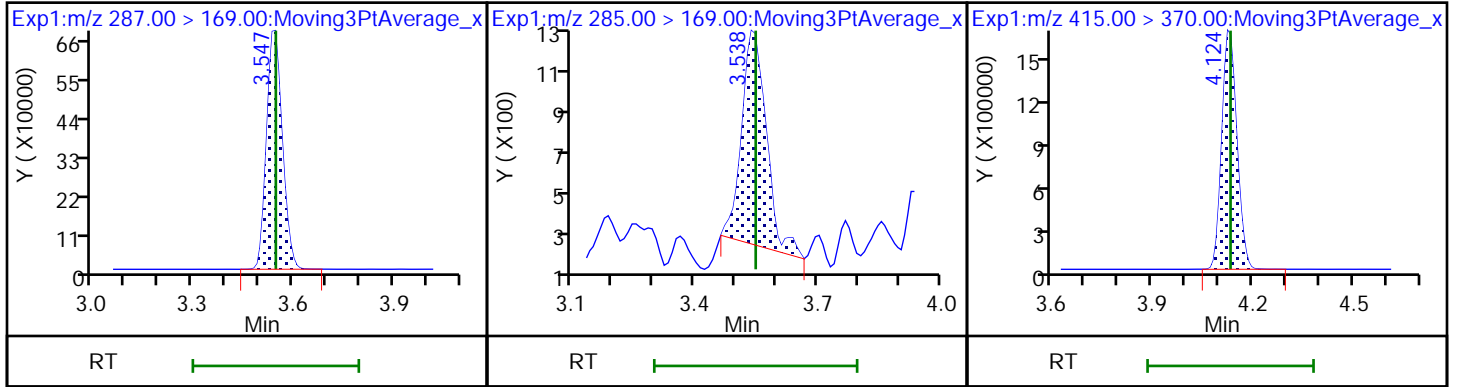
Method: PFC\_LCA

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: <u>Eurofins Knoxville</u>	Job No.: <u>140-25858-1</u>
SDG No.: _____	
Client Sample ID: <u>R-1598,1599 QC OTM-45 CB</u> <u>FH BT</u>	Lab Sample ID: <u>140-25858-7</u>
Matrix: <u>Air</u>	Lab File ID: <u>_015.d</u>
Analysis Method: <u>537 (modified)</u>	Date Collected: <u>12/16/2021 00:00</u>
Extraction Method: <u>None</u>	Date Extracted: <u>01/04/2022 08:32</u>
Sample wt/vol: <u>1 (Sample)</u>	Date Analyzed: <u>01/11/2022 18:58</u>
Con. Extract Vol.: <u>50 (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>57822</u>	Units: <u>ug/Sample</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.0382		0.00100	0.000580

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\20220111-22220.b\_015.d  
 Lims ID: 140-25858-A-7-B  
 Client ID: R-1598,1599 QC OTM-45 CB FH BT  
 Sample Type: Client  
 Inject. Date: 11-Jan-2022 18:58:34 ALS Bottle#: 15 Worklist Smp#: 15  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022220-015 140-25858-a-7-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 12-Jan-2022 18:43:11 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1648

First Level Reviewer: cochranj Date: 12-Jan-2022 18:40:32  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_007.d

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	3.546	3.574	-0.028	0.860	2110584	1.07	85.7	4562	
13 HFPO-DA	285.00 > 169.00	3.546	3.574	-0.028	1.000	4356308	1.91		3854	
* 22 13C2 PFOA	415.00 > 370.00	4.123	4.156	-0.033		5407468	1.25		10107	

**QC Flag Legend**  
Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_015.d

Injection Date: 11-Jan-2022 18:58:34

Instrument ID: LCA

Lims ID: 140-25858-A-7-B

Lab Sample ID: 140-25858-7

Client ID: R-1598,1599 QC OTM-45 CB FH BT

Operator ID: Cochran, Bobby

ALS Bottle#: 15

Worklist Smp#: 15

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

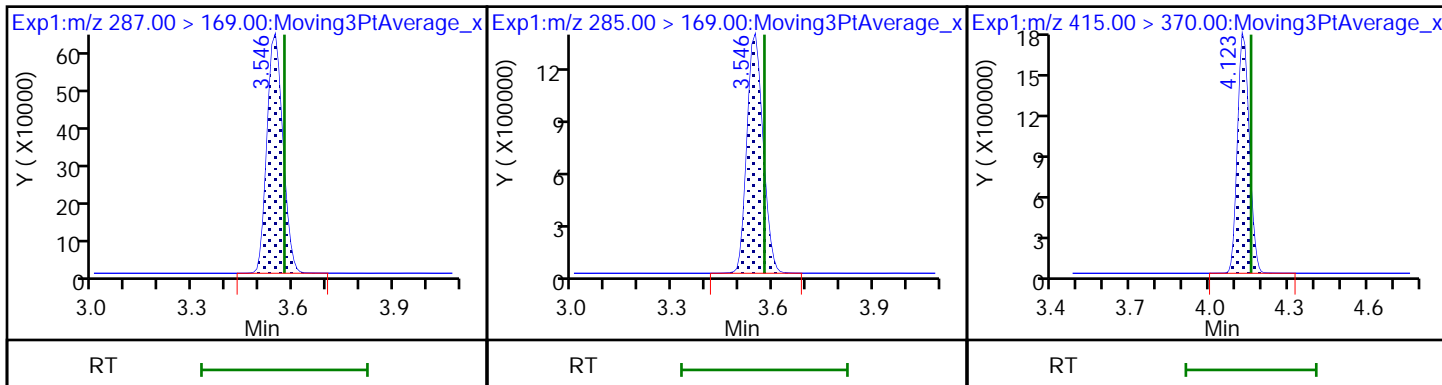
Method: PFC\_LCA

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\20220111-22220.b\_015.d  
 Lims ID: 140-25858-A-7-B  
 Client ID: R-1598,1599 QC OTM-45 CB FH BT  
 Sample Type: Client  
 Inject. Date: 11-Jan-2022 18:58:34 ALS Bottle#: 15 Worklist Smp#: 15  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022220-015 140-25858-a-7-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 12-Jan-2022 18:43:11 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1648

First Level Reviewer: cochranj Date: 12-Jan-2022 18:40:32

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

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
SDG No.: \_\_\_\_\_  
Client Sample ID: R-1600,1601,1603 QC Lab Sample ID: 140-25858-8  
OTM-45 CB BH BT  
Matrix: Air Lab File ID: \_024.d  
Analysis Method: 537 (modified) Date Collected: 12/16/2021 00:00  
Extraction Method: None Date Extracted: 01/04/2022 08:59  
Sample wt/vol: 1(Sample) Date Analyzed: 01/12/2022 21:05  
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.: 57865 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.00213		0.00160	0.00140

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\20220112-22237.b\_024.d  
 Lims ID: 140-25858-A-8-B  
 Client ID: R-1600,1601,1603 QC OTM-45 CB BH BT  
 Sample Type: Client  
 Inject. Date: 12-Jan-2022 21:05:21 ALS Bottle#: 24 Worklist Smp#: 24  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022237-024 140-25858-a-8-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:15:30 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1

Process Host: CTX1674

Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_019.d

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	3.556	3.548	0.008	0.859	2173695	1.20	95.6	5240	
13 HFPO-DA	285.00 > 169.00	3.556	3.548	0.008	1.000	251031	0.1067		239	
* 22 13C2 PFOA	415.00 > 370.00	4.141	4.132	0.009		4988788	1.25		9022	

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\\_024.d

Injection Date: 12-Jan-2022 21:05:21

Instrument ID: LCA

Lims ID: 140-25858-A-8-B

Lab Sample ID: 140-25858-8

Client ID: R-1600,1601,1603 QC OTM-45 CB BH BT

Operator ID: Cochran, Bobby

ALS Bottle#: 24

Worklist Smp#: 24

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

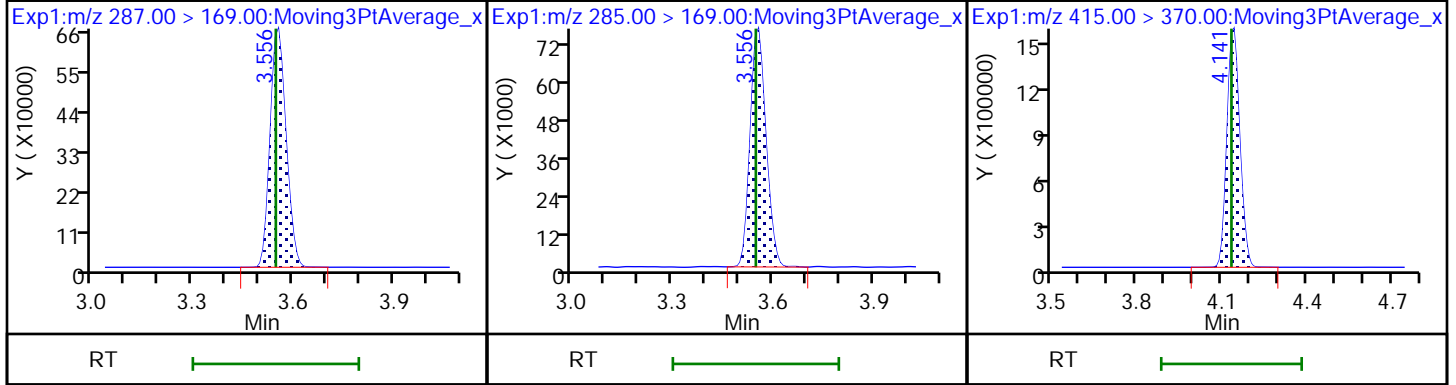
Method: PFC\_LCA

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\20220112-22237.b\_024.d  
 Lims ID: 140-25858-A-8-B  
 Client ID: R-1600,1601,1603 QC OTM-45 CB BH BT  
 Sample Type: Client  
 Inject. Date: 12-Jan-2022 21:05:21 ALS Bottle#: 24 Worklist Smp#: 24  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022237-024 140-25858-a-8-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:15:30 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1674

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

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: R-1603 QC OTM-45 CB Lab Sample ID: 140-25858-9  
                                 IMPINGERS 1,2&3 COND BT  
 Matrix: Air Lab File ID: \_012.d  
 Analysis Method: 537 (modified) Date Collected: 12/16/2021 00:00  
 Extraction Method: None Date Extracted: 01/04/2022 14:49  
 Sample wt/vol: 1(Sample) Date Analyzed: 01/09/2022 13:42  
 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.: 57742 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	98		25-150

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_012.d  
 Lims ID: 140-25858-A-9-B  
 Client ID: R-1603 QC OTM-45 CB IMPINGERS 1,2&3 COND BT  
 Sample Type: Client  
 Inject. Date: 09-Jan-2022 13:42:16 ALS Bottle#: 12 Worklist Smp#: 12  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022187-012 140-25858-A-9-B  
 Misc. Info.: Plate: 11 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 15:08:06 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1641

First Level Reviewer: cochranj Date: 10-Jan-2022 13:31:31  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_005.d

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	3.520	3.528	-0.008	0.857	2509930	1.23	98.3	4848	
13 HFPO-DA	285.00 > 169.00	3.528				ND				
* 22 13C2 PFOA	415.00 > 370.00	4.106	4.106	0.0		5604494	1.25		10733	

**QC Flag Legend**

Processing Flags

ND - Not Detected or Marked ND

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_012.d

Injection Date: 09-Jan-2022 13:42:16

Instrument ID: LCA

Lims ID: 140-25858-A-9-B

Lab Sample ID: 140-25858-9

Client ID: R-1603 QC OTM-45 CB IMPINGERS 1,2&3 COND BT

Operator ID: Cochran, Bobby

ALS Bottle#: 12

Worklist Smp#: 12

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

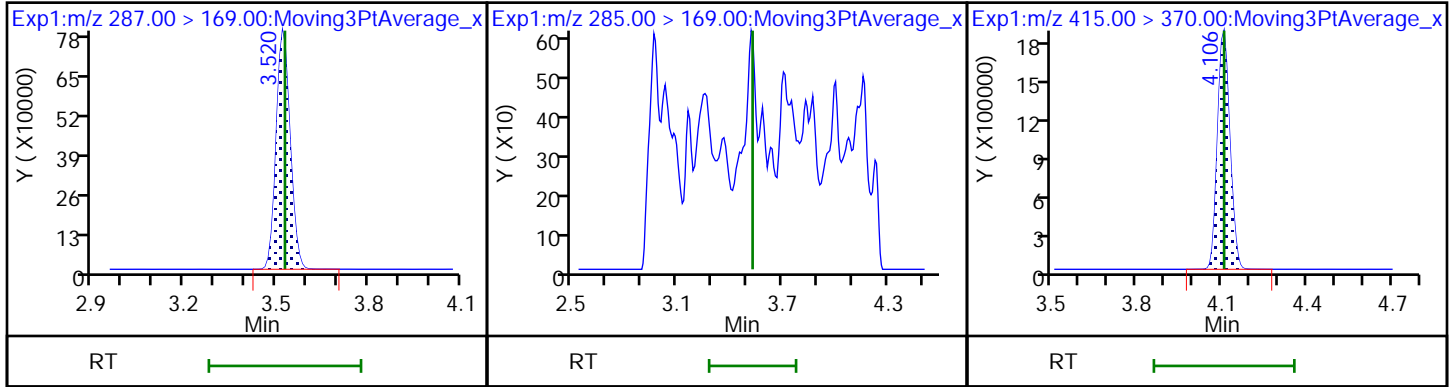
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

D 12 13C3 HFPO-DA

13 HFPO-DA (ND)

\* 22 13C2 PFOA



Eurofins TestAmerica, Knoxville  
Recovery Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_012.d  
 Lims ID: 140-25858-A-9-B  
 Client ID: R-1603 QC OTM-45 CB IMPINGERS 1,2&3 COND BT  
 Sample Type: Client  
 Inject. Date: 09-Jan-2022 13:42:16 ALS Bottle#: 12 Worklist Smp#: 12  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022187-012 140-25858-A-9-B  
 Misc. Info.: Plate: 11 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 15:08:06 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1641

First Level Reviewer: cochranj Date: 10-Jan-2022 13:31:31

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

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: R-1604 QC OTM-45 CB Lab Sample ID: 140-25858-10  
                           BREAKTHROUGH XAD-2 RESIN  
                           TUBE BT  
 Matrix: Air Lab File ID: \_025.d  
 Analysis Method: 537 (modified) Date Collected: 12/16/2021 00:00  
 Extraction Method: None Date Extracted: 01/04/2022 08:59  
 Sample wt/vol: 1(Sample) Date Analyzed: 01/12/2022 21:14  
 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.: 57865 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.00169		0.00160	0.00140

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\20220112-22237.b\_025.d  
 Lims ID: 140-25858-A-10-B  
 Client ID: R-1604 QC OTM-45 CB BREAKTHROUGH XAD-2 RESIN TUBE BT  
 Sample Type: Client  
 Inject. Date: 12-Jan-2022 21:14:11 ALS Bottle#: 25 Worklist Smp#: 25  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022237-025 140-25858-a-10-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:15:30 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1

Process Host: CTX1674

Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_019.d

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	3.547	3.548	-0.001	0.858	2218800	1.17	93.9	5247	
13 HFPO-DA	285.00 > 169.00	3.547	3.548	-0.001	1.000	203386	0.0847		229	
* 22 13C2 PFOA	415.00 > 370.00	4.132	4.132	0.0		5186616	1.25		9095	

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\\_025.d

Injection Date: 12-Jan-2022 21:14:11

Instrument ID: LCA

Lims ID: 140-25858-A-10-B

Lab Sample ID: 140-25858-10

Client ID: R-1604 QC OTM-45 CB BREAKTHROUGH XAD-2 RESIN TUBE BT

Operator ID: Cochran, Bobby

ALS Bottle#: 25 Worklist Smp#: 25

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

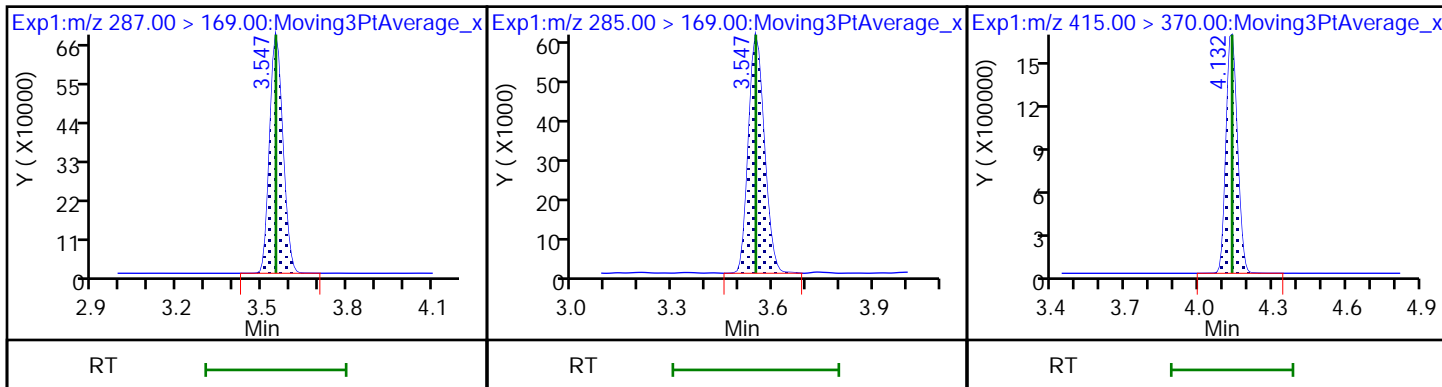
Method: PFC\_LCA

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\20220112-22237.b\_025.d  
 Lims ID: 140-25858-A-10-B  
 Client ID: R-1604 QC OTM-45 CB BREAKTHROUGH XAD-2 RESIN TUBE BT  
 Sample Type: Client  
 Inject. Date: 12-Jan-2022 21:14:11 ALS Bottle#: 25 Worklist Smp#: 25  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022237-025 140-25858-a-10-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:15:30 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1674

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

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: C-2506 MEDIA CHECK XAD Lab Sample ID: 140-25858-12  
 Matrix: Air Lab File ID: 026.d  
 Analysis Method: 537 (modified) Date Collected: 12/16/2021 00:00  
 Extraction Method: None Date Extracted: 01/04/2022 08:59  
 Sample wt/vol: 1(Sample) Date Analyzed: 01/12/2022 21:23  
 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.: 57865 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	99		25-150

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_026.d  
 Lims ID: 140-25858-A-12-B  
 Client ID: C-2506 MEDIA CHECK XAD  
 Sample Type: Client  
 Inject. Date: 12-Jan-2022 21:23:00 ALS Bottle#: 26 Worklist Smp#: 26  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022237-026 140-25858-a-12-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:15:30 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1674  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_019.d

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	3.548	0.0	0.861	2384620	1.24	98.9	5039	
13 HFPO-DA										7
285.00 > 169.00	3.548	3.548	0.0	1.000	11085	0.004296		12.6	7	
LOD = 0.008250										
* 22 13C2 PFOA	415.00 > 370.00	4.123	4.132	-0.009		5291356	1.25		9435	

**QC Flag Legend**

Processing Flags  
 7 - Failed Limit of Detection

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\\_026.d

Injection Date: 12-Jan-2022 21:23:00

Instrument ID: LCA

Lims ID: 140-25858-A-12-B

Lab Sample ID: 140-25858-12

Client ID: C-2506 MEDIA CHECK XAD

Operator ID: Cochran, Bobby

ALS Bottle#: 26

Worklist Smp#: 26

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

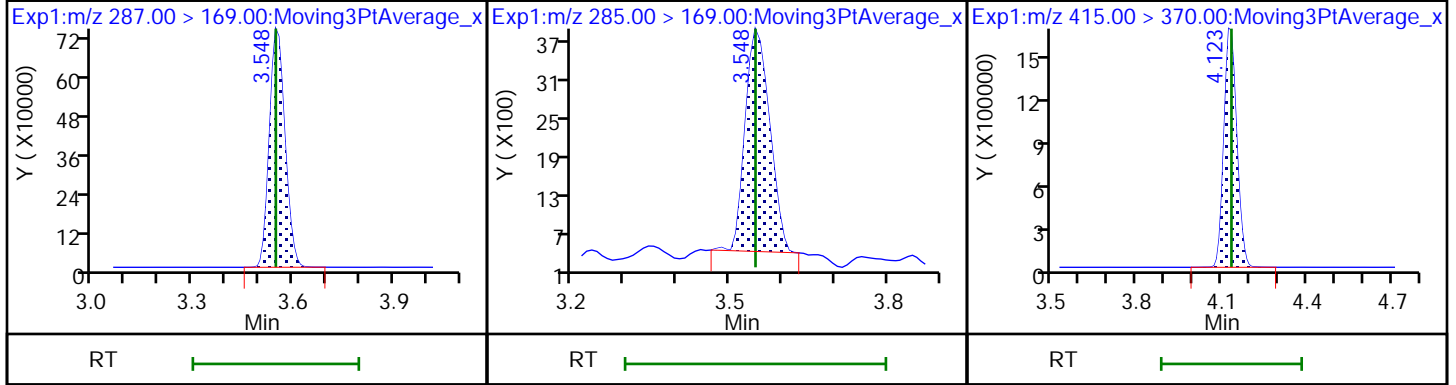
Method: PFC\_LCA

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 Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: C-2507 MEDIA CHECK FILTER Lab Sample ID: 140-25858-13  
 Matrix: Air Lab File ID: \_016.d  
 Analysis Method: 537 (modified) Date Collected: 12/16/2021 00:00  
 Extraction Method: None Date Extracted: 01/04/2022 08:32  
 Sample wt/vol: 1(Sample) Date Analyzed: 01/11/2022 19:07  
 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.: 57822 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\20220111-22220.b\_016.d  
 Lims ID: 140-25858-A-13-B  
 Client ID: C-2507 MEDIA CHECK FILTER  
 Sample Type: Client  
 Inject. Date: 11-Jan-2022 19:07:20 ALS Bottle#: 16 Worklist Smp#: 16  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022220-016 140-25858-a-13-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 12-Jan-2022 18:43:11 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1648

First Level Reviewer: cochranj Date: 12-Jan-2022 18:40:46  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_007.d

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	3.538	3.574	-0.036	0.858	2279762	1.18		94.2	5373	
13 HFPO-DA										7
285.00 > 169.00	3.538	3.574	-0.036	1.000	8701	0.003527		11.3	7	
LOD = 0.008250										
* 22 13C2 PFOA										
415.00 > 370.00	4.122	4.156	-0.034		5310508	1.25			8304	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_016.d

Injection Date: 11-Jan-2022 19:07:20

Instrument ID: LCA

Lims ID: 140-25858-A-13-B

Lab Sample ID: 140-25858-13

Client ID: C-2507 MEDIA CHECK FILTER

Operator ID: Cochran, Bobby

ALS Bottle#: 16

Worklist Smp#: 16

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

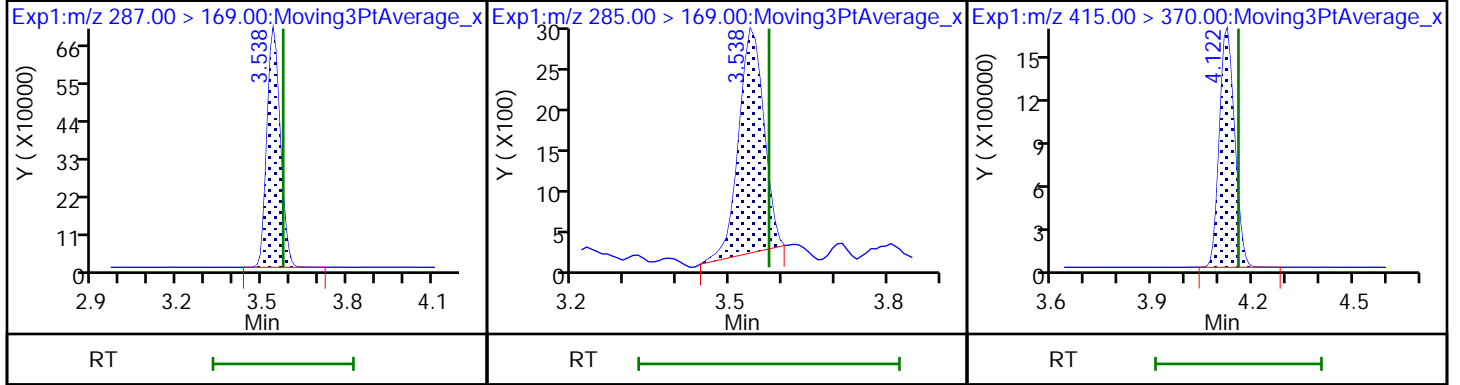
Method: PFC\_LCA

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 Knoxville Job No.: 140-25858-1 Analy Batch No.: 57741

SDG No.: \_\_\_\_\_

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

Calibration Start Date: 01/09/2022 10:35 Calibration End Date: 01/09/2022 11:28 Calibration ID: 3496

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-57741/6	006.d
Level 2	IC 140-57741/7	007.d
Level 3	IC 140-57741/8	008.d
Level 4	ICIS 140-57741/9	009.d
Level 5	IC 140-57741/10	010.d
Level 6	IC 140-57741/11	011.d
Level 7	IC 140-57741/12	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)	0.7464 0.7999	0.7672 0.8186	0.7780	0.7732	0.8076		AveI	0.784 4							35.0				
Perfluoropentanoic acid (PFPeA)	0.9223 0.9921	0.9453 0.9844	0.9375	0.9173	0.9645		AveI	0.951 9							35.0				
Perfluorobutanesulfonic acid (PFBS)	1.0501 1.1020	1.0663 1.1573	1.1041	1.0703	1.1290		AveI	1.097 0							35.0				
4:2 FTS	2.1622 2.3753	2.1637 2.3196	2.1717	2.2516	2.3209		AveI	2.252 2							35.0				
Perfluoropentanesulfonic acid (PFPeS)	0.9221 0.9955	0.9356 1.0291	0.9826	0.9346	0.9995		AveI	0.971 3							35.0				
Perfluorohexanoic acid (PFHxA)	0.9449 0.8620	0.8627 0.8713	0.8158	0.8341	0.8855		AveI	0.868 0							35.0				
HFPO-DA	1.4092 1.3894	1.3426 1.4027	1.2763	1.3238	1.3234		AveI	1.352 5							35.0				
Perfluorohexanesulfonic acid (PFHxS)	1.4875 1.4237	1.3047 1.4581	1.3098	1.3044	1.3523		AveI	1.377 2							35.0				
Perfluoroheptanoic acid (PFHpA)	1.0029 1.0407	1.0043 1.1056	1.0396	1.0297	1.1042		AveI	1.046 7							35.0				
DONA	2.5673 2.7077	2.5847 2.7060	2.4973	2.6048	2.7424		AveI	2.630 0							35.0				
Perfluoroheptanesulfonic Acid (PFHpS)	0.8675 0.9795	0.9937 1.0135	0.8883	0.9179	1.0180		AveI	0.954 1							35.0				
6:2 FTS	1.5458 1.8539	1.8702 1.7992	1.7539	1.7175	1.7650		L21D	-0.00 4	1.799 9						0.9970				0.9900
Perfluorooctanoic acid (PFOA)	1.2245 1.1650	1.1211 1.1689	1.0968	1.1082	1.1475		AveI	1.147 4							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 Knoxville Job No.: 140-25858-1 Analy Batch No.: 57741

SDG No.:

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

Calibration Start Date: 01/09/2022 10:35 Calibration End Date: 01/09/2022 11:28 Calibration ID: 3496

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							
Perfluorooctanesulfonic acid (PFOS)	1.1246	1.0582	1.0402	1.0857	1.1118		1.098		3.5		35.0			
Perfluorononanoic acid (PFNA)	0.7571	0.8428	0.8247	0.8613	0.8400		0.846						0.9990	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	1.8932	2.1322	1.9724	2.1495	2.2457		2.133						0.9980	
Perfluorononanesulfonic acid (PFNS)	0.9183	0.9135	0.9626	0.9814	1.0010		0.974		4.7		35.0			
Perfluorooctanesulfonamide (FOSA)	0.9105	1.0090	0.9138	0.8526	0.9928		0.945		6.0		35.0			
Perfluorodecanoic acid (PFDA)	1.0270	0.9746	0.9494	0.8867	0.9633		0.964		4.3		35.0			
8:2 FTS	1.3829	1.3617	1.4319	1.4115	1.4229		1.415		2.3		35.0			
N-methylperfluorooctanesulfonamido acetic acid (NMeFOSAA)	1.0366	0.7784	0.8361	0.9306	0.9859		0.970						1.0000	0.9900
Perfluorodecanesulfonic acid (PFDS)	0.8045	0.9261	0.8499	0.9074	0.9503		0.931						0.9980	0.9900
Perfluoroundecanoic acid (PFUnA)	0.9127	1.0109	0.9559	0.9458	0.9926		0.969		3.5		35.0			
N-ethylperfluorooctanesulfonamido acetic acid (NEFOSAA)	0.9149	1.1413	0.9175	0.9500	1.0384		0.989						0.9920	0.9900
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid	1.5883	1.6659	1.5850	1.6795	1.7448		1.672		3.9		35.0			
Perfluorododecanoic acid (PFDoA)	1.0279	1.0730	0.9882	1.0257	1.0048		1.026						0.9990	0.9900
10:2 FTS	1.0258	0.9532												
NMeFOSA	2.1340	2.3973	2.1810	2.1445	2.3191		2.276		5.3		35.0			
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	1.1628	0.8984	1.0611	1.0013	1.0732		0.997						0.9940	0.9900
Perfluorododecanesulfonic acid (PFDoS)	0.9328	1.2131	1.0801	1.1601	1.2014		1.168						0.9960	0.9900
	1.1898	1.2417												
	0.8842	0.8932	0.8754	0.9063	0.9373		0.916		3.9		35.0			
	0.9719	0.9478												

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 Knoxville Job No.: 140-25858-1 Analy Batch No.: 57741

SDG No.: \_\_\_\_\_ GC Column: GeminiC18 3 ID: 3 (mm) Heated Purge: (Y/N) N  
Instrument ID: LCA Calibration Start Date: 01/09/2022 10:35 Calibration End Date: 01/09/2022 11:28 Calibration ID: 3496

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						
Perfluorotridecanoic acid (PFTrIA)	0.7671 0.8583	0.8601 0.7907	0.7877	0.8530	0.8872		0.829 2		5.6	35.0			
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	1.3402 1.3295	1.3838 1.3746	1.2691	1.2608	1.3381		1.328 0		3.6	35.0			
N-ethylperfluoro-1-octanesulfonamide	1.1559 1.2197	1.1010 1.2376	1.1934	1.1893	1.2687		1.195 1		4.6	35.0			
Perfluorotetradecanoic acid (PFTeA)	0.1377 0.1360	0.1378 0.1392	0.1307	0.1247	0.1346		0.134 4		3.8	35.0			
Perfluorohexadecanoic acid	1.4913 1.0869	1.3165 1.0796	1.0726	1.0610	1.0898	Q2ID	1.058 2	0.0029017			0.9990		0.9900
Perfluorooctadecanoic acid	0.9373 1.0018	0.9312 1.0239	0.9790	0.9846	1.0328	AveI	0.984 4		4.0	35.0			
13C4 PFBA	1.1372 1.1423	1.1023 1.1628	1.1498	1.1208	1.1773	Ave	1.141 8		2.2	50.0			
13C5 PFPeA	0.8899 0.8728	0.8811 0.9023	0.8857	0.8653	0.9082	Ave	0.886 5		1.7	50.0			
13C3 PFBS	0.5667 0.6186	0.5743 0.6308	0.5687	0.5745	0.6053	Ave	0.591 3		4.5	50.0			
M2-4:2 FTS	0.1825 0.1698	0.1964 0.1685	0.1874	0.1886	0.1807	Ave	0.182 0		5.6	50.0			
13C2 PFHxA	0.9636 0.9437	0.9450 0.9385	0.9898	0.9179	0.9366	Ave	0.947 9		2.4	50.0			
13C3 HFPO-DA	0.4430 0.4581	0.4326 0.4909	0.4517	0.4389	0.4739	Ave	0.455 6		4.5	50.0			
18O2 PFHxS	0.3920 0.3936	0.3910 0.4016	0.3902	0.3886	0.4053	Ave	0.394 6		1.6	50.0			
13C4 PFHpA	0.9260 0.9031	0.9062 0.8946	0.9016	0.8988	0.9166	Ave	0.906 7		1.2	50.0			
M2-6:2 FTS	0.2001 0.1664	0.1957 0.1631	0.1891	0.1833	0.1868	Ave	0.183 5		7.6	50.0			
13C4 PFOA	0.9598 0.9095	0.9369 0.9226	0.9610	0.9270	0.9466	Ave	0.937 6		2.1	50.0			
13C4 PFOS	0.5491 0.5703	0.5482 0.6071	0.5837	0.5450	0.5737	Ave	0.568 1		4.0	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 Knoxville Job No.: 140-25858-1 Analy Batch No.: 57741

SDG No.:

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

Calibration Start Date: 01/09/2022 10:35 Calibration End Date: 01/09/2022 11:28 Calibration ID: 3496

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	M1	M2										
13C5 PFNA	1.2491 1.2078	1.1939 1.2597	1.2592	1.1785	1.2884	1.233 8			3.3		50.0						
13C8 FOSA	0.8007 0.7107	0.7941 0.7183	0.7997	0.7796	0.7744	0.768 2			5.0		50.0						
13C2 PFDA	1.2413 1.1439	1.2072 1.1142	1.2263	1.2025	1.2015	1.191 0			3.8		50.0						
M2-8:2 FTS	0.1973 0.1973	0.2109 0.1848	0.2191	0.2098	0.2078	0.207 0			5.9		50.0						
d3-NMeFOSAA	0.1347 0.1410	0.1314 0.1494	0.1503	0.1352	0.1389	0.140 1			5.2		50.0						
13C2 PFUnA	1.1953 1.1608	1.1801 1.1919	1.2074	1.1676	1.2182	1.188 8			1.7		50.0						
d5-NEtFOSAA	0.1572 0.1498	0.1497 0.1535	0.1597	0.1495	0.1568	0.153 7			2.7		50.0						
13C2 PFDoA	1.2213 1.2180	1.1724 1.3461	1.2909	1.1961	1.2835	1.246 9			4.9		50.0						
d7-N-MeFOSE-M	0.1516 0.1496	0.1473 0.1559	0.1474	0.1445	0.1532	0.149 9			2.6		50.0						
d-N-MeFOSA-M	0.1012 0.1077	0.1022 0.1200	0.0983	0.1071	0.1117	0.106 9			6.9		50.0						
d9-N-EtFOSE-M	0.1493 0.1523	0.1470 0.1569	0.1472	0.1456	0.1545	0.150 4			2.8		50.0						
d-N-EtFOSA-M	0.0847 0.0915	0.0853 0.0968	0.0851	0.0856	0.0889	0.088 3			5.1		50.0						
13C2 PFTeDA	0.9499 0.9676	0.9019 0.9931	0.9497	0.9266	0.9666	0.950 8			3.1		50.0						
13C2 PFHxDA	0.6205 0.6577	0.6275 0.7009	0.6323	0.6134	0.6587	0.644 4			4.7		50.0						
13C8 PFOA	0.9857 1.0065	0.9979 0.9945	0.9933	1.0158	1.0026	0.999 5			1.0		50.0						
13C8 PFOS	0.2241 0.2209	0.2140 0.2298	0.2111	0.2271	0.2271	0.222 0			3.2		50.0						

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

Lab Name: Eurofins Knoxville Job No.: 140-25858-1 Analy Batch No.: 57741

SDG No.:

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

Calibration Start Date: 01/09/2022 10:35 Calibration End Date: 01/09/2022 11:28 Calibration ID: 3496

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-57741/6	006.d
Level 2	IC 140-57741/7	007.d
Level 3	IC 140-57741/8	008.d
Level 4	ICIS 140-57741/9	009.d
Level 5	IC 140-57741/10	010.d
Level 6	IC 140-57741/11	011.d
Level 7	IC 140-57741/12	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	83845	186844	962240	3854072	9638211	0.0250	0.0500	0.250	1.00	1.00	2.50	
Perfluoropentanoic acid (PFPeA)		AveI D	17680839	33917760	893254	3529837	8879560	0.0250	10.0	0.250	1.00	1.00	2.50	
Perfluorobutanesulfonic acid (PFBS)		AveI D	16756830	31649969	597004	2417286	6124063	0.0221	10.0	0.221	0.884	0.884	2.21	
4:2 FTS		AveI D	11661043	22993357	408865	1764352	3970343	0.0234	8.84	0.234	0.934	0.934	2.34	
Perfluoropentanesulfonic acid (PFPeS)		AveI D	7289864	13006427	563759	2239825	5752393	4.67	9.34	0.235	0.938	0.938	2.35	
Perfluorohexanoic acid (PFHxA)		AveI D	48418	111364	868567	3404917	8407159	0.0250	0.0500	0.250	1.00	1.00	2.50	
HFPO-DA		AveI D	11177909	21695732	620127	2584105	6357565	4.69	9.38	0.250	1.00	1.00	2.50	
Perfluorohexanesulfonic acid (PFHxS)		AveI D	15740477	29136720	500197	2051159	5056303	5.00	10.0	0.228	0.910	0.910	2.28	
Perfluorooheptanoic acid (PFHpA)		AveI D	61665	128334	1008145	4115810	10258907	5.00	10.0	0.250	1.00	1.00	2.50	
		AveI D	12316846	24536421	1008145	4115810	10258907	5.00	10.0	0.250	1.00	1.00	2.50	
		AveI D	52407	102576	1008145	4115810	10258907	5.00	10.0	0.250	1.00	1.00	2.50	
		AveI D	9867857	18986869	1008145	4115810	10258907	5.00	10.0	0.250	1.00	1.00	2.50	
		AveI D	91728	201071	1008145	4115810	10258907	5.00	10.0	0.250	1.00	1.00	2.50	
		AveI D	18186660	35239396	1008145	4115810	10258907	5.00	10.0	0.250	1.00	1.00	2.50	

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

Lab Name: Eurofins Knoxville Job No.: 140-25858-1 Job No.: 140-25858-1 Analy Batch No.: 57741

SDG No.: \_\_\_\_\_ GC Column: GeminiC18 3 ID: 3 (mm) Heated Purge: (Y/N) N  
Instrument ID: LCA Calibration Start Date: 01/09/2022 10:35 Calibration End Date: 01/09/2022 11:28 Calibration ID: 3496

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					
DONA		AveI D	131168	294908	1476859	5947134	15024020	0.0236	0.0471	0.236	0.942	2.36					
Perfluoroheptanesulfonic Acid (PFHpS)		AveI D	28147768	55134858	530886	2117985	5636163	4.71	9.42	0.238	0.952	2.38					
6:2 FTS		L2ID	10290455	20869230	338181	1327290	3168996	4.76	9.52	0.237	0.948	2.37					
Perfluorooctanoic acid (PFOA)		AveI D	28966	76663	1133760	4568690	11010802	5660505	9913283	0.0250	0.0500	1.00	2.50				
Perfluorooctanesulfonic acid (PFOS)		AveI D	20503881	38426557	606028	2441987	6000595	56603	118941	0.0232	0.0464	0.928	2.32				
Perfluorononanoic acid (PFNA)		Q2ID	11516632	23013451	1117019	4513988	10970847	11516632	23013451	4.64	9.28	1.00	2.50				
9-Chlorohexadecafluoro-3-oxanona ne-1-sulfonic acid		Q2ID	93408	222306	1154070	4855527	12172388	20662331	40670324	0.0233	0.0466	0.932	2.33				
Perfluorononanesulfonic acid (PFNS)		AveI D	22796459	45057750	580163	2283353	5588794	47815	106223	0.0240	0.0480	0.960	2.40				
Perfluorooctanesulfonamide (FOSA)		AveI D	10858318	21224656	786079	2955933	7793889	72012	177027	0.0250	0.0500	1.00	2.50				
Perfluorodecanoic acid (PFDA)		AveI D	13658161	24296365	1252301	4742177	11732225	125922	259933	0.0250	0.0500	1.00	2.50				
8:2 FTS		AveI D	21676188	38547965	323270	1261773	2871784	28696	60773	0.0240	0.0479	0.958	2.40				
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)		QuaI F	5273346	9167971	135153	559483	1388453	13790	22599	4.79	9.58	1.00	2.50				
Perfluorodecanesulfonic acid (PFDS)		L2ID	2665259	5246503	514341	2120075	5327635	42064	108135	0.0241	0.0482	0.964	2.41				



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

Lab Name: Eurofins Knoxville Job No.: 140-25858-1 Analy Batch No.: 57741

SDG No.:

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

Calibration Start Date: 01/09/2022 10:35 Calibration End Date: 01/09/2022 11:28 Calibration ID: 3496

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
Perfluoroundecanoic acid (PFUnA)		AveI D	10146252 107754	19735300 263564	1241525	4911042	12257781	4.82 0.0250	9.64 0.0500	0.250	1.00	2.50
N-ethylperfluorooctanesulfonamid oacetic acid (NETFOSAA)		Q2ID	21821508 14206	42351559 37744	157582	631535	1650265	5.00 0.0250	10.0 0.0500	0.250	1.00	2.50
11-Chloroicosafuoro-3-oxaundec ane-1-sulfonic acid		AveI D	2908898 81152	5632715 190074	937340	3834571	9558929	5.00 0.0236	10.0 0.0471	0.236	0.942	2.36
Perfluorododecanoic acid (PFDoA)		Q2ID	18048233 124002	34786454 277938	1372157	5455982	13073136	4.71 0.0250	9.42 0.0500	0.250	1.00	2.50
10:2 FTS		AveI D	24177058 44558	45718210 107659	495484	1929022	4709912	5.00 0.0241	10.0 0.0482	0.241	0.964	2.41
NMeFOSA		Q2ID	8656158 11620	15277484 20289	112183	476867	1214999	4.82 0.0250	9.64 0.0500	0.250	1.00	2.50
2- (N-methylperfluoro-1-octanesulfo namido) ethanol		Q2ID	2239289 13964	4741063 39475	171287	745332	1865207	5.00 0.0250	10.0 0.0500	0.250	1.00	2.50
Perfluorododecanesulfonic acid (PFDoS)		AveI D	3444502 46424	6898231 104724	531987	2126318	5276708	5.00 0.0242	10.0 0.0484	0.242	0.968	2.42
Perfluorotridecanoic acid (PFTriA)		AveI D	10381999 92545	19843930 222793	1093849	4537531	11543259	4.84 0.0250	9.68 0.0500	0.250	1.00	2.50
2- (N-ethylperfluoro-1-octanesulfon amido) ethanol		AveI D	20229864 19767	37925934 44938	200969	816282	2095667	5.00 0.0250	10.0 0.0500	0.250	1.00	2.50
N-ethylperfluoro-1-octanesulfona mide		AveI D	3918307 9667	7686908 20762	109188	452813	1143584	5.00 0.0250	10.0 0.0500	0.250	1.00	2.50
Perfluorotetradecanoic acid (PFTeA)		AveI D	2160439 12921	4268012 27452	133500	513995	1318730	5.00 0.0250	10.0 0.0500	0.250	1.00	2.50

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

Lab Name: Eurofins Knoxville Job No.: 140-25858-1 Analy Batch No.: 57741

SDG No.: \_\_\_\_\_

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

Calibration Start Date: 01/09/2022 10:35 Calibration End Date: 01/09/2022 11:28 Calibration ID: 3496

ANALYTE	IS REF	CURVE TYPE	RESPONSE							CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5 LVL 6	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		
Perfluorohexadecanoic acid		Q2ID	2545905 91408 13832628	4925818 182515 26960696	729504	2894336	7276278	5.00 0.0250 5.00	10.0 0.0500 10.0	0.250	1.00	2.50		
Perfluorooctadecanoic acid		AveI D	57448	129098	665836	2686042	6895688	0.0250	0.0500	0.250	1.00	2.50		
13C4 PFBA	13PF OA	Ave	12749801	25570850	6184171	6230665	5967237	5.00	10.0	1.25	1.25	1.25		
13C5 PFPeA	13PF OA	Ave	5616269	6088323	4763774	4810256	4603395	1.25	1.25	1.25	1.25	1.25		
13C3 PFBS	13PF OA	Ave	5525998	5179011	4018830	2970104	2853192	1.25	1.25	1.25	1.16	1.16		
M2-4:2 FTS	13PF OA	Ave	4394817	4866698	2844272	979480	855340	1.16	1.16	1.16	1.17	1.17		
13C2 PFHxA	13PF OA	Ave	4222495	700903	941348	5102737	4746918	1.17	1.17	1.25	1.25	1.25		
13C3 HFPO-DA	13PF OA	Ave	2602922	5219880	5323274	2440057	2402042	1.25	1.25	1.25	1.25	1.25		
18O2 PFHxS	13PF OA	Ave	2783042	2186460	1985027	2043432	1943468	1.25	1.25	1.25	1.18	1.18		
13C4 PFHpA	13PF OA	Ave	842014	1013216	4848796	4996367	4645602	1.16	1.16	1.25	1.25	1.25		
M2-6:2 FTS	13PF OA	Ave	767242	3984356	966110	968049	899627	1.17	1.17	1.19	1.19	1.19		
13C4 PFOA	13PF OA	Ave	4759129	1026945	5168548	5153161	4797778	1.25	1.25	1.25	1.25	1.25		
			4565306	4180045	4109093			1.25	1.25	1.25	1.25	1.25		
			2187985	2389614	2429399			1.25	1.25	1.25	1.25	1.25		
			2216220	2186460				1.25	1.25	1.25	1.25	1.25		
			1831227	2043270	1985027	2043432	1943468	1.18	1.18	1.18	1.18	1.18		
			1801353	1692118	4848796	4996367	4645602	1.18	1.18	1.25	1.25	1.25		
			4573137	5005273				1.25	1.25	1.25	1.25	1.25		
			4368922	3984356				1.25	1.25	1.25	1.25	1.25		
			938909	1026945	966110	968049	899627	1.19	1.19	1.19	1.19	1.19		
			764954	690189				1.19	1.19	1.25	1.25	1.25		
			4740402	5175029	5168548	5153161	4797778	1.25	1.25	1.25	1.25	1.25		
			4399864	4109093				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 Knoxville Job No.: 140-25858-1 Analy Batch No.: 57741

SDG No.: \_\_\_\_\_

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

Calibration Start Date: 01/09/2022 10:35 Calibration End Date: 01/09/2022 11:28 Calibration ID: 3496

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		
13C4 PFOS	13PF OA	Ave	2592602	2894864	3000906	2896304	2779952		1.20	1.20	1.20	1.20	1.20	1.20
13C5 PFNA	13PF OA	Ave	2637457	6594522	6772318	6551468	6530042		1.20	1.20	1.25	1.25	1.25	1.25
13C8 FOSA	13PF OA	Ave	5842775	5610570	4301021	4333664	3925140		1.25	1.25	1.25	1.25	1.25	1.25
13C2 PFDA	13PF OA	Ave	3437917	3199127	6595470	6684781	6089778		1.25	1.25	1.25	1.25	1.25	1.25
M2-8:2 FTS	13PF OA	Ave	1037522	1115730	1128836	1117378	1009120		1.20	1.20	1.20	1.20	1.20	1.20
d3-NMeFOSAA	13PF OA	Ave	665125	725830	808216	751488	704135		1.20	1.20	1.25	1.25	1.25	1.25
13C2 PFUnA	13PF OA	Ave	681894	665518	6493725	6490846	6174640		1.25	1.25	1.25	1.25	1.25	1.25
d5-NETfOSAA	13PF OA	Ave	5903076	6518160	858732	831002	794601		1.25	1.25	1.25	1.25	1.25	1.25
13C2 PFDOA	13PF OA	Ave	5615452	5308482	6942988	6649050	6505443		1.25	1.25	1.25	1.25	1.25	1.25
d7-N-MeFOSE-M	13PF OA	Ave	724743	683862	792935	803090	776280		1.25	1.25	1.25	1.25	1.25	1.25
d-N-MeFOSA-M	13PF OA	Ave	6031799	6475956	528614	595309	566057		1.25	1.25	1.25	1.25	1.25	1.25
d9-N-EtFOSE-M	13PF OA	Ave	5892161	5995500	791757	809270	783063		1.25	1.25	1.25	1.25	1.25	1.25
		Ave	748523	813503	698997				1.25	1.25	1.25	1.25	1.25	1.25
		Ave	723771	694443					1.25	1.25	1.25	1.25	1.25	1.25
		Ave	499646	564600					1.25	1.25	1.25	1.25	1.25	1.25
		Ave	520919	534306					1.25	1.25	1.25	1.25	1.25	1.25
		Ave	737451	811853					1.25	1.25	1.25	1.25	1.25	1.25
		Ave	736824	698997					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 Knoxville Job No.: 140-25858-1 Analy Batch No.: 57741

SDG No.: \_\_\_\_\_

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

Calibration Start Date: 01/09/2022 10:35 Calibration End Date: 01/09/2022 11:28 Calibration ID: 3496

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	
d-N-EtFOA-M	13PF OA	Ave	418161	471424	457457	475911	450709	1.25	1.25	1.25	1.25	1.25	1.25
13C2 PFTeDA	13PF OA	Ave	442829	431073	5107852	5150989	4899401	1.25	1.25	1.25	1.25	1.25	1.25
13C2 PFHxDA	13PF OA	Ave	4681083	4423066	3400742	3410021	3338421	1.25	1.25	1.25	1.25	1.25	1.25
13C8 PFOA		AveI D	3181783	3121615	5133842	5234610	4810294	1.25	1.25	1.25	1.25	1.25	1.25
13C8 PFOS		AveI D	4428641	4086595	633403	657687	631203	1.25	1.25	1.25	1.25	1.25	1.25
			581119	619419				1.20	1.20	1.20	1.20	1.20	1.20
			582576	593950				1.20	1.20				

Curve Type Legend  
Ave = Average ISTD  
AveID = Average isotope dilution  
L2ID = Linear 1/conc^2 IsoDil  
Q2ID = Quadratic 1/conc^2 IsoDil  
QuaIF = Quadratic ISO forced zero

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_006.d  
 Lims ID: IC 1  
 Client ID:  
 Sample Type: IC Calib Level: 1  
 Inject. Date: 09-Jan-2022 10:35:55 ALS Bottle#: 6 Worklist Smp#: 6  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022186-006 ic 1  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 12:31:39 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1686

First Level Reviewer: cochranj Date: 09-Jan-2022 11:17:04

Ratio Calibration: Average of Initial Calibration

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	2.784	0.006	0.678	5616269	1.24	99.6	14113	
2 Perfluorobutanoic acid	212.90 > 169.00	2.795	2.785	0.010	1.002	83845	0.0238	95.2	24.7	
4 Perfluoropentanoic acid	262.90 > 219.00	3.098	3.093	0.005	1.000	81068	0.0242	96.9	28.9	
D 3 13C5 PFPeA	267.90 > 223.00	3.098	3.093	0.005	0.753	4394817	1.25	100	10375	
D 6 13C3 PFBS	301.90 > 80.00	3.115	3.109	0.006	0.757	2602922	1.11	95.8	10850	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.115	3.109	0.006	1.000	51964	0.0212	Target=2.68	95.7	328
	298.90 > 99.00	3.115	3.109	0.006	1.000	19269		2.70(1.34-4.02)	95.7	116
D 8 M2-4:2 FTS	329.00 > 81.00	3.402	3.393	0.009	0.827	842014	1.17	100	1528	
7 4:2 FTS	327.00 > 307.00	3.402	3.393	0.009	1.000	36412	0.0224	96.0	676	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.432	3.422	0.010	1.102	48418	0.0223	Target=3.48	94.9	186
	349.00 > 99.00	3.432	3.422	0.010	1.102	14836		3.26(1.74-5.22)	94.9	202
10 Perfluorohexanoic acid	313.00 > 269.00	3.432	3.423	0.009	1.000	89942	0.0272	Target=12.57	109	45.5
	313.00 > 119.00	3.432	3.423	0.009	1.000	6444		13.96(6.28-18.85)	109	11.6
D 9 13C2 PFHxA	315.00 > 270.00	3.432	3.423	0.009	0.834	4759129	1.27	102	8430	
13 HFPO-DA	285.00 > 169.00	3.537	3.524	0.013	1.000	61665	0.0260	104	42.6	

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	3.537	3.524	0.013	0.860	2187985	1.22		97.2	4107	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.769	3.760	0.009	1.000	52407	0.0246	Target=3.48	108	319	M
399.00 > 99.00	3.769	3.760	0.009	1.000	14502		3.61(1.74-5.21)	108	107	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.769	3.761	0.008	0.916	1831227	1.17		99.3	9772	
D 14 13C4 PFHpA										
367.00 > 322.00	3.778	3.772	0.006	0.918	4573137	1.28		102	7127	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.778	3.772	0.006	1.000	91728	0.0240	Target=3.29	95.8	57.4	
363.00 > 169.00	3.778	3.772	0.006	1.000	23911		3.84(1.65-4.94)	95.8	74.0	
68 DONA										
377.00 > 251.00	3.816	3.807	0.009	0.865	131168	0.0230	Target=1.76	97.6	340	
377.00 > 85.00	3.816	3.807	0.009	0.865	73839		1.78(0.88-2.64)	97.6	116	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.098	4.092	0.006	0.929	44792	0.0216	Target=3.91	90.9	376	
449.00 > 99.00	4.098	4.092	0.006	0.929	12088		3.71(1.95-5.86)	90.9	145	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.106	4.100	0.006	0.998	4672605	1.23		98.6	7901	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.106	4.100	0.006	0.998	938909	1.29		109	3350	
19 6:2 FTS										
427.00 > 407.00	4.115	4.101	0.014	1.002	28966	0.0227		95.8	134	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.115	4.109	0.006	1.000	116093	0.0267	Target=2.61	107	70.5	
413.00 > 169.00	4.115	4.109	0.006	1.000	42740		2.72(1.30-3.91)	107	91.2	
* 22 13C2 PFOA										
415.00 > 370.00	4.115	4.109	0.006		4938728	1.25			10217	
D 21 13C4 PFOA										
417.00 > 372.00	4.115	4.109	0.006	1.000	4740402	1.28		102	8713	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.402	4.396	0.006	0.998	581119	1.21		101	3690	
D 25 13C4 PFOS										
503.00 > 80.00	4.411	4.398	0.013	1.072	2592602	1.15		96.6	3569	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.411	4.398	0.013	1.000	56603	0.0237	Target=4.37	102	208	M
499.00 > 99.00	4.411	4.398	0.013	1.000	12408		4.56(2.18-6.55)	102	66.0	M
26 Perfluorononanoic acid										
463.00 > 419.00	4.428	4.421	0.007	1.000	93408	0.0246	Target=4.48	98.2	125	
463.00 > 169.00	4.428	4.421	0.007	1.000	21543		4.34(2.24-6.72)	98.2	33.6	
D 27 13C5 PFNA										
468.00 > 423.00	4.428	4.421	0.007	1.076	6169153	1.27		101	10654	
63 9CIFOS										
531.00 > 351.00	4.567	4.558	0.009	1.035	95700	0.0229		98.3	534	

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	4.689	4.682	0.007	1.063	47815	0.0226	Target=3.84	94.2	237	
549.00 > 99.00	4.689	4.682	0.007	1.063	13684		3.49(1.92-5.77)	94.2	170	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.706	4.700	0.006	1.000	72012	0.0241		96.3	247	
D 34 13C8 FOSA										
506.00 > 78.00	4.706	4.700	0.006	1.144	3954372	1.30		104	3111	
D 32 13C2 PFDA										
515.00 > 470.00	4.715	4.709	0.006	1.146	6130663	1.30		104	10173	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.715	4.709	0.006	1.000	125922	0.0266	Target=11.50	106	149	
513.00 > 169.00	4.715	4.709	0.006	1.000	12180		10.34(5.75-17.25)	106	39.6	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.732	4.721	0.011	1.150	1037522	1.27		106	1665	
31 8:2 FTS										
527.00 > 507.00	4.732	4.721	0.011	1.000	28696	0.0234		97.7	203	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.861	4.854	0.007	1.181	665125	1.20		96.1	3084	
36 NMeFOSAA										
570.00 > 419.00	4.870	4.858	0.012	1.002	13790	0.0267		107	41.8	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.949	4.942	0.007	1.122	42064	0.0236	Target=3.69	98.1	214	
599.00 > 99.00	4.958	4.942	0.016	1.124	12999		3.24(1.84-5.53)	98.1	117	
D 39 13C2 PFUnA										
565.00 > 520.00	4.984	4.973	0.011	1.211	5903076	1.26		101	12158	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.984	4.973	0.011	1.000	107754	0.0235	Target=8.29	94.1	199	
563.00 > 169.00	4.984	4.973	0.011	1.000	13535		7.96(4.14-12.43)	94.1	72.9	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.993	4.989	0.004	1.213	776364	1.28		102	3556	
40 NEtFOSA										
584.00 > 419.00	5.002	4.995	0.007	1.002	14206	0.0233		93.0	93.6	M
57 11C1FOS										
631.00 > 451.00	5.082	5.075	0.007	1.152	81152	0.0224		95.0	411	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.214	5.207	0.007	1.000	124002	0.0246	Target=6.82	98.5	132	
613.00 > 169.00	5.214	5.207	0.007	1.000	18213		6.81(3.41-10.23)	98.5	44.3	
D 43 13C2 PFDaA										
615.00 > 570.00	5.214	5.207	0.007	1.267	6031799	1.22		97.9	14107	
50 10:2 FTS										
627.00 > 607.00	5.240	5.231	0.009	1.107	44558	0.0226		93.7	336	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.284	5.279	0.005	1.284	748523	1.26		101	764	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.293	5.281	0.011	1.286	499646	1.18		94.7	52.2	
61 NMeFOSA										
512.00 > 169.00	5.293	5.286	0.006	1.000	11620	0.0267		107	68.5	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
49 N-MeFOSE-M										M
616.00 > 59.00	5.301	5.290	0.011	1.003	13964	0.0237		94.9	23.7	M
54 PFDoS										
699.00 > 80.00	5.394	5.383	0.011	1.223	46424	0.0233	Target=4.36	96.5	206	
699.00 > 99.00	5.394	5.383	0.011	1.223	9987		4.65(2.18-6.55)	96.5	88.9	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.425	5.417	0.008	1.041	92545	0.0231	Target=6.19	92.5	131	
663.00 > 169.00	5.425	5.417	0.008	1.041	16690		5.54(3.09-9.28)	92.5	93.0	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.445	5.437	0.008	1.323	737451	1.24		99.3	376	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.455	5.450	0.005	1.326	418161	1.20		95.9	680	
62 N-EtFOSE-M										
630.00 > 59.00	5.455	5.450	0.005	1.002	19767	0.0252		101	30.4	
56 N-EtFOSA-M										
526.00 > 169.00	5.464	5.457	0.007	1.002	9667	0.0242		96.7	73.1	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.609	5.600	0.009	1.363	4691070	1.25		99.9	7755	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.609	5.600	0.009	1.000	12921	0.0256	Target=1.09	102	53.8	
713.00 > 219.00	5.609	5.600	0.009	1.000	10732		1.20(0.54-1.63)	102	66.6	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.913	5.907	0.006	1.437	3064643	1.20		96.3	5053	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.913	5.907	0.006	1.000	91408	0.0247	Target=8.22	98.7	260	
813.00 > 169.00	5.913	5.907	0.006	1.000	10755		8.50(4.11-12.33)	98.7	22.8	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.170	6.162	0.008	1.043	57448	0.0238	Target=11.60	95.2	200	
913.00 > 169.00	6.170	6.162	0.008	1.043	4691		12.25(5.80-17.40)	95.2	28.0	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L1PFC2T3\_00001

Amount Added: 1.00

Units: mL



Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_006.d

Injection Date: 09-Jan-2022 10:35:55

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

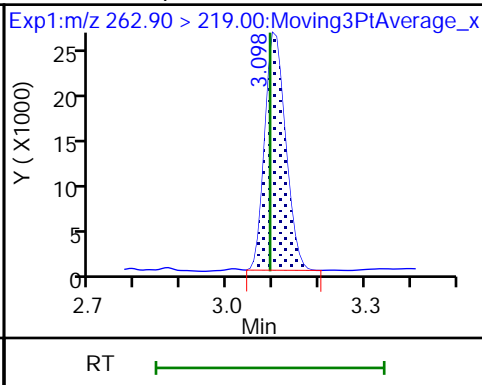
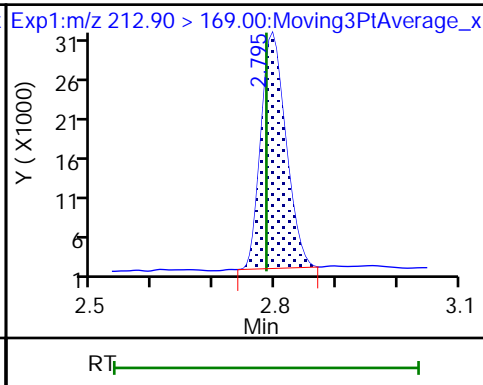
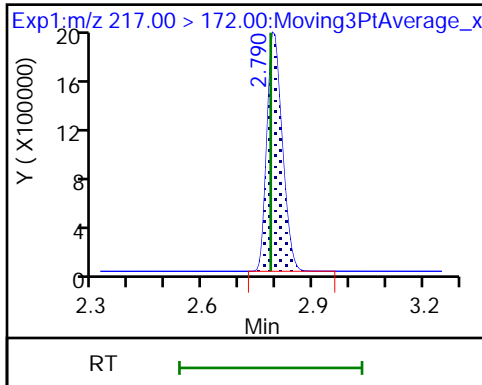
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

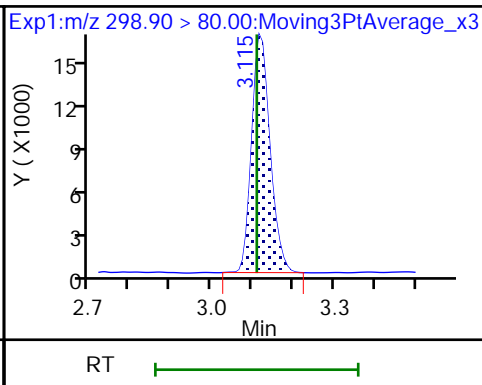
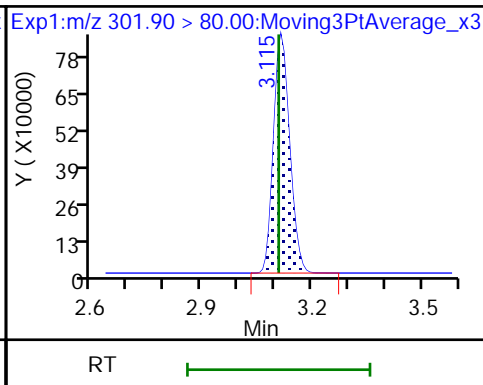
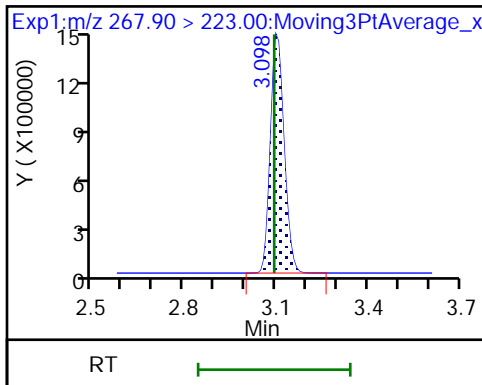
4 Perfluoropentanoic acid



D 3 13C5 PFPeA

D 6 13C3 PFBS

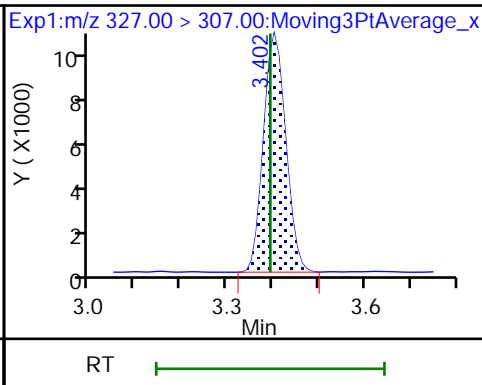
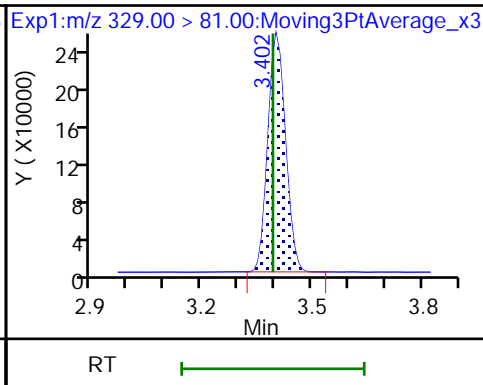
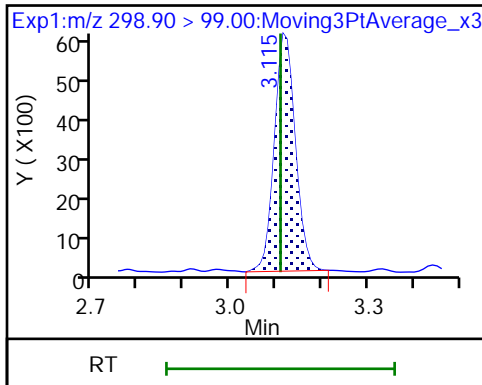
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

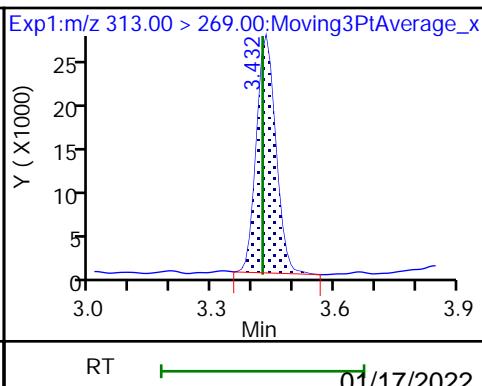
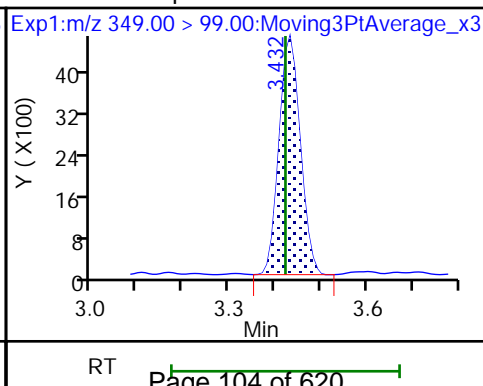
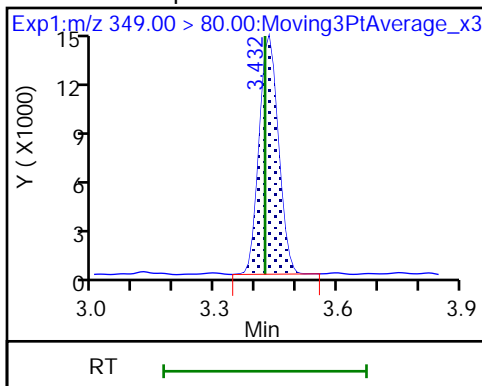
7 4:2 FTS

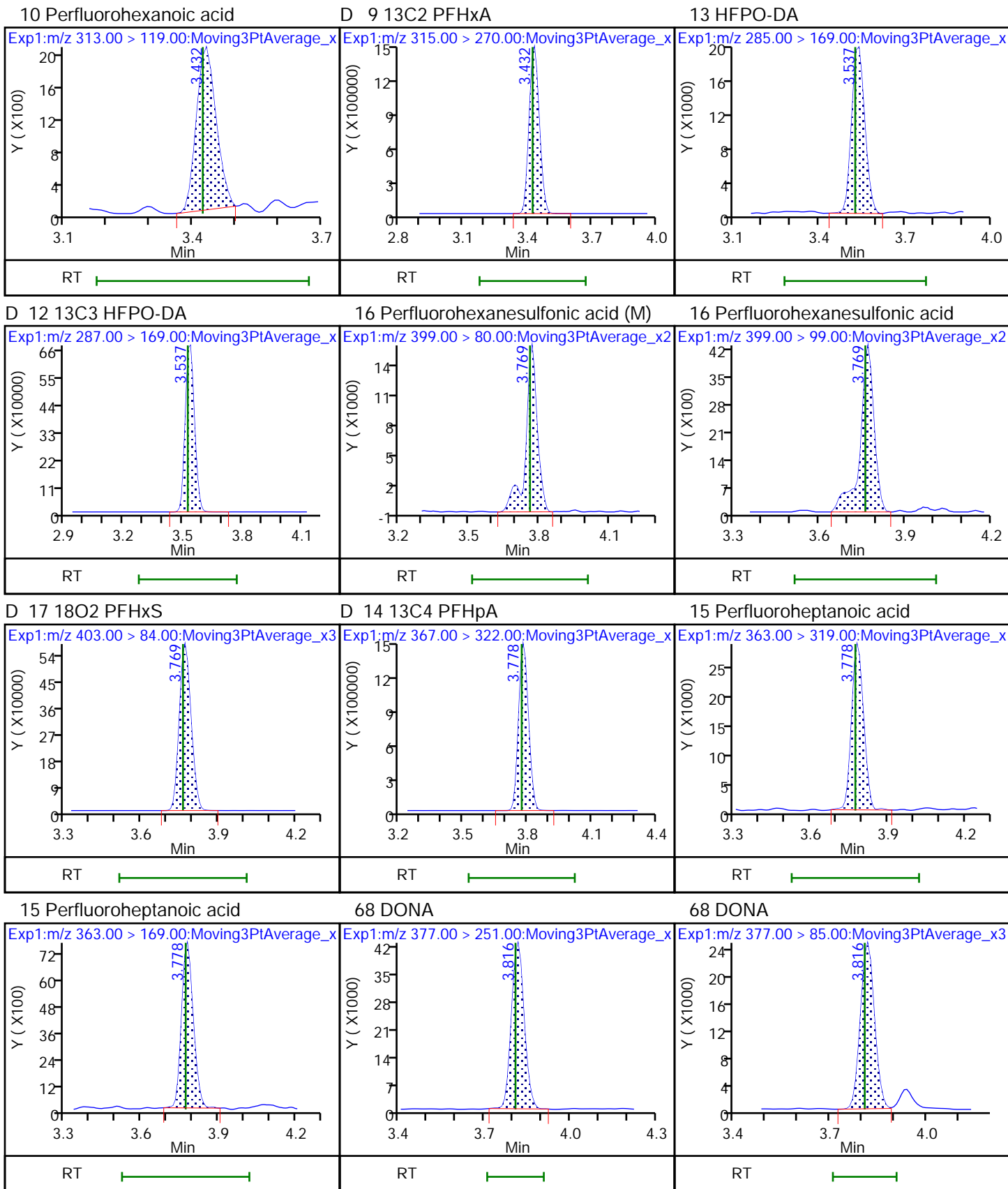


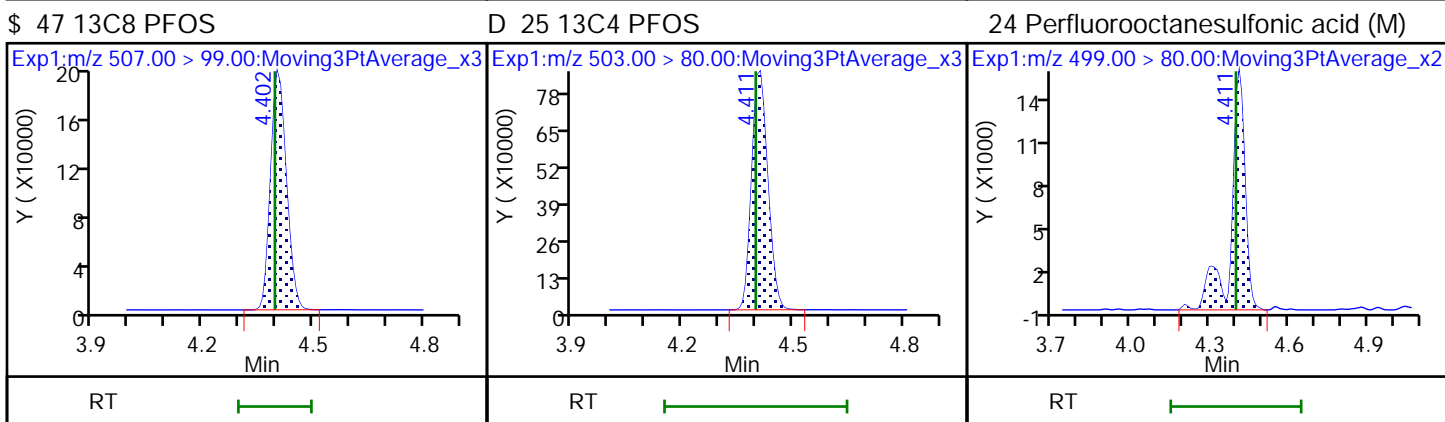
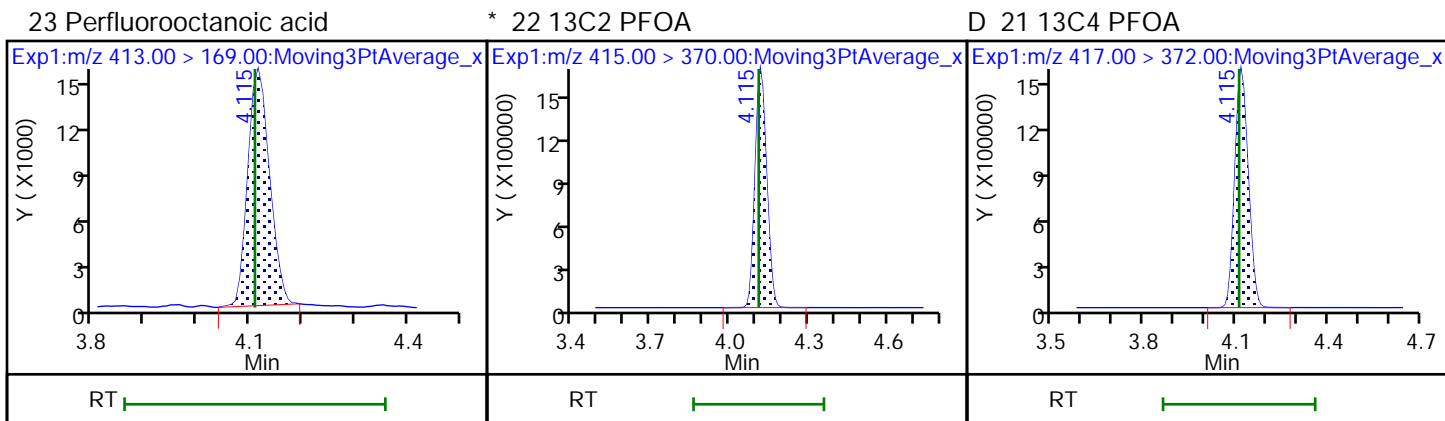
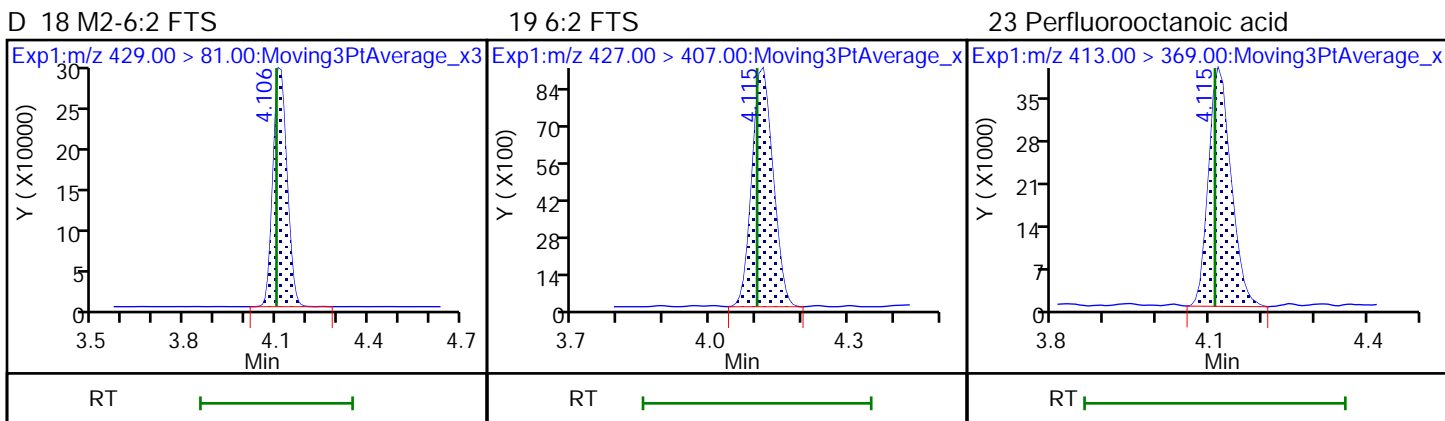
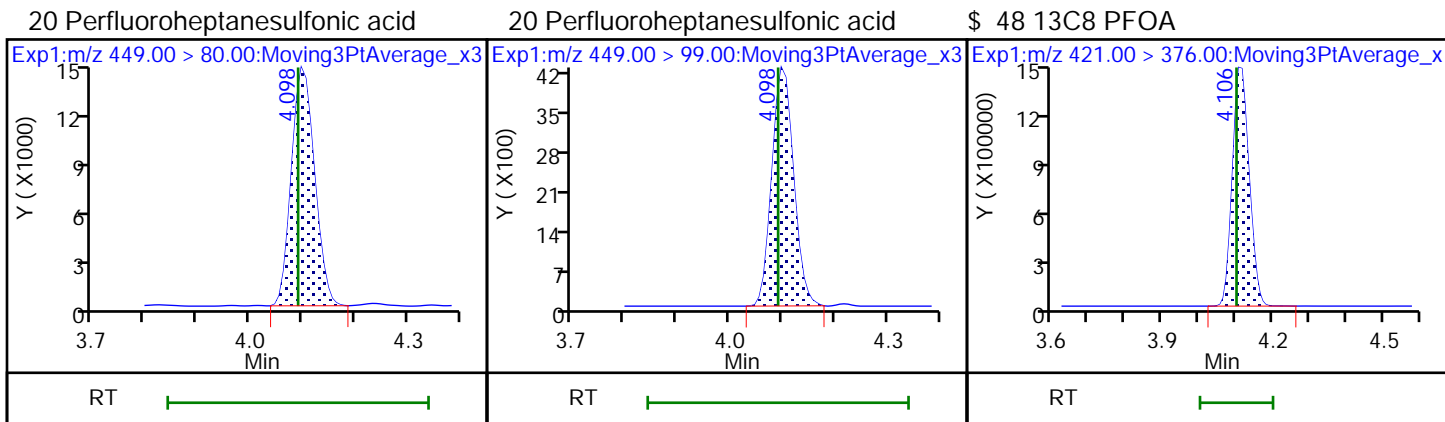
11 Perfluoropentanesulfonic acid

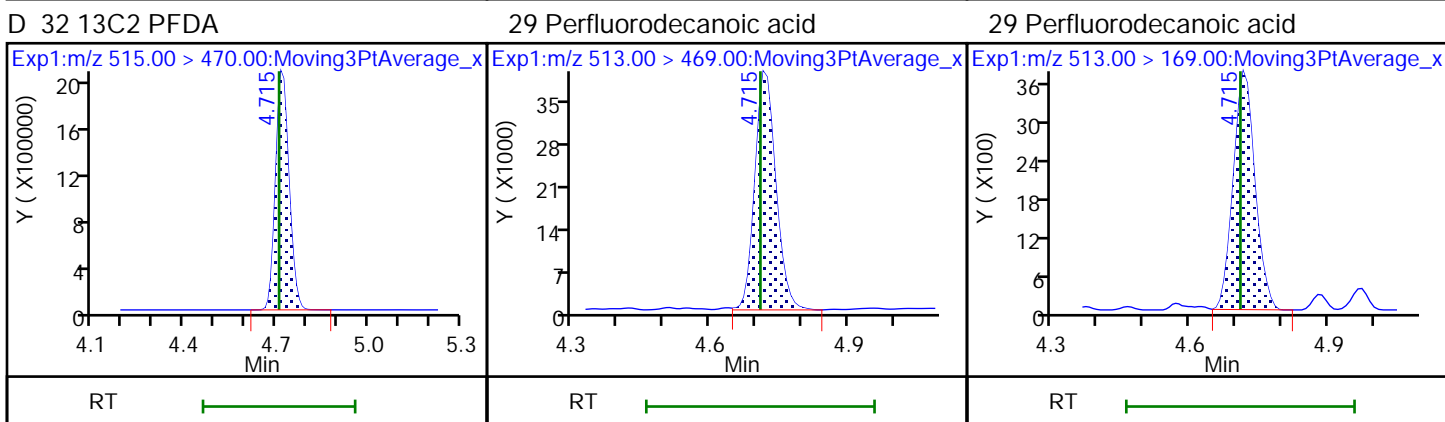
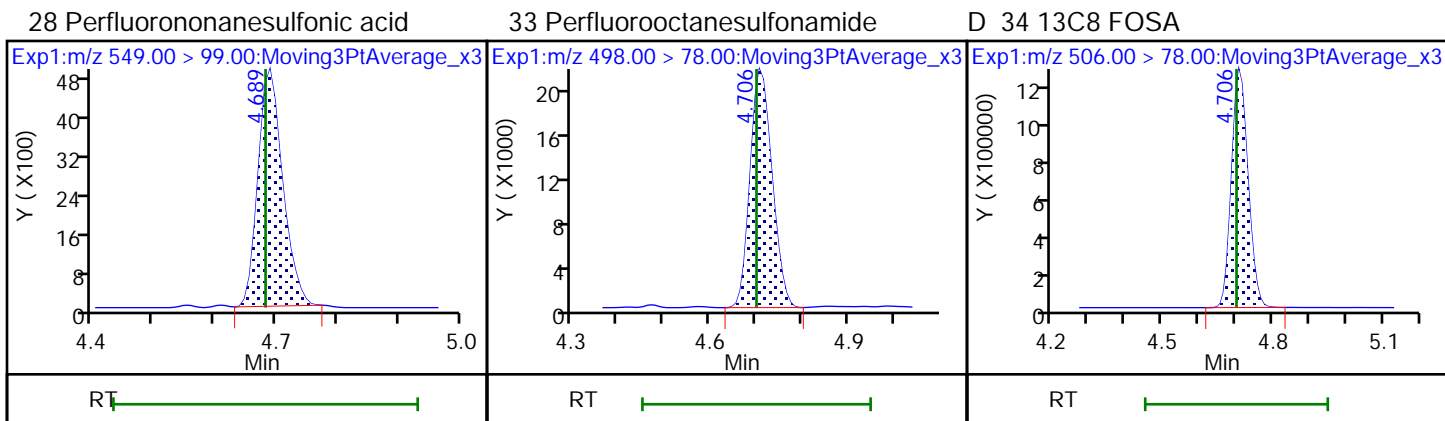
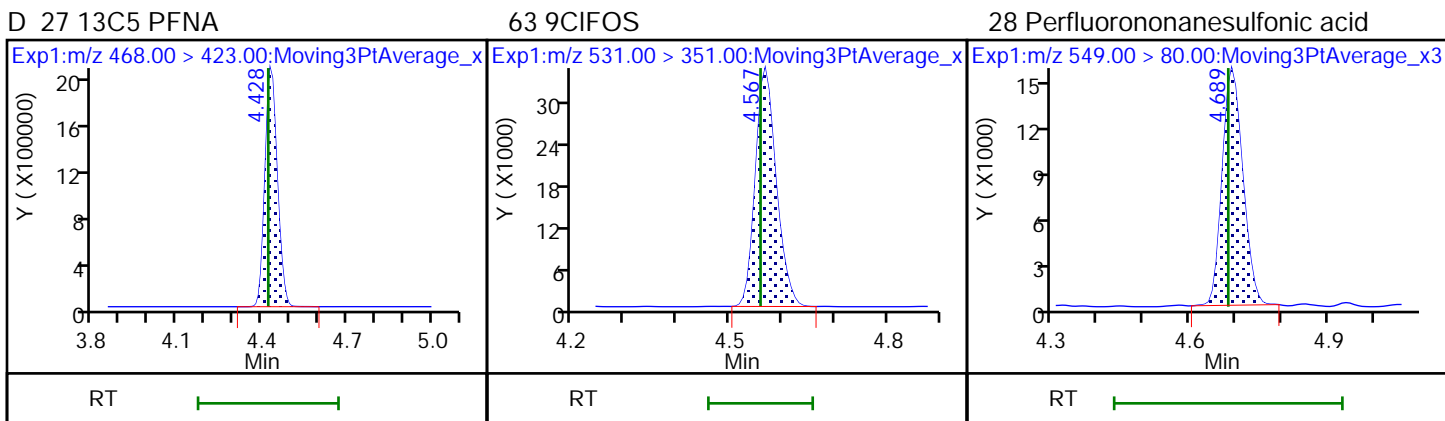
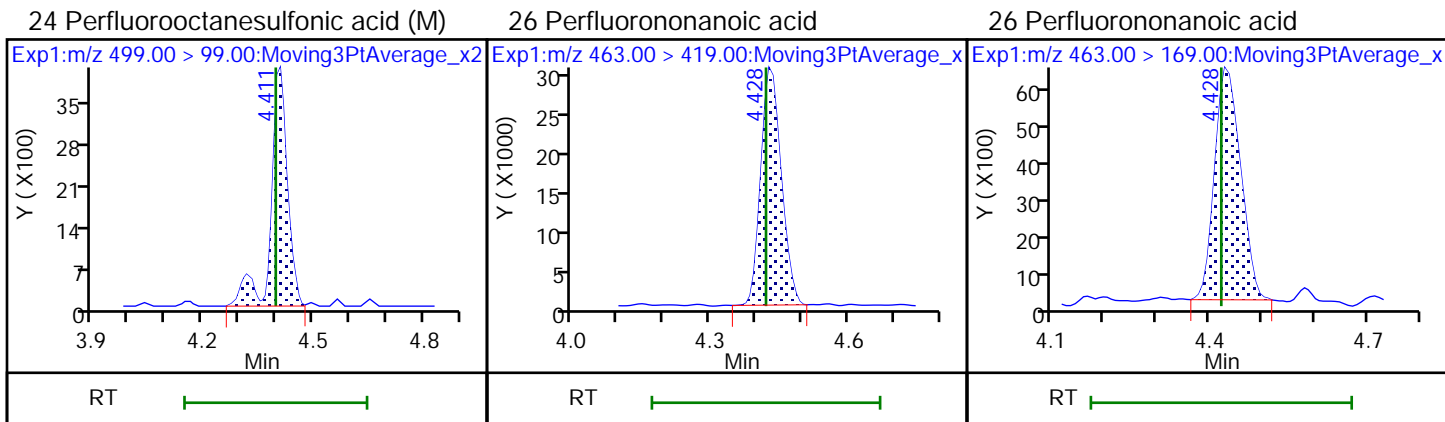
11 Perfluoropentanesulfonic acid

10 Perfluorohexanoic acid





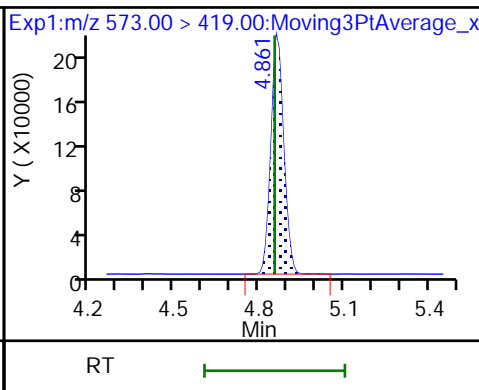
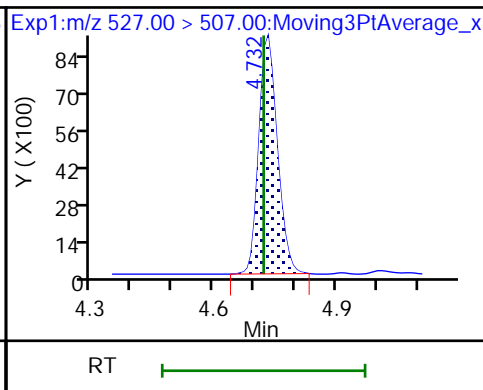
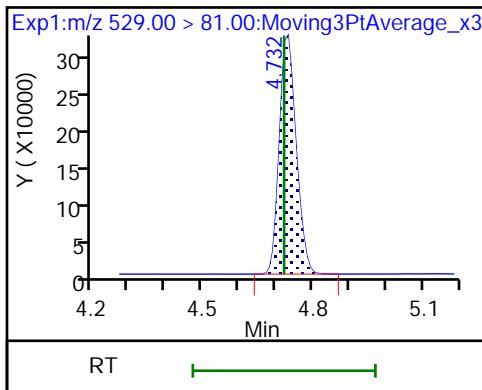




D 30 M2-8:2 FTS

31 8:2 FTS

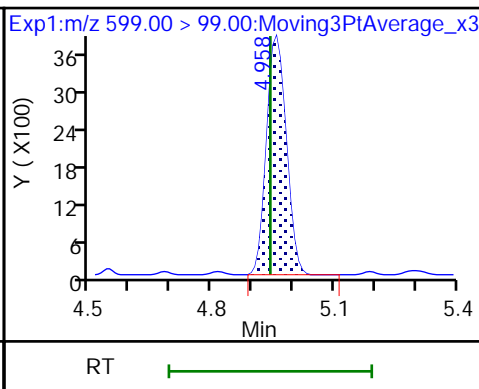
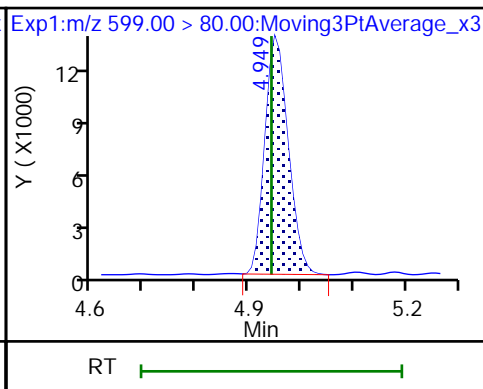
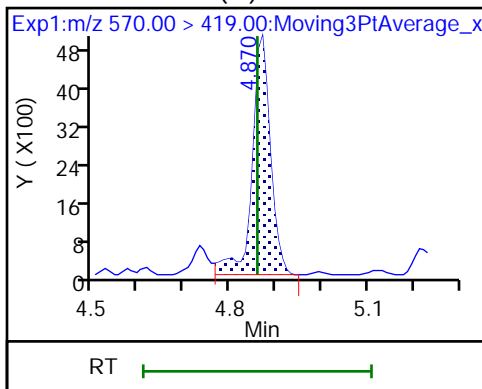
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

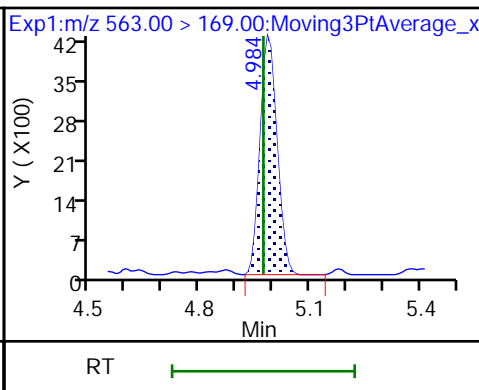
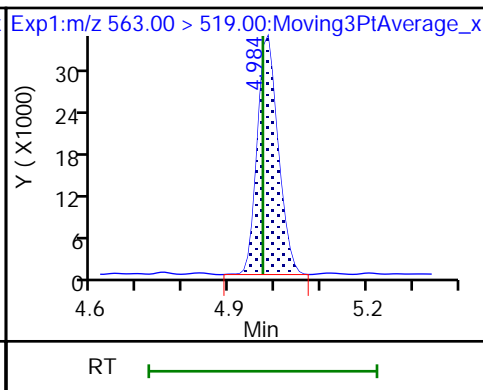
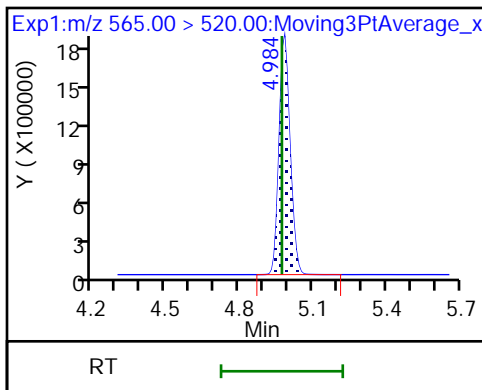
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

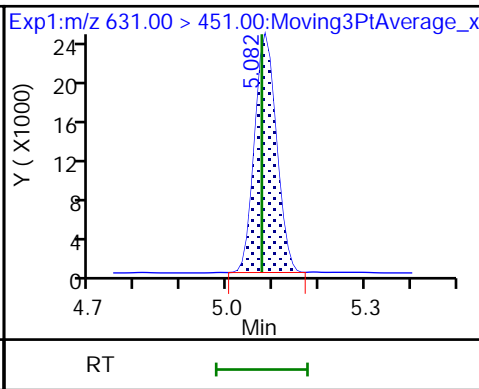
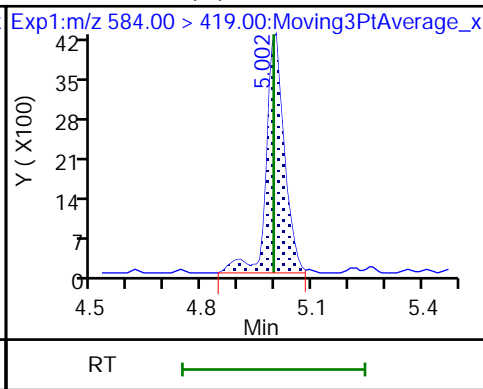
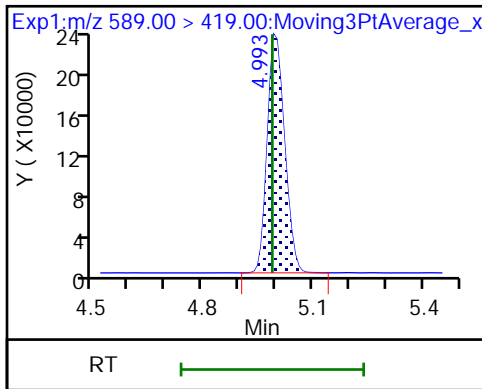
38 Perfluoroundecanoic acid

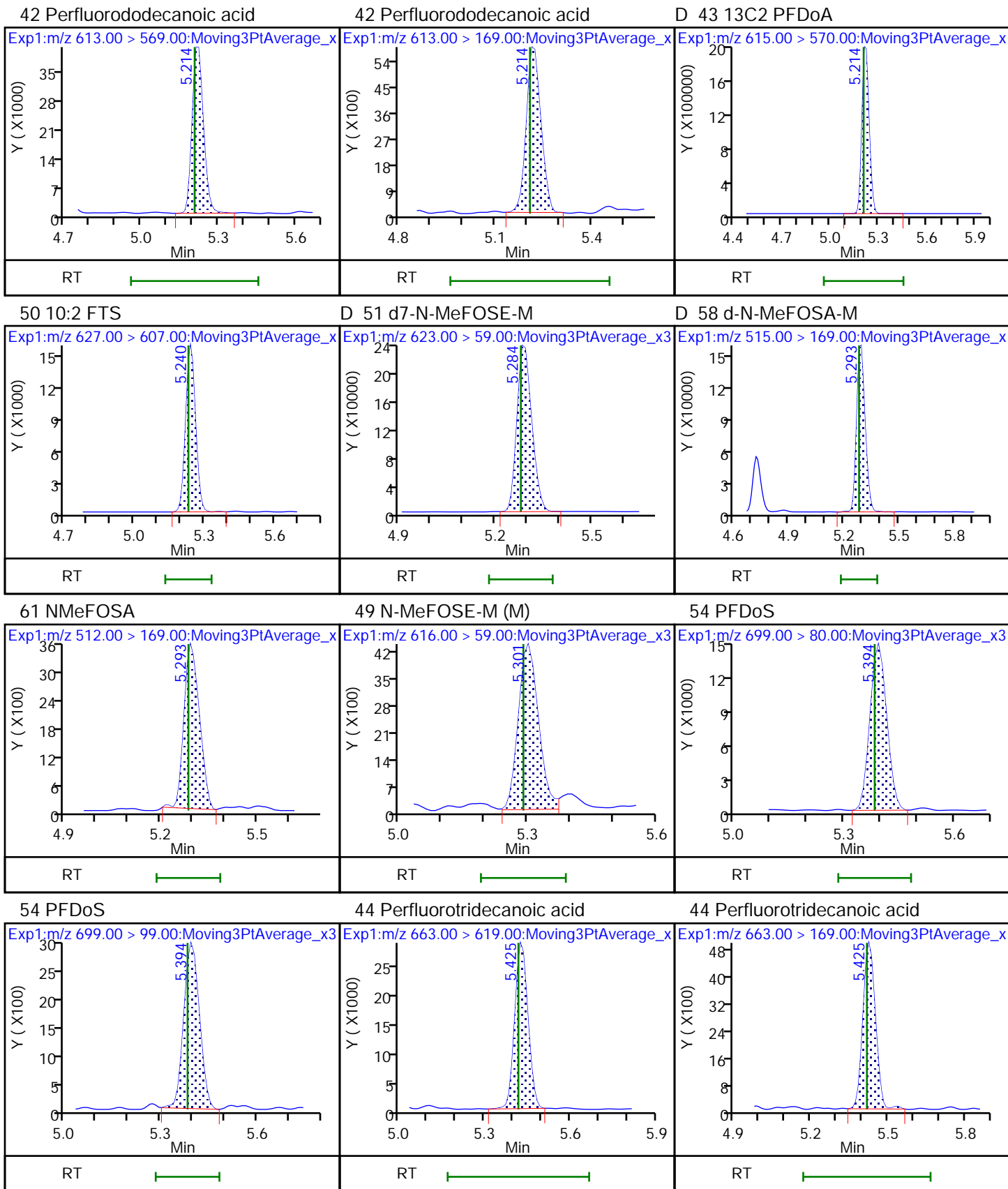


D 41 d5-NEtFOSAA

40 NEtFOSA (M)

57 11CIFOS

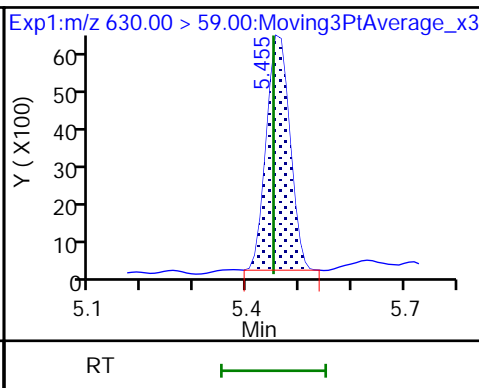
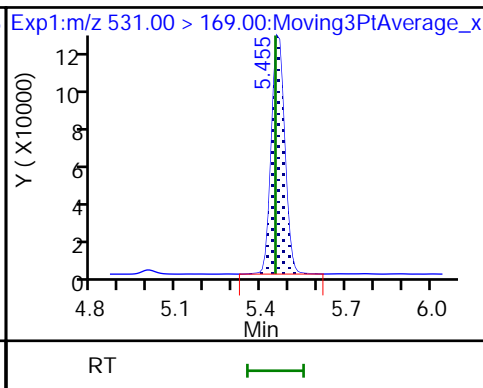
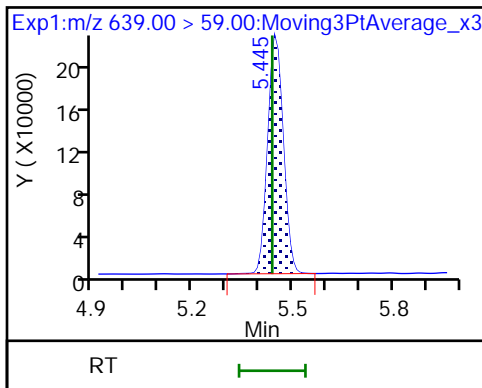




D 53 d9-N-EtFOSE-M

D 52 d-N-EtFOSA-M

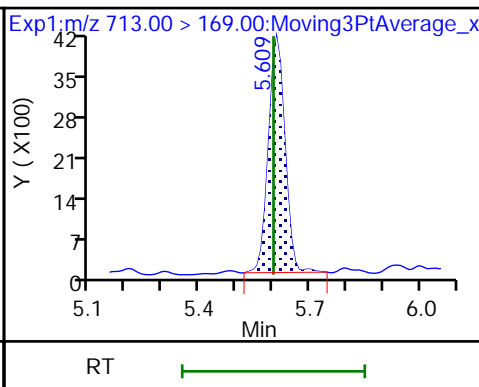
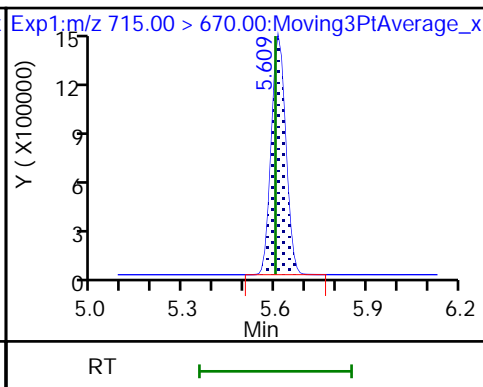
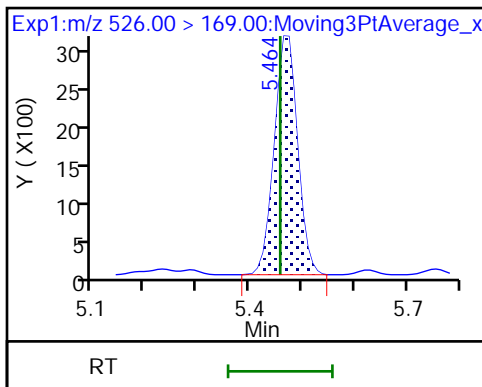
62 N-EtFOSE-M



56 N-EtFOSA-M

D 46 13C2 PFTeDA

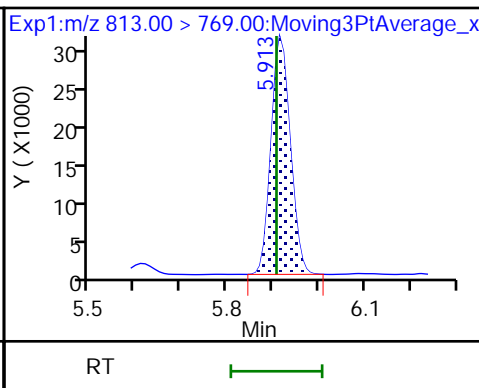
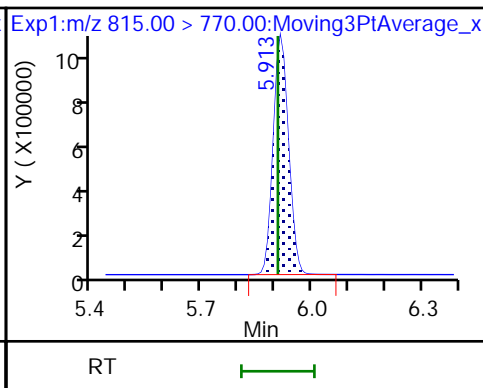
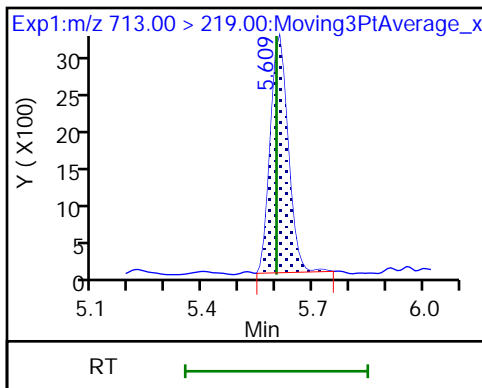
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

D 59 13C2 PFHxDA

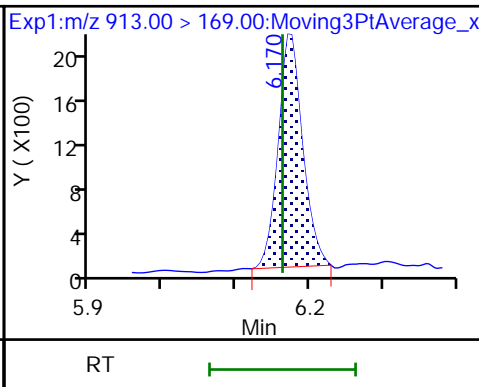
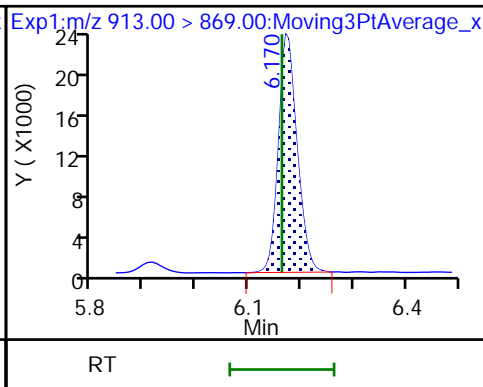
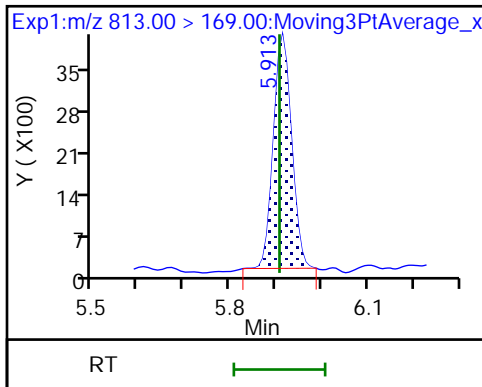
55 Perfluorohexadecanoic acid



55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid







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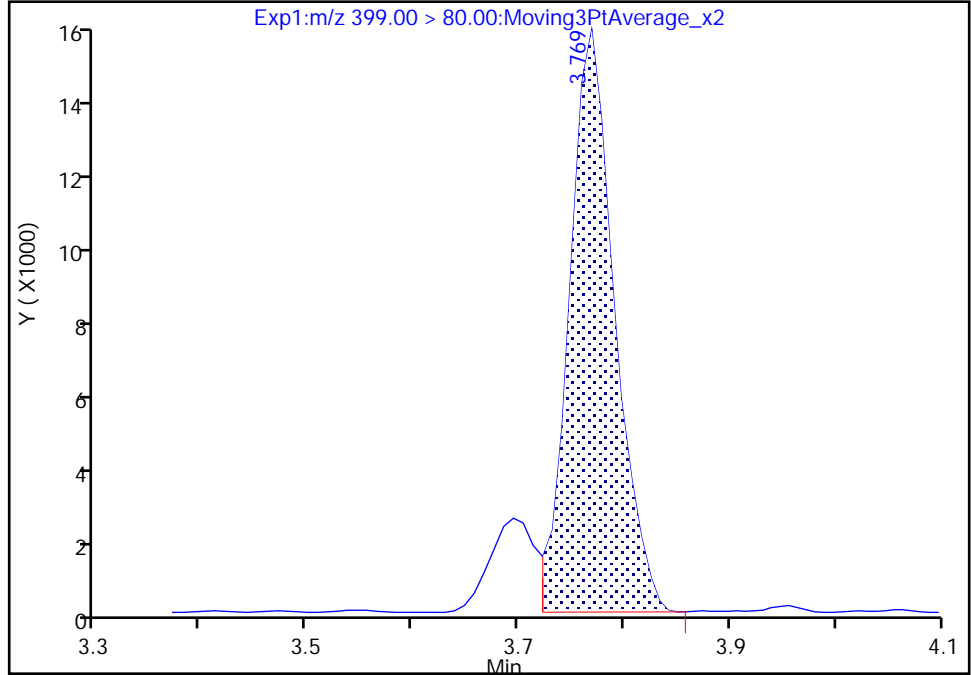
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_006.d  
Injection Date: 09-Jan-2022 10:35:55 Instrument ID: LCA  
Lims ID: IC 1  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

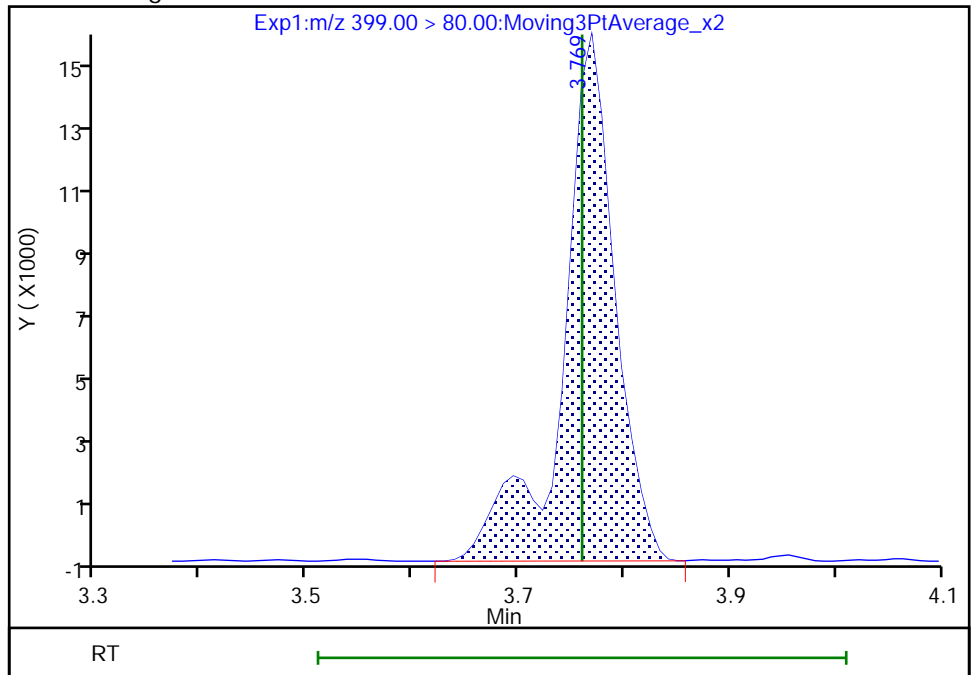
RT: 3.77  
Area: 45171  
Amount: 0.022981  
Amount Units: ng/ml

Processing Integration Results



RT: 3.77  
Area: 52407  
Amount: 0.024573  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:15:43  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

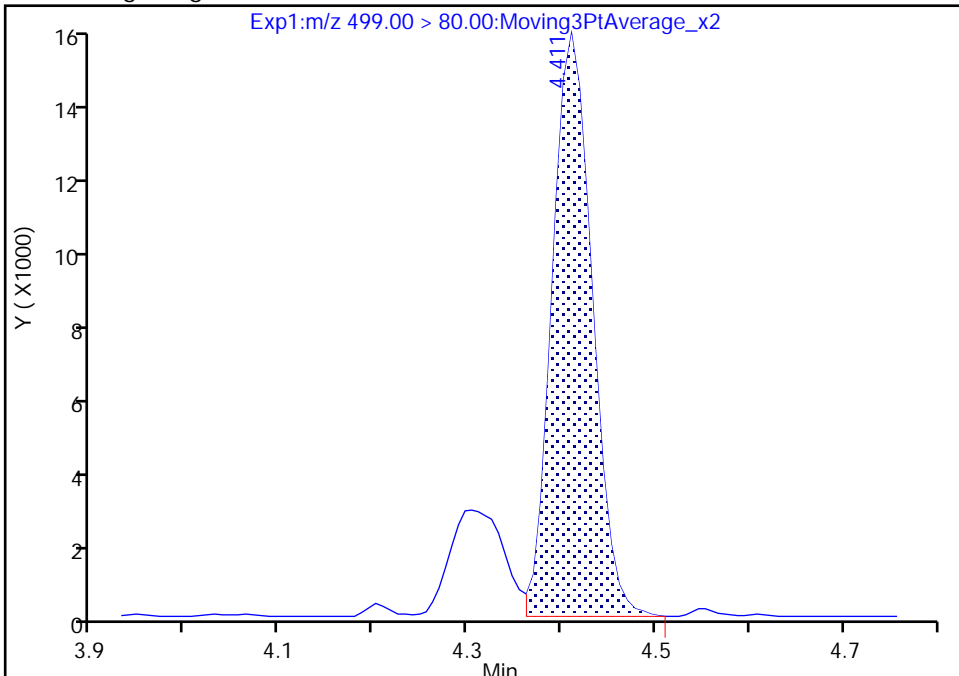
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_006.d  
Injection Date: 09-Jan-2022 10:35:55 Instrument ID: LCA  
Lims ID: IC 1  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

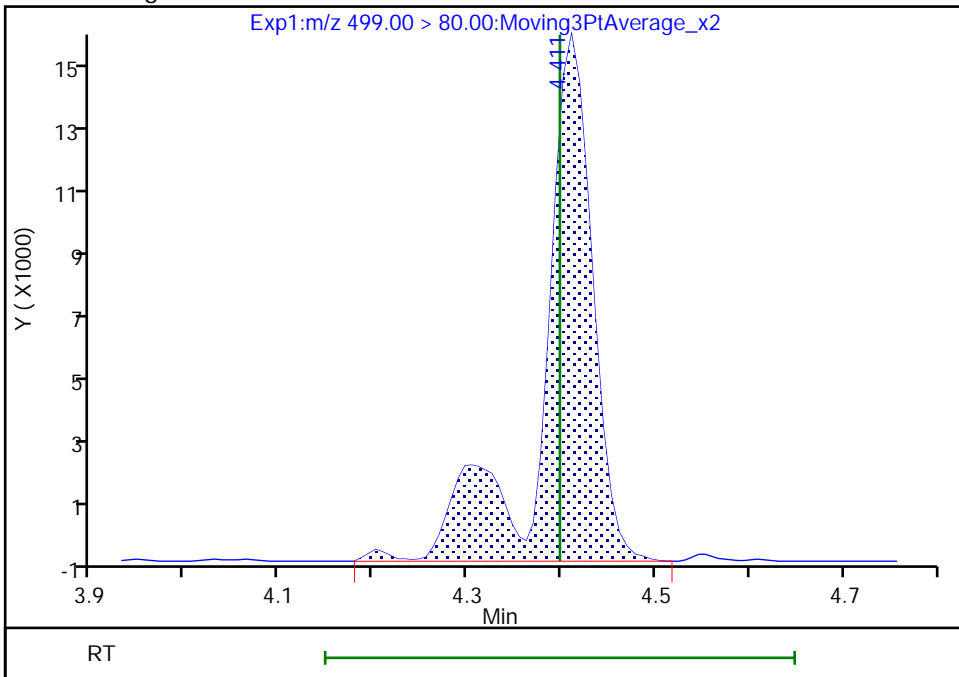
RT: 4.41  
Area: 44939  
Amount: 0.024927  
Amount Units: ng/ml

Processing Integration Results



RT: 4.41  
Area: 56603  
Amount: 0.023744  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:15:59  
Audit Action: Manually Integrated

Audit Reason: Baseline  
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Eurofins TestAmerica, Knoxville

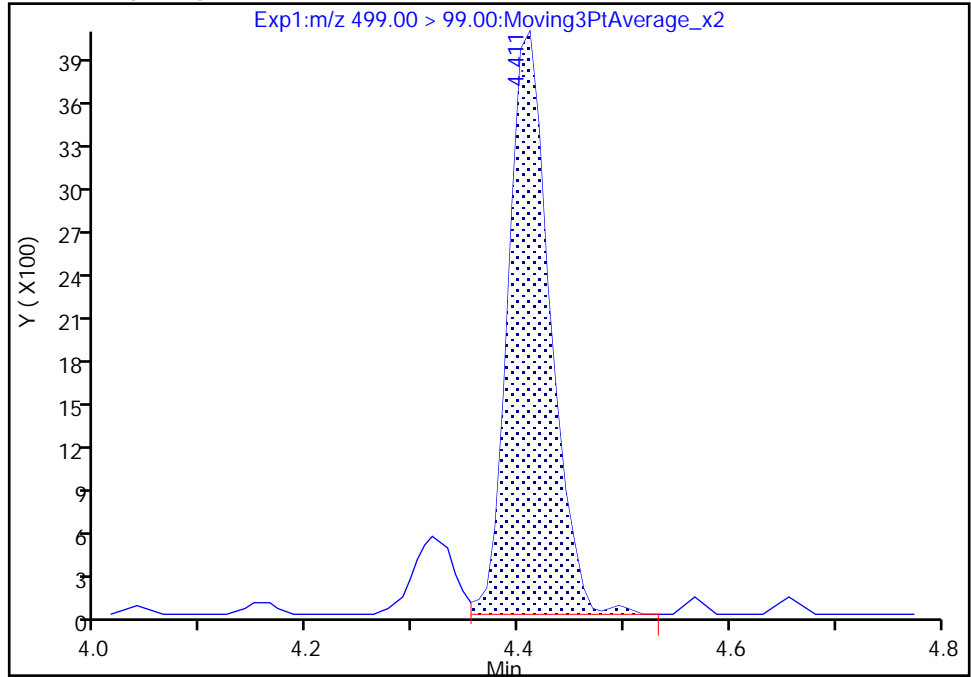
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_006.d  
Injection Date: 09-Jan-2022 10:35:55 Instrument ID: LCA  
Lims ID: IC 1  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

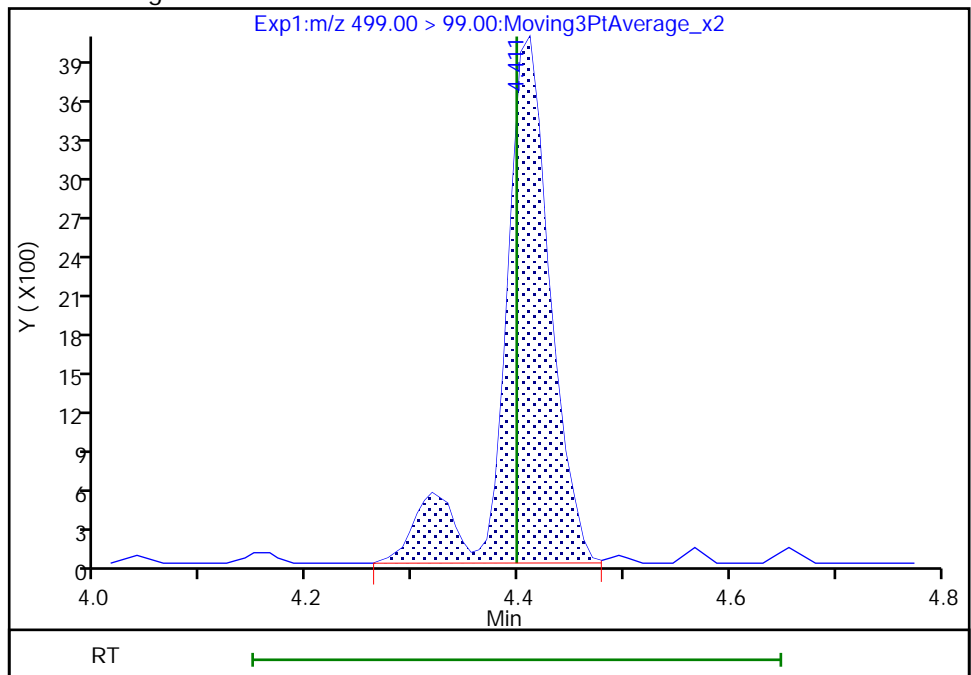
RT: 4.41  
Area: 11071  
Amount: 0.024927  
Amount Units: ng/ml

Processing Integration Results



RT: 4.41  
Area: 12408  
Amount: 0.023744  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:16:09

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

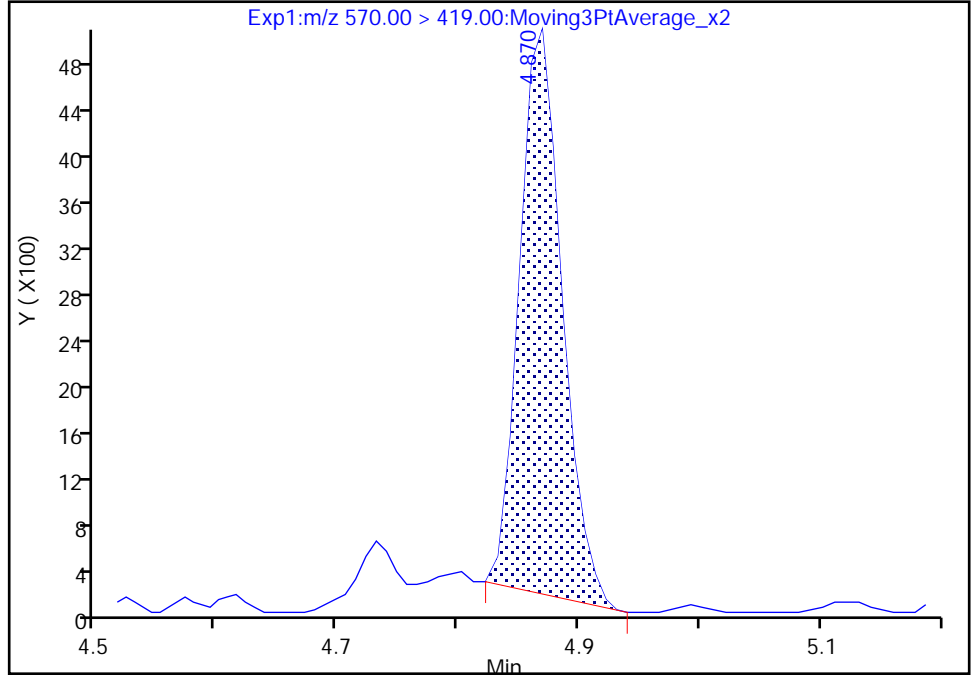
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\006.d  
Injection Date: 09-Jan-2022 10:35:55 Instrument ID: LCA  
Lims ID: IC 1  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

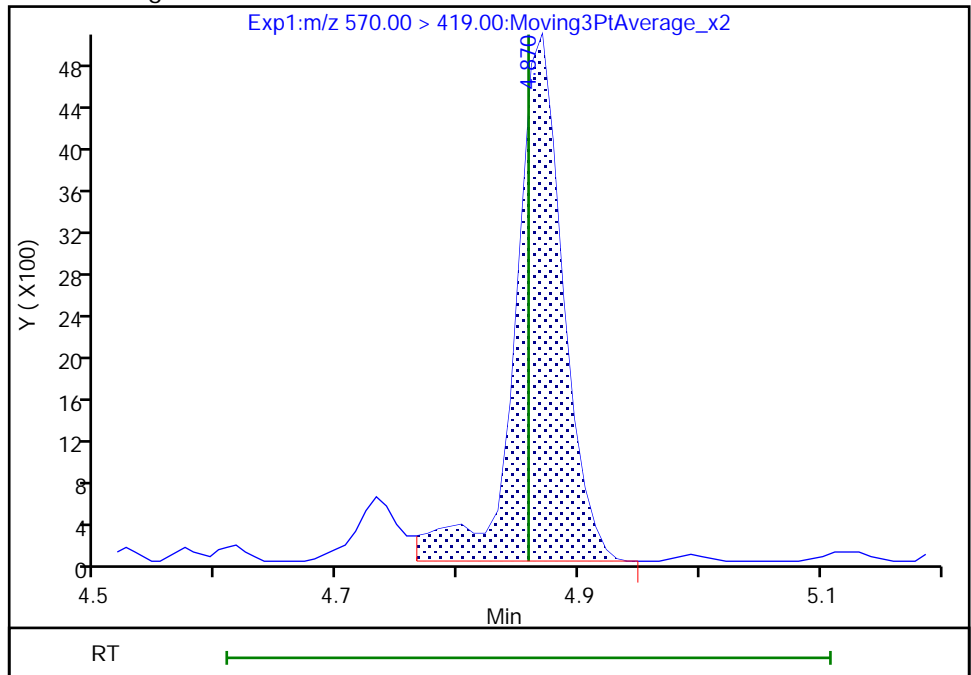
RT: 4.87  
Area: 11877  
Amount: 0.025995  
Amount Units: ng/ml

Processing Integration Results



RT: 4.87  
Area: 13790  
Amount: 0.026707  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:44:23  
Audit Action: Manually Integrated

Audit Reason: Baseline  
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Eurofins TestAmerica, Knoxville

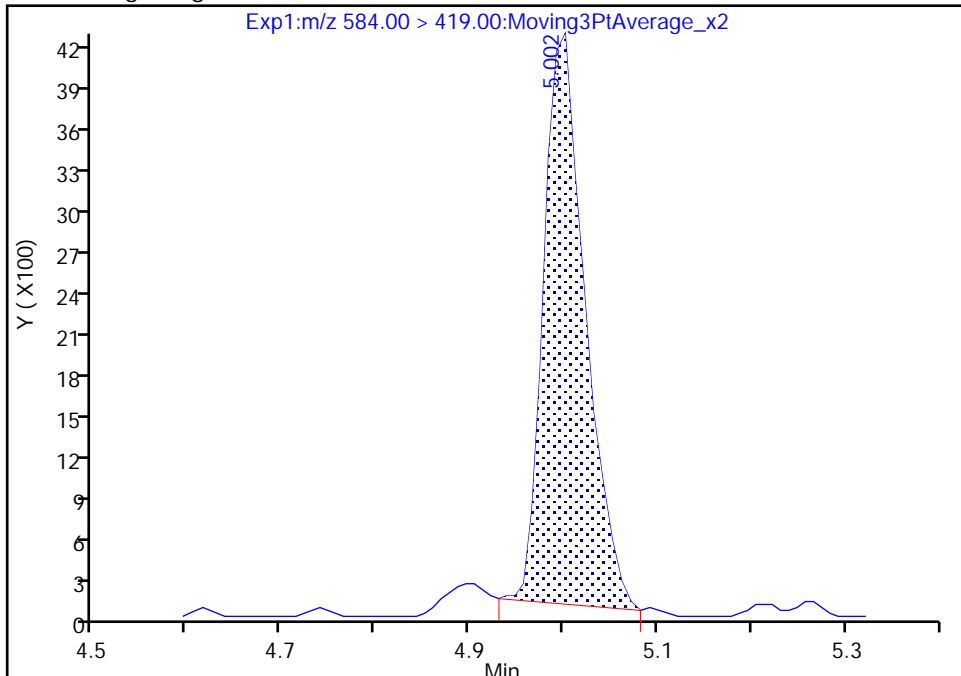
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_006.d  
Injection Date: 09-Jan-2022 10:35:55 Instrument ID: LCA  
Lims ID: IC 1  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

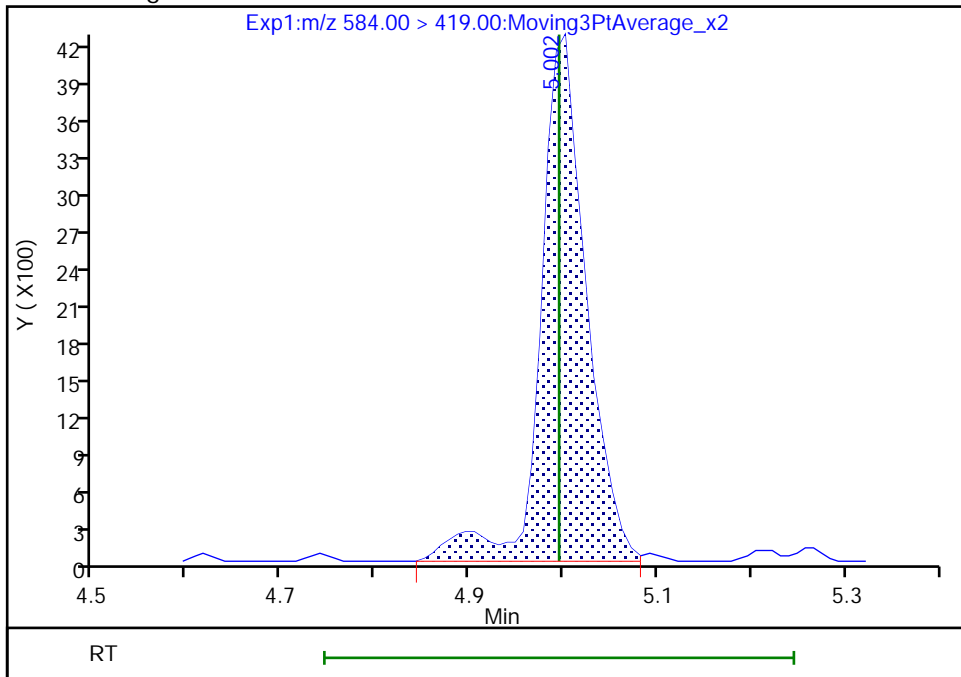
RT: 5.00  
Area: 12653  
Amount: 0.023369  
Amount Units: ng/ml

Processing Integration Results



RT: 5.00  
Area: 14206  
Amount: 0.023255  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:16:34  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

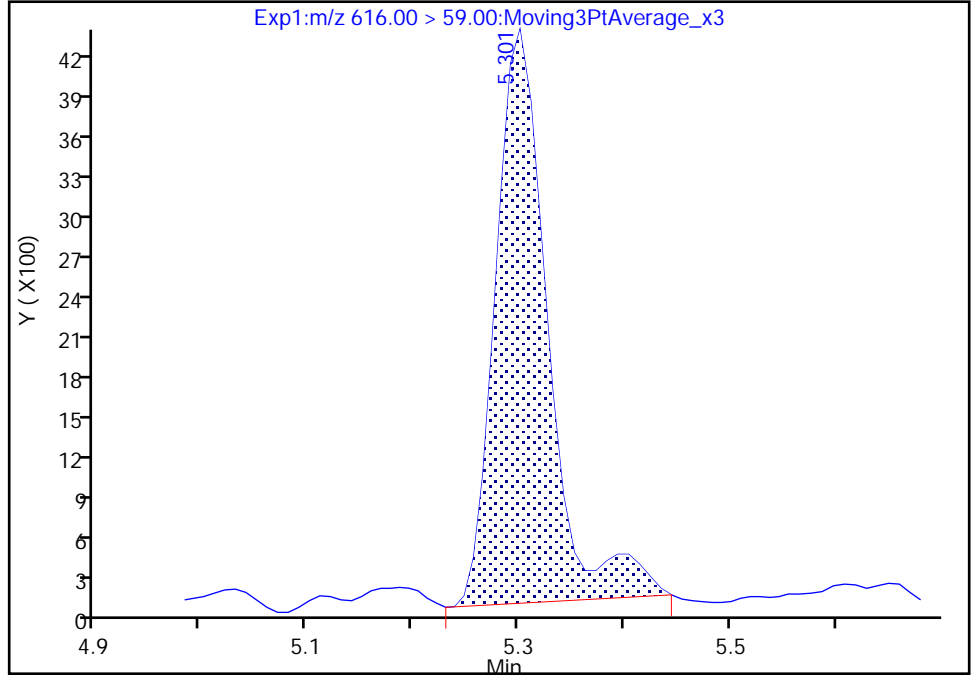
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_006.d  
Injection Date: 09-Jan-2022 10:35:55 Instrument ID: LCA  
Lims ID: IC 1  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

49 N-MeFOSE-M, CAS: 24448-09-7

Signal: 1

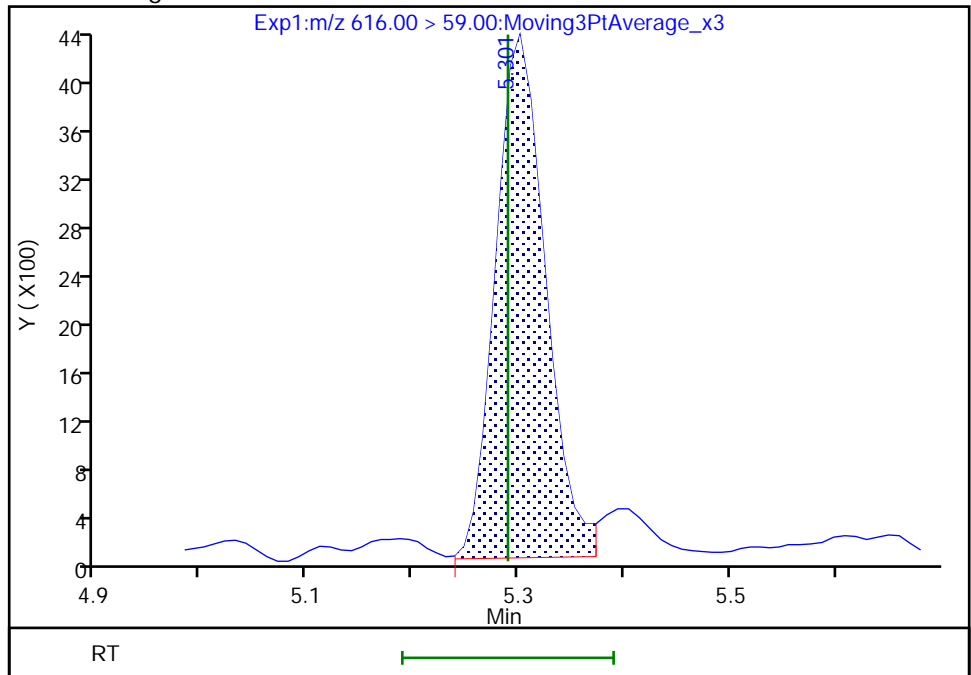
RT: 5.30  
Area: 14526  
Amount: 0.023970  
Amount Units: ng/ml

Processing Integration Results



RT: 5.30  
Area: 13964  
Amount: 0.023737  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:16:53  
Audit Action: Manually Integrated

Audit Reason: Baseline  
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Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_007.d  
 Lims ID: IC 2  
 Client ID:  
 Sample Type: IC Calib Level: 2  
 Inject. Date: 09-Jan-2022 10:44:40 ALS Bottle#: 7 Worklist Smp#: 7  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022186-007 ic 2  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 12:31:42 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1686

First Level Reviewer: cochranj Date: 09-Jan-2022 11:19:05

Ratio Calibration: Average of Initial Calibration

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	2.784	2.784	0.0	0.678	6088323	1.21	96.5	13202	
2 Perfluorobutanoic acid	212.90 > 169.00	2.784	2.785	-0.001	1.000	186844	0.0489	97.8	49.5	
4 Perfluoropentanoic acid	262.90 > 219.00	3.090	3.093	-0.003	1.000	184013	0.0497	99.3	69.9	
D 3 13C5 PFPeA	267.90 > 223.00	3.090	3.093	-0.003	0.753	4866698	1.24	99.4	8891	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.106	3.109	-0.003	1.000	119614	0.0430	Target=2.68	97.2	801
	298.90 > 99.00	3.106	3.109	-0.003	1.000	47019		2.54(1.34-4.02)	97.2	327
D 6 13C3 PFBS	301.90 > 80.00	3.106	3.109	-0.003	0.757	2950306	1.13	97.1	15361	
7 4:2 FTS	327.00 > 307.00	3.391	3.393	-0.002	1.000	87692	0.0449	96.1	1783	
D 8 M2-4:2 FTS	329.00 > 81.00	3.391	3.393	-0.002	0.826	1013216	1.26	108	1980	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.422	3.422	0.0	1.101	111364	0.0452	Target=3.48	96.3	413
	349.00 > 99.00	3.422	3.422	0.0	1.101	31652		3.52(1.74-5.22)	96.3	573
10 Perfluorohexanoic acid	313.00 > 269.00	3.422	3.423	-0.001	1.000	180122	0.0497	Target=12.57	99.4	88.3
	313.00 > 119.00	3.422	3.423	-0.001	1.000	13728		13.12(6.28-18.85)	99.4	22.7
D 9 13C2 PFHxA	315.00 > 270.00	3.422	3.423	-0.001	0.833	5219880	1.25	99.7	9778	
13 HFPO-DA	285.00 > 169.00	3.528	3.524	0.004	1.000	128334	0.0496	99.3	94.7	

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	3.528	3.524	0.004	0.859	2389614	1.19		95.0	4174	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.760	3.760	0.0	1.000	102576	0.0431	Target=3.48	94.7	730	M
399.00 > 99.00	3.760	3.760	0.0	1.000	32312		3.17(1.74-5.21)	94.7	298	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.760	3.761	-0.001	0.916	2043270	1.17		99.1	8016	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.769	3.772	-0.003	1.000	201071	0.0480	Target=3.29	95.9	133	
363.00 > 169.00	3.769	3.772	-0.003	1.000	63937		3.14(1.65-4.94)	95.9	202	
D 14 13C4 PFHpA										
367.00 > 322.00	3.769	3.772	-0.003	0.918	5005273	1.25		99.9	7585	
68 DONA										
377.00 > 251.00	3.807	3.807	0.0	0.865	294908	0.0463	Target=1.76	98.3	741	
377.00 > 85.00	3.807	3.807	0.0	0.865	169799		1.74(0.88-2.64)	98.3	151	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.089	4.092	-0.003	0.929	114589	0.0496	Target=3.91	104	995	
449.00 > 99.00	4.089	4.092	-0.003	0.929	28210		4.06(1.95-5.86)	104	328	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.098	4.100	-0.002	0.998	5164383	1.25		99.8	10646	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.098	4.100	-0.002	0.998	1026945	1.27		107	2918	
19 6:2 FTS										
427.00 > 407.00	4.098	4.101	-0.003	1.000	76663	0.0516		109	577	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.106	4.109	-0.003	1.000	232070	0.0489	Target=2.61	97.7	163	
413.00 > 169.00	4.106	4.109	-0.003	1.000	93897		2.47(1.30-3.91)	97.7	203	
* 22 13C2 PFOA										
415.00 > 370.00	4.106	4.109	-0.003		5523449	1.25			10892	
D 21 13C4 PFOA										
417.00 > 372.00	4.106	4.109	-0.003	1.000	5175029	1.25		99.9	8458	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.393	4.396	-0.003	0.998	619419	1.15		96.4	4015	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.402	4.398	0.004	1.000	118941	0.0447	Target=4.37	96.3	399	M
499.00 > 99.00	4.402	4.398	0.004	1.000	30560		3.89(2.18-6.55)	96.3	265	M
D 25 13C4 PFOS										
503.00 > 80.00	4.402	4.398	0.004	1.072	2894864	1.15		96.5	4887	
26 Perfluorononanoic acid										
463.00 > 419.00	4.418	4.421	-0.003	1.000	222306	0.0520	Target=4.48	104	242	
463.00 > 169.00	4.418	4.421	-0.003	1.000	50374		4.41(2.24-6.72)	104	111	
D 27 13C5 PFNA										
468.00 > 423.00	4.418	4.421	-0.003	1.076	6594522	1.21		96.8	7310	
63 9CIFOS										
531.00 > 351.00	4.560	4.558	0.002	1.036	240697	0.0488		105	1084	



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	4.681	4.682	-0.001	1.063	106223	0.0450	Target=3.84	93.7	402	
549.00 > 99.00	4.681	4.682	-0.001	1.063	29964		3.55(1.92-5.77)	93.7	220	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.698	4.700	-0.002	1.000	177027	0.0533		107	651	
D 34 13C8 FOSA										
506.00 > 78.00	4.698	4.700	-0.002	1.144	4386245	1.29		103	3366	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.706	4.709	-0.003	1.000	259933	0.0505	Target=11.50	101	347	
513.00 > 169.00	4.715	4.709	0.006	1.002	19940		13.04(5.75-17.25)	101	69.0	
D 32 13C2 PFDA										
515.00 > 470.00	4.706	4.709	-0.003	1.146	6667781	1.27		101	9305	
31 8:2 FTS										
527.00 > 507.00	4.724	4.721	0.003	1.000	60773	0.0461		96.2	725	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.724	4.721	0.003	1.150	1115730	1.22		102	1446	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.852	4.854	-0.002	1.182	725830	1.17		93.8	2250	
36 NMeFOSAA										
570.00 > 419.00	4.861	4.858	0.003	1.002	22599	0.0401		80.2	63.6	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.940	4.942	-0.002	1.122	108135	0.0508	Target=3.69	105	896	
599.00 > 99.00	4.940	4.942	-0.002	1.122	28475		3.80(1.84-5.53)	105	250	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.975	4.973	0.002	1.000	263564	0.0521	Target=8.29	104	414	
563.00 > 169.00	4.975	4.973	0.002	1.000	31511		8.36(4.14-12.43)	104	210	
D 39 13C2 PFUnA										
565.00 > 520.00	4.975	4.973	0.002	1.212	6518160	1.24		99.3	9674	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.993	4.989	0.004	1.216	826795	1.22		97.4	3003	
40 NEtFOSA										
584.00 > 419.00	4.993	4.995	-0.002	1.000	37744	0.0578		116	200	M
57 11C1FOS										
631.00 > 451.00	5.072	5.075	-0.003	1.152	190074	0.0469		99.6	851	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.205	5.207	-0.002	1.000	277938	0.0519	Target=6.82	104	310	
613.00 > 169.00	5.205	5.207	-0.002	1.000	39379		7.06(3.41-10.23)	104	127	
D 43 13C2 PFDoA										
615.00 > 570.00	5.205	5.207	-0.002	1.268	6475956	1.18		94.0	13238	
50 10:2 FTS										
627.00 > 607.00	5.231	5.231	0.0	1.107	107659	0.0508		105	619	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.275	5.279	-0.004	1.285	813503	1.23		98.2	953	
61 NMeFOSA										
512.00 > 169.00	5.284	5.286	-0.002	1.000	20289	0.0426		85.2	105	M
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.284	5.281	0.003	1.287	564600	1.20		95.6	51.7	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
49 N-MeFOSE-M										
616.00 > 59.00	5.284	5.290	-0.006	1.002	39475	0.0557		111	65.9	
54 PFDoS										
699.00 > 80.00	5.384	5.383	0.001	1.223	104724	0.0472	Target=4.36	97.4	547	
699.00 > 99.00	5.384	5.383	0.001	1.223	22989		4.56(2.18-6.55)	97.4	308	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.414	5.417	-0.003	1.040	222793	0.0519	Target=6.19	104	339	
663.00 > 169.00	5.414	5.417	-0.003	1.040	33396		6.67(3.09-9.28)	104	195	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.435	5.437	-0.002	1.324	811853	1.22		97.7	423	
62 N-EtFOSE-M										
630.00 > 59.00	5.455	5.450	0.005	1.004	44938	0.0521		104	57.8	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.445	5.450	-0.005	1.326	471424	1.21		96.7	784	
56 N-EtFOSA-M										
526.00 > 169.00	5.455	5.457	-0.002	1.002	20762	0.0461		92.1	135	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.598	5.600	-0.002	1.000	27452	0.0513	Target=1.09	103	115	
713.00 > 219.00	5.598	5.600	-0.002	1.000	24313		1.13(0.54-1.63)	103	160	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.598	5.600	-0.002	1.363	4981370	1.19		94.9	8989	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.905	5.907	-0.002	1.000	182515	0.0516	Target=8.22	103	483	
813.00 > 169.00	5.905	5.907	-0.002	1.000	21588		8.45(4.11-12.33)	103	40.7	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.905	5.907	-0.002	1.438	3465880	1.22		97.4	6491	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.160	6.162	-0.002	1.043	129098	0.0473	Target=11.60	94.6	408	
913.00 > 169.00	6.160	6.162	-0.002	1.043	11272		11.45(5.80-17.40)	94.6	57.9	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L2PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_007.d

Injection Date: 09-Jan-2022 10:44:40

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

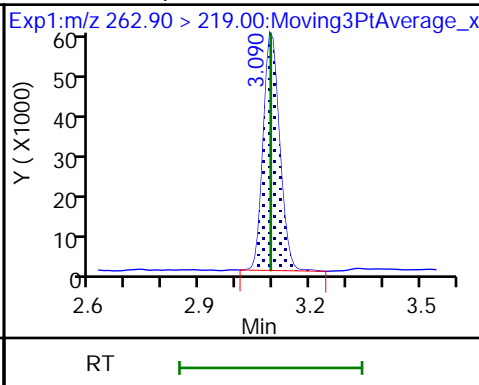
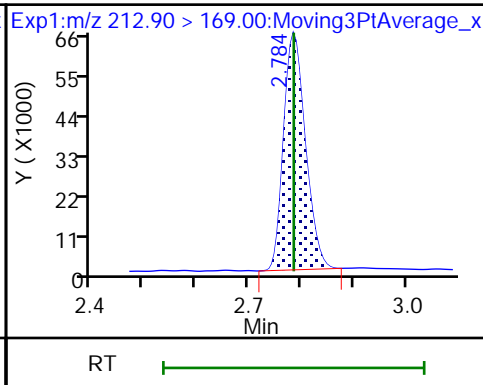
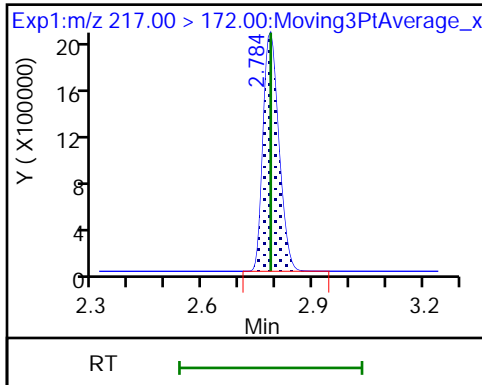
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

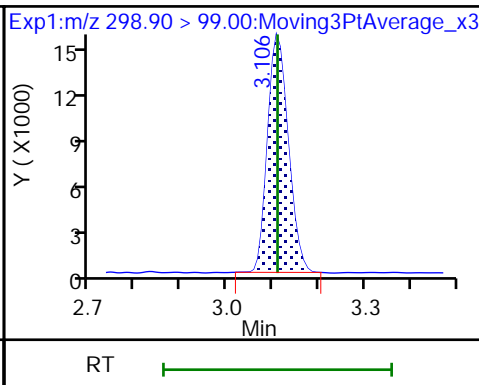
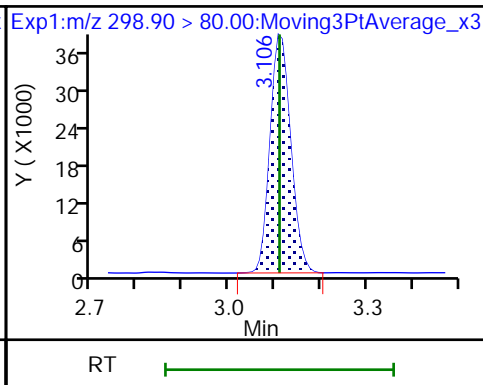
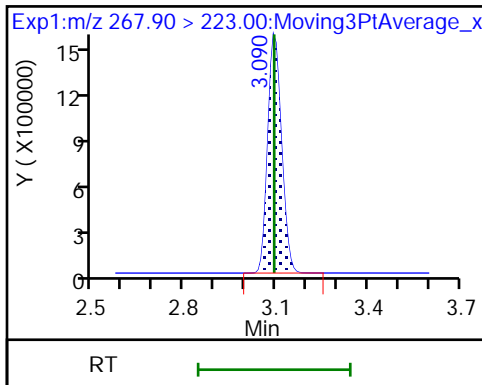
4 Perfluoropentanoic acid



D 3 13C5 PFPeA

5 Perfluorobutanesulfonic acid

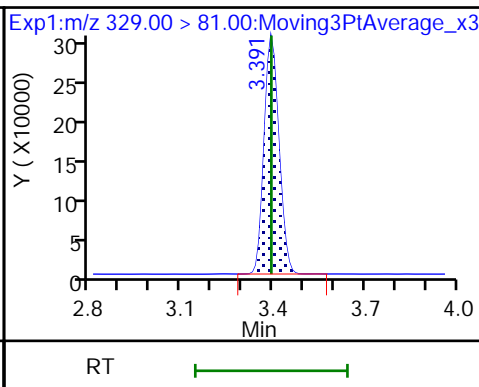
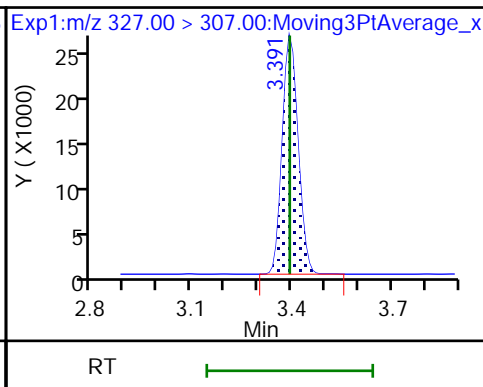
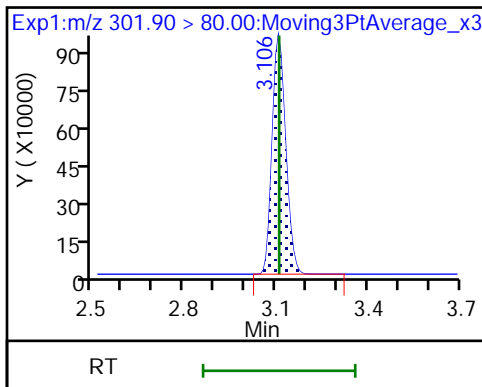
5 Perfluorobutanesulfonic acid



D 6 13C3 PFBS

7 4:2 FTS

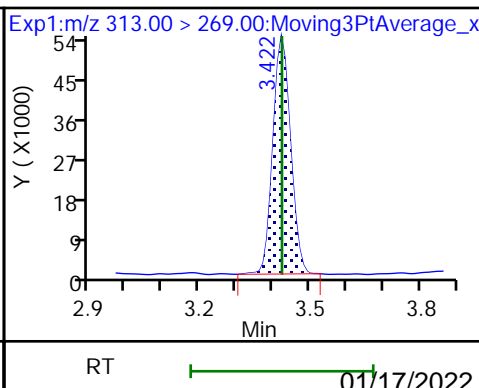
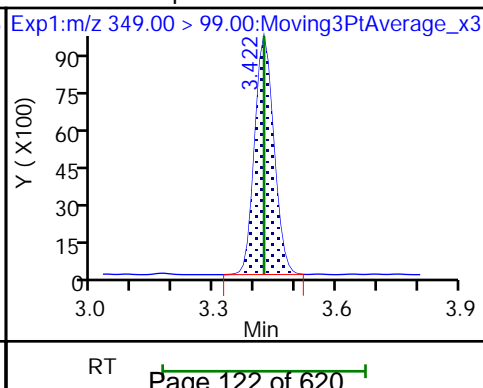
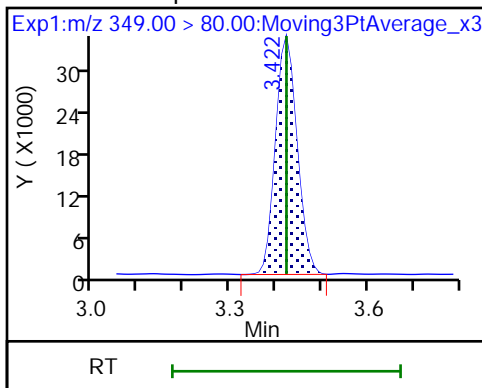
D 8 M2-4:2 FTS

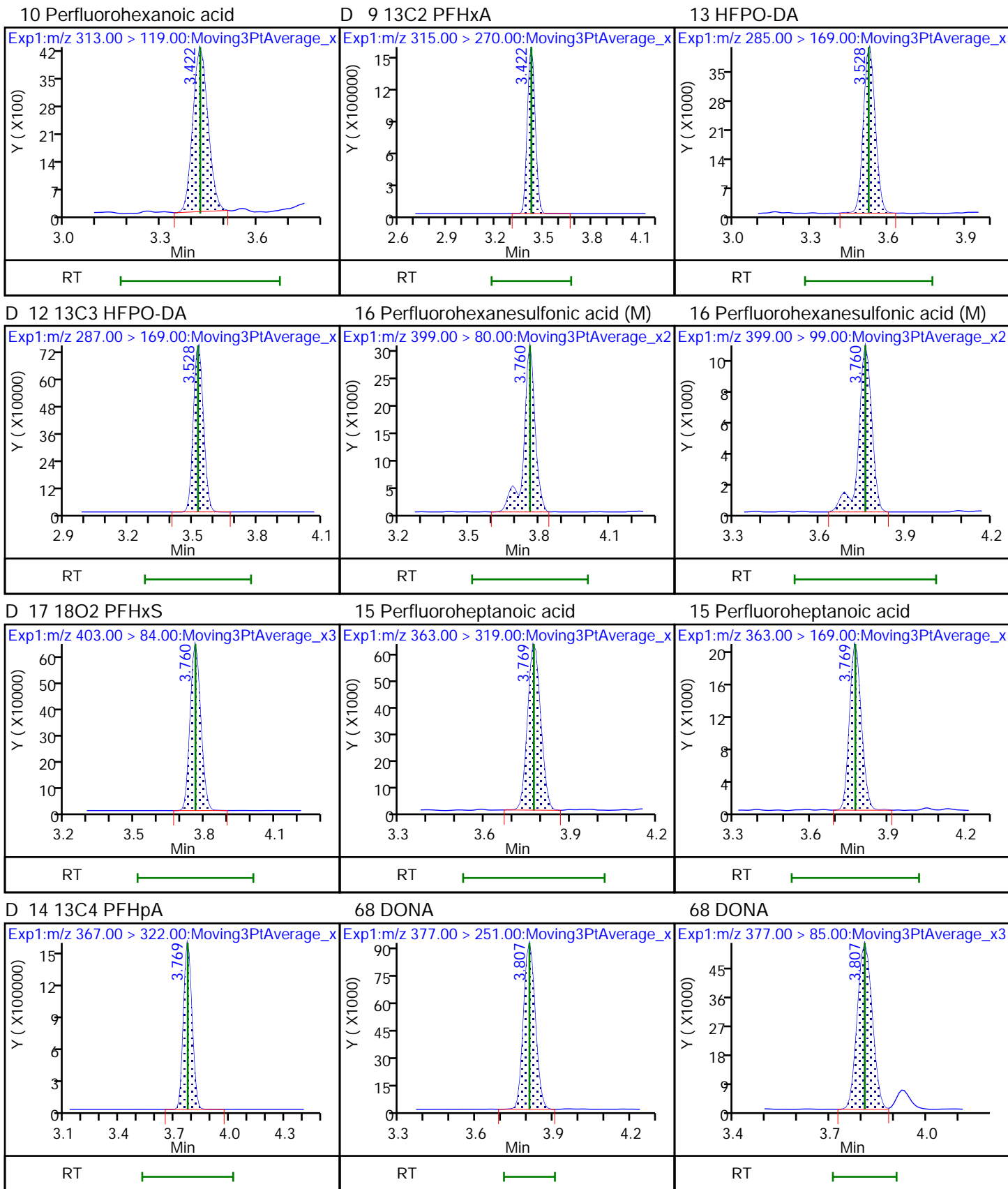


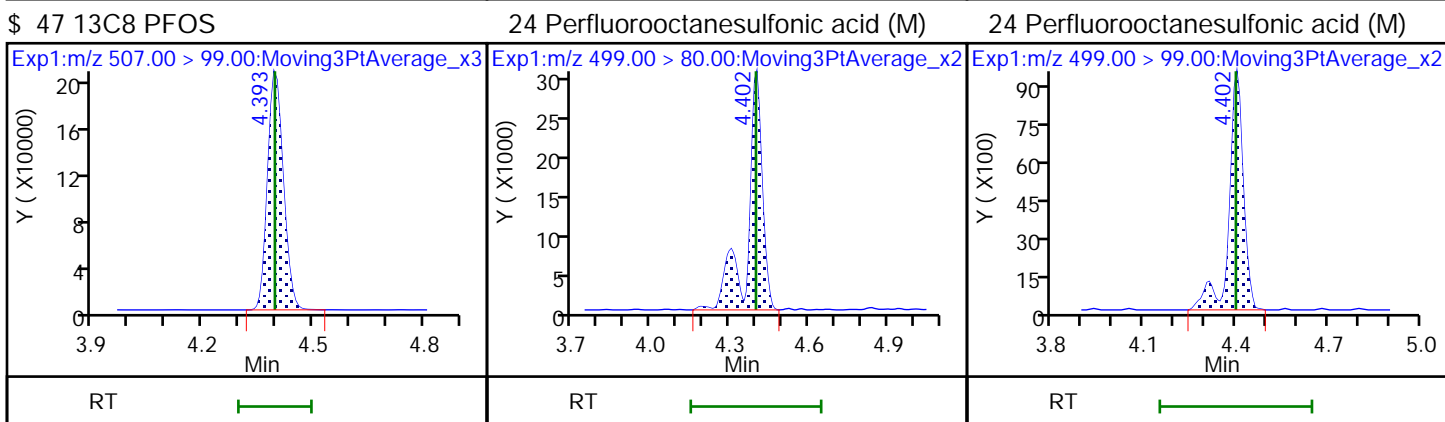
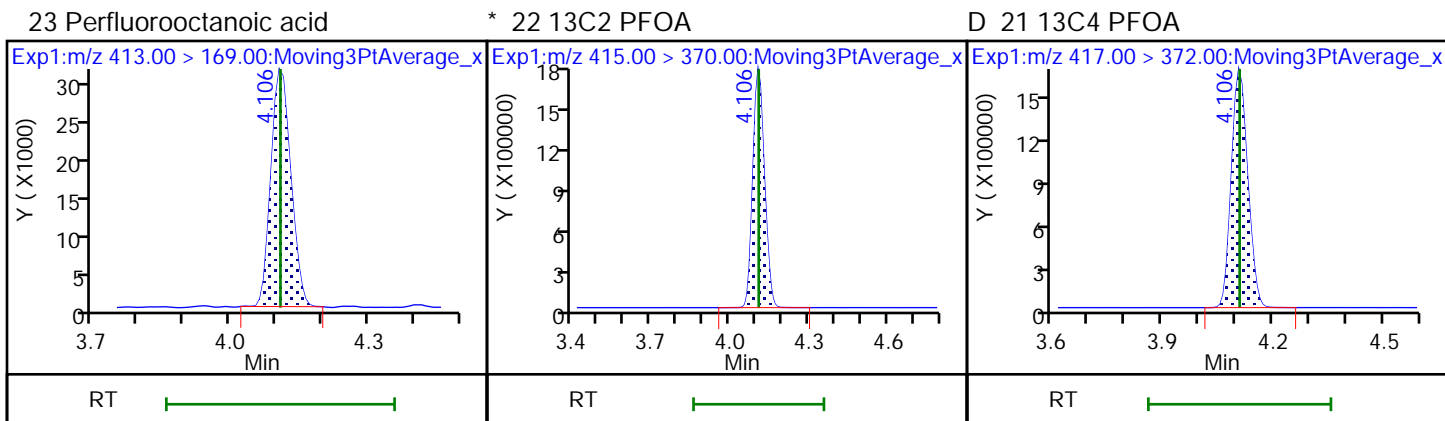
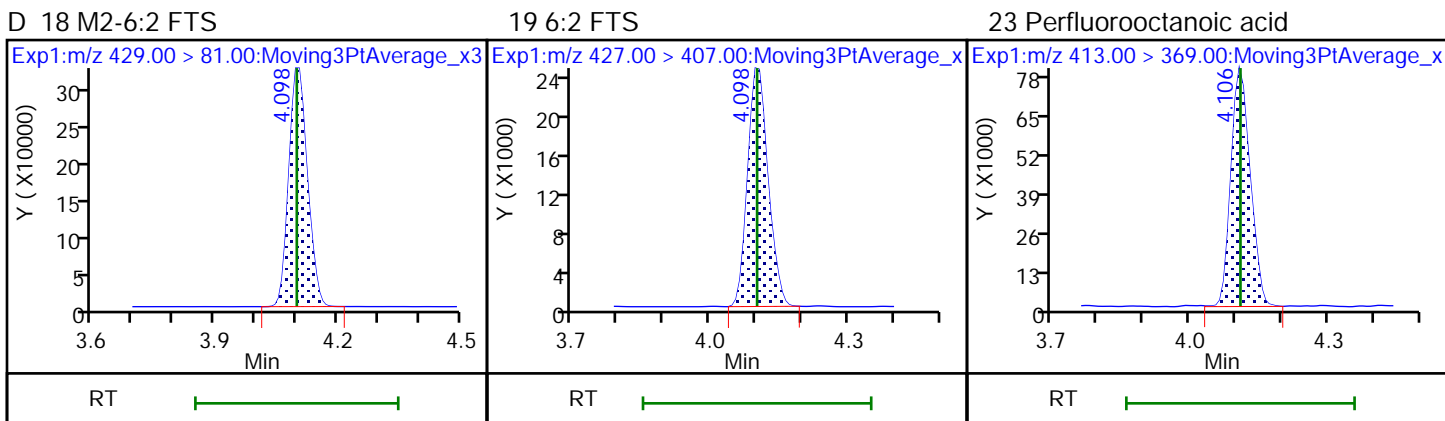
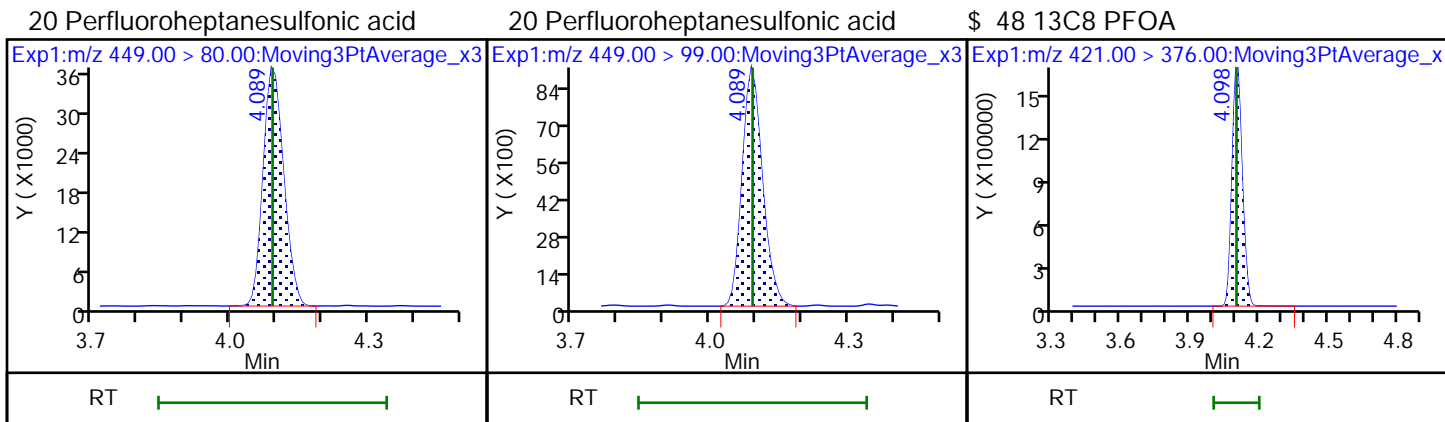
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

10 Perfluorohexanoic acid



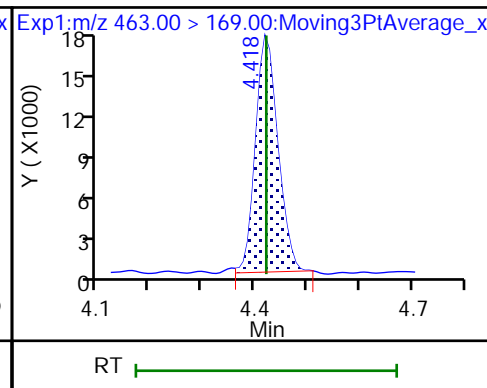
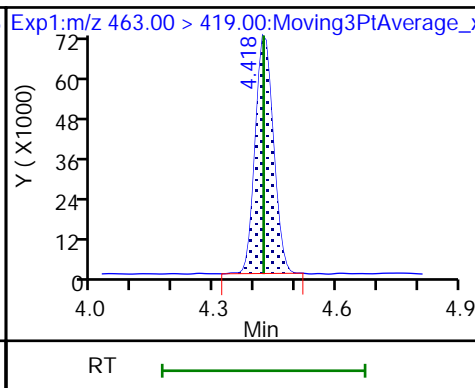
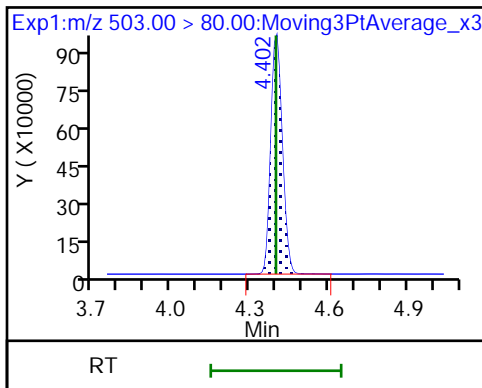




D 25 13C4 PFOS

26 Perfluorononanoic acid

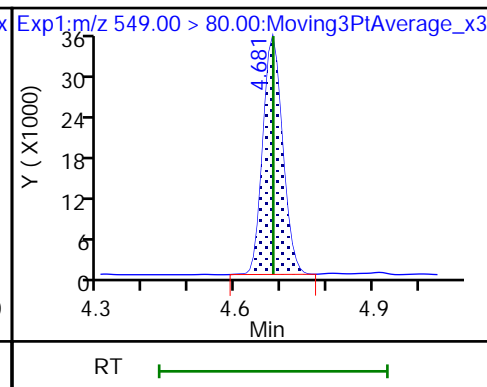
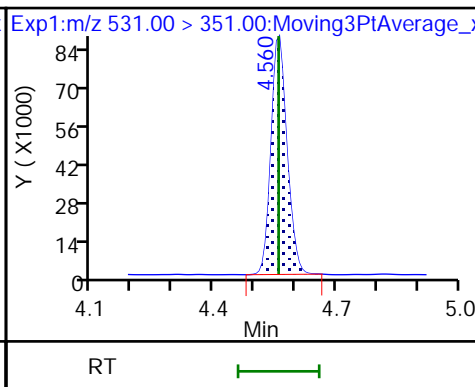
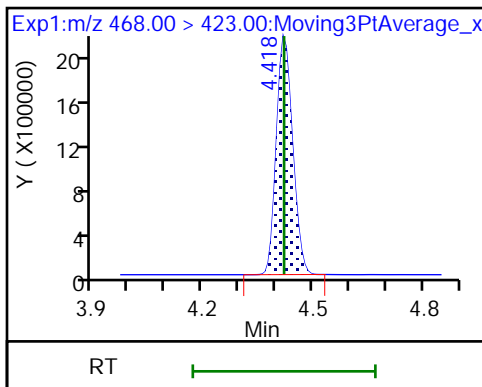
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS

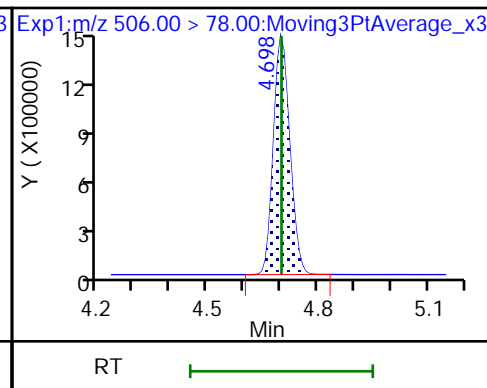
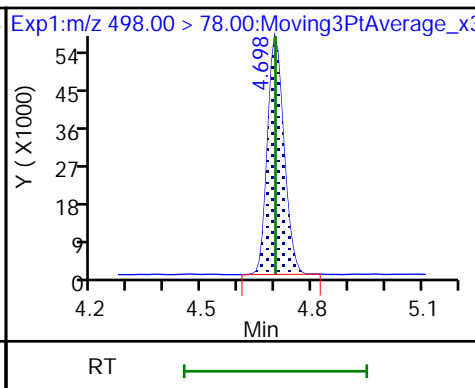
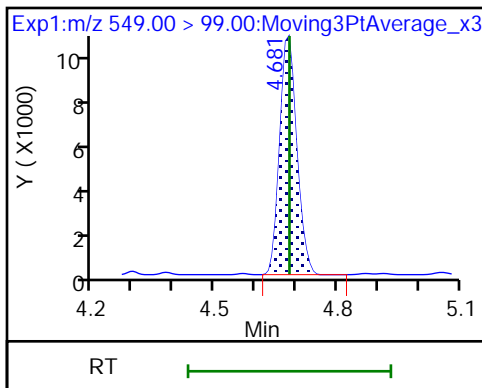
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

33 Perfluorooctanesulfonamide

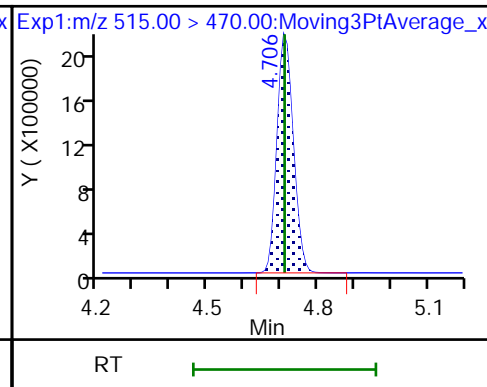
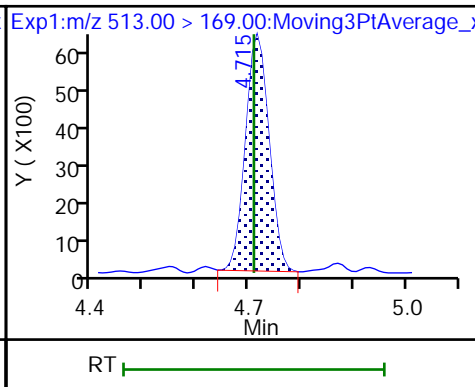
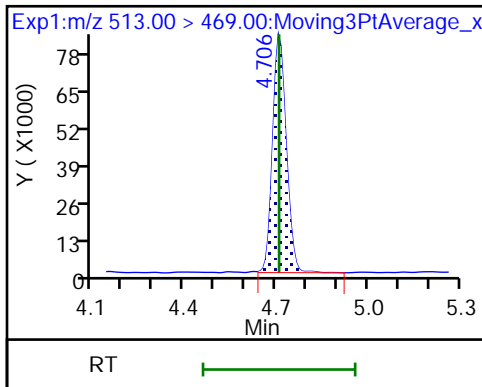
D 34 13C8 FOSA

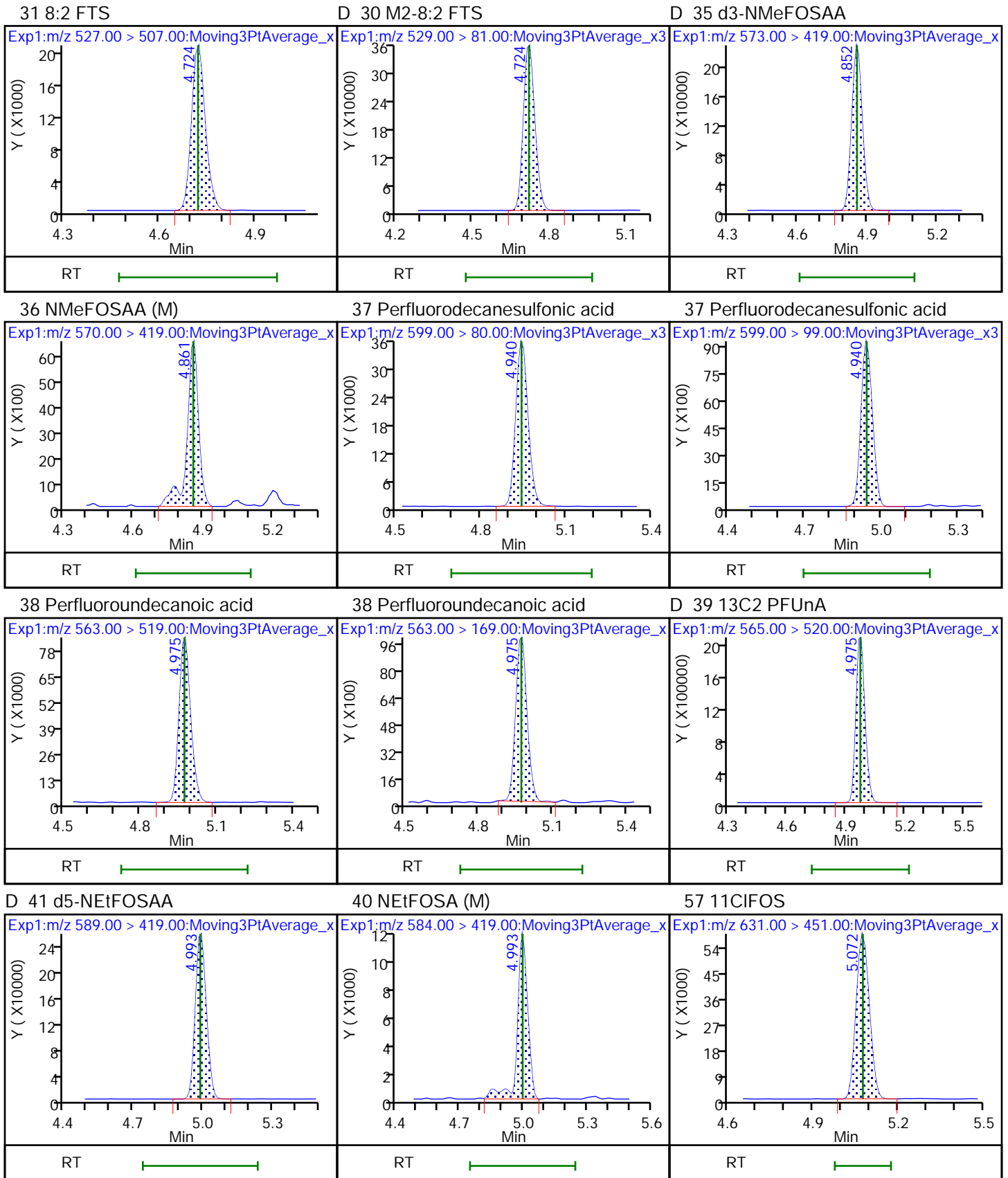


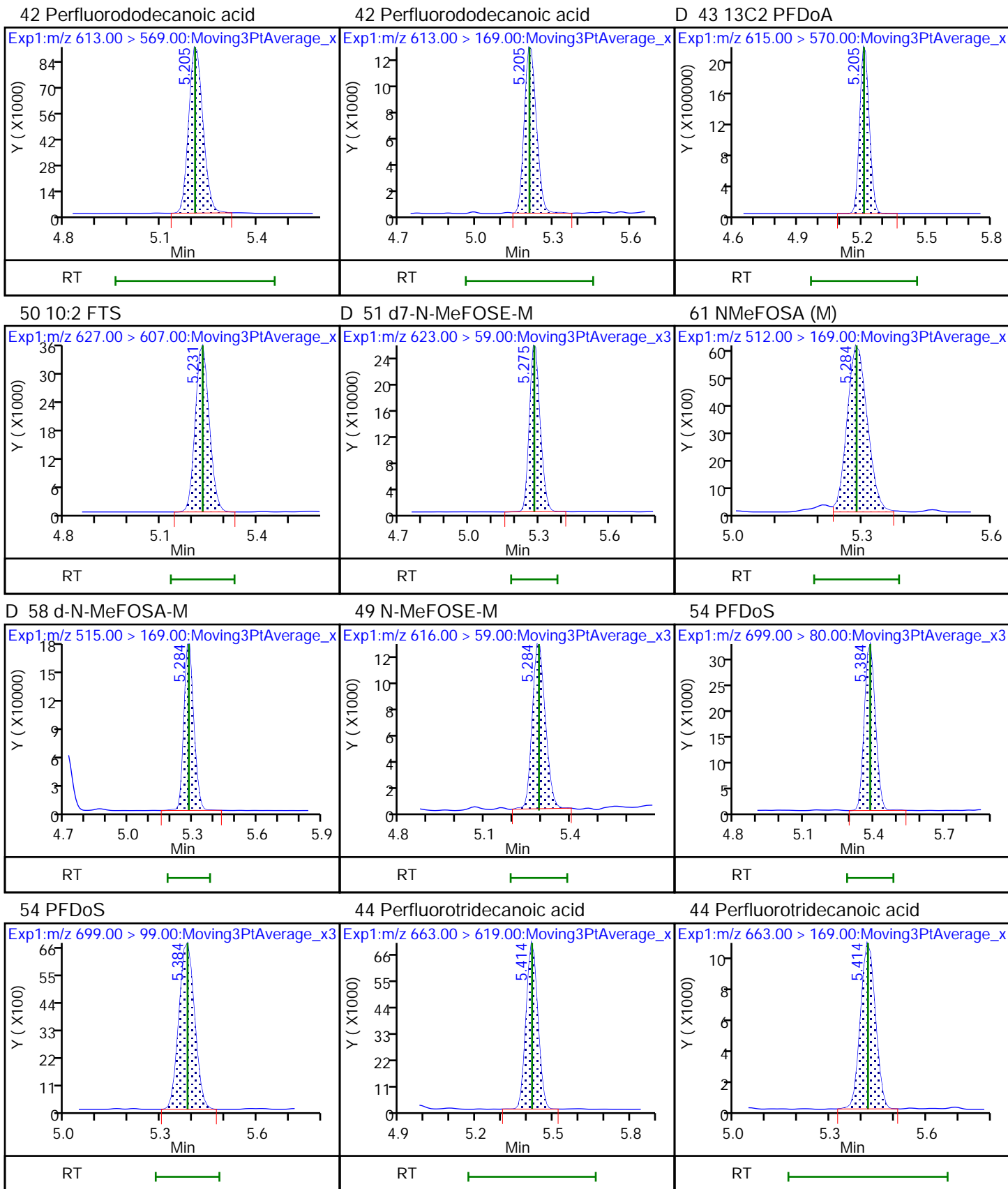
29 Perfluorodecanoic acid

29 Perfluorodecanoic acid

D 32 13C2 PFDA





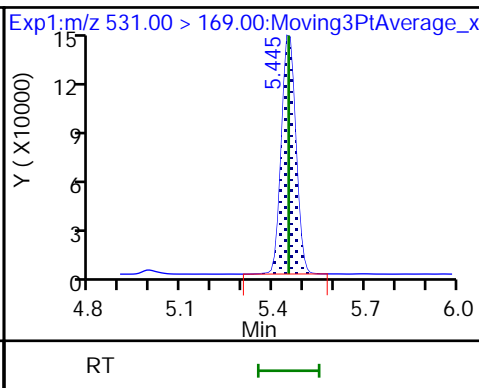
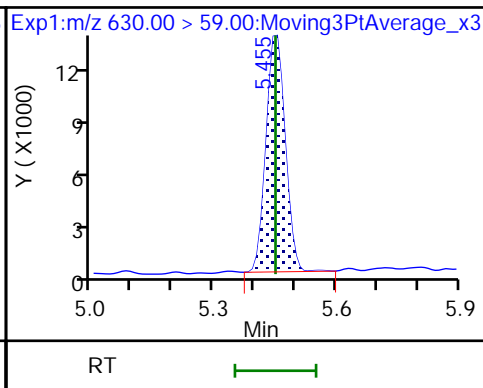
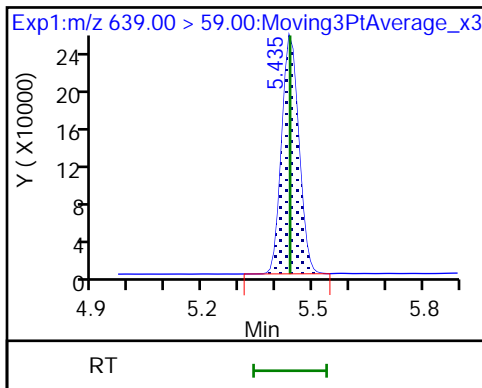




D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M

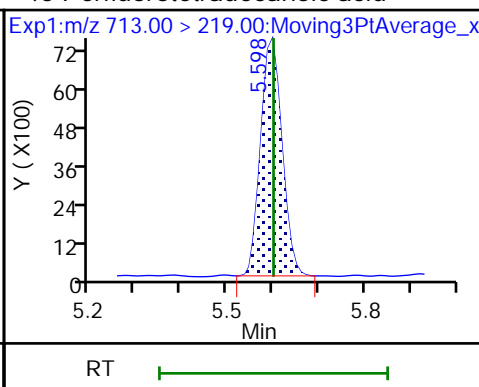
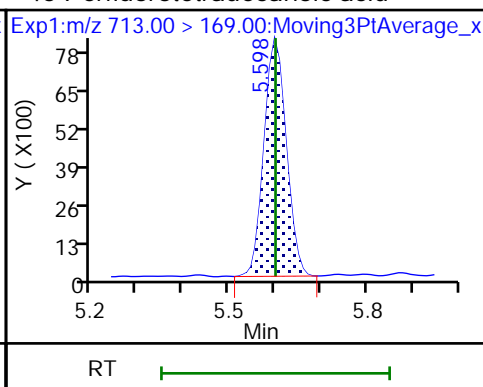
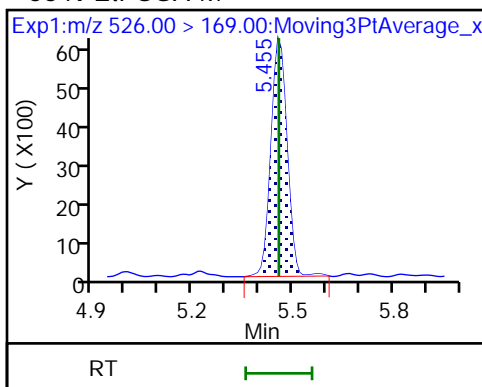
D 52 d-N-EtFOSA-M



56 N-EtFOSA-M

45 Perfluorotetradecanoic acid

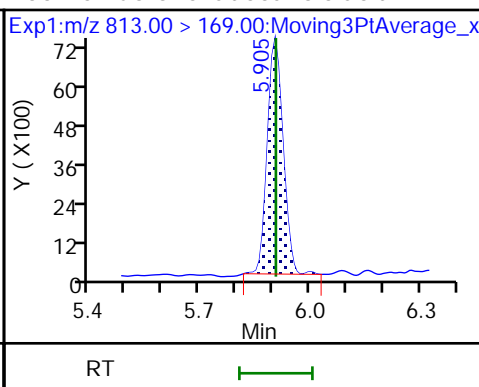
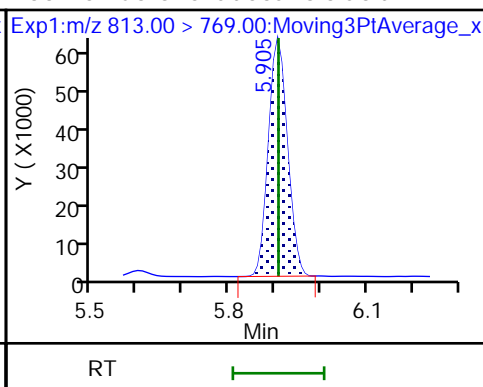
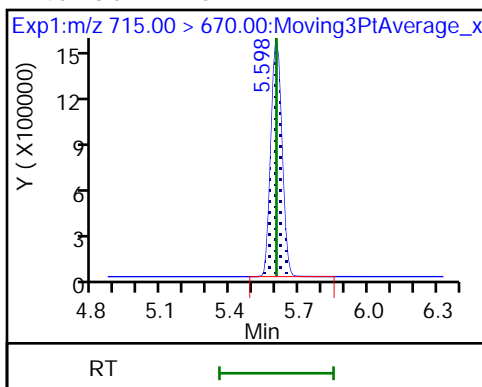
45 Perfluorotetradecanoic acid



D 46 13C2 PFTeDA

55 Perfluorohexadecanoic acid

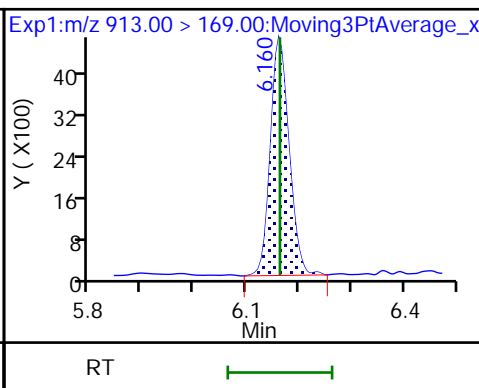
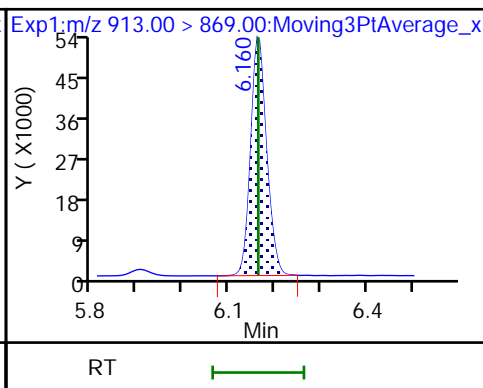
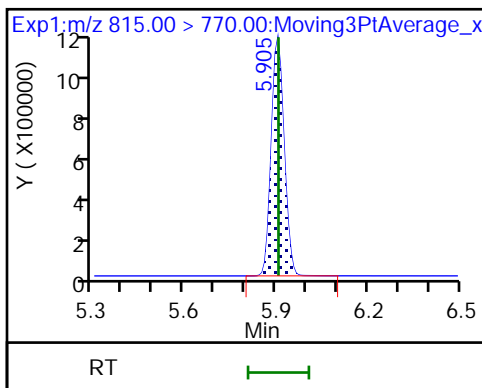
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid





Eurofins TestAmerica, Knoxville

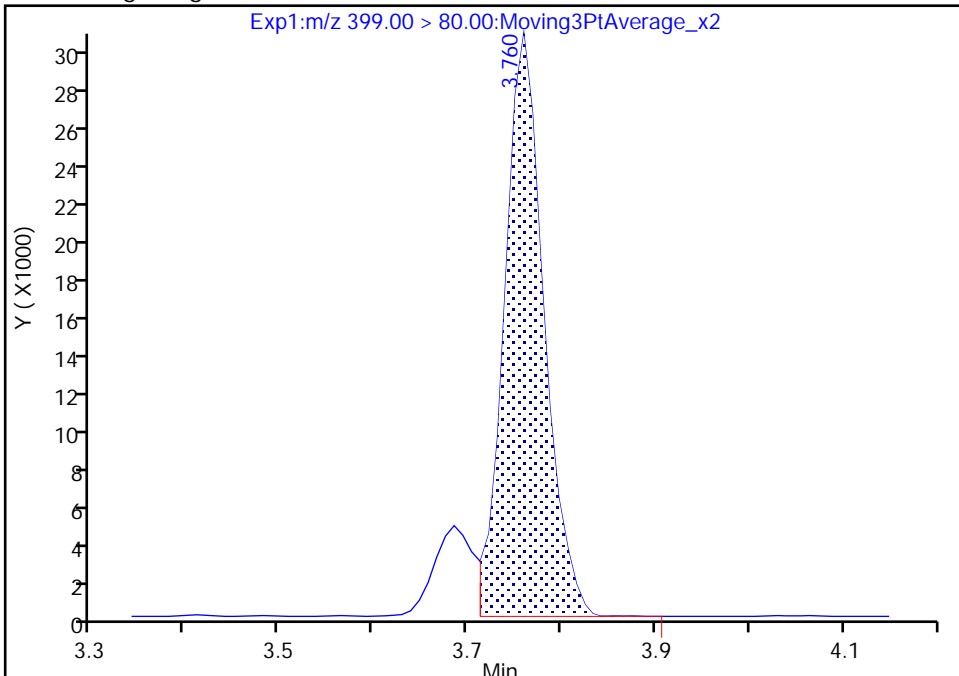
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Lims ID: IC 2  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

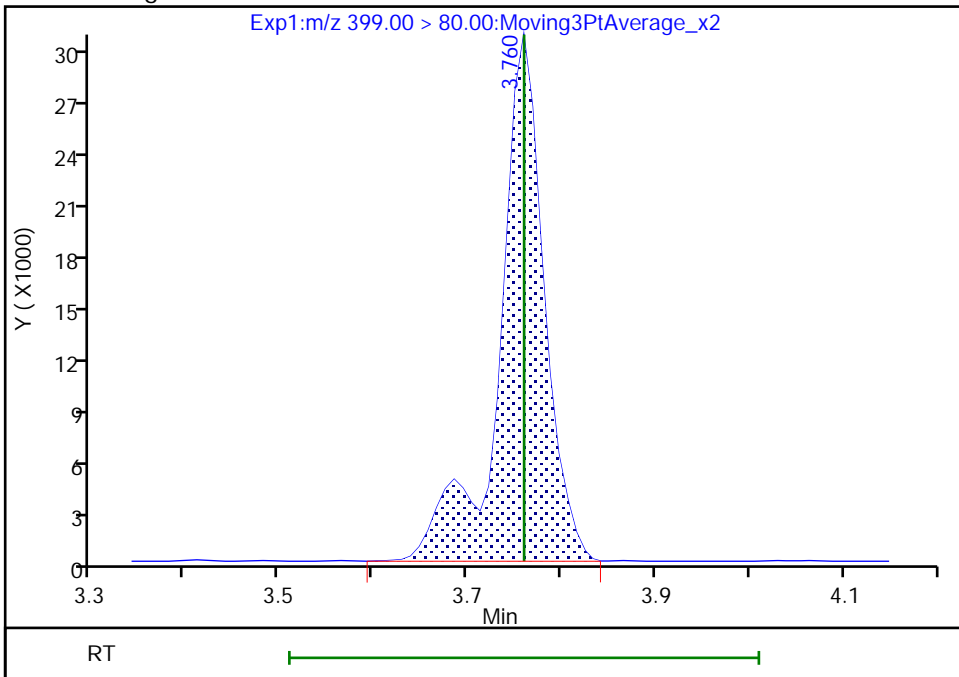
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Area: 89104  
Amount: 0.041895  
Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
Area: 102576  
Amount: 0.043104  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:17:48  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

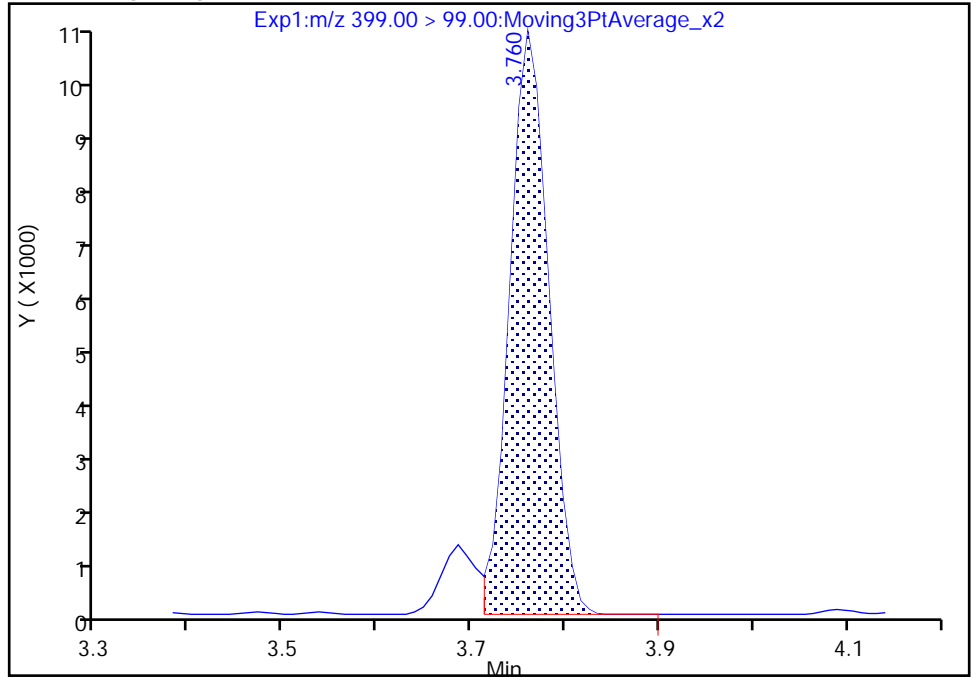
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Lims ID: IC 2  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

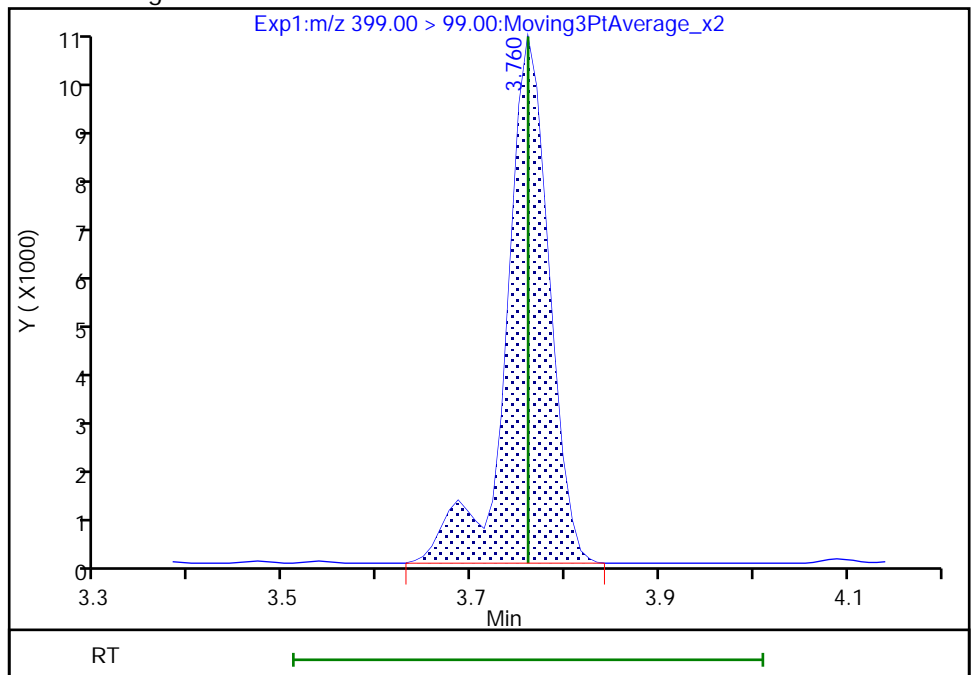
RT: 3.76  
Area: 29245  
Amount: 0.041895  
Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
Area: 32312  
Amount: 0.043104  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:17:54

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

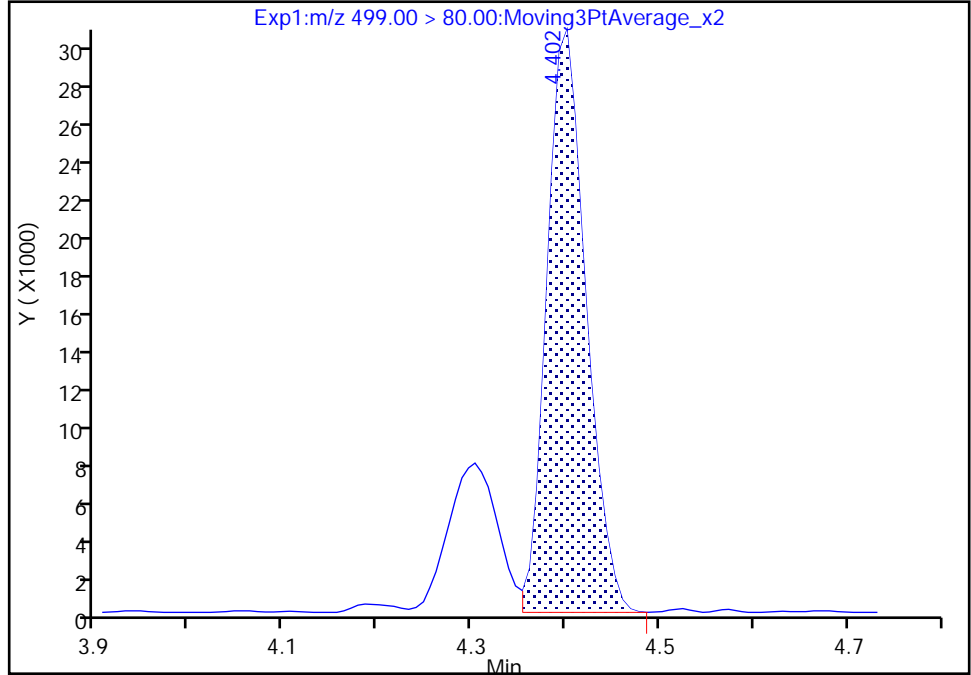
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_007.d  
Injection Date: 09-Jan-2022 10:44:40 Instrument ID: LCA  
Lims ID: IC 2  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

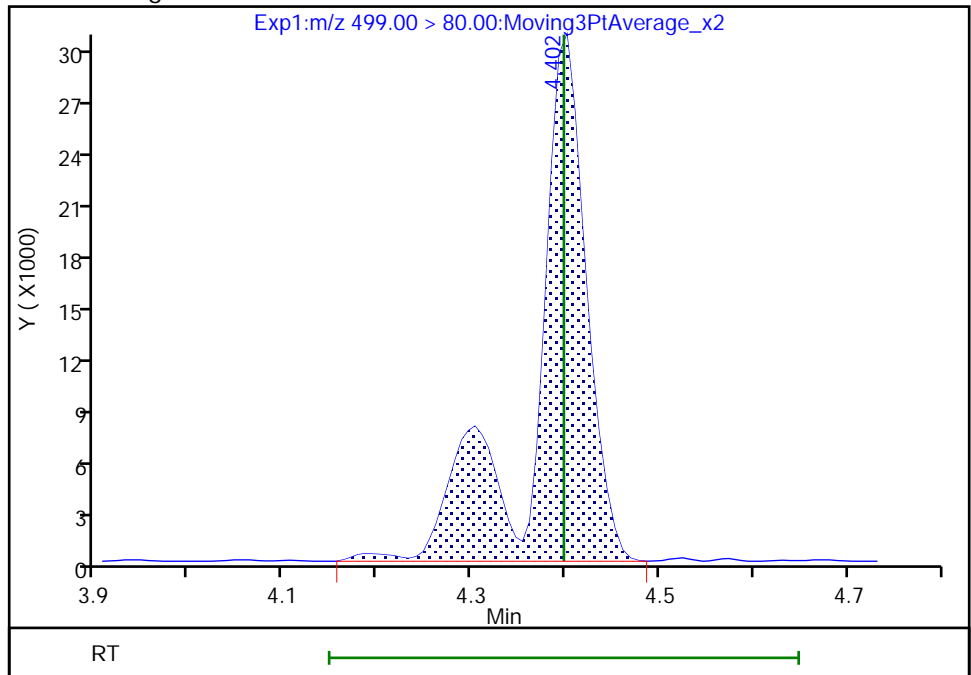
RT: 4.40  
Area: 88831  
Amount: 0.041252  
Amount Units: ng/ml

Processing Integration Results



RT: 4.40  
Area: 118941  
Amount: 0.044684  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:18:05  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

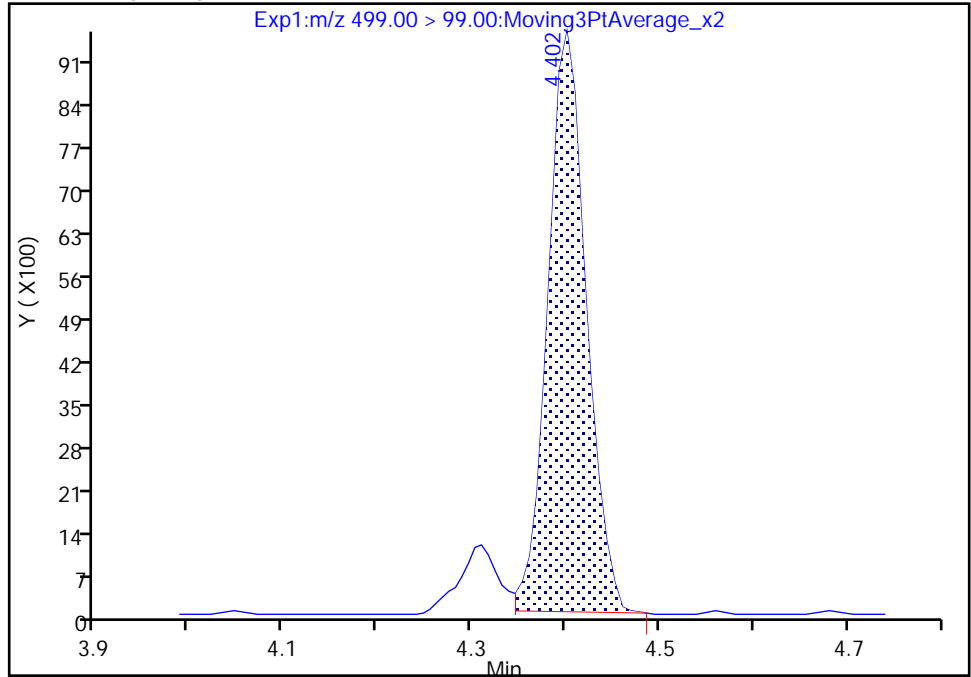
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_007.d  
Injection Date: 09-Jan-2022 10:44:40 Instrument ID: LCA  
Lims ID: IC 2  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

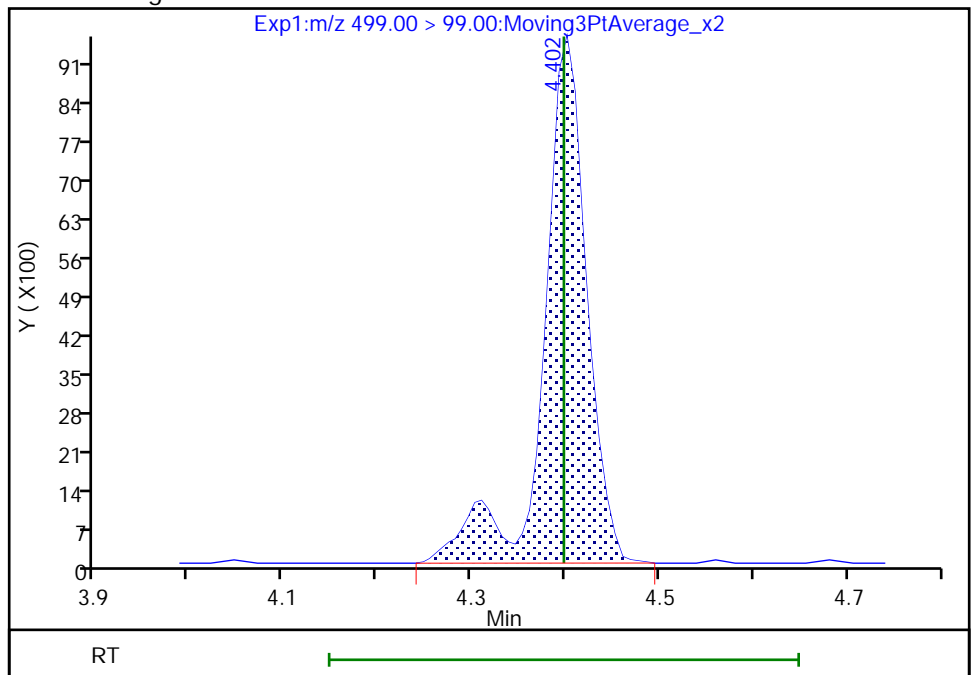
RT: 4.40  
Area: 26962  
Amount: 0.041252  
Amount Units: ng/ml

Processing Integration Results



RT: 4.40  
Area: 30560  
Amount: 0.044684  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:18:12

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

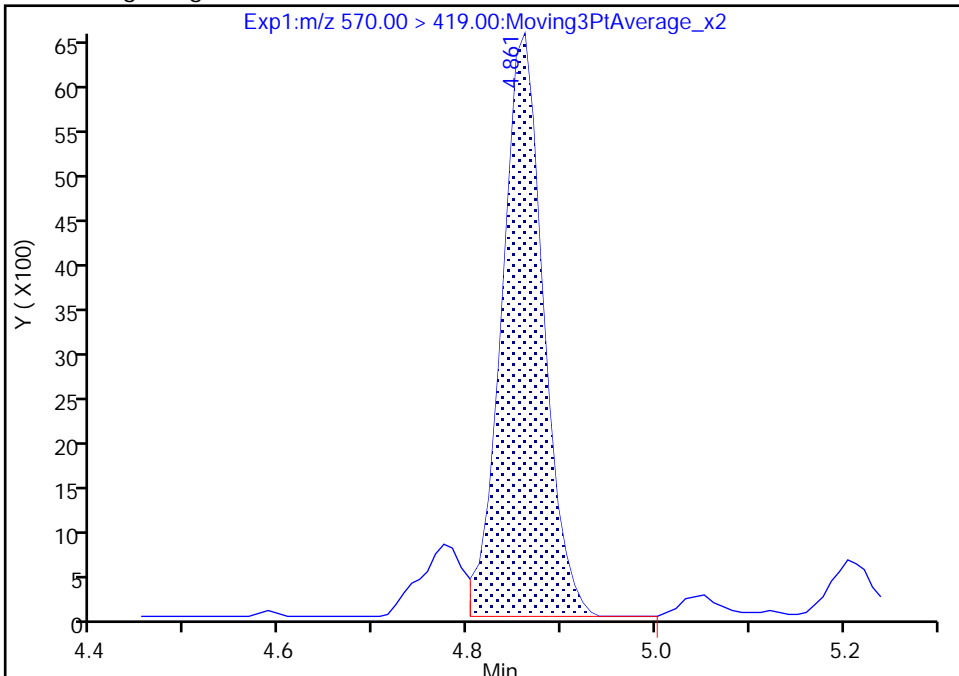
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_007.d  
Injection Date: 09-Jan-2022 10:44:40 Instrument ID: LCA  
Lims ID: IC 2  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

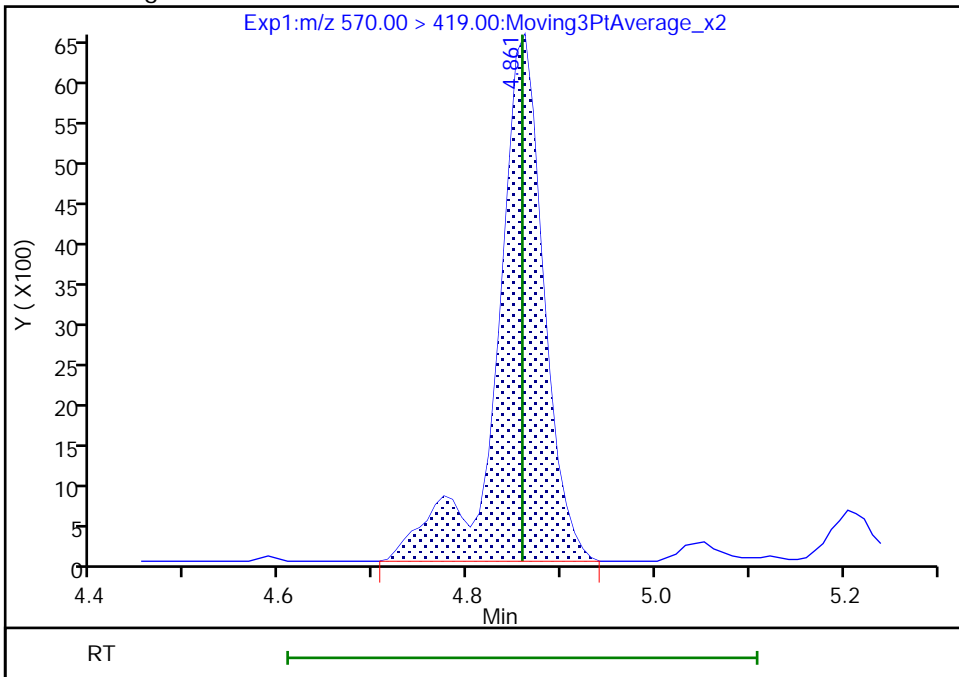
RT: 4.86  
Area: 20069  
Amount: 0.040697  
Amount Units: ng/ml

Processing Integration Results



RT: 4.86  
Area: 22599  
Amount: 0.040105  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:18:22  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

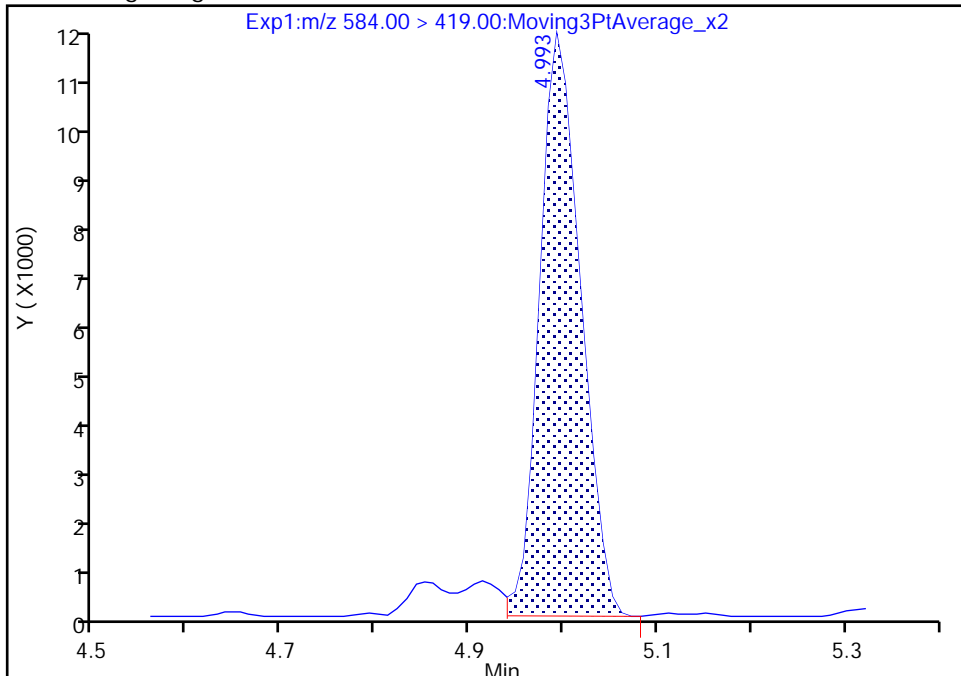
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_007.d  
Injection Date: 09-Jan-2022 10:44:40 Instrument ID: LCA  
Lims ID: IC 2  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

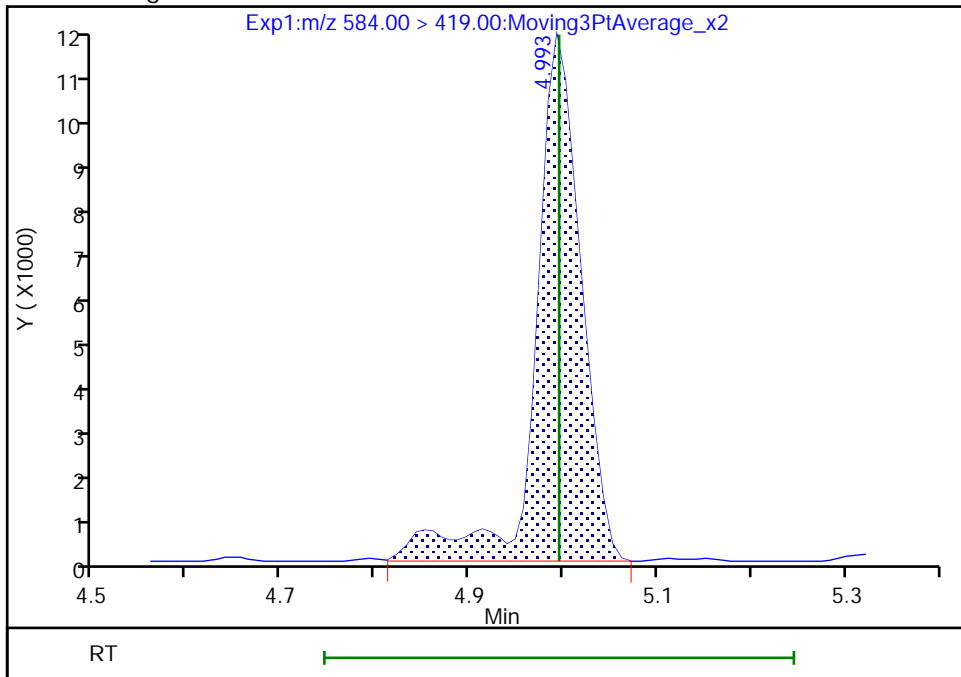
RT: 4.99  
Area: 34008  
Amount: 0.057334  
Amount Units: ng/ml

Processing Integration Results



RT: 4.99  
Area: 37744  
Amount: 0.057788  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:18:37  
Audit Action: Manually Integrated

Audit Reason: Baseline



Eurofins TestAmerica, Knoxville

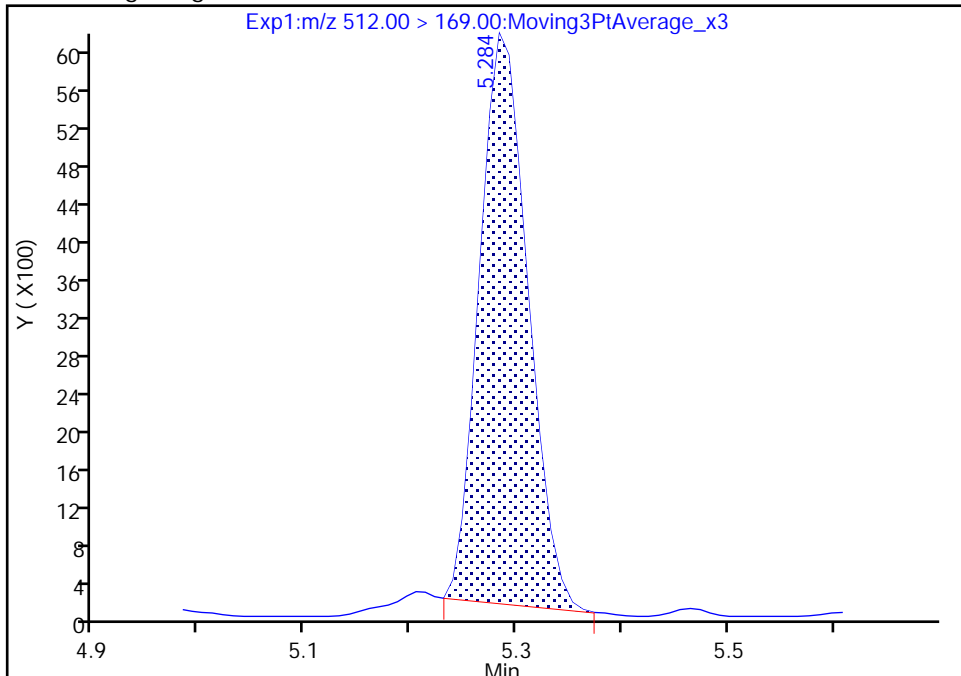
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_007.d  
Injection Date: 09-Jan-2022 10:44:40 Instrument ID: LCA  
Lims ID: IC 2  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

61 NMeFOSA, CAS: 31506-32-8

Signal: 1

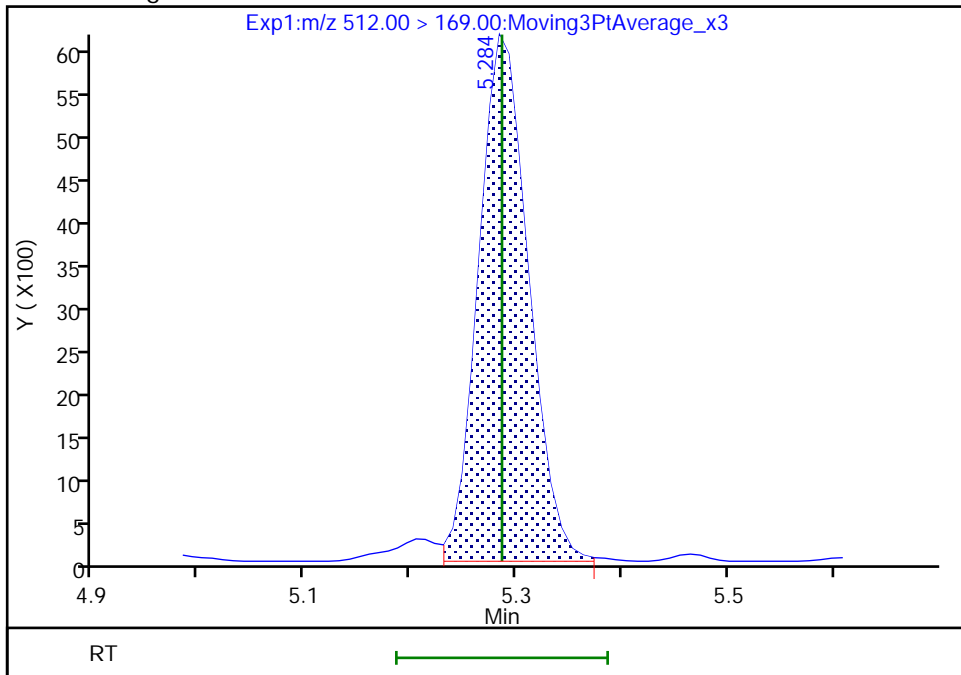
RT: 5.28  
Area: 19316  
Amount: 0.041921  
Amount Units: ng/ml

Processing Integration Results



RT: 5.28  
Area: 20289  
Amount: 0.042599  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:18:56  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville  
 Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_008.d  
 Lims ID: IC 3  
 Client ID:  
 Sample Type: IC Calib Level: 3  
 Inject. Date: 09-Jan-2022 10:53:28 ALS Bottle#: 8 Worklist Smp#: 8  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022186-008 ic 3  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 12:31:46 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1686

First Level Reviewer: cochranj Date: 09-Jan-2022 11:20:43

Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										
212.90 > 169.00	2.773	2.785	-0.012	1.000	962240	0.2479		99.2	262	
D 1 13C4 PFBA										
217.00 > 172.00	2.773	2.784	-0.011	0.677	6184171	1.26		101	13510	
4 Perfluoropentanoic acid										
262.90 > 219.00	3.082	3.093	-0.011	1.000	893254	0.2462		98.5	306	
D 3 13C5 PFPeA										
267.90 > 223.00	3.082	3.093	-0.011	0.752	4763774	1.25		99.9	10193	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	3.099	3.109	-0.010	1.000	597004	0.2224	Target=2.68	101	2143	
298.90 > 99.00	3.099	3.109	-0.010	1.000	217132		2.75(1.34-4.02)	101	1360	
D 6 13C3 PFBS										
301.90 > 80.00	3.099	3.109	-0.010	0.756	2844272	1.12		96.2	13108	
7 4:2 FTS										
327.00 > 307.00	3.382	3.393	-0.011	1.000	408865	0.2252		96.4	3284	
D 8 M2-4:2 FTS										
329.00 > 81.00	3.382	3.393	-0.011	0.825	941348	1.20		103	1958	
11 Perfluoropentanesulfonic acid										
349.00 > 80.00	3.412	3.422	-0.010	1.101	563759	0.2372	Target=3.48	101	1973	
349.00 > 99.00	3.412	3.422	-0.010	1.101	161174		3.50(1.74-5.22)	101	1696	
10 Perfluorohexanoic acid										
313.00 > 269.00	3.412	3.423	-0.011	1.000	868567	0.2350	Target=12.57	94.0	385	
313.00 > 119.00	3.412	3.423	-0.011	1.000	71287		12.18(6.28-18.85)	94.0	102	
D 9 13C2 PFHxA										
315.00 > 270.00	3.412	3.423	-0.011	0.833	5323274	1.31		104	9234	
13 HFPO-DA										
285.00 > 169.00	3.510	3.524	-0.014	1.000	620127	0.2359		94.4	433	

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	3.510	3.524	-0.014	0.857	2429399	1.24		99.1	4696	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.751	3.760	-0.009	1.000	500197	0.2164	Target=3.48	95.1	2431	M
399.00 > 99.00	3.751	3.760	-0.009	1.000	142100		3.52(1.74-5.21)	95.1	985	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.751	3.761	-0.010	0.915	1985027	1.17		98.9	9006	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.760	3.772	-0.012	1.000	1008145	0.2483	Target=3.29	99.3	616	
363.00 > 169.00	3.760	3.772	-0.012	1.000	315712		3.19(1.65-4.94)	99.3	824	
D 14 13C4 PFHpA										
367.00 > 322.00	3.760	3.772	-0.012	0.918	4848796	1.24		99.4	8145	
68 DONA										
377.00 > 251.00	3.797	3.807	-0.010	0.866	1476859	0.2236	Target=1.76	95.0	3114	
377.00 > 85.00	3.797	3.807	-0.010	0.866	831401		1.78(0.88-2.64)	95.0	169	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.081	4.092	-0.011	0.931	530886	0.2216	Target=3.91	93.1	2522	
449.00 > 99.00	4.081	4.092	-0.011	0.931	137861		3.85(1.95-5.86)	93.1	1340	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.089	4.100	-0.011	0.998	5133842	1.24		99.4	10095	
19 6:2 FTS										
427.00 > 407.00	4.089	4.101	-0.012	1.000	338181	0.2333		98.4	1400	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.089	4.100	-0.011	0.998	966110	1.22		103	3076	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.098	4.109	-0.011	1.000	1133760	0.2390	Target=2.61	95.6	697	
413.00 > 169.00	4.098	4.109	-0.011	1.000	434645		2.61(1.30-3.91)	95.6	712	
* 22 13C2 PFOA										
415.00 > 370.00	4.098	4.109	-0.011		5378244	1.25			10460	
D 21 13C4 PFOA										
417.00 > 372.00	4.098	4.109	-0.011	1.000	5168548	1.28		102	8184	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.385	4.396	-0.011	1.000	633403	1.14		95.1	4519	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.385	4.398	-0.013	1.000	606028	0.2196	Target=4.37	94.7	1782	M
499.00 > 99.00	4.385	4.398	-0.013	1.000	135814		4.46(2.18-6.55)	94.7	922	M
D 25 13C4 PFOS										
503.00 > 80.00	4.385	4.398	-0.013	1.070	3000906	1.23		103	5202	
26 Perfluorononanoic acid										
463.00 > 419.00	4.410	4.421	-0.011	1.000	1117019	0.2453	Target=4.48	98.1	1496	
463.00 > 169.00	4.410	4.421	-0.011	1.000	252342		4.43(2.24-6.72)	98.1	615	
D 27 13C5 PFNA										
468.00 > 423.00	4.410	4.421	-0.011	1.076	6772318	1.28		102	10780	
63 9CIFOS										
531.00 > 351.00	4.546	4.558	-0.012	1.037	1154070	0.2173		93.3	4067	

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	4.673	4.682	-0.009	1.066	580163	0.2370	Target=3.84	98.7	2276	
549.00 > 99.00	4.673	4.682	-0.009	1.066	139465		4.16(1.92-5.77)	98.7	994	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.689	4.700	-0.011	1.000	786079	0.2415		96.6	1769	
D 34 13C8 FOSA										
506.00 > 78.00	4.689	4.700	-0.011	1.144	4301021	1.30		104	3568	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.698	4.709	-0.011	1.000	1252301	0.2461	Target=11.50	98.4	1603	
513.00 > 169.00	4.698	4.709	-0.011	1.000	105371		11.88(5.75-17.25)	98.4	299	
D 32 13C2 PFDA										
515.00 > 470.00	4.698	4.709	-0.011	1.146	6595470	1.29		103	11368	
31 8:2 FTS										
527.00 > 507.00	4.706	4.721	-0.015	1.000	323270	0.2423		101	2241	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.706	4.721	-0.015	1.148	1128836	1.27		106	2303	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.843	4.854	-0.011	1.182	808216	1.34		107	1195	
36 NMeFOSAA										
570.00 > 419.00	4.852	4.858	-0.006	1.002	135153	0.2153		86.1	215	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.931	4.942	-0.011	1.124	514341	0.2228	Target=3.69	92.5	2761	
599.00 > 99.00	4.931	4.942	-0.011	1.124	138178		3.72(1.84-5.53)	92.5	1260	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.957	4.973	-0.016	1.000	1241525	0.2465	Target=8.29	98.6	1517	
563.00 > 169.00	4.966	4.973	-0.007	1.002	148650		8.35(4.14-12.43)	98.6	722	
D 39 13C2 PFUnA										
565.00 > 520.00	4.957	4.973	-0.016	1.210	6493725	1.27		102	11021	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.975	4.989	-0.014	1.214	858732	1.30		104	2953	
40 NEtFOSA										
584.00 > 419.00	4.984	4.995	-0.011	1.002	157582	0.2317		92.7	483	M
57 11C1FOS										
631.00 > 451.00	5.062	5.075	-0.013	1.154	937340	0.2232		94.8	4455	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.196	5.207	-0.011	1.000	1372157	0.2407	Target=6.82	96.3	1728	
613.00 > 169.00	5.196	5.207	-0.011	1.000	194469		7.06(3.41-10.23)	96.3	452	
D 43 13C2 PFDoA										
615.00 > 570.00	5.196	5.207	-0.011	1.268	6942988	1.29		104	16694	
50 10:2 FTS										
627.00 > 607.00	5.222	5.231	-0.009	1.110	495484	0.2309		95.8	2868	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.266	5.279	-0.013	1.285	792935	1.23		98.3	680	
61 NMeFOSA										
512.00 > 169.00	5.275	5.286	-0.011	1.002	112183	0.2627		105	415	
49 N-MeFOSE-M										
616.00 > 59.00	5.284	5.290	-0.006	1.003	171287	0.2346		93.8	325	

Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.266	5.281	-0.015	1.285	528614	1.15		92.0	50.5	
54 PFDoS										
699.00 > 80.00	5.373	5.383	-0.010	1.225	531987	0.2311	Target=4.36	95.5	1638	
699.00 > 99.00	5.373	5.383	-0.010	1.225	122440		4.34(2.18-6.55)	95.5	1136	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.404	5.417	-0.013	1.040	1093849	0.2375	Target=6.19	95.0	1426	
663.00 > 169.00	5.404	5.417	-0.013	1.040	170081		6.43(3.09-9.28)	95.0	881	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.425	5.437	-0.012	1.324	791757	1.22		97.9	382	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.444	5.450	-0.006	1.329	457457	1.20		96.4	631	
62 N-EtFOSE-M										
630.00 > 59.00	5.435	5.450	-0.015	1.002	200969	0.2389		95.6	282	
56 N-EtFOSA-M										
526.00 > 169.00	5.444	5.457	-0.013	1.000	109188	0.2497		99.9	396	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.587	5.600	-0.013	1.000	133500	0.2431	Target=1.09	97.2	570	
713.00 > 219.00	5.587	5.600	-0.013	1.000	121201		1.10(0.54-1.63)	97.2	721	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.587	5.600	-0.013	1.363	5107852	1.25		99.9	8973	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.896	5.907	-0.011	1.000	729504	0.2426	Target=8.22	97.0	1643	
813.00 > 169.00	5.896	5.907	-0.011	1.000	90080		8.10(4.11-12.33)	97.0	197	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.896	5.907	-0.011	1.439	3400742	1.23		98.1	5415	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.149	6.162	-0.013	1.043	665836	0.2486	Target=11.60	99.5	1504	
913.00 > 169.00	6.149	6.162	-0.013	1.043	55363		12.03(5.80-17.40)	99.5	284	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

63L3PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_008.d

Injection Date: 09-Jan-2022 10:53:28

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

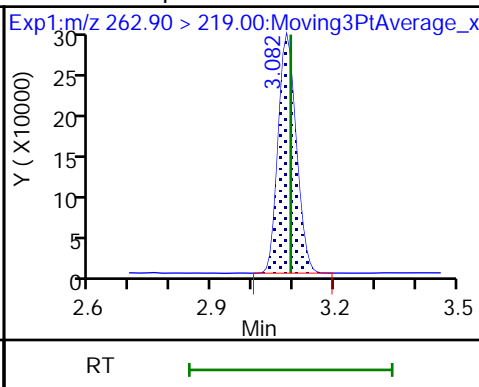
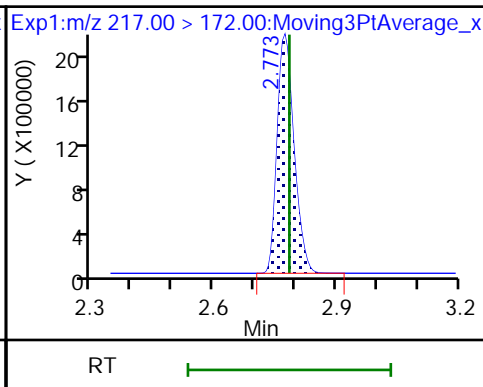
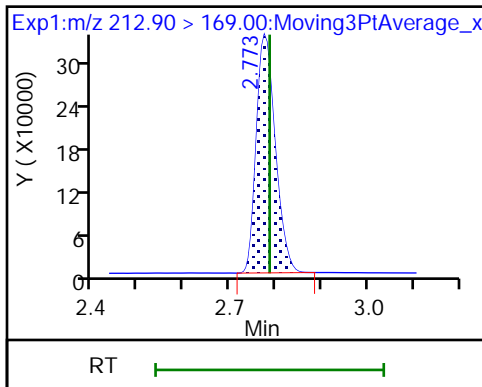
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

2 Perfluorobutanoic acid

D 1 13C4 PFBA

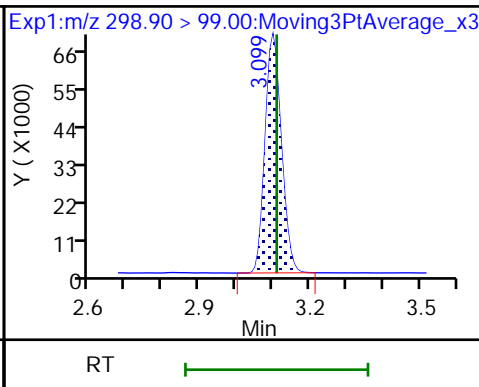
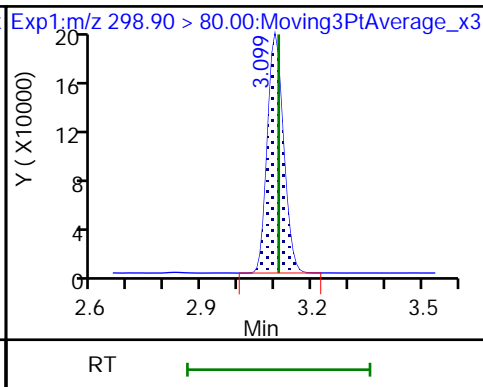
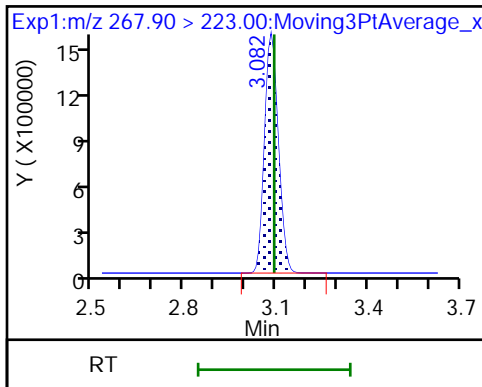
4 Perfluoropentanoic acid



D 3 13C5 PFPeA

5 Perfluorobutanesulfonic acid

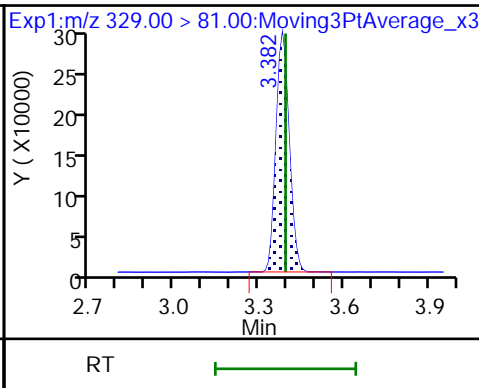
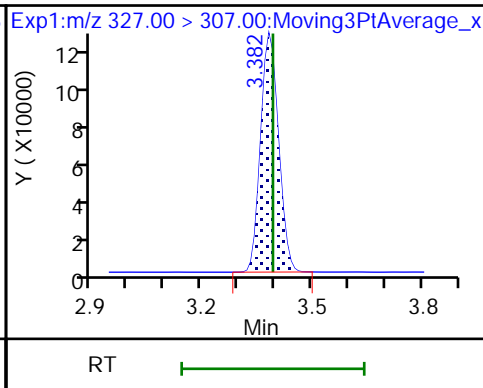
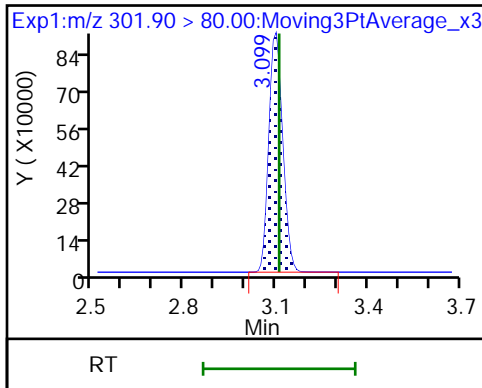
5 Perfluorobutanesulfonic acid



D 6 13C3 PFBS

7 4:2 FTS

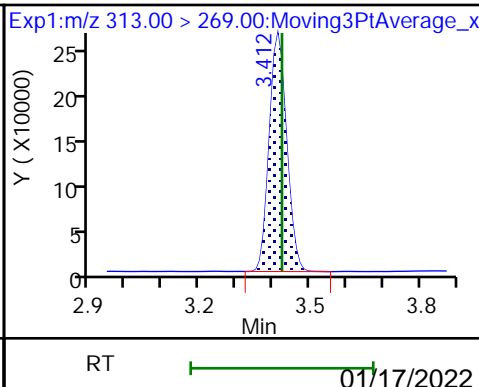
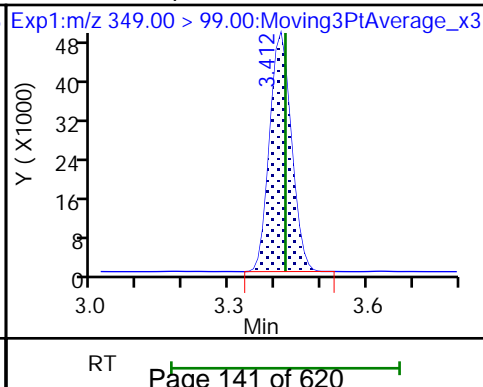
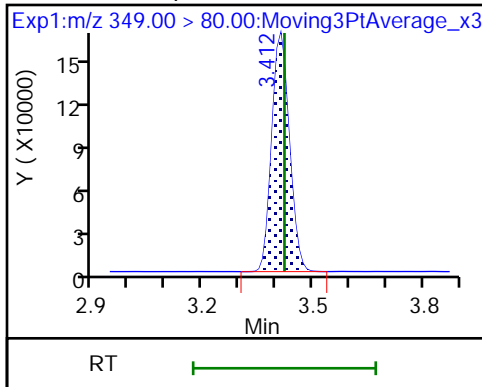
D 8 M2-4:2 FTS

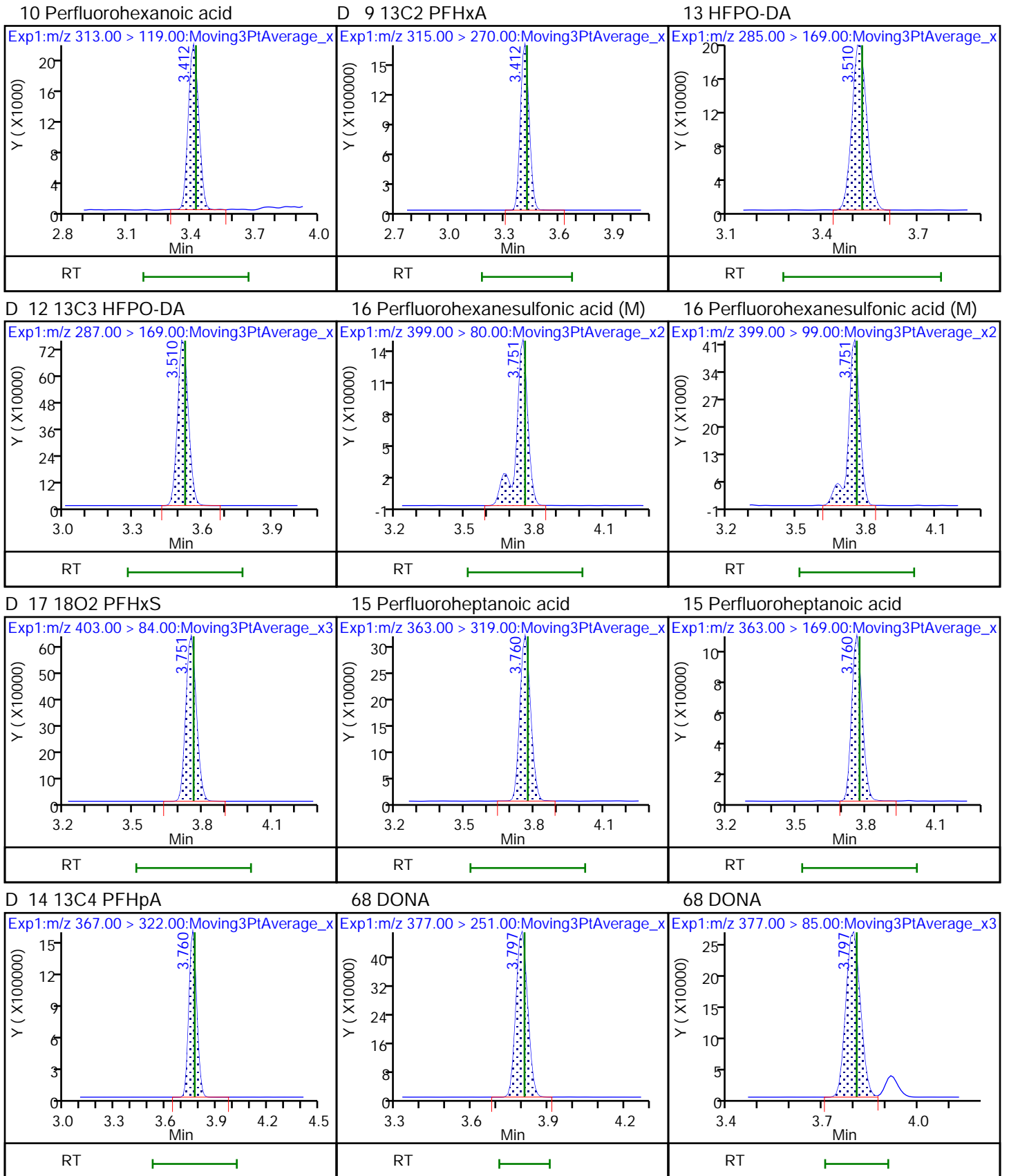


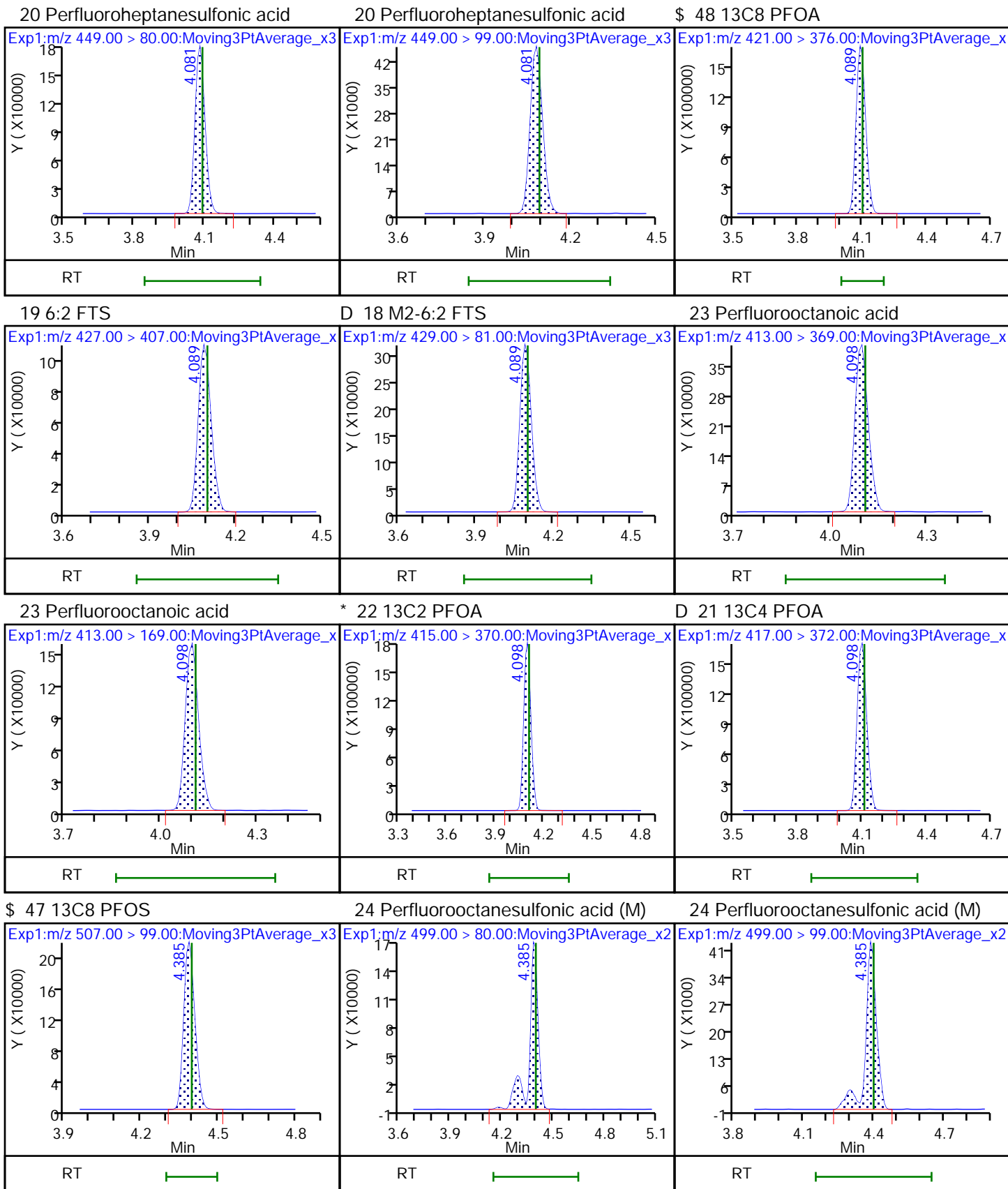
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

10 Perfluorohexanoic acid





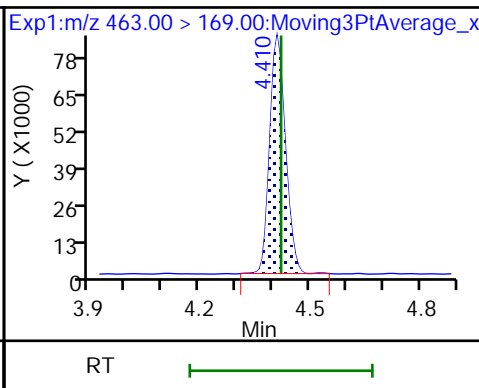
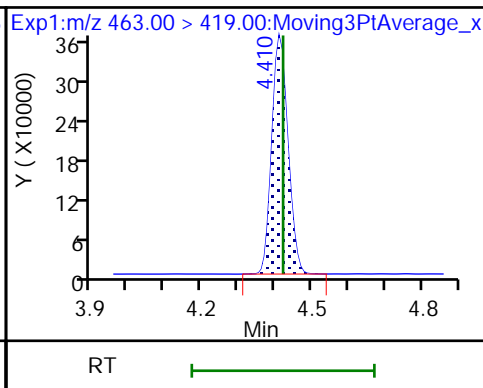
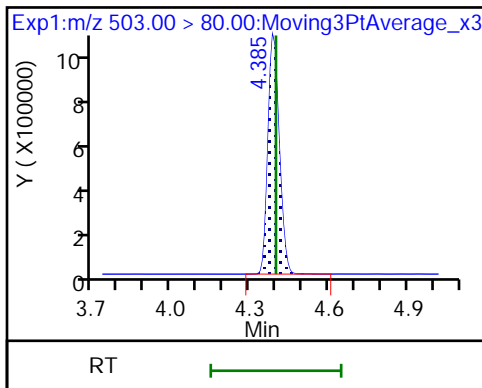




D 25 13C4 PFOS

26 Perfluorononanoic acid

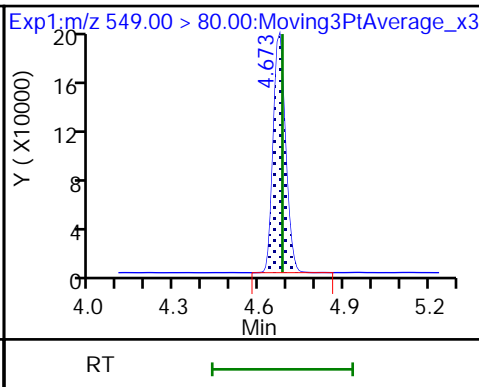
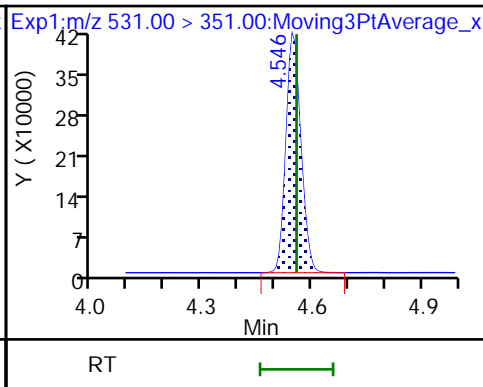
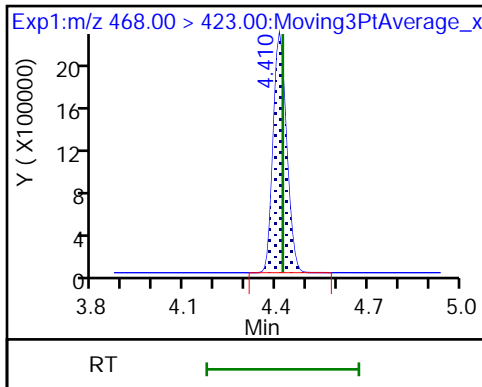
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS

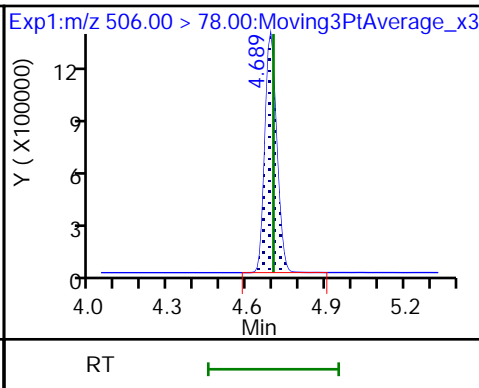
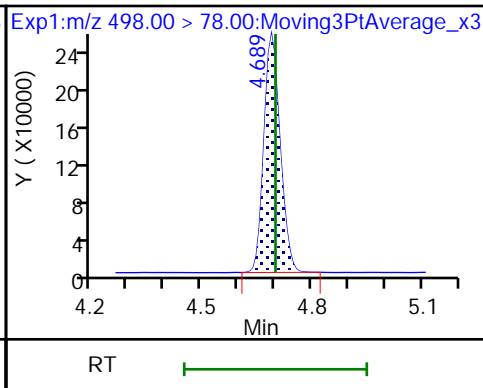
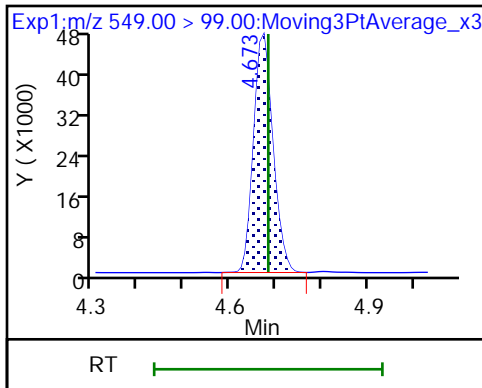
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

33 Perfluorooctanesulfonamide

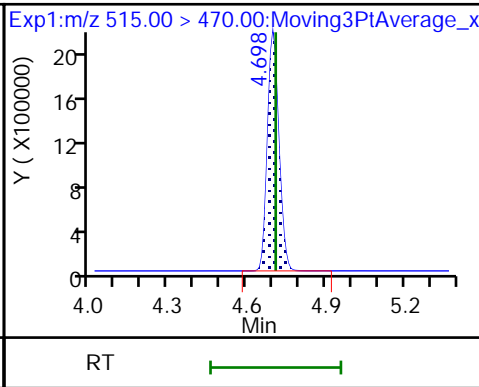
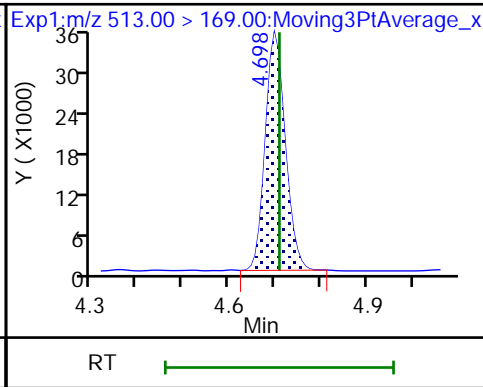
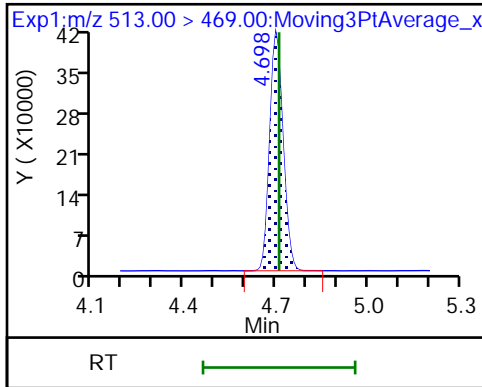
D 34 13C8 FOSA

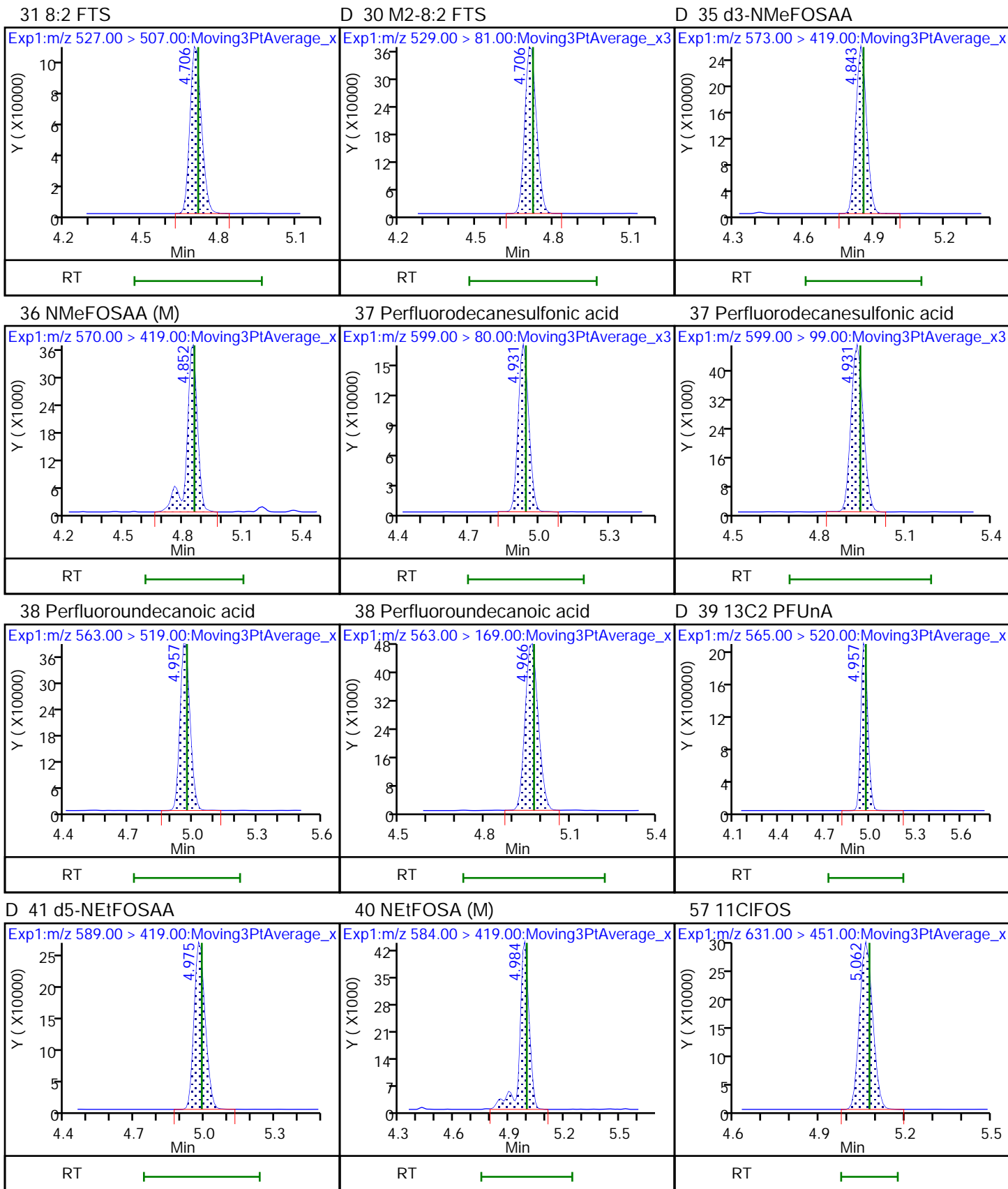


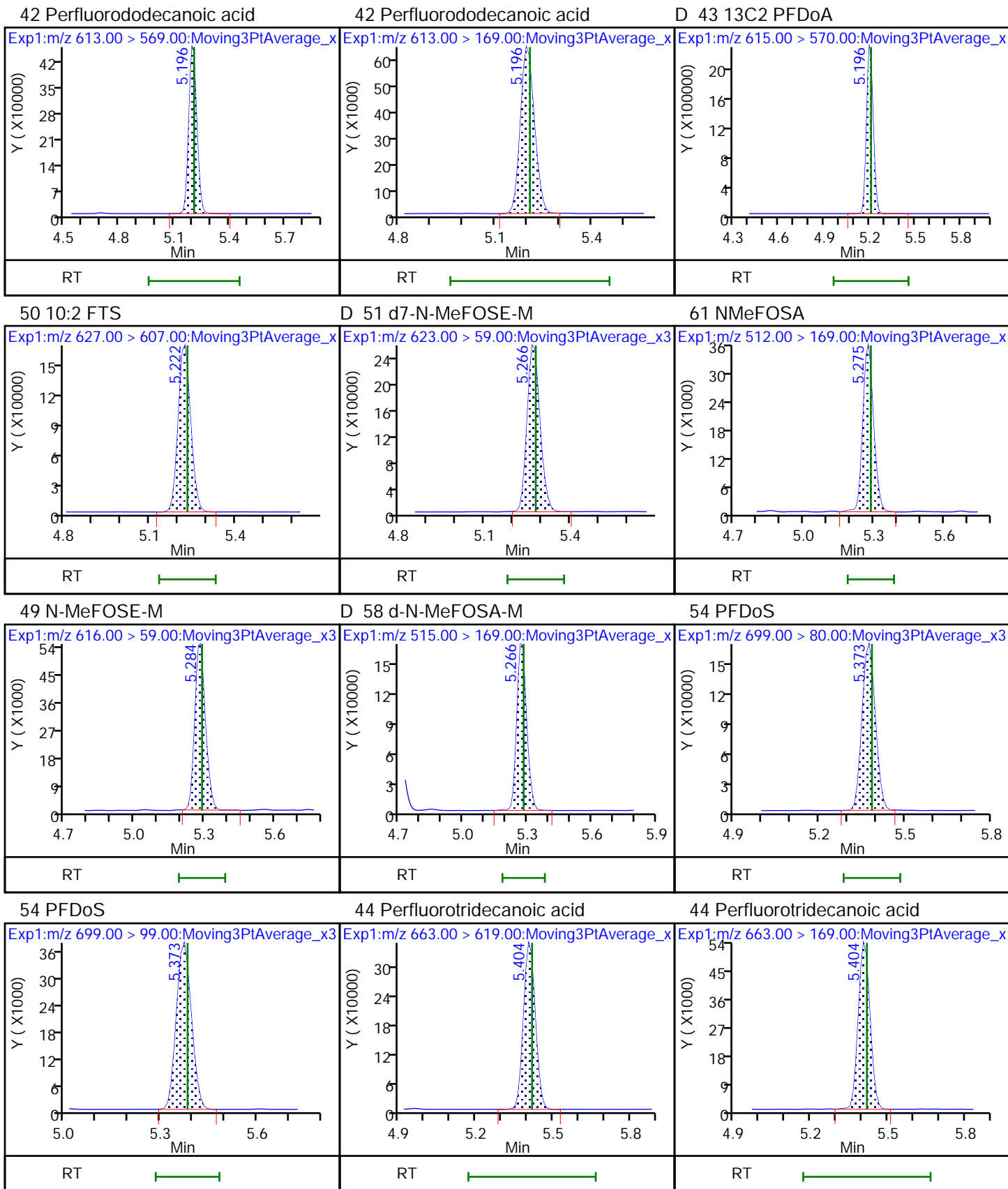
29 Perfluorodecanoic acid

29 Perfluorodecanoic acid

D 32 13C2 PFDA



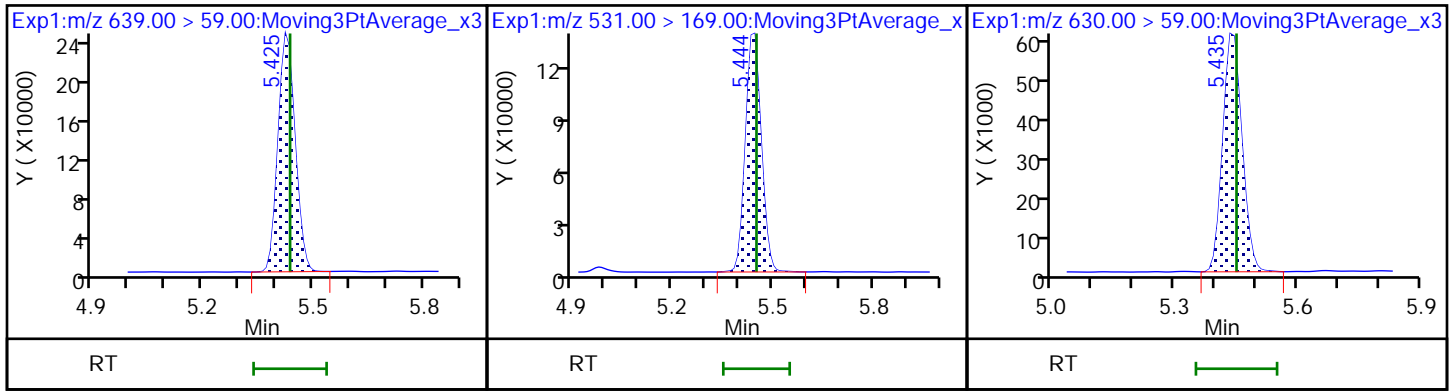




D 53 d9-N-EtFOSE-M

D 52 d-N-EtFOSA-M

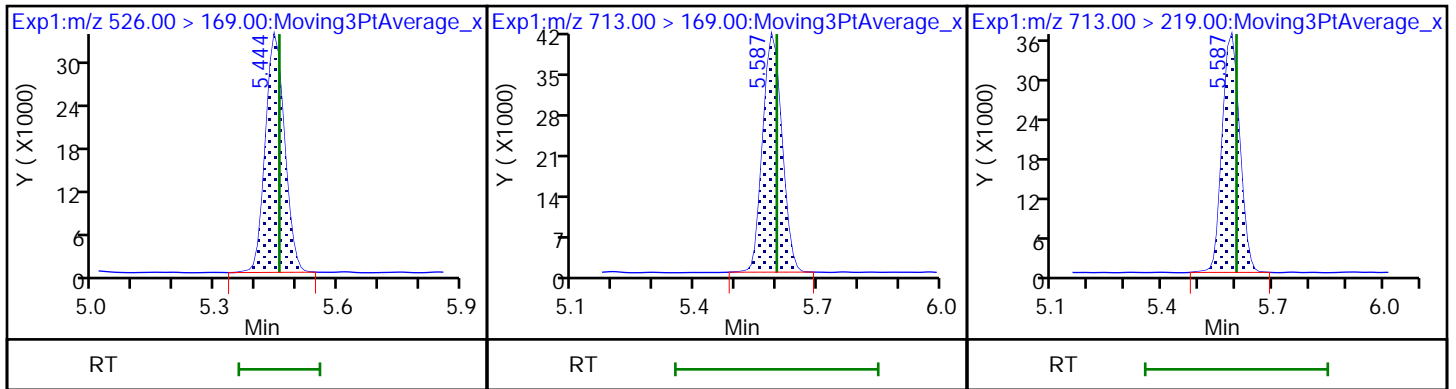
62 N-EtFOSE-M



56 N-EtFOSA-M

45 Perfluorotetradecanoic acid

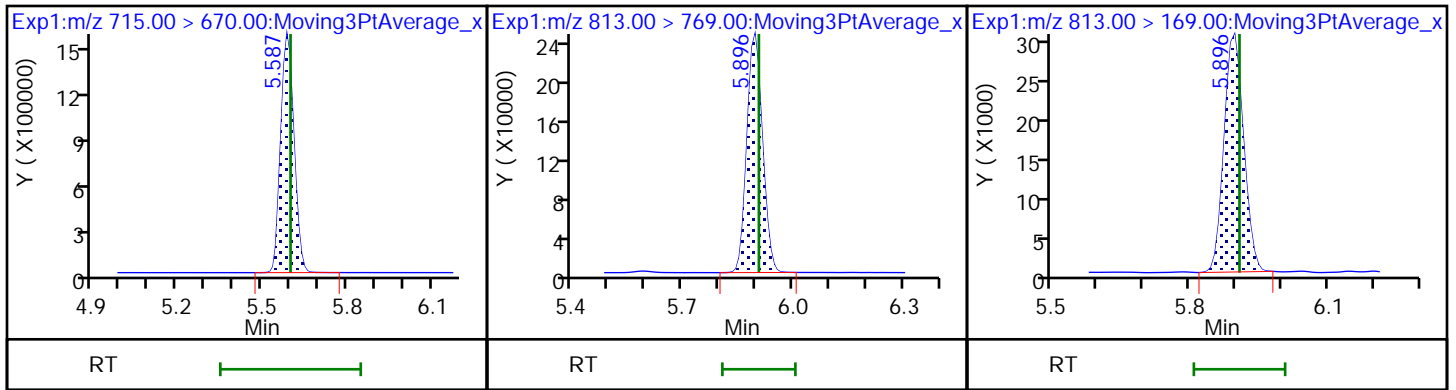
45 Perfluorotetradecanoic acid



D 46 13C2 PFTeDA

55 Perfluorohexadecanoic acid

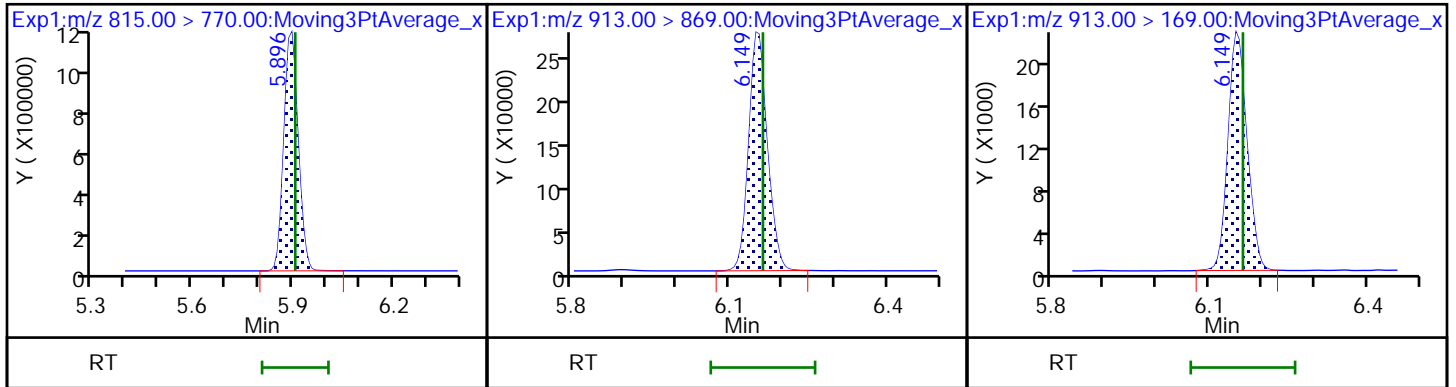
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid





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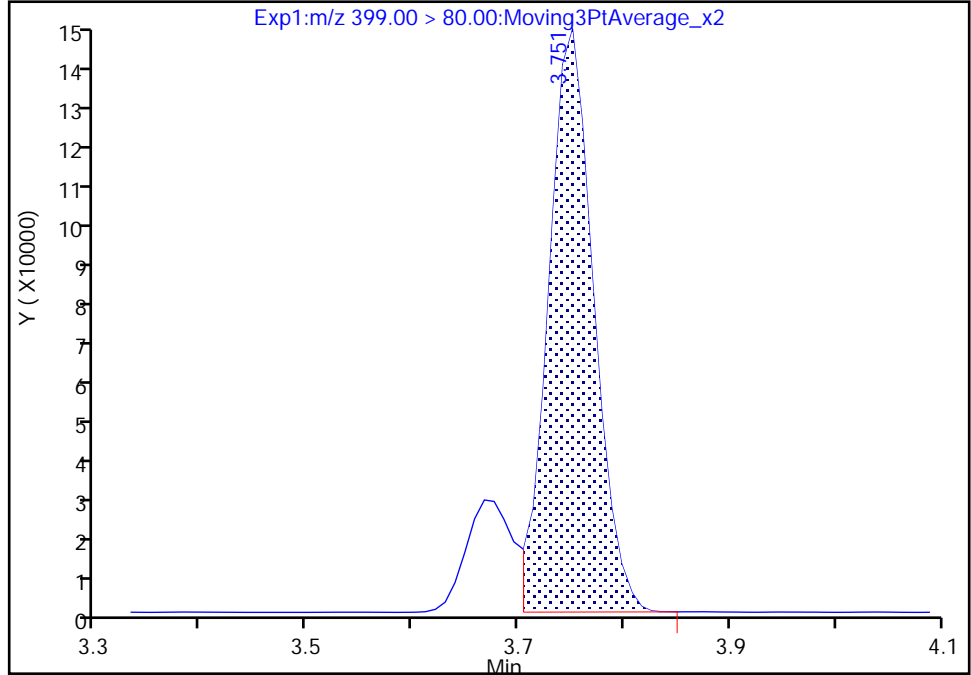
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_008.d  
Injection Date: 09-Jan-2022 10:53:28 Instrument ID: LCA  
Lims ID: IC 3  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

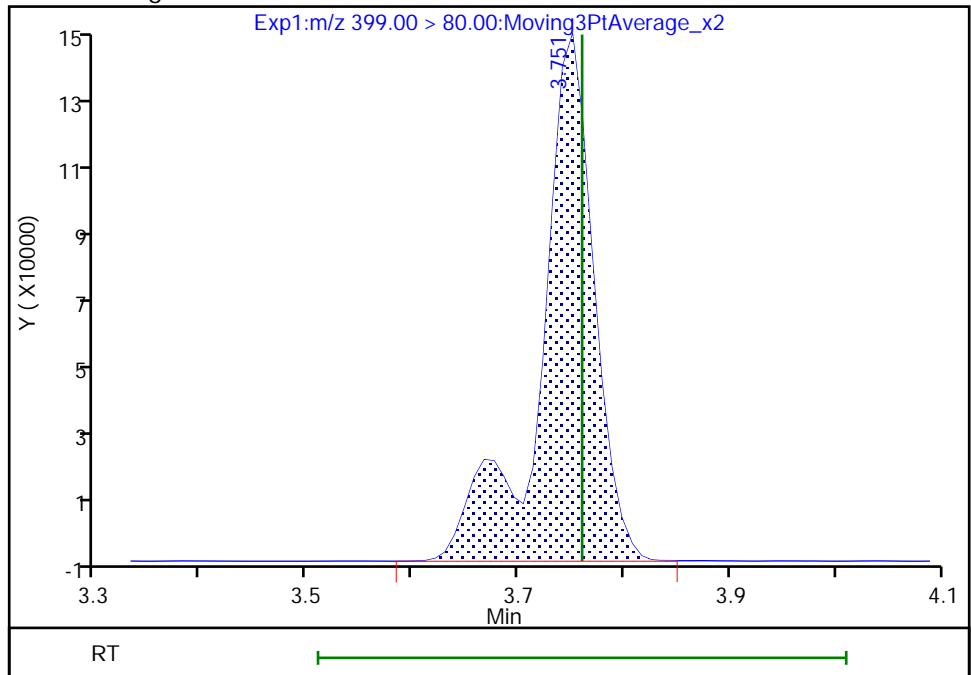
RT: 3.75  
Area: 416539  
Amount: 0.223893  
Amount Units: ng/ml

Processing Integration Results



RT: 3.75  
Area: 500197  
Amount: 0.216360  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:19:43  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

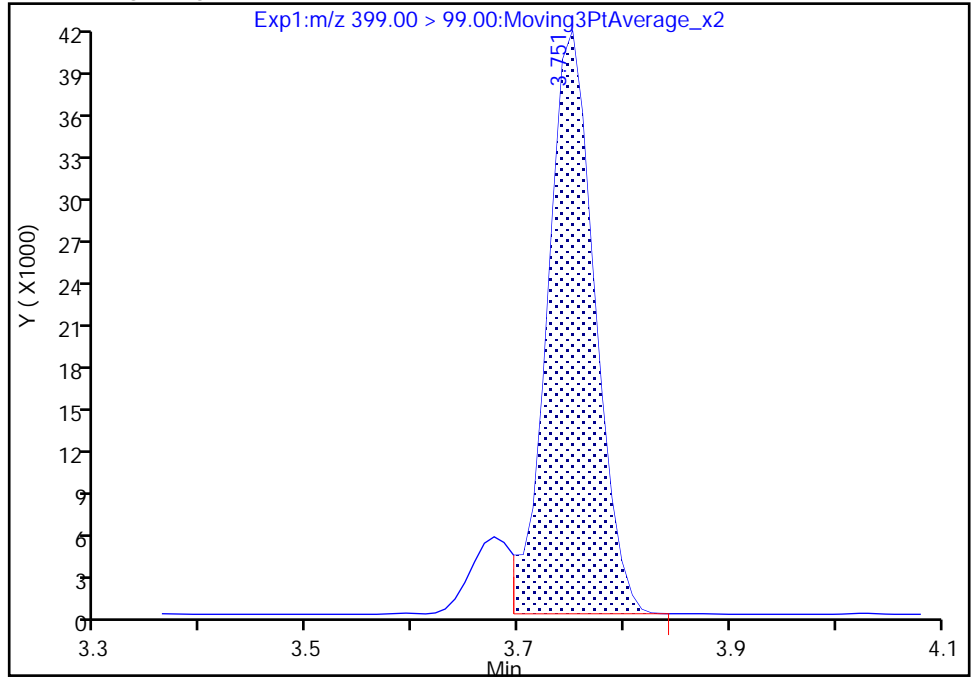
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_008.d  
Injection Date: 09-Jan-2022 10:53:28 Instrument ID: LCA  
Lims ID: IC 3  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

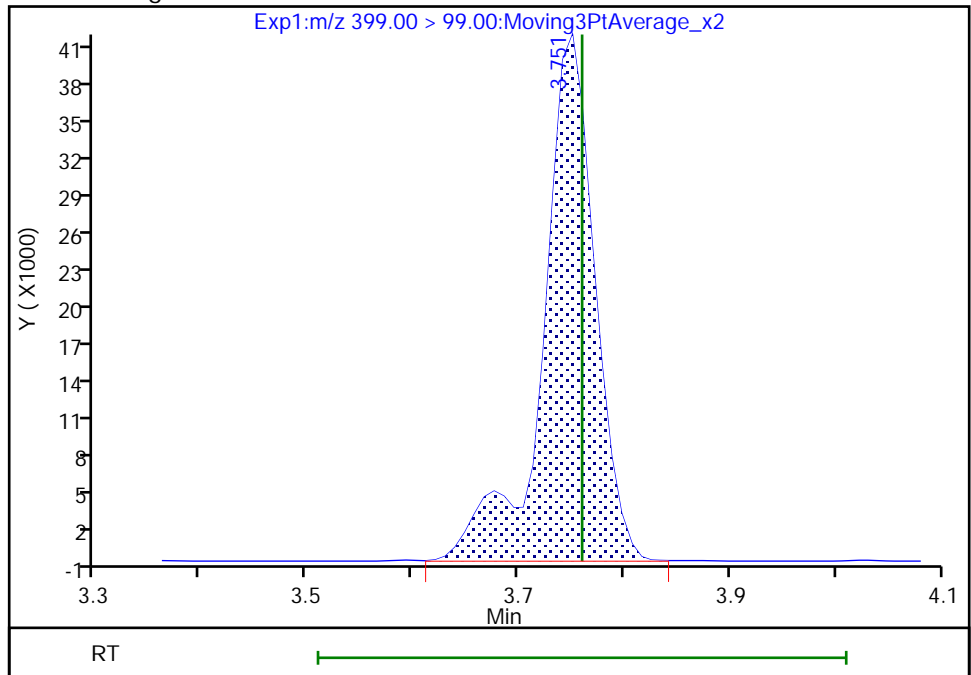
RT: 3.75  
Area: 127627  
Amount: 0.223893  
Amount Units: ng/ml

Processing Integration Results



RT: 3.75  
Area: 142100  
Amount: 0.216360  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:19:49

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

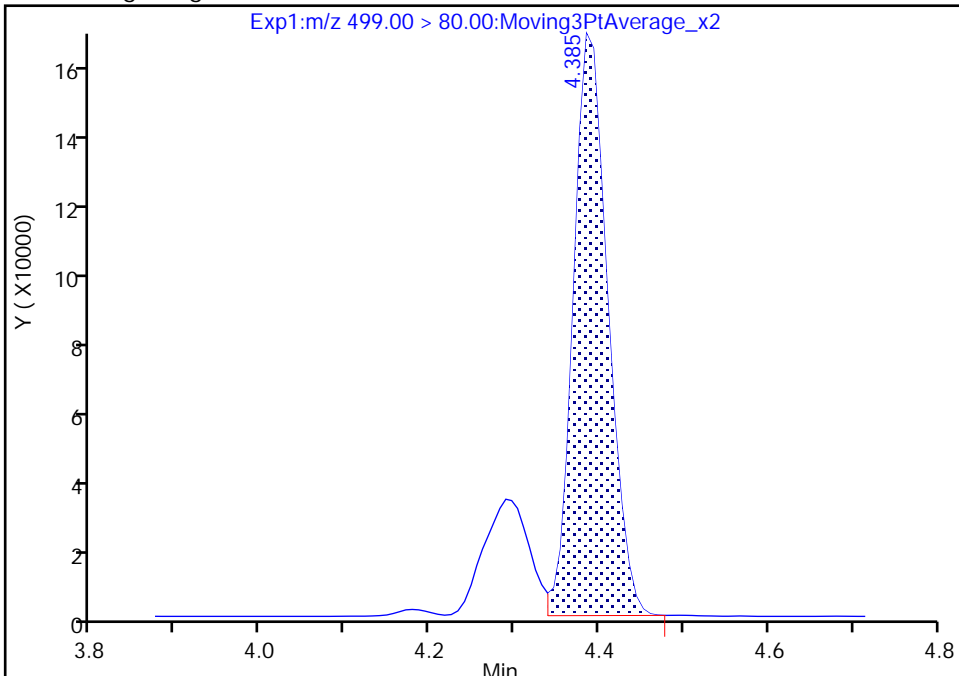
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_008.d  
Injection Date: 09-Jan-2022 10:53:28 Instrument ID: LCA  
Lims ID: IC 3  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

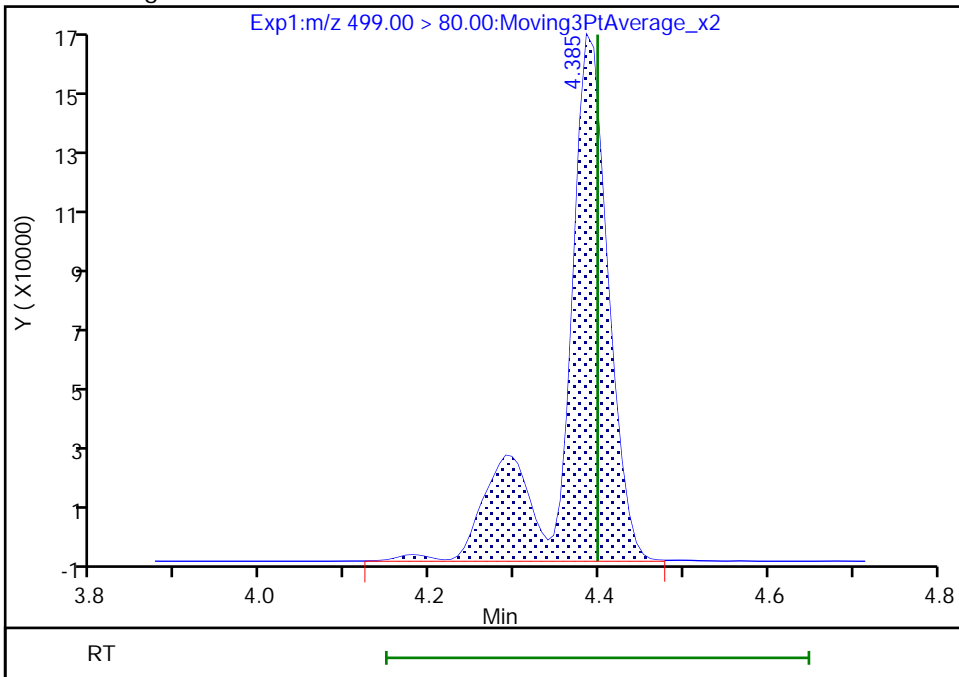
RT: 4.39  
Area: 472518  
Amount: 0.196847  
Amount Units: ng/ml

Processing Integration Results



RT: 4.39  
Area: 606028  
Amount: 0.219630  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:20:02  
Audit Action: Manually Integrated

Audit Reason: Baseline



Eurofins TestAmerica, Knoxville

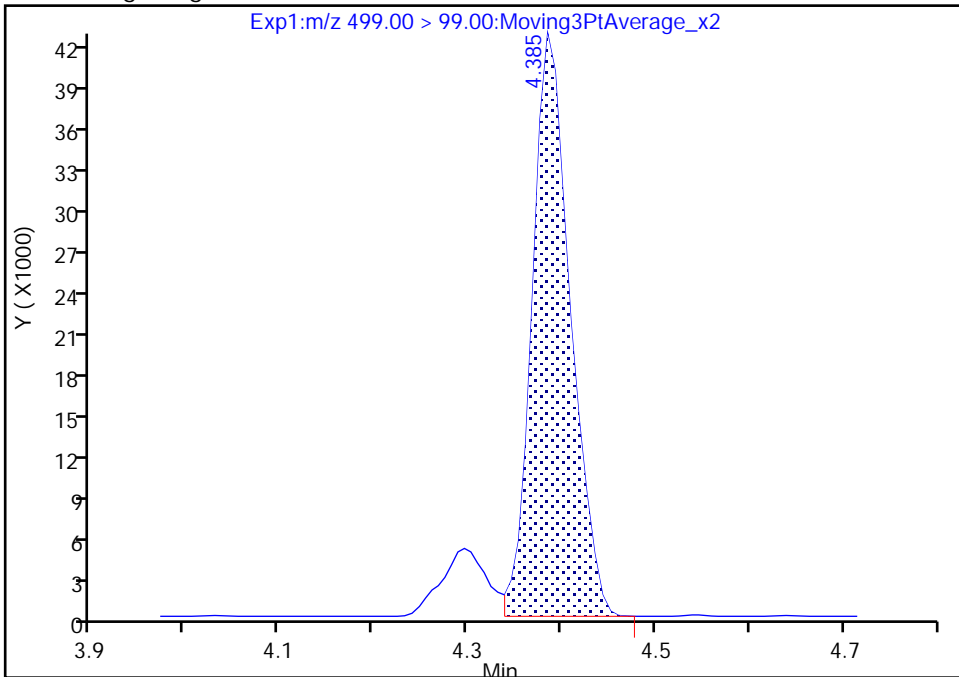
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_008.d  
Injection Date: 09-Jan-2022 10:53:28 Instrument ID: LCA  
Lims ID: IC 3  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

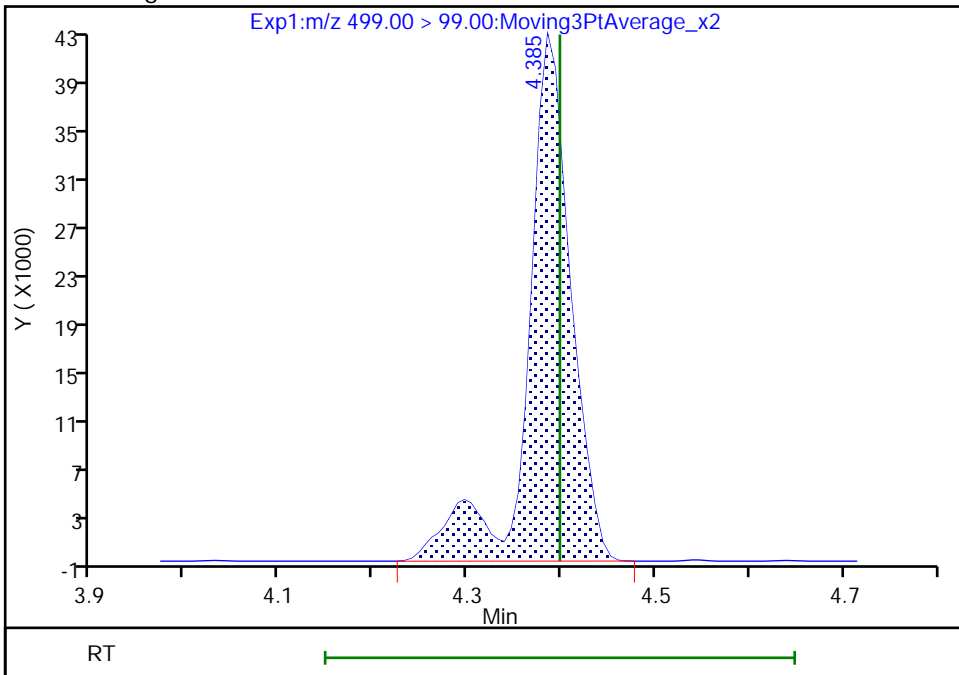
RT: 4.39  
Area: 119471  
Amount: 0.196847  
Amount Units: ng/ml

Processing Integration Results



RT: 4.39  
Area: 135814  
Amount: 0.219630  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:20:10

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

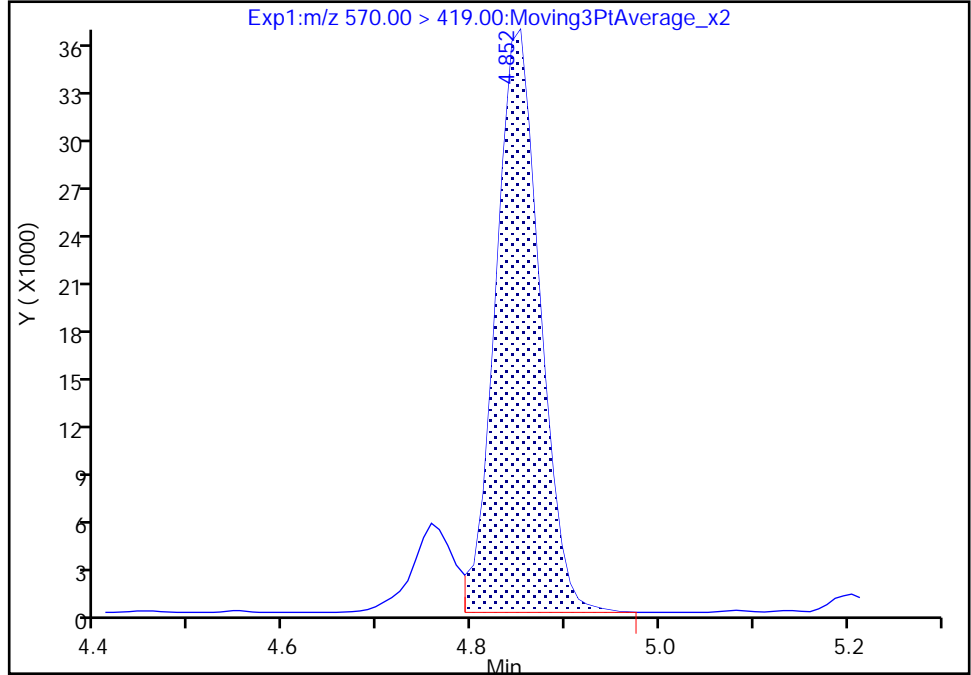
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_008.d  
Injection Date: 09-Jan-2022 10:53:28 Instrument ID: LCA  
Lims ID: IC 3  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

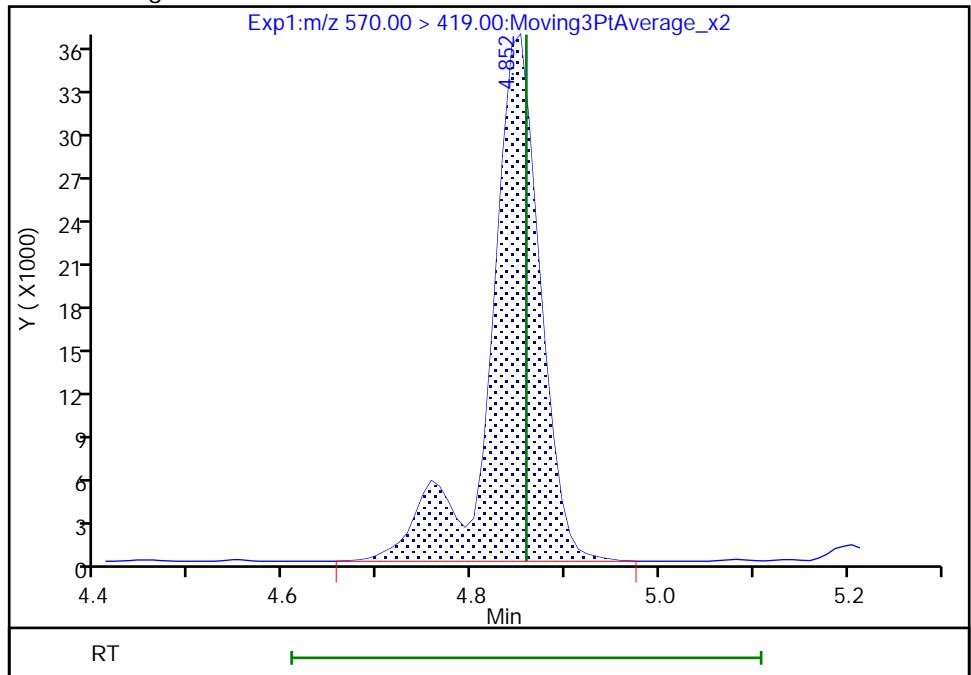
RT: 4.85  
Area: 118280  
Amount: 0.268064  
Amount Units: ng/ml

Processing Integration Results



RT: 4.85  
Area: 135153  
Amount: 0.215342  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:20:27  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

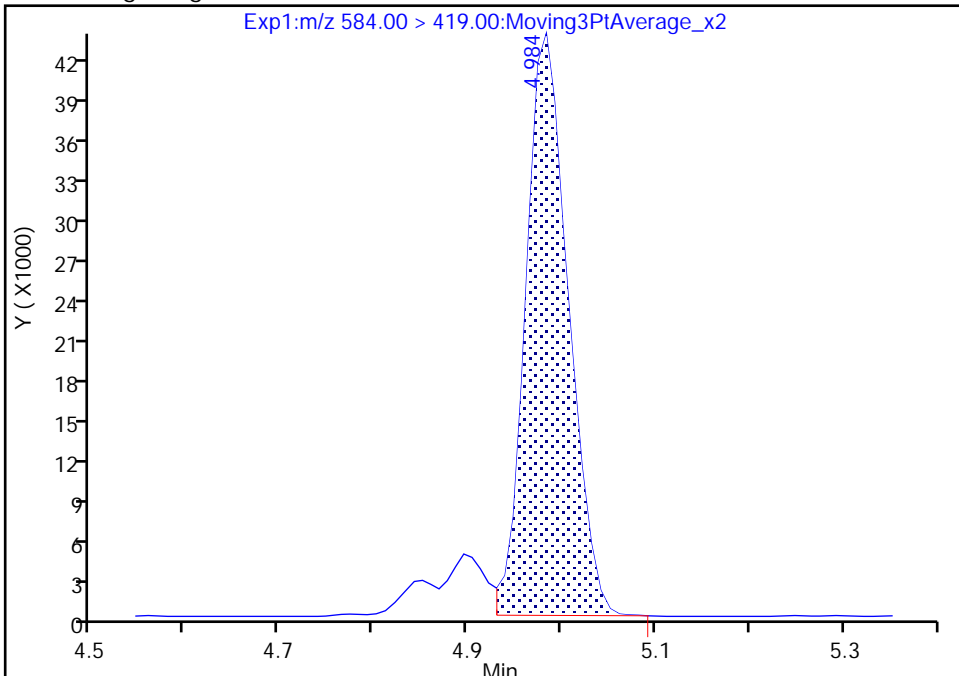
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_008.d  
Injection Date: 09-Jan-2022 10:53:28 Instrument ID: LCA  
Lims ID: IC 3  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

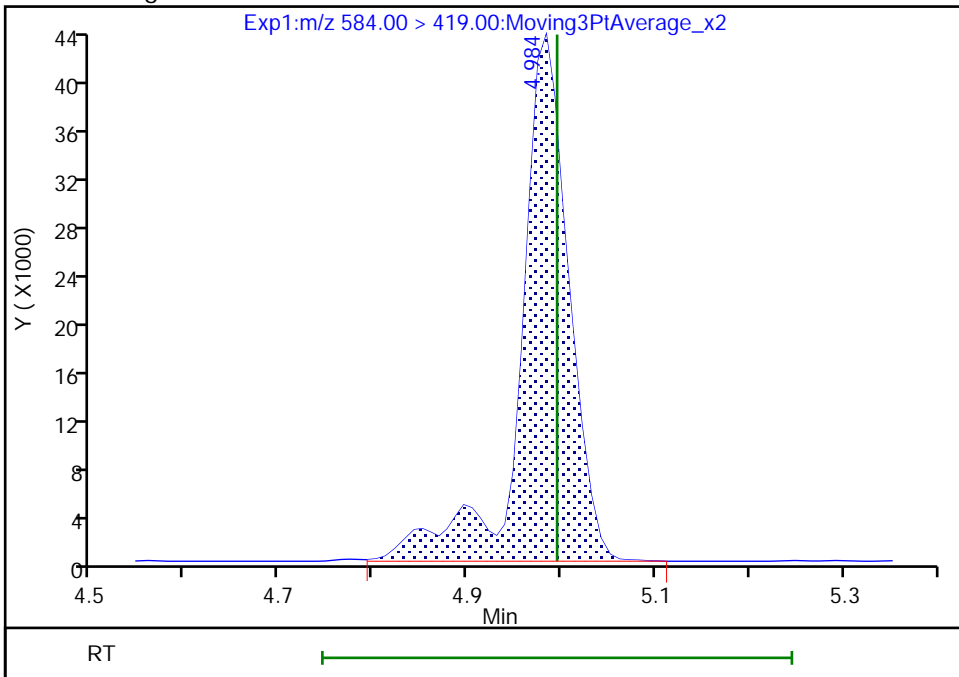
RT: 4.98  
Area: 137502  
Amount: 0.216379  
Amount Units: ng/ml

Processing Integration Results



RT: 4.98  
Area: 157582  
Amount: 0.231685  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:20:36  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_009.d  
 Lims ID: ICIS  
 Client ID:  
 Sample Type: ICIS Calib Level: 4  
 Inject. Date: 09-Jan-2022 11:02:16 ALS Bottle#: 9 Worklist Smp#: 9  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022186-009 icis  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 12:31:50 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1686

First Level Reviewer: cochranj Date: 09-Jan-2022 11:14:16

Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	2.790	2.784	0.006	0.678	6230665	1.23	98.2	15764	
2 Perfluorobutanoic acid	212.90 > 169.00	2.790	2.785	0.005	1.000	3854072	0.9857	98.6	1052	
D 3 13C5 PFPeA	267.90 > 223.00	3.099	3.093	0.006	0.753	4810256	1.22	97.6	9681	
4 Perfluoropentanoic acid	262.90 > 219.00	3.099	3.093	0.006	1.000	3529837	0.9636	96.4	1247	
D 6 13C3 PFBS	301.90 > 80.00	3.115	3.109	0.006	0.757	2970104	1.13	97.2	13746	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.115	3.109	0.006	1.000	2417286	0.8624	Target=2.68	97.6	4897
	298.90 > 99.00	3.115	3.109	0.006	1.000	912397		2.65(1.34-4.02)	97.6	3190
D 8 M2-4:2 FTS	329.00 > 81.00	3.402	3.393	0.009	0.827	979480	1.21	104	1920	
7 4:2 FTS	327.00 > 307.00	3.402	3.393	0.009	1.000	1764352	0.9338	100.0	9455	
D 9 13C2 PFHxA	315.00 > 270.00	3.432	3.423	0.009	0.834	5102737	1.21	96.8	7011	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.422	3.422	0.0	1.099	2239825	0.9026	Target=3.48	96.2	6027
	349.00 > 99.00	3.422	3.422	0.0	1.099	650892		3.44(1.74-5.22)	96.2	3826
10 Perfluorohexanoic acid	313.00 > 269.00	3.432	3.423	0.009	1.000	3404917	0.9609	Target=12.57	96.1	1468
	313.00 > 119.00	3.432	3.423	0.009	1.000	288548		11.80(6.28-18.85)	96.1	466
13 HFPO-DA	285.00 > 169.00	3.529	3.524	0.005	1.000	2584105	0.9788		97.9	1899

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	3.529	3.524	0.005	0.858	2440057	1.20		96.3	4529	
D 17 18O2 PFHxS										
403.00 > 84.00	3.770	3.761	0.009	0.916	2043432	1.16		98.5	8614	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.760	3.760	0.0	0.998	2051159	0.8619	Target=3.48	94.7	5668	M
399.00 > 99.00	3.760	3.760	0.0	0.998	603178		3.40(1.74-5.21)	94.7	3289	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.779	3.772	0.007	0.918	4996367	1.24		99.1	7300	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.779	3.772	0.007	1.000	4115810	0.9838	Target=3.29	98.4	2203	
363.00 > 169.00	3.779	3.772	0.007	1.000	1250702		3.29(1.65-4.94)	98.4	1807	
68 DONA										
377.00 > 251.00	3.807	3.807	0.0	0.865	5947134	0.9330	Target=1.76	99.0	5844	
377.00 > 85.00	3.807	3.807	0.0	0.865	3258714		1.82(0.88-2.64)	99.0	163	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.098	4.092	0.006	0.931	2117985	0.9160	Target=3.91	96.2	6307	
449.00 > 99.00	4.098	4.092	0.006	0.931	540794		3.92(1.95-5.86)	96.2	3156	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.107	4.100	0.007	0.998	968049	1.19		99.9	3130	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.107	4.100	0.007	0.998	5234610	1.27		102	9010	
19 6:2 FTS										
427.00 > 407.00	4.107	4.101	0.006	1.000	1327290	0.9069		95.7	3542	
D 21 13C4 PFOA										
417.00 > 372.00	4.115	4.109	0.006	1.000	5153161	1.24		98.9	8641	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.115	4.109	0.006	1.000	4568690	0.9658	Target=2.61	96.6	2286	
413.00 > 169.00	4.115	4.109	0.006	1.000	1762372		2.59(1.30-3.91)	96.6	2431	
* 22 13C2 PFOA										
415.00 > 370.00	4.115	4.109	0.006		5559029	1.25			8553	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.401	4.396	0.005	1.000	657687	1.22		102	3391	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.401	4.398	0.003	1.000	2441987	0.9170	Target=4.37	98.8	4879	M
499.00 > 99.00	4.401	4.398	0.003	1.000	525382		4.65(2.18-6.55)	98.8	2116	M
D 25 13C4 PFOS										
503.00 > 80.00	4.401	4.398	0.003	1.070	2896304	1.15		95.9	4241	
D 27 13C5 PFNA										
468.00 > 423.00	4.427	4.421	0.006	1.076	6551468	1.19		95.5	8588	
26 Perfluorononanoic acid										
463.00 > 419.00	4.427	4.421	0.006	1.000	4513988	1.01	Target=4.48	101	4394	
463.00 > 169.00	4.427	4.421	0.006	1.000	970843		4.65(2.24-6.72)	101	1995	
63 9CIFOS										
531.00 > 351.00	4.560	4.558	0.002	1.036	4855527	0.9354		100	8585	

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	4.689	4.682	0.007	1.065	2283353	0.9664	Target=3.84	101	5784	
549.00 > 99.00	4.689	4.682	0.007	1.065	562431		4.06(1.92-5.77)	101	2950	
D 34 13C8 FOSA										
506.00 > 78.00	4.706	4.700	0.006	1.144	4333664	1.27		101	3363	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.706	4.700	0.006	1.000	2955933	0.9014		90.1	3026	
D 32 13C2 PFDA										
515.00 > 470.00	4.715	4.709	0.006	1.146	6684781	1.26		101	12498	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.715	4.709	0.006	1.000	4742177	0.9194	Target=11.50	91.9	4670	
513.00 > 169.00	4.715	4.709	0.006	1.000	419558		11.30(5.75-17.25)	91.9	678	
31 8:2 FTS										
527.00 > 507.00	4.723	4.721	0.002	1.000	1261773	0.9556		99.7	4759	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.723	4.721	0.002	1.148	1117378	1.21		101	1810	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.861	4.854	0.007	1.181	751488	1.21		96.5	680	
36 NMeFOSAA										
570.00 > 419.00	4.861	4.858	0.003	1.000	559483	0.9576		95.8	871	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.949	4.942	0.007	1.124	2120075	0.9423	Target=3.69	97.8	5661	
599.00 > 99.00	4.949	4.942	0.007	1.124	559001		3.79(1.84-5.53)	97.8	3875	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.975	4.973	0.002	1.000	4911042	0.9755	Target=8.29	97.5	5859	
563.00 > 169.00	4.975	4.973	0.002	1.000	581504		8.45(4.14-12.43)	97.5	2777	
D 39 13C2 PFUnA										
565.00 > 520.00	4.975	4.973	0.002	1.209	6490846	1.23		98.2	9538	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.993	4.989	0.004	1.213	831002	1.22		97.2	4409	
40 NEtFOSA										
584.00 > 419.00	5.002	4.995	0.007	1.002	631535	0.9562		95.6	1098	M
57 11C1FOS										
631.00 > 451.00	5.082	5.075	0.007	1.155	3834571	0.9460		100	7419	
D 43 13C2 PFDoA										
615.00 > 570.00	5.213	5.207	0.006	1.267	6649050	1.20		95.9	13471	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.213	5.207	0.006	1.000	5455982	1.01	Target=6.82	101	4472	
613.00 > 169.00	5.213	5.207	0.006	1.000	780097		6.99(3.41-10.23)	101	1641	
50 10:2 FTS										
627.00 > 607.00	5.231	5.231	0.0	1.107	1929022	0.9082		94.2	8236	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.284	5.279	0.005	1.284	803090	1.20		96.4	777	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.284	5.281	0.003	1.284	595309	1.25		100	52.5	
61 NMeFOSA										
512.00 > 169.00	5.292	5.286	0.006	1.002	476867	0.9892		98.9	826	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
49 N-MeFOSE-M										
616.00 > 59.00	5.292	5.290	0.002	1.002	745332	0.99		99.1	1051	
54 PFDoS										
699.00 > 80.00	5.383	5.383	0.0	1.223	2126318	0.9572	Target=4.36	98.9	5394	
699.00 > 99.00	5.383	5.383	0.0	1.223	501981		4.24(2.18-6.55)	98.9	2572	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.425	5.417	0.008	1.041	4537531	1.03	Target=6.19	103	5406	
663.00 > 169.00	5.425	5.417	0.008	1.041	732047		6.20(3.09-9.28)	103	2542	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.444	5.437	0.007	1.323	809270	1.21		96.8	455	
62 N-EtFOSE-M										
630.00 > 59.00	5.454	5.450	0.004	1.002	816282	0.9494		94.9	921	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.454	5.450	0.004	1.326	475911	1.21		97.0	745	
56 N-EtFOSA-M										
526.00 > 169.00	5.464	5.457	0.007	1.002	452813	1.00		99.5	734	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.607	5.600	0.007	1.363	5150989	1.22		97.5	8981	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.607	5.600	0.007	1.000	513995	0.9282	Target=1.09	92.8	2047	
713.00 > 219.00	5.596	5.600	-0.004	0.998	488249		1.05(0.54-1.63)	92.8	2625	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.912	5.907	0.005	1.437	3410021	1.19		95.2	5847	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.912	5.907	0.005	1.000	2894336	0.9892	Target=8.22	98.9	3882	
813.00 > 169.00	5.912	5.907	0.005	1.000	357598		8.09(4.11-12.33)	98.9	910	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.169	6.162	0.007	1.043	2686042	1.00	Target=11.60	100	3241	
913.00 > 169.00	6.169	6.162	0.007	1.043	232863		11.53(5.80-17.40)	100	962	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

63L4PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromf\Knoxville\ChromData\LCA\20220109-22186.b\\_009.d

Injection Date: 09-Jan-2022 11:02:16

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

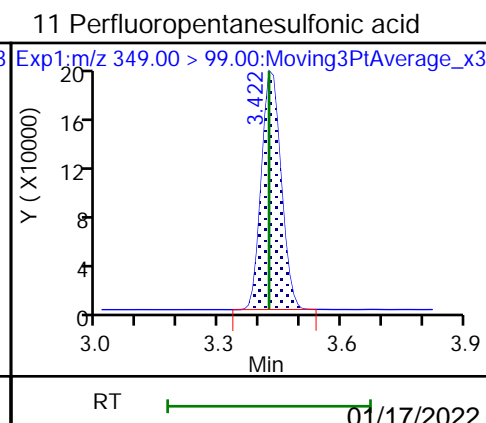
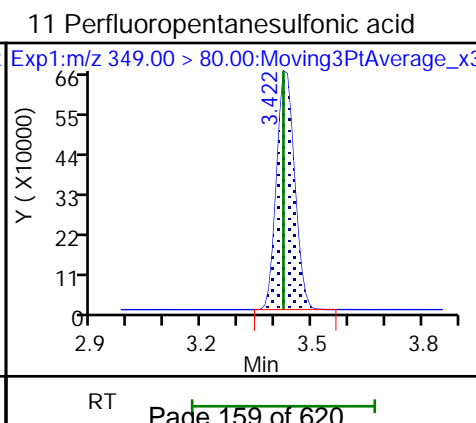
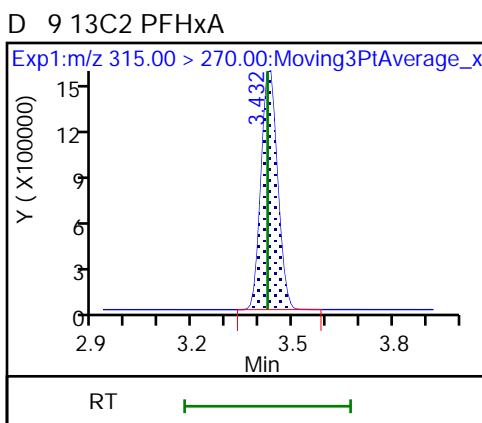
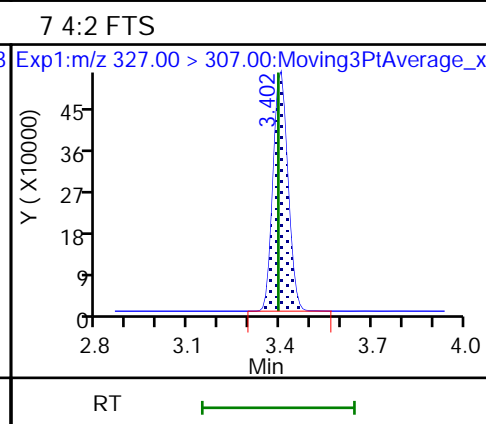
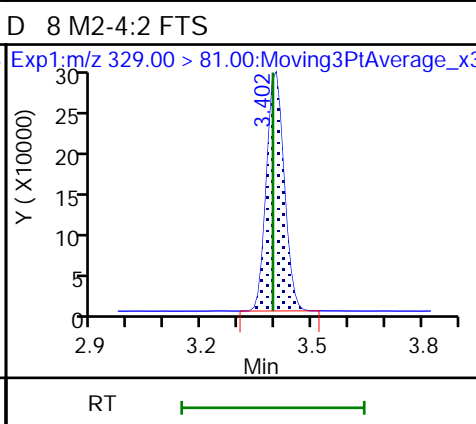
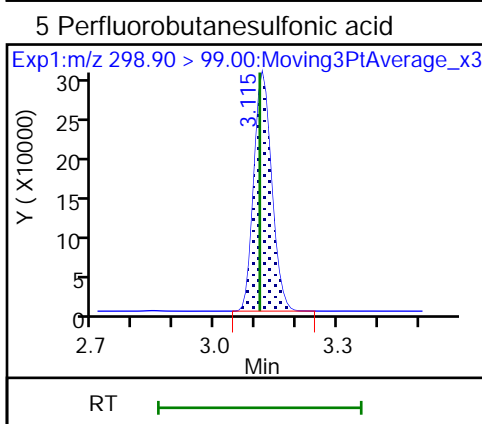
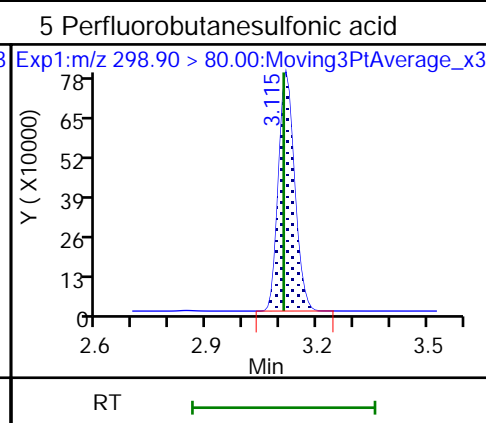
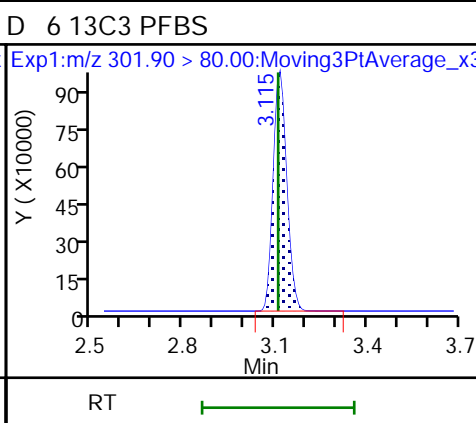
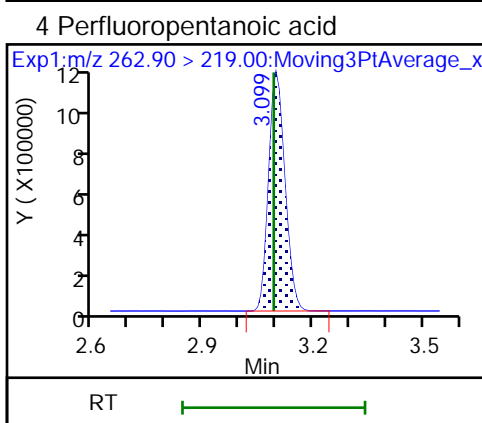
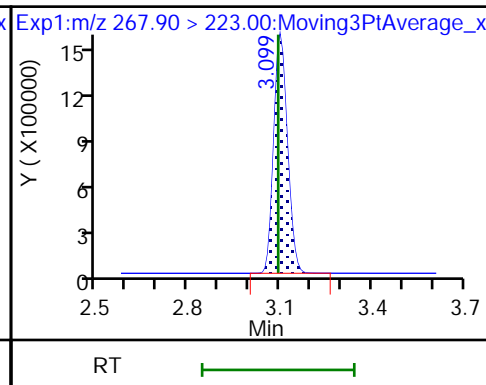
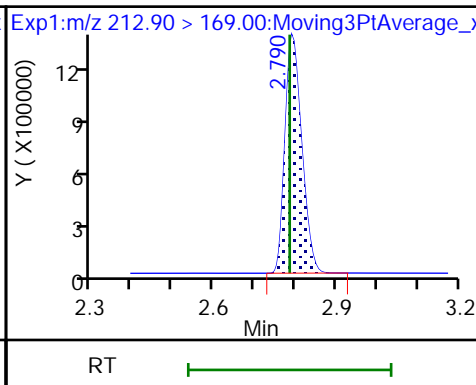
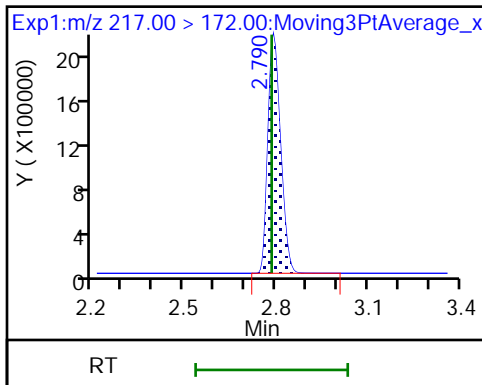
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

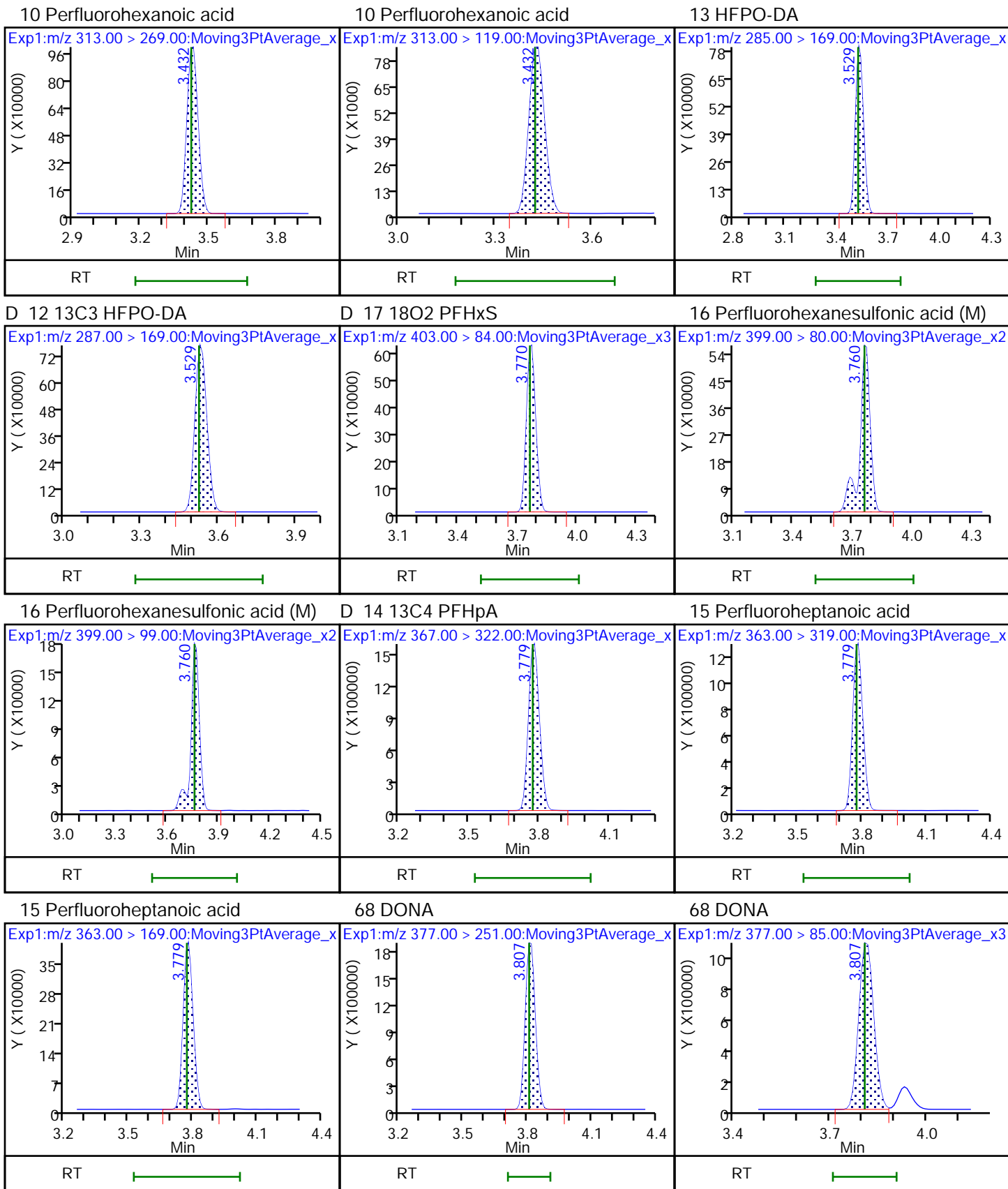
D 1 13C4 PFBA

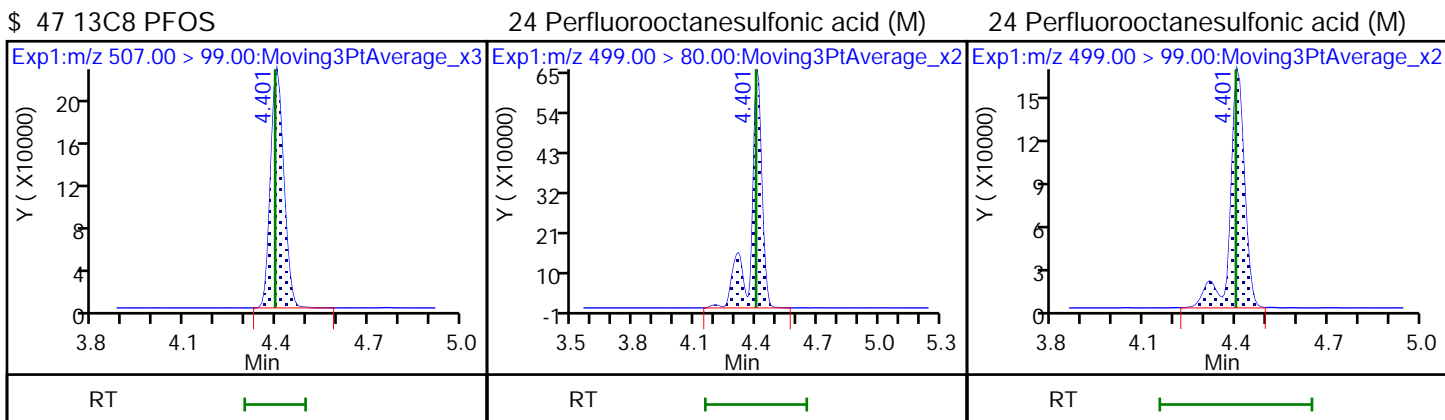
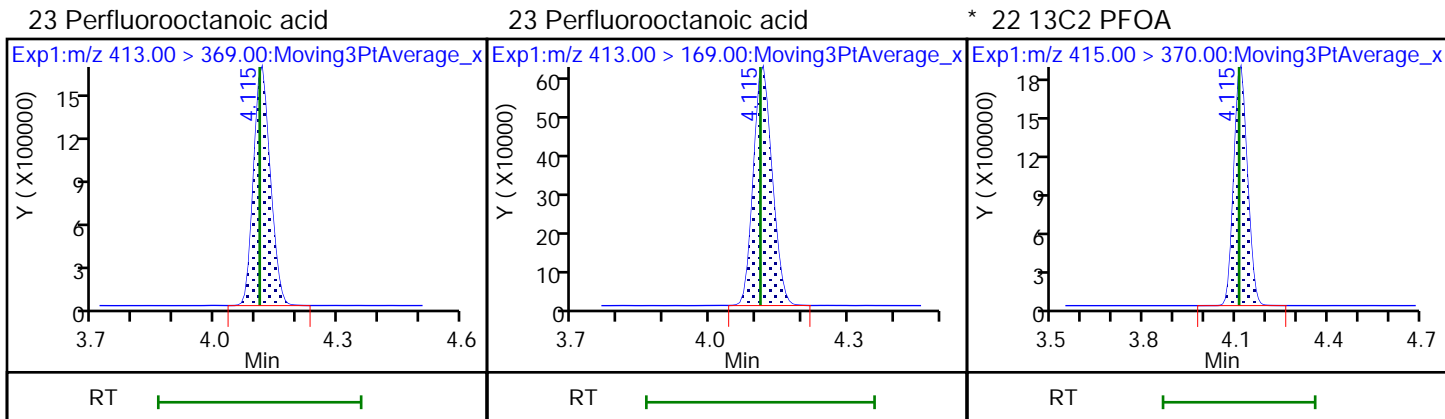
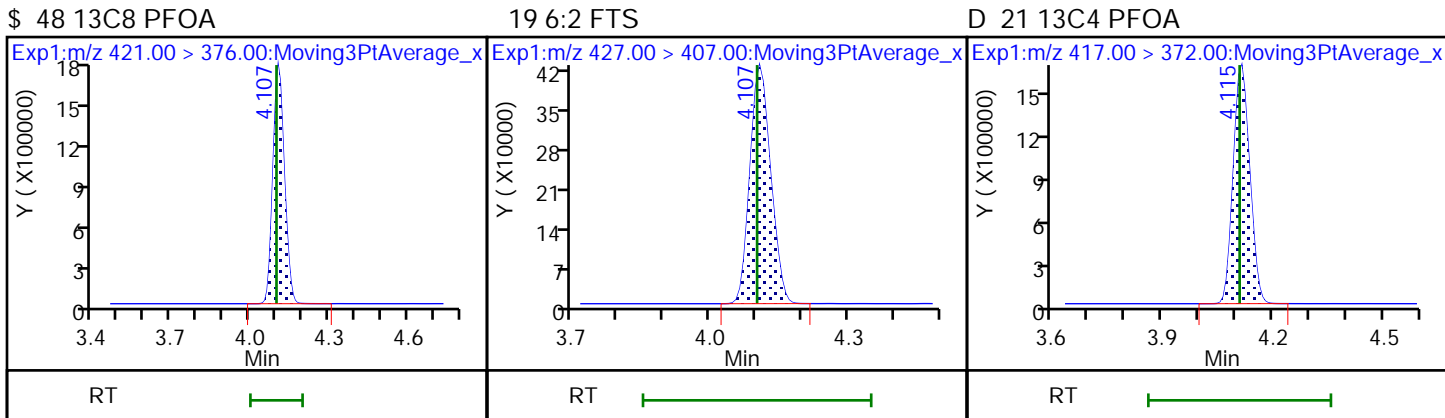
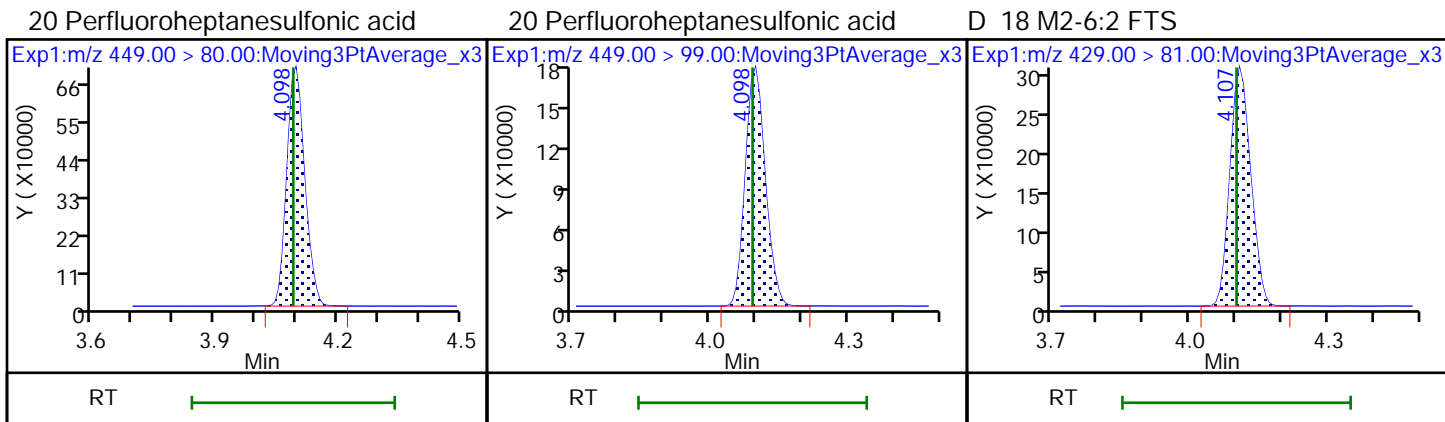
2 Perfluorobutanoic acid

D 3 13C5 PFPeA





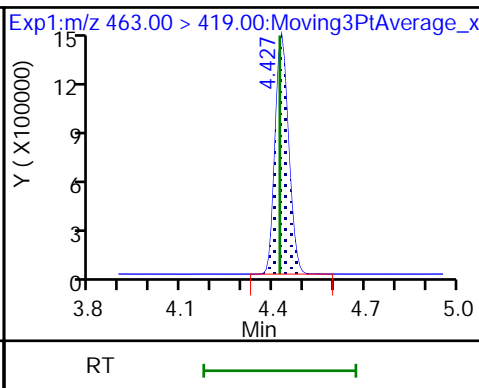
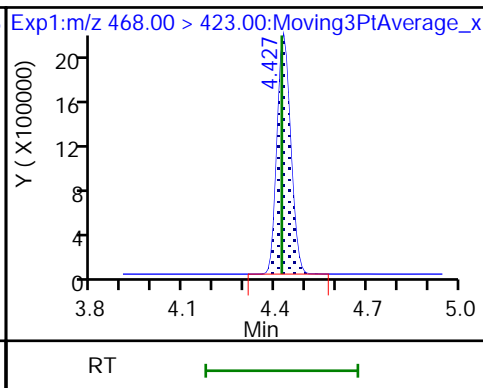
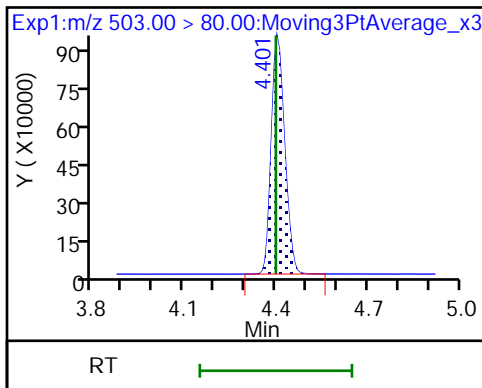




D 25 13C4 PFOS

D 27 13C5 PFNA

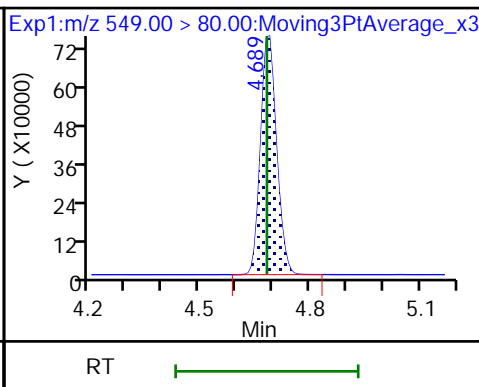
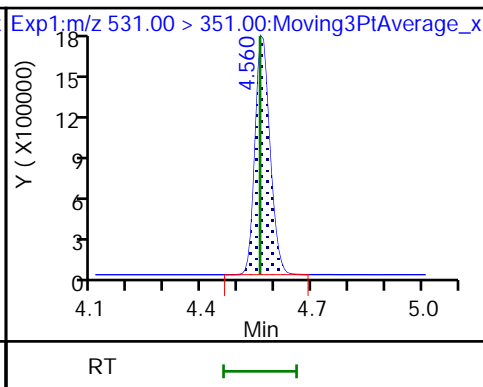
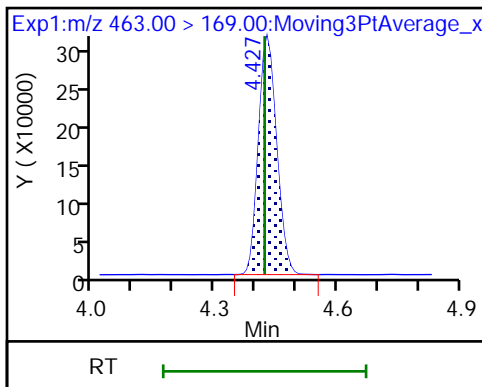
26 Perfluorononanoic acid



26 Perfluorononanoic acid

63 9CIFOS

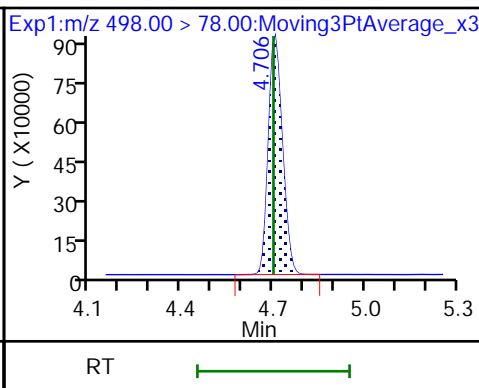
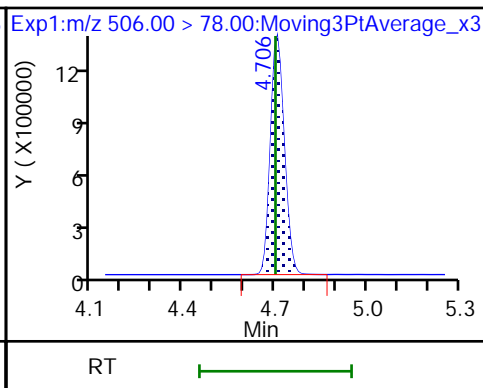
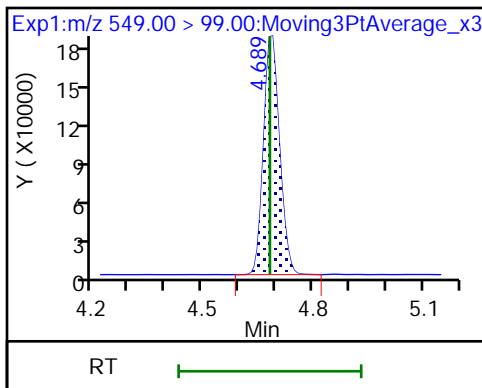
28 Perfluoronanesulfonic acid



28 Perfluoronanesulfonic acid

D 34 13C8 FOSA

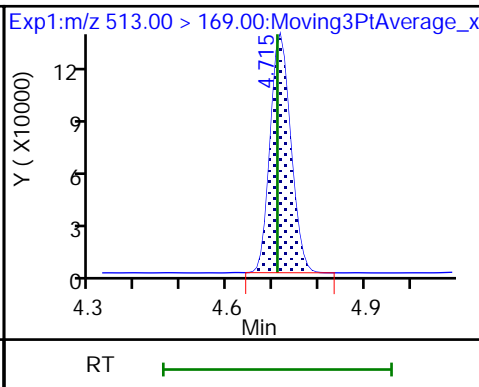
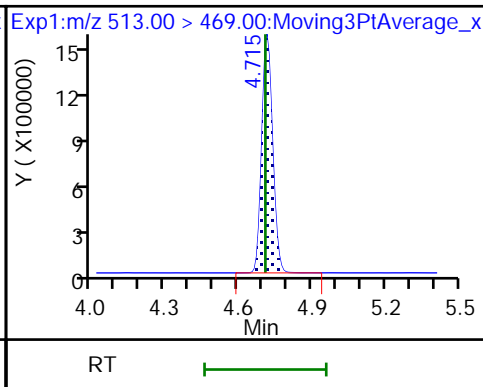
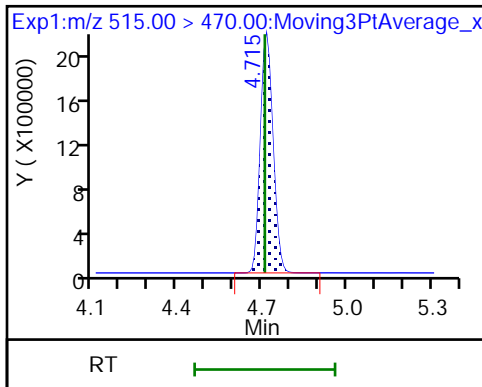
33 Perfluorooctanesulfonamide

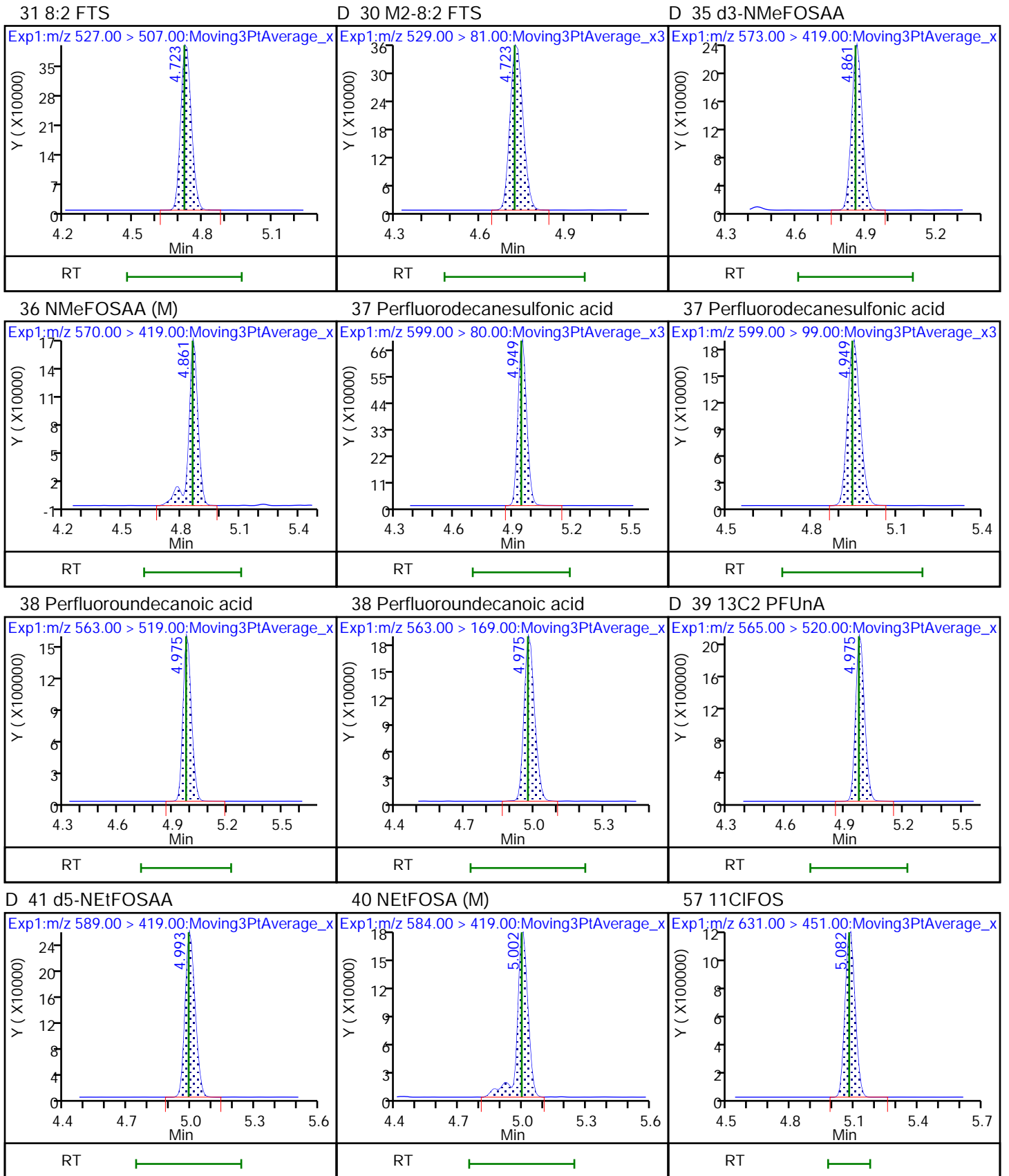


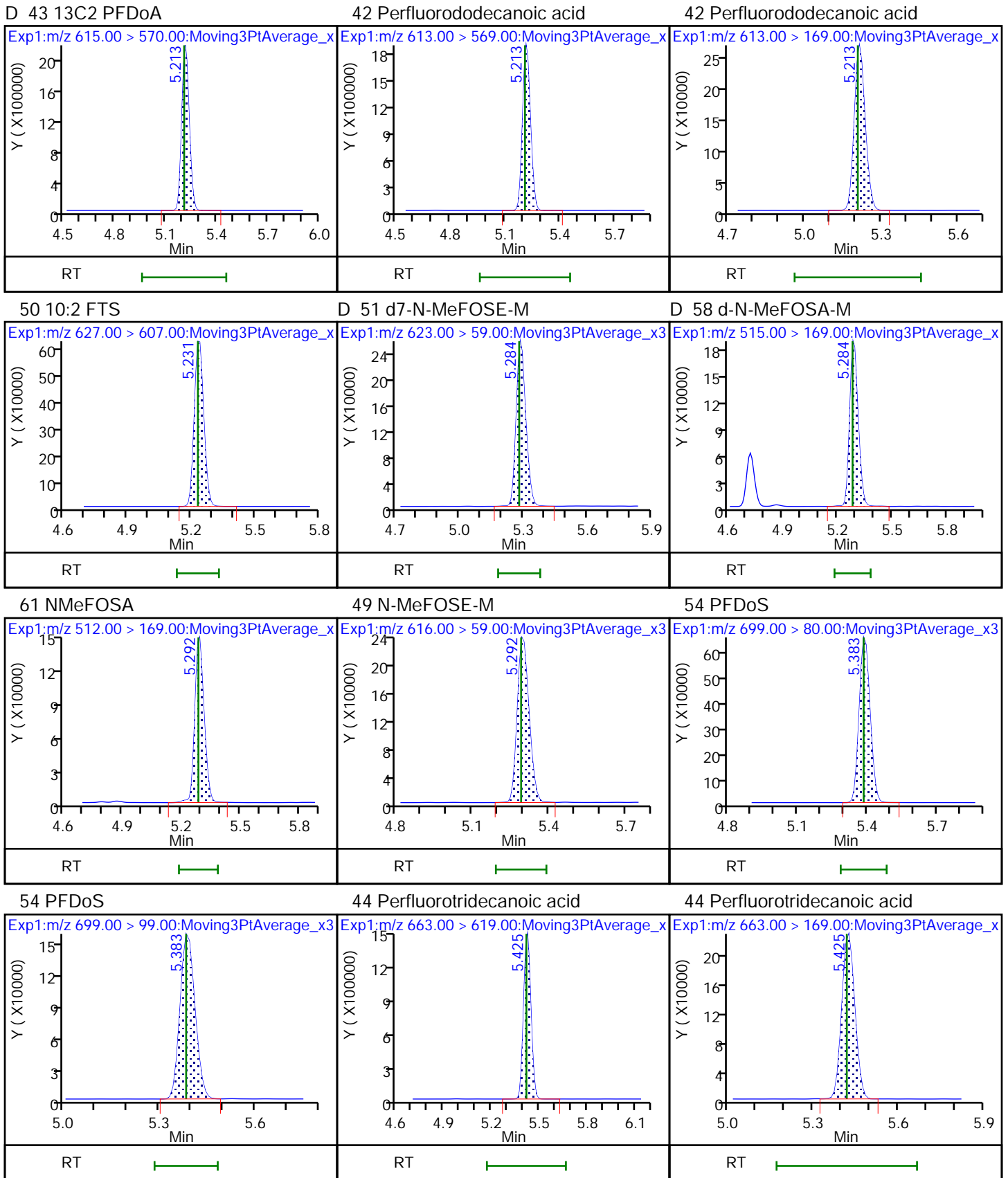
D 32 13C2 PFDA

29 Perfluorodecanoic acid

29 Perfluorodecanoic acid



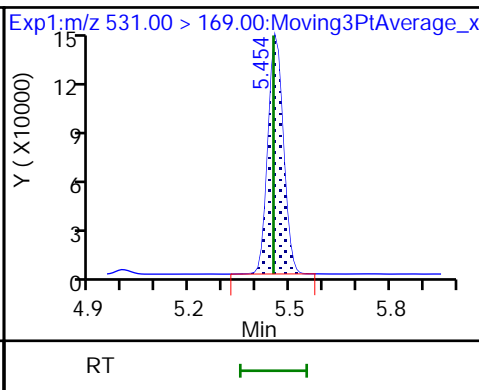
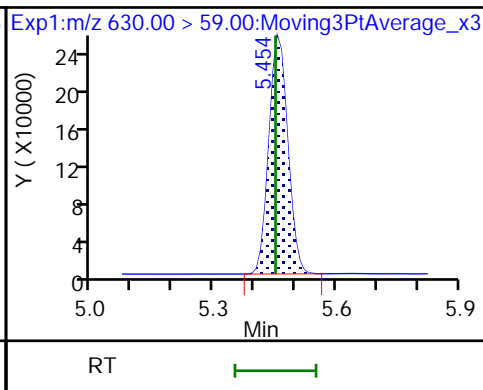
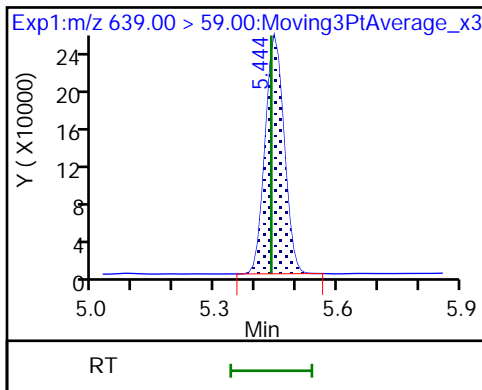




D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M

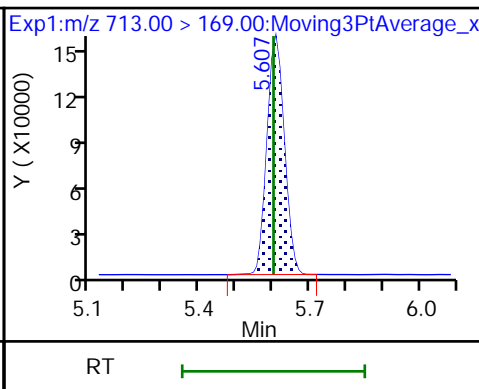
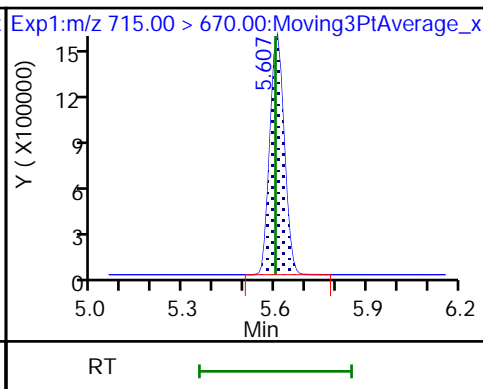
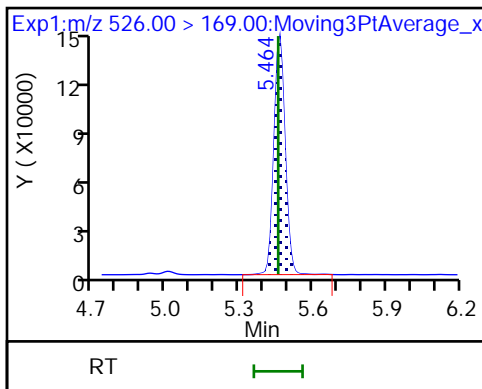
D 52 d-N-EtFOSA-M



56 N-EtFOSA-M

D 46 13C2 PFTeDA

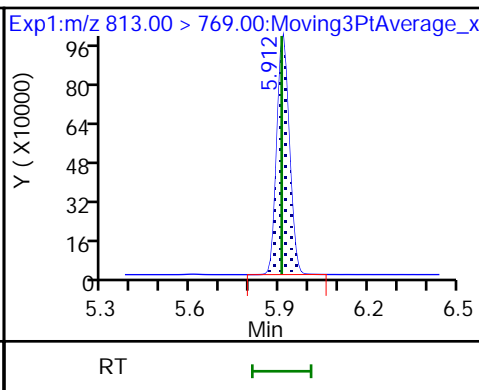
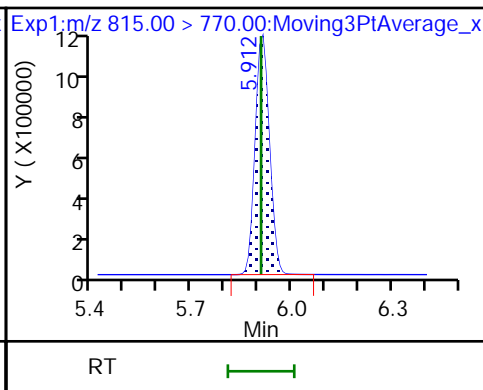
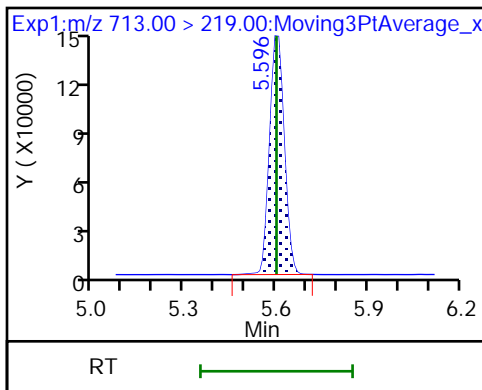
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

D 59 13C2 PFHxDA

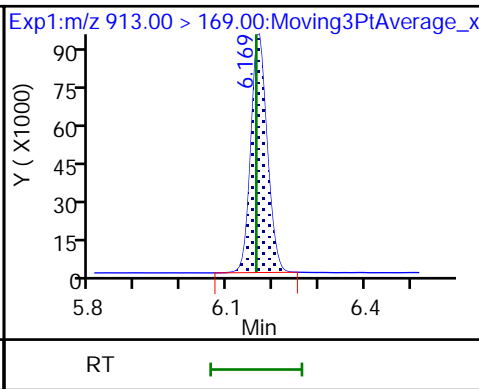
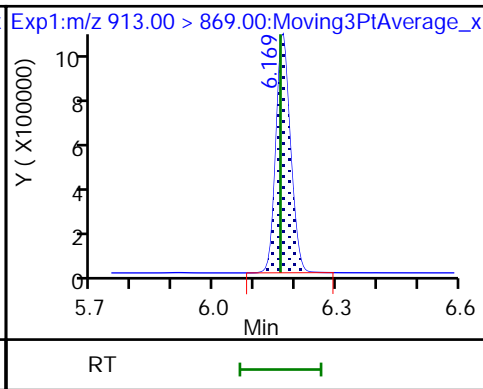
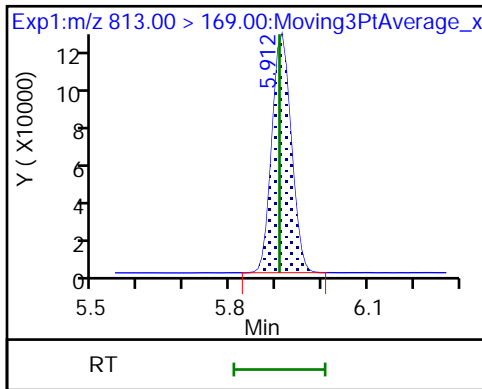
55 Perfluorohexadecanoic acid



55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid





Eurofins TestAmerica, Knoxville

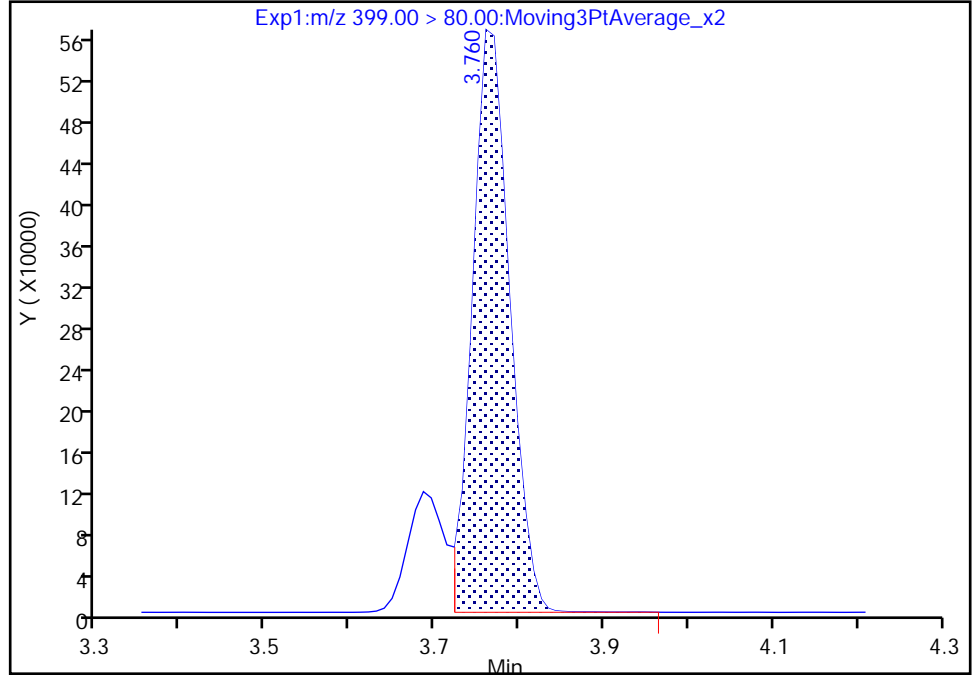
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Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

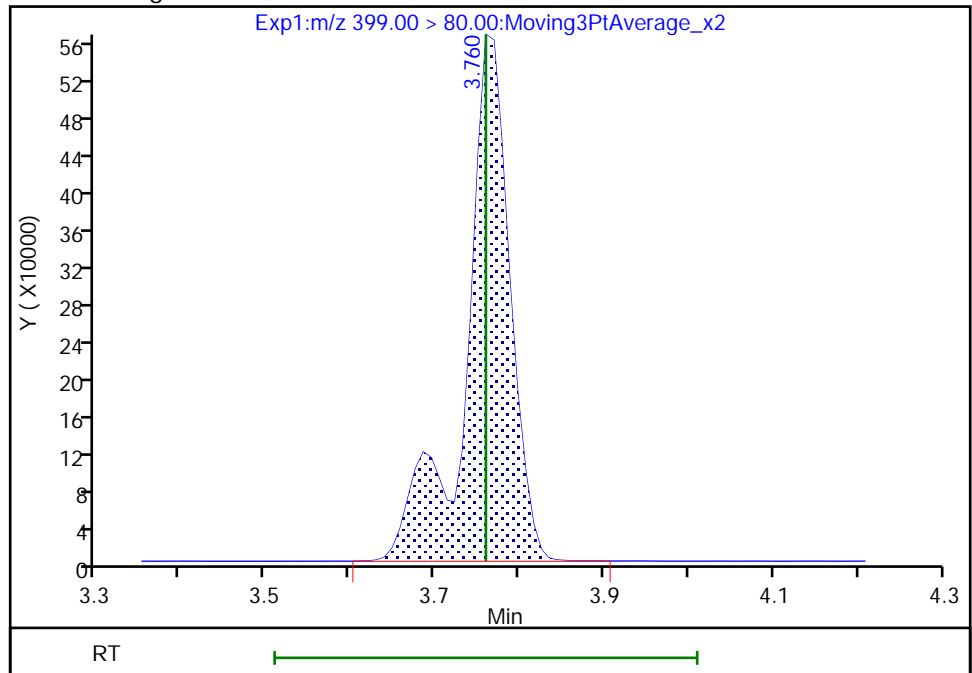
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Amount: 0.900521  
Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
Area: 2051159  
Amount: 0.861869  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:21:12  
Audit Action: Manually Integrated

Audit Reason: Baseline



Eurofins TestAmerica, Knoxville

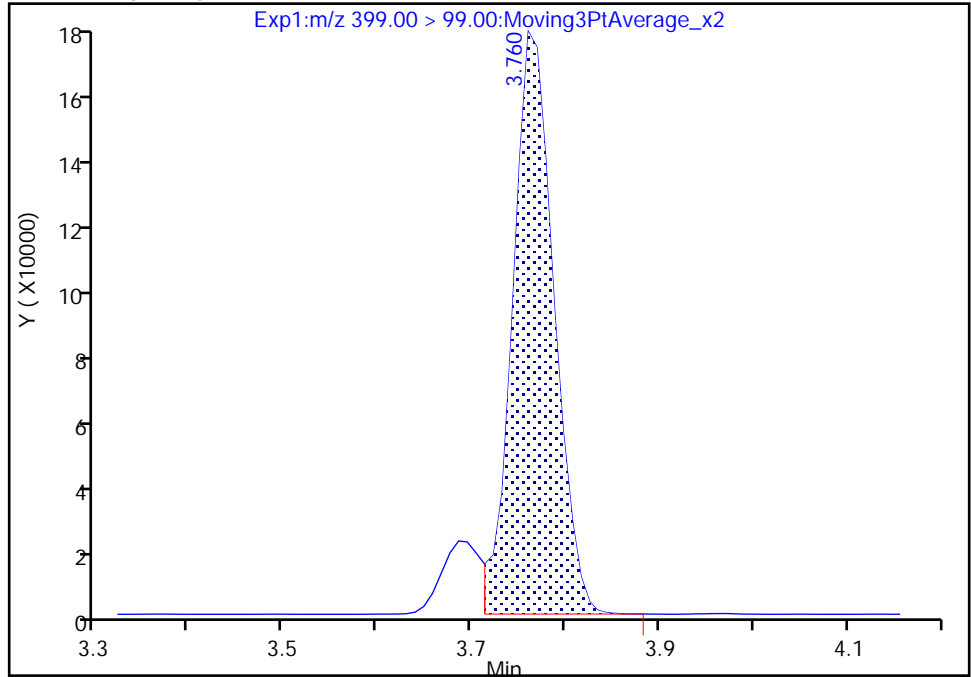
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Operator ID: Cochran, Bobby ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

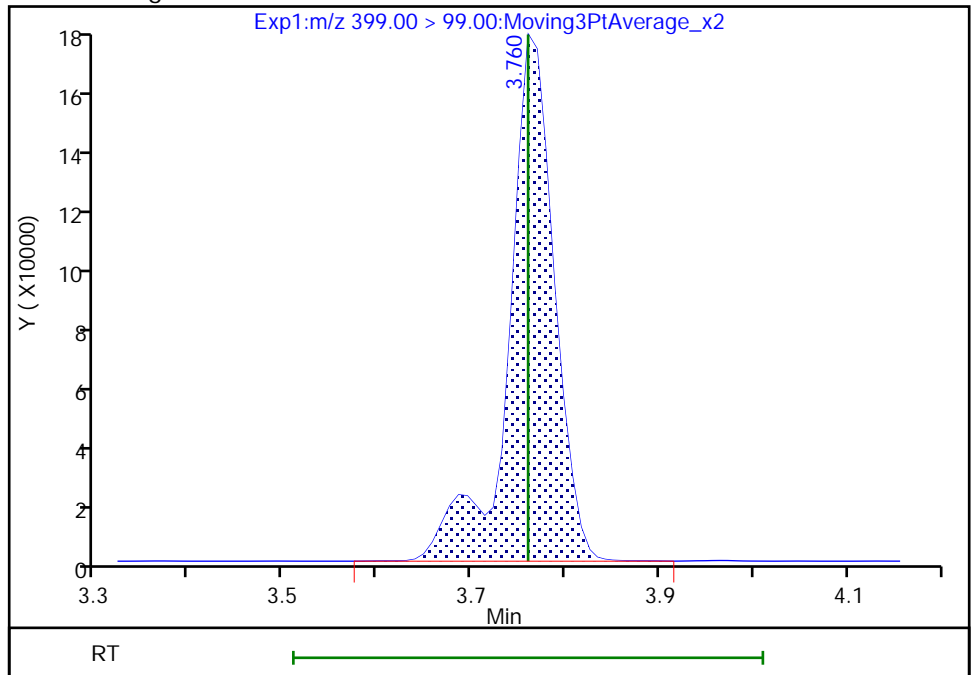
RT: 3.76  
Area: 540017  
Amount: 0.900521  
Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
Area: 603178  
Amount: 0.861869  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:21:27

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

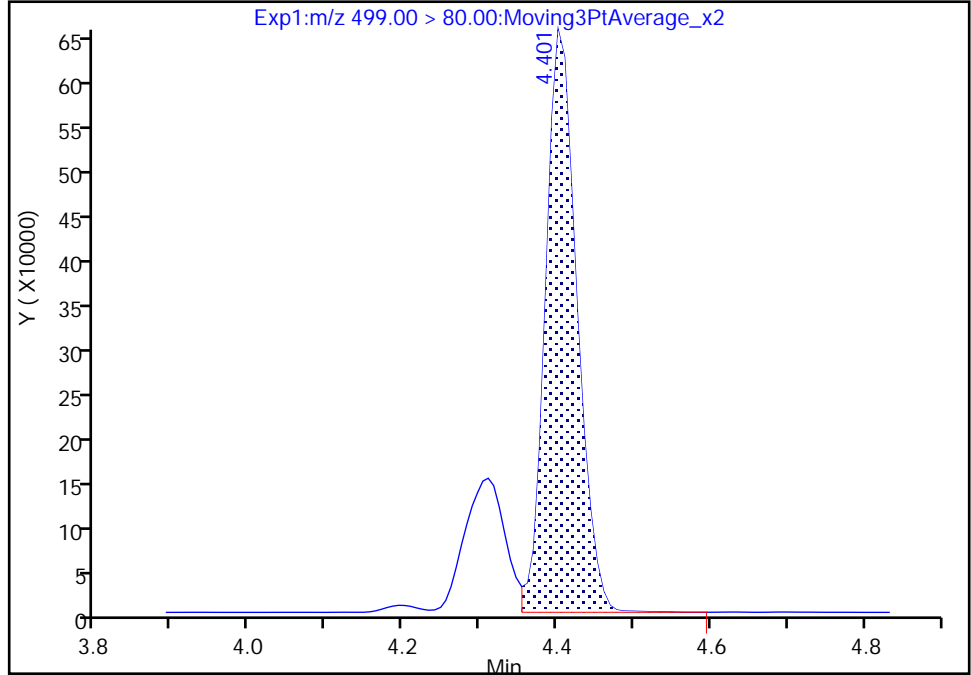
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Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

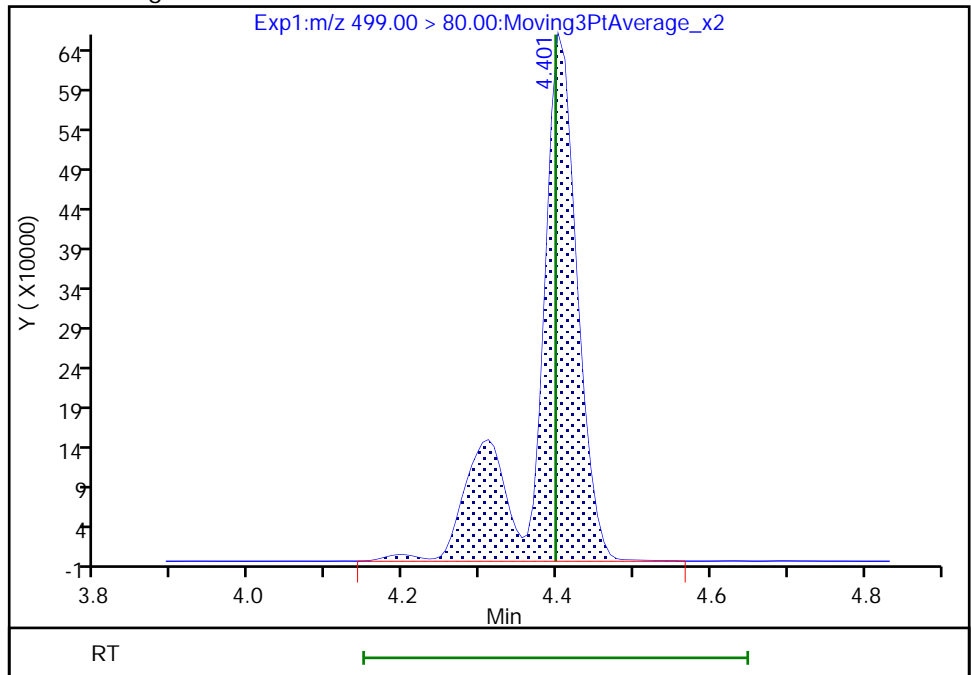
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Amount Units: ng/ml

Processing Integration Results



RT: 4.40  
Area: 2441987  
Amount: 0.916958  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:21:43  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

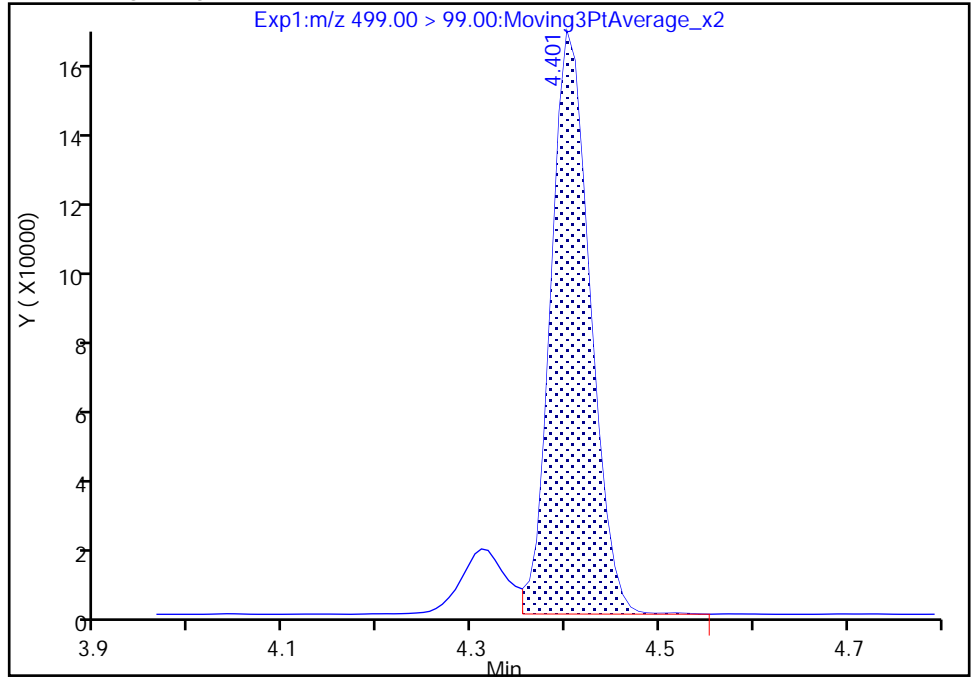
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_009.d  
Injection Date: 09-Jan-2022 11:02:16 Instrument ID: LCA  
Lims ID: ICIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

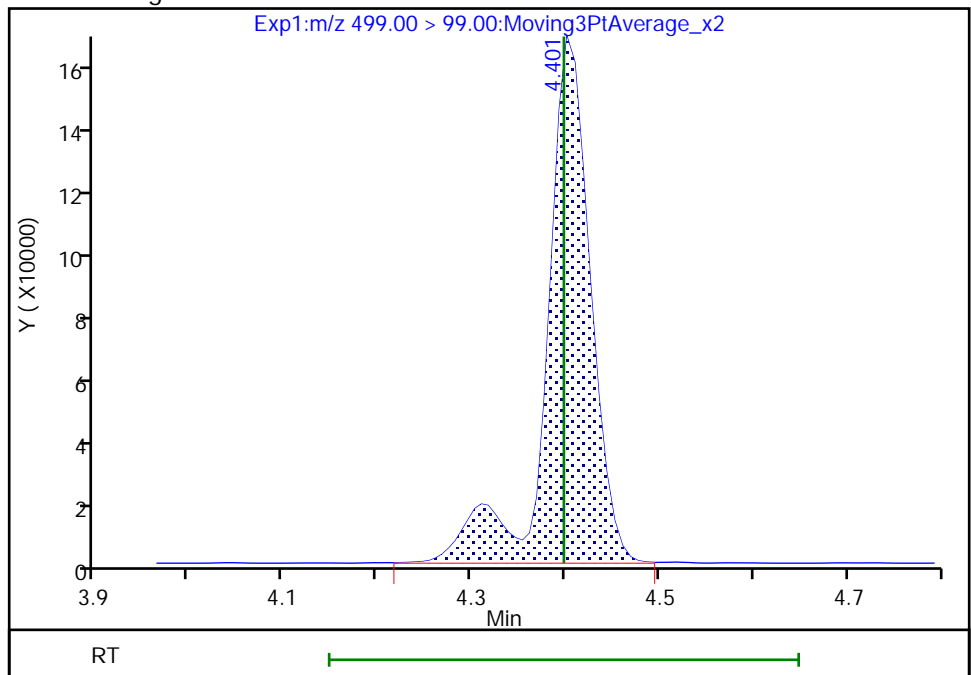
RT: 4.40  
Area: 465158  
Amount: 0.760002  
Amount Units: ng/ml

Processing Integration Results



RT: 4.40  
Area: 525382  
Amount: 0.916958  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:21:53

Audit Action: Manually Integrated

Audit Reason: Baseline  
Page 170 of 620

Eurofins TestAmerica, Knoxville

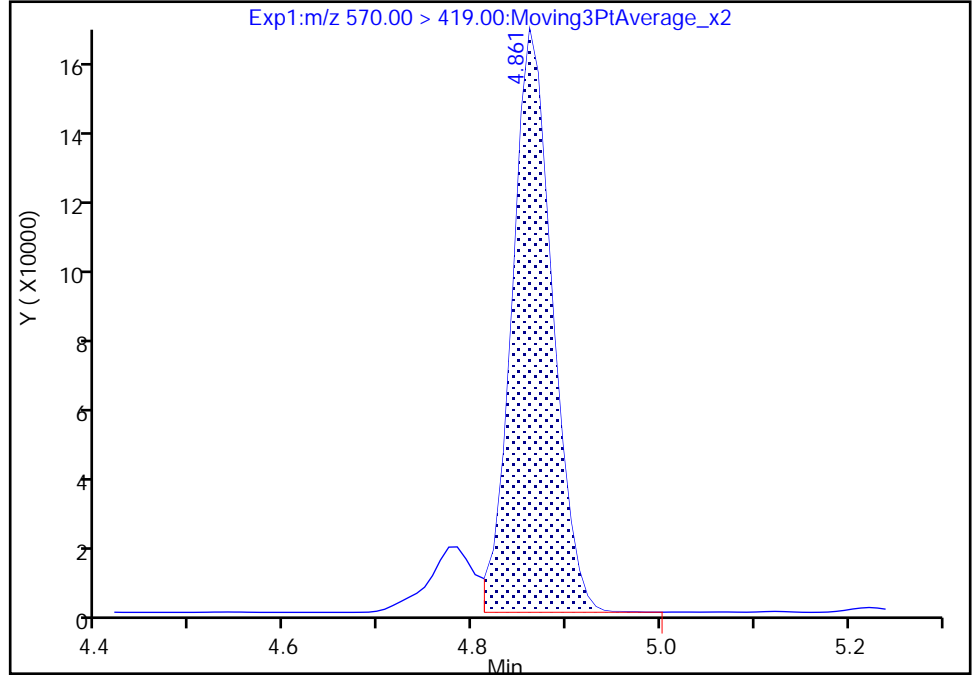
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Injection Date: 09-Jan-2022 11:02:16 Instrument ID: LCA  
Lims ID: ICIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

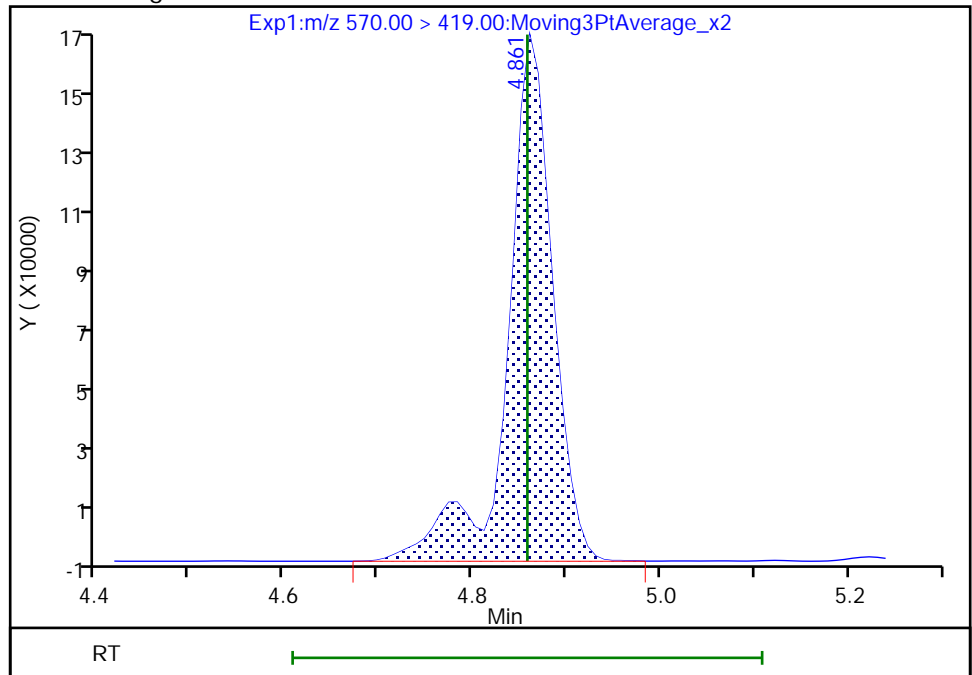
RT: 4.86  
Area: 495724  
Amount: 0.919111  
Amount Units: ng/ml

Processing Integration Results



RT: 4.86  
Area: 559483  
Amount: 0.957621  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:22:04  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

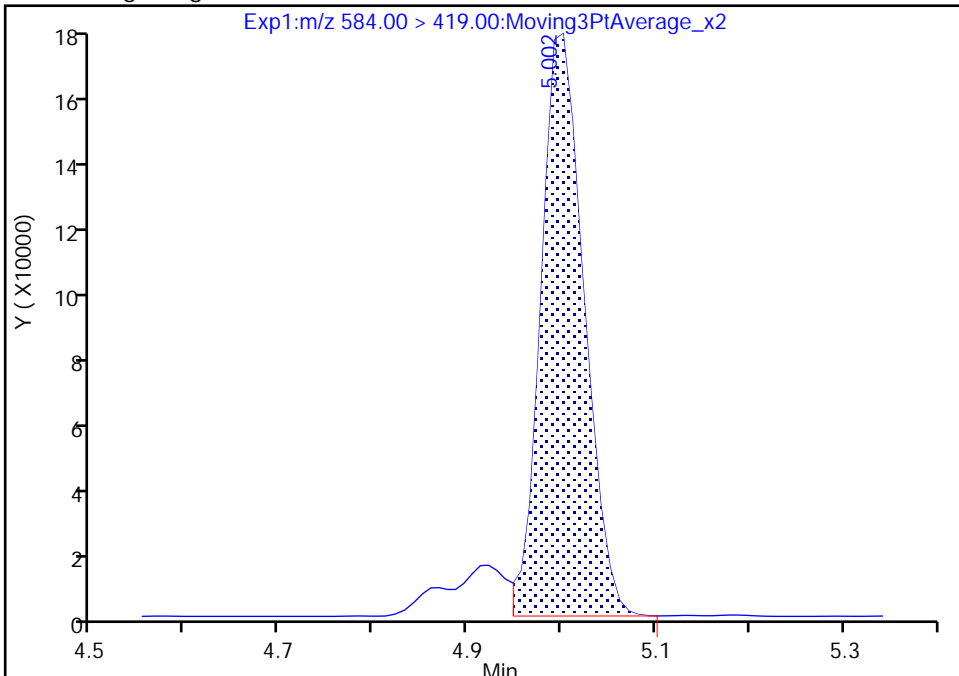
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Injection Date: 09-Jan-2022 11:02:16 Instrument ID: LCA  
Lims ID: ICIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

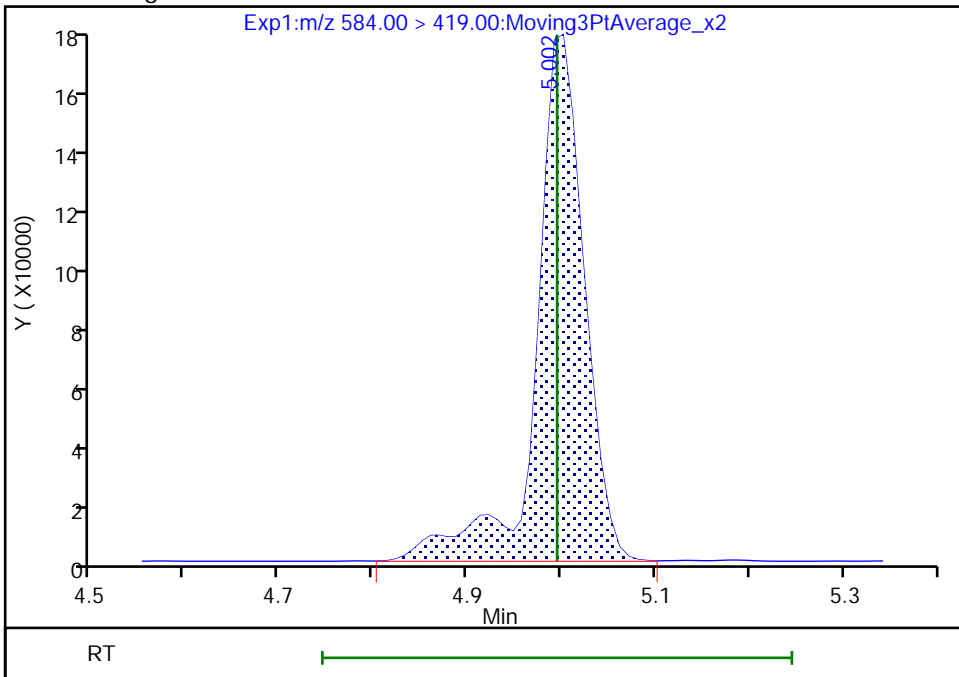
RT: 5.00  
Area: 560594  
Amount: 0.883688  
Amount Units: ng/ml

Processing Integration Results



RT: 5.00  
Area: 631535  
Amount: 0.956197  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:22:17  
Audit Action: Manually Integrated

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_010.d  
 Lims ID: IC 5  
 Client ID:  
 Sample Type: IC Calib Level: 5  
 Inject. Date: 09-Jan-2022 11:11:04 ALS Bottle#: 10 Worklist Smp#: 10  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022186-010 ic 5  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 12:31:54 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1686

First Level Reviewer: cochranj Date: 09-Jan-2022 11:23:49

Ratio Calibration: Average of Initial Calibration

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	2.784	0.006	0.678	5967237	1.29	103	13128	
2 Perfluorobutanoic acid	212.90 > 169.00	2.790	2.785	0.005	1.000	9638211	2.57	103	2572	
D 3 13C5 PFPeA	267.90 > 223.00	3.099	3.093	0.006	0.753	4603395	1.28	102	9781	
4 Perfluoropentanoic acid	262.90 > 219.00	3.099	3.093	0.006	1.000	8879560	2.53	101	2855	
D 6 13C3 PFBS	301.90 > 80.00	3.115	3.109	0.006	0.757	2853192	1.19	102	12035	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.115	3.109	0.006	1.000	6124063	2.27	Target=2.68	103	5228
	298.90 > 99.00	3.115	3.109	0.006	1.000	2288755	2.68(1.34-4.02)	103	4928	
D 8 M2-4:2 FTS	329.00 > 81.00	3.393	3.393	0.0	0.824	855340	1.16	99.3	1430	
7 4:2 FTS	327.00 > 307.00	3.393	3.393	0.0	1.000	3970343	2.41	103	8061	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.423	3.422	0.001	1.099	5752393	2.41	Target=3.48	103	10312
	349.00 > 99.00	3.423	3.422	0.001	1.099	1611018	3.57(1.74-5.22)	103	8179	
D 9 13C2 PFHxA	315.00 > 270.00	3.423	3.423	0.0	0.832	4746918	1.24	98.8	8818	
10 Perfluorohexanoic acid	313.00 > 269.00	3.423	3.423	0.0	1.000	8407159	2.55	Target=12.57	102	3084
	313.00 > 119.00	3.423	3.423	0.0	1.000	673329	12.49(6.28-18.85)	102	992	
D 12 13C3 HFPO-DA	287.00 > 169.00	3.529	3.524	0.005	0.858	2402042	1.30	104	4747	

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	3.529	3.524	0.005	1.000	6357565	2.45		97.8	4219	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.761	3.760	0.001	1.000	5056303	2.23	Target=3.48	98.2	7443	M
399.00 > 99.00	3.761	3.760	0.001	1.000	1405119		3.60(1.74-5.21)	98.2	6234	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.761	3.761	0.0	0.914	1943468	1.21		103	7726	
D 14 13C4 PFHpA										
367.00 > 322.00	3.780	3.772	0.008	0.919	4645602	1.26		101	7635	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.780	3.772	0.008	1.000	10258907	2.64	Target=3.29	105	4386	
363.00 > 169.00	3.780	3.772	0.008	1.000	3152723		3.25(1.65-4.94)	105	2472	
68 DONA										
377.00 > 251.00	3.808	3.807	0.001	0.865	15024020	2.46	Target=1.76	104	11106	
377.00 > 85.00	3.808	3.807	0.001	0.865	8463960		1.78(0.88-2.64)	104	184	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.097	4.092	0.005	0.931	5636163	2.54	Target=3.91	107	8693	
449.00 > 99.00	4.097	4.092	0.005	0.931	1419617		3.97(1.95-5.86)	107	7182	
19 6:2 FTS										
427.00 > 407.00	4.106	4.101	0.005	1.000	3168996	2.33		98.2	5395	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.106	4.100	0.006	0.998	899627	1.21		102	4206	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.106	4.100	0.006	0.998	4810294	1.25		100	9747	
D 21 13C4 PFOA										
417.00 > 372.00	4.115	4.109	0.006	1.000	4797778	1.26		101	8329	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.115	4.109	0.006	1.000	11010802	2.50	Target=2.61	100	4893	
413.00 > 169.00	4.115	4.109	0.006	1.000	4121346		2.67(1.30-3.91)	100	3644	
* 22 13C2 PFOA										
415.00 > 370.00	4.115	4.109	0.006		5068511	1.25			6617	
D 25 13C4 PFOS										
503.00 > 80.00	4.401	4.398	0.003	1.070	2779952	1.21		101	5359	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.401	4.396	0.005	1.000	631203	1.22		102	3980	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.401	4.398	0.003	1.000	6000595	2.35	Target=4.37	101	5887	M
499.00 > 99.00	4.401	4.398	0.003	1.000	1396173		4.30(2.18-6.55)	101	3939	M
26 Perfluorononanoic acid										
463.00 > 419.00	4.427	4.421	0.006	1.000	10970847	2.44	Target=4.48	97.6	6537	
463.00 > 169.00	4.427	4.421	0.006	1.000	2464006		4.45(2.24-6.72)	97.6	3677	
D 27 13C5 PFNA										
468.00 > 423.00	4.427	4.421	0.006	1.076	6530042	1.31		104	9513	
63 9CIFOS										
531.00 > 351.00	4.560	4.558	0.002	1.036	12172388	2.42		104	14403	

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	4.681	4.682	-0.001	1.063	5588794	2.46	Target=3.84	103	7671	
549.00 > 99.00	4.681	4.682	-0.001	1.063	1450714		3.85(1.92-5.77)	103	6528	
D 34 13C8 FOSA										
506.00 > 78.00	4.706	4.700	0.006	1.144	3925140	1.26		101	3526	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.706	4.700	0.006	1.000	7793889	2.62		105	5548	
D 32 13C2 PFDA										
515.00 > 470.00	4.715	4.709	0.006	1.146	6089778	1.26		101	14437	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.715	4.709	0.006	1.000	11732225	2.50	Target=11.50	99.9	7826	
513.00 > 169.00	4.715	4.709	0.006	1.000	1018364		11.52(5.75-17.25)	99.9	705	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.723	4.721	0.002	1.148	1009120	1.20		100	1395	
31 8:2 FTS										
527.00 > 507.00	4.723	4.721	0.002	1.000	2871784	2.41		101	6481	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.861	4.854	0.007	1.181	704135	1.24		99.1	389	
36 NMeFOSAA										
570.00 > 419.00	4.861	4.858	0.003	1.000	1388453	2.53		101	2376	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.949	4.942	0.007	1.124	5327635	2.46	Target=3.69	102	10179	
599.00 > 99.00	4.949	4.942	0.007	1.124	1431128		3.72(1.84-5.53)	102	5115	
D 39 13C2 PFUnA										
565.00 > 520.00	4.975	4.973	0.002	1.209	6174640	1.28		102	14454	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.975	4.973	0.002	1.000	12257781	2.56	Target=8.29	102	7424	
563.00 > 169.00	4.975	4.973	0.002	1.000	1503895		8.15(4.14-12.43)	102	8135	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.992	4.989	0.003	1.213	794601	1.27		102	2275	
40 NEtFOSA										
584.00 > 419.00	5.002	4.995	0.007	1.002	1650265	2.60		104	1770	M
57 11C1FOS										
631.00 > 451.00	5.082	5.075	0.007	1.155	9558929	2.46		104	14157	
D 43 13C2 PFDaA										
615.00 > 570.00	5.213	5.207	0.006	1.267	6505443	1.29		103	10949	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.213	5.207	0.006	1.000	13073136	2.48	Target=6.82	99.3	8814	
613.00 > 169.00	5.213	5.207	0.006	1.000	1948476		6.71(3.41-10.23)	99.3	3479	
50 10:2 FTS										
627.00 > 607.00	5.231	5.231	0.0	1.107	4709912	2.46		102	6324	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.283	5.279	0.004	1.284	776280	1.28		102	754	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.283	5.281	0.002	1.284	566057	1.31		105	57.3	
61 NMeFOSA										
512.00 > 169.00	5.292	5.286	0.006	1.002	1214999	2.60		104	895	



Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
49 N-MeFOSE-M										
616.00 > 59.00	5.292	5.290	0.002	1.002	1865207	2.54		101	2011	
54 PFDoS										
699.00 > 80.00	5.383	5.383	0.0	1.223	5276708	2.47	Target=4.36	102	9784	
699.00 > 99.00	5.383	5.383	0.0	1.223	1254746		4.21(2.18-6.55)	102	5045	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.424	5.417	0.007	1.041	11543259	2.67	Target=6.19	107	9880	
663.00 > 169.00	5.424	5.417	0.007	1.041	1819566		6.34(3.09-9.28)	107	6021	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.444	5.437	0.007	1.323	783063	1.28		103	357	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.454	5.450	0.004	1.326	450709	1.26		101	807	
62 N-EtFOSE-M										
630.00 > 59.00	5.454	5.450	0.004	1.002	2095667	2.52		101	2171	
56 N-EtFOSA-M										
526.00 > 169.00	5.464	5.457	0.007	1.002	1143584	2.65		106	904	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.607	5.600	0.007	1.363	4899401	1.27		102	8377	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.607	5.600	0.007	1.000	1318730	2.50	Target=1.09	100	3876	
713.00 > 219.00	5.596	5.600	-0.004	0.998	1277934		1.03(0.54-1.63)	100	5686	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.912	5.907	0.005	1.437	3338421	1.28		102	5731	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.912	5.907	0.005	1.000	7276278	2.55	Target=8.22	102	5973	
813.00 > 169.00	5.912	5.907	0.005	1.000	878228		8.29(4.11-12.33)	102	1795	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.169	6.162	0.007	1.043	6895688	2.62	Target=11.60	105	5678	
913.00 > 169.00	6.164	6.162	0.002	1.043	603620		11.42(5.80-17.40)	105	2085	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L5PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_010.d

Injection Date: 09-Jan-2022 11:11:04

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

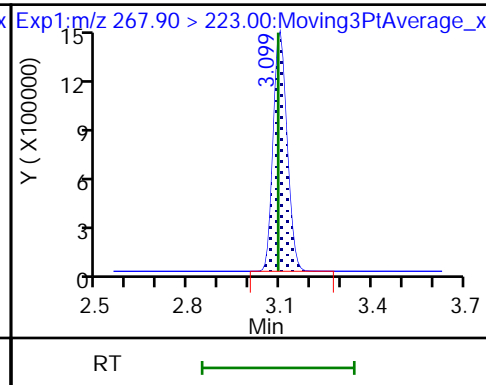
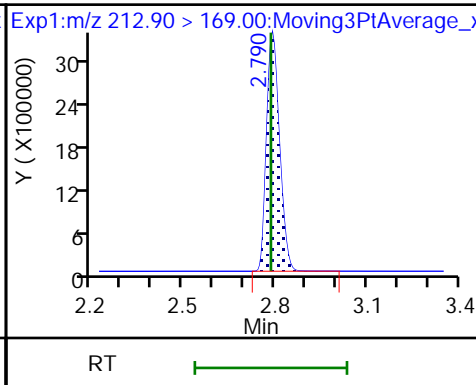
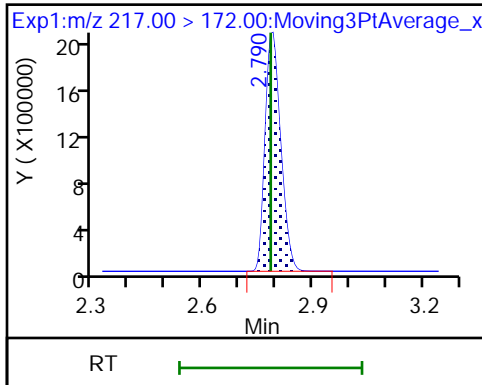
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

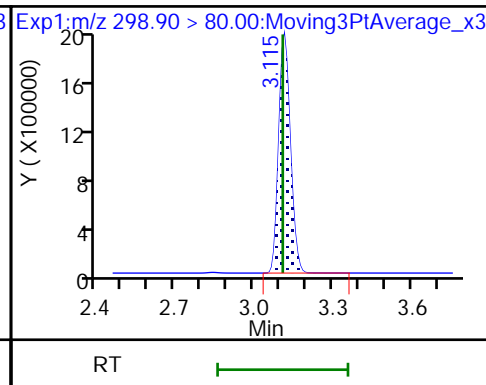
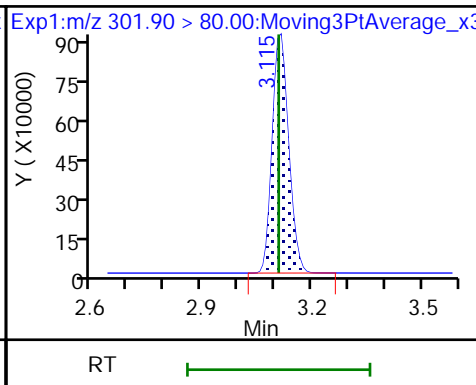
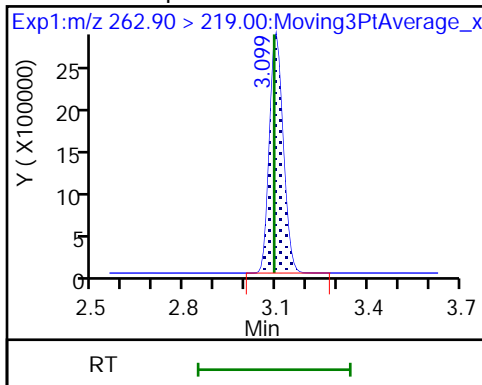
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

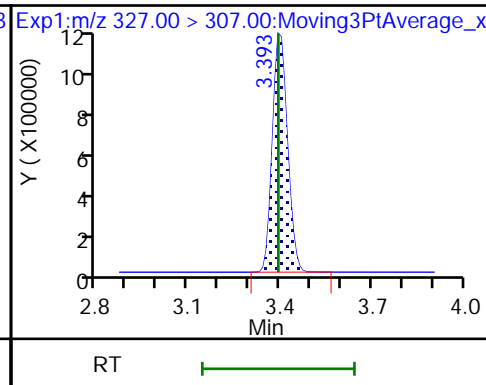
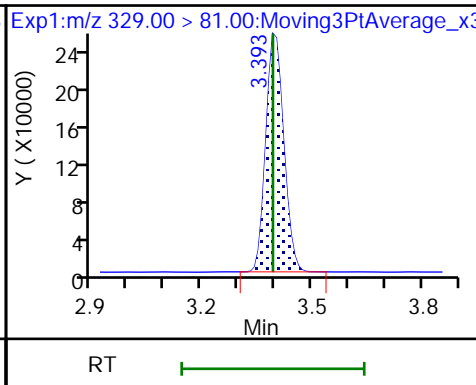
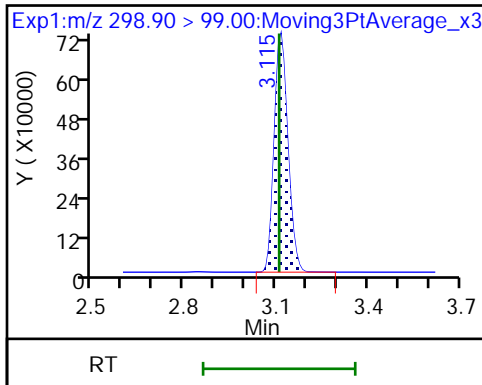
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

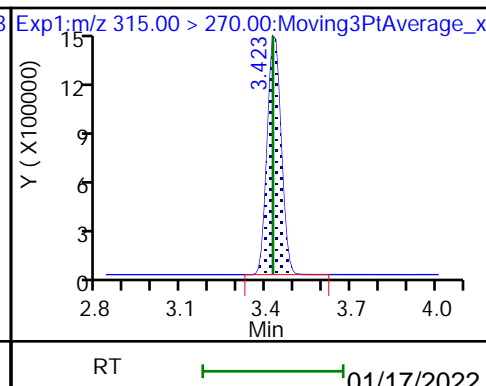
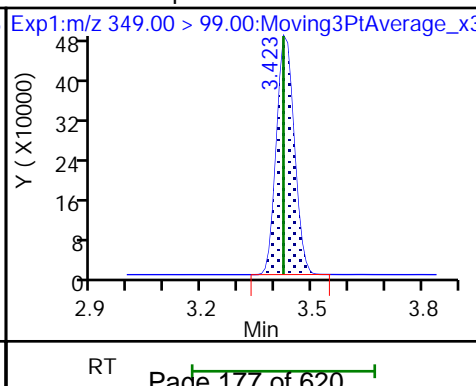
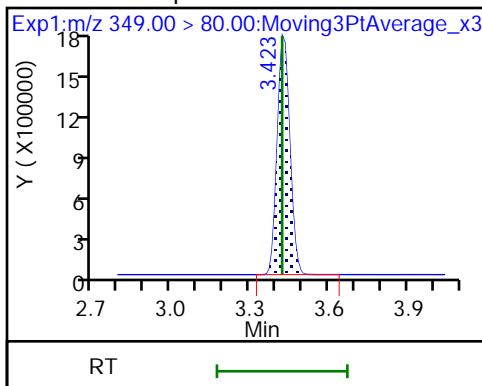
7 4:2 FTS

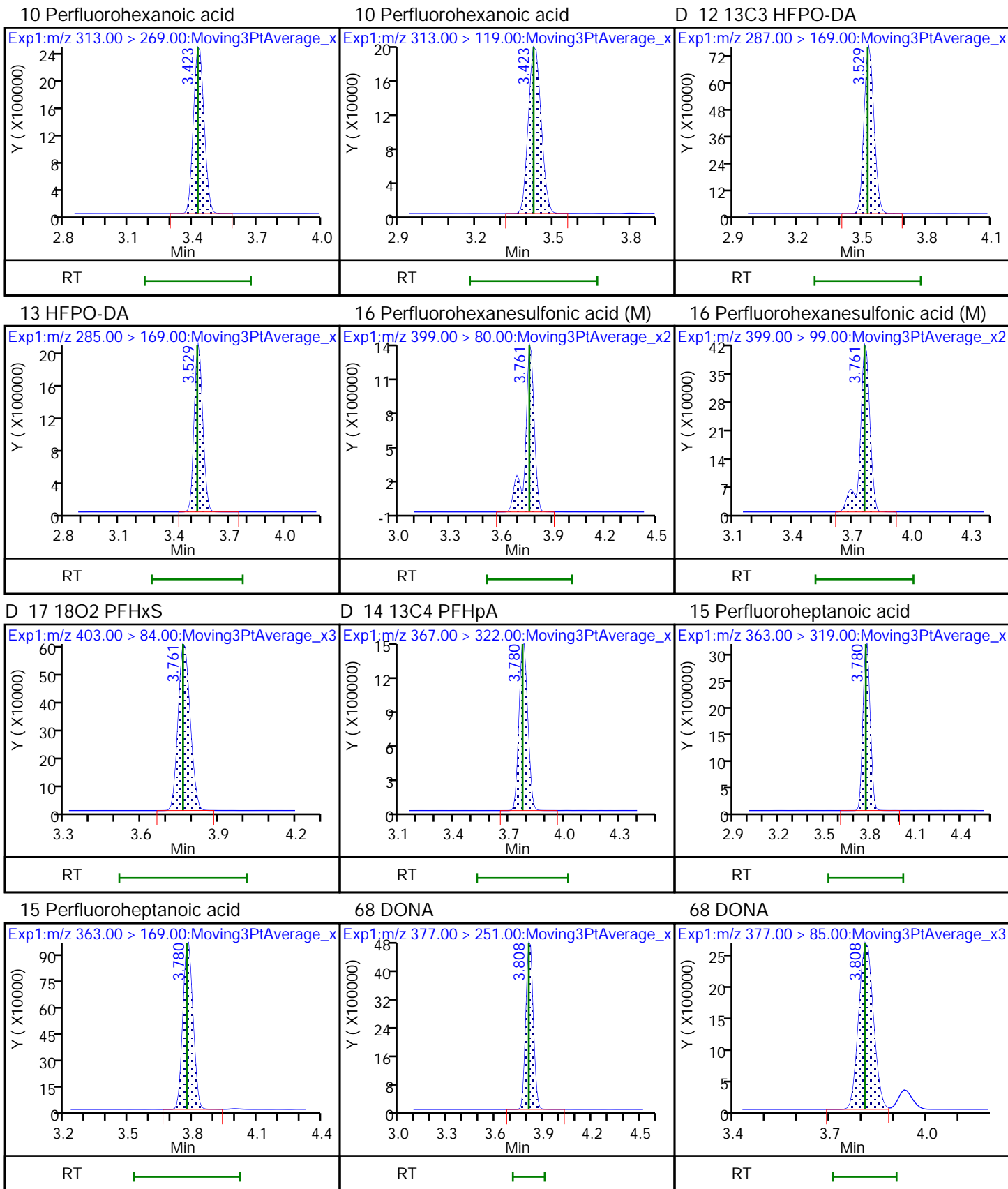


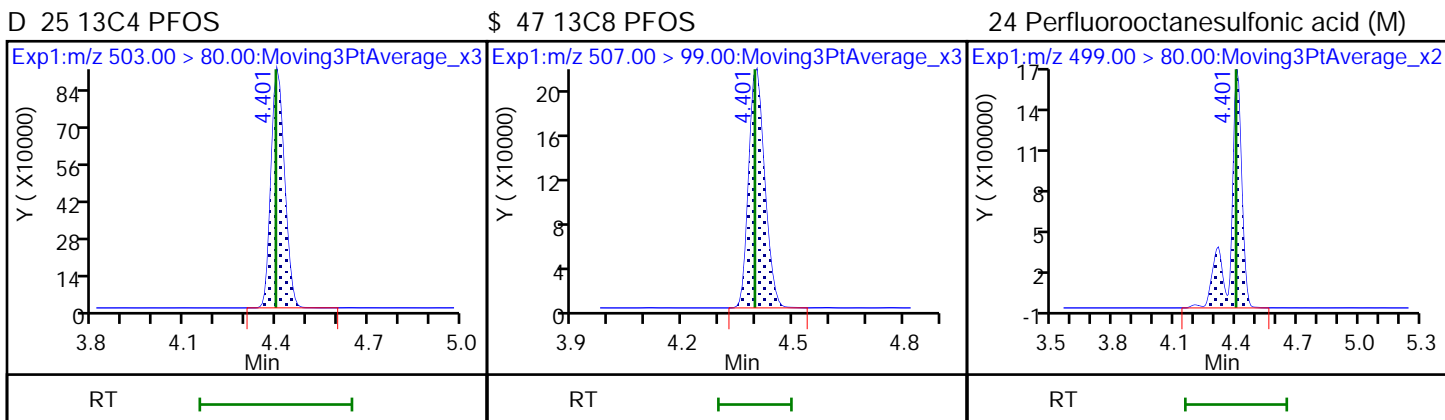
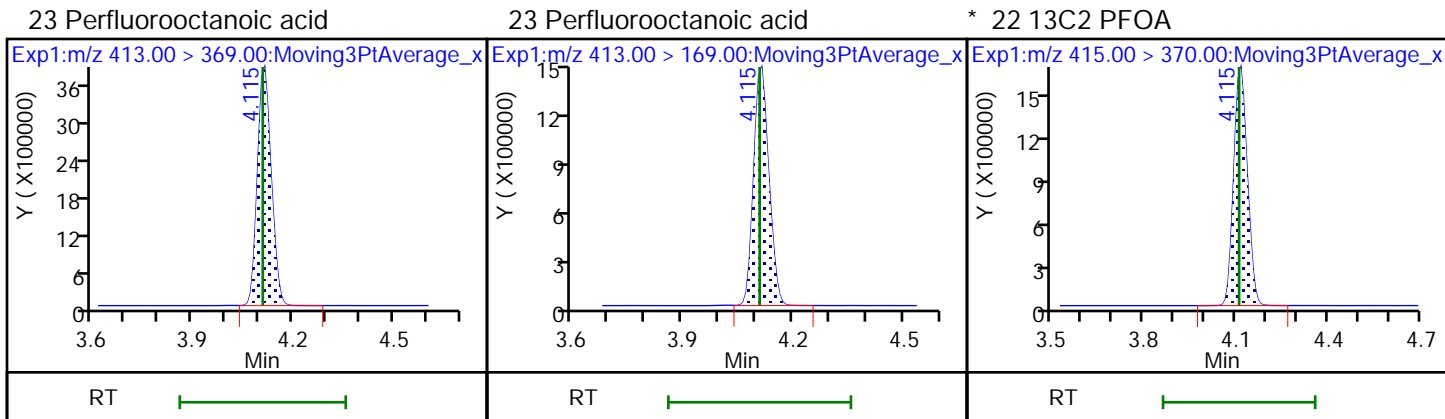
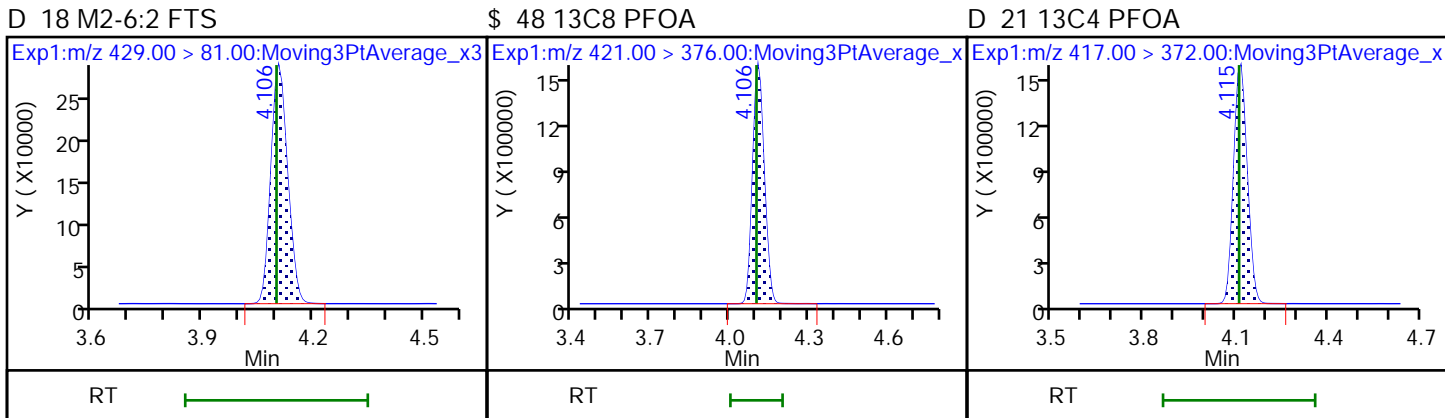
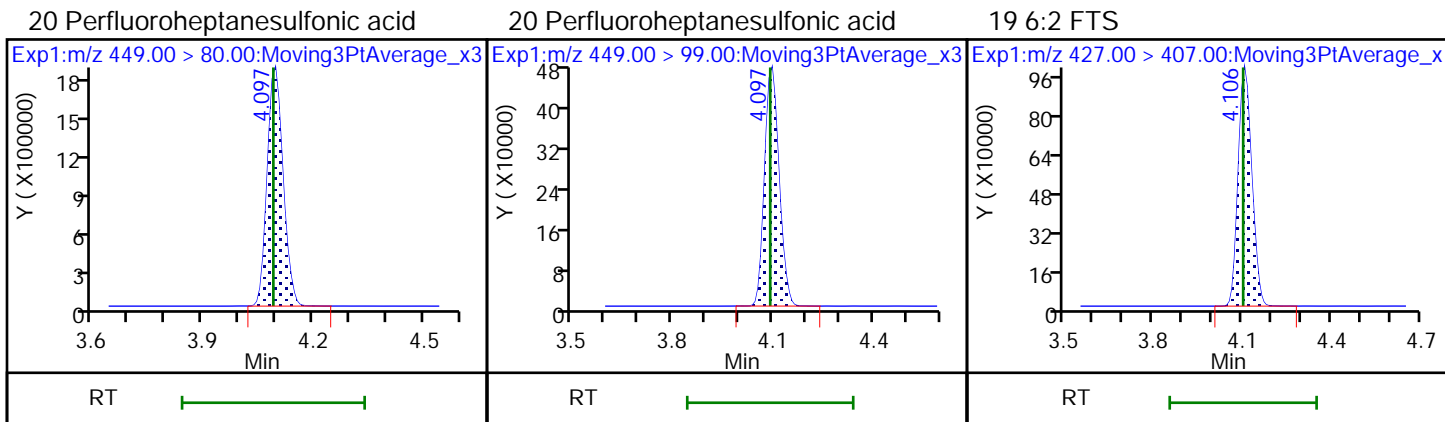
11 Perfluoropentanesulfonic acid

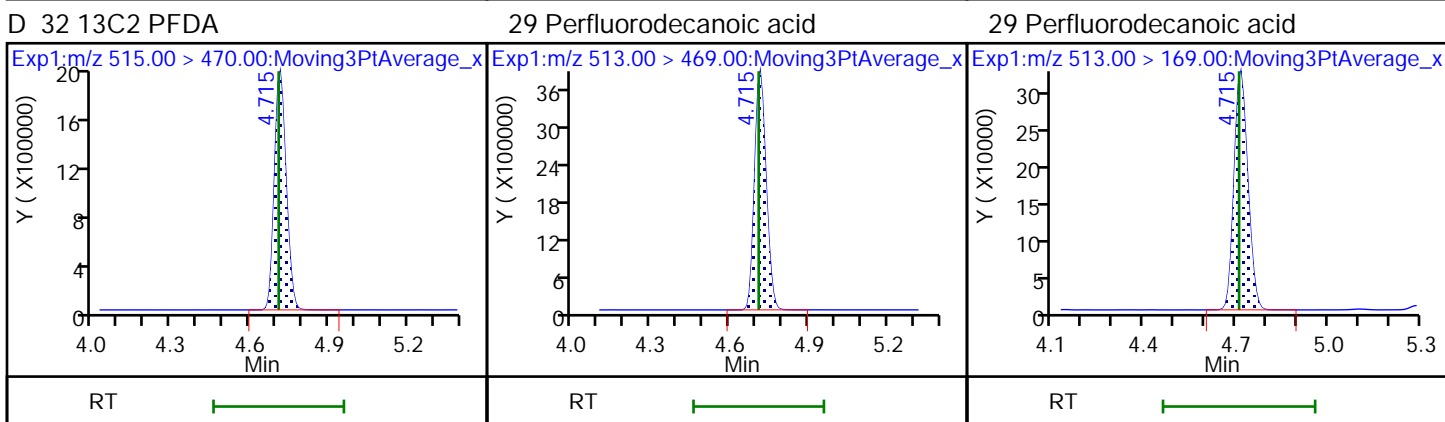
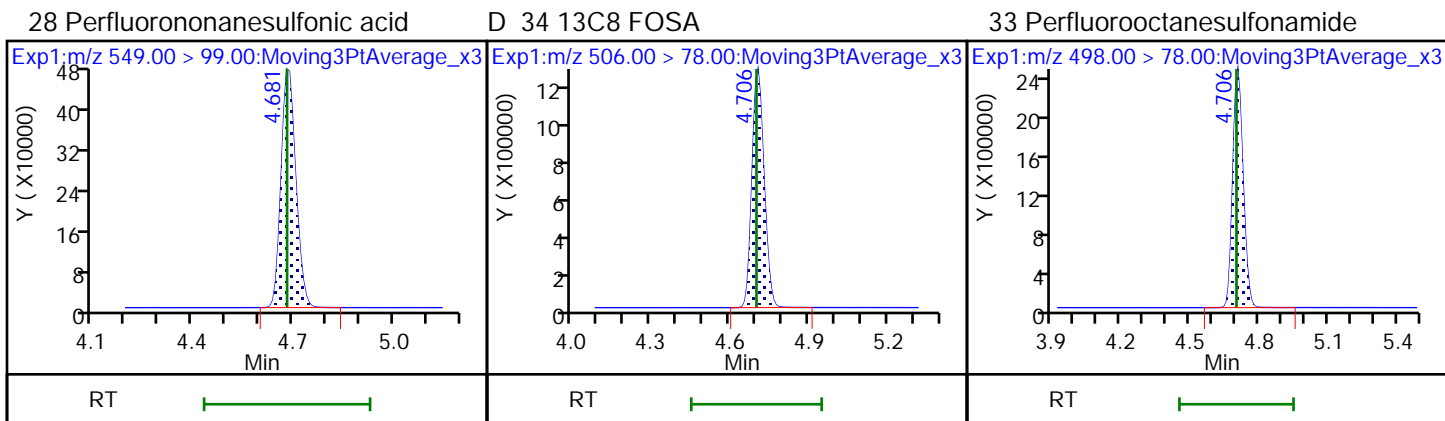
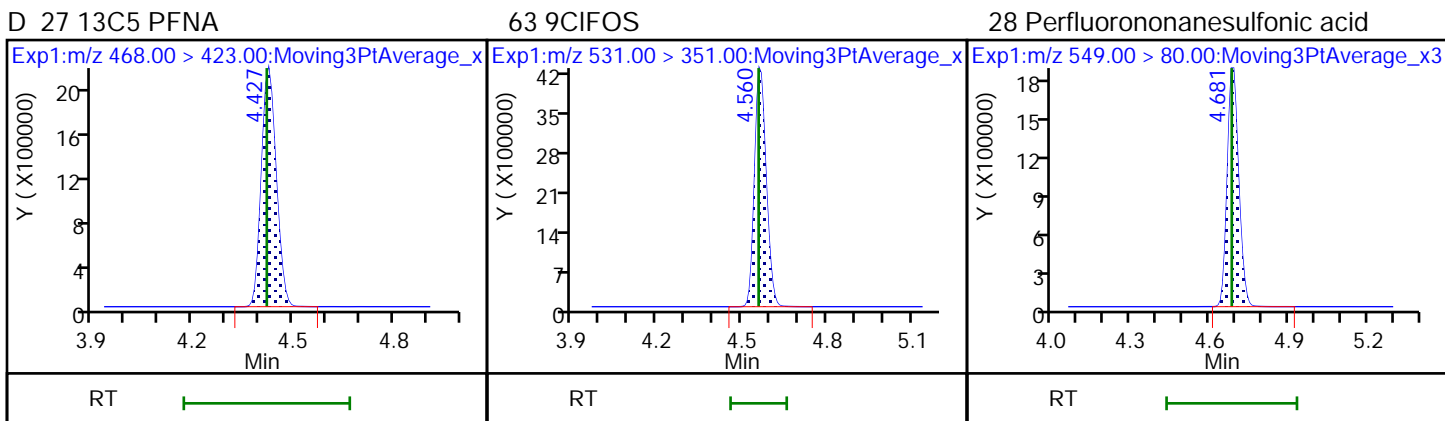
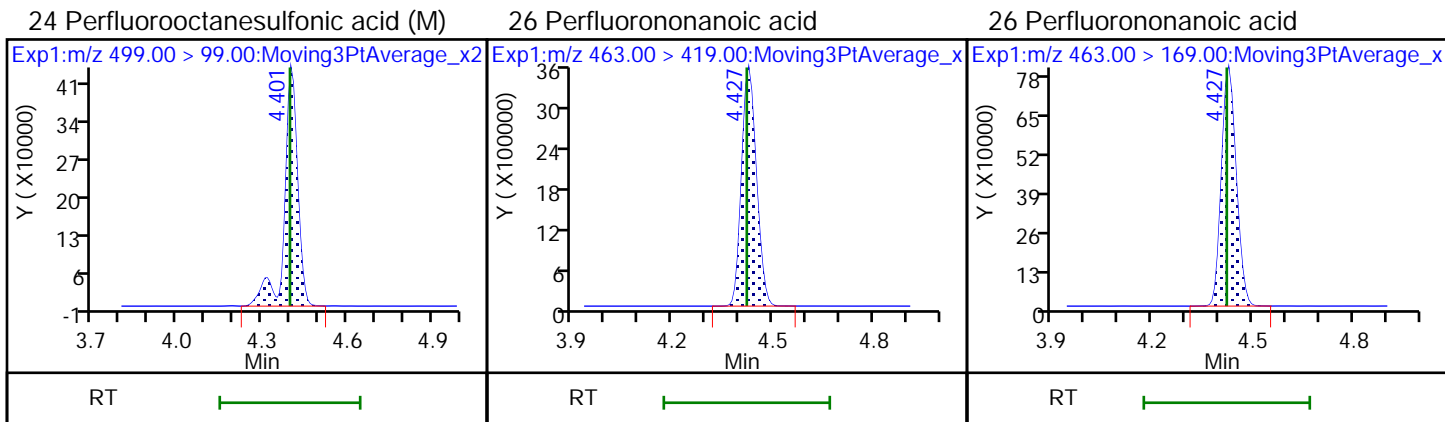
11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA





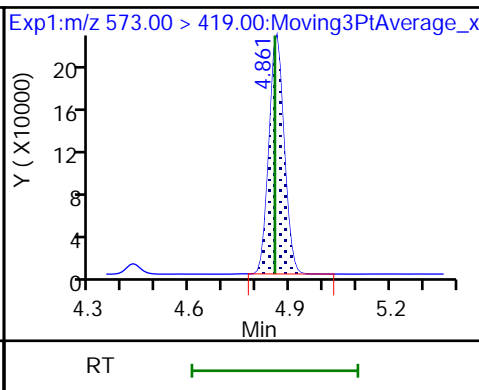
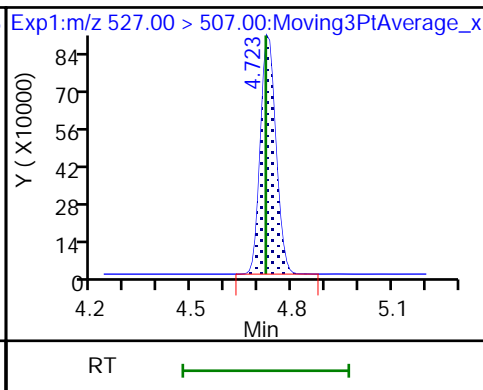
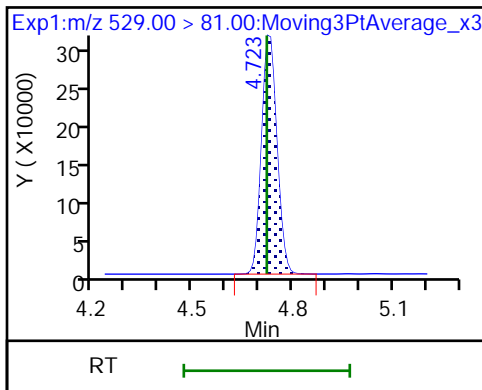




D 30 M2-8:2 FTS

31 8:2 FTS

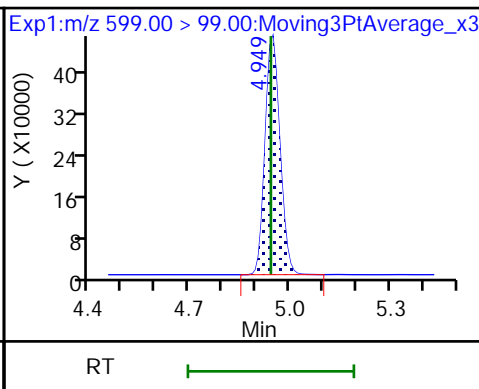
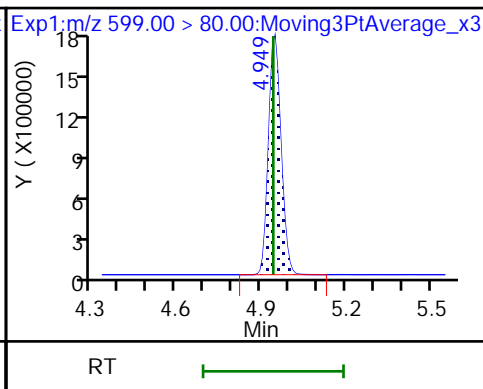
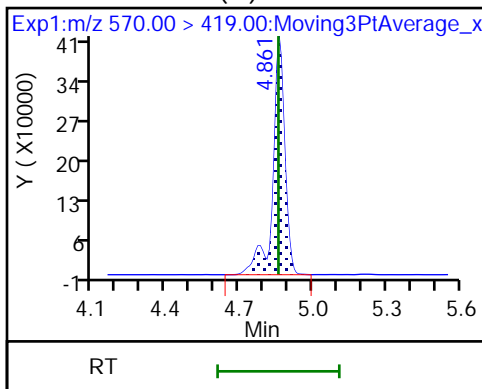
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

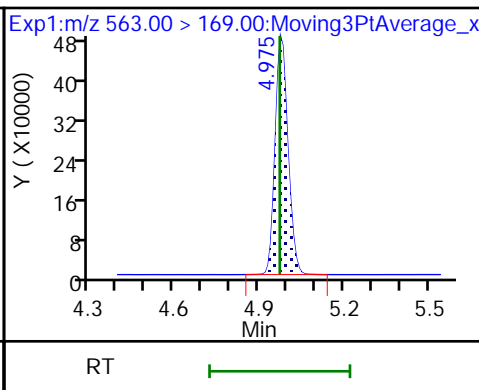
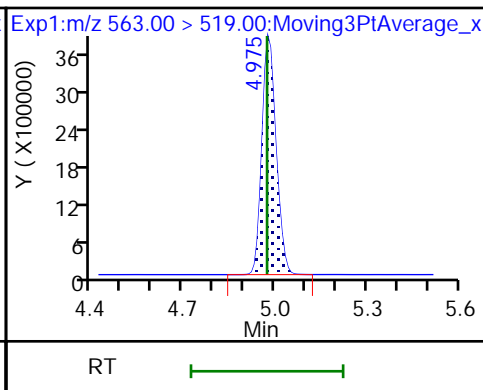
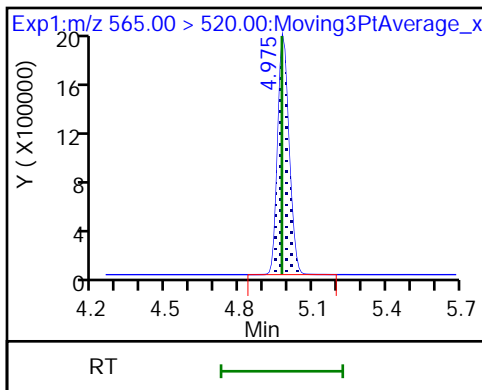
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

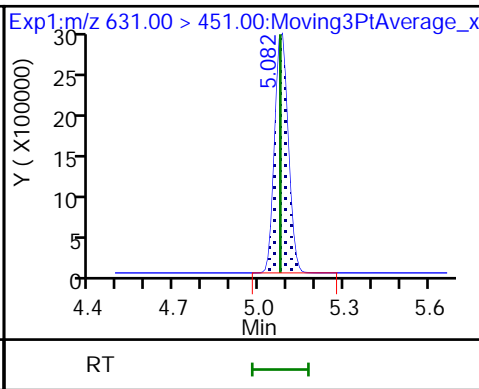
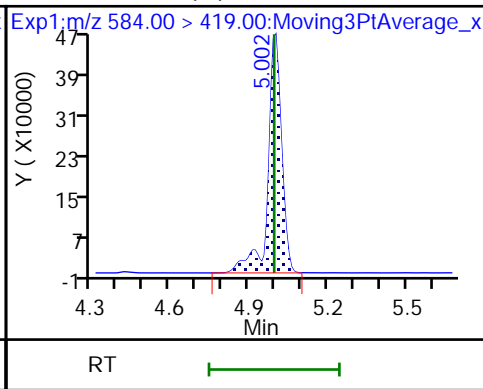
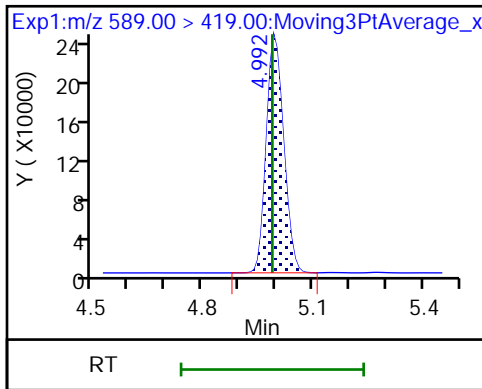
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA (M)

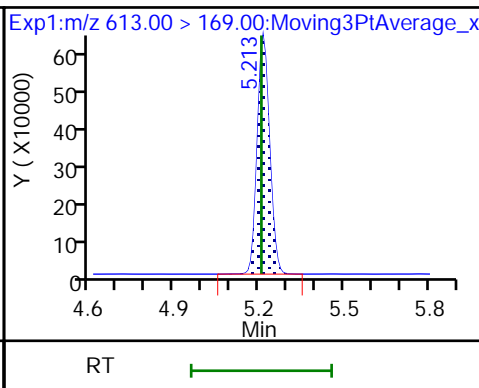
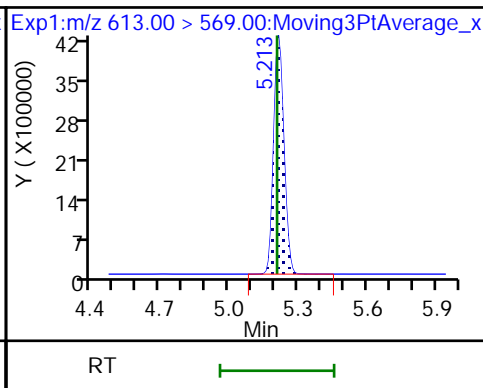
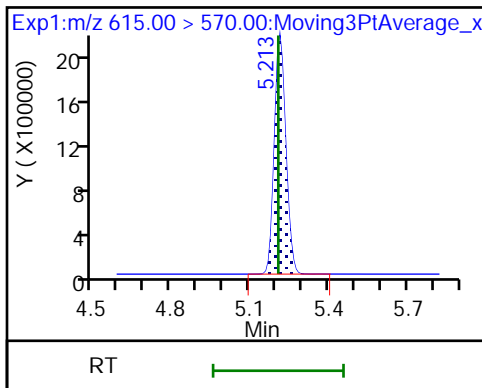
57 11CIFOS



D 43 13C2 PFDaA

42 Perfluorododecanoic acid

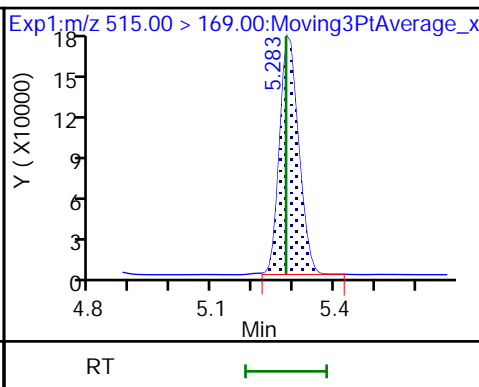
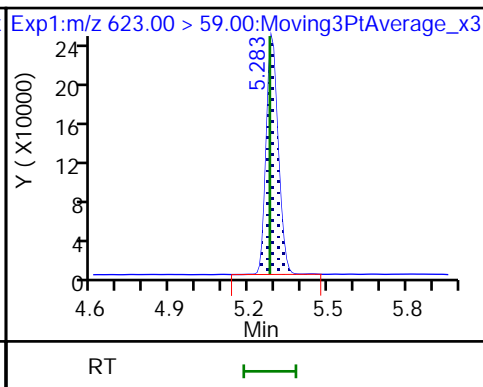
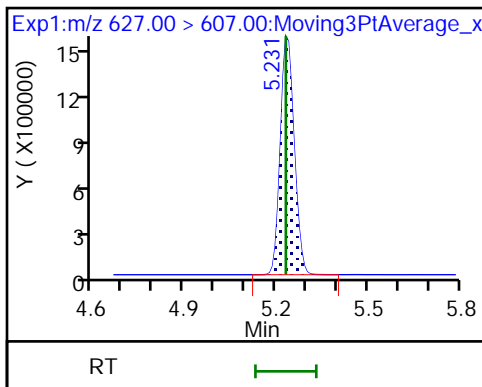
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

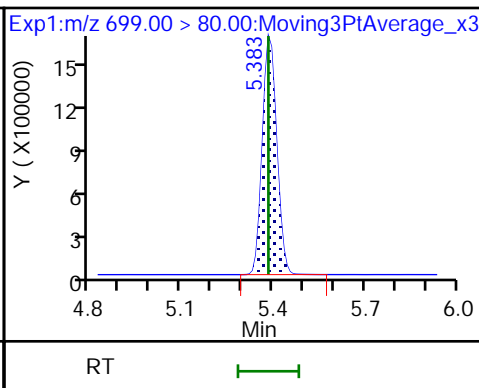
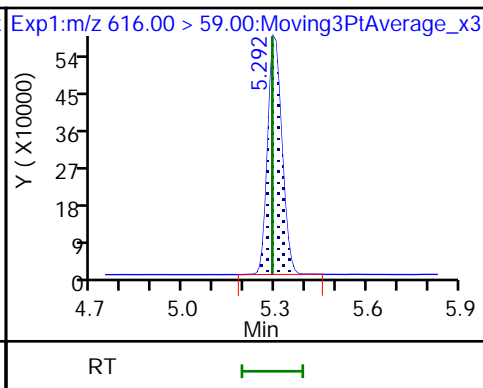
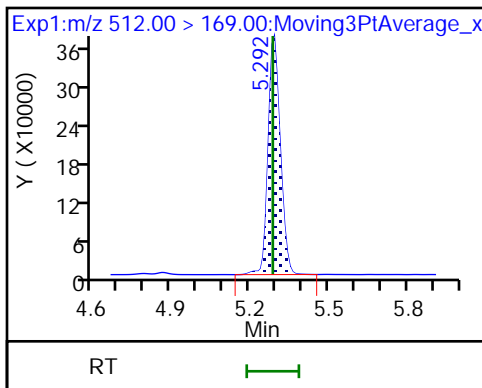
D 58 d-N-MeFOSA-M



61 NMeFOSA

49 N-MeFOSE-M

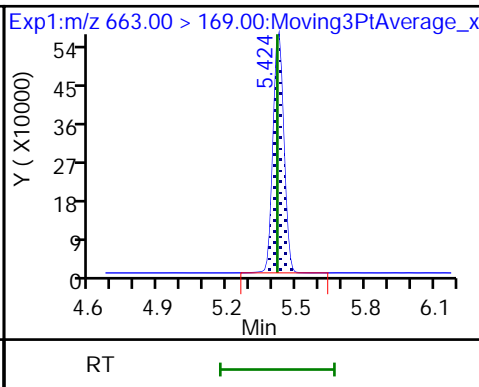
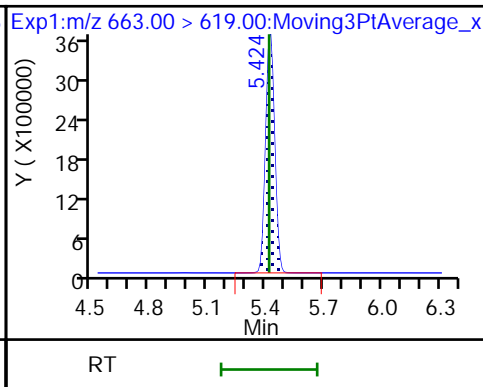
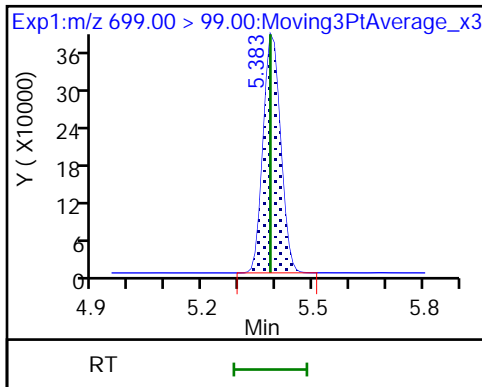
54 PFDoS



54 PFDoS

44 Perfluorotridecanoic acid

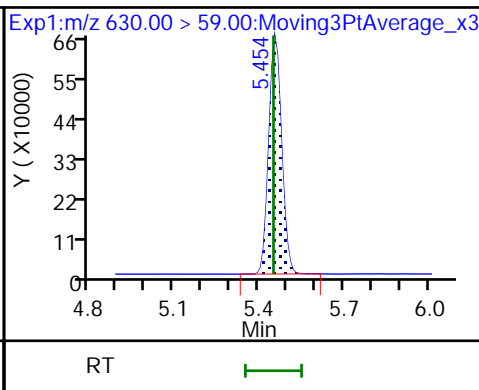
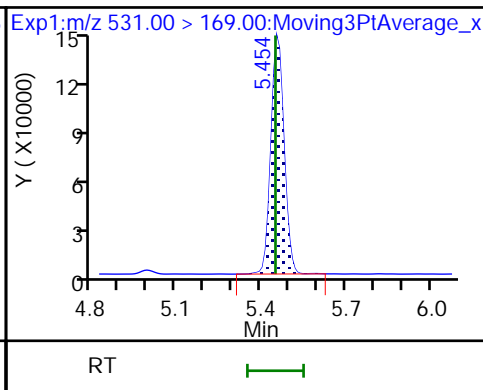
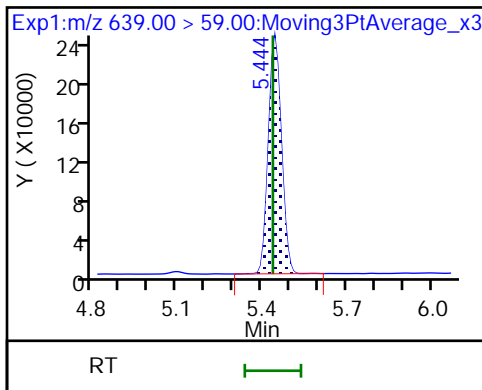
44 Perfluorotridecanoic acid



D 53 d9-N-EtFOSE-M

D 52 d-N-EtFOSA-M

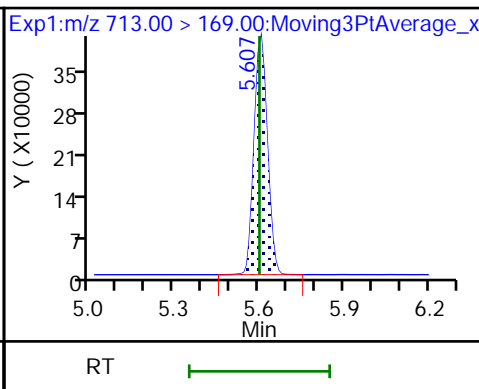
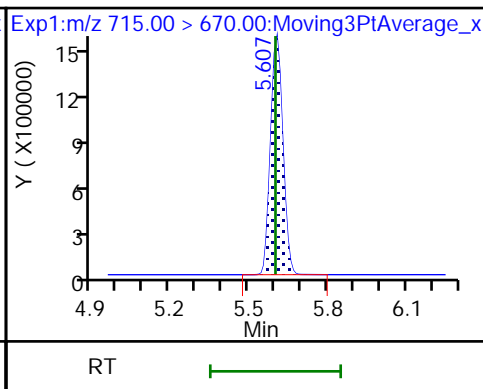
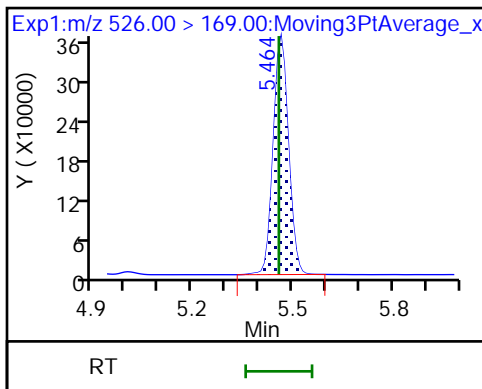
62 N-EtFOSE-M



56 N-EtFOSA-M

D 46 13C2 PFTeDA

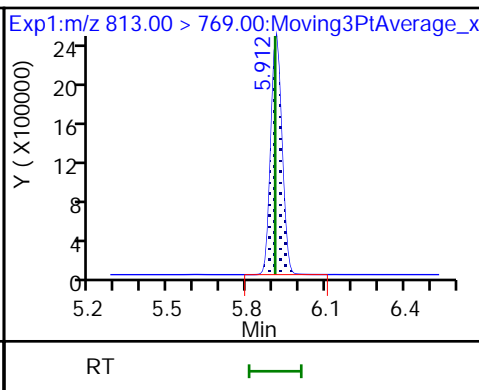
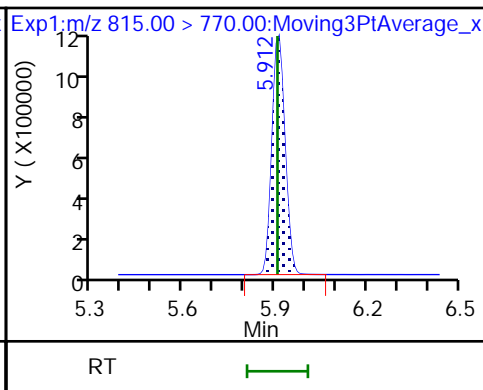
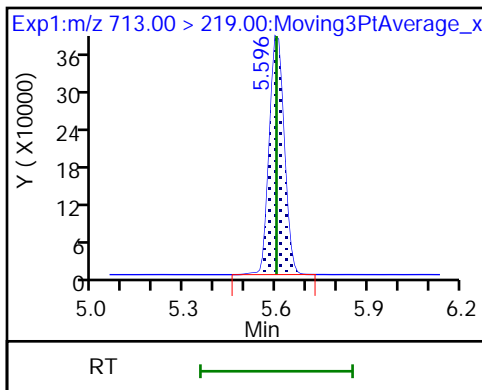
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

D 59 13C2 PFHxDA

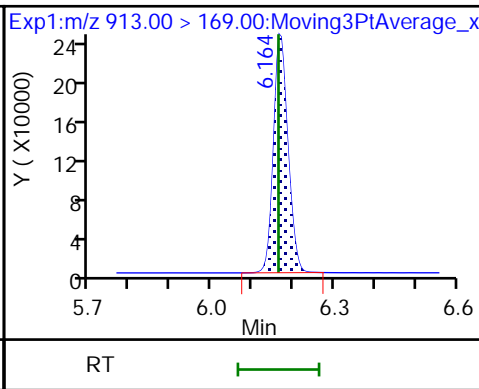
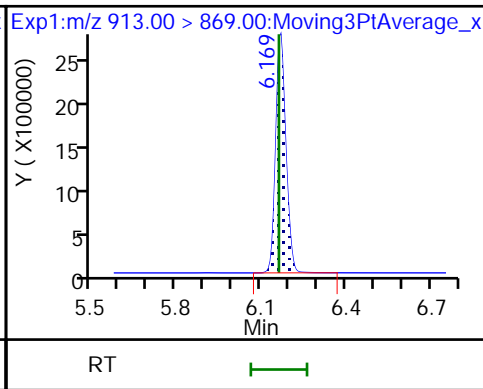
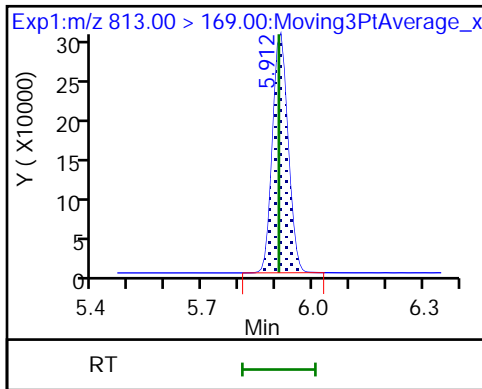
55 Perfluorohexadecanoic acid



55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid







Eurofins TestAmerica, Knoxville

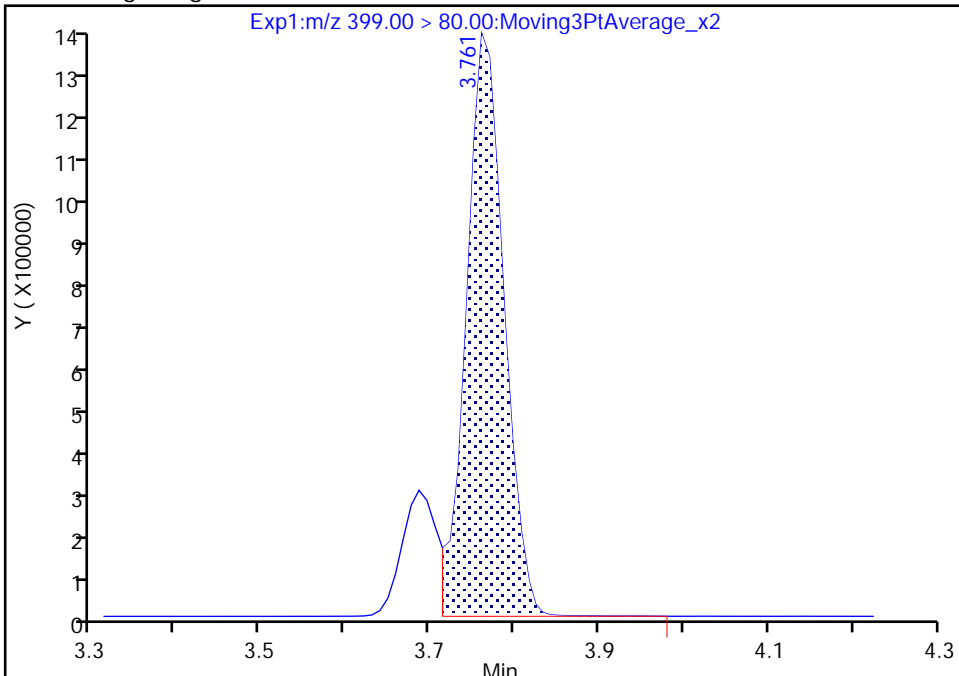
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_010.d  
Injection Date: 09-Jan-2022 11:11:04 Instrument ID: LCA  
Lims ID: IC 5  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

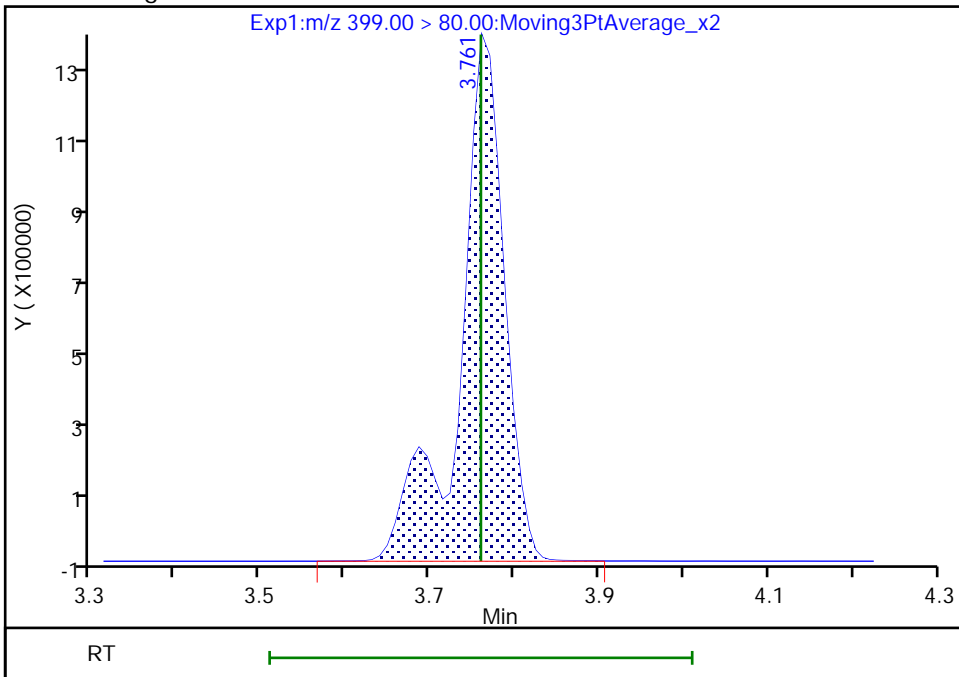
RT: 3.76  
Area: 4233028  
Amount: 1.969553  
Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
Area: 5056303  
Amount: 2.233871  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:22:54  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

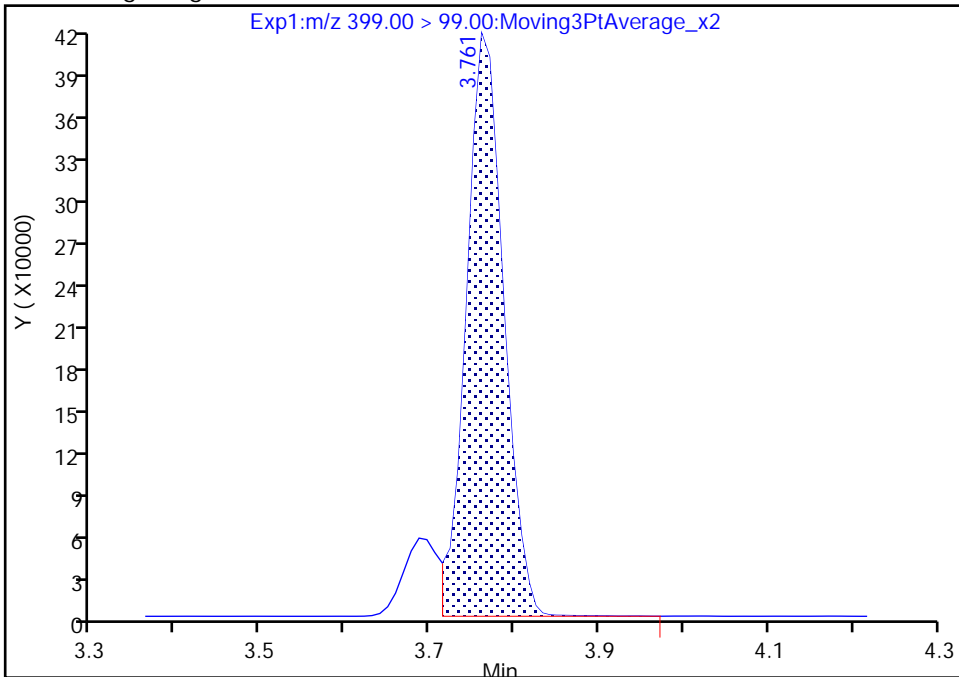
Data File:	\\chromfs\Knoxville\ChromData\LCA\20220109-22186.b_010.d		
Injection Date:	09-Jan-2022 11:11:04	Instrument ID:	LCA
Lims ID:	IC 5		
Client ID:			
Operator ID:	Cochran, Bobby	ALS Bottle#:	10
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	PFC_LCA	Limit Group:	LC - PFC- ICAL
Column:		Detector:	EXP1
		Worklist Smp#:	10

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

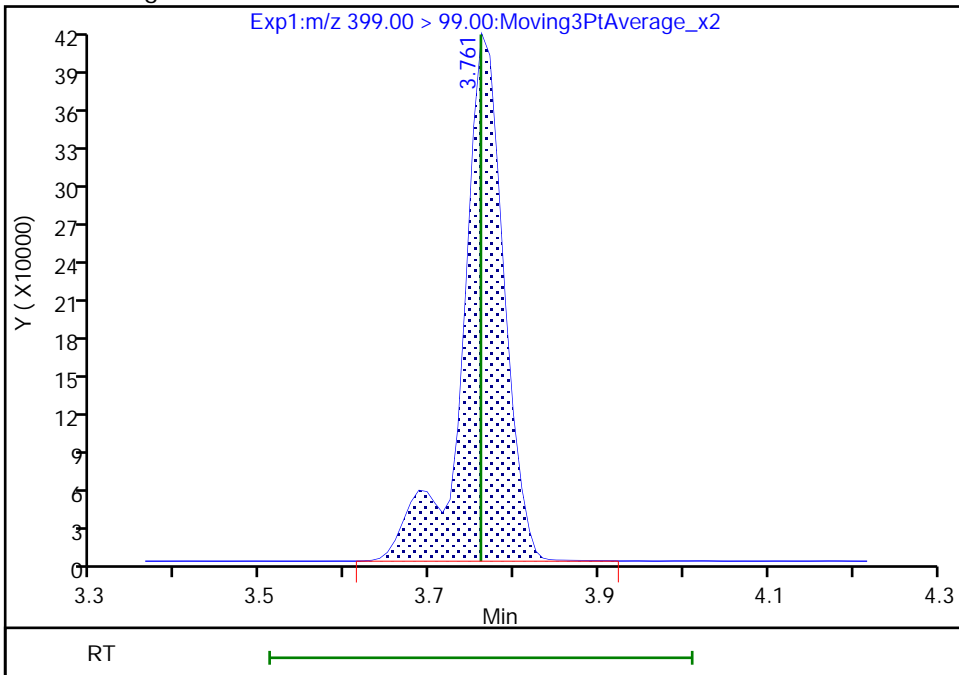
RT: 3.76  
 Area: 1251304  
 Amount: 1.969553  
 Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
 Area: 1405119  
 Amount: 2.233871  
 Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranej, 09-Jan-2022 11:23:01

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

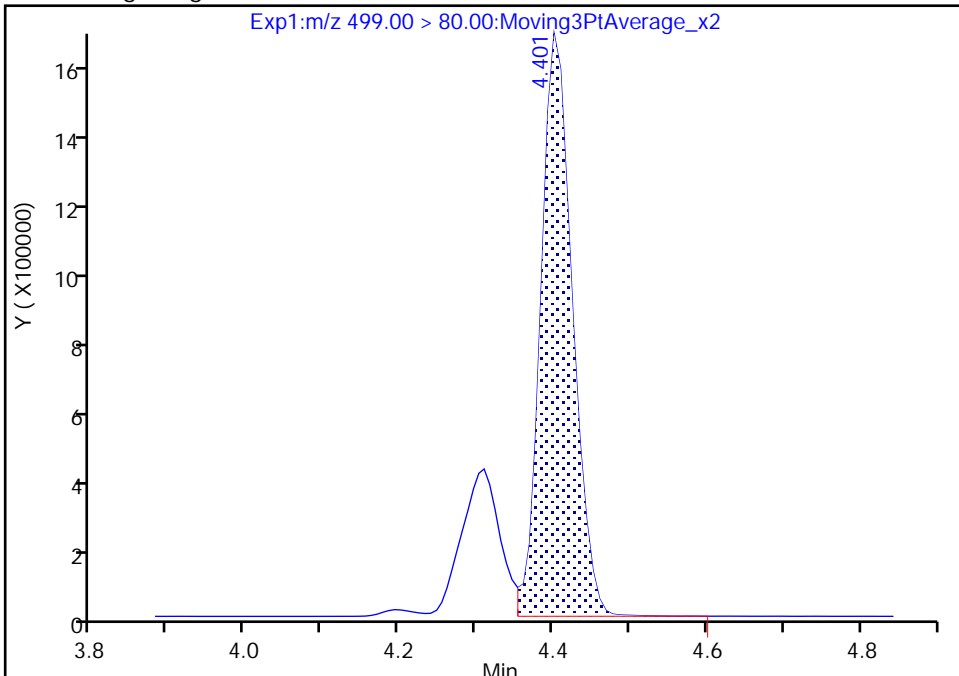
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_010.d  
Injection Date: 09-Jan-2022 11:11:04 Instrument ID: LCA  
Lims ID: IC 5  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

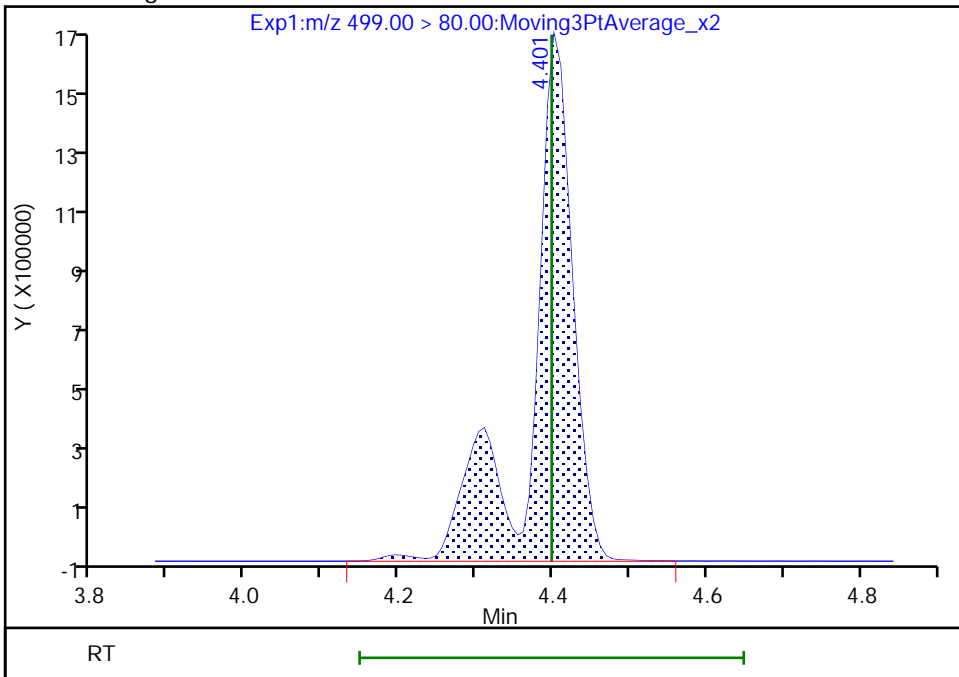
RT: 4.40  
Area: 4547376  
Amount: 1.897366  
Amount Units: ng/ml

Processing Integration Results



RT: 4.40  
Area: 6000595  
Amount: 2.347510  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:23:11  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

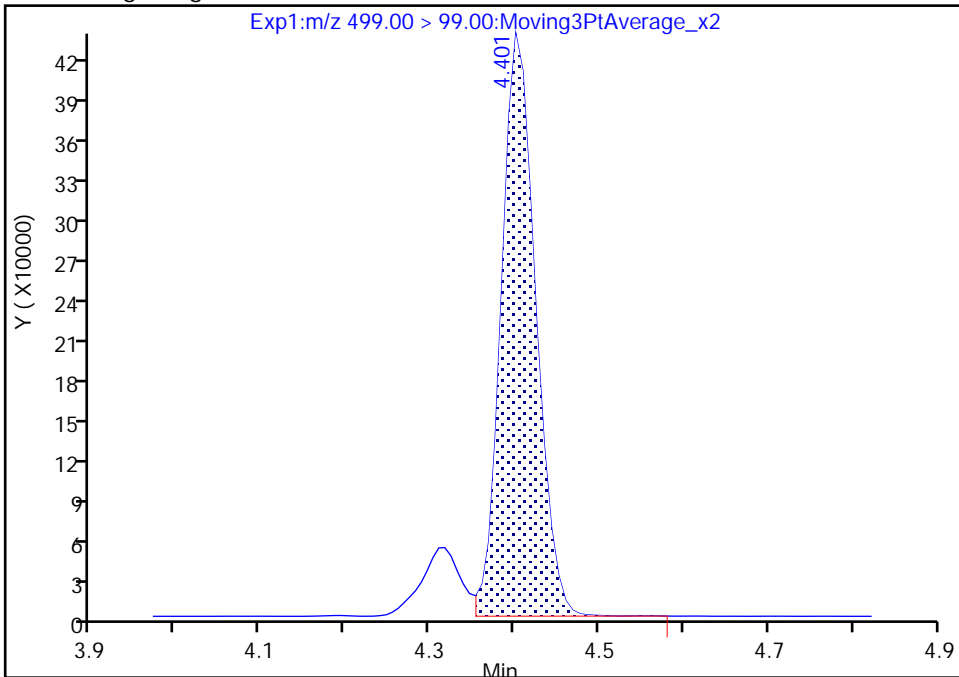
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_010.d  
Injection Date: 09-Jan-2022 11:11:04 Instrument ID: LCA  
Lims ID: IC 5  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

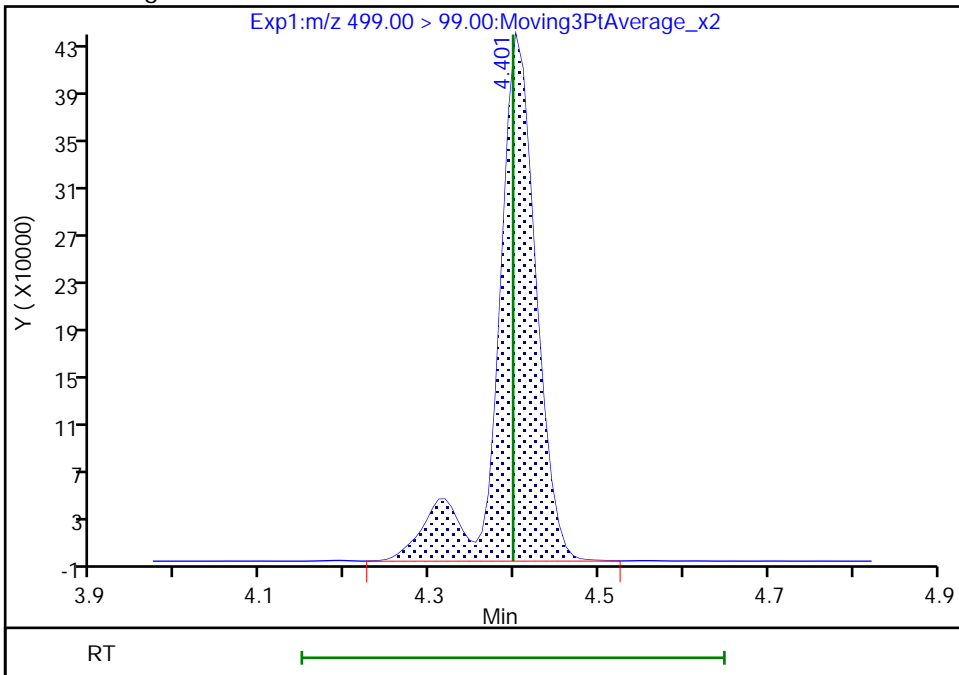
RT: 4.40  
Area: 1230008  
Amount: 1.897366  
Amount Units: ng/ml

Processing Integration Results



RT: 4.40  
Area: 1396173  
Amount: 2.347510  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:23:19

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

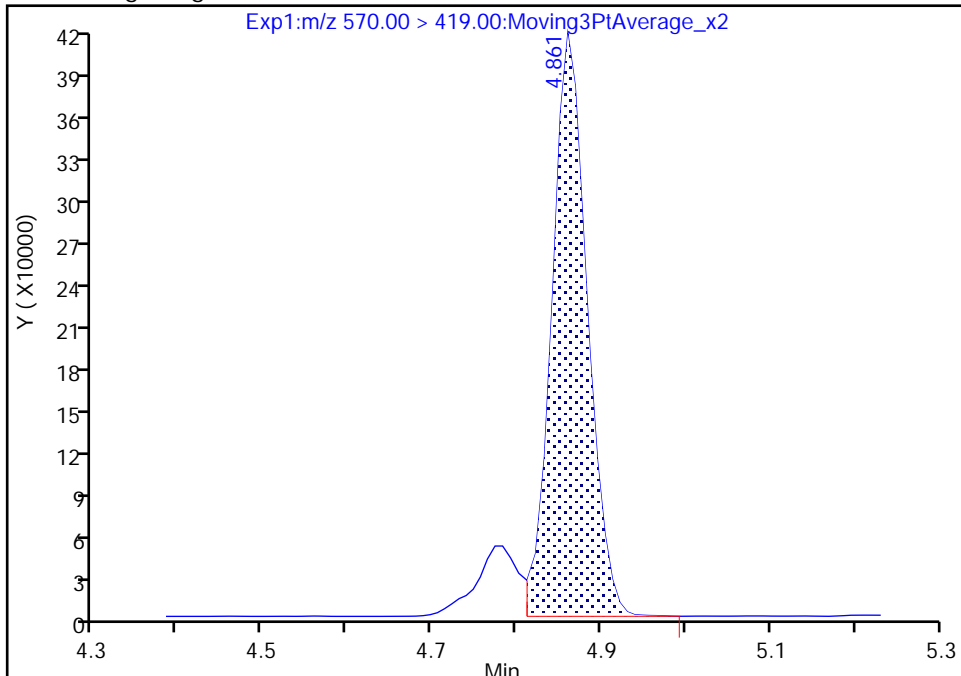
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_010.d  
Injection Date: 09-Jan-2022 11:11:04 Instrument ID: LCA  
Lims ID: IC 5  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

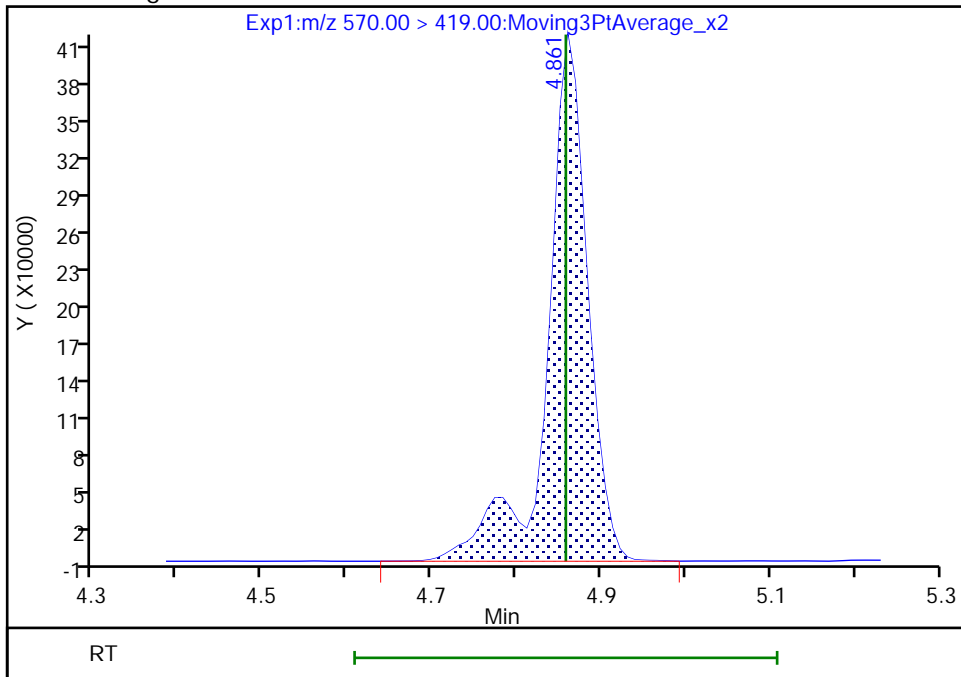
RT: 4.86  
Area: 1213585  
Amount: 2.364152  
Amount Units: ng/ml

Processing Integration Results



RT: 4.86  
Area: 1388453  
Amount: 2.530139  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:23:30  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

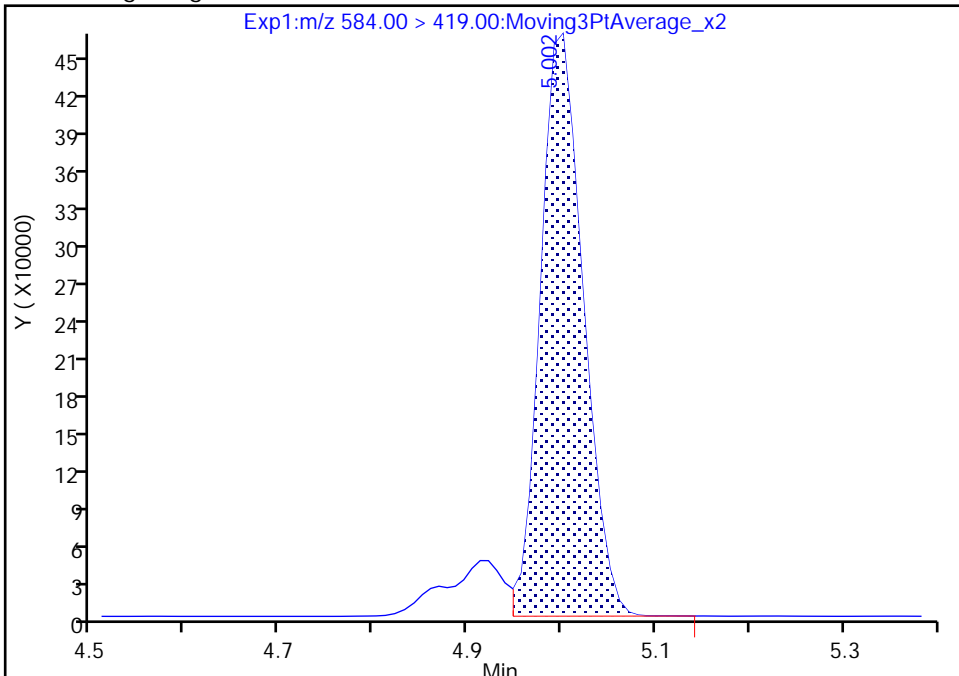
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_010.d  
Injection Date: 09-Jan-2022 11:11:04 Instrument ID: LCA  
Lims ID: IC 5  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

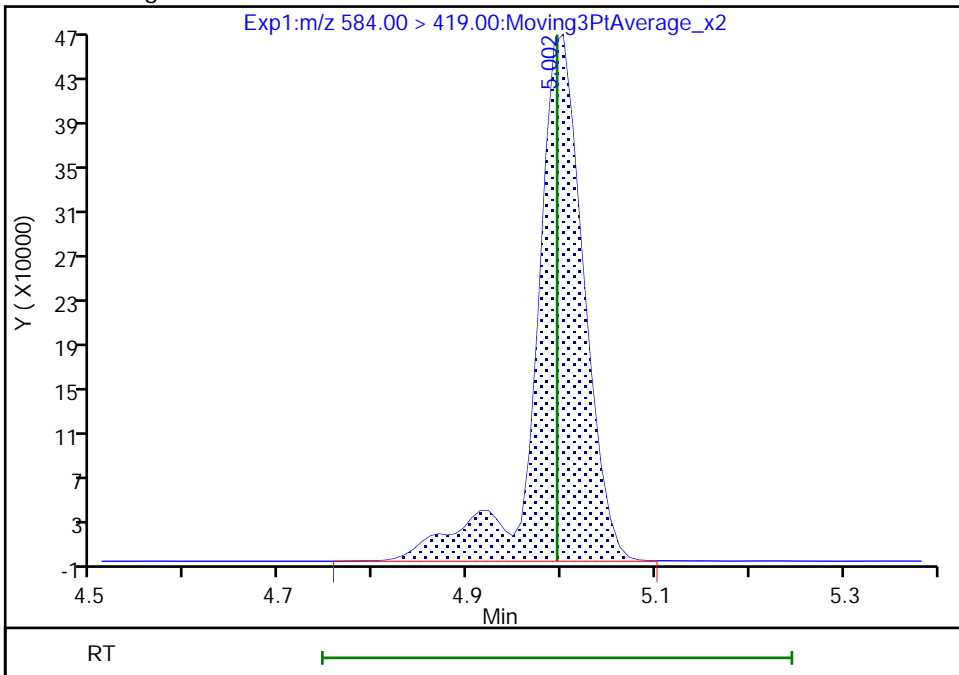
RT: 5.00  
Area: 1458310  
Amount: 2.369291  
Amount Units: ng/ml

Processing Integration Results



RT: 5.00  
Area: 1650265  
Amount: 2.595463  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:23:39  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_011.d  
 Lims ID: IC 6  
 Client ID:  
 Sample Type: IC Calib Level: 6  
 Inject. Date: 09-Jan-2022 11:19:53 ALS Bottle#: 11 Worklist Smp#: 11  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022186-011 ic 6  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 12:31:58 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1686

First Level Reviewer: cochranj Date: 09-Jan-2022 11:37:53

Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										
212.90 > 169.00	2.784	2.785	-0.001	1.000	17680839	5.10		102	4884	
D 1 13C4 PFBA										
217.00 > 172.00	2.784	2.784	0.0	0.678	5525998	1.25		100	12131	
4 Perfluoropentanoic acid										
262.90 > 219.00	3.089	3.093	-0.004	1.000	16756830	5.21		104	4802	
D 3 13C5 PFPeA										
267.90 > 223.00	3.089	3.093	-0.004	0.752	4222495	1.23		98.5	10122	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	3.106	3.109	-0.003	1.000	11661043	4.44	Target=2.68	100	5719	
298.90 > 99.00	3.106	3.109	-0.003	1.000	4287479		2.72(1.34-4.02)	100	5792	
D 6 13C3 PFBS										
301.90 > 80.00	3.106	3.109	-0.003	0.756	2783042	1.22		105	10006	
7 4:2 FTS										
327.00 > 307.00	3.391	3.393	-0.002	1.000	7289864	4.93		105	7601	
D 8 M2-4:2 FTS										
329.00 > 81.00	3.391	3.393	-0.002	0.826	767242	1.09		93.3	1436	
11 Perfluoropentanesulfonic acid										
349.00 > 80.00	3.421	3.422	-0.001	1.102	11177909	4.81	Target=3.48	102	15982	
349.00 > 99.00	3.421	3.422	-0.001	1.102	3116298		3.59(1.74-5.22)	102	8596	
10 Perfluorohexanoic acid										
313.00 > 269.00	3.421	3.423	-0.002	1.000	15740477	4.96	Target=12.57	99.3	5188	
313.00 > 119.00	3.421	3.423	-0.002	1.000	1288002		12.22(6.28-18.85)	99.3	1802	
D 9 13C2 PFHxA										
315.00 > 270.00	3.421	3.423	-0.002	0.833	4565306	1.24		99.6	8520	
13 HFPO-DA										
285.00 > 169.00	3.518	3.524	-0.006	1.000	12316846	5.14		103	6599	



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	3.518	3.524	-0.006	0.857	2216220	1.26		101	4067	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.759	3.760	-0.001	1.000	9867857	4.70	Target=3.48	103	9065	M
399.00 > 99.00	3.759	3.760	-0.001	1.000	2796783		3.53(1.74-5.21)	103	6880	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.759	3.761	-0.002	0.915	1801353	1.18		99.7	5509	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.768	3.772	-0.004	1.000	18186660	4.97	Target=3.29	99.4	6615	
363.00 > 169.00	3.768	3.772	-0.004	1.000	5866419		3.10(1.65-4.94)	99.4	3228	
D 14 13C4 PFHpA										
367.00 > 322.00	3.768	3.772	-0.004	0.918	4368922	1.25		99.6	8514	
68 DONA										
377.00 > 251.00	3.806	3.807	-0.001	0.866	28147768	4.85	Target=1.76	103	11112	
377.00 > 85.00	3.806	3.807	-0.001	0.866	16484052		1.71(0.88-2.64)	103	176	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.089	4.092	-0.003	0.931	10290455	4.89	Target=3.91	103	9975	
449.00 > 99.00	4.089	4.092	-0.003	0.931	2678835		3.84(1.95-5.86)	103	9433	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.098	4.100	-0.002	0.998	4428641	1.26		101	7922	
19 6:2 FTS										
427.00 > 407.00	4.098	4.101	-0.003	1.000	5660505	4.88		103	8692	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.098	4.100	-0.002	0.998	764954	1.08		90.7	2559	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.106	4.109	-0.003	1.000	20503881	5.08	Target=2.61	102	6203	
413.00 > 169.00	4.106	4.109	-0.003	1.000	8046315		2.55(1.30-3.91)	102	4659	
* 22 13C2 PFOA										
415.00 > 370.00	4.106	4.109	-0.003		4837679	1.25			10314	
D 21 13C4 PFOA										
417.00 > 372.00	4.106	4.109	-0.003	1.000	4399864	1.21		97.0	7529	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.394	4.396	-0.002	1.000	582576	1.19		99.5	2914	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.394	4.398	-0.004	1.000	11516632	4.75	Target=4.37	102	5977	M
499.00 > 99.00	4.394	4.398	-0.004	1.000	2633758		4.37(2.18-6.55)	102	4663	M
D 25 13C4 PFOS										
503.00 > 80.00	4.394	4.398	-0.004	1.070	2637457	1.20		100	3375	
26 Perfluorononanoic acid										
463.00 > 419.00	4.419	4.421	-0.002	1.000	20662331	5.04	Target=4.48	101	10170	
463.00 > 169.00	4.419	4.421	-0.002	1.000	4518493		4.57(2.24-6.72)	101	4972	
D 27 13C5 PFNA										
468.00 > 423.00	4.419	4.421	-0.002	1.076	5842775	1.22		97.9	10264	
63 9CIFOS										
531.00 > 351.00	4.553	4.558	-0.005	1.036	22796459	4.70		101	14071	

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	4.681	4.682	-0.001	1.065	10858318	5.05	Target=3.84	105	8870	
549.00 > 99.00	4.673	4.682	-0.009	1.063	2794524		3.89(1.92-5.77)	105	7645	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.698	4.700	-0.002	1.000	13658161	5.25		105	4554	
D 34 13C8 FOSA										
506.00 > 78.00	4.698	4.700	-0.002	1.144	3437917	1.16		92.5	3326	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.706	4.709	-0.003	1.000	21676188	5.08	Target=11.50	102	10730	
513.00 > 169.00	4.706	4.709	-0.003	1.000	1933112		11.21(5.75-17.25)	102	975	
D 32 13C2 PFDA										
515.00 > 470.00	4.706	4.709	-0.003	1.146	5533817	1.20		96.0	7856	
31 8:2 FTS										
527.00 > 507.00	4.715	4.721	-0.006	1.000	5273346	4.88		102	4793	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.715	4.721	-0.006	1.148	914379	1.14		95.3	1706	
36 NMeFOSAA										
570.00 > 419.00	4.852	4.858	-0.006	1.000	2665259	5.00		99.9	3287	M
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.852	4.854	-0.002	1.182	681894	1.26		101	246	
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.940	4.942	-0.002	1.124	10146252	4.94	Target=3.69	102	17395	
599.00 > 99.00	4.940	4.942	-0.002	1.124	2708533		3.75(1.84-5.53)	102	7810	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.966	4.973	-0.007	1.000	21821508	5.01	Target=8.29	100	11225	
563.00 > 169.00	4.966	4.973	-0.007	1.000	2576527		8.47(4.14-12.43)	100	7658	
D 39 13C2 PFUnA										
565.00 > 520.00	4.966	4.973	-0.007	1.209	5615452	1.22		97.6	11414	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.984	4.989	-0.005	1.214	724743	1.22		97.4	2973	
40 NEtFOSA										
584.00 > 419.00	4.993	4.995	-0.002	1.002	2908898	4.97		99.4	2217	M
57 11C1FOS										
631.00 > 451.00	5.072	5.075	-0.003	1.154	18048233	4.89		104	11373	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.205	5.207	-0.002	1.000	24177058	5.15	Target=6.82	103	12884	
613.00 > 169.00	5.205	5.207	-0.002	1.000	3559201		6.79(3.41-10.23)	103	5331	
D 43 13C2 PFDoA										
615.00 > 570.00	5.205	5.207	-0.002	1.268	5892161	1.22		97.7	13986	
50 10:2 FTS										
627.00 > 607.00	5.231	5.231	0.0	1.110	8656158	4.98		103	13205	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.275	5.279	-0.004	1.285	723771	1.25		99.8	690	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.275	5.281	-0.006	1.285	520919	1.26		101	51.5	
61 NMeFOSA										
512.00 > 169.00	5.284	5.286	-0.002	1.002	2239289	5.06		101	875	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
49 N-MeFOSE-M										
616.00 > 59.00	5.284	5.290	-0.006	1.002	3444502	4.95		99.0	3358	
54 PFDoS										
699.00 > 80.00	5.384	5.383	0.001	1.225	10381999	5.13	Target=4.36	106	10226	
699.00 > 99.00	5.384	5.383	0.001	1.225	2391072		4.34(2.18-6.55)	106	7411	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.415	5.417	-0.003	1.040	20229864	5.18	Target=6.19	104	13159	
663.00 > 169.00	5.415	5.417	-0.003	1.040	3291184		6.15(3.09-9.28)	104	7600	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.435	5.437	-0.002	1.324	736824	1.27		101	318	
62 N-EtFOSE-M										
630.00 > 59.00	5.445	5.450	-0.005	1.002	3918307	5.01		100	2964	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.445	5.450	-0.005	1.326	442829	1.30		104	751	
56 N-EtFOSA-M										
526.00 > 169.00	5.455	5.457	-0.002	1.002	2160439	5.10		102	753	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.598	5.600	-0.002	1.000	2545905	5.06	Target=1.09	101	6436	
713.00 > 219.00	5.598	5.600	-0.002	1.000	2402723		1.06(0.54-1.63)	101	7866	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.598	5.600	-0.002	1.363	4681083	1.27		102	8707	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.905	5.907	-0.002	1.000	13832628	5.05	Target=8.22	101	6893	
813.00 > 169.00	5.905	5.907	-0.002	1.000	1712351		8.08(4.11-12.33)	101	3164	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.905	5.907	-0.002	1.438	3181783	1.28		102	5990	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.160	6.162	-0.002	1.043	12749801	5.09	Target=11.60	102	8028	
913.00 > 169.00	6.160	6.162	-0.002	1.043	1124331		11.34(5.80-17.40)	102	2805	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L6PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_011.d

Injection Date: 09-Jan-2022 11:19:53

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

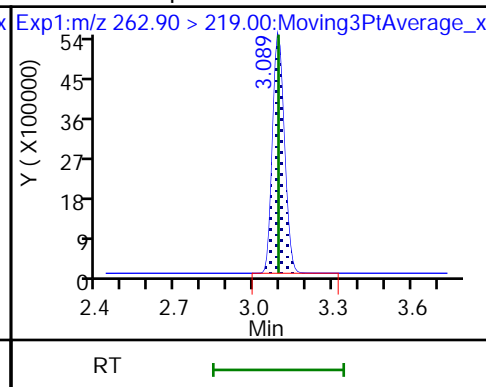
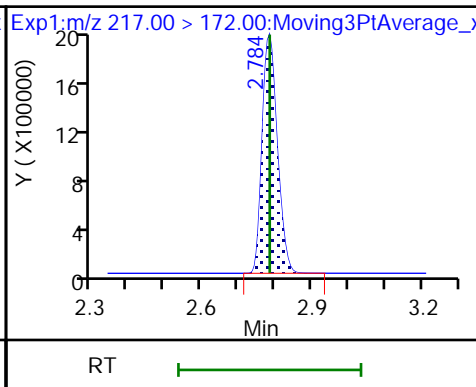
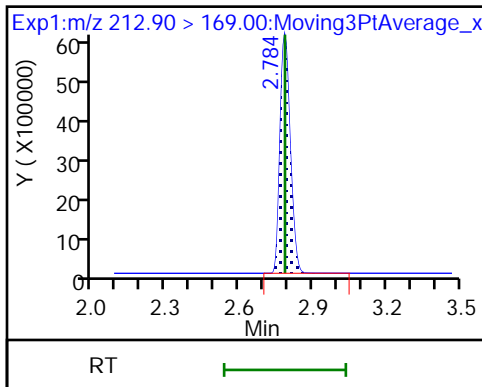
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

2 Perfluorobutanoic acid

D 1 13C4 PFBA

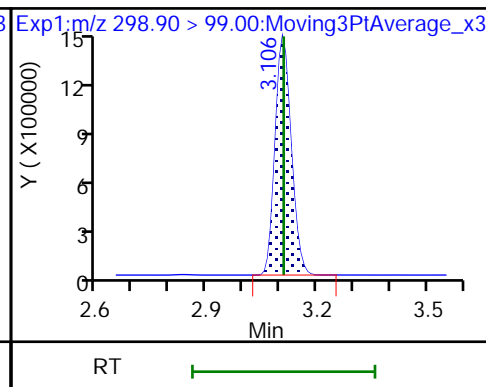
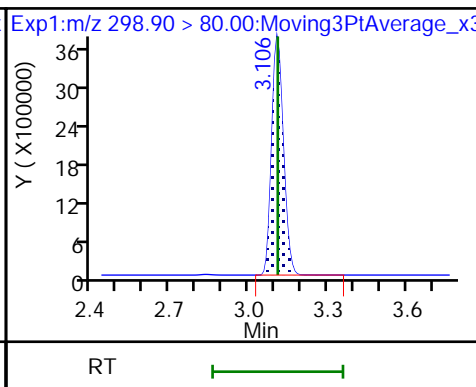
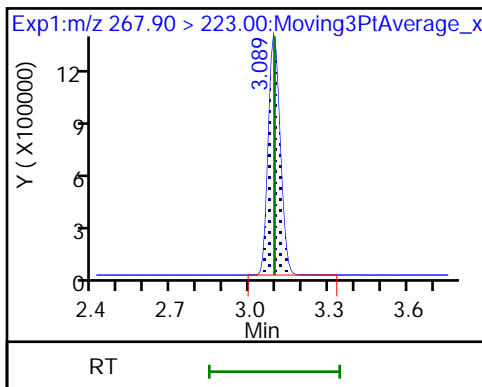
4 Perfluoropentanoic acid



D 3 13C5 PFPeA

5 Perfluorobutanesulfonic acid

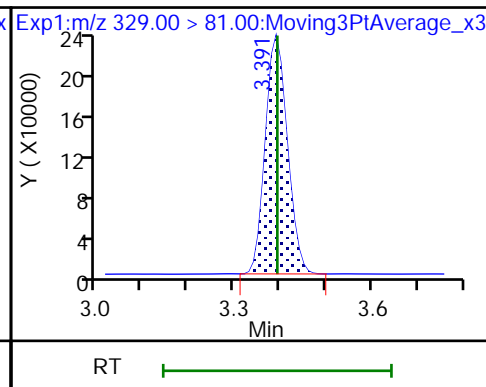
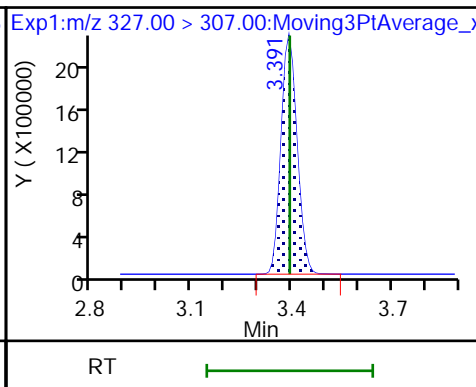
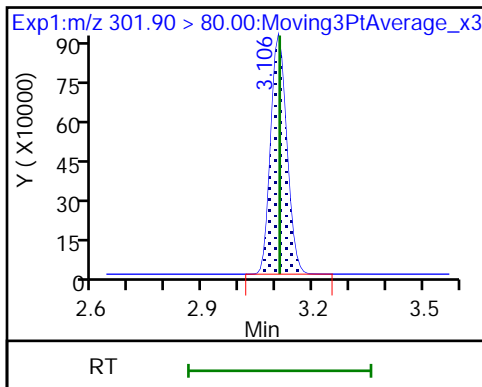
5 Perfluorobutanesulfonic acid



D 6 13C3 PFBS

7 4:2 FTS

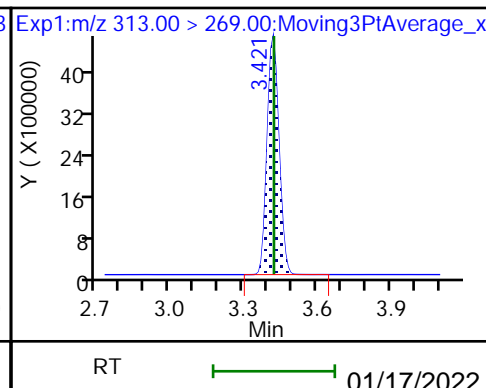
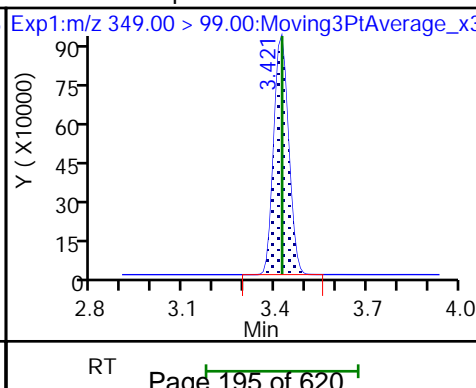
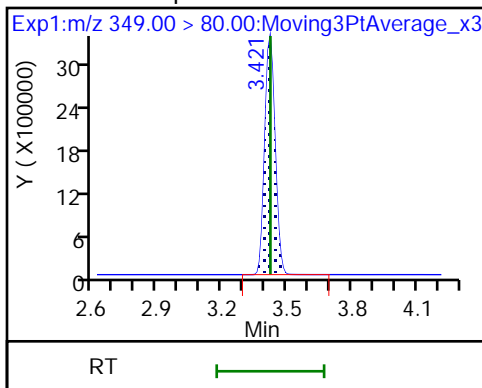
D 8 M2-4:2 FTS

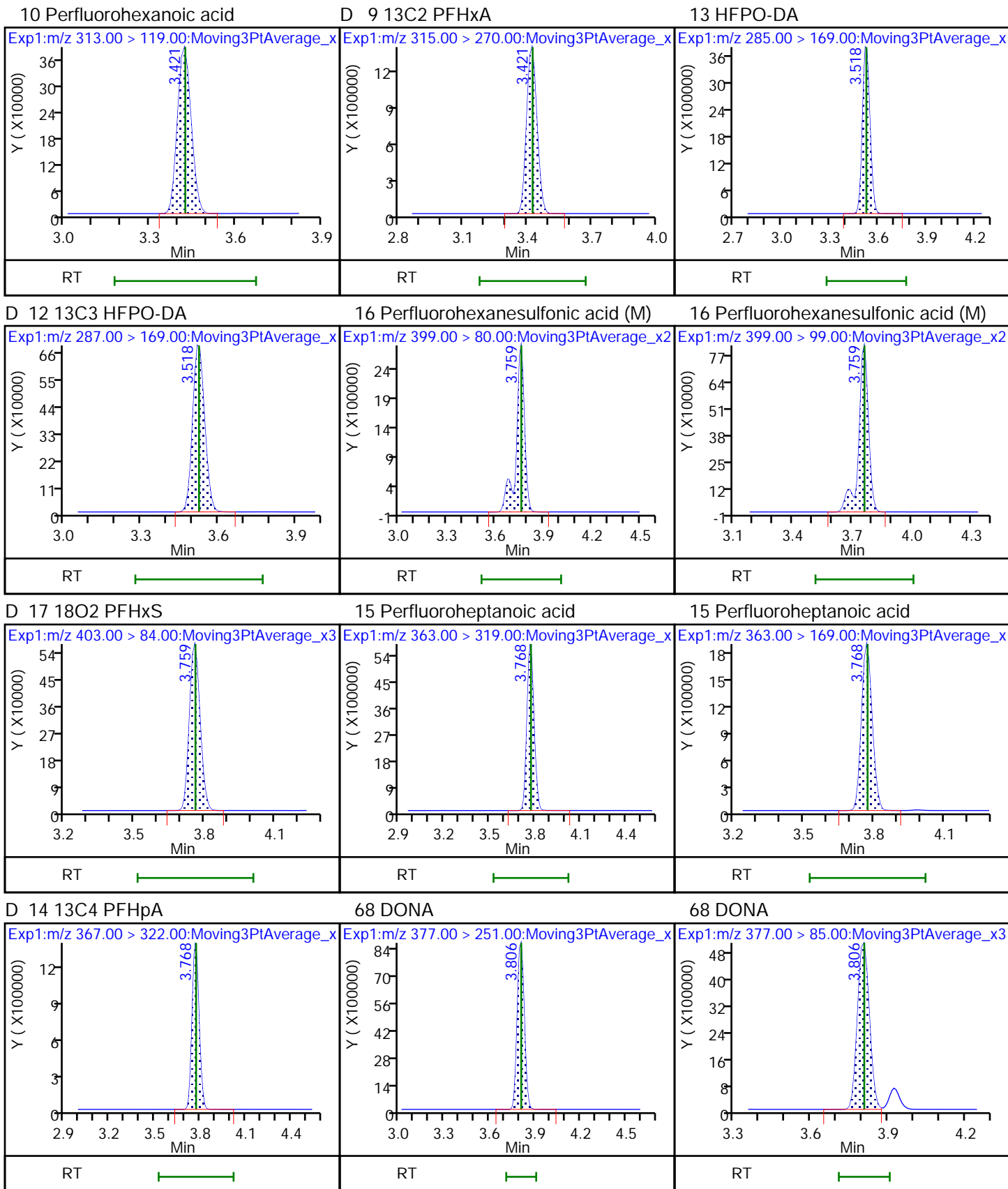


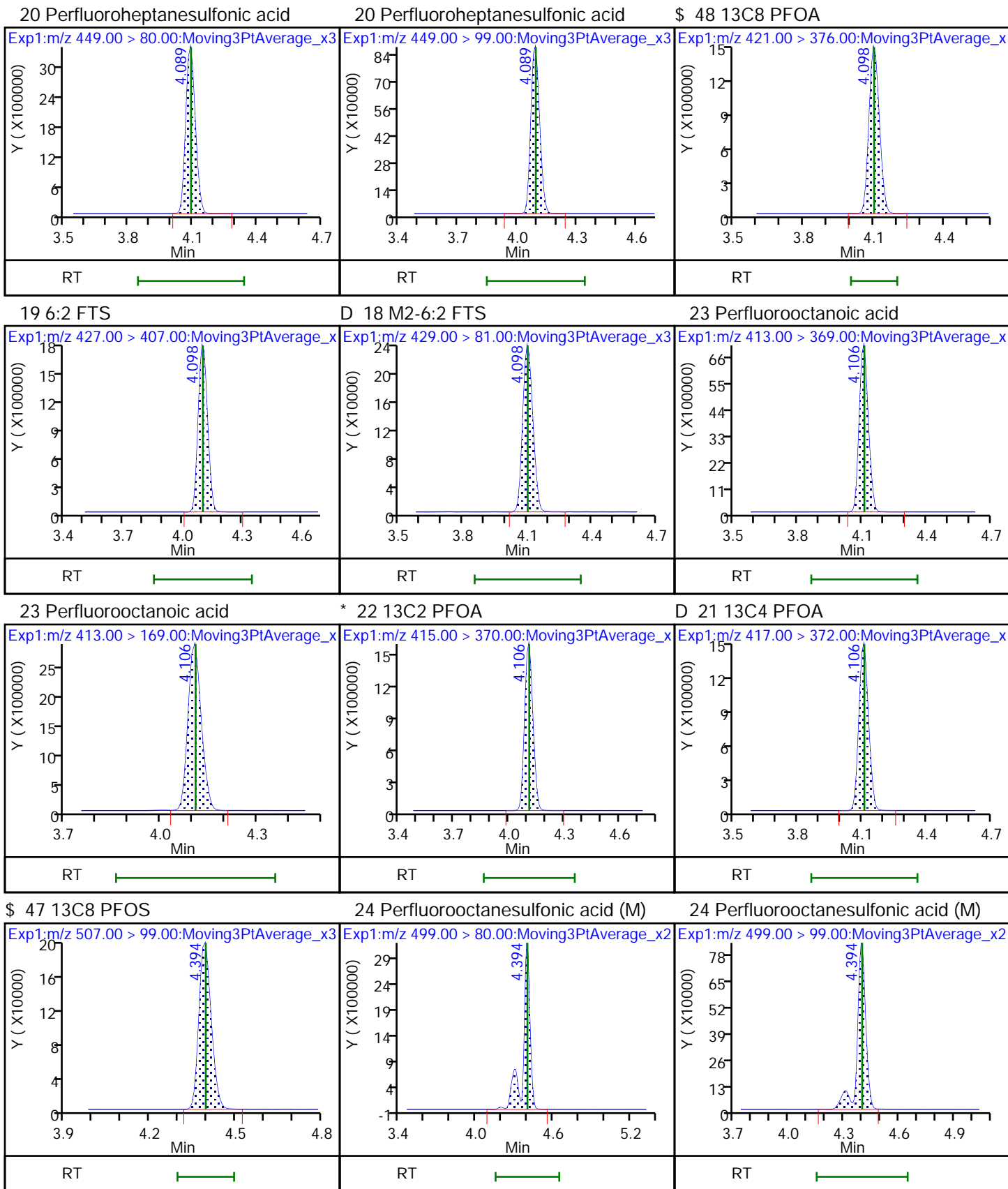
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

10 Perfluorohexanoic acid



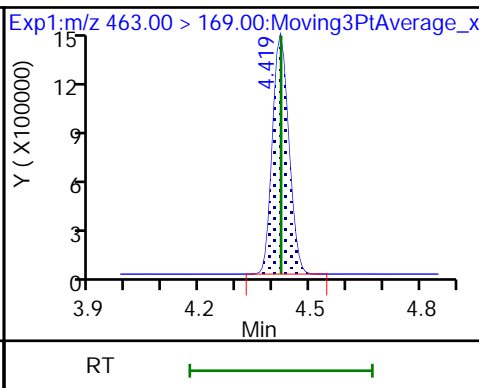
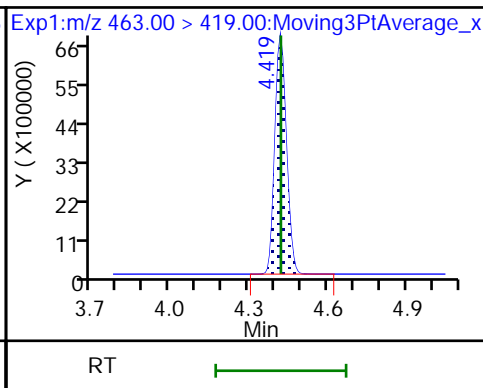
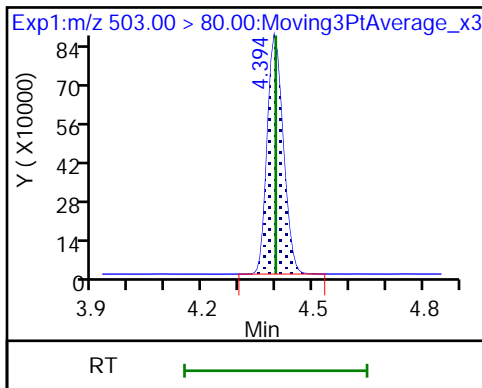




D 25 13C4 PFOS

26 Perfluorononanoic acid

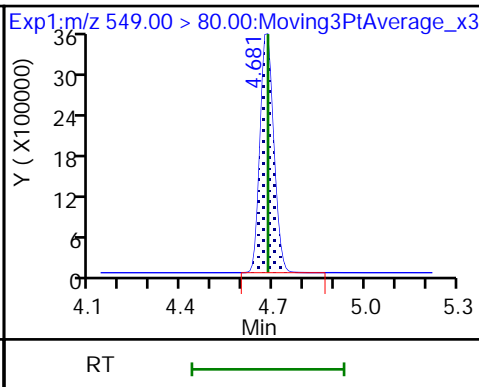
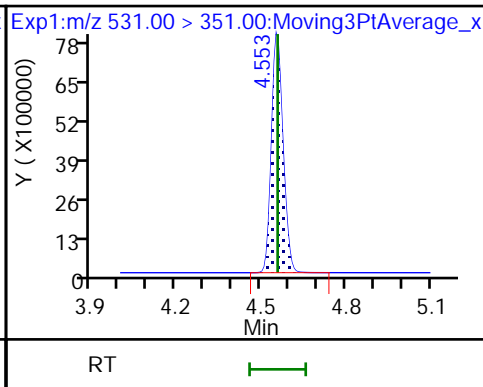
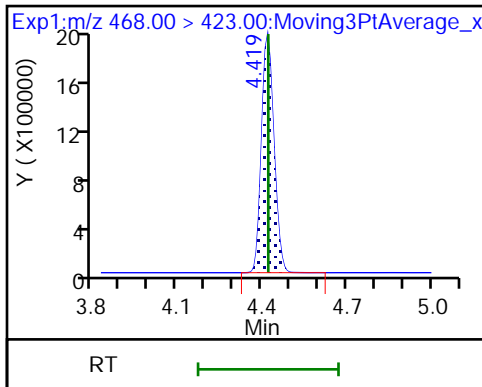
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS

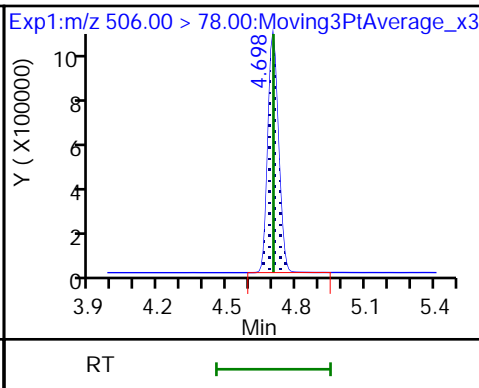
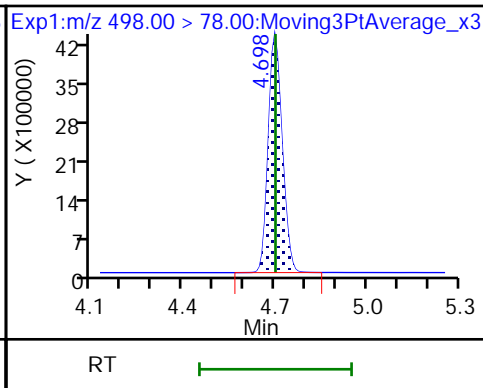
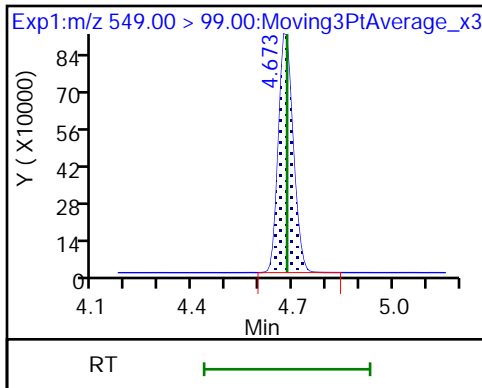
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

33 Perfluorooctanesulfonamide

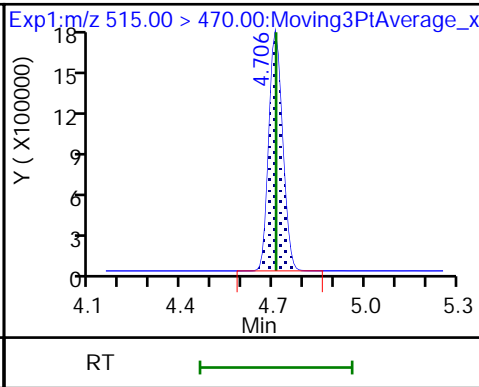
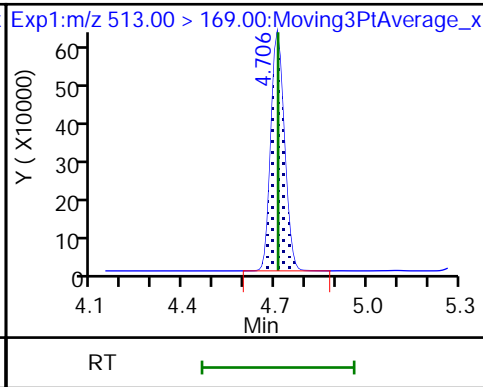
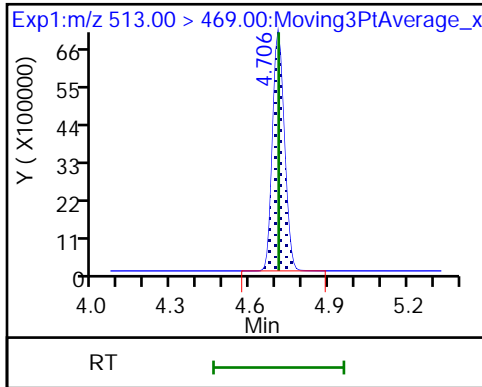
D 34 13C8 FOSA

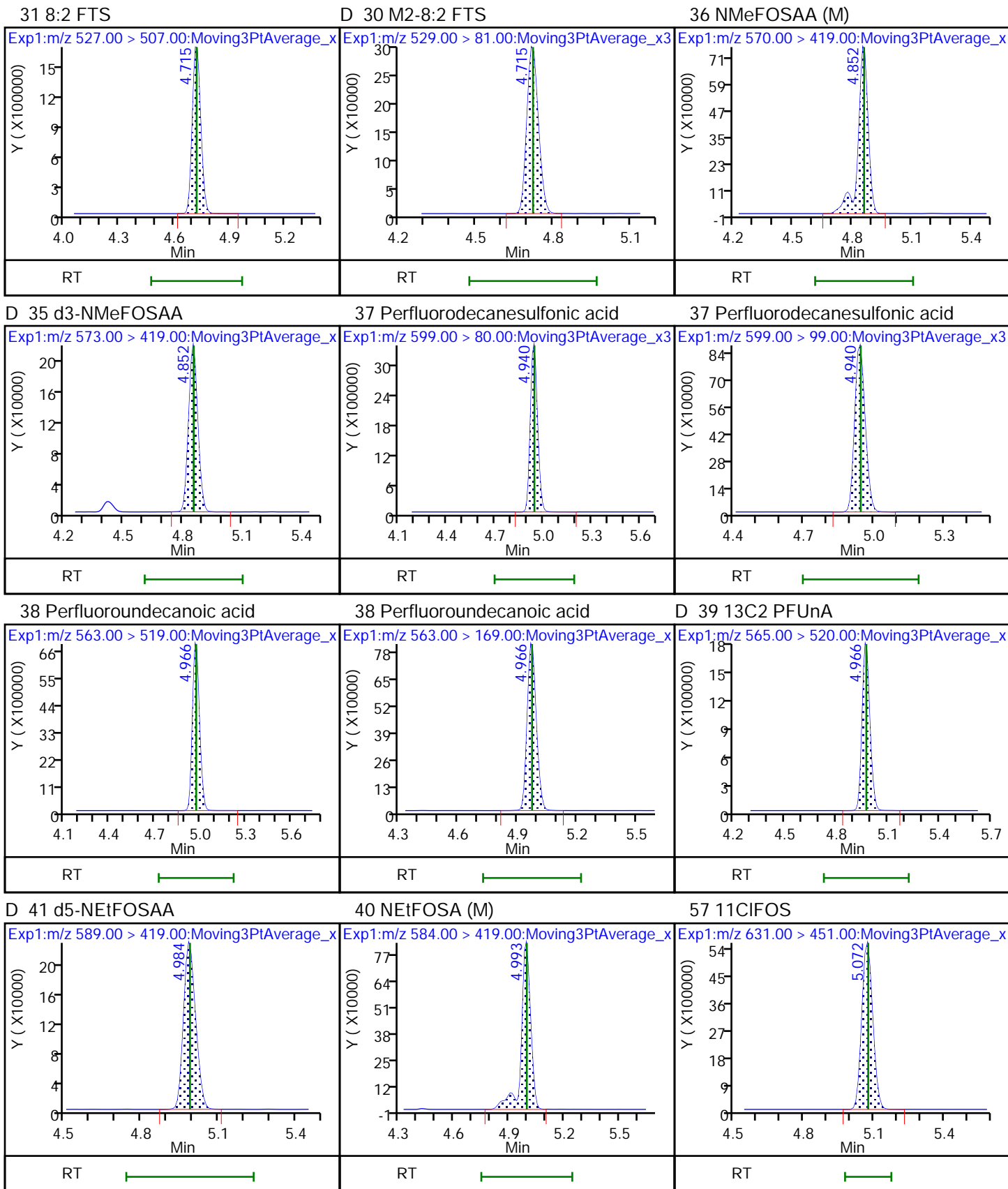


29 Perfluorodecanoic acid

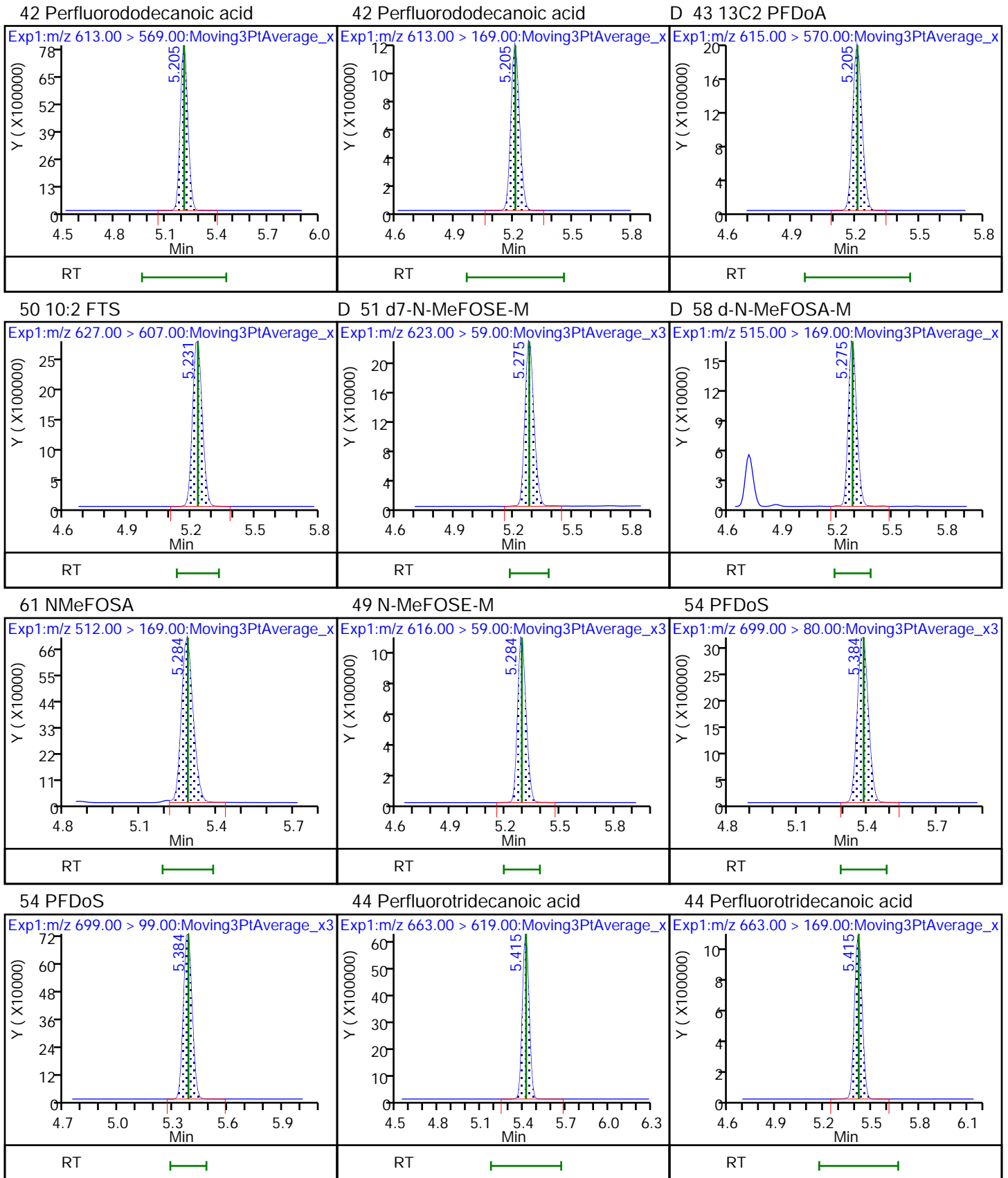
29 Perfluorodecanoic acid

D 32 13C2 PFDA





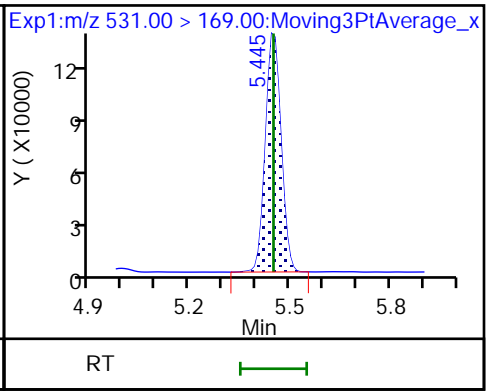
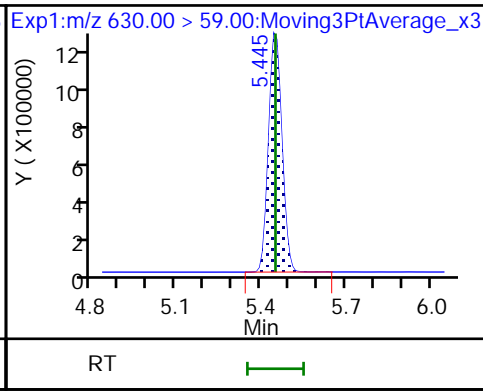
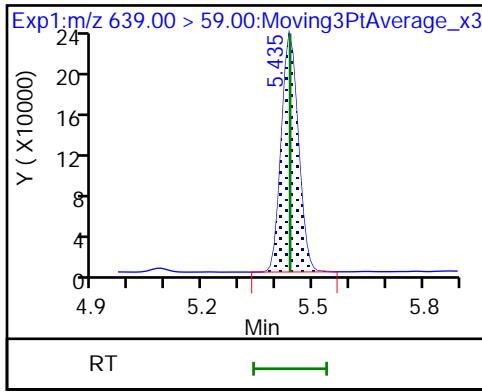




D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M

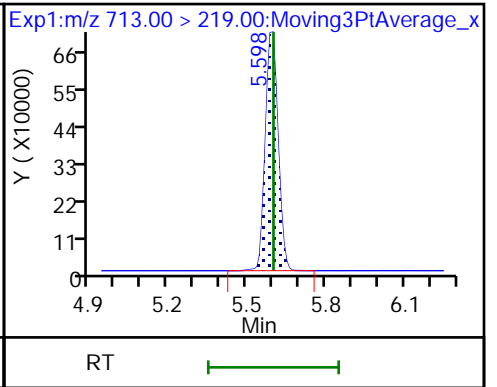
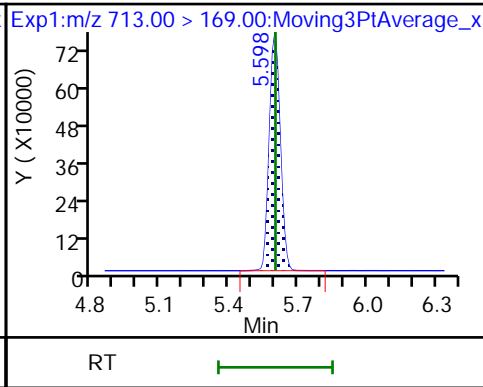
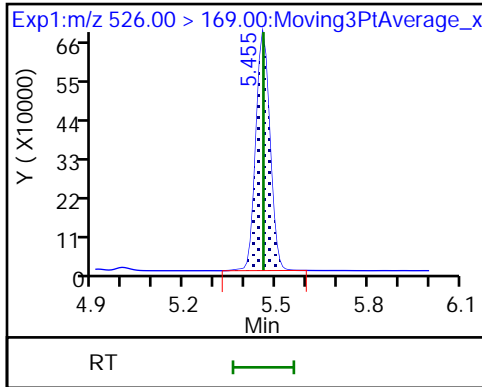
D 52 d-N-EtFOSA-M



56 N-EtFOSA-M

45 Perfluorotetradecanoic acid

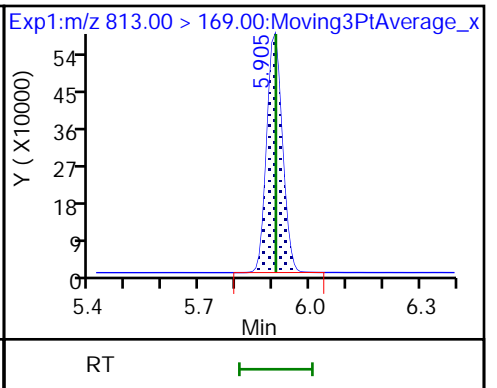
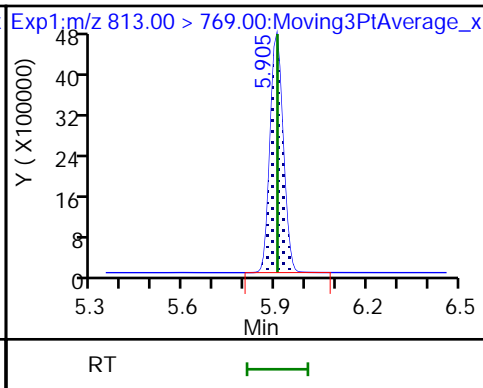
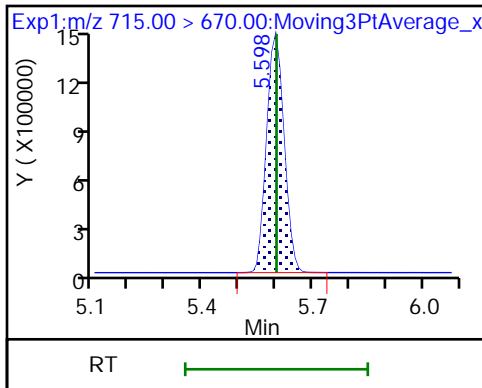
45 Perfluorotetradecanoic acid



D 46 13C2 PFTeDA

55 Perfluorohexadecanoic acid

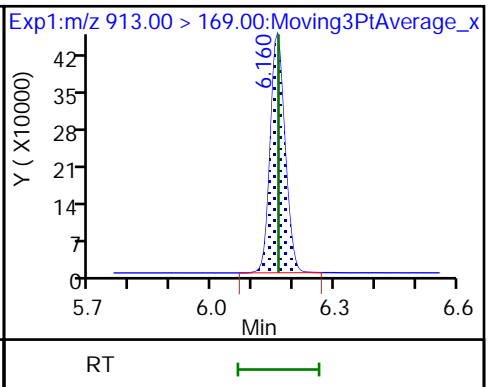
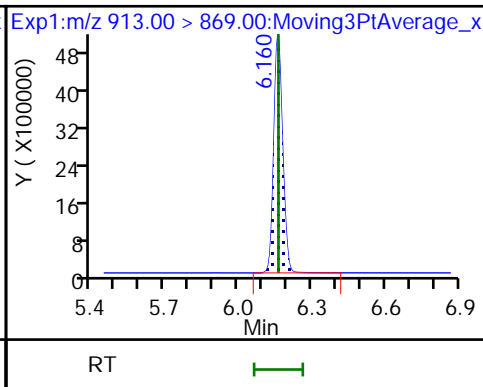
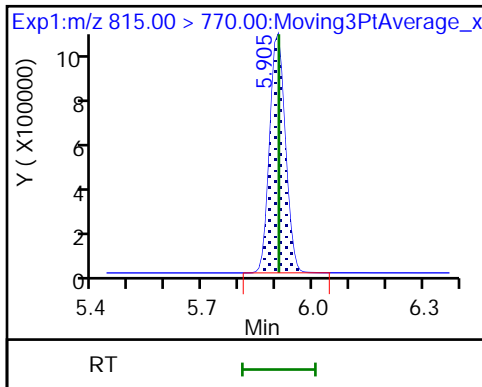
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid





Eurofins TestAmerica, Knoxville

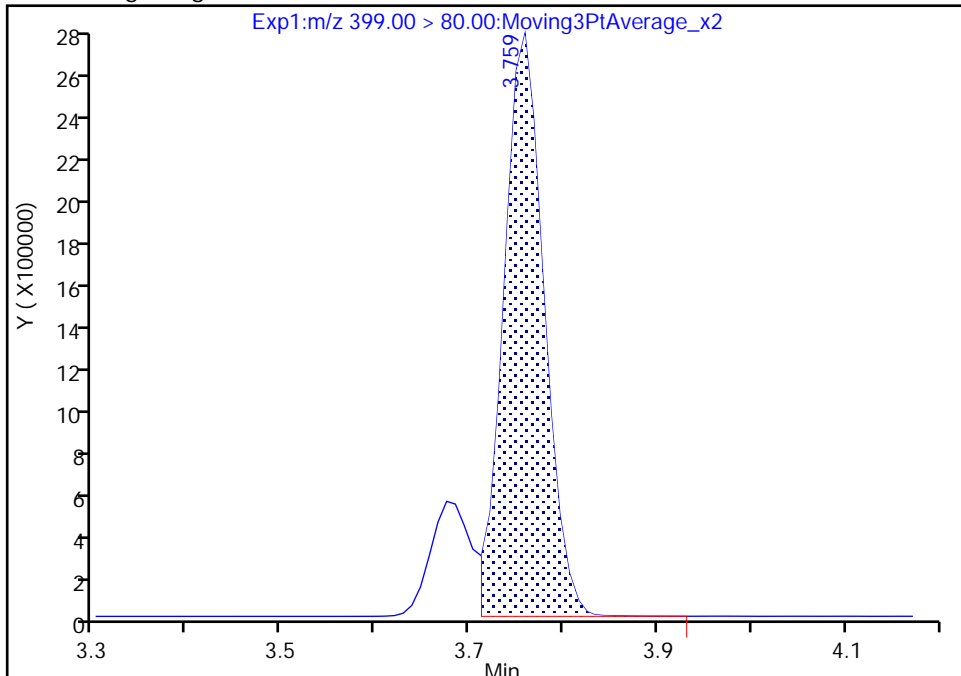
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Lims ID: IC 6  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 11 Worklist Smp#: 11  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

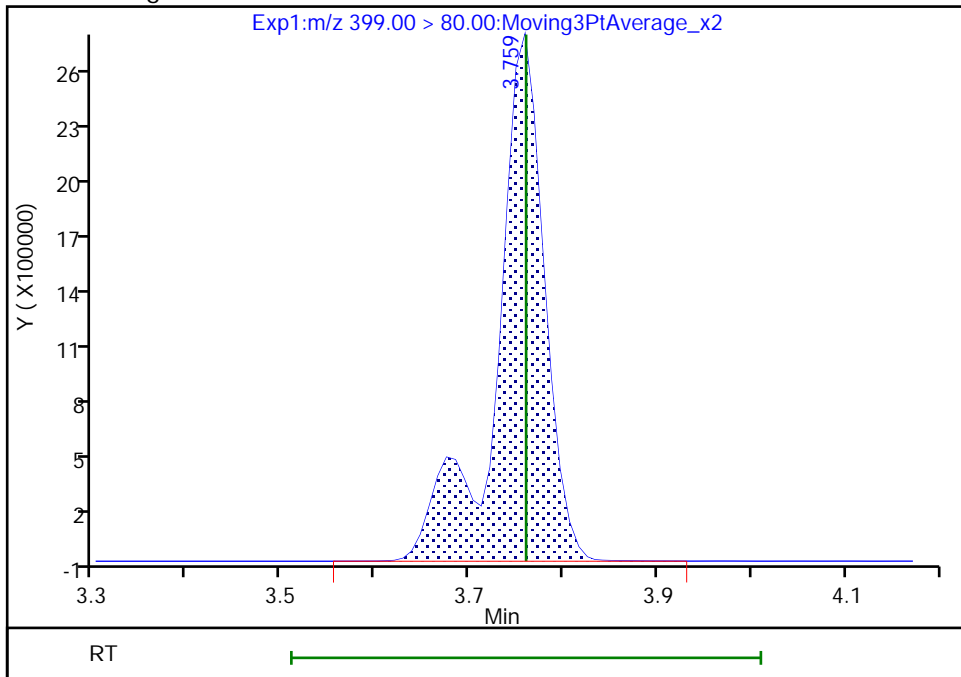
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Area: 8235487  
Amount: 4.081766  
Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
Area: 9867857  
Amount: 4.703557  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:36:47  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

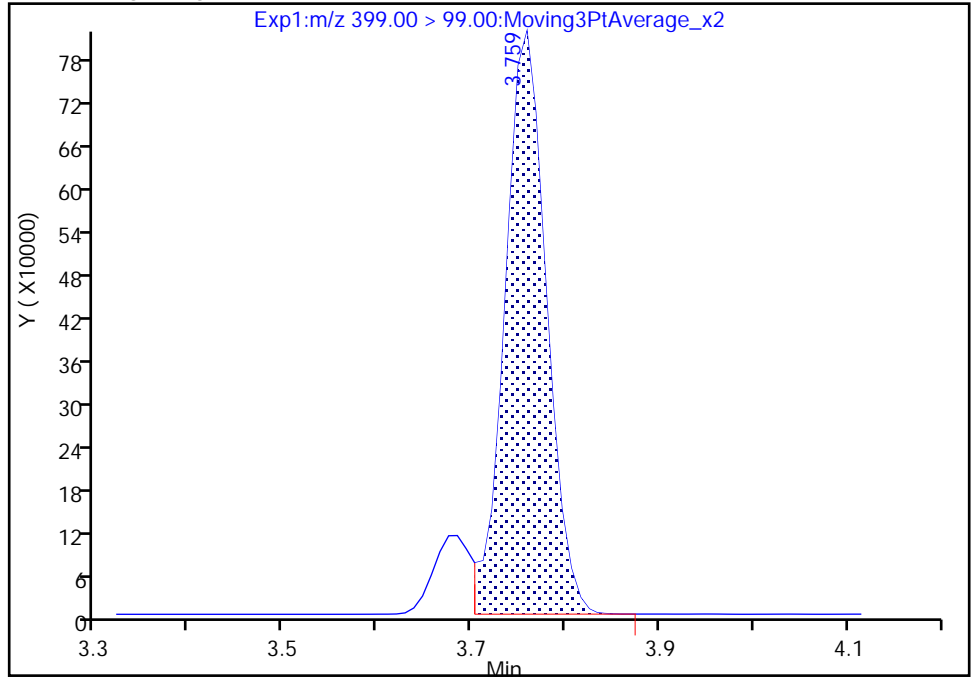
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_011.d  
Injection Date: 09-Jan-2022 11:19:53 Instrument ID: LCA  
Lims ID: IC 6  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 11 Worklist Smp#: 11  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

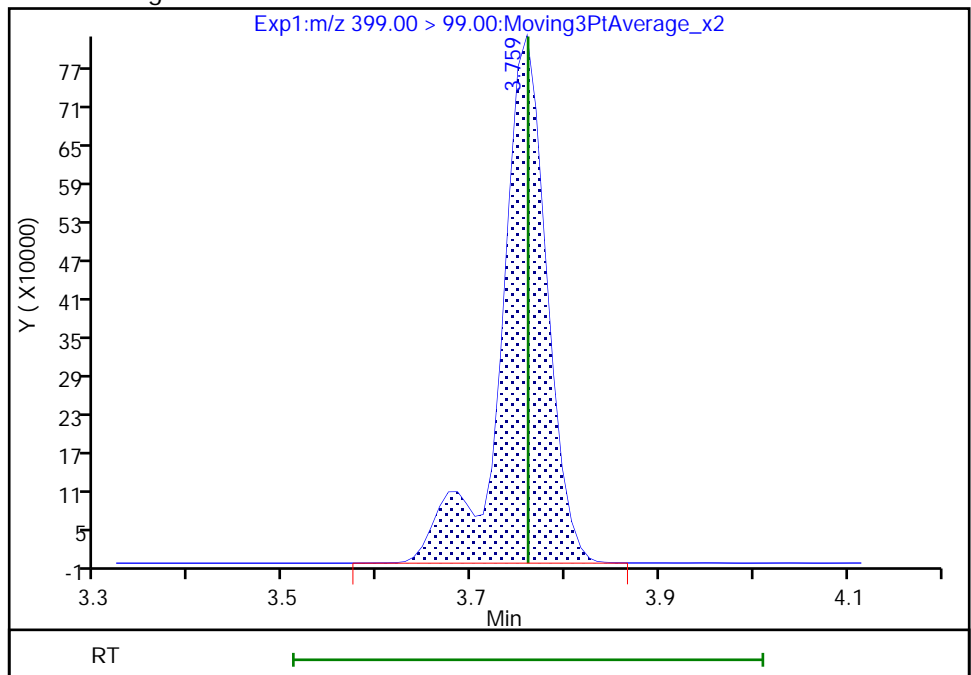
RT: 3.76  
Area: 2500128  
Amount: 4.081766  
Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
Area: 2796783  
Amount: 4.703557  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:36:56

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

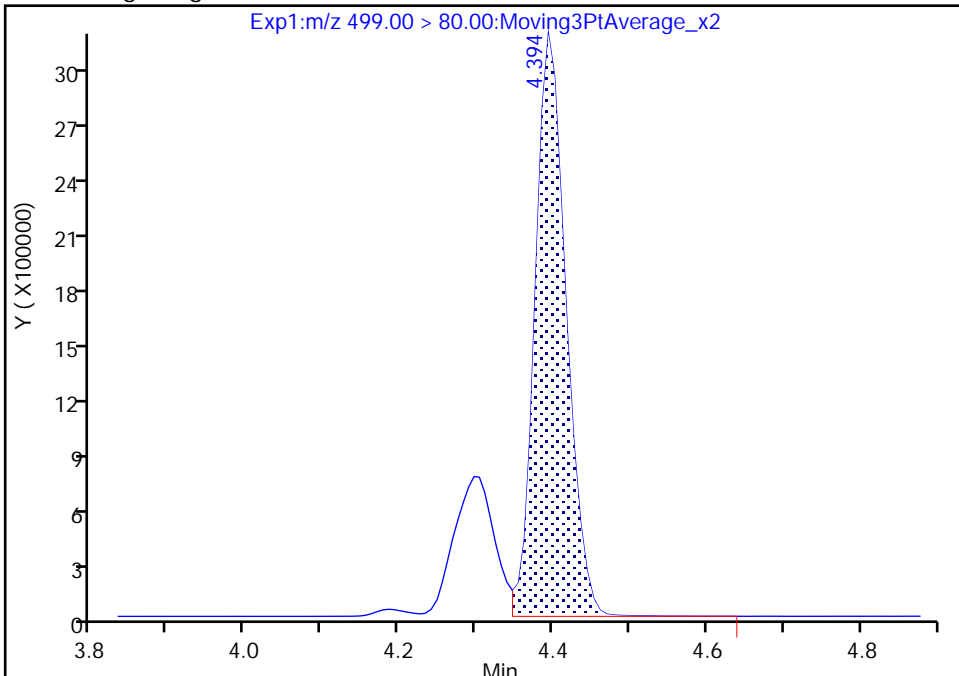
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Injection Date: 09-Jan-2022 11:19:53 Instrument ID: LCA  
Lims ID: IC 6  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 11 Worklist Smp#: 11  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

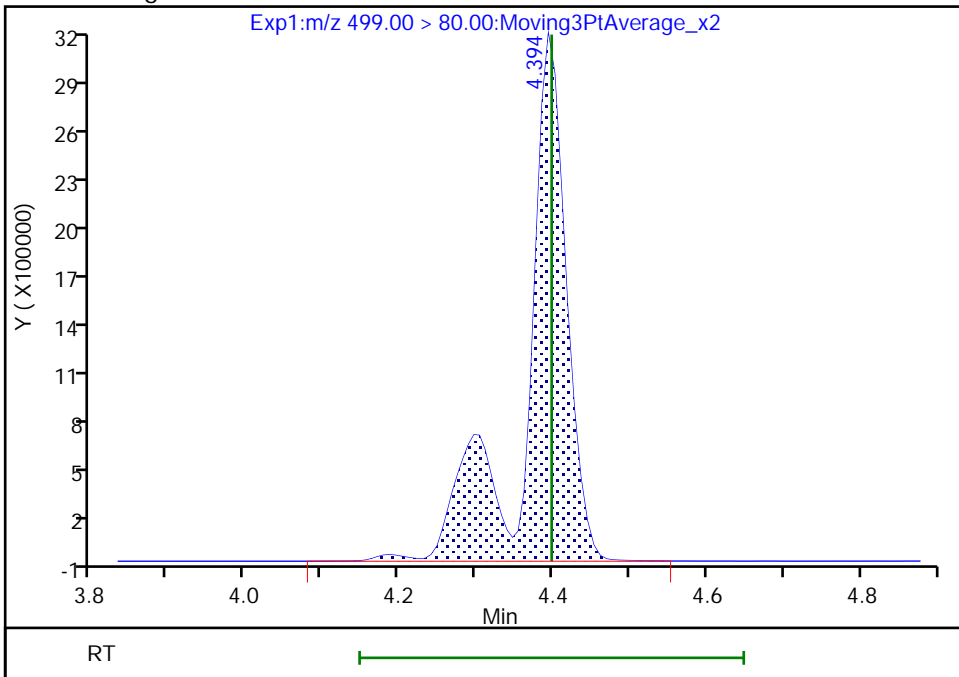
RT: 4.39  
Area: 8696026  
Amount: 3.770615  
Amount Units: ng/ml

Processing Integration Results



RT: 4.39  
Area: 11516632  
Amount: 4.748873  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:37:09  
Audit Action: Manually Integrated

Eurofins TestAmerica, Knoxville

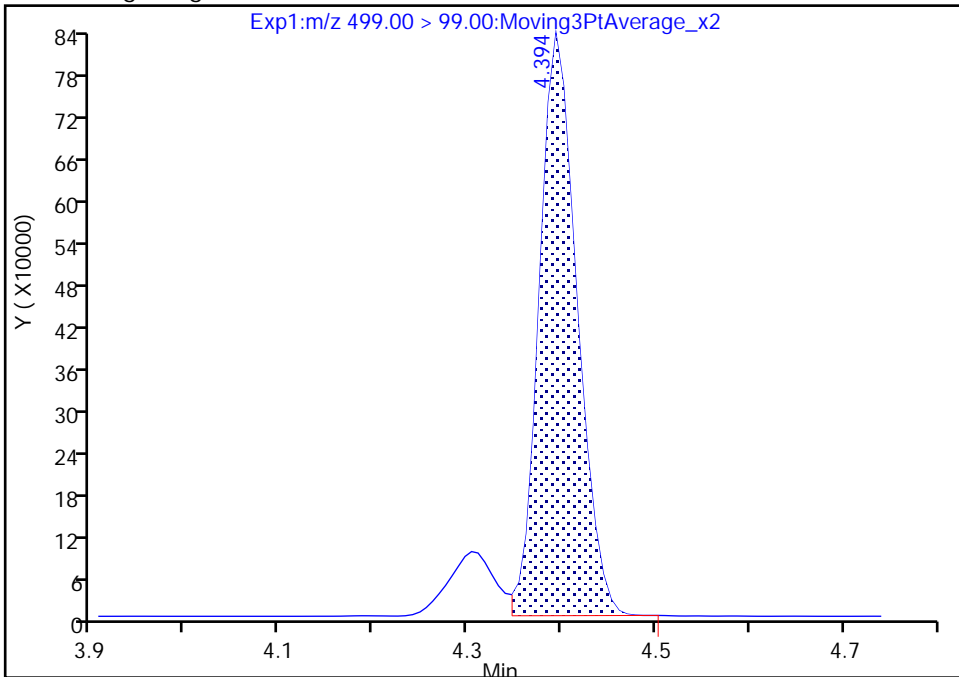
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Injection Date: 09-Jan-2022 11:19:53 Instrument ID: LCA  
Lims ID: IC 6  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 11 Worklist Smp#: 11  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

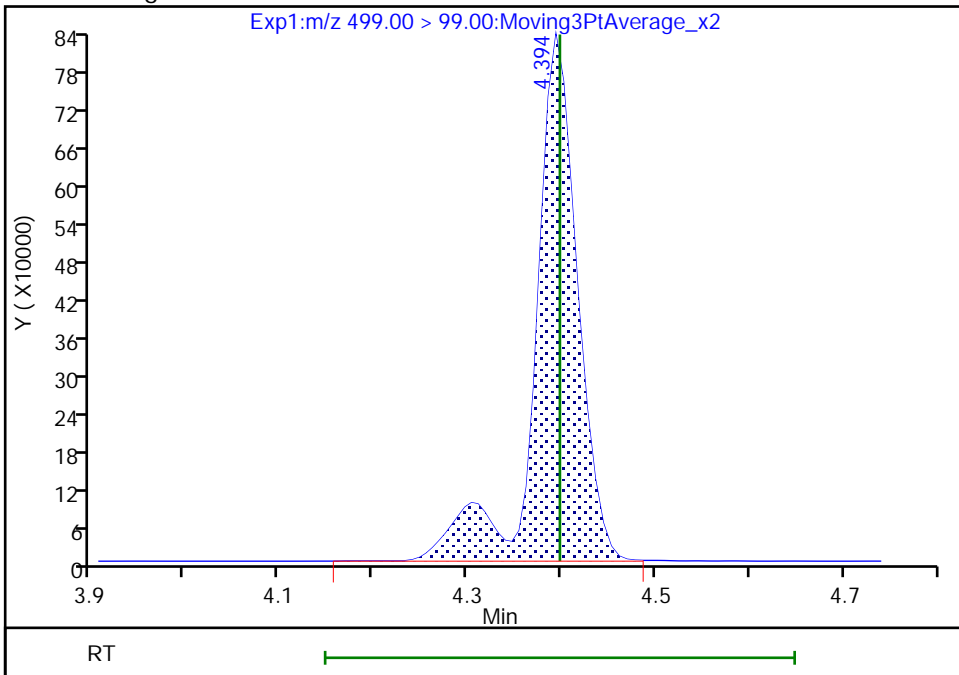
RT: 4.39  
Area: 2309451  
Amount: 3.770615  
Amount Units: ng/ml

Processing Integration Results



RT: 4.39  
Area: 2633758  
Amount: 4.748873  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:37:18

Audit Action: Manually Integrated

Audit Reason: Baseline  
Page 206 of 620

Eurofins TestAmerica, Knoxville

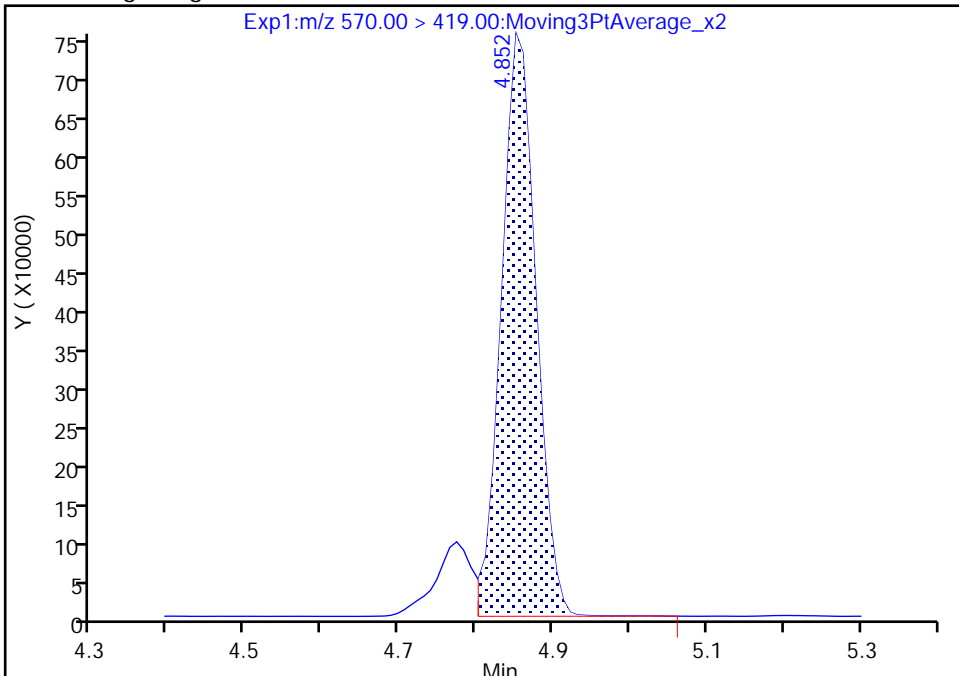
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Injection Date:	09-Jan-2022 11:19:53	Instrument ID:	LCA
Lims ID:	IC 6		
Client ID:			
Operator ID:	Cochran, Bobby	ALS Bottle#:	11
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	PFC_LCA	Limit Group:	LC - PFC- ICAL
Column:		Detector:	EXP1
		Worklist Smp#:	11

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

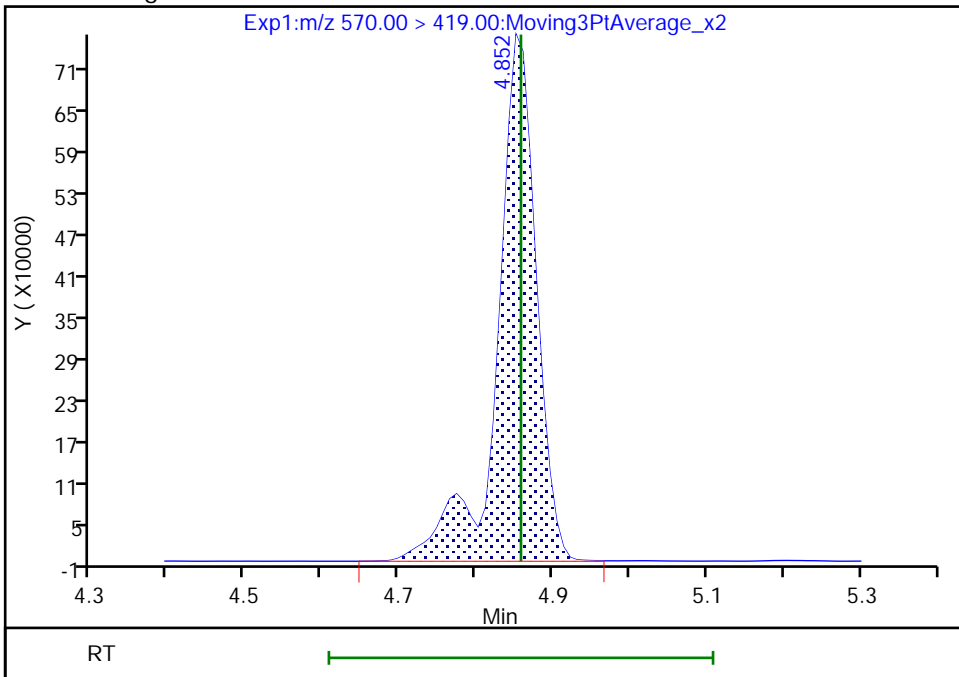
RT: 4.85  
 Area: 2353462  
 Amount: 4.669570  
 Amount Units: ng/ml

Processing Integration Results



RT: 4.85  
 Area: 2665259  
 Amount: 4.996143  
 Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:37:29  
 Audit Action: Manually Integrated

Audit Reason: Baseline



Eurofins TestAmerica, Knoxville

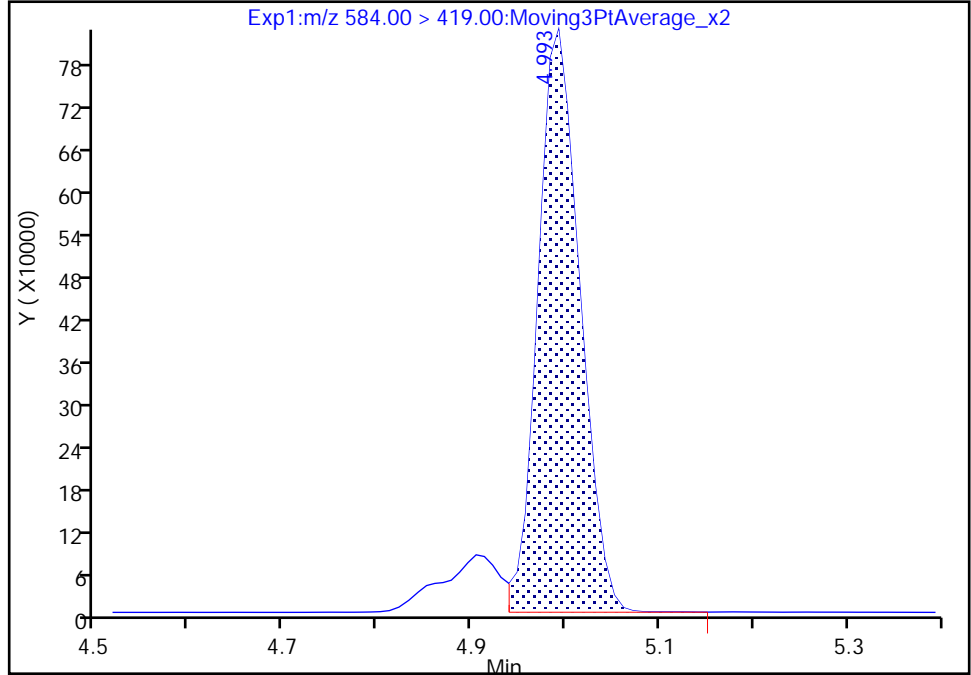
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Injection Date: 09-Jan-2022 11:19:53 Instrument ID: LCA  
Lims ID: IC 6  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 11 Worklist Smp#: 11  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

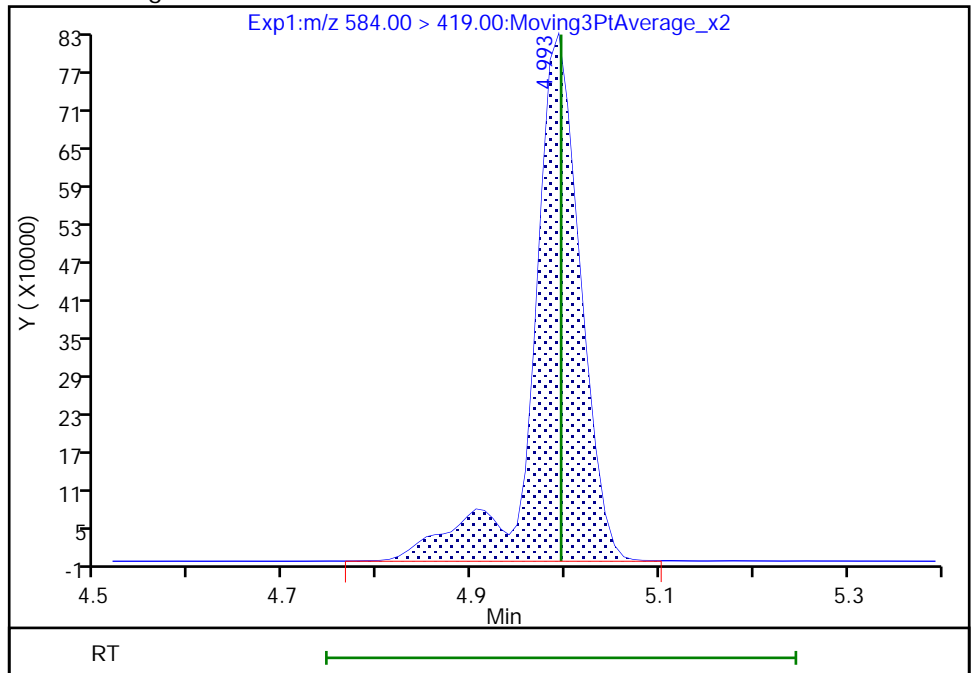
RT: 4.99  
Area: 2560706  
Amount: 4.533381  
Amount Units: ng/ml

Processing Integration Results



RT: 4.99  
Area: 2908898  
Amount: 4.967985  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:37:42  
Audit Action: Manually Integrated

Eurofins TestAmerica, Knoxville  
 Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Lims ID: IC 7  
 Client ID:  
 Sample Type: IC Calib Level: 7  
 Inject. Date: 09-Jan-2022 11:28:41 ALS Bottle#: 12 Worklist Smp#: 12  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022186-012 ic 7  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16

Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 12:32:03 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1686

First Level Reviewer: cochranj Date: 09-Jan-2022 11:41:25

Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										
212.90 > 169.00	2.779	2.785	-0.006	1.000	33917760	10.4		104	8834	
D 1 13C4 PFBA										
217.00 > 172.00	2.779	2.784	-0.005	0.677	5179011	1.27		102	10771	
4 Perfluoropentanoic acid										
262.90 > 219.00	3.091	3.093	-0.002	1.000	31649969	10.3		103	7455	
D 3 13C5 PFPeA										
267.90 > 223.00	3.091	3.093	-0.002	0.753	4018830	1.27		102	7936	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	3.107	3.109	-0.002	1.000	22993357	9.33	Target=2.68	105	6255	
298.90 > 99.00	3.107	3.109	-0.002	1.000	8513657		2.70(1.34-4.02)	105	7137	
D 6 13C3 PFBS										
301.90 > 80.00	3.107	3.109	-0.002	0.757	2612686	1.24		107	9951	
D 8 M2-4:2 FTS										
329.00 > 81.00	3.392	3.393	-0.001	0.826	700903	1.08		92.6	1510	
7 4:2 FTS										
327.00 > 307.00	3.392	3.393	-0.001	1.000	13006427	9.62		103	10586	
11 Perfluoropentanesulfonic acid										
349.00 > 80.00	3.422	3.422	0.0	1.101	21695732	9.94	Target=3.48	106	15394	
349.00 > 99.00	3.422	3.422	0.0	1.101	6215557		3.49(1.74-5.22)	106	12756	
D 9 13C2 PFHxA										
315.00 > 270.00	3.422	3.423	-0.001	0.833	4180045	1.24		99.0	8017	
10 Perfluorohexanoic acid										
313.00 > 269.00	3.422	3.423	-0.001	1.000	29136720	10.0	Target=12.57	100	7487	
313.00 > 119.00	3.422	3.423	-0.001	1.000	2390043		12.19(6.28-18.85)	100	2729	
13 HFPO-DA										
285.00 > 169.00	3.519	3.524	-0.005	1.000	24536421	10.4		104	10251	

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	3.519	3.524	-0.005	0.857	2186460	1.35		108	4221	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.760	3.760	0.0	1.000	18986869	9.63	Target=3.48	106	8330	M
399.00 > 99.00	3.760	3.760	0.0	1.000	5426352		3.50(1.74-5.21)	106	8540	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.760	3.761	-0.001	0.916	1692118	1.20		102	6312	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.770	3.772	-0.002	1.000	35239396	10.6	Target=3.29	106	7141	
363.00 > 169.00	3.770	3.772	-0.002	1.000	10884931		3.24(1.65-4.94)	106	3574	
D 14 13C4 PFHpA										
367.00 > 322.00	3.770	3.772	-0.002	0.918	3984356	1.23		98.7	5606	
68 DONA										
377.00 > 251.00	3.807	3.807	0.0	0.867	55134858	9.69	Target=1.76	103	12694	
377.00 > 85.00	3.807	3.807	0.0	0.867	32133956		1.72(0.88-2.64)	103	211	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.089	4.092	-0.003	0.931	20869230	10.1	Target=3.91	106	10321	
449.00 > 99.00	4.089	4.092	-0.003	0.931	5228998		3.99(1.95-5.86)	106	9782	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.098	4.100	-0.002	0.998	4086595	1.24		99.5	7807	
19 6:2 FTS										
427.00 > 407.00	4.098	4.101	-0.003	1.000	9913283	9.48		100.0	8045	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.098	4.100	-0.002	0.998	690189	1.06		88.9	2443	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.107	4.109	-0.002	1.000	38426557	10.2	Target=2.61	102	7314	
413.00 > 169.00	4.107	4.109	-0.002	1.000	14632708		2.63(1.30-3.91)	102	5627	
* 22 13C2 PFOA										
415.00 > 370.00	4.107	4.109	-0.002		4453891	1.25			8043	
D 21 13C4 PFOA										
417.00 > 372.00	4.107	4.109	-0.002	1.000	4109093	1.23		98.4	6464	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.393	4.396	-0.003	1.000	593950	1.24		104	3217	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.393	4.398	-0.005	1.000	23013451	9.68	Target=4.37	104	6321	M
499.00 > 99.00	4.393	4.398	-0.005	1.000	5311089		4.33(2.18-6.55)	104	8507	M
D 25 13C4 PFOS										
503.00 > 80.00	4.393	4.398	-0.005	1.070	2584771	1.28		107	4193	
26 Perfluorononanoic acid										
463.00 > 419.00	4.418	4.421	-0.003	1.000	40670324	10.0	Target=4.48	100	13239	
463.00 > 169.00	4.418	4.421	-0.003	1.000	8986626		4.53(2.24-6.72)	100	8115	
D 27 13C5 PFNA										
468.00 > 423.00	4.418	4.421	-0.003	1.076	5610570	1.28		102	9189	
63 9CIFOS										
531.00 > 351.00	4.560	4.558	0.002	1.038	45057750	9.21		98.9	13185	

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	4.681	4.682	-0.001	1.065	21224656	10.1	Target=3.84	105	12358	
549.00 > 99.00	4.681	4.682	-0.001	1.065	5427955		3.91(1.92-5.77)	105	11342	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.698	4.700	-0.002	1.000	24296365	10.0		100	5598	
D 34 13C8 FOSA										
506.00 > 78.00	4.698	4.700	-0.002	1.144	3199127	1.17		93.5	3460	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.706	4.709	-0.003	1.000	38547965	10.1	Target=11.50	101	12152	
513.00 > 169.00	4.706	4.709	-0.003	1.000	3434555		11.22(5.75-17.25)	101	792	
D 32 13C2 PFDA										
515.00 > 470.00	4.706	4.709	-0.003	1.146	4962518	1.17		93.6	8219	
31 8:2 FTS										
527.00 > 507.00	4.723	4.721	0.002	1.000	9167971	9.84		103	5365	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.723	4.721	0.002	1.150	788680	1.07		89.3	1437	
36 NMeFOSAA										
570.00 > 419.00	4.852	4.858	-0.006	1.000	5246503	10.0		100	4191	M
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.852	4.854	-0.002	1.181	665518	1.33		107	146	
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.940	4.942	-0.002	1.124	19735300	9.80	Target=3.69	102	13659	
599.00 > 99.00	4.940	4.942	-0.002	1.124	5208981		3.79(1.84-5.53)	102	10279	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.975	4.973	0.002	1.000	42351559	10.3	Target=8.29	103	14580	
563.00 > 169.00	4.975	4.973	0.002	1.000	5126352		8.26(4.14-12.43)	103	7917	
D 39 13C2 PFUnA										
565.00 > 520.00	4.975	4.973	0.002	1.211	5308482	1.25		100	9804	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.993	4.989	0.004	1.216	683862	1.25		99.9	2715	
40 NEtFOSA										
584.00 > 419.00	4.993	4.995	-0.002	1.000	5632715	10.0		99.9	2544	M
57 11C1FOS										
631.00 > 451.00	5.072	5.075	-0.003	1.154	34786454	9.62		102	15935	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.205	5.207	-0.002	1.000	45718210	9.86	Target=6.82	98.6	15928	
613.00 > 169.00	5.205	5.207	-0.002	1.000	7233572		6.32(3.41-10.23)	98.6	8576	
D 43 13C2 PFDoA										
615.00 > 570.00	5.205	5.207	-0.002	1.267	5995500	1.35		108	14186	
50 10:2 FTS										
627.00 > 607.00	5.231	5.231	0.0	1.107	15277484	10.2		106	14512	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.284	5.279	0.005	1.287	694443	1.30		104	650	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.284	5.281	0.003	1.287	534306	1.40		112	59.6	
61 NMeFOSA										
512.00 > 169.00	5.284	5.286	-0.002	1.000	4741063	9.87		98.7	860	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
49 N-MeFOSE-M										
616.00 > 59.00	5.292	5.290	0.002	1.002	6898231	10.0		100	4174	
54 PFDoS										
699.00 > 80.00	5.383	5.383	0.0	1.225	19843930	10.0	Target=4.36	103	15467	
699.00 > 99.00	5.383	5.383	0.0	1.225	4701871		4.22(2.18-6.55)	103	10457	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.414	5.417	-0.003	1.040	37925934	9.54	Target=6.19	95.4	12317	
663.00 > 169.00	5.414	5.417	-0.003	1.040	6334473		5.99(3.09-9.28)	95.4	12151	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.434	5.437	-0.003	1.323	698997	1.30		104	250	
62 N-EtFOSE-M										
630.00 > 59.00	5.454	5.450	0.004	1.004	7686908	10.4		104	4043	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.454	5.450	0.004	1.328	431073	1.37		110	730	
56 N-EtFOSA-M										
526.00 > 169.00	5.454	5.457	-0.003	1.000	4268012	10.4		104	751	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.596	5.600	-0.004	1.000	4925818	10.4	Target=1.09	104	9256	
713.00 > 219.00	5.596	5.600	-0.004	1.000	4711850		1.05(0.54-1.63)	104	10177	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.596	5.600	-0.004	1.363	4423066	1.31		104	7918	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.903	5.907	-0.004	1.000	26960696	9.92	Target=8.22	99.2	9689	
813.00 > 169.00	5.903	5.907	-0.004	1.000	3363491		8.02(4.11-12.33)	99.2	4924	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.903	5.907	-0.004	1.438	3121615	1.36		109	6288	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.159	6.162	-0.003	1.043	25570850	10.4	Target=11.60	104	6174	
913.00 > 169.00	6.159	6.162	-0.003	1.043	2292471		11.15(5.80-17.40)	104	4218	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L7PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_012.d

Injection Date: 09-Jan-2022 11:28:41

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

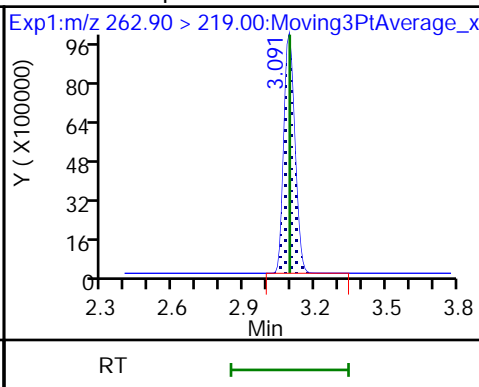
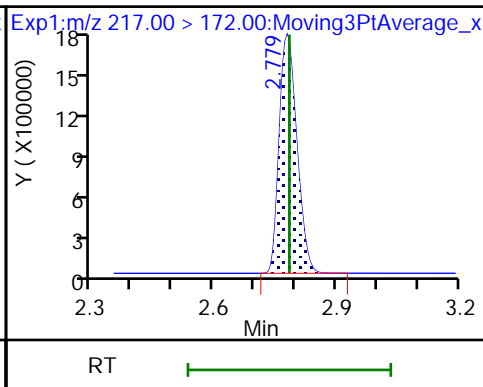
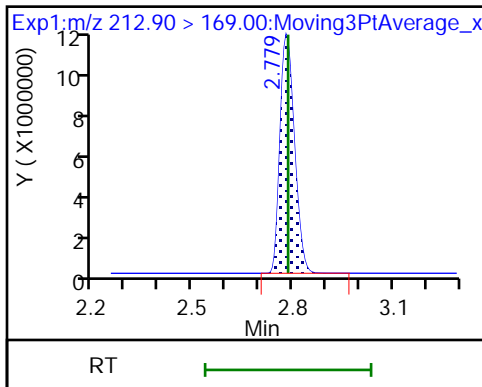
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

2 Perfluorobutanoic acid

D 1 13C4 PFBA

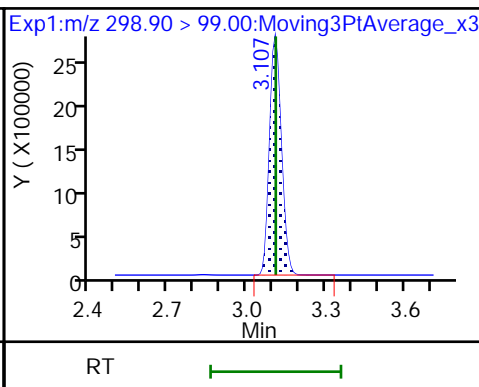
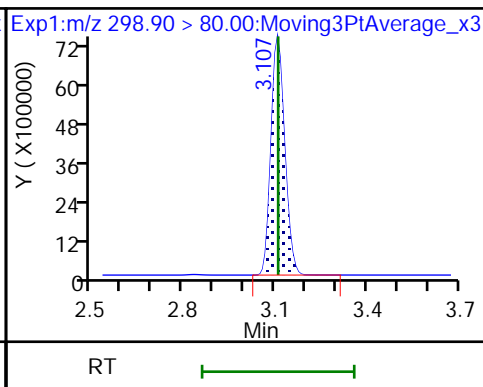
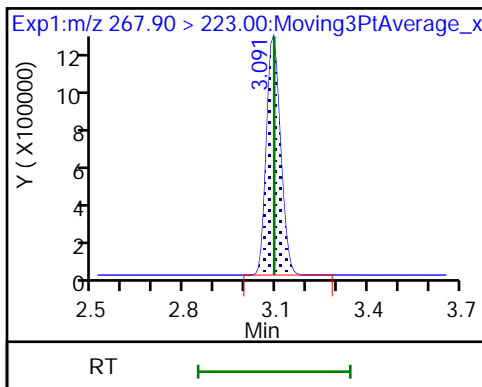
4 Perfluoropentanoic acid



D 3 13C5 PFPeA

5 Perfluorobutanesulfonic acid

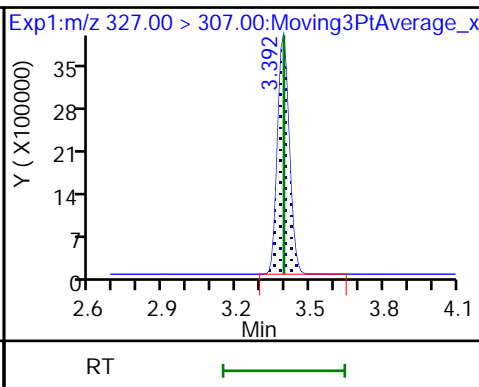
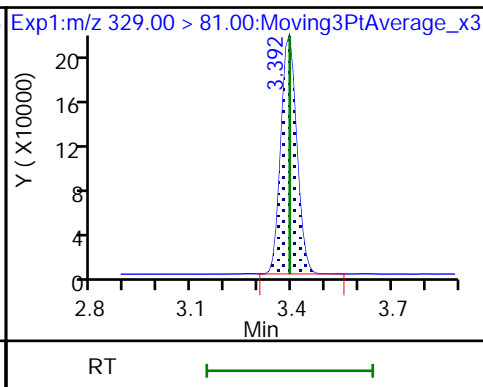
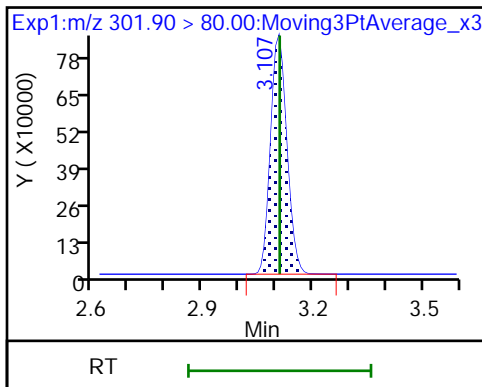
5 Perfluorobutanesulfonic acid



D 6 13C3 PFBS

D 8 M2-4:2 FTS

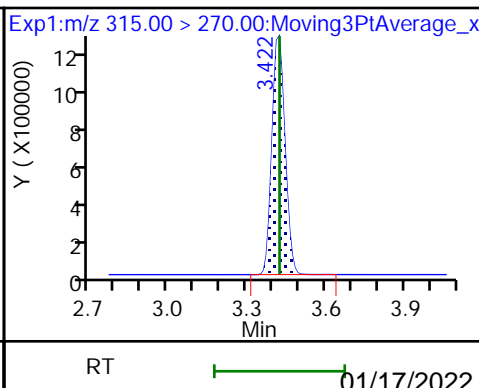
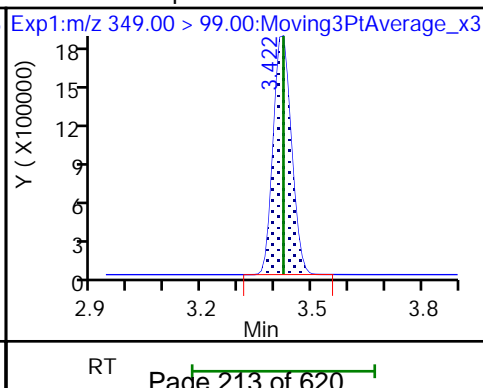
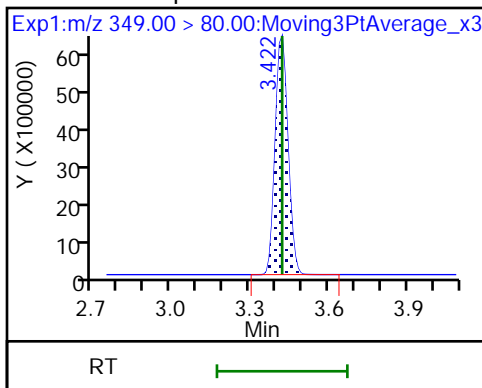
7 4:2 FTS

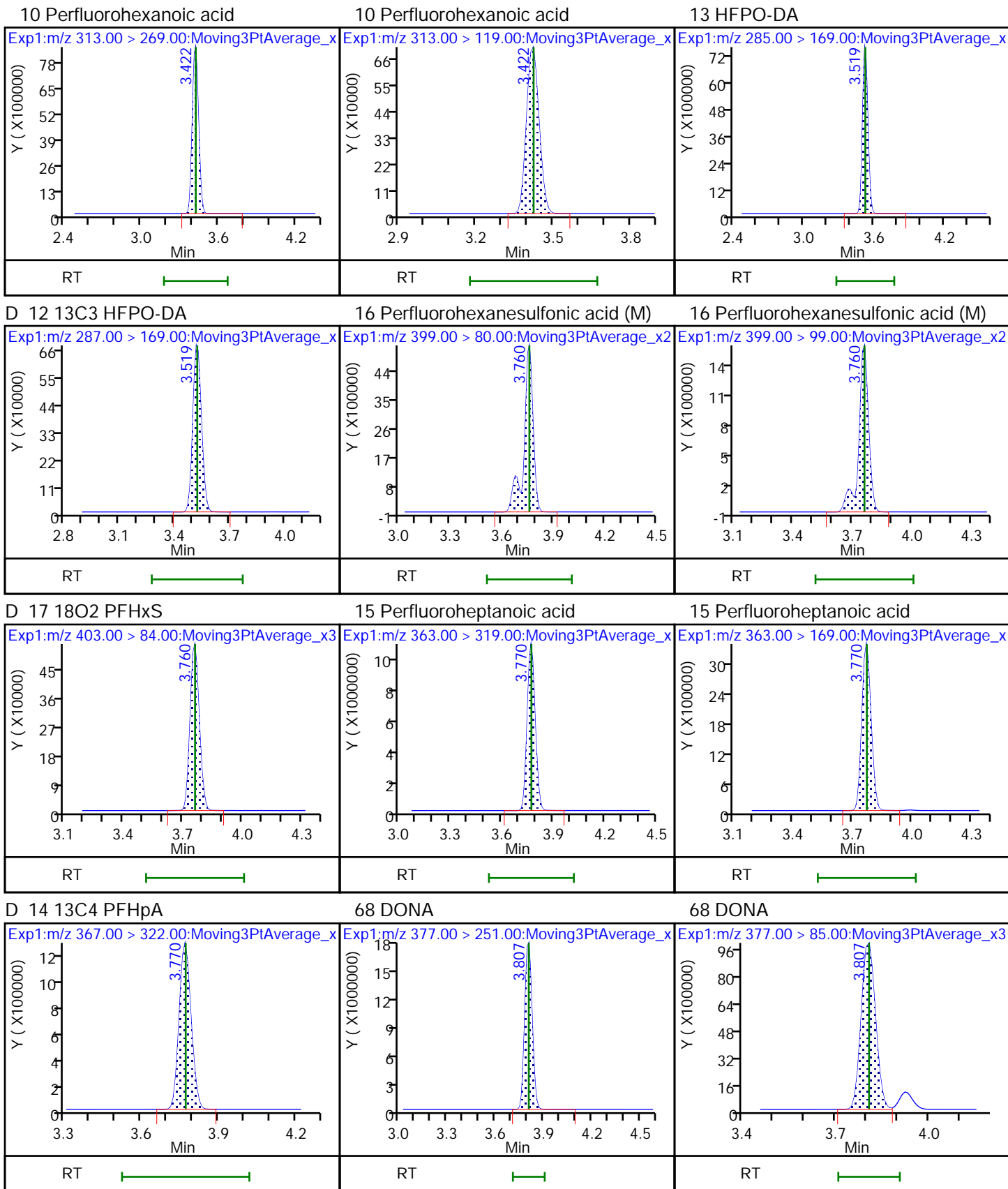


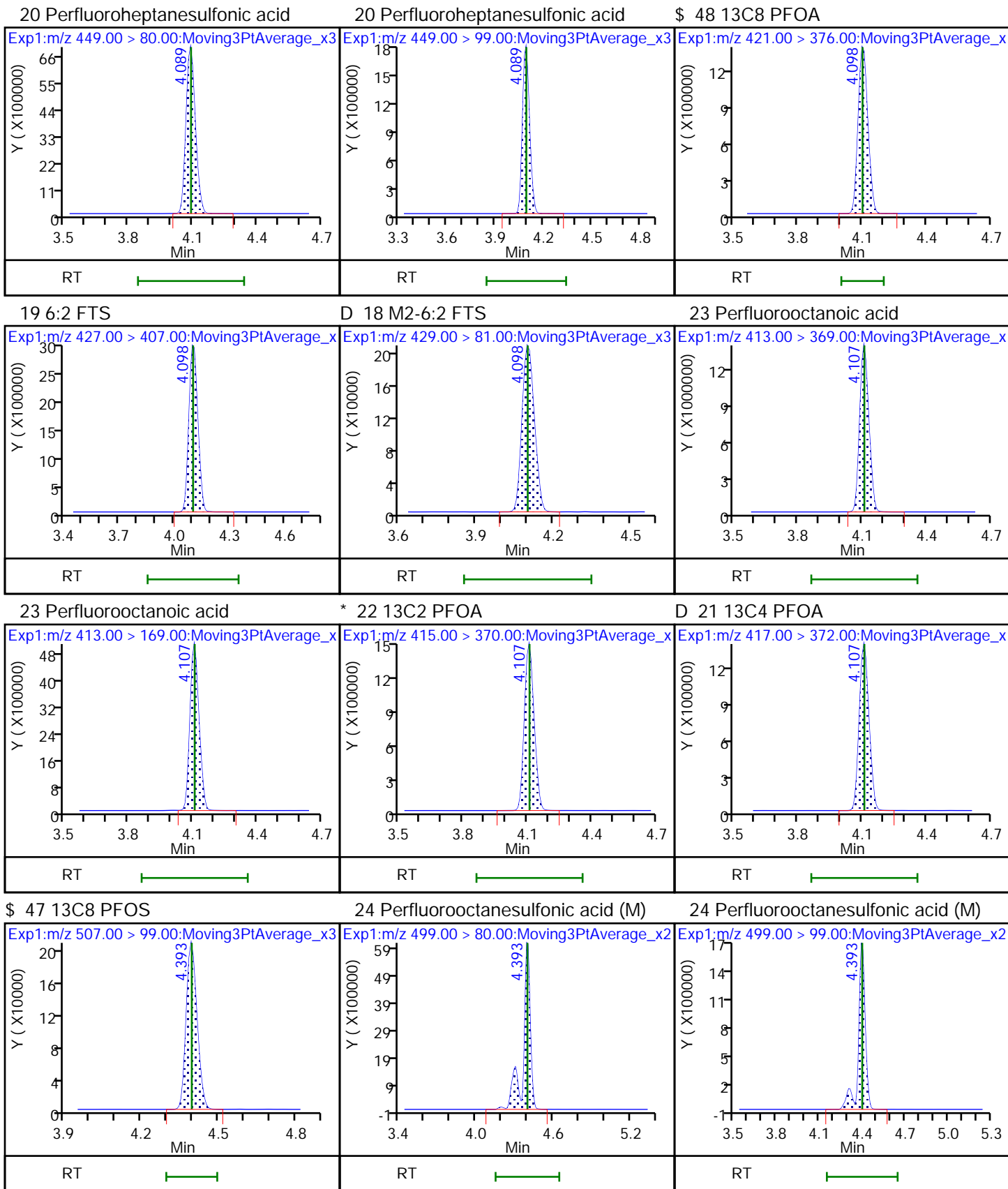
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA





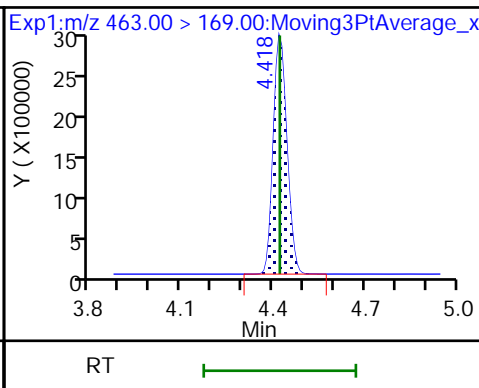
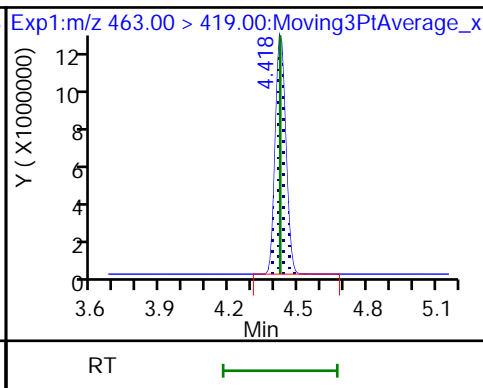
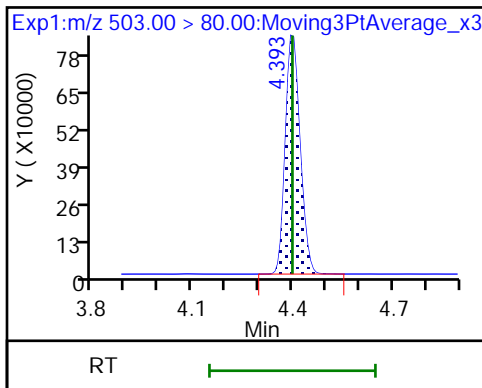




D 25 13C4 PFOS

26 Perfluorononanoic acid

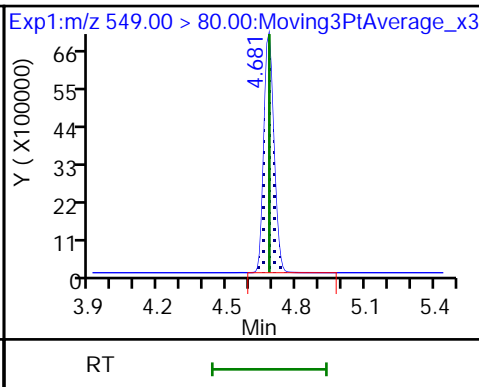
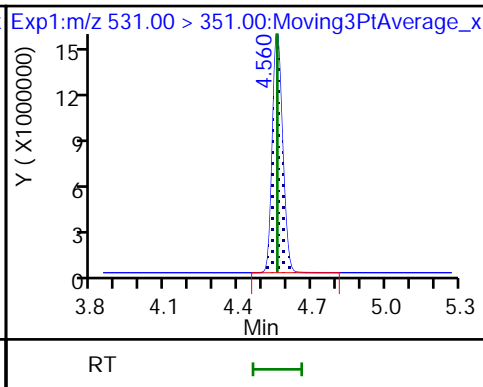
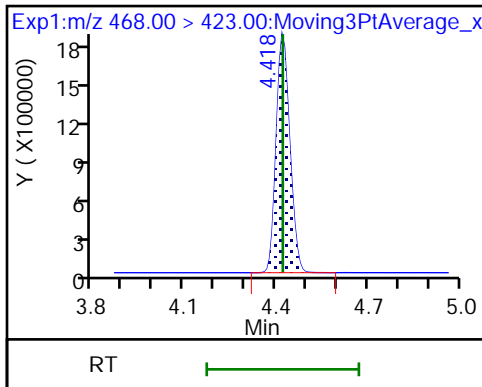
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS

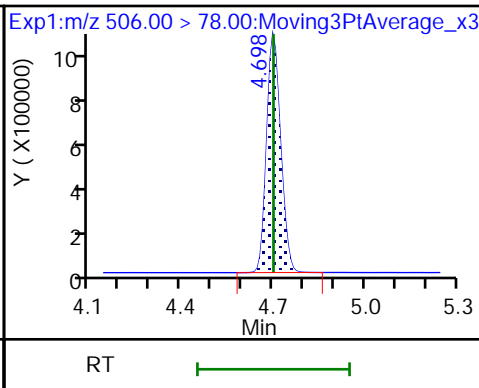
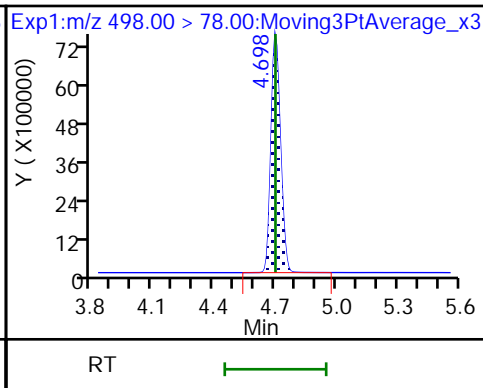
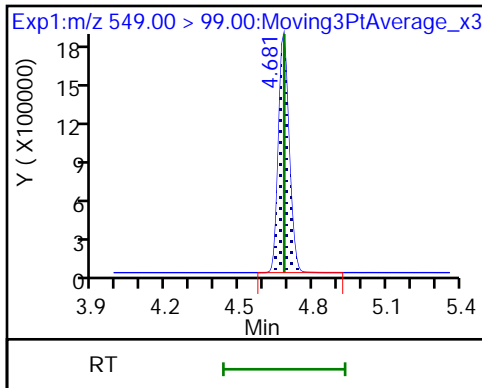
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

33 Perfluorooctanesulfonamide

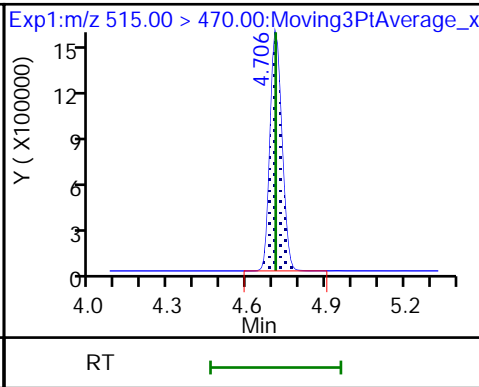
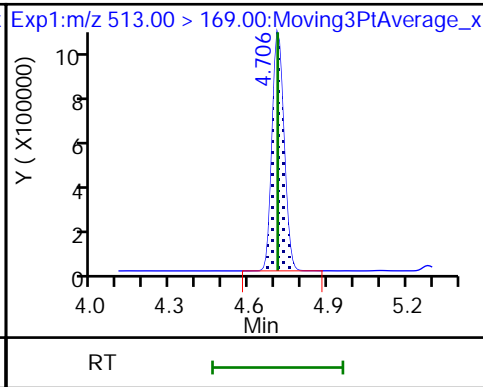
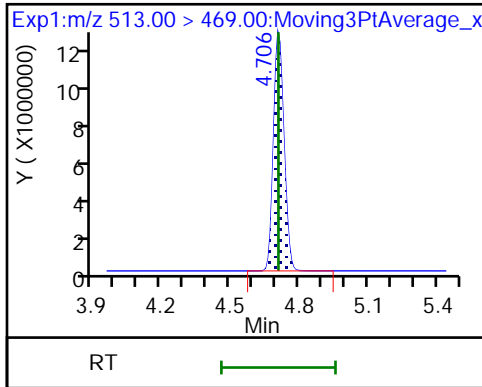
D 34 13C8 FOSA

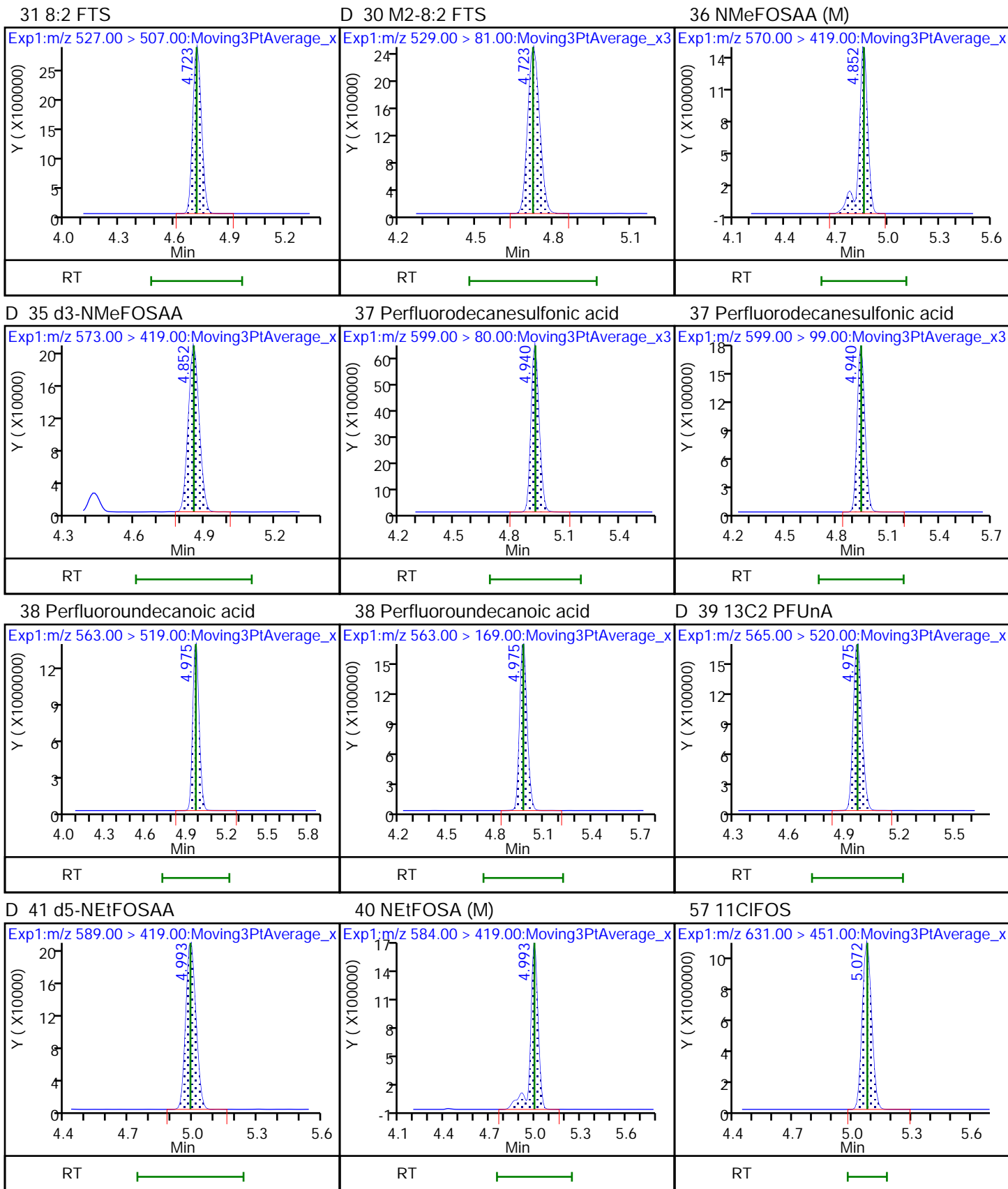


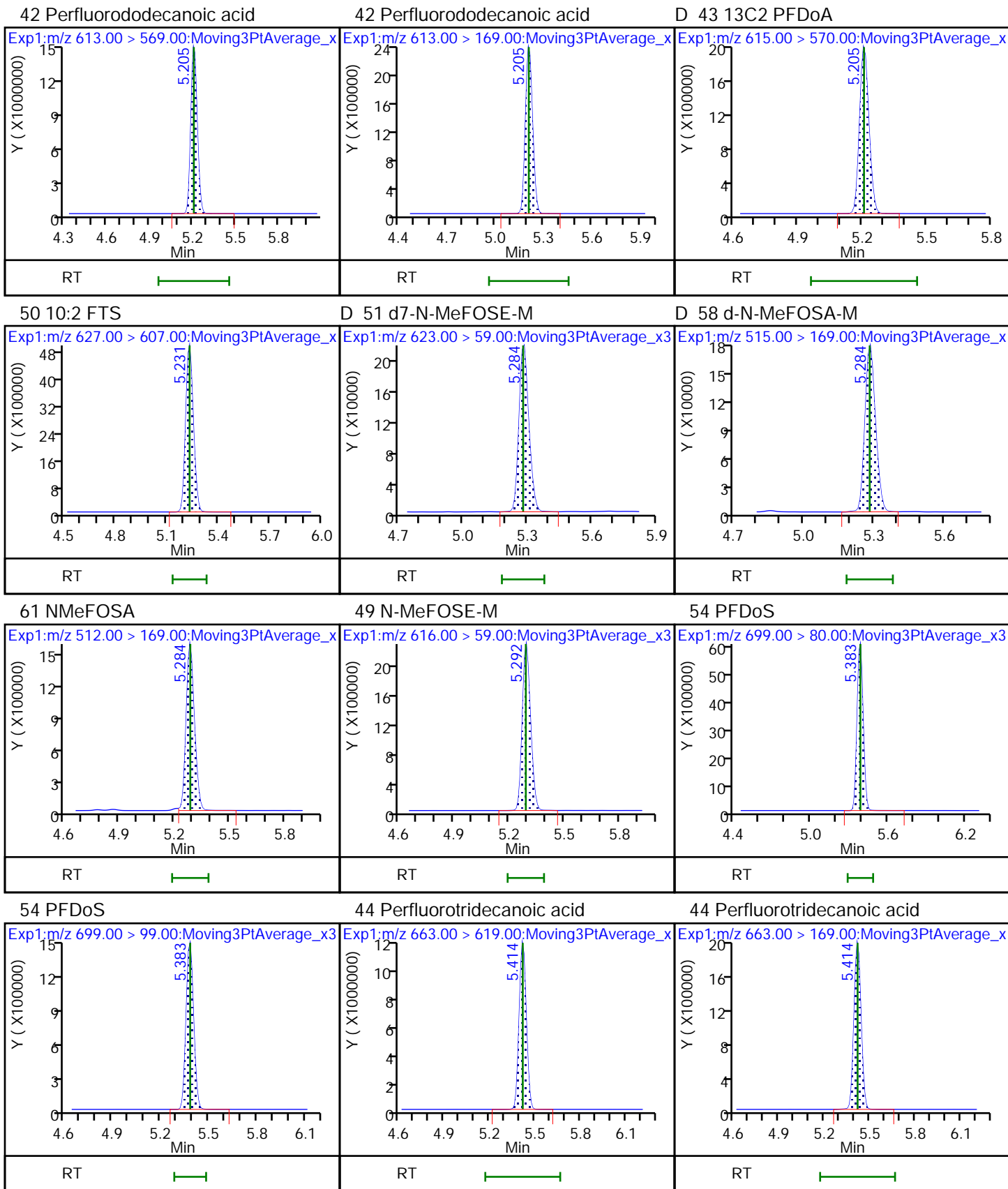
29 Perfluorodecanoic acid

29 Perfluorodecanoic acid

D 32 13C2 PFDA



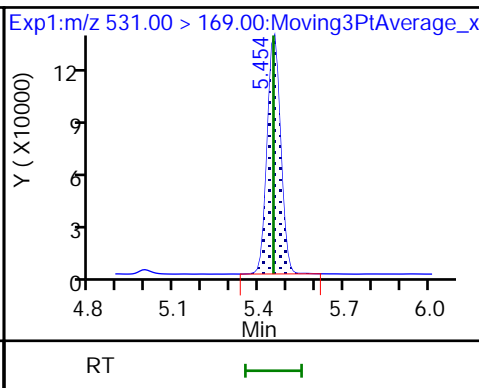
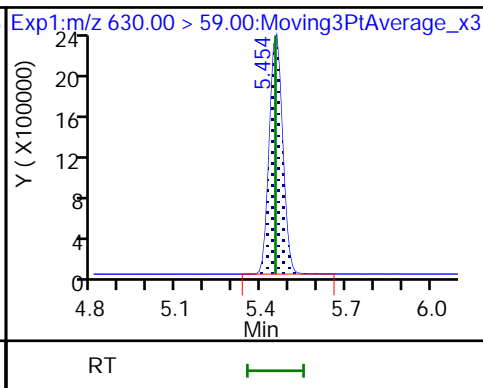
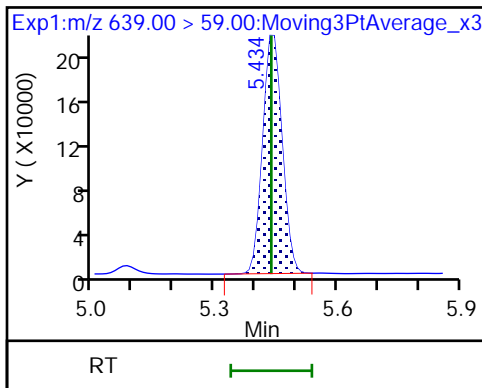




D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M

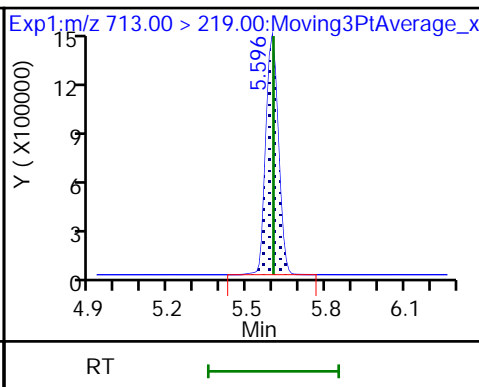
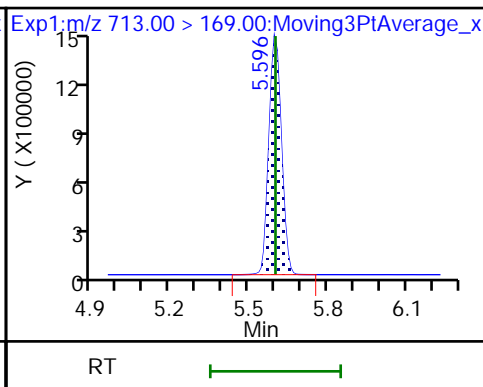
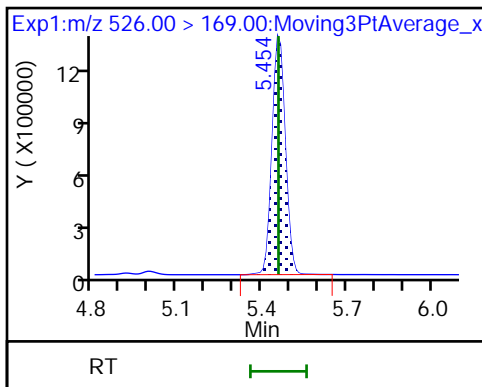
D 52 d-N-EtFOSA-M



56 N-EtFOSA-M

45 Perfluorotetradecanoic acid

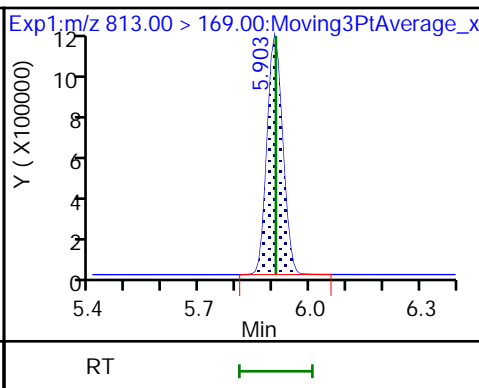
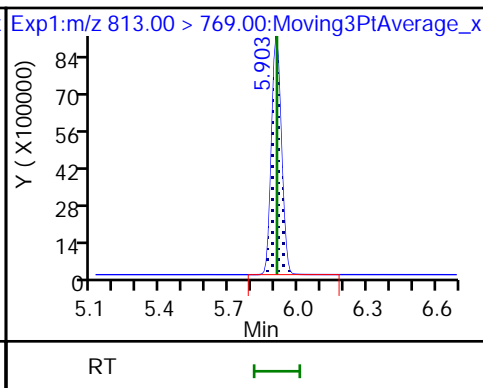
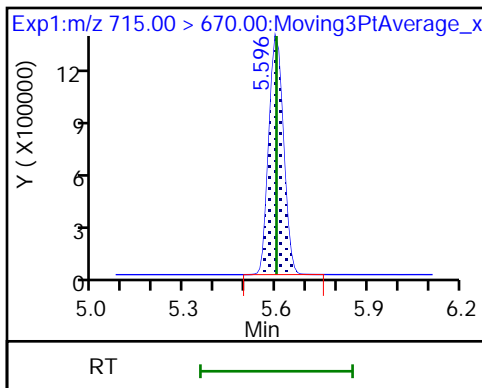
45 Perfluorotetradecanoic acid



D 46 13C2 PFTeDA

55 Perfluorohexadecanoic acid

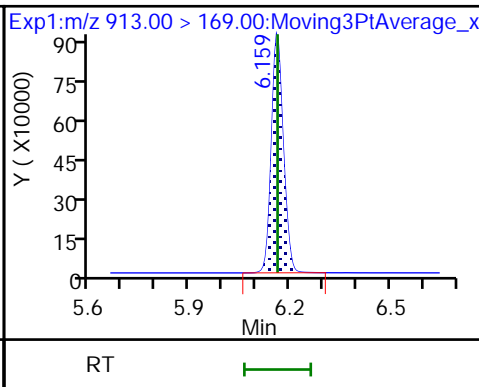
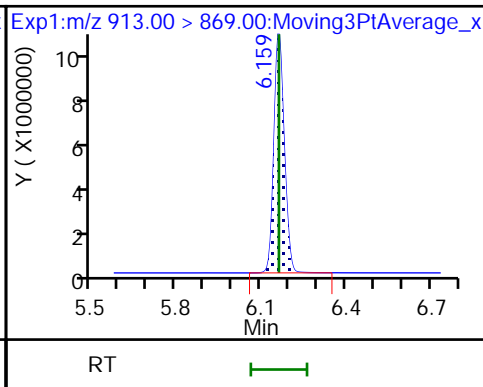
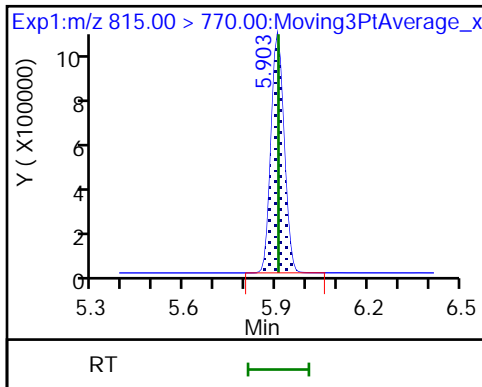
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid





Eurofins TestAmerica, Knoxville

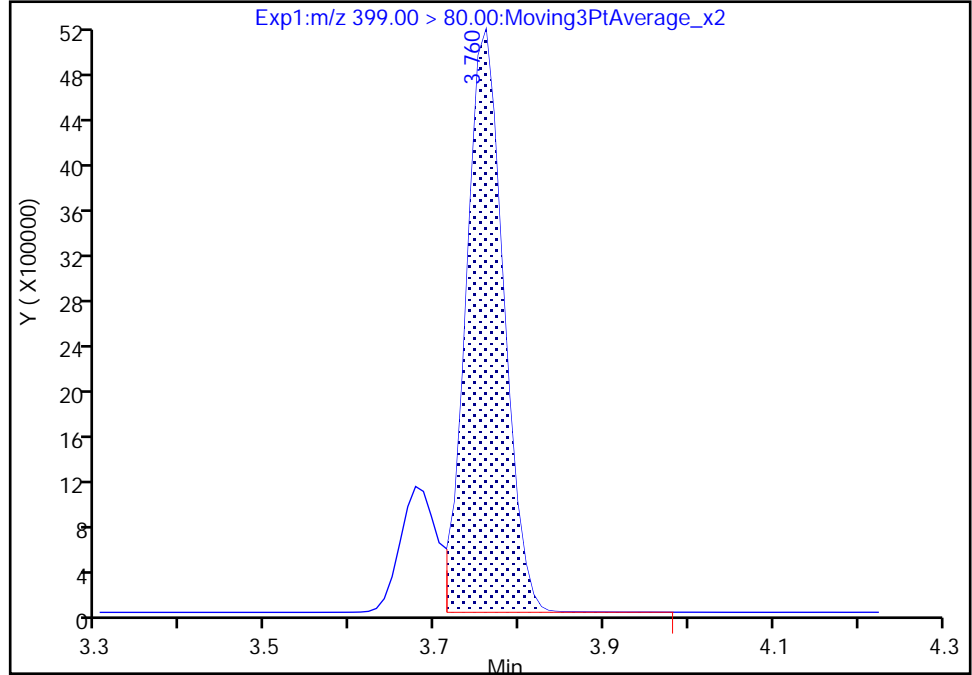
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
Injection Date: 09-Jan-2022 11:28:41 Instrument ID: LCA  
Lims ID: IC 7  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 12 Worklist Smp#: 12  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

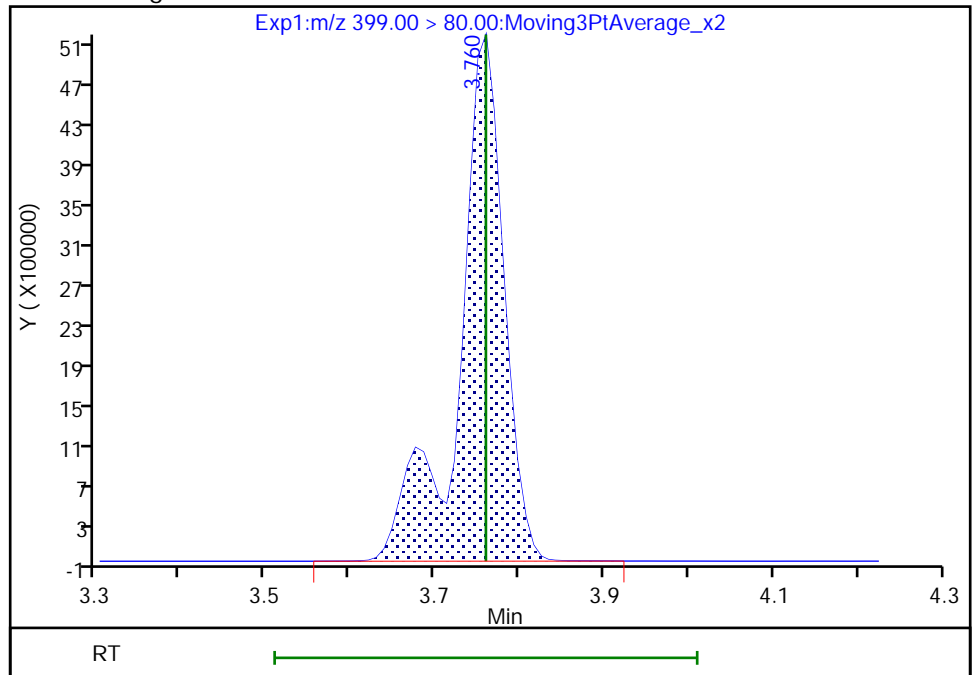
RT: 3.76  
Area: 15678186  
Amount: 8.170856  
Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
Area: 18986869  
Amount: 9.634409  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:40:20  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

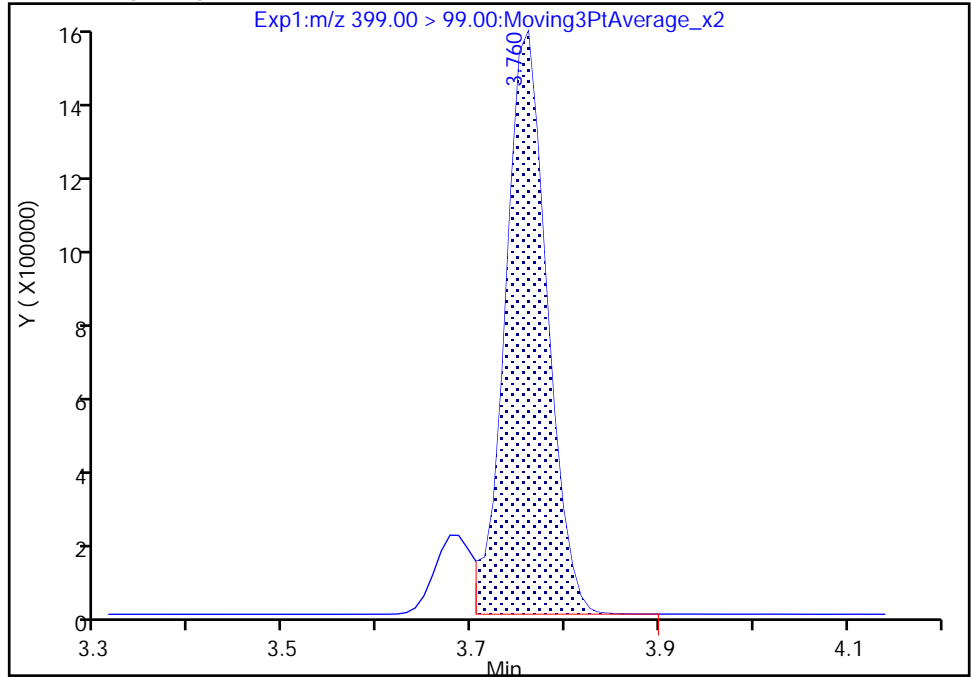
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
Injection Date: 09-Jan-2022 11:28:41 Instrument ID: LCA  
Lims ID: IC 7  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 12 Worklist Smp#: 12  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

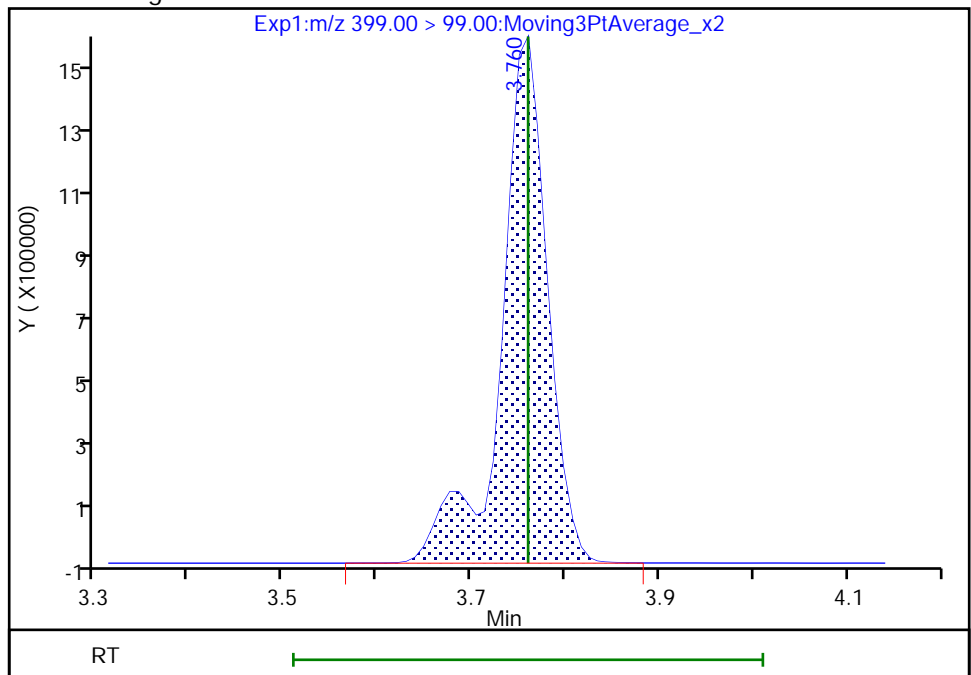
RT: 3.76  
Area: 4848547  
Amount: 8.170856  
Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
Area: 5426352  
Amount: 9.634409  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:40:33

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

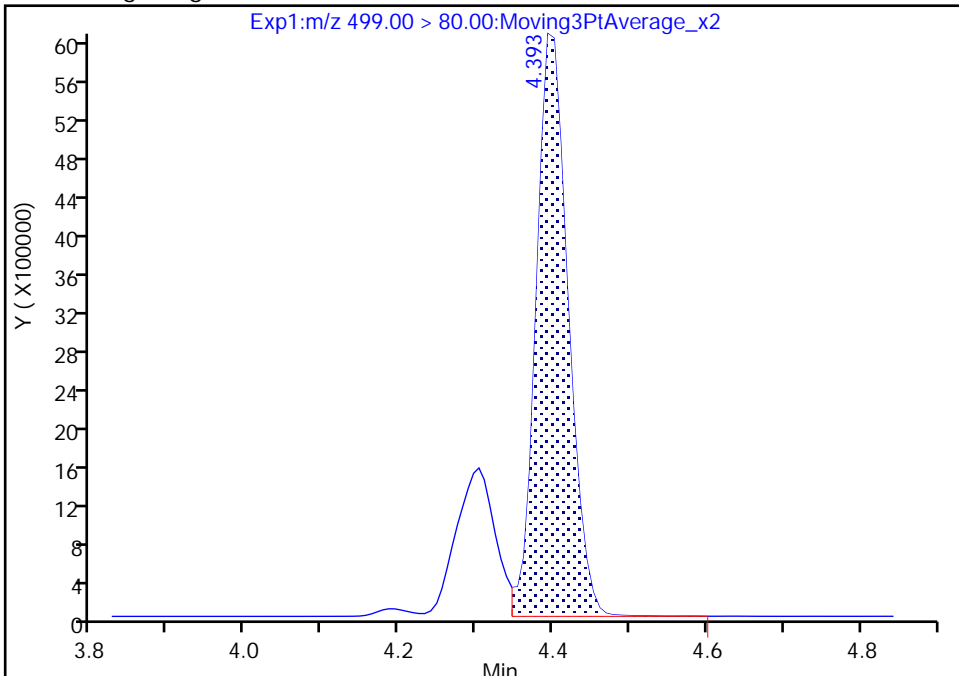
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Injection Date: 09-Jan-2022 11:28:41 Instrument ID: LCA  
Lims ID: IC 7  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 12 Worklist Smp#: 12  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

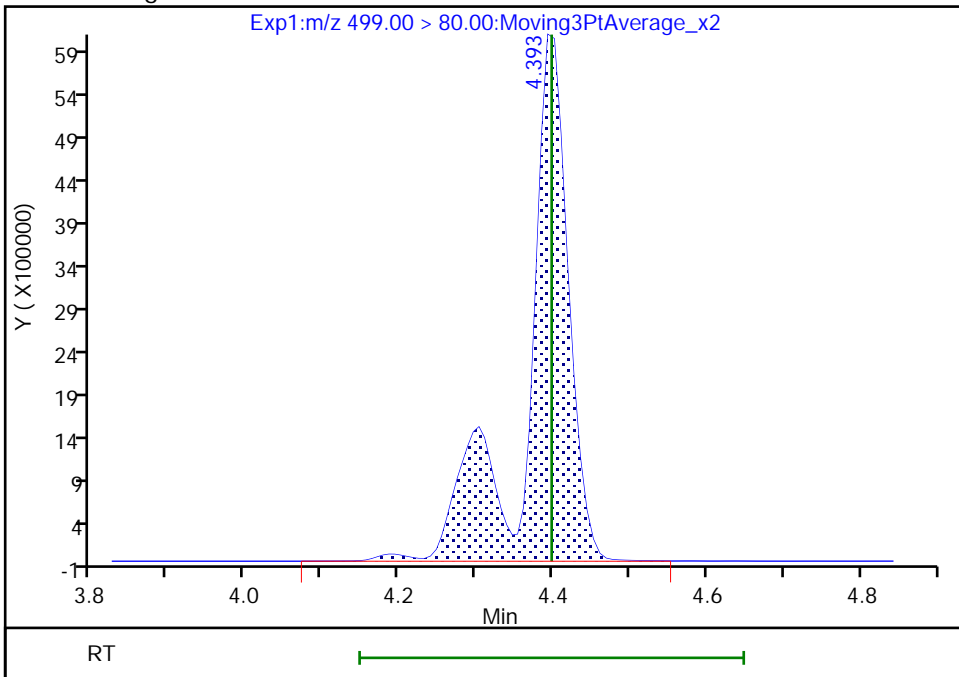
RT: 4.39  
Area: 17397980  
Amount: 7.596576  
Amount Units: ng/ml

Processing Integration Results



RT: 4.39  
Area: 23013451  
Amount: 9.683005  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:40:43  
Audit Action: Manually Integrated

Audit Reason: Baseline



Eurofins TestAmerica, Knoxville

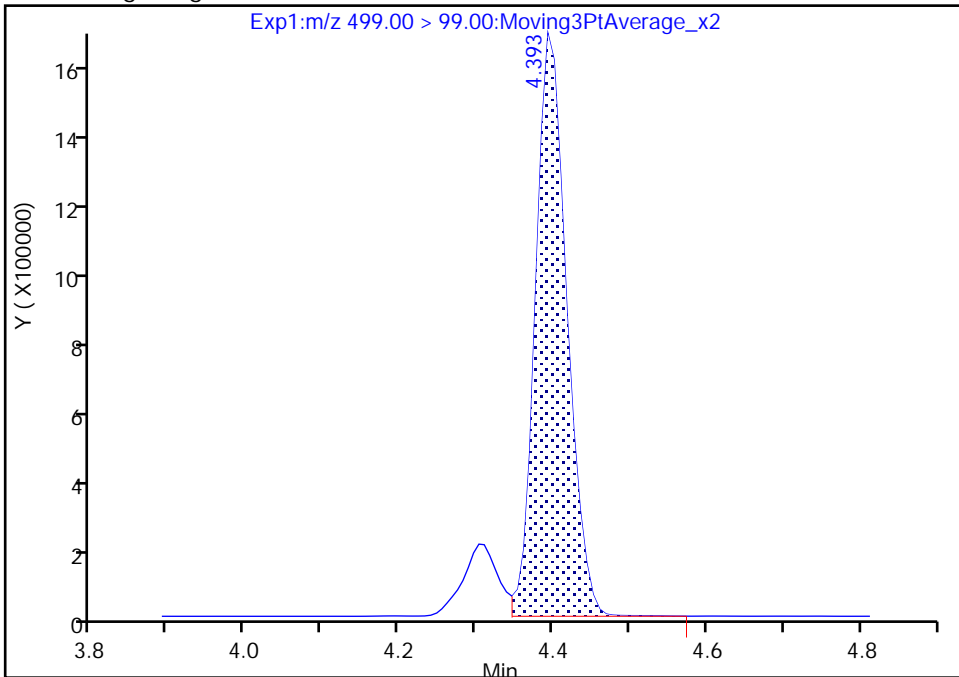
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
Injection Date: 09-Jan-2022 11:28:41 Instrument ID: LCA  
Lims ID: IC 7  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 12 Worklist Smp#: 12  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

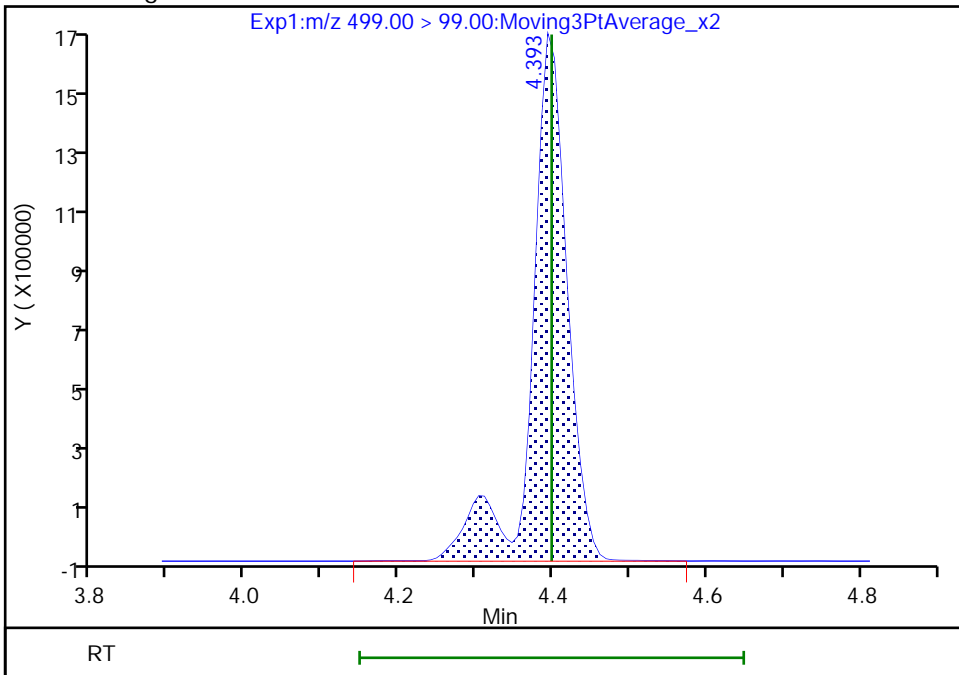
RT: 4.39  
Area: 4659336  
Amount: 7.596576  
Amount Units: ng/ml

Processing Integration Results



RT: 4.39  
Area: 5311089  
Amount: 9.683005  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:40:50

Audit Action: Manually Integrated

Audit Reason: Baseline  
Page 224 of 620

Eurofins TestAmerica, Knoxville

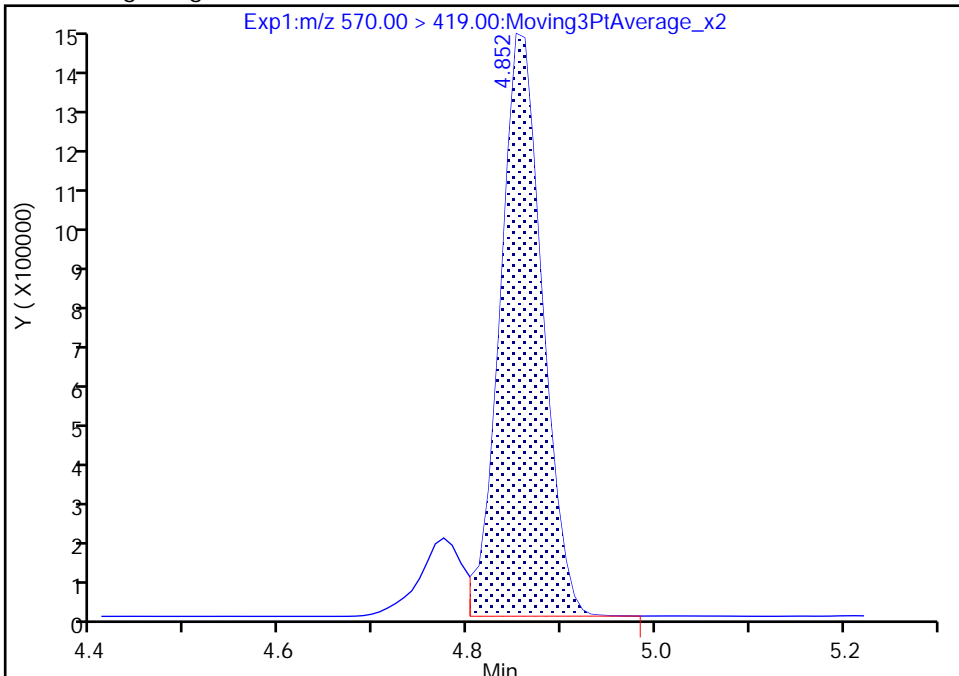
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_012.d  
Injection Date: 09-Jan-2022 11:28:41 Instrument ID: LCA  
Lims ID: IC 7  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 12 Worklist Smp#: 12  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

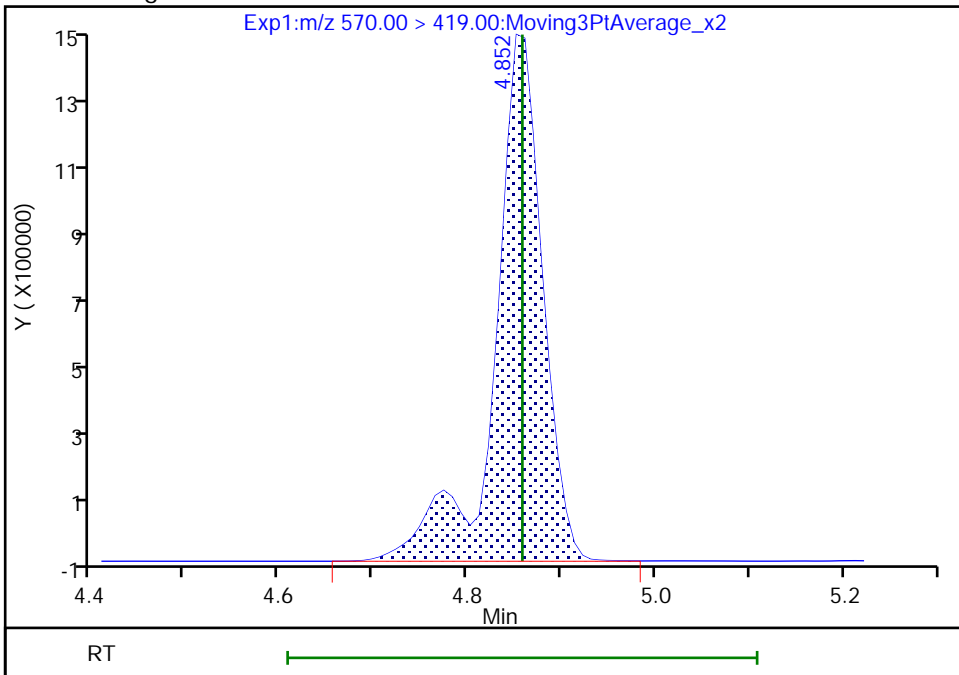
RT: 4.85  
Area: 4616573  
Amount: 9.302530  
Amount Units: ng/ml

Processing Integration Results



RT: 4.85  
Area: 5246503  
Amount: 9.999542  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:41:02  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

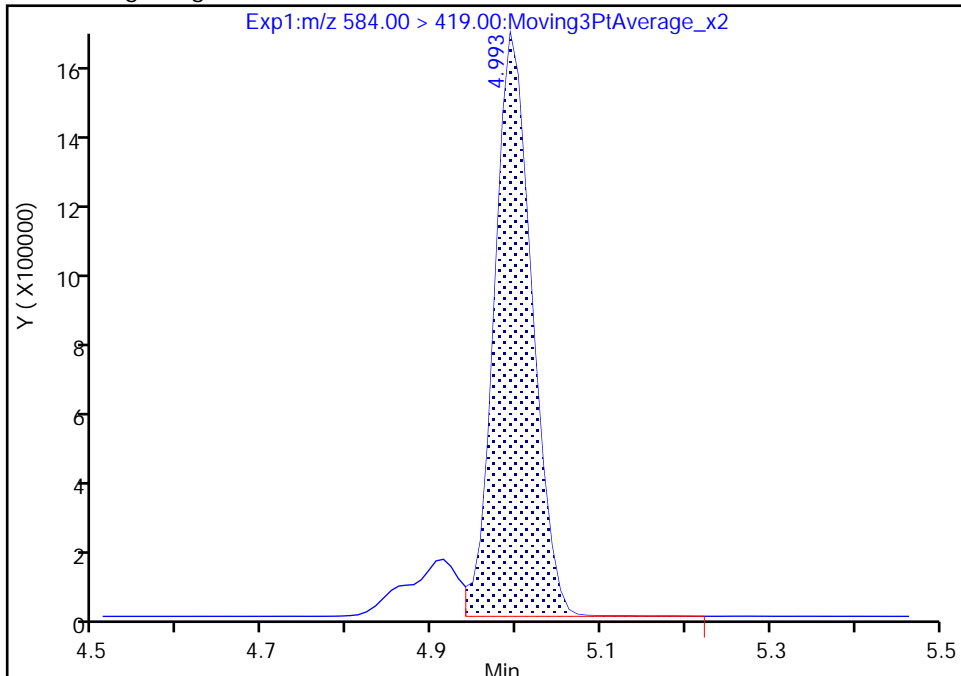
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Injection Date: 09-Jan-2022 11:28:41 Instrument ID: LCA  
Lims ID: IC 7  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 12 Worklist Smp#: 12  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

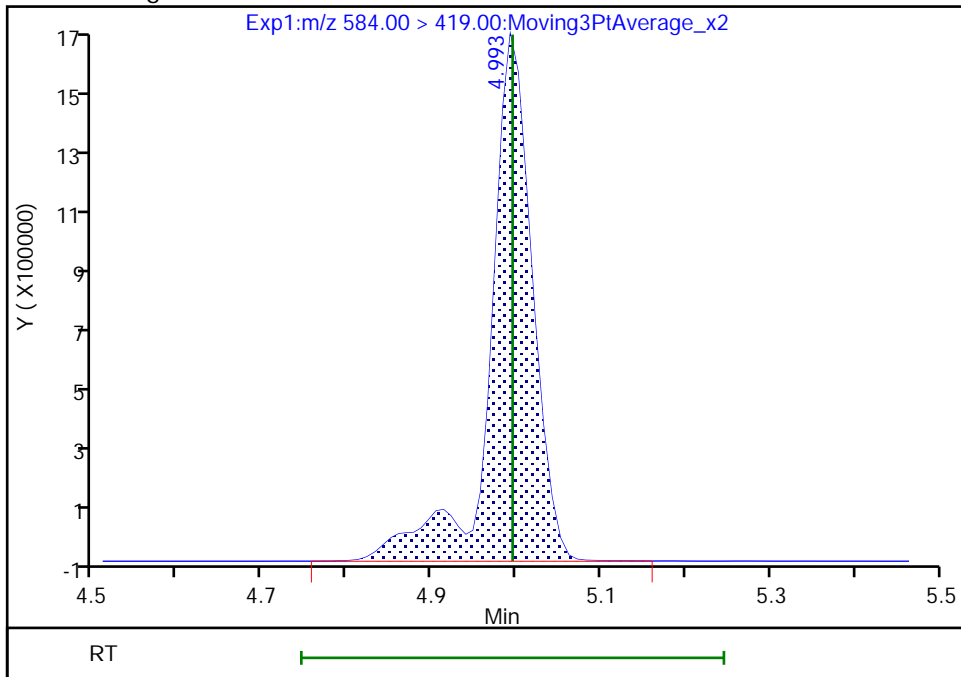
RT: 4.99  
Area: 4962861  
Amount: 9.239473  
Amount Units: ng/ml

Processing Integration Results



RT: 4.99  
Area: 5632715  
Amount: 9.992908  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:41:13  
Audit Action: Manually Integrated

Audit Reason: Baseline

**Calibration**

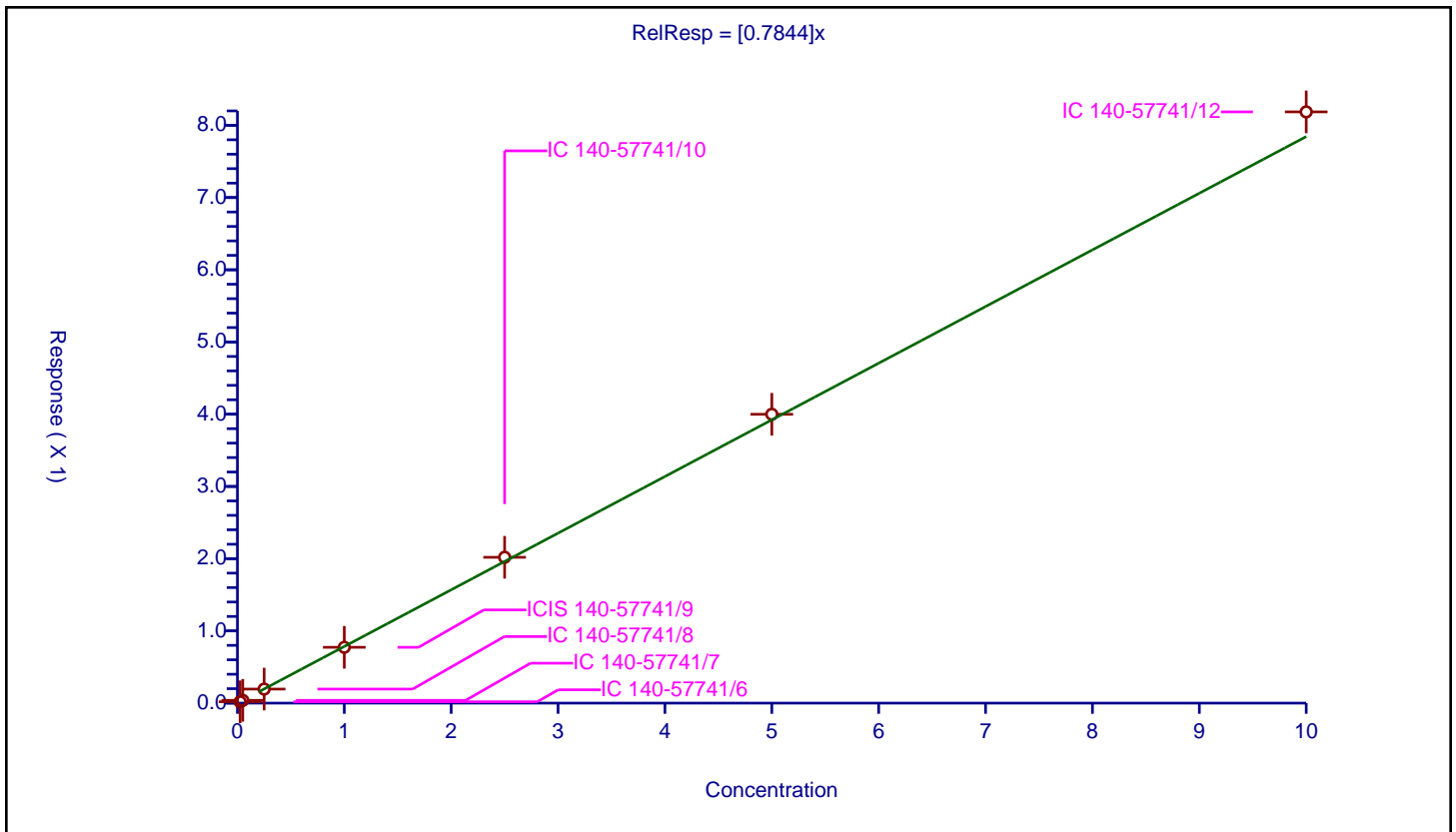
/ Perfluorobutanoic acid

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.7844

Error Coefficients	
Standard Error:	16200000
Relative Standard Error:	3.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.018661	1.25	5616269.0	0.746448	Y
2	IC 140-57741/7	0.05	0.038361	1.25	6088323.0	0.767223	Y
3	IC 140-57741/8	0.25	0.194497	1.25	6184171.0	0.777986	Y
4	ICIS 140-57741/9	1.0	0.773206	1.25	6230665.0	0.773206	Y
5	IC 140-57741/10	2.5	2.018985	1.25	5967237.0	0.807594	Y
6	IC 140-57741/11	5.0	3.999467	1.25	5525998.0	0.799893	Y
7	IC 140-57741/12	10.0	8.186351	1.25	5179011.0	0.818635	Y



**Calibration**

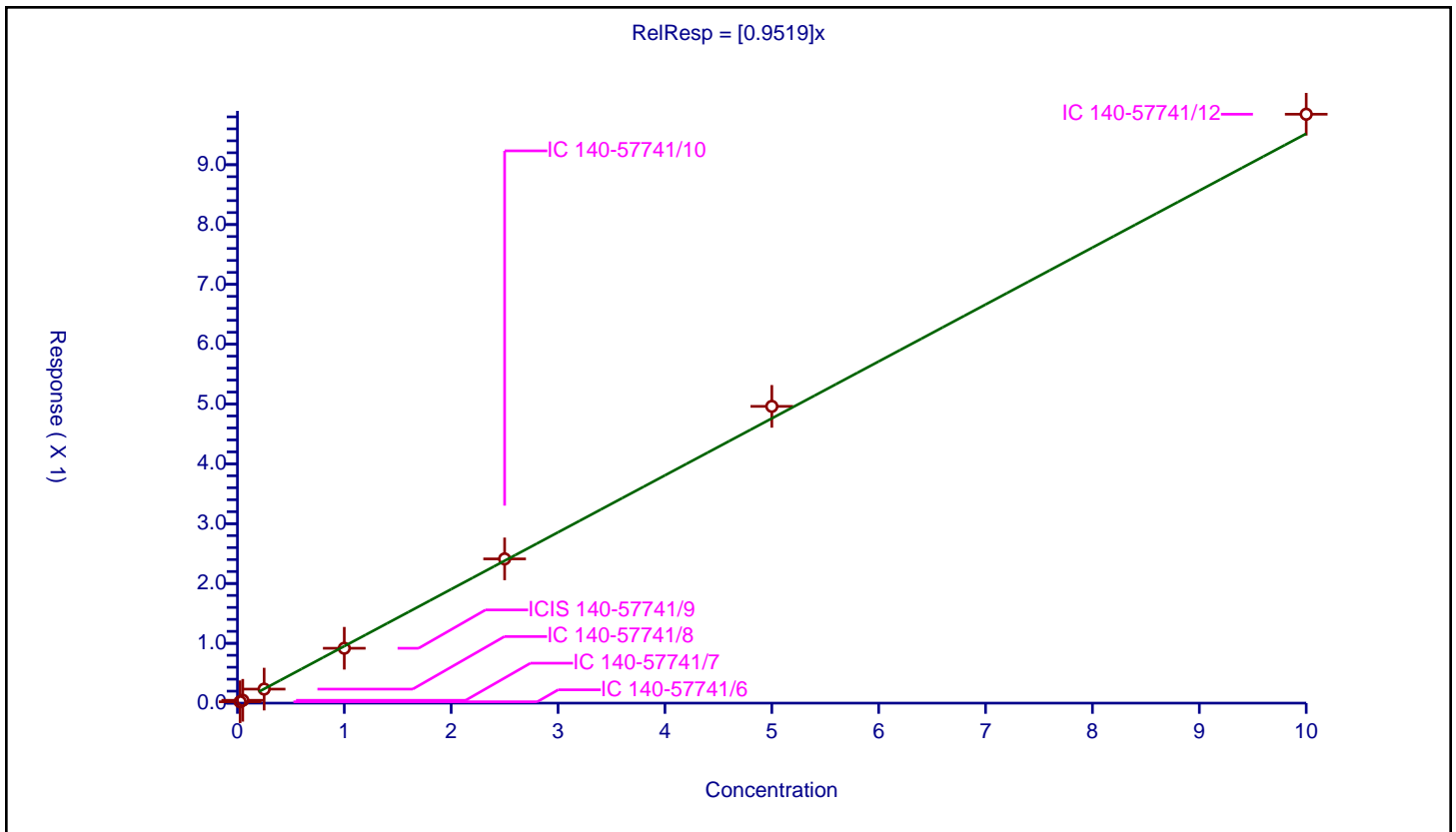
/ Perfluoropentanoic acid

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.9519

Error Coefficients	
Standard Error:	15100000
Relative Standard Error:	3.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.023058	1.25	4394817.0	0.922314	Y
2	IC 140-57741/7	0.05	0.047263	1.25	4866698.0	0.945266	Y
3	IC 140-57741/8	0.25	0.234387	1.25	4763774.0	0.937549	Y
4	ICIS 140-57741/9	1.0	0.917268	1.25	4810256.0	0.917268	Y
5	IC 140-57741/10	2.5	2.411144	1.25	4603395.0	0.964458	Y
6	IC 140-57741/11	5.0	4.960583	1.25	4222495.0	0.992117	Y
7	IC 140-57741/12	10.0	9.844273	1.25	4018830.0	0.984427	Y



Calibration

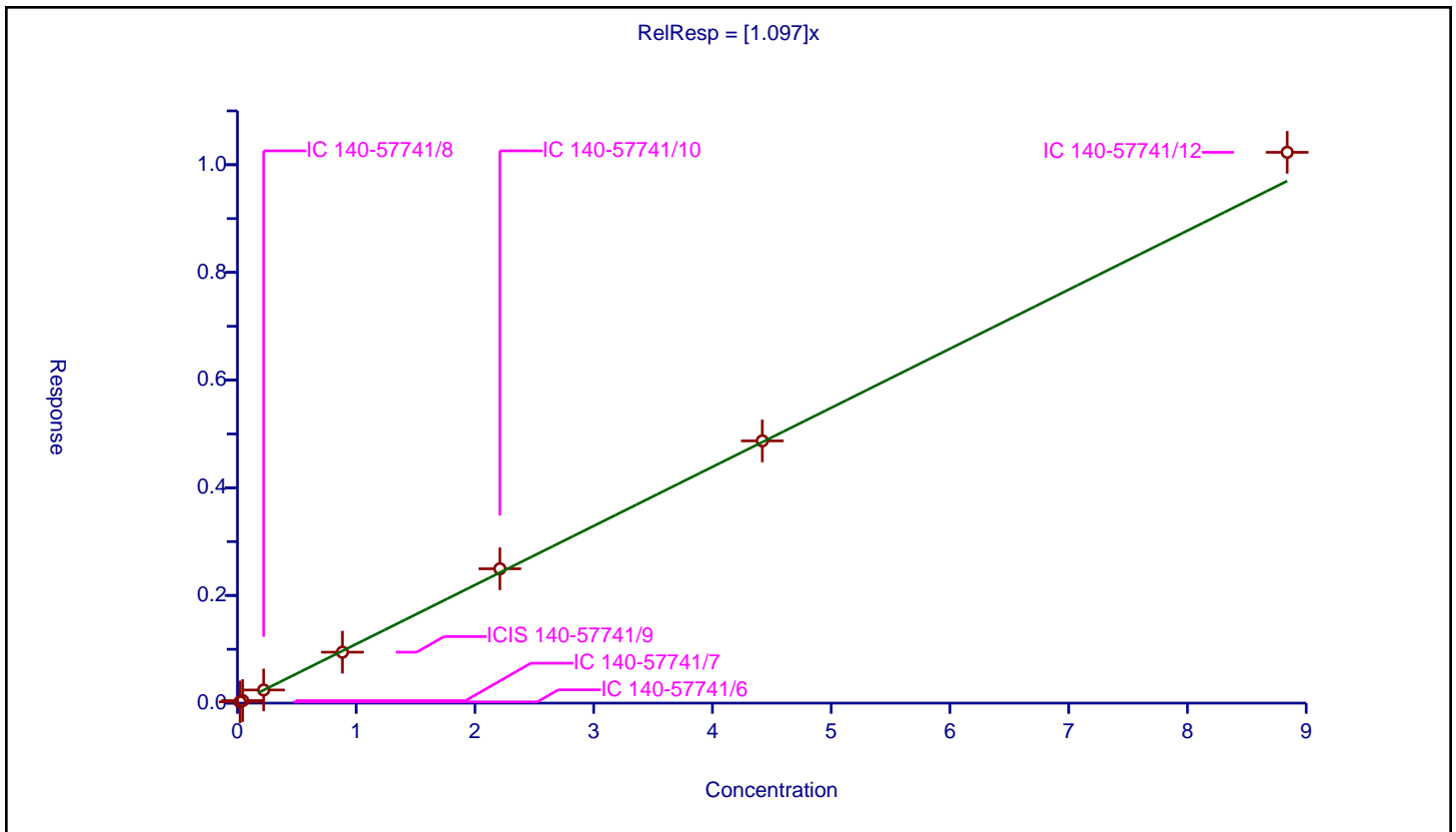
/ Perfluorobutanesulfonic acid

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.097

Error Coefficients	
Standard Error:	10900000
Relative Standard Error:	3.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.0221	0.023208	1.1625	2602922.0	1.050128	Y
2	IC 140-57741/7	0.0442	0.047131	1.1625	2950306.0	1.066315	Y
3	IC 140-57741/8	0.221	0.244005	1.1625	2844272.0	1.104096	Y
4	ICIS 140-57741/9	0.884	0.946127	1.1625	2970104.0	1.070279	Y
5	IC 140-57741/10	2.21	2.495178	1.1625	2853192.0	1.12904	Y
6	IC 140-57741/11	4.42	4.870916	1.1625	2783042.0	1.102017	Y
7	IC 140-57741/12	8.84	10.230765	1.1625	2612686.0	1.157326	Y



**Calibration**

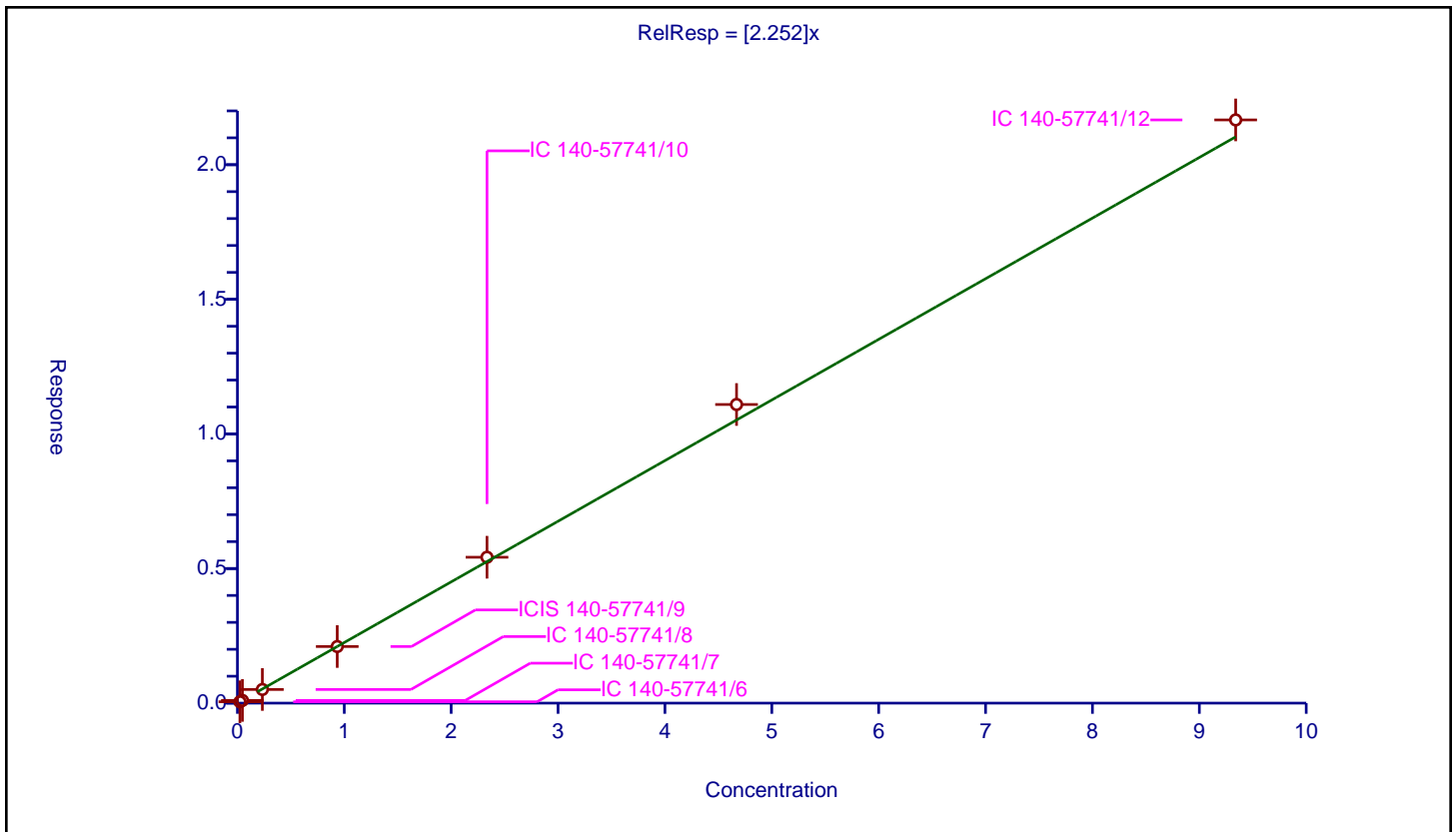
/ 1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2)

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	2.252

Error Coefficients	
Standard Error:	6340000
Relative Standard Error:	3.9
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.02335	0.050487	1.1675	842014.0	2.162197	Y
2	IC 140-57741/7	0.0467	0.101045	1.1675	1013216.0	2.163704	Y
3	IC 140-57741/8	0.2335	0.507092	1.1675	941348.0	2.1717	Y
4	ICIS 140-57741/9	0.934	2.103035	1.1675	979480.0	2.251644	Y
5	IC 140-57741/10	2.335	5.419337	1.1675	855340.0	2.320915	Y
6	IC 140-57741/11	4.67	11.092871	1.1675	767242.0	2.375347	Y
7	IC 140-57741/12	9.34	21.664914	1.1675	700903.0	2.319584	Y



**Calibration**

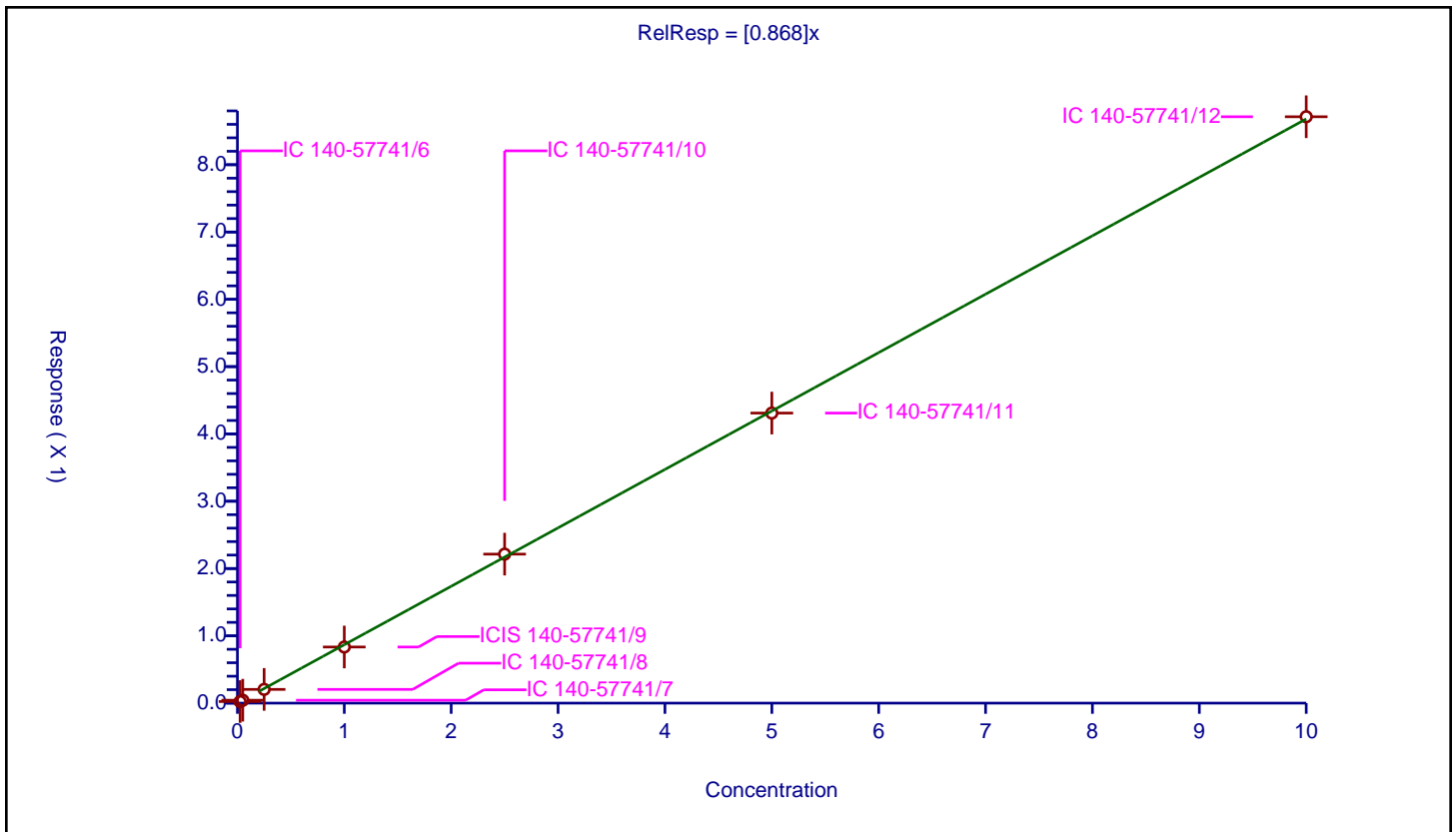
/ Perfluorohexanoic acid

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.868

Error Coefficients	
Standard Error:	14000000
Relative Standard Error:	4.7
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.023624	1.25	4759129.0	0.944942	Y
2	IC 140-57741/7	0.05	0.043134	1.25	5219880.0	0.862673	Y
3	IC 140-57741/8	0.25	0.203955	1.25	5323274.0	0.81582	Y
4	ICIS 140-57741/9	1.0	0.834091	1.25	5102737.0	0.834091	Y
5	IC 140-57741/10	2.5	2.213847	1.25	4746918.0	0.885539	Y
6	IC 140-57741/11	5.0	4.309809	1.25	4565306.0	0.861962	Y
7	IC 140-57741/12	10.0	8.71304	1.25	4180045.0	0.871304	Y





Calibration

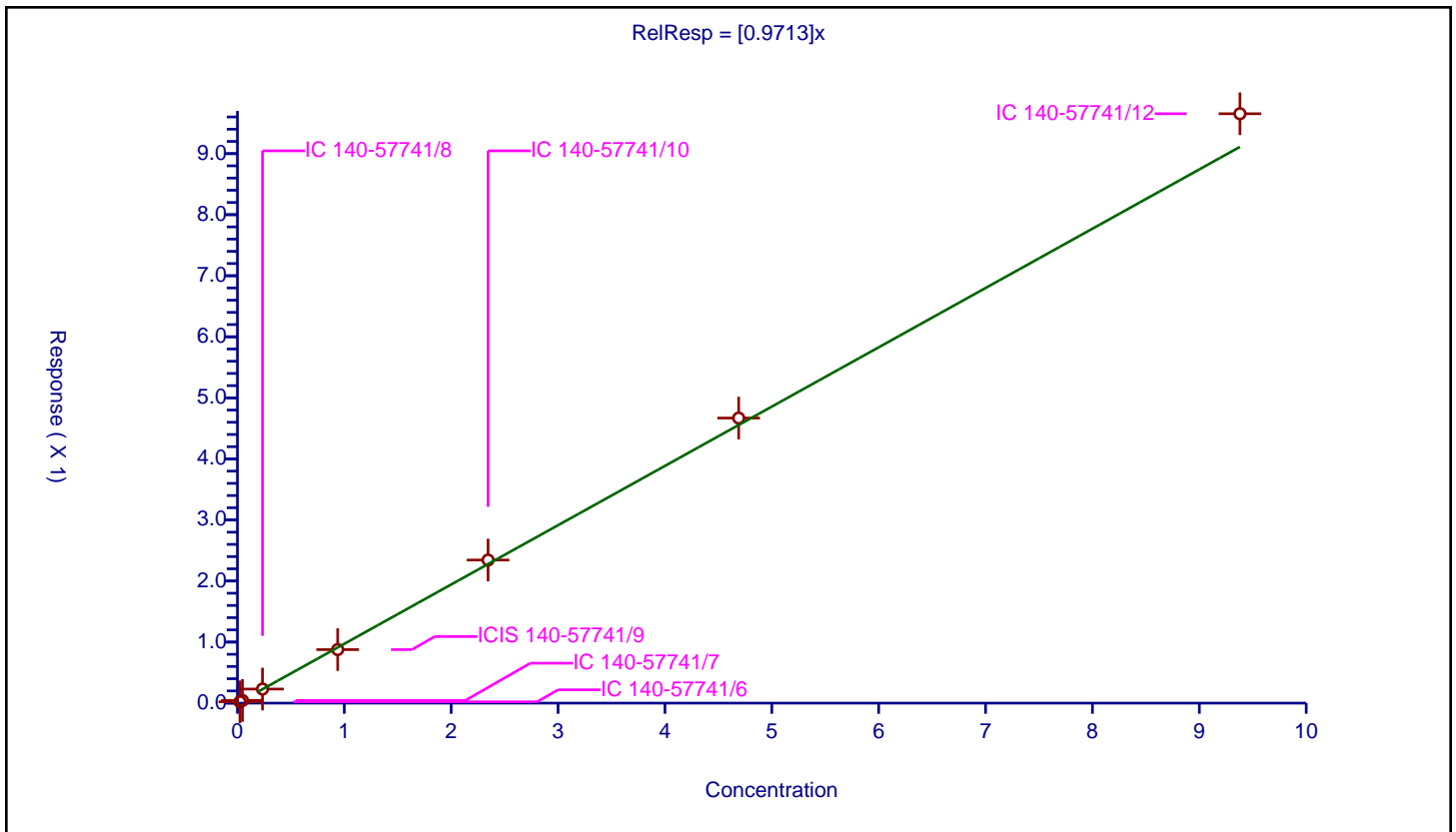
/ Perfluoropentanesulfonic acid

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.9713

Error Coefficients	
Standard Error:	10300000
Relative Standard Error:	4.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.02345	0.021624	1.1625	2602922.0	0.922138	Y
2	IC 140-57741/7	0.0469	0.04388	1.1625	2950306.0	0.935617	Y
3	IC 140-57741/8	0.2345	0.230417	1.1625	2844272.0	0.98259	Y
4	ICIS 140-57741/9	0.938	0.876668	1.1625	2970104.0	0.934615	Y
5	IC 140-57741/10	2.345	2.343746	1.1625	2853192.0	0.999465	Y
6	IC 140-57741/11	4.69	4.669106	1.1625	2783042.0	0.995545	Y
7	IC 140-57741/12	9.38	9.653394	1.1625	2612686.0	1.029147	Y



**Calibration**

**/ Perfluoro(2-propoxypropanoic) acid**

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

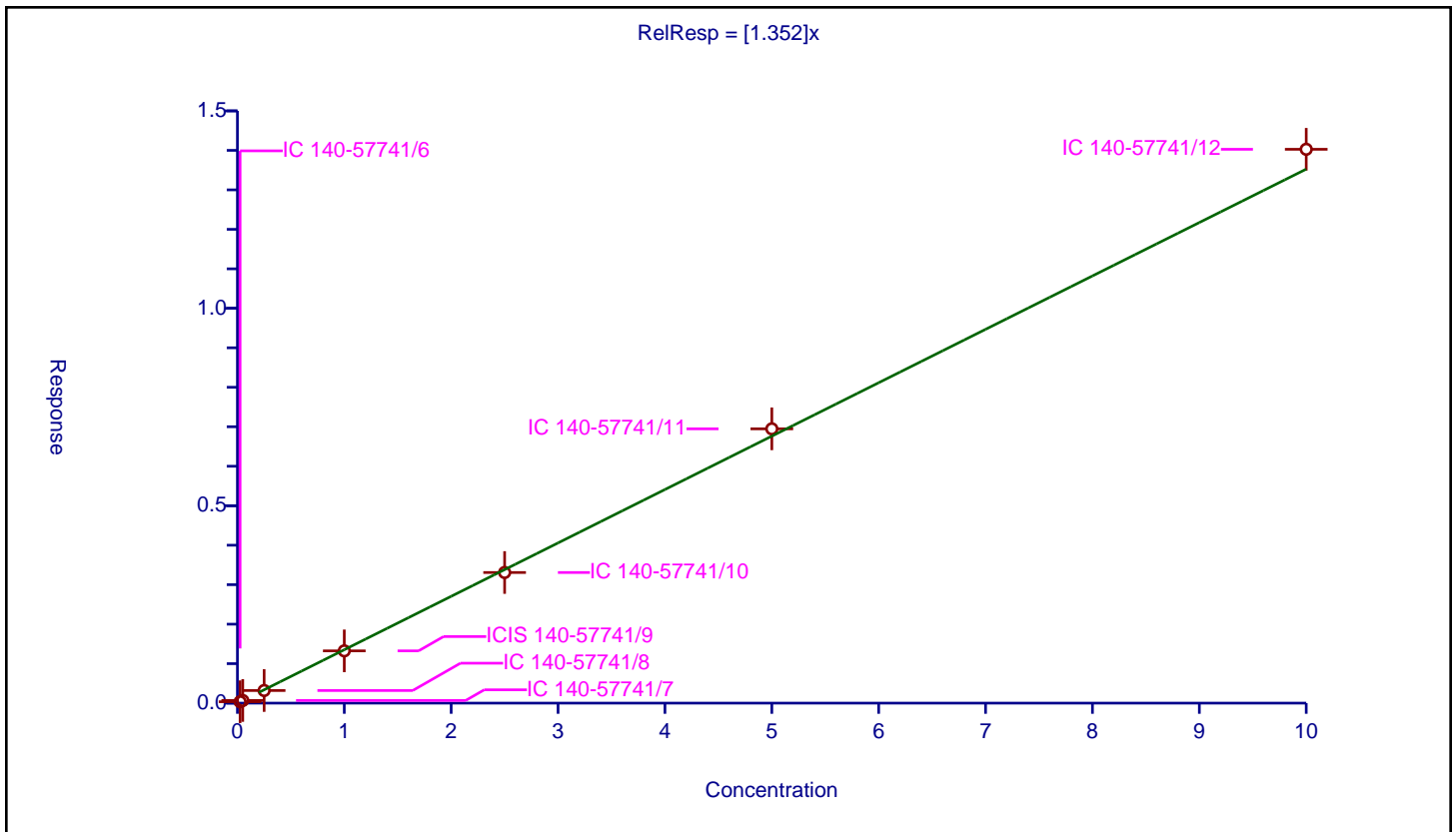
**Curve Coefficients**

Intercept: 0  
 Slope: 1.352

**Error Coefficients**

Standard Error: 11600000  
 Relative Standard Error: 3.7  
 Correlation Coefficient: 1.000  
 Coefficient of Determination (Adjusted): 0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.035229	1.25	2187985.0	1.409173	Y
2	IC 140-57741/7	0.05	0.067131	1.25	2389614.0	1.342623	Y
3	IC 140-57741/8	0.25	0.319074	1.25	2429399.0	1.276297	Y
4	ICIS 140-57741/9	1.0	1.323793	1.25	2440057.0	1.323793	Y
5	IC 140-57741/10	2.5	3.308417	1.25	2402042.0	1.323367	Y
6	IC 140-57741/11	5.0	6.94699	1.25	2216220.0	1.389398	Y
7	IC 140-57741/12	10.0	14.027481	1.25	2186460.0	1.402748	Y



Calibration

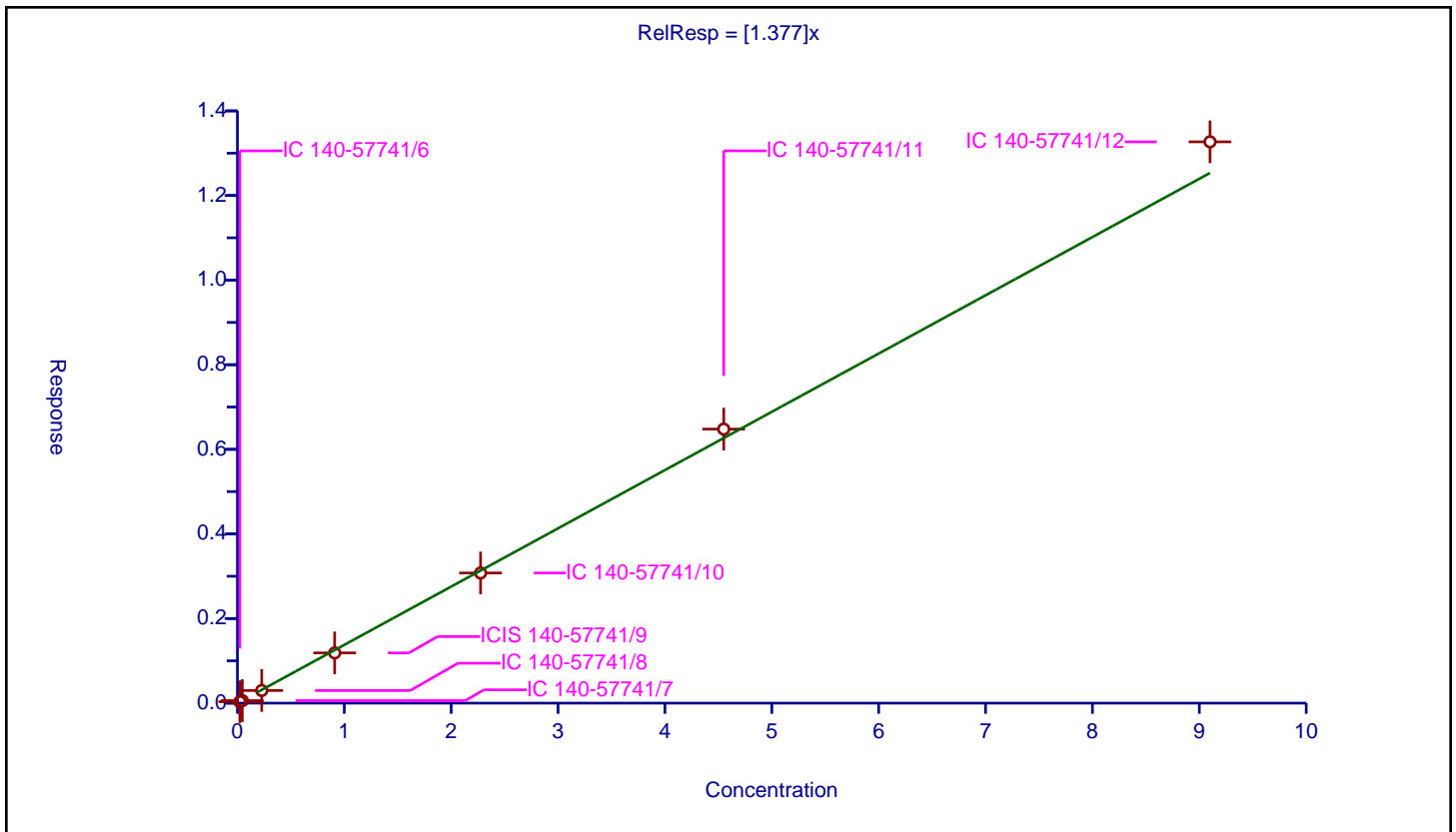
/ Perfluorohexanesulfonic acid

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.377

Error Coefficients	
Standard Error:	9020000
Relative Standard Error:	5.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.02275	0.033841	1.1825	1831227.0	1.487534	Y
2	IC 140-57741/7	0.0455	0.059364	1.1825	2043270.0	1.304697	Y
3	IC 140-57741/8	0.2275	0.297972	1.1825	1985027.0	1.309768	Y
4	ICIS 140-57741/9	0.91	1.186971	1.1825	2043432.0	1.304364	Y
5	IC 140-57741/10	2.275	3.076499	1.1825	1943468.0	1.352307	Y
6	IC 140-57741/11	4.55	6.477765	1.1825	1801353.0	1.423685	Y
7	IC 140-57741/12	9.1	13.268562	1.1825	1692118.0	1.458084	Y



**Calibration**

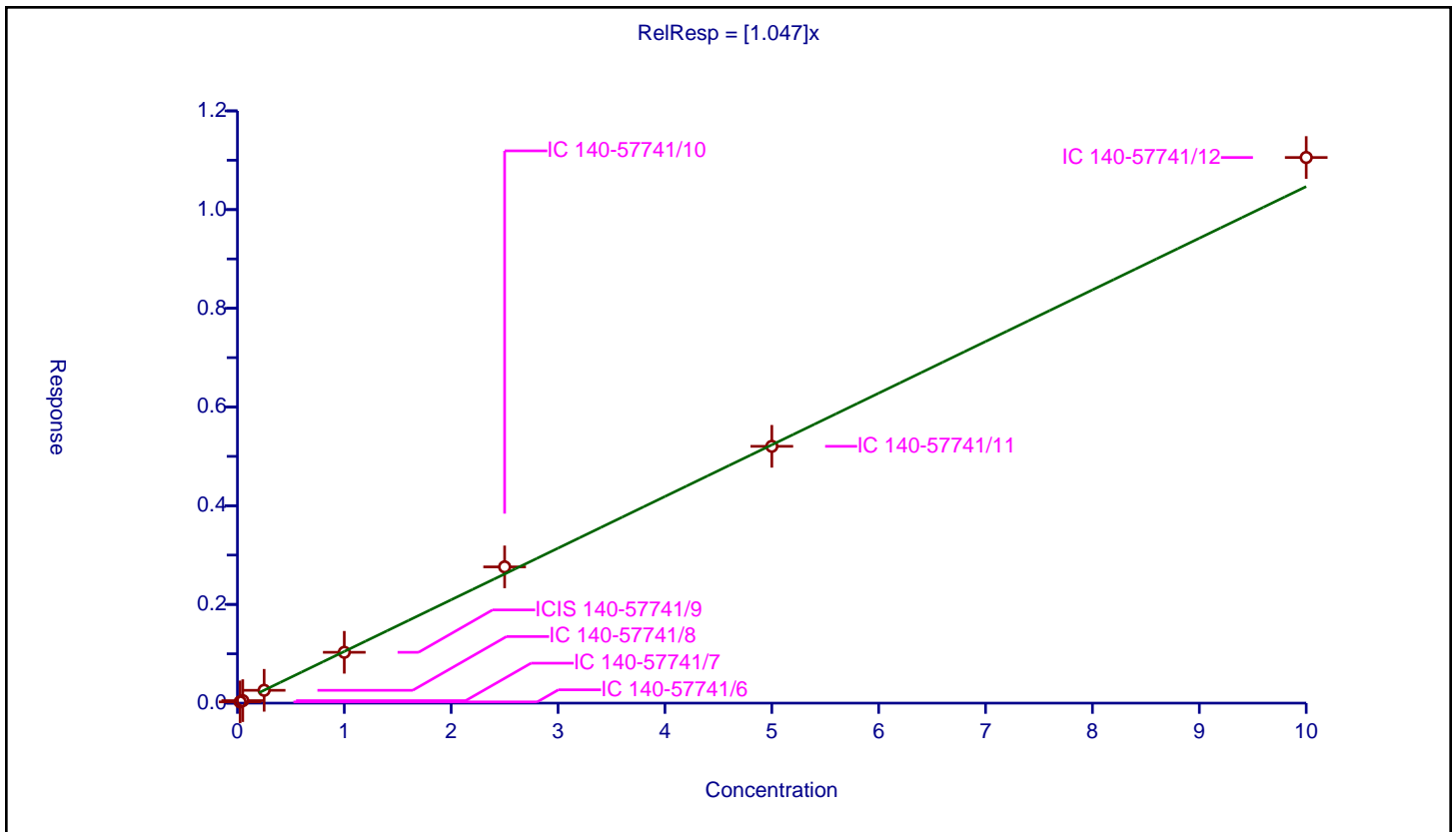
/ Perfluoroheptanoic acid

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.047

Error Coefficients	
Standard Error:	16800000
Relative Standard Error:	4.1
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.025073	1.25	4573137.0	1.0029	Y
2	IC 140-57741/7	0.05	0.050215	1.25	5005273.0	1.004296	Y
3	IC 140-57741/8	0.25	0.259896	1.25	4848796.0	1.039583	Y
4	ICIS 140-57741/9	1.0	1.029701	1.25	4996367.0	1.029701	Y
5	IC 140-57741/10	2.5	2.760381	1.25	4645602.0	1.104153	Y
6	IC 140-57741/11	5.0	5.203417	1.25	4368922.0	1.040683	Y
7	IC 140-57741/12	10.0	11.05555	1.25	3984356.0	1.105555	Y



Calibration

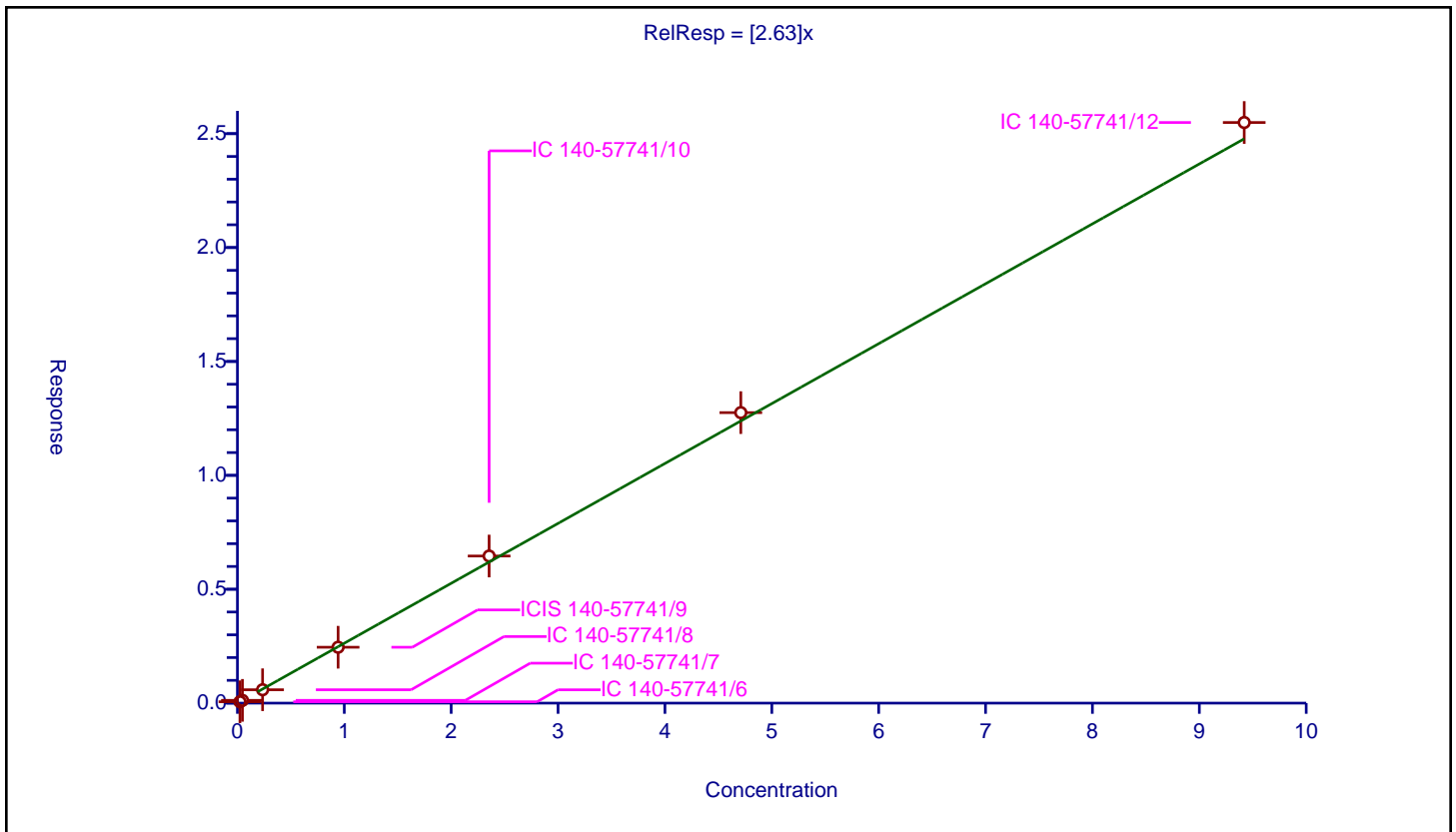
/ DONA

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	2.63

Error Coefficients	
Standard Error:	26100000
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 140-57741/6	0.02355	0.060459	1.195	2592602.0	2.567255	Y
2	IC 140-57741/7	0.0471	0.121738	1.195	2894864.0	2.584672	Y
3	IC 140-57741/8	0.2355	0.588105	1.195	3000906.0	2.497259	Y
4	ICIS 140-57741/9	0.942	2.453757	1.195	2896304.0	2.604837	Y
5	IC 140-57741/10	2.355	6.458278	1.195	2779952.0	2.742369	Y
6	IC 140-57741/11	4.71	12.753415	1.195	2637457.0	2.707731	Y
7	IC 140-57741/12	9.42	25.490133	1.195	2584771.0	2.705959	Y



**Calibration**

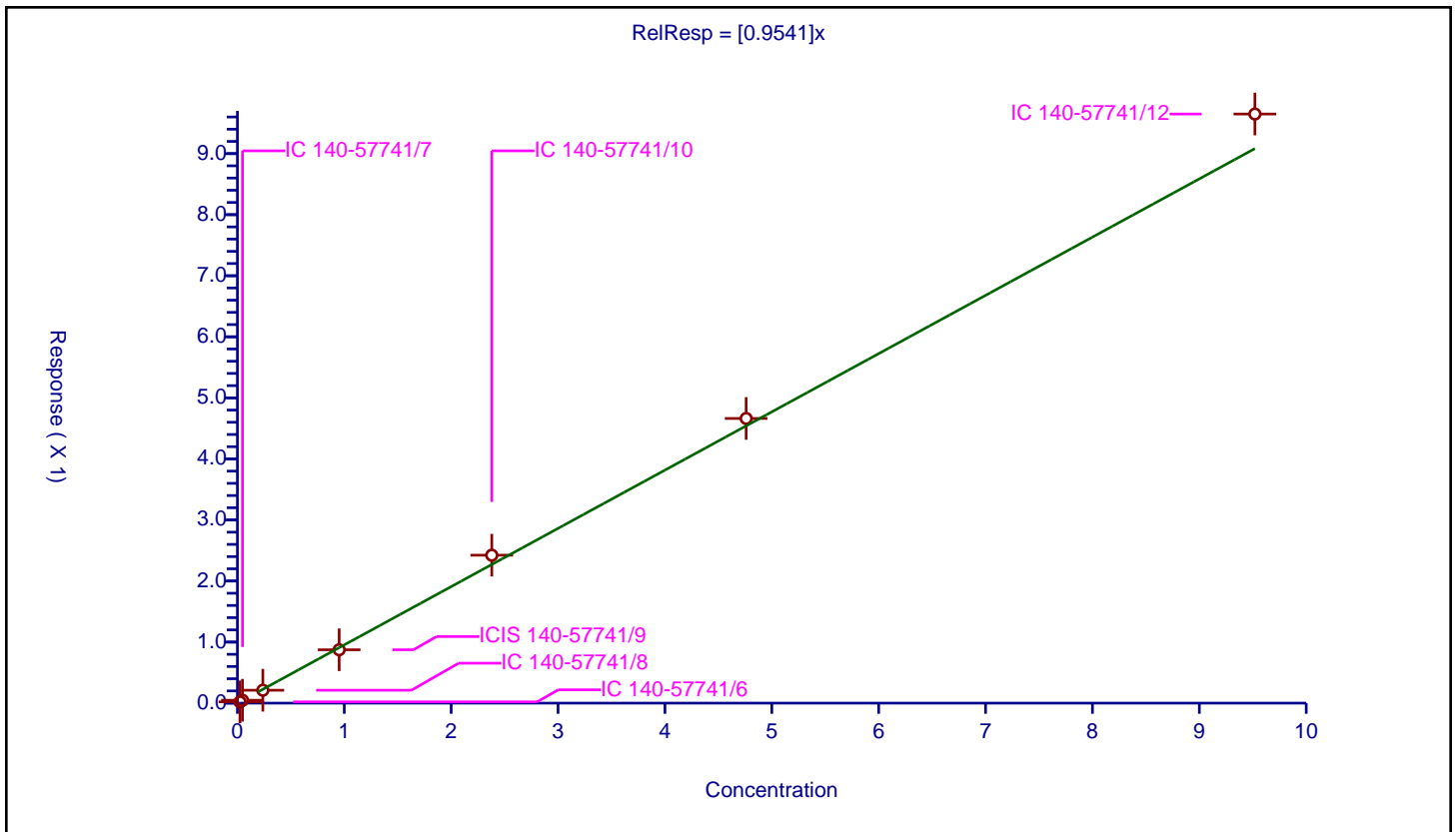
/ Perfluoroheptanesulfonic acid

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.9541

Error Coefficients	
Standard Error:	9810000
Relative Standard Error:	6.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.0238	0.020646	1.195	2592602.0	0.867472	Y
2	IC 140-57741/7	0.0476	0.047302	1.195	2894864.0	0.993747	Y
3	IC 140-57741/8	0.238	0.211406	1.195	3000906.0	0.888259	Y
4	ICIS 140-57741/9	0.952	0.87387	1.195	2896304.0	0.91793	Y
5	IC 140-57741/10	2.38	2.422781	1.195	2779952.0	1.017975	Y
6	IC 140-57741/11	4.76	4.662481	1.195	2637457.0	0.979513	Y
7	IC 140-57741/12	9.52	9.648332	1.195	2584771.0	1.01348	Y



Calibration

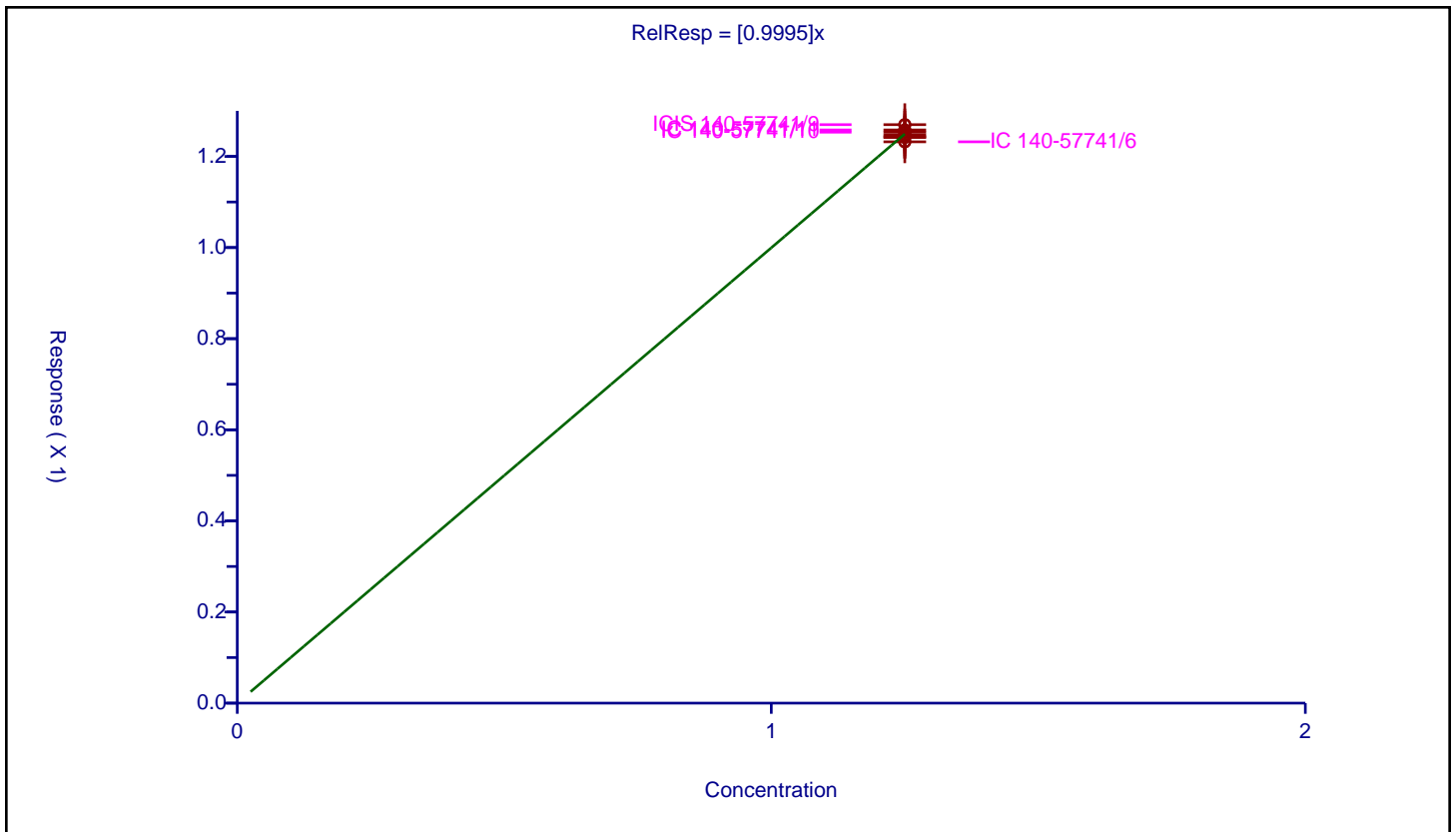
/ 13C8 PFOA

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.9995

Error Coefficients	
Standard Error:	5190000
Relative Standard Error:	1.0
Correlation Coefficient:	0.00000000000000000000
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	1.25	1.232123	1.25	4740402.0	0.985698	Y
2	IC 140-57741/7	1.25	1.247429	1.25	5175029.0	0.997943	Y
3	IC 140-57741/8	1.25	1.241606	1.25	5168548.0	0.993285	Y
4	ICIS 140-57741/9	1.25	1.269757	1.25	5153161.0	1.015806	Y
5	IC 140-57741/10	1.25	1.253261	1.25	4797778.0	1.002609	Y
6	IC 140-57741/11	1.25	1.258176	1.25	4399864.0	1.00654	Y
7	IC 140-57741/12	1.25	1.243156	1.25	4109093.0	0.994525	Y



Calibration

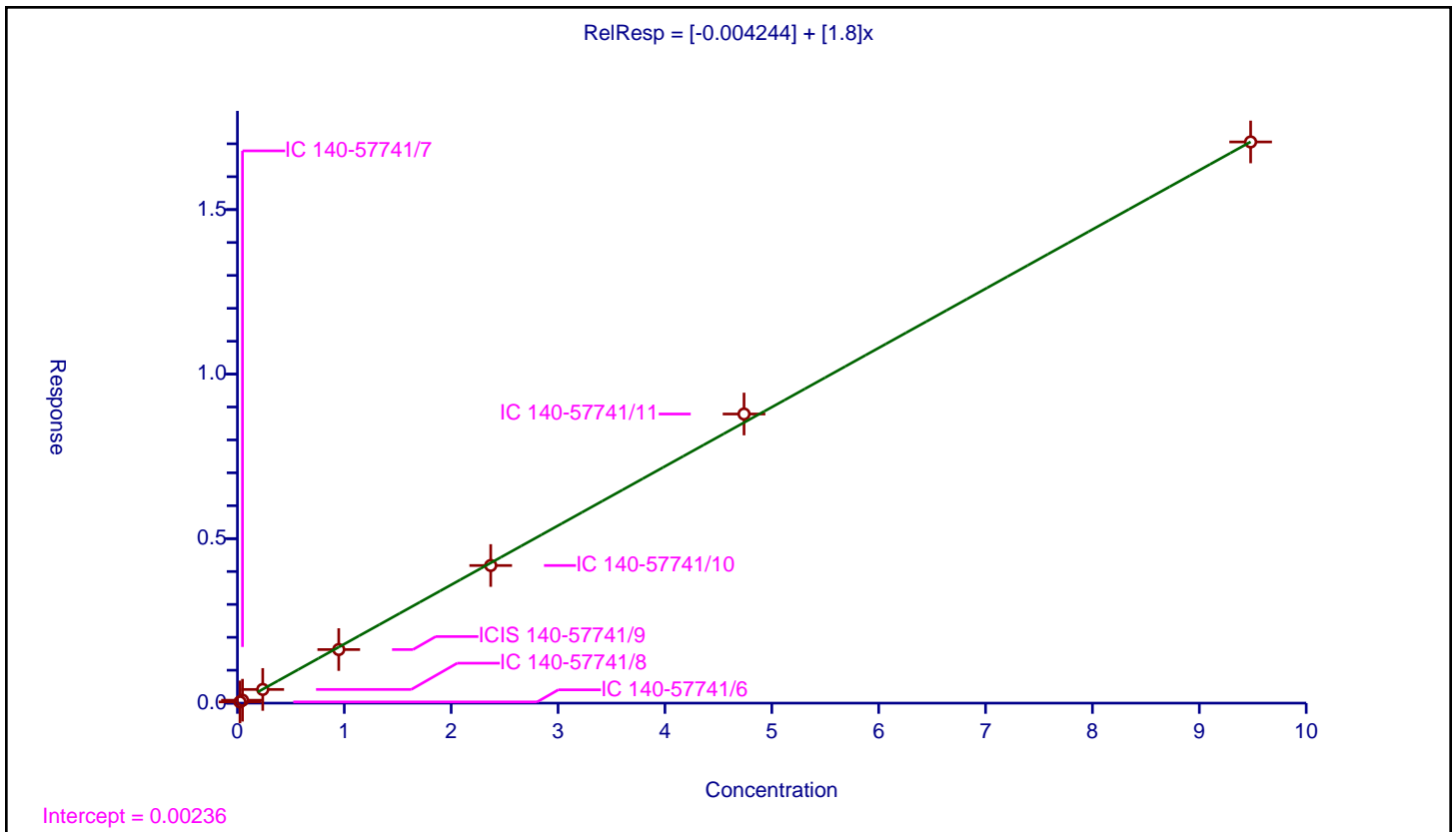
/ 1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)

Curve Type: Linear  
 Weighting: Conc\_Sq  
 Origin: None  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	-0.004244
Slope:	1.8

Error Coefficients	
Standard Error:	5330000
Relative Standard Error:	5.1
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.0237	0.036635	1.1875	938909.0	1.545789	Y
2	IC 140-57741/7	0.0474	0.088649	1.1875	1026945.0	1.870225	Y
3	IC 140-57741/8	0.237	0.415677	1.1875	966110.0	1.753912	Y
4	ICIS 140-57741/9	0.948	1.628179	1.1875	968049.0	1.717488	Y
5	IC 140-57741/10	2.37	4.183048	1.1875	899627.0	1.764999	Y
6	IC 140-57741/11	4.74	8.78726	1.1875	764954.0	1.853852	Y
7	IC 140-57741/12	9.48	17.056232	1.1875	690189.0	1.799181	Y





**Calibration**

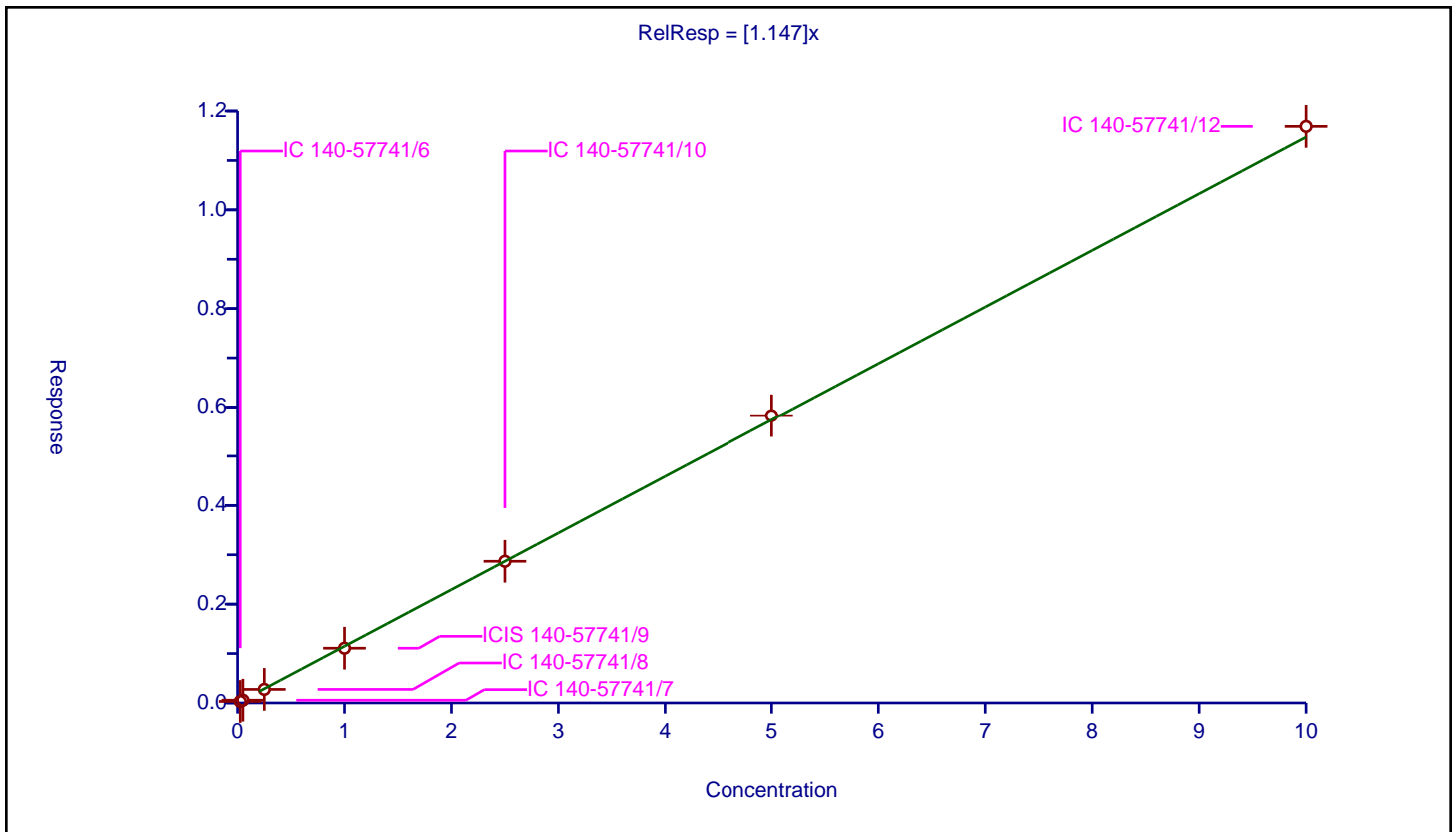
/ Perfluorooctanoic acid

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.147

Error Coefficients	
Standard Error:	18400000
Relative Standard Error:	3.8
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.030613	1.25	4740402.0	1.224506	Y
2	IC 140-57741/7	0.05	0.056055	1.25	5175029.0	1.121105	Y
3	IC 140-57741/8	0.25	0.274197	1.25	5168548.0	1.096788	Y
4	ICIS 140-57741/9	1.0	1.108225	1.25	5153161.0	1.108225	Y
5	IC 140-57741/10	2.5	2.868724	1.25	4797778.0	1.14749	Y
6	IC 140-57741/11	5.0	5.825146	1.25	4399864.0	1.165029	Y
7	IC 140-57741/12	10.0	11.689489	1.25	4109093.0	1.168949	Y



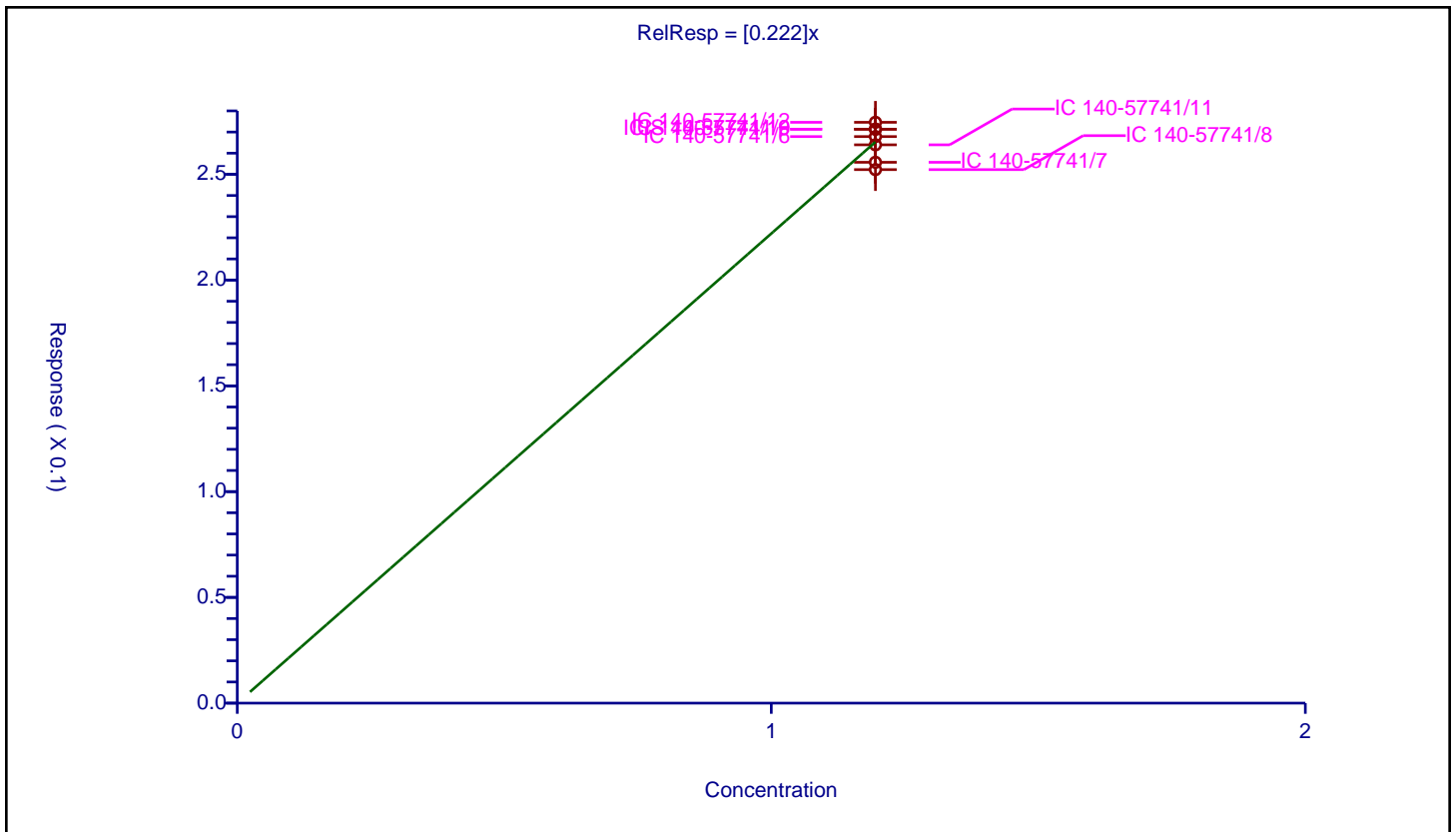
Calibration

/ 13C8 PFOS

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.222
Error Coefficients	
Standard Error:	664000
Relative Standard Error:	3.2
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0.0000000000000000222

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	1.195	0.267853	1.195	2592602.0	0.224145	Y
2	IC 140-57741/7	1.195	0.255696	1.195	2894864.0	0.213972	Y
3	IC 140-57741/8	1.195	0.252229	1.195	3000906.0	0.211071	Y
4	ICIS 140-57741/9	1.195	0.271358	1.195	2896304.0	0.227078	Y
5	IC 140-57741/10	1.195	0.271331	1.195	2779952.0	0.227055	Y
6	IC 140-57741/11	1.195	0.263958	1.195	2637457.0	0.220885	Y
7	IC 140-57741/12	1.195	0.274597	1.195	2584771.0	0.229788	Y



**Calibration**

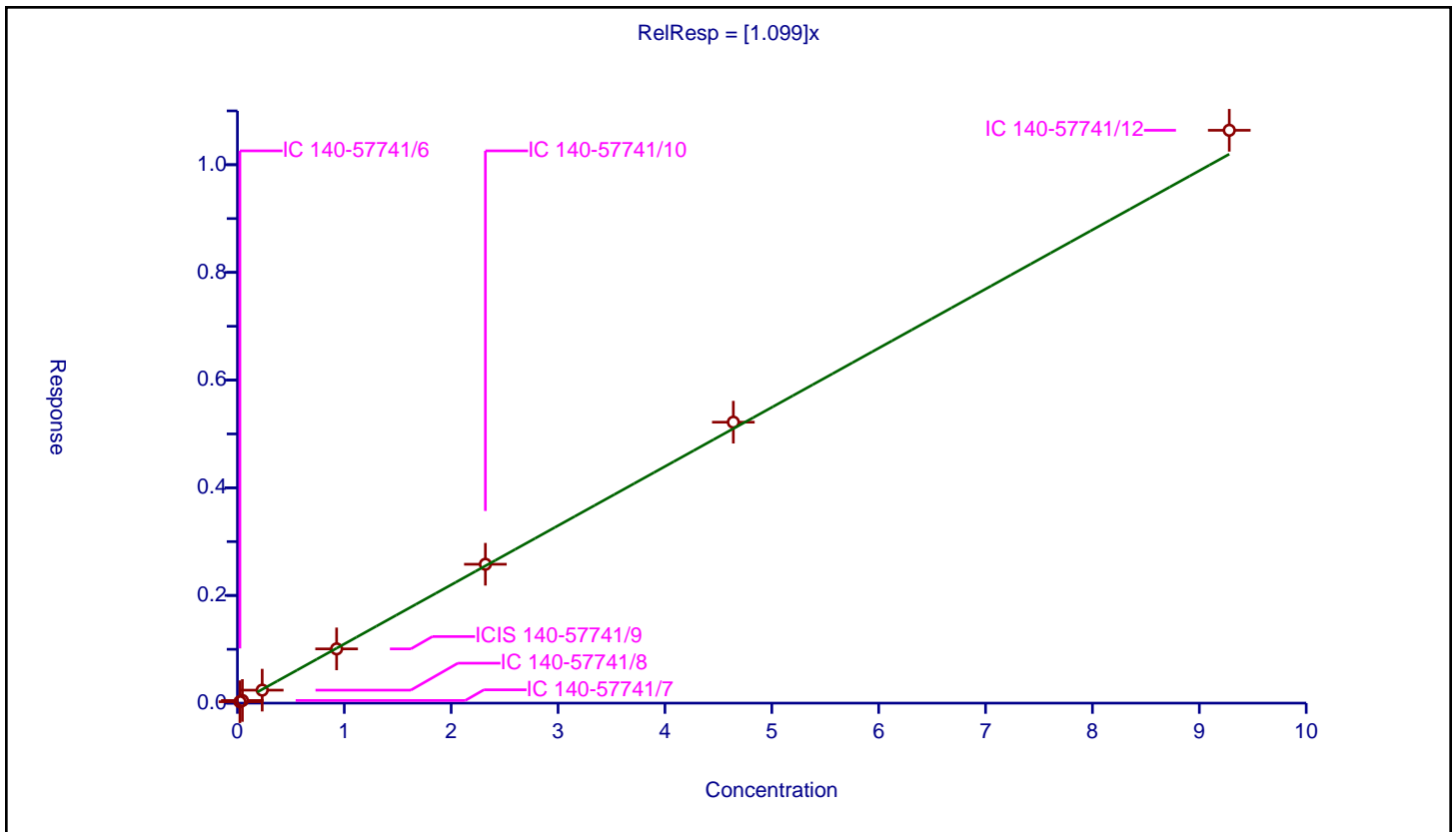
/ Perfluorooctanesulfonic acid

**Curve Type:** Average  
**Weighting:** Conc\_Sq  
**Origin:** Force  
**Dependency:** Response  
**Calib Mode:** IsoDil  
**Response Base:** AREA  
**RF Rounding:** 0

Curve Coefficients	
<b>Intercept:</b>	0
<b>Slope:</b>	1.099

Error Coefficients	
<b>Standard Error:</b>	10800000
<b>Relative Standard Error:</b>	3.5
<b>Correlation Coefficient:</b>	1.000
<b>Coefficient of Determination (Adjusted):</b>	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.0232	0.02609	1.195	2592602.0	1.124562	Y
2	IC 140-57741/7	0.0464	0.049099	1.195	2894864.0	1.058165	Y
3	IC 140-57741/8	0.232	0.241328	1.195	3000906.0	1.040208	Y
4	ICIS 140-57741/9	0.928	1.007551	1.195	2896304.0	1.085723	Y
5	IC 140-57741/10	2.32	2.579437	1.195	2779952.0	1.111826	Y
6	IC 140-57741/11	4.64	5.218047	1.195	2637457.0	1.124579	Y
7	IC 140-57741/12	9.28	10.639656	1.195	2584771.0	1.146515	Y



**Calibration**

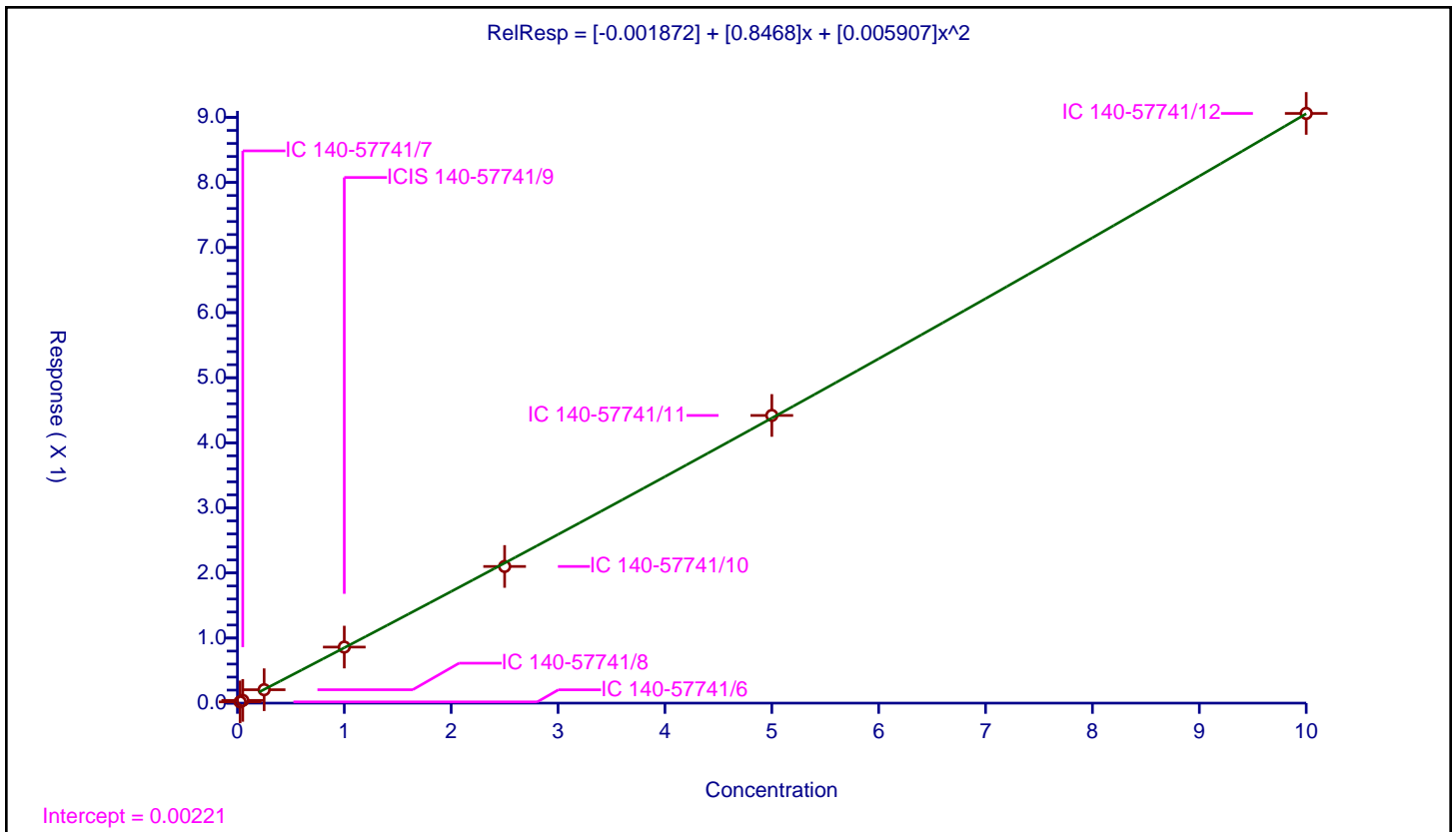
/ Perfluorononanoic acid

Curve Type: Quadratic  
 Weighting: Conc\_Sq  
 Origin: None  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	-0.001872
Slope:	0.8468
Second Order:	0.005907

Error Coefficients	
Standard Error:	23600000
Relative Standard Error:	2.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.018926	1.25	6169153.0	0.757057	Y
2	IC 140-57741/7	0.05	0.042138	1.25	6594522.0	0.842768	Y
3	IC 140-57741/8	0.25	0.206174	1.25	6772318.0	0.824695	Y
4	ICIS 140-57741/9	1.0	0.861255	1.25	6551468.0	0.861255	Y
5	IC 140-57741/10	2.5	2.100072	1.25	6530042.0	0.840029	Y
6	IC 140-57741/11	5.0	4.420487	1.25	5842775.0	0.884097	Y
7	IC 140-57741/12	10.0	9.061095	1.25	5610570.0	0.906109	Y



**Calibration**

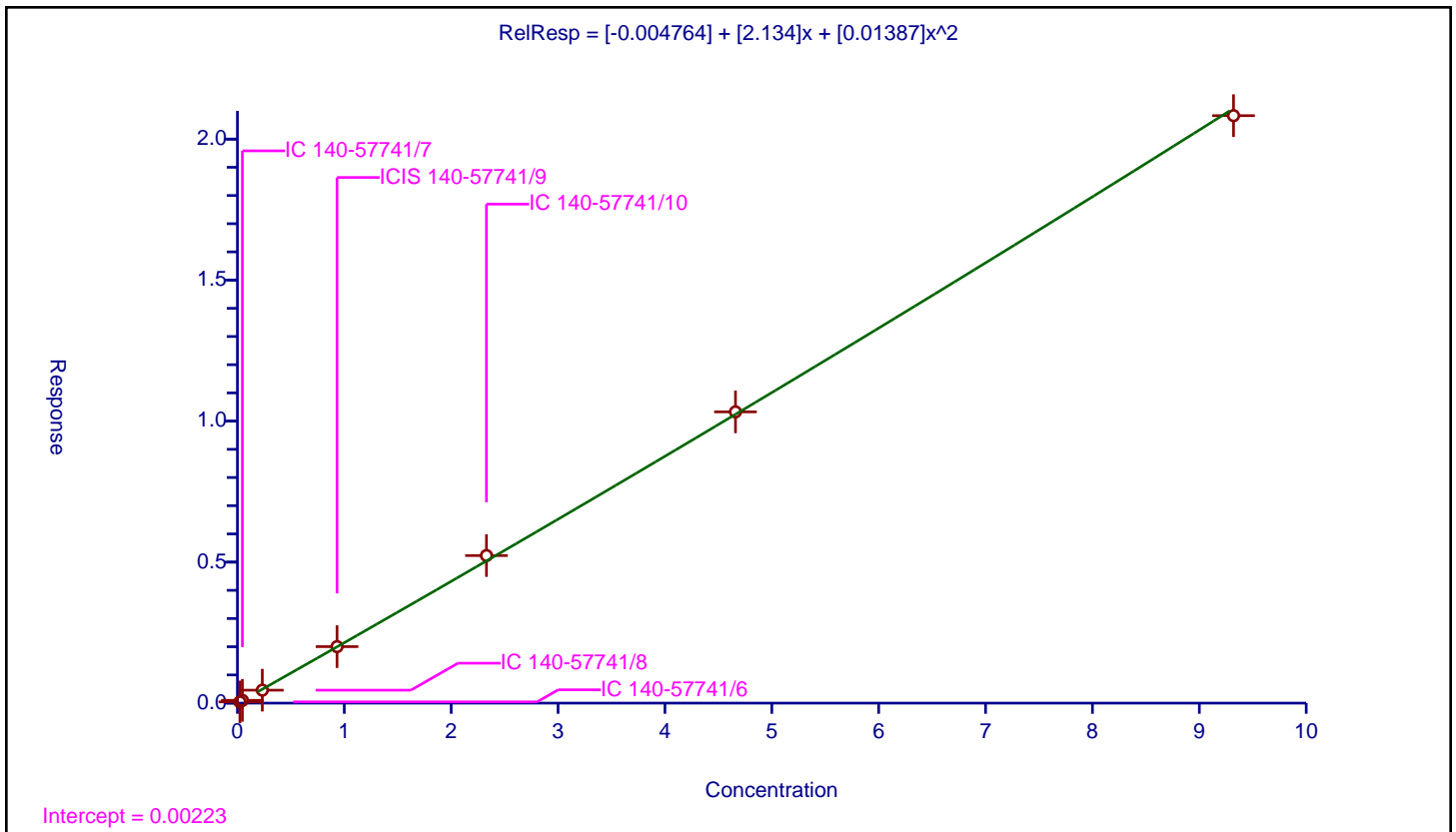
**/ 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid**

Curve Type: Quadratic  
 Weighting: Conc\_Sq  
 Origin: None  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	-0.004764
Slope:	2.134
Second Order:	0.01387

Error Coefficients	
Standard Error:	26100000
Relative Standard Error:	4.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.0233	0.044111	1.195	2592602.0	1.893163	Y
2	IC 140-57741/7	0.0466	0.09936	1.195	2894864.0	2.132183	Y
3	IC 140-57741/8	0.233	0.459566	1.195	3000906.0	1.972385	Y
4	ICIS 140-57741/9	0.932	2.003365	1.195	2896304.0	2.149534	Y
5	IC 140-57741/10	2.33	5.232466	1.195	2779952.0	2.245693	Y
6	IC 140-57741/11	4.66	10.328801	1.195	2637457.0	2.216481	Y
7	IC 140-57741/12	9.32	20.83125	1.195	2584771.0	2.235113	Y



**Calibration**

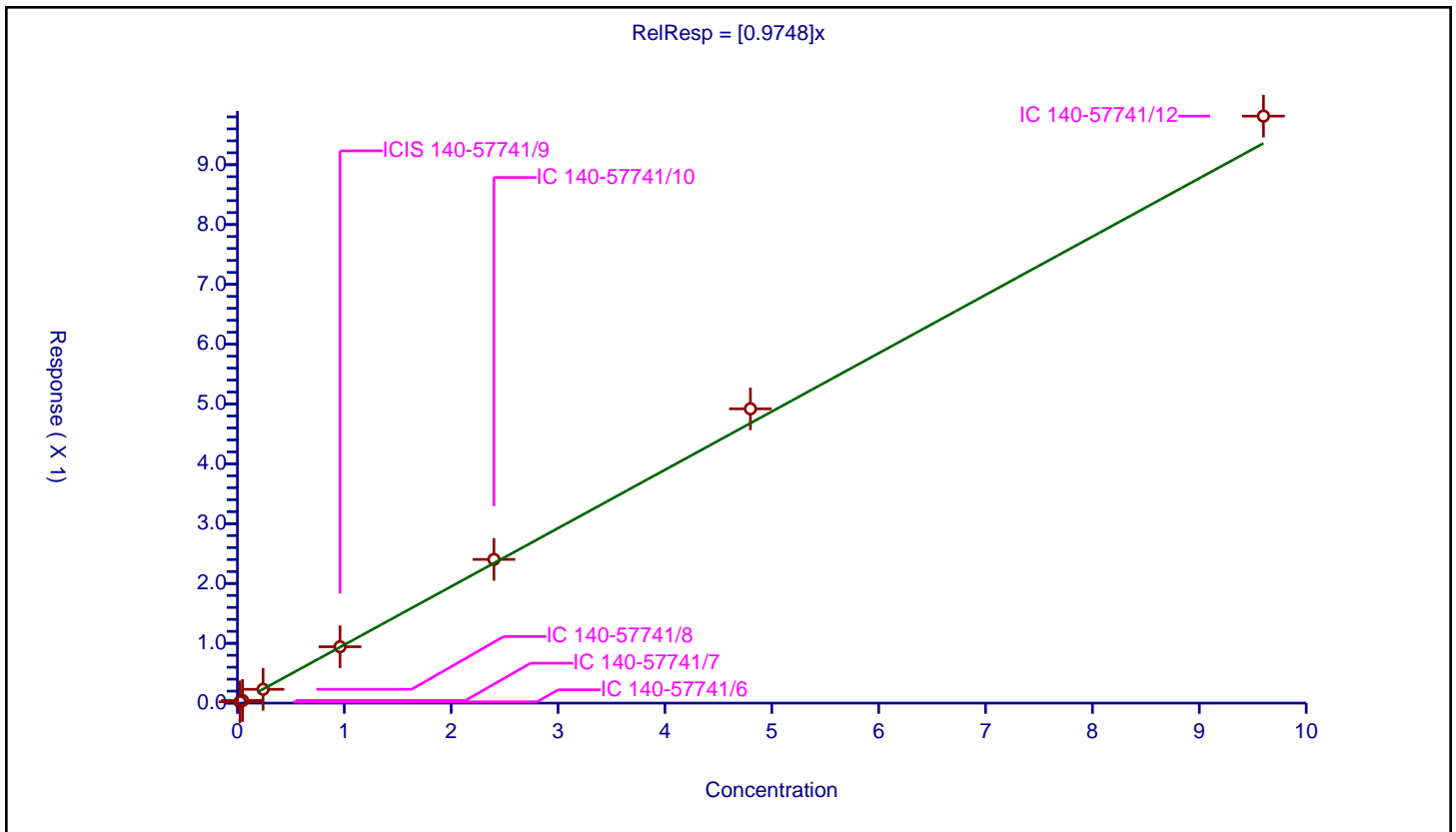
**/ Perfluorononanesulfonic acid**

**Curve Type:** Average  
**Weighting:** Conc\_Sq  
**Origin:** Force  
**Dependency:** Response  
**Calib Mode:** IsoDil  
**Response Base:** AREA  
**RF Rounding:** 0

Curve Coefficients	
<b>Intercept:</b>	0
<b>Slope:</b>	0.9748

Error Coefficients	
<b>Standard Error:</b>	10000000
<b>Relative Standard Error:</b>	4.7
<b>Correlation Coefficient:</b>	1.000
<b>Coefficient of Determination (Adjusted):</b>	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.024	0.022039	1.195	2592602.0	0.918301	Y
2	IC 140-57741/7	0.048	0.043849	1.195	2894864.0	0.913518	Y
3	IC 140-57741/8	0.24	0.231028	1.195	3000906.0	0.962619	Y
4	ICIS 140-57741/9	0.96	0.9421	1.195	2896304.0	0.981354	Y
5	IC 140-57741/10	2.4	2.402419	1.195	2779952.0	1.001008	Y
6	IC 140-57741/11	4.8	4.919773	1.195	2637457.0	1.024953	Y
7	IC 140-57741/12	9.6	9.812654	1.195	2584771.0	1.022151	Y



**Calibration**

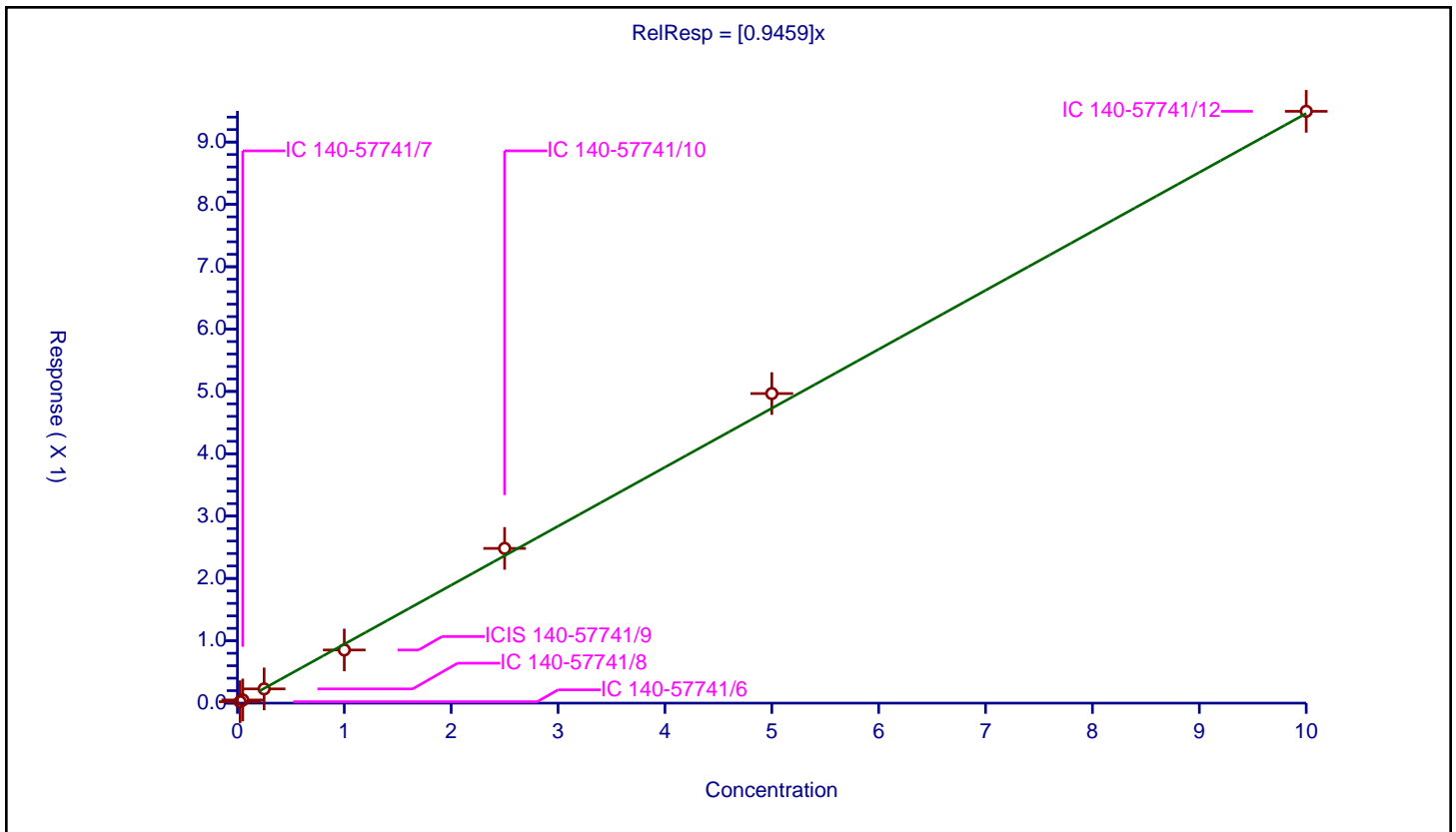
**/ Perfluorooctanesulfonamide**

**Curve Type:** Average  
**Weighting:** Conc\_Sq  
**Origin:** Force  
**Dependency:** Response  
**Calib Mode:** IsoDil  
**Response Base:** AREA  
**RF Rounding:** 0

Curve Coefficients	
Intercept:	0
Slope:	0.9459

Error Coefficients	
Standard Error:	11900000
Relative Standard Error:	6.0
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.022763	1.25	3954372.0	0.910536	Y
2	IC 140-57741/7	0.05	0.050449	1.25	4386245.0	1.008989	Y
3	IC 140-57741/8	0.25	0.228457	1.25	4301021.0	0.913828	Y
4	ICIS 140-57741/9	1.0	0.852608	1.25	4333664.0	0.852608	Y
5	IC 140-57741/10	2.5	2.482042	1.25	3925140.0	0.992817	Y
6	IC 140-57741/11	5.0	4.966002	1.25	3437917.0	0.9932	Y
7	IC 140-57741/12	10.0	9.493357	1.25	3199127.0	0.949336	Y



**Calibration**

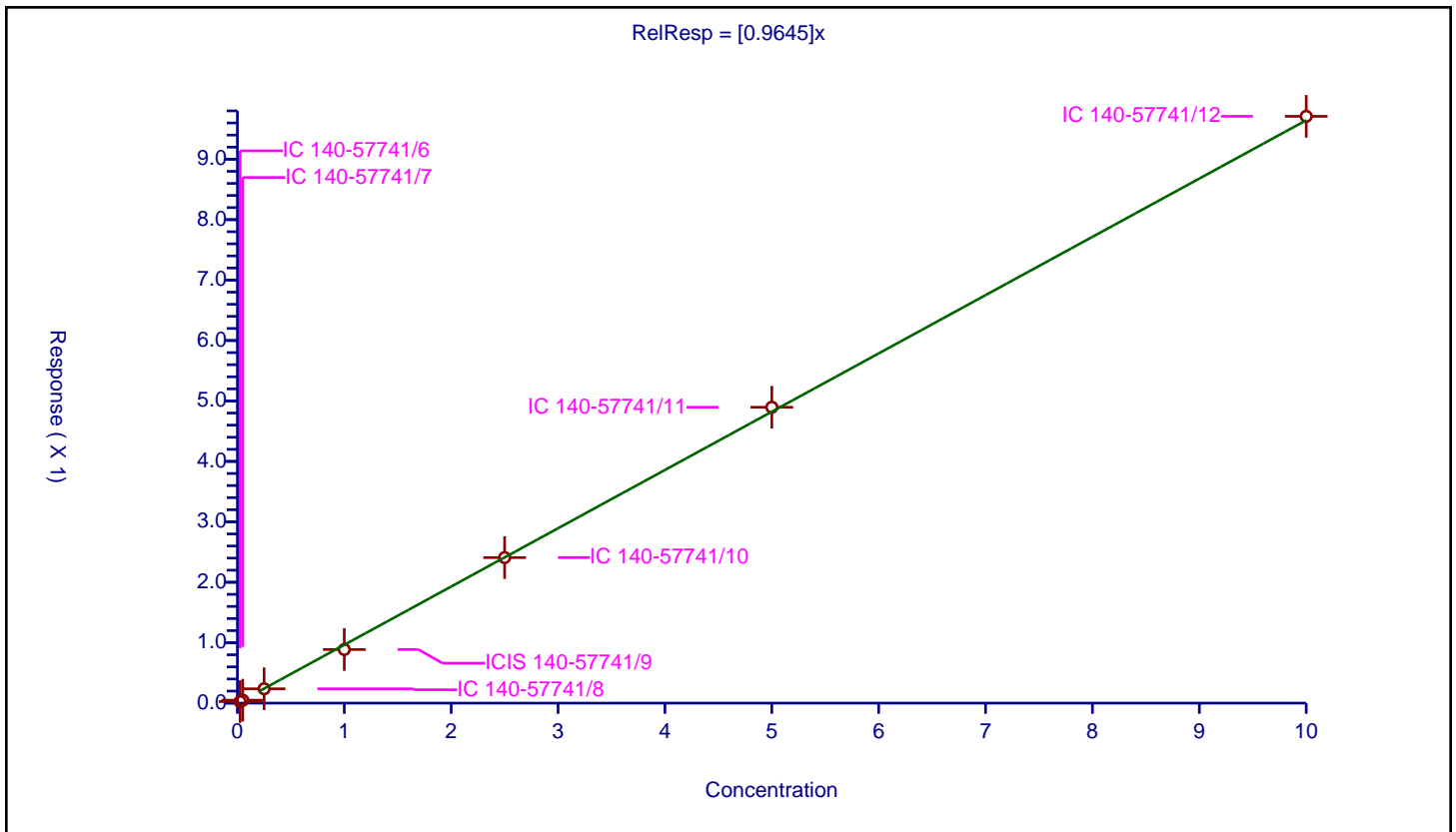
/ Perfluorodecanoic acid

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.9645

Error Coefficients	
Standard Error:	18800000
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 140-57741/6	0.025	0.025675	1.25	6130663.0	1.026985	Y
2	IC 140-57741/7	0.05	0.048729	1.25	6667781.0	0.974586	Y
3	IC 140-57741/8	0.25	0.237341	1.25	6595470.0	0.949364	Y
4	ICIS 140-57741/9	1.0	0.886749	1.25	6684781.0	0.886749	Y
5	IC 140-57741/10	2.5	2.40818	1.25	6089778.0	0.963272	Y
6	IC 140-57741/11	5.0	4.896301	1.25	5533817.0	0.97926	Y
7	IC 140-57741/12	10.0	9.70978	1.25	4962518.0	0.970978	Y





**Calibration**

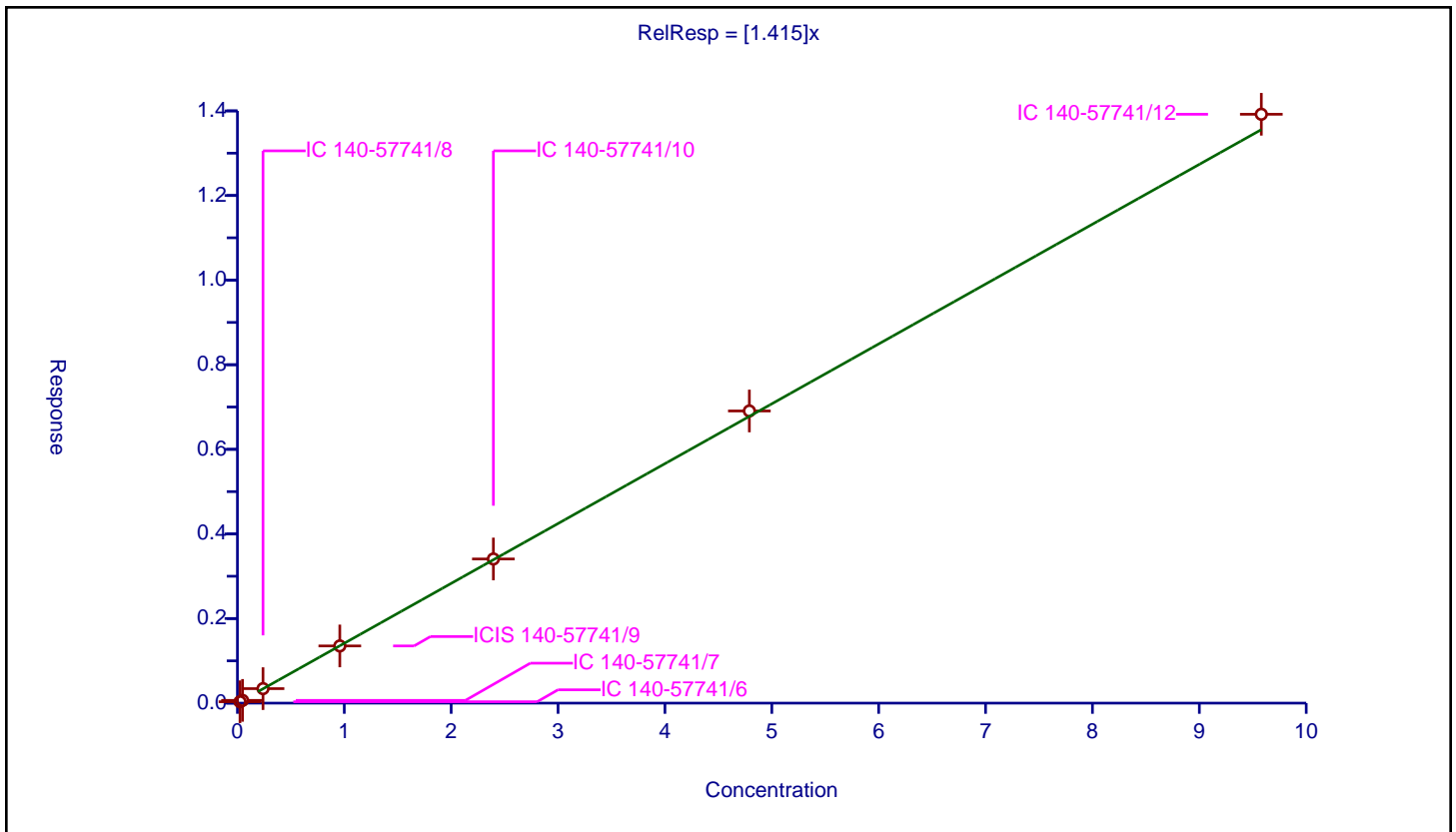
/ 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.415

Error Coefficients	
Standard Error:	4510000
Relative Standard Error:	2.3
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.02395	0.033121	1.1975	1037522.0	1.38291	Y
2	IC 140-57741/7	0.0479	0.065227	1.1975	1115730.0	1.361732	Y
3	IC 140-57741/8	0.2395	0.342934	1.1975	1128836.0	1.431873	Y
4	ICIS 140-57741/9	0.958	1.352249	1.1975	1117378.0	1.411533	Y
5	IC 140-57741/10	2.395	3.407881	1.1975	1009120.0	1.422915	Y
6	IC 140-57741/11	4.79	6.906143	1.1975	914379.0	1.441783	Y
7	IC 140-57741/12	9.58	13.920279	1.1975	788680.0	1.453056	Y



**Calibration**

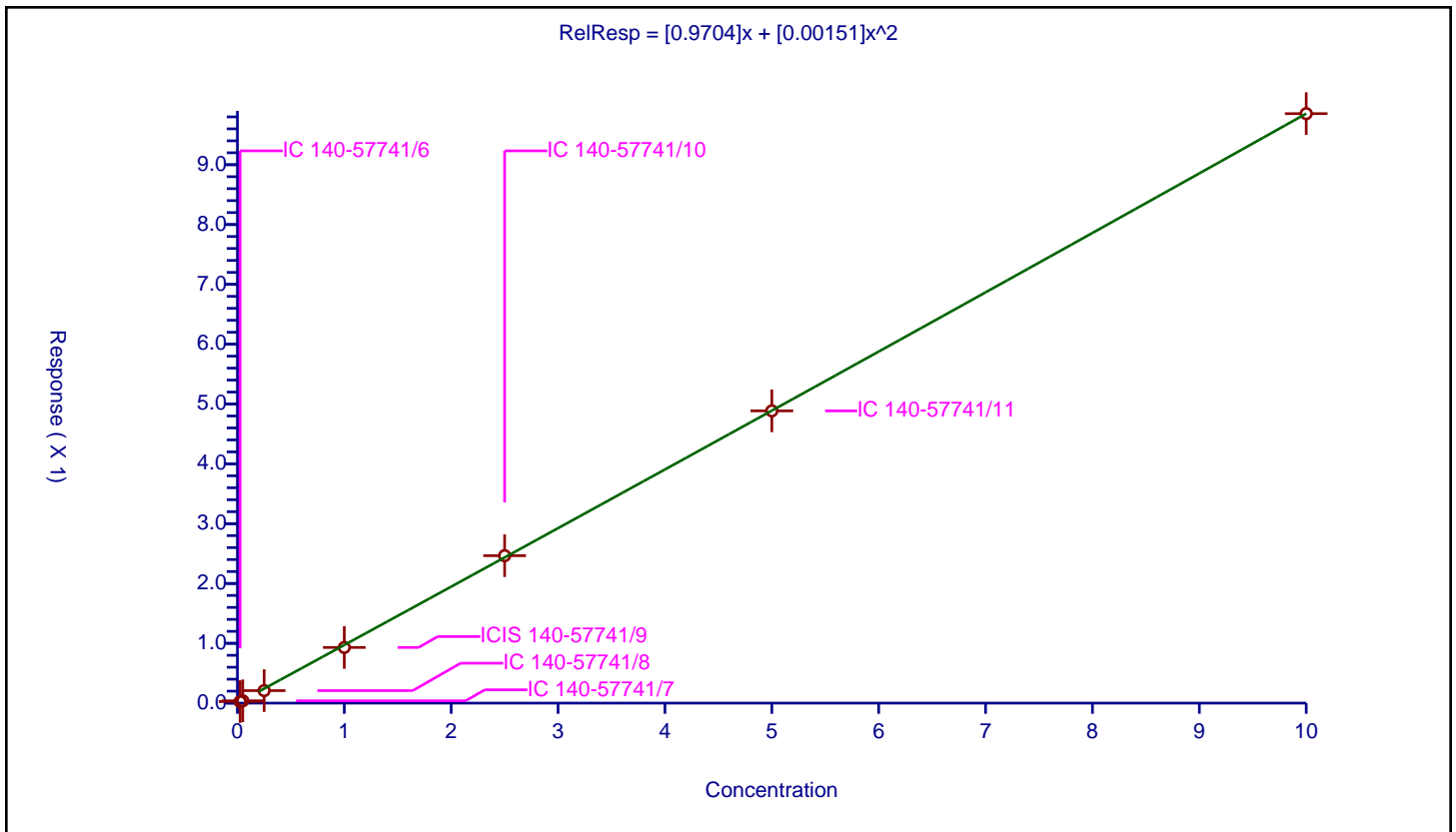
**/ N-methylperfluorooctanesulfonamidoacetic acid**

Curve Type: Quadratic  
 Weighting: None  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.9704
Second Order:	0.00151

Error Coefficients	
Standard Error:	2720000
Relative Standard Error:	11.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.025916	1.25	665125.0	1.036647	Y
2	IC 140-57741/7	0.05	0.038919	1.25	725830.0	0.778385	Y
3	IC 140-57741/8	0.25	0.20903	1.25	808216.0	0.836119	Y
4	ICIS 140-57741/9	1.0	0.930625	1.25	751488.0	0.930625	Y
5	IC 140-57741/10	2.5	2.46482	1.25	704135.0	0.985928	Y
6	IC 140-57741/11	5.0	4.885765	1.25	681894.0	0.977153	Y
7	IC 140-57741/12	10.0	9.854172	1.25	665518.0	0.985417	Y



**Calibration**

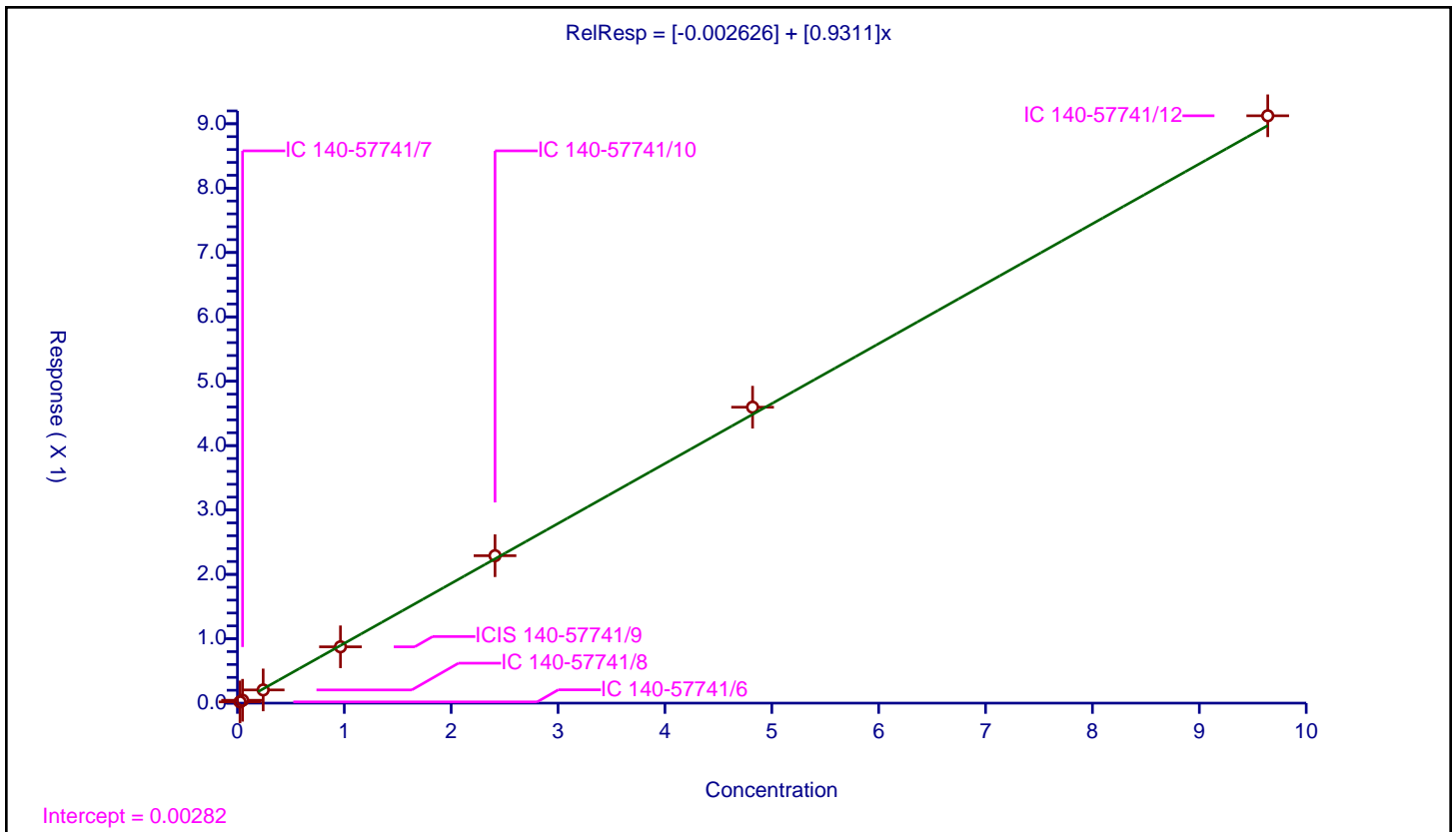
**/ Perfluorodecanesulfonic acid**

Curve Type: Linear  
 Weighting: Conc\_Sq  
 Origin: None  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	-0.002626
Slope:	0.9311

Error Coefficients	
Standard Error:	10300000
Relative Standard Error:	4.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.0241	0.019388	1.195	2592602.0	0.804499	Y
2	IC 140-57741/7	0.0482	0.044638	1.195	2894864.0	0.926102	Y
3	IC 140-57741/8	0.241	0.204817	1.195	3000906.0	0.849864	Y
4	ICIS 140-57741/9	0.964	0.874732	1.195	2896304.0	0.907398	Y
5	IC 140-57741/10	2.41	2.290156	1.195	2779952.0	0.950272	Y
6	IC 140-57741/11	4.82	4.597145	1.195	2637457.0	0.953764	Y
7	IC 140-57741/12	9.64	9.12409	1.195	2584771.0	0.946482	Y



**Calibration**

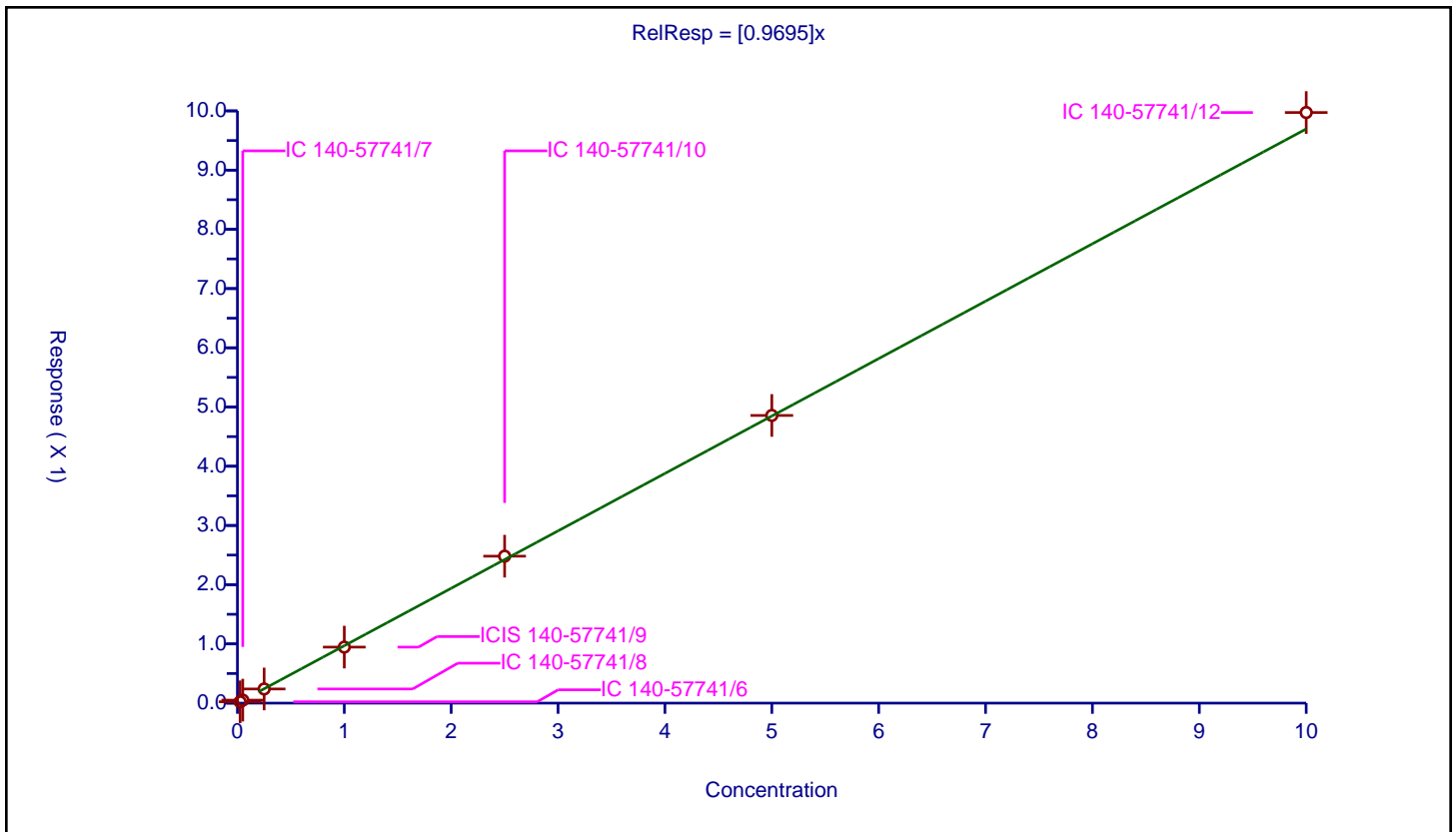
**/ Perfluoroundecanoic acid**

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.9695

Error Coefficients	
Standard Error:	20200000
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 140-57741/6	0.025	0.022817	1.25	5903076.0	0.912694	Y
2	IC 140-57741/7	0.05	0.050544	1.25	6518160.0	1.010883	Y
3	IC 140-57741/8	0.25	0.238986	1.25	6493725.0	0.955942	Y
4	ICIS 140-57741/9	1.0	0.945763	1.25	6490846.0	0.945763	Y
5	IC 140-57741/10	2.5	2.481477	1.25	6174640.0	0.992591	Y
6	IC 140-57741/11	5.0	4.857469	1.25	5615452.0	0.971494	Y
7	IC 140-57741/12	10.0	9.972615	1.25	5308482.0	0.997262	Y



Calibration

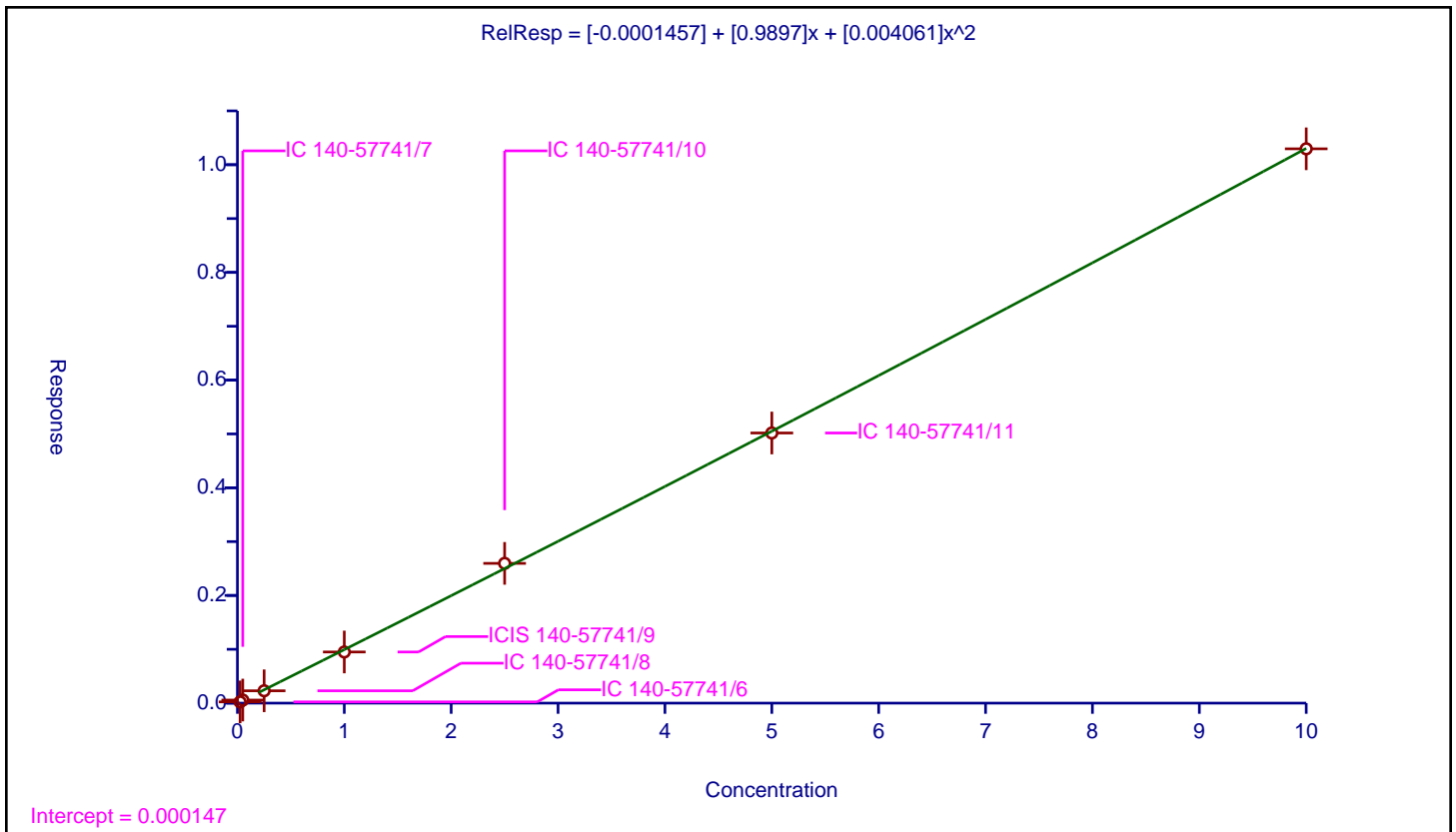
/ N-ethylperfluorooctanesulfonamidoacetic acid

Curve Type: Quadratic  
 Weighting: Conc\_Sq  
 Origin: None  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	-0.0001457
Slope:	0.9897
Second Order:	0.004061

Error Coefficients	
Standard Error:	3290000
Relative Standard Error:	9.7
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.022873	1.25	776364.0	0.914906	Y
2	IC 140-57741/7	0.05	0.057064	1.25	826795.0	1.141274	Y
3	IC 140-57741/8	0.25	0.229382	1.25	858732.0	0.917527	Y
4	ICIS 140-57741/9	1.0	0.94996	1.25	831002.0	0.94996	Y
5	IC 140-57741/10	2.5	2.596059	1.25	794601.0	1.038424	Y
6	IC 140-57741/11	5.0	5.01712	1.25	724743.0	1.003424	Y
7	IC 140-57741/12	10.0	10.295782	1.25	683862.0	1.029578	Y



**Calibration**

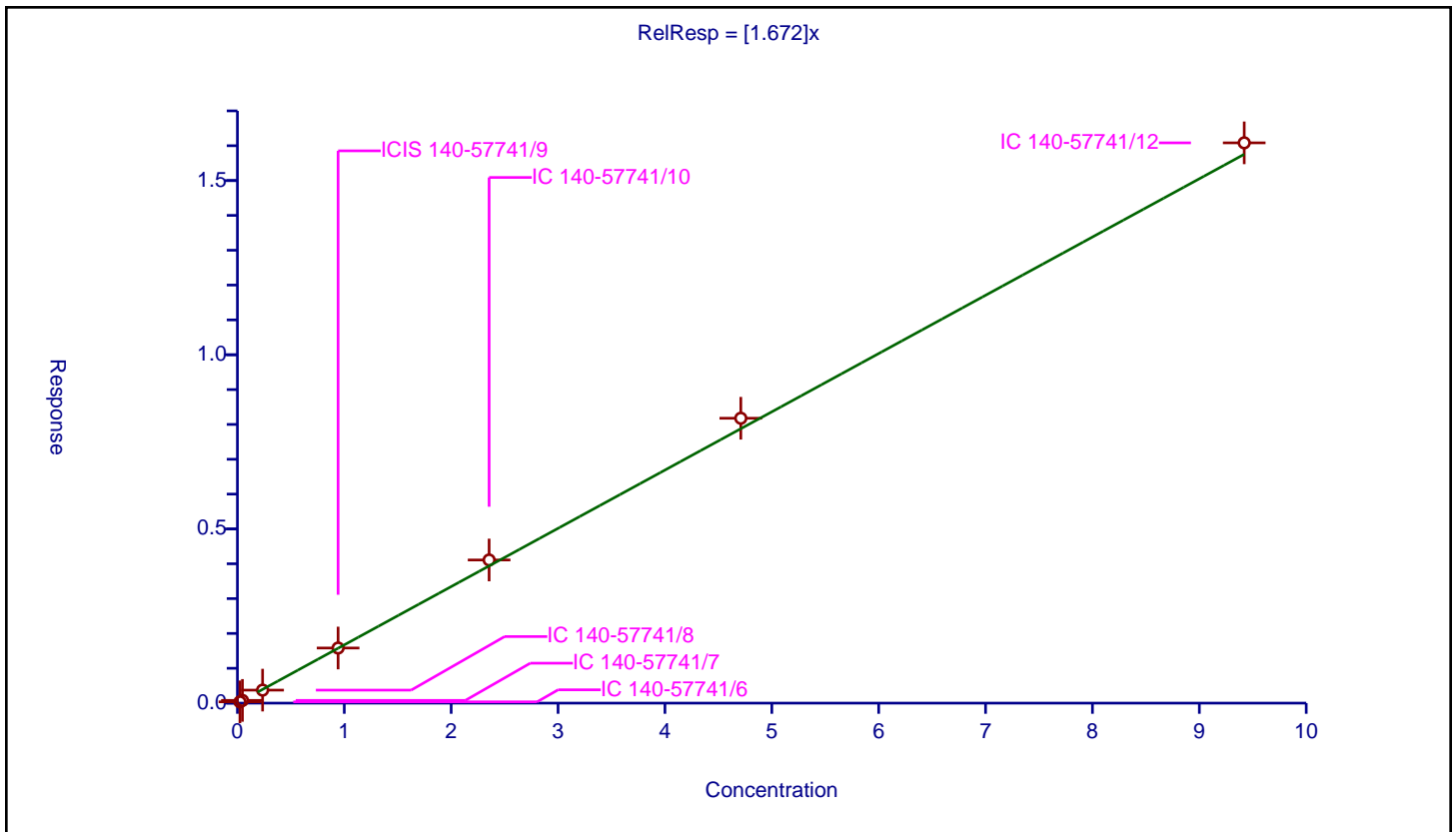
**/ 11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid**

**Curve Type:** Average  
**Weighting:** Conc\_Sq  
**Origin:** Force  
**Dependency:** Response  
**Calib Mode:** IsoDil  
**Response Base:** AREA  
**RF Rounding:** 0

Curve Coefficients	
Intercept:	0
Slope:	1.672

Error Coefficients	
Standard Error:	16500000
Relative Standard Error:	3.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.02355	0.037405	1.195	2592602.0	1.588329	Y
2	IC 140-57741/7	0.0471	0.078463	1.195	2894864.0	1.665872	Y
3	IC 140-57741/8	0.2355	0.373261	1.195	3000906.0	1.584973	Y
4	ICIS 140-57741/9	0.942	1.582124	1.195	2896304.0	1.679537	Y
5	IC 140-57741/10	2.355	4.109035	1.195	2779952.0	1.744813	Y
6	IC 140-57741/11	4.71	8.177437	1.195	2637457.0	1.736186	Y
7	IC 140-57741/12	9.42	16.08259	1.195	2584771.0	1.707281	Y



**Calibration**

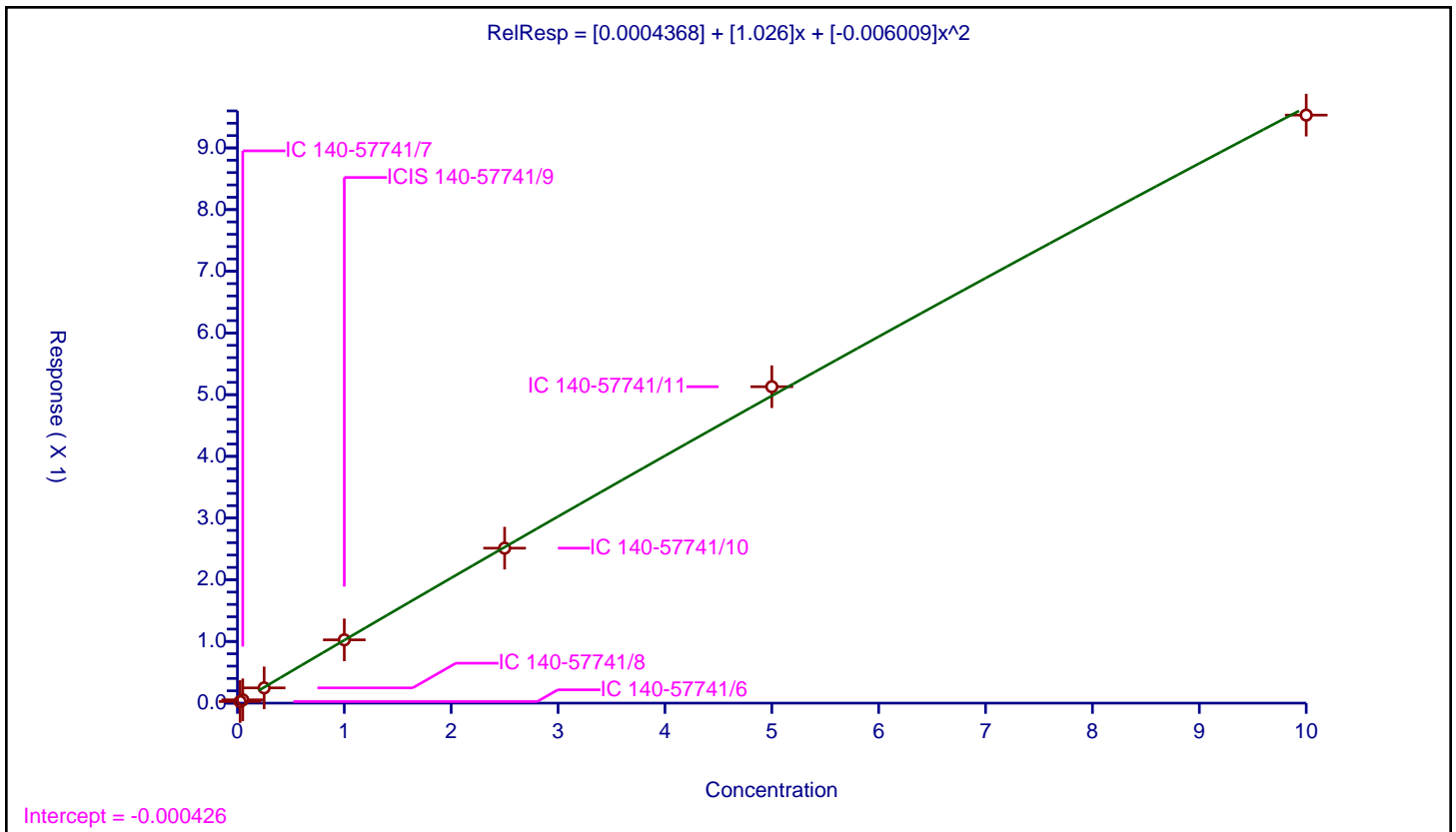
/ Perfluorododecanoic acid

Curve Type: Quadratic  
 Weighting: Conc\_Sq  
 Origin: None  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.0004368
Slope:	1.026
Second Order:	-0.006009

Error Coefficients	
Standard Error:	26800000
Relative Standard Error:	3.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.025698	1.25	6031799.0	1.027902	Y
2	IC 140-57741/7	0.05	0.053648	1.25	6475956.0	1.072961	Y
3	IC 140-57741/8	0.25	0.24704	1.25	6942988.0	0.98816	Y
4	ICIS 140-57741/9	1.0	1.025707	1.25	6649050.0	1.025707	Y
5	IC 140-57741/10	2.5	2.511961	1.25	6505443.0	1.004784	Y
6	IC 140-57741/11	5.0	5.129073	1.25	5892161.0	1.025815	Y
7	IC 140-57741/12	10.0	9.531776	1.25	5995500.0	0.953178	Y



**Calibration**

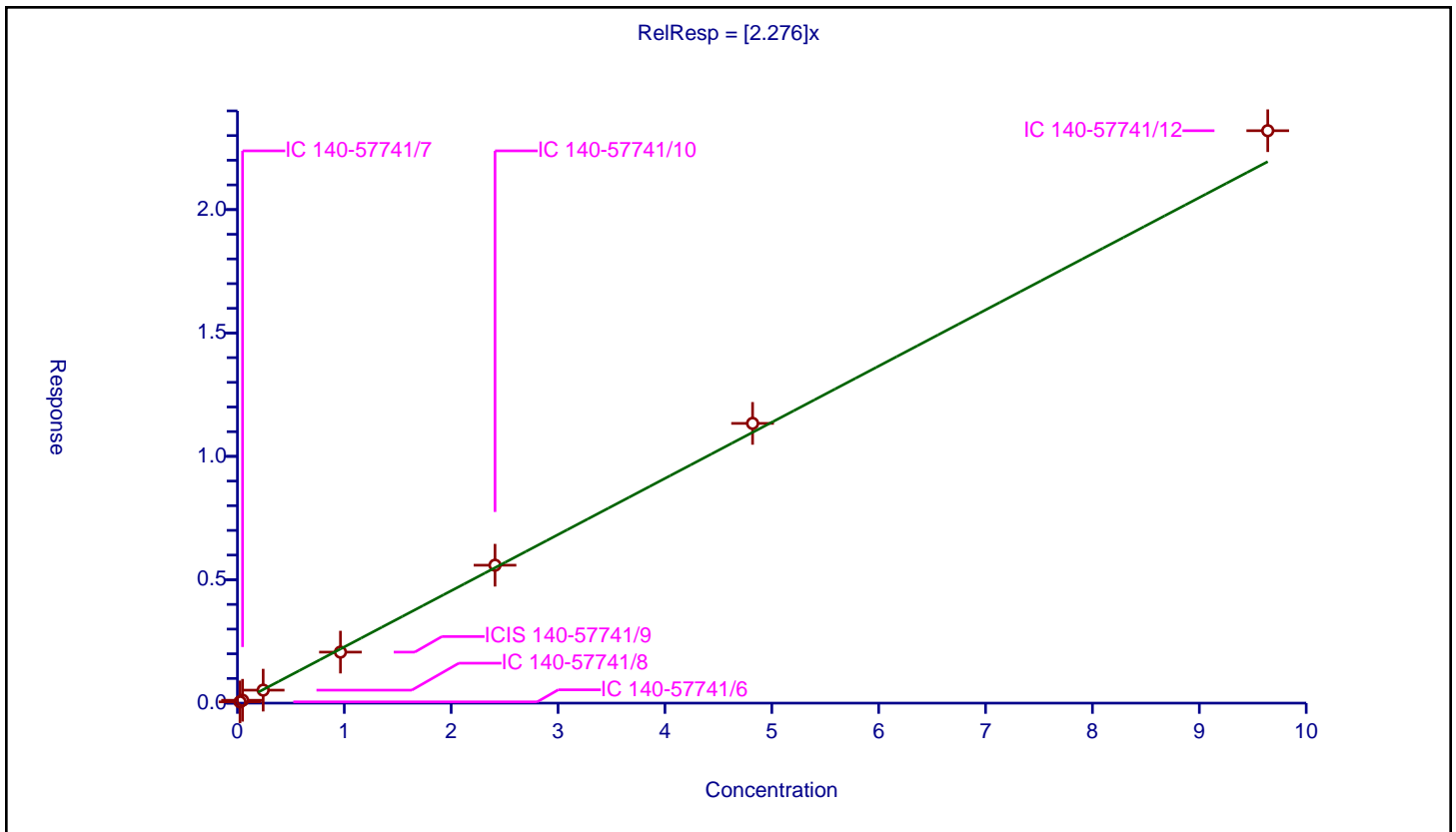
**/ 1H,1H,2H,2H-perfluorododecanesulfonic acid (10:2)**

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	2.276

Error Coefficients	
Standard Error:	7470000
Relative Standard Error:	5.3
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.0241	0.051429	1.1975	1037522.0	2.133963	Y
2	IC 140-57741/7	0.0482	0.115549	1.1975	1115730.0	2.397285	Y
3	IC 140-57741/8	0.241	0.525623	1.1975	1128836.0	2.181008	Y
4	ICIS 140-57741/9	0.964	2.067343	1.1975	1117378.0	2.144547	Y
5	IC 140-57741/10	2.41	5.589147	1.1975	1009120.0	2.319148	Y
6	IC 140-57741/11	4.82	11.336382	1.1975	914379.0	2.351946	Y
7	IC 140-57741/12	9.64	23.196717	1.1975	788680.0	2.406298	Y





Calibration

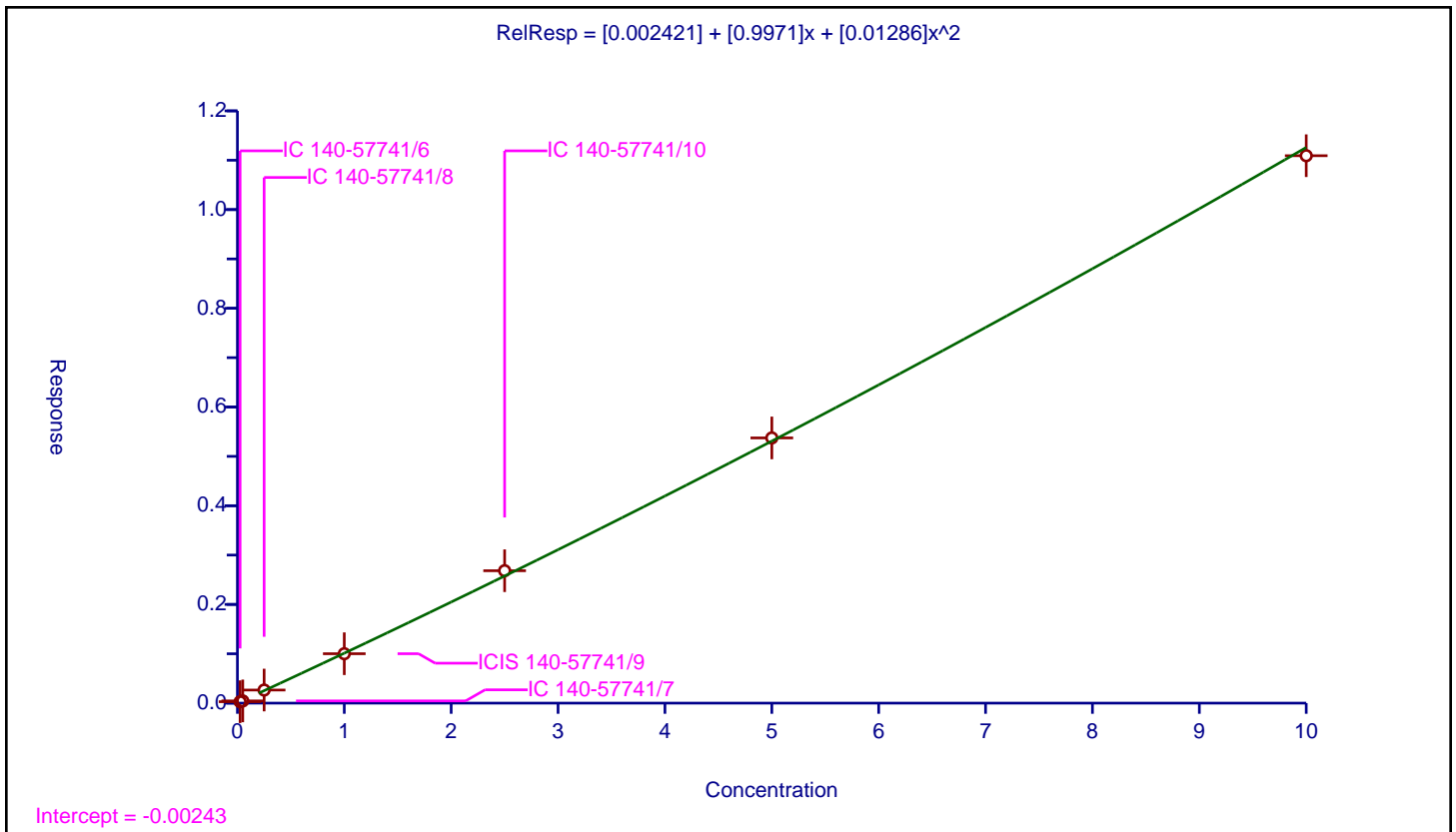
/ NMeFOSA

Curve Type: Quadratic  
 Weighting: Conc\_Sq  
 Origin: None  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.002421
Slope:	0.9971
Second Order:	0.01286

Error Coefficients	
Standard Error:	2700000
Relative Standard Error:	8.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.029071	1.25	499646.0	1.162823	Y
2	IC 140-57741/7	0.05	0.044919	1.25	564600.0	0.898379	Y
3	IC 140-57741/8	0.25	0.265276	1.25	528614.0	1.061105	Y
4	ICIS 140-57741/9	1.0	1.001301	1.25	595309.0	1.001301	Y
5	IC 140-57741/10	2.5	2.683031	1.25	566057.0	1.073213	Y
6	IC 140-57741/11	5.0	5.37341	1.25	520919.0	1.074682	Y
7	IC 140-57741/12	10.0	11.091638	1.25	534306.0	1.109164	Y



**Calibration**

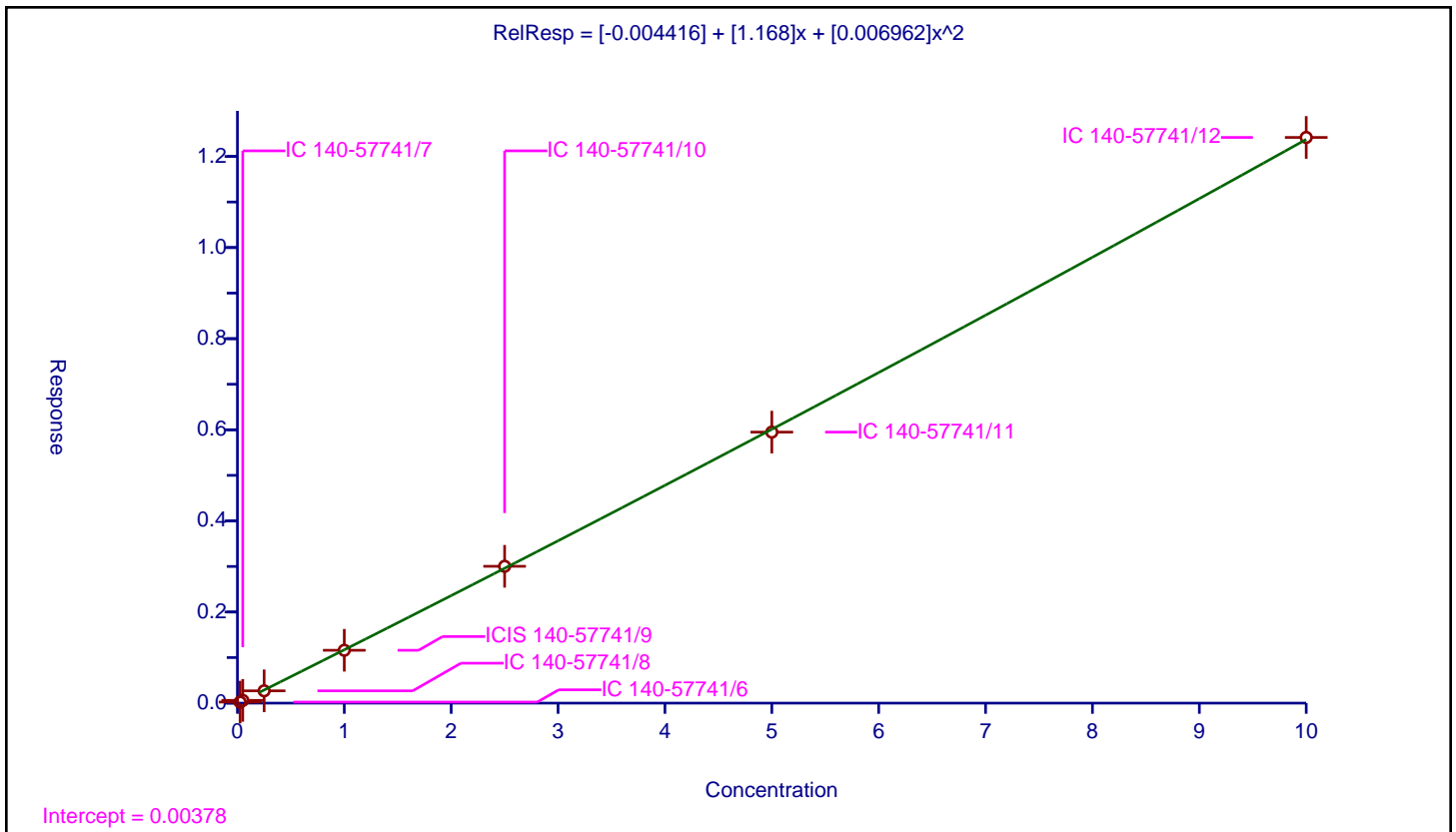
**/ 2-(N-methylperfluoro-1-octanesulfonamido) ethanol**

**Curve Type:** Quadratic  
**Weighting:** Conc\_Sq  
**Origin:** None  
**Dependency:** Response  
**Calib Mode:** IsoDil  
**Response Base:** AREA  
**RF Rounding:** 0

Curve Coefficients	
<b>Intercept:</b>	-0.004416
<b>Slope:</b>	1.168
<b>Second Order:</b>	0.006962

Error Coefficients	
<b>Standard Error:</b>	3980000
<b>Relative Standard Error:</b>	7.0
<b>Correlation Coefficient:</b>	0.999
<b>Coefficient of Determination (Adjusted):</b>	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.023319	1.25	748523.0	0.93277	Y
2	IC 140-57741/7	0.05	0.060656	1.25	813503.0	1.213118	Y
3	IC 140-57741/8	0.25	0.270021	1.25	792935.0	1.080082	Y
4	ICIS 140-57741/9	1.0	1.1601	1.25	803090.0	1.1601	Y
5	IC 140-57741/10	2.5	3.003438	1.25	776280.0	1.201375	Y
6	IC 140-57741/11	5.0	5.948881	1.25	723771.0	1.189776	Y
7	IC 140-57741/12	10.0	12.416842	1.25	694443.0	1.241684	Y



**Calibration**

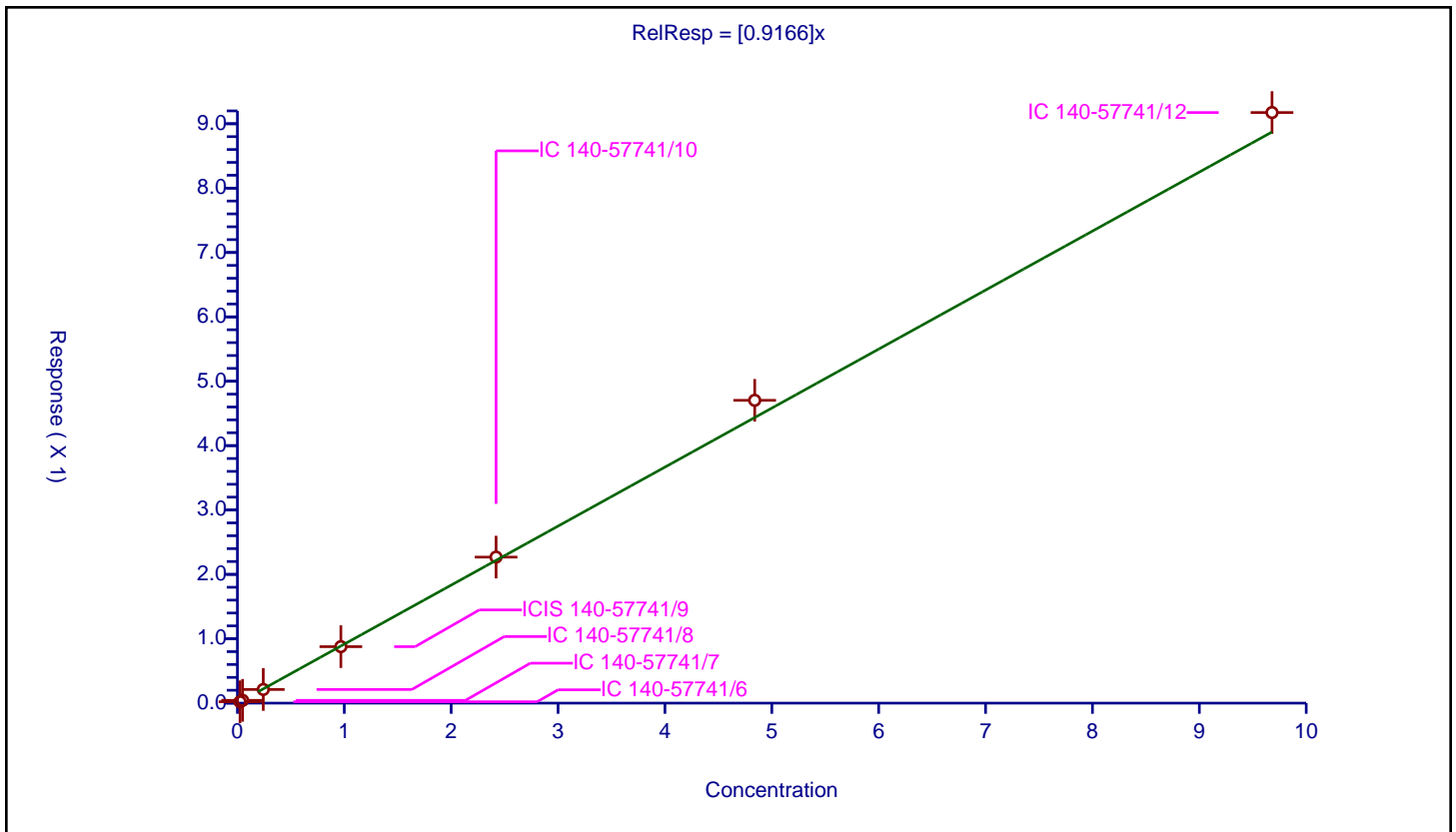
**/ Perfluorododecanesulfonic acid (PFDoS)**

**Curve Type:** Average  
**Weighting:** Conc\_Sq  
**Origin:** Force  
**Dependency:** Response  
**Calib Mode:** IsoDil  
**Response Base:** AREA  
**RF Rounding:** 0

Curve Coefficients	
Intercept:	0
Slope:	0.9166

Error Coefficients	
Standard Error:	9440000
Relative Standard Error:	3.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.0242	0.021398	1.195	2592602.0	0.884218	Y
2	IC 140-57741/7	0.0484	0.04323	1.195	2894864.0	0.893183	Y
3	IC 140-57741/8	0.242	0.211844	1.195	3000906.0	0.875389	Y
4	ICIS 140-57741/9	0.968	0.877308	1.195	2896304.0	0.90631	Y
5	IC 140-57741/10	2.42	2.268264	1.195	2779952.0	0.937299	Y
6	IC 140-57741/11	4.84	4.703959	1.195	2637457.0	0.971892	Y
7	IC 140-57741/12	9.68	9.174312	1.195	2584771.0	0.94776	Y



**Calibration**

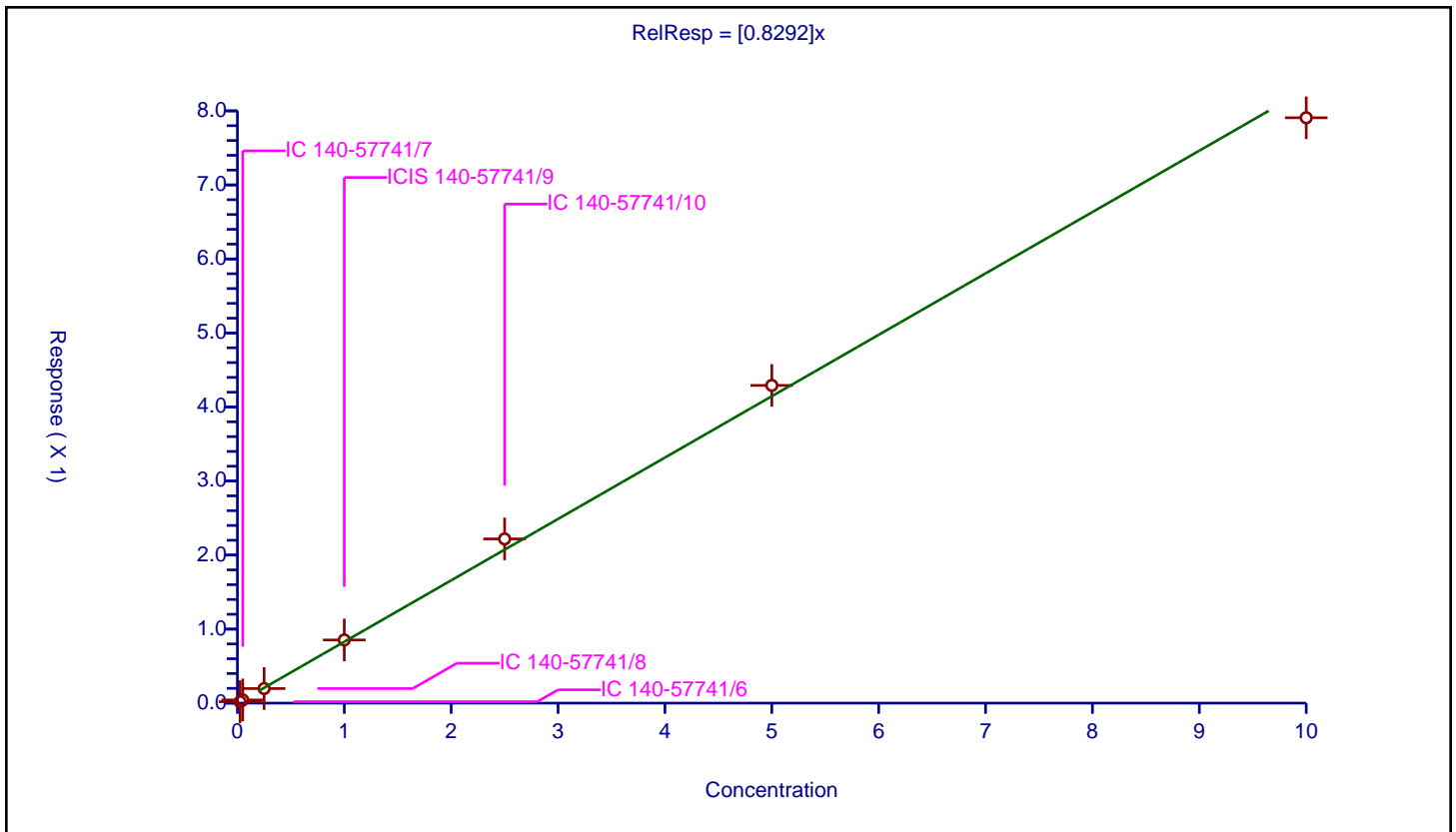
/ Perfluorotridecanoic acid

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.8292

Error Coefficients	
Standard Error:	18300000
Relative Standard Error:	5.6
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.019179	1.25	6031799.0	0.767143	Y
2	IC 140-57741/7	0.05	0.043004	1.25	6475956.0	0.860078	Y
3	IC 140-57741/8	0.25	0.196934	1.25	6942988.0	0.787736	Y
4	ICIS 140-57741/9	1.0	0.853041	1.25	6649050.0	0.853041	Y
5	IC 140-57741/10	2.5	2.218	1.25	6505443.0	0.8872	Y
6	IC 140-57741/11	5.0	4.29169	1.25	5892161.0	0.858338	Y
7	IC 140-57741/12	10.0	7.907167	1.25	5995500.0	0.790717	Y



**Calibration**

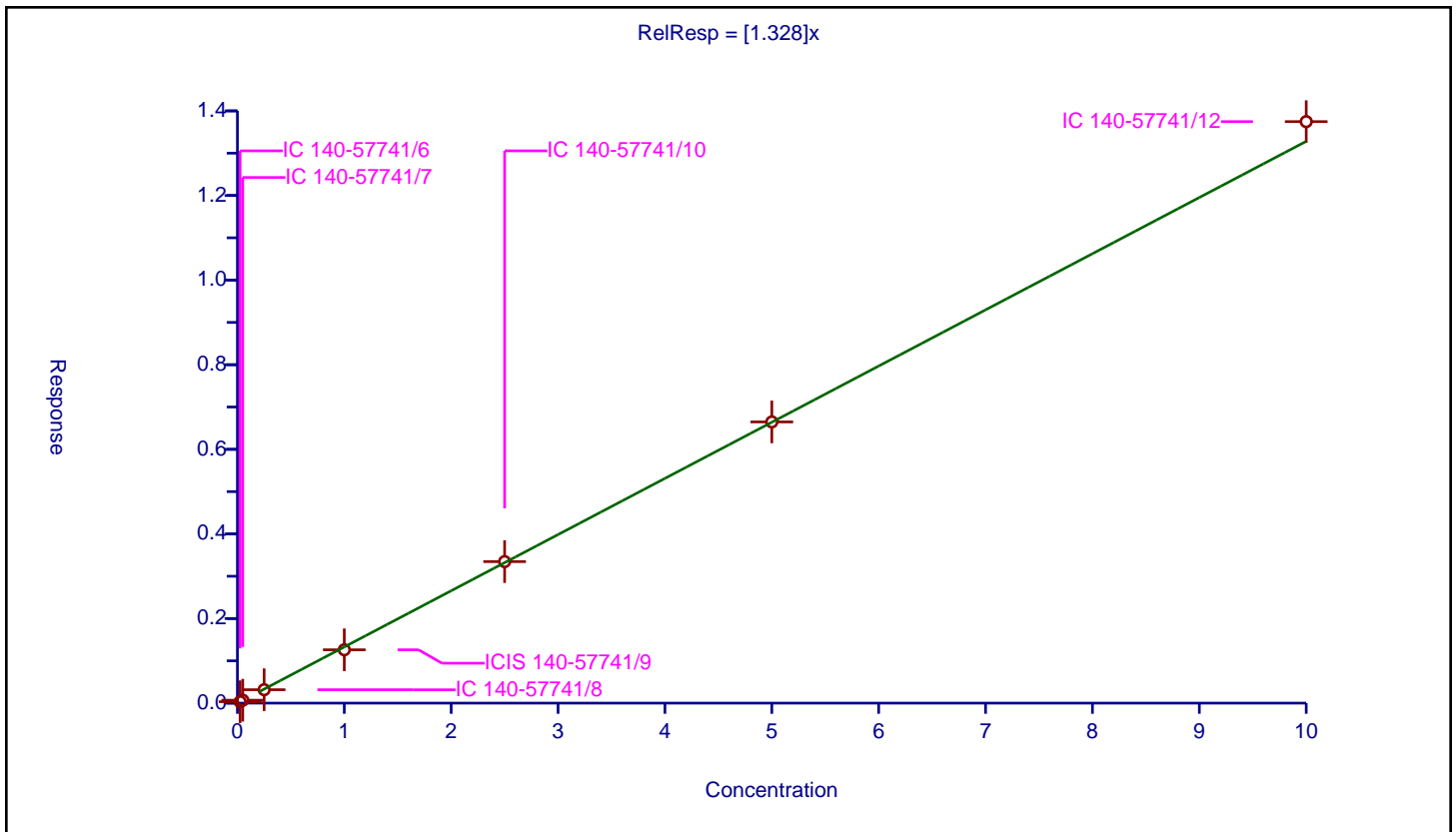
**/ 2-(N-ethylperfluoro-1-octanesulfonamido) ethanol**

**Curve Type:** Average  
**Weighting:** Conc\_Sq  
**Origin:** Force  
**Dependency:** Response  
**Calib Mode:** IsoDil  
**Response Base:** AREA  
**RF Rounding:** 0

Curve Coefficients	
<b>Intercept:</b>	0
<b>Slope:</b>	1.328

Error Coefficients	
<b>Standard Error:</b>	3640000
<b>Relative Standard Error:</b>	3.6
<b>Correlation Coefficient:</b>	0.999
<b>Coefficient of Determination (Adjusted):</b>	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.033506	1.25	737451.0	1.340225	Y
2	IC 140-57741/7	0.05	0.06919	1.25	811853.0	1.38381	Y
3	IC 140-57741/8	0.25	0.317283	1.25	791757.0	1.269133	Y
4	ICIS 140-57741/9	1.0	1.260831	1.25	809270.0	1.260831	Y
5	IC 140-57741/10	2.5	3.345304	1.25	783063.0	1.338122	Y
6	IC 140-57741/11	5.0	6.647291	1.25	736824.0	1.329458	Y
7	IC 140-57741/12	10.0	13.746318	1.25	698997.0	1.374632	Y



**Calibration**

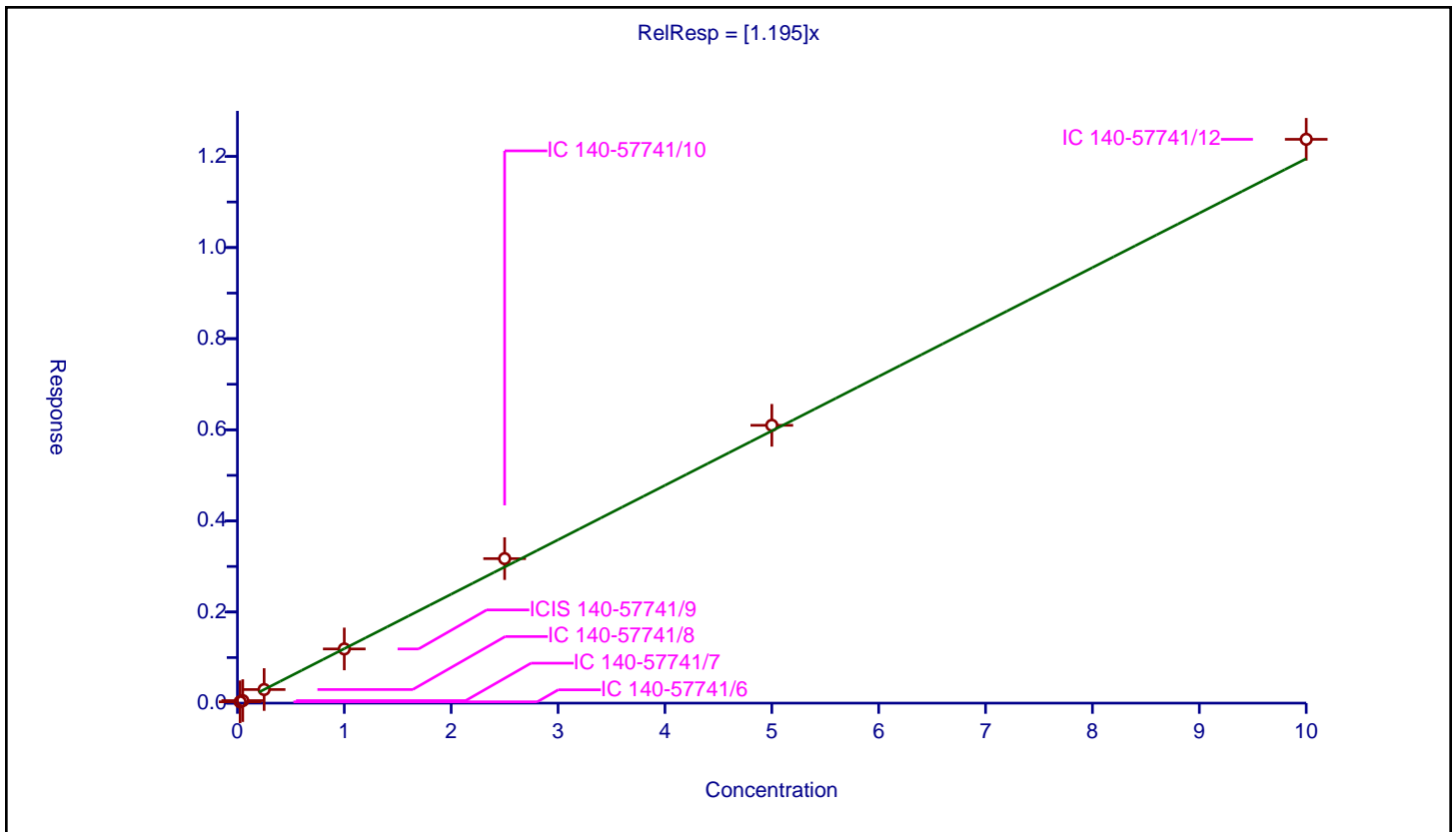
**/ N-ethylperfluoro-1-octanesulfonamide**

**Curve Type:** Average  
**Weighting:** Conc\_Sq  
**Origin:** Force  
**Dependency:** Response  
**Calib Mode:** IsoDil  
**Response Base:** AREA  
**RF Rounding:** 0

Curve Coefficients	
Intercept:	0
Slope:	1.195

Error Coefficients	
Standard Error:	2020000
Relative Standard Error:	4.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.028897	1.25	418161.0	1.155894	Y
2	IC 140-57741/7	0.05	0.055051	1.25	471424.0	1.101026	Y
3	IC 140-57741/8	0.25	0.298356	1.25	457457.0	1.193424	Y
4	ICIS 140-57741/9	1.0	1.189332	1.25	475911.0	1.189332	Y
5	IC 140-57741/10	2.5	3.171625	1.25	450709.0	1.26865	Y
6	IC 140-57741/11	5.0	6.098401	1.25	442829.0	1.21968	Y
7	IC 140-57741/12	10.0	12.376129	1.25	431073.0	1.237613	Y



**Calibration**

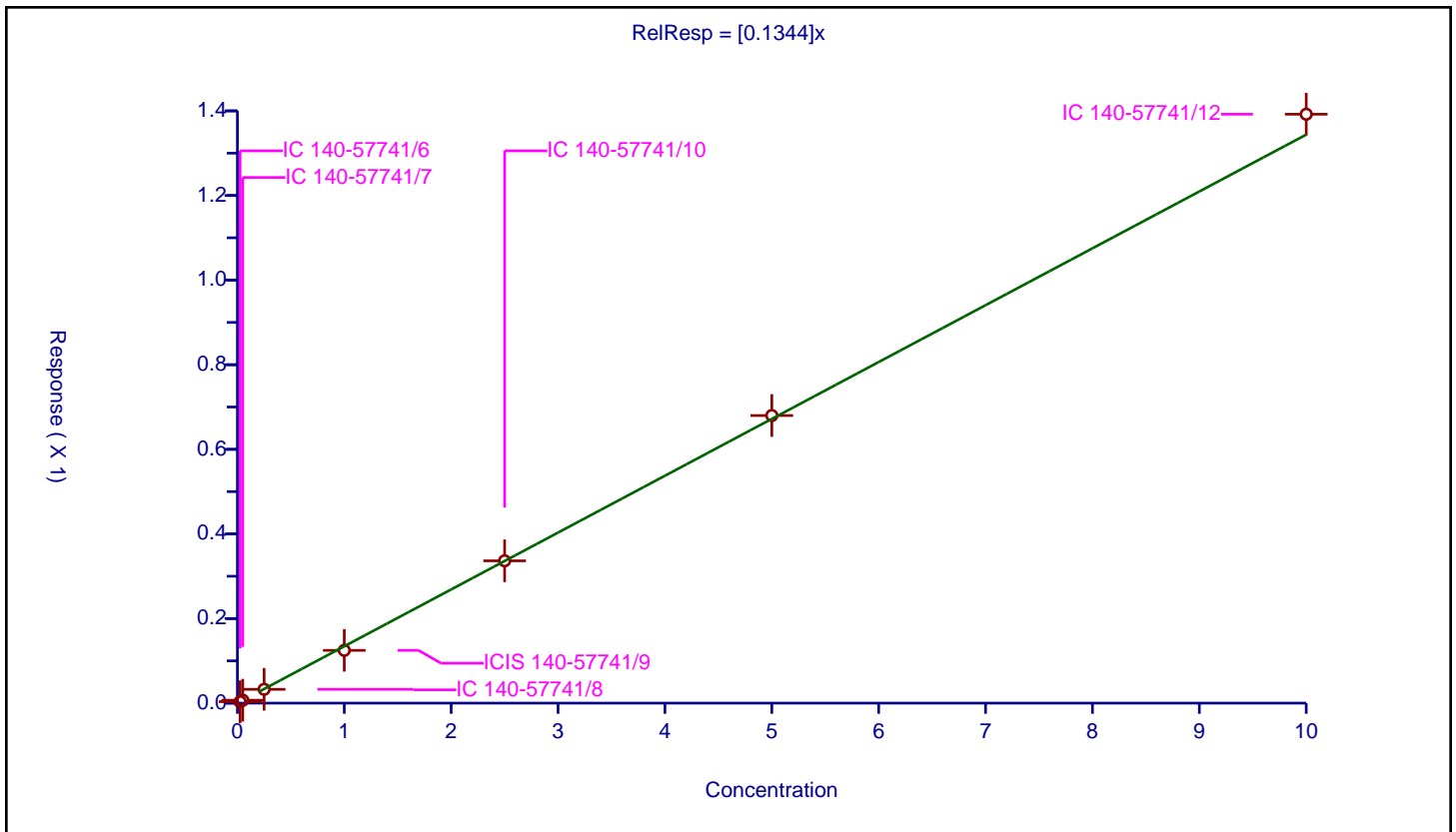
/ Perfluorotetradecanoic acid

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.1344

Error Coefficients	
Standard Error:	2340000
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 140-57741/6	0.025	0.003443	1.25	4691070.0	0.137719	Y
2	IC 140-57741/7	0.05	0.006889	1.25	4981370.0	0.137773	Y
3	IC 140-57741/8	0.25	0.03267	1.25	5107852.0	0.130681	Y
4	ICIS 140-57741/9	1.0	0.124732	1.25	5150989.0	0.124732	Y
5	IC 140-57741/10	2.5	0.336452	1.25	4899401.0	0.134581	Y
6	IC 140-57741/11	5.0	0.679839	1.25	4681083.0	0.135968	Y
7	IC 140-57741/12	10.0	1.392082	1.25	4423066.0	0.139208	Y



**Calibration**

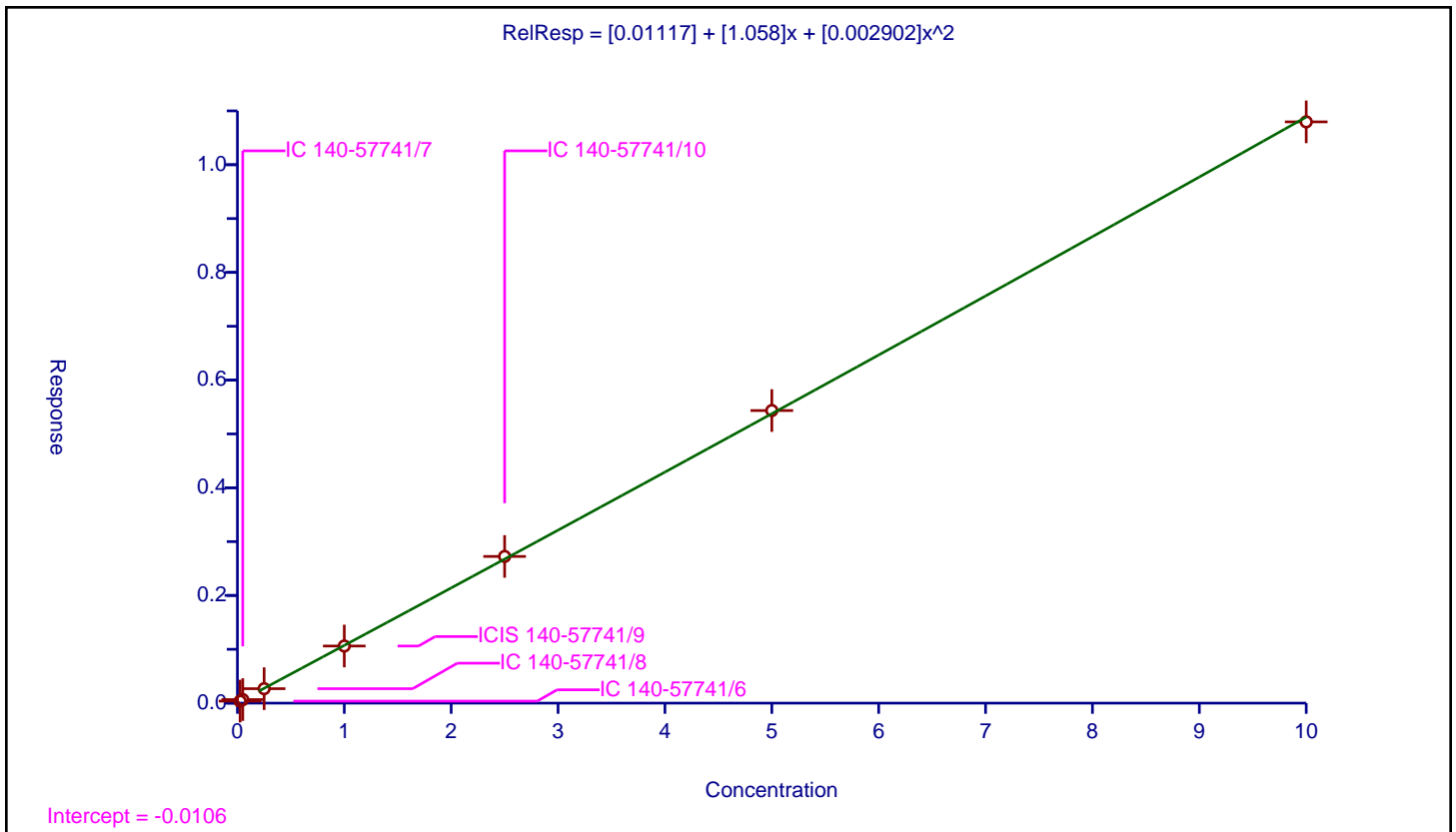
/ Perfluorohexadecanoic acid

Curve Type: Quadratic  
 Weighting: Conc\_Sq  
 Origin: None  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.01117
Slope:	1.058
Second Order:	0.002902

Error Coefficients	
Standard Error:	15700000
Relative Standard Error:	2.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.037283	1.25	3064643.0	1.491332	Y
2	IC 140-57741/7	0.05	0.065826	1.25	3465880.0	1.316513	Y
3	IC 140-57741/8	0.25	0.268141	1.25	3400742.0	1.072566	Y
4	ICIS 140-57741/9	1.0	1.060967	1.25	3410021.0	1.060967	Y
5	IC 140-57741/10	2.5	2.724446	1.25	3338421.0	1.089778	Y
6	IC 140-57741/11	5.0	5.434307	1.25	3181783.0	1.086861	Y
7	IC 140-57741/12	10.0	10.795973	1.25	3121615.0	1.079597	Y





Calibration

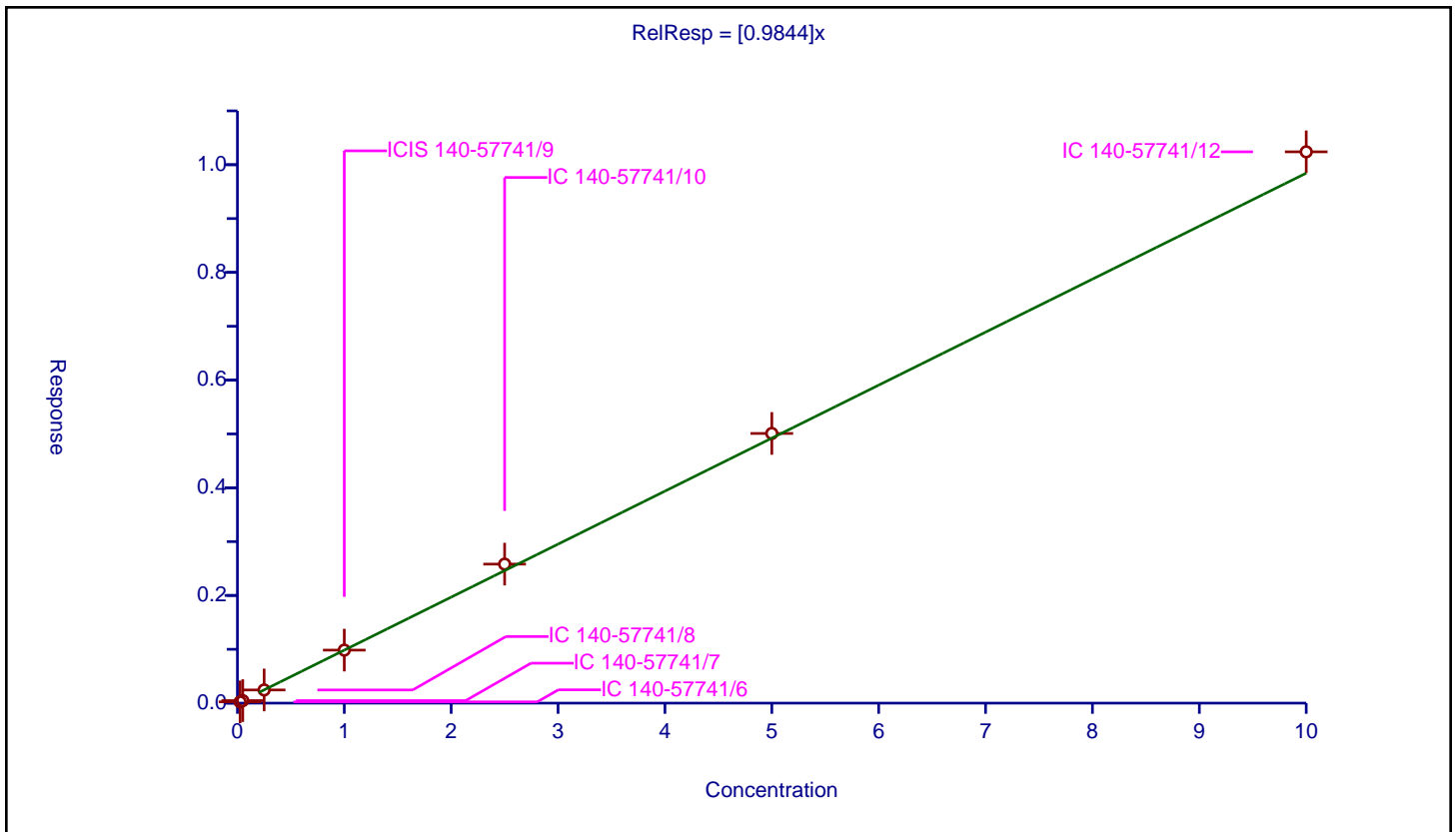
/ Perfluorooctadecanoic acid

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.9844

Error Coefficients	
Standard Error:	12100000
Relative Standard Error:	4.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.023432	1.25	3064643.0	0.937271	Y
2	IC 140-57741/7	0.05	0.04656	1.25	3465880.0	0.931207	Y
3	IC 140-57741/8	0.25	0.244739	1.25	3400742.0	0.978957	Y
4	ICIS 140-57741/9	1.0	0.984613	1.25	3410021.0	0.984613	Y
5	IC 140-57741/10	2.5	2.581942	1.25	3338421.0	1.032777	Y
6	IC 140-57741/11	5.0	5.008906	1.25	3181783.0	1.001781	Y
7	IC 140-57741/12	10.0	10.239431	1.25	3121615.0	1.023943	Y



FORM VII  
PFAS CONTINUING CALIBRATION DATA

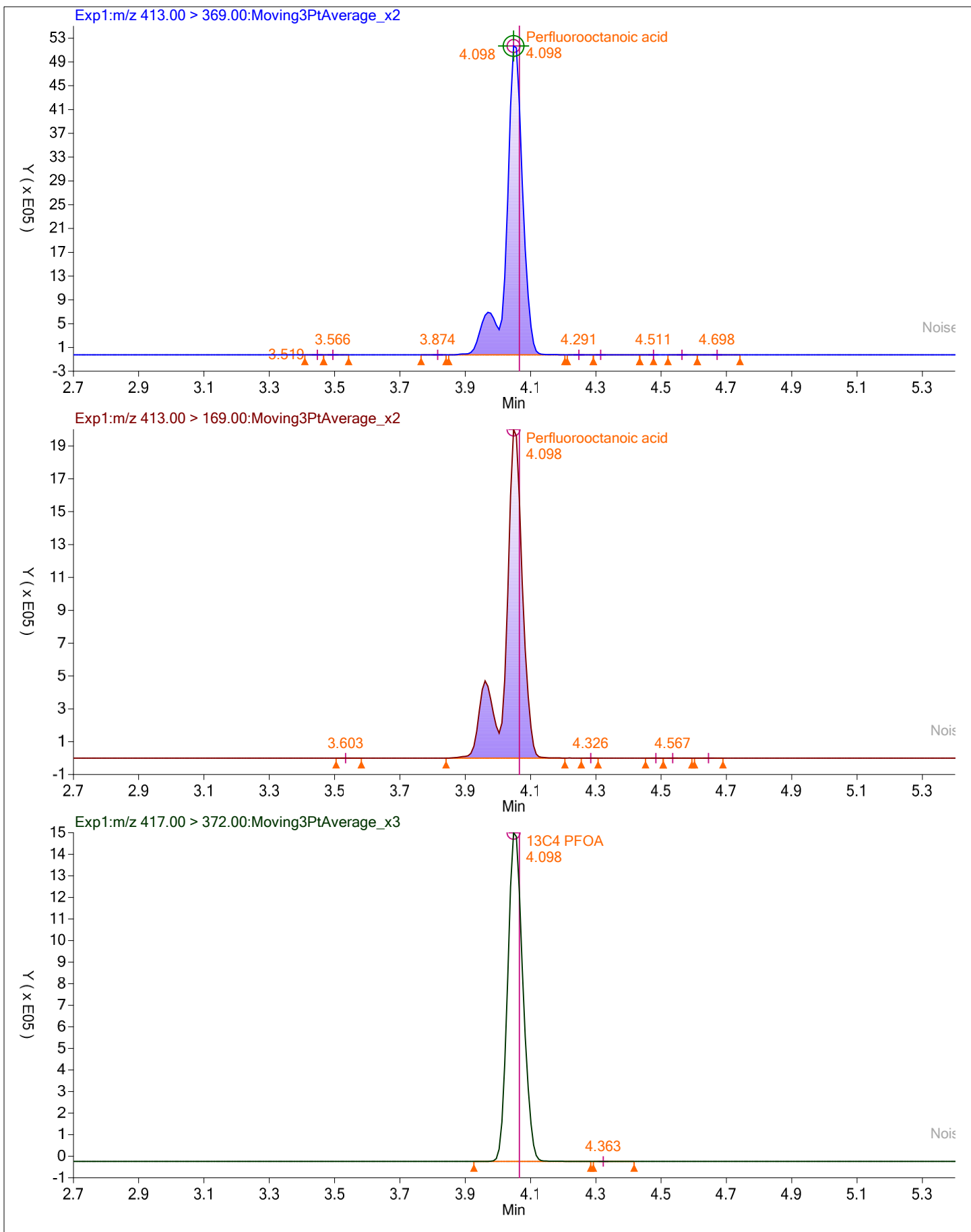
Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 140-57741/14 Calibration Date: 01/09/2022 11:46  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 Lab File ID: \_014.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7844	0.8299		2.15	2.03	5.8	40.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9519	1.036		2.25	2.07	8.8	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.097	1.208		2.48	2.25	10.1	40.0
4:2 FTS	AveID	2.252	2.212		2.07	2.10	-1.8	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8680	0.9918		2.57	2.25	14.3	40.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	0.9713	0.9547		2.07	2.11	-1.7	40.0
HFPO-DA	AveID	1.352	1.606		2.67	2.25	18.7	40.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.377	1.481		2.42	2.25	7.5	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.047	1.244		2.67	2.25	18.8	40.0
DONA	AveID	2.630	2.856		2.44	2.25	8.6	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9541	0.9309		2.09	2.14	-2.4	40.0
6:2 FTS	L2ID		1.758		2.09	2.14	-2.2	40.0
Perfluorooctanoic acid (PFOA)	AveID	1.147	1.329		2.61	2.25	15.8	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.099	1.235		2.53	2.25	12.4	40.0
Perfluorononanoic acid (PFNA)	Q2ID		1.047		2.73	2.25	21.4	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	Q2ID		2.374		2.47	2.25	9.6	50.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9748	0.9343		2.07	2.16	-4.2	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9459	0.9049		2.15	2.25	-4.3	40.0
Perfluorodecanoic acid (PFDA)	AveID	0.9645	1.165		2.72	2.25	20.8	40.0
8:2 FTS	AveID	1.415	1.410		2.21	2.22	-0.3	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	QuaIF		1.134		2.62	2.25	16.4	40.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		0.8984		2.10	2.17	-3.4	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9695	1.192		2.77	2.25	22.9	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Q2ID		1.202		2.70	2.25	20.1	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.672	1.878		2.53	2.25	12.3	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		1.235		2.75	2.25	22.3	40.0
10:2 FTS	AveID	2.276	2.257		2.15	2.17	-0.9	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	Q2ID		1.143		2.18	2.25	-3.2	40.0
NMeFOSA	Q2ID		1.003		2.20	2.25	-2.3	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9166	0.9316		2.21	2.18	1.6	40.0

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 140-57741/14 Calibration Date: 01/09/2022 11:46  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 Lab File ID: \_014.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTriA)	AveID	0.8292	0.9802		2.66	2.25	18.2	40.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	AveID	1.328	1.300		2.20	2.25	-2.1	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.195	1.196		2.25	2.25	0.0	40.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1344	0.1539		2.58	2.25	14.5	40.0
Perfluorohexadecanoic acid	Q2ID		1.044		2.20	2.25	-2.4	40.0
Perfluorooctadecanoic acid	AveID	0.9844	0.9757		2.23	2.25	-0.9	40.0
13C4 PFBA	Ave	1.142	1.144		1.25	1.25	0.2	50.0
13C5 PFPeA	Ave	0.8865	0.8934		1.26	1.25	0.8	50.0
13C3 PFBS	Ave	0.5913	0.5993		1.18	1.16	1.4	50.0
M2-4:2 FTS	Ave	0.1820	0.1814		1.16	1.17	-0.3	50.0
13C2 PFHxA	Ave	0.9479	0.9706		1.28	1.25	2.4	50.0
13C3 HFPO-DA	Ave	0.4556	0.4519		1.24	1.25	-0.8	50.0
18O2 PFHxS	Ave	0.3946	0.3929		1.18	1.18	-0.4	50.0
13C4 PFHpA	Ave	0.9067	0.9208		1.27	1.25	1.6	50.0
M2-6:2 FTS	Ave	0.1835	0.1817		1.18	1.19	-1.0	50.0
13C4 PFOA	Ave	0.9376	0.9198		1.23	1.25	-1.9	50.0
13C4 PFOS	Ave	0.5681	0.5746		1.21	1.20	1.1	50.0
13C5 PFNA	Ave	1.234	1.226		1.24	1.25	-0.7	50.0
13C8 FOSA	Ave	0.7682	0.7880		1.28	1.25	2.6	50.0
13C2 PFDA	Ave	1.191	1.164		1.22	1.25	-2.3	50.0
M2-8:2 FTS	Ave	0.2070	0.1970		1.14	1.20	-4.8	50.0
d3-NMeFOSAA	Ave	0.1401	0.1413		1.26	1.25	0.9	50.0
13C2 PFUnA	Ave	1.189	1.175		1.24	1.25	-1.2	50.0
d5-NEtFOSAA	Ave	0.1537	0.1529		1.24	1.25	-0.5	50.0
13C2 PFDoA	Ave	1.247	1.238		1.24	1.25	-0.7	50.0
d7-N-MeFOSE-M	Ave	0.1499	0.1467		1.22	1.25	-2.2	50.0
d-N-MeFOSA-M	Ave	0.1069	0.1107		1.30	1.25	3.6	50.0
d9-N-EtFOSE-M	Ave	0.1504	0.1488		1.24	1.25	-1.0	50.0
d-N-EtFOSA-M	Ave	0.0883	0.0888		1.26	1.25	0.6	50.0
13C2 PFTeDA	Ave	0.9508	0.9505		1.25	1.25	-0.0	50.0
13C2 PFHxDA	Ave	0.6444	0.6595		1.28	1.25	2.3	50.0
13C8 PFOA	AveID	0.999	1.046		1.31	1.25	4.6	50.0
13C8 PFOS	AveID	0.2220	0.2315		1.25	1.20	4.3	50.0



Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_014.d  
 Lims ID: ICV  
 Client ID:  
 Sample Type: ICV  
 Inject. Date: 09-Jan-2022 11:46:17 ALS Bottle#: 14 Worklist Smp#: 14  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022186-014 icv  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist:

Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 12:40:53 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1686

First Level Reviewer: cochranj Date: 09-Jan-2022 11:59:58

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	2.785	2.779	0.006	0.677	5618862	1.25	100	12283	
2 Perfluorobutanoic acid	212.90 > 169.00	2.790	2.779	0.011	1.002	7576025	2.15		2052	
D 3 13C5 PFPeA	267.90 > 223.00	3.099	3.091	0.008	0.753	4386829	1.26	101	9494	
4 Perfluoropentanoic acid	262.90 > 219.00	3.099	3.091	0.008	1.000	7521176	2.25		2326	
D 6 13C3 PFBS	301.90 > 80.00	3.107	3.107	0.0	0.755	2736912	1.18	101	14308	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.115	3.107	0.008	1.003	6397243	2.48	Target=2.65	18295	
	298.90 > 99.00	3.115	3.107	0.008	1.003	2350161		2.72(1.32-3.97)	9765	
D 8 M2-4:2 FTS	329.00 > 81.00	3.392	3.392	0.0	0.824	831880	1.16	99.7	1531	
7 4:2 FTS	327.00 > 307.00	3.392	3.392	0.0	1.000	3313815	2.07		8283	
D 9 13C2 PFHxA	315.00 > 270.00	3.422	3.422	0.0	0.832	4766044	1.28	102	9189	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.422	3.422	0.0	1.101	4743679	2.07	Target=3.44	9260	
	349.00 > 99.00	3.422	3.422	0.0	1.101	1372660		3.46(1.72-5.16)	9247	
10 Perfluorohexanoic acid	313.00 > 269.00	3.422	3.422	0.0	1.000	8508513	2.57	Target=11.80	3110	
	313.00 > 119.00	3.422	3.422	0.0	1.000	719840		11.82(5.90-17.70)	987	
D 12 13C3 HFPO-DA	287.00 > 169.00	3.529	3.519	0.010	0.858	2219038	1.24	99.2	4285	

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	3.529	3.519	0.010	1.000	6414572	2.67			4074	
D 17 18O2 PFHxS										
403.00 > 84.00	3.760	3.760	0.0	0.914	1825253	1.18		99.6	6834	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.760	3.760	0.0	1.000	5143829	2.42	Target=3.40		7241	M
399.00 > 99.00	3.760	3.760	0.0	1.000	1516543		3.39(1.70-5.10)		5482	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.770	3.770	0.0	0.916	4521592	1.27		102	7454	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.779	3.770	0.009	1.002	10123525	2.67	Target=3.29		4234	
363.00 > 169.00	3.779	3.770	0.009	1.002	3114751		3.25(1.65-4.94)		4290	
68 DONA										
377.00 > 251.00	3.807	3.807	0.0	0.865	14503826	2.44	Target=1.82		10398	
377.00 > 85.00	3.807	3.807	0.0	0.865	8565950		1.69(0.91-2.74)		5813	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.098	4.089	0.009	0.931	4500822	2.09	Target=3.92		6324	
449.00 > 99.00	4.098	4.089	0.009	0.931	1140960		3.94(1.96-5.87)		5921	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.107	4.098	0.009	0.998	847535	1.18		99.0	3373	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.107	4.098	0.009	0.998	4722519	1.31		105	11713	
19 6:2 FTS										
427.00 > 407.00	4.107	4.098	0.009	1.000	2679570	2.09			5004	
D 21 13C4 PFOA										
417.00 > 372.00	4.115	4.107	0.008	1.000	4516484	1.23		98.1	7051	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.115	4.107	0.008	1.000	10801437	2.61	Target=2.59		3489	
413.00 > 169.00	4.115	4.107	0.008	1.000	4250386		2.54(1.30-3.89)		2767	
* 22 13C2 PFOA										
415.00 > 370.00	4.115	4.107	0.008		4910276	1.25			6389	
D 25 13C4 PFOS										
503.00 > 80.00	4.402	4.393	0.009	1.070	2697342	1.21		101	4188	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.402	4.393	0.009	1.000	624476	1.25		104	5124	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.402	4.393	0.009	1.000	6270976	2.53	Target=4.65		6475	M
499.00 > 99.00	4.402	4.393	0.009	1.000	1370135		4.58(2.32-6.97)		5353	M
D 27 13C5 PFNA										
468.00 > 423.00	4.427	4.418	0.009	1.076	6018694	1.24		99.3	10880	
26 Perfluorononanoic acid										
463.00 > 419.00	4.427	4.418	0.009	1.000	11340690	2.73	Target=4.65		7772	
463.00 > 169.00	4.427	4.418	0.009	1.000	2582883		4.39(2.32-6.97)		4040	
63 9CIFOS										
531.00 > 351.00	4.560	4.560	0.0	1.036	12058676	2.47			10916	

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	4.681	4.681	0.0	1.063	4554451	2.07	Target=4.06		7908	
549.00 > 99.00	4.681	4.681	0.0	1.063	1212084		3.76(2.03-6.09)		5300	
D 34 13C8 FOSA										
506.00 > 78.00	4.706	4.698	0.008	1.144	3869059	1.28		103	4343	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.706	4.698	0.008	1.000	6301782	2.15			4400	
D 32 13C2 PFDA										
515.00 > 470.00	4.715	4.706	0.009	1.146	5716265	1.22		97.7	9970	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.715	4.706	0.009	1.000	11987010	2.72	Target=11.30		7687	
513.00 > 169.00	4.715	4.706	0.009	1.000	1018027		11.77(5.65-16.95)		1014	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.723	4.723	0.0	1.148	926925	1.14		95.2	1412	
31 8:2 FTS										
527.00 > 507.00	4.723	4.723	0.0	1.000	2424074	2.21			7819	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.861	4.852	0.009	1.181	693908	1.26		101	419	
36 NMeFOSAA										
570.00 > 419.00	4.861	4.852	0.009	1.000	1416349	2.62			2816	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.949	4.940	0.009	1.124	4398505	2.10	Target=3.79		10029	
599.00 > 99.00	4.949	4.940	0.009	1.124	1210588		3.63(1.90-5.69)		8720	
D 39 13C2 PFUnA										
565.00 > 520.00	4.975	4.975	0.0	1.209	5768456	1.24		98.8	7332	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.975	4.975	0.0	1.000	12374975	2.77	Target=8.45		8318	
563.00 > 169.00	4.975	4.975	0.0	1.000	1450287		8.53(4.22-12.67)		3842	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.993	4.993	0.0	1.213	750996	1.24		99.5	3344	
40 NEtFOSA										
584.00 > 419.00	5.002	4.993	0.009	1.002	1625259	2.70			1806	M
57 11C1FOS										
631.00 > 451.00	5.072	5.072	0.0	1.152	9536270	2.53			13825	
D 43 13C2 PFDa										
615.00 > 570.00	5.213	5.205	0.008	1.267	6080847	1.24		99.3	10489	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.213	5.205	0.008	1.000	13512486	2.75	Target=6.99		9355	
613.00 > 169.00	5.213	5.205	0.008	1.000	1908348		7.08(3.50-10.49)		2953	
50 10:2 FTS										
627.00 > 607.00	5.231	5.231	0.0	1.107	3790981	2.15			6775	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.284	5.284	0.0	1.284	720274	1.22		97.8	763	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.284	5.284	0.0	1.284	543464	1.29		104	53.8	
61 NMeFOSA										
512.00 > 169.00	5.292	5.284	0.008	1.002	981348	2.20			721	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
49 N-MeFOSE-M										
616.00 > 59.00	5.292	5.292	0.0	1.002	1482344	2.18			1826	
54 PFDoS										
699.00 > 80.00	5.383	5.383	0.0	1.223	4580042	2.21	Target=4.24		8837	
699.00 > 99.00	5.383	5.383	0.0	1.223	1054677		4.34(2.12-6.35)		8837	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.425	5.414	0.011	1.041	10728911	2.66	Target=6.20		8952	
663.00 > 169.00	5.425	5.414	0.011	1.041	1731218		6.20(3.10-9.30)		4677	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.444	5.434	0.010	1.323	730859	1.24		99.0	357	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.454	5.454	0.0	1.326	436082	1.26		101	891	
62 N-EtFOSE-M										
630.00 > 59.00	5.454	5.454	0.0	1.002	1710606	2.20			1609	
56 N-EtFOSA-M										
526.00 > 169.00	5.464	5.454	0.010	1.002	938916	2.25			557	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.607	5.596	0.011	1.363	4667251	1.25		100.0	9194	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.607	5.596	0.011	1.000	1292634	2.58	Target=1.05		4606	
713.00 > 219.00	5.596	5.596	0.0	0.998	1268940		1.02(0.53-1.58)		5336	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.912	5.903	0.009	1.437	3238191	1.28		102	6246	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.912	5.903	0.009	1.000	6086077	2.20	Target=8.09		5684	
813.00 > 169.00	5.912	5.903	0.009	1.000	742274		8.20(4.05-12.14)		2198	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.169	6.159	0.010	1.043	5687126	2.23	Target=11.53		4670	
913.00 > 169.00	6.164	6.159	0.005	1.043	495627		11.47(5.77-17.30)		1954	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

63ICVPFC2\_FUL\_00005

Amount Added: 1.00

Units: mL



Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_014.d

Injection Date: 09-Jan-2022 11:46:17

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

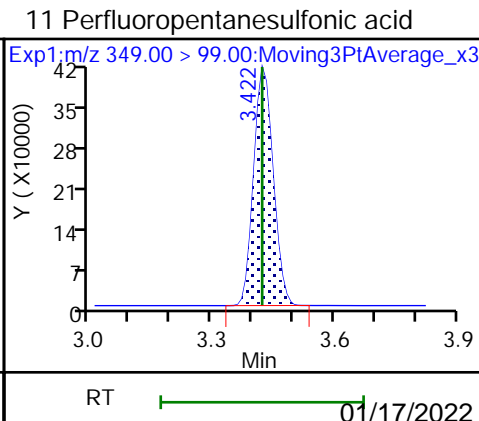
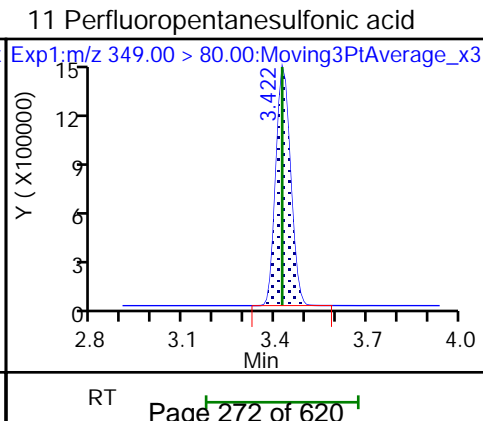
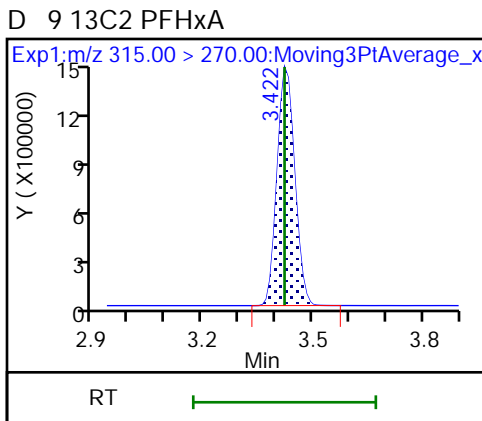
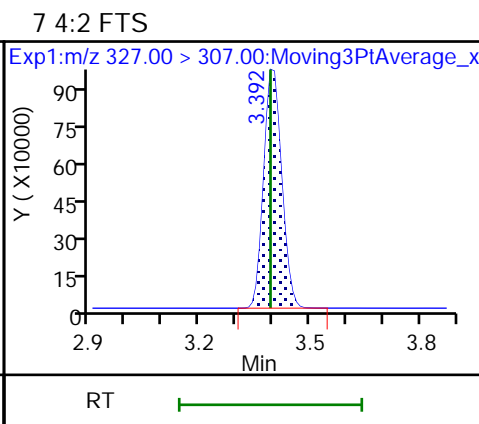
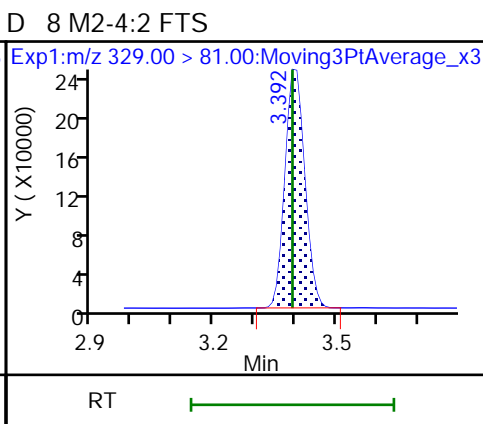
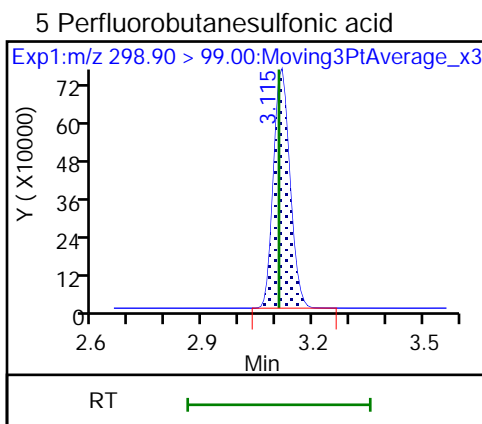
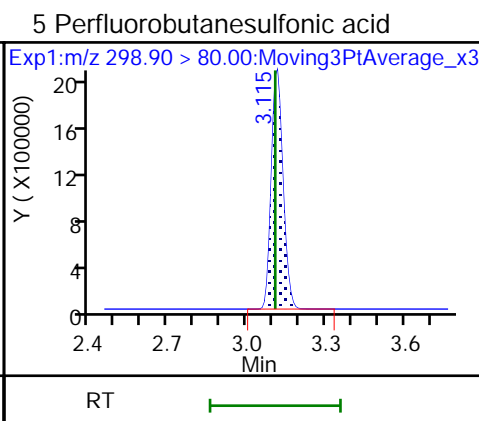
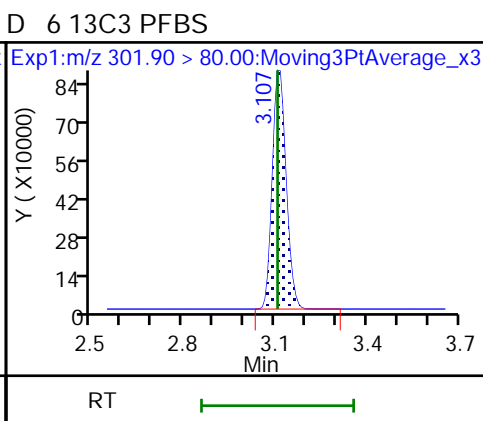
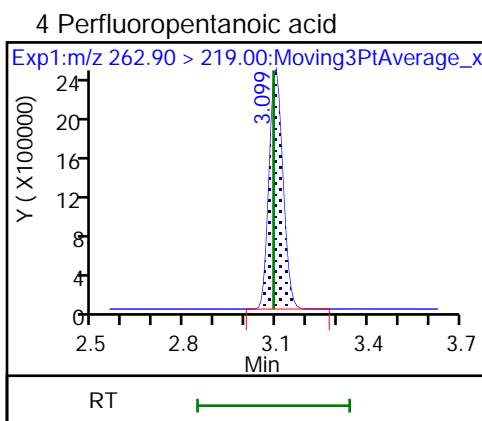
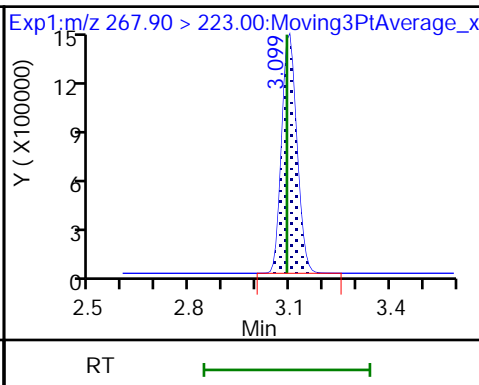
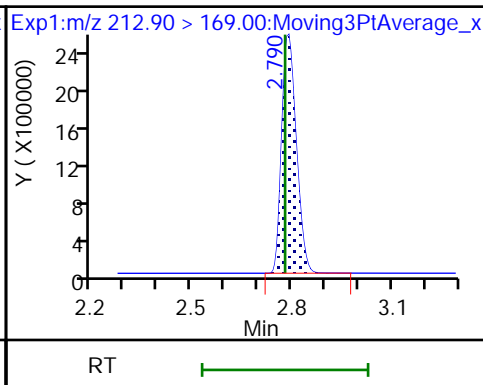
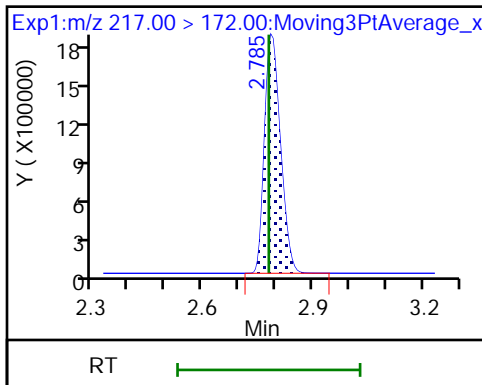
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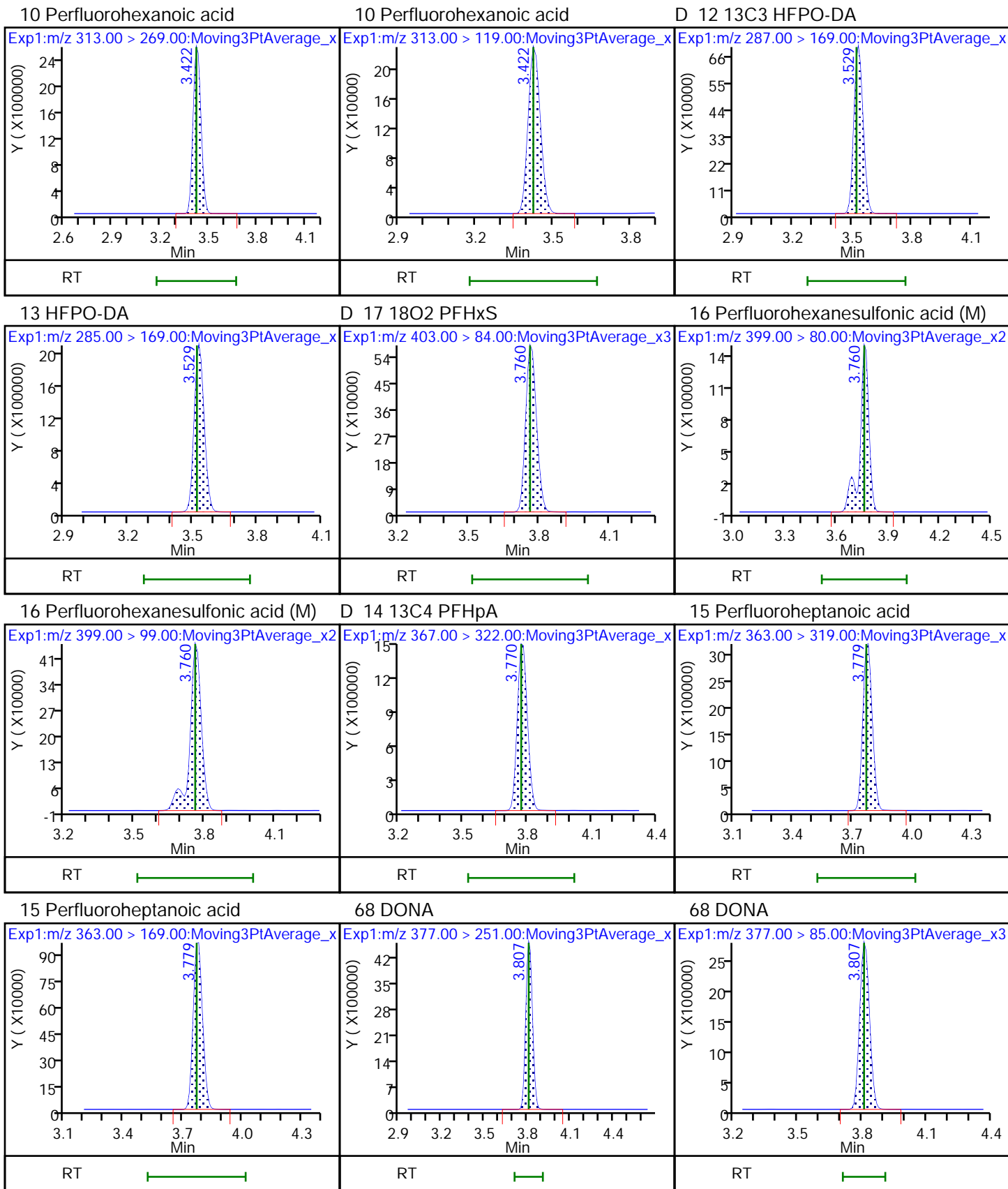
Limit Group: LC - PFC- ICAL

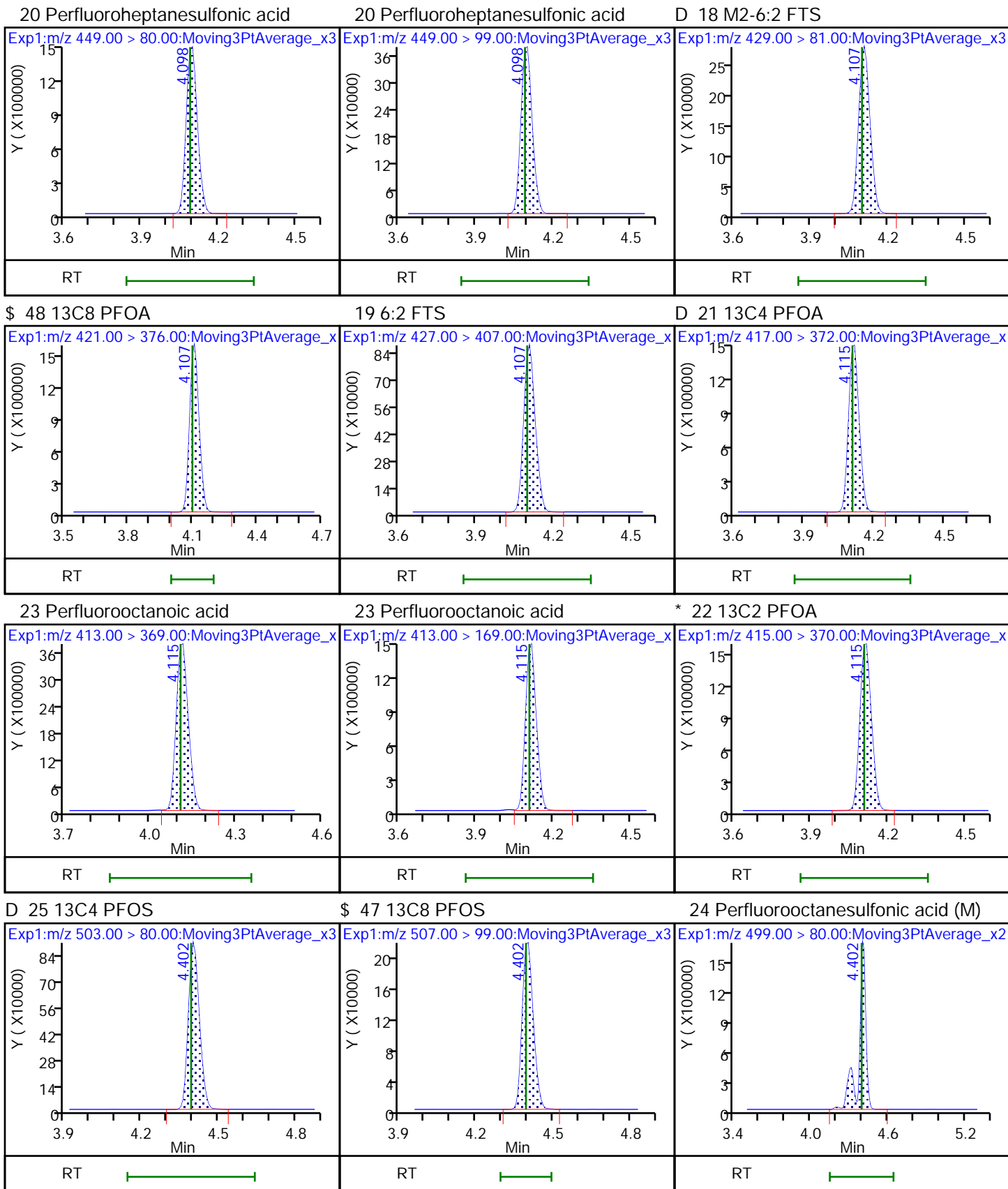
D 1 13C4 PFBA

2 Perfluorobutanoic acid

D 3 13C5 PFPeA



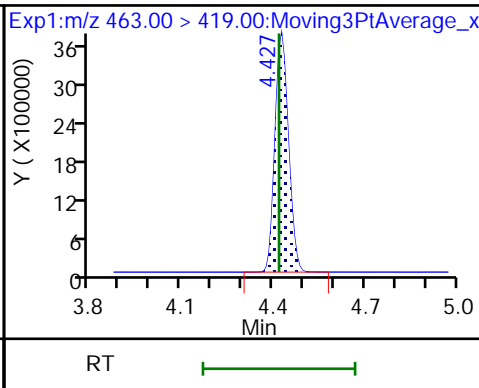
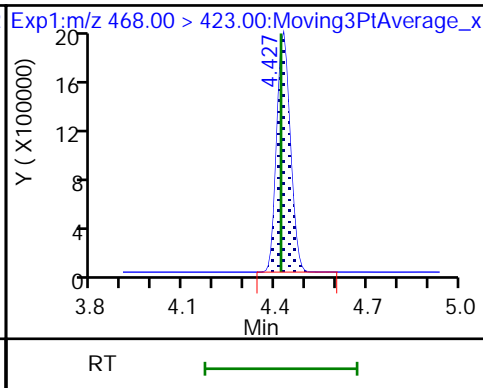
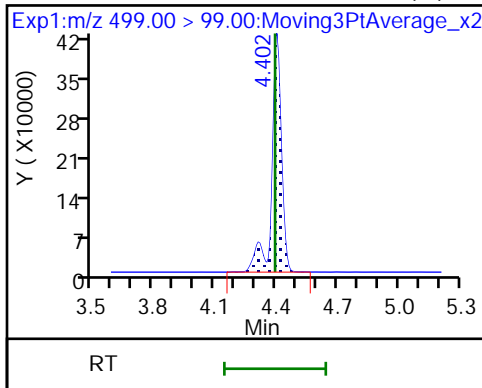




24 Perfluorooctanesulfonic acid (M)

D 27 13C5 PFNA

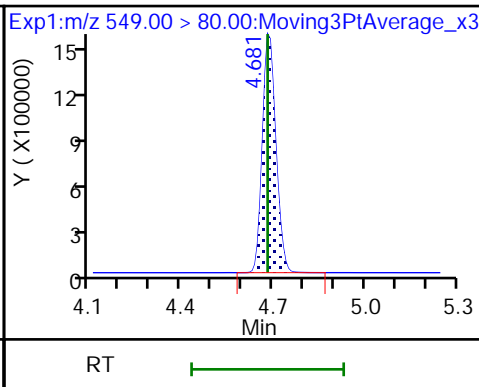
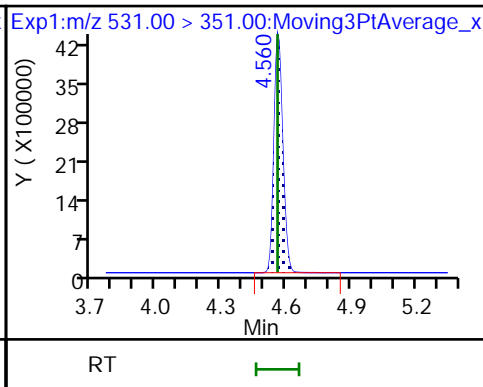
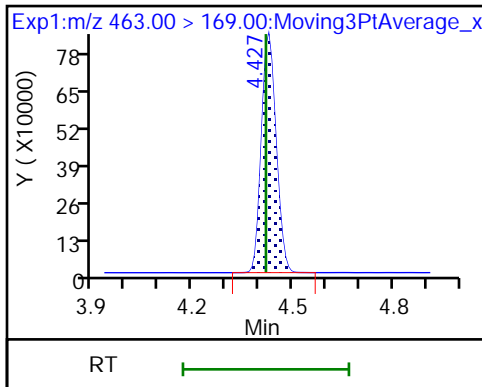
26 Perfluorononanoic acid



26 Perfluorononanoic acid

63 9CIFOS

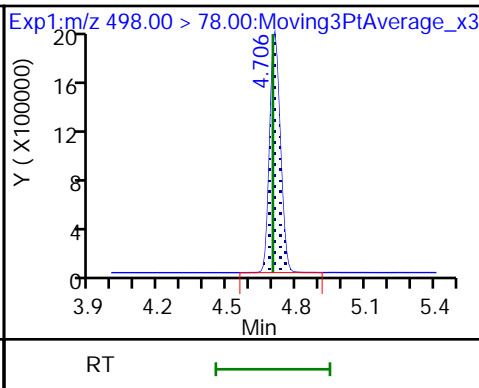
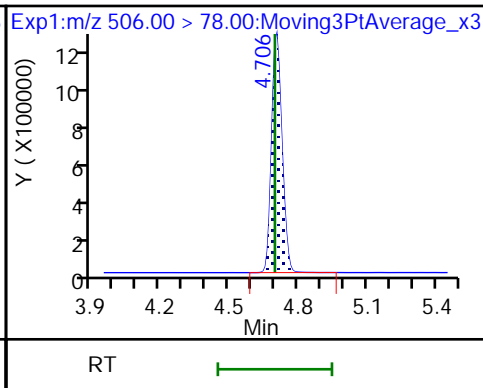
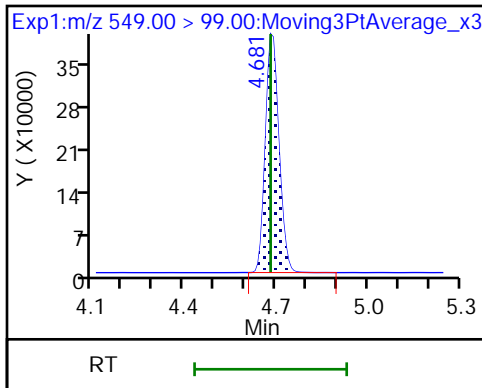
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

D 34 13C8 FOSA

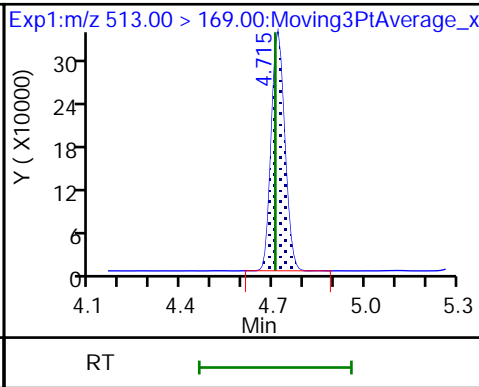
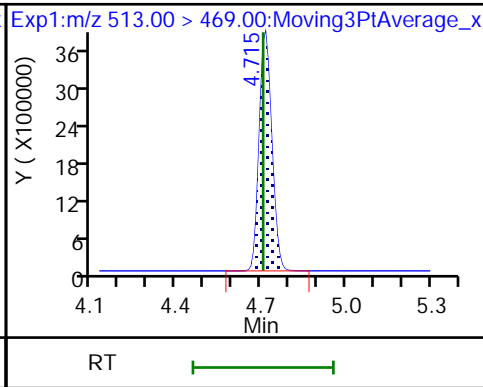
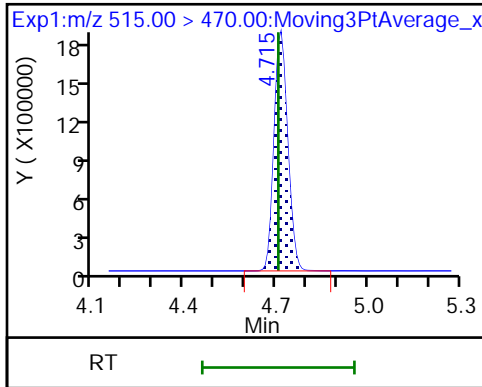
33 Perfluorooctanesulfonamide



D 32 13C2 PFDA

29 Perfluorodecanoic acid

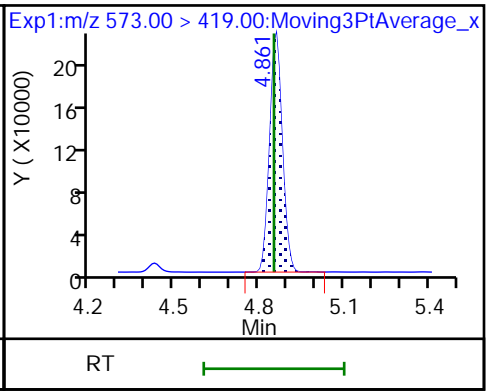
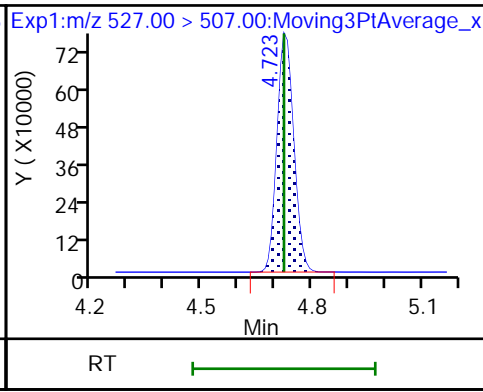
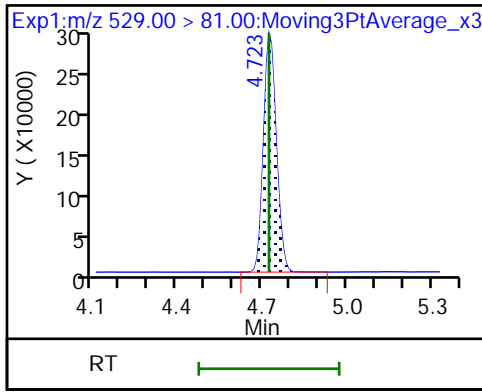
29 Perfluorodecanoic acid



D 30 M2-8:2 FTS

31 8:2 FTS

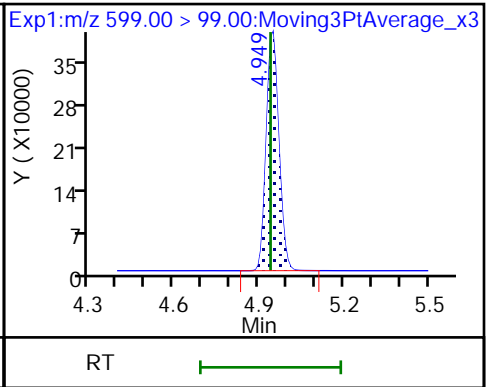
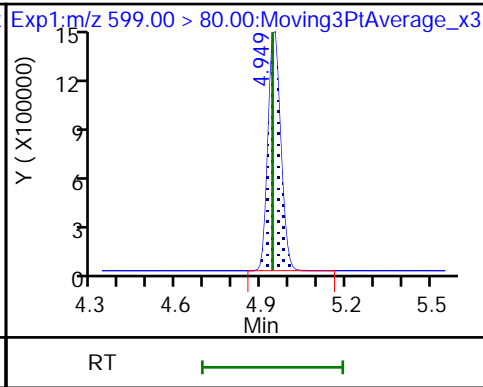
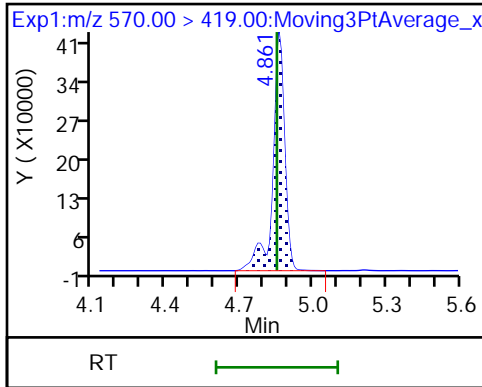
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

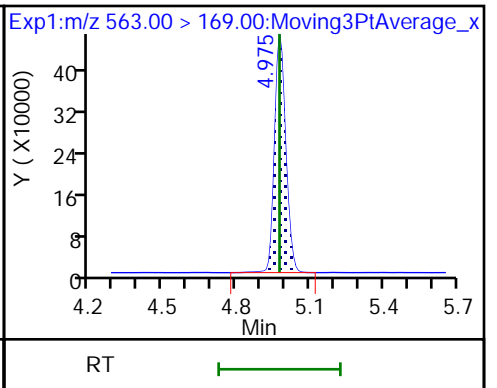
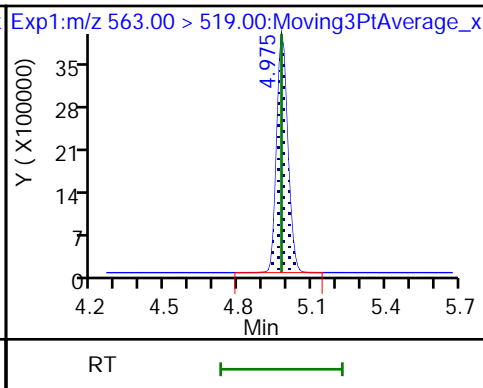
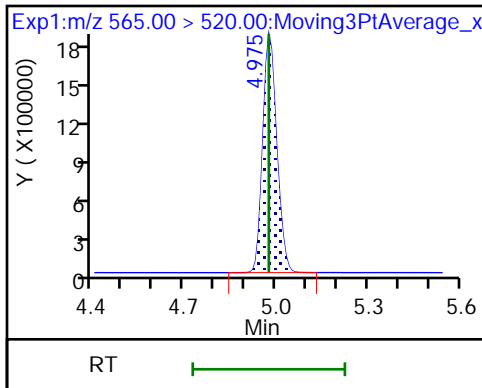
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

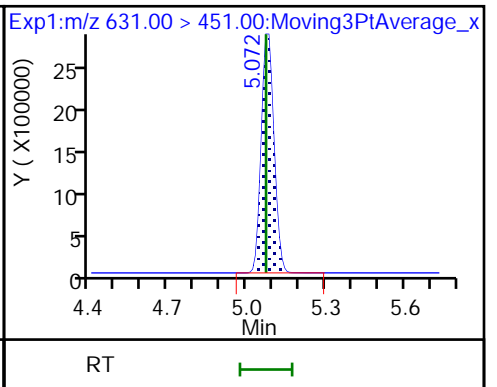
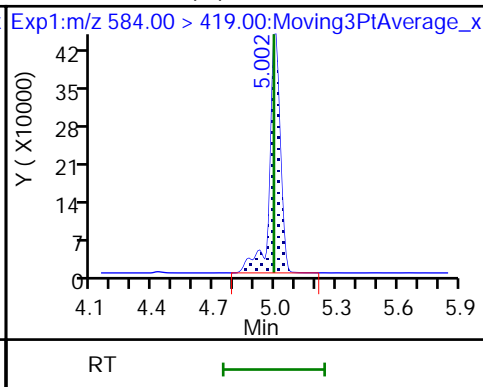
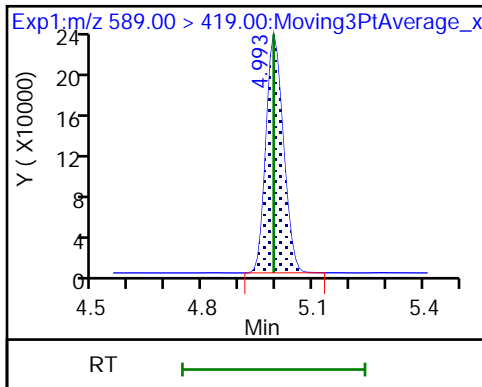
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA (M)

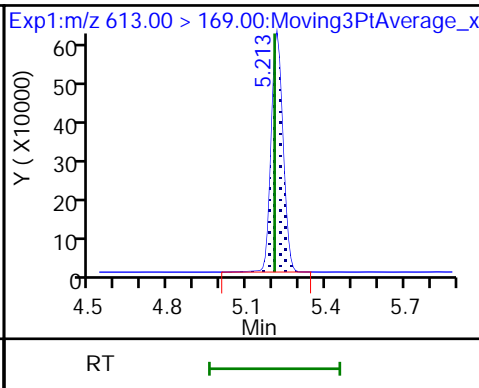
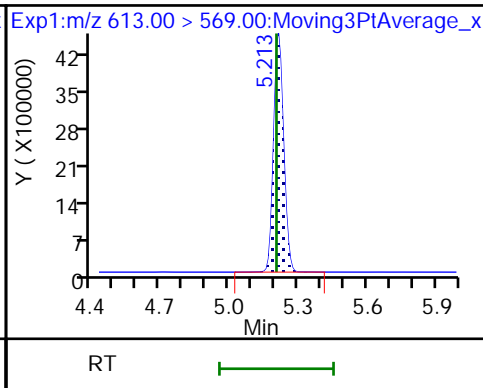
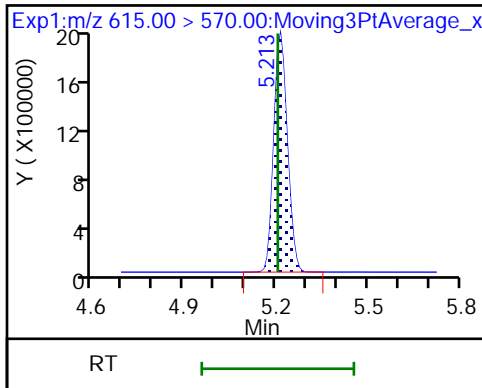
57 11CIFOS



D 43 13C2 PFDaA

42 Perfluorododecanoic acid

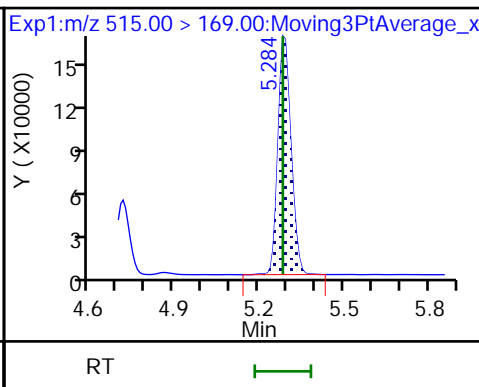
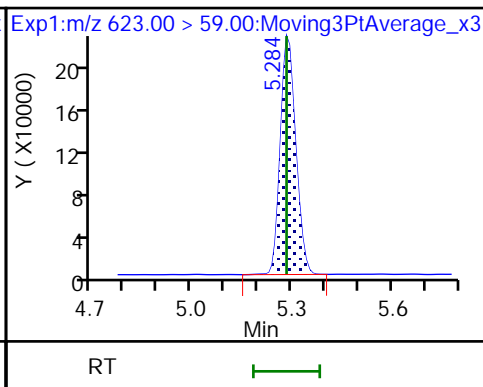
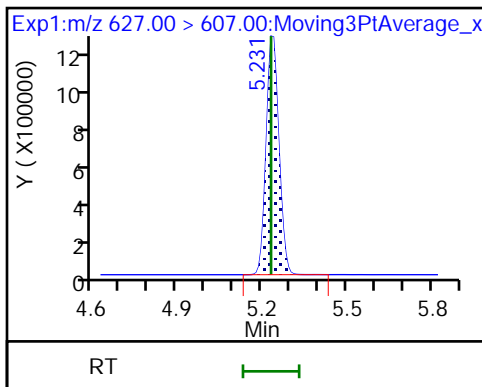
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

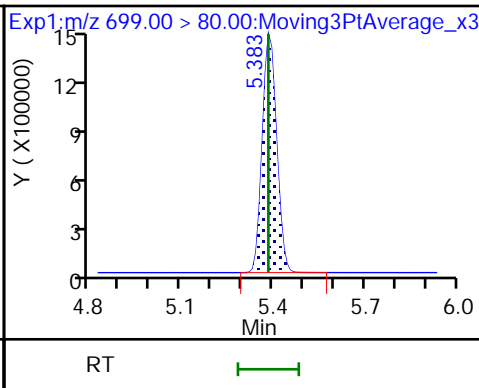
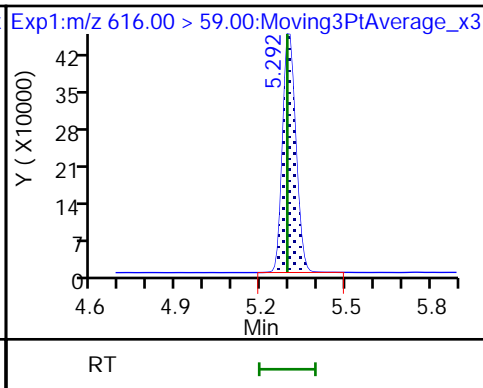
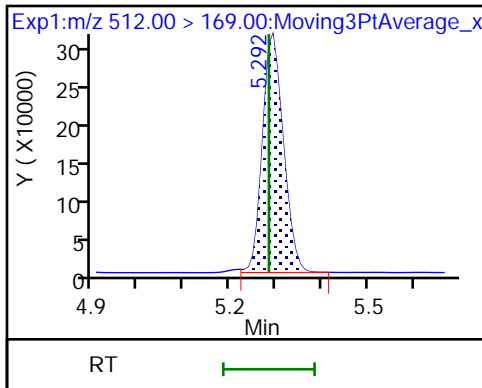
D 58 d-N-MeFOSE-M



61 NMeFOSE

49 N-MeFOSE-M

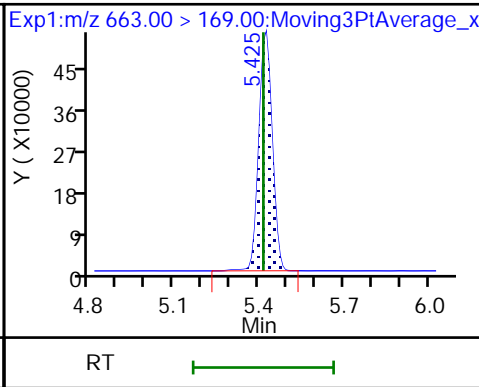
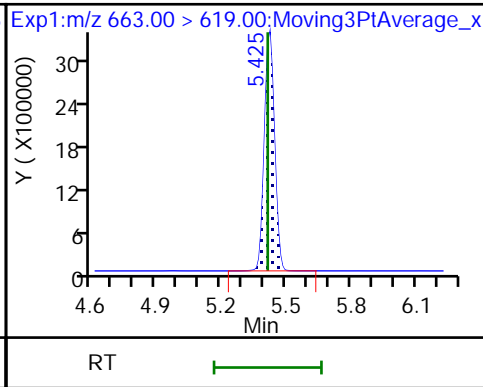
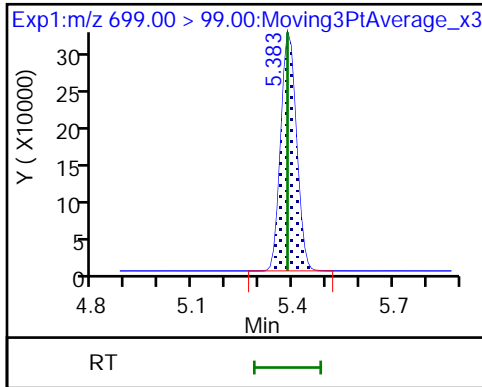
54 PFDoS



54 PFDoS

44 Perfluorotridecanoic acid

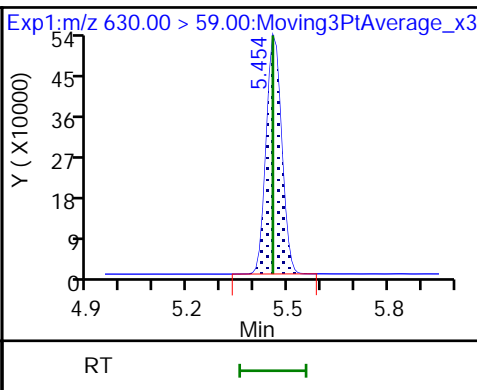
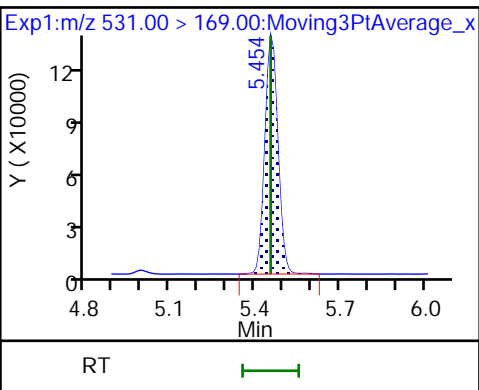
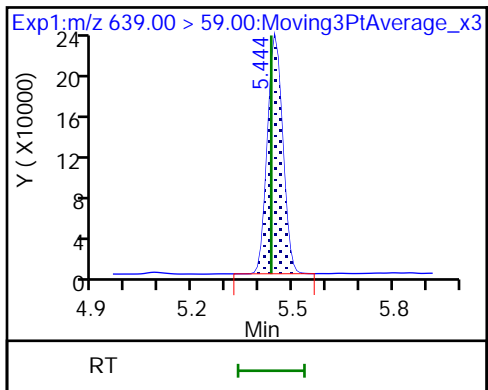
44 Perfluorotridecanoic acid



D 53 d9-N-EtFOSE-M

D 52 d-N-EtFOSA-M

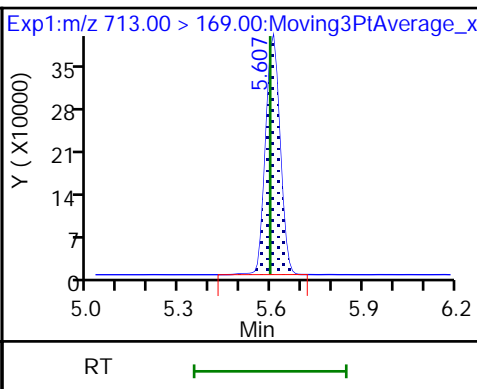
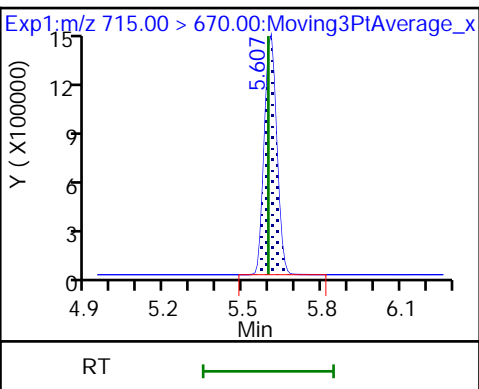
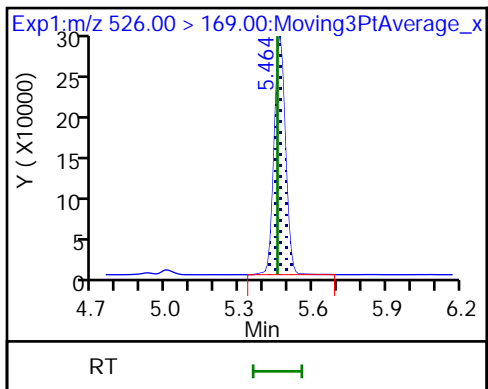
62 N-EtFOSE-M



56 N-EtFOSA-M

D 46 13C2 PFTeDA

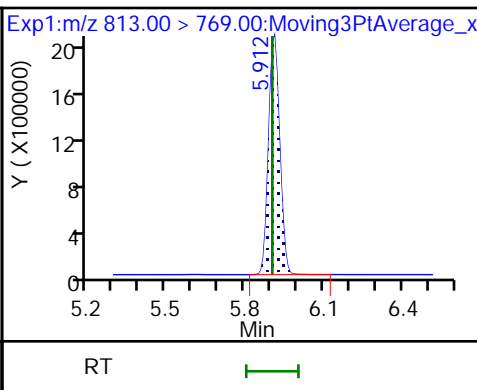
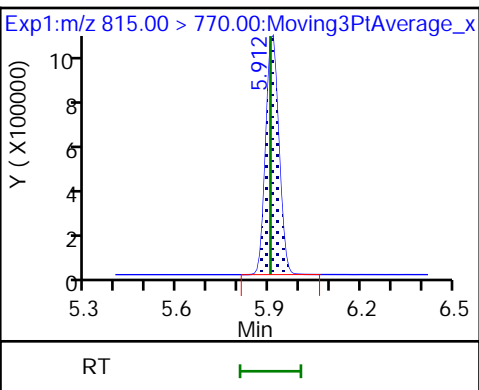
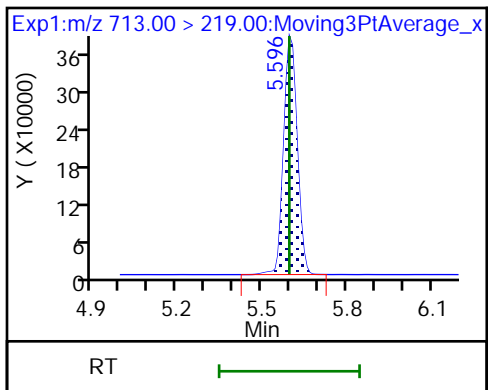
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

D 59 13C2 PFHxDA

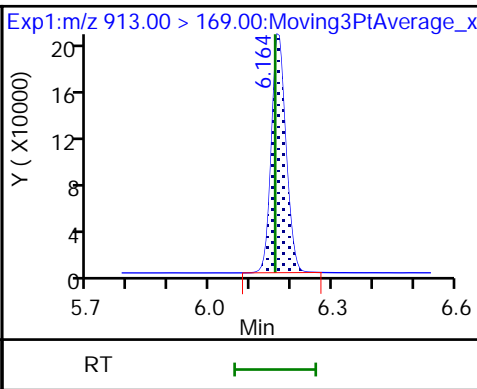
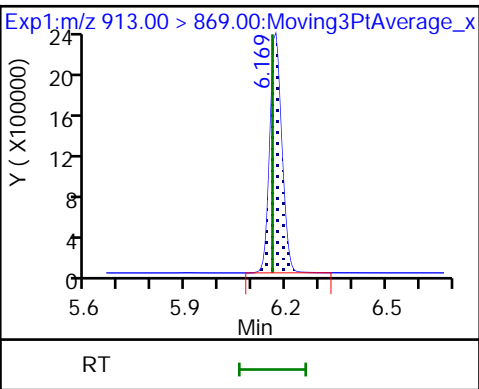
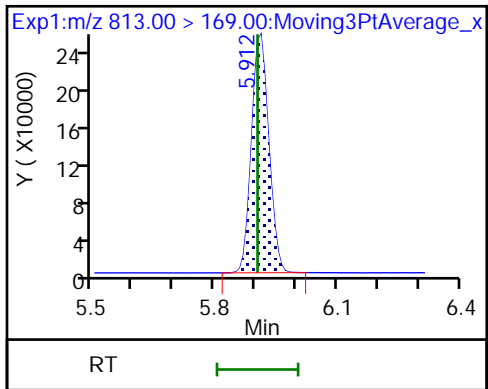
55 Perfluorohexadecanoic acid



55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid







Eurofins TestAmerica, Knoxville

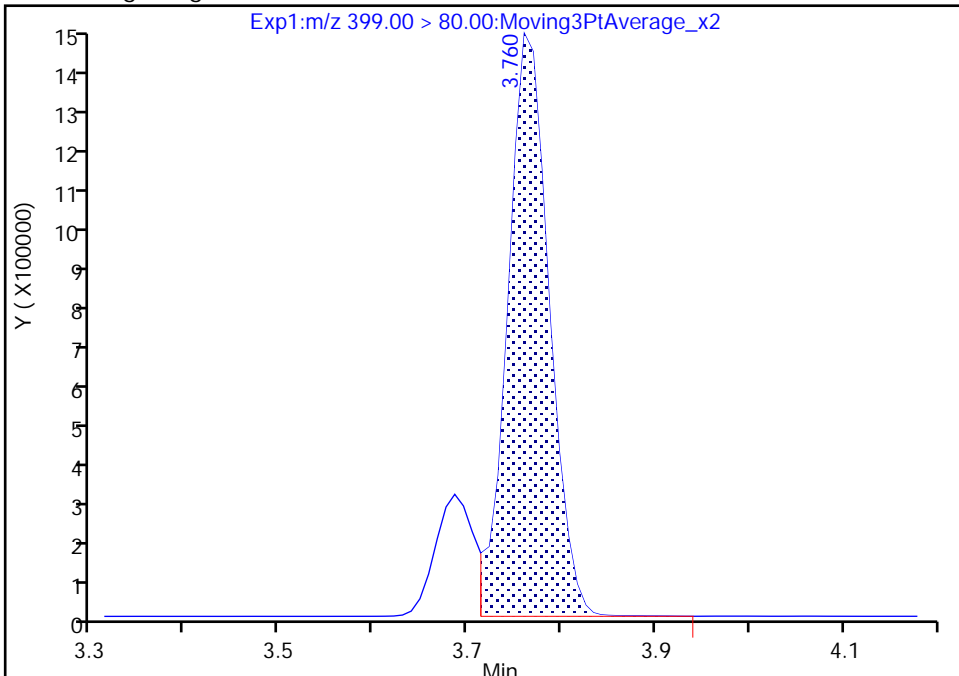
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_014.d  
Injection Date: 09-Jan-2022 11:46:17 Instrument ID: LCA  
Lims ID: ICV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 14 Worklist Smp#: 14  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

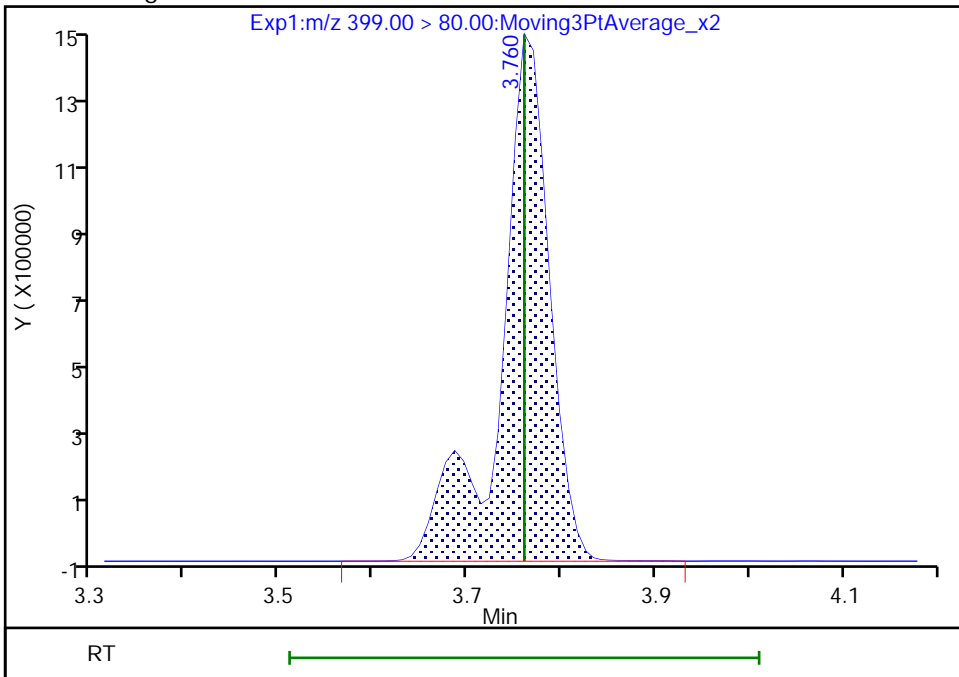
RT: 3.76  
Area: 4324860  
Amount: 2.034470  
Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
Area: 5143829  
Amount: 2.419724  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:58:50  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

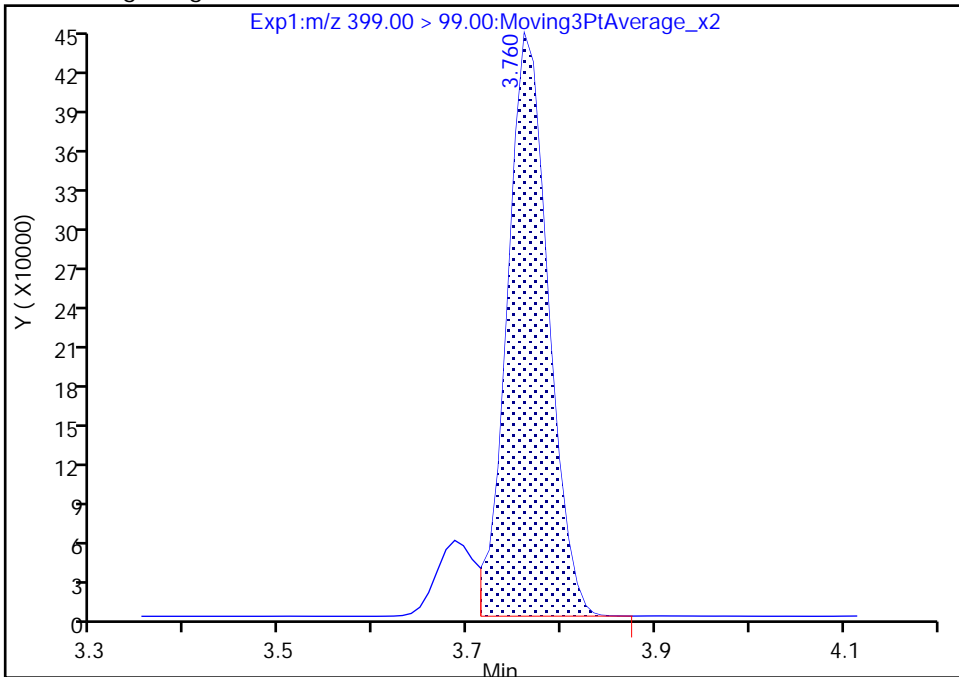
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_014.d  
Injection Date: 09-Jan-2022 11:46:17 Instrument ID: LCA  
Lims ID: ICV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 14 Worklist Smp#: 14  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

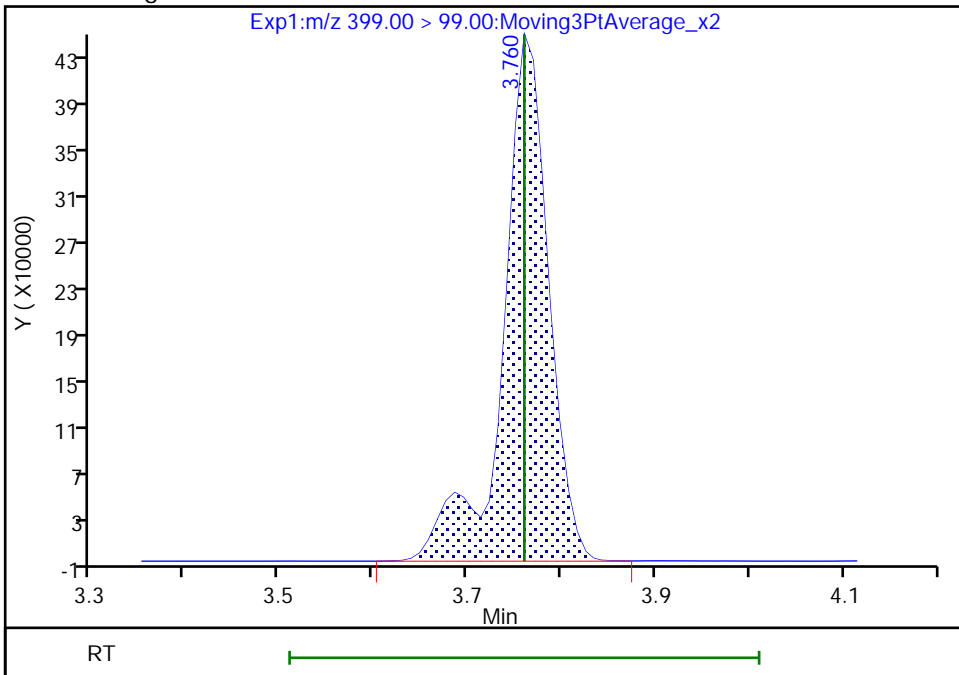
RT: 3.76  
Area: 1353817  
Amount: 2.034470  
Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
Area: 1516543  
Amount: 2.419724  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:58:57

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

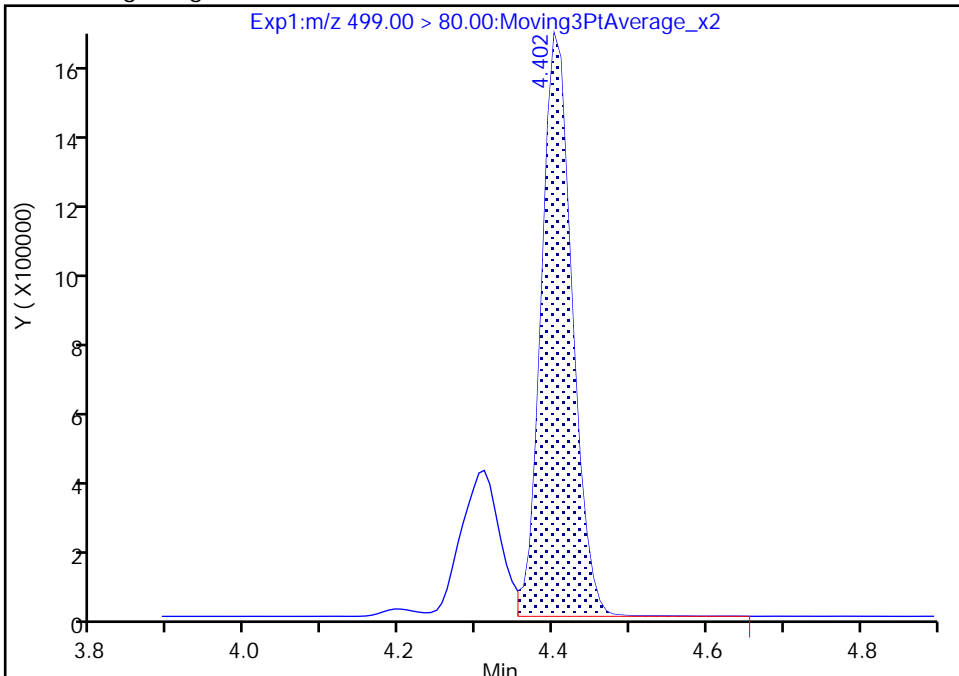
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_014.d  
Injection Date: 09-Jan-2022 11:46:17 Instrument ID: LCA  
Lims ID: ICV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 14 Worklist Smp#: 14  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

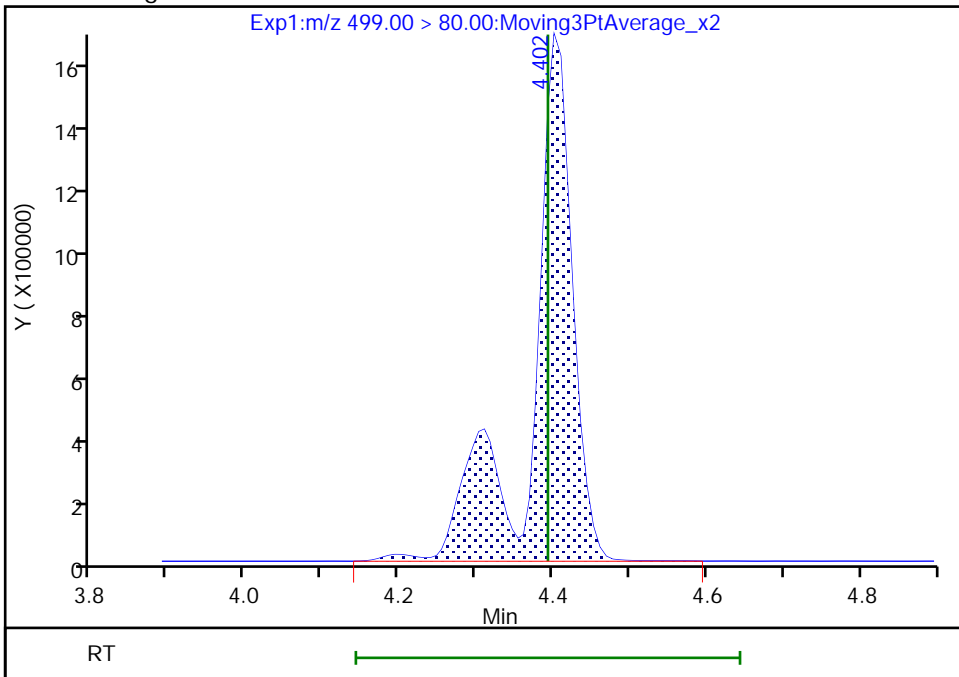
RT: 4.40  
Area: 4719755  
Amount: 1.902979  
Amount Units: ng/ml

Processing Integration Results



RT: 4.40  
Area: 6270976  
Amount: 2.528422  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:59:12  
Audit Action: Manually Integrated

Eurofins TestAmerica, Knoxville

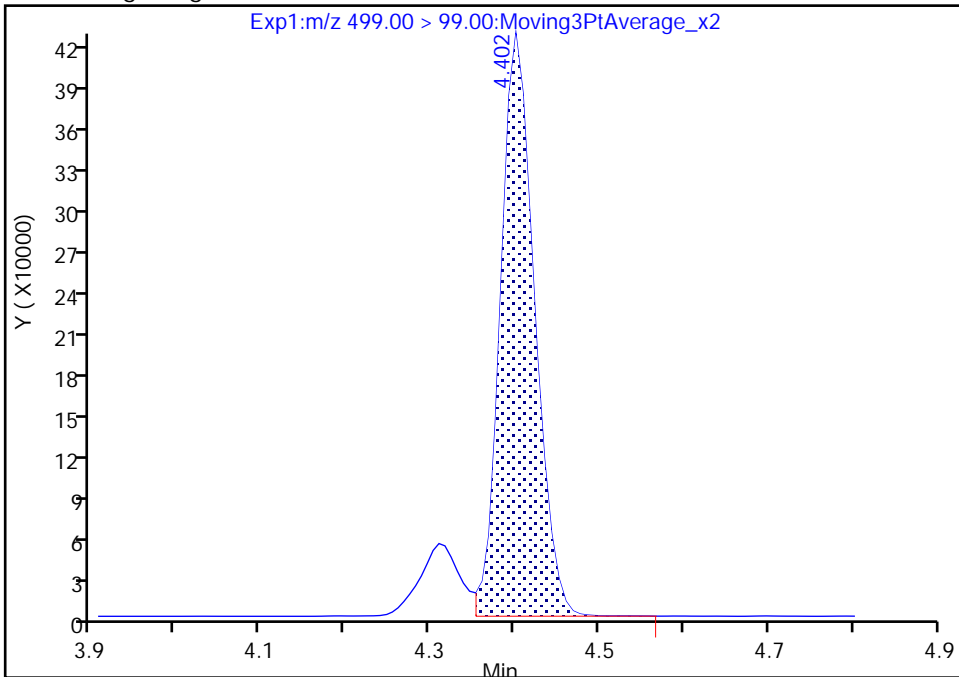
Data File:	\\chromfs\Knoxville\ChromData\LCA\20220109-22186.b_014.d		
Injection Date:	09-Jan-2022 11:46:17	Instrument ID:	LCA
Lims ID:	ICV		
Client ID:			
Operator ID:	Cochran, Bobby	ALS Bottle#:	14
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	PFC_LCA	Limit Group:	LC - PFC- ICAL
Column:		Detector:	EXP1
		Worklist Smp#:	14

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

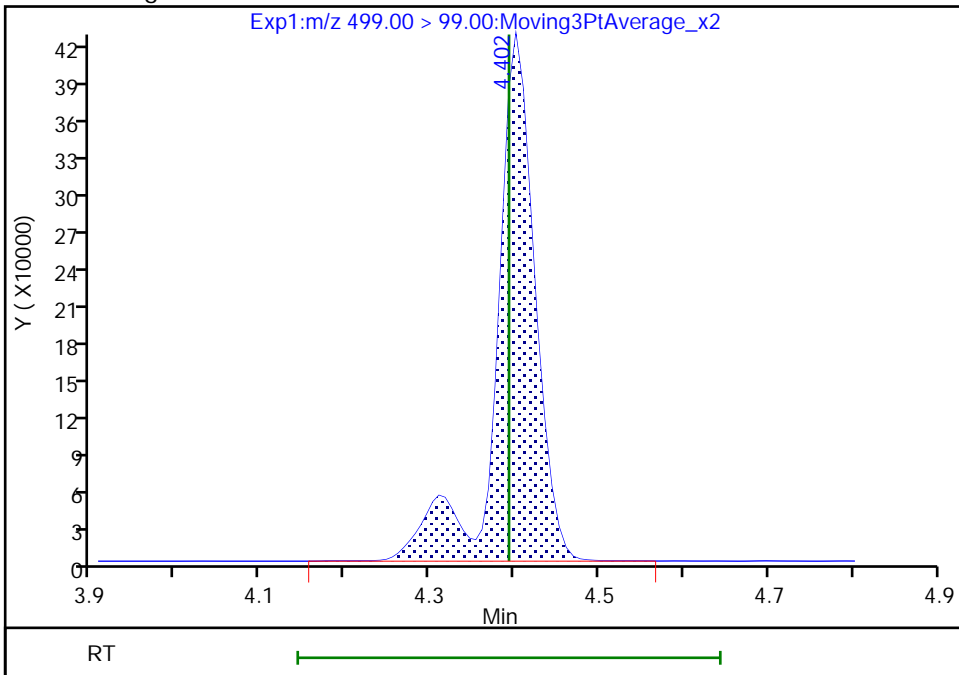
RT: 4.40  
 Area: 1193342  
 Amount: 1.902979  
 Amount Units: ng/ml

Processing Integration Results



RT: 4.40  
 Area: 1370135  
 Amount: 2.528422  
 Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranej, 09-Jan-2022 11:59:23

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

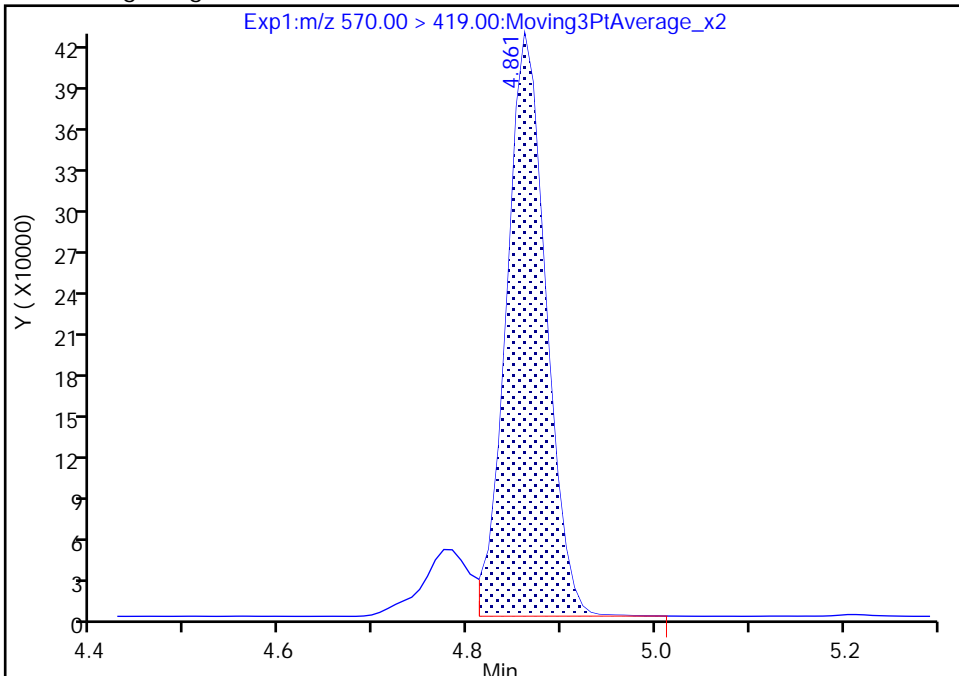
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Injection Date: 09-Jan-2022 11:46:17 Instrument ID: LCA  
Lims ID: ICV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 14 Worklist Smp#: 14  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

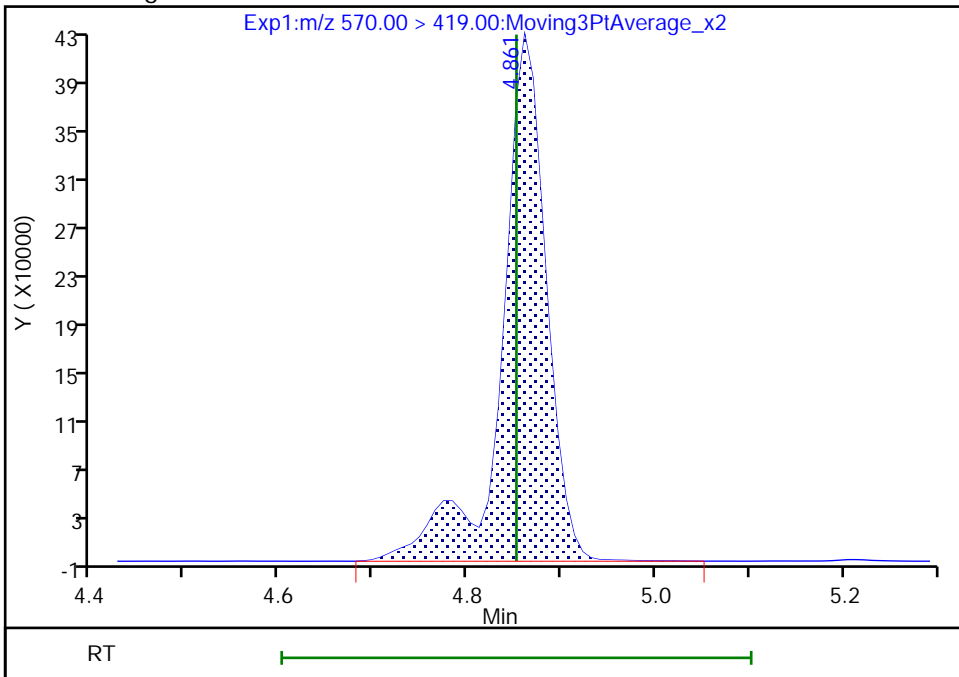
RT: 4.86  
Area: 1241790  
Amount: 2.397855  
Amount Units: ng/ml

Processing Integration Results



RT: 4.86  
Area: 1416349  
Amount: 2.618653  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:59:36  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

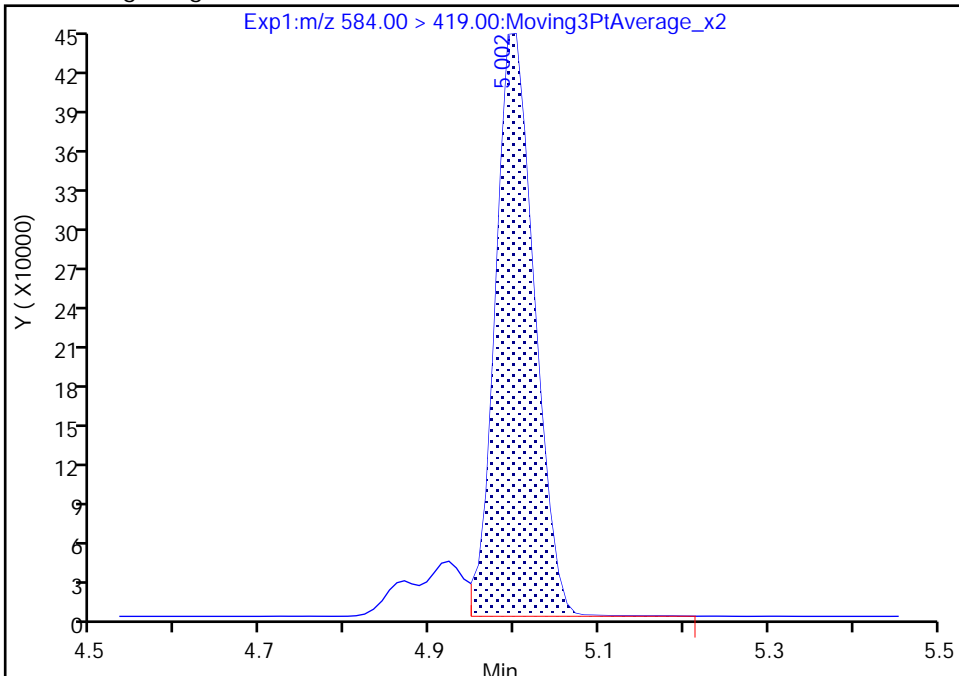
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_014.d  
Injection Date: 09-Jan-2022 11:46:17 Instrument ID: LCA  
Lims ID: ICV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 14 Worklist Smp#: 14  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NEtFOSA, CAS: 2991-50-6

Signal: 1

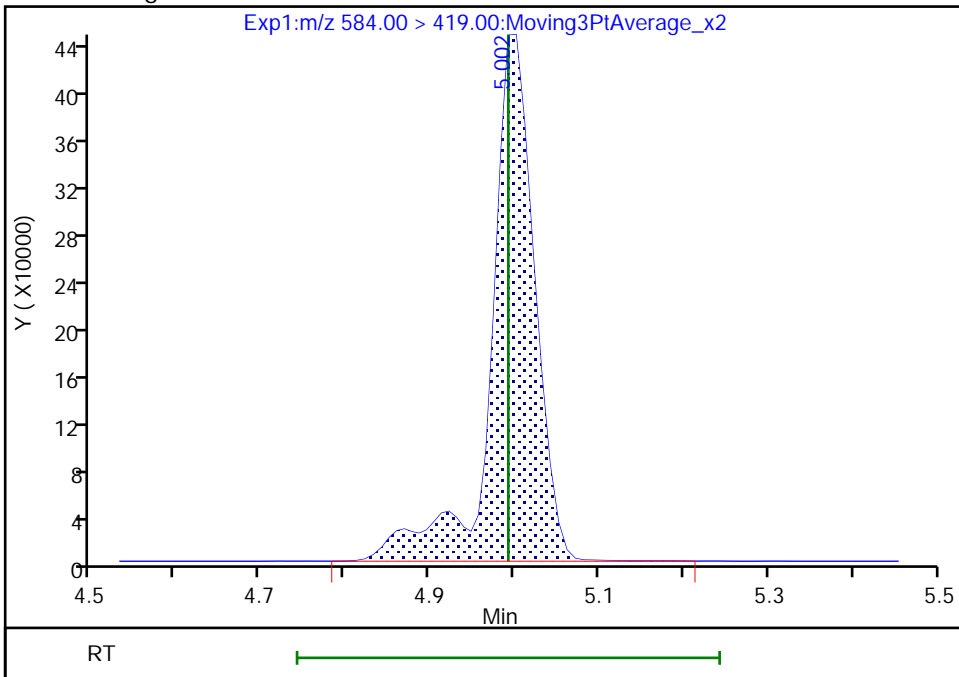
RT: 5.00  
Area: 1430991  
Amount: 2.383339  
Amount Units: ng/ml

Processing Integration Results



RT: 5.00  
Area: 1625259  
Amount: 2.703361  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:59:46  
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVL 140-57742/4 Calibration Date: 01/09/2022 12:31  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 Lab File ID: \_004.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7844	0.7575		0.0483	0.0500	-3.4	50.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9519	0.9598		0.0504	0.0500	0.8	50.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.097	1.057		0.0426	0.0442	-3.6	50.0
4:2 FTS	AveID	2.252	2.202		0.0457	0.0467	-2.2	50.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8680	0.8472		0.0488	0.0500	-2.4	50.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	0.9713	0.9252		0.0447	0.0469	-4.7	50.0
HFPO-DA	AveID	1.352	1.304		0.0482	0.0500	-3.6	50.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.377	1.404		0.0464	0.0455	1.9	50.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.047	1.075		0.0514	0.0500	2.7	50.0
DONA	AveID	2.630	2.698		0.0483	0.0471	2.6	50.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9541	1.004		0.0501	0.0476	5.3	50.0
6:2 FTS	L2ID		1.952		0.0538	0.0474	13.4	50.0
Perfluorooctanoic acid (PFOA)	AveID	1.147	1.148		0.0500	0.0500	0.0	50.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.099	1.102		0.0465	0.0464	0.3	50.0
Perfluorononanoic acid (PFNA)	Q2ID		0.8806		0.0542	0.0500	8.4	50.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	Q2ID		2.243		0.0512	0.0466	9.9	50.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9748	1.042		0.0513	0.0480	6.8	50.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9459	0.9721		0.0514	0.0500	2.8	50.0
Perfluorodecanoic acid (PFDA)	AveID	0.9645	0.9734		0.0505	0.0500	0.9	50.0
8:2 FTS	AveID	1.415	1.577		0.0534	0.0479	11.5	50.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	QuaIF		0.9565		0.0493	0.0500	-1.4	50.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		0.9216		0.0505	0.0482	4.8	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9695	0.9849		0.0508	0.0500	1.6	50.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Q2ID		0.9342		0.0473	0.0500	-5.3	50.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.672	1.730		0.0487	0.0471	3.5	50.0
Perfluorododecanoic acid (PFDoA)	Q2ID		1.062		0.0513	0.0500	2.6	50.0
10:2 FTS	AveID	2.276	2.427		0.0514	0.0482	6.6	50.0
NMeFOSA	Q2ID		1.003		0.0479	0.0500	-4.3	50.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	Q2ID		1.067		0.0494	0.0500	-1.1	50.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9166	0.9304		0.0491	0.0484	1.5	50.0

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVL 140-57742/4 Calibration Date: 01/09/2022 12:31  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 Lab File ID: \_004.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTriA)	AveID	0.8292	0.8501		0.0513	0.0500	2.5	50.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	AveID	1.328	1.161		0.0437	0.0500	-12.6	50.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.195	1.152		0.0482	0.0500	-3.6	50.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1344	0.1275		0.0475	0.0500	-5.1	50.0
Perfluorohexadecanoic acid	Q2ID		1.324		0.0520	0.0500	4.0	50.0
Perfluorooctadecanoic acid	AveID	0.9844	1.026		0.0521	0.0500	4.2	50.0
13C4 PFBA	Ave	1.142	1.136		1.24	1.25	-0.5	50.0
13C5 PFPeA	Ave	0.8865	0.8753		1.23	1.25	-1.3	50.0
13C3 PFBS	Ave	0.5913	0.5768		1.13	1.16	-2.4	50.0
M2-4:2 FTS	Ave	0.1820	0.1815		1.16	1.17	-0.3	50.0
13C2 PFHxA	Ave	0.9479	0.9699		1.28	1.25	2.3	50.0
13C3 HFPO-DA	Ave	0.4556	0.4384		1.20	1.25	-3.8	50.0
18O2 PFHxS	Ave	0.3946	0.3863		1.16	1.18	-2.1	50.0
13C4 PFHpA	Ave	0.9067	0.9130		1.26	1.25	0.7	50.0
13C4 PFOA	Ave	0.9376	0.9310		1.24	1.25	-0.7	50.0
M2-6:2 FTS	Ave	0.1835	0.1857		1.20	1.19	1.2	50.0
13C4 PFOS	Ave	0.5681	0.5357		1.13	1.20	-5.7	50.0
13C5 PFNA	Ave	1.234	1.207		1.22	1.25	-2.2	50.0
13C8 FOSA	Ave	0.7682	0.7764		1.26	1.25	1.1	50.0
13C2 PFDA	Ave	1.191	1.207		1.27	1.25	1.3	50.0
M2-8:2 FTS	Ave	0.2070	0.2153		1.25	1.20	4.0	50.0
d3-NMeFOSAA	Ave	0.1401	0.1396		1.25	1.25	-0.4	50.0
13C2 PFUnA	Ave	1.189	1.193		1.25	1.25	0.3	50.0
d5-NEtFOSAA	Ave	0.1537	0.1638		1.33	1.25	6.5	50.0
13C2 PFDoA	Ave	1.247	1.206		1.21	1.25	-3.3	50.0
d7-N-MeFOSE-M	Ave	0.1499	0.1496		1.25	1.25	-0.2	50.0
d-N-MeFOSA-M	Ave	0.1069	0.0999		1.17	1.25	-6.6	50.0
d9-N-EtFOSE-M	Ave	0.1504	0.1491		1.24	1.25	-0.9	50.0
d-N-EtFOSA-M	Ave	0.0883	0.0831		1.18	1.25	-5.9	50.0
13C2 PFTeDA	Ave	0.9508	0.9235		1.21	1.25	-2.9	50.0
13C2 PFHxDA	Ave	0.6444	0.6146		1.19	1.25	-4.6	50.0
13C8 PFOA	AveID	0.999	0.9943		1.24	1.25	-0.5	50.0
13C8 PFOS	AveID	0.2220	0.2247		1.21	1.20	1.2	50.0



Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_004.d  
 Lims ID: CCVL  
 Client ID:  
 Sample Type: CCVL  
 Inject. Date: 09-Jan-2022 12:31:49 ALS Bottle#: 4 Worklist Smp#: 4  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022187-004 CCVL  
 Misc. Info.: Plate: 11 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 15:07:58 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1641

First Level Reviewer: cochranj Date: 09-Jan-2022 12:42:57

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	2.784	2.779	0.005	0.678	6447148	1.24	99.5	15492	
2 Perfluorobutanoic acid	212.90 > 169.00	2.790	2.779	0.011	1.002	195352	0.0483	96.6	50.0	
D 3 13C5 PFPeA	267.90 > 223.00	3.098	3.091	0.007	0.755	4968713	1.23	98.7	11525	
4 Perfluoropentanoic acid	262.90 > 219.00	3.098	3.091	0.007	1.000	190763	0.0504	101	66.9	
D 6 13C3 PFBS	301.90 > 80.00	3.106	3.107	-0.001	0.757	3045407	1.13	97.6	12711	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.115	3.107	0.008	1.003	122418	0.0426	Target=2.65	96.4	760
	298.90 > 99.00	3.115	3.107	0.008	1.003	46364		2.64(1.32-3.97)		297
D 8 M2-4:2 FTS	329.00 > 81.00	3.391	3.392	-0.001	0.826	962475	1.16	99.7	1943	
7 4:2 FTS	327.00 > 307.00	3.401	3.392	0.009	1.003	84770	0.0457	97.8	1081	
D 9 13C2 PFHxA	315.00 > 270.00	3.422	3.422	0.0	0.833	5506183	1.28	102	10336	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.422	3.422	0.0	1.101	113677	0.0447	Target=3.44	95.3	385
	349.00 > 99.00	3.422	3.422	0.0	1.101	35596		3.19(1.72-5.16)		427
10 Perfluorohexanoic acid	313.00 > 269.00	3.422	3.422	0.0	1.000	186589	0.0488	Target=11.80	97.6	91.8
	313.00 > 119.00	3.422	3.422	0.0	1.000	17931		10.41(5.90-17.70)		31.5
D 12 13C3 HFPO-DA	287.00 > 169.00	3.528	3.519	0.009	0.859	2488865	1.20	96.2	4065	

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	3.528	3.519	0.009	1.000	129811	0.0482		96.4	108	
D 17 18O2 PFHxS										
403.00 > 84.00	3.760	3.760	0.0	0.916	2074432	1.16		97.9	7970	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.760	3.760	0.0	1.000	112060	0.0464	Target=3.40	102	549	M
399.00 > 99.00	3.760	3.760	0.0	1.000	34674		3.23(1.70-5.10)		363	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.769	3.770	-0.001	0.918	5183008	1.26		101	8600	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.769	3.770	-0.001	1.000	222965	0.0514	Target=3.29	103	142	
363.00 > 169.00	3.769	3.770	-0.001	1.000	66971		3.33(1.65-4.94)		187	
68 DONA										
377.00 > 251.00	3.807	3.807	0.0	0.865	309164	0.0483	Target=1.82	103	751	
377.00 > 85.00	3.807	3.807	0.0	0.865	179180		1.73(0.91-2.74)		133	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.089	4.089	0.0	0.929	116316	0.0501	Target=3.92	105	683	
449.00 > 99.00	4.089	4.089	0.0	0.929	29419		3.95(1.96-5.87)		289	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.106	4.098	0.008	1.000	1001437	1.20		101	3095	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.106	4.098	0.008	1.000	5254718	1.24		99.5	7794	
19 6:2 FTS										
427.00 > 407.00	4.106	4.098	0.008	1.000	78045	0.0538		113	479	
D 21 13C4 PFOA										
417.00 > 372.00	4.106	4.107	-0.001	1.000	5285060	1.24		99.3	9097	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.106	4.107	-0.001	1.000	242644	0.0500	Target=2.59	100	164	
413.00 > 169.00	4.106	4.107	-0.001	1.000	92161		2.63(1.30-3.89)		177	
* 22 13C2 PFOA										
415.00 > 370.00	4.106	4.107	-0.001		5676885	1.25			8535	
D 25 13C4 PFOS										
503.00 > 80.00	4.402	4.393	0.009	1.072	2907516	1.13		94.3	3928	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.393	4.393	0.0	0.998	653440	1.21		101	4742	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.402	4.393	0.009	1.000	124364	0.0465	Target=4.65	100	406	M
499.00 > 99.00	4.402	4.393	0.009	1.000	27749		4.48(2.32-6.97)		188	M
D 27 13C5 PFNA										
468.00 > 423.00	4.419	4.418	0.0	1.076	6850515	1.22		97.8	10957	
26 Perfluorononanoic acid										
463.00 > 419.00	4.419	4.418	0.0	1.000	241294	0.0542	Target=4.65	108	351	
463.00 > 169.00	4.427	4.418	0.009	1.002	51363		4.70(2.32-6.97)		102	
63 9CIFOS										
531.00 > 351.00	4.560	4.560	0.0	1.036	254309	0.0512		110	1095	

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	4.681	4.681	0.0	1.064	121639	0.0513	Target=4.06	107	376	
549.00 > 99.00	4.681	4.681	0.0	1.064	29942		4.06(2.03-6.09)		256	
D 34 13C8 FOSA										
506.00 > 78.00	4.698	4.698	0.0	1.144	4407575	1.26		101	4145	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.698	4.698	0.0	1.000	171391	0.0514		103	807	
D 32 13C2 PFDA										
515.00 > 470.00	4.707	4.706	0.001	1.146	6850080	1.27		101	12140	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.707	4.706	0.001	1.000	266715	0.0505	Target=11.30	101	419	
513.00 > 169.00	4.707	4.706	0.001	1.000	21712		12.28(5.65-16.95)		87.1	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.724	4.723	0.001	1.150	1171092	1.25		104	1647	
31 8:2 FTS										
527.00 > 507.00	4.724	4.723	0.001	1.000	73891	0.0534		111	861	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.853	4.852	0.001	1.182	792335	1.25		99.6	2631	
36 NMeFOSAA										
570.00 > 419.00	4.861	4.852	0.009	1.002	30314	0.0493		98.6	66.1	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.941	4.940	0.001	1.122	108081	0.0505	Target=3.79	105	681	
599.00 > 99.00	4.941	4.940	0.001	1.122	23284		4.64(1.90-5.69)		178	
D 39 13C2 PFUnA										
565.00 > 520.00	4.976	4.975	0.001	1.212	6771393	1.25		100	10008	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.976	4.975	0.001	1.000	266762	0.0508	Target=8.45	102	441	
563.00 > 169.00	4.976	4.975	0.001	1.000	29934		8.91(4.22-12.67)		176	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.993	4.993	0.0	1.216	929634	1.33		107	2909	
40 NEtFOSA										
584.00 > 419.00	4.993	4.993	0.0	1.000	34737	0.0473		94.7	232	M
57 11C1FOS										
631.00 > 451.00	5.072	5.072	0.0	1.152	198284	0.0487		103	1212	
D 43 13C2 PFDaA										
615.00 > 570.00	5.205	5.205	0.0	1.268	6846338	1.21		96.7	13735	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.205	5.205	0.0	1.000	290713	0.0513	Target=6.99	103	390	
613.00 > 169.00	5.205	5.205	0.0	1.000	44161		6.58(3.50-10.49)		97.8	
50 10:2 FTS										
627.00 > 607.00	5.232	5.231	0.001	1.108	114425	0.0514		107	826	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.284	5.284	0.0	1.287	849178	1.25		99.8	891	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.284	5.284	0.0	1.287	566861	1.17		93.4	57.5	
61 NMeFOSA										
512.00 > 169.00	5.284	5.284	0.0	1.000	22752	0.0479		95.7	131	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
49 N-MeFOSE-M										
616.00 > 59.00	5.293	5.292	0.001	1.002	36251	0.0494		98.9	65.3	
54 PFDoS										
699.00 > 80.00	5.384	5.383	0.001	1.223	109568	0.0491	Target=4.24	102	406	
699.00 > 99.00	5.384	5.383	0.001	1.223	23212		4.72(2.12-6.35)		199	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.415	5.414	0.001	1.040	232795	0.0513	Target=6.20	103	323	
663.00 > 169.00	5.415	5.414	0.001	1.040	36235		6.42(3.10-9.30)		220	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.435	5.434	0.001	1.324	846546	1.24		99.1	430	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.455	5.454	0.001	1.328	471646	1.18		94.1	724	
62 N-EtFOSE-M										
630.00 > 59.00	5.455	5.454	0.001	1.004	39325	0.0437		87.4	53.4	
56 N-EtFOSA-M										
526.00 > 169.00	5.455	5.454	0.001	1.000	21736	0.0482		96.4	159	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.599	5.596	0.003	1.363	5242476	1.21		97.1	10247	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.599	5.596	0.003	1.000	26742	0.0474	Target=1.05	94.9	141	
713.00 > 219.00	5.599	5.596	0.003	1.000	26572		1.01(0.53-1.58)		238	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.905	5.903	0.002	1.438	3488983	1.19		95.4	5907	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.905	5.903	0.002	1.000	184800	0.0520	Target=8.09	104	508	
813.00 > 169.00	5.905	5.903	0.002	1.000	21548		8.58(4.05-12.14)		111	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.165	6.159	0.006	1.044	143176	0.0521	Target=11.53	104	445	
913.00 > 169.00	6.165	6.159	0.006	1.044	12364		11.58(5.77-17.30)		83.2	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

63L2PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\\_004.d

Injection Date: 09-Jan-2022 12:31:49

Instrument ID: LCA

Lims ID: CCVL

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 4

Worklist Smp#: 4

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

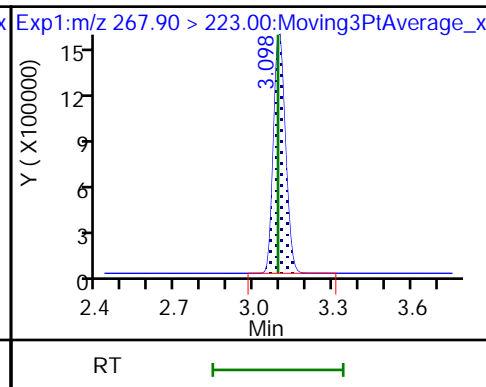
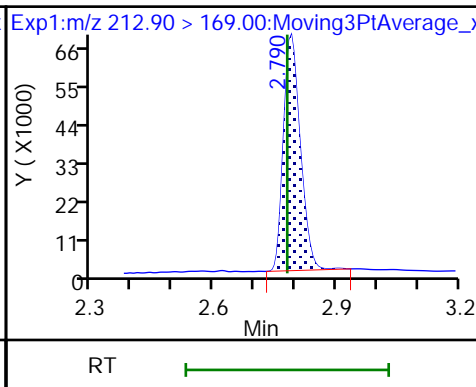
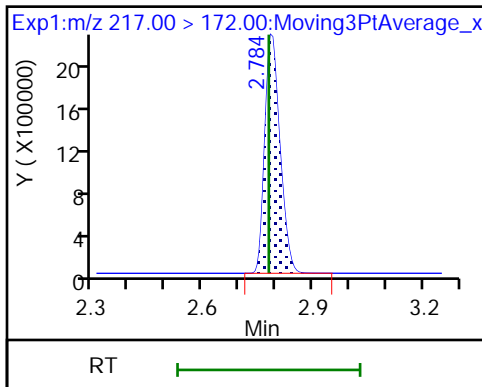
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

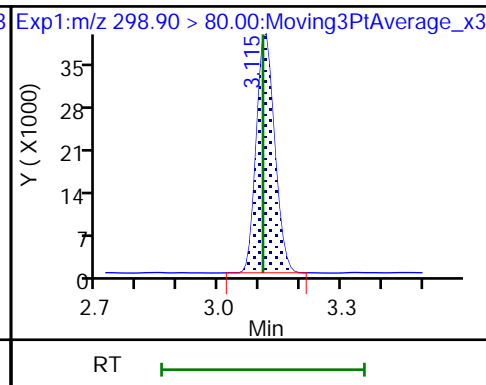
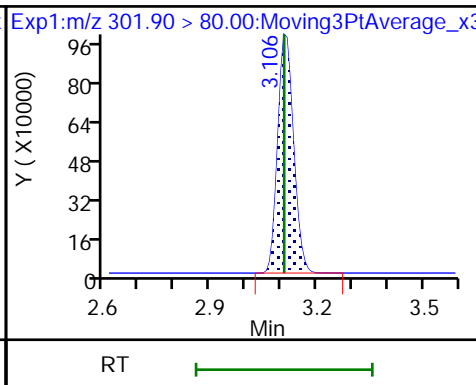
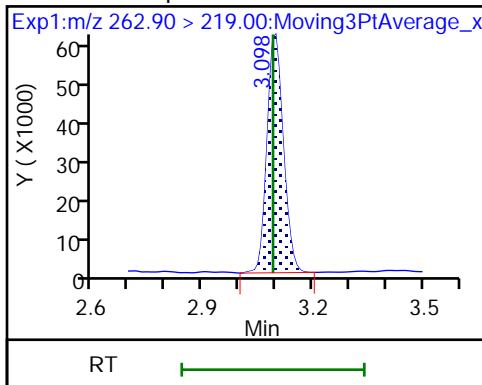
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

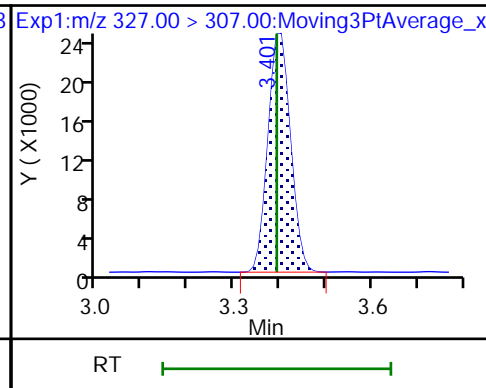
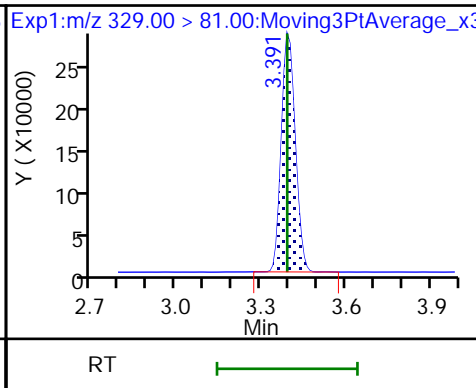
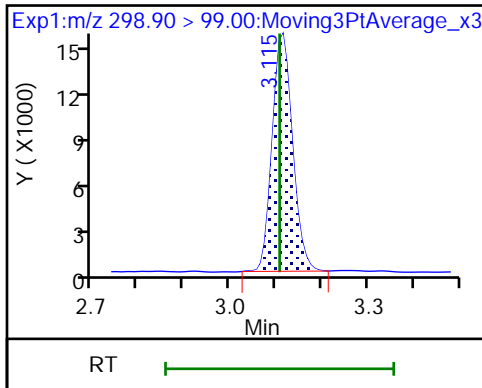
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

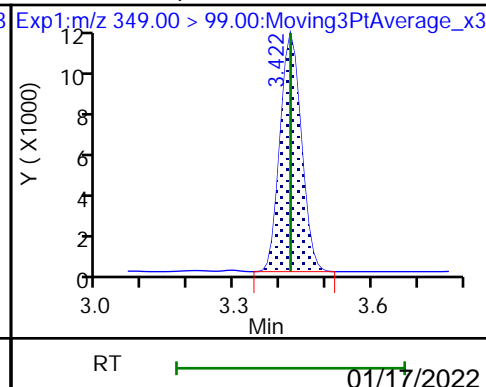
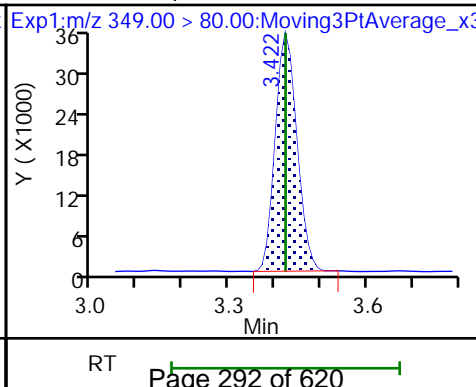
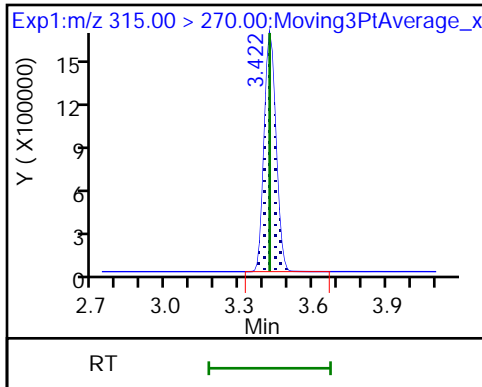
7 4:2 FTS

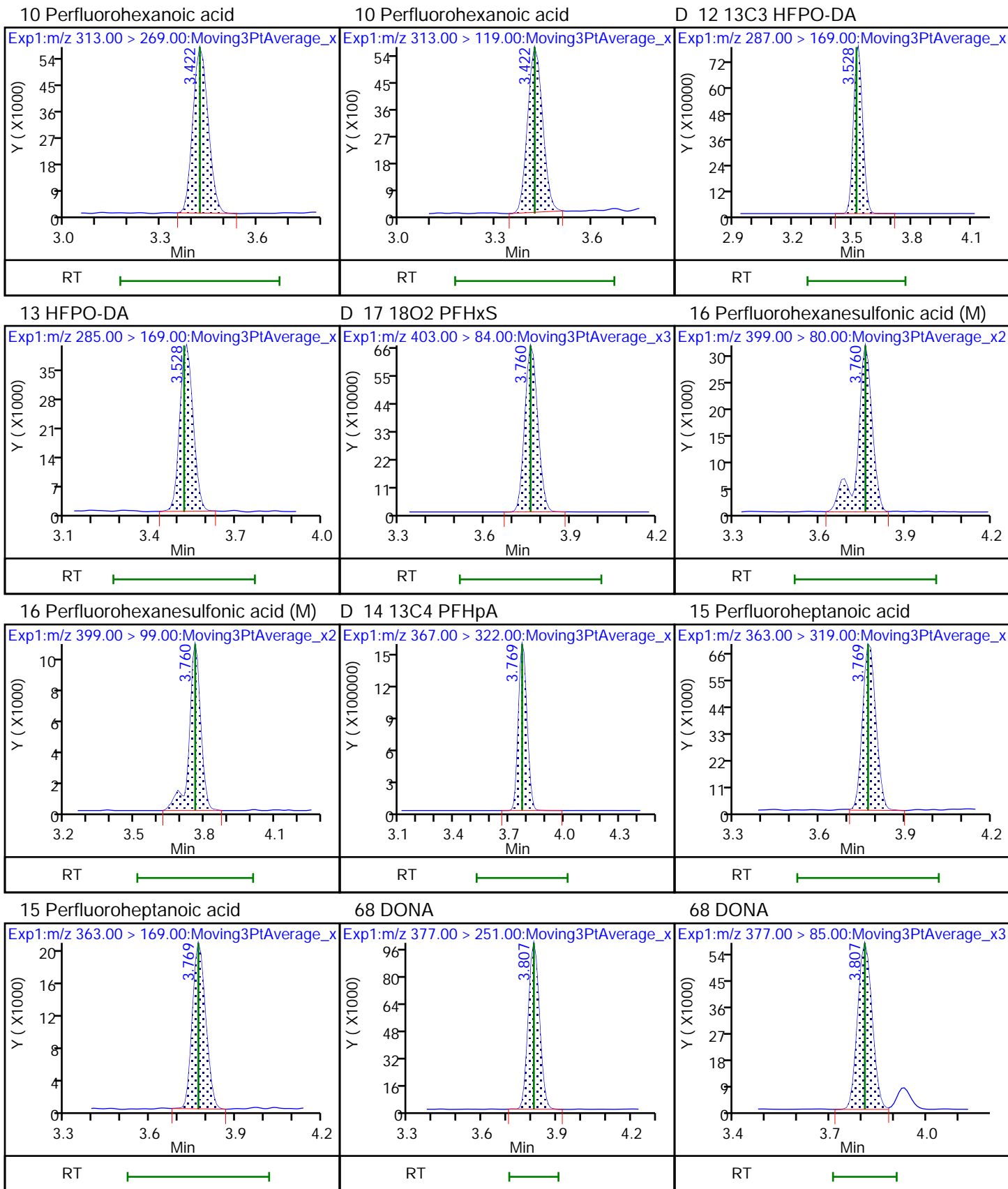


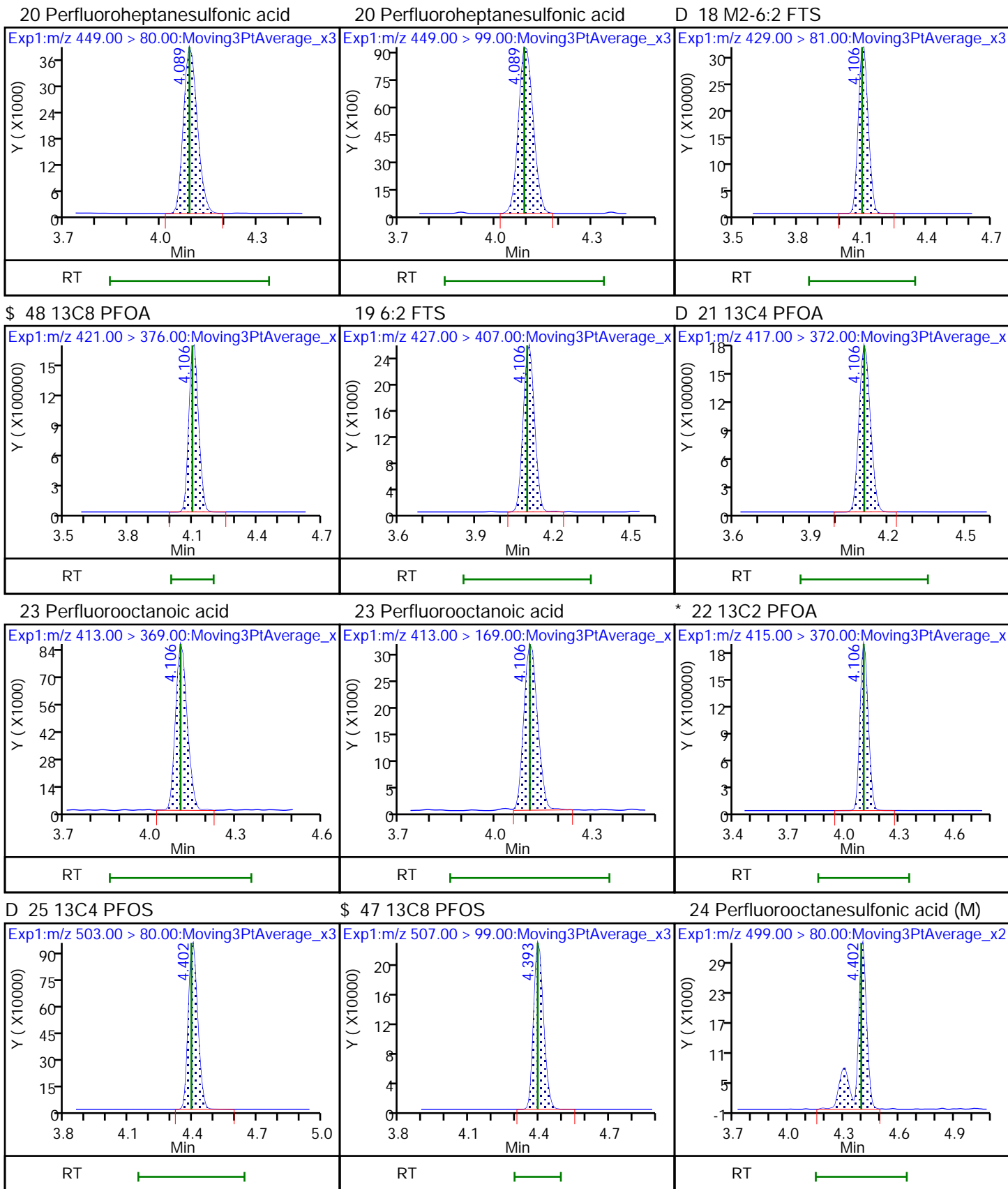
D 9 13C2 PFHxA

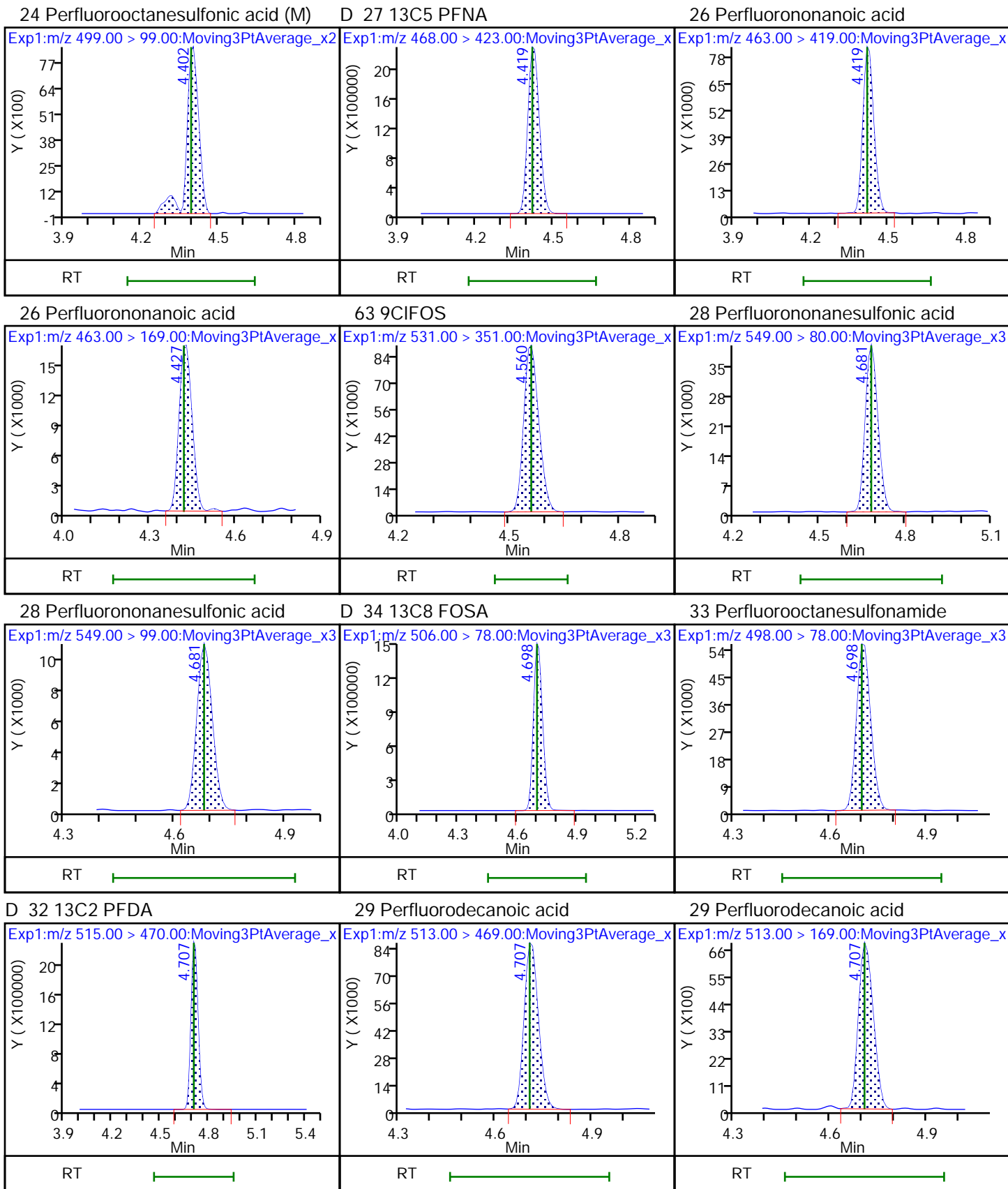
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid







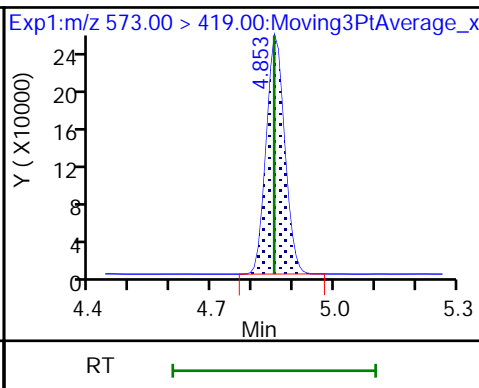
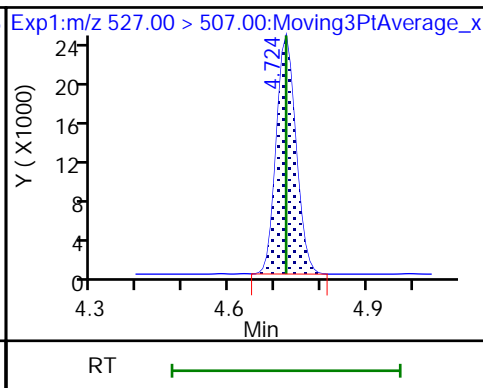
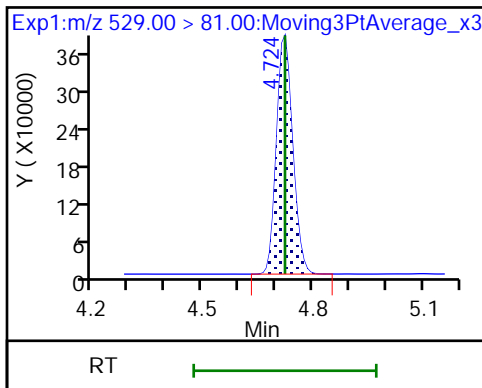




D 30 M2-8:2 FTS

31 8:2 FTS

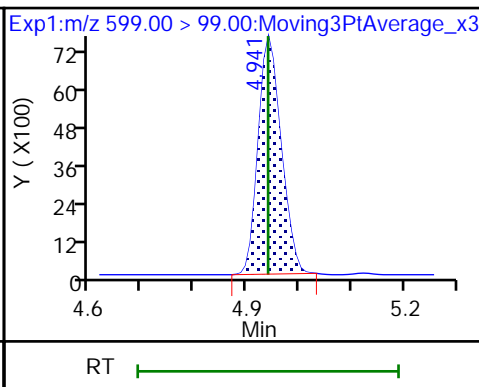
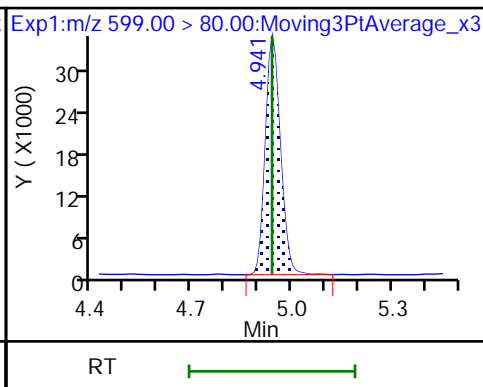
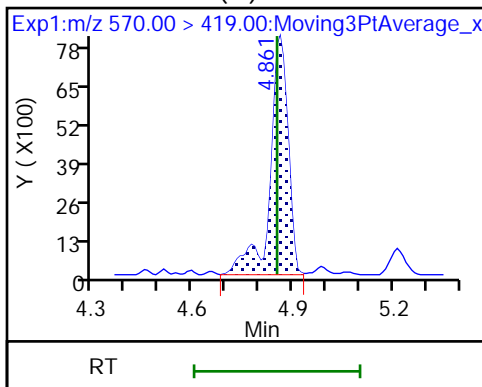
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

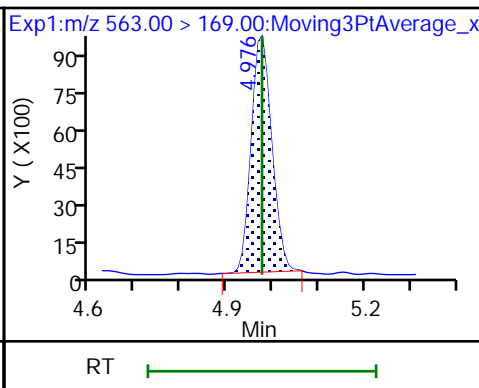
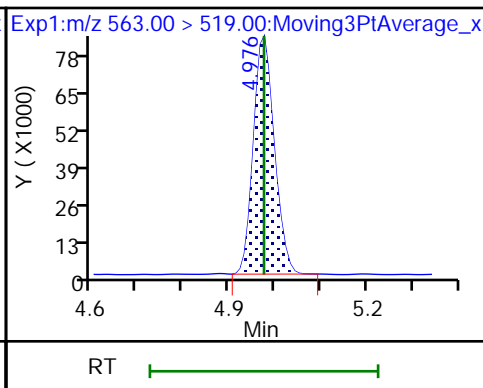
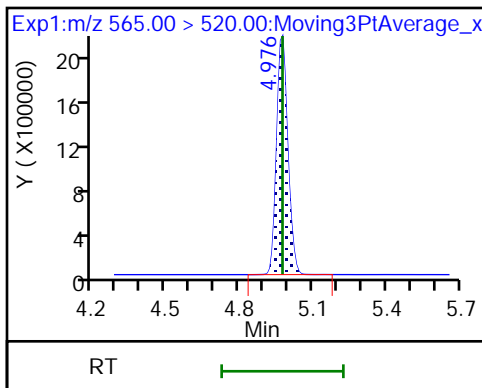
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

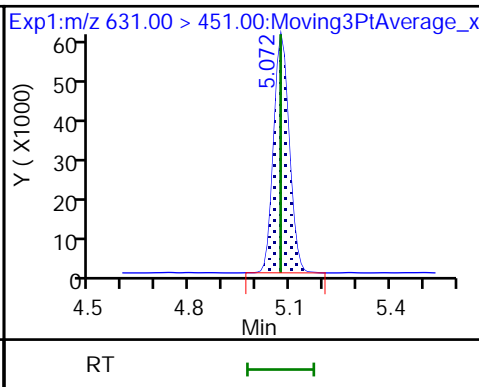
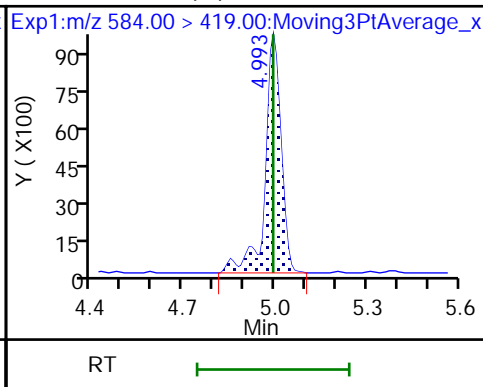
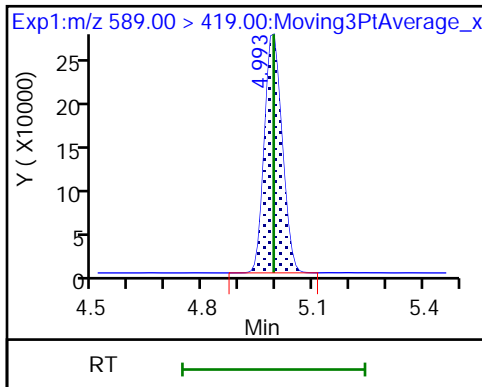
38 Perfluoroundecanoic acid

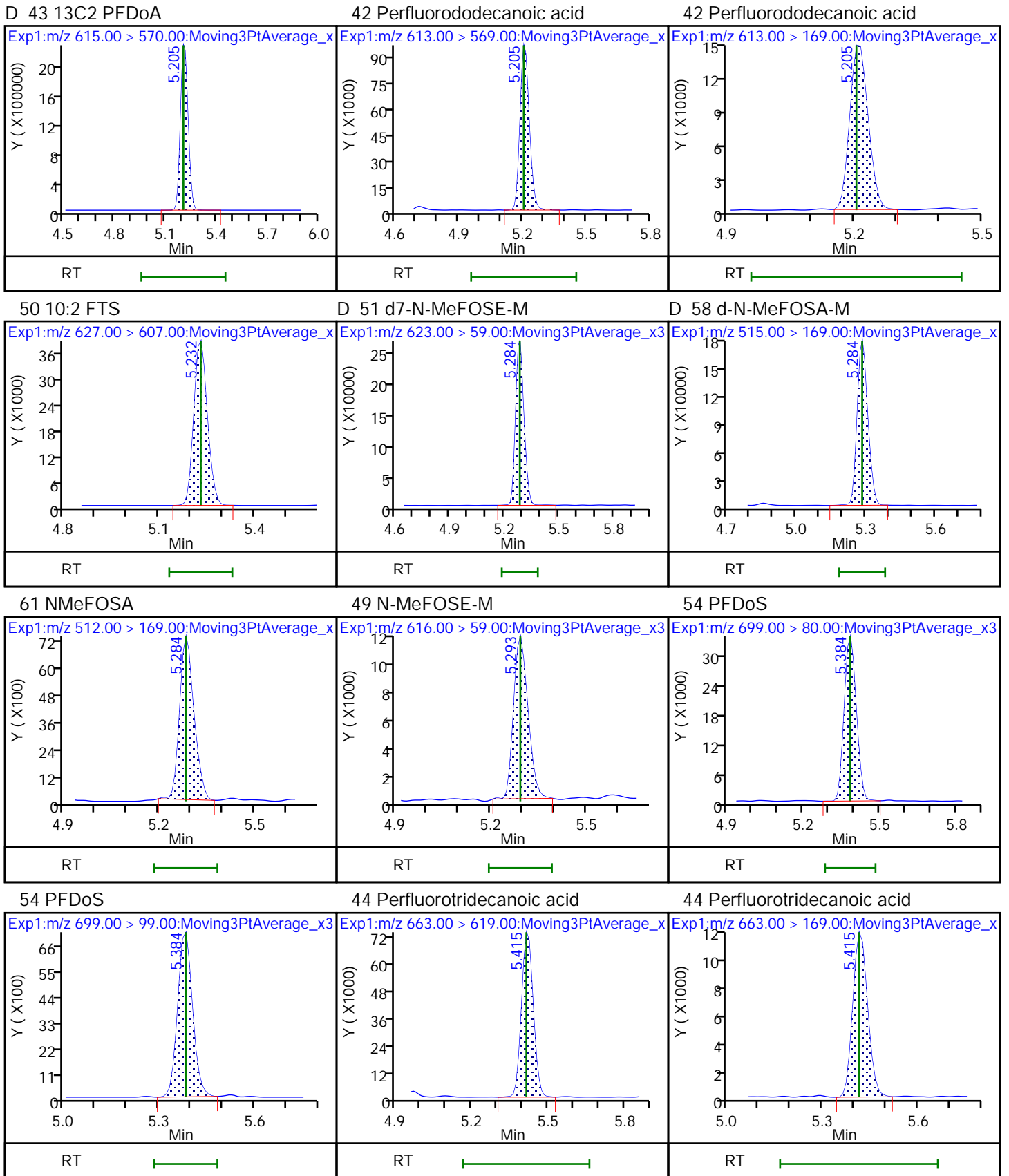


D 41 d5-NEtFOSAA

40 NEtFOSA (M)

57 11CIFOS

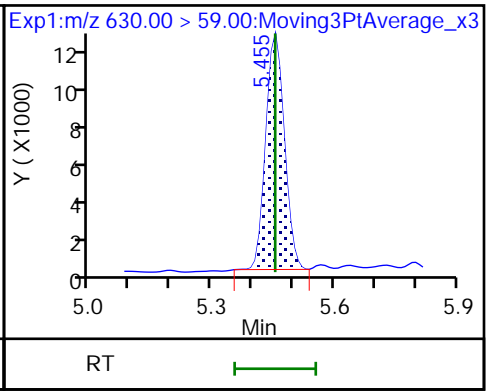
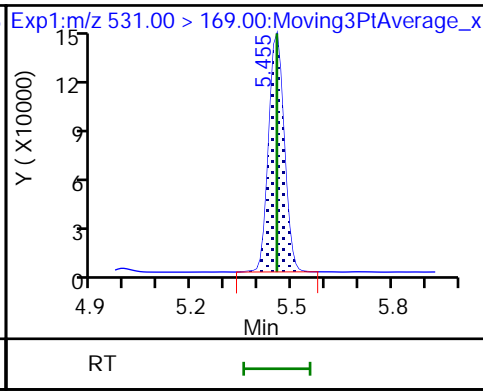
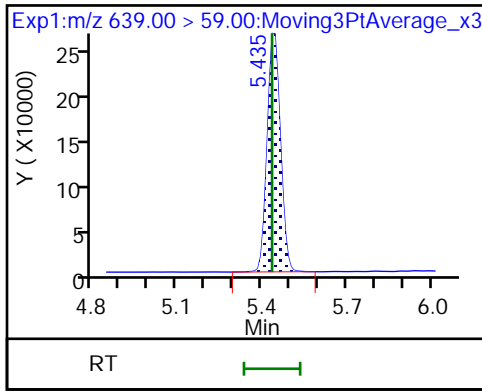




D 53 d9-N-EtFOSE-M

D 52 d-N-EtFOSA-M

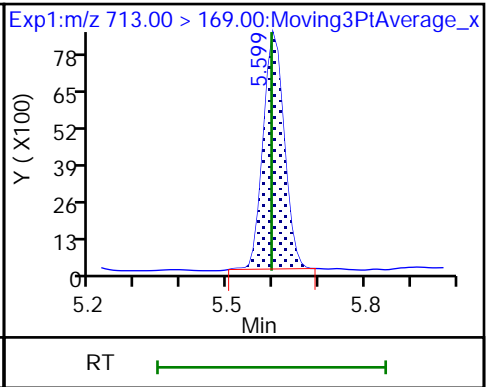
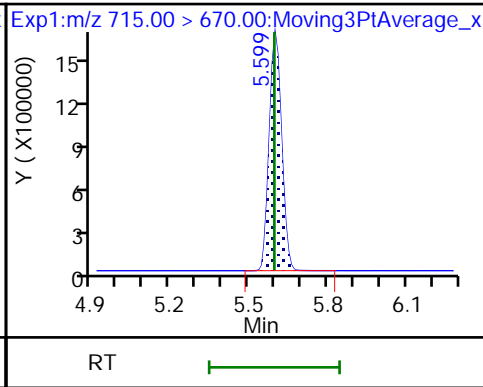
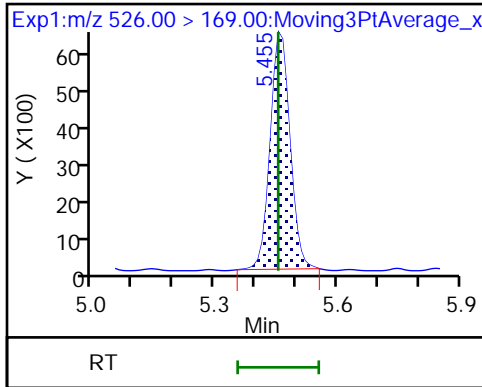
62 N-EtFOSE-M



56 N-EtFOSA-M

D 46 13C2 PFTeDA

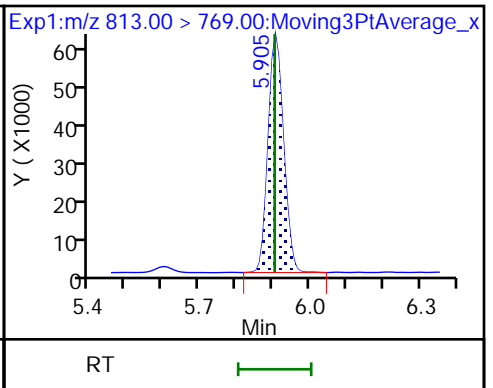
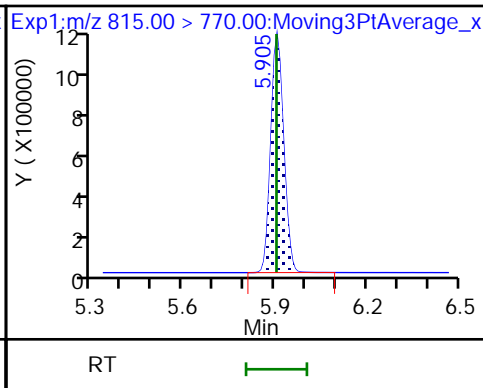
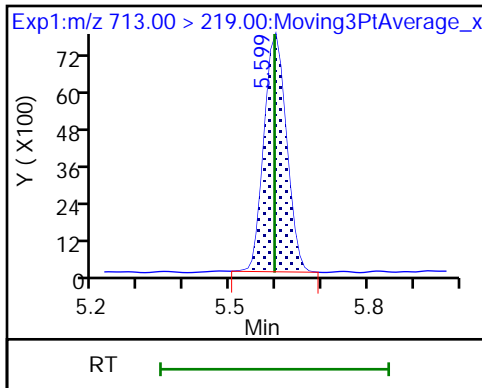
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

D 59 13C2 PFHxDA

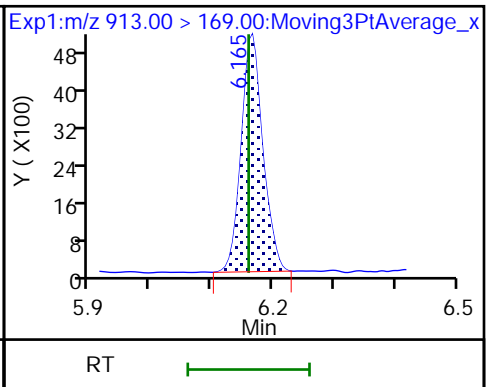
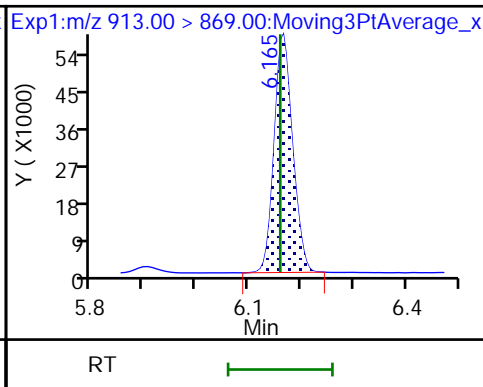
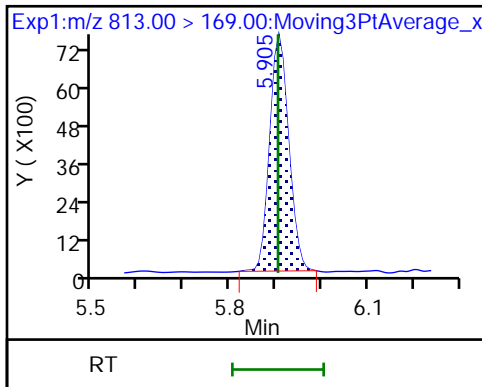
55 Perfluorohexadecanoic acid



55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid





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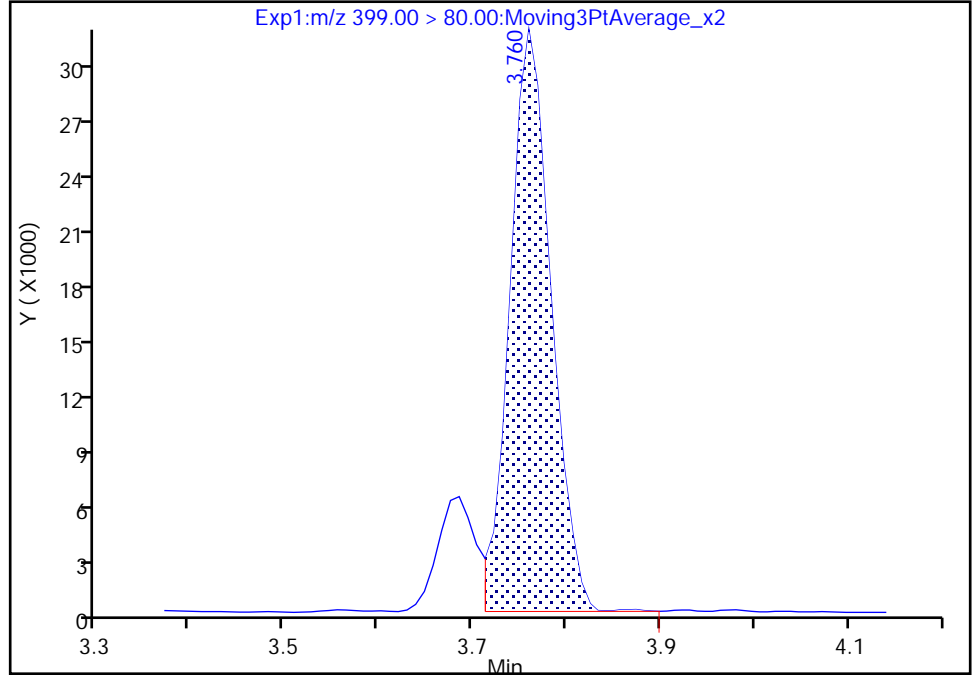
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Lims ID: CCVL  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 4 Worklist Smp#: 4  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

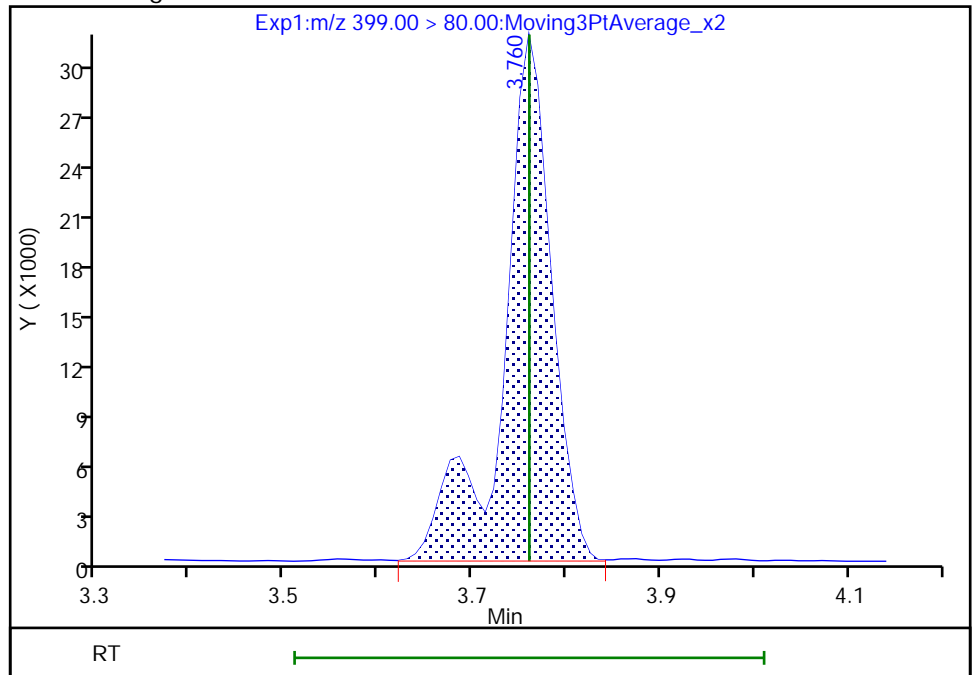
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Area: 94744  
Amount: 0.039215  
Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
Area: 112060  
Amount: 0.046382  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 12:42:02  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

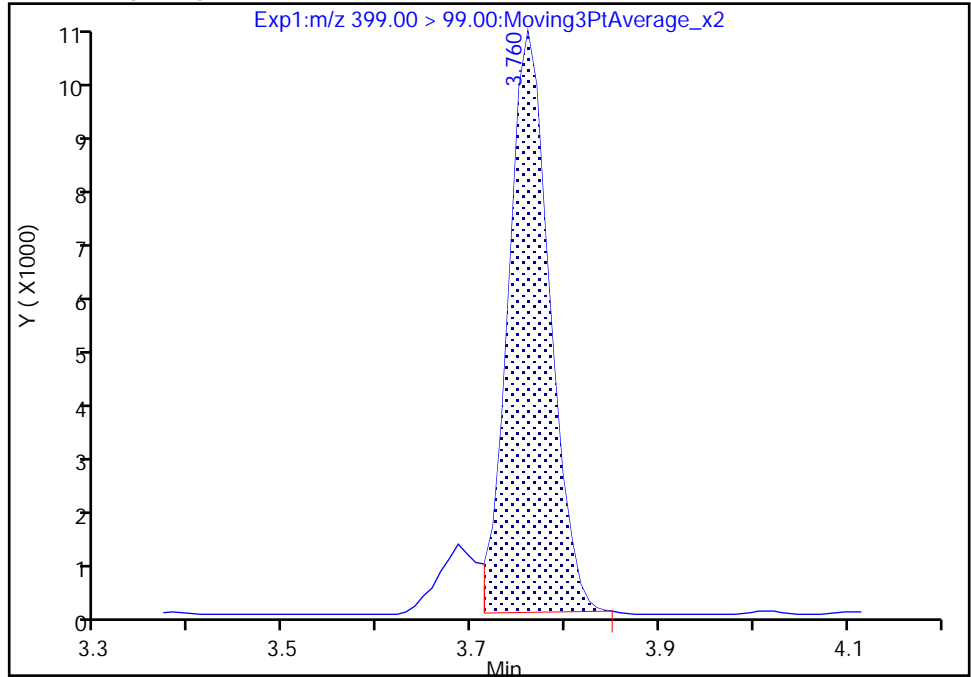
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Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 4 Worklist Smp#: 4  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

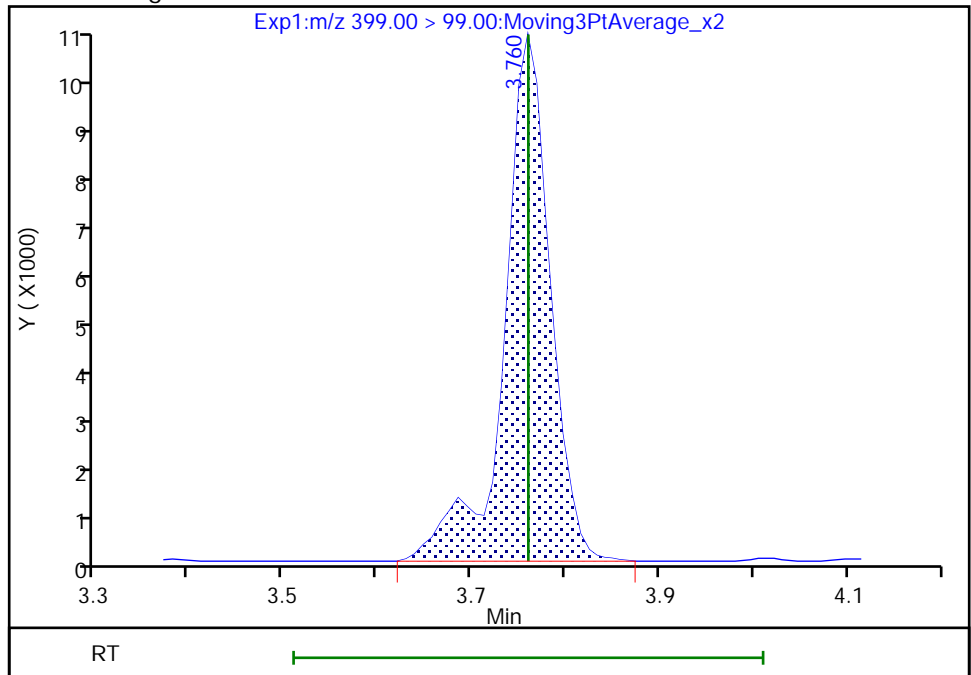
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Area: 30815  
Amount: 0.039215  
Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
Area: 34674  
Amount: 0.046382  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 12:42:08

Audit Action: Manually Integrated

Audit Reason: Baseline  
Page 301 of 620

Eurofins TestAmerica, Knoxville

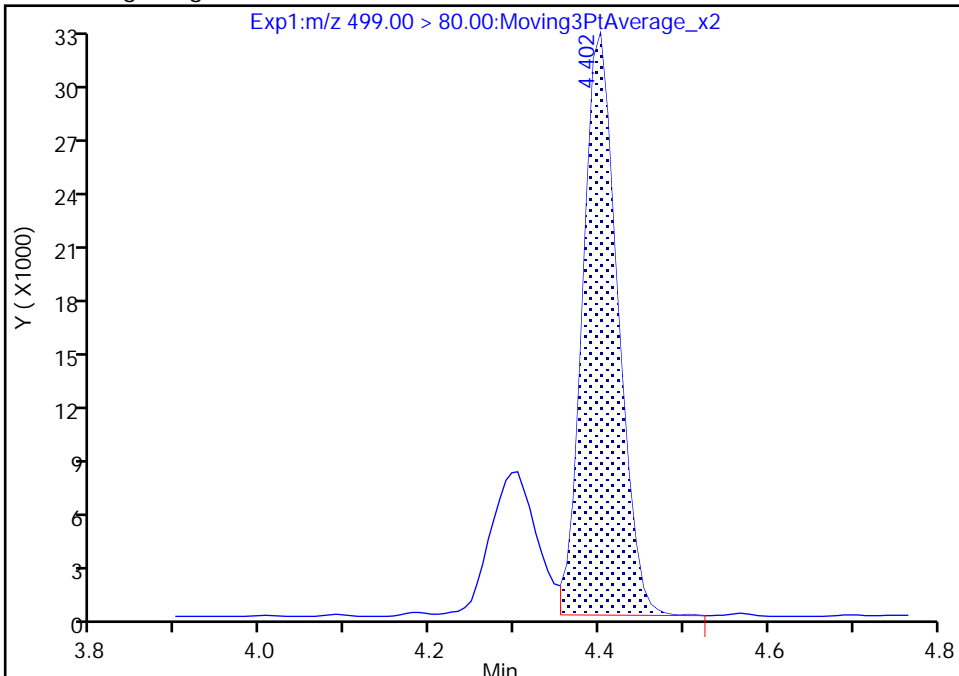
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Operator ID: Cochran, Bobby ALS Bottle#: 4 Worklist Smp#: 4  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

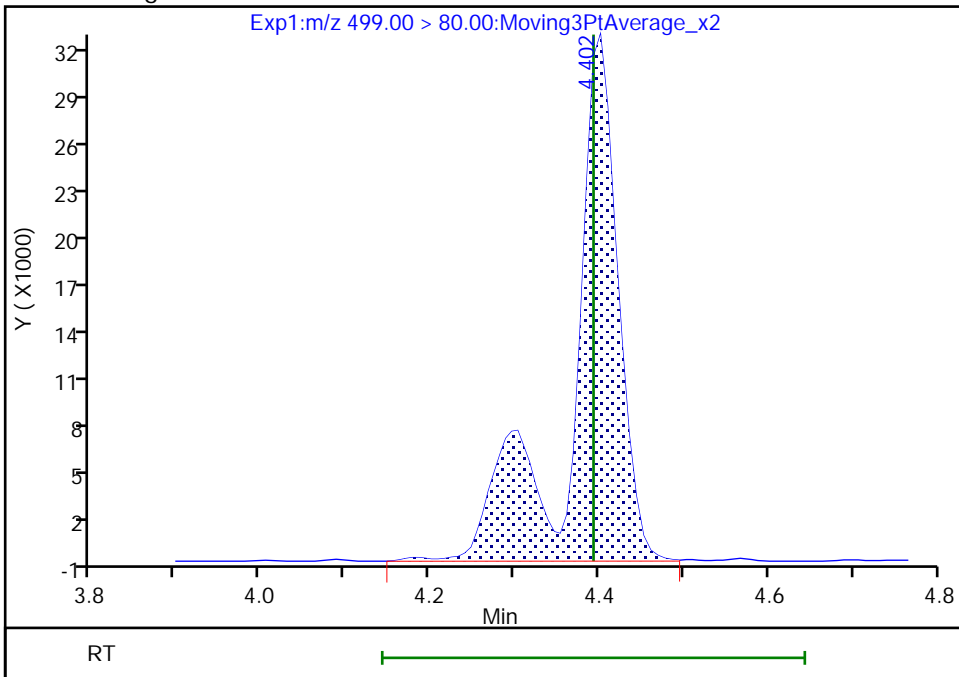
RT: 4.40  
Area: 92498  
Amount: 0.034599  
Amount Units: ng/ml

Processing Integration Results



RT: 4.40  
Area: 124364  
Amount: 0.046518  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 12:42:19  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

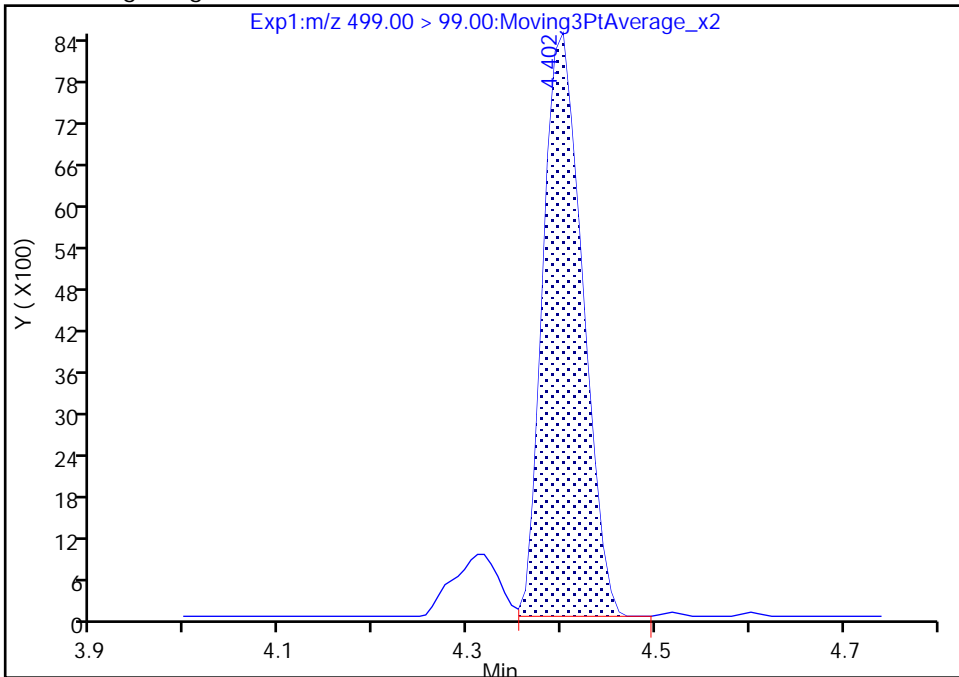
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Injection Date: 09-Jan-2022 12:31:49 Instrument ID: LCA  
Lims ID: CCVL  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 4 Worklist Smp#: 4  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

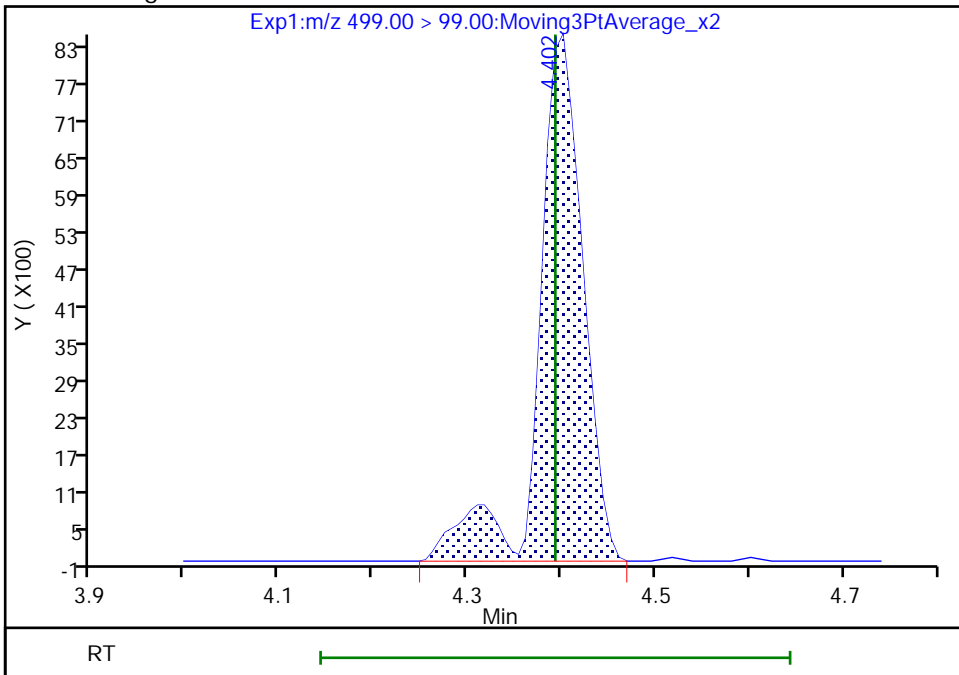
RT: 4.40  
Area: 24690  
Amount: 0.034599  
Amount Units: ng/ml

Processing Integration Results



RT: 4.40  
Area: 27749  
Amount: 0.046518  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 12:42:26

Audit Action: Manually Integrated

Audit Reason: Baseline  
Page 303 of 620



Eurofins TestAmerica, Knoxville

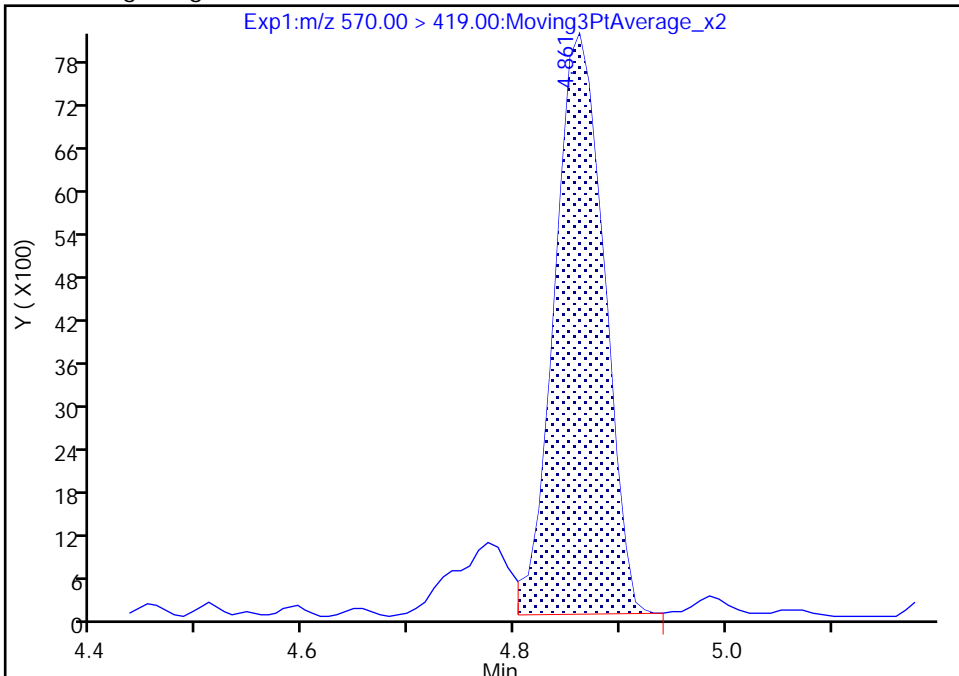
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_004.d  
Injection Date: 09-Jan-2022 12:31:49 Instrument ID: LCA  
Lims ID: CCVL  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 4 Worklist Smp#: 4  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

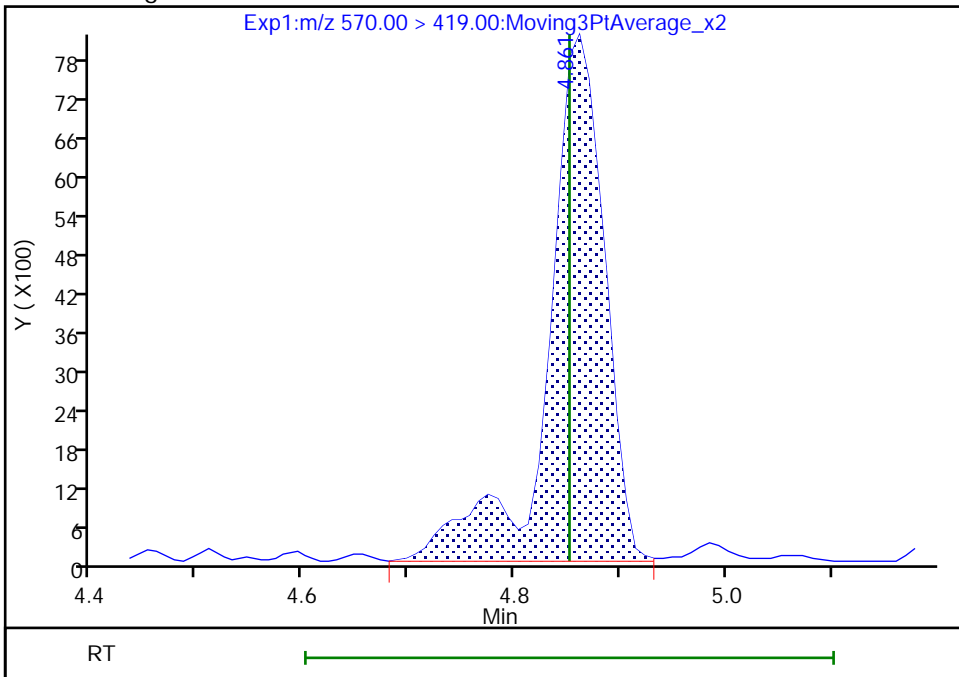
RT: 4.86  
Area: 26284  
Amount: 0.042730  
Amount Units: ng/ml

Processing Integration Results



RT: 4.86  
Area: 30314  
Amount: 0.049281  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 12:42:38  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

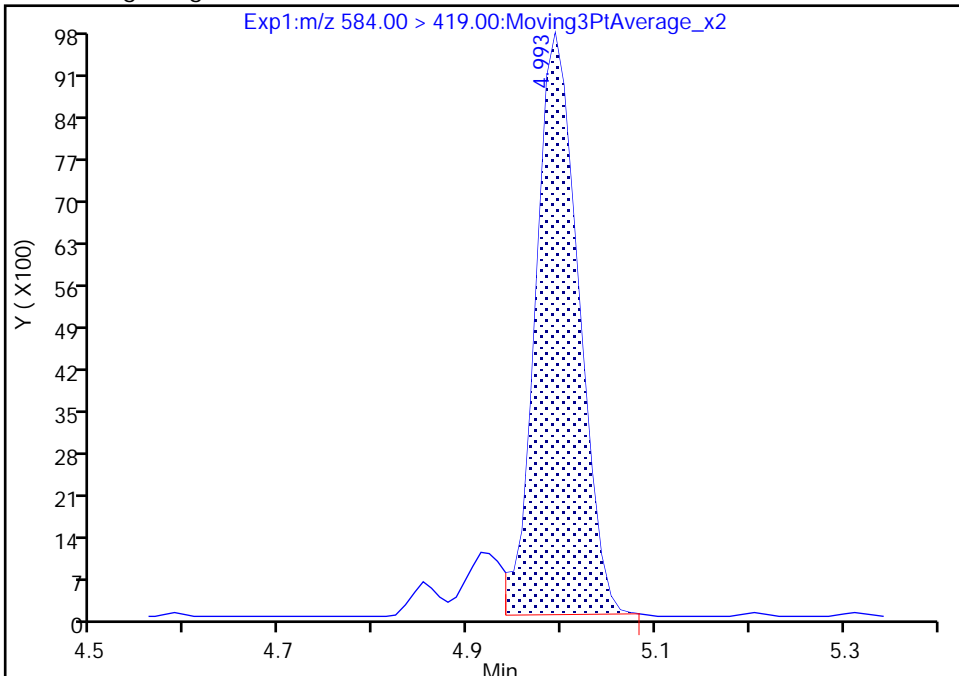
Data File:	\\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_004.d		
Injection Date:	09-Jan-2022 12:31:49	Instrument ID:	LCA
Lims ID:	CCVL		
Client ID:			
Operator ID:	Cochran, Bobby	ALS Bottle#:	4
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	PFC_LCA	Limit Group:	LC - PFC- ICAL
Column:		Detector:	EXP1
		Worklist Smp#:	4

40 NETFOSA, CAS: 2991-50-6

Signal: 1

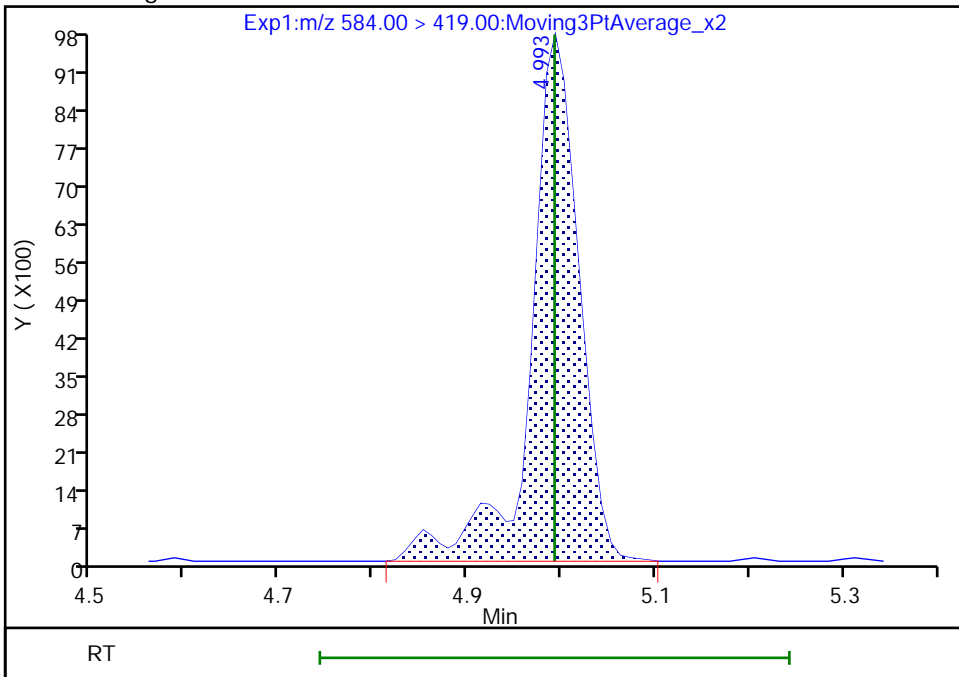
RT: 4.99  
 Area: 30524  
 Amount: 0.041608  
 Amount Units: ng/ml

Processing Integration Results



RT: 4.99  
 Area: 34737  
 Amount: 0.047330  
 Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 12:42:48  
 Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 140-57742/5 Calibration Date: 01/09/2022 12:40  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 Lab File ID: \_005.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7844	0.7653		0.976	1.00	-2.4	40.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9519	0.8942		0.939	1.00	-6.1	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.097	1.083		0.872	0.884	-1.3	40.0
4:2 FTS	AveID	2.252	2.178		0.903	0.934	-3.3	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8680	0.8267		0.952	1.00	-4.8	40.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	0.9713	0.9534		0.921	0.938	-1.8	40.0
HFPO-DA	AveID	1.352	1.287		0.952	1.00	-4.8	40.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.377	1.327		0.877	0.910	-3.6	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.047	1.018		0.973	1.00	-2.8	40.0
DONA	AveID	2.630	2.614		0.936	0.942	-0.6	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9541	0.9288		0.927	0.952	-2.6	40.0
6:2 FTS	L2ID		1.782		0.941	0.948	-0.7	40.0
Perfluorooctanoic acid (PFOA)	AveID	1.147	1.097		0.956	1.00	-4.4	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.099	1.052		0.888	0.928	-4.3	40.0
Perfluorononanoic acid (PFNA)	Q2ID		0.8417		0.989	1.00	-1.1	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	Q2ID		2.134		0.929	0.932	-0.4	50.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9748	0.9321		0.918	0.960	-4.4	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9459	0.9365		0.990	1.00	-1.0	40.0
Perfluorodecanoic acid (PFDA)	AveID	0.9645	0.9333		0.968	1.00	-3.2	40.0
8:2 FTS	AveID	1.415	1.396		0.945	0.958	-1.4	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	QuaIF		0.9683		0.996	1.00	-0.4	40.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		0.8649		0.898	0.964	-6.8	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9695	0.9671		0.998	1.00	-0.2	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Q2ID		0.9625		0.969	1.00	-3.1	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.672	1.662		0.936	0.942	-0.6	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9757		0.956	1.00	-4.4	40.0
10:2 FTS	AveID	2.276	2.044		0.866	0.964	-10.2	40.0
NMeFOSA	Q2ID		1.060		1.05	1.00	4.6	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	Q2ID		1.134		0.969	1.00	-3.1	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9166	0.8800		0.929	0.968	-4.0	40.0

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 140-57742/5 Calibration Date: 01/09/2022 12:40  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 Lab File ID: \_005.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTriA)	AveID	0.8292	0.8237		0.993	1.00	-0.7	40.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	AveID	1.328	1.278		0.962	1.00	-3.8	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.195	1.185		0.992	1.00	-0.8	40.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1344	0.1289		0.959	1.00	-4.1	40.0
Perfluorohexadecanoic acid	Q2ID		1.059		0.987	1.00	-1.3	40.0
Perfluorooctadecanoic acid	AveID	0.9844	1.015		1.03	1.00	3.1	40.0
13C4 PFBA	Ave	1.142	1.125		1.23	1.25	-1.5	50.0
13C5 PFPeA	Ave	0.8865	0.9062		1.28	1.25	2.2	50.0
13C3 PFBS	Ave	0.5913	0.5854		1.15	1.16	-1.0	50.0
M2-4:2 FTS	Ave	0.1820	0.1909		1.23	1.17	4.9	50.0
13C2 PFHxA	Ave	0.9479	0.9784		1.29	1.25	3.2	50.0
13C3 HFPO-DA	Ave	0.4556	0.4517		1.24	1.25	-0.9	50.0
18O2 PFHxS	Ave	0.3946	0.3887		1.17	1.18	-1.5	50.0
13C4 PFHpA	Ave	0.9067	0.9192		1.27	1.25	1.4	50.0
13C4 PFOA	Ave	0.9376	0.9388		1.25	1.25	0.1	50.0
M2-6:2 FTS	Ave	0.1835	0.1829		1.18	1.19	-0.3	50.0
13C4 PFOS	Ave	0.5681	0.5578		1.17	1.20	-1.8	50.0
13C5 PFNA	Ave	1.234	1.218		1.23	1.25	-1.3	50.0
13C8 FOSA	Ave	0.7682	0.7707		1.25	1.25	0.3	50.0
13C2 PFDA	Ave	1.191	1.175		1.23	1.25	-1.4	50.0
M2-8:2 FTS	Ave	0.2070	0.2064		1.19	1.20	-0.3	50.0
d3-NMeFOSAA	Ave	0.1401	0.1389		1.24	1.25	-0.9	50.0
13C2 PFUnA	Ave	1.189	1.194		1.26	1.25	0.4	50.0
d5-NEtFOSAA	Ave	0.1537	0.1582		1.29	1.25	2.9	50.0
13C2 PFDoA	Ave	1.247	1.257		1.26	1.25	0.8	50.0
d7-N-MeFOSE-M	Ave	0.1499	0.1409		1.18	1.25	-6.0	50.0
d-N-MeFOSA-M	Ave	0.1069	0.1037		1.21	1.25	-2.9	50.0
d9-N-EtFOSE-M	Ave	0.1504	0.1521		1.26	1.25	1.2	50.0
d-N-EtFOSA-M	Ave	0.0883	0.0853		1.21	1.25	-3.4	50.0
13C2 PFTeDA	Ave	0.9508	0.9528		1.25	1.25	0.2	50.0
13C2 PFHxDA	Ave	0.6444	0.6224		1.21	1.25	-3.4	50.0
13C8 PFOA	AveID	0.999	0.9671		1.21	1.25	-3.2	50.0
13C8 PFOS	AveID	0.2220	0.2176		1.17	1.20	-2.0	50.0

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_005.d  
 Lims ID: CCVIS  
 Client ID:  
 Sample Type: CCVIS  
 Inject. Date: 09-Jan-2022 12:40:40 ALS Bottle#: 5 Worklist Smp#: 5  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022187-005 CCVIS  
 Misc. Info.: Plate: 11 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 15:08:06 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1641

First Level Reviewer: cochranj Date: 10-Jan-2022 09:11:29

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	2.790	2.790	0.0	0.679	6367670	1.23	98.5	14660	
2 Perfluorobutanoic acid	212.90 > 169.00	2.790	2.785	0.005	1.000	3898601	0.9756	97.6	958	
D 3 13C5 PFPeA	267.90 > 223.00	3.098	3.098	0.0	0.755	5128347	1.28	102	10452	
4 Perfluoropentanoic acid	262.90 > 219.00	3.098	3.093	0.005	1.000	3668428	0.9393	93.9	1143	
D 6 13C3 PFBS	301.90 > 80.00	3.115	3.115	0.0	0.759	3081181	1.15	99.0	13130	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.115	3.109	0.006	1.000	2536732	0.8724	Target=2.65	98.7	4407
	298.90 > 99.00	3.115	3.109	0.006	1.000	923746		2.75(1.32-3.97)		3212
D 8 M2-4:2 FTS	329.00 > 81.00	3.391	3.391	0.0	0.826	1009102	1.22	105	1763	
7 4:2 FTS	327.00 > 307.00	3.402	3.393	0.009	1.003	1758250	0.9032	96.7	6414	
D 9 13C2 PFHxA	315.00 > 270.00	3.422	3.422	0.0	0.833	5537068	1.29	103	8038	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.422	3.422	0.0	1.099	2370404	0.9208	Target=3.44	98.2	6290
	349.00 > 99.00	3.422	3.422	0.0	1.099	684041		3.47(1.72-5.16)		3801
10 Perfluorohexanoic acid	313.00 > 269.00	3.422	3.423	-0.001	1.000	3661783	0.9523	Target=11.80	95.2	1634
	313.00 > 119.00	3.422	3.423	-0.001	1.000	298294		12.28(5.90-17.70)		477
D 12 13C3 HFPO-DA	287.00 > 169.00	3.528	3.528	0.0	0.859	2556245	1.24	99.1	5068	

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	3.528	3.524	0.004	1.000	2632733	0.9519		95.2	1905	
D 17 18O2 PFHxS										
403.00 > 84.00	3.760	3.760	0.0	0.916	2080789	1.16		98.5	6453	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.760	3.760	0.0	1.000	2124992	0.8769	Target=3.40	96.4	6566	M
399.00 > 99.00	3.760	3.760	0.0	1.000	603408		3.52(1.70-5.10)		2858	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.769	3.769	0.0	0.918	5202117	1.27		101	8125	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.769	3.772	-0.003	1.000	4236139	0.9725	Target=3.29	97.2	2476	
363.00 > 169.00	3.769	3.772	-0.003	1.000	1325544		3.20(1.65-4.94)		1928	
68 DONA										
377.00 > 251.00	3.807	3.807	0.0	0.865	6218020	0.9362	Target=1.82	99.4	7593	
377.00 > 85.00	3.807	3.807	0.0	0.865	3493736		1.78(0.91-2.74)		181	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.089	4.092	-0.003	0.929	2232910	0.9268	Target=3.92	97.4	5831	
449.00 > 99.00	4.089	4.092	-0.003	0.929	564652		3.95(1.96-5.87)		4044	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.106	4.106	0.0	1.000	983468	1.18		99.7	3385	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.106	4.100	0.006	1.000	5138196	1.21		96.8	9354	
19 6:2 FTS										
427.00 > 407.00	4.106	4.101	0.005	1.000	1399139	0.9410		99.3	4926	
D 21 13C4 PFOA										
417.00 > 372.00	4.106	4.106	0.0	1.000	5312782	1.25		100	9225	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.106	4.109	-0.003	1.000	4661452	0.9558	Target=2.59	95.6	2242	
413.00 > 169.00	4.106	4.109	-0.003	1.000	1777903		2.62(1.30-3.89)		2622	
* 22 13C2 PFOA										
415.00 > 370.00	4.106	4.109	-0.003		5659179	1.25			8146	
D 25 13C4 PFOS										
503.00 > 80.00	4.401	4.401	0.0	1.072	3017801	1.17		98.2	3665	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.393	4.396	-0.003	0.998	656746	1.17		98.0	3365	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.401	4.398	0.003	1.000	2464700	0.8882	Target=4.65	95.7	4177	M
499.00 > 99.00	4.401	4.398	0.003	1.000	575561		4.28(2.32-6.97)		3061	M
D 27 13C5 PFNA										
468.00 > 423.00	4.427	4.427	0.0	1.078	6892089	1.23		98.7	10432	
26 Perfluorononanoic acid										
463.00 > 419.00	4.427	4.421	0.006	1.000	4640752	0.9893	Target=4.65	98.9	4462	
463.00 > 169.00	4.427	4.421	0.006	1.000	1022199		4.54(2.32-6.97)		1768	
63 9CIFOS										
531.00 > 351.00	4.560	4.558	0.002	1.036	5022882	0.9287		99.6	11879	

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	4.681	4.682	-0.001	1.063	2259649	0.9179	Target=4.06	95.6	5320	
549.00 > 99.00	4.681	4.682	-0.001	1.063	583530		3.87(2.03-6.09)		3633	
D 34 13C8 FOSA										
506.00 > 78.00	4.706	4.706	0.0	1.146	4361794	1.25		100	3188	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.706	4.700	0.006	1.000	3267696	0.99		99.0	4163	
D 32 13C2 PFDA										
515.00 > 470.00	4.715	4.715	0.0	1.148	6647723	1.23		98.6	9583	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.715	4.709	0.006	1.000	4963529	0.9677	Target=11.30	96.8	4924	
513.00 > 169.00	4.715	4.709	0.006	1.000	431792		11.50(5.65-16.95)		739	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.723	4.723	0.0	1.150	1119081	1.19		99.7	1670	
31 8:2 FTS										
527.00 > 507.00	4.723	4.721	0.002	1.000	1249717	0.9450		98.6	5310	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.852	4.852	0.0	1.182	785893	1.24		99.1	817	
36 NMeFOSAA										
570.00 > 419.00	4.861	4.858	0.003	1.002	608781	1.00		99.6	1168	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.940	4.942	-0.002	1.122	2105671	0.8984	Target=3.79	93.2	5650	
599.00 > 99.00	4.940	4.942	-0.002	1.122	560322		3.76(1.90-5.69)		5192	
D 39 13C2 PFUnA										
565.00 > 520.00	4.975	4.975	0.0	1.212	6754829	1.26		100	12512	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.975	4.973	0.002	1.000	5226221	1.00	Target=8.45	99.8	4881	
563.00 > 169.00	4.975	4.973	0.002	1.000	628952		8.31(4.22-12.67)		2410	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.993	4.993	0.0	1.216	895232	1.29		103	3041	
40 NEtFOSA										
584.00 > 419.00	4.993	4.995	-0.002	1.000	689299	0.9687		96.9	1481	M
57 11C1FOS										
631.00 > 451.00	5.072	5.075	-0.003	1.152	3954456	0.9363		99.4	8135	
D 43 13C2 PFDoA										
615.00 > 570.00	5.213	5.213	0.0	1.270	7115904	1.26		101	14001	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.213	5.207	0.006	1.000	5554622	0.9558	Target=6.99	95.6	4585	
613.00 > 169.00	5.213	5.207	0.006	1.000	774808		7.17(3.50-10.49)		2015	
50 10:2 FTS										
627.00 > 607.00	5.231	5.231	0.0	1.107	1841671	0.8658		89.8	8253	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.284	5.284	0.0	1.287	797603	1.18		94.0	773	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.284	5.284	0.0	1.287	587090	1.21		97.1	52.4	
61 NMeFOSA										
512.00 > 169.00	5.284	5.286	-0.002	1.000	497652	1.05		105	700	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
49 N-MeFOSE-M										
616.00 > 59.00	5.292	5.290	0.002	1.002	723654	0.9689		96.9	1090	
54 PFDoS										
699.00 > 80.00	5.383	5.383	0.0	1.223	2151098	0.9293	Target=4.24	96.0	5147	
699.00 > 99.00	5.383	5.383	0.0	1.223	521813		4.12(2.12-6.35)		3947	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.414	5.417	-0.003	1.039	4689354	0.99	Target=6.20	99.3	4427	
663.00 > 169.00	5.414	5.417	-0.003	1.039	739010		6.35(3.10-9.30)		2891	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.444	5.444	0.0	1.326	860978	1.26		101	382	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.454	5.454	0.0	1.328	482528	1.21		96.6	751	
62 N-EtFOSE-M										
630.00 > 59.00	5.454	5.450	0.004	1.002	880141	0.9622		96.2	1037	
56 N-EtFOSA-M										
526.00 > 169.00	5.464	5.457	0.007	1.002	457621	0.99		99.2	655	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.607	5.607	0.0	1.365	5391830	1.25		100	11376	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.607	5.600	0.007	1.000	555991	0.9592	Target=1.05	95.9	3214	
713.00 > 219.00	5.596	5.600	-0.004	0.998	524354		1.06(0.53-1.58)		3225	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.904	5.904	0.0	1.438	3522426	1.21		96.6	6362	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.904	5.907	-0.003	1.000	2982967	0.9869	Target=8.09	98.7	4048	
813.00 > 169.00	5.904	5.907	-0.003	1.000	363521		8.21(4.05-12.14)		1352	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.164	6.162	0.002	1.044	2860126	1.03	Target=11.53	103	4031	
913.00 > 169.00	6.164	6.162	0.002	1.044	246097		11.62(5.77-17.30)		1247	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

63L4PFC2T3\_00001

Amount Added: 1.00

Units: mL



Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\\_005.d

Injection Date: 09-Jan-2022 12:40:40

Instrument ID: LCA

Lims ID: CCVIS

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 5

Worklist Smp#: 5

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

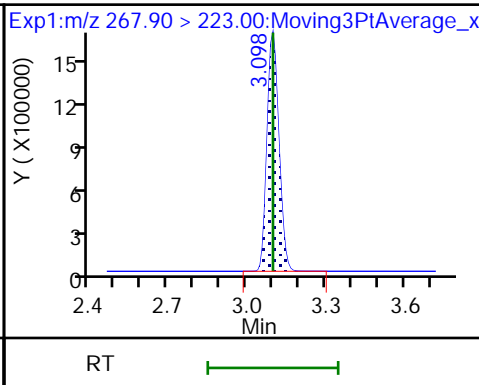
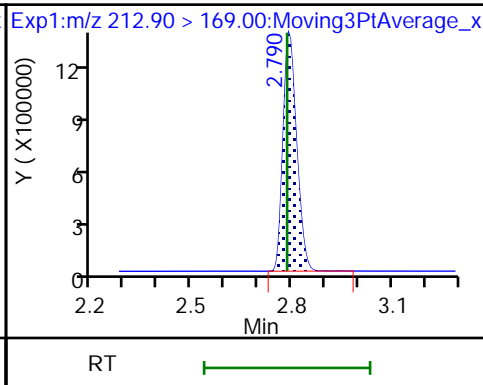
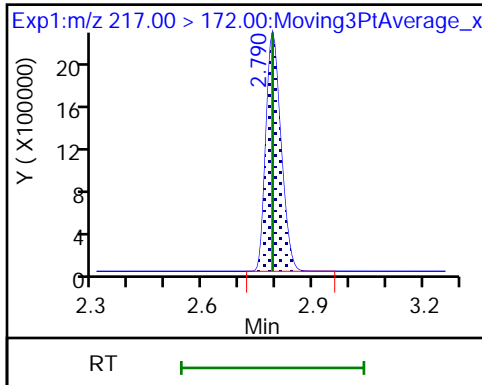
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

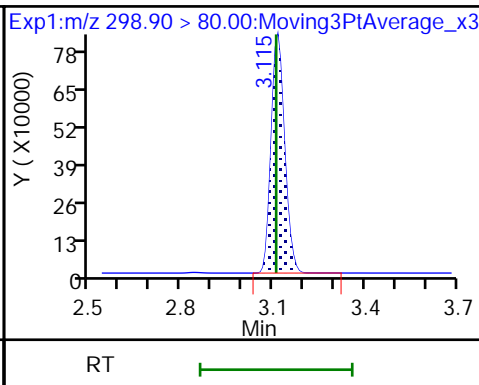
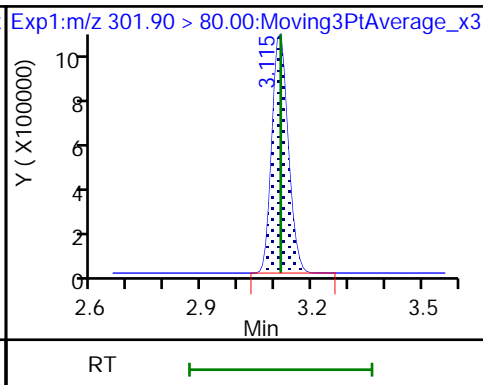
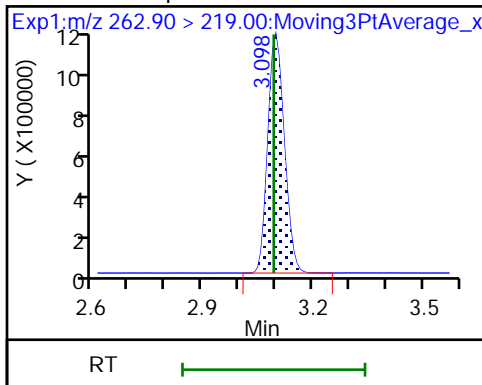
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

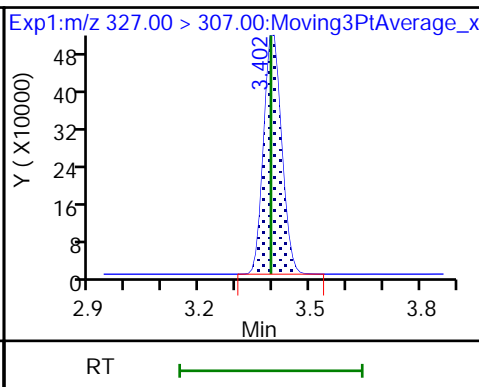
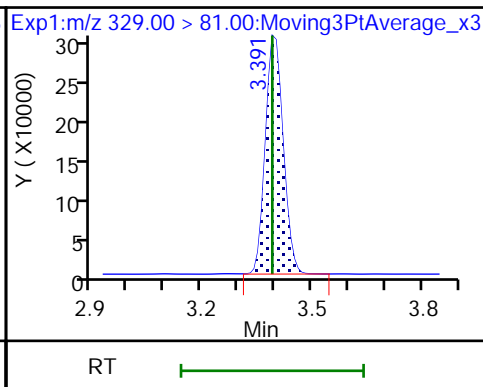
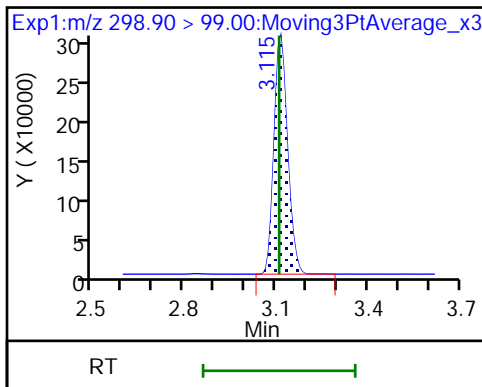
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

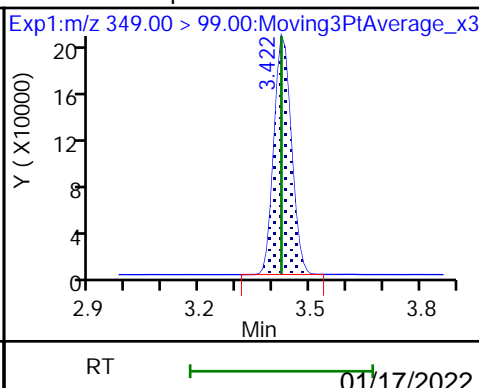
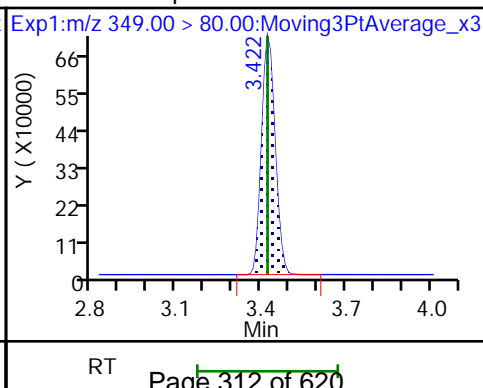
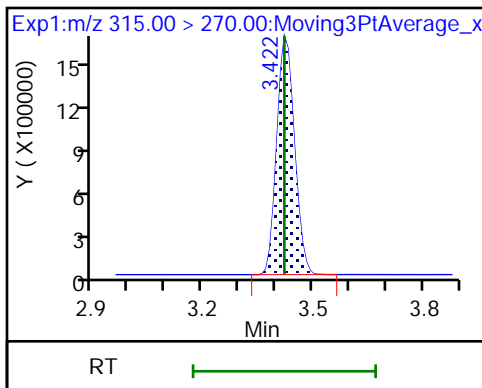
7 4:2 FTS

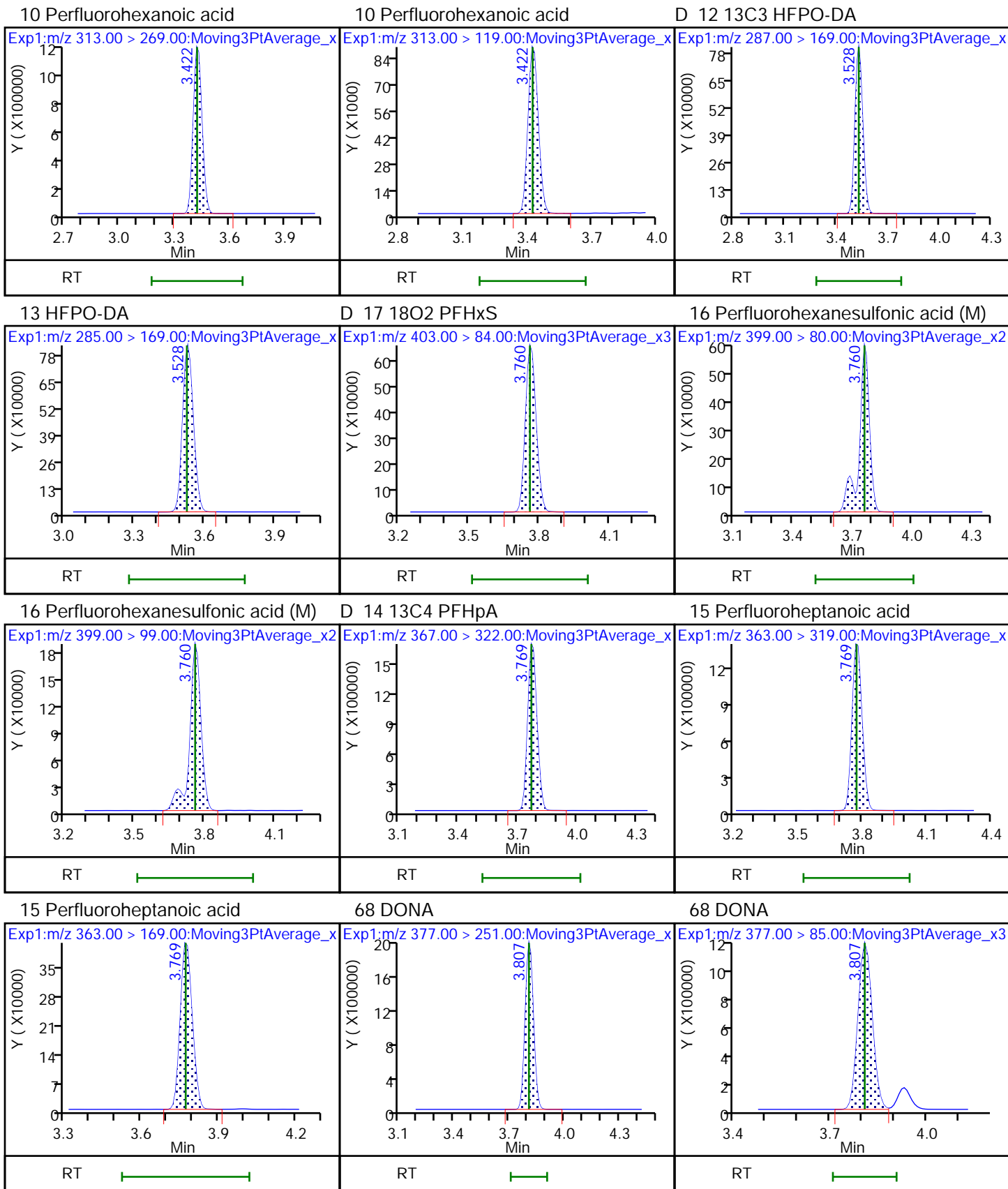


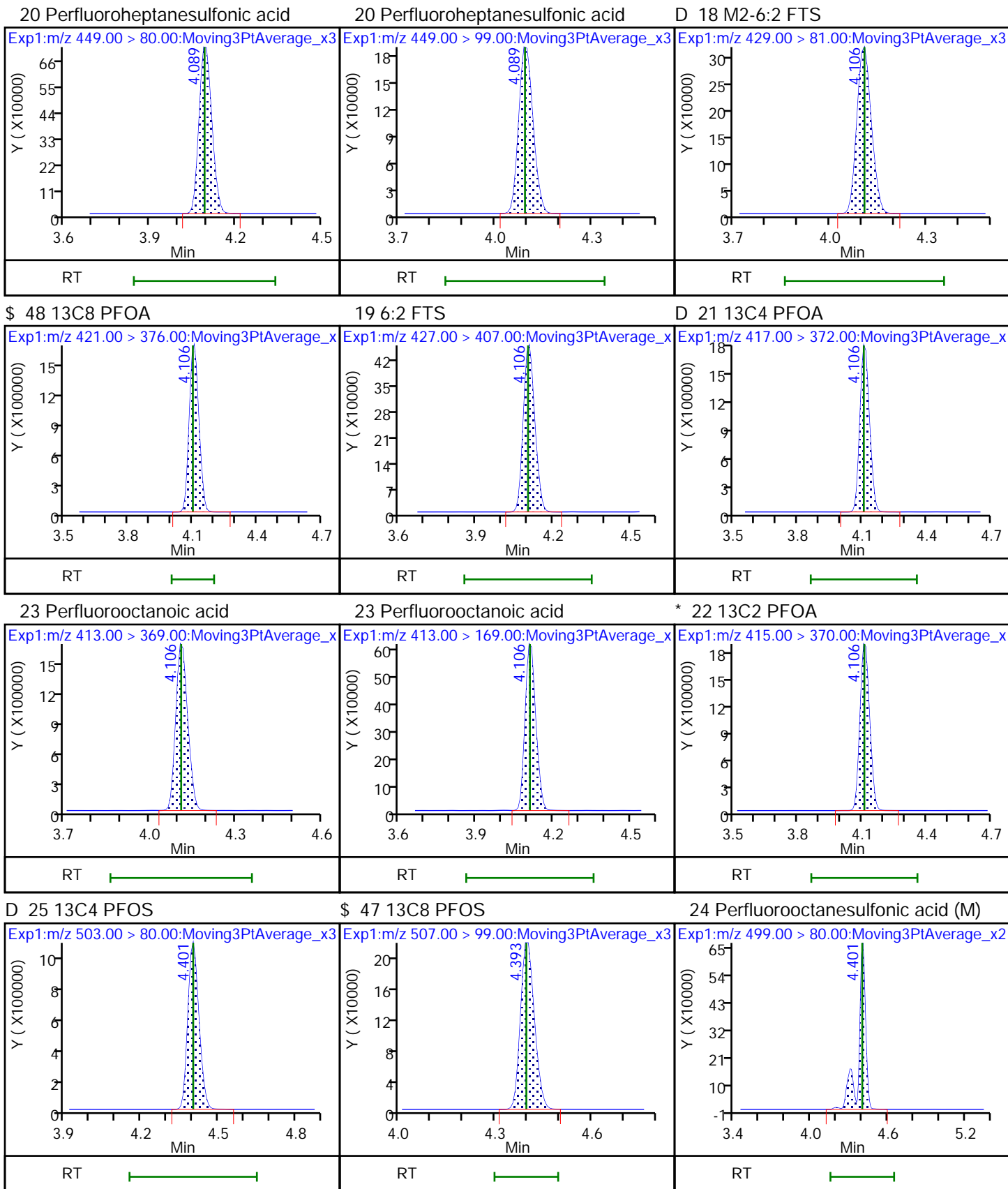
D 9 13C2 PFHxA

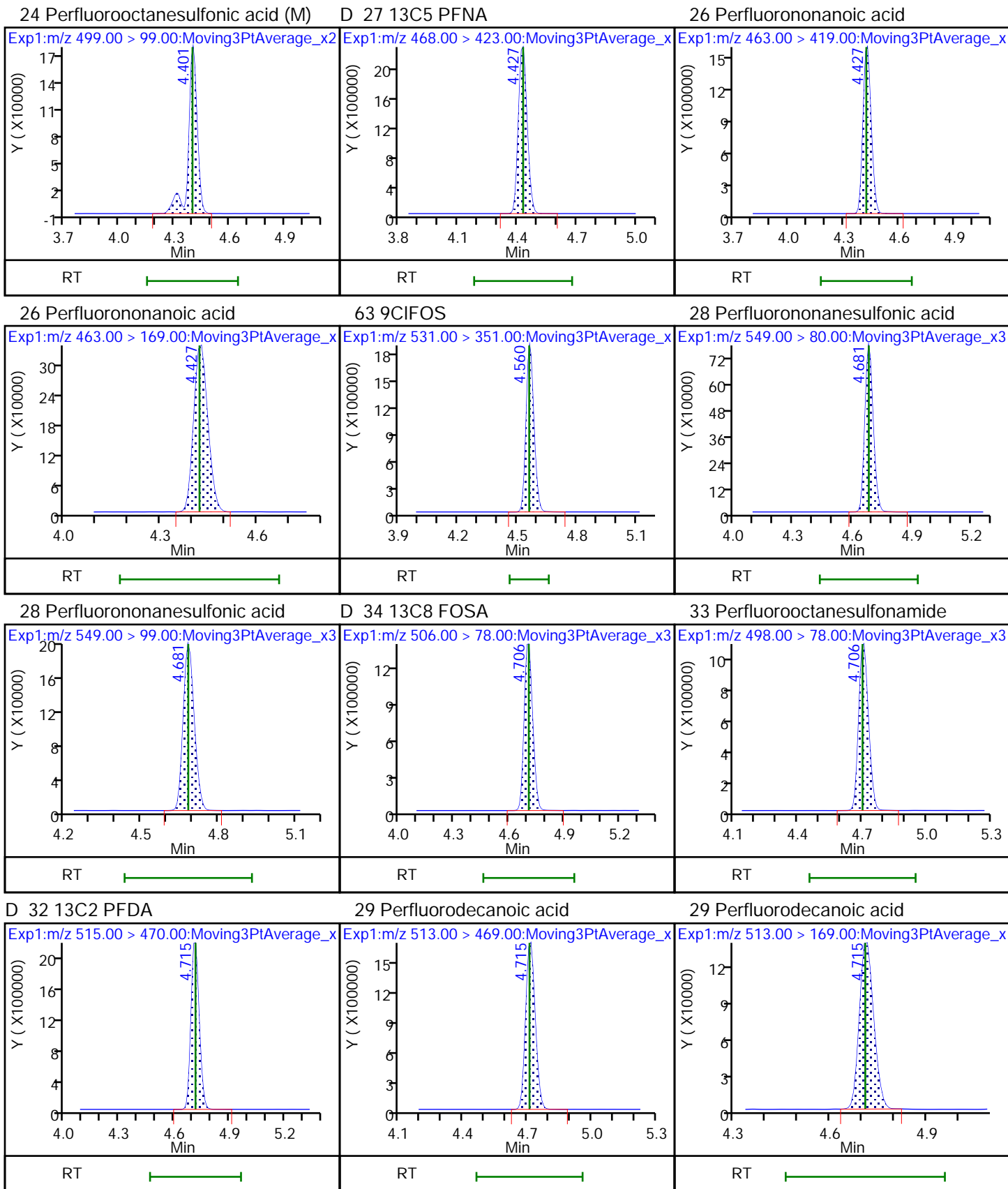
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid





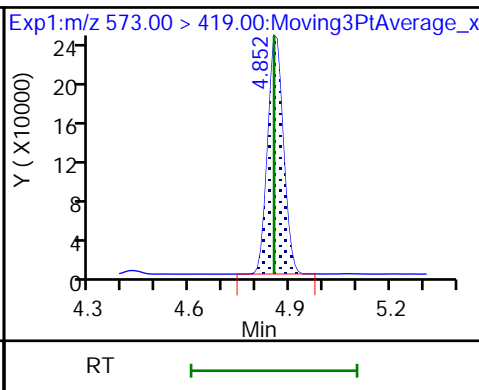
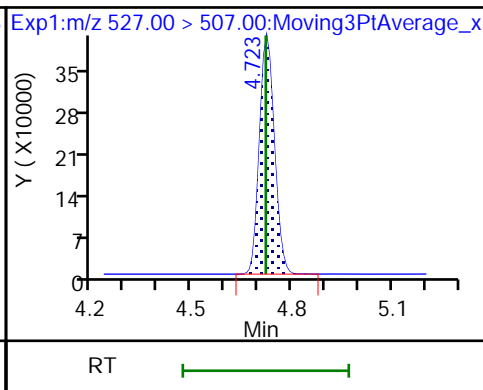
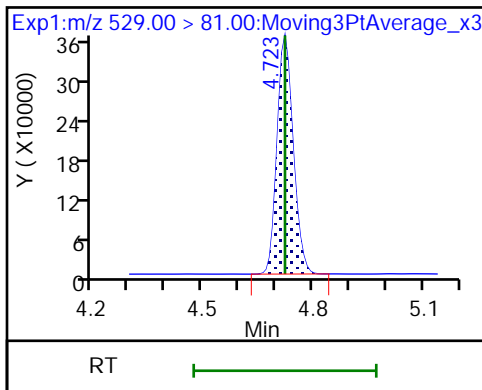




D 30 M2-8:2 FTS

31 8:2 FTS

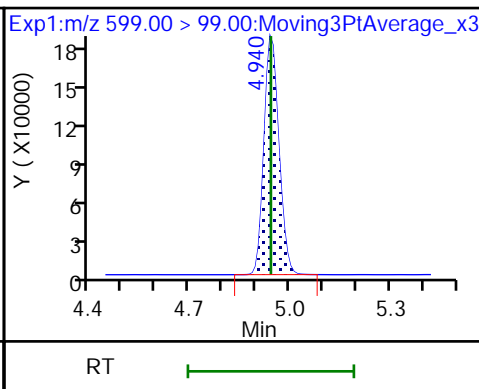
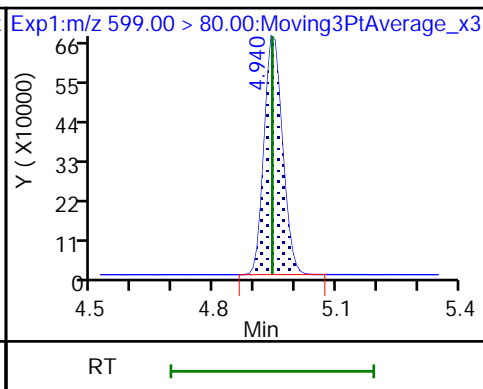
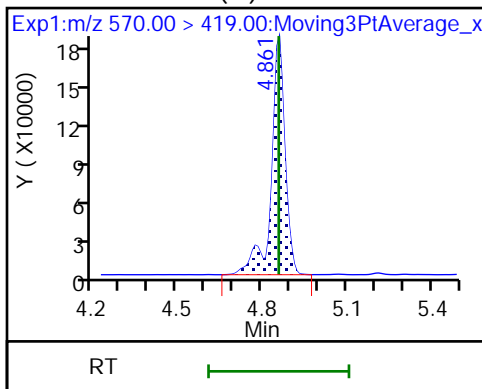
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

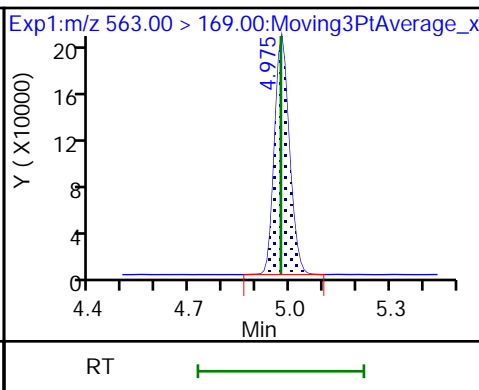
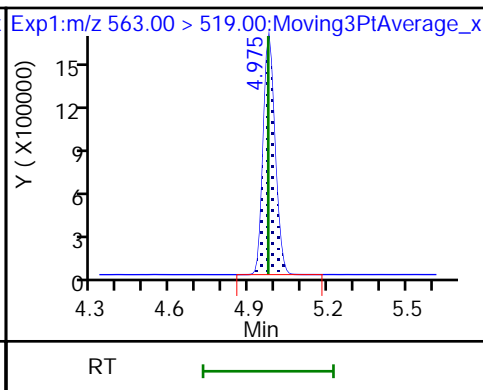
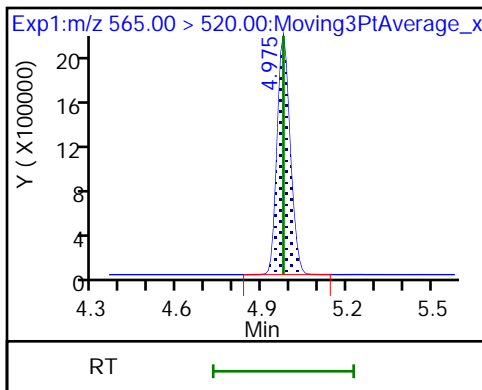
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

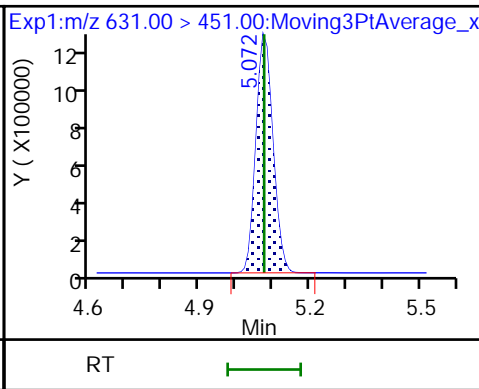
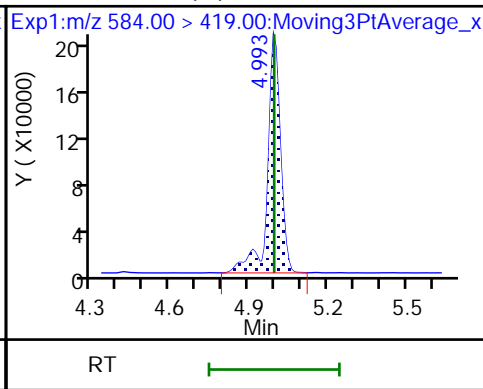
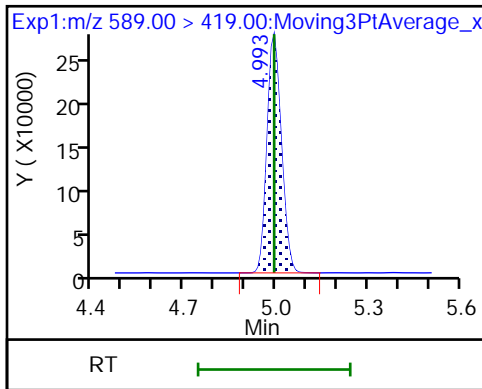
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA (M)

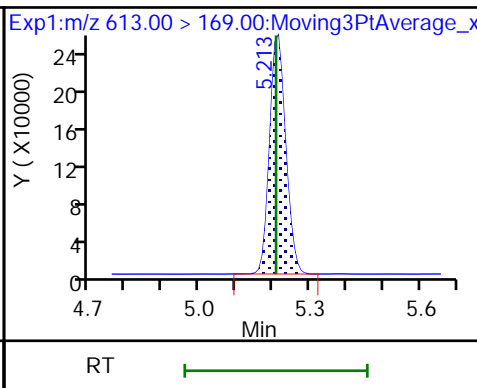
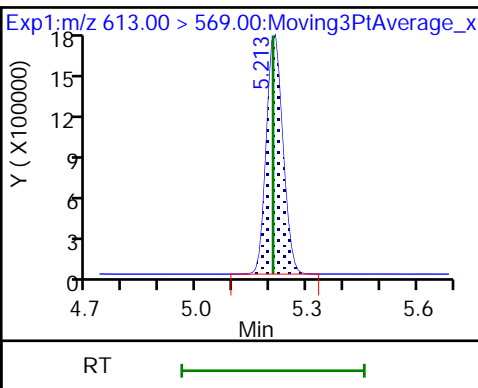
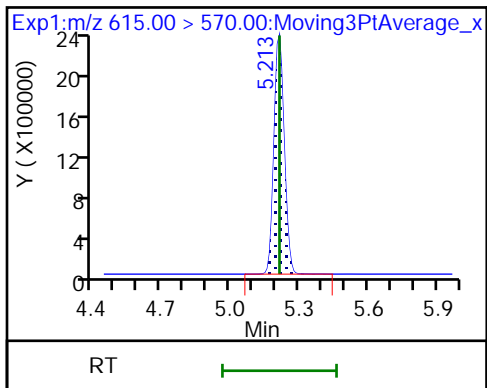
57 11CIFOS



D 43 13C2 PFDaA

42 Perfluorododecanoic acid

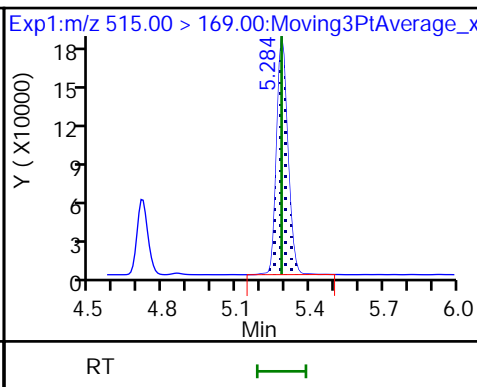
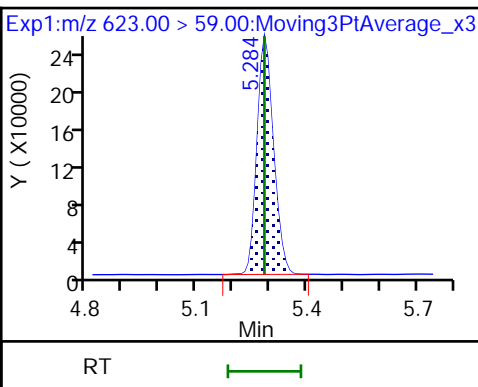
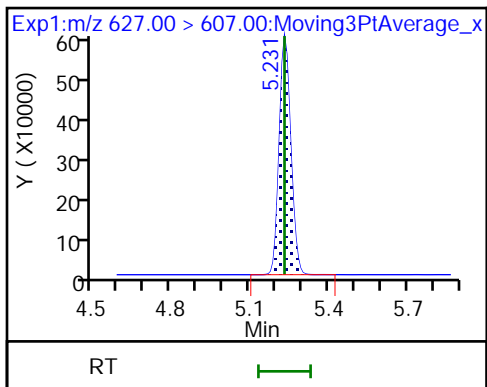
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

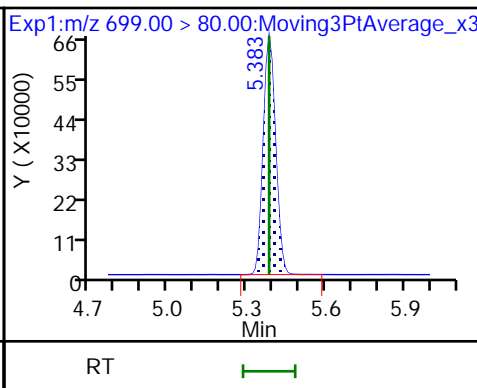
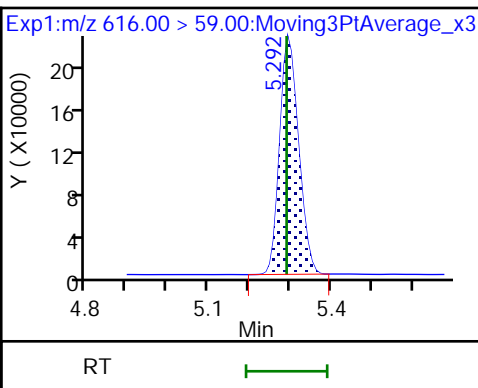
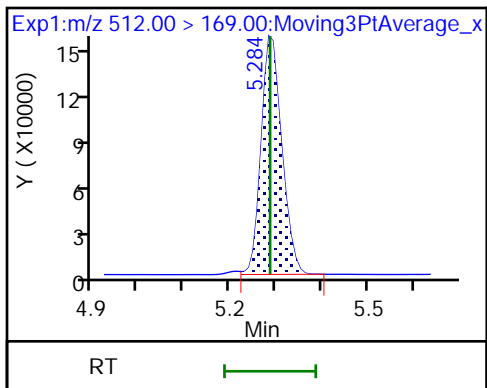
D 58 d-N-MeFOSA-M



61 NMeFOSA

49 N-MeFOSE-M

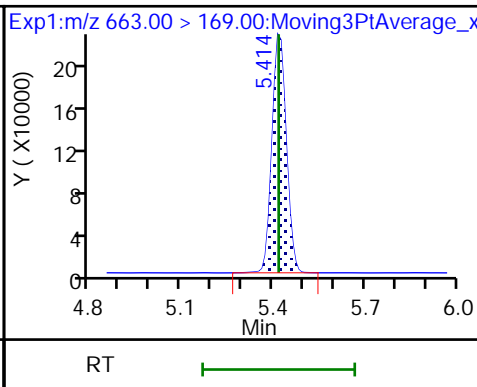
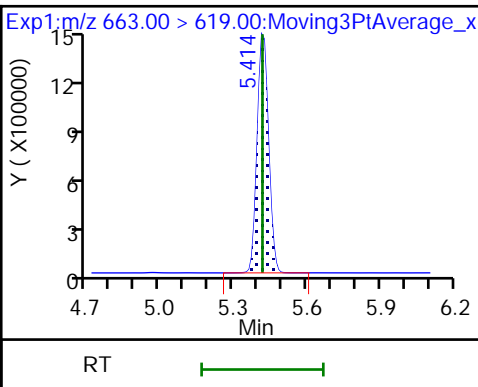
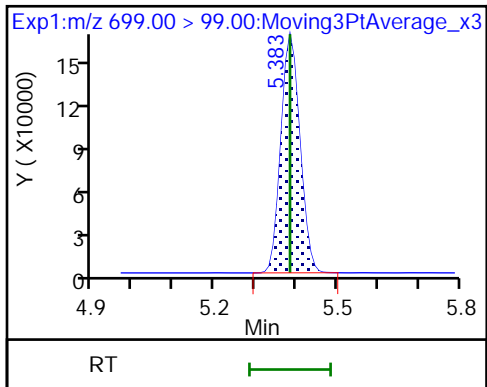
54 PFDoS



54 PFDoS

44 Perfluorotridecanoic acid

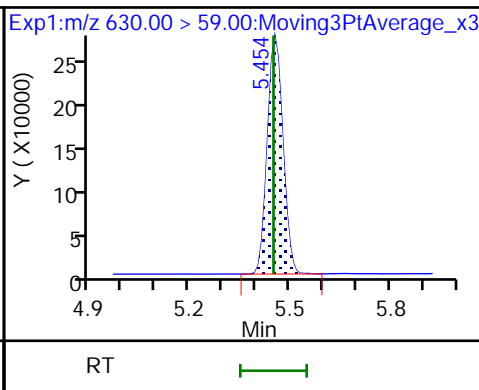
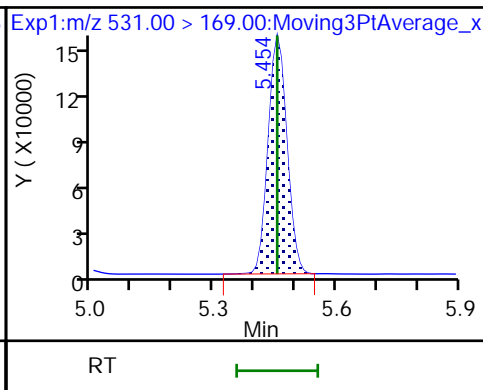
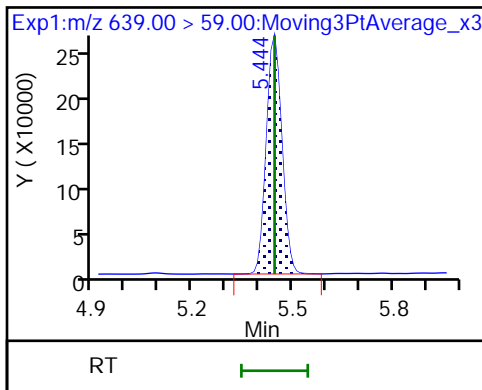
44 Perfluorotridecanoic acid



D 53 d9-N-EtFOSE-M

D 52 d-N-EtFOSA-M

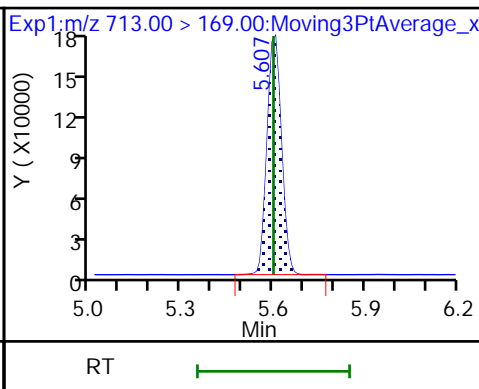
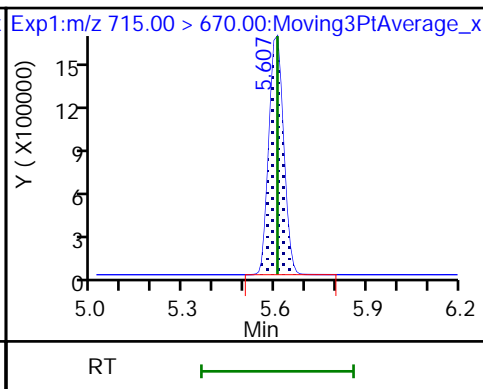
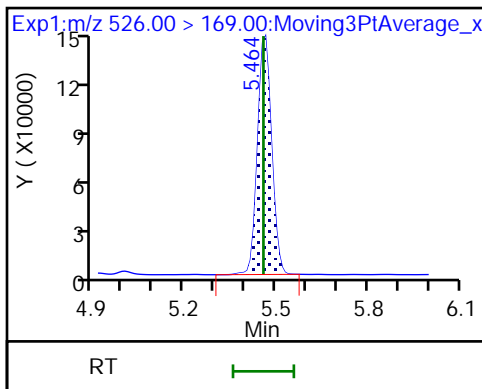
62 N-EtFOSE-M



56 N-EtFOSA-M

D 46 13C2 PFTeDA

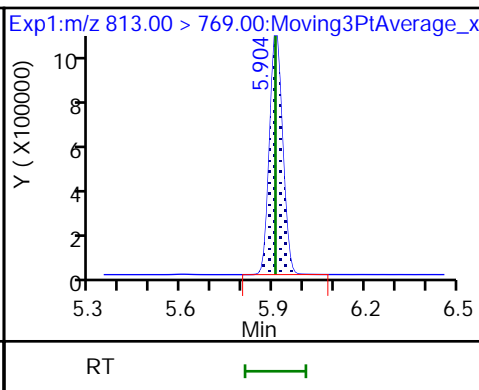
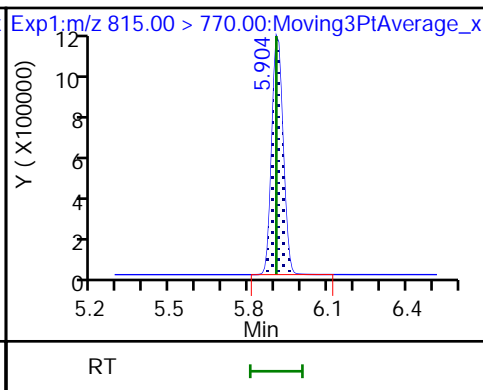
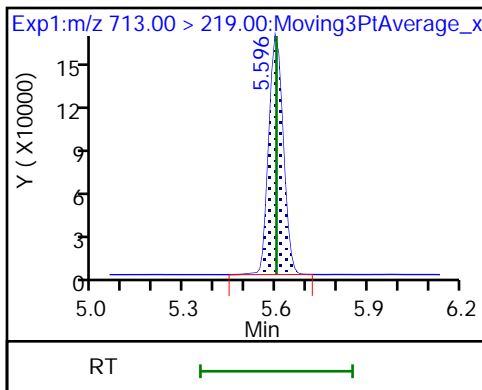
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

D 59 13C2 PFHxDA

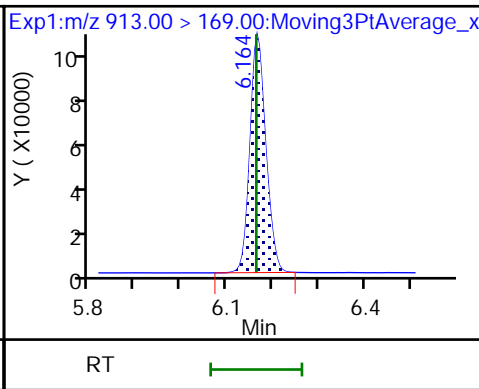
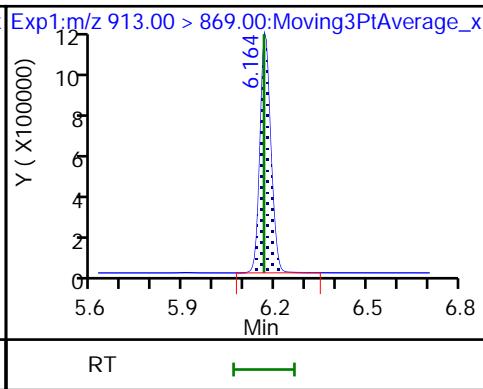
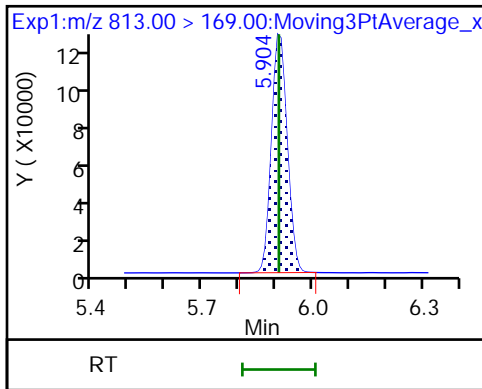
55 Perfluorohexadecanoic acid



55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid







Eurofins TestAmerica, Knoxville

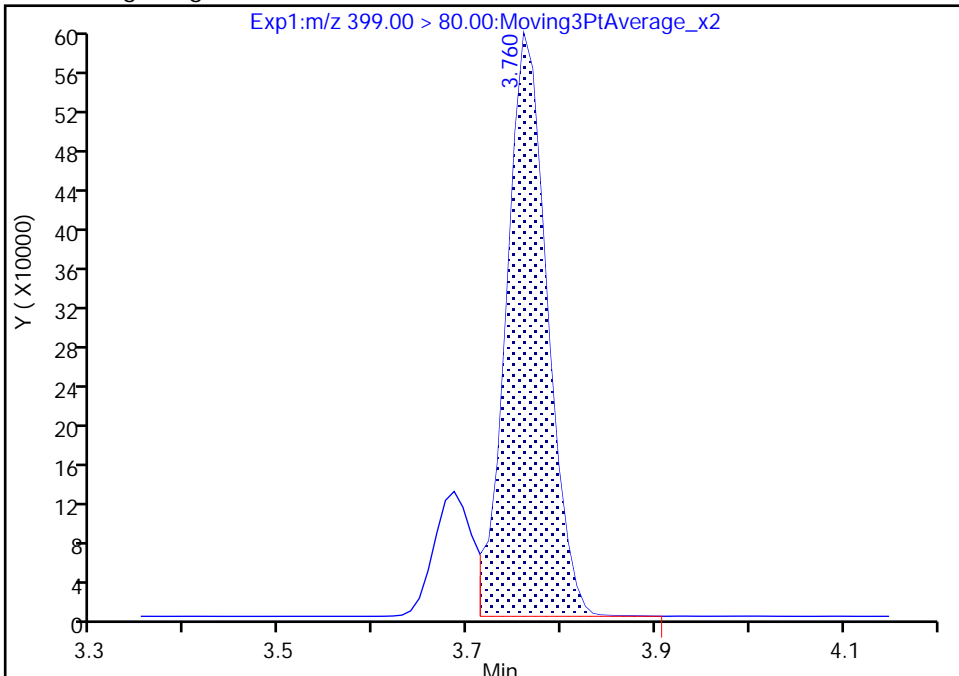
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Injection Date: 09-Jan-2022 12:40:40 Instrument ID: LCA  
Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 5 Worklist Smp#: 5  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

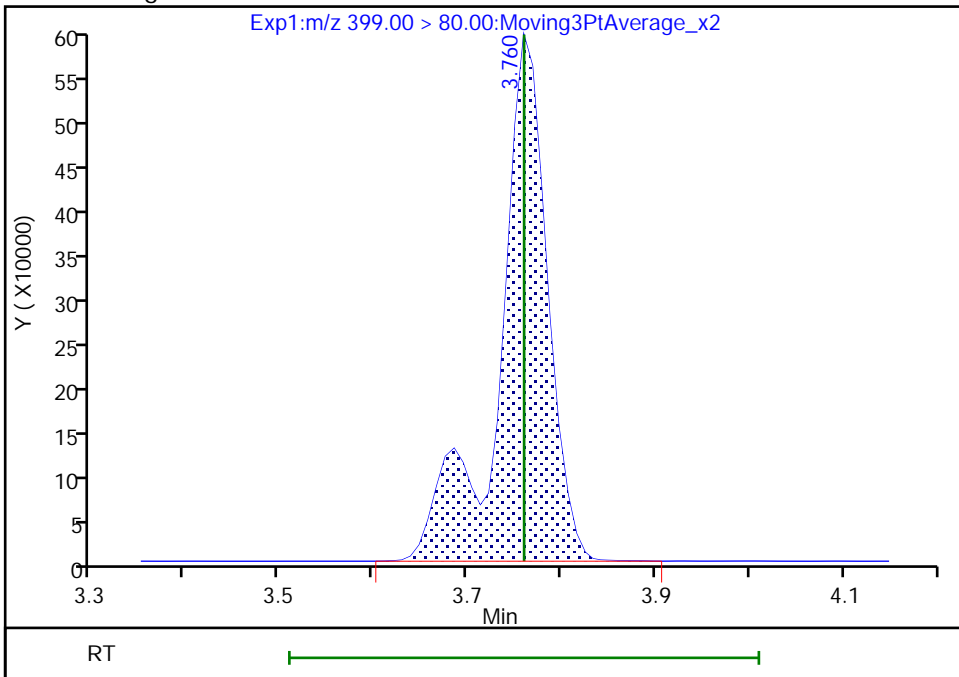
RT: 3.76  
Area: 1777365  
Amount: 0.733417  
Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
Area: 2124992  
Amount: 0.876863  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 09:10:11  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

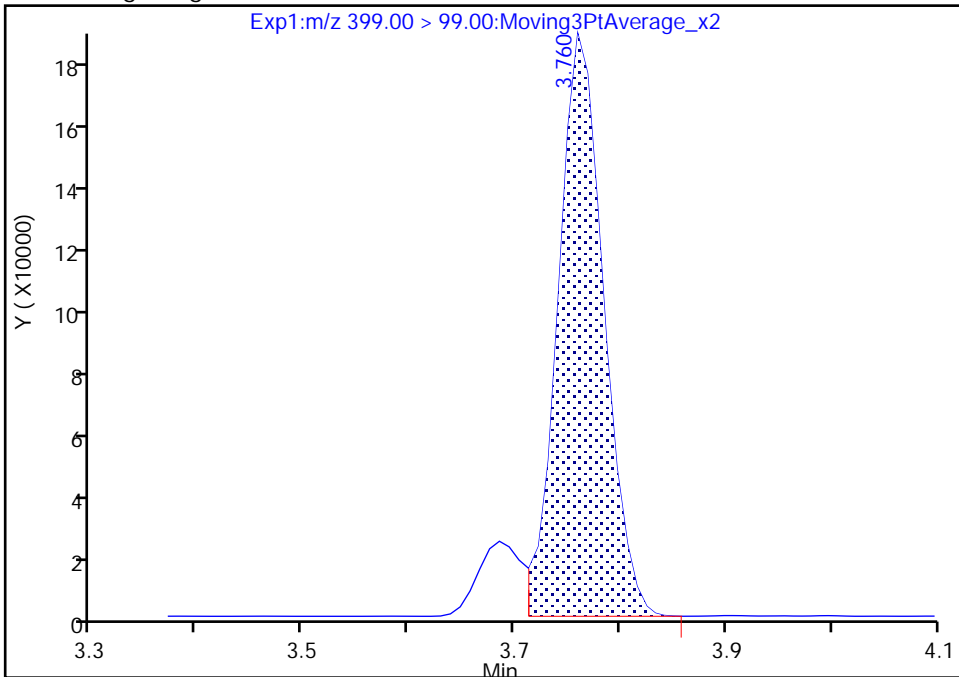
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Injection Date: 09-Jan-2022 12:40:40 Instrument ID: LCA  
Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 5 Worklist Smp#: 5  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

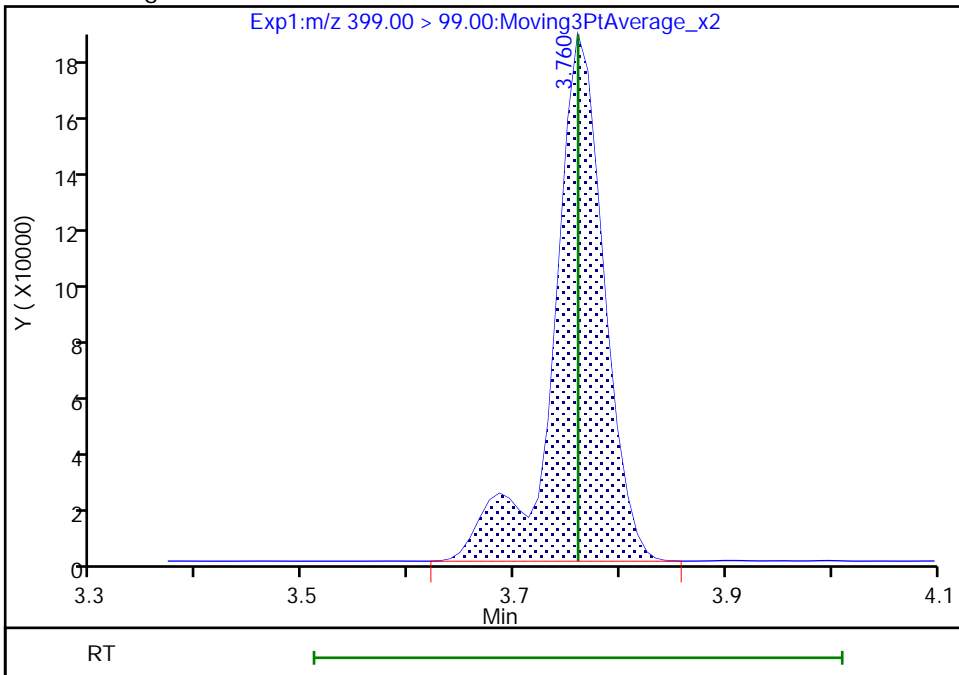
RT: 3.76  
Area: 538499  
Amount: 0.733417  
Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
Area: 603408  
Amount: 0.876863  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 09:10:22

Audit Action: Manually Integrated

Audit Reason: Baseline  
Page 321 of 620

Eurofins TestAmerica, Knoxville

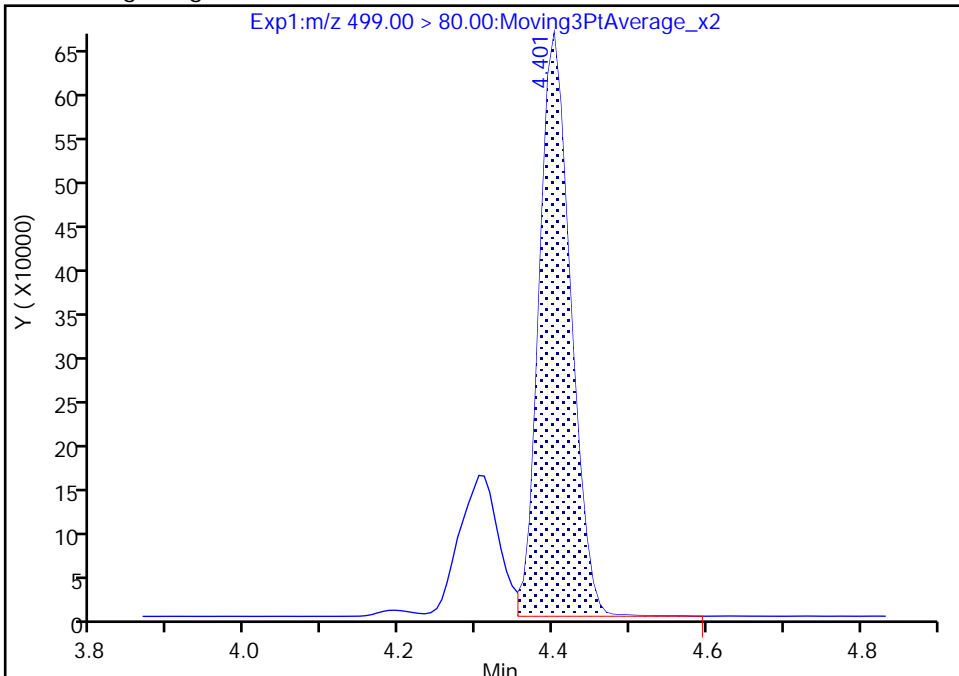
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Injection Date: 09-Jan-2022 12:40:40 Instrument ID: LCA  
Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 5 Worklist Smp#: 5  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

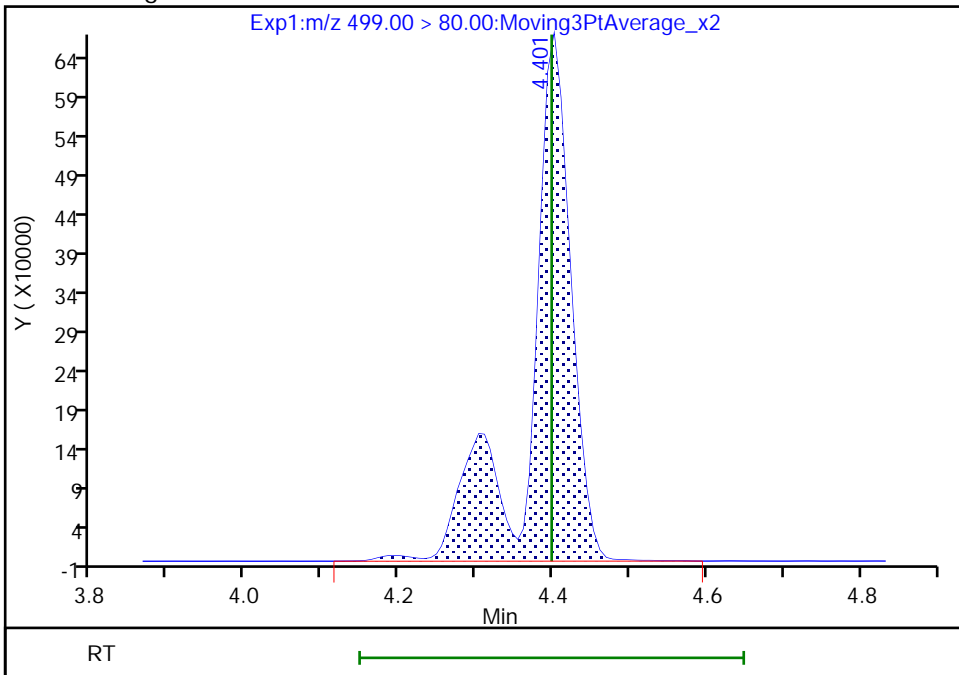
RT: 4.40  
Area: 1873908  
Amount: 0.675318  
Amount Units: ng/ml

Processing Integration Results



RT: 4.40  
Area: 2464700  
Amount: 0.888227  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 09:10:35  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

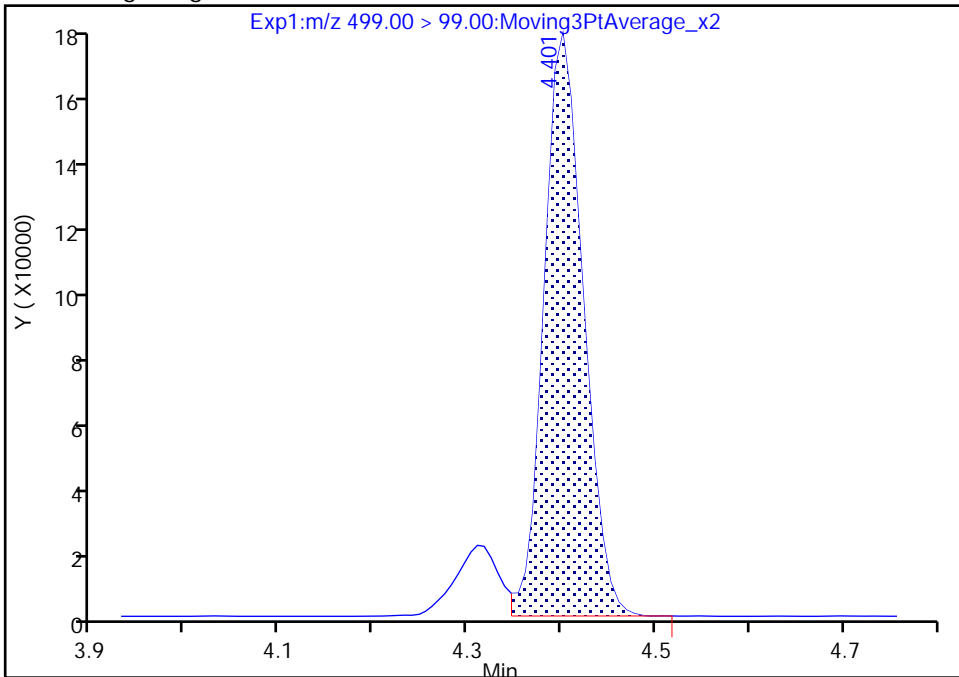
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Injection Date: 09-Jan-2022 12:40:40 Instrument ID: LCA  
Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 5 Worklist Smp#: 5  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

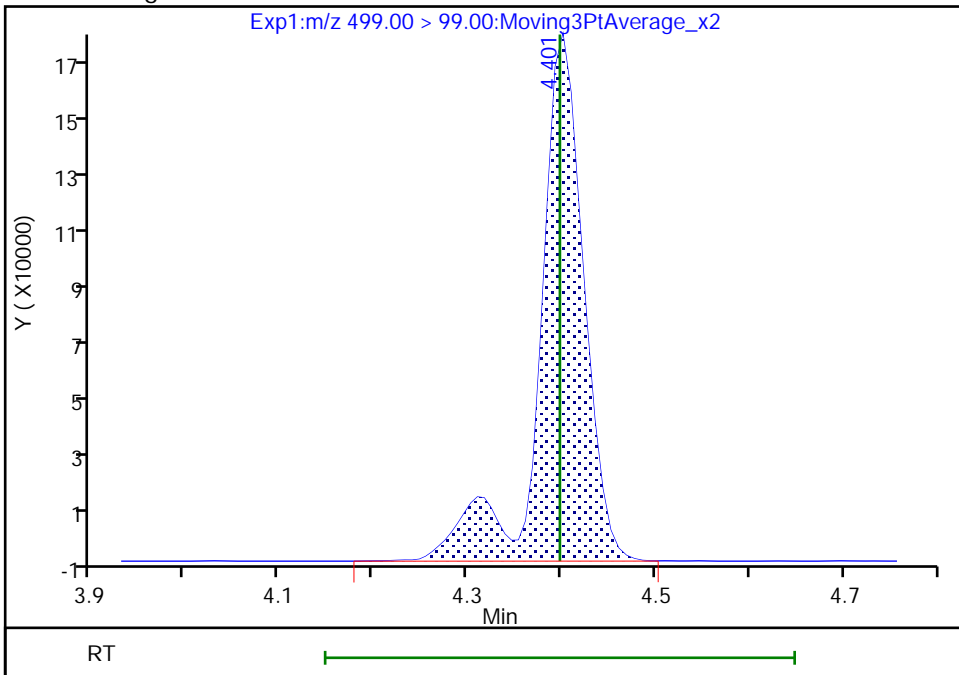
RT: 4.40  
Area: 506673  
Amount: 0.675318  
Amount Units: ng/ml

Processing Integration Results



RT: 4.40  
Area: 575561  
Amount: 0.888227  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 09:10:41

Audit Action: Manually Integrated

Audit Reason: Baseline  
Page 323 of 620

Eurofins TestAmerica, Knoxville

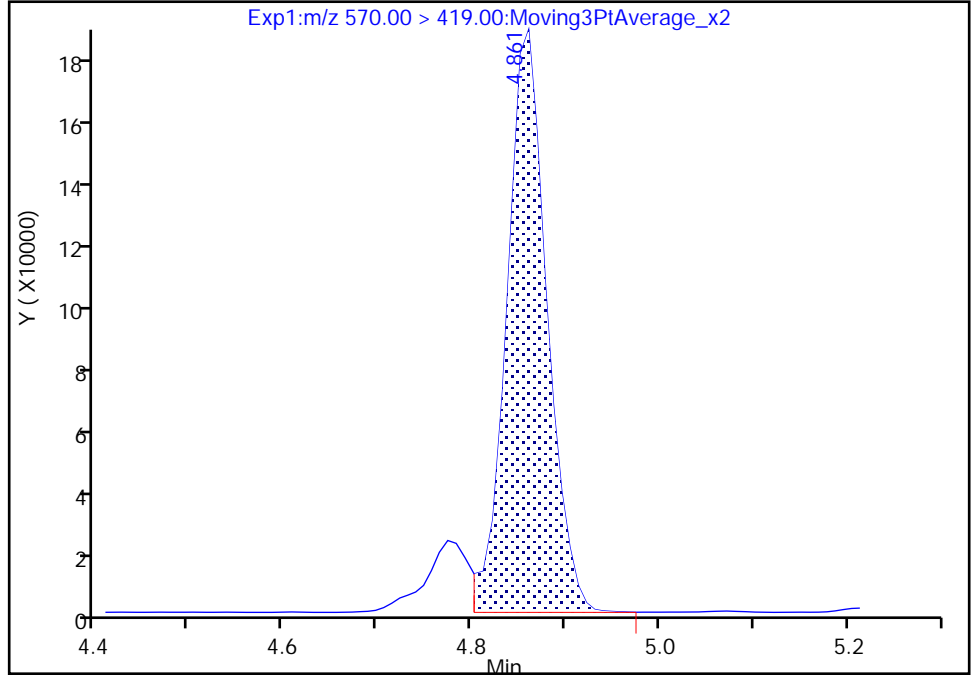
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\\_005.d  
Injection Date: 09-Jan-2022 12:40:40 Instrument ID: LCA  
Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 5 Worklist Smp#: 5  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

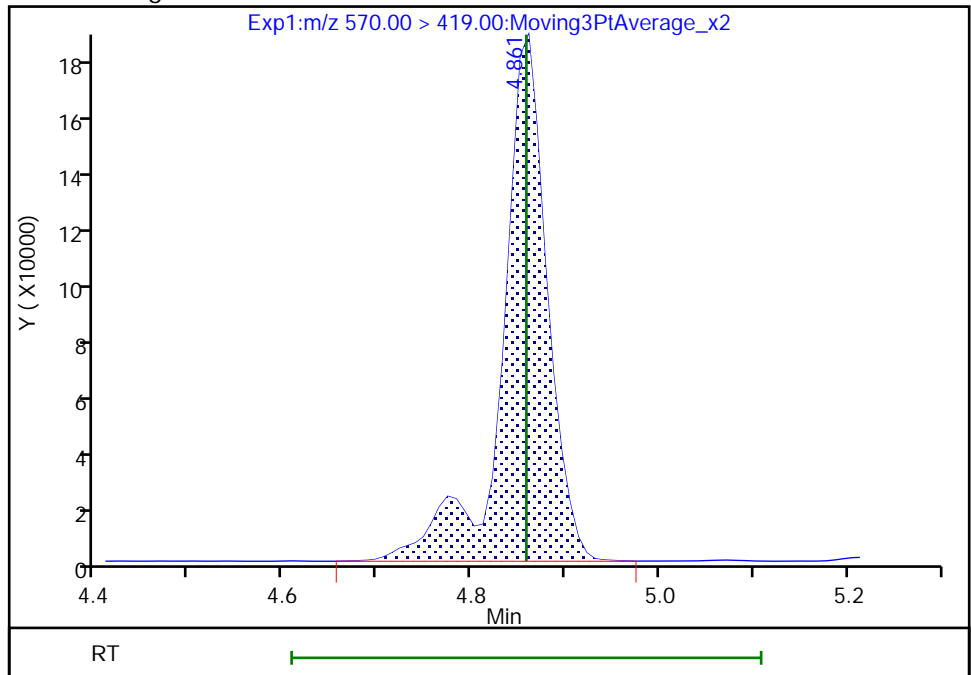
RT: 4.86  
Area: 539718  
Amount: 0.883451  
Amount Units: ng/ml

Processing Integration Results



RT: 4.86  
Area: 608781  
Amount: 0.996324  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 09:10:54  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

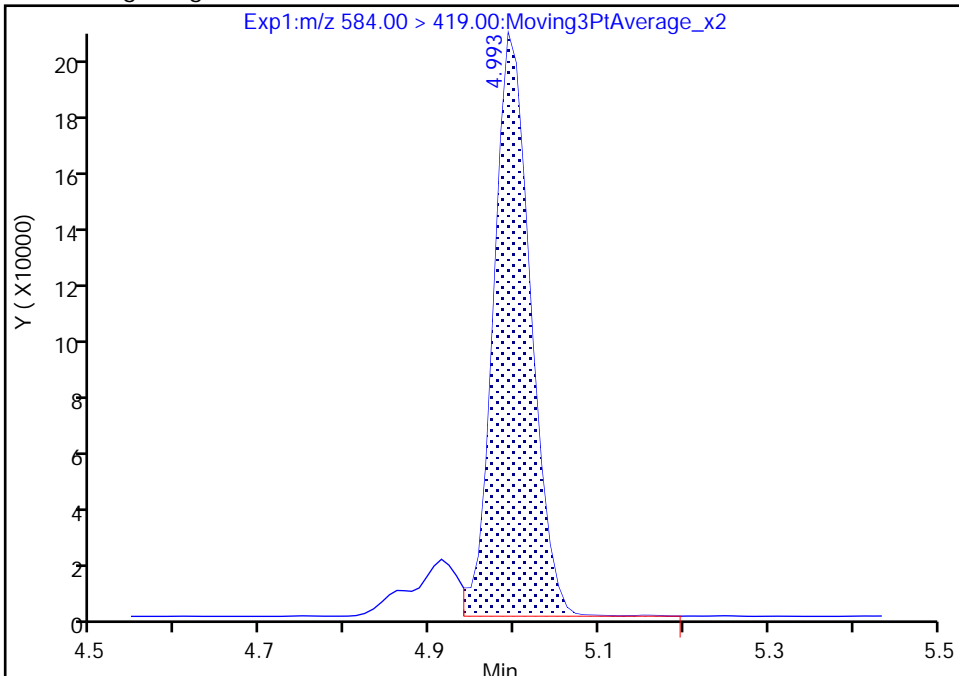
Data File:	\\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_005.d		
Injection Date:	09-Jan-2022 12:40:40	Instrument ID:	LCA
Lims ID:	CCVIS		
Client ID:			
Operator ID:	Cochran, Bobby	ALS Bottle#:	5
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	PFC_LCA	Limit Group:	LC - PFC- ICAL
Column:		Detector:	EXP1
		Worklist Smp#:	5

40 NETFOSA, CAS: 2991-50-6

Signal: 1

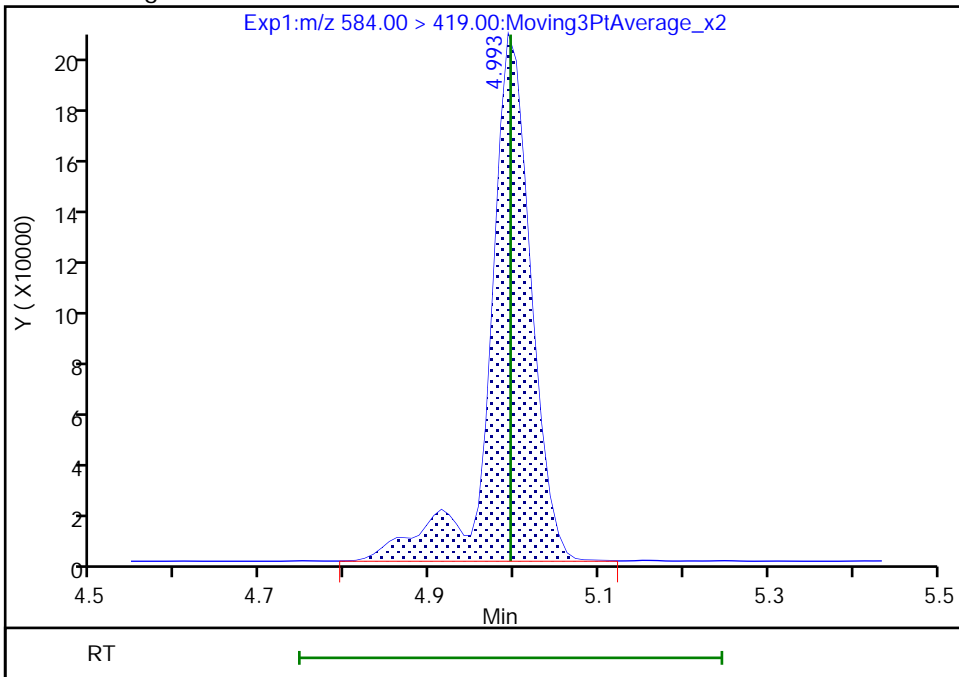
RT: 4.99  
 Area: 614187  
 Amount: 0.863552  
 Amount Units: ng/ml

Processing Integration Results



RT: 4.99  
 Area: 689299  
 Amount: 0.968726  
 Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 09:11:05  
 Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-57742/17 Calibration Date: 01/09/2022 14:26  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 Lab File ID: \_017.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7844	0.7969		2.54	2.50	1.6	40.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9519	0.9721		2.55	2.50	2.1	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.097	1.131		2.28	2.21	3.1	40.0
4:2 FTS	AveID	2.252	2.337		2.42	2.34	3.8	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8680	0.8573		2.47	2.50	-1.2	40.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	0.9713	1.027		2.48	2.35	5.7	40.0
HFPO-DA	AveID	1.352	1.312		2.43	2.50	-3.0	40.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.377	1.411		2.33	2.28	2.5	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.047	1.082		2.59	2.50	3.4	40.0
DONA	AveID	2.630	2.777		2.49	2.36	5.6	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9541	0.9607		2.40	2.38	0.7	40.0
6:2 FTS	L2ID		1.763		2.32	2.37	-2.0	40.0
Perfluorooctanoic acid (PFOA)	AveID	1.147	1.161		2.53	2.50	1.2	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.099	1.113		2.35	2.32	1.3	40.0
Perfluorononanoic acid (PFNA)	Q2ID		0.9144		2.65	2.50	6.1	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	Q2ID		2.196		2.36	2.33	1.4	50.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9748	0.9701		2.39	2.40	-0.5	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9459	0.9575		2.53	2.50	1.2	40.0
Perfluorodecanoic acid (PFDA)	AveID	0.9645	1.000		2.59	2.50	3.7	40.0
8:2 FTS	AveID	1.415	1.509		2.55	2.40	6.6	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	QuaIF		0.9721		2.50	2.50	-0.2	40.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		0.9345		2.42	2.41	0.5	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9695	0.9872		2.55	2.50	1.8	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Q2ID		1.026		2.56	2.50	2.5	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.672	1.760		2.48	2.36	5.2	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		1.047		2.59	2.50	3.6	40.0
10:2 FTS	AveID	2.276	2.435		2.58	2.41	7.0	40.0
NMeFOSA	Q2ID		1.086		2.63	2.50	5.3	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	Q2ID		1.208		2.55	2.50	2.0	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9166	0.9086		2.40	2.42	-0.9	40.0

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-57742/17 Calibration Date: 01/09/2022 14:26  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 Lab File ID: \_017.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTriA)	AveID	0.8292	0.8756		2.64	2.50	5.6	40.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	AveID	1.328	1.407		2.65	2.50	6.0	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.195	1.317		2.76	2.50	10.2	40.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1344	0.1266		2.35	2.50	-5.8	40.0
Perfluorohexadecanoic acid	Q2ID		1.120		2.62	2.50	4.7	40.0
Perfluorooctadecanoic acid	AveID	0.9844	1.043		2.65	2.50	6.0	40.0
13C4 PFBA	Ave	1.142	1.161		1.27	1.25	1.7	50.0
13C5 PFPeA	Ave	0.8865	0.8945		1.26	1.25	0.9	50.0
13C3 PFBS	Ave	0.5913	0.5888		1.16	1.16	-0.4	50.0
M2-4:2 FTS	Ave	0.1820	0.1851		1.19	1.17	1.7	50.0
13C2 PFHxA	Ave	0.9479	0.9726		1.28	1.25	2.6	50.0
13C3 HFPO-DA	Ave	0.4556	0.4838		1.33	1.25	6.2	50.0
18O2 PFHxS	Ave	0.3946	0.3752		1.12	1.18	-4.9	50.0
13C4 PFHpA	Ave	0.9067	0.9229		1.27	1.25	1.8	50.0
13C4 PFOA	Ave	0.9376	0.9473		1.26	1.25	1.0	50.0
M2-6:2 FTS	Ave	0.1835	0.1854		1.20	1.19	1.0	50.0
13C4 PFOS	Ave	0.5681	0.5722		1.20	1.20	0.7	50.0
13C5 PFNA	Ave	1.234	1.226		1.24	1.25	-0.6	50.0
13C8 FOSA	Ave	0.7682	0.7765		1.26	1.25	1.1	50.0
13C2 PFDA	Ave	1.191	1.205		1.27	1.25	1.2	50.0
M2-8:2 FTS	Ave	0.2070	0.1916		1.11	1.20	-7.4	50.0
d3-NMeFOSAA	Ave	0.1401	0.1556		1.39	1.25	11.0	50.0
13C2 PFUnA	Ave	1.189	1.223		1.29	1.25	2.9	50.0
d5-NEtFOSAA	Ave	0.1537	0.1635		1.33	1.25	6.4	50.0
13C2 PFDoA	Ave	1.247	1.234		1.24	1.25	-1.0	50.0
d7-N-MeFOSE-M	Ave	0.1499	0.1545		1.29	1.25	3.1	50.0
d-N-MeFOSA-M	Ave	0.1069	0.1036		1.21	1.25	-3.1	50.0
d9-N-EtFOSE-M	Ave	0.1504	0.1458		1.21	1.25	-3.0	50.0
d-N-EtFOSA-M	Ave	0.0883	0.0847		1.20	1.25	-4.1	50.0
13C2 PFTeDA	Ave	0.9508	1.034		1.36	1.25	8.7	50.0
13C2 PFHxDA	Ave	0.6444	0.6601		1.28	1.25	2.4	50.0
13C8 PFOA	AveID	0.999	0.9910		1.24	1.25	-0.9	50.0
13C8 PFOS	AveID	0.2220	0.2151		1.16	1.20	-3.1	50.0



Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_017.d  
 Lims ID: CCV  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 09-Jan-2022 14:26:14 ALS Bottle#: 17 Worklist Smp#: 17  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022187-017 CCV  
 Misc. Info.: Plate: 11 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 15:08:48 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1641

First Level Reviewer: cochranj Date: 10-Jan-2022 13:36:40

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	2.779	2.790	-0.011	0.678	6182549	1.27	102	13487	
2 Perfluorobutanoic acid	212.90 > 169.00	2.779	2.790	-0.011	1.000	9853830	2.54	102	2409	
D 3 13C5 PFPeA	267.90 > 223.00	3.090	3.098	-0.008	0.754	4763604	1.26	101	9042	
4 Perfluoropentanoic acid	262.90 > 219.00	3.090	3.098	-0.008	1.000	9261683	2.55	102	3369	
D 6 13C3 PFBS	301.90 > 80.00	3.098	3.115	-0.017	0.756	2916055	1.16	99.6	13438	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.106	3.115	-0.009	1.003	6272560	2.28	Target=2.65	103	5459
	298.90 > 99.00	3.106	3.115	-0.009	1.003	2307185	2.72(1.32-3.97)			5609
D 8 M2-4:2 FTS	329.00 > 81.00	3.382	3.391	-0.009	0.825	920693	1.19	102	1615	
7 4:2 FTS	327.00 > 307.00	3.382	3.402	-0.020	1.000	4303673	2.42	104	9175	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.412	3.422	-0.010	1.101	6041604	2.48	Target=3.44	106	10627
	349.00 > 99.00	3.412	3.422	-0.010	1.101	1740201	3.47(1.72-5.16)			11325
D 9 13C2 PFHxA	315.00 > 270.00	3.412	3.422	-0.010	0.833	5179132	1.28	103	9265	
10 Perfluorohexanoic acid	313.00 > 269.00	3.412	3.422	-0.010	1.000	8880029	2.47	Target=11.80	98.8	3726
	313.00 > 119.00	3.412	3.422	-0.010	1.000	713228	12.45(5.90-17.70)			1138
D 12 13C3 HFPO-DA	287.00 > 169.00	3.519	3.528	-0.009	0.859	2576322	1.33	106	5011	

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	3.519	3.528	-0.009	1.000	6760074	2.43		97.0	5593	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.751	3.760	-0.009	1.000	5133204	2.33	Target=3.40	102	8317	M
399.00 > 99.00	3.751	3.760	-0.009	1.000	1462866		3.51(1.70-5.10)		6667	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.751	3.760	-0.009	0.915	1890325	1.12		95.1	6784	
D 14 13C4 PFHpA										
367.00 > 322.00	3.760	3.769	-0.009	0.918	4914716	1.27		102	10013	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.760	3.769	-0.009	1.000	10636333	2.58	Target=3.29	103	4685	
363.00 > 169.00	3.760	3.769	-0.009	1.000	3282437		3.24(1.65-4.94)		3034	
68 DONA										
377.00 > 251.00	3.797	3.807	-0.010	0.866	15940526	2.49	Target=1.82	106	10529	
377.00 > 85.00	3.797	3.807	-0.010	0.866	8911848		1.79(0.91-2.74)		185	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.080	4.089	-0.009	0.930	5573290	2.40	Target=3.92	101	8706	
449.00 > 99.00	4.080	4.089	-0.009	0.930	1443456		3.86(1.96-5.87)		5534	
19 6:2 FTS										
427.00 > 407.00	4.089	4.106	-0.017	0.998	3299261	2.32		98.0	5551	
D 21 13C4 PFOA										
417.00 > 372.00	4.098	4.106	-0.008	1.000	5044529	1.26		101	8369	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.098	4.106	-0.008	1.000	937817	1.20		101	4425	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.098	4.106	-0.008	1.000	4998882	1.24		99.1	9451	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.098	4.106	-0.008	1.000	11710937	2.53	Target=2.59	101	5264	
413.00 > 169.00	4.098	4.106	-0.008	1.000	4590443		2.55(1.30-3.89)		4385	
* 22 13C2 PFOA										
415.00 > 370.00	4.098	4.106	-0.008		5325263	1.25			9827	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.385	4.393	-0.008	1.000	626440	1.16		96.9	4145	
D 25 13C4 PFOS										
503.00 > 80.00	4.385	4.401	-0.016	1.070	2912815	1.20		101	5232	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.385	4.401	-0.016	1.000	6295888	2.35	Target=4.65	101	5278	M
499.00 > 99.00	4.385	4.401	-0.016	1.000	1418173		4.44(2.32-6.97)		3689	M
D 27 13C5 PFNA										
468.00 > 423.00	4.410	4.427	-0.017	1.076	6531248	1.24		99.4	11908	
26 Perfluorononanoic acid										
463.00 > 419.00	4.410	4.427	-0.017	1.000	11943976	2.65	Target=4.65	106	9744	
463.00 > 169.00	4.410	4.427	-0.017	1.000	2584028		4.62(2.32-6.97)		3973	
63 9CIFOS										
531.00 > 351.00	4.546	4.560	-0.014	1.037	12469541	2.36		101	9911	

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	4.673	4.681	-0.008	1.066	5675151	2.39	Target=4.06	99.5	8874	
549.00 > 99.00	4.673	4.681	-0.008	1.066	1471710		3.86(2.03-6.09)		8005	
D 34 13C8 FOSA										
506.00 > 78.00	4.689	4.706	-0.017	1.144	4134947	1.26		101	3975	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.689	4.706	-0.017	1.000	7918706	2.53		101	5126	
D 32 13C2 PFDA										
515.00 > 470.00	4.698	4.715	-0.017	1.146	6419039	1.27		101	10018	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.698	4.715	-0.017	1.000	12834464	2.59	Target=11.30	104	9994	
513.00 > 169.00	4.698	4.715	-0.017	1.000	1131996		11.34(5.65-16.95)		876	
31 8:2 FTS										
527.00 > 507.00	4.715	4.723	-0.008	1.000	2949861	2.55		107	5794	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.715	4.723	-0.008	1.151	977540	1.11		92.6	1575	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.843	4.852	-0.009	1.182	828459	1.39		111	497	
36 NMeFOSAA										
570.00 > 419.00	4.843	4.861	-0.018	1.000	1610684	2.49		99.8	1843	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.931	4.940	-0.009	1.124	5489895	2.42	Target=3.79	100	13138	
599.00 > 99.00	4.931	4.940	-0.009	1.124	1470748		3.73(1.90-5.69)		4678	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.966	4.975	-0.009	1.000	12859199	2.55	Target=8.45	102	12572	
563.00 > 169.00	4.966	4.975	-0.009	1.000	1519743		8.46(4.22-12.67)		6423	
D 39 13C2 PFUnA										
565.00 > 520.00	4.966	4.975	-0.009	1.212	6513279	1.29		103	11946	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.975	4.993	-0.018	1.214	870915	1.33		106	3486	
40 NEtFOSA										
584.00 > 419.00	4.984	4.993	-0.009	1.002	1786304	2.56		103	2905	M
57 11C1FOS										
631.00 > 451.00	5.062	5.072	-0.010	1.154	10103048	2.48		105	12084	
D 43 13C2 PFDaA										
615.00 > 570.00	5.196	5.213	-0.017	1.268	6572416	1.24		99.0	9457	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.196	5.213	-0.017	1.000	13766449	2.59	Target=6.99	104	9952	
613.00 > 169.00	5.196	5.213	-0.017	1.000	1965441		7.00(3.50-10.49)		3444	
50 10:2 FTS										
627.00 > 607.00	5.222	5.231	-0.009	1.108	4791356	2.58		107	10451	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.275	5.284	-0.009	1.287	822905	1.29		103	827	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.275	5.284	-0.009	1.287	551725	1.21		96.9	58.0	
61 NMeFOSA										
512.00 > 169.00	5.275	5.284	-0.009	1.000	1198652	2.63		105	795	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
49 N-MeFOSE-M										
616.00 > 59.00	5.284	5.292	-0.008	1.002	1988311	2.55		102	2164	
54 PFDoS										
699.00 > 80.00	5.373	5.383	-0.010	1.225	5359725	2.40	Target=4.24	99.1	7500	
699.00 > 99.00	5.373	5.383	-0.010	1.225	1306115		4.10(2.12-6.35)		4715	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.404	5.414	-0.010	1.040	11510233	2.64	Target=6.20	106	8125	
663.00 > 169.00	5.404	5.414	-0.010	1.040	1887572		6.10(3.10-9.30)		5617	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.435	5.444	-0.009	1.326	776615	1.21		97.0	377	
62 N-EtFOSE-M										
630.00 > 59.00	5.444	5.454	-0.010	1.002	2185573	2.65		106	2020	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.444	5.454	-0.010	1.329	450991	1.20		95.9	761	
56 N-EtFOSA-M										
526.00 > 169.00	5.454	5.464	-0.010	1.002	1188121	2.76		110	627	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.585	5.607	-0.022	1.363	5505228	1.36		109	10356	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.585	5.607	-0.022	1.000	1393376	2.35	Target=1.05	94.2	5596	
713.00 > 219.00	5.585	5.607	-0.022	1.000	1352735		1.03(0.53-1.58)		5326	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.895	5.904	-0.009	1.439	3515368	1.28		102	5971	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.895	5.904	-0.009	1.000	7875218	2.62	Target=8.09	105	5871	
813.00 > 169.00	5.895	5.904	-0.009	1.000	934936		8.42(4.05-12.14)		2832	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.155	6.164	-0.009	1.044	7335338	2.65	Target=11.53	106	5039	
913.00 > 169.00	6.155	6.164	-0.009	1.044	615934		11.91(5.77-17.30)		2293	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L5PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_017.d

Injection Date: 09-Jan-2022 14:26:14

Instrument ID: LCA

Lims ID: CCV

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 17

Worklist Smp#: 17

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

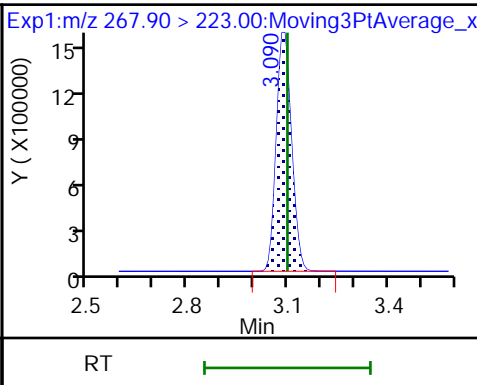
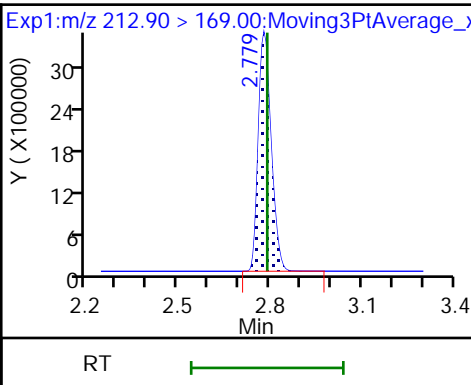
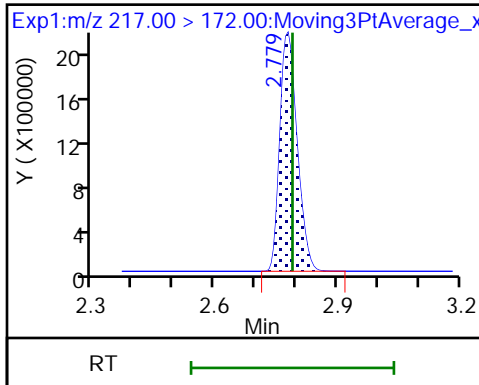
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

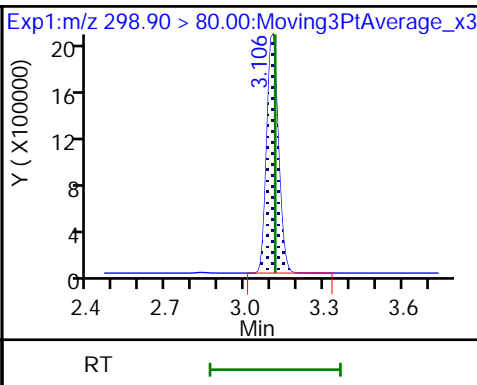
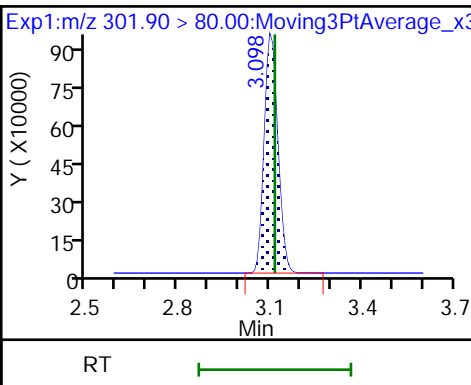
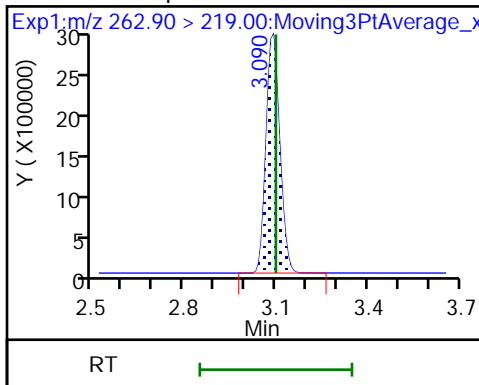
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

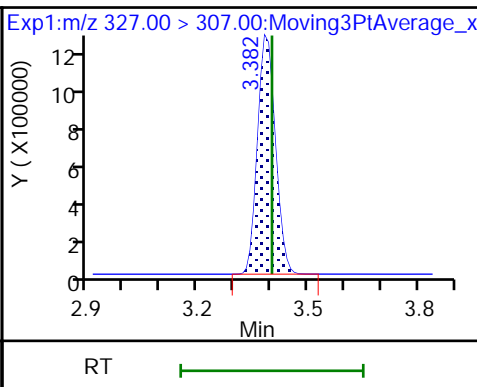
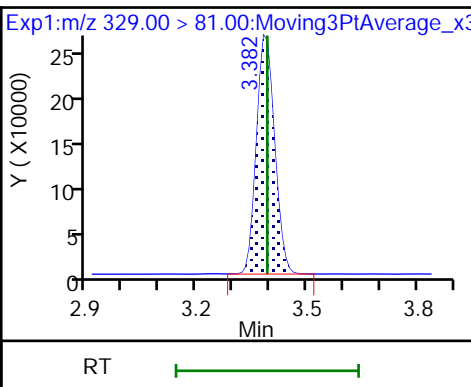
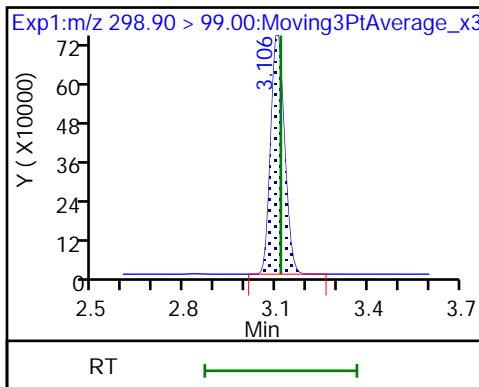
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

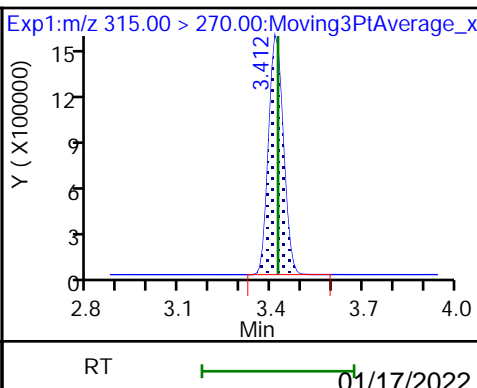
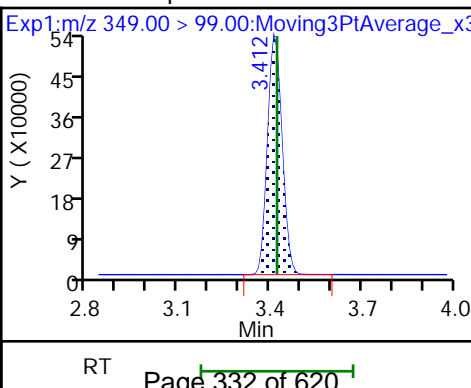
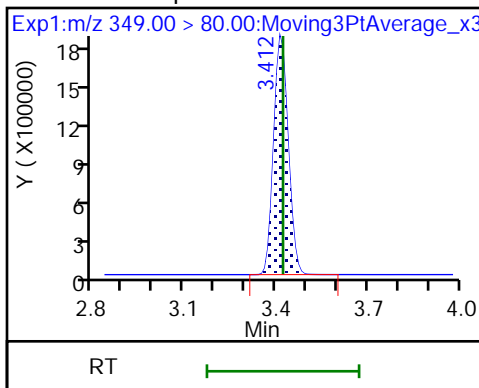
7 4:2 FTS

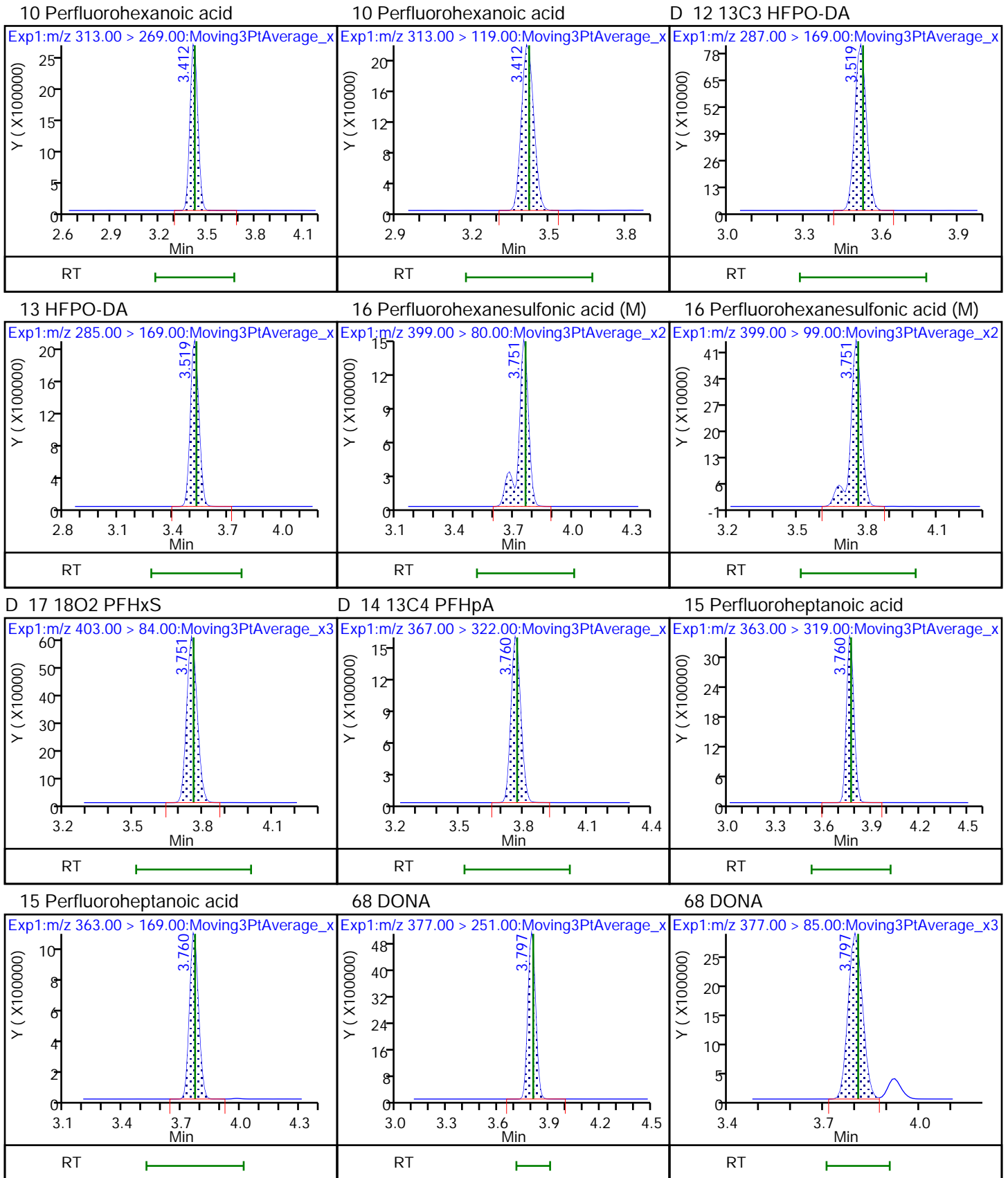


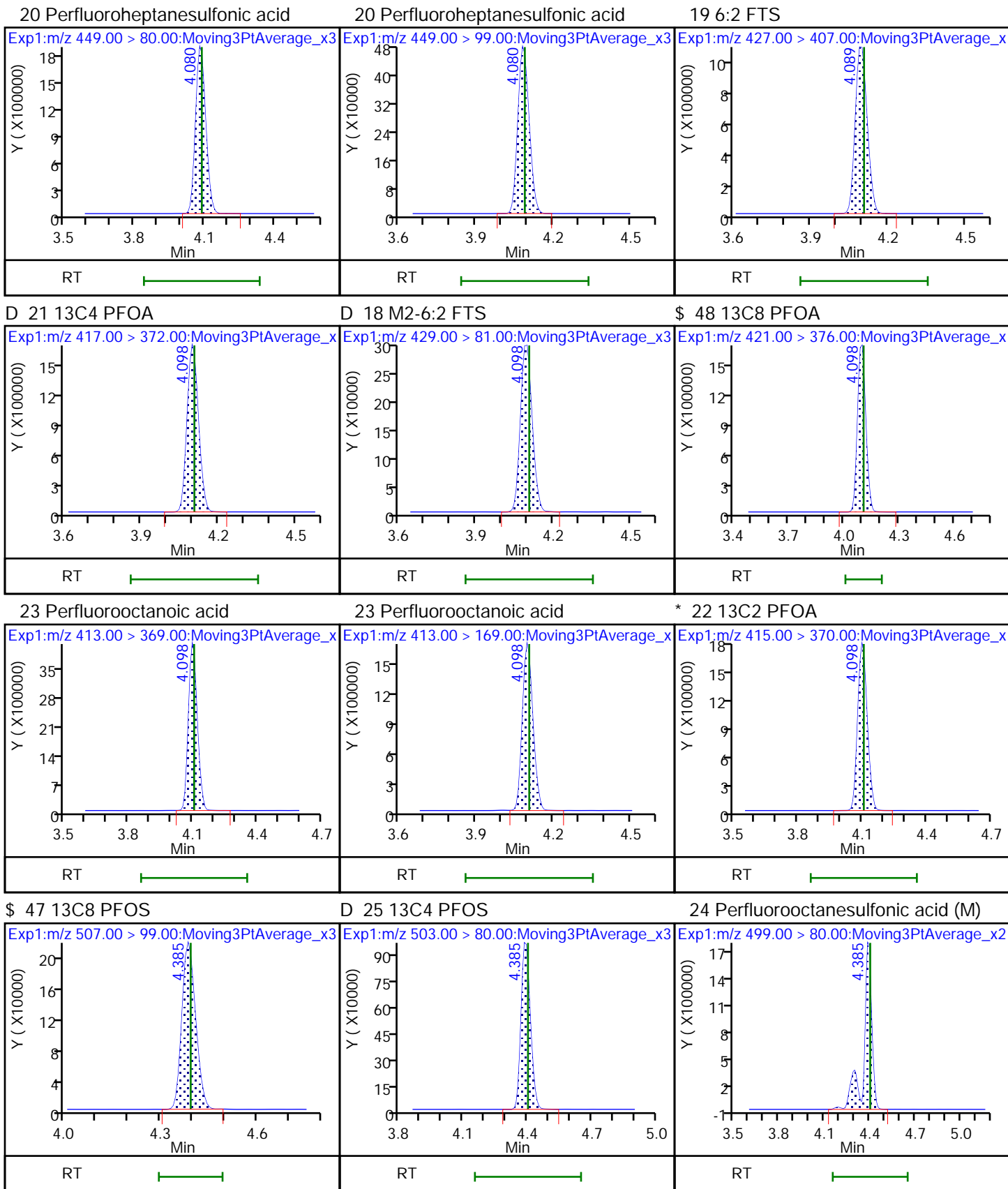
11 Perfluoropentanesulfonic acid

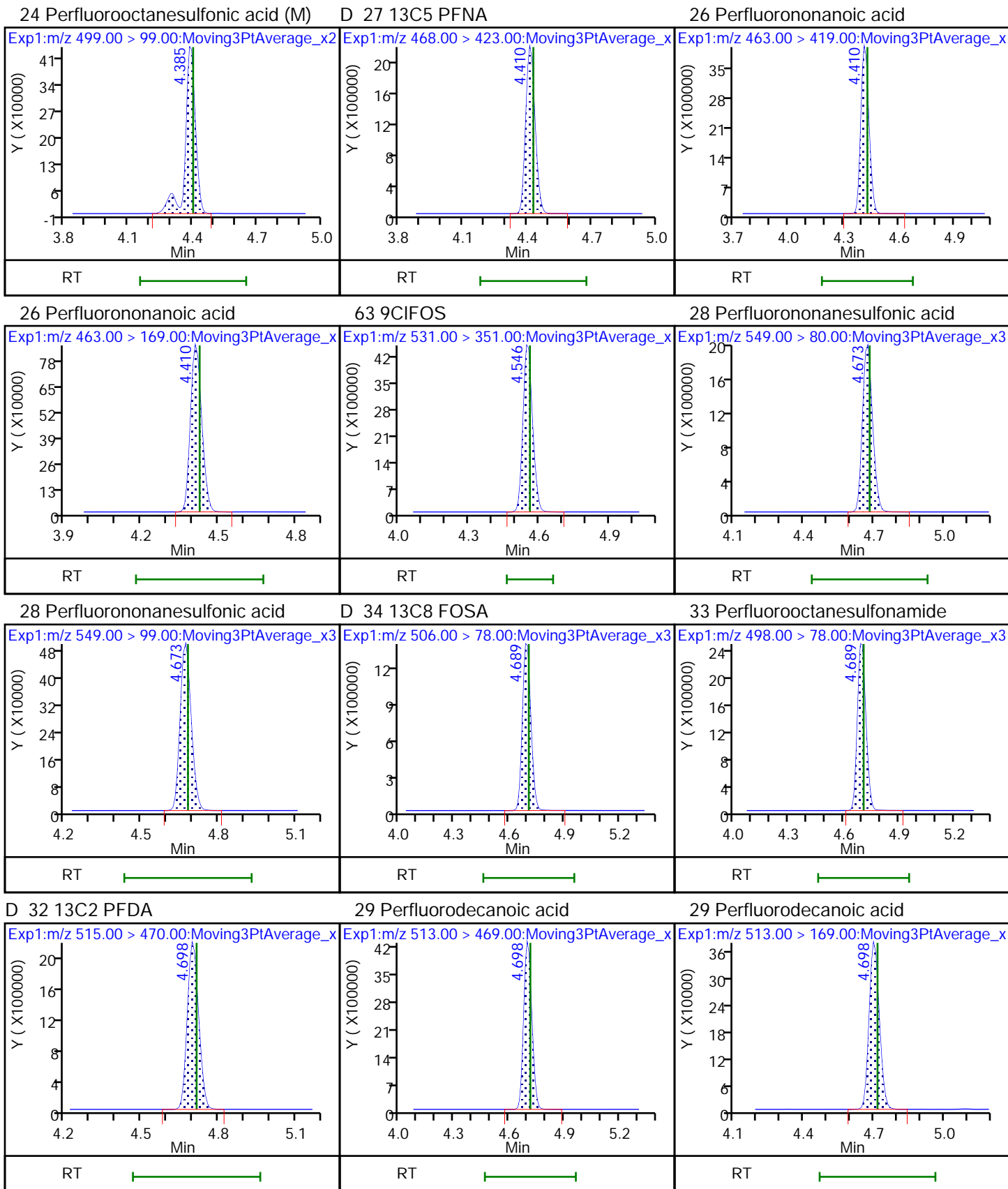
11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA

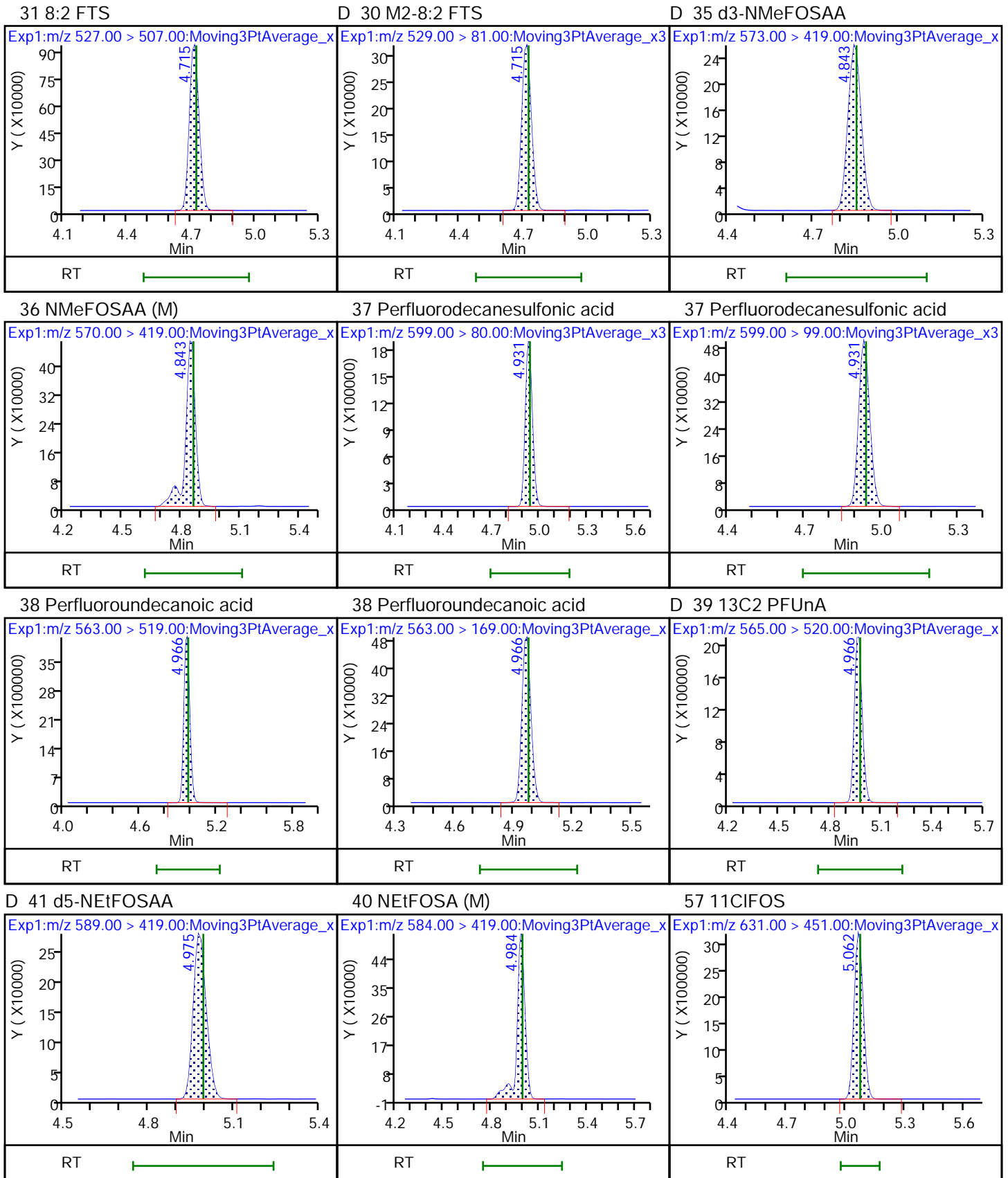








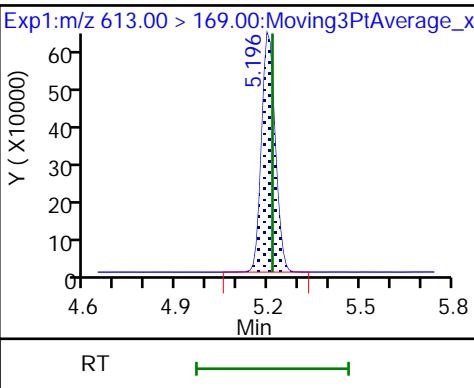
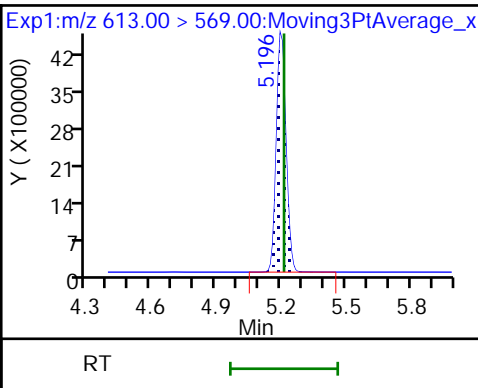
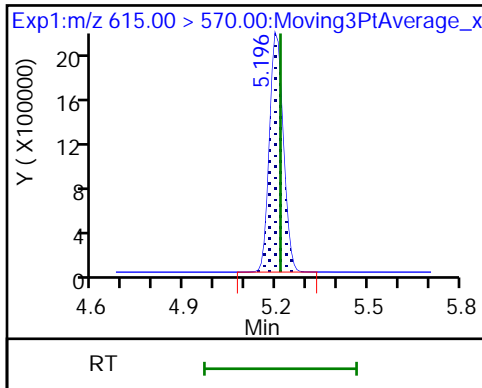




D 43 13C2 PFDaA

42 Perfluorododecanoic acid

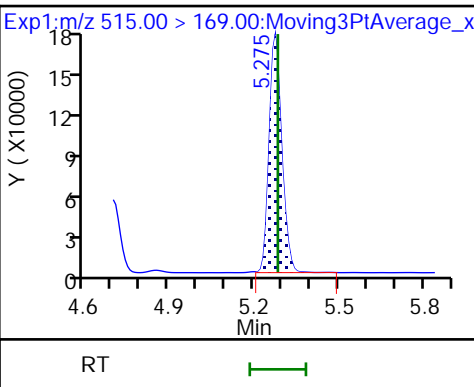
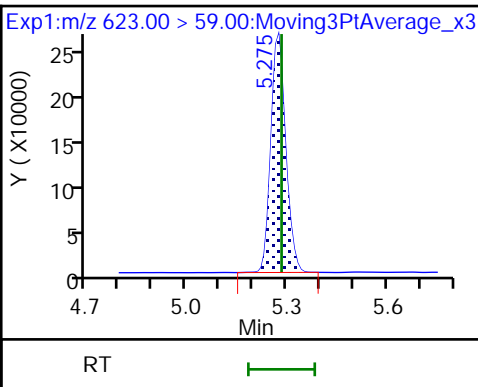
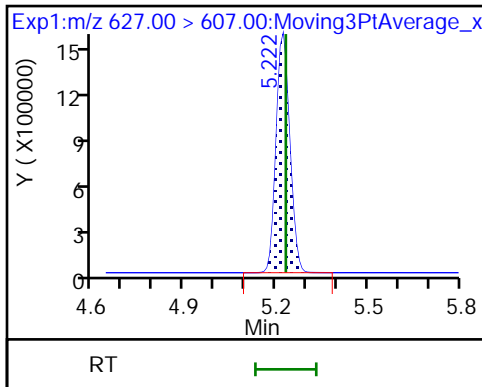
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

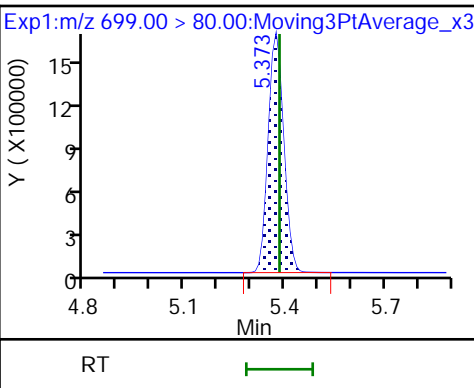
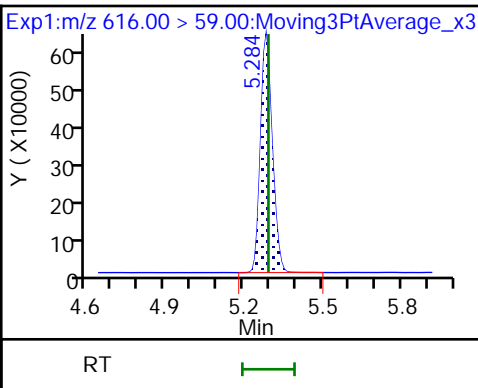
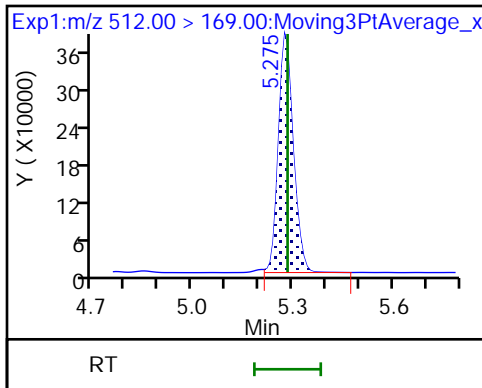
D 58 d-N-MeFOSA-M



61 NMeFOSA

49 N-MeFOSE-M

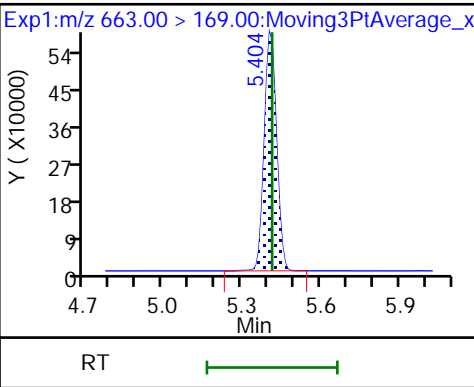
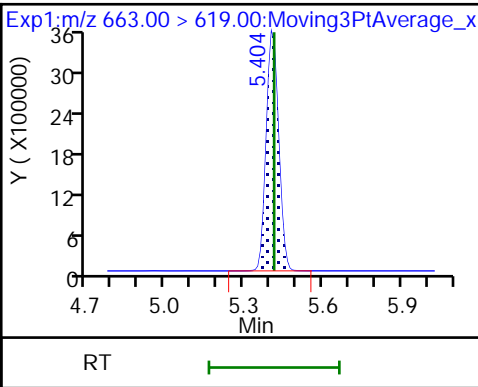
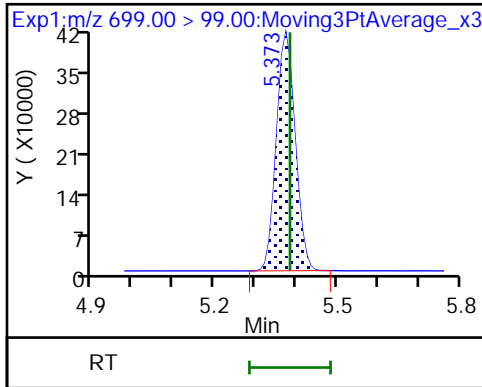
54 PFDoS



54 PFDoS

44 Perfluorotridecanoic acid

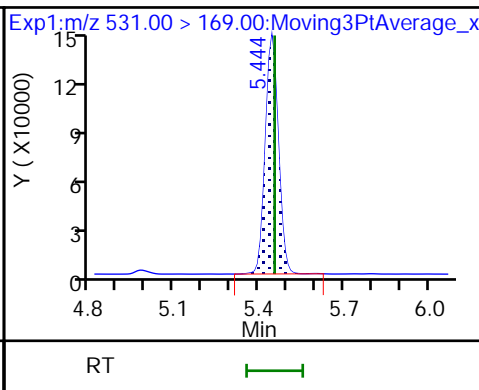
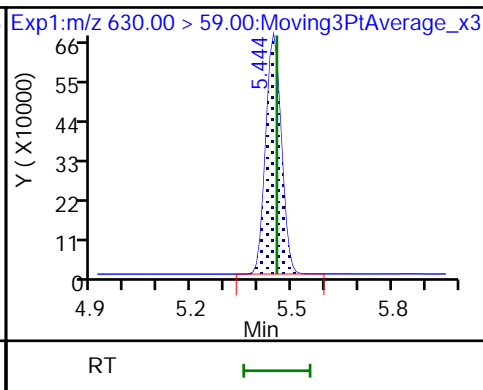
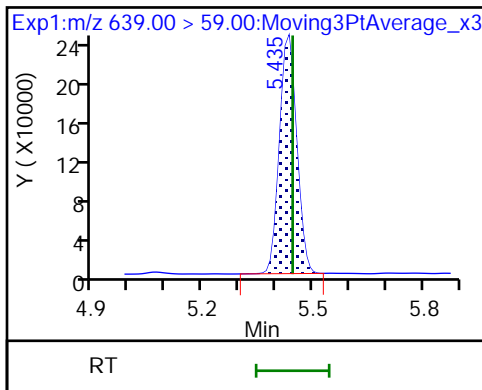
44 Perfluorotridecanoic acid



D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M

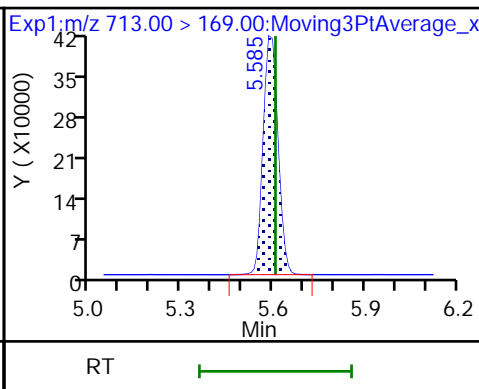
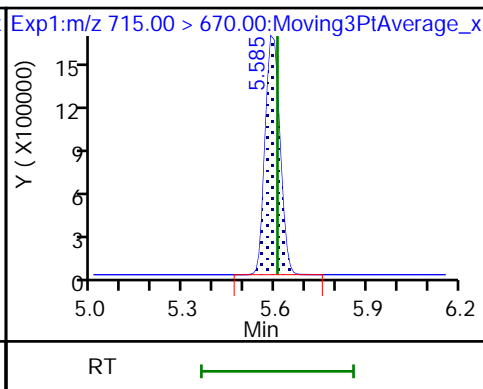
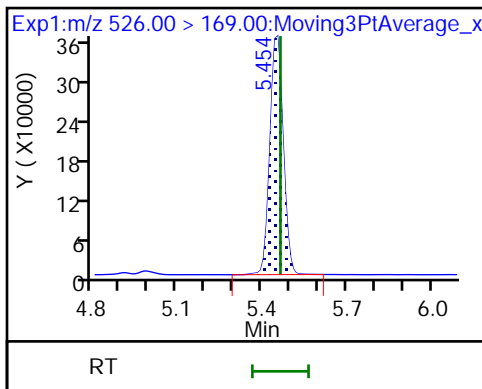
D 52 d-N-EtFOSA-M



56 N-EtFOSA-M

D 46 13C2 PFTeDA

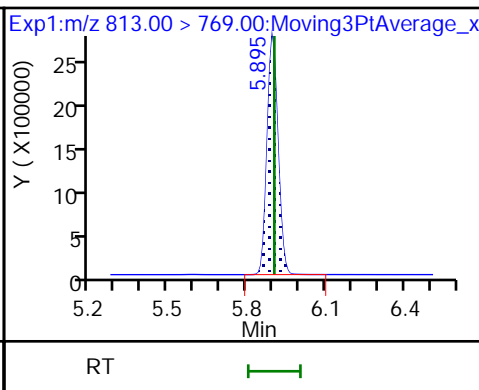
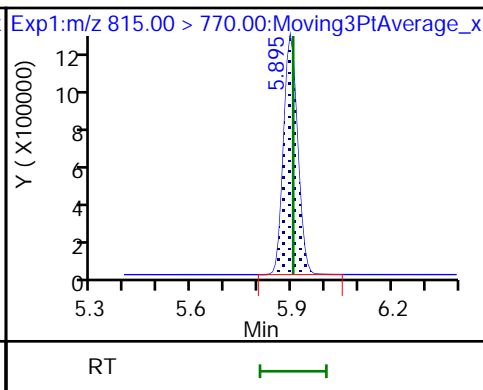
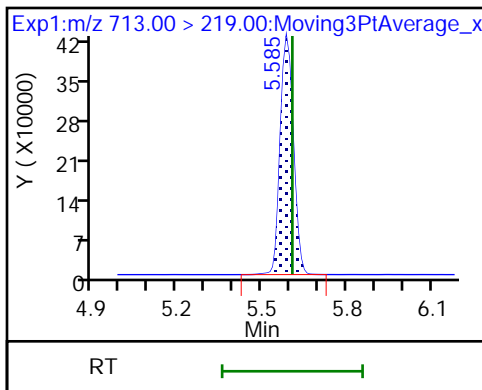
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

D 59 13C2 PFHxDA

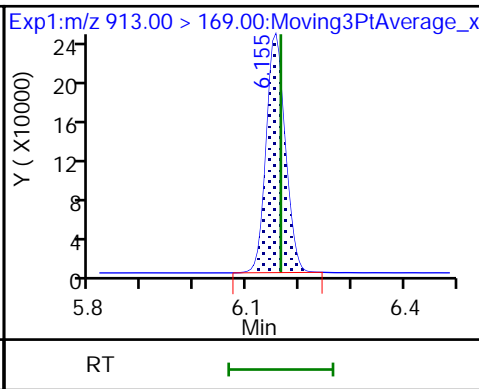
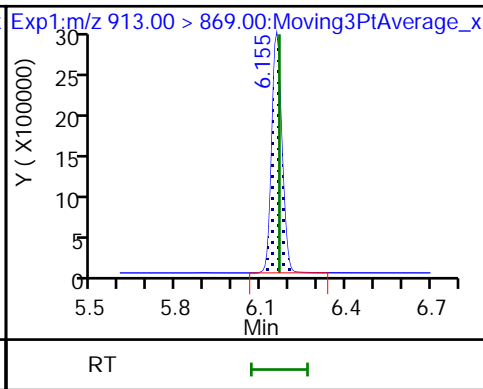
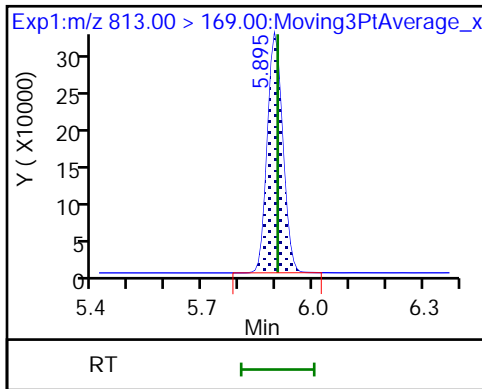
55 Perfluorohexadecanoic acid



55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid





Eurofins TestAmerica, Knoxville

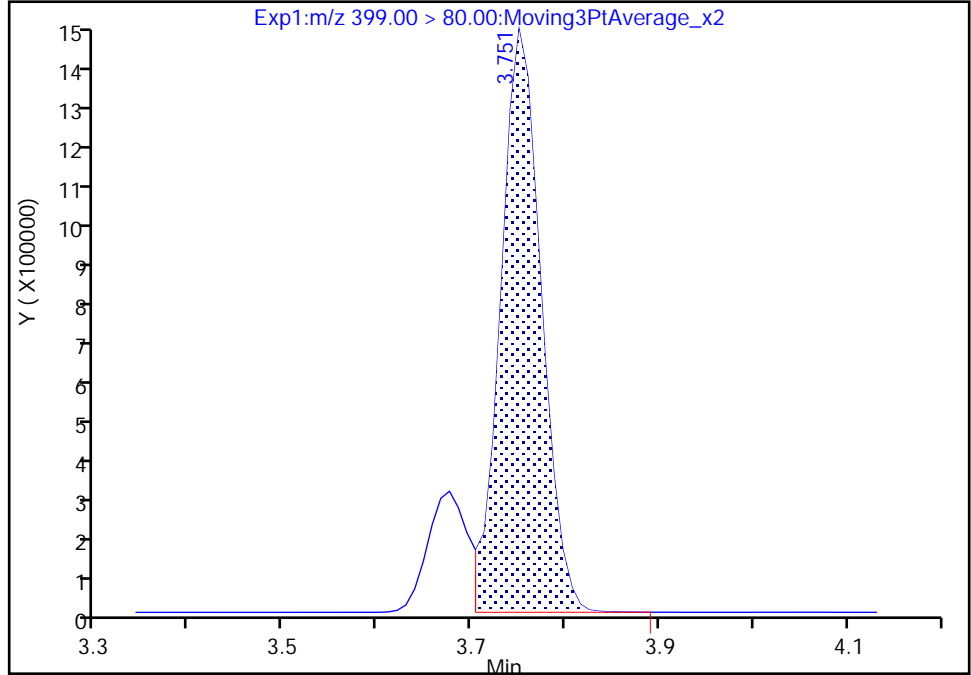
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Injection Date: 09-Jan-2022 14:26:14 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

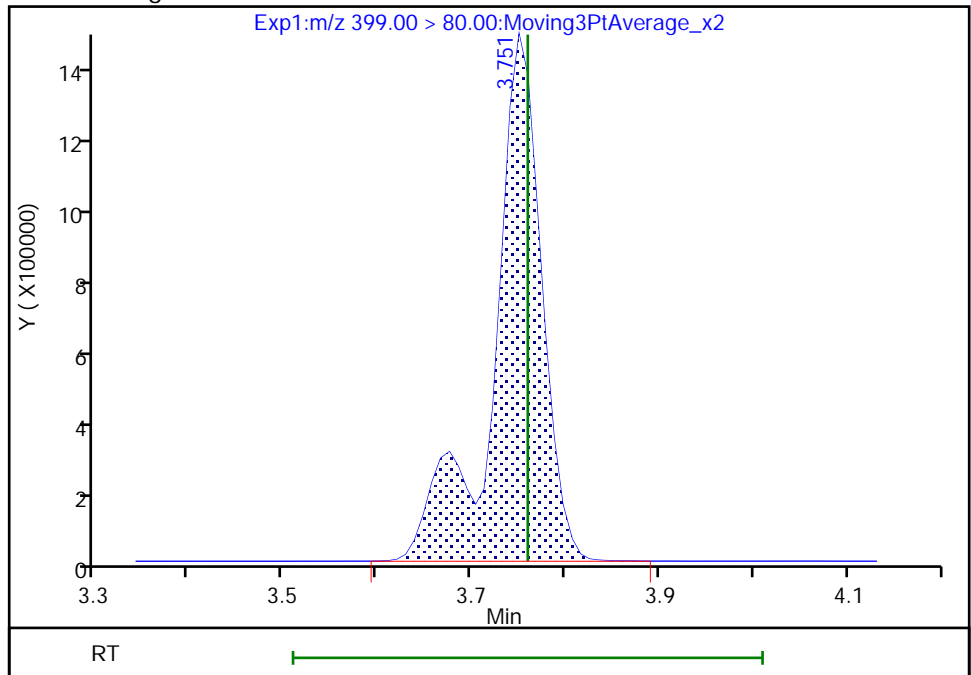
RT: 3.75  
Area: 4279385  
Amount: 1.943781  
Amount Units: ng/ml

Processing Integration Results



RT: 3.75  
Area: 5133204  
Amount: 2.331602  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 13:35:42  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

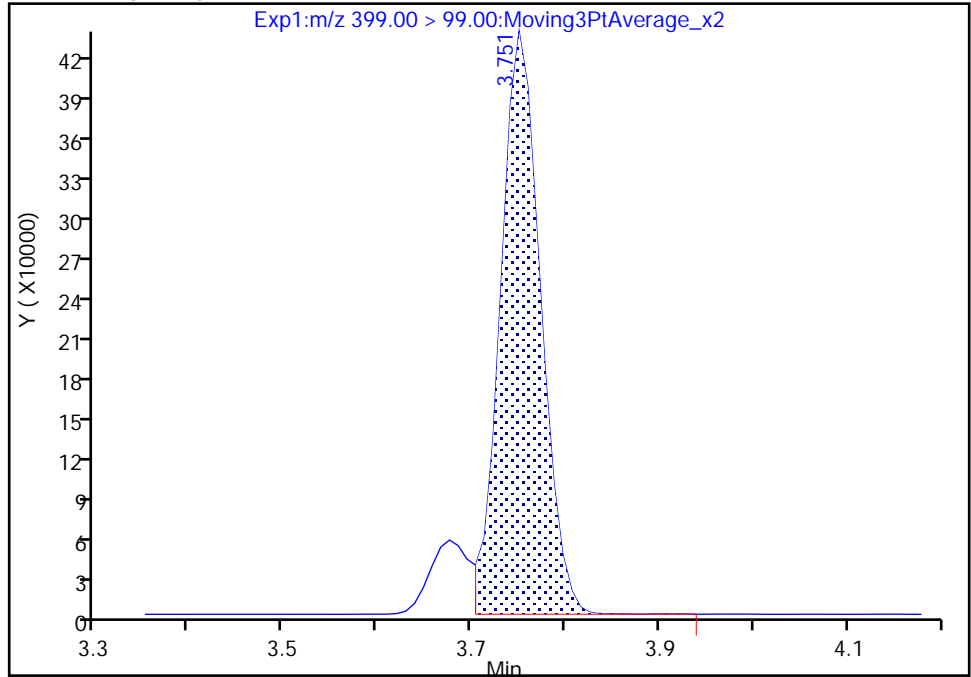
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Injection Date: 09-Jan-2022 14:26:14 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

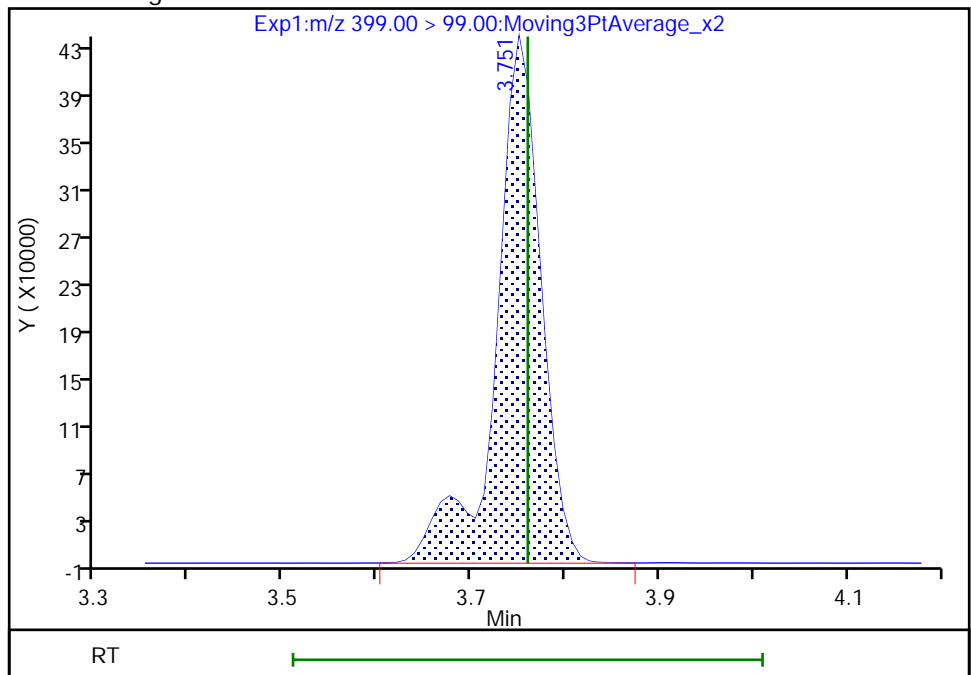
RT: 3.75  
Area: 1302260  
Amount: 1.943781  
Amount Units: ng/ml

Processing Integration Results



RT: 3.75  
Area: 1462866  
Amount: 2.331602  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 13:35:48

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

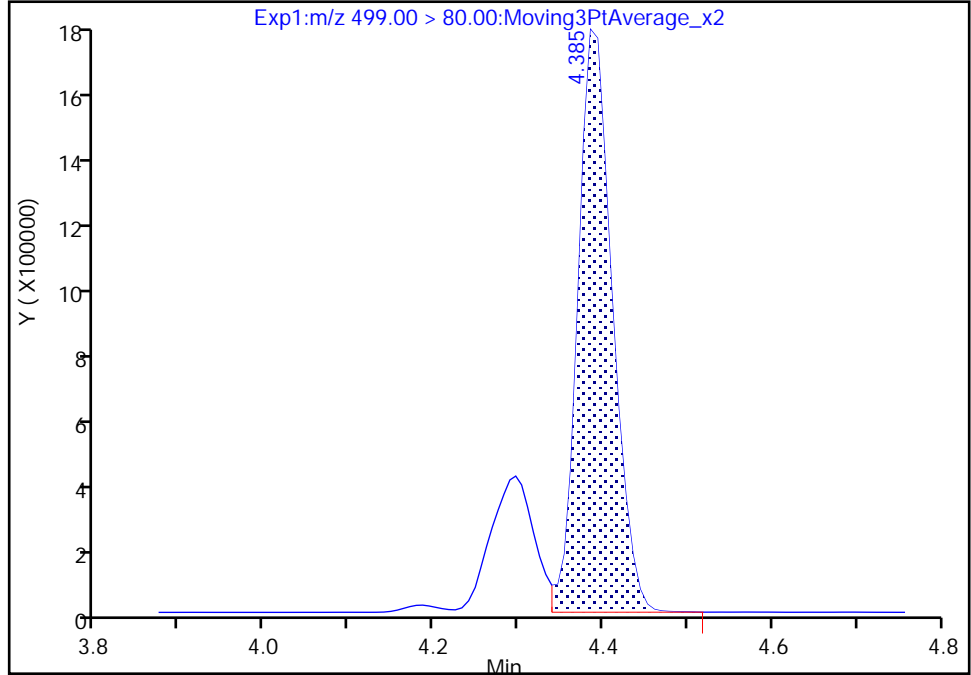
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Operator ID: Cochran, Bobby ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

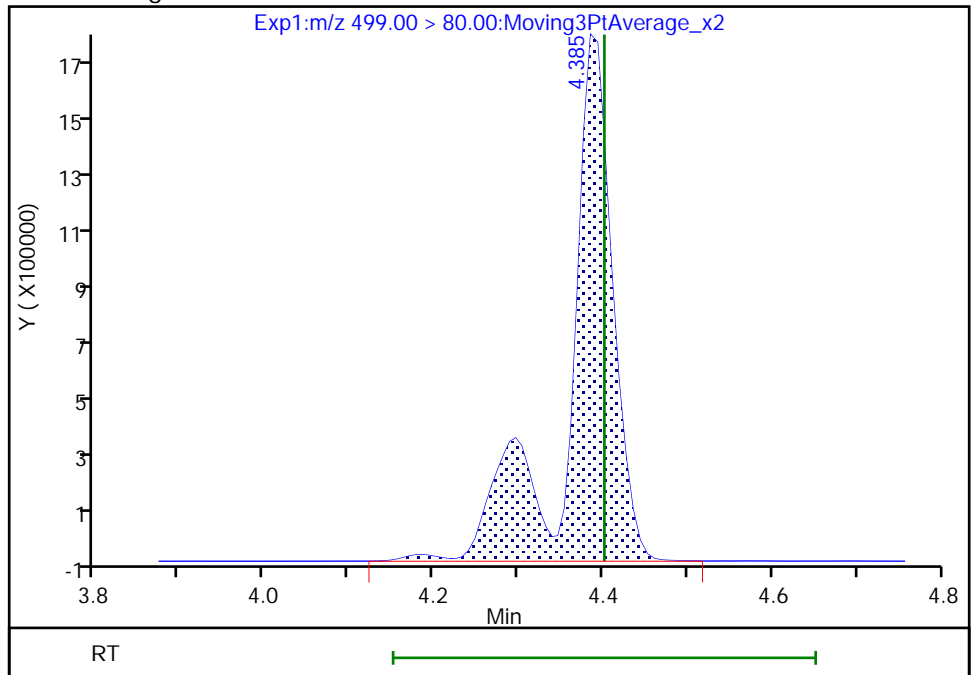
RT: 4.39  
Area: 4813560  
Amount: 1.797231  
Amount Units: ng/ml

Processing Integration Results



RT: 4.39  
Area: 6295888  
Amount: 2.350686  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 13:36:00  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

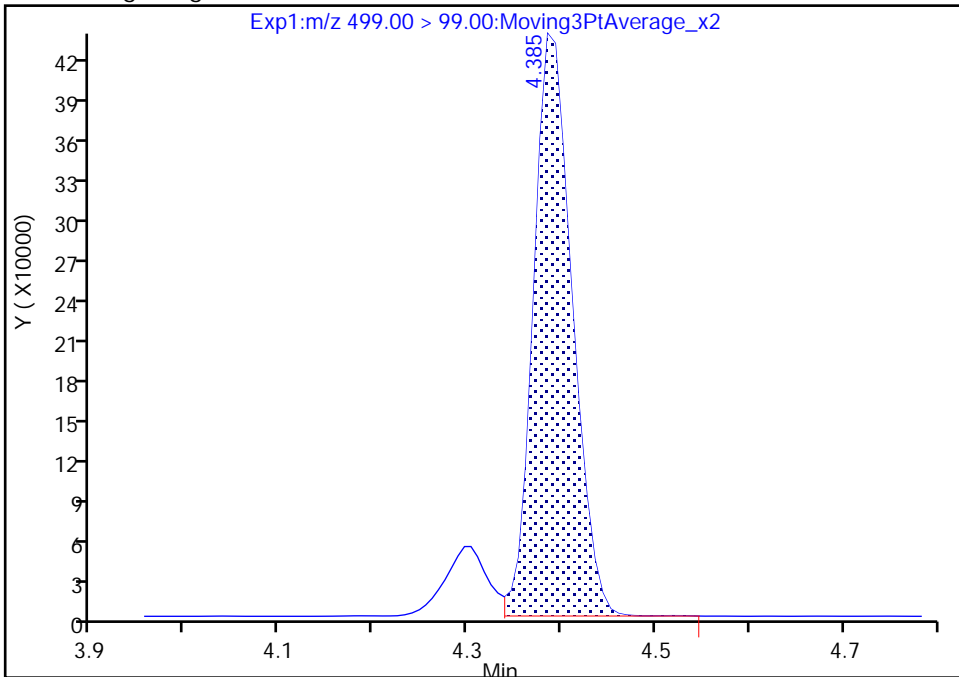
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Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

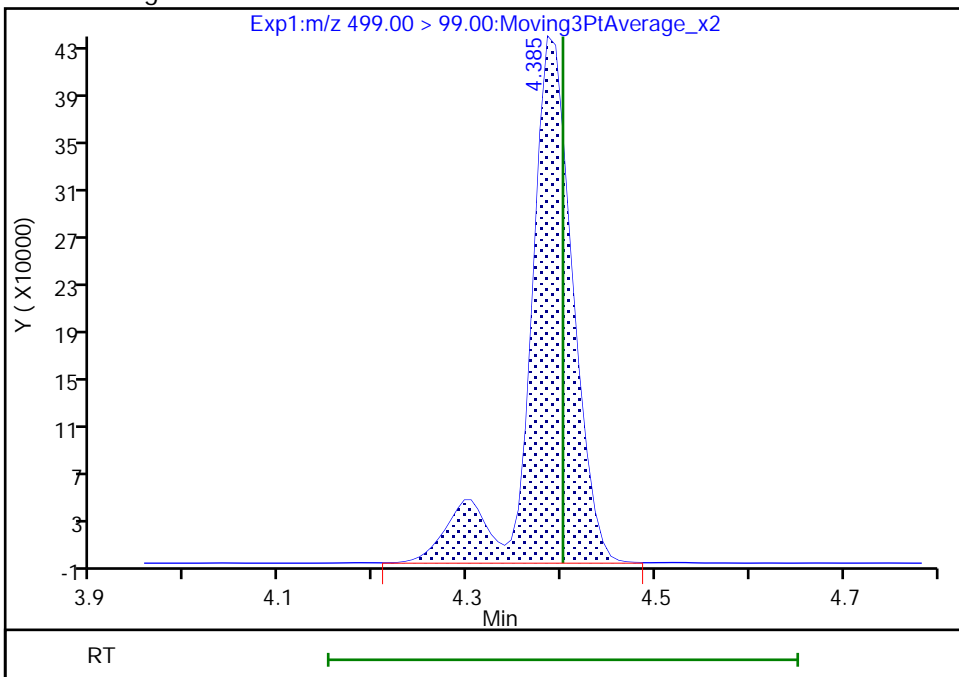
RT: 4.39  
Area: 1251599  
Amount: 1.797231  
Amount Units: ng/ml

Processing Integration Results



RT: 4.39  
Area: 1418173  
Amount: 2.350686  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 13:36:08

Audit Action: Manually Integrated

Audit Reason: Baseline  
Page 343 of 620



Eurofins TestAmerica, Knoxville

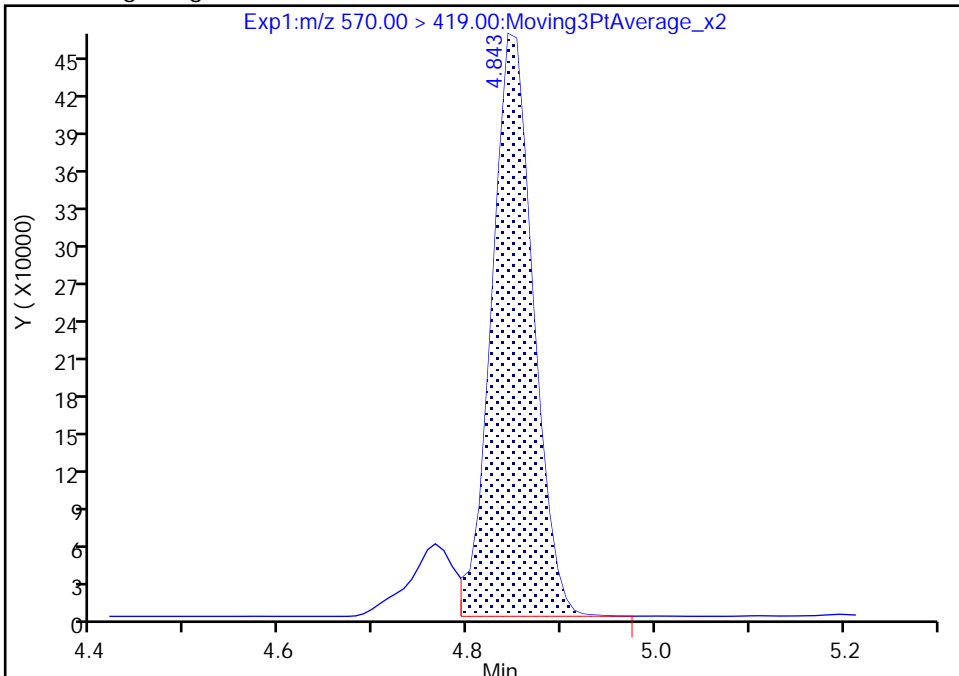
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Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

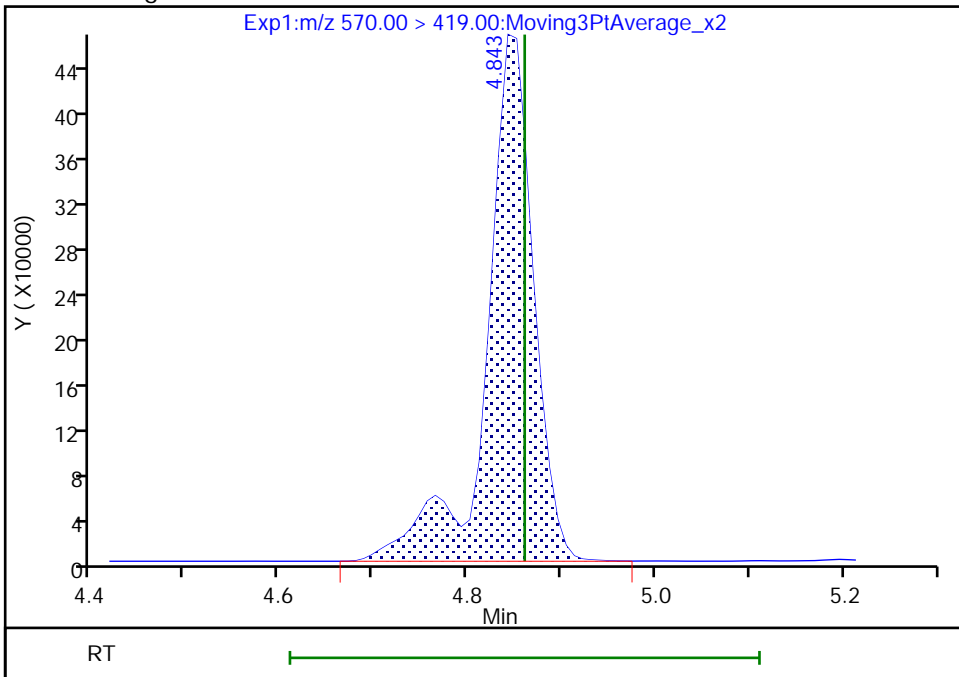
RT: 4.84  
Area: 1421403  
Amount: 2.202601  
Amount Units: ng/ml

Processing Integration Results



RT: 4.84  
Area: 1610684  
Amount: 2.494780  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 13:36:21  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

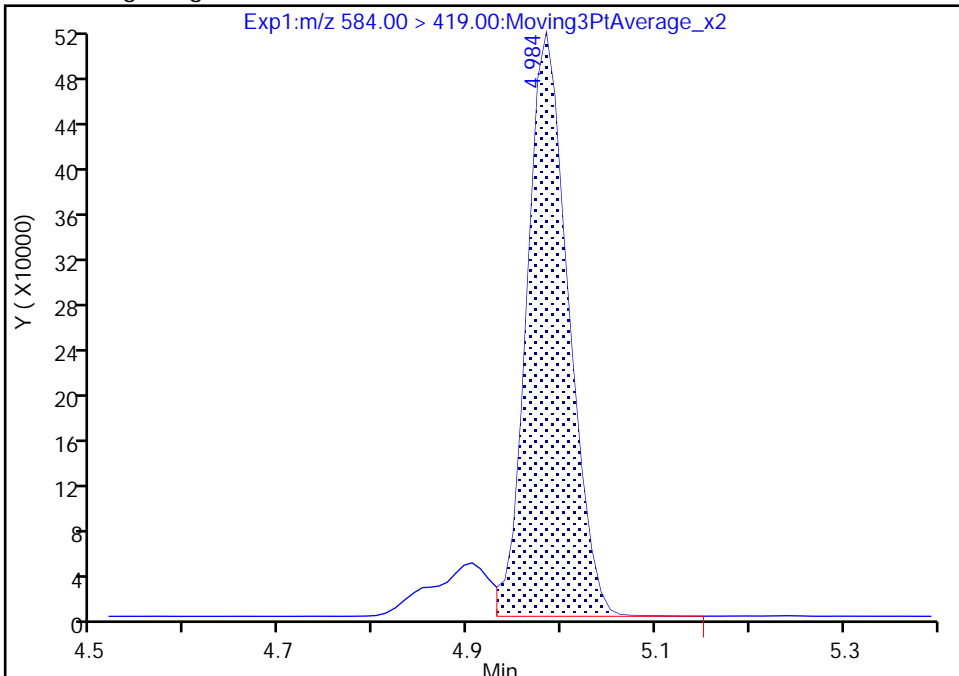
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Injection Date: 09-Jan-2022 14:26:14 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

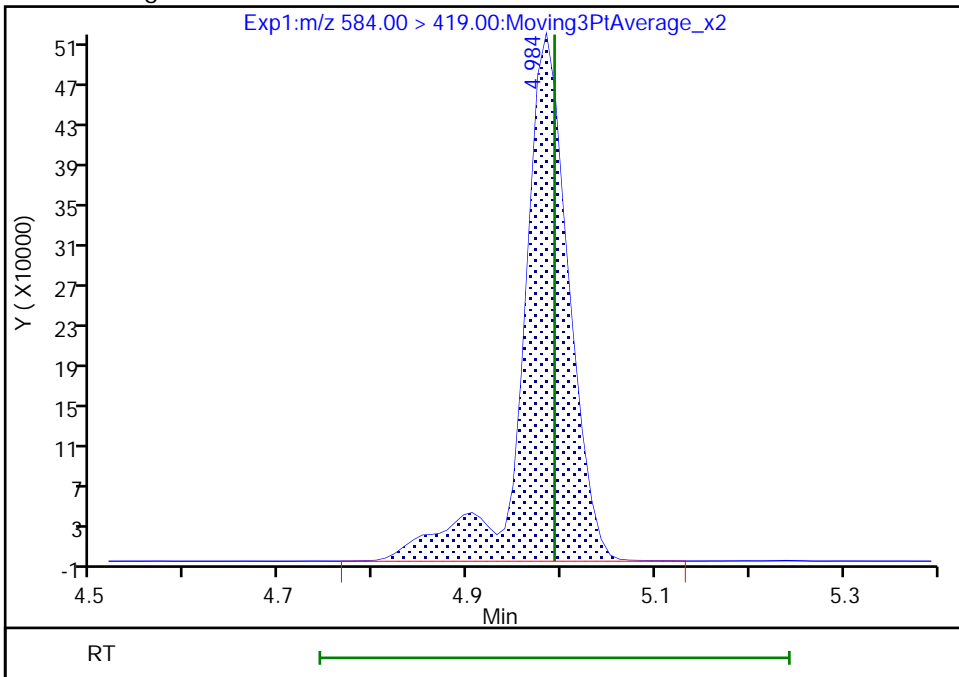
RT: 4.98  
Area: 1583683  
Amount: 2.275467  
Amount Units: ng/ml

Processing Integration Results



RT: 4.98  
Area: 1786304  
Amount: 2.563577  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 13:36:32  
Audit Action: Manually Integrated

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVL 140-57822/6 Calibration Date: 01/11/2022 17:39  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 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	0.7844	0.7531		0.0480	0.0500	-4.0	50.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9519	0.9511		0.0500	0.0500	-0.0	50.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.097	1.129		0.0455	0.0442	2.9	50.0
4:2 FTS	AveID	2.252	2.326		0.0482	0.0467	3.3	50.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8680	0.8994		0.0518	0.0500	3.6	50.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	0.9713	0.9840		0.0475	0.0469	1.3	50.0
HFPO-DA	AveID	1.352	1.325		0.0490	0.0500	-2.0	50.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.377	1.418		0.0468	0.0455	3.0	50.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.047	1.069		0.0511	0.0500	2.1	50.0
DONA	AveID	2.630	2.573		0.0461	0.0471	-2.2	50.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9541	0.8795		0.0439	0.0476	-7.8	50.0
6:2 FTS	L2ID		1.796		0.0497	0.0474	4.8	50.0
Perfluorooctanoic acid (PFOA)	AveID	1.147	1.176		0.0513	0.0500	2.5	50.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.099	1.072		0.0453	0.0464	-2.5	50.0
Perfluorononanoic acid (PFNA)	Q2ID		0.8546		0.0527	0.0500	5.3	50.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	Q2ID		2.080		0.0476	0.0466	2.2	50.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9459	0.8813		0.0466	0.0500	-6.8	50.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9748	0.9911		0.0488	0.0480	1.7	50.0
Perfluorodecanoic acid (PFDA)	AveID	0.9645	1.015		0.0526	0.0500	5.3	50.0
8:2 FTS	AveID	1.415	1.515		0.0513	0.0479	7.0	50.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	QuaIF		0.9245		0.0476	0.0500	-4.7	50.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		0.9176		0.0503	0.0482	4.4	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9695	0.9688		0.0500	0.0500	-0.0	50.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Q2ID		1.002		0.0507	0.0500	1.5	50.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.672	1.504		0.0424	0.0471	-10.1	50.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9853		0.0476	0.0500	-4.8	50.0
10:2 FTS	AveID	2.276	2.174		0.0460	0.0482	-4.5	50.0
NMeFOSA	Q2ID		1.221		0.0588	0.0500	17.5	50.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	Q2ID		1.126		0.0520	0.0500	3.9	50.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9166	0.8629		0.0456	0.0484	-5.9	50.0

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVL 140-57822/6 Calibration Date: 01/11/2022 17:39  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 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	AveID	1.328	1.258		0.0474	0.0500	-5.2	50.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.195	1.268		0.0530	0.0500	6.1	50.0
Perfluorotridecanoic acid (PFTrIA)	AveID	0.8292	0.8246		0.0497	0.0500	-0.5	50.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1344	0.1435		0.0534	0.0500	6.8	50.0
Perfluorohexadecanoic acid	Q2ID		1.326		0.0521	0.0500	4.1	50.0
Perfluorooctadecanoic acid	AveID	0.9844	0.9216		0.0468	0.0500	-6.4	50.0
13C4 PFBA	Ave	1.142	1.013		1.11	1.25	-11.3	50.0
13C5 PFPeA	Ave	0.8865	0.8213		1.16	1.25	-7.4	50.0
13C3 PFBS	Ave	0.5913	0.5455		1.07	1.16	-7.7	50.0
M2-4:2 FTS	Ave	0.1820	0.1892		1.21	1.17	4.0	50.0
13C2 PFHxA	Ave	0.9479	0.8436		1.11	1.25	-11.0	50.0
13C3 HFPO-DA	Ave	0.4556	0.4025		1.10	1.25	-11.7	50.0
18O2 PFHxS	Ave	0.3946	0.3987		1.20	1.18	1.0	50.0
13C4 PFHpA	Ave	0.9067	0.8573		1.18	1.25	-5.4	50.0
13C4 PFOA	Ave	0.9376	0.9458		1.26	1.25	0.9	50.0
M2-6:2 FTS	Ave	0.1835	0.1803		1.17	1.19	-1.7	50.0
13C4 PFOS	Ave	0.5681	0.5545		1.17	1.20	-2.4	50.0
13C5 PFNA	Ave	1.234	1.183		1.20	1.25	-4.1	50.0
13C8 FOSA	Ave	0.7682	0.7818		1.27	1.25	1.8	50.0
13C2 PFDA	Ave	1.191	1.193		1.25	1.25	0.2	50.0
M2-8:2 FTS	Ave	0.2070	0.2099		1.21	1.20	1.4	50.0
d3-NMeFOSAA	Ave	0.1401	0.1622		1.45	1.25	15.7	50.0
13C2 PFUnA	Ave	1.189	1.142		1.20	1.25	-3.9	50.0
d5-NEtFOSAA	Ave	0.1537	0.1761		1.43	1.25	14.5	50.0
13C2 PFDoA	Ave	1.247	1.126		1.13	1.25	-9.7	50.0
d7-N-MeFOSE-M	Ave	0.1499	0.1327		1.11	1.25	-11.5	50.0
d-N-MeFOSA-M	Ave	0.1069	0.0942		1.10	1.25	-11.8	50.0
d9-N-EtFOSE-M	Ave	0.1504	0.1347		1.12	1.25	-10.4	50.0
d-N-EtFOSA-M	Ave	0.0883	0.0787		1.11	1.25	-10.9	50.0
13C2 PFTeDA	Ave	0.9508	0.7926		1.04	1.25	-16.6	50.0
13C2 PFHxDA	Ave	0.6444	0.5309		1.03	1.25	-17.6	50.0
13C8 PFOA	AveID	0.999	1.008		1.26	1.25	0.9	50.0
13C8 PFOS	AveID	0.2220	0.2271		1.22	1.20	2.3	50.0

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_006.d  
 Lims ID: CCVL  
 Client ID:  
 Sample Type: CCVL  
 Inject. Date: 11-Jan-2022 17:39:19 ALS Bottle#: 6 Worklist Smp#: 6  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022220-006 ccvl  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 12-Jan-2022 18:43:08 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1648

First Level Reviewer: cochranj Date: 11-Jan-2022 17:51:50

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	2.815	2.814	0.001	0.677	5737276	1.11	88.7	14399	
2 Perfluorobutanoic acid	212.90 > 169.00	2.822	2.814	0.008	1.002	172821	0.0480	96.0	52.6	
D 3 13C5 PFPeA	267.90 > 223.00	3.132	3.131	0.001	0.753	4651392	1.16	92.6	10870	
4 Perfluoropentanoic acid	262.90 > 219.00	3.132	3.131	0.001	1.000	176953	0.0500	99.9	93.8	
D 6 13C3 PFBS	301.90 > 80.00	3.148	3.147	0.001	0.757	2873390	1.07	92.3	12200	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.148	3.147	0.001	1.000	123309	0.0455	Target=2.65	103	971
	298.90 > 99.00	3.148	3.147	0.001	1.000	43390		2.84(1.32-3.97)		403
D 8 M2-4:2 FTS	329.00 > 81.00	3.442	3.442	0.0	0.828	1000839	1.21	104	1841	
7 4:2 FTS	327.00 > 307.00	3.442	3.442	0.0	1.000	93117	0.0482	103	1579	
D 9 13C2 PFHxA	315.00 > 270.00	3.473	3.472	0.001	0.836	4777819	1.11	89.0	11564	
10 Perfluorohexanoic acid	313.00 > 269.00	3.473	3.472	0.001	1.000	171883	0.0518	Target=11.80	104	117
	313.00 > 119.00	3.473	3.472	0.001	1.000	14122		12.17(5.90-17.70)		19.7
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.473	3.472	0.001	1.103	114071	0.0475	Target=3.44	101	441
	349.00 > 99.00	3.473	3.472	0.001	1.103	34995		3.26(1.72-5.16)		541
D 12 13C3 HFPO-DA	287.00 > 169.00	3.575	3.574	0.001	0.860	2279394	1.10	88.3	5333	

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	3.574	0.001	1.000	120809	0.0490		98.0	105	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.807	3.807	0.0	1.000	116541	0.0468	Target=3.40	103	671	M
399.00 > 99.00	3.807	3.807	0.0	1.000	31296		3.72(1.70-5.10)		300	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.807	3.807	0.0	0.916	2136204	1.19		101	7750	
D 14 13C4 PFHpA										
367.00 > 322.00	3.826	3.825	0.001	0.920	4855593	1.18		94.6	9333	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.826	3.825	0.001	1.000	207619	0.0511	Target=3.29	102	189	
363.00 > 169.00	3.826	3.825	0.001	1.000	61479		3.38(1.65-4.94)		205	
68 DONA										
377.00 > 251.00	3.858	3.858	0.0	0.867	304483	0.0461	Target=1.82	97.8	1084	
377.00 > 85.00	3.858	3.858	0.0	0.867	178713		1.70(0.91-2.74)		132	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.140	4.140	0.0	0.930	105177	0.0439	Target=3.92	92.2	675	
449.00 > 99.00	4.140	4.140	0.0	0.930	29768		3.53(1.96-5.87)		304	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.156	4.149	0.007	1.000	970176	1.17		98.3	3545	
D 21 13C4 PFOA										
417.00 > 372.00	4.156	4.156	0.0	1.000	5356797	1.26		101	11643	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.156	4.156	0.0	1.000	5402324	1.26		101	11672	
19 6:2 FTS										
427.00 > 407.00	4.156	4.156	0.0	1.000	69558	0.0497		105	486	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.156	4.156	0.0	1.000	251999	0.0512	Target=2.59	102	229	
413.00 > 169.00	4.156	4.156	0.0	1.000	97113		2.59(1.30-3.89)		251	
* 22 13C2 PFOA										
415.00 > 370.00	4.156	4.156	0.0		5663654	1.25			9406	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.444	4.444	0.0	0.998	681696	1.22		102	4282	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.452	4.452	0.0	1.000	124955	0.0453	Target=4.65	97.5	557	M
499.00 > 99.00	4.452	4.452	0.0	1.000	25318		4.94(2.32-6.97)		161	M
D 25 13C4 PFOS										
503.00 > 80.00	4.452	4.452	0.0	1.071	3002349	1.17		97.6	7420	
26 Perfluorononanoic acid										
463.00 > 419.00	4.469	4.469	0.0	0.998	229106	0.0526	Target=4.65	105	358	
463.00 > 169.00	4.478	4.469	0.009	1.000	50091		4.57(2.32-6.97)		99.4	
D 27 13C5 PFNA										
468.00 > 423.00	4.478	4.469	0.009	1.077	6702421	1.20		95.9	9997	
63 9CIFOS										
531.00 > 351.00	4.608	4.608	0.0	1.035	243487	0.0476		102	1388	
D 34 13C8 FOSA										
506.00 > 78.00	4.724	4.723	0.001	1.136	4427901	1.27		102	5055	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
33 Perfluorooctanesulfonamide	498.00 > 78.00	4.724	4.723	0.001	1.000	156097	0.0466	93.2	562	
28 Perfluorononanesulfonic acid	549.00 > 80.00	4.732	4.732	0.0	1.063	119520	0.0488	Target=4.06	102	690
	549.00 > 99.00	4.732	4.732	0.0	1.063	30418	3.93(2.03-6.09)			382
D 32 13C2 PFDA	515.00 > 470.00	4.757	4.757	0.0	1.145	6756582	1.25		100	13688
29 Perfluorodecanoic acid	513.00 > 469.00	4.757	4.757	0.0	1.000	274384	0.0526	Target=11.30	105	321
	513.00 > 169.00	4.757	4.757	0.0	1.000	26248	10.45(5.65-16.95)			67.9
31 8:2 FTS	527.00 > 507.00	4.775	4.774	0.001	1.000	68988	0.0513		107	505
D 30 M2-8:2 FTS	529.00 > 81.00	4.775	4.774	0.001	1.149	1138776	1.21		101	1926
D 35 d3-NMeFOSAA	573.00 > 419.00	4.905	4.905	0.0	1.180	918426	1.45		116	3757
36 NMeFOSAA	570.00 > 419.00	4.905	4.905	0.0	1.000	33965	0.0476		95.3	96.8
										M
37 Perfluorodecanesulfonic acid	599.00 > 80.00	4.993	4.992	0.001	1.121	111117	0.0503	Target=3.79	104	651
	599.00 > 99.00	4.993	4.992	0.001	1.121	30314	3.67(1.90-5.69)			303
38 Perfluoroundecanoic acid	563.00 > 519.00	5.032	5.022	0.010	1.002	250609	0.0500	Target=8.45	99.9	514
	563.00 > 169.00	5.022	5.022	0.0	1.000	29667	8.45(4.22-12.67)			147
D 39 13C2 PFUnA	565.00 > 520.00	5.022	5.022	0.0	1.208	6467096	1.20		96.1	11039
40 NEtFOSA	584.00 > 419.00	5.042	5.042	0.0	1.000	39966	0.0507		101	185
										M
D 41 d5-NEtFOSAA	589.00 > 419.00	5.042	5.042	0.0	1.213	997403	1.43		115	6011
57 11C1FOS	631.00 > 451.00	5.122	5.122	0.0	1.150	177991	0.0424		89.9	1106
D 43 13C2 PFDoA	615.00 > 570.00	5.257	5.257	0.0	1.265	6374687	1.13		90.3	11468
42 Perfluorododecanoic acid	613.00 > 569.00	5.257	5.257	0.0	1.000	251248	0.0476	Target=6.99	95.2	295
	613.00 > 169.00	5.257	5.257	0.0	1.000	40213	6.25(3.50-10.49)			135
50 10:2 FTS	627.00 > 607.00	5.284	5.275	0.009	1.107	99669	0.0460		95.5	487
D 51 d7-N-MeFOSE-M	623.00 > 59.00	5.292	5.292	0.0	1.273	751777	1.11		88.5	614
D 58 d-N-MeFOSA-M	515.00 > 169.00	5.292	5.292	0.0	1.273	533759	1.10		88.2	54.1
61 NMeFOSA	512.00 > 169.00	5.292	5.292	0.0	1.000	26070	0.0588		118	181
49 N-MeFOSE-M	616.00 > 59.00	5.301	5.301	0.0	1.002	33859	0.0520		104	40.1

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
54 PFDoS										
699.00 > 80.00	5.435	5.425	0.011	1.221	104931	0.0456	Target=4.24	94.1	567	
699.00 > 99.00	5.435	5.425	0.011	1.221	27521		3.81(2.12-6.35)		253	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.444	5.444	0.0	1.310	762923	1.12		89.6	416	
62 N-EtFOSE-M										
630.00 > 59.00	5.464	5.464	0.0	1.004	38403	0.0474		94.8	35.8	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.464	5.464	0.0	1.039	210271	0.0497	Target=6.20	99.5	408	
663.00 > 169.00	5.464	5.464	0.0	1.039	32432		6.48(3.10-9.30)		163	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.464	5.464	0.0	1.315	445713	1.11		89.1	710	
56 N-EtFOSA-M										
526.00 > 169.00	5.464	5.464	0.0	1.000	22602	0.0530		106	171	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.648	5.650	-0.002	1.359	4488748	1.04		83.4	10283	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.648	5.650	-0.002	1.000	25762	0.0534	Target=1.05	107	115	
713.00 > 219.00	5.648	5.650	-0.002	1.000	21607		1.19(0.53-1.58)		130	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.955	5.948	0.007	1.433	3007083	1.03		82.4	5740	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.955	5.948	0.007	1.000	159489	0.0521	Target=8.09	104	399	
813.00 > 169.00	5.955	5.948	0.007	1.000	17969		8.88(4.05-12.14)		65.7	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.218	6.209	0.009	1.044	110854	0.0468	Target=11.53	93.6	292	
913.00 > 169.00	6.213	6.209	0.004	1.043	9200		12.05(5.77-17.30)		41.9	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

63L2PFC2T3\_00001

Amount Added: 1.00

Units: mL



Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\\_006.d

Injection Date: 11-Jan-2022 17:39:19

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

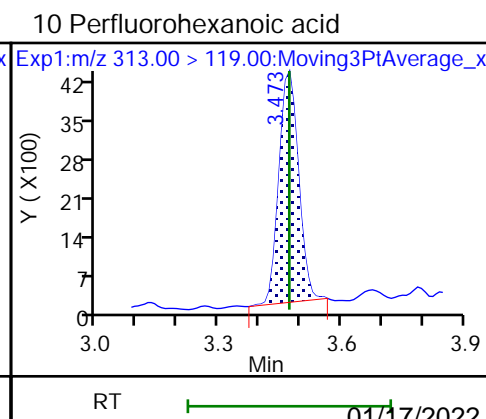
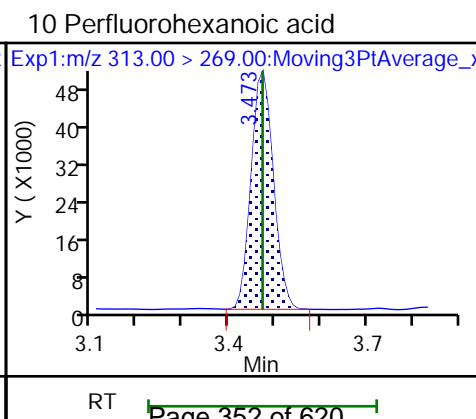
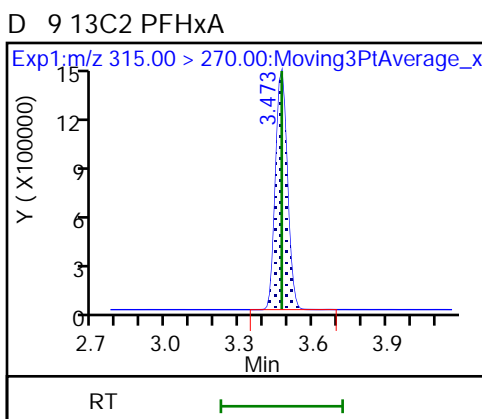
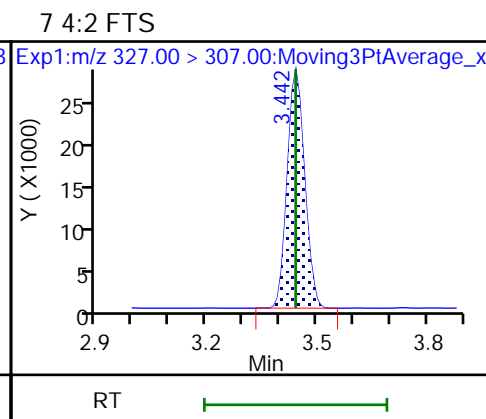
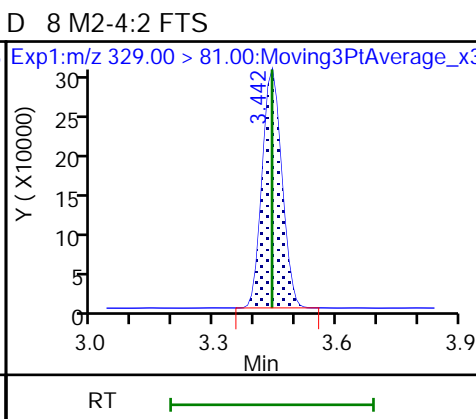
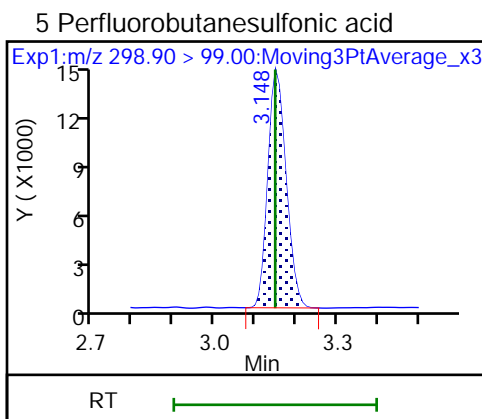
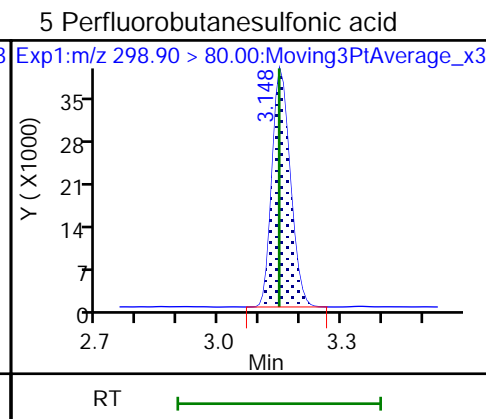
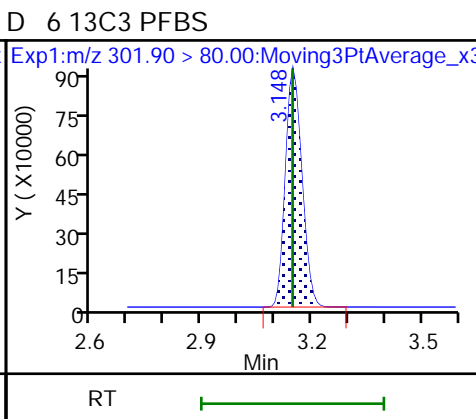
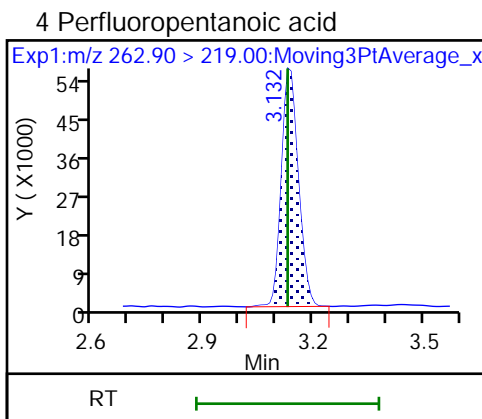
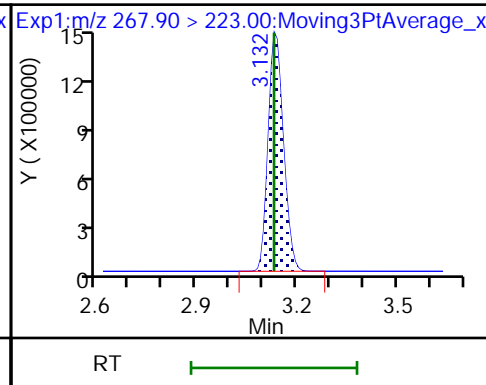
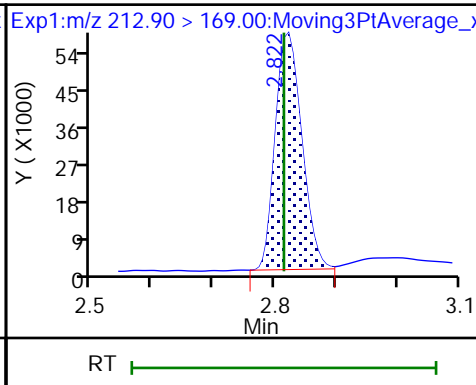
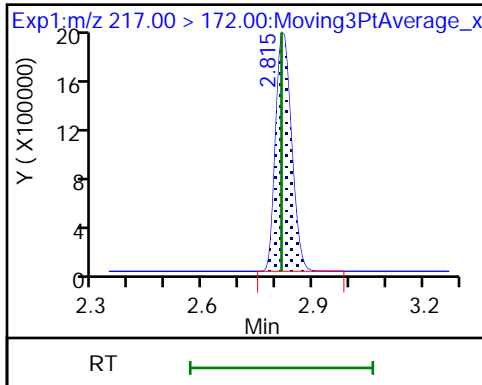
Method: PFC\_LCA

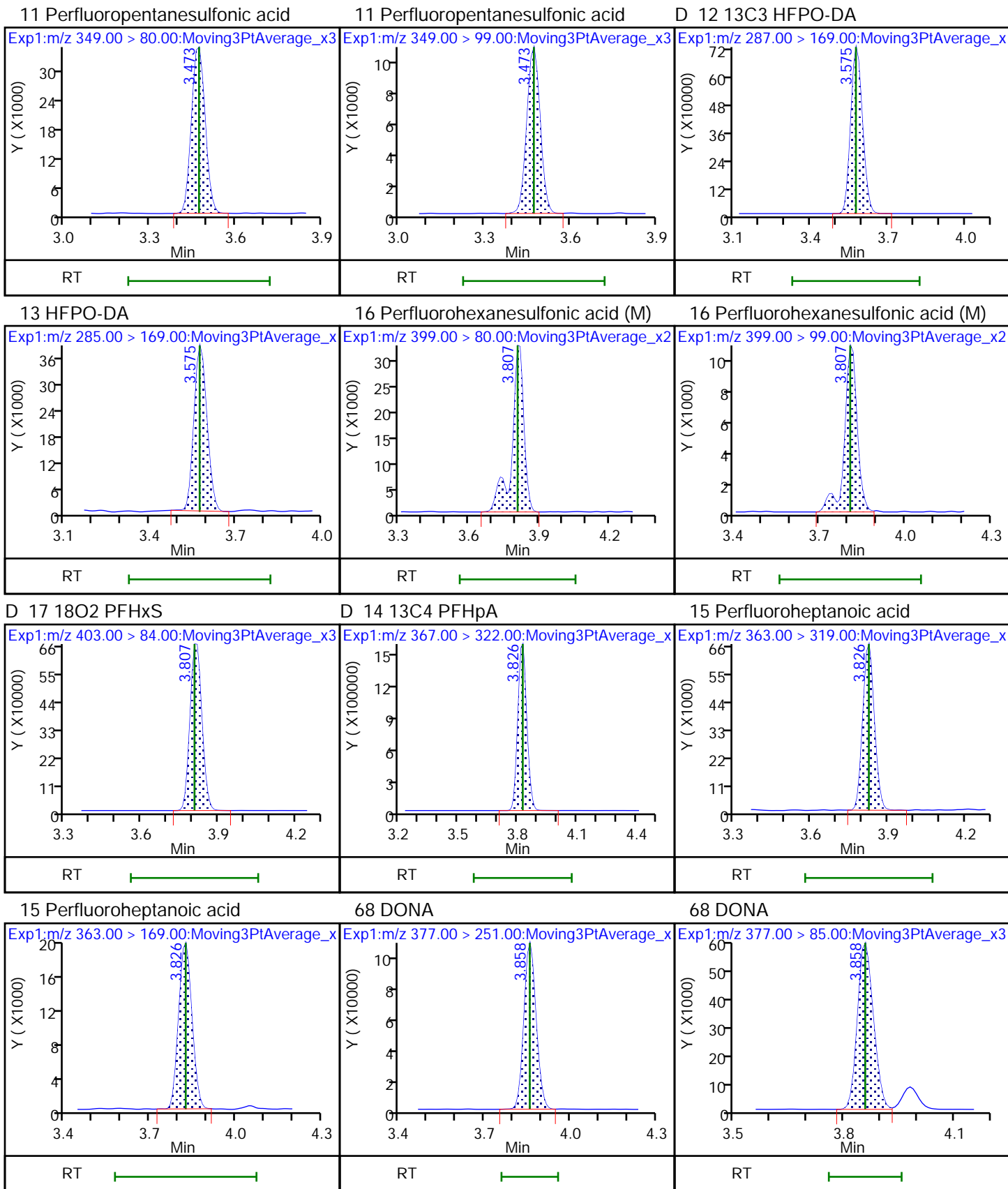
Limit Group: LC - PFC- ICAL

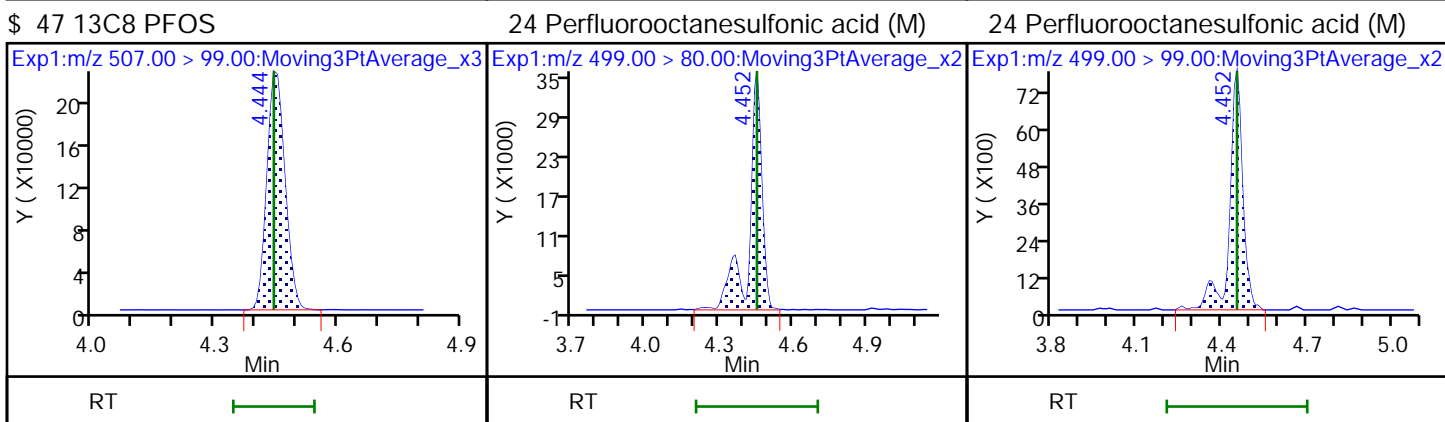
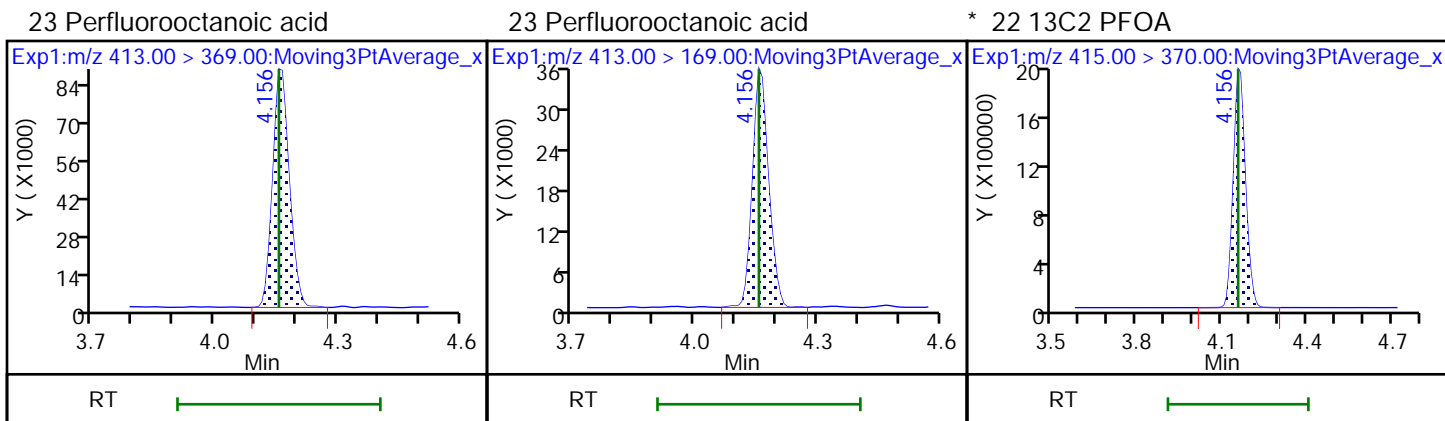
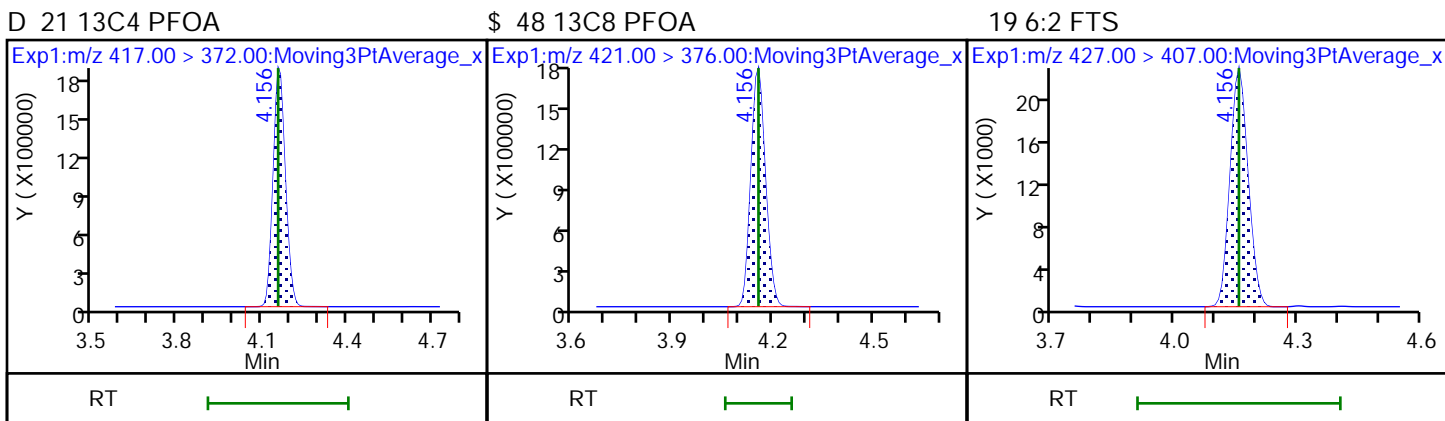
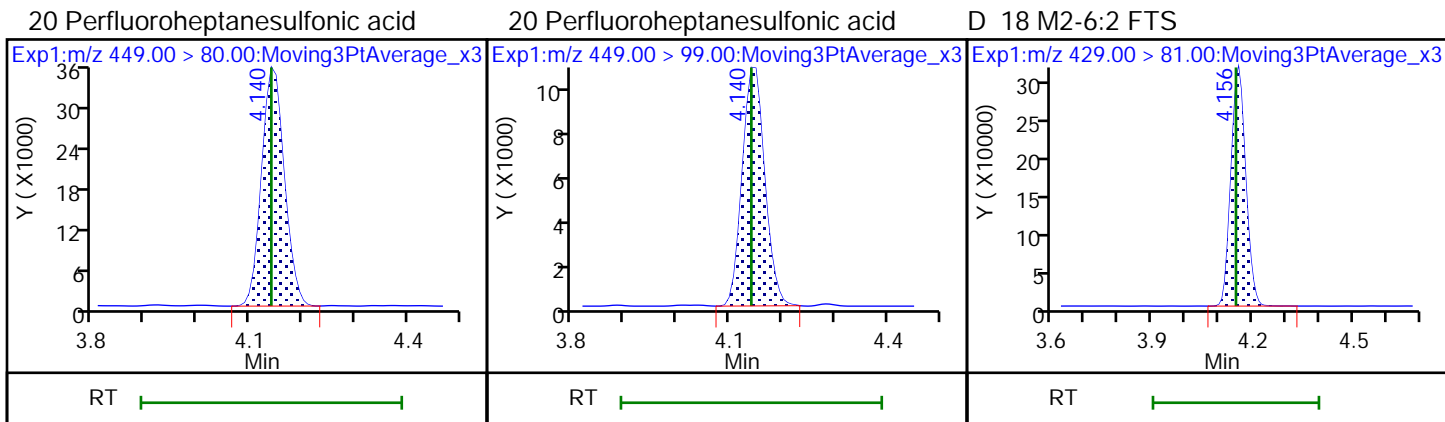
D 1 13C4 PFBA

2 Perfluorobutanoic acid

D 3 13C5 PFPeA



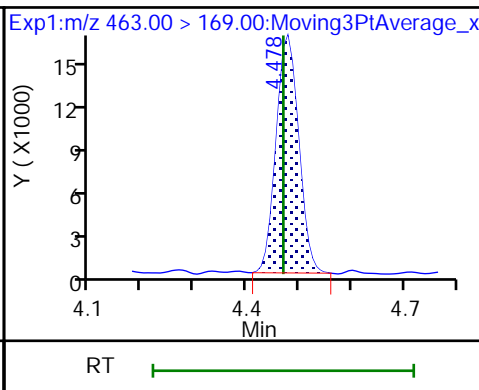
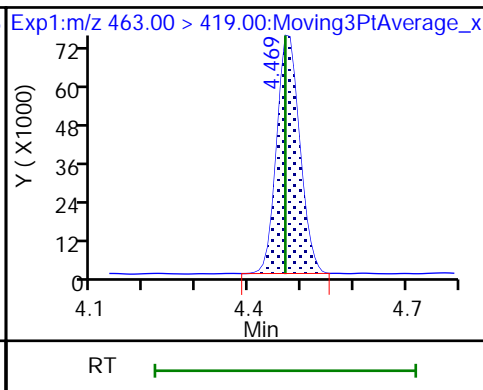
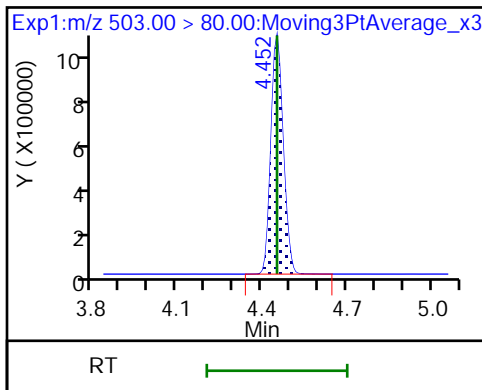




D 25 13C4 PFOS

26 Perfluorononanoic acid

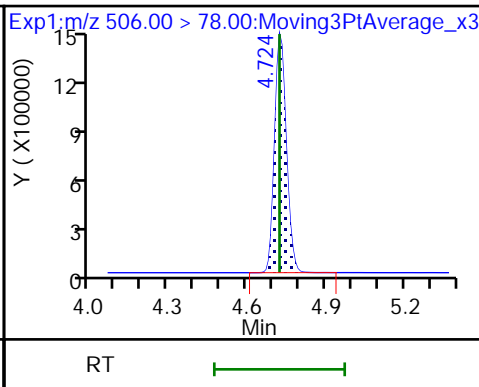
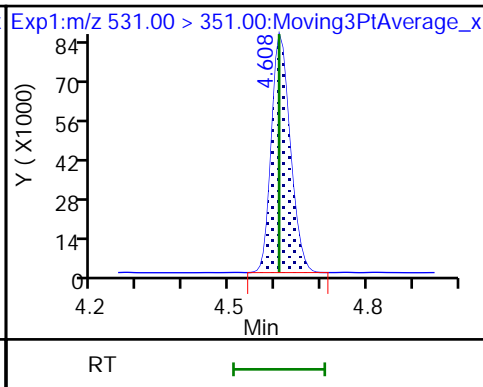
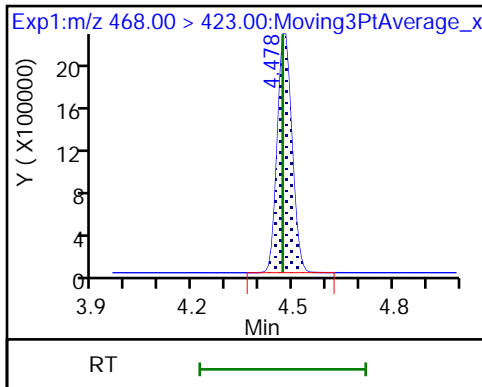
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS

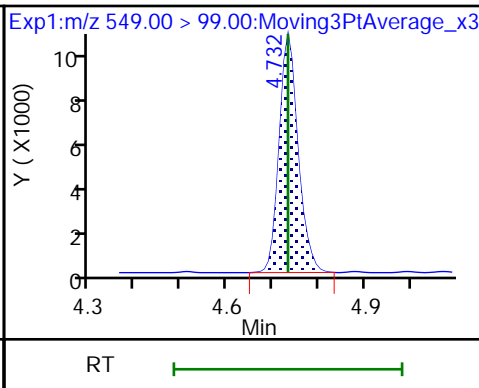
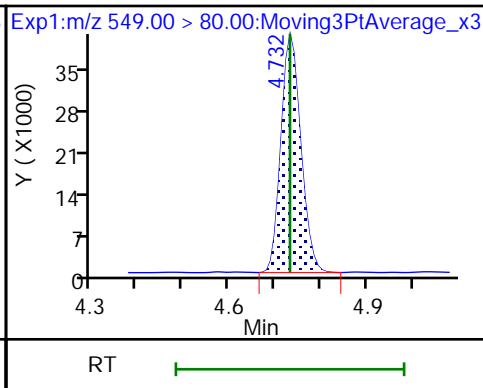
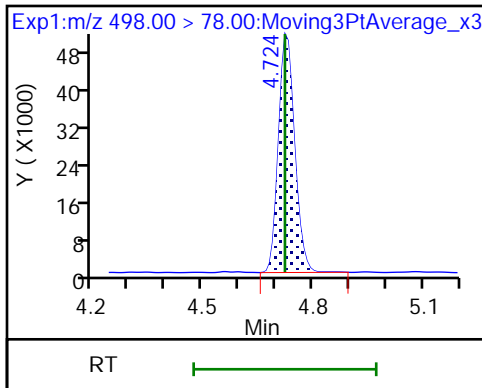
D 34 13C8 FOSA



33 Perfluorooctanesulfonamide

28 Perfluorononanesulfonic acid

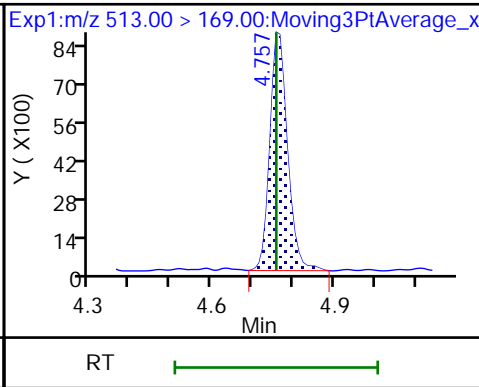
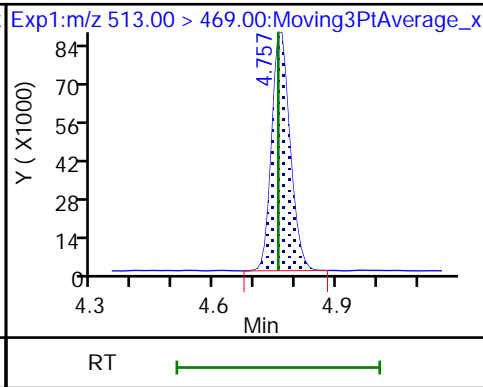
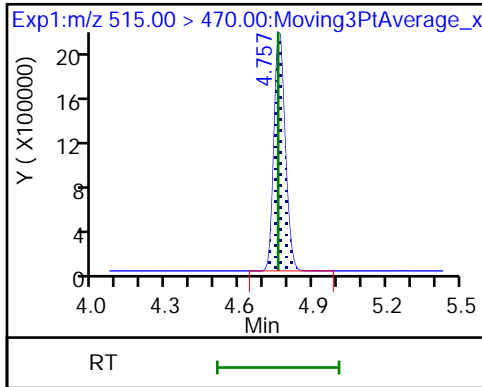
28 Perfluorononanesulfonic acid

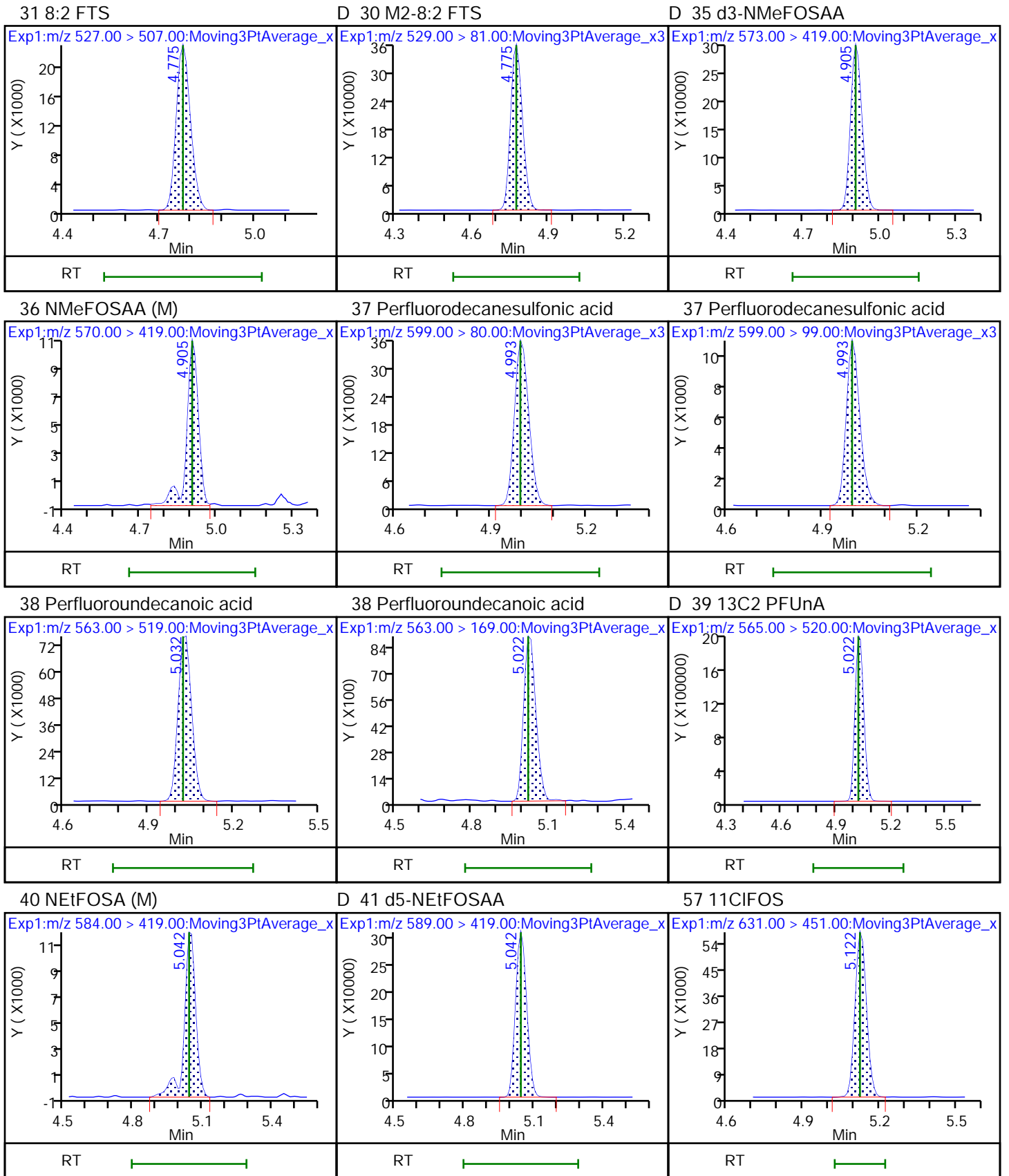


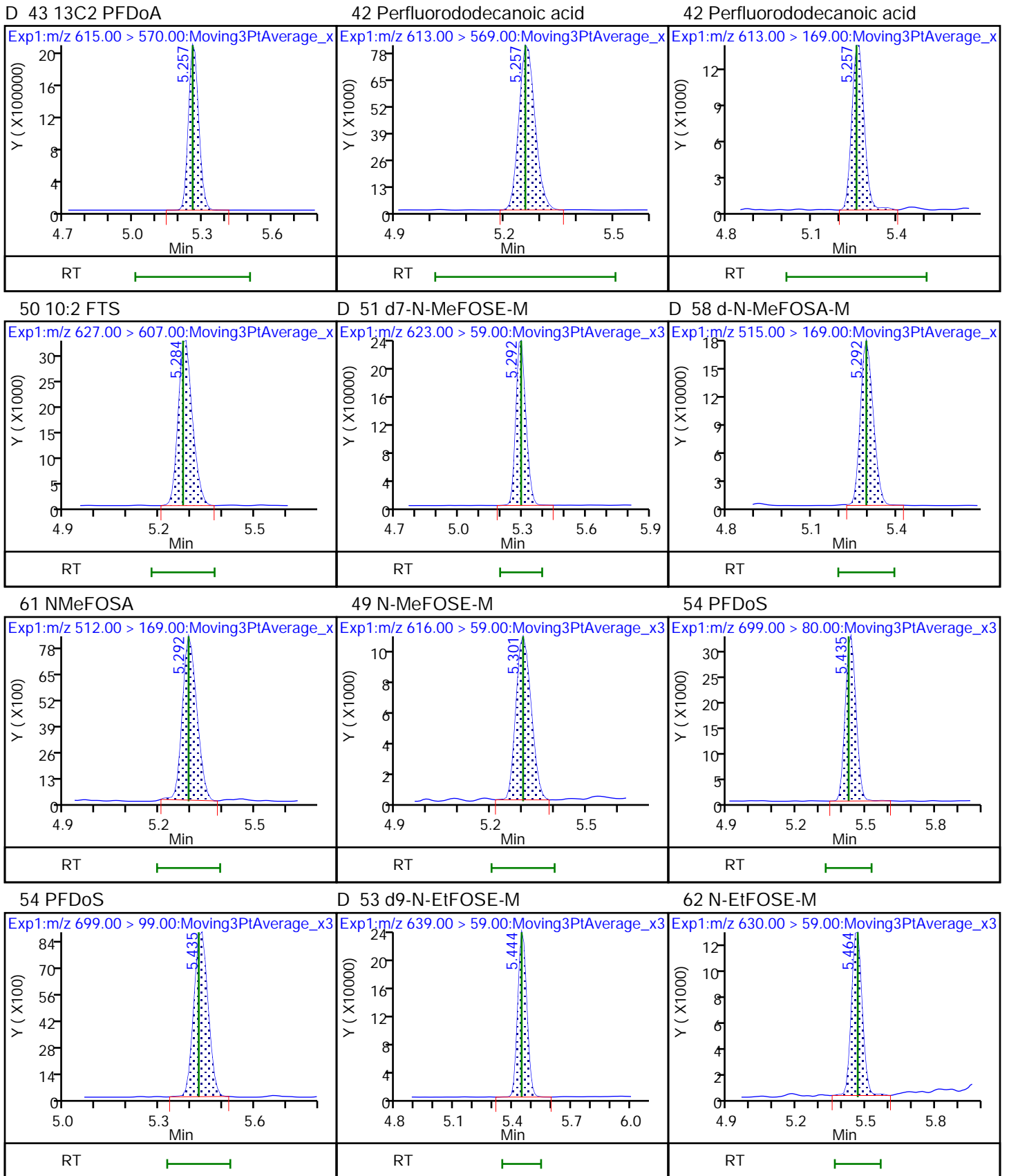
D 32 13C2 PFDA

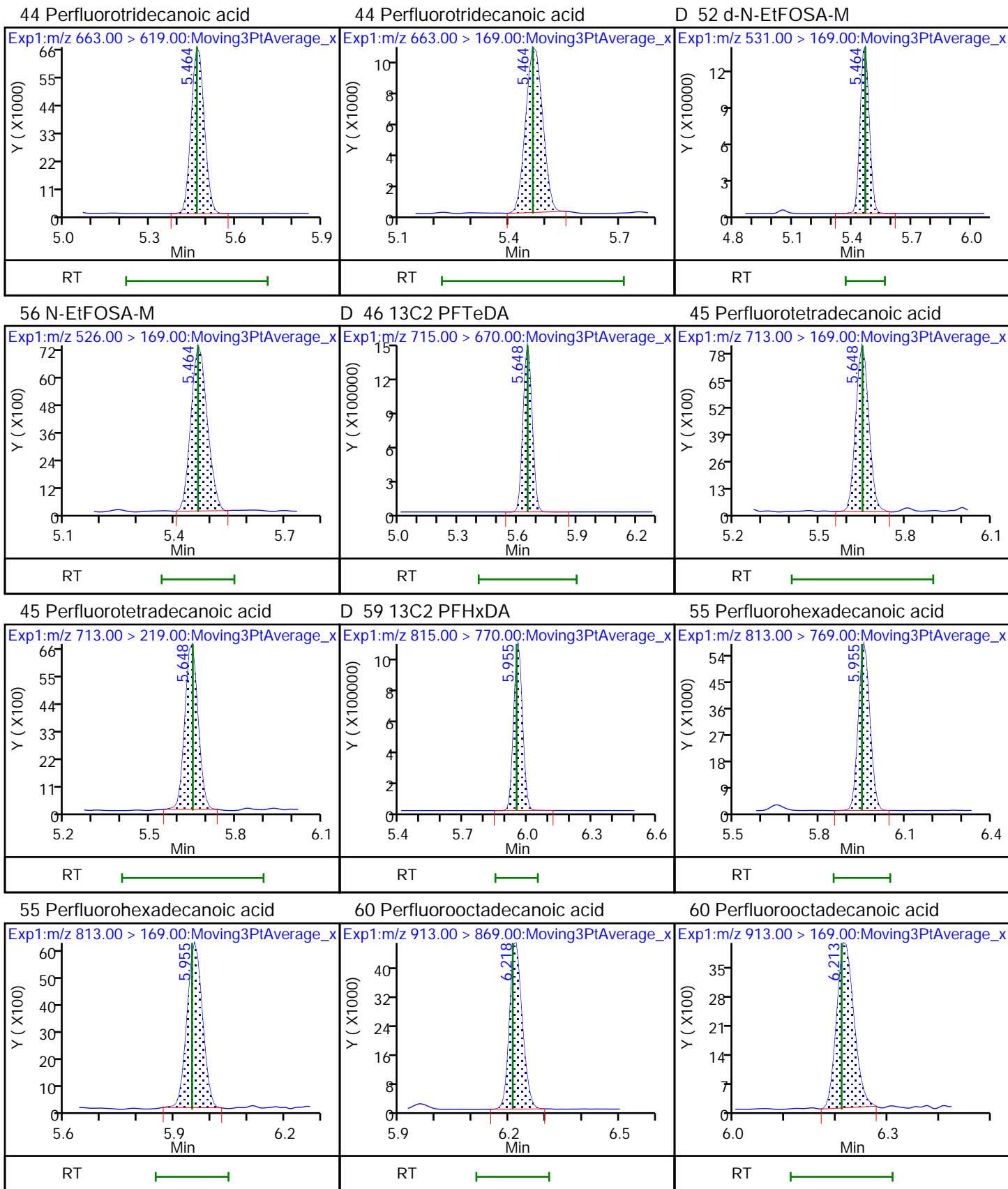
29 Perfluorodecanoic acid

29 Perfluorodecanoic acid













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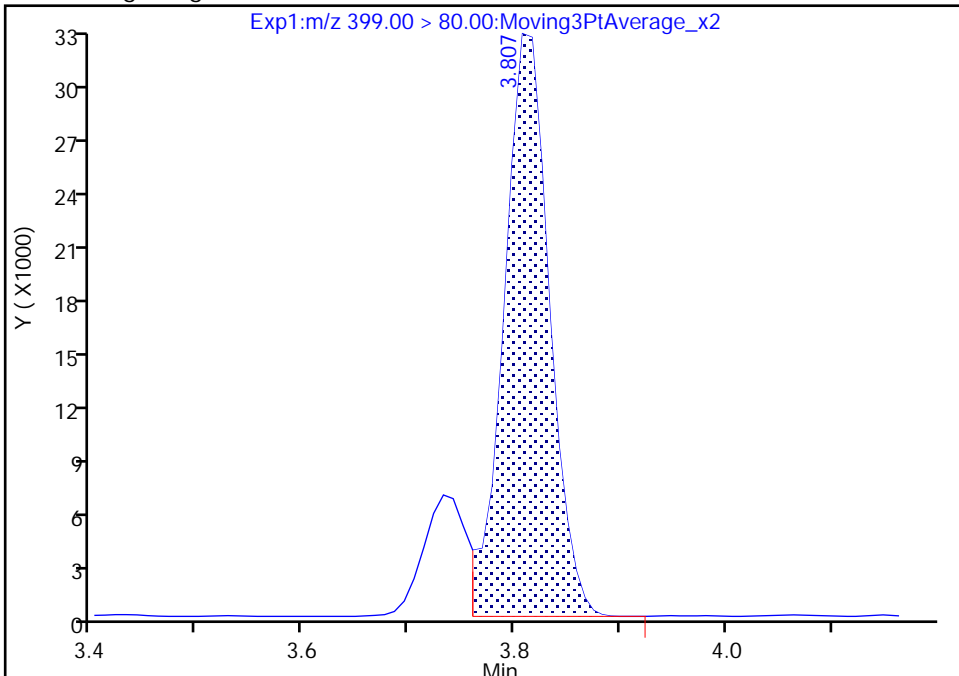
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Injection Date: 11-Jan-2022 17:39:19 Instrument ID: LCA  
Lims ID: CCVL  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

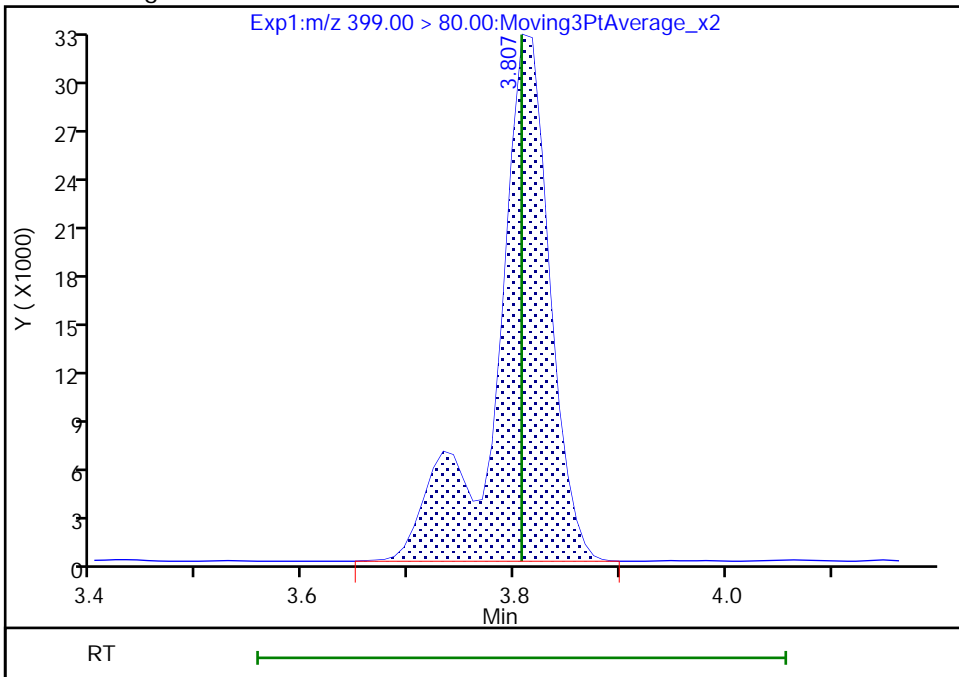
RT: 3.81  
Area: 97844  
Amount: 0.039327  
Amount Units: ng/ml

Processing Integration Results



RT: 3.81  
Area: 116541  
Amount: 0.046842  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 11-Jan-2022 17:59:54  
Audit Action: Manually Integrated

Audit Reason: Baseline

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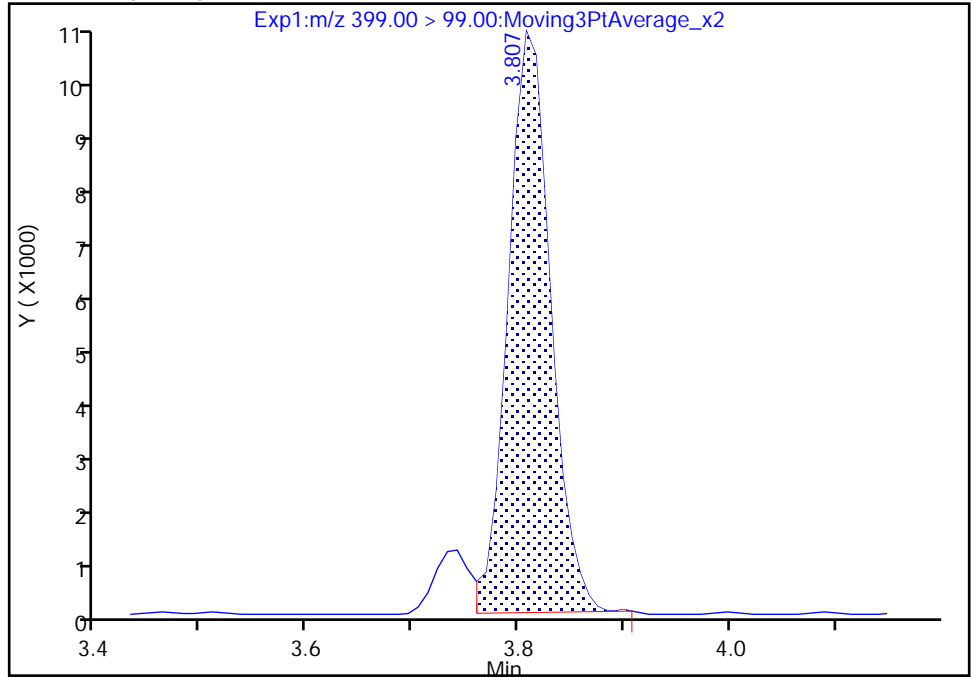
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Injection Date: 11-Jan-2022 17:39:19 Instrument ID: LCA  
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Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

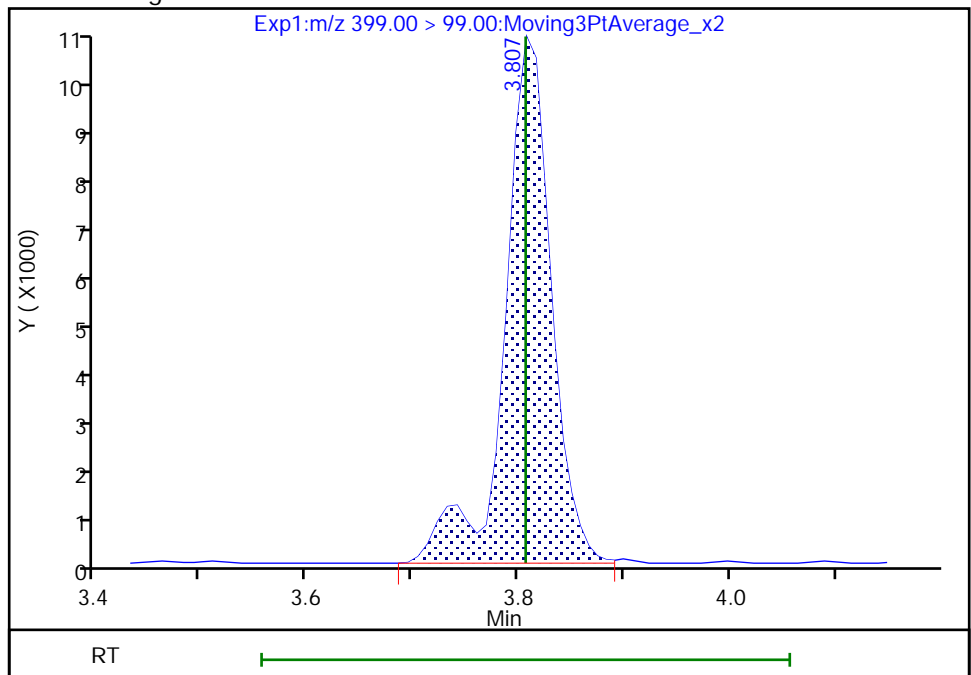
RT: 3.81  
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Amount: 0.039327  
Amount Units: ng/ml

Processing Integration Results



RT: 3.81  
Area: 31296  
Amount: 0.046842  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 11-Jan-2022 18:00:00

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

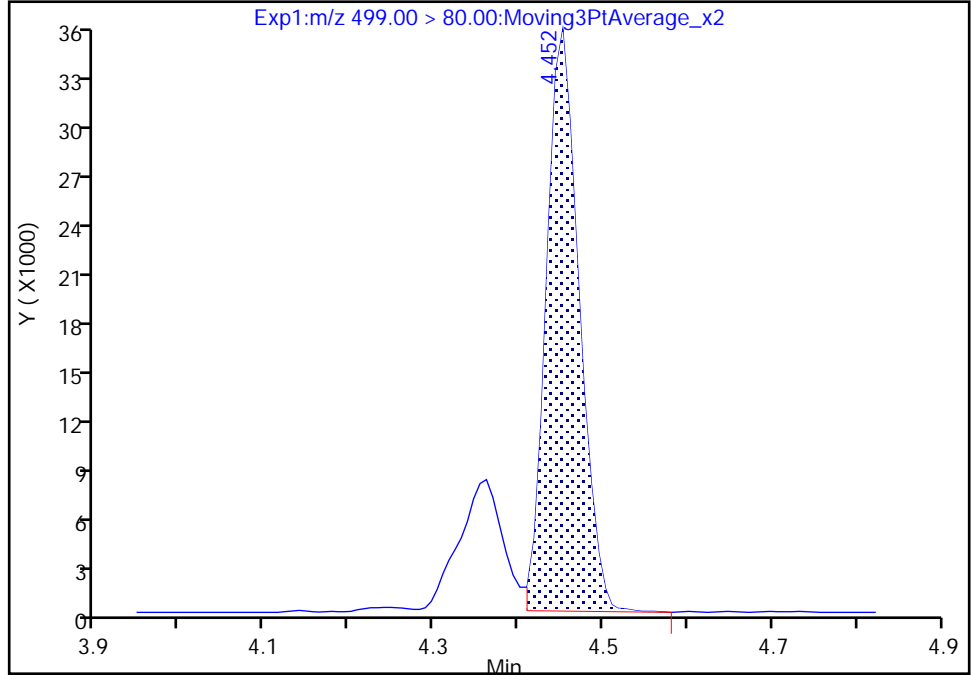
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Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

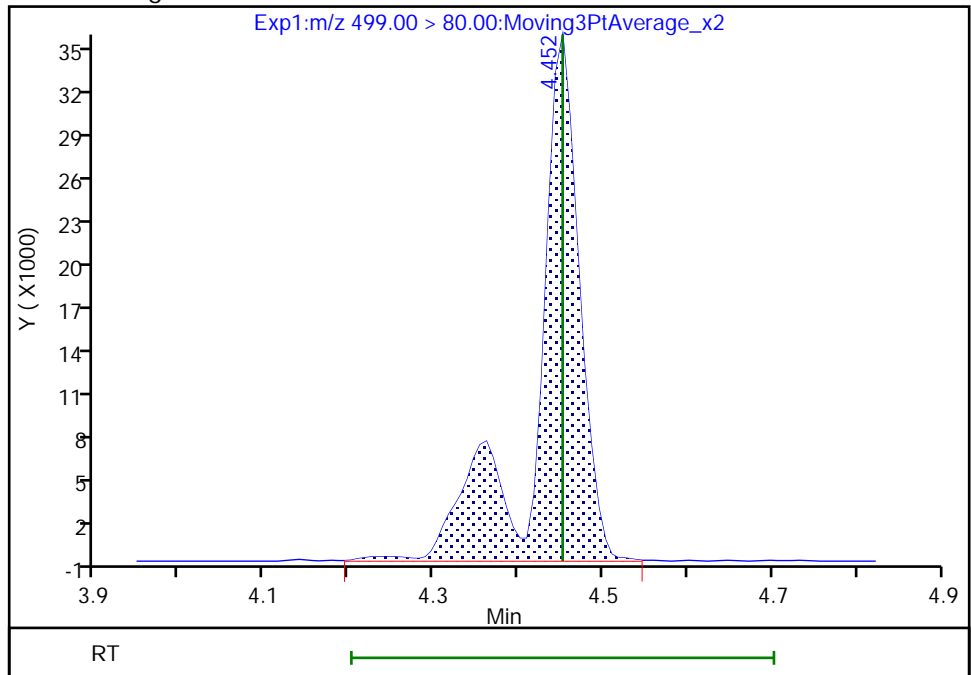
RT: 4.45  
Area: 93997  
Amount: 0.034049  
Amount Units: ng/ml

Processing Integration Results



RT: 4.45  
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Amount: 0.045263  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 11-Jan-2022 18:00:12  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

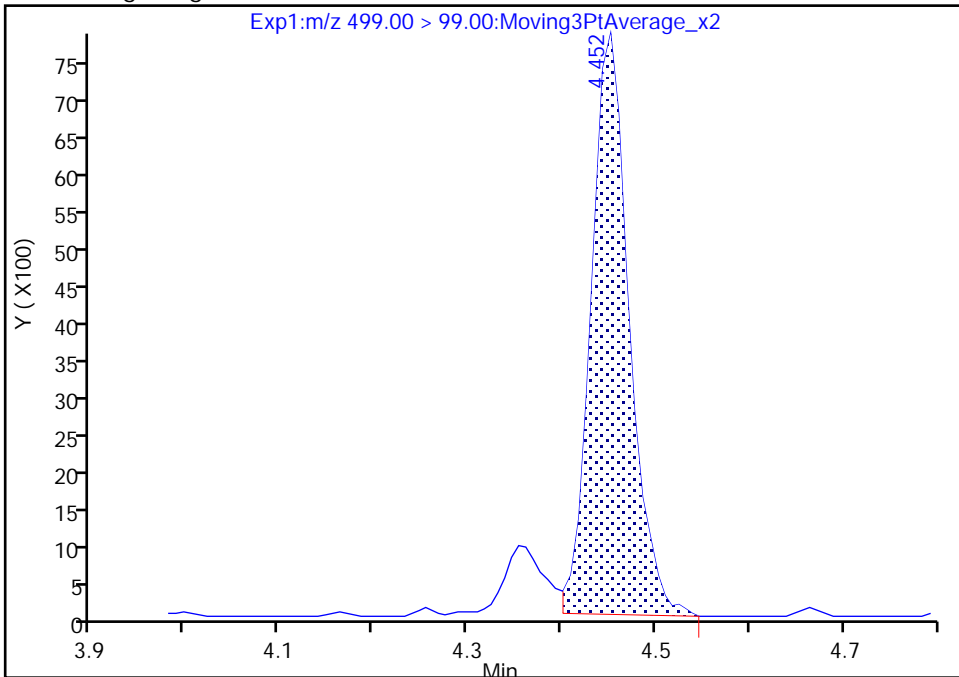
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Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

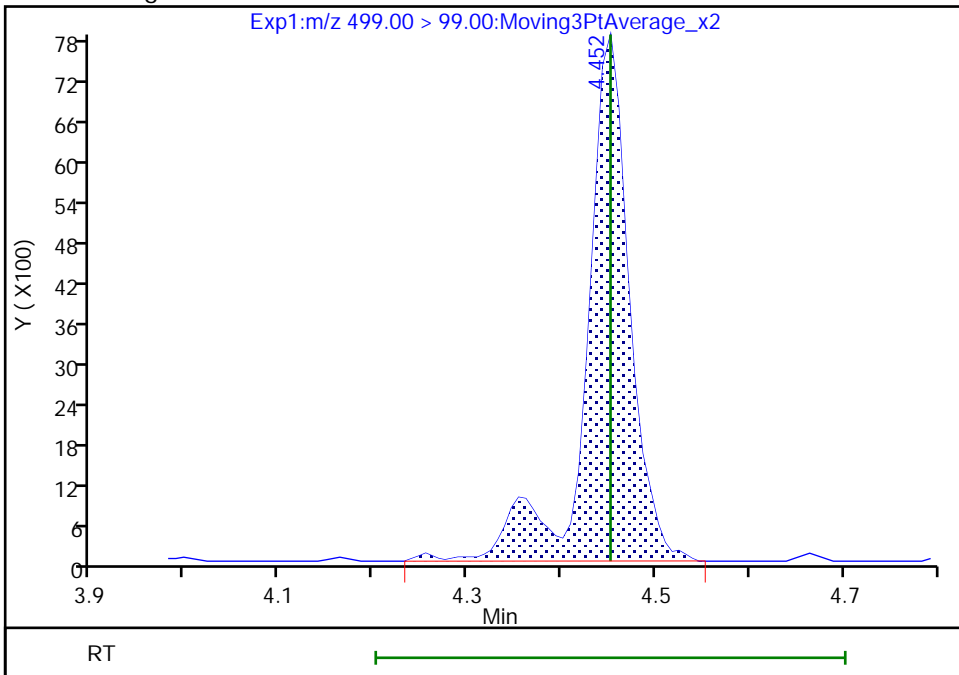
RT: 4.45  
Area: 22056  
Amount: 0.034049  
Amount Units: ng/ml

Processing Integration Results



RT: 4.45  
Area: 25318  
Amount: 0.045263  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 11-Jan-2022 18:00:19

Audit Action: Manually Integrated

Audit Reason: Baseline  
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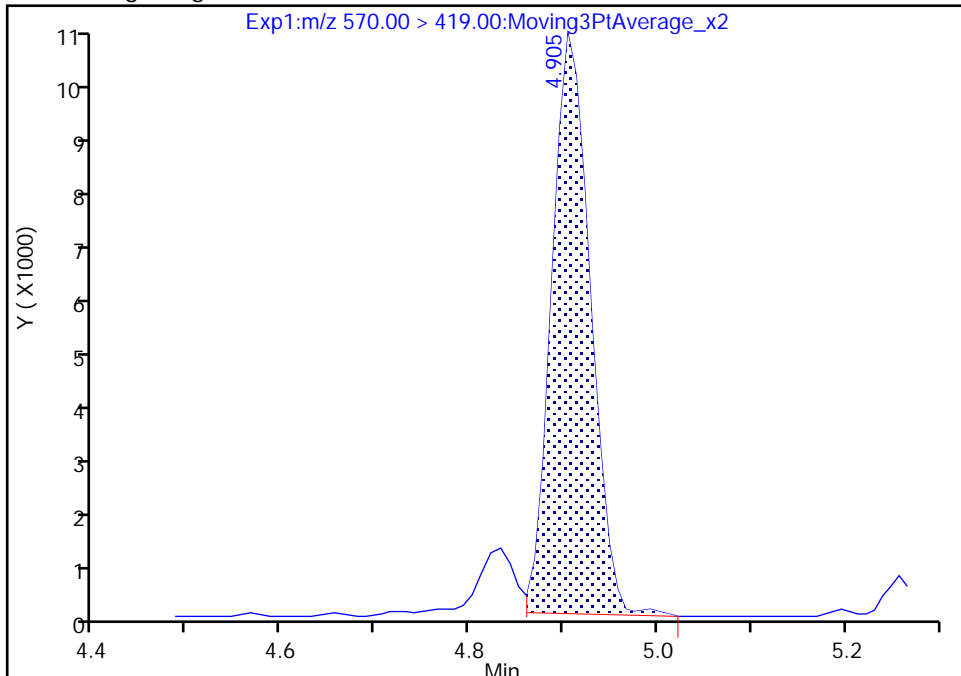
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Lims ID: CCVL  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

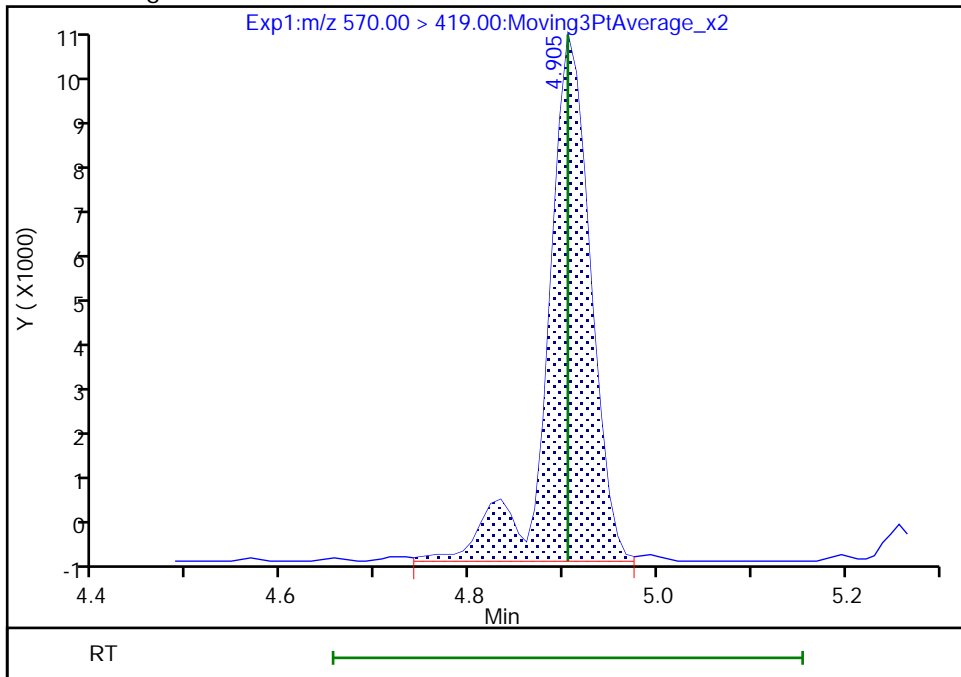
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Area: 30264  
Amount: 0.042445  
Amount Units: ng/ml

Processing Integration Results



RT: 4.90  
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Amount: 0.047636  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 11-Jan-2022 18:00:31  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

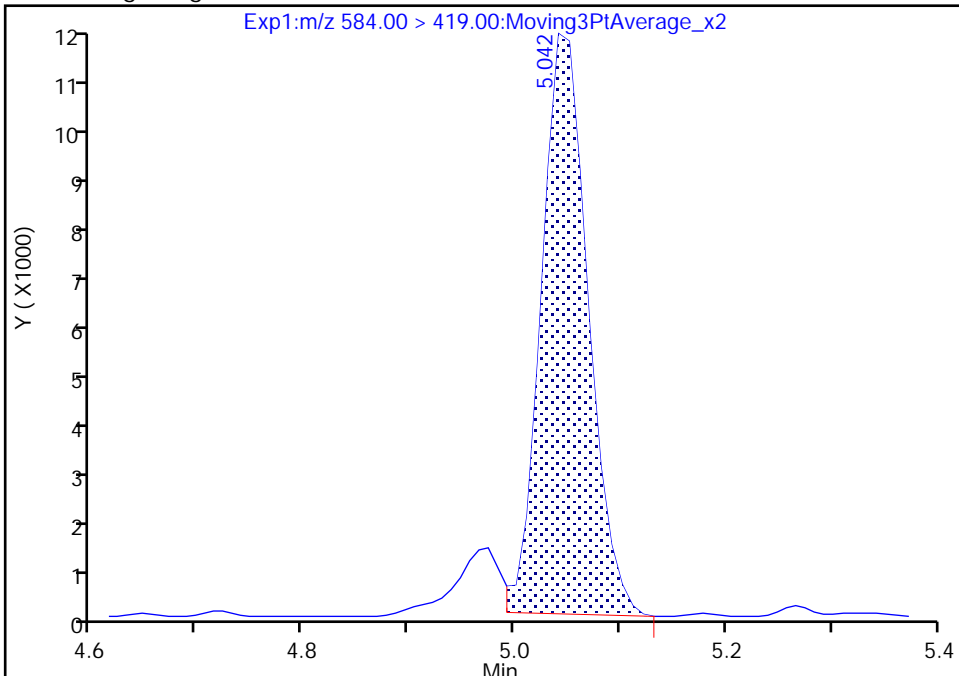
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Injection Date: 11-Jan-2022 17:39:19 Instrument ID: LCA  
Lims ID: CCVL  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

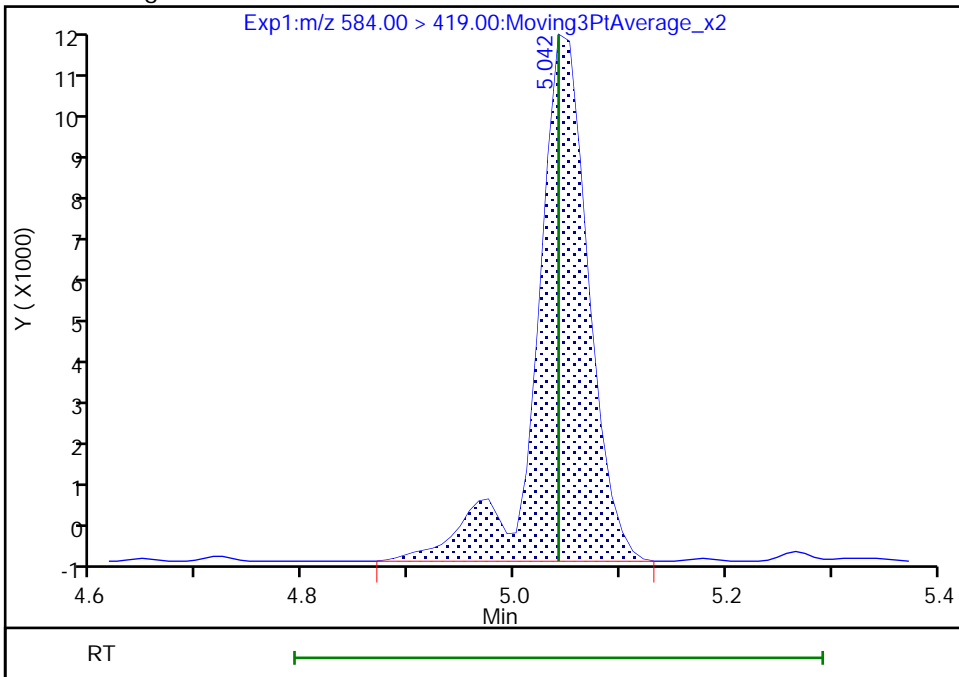
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Area: 35574  
Amount: 0.045184  
Amount Units: ng/ml

Processing Integration Results



RT: 5.04  
Area: 39966  
Amount: 0.050743  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 11-Jan-2022 18:00:41  
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 140-57822/7 Calibration Date: 01/11/2022 17:48  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 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	0.7844	0.7403		0.944	1.00	-5.6	40.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9519	0.9286		0.976	1.00	-2.4	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.097	1.106		0.891	0.884	0.8	40.0
4:2 FTS	AveID	2.252	2.126		0.882	0.934	-5.6	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8680	0.8054		0.928	1.00	-7.2	40.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	0.9713	0.9943		0.960	0.938	2.4	40.0
HFPO-DA	AveID	1.352	1.337		0.988	1.00	-1.2	40.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.377	1.277		0.844	0.910	-7.3	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.047	1.029		0.983	1.00	-1.7	40.0
DONA	AveID	2.630	2.593		0.929	0.942	-1.4	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9541	0.9436		0.942	0.952	-1.1	40.0
6:2 FTS	L2ID		1.676		0.885	0.948	-6.6	40.0
Perfluorooctanoic acid (PFOA)	AveID	1.147	1.060		0.924	1.00	-7.6	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.099	1.035		0.874	0.928	-5.8	40.0
Perfluorononanoic acid (PFNA)	Q2ID		0.8347		0.981	1.00	-1.9	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	Q2ID		2.080		0.905	0.932	-2.9	50.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9459	0.9263		0.979	1.00	-2.1	40.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9748	0.9096		0.896	0.960	-6.7	40.0
Perfluorodecanoic acid (PFDA)	AveID	0.9645	0.9321		0.967	1.00	-3.4	40.0
8:2 FTS	AveID	1.415	1.441		0.976	0.958	1.8	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	QuaIF		0.9571		0.985	1.00	-1.5	40.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		0.8581		0.891	0.964	-7.5	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9695	0.9655		0.996	1.00	-0.4	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Q2ID		0.9585		0.965	1.00	-3.5	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.672	1.567		0.883	0.942	-6.3	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9856		0.966	1.00	-3.4	40.0
10:2 FTS	AveID	2.276	2.138		0.905	0.964	-6.1	40.0
NMeFOSA	Q2ID		0.9889		0.977	1.00	-2.3	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	Q2ID		1.056		0.903	1.00	-9.7	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9166	0.8895		0.939	0.968	-3.0	40.0

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 140-57822/7 Calibration Date: 01/11/2022 17:48  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 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	AveID	1.328	1.215		0.915	1.00	-8.5	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.195	1.239		1.04	1.00	3.7	40.0
Perfluorotridecanoic acid (PFTriA)	AveID	0.8292	0.7746		0.934	1.00	-6.6	40.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1344	0.1297		0.966	1.00	-3.5	40.0
Perfluorohexadecanoic acid	Q2ID		1.075		1.00	1.00	0.2	40.0
Perfluorooctadecanoic acid	AveID	0.9844	0.9008		0.915	1.00	-8.5	40.0
13C4 PFBA	Ave	1.142	1.056		1.16	1.25	-7.5	50.0
13C5 PFPeA	Ave	0.8865	0.8479		1.20	1.25	-4.4	50.0
13C3 PFBS	Ave	0.5913	0.5722		1.13	1.16	-3.2	50.0
M2-4:2 FTS	Ave	0.1820	0.2070		1.33	1.17	13.7	50.0
13C2 PFHxA	Ave	0.9479	0.8789		1.16	1.25	-7.3	50.0
13C3 HFPO-DA	Ave	0.4556	0.4263		1.17	1.25	-6.4	50.0
18O2 PFHxS	Ave	0.3946	0.4144		1.24	1.18	5.0	50.0
13C4 PFHpA	Ave	0.9067	0.9018		1.24	1.25	-0.5	50.0
M2-6:2 FTS	Ave	0.1835	0.1876		1.21	1.19	2.2	50.0
13C4 PFOA	Ave	0.9376	0.9577		1.28	1.25	2.1	50.0
13C4 PFOS	Ave	0.5681	0.5709		1.20	1.20	0.5	50.0
13C5 PFNA	Ave	1.234	1.191		1.21	1.25	-3.4	50.0
13C8 FOSA	Ave	0.7682	0.7794		1.27	1.25	1.5	50.0
13C2 PFDA	Ave	1.191	1.200		1.26	1.25	0.8	50.0
M2-8:2 FTS	Ave	0.2070	0.2075		1.20	1.20	0.3	50.0
d3-NMeFOSAA	Ave	0.1401	0.1598		1.43	1.25	14.0	50.0
13C2 PFUnA	Ave	1.189	1.195		1.26	1.25	0.6	50.0
d5-NEtFOSAA	Ave	0.1537	0.1779		1.45	1.25	15.7	50.0
13C2 PFDoA	Ave	1.247	1.190		1.19	1.25	-4.6	50.0
d7-N-MeFOSE-M	Ave	0.1499	0.1390		1.16	1.25	-7.3	50.0
d-N-MeFOSA-M	Ave	0.1069	0.1034		1.21	1.25	-3.3	50.0
d9-N-EtFOSE-M	Ave	0.1504	0.1464		1.22	1.25	-2.7	50.0
d-N-EtFOSA-M	Ave	0.0883	0.0812		1.15	1.25	-8.0	50.0
13C2 PFTeDA	Ave	0.9508	0.8326		1.10	1.25	-12.4	50.0
13C2 PFHxDA	Ave	0.6444	0.5645		1.10	1.25	-12.4	50.0
13C8 PFOA	AveID	0.999	1.023		1.28	1.25	2.4	50.0
13C8 PFOS	AveID	0.2220	0.2198		1.18	1.20	-1.0	50.0



Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_007.d  
 Lims ID: CCVIS  
 Client ID:  
 Sample Type: CCVIS  
 Inject. Date: 11-Jan-2022 17:48:06 ALS Bottle#: 7 Worklist Smp#: 7  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022220-007 ccvis  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 12-Jan-2022 18:43:11 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1648

First Level Reviewer: cochranj Date: 11-Jan-2022 17:58:36

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	2.814	2.814	0.0	0.677	5810475	1.16	92.5	13771	
2 Perfluorobutanoic acid	212.90 > 169.00	2.814	2.814	0.0	1.000	3441163	0.9437	94.4	1162	
D 3 13C5 PFPeA	267.90 > 223.00	3.131	3.131	0.0	0.753	4665144	1.20	95.6	9915	
4 Perfluoropentanoic acid	262.90 > 219.00	3.131	3.131	0.0	1.000	3465722	0.9755	97.6	1533	
D 6 13C3 PFBS	301.90 > 80.00	3.147	3.147	0.0	0.757	2927798	1.13	96.8	13179	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.147	3.147	0.0	1.000	2461717	0.8910	Target=2.65	101	4659
	298.90 > 99.00	3.147	3.147	0.0	1.000	898739		2.74(1.32-3.97)		3763
D 8 M2-4:2 FTS	329.00 > 81.00	3.442	3.442	0.0	0.828	1063756	1.33	114	2130	
7 4:2 FTS	327.00 > 307.00	3.442	3.442	0.0	1.000	1809128	0.8816	94.4	8643	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.472	3.472	0.0	1.103	2348908	0.9602	Target=3.44	102	6438
	349.00 > 99.00	3.472	3.472	0.0	1.103	680410		3.45(1.72-5.16)		6223
D 9 13C2 PFHxA	315.00 > 270.00	3.472	3.472	0.0	0.835	4835408	1.16	92.7	9700	
10 Perfluorohexanoic acid	313.00 > 269.00	3.472	3.472	0.0	1.000	3115452	0.9278	Target=11.80	92.8	1887
	313.00 > 119.00	3.472	3.472	0.0	1.000	247313		12.60(5.90-17.70)		385
D 12 13C3 HFPO-DA	287.00 > 169.00	3.574	3.574	0.0	0.860	2345371	1.17	93.6	5746	

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	3.574	3.574	0.0	1.000	2507862	0.9883		98.8	2113	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.807	3.807	0.0	1.000	2119859	0.8439	Target=3.40	92.7	7163	M
399.00 > 99.00	3.807	3.807	0.0	1.000	612888		3.46(1.70-5.10)		4203	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.807	3.807	0.0	0.916	2156829	1.24		105	9552	
D 14 13C4 PFHpA										
367.00 > 322.00	3.825	3.825	0.0	0.920	4961431	1.24		99.5	10131	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.825	3.825	0.0	1.000	4085486	0.9834	Target=3.29	98.3	3244	
363.00 > 169.00	3.825	3.825	0.0	1.000	1270946		3.21(1.65-4.94)		2009	
68 DONA										
377.00 > 251.00	3.858	3.858	0.0	0.866	6137183	0.9286	Target=1.82	98.6	8262	
377.00 > 85.00	3.858	3.858	0.0	0.866	3566089		1.72(0.91-2.74)		162	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.140	4.140	0.0	0.930	2257399	0.9416	Target=3.92	98.9	7392	
449.00 > 99.00	4.140	4.140	0.0	0.930	573558		3.94(1.96-5.87)		4679	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.149	4.149	0.0	0.998	980579	1.21		102	3433	
D 21 13C4 PFOA										
417.00 > 372.00	4.156	4.156	0.0	1.000	5269434	1.28		102	9871	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.156	4.156	0.0	1.000	5390935	1.28		102	10046	
19 6:2 FTS										
427.00 > 407.00	4.156	4.156	0.0	1.002	1312158	0.8852		93.4	5624	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.156	4.156	0.0	1.000	4469105	0.9239	Target=2.59	92.4	2800	
413.00 > 169.00	4.156	4.156	0.0	1.000	1765772		2.53(1.30-3.89)		2988	
* 22 13C2 PFOA										
415.00 > 370.00	4.156	4.156	0.0		5501943	1.25			14385	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.444	4.444	0.0	0.998	659987	1.18		99.0	5036	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.452	4.452	0.0	1.000	2414182	0.8743	Target=4.65	94.2	4568	M
499.00 > 99.00	4.452	4.452	0.0	1.000	565909		4.27(2.32-6.97)		2767	M
D 25 13C4 PFOS										
503.00 > 80.00	4.452	4.452	0.0	1.071	3002898	1.20		100	5948	
26 Perfluorononanoic acid										
463.00 > 419.00	4.469	4.469	0.0	1.000	4377001	0.9811	Target=4.65	98.1	4591	
463.00 > 169.00	4.469	4.469	0.0	1.000	968115		4.52(2.32-6.97)		2020	
D 27 13C5 PFNA										
468.00 > 423.00	4.469	4.469	0.0	1.075	6554947	1.21		96.6	15598	
63 9CIFOS										
531.00 > 351.00	4.608	4.608	0.0	1.035	4871647	0.9054		97.1	10224	
D 34 13C8 FOSA										
506.00 > 78.00	4.723	4.723	0.0	1.136	4288445	1.27		101	3542	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
33 Perfluorooctanesulfonamide	498.00 > 78.00	4.723	4.723	0.0	1.000	3178024	0.9793	97.9	5326	
28 Perfluorononanesulfonic acid	549.00 > 80.00	4.732	4.732	0.0	1.063	2194322	0.8958	Target=4.06	93.3	7154
	549.00 > 99.00	4.732	4.732	0.0	1.063	574240		3.82(2.03-6.09)		3782
D 32 13C2 PFDA	515.00 > 470.00	4.757	4.757	0.0	1.145	6603985	1.26		101	8672
29 Perfluorodecanoic acid	513.00 > 469.00	4.757	4.757	0.0	1.000	4924632	0.9665	Target=11.30	96.6	3902
	513.00 > 169.00	4.757	4.757	0.0	1.000	424791		11.59(5.65-16.95)		619
31 8:2 FTS	527.00 > 507.00	4.774	4.774	0.0	1.000	1261249	0.9757		102	4877
D 30 M2-8:2 FTS	529.00 > 81.00	4.774	4.774	0.0	1.149	1093897	1.20		100	1909
D 35 d3-NMeFOSAA	573.00 > 419.00	4.905	4.905	0.0	1.180	879181	1.43		114	709
36 NMeFOSAA	570.00 > 419.00	4.905	4.905	0.0	1.000	673153	0.9848		98.5	1409 M
37 Perfluorodecanesulfonic acid	599.00 > 80.00	4.992	4.992	0.0	1.121	2078641	0.8913	Target=3.79	92.5	7055
	599.00 > 99.00	4.992	4.992	0.0	1.121	577536		3.60(1.90-5.69)		4154
38 Perfluoroundecanoic acid	563.00 > 519.00	5.022	5.022	0.0	1.000	5079870	1.00	Target=8.45	99.6	6073
	563.00 > 169.00	5.022	5.022	0.0	1.000	583473		8.71(4.22-12.67)		2594
D 39 13C2 PFUnA	565.00 > 520.00	5.022	5.022	0.0	1.208	6576480	1.26		101	13040
40 NEtFOSA	584.00 > 419.00	5.042	5.042	0.0	1.000	750429	0.9647		96.5	1535 M
D 41 d5-NEtFOSAA	589.00 > 419.00	5.042	5.042	0.0	1.213	978682	1.45		116	3832
57 11CIFOS	631.00 > 451.00	5.122	5.122	0.0	1.150	3709585	0.8827		93.7	10041
D 43 13C2 PFDoA	615.00 > 570.00	5.257	5.257	0.0	1.265	6547698	1.19		95.4	12963
42 Perfluorododecanoic acid	613.00 > 569.00	5.257	5.257	0.0	1.000	5162987	0.9656	Target=6.99	96.6	4552
	613.00 > 169.00	5.257	5.257	0.0	1.000	736031		7.01(3.50-10.49)		1593
50 10:2 FTS	627.00 > 607.00	5.275	5.275	0.0	1.105	1882500	0.9053		93.9	6963
D 51 d7-N-MeFOSE-M	623.00 > 59.00	5.292	5.292	0.0	1.273	764651	1.16		92.7	638
D 58 d-N-MeFOSA-M	515.00 > 169.00	5.292	5.292	0.0	1.273	568715	1.21		96.7	54.3
61 NMeFOSA	512.00 > 169.00	5.292	5.292	0.0	1.000	449933	0.9771		97.7	636
49 N-MeFOSE-M	616.00 > 59.00	5.301	5.301	0.0	1.002	646255	0.9032		90.3	785

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
54 PFDoS										
699.00 > 80.00	5.425	5.425	0.0	1.218	2163664	0.9394	Target=4.24	97.0	4710	
699.00 > 99.00	5.425	5.425	0.0	1.218	507944		4.26(2.12-6.35)		2526	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.444	5.444	0.0	1.310	805442	1.22		97.3	400	
62 N-EtFOSE-M										
630.00 > 59.00	5.464	5.464	0.0	1.004	782837	0.9148		91.5	709	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.464	5.464	0.0	1.039	4057386	0.9342	Target=6.20	93.4	5336	
663.00 > 169.00	5.464	5.464	0.0	1.039	691531		5.87(3.10-9.30)		3748	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.464	5.464	0.0	1.315	447017	1.15		92.0	666	
56 N-EtFOSA-M										
526.00 > 169.00	5.464	5.464	0.0	1.000	443037	1.04		104	525	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.650	5.650	0.0	1.359	4580954	1.09		87.6	9171	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.650	5.650	0.0	1.000	475461	0.9655	Target=1.05	96.5	1732	
713.00 > 219.00	5.640	5.650	-0.010	0.998	465483		1.02(0.53-1.58)		2104	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.948	5.948	0.0	1.431	3105756	1.09		87.6	6281	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.948	5.948	0.0	1.000	2670009	1.00	Target=8.09	100	3673	
813.00 > 169.00	5.948	5.948	0.0	1.000	316541		8.43(4.05-12.14)		599	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.209	6.209	0.0	1.044	2238084	0.9151	Target=11.53	91.5	3222	
913.00 > 169.00	6.209	6.209	0.0	1.044	194073		11.53(5.77-17.30)		703	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

63L4PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\\_007.d

Injection Date: 11-Jan-2022 17:48:06 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

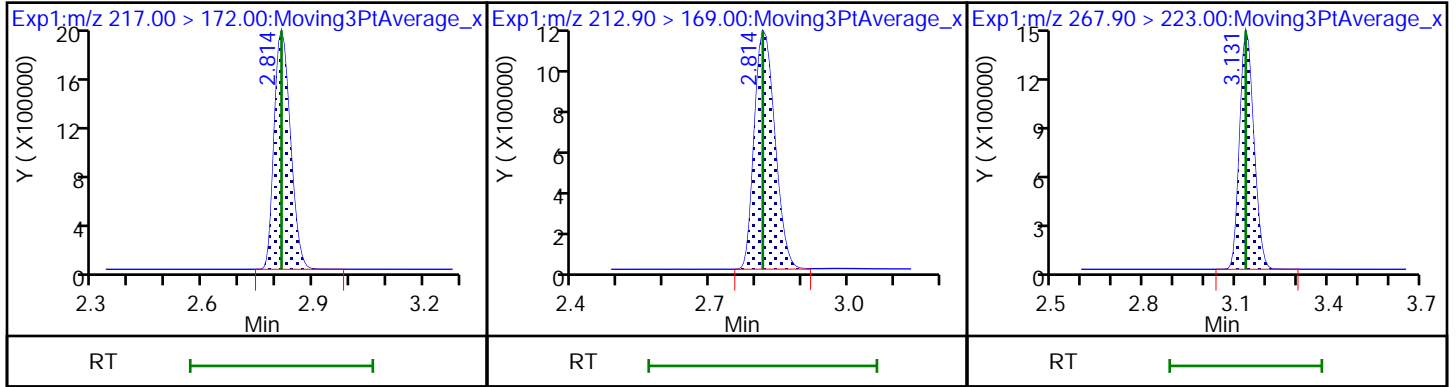
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

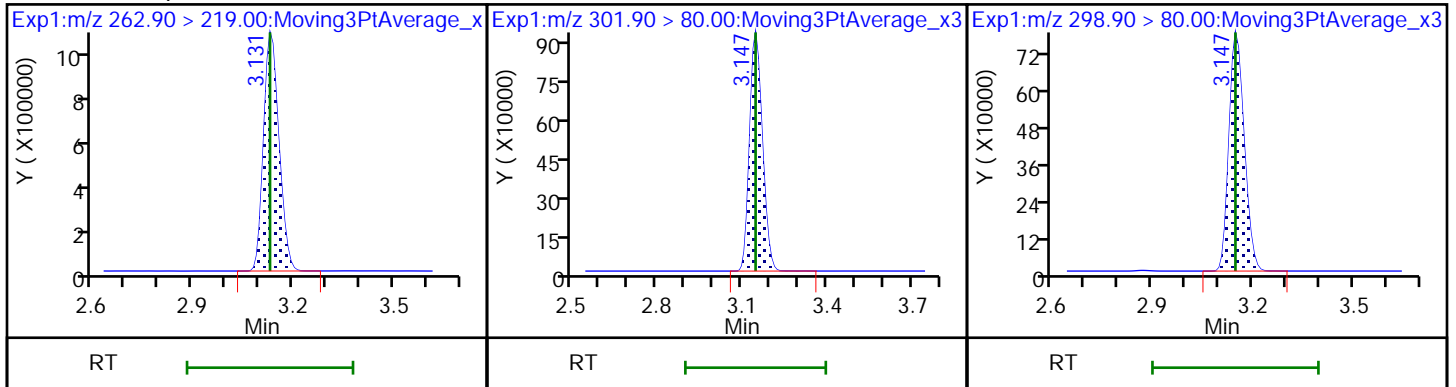
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

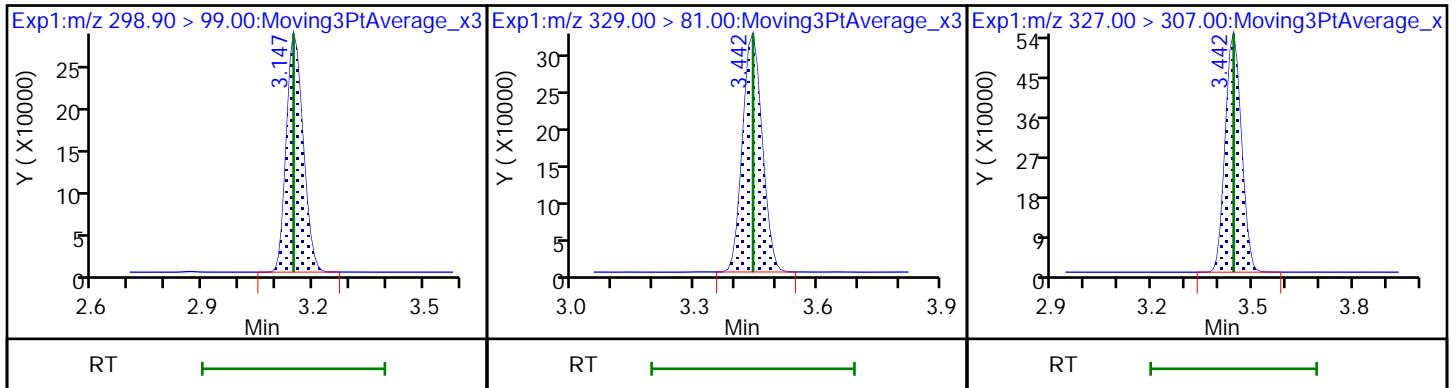
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

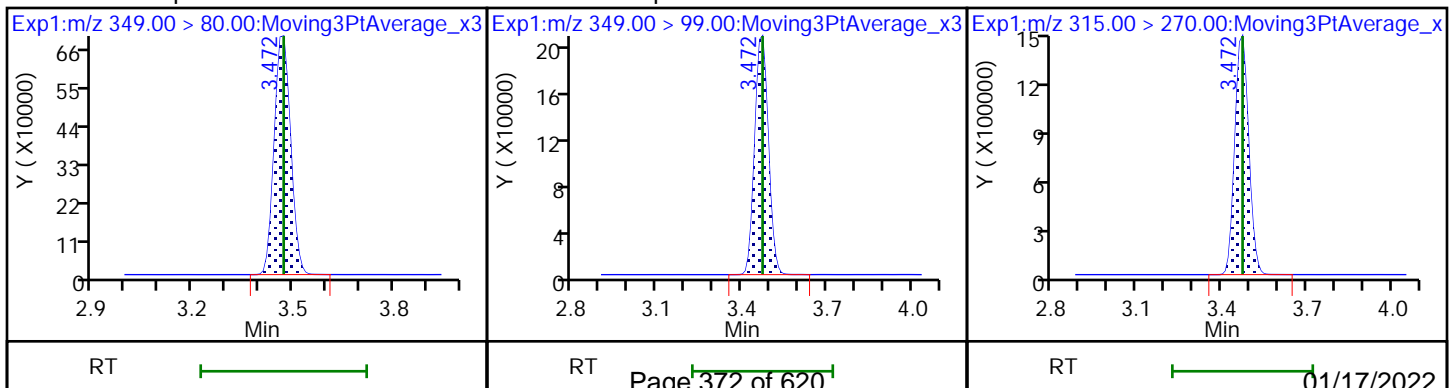
7 4:2 FTS

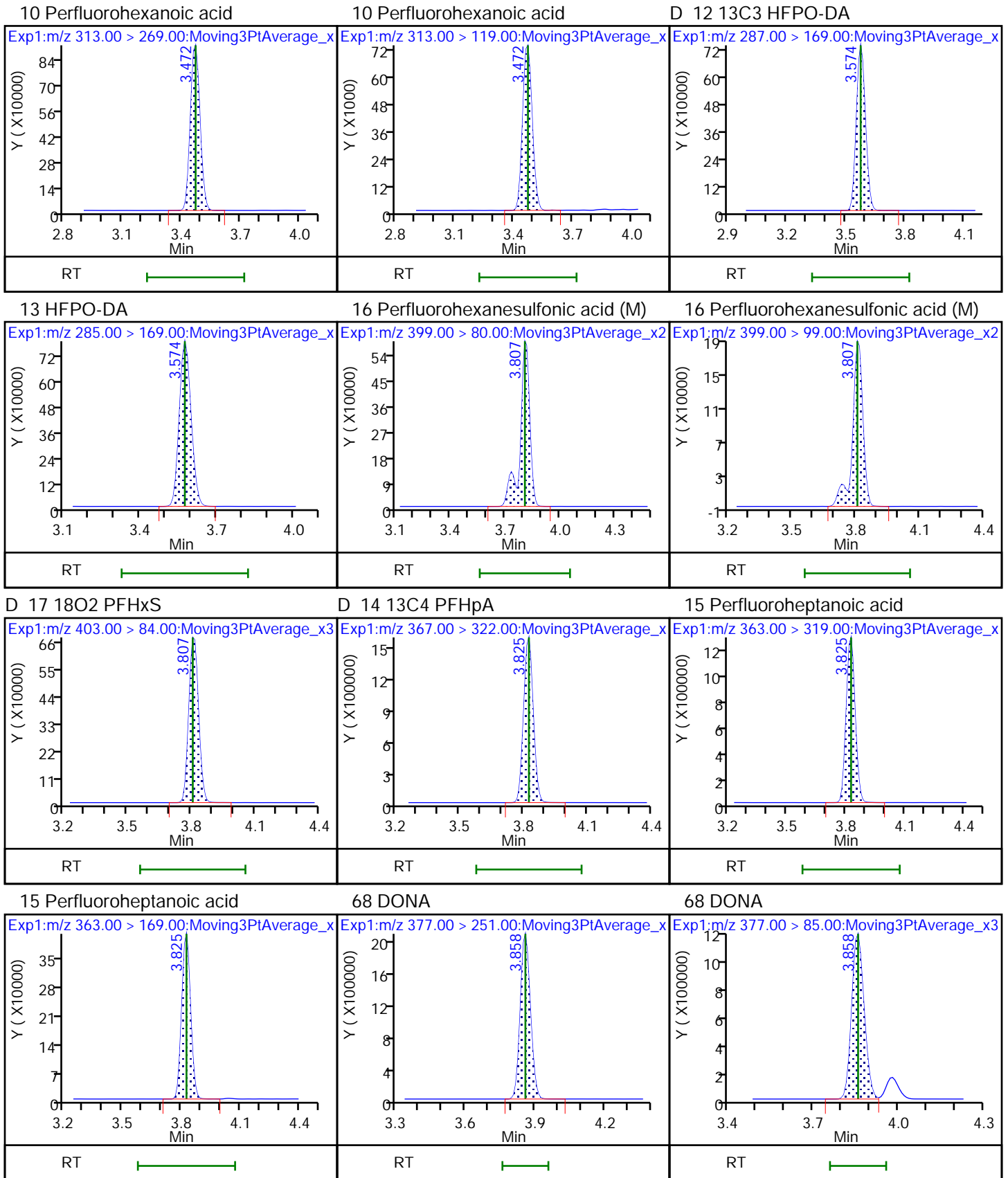


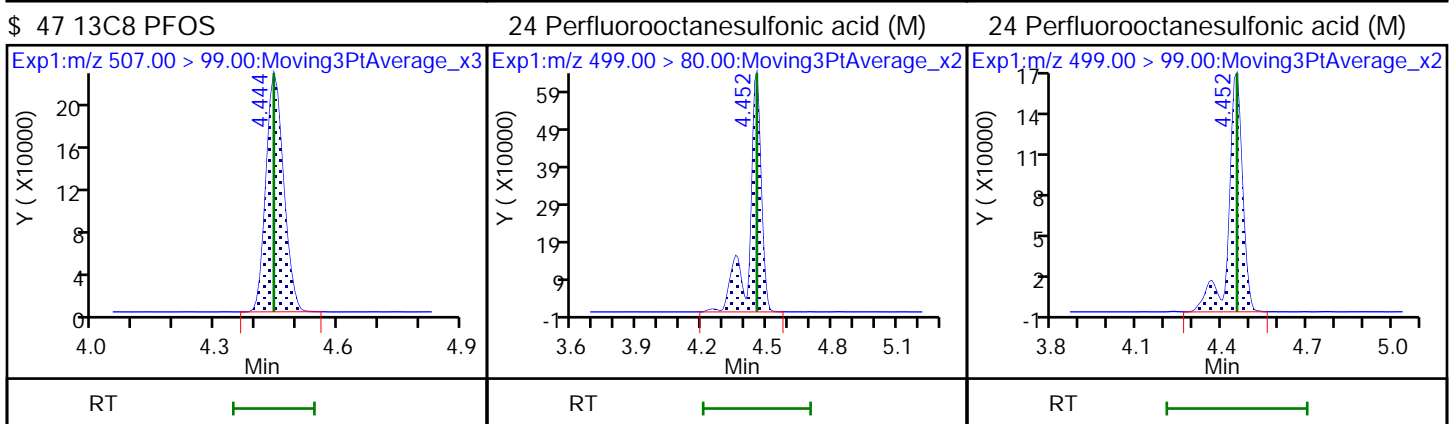
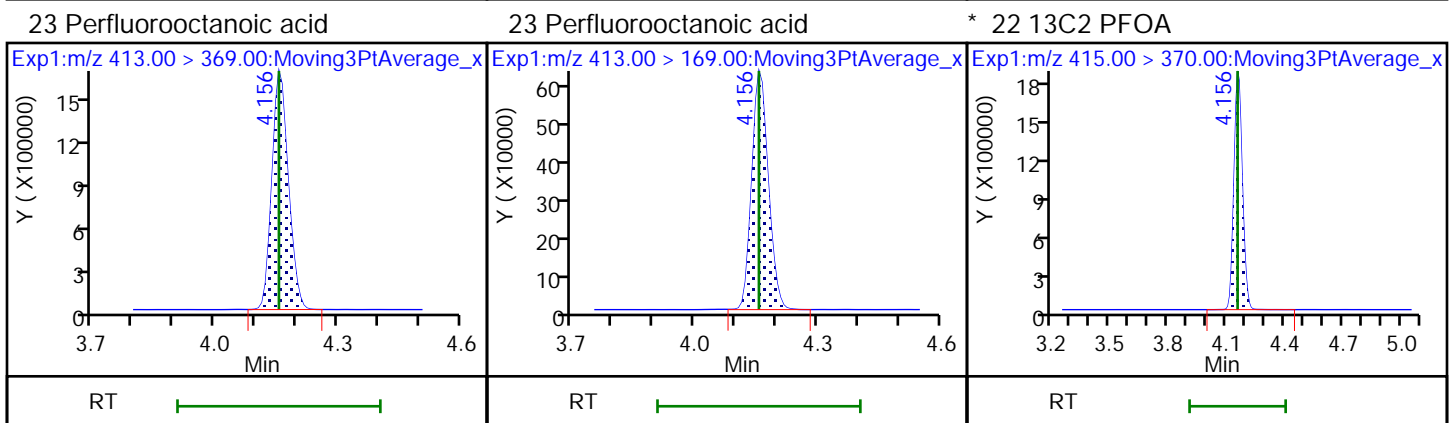
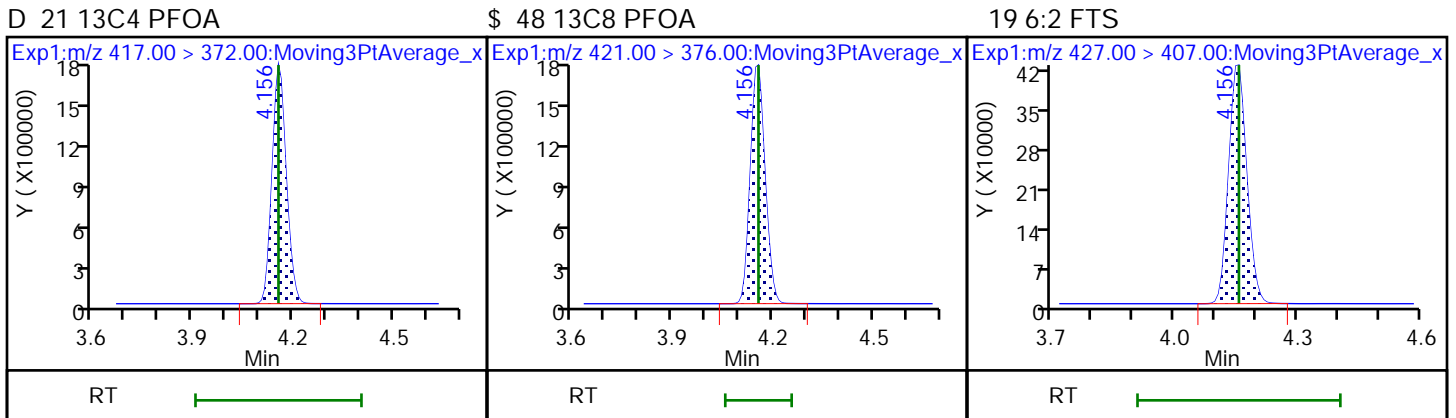
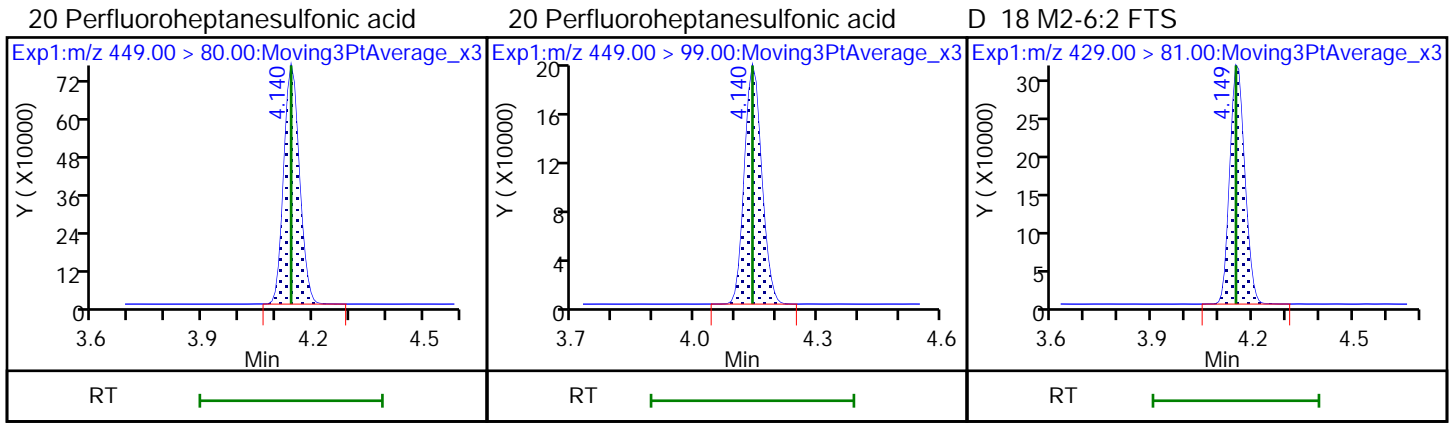
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA



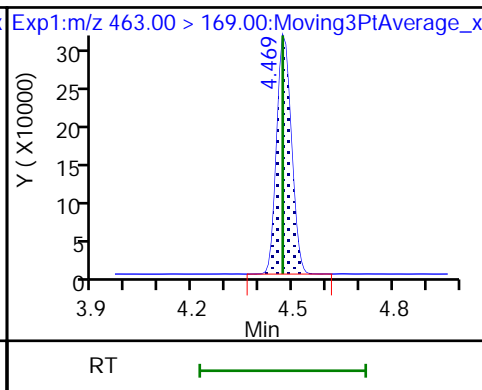
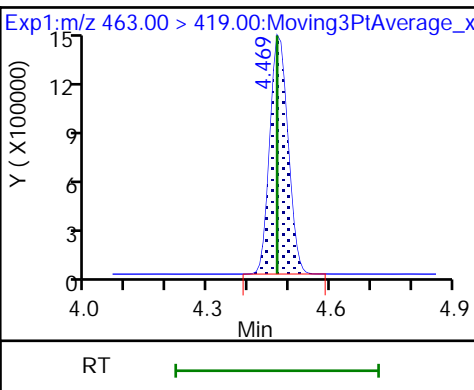
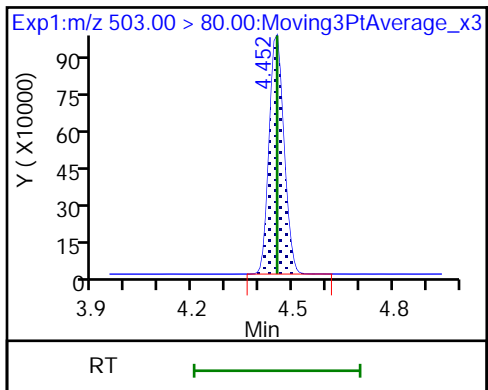




D 25 13C4 PFOS

26 Perfluorononanoic acid

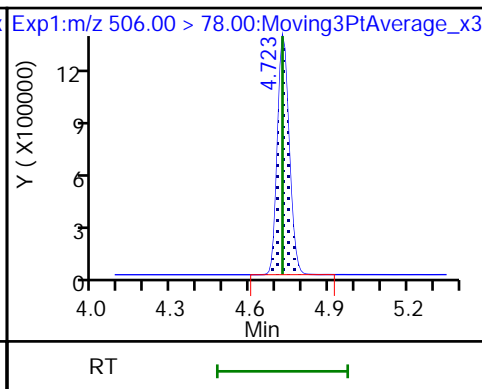
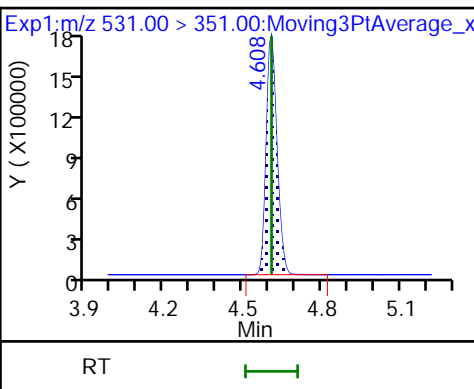
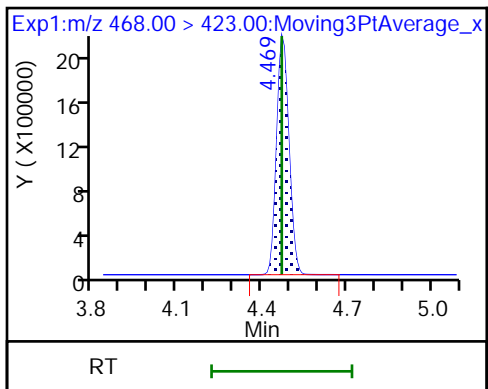
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS

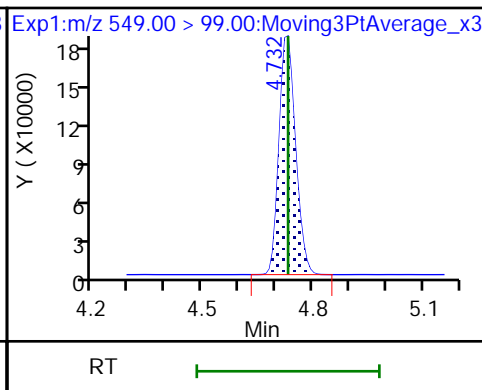
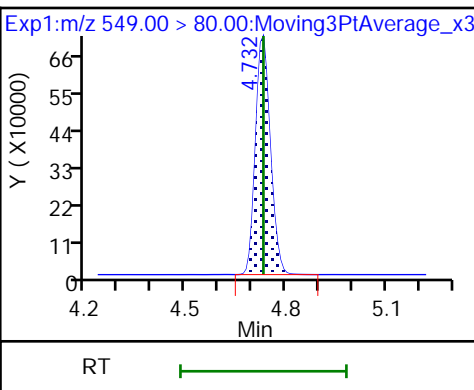
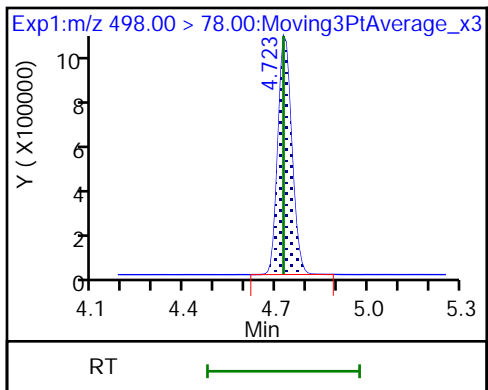
D 34 13C8 FOSA



33 Perfluorooctanesulfonamide

28 Perfluorononanesulfonic acid

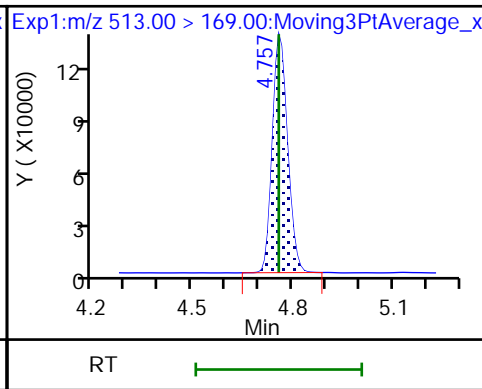
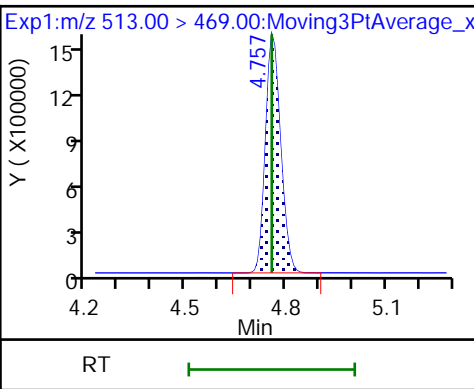
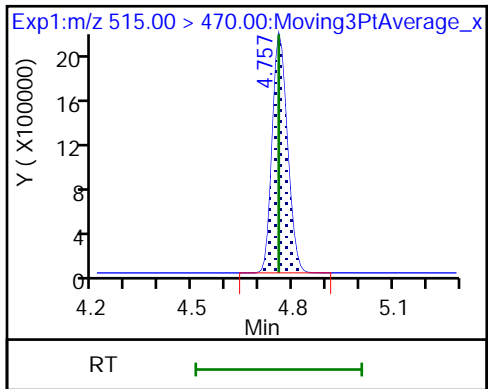
28 Perfluorononanesulfonic acid



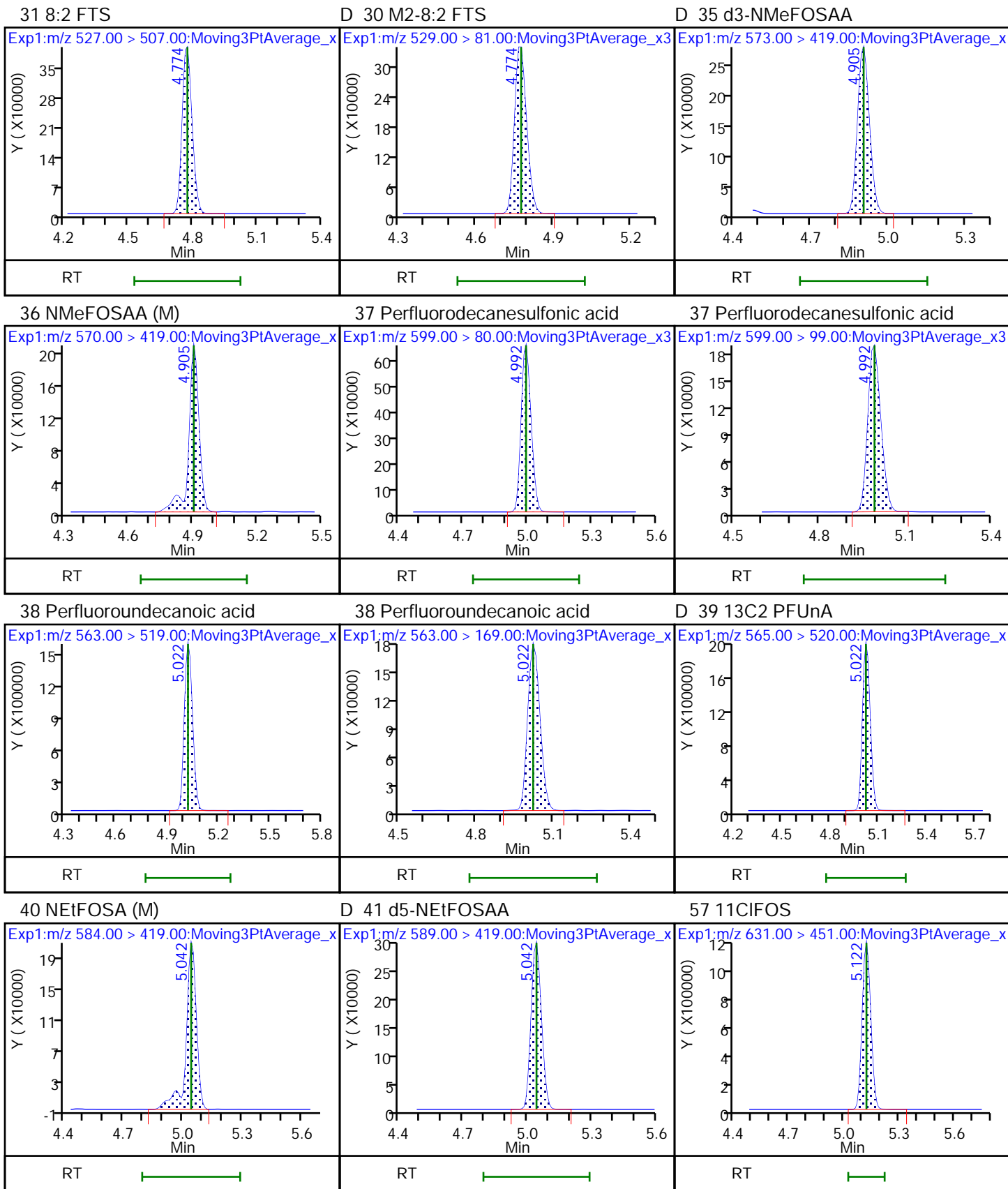
D 32 13C2 PFDA

29 Perfluorodecanoic acid

29 Perfluorodecanoic acid



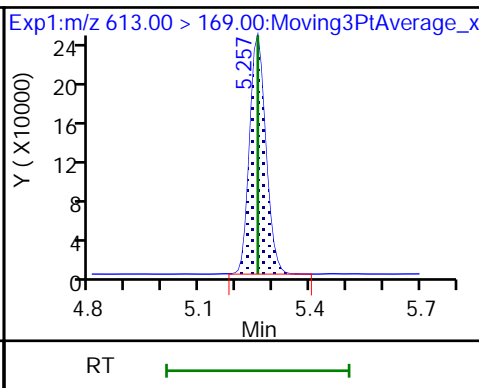
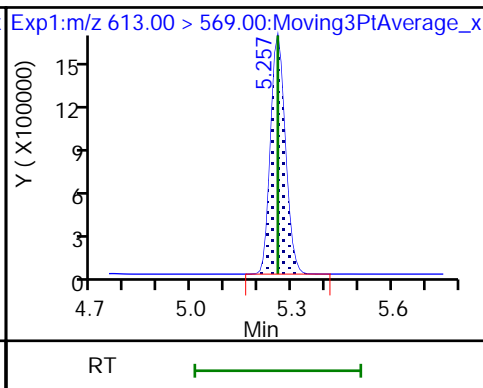
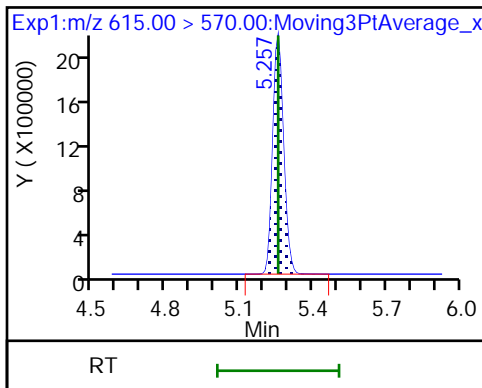




D 43 13C2 PFDaA

42 Perfluorododecanoic acid

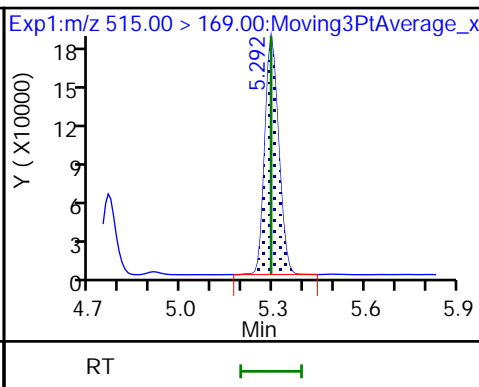
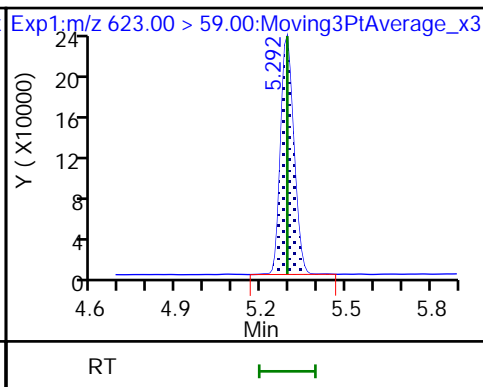
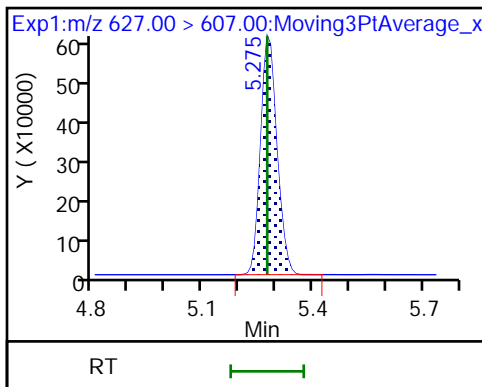
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

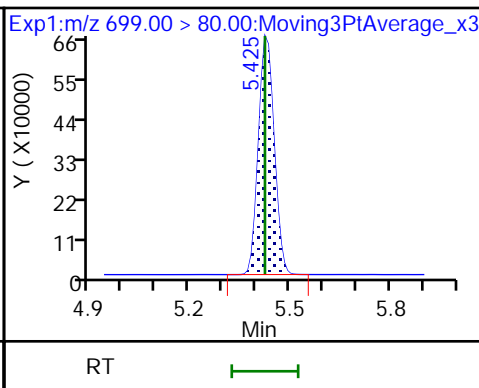
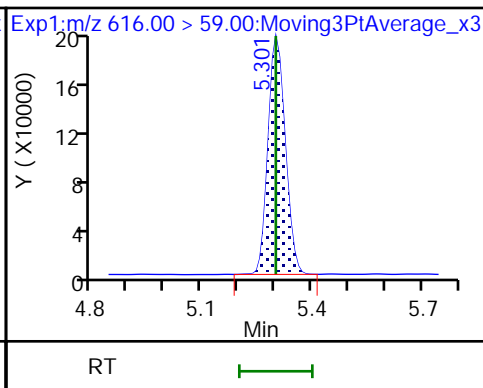
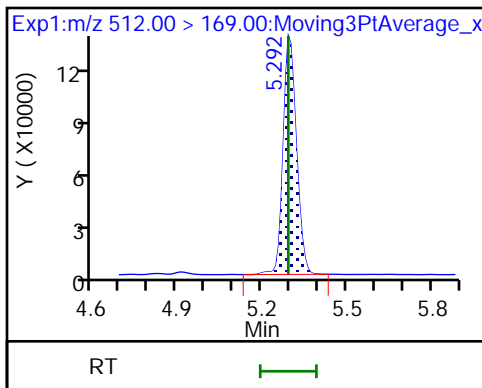
D 58 d-N-MeFOSE-M



61 NMeFOSE

49 N-MeFOSE-M

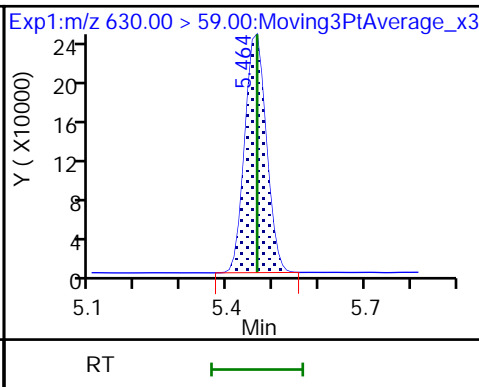
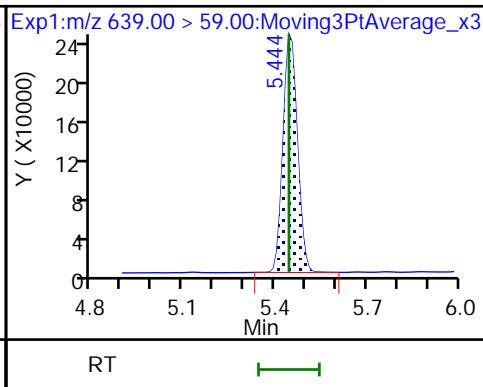
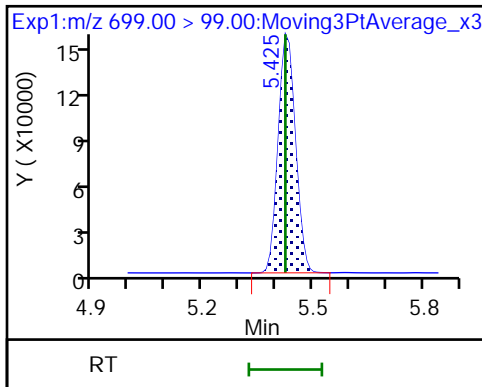
54 PFDoS

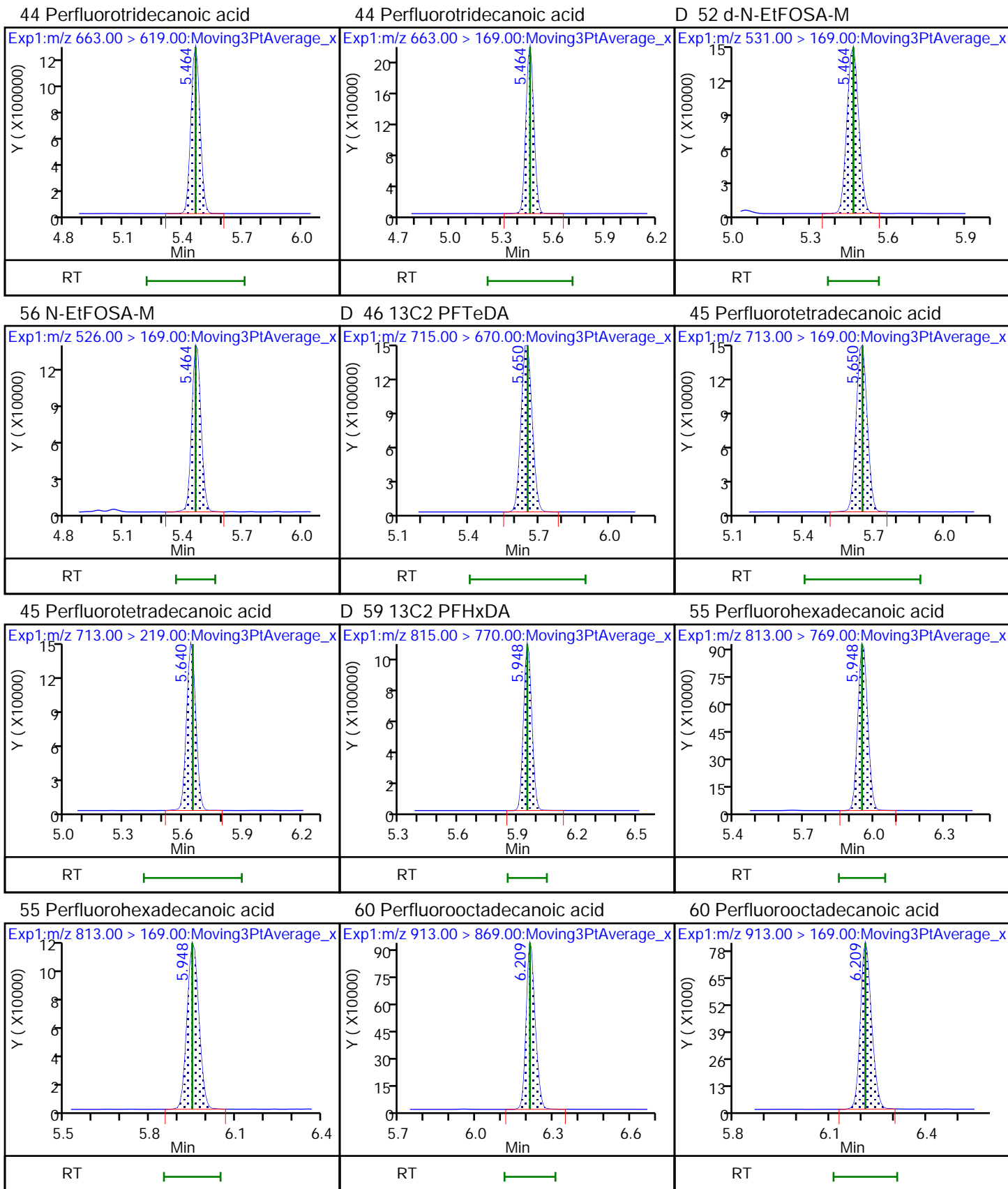


54 PFDoS

D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M







Eurofins TestAmerica, Knoxville

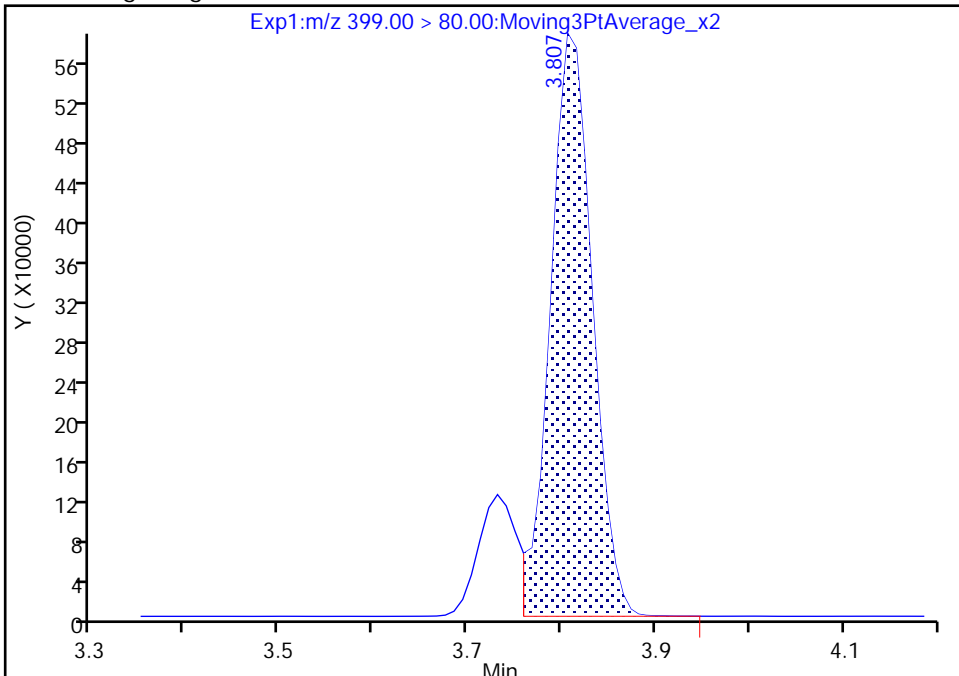
Data File: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\\_007.d  
Injection Date: 11-Jan-2022 17:48:06 Instrument ID: LCA  
Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

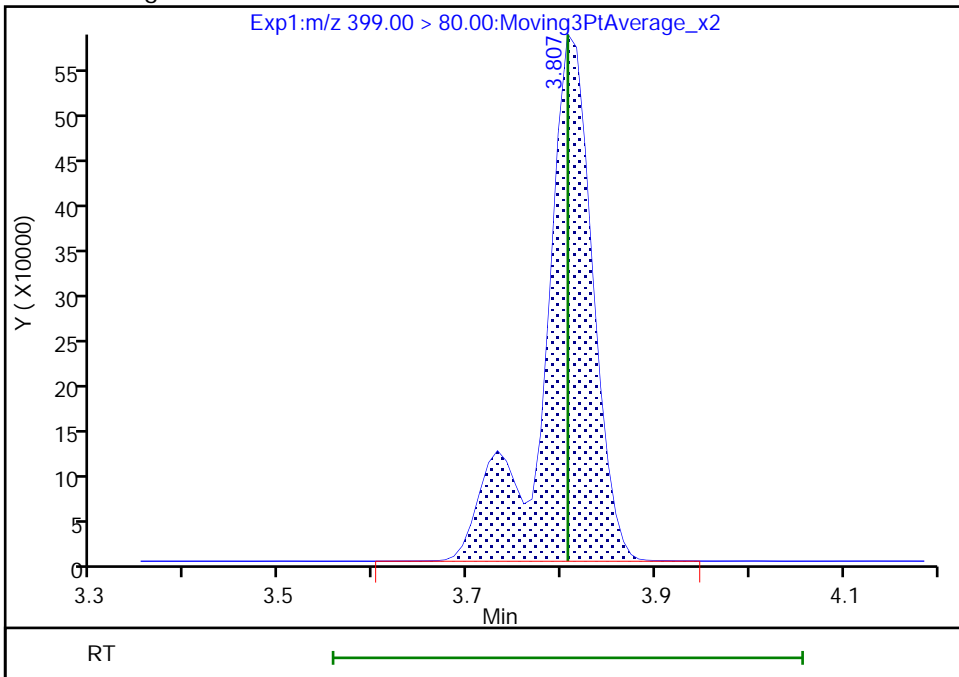
RT: 3.81  
Area: 1786052  
Amount: 0.711018  
Amount Units: ng/ml

Processing Integration Results



RT: 3.81  
Area: 2119859  
Amount: 0.843905  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 11-Jan-2022 18:01:39  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

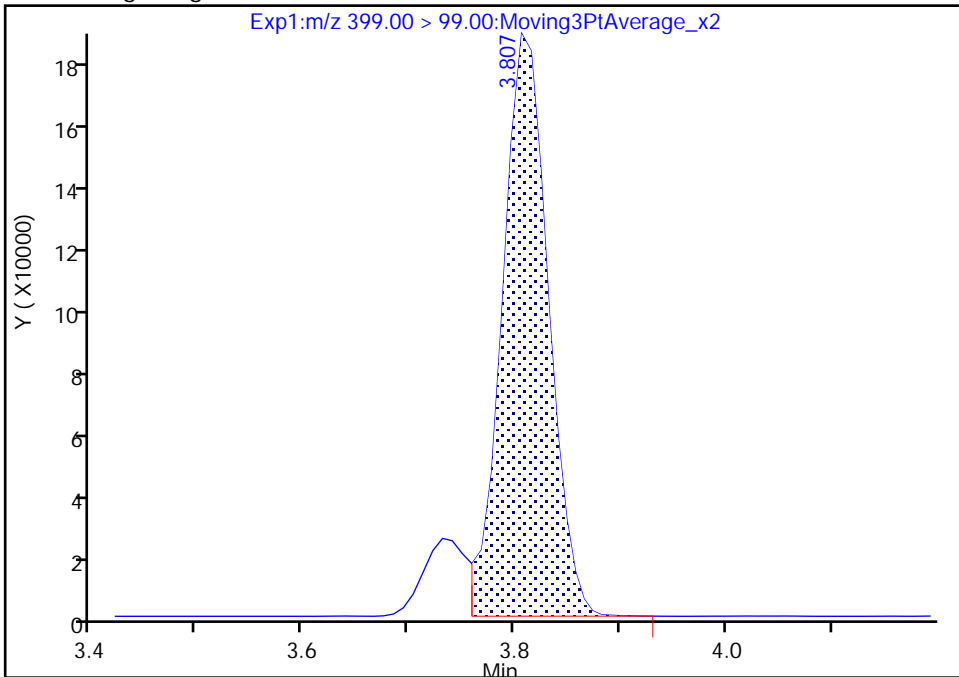
Data File: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_007.d  
Injection Date: 11-Jan-2022 17:48:06 Instrument ID: LCA  
Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

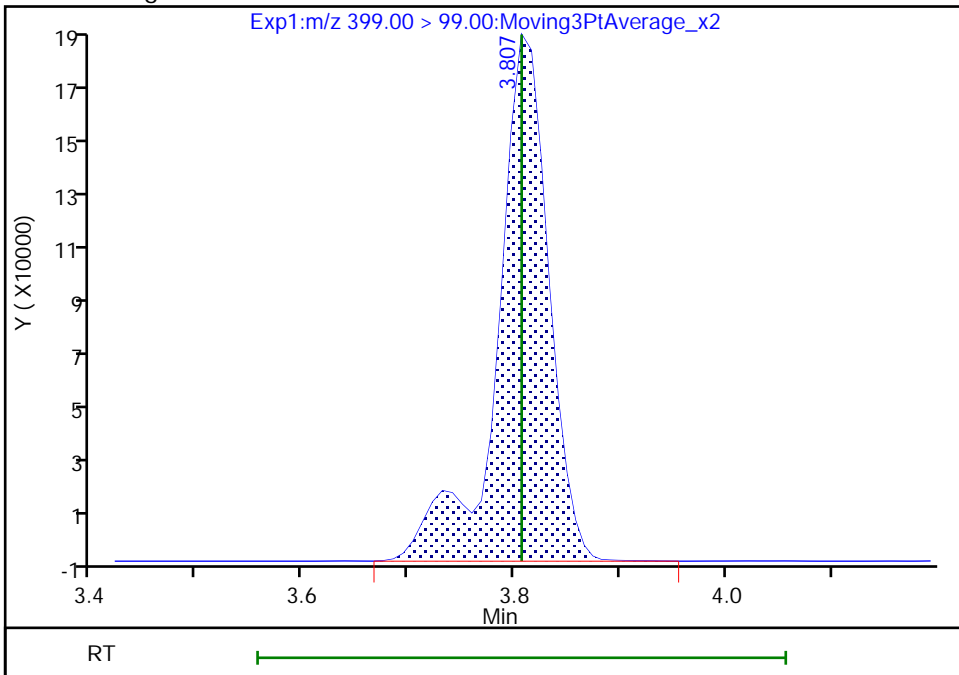
RT: 3.81  
Area: 545874  
Amount: 0.711018  
Amount Units: ng/ml

Processing Integration Results



RT: 3.81  
Area: 612888  
Amount: 0.843905  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 11-Jan-2022 18:01:47

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

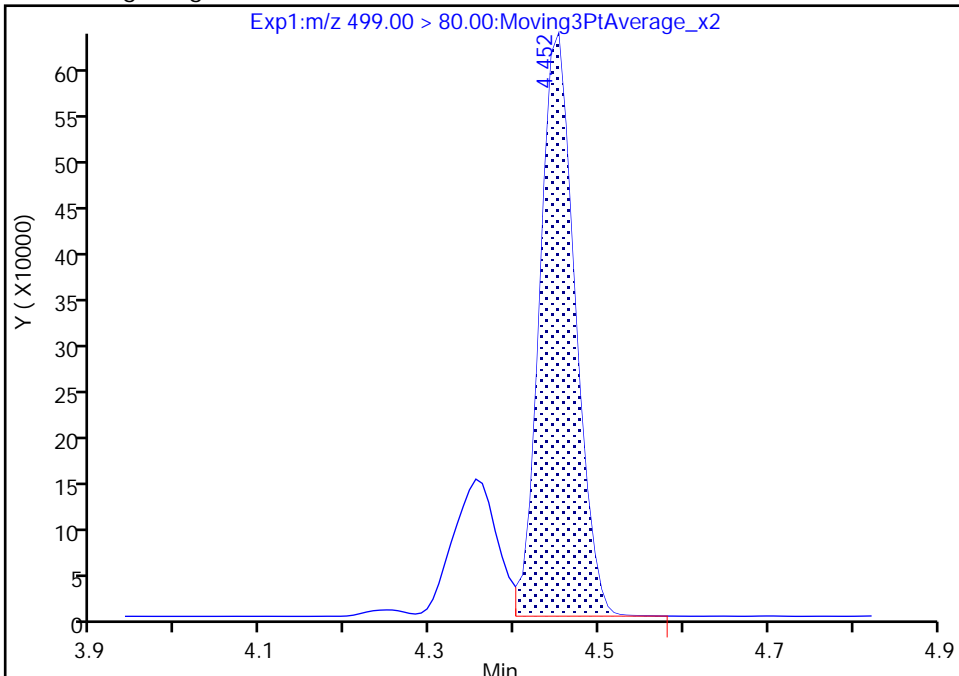
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Injection Date: 11-Jan-2022 17:48:06 Instrument ID: LCA  
Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

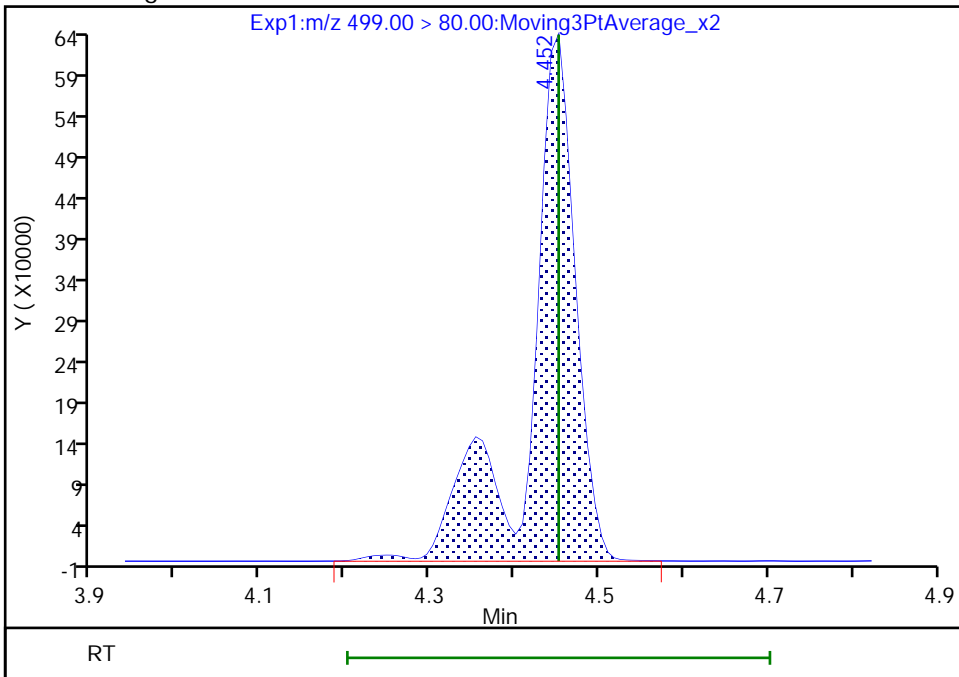
RT: 4.45  
Area: 1843139  
Amount: 0.667526  
Amount Units: ng/ml

Processing Integration Results



RT: 4.45  
Area: 2414182  
Amount: 0.874339  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 11-Jan-2022 18:02:02  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

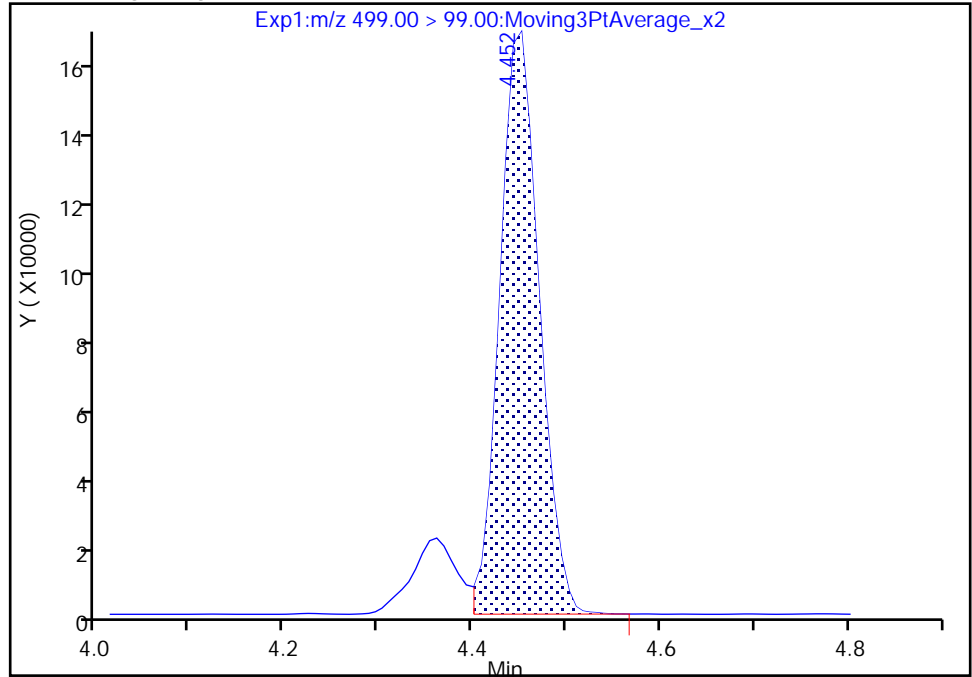
Data File: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_007.d  
Injection Date: 11-Jan-2022 17:48:06 Instrument ID: LCA  
Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

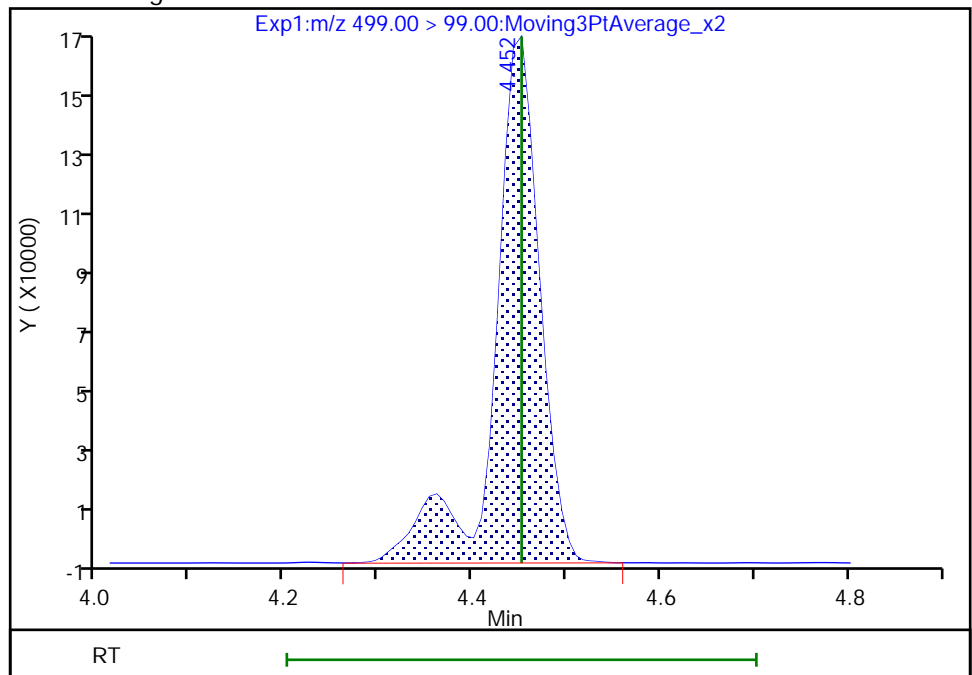
RT: 4.45  
Area: 491383  
Amount: 0.667526  
Amount Units: ng/ml

Processing Integration Results



RT: 4.45  
Area: 565909  
Amount: 0.874339  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 11-Jan-2022 18:02:07

Audit Action: Manually Integrated

Audit Reason: Baseline



Eurofins TestAmerica, Knoxville

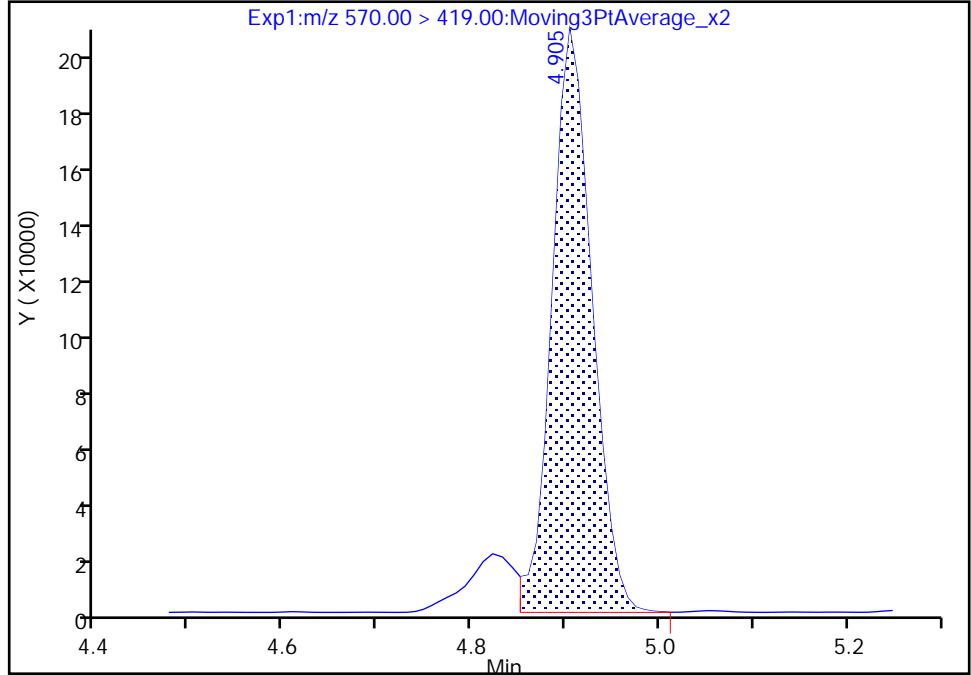
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Injection Date: 11-Jan-2022 17:48:06 Instrument ID: LCA  
Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

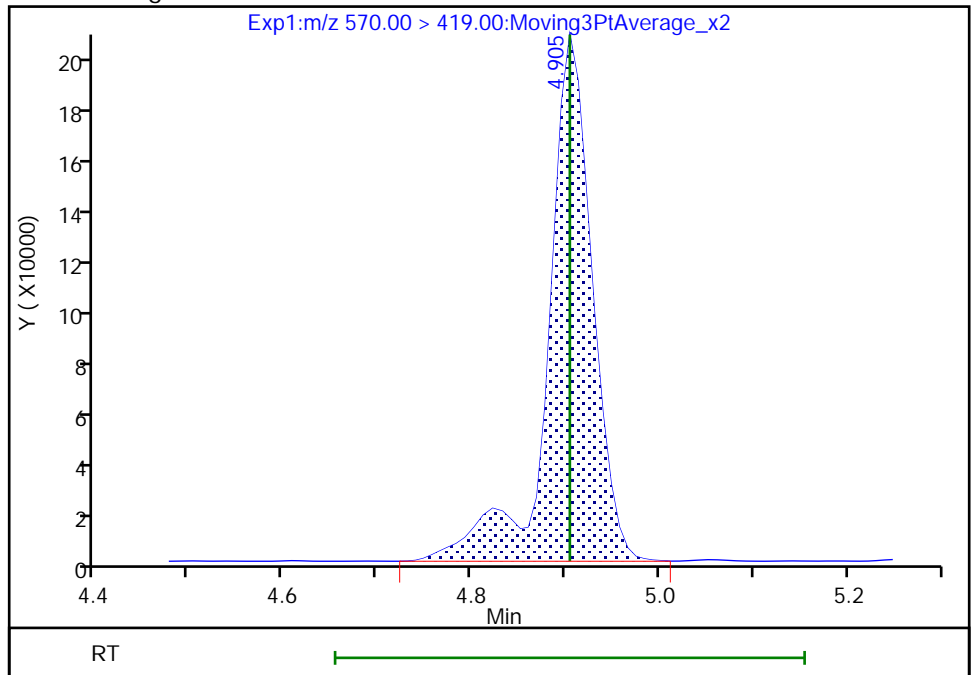
RT: 4.90  
Area: 602017  
Amount: 0.880869  
Amount Units: ng/ml

Processing Integration Results



RT: 4.90  
Area: 673153  
Amount: 0.984796  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 11-Jan-2022 18:02:19  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

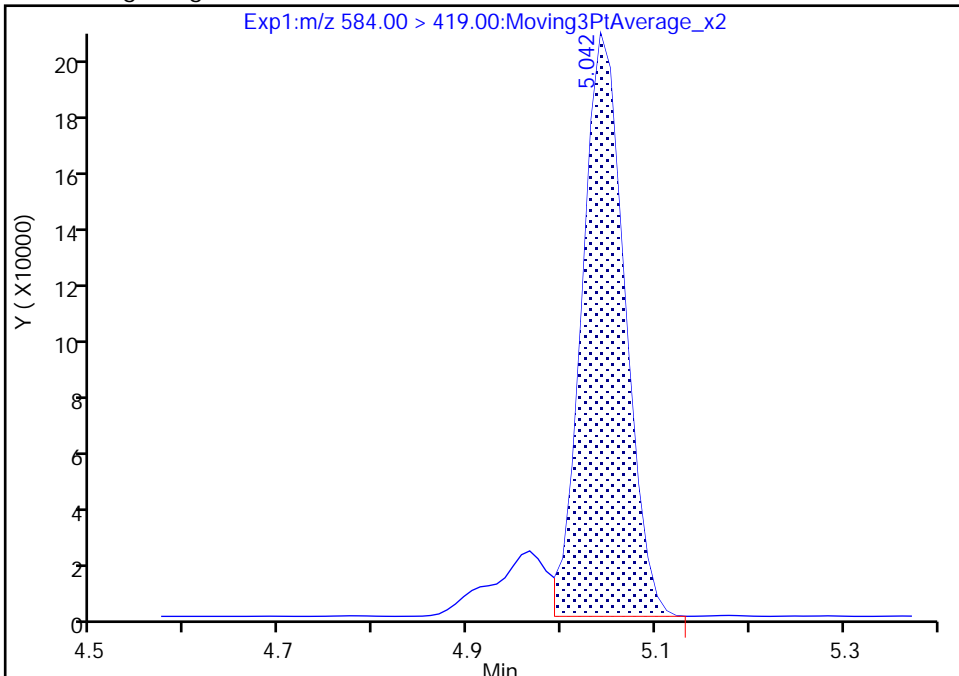
Data File:	\\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_007.d		
Injection Date:	11-Jan-2022 17:48:06	Instrument ID:	LCA
Lims ID:	CCVIS		
Client ID:			
Operator ID:	Cochran, Bobby	ALS Bottle#:	7
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	PFC_LCA	Limit Group:	LC - PFC- ICAL
Column:		Detector:	EXP1
		Worklist Smp#:	7

40 NETFOSA, CAS: 2991-50-6

Signal: 1

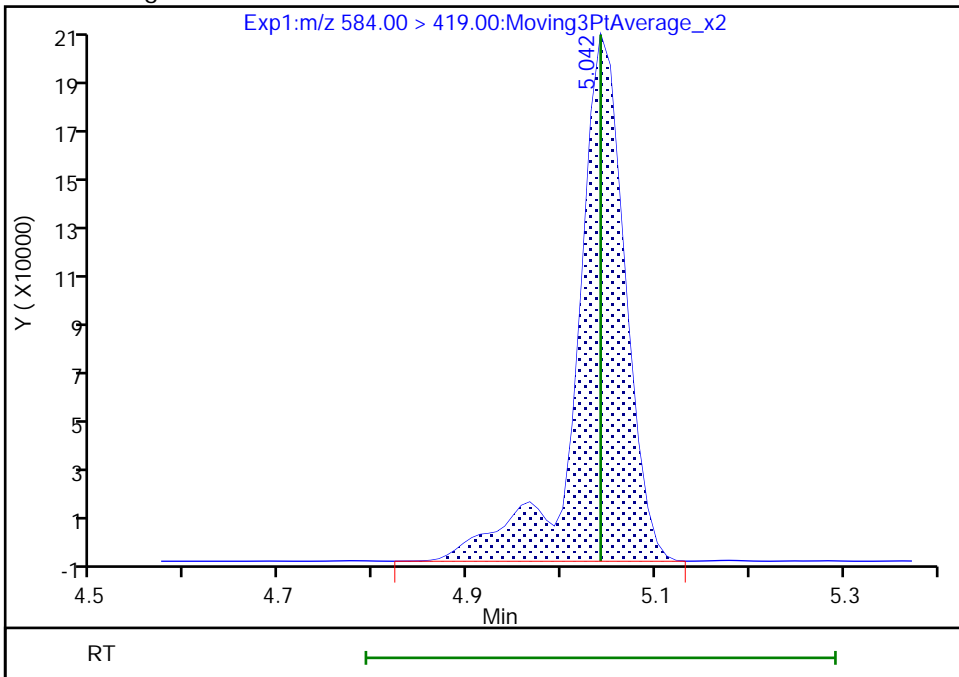
RT: 5.04  
 Area: 655907  
 Amount: 0.843648  
 Amount Units: ng/ml

Processing Integration Results



RT: 5.04  
 Area: 750429  
 Amount: 0.964727  
 Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 11-Jan-2022 18:02:27  
 Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-57822/19 Calibration Date: 01/11/2022 19:33  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 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	0.7844	0.7889		2.51	2.50	0.6	40.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9519	0.998		2.62	2.50	4.9	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.097	1.145		2.31	2.21	4.4	40.0
4:2 FTS	AveID	2.252	2.314		2.40	2.34	2.8	40.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	0.9713	1.033		2.49	2.35	6.3	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8680	0.8882		2.56	2.50	2.3	40.0
HFPO-DA	AveID	1.352	1.442		2.67	2.50	6.6	40.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.377	1.354		2.24	2.28	-1.7	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.047	1.085		2.59	2.50	3.6	40.0
DONA	AveID	2.630	2.717		2.43	2.36	3.3	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9541	1.011		2.52	2.38	5.9	40.0
6:2 FTS	L2ID		1.947		2.57	2.37	8.3	40.0
Perfluorooctanoic acid (PFOA)	AveID	1.147	1.127		2.46	2.50	-1.8	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.099	1.123		2.37	2.32	2.2	40.0
Perfluorononanoic acid (PFNA)	Q2ID		0.8888		2.58	2.50	3.2	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	Q2ID		2.283		2.46	2.33	5.4	50.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9748	1.033		2.54	2.40	6.0	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9459	0.9322		2.46	2.50	-1.5	40.0
Perfluorodecanoic acid (PFDA)	AveID	0.9645	1.012		2.62	2.50	4.9	40.0
8:2 FTS	AveID	1.415	1.453		2.46	2.40	2.7	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	QuaIF		0.9745		2.50	2.50	0.0	40.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		0.9621		2.49	2.41	3.4	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9695	1.008		2.60	2.50	4.0	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Q2ID		1.016		2.54	2.50	1.6	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.672	1.711		2.41	2.36	2.3	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.999		2.47	2.50	-1.2	40.0
10:2 FTS	AveID	2.276	2.437		2.58	2.41	7.1	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	Q2ID		1.284		2.71	2.50	8.3	40.0
NMeFOSA	Q2ID		1.085		2.63	2.50	5.2	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9166	0.9874		2.61	2.42	7.7	40.0

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-57822/19 Calibration Date: 01/11/2022 19:33  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 Lab File ID: \_019.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTriA)	AveID	0.8292	0.8289		2.50	2.50	-0.0	40.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	AveID	1.328	1.331		2.51	2.50	0.2	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.195	1.263		2.64	2.50	5.6	40.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1344	0.1331		2.48	2.50	-1.0	40.0
Perfluorohexadecanoic acid	Q2ID		1.096		2.56	2.50	2.4	40.0
Perfluorooctadecanoic acid	AveID	0.9844	0.9799		2.49	2.50	-0.5	40.0
13C4 PFBA	Ave	1.142	1.102		1.21	1.25	-3.5	50.0
13C5 PFPeA	Ave	0.8865	0.8596		1.21	1.25	-3.0	50.0
13C3 PFBS	Ave	0.5913	0.5931		1.17	1.16	0.3	50.0
M2-4:2 FTS	Ave	0.1820	0.1752		1.12	1.17	-3.7	50.0
13C2 PFHxA	Ave	0.9479	0.9093		1.20	1.25	-4.1	50.0
13C3 HFPO-DA	Ave	0.4556	0.4365		1.20	1.25	-4.2	50.0
18O2 PFHxS	Ave	0.3946	0.4141		1.24	1.18	4.9	50.0
13C4 PFHpA	Ave	0.9067	0.9204		1.27	1.25	1.5	50.0
M2-6:2 FTS	Ave	0.1835	0.1681		1.09	1.19	-8.4	50.0
13C4 PFOA	Ave	0.9376	0.9522		1.27	1.25	1.5	50.0
13C4 PFOS	Ave	0.5681	0.5827		1.23	1.20	2.6	50.0
13C5 PFNA	Ave	1.234	1.228		1.24	1.25	-0.5	50.0
13C8 FOSA	Ave	0.7682	0.8121		1.32	1.25	5.7	50.0
13C2 PFDA	Ave	1.191	1.149		1.21	1.25	-3.5	50.0
M2-8:2 FTS	Ave	0.2070	0.1884		1.09	1.20	-9.0	50.0
d3-NMeFOSAA	Ave	0.1401	0.1902		1.70	1.25	35.8	50.0
13C2 PFUnA	Ave	1.189	1.176		1.24	1.25	-1.0	50.0
d5-NEtFOSAA	Ave	0.1537	0.1795		1.46	1.25	16.8	50.0
13C2 PFDoA	Ave	1.247	1.270		1.27	1.25	1.8	50.0
d7-N-MeFOSE-M	Ave	0.1499	0.1356		1.13	1.25	-9.6	50.0
d-N-MeFOSA-M	Ave	0.1069	0.1047		1.23	1.25	-2.0	50.0
d9-N-EtFOSE-M	Ave	0.1504	0.1483		1.23	1.25	-1.4	50.0
d-N-EtFOSA-M	Ave	0.0883	0.0844		1.20	1.25	-4.4	50.0
13C2 PFTeDA	Ave	0.9508	0.9442		1.24	1.25	-0.7	50.0
13C2 PFHxDA	Ave	0.6444	0.6391		1.24	1.25	-0.8	50.0
13C8 PFOA	AveID	0.999	0.9887		1.24	1.25	-1.1	50.0
13C8 PFOS	AveID	0.2220	0.2274		1.22	1.20	2.4	50.0

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_019.d  
 Lims ID: CCV  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 11-Jan-2022 19:33:44 ALS Bottle#: 19 Worklist Smp#: 19  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022220-019 ccv  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 12-Jan-2022 18:43:32 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1648

First Level Reviewer: cochranj Date: 12-Jan-2022 18:42:52

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	2.784	2.814	-0.030	0.677	5905024	1.21	96.5	13809	
2 Perfluorobutanoic acid	212.90 > 169.00	2.784	2.814	-0.030	1.000	9317012	2.51	101	2846	
D 3 13C5 PFPeA	267.90 > 223.00	3.098	3.131	-0.033	0.753	4608266	1.21	97.0	11990	
4 Perfluoropentanoic acid	262.90 > 219.00	3.098	3.131	-0.033	1.000	9200256	2.62	105	3209	
D 6 13C3 PFBS	301.90 > 80.00	3.107	3.147	-0.040	0.755	2957131	1.17	100	13039	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.115	3.147	-0.032	1.003	6438409	2.31	Target=2.65	104	5684
	298.90 > 99.00	3.115	3.147	-0.032	1.003	2339875		2.75(1.32-3.97)		4856
D 8 M2-4:2 FTS	329.00 > 81.00	3.402	3.442	-0.040	0.827	877179	1.12	96.3	1680	
7 4:2 FTS	327.00 > 307.00	3.402	3.442	-0.040	1.000	4059932	2.40	103	11628	
10 Perfluorohexanoic acid	313.00 > 269.00	3.432	3.472	-0.040	1.003	8659473	2.56	Target=11.80	102	3299
	313.00 > 119.00	3.422	3.472	-0.050	1.000	678056		12.77(5.90-17.70)		1105
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.422	3.472	-0.050	1.101	6159071	2.49	Target=3.44	106	10962
	349.00 > 99.00	3.422	3.472	-0.050	1.101	1732978		3.55(1.72-5.16)		8814
D 9 13C2 PFHxA	315.00 > 270.00	3.422	3.472	-0.050	0.832	4874590	1.20	95.9	11542	
D 12 13C3 HFPO-DA	287.00 > 169.00	3.528	3.574	-0.046	0.857	2339792	1.20	95.8	4479	

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	3.528	3.574	-0.046	1.000	6748114	2.67		107	3723	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.769	3.807	-0.038	1.000	5472581	2.24	Target=3.40	98.3	6388	M
399.00 > 99.00	3.769	3.807	-0.038	1.000	1577736		3.47(1.70-5.10)		4915	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.769	3.807	-0.038	0.916	2100195	1.24		105	11203	
D 14 13C4 PFHpA										
367.00 > 322.00	3.778	3.825	-0.047	0.918	4934222	1.27		102	7829	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.778	3.825	-0.047	1.000	10703234	2.59	Target=3.29	104	5468	
363.00 > 169.00	3.778	3.825	-0.047	1.000	3322767		3.22(1.65-4.94)		2741	
68 DONA										
377.00 > 251.00	3.816	3.858	-0.042	0.867	15987954	2.43	Target=1.82	103	10545	
377.00 > 85.00	3.807	3.858	-0.051	0.865	9279300		1.72(0.91-2.74)		170	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.098	4.140	-0.042	0.931	6010653	2.52	Target=3.92	106	7280	
449.00 > 99.00	4.098	4.140	-0.042	0.931	1534345		3.92(1.96-5.87)		7187	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.106	4.149	-0.043	0.998	855927	1.09		91.6	2625	
D 21 13C4 PFOA										
417.00 > 372.00	4.115	4.156	-0.041	1.000	5104422	1.27		102	8570	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.106	4.156	-0.050	0.998	5046552	1.24		98.9	8756	
19 6:2 FTS										
427.00 > 407.00	4.106	4.156	-0.050	1.000	3325889	2.57		108	10194	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.115	4.156	-0.041	1.000	11505121	2.46	Target=2.59	98.2	4646	
413.00 > 169.00	4.115	4.156	-0.041	1.000	4455159		2.58(1.30-3.89)		5202	
* 22 13C2 PFOA										
415.00 > 370.00	4.115	4.156	-0.041		5360856	1.25			8789	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.402	4.444	-0.042	1.000	678930	1.22		102	3907	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.402	4.452	-0.050	1.000	6511310	2.37	Target=4.65	102	5814	M
499.00 > 99.00	4.402	4.452	-0.050	1.000	1461843		4.45(2.32-6.97)		5382	M
D 25 13C4 PFOS										
503.00 > 80.00	4.402	4.452	-0.050	1.070	2986229	1.23		103	5158	
26 Perfluorononanoic acid										
463.00 > 419.00	4.428	4.469	-0.041	1.000	11697119	2.58	Target=4.65	103	8741	
463.00 > 169.00	4.428	4.469	-0.041	1.000	2577190		4.54(2.32-6.97)		4781	
D 27 13C5 PFNA										
468.00 > 423.00	4.428	4.469	-0.041	1.076	6580631	1.24		99.5	12391	
63 9CIFOS										
531.00 > 351.00	4.560	4.608	-0.048	1.036	13295456	2.46		105	15217	
D 34 13C8 FOSA										
506.00 > 78.00	4.689	4.723	-0.034	1.140	4353543	1.32		106	4284	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
33 Perfluorooctanesulfonamide	498.00 > 78.00	4.689	4.723	-0.034	1.000	8116626	2.46	98.5	5067	
28 Perfluorononanesulfonic acid	549.00 > 80.00	4.681	4.732	-0.051	1.063	6195256	2.54	Target=4.06	106	7706
	549.00 > 99.00	4.681	4.732	-0.051	1.063	1510610		4.10(2.03-6.09)		7310
D 32 13C2 PFDA	515.00 > 470.00	4.715	4.757	-0.042	1.146	6160751	1.21		96.5	8534
29 Perfluorodecanoic acid	513.00 > 469.00	4.715	4.757	-0.042	1.000	12463432	2.62	Target=11.30	105	8161
	513.00 > 169.00	4.715	4.757	-0.042	1.000	1046463		11.91(5.65-16.95)		704
31 8:2 FTS	527.00 > 507.00	4.723	4.774	-0.051	1.000	2811799	2.46		103	7358
D 30 M2-8:2 FTS	529.00 > 81.00	4.723	4.774	-0.051	1.148	967607	1.09		91.0	1421
D 35 d3-NMeFOSAA	573.00 > 419.00	4.861	4.905	-0.044	1.181	1019766	1.70		136	672
36 NMeFOSAA	570.00 > 419.00	4.861	4.905	-0.044	1.000	1987540	2.50		100	3429 M
37 Perfluorodecanesulfonic acid	599.00 > 80.00	4.940	4.992	-0.052	1.122	5794077	2.49	Target=3.79	103	7930
	599.00 > 99.00	4.940	4.992	-0.052	1.122	1517842		3.82(1.90-5.69)		6781
38 Perfluoroundecanoic acid	563.00 > 519.00	4.975	5.022	-0.047	1.000	12718685	2.60	Target=8.45	104	9831
	563.00 > 169.00	4.975	5.022	-0.047	1.000	1471724		8.64(4.22-12.67)		5652
D 39 13C2 PFUnA	565.00 > 520.00	4.975	5.022	-0.047	1.209	6306773	1.24		99.0	9627
40 NEtFOSA	584.00 > 419.00	4.993	5.042	-0.049	1.000	1956125	2.54		102	2328 M
D 41 d5-NEtFOSAA	589.00 > 419.00	4.993	5.042	-0.049	1.213	962458	1.46		117	3995
57 11CIFOS	631.00 > 451.00	5.072	5.122	-0.050	1.152	10070176	2.41		102	10104
D 43 13C2 PFDoA	615.00 > 570.00	5.213	5.257	-0.044	1.267	6805635	1.27		102	12760
42 Perfluorododecanoic acid	613.00 > 569.00	5.213	5.257	-0.044	1.000	13599842	2.47	Target=6.99	98.8	7397
	613.00 > 169.00	5.213	5.257	-0.044	1.000	2108107		6.45(3.50-10.49)		3607
50 10:2 FTS	627.00 > 607.00	5.231	5.275	-0.044	1.107	4745850	2.58		107	7205
D 51 d7-N-MeFOSE-M	623.00 > 59.00	5.266	5.292	-0.026	1.280	726667	1.13		90.4	586
D 58 d-N-MeFOSA-M	515.00 > 169.00	5.266	5.292	-0.026	1.280	561353	1.22		98.0	50.3
61 NMeFOSA	512.00 > 169.00	5.275	5.292	-0.017	1.002	1218080	2.63		105	645
49 N-MeFOSE-M	616.00 > 59.00	5.275	5.301	-0.026	1.002	1865976	2.71		108	2112

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
54 PFDoS										
699.00 > 80.00	5.383	5.425	-0.041	1.223	5971004	2.61	Target=4.24	108	9167	
699.00 > 99.00	5.383	5.425	-0.041	1.223	1413551		4.22(2.12-6.35)		5181	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.425	5.444	-0.019	1.318	795015	1.23		98.6	404	
62 N-EtFOSE-M										
630.00 > 59.00	5.435	5.464	-0.029	1.002	2116068	2.51		100	1900	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.414	5.464	-0.050	1.039	11282861	2.50	Target=6.20	100.0	7735	
663.00 > 169.00	5.414	5.464	-0.050	1.039	1949178		5.79(3.10-9.30)		5081	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.435	5.464	-0.029	1.321	452642	1.20		95.6	673	
56 N-EtFOSA-M										
526.00 > 169.00	5.444	5.464	-0.020	1.002	1142957	2.64		106	562	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.598	5.650	-0.052	1.360	5061646	1.24		99.3	8469	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.598	5.650	-0.052	1.000	1346990	2.48	Target=1.05	99.0	4457	
713.00 > 219.00	5.598	5.650	-0.052	1.000	1339546		1.01(0.53-1.58)		5218	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.905	5.948	-0.043	1.435	3425895	1.24		99.2	6624	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.905	5.948	-0.043	1.000	7507559	2.56	Target=8.09	102	5979	
813.00 > 169.00	5.905	5.948	-0.043	1.000	931204		8.06(4.05-12.14)		2644	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.165	6.209	-0.044	1.044	6713730	2.49	Target=11.53	99.5	5639	
913.00 > 169.00	6.165	6.209	-0.044	1.044	590639		11.37(5.77-17.30)		2175	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

63L5PFC2T3\_00001

Amount Added: 1.00

Units: mL



Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\\_019.d

Injection Date: 11-Jan-2022 19:33:44

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

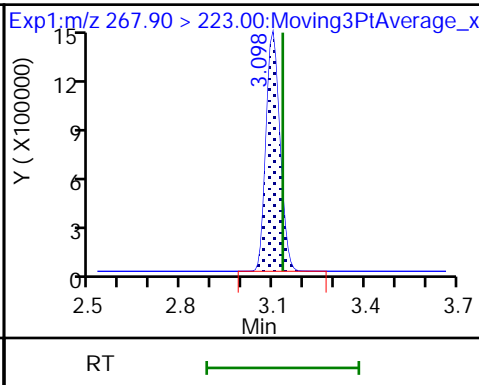
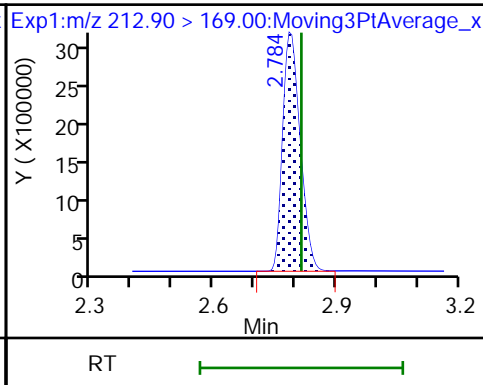
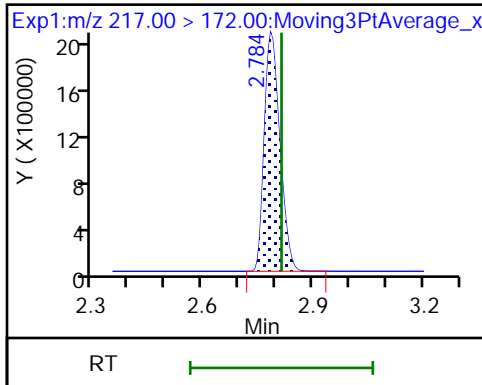
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

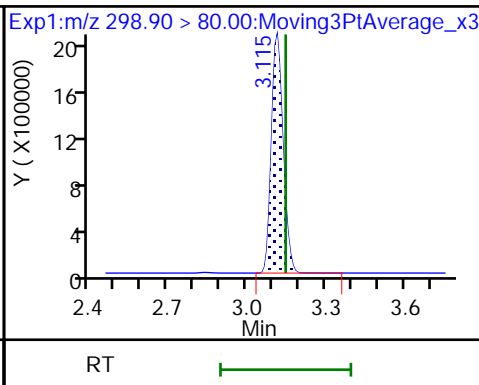
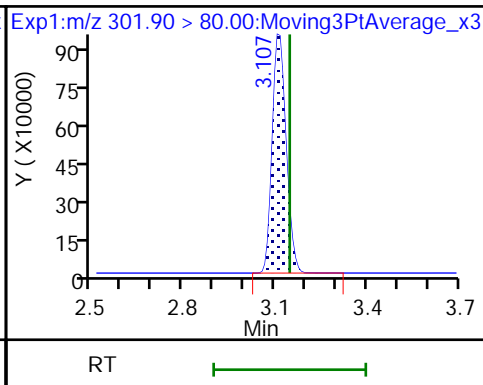
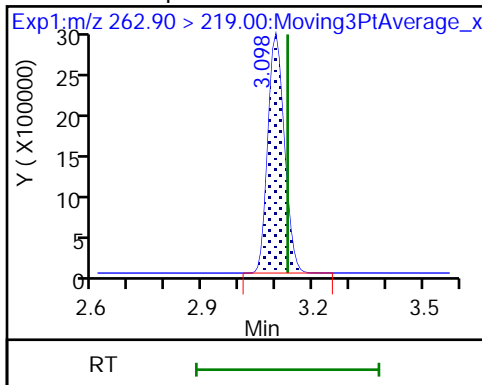
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

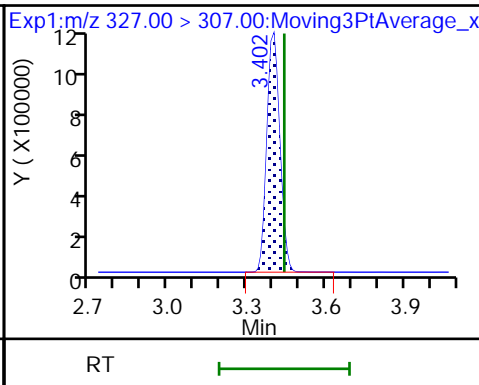
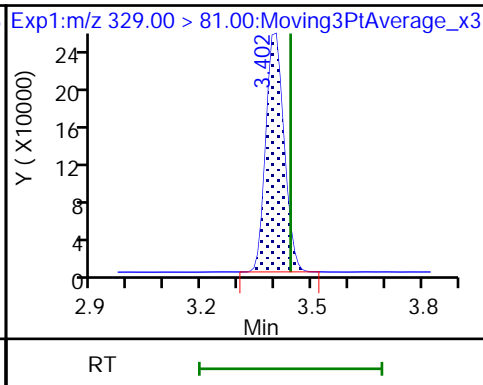
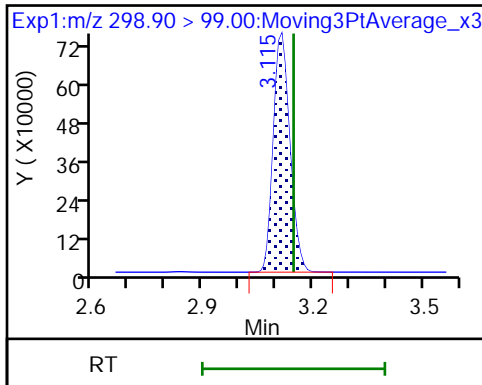
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

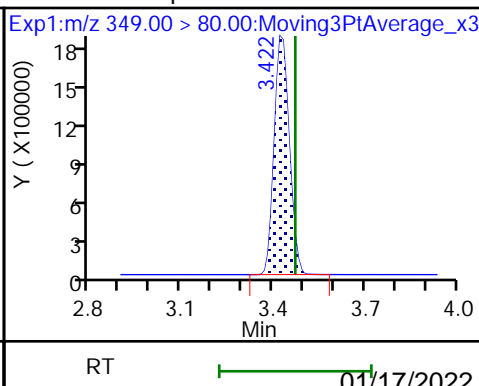
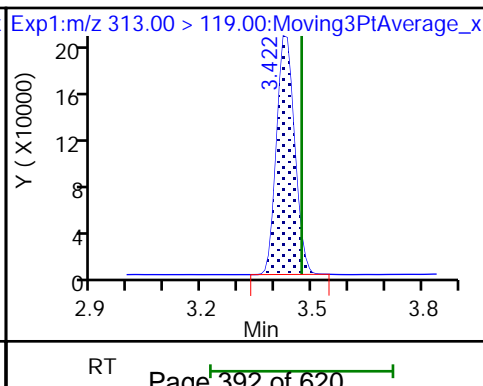
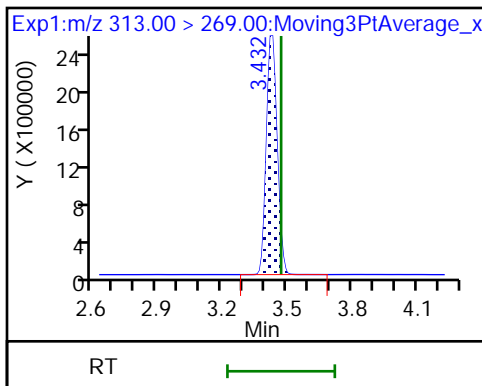
7 4:2 FTS

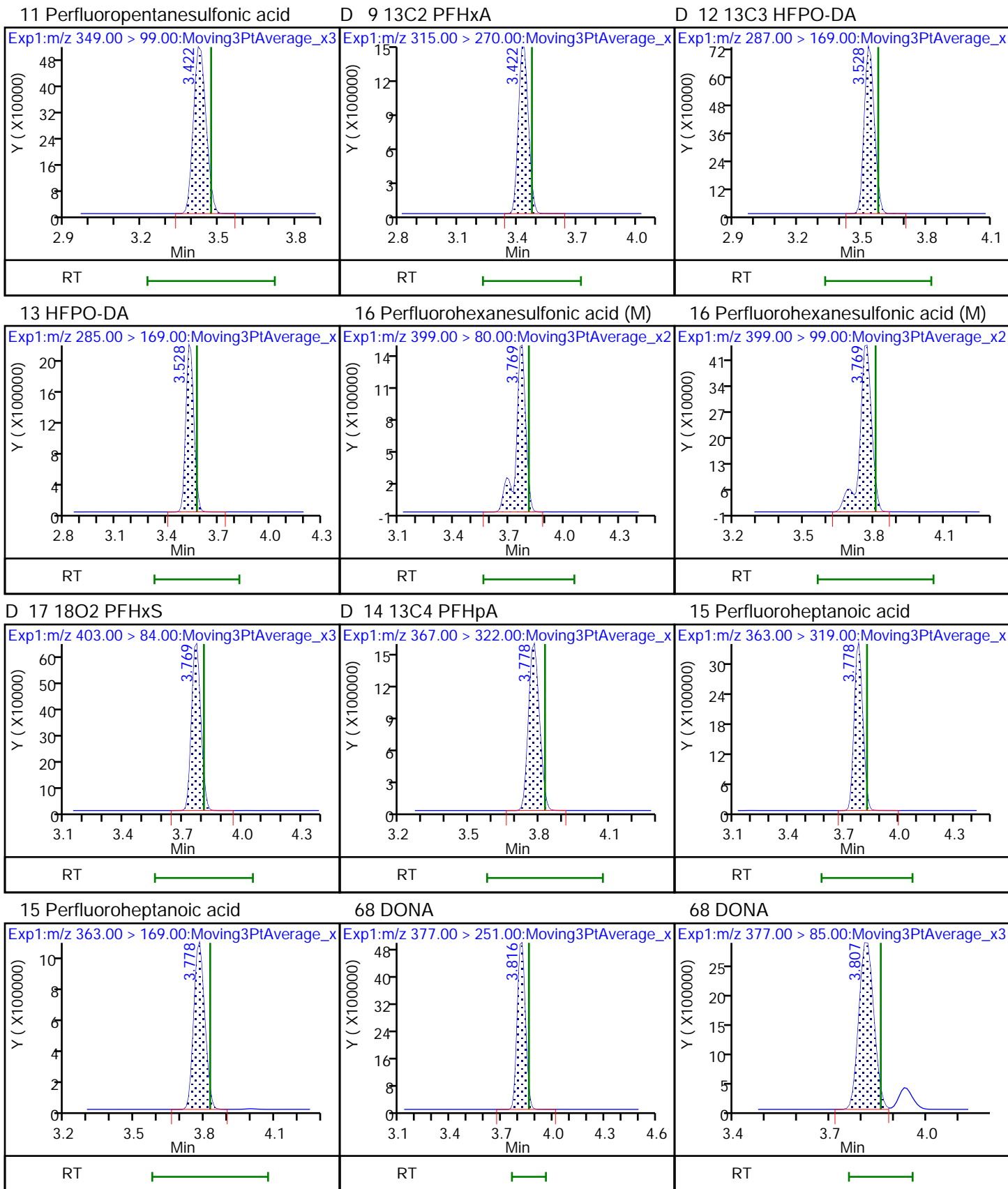


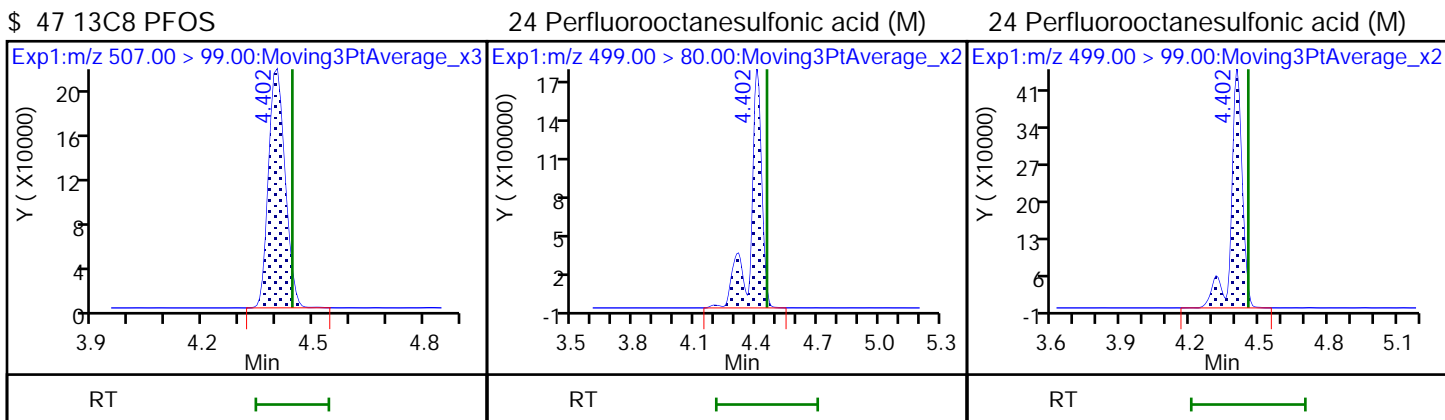
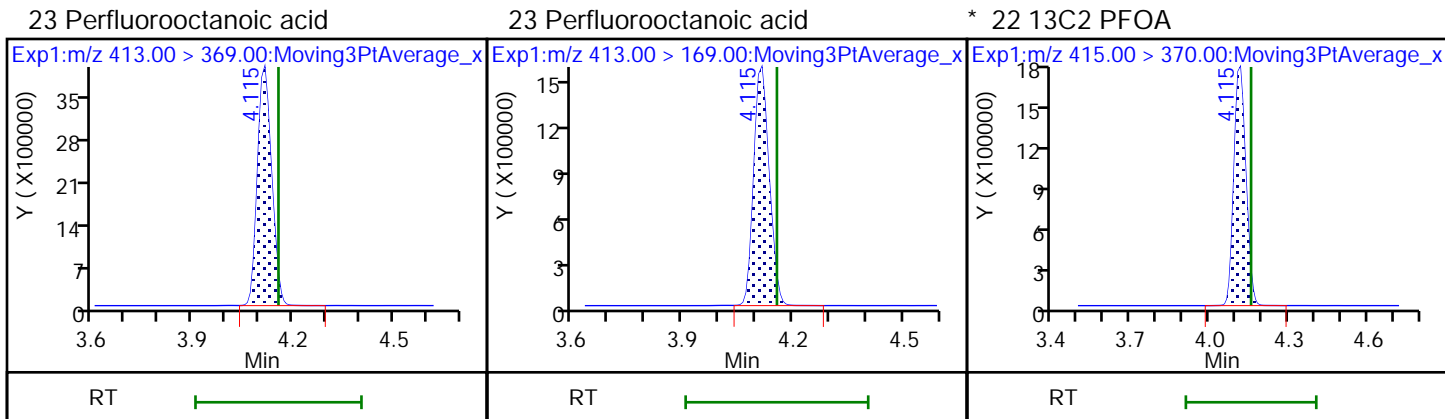
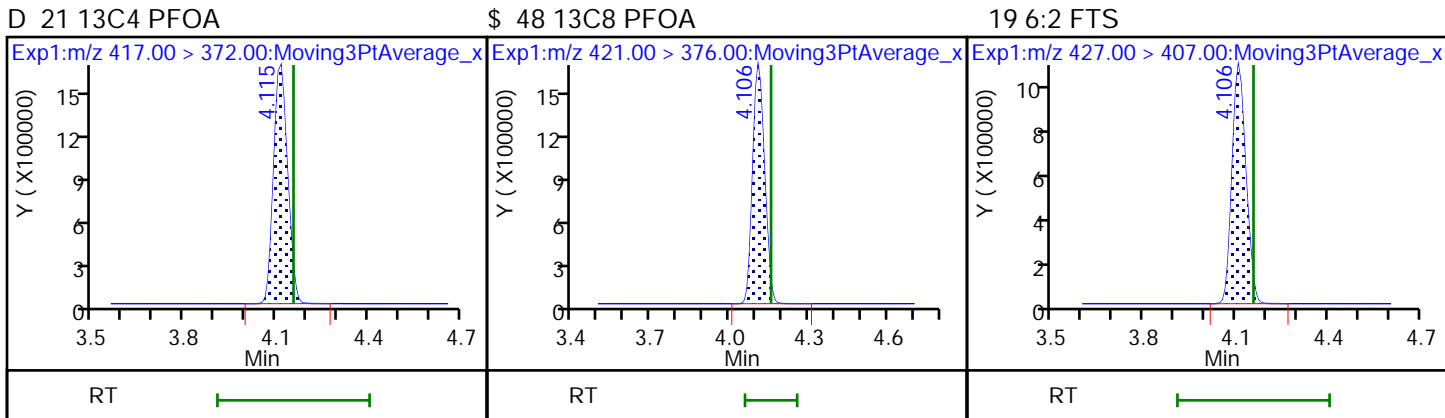
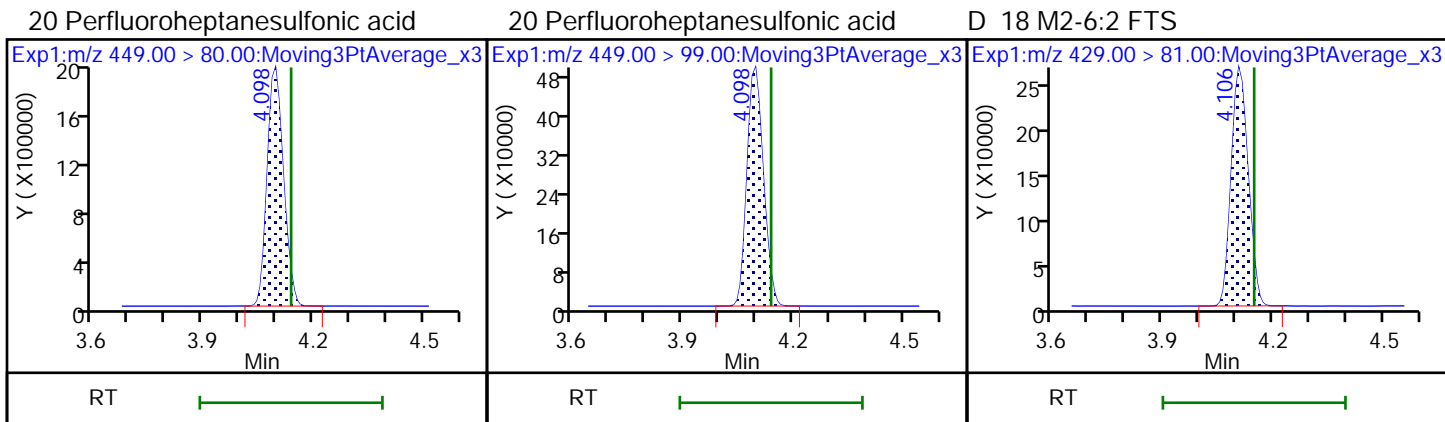
10 Perfluorohexanoic acid

10 Perfluorohexanoic acid

11 Perfluoropentanesulfonic acid



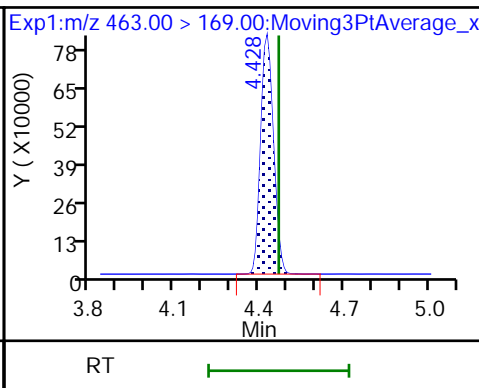
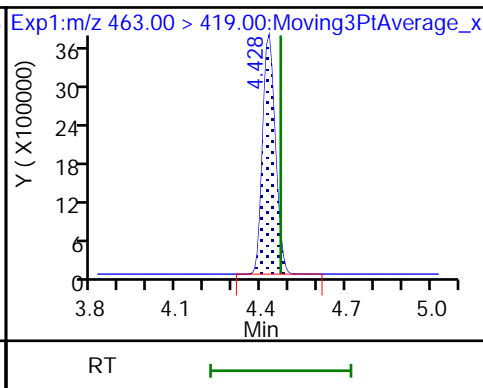
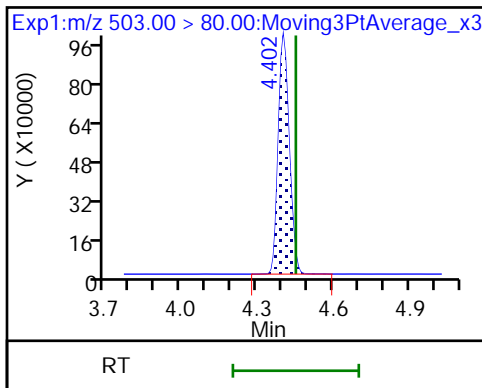




D 25 13C4 PFOS

26 Perfluorononanoic acid

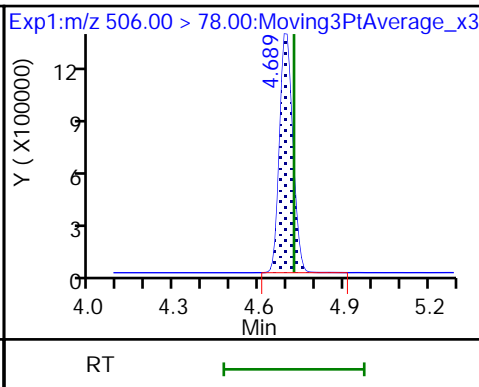
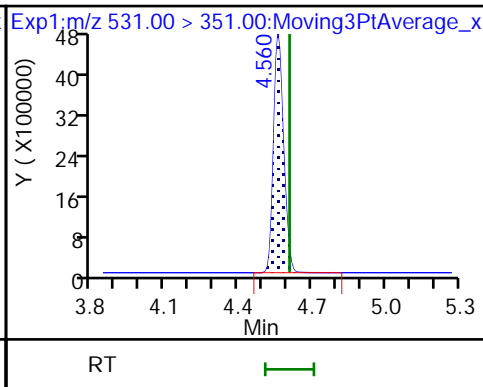
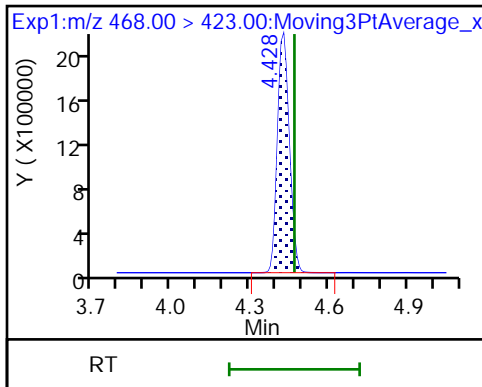
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS

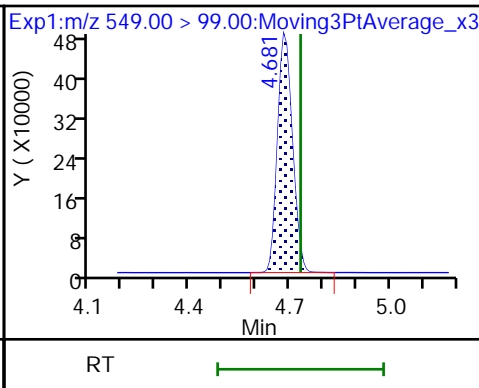
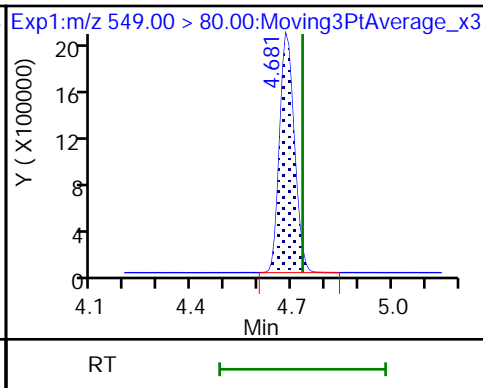
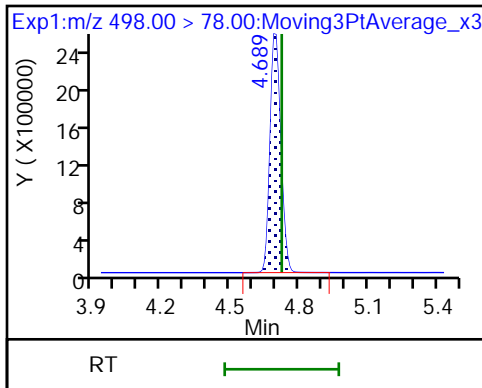
D 34 13C8 FOSA



33 Perfluorooctanesulfonamide

28 Perfluorononanesulfonic acid

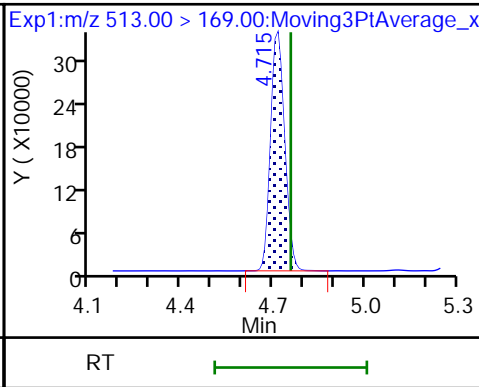
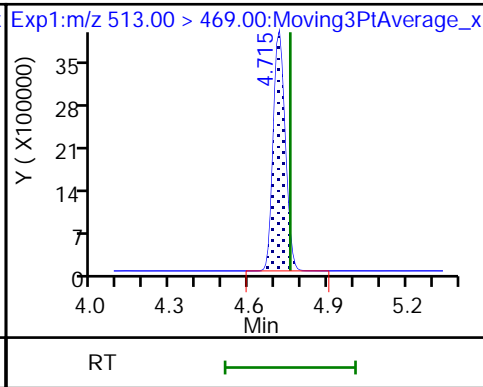
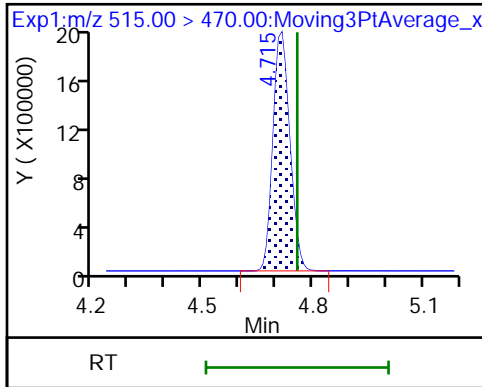
28 Perfluorononanesulfonic acid

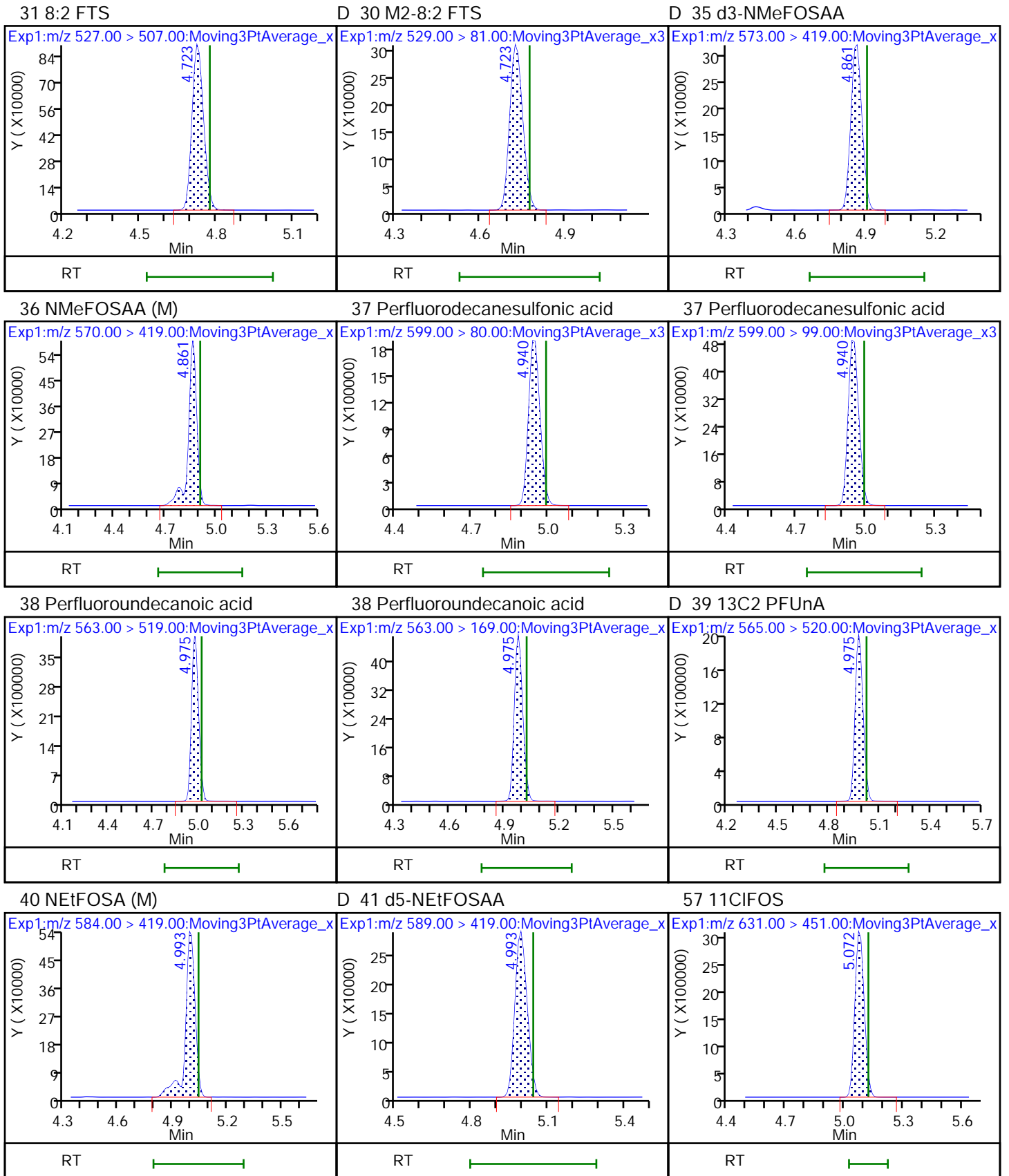


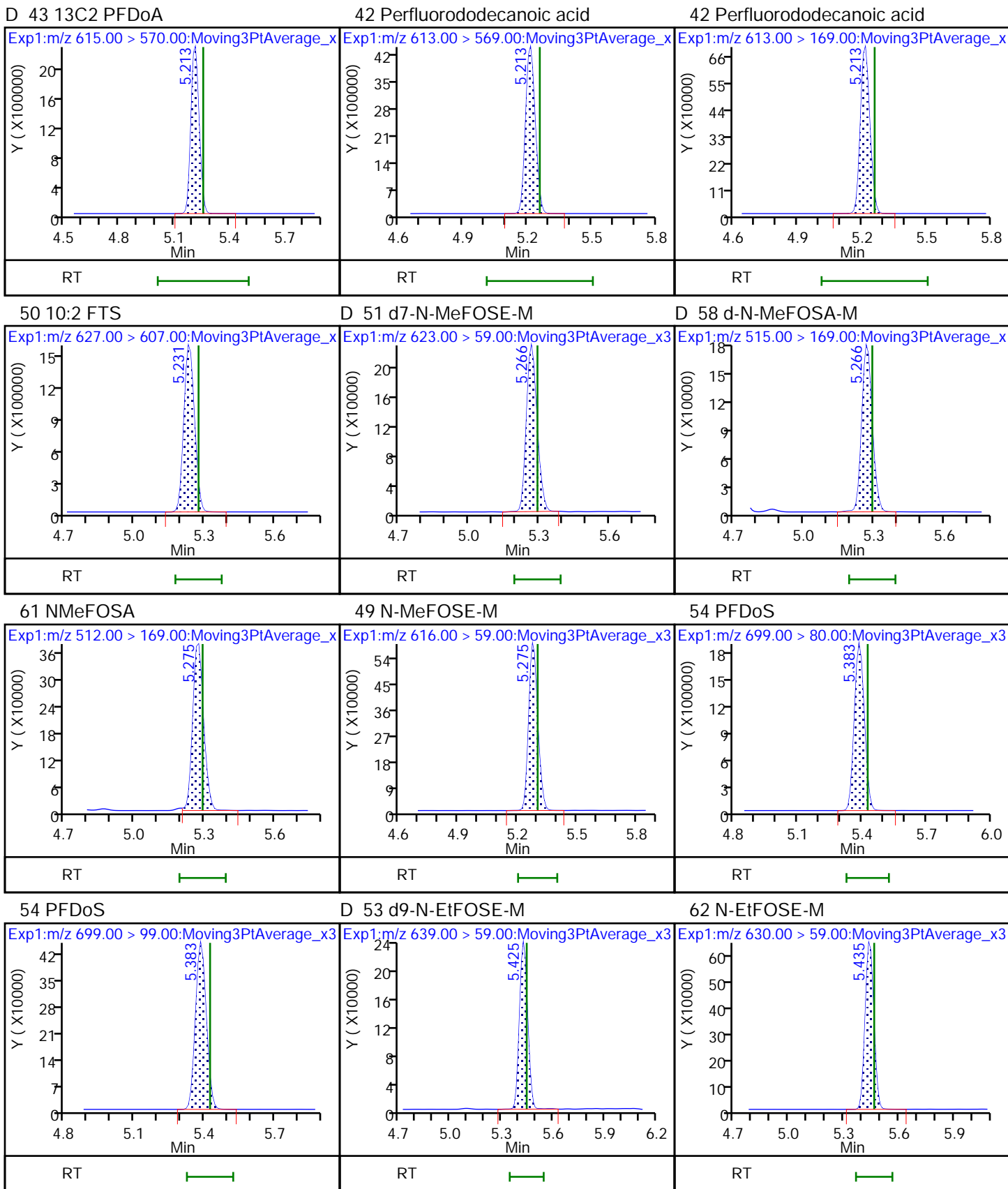
D 32 13C2 PFDA

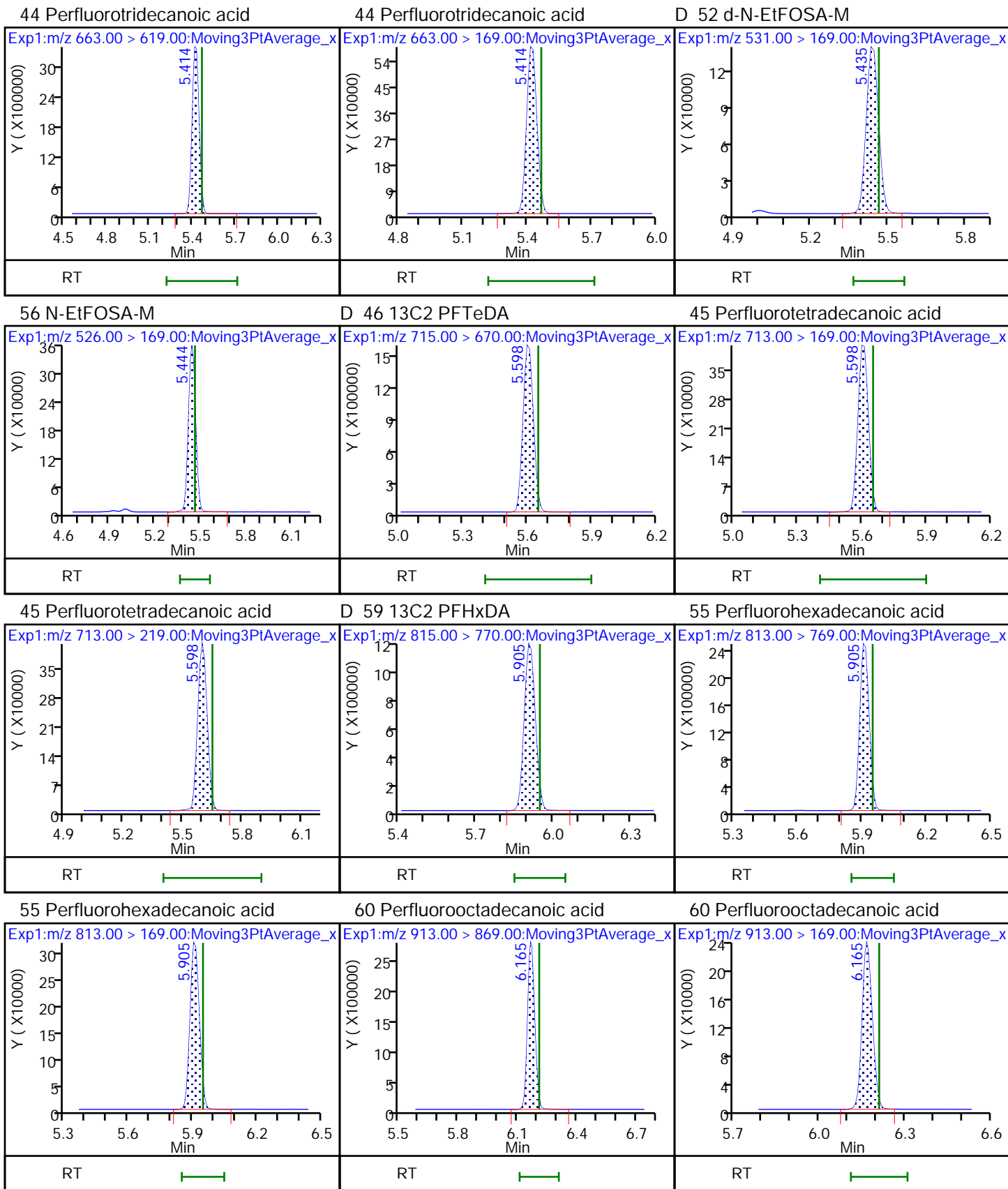
29 Perfluorodecanoic acid

29 Perfluorodecanoic acid













Eurofins TestAmerica, Knoxville

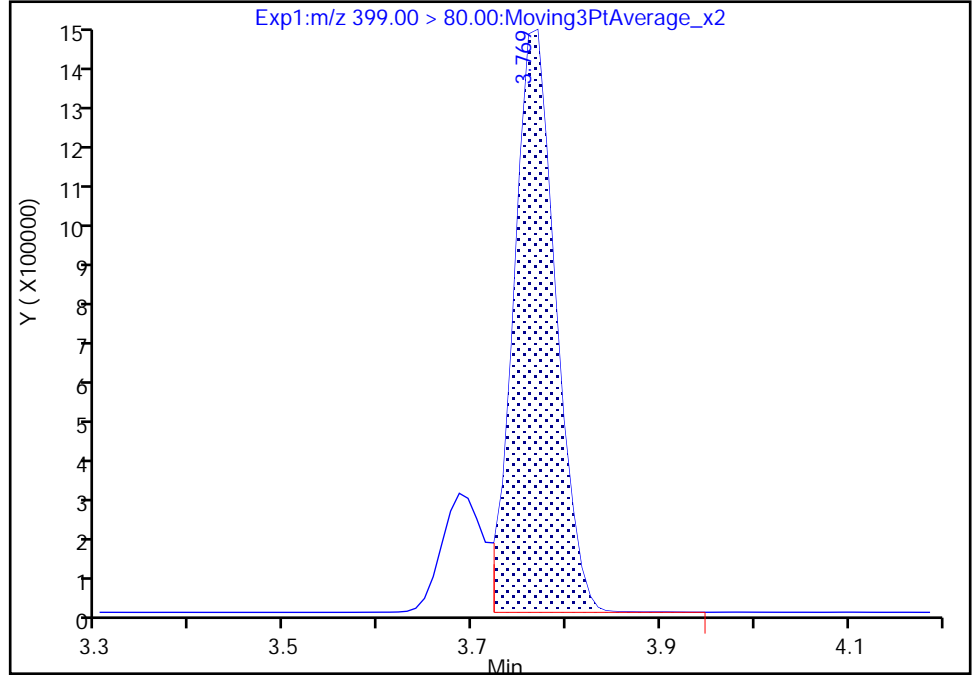
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Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

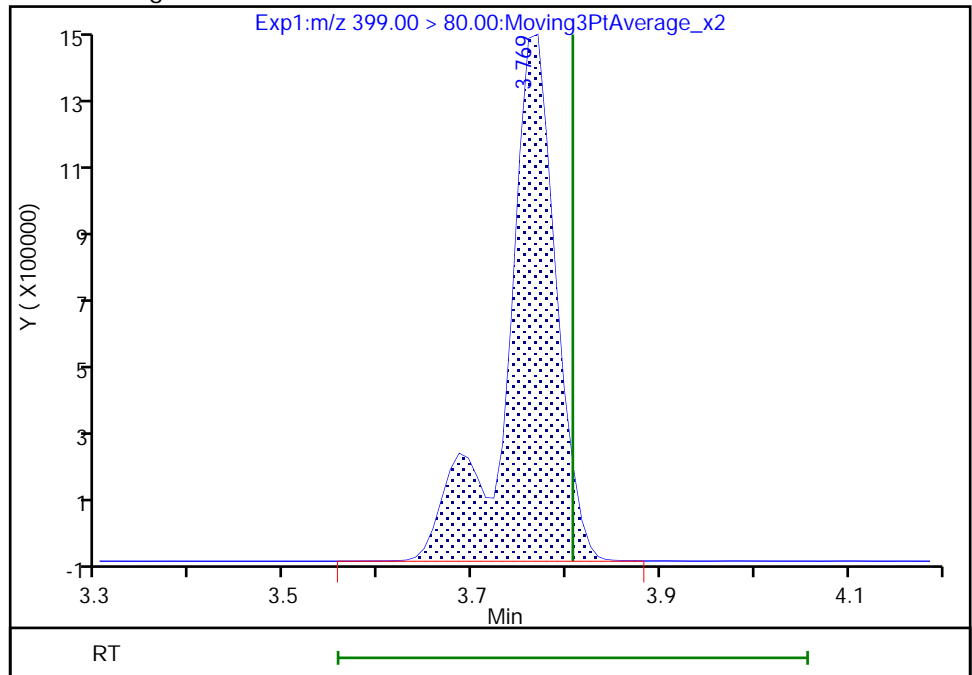
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Amount: 1.857295  
Amount Units: ng/ml

Processing Integration Results



RT: 3.77  
Area: 5472581  
Amount: 2.237355  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 12-Jan-2022 18:41:47  
Audit Action: Manually Integrated

Eurofins TestAmerica, Knoxville

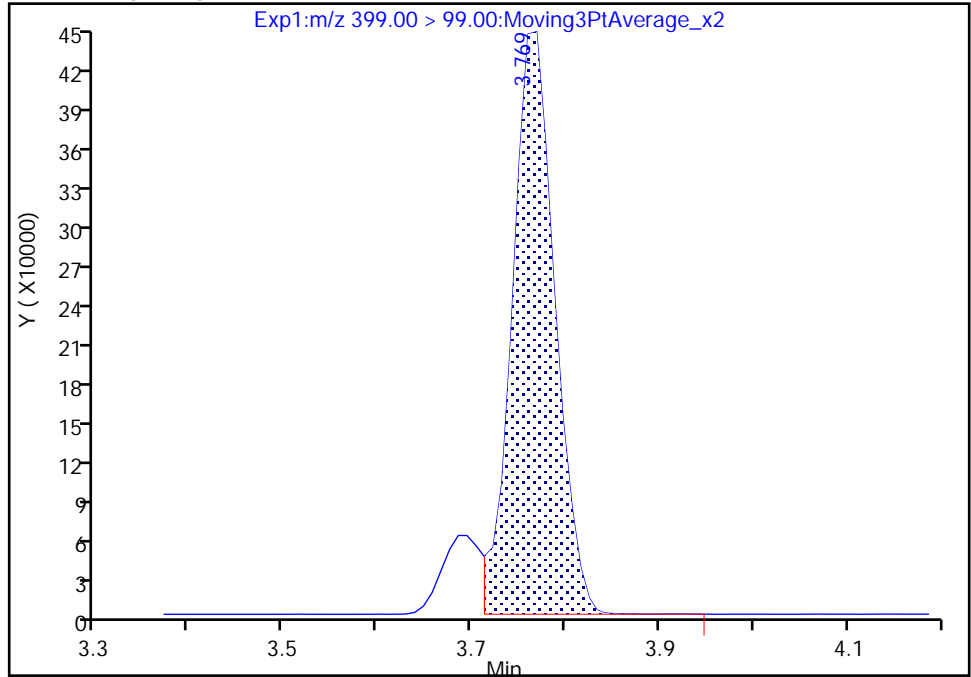
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Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

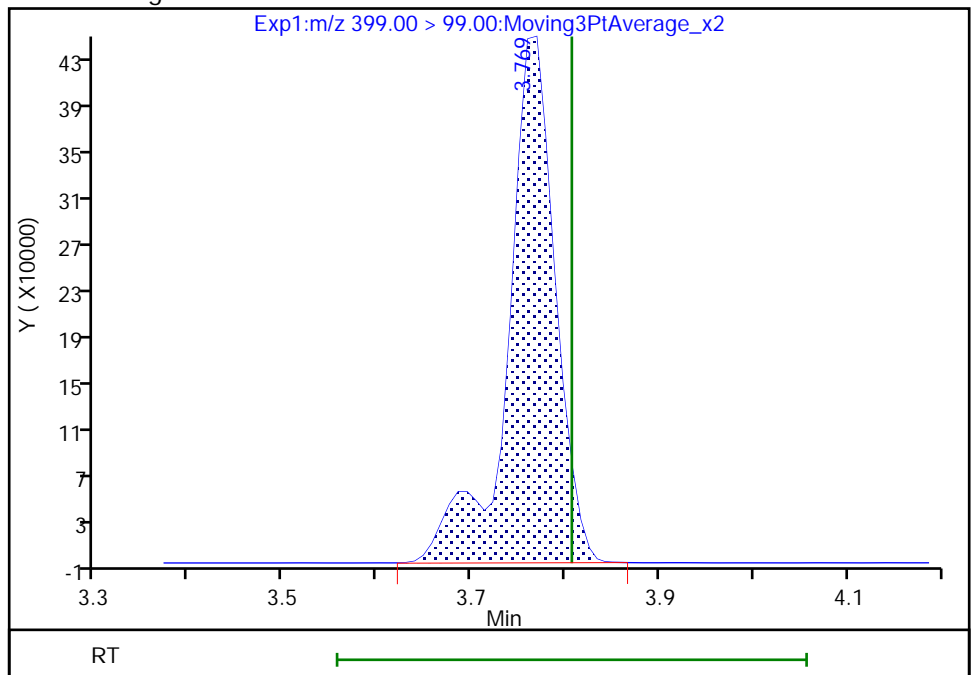
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Amount: 1.857295  
Amount Units: ng/ml

Processing Integration Results



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Amount: 2.237355  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 12-Jan-2022 18:41:52

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

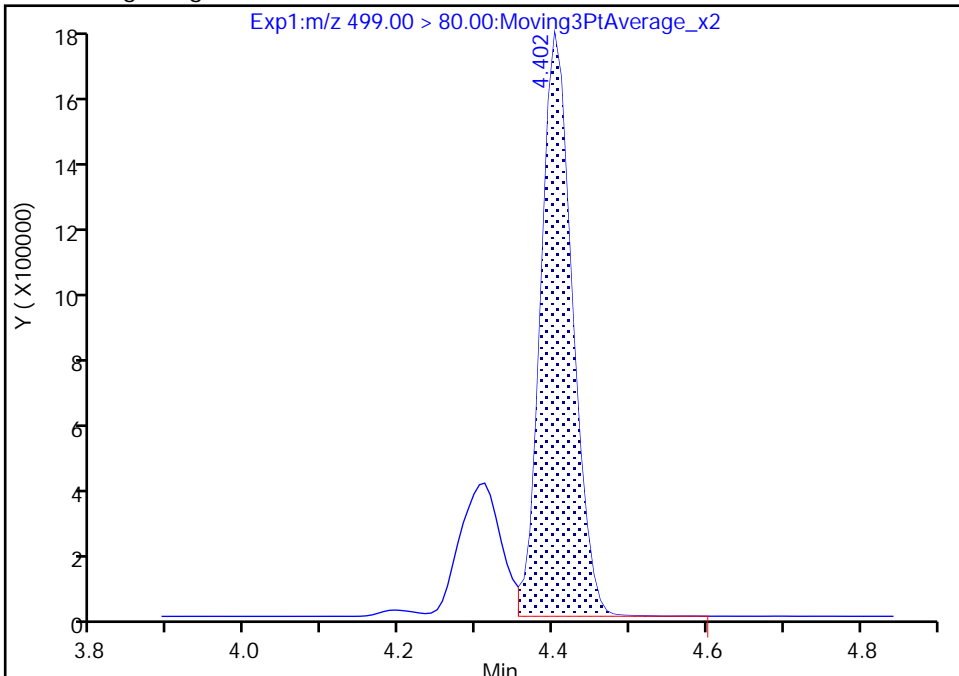
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Operator ID: Cochran, Bobby ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

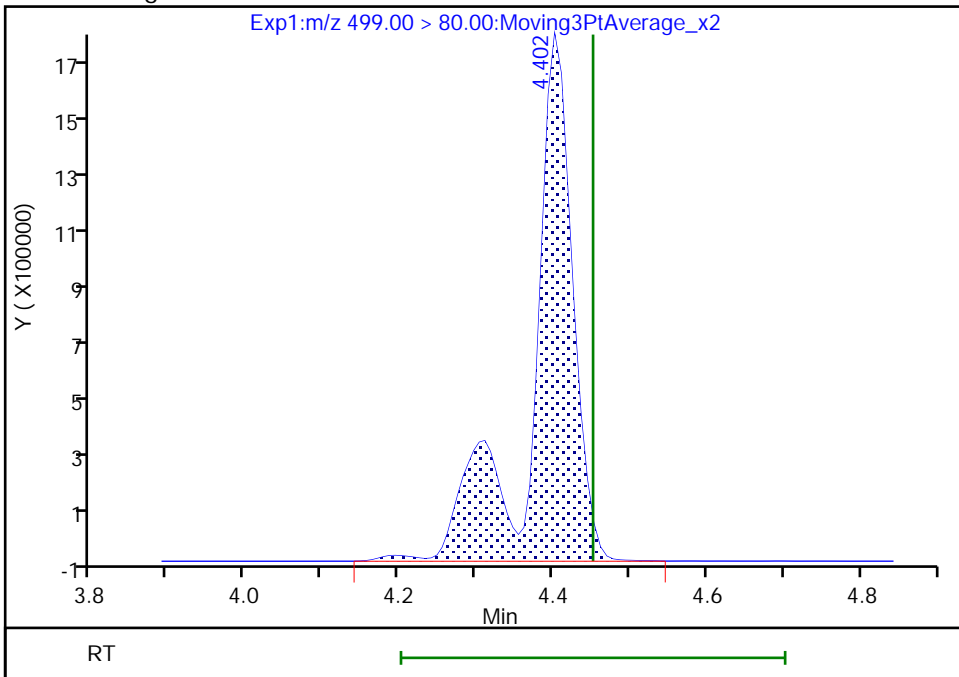
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Area: 4961460  
Amount: 1.806911  
Amount Units: ng/ml

Processing Integration Results



RT: 4.40  
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Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 12-Jan-2022 18:42:04  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

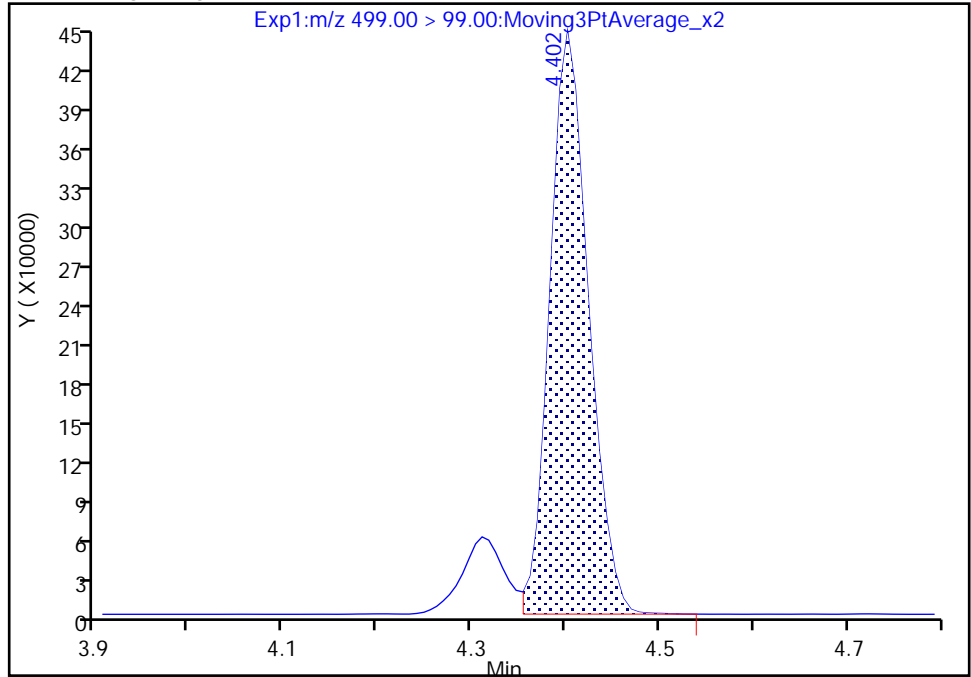
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Operator ID: Cochran, Bobby ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

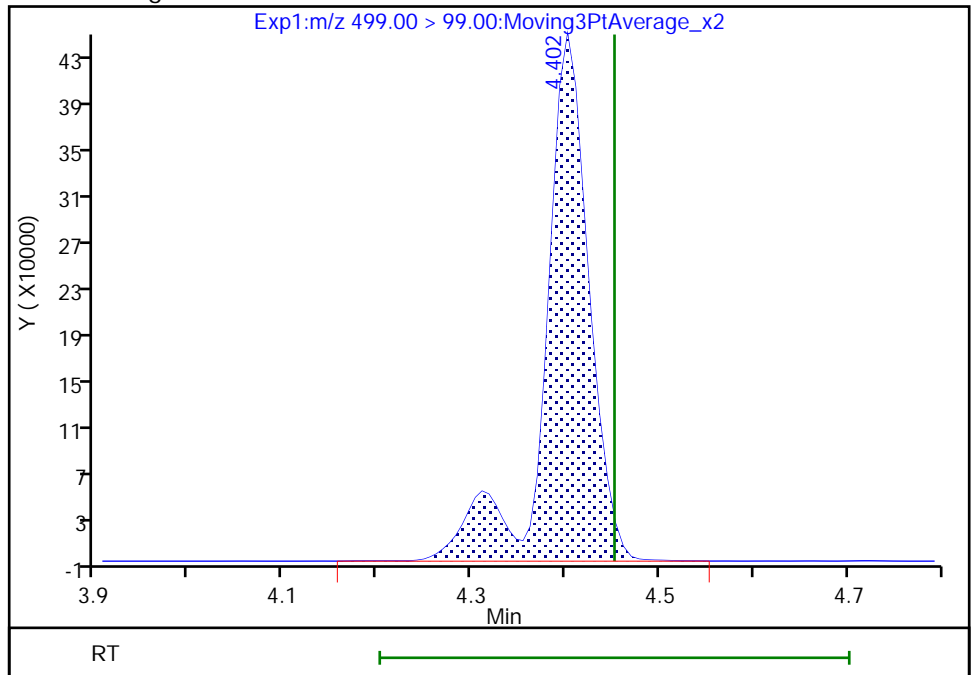
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Area: 1271982  
Amount: 1.806911  
Amount Units: ng/ml

Processing Integration Results



RT: 4.40  
Area: 1461843  
Amount: 2.371350  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 12-Jan-2022 18:42:12

Audit Action: Manually Integrated

Audit Reason: Baseline  
Page 403 of 620

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\\_019.d  
Injection Date: 11-Jan-2022 19:33:44 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

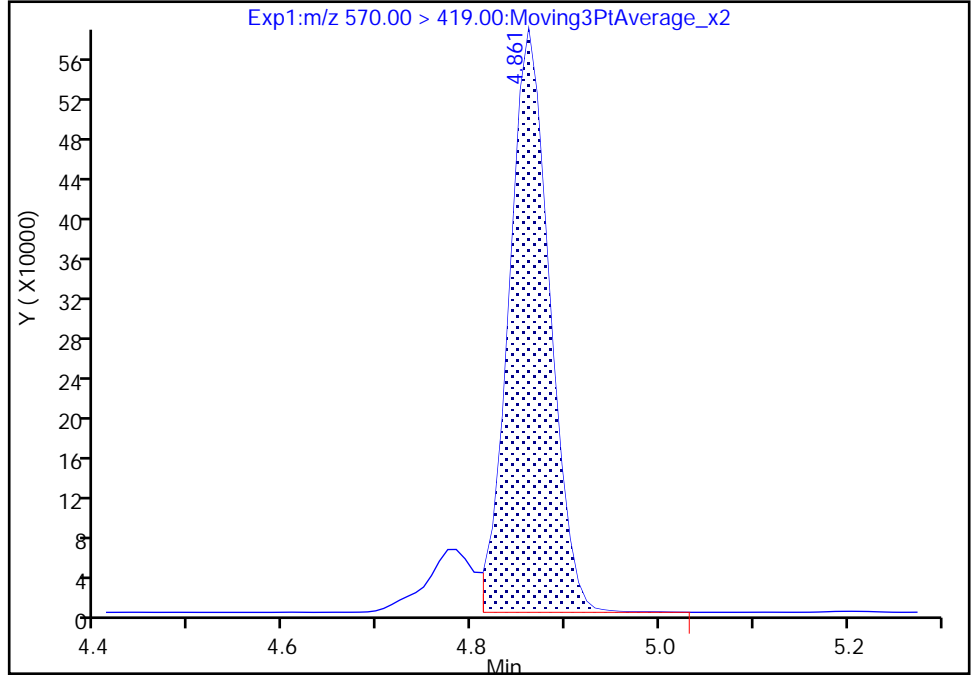
Worklist Smp#: 19

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

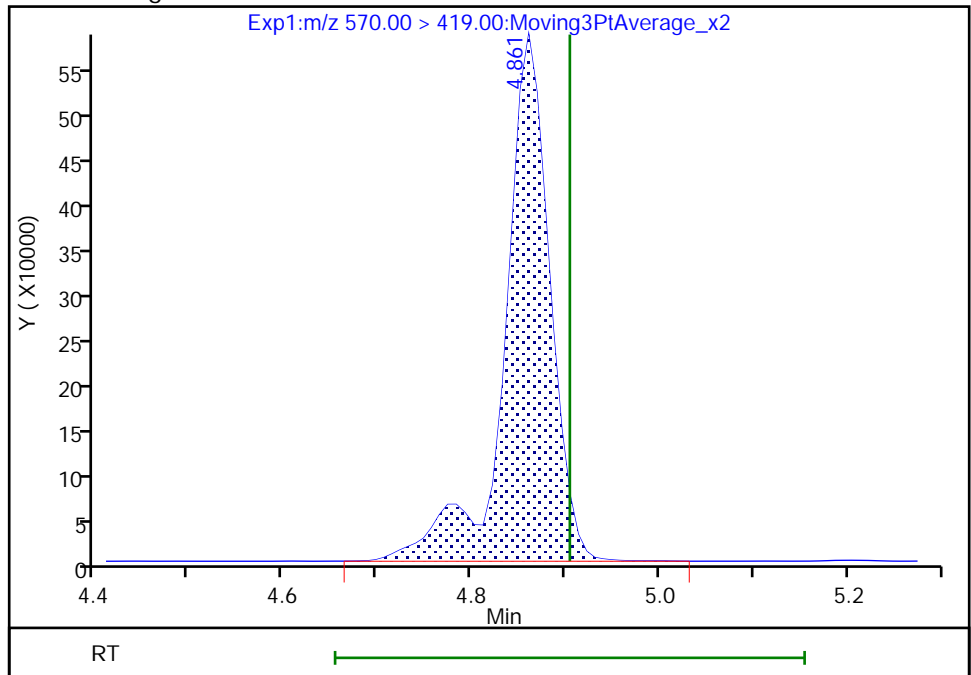
RT: 4.86  
Area: 1759883  
Amount: 2.215462  
Amount Units: ng/ml

Processing Integration Results



RT: 4.86  
Area: 1987540  
Amount: 2.500945  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 12-Jan-2022 18:42:23  
Audit Action: Manually Integrated

Eurofins TestAmerica, Knoxville

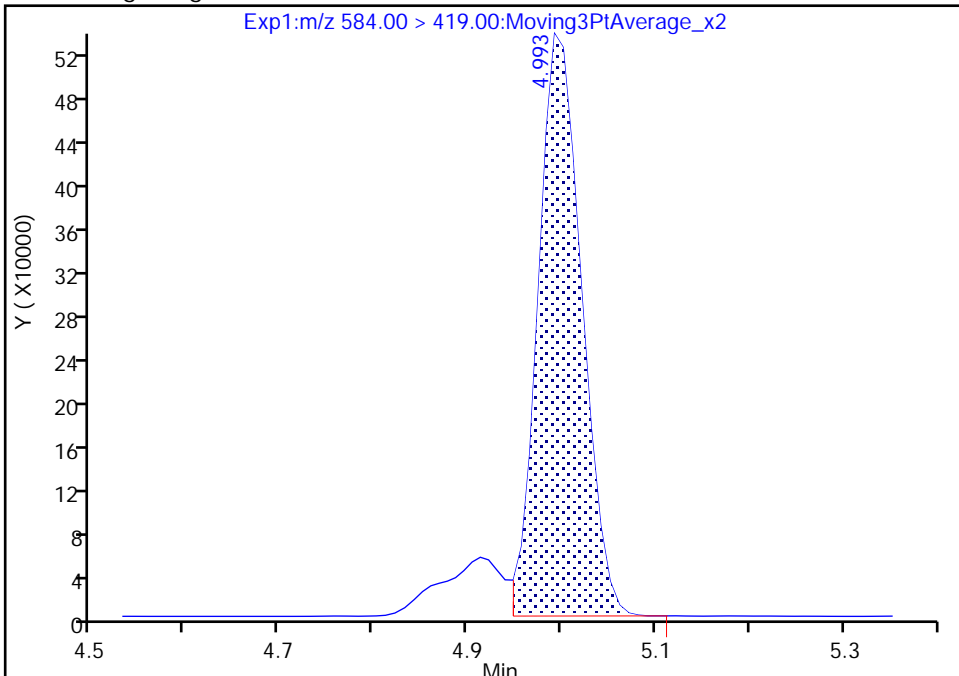
Data File: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\\_019.d  
Injection Date: 11-Jan-2022 19:33:44 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

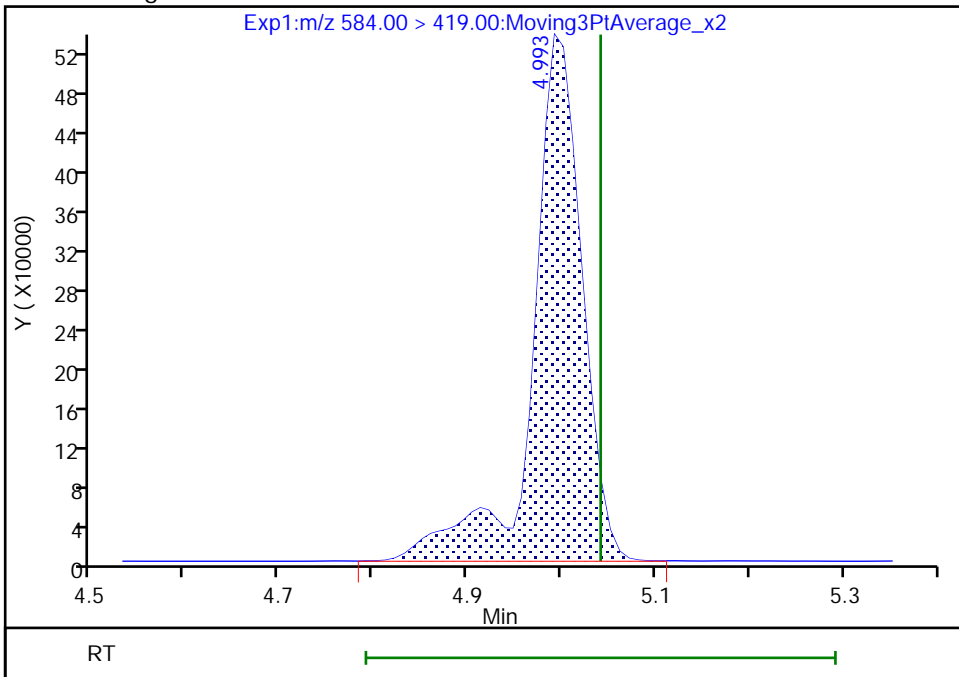
RT: 4.99  
Area: 1704804  
Amount: 2.217046  
Amount Units: ng/ml

Processing Integration Results



RT: 4.99  
Area: 1956125  
Amount: 2.540519  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 12-Jan-2022 18:42:35  
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVL 140-57865/6 Calibration Date: 01/12/2022 18:27  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 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	0.7844	0.7503		0.0478	0.0500	-4.3	50.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9519	0.9712		0.0510	0.0500	2.0	50.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.097	1.087		0.0438	0.0442	-0.9	50.0
4:2 FTS	AveID	2.252	2.386		0.0495	0.0467	5.9	50.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8680	0.9096		0.0524	0.0500	4.8	50.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	0.9713	0.9646		0.0466	0.0469	-0.7	50.0
HFPO-DA	AveID	1.352	1.420		0.0525	0.0500	5.0	50.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.377	1.431		0.0473	0.0455	3.9	50.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.047	1.056		0.0504	0.0500	0.9	50.0
DONA	AveID	2.630	2.572		0.0461	0.0471	-2.2	50.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9541	0.9712		0.0485	0.0476	1.8	50.0
6:2 FTS	L2ID		1.628		0.0452	0.0474	-4.6	50.0
Perfluorooctanoic acid (PFOA)	AveID	1.147	1.230		0.0536	0.0500	7.2	50.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.099	1.066		0.0450	0.0464	-3.0	50.0
Perfluorononanoic acid (PFNA)	Q2ID		0.8953		0.0551	0.0500	10.1	50.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	Q2ID		2.070		0.0474	0.0466	1.8	50.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9748	0.9675		0.0476	0.0480	-0.8	50.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9459	0.9446		0.0499	0.0500	-0.1	50.0
Perfluorodecanoic acid (PFDA)	AveID	0.9645	0.9587		0.0497	0.0500	-0.6	50.0
8:2 FTS	AveID	1.415	1.528		0.0517	0.0479	8.0	50.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	QuaIF		0.9051		0.0466	0.0500	-6.7	50.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		0.8455		0.0466	0.0482	-3.3	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9695	0.9530		0.0492	0.0500	-1.7	50.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Q2ID		0.8473		0.0429	0.0500	-14.1	50.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.672	1.622		0.0457	0.0471	-3.0	50.0
Perfluorododecanoic acid (PFDoA)	Q2ID		1.006		0.0486	0.0500	-2.8	50.0
10:2 FTS	AveID	2.276	2.420		0.0512	0.0482	6.3	50.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	Q2ID		1.040		0.0483	0.0500	-3.5	50.0
NMeFOSA	Q2ID		0.8899		0.0422	0.0500	-15.6	50.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9166	0.8693		0.0459	0.0484	-5.2	50.0

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVL 140-57865/6 Calibration Date: 01/12/2022 18:27  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 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	AveID	1.328	1.115		0.0420	0.0500	-16.1	50.0
Perfluorotridecanoic acid (PFTriA)	AveID	0.8292	0.8251		0.0498	0.0500	-0.5	50.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.195	1.253		0.0524	0.0500	4.9	50.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1344	0.1233		0.0459	0.0500	-8.2	50.0
Perfluorohexadecanoic acid	Q2ID		1.266		0.0492	0.0500	-1.5	50.0
Perfluorooctadecanoic acid	AveID	0.9844	0.9756		0.0496	0.0500	-0.9	50.0
13C4 PFBA	Ave	1.142	1.089		1.19	1.25	-4.6	50.0
13C5 PFPeA	Ave	0.8865	0.8586		1.21	1.25	-3.2	50.0
13C3 PFBS	Ave	0.5913	0.5788		1.14	1.16	-2.1	50.0
M2-4:2 FTS	Ave	0.1820	0.1907		1.22	1.17	4.8	50.0
13C2 PFHxA	Ave	0.9479	0.9257		1.22	1.25	-2.3	50.0
13C3 HFPO-DA	Ave	0.4556	0.4409		1.21	1.25	-3.2	50.0
18O2 PFHxS	Ave	0.3946	0.4120		1.24	1.18	4.4	50.0
13C4 PFHpA	Ave	0.9067	0.9210		1.27	1.25	1.6	50.0
13C4 PFOA	Ave	0.9376	0.9546		1.27	1.25	1.8	50.0
M2-6:2 FTS	Ave	0.1835	0.1864		1.21	1.19	1.6	50.0
13C4 PFOS	Ave	0.5681	0.5820		1.22	1.20	2.4	50.0
13C5 PFNA	Ave	1.234	1.215		1.23	1.25	-1.5	50.0
13C8 FOSA	Ave	0.7682	0.8266		1.35	1.25	7.6	50.0
13C2 PFDA	Ave	1.191	1.231		1.29	1.25	3.4	50.0
M2-8:2 FTS	Ave	0.2070	0.1994		1.15	1.20	-3.7	50.0
d3-NMeFOSAA	Ave	0.1401	0.1816		1.62	1.25	29.6	50.0
13C2 PFUnA	Ave	1.189	1.275		1.34	1.25	7.2	50.0
d5-NEtFOSAA	Ave	0.1537	0.2017		1.64	1.25	31.2	50.0
13C2 PFDoA	Ave	1.247	1.275		1.28	1.25	2.2	50.0
d7-N-MeFOSE-M	Ave	0.1499	0.1464		1.22	1.25	-2.4	50.0
d-N-MeFOSA-M	Ave	0.1069	0.1047		1.22	1.25	-2.1	50.0
d9-N-EtFOSE-M	Ave	0.1504	0.1564		1.30	1.25	4.0	50.0
d-N-EtFOSA-M	Ave	0.0883	0.0862		1.22	1.25	-2.3	50.0
13C2 PFTeDA	Ave	0.9508	0.9357		1.23	1.25	-1.6	50.0
13C2 PFHxDA	Ave	0.6444	0.6153		1.19	1.25	-4.5	50.0
13C8 PFOA	AveID	0.999	1.048		1.31	1.25	4.8	50.0
13C8 PFOS	AveID	0.2220	0.2300		1.24	1.20	3.6	50.0



Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_006.d  
 Lims ID: CCVL  
 Client ID:  
 Sample Type: CCVL  
 Inject. Date: 12-Jan-2022 18:27:00 ALS Bottle#: 6 Worklist Smp#: 6  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022237-006 ccvl  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:15:12 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 12-Jan-2022 19:11:33

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										
212.90 > 169.00	2.808	2.802	0.006	1.000	171286	0.0478		95.7	35.9	
D 1 13C4 PFBA										
217.00 > 172.00	2.808	2.802	0.006	0.678	5706952	1.19		95.4	14675	
D 3 13C5 PFPeA										
267.90 > 223.00	3.123	3.116	0.007	0.754	4499691	1.21		96.8	10415	
4 Perfluoropentanoic acid										
262.90 > 219.00	3.123	3.116	0.007	1.000	174812	0.0510		102	74.5	
D 6 13C3 PFBS										
301.90 > 80.00	3.132	3.132	0.0	0.756	2821286	1.14		97.9	12485	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	3.140	3.132	0.008	1.003	116650	0.0438	Target=2.65	99.1	965	
298.90 > 99.00	3.140	3.132	0.008	1.003	42754		2.73(1.32-3.97)		308	
D 8 M2-4:2 FTS										
329.00 > 81.00	3.423	3.423	0.0	0.827	933274	1.22		105	1727	
7 4:2 FTS										
327.00 > 307.00	3.423	3.423	0.0	1.000	89076	0.0495		106	1547	
11 Perfluoropentanesulfonic acid										
349.00 > 80.00	3.453	3.444	0.009	1.103	109796	0.0466	Target=3.44	99.3	370	
349.00 > 99.00	3.453	3.444	0.009	1.103	34403		3.19(1.72-5.16)		468	
D 9 13C2 PFHxA										
315.00 > 270.00	3.453	3.444	0.009	0.834	4851360	1.22		97.7	11071	
10 Perfluorohexanoic acid										
313.00 > 269.00	3.453	3.444	0.009	1.000	176504	0.0524	Target=11.80	105	90.8	
313.00 > 119.00	3.453	3.444	0.009	1.000	14199		12.43(5.90-17.70)		19.4	
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.557	3.548	0.009	0.859	2310692	1.21		96.8	5274	

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	3.557	3.548	0.009	1.000	131249	0.0525		105	159	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.798	3.789	0.009	1.000	112500	0.0473	Target=3.40	104	703	M
399.00 > 99.00	3.798	3.789	0.009	1.000	31737		3.54(1.70-5.10)		211	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.798	3.789	0.009	0.917	2042844	1.23		104	8200	
D 14 13C4 PFHpA										
367.00 > 322.00	3.808	3.799	0.009	0.920	4826831	1.27		102	9741	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.808	3.799	0.009	1.000	203845	0.0504	Target=3.29	101	154	
363.00 > 169.00	3.808	3.799	0.009	1.000	60927		3.35(1.65-4.94)		177	
68 DONA										
377.00 > 251.00	3.841	3.834	0.007	0.866	295653	0.0461	Target=1.82	97.8	1013	
377.00 > 85.00	3.841	3.834	0.007	0.866	157593		1.88(0.91-2.74)		126	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.131	4.115	0.016	0.931	112811	0.0485	Target=3.92	102	603	
449.00 > 99.00	4.131	4.115	0.016	0.931	25548		4.42(1.96-5.87)		202	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.140	4.132	0.008	1.000	928260	1.21		102	2113	
D 21 13C4 PFOA										
417.00 > 372.00	4.140	4.132	0.008	1.000	5002903	1.27		102	12715	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.140	4.132	0.008	1.000	5242088	1.31		105	6478	
19 6:2 FTS										
427.00 > 407.00	4.140	4.132	0.008	1.000	60316	0.0452		95.4	409	
* 22 13C2 PFOA										
415.00 > 370.00	4.140	4.132	0.008		5241011	1.25			9718	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.140	4.132	0.008	1.000	246043	0.0536	Target=2.59	107	172	
413.00 > 169.00	4.140	4.132	0.008	1.000	91692		2.68(1.30-3.89)		187	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.435	4.419	0.016	1.000	670803	1.24		104	3421	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.435	4.428	0.007	1.000	120698	0.0450	Target=4.65	97.0	456	M
499.00 > 99.00	4.435	4.428	0.007	1.000	24889		4.85(2.32-6.97)		181	M
D 25 13C4 PFOS										
503.00 > 80.00	4.435	4.428	0.007	1.071	2915990	1.22		102	5623	
26 Perfluorononanoic acid										
463.00 > 419.00	4.461	4.445	0.016	1.000	228056	0.0551	Target=4.65	110	248	
463.00 > 169.00	4.461	4.445	0.016	1.000	45957		4.96(2.32-6.97)		122	
D 27 13C5 PFNA										
468.00 > 423.00	4.461	4.445	0.016	1.077	6368200	1.23		98.5	8888	
63 9CIFOS										
531.00 > 351.00	4.594	4.581	0.013	1.036	235383	0.0474		102	1238	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.715	4.706	0.009	1.000	163681	0.0499		99.9	613	

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	4.715	4.706	0.009	1.063	113316	0.0476	Target=4.06	99.2	682	
549.00 > 99.00	4.715	4.706	0.009	1.063	27377		4.14(2.03-6.09)		286	
D 34 13C8 FOSA										
506.00 > 78.00	4.715	4.706	0.009	1.139	4332002	1.34		108	4964	
D 32 13C2 PFDA										
515.00 > 470.00	4.749	4.732	0.017	1.147	6452439	1.29		103	10420	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.749	4.732	0.017	1.000	247428	0.0497	Target=11.30	99.4	237	
513.00 > 169.00	4.749	4.732	0.017	1.000	25008		9.89(5.65-16.95)		74.0	
31 8:2 FTS										
527.00 > 507.00	4.757	4.749	0.008	1.000	61180	0.0517		108	546	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.757	4.749	0.008	1.149	1001062	1.15		96.3	1586	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.887	4.878	0.009	1.180	951876	1.62		130	3667	
36 NMeFOSAA										
570.00 > 419.00	4.896	4.887	0.009	1.002	34462	0.0466		93.3	61.3	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.975	4.966	0.009	1.122	99447	0.0466	Target=3.79	96.7	442	
599.00 > 99.00	4.975	4.966	0.009	1.122	24684		4.03(1.90-5.69)		249	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.012	5.002	0.010	1.000	254703	0.0492	Target=8.45	98.3	425	
563.00 > 169.00	5.012	5.002	0.010	1.000	26058		9.77(4.22-12.67)		105	
D 39 13C2 PFUnA										
565.00 > 520.00	5.012	5.002	0.010	1.210	6681322	1.34		107	10418	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.022	5.012	0.010	1.213	1057275	1.64		131	3840	
40 NEtFOSA										
584.00 > 419.00	5.032	5.022	0.010	1.002	35832	0.0429		85.9	157	M
57 11CIFOS										
631.00 > 451.00	5.112	5.102	0.010	1.153	186428	0.0457		97.0	1417	
D 43 13C2 PFDoA										
615.00 > 570.00	5.248	5.231	0.017	1.268	6681838	1.28		102	13235	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.248	5.231	0.017	1.000	268758	0.0486	Target=6.99	97.2	292	
613.00 > 169.00	5.248	5.231	0.017	1.000	37191		7.23(3.50-10.49)		81.8	
50 10:2 FTS										
627.00 > 607.00	5.266	5.257	0.009	1.107	97513	0.0512		106	480	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.284	5.275	0.009	1.276	767120	1.22		97.6	585	
49 N-MeFOSE-M										
616.00 > 59.00	5.292	5.284	0.008	1.002	31901	0.0483		96.5	44.2	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.284	5.284	0.0	1.276	548472	1.22		97.9	45.8	
61 NMeFOSA										
512.00 > 169.00	5.292	5.284	0.008	1.002	19524	0.0422		84.4	130	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
54 PFDoS										
699.00 > 80.00	5.414	5.404	0.010	1.221	102668	0.0459	Target=4.24	94.8	431	
699.00 > 99.00	5.414	5.404	0.010	1.221	24799		4.14(2.12-6.35)		226	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.444	5.435	0.009	1.315	819694	1.30		104	448	
62 N-EtFOSE-M										
630.00 > 59.00	5.454	5.445	0.009	1.002	36551	0.0420		83.9	40.1	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.454	5.445	0.009	1.039	220532	0.0498	Target=6.20	99.5	331	
663.00 > 169.00	5.454	5.445	0.009	1.039	35254		6.26(3.10-9.30)		201	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.454	5.445	0.009	1.317	451889	1.22		97.7	669	
56 N-EtFOSA-M										
526.00 > 169.00	5.464	5.455	0.009	1.002	22657	0.0524		105	191	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.640	5.629	0.011	1.362	4904125	1.23		98.4	10556	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.629	5.629	0.0	0.998	24196	0.0459	Target=1.05	91.8	129	
713.00 > 219.00	5.629	5.629	0.0	0.998	21654		1.12(0.53-1.58)		121	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.939	5.931	0.008	1.435	3224633	1.19		95.5	5584	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.939	5.931	0.008	1.000	163260	0.0492	Target=8.09	98.5	404	
813.00 > 169.00	5.939	5.931	0.008	1.000	20033		8.15(4.05-12.14)		57.6	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.199	6.195	0.004	1.044	125835	0.0496	Target=11.53	99.1	395	
913.00 > 169.00	6.199	6.195	0.004	1.044	10787		11.67(5.77-17.30)		54.1	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

63L2PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\\_006.d

Injection Date: 12-Jan-2022 18:27:00

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

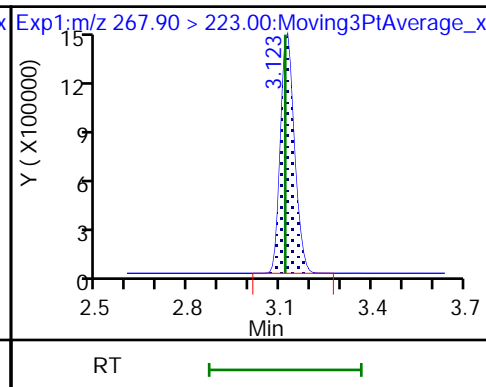
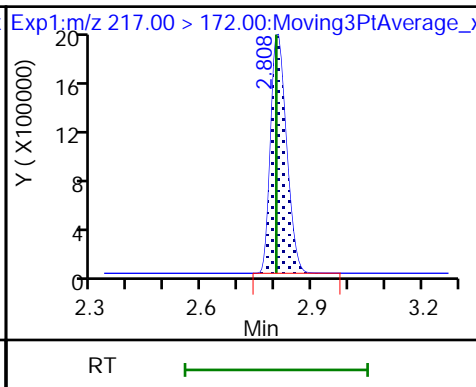
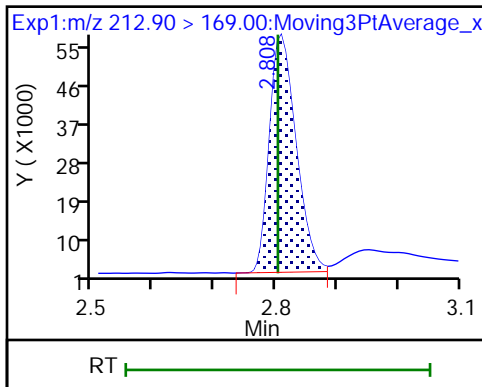
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

2 Perfluorobutanoic acid

D 1 13C4 PFBA

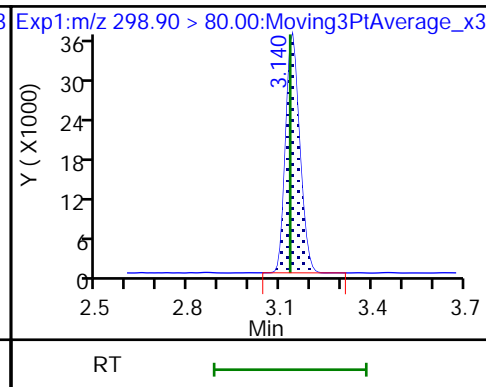
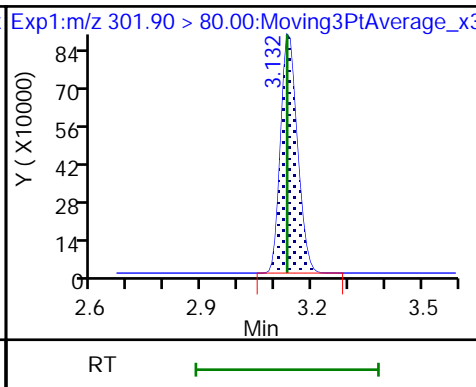
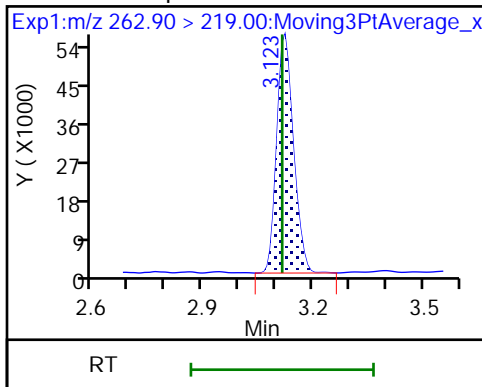
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

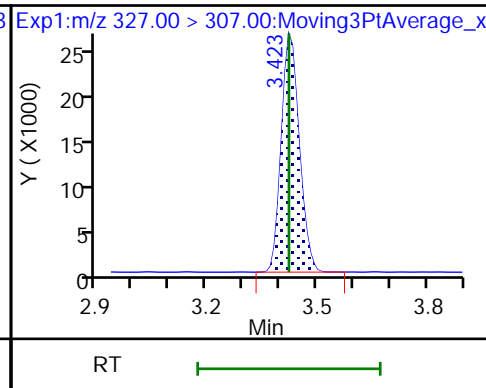
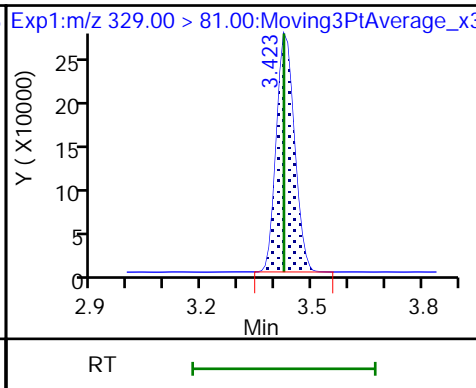
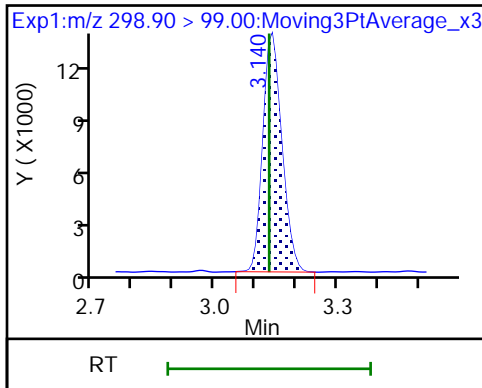
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

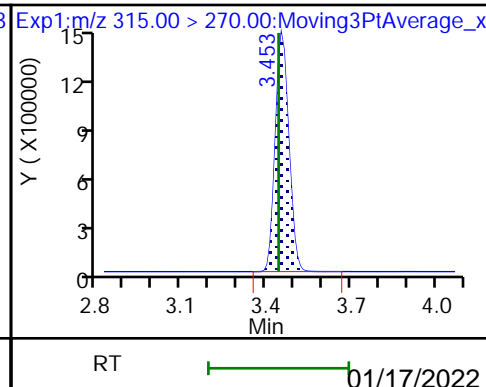
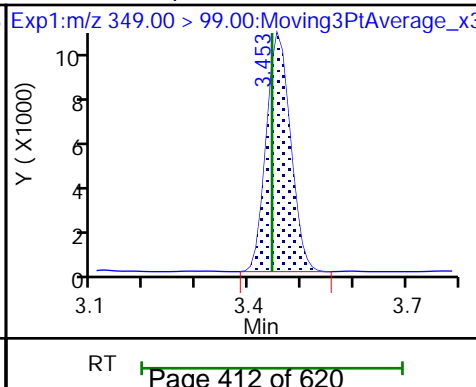
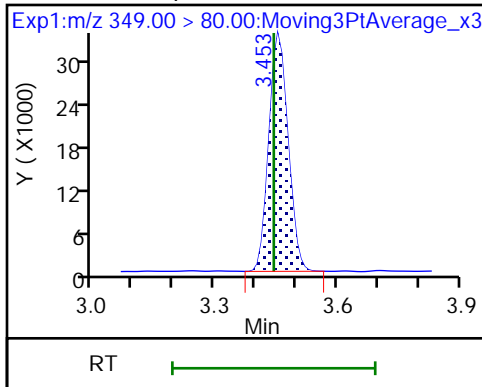
7 4:2 FTS

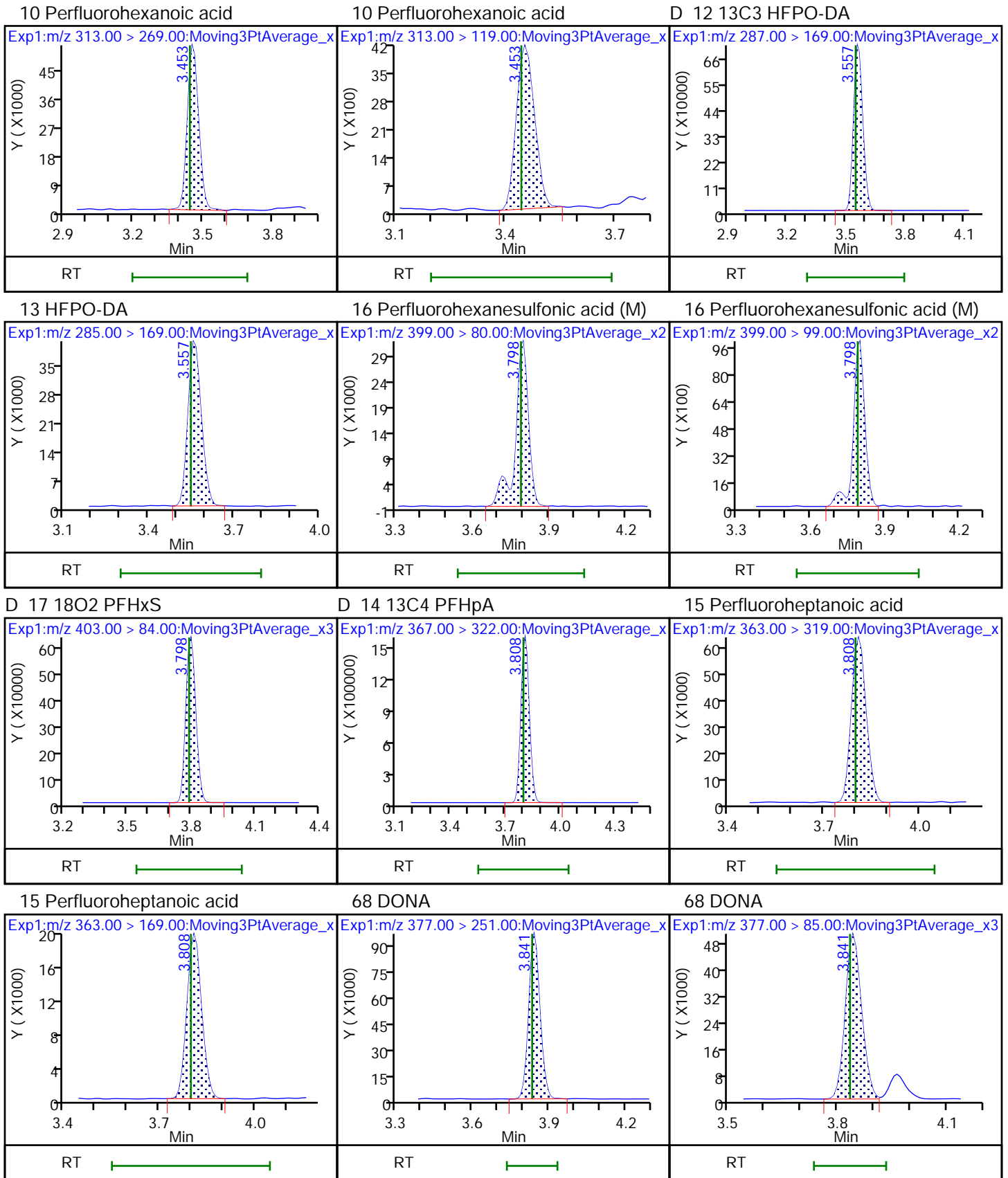


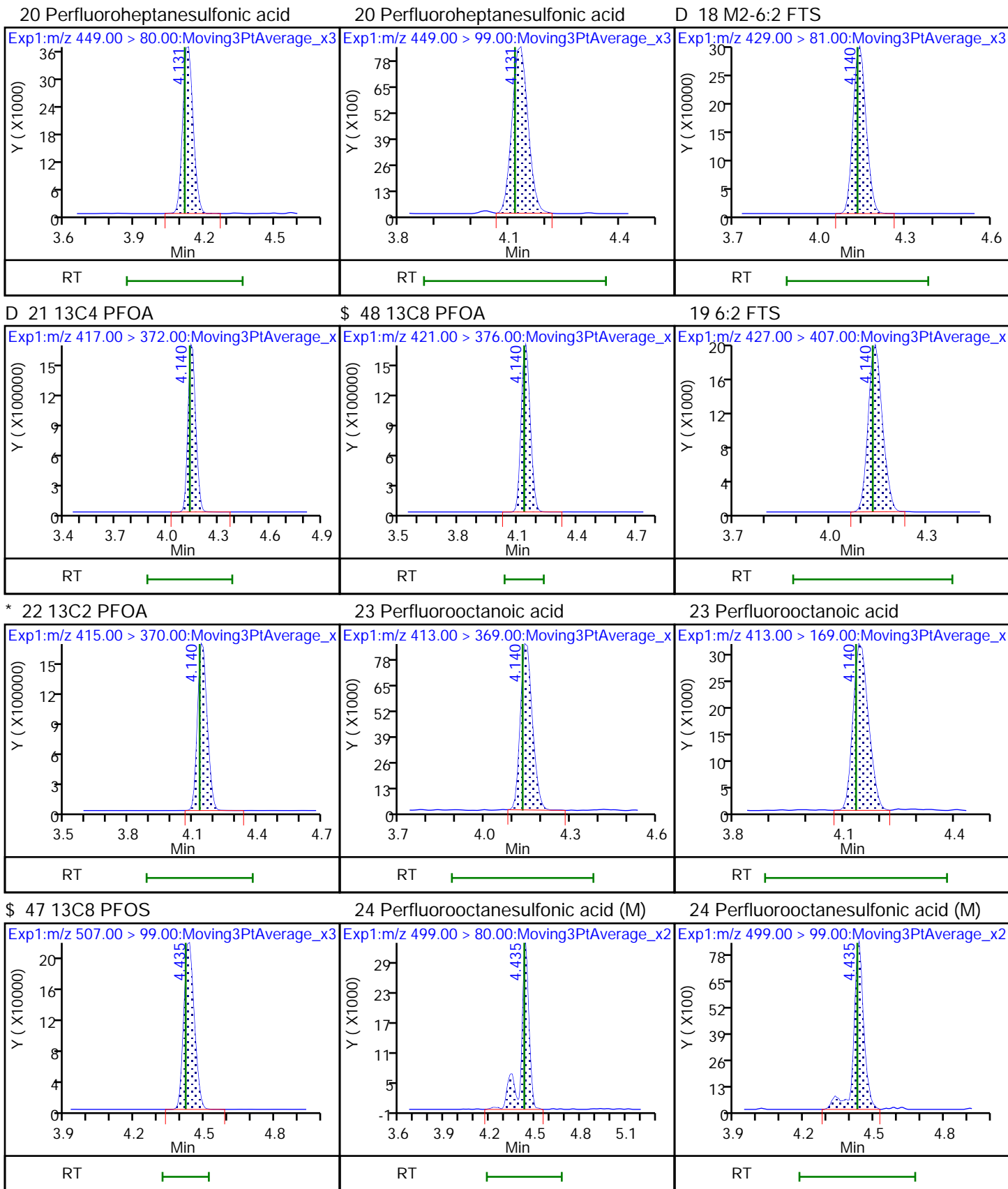
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

D 9 13C2 PFXhA



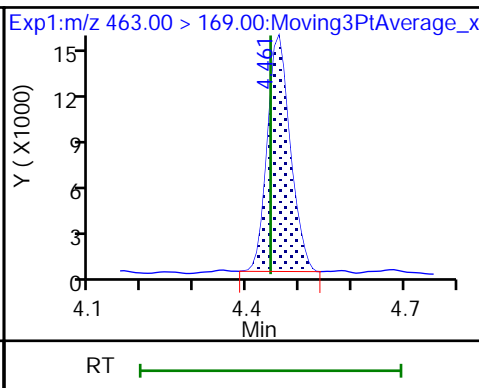
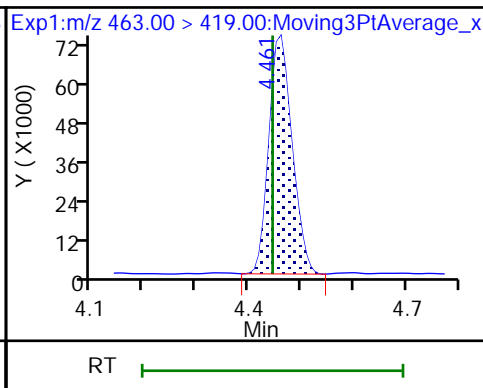
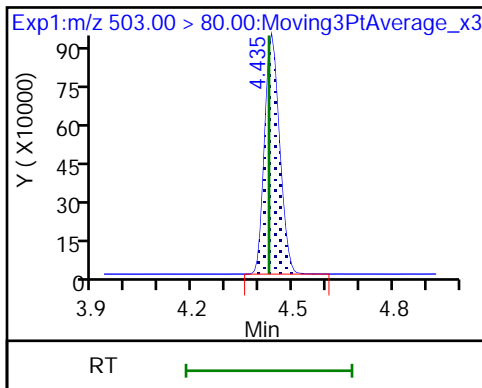




D 25 13C4 PFOS

26 Perfluorononanoic acid

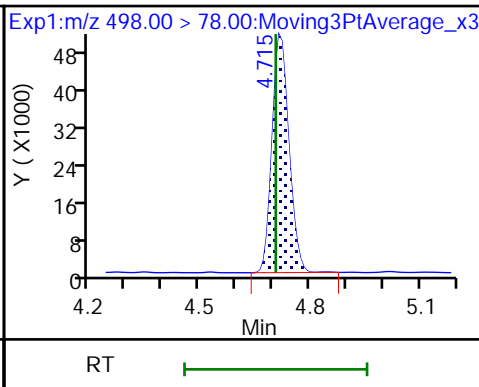
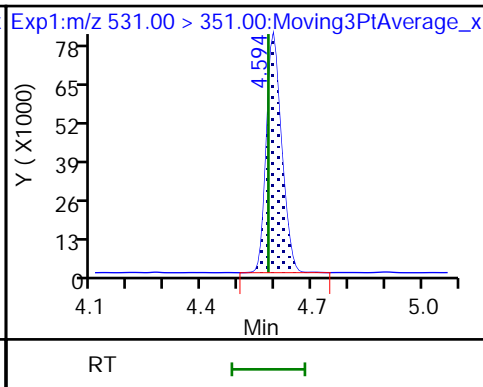
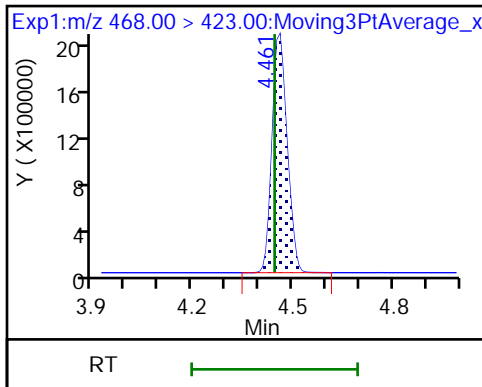
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS

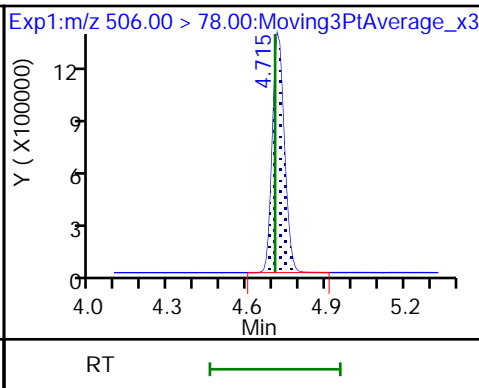
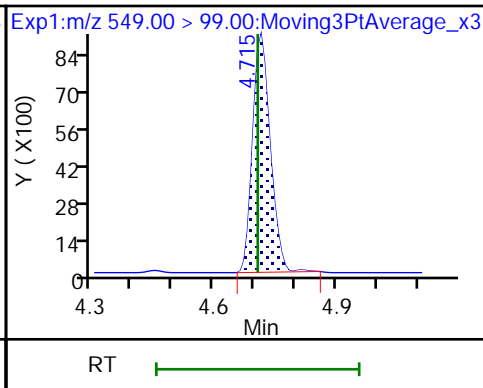
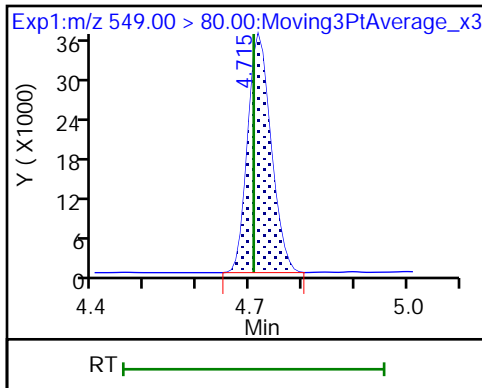
33 Perfluorooctanesulfonamide



28 Perfluorononanesulfonic acid

28 Perfluorononanesulfonic acid

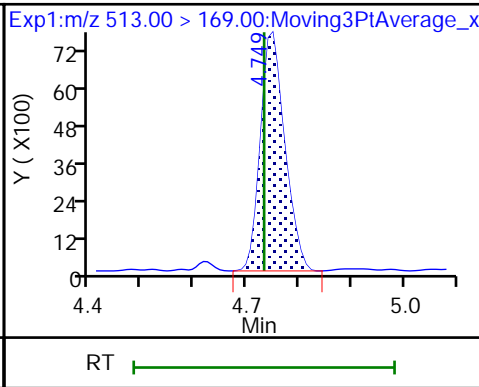
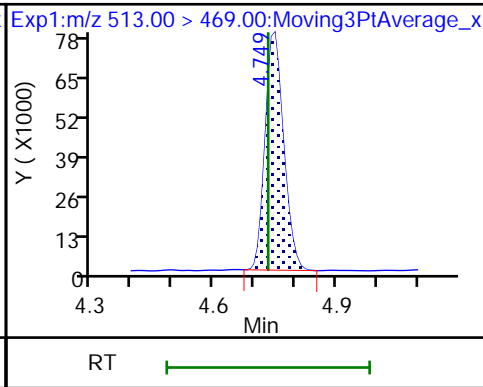
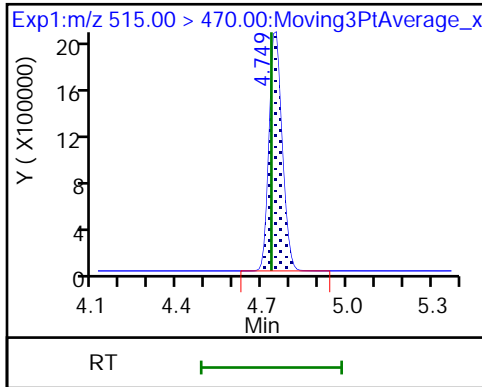
D 34 13C8 FOSA



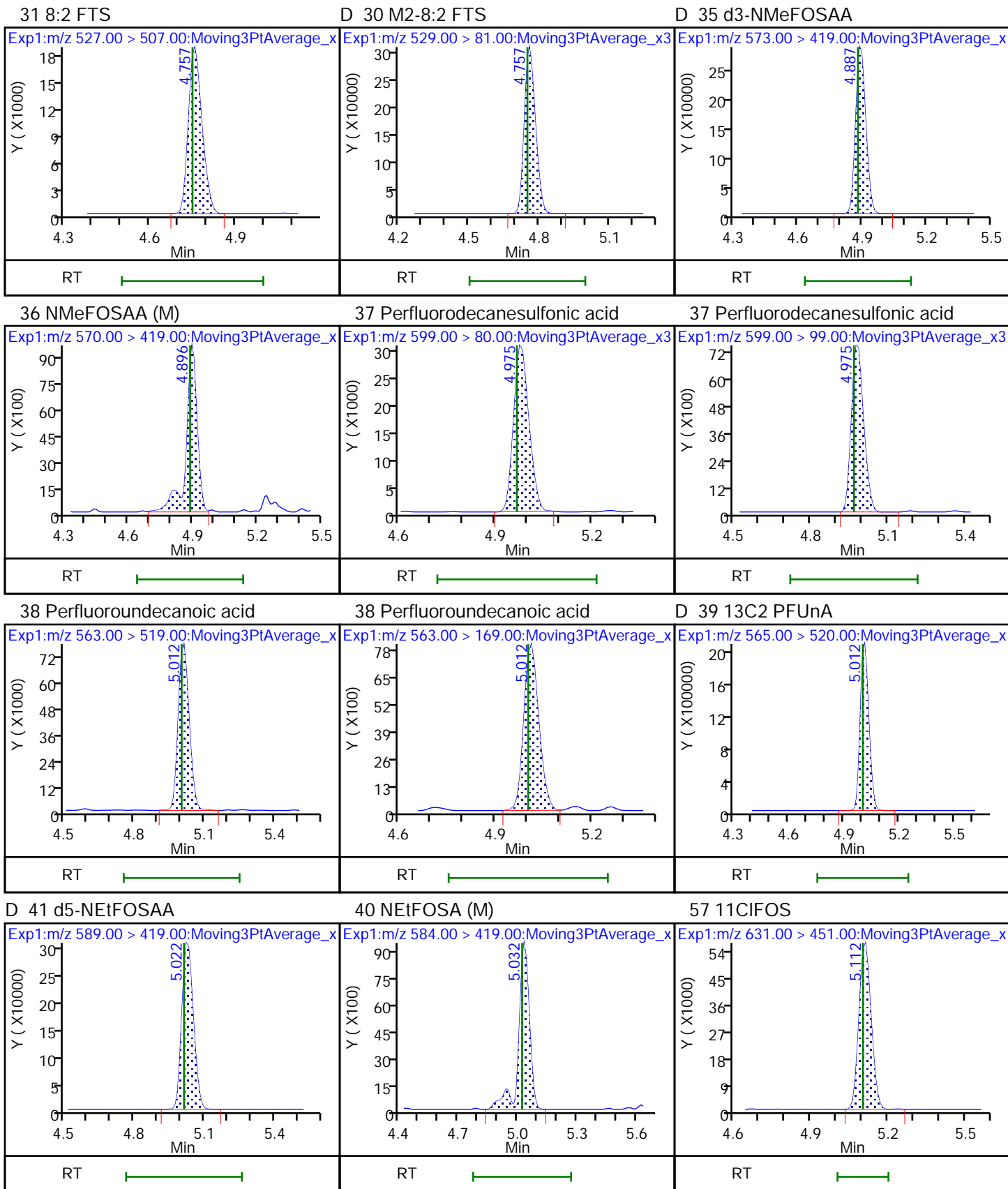
D 32 13C2 PFDA

29 Perfluorodecanoic acid

29 Perfluorodecanoic acid



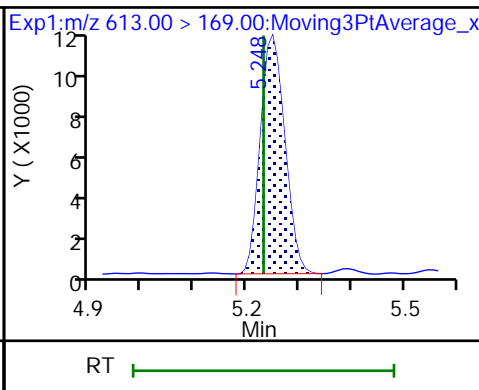
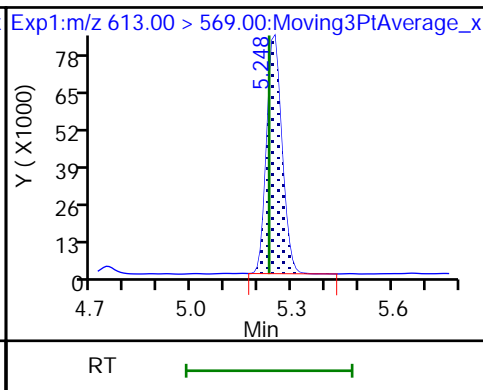
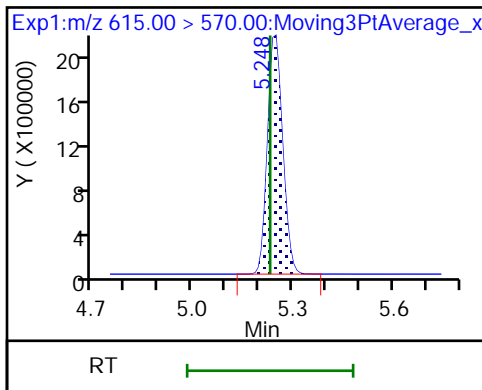




D 43 13C2 PFDaA

42 Perfluorododecanoic acid

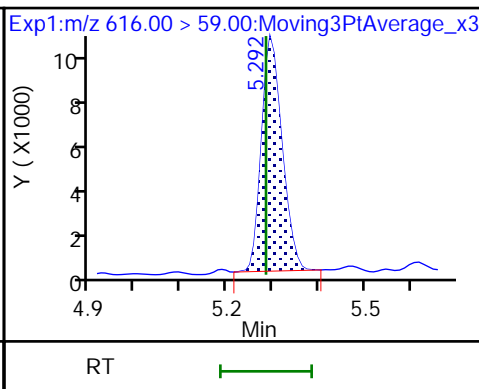
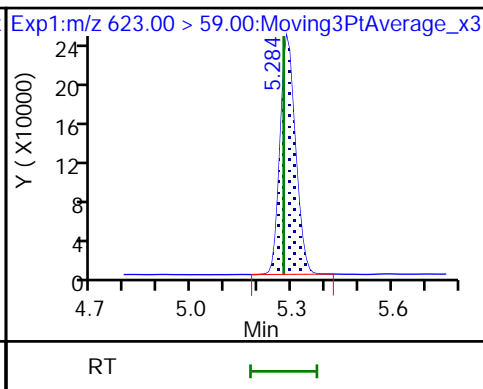
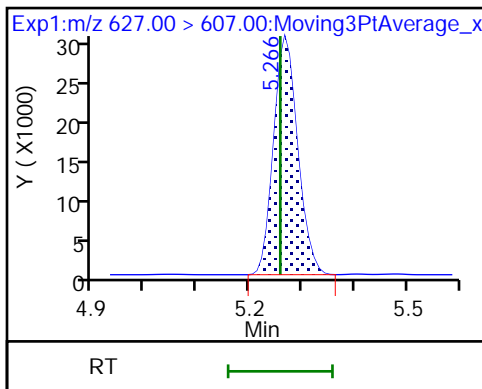
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

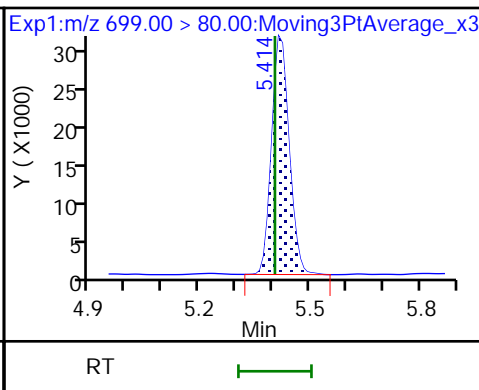
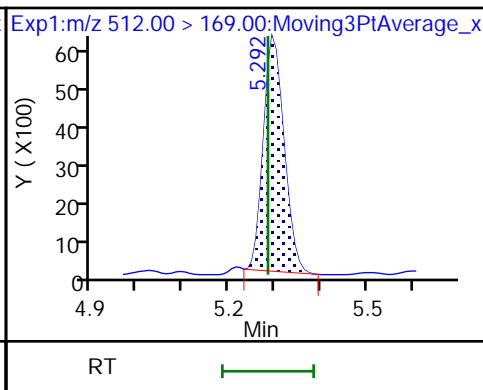
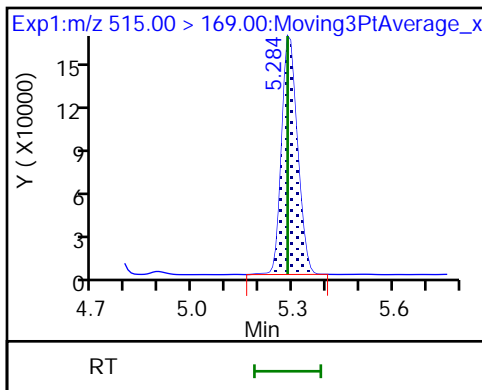
49 N-MeFOSE-M



D 58 d-N-MeFOSA-M

61 NMeFOSA

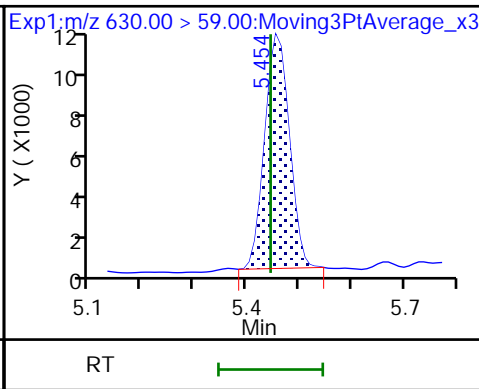
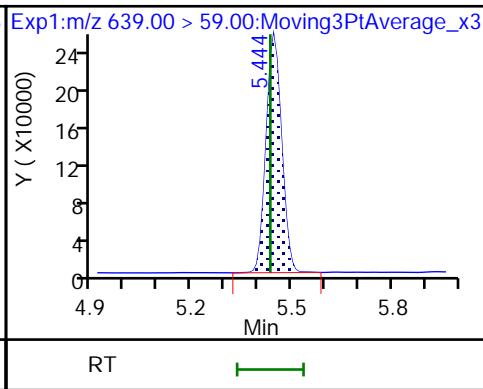
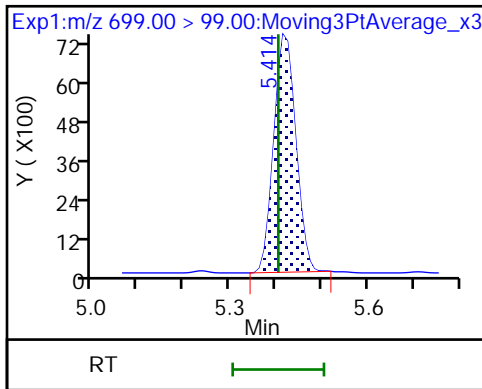
54 PFDoS

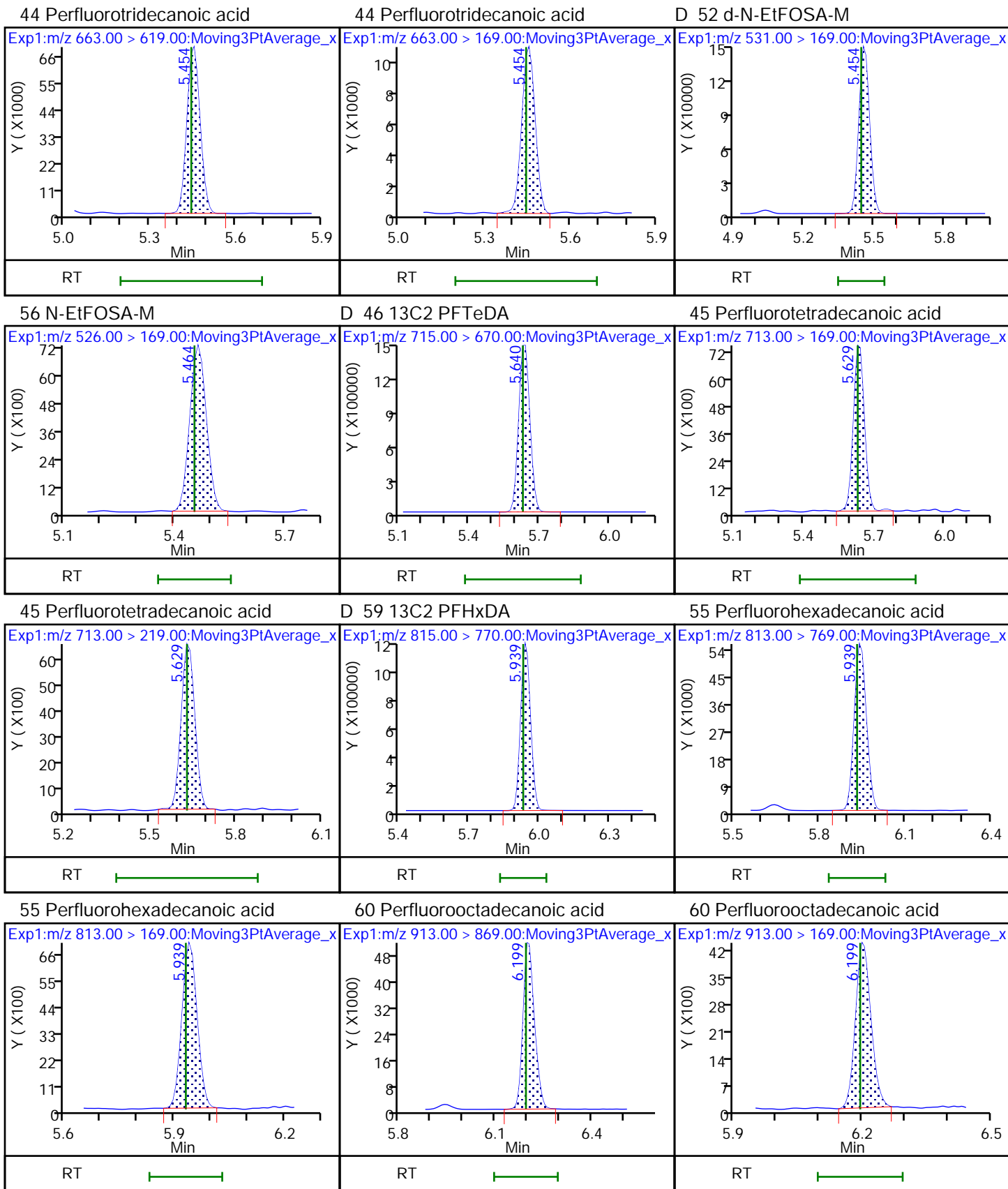


54 PFDoS

D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M







Eurofins TestAmerica, Knoxville

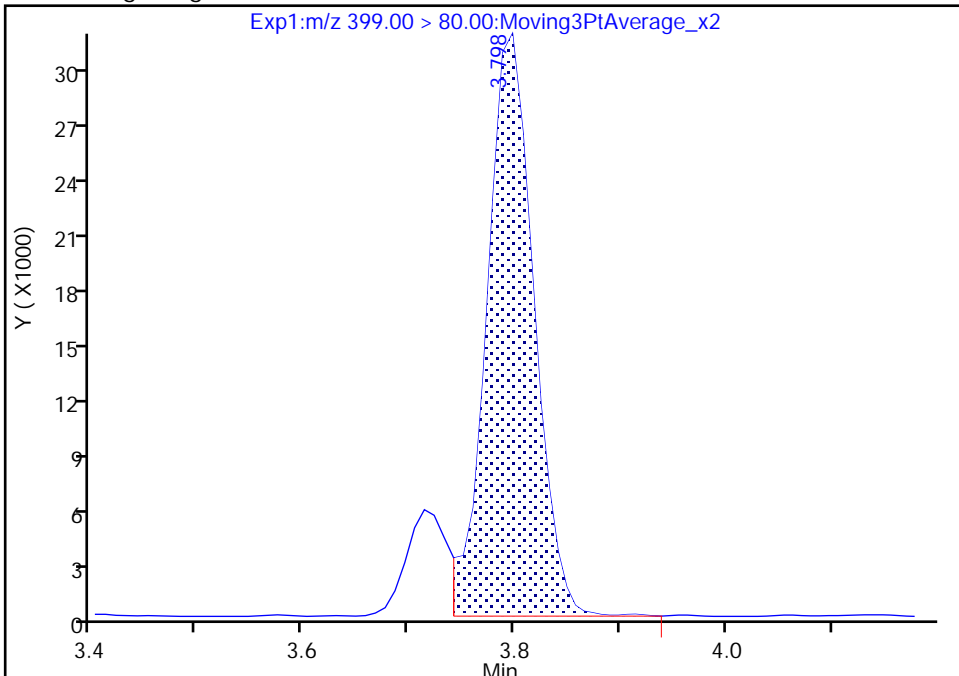
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Injection Date: 12-Jan-2022 18:27:00 Instrument ID: LCA  
Lims ID: CCVL  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

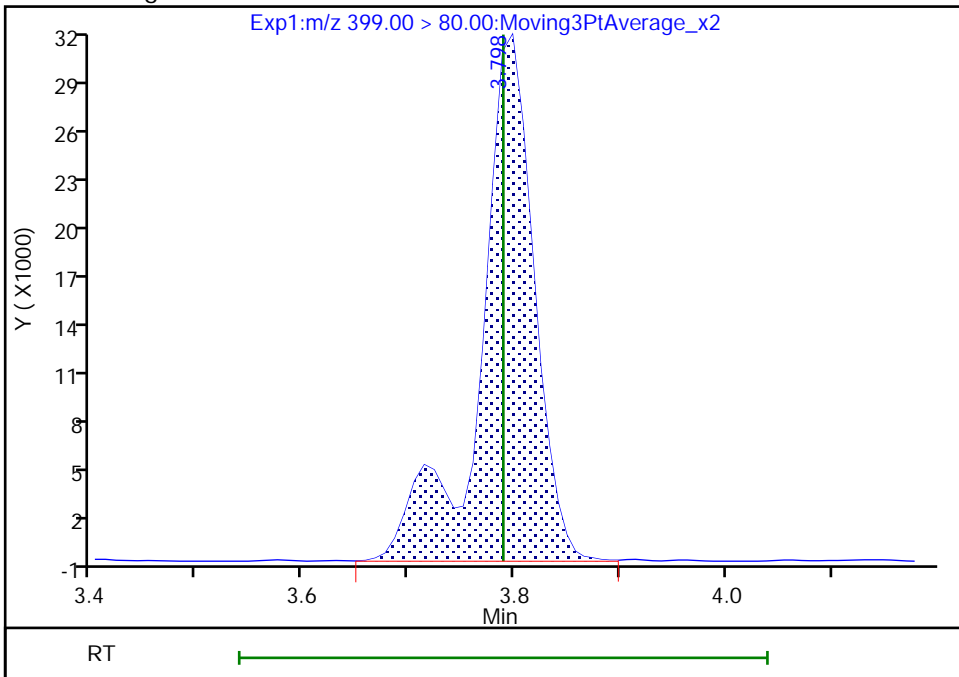
RT: 3.80  
Area: 97472  
Amount: 0.040968  
Amount Units: ng/ml

Processing Integration Results



RT: 3.80  
Area: 112500  
Amount: 0.047285  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:36:09  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

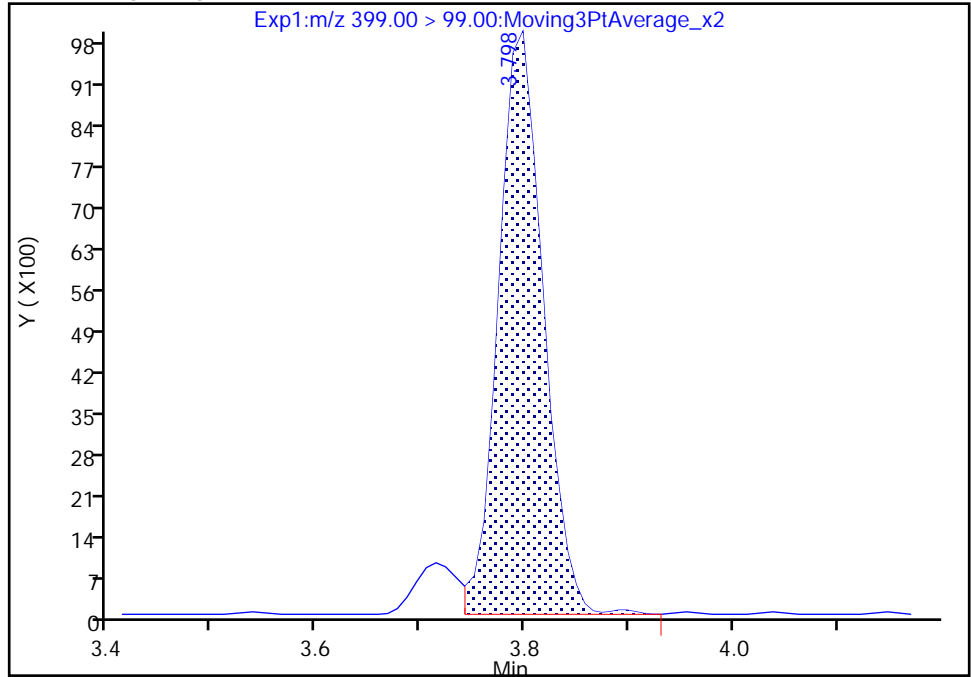
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Lims ID: CCVL  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

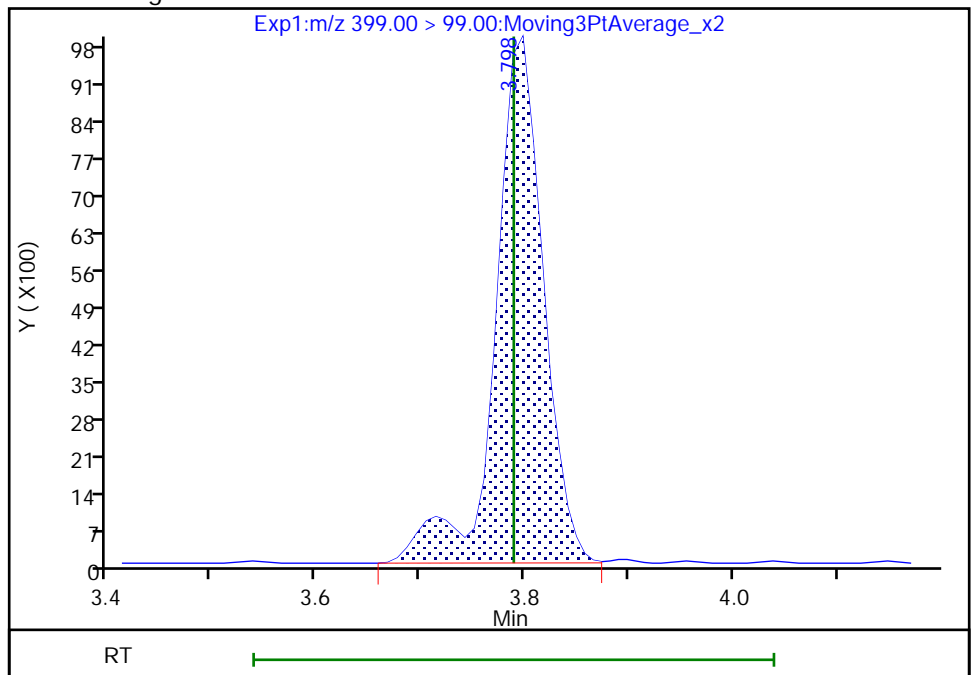
RT: 3.80  
Area: 29507  
Amount: 0.040968  
Amount Units: ng/ml

Processing Integration Results



RT: 3.80  
Area: 31737  
Amount: 0.047285  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:36:18

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

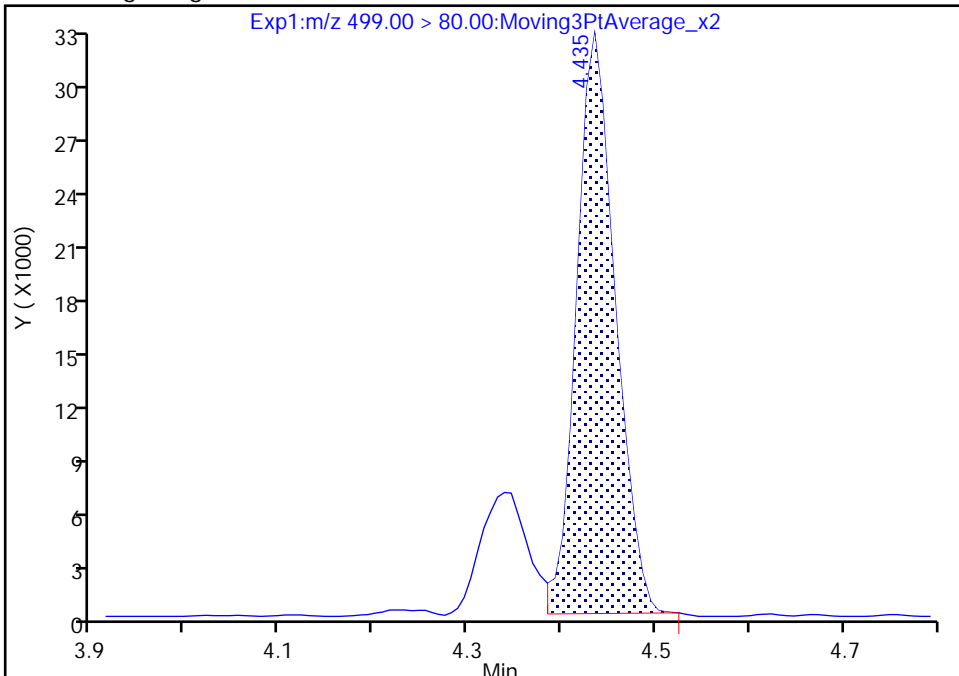
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Injection Date: 12-Jan-2022 18:27:00 Instrument ID: LCA  
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Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

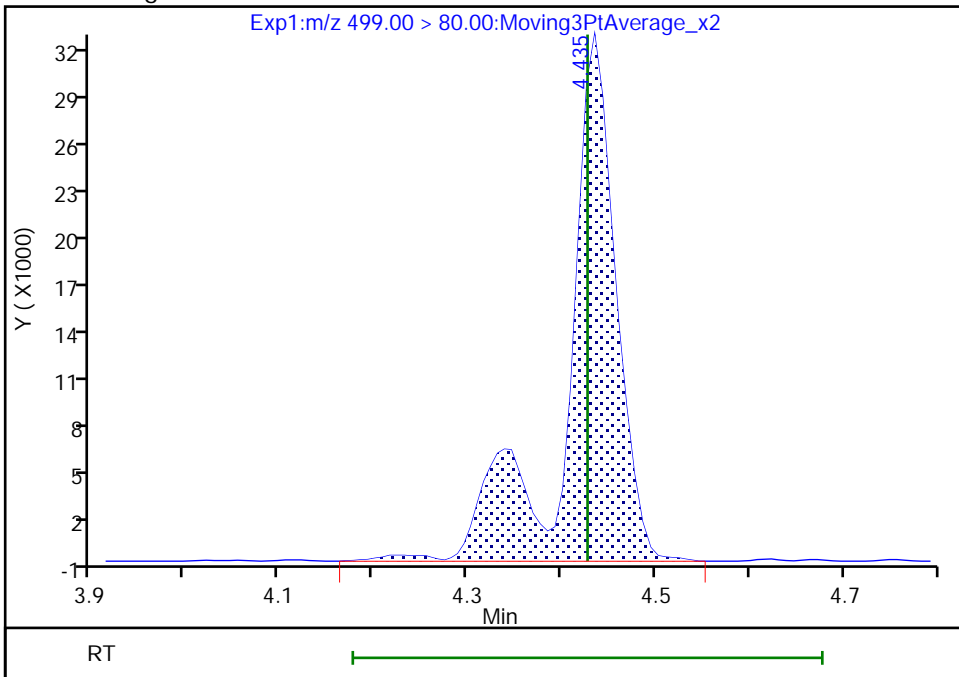
RT: 4.44  
Area: 93207  
Amount: 0.034763  
Amount Units: ng/ml

Processing Integration Results



RT: 4.44  
Area: 120698  
Amount: 0.045016  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:37:34  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

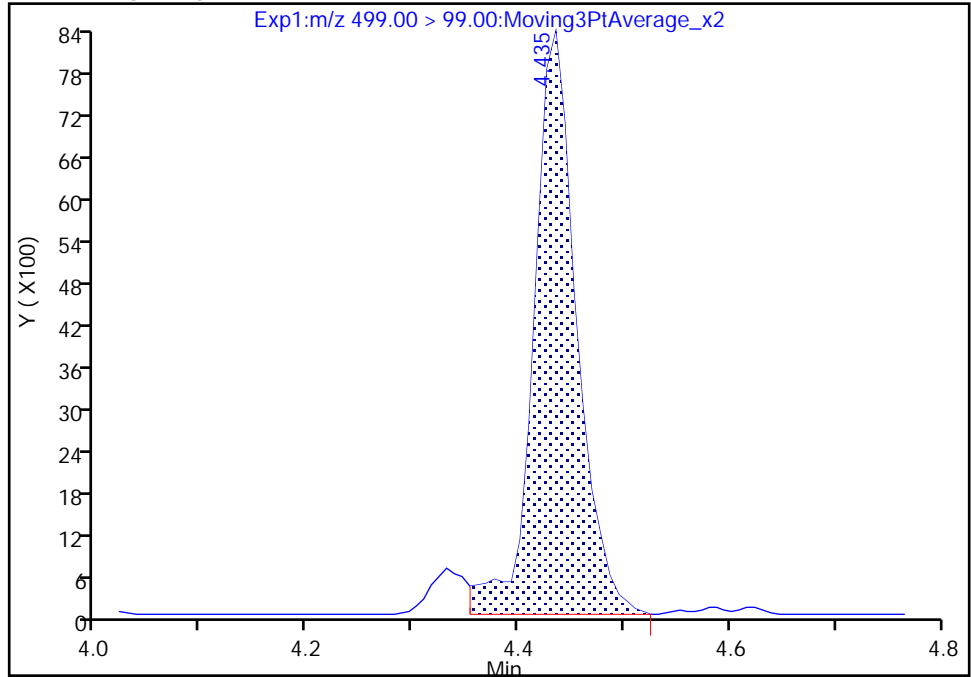
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Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

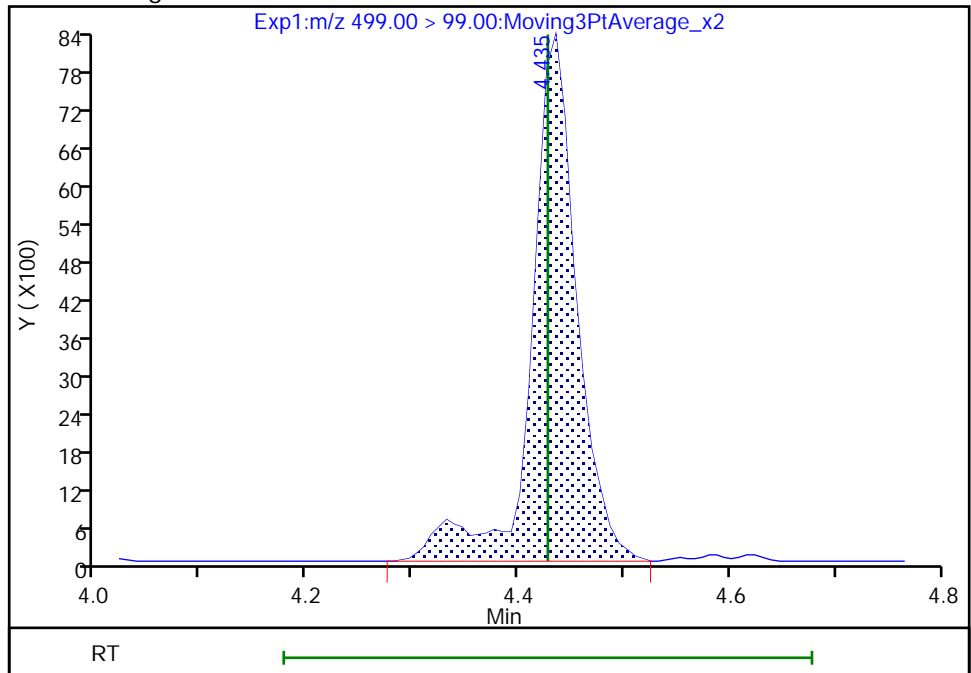
RT: 4.44  
Area: 23434  
Amount: 0.034763  
Amount Units: ng/ml

Processing Integration Results



RT: 4.44  
Area: 24889  
Amount: 0.045016  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:37:40

Audit Action: Manually Integrated

Audit Reason: Baseline



Eurofins TestAmerica, Knoxville

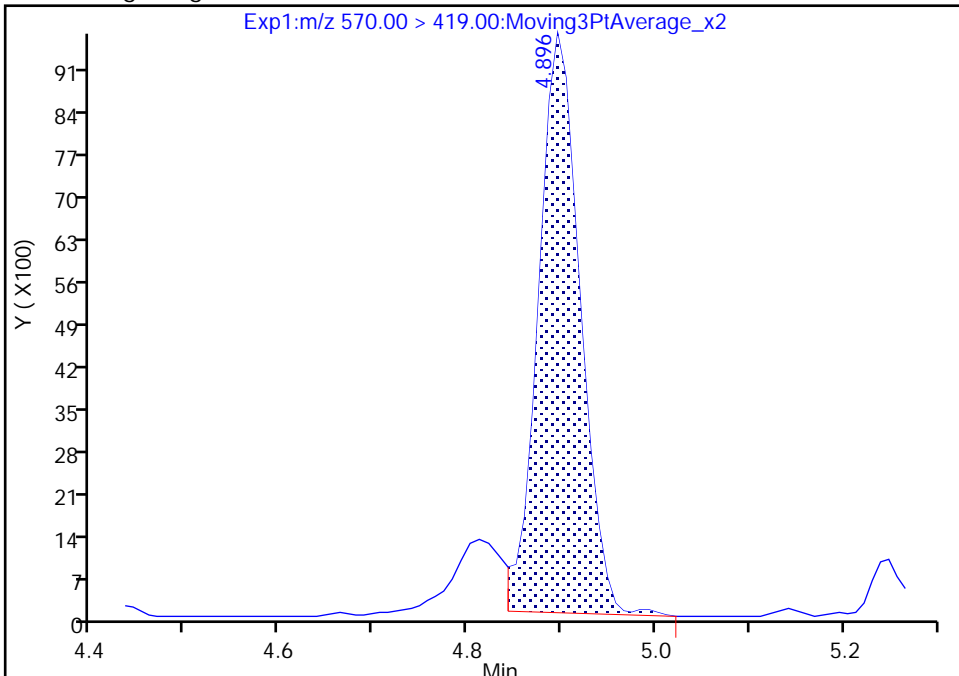
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Lims ID: CCVL  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

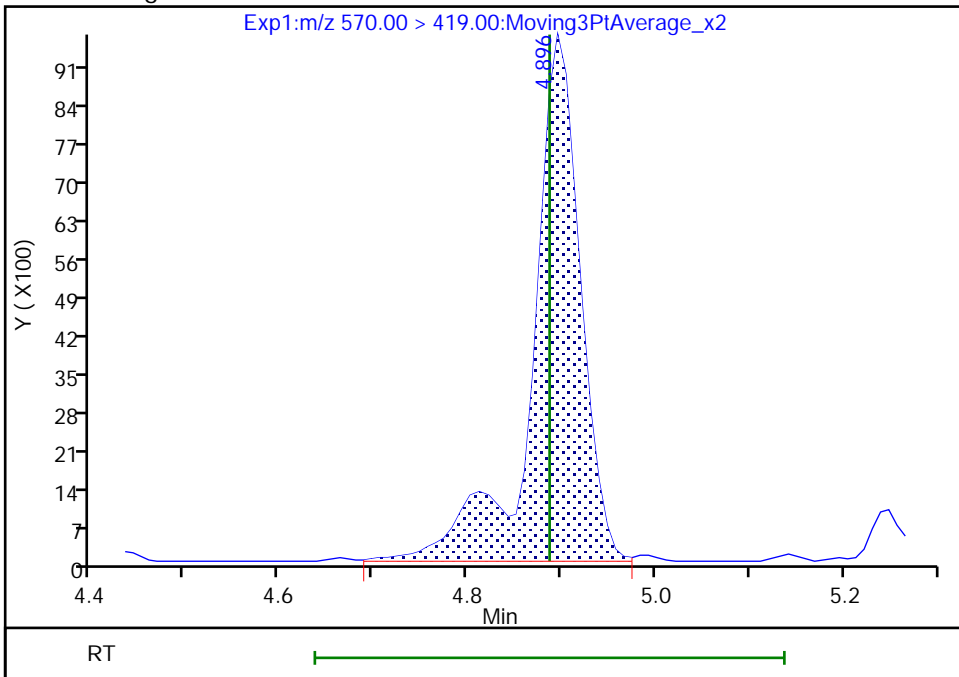
RT: 4.90  
Area: 29378  
Amount: 0.039755  
Amount Units: ng/ml

Processing Integration Results



RT: 4.90  
Area: 34462  
Amount: 0.046634  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:38:01  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

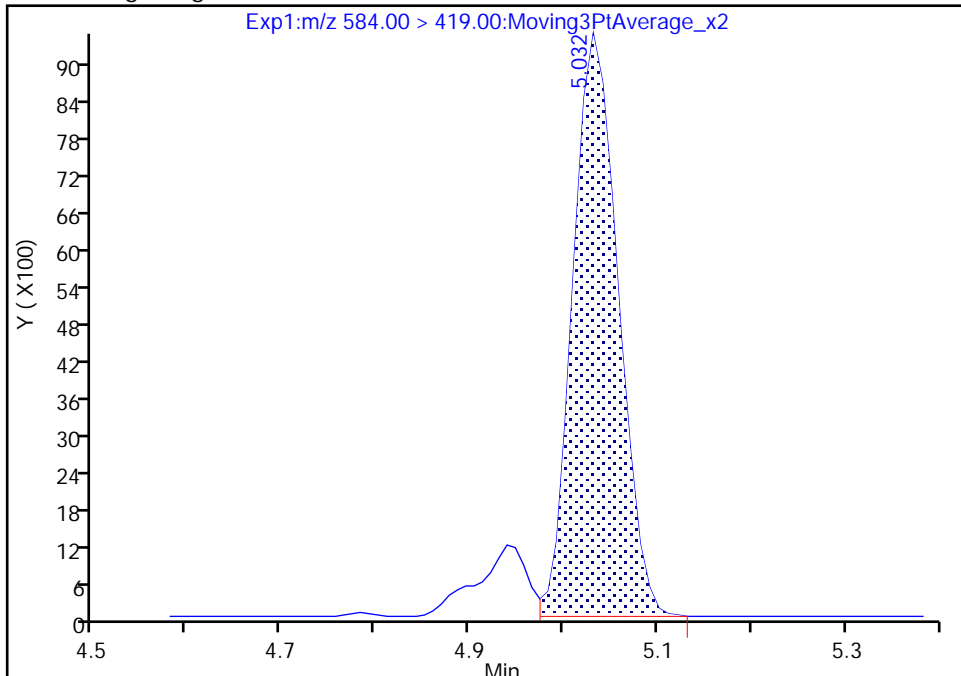
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Injection Date: 12-Jan-2022 18:27:00 Instrument ID: LCA  
Lims ID: CCVL  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

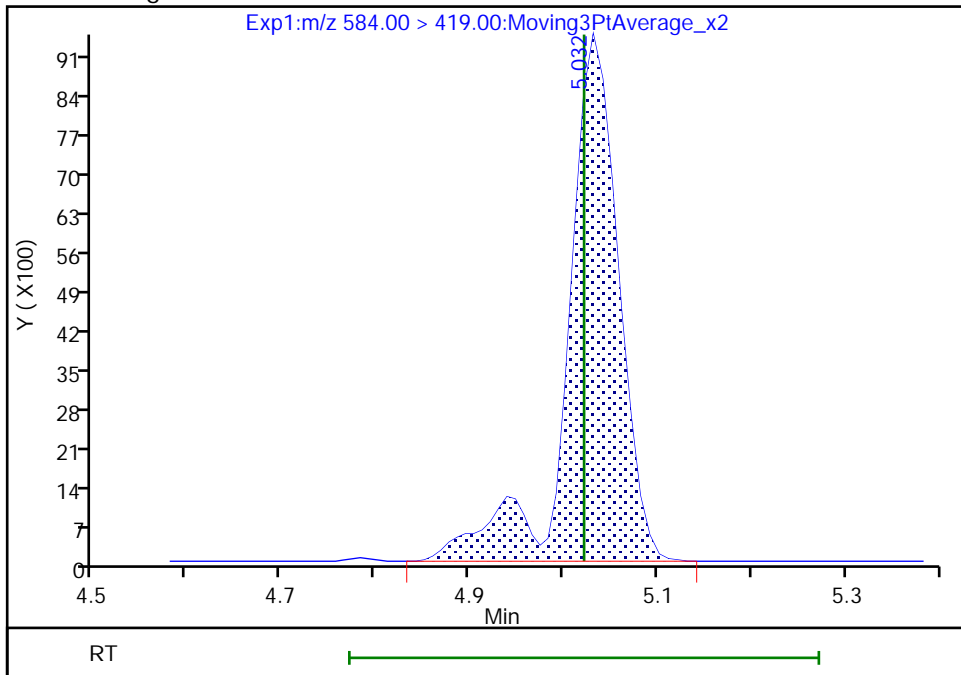
RT: 5.03  
Area: 31638  
Amount: 0.037934  
Amount Units: ng/ml

Processing Integration Results



RT: 5.03  
Area: 35832  
Amount: 0.042942  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:38:13  
Audit Action: Manually Integrated

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 140-57865/7 Calibration Date: 01/12/2022 18:35  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 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	0.7844	0.7422		0.946	1.00	-5.4	40.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9519	0.9214		0.968	1.00	-3.2	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.097	1.062		0.856	0.884	-3.2	40.0
4:2 FTS	AveID	2.252	2.232		0.926	0.934	-0.9	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8680	0.8373		0.965	1.00	-3.5	40.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	0.9713	0.9797		0.946	0.938	0.9	40.0
HFPO-DA	AveID	1.352	1.314		0.972	1.00	-2.8	40.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.377	1.322		0.874	0.910	-4.0	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.047	1.042		0.995	1.00	-0.5	40.0
DONA	AveID	2.630	2.495		0.894	0.942	-5.1	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9541	0.8926		0.891	0.952	-6.4	40.0
6:2 FTS	L2ID		1.737		0.917	0.948	-3.3	40.0
Perfluorooctanoic acid (PFOA)	AveID	1.147	1.084		0.945	1.00	-5.5	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.099	0.9915		0.837	0.928	-9.8	40.0
Perfluorononanoic acid (PFNA)	Q2ID		0.8481		0.997	1.00	-0.3	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	Q2ID		2.005		0.873	0.932	-6.3	50.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9748	0.8932		0.880	0.960	-8.4	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9459	0.9224		0.975	1.00	-2.5	40.0
Perfluorodecanoic acid (PFDA)	AveID	0.9645	0.9478		0.983	1.00	-1.7	40.0
8:2 FTS	AveID	1.415	1.399		0.947	0.958	-1.1	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	QuaIF		0.8925		0.919	1.00	-8.2	40.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		0.8656		0.899	0.964	-6.7	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9695	0.9644		0.995	1.00	-0.5	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Q2ID		0.9229		0.929	1.00	-7.1	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.672	1.507		0.849	0.942	-9.9	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9890		0.969	1.00	-3.1	40.0
10:2 FTS	AveID	2.276	2.329		0.986	0.964	2.3	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	Q2ID		1.112		0.950	1.00	-5.0	40.0
NMeFOSA	Q2ID		1.015		1.00	1.00	0.3	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9166	0.8517		0.900	0.968	-7.1	40.0

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 140-57865/7 Calibration Date: 01/12/2022 18:35  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 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	AveID	1.328	1.281		0.964	1.00	-3.6	40.0
Perfluorotridecanoic acid (PFTriA)	AveID	0.8292	0.8030		0.968	1.00	-3.2	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.195	1.152		0.964	1.00	-3.6	40.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1344	0.1308		0.973	1.00	-2.7	40.0
Perfluorohexadecanoic acid	Q2ID		1.037		0.967	1.00	-3.3	40.0
Perfluorooctadecanoic acid	AveID	0.9844	0.9028		0.917	1.00	-8.3	40.0
13C4 PFBA	Ave	1.142	1.076		1.18	1.25	-5.7	50.0
13C5 PFPeA	Ave	0.8865	0.8254		1.16	1.25	-6.9	50.0
13C3 PFBS	Ave	0.5913	0.5737		1.13	1.16	-3.0	50.0
M2-4:2 FTS	Ave	0.1820	0.1790		1.15	1.17	-1.7	50.0
13C2 PFHxA	Ave	0.9479	0.8698		1.15	1.25	-8.2	50.0
13C3 HFPO-DA	Ave	0.4556	0.4453		1.22	1.25	-2.3	50.0
18O2 PFHxS	Ave	0.3946	0.4000		1.20	1.18	1.4	50.0
13C4 PFHpA	Ave	0.9067	0.8863		1.22	1.25	-2.3	50.0
13C4 PFOA	Ave	0.9376	0.9409		1.25	1.25	0.3	50.0
M2-6:2 FTS	Ave	0.1835	0.1767		1.14	1.19	-3.7	50.0
13C4 PFOS	Ave	0.5681	0.5903		1.24	1.20	3.9	50.0
13C5 PFNA	Ave	1.234	1.201		1.22	1.25	-2.7	50.0
13C8 FOSA	Ave	0.7682	0.8015		1.30	1.25	4.3	50.0
13C2 PFDA	Ave	1.191	1.210		1.27	1.25	1.6	50.0
M2-8:2 FTS	Ave	0.2070	0.1838		1.06	1.20	-11.2	50.0
d3-NMeFOSAA	Ave	0.1401	0.1789		1.60	1.25	27.7	50.0
13C2 PFUnA	Ave	1.189	1.230		1.29	1.25	3.5	50.0
d5-NEtFOSAA	Ave	0.1537	0.1885		1.53	1.25	22.6	50.0
13C2 PFDoA	Ave	1.247	1.247		1.25	1.25	-0.0	50.0
d7-N-MeFOSE-M	Ave	0.1499	0.1431		1.19	1.25	-4.5	50.0
d-N-MeFOSA-M	Ave	0.1069	0.1024		1.20	1.25	-4.1	50.0
d9-N-EtFOSE-M	Ave	0.1504	0.1476		1.23	1.25	-1.9	50.0
d-N-EtFOSA-M	Ave	0.0883	0.0853		1.21	1.25	-3.3	50.0
13C2 PFTeDA	Ave	0.9508	0.8973		1.18	1.25	-5.6	50.0
13C2 PFHxDA	Ave	0.6444	0.6182		1.20	1.25	-4.1	50.0
13C8 PFOA	AveID	0.999	1.044		1.31	1.25	4.4	50.0
13C8 PFOS	AveID	0.2220	0.2136		1.15	1.20	-3.8	50.0

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_007.d  
 Lims ID: CCVIS  
 Client ID:  
 Sample Type: CCVIS  
 Inject. Date: 12-Jan-2022 18:35:48 ALS Bottle#: 7 Worklist Smp#: 7  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022237-007 ccvis  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:15:14 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 09:35:38

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										
212.90 > 169.00	2.802	2.802	0.0	1.000	3504446	0.9462		94.6	856	
D 1 13C4 PFBA										
217.00 > 172.00	2.802	2.802	0.0	0.678	5902109	1.18		94.3	13869	
D 3 13C5 PFPeA										
267.90 > 223.00	3.116	3.116	0.0	0.754	4526738	1.16		93.1	9478	
4 Perfluoropentanoic acid										
262.90 > 219.00	3.116	3.116	0.0	1.000	3336776	0.9680		96.8	1315	
D 6 13C3 PFBS										
301.90 > 80.00	3.132	3.132	0.0	0.758	2925856	1.13		97.0	14868	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	3.132	3.132	0.0	1.000	2363113	0.8559	Target=2.65	96.8	4503	
298.90 > 99.00	3.132	3.132	0.0	1.000	872769		2.71(1.32-3.97)		3468	
D 8 M2-4:2 FTS										
329.00 > 81.00	3.423	3.423	0.0	0.828	916714	1.15		98.3	2064	
7 4:2 FTS										
327.00 > 307.00	3.423	3.423	0.0	1.000	1636626	0.9255		99.1	8542	
10 Perfluorohexanoic acid										
313.00 > 269.00	3.444	3.444	0.0	1.000	3195279	0.9646	Target=11.80	96.5	1532	
313.00 > 119.00	3.444	3.444	0.0	1.000	247387		12.92(5.90-17.70)		373	
11 Perfluoropentanesulfonic acid										
349.00 > 80.00	3.444	3.444	0.0	1.099	2312795	0.9461	Target=3.44	101	6036	
349.00 > 99.00	3.444	3.444	0.0	1.099	640124		3.61(1.72-5.16)		6121	
D 9 13C2 PFHxA										
315.00 > 270.00	3.444	3.444	0.0	0.833	4769958	1.15		91.8	8358	
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.548	3.548	0.0	0.859	2442066	1.22		97.7	4984	

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	3.548	0.0	1.000	2567958	0.9719		97.2	3017	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.789	3.789	0.0	1.000	2111511	0.8736	Target=3.40	96.0	6466	M
399.00 > 99.00	3.789	3.789	0.0	1.000	599468		3.52(1.70-5.10)		3731	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.789	3.789	0.0	0.917	2075380	1.20		101	7681	
D 14 13C4 PFHpA										
367.00 > 322.00	3.799	3.799	0.0	0.919	4860347	1.22		97.7	8727	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.799	3.799	0.0	1.000	4049961	1.00	Target=3.29	99.5	2383	
363.00 > 169.00	3.799	3.799	0.0	1.000	1227508		3.30(1.65-4.94)		1730	
68 DONA										
377.00 > 251.00	3.834	3.834	0.0	0.866	6086623	0.8937	Target=1.82	94.9	7350	
377.00 > 85.00	3.834	3.834	0.0	0.866	3460815		1.76(0.91-2.74)		144	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.115	4.115	0.0	0.929	2200645	0.8907	Target=3.92	93.6	5909	
449.00 > 99.00	4.115	4.115	0.0	0.929	567412		3.88(1.96-5.87)		2787	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.132	4.132	0.0	1.000	920438	1.14		96.3	2804	
D 21 13C4 PFOA										
417.00 > 372.00	4.132	4.132	0.0	1.000	5159992	1.25		100	12422	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.132	4.132	0.0	1.000	5386165	1.31		104	8554	
19 6:2 FTS										
427.00 > 407.00	4.132	4.132	0.0	1.000	1276132	0.9171		96.7	6959	
* 22 13C2 PFOA										
415.00 > 370.00	4.132	4.132	0.0		5484136	1.25			8908	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.132	4.132	0.0	1.000	4476143	0.9450	Target=2.59	94.5	2196	
413.00 > 169.00	4.132	4.132	0.0	1.000	1716769		2.61(1.30-3.89)		2203	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.419	4.419	0.0	0.998	660956	1.15		96.2	4973	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.428	4.428	0.0	1.000	2382706	0.8374	Target=4.65	90.2	3192	M
499.00 > 99.00	4.428	4.428	0.0	1.000	543317		4.39(2.32-6.97)		1859	M
D 25 13C4 PFOS										
503.00 > 80.00	4.428	4.428	0.0	1.071	3094632	1.24		104	5882	
26 Perfluorononanoic acid										
463.00 > 419.00	4.445	4.445	0.0	1.000	4467728	1.00	Target=4.65	99.7	4277	
463.00 > 169.00	4.453	4.445	0.008	1.002	934532		4.78(2.32-6.97)		1834	
D 27 13C5 PFNA										
468.00 > 423.00	4.445	4.445	0.0	1.076	6584947	1.22		97.3	9859	
63 9CIFOS										
531.00 > 351.00	4.581	4.581	0.0	1.035	4839293	0.8730		93.7	7756	
D 34 13C8 FOSA										
506.00 > 78.00	4.706	4.706	0.0	1.139	4395352	1.30		104	3790	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
33 Perfluorooctanesulfonamide	498.00 > 78.00	4.706	4.706	0.0	1.000	3243289	0.9751	97.5	3949	
28 Perfluorononanesulfonic acid	549.00 > 80.00	4.706	4.706	0.0	1.063	2220591	0.8796	Target=4.06	91.6	5498
	549.00 > 99.00	4.706	4.706	0.0	1.063	560543	3.96(2.03-6.09)			3745
D 32 13C2 PFDA	515.00 > 470.00	4.732	4.732	0.0	1.145	6635382	1.27		102	11214
29 Perfluorodecanoic acid	513.00 > 469.00	4.732	4.732	0.0	1.000	5031277	0.9827	Target=11.30	98.3	4438
	513.00 > 169.00	4.732	4.732	0.0	1.000	450105	11.18(5.65-16.95)			620
31 8:2 FTS	527.00 > 507.00	4.749	4.749	0.0	1.000	1080857	0.9472		98.9	4235
D 30 M2-8:2 FTS	529.00 > 81.00	4.749	4.749	0.0	1.149	965596	1.06		88.8	1588
D 35 d3-NMeFOSAA	573.00 > 419.00	4.878	4.878	0.0	1.181	981330	1.60		128	1046
36 NMeFOSAA	570.00 > 419.00	4.887	4.887	0.0	1.002	700690	0.9185		91.8	1460
										M
37 Perfluorodecanesulfonic acid	599.00 > 80.00	4.966	4.966	0.0	1.122	2160801	0.8990	Target=3.79	93.3	6260
	599.00 > 99.00	4.966	4.966	0.0	1.122	592028	3.65(1.90-5.69)			3261
38 Perfluoroundecanoic acid	563.00 > 519.00	5.002	5.002	0.0	1.000	5204792	0.99	Target=8.45	99.5	5234
	563.00 > 169.00	5.002	5.002	0.0	1.000	597055	8.72(4.22-12.67)			2646
D 39 13C2 PFUnA	565.00 > 520.00	5.002	5.002	0.0	1.210	6746391	1.29		103	16557
D 41 d5-NEtFOSAA	589.00 > 419.00	5.012	5.012	0.0	1.213	1033970	1.53		123	4233
40 NEtFOSA	584.00 > 419.00	5.022	5.022	0.0	1.002	763376	0.9290		92.9	1428
										M
57 11CIFOS	631.00 > 451.00	5.102	5.102	0.0	1.152	3675383	0.8486		90.1	9034
D 43 13C2 PFDoA	615.00 > 570.00	5.231	5.231	0.0	1.266	6836281	1.25		100.0	12933
42 Perfluorododecanoic acid	613.00 > 569.00	5.231	5.231	0.0	1.000	5408706	0.9689	Target=6.99	96.9	4626
	613.00 > 169.00	5.231	5.231	0.0	1.000	789027	6.85(3.50-10.49)			1854
50 10:2 FTS	627.00 > 607.00	5.257	5.257	0.0	1.107	1810044	0.9861		102	9097
D 51 d7-N-MeFOSE-M	623.00 > 59.00	5.275	5.275	0.0	1.277	784769	1.19		95.5	633
49 N-MeFOSE-M	616.00 > 59.00	5.284	5.284	0.0	1.002	698122	0.9502		95.0	941
D 58 d-N-MeFOSA-M	515.00 > 169.00	5.284	5.284	0.0	1.279	561840	1.20		95.9	50.3
61 NMeFOSA	512.00 > 169.00	5.284	5.284	0.0	1.000	456256	1.00		100	574

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
54 PFDoS										
699.00 > 80.00	5.404	5.404	0.0	1.221	2135070	0.8995	Target=4.24	92.9	5748	
699.00 > 99.00	5.404	5.404	0.0	1.221	510377		4.18(2.12-6.35)		2709	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.435	5.435	0.0	1.315	809335	1.23		98.1	439	
62 N-EtFOSE-M										
630.00 > 59.00	5.445	5.445	0.0	1.002	829124	0.9643		96.4	861	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.445	5.445	0.0	1.041	4391640	0.9684	Target=6.20	96.8	4412	
663.00 > 169.00	5.445	5.445	0.0	1.041	714268		6.15(3.10-9.30)		2255	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.445	5.445	0.0	1.318	467961	1.21		96.7	653	
56 N-EtFOSA-M										
526.00 > 169.00	5.455	5.455	0.0	1.002	431329	0.9641		96.4	534	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.629	5.629	0.0	1.362	4921018	1.18		94.4	8970	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.629	5.629	0.0	1.000	514760	0.9730	Target=1.05	97.3	2434	
713.00 > 219.00	5.619	5.629	-0.010	0.998	487834		1.06(0.53-1.58)		2152	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.931	5.931	0.0	1.435	3390481	1.20		95.9	5938	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.931	5.931	0.0	1.000	2812941	0.9667	Target=8.09	96.7	3803	
813.00 > 169.00	5.931	5.931	0.0	1.000	342499		8.21(4.05-12.14)		744	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.195	6.195	0.0	1.044	2448806	0.9172	Target=11.53	91.7	3350	
913.00 > 169.00	6.195	6.195	0.0	1.044	219805		11.14(5.77-17.30)		946	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

63L4PFC2T3\_00001

Amount Added: 1.00

Units: mL



Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_007.d

Injection Date: 12-Jan-2022 18:35:48

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

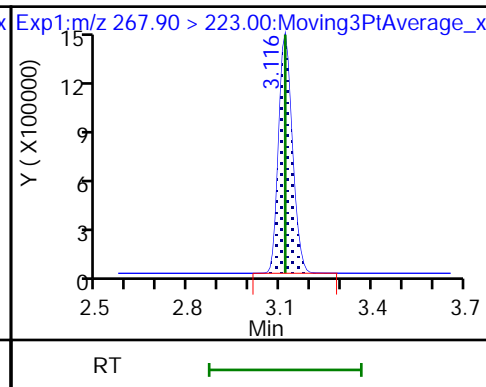
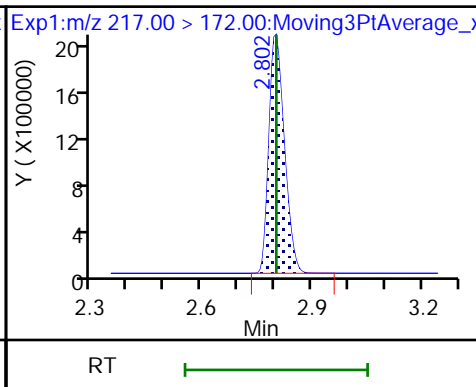
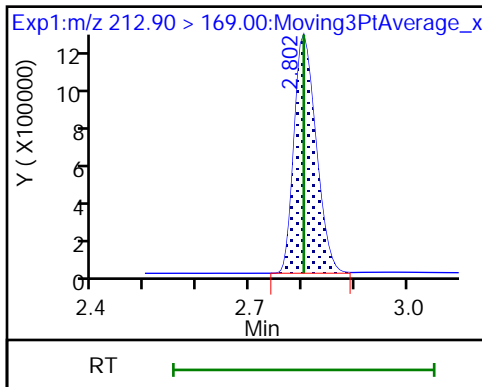
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

2 Perfluorobutanoic acid

D 1 13C4 PFBA

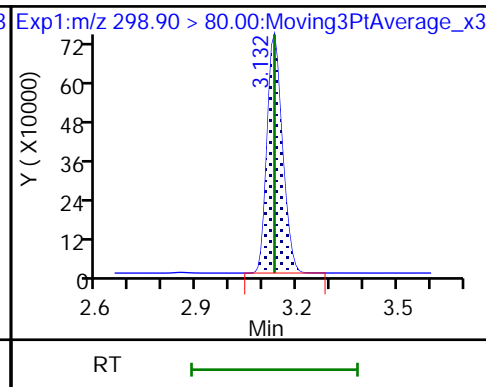
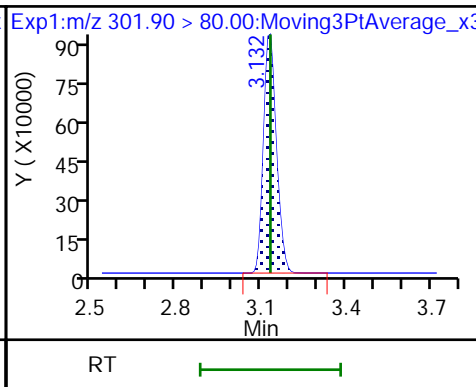
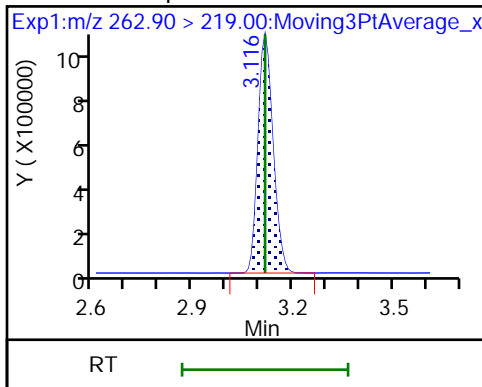
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

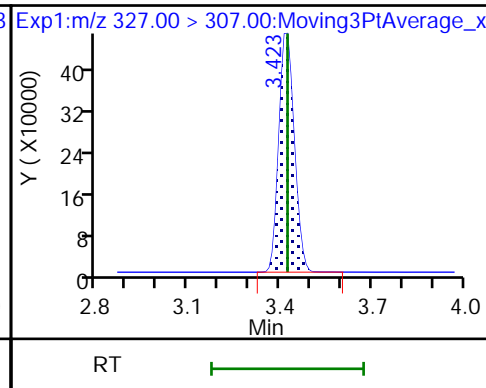
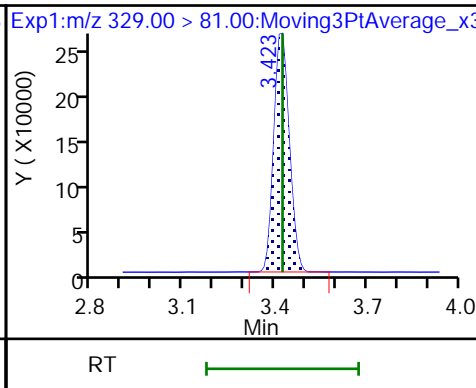
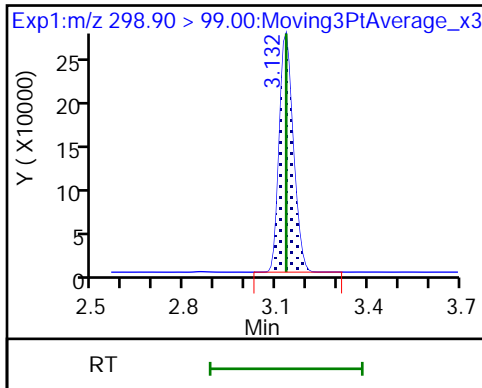
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

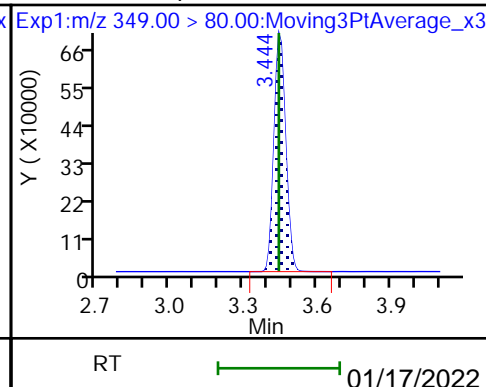
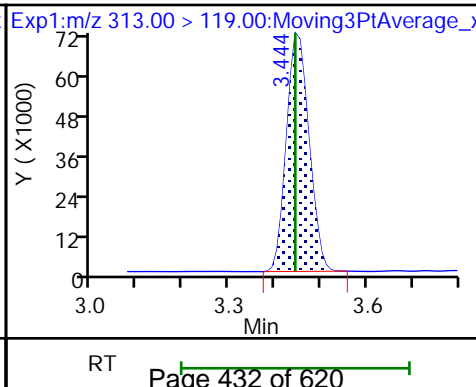
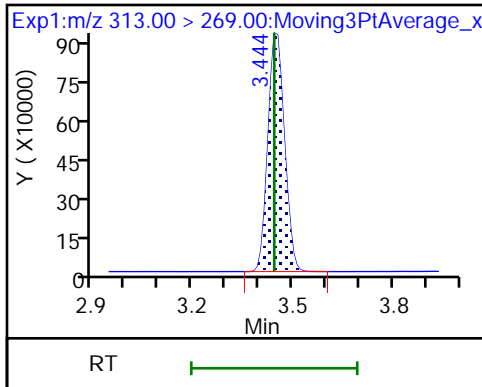
7 4:2 FTS

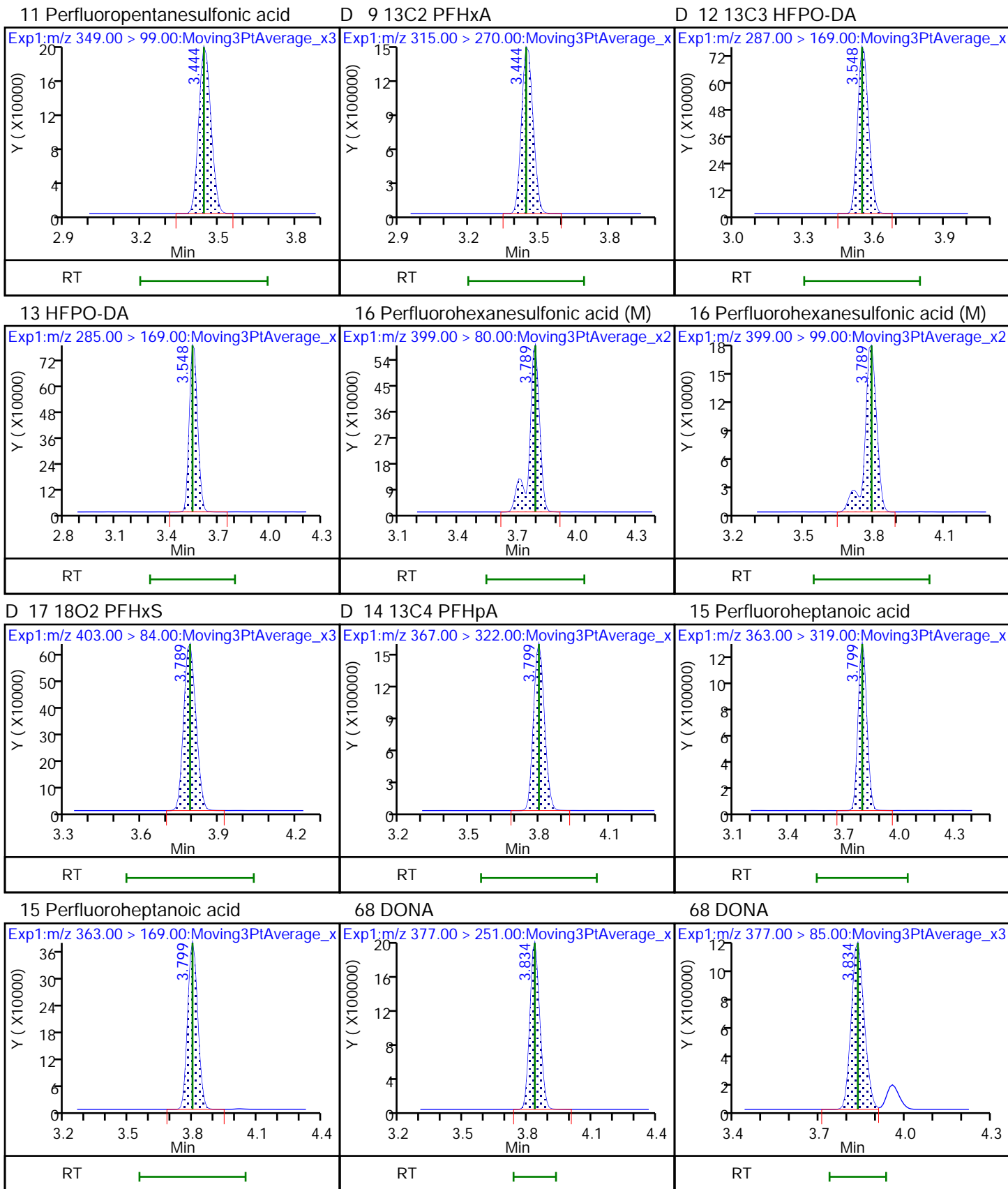


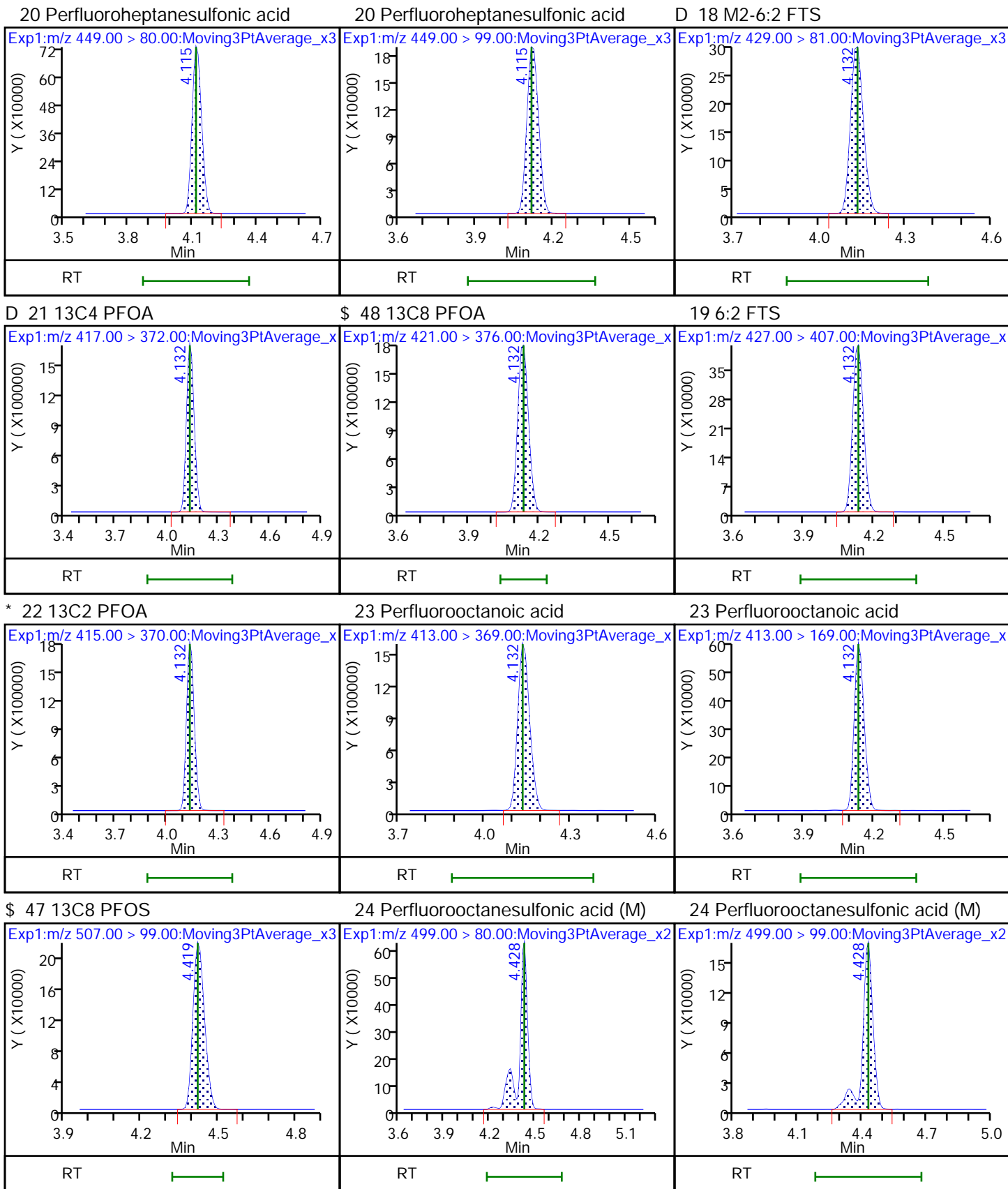
10 Perfluorohexanoic acid

10 Perfluorohexanoic acid

11 Perfluoropentanesulfonic acid



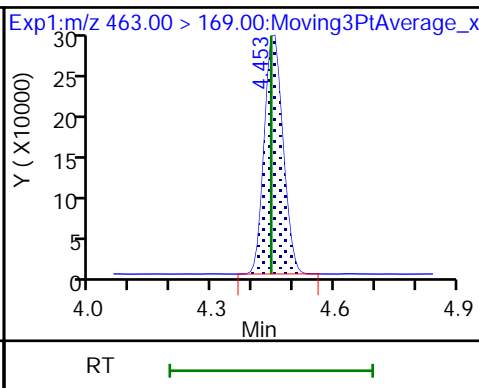
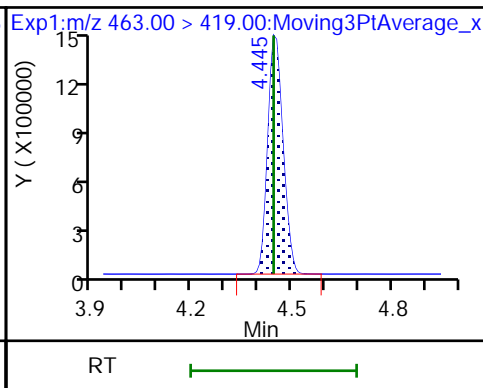
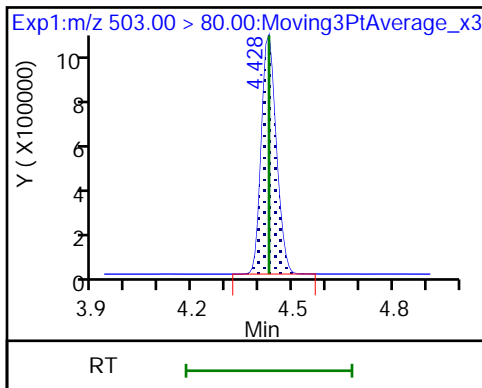




D 25 13C4 PFOS

26 Perfluorononanoic acid

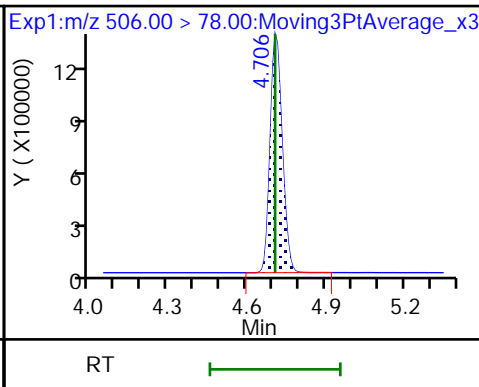
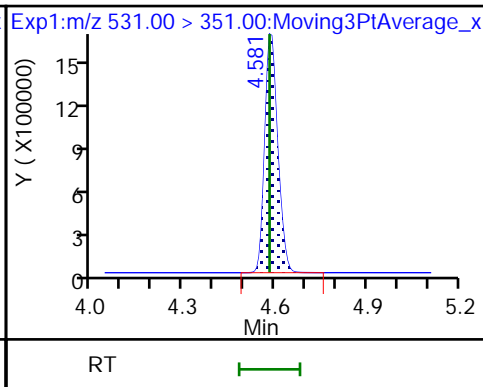
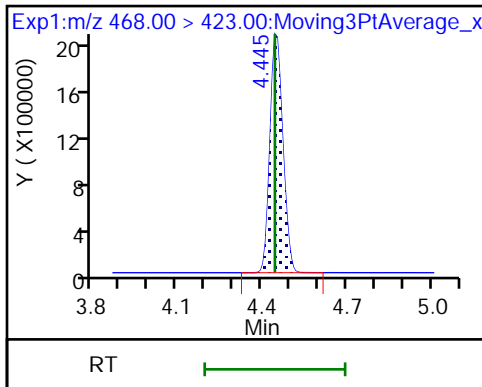
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS

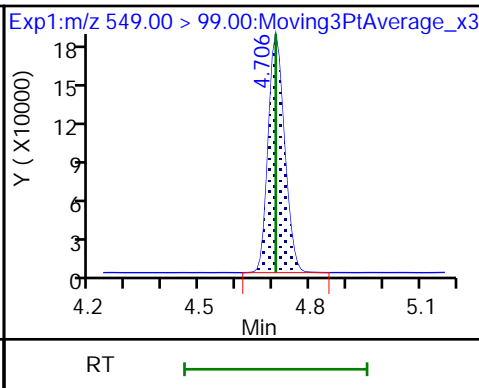
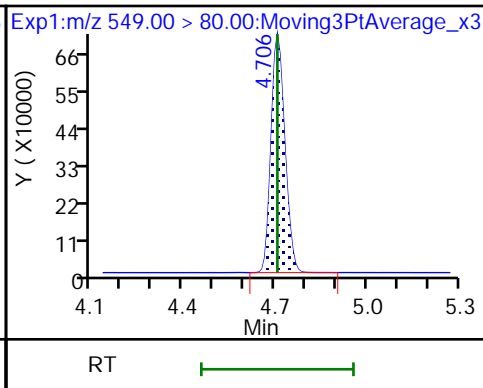
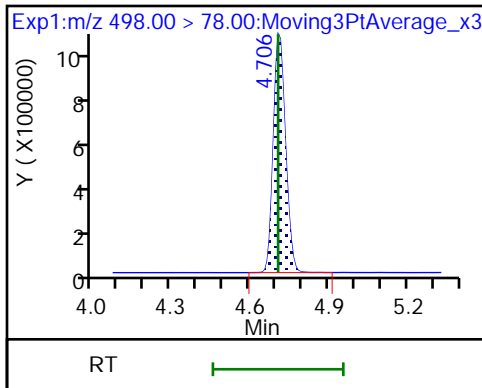
D 34 13C8 FOSA



33 Perfluorooctanesulfonamide

28 Perfluorononanesulfonic acid

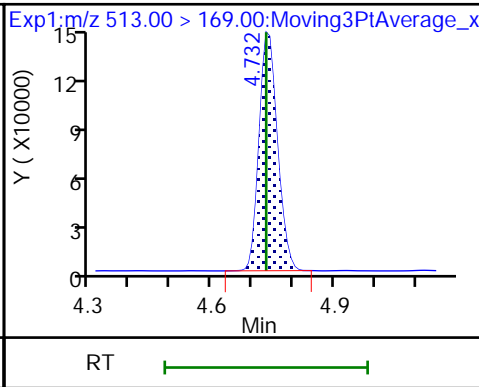
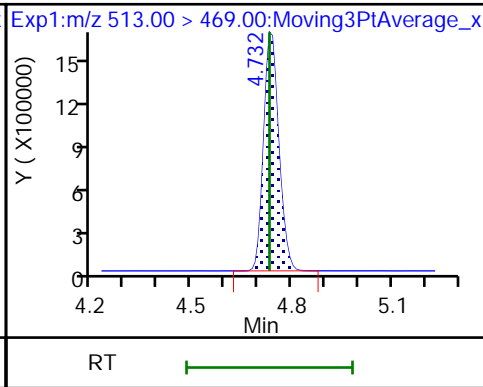
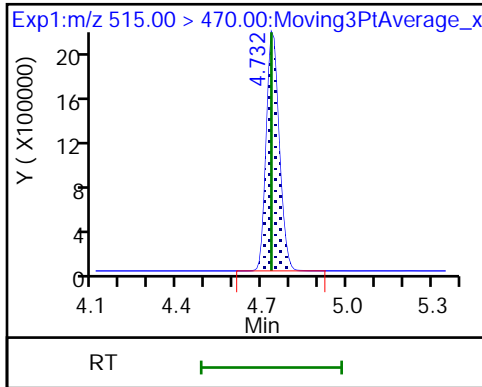
28 Perfluorononanesulfonic acid

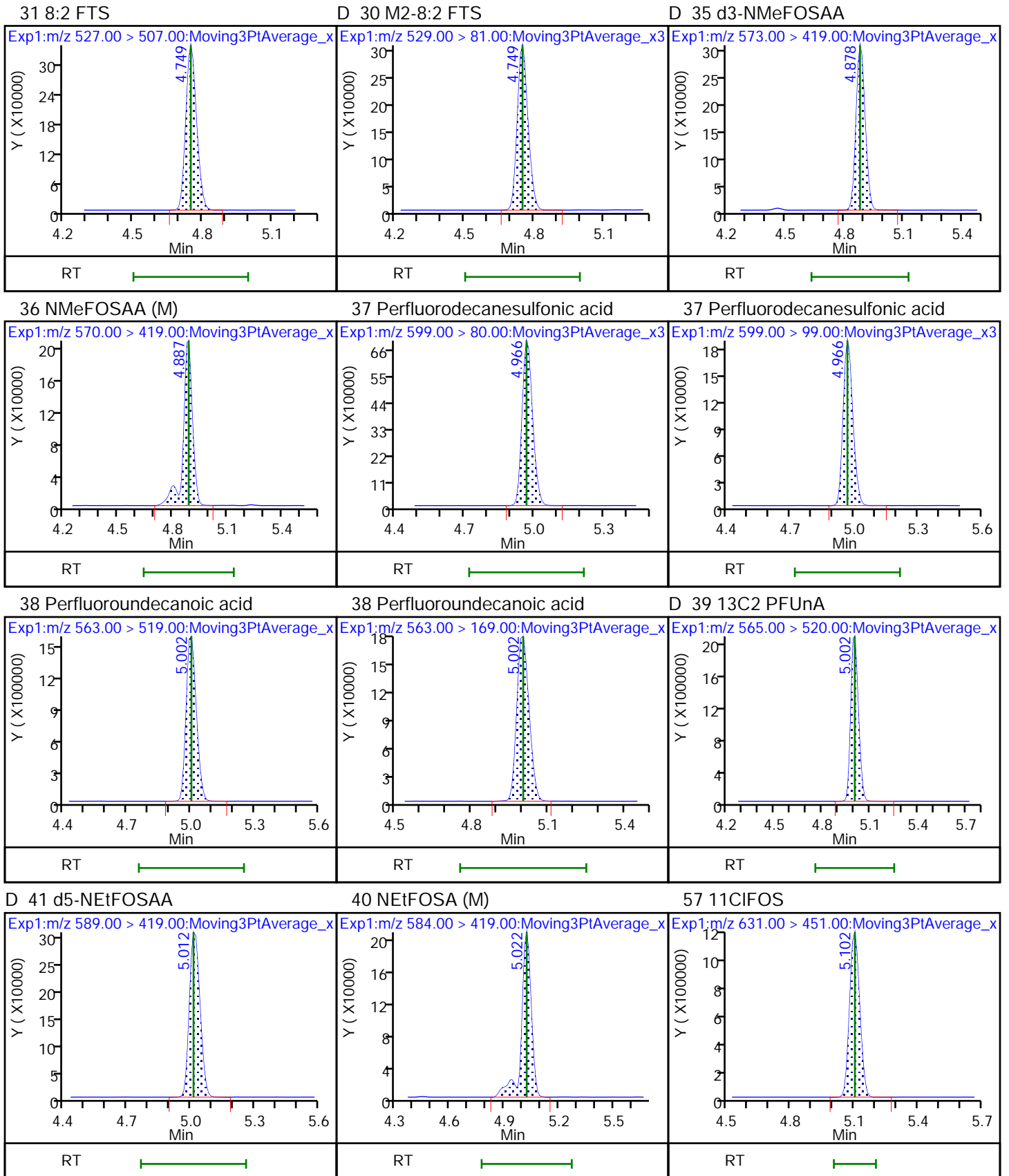


D 32 13C2 PFDA

29 Perfluorodecanoic acid

29 Perfluorodecanoic acid

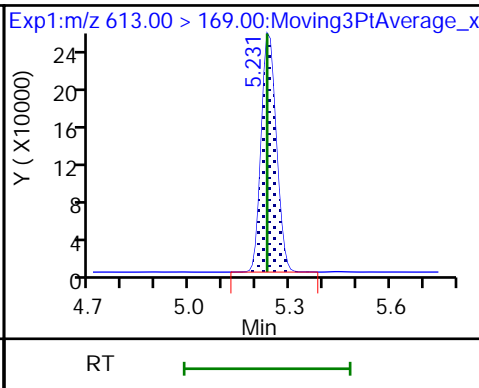
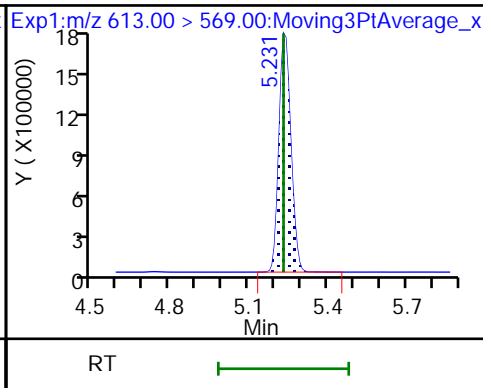
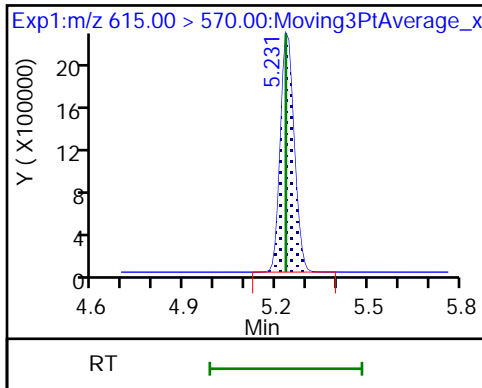




D 43 13C2 PFDaA

42 Perfluorododecanoic acid

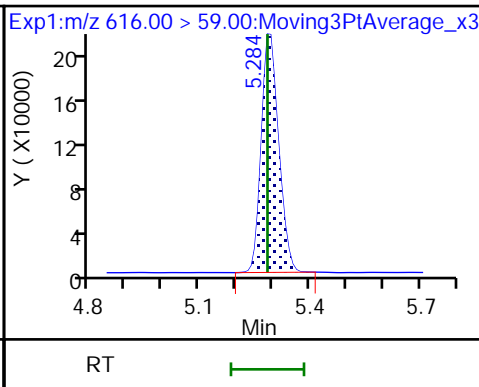
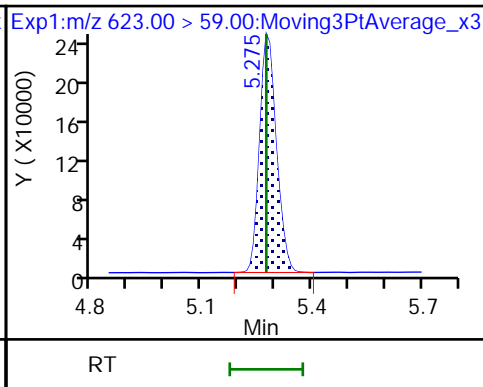
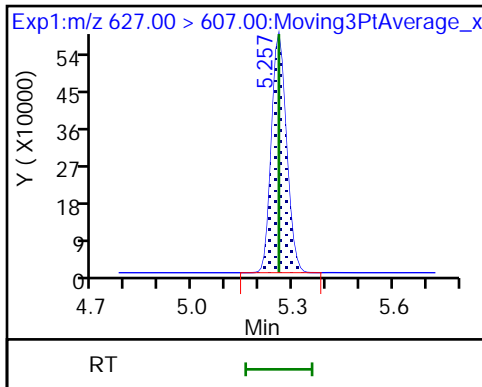
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

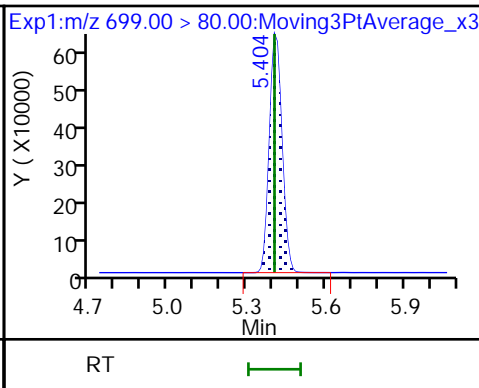
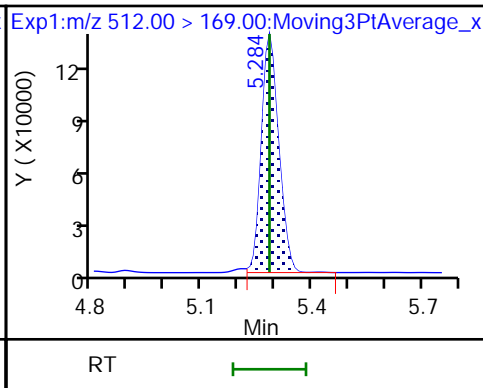
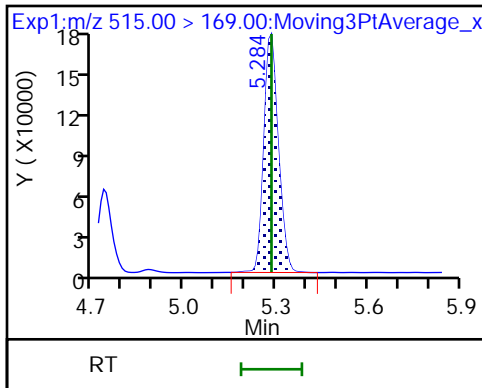
49 N-MeFOSE-M



D 58 d-N-MeFOSA-M

61 NMeFOSA

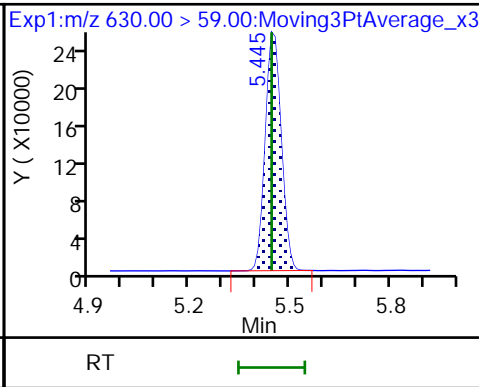
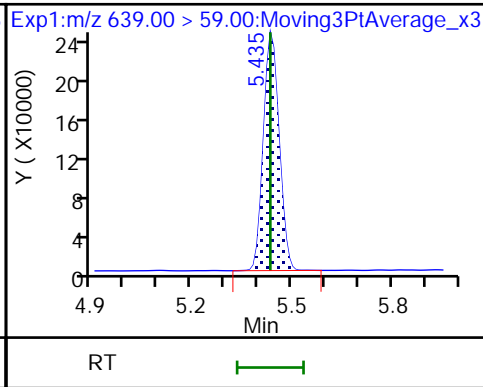
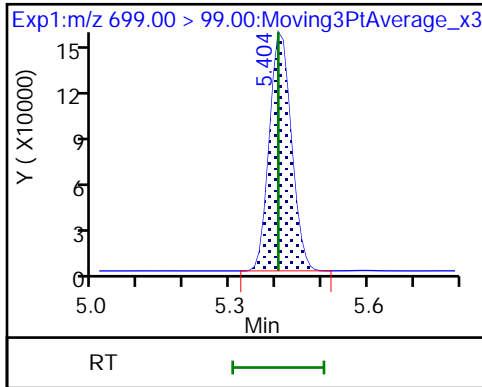
54 PFDoS

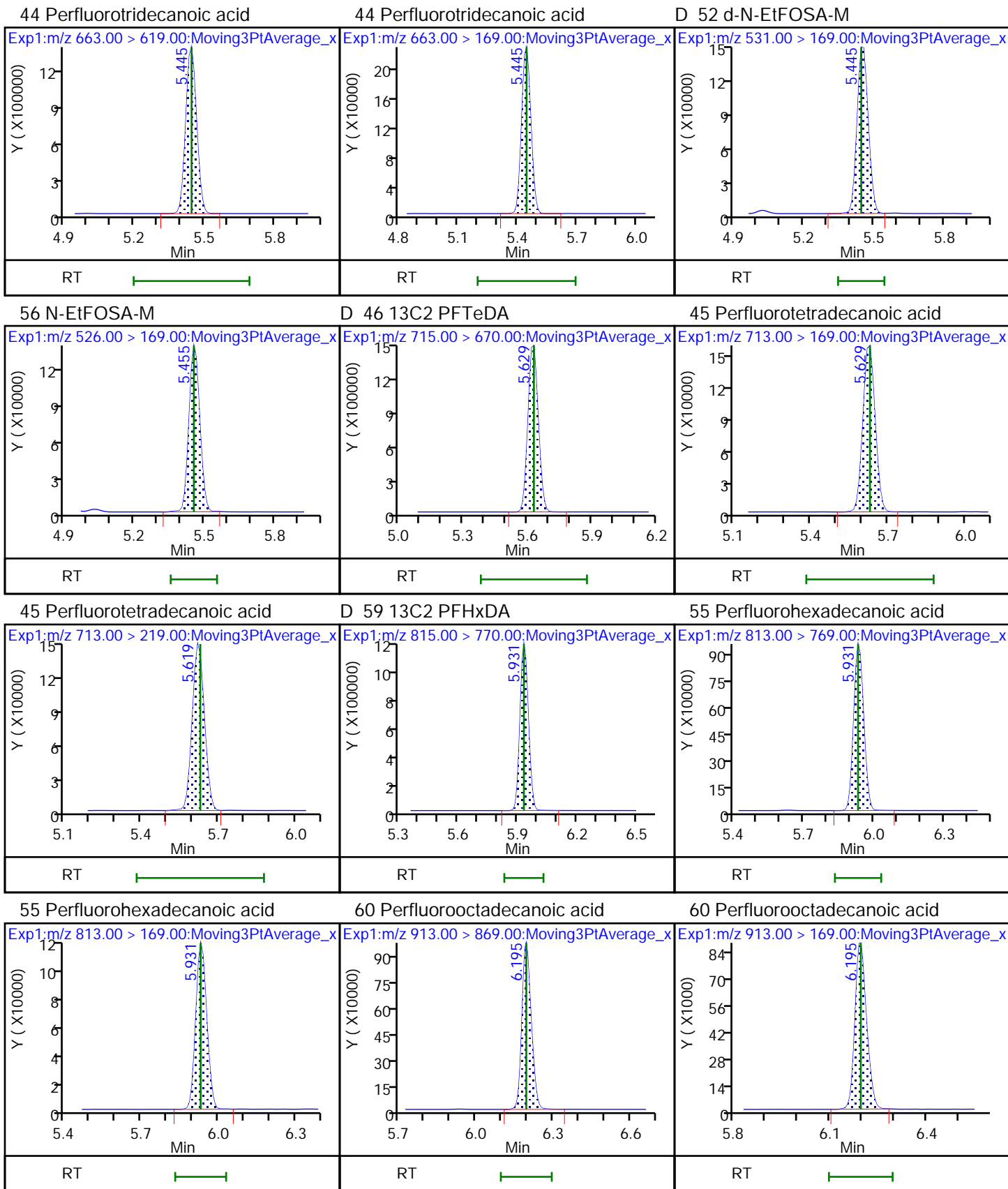


54 PFDoS

D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M









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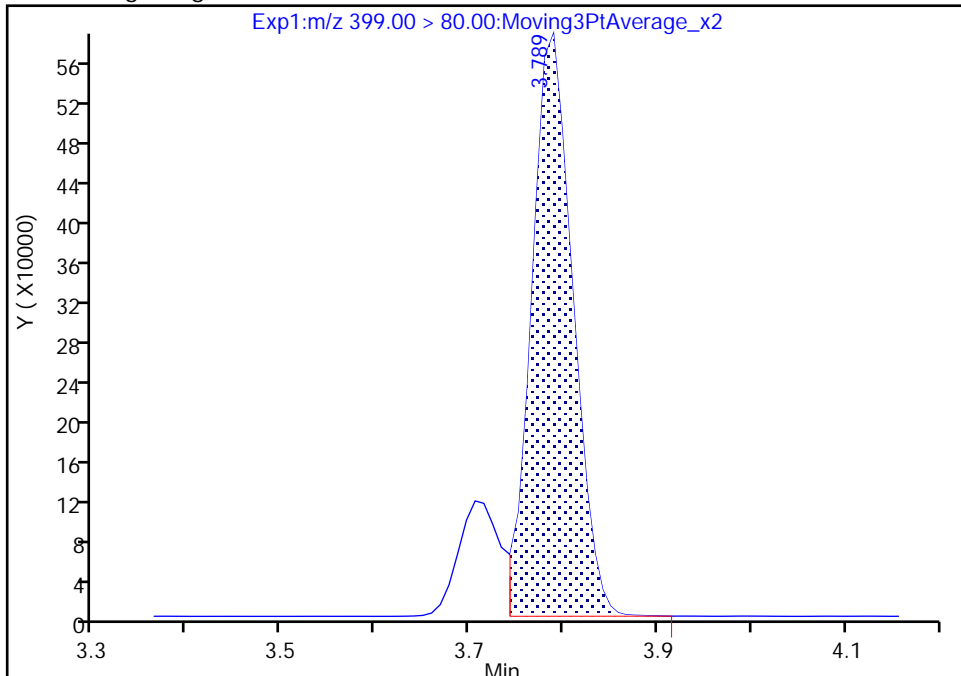
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Injection Date: 12-Jan-2022 18:35:48 Instrument ID: LCA  
Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

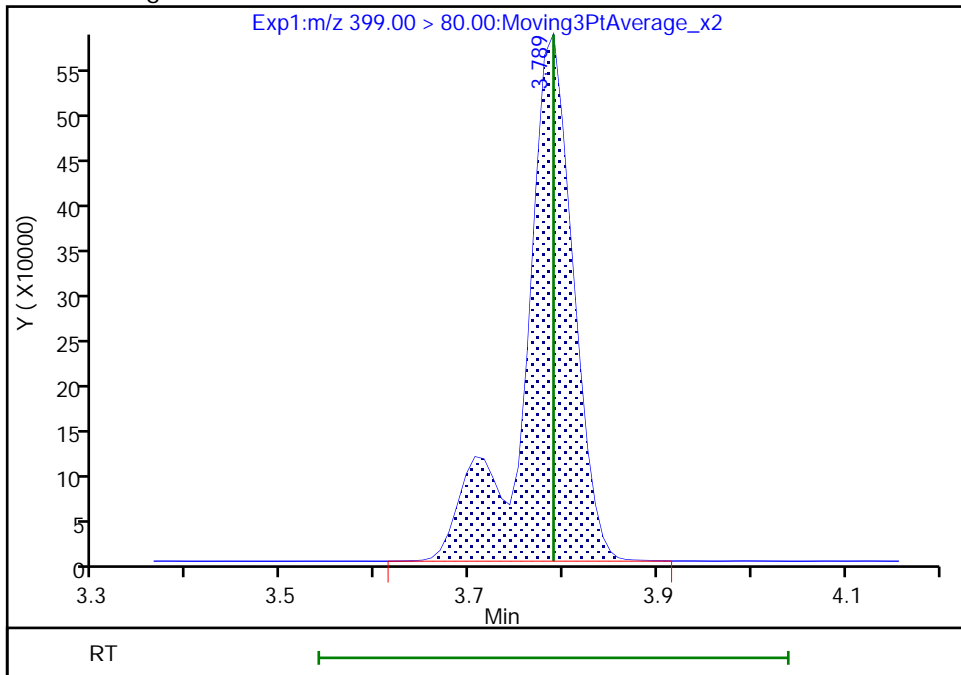
RT: 3.79  
Area: 1762040  
Amount: 0.728988  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 2111511  
Amount: 0.873571  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:39:01  
Audit Action: Manually Integrated

Eurofins TestAmerica, Knoxville

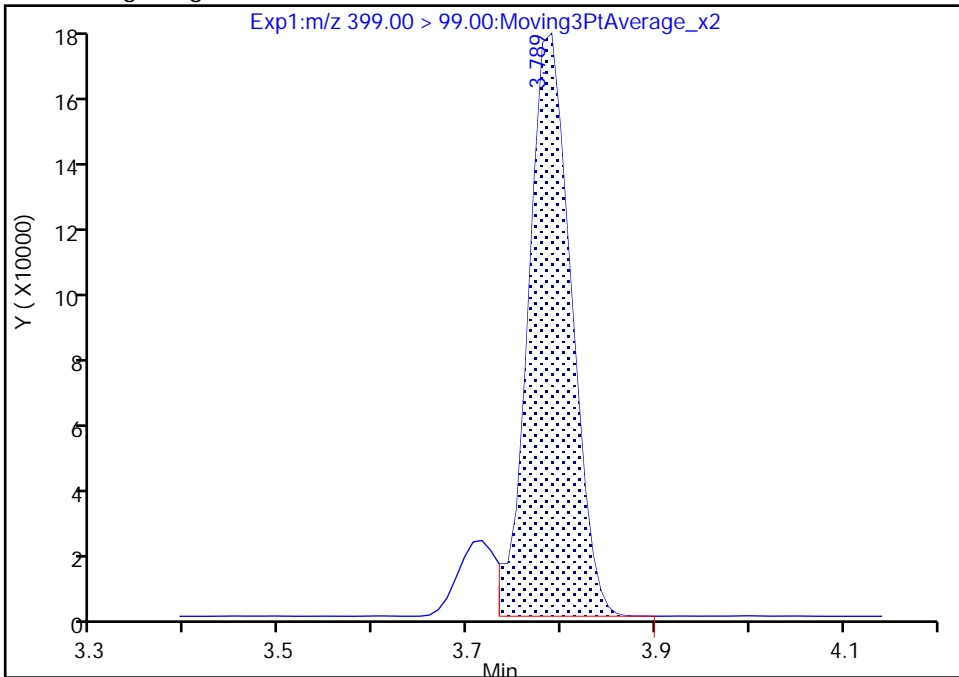
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Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

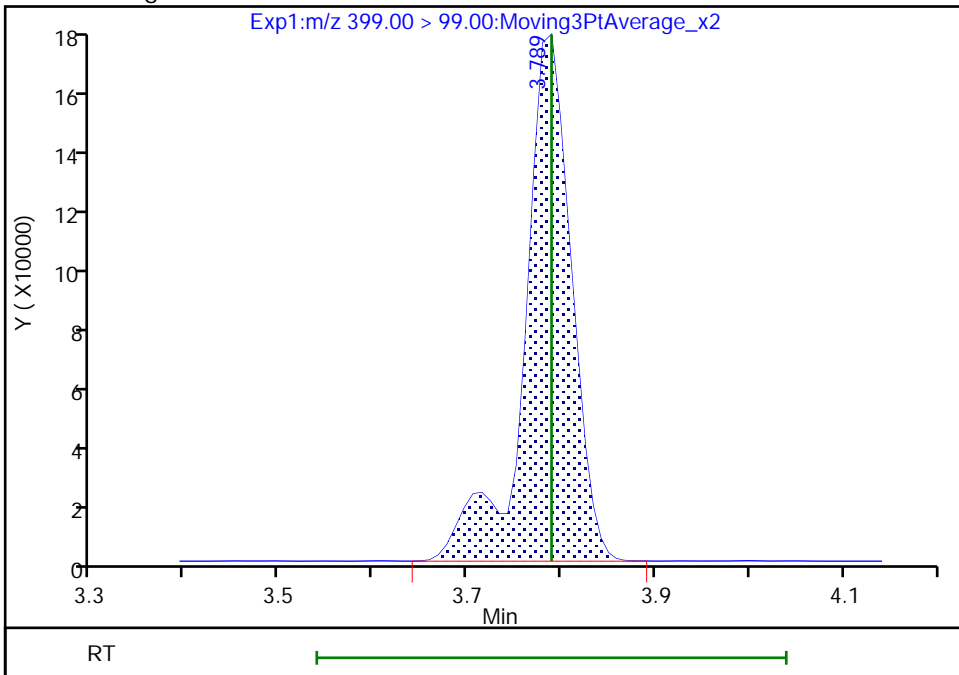
RT: 3.79  
Area: 539317  
Amount: 0.728988  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 599468  
Amount: 0.873571  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:39:07

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

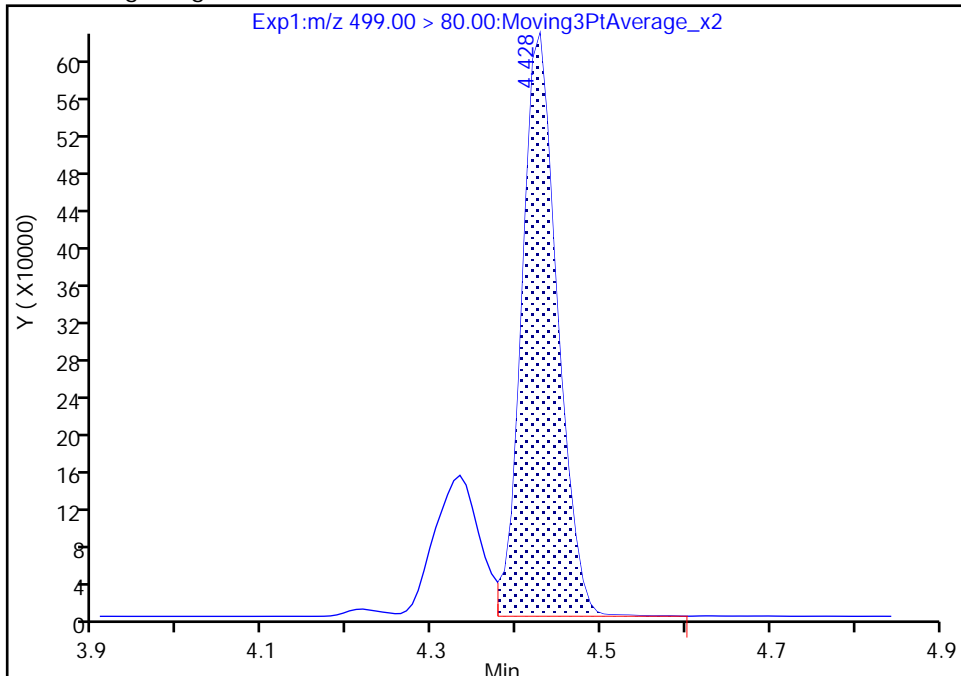
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Injection Date: 12-Jan-2022 18:35:48 Instrument ID: LCA  
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Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

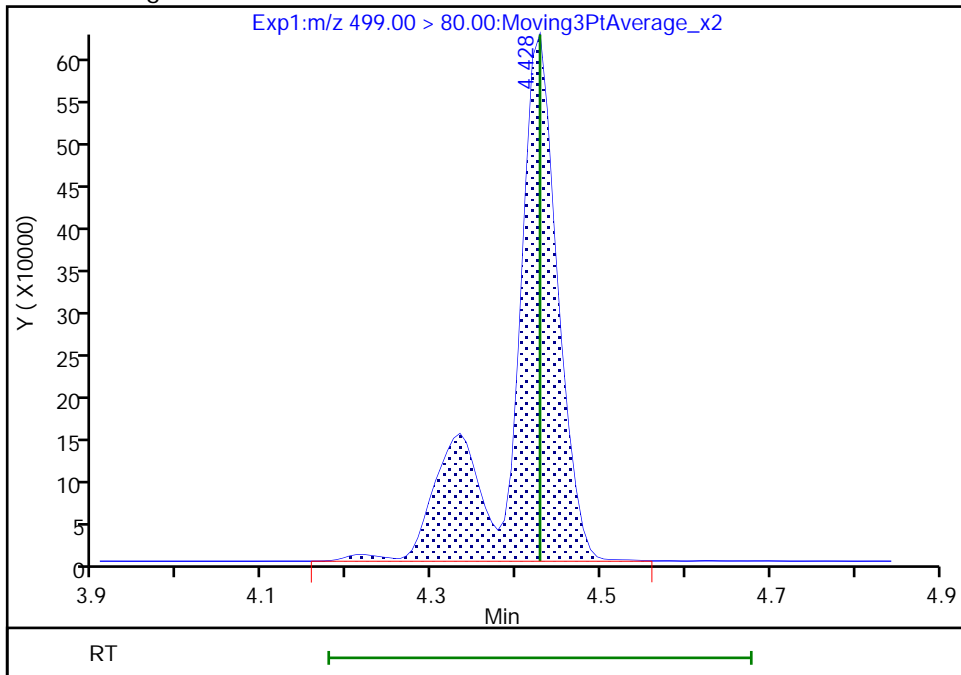
RT: 4.43  
Area: 1803200  
Amount: 0.633702  
Amount Units: ng/ml

Processing Integration Results



RT: 4.43  
Area: 2382706  
Amount: 0.837359  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:39:20  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

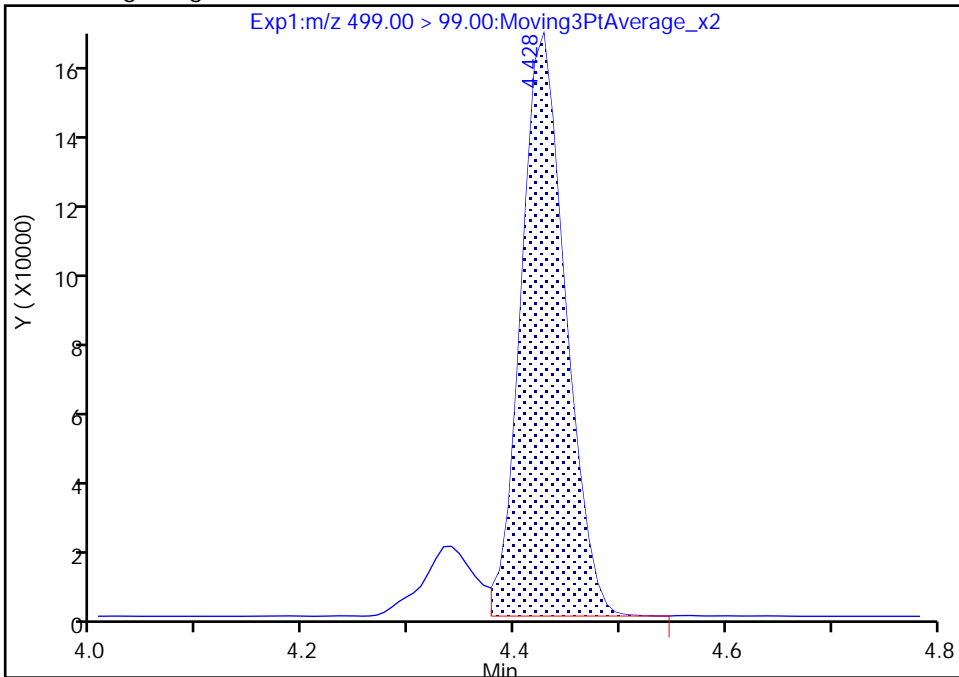
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Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

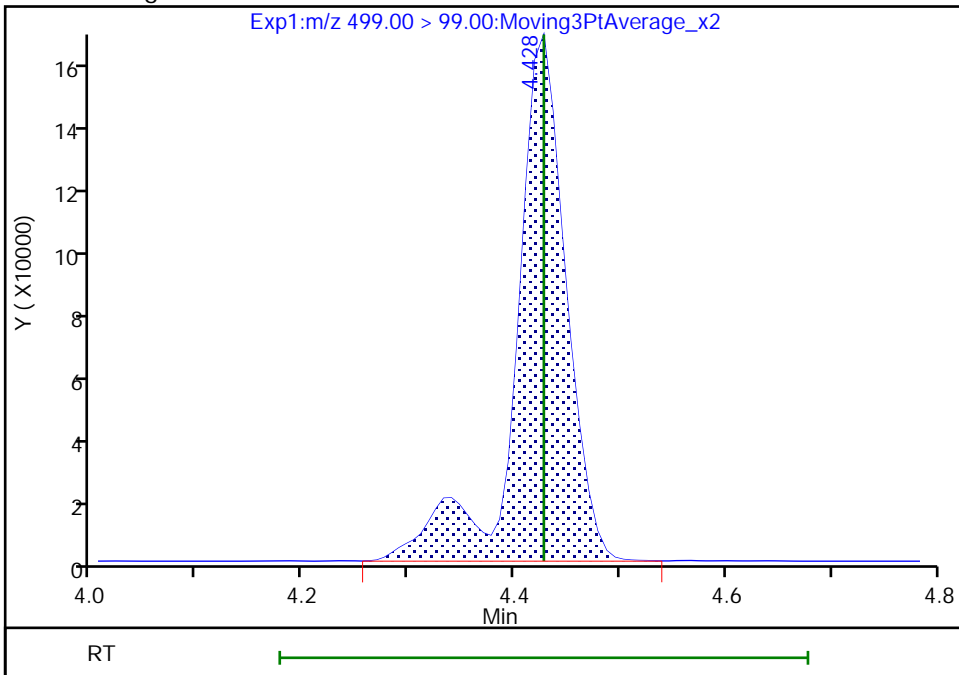
RT: 4.43  
Area: 475908  
Amount: 0.633702  
Amount Units: ng/ml

Processing Integration Results



RT: 4.43  
Area: 543317  
Amount: 0.837359  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:39:27

Audit Action: Manually Integrated

Audit Reason: Baseline  
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Eurofins TestAmerica, Knoxville

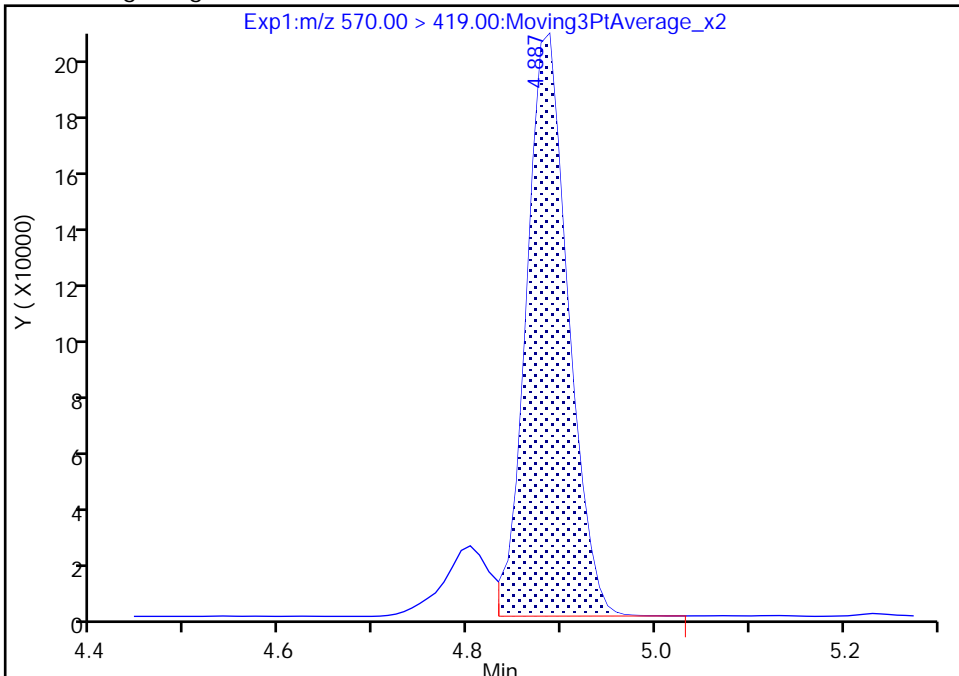
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Injection Date: 12-Jan-2022 18:35:48 Instrument ID: LCA  
Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

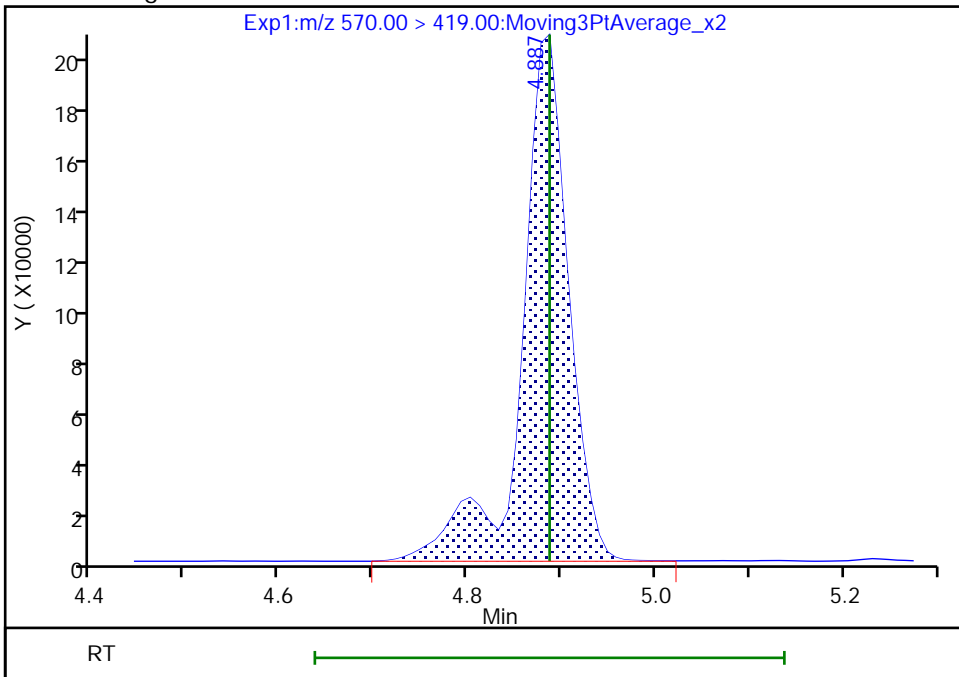
RT: 4.89  
Area: 618022  
Amount: 0.810247  
Amount Units: ng/ml

Processing Integration Results



RT: 4.89  
Area: 700690  
Amount: 0.918473  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:39:40  
Audit Action: Manually Integrated

Eurofins TestAmerica, Knoxville

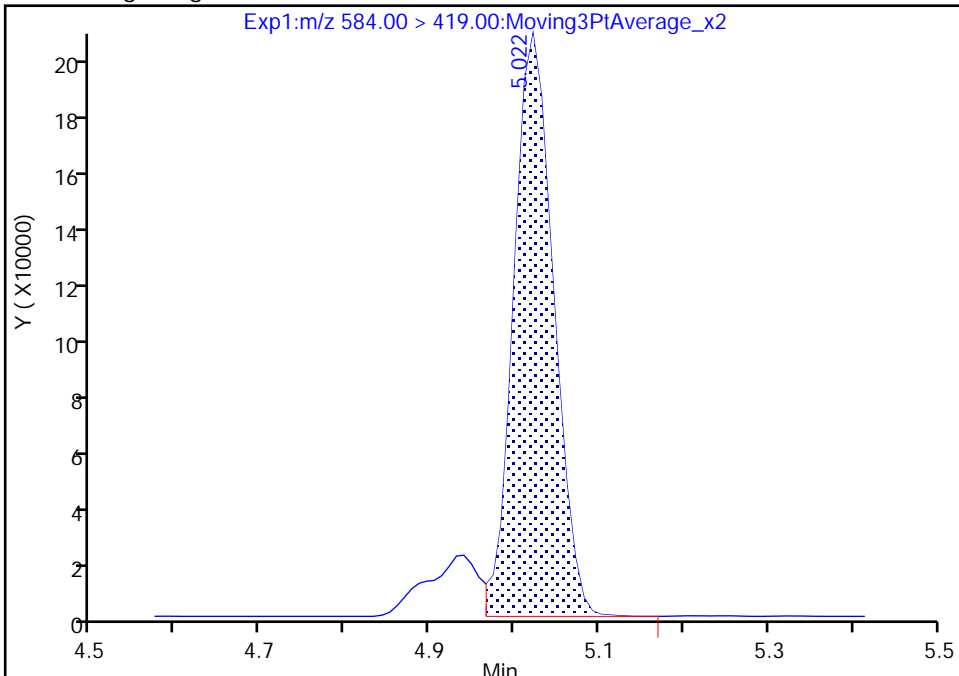
Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\\_007.d  
Injection Date: 12-Jan-2022 18:35:48 Instrument ID: LCA  
Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NEtFOSA, CAS: 2991-50-6

Signal: 1

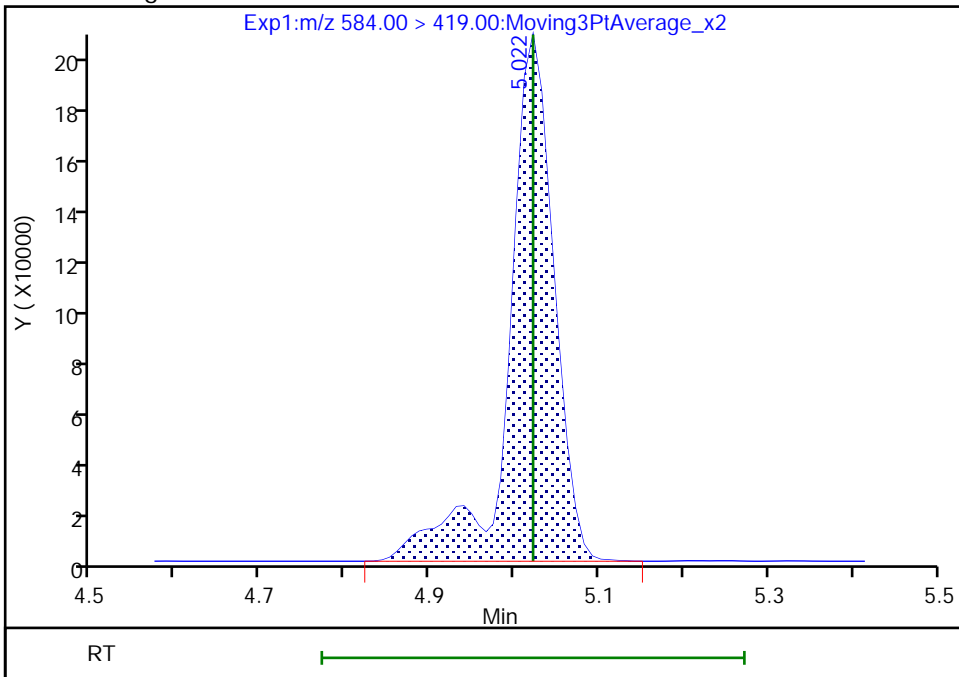
RT: 5.02  
Area: 672696  
Amount: 0.819064  
Amount Units: ng/ml

Processing Integration Results



RT: 5.02  
Area: 763376  
Amount: 0.929036  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:39:51  
Audit Action: Manually Integrated

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-57865/19 Calibration Date: 01/12/2022 20:21  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 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	0.7844	0.7695		2.45	2.50	-1.9	40.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9519	0.9854		2.59	2.50	3.5	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.097	1.182		2.38	2.21	7.7	40.0
4:2 FTS	AveID	2.252	2.342		2.43	2.34	4.0	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8680	0.8538		2.46	2.50	-1.6	40.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	0.9713	1.068		2.58	2.35	10.0	40.0
HFPO-DA	AveID	1.352	1.420		2.62	2.50	5.0	40.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.377	1.343		2.22	2.28	-2.5	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.047	1.044		2.49	2.50	-0.2	40.0
DONA	AveID	2.630	2.820		2.53	2.36	7.2	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9541	1.023		2.55	2.38	7.2	40.0
6:2 FTS	L2ID		1.824		2.41	2.37	1.5	40.0
Perfluorooctanoic acid (PFOA)	AveID	1.147	1.177		2.57	2.50	2.6	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.099	1.125		2.38	2.32	2.4	40.0
Perfluorononanoic acid (PFNA)	Q2ID		0.9259		2.69	2.50	7.4	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	Q2ID		2.299		2.47	2.33	6.1	50.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9748	1.016		2.50	2.40	4.2	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9459	0.9457		2.50	2.50	-0.0	40.0
Perfluorodecanoic acid (PFDA)	AveID	0.9645	0.9891		2.56	2.50	2.6	40.0
8:2 FTS	AveID	1.415	1.502		2.54	2.40	6.1	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	QuaIF		0.9636		2.47	2.50	-1.1	40.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		0.9264		2.40	2.41	-0.4	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9695	1.011		2.61	2.50	4.3	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Q2ID		0.9750		2.44	2.50	-2.5	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.672	1.748		2.46	2.36	4.5	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		1.025		2.53	2.50	1.4	40.0
10:2 FTS	AveID	2.276	2.512		2.66	2.41	10.4	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	Q2ID		1.180		2.49	2.50	-0.4	40.0
NMeFOSA	Q2ID		1.067		2.59	2.50	3.5	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9166	0.9818		2.59	2.42	7.1	40.0

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-57865/19 Calibration Date: 01/12/2022 20:21  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 Lab File ID: \_019.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTriA)	AveID	0.8292	0.8542		2.58	2.50	3.0	40.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	AveID	1.328	1.405		2.65	2.50	5.8	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.195	1.263		2.64	2.50	5.7	40.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1344	0.1347		2.51	2.50	0.2	40.0
Perfluorohexadecanoic acid	Q2ID		1.097		2.56	2.50	2.5	40.0
Perfluorooctadecanoic acid	AveID	0.9844	1.049		2.66	2.50	6.5	40.0
13C4 PFBA	Ave	1.142	1.097		1.20	1.25	-3.9	50.0
13C5 PFPeA	Ave	0.8865	0.8559		1.21	1.25	-3.5	50.0
13C3 PFBS	Ave	0.5913	0.5676		1.12	1.16	-4.0	50.0
M2-4:2 FTS	Ave	0.1820	0.1737		1.11	1.17	-4.6	50.0
13C2 PFHxA	Ave	0.9479	0.9123		1.20	1.25	-3.8	50.0
13C3 HFPO-DA	Ave	0.4556	0.4513		1.24	1.25	-0.9	50.0
18O2 PFHxS	Ave	0.3946	0.4200		1.26	1.18	6.4	50.0
13C4 PFHpA	Ave	0.9067	0.9063		1.25	1.25	-0.0	50.0
M2-6:2 FTS	Ave	0.1835	0.1682		1.09	1.19	-8.4	50.0
13C4 PFOA	Ave	0.9376	0.9110		1.21	1.25	-2.8	50.0
13C4 PFOS	Ave	0.5681	0.5634		1.19	1.20	-0.8	50.0
13C5 PFNA	Ave	1.234	1.184		1.20	1.25	-4.1	50.0
13C8 FOSA	Ave	0.7682	0.8064		1.31	1.25	5.0	50.0
13C2 PFDA	Ave	1.191	1.197		1.26	1.25	0.5	50.0
M2-8:2 FTS	Ave	0.2070	0.1791		1.04	1.20	-13.5	50.0
d3-NMeFOSAA	Ave	0.1401	0.1888		1.68	1.25	34.7	50.0
13C2 PFUnA	Ave	1.189	1.182		1.24	1.25	-0.5	50.0
d5-NEtFOSAA	Ave	0.1537	0.1968		1.60	1.25	28.0	50.0
13C2 PFDoA	Ave	1.247	1.260		1.26	1.25	1.1	50.0
d7-N-MeFOSE-M	Ave	0.1499	0.1438		1.20	1.25	-4.1	50.0
d-N-MeFOSA-M	Ave	0.1069	0.1074		1.26	1.25	0.5	50.0
d9-N-EtFOSE-M	Ave	0.1504	0.1408		1.17	1.25	-6.4	50.0
d-N-EtFOSA-M	Ave	0.0883	0.0856		1.21	1.25	-3.1	50.0
13C2 PFTeDA	Ave	0.9508	0.9577		1.26	1.25	0.7	50.0
13C2 PFHxDA	Ave	0.6444	0.6188		1.20	1.25	-4.0	50.0
13C8 PFOA	AveID	0.999	1.050		1.31	1.25	5.1	50.0
13C8 PFOS	AveID	0.2220	0.2361		1.27	1.20	6.4	50.0



Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

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 Lims ID: CCV  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 12-Jan-2022 20:21:20 ALS Bottle#: 19 Worklist Smp#: 19  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022237-019 ccv  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:15:30 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 10:03:08

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										
212.90 > 169.00	2.807	2.802	0.005	1.000	8971887	2.45		98.1	2248	
D 1 13C4 PFBA										
217.00 > 172.00	2.807	2.802	0.005	0.677	5829982	1.20		96.1	14345	
D 3 13C5 PFPeA										
267.90 > 223.00	3.123	3.116	0.007	0.753	4546638	1.21		96.5	9768	
4 Perfluoropentanoic acid										
262.90 > 219.00	3.123	3.116	0.007	1.000	8960328	2.59		104	2895	
D 6 13C3 PFBS										
301.90 > 80.00	3.139	3.132	0.007	0.757	2804327	1.12		96.0	12305	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	3.139	3.132	0.007	1.000	6301595	2.38	Target=2.65	108	5450	
298.90 > 99.00	3.139	3.132	0.007	1.000	2335697		2.70(1.32-3.97)		4964	
D 8 M2-4:2 FTS										
329.00 > 81.00	3.422	3.423	-0.001	0.825	861648	1.11		95.4	1615	
7 4:2 FTS										
327.00 > 307.00	3.422	3.423	-0.001	1.000	4036770	2.43		104	9974	
D 9 13C2 PFHxA										
315.00 > 270.00	3.452	3.444	0.008	0.832	4846012	1.20		96.2	10189	
10 Perfluorohexanoic acid										
313.00 > 269.00	3.452	3.444	0.008	1.000	8275070	2.46	Target=11.80	98.4	2968	
313.00 > 119.00	3.452	3.444	0.008	1.000	684506		12.09(5.90-17.70)		992	
11 Perfluoropentanesulfonic acid										
349.00 > 80.00	3.452	3.444	0.008	1.100	6043281	2.58	Target=3.44	110	12144	
349.00 > 99.00	3.452	3.444	0.008	1.100	1716833		3.52(1.72-5.16)		7943	
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.556	3.548	0.008	0.857	2397412	1.24		99.1	4947	

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	3.556	3.548	0.008	1.000	6807408	2.62		105	4276	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.797	3.789	0.008	1.000	5452920	2.22	Target=3.40	97.5	7482	M
399.00 > 99.00	3.797	3.789	0.008	1.000	1598932		3.41(1.70-5.10)		5614	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.797	3.789	0.008	0.915	2110675	1.26		106	5759	
D 14 13C4 PFHpA										
367.00 > 322.00	3.807	3.799	0.008	0.918	4814259	1.25		100.0	8566	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.807	3.799	0.008	1.000	10054213	2.49	Target=3.29	99.8	4825	
363.00 > 169.00	3.807	3.799	0.008	1.000	3169310		3.17(1.65-4.94)		3047	
68 DONA										
377.00 > 251.00	3.841	3.834	0.007	0.866	15899674	2.53	Target=1.82	107	11362	
377.00 > 85.00	3.841	3.834	0.007	0.866	9211958		1.73(0.91-2.74)		186	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.131	4.115	0.016	0.931	5826487	2.55	Target=3.92	107	8235	
449.00 > 99.00	4.123	4.115	0.008	0.930	1490884		3.91(1.96-5.87)		5772	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.140	4.132	0.008	0.998	848612	1.09		91.6	2957	
D 21 13C4 PFOA										
417.00 > 372.00	4.149	4.132	0.017	1.000	4839215	1.21		97.2	9524	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.140	4.132	0.008	0.998	5081628	1.31		105	9534	
19 6:2 FTS										
427.00 > 407.00	4.140	4.132	0.008	1.000	3089995	2.40		101	6540	
* 22 13C2 PFOA										
415.00 > 370.00	4.149	4.132	0.017		5312145	1.25			9812	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.140	4.132	0.008	0.998	11394165	2.56	Target=2.59	103	4706	
413.00 > 169.00	4.140	4.132	0.008	0.998	4432962		2.57(1.30-3.89)		4529	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.435	4.419	0.016	1.000	675505	1.27		106	4074	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.435	4.428	0.007	1.000	6247322	2.37	Target=4.65	102	4168	M
499.00 > 99.00	4.435	4.428	0.007	1.000	1464945		4.26(2.32-6.97)		4626	M
D 25 13C4 PFOS										
503.00 > 80.00	4.435	4.428	0.007	1.069	2860949	1.18		99.2	4858	
26 Perfluorononanoic acid										
463.00 > 419.00	4.461	4.445	0.016	1.000	11645862	2.69	Target=4.65	107	8711	
463.00 > 169.00	4.461	4.445	0.016	1.000	2455625		4.74(2.32-6.97)		3757	
D 27 13C5 PFNA										
468.00 > 423.00	4.461	4.445	0.016	1.075	6288677	1.20		95.9	9786	
63 9CIFOS										
531.00 > 351.00	4.594	4.581	0.013	1.036	12824442	2.47		106	14985	

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	4.715	4.706	0.009	1.063	5837363	2.50	Target=4.06	104	7068	
549.00 > 99.00	4.715	4.706	0.009	1.063	1520919		3.84(2.03-6.09)		6368	
D 34 13C8 FOSA										
506.00 > 78.00	4.732	4.706	0.026	1.141	4283694	1.31		105	3540	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.732	4.706	0.026	1.000	8102187	2.50		100.0	4416	
D 32 13C2 PFDA										
515.00 > 470.00	4.749	4.732	0.017	1.145	6356906	1.26		100	8710	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.749	4.732	0.017	1.000	12575273	2.56	Target=11.30	103	6839	
513.00 > 169.00	4.749	4.732	0.017	1.000	1091114		11.53(5.65-16.95)		730	
31 8:2 FTS										
527.00 > 507.00	4.757	4.749	0.008	1.000	2738303	2.54		106	5530	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.757	4.749	0.008	1.147	911602	1.04		86.5	1556	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.887	4.878	0.009	1.178	1002983	1.68		135	658	
36 NMeFOSAA										
570.00 > 419.00	4.896	4.887	0.009	1.002	1932897	2.47		98.9	2856	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.975	4.966	0.009	1.122	5345019	2.40	Target=3.79	99.6	8200	
599.00 > 99.00	4.975	4.966	0.009	1.122	1504307		3.55(1.90-5.69)		5161	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.012	5.002	0.010	1.000	12701250	2.61	Target=8.45	104	8705	
563.00 > 169.00	5.012	5.002	0.010	1.000	1459831		8.70(4.22-12.67)		4389	
D 39 13C2 PFUnA										
565.00 > 520.00	5.012	5.002	0.010	1.208	6280665	1.24		99.5	14017	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.032	5.012	0.020	1.213	1045575	1.60		128	3559	
40 NEtFOSA										
584.00 > 419.00	5.032	5.022	0.010	1.000	2038828	2.44		97.5	2000	M
57 11C1FOS										
631.00 > 451.00	5.112	5.102	0.010	1.153	9856914	2.46		105	11230	
D 43 13C2 PFDaA										
615.00 > 570.00	5.249	5.231	0.018	1.265	6694272	1.26		101	10889	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.249	5.231	0.018	1.000	13722542	2.53	Target=6.99	101	9413	
613.00 > 169.00	5.249	5.231	0.018	1.000	1934597		7.09(3.50-10.49)		4522	
50 10:2 FTS										
627.00 > 607.00	5.266	5.257	0.009	1.107	4609415	2.66		110	9976	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.301	5.275	0.026	1.278	763876	1.20		95.9	741	
49 N-MeFOSE-M										
616.00 > 59.00	5.312	5.284	0.028	1.002	1802259	2.49		99.6	1885	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.301	5.284	0.017	1.278	570530	1.26		100	51.0	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA	512.00 > 169.00	5.312	5.284	0.028	1.002	1217980	2.59	104	668	
54 PFDoS	699.00 > 80.00	5.414	5.404	0.010	1.221	5688067	2.59	Target=4.24	107	8424
	699.00 > 99.00	5.414	5.404	0.010	1.221	1298430		4.38(2.12-6.35)		5581
D 53 d9-N-EtFOSE-M	639.00 > 59.00	5.464	5.435	0.029	1.317	747957	1.17	93.6	374	
62 N-EtFOSE-M	630.00 > 59.00	5.474	5.445	0.029	1.002	2101963	2.65	106	1706	
44 Perfluorotridecanoic acid	663.00 > 619.00	5.455	5.445	0.010	1.039	11436937	2.58	Target=6.20	103	9329
	663.00 > 169.00	5.455	5.445	0.010	1.039	1850867		6.18(3.10-9.30)		5515
D 52 d-N-EtFOSA-M	531.00 > 169.00	5.474	5.445	0.029	1.319	454625	1.21	96.9	699	
56 N-EtFOSA-M	526.00 > 169.00	5.483	5.455	0.028	1.002	1148126	2.64	106	694	
D 46 13C2 PFTeDA	715.00 > 670.00	5.629	5.629	0.0	1.357	5087439	1.26	101	10236	
45 Perfluorotetradecanoic acid	713.00 > 169.00	5.640	5.629	0.011	1.002	1370080	2.51	Target=1.05	100	5440
	713.00 > 219.00	5.629	5.629	0.0	1.000	1323927		1.03(0.53-1.58)		5952
D 59 13C2 PFHxDA	815.00 > 770.00	5.940	5.931	0.009	1.432	3287121	1.20	96.0	5794	
55 Perfluorohexadecanoic acid	813.00 > 769.00	5.940	5.931	0.009	1.000	7211370	2.56	Target=8.09	102	5482
	813.00 > 169.00	5.940	5.931	0.009	1.000	890834		8.10(4.05-12.14)		3105
60 Perfluorooctadecanoic acid	913.00 > 869.00	6.199	6.195	0.004	1.044	6893567	2.66	Target=11.53	107	4422
	913.00 > 169.00	6.199	6.195	0.004	1.044	590623		11.67(5.77-17.30)		2008

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L5PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_019.d

Injection Date: 12-Jan-2022 20:21:20

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

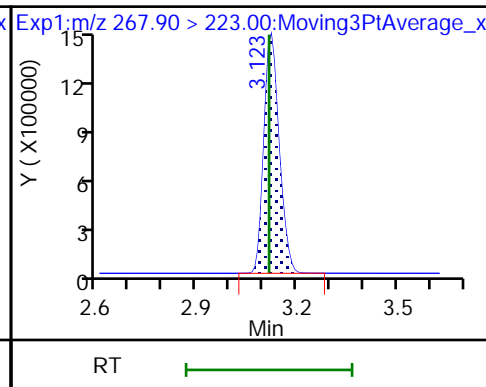
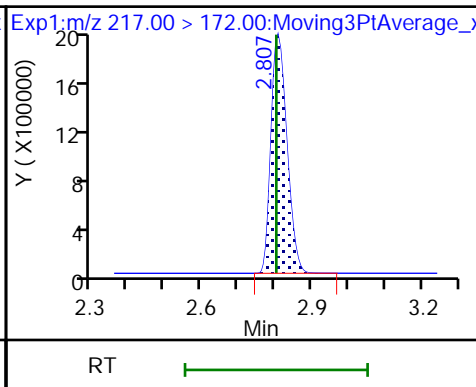
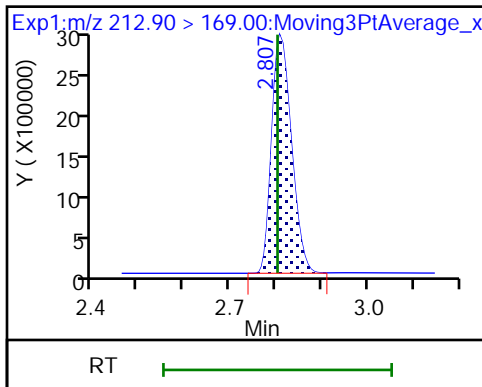
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

2 Perfluorobutanoic acid

D 1 13C4 PFBA

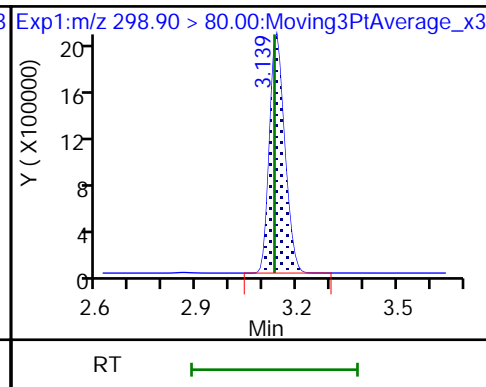
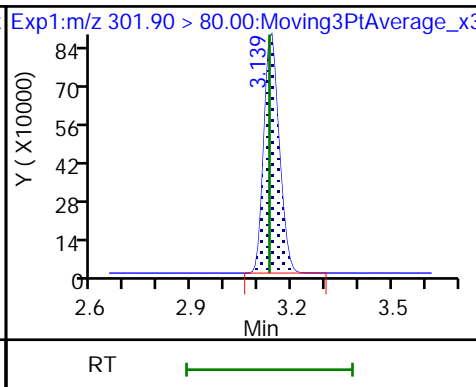
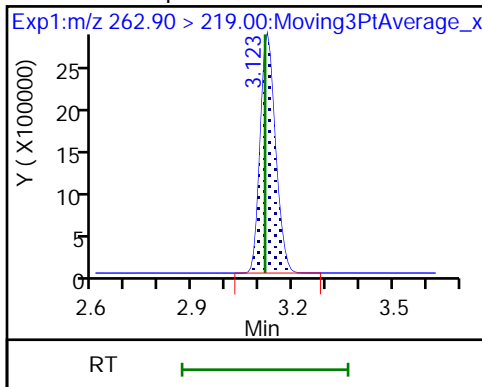
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

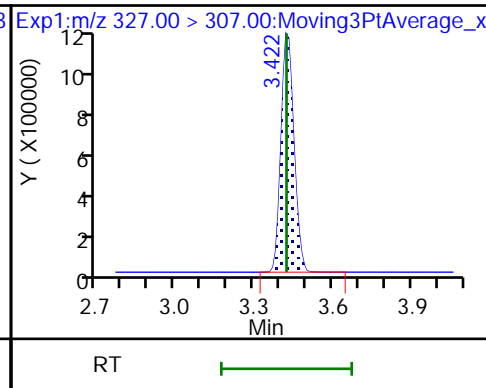
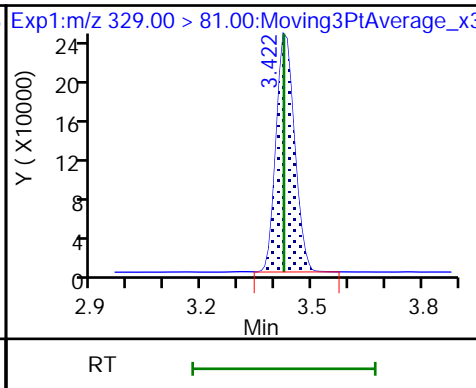
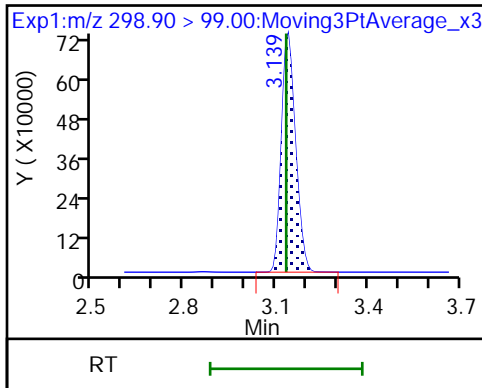
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

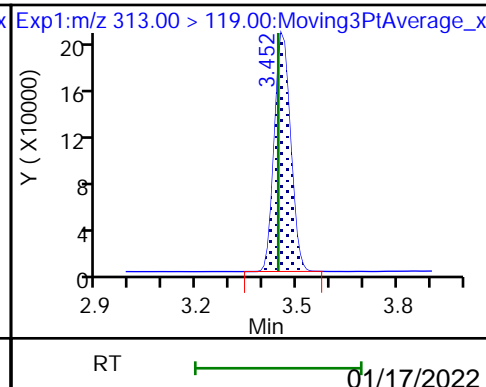
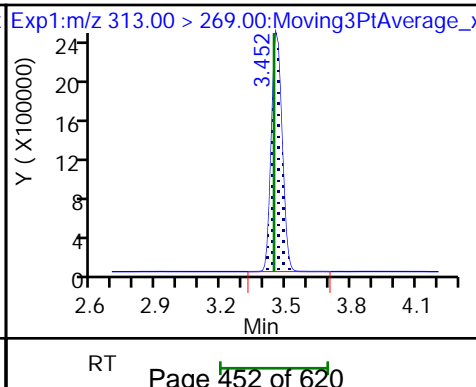
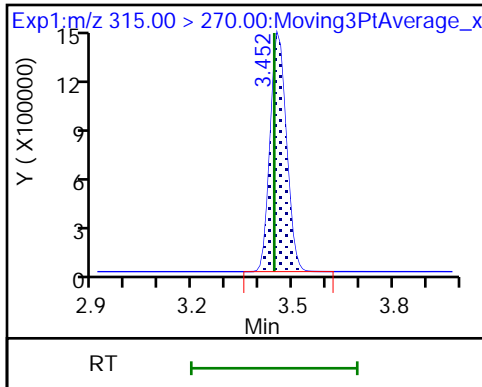
7 4:2 FTS

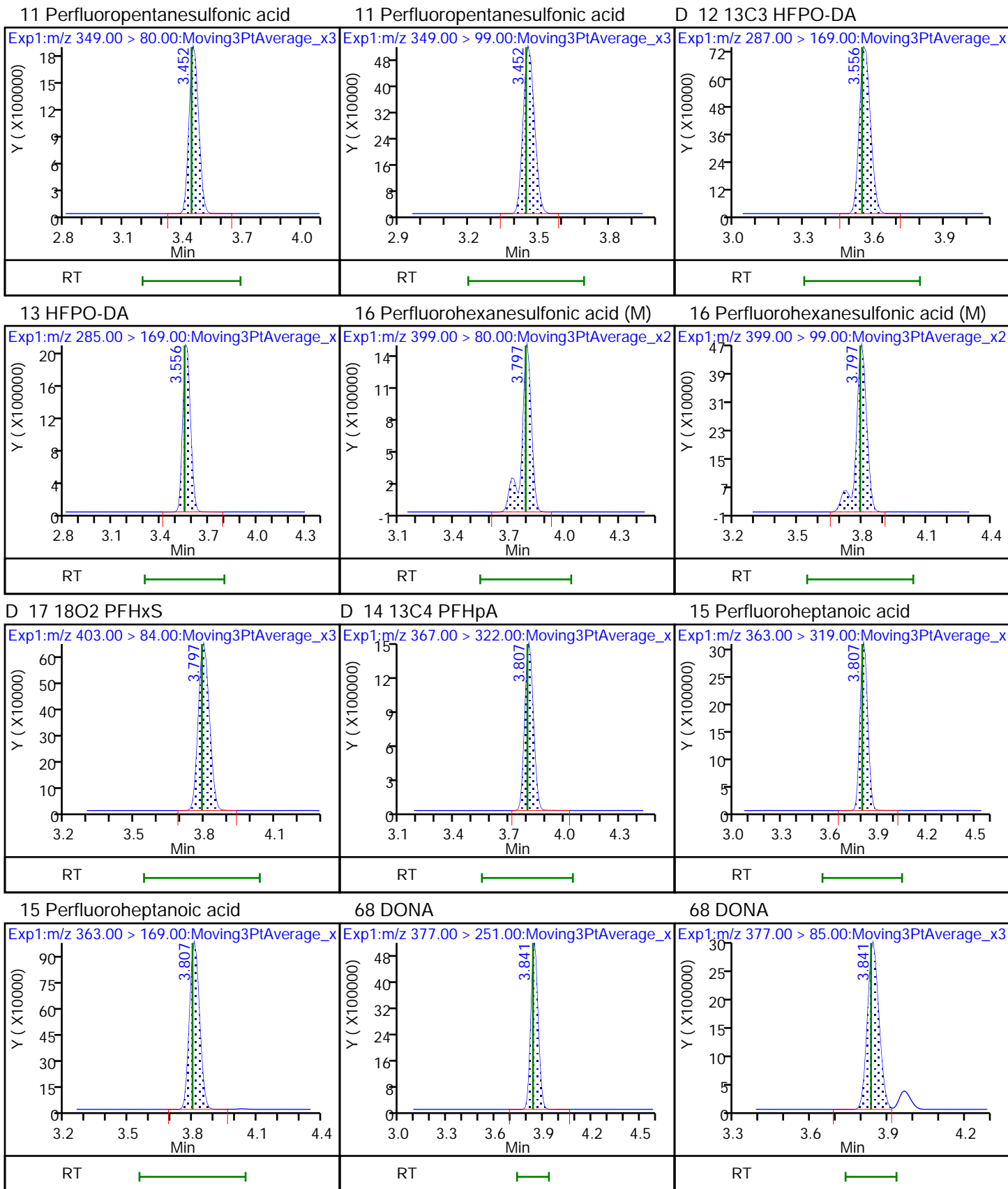


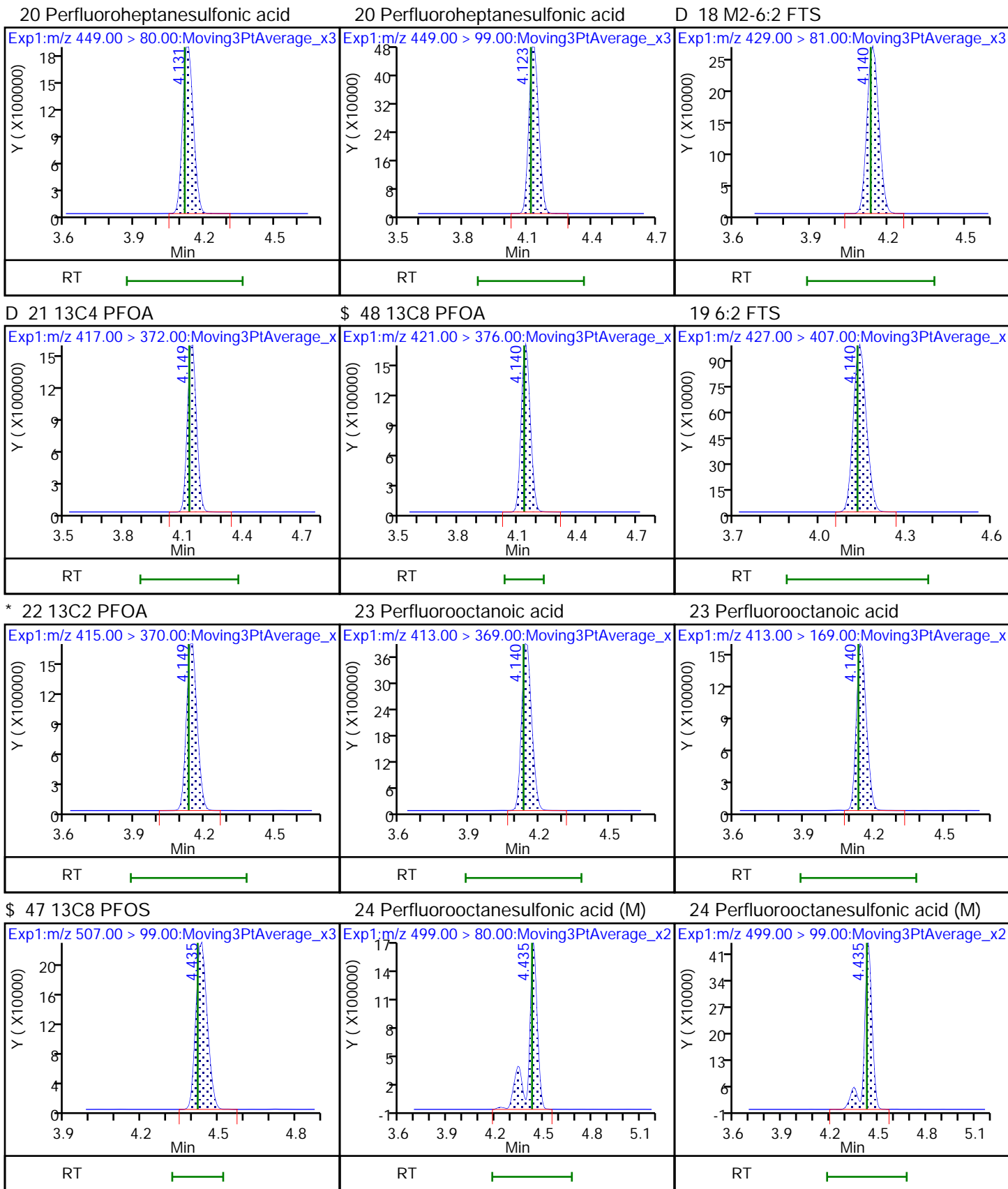
D 9 13C2 PFHxA

10 Perfluorohexanoic acid

10 Perfluorohexanoic acid



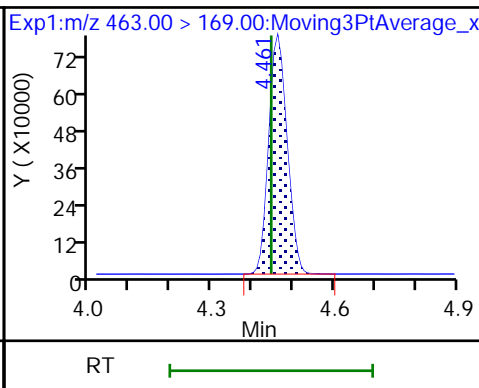
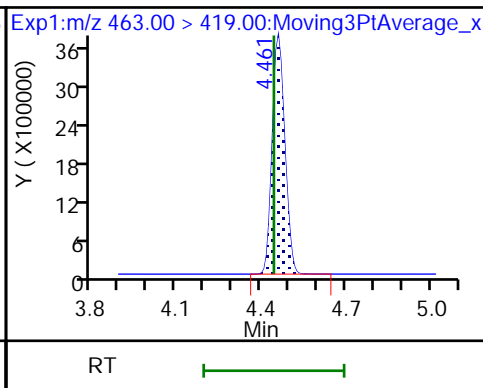
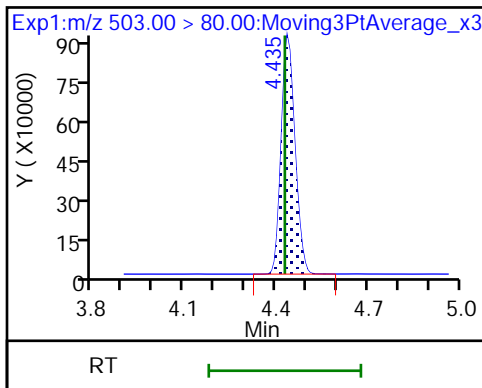




D 25 13C4 PFOS

26 Perfluorononanoic acid

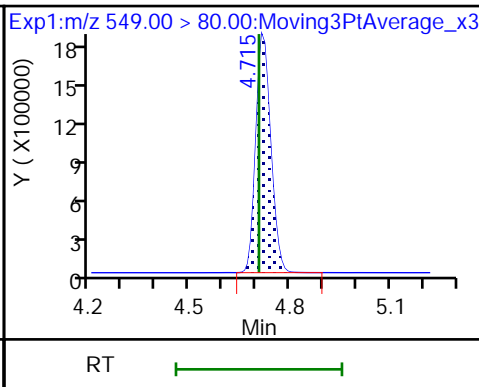
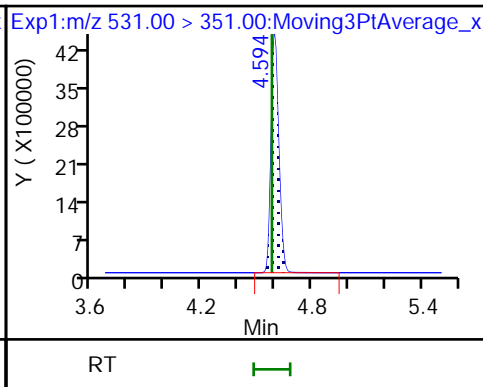
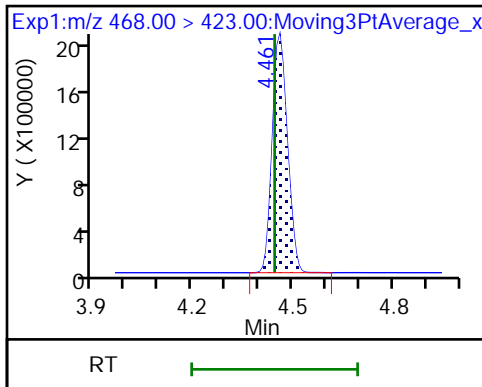
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS

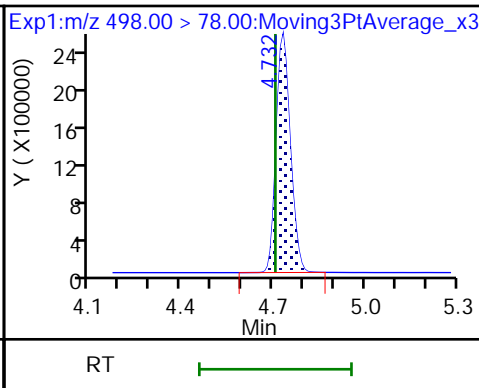
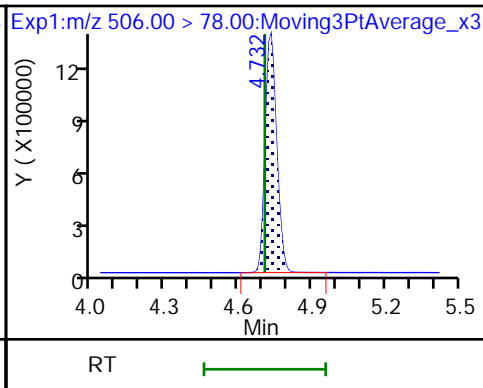
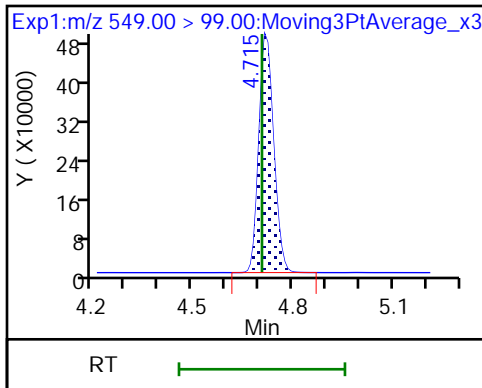
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

D 34 13C8 FOSA

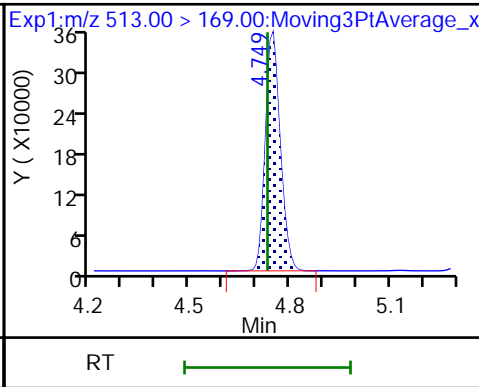
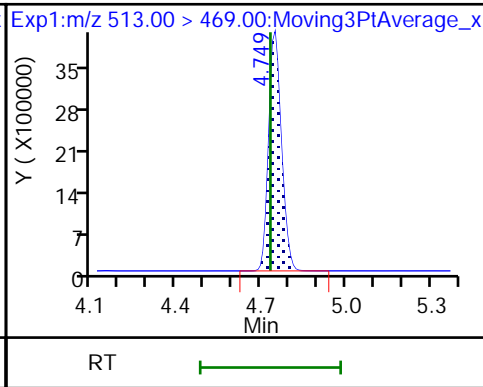
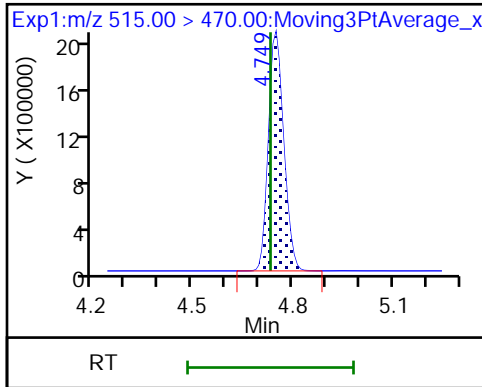
33 Perfluorooctanesulfonamide



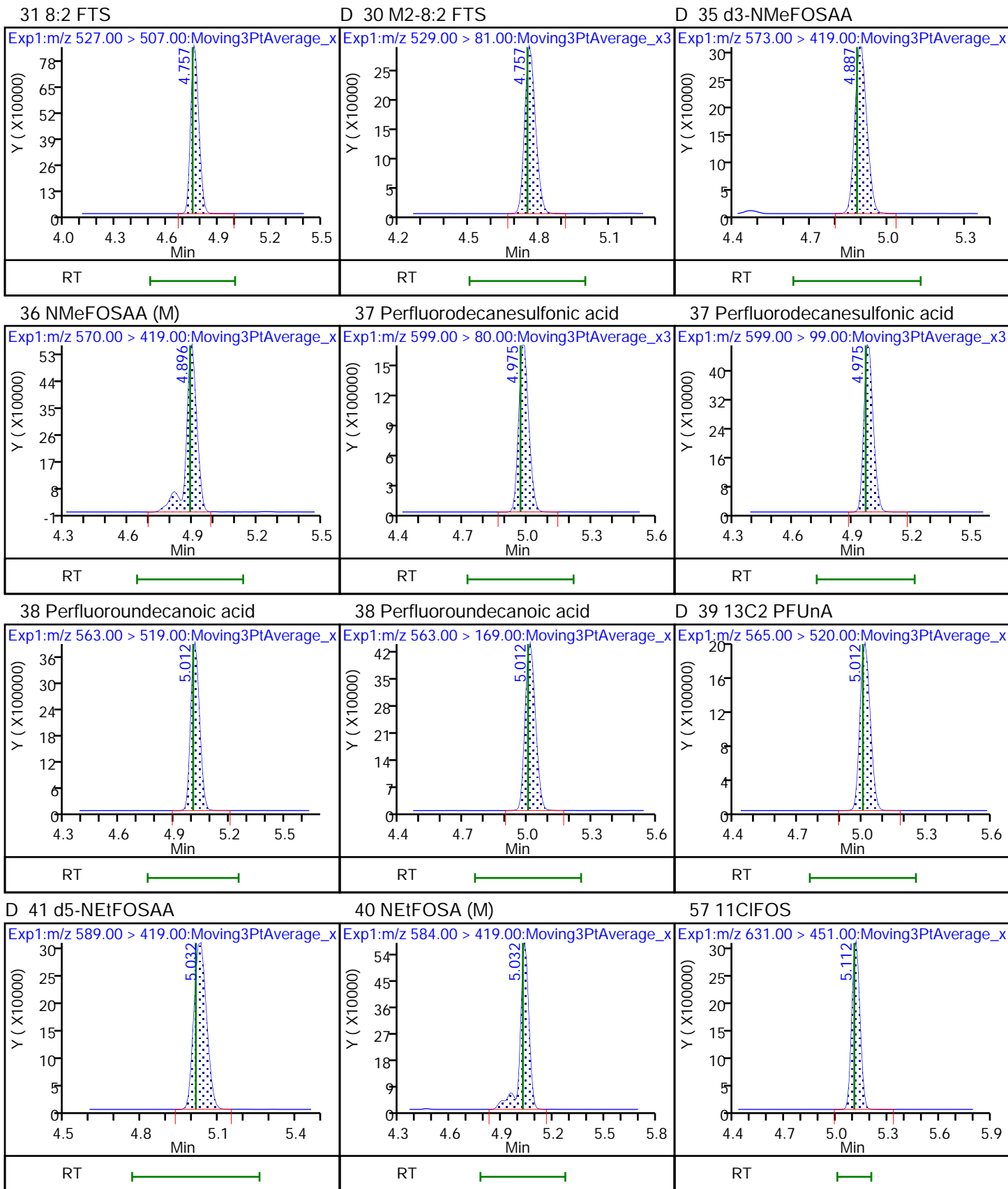
D 32 13C2 PFDA

29 Perfluorodecanoic acid

29 Perfluorodecanoic acid



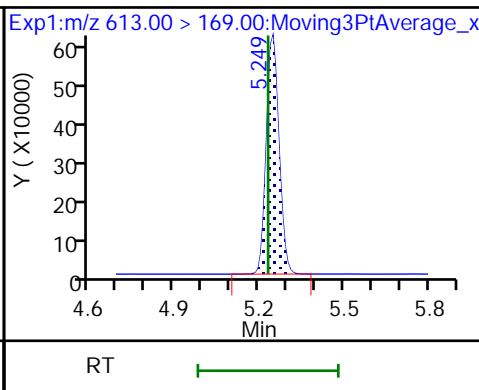
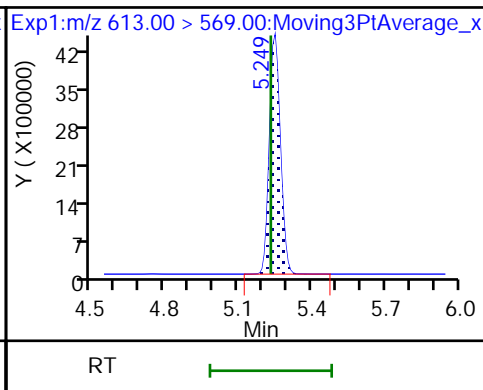
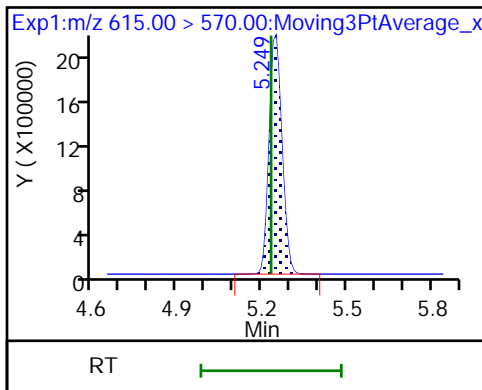




D 43 13C2 PFDaA

42 Perfluorododecanoic acid

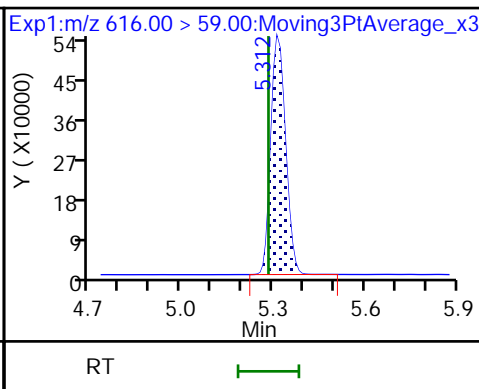
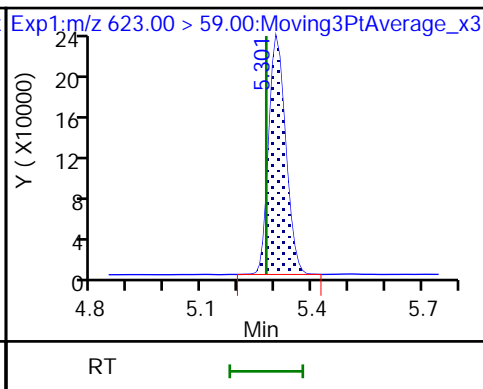
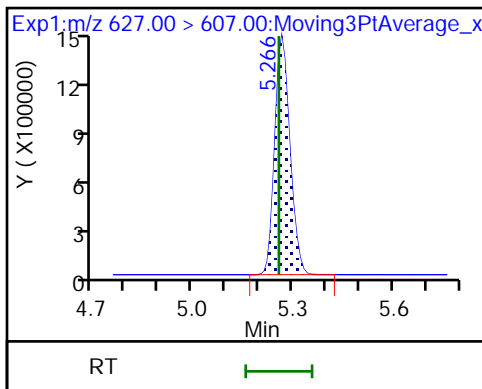
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

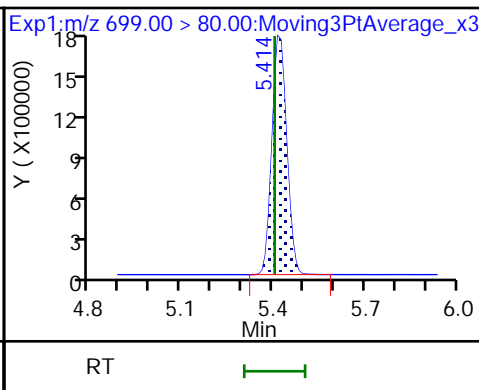
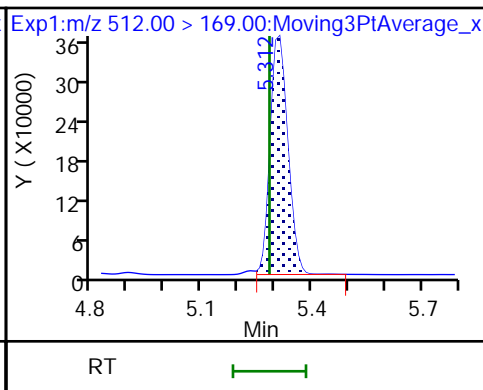
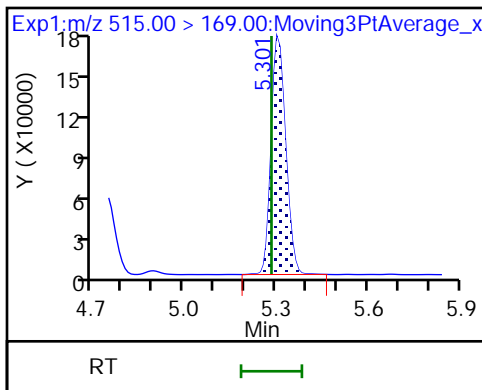
49 N-MeFOSE-M



D 58 d-N-MeFOSA-M

61 NMeFOSA

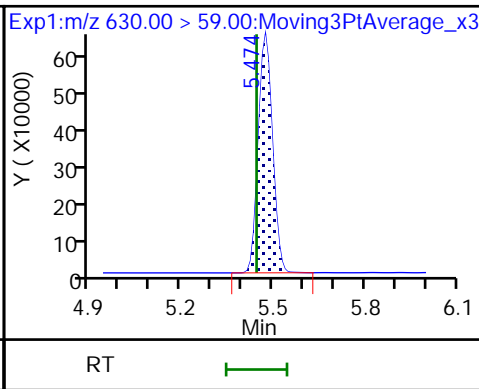
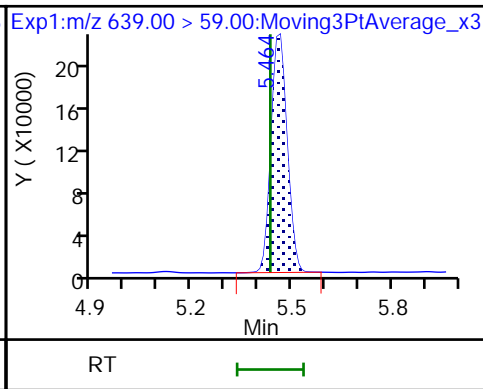
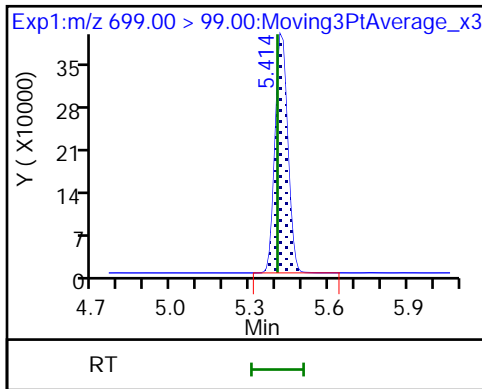
54 PFDoS

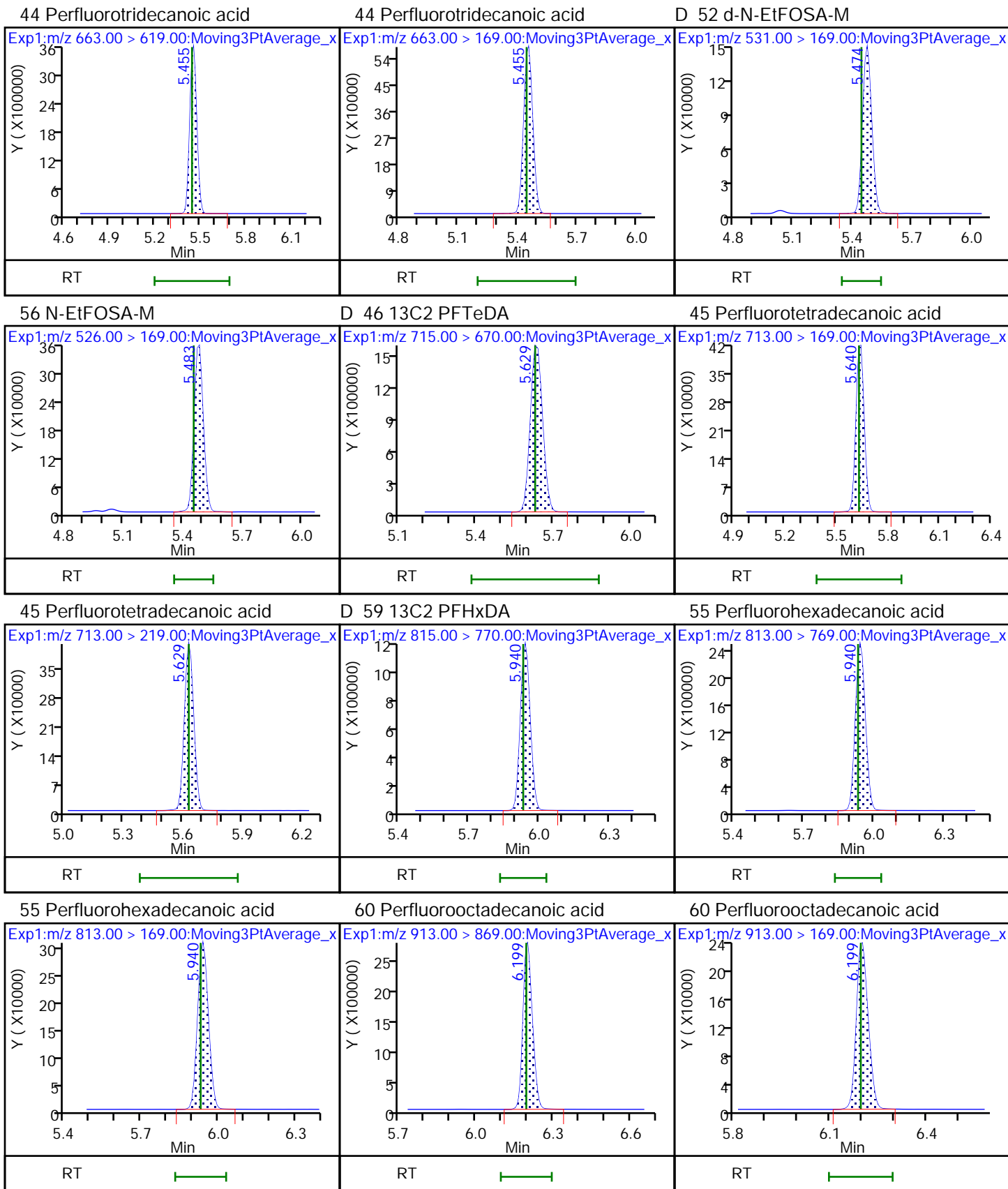


54 PFDoS

D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M







Eurofins TestAmerica, Knoxville

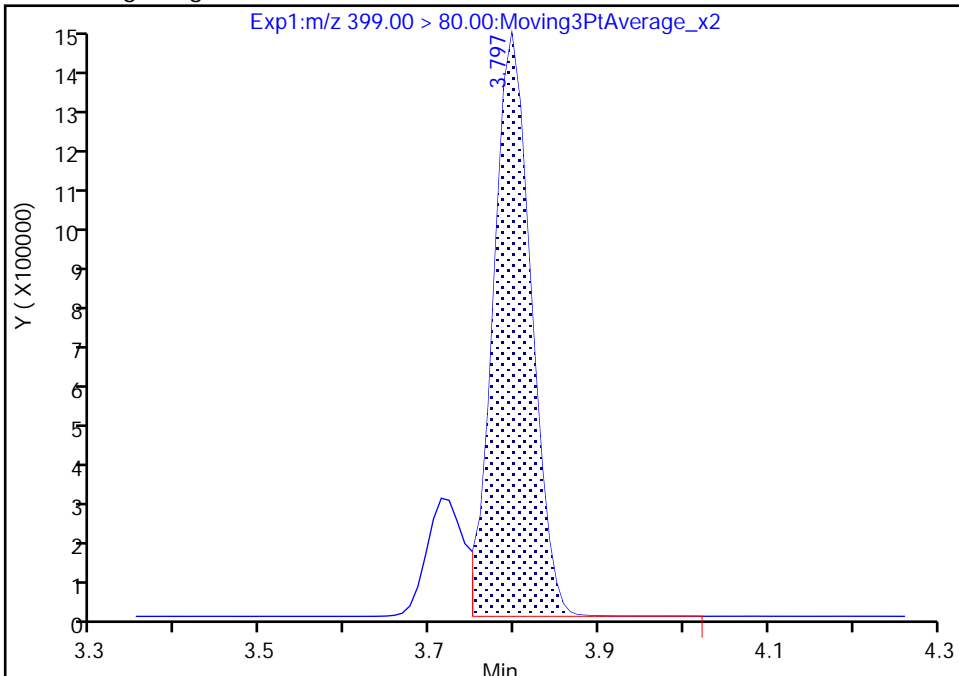
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Injection Date: 12-Jan-2022 20:21:20 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

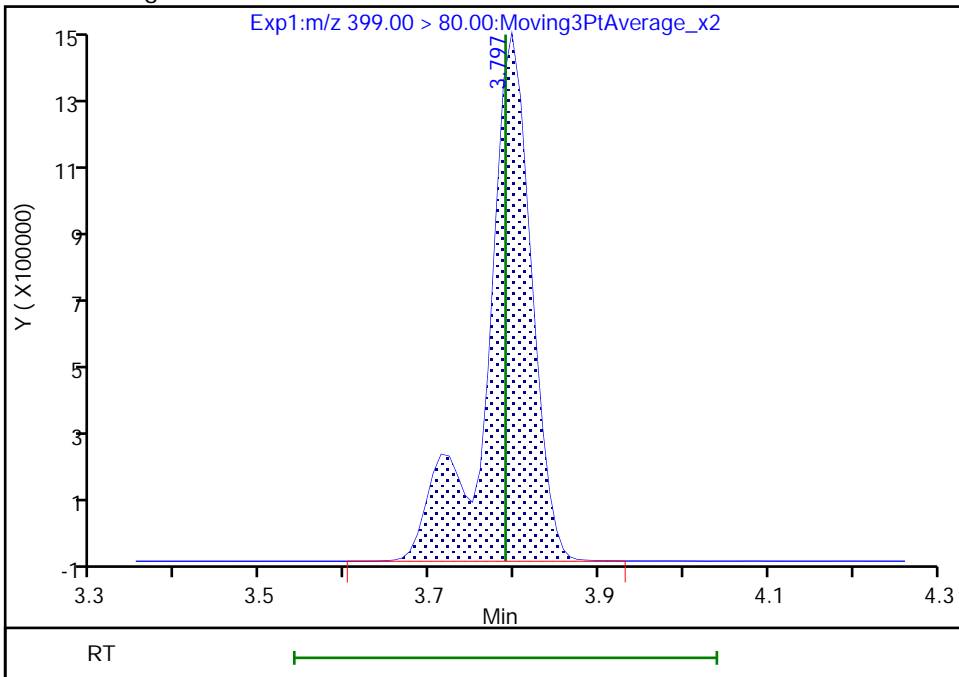
RT: 3.80  
Area: 4553901  
Amount: 1.852527  
Amount Units: ng/ml

Processing Integration Results



RT: 3.80  
Area: 5452920  
Amount: 2.218248  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 10:01:40  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

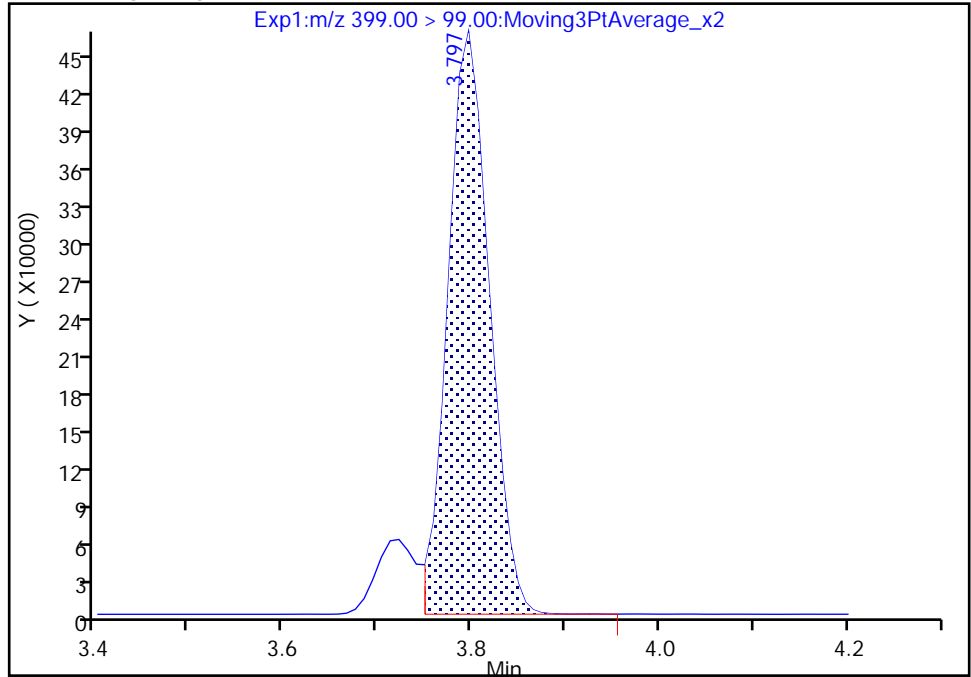
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Injection Date: 12-Jan-2022 20:21:20 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

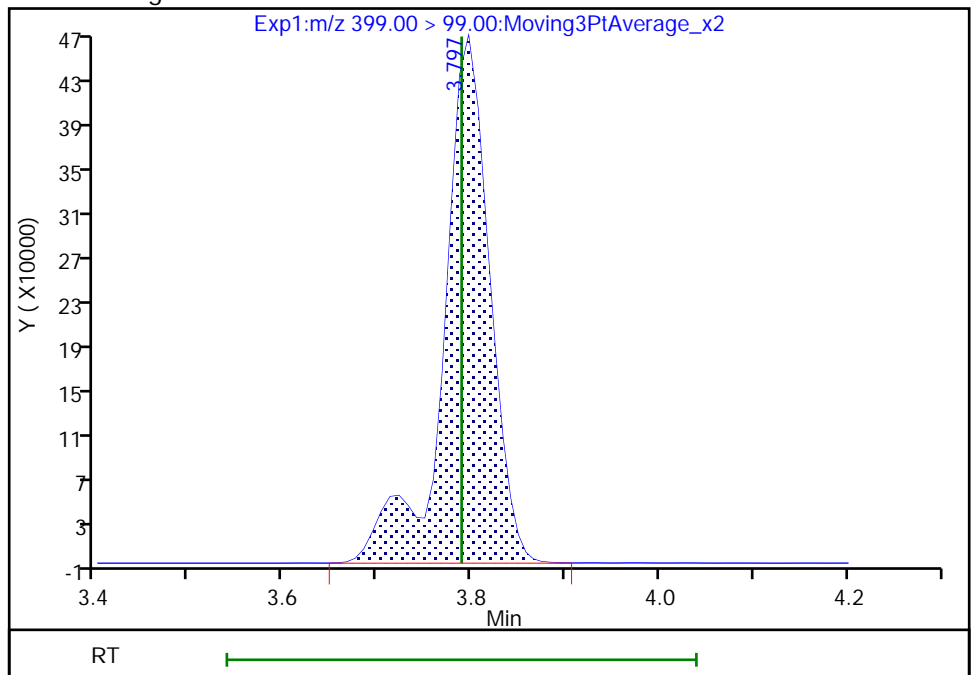
RT: 3.80  
Area: 1419436  
Amount: 1.852527  
Amount Units: ng/ml

Processing Integration Results



RT: 3.80  
Area: 1598932  
Amount: 2.218248  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 10:01:48

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

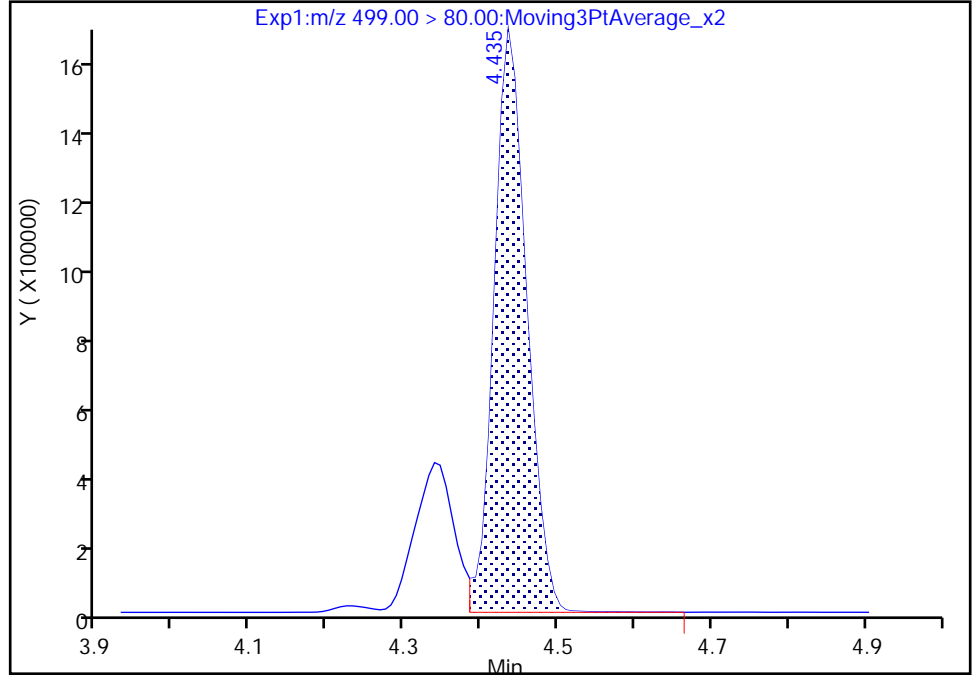
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Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

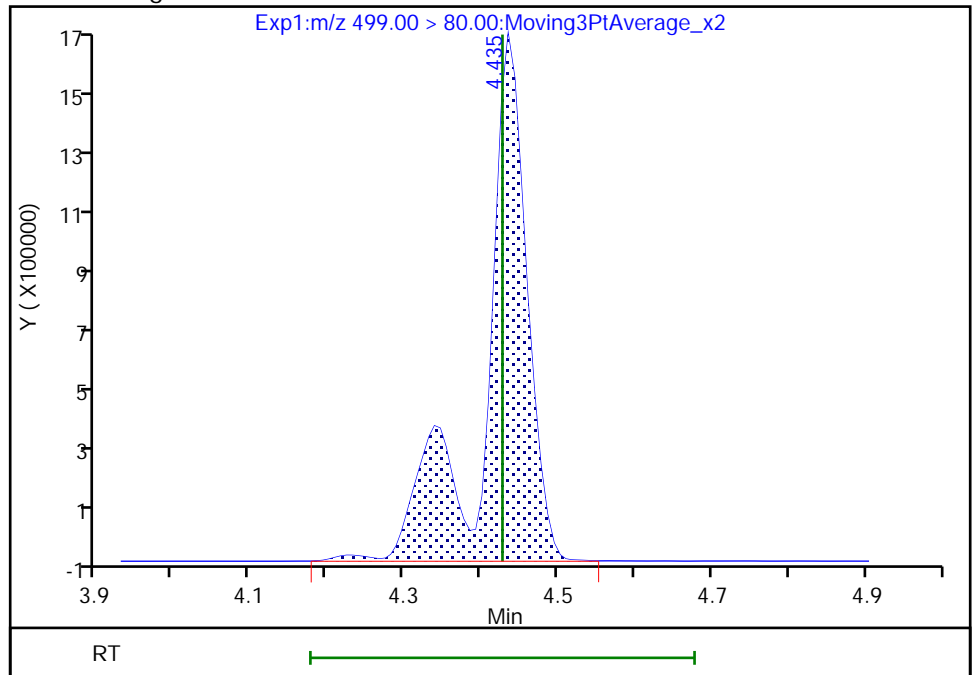
RT: 4.44  
Area: 4734980  
Amount: 1.799942  
Amount Units: ng/ml

Processing Integration Results



RT: 4.44  
Area: 6247322  
Amount: 2.374839  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 10:02:00  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

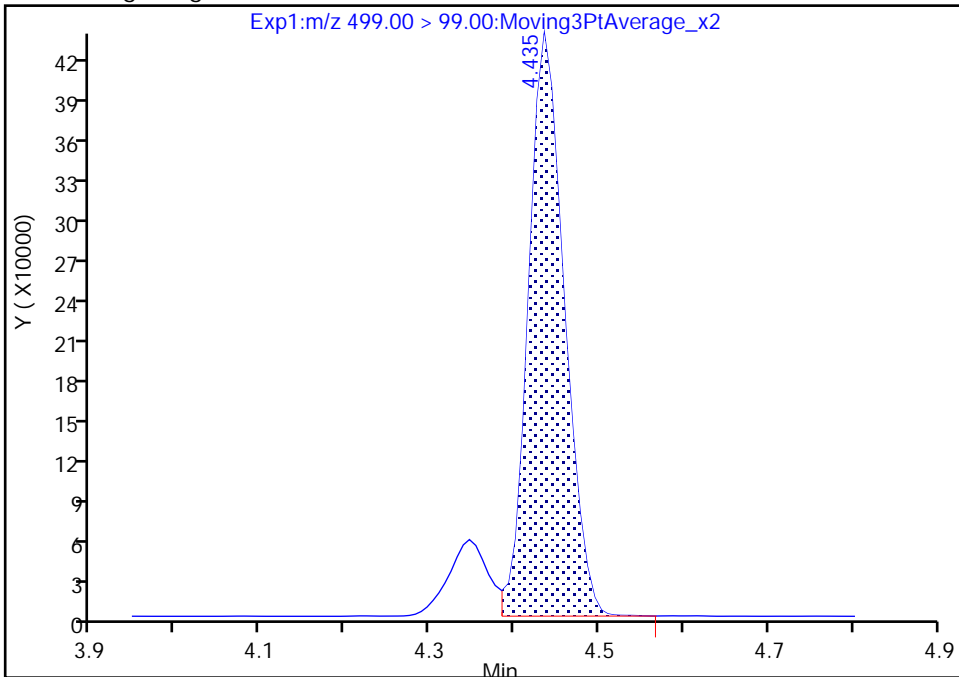
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Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

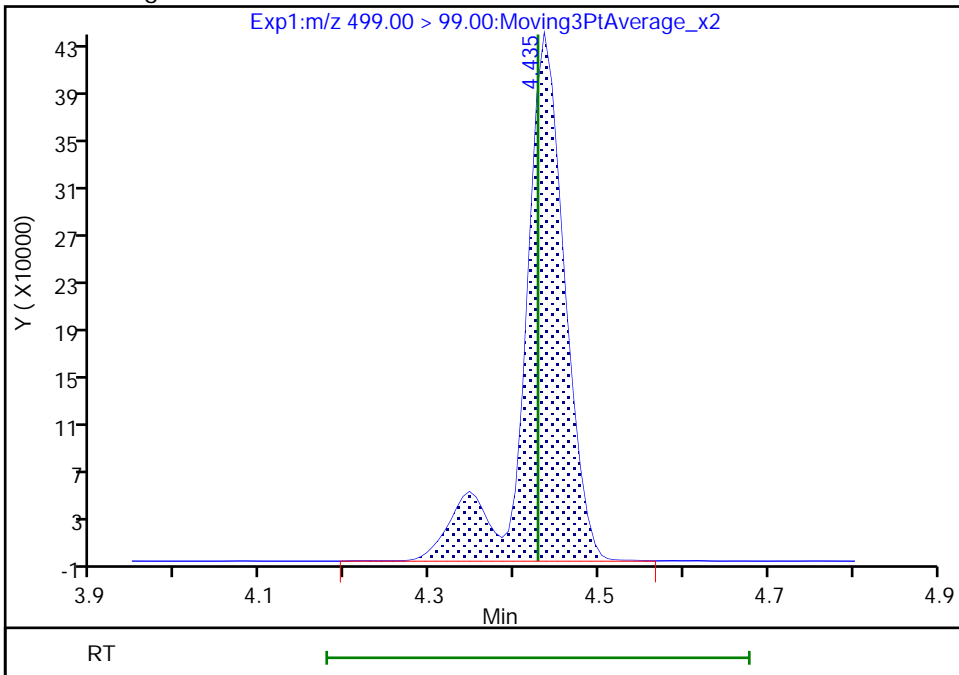
RT: 4.44  
Area: 1277837  
Amount: 1.799942  
Amount Units: ng/ml

Processing Integration Results



RT: 4.44  
Area: 1464945  
Amount: 2.374839  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 10:02:07

Audit Action: Manually Integrated

Audit Reason: Baseline  
Page 463 of 620



Eurofins TestAmerica, Knoxville

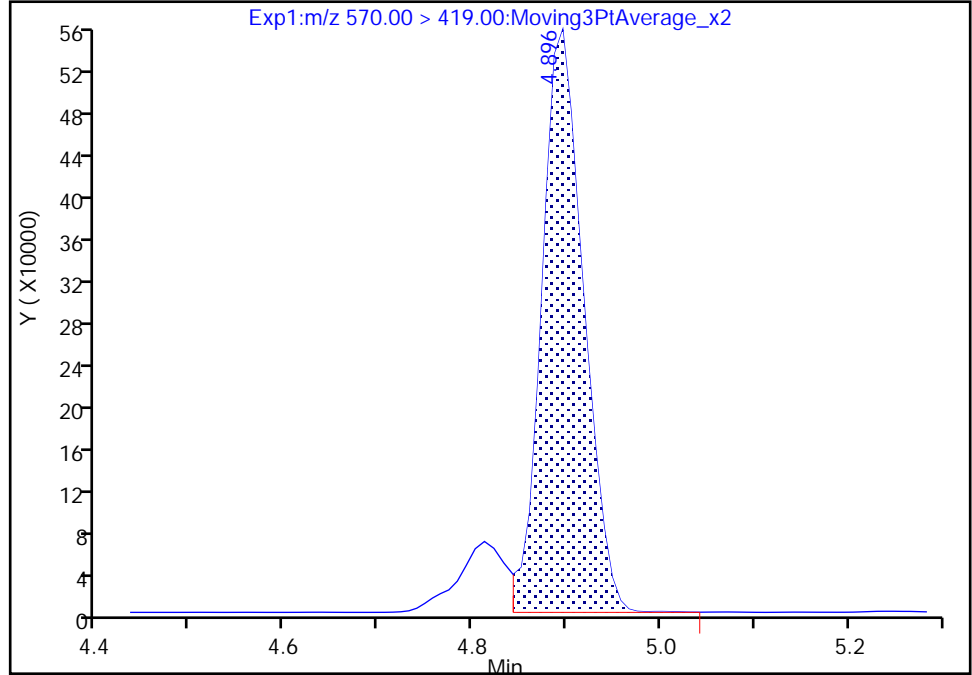
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Injection Date: 12-Jan-2022 20:21:20 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

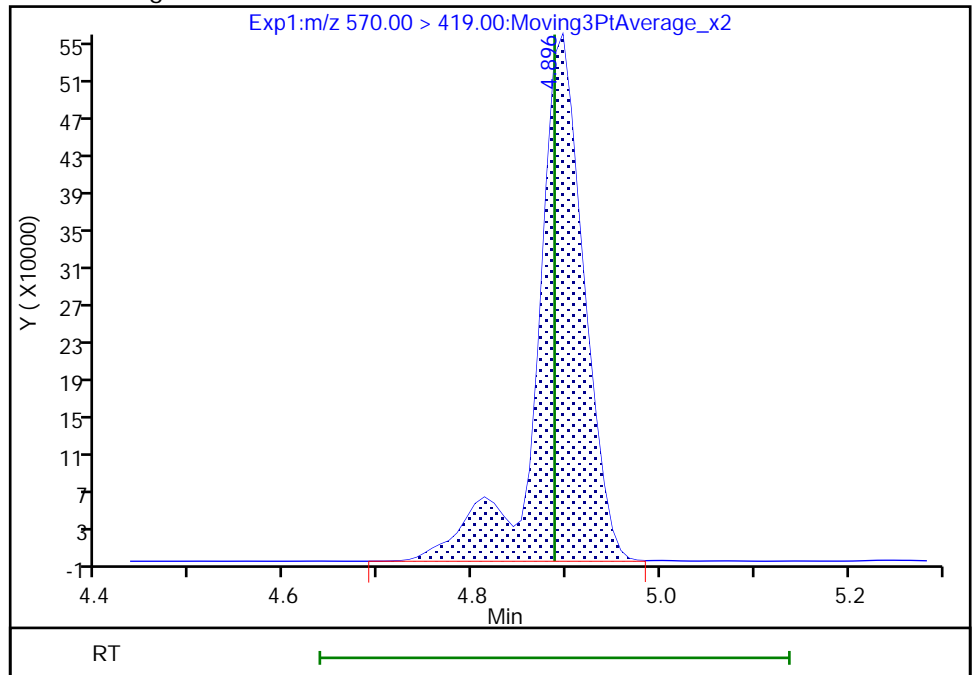
RT: 4.90  
Area: 1705089  
Amount: 2.182512  
Amount Units: ng/ml

Processing Integration Results



RT: 4.90  
Area: 1932897  
Amount: 2.472992  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 10:02:21  
Audit Action: Manually Integrated

Eurofins TestAmerica, Knoxville

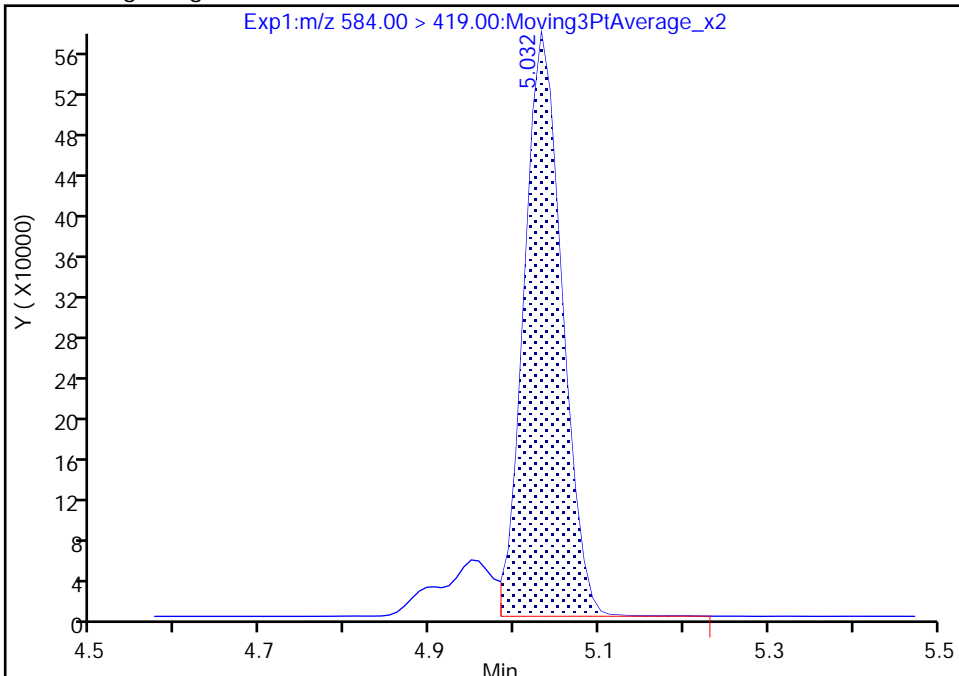
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Injection Date: 12-Jan-2022 20:21:20 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

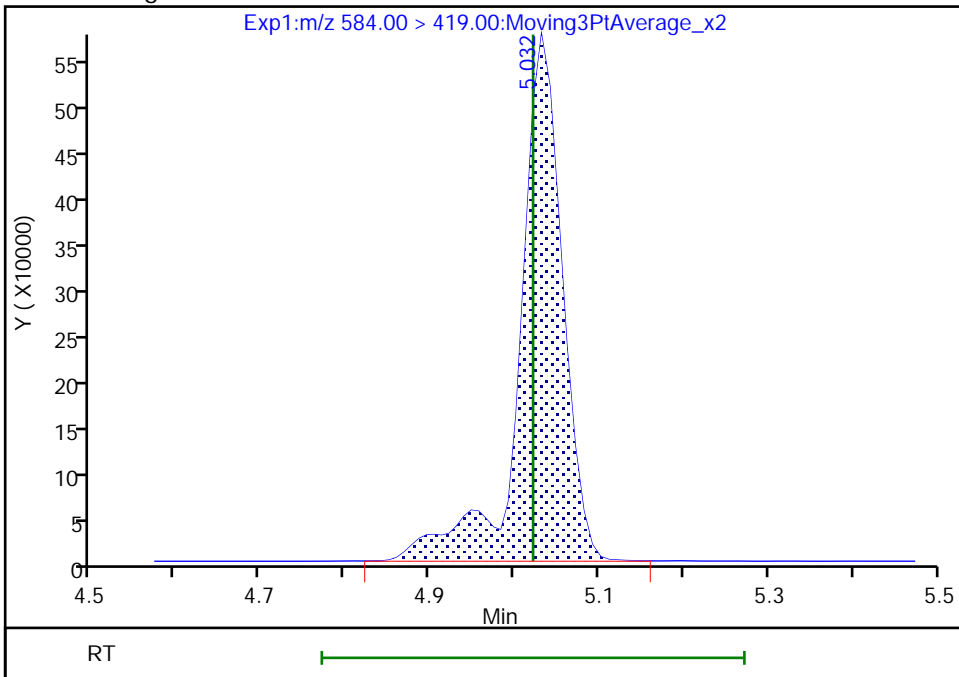
RT: 5.03  
Area: 1788686  
Amount: 2.141878  
Amount Units: ng/ml

Processing Integration Results



RT: 5.03  
Area: 2038828  
Amount: 2.438451  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 10:02:30  
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-57865/31 Calibration Date: 01/12/2022 22:06  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 Lab File ID: \_031.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7844	0.7377		0.940	1.00	-6.0	40.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9519	0.9188		0.965	1.00	-3.5	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.097	1.060		0.854	0.884	-3.4	40.0
4:2 FTS	AveID	2.252	2.297		0.953	0.934	2.0	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8680	0.8002		0.922	1.00	-7.8	40.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	0.9713	0.9852		0.952	0.938	1.4	40.0
HFPO-DA	AveID	1.352	1.331		0.984	1.00	-1.6	40.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.377	1.300		0.859	0.910	-5.6	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.047	1.009		0.964	1.00	-3.6	40.0
DONA	AveID	2.630	2.563		0.918	0.942	-2.6	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9541	0.9365		0.935	0.952	-1.8	40.0
6:2 FTS	L2ID		1.791		0.946	0.948	-0.2	40.0
Perfluorooctanoic acid (PFOA)	AveID	1.147	1.109		0.967	1.00	-3.3	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.099	1.064		0.899	0.928	-3.2	40.0
Perfluorononanoic acid (PFNA)	Q2ID		0.8866		1.04	1.00	4.2	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	Q2ID		2.167		0.943	0.932	1.1	50.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9748	0.9542		0.940	0.960	-2.1	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9459	0.9279		0.981	1.00	-1.9	40.0
Perfluorodecanoic acid (PFDA)	AveID	0.9645	0.9364		0.971	1.00	-2.9	40.0
8:2 FTS	AveID	1.415	1.437		0.973	0.958	1.6	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	QuaIF		0.9390		0.966	1.00	-3.4	40.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		0.9035		0.938	0.964	-2.7	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9695	0.9428		0.972	1.00	-2.8	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Q2ID		0.8973		0.903	1.00	-9.7	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.672	1.687		0.950	0.942	0.9	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		1.000		0.980	1.00	-2.0	40.0
10:2 FTS	AveID	2.276	2.465		1.04	0.964	8.3	40.0
NMeFOSA	Q2ID		1.044		1.03	1.00	3.1	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	Q2ID		1.155		0.986	1.00	-1.4	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9166	0.8993		0.950	0.968	-1.9	40.0

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-57865/31 Calibration Date: 01/12/2022 22:06  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 Lab File ID: \_031.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTriA)	AveID	0.8292	0.7928		0.956	1.00	-4.4	40.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	AveID	1.328	1.318		0.992	1.00	-0.8	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.195	1.209		1.01	1.00	1.1	40.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1344	0.1190		0.886	1.00	-11.4	40.0
Perfluorohexadecanoic acid	Q2ID		1.038		0.968	1.00	-3.2	40.0
Perfluorooctadecanoic acid	AveID	0.9844	0.9682		0.984	1.00	-1.6	40.0
13C4 PFBA	Ave	1.142	1.115		1.22	1.25	-2.4	50.0
13C5 PFPeA	Ave	0.8865	0.8722		1.23	1.25	-1.6	50.0
13C3 PFBS	Ave	0.5913	0.5885		1.16	1.16	-0.5	50.0
M2-4:2 FTS	Ave	0.1820	0.1637		1.05	1.17	-10.0	50.0
13C2 PFHxA	Ave	0.9479	0.9173		1.21	1.25	-3.2	50.0
13C3 HFPO-DA	Ave	0.4556	0.4599		1.26	1.25	0.9	50.0
18O2 PFHxS	Ave	0.3946	0.4145		1.24	1.18	5.0	50.0
13C4 PFHpA	Ave	0.9067	0.9268		1.28	1.25	2.2	50.0
M2-6:2 FTS	Ave	0.1835	0.1634		1.06	1.19	-11.0	50.0
13C4 PFOA	Ave	0.9376	0.9319		1.24	1.25	-0.6	50.0
13C4 PFOS	Ave	0.5681	0.5786		1.22	1.20	1.8	50.0
13C5 PFNA	Ave	1.234	1.167		1.18	1.25	-5.4	50.0
13C8 FOSA	Ave	0.7682	0.8150		1.33	1.25	6.1	50.0
13C2 PFDA	Ave	1.191	1.197		1.26	1.25	0.5	50.0
M2-8:2 FTS	Ave	0.2070	0.1764		1.02	1.20	-14.8	50.0
d3-NMeFOSAA	Ave	0.1401	0.1878		1.68	1.25	34.1	50.0
13C2 PFUnA	Ave	1.189	1.219		1.28	1.25	2.5	50.0
d5-NEtFOSAA	Ave	0.1537	0.2023		1.65	1.25	31.6	50.0
13C2 PFDoA	Ave	1.247	1.270		1.27	1.25	1.8	50.0
d7-N-MeFOSE-M	Ave	0.1499	0.1432		1.19	1.25	-4.5	50.0
d-N-MeFOSA-M	Ave	0.1069	0.1063		1.24	1.25	-0.5	50.0
d9-N-EtFOSE-M	Ave	0.1504	0.1454		1.21	1.25	-3.3	50.0
d-N-EtFOSA-M	Ave	0.0883	0.0851		1.21	1.25	-3.6	50.0
13C2 PFTeDA	Ave	0.9508	0.9673		1.27	1.25	1.7	50.0
13C2 PFHxDA	Ave	0.6444	0.6432		1.25	1.25	-0.2	50.0
13C8 PFOA	AveID	0.999	1.072		1.34	1.25	7.3	50.0
13C8 PFOS	AveID	0.2220	0.2256		1.21	1.20	1.6	50.0

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_031.d  
 Lims ID: CCV  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 12-Jan-2022 22:06:59 ALS Bottle#: 31 Worklist Smp#: 31  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022237-031 ccv  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:15:42 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 10:07:00

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										
212.90 > 169.00	2.795	2.802	-0.007	1.000	3596366	0.9404		94.0	765	
D 1 13C4 PFBA										
217.00 > 172.00	2.795	2.802	-0.007	0.677	6093849	1.22		97.6	12969	
D 3 13C5 PFPeA										
267.90 > 223.00	3.106	3.116	-0.010	0.752	4767975	1.23		98.4	10641	
4 Perfluoropentanoic acid										
262.90 > 219.00	3.115	3.116	-0.001	1.003	3504506	0.9652		96.5	1202	
D 6 13C3 PFBS										
301.90 > 80.00	3.123	3.132	-0.009	0.756	2991570	1.16		99.5	12317	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	3.131	3.132	-0.001	1.003	2410824	0.8540	Target=2.65	96.6	5160	
298.90 > 99.00	3.123	3.132	-0.009	1.000	879632		2.74(1.32-3.97)		3055	
D 8 M2-4:2 FTS										
329.00 > 81.00	3.412	3.423	-0.011	0.826	835949	1.05		90.0	1548	
7 4:2 FTS										
327.00 > 307.00	3.412	3.423	-0.011	1.000	1536283	0.9527		102	6885	
11 Perfluoropentanesulfonic acid										
349.00 > 80.00	3.442	3.444	-0.002	1.102	2378210	0.9515	Target=3.44	101	6428	
349.00 > 99.00	3.442	3.444	-0.002	1.102	668770		3.56(1.72-5.16)		5376	
D 9 13C2 PFHxA										
315.00 > 270.00	3.442	3.444	-0.002	0.833	5014167	1.21		96.8	10666	
10 Perfluorohexanoic acid										
313.00 > 269.00	3.442	3.444	-0.002	1.000	3209692	0.9218	Target=11.80	92.2	1329	
313.00 > 119.00	3.442	3.444	-0.002	1.000	268874		11.94(5.90-17.70)		446	
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.547	3.548	-0.001	0.858	2513911	1.26		101	5121	

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	3.547	3.548	-0.001	1.000	2677381	0.9843		98.4	3375	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.778	3.789	-0.011	1.000	2144189	0.8589	Target=3.40	94.4	5986	M
399.00 > 99.00	3.778	3.789	-0.011	1.000	605337		3.54(1.70-5.10)		3087	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.778	3.789	-0.011	0.915	2143415	1.24		105	7148	
D 14 13C4 PFHpA										
367.00 > 322.00	3.797	3.799	-0.002	0.919	5066544	1.28		102	8810	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.797	3.799	-0.002	1.000	4088731	0.9638	Target=3.29	96.4	2317	
363.00 > 169.00	3.797	3.799	-0.002	1.000	1280785		3.19(1.65-4.94)		1961	
68 DONA										
377.00 > 251.00	3.825	3.834	-0.009	0.866	6108652	0.9179	Target=1.82	97.4	7586	
377.00 > 85.00	3.825	3.834	-0.009	0.866	3540459		1.73(0.91-2.74)		166	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.115	4.115	0.0	0.931	2256093	0.9345	Target=3.92	98.2	6257	
449.00 > 99.00	4.115	4.115	0.0	0.931	596947		3.78(1.96-5.87)		5018	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.123	4.132	-0.009	0.998	848399	1.06		89.0	3858	
D 21 13C4 PFOA										
417.00 > 372.00	4.132	4.132	0.0	1.000	5094262	1.24		99.4	7662	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.123	4.132	-0.009	0.998	5462982	1.34		107	8106	
19 6:2 FTS										
427.00 > 407.00	4.123	4.132	-0.009	1.000	1213005	0.9456		99.8	5161	
* 22 13C2 PFOA										
415.00 > 370.00	4.132	4.132	0.0		5466439	1.25			7996	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.132	4.132	0.0	1.000	4520324	0.9666	Target=2.59	96.7	2538	
413.00 > 169.00	4.132	4.132	0.0	1.000	1708869		2.65(1.30-3.89)		2892	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.418	4.419	-0.001	1.000	682190	1.21		102	3188	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.418	4.428	-0.010	1.000	2498910	0.8987	Target=4.65	96.8	4192	M
499.00 > 99.00	4.418	4.428	-0.010	1.000	559519		4.47(2.32-6.97)		2398	M
D 25 13C4 PFOS										
503.00 > 80.00	4.418	4.428	-0.010	1.069	3023910	1.22		102	5650	
26 Perfluorononanoic acid										
463.00 > 419.00	4.444	4.445	-0.001	1.000	4525808	1.04	Target=4.65	104	4255	
463.00 > 169.00	4.444	4.445	-0.001	1.000	959705		4.72(2.32-6.97)		2055	
D 27 13C5 PFNA										
468.00 > 423.00	4.444	4.445	-0.001	1.076	6380737	1.18		94.6	12208	
63 9CIFOS										
531.00 > 351.00	4.581	4.581	0.0	1.037	5109511	0.9427		101	11114	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.715	4.706	0.009	1.000	3307123	0.9810		98.1	3860	

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	4.698	4.706	-0.008	1.063	2317899	0.9396	Target=4.06	97.9	5510	
549.00 > 99.00	4.698	4.706	-0.008	1.063	608981		3.81(2.03-6.09)		2260	
D 34 13C8 FOSA										
506.00 > 78.00	4.715	4.706	0.009	1.141	4454913	1.33		106	3263	
D 32 13C2 PFDA										
515.00 > 470.00	4.732	4.732	0.0	1.145	6541193	1.26		100	11185	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.732	4.732	0.0	1.000	4900008	0.9709	Target=11.30	97.1	3906	
513.00 > 169.00	4.732	4.732	0.0	1.000	415311		11.80(5.65-16.95)		580	
31 8:2 FTS										
527.00 > 507.00	4.740	4.749	-0.009	1.000	1062468	0.9731		102	4018	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.740	4.749	-0.009	1.147	923895	1.02		85.2	1428	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.870	4.878	-0.008	1.179	1026820	1.68		134	1275	
36 NMeFOSAA										
570.00 > 419.00	4.878	4.887	-0.009	1.002	771349	0.9662		96.6	1555	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.957	4.966	-0.009	1.122	2204025	0.9383	Target=3.79	97.3	5826	
599.00 > 99.00	4.957	4.966	-0.009	1.122	581580		3.79(1.90-5.69)		3983	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.993	5.002	-0.009	1.000	5023860	0.9724	Target=8.45	97.2	4768	
563.00 > 169.00	4.993	5.002	-0.009	1.000	589278		8.53(4.22-12.67)		3183	
D 39 13C2 PFUnA										
565.00 > 520.00	4.993	5.002	-0.009	1.208	6661171	1.28		103	13478	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.012	5.012	0.0	1.213	1106049	1.65		132	4150	
40 NEtFOSA										
584.00 > 419.00	5.012	5.022	-0.010	1.000	793957	0.9034		90.3	1257	M
57 11CIFOS										
631.00 > 451.00	5.092	5.102	-0.010	1.152	4020668	0.9501		101	8730	
D 43 13C2 PFDoA										
615.00 > 570.00	5.231	5.231	0.0	1.266	6940107	1.27		102	13631	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.222	5.231	-0.009	0.998	5551441	0.9796	Target=6.99	98.0	4303	
613.00 > 169.00	5.222	5.231	-0.009	0.998	760001		7.30(3.50-10.49)		1876	
50 10:2 FTS										
627.00 > 607.00	5.248	5.257	-0.009	1.107	1833242	1.04		108	5731	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.284	5.275	0.009	1.279	782697	1.19		95.5	661	
49 N-MeFOSE-M										
616.00 > 59.00	5.301	5.284	0.017	1.003	723049	0.9864		98.6	1133	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.292	5.284	0.008	1.281	581127	1.24		99.5	52.9	
61 NMeFOSA										
512.00 > 169.00	5.292	5.284	0.008	1.000	485178	1.03		103	529	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
54 PFDoS										
699.00 > 80.00	5.394	5.404	-0.010	1.221	2202897	0.9498	Target=4.24	98.1	6489	
699.00 > 99.00	5.394	5.404	-0.010	1.221	512209		4.30(2.12-6.35)		2609	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.445	5.435	0.010	1.318	794742	1.21		96.7	407	
62 N-EtFOSE-M										
630.00 > 59.00	5.455	5.445	0.009	1.002	837794	0.99		99.2	847	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.435	5.445	-0.010	1.039	4401547	0.9561	Target=6.20	95.6	3695	
663.00 > 169.00	5.435	5.445	-0.010	1.039	725905		6.06(3.10-9.30)		2191	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.455	5.445	0.009	1.320	465036	1.20		96.4	693	
56 N-EtFOSA-M										
526.00 > 169.00	5.464	5.455	0.009	1.002	449659	1.01		101	655	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.619	5.629	-0.010	1.360	5287737	1.27		102	12722	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.619	5.629	-0.010	1.000	503381	0.8855	Target=1.05	88.6	3500	
713.00 > 219.00	5.609	5.629	-0.020	0.998	508240		0.99(0.53-1.58)		3291	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.922	5.931	-0.009	1.433	3515908	1.25		99.8	5632	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.922	5.931	-0.009	1.000	2919894	0.9677	Target=8.09	96.8	3667	
813.00 > 169.00	5.922	5.931	-0.009	1.000	357579		8.17(4.05-12.14)		1669	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.175	6.195	-0.020	1.043	2723185	0.9835	Target=11.53	98.4	3642	
913.00 > 169.00	6.175	6.195	-0.020	1.043	238179		11.43(5.77-17.30)		1308	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

63L4PFC2T3\_00001

Amount Added: 1.00

Units: mL



Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\\_031.d

Injection Date: 12-Jan-2022 22:06:59

Instrument ID: LCA

Lims ID: CCV

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 31

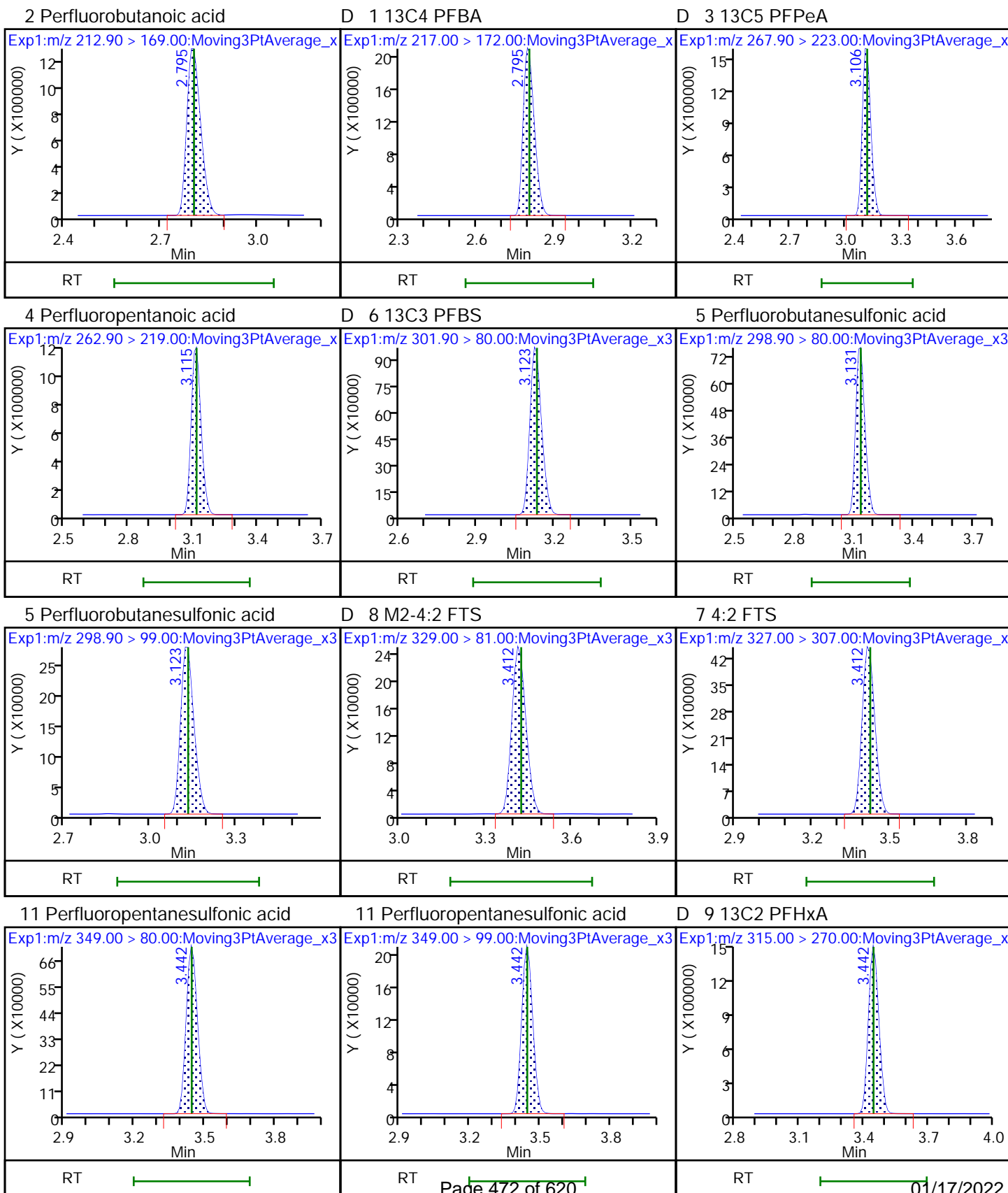
Worklist Smp#: 31

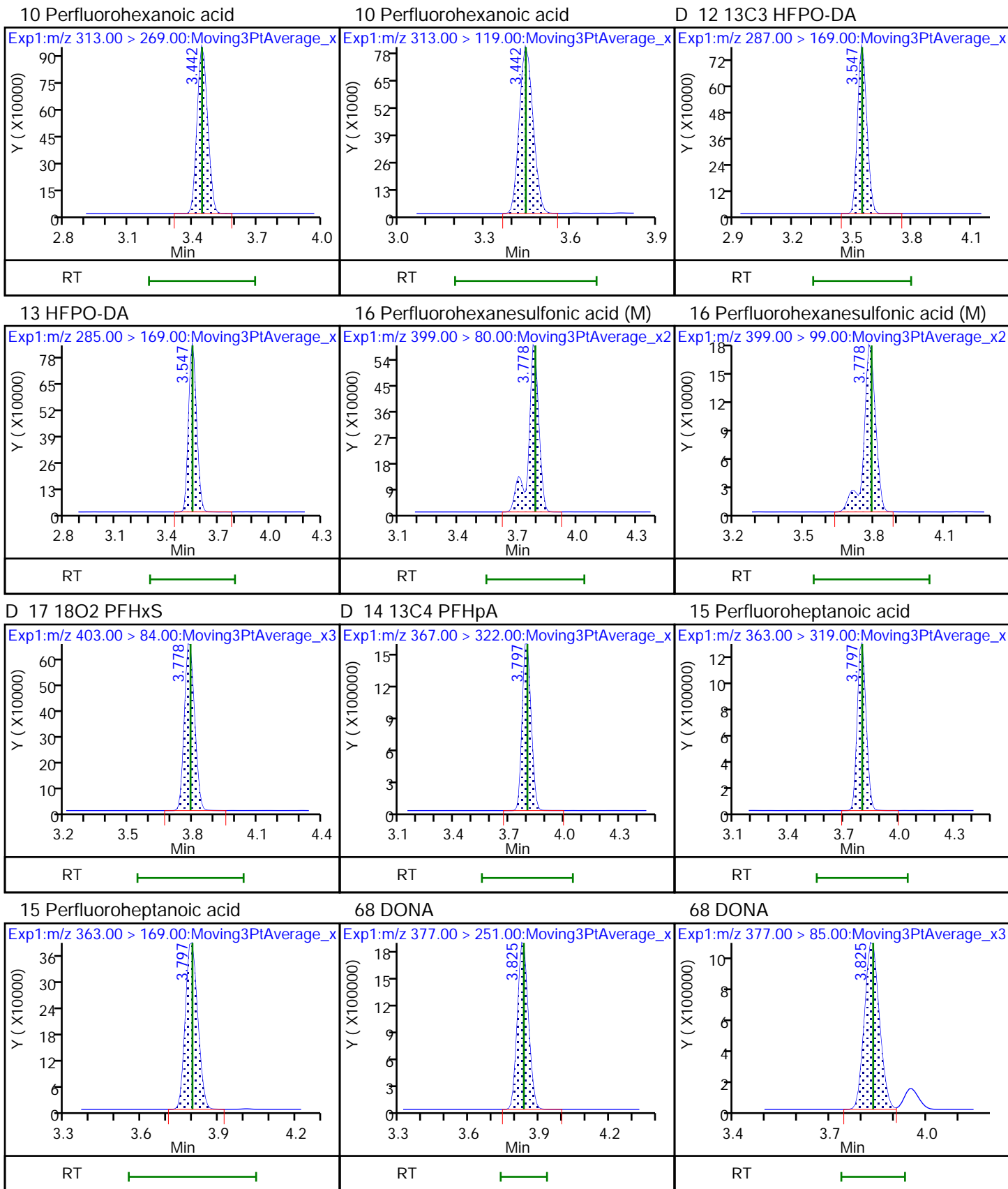
Injection Vol: 1.0 ul

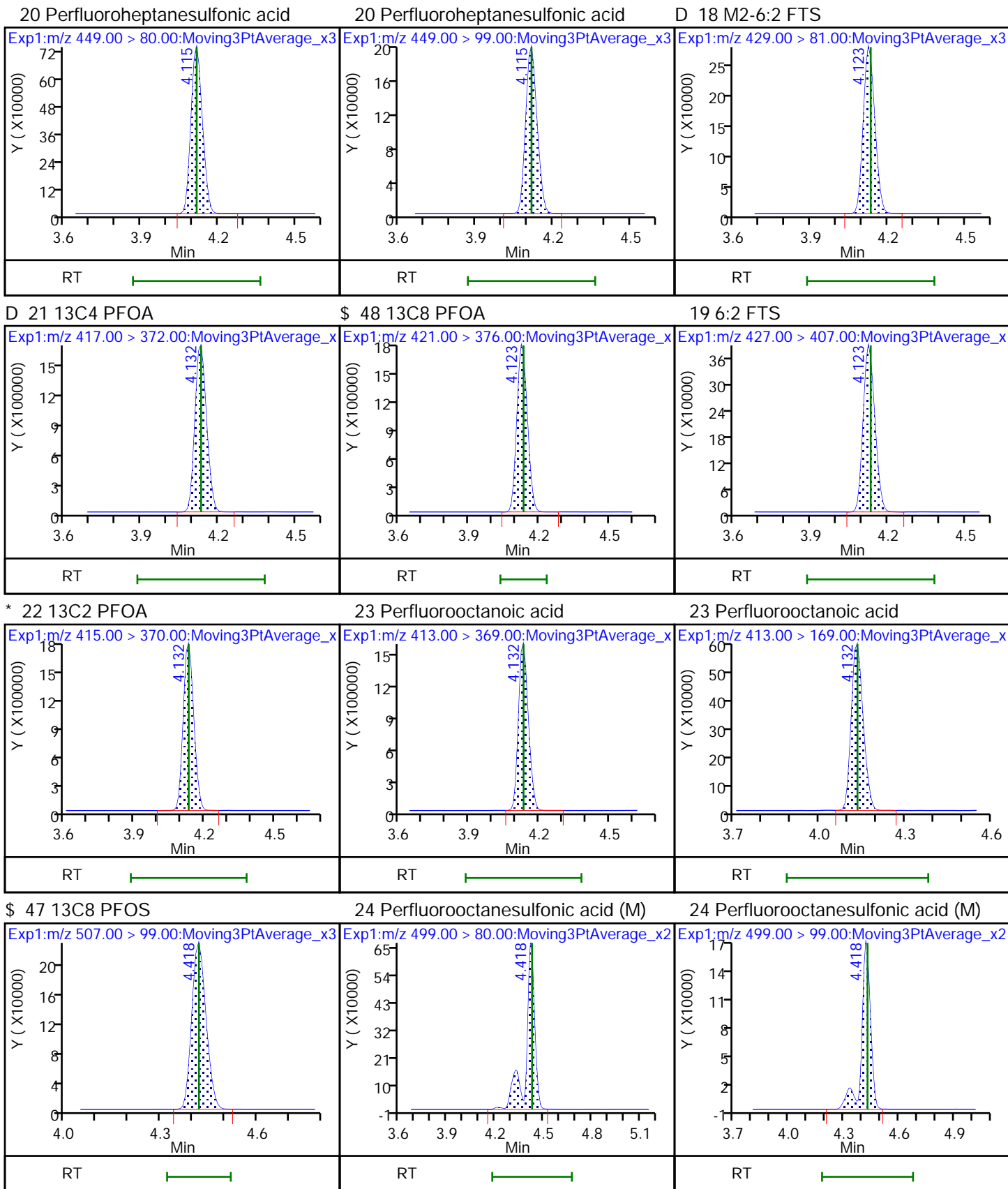
Dil. Factor: 1.0000

Method: PFC\_LCA

Limit Group: LC - PFC- ICAL



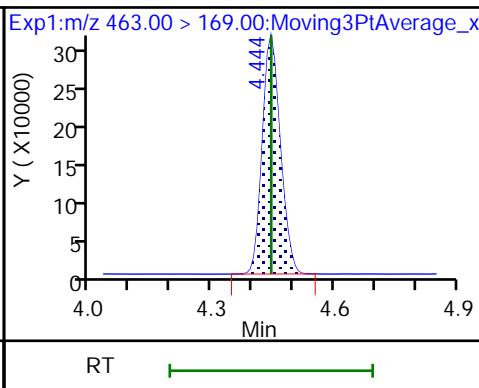
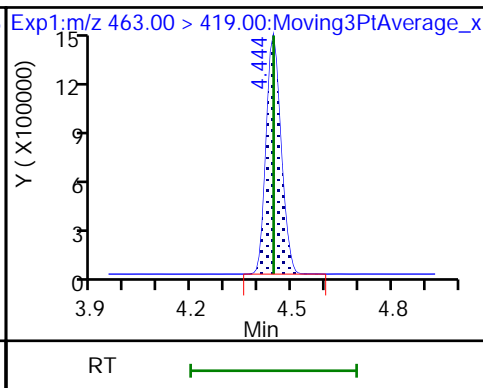
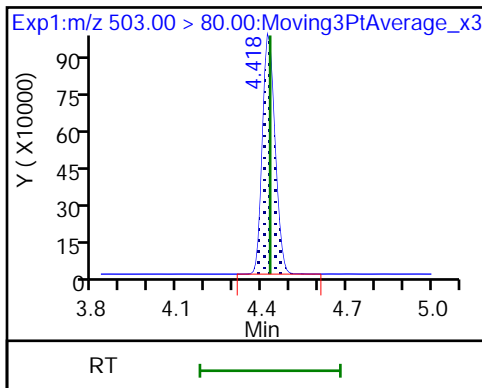




D 25 13C4 PFOS

26 Perfluorononanoic acid

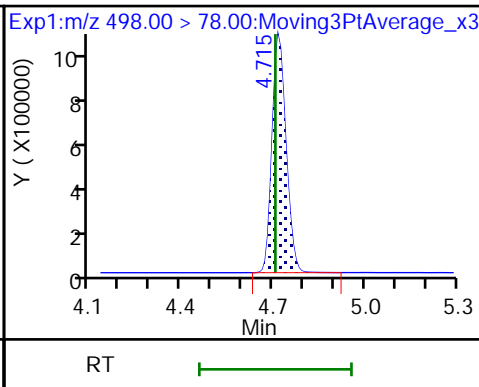
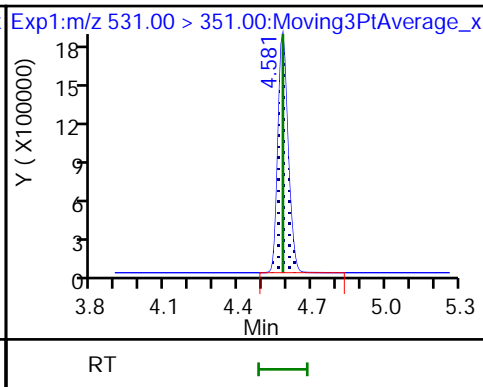
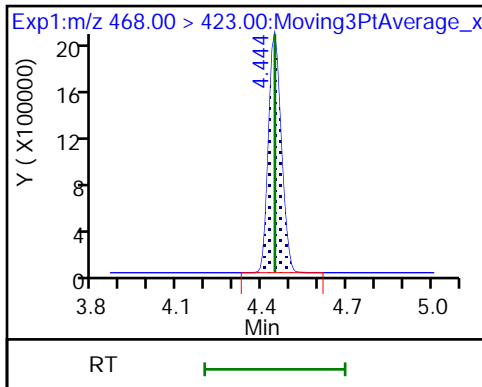
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS

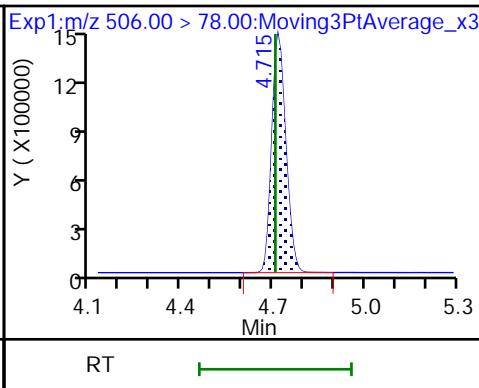
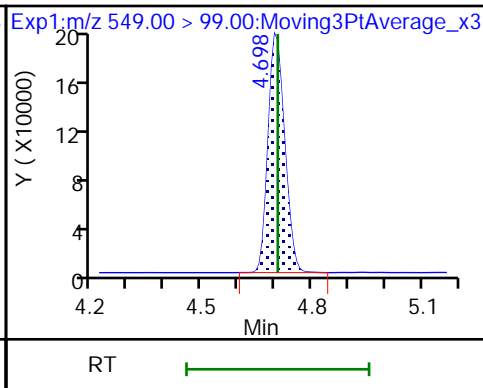
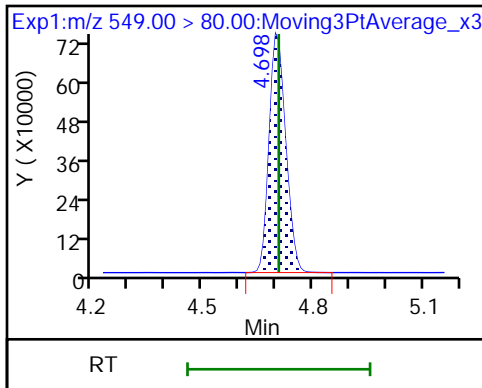
33 Perfluorooctanesulfonamide



28 Perfluorononanesulfonic acid

28 Perfluorononanesulfonic acid

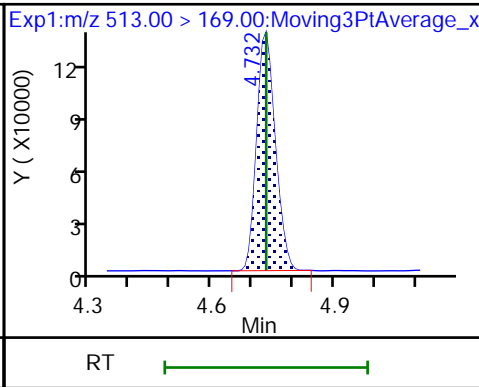
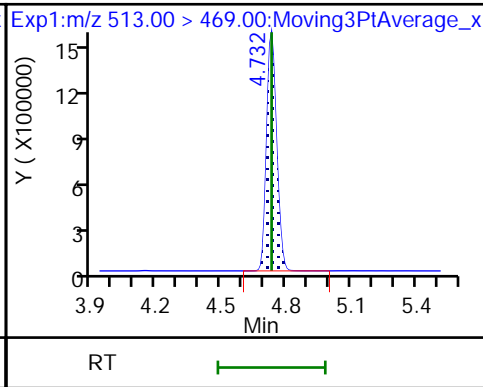
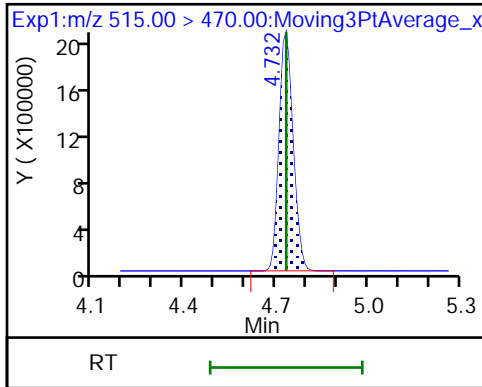
D 34 13C8 FOSA

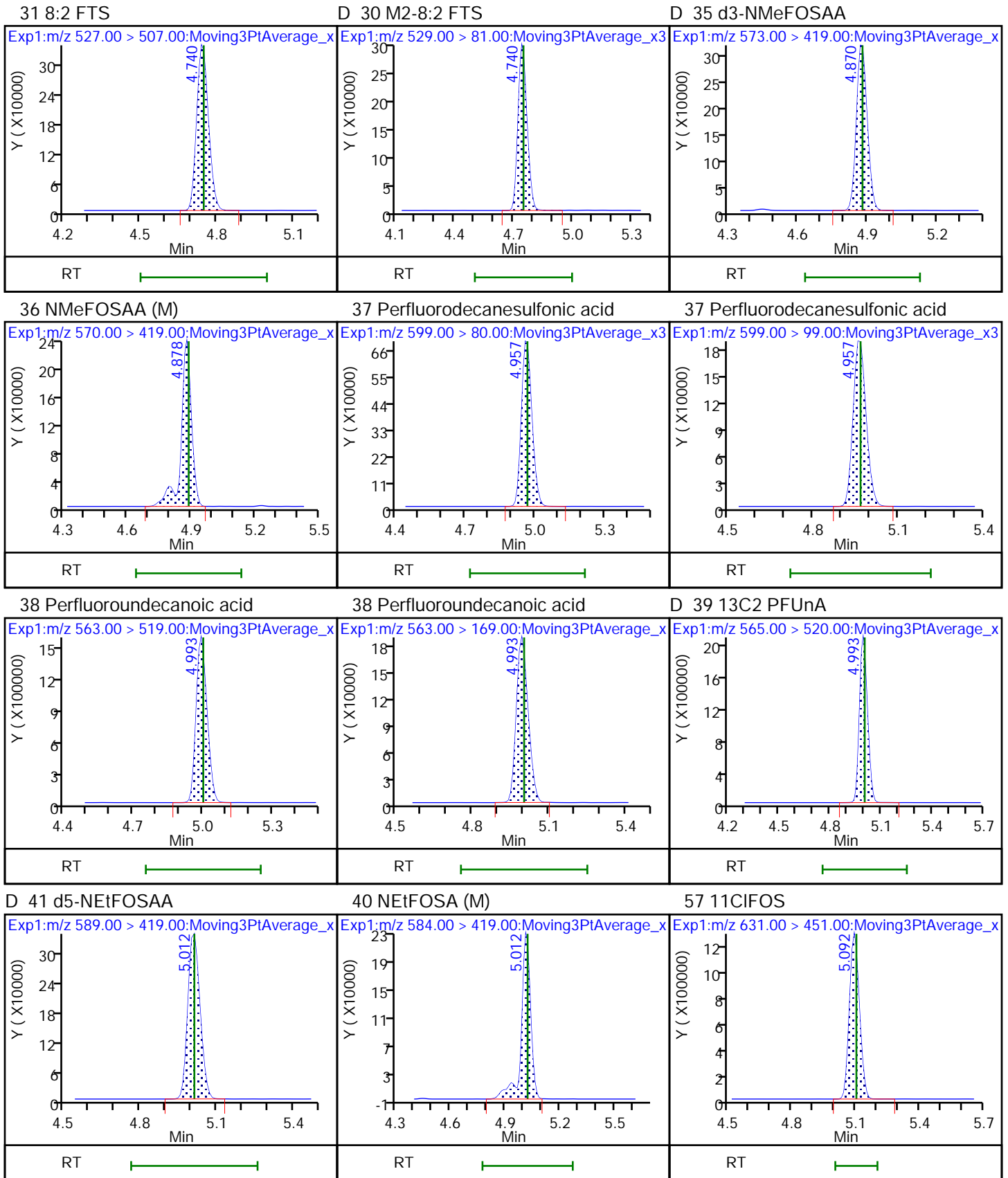


D 32 13C2 PFDA

29 Perfluorodecanoic acid

29 Perfluorodecanoic acid

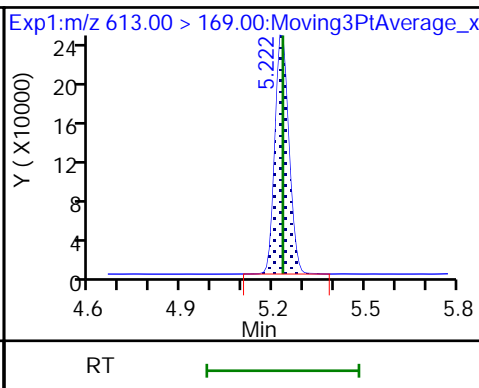
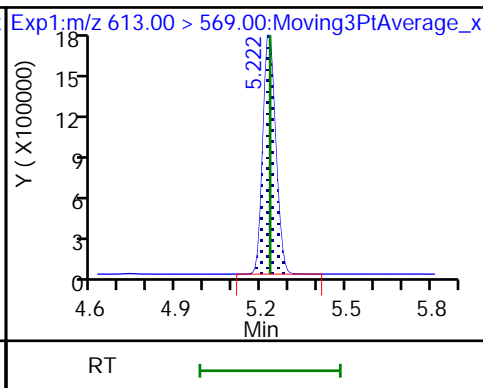
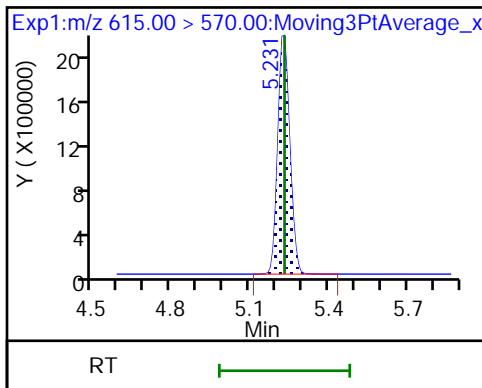




D 43 13C2 PFDaA

42 Perfluorododecanoic acid

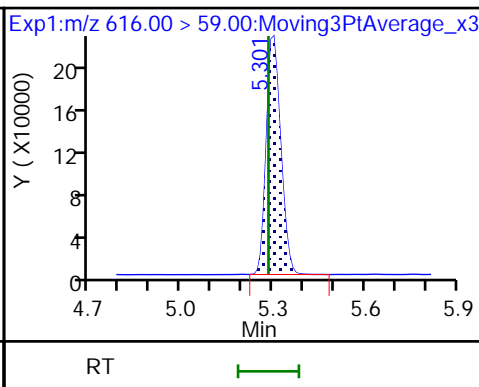
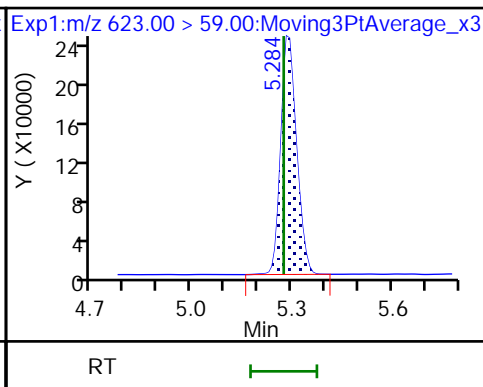
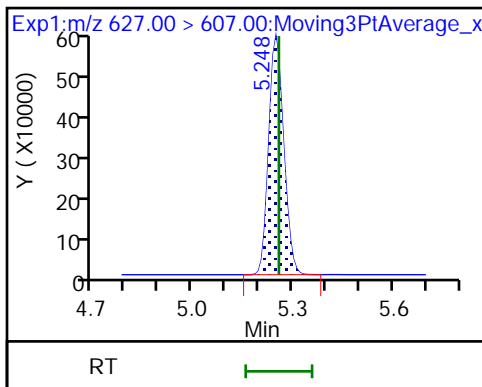
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

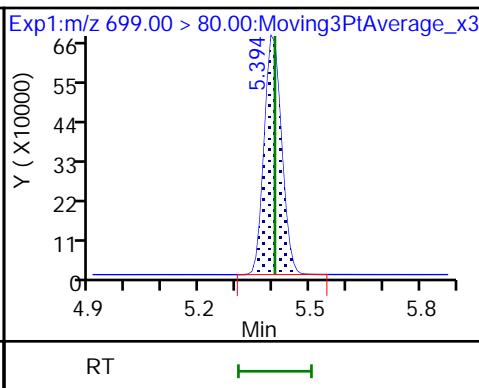
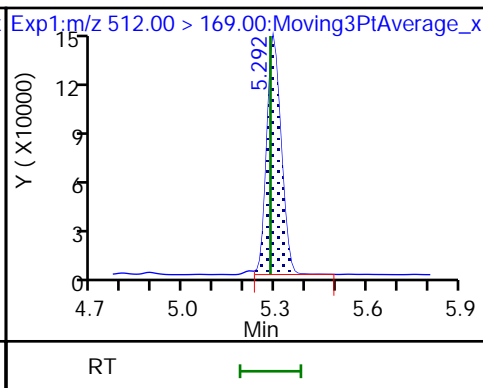
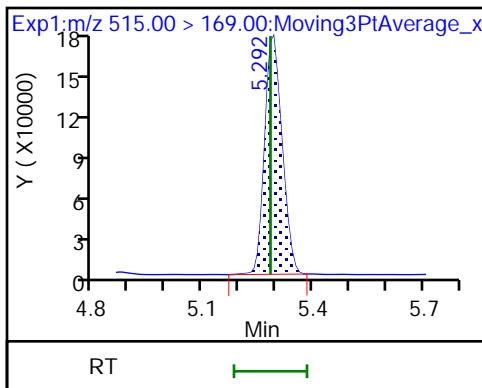
49 N-MeFOSE-M



D 58 d-N-MeFOSA-M

61 NMeFOSA

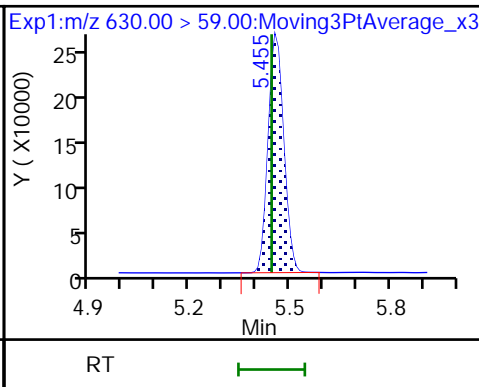
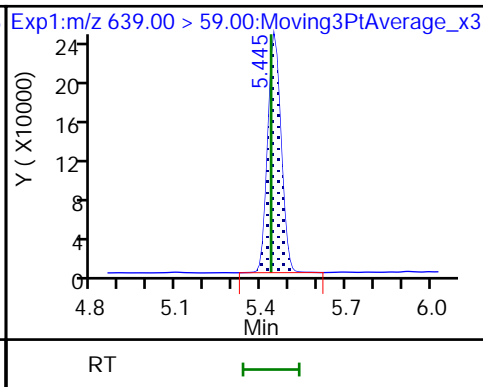
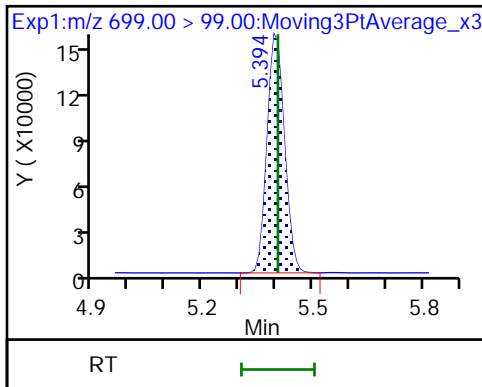
54 PFDoS

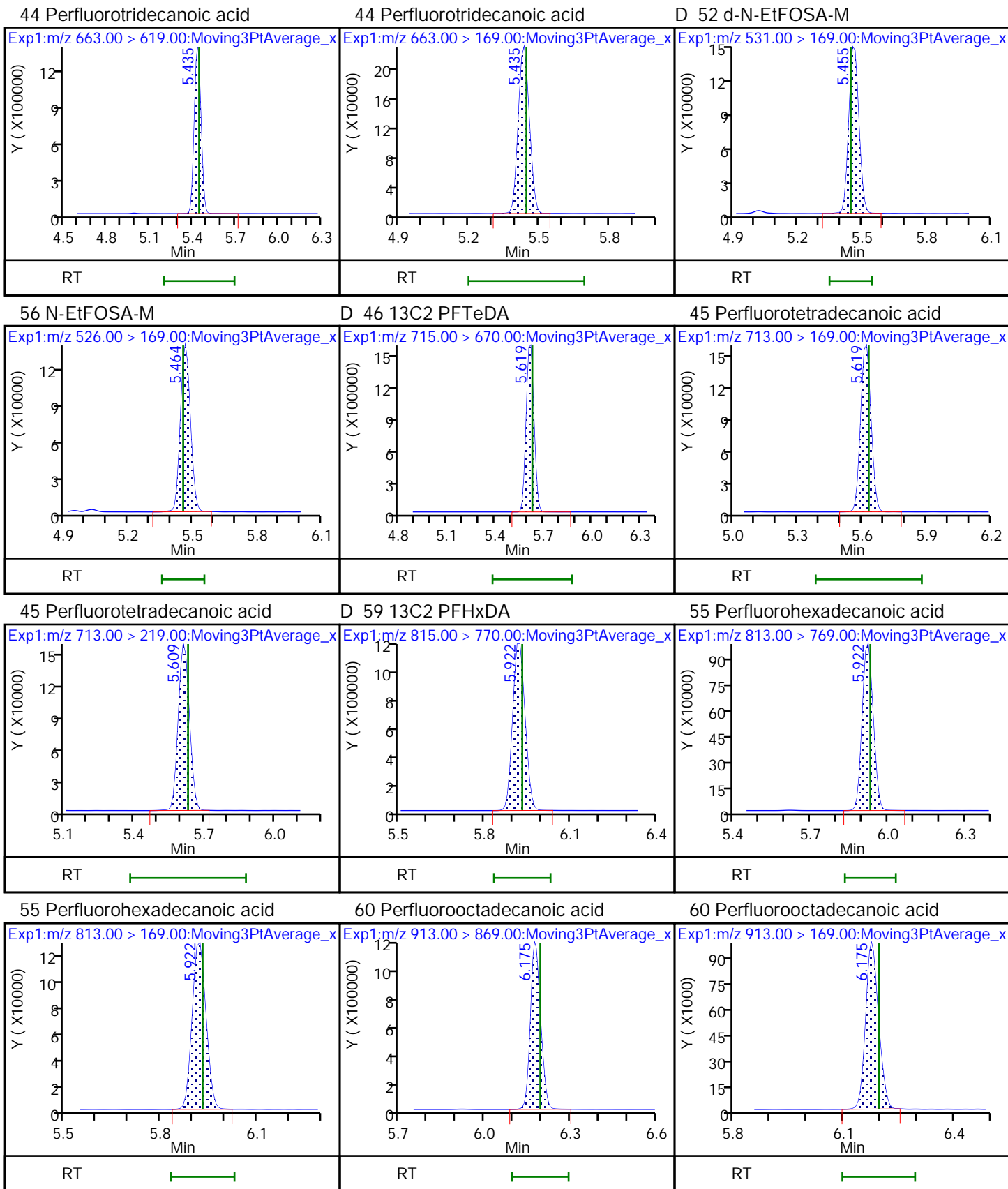


54 PFDoS

D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M









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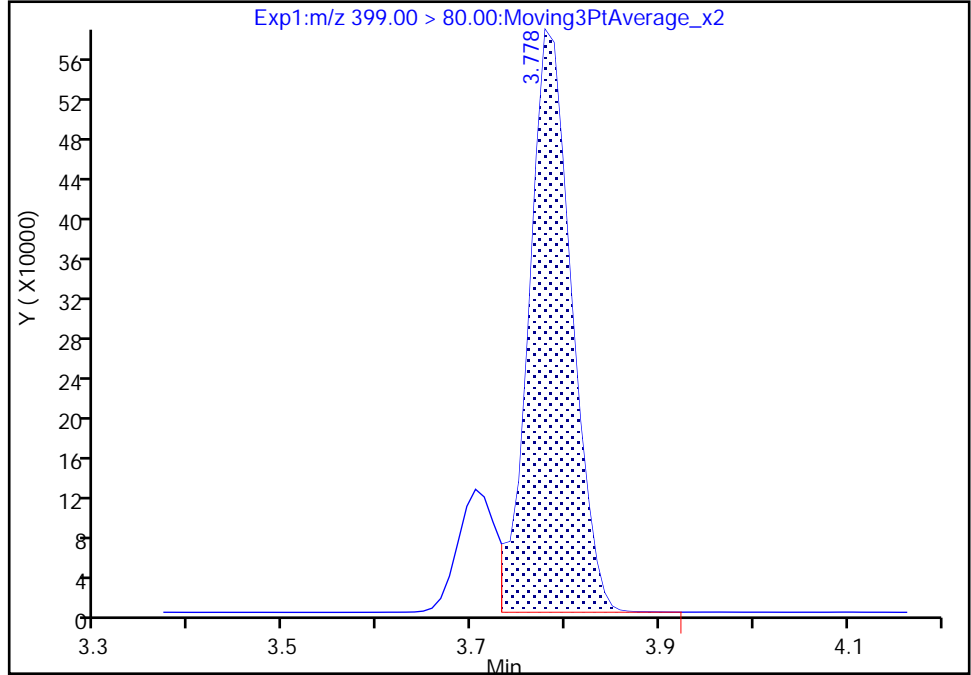
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Injection Date: 12-Jan-2022 22:06:59 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 31 Worklist Smp#: 31  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

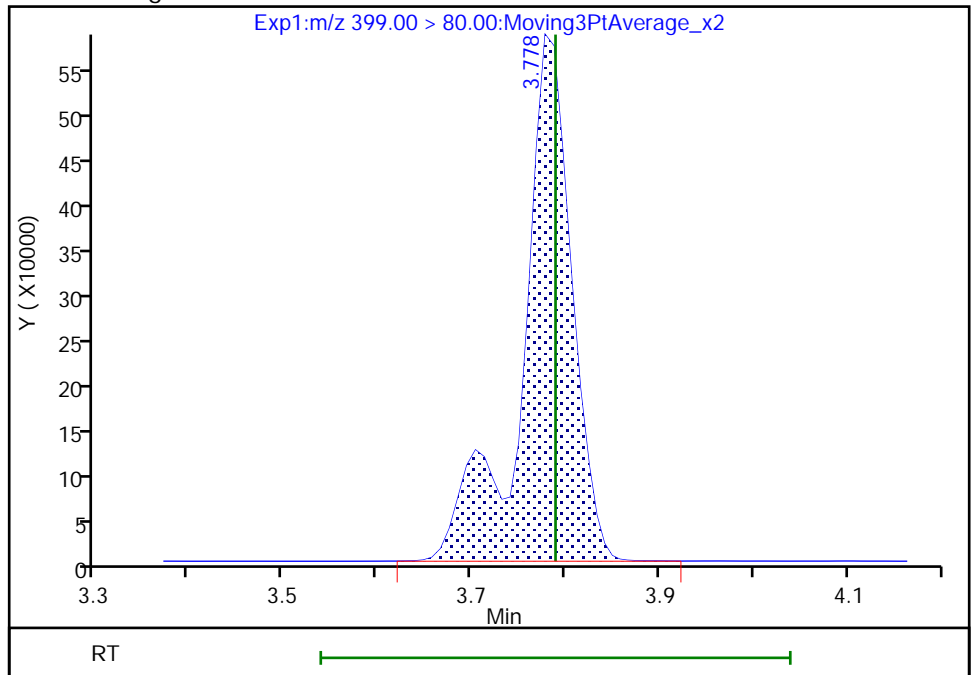
RT: 3.78  
Area: 1812563  
Amount: 0.726088  
Amount Units: ng/ml

Processing Integration Results



RT: 3.78  
Area: 2144189  
Amount: 0.858933  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 10:06:02  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

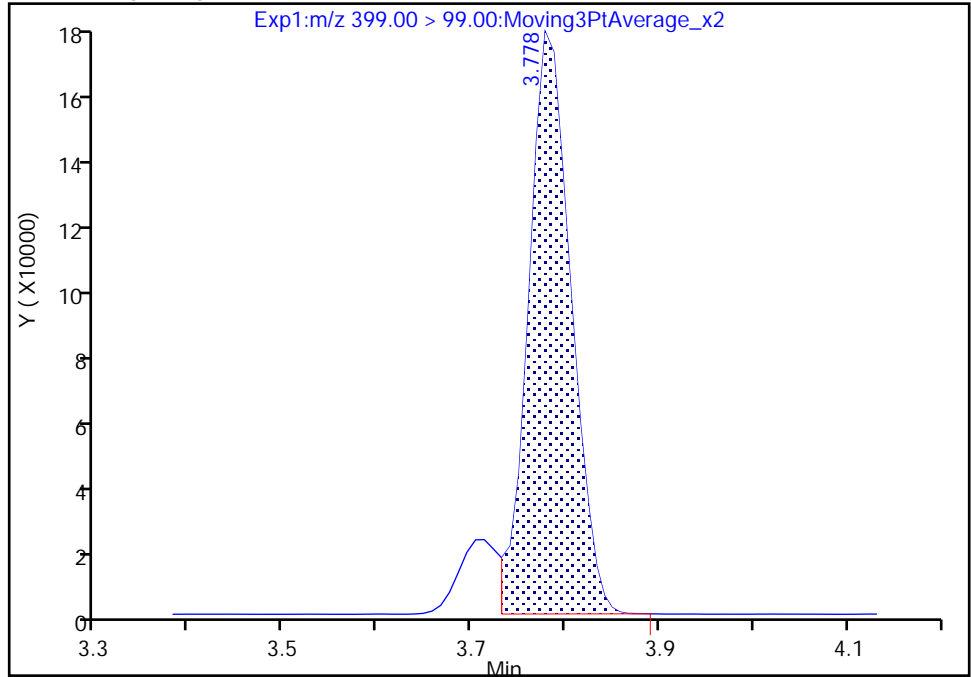
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Injection Date: 12-Jan-2022 22:06:59 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 31 Worklist Smp#: 31  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

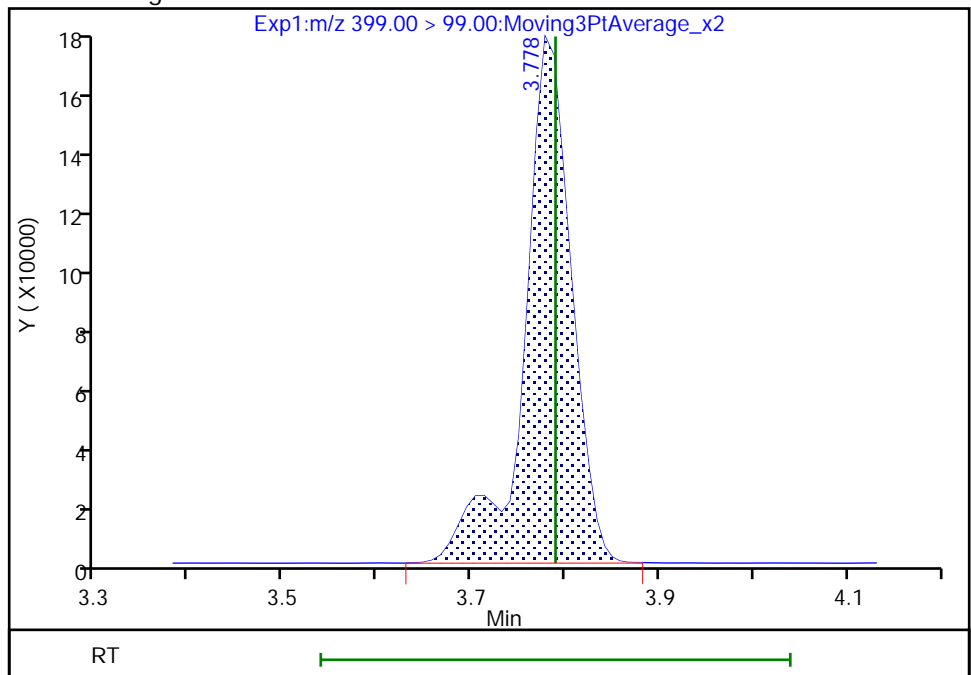
RT: 3.78  
Area: 541601  
Amount: 0.726088  
Amount Units: ng/ml

Processing Integration Results



RT: 3.78  
Area: 605337  
Amount: 0.858933  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 10:06:08

Audit Action: Manually Integrated

Audit Reason: Baseline  
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01/17/2022

Eurofins TestAmerica, Knoxville

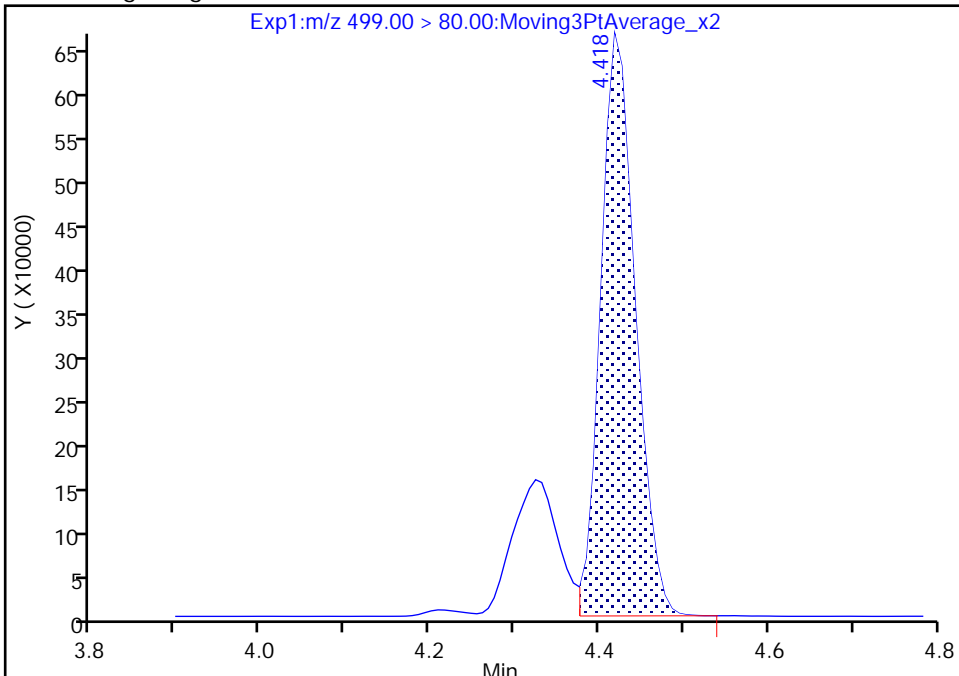
Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\\_031.d  
Injection Date: 12-Jan-2022 22:06:59 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 31 Worklist Smp#: 31  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

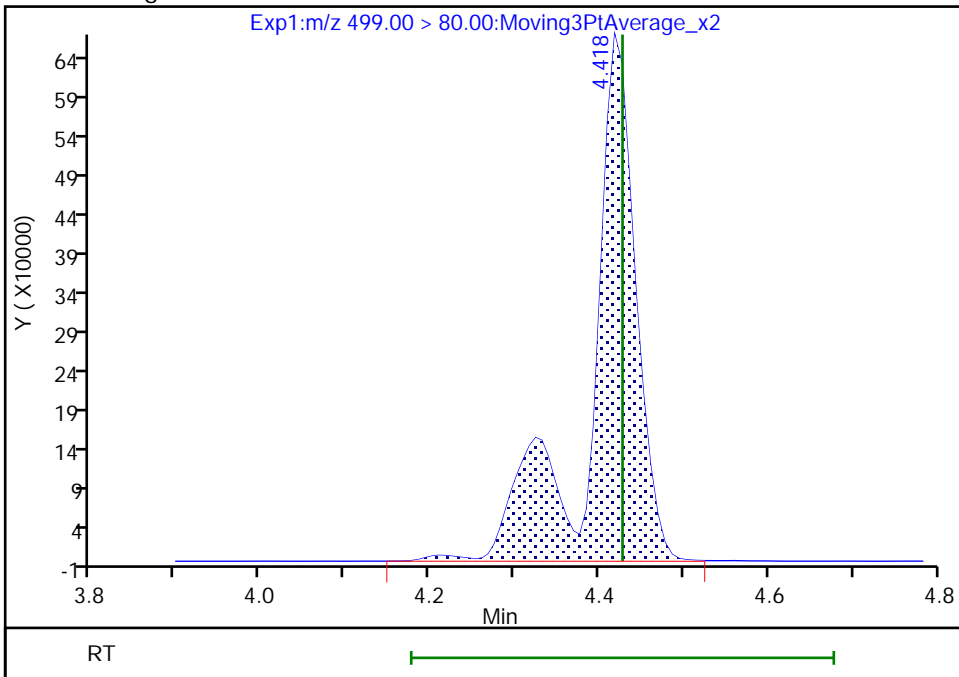
RT: 4.42  
Area: 1883096  
Amount: 0.677258  
Amount Units: ng/ml

Processing Integration Results



RT: 4.42  
Area: 2498910  
Amount: 0.898736  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 10:06:43  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

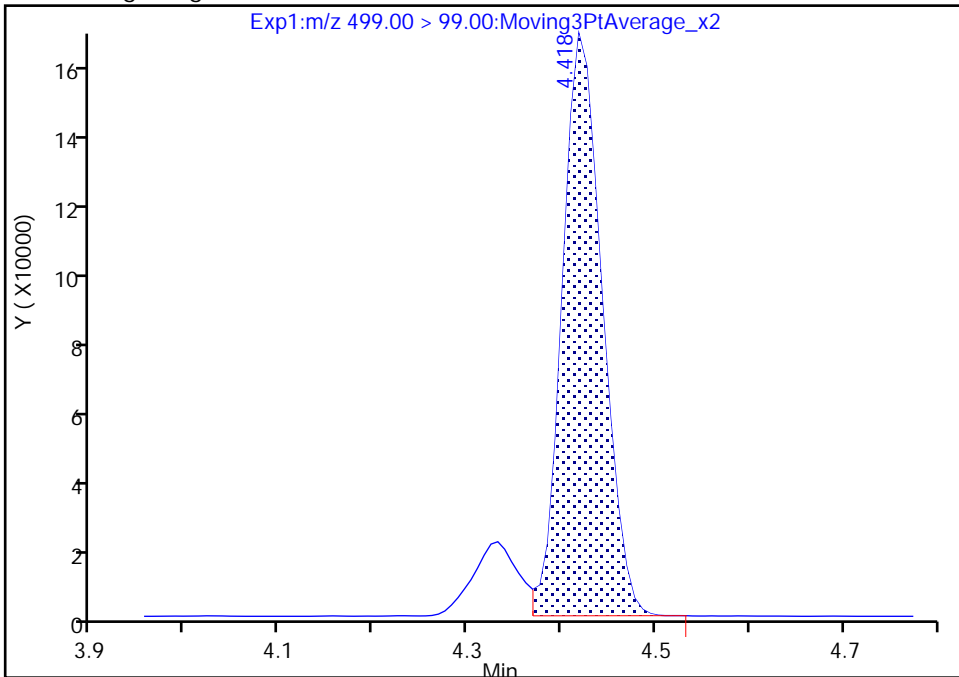
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Injection Date: 12-Jan-2022 22:06:59 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 31 Worklist Smp#: 31  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

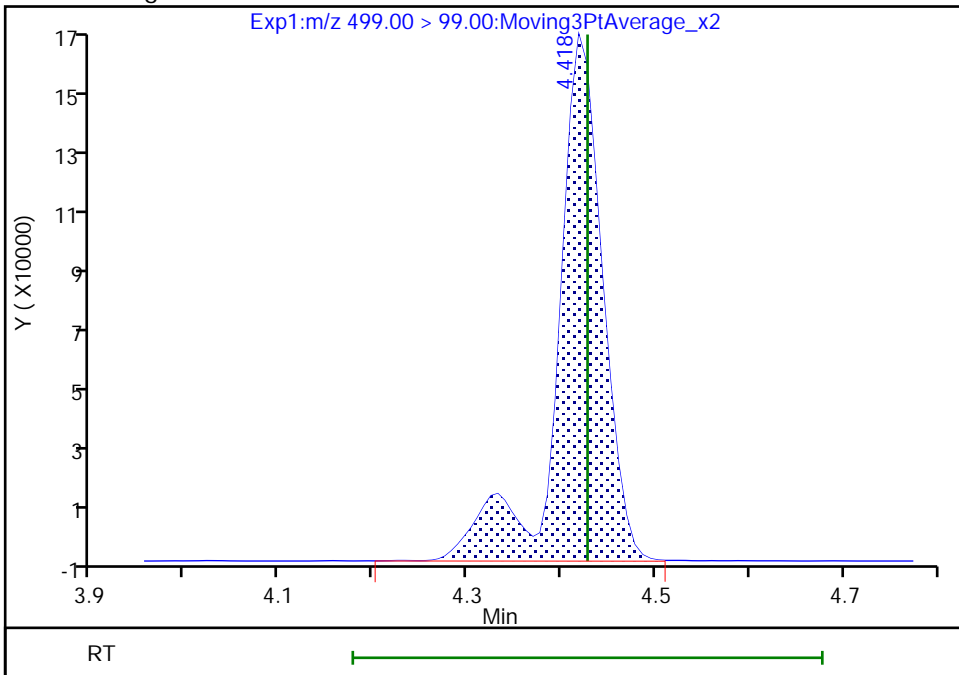
RT: 4.42  
Area: 487119  
Amount: 0.677258  
Amount Units: ng/ml

Processing Integration Results



RT: 4.42  
Area: 559519  
Amount: 0.898736  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 10:06:49

Audit Action: Manually Integrated

Audit Reason: Baseline  
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Eurofins TestAmerica, Knoxville

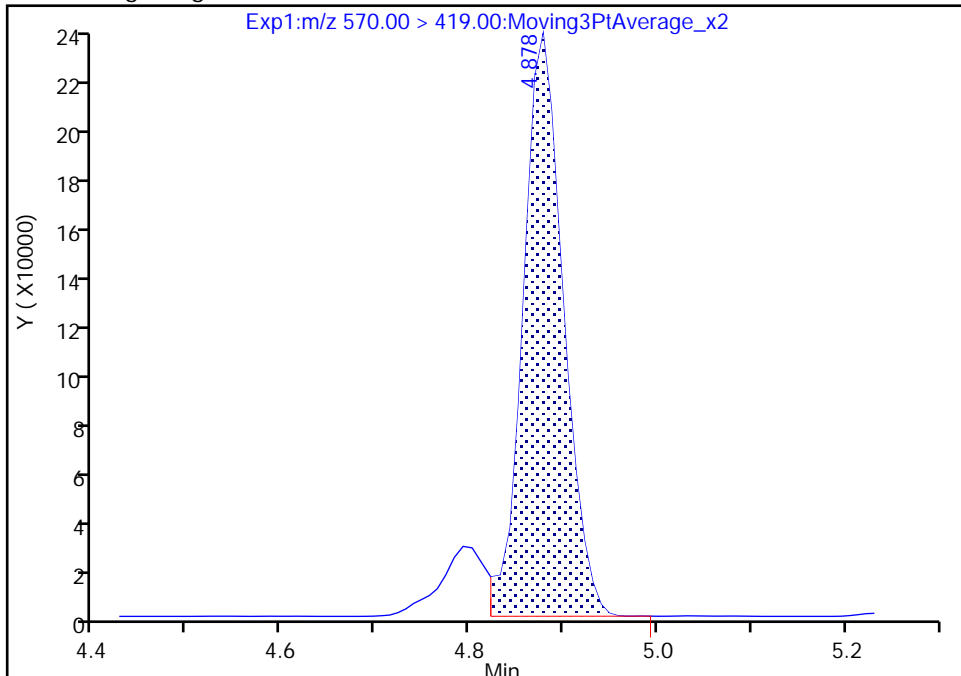
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Injection Date: 12-Jan-2022 22:06:59 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 31 Worklist Smp#: 31  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

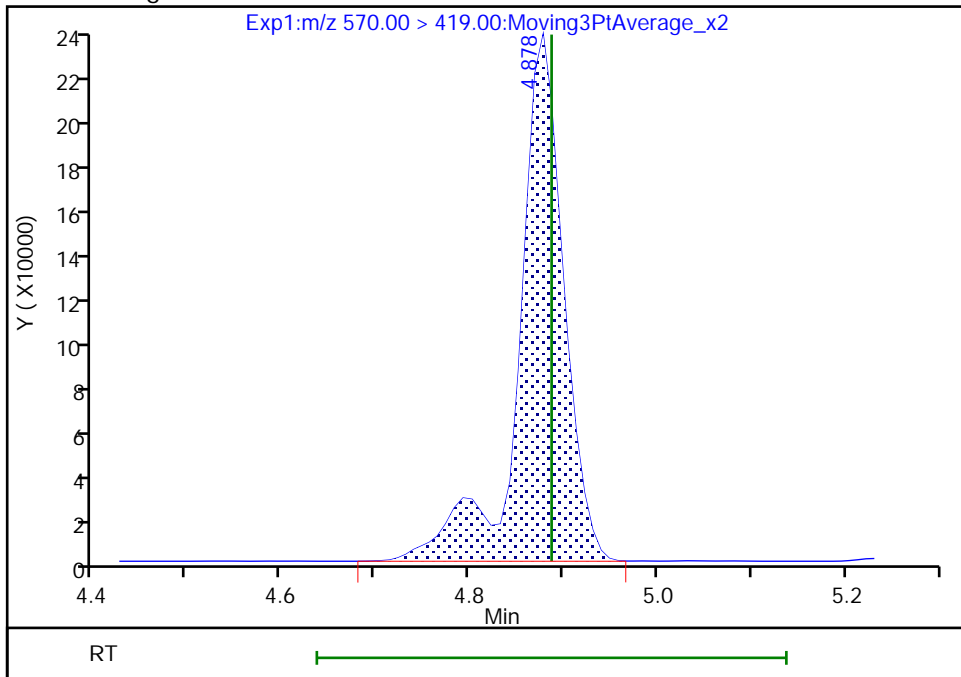
RT: 4.88  
Area: 681541  
Amount: 0.853880  
Amount Units: ng/ml

Processing Integration Results



RT: 4.88  
Area: 771349  
Amount: 0.966228  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 10:07:52  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

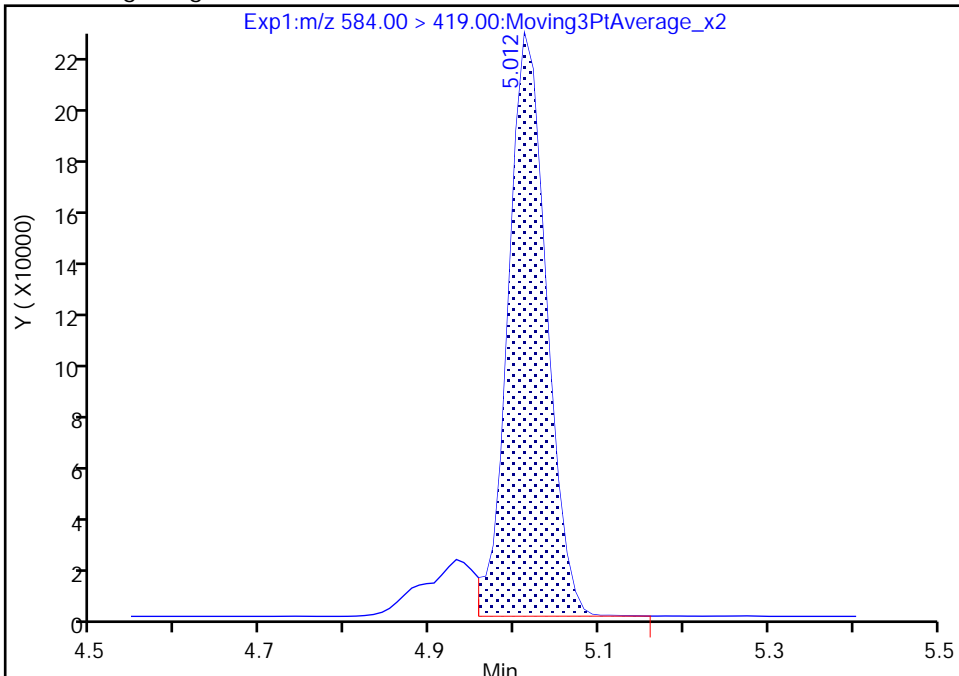
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Injection Date: 12-Jan-2022 22:06:59 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 31 Worklist Smp#: 31  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

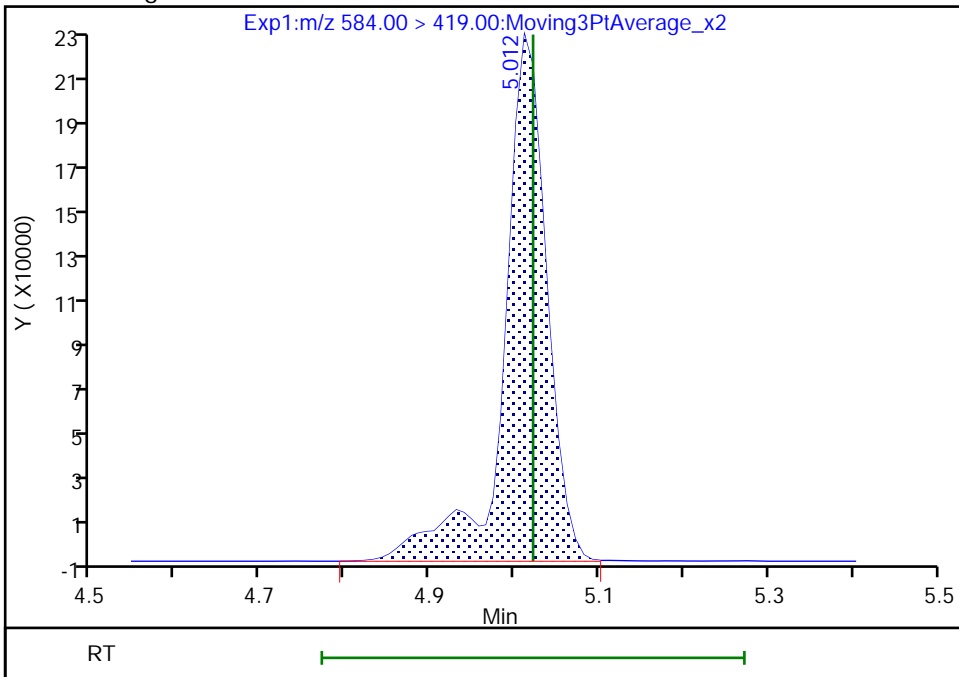
RT: 5.01  
Area: 703151  
Amount: 0.800416  
Amount Units: ng/ml

Processing Integration Results



RT: 5.01  
Area: 793957  
Amount: 0.903384  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 10:08:00  
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM I  
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 140-57611/1-B  
 Matrix: Air Lab File ID: \_010.d  
 Analysis Method: 537 (modified) Date Collected: \_\_\_\_\_  
 Extraction Method: None Date Extracted: 01/04/2022 08:32  
 Sample wt/vol: 1 (Sample) Date Analyzed: 01/11/2022 18:14  
 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.: 57822 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	83		25-150

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_010.d  
 Lims ID: MB 140-57611/1-B  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 11-Jan-2022 18:14:31 ALS Bottle#: 10 Worklist Smp#: 10  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022220-010 mb 140-57611/1-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 12-Jan-2022 18:43:11 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1648

First Level Reviewer: cochranj Date: 11-Jan-2022 18:38:27  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_007.d

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	2.807	2.814	-0.007	0.678	5452826	1.10	87.7	13173	
2 Perfluorobutanoic acid										7
212.90 > 169.00	2.807	2.814	-0.007	1.000	16230	0.004743		4.1	7	
LOD = 0.0100										
D 3 13C5 PFPeA	267.90 > 223.00	3.123	3.131	-0.008	0.754	4207967	1.09	87.2	7782	
4 Perfluoropentanoic acid										7
262.90 > 219.00	3.123	3.131	-0.008	1.000	6520	0.002035		1.8	7	
LOD = 0.006500										
D 6 13C3 PFBS	301.90 > 80.00	3.139	3.147	-0.008	0.758	2702696	1.05	90.3	8762	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00		3.147				ND				
298.90 > 99.00		3.147								
D 8 M2-4:2 FTS	329.00 > 81.00	3.422	3.442	-0.020	0.826	944541	1.19	102	1370	
7 4:2 FTS										
327.00 > 307.00		3.442				ND				
10 Perfluorohexanoic acid										7
313.00 > 269.00	3.452	3.472	-0.020	1.000	17031	0.005652	Target=12.60	9.9	7	
313.00 > 119.00	3.452	3.472	-0.020	1.000	1348		12.63(6.30-18.90)	2.0		
LOD = 0.008000										
11 Perfluoropentanesulfonic acid										
349.00 > 80.00		3.472				ND				
349.00 > 99.00		3.472								

D 9 13C2 PFHxA	315.00 > 270.00	3.452	3.472	-0.020	0.834	4339341	1.05	84.1	8443	
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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	3.556	3.574	-0.018	0.859	2068893	1.04		83.4	4312	
13 HFPO-DA										
285.00 > 169.00	3.556	3.574	-0.018	1.000	10539	0.004708		10.9	7	7
LOD = 0.008250										
S 65 ADONA										
377.00 > 251.00		3.592				0				
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.788	3.807	-0.019	1.000	7433	0.003338	Target=3.46	46.0	7	7
399.00 > 99.00	3.788	3.807	-0.019	1.000	2268		3.28(1.73-5.19)	18.1		
LOD = 0.005000										
D 17 18O2 PFHxS										
403.00 > 84.00	3.788	3.807	-0.019	0.915	1911898	1.11		94.1	6883	
D 14 13C4 PFHpA										
367.00 > 322.00	3.807	3.825	-0.018	0.919	4520294	1.15		91.6	8984	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.807	3.825	-0.018	1.000	5408	0.001429	Target=3.21	3.4	7	7
363.00 > 169.00	3.797	3.825	-0.028	0.997	1746		3.10(1.61-4.82)	3.8		
LOD = 0.004250										
68 DONA										
377.00 > 251.00		3.858				ND				
377.00 > 85.00		3.858								
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00		4.140				ND				
449.00 > 99.00		4.140								
D 18 M2-6:2 FTS										
429.00 > 81.00	4.132	4.149	-0.017	0.998	937780	1.17		98.8	2518	
D 21 13C4 PFOA										
417.00 > 372.00	4.141	4.156	-0.015	1.000	4783543	1.17		93.7	9067	
\$ 48 13C8 PFOA										
421.00 > 376.00		4.156				ND				
19 6:2 FTS										
427.00 > 407.00	4.132	4.156	-0.024	1.000	12819	0.0114		98.8		
23 Perfluorooctanoic acid										
413.00 > 369.00	4.141	4.156	-0.015	1.000	20861	0.004751	Target=2.53	14.3	7	7
413.00 > 169.00	4.141	4.156	-0.015	1.000	6956		3.00(1.27-3.80)	19.9		
LOD = 0.007800										
* 22 13C2 PFOA										
415.00 > 370.00	4.141	4.156	-0.015		5442494	1.25			6979	
\$ 47 13C8 PFOS										
507.00 > 99.00		4.444				ND				
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.402	4.452	-0.050	0.994	13147	0.005393	Target=4.27	14.3	7M	7M
499.00 > 99.00	4.452	4.452	0.0	0.000	0		0.00(2.13-6.40)			
LOD = 0.005500										
D 25 13C4 PFOS										
503.00 > 80.00	4.427	4.452	-0.025	1.069	2651262	1.07		89.7	3571	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
26 Perfluorononanoic acid										7
463.00 > 419.00	4.444	4.469	-0.025	0.998	4133	0.003274	Target=4.52	4.2	7	
463.00 > 169.00	4.444	4.469	-0.025	0.998	696		5.94(2.26-6.78)	2.6		
LOD = 0.004250										
D 27 13C5 PFNA										
468.00 > 423.00	4.452	4.469	-0.017	1.075	5738656	1.07		85.5	9828	
63 9CIFOS										
531.00 > 351.00		4.608				ND				
D 34 13C8 FOSA										
506.00 > 78.00	4.715	4.723	-0.008	1.139	3994103	1.19		95.5	4317	
33 Perfluorooctanesulfonamide										7
498.00 > 78.00	4.715	4.723	-0.008	1.000	1895	0.000627		9.3	7	
LOD = 0.004400										
28 Perfluorononanesulfonic acid										
549.00 > 80.00		4.732				ND				
549.00 > 99.00		4.732								
D 32 13C2 PFDA										
515.00 > 470.00	4.741	4.757	-0.016	1.145	5762831	1.11		88.9	11489	
29 Perfluorodecanoic acid										R7
513.00 > 469.00	4.741	4.757	-0.016	1.000	17323	0.003896	Target=11.59	17.1	R7	
513.00 > 169.00	4.741	4.757	-0.016	1.000	3767		4.60(5.80-17.39)	14.0		
LOD = 0.004450										
31 8:2 FTS										
527.00 > 507.00		4.774				ND				
D 30 M2-8:2 FTS										
529.00 > 81.00	4.757	4.774	-0.017	1.149	1067007	1.18		98.9	1818	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.887	4.905	-0.018	1.180	829393	1.36		109	3630	
36 NMeFOSAA										
570.00 > 419.00		4.905				ND				
69 Perfluoro-3,6,9-trioxatridecanoic acid										
561.00 > 467.00		4.970				ND				
561.00 > 235.00		4.970								
37 Perfluorodecanesulfonic acid										
599.00 > 80.00		4.992				ND				
599.00 > 99.00		4.992								
38 Perfluoroundecanoic acid										
563.00 > 519.00		5.022				ND				
563.00 > 169.00		5.022								
D 39 13C2 PFUnA										
565.00 > 520.00	5.002	5.022	-0.020	1.208	5948233	1.15		91.9	11916	
40 NEtFOSA										
584.00 > 419.00		5.042				ND				
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.022	5.042	-0.020	1.213	948049	1.42		113	4783	
57 11CIFOS										
631.00 > 451.00		5.122				ND				

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 43 13C2 PFDaA										
615.00 > 570.00	5.240	5.257	-0.017	1.265	5690832	1.05		83.9	8957	
42 Perfluorododecanoic acid										
613.00 > 569.00		5.257				ND				
613.00 > 169.00		5.257								
50 10:2 FTS										
627.00 > 607.00	5.266	5.275	-0.009	1.107	8972	0.004423		39.3		M
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.284	5.292	-0.008	1.276	728025	1.12		89.2	516	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.284	5.292	-0.008	1.276	497031	1.07		85.5	58.7	
61 NMeFOSA										
512.00 > 169.00		5.292				ND				
49 N-MeFOSE-M										
616.00 > 59.00		5.301				ND				
54 PFDoS										
699.00 > 80.00		5.425				ND				
699.00 > 99.00		5.425								
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.445	5.444	0.001	1.315	681362	1.04		83.2	318	
62 N-EtFOSE-M										
630.00 > 59.00		5.464				ND				
44 Perfluorotridecanoic acid										
663.00 > 619.00		5.464				ND				
663.00 > 169.00		5.464								
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.455	5.464	-0.009	1.317	403864	1.05		84.1	584	
56 N-EtFOSA-M										
526.00 > 169.00		5.464				ND				
D 46 13C2 PFTeDA										
715.00 > 670.00	5.629	5.650	-0.021	1.360	4276838	1.03		82.7	7401	
45 Perfluorotetradecanoic acid										
713.00 > 169.00		5.650				ND				
713.00 > 219.00		5.650								
D 59 13C2 PFHxDA										
815.00 > 770.00	5.940	5.948	-0.008	1.434	2949878	1.05		84.1	5102	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.940	5.948	-0.008	1.000	29388	0.001210	Target=8.43	83.2		7
813.00 > 169.00	5.940	5.948	-0.008	1.000	4213		6.98(4.22-12.65)	10.0		
LOD = 0.009000										
60 Perfluorooctadecanoic acid										
913.00 > 869.00		6.209				ND				
913.00 > 169.00		6.209								
S 66 F-53B										
212.90 > 169.00		0.0				0				

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

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\20220111-22220.b\_010.d

Injection Date: 11-Jan-2022 18:14:31

Instrument ID: LCA

Lims ID: MB 140-57611/1-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 10

Worklist Smp#: 10

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

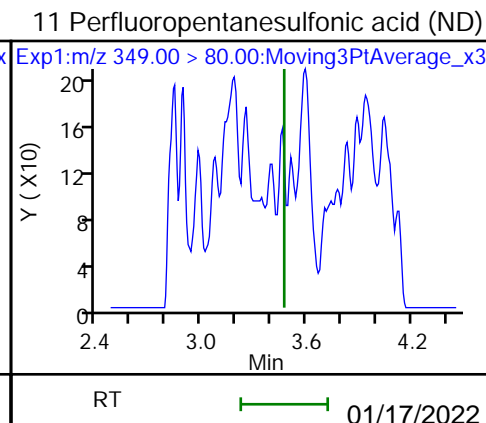
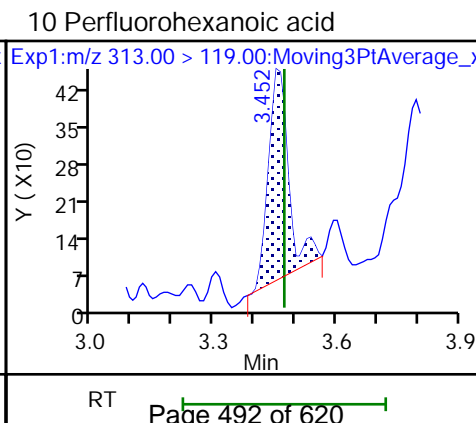
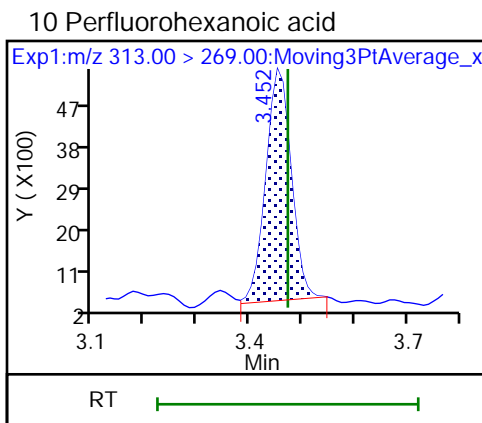
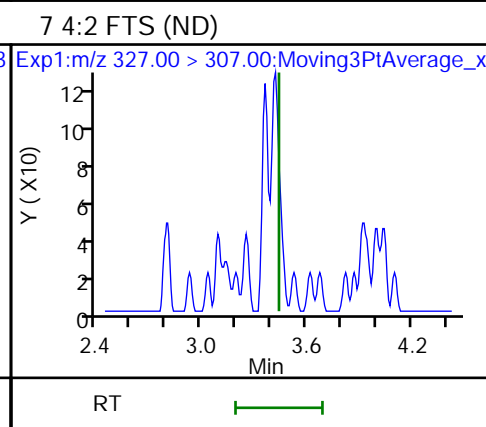
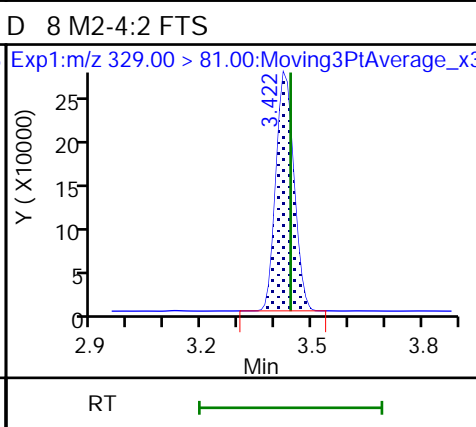
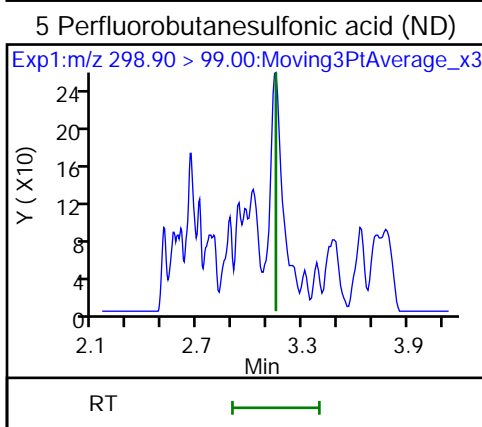
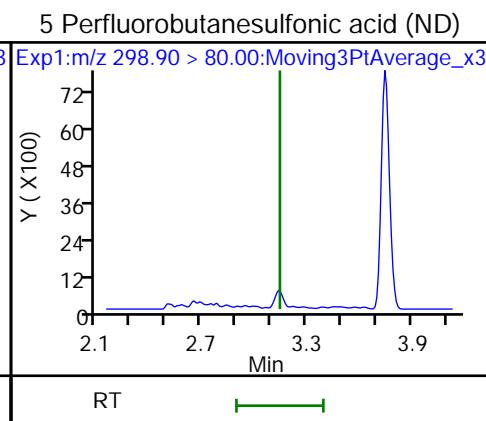
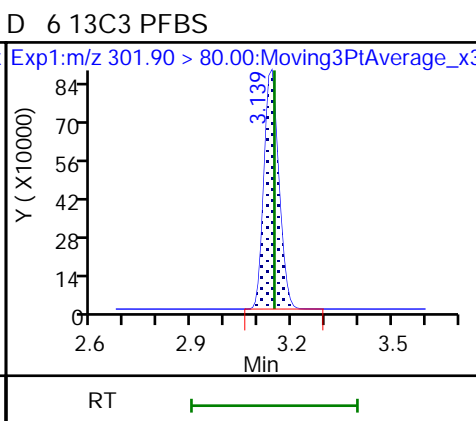
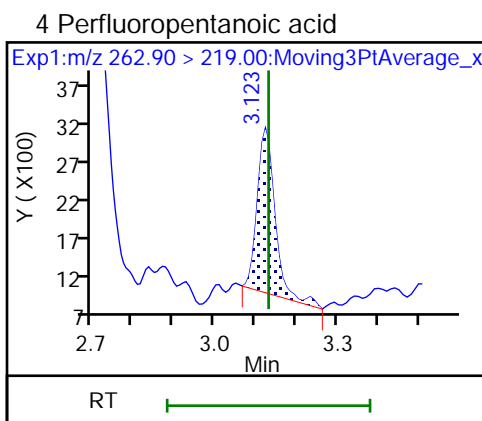
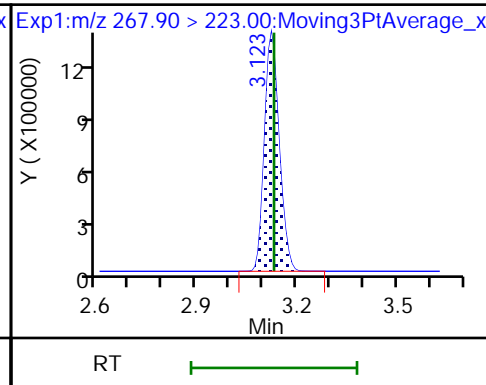
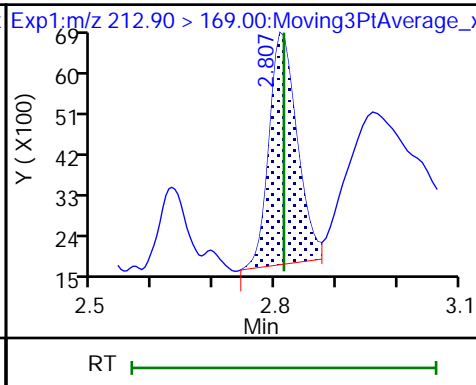
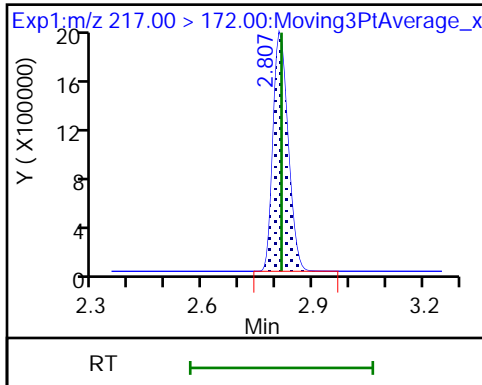
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

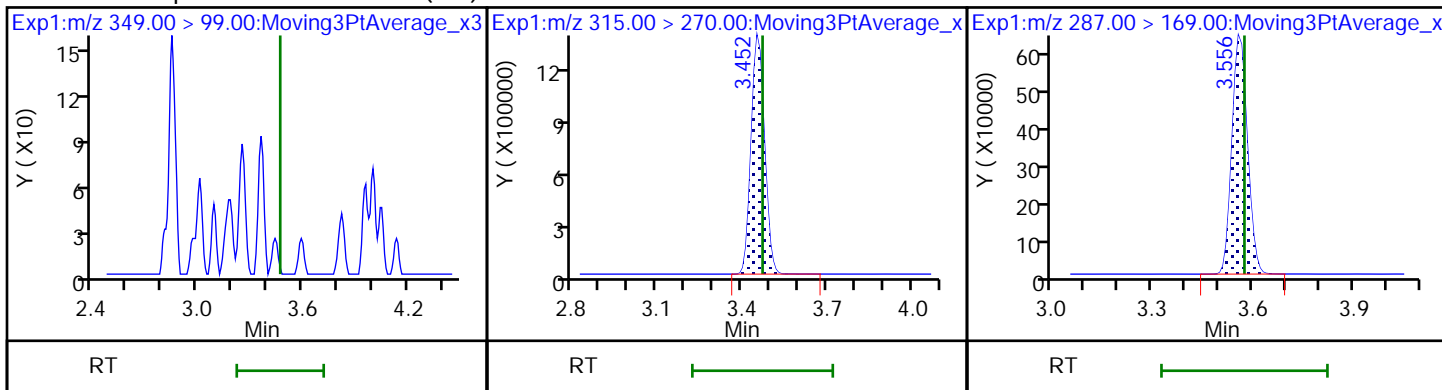
2 Perfluorobutanoic acid

D 3 13C5 PFPeA



11 Perfluoropentanesulfonic acid (ND) D 9 13C2 PFHxA

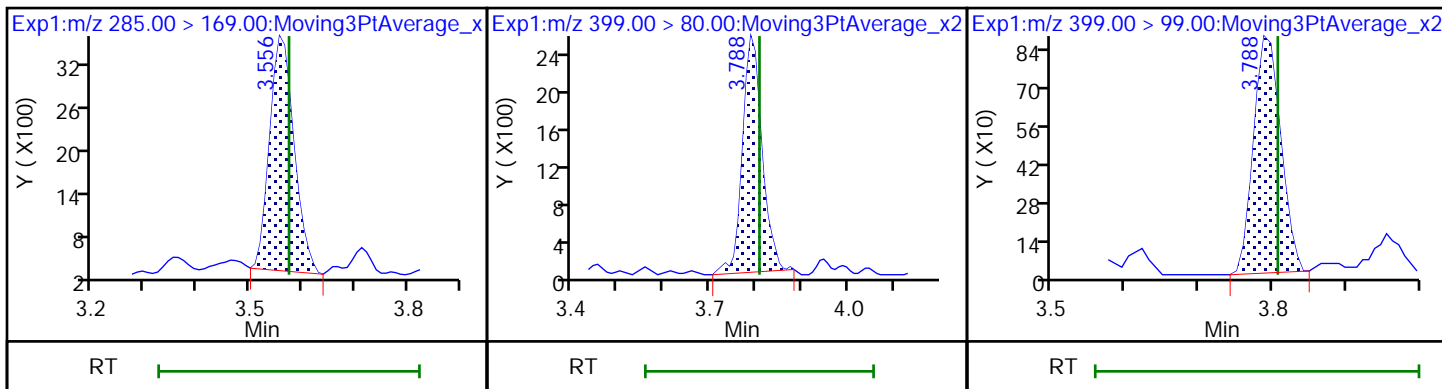
D 12 13C3 HFPO-DA



13 HFPO-DA

16 Perfluorohexanesulfonic acid

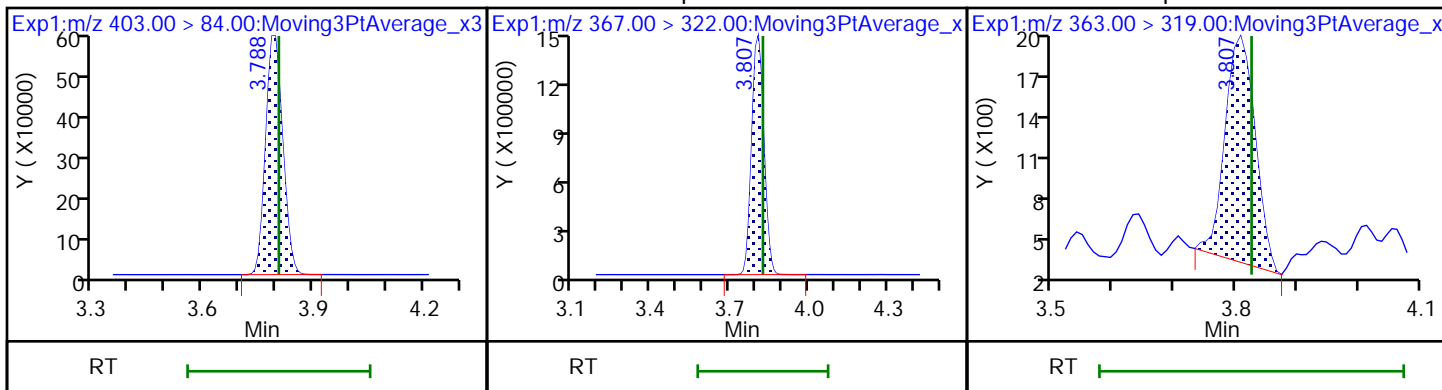
16 Perfluorohexanesulfonic acid



D 17 18O2 PFHxS

D 14 13C4 PFHpA

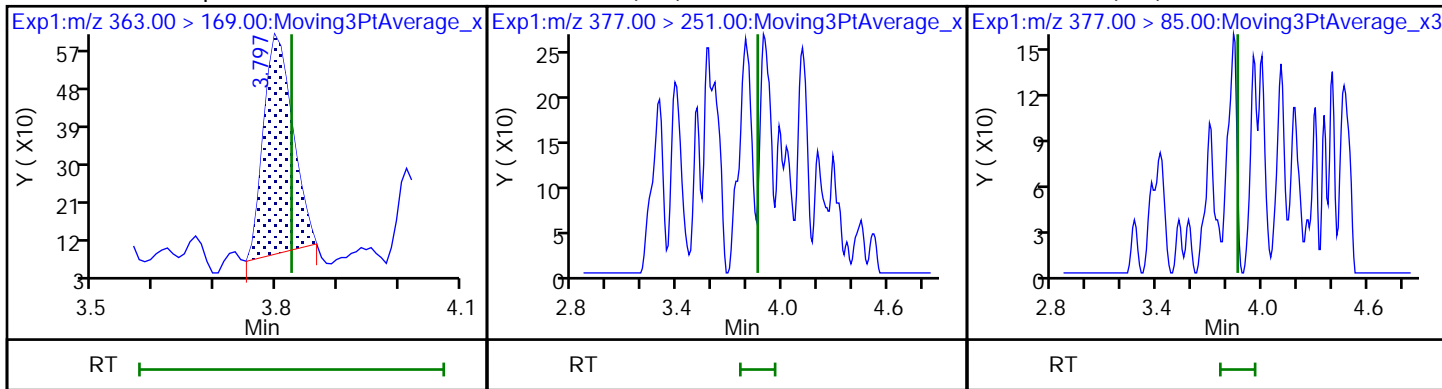
15 Perfluoroheptanoic acid



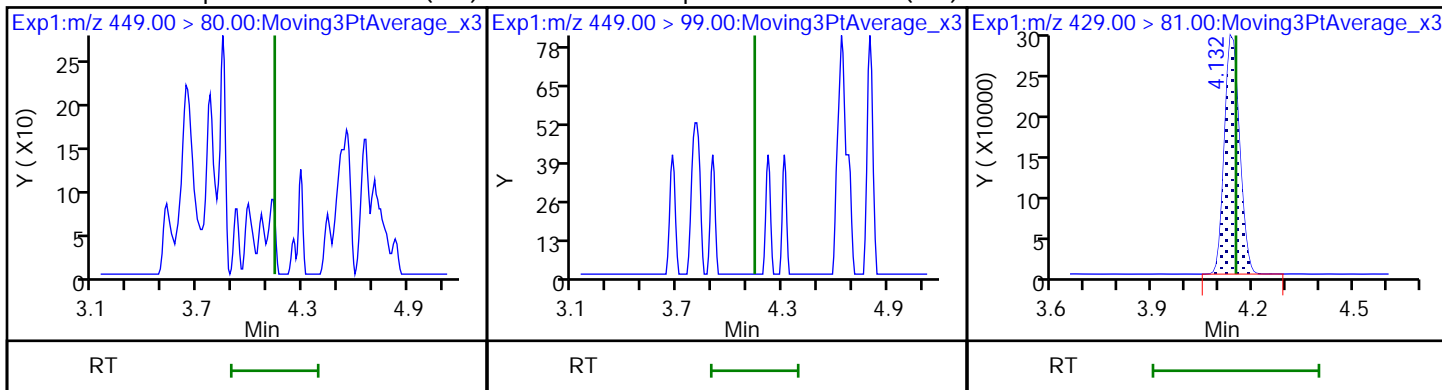
15 Perfluoroheptanoic acid

68 DONA (ND)

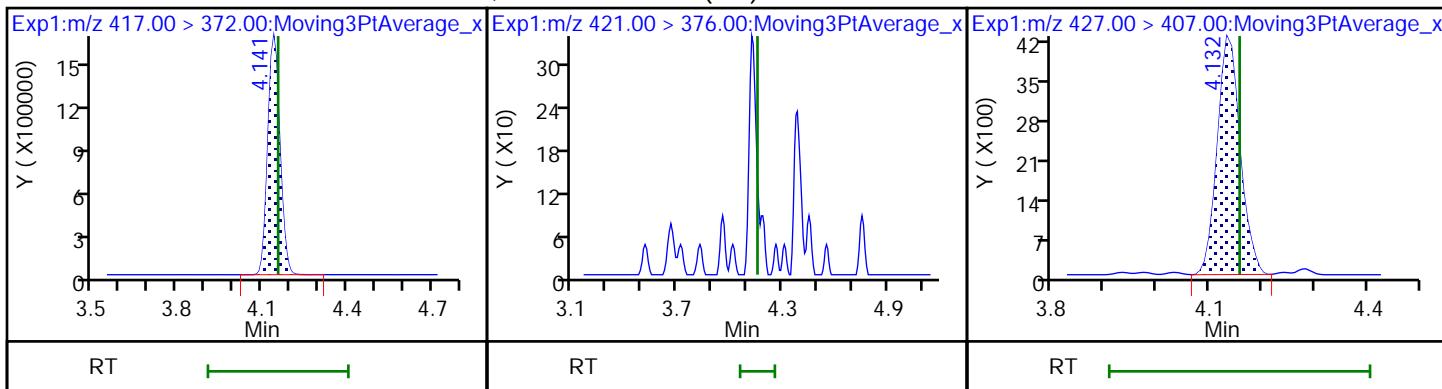
68 DONA (ND)



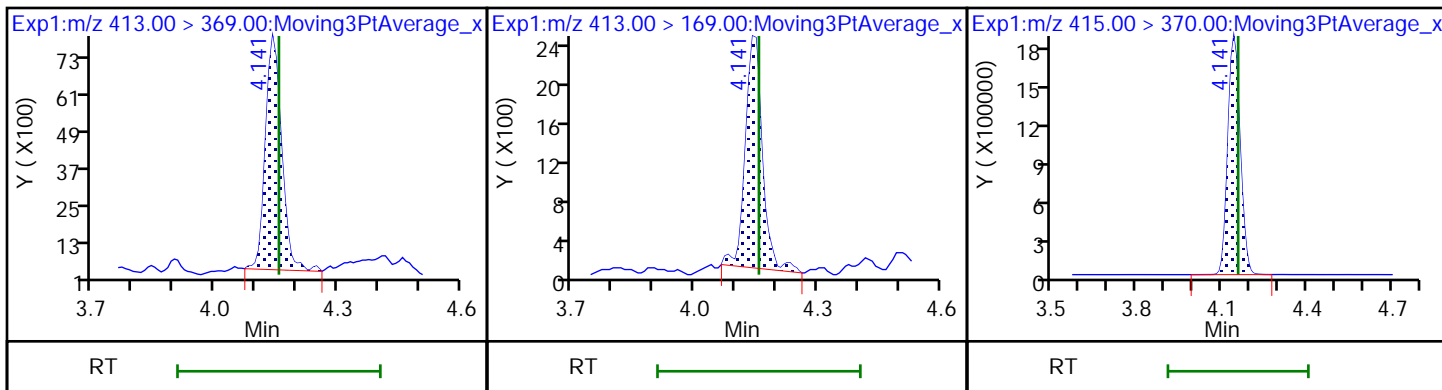
20 Perfluoroheptanesulfonic acid (ND) 20 Perfluoroheptanesulfonic acid (ND) D 18 M2-6:2 FTS



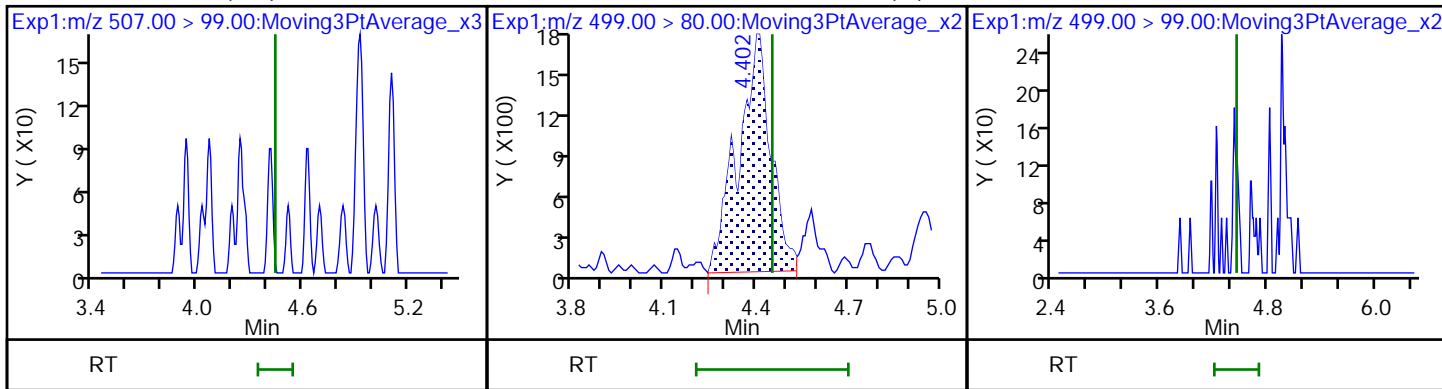
D 21 13C4 PFOA \$ 48 13C8 PFOA (ND) 19 6:2 FTS



23 Perfluorooctanoic acid 23 Perfluorooctanoic acid \* 22 13C2 PFOA



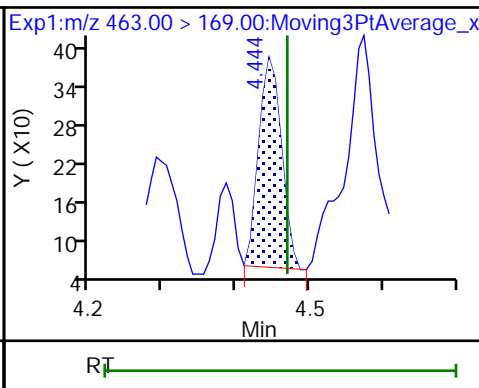
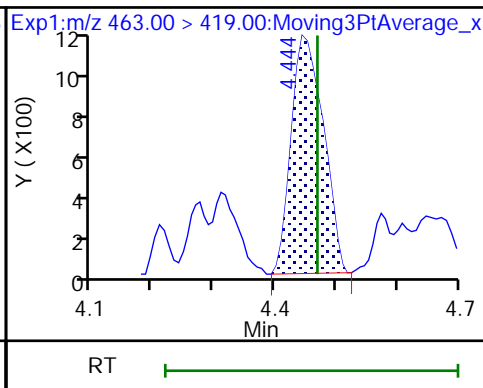
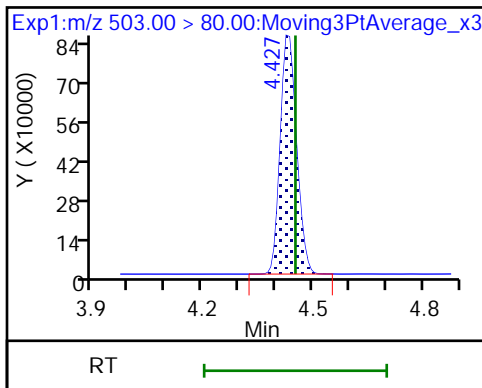
\$ 47 13C8 PFOS (ND) 24 Perfluorooctanesulfonic acid (M) 24 Perfluorooctanesulfonic acid



D 25 13C4 PFOS

26 Perfluorononanoic acid

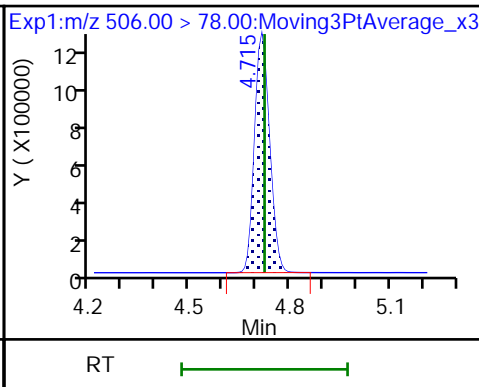
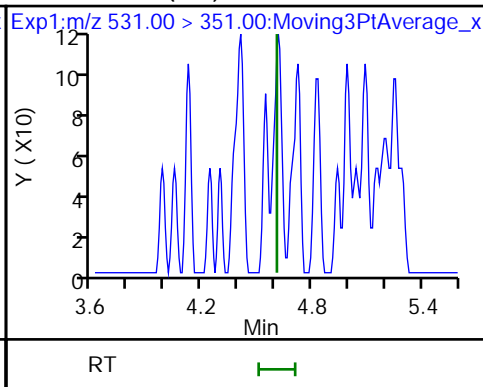
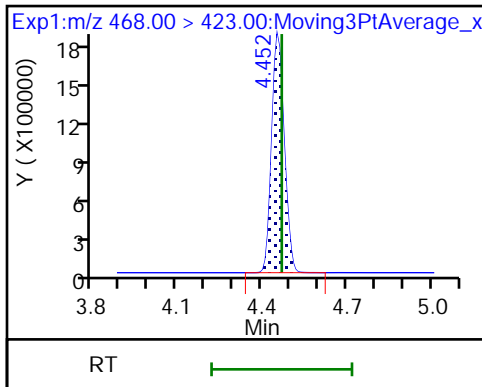
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS (ND)

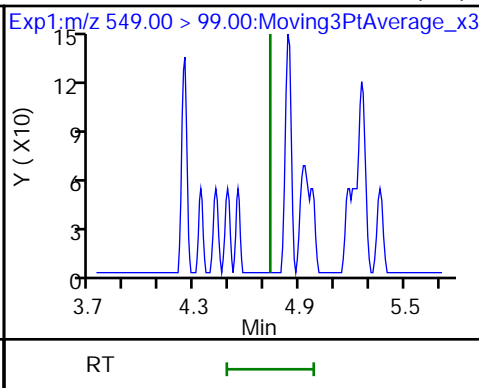
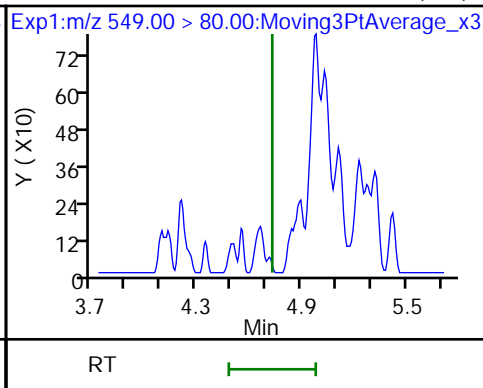
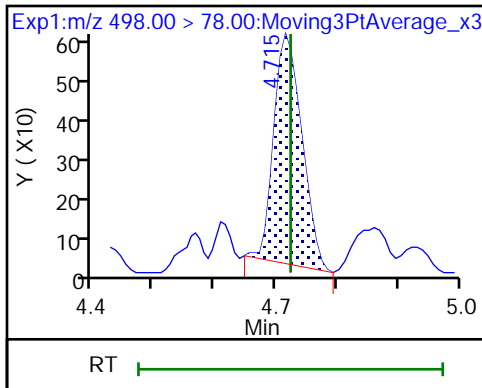
D 34 13C8 FOSA



33 Perfluorooctanesulfonamide

28 Perfluorononanesulfonic acid (ND)

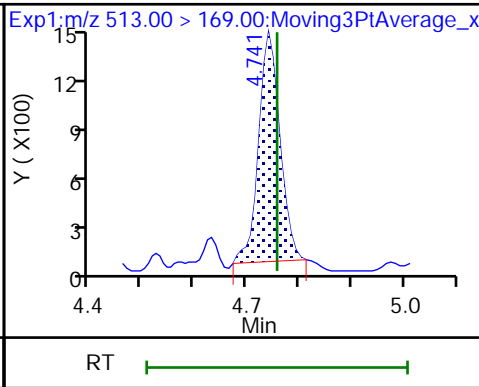
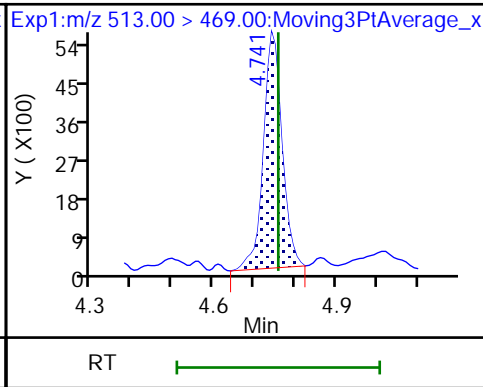
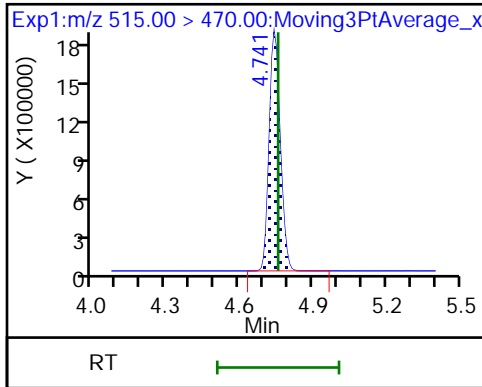
28 Perfluorononanesulfonic acid (ND)



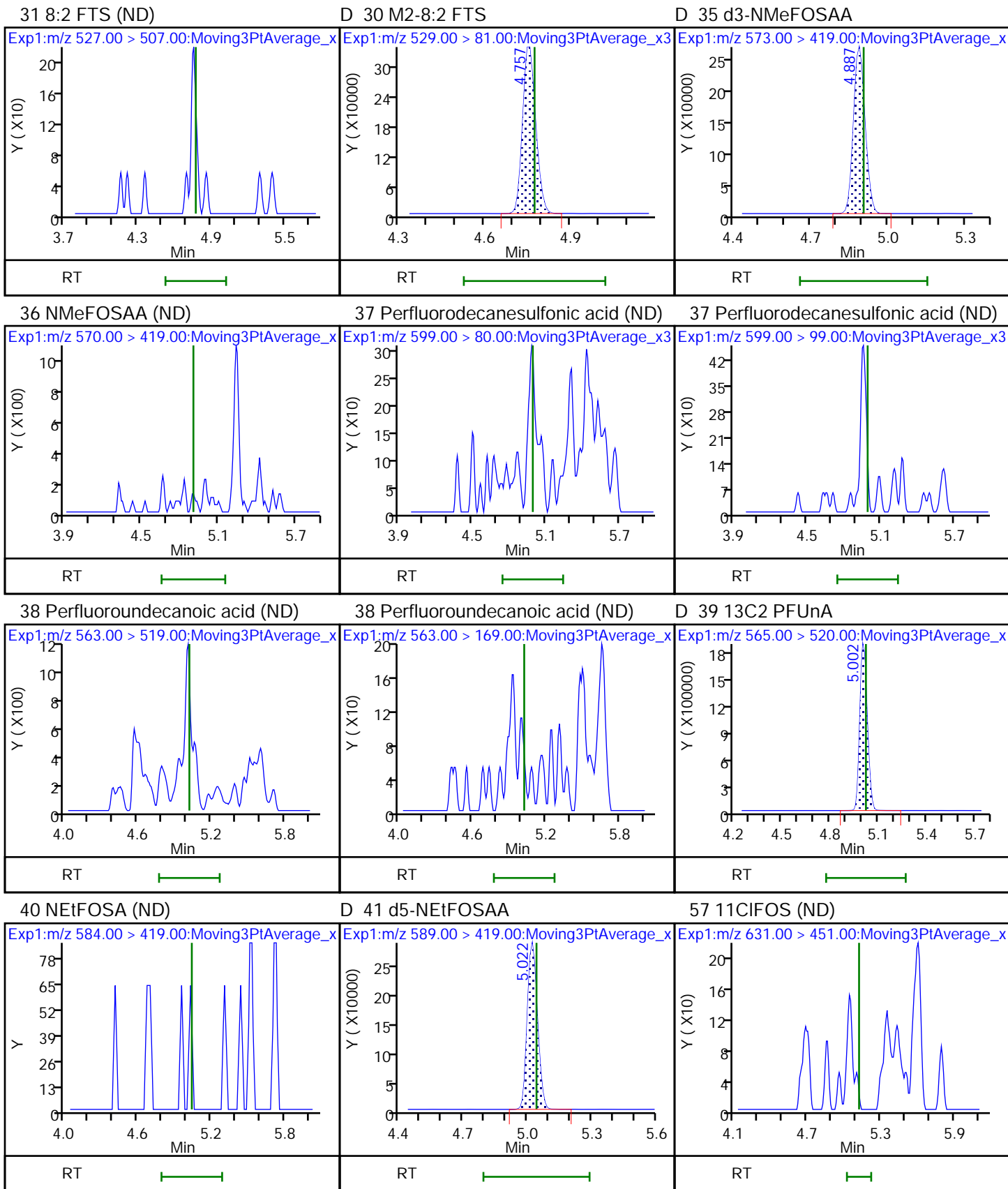
D 32 13C2 PFDA

29 Perfluorodecanoic acid

29 Perfluorodecanoic acid



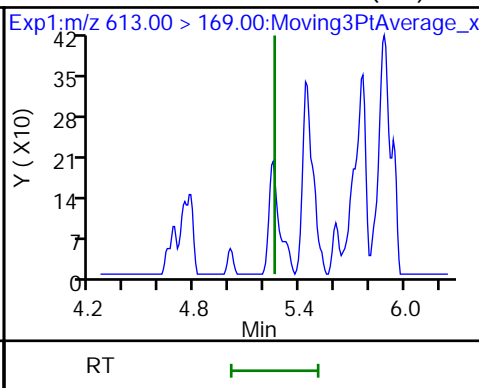
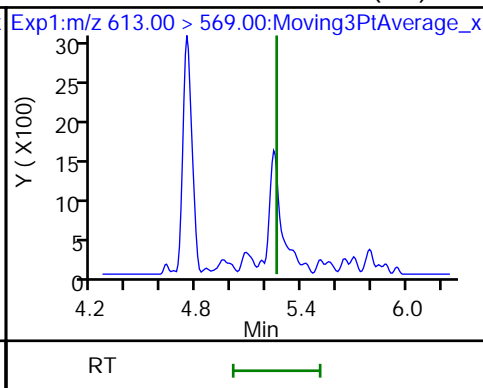
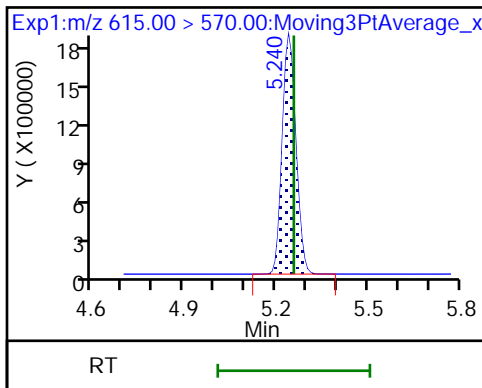




D 43 13C2 PFDaA

42 Perfluorododecanoic acid (ND)

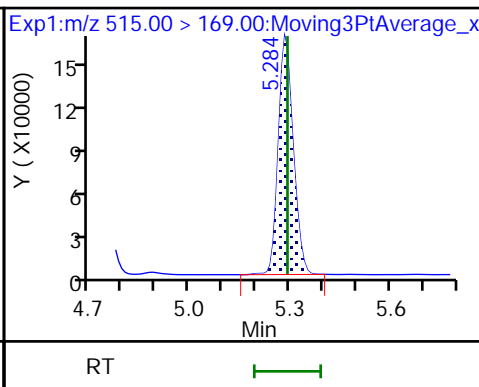
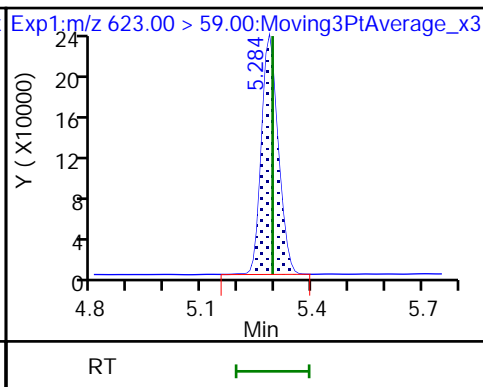
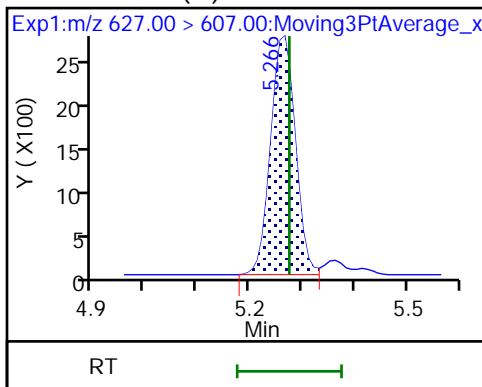
42 Perfluorododecanoic acid (ND)



50 10:2 FTS (M)

D 51 d7-N-MeFOSE-M

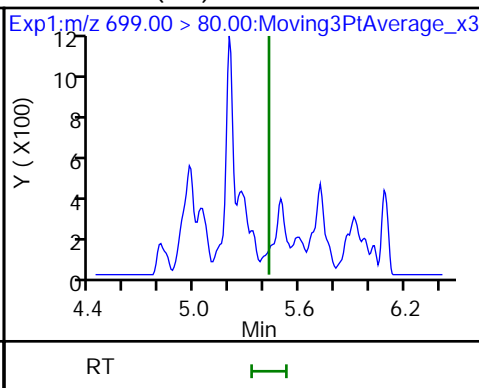
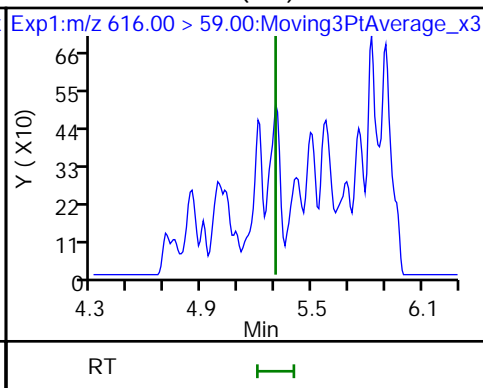
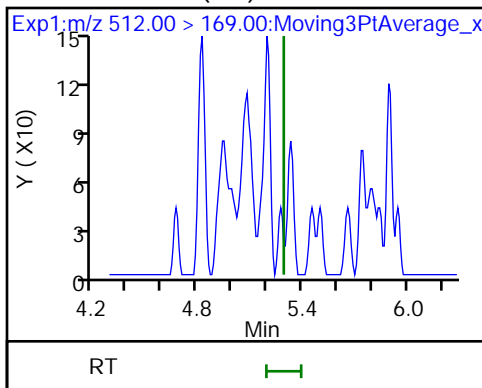
D 58 d-N-MeFOSA-M



61 NMeFOSA (ND)

49 N-MeFOSE-M (ND)

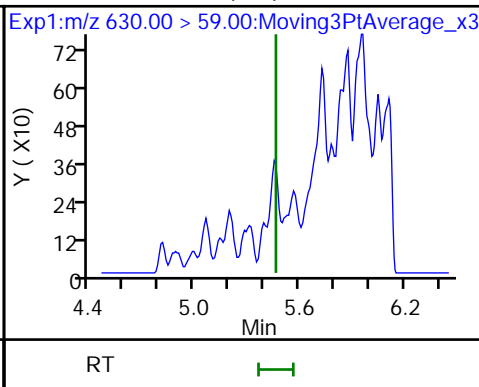
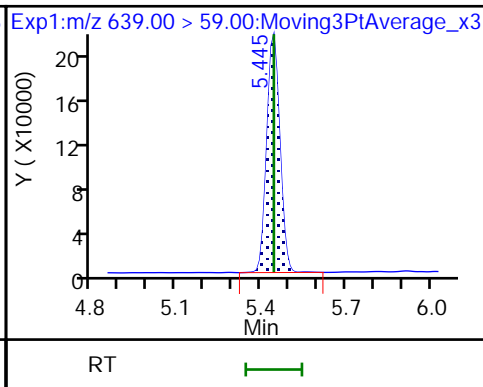
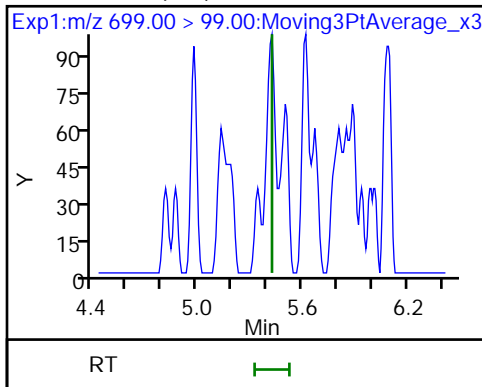
54 PFDoS (ND)

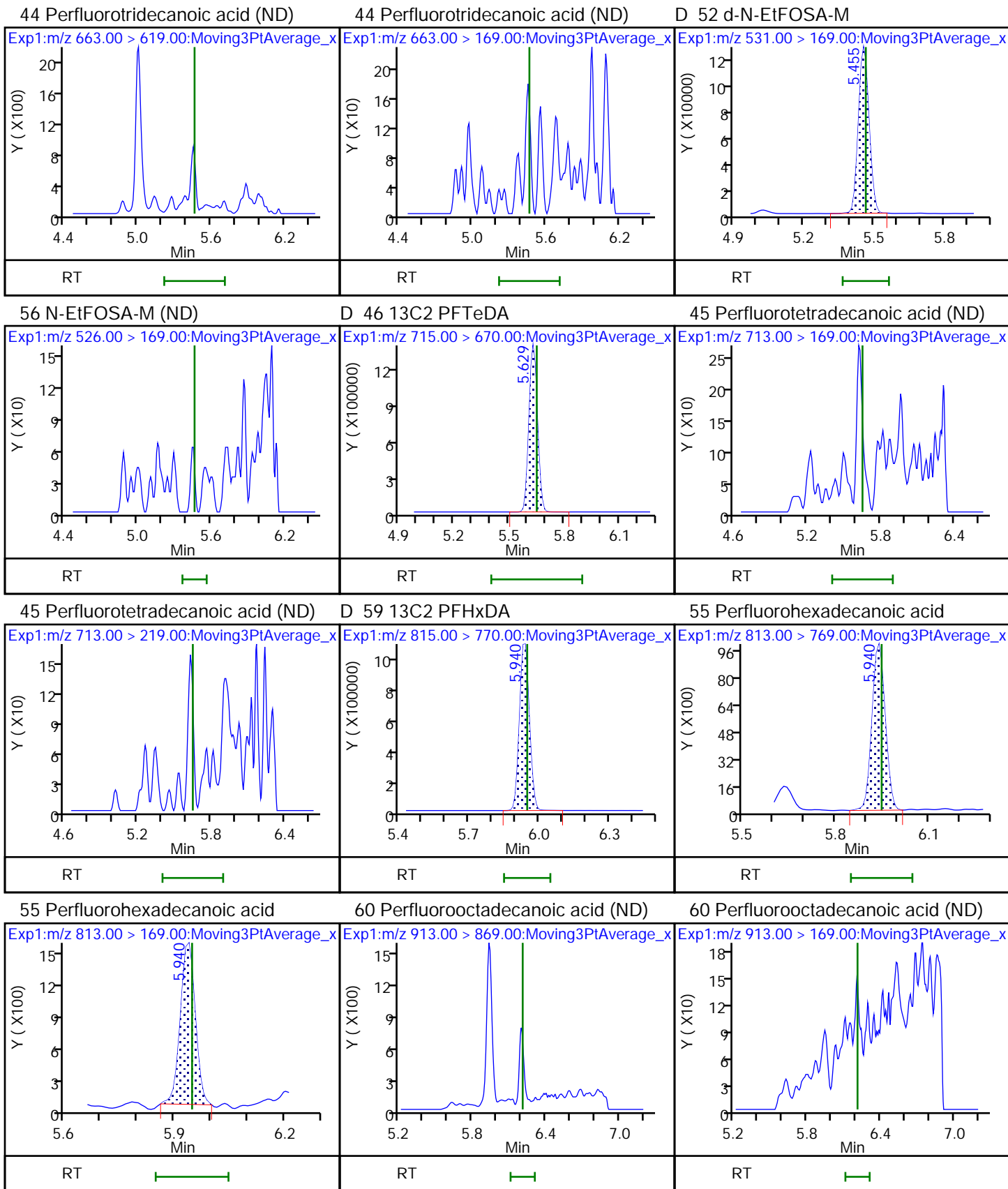


54 PFDoS (ND)

D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M (ND)







FORM I  
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 140-57613/1-B  
 Matrix: Air Lab File ID: 008.d  
 Analysis Method: 537 (modified) Date Collected: \_\_\_\_\_  
 Extraction Method: None Date Extracted: 01/04/2022 08:59  
 Sample wt/vol: 1 (Sample) Date Analyzed: 01/12/2022 18:44  
 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.: 57865 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\20220112-22237.b\_008.d  
 Lims ID: MB 140-57613/1-B  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 12-Jan-2022 18:44:37 ALS Bottle#: 8 Worklist Smp#: 8  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022237-008 mb 140-57613/1-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:15:14 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 09:48:23  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_007.d

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	2.806	2.802	0.004	1.000	147857	0.0412	14.9		
D 1 13C4 PFBA	217.00 > 172.00	2.806	2.802	0.004	0.678	5712622	1.21	97.1	10901	
D 3 13C5 PFPeA	267.90 > 223.00	3.122	3.116	0.006	0.754	4676559	1.28	102	8192	
4 Perfluoropentanoic acid	262.90 > 219.00	3.122	3.116	0.006	1.000	20440	0.005739	3.1		7
LOD = 0.006500										
D 6 13C3 PFBS	301.90 > 80.00	3.130	3.132	-0.002	0.756	2573430	1.06	90.8	5521	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.130	3.132	-0.002	1.000	5865	0.002415	6.2		7
	298.90 > 99.00	3.138	3.132	0.006	1.003	2447	Target=2.71 2.40(1.35-4.06)	4.3		
LOD = 0.003450										
D 8 M2-4:2 FTS	329.00 > 81.00	3.421	3.423	-0.002	0.826	1009818	1.35	115	1282	
7 4:2 FTS	327.00 > 307.00		3.423				ND			
D 9 13C2 PFHxA	315.00 > 270.00	3.451	3.444	0.007	0.833	4867871	1.25	99.6	8902	
10 Perfluorohexanoic acid	313.00 > 269.00	3.451	3.444	0.007	1.000	83446	0.0247	22.7		
	313.00 > 119.00	3.451	3.444	0.007	1.000	6094	Target=12.92 13.69(6.46-19.37)	6.1		
11 Perfluoropentanesulfonic acid	349.00 > 80.00		3.444				ND			
	349.00 > 99.00		3.444							

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	3.555	3.548	0.007	0.859	2232227	1.19		95.1	4809	
13 HFPO-DA										
285.00 > 169.00	3.555	3.548	0.007	1.000	11528	0.004773		10.5	7	7
LOD = 0.008250										
S 65 ADONA										
377.00 > 251.00		3.592				0				
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.796	3.789	0.007	1.000	8669	0.004104	Target=3.52	26.5	7	7
399.00 > 99.00	3.787	3.789	-0.002	0.998	2564		3.38(1.76-5.28)	27.3		
LOD = 0.005000										
D 17 18O2 PFHxS										
403.00 > 84.00	3.796	3.789	0.007	0.917	1813621	1.11		94.3	7395	
D 14 13C4 PFHpA										
367.00 > 322.00	3.806	3.799	0.007	0.919	4671370	1.25		100.0	8611	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.806	3.799	0.007	1.000	302604	0.0774	Target=3.30	125		
363.00 > 169.00	3.806	3.799	0.007	1.000	100314		3.02(1.65-4.95)	260		
68 DONA										
377.00 > 251.00		3.834				ND				
377.00 > 85.00		3.834								
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00		4.115				ND				
449.00 > 99.00		4.115								
D 18 M2-6:2 FTS										
429.00 > 81.00	4.132	4.132	0.0	0.998	978282	1.29		109	2607	
D 21 13C4 PFOA										
417.00 > 372.00	4.141	4.132	0.009	1.000	5071648	1.31		105	8701	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.141	4.132	0.009	1.000	1714	0.000423		7.6		
19 6:2 FTS										
427.00 > 407.00	4.132	4.132	0.0	1.000	310878	0.2120		1478		
* 22 13C2 PFOA										
415.00 > 370.00	4.141	4.132	0.009		5153682	1.25		9119		
23 Perfluorooctanoic acid										
413.00 > 369.00	4.141	4.132	0.009	1.000	42331	0.009093	Target=2.61	23.2		
413.00 > 169.00	4.141	4.132	0.009	1.000	14917		2.84(1.30-3.91)	39.5		
\$ 47 13C8 PFOS										
507.00 > 99.00		4.419				ND				
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.427	4.428	-0.001	1.000	4049	0.001705	Target=4.39	7.3	7M	7M
499.00 > 99.00	4.428	4.428	0.0	0.000	0		0.00(2.19-6.58)			
LOD = 0.005500										
D 25 13C4 PFOS										
503.00 > 80.00	4.427	4.428	-0.001	1.069	2581972	1.10		92.2	5100	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
26 Perfluorononanoic acid										7
463.00 > 419.00	4.452	4.445	0.007	1.000	5129	0.003367	Target=4.78	4.5	7	
463.00 > 169.00	4.461	4.445	0.016	1.002	1484		3.46(2.39-7.17)	3.4		
LOD = 0.004250										
D 27 13C5 PFNA										
468.00 > 423.00	4.452	4.445	0.007	1.075	6551604	1.29		103	11320	
63 9CIFOS										
531.00 > 351.00		4.581				ND				
28 Perfluorononanesulfonic acid										
549.00 > 80.00		4.706				ND				
549.00 > 99.00		4.706								
D 34 13C8 FOSA										
506.00 > 78.00	4.715	4.706	0.009	1.139	4243537	1.34		107	4854	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.715	4.706	0.009	1.000	3485	0.001085		13.3		7M
LOD = 0.004400										
D 32 13C2 PFDA										
515.00 > 470.00	4.741	4.732	0.009	1.145	6711946	1.37		109	10547	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.741	4.732	0.009	1.000	39935	0.007711	Target=11.18	31.3		M
513.00 > 169.00	4.749	4.732	0.017	1.002	4199		9.51(5.59-16.77)	12.4		M
31 8:2 FTS										
527.00 > 507.00	4.749	4.749	0.0	1.000	2236	0.001750		9.1		7
LOD = 0.007000										
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.749	0.0	1.147	1080978	1.27		106	1807	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.887	4.878	0.009	1.180	987899	1.71		137	3179	
36 NMeFOSAA										
570.00 > 419.00	4.878	4.887	-0.009	0.998	1041	0.001357		3.3		7
LOD = 0.006000										
37 Perfluorodecanesulfonic acid										
599.00 > 80.00		4.966				ND				
599.00 > 99.00		4.966								
69 Perfluoro-3,6,9-trioxatridecanoic acid										
561.00 > 467.00	4.931	4.970	-0.039	1.114	2007	NC	Target=0.00	4.8		M
561.00 > 235.00	4.914	4.970	-0.056	1.110	2416		0.83(0.00-0.00)	2.3		M
38 Perfluoroundecanoic acid										
563.00 > 519.00		5.002				ND				
563.00 > 169.00		5.002								
D 39 13C2 PFUnA										
565.00 > 520.00	5.002	5.002	0.0	1.208	6560943	1.34		107	13938	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.022	5.012	0.010	1.213	1040572	1.64		131	6383	
40 NEtFOSA										
584.00 > 419.00		5.022				ND				
57 11CIFOS										
631.00 > 451.00	5.112	5.102	0.010	1.155	874	0.000242		4.6		7
LOD = 0.004350										



Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 43 13C2 PFDaA										
615.00 > 570.00	5.240	5.231	0.009	1.266	6443183	1.25		100	18848	
42 Perfluorododecanoic acid										
613.00 > 569.00		5.231				ND				
613.00 > 169.00		5.231								
50 10:2 FTS										
627.00 > 607.00	5.266	5.257	0.009	1.109	10531	0.005125			94.8	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.284	5.275	0.009	1.276	821393	1.33		106	599	
49 N-MeFOSE-M										
616.00 > 59.00	5.249	5.284	-0.035	0.993	58350	0.0797		9.0		M
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.284	5.284	0.0	1.276	531673	1.21		96.5	45.6	
61 NMeFOSA										
512.00 > 169.00		5.284				ND				
54 PFDoS										
699.00 > 80.00		5.404				ND				
699.00 > 99.00		5.404								
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.445	5.435	0.010	1.315	754828	1.22		97.4	419	
62 N-EtFOSE-M										
630.00 > 59.00		5.445				ND				
44 Perfluorotridecanoic acid										
663.00 > 619.00		5.445				ND				
663.00 > 169.00		5.445								
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.455	5.445	0.010	1.317	413990	1.14		91.0	648	
56 N-EtFOSA-M										
526.00 > 169.00		5.455				ND				
D 46 13C2 PFTeDA										
715.00 > 670.00	5.629	5.629	0.0	1.360	4436198	1.13		90.5	9874	
45 Perfluorotetradecanoic acid										
713.00 > 169.00		5.629				ND				
713.00 > 219.00		5.629								
D 59 13C2 PFHxDA										
815.00 > 770.00	5.940	5.931	0.009	1.434	2094030	0.7881		63.1	4800	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.940	5.931	0.009	1.000	23268	0.002567	Target=8.21	69.6		7
813.00 > 169.00	5.940	5.931	0.009	1.000	3430		6.78(4.11-12.32)	10.2		7
LOD = 0.009000										
60 Perfluorooctadecanoic acid										
913.00 > 869.00		6.195				ND				
913.00 > 169.00		6.195								
S 66 F-53B										
212.90 > 169.00		0.0				0				

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
--------	----	--------	--------	--------	----------	--------------	---------------	------	-----	-------

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\20220112-22237.b\\_008.d

Injection Date: 12-Jan-2022 18:44:37

Instrument ID: LCA

Lims ID: MB 140-57613/1-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 8

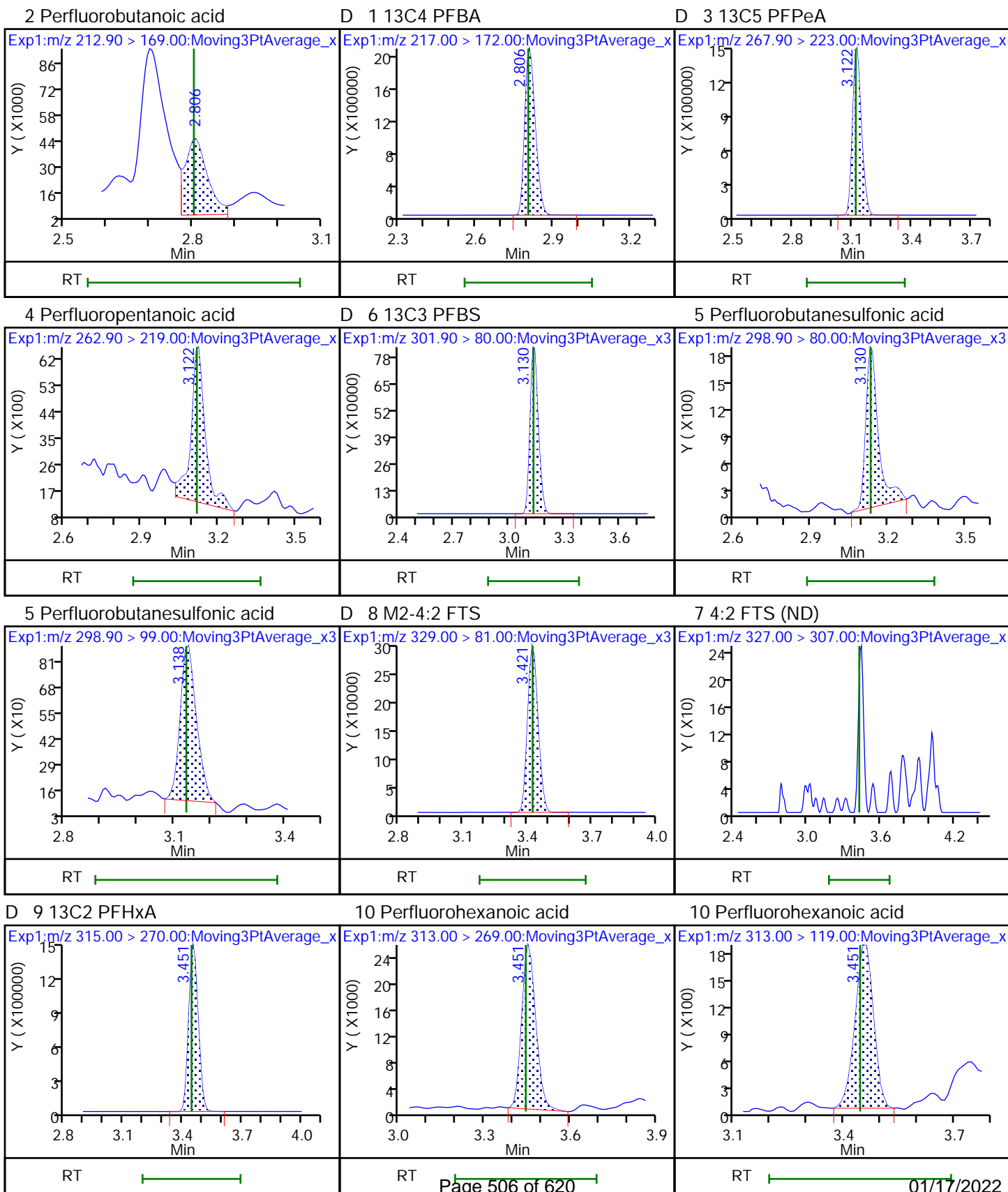
Worklist Smp#: 8

Injection Vol: 1.0 ul

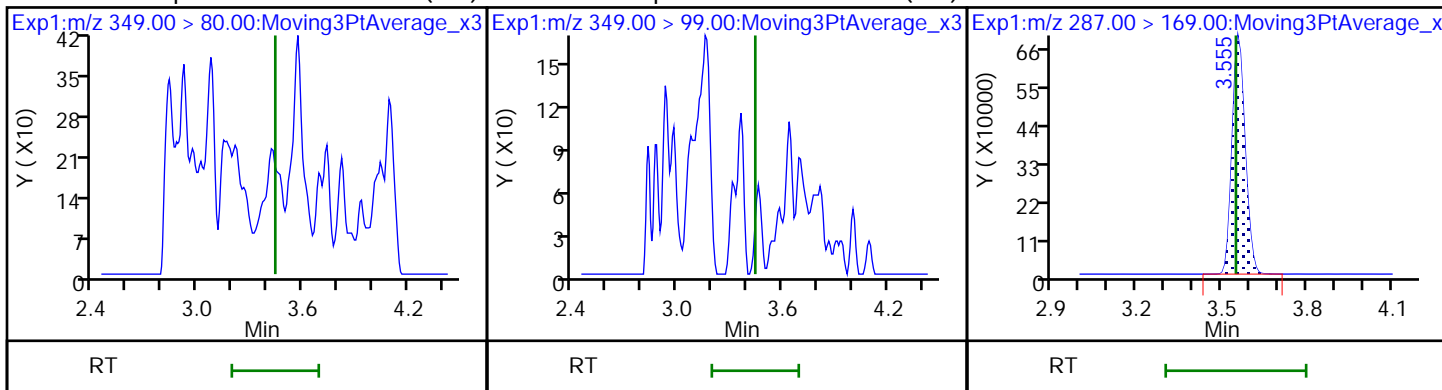
Dil. Factor: 1.0000

Method: PFC\_LCA

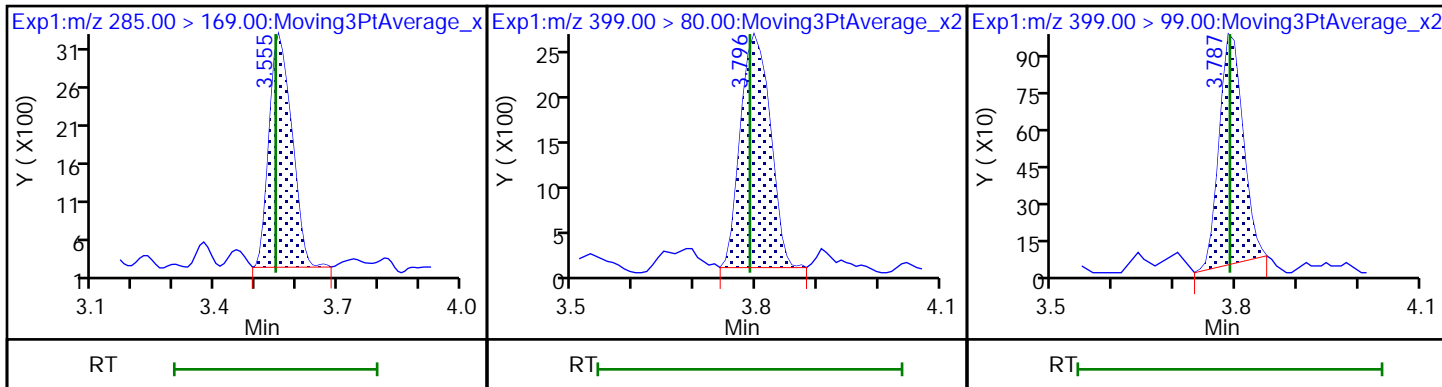
Limit Group: LC - PFC- ICAL



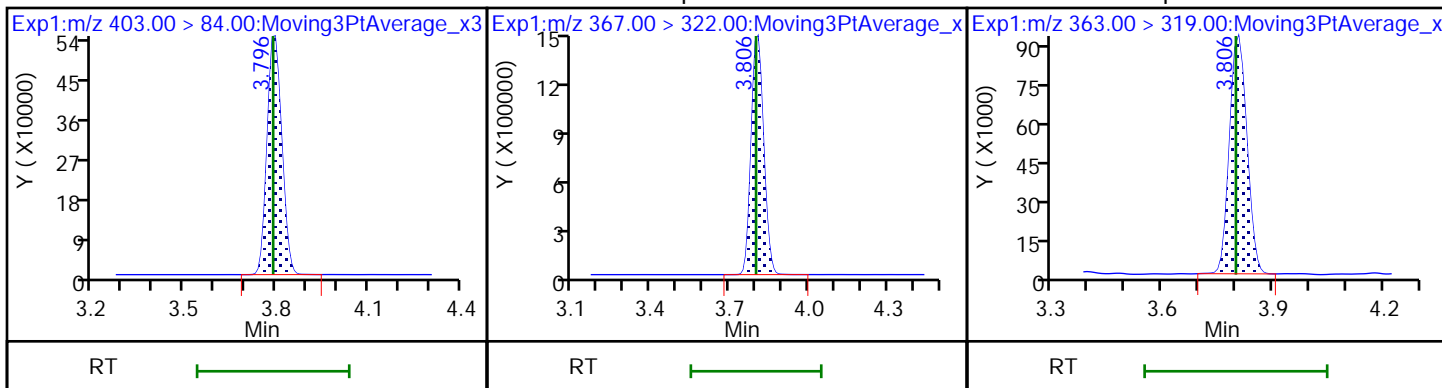
11 Perfluoropentanesulfonic acid (ND) 11 Perfluoropentanesulfonic acid (ND) D 12 13C3 HFPO-DA



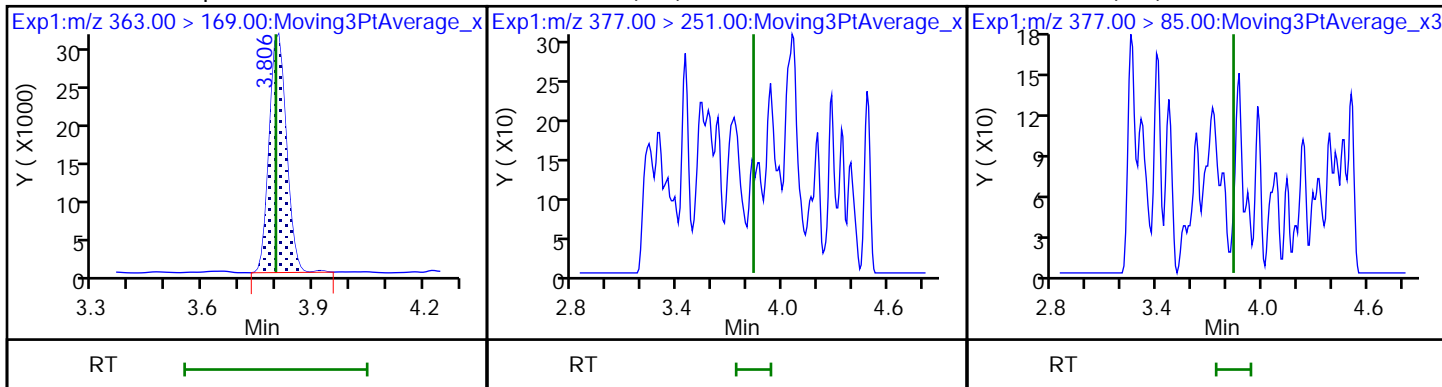
13 HFPO-DA 16 Perfluorohexanesulfonic acid 16 Perfluorohexanesulfonic acid



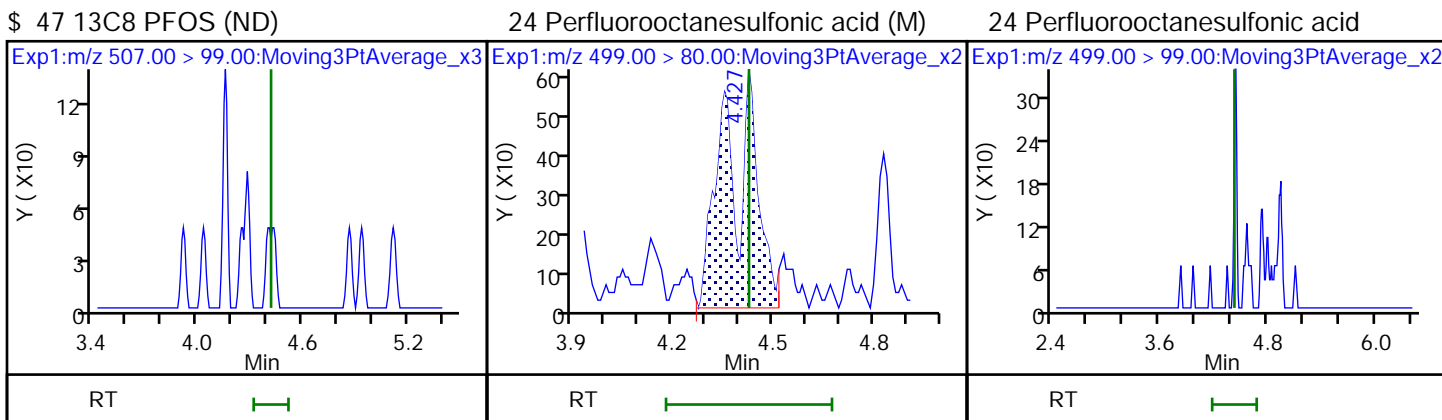
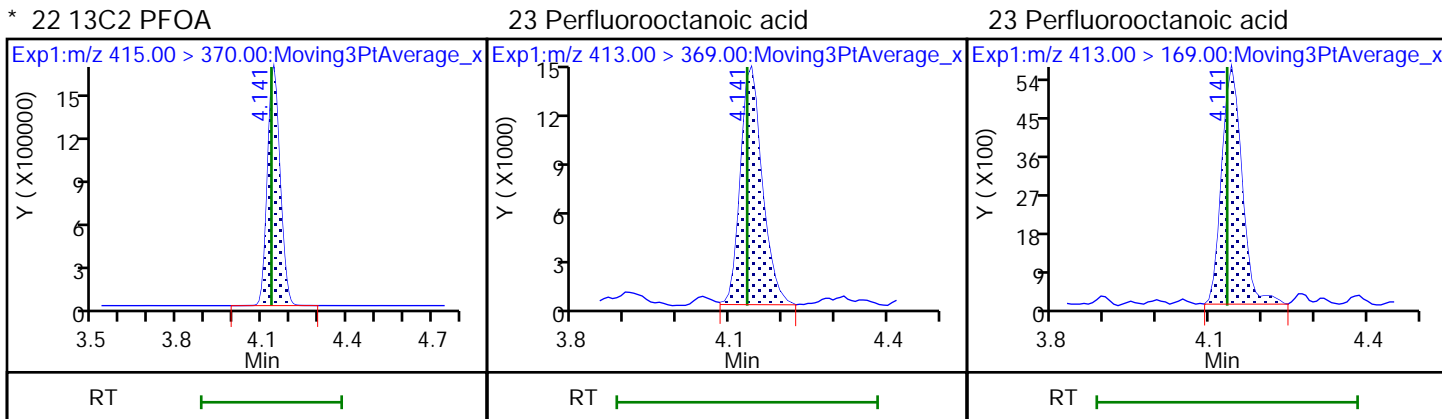
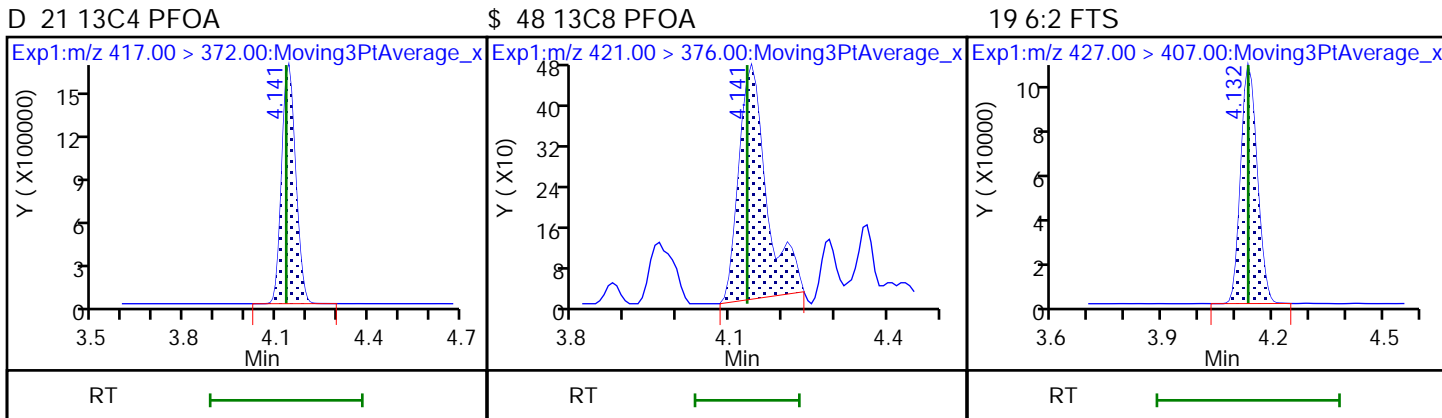
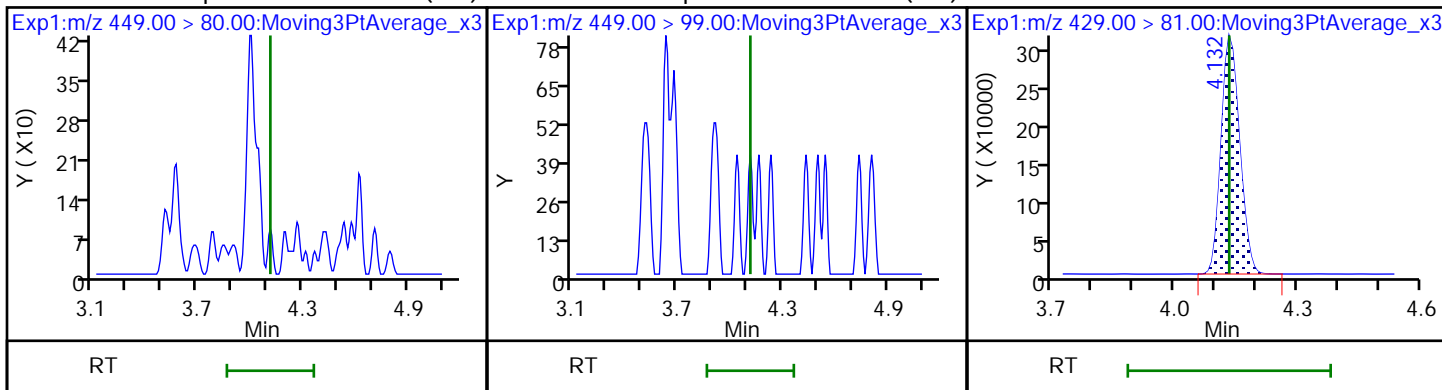
D 17 18O2 PFHxS D 14 13C4 PFHpA 15 Perfluoroheptanoic acid



15 Perfluoroheptanoic acid 68 DONA (ND) 68 DONA (ND)



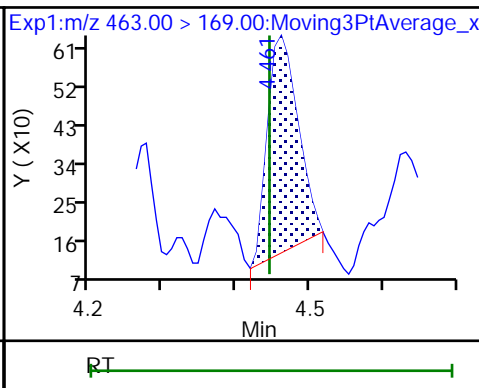
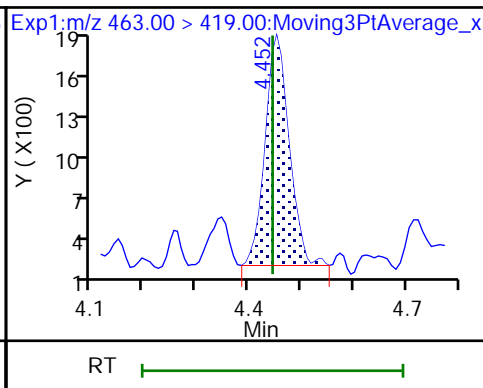
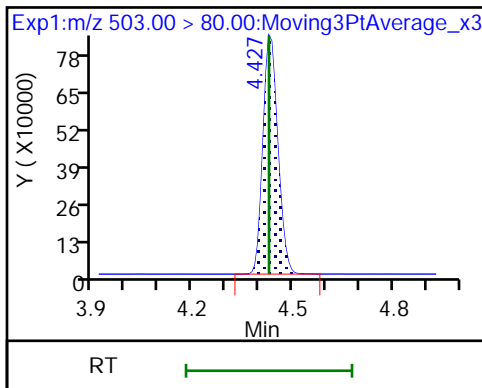
20 Perfluoroheptanesulfonic acid (ND) 20 Perfluoroheptanesulfonic acid (ND) D 18 M2-6:2 FTS



D 25 13C4 PFOS

26 Perfluorononanoic acid

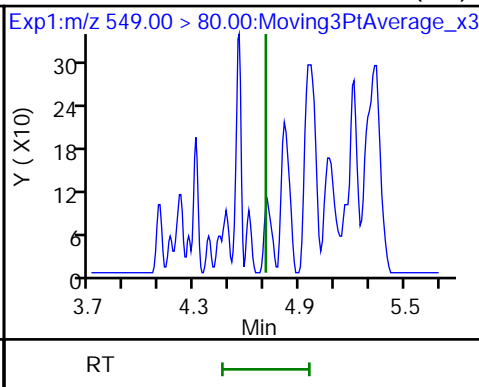
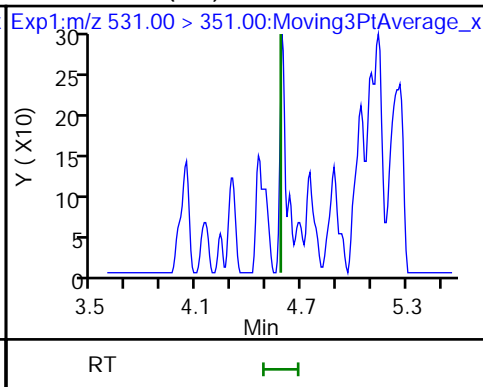
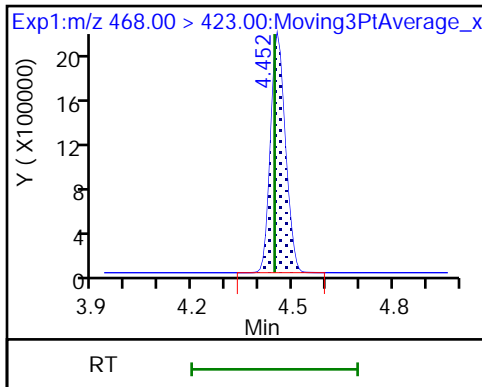
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS (ND)

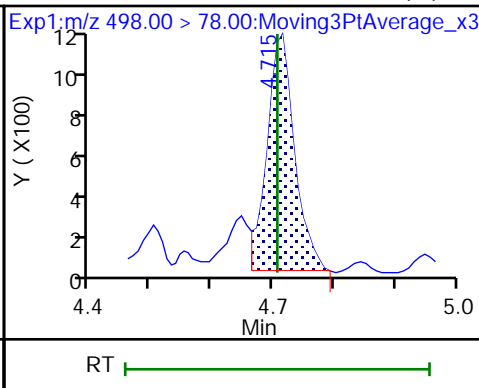
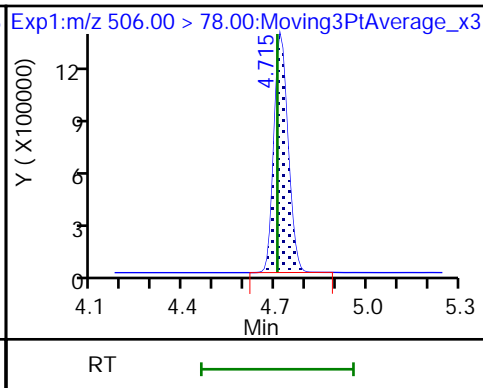
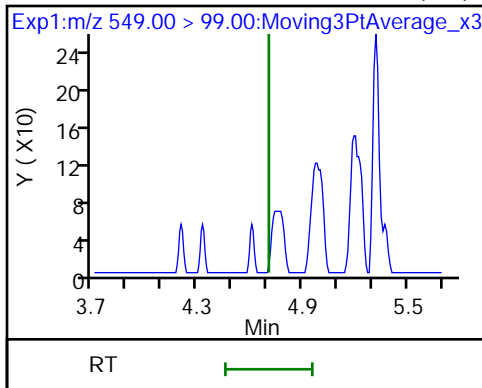
28 Perfluorononanesulfonic acid (ND)



28 Perfluorononanesulfonic acid (ND)

D 34 13C8 FOSA

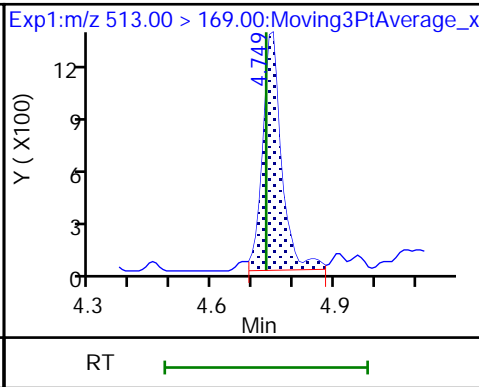
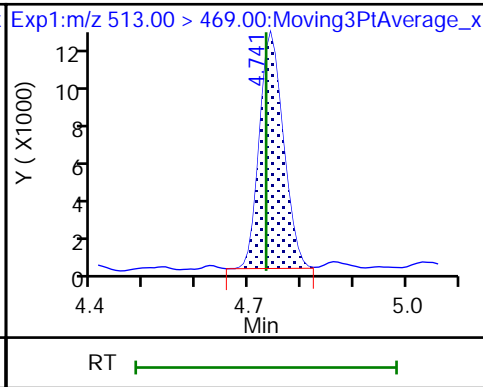
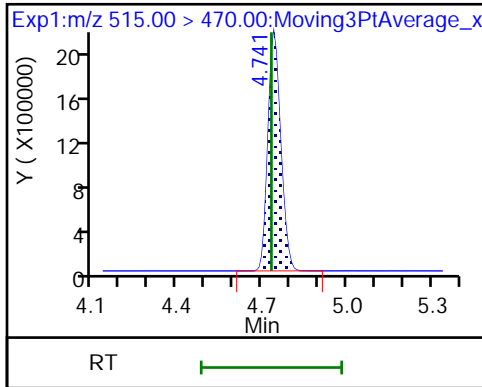
33 Perfluorooctanesulfonamide (M)

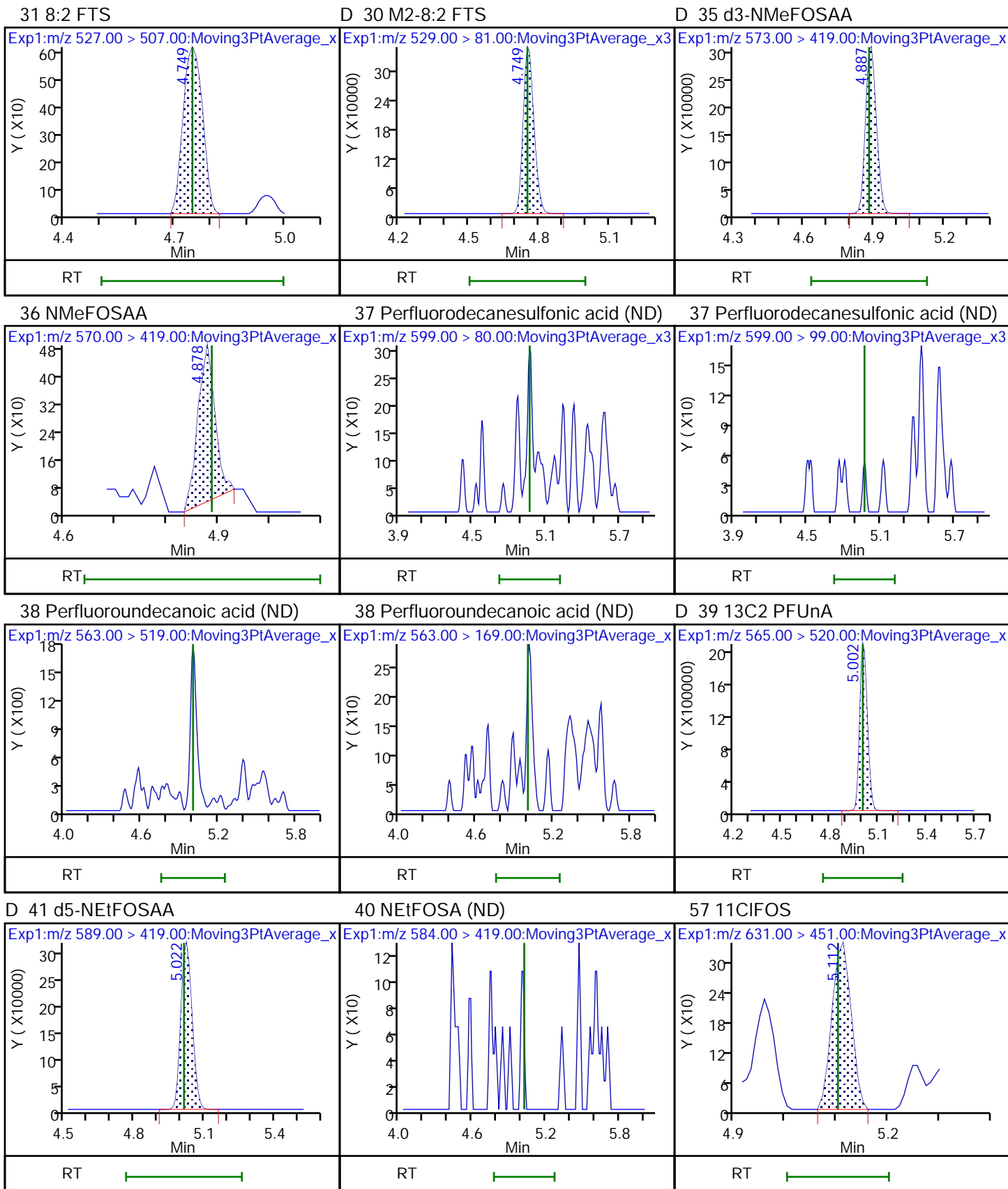


D 32 13C2 PFDA

29 Perfluorodecanoic acid

29 Perfluorodecanoic acid (M)

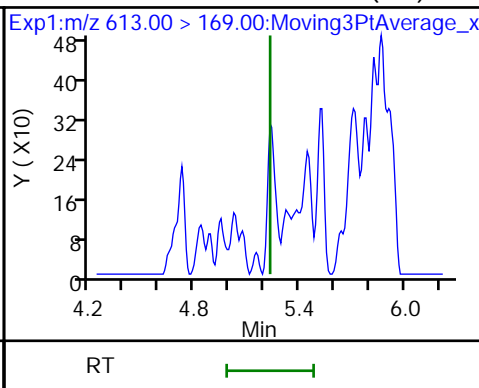
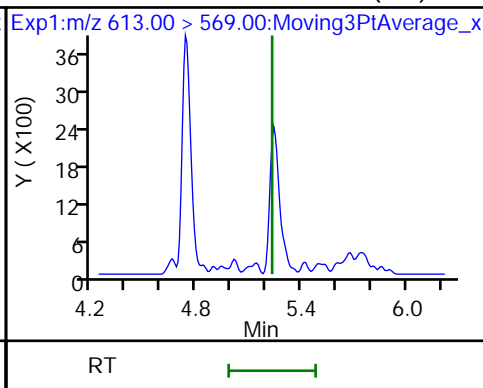
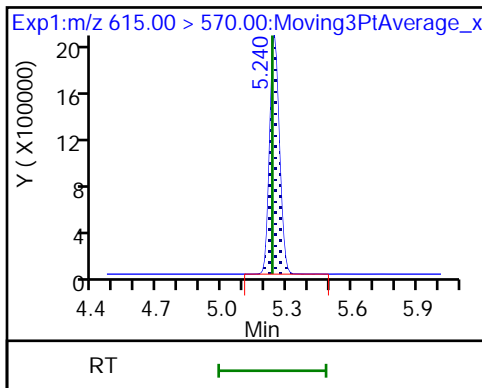




D 43 13C2 PFDaA

42 Perfluorododecanoic acid (ND)

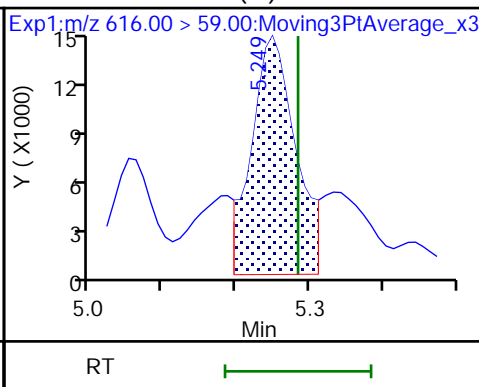
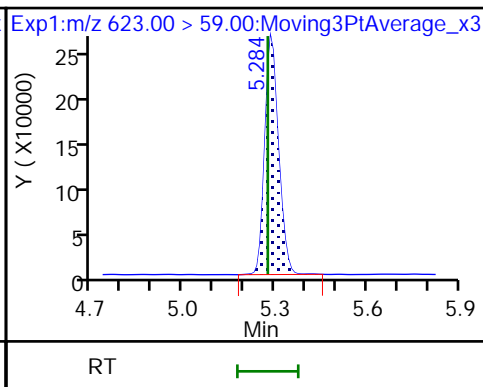
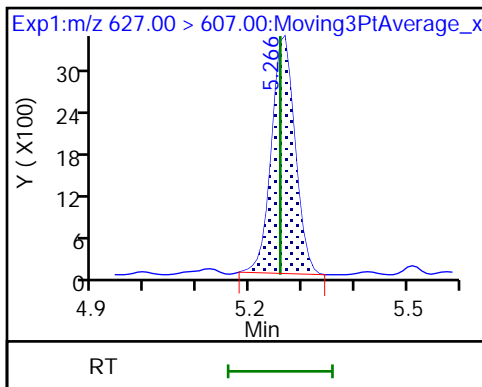
42 Perfluorododecanoic acid (ND)



50 10:2 FTS

D 51 d7-N-MeFOSE-M

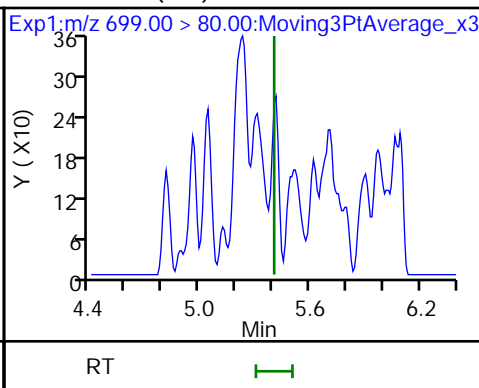
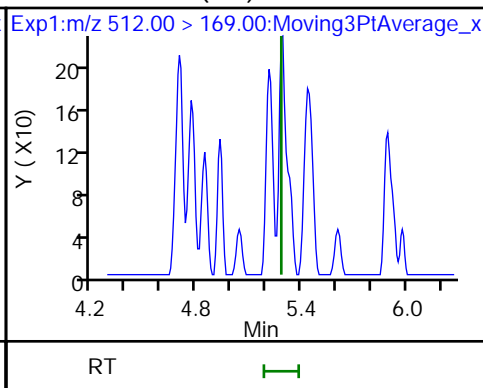
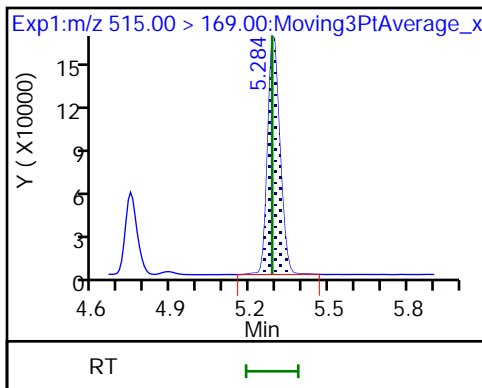
49 N-MeFOSE-M (M)



D 58 d-N-MeFOSA-M

61 NMeFOSA (ND)

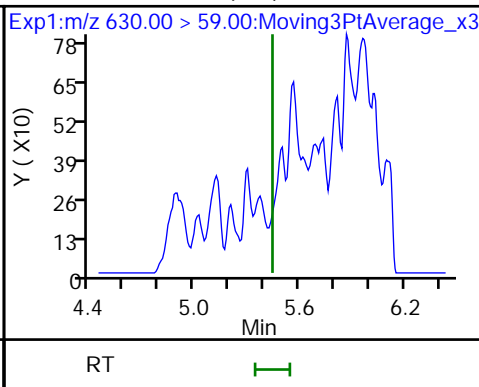
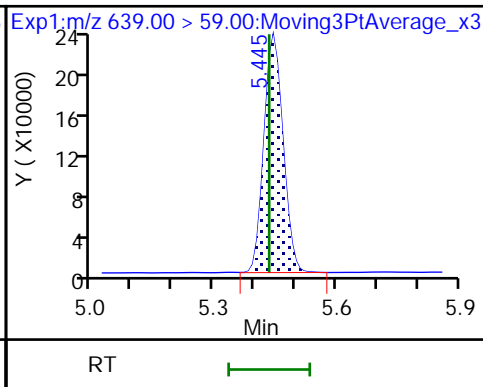
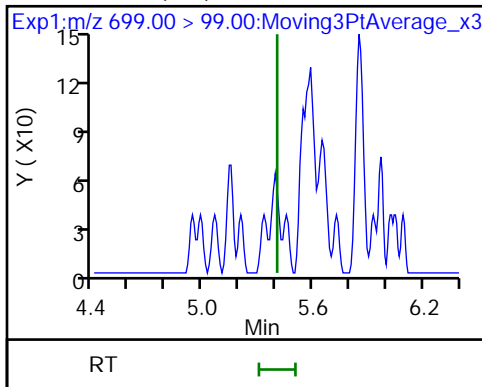
54 PFDoS (ND)



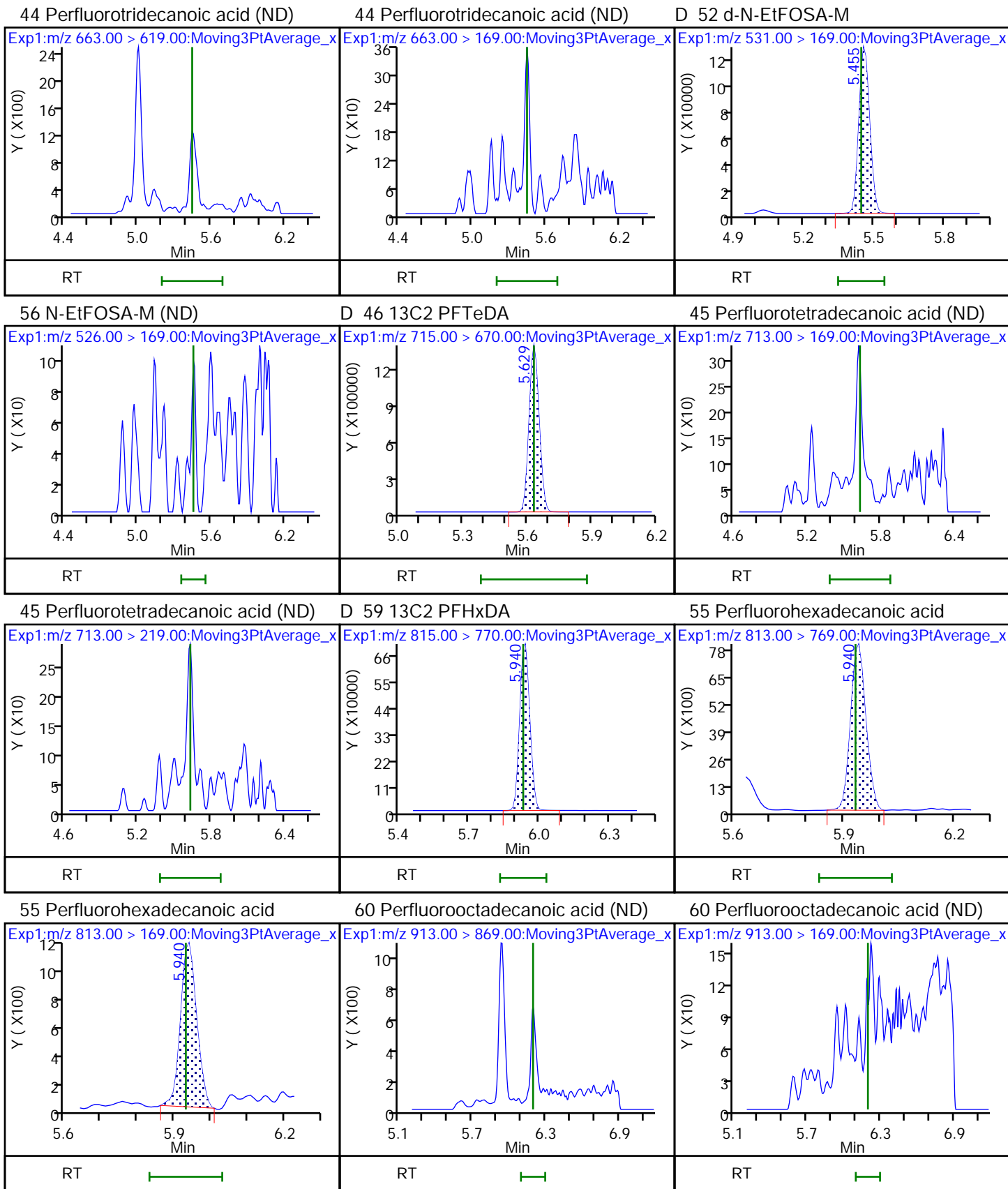
54 PFDoS (ND)

D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M (ND)









Eurofins TestAmerica, Knoxville  
Recovery Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_008.d  
 Lims ID: MB 140-57613/1-B  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 12-Jan-2022 18:44:37 ALS Bottle#: 8 Worklist Smp#: 8  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022237-008 mb 140-57613/1-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:15:14 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 09:48:23

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

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 140-57645/1-B  
 Matrix: Air Lab File ID: 006.d  
 Analysis Method: 537 (modified) Date Collected: \_\_\_\_\_  
 Extraction Method: None Date Extracted: 01/04/2022 14:49  
 Sample wt/vol: 1 (Sample) Date Analyzed: 01/09/2022 12:49  
 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.: 57742 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	102		25-150

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_006.d  
 Lims ID: MB 140-57645/1-B  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 09-Jan-2022 12:49:27 ALS Bottle#: 6 Worklist Smp#: 6  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022187-006 MB 140-57645/1-B  
 Misc. Info.: Plate: 11 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 15:08:06 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1641

First Level Reviewer: cochranj Date: 10-Jan-2022 09:14:35  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_005.d

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	2.779	2.790	-0.011	0.678	6338742	1.26	101	13190	
2 Perfluorobutanoic acid										7
212.90 > 169.00	2.774	2.790	-0.016	0.998	2408	0.000605		0.7	7	
LOD = 0.0100										
D 3 13C5 PFPeA	267.90 > 223.00	3.083	3.098	-0.015	0.752	4898929	1.26	101	9557	
4 Perfluoropentanoic acid										7
262.90 > 219.00	3.083	3.098	-0.015	1.000	6310	0.001691		2.2	7	
LOD = 0.006500										
D 6 13C3 PFBS	301.90 > 80.00	3.099	3.115	-0.016	0.756	2968447	1.14	98.3	12796	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00		3.115				ND				
298.90 > 99.00		3.115								
D 8 M2-4:2 FTS	329.00 > 81.00	3.383	3.391	-0.008	0.826	935254	1.17	100	1555	
7 4:2 FTS										
327.00 > 307.00		3.402				ND				
11 Perfluoropentanesulfonic acid										
349.00 > 80.00		3.422				ND				
349.00 > 99.00		3.422								
D 9 13C2 PFHxA	315.00 > 270.00	3.413	3.422	-0.009	0.833	5261759	1.26	101	8916	
10 Perfluorohexanoic acid										
313.00 > 269.00		3.422				ND				
313.00 > 119.00		3.422								

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	3.520	3.528	-0.008	0.859	2548857	1.27		102	4310	
13 HFPO-DA										
285.00 > 169.00	3.520	3.528	-0.008	1.000	2264	0.000821		2.0	7M	7M
LOD = 0.008250										
S 65 ADONA										
377.00 > 251.00		3.592				0				
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.752	3.760	-0.008	1.000	8789	0.003772	Target=3.52	51.9	7	7
399.00 > 99.00	3.752	3.760	-0.008	1.000	2369		3.71(1.76-5.28)	24.8		
LOD = 0.005000										
D 17 18O2 PFHxS										
403.00 > 84.00	3.752	3.760	-0.008	0.916	2000836	1.15		97.6	6418	
D 14 13C4 PFHpA										
367.00 > 322.00	3.761	3.769	-0.008	0.918	5197611	1.31		104	6986	
15 Perfluoroheptanoic acid										
363.00 > 319.00		3.769				ND				
363.00 > 169.00		3.769								
68 DONA										
377.00 > 251.00		3.807				ND				
377.00 > 85.00		3.807								
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00		4.089				ND				
449.00 > 99.00		4.089								
19 6:2 FTS										
427.00 > 407.00	4.089	4.106	-0.017	0.998	3615	0.004635		23.1	7	7
LOD = 0.005000										
D 21 13C4 PFOA										
417.00 > 372.00	4.097	4.106	-0.009	1.000	5404979	1.31		105	7759	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.097	4.106	-0.009	1.000	1047343	1.30		109	3194	
\$ 48 13C8 PFOA										
421.00 > 376.00		4.106				ND				
23 Perfluorooctanoic acid										
413.00 > 369.00	4.097	4.106	-0.009	1.000	22491	0.004533	Target=2.62	16.4	7	7
413.00 > 169.00	4.097	4.106	-0.009	1.000	8833		2.55(1.31-3.93)	19.4		
LOD = 0.007800										
* 22 13C2 PFOA										
415.00 > 370.00	4.097	4.106	-0.009		5489432	1.25			9434	
\$ 47 13C8 PFOS										
507.00 > 99.00		4.393				ND				
D 25 13C4 PFOS										
503.00 > 80.00	4.393	4.401	-0.008	1.072	3007011	1.21		101	4456	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00		4.401				ND				
499.00 > 99.00		4.401								
D 27 13C5 PFNA										
468.00 > 423.00	4.410	4.427	-0.017	1.076	6805153	1.26		100	8930	

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		4.427				ND				
463.00 > 169.00		4.427								
63 9CIFOS										
531.00 > 351.00		4.560				ND				
28 Perfluorononanesulfonic acid										
549.00 > 80.00		4.681				ND				
549.00 > 99.00		4.681								
D 34 13C8 FOSA										
506.00 > 78.00	4.689	4.706	-0.017	1.144	4589441	1.36		109	4163	
33 Perfluorooctanesulfonamide										
498.00 > 78.00		4.706				ND				
D 32 13C2 PFDA										
515.00 > 470.00	4.698	4.715	-0.017	1.146	6793902	1.30		104	11998	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.698	4.715	-0.017	1.000	15253	0.002910	Target=11.50	23.8	7	7M
513.00 > 169.00	4.698	4.715	-0.017	1.000	2089		7.30(5.75-17.24)	7.4	M	
LOD = 0.004450										
31 8:2 FTS										
527.00 > 507.00		4.723				ND				
D 30 M2-8:2 FTS										
529.00 > 81.00	4.715	4.723	-0.008	1.151	1102158	1.21		101	1823	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.843	4.852	-0.009	1.182	748284	1.22		97.3	3449	
36 NMeFOSAA										
570.00 > 419.00		4.861				ND				
37 Perfluorodecanesulfonic acid										
599.00 > 80.00		4.940				ND				
599.00 > 99.00		4.940								
69 Perfluoro-3,6,9-trioxatridecanoic acid										
561.00 > 467.00		4.970				ND				
561.00 > 235.00		4.970								
38 Perfluoroundecanoic acid										
563.00 > 519.00		4.975				ND				
563.00 > 169.00		4.975								
D 39 13C2 PFUnA										
565.00 > 520.00	4.966	4.975	-0.009	1.212	6394993	1.22		98.0	9309	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.984	4.993	-0.009	1.216	867741	1.29		103	3824	
40 NEtFOSA										
584.00 > 419.00		4.993				ND				
57 11CIFOS										
631.00 > 451.00		5.072				ND				
D 43 13C2 PFDoA										
615.00 > 570.00	5.196	5.213	-0.017	1.268	7199137	1.31		105	15004	

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		5.213				ND				
613.00 > 169.00		5.213								
50 10:2 FTS										
627.00 > 607.00	5.222	5.231	-0.009	1.108	10871	0.005189			99.0	M
										M
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.275	5.284	-0.009	1.287	804895	1.22		97.8	702	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.275	5.284	-0.009	1.287	559645	1.19		95.4	49.8	
61 NMeFOSA										
512.00 > 169.00		5.284				ND				
49 N-MeFOSE-M										
616.00 > 59.00		5.292				ND				
54 PFDoS										
699.00 > 80.00		5.383				ND				
699.00 > 99.00		5.383								
44 Perfluorotridecanoic acid										
663.00 > 619.00		5.414				ND				
663.00 > 169.00		5.414								
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.434	5.444	-0.010	1.326	858717	1.30		104	370	
62 N-EtFOSE-M										
630.00 > 59.00		5.454				ND				
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.444	5.454	-0.010	1.329	451019	1.16		93.1	774	
56 N-EtFOSA-M										
526.00 > 169.00		5.464				ND				
D 46 13C2 PFTeDA										
715.00 > 670.00	5.585	5.607	-0.022	1.363	5367661	1.29		103	11114	
45 Perfluorotetradecanoic acid										
713.00 > 169.00		5.607				ND				
713.00 > 219.00		5.607								
D 59 13C2 PFHxDA										
815.00 > 770.00	5.895	5.904	-0.009	1.439	3600187	1.27		102	5932	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.895	5.904	-0.009	1.000	36385	0.001380	Target=8.21	99.7		7
813.00 > 169.00	5.895	5.904	-0.009	1.000	4211		8.64(4.10-12.31)	21.8		7
LOD = 0.009000										
60 Perfluorooctadecanoic acid										
913.00 > 869.00		6.164				ND				
913.00 > 169.00		6.164								
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

7 - Failed Limit of Detection

### Review Flags

M - Manually Integrated

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\\_006.d

Injection Date: 09-Jan-2022 12:49:27

Instrument ID: LCA

Lims ID: MB 140-57645/1-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 6

Worklist Smp#: 6

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

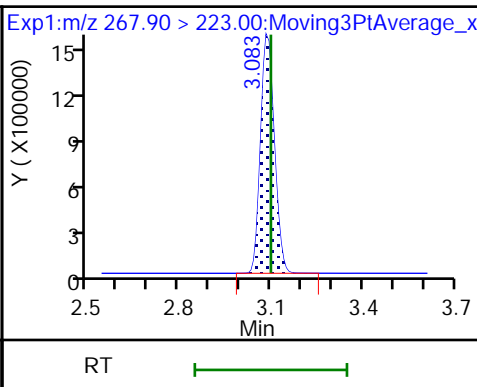
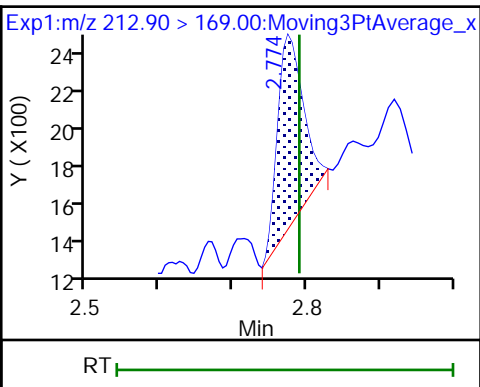
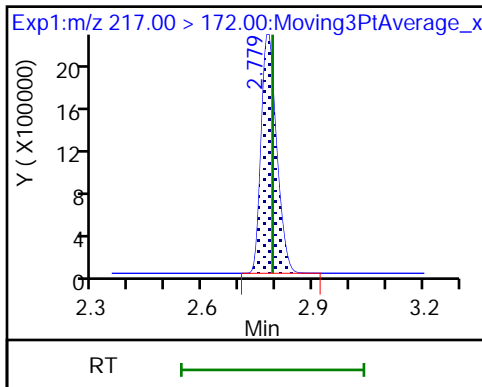
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

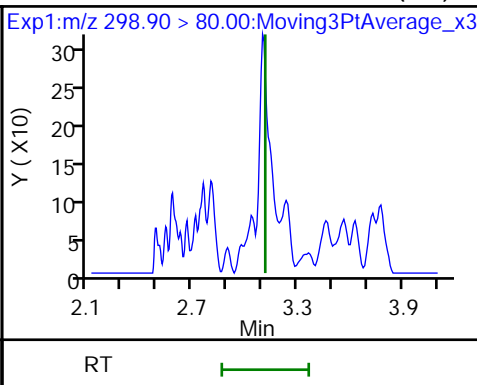
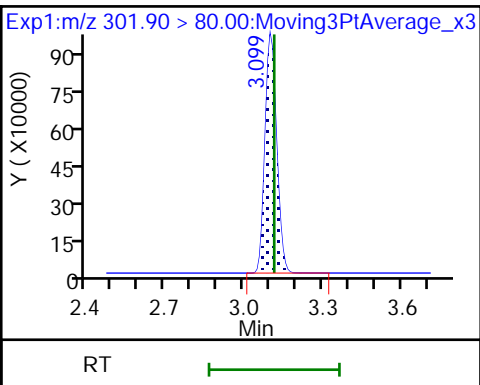
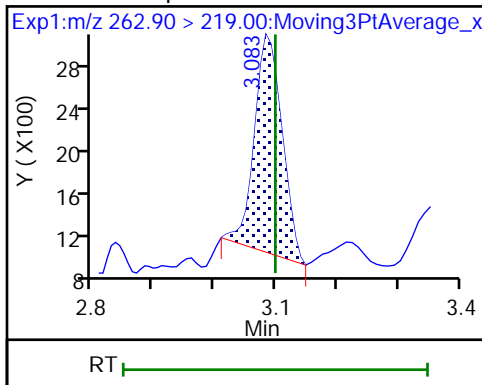
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

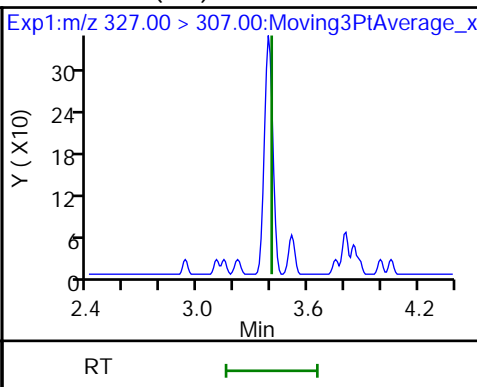
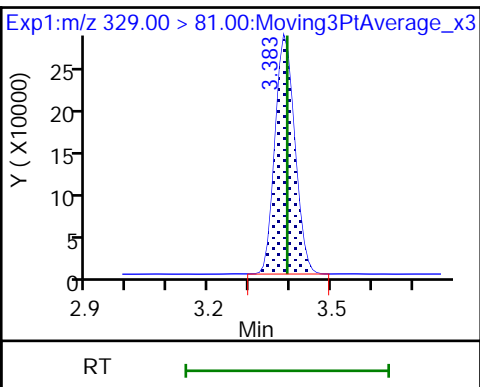
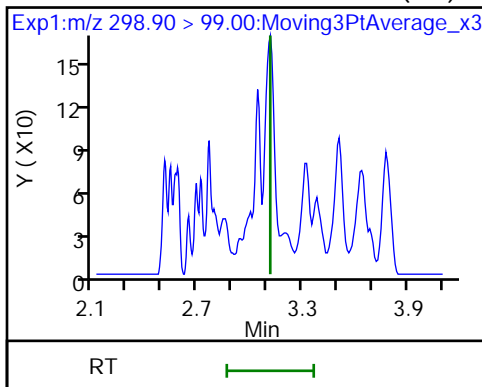
5 Perfluorobutanesulfonic acid (ND)



5 Perfluorobutanesulfonic acid (ND)

D 8 M2-4:2 FTS

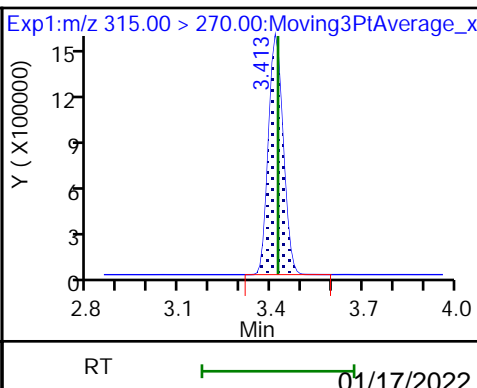
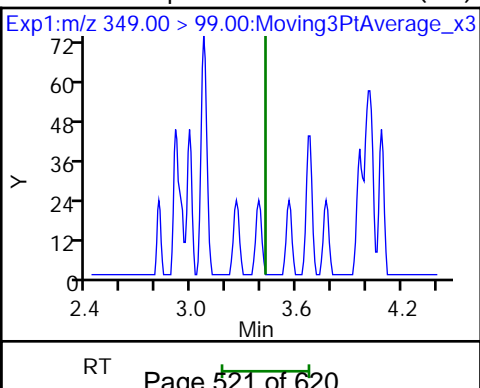
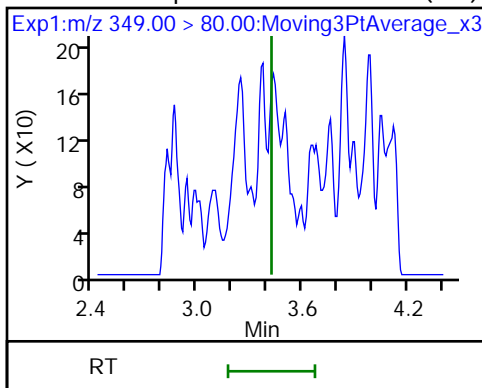
7 4:2 FTS (ND)

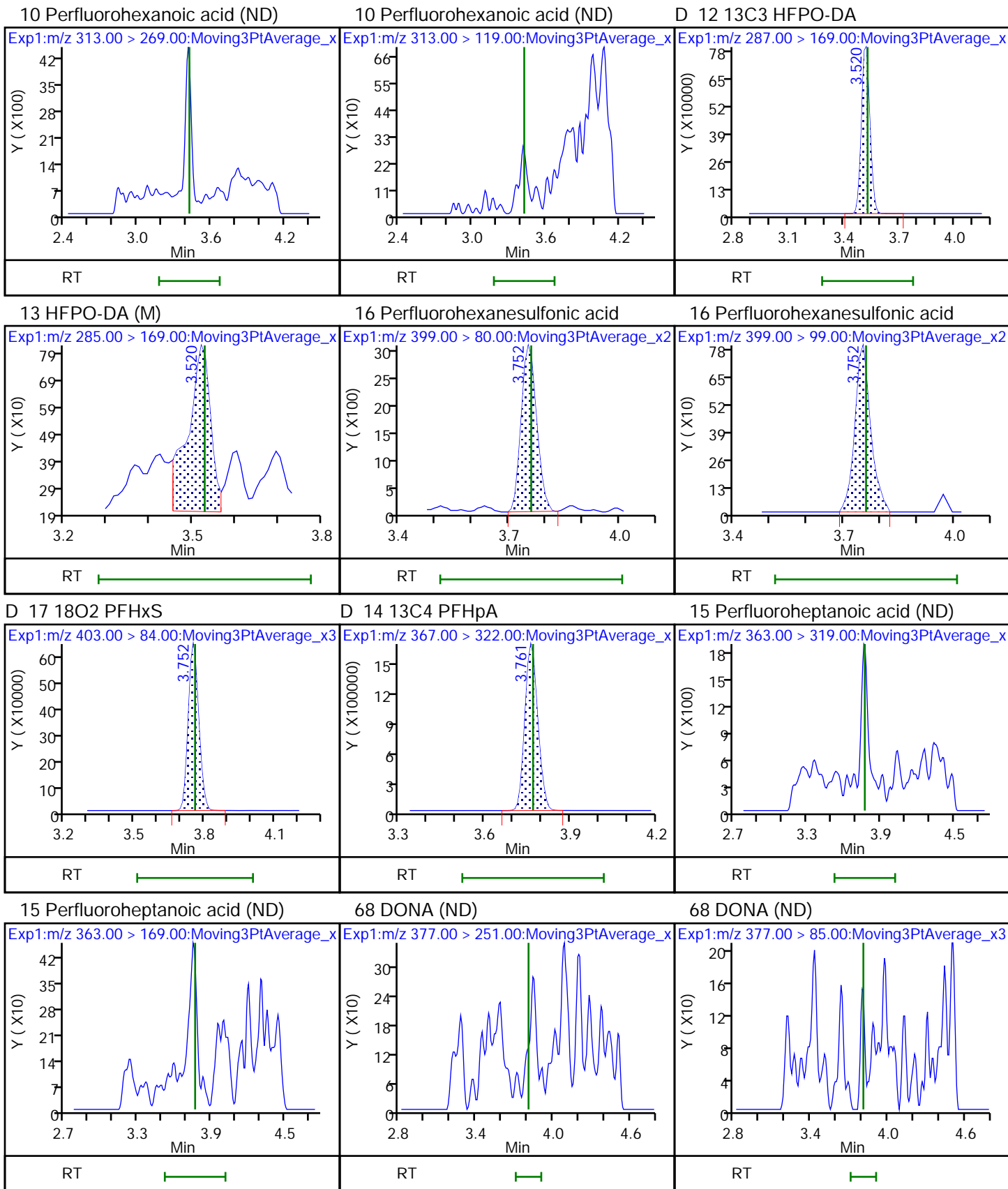


11 Perfluoropentanesulfonic acid (ND)

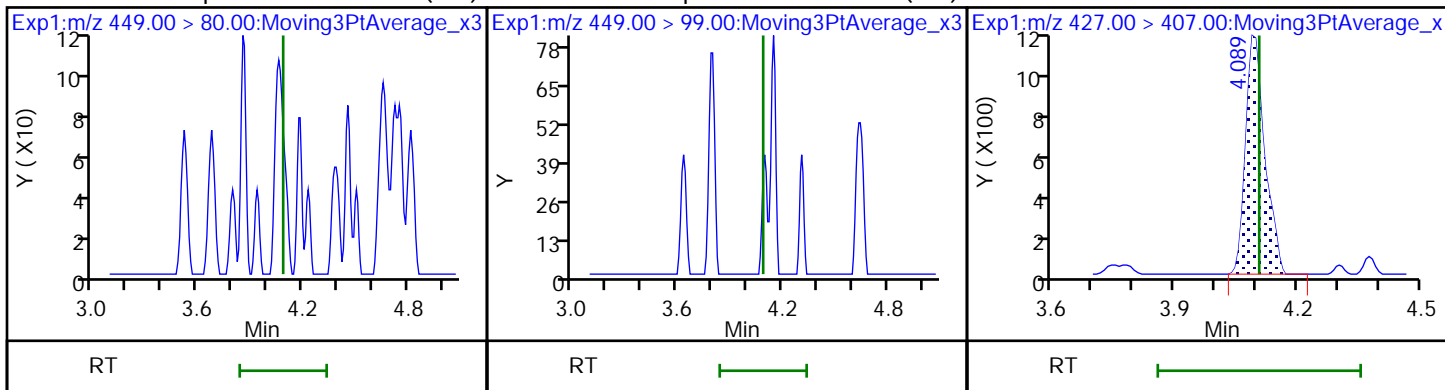
11 Perfluoropentanesulfonic acid (ND)

D 9 13C2 PFHxA





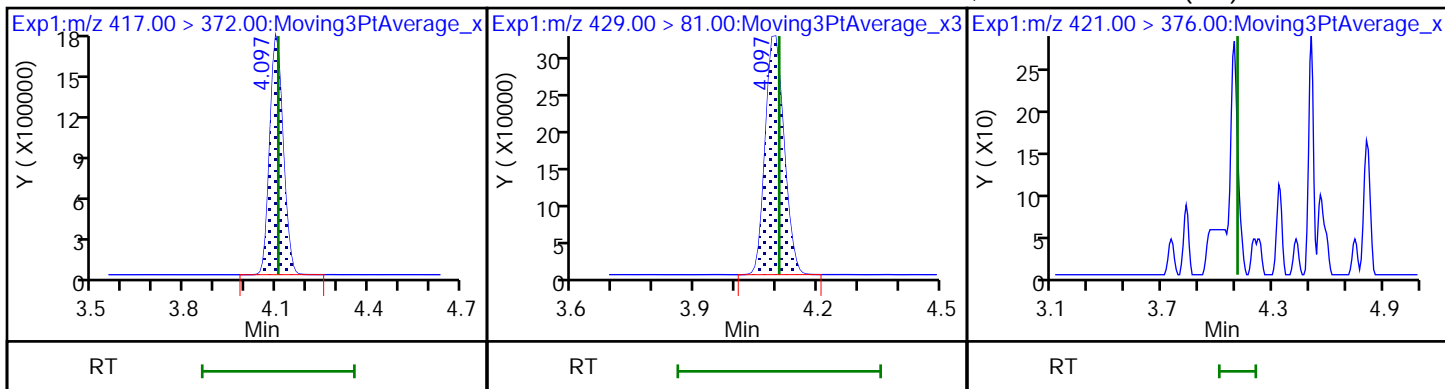
20 Perfluoroheptanesulfonic acid (ND) 20 Perfluoroheptanesulfonic acid (ND) 19 6:2 FTS



D 21 13C4 PFOA

D 18 M2-6:2 FTS

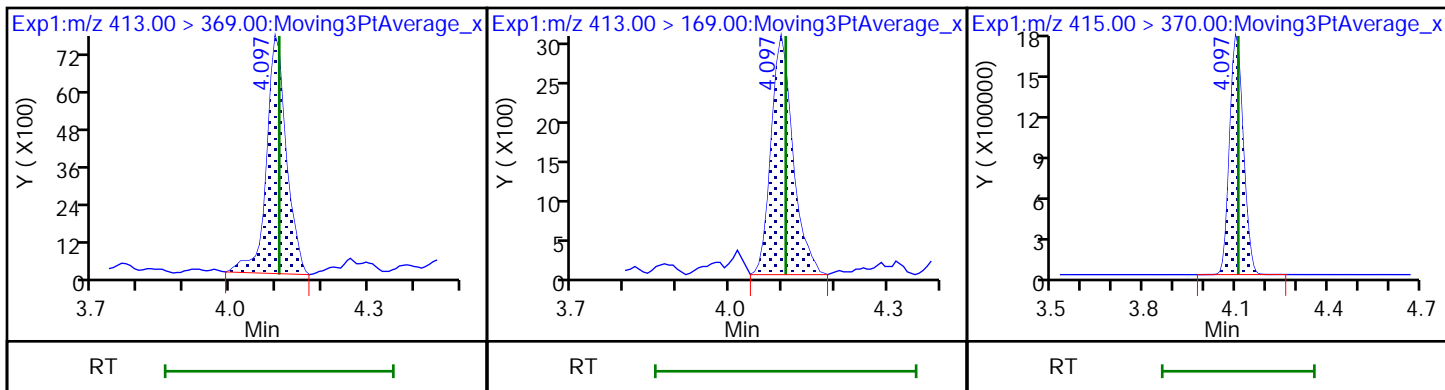
\$ 48 13C8 PFOA (ND)



23 Perfluorooctanoic acid

23 Perfluorooctanoic acid

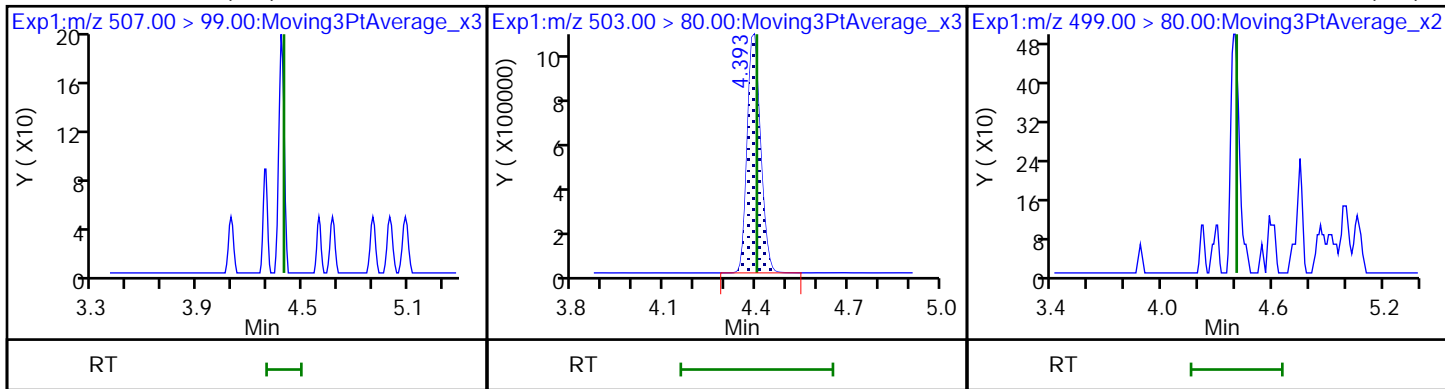
\* 22 13C2 PFOA



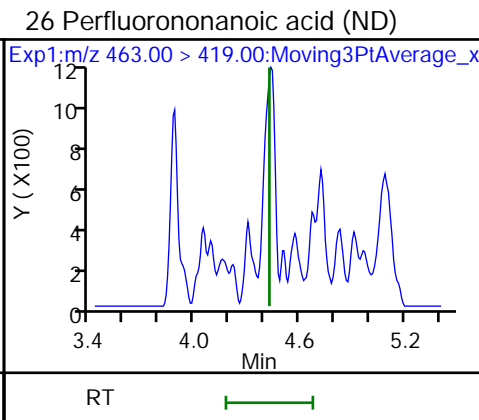
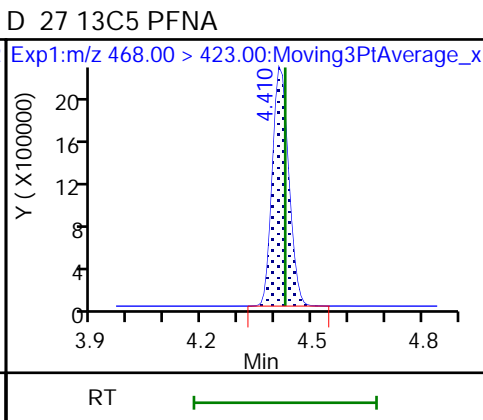
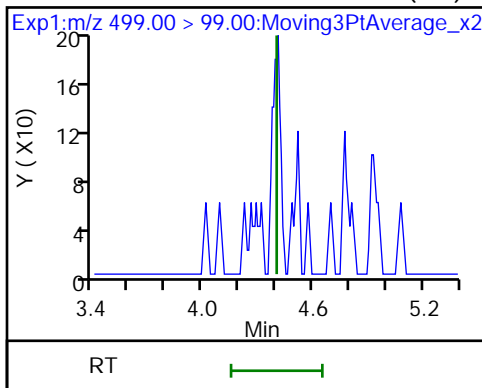
\$ 47 13C8 PFOS (ND)

D 25 13C4 PFOS

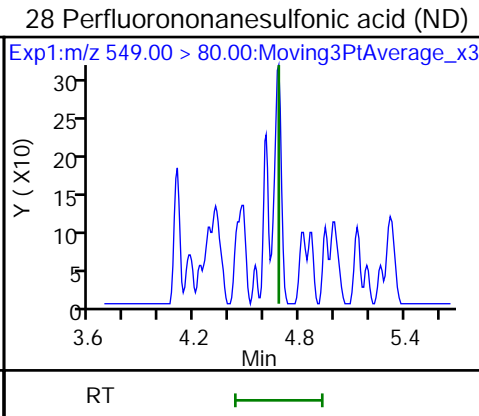
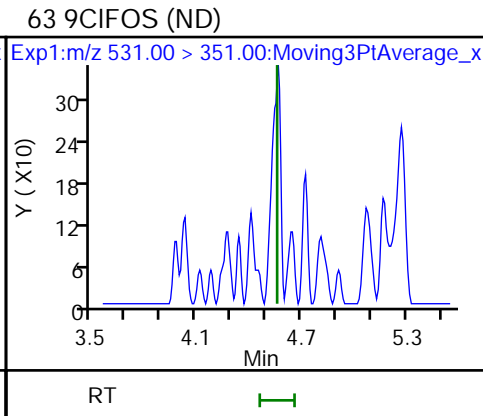
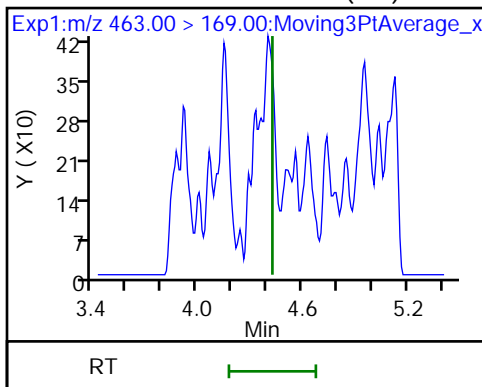
24 Perfluorooctanesulfonic acid (ND)



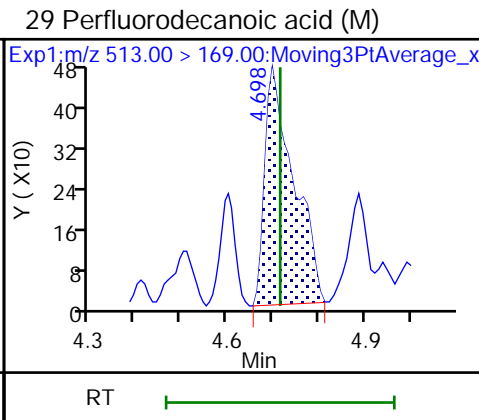
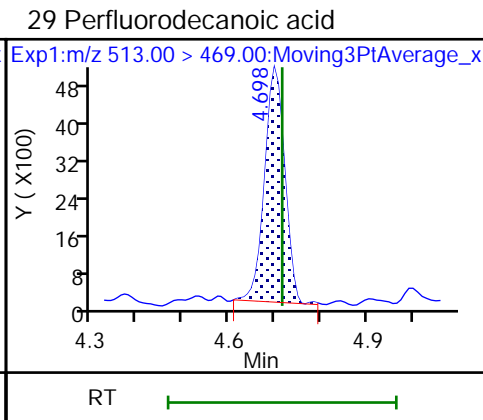
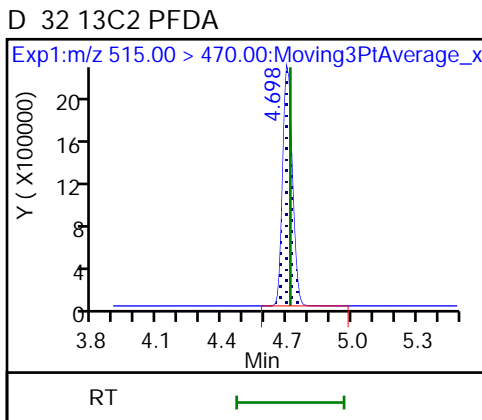
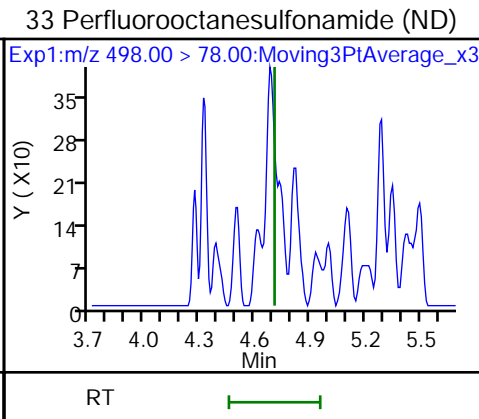
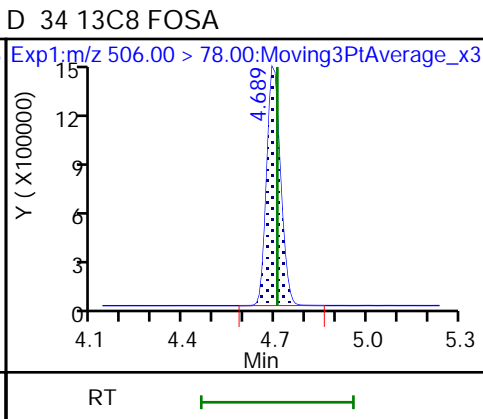
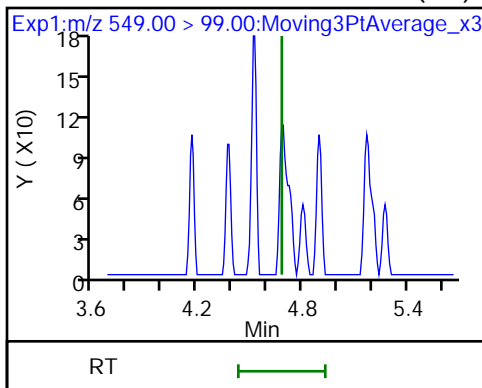
24 Perfluorooctanesulfonic acid (ND) D 27 13C5 PFNA

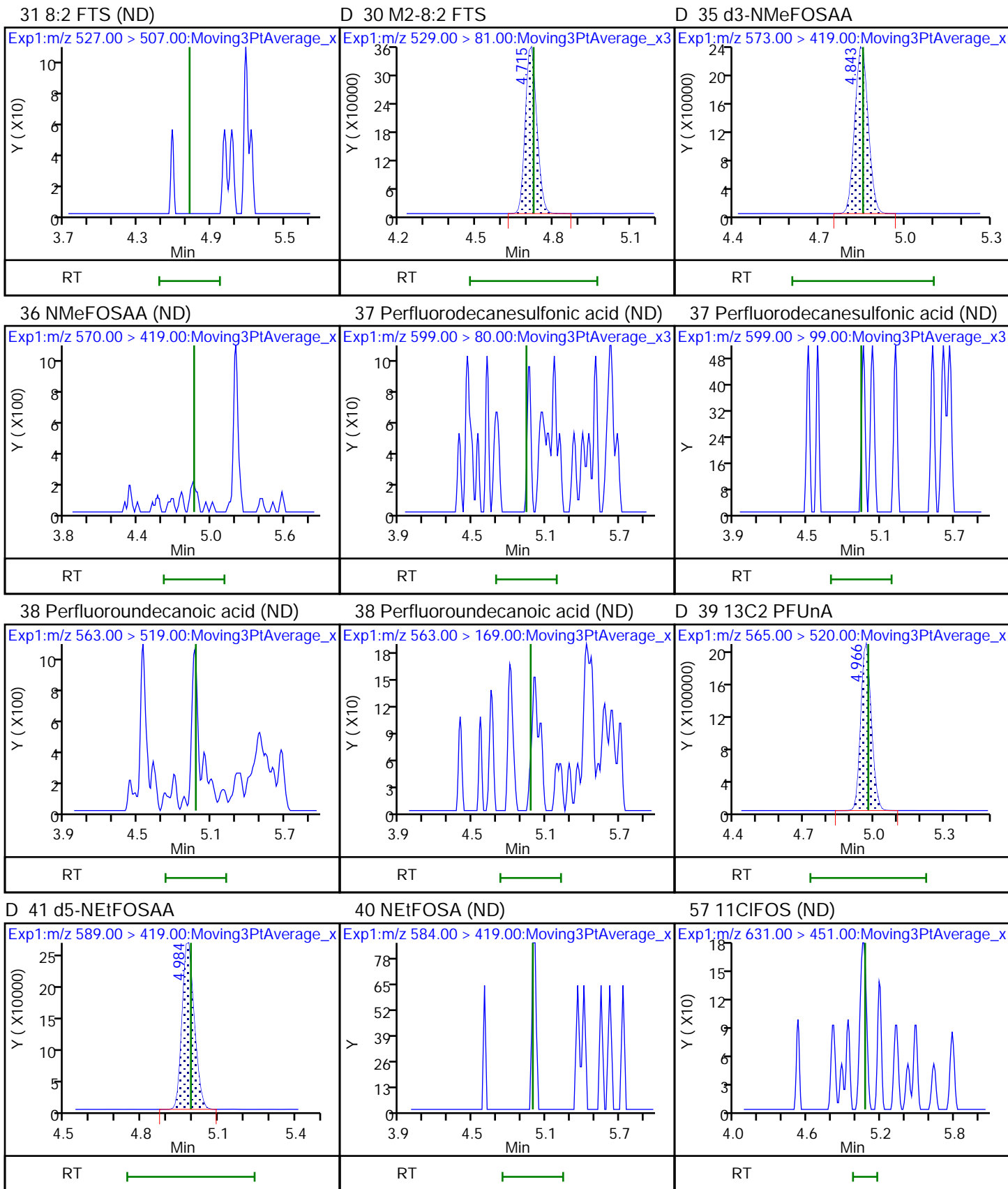


26 Perfluorononanoic acid (ND)



28 Perfluoronanesulfonic acid (ND) D 34 13C8 FOSA

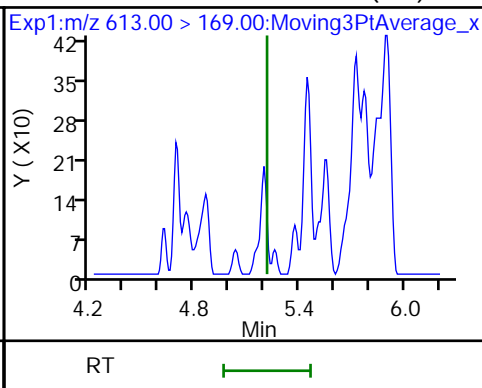
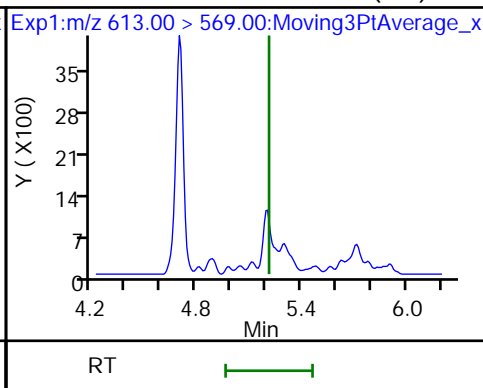
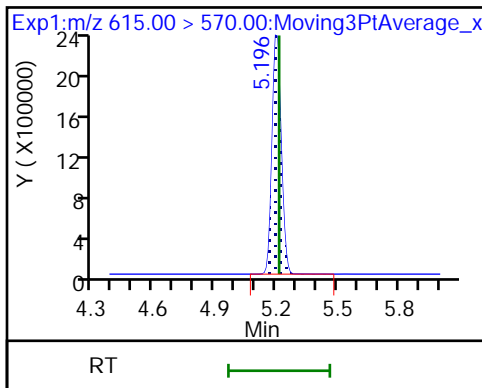




D 43 13C2 PFDaA

42 Perfluorododecanoic acid (ND)

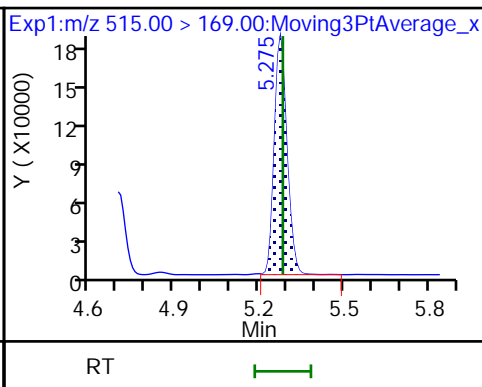
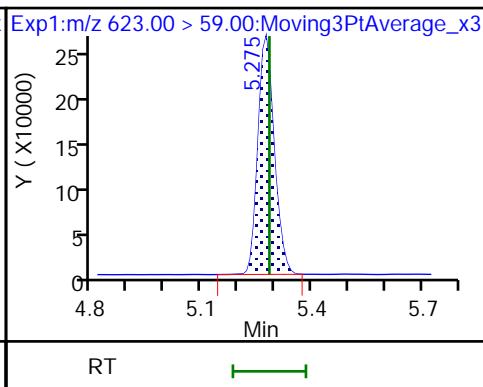
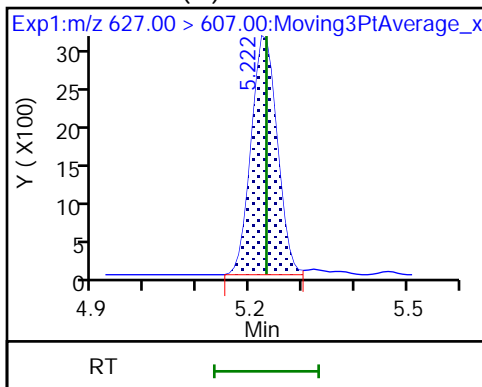
42 Perfluorododecanoic acid (ND)



50 10:2 FTS (M)

D 51 d7-N-MeFOSE-M

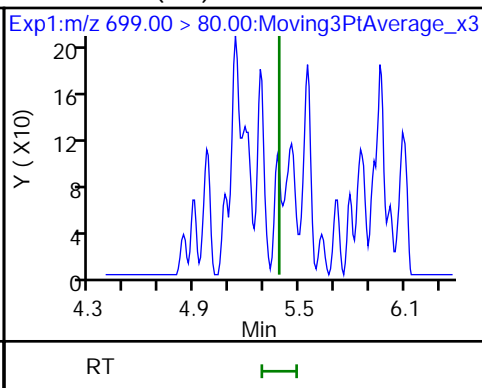
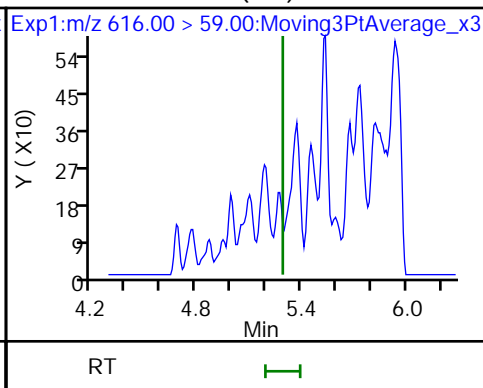
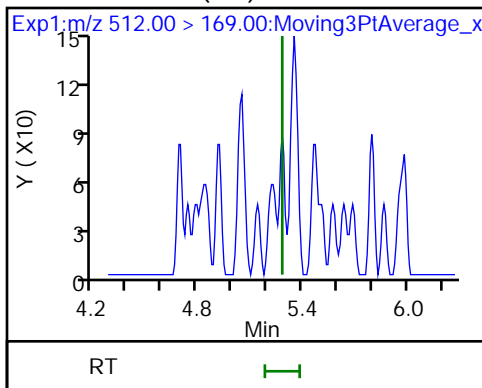
D 58 d-N-MeFOSA-M



61 NMeFOSA (ND)

49 N-MeFOSE-M (ND)

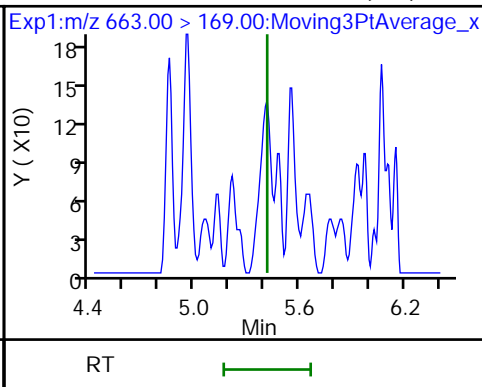
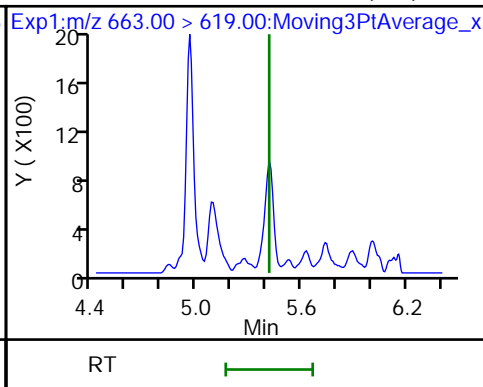
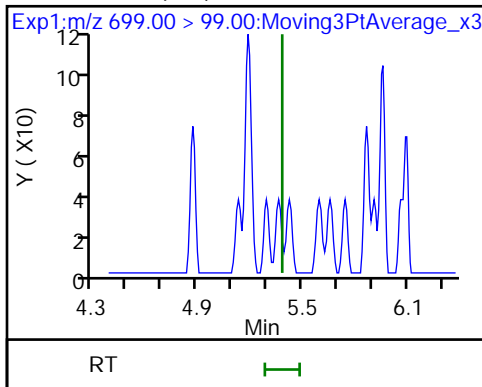
54 PFDoS (ND)



54 PFDoS (ND)

44 Perfluorotridecanoic acid (ND)

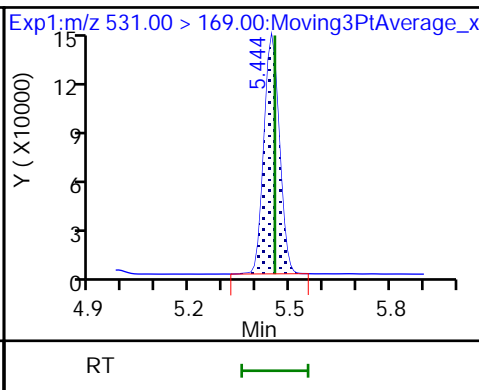
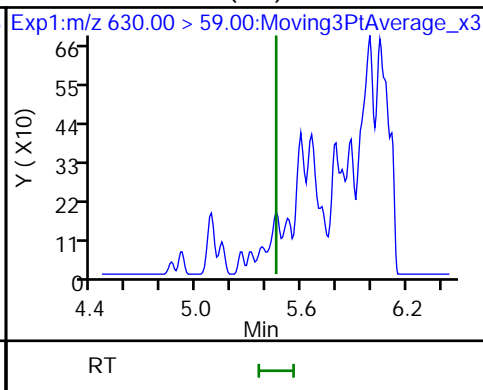
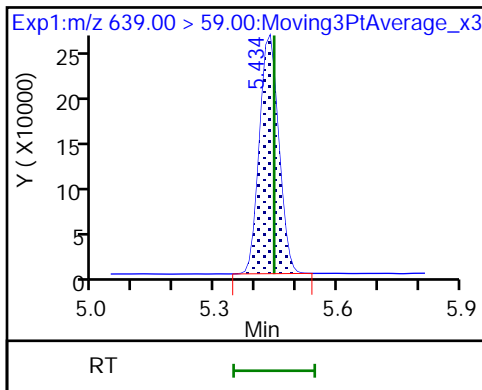
44 Perfluorotridecanoic acid (ND)



D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M (ND)

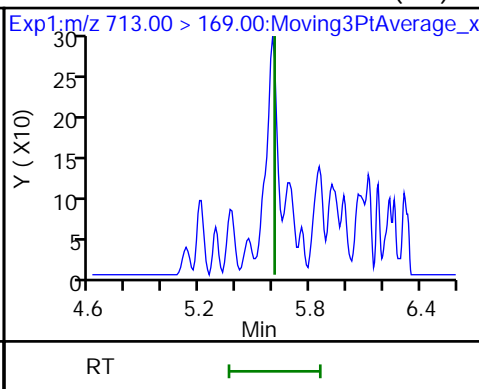
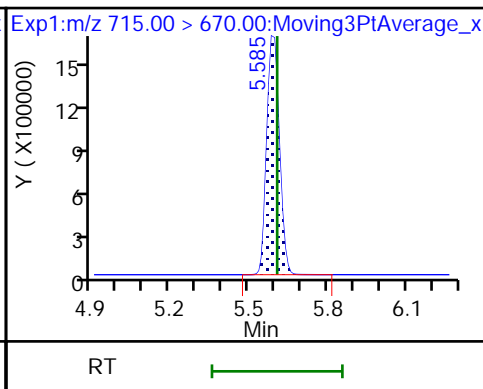
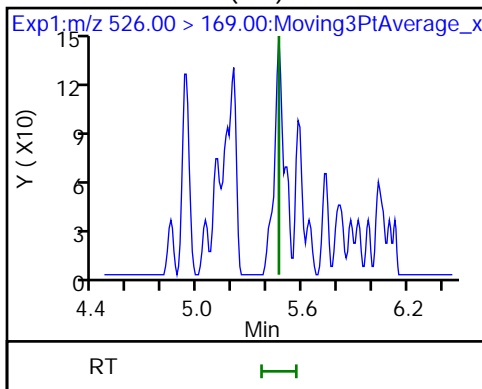
D 52 d-N-EtFOSA-M



56 N-EtFOSA-M (ND)

D 46 13C2 PFTeDA

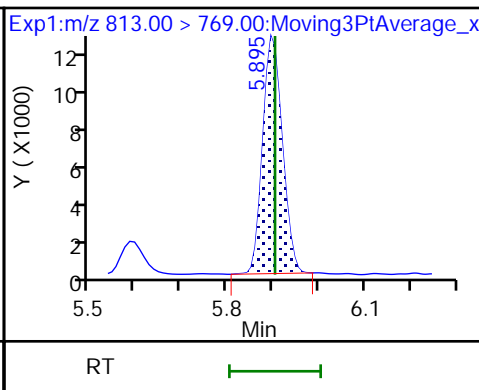
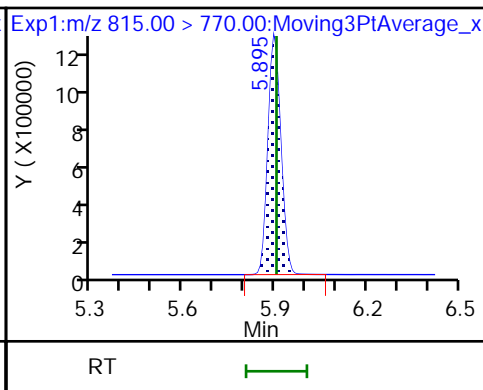
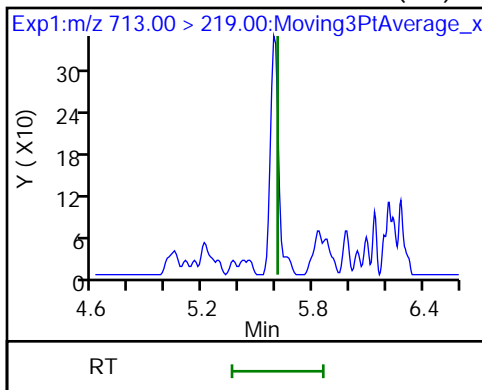
45 Perfluorotetradecanoic acid (ND)



45 Perfluorotetradecanoic acid (ND)

D 59 13C2 PFHxDA

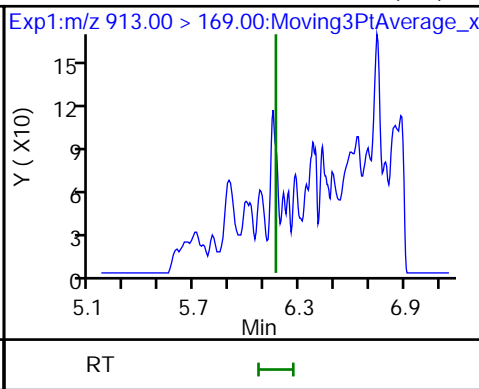
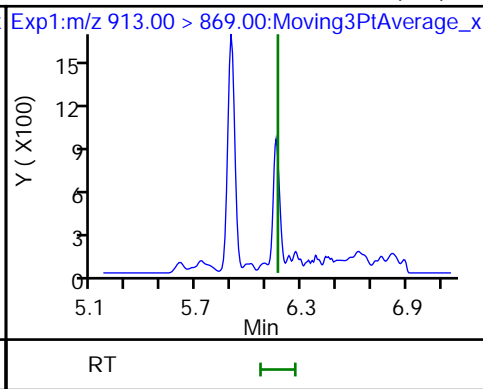
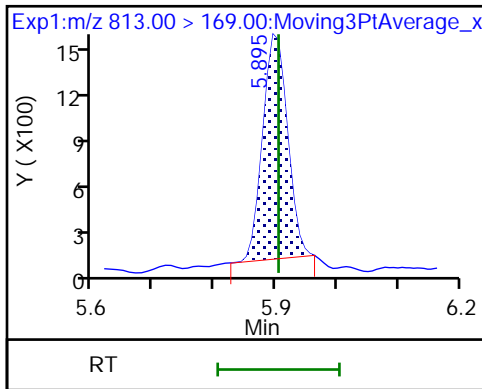
55 Perfluorohexadecanoic acid



55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid (ND)

60 Perfluorooctadecanoic acid (ND)







Eurofins TestAmerica, Knoxville

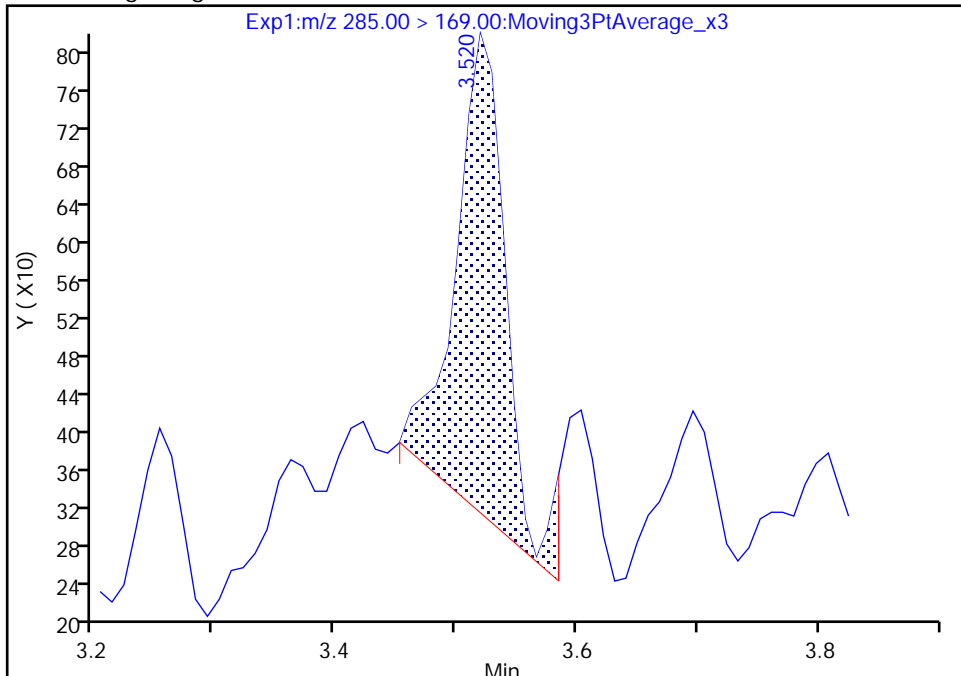
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_006.d  
Injection Date: 09-Jan-2022 12:49:27 Instrument ID: LCA  
Lims ID: MB 140-57645/1-B  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

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

Signal: 1

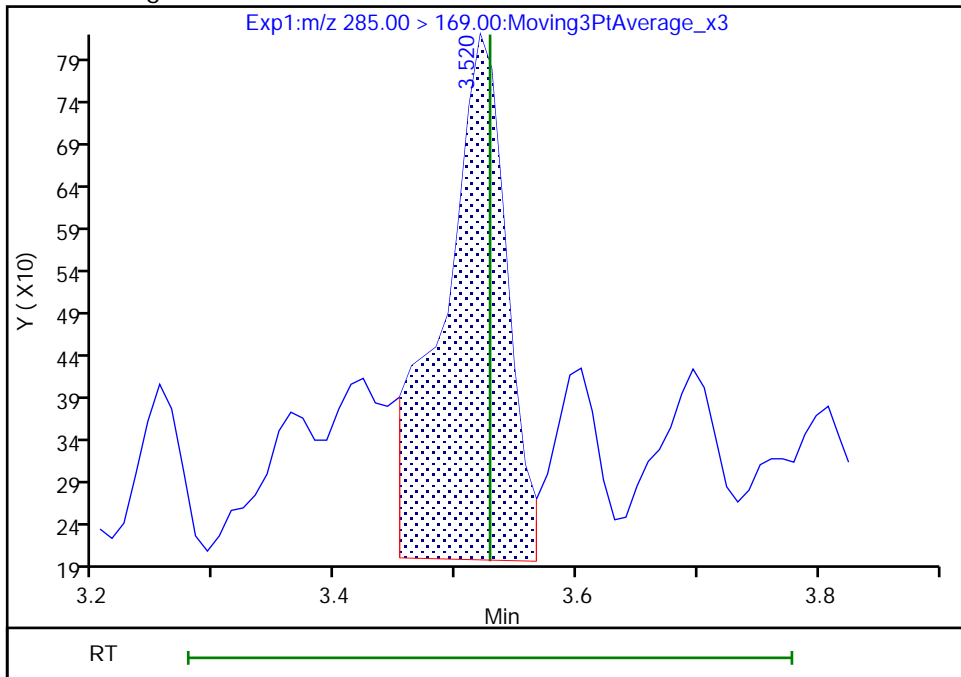
RT: 3.52  
Area: 1440  
Amount: 0.000522  
Amount Units: ng/ml

Processing Integration Results



RT: 3.52  
Area: 2264  
Amount: 0.000821  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 09:13:01  
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM I  
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 140-57611/2-B  
 Matrix: Air Lab File ID: \_011.d  
 Analysis Method: 537 (modified) Date Collected: \_\_\_\_\_  
 Extraction Method: None Date Extracted: 01/04/2022 08:32  
 Sample wt/vol: 1 (Sample) Date Analyzed: 01/11/2022 18:23  
 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.: 57822 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.02126		0.00100	0.000580

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\20220111-22220.b\_011.d  
 Lims ID: LCS 140-57611/2-B  
 Client ID:  
 Sample Type: LCS  
 Inject. Date: 11-Jan-2022 18:23:19 ALS Bottle#: 11 Worklist Smp#: 11  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022220-011 lcs 140-57611/2-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 12-Jan-2022 18:43:11 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1648

First Level Reviewer: cochranj Date: 11-Jan-2022 18:40:00  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_007.d

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	2.795	2.814	-0.019	0.676	5413912	1.13	90.5	11607	
2 Perfluorobutanoic acid	212.90 > 169.00	2.800	2.814	-0.014	1.002	3561642	1.05	105	943	
D 3 13C5 PFPeA	267.90 > 223.00	3.114	3.131	-0.017	0.754	4266446	1.15	91.8	9311	
4 Perfluoropentanoic acid	262.90 > 219.00	3.114	3.131	-0.017	1.000	3404486	1.05	105	921	
D 6 13C3 PFBS	301.90 > 80.00	3.130	3.147	-0.017	0.757	2745869	1.11	95.3	7887	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.130	3.147	-0.017	1.000	2395711	0.9245	Target=2.74	105	2249
	298.90 > 99.00	3.130	3.147	-0.017	1.000	891996		2.69(1.37-4.11)		3710
D 8 M2-4:2 FTS	329.00 > 81.00	3.411	3.442	-0.031	0.825	949780	1.24	107	1375	
7 4:2 FTS	327.00 > 307.00	3.411	3.442	-0.031	1.000	1799482	0.9822	105	11617	
10 Perfluorohexanoic acid	313.00 > 269.00	3.441	3.472	-0.031	1.000	3075099	1.01	Target=12.60	101	1364
	313.00 > 119.00	3.441	3.472	-0.031	1.000	254999		12.06(6.30-18.90)		391
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.441	3.472	-0.031	1.099	2315328	1.01	Target=3.45	108	4529
	349.00 > 99.00	3.441	3.472	-0.031	1.099	649527		3.56(1.73-5.18)		4734
D 9 13C2 PFHxA	315.00 > 270.00	3.441	3.472	-0.031	0.833	4368549	1.10	87.9	8278	
D 12 13C3 HFPO-DA	287.00 > 169.00	3.546	3.574	-0.028	0.858	2096767	1.10	87.8	4550	

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	3.546	3.574	-0.028	1.000	2411736	1.06		106	2223	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.787	3.807	-0.020	1.000	2067269	0.9277	Target=3.46	102	4373	M
399.00 > 99.00	3.787	3.807	-0.020	1.000	599821		3.45(1.73-5.19)		3130	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.787	3.807	-0.020	0.916	1913236	1.16		97.8	7083	
D 14 13C4 PFHpA										
367.00 > 322.00	3.796	3.825	-0.029	0.919	4458910	1.17		93.8	8882	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.796	3.825	-0.029	1.000	3968774	1.06	Target=3.21	106	2248	
363.00 > 169.00	3.796	3.825	-0.029	1.000	1236838		3.21(1.61-4.82)		2420	
68 DONA										
377.00 > 251.00	3.834	3.858	-0.024	0.867	5909362	1.02	Target=1.72	108	7584	
377.00 > 85.00	3.834	3.858	-0.024	0.867	3375300		1.75(0.86-2.58)		5581	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.115	4.140	-0.025	0.931	2284349	1.09	Target=3.94	114	5868	
449.00 > 99.00	4.115	4.140	-0.025	0.931	575192		3.97(1.97-5.90)		5808	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.124	4.149	-0.025	0.998	945414	1.23		103	2023	
D 21 13C4 PFOA										
417.00 > 372.00	4.132	4.156	-0.024	1.000	4705883	1.20		95.8	8887	
19 6:2 FTS										
427.00 > 407.00	4.132	4.156	-0.024	1.002	1344492	0.9406		99.2	3870	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.132	4.156	-0.024	1.000	4310825	1.00	Target=2.53	99.8	2725	
413.00 > 169.00	4.132	4.156	-0.024	1.000	1659516		2.60(1.27-3.80)		3222	
* 22 13C2 PFOA										
415.00 > 370.00	4.132	4.156	-0.024		5240791	1.25			9168	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.419	4.452	-0.033	1.000	2432904	1.01	Target=4.27	109	3191	M
499.00 > 99.00	4.419	4.452	-0.033	1.000	535509		4.54(2.13-6.40)		2477	M
D 25 13C4 PFOS										
503.00 > 80.00	4.419	4.452	-0.033	1.069	2627227	1.10		92.3	4711	
26 Perfluorononanoic acid										
463.00 > 419.00	4.445	4.469	-0.024	1.000	4305633	1.03	Target=4.52	103	3890	
463.00 > 169.00	4.445	4.469	-0.024	1.000	947885		4.54(2.26-6.78)		2453	
D 27 13C5 PFNA										
468.00 > 423.00	4.445	4.469	-0.024	1.076	6162855	1.19		95.3	11510	
63 9CIFOS										
531.00 > 351.00	4.581	4.608	-0.027	1.037	4846270	1.03		110	10604	
D 34 13C8 FOSA										
506.00 > 78.00	4.706	4.723	-0.017	1.139	4005896	1.24		99.5	3860	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.706	4.723	-0.017	1.000	3128062	1.03		103	4396	

Data File: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_011.d

Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_007.d

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	4.732	-0.026	1.065	2264880	1.06	Target=3.82	110	2750	
549.00 > 99.00	4.706	4.732	-0.026	1.065	560870		4.04(1.91-5.73)		3434	
D 32 13C2 PFDA										
515.00 > 470.00	4.732	4.757	-0.025	1.145	5870858	1.18		94.1	9456	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.732	4.757	-0.025	1.000	4758395	1.05	Target=11.59	105	3114	
513.00 > 169.00	4.732	4.757	-0.025	1.000	411365		11.57(5.80-17.39)		498	
31 8:2 FTS										
527.00 > 507.00	4.749	4.774	-0.025	1.000	1253057	1.02		107	4171	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.774	-0.025	1.149	1038872	1.20		100.0	1852	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.878	4.905	-0.027	1.181	884367	1.51		120	877	
36 NMeFOSAA										
570.00 > 419.00	4.878	4.905	-0.027	1.000	677142	0.9848		98.5	1505	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.966	4.992	-0.026	1.124	2041880	1.00	Target=3.60	104	4403	
599.00 > 99.00	4.966	4.992	-0.026	1.124	566257		3.61(1.80-5.40)		2825	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.993	5.022	-0.029	1.000	4892690	1.02	Target=8.71	102	5117	
563.00 > 169.00	4.993	5.022	-0.029	1.000	571937		8.55(4.35-13.06)		2349	
D 39 13C2 PFUnA										
565.00 > 520.00	4.993	5.022	-0.029	1.208	6202589	1.24		99.6	10604	
40 NEtFOSA										
584.00 > 419.00	5.022	5.042	-0.020	1.002	778407	1.03		103	2345	M
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.012	5.042	-0.030	1.213	954784	1.48		119	3128	
57 11C1FOS										
631.00 > 451.00	5.092	5.122	-0.030	1.152	3756819	1.02		108	7632	
D 43 13C2 PFDoA										
615.00 > 570.00	5.231	5.257	-0.026	1.266	5728418	1.10		87.7	16390	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.231	5.257	-0.026	1.000	4958559	1.06	Target=7.01	106	4600	
613.00 > 169.00	5.231	5.257	-0.026	1.000	707183		7.01(3.51-10.52)		1864	
50 10:2 FTS										
627.00 > 607.00	5.257	5.275	-0.018	1.107	2097183	1.06		110	5949	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.275	5.292	-0.017	1.277	715526	1.14		91.1	480	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.275	5.292	-0.017	1.277	510387	1.14		91.1	49.3	
61 NMeFOSA										
512.00 > 169.00	5.284	5.292	-0.008	1.002	449078	1.09		109	629	
49 N-MeFOSE-M										
616.00 > 59.00	5.284	5.301	-0.017	1.002	675473	1.01		101	781	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
54 PFDoS										
699.00 > 80.00	5.404	5.425	-0.020	1.223	2094630	1.04	Target=4.26	107	1978	
699.00 > 99.00	5.404	5.425	-0.020	1.223	493155		4.25(2.13-6.39)		2620	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.435	5.444	-0.009	1.315	698696	1.11		88.6	299	
62 N-EtFOSE-M										
630.00 > 59.00	5.445	5.464	-0.019	1.002	734659	0.9897		99.0	702	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.435	5.464	-0.029	1.039	3962901	1.04	Target=5.87	104	4328	
663.00 > 169.00	5.435	5.464	-0.029	1.039	682363		5.81(2.93-8.80)		3279	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.445	5.464	-0.019	1.318	400628	1.08		86.6	552	
56 N-EtFOSA-M										
526.00 > 169.00	5.455	5.464	-0.009	1.002	421527	1.10		110	607	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.619	5.650	-0.031	1.360	4410421	1.11		88.5	8583	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.619	5.650	-0.031	1.000	481479	1.02	Target=1.02	102	1685	
713.00 > 219.00	5.619	5.650	-0.031	1.000	461658		1.04(0.51-1.53)		2175	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.922	5.948	-0.026	1.433	2937146	1.09		87.0	5840	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.931	5.948	-0.017	1.001	2745767	1.09	Target=8.43	109	3697	
813.00 > 169.00	5.922	5.948	-0.026	1.000	331679		8.28(4.22-12.65)		662	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.185	6.209	-0.024	1.044	2473448	1.07	Target=11.53	107	3372	
913.00 > 169.00	6.185	6.209	-0.024	1.044	207924		11.90(5.77-17.30)		815	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_011.d

Injection Date: 11-Jan-2022 18:23:19

Instrument ID: LCA

Lims ID: LCS 140-57611/2-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 11

Worklist Smp#: 11

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

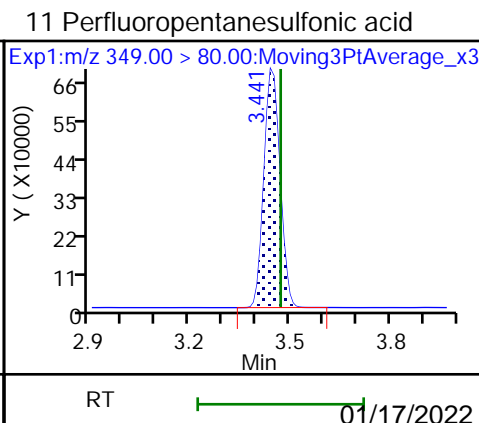
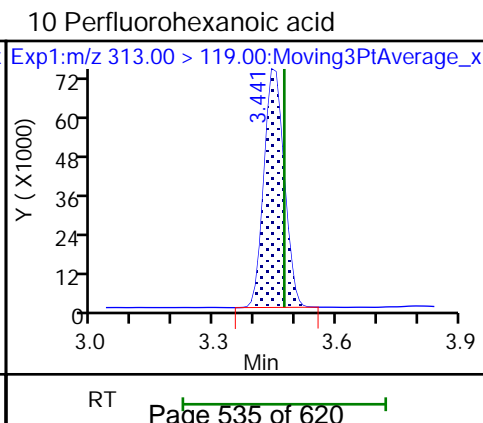
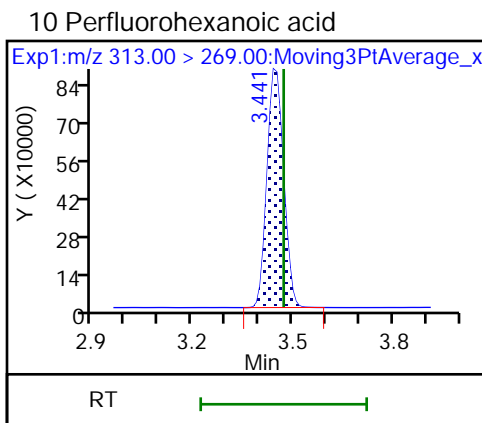
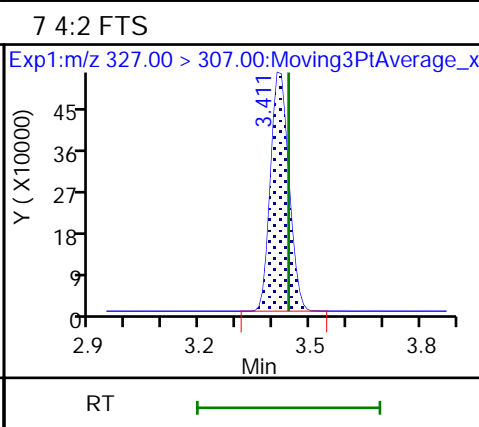
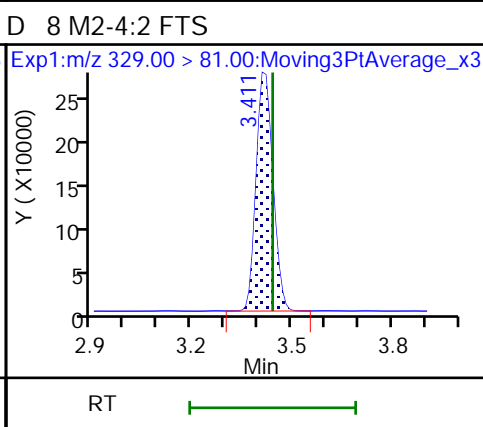
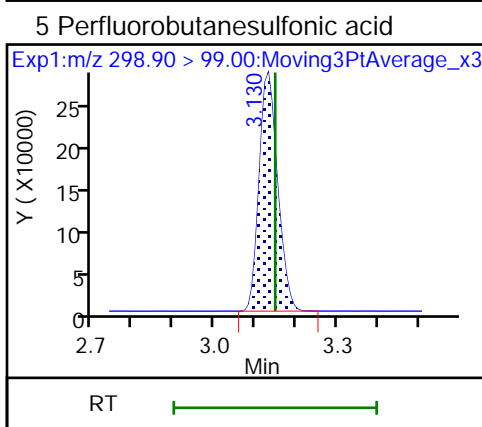
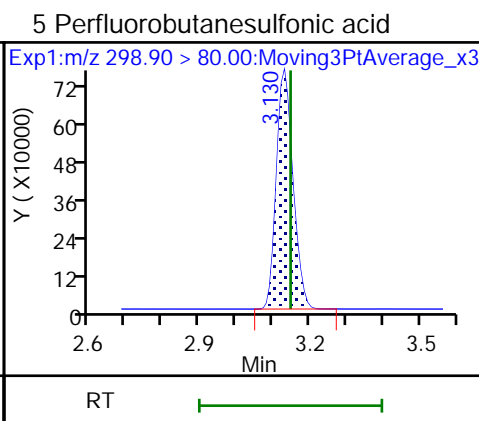
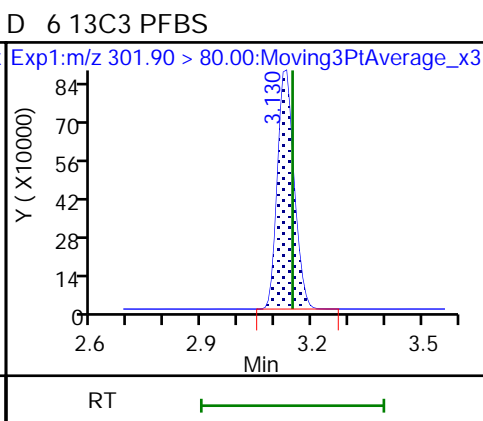
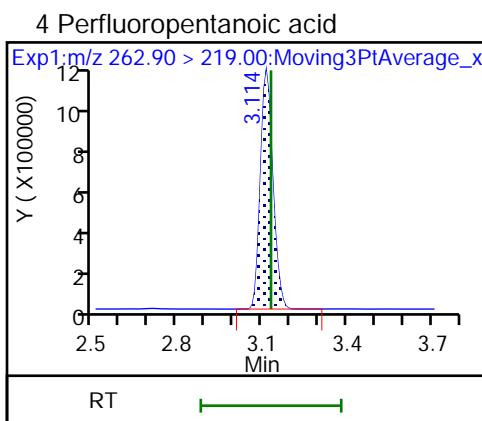
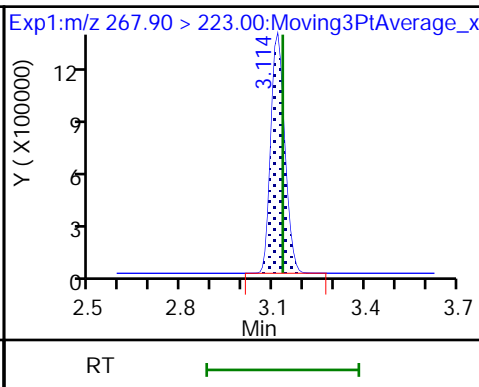
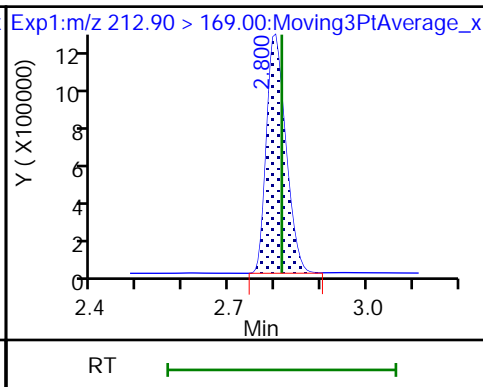
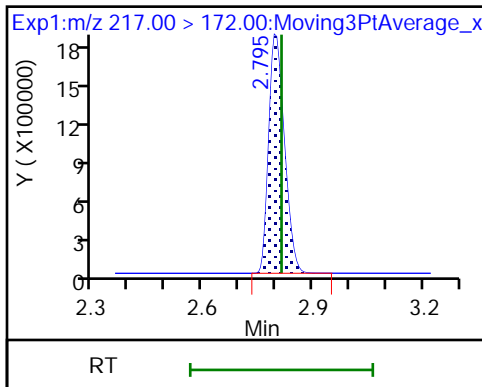
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

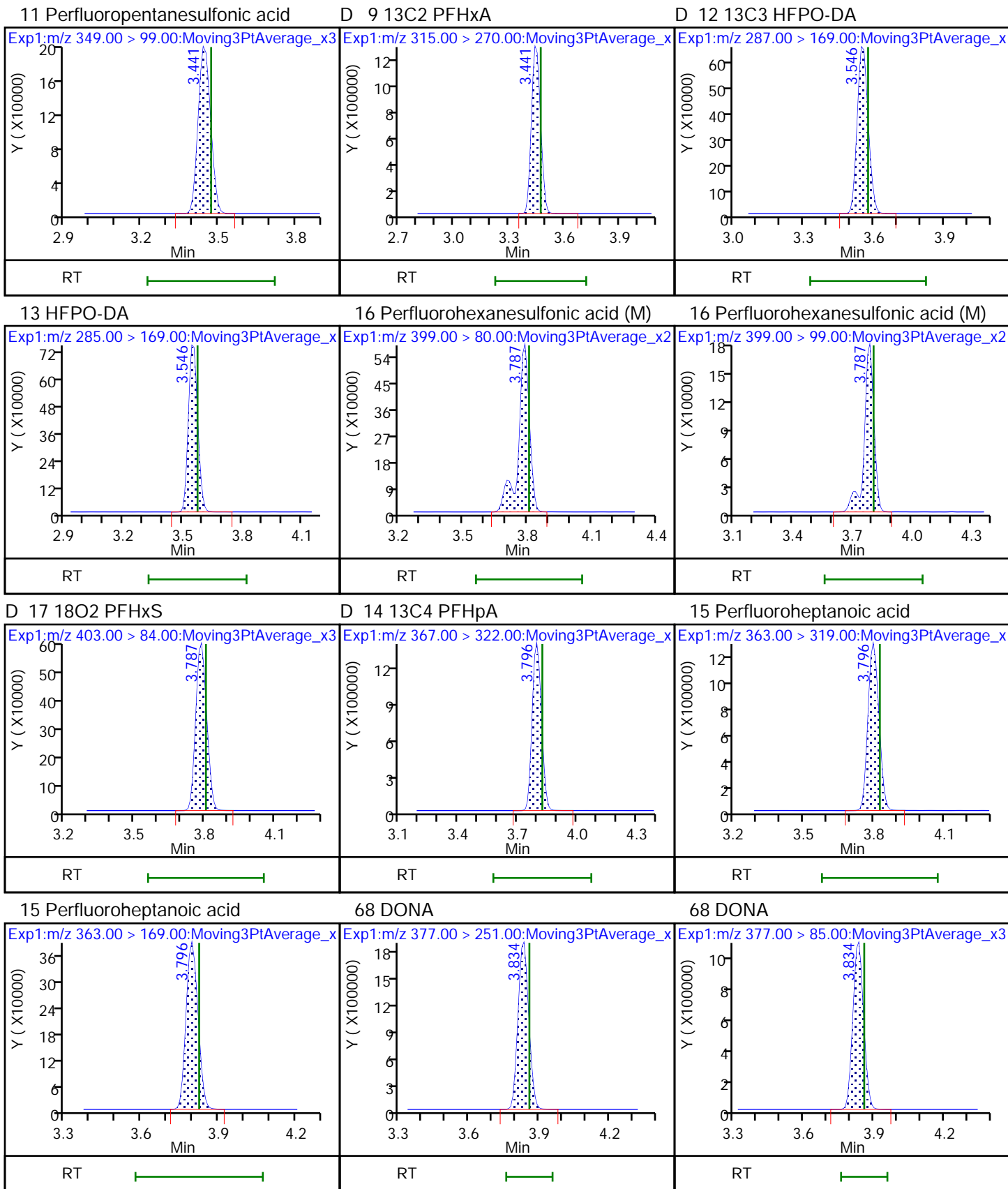
D 1 13C4 PFBA

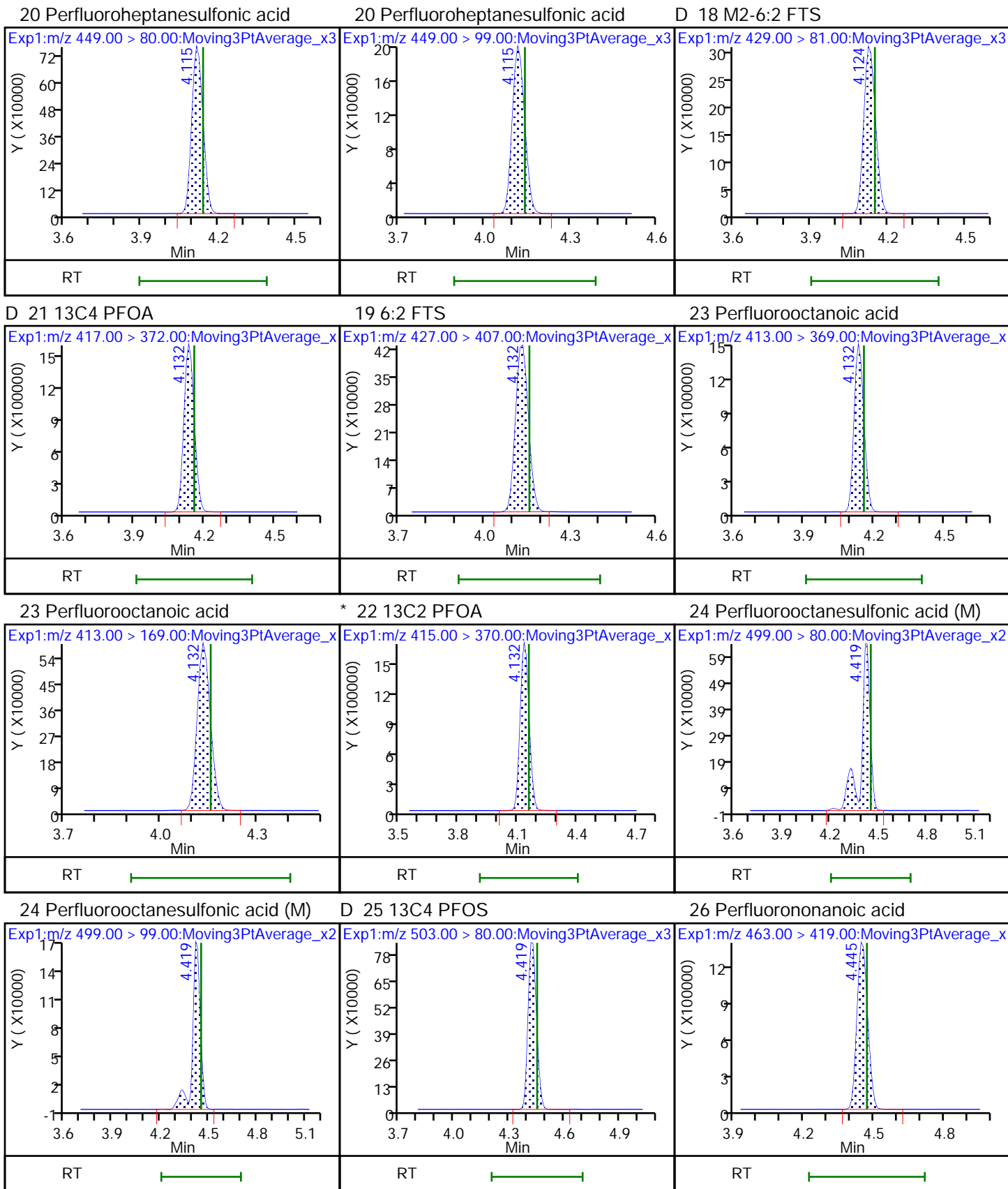
2 Perfluorobutanoic acid

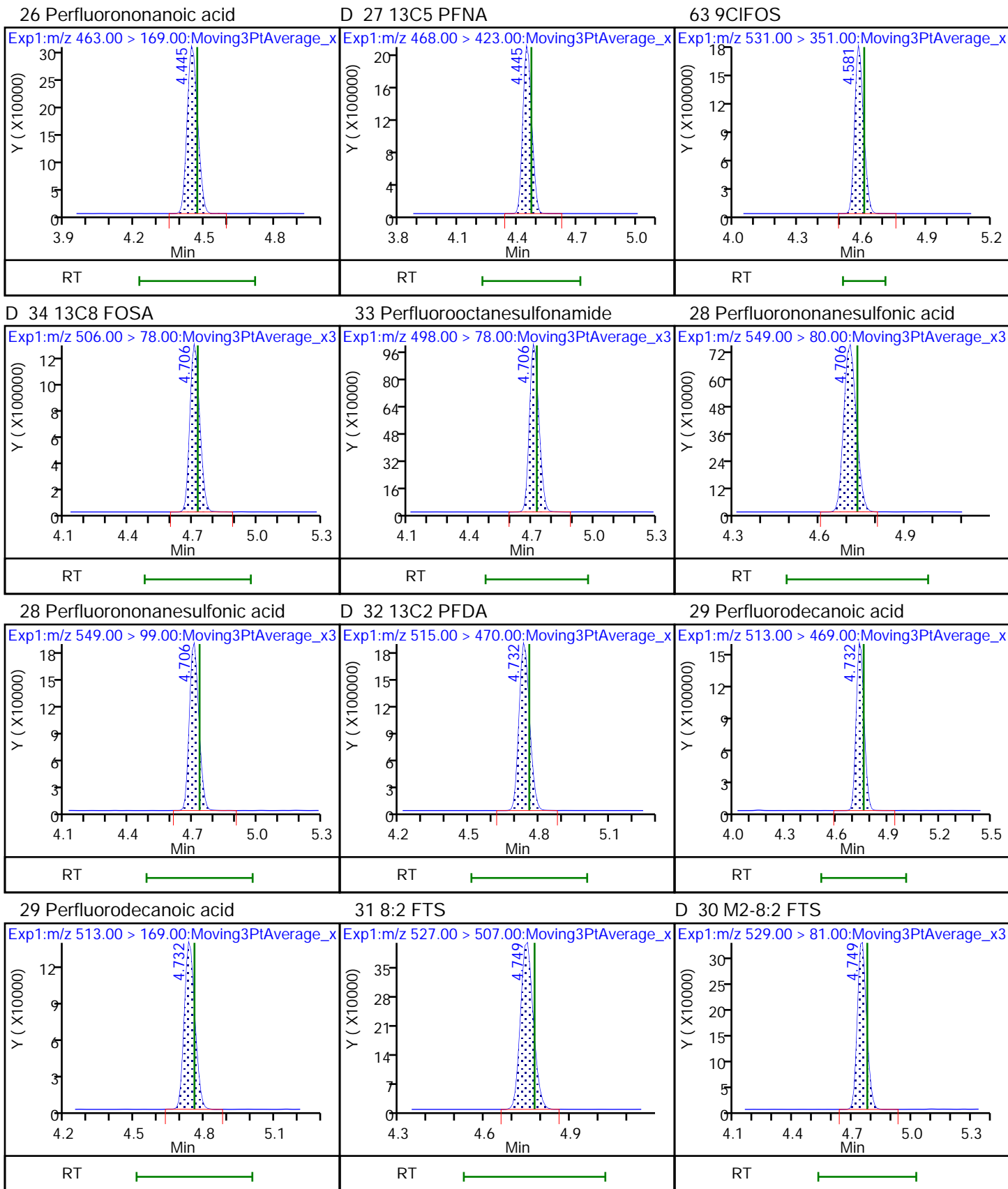
D 3 13C5 PFPeA







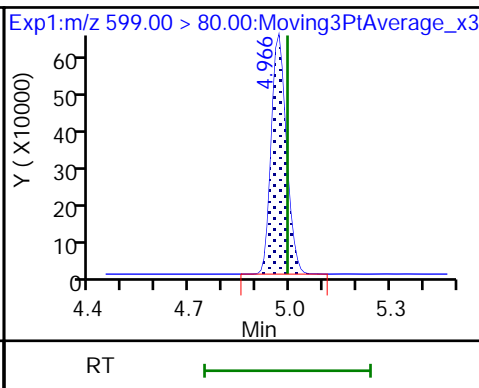
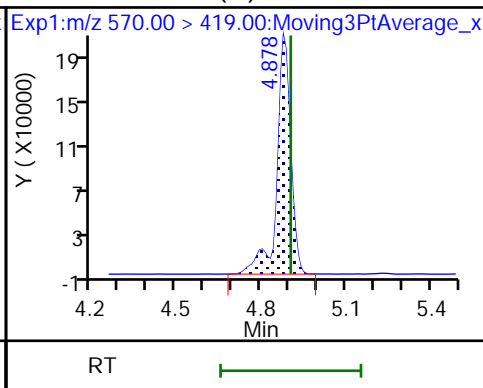
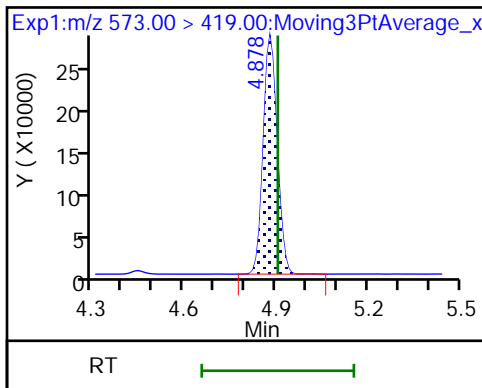




D 35 d3-NMeFOSAA

36 NMeFOSAA (M)

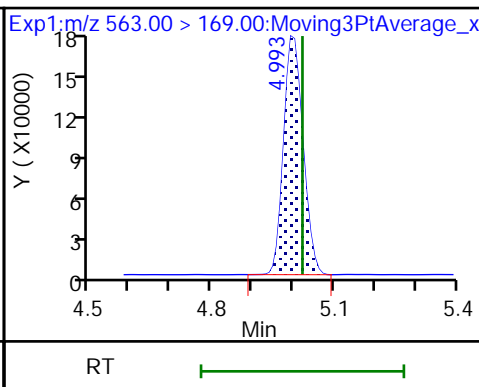
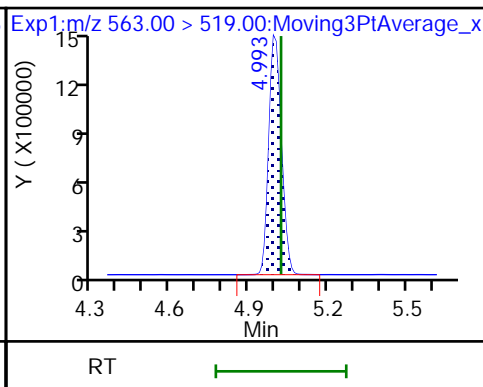
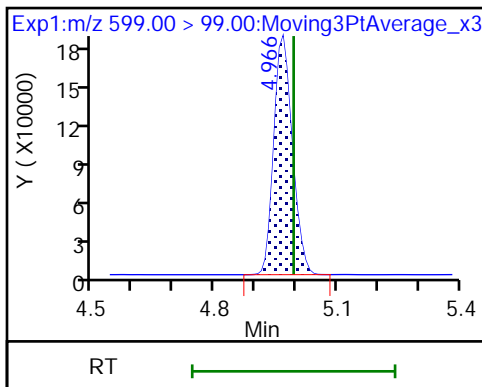
37 Perfluorodecanesulfonic acid



37 Perfluorodecanesulfonic acid

38 Perfluoroundecanoic acid

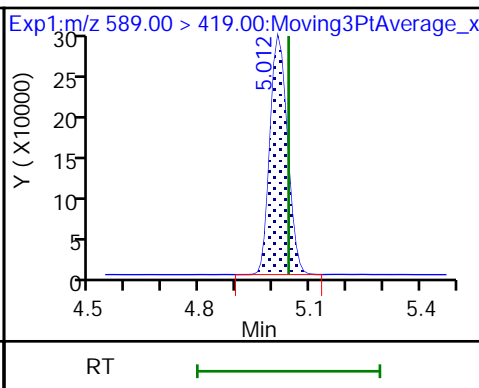
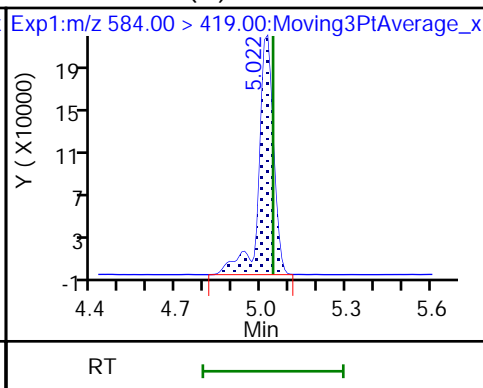
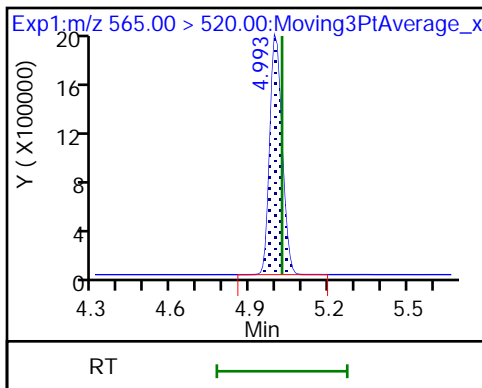
38 Perfluoroundecanoic acid



D 39 13C2 PFUnA

40 NEtFOSA (M)

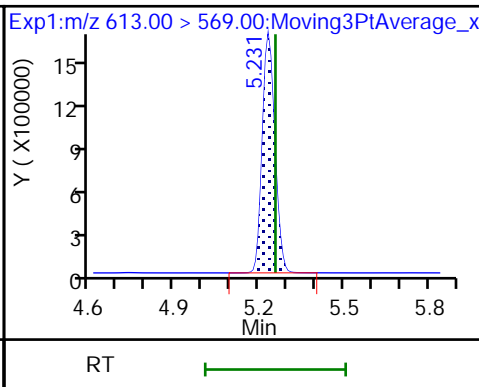
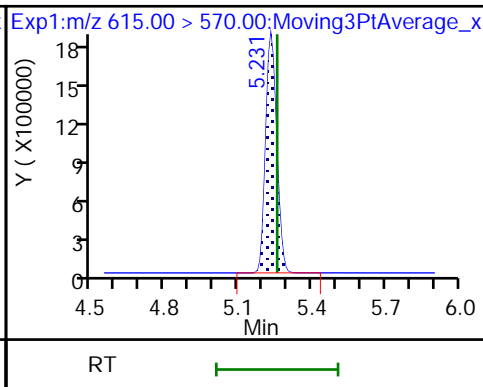
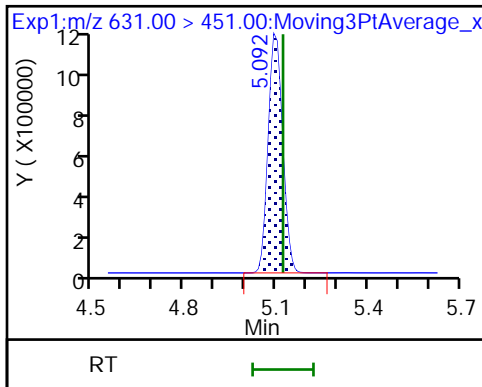
D 41 d5-NEtFOSAA

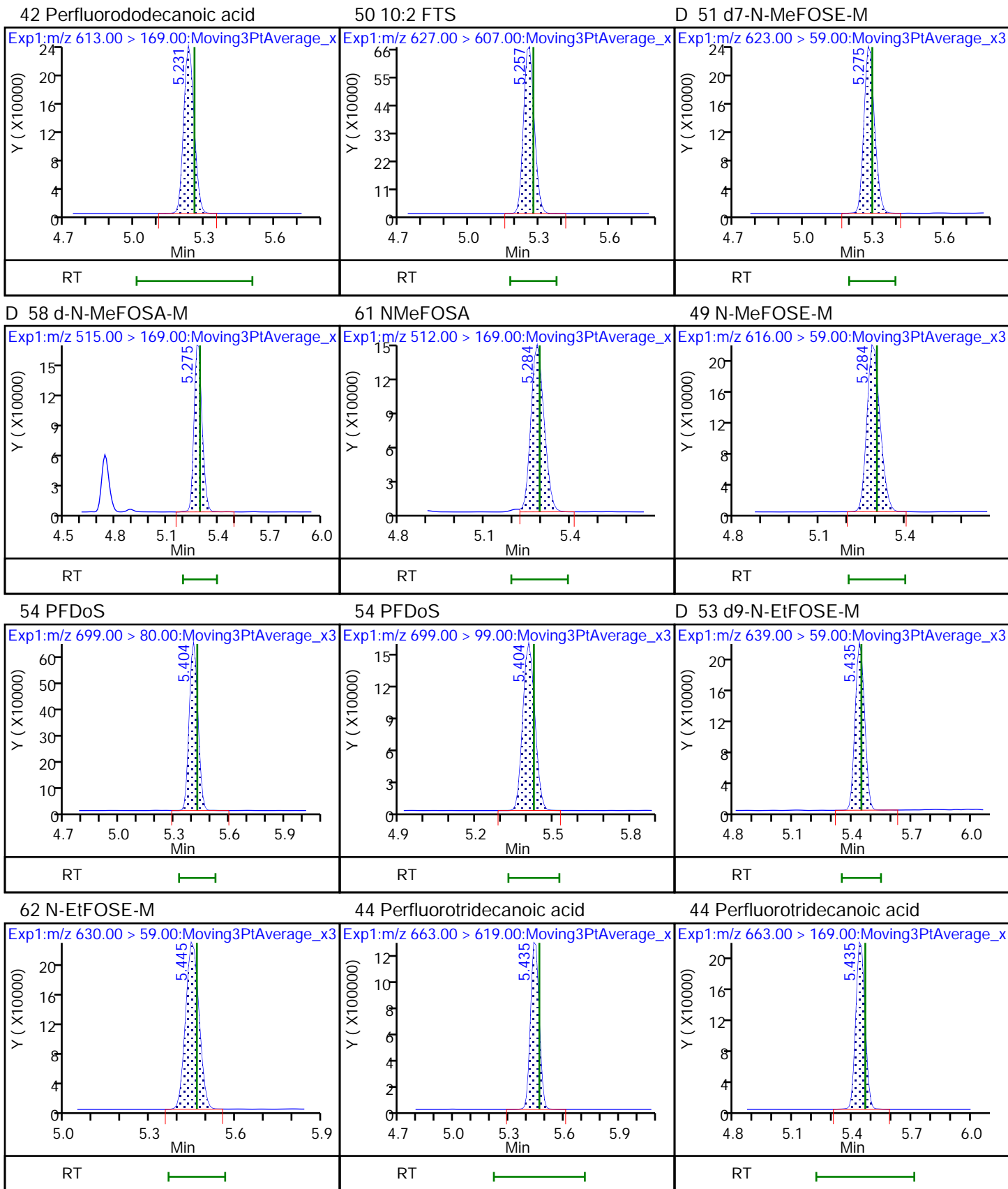


57 11CIFOS

D 43 13C2 PFDaA

42 Perfluorododecanoic acid

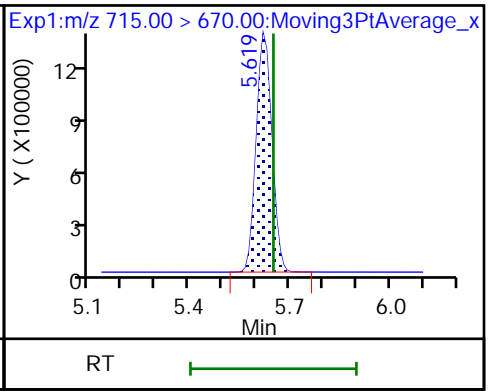
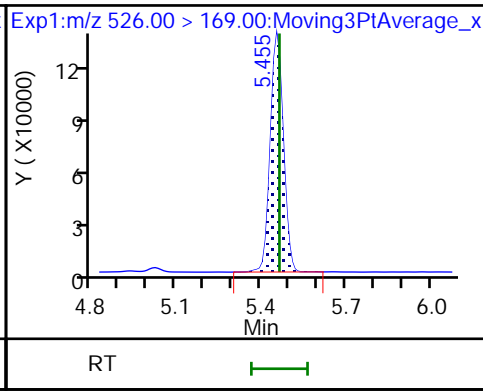
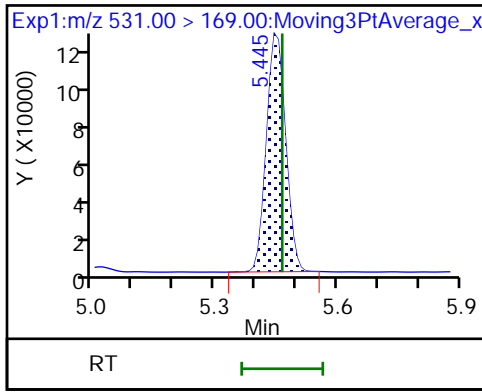




D 52 d-N-EtFOSA-M

56 N-EtFOSA-M

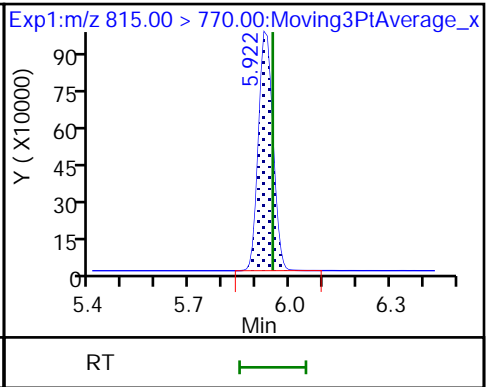
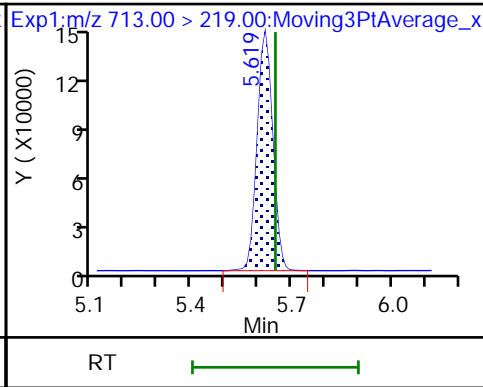
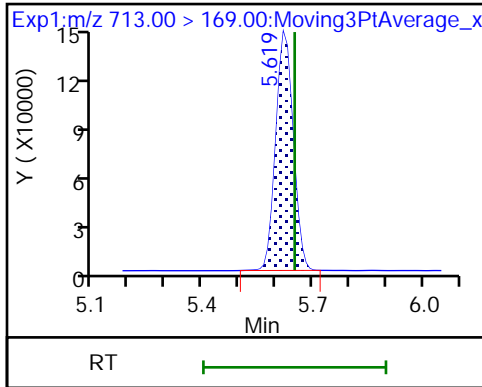
D 46 13C2 PFTeDA



45 Perfluorotetradecanoic acid

45 Perfluorotetradecanoic acid

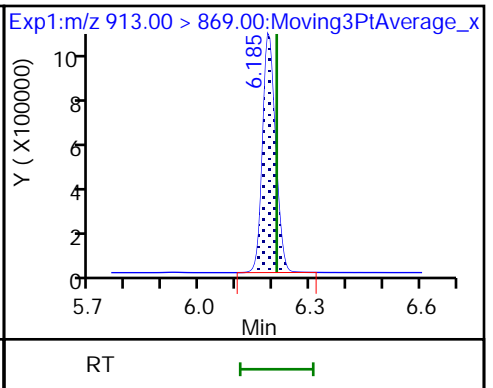
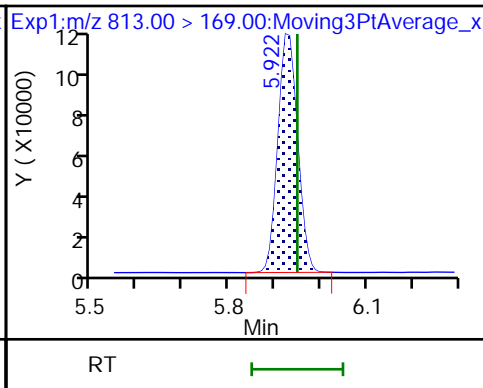
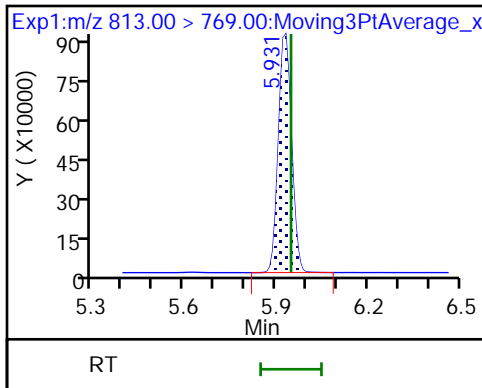
D 59 13C2 PFHxDA



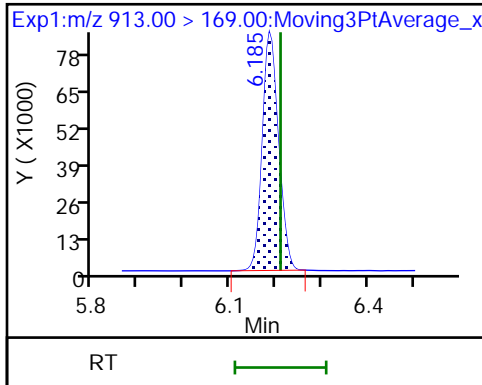
55 Perfluorohexadecanoic acid

55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid



60 Perfluorooctadecanoic acid



FORM I  
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 140-57613/2-B  
 Matrix: Air Lab File ID: 009.d  
 Analysis Method: 537 (modified) Date Collected: \_\_\_\_\_  
 Extraction Method: None Date Extracted: 01/04/2022 08:59  
 Sample wt/vol: 1 (Sample) Date Analyzed: 01/12/2022 18:53  
 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.: 57865 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.01948		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\20220112-22237.b\_009.d  
 Lims ID: LCS 140-57613/2-B  
 Client ID:  
 Sample Type: LCS  
 Inject. Date: 12-Jan-2022 18:53:22 ALS Bottle#: 9 Worklist Smp#: 9  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022237-009 lcs 140-57613/2-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:15:14 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 09:50:04  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_007.d

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	2.796	2.802	-0.006	1.000	3656801	1.00	100	402	
D 1 13C4 PFBA	217.00 > 172.00	2.796	2.802	-0.006	0.677	5808758	1.19	94.8	9867	
D 3 13C5 PFPeA	267.90 > 223.00	3.107	3.116	-0.009	0.752	4667183	1.23	98.1	8098	
4 Perfluoropentanoic acid	262.90 > 219.00	3.115	3.116	-0.001	1.003	3527452	0.99	99.2	544	
D 6 13C3 PFBS	301.90 > 80.00	3.124	3.132	-0.008	0.756	2600639	1.02	88.2	5674	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.124	3.132	-0.008	1.000	2149185	0.8757	Target=2.71 2.68(1.35-4.06)	99.1	3106
	298.90 > 99.00	3.124	3.132	-0.008	1.000	802009				1143
D 8 M2-4:2 FTS	329.00 > 81.00	3.413	3.423	-0.010	0.826	1081054	1.38	119	1356	
7 4:2 FTS	327.00 > 307.00	3.413	3.423	-0.010	1.000	1925467	0.9233	98.9	9027	
D 9 13C2 PFHxA	315.00 > 270.00	3.443	3.444	-0.001	0.833	4993295	1.23	98.2	10167	
10 Perfluorohexanoic acid	313.00 > 269.00	3.443	3.444	-0.001	1.000	3255496	0.9389	Target=12.92 12.47(6.46-19.37)	93.9	756
	313.00 > 119.00	3.443	3.444	-0.001	1.000	261071				236
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.443	3.444	-0.001	1.102	2083776	0.9590	Target=3.61 3.53(1.81-5.42)	102	3556
	349.00 > 99.00	3.443	3.444	-0.001	1.102	590131				2654
D 12 13C3 HFPO-DA	287.00 > 169.00	3.548	3.548	0.0	0.859	2323065	1.19	95.0	5747	



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	3.548	0.0	1.000	2447688	0.9738		97.4	2461	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.780	3.789	-0.009	1.000	1940166	0.8989	Target=3.52	98.8	4568	M
399.00 > 99.00	3.780	3.789	-0.009	1.000	540468		3.59(1.76-5.28)		2313	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.780	3.789	-0.009	0.915	1853220	1.09		92.5	6899	
D 14 13C4 PFHpA										
367.00 > 322.00	3.798	3.799	-0.001	0.919	4940396	1.27		102	8959	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.798	3.799	-0.001	1.000	4328929	1.05	Target=3.30	105	1366	
363.00 > 169.00	3.798	3.799	-0.001	1.000	1308310		3.31(1.65-4.95)		2942	
68 DONA										
377.00 > 251.00	3.833	3.834	-0.001	0.866	6052180	1.01	Target=1.76	107	6741	
377.00 > 85.00	3.833	3.834	-0.001	0.866	3588701		1.69(0.88-2.64)		5103	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.115	4.115	0.0	0.930	2005700	0.9235	Target=3.88	97.0	4442	
449.00 > 99.00	4.115	4.115	0.0	0.930	517354		3.88(1.94-5.82)		2396	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.123	4.132	-0.009	0.998	1023476	1.30		109	2950	
D 21 13C4 PFOA										
417.00 > 372.00	4.131	4.132	-0.001	1.000	5221690	1.30		104	11075	
19 6:2 FTS										
427.00 > 407.00	4.123	4.132	-0.009	1.000	1744491	1.13		119	6267	
* 22 13C2 PFOA										
415.00 > 370.00	4.131	4.132	-0.001		5364999	1.25			8546	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.131	4.132	-0.001	1.000	4594104	0.9584	Target=2.61	95.8	2021	
413.00 > 169.00	4.131	4.132	-0.001	1.000	1748972		2.63(1.30-3.91)		3110	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.427	4.428	-0.001	1.000	2166845	0.8663	Target=4.39	93.4	2732	M
499.00 > 99.00	4.427	4.428	-0.001	1.000	508190		4.26(2.19-6.58)		2315	M
D 25 13C4 PFOS										
503.00 > 80.00	4.427	4.428	-0.001	1.071	2720206	1.12		93.3	4940	
26 Perfluorononanoic acid										
463.00 > 419.00	4.452	4.445	0.007	1.000	4525050	1.00	Target=4.78	100	3022	
463.00 > 169.00	4.452	4.445	0.007	1.000	965331		4.69(2.39-7.17)		2031	
D 27 13C5 PFNA										
468.00 > 423.00	4.452	4.445	0.007	1.078	6644500	1.25		100	9503	
63 9CIFOS										
531.00 > 351.00	4.587	4.581	0.006	1.036	4429807	0.9088		97.5	8307	
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.706	4.706	0.0	1.063	2025444	0.9127	Target=3.96	95.1	5689	
549.00 > 99.00	4.706	4.706	0.0	1.063	508793		3.98(1.98-5.94)		3272	
D 34 13C8 FOSA										
506.00 > 78.00	4.715	4.706	0.009	1.141	4375534	1.33		106	4983	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.715	4.706	0.009	1.000	3265242	0.9862		98.6	4350	

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	4.740	4.732	0.008	1.147	6598552	1.29		103	10263	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.740	4.732	0.008	1.000	5166010	1.01	Target=11.18	101	3895	
513.00 > 169.00	4.740	4.732	0.008	1.000	423294		12.20(5.59-16.77)		665	
31 8:2 FTS										
527.00 > 507.00	4.749	4.749	0.0	1.000	1259599	0.9643		101	4692	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.749	0.0	1.149	1105353	1.24		104	1761	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.878	4.878	0.0	1.181	983617	1.64		131	1147	
36 NMeFOSAA										
570.00 > 419.00	4.887	4.887	0.0	1.002	710351	0.9290		92.9	1947	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.966	4.966	0.0	1.122	1769226	0.8376	Target=3.65	86.9	4418	
599.00 > 99.00	4.966	4.966	0.0	1.122	493835		3.58(1.82-5.47)		3565	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.002	5.002	0.0	1.000	5217344	0.9644	Target=8.72	96.4	5180	
563.00 > 169.00	5.002	5.002	0.0	1.000	618440		8.44(4.36-13.08)		2354	
D 39 13C2 PFUnA										
565.00 > 520.00	5.002	5.002	0.0	1.211	6975314	1.37		109	11785	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.022	5.012	0.010	1.215	1086329	1.65		132	4376	
40 NEtFOSA										
584.00 > 419.00	5.022	5.022	0.0	1.000	810802	0.9392		93.9	2155	M
57 11CIFOS										
631.00 > 451.00	5.102	5.102	0.0	1.152	3433510	0.9019		95.7	7193	
D 43 13C2 PFDoA										
615.00 > 570.00	5.240	5.231	0.009	1.268	6655008	1.24		99.5	10337	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.240	5.231	0.009	1.000	5102107	0.9386	Target=6.85	93.9	4083	
613.00 > 169.00	5.240	5.231	0.009	1.000	733443		6.96(3.43-10.28)		1584	
50 10:2 FTS										
627.00 > 607.00	5.257	5.257	0.0	1.107	1887390	0.8983		93.2	6535	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.284	5.275	0.009	1.279	826762	1.28		103	497	
49 N-MeFOSE-M										
616.00 > 59.00	5.292	5.284	0.008	1.002	791919	1.02		102	187	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.284	5.284	0.0	1.279	552549	1.20		96.4	51.4	
61 NMeFOSA										
512.00 > 169.00	5.292	5.284	0.008	1.002	473094	1.06		106	883	
54 PFDoS										
699.00 > 80.00	5.414	5.404	0.010	1.223	1524686	0.7308	Target=4.18	75.5	3695	
699.00 > 99.00	5.414	5.404	0.010	1.223	368018		4.14(2.09-6.27)		2474	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.445	5.435	0.010	1.318	824946	1.28		102	377	

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	5.455	5.445	0.010	1.002	797909	0.9104		91.0	684	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.445	5.445	0.0	1.039	4092215	0.9270	Target=6.15	92.7	4579	
663.00 > 169.00	5.445	5.445	0.0	1.039	682717		5.99(3.07-9.22)		2778	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.455	5.445	0.010	1.320	443710	1.17		93.7	689	
56 N-EtFOSA-M										
526.00 > 169.00	5.464	5.455	0.009	1.002	424543	1.00		100	532	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.629	5.629	0.0	1.363	4660142	1.14		91.4	9346	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.629	5.629	0.0	1.000	470434	0.9390	Target=1.06	93.9	2428	
713.00 > 219.00	5.629	5.629	0.0	1.000	470207		1.00(0.53-1.58)		2522	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.931	5.931	0.0	1.436	1750910	0.6330		50.6	4945	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.940	5.931	0.009	1.001	1541149	1.03	Target=8.21	103	2704	
813.00 > 169.00	5.940	5.931	0.009	1.001	181142		8.51(4.11-12.32)		460	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.195	6.195	-0.001	1.044	65372	0.0474	Target=11.14	4.7	242	
913.00 > 169.00	6.195	6.195	-0.001	1.044	5376		12.16(5.57-16.71)		30.0	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_009.d

Injection Date: 12-Jan-2022 18:53:22

Instrument ID: LCA

Lims ID: LCS 140-57613/2-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 9

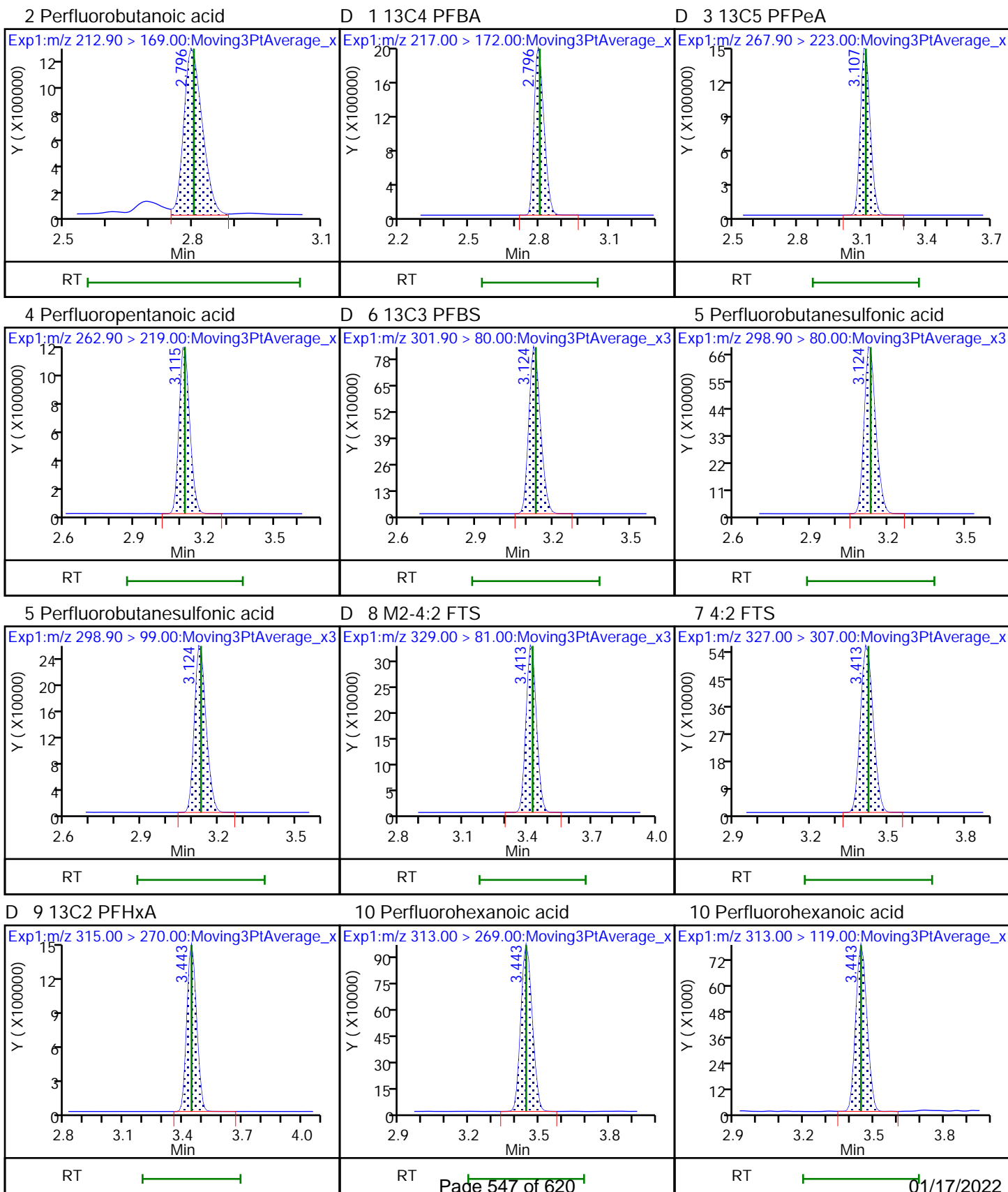
Worklist Smp#: 9

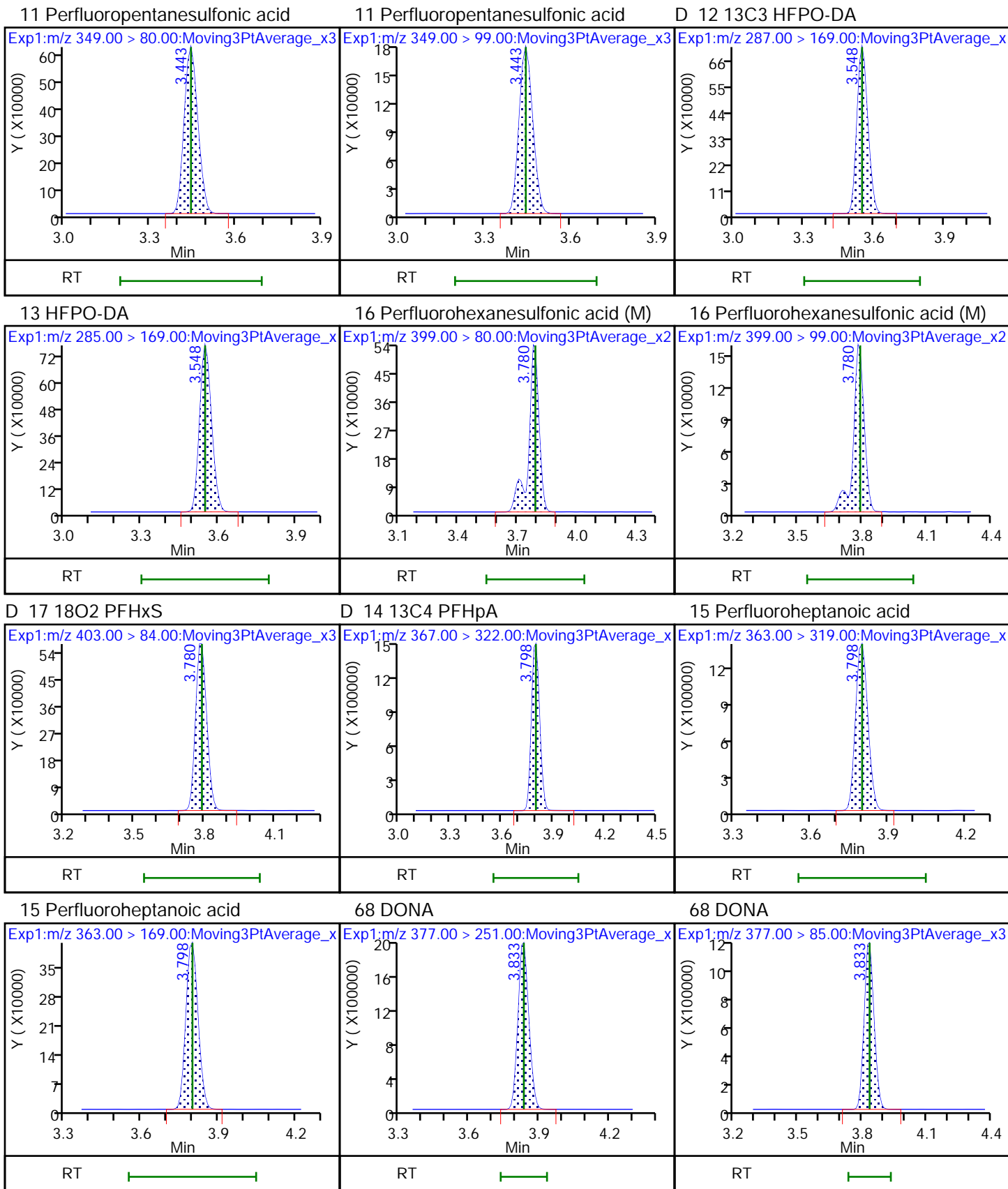
Injection Vol: 1.0 ul

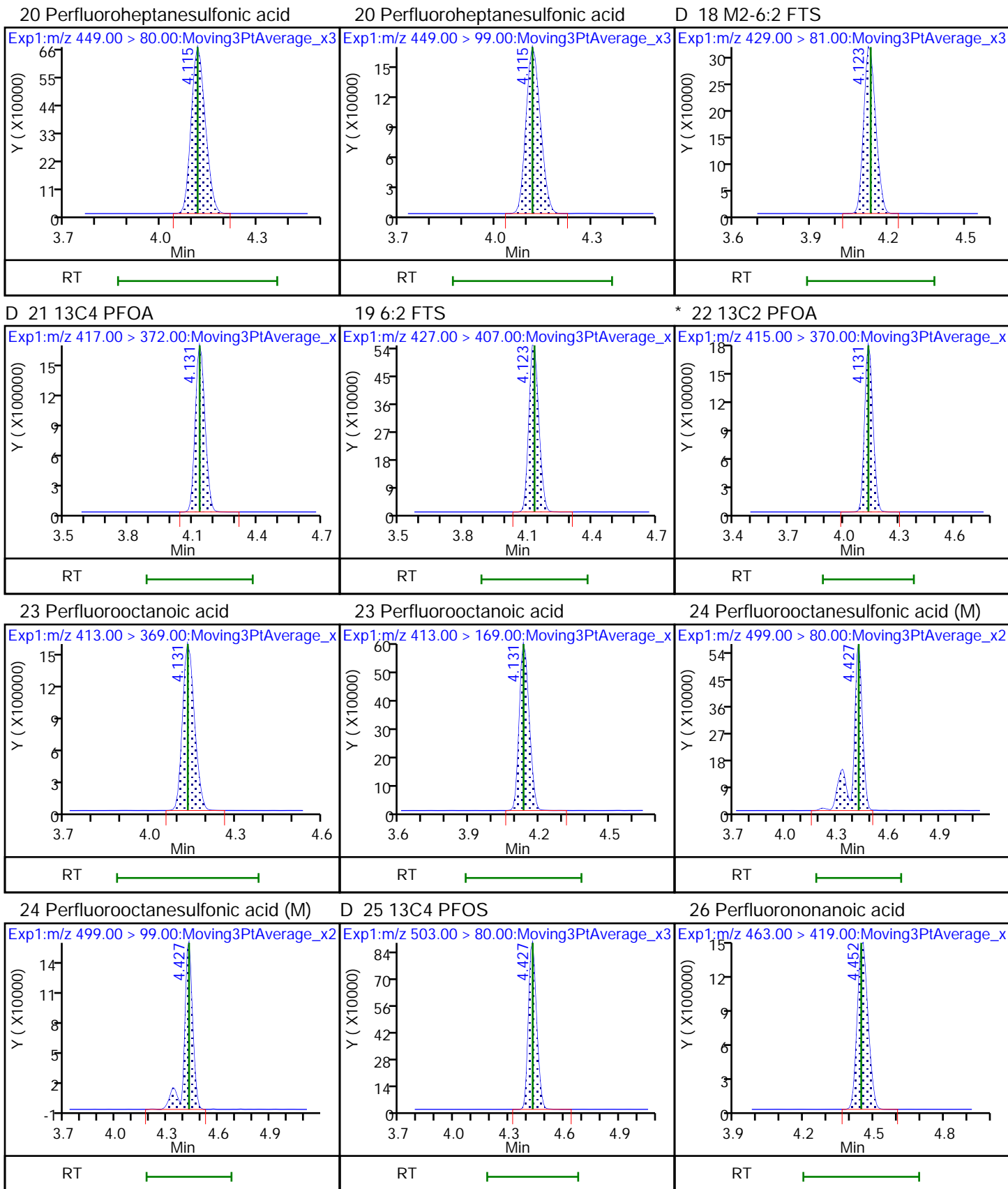
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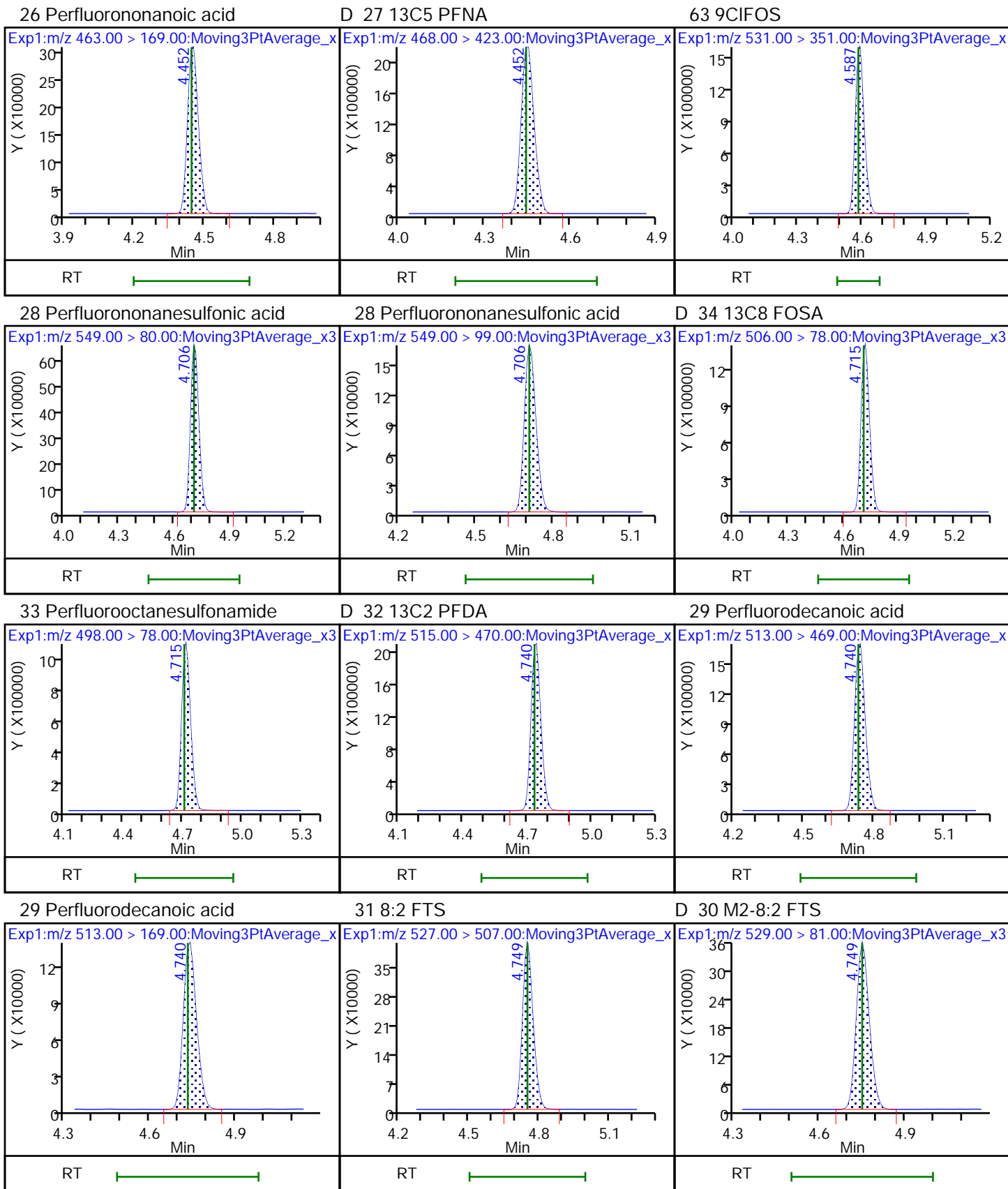
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL





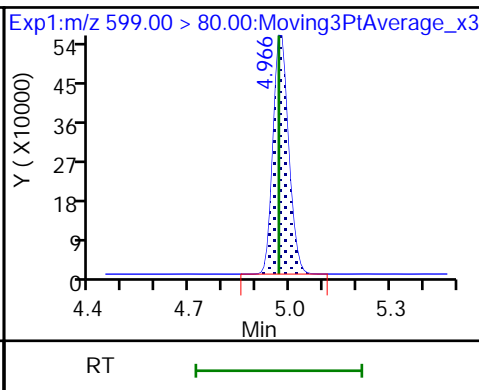
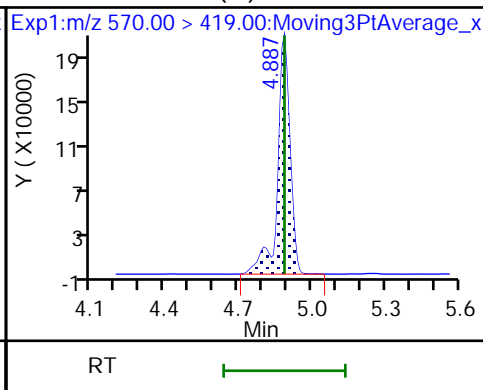
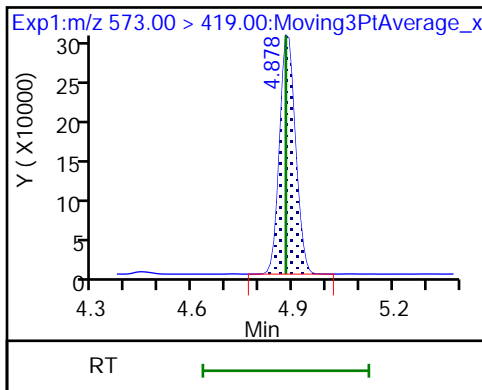




D 35 d3-NMeFOSAA

36 NMeFOSAA (M)

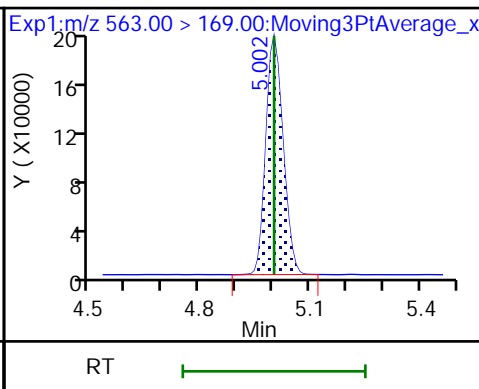
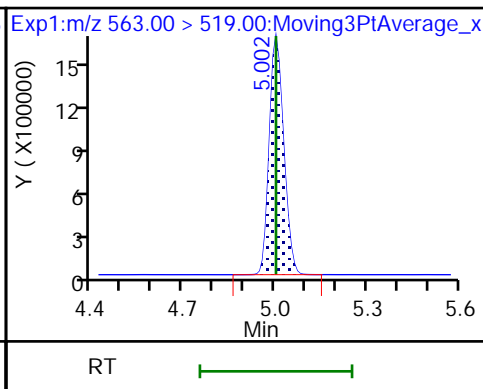
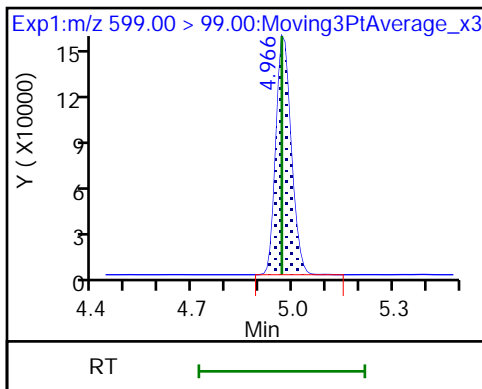
37 Perfluorodecanesulfonic acid



37 Perfluorodecanesulfonic acid

38 Perfluoroundecanoic acid

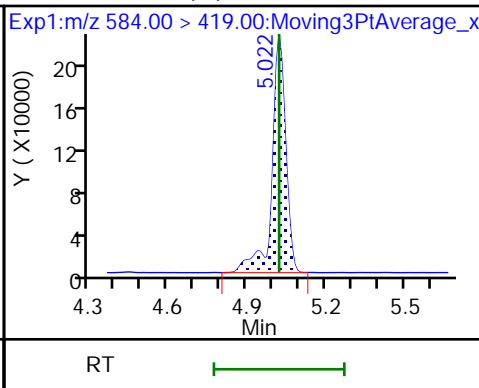
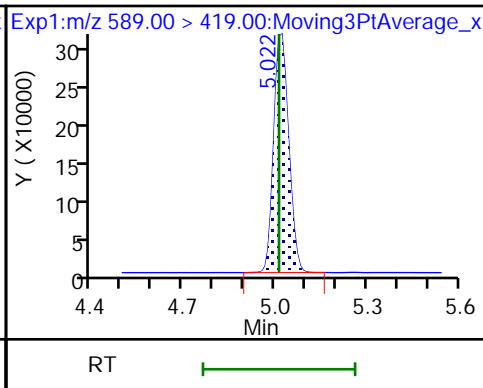
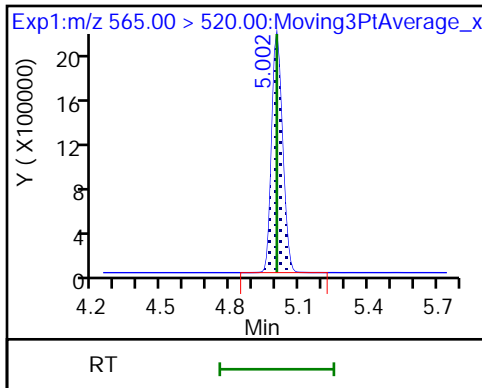
38 Perfluoroundecanoic acid



D 39 13C2 PFUnA

D 41 d5-NEtFOSAA

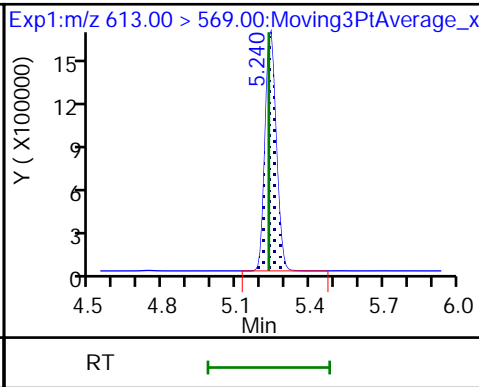
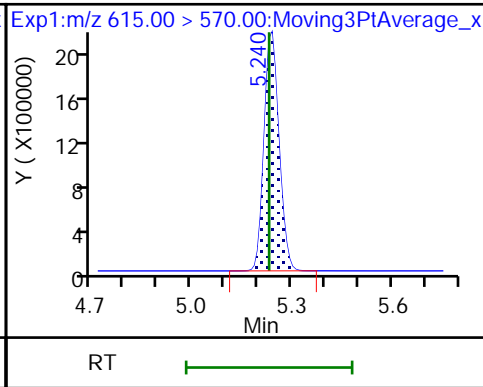
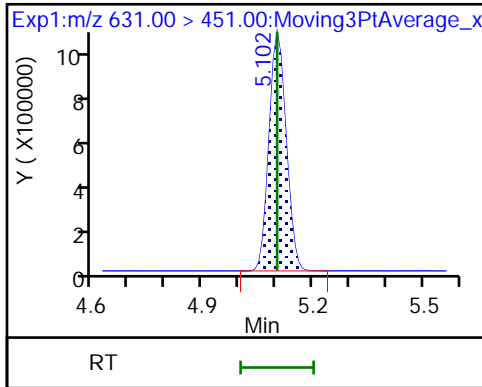
40 NEtFOSA (M)



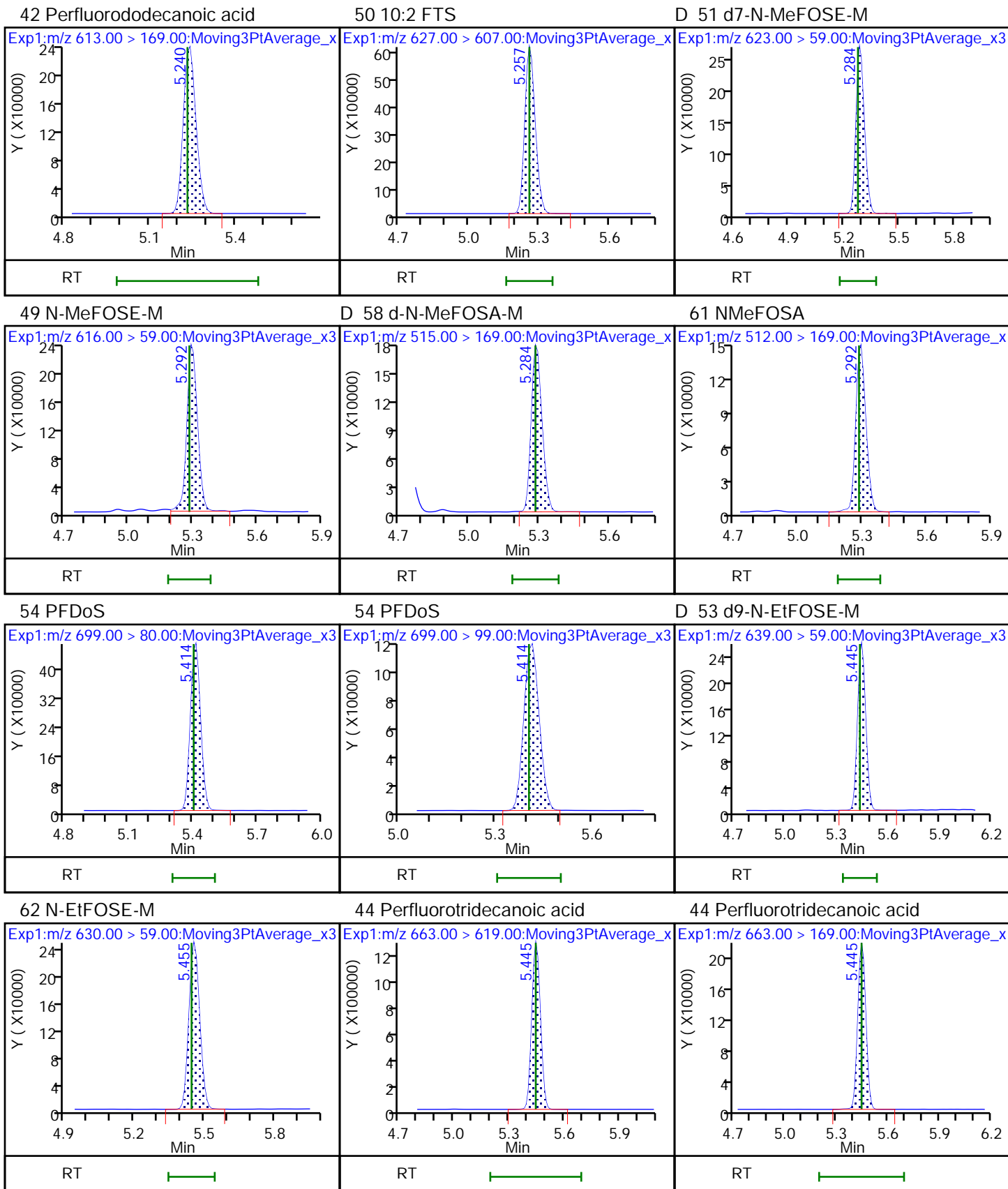
57 11CIFOS

D 43 13C2 PFDoA

42 Perfluorododecanoic acid



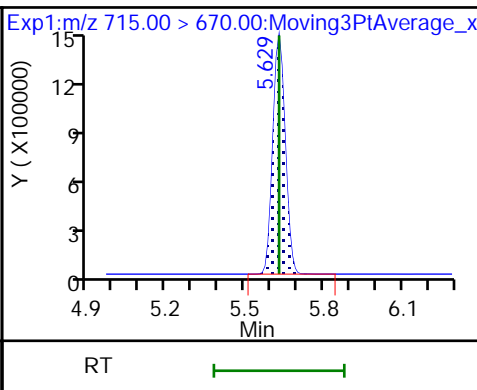
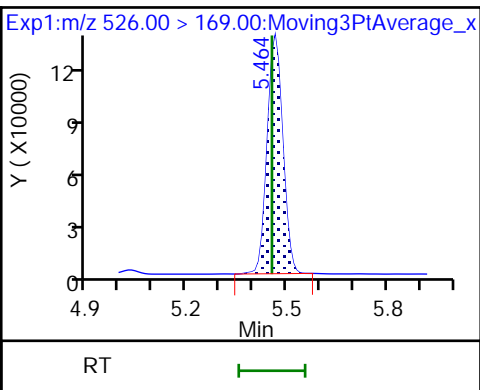
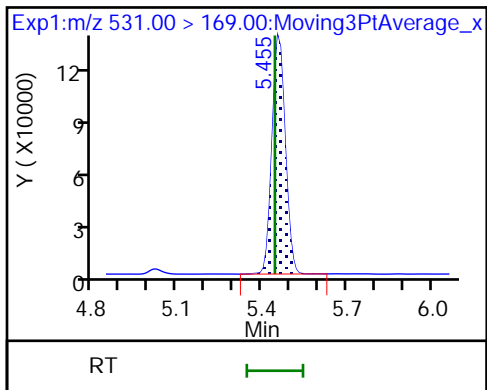




D 52 d-N-EtFOSA-M

56 N-EtFOSA-M

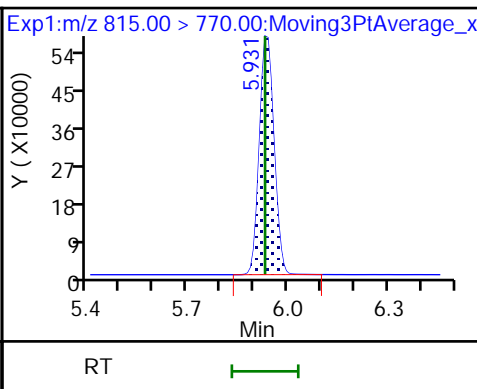
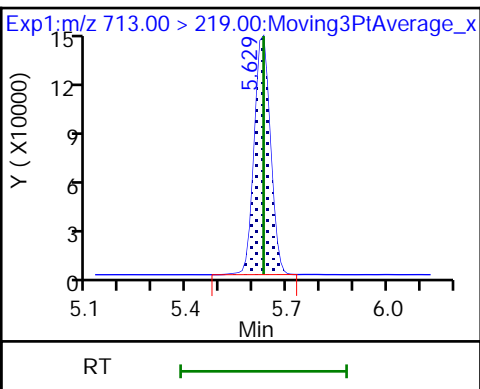
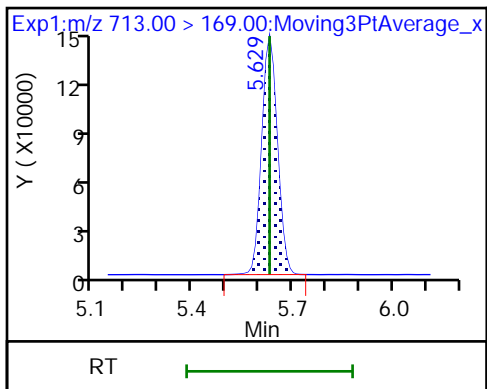
D 46 13C2 PFTeDA



45 Perfluorotetradecanoic acid

45 Perfluorotetradecanoic acid

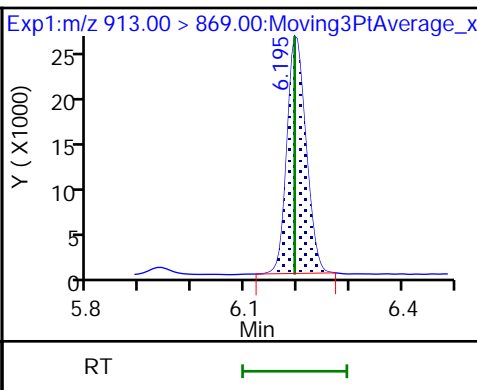
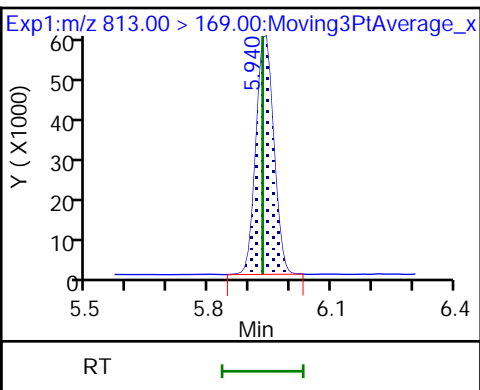
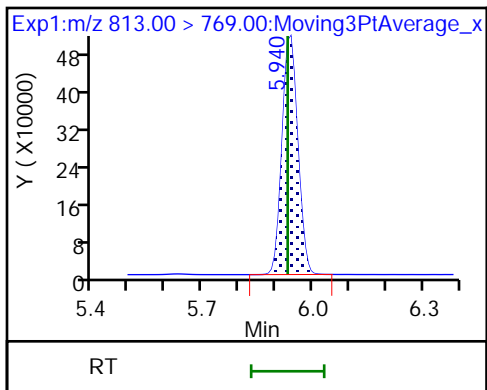
D 59 13C2 PFHxDA



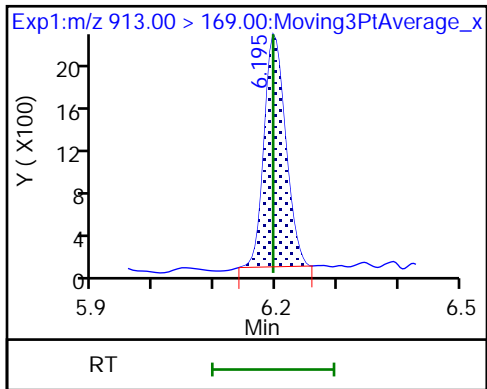
55 Perfluorohexadecanoic acid

55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid



60 Perfluorooctadecanoic acid



FORM I  
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 140-57645/2-B  
 Matrix: Air Lab File ID: 007.d  
 Analysis Method: 537 (modified) Date Collected: \_\_\_\_\_  
 Extraction Method: None Date Extracted: 01/04/2022 14:49  
 Sample wt/vol: 1 (Sample) Date Analyzed: 01/09/2022 12:58  
 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.: 57742 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.009965		0.000500	0.0000825

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\20220109-22187.b\_007.d  
 Lims ID: LCS 140-57645/2-B  
 Client ID:  
 Sample Type: LCS  
 Inject. Date: 09-Jan-2022 12:58:16 ALS Bottle#: 7 Worklist Smp#: 7  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022187-007 LCS 140-57645/2-B  
 Misc. Info.: Plate: 11 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 15:08:06 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1641

First Level Reviewer: cochranj Date: 10-Jan-2022 12:51:43  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_005.d

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	2.779	2.790	-0.011	0.678	6305108	1.29	103	13791	
2 Perfluorobutanoic acid	212.90 > 169.00	2.779	2.790	-0.011	1.000	3921710	0.99	99.1	998	
D 3 13C5 PFPeA	267.90 > 223.00	3.091	3.098	-0.007	0.754	5078053	1.34	107	9661	
4 Perfluoropentanoic acid	262.90 > 219.00	3.091	3.098	-0.007	1.000	3926926	1.02	102	1282	
D 6 13C3 PFBS	301.90 > 80.00	3.099	3.115	-0.016	0.756	3014162	1.19	102	11654	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.107	3.115	-0.008	1.003	2581348	0.9075	Target=2.75	103	8826
	298.90 > 99.00	3.099	3.115	-0.016	1.000	931257		2.77(1.37-4.12)		5018
D 8 M2-4:2 FTS	329.00 > 81.00	3.383	3.391	-0.008	0.826	930407	1.19	102	1539	
7 4:2 FTS	327.00 > 307.00	3.383	3.402	-0.019	1.000	1673232	0.9323	99.8	7108	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.413	3.422	-0.009	1.101	2427413	0.9639	Target=3.47	103	4716
	349.00 > 99.00	3.413	3.422	-0.009	1.101	690004		3.52(1.73-5.20)		6987
D 9 13C2 PFHxA	315.00 > 270.00	3.413	3.422	-0.009	0.833	5378882	1.32	106	9428	
10 Perfluorohexanoic acid	313.00 > 269.00	3.413	3.422	-0.009	1.000	3774580	1.01	Target=12.28	101	1740
	313.00 > 119.00	3.413	3.422	-0.009	1.000	296916		12.71(6.14-18.41)		487
D 12 13C3 HFPO-DA	287.00 > 169.00	3.520	3.528	-0.008	0.859	2523103	1.29	103	4139	

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	3.520	3.528	-0.008	1.000	2720481	1.00		99.7	2203	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.752	3.760	-0.008	1.000	2078477	0.8726	Target=3.52	95.9	5590	M
399.00 > 99.00	3.752	3.760	-0.008	1.000	605363		3.43(1.76-5.28)		3393	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.752	3.760	-0.008	0.916	2045157	1.21		102	6800	
D 14 13C4 PFHpA										
367.00 > 322.00	3.761	3.769	-0.008	0.918	5164711	1.33		106	8696	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.761	3.769	-0.008	1.000	4417999	1.02	Target=3.20	102	2242	
363.00 > 169.00	3.761	3.769	-0.008	1.000	1372138		3.22(1.60-4.79)		2543	
68 DONA										
377.00 > 251.00	3.798	3.807	-0.009	0.865	6439240	0.9600	Target=1.78	102	7264	
377.00 > 85.00	3.798	3.807	-0.009	0.865	3670136		1.75(0.89-2.67)		5211	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.080	4.089	-0.009	0.929	2304100	0.9469	Target=3.95	99.5	6747	
449.00 > 99.00	4.080	4.089	-0.009	0.929	581276		3.96(1.98-5.93)		4166	
19 6:2 FTS										
427.00 > 407.00	4.097	4.106	-0.009	1.000	1445064	0.9532		101	5275	
D 21 13C4 PFOA										
417.00 > 372.00	4.097	4.106	-0.009	1.000	5333445	1.33		106	12891	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.097	4.106	-0.009	1.000	1002680	1.28		107	3260	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.097	4.106	-0.009	1.000	4862284	0.99	Target=2.62	99.3	2914	
413.00 > 169.00	4.097	4.106	-0.009	1.000	1882572		2.58(1.31-3.93)		3036	
* 22 13C2 PFOA										
415.00 > 370.00	4.097	4.106	-0.009		5356156	1.25			7414	
D 25 13C4 PFOS										
503.00 > 80.00	4.393	4.401	-0.008	1.072	3047767	1.25		105	3859	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.393	4.401	-0.008	1.000	2525228	0.9011	Target=4.28	97.1	4747	M
499.00 > 99.00	4.393	4.401	-0.008	1.000	577517		4.37(2.14-6.42)		1844	M
D 27 13C5 PFNA										
468.00 > 423.00	4.418	4.427	-0.009	1.078	6806843	1.29		103	11602	
26 Perfluorononanoic acid										
463.00 > 419.00	4.418	4.427	-0.009	1.000	4736538	1.02	Target=4.54	102	3721	
463.00 > 169.00	4.418	4.427	-0.009	1.000	1047226		4.52(2.27-6.81)		1917	
63 9CIFOS										
531.00 > 351.00	4.553	4.560	-0.007	1.036	5069545	0.9281		99.6	11096	
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.673	4.681	-0.008	1.064	2358359	0.9486	Target=3.87	98.8	6180	
549.00 > 99.00	4.673	4.681	-0.008	1.064	602301		3.92(1.94-5.81)		3749	
D 34 13C8 FOSA										
506.00 > 78.00	4.698	4.706	-0.008	1.146	4393392	1.33		107	3959	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.698	4.706	-0.008	1.000	3245400	2.01		101	4420	01/17/2022

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	4.698	4.715	-0.017	1.146	6868549	1.35		108	10221	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.706	4.715	-0.009	1.002	5209486	0.9830	Target=11.50	98.3	4243	
513.00 > 169.00	4.698	4.715	-0.017	1.000	448844		11.61(5.75-17.24)		691	
31 8:2 FTS										
527.00 > 507.00	4.715	4.723	-0.008	1.000	1307151	1.07		112	3589	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.715	4.723	-0.008	1.151	1034274	1.17		97.4	1421	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.843	4.852	-0.009	1.182	727279	1.21		96.9	627	
36 NMeFOSAA										
570.00 > 419.00	4.852	4.861	-0.009	1.002	584726	1.03		103	1305	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.931	4.940	-0.009	1.122	2165428	0.9147	Target=3.76	94.9	5800	
599.00 > 99.00	4.931	4.940	-0.009	1.122	575736		3.76(1.88-5.64)		3174	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.966	4.975	-0.009	1.000	5237037	1.02	Target=8.31	102	4977	
563.00 > 169.00	4.966	4.975	-0.009	1.000	604980		8.66(4.15-12.46)		2107	
D 39 13C2 PFUnA										
565.00 > 520.00	4.966	4.975	-0.009	1.212	6640418	1.30		104	11911	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.984	4.993	-0.009	1.216	881818	1.34		107	5125	
40 NEtFOSA										
584.00 > 419.00	4.984	4.993	-0.009	1.000	665986	0.9503		95.0	1157	M
57 11CIFOS										
631.00 > 451.00	5.062	5.072	-0.010	1.152	3926574	0.9206		97.7	8183	
D 43 13C2 PFDoA										
615.00 > 570.00	5.205	5.213	-0.008	1.270	7289827	1.36		109	17478	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.205	5.213	-0.008	1.000	5924995	1.00	Target=7.17	99.5	4783	
613.00 > 169.00	5.205	5.213	-0.008	1.000	876539		6.76(3.58-10.75)		2079	
50 10:2 FTS										
627.00 > 607.00	5.222	5.231	-0.009	1.108	2022111	1.03		107	7085	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.275	5.284	-0.009	1.287	791900	1.23		98.6	860	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.275	5.284	-0.009	1.287	555451	1.21		97.0	59.8	
61 NMeFOSA										
512.00 > 169.00	5.284	5.284	0.0	1.002	472732	1.05		105	612	
49 N-MeFOSE-M										
616.00 > 59.00	5.284	5.292	-0.008	1.002	740353	1.00		99.8	1022	
54 PFDoS										
699.00 > 80.00	5.373	5.383	-0.010	1.223	2204426	0.9430	Target=4.12	97.4	5897	
699.00 > 99.00	5.373	5.383	-0.010	1.223	516927		4.26(2.06-6.18)		3138	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.414	5.414	0.0	1.040	4612353	0.9538	Target=6.35	95.4	4868	
663.00 > 169.00	5.414	5.414	0.0	1.040	768111		6.00(3.17-9.52)		2922	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.435	5.444	-0.009	1.326	820772	1.27		102	386	
62 N-EtFOSE-M										
630.00 > 59.00	5.445	5.454	-0.009	1.002	848882	0.9735		97.3	853	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.445	5.454	-0.009	1.329	452368	1.20		95.7	742	
56 N-EtFOSA-M										
526.00 > 169.00	5.455	5.464	-0.009	1.002	456227	1.05		105	577	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.598	5.607	-0.009	1.366	5402581	1.33		106	10937	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.598	5.607	-0.009	1.000	585985	1.01	Target=1.06	101	2725	
713.00 > 219.00	5.587	5.607	-0.020	0.998	518634		1.13(0.53-1.59)		3396	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.896	5.904	-0.008	1.439	3563143	1.29		103	6800	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.896	5.904	-0.008	1.000	3171773	1.04	Target=8.21	104	4124	
813.00 > 169.00	5.896	5.904	-0.008	1.000	391676		8.10(4.10-12.31)		1253	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.155	6.164	-0.009	1.044	2949051	1.05	Target=11.62	105	3498	
913.00 > 169.00	6.155	6.164	-0.009	1.044	251712		11.72(5.81-17.43)		1202	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Knoxville

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Injection Date: 09-Jan-2022 12:58:16

Instrument ID: LCA

Lims ID: LCS 140-57645/2-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 7

Worklist Smp#: 7

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

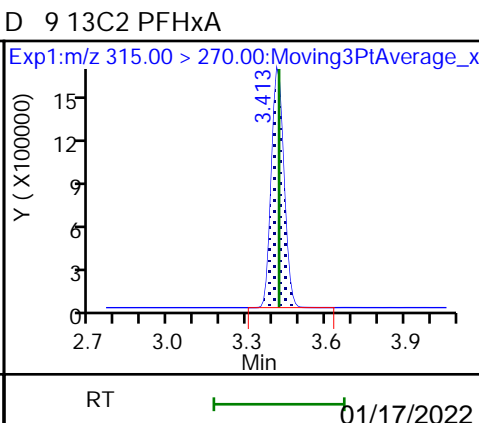
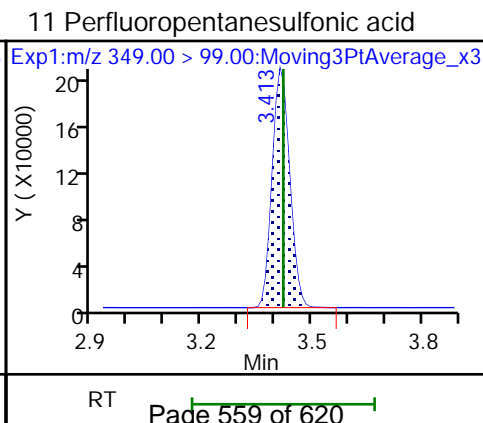
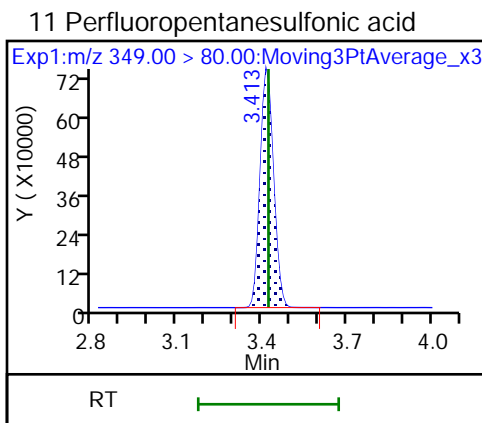
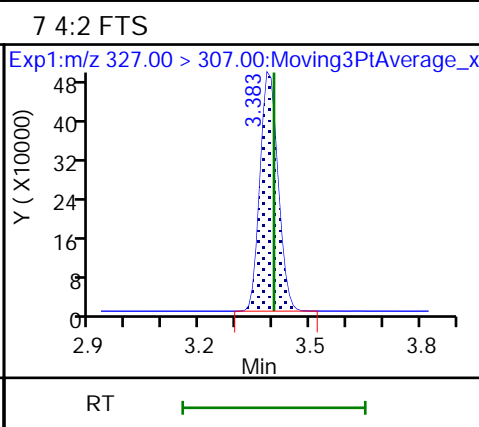
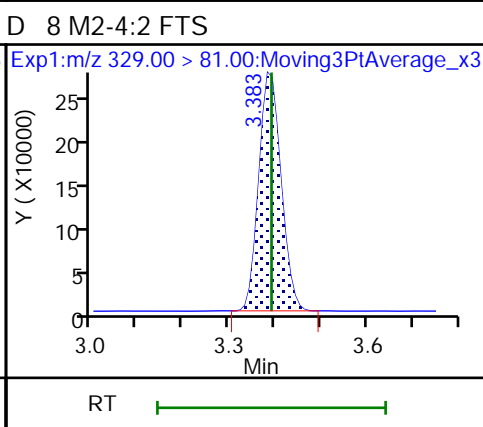
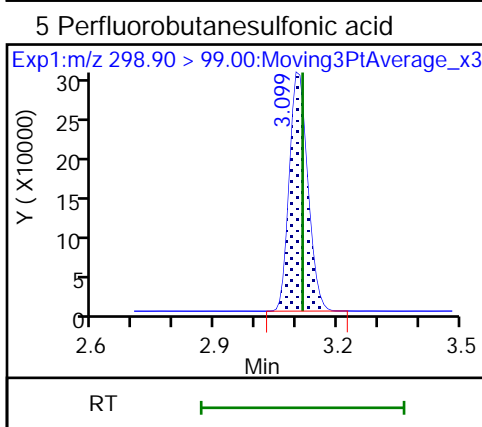
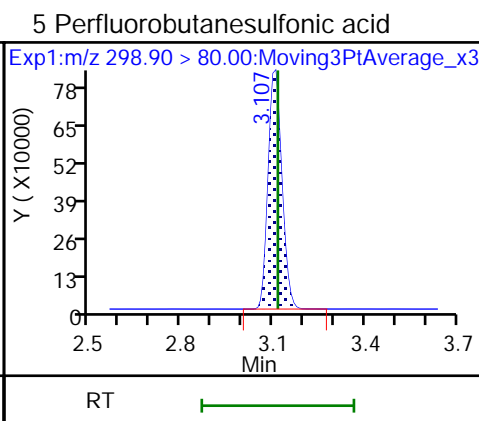
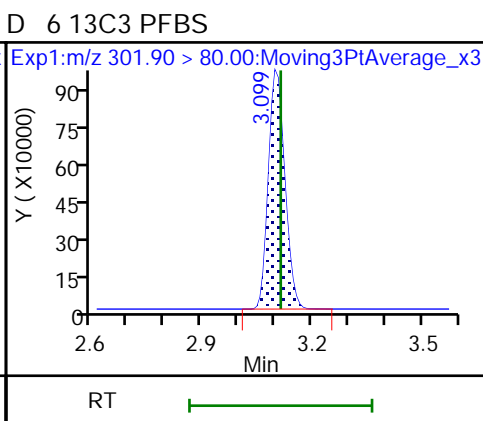
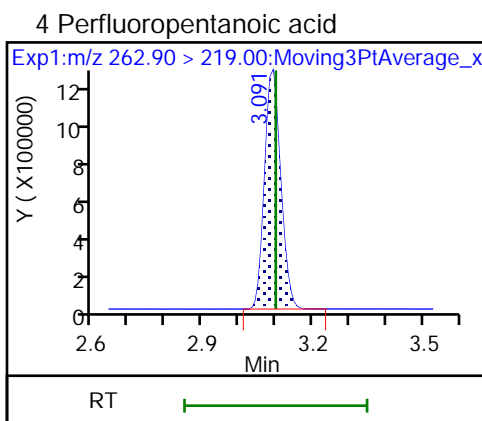
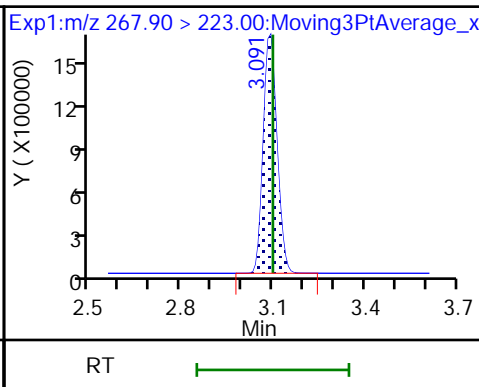
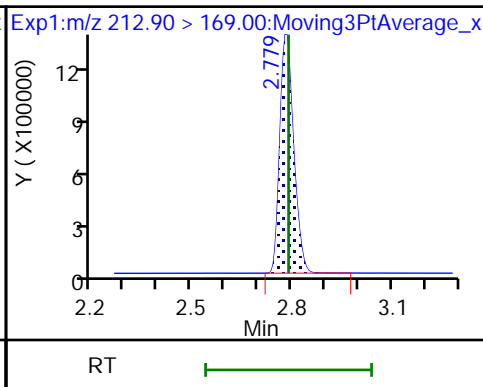
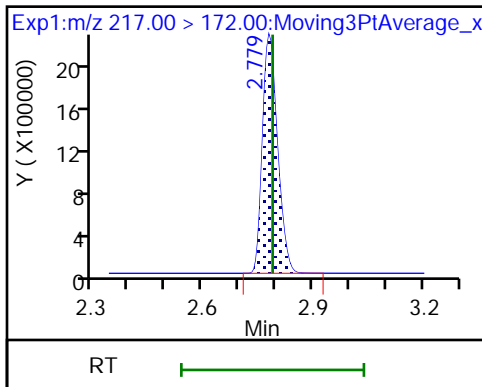
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Limit Group: LC - PFC- ICAL

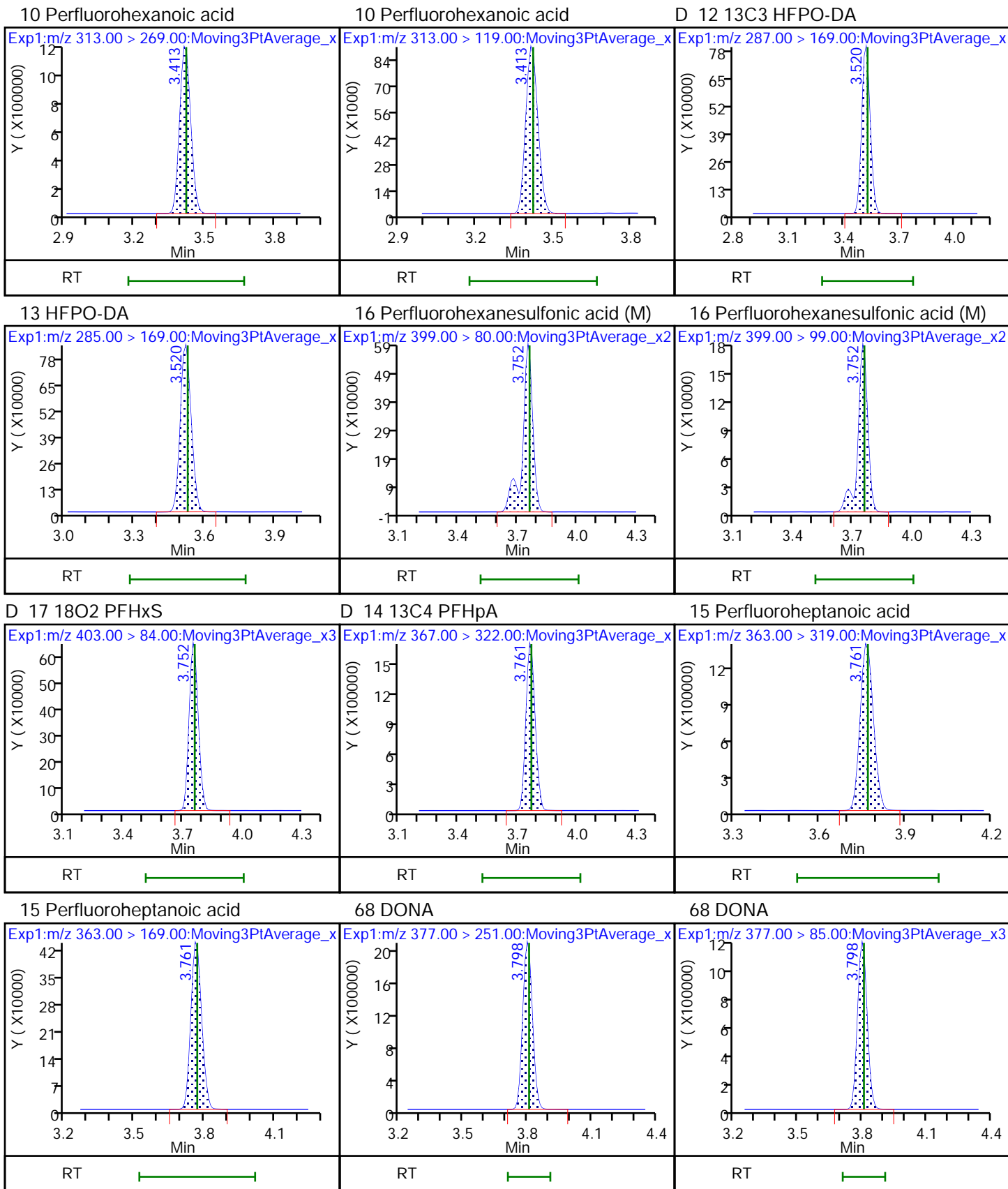
D 1 13C4 PFBA

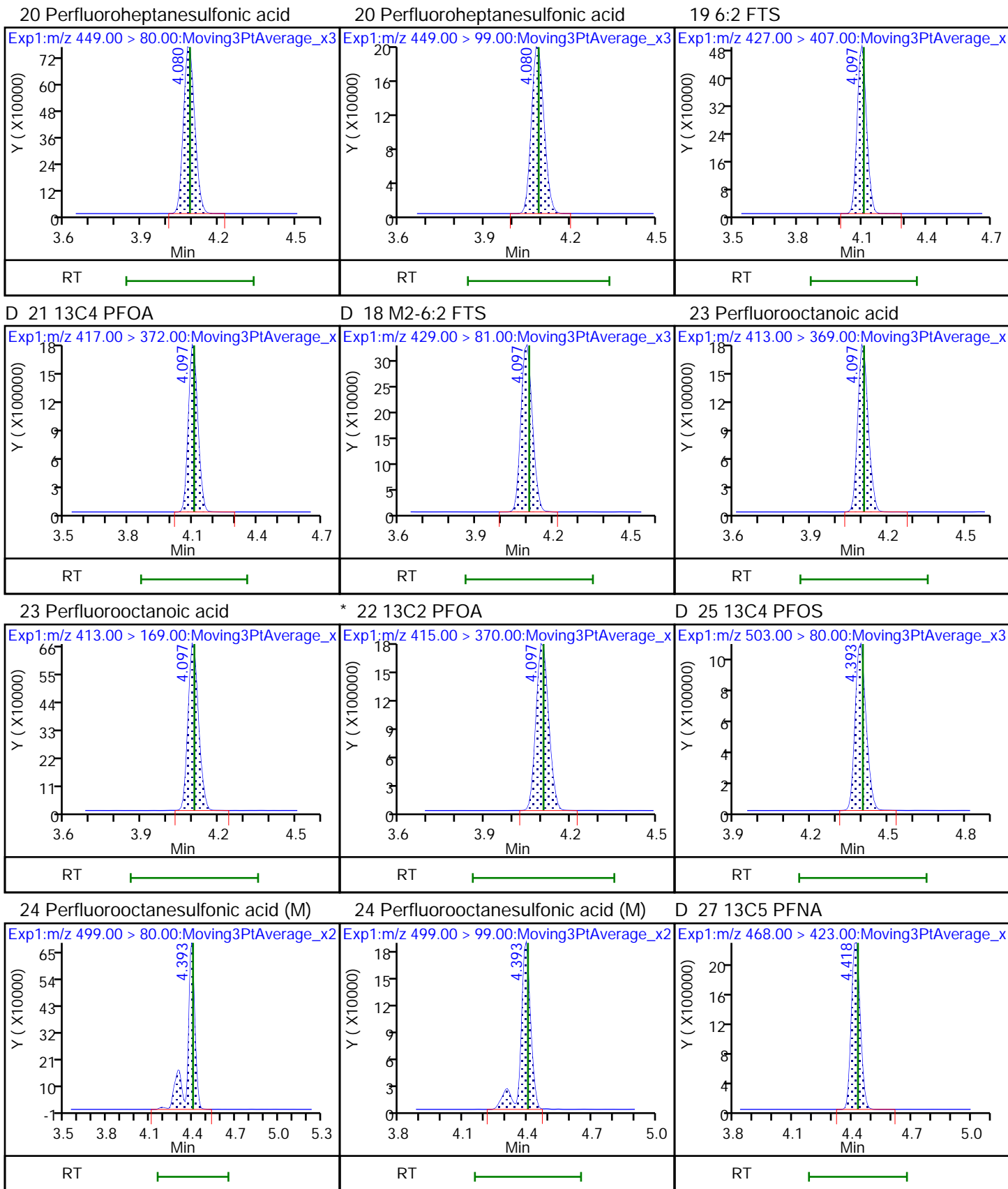
2 Perfluorobutanoic acid

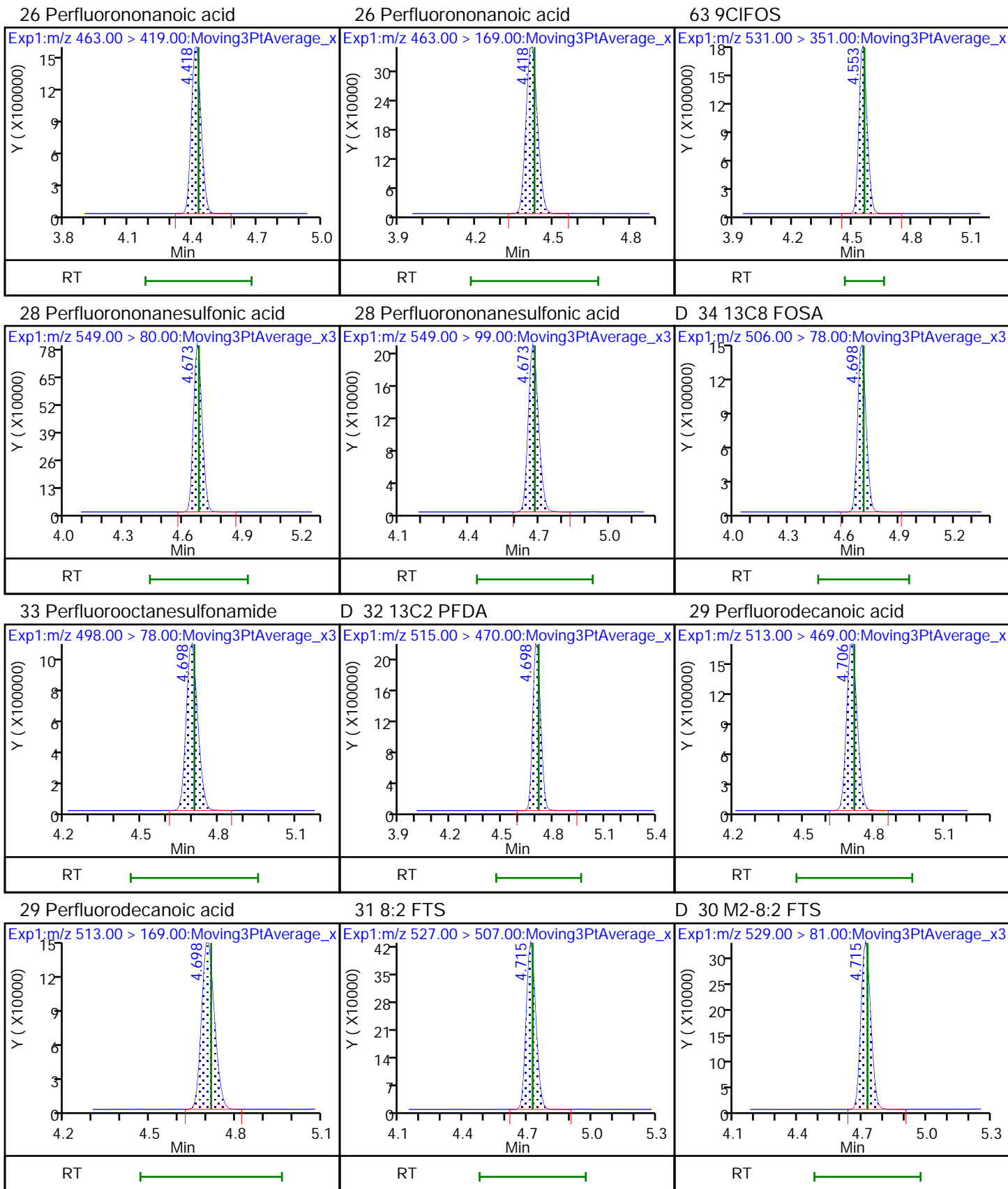
D 3 13C5 PFPeA







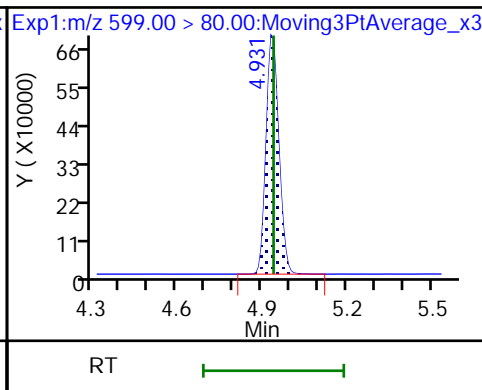
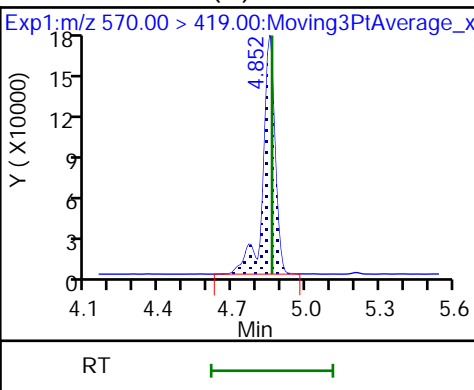
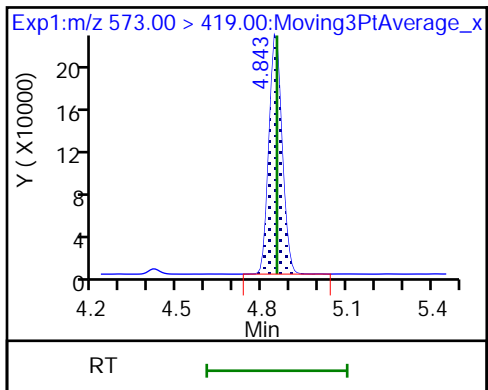




D 35 d3-NMeFOSAA

36 NMeFOSAA (M)

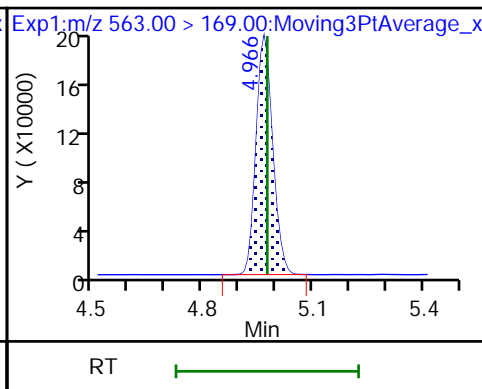
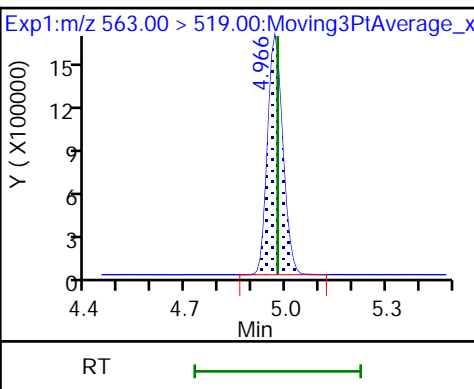
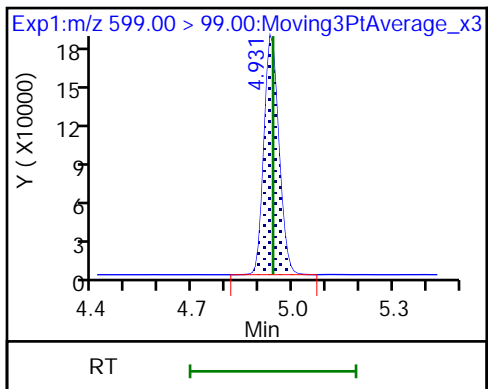
37 Perfluorodecanesulfonic acid



37 Perfluorodecanesulfonic acid

38 Perfluoroundecanoic acid

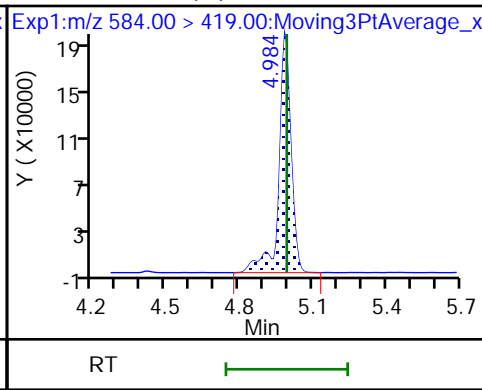
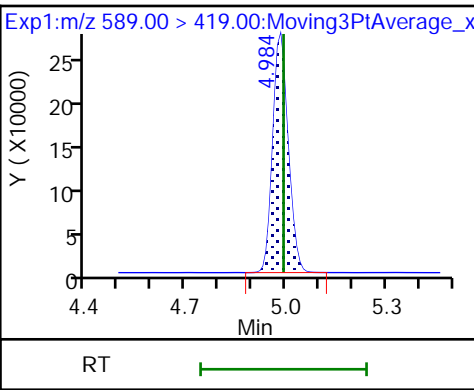
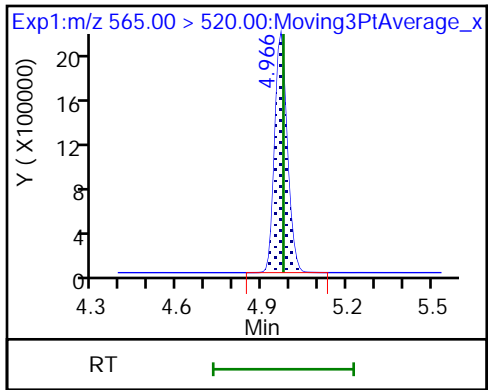
38 Perfluoroundecanoic acid



D 39 13C2 PFUnA

D 41 d5-NEtFOSAA

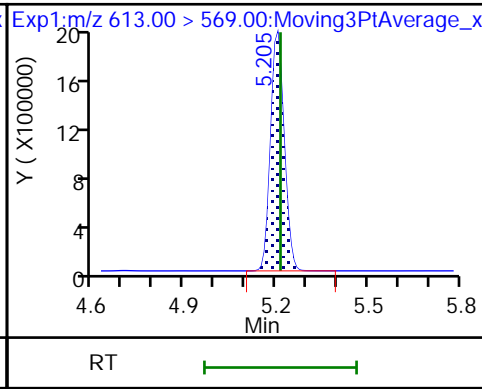
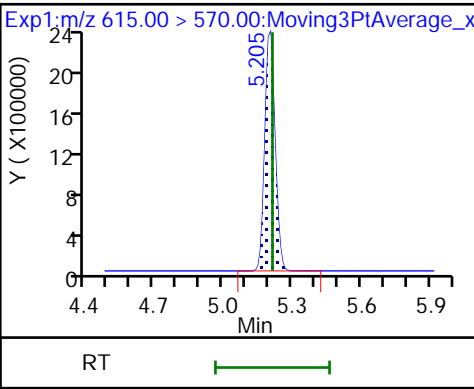
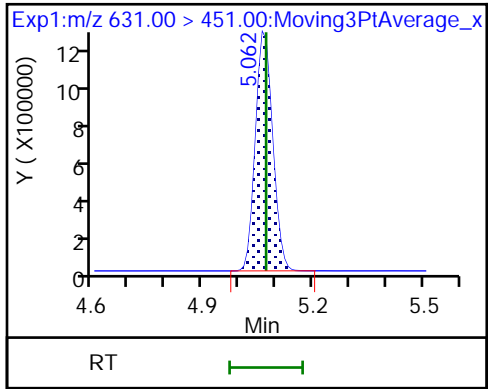
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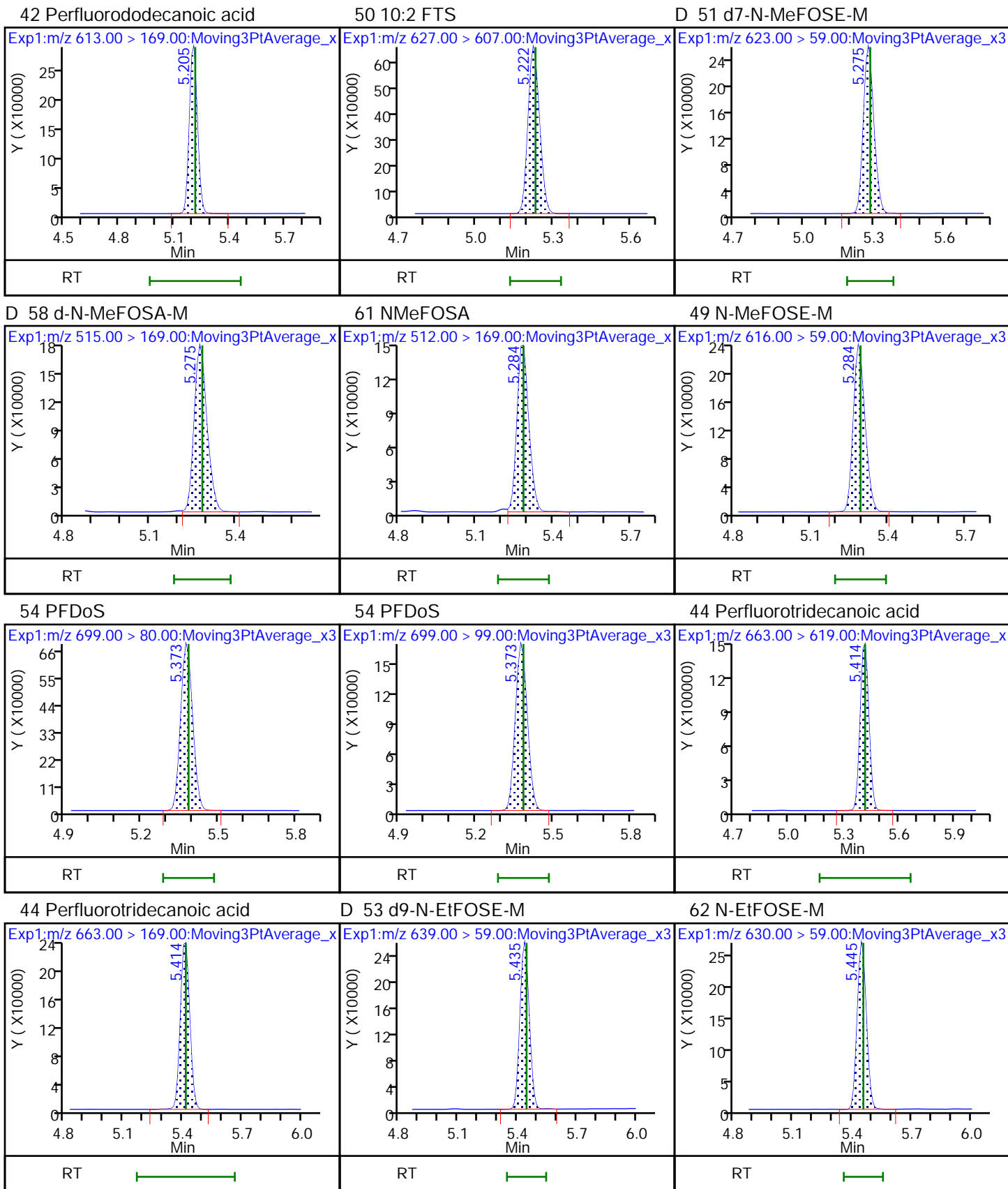


57 11CIFOS

D 43 13C2 PFDaA

42 Perfluorododecanoic acid

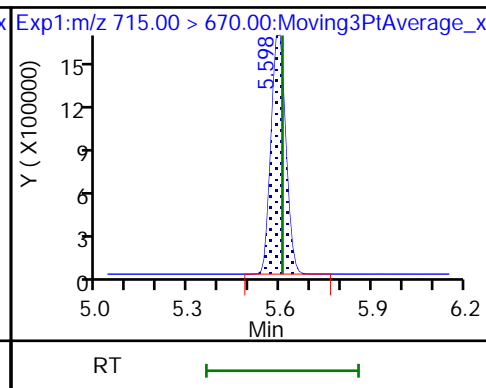
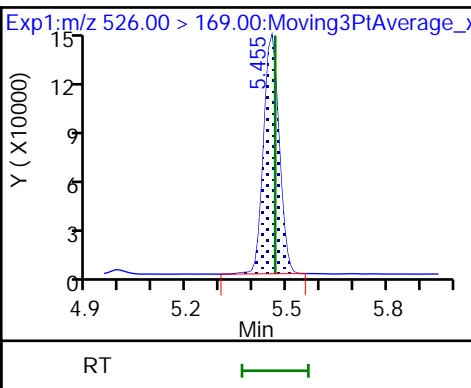
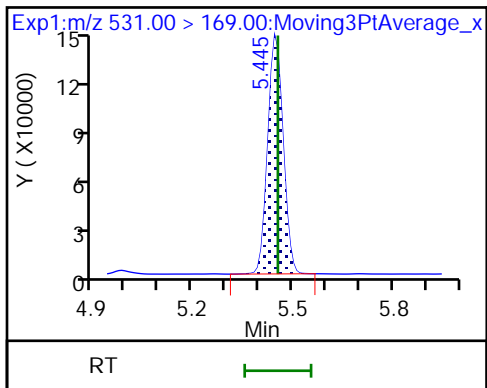




D 52 d-N-EtFOSA-M

56 N-EtFOSA-M

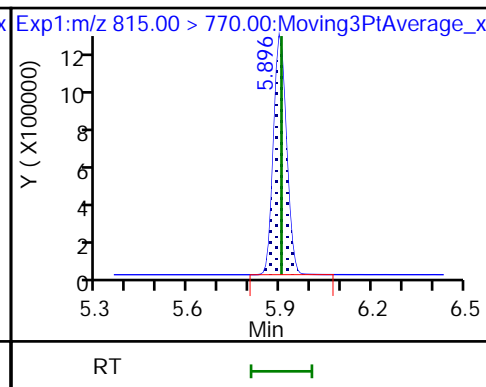
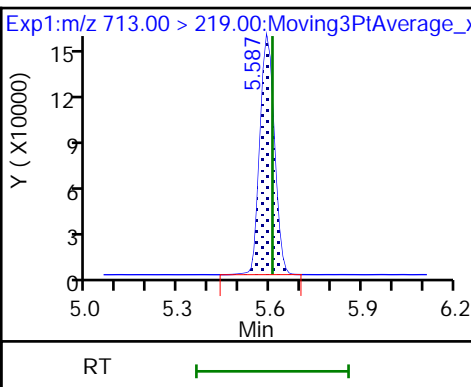
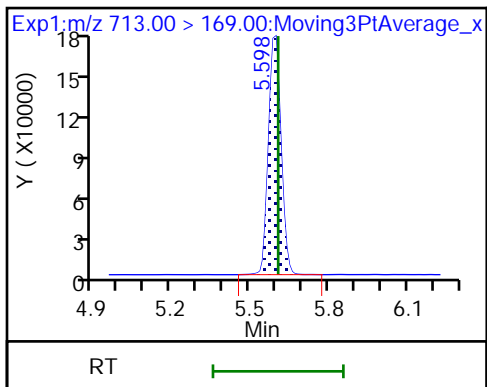
D 46 13C2 PFTeDA



45 Perfluorotetradecanoic acid

45 Perfluorotetradecanoic acid

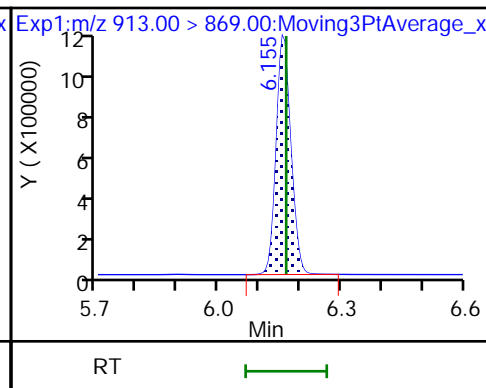
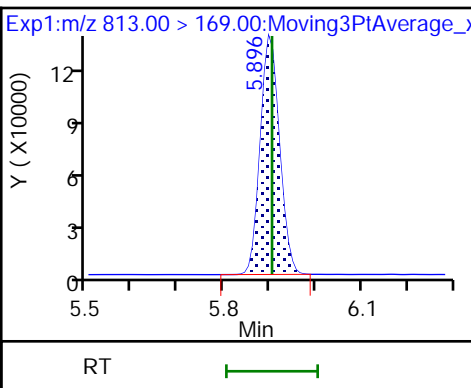
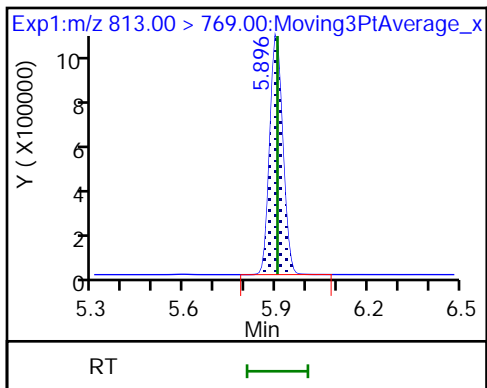
D 59 13C2 PFHxDA



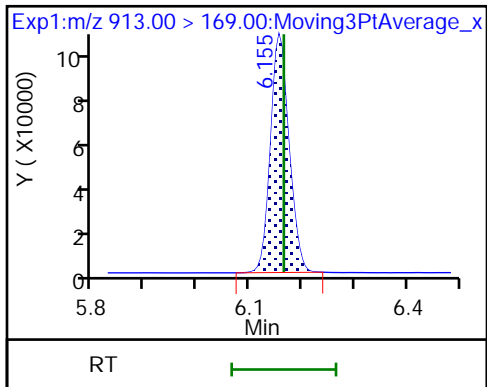
55 Perfluorohexadecanoic acid

55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid



60 Perfluorooctadecanoic acid



FORM I  
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCSD 140-57611/3-B  
 Matrix: Air Lab File ID: 012.d  
 Analysis Method: 537 (modified) Date Collected: \_\_\_\_\_  
 Extraction Method: None Date Extracted: 01/04/2022 08:32  
 Sample wt/vol: 1 (Sample) Date Analyzed: 01/11/2022 18:32  
 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.: 57822 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.02252		0.00100	0.000580

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\20220111-22220.b\_012.d  
 Lims ID: LCSD 140-57611/3-B  
 Client ID:  
 Sample Type: LCSD  
 Inject. Date: 11-Jan-2022 18:32:07 ALS Bottle#: 12 Worklist Smp#: 12  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022220-012 lcsd 140-57611/3-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 12-Jan-2022 18:43:11 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1648

First Level Reviewer: cochranj Date: 12-Jan-2022 18:37:31  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_007.d

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	2.814	-0.018	0.678	5533266	1.13	90.2	13398	
2 Perfluorobutanoic acid	212.90 > 169.00	2.796	2.814	-0.018	1.000	3682735	1.06	106	970	
D 3 13C5 PFPeA	267.90 > 223.00	3.108	3.131	-0.023	0.754	4271051	1.12	89.7	8979	
4 Perfluoropentanoic acid	262.90 > 219.00	3.108	3.131	-0.023	1.000	3508676	1.08	108	870	
D 6 13C3 PFBS	301.90 > 80.00	3.124	3.147	-0.023	0.758	2768880	1.09	93.7	7137	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.124	3.147	-0.023	1.000	2531247	0.9687	Target=2.74	110	2159
	298.90 > 99.00	3.124	3.147	-0.023	1.000	941040		2.69(1.37-4.11)		4879
D 8 M2-4:2 FTS	329.00 > 81.00	3.413	3.442	-0.029	0.828	884858	1.13	96.9	1287	
7 4:2 FTS	327.00 > 307.00	3.413	3.442	-0.029	1.000	1666486	0.9763	105	6942	
10 Perfluorohexanoic acid	313.00 > 269.00	3.443	3.472	-0.029	1.000	3162606	1.04	Target=12.60	104	1339
	313.00 > 119.00	3.443	3.472	-0.029	1.000	266775		11.85(6.30-18.90)		358
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.443	3.472	-0.029	1.102	2388359	1.03	Target=3.45	110	4711
	349.00 > 99.00	3.443	3.472	-0.029	1.102	666085		3.59(1.73-5.18)		3897
D 9 13C2 PFHxA	315.00 > 270.00	3.443	3.472	-0.029	0.835	4387776	1.08	86.1	9778	
D 12 13C3 HFPO-DA	287.00 > 169.00	3.539	3.574	-0.035	0.858	2095104	1.07	85.6	3879	



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	3.574	-0.026	1.003	2552199	1.13		113	2379	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.780	3.807	-0.027	1.000	2234599	0.9851	Target=3.46	108	4470	M
399.00 > 99.00	3.780	3.807	-0.027	1.000	618486		3.61(1.73-5.19)		3018	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.780	3.807	-0.027	0.917	1947783	1.15		97.1	8524	
D 14 13C4 PFHpA										
367.00 > 322.00	3.789	3.825	-0.036	0.919	4573452	1.17		93.9	10533	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.789	3.825	-0.036	1.000	4204018	1.10	Target=3.21	110	2431	
363.00 > 169.00	3.789	3.825	-0.036	1.000	1262978		3.33(1.61-4.82)		2552	
68 DONA										
377.00 > 251.00	3.825	3.858	-0.033	0.866	6417648	1.03	Target=1.72	110	8349	
377.00 > 85.00	3.825	3.858	-0.033	0.866	3577744		1.79(0.86-2.58)		5185	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.106	4.140	-0.034	0.929	2337299	1.04	Target=3.94	109	6313	
449.00 > 99.00	4.106	4.140	-0.034	0.929	598725		3.90(1.97-5.90)		4128	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.123	4.149	-0.026	1.000	978008	1.24		104	2515	
D 21 13C4 PFOA										
417.00 > 372.00	4.123	4.156	-0.033	1.000	4823177	1.20		95.7	10195	
19 6:2 FTS										
427.00 > 407.00	4.123	4.156	-0.033	1.000	1438439	0.9727		103	6046	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.123	4.156	-0.033	1.000	4640642	1.05	Target=2.53	105	2747	
413.00 > 169.00	4.123	4.156	-0.033	1.000	1770941		2.62(1.27-3.80)		2963	
* 22 13C2 PFOA										
415.00 > 370.00	4.123	4.156	-0.033		5373279	1.25			7596	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.419	4.452	-0.033	1.000	2597332	1.00	Target=4.27	108	4327	M
499.00 > 99.00	4.419	4.452	-0.033	1.000	576522		4.51(2.13-6.40)		2598	M
D 25 13C4 PFOS										
503.00 > 80.00	4.419	4.452	-0.033	1.072	2823071	1.16		96.7	4828	
26 Perfluorononanoic acid										
463.00 > 419.00	4.435	4.469	-0.034	1.000	4630865	1.07	Target=4.52	107	4059	
463.00 > 169.00	4.435	4.469	-0.034	1.000	998602		4.64(2.26-6.78)		1945	
D 27 13C5 PFNA										
468.00 > 423.00	4.435	4.469	-0.034	1.076	6332504	1.19		95.5	11807	
63 9CIFOS										
531.00 > 351.00	4.574	4.608	-0.034	1.035	5122731	1.01		109	11218	
D 34 13C8 FOSA										
506.00 > 78.00	4.698	4.723	-0.025	1.139	4067363	1.23		98.5	3731	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.706	4.723	-0.017	1.002	3314390	1.08		108	4469	

Data File: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_012.d

Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_007.d

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	4.698	4.732	-0.034	1.063	2310103	1.00	Target=3.82	104	2966	
549.00 > 99.00	4.698	4.732	-0.034	1.063	591578		3.90(1.91-5.73)		4191	
D 32 13C2 PFDA										
515.00 > 470.00	4.724	4.757	-0.033	1.146	6075333	1.19		94.9	11482	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.724	4.757	-0.033	1.000	4902611	1.05	Target=11.59	105	4118	
513.00 > 169.00	4.724	4.757	-0.033	1.000	412899		11.87(5.80-17.39)		660	
31 8:2 FTS										
527.00 > 507.00	4.741	4.774	-0.033	1.000	1293253	1.08		113	3994	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.741	4.774	-0.033	1.150	1012429	1.14		95.0	1517	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.870	4.905	-0.035	1.181	894108	1.48		119	1087	
36 NMeFOSAA										
570.00 > 419.00	4.870	4.905	-0.035	1.000	699337	1.01		101	1375	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.958	4.992	-0.034	1.122	2134841	0.9734	Target=3.60	101	5230	
599.00 > 99.00	4.958	4.992	-0.034	1.122	558739		3.82(1.80-5.40)		4253	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.993	5.022	-0.029	1.000	5288415	1.13	Target=8.71	113	5648	
563.00 > 169.00	4.993	5.022	-0.029	1.000	607349		8.71(4.35-13.06)		2408	
D 39 13C2 PFUnA										
565.00 > 520.00	4.993	5.022	-0.029	1.211	6016990	1.18		94.2	8468	
40 NEtFOSA										
584.00 > 419.00	5.012	5.042	-0.030	1.002	791125	1.02		102	1699	M
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.002	5.042	-0.040	1.213	977716	1.48		118	4942	
57 11C1FOS										
631.00 > 451.00	5.092	5.122	-0.030	1.152	3840364	0.9720		103	10458	
D 43 13C2 PFDoA										
615.00 > 570.00	5.222	5.257	-0.035	1.267	5907163	1.10		88.2	12157	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.222	5.257	-0.035	1.000	5159245	1.07	Target=7.01	107	4627	
613.00 > 169.00	5.222	5.257	-0.035	1.000	719631		7.17(3.51-10.52)		2245	
50 10:2 FTS										
627.00 > 607.00	5.249	5.275	-0.026	1.107	2029960	1.05		109	6256	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.275	5.292	-0.017	1.279	687638	1.07		85.4	537	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.275	5.292	-0.017	1.279	496180	1.08		86.4	50.9	
61 NMeFOSA										
512.00 > 169.00	5.275	5.292	-0.017	1.000	464656	1.15		115	589	
49 N-MeFOSE-M										
616.00 > 59.00	5.284	5.301	-0.017	1.002	706786	1.10		110	757	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
54 PFDoS										
699.00 > 80.00	5.394	5.425	-0.030	1.221	2197076	1.01	Target=4.26	105	2339	
699.00 > 99.00	5.394	5.425	-0.030	1.221	528207		4.16(2.13-6.39)		2688	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.435	5.444	-0.009	1.318	717477	1.11		88.8	305	
62 N-EtFOSE-M										
630.00 > 59.00	5.445	5.464	-0.019	1.002	781986	1.03		103	772	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.435	5.464	-0.029	1.041	4247745	1.08	Target=5.87	108	4623	
663.00 > 169.00	5.435	5.464	-0.029	1.041	713516		5.95(2.93-8.80)		2659	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.445	5.464	-0.019	1.321	418094	1.10		88.1	573	
56 N-EtFOSA-M										
526.00 > 169.00	5.455	5.464	-0.009	1.002	442659	1.11		111	636	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.619	5.650	-0.031	1.363	4471417	1.09		87.5	8604	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.619	5.650	-0.031	1.000	506406	1.05	Target=1.02	105	2058	
713.00 > 219.00	5.609	5.650	-0.041	0.998	489424		1.03(0.51-1.53)		2151	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.922	5.948	-0.026	1.436	3067347	1.11		88.6	5320	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.922	5.948	-0.026	1.000	2855378	1.09	Target=8.43	109	3751	
813.00 > 169.00	5.922	5.948	-0.026	1.000	349743		8.16(4.22-12.65)		686	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.180	6.209	-0.029	1.044	2513236	1.04	Target=11.53	104	3286	
913.00 > 169.00	6.180	6.209	-0.029	1.044	224164		11.21(5.77-17.30)		914	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_012.d

Injection Date: 11-Jan-2022 18:32:07

Instrument ID: LCA

Lims ID: LCSD 140-57611/3-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 12

Worklist Smp#: 12

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

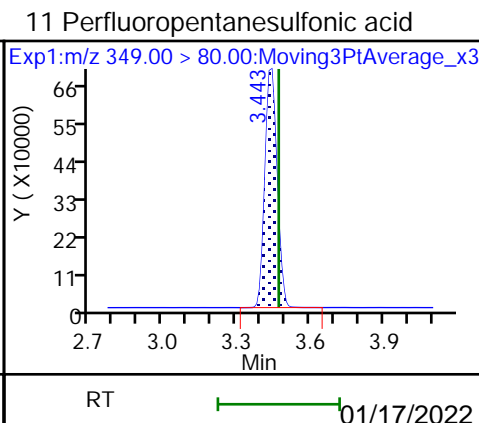
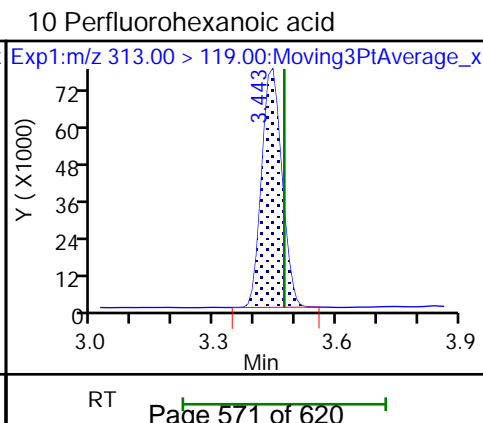
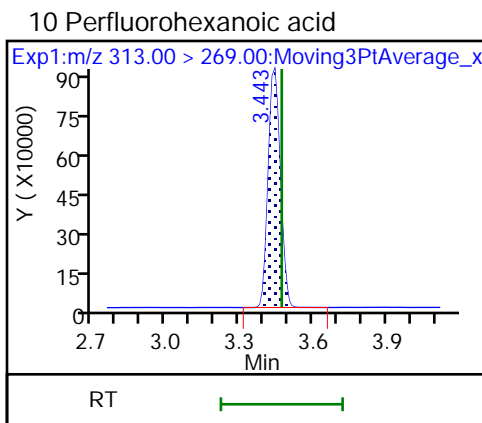
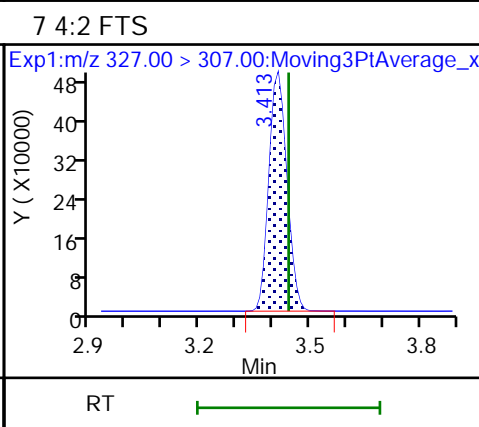
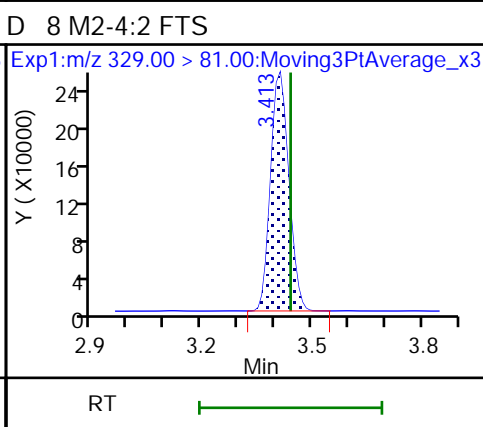
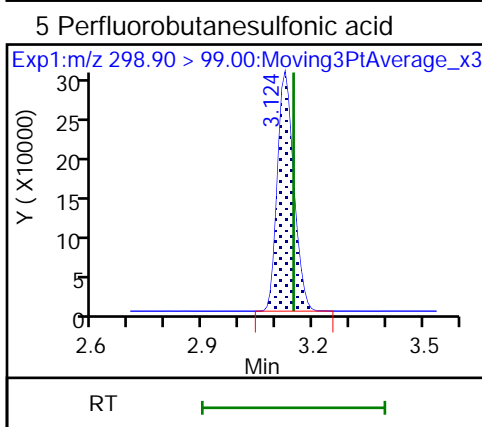
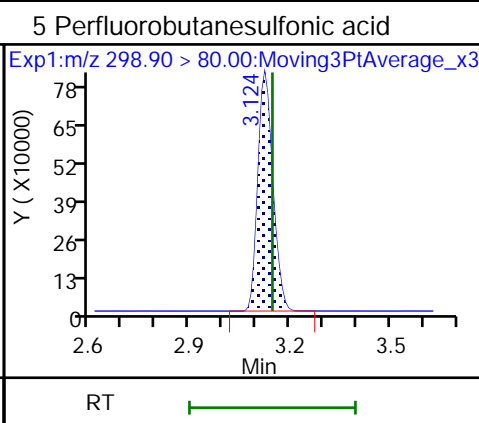
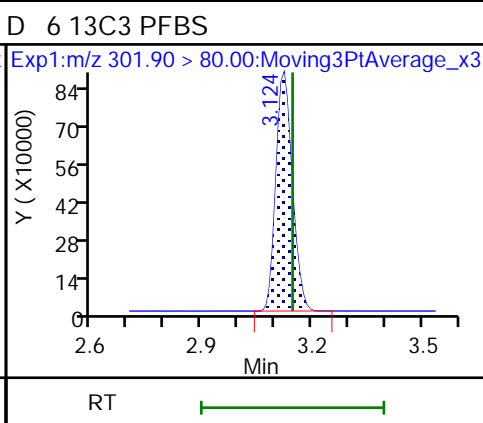
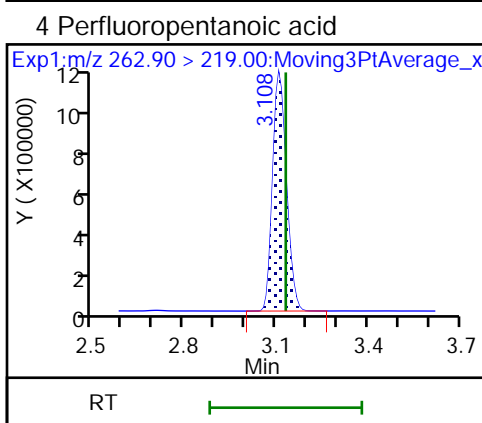
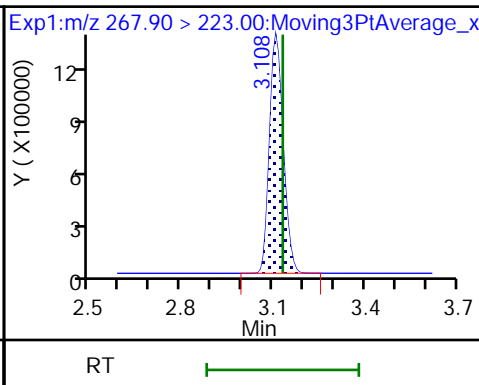
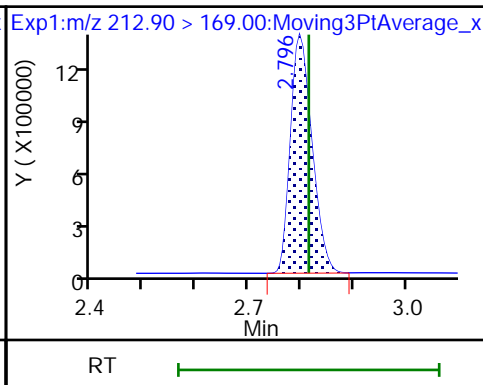
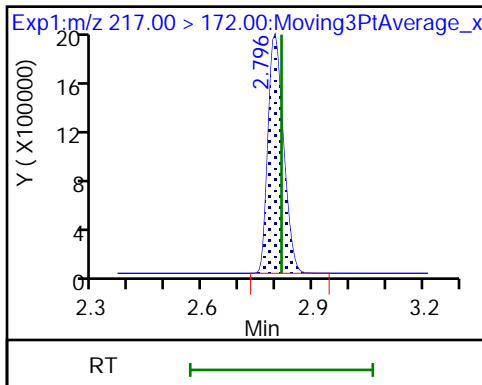
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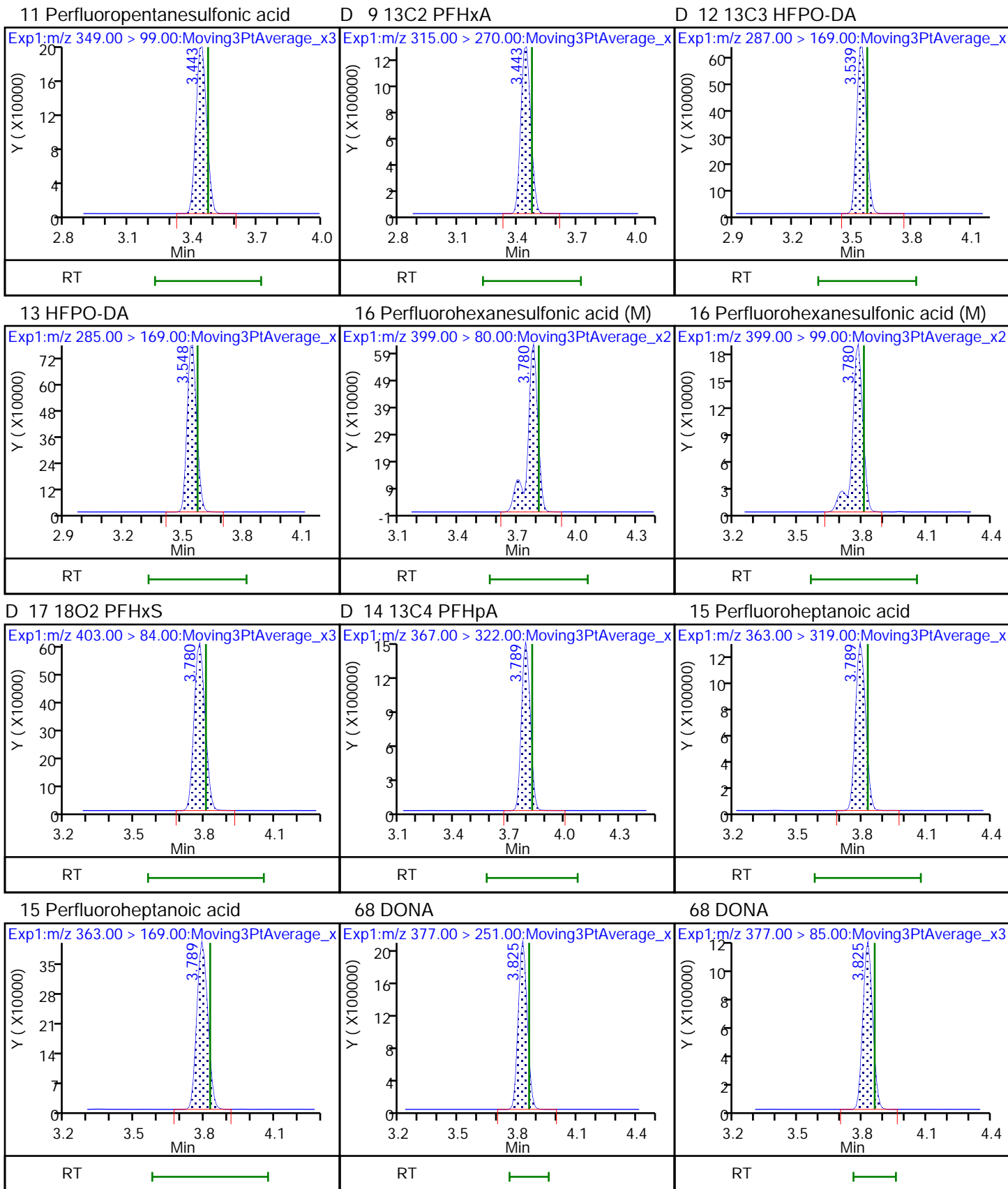
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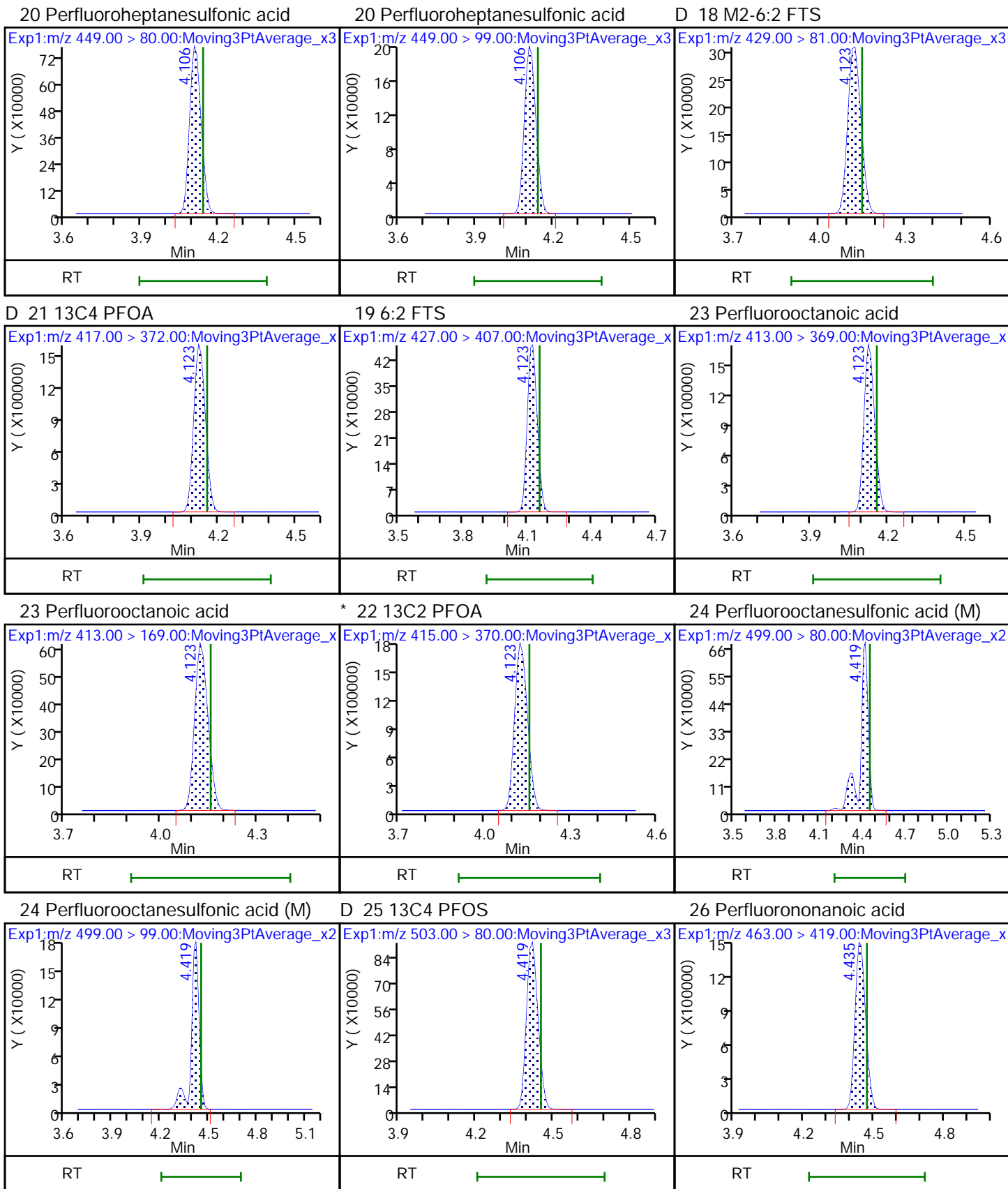
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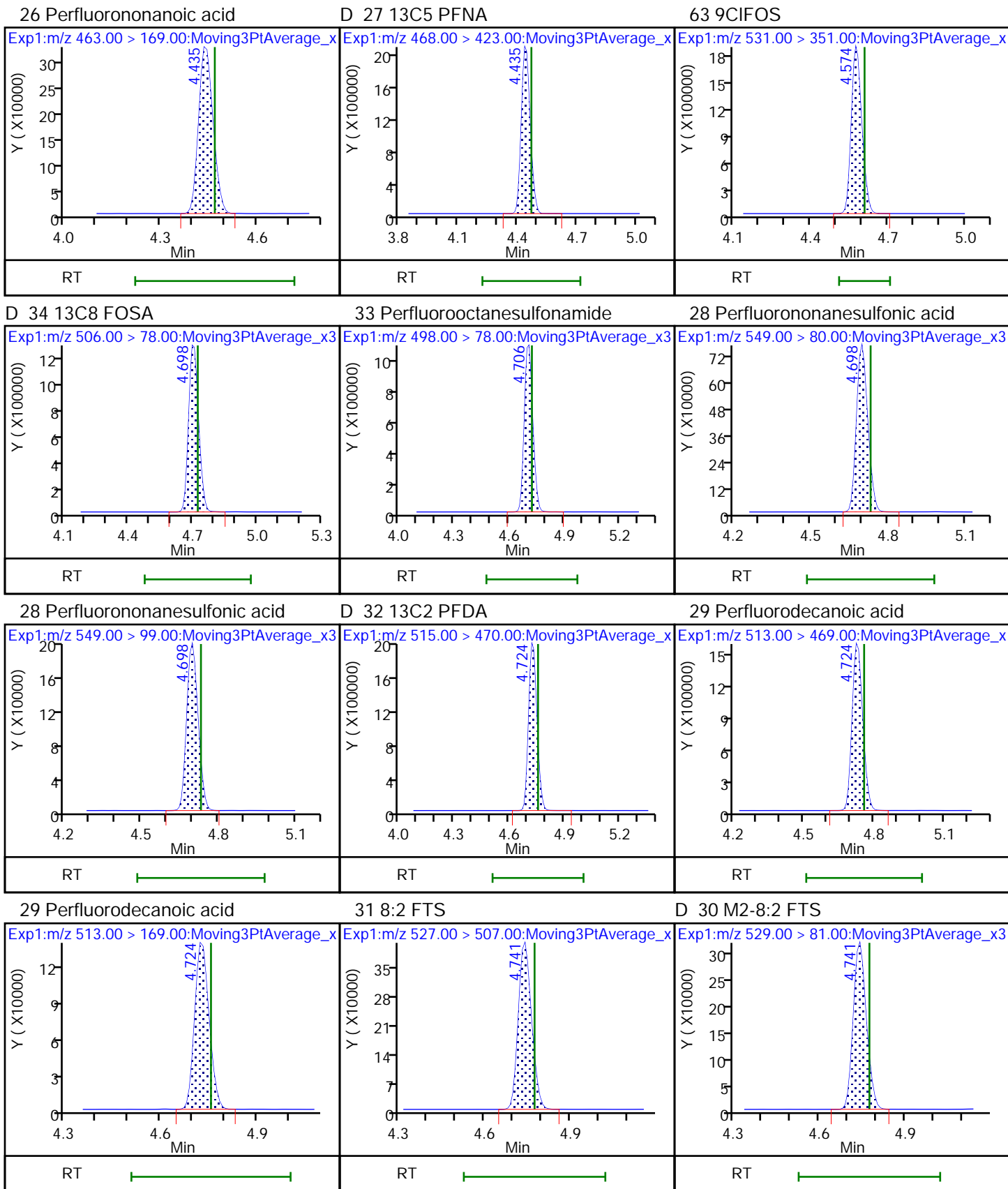
2 Perfluorobutanoic acid

D 3 13C5 PFPeA





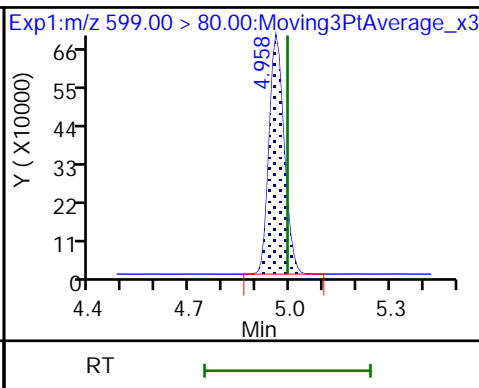
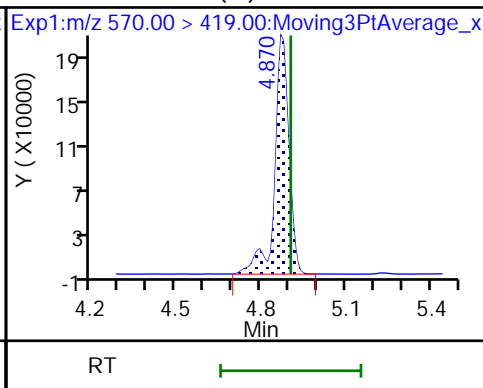
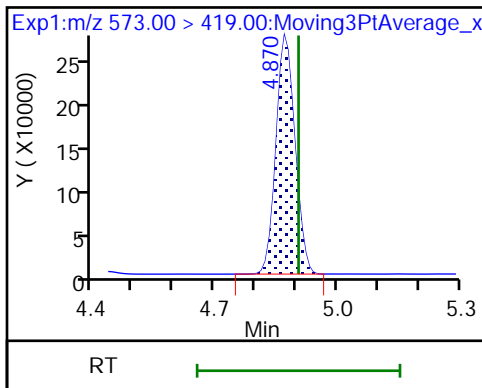




D 35 d3-NMeFOSAA

36 NMeFOSAA (M)

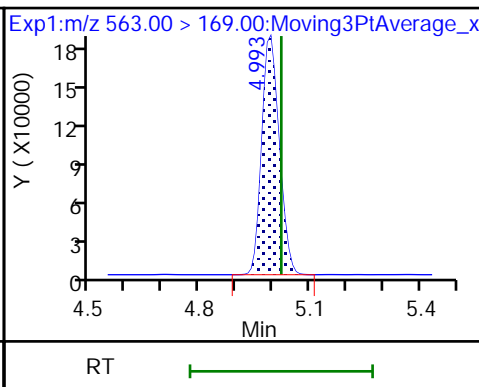
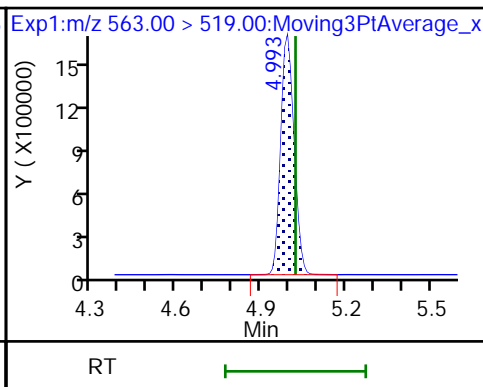
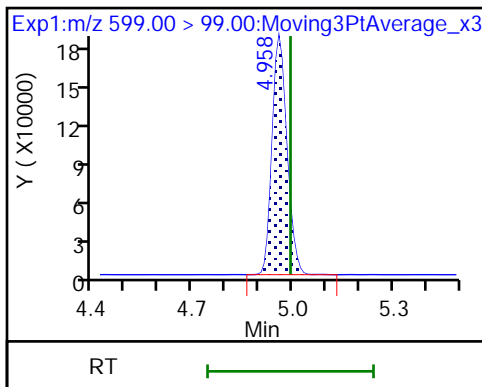
37 Perfluorodecanesulfonic acid



37 Perfluorodecanesulfonic acid

38 Perfluoroundecanoic acid

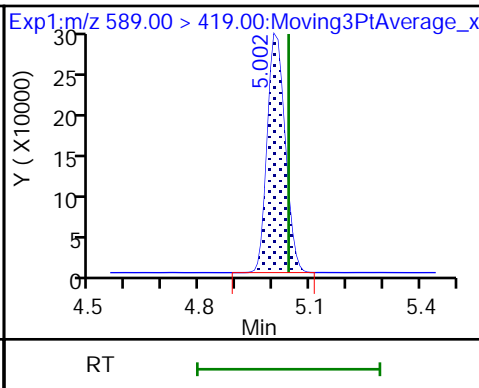
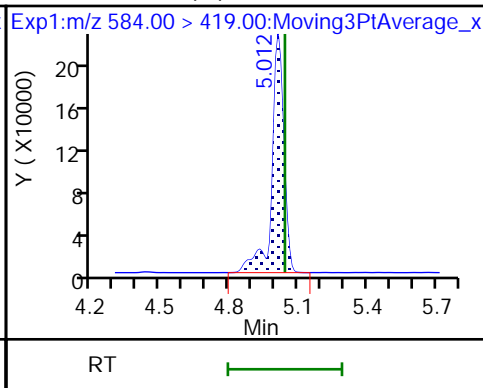
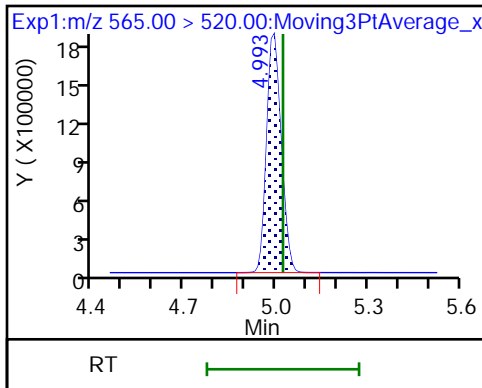
38 Perfluoroundecanoic acid



D 39 13C2 PFUnA

40 NEtFOSA (M)

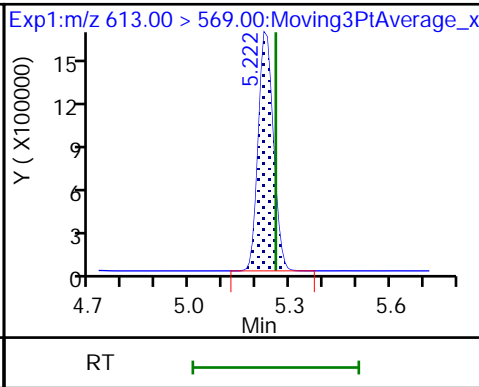
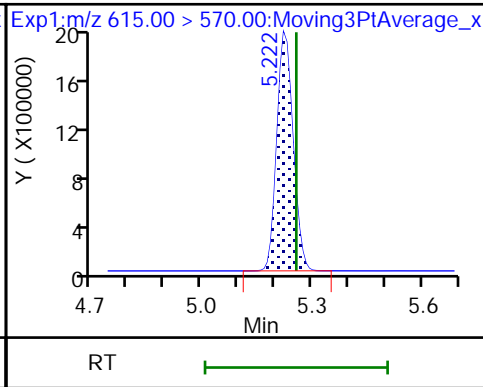
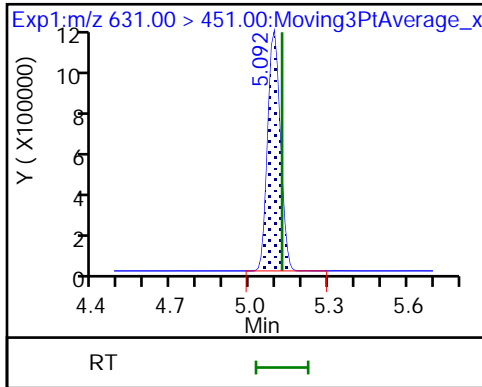
D 41 d5-NEtFOSAA



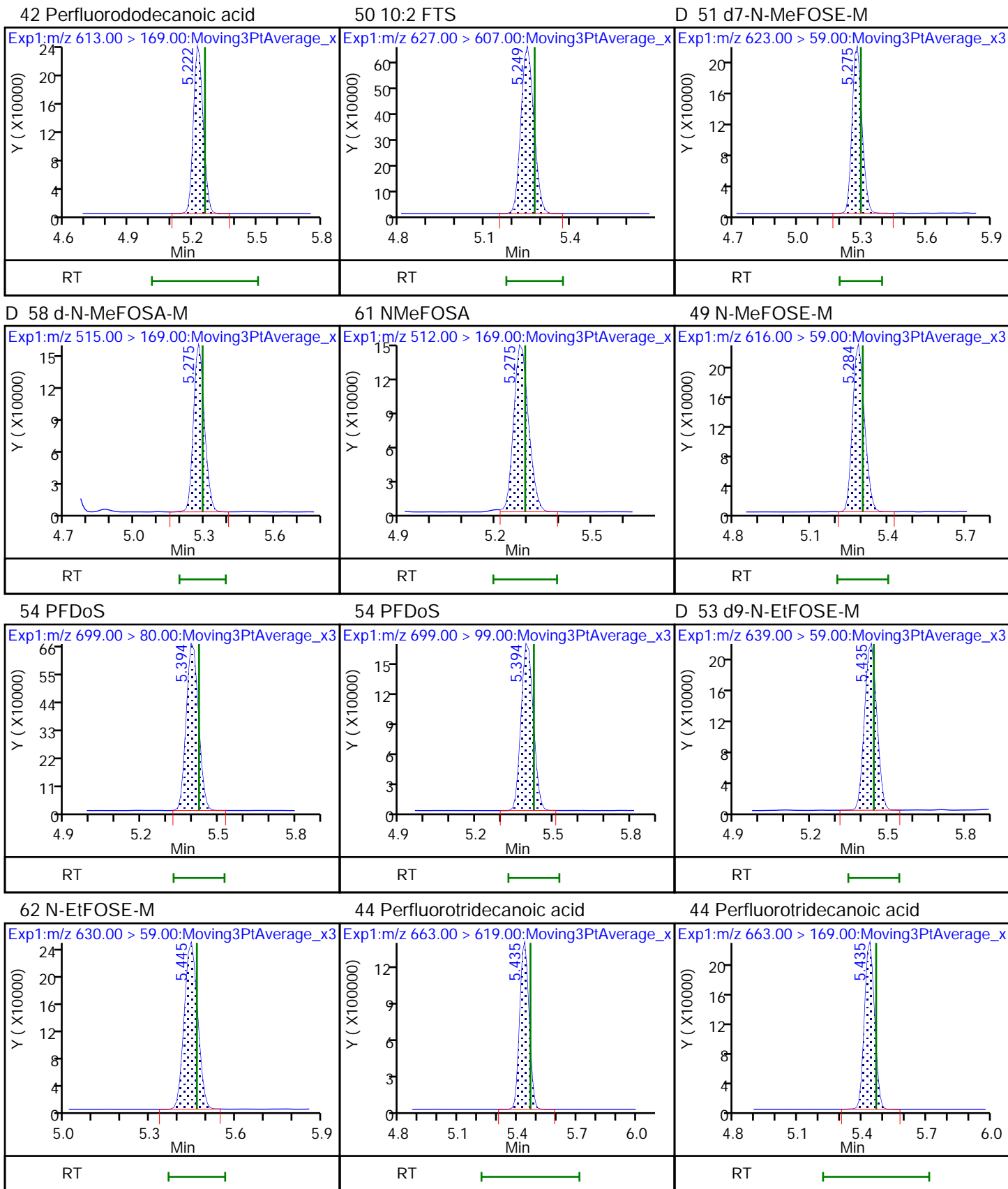
57 11CIFOS

D 43 13C2 PFDaA

42 Perfluorododecanoic acid



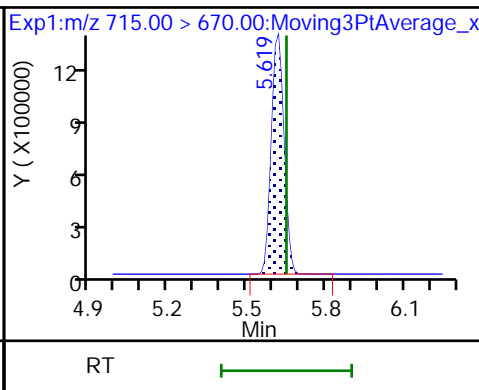
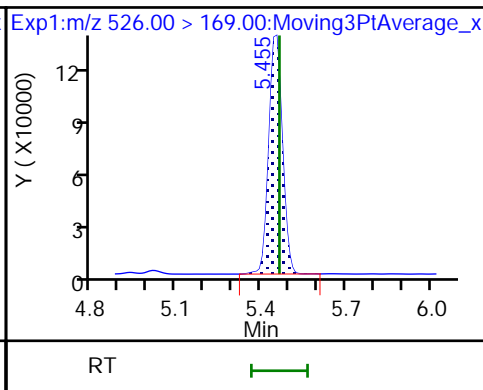
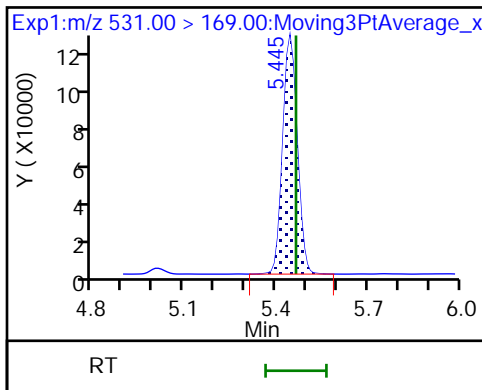




D 52 d-N-EtFOSA-M

56 N-EtFOSA-M

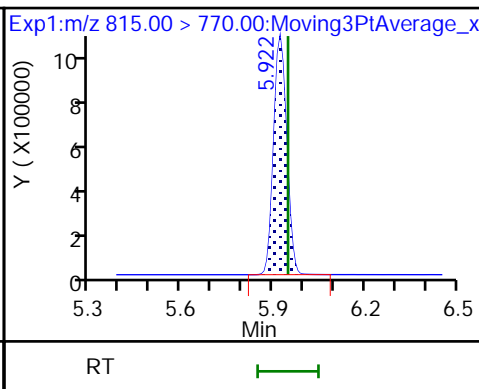
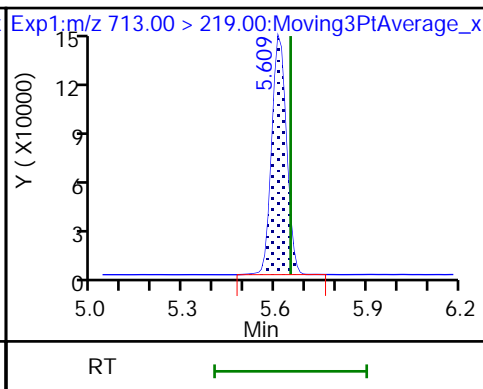
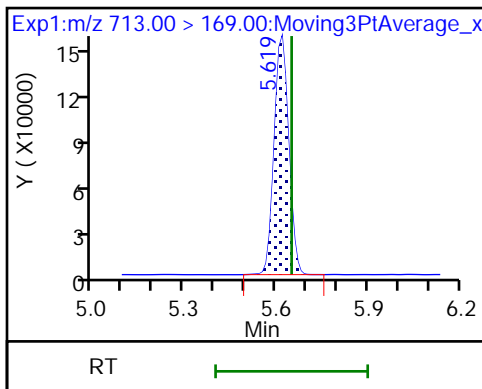
D 46 13C2 PFTeDA



45 Perfluorotetradecanoic acid

45 Perfluorotetradecanoic acid

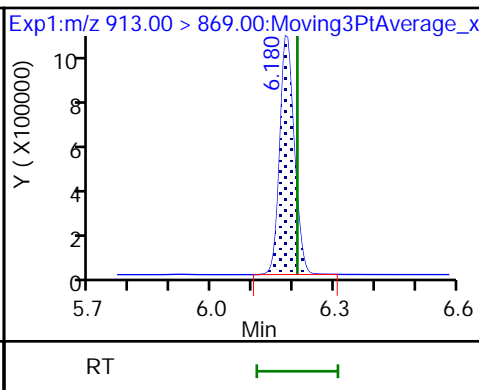
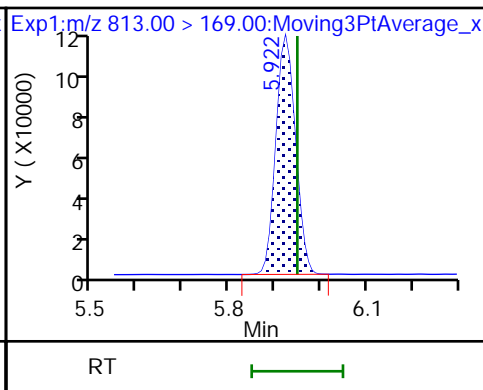
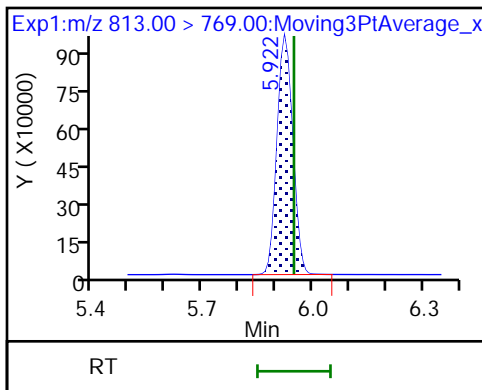
D 59 13C2 PFHxDA



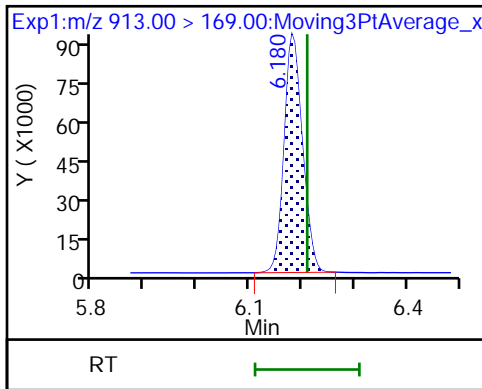
55 Perfluorohexadecanoic acid

55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid



60 Perfluorooctadecanoic acid



FORM I  
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCSD 140-57613/3-B  
 Matrix: Air Lab File ID: \_010.d  
 Analysis Method: 537 (modified) Date Collected: \_\_\_\_\_  
 Extraction Method: None Date Extracted: 01/04/2022 08:59  
 Sample wt/vol: 1(Sample) Date Analyzed: 01/12/2022 19:02  
 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.: 57865 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.02130		0.00160	0.00140

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\20220112-22237.b\_010.d  
 Lims ID: LCSD 140-57613/3-B  
 Client ID:  
 Sample Type: LCSD  
 Inject. Date: 12-Jan-2022 19:02:06 ALS Bottle#: 10 Worklist Smp#: 10  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022237-010 lcsd 140-57613/3-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:15:14 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 09:51:57  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_007.d

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	2.808	2.802	0.006	1.000	3959446	1.10		110	411	
D 1 13C4 PFBA										
217.00 > 172.00	2.808	2.802	0.006	0.677	5713424	1.23		98.7	9534	
D 3 13C5 PFPeA										
267.90 > 223.00	3.123	3.116	0.007	0.753	4734954	1.32		105	8140	
4 Perfluoropentanoic acid										
262.90 > 219.00	3.123	3.116	0.007	1.000	3864910	1.07		107	579	
D 6 13C3 PFBS										
301.90 > 80.00	3.132	3.132	0.0	0.755	2527120	1.05		90.6	5359	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	3.140	3.132	0.008	1.003	2289855	0.9602	Target=2.71	109	2910	
298.90 > 99.00	3.140	3.132	0.008	1.003	852414		2.69(1.35-4.06)		1109	
D 8 M2-4:2 FTS										
329.00 > 81.00	3.423	3.423	0.0	0.825	1067798	1.45		124	1292	
7 4:2 FTS										
327.00 > 307.00	3.423	3.423	0.0	1.000	2131452	1.03		111	7830	
D 9 13C2 PFHxA										
315.00 > 270.00	3.453	3.444	0.009	0.832	5078988	1.32		106	8912	
10 Perfluorohexanoic acid										
313.00 > 269.00	3.453	3.444	0.009	1.000	3689989	1.05	Target=12.92	105	753	
313.00 > 119.00	3.453	3.444	0.009	1.000	295669		12.48(6.46-19.37)		243	
11 Perfluoropentanesulfonic acid										
349.00 > 80.00	3.453	3.444	0.009	1.103	2123592	1.01	Target=3.61	107	2832	
349.00 > 99.00	3.453	3.444	0.009	1.103	637726		3.33(1.81-5.42)		2824	
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.557	3.548	0.009	0.858	2374561	1.28		103	4529	

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	3.566	3.548	0.018	1.003	2736048	1.06		106	3011	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.798	3.789	0.009	1.000	1937425	0.9257	Target=3.52	102	4684	M
399.00 > 99.00	3.798	3.789	0.009	1.000	568775		3.41(1.76-5.28)		2369	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.798	3.789	0.009	0.916	1797074	1.12		94.9	6720	
D 14 13C4 PFHpA										
367.00 > 322.00	3.808	3.799	0.009	0.918	4970875	1.35		108	7803	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.808	3.799	0.009	1.000	4637083	1.11	Target=3.30	111	1358	
363.00 > 169.00	3.808	3.799	0.009	1.000	1451045		3.20(1.65-4.95)		3004	
68 DONA										
377.00 > 251.00	3.841	3.834	0.007	0.866	6786301	1.28	Target=1.76	135	8456	
377.00 > 85.00	3.841	3.834	0.007	0.866	3863287		1.76(0.88-2.64)		4525	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.131	4.115	0.016	0.932	2048618	1.06	Target=3.88	111	4612	
449.00 > 99.00	4.131	4.115	0.016	0.932	509832		4.02(1.94-5.82)		3441	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.140	4.132	0.008	0.998	1000213	1.34		113	3382	
D 21 13C4 PFOA										
417.00 > 372.00	4.148	4.132	0.016	1.000	5196494	1.37		109	9154	
19 6:2 FTS										
427.00 > 407.00	4.140	4.132	0.008	1.000	1829901	1.21		128	4397	
* 22 13C2 PFOA										
415.00 > 370.00	4.148	4.132	0.016		5070128	1.25			9773	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.148	4.132	0.016	1.000	4942162	1.04	Target=2.61	104	2009	
413.00 > 169.00	4.148	4.132	0.016	1.000	1898004		2.60(1.30-3.91)		2792	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.434	4.428	0.006	1.000	2124279	0.9554	Target=4.39	103	3517	M
499.00 > 99.00	4.434	4.428	0.006	1.000	487987		4.35(2.19-6.58)		2563	M
D 25 13C4 PFOS										
503.00 > 80.00	4.434	4.428	0.006	1.069	2418059	1.05		87.8	5071	
26 Perfluorononanoic acid										
463.00 > 419.00	4.460	4.445	0.015	1.000	4968511	1.12	Target=4.78	112	3413	
463.00 > 169.00	4.460	4.445	0.015	1.000	1069156		4.65(2.39-7.17)		2449	
D 27 13C5 PFNA										
468.00 > 423.00	4.460	4.445	0.015	1.075	6491674	1.30		104	10865	
63 9CIFOS										
531.00 > 351.00	4.593	4.581	0.012	1.036	4430039	1.02		110	10834	
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.714	4.706	0.008	1.063	1945215	0.9861	Target=3.96	103	4611	
549.00 > 99.00	4.714	4.706	0.008	1.063	475354		4.09(1.98-5.94)		2808	
D 34 13C8 FOSA										
506.00 > 78.00	4.722	4.706	0.016	1.139	4110480	1.32		106	3598	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.722	4.706	0.016	1.000	4137580	201.01		101	4114	

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	4.732	0.016	1.145	6441813	1.33		107	10750	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.748	4.732	0.016	1.000	5544635	1.12	Target=11.18	112	4165	
513.00 > 169.00	4.748	4.732	0.016	1.000	459076		12.08(5.59-16.77)		721	
31 8:2 FTS										
527.00 > 507.00	4.756	4.749	0.007	1.000	1284895	1.05		110	4956	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.756	4.749	0.007	1.147	1031305	1.23		103	1355	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.894	4.878	0.016	1.180	946535	1.67		133	1031	
36 NMeFOSAA										
570.00 > 419.00	4.894	4.887	0.007	1.000	771451	1.05		105	2031	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.973	4.966	0.007	1.122	1655614	0.8816	Target=3.65	91.5	5779	
599.00 > 99.00	4.973	4.966	0.007	1.122	418598		3.96(1.82-5.47)		2154	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.010	5.002	0.008	1.000	5568780	1.08	Target=8.72	108	5297	
563.00 > 169.00	5.010	5.002	0.008	1.000	645161		8.63(4.36-13.08)		2577	
D 39 13C2 PFUnA										
565.00 > 520.00	5.010	5.002	0.008	1.208	6640906	1.38		110	9030	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.020	5.012	0.008	1.210	1018829	1.63		131	3925	
40 NEtFOSA										
584.00 > 419.00	5.030	5.022	0.008	1.002	838718	1.04		104	2028	M
57 11CIFOS										
631.00 > 451.00	5.110	5.102	0.008	1.152	3133999	0.9261		98.3	8780	
D 43 13C2 PFDaA										
615.00 > 570.00	5.247	5.231	0.016	1.265	6364125	1.26		101	13686	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.247	5.231	0.016	1.000	5626569	1.08	Target=6.85	108	4941	
613.00 > 169.00	5.238	5.231	0.007	0.998	763258		7.37(3.43-10.28)		1875	
50 10:2 FTS										
627.00 > 607.00	5.264	5.257	0.007	1.107	1896466	0.9674		100	8879	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.291	5.275	0.016	1.276	815591	1.34		107	567	
49 N-MeFOSE-M										
616.00 > 59.00	5.299	5.284	0.015	1.002	879133	1.15		115	201	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.291	5.284	0.007	1.276	512947	1.18		94.7	44.1	
61 NMeFOSA										
512.00 > 169.00	5.299	5.284	0.015	1.002	451862	1.09		109	697	
54 PFDoS										
699.00 > 80.00	5.413	5.404	0.009	1.221	1001361	0.5399	Target=4.18	55.8	2394	
699.00 > 99.00	5.413	5.404	0.009	1.221	227468		4.40(2.09-6.27)		1947	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.453	5.435	0.018	1.315	728913	1.19		95.6	352	

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	5.463	5.445	0.018	1.002	774526	1.00		100	685	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.453	5.445	0.008	1.039	4097037	0.9705	Target=6.15	97.0	4568	
663.00 > 169.00	5.443	5.445	-0.002	1.037	647458		6.33(3.07-9.22)		2316	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.463	5.445	0.018	1.317	385815	1.08		86.2	707	
56 N-EtFOSA-M										
526.00 > 169.00	5.472	5.455	0.017	1.002	403535	1.09		109	462	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.627	5.629	-0.002	1.357	3974932	1.03		82.5	8403	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.627	5.629	-0.002	1.000	427160	1.00	Target=1.06	100.0	2357	
713.00 > 219.00	5.627	5.629	-0.002	1.000	406677		1.05(0.53-1.58)		2022	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.937	5.931	0.006	1.431	948814	0.3630		29.0	3450	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.937	5.931	0.006	1.000	885998	1.09	Target=8.21	109	1936	
813.00 > 169.00	5.937	5.931	0.006	1.000	103373		8.57(4.11-12.32)		297	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.193	6.195	-0.002	1.043	30345	0.0406	Target=11.14	4.1	132	M
913.00 > 169.00	6.188	6.195	-0.007	1.042	2848		10.65(5.57-16.71)		17.5	M

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\\_010.d

Injection Date: 12-Jan-2022 19:02:06

Instrument ID: LCA

Lims ID: LCSD 140-57613/3-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 10

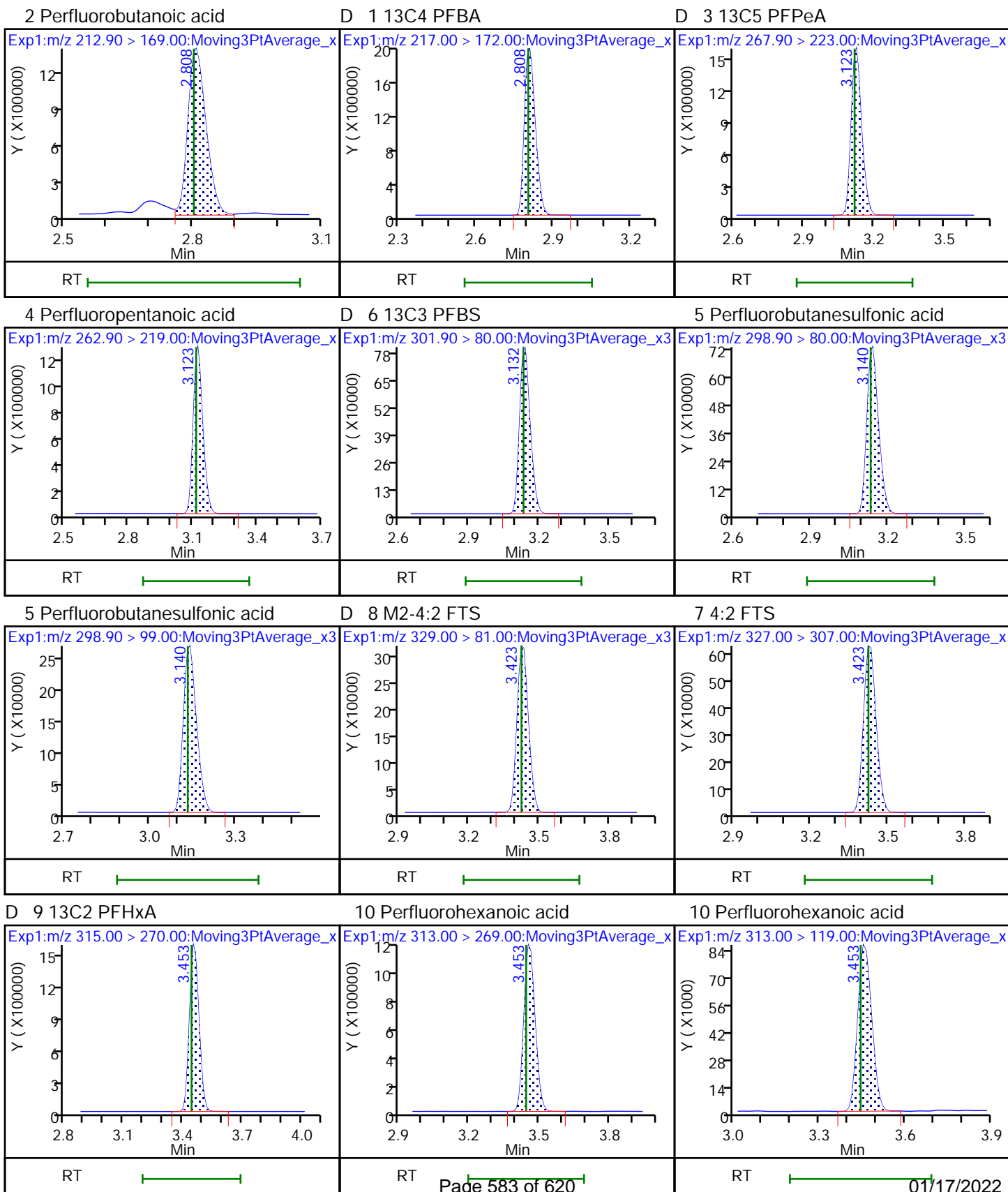
Worklist Smp#: 10

Injection Vol: 1.0 ul

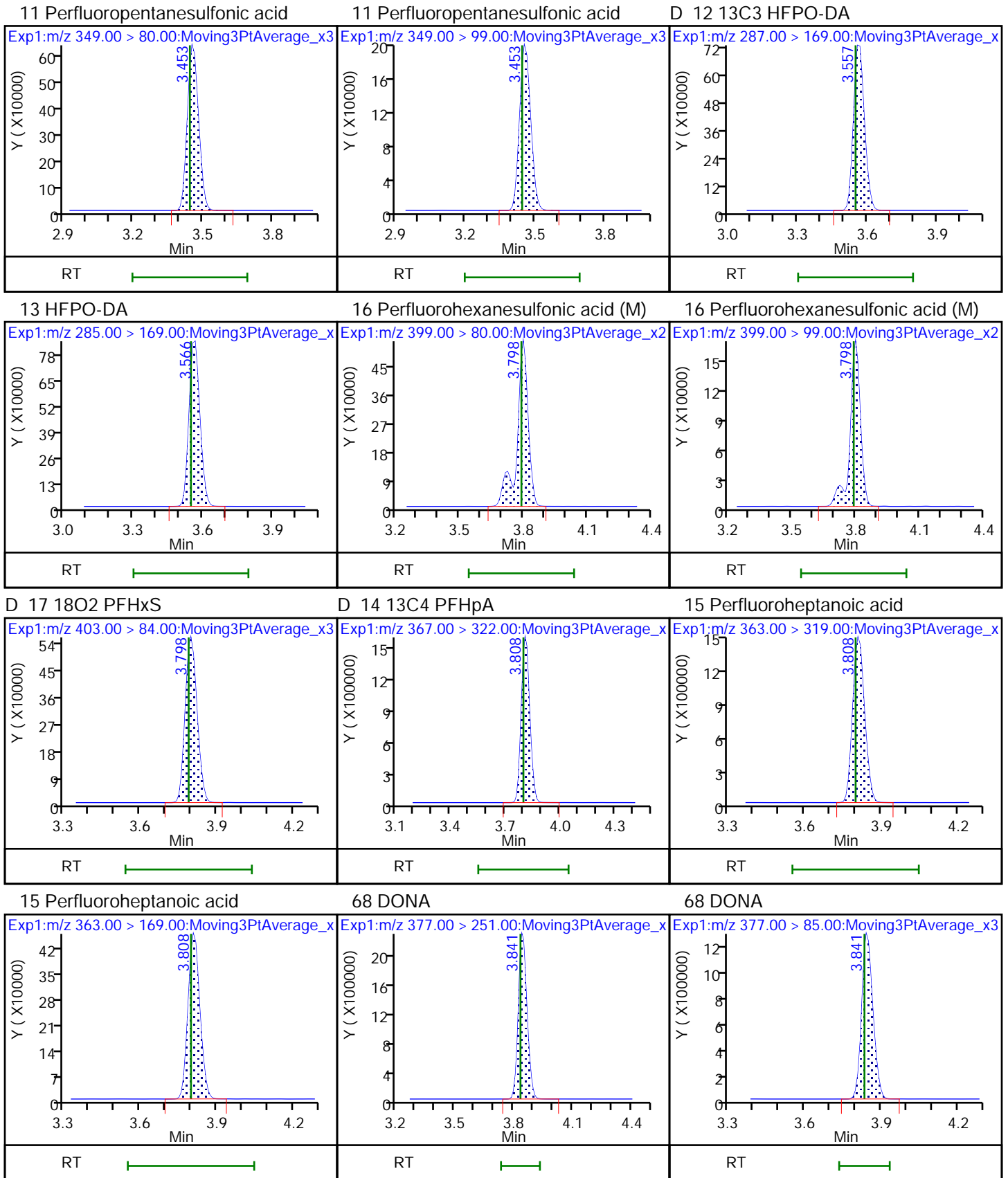
Dil. Factor: 1.0000

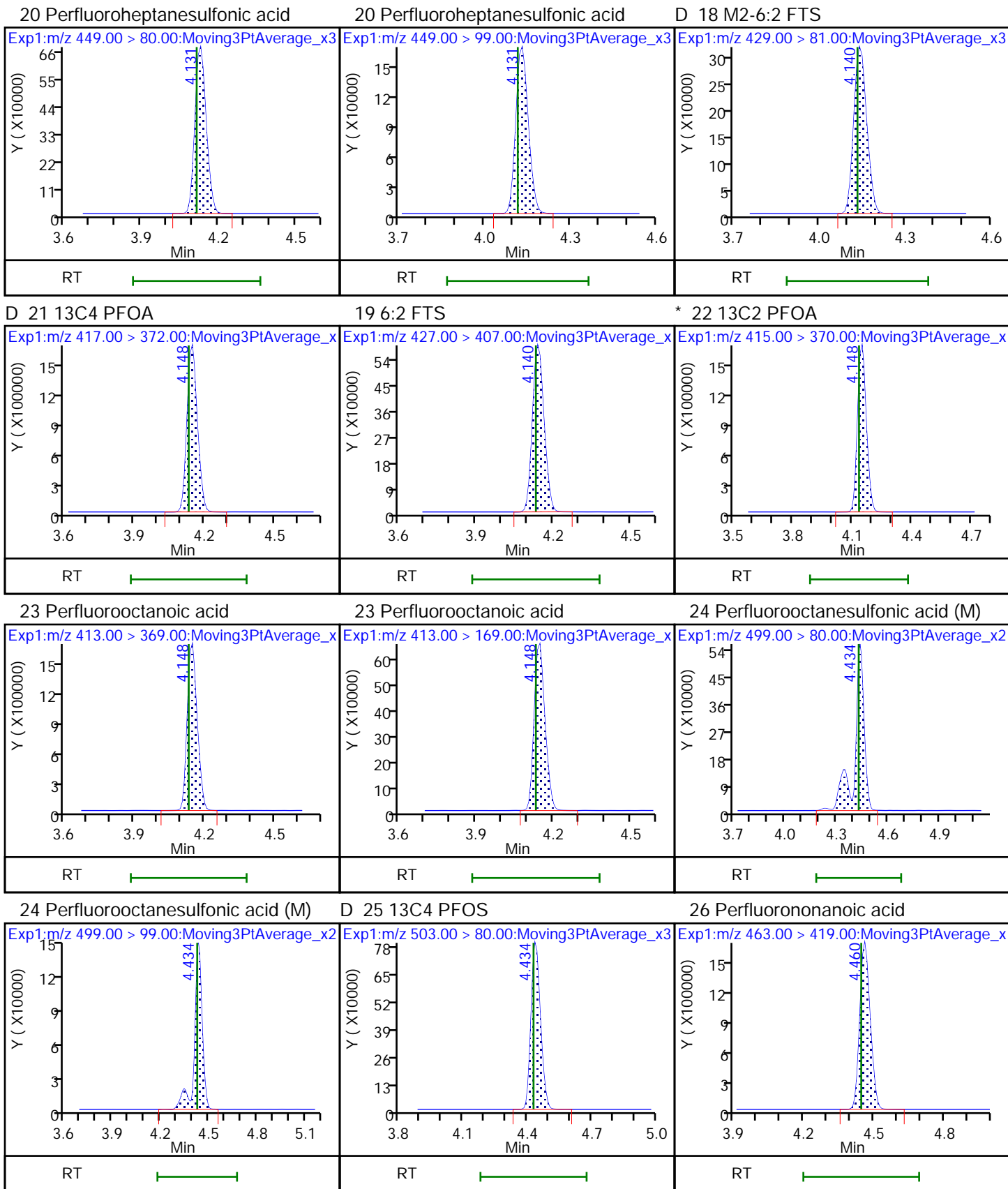
Method: PFC\_LCA

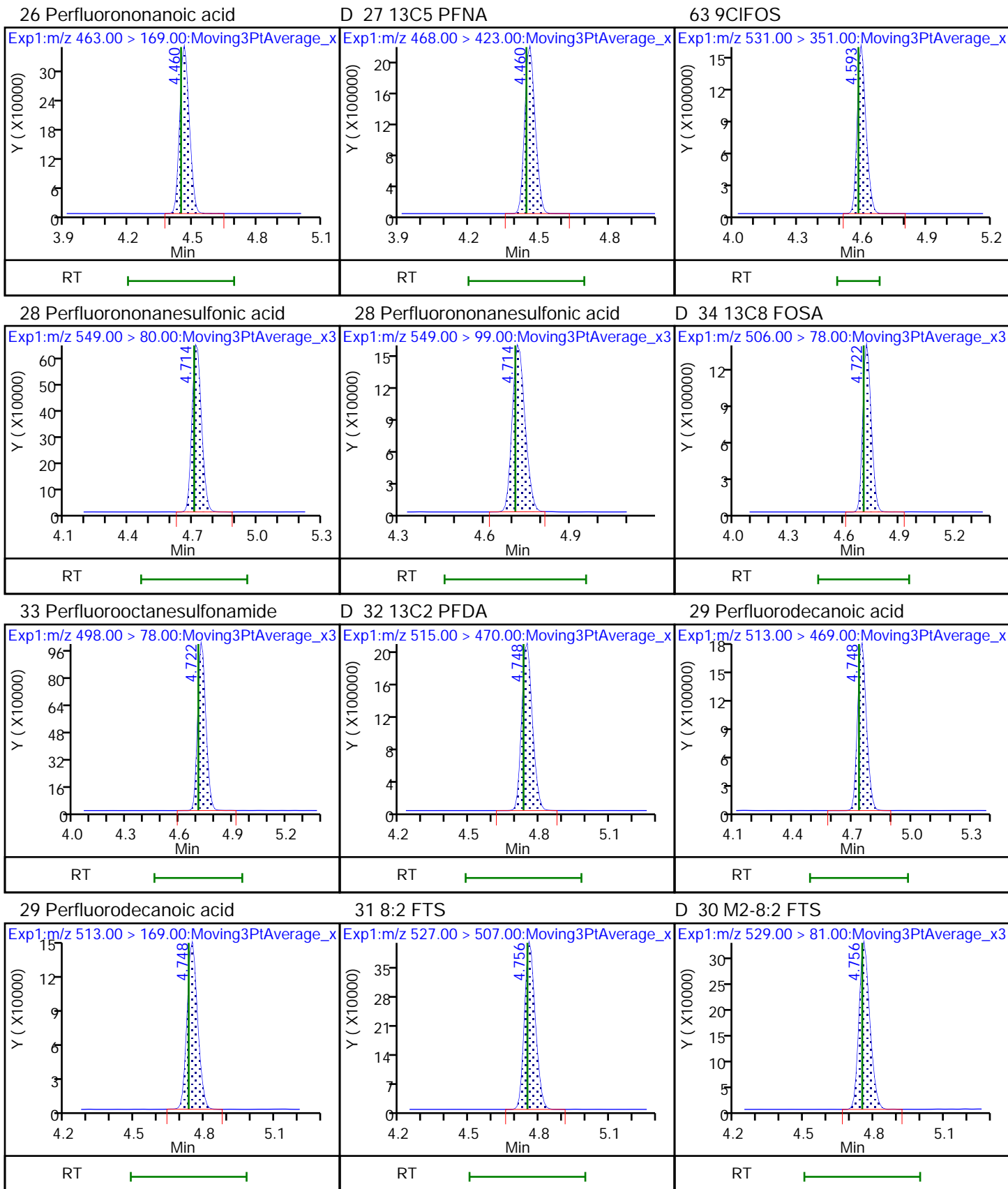
Limit Group: LC - PFC- ICAL







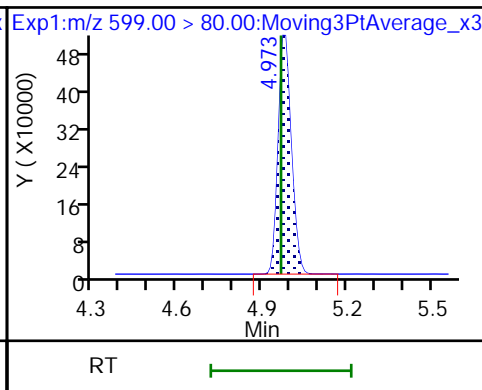
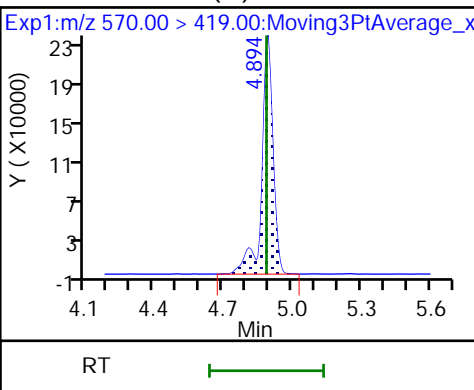
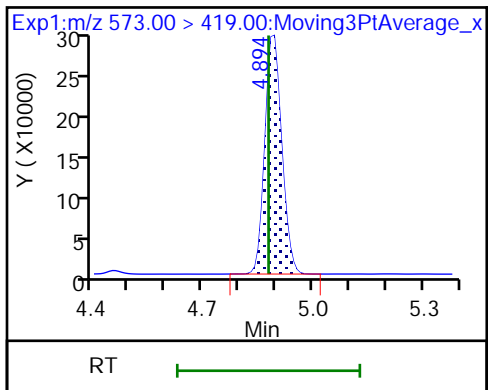




D 35 d3-NMeFOSAA

36 NMeFOSAA (M)

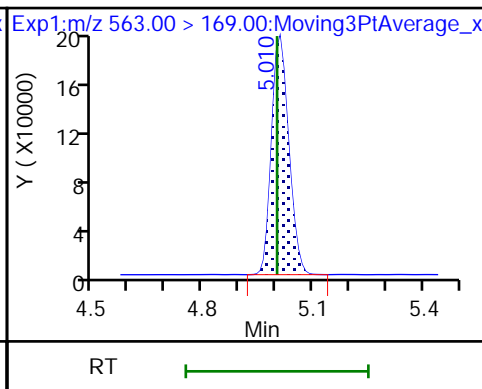
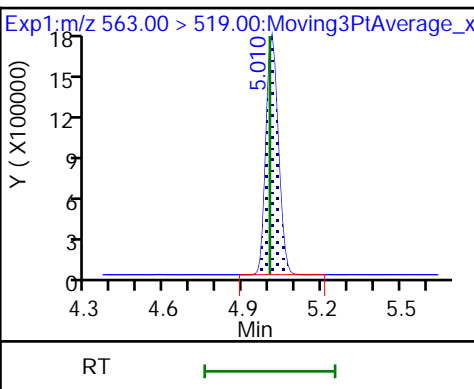
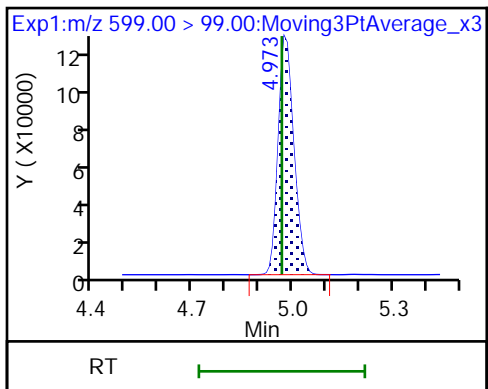
37 Perfluorodecanesulfonic acid



37 Perfluorodecanesulfonic acid

38 Perfluoroundecanoic acid

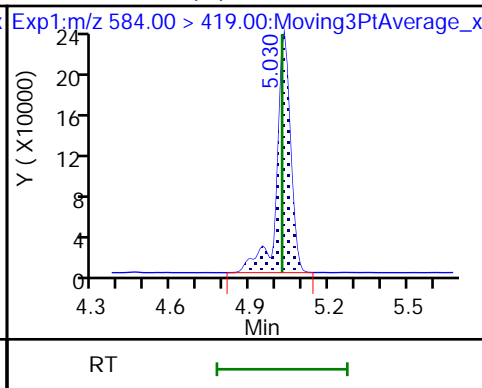
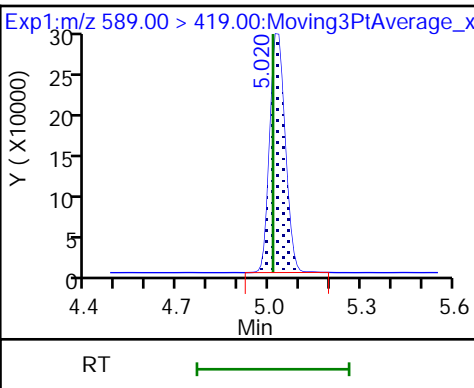
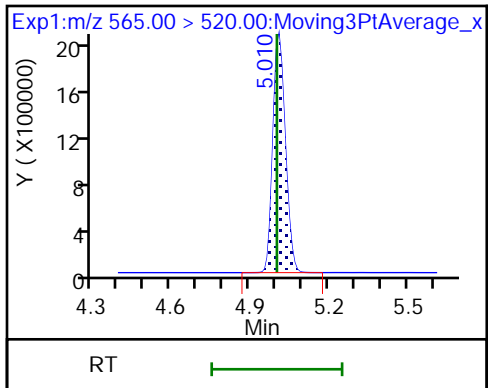
38 Perfluoroundecanoic acid



D 39 13C2 PFUnA

D 41 d5-NEtFOSAA

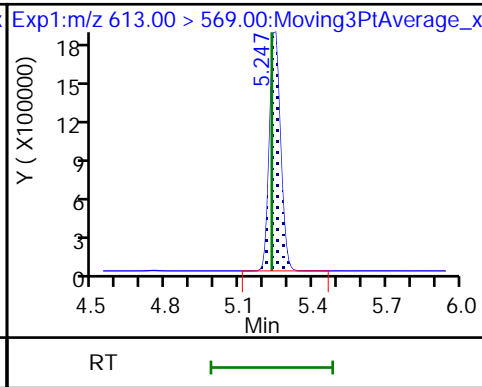
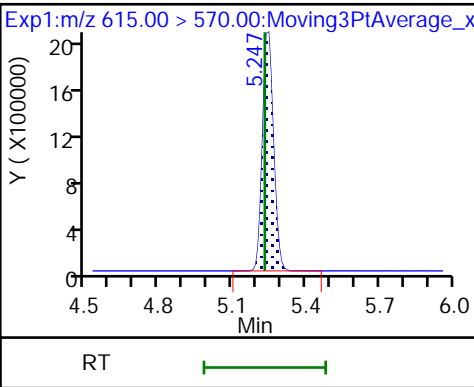
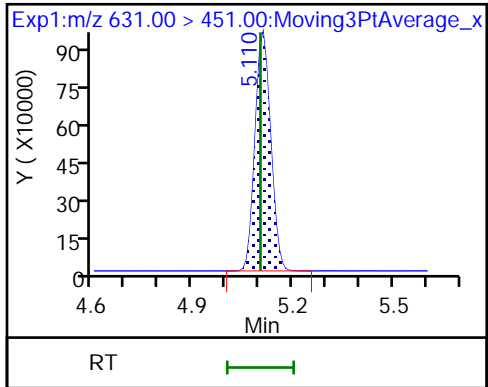
40 NEtFOSA (M)

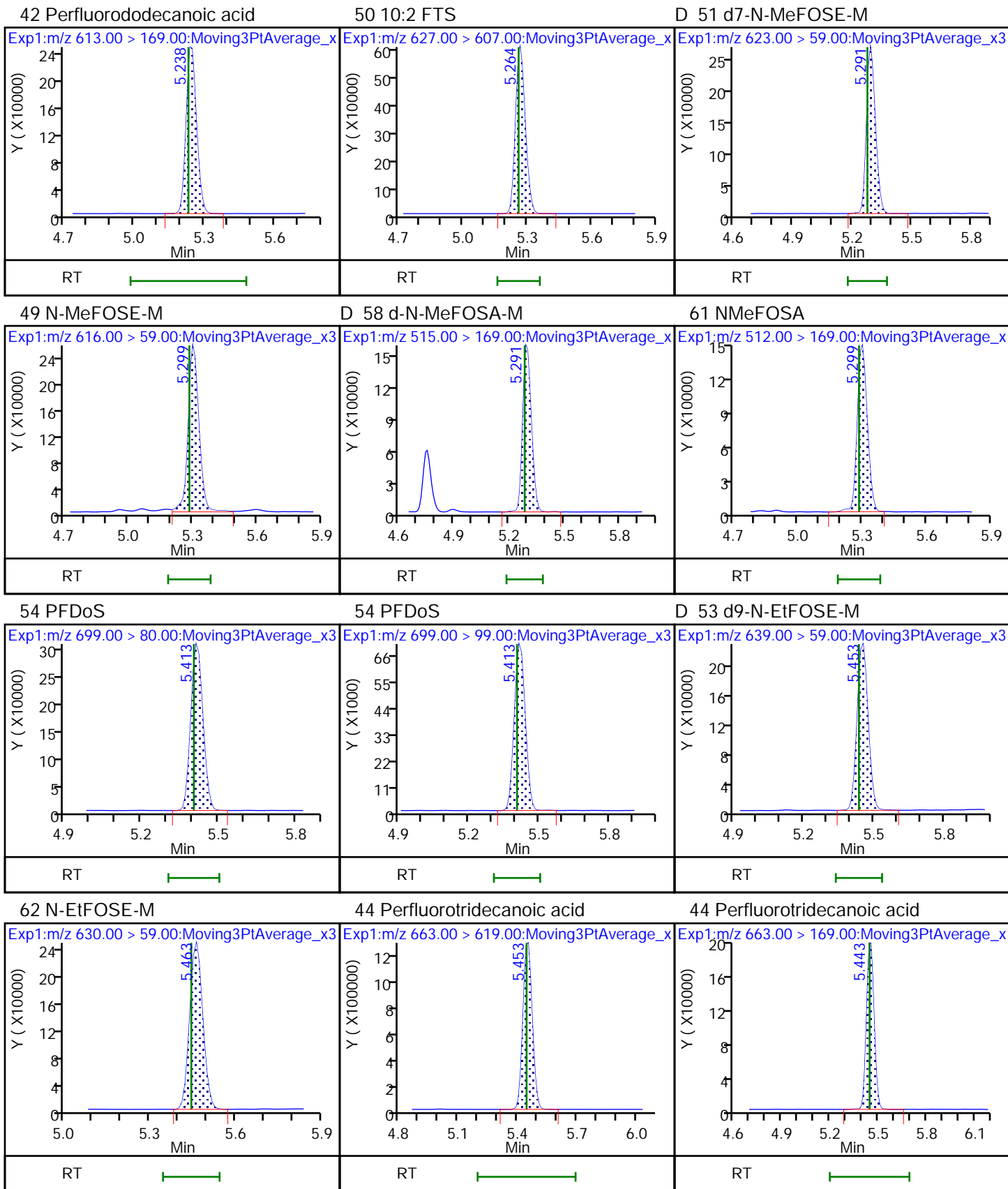


57 11C1FOS

D 43 13C2 PFDaA

42 Perfluorododecanoic acid

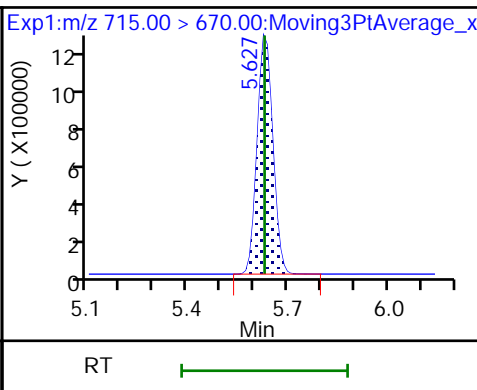
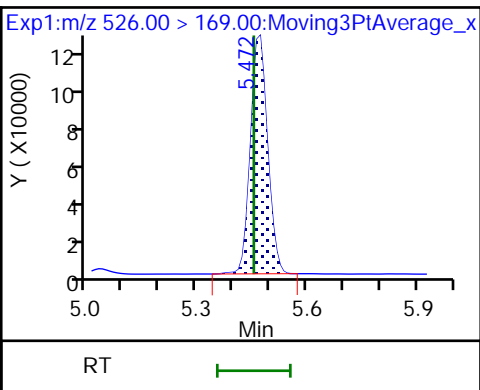
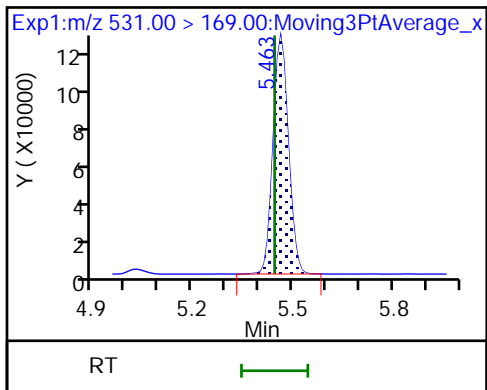




D 52 d-N-EtFOSA-M

56 N-EtFOSA-M

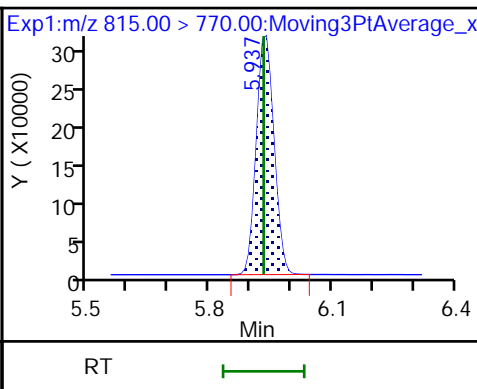
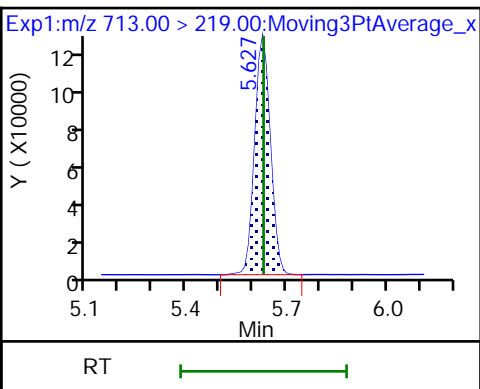
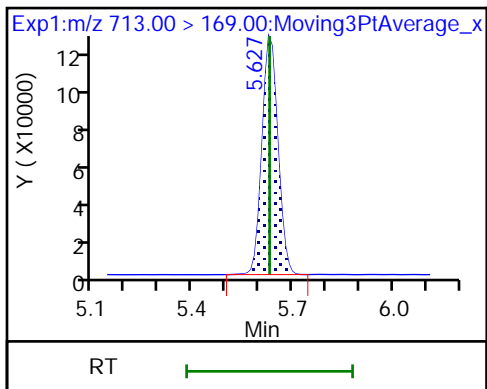
D 46 13C2 PFTeDA



45 Perfluorotetradecanoic acid

45 Perfluorotetradecanoic acid

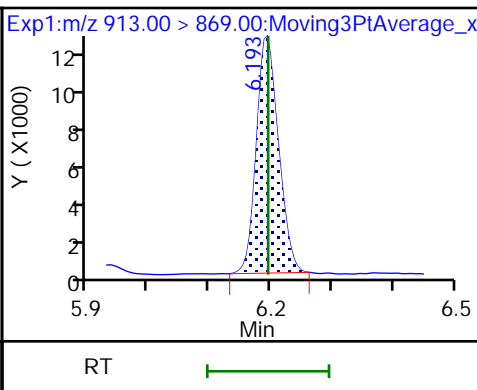
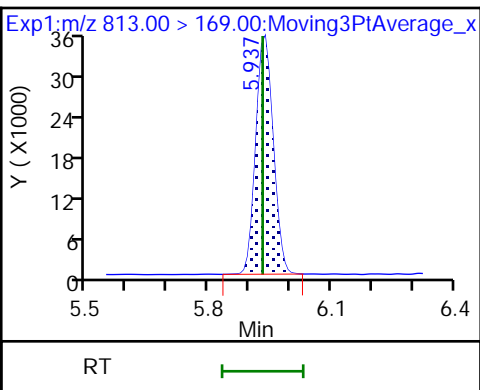
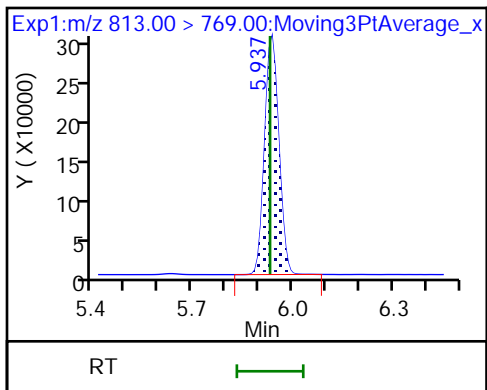
D 59 13C2 PFHxDA



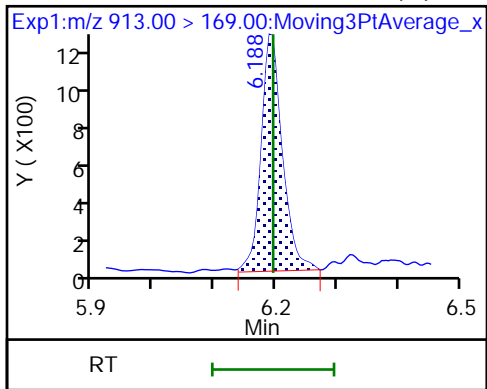
55 Perfluorohexadecanoic acid

55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid



60 Perfluorooctadecanoic acid (M)



FORM I  
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCSD 140-57645/3-B  
 Matrix: Air Lab File ID: 008.d  
 Analysis Method: 537 (modified) Date Collected: \_\_\_\_\_  
 Extraction Method: None Date Extracted: 01/04/2022 14:49  
 Sample wt/vol: 1 (Sample) Date Analyzed: 01/09/2022 13:07  
 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.: 57742 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.009816		0.000500	0.0000825

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	101		25-150

Eurofins TestAmerica, Knoxville  
 Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_008.d  
 Lims ID: LCSD 140-57645/3-B  
 Client ID:  
 Sample Type: LCSD  
 Inject. Date: 09-Jan-2022 13:07:04 ALS Bottle#: 8 Worklist Smp#: 8  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022187-008 LCSD 140-57645/3-B  
 Misc. Info.: Plate: 11 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 15:08:06 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1641

First Level Reviewer: cochranj Date: 10-Jan-2022 13:28:09  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_005.d

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	2.779	2.790	-0.011	0.678	6120986	1.23	98.2	14044	
2 Perfluorobutanoic acid	212.90 > 169.00	2.779	2.790	-0.011	1.000	4051364	1.05	105	979	
D 3 13C5 PFPeA	267.90 > 223.00	3.082	3.098	-0.016	0.752	4928916	1.27	102	9973	
4 Perfluoropentanoic acid	262.90 > 219.00	3.082	3.098	-0.016	1.000	3918333	1.04	104	1275	
D 6 13C3 PFBS	301.90 > 80.00	3.098	3.115	-0.017	0.756	2882481	1.12	96.0	12661	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.098	3.115	-0.017	1.000	2571164	0.9452	Target=2.75	107	8013
	298.90 > 99.00	3.098	3.115	-0.017	1.000	948701		2.71(1.37-4.12)		4596
D 8 M2-4:2 FTS	329.00 > 81.00	3.382	3.391	-0.009	0.825	875719	1.10	94.4	1336	
7 4:2 FTS	327.00 > 307.00	3.382	3.402	-0.020	1.000	1707707	1.01	108	7125	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.412	3.422	-0.010	1.101	2484819	1.03	Target=3.47	110	5271
	349.00 > 99.00	3.412	3.422	-0.010	1.101	682108		3.64(1.73-5.20)		6264
D 9 13C2 PFHxA	315.00 > 270.00	3.412	3.422	-0.010	0.833	5249380	1.27	101	8115	
10 Perfluorohexanoic acid	313.00 > 269.00	3.412	3.422	-0.010	1.000	3683113	1.01	Target=12.28	101	1555
	313.00 > 119.00	3.412	3.422	-0.010	1.000	300799		12.24(6.14-18.41)		483
D 12 13C3 HFPO-DA	287.00 > 169.00	3.519	3.528	-0.009	0.859	2510868	1.26	101	3675	



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	3.519	3.528	-0.009	1.000	2666670	0.9816		98.2	2034	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.751	3.760	-0.009	1.000	2159838	0.9299	Target=3.52	102	5335	M
399.00 > 99.00	3.751	3.760	-0.009	1.000	623471		3.46(1.76-5.28)		3952	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.751	3.760	-0.009	0.915	1994225	1.16		97.8	10571	
D 14 13C4 PFHpA										
367.00 > 322.00	3.760	3.769	-0.009	0.918	5168008	1.31		104	8925	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.760	3.769	-0.009	1.000	4345997	1.00	Target=3.20	100	2386	
363.00 > 169.00	3.760	3.769	-0.009	1.000	1333076		3.26(1.60-4.79)		2438	
68 DONA										
377.00 > 251.00	3.797	3.807	-0.010	0.866	6389232	1.06	Target=1.78	113	6383	
377.00 > 85.00	3.797	3.807	-0.010	0.866	3633696		1.76(0.89-2.67)		6179	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.080	4.089	-0.009	0.930	2268034	1.04	Target=3.95	109	6363	
449.00 > 99.00	4.080	4.089	-0.009	0.930	575530		3.94(1.98-5.93)		3089	
19 6:2 FTS										
427.00 > 407.00	4.089	4.106	-0.017	1.000	1426444	1.03		109	4821	
D 21 13C4 PFOA										
417.00 > 372.00	4.098	4.106	-0.008	1.000	4990611	1.22		97.5	10546	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.089	4.106	-0.017	0.998	915451	1.14		96.2	2782	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.098	4.106	-0.008	1.000	4787018	1.04	Target=2.62	104	2785	
413.00 > 169.00	4.098	4.106	-0.008	1.000	1914136		2.50(1.31-3.93)		2816	
* 22 13C2 PFOA										
415.00 > 370.00	4.098	4.106	-0.008		5459523	1.25			10310	
D 25 13C4 PFOS										
503.00 > 80.00	4.385	4.401	-0.016	1.070	2731259	1.10		92.1	4401	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.385	4.401	-0.016	1.000	2515017	1.00	Target=4.28	108	4350	M
499.00 > 99.00	4.385	4.401	-0.016	1.000	556962		4.52(2.14-6.42)		2355	M
D 27 13C5 PFNA										
468.00 > 423.00	4.410	4.427	-0.017	1.076	6671289	1.24		99.0	13712	
26 Perfluorononanoic acid										
463.00 > 419.00	4.410	4.427	-0.017	1.000	4786931	1.05	Target=4.54	105	4213	
463.00 > 169.00	4.410	4.427	-0.017	1.000	1028838		4.65(2.27-6.81)		1623	
63 9CIFOS										
531.00 > 351.00	4.546	4.560	-0.014	1.037	4957041	1.01		109	9968	
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.673	4.681	-0.008	1.066	2372782	1.06	Target=3.87	111	7501	
549.00 > 99.00	4.673	4.681	-0.008	1.066	625612		3.79(1.94-5.81)		4992	
D 34 13C8 FOSA										
506.00 > 78.00	4.690	4.706	-0.016	1.144	4241117	1.26		101	3477	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.690	4.706	-0.016	1.000	337101	1.03		103	4990	

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	4.698	4.715	-0.017	1.147	6805449	1.31		105	11364	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.698	4.715	-0.017	1.000	5504092	1.05	Target=11.50	105	5142	
513.00 > 169.00	4.698	4.715	-0.017	1.000	473763		11.62(5.75-17.24)		711	
31 8:2 FTS										
527.00 > 507.00	4.707	4.723	-0.016	1.000	1228268	0.99		104	4366	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.707	4.723	-0.016	1.149	1047991	1.16		96.8	1640	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.844	4.852	-0.008	1.182	762865	1.25		99.7	779	
36 NMeFOSAA										
570.00 > 419.00	4.852	4.861	-0.009	1.002	609703	1.03		103	1033	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.931	4.940	-0.009	1.125	2207874	1.04	Target=3.76	108	8472	
599.00 > 99.00	4.931	4.940	-0.009	1.125	581120		3.80(1.88-5.64)		3709	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.958	4.975	-0.017	1.000	5214694	1.03	Target=8.31	103	5138	
563.00 > 169.00	4.958	4.975	-0.017	1.000	629834		8.28(4.15-12.46)		3398	
D 39 13C2 PFUnA										
565.00 > 520.00	4.958	4.975	-0.017	1.210	6510205	1.25		100	11811	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.975	4.993	-0.018	1.214	838251	1.25		99.9	3858	
40 NEtFOSA										
584.00 > 419.00	4.984	4.993	-0.009	1.002	668555	1.00		100	2057	M
57 11CIFOS										
631.00 > 451.00	5.062	5.072	-0.010	1.154	3964368	1.04		110	8510	
D 43 13C2 PFDoA										
615.00 > 570.00	5.196	5.213	-0.017	1.268	6938857	1.27		102	16908	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.196	5.213	-0.017	1.000	5818089	1.03	Target=7.17	103	6075	
613.00 > 169.00	5.196	5.213	-0.017	1.000	822407		7.07(3.58-10.75)		1840	
50 10:2 FTS										
627.00 > 607.00	5.223	5.231	-0.008	1.110	2107121	1.06		110	7303	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.275	5.284	-0.009	1.287	737495	1.13		90.1	684	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.275	5.284	-0.009	1.287	550816	1.18		94.4	46.8	
61 NMeFOSA										
512.00 > 169.00	5.275	5.284	-0.009	1.000	467829	1.05		105	706	
49 N-MeFOSE-M										
616.00 > 59.00	5.284	5.292	-0.008	1.002	794290	1.15		115	1100	
54 PFDoS										
699.00 > 80.00	5.374	5.383	-0.009	1.225	2171218	1.04	Target=4.12	107	5486	
699.00 > 99.00	5.374	5.383	-0.009	1.225	506525		4.29(2.06-6.18)		4195	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.404	5.414	-0.010	1.040	4791517	1.04	Target=6.35	104	5089	
663.00 > 169.00	5.404	5.414	-0.010	1.040	740963		6.47(3.17-9.52)		2691	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.425	5.444	-0.019	1.324	819239	1.25		99.8	413	
62 N-EtFOSE-M										
630.00 > 59.00	5.445	5.454	-0.009	1.004	911020	1.05		105	948	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.445	5.454	-0.009	1.329	434964	1.13		90.3	721	
56 N-EtFOSA-M										
526.00 > 169.00	5.445	5.464	-0.019	1.000	453978	1.09		109	541	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.588	5.607	-0.019	1.364	5355370	1.29		103	10501	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.588	5.607	-0.019	1.000	569034	0.9884	Target=1.06	98.8	2231	
713.00 > 219.00	5.588	5.607	-0.019	1.000	519671		1.09(0.53-1.59)		2700	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.896	5.904	-0.008	1.439	3436326	1.22		97.7	5942	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.896	5.904	-0.008	1.000	3247113	1.10	Target=8.21	110	4022	
813.00 > 169.00	5.896	5.904	-0.008	1.000	377724		8.60(4.10-12.31)		1235	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.155	6.164	-0.009	1.044	2963865	1.10	Target=11.62	110	3726	
913.00 > 169.00	6.150	6.164	-0.014	1.043	255121		11.62(5.81-17.43)		1091	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_008.d

Injection Date: 09-Jan-2022 13:07:04

Instrument ID: LCA

Lims ID: LCSD 140-57645/3-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 8

Worklist Smp#: 8

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

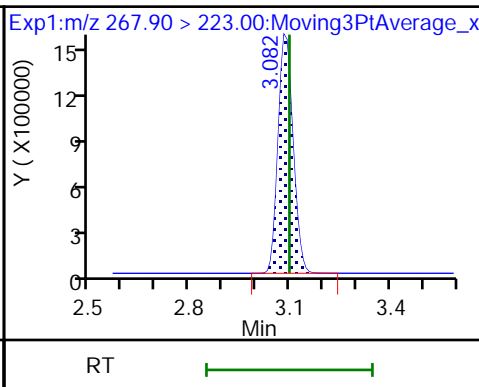
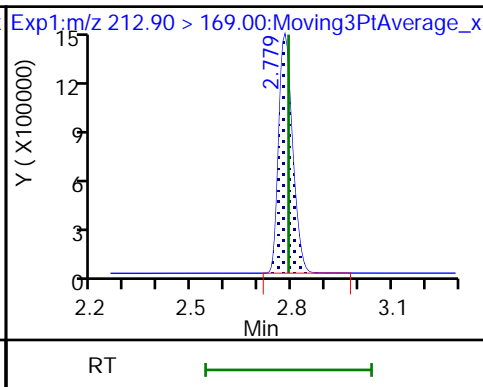
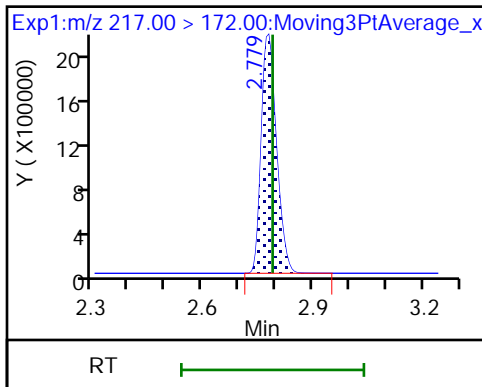
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

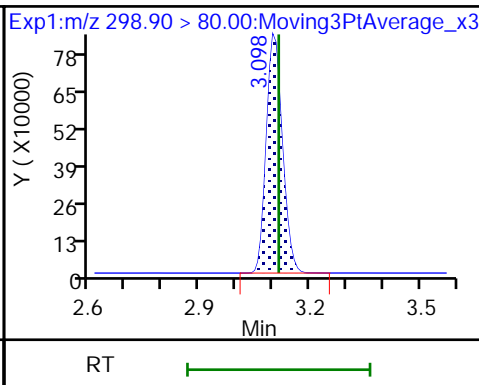
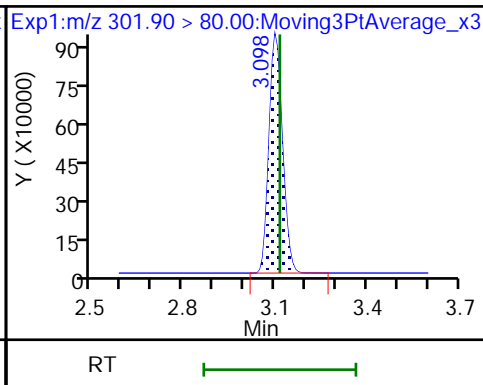
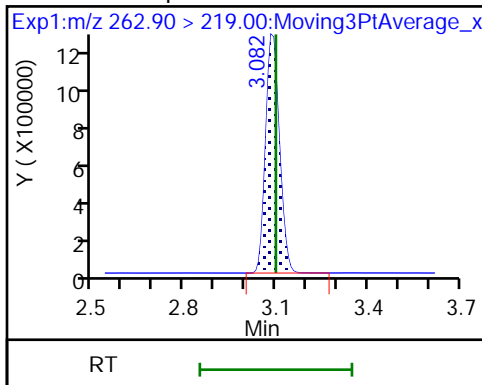
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

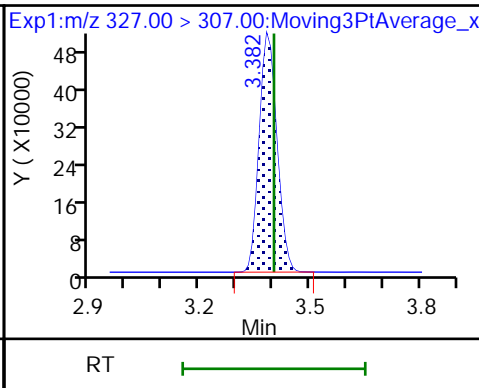
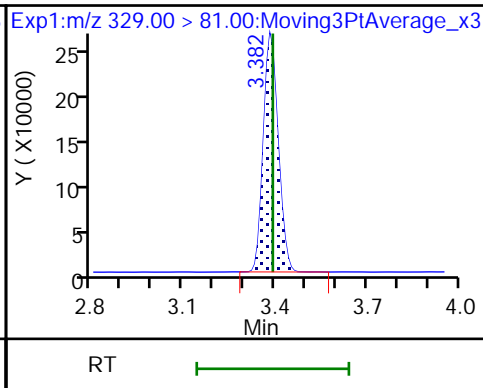
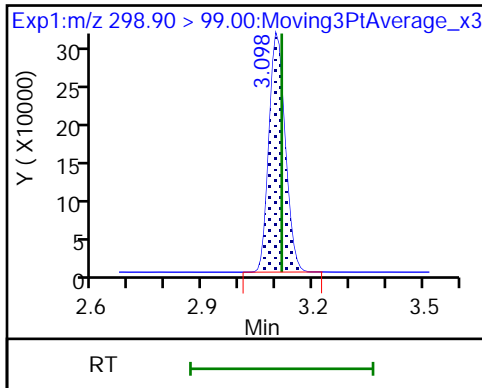
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

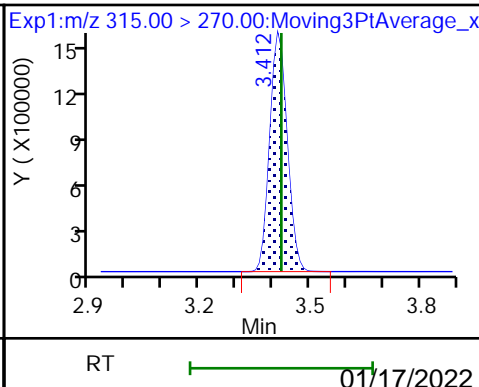
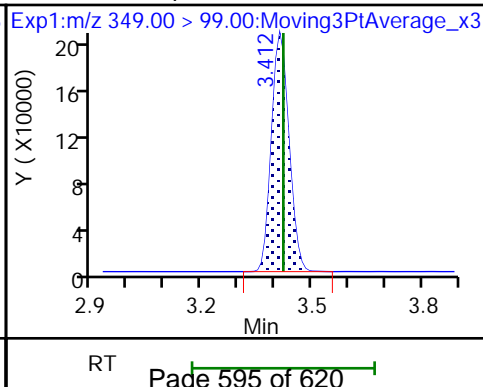
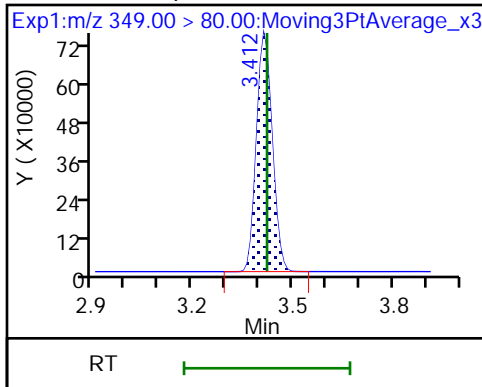
7 4:2 FTS

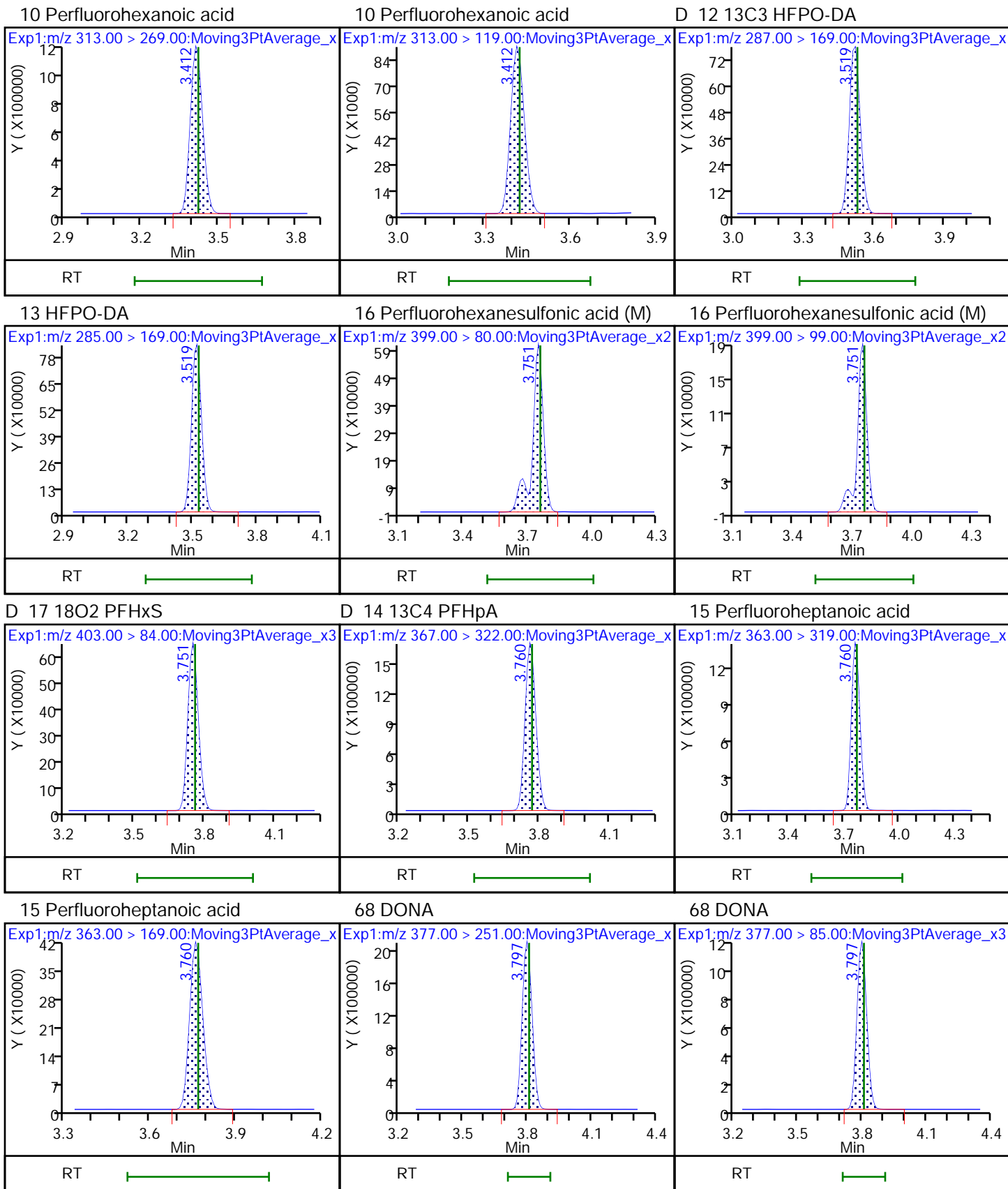


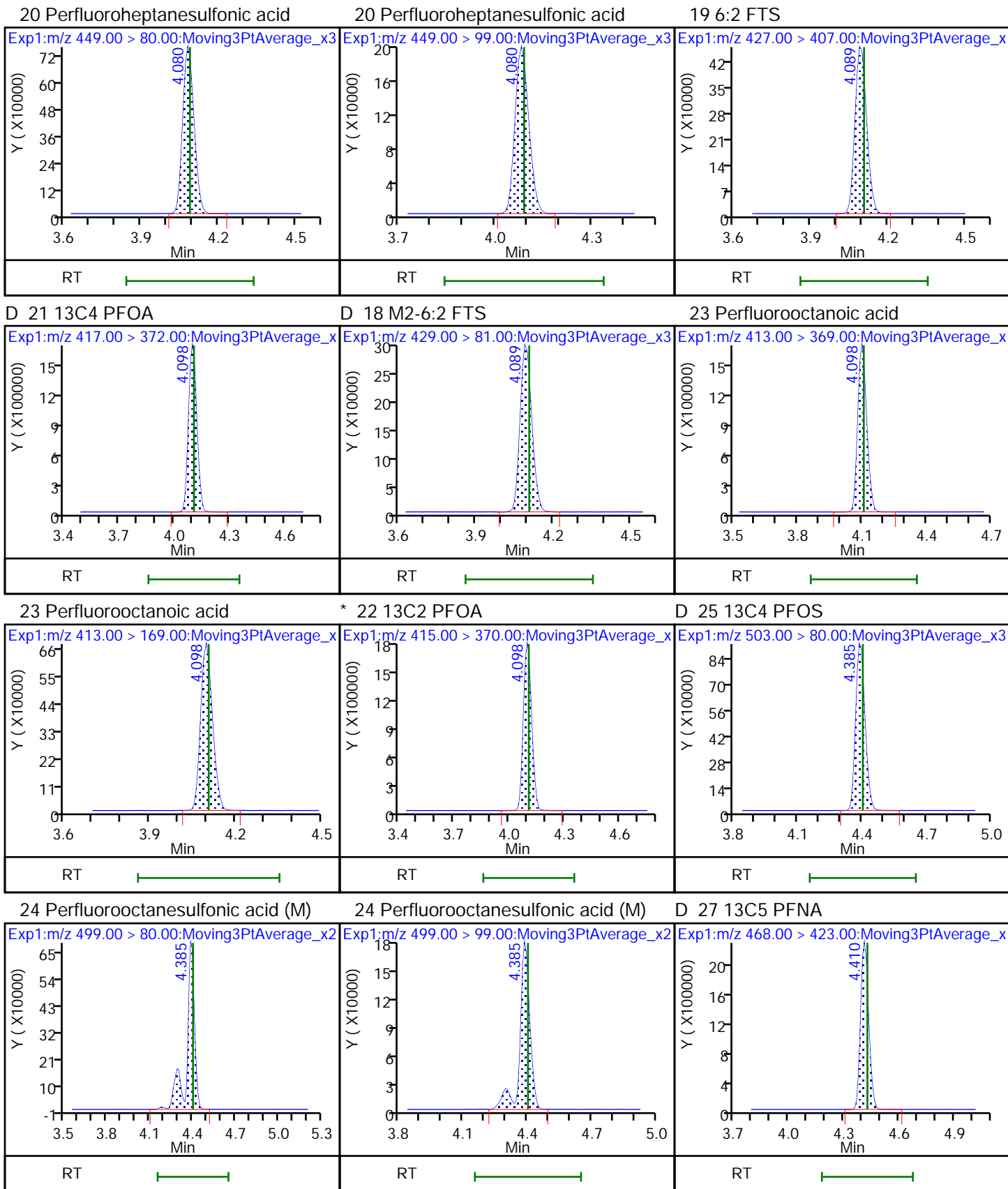
11 Perfluoropentanesulfonic acid

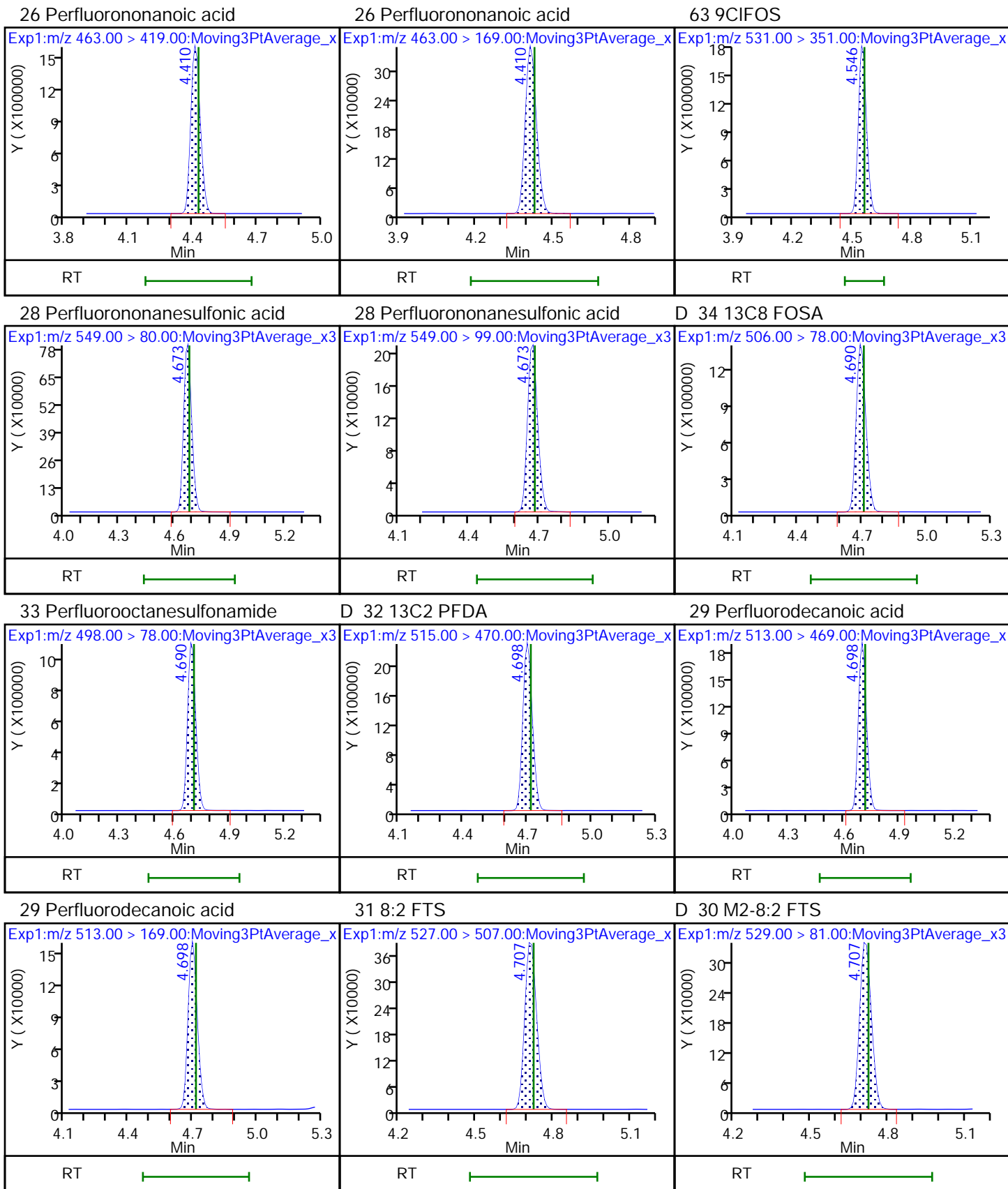
11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA





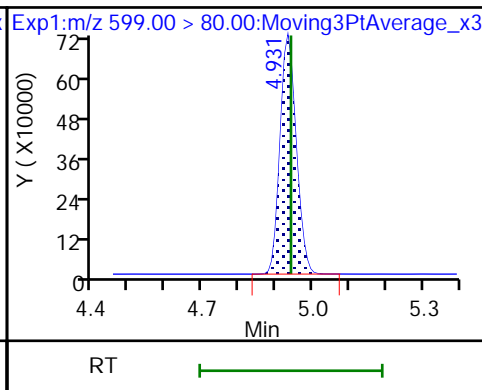
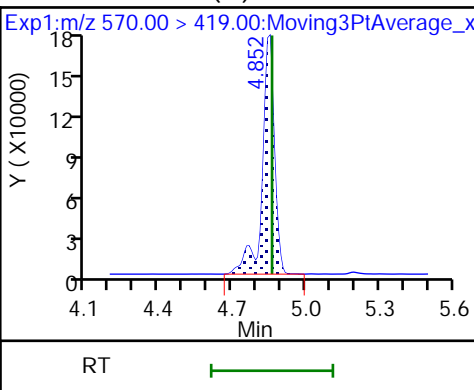
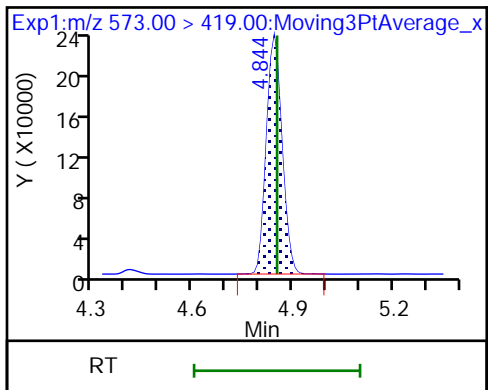




D 35 d3-NMeFOSAA

36 NMeFOSAA (M)

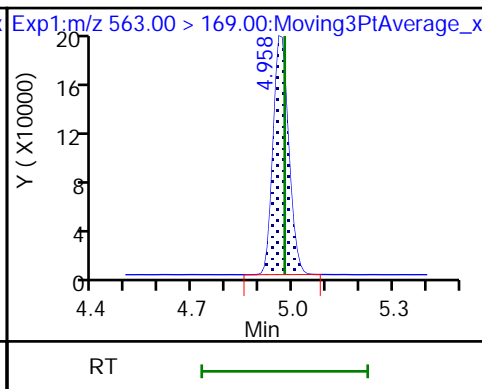
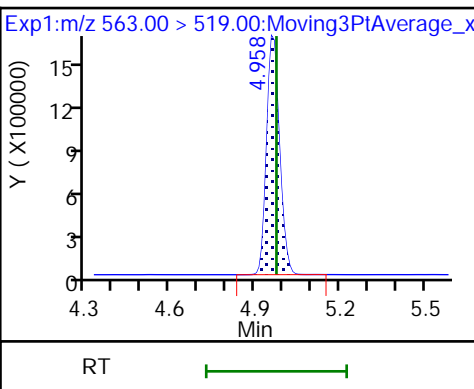
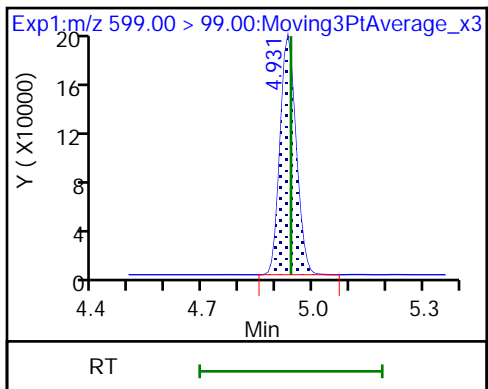
37 Perfluorodecanesulfonic acid



37 Perfluorodecanesulfonic acid

38 Perfluoroundecanoic acid

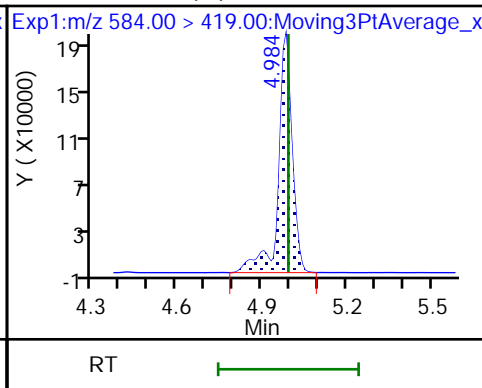
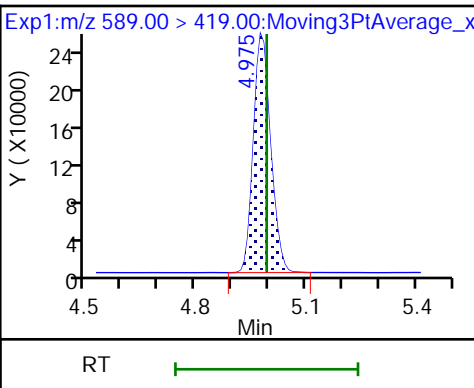
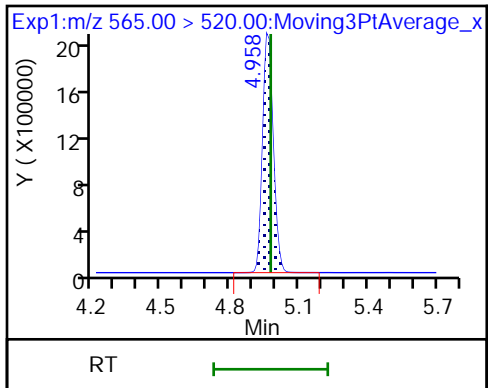
38 Perfluoroundecanoic acid



D 39 13C2 PFUnA

D 41 d5-NEtFOSAA

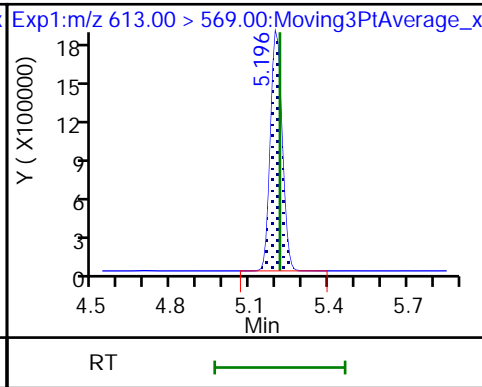
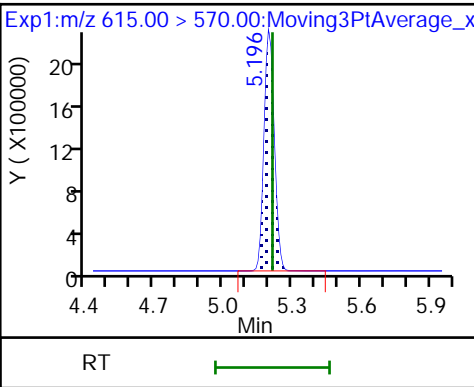
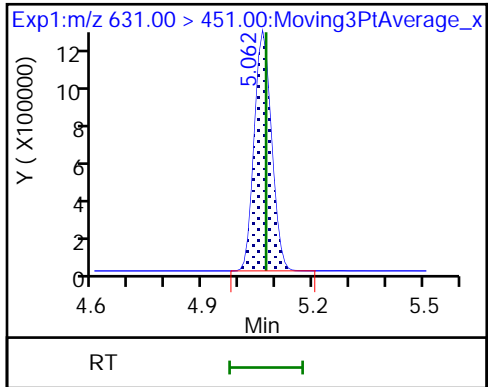
40 NEtFOSA (M)



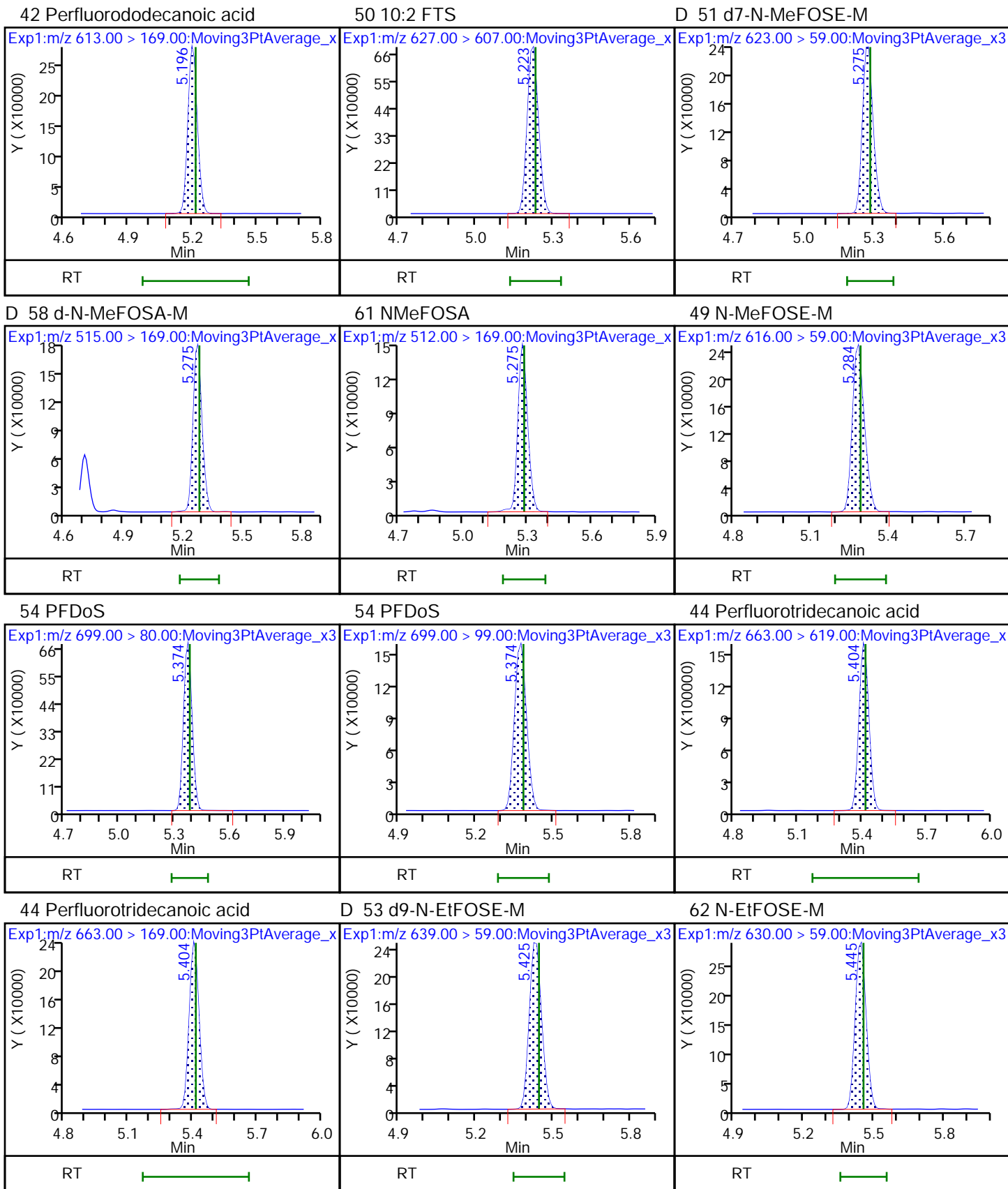
57 11CIFOS

D 43 13C2 PFDaA

42 Perfluorododecanoic acid



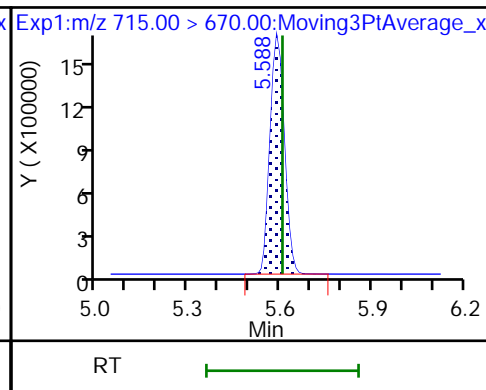
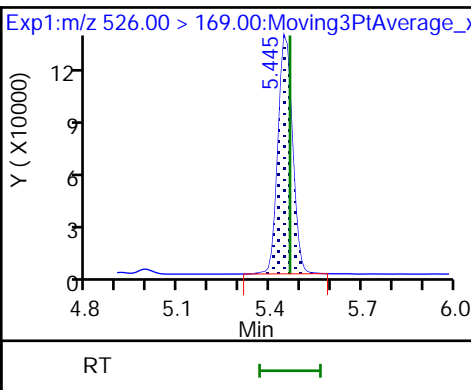
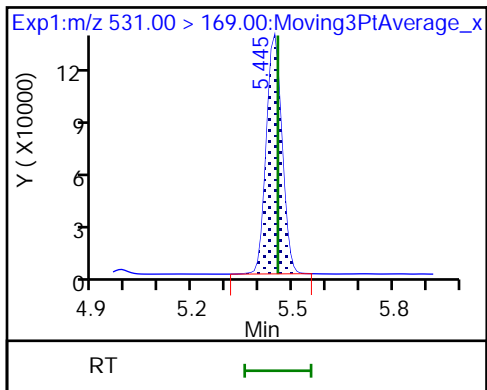




D 52 d-N-EtFOSA-M

56 N-EtFOSA-M

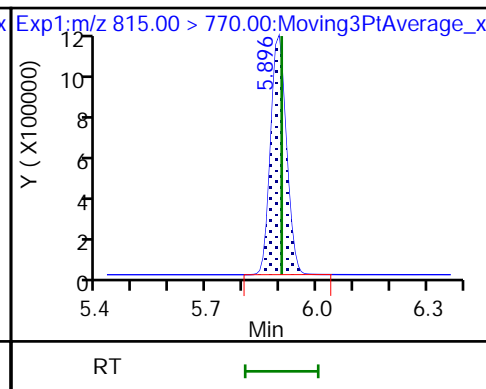
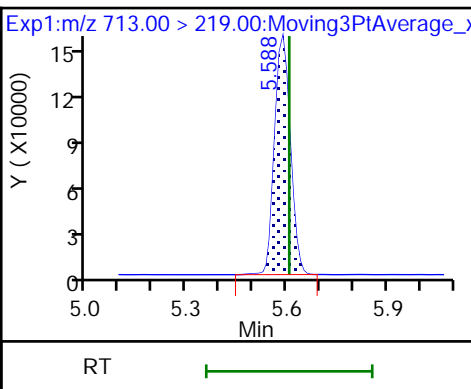
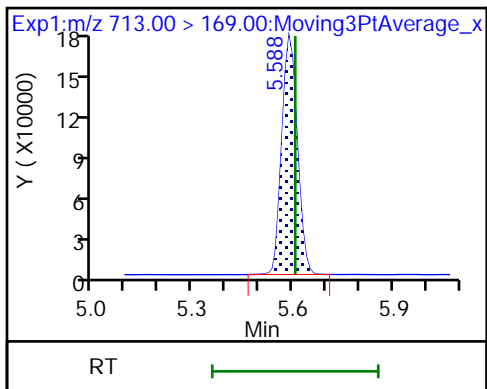
D 46 13C2 PFTeDA



45 Perfluorotetradecanoic acid

45 Perfluorotetradecanoic acid

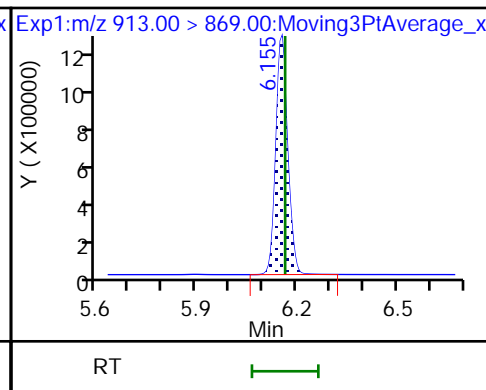
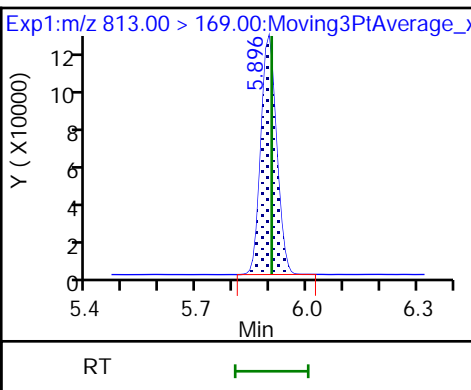
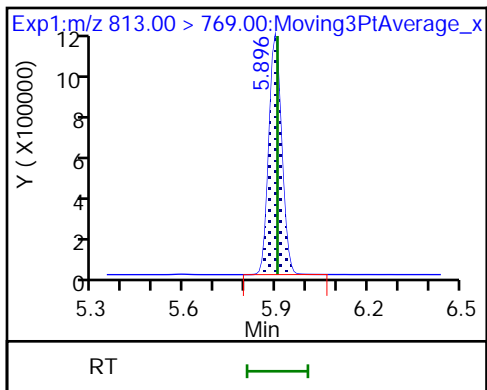
D 59 13C2 PFHxDA



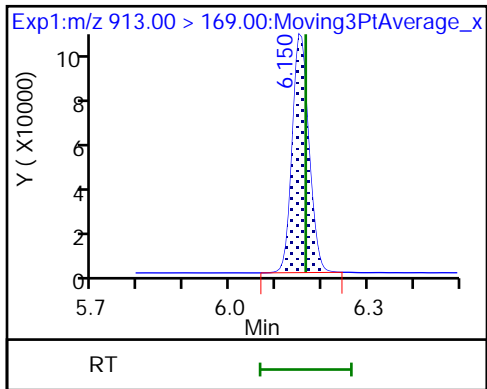
55 Perfluorohexadecanoic acid

55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid



60 Perfluorooctadecanoic acid



PFAS BATCH WORKSHEET

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_

Batch Number: 57611 Batch Start Date: 01/04/22 08:32 Batch Analyst: Stout, David W  
 Batch Method: None Batch End Date: 01/05/22 15:07

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	CalcMsg	63xxMPFC IDA	63xxPFC3LSP
MB 140-57611/1		None, Split, 537 (modified)		1 Sample	50 mL	CALC NOT SET TO RUN	00041	00006
LCS 140-57611/2		None, Split, 537 (modified)		1 Sample	50 mL	CALC NOT SET TO RUN		1 mL
LCS 140-57611/3		None, Split, 537 (modified)		1 Sample	50 mL	CALC NOT SET TO RUN		1 mL
140-25858-A-1	R-1589,1590 QC OTM-45 CB FH PBT	None, Split, 537 (modified)	T	1 Sample	50 mL	CALC NOT SET TO RUN		
140-25858-A-7	R-1598,1599 QC OTM-45 CB FH BT	None, Split, 537 (modified)	T	1 Sample	50 mL	CALC NOT SET TO RUN		
140-25858-A-13	C-2507 MEDIA CHECK FILTER	None, Split, 537 (modified)	T	1 Sample	50 mL	CALC NOT SET TO RUN		

Batch Notes	
Methanol ID	5% NH4OH / MeOH 440020
Extraction Start Date	01/04/2022
Extraction Start time	13:20
Extraction End Date	01/05/2022
Extraction End time	08:06
Analyst ID - Extraction	DWS/CAC
Analyst ID - Spike Analyst	DWS
Analyst ID - Spike Witness Analyst	CAC
Filter ID	427675
Hot Block ID	F
Oven, Bath or Block Temperature 1	60 Degrees C

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.

EurofinsTestAmerica Knoxville Extraction Sheet  
PFAS in Source Air Front Half Fraction

Prep Batch Number: 140-57611  
 Split Batch Number: **57685**  
 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 PVDE filter disk.
MB 140-57611/1	NA	✓	✓	✓	NA	50	✓	✓	✓	✓	✓
LCS 140-57611/2	NA	✓	NA	✓	NA	49	✓	✓	✓	✓	✓
140-25858-A-1 (140-453612)	✓	✓	✓	✓	NA	50	✓	✓	✓	✓	✓
140-25858-A-7 (140-453621)	✓	✓	✓	✓	NA	50	✓	✓	✓	✓	✓
140-25858-A-13 (140-453630)	87	✓	✓	✓	NA	50	✓	✓	✓	✓	✓
140-25859-A-1 (140-453634)	80	✓	✓	✓	NA	50	✓	✓	✓	✓	✓
140-25859-A-5 (140-453641)	81	✓	✓	✓	NA	50	✓	✓	✓	✓	✓
140-25859-A-9 (140-453648)	71	✓	✓	✓	NA	50	✓	✓	✓	✓	✓
140-25860-A-1 (140-453671)	130	✓	✓	✓	NA	50	✓	✓	✓	✓	✓
140-25860-A-5 (140-453678)	128	✓	✓	✓	NA	50	✓	✓	✓	✓	✓
140-25860-A-9 (140-453685)	114	✓	✓	✓	NA	50	✓	✓	✓	✓	✓
140-25966-A-1 MDLV	NA	✓	✓	✓	NA	50	✓	✓	✓	✓	✓
CAC 1/11/22											
CAC 1/11/22											
CAC 1/11/22											

PFAS BATCH WORKSHEET

Lab Name: Eurofins Knoxville Job No.: 140-25858-1  
 SDG No.: \_\_\_\_\_

Batch Number: 57613 Batch Start Date: 01/04/22 08:59 Batch Analyst: Stout, David W  
 Batch Method: None Batch End Date: 01/11/22 13:20

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	63xxMPFC_IDA 00041	63xxPF3LSP 00006
MB 140-57613/1		None, Split, 537 (modified)		1 Sample	360 mL	0.5 mL	
LCS 140-57613/2		None, Split, 537 (modified)		1 Sample	360 mL	0.5 mL	1 mL
LCS 140-57613/3		None, Split, 537 (modified)		1 Sample	360 mL	0.5 mL	1 mL
140-25858-A-2	R-1591,1592,1594 QC OTM-45 CB BH PBT	None, Split, 537 (modified)	T	1 Sample	360 mL	0.5 mL	
140-25858-A-4	R-1595 QC OTM-45 CB IMPINGERS BREAKTHROUGH XAD-2 RESIN TUBE PBT	None, Split, 537 (modified)	T	1 Sample	360 mL	0.5 mL	
140-25858-A-6	R-1597 QC OTM-45 CB MEOH WITH 5% NH4OH.RB	None, Split, 537 (modified)	T	1 Sample	50 mL	0.5 mL	
140-25858-A-8	R-1600,1601,1603 QC OTM-45 CB BH BT	None, Split, 537 (modified)	T	1 Sample	360 mL	0.5 mL	
140-25858-A-10	R-1604 QC OTM-45 CB BREAKTHROUGH XAD-2 RESIN TUBE BT	None, Split, 537 (modified)	T	1 Sample	360 mL	0.5 mL	
140-25858-A-12	C-2506 MEDIA CHECK XAD	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 Knoxville Job No.: 140-25858-1 Batch Start Date: 01/04/22 08:59 Batch Analyst: Stout, David W  
 SDG No.: Batch Number: 57613 Batch End Date: 01/11/22 13:20  
 Batch Method: None

Batch Notes	
H2O/ 5% NH4OH ID	5% NH4OH/MeOH 455378
Extraction 1 Start Time	01/04/2022 13:25
Extraction 1 End Time	01/05/2022 08:45
Extraction 2 Start Time	01/05/2022 11:15
Extraction 2 End Time	01/07/2022 17:45
Analyst ID - Extraction	DWS/CAC
Analyst ID - Spike Analyst	DWS
Analyst ID - Spike Witness Analyst	CAC
Methanol ID	5% NH4OH / MeOH 455378
PVDF Filter ID	419756
XAD ID	438442
Hot Block ID	F
Oven, Bath or Block Temperature 1	60 Degrees C

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 Knoxville Job No.: 140-25858-1

SDG No.:

Batch Number: 57645 Batch Start Date: 01/04/22 14:49 Batch Analyst: Stout, David W

Batch Method: None Batch End Date: 01/05/22 09:04

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	63xxMPFC_IDA 00041	63xxMPFOA-IS 00045	63xxPFC3LSP 00006	AnalysisComment
MB 140-57645/1		None, Split, 537 (modified)		1 Sample	10 mL	0.25 mL	0.25 mL		
LCS 140-57645/2		None, Split, 537 (modified)		1 Sample	10 mL	0.25 mL	0.25 mL	0.5 mL	
LCS 140-57645/3		None, Split, 537 (modified)		1 Sample	10 mL	0.25 mL	0.25 mL	0.5 mL	
140-25858-A-3	R-1593 QC OTM-45 IMPINGERS 1,2&3 COND PBT	None, Split, 537 (modified)	T	1 Sample	10 mL	0.25 mL	0.25 mL		received 350mL; used 2mL
140-25858-A-5	R-1596 QC OTM-45 CB DI WATER RB	None, Split, 537 (modified)	T	1 Sample	10 mL	0.25 mL	0.25 mL		received 152mL; used 2mL
140-25858-A-9	R-1603 QC OTM-45 CB IMPINGERS 1,2&3 COND BT	None, Split, 537 (modified)	T	1 Sample	10 mL	0.25 mL	0.25 mL		received 310mL; used 2mL

Batch Notes	
Solvent	methanol lot: 214330
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 Knoxville Job No.: 140-25858-1

SDG No.:

Batch Number: 57659 Batch Start Date: 01/05/22 09:07 Batch Analyst: Clark, Courtney A

Batch Method: Split Batch End Date: 01/05/22 09:08

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount
MB 140-57645/1-A		Split, 537 (modified)		10 mL	10 mL
LCS 140-57645/2-A		Split, 537 (modified)		10 mL	10 mL
LCS 140-57645/3-A		Split, 537 (modified)		10 mL	10 mL
140-25858-A-3-A	R-1593 QC OTM-45 IMPINGERS 1,2&3 COND PBT	Split, 537 (modified)	T	10 mL	10 mL
140-25858-A-5-A	R-1596 QC OTM-45 CB DI WATER RB	Split, 537 (modified)	T	10 mL	10 mL
140-25858-A-9-A	R-1603 QC OTM-45 CB IMPINGERS 1,2&3 COND BT	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: 140-57645




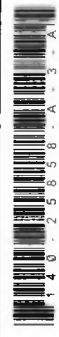
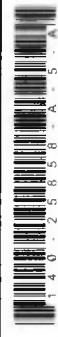
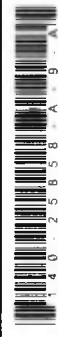

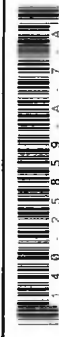

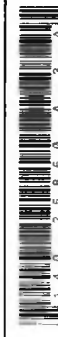
Analyst: Stout, David W

Batch Open: 1/4/2022 2:49:00PM

Method Code: 140-LCMS\_COND\_Prep-140

Batch End:

## Leaching Procedure for Condensate

Input Sample Lab ID (Analytical Method)	SDG (Job #)	GrossWt TareWt	InitAmt FinAmt	Rcvd	PHS Adj1	Adj2	Due Date	Analytical TAT	Div Rank	Comments	Output Sample Lab ID
1 MB-140-57645/1 N/A	N/A		1 Sample				N/A	N/A	N/A		 M B - 1 4 0 - 5 7 6 4 5 / 1 - A
2 LCS-140-57645/2 N/A	N/A		1 Sample				N/A	N/A	N/A		 L C S - 1 4 0 - 5 7 6 4 5 / 2 - A
3 LCSD-140-57645/3 N/A	N/A		1 Sample				N/A	N/A	N/A		 L C S D - 1 4 0 - 5 7 6 4 5 / 3 - A
4 140-25858-A-3 (PFC_IDA)	N/A (140-25858-1)	350mc	1 Sample				1/6/22	12_Day_Rush	4		 1 4 0 - 2 5 8 5 8 - A - 3 - A
5 140-25858-A-5 (PFC_IDA)	N/A (140-25858-1)	152mc	1 Sample				1/6/22	12_Day_Rush	4		 1 4 0 - 2 5 8 5 8 - A - 5 - A
6 140-25858-A-9 (PFC_IDA)	N/A (140-25858-1)	310mc	1 Sample				1/6/22	12_Day_Rush	4		 1 4 0 - 2 5 8 5 8 - A - 9 - A
7 140-25859-A-3 (PFC_IDA)	N/A (140-25859-1)	355mc	1 Sample				1/6/22	12_Days	4		 1 4 0 - 2 5 8 5 9 - A - 3 - A
8 140-25859-A-7 (PFC_IDA)	N/A (140-25859-1)	295mc	1 Sample				1/6/22	12_Days	4		 1 4 0 - 2 5 8 5 9 - A - 7 - A
9 140-25859-A-11 (PFC_IDA)	N/A (140-25859-1)	250mc	1 Sample				1/6/22	12_Days	4		 1 4 0 - 2 5 8 5 9 - A - 1 1 - A
10 140-25860-A-3 (PFC_IDA)	N/A (140-25860-1)	310mc	1 Sample				1/6/22	12_Days	4		 1 4 0 - 2 5 8 6 0 - A - 3 - A

# Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)

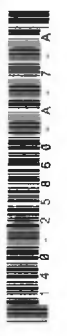
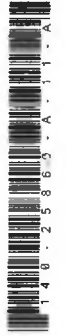
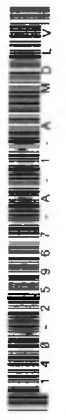
Batch Number: 140-57645

Analyst: Stout, David W

Batch Open: 1/4/2022 2:49:00PM

Method Code: 140-LCMS\_COND\_Prep-140

Batch End:

11	140-25860-A-7 (PFC_IDA)	N/A (140-25860-1)	300 mL ✓					1/6/22	12_Days	4	 140-25860-A-7-A
12	140-25860-A-11 (PFC_IDA)	N/A (140-25860-1)	305 mL ✓					1/6/22	12_Days	4	 140-25860-A-11-A
13	140-25967-A-1-MDLV (PFC_IDA)	2022 Q1 - PFAS (140-25967-1) (oil-shoot) MDLV	1 Sample					3/29/22	61_Days	N/A	 140-25967-A-1-A MDLV

PFAS BATCH WORKSHEET

Lab Name: Eurofins Knoxville Job No.: 140-25858-1

SDG No.:

Batch Number: 57685 Batch Start Date: 01/05/22 15:08 Batch Analyst: Clark, Courtney A

Batch Method: Split Batch End Date: 01/11/22 10:10

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	63xMPFOA-IS 00045
MB 140-57611/1-A		Split, 537 (modified)		25 mL	10 mL	250 uL
LCS 140-57611/2-A		Split, 537 (modified)		25 mL	10 mL	250 uL
LCS 140-57611/3-A		Split, 537 (modified)		25 mL	10 mL	250 uL
140-25858-A-1-A	R-1589,1590 QC OTM-45 CB.FH PBT (modified)	Split, 537 (modified)	T	25 mL	10 mL	250 uL
140-25858-A-7-A	R-1598,1599 QC OTM-45 CB.FH BT (modified)	Split, 537 (modified)	T	25 mL	10 mL	250 uL
140-25858-A-13-A	C-2507 MEDIA CHECK FILTER	Split, 537 (modified)	T	25 mL	10 mL	250 uL

Batch Notes	
Analyst ID - IS Reagent Drop	dws
Analyst ID - IS Reagent Drop Witness	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.

**EurofinsTestAmerica Knoxville Extraction Sheet**  
**PFAS in Source Air Front Half Fraction**

Prep Batch Number: 140-57611  
 Split Batch Number: 57685  
 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 140-57611/1	NA	✓	✓	✓	NA	50	✓	✓	✓	✓	✓
LCS D 140-57611/2	✓	✓	✓	✓	NA	49	✓	✓	✓	✓	✓
140-25858-A-1 (140-453612)	✓	NA	✓	✓	NA	50	✓	✓	✓	✓	✓
140-25858-A-7 (140-453621)	✓	✓	✓	✓	✓	87	✓	✓	✓	✓	✓
140-25858-A-13 (140-453630)	✓	✓	✓	✓	✓	80	✓	✓	✓	✓	✓
140-25859-A-1 (140-453634)	✓	✓	✓	✓	✓	71	✓	✓	✓	✓	✓
140-25859-A-5 (140-453641)	✓	✓	✓	✓	✓	130	✓	✓	✓	✓	✓
140-25859-A-9 (140-453648)	✓	✓	✓	✓	✓	128	✓	✓	✓	✓	✓
140-25860-A-1 (140-453671)	✓	✓	✓	✓	✓	114	✓	✓	✓	✓	✓
140-25860-A-5 (140-453678)	✓	✓	✓	✓	✓	59	✓	✓	✓	✓	✓
140-25860-A-9 (140-453685)	✓	✓	✓	✓	✓	Pass/CAC	✓	✓	✓	✓	✓
140-25966-A-1 MDLV	114	✓	✓	✓	Pass	Pass/CAC	✓	✓	✓	✓	✓
CAC 1/11/21	NA	✓	✓	✓	Pass	Pass/CAC	✓	✓	✓	✓	✓
CAC 1/11/21	NA	✓	✓	✓	Pass	Pass/CAC	✓	✓	✓	✓	✓
CAC 1/11/21	NA	✓	✓	✓	Pass	Pass/CAC	✓	✓	✓	✓	✓
CAC 1/11/21	NA	✓	✓	✓	Pass	Pass/CAC	✓	✓	✓	✓	✓
CAC 1/11/21	NA	✓	✓	✓	Pass	Pass/CAC	✓	✓	✓	✓	✓
CAC 1/11/21	NA	✓	✓	✓	Pass	Pass/CAC	✓	✓	✓	✓	✓
CAC 1/11/21	NA	✓	✓	✓	Pass	Pass/CAC	✓	✓	✓	✓	✓

PFAS BATCH WORKSHEET

Lab Name: Eurofins Knoxville Job No.: 140-25858-1

SDG No.:

Batch Number: 57746 Batch Start Date: 01/09/22 13:05 Batch Analyst: Stout, David W

Batch Method: Split Batch End Date: 01/12/22 12:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	63xxMPFOA-IS 00045
MB 140-57613/1-A		Split, 537 (modified)		180 mL	10 mL	250 uL
LCS 140-57613/2-A		Split, 537 (modified)		180 mL	10 mL	250 uL
LCS 140-57613/3-A		Split, 537 (modified)		180 mL	10 mL	250 uL
140-25858-A-2-A	R-1591,1592,1594 QC OTM-45 CB BH PBT	Split, 537 (modified)	T	180 mL	10 mL	250 uL
140-25858-A-4-A	R-1595 QC OTM-45 CB IMPINGERS BREAKTHROUGH XAD-2 RESIN TUBE PBT	Split, 537 (modified)	T	180 mL	10 mL	250 uL
140-25858-A-6-A	R-1597 QC OTM-45 CB MEOH WITH 5% NH4OH RB	Split, 537 (modified)	T	25 mL	10 mL	250 uL
140-25858-A-8-A	R-1600,1601,1603 QC OTM-45 CB BH BT	Split, 537 (modified)	T	180 mL	10 mL	250 uL
140-25858-A-10-A	R-1604 QC OTM-45 CB BREAKTHROUGH XAD-2 RESIN TUBE BT	Split, 537 (modified)	T	180 mL	10 mL	250 uL
140-25858-A-12-A	C-2506 MEDIA CHECK XAD	Split, 537 (modified)	T	180 mL	10 mL	250 uL

Batch Notes	
Analyst ID - IS Reagent Drop	cac
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.

**EurofinsTestAmerica Knoxville Extraction Sheet  
PFAS in Source Air Back Half Fraction**

Prep Batch Number: 140-57613  
 Split Batch Number: 57746  
 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. 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 140-57613/1	NA	✓	✓	✓	NA	✓	✓	✓	✓	✓	✓	✓	✓
LCS 140-57613/2	↓	✓	✓	✓	190	✓	✓	✓	✓	✓	✓	✓	✓
LCSD 140-57613/3	220	NA	✓	✓	NA	✓	✓	✓	✓	✓	✓	✓	✓
140-25858-A-2 (140-453614)	NA	NA	✓	✓	50	NA	✓	✓	✓	✓	✓	✓	✓
140-25858-A-4 (140-453618)	NA	NA	✓	✓	180	✓	✓	✓	✓	✓	✓	✓	✓
140-25858-A-6 (140-453620)	NA	NA	✓	✓	NA	✓	✓	✓	✓	✓	✓	✓	✓
140-25858-A-8 (140-453623)	110.3	NA	✓	✓	NA	✓	✓	✓	✓	✓	✓	✓	✓
140-25858-A-10 (140-453627)	NA	NA	✓	✓	NA	✓	✓	✓	✓	✓	✓	✓	✓
140-25858-A-12 (140-453629)	198	NA	✓	✓	NA	✓	✓	✓	✓	✓	✓	✓	✓
140-25859-A-2 (140-453636)	NA	NA	✓	✓	NA	✓	✓	✓	✓	✓	✓	✓	✓
140-25859-A-4 (140-453640)	222	NA	✓	✓	NA	✓	✓	✓	✓	✓	✓	✓	✓
140-25859-A-6 (140-453643)	NA	NA	✓	✓	NA	✓	✓	✓	✓	✓	✓	✓	✓
140-25859-A-8 (140-453647)	↓	NA	✓	✓	NA	✓	✓	✓	✓	✓	✓	✓	✓
MB 140-57613/14	203	NA	✓	✓	NA	✓	✓	✓	✓	✓	✓	✓	✓
140-25859-A-10 (140-453650)	NA	NA	✓	✓	NA	✓	✓	✓	✓	✓	✓	✓	✓
140-25859-A-12 (140-453654)	198	NA	✓	✓	NA	✓	✓	✓	✓	✓	✓	✓	✓
140-25860-A-2 (140-453673)	NA	NA	✓	✓	NA	✓	✓	✓	✓	✓	✓	✓	✓
140-25860-A-4 (140-453677)	187	NA	✓	✓	NA	✓	✓	✓	✓	✓	✓	✓	✓
140-25860-A-6 (140-453680)	NA	NA	✓	✓	NA	✓	✓	✓	✓	✓	✓	✓	✓
140-25860-A-8 (140-453684)	214	NA	✓	✓	NA	✓	✓	✓	✓	✓	✓	✓	✓
140-25860-A-10 (140-453687)	NA	NA	✓	✓	NA	✓	✓	✓	✓	✓	✓	✓	✓
140-25860-A-12 (140-453691)	NA	NA	✓	✓	NA	✓	✓	✓	✓	✓	✓	✓	✓
140-259655-A-1 MDLV	NA	NA	✓	✓	NA	✓	✓	✓	✓	✓	✓	✓	✓
CAC 01/12/22	NA	NA	✓	✓	NA	✓	✓	✓	✓	✓	✓	✓	✓
CAC 01/12/22	NA	NA	✓	✓	NA	✓	✓	✓	✓	✓	✓	✓	✓
CAC 01/12/22	NA	NA	✓	✓	NA	✓	✓	✓	✓	✓	✓	✓	✓
CAC 01/12/22	NA	NA	✓	✓	NA	✓	✓	✓	✓	✓	✓	✓	✓

OP136R2 081721 PFAS Back Half (TALS)

# Shipping and Receiving Documents

**Request for Analysis/Chain-of-Custody – RFA/COC #003**  
**The Chemours Company – Fayetteville NC**  
**Q4 Carbon Bed Field QC Samples**

<b>Project Identification:</b>		<b>Chemours Emissions Test</b>	
Client Name:	The Chemours Company FC, LLC		
Client Contact:	Christel Compton Office: (910) 678-1213 Cell: (910) 975-3386		
TestAmerica Project Manager:	Courtney Adkins Office: (865) 291-3019		
TestAmerica Program Manager:	Billy Anderson Office: (865) 291-3080 Cell: (865) 206-9004		
<b>Analytical Testing QC Requirements:</b>			
The Legend for ProjectB- 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			
<b>Project Deliverables:</b>			
Report analytical results on TALS Report form Std_Tal_L4. Include "Field Sample Number", "Sample Type", and "Run Number" on all TALS Reports.			
<b>Analytical Parameter:</b>		<b>Holding Time Requirements:</b>	<b>Preservation Requirements:</b>
HFPO-DA (CAS No. 13252-13-6) & PFOA (CAS No. 335-67-1)		14 Days to Extraction; 40 Days to Analysis	Cool, 4°C
<b>Laboratory Deliverable Turnaround Requirements:</b>		<b>Laboratory Destination:</b>	
Analytical Due Date: (Review-Released Data)	21 Days from Lab Receipt		
Data Package Due Date:	28 Days from Lab Receipt		
<b>Lab Phone Number:</b>		865.291.3000	
<b>Courier:</b>		Hand Deliver	

Field Sample No./Sample Code/ID	Run No.	Sample Collection Date	Project QC Requirements	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
R-1589 QC OTM-45 Q2 CB Filter PBT  (Combine with R-1590)	QC	12/16/21	Proof Blank Train	250 mL HDPE Wide-Mouth Bottle	Particulate Filter (82.6 mm Whatman Glass Microfiber)  OTM-45 Blank Train  HFPO-DA Analysis	<b>Knoxville:</b> 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 Filter sample. Analyze for HFPO-DA.
R-1590 QC OTM-45 Q2 CB FH of Filter Holder & Probe MeOH Rinse PBT  (Combine with B- 1658)	QC	12/16/21	Proof Blank Train	250 mL HDPE Wide-Mouth Bottle	Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse  OTM-45 Blank Train  HFPO-DA Analysis	<b>Knoxville:</b> Use this solvent sample in the Filter extraction.



**Request for Analysis/Chain-of-Custody – RFA/COC #003**  
**The Chemours Company – Fayetteville NC**  
**Q4 Carbon Bed Field QC Samples**

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project (QC) Requirements	Sample Bottle/ Container	Sample Type//Analysis	Analytical Specifications
R-1591 QC OTM-45 Q2 CB XAD-2 Resin Tube PBT	QC	12/16/21	Proof Blank Train	XAD-2 Resin Tube	XAD-2 Resin Tube  OTM-45 Blank Train  HFPO-DA Analysis	<b>Knoxville:</b> 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.
R-1592 QC OTM-45 Q2 CB BH of Filter Holder & Coil Condenser MeOH Rinse PBT  (Combine with R-1591)	QC	12/16/21	Proof Blank Train	250 mL HDPE Wide-Mouth Bottle	Back Half of Filter Holder & Coil Condenser Methanol/5% Ammonium Hydroxide Rinse  OTM-45 Blank Train  HFPO-DA Analysis	<b>Knoxville:</b> Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction. Analyze for HFPO-DA.
R-1593 QC OTM-45 Q2 CB Impingers 1,2 & 3 Condensate PBT	QC	12/16/21	Proof Blank Train	1 Liter HDPE Wide-Mouth Bottle	Impinger #1, #2 & #3 Condensate  OTM-45 Blank Train  HFPO-DA Analysis	<b>Knoxville:</b> Analyze for HFPO-DA.
R-1594 QC OTM-45 Q2 CB Impinger Glassware MeOH Rinse PBT  (Combine with R-1591)	QC	12/16/21	Proof Blank Train	250 mL HDPE Wide-Mouth Bottle	Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse  OTM-45 Blank Train  HFPO-DA Analysis	<b>Knoxville:</b> Use this solvent sample in the XAD-2 Resin Extraction.
R-1595 QC OTM-45 Q2 CB Breakthrough XAD-2 Resin Tube PBT	QC	12/16/21	Proof Blank Train	XAD-2 Resin Tube	Breakthrough XAD-2 Resin Tube  OTM-45 Blank Train  HFPO-DA Analysis	<b>Knoxville:</b> 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.
R-1596 QC OTM-45 Q2 CB DI Water RB	QC	12/16/21	Reagent Blank	250 mL HDPE Wide-Mouth Bottle	Deionized (DI) Water Reagent Blank  OTM-45 Train  HFPO-DA Analysis	<b>Knoxville:</b> Analyze for HFPO-DA.

**Request for Analysis/Chain-of-Custody – RFA/COC #003**  
**The Chemours Company – Fayetteville NC**  
**Q4 Carbon Bed Field QC Samples**

Field Sample No./Sample Code/ID	Run No.	Sample Collection Date	Project QC Requirements	Sample Bottle/Container	Sample Type/Analysis	Analytical Specifications
R-1597 QC OTM-45 Q2 CB MeOH with 5% NH <sub>4</sub> OH RB	QC	12/16/21	Reagent Blank	250 mL HDPE Wide-Mouth Bottle	Methanol with 5% NH <sub>4</sub> OH Reagent Blank  OTM-45 Train  HFPO-DA Analysis	<b>Knoxville:</b> Analyze for HFPO-DA.
R-1598 QC OTM-45 Q2 CB Filter BT  (Combine with R-1599)	QC	12/16/21	Field Blank Train	250 mL HDPE Wide-Mouth Bottle	Particulate Filter (82.6 mm Whatman Glass Microfiber)  OTM-45 Blank Train  HFPO-DA Analysis	<b>Knoxville:</b> 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 Filter sample. Analyze for HFPO-DA.
R-1599 QC OTM-45 Q2 CB FH of Filter Holder & Probe MeOH Rinse BT  (Combine with B- 1667)	QC	12/16/21	Field Blank Train	250 mL HDPE Wide-Mouth Bottle	Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse  OTM-45 Blank Train  HFPO-DA Analysis	<b>Knoxville:</b> Use this solvent sample in the Filter extraction.
R-1600 QC OTM-45 Q2 CB XAD-2 Resin Tube BT	QC	12/16/21	Field Blank Train	XAD-2 Resin Tube	XAD-2 Resin Tube  OTM-45 Blank Train  HFPO-DA Analysis	<b>Knoxville:</b> 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.
R-1601 QC OTM-45 Q2 CB BH of Filter Holder & Coil Condenser MeOH Rinse BT  (Combine with R-1600)	QC	12/16/21	Field Blank Train	250 mL HDPE Wide-Mouth Bottle	Back Half of Filter Holder & Coil Condenser Methanol/5% Ammonium Hydroxide Rinse  OTM-45 Blank Train  HFPO-DA Analysis	<b>Knoxville:</b> Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction. Analyze for HFPO-DA.

**Request for Analysis/Chain-of-Custody – RFA/COC #003**  
**The Chemours Company – Fayetteville NC**  
**Q4 Carbon Bed Field QC Samples**

Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Requirements	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
R-1602 QC OTM-45 Q2 CB Impingers 1, 2 & 3 Condensate BT	QC	12/16/21	Field Blank Train	1 Liter HDPE Wide-Mouth Bottle	Impinger #1, #2 & #3 Condensate  OTM-45 Blank Train  HFPO-DA Analysis	<b>Knoxville:</b> Analyze for HFPO-DA.
R-1603 QC OTM-45 Q2 CB Impinger Glassware MeOH Rinse BT  (Combine with R-1600)	QC	12/16/21	Field Blank Train	250 mL HDPE Wide-Mouth Bottle	Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse  OTM-45 Blank Train  HFPO-DA Analysis	<b>Knoxville:</b> Use this solvent sample in the XAD-2 Resin Extraction.
R-1604 QC OTM-45 Q2 CB Breakthrough XAD-2 Resin Tube BT	QC	12/16/21	Field Blank Train	XAD-2 Resin Tube	Breakthrough XAD-2 Resin Tube  OTM-45 Blank Train  HFPO-DA Analysis	<b>Knoxville:</b> 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.

**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.

N/A

(2) Record the sample shipping cooler temperature of all coolers transporting samples listed on this RFA:

2.2°C / 2.1°C N/A

(3) Record any aQ2rent sample loss/breakage.

N/A

(4) Record any unidentified samples transported with this shipment of samples:

N/A

(5) Indicate if all samples were received according to the project's required specifications (i.e. no nonconformances):

N/A

**Custody Transfer:**

Relinquished By:

*[Signature]*  
Name

AST  
Company

12/16/21 1915  
Date/Time

Accepted By:

*[Signature]*  
Name

ETA  
Company

12/18/21 16:20  
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

Relinquished By:

Name

Company

Date/Time

Accepted By:

Name

Company

Date/Time

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 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>8671</u> Correction factor: <u>-0.1</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	Labeling Verified by: _____ Date: _____
10. Was the sampler identified on the COC?	✓			<input type="checkbox"/> Sampler Not Listed on COC	pH test strip lot number: _____
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	Box 16A: pH Preservation Box 18A: Residual Chlorine
15. Were samples received within holding time?	✓			<input type="checkbox"/> Holding Time - Receipt	Preservative: _____ Lot Number: _____
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	Exp Date: _____ Analyst: _____
17. Were VOA samples received without headspace?			✓	<input type="checkbox"/> Headspace (VOA only) <input type="checkbox"/> Residual Chlorine	Date: _____ Time: _____
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:			✓		
19. For 1613B water samples is pH<9?			✓	<input type="checkbox"/> If no, notify lab to adjust	
20. For rad samples was sample activity info. Provided?			✓	<input type="checkbox"/> Project missing info	

Project #: \_\_\_\_\_ PM Instructions: \_\_\_\_\_

Signature: *[Handwritten Signature]*

## ANALYTICAL REPORT

Job Number: 140-25860-1

Job Description: Fayetteville VEN Carbon Bed Inlet

Contract Number: LBIO-67048

For:

The Chemours Company FC, LLC

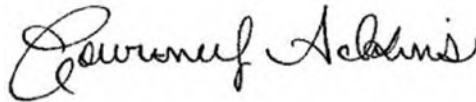
c/o AECOM

Sabre Building, Suite 300

4051 Ogletown Road

Newark, DE 19713

Attention: Michael Aucoin



Approved for release.  
Courtney M Adkins  
Project Manager II  
1/17/2022 8:11 AM

---

Courtney M Adkins, Project Manager II  
5815 Middlebrook Pike, Knoxville, TN, 37921  
(865)291-3019  
courtney.adkins@eurofinset.com  
01/17/2022

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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: 140-25860-1

## 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 Inlet

Job ID: 140-25860-1

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<b>Method</b>	<b>Method Description</b>	<b>Protocol</b>	<b>Laboratory</b>
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 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: 140-25860-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-25860-1	K-1783, 1784 VEN CARBON BED INLET R1 OTM-45 FH	Air	12/16/21 00:00	12/18/21 16:30
140-25860-2	K-1785, 1786, 1789 VEN CARBON BED INLET R1 OTM-45 BH	Air	12/16/21 00:00	12/18/21 16:30
140-25860-3	K-1787 VEN CARBON BED INLET R1 OTM-45 IMPINGERS 1,2&3 COND	Air	12/16/21 00:00	12/18/21 16:30
140-25860-4	K-1789 VEN CARBON BED INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Air	12/16/21 00:00	12/18/21 16:30
140-25860-5	K-1790, 1791 VEN CARBON BED INLET R2 OTM-45 FH	Air	12/16/21 00:00	12/18/21 16:30
140-25860-6	K-1792, 1793, 1795 VEN CARBON BED INLET R2 OTM-45 BH	Air	12/16/21 00:00	12/18/21 16:30
140-25860-7	K-1794 VEN CARBON BED INLET R2 OTM-45 IMPINGERS 1,2&3 COND	Air	12/16/21 00:00	12/18/21 16:30
140-25860-8	K-1796 VEN CARBON BED INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Air	12/16/21 00:00	12/18/21 16:30
140-25860-9	K-1797, 1798 VEN CARBON BED INLET R3 OTM-45 FH	Air	12/16/21 00:00	12/18/21 16:30
140-25860-10	K-1799, 1800, 1802 VEN CARBON BED INLET R3 OTM-45 BH	Air	12/16/21 00:00	12/18/21 16:30
140-25860-11	K-1801 VEN CARBON BED INLET R3 OTM-45 IMPINGERS 1,2&3 COND	Air	12/16/21 00:00	12/18/21 16:30
140-25860-12	K-1803 VEN CARBON BED INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Air	12/16/21 00:00	12/18/21 16:30

**Job Narrative**  
**140-25860-1**

**Comments**

No additional comments.

**Receipt**

The samples were received on 12/18/2021 4:30 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.5° 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:

Result, ng/sample = (on-column concentration, ng/mL) × (nominal final volume of extract (10 mL) / 1 sample) × DF × 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): The following samples were reported with elevated reporting limits for all analytes: K-1787 VEN CARBON BED INLET R1 OTM-45 IMPINGERS 1,2&3 COND (140-25860-3), K-1794 VEN CARBON BED INLET R2 OTM-45 IMPINGERS 1,2&3 COND (140-25860-7) and K-1801 VEN CARBON BED INLET R3 OTM-45 IMPINGERS 1,2&3 COND (140-25860-11). The sample was analyzed at a dilution based on screening results.

Method 537 (modified): Results for samples K-1787 VEN CARBON BED INLET R1 OTM-45 IMPINGERS 1,2&3 COND (140-25860-3), K-1794 VEN CARBON BED INLET R2 OTM-45 IMPINGERS 1,2&3 COND (140-25860-7) and K-1801 VEN CARBON BED INLET R3 OTM-45 IMPINGERS 1,2&3 COND (140-25860-11) were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits

Method 537 (modified): Results for samples K-1789 VEN CARBON BED INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE (140-25860-4), K-1796 VEN CARBON BED INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE (140-25860-8) and K-1803 VEN CARBON BED INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE (140-25860-12) were reported from the analysis of a diluted extract due to high concentration of the target analyte in the analysis of the undiluted extract. The dilution factor was applied to the labeled internal standard area counts and these area counts were within acceptance limits

Method 537 (modified): The following samples were reported with elevated reporting limits for all analytes: K-1783, 1784 VEN CARBON BED INLET R1 OTM-45 FH (140-25860-1), K-1785, 1786, 1789 VEN CARBON BED INLET R1 OTM-45 BH (140-25860-2), K-1789 VEN CARBON BED INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE (140-25860-4), K-1790, 1791 VEN CARBON BED INLET R2 OTM-45 FH (140-25860-5), K-1792, 1793, 1795 VEN CARBON BED INLET R2 OTM-45 BH (140-25860-6), K-1796 VEN CARBON BED INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE (140-25860-8), K-1797, 1798 VEN CARBON BED INLET R3 OTM-45 FH (140-25860-9), K-1799, 1800, 1802 VEN CARBON BED INLET R3 OTM-45 BH (140-25860-10) and K-1803 VEN CARBON BED INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE (140-25860-12). The sample was analyzed at a dilution based on screening results.

Method 537 (modified): The required dilution factor for the following samples were higher than could be achieved by "in vial" dilution, as it would dilute out the Isotope Dilution Analytes (IDA): K-1783, 1784 VEN CARBON BED INLET R1 OTM-45 FH (140-25860-1), K-1785, 1786, 1789 VEN CARBON BED INLET R1 OTM-45 BH (140-25860-2), K-1790, 1791 VEN CARBON BED INLET R2 OTM-45 FH (140-25860-5), K-1792, 1793, 1795 VEN CARBON BED INLET R2 OTM-45 BH (140-25860-6), K-1797, 1798 VEN CARBON BED INLET R3 OTM-45 FH (140-25860-9) and K-1799, 1800, 1802 VEN CARBON BED INLET R3 OTM-45 BH (140-25860-10). As such, the dilution was achieved by taking a subsample of the undiluted extract, adding sufficient solvent, and re-spiking the extract with IDA.

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

**General Chemistry**

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

$$\text{Anion, } \mu\text{g} = (\text{Anion, } \mu\text{g/mL}) \times (\text{Sample Volume, mL}) \times (\text{Formula Weight of Chemical Species Reported} / \text{Formula Weight of Chemical Species Analyzed}) \times \text{Bench DF}$$

Sodium hydroxide impinger samples were treated with sodium thiosulfate prior to the final analysis in order to convert residual hypochlorite or hypobromite to chloride or bromide ions.

Note: A sample volume of 100 mL was used to convert the results to total µg for the method blanks, laboratory control samples, and client reagent blanks.

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

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: 140-25860-1

## LCMS

### Prep Batch: 57611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-25860-1	K-1783, 1784 VEN CARBON BED INLET R1 OTI	Total/NA	Air	None	
140-25860-5	K-1790, 1791 VEN CARBON BED INLET R2 OTI	Total/NA	Air	None	
140-25860-9	K-1797, 1798 VEN CARBON BED INLET R3 OTI	Total/NA	Air	None	
MB 140-57611/1-B	Method Blank	Total/NA	Air	None	
LCS 140-57611/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-57611/3-B	Lab Control Sample Dup	Total/NA	Air	None	

### Prep Batch: 57613

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-25860-2	K-1785, 1786,1789 VEN CARBON BED INLET R	Total/NA	Air	None	
140-25860-4	K-1789 VEN CARBON BED INLET R1 OTM-45 E	Total/NA	Air	None	
140-25860-6	K-1792, 1793, 1795 VEN CARBON BED INLET F	Total/NA	Air	None	
140-25860-8	K-1796 VEN CARBON BED INLET R2 OTM-45 E	Total/NA	Air	None	
140-25860-10	K-1799, 1800, 1802 VEN CARBON BED INLET F	Total/NA	Air	None	
140-25860-12	K-1803 VEN CARBON BED INLET R3 OTM-45 E	Total/NA	Air	None	
MB 140-57613/14-B	Method Blank	Total/NA	Air	None	
MB 140-57613/1-B	Method Blank	Total/NA	Air	None	
LCS 140-57613/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-57613/3-B	Lab Control Sample Dup	Total/NA	Air	None	

### Prep Batch: 57645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-25860-3	K-1787 VEN CARBON BED INLET R1 OTM-45 II	Total/NA	Air	None	
140-25860-7	K-1794 VEN CARBON BED INLET R2 OTM-45 II	Total/NA	Air	None	
140-25860-11	K-1801 VEN CARBON BED INLET R3 OTM-45 II	Total/NA	Air	None	
MB 140-57645/1-B	Method Blank	Total/NA	Air	None	
LCS 140-57645/2-B	Lab Control Sample	Total/NA	Air	None	
LCSD 140-57645/3-B	Lab Control Sample Dup	Total/NA	Air	None	

### Cleanup Batch: 57659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-25860-3	K-1787 VEN CARBON BED INLET R1 OTM-45 II	Total/NA	Air	Split	57645
140-25860-7	K-1794 VEN CARBON BED INLET R2 OTM-45 II	Total/NA	Air	Split	57645
140-25860-11	K-1801 VEN CARBON BED INLET R3 OTM-45 II	Total/NA	Air	Split	57645
MB 140-57645/1-B	Method Blank	Total/NA	Air	Split	57645
LCS 140-57645/2-B	Lab Control Sample	Total/NA	Air	Split	57645
LCSD 140-57645/3-B	Lab Control Sample Dup	Total/NA	Air	Split	57645

### Cleanup Batch: 57685

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-25860-1	K-1783, 1784 VEN CARBON BED INLET R1 OTI	Total/NA	Air	Split	57611
140-25860-5	K-1790, 1791 VEN CARBON BED INLET R2 OTI	Total/NA	Air	Split	57611
140-25860-9	K-1797, 1798 VEN CARBON BED INLET R3 OTI	Total/NA	Air	Split	57611
MB 140-57611/1-B	Method Blank	Total/NA	Air	Split	57611
LCS 140-57611/2-B	Lab Control Sample	Total/NA	Air	Split	57611
LCSD 140-57611/3-B	Lab Control Sample Dup	Total/NA	Air	Split	57611

### Analysis Batch: 57742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-25860-3	K-1787 VEN CARBON BED INLET R1 OTM-45 II	Total/NA	Air	537 (modified)	57659
140-25860-7	K-1794 VEN CARBON BED INLET R2 OTM-45 II	Total/NA	Air	537 (modified)	57659

# QC Association Summary

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

Job ID: 140-25860-1

## LCMS (Continued)

### Analysis Batch: 57742 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-25860-11	K-1801 VEN CARBON BED INLET R3 OTM-45 II	Total/NA	Air	537 (modified)	57659
MB 140-57645/1-B	Method Blank	Total/NA	Air	537 (modified)	57659
LCS 140-57645/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	57659
LCSD 140-57645/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	57659

### Cleanup Batch: 57746

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-25860-2	K-1785, 1786,1789 VEN CARBON BED INLET R	Total/NA	Air	Split	57613
140-25860-4	K-1789 VEN CARBON BED INLET R1 OTM-45 E	Total/NA	Air	Split	57613
140-25860-6	K-1792, 1793, 1795 VEN CARBON BED INLET F	Total/NA	Air	Split	57613
140-25860-8	K-1796 VEN CARBON BED INLET R2 OTM-45 E	Total/NA	Air	Split	57613
140-25860-10	K-1799, 1800, 1802 VEN CARBON BED INLET F	Total/NA	Air	Split	57613
140-25860-12	K-1803 VEN CARBON BED INLET R3 OTM-45 E	Total/NA	Air	Split	57613
MB 140-57613/14-B	Method Blank	Total/NA	Air	Split	57613
MB 140-57613/1-B	Method Blank	Total/NA	Air	Split	57613
LCS 140-57613/2-B	Lab Control Sample	Total/NA	Air	Split	57613
LCSD 140-57613/3-B	Lab Control Sample Dup	Total/NA	Air	Split	57613

### Analysis Batch: 57822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 140-57611/1-B	Method Blank	Total/NA	Air	537 (modified)	57685
LCS 140-57611/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	57685
LCSD 140-57611/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	57685

### Analysis Batch: 57865

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 140-57613/14-B	Method Blank	Total/NA	Air	537 (modified)	57746
MB 140-57613/1-B	Method Blank	Total/NA	Air	537 (modified)	57746
LCS 140-57613/2-B	Lab Control Sample	Total/NA	Air	537 (modified)	57746
LCSD 140-57613/3-B	Lab Control Sample Dup	Total/NA	Air	537 (modified)	57746

### Analysis Batch: 57893

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-25860-1	K-1783, 1784 VEN CARBON BED INLET R1 OTI	Total/NA	Air	537 (modified)	57913
140-25860-2	K-1785, 1786,1789 VEN CARBON BED INLET R	Total/NA	Air	537 (modified)	57913
140-25860-4	K-1789 VEN CARBON BED INLET R1 OTM-45 E	Total/NA	Air	537 (modified)	57746
140-25860-5	K-1790, 1791 VEN CARBON BED INLET R2 OTI	Total/NA	Air	537 (modified)	57913
140-25860-6	K-1792, 1793, 1795 VEN CARBON BED INLET F	Total/NA	Air	537 (modified)	57913
140-25860-8	K-1796 VEN CARBON BED INLET R2 OTM-45 E	Total/NA	Air	537 (modified)	57746
140-25860-9	K-1797, 1798 VEN CARBON BED INLET R3 OTI	Total/NA	Air	537 (modified)	57913
140-25860-10	K-1799, 1800, 1802 VEN CARBON BED INLET F	Total/NA	Air	537 (modified)	57913
140-25860-12	K-1803 VEN CARBON BED INLET R3 OTM-45 E	Total/NA	Air	537 (modified)	57746

### Cleanup Batch: 57913

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-25860-1	K-1783, 1784 VEN CARBON BED INLET R1 OTI	Total/NA	Air	Dilution	57685
140-25860-2	K-1785, 1786,1789 VEN CARBON BED INLET R	Total/NA	Air	Dilution	57746
140-25860-5	K-1790, 1791 VEN CARBON BED INLET R2 OTI	Total/NA	Air	Dilution	57685
140-25860-6	K-1792, 1793, 1795 VEN CARBON BED INLET F	Total/NA	Air	Dilution	57746
140-25860-9	K-1797, 1798 VEN CARBON BED INLET R3 OTI	Total/NA	Air	Dilution	57685
140-25860-10	K-1799, 1800, 1802 VEN CARBON BED INLET F	Total/NA	Air	Dilution	57746

Eurofins Knoxville

# Client Sample Results

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

Job ID: 140-25860-1

**Client Sample ID: K-1783, 1784 VEN CARBON BED INLET R1**

**Lab Sample ID: 140-25860-1**

**OTM-45 FH**

Date Collected: 12/16/21 00:00

Matrix: Air

Date Received: 12/18/21 16:30

Sample Container: Air Train

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	100		1.00	0.580	ug/Sample		01/04/22 08:32	01/13/22 22:00	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	98		25 - 150				01/04/22 08:32	01/13/22 22:00	1

**Client Sample ID: K-1785, 1786,1789 VEN CARBON BED**

**Lab Sample ID: 140-25860-2**

**INLET R1 OTM-45 BH**

Date Collected: 12/16/21 00:00

Matrix: Air

Date Received: 12/18/21 16:30

Sample Container: Air Train

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	937		8.00	7.00	ug/Sample		01/04/22 08:59	01/13/22 22:27	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				01/04/22 08:59	01/13/22 22:27	1

**Client Sample ID: K-1787 VEN CARBON BED INLET R1**

**Lab Sample ID: 140-25860-3**

**OTM-45 IMPINGERS 1,2&3 COND**

Date Collected: 12/16/21 00:00

Matrix: Air

Date Received: 12/18/21 16:30

Sample Container: Air Train

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	20.7		0.233	0.0384	ug/Sample		01/04/22 14:49	01/09/22 14:35	3
<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	101		25 - 150				01/04/22 14:49	01/09/22 14:35	3

**Client Sample ID: K-1789 VEN CARBON BED INLET R1**

**Lab Sample ID: 140-25860-4**

**OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE**

Date Collected: 12/16/21 00:00

Matrix: Air

Date Received: 12/18/21 16:30

Sample Container: Air Train

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	1.40		0.0160	0.0140	ug/Sample		01/04/22 08:59	01/13/22 21:34	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	105		25 - 150				01/04/22 08:59	01/13/22 21:34	10



# Client Sample Results

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

Job ID: 140-25860-1

**Client Sample ID: K-1790, 1791 VEN CARBON BED INLET R2**

**Lab Sample ID: 140-25860-5**

**OTM-45 FH**

Date Collected: 12/16/21 00:00

Matrix: Air

Date Received: 12/18/21 16:30

Sample Container: Air Train

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	84.7		1.00	0.580	ug/Sample		01/04/22 08:32	01/13/22 22:09	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				01/04/22 08:32	01/13/22 22:09	1

**Client Sample ID: K-1792, 1793, 1795 VEN CARBON BED**

**Lab Sample ID: 140-25860-6**

**INLET R2 OTM-45 BH**

Date Collected: 12/16/21 00:00

Matrix: Air

Date Received: 12/18/21 16:30

Sample Container: Air Train

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	765		8.00	7.00	ug/Sample		01/04/22 08:59	01/13/22 22:36	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	95		25 - 150				01/04/22 08:59	01/13/22 22:36	1

**Client Sample ID: K-1794 VEN CARBON BED INLET R2**

**Lab Sample ID: 140-25860-7**

**OTM-45 IMPINGERS 1,2&3 COND**

Date Collected: 12/16/21 00:00

Matrix: Air

Date Received: 12/18/21 16:30

Sample Container: Air Train

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	34.1		0.375	0.0618	ug/Sample		01/04/22 14:49	01/09/22 14:43	5
<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	109		25 - 150				01/04/22 14:49	01/09/22 14:43	5

**Client Sample ID: K-1796 VEN CARBON BED INLET R2**

**Lab Sample ID: 140-25860-8**

**OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE**

Date Collected: 12/16/21 00:00

Matrix: Air

Date Received: 12/18/21 16:30

Sample Container: Air Train

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	0.632		0.0160	0.0140	ug/Sample		01/04/22 08:59	01/13/22 21:43	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	98		25 - 150				01/04/22 08:59	01/13/22 21:43	10

# Client Sample Results

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

Job ID: 140-25860-1

**Client Sample ID: K-1797, 1798 VEN CARBON BED INLET R3**

**Lab Sample ID: 140-25860-9**

**OTM-45 FH**

Date Collected: 12/16/21 00:00

Matrix: Air

Date Received: 12/18/21 16:30

Sample Container: Air Train

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	84.3		1.00	0.580	ug/Sample		01/04/22 08:32	01/13/22 22:18	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				01/04/22 08:32	01/13/22 22:18	1

**Client Sample ID: K-1799, 1800, 1802 VEN CARBON BED**

**Lab Sample ID: 140-25860-10**

**INLET R3 OTM-45 BH**

Date Collected: 12/16/21 00:00

Matrix: Air

Date Received: 12/18/21 16:30

Sample Container: Air Train

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	797		8.00	7.00	ug/Sample		01/04/22 08:59	01/13/22 22:44	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				01/04/22 08:59	01/13/22 22:44	1

**Client Sample ID: K-1801 VEN CARBON BED INLET R3**

**Lab Sample ID: 140-25860-11**

**OTM-45 IMPINGERS 1,2&3 COND**

Date Collected: 12/16/21 00:00

Matrix: Air

Date Received: 12/18/21 16:30

Sample Container: Air Train

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	21.3		0.229	0.0377	ug/Sample		01/04/22 14:49	01/09/22 14:52	3
<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	105		25 - 150				01/04/22 14:49	01/09/22 14:52	3

**Client Sample ID: K-1803 VEN CARBON BED INLET R3**

**Lab Sample ID: 140-25860-12**

**OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE**

Date Collected: 12/16/21 00:00

Matrix: Air

Date Received: 12/18/21 16:30

Sample Container: Air Train

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	2.08		0.0320	0.0280	ug/Sample		01/04/22 08:59	01/13/22 21:51	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	125		25 - 150				01/04/22 08:59	01/13/22 21:51	20

# Default Detection Limits

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

Job ID: 140-25860-1

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

Prep: None

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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: 140-25860-1

## 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)
140-25860-1	K-1783, 1784 VEN CARBON BE	98
140-25860-2	K-1785, 1786, 1789 VEN CARBON BED INLET R1	89
140-25860-3	OTM-45 BH K-1787 VEN CARBON BED INLET R1 OTM-45 IMPINGERS	101
140-25860-4	1,2&3 COND K-1789 VEN CARBON BED INLET R1 OTM-45	105
140-25860-5	BREAKTHROUGH XAD-2 RESI TUBE K-1790, 1791 VEN CARBON BED INLET R2 OTM-45 FH	94
140-25860-6	K-1792, 1793, 1795 VEN CARBON BED INLET R2	95
140-25860-7	OTM-45 BH K-1794 VEN CARBON BED INLET R2 OTM-45 IMPINGERS	109
140-25860-8	1,2&3 COND K-1796 VEN CARBON BED INLET R2 OTM-45	98
140-25860-9	BREAKTHROUGH XAD-2 RESI TUBE K-1797, 1798 VEN CARBON BED INLET R3 OTM-45 FH	96
140-25860-10	K-1799, 1800, 1802 VEN CARBON BED INLET R3	95
140-25860-11	OTM-45 BH K-1801 VEN CARBON BED INLET R3 OTM-45 IMPINGERS	105
140-25860-12	1,2&3 COND K-1803 VEN CARBON BED INLET R3 OTM-45	125
LCS 140-57611/2-B	BREAKTHROUGH XAD-2 RESI TUBE Lab Control Sample	88
LCS 140-57613/2-B	Lab Control Sample	95
LCS 140-57645/2-B	Lab Control Sample	103
LCSD 140-57611/3-B	Lab Control Sample Dup	86
LCSD 140-57613/3-B	Lab Control Sample Dup	103
LCSD 140-57645/3-B	Lab Control Sample Dup	101
MB 140-57611/1-B	Method Blank	83
MB 140-57613/14-B	Method Blank	97
MB 140-57613/1-B	Method Blank	95
MB 140-57645/1-B	Method Blank	102

**Surrogate Legend**

HFPODA = 13C3 HFPO-DA

# QC Sample Results

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

Job ID: 140-25860-1

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

**Lab Sample ID: MB 140-57611/1-B**  
**Matrix: Air**  
**Analysis Batch: 57822**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 57611**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00100	0.000580	ug/Sample		01/04/22 08:32	01/11/22 18:14	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
<sup>13</sup> C3 HFPO-DA	83		25 - 150				01/04/22 08:32	01/11/22 18:14	1

**Lab Sample ID: LCS 140-57611/2-B**  
**Matrix: Air**  
**Analysis Batch: 57822**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 57611**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HFPO-DA	0.0200	0.02126		ug/Sample		106	60 - 140
Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits				
<sup>13</sup> C3 HFPO-DA	88		25 - 150				

**Lab Sample ID: LCSD 140-57611/3-B**  
**Matrix: Air**  
**Analysis Batch: 57822**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 57611**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HFPO-DA	0.0200	0.02252		ug/Sample		113	60 - 140	6	30
Isotope Dilution	LCSD %Recovery	LCSD Qualifier	Limits						
<sup>13</sup> C3 HFPO-DA	86		25 - 150						

**Lab Sample ID: MB 140-57613/14-B**  
**Matrix: Air**  
**Analysis Batch: 57865**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 57613**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00160	0.00140	ug/Sample		01/04/22 08:59	01/12/22 22:24	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
<sup>13</sup> C3 HFPO-DA	97		25 - 150				01/04/22 08:59	01/12/22 22:24	1

**Lab Sample ID: MB 140-57613/1-B**  
**Matrix: Air**  
**Analysis Batch: 57865**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 57613**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.00160	0.00140	ug/Sample		01/04/22 08:59	01/12/22 18:44	1
Isotope Dilution	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
<sup>13</sup> C3 HFPO-DA	95		25 - 150				01/04/22 08:59	01/12/22 18:44	1

# QC Sample Results

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

Job ID: 140-25860-1

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

**Lab Sample ID: LCS 140-57613/2-B**  
**Matrix: Air**  
**Analysis Batch: 57865**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 57613**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HFPO-DA	0.0200	0.01948		ug/Sample		97	60 - 140
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				
13C3 HFPO-DA	95		25 - 150				

**Lab Sample ID: LCSD 140-57613/3-B**  
**Matrix: Air**  
**Analysis Batch: 57865**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 57613**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HFPO-DA	0.0200	0.02130		ug/Sample		106	60 - 140	9	30
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>						
13C3 HFPO-DA	103		25 - 150						

**Lab Sample ID: MB 140-57645/1-B**  
**Matrix: Air**  
**Analysis Batch: 57742**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 57645**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
HFPO-DA	ND		0.000500	0.0000825	ug/Sample		01/04/22 14:49	01/09/22 12:49	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	102		25 - 150				01/04/22 14:49	01/09/22 12:49	1

**Lab Sample ID: LCS 140-57645/2-B**  
**Matrix: Air**  
**Analysis Batch: 57742**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 57645**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
HFPO-DA	0.0100	0.009965		ug/Sample		100	60 - 140
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				
13C3 HFPO-DA	103		25 - 150				

**Lab Sample ID: LCSD 140-57645/3-B**  
**Matrix: Air**  
**Analysis Batch: 57742**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 57645**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
HFPO-DA	0.0100	0.009816		ug/Sample		98	60 - 140	2	30
<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>						
13C3 HFPO-DA	101		25 - 150						

# Lab Chronicle

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

Job ID: 140-25860-1

**Client Sample ID: K-1783, 1784 VEN CARBON BED INLET R1**

**Lab Sample ID: 140-25860-1**

**OTM-45 FH**

**Date Collected: 12/16/21 00:00**

**Matrix: Air**

**Date Received: 12/18/21 16:30**

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	130 mL	57611	01/04/22 08:32	DWS	TAL KNX
Total/NA	Cleanup	Split			65 mL	10 mL	57685	01/05/22 15:08	CAC	TAL KNX
Total/NA	Cleanup	Dilution			10 uL	10000 uL	57913	01/13/22 18:00	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			57893	01/13/22 22:00	JRC	TAL KNX

Instrument ID: LCA

**Client Sample ID: K-1785, 1786,1789 VEN CARBON BED INLET R1 OTM-45 BH**

**Lab Sample ID: 140-25860-2**

**Date Collected: 12/16/21 00:00**

**Matrix: Air**

**Date Received: 12/18/21 16:30**

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	57613	01/04/22 08:59	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	57746	01/09/22 13:05	DWS	TAL KNX
Total/NA	Cleanup	Dilution			2 uL	10000 uL	57913	01/13/22 18:00	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			57893	01/13/22 22:27	JRC	TAL KNX

Instrument ID: LCA

**Client Sample ID: K-1787 VEN CARBON BED INLET R1 OTM-45 IMPINGERS 1,2&3 COND**

**Lab Sample ID: 140-25860-3**

**Date Collected: 12/16/21 00:00**

**Matrix: Air**

**Date Received: 12/18/21 16:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			0.00645 Sample	10 mL	57645	01/04/22 14:49	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	57659	01/05/22 09:07	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		3			57742	01/09/22 14:35	JRC	TAL KNX

Instrument ID: LCA

**Client Sample ID: K-1789 VEN CARBON BED INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE**

**Lab Sample ID: 140-25860-4**

**Date Collected: 12/16/21 00:00**

**Matrix: Air**

**Date Received: 12/18/21 16:30**

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	57613	01/04/22 08:59	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	57746	01/09/22 13:05	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		10			57893	01/13/22 21:34	JRC	TAL KNX

Instrument ID: LCA

# Lab Chronicle

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

Job ID: 140-25860-1

**Client Sample ID: K-1790, 1791 VEN CARBON BED INLET R2**

**Lab Sample ID: 140-25860-5**

**OTM-45 FH**

**Date Collected: 12/16/21 00:00**

**Matrix: Air**

**Date Received: 12/18/21 16:30**

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	128 mL	57611	01/04/22 08:32	DWS	TAL KNX
Total/NA	Cleanup	Split			64 mL	10 mL	57685	01/05/22 15:08	CAC	TAL KNX
Total/NA	Cleanup	Dilution			10 uL	10000 uL	57913	01/13/22 18:00	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			57893	01/13/22 22:09	JRC	TAL KNX
Instrument ID: LCA										

**Client Sample ID: K-1792, 1793, 1795 VEN CARBON BED INLET R2 OTM-45 BH**

**Lab Sample ID: 140-25860-6**

**Date Collected: 12/16/21 00:00**

**Matrix: Air**

**Date Received: 12/18/21 16:30**

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	57613	01/04/22 08:59	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	57746	01/09/22 13:05	DWS	TAL KNX
Total/NA	Cleanup	Dilution			2 uL	10000 uL	57913	01/13/22 18:00	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			57893	01/13/22 22:36	JRC	TAL KNX
Instrument ID: LCA										

**Client Sample ID: K-1794 VEN CARBON BED INLET R2 OTM-45 IMPINGERS 1,2&3 COND**

**Lab Sample ID: 140-25860-7**

**Date Collected: 12/16/21 00:00**

**Matrix: Air**

**Date Received: 12/18/21 16:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			0.00667 Sample	10 mL	57645	01/04/22 14:49	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	57659	01/05/22 09:07	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		5			57742	01/09/22 14:43	JRC	TAL KNX
Instrument ID: LCA										

**Client Sample ID: K-1796 VEN CARBON BED INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE**

**Lab Sample ID: 140-25860-8**

**Date Collected: 12/16/21 00:00**

**Matrix: Air**

**Date Received: 12/18/21 16:30**

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	57613	01/04/22 08:59	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	57746	01/09/22 13:05	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		10			57893	01/13/22 21:43	JRC	TAL KNX
Instrument ID: LCA										



# Lab Chronicle

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

Job ID: 140-25860-1

**Client Sample ID: K-1797, 1798 VEN CARBON BED INLET R3**

**Lab Sample ID: 140-25860-9**

**OTM-45 FH**

**Date Collected: 12/16/21 00:00**

**Matrix: Air**

**Date Received: 12/18/21 16:30**

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	114 mL	57611	01/04/22 08:32	DWS	TAL KNX
Total/NA	Cleanup	Split			57 mL	10 mL	57685	01/05/22 15:08	CAC	TAL KNX
Total/NA	Cleanup	Dilution			10 uL	10000 uL	57913	01/13/22 18:00	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			57893	01/13/22 22:18	JRC	TAL KNX
Instrument ID: LCA										

**Client Sample ID: K-1799, 1800, 1802 VEN CARBON BED**

**Lab Sample ID: 140-25860-10**

**INLET R3 OTM-45 BH**

**Date Collected: 12/16/21 00:00**

**Matrix: Air**

**Date Received: 12/18/21 16:30**

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	57613	01/04/22 08:59	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	57746	01/09/22 13:05	DWS	TAL KNX
Total/NA	Cleanup	Dilution			2 uL	10000 uL	57913	01/13/22 18:00	JRC	TAL KNX
Total/NA	Analysis	537 (modified)		1			57893	01/13/22 22:44	JRC	TAL KNX
Instrument ID: LCA										

**Client Sample ID: K-1801 VEN CARBON BED INLET R3**

**Lab Sample ID: 140-25860-11**

**OTM-45 IMPINGERS 1,2&3 COND**

**Date Collected: 12/16/21 00:00**

**Matrix: Air**

**Date Received: 12/18/21 16:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	None			0.00656 Sample	10 mL	57645	01/04/22 14:49	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	57659	01/05/22 09:07	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		3			57742	01/09/22 14:52	JRC	TAL KNX
Instrument ID: LCA										

**Client Sample ID: K-1803 VEN CARBON BED INLET R3**

**Lab Sample ID: 140-25860-12**

**OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE**

**Date Collected: 12/16/21 00:00**

**Matrix: Air**

**Date Received: 12/18/21 16:30**

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	57613	01/04/22 08:59	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	57746	01/09/22 13:05	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		20			57893	01/13/22 21:51	JRC	TAL KNX
Instrument ID: LCA										

# Lab Chronicle

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

Job ID: 140-25860-1

**Client Sample ID: Method Blank**

**Lab Sample ID: MB 140-57611/1-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	57611	01/04/22 08:32	DWS	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	57685	01/05/22 15:08	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			57822	01/11/22 18:14	JRC	TAL KNX
Instrument ID: LCA										

**Client Sample ID: Method Blank**

**Lab Sample ID: MB 140-57613/14-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	57613	01/04/22 08:59	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	57746	01/09/22 13:05	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			57865	01/12/22 22:24	JRC	TAL KNX
Instrument ID: LCA										

**Client Sample ID: Method Blank**

**Lab Sample ID: MB 140-57613/1-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	57613	01/04/22 08:59	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	57746	01/09/22 13:05	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			57865	01/12/22 18:44	JRC	TAL KNX
Instrument ID: LCA										

**Client Sample ID: Method Blank**

**Lab Sample ID: MB 140-57645/1-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	57645	01/04/22 14:49	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	57659	01/05/22 09:07	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			57742	01/09/22 12:49	JRC	TAL KNX
Instrument ID: LCA										

**Client Sample ID: Lab Control Sample**

**Lab Sample ID: LCS 140-57611/2-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	57611	01/04/22 08:32	DWS	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	57685	01/05/22 15:08	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			57822	01/11/22 18:23	JRC	TAL KNX
Instrument ID: LCA										

# Lab Chronicle

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

Job ID: 140-25860-1

**Client Sample ID: Lab Control Sample**

**Lab Sample ID: LCS 140-57613/2-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	57613	01/04/22 08:59	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	57746	01/09/22 13:05	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			57865	01/12/22 18:53	JRC	TAL KNX
Instrument ID: LCA										

**Client Sample ID: Lab Control Sample**

**Lab Sample ID: LCS 140-57645/2-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	57645	01/04/22 14:49	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	57659	01/05/22 09:07	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			57742	01/09/22 12:58	JRC	TAL KNX
Instrument ID: LCA										

**Client Sample ID: Lab Control Sample Dup**

**Lab Sample ID: LCSD 140-57611/3-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	57611	01/04/22 08:32	DWS	TAL KNX
Total/NA	Cleanup	Split			25 mL	10 mL	57685	01/05/22 15:08	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			57822	01/11/22 18:32	JRC	TAL KNX
Instrument ID: LCA										

**Client Sample ID: Lab Control Sample Dup**

**Lab Sample ID: LCSD 140-57613/3-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	57613	01/04/22 08:59	DWS	TAL KNX
Total/NA	Cleanup	Split			180 mL	10 mL	57746	01/09/22 13:05	DWS	TAL KNX
Total/NA	Analysis	537 (modified)		1			57865	01/12/22 19:02	JRC	TAL KNX
Instrument ID: LCA										

**Client Sample ID: Lab Control Sample Dup**

**Lab Sample ID: LCSD 140-57645/3-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	57645	01/04/22 14:49	DWS	TAL KNX
Total/NA	Cleanup	Split			10 mL	10 mL	57659	01/05/22 09:07	CAC	TAL KNX
Total/NA	Analysis	537 (modified)		1			57742	01/09/22 13:07	JRC	TAL KNX
Instrument ID: LCA										

**Laboratory References:**

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

Eurofins Knoxville

# Accreditation/Certification Summary

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

Job ID: 140-25860-1

## Laboratory: Eurofins Knoxville

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

Authority	Program	Identification Number	Expiration Date
	AFCEE	N/A	
ANAB	Dept. of Defense ELAP	L2311	02-13-22
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	02-28-22
Florida	NELAP	E87177	06-30-22
Georgia (DW)	State	906	12-11-22
Hawaii	State	NA	12-11-22
Kansas	NELAP	E-10349	10-31-22
Kentucky (DW)	State	90101	12-31-21 *
Louisiana	NELAP	83979	06-30-22
Louisiana (DW)	State	LA019	12-31-22
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	12-31-22
Ohio VAP	State	CL0059	06-02-23
Oklahoma	State	9415	08-31-22
Oregon	NELAP	TNI0189	12-31-22
Pennsylvania	NELAP	68-00576	12-31-22
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 Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Instrument ID: ICA Analysis Batch Number: 57741  
 Lab Sample ID: IC 140-57741/6 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 01/09/22 10:35 Lab File ID: 006.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.77	Baseline	cochranj	01/09/22 11:15
Perfluorooctanesulfonic acid (PFOS)	4.41	Baseline	cochranj	01/09/22 11:15
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.87	Baseline	cochranj	01/09/22 11:44
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.00	Baseline	cochranj	01/09/22 11:16
2-(N-methylperfluoro-1-octanesulfon amido) ethanol	5.30	Baseline	cochranj	01/09/22 11:16

Lab Sample ID: IC 140-57741/7 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 01/09/22 10:44 Lab File ID: 007.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.76	Baseline	cochranj	01/09/22 11:17
Perfluorooctanesulfonic acid (PFOS)	4.40	Baseline	cochranj	01/09/22 11:18
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.86	Baseline	cochranj	01/09/22 11:18
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	4.99	Baseline	cochranj	01/09/22 11:18
NMeFOSA	5.28	Baseline	cochranj	01/09/22 11:18

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Instrument ID: ICA Analysis Batch Number: 57741  
 Lab Sample ID: IC 140-57741/8 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 01/09/22 10:53 Lab File ID: 008.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION	
		REASON	ANALYST
Perfluorohexanesulfonic acid (PFHxS)	3.75	Baseline	cochranj
Perfluorooctanesulfonic acid (PFOS)	4.39	Baseline	cochranj
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.85	Baseline	cochranj
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	4.98	Baseline	cochranj

Lab Sample ID: ICIS 140-57741/9 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 01/09/22 11:02 Lab File ID: 009.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION	
		REASON	ANALYST
Perfluorohexanesulfonic acid (PFHxS)	3.76	Baseline	cochranj
Perfluorooctanesulfonic acid (PFOS)	4.40	Baseline	cochranj
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.86	Baseline	cochranj
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.00	Baseline	cochranj

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Instrument ID: LCA Analysis Batch Number: 57741  
 Lab Sample ID: IC 140-57741/10 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 01/09/22 11:11 Lab File ID: 010.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.76	Baseline	cochranj	01/09/22 11:22
Perfluorooctanesulfonic acid (PFOS)	4.40	Baseline	cochranj	01/09/22 11:23
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.86	Baseline	cochranj	01/09/22 11:23
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.00	Baseline	cochranj	01/09/22 11:23

Lab Sample ID: IC 140-57741/11 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 01/09/22 11:19 Lab File ID: 011.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.76	Baseline	cochranj	01/09/22 11:36
Perfluorooctanesulfonic acid (PFOS)	4.39	Baseline	cochranj	01/09/22 11:37
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.85	Baseline	cochranj	01/09/22 11:37
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	4.99	Baseline	cochranj	01/09/22 11:37

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-25860-1

SDG No.: Instrument ID: LCA Analysis Batch Number: 57741

Lab Sample ID: IC 140-57741/12 Client Sample ID:

Date Analyzed: 01/09/22 11:28 Lab File ID: 012.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.76	Baseline	cochranj	01/09/22 11:40
Perfluorooctanesulfonic acid (PFOS)	4.39	Baseline	cochranj	01/09/22 11:40
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.85	Baseline	cochranj	01/09/22 11:41
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	4.99	Baseline	cochranj	01/09/22 11:41

Lab Sample ID: ICV 140-57741/14 Client Sample ID:

Date Analyzed: 01/09/22 11:46 Lab File ID: 014.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.76	Baseline	cochranj	01/09/22 11:58
Perfluorooctanesulfonic acid (PFOS)	4.40	Baseline	cochranj	01/09/22 11:59
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.86	Baseline	cochranj	01/09/22 11:59
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.00	Baseline	cochranj	01/09/22 11:59



PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Instrument ID: ICA Analysis Batch Number: 57742  
 Lab Sample ID: CCVL 140-57742/4 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 01/09/22 12:31 Lab File ID: 004.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.76	Baseline	cochranj	01/09/22 12:42
Perfluorooctanesulfonic acid (PFOS)	4.40	Baseline	cochranj	01/09/22 12:42
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.86	Baseline	cochranj	01/09/22 12:42
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	4.99	Baseline	cochranj	01/09/22 12:42

Lab Sample ID: CCVIS 140-57742/5 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 01/09/22 12:40 Lab File ID: 005.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.76	Baseline	cochranj	01/10/22 09:10
Perfluorooctanesulfonic acid (PFOS)	4.40	Baseline	cochranj	01/10/22 09:10
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.86	Baseline	cochranj	01/10/22 09:10
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	4.99	Baseline	cochranj	01/10/22 09:11

Lab Sample ID: MB 140-57645/1-B Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 01/09/22 12:49 Lab File ID: 006.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
HFPO-DA	3.52	Baseline	cochranj	01/10/22 09:13

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Instrument ID: ICA Analysis Batch Number: 57742  
 Lab Sample ID: CCV 140-57742/17 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 01/09/22 14:26 Lab File ID: 017.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.75	Baseline	cochranj	01/10/22 13:35
Perfluorooctanesulfonic acid (PFOS)	4.39	Baseline	cochranj	01/10/22 13:36
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.84	Baseline	cochranj	01/10/22 13:36
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	4.98	Baseline	cochranj	01/10/22 13:36

Lab Sample ID: CCV 140-57742/30 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 01/09/22 16:20 Lab File ID: 030.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.75	Baseline	cochranj	01/10/22 14:25
Perfluorooctanesulfonic acid (PFOS)	4.39	Baseline	cochranj	01/10/22 14:26
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.85	Baseline	cochranj	01/10/22 14:26
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	4.98	Baseline	cochranj	01/10/22 14:26

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Instrument ID: ICA Analysis Batch Number: 57822  
 Lab Sample ID: CCVL 140-57822/6 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 01/11/22 17:39 Lab File ID: 006.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.81	Baseline	cochranj	01/11/22 17:59
Perfluorooctanesulfonic acid (PFOS)	4.45	Baseline	cochranj	01/11/22 18:00
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.91	Baseline	cochranj	01/11/22 18:00
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.04	Baseline	cochranj	01/11/22 18:00

Lab Sample ID: CCVIS 140-57822/7 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 01/11/22 17:48 Lab File ID: 007.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.81	Baseline	cochranj	01/11/22 18:01
Perfluorooctanesulfonic acid (PFOS)	4.45	Baseline	cochranj	01/11/22 18:02
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.91	Baseline	cochranj	01/11/22 18:02
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.04	Baseline	cochranj	01/11/22 18:02

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Instrument ID: ICA Analysis Batch Number: 57822  
 Lab Sample ID: CCV 140-57822/19 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 01/11/22 19:33 Lab File ID: 019.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.77	Baseline	cochranj	01/12/22 18:41
Perfluorooctanesulfonic acid (PFOS)	4.40	Baseline	cochranj	01/12/22 18:42
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.86	Baseline	cochranj	01/12/22 18:42
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	4.99	Baseline	cochranj	01/12/22 18:42

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-25860-1

SDG No.: Instrument ID: ICA Analysis Batch Number: 57865

Lab Sample ID: CCVL 140-57865/6 Client Sample ID:

Date Analyzed: 01/12/22 18:27 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	01/15/22 09:36
Perfluorooctanesulfonic acid (PFOS)	4.44	Baseline	cochranj	01/15/22 09:37
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.90	Baseline	cochranj	01/15/22 09:38
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.03	Baseline	cochranj	01/15/22 09:38

Lab Sample ID: CCVIS 140-57865/7 Client Sample ID:

Date Analyzed: 01/12/22 18:35 Lab File ID: 007.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.79	Baseline	cochranj	01/15/22 09:39
Perfluorooctanesulfonic acid (PFOS)	4.43	Baseline	cochranj	01/15/22 09:39
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.89	Baseline	cochranj	01/15/22 09:39
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.02	Baseline	cochranj	01/15/22 09:39

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Instrument ID: ICA Analysis Batch Number: 57865  
 Lab Sample ID: CCV 140-57865/19 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 01/12/22 20:21 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	01/15/22 10:01
Perfluorooctanesulfonic acid (PFOS)	4.44	Baseline	cochranj	01/15/22 10:02
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.90	Baseline	cochranj	01/15/22 10:02
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.03	Baseline	cochranj	01/15/22 10:02

Lab Sample ID: CCV 140-57865/31 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 01/12/22 22:06 Lab File ID: 031.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.78	Baseline	cochranj	01/15/22 10:06
Perfluorooctanesulfonic acid (PFOS)	4.42	Baseline	cochranj	01/15/22 10:06
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.88	Baseline	cochranj	01/15/22 10:07
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.01	Baseline	cochranj	01/15/22 10:08

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Instrument ID: ICA Analysis Batch Number: 57865  
 Lab Sample ID: CCV 140-57865/43 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 01/12/22 23:52 Lab File ID: 043.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION	
		REASON	ANALYST
Perfluorohexanesulfonic acid (PFHxS)	3.77	Baseline	cochranj
Perfluorooctanesulfonic acid (PFOS)	4.41	Baseline	cochranj
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.86	Baseline	cochranj
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.00	Baseline	cochranj

PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-25860-1

SDG No.: Instrument ID: ICA Analysis Batch Number: 57893

Lab Sample ID: CCVL 140-57893/6 Client Sample ID:

Date Analyzed: 01/13/22 19:31 Lab File ID: 006.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.79	Baseline	cochranj	01/15/22 09:01
Perfluorooctanesulfonic acid (PFOS)	4.43	Baseline	cochranj	01/15/22 09:01
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.89	Baseline	cochranj	01/15/22 09:02
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.02	Baseline	cochranj	01/15/22 09:02

Lab Sample ID: CCVIS 140-57893/7 Client Sample ID:

Date Analyzed: 01/13/22 19:39 Lab File ID: 007.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.78	Baseline	cochranj	01/15/22 09:03
Perfluorooctanesulfonic acid (PFOS)	4.42	Baseline	cochranj	01/15/22 09:05
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.88	Baseline	cochranj	01/15/22 09:06
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.01	Baseline	cochranj	01/15/22 09:06



PFAS MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Instrument ID: ICA Analysis Batch Number: 57893  
 Lab Sample ID: CCV 140-57893/19 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 01/13/22 21:25 Lab File ID: 019.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.78	Baseline	cochranj	01/15/22 09:19
Perfluorooctanesulfonic acid (PFOS)	4.42	Baseline	cochranj	01/15/22 09:19
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.87	Baseline	cochranj	01/15/22 09:20
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.01	Baseline	cochranj	01/15/22 09:20

Lab Sample ID: CCV 140-57893/30 Client Sample ID: \_\_\_\_\_  
 Date Analyzed: 01/13/22 23:02 Lab File ID: 030.d GC Column: GeminiC18 3x1 ID: 3 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Perfluorohexanesulfonic acid (PFHxS)	3.77	Baseline	cochranj	01/15/22 09:23
Perfluorooctanesulfonic acid (PFOS)	4.41	Baseline	cochranj	01/15/22 09:23
N-methylperfluorooctanesulfonamid oacetic acid (NMeFOSAA)	4.87	Baseline	cochranj	01/15/22 09:24
N-ethylperfluorooctanesulfonamido acetic acid (NEtFOSAA)	5.00	Baseline	cochranj	01/15/22 09:24

# Method PFC IDA

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Fluorinated Hydrocarbons by Method  
PFAS IDA

FORM II  
PFAS SURROGATE RECOVERY

Lab Name: Eurofins Knoxville

Job No.: 140-25860-1

SDG No.: \_\_\_\_\_

Matrix: Air

Level: Low

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

Client Sample ID	Lab Sample ID	HFPODA #
K-1783, 1784 VEN CARBON BED INLET R1 OTM-45 FH	140-25860-1	98
K-1785, 1786, 1789 VEN CARBON BED INLET R1 OTM-45 BH	140-25860-2	89
K-1787 VEN CARBON BED INLET R1 OTM-45 IMPINGERS 1,2&3 COND	140-25860-3	101
K-1789 VEN CARBON BED INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	140-25860-4	105
K-1790, 1791 VEN CARBON BED INLET R2 OTM-45 FH	140-25860-5	94
K-1792, 1793, 1795 VEN CARBON BED INLET R2 OTM-45 BH	140-25860-6	95
K-1794 VEN CARBON BED INLET R2 OTM-45 IMPINGERS 1,2&3 COND	140-25860-7	109
K-1796 VEN CARBON BED INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	140-25860-8	98
K-1797, 1798 VEN CARBON BED INLET R3 OTM-45 FH	140-25860-9	96
K-1799, 1800, 1802 VEN CARBON BED INLET R3 OTM-45 BH	140-25860-10	95
K-1801 VEN CARBON BED INLET R3 OTM-45 IMPINGERS 1,2&3 COND	140-25860-11	105
K-1803 VEN CARBON BED INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	140-25860-12	125
	MB 140-57611/1-B	83
	MB 140-57613/1-B	95

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 Knoxville

Job No.: 140-25860-1

SDG No.: \_\_\_\_\_

Matrix: Air

Level: Low

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

Client Sample ID	Lab Sample ID	HFPODA #
	MB 140-57613/14-B	97
	MB 140-57645/1-B	102
	LCS 140-57611/2-B	88
	LCS 140-57613/2-B	95
	LCS 140-57645/2-B	103
	LCSD 140-57611/3-B	86
	LCSD 140-57613/3-B	103
	LCSD 140-57645/3-B	101

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 Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: \_011.d  
 Lab ID: LCS 140-57611/2-B Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Sample)	LCS CONCENTRATION (ug/Sample)	LCS % REC	QC LIMITS REC	#
HFPO-DA	0.0200	0.02126	106	60-140	
13C3 HFPO-DA	0.0250	0.02195	88	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 Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: \_009.d  
 Lab ID: LCS 140-57613/2-B Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Sample)	LCS CONCENTRATION (ug/Sample)	LCS % REC	QC LIMITS REC	#
HFPO-DA	0.0200	0.01948	97	60-140	
13C3 HFPO-DA	0.0250	0.02376	95	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 Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: \_007.d  
 Lab ID: LCS 140-57645/2-B Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Sample)	LCS CONCENTRATION (ug/Sample)	LCS % REC	QC LIMITS REC	#
HFPO-DA	0.0100	0.009965	100	60-140	
13C3 HFPO-DA	0.0125	0.01292	103	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 Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: \_012.d  
 Lab ID: LCSD 140-57611/3-B Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Sample)	LCSD CONCENTRATION (ug/Sample)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
HFPO-DA	0.0200	0.02252	113	6	30	60-140	
13C3 HFPO-DA	0.0250	0.02140	86			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 Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: \_010.d  
 Lab ID: LCSD 140-57613/3-B Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Sample)	LCSD CONCENTRATION (ug/Sample)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
HFPO-DA	0.0200	0.02130	106	9	30	60-140	
13C3 HFPO-DA	0.0250	0.02570	103			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 Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Air Level: Low Lab File ID: \_008.d  
 Lab ID: LCSD 140-57645/3-B Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/Sample)	LCSD CONCENTRATION (ug/Sample)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
HFPO-DA	0.0100	0.009816	98	2	30	60-140	
13C3 HFPO-DA	0.0125	0.01262	101			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 Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: \_010.d Lab Sample ID: MB 140-57611/1-B  
 Matrix: Air Date Extracted: 01/04/2022 08:32  
 Instrument ID: LCA Date Analyzed: 01/11/2022 18:14  
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-57611/2-B	_011.d	01/11/2022 18:23
	LCSD 140-57611/3-B	_012.d	01/11/2022 18:32
K-1783, 1784 VEN CARBON BED INLET R1 OTM-45 FH	140-25860-1	_023.d	01/13/2022 22:00
K-1790, 1791 VEN CARBON BED INLET R2 OTM-45 FH	140-25860-5	_024.d	01/13/2022 22:09
K-1797, 1798 VEN CARBON BED INLET R3 OTM-45 FH	140-25860-9	_025.d	01/13/2022 22:18

FORM IV  
PFAS METHOD BLANK SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: \_008.d Lab Sample ID: MB 140-57613/1-B  
 Matrix: Air Date Extracted: 01/04/2022 08:59  
 Instrument ID: LCA Date Analyzed: 01/12/2022 18:44  
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-57613/2-B	_009.d	01/12/2022 18:53
	LCSD 140-57613/3-B	_010.d	01/12/2022 19:02

FORM IV  
PFAS METHOD BLANK SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: \_033.d Lab Sample ID: MB 140-57613/14-B  
 Matrix: Air Date Extracted: 01/04/2022 08:59  
 Instrument ID: LCA Date Analyzed: 01/12/2022 22:24  
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
K-1789 VEN CARBON BED INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	140-25860-4	_020.d	01/13/2022 21:34
K-1796 VEN CARBON BED INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	140-25860-8	_021.d	01/13/2022 21:43
K-1803 VEN CARBON BED INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	140-25860-12	_022.d	01/13/2022 21:51
K-1785, 1786, 1789 VEN CARBON BED INLET R1 OTM-45 BH	140-25860-2	_026.d	01/13/2022 22:27
K-1792, 1793, 1795 VEN CARBON BED INLET R2 OTM-45 BH	140-25860-6	_027.d	01/13/2022 22:36
K-1799, 1800, 1802 VEN CARBON BED INLET R3 OTM-45 BH	140-25860-10	_028.d	01/13/2022 22:44

FORM IV  
PFAS METHOD BLANK SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: \_006.d Lab Sample ID: MB 140-57645/1-B  
 Matrix: Air Date Extracted: 01/04/2022 14:49  
 Instrument ID: LCA Date Analyzed: 01/09/2022 12:49  
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-57645/2-B	_007.d	01/09/2022 12:58
	LCSD 140-57645/3-B	_008.d	01/09/2022 13:07
K-1787 VEN CARBON BED INLET R1 OTM-45 IMPINGERS 1,2&3 COND	140-25860-3	_018.d	01/09/2022 14:35
K-1794 VEN CARBON BED INLET R2 OTM-45 IMPINGERS 1,2&3 COND	140-25860-7	_019.d	01/09/2022 14:43
K-1801 VEN CARBON BED INLET R3 OTM-45 IMPINGERS 1,2&3 COND	140-25860-11	_020.d	01/09/2022 14:52

FORM VIII  
PFAS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: ICIS 140-57741/9 Date Analyzed: 01/09/2022 11:02  
 Instrument ID: LCA GC Column: GeminiC18 3x100 ID: 3 (mm)  
 Lab File ID (Standard): 009.d Heated Purge: (Y/N) N  
 Calibration ID: 3496

	13PFOA		#	RT #	#	RT #
	AREA #	RT #				
INITIAL CALIBRATION MID-POINT	5559029	4.12				
UPPER LIMIT	8338544	4.32				
LOWER LIMIT	2779515	3.92				
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-57741/14		4910276	4.12			
CCVIS 140-57742/5		5659179	4.11			
CCVIS 140-57822/7		5501943	4.16			
CCVIS 140-57865/7		5484136	4.13			
CCVIS 140-57893/7		5100546	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 Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVIS 140-57742/5 Date Analyzed: 01/09/2022 12:40  
 Instrument ID: LCA GC Column: GeminiC18 3x100 ID: 3 (mm)  
 Lab File ID (Standard): 005.d Heated Purge: (Y/N) N  
 Calibration ID: 3496

		13PFOA					
		AREA #	RT #	#	RT #	#	RT #
12/24 HOUR STD		5659179	4.11				
UPPER LIMIT		8488769	4.31				
LOWER LIMIT		2829590	3.91				
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 140-57645/1-B		5489432	4.10				
LCS 140-57645/2-B		5356156	4.10				
LCSD 140-57645/3-B		5459523	4.10				
CCV 140-57742/17		5325263	4.10				
140-25860-3	K-1787 VEN CARBON BED INLET R1 OTM-45 IMPINGERS 1,2&3 COND	1828534*3	4.10				
140-25860-7	K-1794 VEN CARBON BED INLET R2 OTM-45 IMPINGERS 1,2&3 COND	1057563*3	4.10				
140-25860-11	K-1801 VEN CARBON BED INLET R3 OTM-45 IMPINGERS 1,2&3 COND	1806598*3	4.11				
CCV 140-57742/30		5598719	4.10				

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 Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVIS 140-57822/7 Date Analyzed: 01/11/2022 17:48  
 Instrument ID: LCA GC Column: GeminiC18 3x100 ID: 3 (mm)  
 Lab File ID (Standard): \_007.d Heated Purge: (Y/N) N  
 Calibration ID: 3496

	13PFOA		#	RT #	#	RT #
	AREA #	RT #				
12/24 HOUR STD	5501943	4.16				
UPPER LIMIT	8252915	4.36				
LOWER LIMIT	2750972	3.96				
LAB SAMPLE ID	CLIENT SAMPLE ID					
MB 140-57611/1-B		5442494	4.14			
LCS 140-57611/2-B		5240791	4.13			
LCSD 140-57611/3-B		5373279	4.12			
CCV 140-57822/19		5360856	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 Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVIS 140-57865/7 Date Analyzed: 01/12/2022 18:35  
 Instrument ID: LCA GC Column: GeminiC18 3x100 ID: 3 (mm)  
 Lab File ID (Standard): 007.d Heated Purge: (Y/N) N  
 Calibration ID: 3496

	13PFOA		#	RT #	#	RT #
	AREA #	RT #				
12/24 HOUR STD	5484136	4.13				
UPPER LIMIT	8226204	4.33				
LOWER LIMIT	2742068	3.93				
LAB SAMPLE ID	CLIENT SAMPLE ID					
MB 140-57613/1-B		5153682	4.14			
LCS 140-57613/2-B		5364999	4.13			
LCSD 140-57613/3-B		5070128	4.15			
CCV 140-57865/19		5312145	4.15			
CCV 140-57865/31		5466439	4.13			
MB 140-57613/14-B		5539318	4.11			
CCV 140-57865/43		5116086	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 Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVIS 140-57893/7 Date Analyzed: 01/13/2022 19:39  
 Instrument ID: LCA GC Column: GeminiC18 3x100 ID: 3 (mm)  
 Lab File ID (Standard): 007.d Heated Purge: (Y/N) N  
 Calibration ID: 3496

		13PFOA					
		AREA #	RT #	#	RT #	#	RT #
12/24 HOUR STD		5100546	4.13				
UPPER LIMIT		7650819	4.33				
LOWER LIMIT		2550273	3.93				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 140-57893/19		5143479	4.12				
140-25860-4	K-1789 VEN CARBON BED INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	507317*3	4.12				
140-25860-8	K-1796 VEN CARBON BED INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	544334*3	4.12				
140-25860-12	K-1803 VEN CARBON BED INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	298245*3	4.12				
140-25860-1	K-1783, 1784 VEN CARBON BED INLET R1 OTM-45 FH	5020170	4.12				
140-25860-5	K-1790, 1791 VEN CARBON BED INLET R2 OTM-45 FH	5648647	4.12				
140-25860-9	K-1797, 1798 VEN CARBON BED INLET R3 OTM-45 FH	5530209	4.12				
140-25860-2	K-1785, 1786, 1789 VEN CARBON BED INLET R1 OTM-45 BH	5617304	4.12				
140-25860-6	K-1792, 1793, 1795 VEN CARBON BED INLET R2 OTM-45 BH	5395580	4.11				
140-25860-10	K-1799, 1800, 1802 VEN CARBON BED INLET R3 OTM-45 BH	5579464	4.12				
CCV 140-57893/30		5357206	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 I  
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
SDG No.: \_\_\_\_\_  
Client Sample ID: K-1783, 1784 VEN CARBON Lab Sample ID: 140-25860-1  
BED INLET R1 OTM-45 FH  
Matrix: Air Lab File ID: \_023.d  
Analysis Method: 537 (modified) Date Collected: 12/16/2021 00:00  
Extraction Method: None Date Extracted: 01/04/2022 08:32  
Sample wt/vol: 1(Sample) Date Analyzed: 01/13/2022 22:00  
Con. Extract Vol.: 130(mL) Dilution Factor: 1  
Injection Volume: 1(uL) GC Column: GeminiC18 3x100 ID: 3(mm)  
% Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
Analysis Batch No.: 57893 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	100		1.00	0.580

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\20220113-22248.b\_023.d  
 Lims ID: 140-25860-A-1-E  
 Client ID: K-1783, 1784 VEN CARBON BED INLET R1 OTM-45 FH  
 Sample Type: Client  
 Inject. Date: 13-Jan-2022 22:00:50 ALS Bottle#: 23 Worklist Smp#: 23  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022248-023 140-25860-a-1-c  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 13:14:16 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 09:22:24  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\_019.d

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	3.538	3.548	-0.010	0.858	2247770	1.23	98.3	4664	
13 HFPO-DA	285.00 > 169.00	3.538	3.548	-0.010	1.000	12188589	5.02		8006	
* 22 13C2 PFOA	415.00 > 370.00	4.123	4.131	-0.008		5020170	1.25		11003	

**QC Flag Legend**  
 Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\\_023.d

Injection Date: 13-Jan-2022 22:00:50

Instrument ID: LCA

Lims ID: 140-25860-A-1-E

Lab Sample ID: 140-25860-1

Client ID: K-1783, 1784 VEN CARBON BED INLET R1 OTM-45 FH

Operator ID: Cochran, Bobby

ALS Bottle#: 23

Worklist Smp#: 23

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

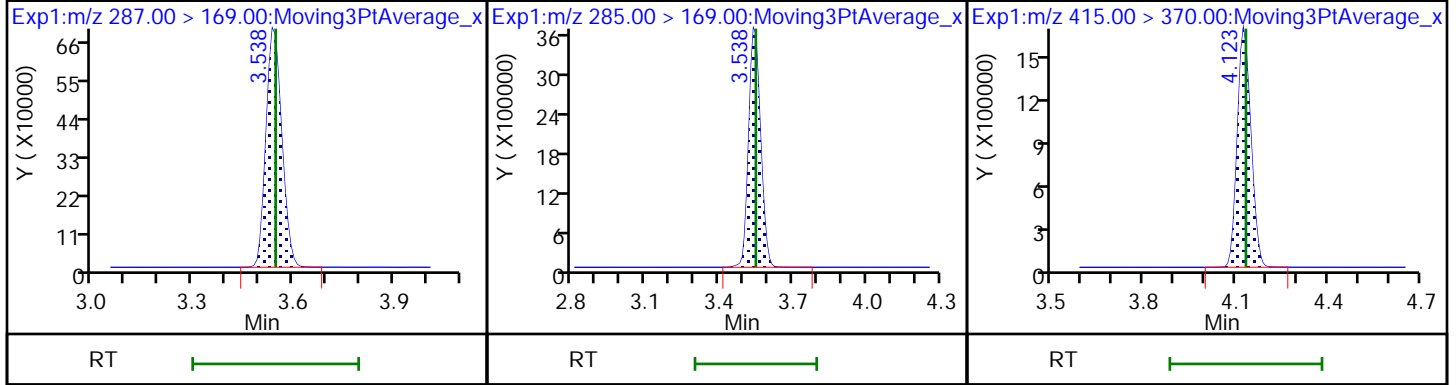
Method: PFC\_LCA

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 Knoxville Job No.: 140-25860-1  
SDG No.: \_\_\_\_\_  
Client Sample ID: K-1785, 1786,1789 VEN Lab Sample ID: 140-25860-2  
CARBON BED INLET R1  
OTM-45 BH  
Matrix: Air Lab File ID: 026.d  
Analysis Method: 537 (modified) Date Collected: 12/16/2021 00:00  
Extraction Method: None Date Extracted: 01/04/2022 08:59  
Sample wt/vol: 1 (Sample) Date Analyzed: 01/13/2022 22:27  
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.: 57893 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	937		8.00	7.00

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\20220113-22248.b\_026.d  
 Lims ID: 140-25860-A-2-E  
 Client ID: K-1785, 1786,1789 VEN CARBON BED INLET R1 OTM-45 BH  
 Sample Type: Client  
 Inject. Date: 13-Jan-2022 22:27:16 ALS Bottle#: 26 Worklist Smp#: 26  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022248-026 140-25860-a-2-c  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 13:14:16 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 09:22:44  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\_019.d

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	3.528	3.548	-0.020	0.857	2287307	1.12	89.4	3657	
13 HFPO-DA	285.00 > 169.00	3.528	3.548	-0.020	1.000	23186505	9.37		6331	
* 22 13C2 PFOA	415.00 > 370.00	4.115	4.131	-0.016		5617304	1.25		10316	

**QC Flag Legend**  
 Processing Flags



Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\\_026.d

Injection Date: 13-Jan-2022 22:27:16

Instrument ID: LCA

Lims ID: 140-25860-A-2-E

Lab Sample ID: 140-25860-2

Client ID: K-1785, 1786,1789 VEN CARBON BED INLET R1 OTM-45 BH

Operator ID: Cochran, Bobby

ALS Bottle#: 26

Worklist Smp#: 26

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

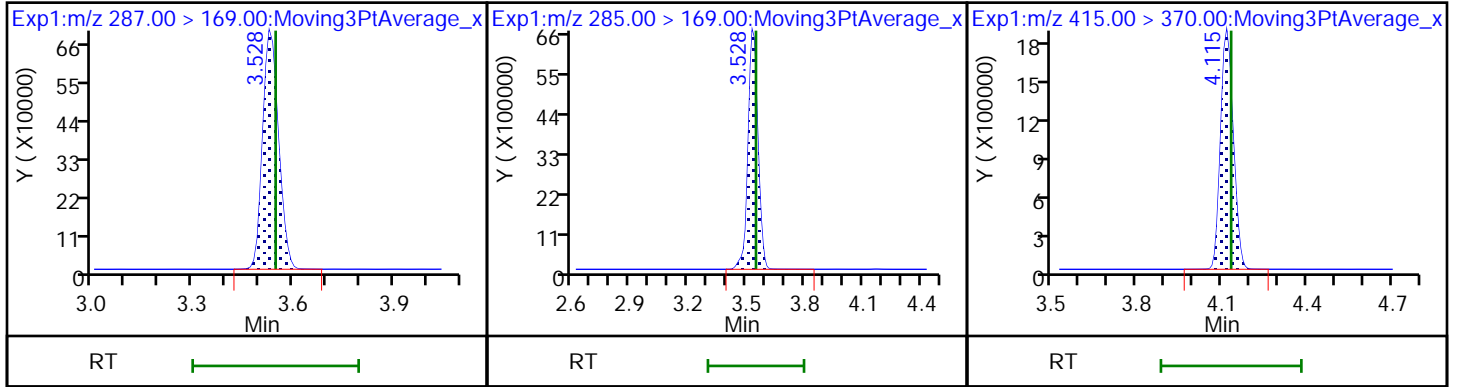
Method: PFC\_LCA

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 Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: K-1787 VEN CARBON BED Lab Sample ID: 140-25860-3  
                           INLET R1 OTM-45 IMPINGERS  
                           1,2&3 COND  
 Matrix: Air Lab File ID: 018.d  
 Analysis Method: 537 (modified) Date Collected: 12/16/2021 00:00  
 Extraction Method: None Date Extracted: 01/04/2022 14:49  
 Sample wt/vol: 0.00645 (Sample) Date Analyzed: 01/09/2022 14:35  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 3  
 Injection Volume: 1 (uL) GC Column: GeminiC18 3x100 ID: 3 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 57742 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	20.7		0.233	0.0384

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	101		25-150

Eurofins TestAmerica, Knoxville  
 Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_018.d  
 Lims ID: 140-25860-A-3-B  
 Client ID: K-1787 VEN CARBON BED INLET R1 OTM-45 IMPINGERS 1,2&3 COND  
 Sample Type: Client  
 Inject. Date: 09-Jan-2022 14:35:03 ALS Bottle#: 18 Worklist Smp#: 18  
 Injection Vol: 1.0 ul Dil. Factor: 3.0000  
 Sample Info: 140-0022187-018 140-25860-A-3-B  
 Misc. Info.: Plate: 11 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 15:08:48 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1641

First Level Reviewer: cochranj Date: 10-Jan-2022 13:37:21  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_017.d

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	3.511	3.528	-0.017	0.857	837590	0.4189	101	2162	
13 HFPO-DA	285.00 > 169.00	3.511	3.528	-0.017	1.000	12080624	4.44		7842	
* 22 13C2 PFOA	415.00 > 370.00	4.097	4.106	-0.009		1828534	0.4167		6260	

**QC Flag Legend**  
 Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_018.d

Injection Date: 09-Jan-2022 14:35:03

Instrument ID: LCA

Lims ID: 140-25860-A-3-B

Lab Sample ID: 140-25860-3

Client ID: K-1787 VEN CARBON BED INLET R1 OTM-45 IMPINGERS 1,2&3 COND

Operator ID: Cochran, Bobby

ALS Bottle#: 18

Worklist Smp#: 18

Injection Vol: 1.0 ul

Dil. Factor: 3.0000

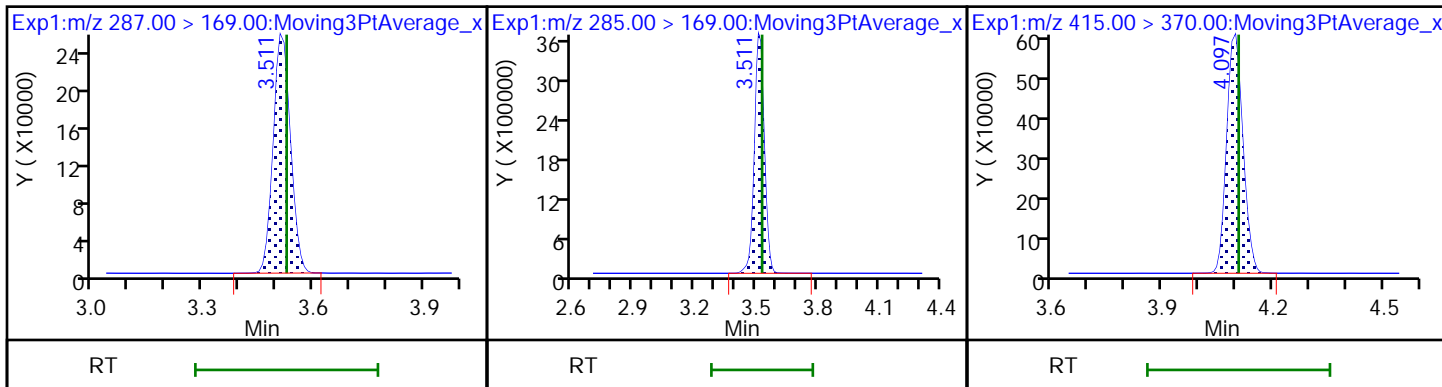
Method: PFC\_LCA

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 Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: K-1789 VEN CARBON BED Lab Sample ID: 140-25860-4  
                           INLET R1 OTM-45  
                           BREAKTHROUGH XAD-2 RESIN  
                           TUBE  
 Matrix: Air Lab File ID: \_020.d  
 Analysis Method: 537 (modified) Date Collected: 12/16/2021 00:00  
 Extraction Method: None Date Extracted: 01/04/2022 08:59  
 Sample wt/vol: 1 (Sample) Date Analyzed: 01/13/2022 21:34  
 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.: 57893 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	1.40		0.0160	0.0140

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	105		25-150

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\_020.d  
 Lims ID: 140-25860-A-4-B  
 Client ID: K-1789 VEN CARBON BED INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE  
 Sample Type: Client  
 Inject. Date: 13-Jan-2022 21:34:21 ALS Bottle#: 20 Worklist Smp#: 20  
 Injection Vol: 1.0 ul Dil. Factor: 10.0000  
 Sample Info: 140-0022248-020 140-25860-a-4-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:53:11 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 09:21:05  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\_019.d

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	3.538	3.548	-0.010	0.858	243462	0.1317	105	731	
13 HFPO-DA	285.00 > 169.00	3.538	3.548	-0.010	1.000	18492280	7.02		10099	
* 22 13C2 PFOA	415.00 > 370.00	4.123	4.131	-0.008		507317	0.1250		3213	

**QC Flag Legend**  
Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\_020.d

Injection Date: 13-Jan-2022 21:34:21

Instrument ID: LCA

Lims ID: 140-25860-A-4-B

Lab Sample ID: 140-25860-4

Client ID: K-1789 VEN CARBON BED INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Operator ID: Cochran, Bobby

ALS Bottle#: 20 Worklist Smp#: 20

Injection Vol: 1.0 ul

Dil. Factor: 10.0000

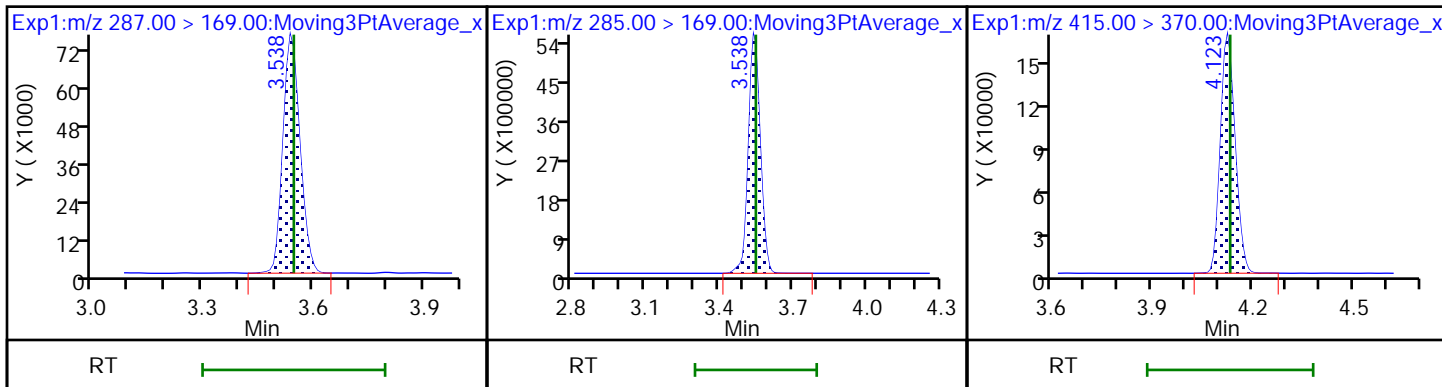
Method: PFC\_LCA

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 Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: K-1790, 1791 VEN CARBON Lab Sample ID: 140-25860-5  
BED INLET R2 OTM-45 FH  
 Matrix: Air Lab File ID: \_024.d  
 Analysis Method: 537 (modified) Date Collected: 12/16/2021 00:00  
 Extraction Method: None Date Extracted: 01/04/2022 08:32  
 Sample wt/vol: 1(Sample) Date Analyzed: 01/13/2022 22:09  
 Con. Extract Vol.: 128(mL) Dilution Factor: 1  
 Injection Volume: 1(uL) GC Column: GeminiC18 3x100 ID: 3(mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 57893 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	84.7		1.00	0.580

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\20220113-22248.b\_024.d  
 Lims ID: 140-25860-A-5-E  
 Client ID: K-1790, 1791 VEN CARBON BED INLET R2 OTM-45 FH  
 Sample Type: Client  
 Inject. Date: 13-Jan-2022 22:09:39 ALS Bottle#: 24 Worklist Smp#: 24  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022248-024 140-25860-a-5-c  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 13:14:16 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 09:22:31  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\_019.d

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	3.538	3.548	-0.010	0.858	2414689	1.17	93.8	4438	
13 HFPO-DA	285.00 > 169.00	3.538	3.548	-0.010	1.000	11048527	4.23		7008	
* 22 13C2 PFOA	415.00 > 370.00	4.123	4.131	-0.008		5648647	1.25		10679	

**QC Flag Legend**  
Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\_024.d

Injection Date: 13-Jan-2022 22:09:39

Instrument ID: LCA

Lims ID: 140-25860-A-5-E

Lab Sample ID: 140-25860-5

Client ID: K-1790, 1791 VEN CARBON BED INLET R2 OTM-45 FH

Operator ID: Cochran, Bobby

ALS Bottle#: 24

Worklist Smp#: 24

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

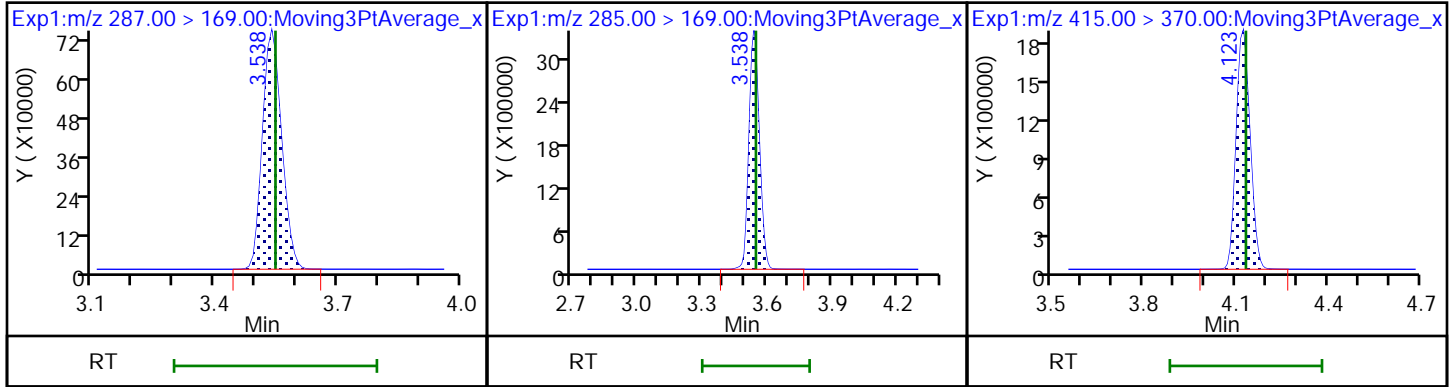
Method: PFC\_LCA

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 Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: K-1792, 1793, 1795 VEN Lab Sample ID: 140-25860-6  
                           CARBON BED INLET R2  
                           OTM-45 BH  
 Matrix: Air Lab File ID: 027.d  
 Analysis Method: 537 (modified) Date Collected: 12/16/2021 00:00  
 Extraction Method: None Date Extracted: 01/04/2022 08:59  
 Sample wt/vol: 1 (Sample) Date Analyzed: 01/13/2022 22:36  
 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.: 57893 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	765		8.00	7.00

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\20220113-22248.b\_027.d  
 Lims ID: 140-25860-A-6-E  
 Client ID: K-1792, 1793, 1795 VEN CARBON BED INLET R2 OTM-45 BH  
 Sample Type: Client  
 Inject. Date: 13-Jan-2022 22:36:03 ALS Bottle#: 27 Worklist Smp#: 27  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022248-027 140-25860-a-6-c  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 13:14:16 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 09:22:51  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\_019.d

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	3.527	3.548	-0.021	0.859	2345859	1.19	95.4	4592	
13 HFPO-DA	285.00 > 169.00	3.527	3.548	-0.021	1.000	19422978	7.65		7923	
* 22 13C2 PFOA	415.00 > 370.00	4.106	4.131	-0.025		5395580	1.25		8656	

**QC Flag Legend**  
 Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\_027.d

Injection Date: 13-Jan-2022 22:36:03

Instrument ID: LCA

Lims ID: 140-25860-A-6-E

Lab Sample ID: 140-25860-6

Client ID: K-1792, 1793, 1795 VEN CARBON BED INLET R2 OTM-45 BH

Operator ID: Cochran, Bobby

ALS Bottle#: 27

Worklist Smp#: 27

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

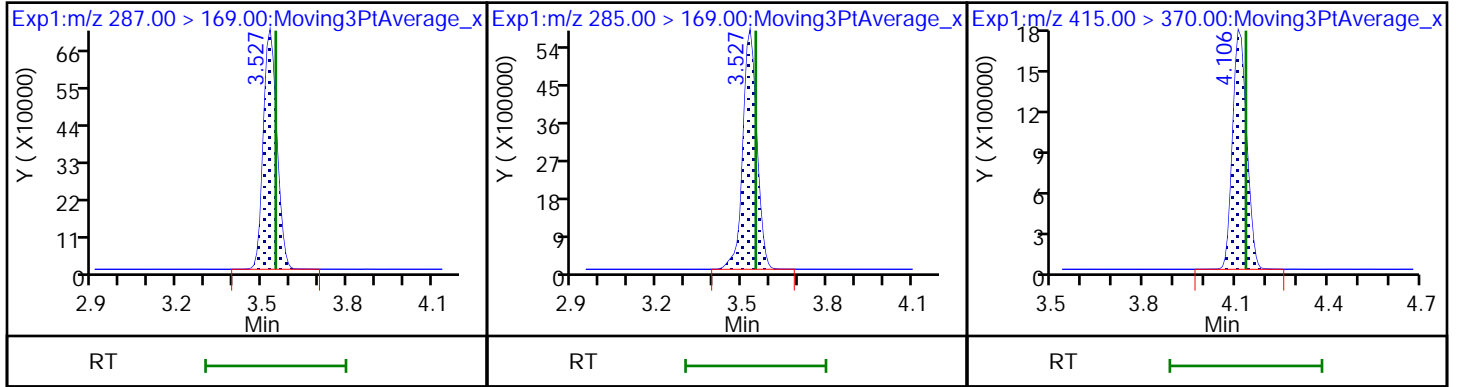
Method: PFC\_LCA

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 Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: K-1794 VEN CARBON BED Lab Sample ID: 140-25860-7  
                           INLET R2 OTM-45 IMPINGERS  
                           1,2&3 COND  
 Matrix: Air Lab File ID: 019.d  
 Analysis Method: 537 (modified) Date Collected: 12/16/2021 00:00  
 Extraction Method: None Date Extracted: 01/04/2022 14:49  
 Sample wt/vol: 0.00667 (Sample) Date Analyzed: 01/09/2022 14:43  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 5  
 Injection Volume: 1 (uL) GC Column: GeminiC18 3x100 ID: 3 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 57742 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	34.1		0.375	0.0618

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	109		25-150

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_019.d  
 Lims ID: 140-25860-A-7-B  
 Client ID: K-1794 VEN CARBON BED INLET R2 OTM-45 IMPINGERS 1,2&3 COND  
 Sample Type: Client  
 Inject. Date: 09-Jan-2022 14:43:51 ALS Bottle#: 19 Worklist Smp#: 19  
 Injection Vol: 1.0 ul Dil. Factor: 5.0000  
 Sample Info: 140-0022187-019 140-25860-A-7-B  
 Misc. Info.: Plate: 11 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 15:08:48 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1641

First Level Reviewer: cochranj Date: 10-Jan-2022 13:37:34  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_017.d

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	3.519	3.528	-0.009	0.859	527456	0.2737	109	1412	
13 HFPO-DA	285.00 > 169.00	3.519	3.528	-0.009	1.000	12963305	4.54		7028	
* 22 13C2 PFOA	415.00 > 370.00	4.098	4.106	-0.008		1057563	0.2500		4353	

**QC Flag Legend**  
Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_019.d

Injection Date: 09-Jan-2022 14:43:51

Instrument ID: LCA

Lims ID: 140-25860-A-7-B

Lab Sample ID: 140-25860-7

Client ID: K-1794 VEN CARBON BED INLET R2 OTM-45 IMPINGERS 1,2&3 COND

Operator ID: Cochran, Bobby

ALS Bottle#: 19

Worklist Smp#: 19

Injection Vol: 1.0 ul

Dil. Factor: 5.0000

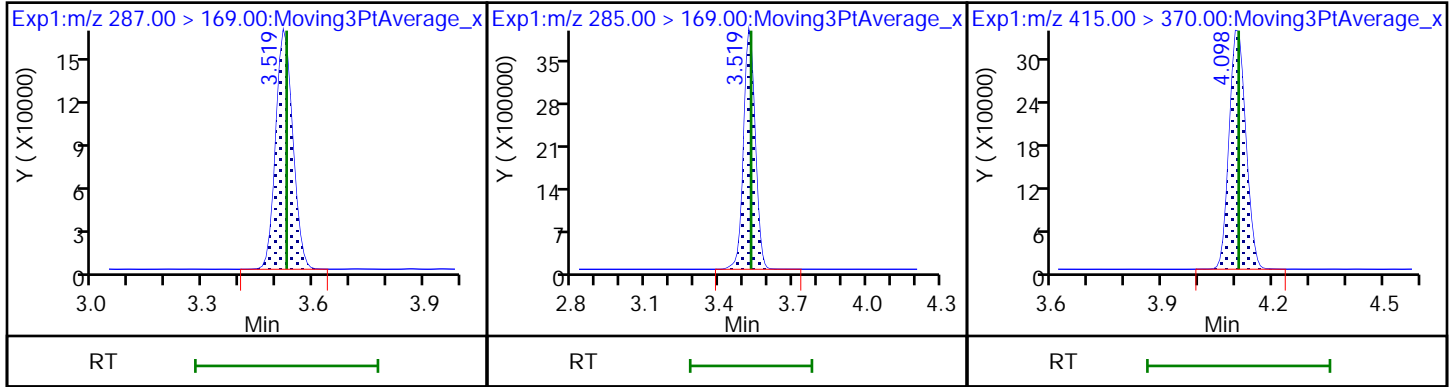
Method: PFC\_LCA

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 Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: K-1796 VEN CARBON BED Lab Sample ID: 140-25860-8  
                           INLET R2 OTM-45  
                           BREAKTHROUGH XAD-2 RESIN  
                           TUBE  
 Matrix: Air Lab File ID: \_021.d  
 Analysis Method: 537 (modified) Date Collected: 12/16/2021 00:00  
 Extraction Method: None Date Extracted: 01/04/2022 08:59  
 Sample wt/vol: 1 (Sample) Date Analyzed: 01/13/2022 21:43  
 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.: 57893 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.632		0.0160	0.0140

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\20220113-22248.b\_021.d  
 Lims ID: 140-25860-A-8-B  
 Client ID: K-1796 VEN CARBON BED INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE  
 Sample Type: Client  
 Inject. Date: 13-Jan-2022 21:43:11 ALS Bottle#: 21 Worklist Smp#: 21  
 Injection Vol: 1.0 ul Dil. Factor: 10.0000  
 Sample Info: 140-0022248-021 140-25860-a-8-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:53:11 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 09:22:04  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\_019.d

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	3.538	3.548	-0.010	0.858	242008	0.1220	97.6	853	
13 HFPO-DA	285.00 > 169.00	3.538	3.548	-0.010	1.000	8277120	3.16		3942	
* 22 13C2 PFOA	415.00 > 370.00	4.124	4.131	-0.007		544334	0.1250		3772	

**QC Flag Legend**  
 Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\_021.d

Injection Date: 13-Jan-2022 21:43:11

Instrument ID: LCA

Lims ID: 140-25860-A-8-B

Lab Sample ID: 140-25860-8

Client ID: K-1796 VEN CARBON BED INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Operator ID: Cochran, Bobby

ALS Bottle#: 21 Worklist Smp#: 21

Injection Vol: 1.0 ul

Dil. Factor: 10.0000

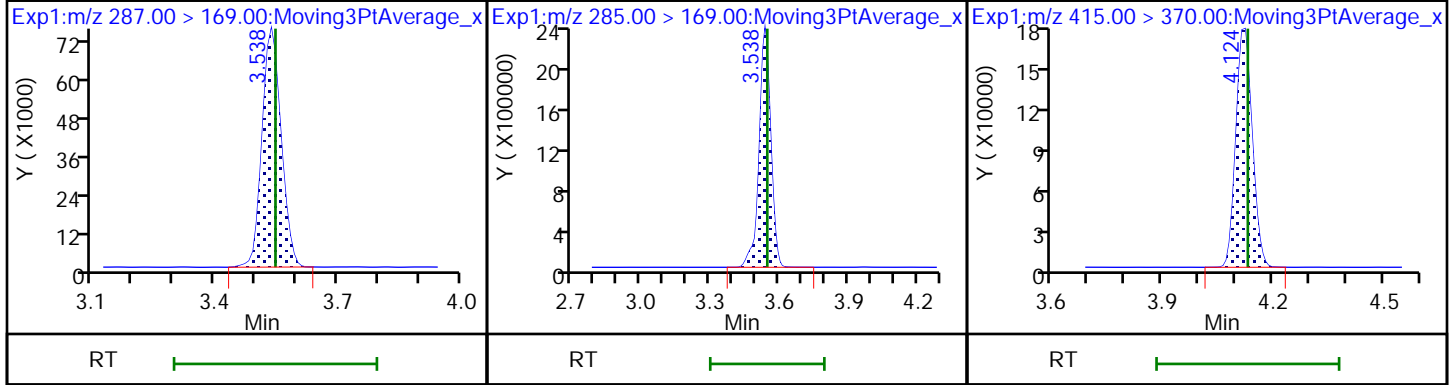
Method: PFC\_LCA

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 Knoxville Job No.: 140-25860-1  
SDG No.: \_\_\_\_\_  
Client Sample ID: K-1797, 1798 VEN CARBON BED INLET R3 OTM-45 FH Lab Sample ID: 140-25860-9  
Matrix: Air Lab File ID: \_025.d  
Analysis Method: 537 (modified) Date Collected: 12/16/2021 00:00  
Extraction Method: None Date Extracted: 01/04/2022 08:32  
Sample wt/vol: 1 (Sample) Date Analyzed: 01/13/2022 22:18  
Con. Extract Vol.: 114 (mL) Dilution Factor: 1  
Injection Volume: 1 (uL) GC Column: GeminiC18 3x100 ID: 3 (mm)  
% Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
Analysis Batch No.: 57893 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	84.3		1.00	0.580

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\20220113-22248.b\_025.d  
 Lims ID: 140-25860-A-9-E  
 Client ID: K-1797, 1798 VEN CARBON BED INLET R3 OTM-45 FH  
 Sample Type: Client  
 Inject. Date: 13-Jan-2022 22:18:30 ALS Bottle#: 25 Worklist Smp#: 25  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022248-025 140-25860-a-9-c  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 13:14:16 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 09:22:37  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\_019.d

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	3.538	3.548	-0.010	0.860	2430713	1.21	96.5	4315	
13 HFPO-DA	285.00 > 169.00	3.538	3.548	-0.010	1.000	11072410	4.21		6488	
* 22 13C2 PFOA	415.00 > 370.00	4.115	4.131	-0.016		5530209	1.25		11675	

**QC Flag Legend**  
Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\_025.d

Injection Date: 13-Jan-2022 22:18:30

Instrument ID: LCA

Lims ID: 140-25860-A-9-E

Lab Sample ID: 140-25860-9

Client ID: K-1797, 1798 VEN CARBON BED INLET R3 OTM-45 FH

Operator ID: Cochran, Bobby

ALS Bottle#: 25

Worklist Smp#: 25

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

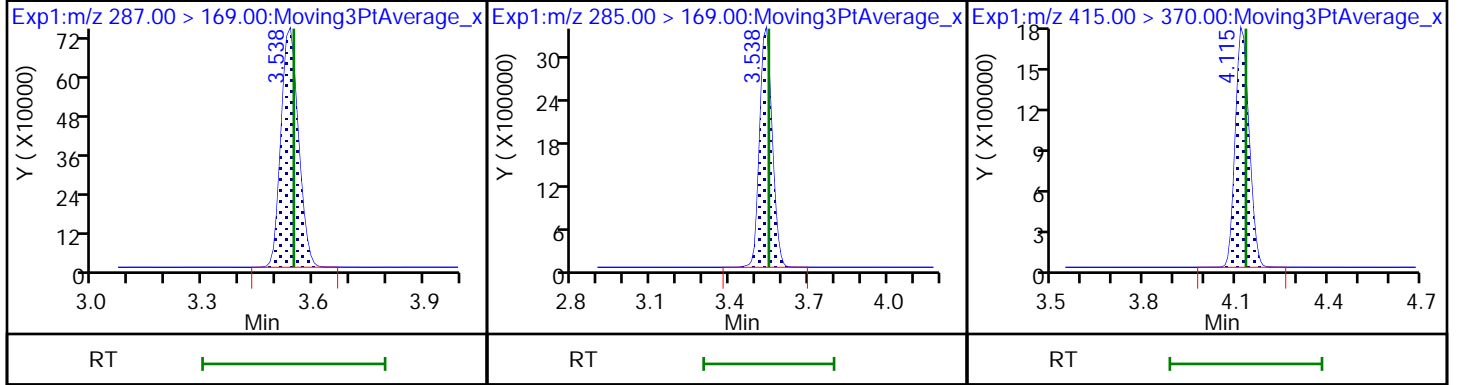
Method: PFC\_LCA

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 Knoxville Job No.: 140-25860-1  
SDG No.: \_\_\_\_\_  
Client Sample ID: K-1799, 1800, 1802 VEN Lab Sample ID: 140-25860-10  
CARBON BED INLET R3  
OTM-45 BH  
Matrix: Air Lab File ID: \_028.d  
Analysis Method: 537 (modified) Date Collected: 12/16/2021 00:00  
Extraction Method: None Date Extracted: 01/04/2022 08:59  
Sample wt/vol: 1 (Sample) Date Analyzed: 01/13/2022 22:44  
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.: 57893 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	797		8.00	7.00

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\20220113-22248.b\_028.d  
 Lims ID: 140-25860-A-10-E  
 Client ID: K-1799, 1800, 1802 VEN CARBON BED INLET R3 OTM-45 BH  
 Sample Type: Client  
 Inject. Date: 13-Jan-2022 22:44:51 ALS Bottle#: 28 Worklist Smp#: 28  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022248-028 140-25860-a-10-c  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 13:14:16 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 09:23:02  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\_019.d

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	3.538	3.548	-0.010	0.858	2419513	1.19	95.2	5028	
13 HFPO-DA	285.00 > 169.00	3.538	3.548	-0.010	1.000	20864983	7.97		7555	
* 22 13C2 PFOA	415.00 > 370.00	4.123	4.131	-0.008		5579464	1.25		8172	

**QC Flag Legend**  
Processing Flags



Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\_028.d

Injection Date: 13-Jan-2022 22:44:51

Instrument ID: LCA

Lims ID: 140-25860-A-10-E

Lab Sample ID: 140-25860-10

Client ID: K-1799, 1800, 1802 VEN CARBON BED INLET R3 OTM-45 BH

Operator ID: Cochran, Bobby

ALS Bottle#: 28

Worklist Smp#: 28

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

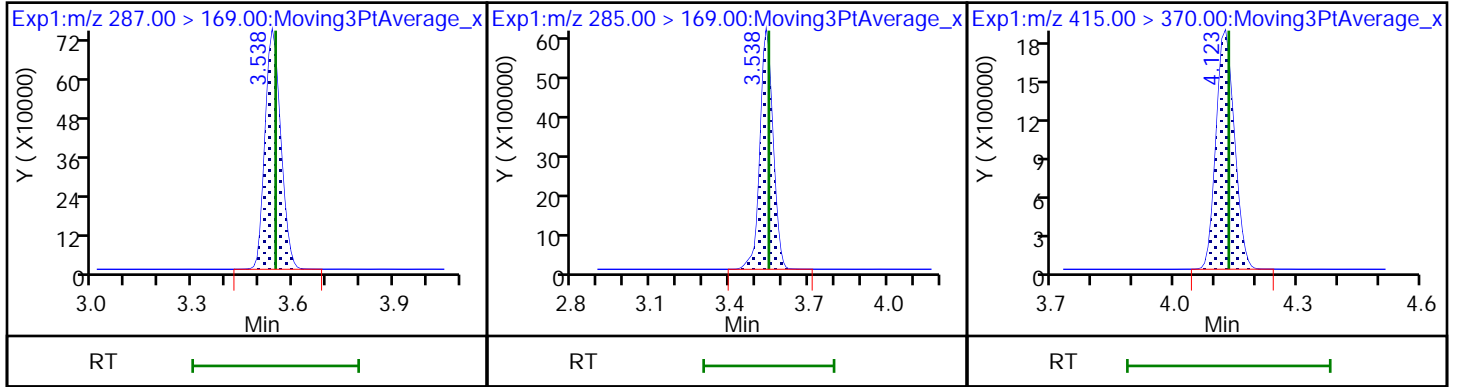
Method: PFC\_LCA

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 Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: K-1801 VEN CARBON BED Lab Sample ID: 140-25860-11  
                           INLET R3 OTM-45 IMPINGERS  
                           1,2&3 COND  
 Matrix: Air Lab File ID: \_020.d  
 Analysis Method: 537 (modified) Date Collected: 12/16/2021 00:00  
 Extraction Method: None Date Extracted: 01/04/2022 14:49  
 Sample wt/vol: 0.00656(Sample) Date Analyzed: 01/09/2022 14:52  
 Con. Extract Vol.: 10(mL) Dilution Factor: 3  
 Injection Volume: 1(uL) GC Column: GeminiC18 3x100 ID: 3(mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 57742 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	21.3		0.229	0.0377

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	105		25-150

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_020.d  
 Lims ID: 140-25860-A-11-B  
 Client ID: K-1801 VEN CARBON BED INLET R3 OTM-45 IMPINGERS 1,2&3 COND  
 Sample Type: Client  
 Inject. Date: 09-Jan-2022 14:52:39 ALS Bottle#: 20 Worklist Smp#: 20  
 Injection Vol: 1.0 ul Dil. Factor: 3.0000  
 Sample Info: 140-0022187-020 140-25860-A-11-B  
 Misc. Info.: Plate: 11 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 15:08:48 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1641

First Level Reviewer: cochranj Date: 10-Jan-2022 13:37:48  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_017.d

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	3.528	3.528	0.0	0.859	863096	0.4369	105	2265	
13 HFPO-DA	285.00 > 169.00	3.528	3.528	0.0	1.000	13056428	4.66		7683	
* 22 13C2 PFOA	415.00 > 370.00	4.106	4.106	0.0		1806598	0.4167		9307	

**QC Flag Legend**  
Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\\_020.d

Injection Date: 09-Jan-2022 14:52:39

Instrument ID: LCA

Lims ID: 140-25860-A-11-B

Lab Sample ID: 140-25860-11

Client ID: K-1801 VEN CARBON BED INLET R3 OTM-45 IMPINGERS 1,2&3 COND

Operator ID: Cochran, Bobby

ALS Bottle#: 20

Worklist Smp#: 20

Injection Vol: 1.0 ul

Dil. Factor: 3.0000

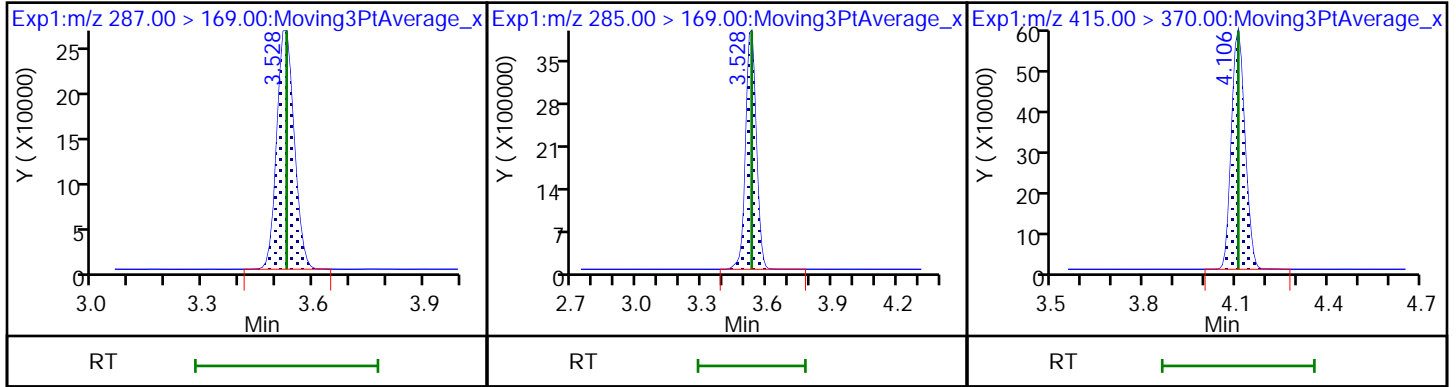
Method: PFC\_LCA

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 Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: K-1803 VEN CARBON BED Lab Sample ID: 140-25860-12  
                           INLET R3 OTM-45  
                           BREAKTHROUGH XAD-2 RESIN  
                           TUBE  
 Matrix: Air Lab File ID: \_022.d  
 Analysis Method: 537 (modified) Date Collected: 12/16/2021 00:00  
 Extraction Method: None Date Extracted: 01/04/2022 08:59  
 Sample wt/vol: 1 (Sample) Date Analyzed: 01/13/2022 21:51  
 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.: 57893 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	2.08		0.0320	0.0280

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	125		25-150

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\_022.d  
 Lims ID: 140-25860-A-12-B  
 Client ID: K-1803 VEN CARBON BED INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE  
 Sample Type: Client  
 Inject. Date: 13-Jan-2022 21:51:59 ALS Bottle#: 22 Worklist Smp#: 22  
 Injection Vol: 1.0 ul Dil. Factor: 20.0000  
 Sample Info: 140-0022248-022 140-25860-a-12-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 11:49:07 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 13:11:48  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\_019.d

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	3.538	3.548	-0.010	0.860	169650	0.0780	125	562	
13 HFPO-DA	285.00 > 169.00	3.538	3.548	-0.010	1.000	19060216	5.19		6118	
* 22 13C2 PFOA	415.00 > 370.00	4.115	4.131	-0.016		298245	0.0625		1799	

**QC Flag Legend**  
Processing Flags

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\_022.d

Injection Date: 13-Jan-2022 21:51:59

Instrument ID: LCA

Lims ID: 140-25860-A-12-B

Lab Sample ID: 140-25860-12

Client ID: K-1803 VEN CARBON BED INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE

Operator ID: Cochran, Bobby

ALS Bottle#: 22 Worklist Smp#: 22

Injection Vol: 1.0 ul

Dil. Factor: 20.0000

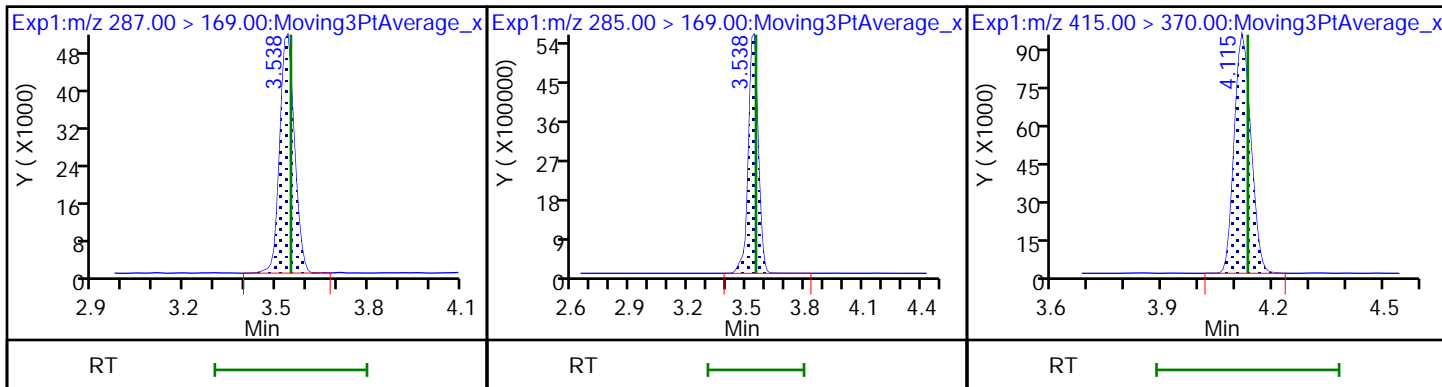
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

D 12 13C3 HFPO-DA

13 HFPO-DA

\* 22 13C2 PFOA



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

Lab Name: Eurofins Knoxville Job No.: 140-25860-1 Analy Batch No.: 57741

SDG No.: \_\_\_\_\_

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

Calibration Start Date: 01/09/2022 10:35 Calibration End Date: 01/09/2022 11:28 Calibration ID: 3496

Calibration Files

LEVEL	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-57741/6	006.d
Level 2	IC 140-57741/7	007.d
Level 3	IC 140-57741/8	008.d
Level 4	ICIS 140-57741/9	009.d
Level 5	IC 140-57741/10	010.d
Level 6	IC 140-57741/11	011.d
Level 7	IC 140-57741/12	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)	0.7464 0.7999	0.7672 0.8186	0.7780	0.7732	0.8076			AveI	0.784 4						35.0				
Perfluoropentanoic acid (PFPeA)	0.9223 0.9921	0.9453 0.9844	0.9375	0.9173	0.9645			AveI	0.951 9						35.0				
Perfluorobutanesulfonic acid (PFBS)	1.0501 1.1020	1.0663 1.1573	1.1041	1.0703	1.1290			AveI	1.097 0						35.0				
4:2 FTS	2.1622 2.3753	2.1637 2.3196	2.1717	2.2516	2.3209			AveI	2.252 2						35.0				
Perfluoropentanesulfonic acid (PFPeS)	0.9221 0.9955	0.9356 1.0291	0.9826	0.9346	0.9995			AveI	0.971 3						35.0				
Perfluorohexanoic acid (PFHxA)	0.9449 0.8620	0.8627 0.8713	0.8158	0.8341	0.8855			AveI	0.868 0						35.0				
HFPO-DA	1.4092 1.3894	1.3426 1.4027	1.2763	1.3238	1.3234			AveI	1.352 5						35.0				
Perfluorohexanesulfonic acid (PFHxS)	1.4875 1.4237	1.3047 1.4581	1.3098	1.3044	1.3523			AveI	1.377 2						35.0				
Perfluoroheptanoic acid (PFHpA)	1.0029 1.0407	1.0043 1.1056	1.0396	1.0297	1.1042			AveI	1.046 7						35.0				
DONA	2.5673 2.7077	2.5847 2.7060	2.4973	2.6048	2.7424			AveI	2.630 0						35.0				
Perfluoroheptanesulfonic Acid (PFHpS)	0.8675 0.9795	0.9937 1.0135	0.8883	0.9179	1.0180			AveI	0.954 1						35.0				
6:2 FTS	1.5458 1.8539	1.8702 1.7992	1.7539	1.7175	1.7650			L2ID	-0.00 4						0.9970				0.9900
Perfluorooctanoic acid (PFOA)	1.2245 1.1650	1.1211 1.1689	1.0968	1.1082	1.1475			AveI	1.147 4						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 Knoxville Job No.: 140-25860-1 Analy Batch No.: 57741

SDG No.: \_\_\_\_\_

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

Calibration Start Date: 01/09/2022 10:35 Calibration End Date: 01/09/2022 11:28 Calibration ID: 3496

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						
Perfluorooctanesulfonic acid (PFOS)	1.1246	1.0582	1.0402	1.0857	1.1118		1.098		3.5	35.0			
Perfluorononanoic acid (PFNA)	0.7571	0.8428	0.8247	0.8613	0.8400		0.846				0.9990		0.9900
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	1.8932	2.1322	1.9724	2.1495	2.2457		2.133				0.9980		0.9900
Perfluorononanesulfonic acid (PFNS)	0.9183	0.9135	0.9626	0.9814	1.0010		0.974		4.7	35.0			
Perfluorooctanesulfonamide (FOSA)	0.9105	1.0090	0.9138	0.8526	0.9928		0.945		6.0	35.0			
Perfluorodecanoic acid (PFDA)	1.0270	0.9746	0.9494	0.8867	0.9633		0.964		4.3	35.0			
8:2 FTS	1.3829	1.3617	1.4319	1.4115	1.4229		1.415		2.3	35.0			
N-methylperfluorooctanesulfonamido acetic acid (NMeFOSAA)	1.0366	0.7784	0.8361	0.9306	0.9859		0.970				1.0000		0.9900
Perfluorodecanesulfonic acid (PFDS)	0.8045	0.9261	0.8499	0.9074	0.9503		0.931				0.9980		0.9900
Perfluoroundecanoic acid (PFUnA)	0.9127	1.0109	0.9559	0.9458	0.9926		0.969		3.5	35.0			
N-ethylperfluorooctanesulfonamido acetic acid (NEFOSAA)	0.9149	1.1413	0.9175	0.9500	1.0384		0.989				0.9920		0.9900
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid	1.5883	1.6659	1.5850	1.6795	1.7448		1.672		3.9	35.0			
Perfluorododecanoic acid (PFDoA)	1.0279	1.0730	0.9882	1.0257	1.0048		1.026				0.9990		0.9900
10:2 FTS	1.0258	0.9532											
NMeFOSA	2.1340	2.3973	2.1810	2.1445	2.3191		2.276		5.3	35.0			
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	1.1628	0.8984	1.0611	1.0013	1.0732		0.997				0.9940		0.9900
Perfluorododecanesulfonic acid (PFDoS)	0.9328	1.2131	1.0801	1.1601	1.2014		1.168				0.9960		0.9900
	1.1898	1.2417											
	0.8842	0.8932	0.8754	0.9063	0.9373		0.916		3.9	35.0			
	0.9719	0.9478											

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

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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						
Perfluorotridecanoic acid (PFTrIA)	0.7671 0.8583	0.8601 0.7907	0.7877	0.8530	0.8872		0.829 2		5.6	35.0			
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	1.3402 1.3295	1.3838 1.3746	1.2691	1.2608	1.3381		1.328 0		3.6	35.0			
N-ethylperfluoro-1-octanesulfonamide	1.1559 1.2197	1.1010 1.2376	1.1934	1.1893	1.2687		1.195 1		4.6	35.0			
Perfluorotetradecanoic acid (PFTeA)	0.1377 0.1360	0.1378 0.1392	0.1307	0.1247	0.1346		0.134 4		3.8	35.0			
Perfluorohexadecanoic acid	1.4913 1.0869	1.3165 1.0796	1.0726	1.0610	1.0898	Q2ID	1.058 2	0.0029017			0.9990		0.9900
Perfluorooctadecanoic acid	0.9373 1.0018	0.9312 1.0239	0.9790	0.9846	1.0328	AveI	0.984 4		4.0	35.0			
13C4 PFBA	1.1372 1.1423	1.1023 1.1628	1.1498	1.1208	1.1773	Ave	1.141 8		2.2	50.0			
13C5 PFPeA	0.8899 0.8728	0.8811 0.9023	0.8857	0.8653	0.9082	Ave	0.886 5		1.7	50.0			
13C3 PFBS	0.5667 0.6186	0.5743 0.6308	0.5687	0.5745	0.6053	Ave	0.591 3		4.5	50.0			
M2-4:2 FTS	0.1825 0.1698	0.1964 0.1685	0.1874	0.1886	0.1807	Ave	0.182 0		5.6	50.0			
13C2 PFHxA	0.9636 0.9437	0.9450 0.9385	0.9898	0.9179	0.9366	Ave	0.947 9		2.4	50.0			
13C3 HFPO-DA	0.4430 0.4581	0.4326 0.4909	0.4517	0.4389	0.4739	Ave	0.455 6		4.5	50.0			
18O2 PFHxS	0.3920 0.3936	0.3910 0.4016	0.3902	0.3886	0.4053	Ave	0.394 6		1.6	50.0			
13C4 PFHpA	0.9260 0.9031	0.9062 0.8946	0.9016	0.8988	0.9166	Ave	0.906 7		1.2	50.0			
M2-6:2 FTS	0.2001 0.1664	0.1957 0.1631	0.1891	0.1833	0.1868	Ave	0.183 5		7.6	50.0			
13C4 PFOA	0.9598 0.9095	0.9369 0.9226	0.9610	0.9270	0.9466	Ave	0.937 6		2.1	50.0			
13C4 PFOS	0.5491 0.5703	0.5482 0.6071	0.5837	0.5450	0.5737	Ave	0.568 1		4.0	50.0			

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SDG No.:

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

Calibration Start Date: 01/09/2022 10:35 Calibration End Date: 01/09/2022 11:28 Calibration ID: 3496

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	M1	M2										
13C5 PFNA	1.2491 1.2078	1.1939 1.2597	1.2592	1.1785	1.2884	1.2338	Ave						3.3	50.0			
13C8 FOSA	0.8007 0.7107	0.7941 0.7183	0.7997	0.7796	0.7744	0.7682	Ave						5.0	50.0			
13C2 PFDA	1.2413 1.1439	1.2072 1.1142	1.2263	1.2025	1.2015	1.1910	Ave						3.8	50.0			
M2-8:2 FTS	0.1973 0.1973	0.2109 0.1848	0.2191	0.2098	0.2078	0.2070	Ave						5.9	50.0			
d3-NMeFOSAA	0.1347 0.1410	0.1314 0.1494	0.1503	0.1352	0.1389	0.1401	Ave						5.2	50.0			
13C2 PFUnA	1.1953 1.1608	1.1801 1.1919	1.2074	1.1676	1.2182	1.1888	Ave						1.7	50.0			
d5-NEtFOSAA	0.1572 0.1498	0.1497 0.1535	0.1597	0.1495	0.1568	0.1537	Ave						2.7	50.0			
13C2 PFDoA	1.2213 1.2180	1.1724 1.3461	1.2909	1.1961	1.2835	1.2469	Ave						4.9	50.0			
d7-N-MeFOSE-M	0.1516 0.1496	0.1473 0.1559	0.1474	0.1445	0.1532	0.1499	Ave						2.6	50.0			
d-N-MeFOSA-M	0.1012 0.1077	0.1022 0.1200	0.0983	0.1071	0.1117	0.1069	Ave						6.9	50.0			
d9-N-EtFOSE-M	0.1493 0.1523	0.1470 0.1569	0.1472	0.1456	0.1545	0.1504	Ave						2.8	50.0			
d-N-EtFOSA-M	0.0847 0.0915	0.0853 0.0968	0.0851	0.0856	0.0889	0.0883	Ave						5.1	50.0			
13C2 PFTeDA	0.9499 0.9676	0.9019 0.9931	0.9497	0.9266	0.9666	0.9508	Ave						3.1	50.0			
13C2 PFHxDA	0.6205 0.6577	0.6275 0.7009	0.6323	0.6134	0.6587	0.6444	Ave						4.7	50.0			
13C8 PFOA	0.9857 1.0065	0.9979 0.9945	0.9933	1.0158	1.0026	0.9995	AveI						1.0	50.0			
13C8 PFOS	0.2241 0.2209	0.2140 0.2298	0.2111	0.2271	0.2271	0.2220	AveI						3.2	50.0			

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PFAS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA  
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Knoxville Job No.: 140-25860-1 Analy Batch No.: 57741

SDG No.:

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

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Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-57741/6	006.d
Level 2	IC 140-57741/7	007.d
Level 3	IC 140-57741/8	008.d
Level 4	ICIS 140-57741/9	009.d
Level 5	IC 140-57741/10	010.d
Level 6	IC 140-57741/11	011.d
Level 7	IC 140-57741/12	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	83845	186844	962240	3854072	9638211	0.0250	0.0500	0.250	1.00	1.00	2.50	
Perfluoropentanoic acid (PFPeA)		AveI D	17680839	33917760	893254	3529837	8879560	0.0250	10.0	0.250	1.00	1.00	2.50	
Perfluorobutanesulfonic acid (PFBS)		AveI D	16756830	31649969	597004	2417286	6124063	0.0221	10.0	0.221	0.884	0.884	2.21	
4:2 FTS		AveI D	11661043	22993357	408865	1764352	3970343	0.0234	8.84	0.234	0.934	0.934	2.34	
Perfluoropentanesulfonic acid (PFPeS)		AveI D	7289864	13006427	563759	2239825	5752393	4.67	9.34	0.235	0.938	0.938	2.35	
Perfluorohexanoic acid (PFHxA)		AveI D	48418	111364	868567	3404917	8407159	0.0250	0.0500	0.250	1.00	1.00	2.50	
HFPO-DA		AveI D	11177909	21695732	620127	2584105	6357565	4.69	9.38	0.250	1.00	1.00	2.50	
Perfluorohexanesulfonic acid (PFHxS)		AveI D	15740477	29136720	500197	2051159	5056303	5.00	10.0	0.228	0.910	0.910	2.28	
Perfluorooheptanoic acid (PFHpA)		AveI D	61665	128334	1008145	4115810	10258907	5.00	10.0	0.250	1.00	1.00	2.50	
		AveI D	12316846	24536421	1008145	4115810	10258907	5.00	10.0	0.250	1.00	1.00	2.50	
		AveI D	52407	102576	1008145	4115810	10258907	5.00	10.0	0.250	1.00	1.00	2.50	
		AveI D	9867857	18986869	1008145	4115810	10258907	5.00	10.0	0.250	1.00	1.00	2.50	
		AveI D	91728	201071	1008145	4115810	10258907	5.00	10.0	0.250	1.00	1.00	2.50	
		AveI D	18186660	35239396	1008145	4115810	10258907	5.00	10.0	0.250	1.00	1.00	2.50	

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Instrument ID: LCA Calibration Start Date: 01/09/2022 10:35 Calibration End Date: 01/09/2022 11:28 Calibration ID: 3496

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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		
DONA		AveI D	131168	294908	1476859	5947134	15024020		0.0236	0.0471	0.236	0.942	2.36	
Perfluoroheptanesulfonic Acid (PFHpS)		AveI D	28147768	55134858	530886	2117985	5636163		4.71	9.42	0.238	0.952	2.38	
6:2 FTS		L2ID	10290455	20869230	338181	1327290	3168996		4.76	9.52	0.237	0.948	2.37	
Perfluorooctanoic acid (PFOA)		AveI D	28966	76663	1133760	4568690	11010802		4.74	9.48	0.0250	1.00	2.50	
Perfluorooctanesulfonic acid (PFOS)		AveI D	20503881	38426557	606028	2441987	6000595		5.00	10.0	0.0232	0.928	2.32	
Perfluorononanoic acid (PFNA)		Q2ID	11516632	23013451	1117019	4513988	10970847		4.64	9.28	0.0250	1.00	2.50	
9-Chlorohexadecafluoro-3-oxanona ne-1-sulfonic acid		Q2ID	93408	222306	1154070	4855527	12172388		20662331	40670324	0.0233	0.932	2.33	
Perfluorononanesulfonic acid (PFNS)		AveI D	22796459	45057750	580163	2283353	5588794		4.66	9.32	0.0240	0.960	2.40	
Perfluorooctanesulfonamide (FOSA)		AveI D	10858318	21224656	786079	2955933	7793889		4.80	9.60	0.0250	1.00	2.50	
Perfluorodecanoic acid (PFDA)		AveI D	72012	177027	1252301	4742177	11732225		13658161	24296365	0.0250	1.00	2.50	
8:2 FTS		AveI D	21676188	38547965	323270	1261773	2871784		28696	60773	0.0240	0.958	2.40	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)		QuaI F	5273346	9167971	135153	559483	1388453		13790	22599	0.0250	1.00	2.50	
Perfluorodecanesulfonic acid (PFDS)		L2ID	2665259	5246503	514341	2120075	5327635		42064	108135	0.0241	0.964	2.41	

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			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				
Perfluoroundecanoic acid (PFUnA)		AveI D	10146252 107754	19735300 263564	1241525	4911042	12257781	4.82 0.0250	9.64 0.0500	0.250	1.00	2.50				
N-ethylperfluorooctanesulfonamid oacetic acid (NETFOSAA)		Q2ID	21821508 14206	42351559 37744	157582	631535	1650265	5.00 0.0250	10.0 0.0500	0.250	1.00	2.50				
11-Chloroicosafuoro-3-oxaundec ane-1-sulfonic acid		AveI D	2908898 81152	5632715 190074	937340	3834571	9558929	5.00 0.0236	10.0 0.0471	0.236	0.942	2.36				
Perfluorododecanoic acid (PFDoA)		Q2ID	18048233 124002	34786454 277938	1372157	5455982	13073136	4.71 0.0250	9.42 0.0500	0.250	1.00	2.50				
10:2 FTS		AveI D	24177058 44558	45718210 107659	495484	1929022	4709912	5.00 0.0241	10.0 0.0482	0.241	0.964	2.41				
NMeFOSA		Q2ID	8656158 11620	15277484 20289	112183	476867	1214999	4.82 0.0250	9.64 0.0500	0.250	1.00	2.50				
2- (N-methylperfluoro-1-octanesulfo namido) ethanol		Q2ID	2239289 13964	4741063 39475	171287	745332	1865207	5.00 0.0250	10.0 0.0500	0.250	1.00	2.50				
Perfluorododecanesulfonic acid (PFDoS)		AveI D	3444502 46424	6898231 104724	531987	2126318	5276708	5.00 0.0242	10.0 0.0484	0.242	0.968	2.42				
Perfluorotridecanoic acid (PFTriA)		AveI D	10381999 92545	19843930 222793	1093849	4537531	11543259	4.84 0.0250	9.68 0.0500	0.250	1.00	2.50				
2- (N-ethylperfluoro-1-octanesulfon amido) ethanol		AveI D	20229864 19767	37925934 44938	200969	816282	2095667	5.00 0.0250	10.0 0.0500	0.250	1.00	2.50				
N-ethylperfluoro-1-octanesulfona mide		AveI D	3918307 9667	7686908 20762	109188	452813	1143584	5.00 0.0250	10.0 0.0500	0.250	1.00	2.50				
Perfluorotetradecanoic acid (PFTeA)		AveI D	2160439 12921	4268012 27452	133500	513995	1318730	5.00 0.0250	10.0 0.0500	0.250	1.00	2.50				

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			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5 LVL 6	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		
Perfluorohexadecanoic acid		Q2ID	2545905 91408 13832628	4925818 182515 26960696	729504	2894336	7276278	5.00 0.0250 5.00	10.0 0.0500 10.0	0.250	1.00	2.50		
Perfluorooctadecanoic acid		AveI D	57448	129098	665836	2686042	6895688	0.0250	0.0500	0.250	1.00	2.50		
13C4 PFBA	13PF OA	Ave	12749801	25570850	6184171	6230665	5967237	5.00	10.0	1.25	1.25	1.25		
13C5 PFPeA	13PF OA	Ave	5616269	6088323	4763774	4810256	4603395	1.25	1.25	1.25	1.25	1.25		
13C3 PFBS	13PF OA	Ave	5525998	5179011	4018830	2970104	2853192	1.25	1.25	1.25	1.16	1.16		
M2-4:2 FTS	13PF OA	Ave	4394817	4866698	2844272	979480	855340	1.16	1.16	1.16	1.17	1.17		
13C2 PFHxA	13PF OA	Ave	4222495	700903	941348	5102737	4746918	1.17	1.17	1.25	1.25	1.25		
13C3 HFPO-DA	13PF OA	Ave	2602922	5219880	5323274	2440057	2402042	1.25	1.25	1.25	1.25	1.25		
18O2 PFHxS	13PF OA	Ave	2783042	2186460	2429399	2043432	1943468	1.25	1.25	1.25	1.18	1.18		
13C4 PFHpA	13PF OA	Ave	842014	1013216	4848796	4996367	4645602	1.16	1.16	1.25	1.25	1.25		
M2-6:2 FTS	13PF OA	Ave	767242	3984356	966110	968049	899627	1.25	1.25	1.25	1.19	1.19		
13C4 PFOA	13PF OA	Ave	4759129	1026945	5168548	5153161	4797778	1.25	1.25	1.25	1.25	1.25		
			4565306	690189	4109093			1.25	1.25	1.25	1.25	1.25		
			2187985	5175029				1.25	1.25	1.25	1.25	1.25		
			2216220	4109093				1.25	1.25	1.25	1.25	1.25		

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PFAS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA  
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Knoxville Job No.: 140-25860-1 Analy Batch No.: 57741

SDG No.: \_\_\_\_\_

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

Calibration Start Date: 01/09/2022 10:35 Calibration End Date: 01/09/2022 11:28 Calibration ID: 3496

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		
13C4 PFOS	13PF OA	Ave	2592602	2894864	3000906	2896304	2779952		1.20	1.20	1.20	1.20	1.20	1.20
13C5 PFNA	13PF OA	Ave	2637457	2584771	6772318	6551468	6530042		1.20	1.20	1.25	1.25	1.25	1.25
13C8 FOSA	13PF OA	Ave	5842775	5610570	4301021	4333664	3925140		1.25	1.25	1.25	1.25	1.25	1.25
13C2 PFDA	13PF OA	Ave	3437917	3199127	6595470	6684781	6089778		1.25	1.25	1.25	1.25	1.25	1.25
M2-8:2 FTS	13PF OA	Ave	1037522	1115730	1128836	1117378	1009120		1.20	1.20	1.20	1.20	1.20	1.20
d3-NMeFOSAA	13PF OA	Ave	914379	788680	808216	751488	704135		1.20	1.20	1.25	1.25	1.25	1.25
13C2 PFUnA	13PF OA	Ave	665125	725830	6493725	6490846	6174640		1.25	1.25	1.25	1.25	1.25	1.25
d5-NETfOSAA	13PF OA	Ave	5903076	6518160	858732	831002	794601		1.25	1.25	1.25	1.25	1.25	1.25
13C2 PFDOA	13PF OA	Ave	5615452	5308482	6942988	6649050	6505443		1.25	1.25	1.25	1.25	1.25	1.25
d7-N-MeFOSE-M	13PF OA	Ave	724743	683862	792935	803090	776280		1.25	1.25	1.25	1.25	1.25	1.25
d-N-MeFOSA-M	13PF OA	Ave	6031799	6475956	528614	595309	566057		1.25	1.25	1.25	1.25	1.25	1.25
d9-N-EtFOSE-M	13PF OA	Ave	5892161	5995500	791757	809270	783063		1.25	1.25	1.25	1.25	1.25	1.25
		Ave	748523	813503	698997				1.25	1.25	1.25	1.25	1.25	1.25
		Ave	723771	694443					1.25	1.25	1.25	1.25	1.25	1.25
		Ave	499646	564600					1.25	1.25	1.25	1.25	1.25	1.25
		Ave	520919	534306					1.25	1.25	1.25	1.25	1.25	1.25
		Ave	737451	811853					1.25	1.25	1.25	1.25	1.25	1.25
		Ave	736824	698997					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 Knoxville Job No.: 140-25860-1 Analy Batch No.: 57741

SDG No.: \_\_\_\_\_

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

Calibration Start Date: 01/09/2022 10:35 Calibration End Date: 01/09/2022 11:28 Calibration ID: 3496

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	
d-N-EtFOA-M	13PF OA	Ave	418161	471424	457457	475911	450709	1.25	1.25	1.25	1.25	1.25	1.25
13C2 PFTeDA	13PF OA	Ave	442829	431073	5107852	5150989	4899401	1.25	1.25	1.25	1.25	1.25	1.25
13C2 PFHxDA	13PF OA	Ave	4681083	4423066	3400742	3410021	3338421	1.25	1.25	1.25	1.25	1.25	1.25
13C8 PFOA		AveI D	3181783	3121615	5133842	5234610	4810294	1.25	1.25	1.25	1.25	1.25	1.25
13C8 PFOS		AveI D	4428641	4086595	633403	657687	631203	1.25	1.25	1.25	1.25	1.25	1.25
			581119	619419				1.20	1.20	1.20	1.20	1.20	1.20
			582576	593950				1.20	1.20				

Curve Type Legend  
Ave = Average ISTD  
AveID = Average isotope dilution  
L2ID = Linear 1/conc^2 IsoDil  
Q2ID = Quadratic 1/conc^2 IsoDil  
QuaIF = Quadratic ISO forced zero

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_006.d  
 Lims ID: IC 1  
 Client ID:  
 Sample Type: IC Calib Level: 1  
 Inject. Date: 09-Jan-2022 10:35:55 ALS Bottle#: 6 Worklist Smp#: 6  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022186-006 ic 1  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 12:31:39 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1686

First Level Reviewer: cochranj Date: 09-Jan-2022 11:17:04

Ratio Calibration: Average of Initial Calibration

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	2.784	0.006	0.678	5616269	1.24	99.6	14113	
2 Perfluorobutanoic acid	212.90 > 169.00	2.795	2.785	0.010	1.002	83845	0.0238	95.2	24.7	
4 Perfluoropentanoic acid	262.90 > 219.00	3.098	3.093	0.005	1.000	81068	0.0242	96.9	28.9	
D 3 13C5 PFPeA	267.90 > 223.00	3.098	3.093	0.005	0.753	4394817	1.25	100	10375	
D 6 13C3 PFBS	301.90 > 80.00	3.115	3.109	0.006	0.757	2602922	1.11	95.8	10850	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.115	3.109	0.006	1.000	51964	0.0212	Target=2.68	95.7	328
	298.90 > 99.00	3.115	3.109	0.006	1.000	19269		2.70(1.34-4.02)	95.7	116
D 8 M2-4:2 FTS	329.00 > 81.00	3.402	3.393	0.009	0.827	842014	1.17	100	1528	
7 4:2 FTS	327.00 > 307.00	3.402	3.393	0.009	1.000	36412	0.0224	96.0	676	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.432	3.422	0.010	1.102	48418	0.0223	Target=3.48	94.9	186
	349.00 > 99.00	3.432	3.422	0.010	1.102	14836		3.26(1.74-5.22)	94.9	202
10 Perfluorohexanoic acid	313.00 > 269.00	3.432	3.423	0.009	1.000	89942	0.0272	Target=12.57	109	45.5
	313.00 > 119.00	3.432	3.423	0.009	1.000	6444		13.96(6.28-18.85)	109	11.6
D 9 13C2 PFHxA	315.00 > 270.00	3.432	3.423	0.009	0.834	4759129	1.27	102	8430	
13 HFPO-DA	285.00 > 169.00	3.537	3.524	0.013	1.000	61665	0.0260	104	42.6	

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	3.537	3.524	0.013	0.860	2187985	1.22		97.2	4107	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.769	3.760	0.009	1.000	52407	0.0246	Target=3.48	108	319	M
399.00 > 99.00	3.769	3.760	0.009	1.000	14502		3.61(1.74-5.21)	108	107	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.769	3.761	0.008	0.916	1831227	1.17		99.3	9772	
D 14 13C4 PFHpA										
367.00 > 322.00	3.778	3.772	0.006	0.918	4573137	1.28		102	7127	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.778	3.772	0.006	1.000	91728	0.0240	Target=3.29	95.8	57.4	
363.00 > 169.00	3.778	3.772	0.006	1.000	23911		3.84(1.65-4.94)	95.8	74.0	
68 DONA										
377.00 > 251.00	3.816	3.807	0.009	0.865	131168	0.0230	Target=1.76	97.6	340	
377.00 > 85.00	3.816	3.807	0.009	0.865	73839		1.78(0.88-2.64)	97.6	116	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.098	4.092	0.006	0.929	44792	0.0216	Target=3.91	90.9	376	
449.00 > 99.00	4.098	4.092	0.006	0.929	12088		3.71(1.95-5.86)	90.9	145	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.106	4.100	0.006	0.998	4672605	1.23		98.6	7901	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.106	4.100	0.006	0.998	938909	1.29		109	3350	
19 6:2 FTS										
427.00 > 407.00	4.115	4.101	0.014	1.002	28966	0.0227		95.8	134	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.115	4.109	0.006	1.000	116093	0.0267	Target=2.61	107	70.5	
413.00 > 169.00	4.115	4.109	0.006	1.000	42740		2.72(1.30-3.91)	107	91.2	
* 22 13C2 PFOA										
415.00 > 370.00	4.115	4.109	0.006		4938728	1.25			10217	
D 21 13C4 PFOA										
417.00 > 372.00	4.115	4.109	0.006	1.000	4740402	1.28		102	8713	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.402	4.396	0.006	0.998	581119	1.21		101	3690	
D 25 13C4 PFOS										
503.00 > 80.00	4.411	4.398	0.013	1.072	2592602	1.15		96.6	3569	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.411	4.398	0.013	1.000	56603	0.0237	Target=4.37	102	208	M
499.00 > 99.00	4.411	4.398	0.013	1.000	12408		4.56(2.18-6.55)	102	66.0	M
26 Perfluorononanoic acid										
463.00 > 419.00	4.428	4.421	0.007	1.000	93408	0.0246	Target=4.48	98.2	125	
463.00 > 169.00	4.428	4.421	0.007	1.000	21543		4.34(2.24-6.72)	98.2	33.6	
D 27 13C5 PFNA										
468.00 > 423.00	4.428	4.421	0.007	1.076	6169153	1.27		101	10654	
63 9CIFOS										
531.00 > 351.00	4.567	4.558	0.009	1.035	95700	0.0229		98.3	534	

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	4.689	4.682	0.007	1.063	47815	0.0226	Target=3.84	94.2	237	
549.00 > 99.00	4.689	4.682	0.007	1.063	13684		3.49(1.92-5.77)	94.2	170	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.706	4.700	0.006	1.000	72012	0.0241		96.3	247	
D 34 13C8 FOSA										
506.00 > 78.00	4.706	4.700	0.006	1.144	3954372	1.30		104	3111	
D 32 13C2 PFDA										
515.00 > 470.00	4.715	4.709	0.006	1.146	6130663	1.30		104	10173	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.715	4.709	0.006	1.000	125922	0.0266	Target=11.50	106	149	
513.00 > 169.00	4.715	4.709	0.006	1.000	12180		10.34(5.75-17.25)	106	39.6	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.732	4.721	0.011	1.150	1037522	1.27		106	1665	
31 8:2 FTS										
527.00 > 507.00	4.732	4.721	0.011	1.000	28696	0.0234		97.7	203	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.861	4.854	0.007	1.181	665125	1.20		96.1	3084	
36 NMeFOSAA										
570.00 > 419.00	4.870	4.858	0.012	1.002	13790	0.0267		107	41.8	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.949	4.942	0.007	1.122	42064	0.0236	Target=3.69	98.1	214	
599.00 > 99.00	4.958	4.942	0.016	1.124	12999		3.24(1.84-5.53)	98.1	117	
D 39 13C2 PFUnA										
565.00 > 520.00	4.984	4.973	0.011	1.211	5903076	1.26		101	12158	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.984	4.973	0.011	1.000	107754	0.0235	Target=8.29	94.1	199	
563.00 > 169.00	4.984	4.973	0.011	1.000	13535		7.96(4.14-12.43)	94.1	72.9	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.993	4.989	0.004	1.213	776364	1.28		102	3556	
40 NEtFOSA										
584.00 > 419.00	5.002	4.995	0.007	1.002	14206	0.0233		93.0	93.6	M
57 11C1FOS										
631.00 > 451.00	5.082	5.075	0.007	1.152	81152	0.0224		95.0	411	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.214	5.207	0.007	1.000	124002	0.0246	Target=6.82	98.5	132	
613.00 > 169.00	5.214	5.207	0.007	1.000	18213		6.81(3.41-10.23)	98.5	44.3	
D 43 13C2 PFDoA										
615.00 > 570.00	5.214	5.207	0.007	1.267	6031799	1.22		97.9	14107	
50 10:2 FTS										
627.00 > 607.00	5.240	5.231	0.009	1.107	44558	0.0226		93.7	336	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.284	5.279	0.005	1.284	748523	1.26		101	764	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.293	5.281	0.011	1.286	499646	1.18		94.7	52.2	
61 NMeFOSA										
512.00 > 169.00	5.293	5.286	0.006	1.000	11620	0.0267		107	68.5	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
49 N-MeFOSE-M										M
616.00 > 59.00	5.301	5.290	0.011	1.003	13964	0.0237		94.9	23.7	M
54 PFDoS										
699.00 > 80.00	5.394	5.383	0.011	1.223	46424	0.0233	Target=4.36	96.5	206	
699.00 > 99.00	5.394	5.383	0.011	1.223	9987		4.65(2.18-6.55)	96.5	88.9	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.425	5.417	0.008	1.041	92545	0.0231	Target=6.19	92.5	131	
663.00 > 169.00	5.425	5.417	0.008	1.041	16690		5.54(3.09-9.28)	92.5	93.0	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.445	5.437	0.008	1.323	737451	1.24		99.3	376	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.455	5.450	0.005	1.326	418161	1.20		95.9	680	
62 N-EtFOSE-M										
630.00 > 59.00	5.455	5.450	0.005	1.002	19767	0.0252		101	30.4	
56 N-EtFOSA-M										
526.00 > 169.00	5.464	5.457	0.007	1.002	9667	0.0242		96.7	73.1	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.609	5.600	0.009	1.363	4691070	1.25		99.9	7755	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.609	5.600	0.009	1.000	12921	0.0256	Target=1.09	102	53.8	
713.00 > 219.00	5.609	5.600	0.009	1.000	10732		1.20(0.54-1.63)	102	66.6	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.913	5.907	0.006	1.437	3064643	1.20		96.3	5053	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.913	5.907	0.006	1.000	91408	0.0247	Target=8.22	98.7	260	
813.00 > 169.00	5.913	5.907	0.006	1.000	10755		8.50(4.11-12.33)	98.7	22.8	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.170	6.162	0.008	1.043	57448	0.0238	Target=11.60	95.2	200	
913.00 > 169.00	6.170	6.162	0.008	1.043	4691		12.25(5.80-17.40)	95.2	28.0	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L1PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_006.d

Injection Date: 09-Jan-2022 10:35:55

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

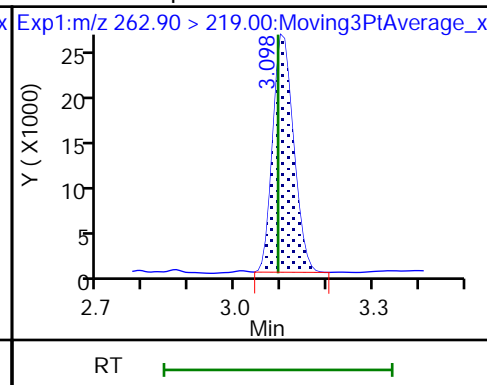
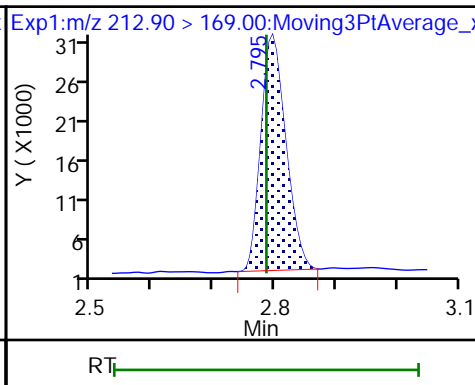
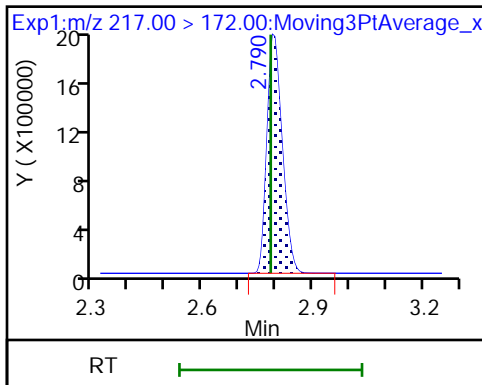
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

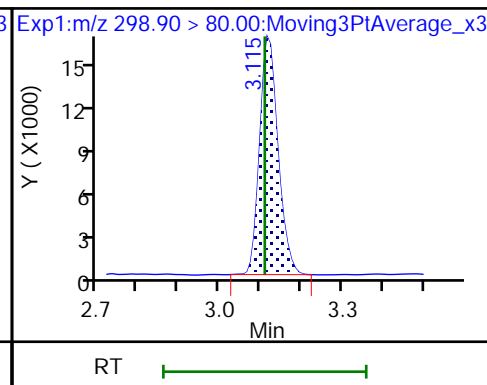
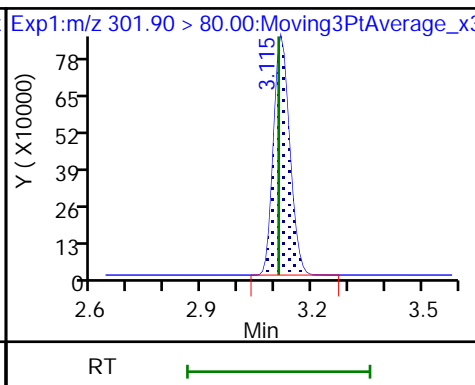
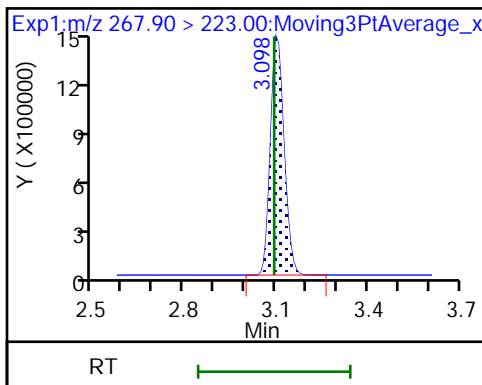
4 Perfluoropentanoic acid



D 3 13C5 PFPeA

D 6 13C3 PFBS

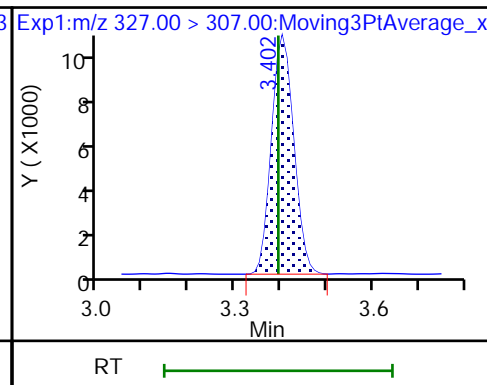
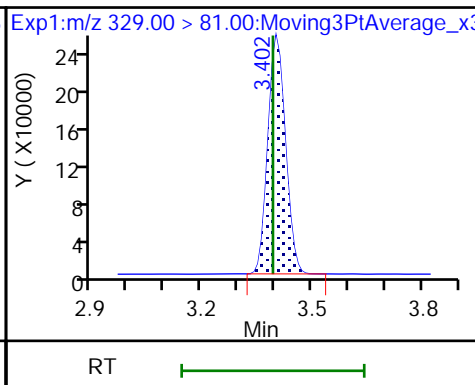
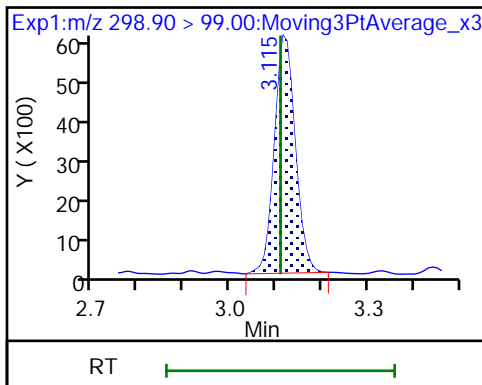
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

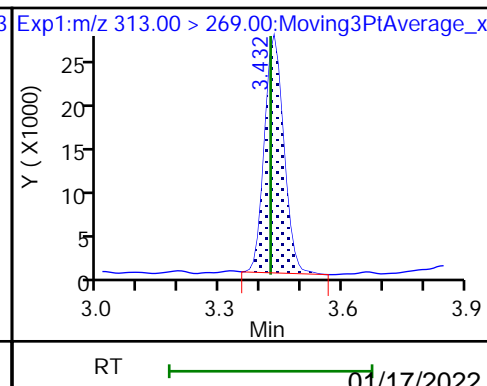
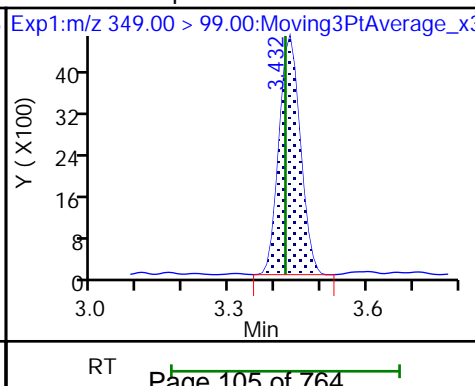
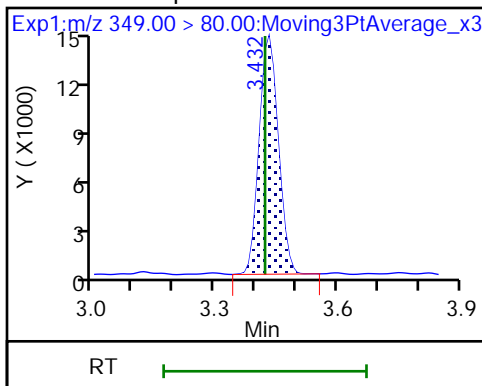
7 4:2 FTS

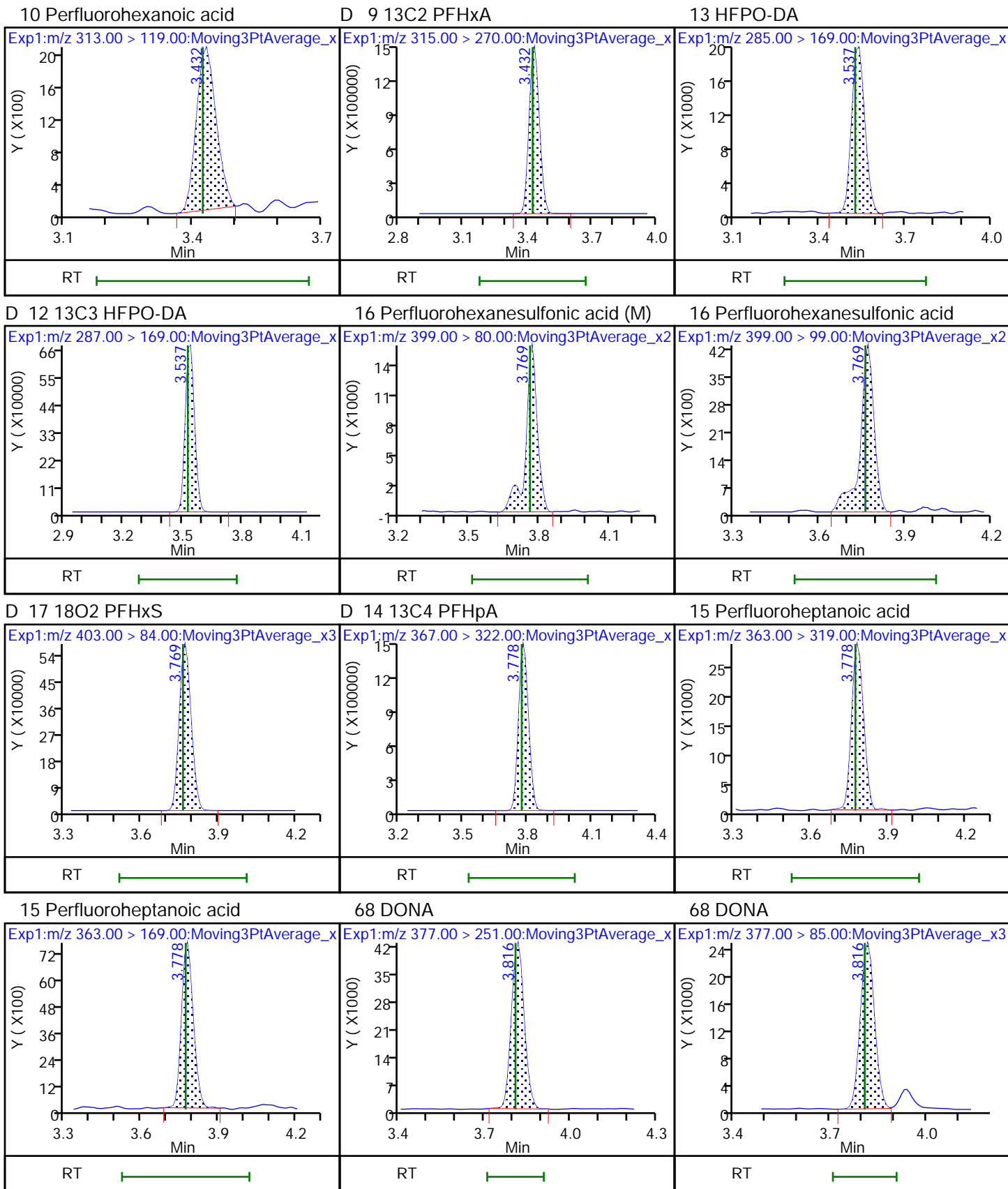


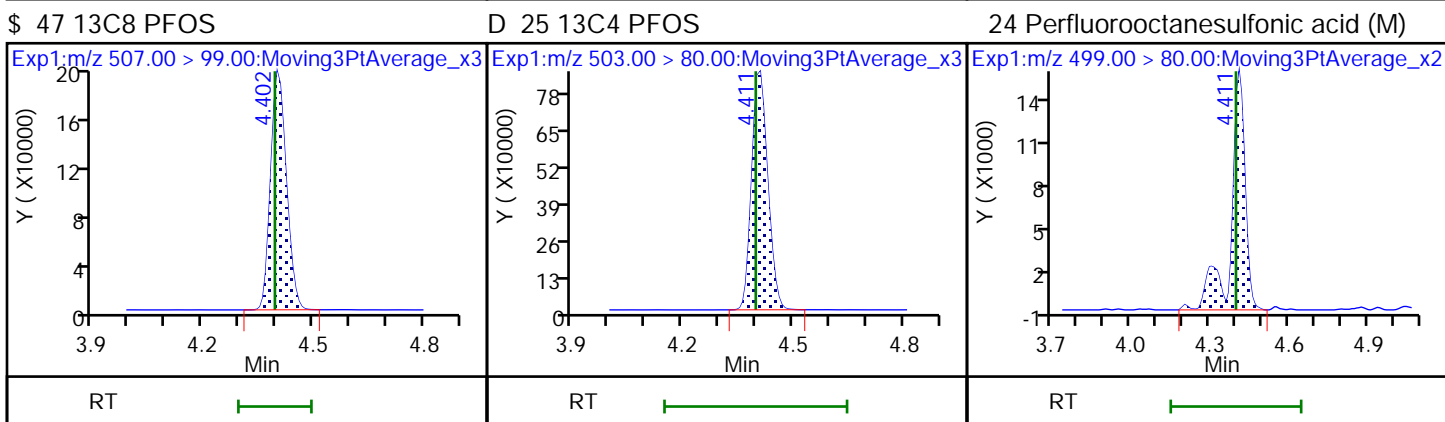
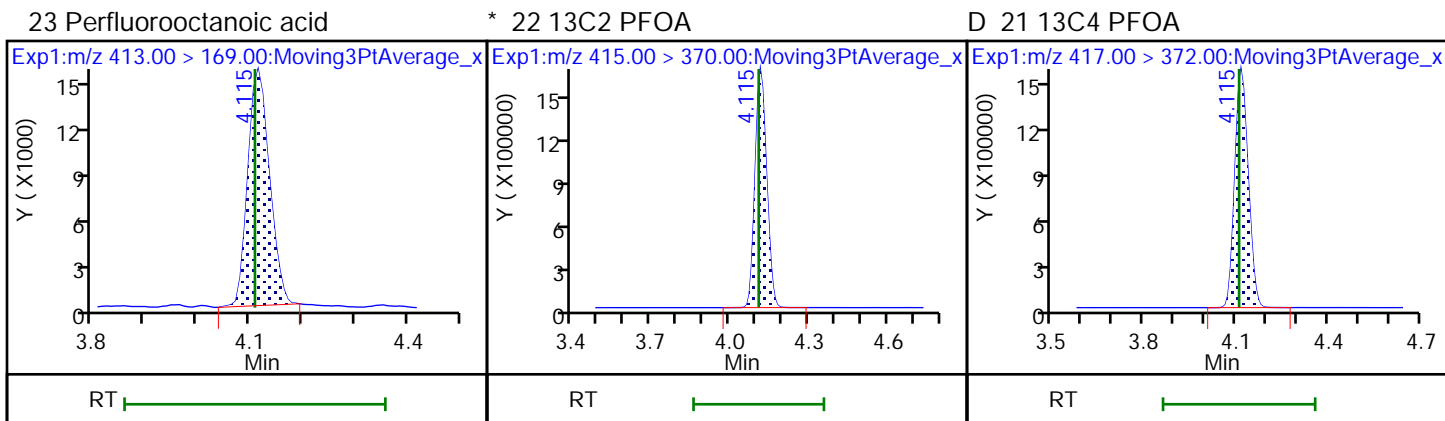
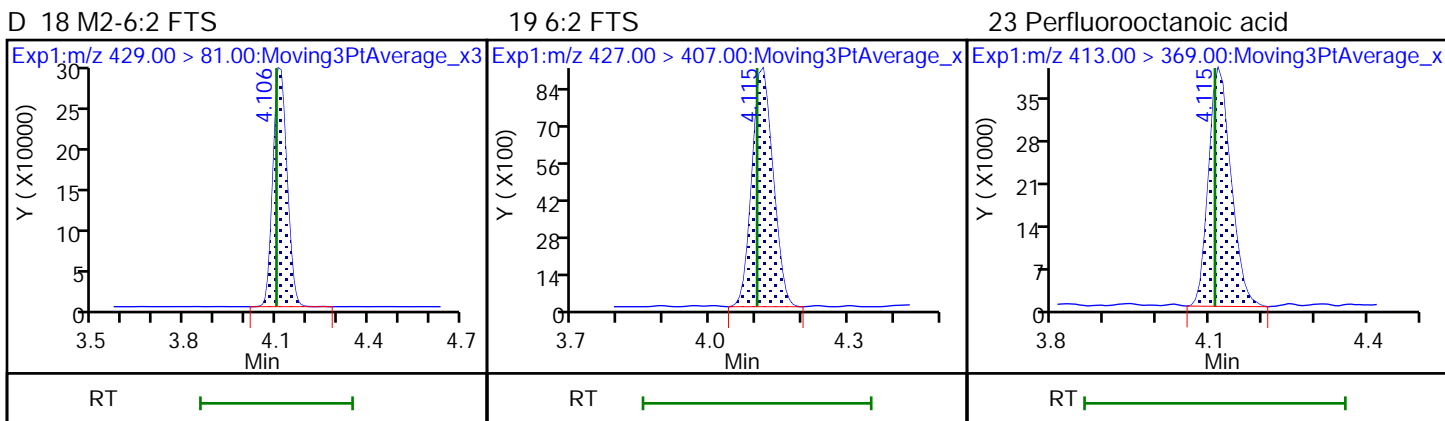
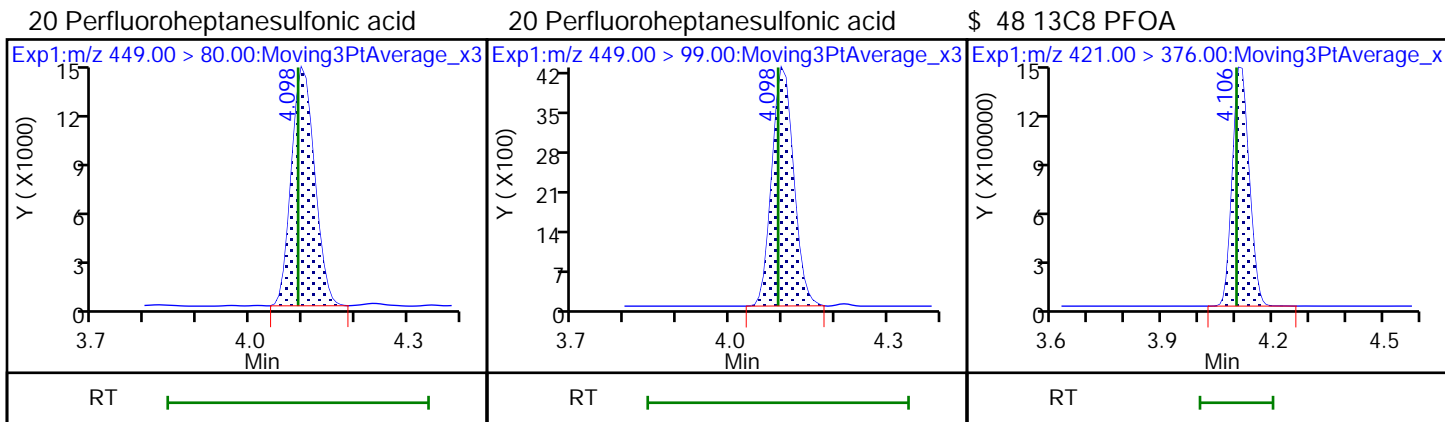
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

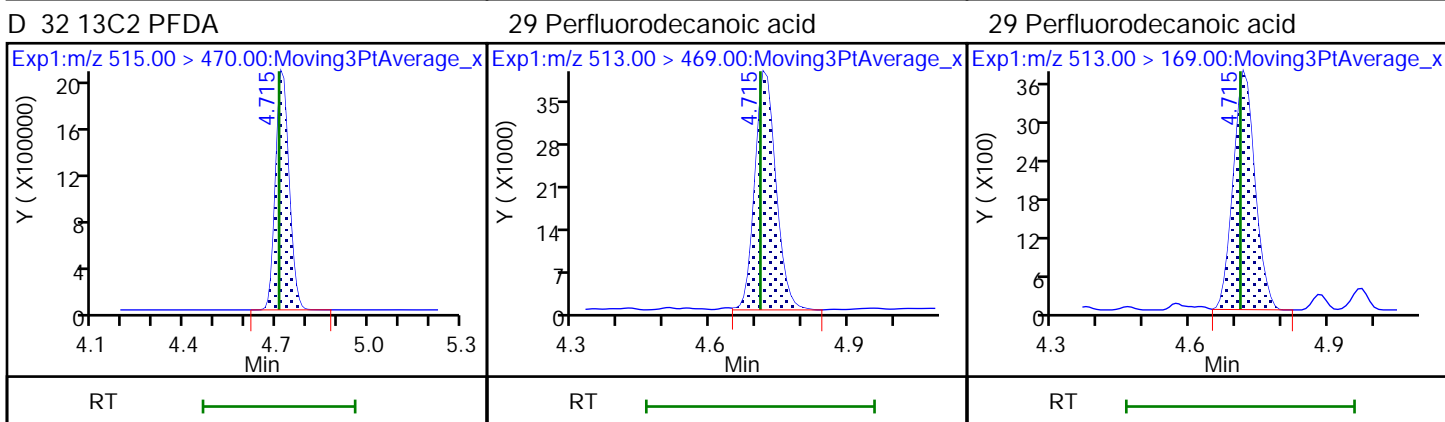
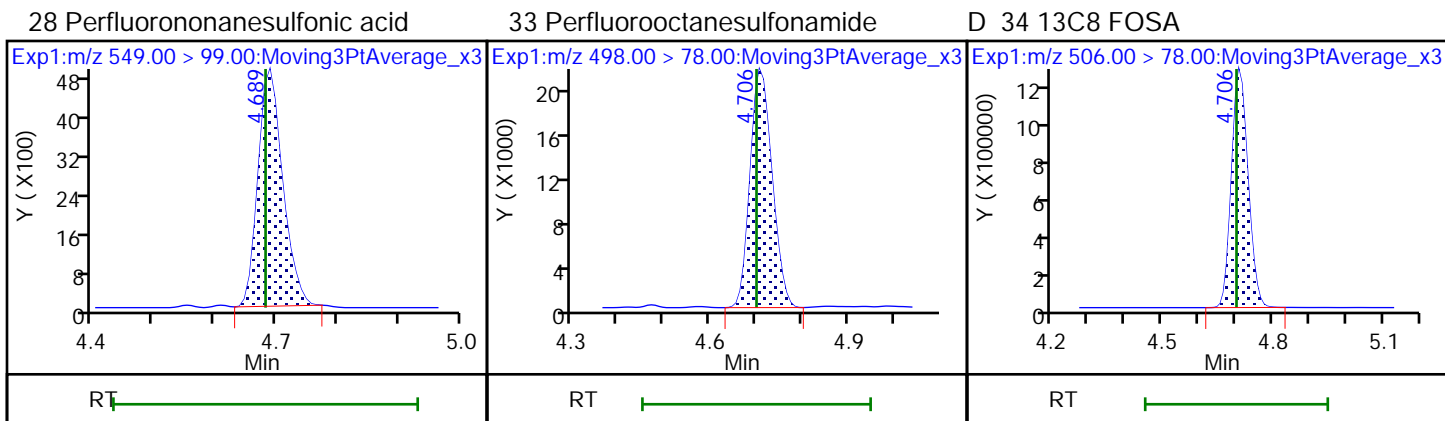
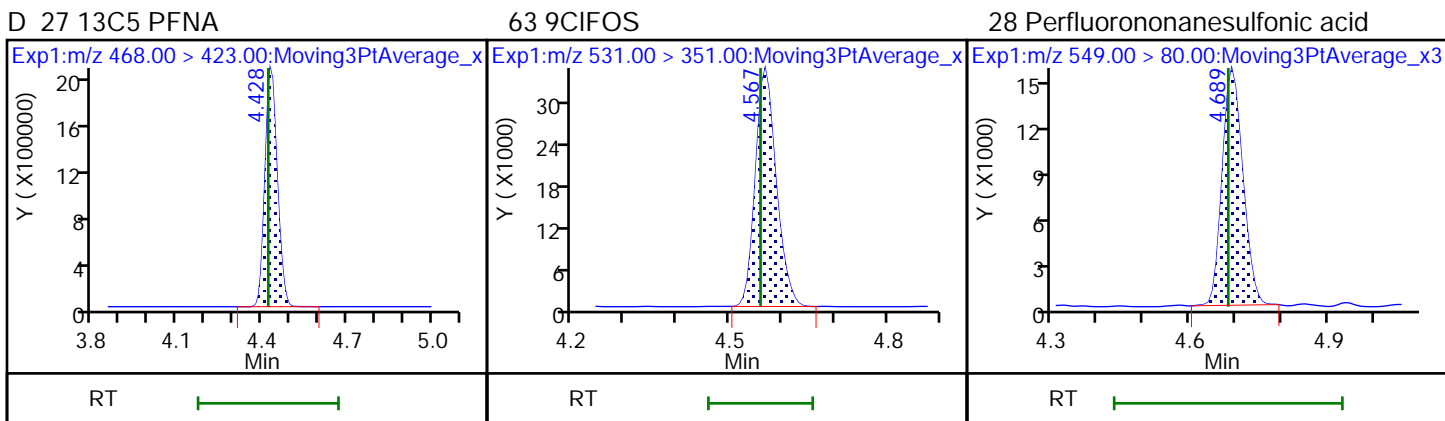
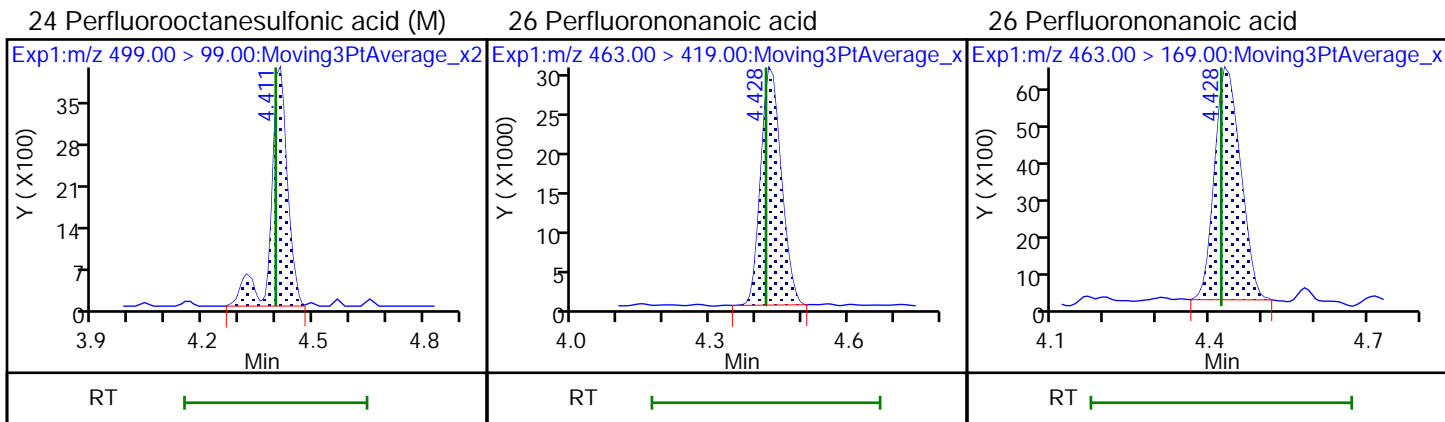
10 Perfluorohexanoic acid







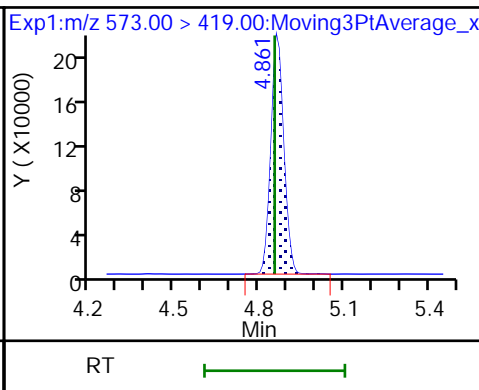
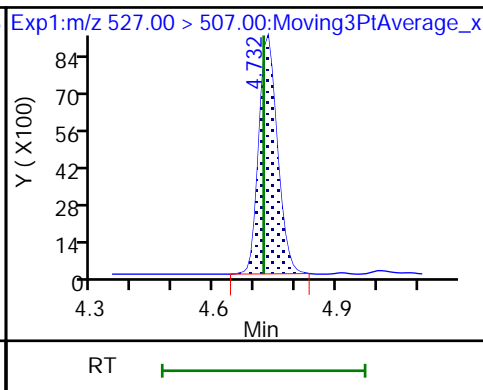
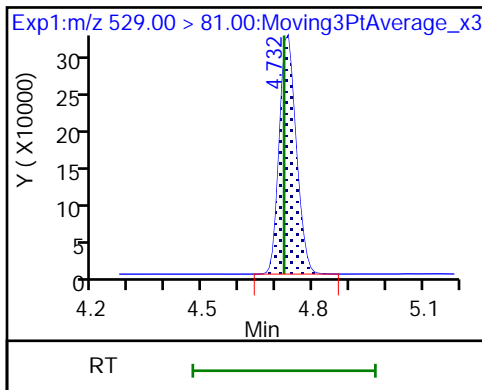




D 30 M2-8:2 FTS

31 8:2 FTS

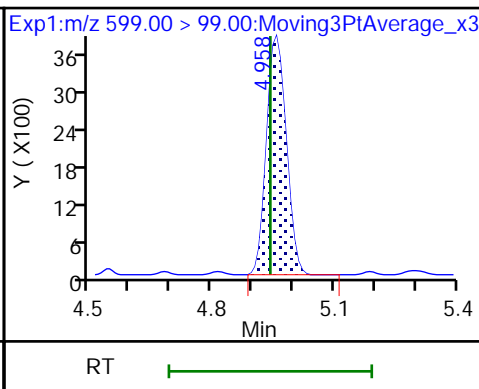
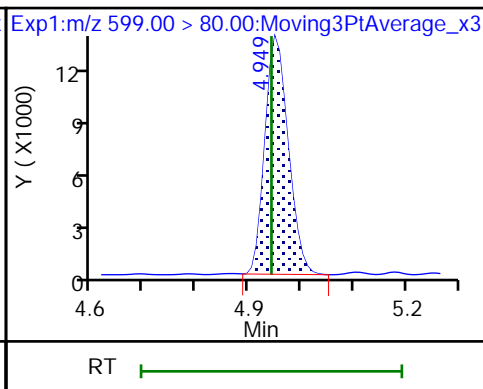
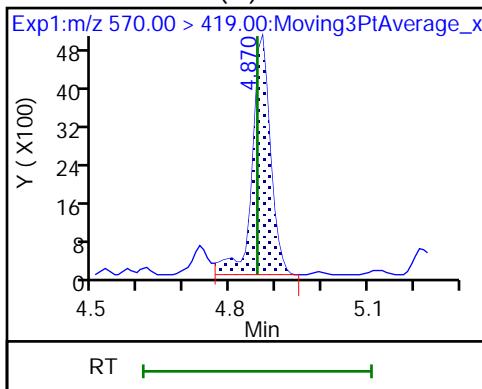
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

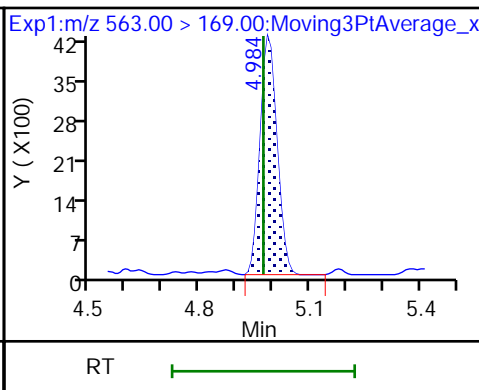
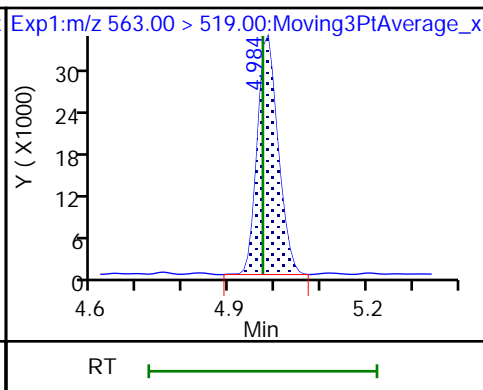
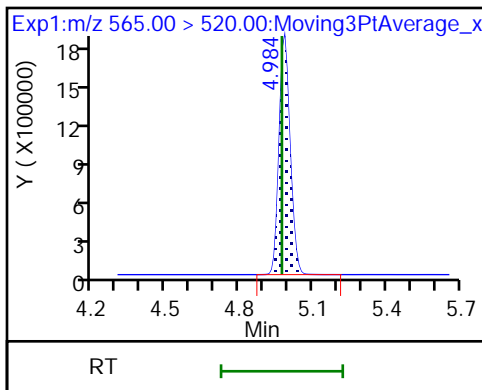
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

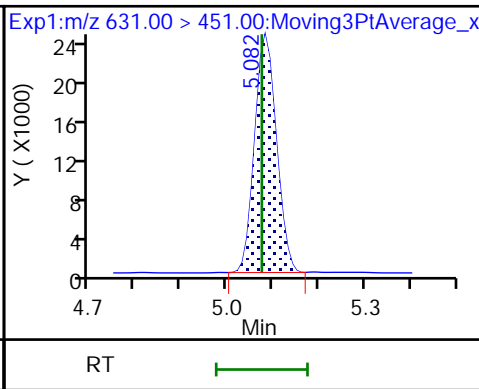
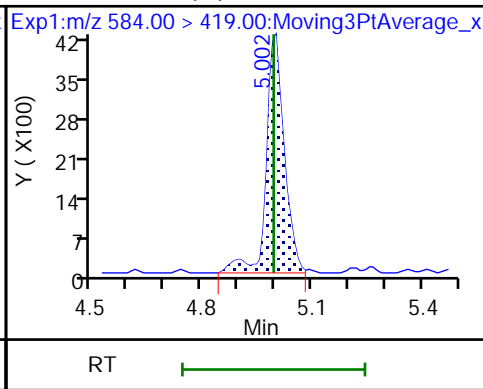
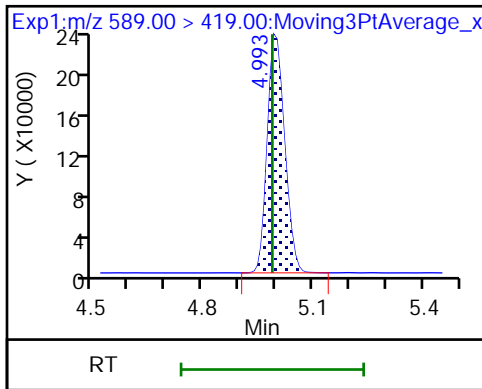
38 Perfluoroundecanoic acid

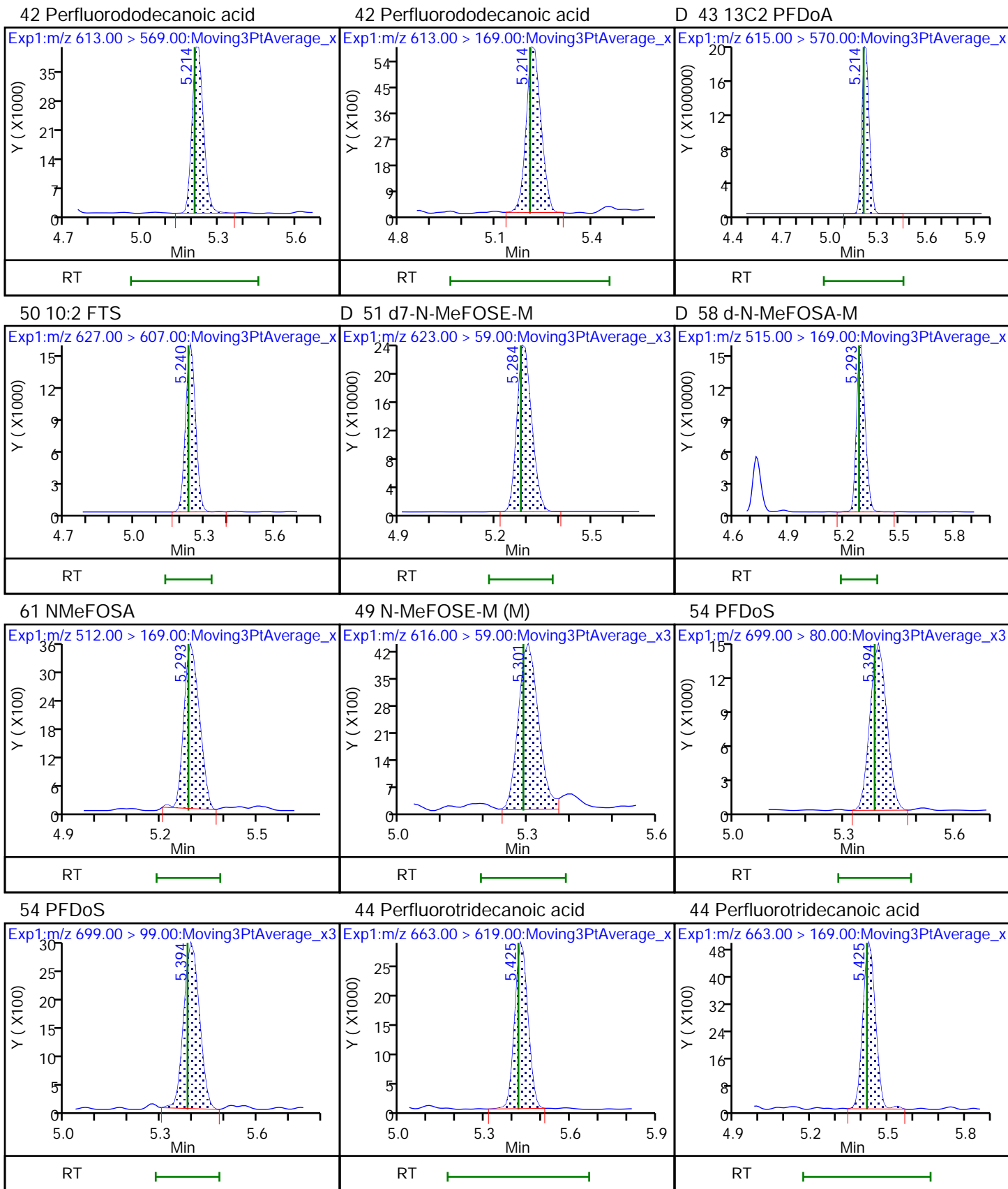


D 41 d5-NEtFOSAA

40 NEtFOSA (M)

57 11CIFOS

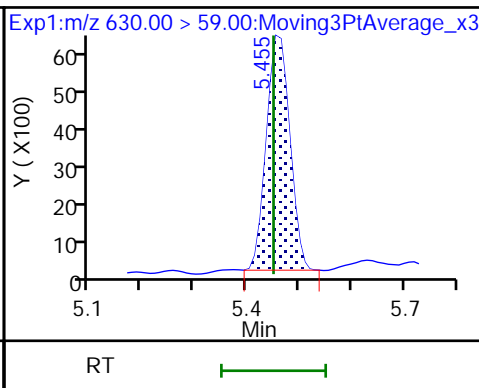
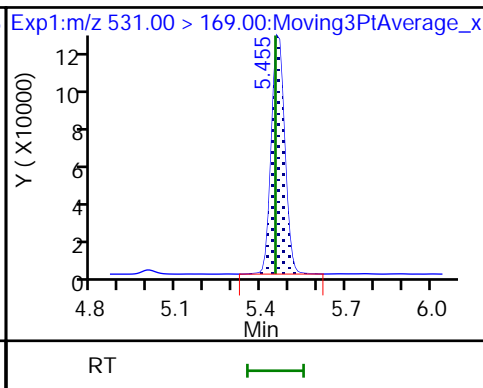
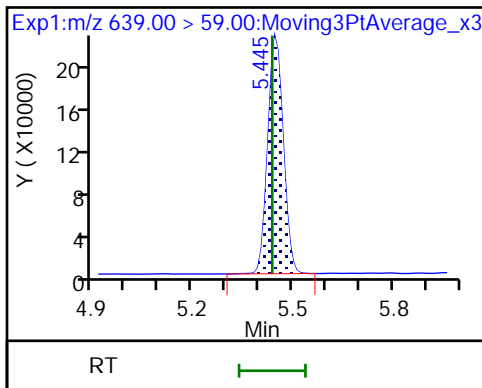




D 53 d9-N-EtFOSE-M

D 52 d-N-EtFOSA-M

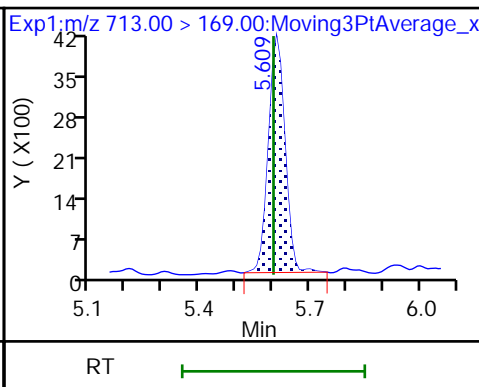
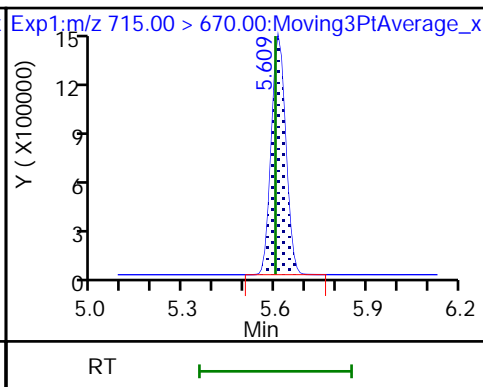
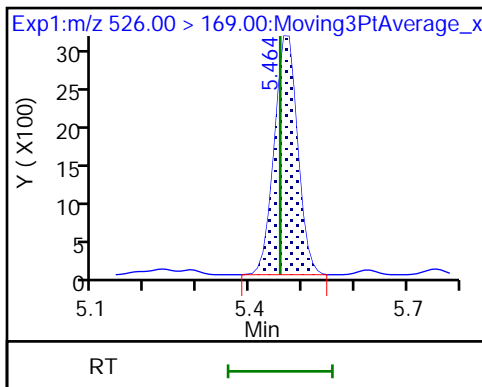
62 N-EtFOSE-M



56 N-EtFOSA-M

D 46 13C2 PFTeDA

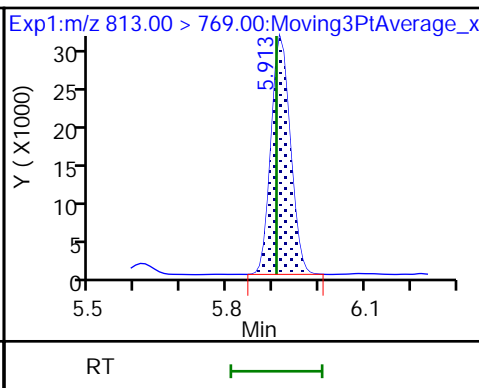
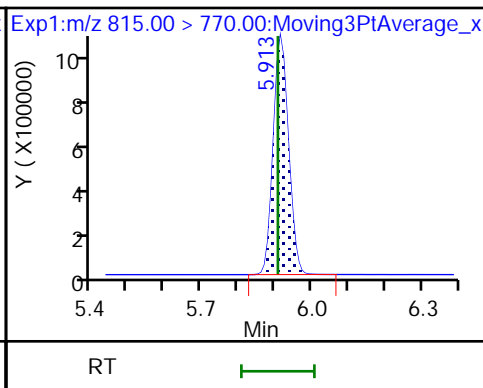
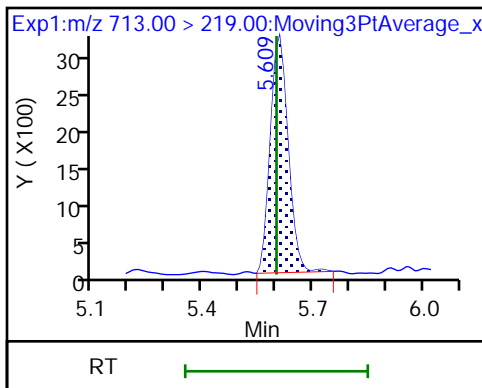
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

D 59 13C2 PFHxDA

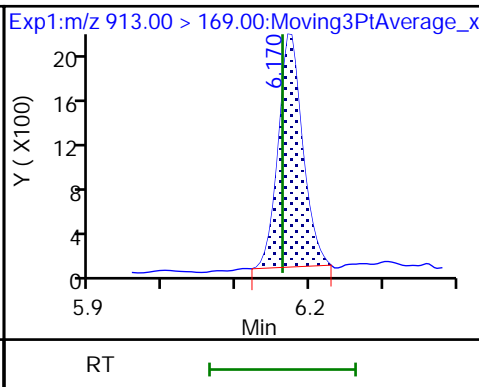
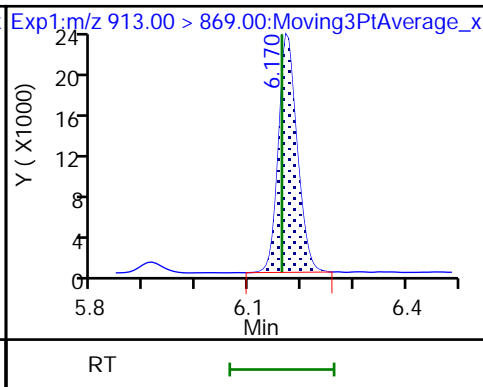
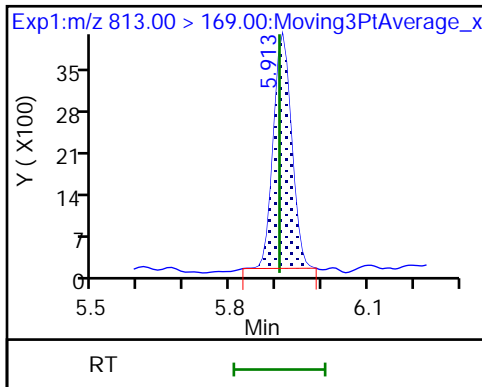
55 Perfluorohexadecanoic acid



55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid





Eurofins TestAmerica, Knoxville

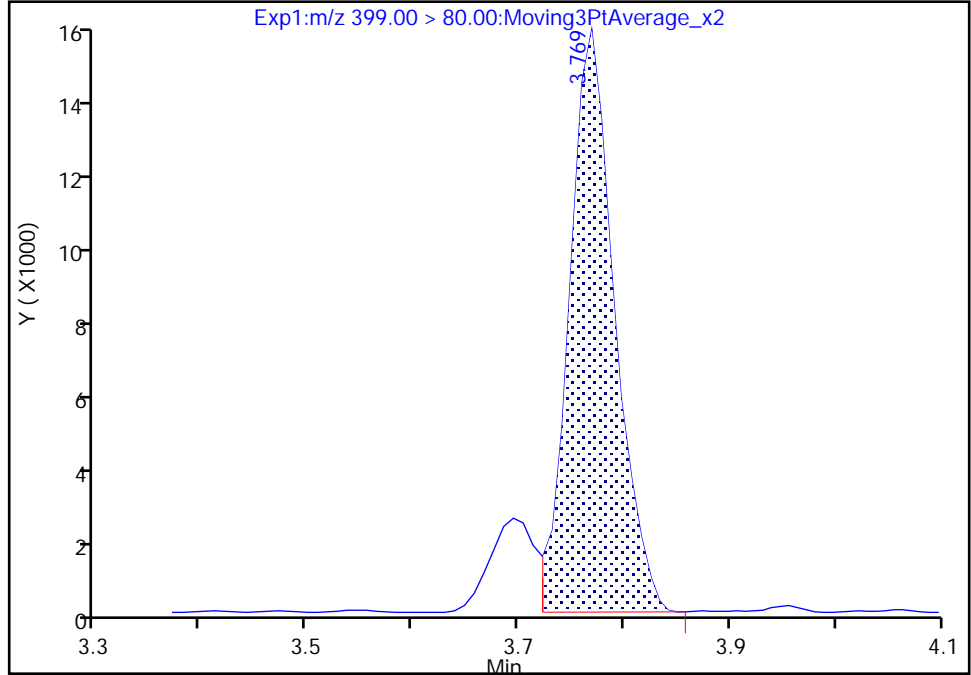
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_006.d  
Injection Date: 09-Jan-2022 10:35:55 Instrument ID: LCA  
Lims ID: IC 1  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

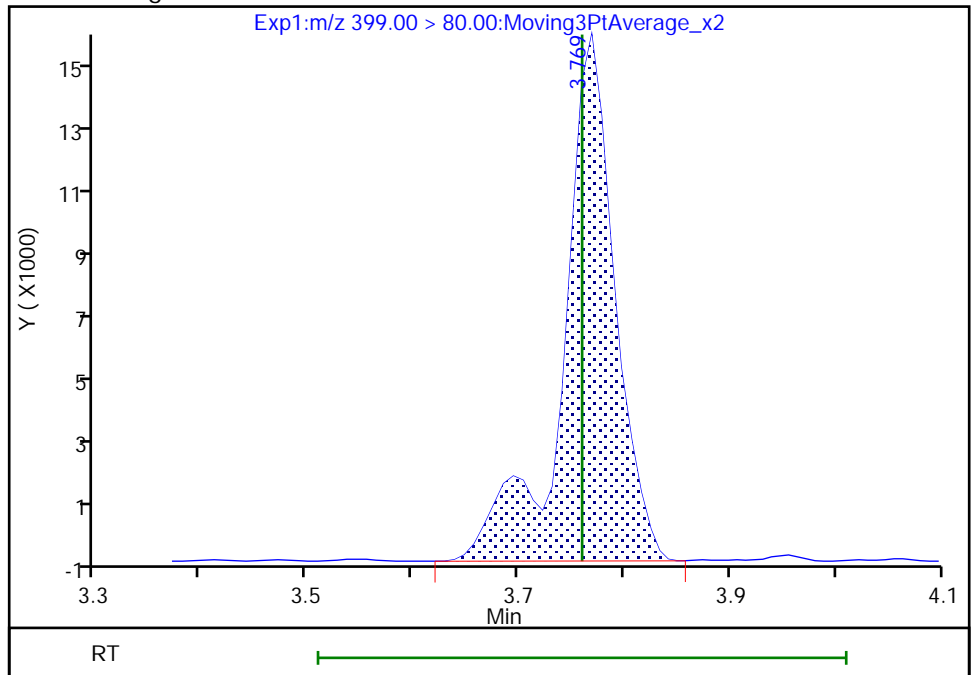
RT: 3.77  
Area: 45171  
Amount: 0.022981  
Amount Units: ng/ml

Processing Integration Results



RT: 3.77  
Area: 52407  
Amount: 0.024573  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:15:43  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

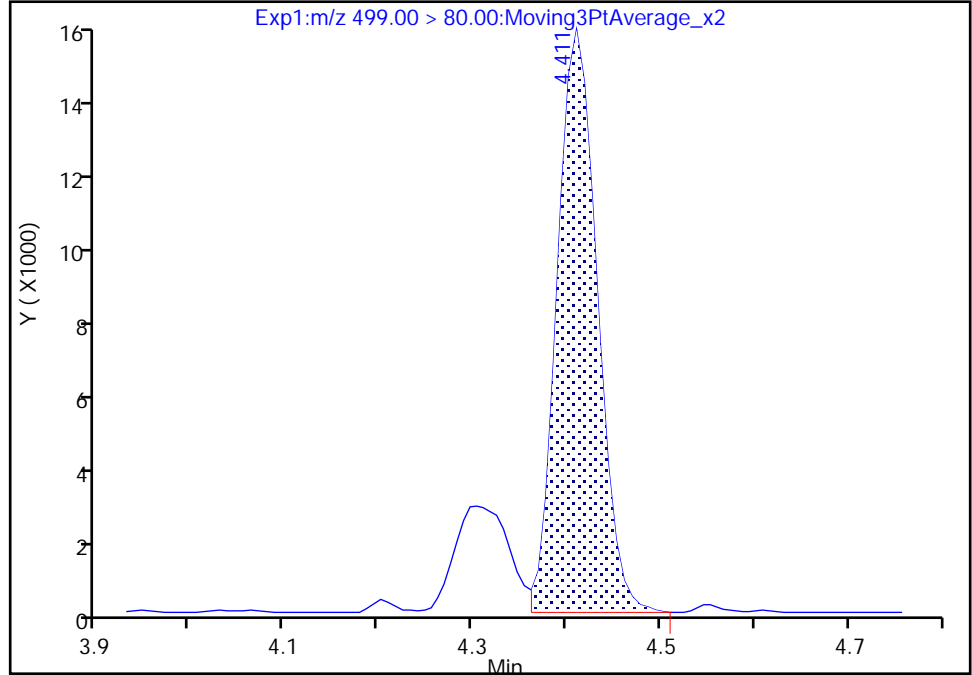
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_006.d  
Injection Date: 09-Jan-2022 10:35:55 Instrument ID: LCA  
Lims ID: IC 1  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

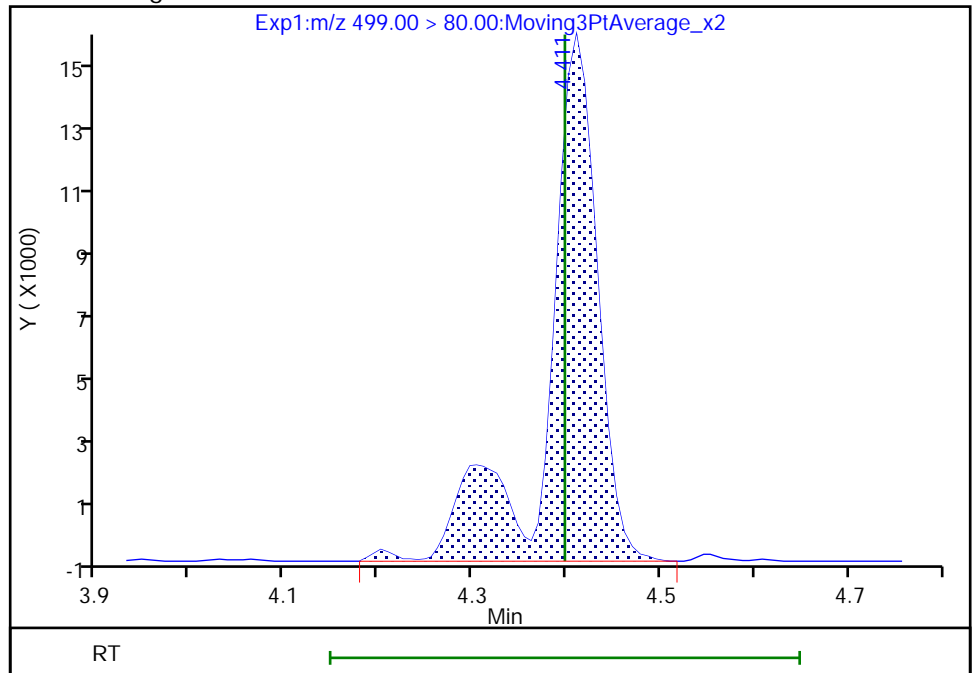
RT: 4.41  
Area: 44939  
Amount: 0.024927  
Amount Units: ng/ml

Processing Integration Results



RT: 4.41  
Area: 56603  
Amount: 0.023744  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:15:59  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

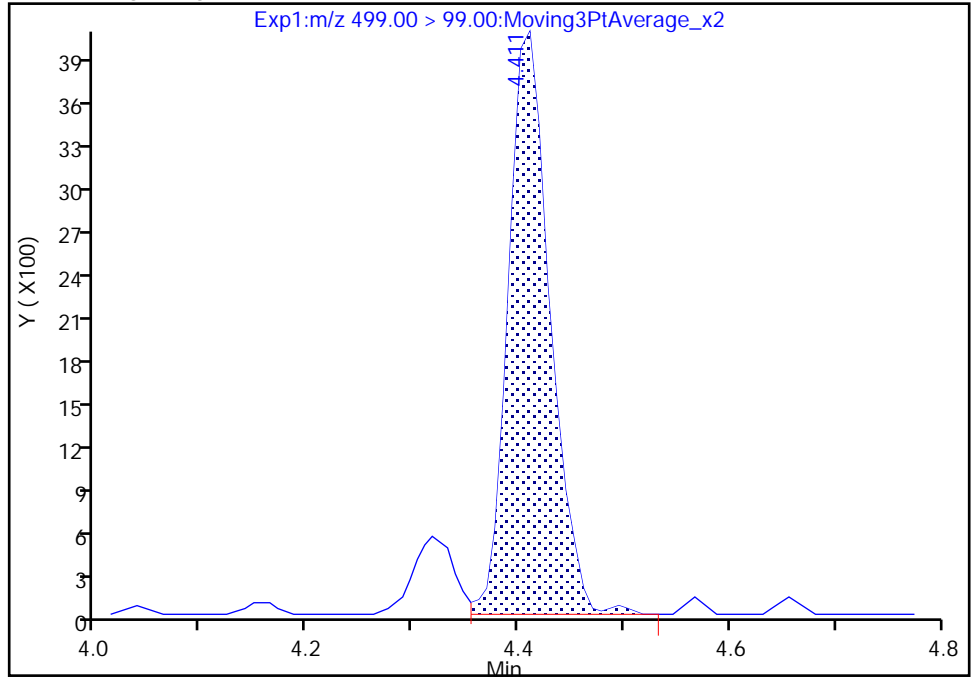
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_006.d  
Injection Date: 09-Jan-2022 10:35:55 Instrument ID: LCA  
Lims ID: IC 1  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

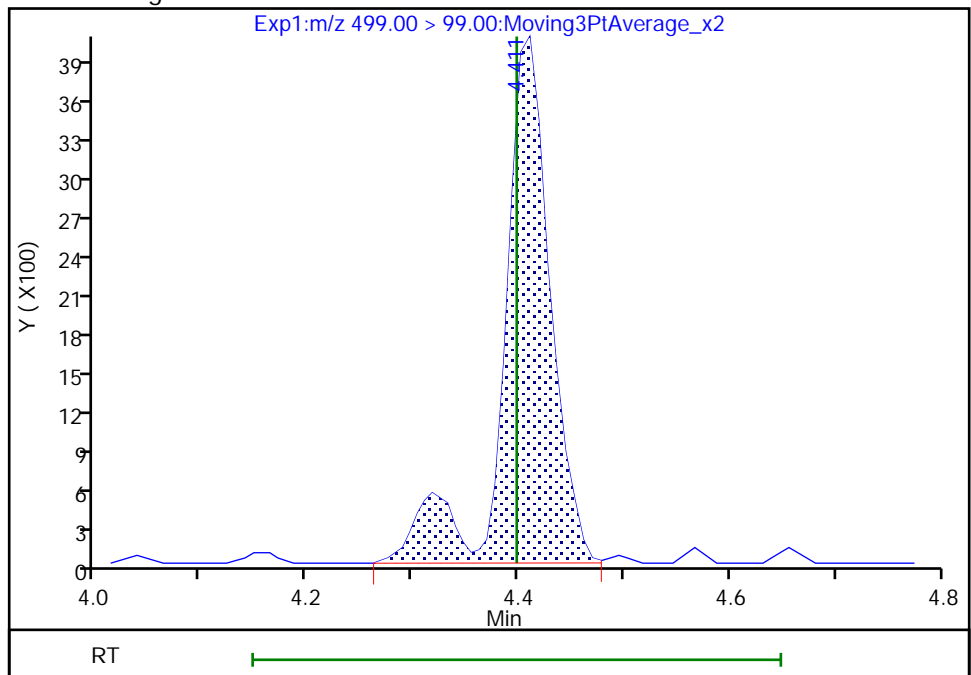
RT: 4.41  
Area: 11071  
Amount: 0.024927  
Amount Units: ng/ml

Processing Integration Results



RT: 4.41  
Area: 12408  
Amount: 0.023744  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:16:09

Audit Action: Manually Integrated

Audit Reason: Baseline



Eurofins TestAmerica, Knoxville

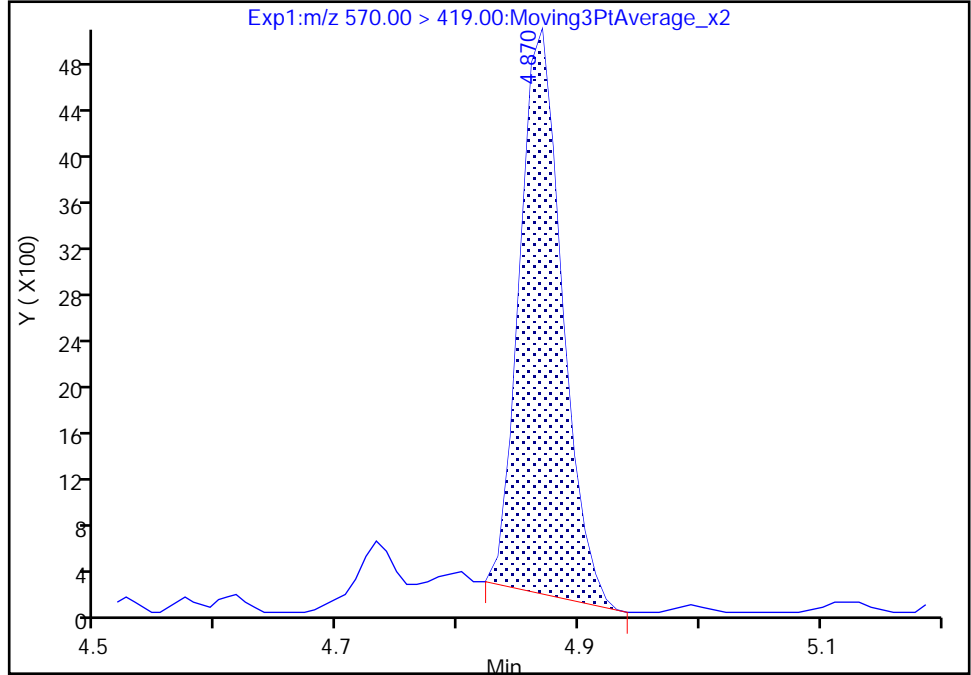
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_006.d  
Injection Date: 09-Jan-2022 10:35:55 Instrument ID: LCA  
Lims ID: IC 1  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

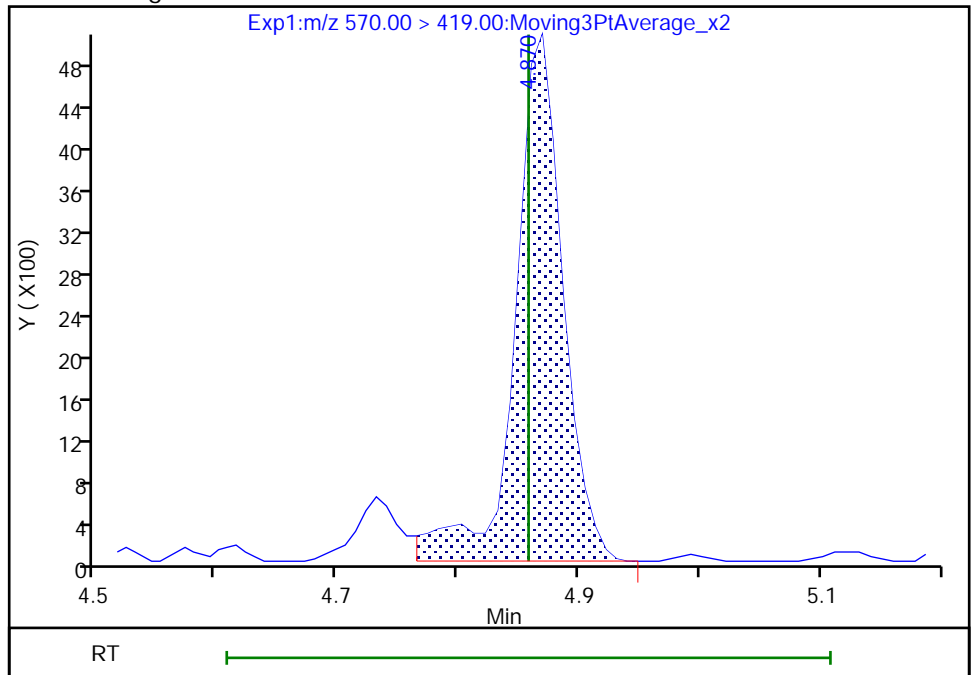
RT: 4.87  
Area: 11877  
Amount: 0.025995  
Amount Units: ng/ml

Processing Integration Results



RT: 4.87  
Area: 13790  
Amount: 0.026707  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:44:23  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

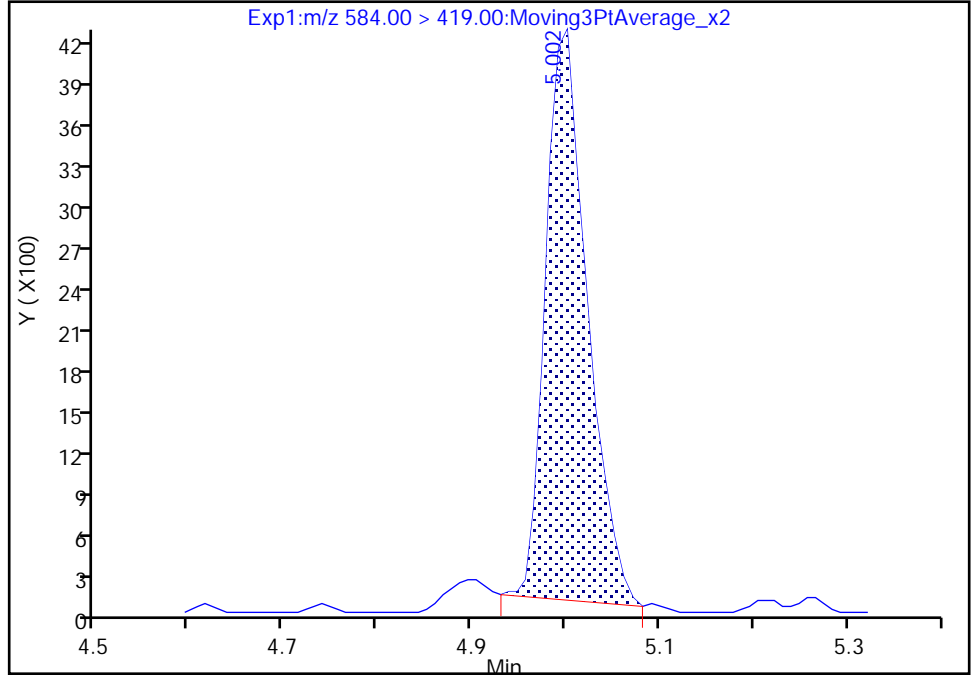
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_006.d  
Injection Date: 09-Jan-2022 10:35:55 Instrument ID: LCA  
Lims ID: IC 1  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

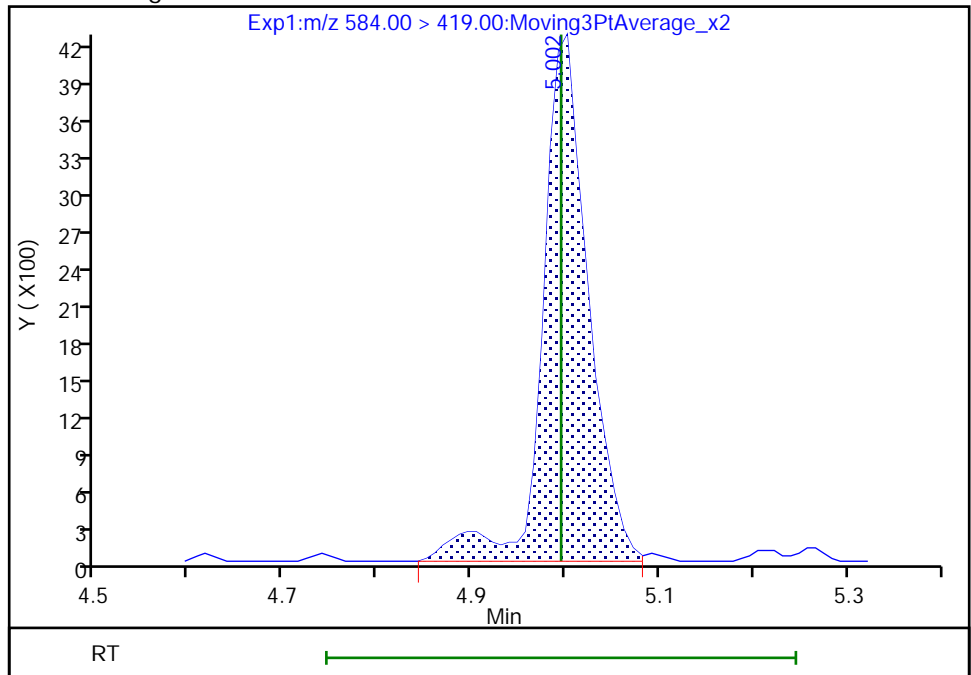
RT: 5.00  
Area: 12653  
Amount: 0.023369  
Amount Units: ng/ml

Processing Integration Results



RT: 5.00  
Area: 14206  
Amount: 0.023255  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:16:34  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

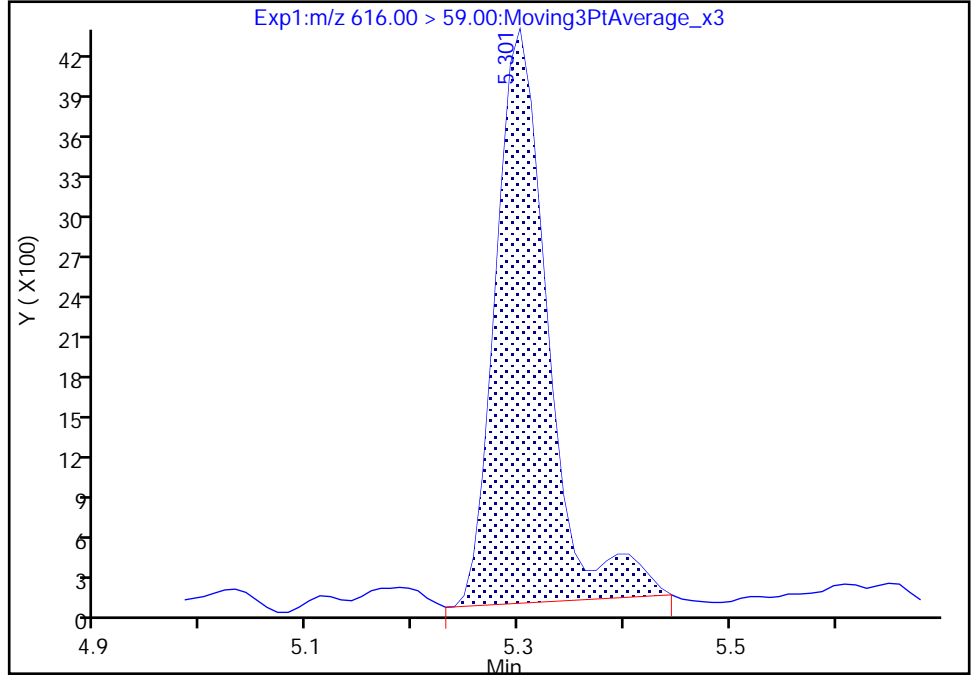
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_006.d  
Injection Date: 09-Jan-2022 10:35:55 Instrument ID: LCA  
Lims ID: IC 1  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

49 N-MeFOSE-M, CAS: 24448-09-7

Signal: 1

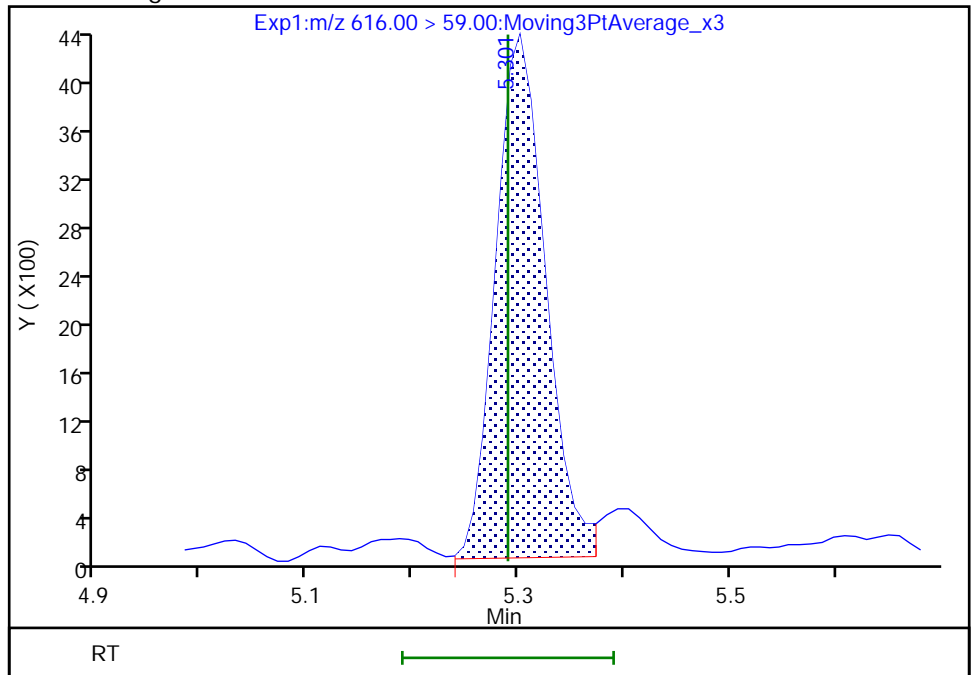
RT: 5.30  
Area: 14526  
Amount: 0.023970  
Amount Units: ng/ml

Processing Integration Results



RT: 5.30  
Area: 13964  
Amount: 0.023737  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:16:53  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_007.d  
 Lims ID: IC 2  
 Client ID:  
 Sample Type: IC Calib Level: 2  
 Inject. Date: 09-Jan-2022 10:44:40 ALS Bottle#: 7 Worklist Smp#: 7  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022186-007 ic 2  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 12:31:42 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1686

First Level Reviewer: cochranj Date: 09-Jan-2022 11:19:05

Ratio Calibration: Average of Initial Calibration

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	2.784	2.784	0.0	0.678	6088323	1.21	96.5	13202	
2 Perfluorobutanoic acid	212.90 > 169.00	2.784	2.785	-0.001	1.000	186844	0.0489	97.8	49.5	
4 Perfluoropentanoic acid	262.90 > 219.00	3.090	3.093	-0.003	1.000	184013	0.0497	99.3	69.9	
D 3 13C5 PFPeA	267.90 > 223.00	3.090	3.093	-0.003	0.753	4866698	1.24	99.4	8891	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.106	3.109	-0.003	1.000	119614	0.0430	Target=2.68	97.2	801
	298.90 > 99.00	3.106	3.109	-0.003	1.000	47019		2.54(1.34-4.02)	97.2	327
D 6 13C3 PFBS	301.90 > 80.00	3.106	3.109	-0.003	0.757	2950306	1.13	97.1	15361	
7 4:2 FTS	327.00 > 307.00	3.391	3.393	-0.002	1.000	87692	0.0449	96.1	1783	
D 8 M2-4:2 FTS	329.00 > 81.00	3.391	3.393	-0.002	0.826	1013216	1.26	108	1980	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.422	3.422	0.0	1.101	111364	0.0452	Target=3.48	96.3	413
	349.00 > 99.00	3.422	3.422	0.0	1.101	31652		3.52(1.74-5.22)	96.3	573
10 Perfluorohexanoic acid	313.00 > 269.00	3.422	3.423	-0.001	1.000	180122	0.0497	Target=12.57	99.4	88.3
	313.00 > 119.00	3.422	3.423	-0.001	1.000	13728		13.12(6.28-18.85)	99.4	22.7
D 9 13C2 PFHxA	315.00 > 270.00	3.422	3.423	-0.001	0.833	5219880	1.25	99.7	9778	
13 HFPO-DA	285.00 > 169.00	3.528	3.524	0.004	1.000	128334	0.0496	99.3	94.7	

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	3.528	3.524	0.004	0.859	2389614	1.19		95.0	4174	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.760	3.760	0.0	1.000	102576	0.0431	Target=3.48	94.7	730	M
399.00 > 99.00	3.760	3.760	0.0	1.000	32312		3.17(1.74-5.21)	94.7	298	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.760	3.761	-0.001	0.916	2043270	1.17		99.1	8016	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.769	3.772	-0.003	1.000	201071	0.0480	Target=3.29	95.9	133	
363.00 > 169.00	3.769	3.772	-0.003	1.000	63937		3.14(1.65-4.94)	95.9	202	
D 14 13C4 PFHpA										
367.00 > 322.00	3.769	3.772	-0.003	0.918	5005273	1.25		99.9	7585	
68 DONA										
377.00 > 251.00	3.807	3.807	0.0	0.865	294908	0.0463	Target=1.76	98.3	741	
377.00 > 85.00	3.807	3.807	0.0	0.865	169799		1.74(0.88-2.64)	98.3	151	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.089	4.092	-0.003	0.929	114589	0.0496	Target=3.91	104	995	
449.00 > 99.00	4.089	4.092	-0.003	0.929	28210		4.06(1.95-5.86)	104	328	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.098	4.100	-0.002	0.998	5164383	1.25		99.8	10646	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.098	4.100	-0.002	0.998	1026945	1.27		107	2918	
19 6:2 FTS										
427.00 > 407.00	4.098	4.101	-0.003	1.000	76663	0.0516		109	577	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.106	4.109	-0.003	1.000	232070	0.0489	Target=2.61	97.7	163	
413.00 > 169.00	4.106	4.109	-0.003	1.000	93897		2.47(1.30-3.91)	97.7	203	
* 22 13C2 PFOA										
415.00 > 370.00	4.106	4.109	-0.003		5523449	1.25			10892	
D 21 13C4 PFOA										
417.00 > 372.00	4.106	4.109	-0.003	1.000	5175029	1.25		99.9	8458	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.393	4.396	-0.003	0.998	619419	1.15		96.4	4015	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.402	4.398	0.004	1.000	118941	0.0447	Target=4.37	96.3	399	M
499.00 > 99.00	4.402	4.398	0.004	1.000	30560		3.89(2.18-6.55)	96.3	265	M
D 25 13C4 PFOS										
503.00 > 80.00	4.402	4.398	0.004	1.072	2894864	1.15		96.5	4887	
26 Perfluorononanoic acid										
463.00 > 419.00	4.418	4.421	-0.003	1.000	222306	0.0520	Target=4.48	104	242	
463.00 > 169.00	4.418	4.421	-0.003	1.000	50374		4.41(2.24-6.72)	104	111	
D 27 13C5 PFNA										
468.00 > 423.00	4.418	4.421	-0.003	1.076	6594522	1.21		96.8	7310	
63 9CIFOS										
531.00 > 351.00	4.560	4.558	0.002	1.036	240697	0.0488		105	1084	

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	4.681	4.682	-0.001	1.063	106223	0.0450	Target=3.84	93.7	402	
549.00 > 99.00	4.681	4.682	-0.001	1.063	29964		3.55(1.92-5.77)	93.7	220	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.698	4.700	-0.002	1.000	177027	0.0533		107	651	
D 34 13C8 FOSA										
506.00 > 78.00	4.698	4.700	-0.002	1.144	4386245	1.29		103	3366	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.706	4.709	-0.003	1.000	259933	0.0505	Target=11.50	101	347	
513.00 > 169.00	4.715	4.709	0.006	1.002	19940		13.04(5.75-17.25)	101	69.0	
D 32 13C2 PFDA										
515.00 > 470.00	4.706	4.709	-0.003	1.146	6667781	1.27		101	9305	
31 8:2 FTS										
527.00 > 507.00	4.724	4.721	0.003	1.000	60773	0.0461		96.2	725	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.724	4.721	0.003	1.150	1115730	1.22		102	1446	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.852	4.854	-0.002	1.182	725830	1.17		93.8	2250	
36 NMeFOSAA										
570.00 > 419.00	4.861	4.858	0.003	1.002	22599	0.0401		80.2	63.6	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.940	4.942	-0.002	1.122	108135	0.0508	Target=3.69	105	896	
599.00 > 99.00	4.940	4.942	-0.002	1.122	28475		3.80(1.84-5.53)	105	250	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.975	4.973	0.002	1.000	263564	0.0521	Target=8.29	104	414	
563.00 > 169.00	4.975	4.973	0.002	1.000	31511		8.36(4.14-12.43)	104	210	
D 39 13C2 PFUnA										
565.00 > 520.00	4.975	4.973	0.002	1.212	6518160	1.24		99.3	9674	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.993	4.989	0.004	1.216	826795	1.22		97.4	3003	
40 NEtFOSA										
584.00 > 419.00	4.993	4.995	-0.002	1.000	37744	0.0578		116	200	M
57 11C1FOS										
631.00 > 451.00	5.072	5.075	-0.003	1.152	190074	0.0469		99.6	851	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.205	5.207	-0.002	1.000	277938	0.0519	Target=6.82	104	310	
613.00 > 169.00	5.205	5.207	-0.002	1.000	39379		7.06(3.41-10.23)	104	127	
D 43 13C2 PFDoA										
615.00 > 570.00	5.205	5.207	-0.002	1.268	6475956	1.18		94.0	13238	
50 10:2 FTS										
627.00 > 607.00	5.231	5.231	0.0	1.107	107659	0.0508		105	619	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.275	5.279	-0.004	1.285	813503	1.23		98.2	953	
61 NMeFOSA										
512.00 > 169.00	5.284	5.286	-0.002	1.000	20289	0.0426		85.2	105	M
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.284	5.281	0.003	1.287	564600	1.20		95.6	51.7	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
49 N-MeFOSE-M										
616.00 > 59.00	5.284	5.290	-0.006	1.002	39475	0.0557		111	65.9	
54 PFDoS										
699.00 > 80.00	5.384	5.383	0.001	1.223	104724	0.0472	Target=4.36	97.4	547	
699.00 > 99.00	5.384	5.383	0.001	1.223	22989		4.56(2.18-6.55)	97.4	308	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.414	5.417	-0.003	1.040	222793	0.0519	Target=6.19	104	339	
663.00 > 169.00	5.414	5.417	-0.003	1.040	33396		6.67(3.09-9.28)	104	195	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.435	5.437	-0.002	1.324	811853	1.22		97.7	423	
62 N-EtFOSE-M										
630.00 > 59.00	5.455	5.450	0.005	1.004	44938	0.0521		104	57.8	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.445	5.450	-0.005	1.326	471424	1.21		96.7	784	
56 N-EtFOSA-M										
526.00 > 169.00	5.455	5.457	-0.002	1.002	20762	0.0461		92.1	135	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.598	5.600	-0.002	1.000	27452	0.0513	Target=1.09	103	115	
713.00 > 219.00	5.598	5.600	-0.002	1.000	24313		1.13(0.54-1.63)	103	160	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.598	5.600	-0.002	1.363	4981370	1.19		94.9	8989	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.905	5.907	-0.002	1.000	182515	0.0516	Target=8.22	103	483	
813.00 > 169.00	5.905	5.907	-0.002	1.000	21588		8.45(4.11-12.33)	103	40.7	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.905	5.907	-0.002	1.438	3465880	1.22		97.4	6491	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.160	6.162	-0.002	1.043	129098	0.0473	Target=11.60	94.6	408	
913.00 > 169.00	6.160	6.162	-0.002	1.043	11272		11.45(5.80-17.40)	94.6	57.9	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L2PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfms\Knoxville\ChromData\LCA\20220109-22186.b\\_007.d

Injection Date: 09-Jan-2022 10:44:40

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

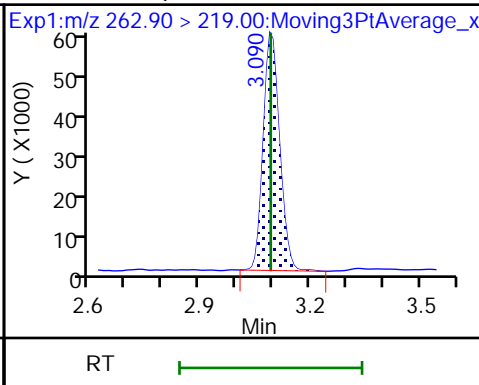
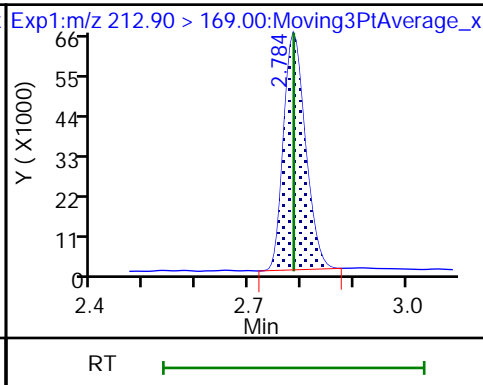
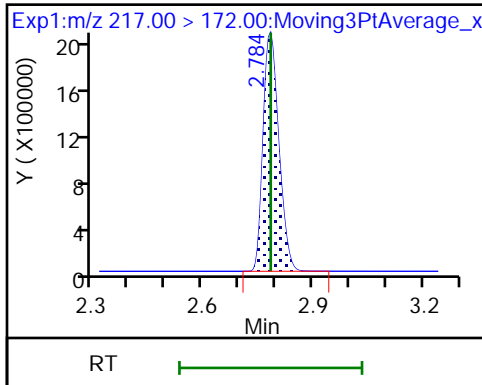
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

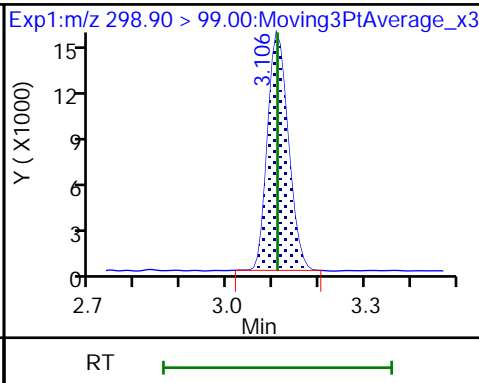
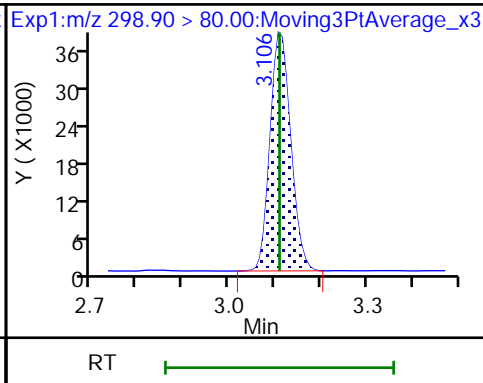
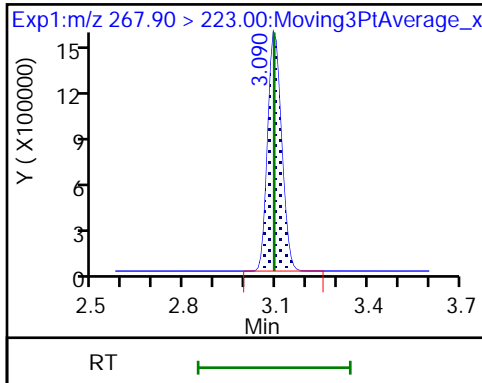
4 Perfluoropentanoic acid



D 3 13C5 PFPeA

5 Perfluorobutanesulfonic acid

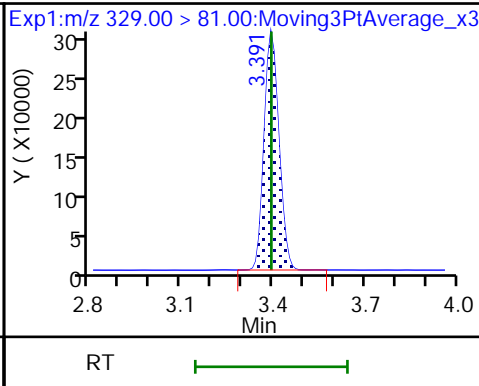
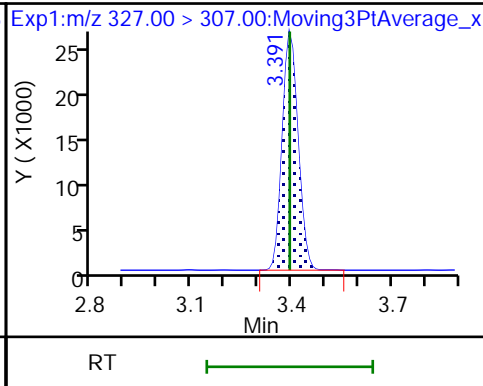
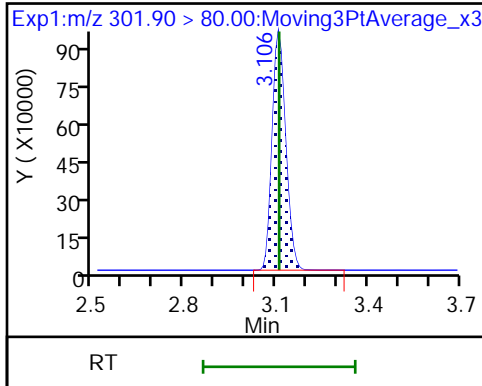
5 Perfluorobutanesulfonic acid



D 6 13C3 PFBS

7 4:2 FTS

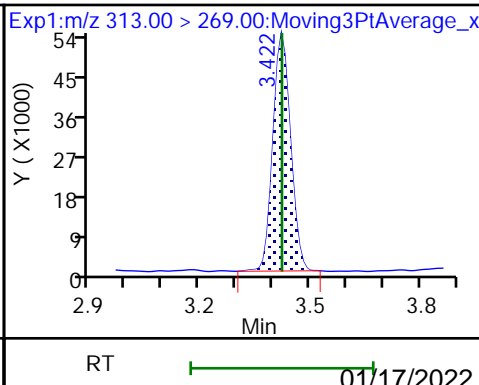
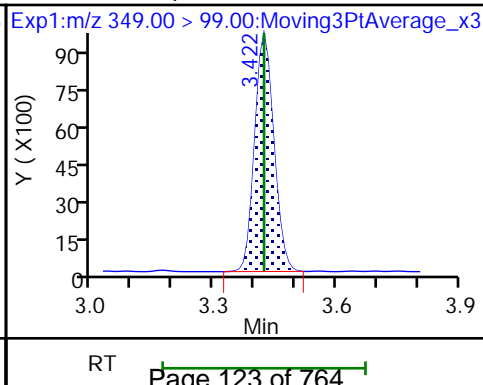
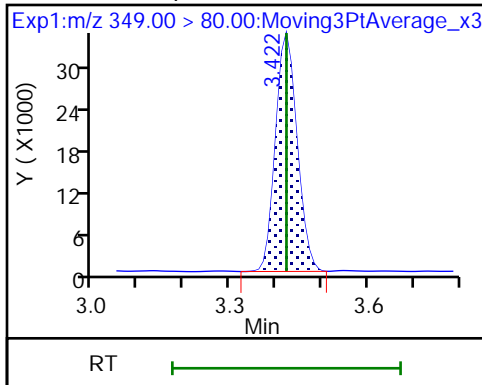
D 8 M2-4:2 FTS



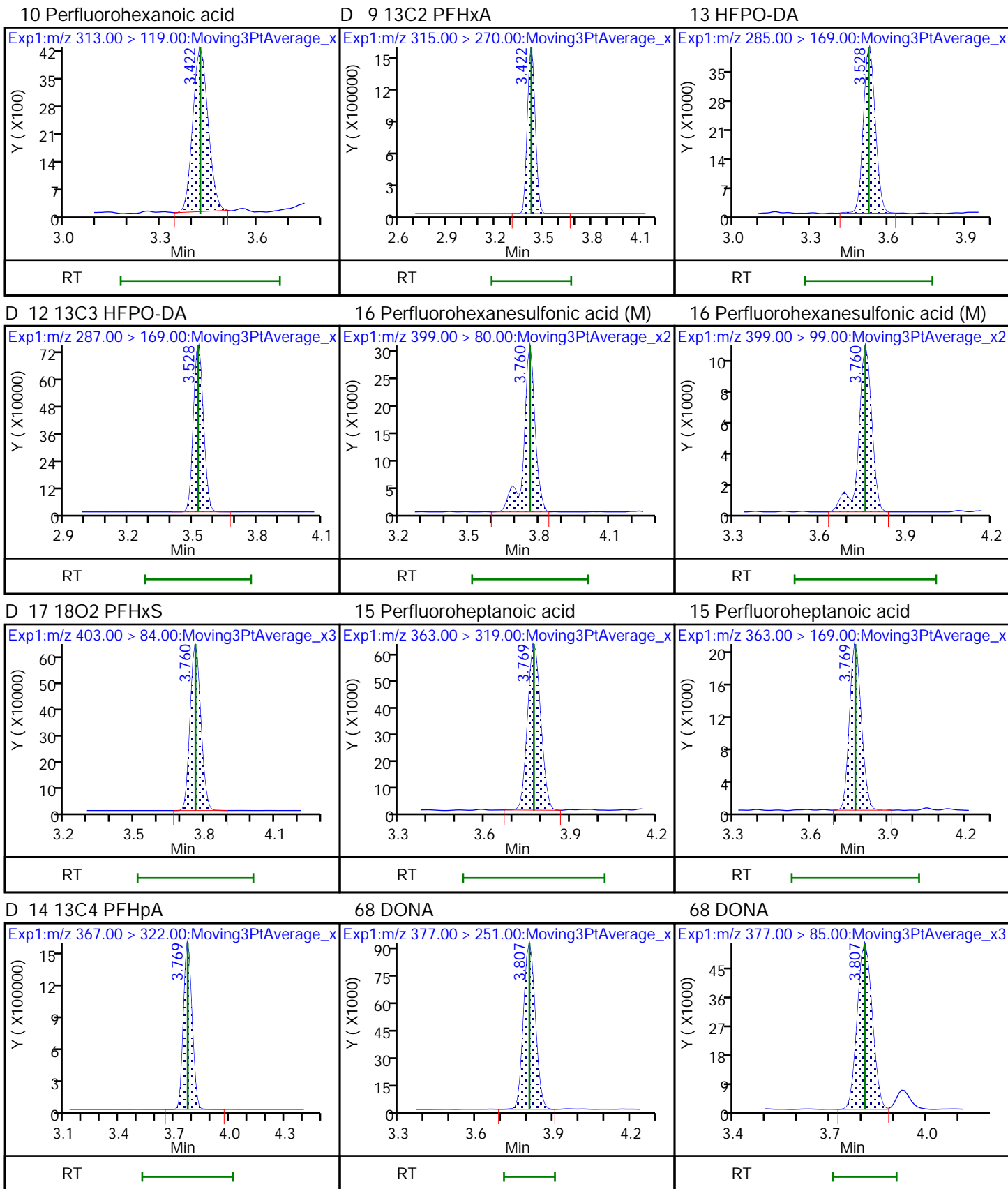
11 Perfluoropentanesulfonic acid

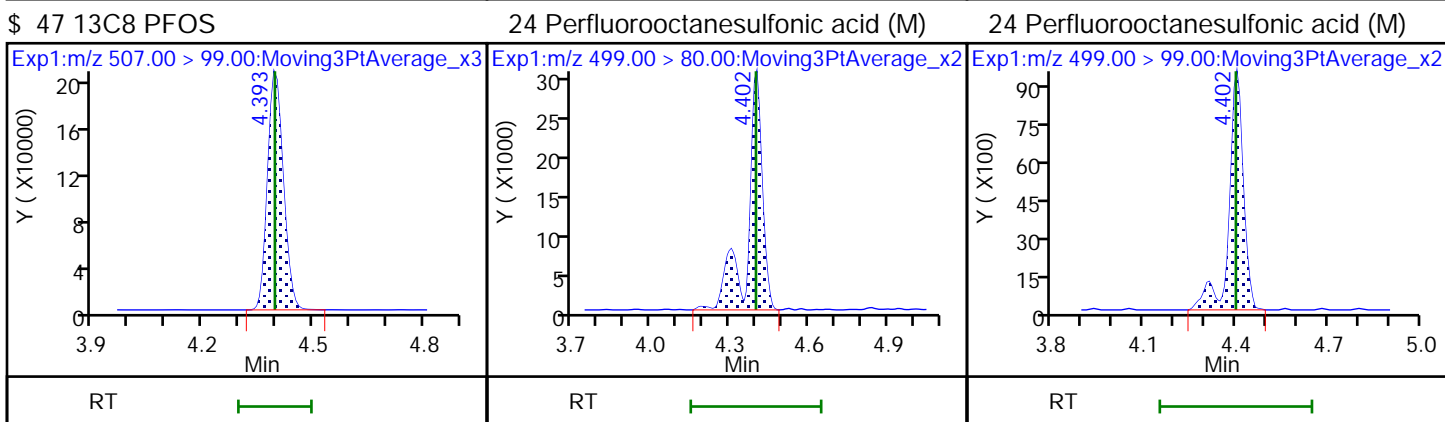
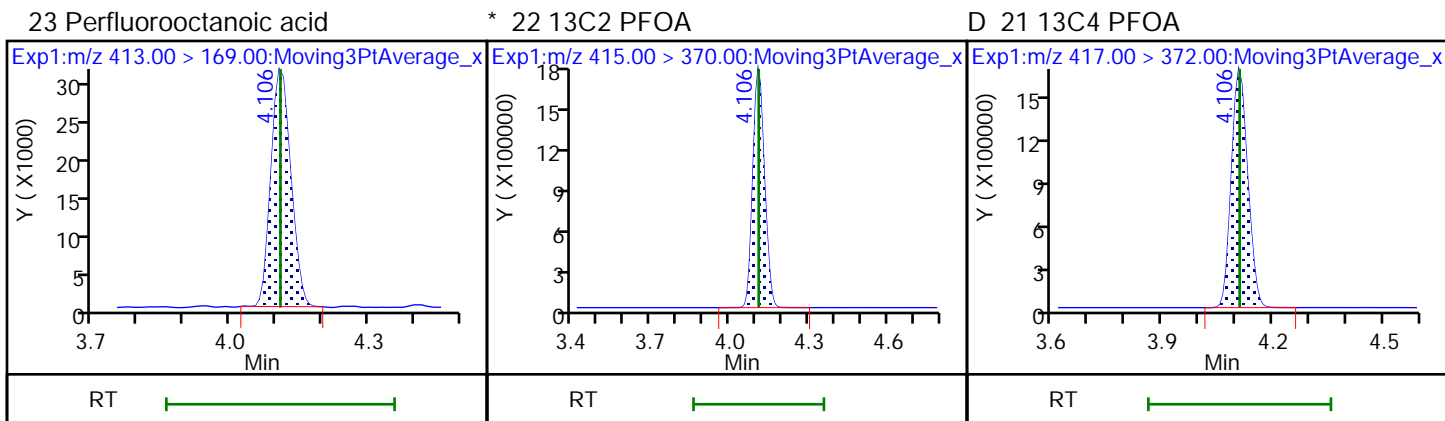
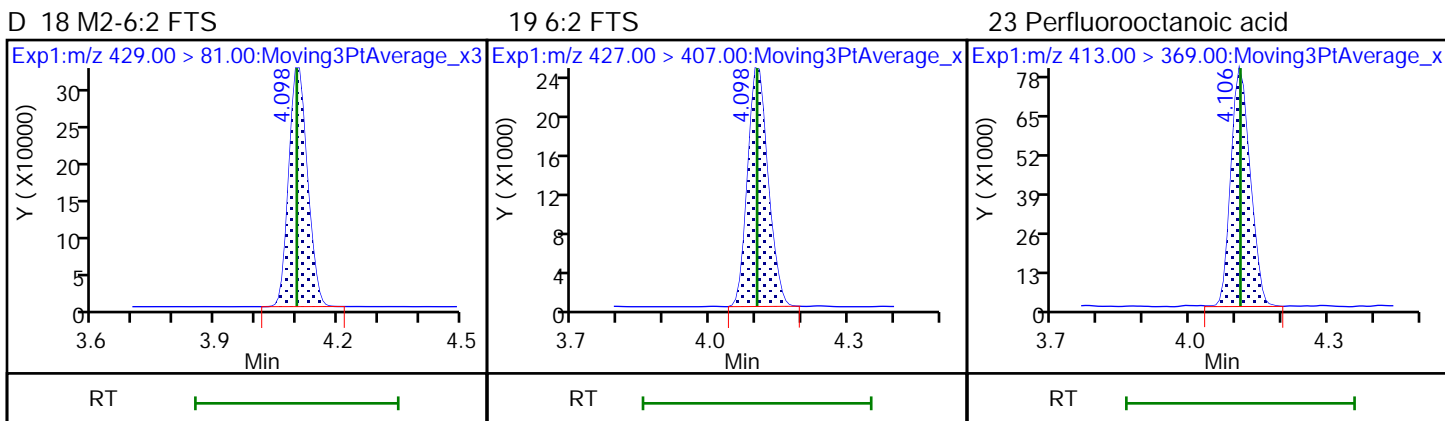
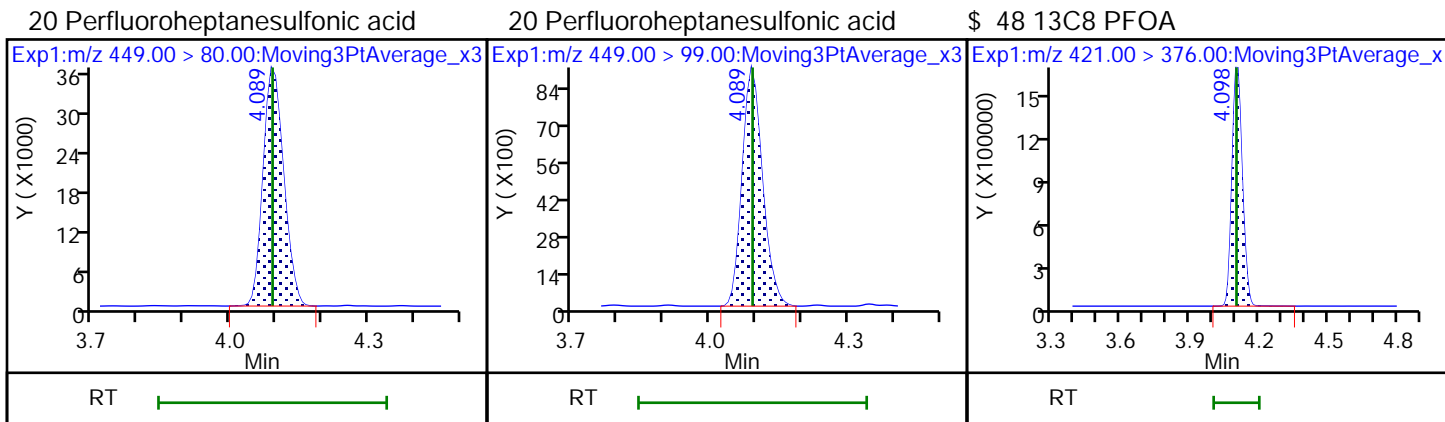
11 Perfluoropentanesulfonic acid

10 Perfluorohexanoic acid





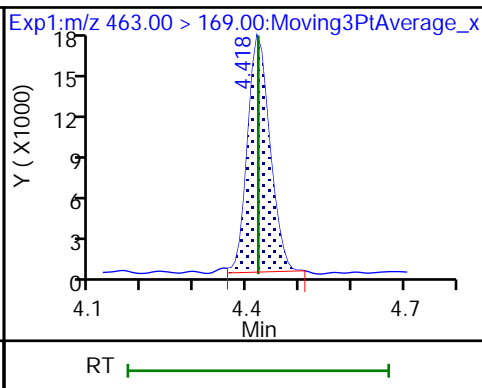
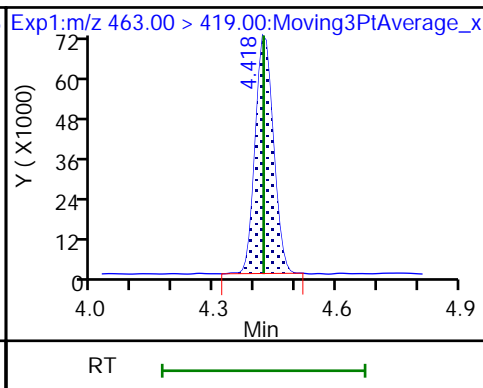
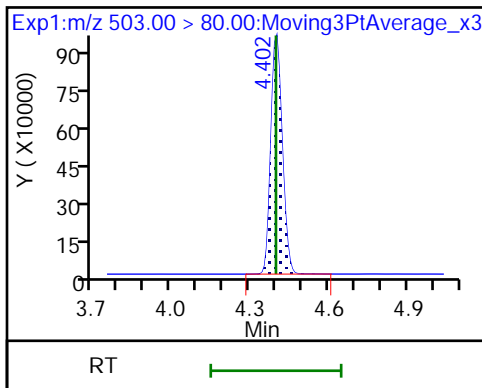




D 25 13C4 PFOS

26 Perfluorononanoic acid

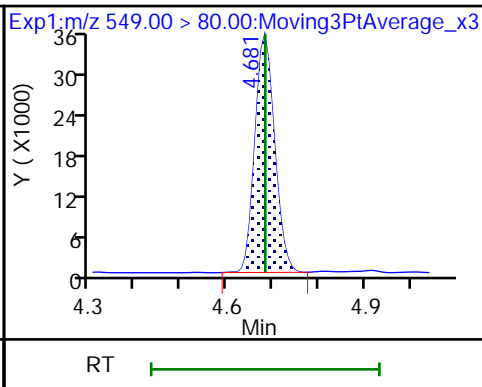
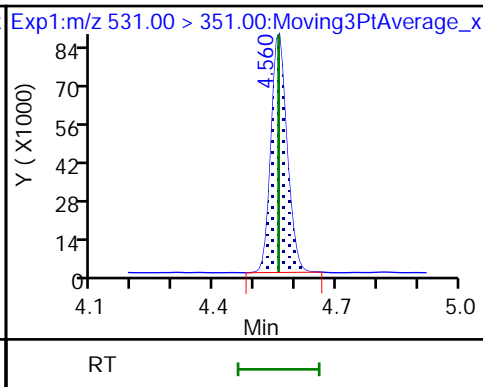
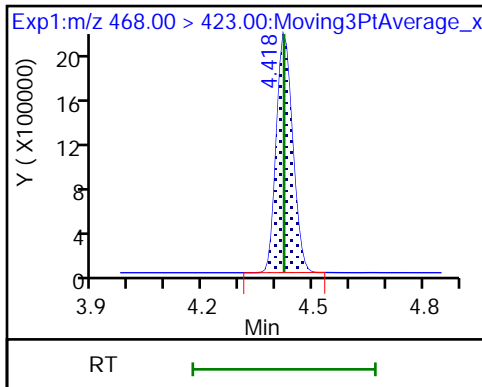
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS

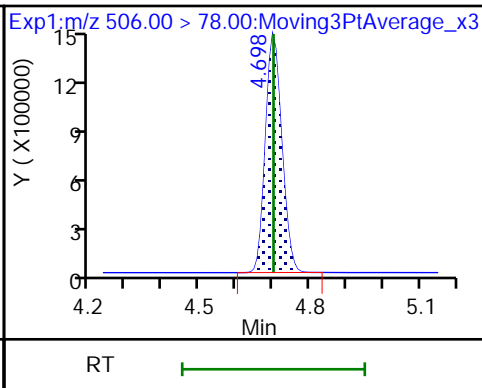
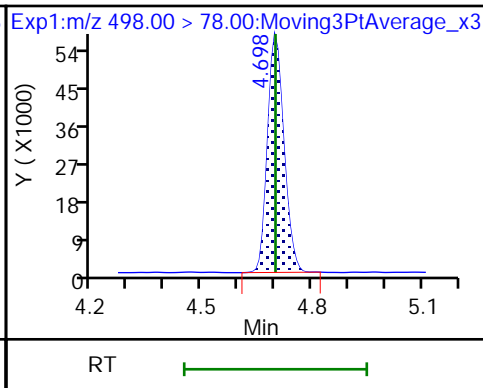
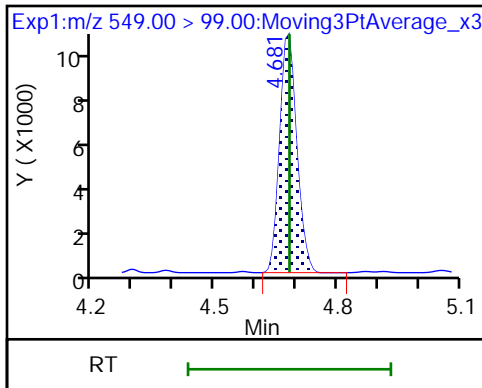
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

33 Perfluorooctanesulfonamide

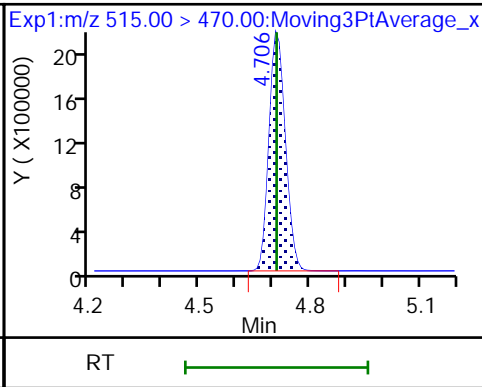
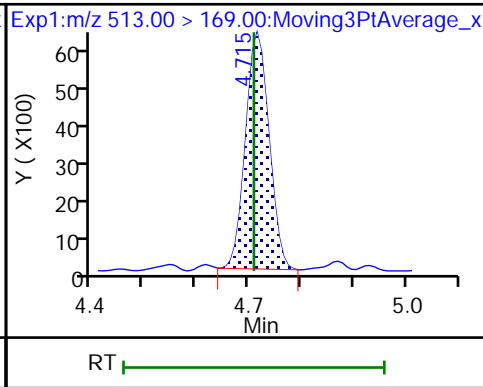
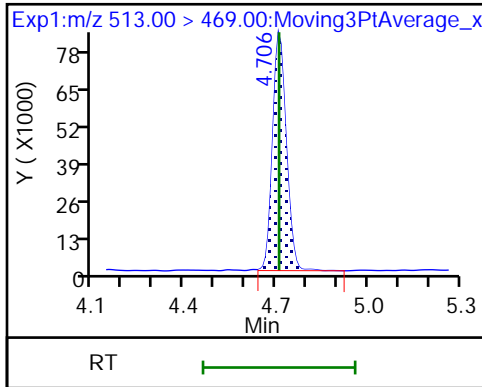
D 34 13C8 FOSA

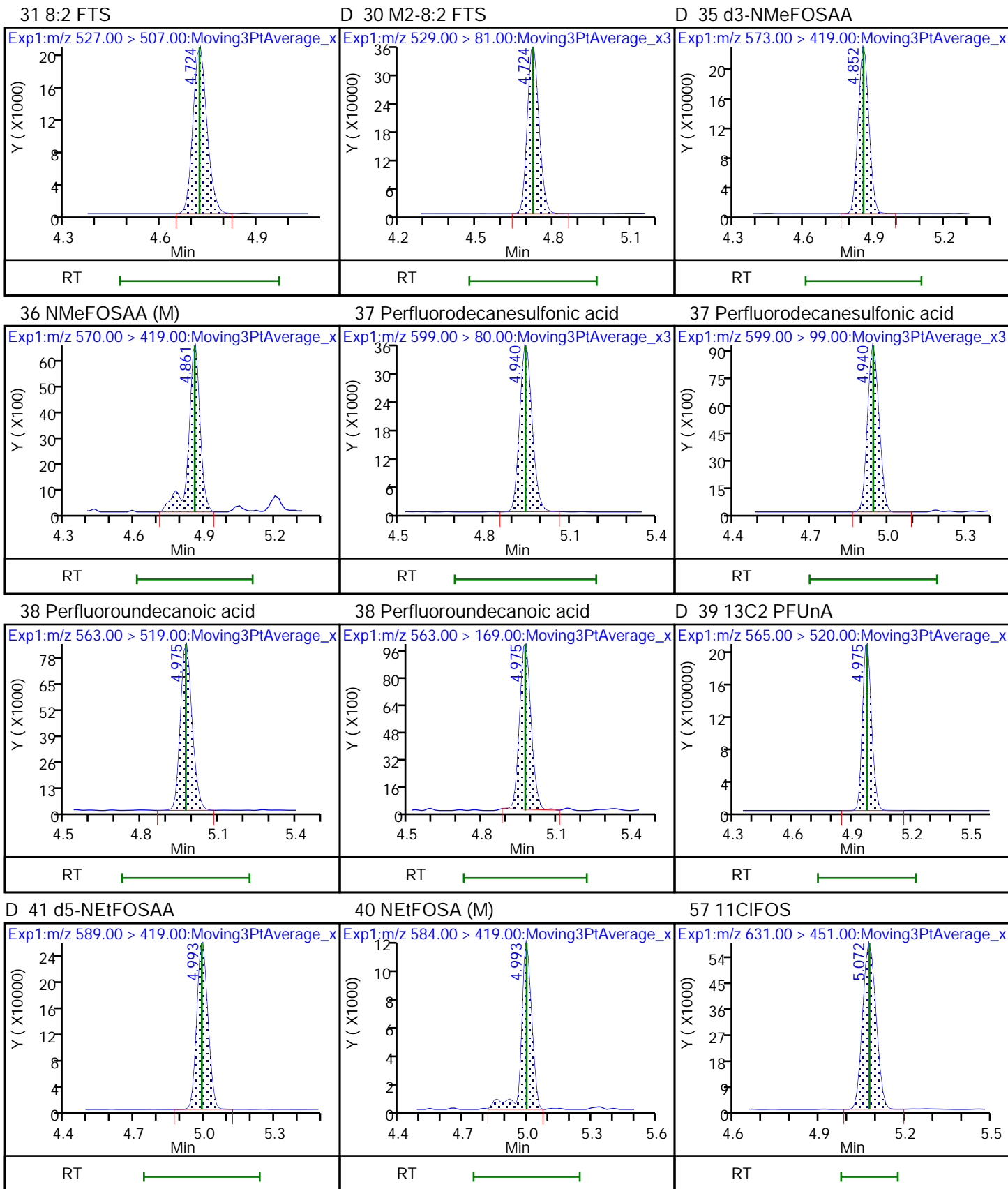


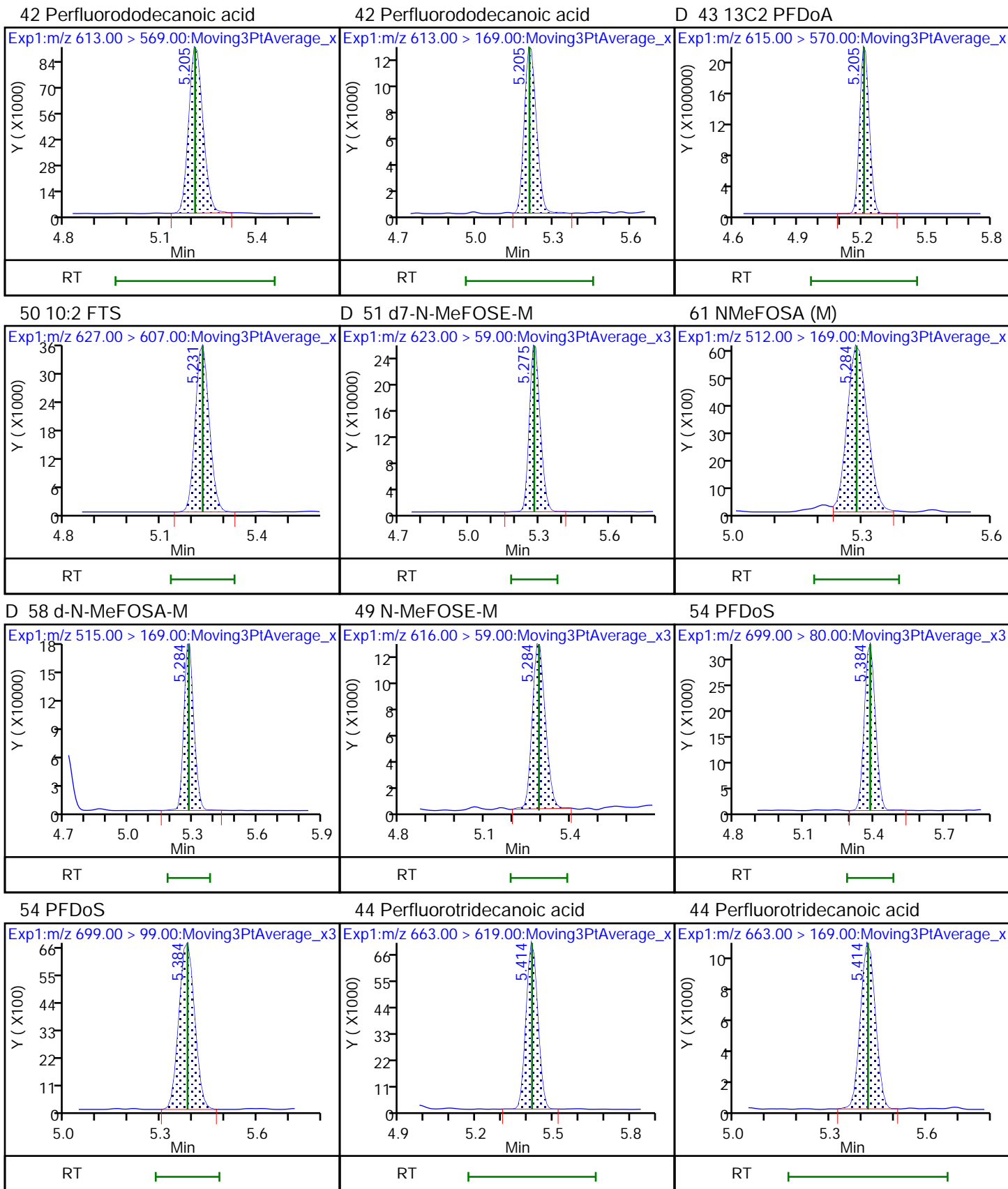
29 Perfluorodecanoic acid

29 Perfluorodecanoic acid

D 32 13C2 PFDA



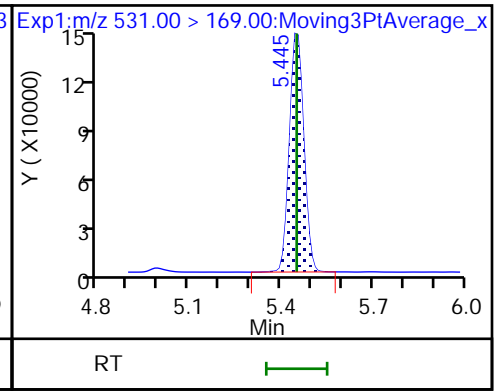
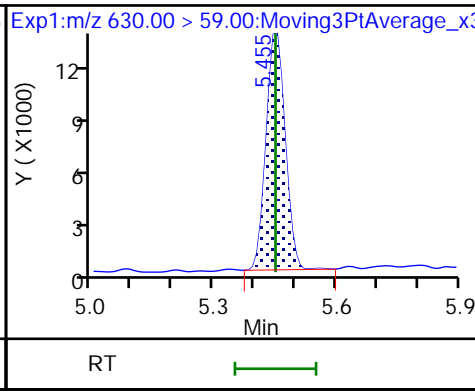
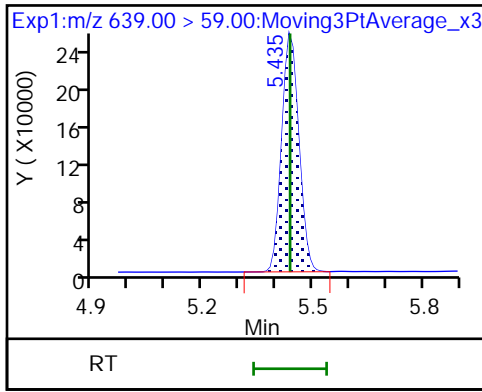




D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M

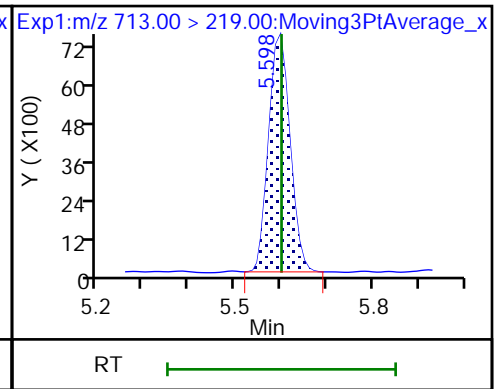
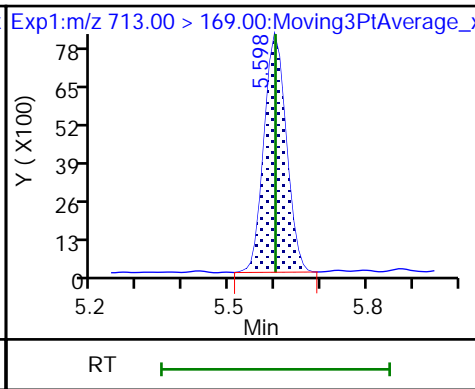
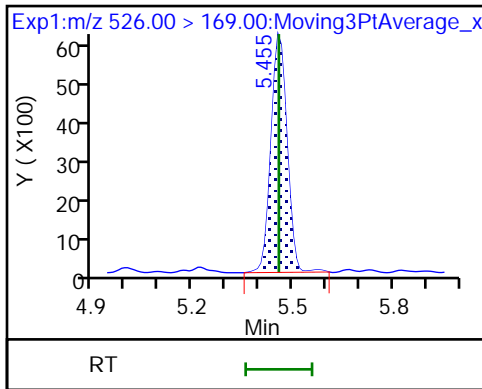
D 52 d-N-EtFOSA-M



56 N-EtFOSA-M

45 Perfluorotetradecanoic acid

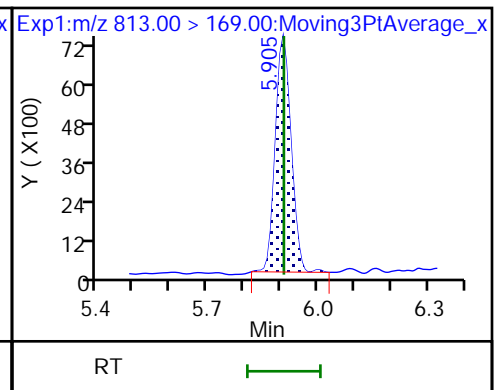
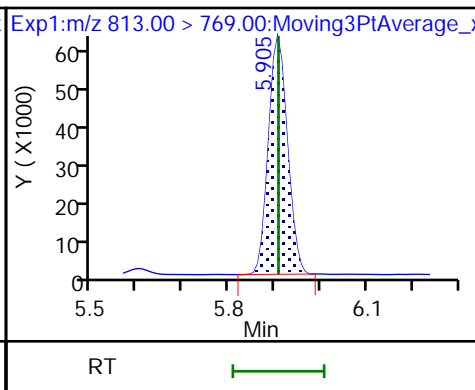
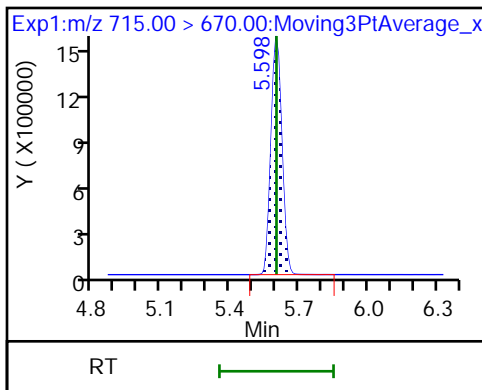
45 Perfluorotetradecanoic acid



D 46 13C2 PFTeDA

55 Perfluorohexadecanoic acid

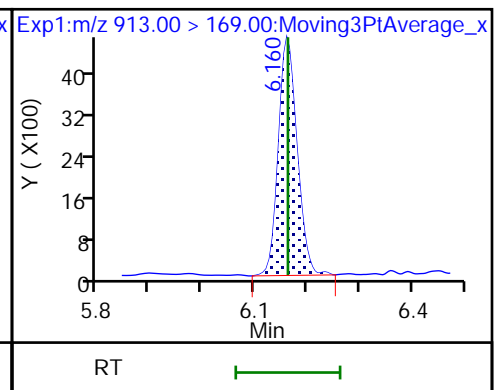
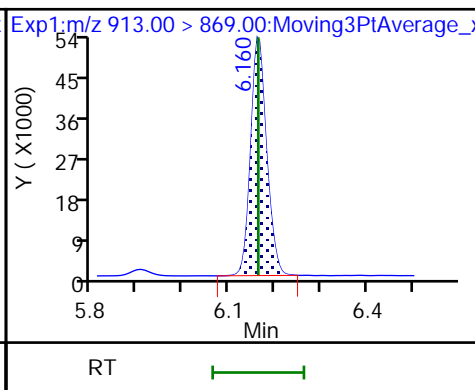
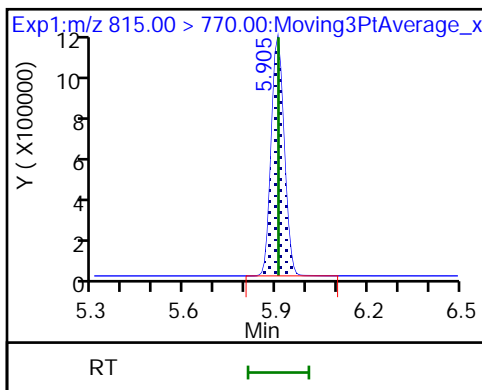
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid





Eurofins TestAmerica, Knoxville

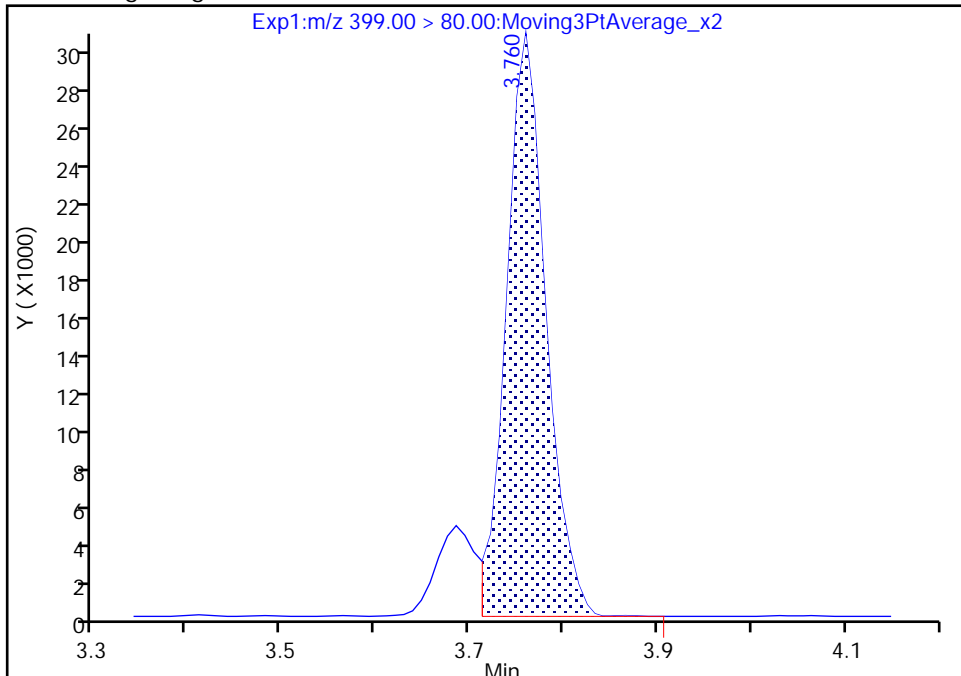
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Lims ID: IC 2  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

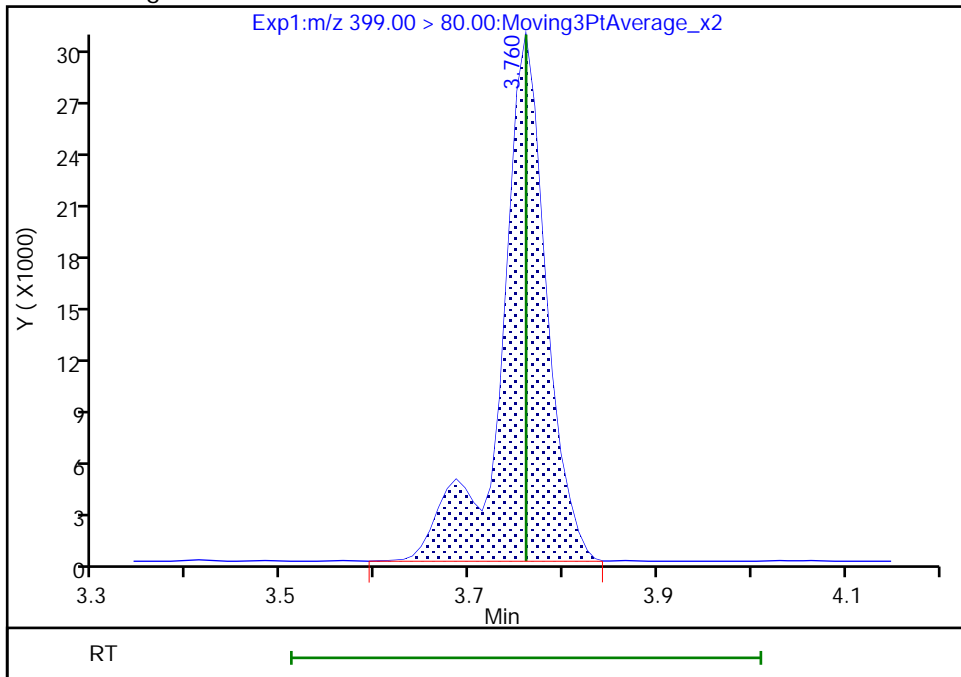
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Amount: 0.041895  
Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
Area: 102576  
Amount: 0.043104  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:17:48  
Audit Action: Manually Integrated

Audit Reason: Baseline



Eurofins TestAmerica, Knoxville

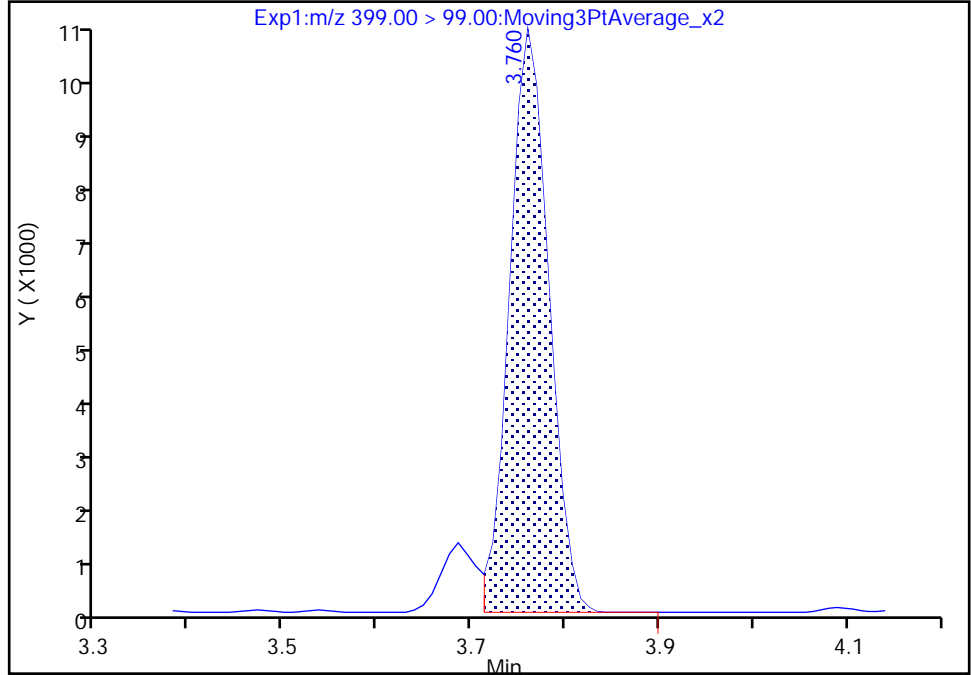
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Lims ID: IC 2  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

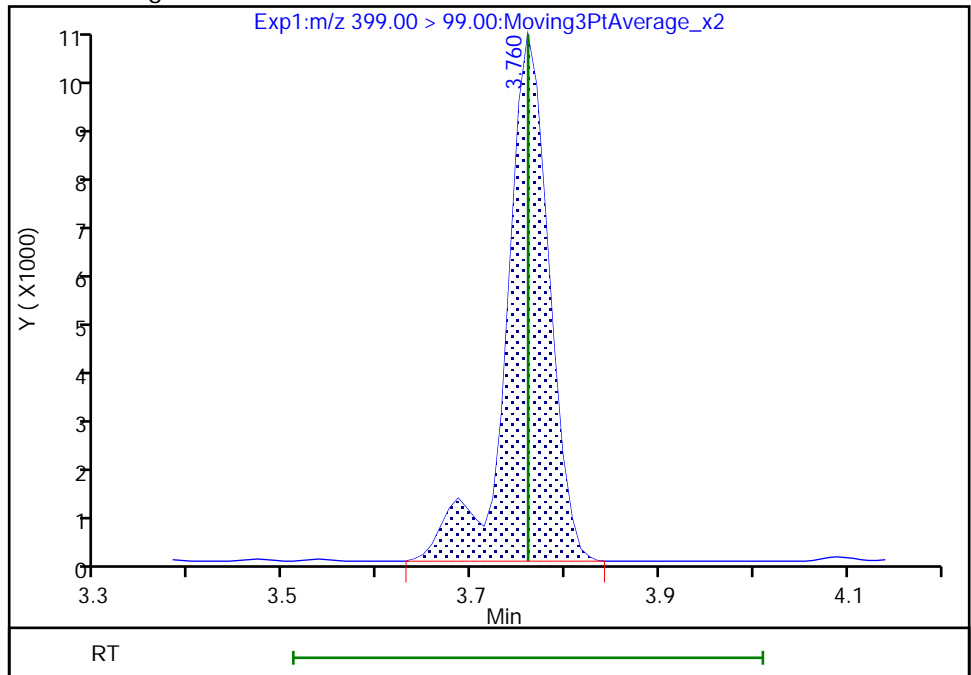
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Area: 29245  
Amount: 0.041895  
Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
Area: 32312  
Amount: 0.043104  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:17:54

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

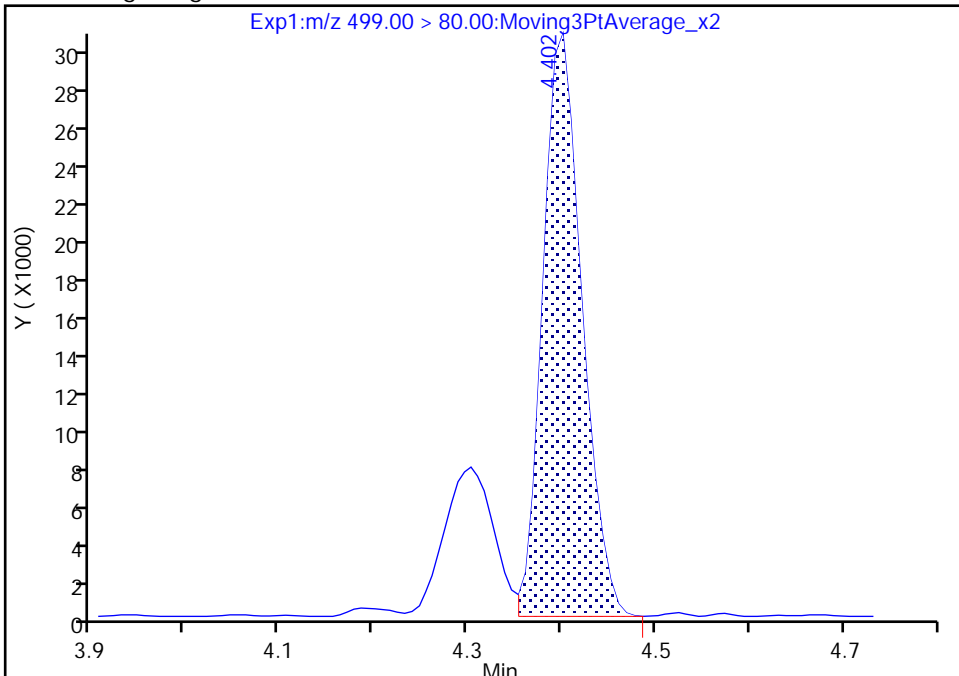
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_007.d  
Injection Date: 09-Jan-2022 10:44:40 Instrument ID: LCA  
Lims ID: IC 2  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

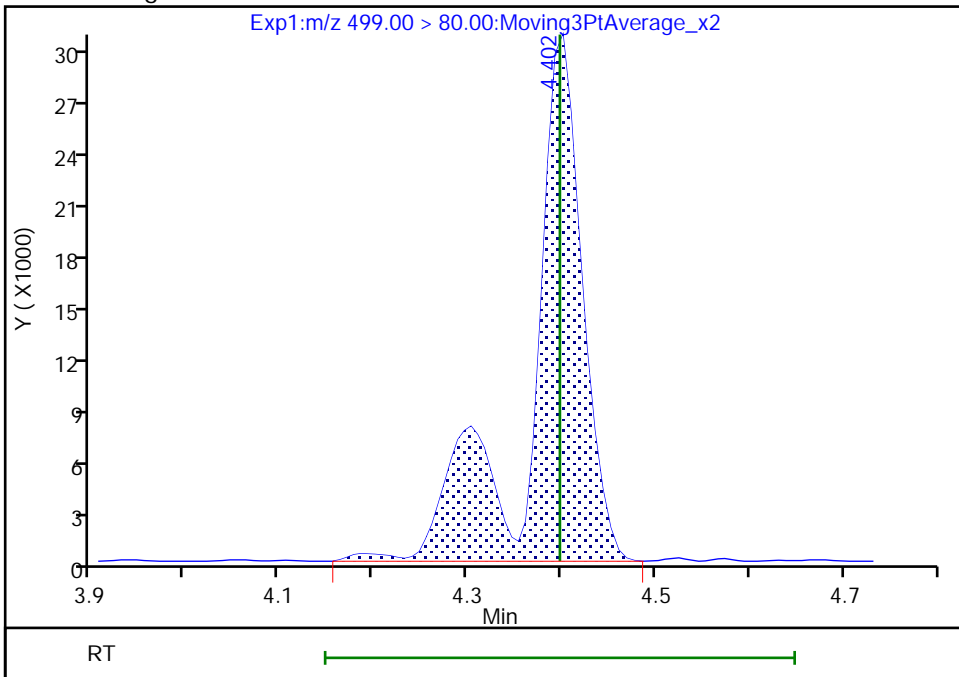
RT: 4.40  
Area: 88831  
Amount: 0.041252  
Amount Units: ng/ml

Processing Integration Results



RT: 4.40  
Area: 118941  
Amount: 0.044684  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:18:05  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

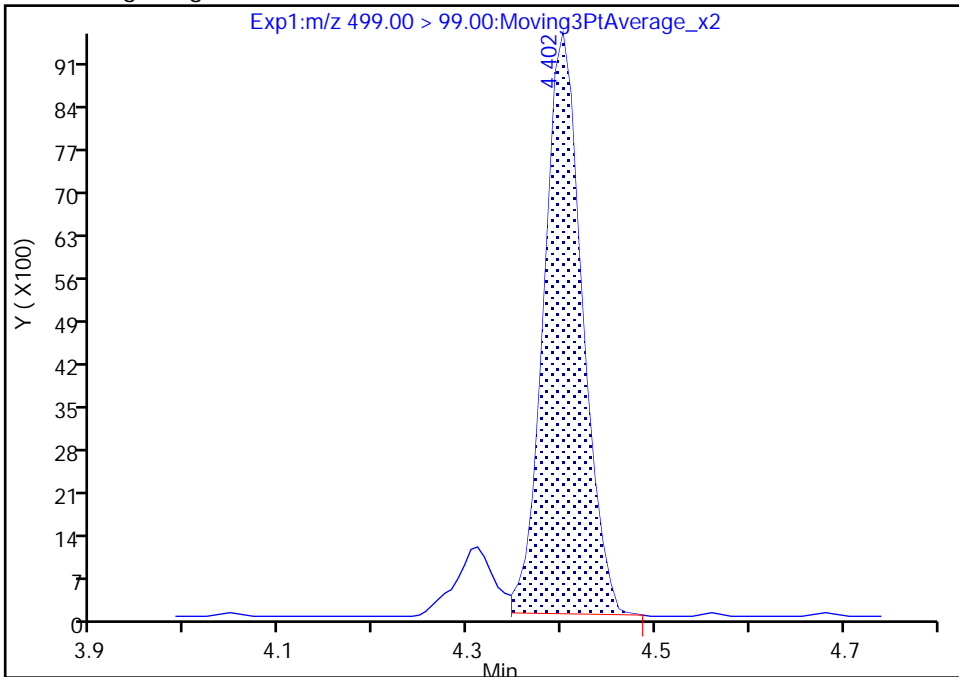
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Injection Date: 09-Jan-2022 10:44:40 Instrument ID: LCA  
Lims ID: IC 2  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

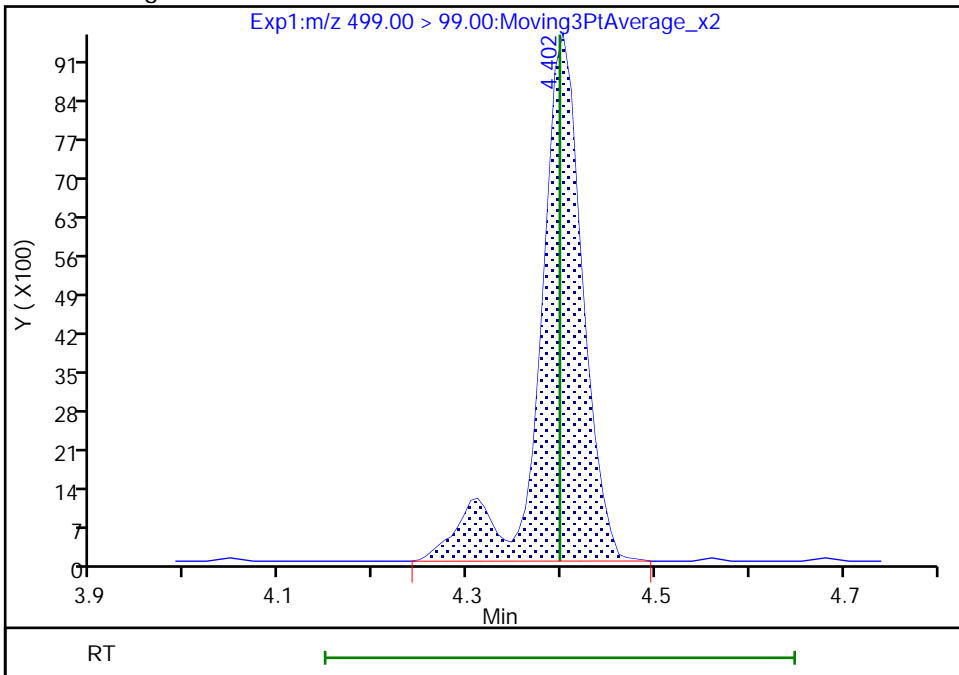
RT: 4.40  
Area: 26962  
Amount: 0.041252  
Amount Units: ng/ml

Processing Integration Results



RT: 4.40  
Area: 30560  
Amount: 0.044684  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:18:12

Audit Action: Manually Integrated

Audit Reason: Baseline  
Page 134 of 764

Eurofins TestAmerica, Knoxville

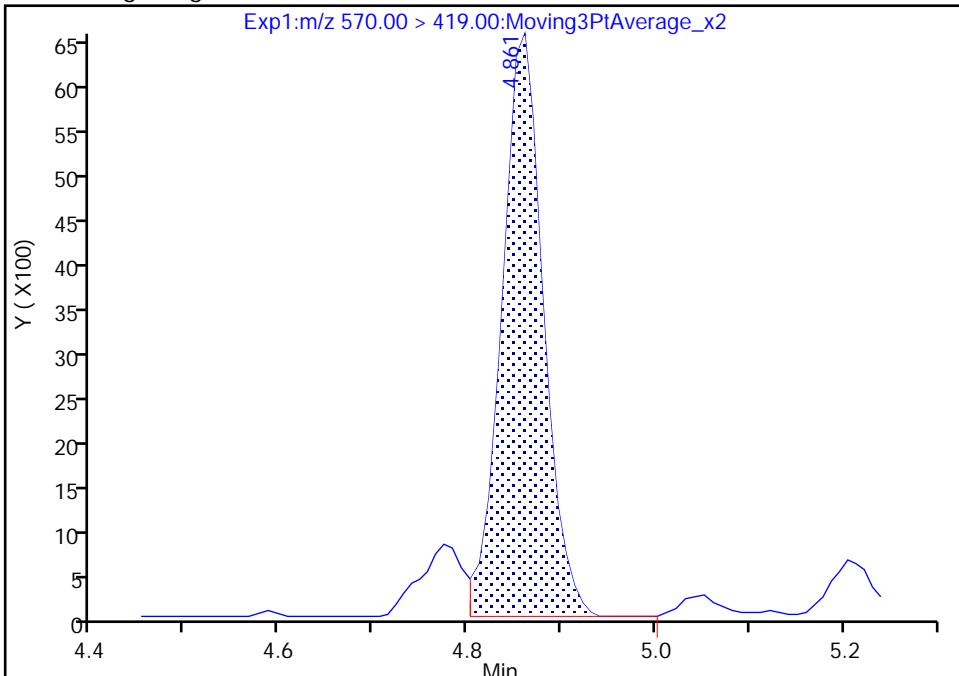
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Injection Date: 09-Jan-2022 10:44:40 Instrument ID: LCA  
Lims ID: IC 2  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

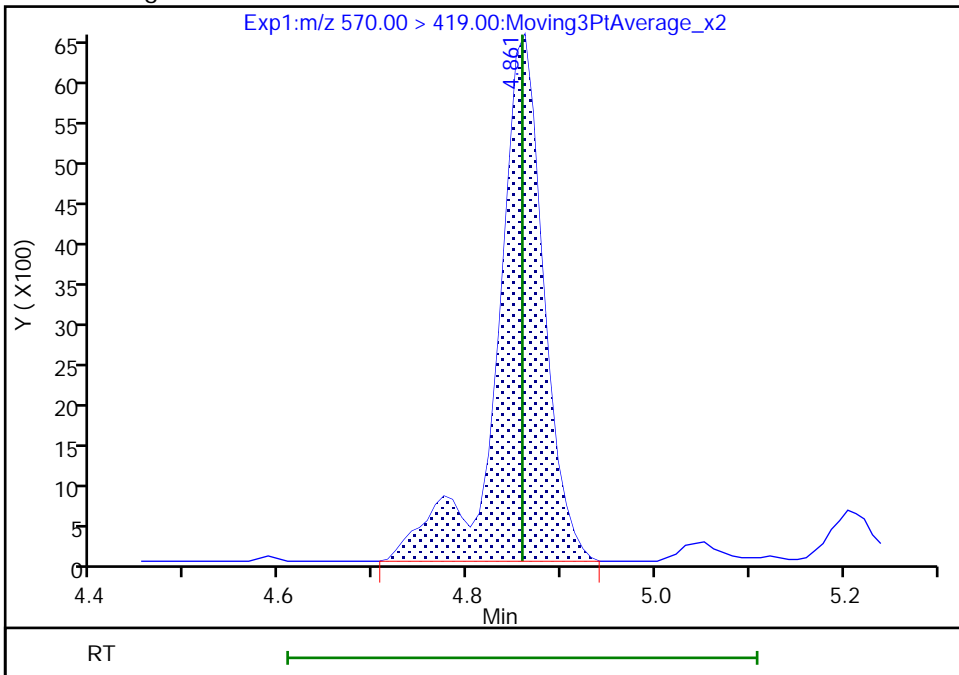
RT: 4.86  
Area: 20069  
Amount: 0.040697  
Amount Units: ng/ml

Processing Integration Results



RT: 4.86  
Area: 22599  
Amount: 0.040105  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:18:22  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

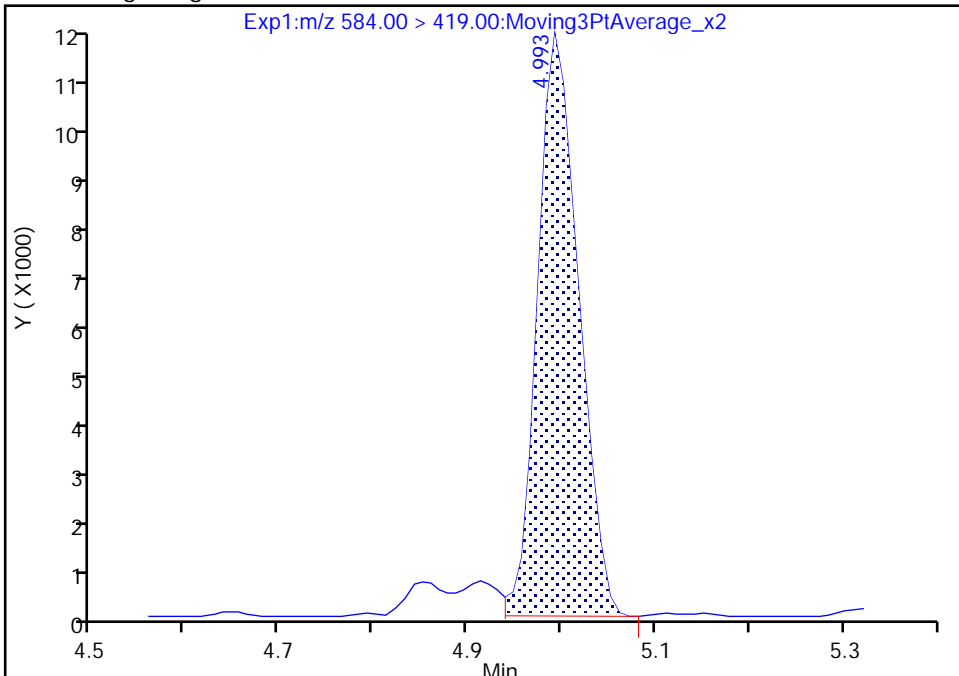
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Injection Date: 09-Jan-2022 10:44:40 Instrument ID: LCA  
Lims ID: IC 2  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

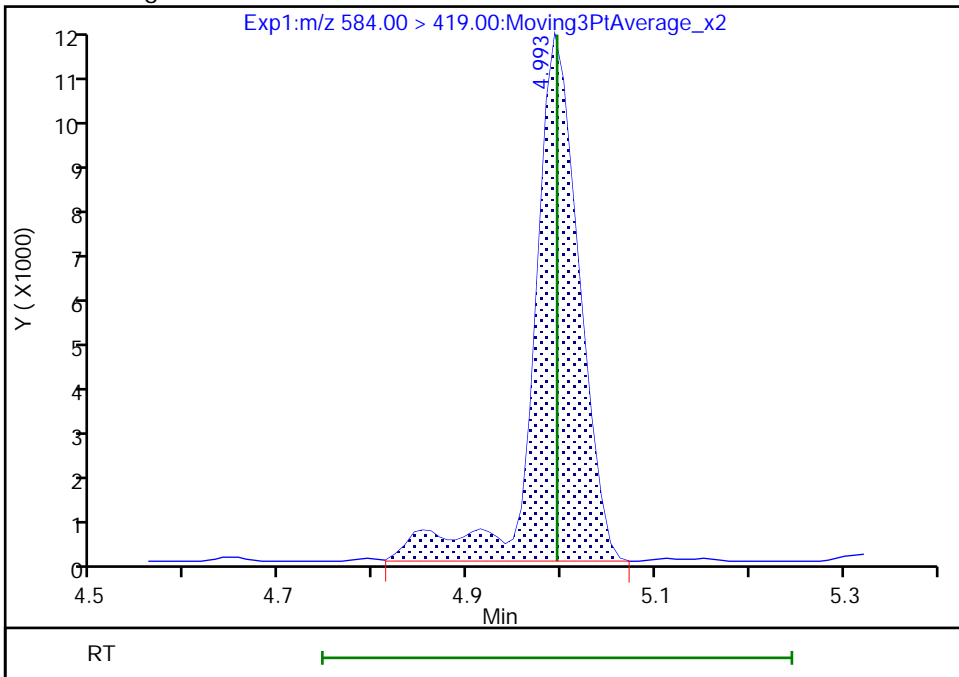
RT: 4.99  
Area: 34008  
Amount: 0.057334  
Amount Units: ng/ml

Processing Integration Results



RT: 4.99  
Area: 37744  
Amount: 0.057788  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:18:37  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

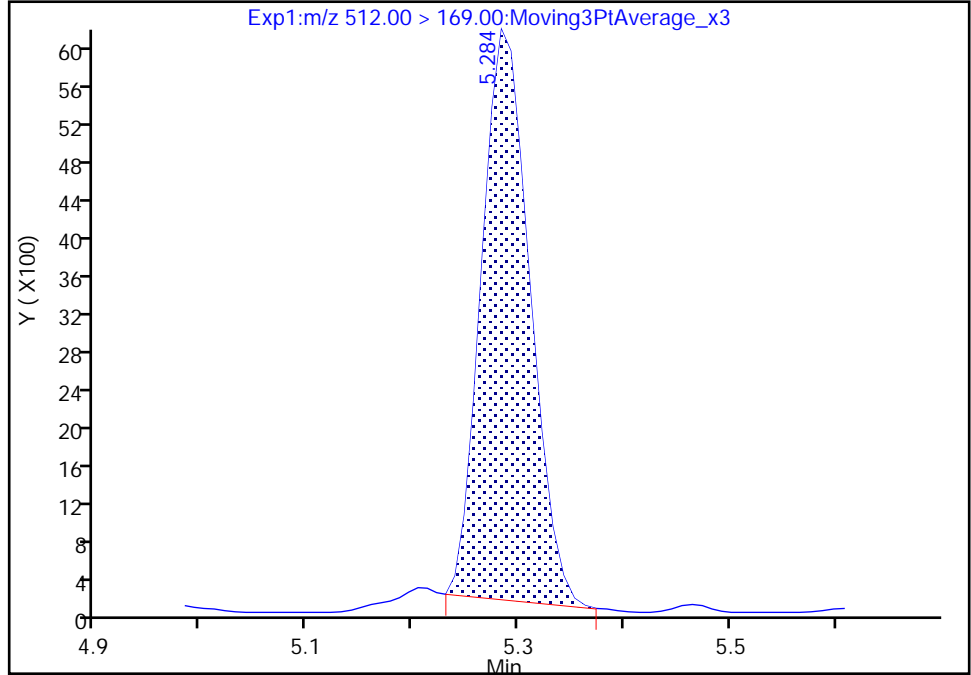
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Injection Date: 09-Jan-2022 10:44:40 Instrument ID: LCA  
Lims ID: IC 2  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

61 NMeFOSA, CAS: 31506-32-8

Signal: 1

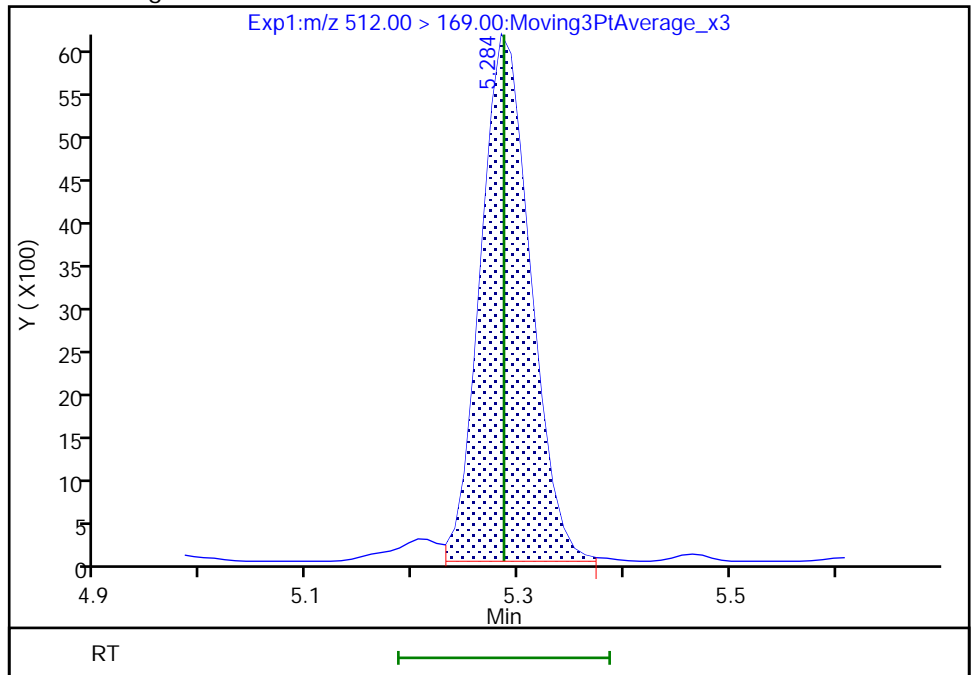
RT: 5.28  
Area: 19316  
Amount: 0.041921  
Amount Units: ng/ml

Processing Integration Results



RT: 5.28  
Area: 20289  
Amount: 0.042599  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:18:56  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_008.d  
 Lims ID: IC 3  
 Client ID:  
 Sample Type: IC Calib Level: 3  
 Inject. Date: 09-Jan-2022 10:53:28 ALS Bottle#: 8 Worklist Smp#: 8  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022186-008 ic 3  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 12:31:46 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1686

First Level Reviewer: cochranj Date: 09-Jan-2022 11:20:43

Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										
212.90 > 169.00	2.773	2.785	-0.012	1.000	962240	0.2479		99.2	262	
D 1 13C4 PFBA										
217.00 > 172.00	2.773	2.784	-0.011	0.677	6184171	1.26		101	13510	
4 Perfluoropentanoic acid										
262.90 > 219.00	3.082	3.093	-0.011	1.000	893254	0.2462		98.5	306	
D 3 13C5 PFPeA										
267.90 > 223.00	3.082	3.093	-0.011	0.752	4763774	1.25		99.9	10193	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	3.099	3.109	-0.010	1.000	597004	0.2224	Target=2.68	101	2143	
298.90 > 99.00	3.099	3.109	-0.010	1.000	217132		2.75(1.34-4.02)	101	1360	
D 6 13C3 PFBS										
301.90 > 80.00	3.099	3.109	-0.010	0.756	2844272	1.12		96.2	13108	
7 4:2 FTS										
327.00 > 307.00	3.382	3.393	-0.011	1.000	408865	0.2252		96.4	3284	
D 8 M2-4:2 FTS										
329.00 > 81.00	3.382	3.393	-0.011	0.825	941348	1.20		103	1958	
11 Perfluoropentanesulfonic acid										
349.00 > 80.00	3.412	3.422	-0.010	1.101	563759	0.2372	Target=3.48	101	1973	
349.00 > 99.00	3.412	3.422	-0.010	1.101	161174		3.50(1.74-5.22)	101	1696	
10 Perfluorohexanoic acid										
313.00 > 269.00	3.412	3.423	-0.011	1.000	868567	0.2350	Target=12.57	94.0	385	
313.00 > 119.00	3.412	3.423	-0.011	1.000	71287		12.18(6.28-18.85)	94.0	102	
D 9 13C2 PFHxA										
315.00 > 270.00	3.412	3.423	-0.011	0.833	5323274	1.31		104	9234	
13 HFPO-DA										
285.00 > 169.00	3.510	3.524	-0.014	1.000	620127	0.2359		94.4	433	

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	3.510	3.524	-0.014	0.857	2429399	1.24		99.1	4696	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.751	3.760	-0.009	1.000	500197	0.2164	Target=3.48	95.1	2431	M
399.00 > 99.00	3.751	3.760	-0.009	1.000	142100		3.52(1.74-5.21)	95.1	985	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.751	3.761	-0.010	0.915	1985027	1.17		98.9	9006	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.760	3.772	-0.012	1.000	1008145	0.2483	Target=3.29	99.3	616	
363.00 > 169.00	3.760	3.772	-0.012	1.000	315712		3.19(1.65-4.94)	99.3	824	
D 14 13C4 PFHpA										
367.00 > 322.00	3.760	3.772	-0.012	0.918	4848796	1.24		99.4	8145	
68 DONA										
377.00 > 251.00	3.797	3.807	-0.010	0.866	1476859	0.2236	Target=1.76	95.0	3114	
377.00 > 85.00	3.797	3.807	-0.010	0.866	831401		1.78(0.88-2.64)	95.0	169	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.081	4.092	-0.011	0.931	530886	0.2216	Target=3.91	93.1	2522	
449.00 > 99.00	4.081	4.092	-0.011	0.931	137861		3.85(1.95-5.86)	93.1	1340	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.089	4.100	-0.011	0.998	5133842	1.24		99.4	10095	
19 6:2 FTS										
427.00 > 407.00	4.089	4.101	-0.012	1.000	338181	0.2333		98.4	1400	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.089	4.100	-0.011	0.998	966110	1.22		103	3076	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.098	4.109	-0.011	1.000	1133760	0.2390	Target=2.61	95.6	697	
413.00 > 169.00	4.098	4.109	-0.011	1.000	434645		2.61(1.30-3.91)	95.6	712	
* 22 13C2 PFOA										
415.00 > 370.00	4.098	4.109	-0.011		5378244	1.25			10460	
D 21 13C4 PFOA										
417.00 > 372.00	4.098	4.109	-0.011	1.000	5168548	1.28		102	8184	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.385	4.396	-0.011	1.000	633403	1.14		95.1	4519	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.385	4.398	-0.013	1.000	606028	0.2196	Target=4.37	94.7	1782	M
499.00 > 99.00	4.385	4.398	-0.013	1.000	135814		4.46(2.18-6.55)	94.7	922	M
D 25 13C4 PFOS										
503.00 > 80.00	4.385	4.398	-0.013	1.070	3000906	1.23		103	5202	
26 Perfluorononanoic acid										
463.00 > 419.00	4.410	4.421	-0.011	1.000	1117019	0.2453	Target=4.48	98.1	1496	
463.00 > 169.00	4.410	4.421	-0.011	1.000	252342		4.43(2.24-6.72)	98.1	615	
D 27 13C5 PFNA										
468.00 > 423.00	4.410	4.421	-0.011	1.076	6772318	1.28		102	10780	
63 9CIFOS										
531.00 > 351.00	4.546	4.558	-0.012	1.037	1154070	0.2173		93.3	4067	



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	4.673	4.682	-0.009	1.066	580163	0.2370	Target=3.84	98.7	2276	
549.00 > 99.00	4.673	4.682	-0.009	1.066	139465		4.16(1.92-5.77)	98.7	994	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.689	4.700	-0.011	1.000	786079	0.2415		96.6	1769	
D 34 13C8 FOSA										
506.00 > 78.00	4.689	4.700	-0.011	1.144	4301021	1.30		104	3568	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.698	4.709	-0.011	1.000	1252301	0.2461	Target=11.50	98.4	1603	
513.00 > 169.00	4.698	4.709	-0.011	1.000	105371		11.88(5.75-17.25)	98.4	299	
D 32 13C2 PFDA										
515.00 > 470.00	4.698	4.709	-0.011	1.146	6595470	1.29		103	11368	
31 8:2 FTS										
527.00 > 507.00	4.706	4.721	-0.015	1.000	323270	0.2423		101	2241	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.706	4.721	-0.015	1.148	1128836	1.27		106	2303	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.843	4.854	-0.011	1.182	808216	1.34		107	1195	
36 NMeFOSAA										
570.00 > 419.00	4.852	4.858	-0.006	1.002	135153	0.2153		86.1	215	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.931	4.942	-0.011	1.124	514341	0.2228	Target=3.69	92.5	2761	
599.00 > 99.00	4.931	4.942	-0.011	1.124	138178		3.72(1.84-5.53)	92.5	1260	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.957	4.973	-0.016	1.000	1241525	0.2465	Target=8.29	98.6	1517	
563.00 > 169.00	4.966	4.973	-0.007	1.002	148650		8.35(4.14-12.43)	98.6	722	
D 39 13C2 PFUnA										
565.00 > 520.00	4.957	4.973	-0.016	1.210	6493725	1.27		102	11021	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.975	4.989	-0.014	1.214	858732	1.30		104	2953	
40 NEtFOSA										
584.00 > 419.00	4.984	4.995	-0.011	1.002	157582	0.2317		92.7	483	M
57 11C1FOS										
631.00 > 451.00	5.062	5.075	-0.013	1.154	937340	0.2232		94.8	4455	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.196	5.207	-0.011	1.000	1372157	0.2407	Target=6.82	96.3	1728	
613.00 > 169.00	5.196	5.207	-0.011	1.000	194469		7.06(3.41-10.23)	96.3	452	
D 43 13C2 PFDoA										
615.00 > 570.00	5.196	5.207	-0.011	1.268	6942988	1.29		104	16694	
50 10:2 FTS										
627.00 > 607.00	5.222	5.231	-0.009	1.110	495484	0.2309		95.8	2868	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.266	5.279	-0.013	1.285	792935	1.23		98.3	680	
61 NMeFOSA										
512.00 > 169.00	5.275	5.286	-0.011	1.002	112183	0.2627		105	415	
49 N-MeFOSE-M										
616.00 > 59.00	5.284	5.290	-0.006	1.003	171287	0.2346		93.8	325	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.266	5.281	-0.015	1.285	528614	1.15		92.0	50.5	
54 PFDoS										
699.00 > 80.00	5.373	5.383	-0.010	1.225	531987	0.2311	Target=4.36	95.5	1638	
699.00 > 99.00	5.373	5.383	-0.010	1.225	122440		4.34(2.18-6.55)	95.5	1136	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.404	5.417	-0.013	1.040	1093849	0.2375	Target=6.19	95.0	1426	
663.00 > 169.00	5.404	5.417	-0.013	1.040	170081		6.43(3.09-9.28)	95.0	881	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.425	5.437	-0.012	1.324	791757	1.22		97.9	382	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.444	5.450	-0.006	1.329	457457	1.20		96.4	631	
62 N-EtFOSE-M										
630.00 > 59.00	5.435	5.450	-0.015	1.002	200969	0.2389		95.6	282	
56 N-EtFOSA-M										
526.00 > 169.00	5.444	5.457	-0.013	1.000	109188	0.2497		99.9	396	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.587	5.600	-0.013	1.000	133500	0.2431	Target=1.09	97.2	570	
713.00 > 219.00	5.587	5.600	-0.013	1.000	121201		1.10(0.54-1.63)	97.2	721	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.587	5.600	-0.013	1.363	5107852	1.25		99.9	8973	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.896	5.907	-0.011	1.000	729504	0.2426	Target=8.22	97.0	1643	
813.00 > 169.00	5.896	5.907	-0.011	1.000	90080		8.10(4.11-12.33)	97.0	197	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.896	5.907	-0.011	1.439	3400742	1.23		98.1	5415	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.149	6.162	-0.013	1.043	665836	0.2486	Target=11.60	99.5	1504	
913.00 > 169.00	6.149	6.162	-0.013	1.043	55363		12.03(5.80-17.40)	99.5	284	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L3PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromf\Knoxville\ChromData\LCA\20220109-22186.b\\_008.d

Injection Date: 09-Jan-2022 10:53:28

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

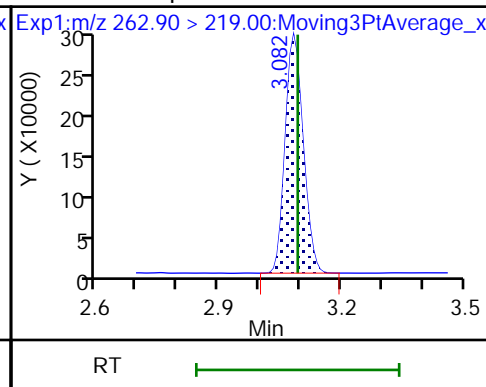
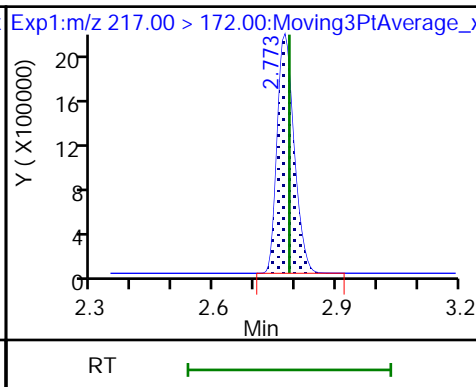
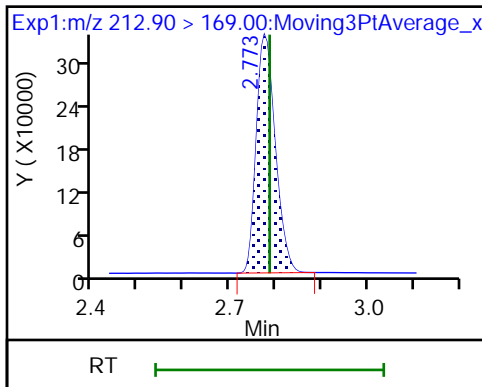
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

2 Perfluorobutanoic acid

D 1 13C4 PFBA

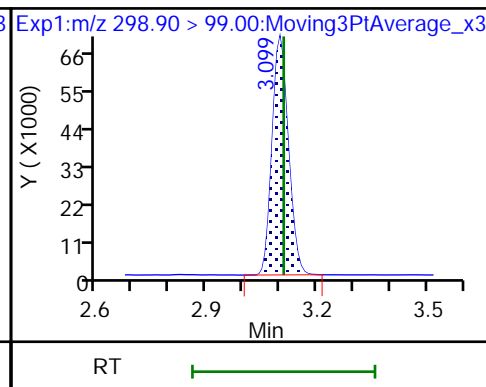
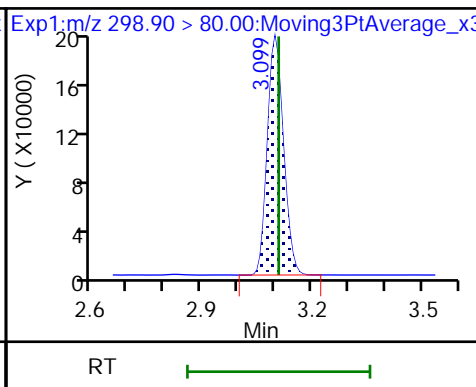
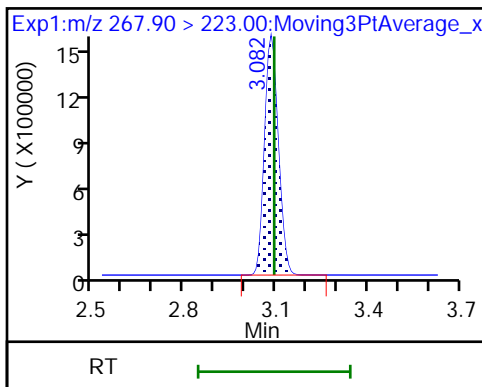
4 Perfluoropentanoic acid



D 3 13C5 PFPeA

5 Perfluorobutanesulfonic acid

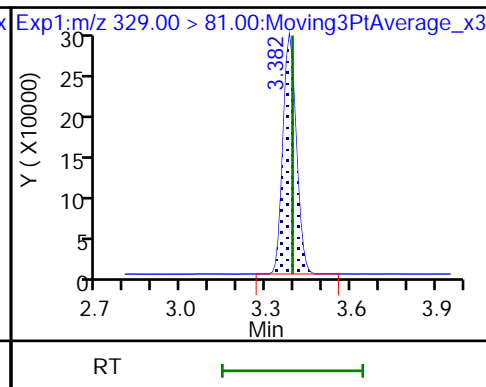
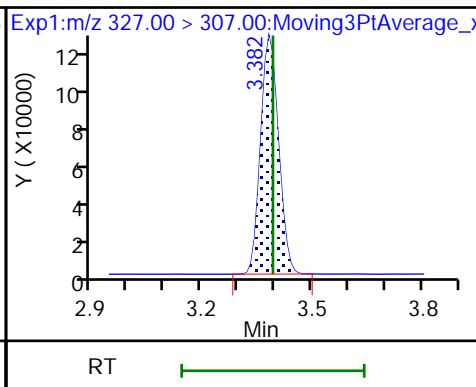
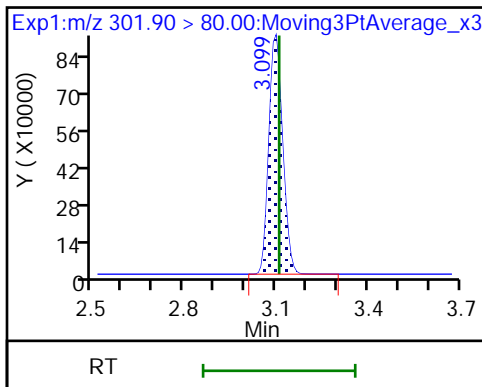
5 Perfluorobutanesulfonic acid



D 6 13C3 PFBS

7 4:2 FTS

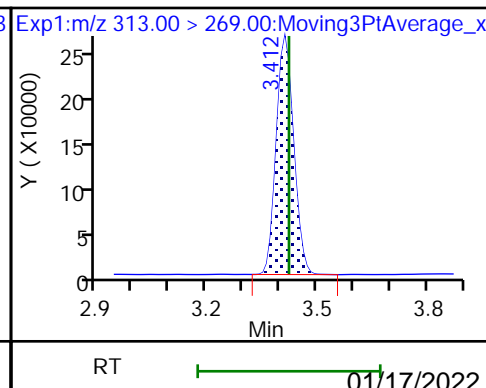
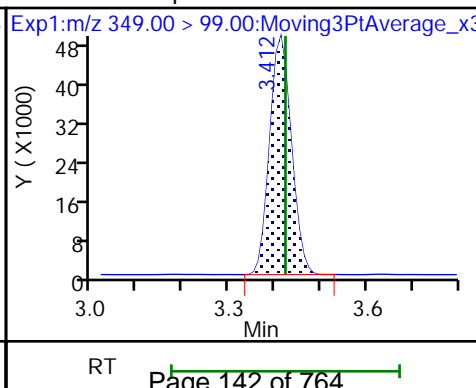
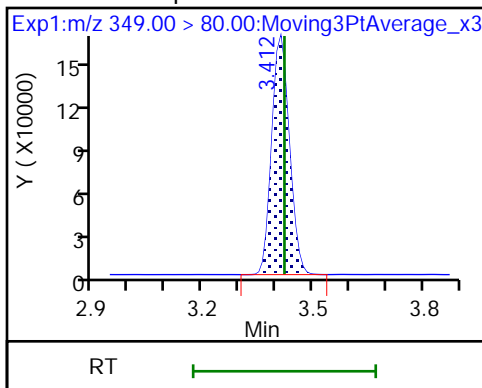
D 8 M2-4:2 FTS

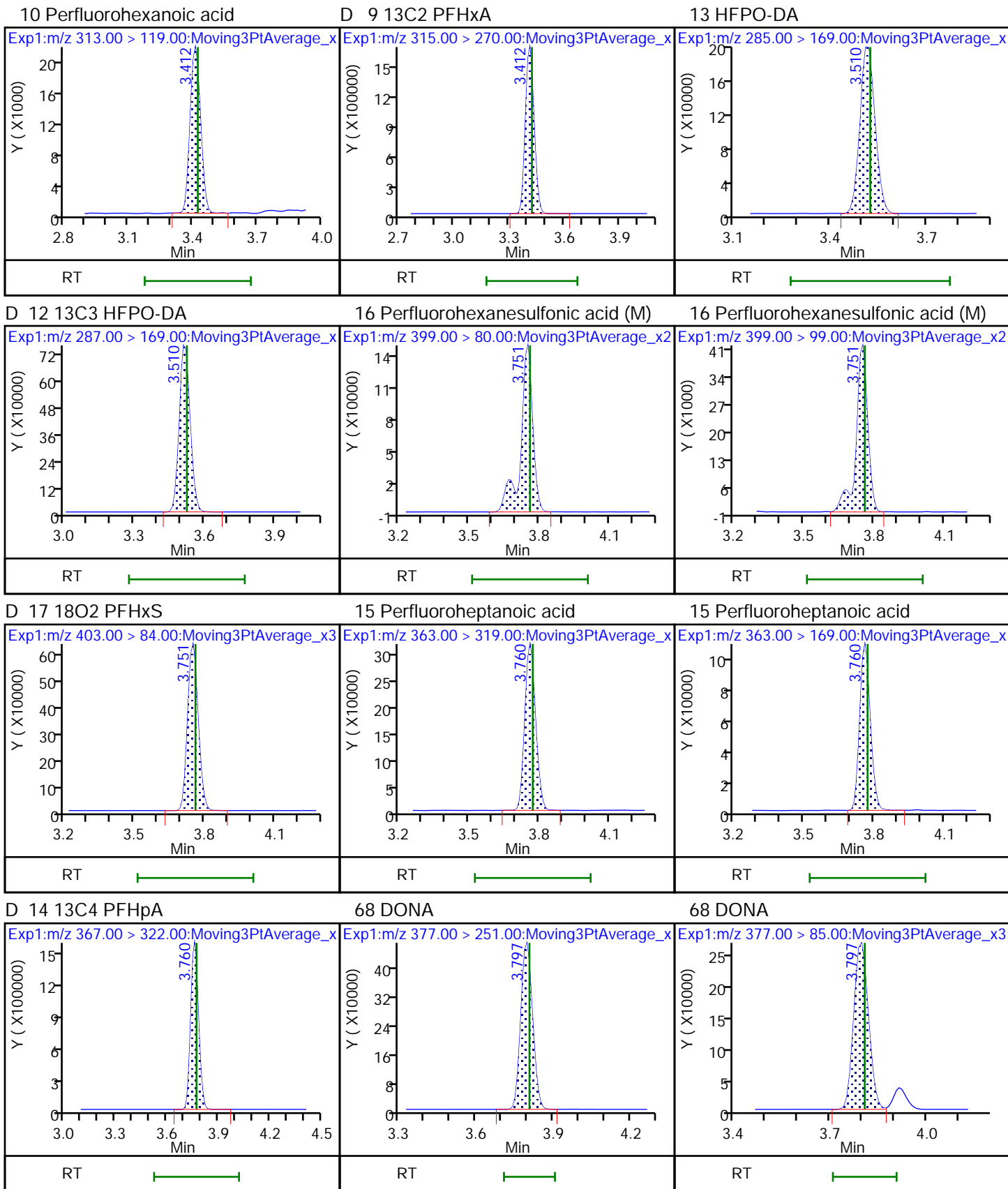


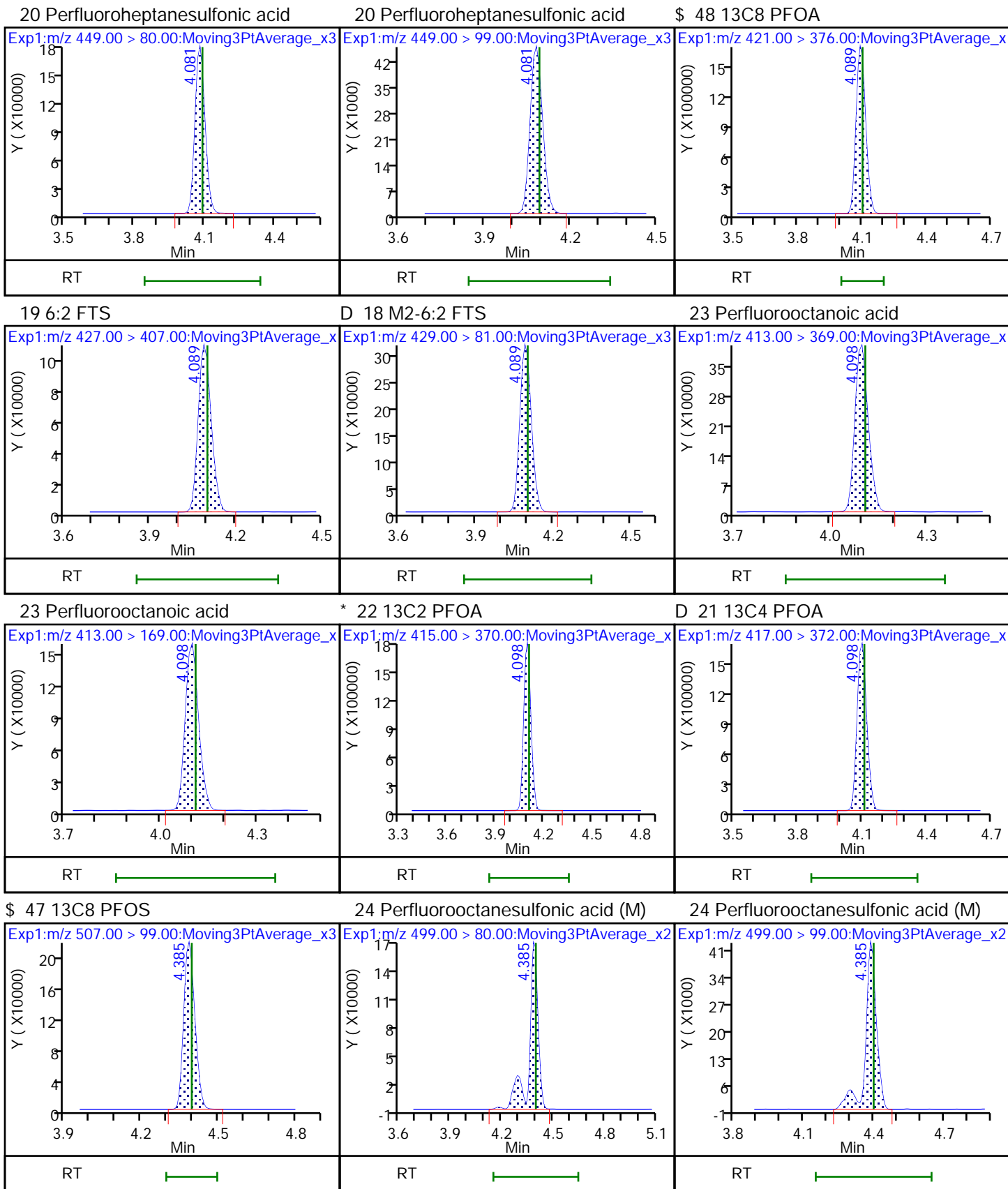
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

10 Perfluorohexanoic acid



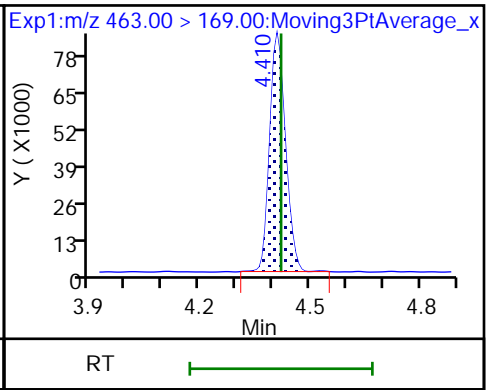
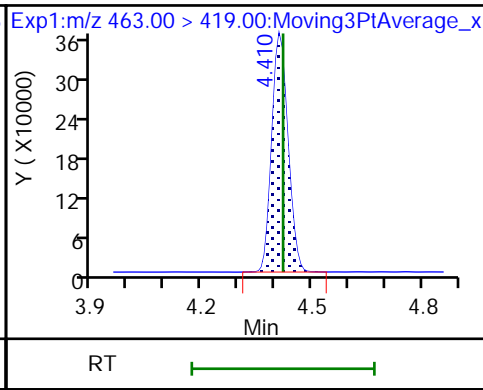
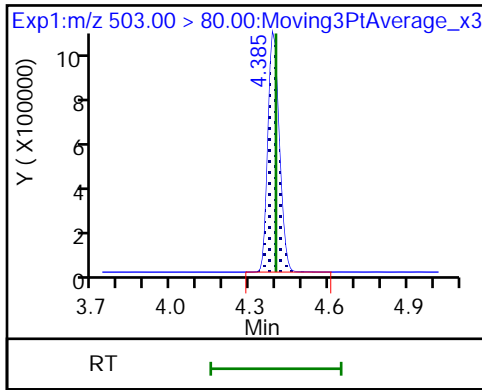




D 25 13C4 PFOS

26 Perfluorononanoic acid

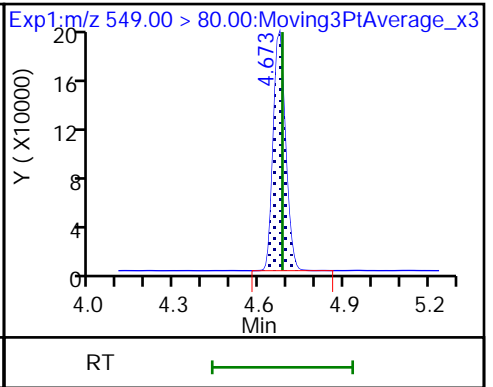
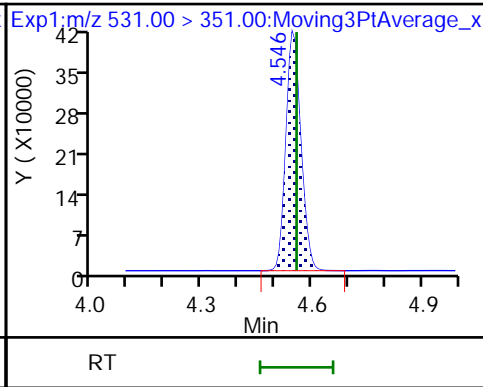
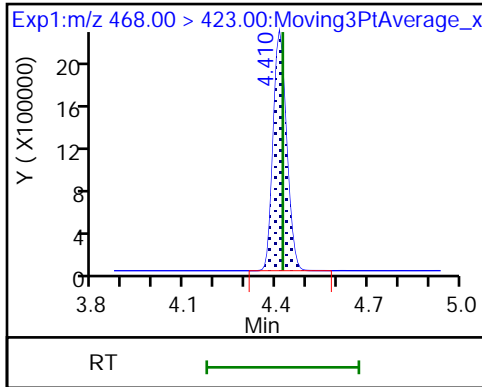
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS

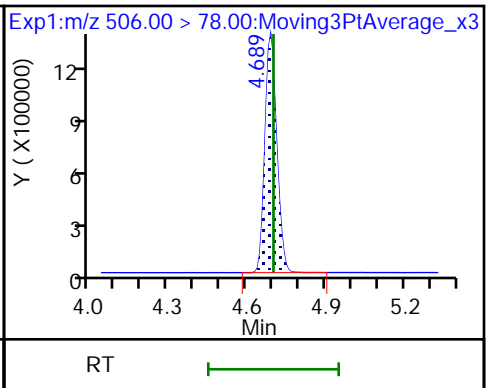
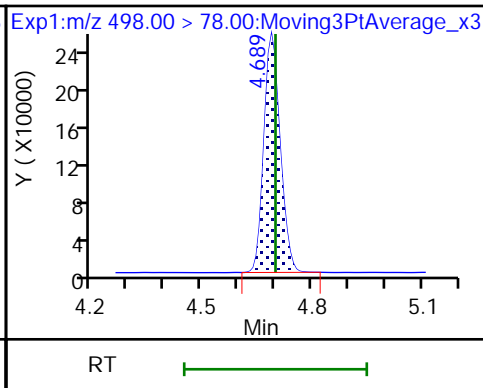
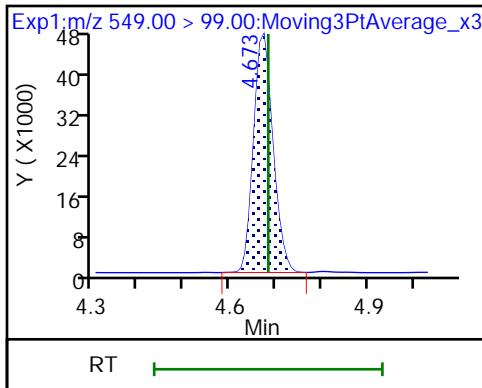
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

33 Perfluorooctanesulfonamide

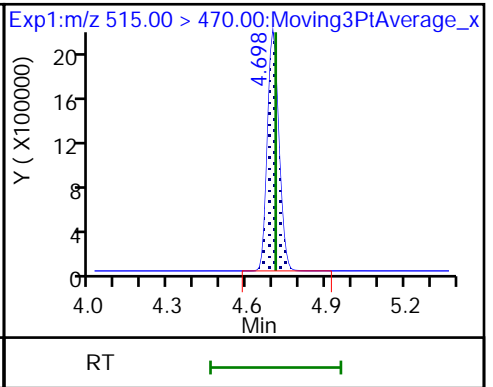
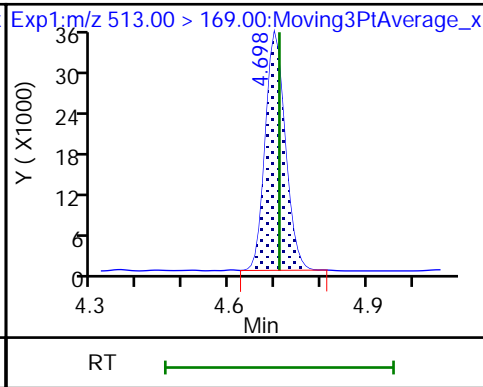
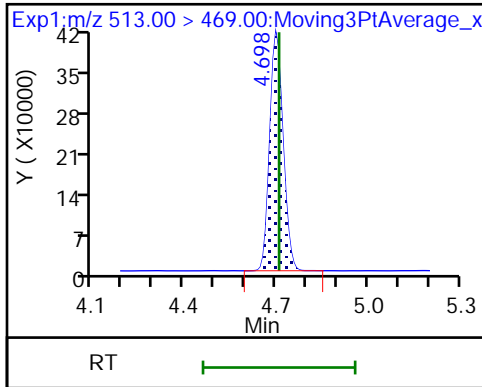
D 34 13C8 FOSA

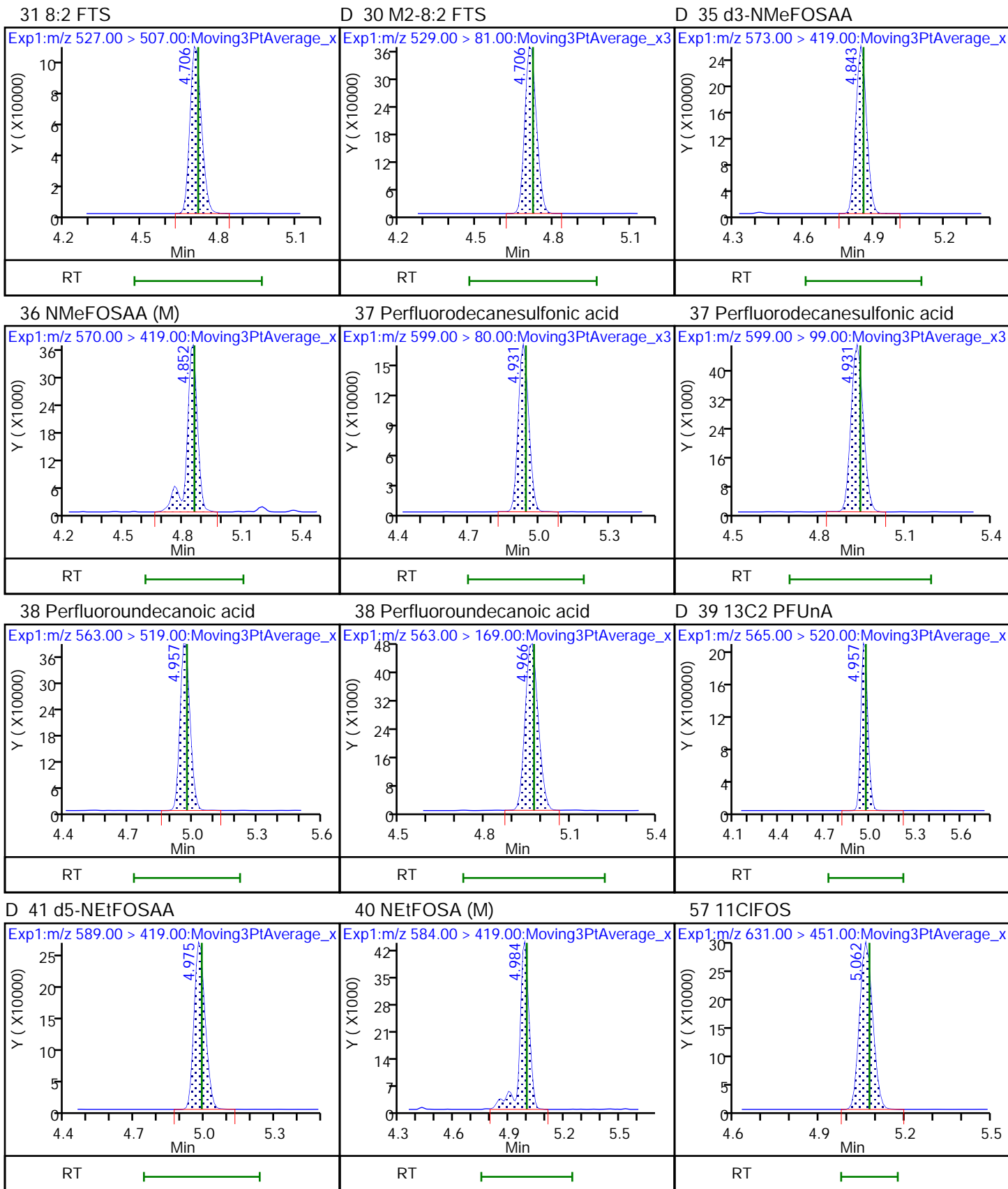


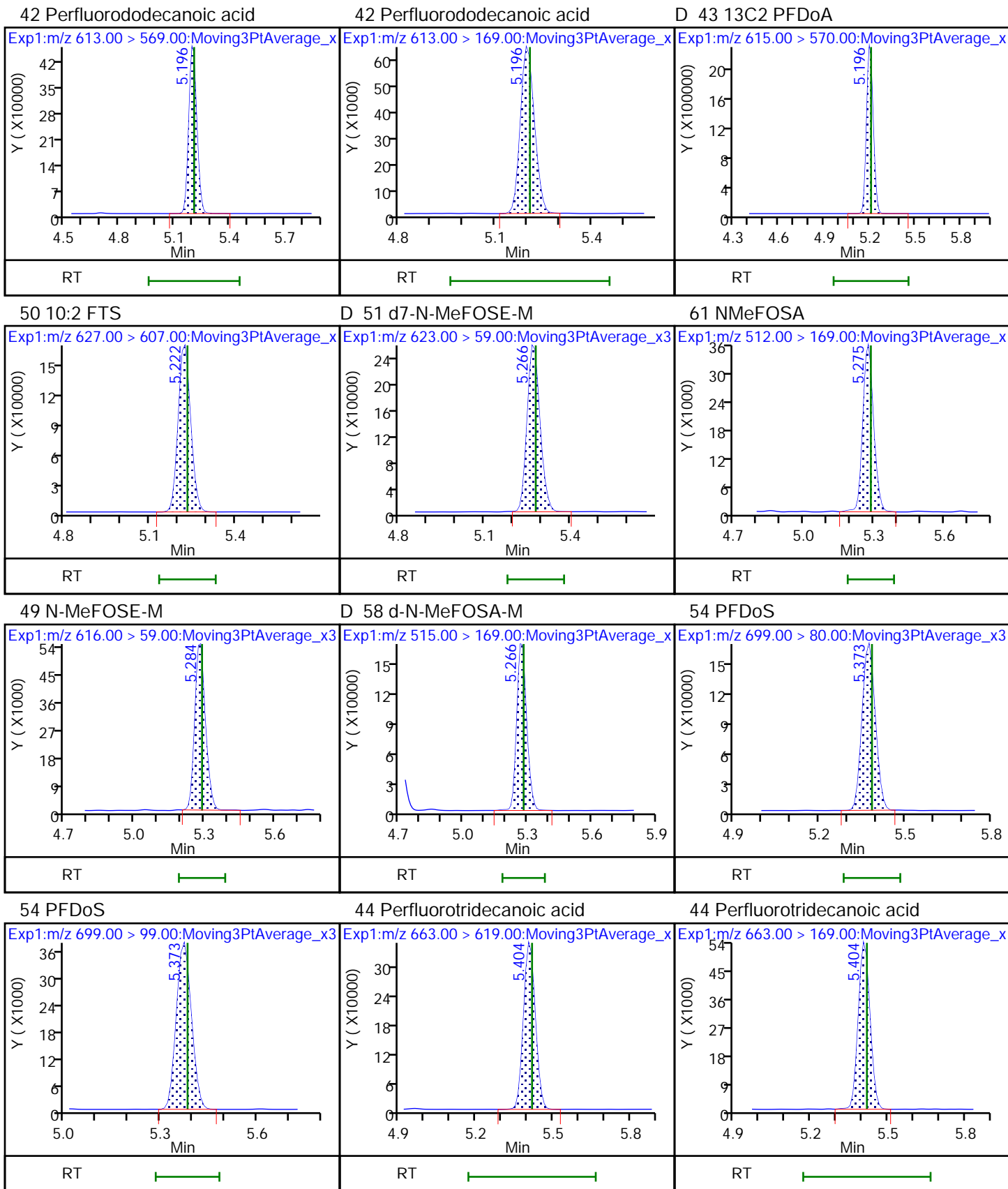
29 Perfluorodecanoic acid

29 Perfluorodecanoic acid

D 32 13C2 PFDA





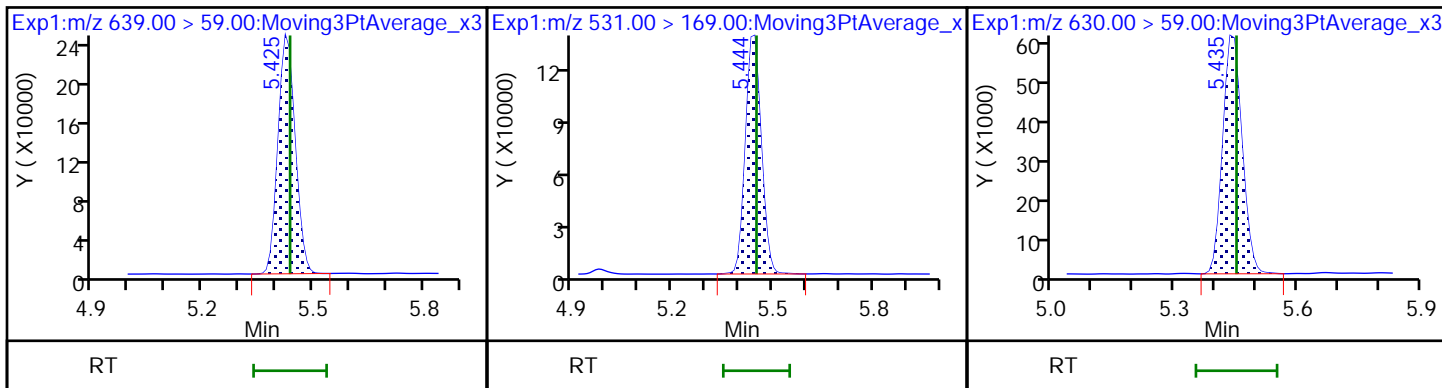




D 53 d9-N-EtFOSE-M

D 52 d-N-EtFOSA-M

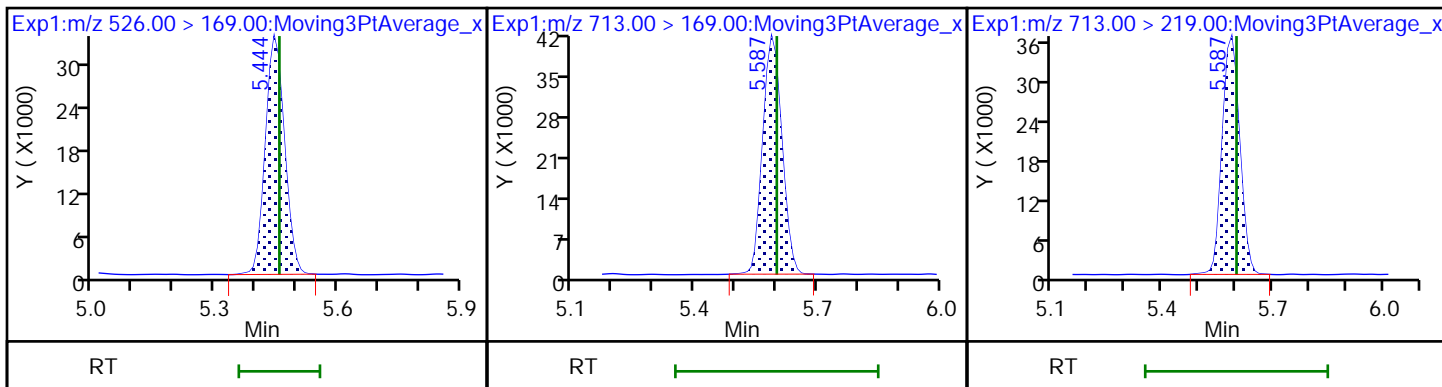
62 N-EtFOSE-M



56 N-EtFOSA-M

45 Perfluorotetradecanoic acid

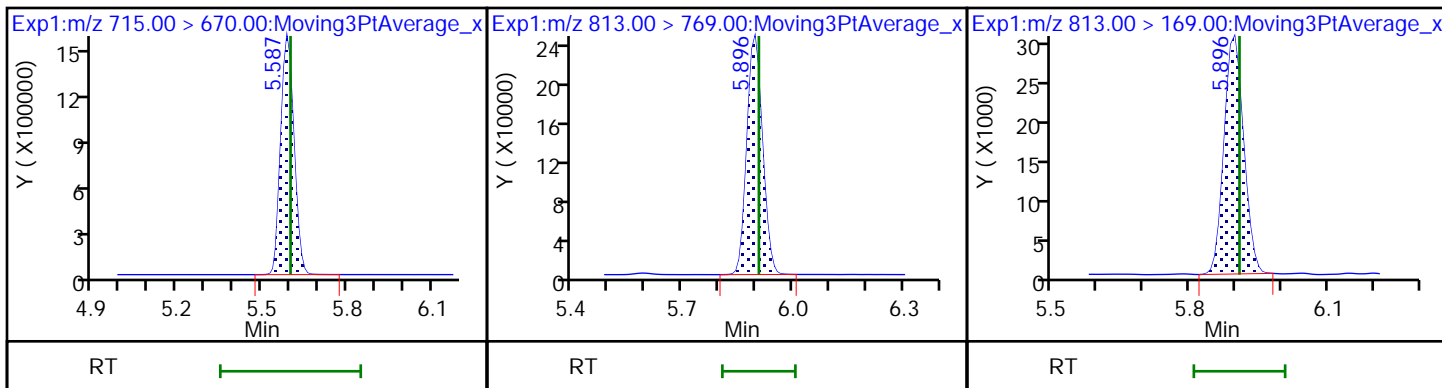
45 Perfluorotetradecanoic acid



D 46 13C2 PFTeDA

55 Perfluorohexadecanoic acid

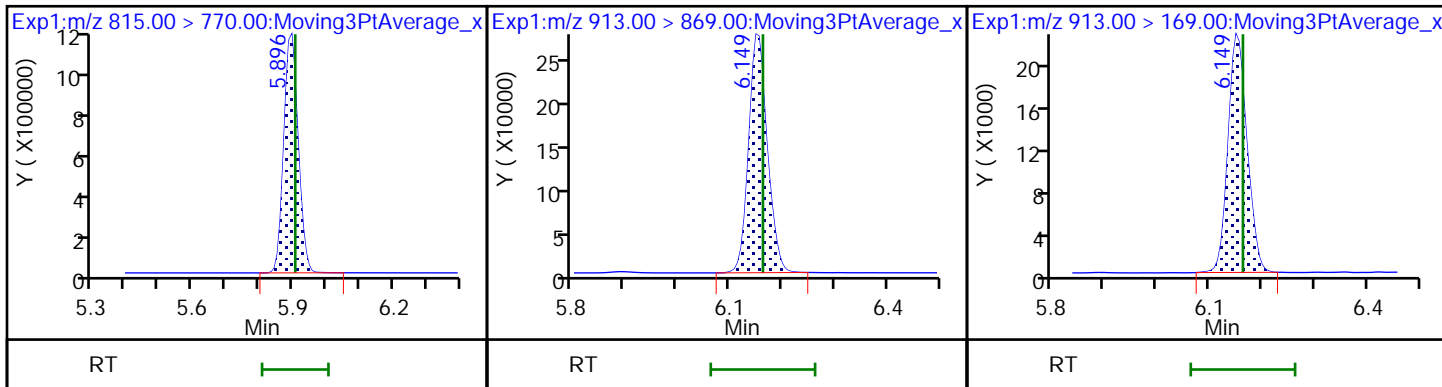
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid





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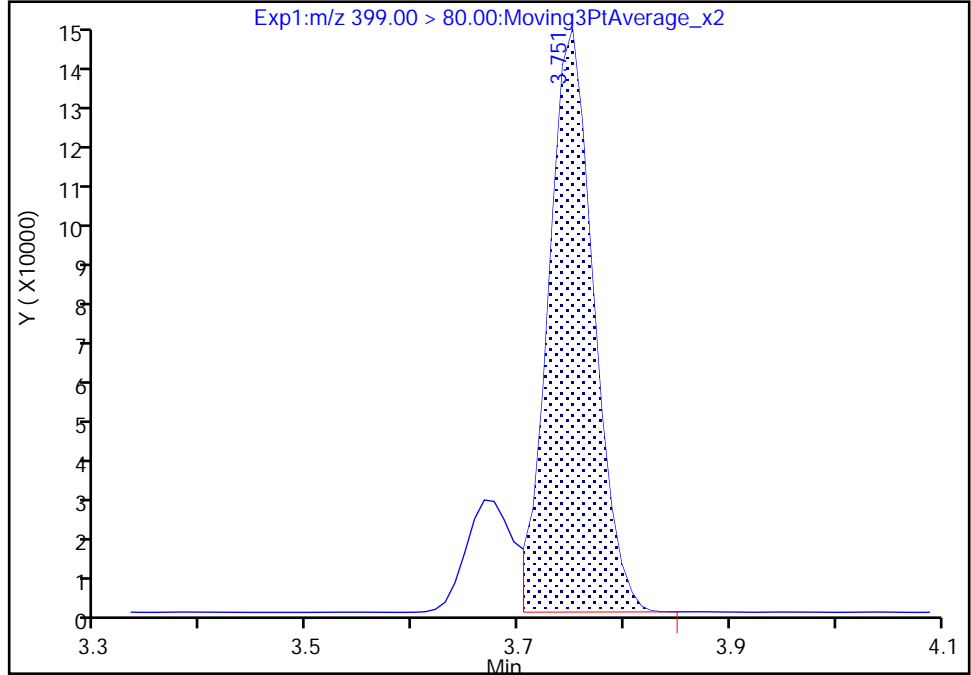
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_008.d  
Injection Date: 09-Jan-2022 10:53:28 Instrument ID: LCA  
Lims ID: IC 3  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

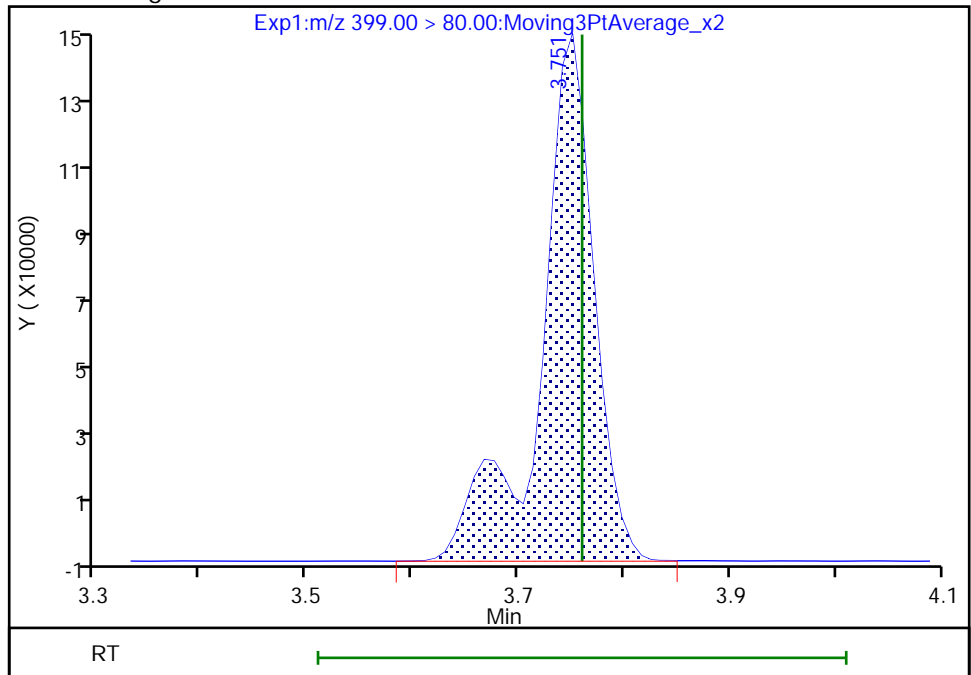
RT: 3.75  
Area: 416539  
Amount: 0.223893  
Amount Units: ng/ml

Processing Integration Results



RT: 3.75  
Area: 500197  
Amount: 0.216360  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:19:43  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

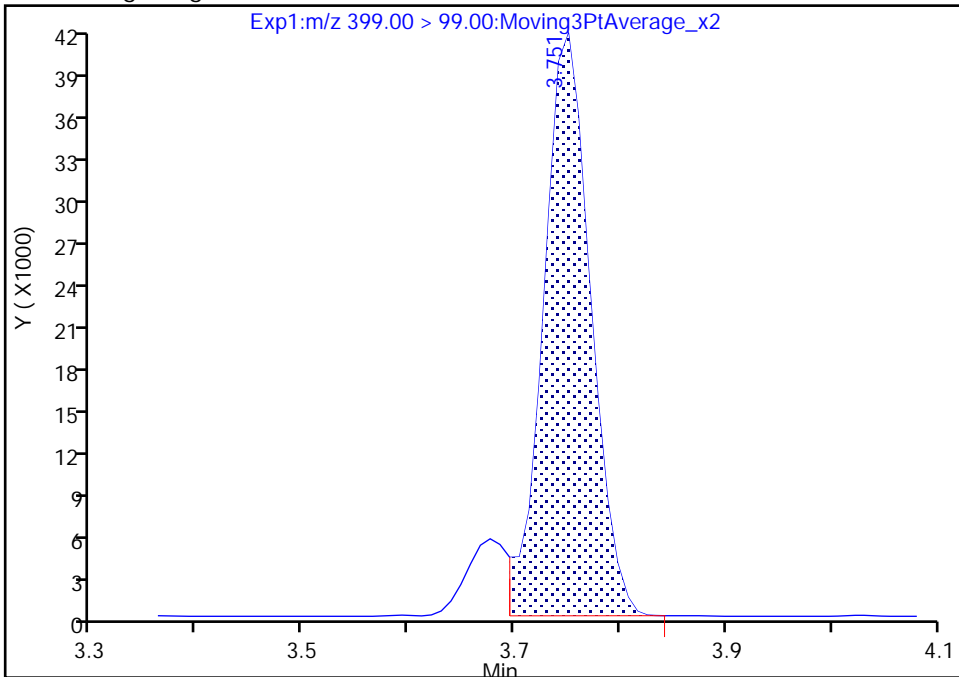
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_008.d  
Injection Date: 09-Jan-2022 10:53:28 Instrument ID: LCA  
Lims ID: IC 3  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

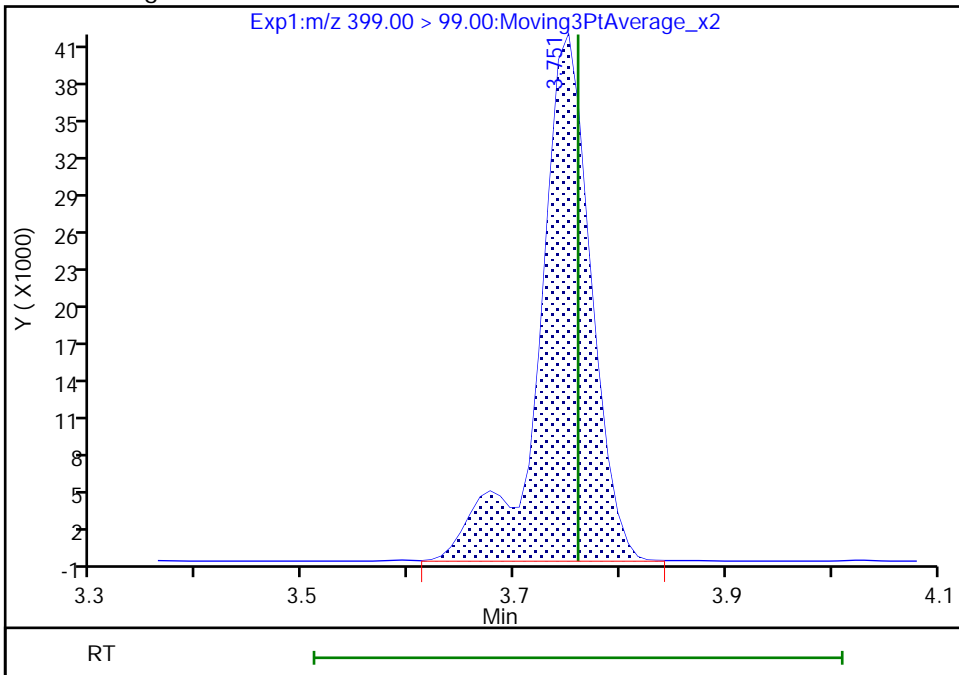
RT: 3.75  
Area: 127627  
Amount: 0.223893  
Amount Units: ng/ml

Processing Integration Results



RT: 3.75  
Area: 142100  
Amount: 0.216360  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:19:49

Audit Action: Manually Integrated

Audit Reason: Baseline  
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Eurofins TestAmerica, Knoxville

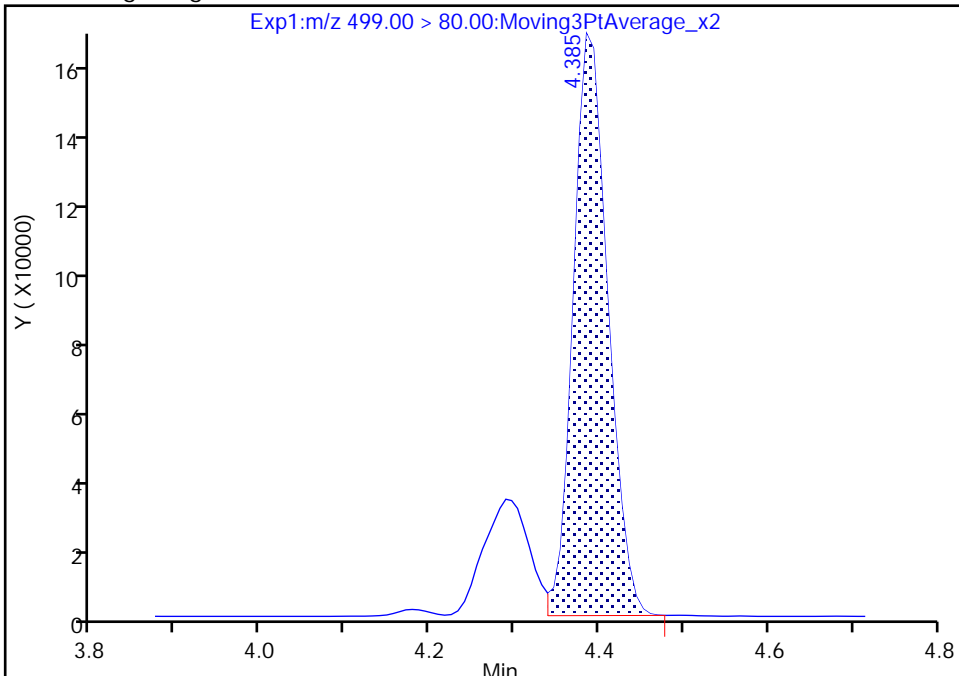
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Injection Date: 09-Jan-2022 10:53:28 Instrument ID: LCA  
Lims ID: IC 3  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

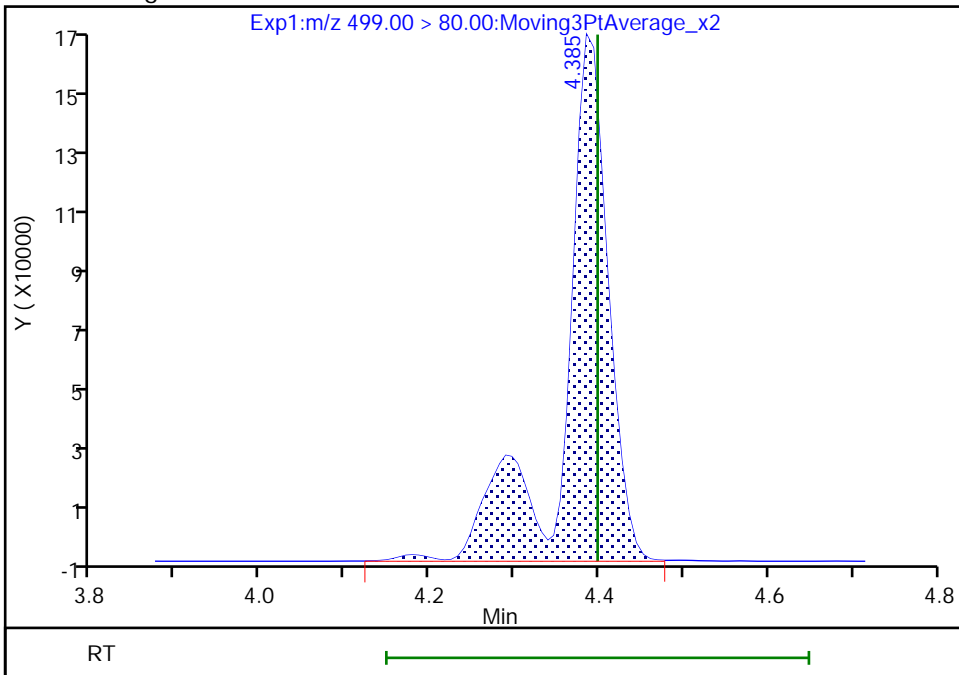
RT: 4.39  
Area: 472518  
Amount: 0.196847  
Amount Units: ng/ml

Processing Integration Results



RT: 4.39  
Area: 606028  
Amount: 0.219630  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:20:02  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

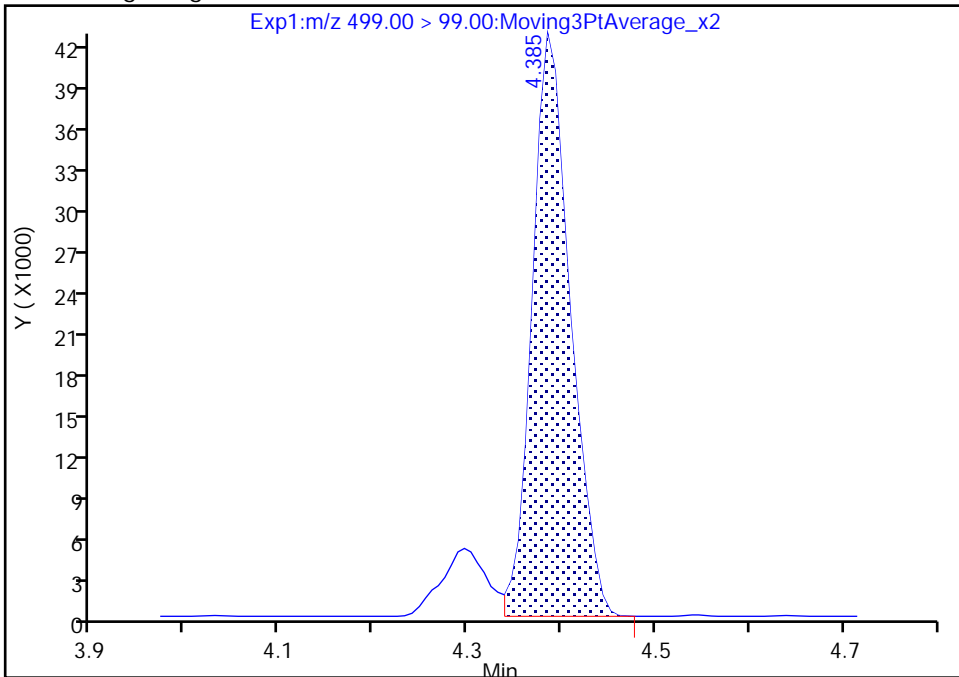
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_008.d  
Injection Date: 09-Jan-2022 10:53:28 Instrument ID: LCA  
Lims ID: IC 3  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

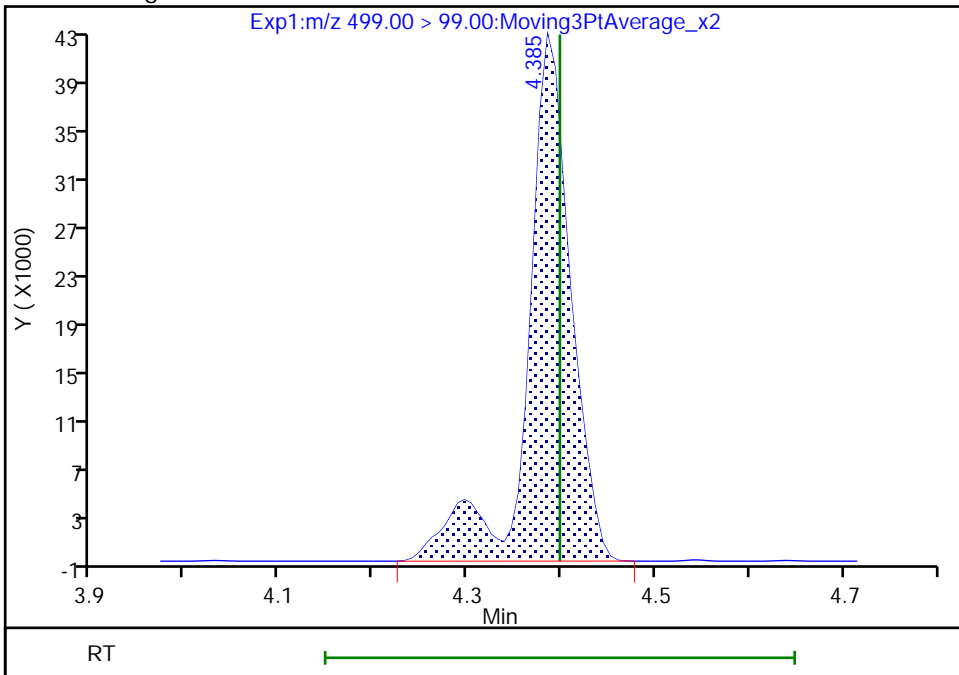
RT: 4.39  
Area: 119471  
Amount: 0.196847  
Amount Units: ng/ml

Processing Integration Results



RT: 4.39  
Area: 135814  
Amount: 0.219630  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:20:10

Audit Action: Manually Integrated

Audit Reason: Baseline  
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Eurofins TestAmerica, Knoxville

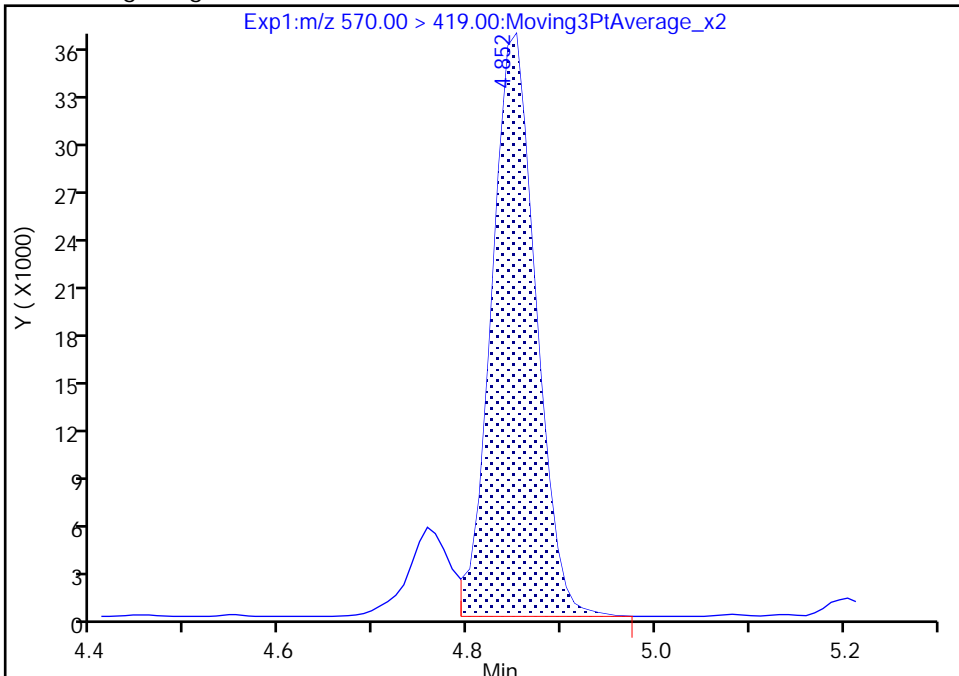
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Injection Date: 09-Jan-2022 10:53:28 Instrument ID: LCA  
Lims ID: IC 3  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

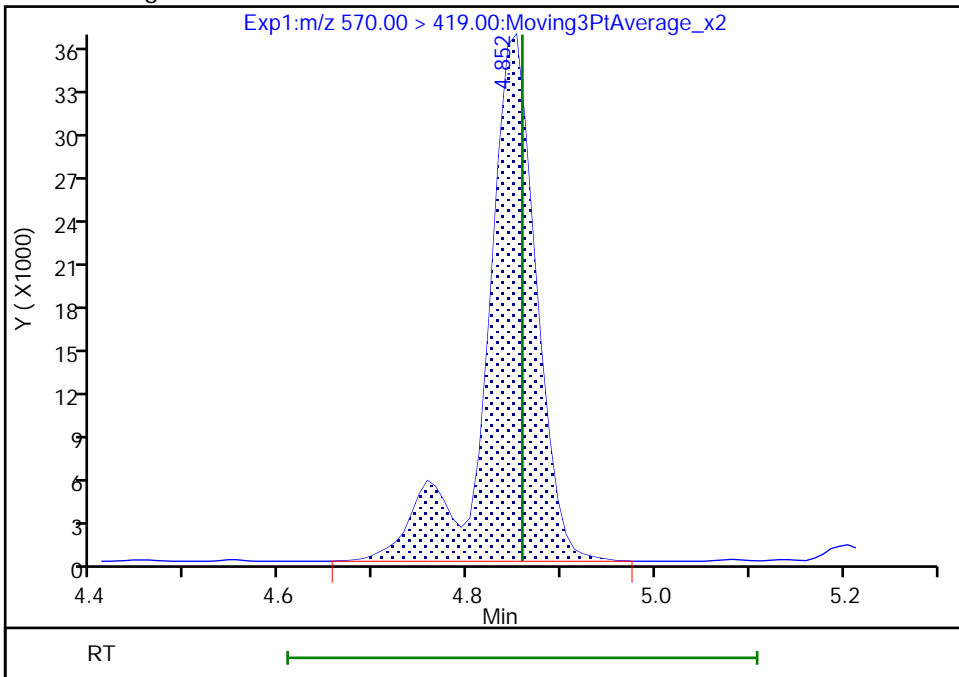
RT: 4.85  
Area: 118280  
Amount: 0.268064  
Amount Units: ng/ml

Processing Integration Results



RT: 4.85  
Area: 135153  
Amount: 0.215342  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:20:27  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

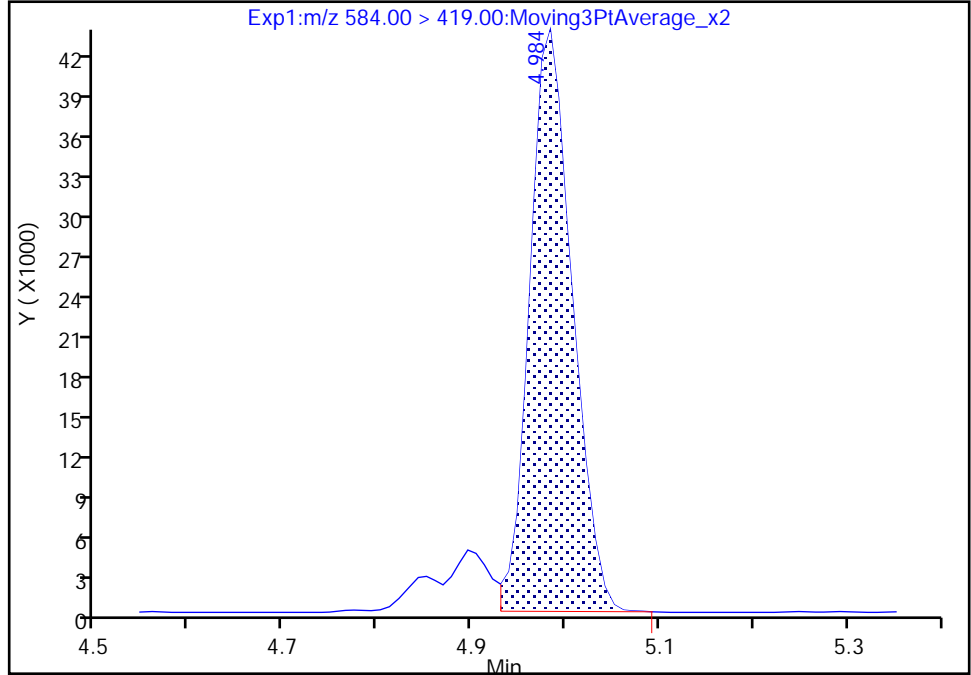
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Injection Date: 09-Jan-2022 10:53:28 Instrument ID: LCA  
Lims ID: IC 3  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

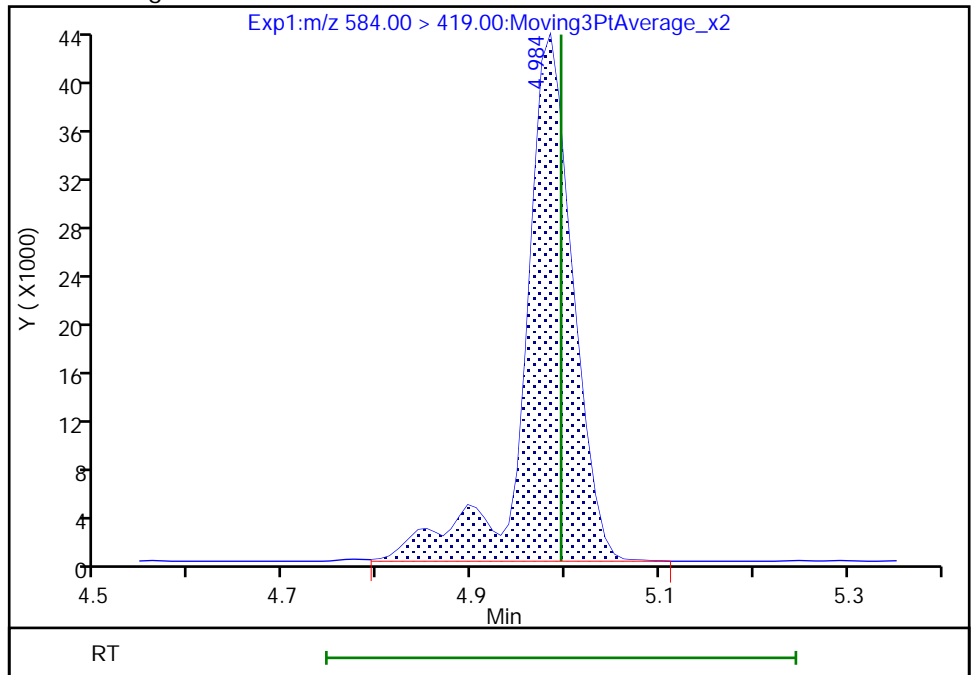
RT: 4.98  
Area: 137502  
Amount: 0.216379  
Amount Units: ng/ml

Processing Integration Results



RT: 4.98  
Area: 157582  
Amount: 0.231685  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:20:36  
Audit Action: Manually Integrated

Audit Reason: Baseline



Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_009.d  
 Lims ID: ICIS  
 Client ID:  
 Sample Type: ICIS Calib Level: 4  
 Inject. Date: 09-Jan-2022 11:02:16 ALS Bottle#: 9 Worklist Smp#: 9  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022186-009 icis  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16

Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 12:31:50 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1686

First Level Reviewer: cochranj Date: 09-Jan-2022 11:14:16

Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	2.790	2.784	0.006	0.678	6230665	1.23	98.2	15764	
2 Perfluorobutanoic acid	212.90 > 169.00	2.790	2.785	0.005	1.000	3854072	0.9857	98.6	1052	
D 3 13C5 PFPeA	267.90 > 223.00	3.099	3.093	0.006	0.753	4810256	1.22	97.6	9681	
4 Perfluoropentanoic acid	262.90 > 219.00	3.099	3.093	0.006	1.000	3529837	0.9636	96.4	1247	
D 6 13C3 PFBS	301.90 > 80.00	3.115	3.109	0.006	0.757	2970104	1.13	97.2	13746	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.115	3.109	0.006	1.000	2417286	0.8624	Target=2.68	97.6	4897
	298.90 > 99.00	3.115	3.109	0.006	1.000	912397		2.65(1.34-4.02)	97.6	3190
D 8 M2-4:2 FTS	329.00 > 81.00	3.402	3.393	0.009	0.827	979480	1.21	104	1920	
7 4:2 FTS	327.00 > 307.00	3.402	3.393	0.009	1.000	1764352	0.9338	100.0	9455	
D 9 13C2 PFHxA	315.00 > 270.00	3.432	3.423	0.009	0.834	5102737	1.21	96.8	7011	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.422	3.422	0.0	1.099	2239825	0.9026	Target=3.48	96.2	6027
	349.00 > 99.00	3.422	3.422	0.0	1.099	650892		3.44(1.74-5.22)	96.2	3826
10 Perfluorohexanoic acid	313.00 > 269.00	3.432	3.423	0.009	1.000	3404917	0.9609	Target=12.57	96.1	1468
	313.00 > 119.00	3.432	3.423	0.009	1.000	288548		11.80(6.28-18.85)	96.1	466
13 HFPO-DA	285.00 > 169.00	3.529	3.524	0.005	1.000	2584105	0.9788		97.9	1899

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	3.529	3.524	0.005	0.858	2440057	1.20		96.3	4529	
D 17 18O2 PFHxS										
403.00 > 84.00	3.770	3.761	0.009	0.916	2043432	1.16		98.5	8614	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.760	3.760	0.0	0.998	2051159	0.8619	Target=3.48	94.7	5668	M
399.00 > 99.00	3.760	3.760	0.0	0.998	603178		3.40(1.74-5.21)	94.7	3289	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.779	3.772	0.007	0.918	4996367	1.24		99.1	7300	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.779	3.772	0.007	1.000	4115810	0.9838	Target=3.29	98.4	2203	
363.00 > 169.00	3.779	3.772	0.007	1.000	1250702		3.29(1.65-4.94)	98.4	1807	
68 DONA										
377.00 > 251.00	3.807	3.807	0.0	0.865	5947134	0.9330	Target=1.76	99.0	5844	
377.00 > 85.00	3.807	3.807	0.0	0.865	3258714		1.82(0.88-2.64)	99.0	163	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.098	4.092	0.006	0.931	2117985	0.9160	Target=3.91	96.2	6307	
449.00 > 99.00	4.098	4.092	0.006	0.931	540794		3.92(1.95-5.86)	96.2	3156	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.107	4.100	0.007	0.998	968049	1.19		99.9	3130	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.107	4.100	0.007	0.998	5234610	1.27		102	9010	
19 6:2 FTS										
427.00 > 407.00	4.107	4.101	0.006	1.000	1327290	0.9069		95.7	3542	
D 21 13C4 PFOA										
417.00 > 372.00	4.115	4.109	0.006	1.000	5153161	1.24		98.9	8641	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.115	4.109	0.006	1.000	4568690	0.9658	Target=2.61	96.6	2286	
413.00 > 169.00	4.115	4.109	0.006	1.000	1762372		2.59(1.30-3.91)	96.6	2431	
* 22 13C2 PFOA										
415.00 > 370.00	4.115	4.109	0.006		5559029	1.25			8553	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.401	4.396	0.005	1.000	657687	1.22		102	3391	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.401	4.398	0.003	1.000	2441987	0.9170	Target=4.37	98.8	4879	M
499.00 > 99.00	4.401	4.398	0.003	1.000	525382		4.65(2.18-6.55)	98.8	2116	M
D 25 13C4 PFOS										
503.00 > 80.00	4.401	4.398	0.003	1.070	2896304	1.15		95.9	4241	
D 27 13C5 PFNA										
468.00 > 423.00	4.427	4.421	0.006	1.076	6551468	1.19		95.5	8588	
26 Perfluorononanoic acid										
463.00 > 419.00	4.427	4.421	0.006	1.000	4513988	1.01	Target=4.48	101	4394	
463.00 > 169.00	4.427	4.421	0.006	1.000	970843		4.65(2.24-6.72)	101	1995	
63 9CIFOS										
531.00 > 351.00	4.560	4.558	0.002	1.036	4855527	0.9354		100	8585	

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	4.689	4.682	0.007	1.065	2283353	0.9664	Target=3.84	101	5784	
549.00 > 99.00	4.689	4.682	0.007	1.065	562431		4.06(1.92-5.77)	101	2950	
D 34 13C8 FOSA										
506.00 > 78.00	4.706	4.700	0.006	1.144	4333664	1.27		101	3363	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.706	4.700	0.006	1.000	2955933	0.9014		90.1	3026	
D 32 13C2 PFDA										
515.00 > 470.00	4.715	4.709	0.006	1.146	6684781	1.26		101	12498	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.715	4.709	0.006	1.000	4742177	0.9194	Target=11.50	91.9	4670	
513.00 > 169.00	4.715	4.709	0.006	1.000	419558		11.30(5.75-17.25)	91.9	678	
31 8:2 FTS										
527.00 > 507.00	4.723	4.721	0.002	1.000	1261773	0.9556		99.7	4759	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.723	4.721	0.002	1.148	1117378	1.21		101	1810	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.861	4.854	0.007	1.181	751488	1.21		96.5	680	
36 NMeFOSAA										
570.00 > 419.00	4.861	4.858	0.003	1.000	559483	0.9576		95.8	871	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.949	4.942	0.007	1.124	2120075	0.9423	Target=3.69	97.8	5661	
599.00 > 99.00	4.949	4.942	0.007	1.124	559001		3.79(1.84-5.53)	97.8	3875	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.975	4.973	0.002	1.000	4911042	0.9755	Target=8.29	97.5	5859	
563.00 > 169.00	4.975	4.973	0.002	1.000	581504		8.45(4.14-12.43)	97.5	2777	
D 39 13C2 PFUnA										
565.00 > 520.00	4.975	4.973	0.002	1.209	6490846	1.23		98.2	9538	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.993	4.989	0.004	1.213	831002	1.22		97.2	4409	
40 NEtFOSA										
584.00 > 419.00	5.002	4.995	0.007	1.002	631535	0.9562		95.6	1098	M
57 11C1FOS										
631.00 > 451.00	5.082	5.075	0.007	1.155	3834571	0.9460		100	7419	
D 43 13C2 PFDoA										
615.00 > 570.00	5.213	5.207	0.006	1.267	6649050	1.20		95.9	13471	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.213	5.207	0.006	1.000	5455982	1.01	Target=6.82	101	4472	
613.00 > 169.00	5.213	5.207	0.006	1.000	780097		6.99(3.41-10.23)	101	1641	
50 10:2 FTS										
627.00 > 607.00	5.231	5.231	0.0	1.107	1929022	0.9082		94.2	8236	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.284	5.279	0.005	1.284	803090	1.20		96.4	777	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.284	5.281	0.003	1.284	595309	1.25		100	52.5	
61 NMeFOSA										
512.00 > 169.00	5.292	5.286	0.006	1.002	476867	0.9892		98.9	826	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
49 N-MeFOSE-M										
616.00 > 59.00	5.292	5.290	0.002	1.002	745332	0.99		99.1	1051	
54 PFDoS										
699.00 > 80.00	5.383	5.383	0.0	1.223	2126318	0.9572	Target=4.36	98.9	5394	
699.00 > 99.00	5.383	5.383	0.0	1.223	501981		4.24(2.18-6.55)	98.9	2572	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.425	5.417	0.008	1.041	4537531	1.03	Target=6.19	103	5406	
663.00 > 169.00	5.425	5.417	0.008	1.041	732047		6.20(3.09-9.28)	103	2542	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.444	5.437	0.007	1.323	809270	1.21		96.8	455	
62 N-EtFOSE-M										
630.00 > 59.00	5.454	5.450	0.004	1.002	816282	0.9494		94.9	921	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.454	5.450	0.004	1.326	475911	1.21		97.0	745	
56 N-EtFOSA-M										
526.00 > 169.00	5.464	5.457	0.007	1.002	452813	1.00		99.5	734	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.607	5.600	0.007	1.363	5150989	1.22		97.5	8981	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.607	5.600	0.007	1.000	513995	0.9282	Target=1.09	92.8	2047	
713.00 > 219.00	5.596	5.600	-0.004	0.998	488249		1.05(0.54-1.63)	92.8	2625	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.912	5.907	0.005	1.437	3410021	1.19		95.2	5847	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.912	5.907	0.005	1.000	2894336	0.9892	Target=8.22	98.9	3882	
813.00 > 169.00	5.912	5.907	0.005	1.000	357598		8.09(4.11-12.33)	98.9	910	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.169	6.162	0.007	1.043	2686042	1.00	Target=11.60	100	3241	
913.00 > 169.00	6.169	6.162	0.007	1.043	232863		11.53(5.80-17.40)	100	962	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

63L4PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_009.d

Injection Date: 09-Jan-2022 11:02:16 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

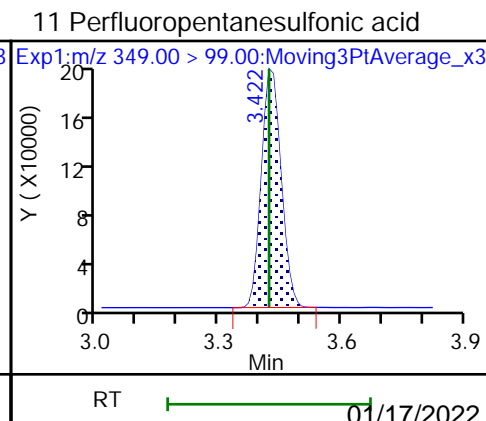
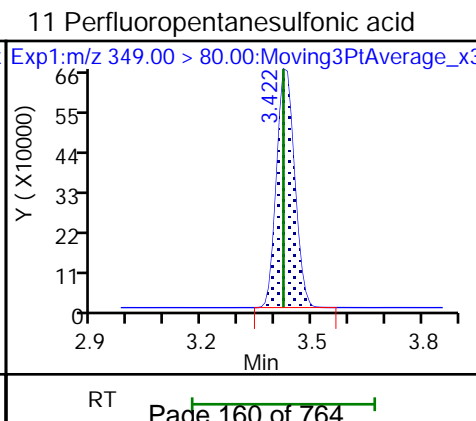
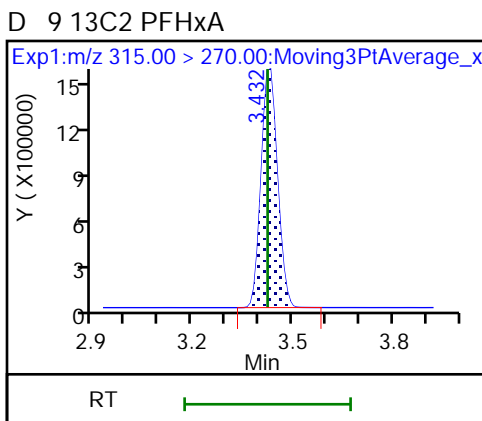
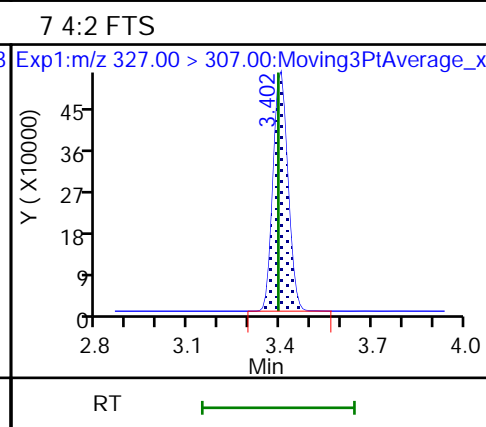
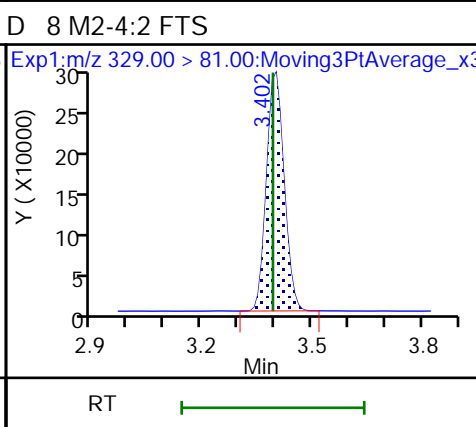
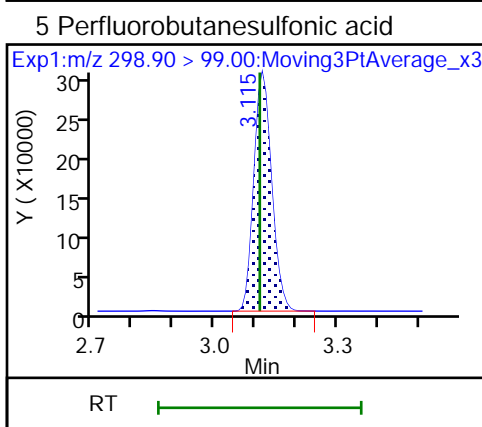
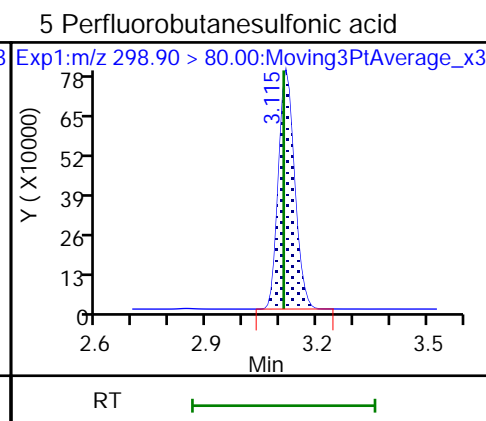
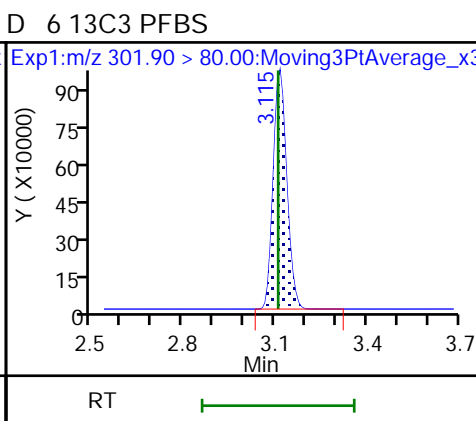
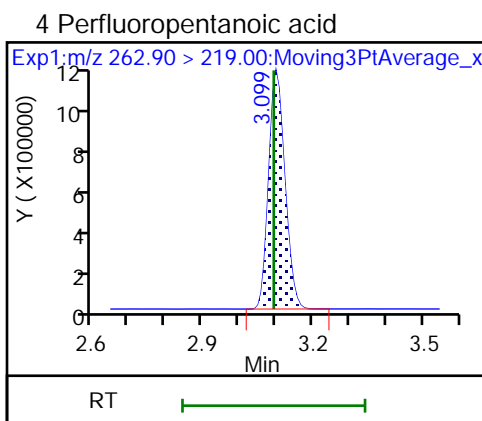
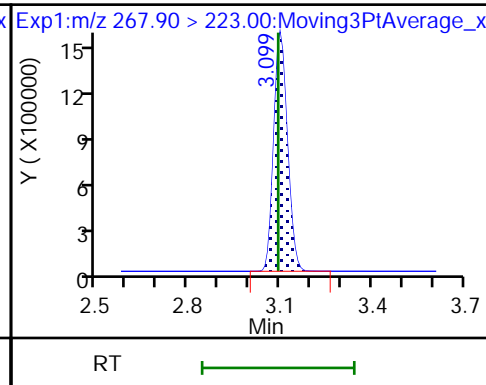
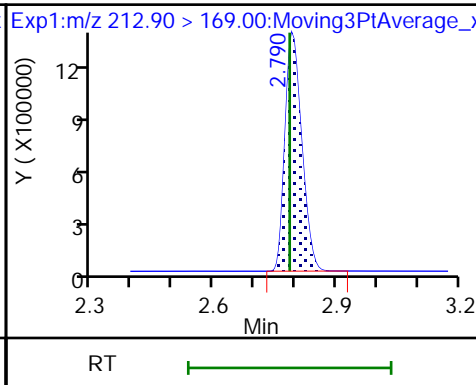
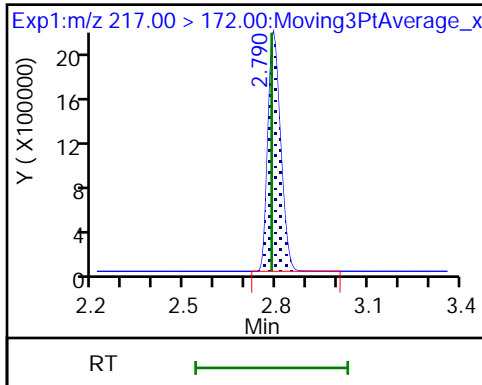
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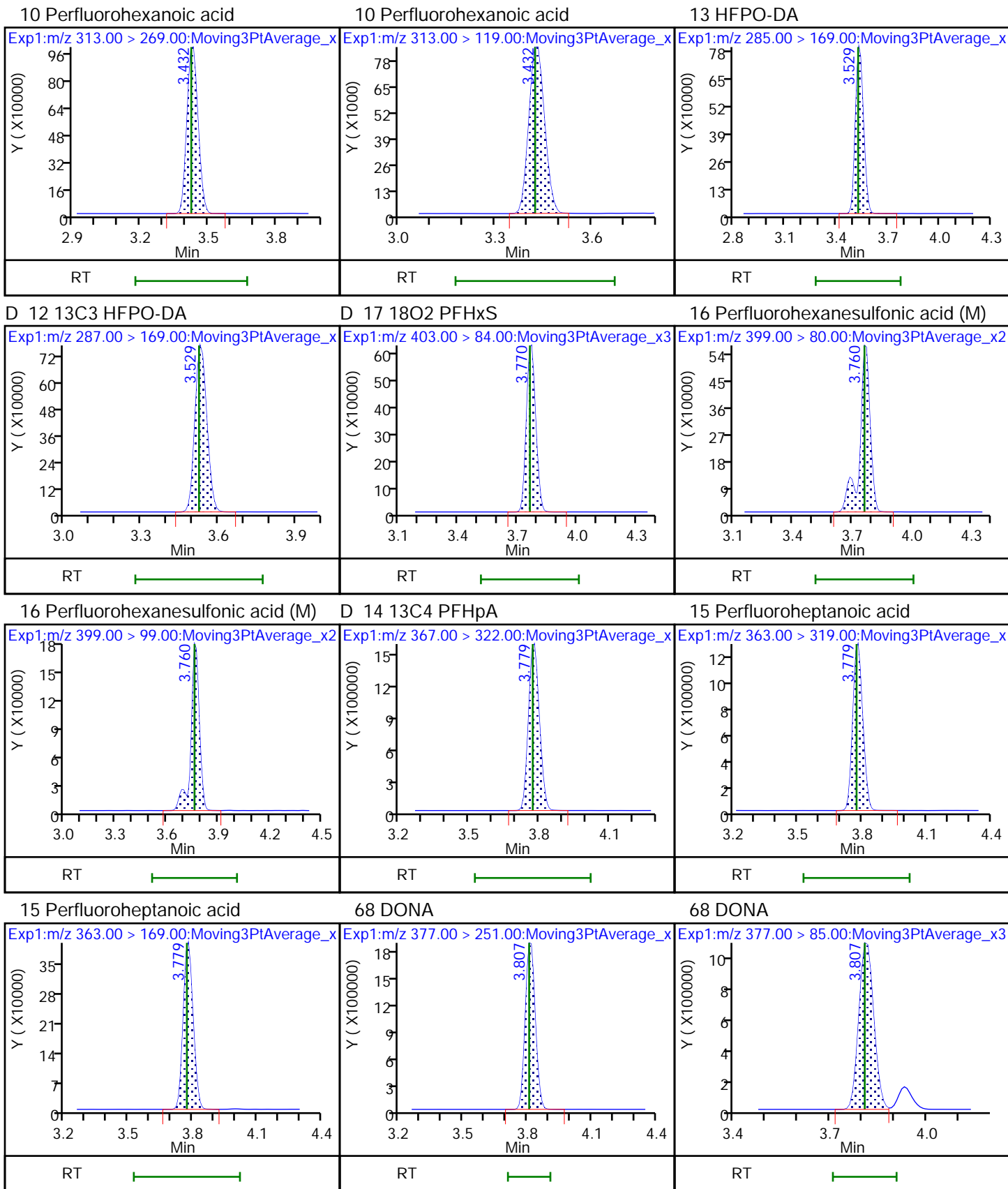
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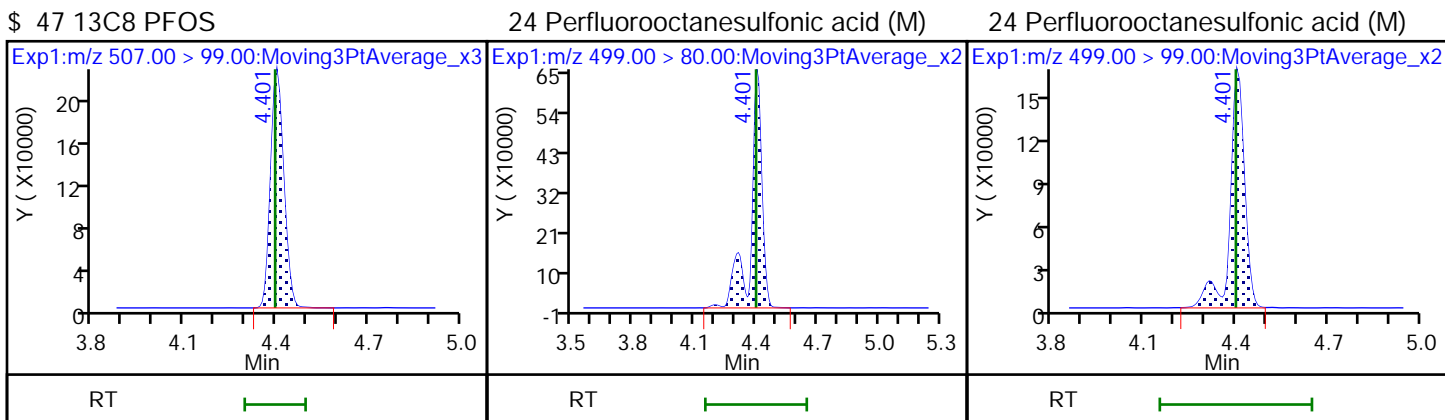
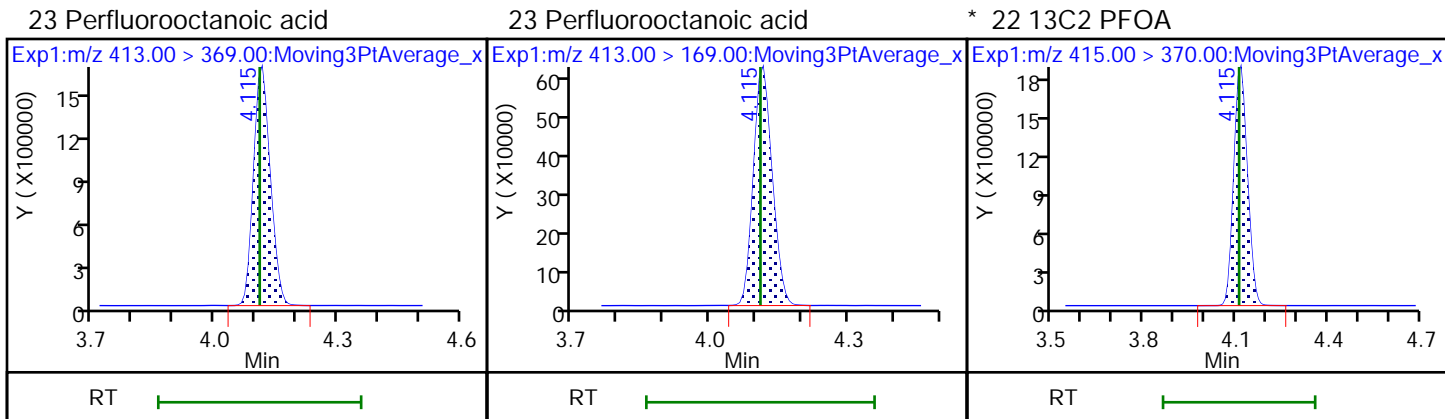
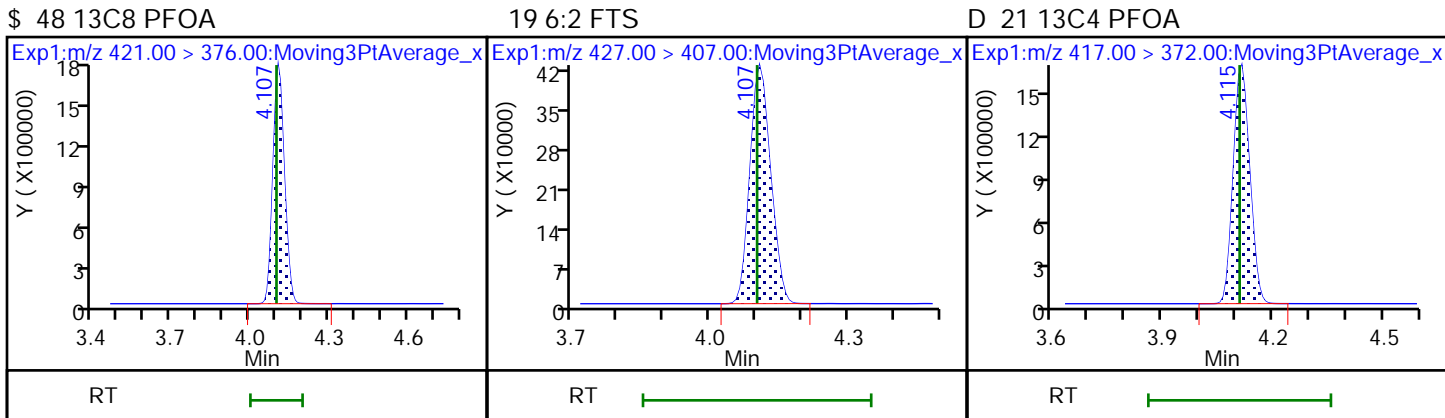
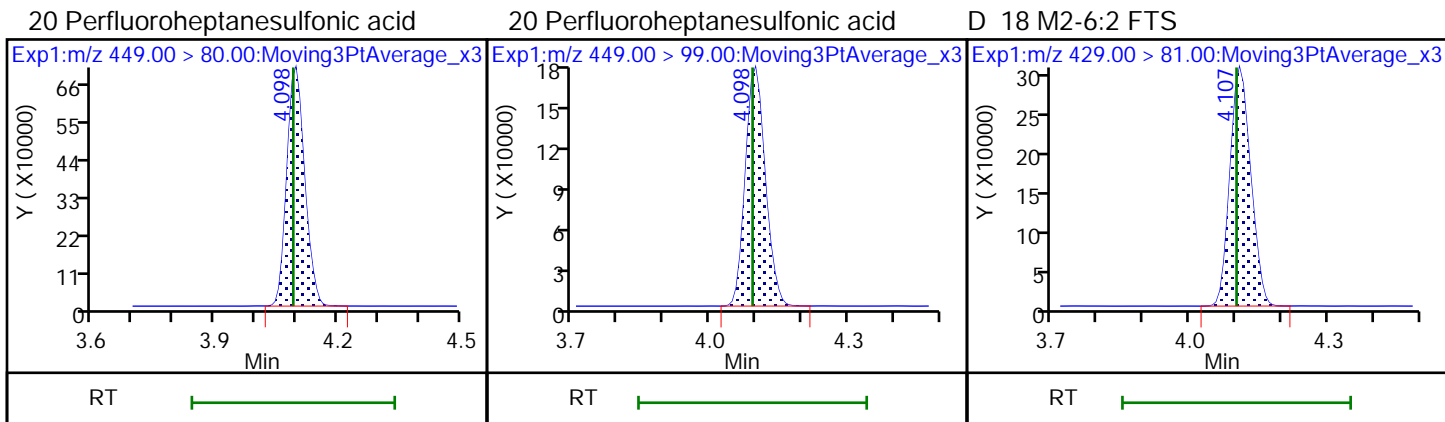
D 1 13C4 PFBA

2 Perfluorobutanoic acid

D 3 13C5 PFPeA



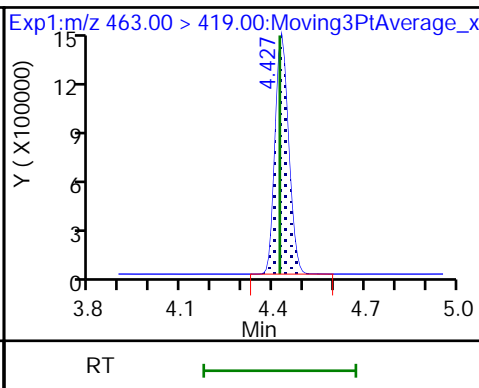
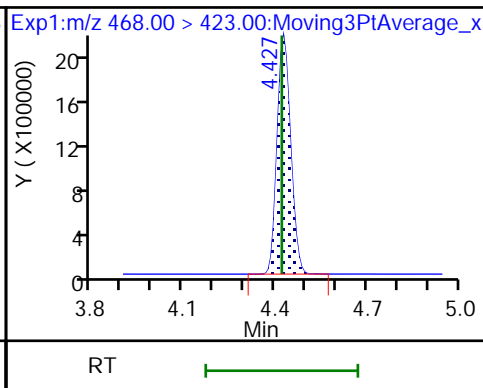
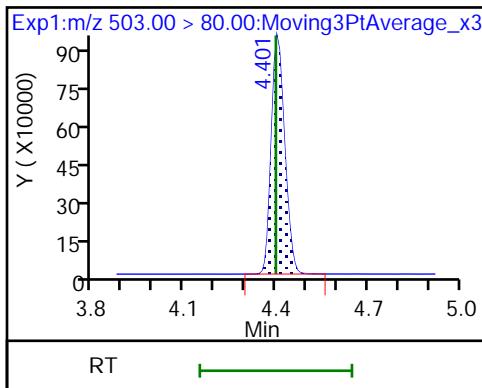




D 25 13C4 PFOS

D 27 13C5 PFNA

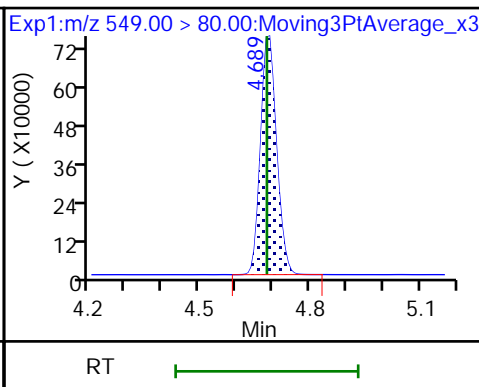
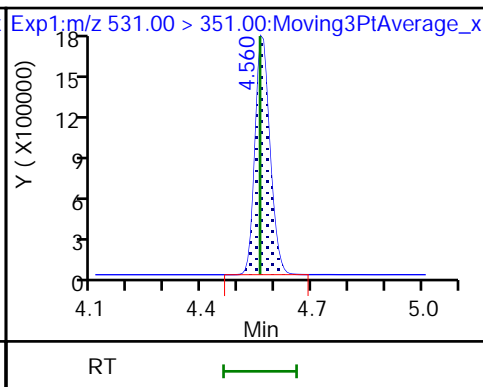
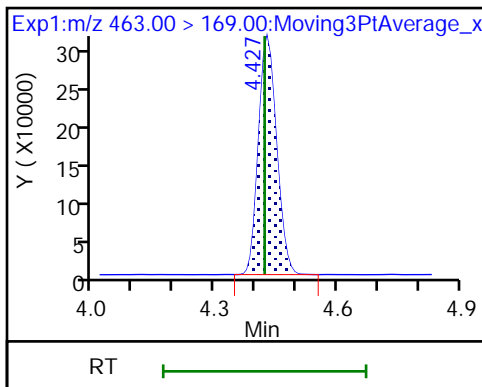
26 Perfluorononanoic acid



26 Perfluorononanoic acid

63 9CIFOS

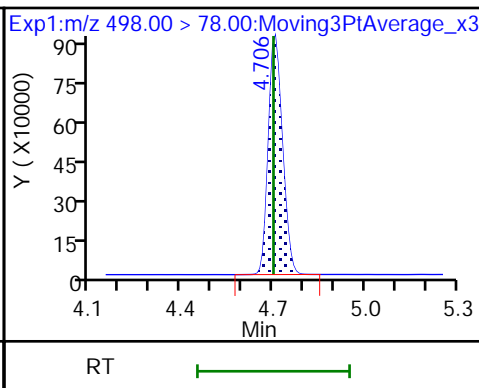
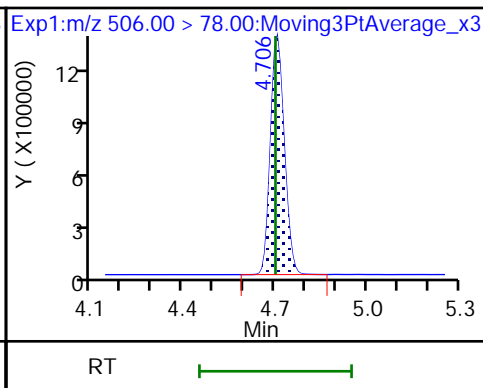
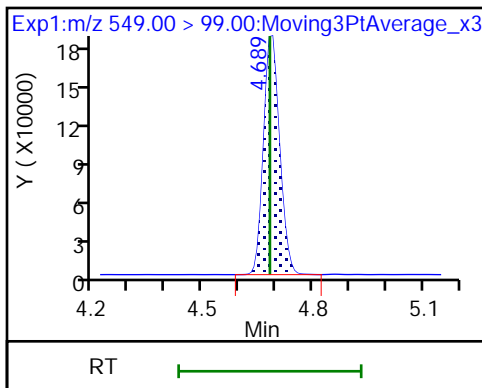
28 Perfluoronanesulfonic acid



28 Perfluoronanesulfonic acid

D 34 13C8 FOSA

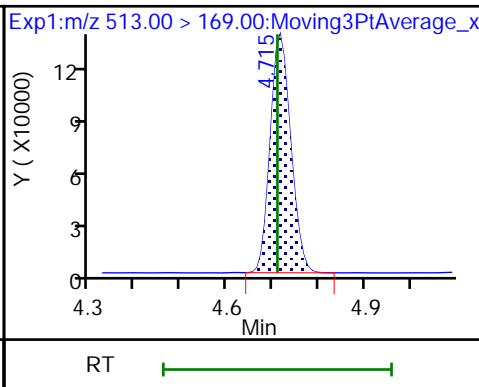
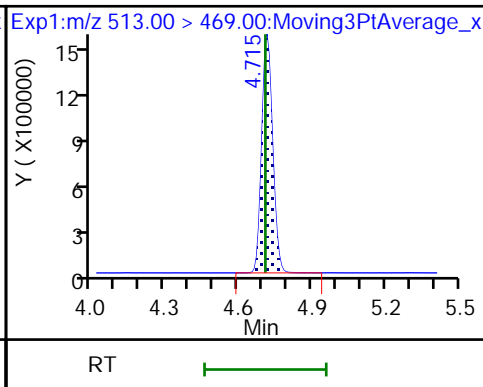
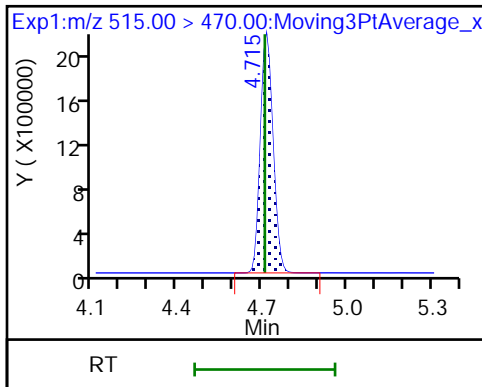
33 Perfluorooctanesulfonamide



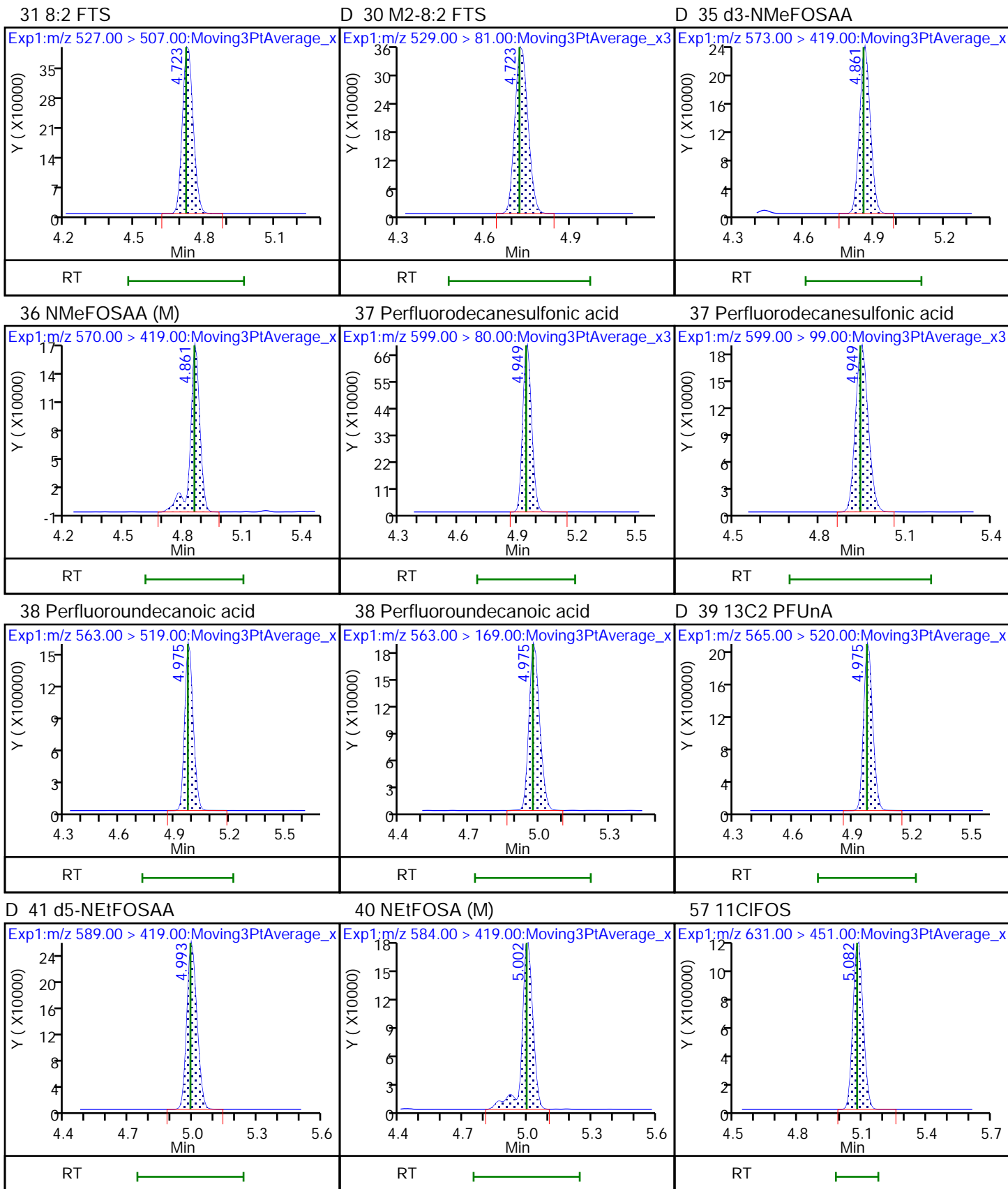
D 32 13C2 PFDA

29 Perfluorodecanoic acid

29 Perfluorodecanoic acid



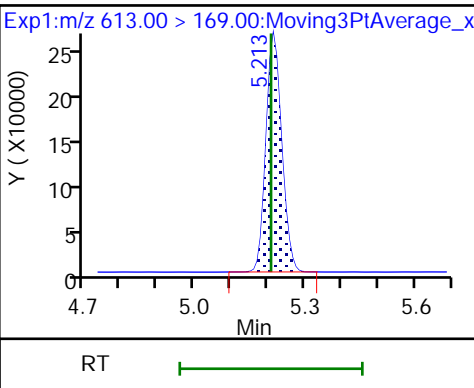
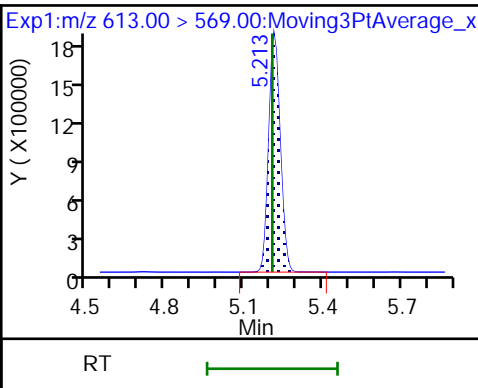
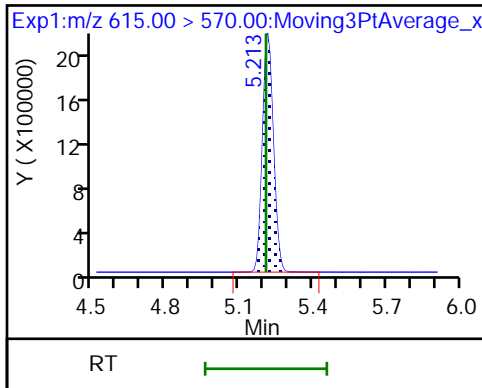




D 43 13C2 PFDaA

42 Perfluorododecanoic acid

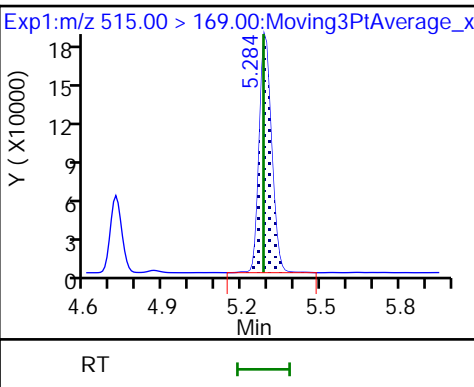
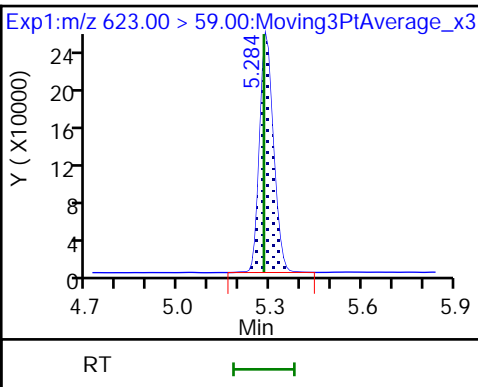
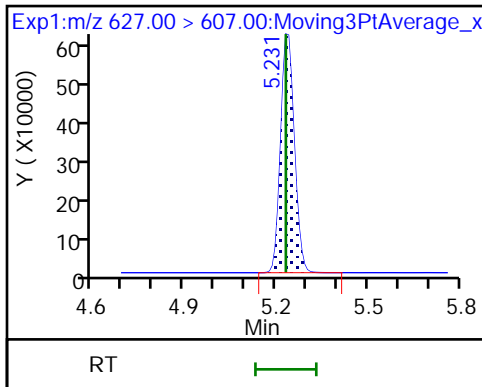
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

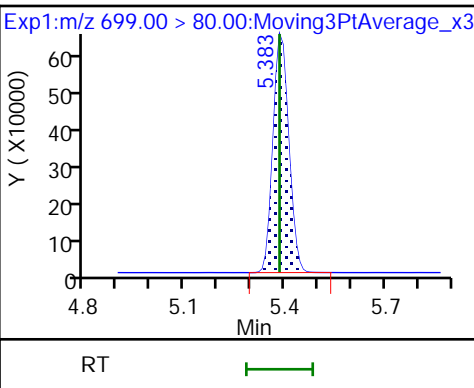
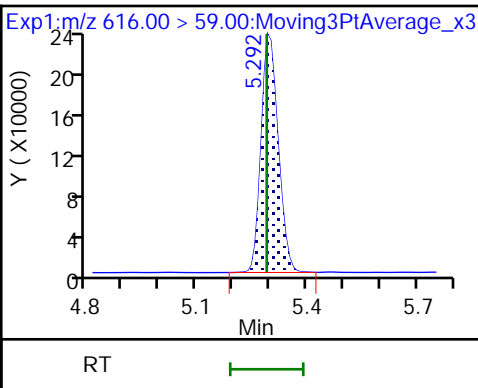
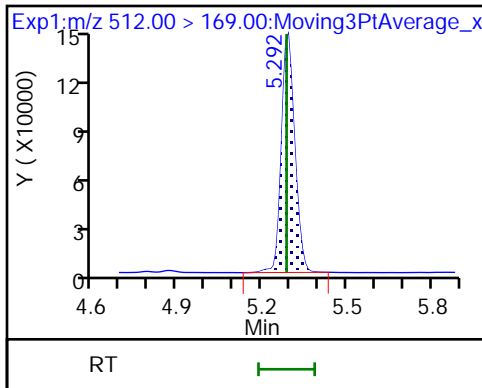
D 58 d-N-MeFOSA-M



61 NMeFOSA

49 N-MeFOSE-M

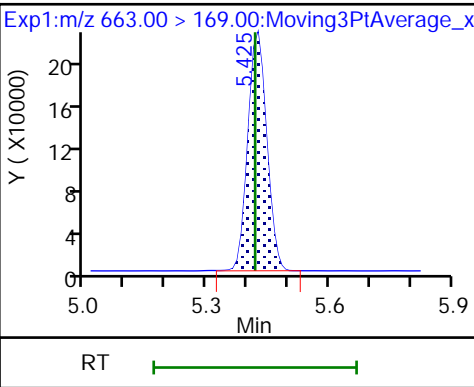
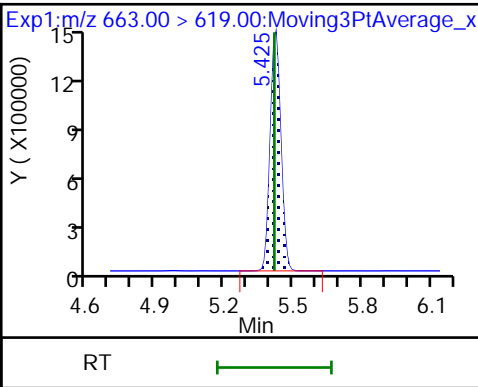
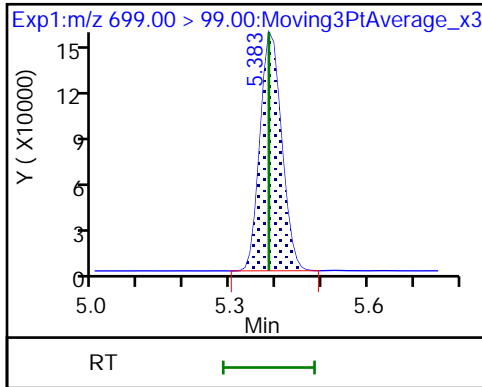
54 PFDoS



54 PFDoS

44 Perfluorotridecanoic acid

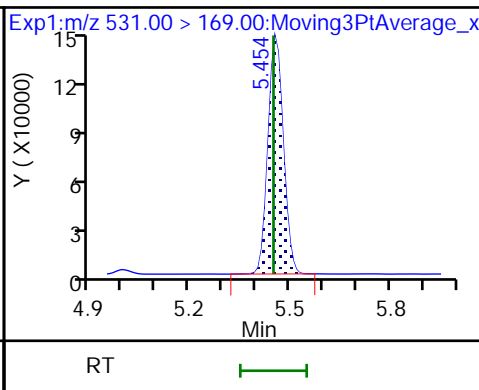
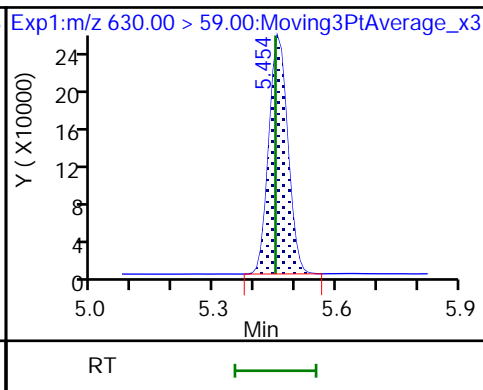
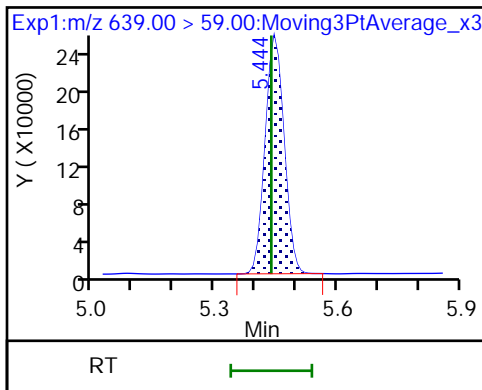
44 Perfluorotridecanoic acid



D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M

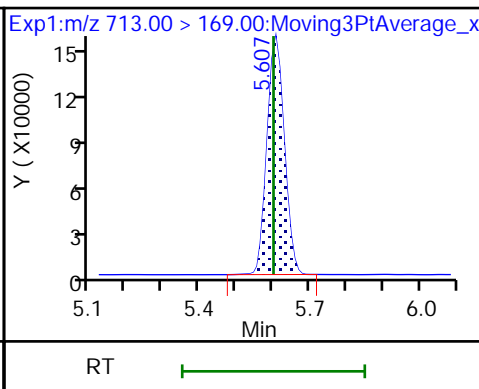
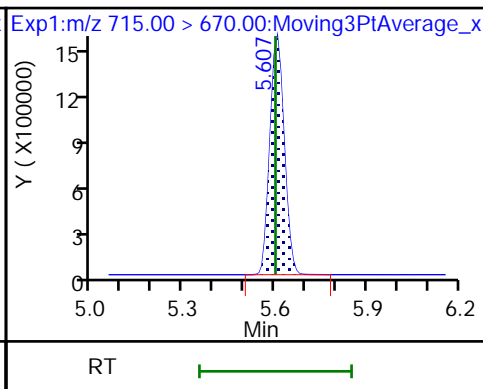
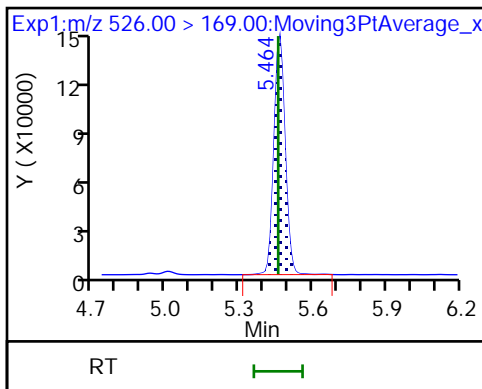
D 52 d-N-EtFOSA-M



56 N-EtFOSA-M

D 46 13C2 PFTeDA

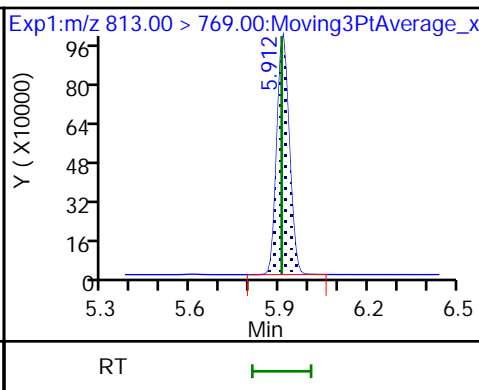
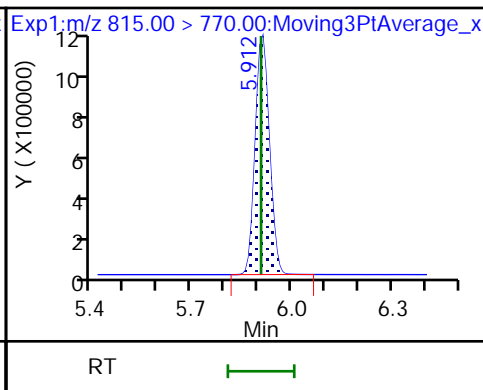
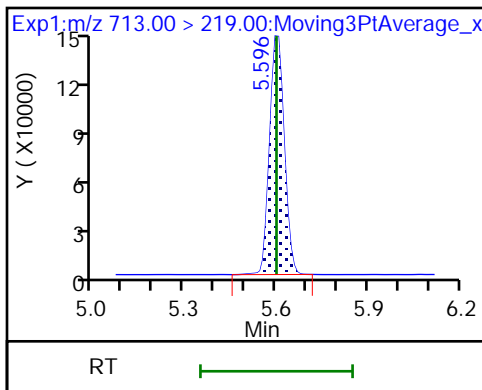
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

D 59 13C2 PFHxDA

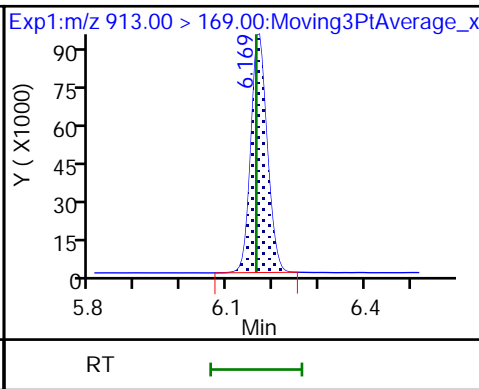
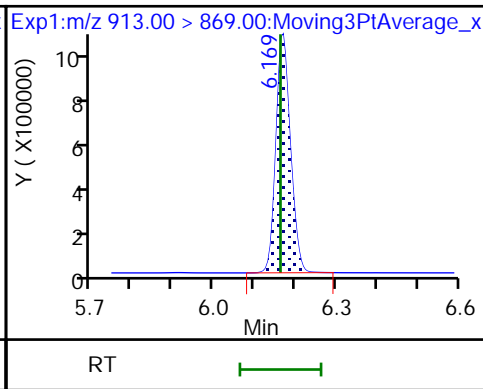
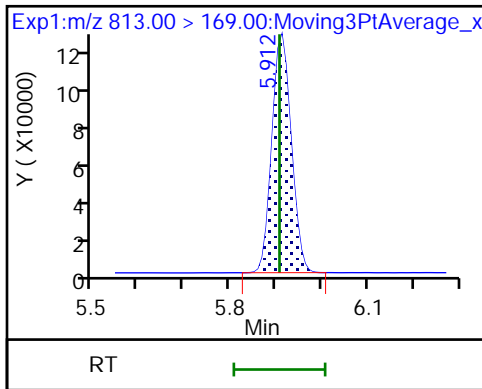
55 Perfluorohexadecanoic acid



55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid





Eurofins TestAmerica, Knoxville

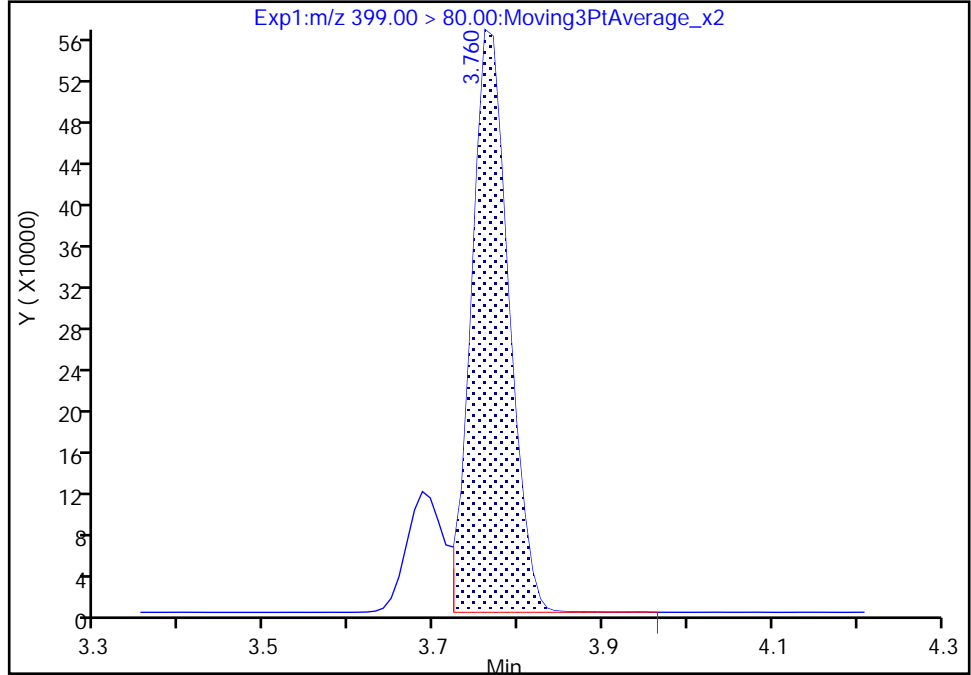
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Injection Date: 09-Jan-2022 11:02:16 Instrument ID: LCA  
Lims ID: ICIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

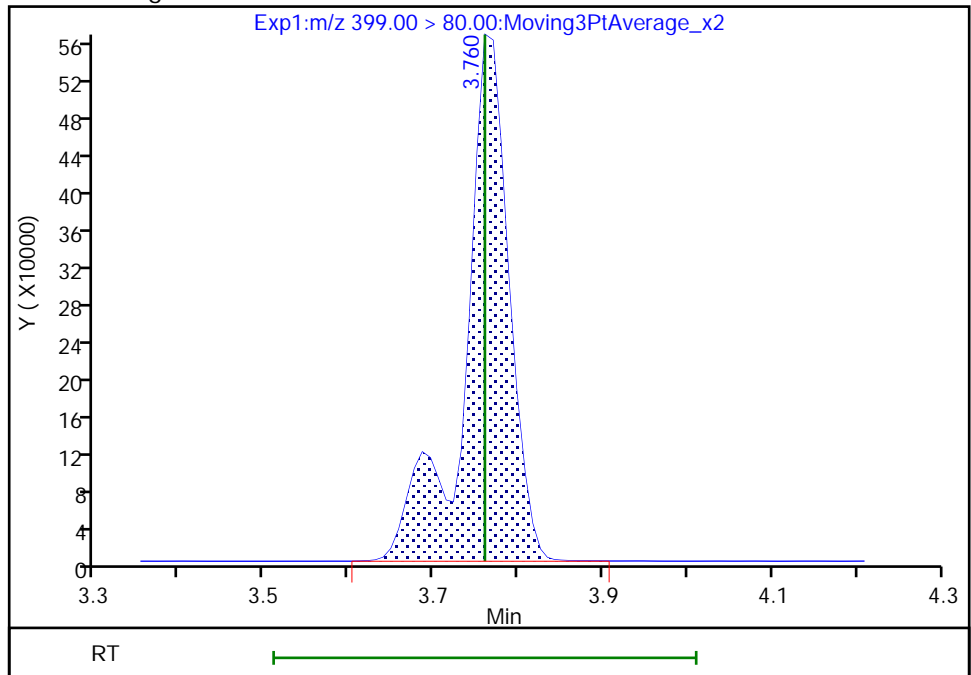
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Area: 1700041  
Amount: 0.900521  
Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
Area: 2051159  
Amount: 0.861869  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:21:12  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

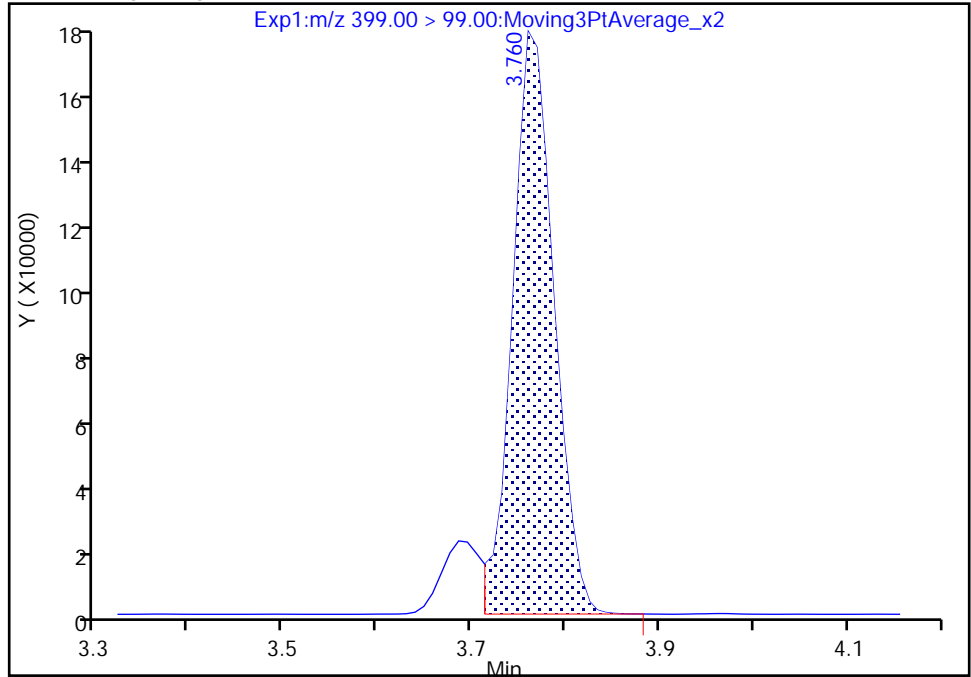
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Injection Date: 09-Jan-2022 11:02:16 Instrument ID: LCA  
Lims ID: ICIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

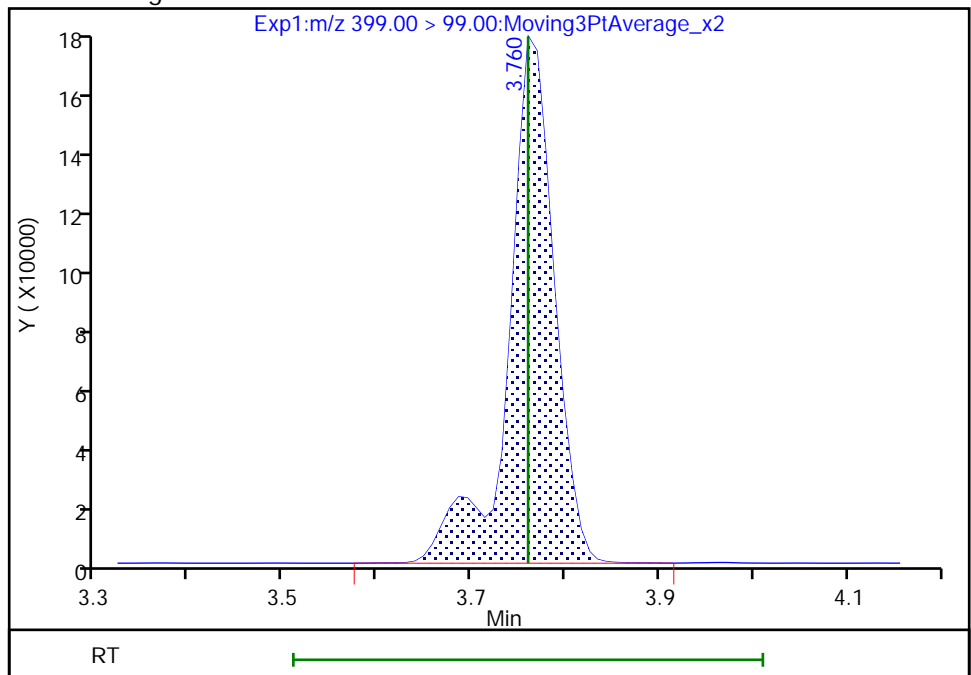
RT: 3.76  
Area: 540017  
Amount: 0.900521  
Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
Area: 603178  
Amount: 0.861869  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:21:27

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

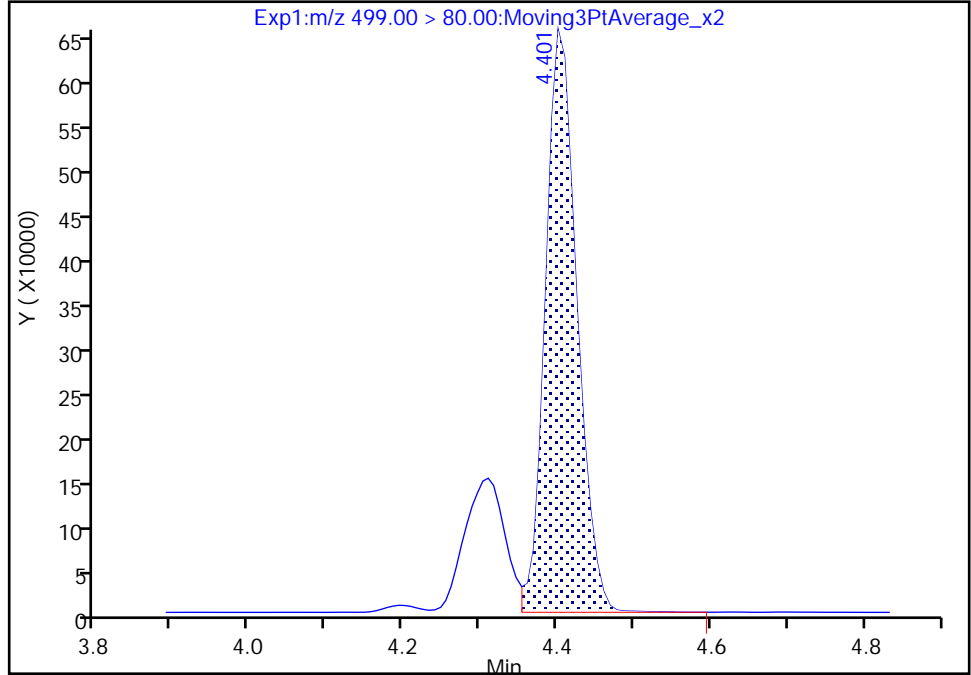
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Injection Date: 09-Jan-2022 11:02:16 Instrument ID: LCA  
Lims ID: ICIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

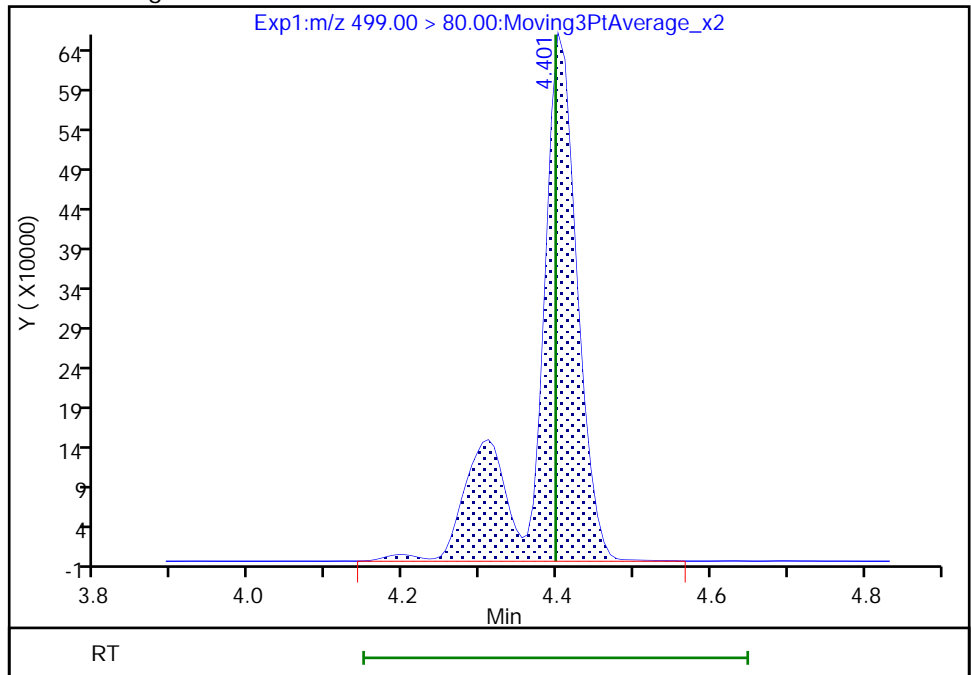
RT: 4.40  
Area: 1866271  
Amount: 0.760002  
Amount Units: ng/ml

Processing Integration Results



RT: 4.40  
Area: 2441987  
Amount: 0.916958  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:21:43  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

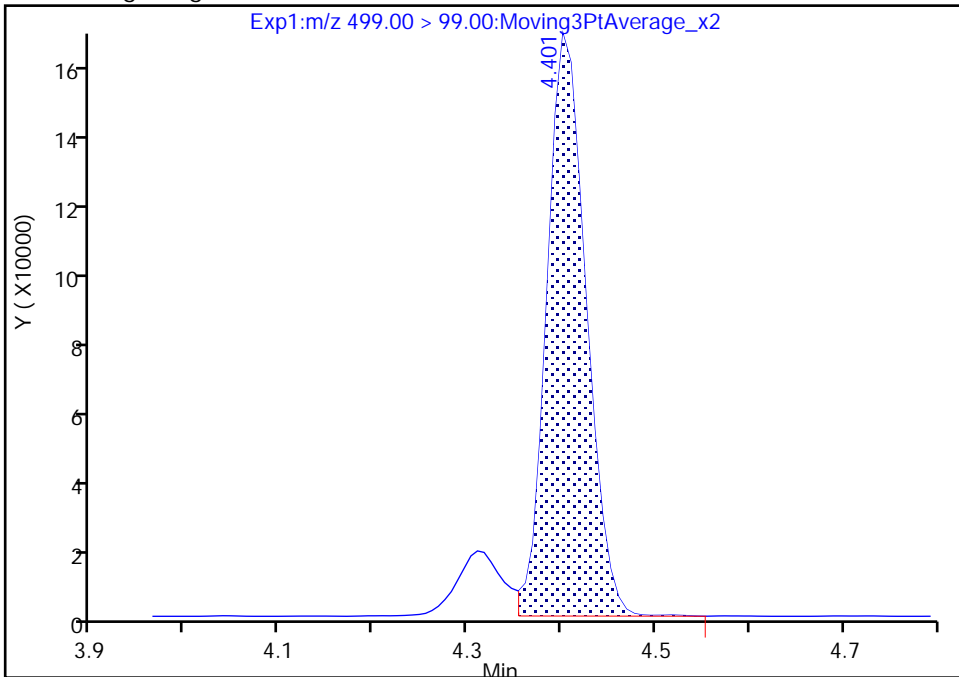
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Injection Date: 09-Jan-2022 11:02:16 Instrument ID: LCA  
Lims ID: ICIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

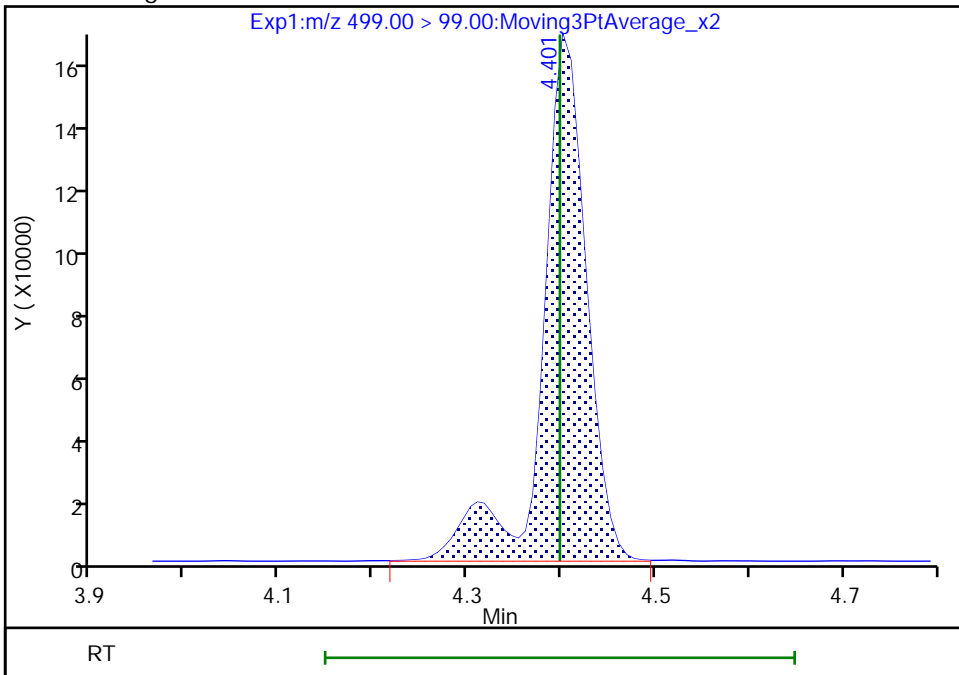
RT: 4.40  
Area: 465158  
Amount: 0.760002  
Amount Units: ng/ml

Processing Integration Results



RT: 4.40  
Area: 525382  
Amount: 0.916958  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:21:53

Audit Action: Manually Integrated

Audit Reason: Baseline  
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Eurofins TestAmerica, Knoxville

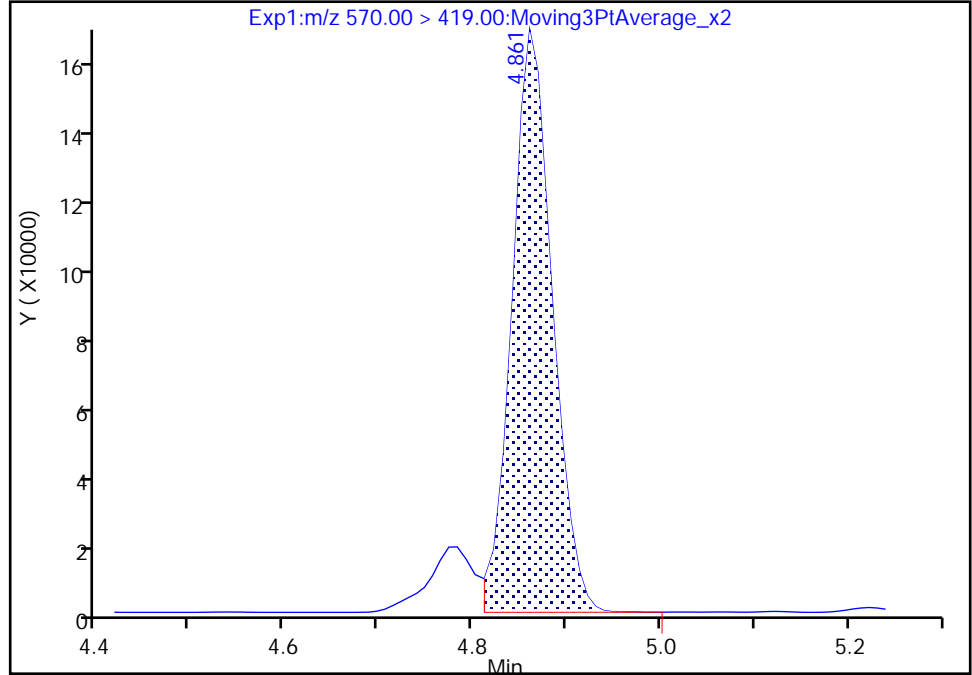
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Injection Date: 09-Jan-2022 11:02:16 Instrument ID: LCA  
Lims ID: ICIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

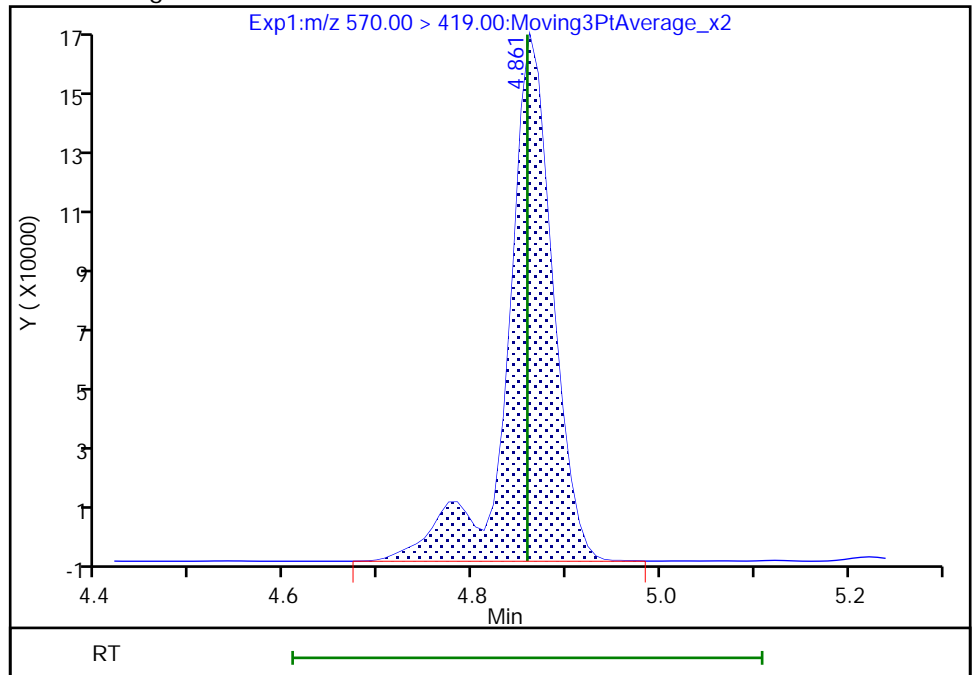
RT: 4.86  
Area: 495724  
Amount: 0.919111  
Amount Units: ng/ml

Processing Integration Results



RT: 4.86  
Area: 559483  
Amount: 0.957621  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:22:04  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

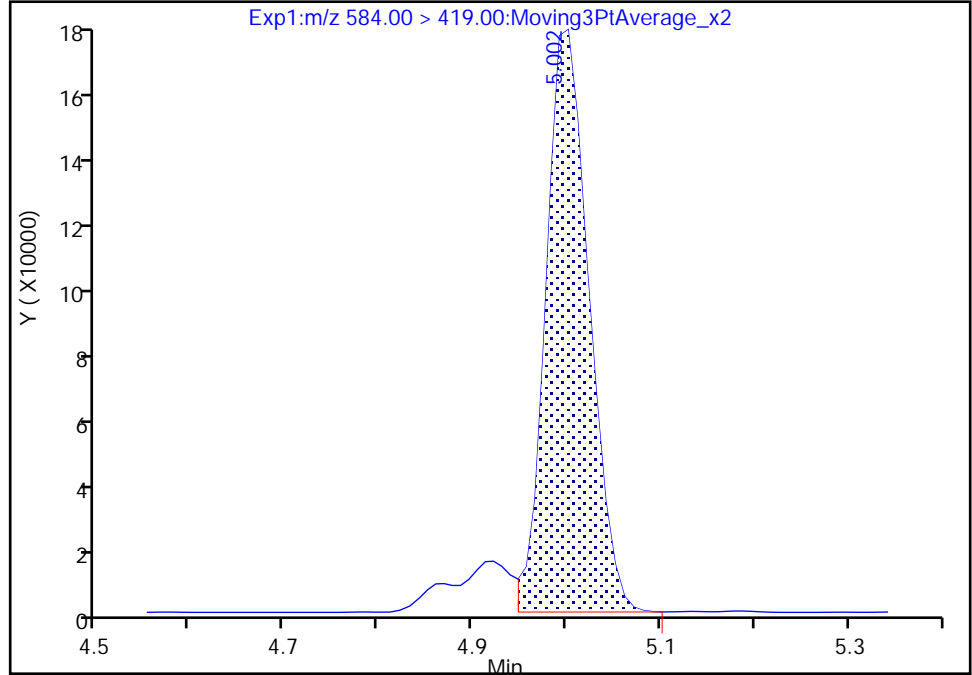
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Injection Date: 09-Jan-2022 11:02:16 Instrument ID: LCA  
Lims ID: ICIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

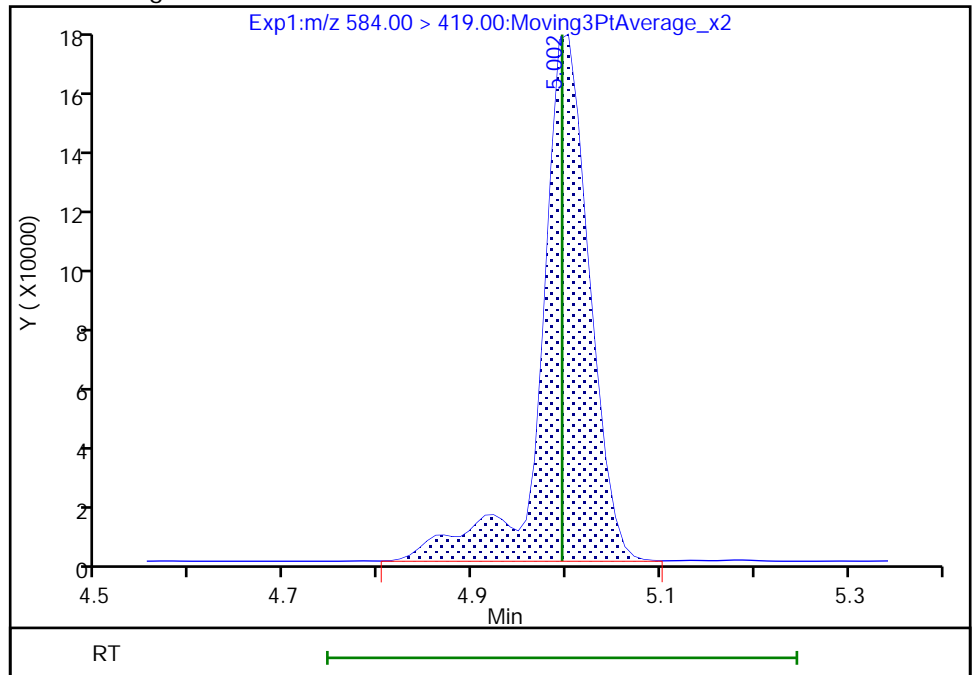
RT: 5.00  
Area: 560594  
Amount: 0.883688  
Amount Units: ng/ml

Processing Integration Results



RT: 5.00  
Area: 631535  
Amount: 0.956197  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:22:17  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_010.d  
 Lims ID: IC 5  
 Client ID:  
 Sample Type: IC Calib Level: 5  
 Inject. Date: 09-Jan-2022 11:11:04 ALS Bottle#: 10 Worklist Smp#: 10  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022186-010 ic 5  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 12:31:54 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1686

First Level Reviewer: cochranj Date: 09-Jan-2022 11:23:49

Ratio Calibration: Average of Initial Calibration

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	2.784	0.006	0.678	5967237	1.29	103	13128	
2 Perfluorobutanoic acid	212.90 > 169.00	2.790	2.785	0.005	1.000	9638211	2.57	103	2572	
D 3 13C5 PFPeA	267.90 > 223.00	3.099	3.093	0.006	0.753	4603395	1.28	102	9781	
4 Perfluoropentanoic acid	262.90 > 219.00	3.099	3.093	0.006	1.000	8879560	2.53	101	2855	
D 6 13C3 PFBS	301.90 > 80.00	3.115	3.109	0.006	0.757	2853192	1.19	102	12035	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.115	3.109	0.006	1.000	6124063	2.27	Target=2.68	103	5228
	298.90 > 99.00	3.115	3.109	0.006	1.000	2288755	2.68(1.34-4.02)	103	4928	
D 8 M2-4:2 FTS	329.00 > 81.00	3.393	3.393	0.0	0.824	855340	1.16	99.3	1430	
7 4:2 FTS	327.00 > 307.00	3.393	3.393	0.0	1.000	3970343	2.41	103	8061	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.423	3.422	0.001	1.099	5752393	2.41	Target=3.48	103	10312
	349.00 > 99.00	3.423	3.422	0.001	1.099	1611018	3.57(1.74-5.22)	103	8179	
D 9 13C2 PFHxA	315.00 > 270.00	3.423	3.423	0.0	0.832	4746918	1.24	98.8	8818	
10 Perfluorohexanoic acid	313.00 > 269.00	3.423	3.423	0.0	1.000	8407159	2.55	Target=12.57	102	3084
	313.00 > 119.00	3.423	3.423	0.0	1.000	673329	12.49(6.28-18.85)	102	992	

D 12 13C3 HFPO-DA

287.00 > 169.00 3.529 3.524 0.005 0.858 2402042 1.30  
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104 4747 01/17/2022

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	3.529	3.524	0.005	1.000	6357565	2.45		97.8	4219	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.761	3.760	0.001	1.000	5056303	2.23	Target=3.48	98.2	7443	M
399.00 > 99.00	3.761	3.760	0.001	1.000	1405119		3.60(1.74-5.21)	98.2	6234	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.761	3.761	0.0	0.914	1943468	1.21		103	7726	
D 14 13C4 PFHpA										
367.00 > 322.00	3.780	3.772	0.008	0.919	4645602	1.26		101	7635	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.780	3.772	0.008	1.000	10258907	2.64	Target=3.29	105	4386	
363.00 > 169.00	3.780	3.772	0.008	1.000	3152723		3.25(1.65-4.94)	105	2472	
68 DONA										
377.00 > 251.00	3.808	3.807	0.001	0.865	15024020	2.46	Target=1.76	104	11106	
377.00 > 85.00	3.808	3.807	0.001	0.865	8463960		1.78(0.88-2.64)	104	184	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.097	4.092	0.005	0.931	5636163	2.54	Target=3.91	107	8693	
449.00 > 99.00	4.097	4.092	0.005	0.931	1419617		3.97(1.95-5.86)	107	7182	
19 6:2 FTS										
427.00 > 407.00	4.106	4.101	0.005	1.000	3168996	2.33		98.2	5395	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.106	4.100	0.006	0.998	899627	1.21		102	4206	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.106	4.100	0.006	0.998	4810294	1.25		100	9747	
D 21 13C4 PFOA										
417.00 > 372.00	4.115	4.109	0.006	1.000	4797778	1.26		101	8329	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.115	4.109	0.006	1.000	11010802	2.50	Target=2.61	100	4893	
413.00 > 169.00	4.115	4.109	0.006	1.000	4121346		2.67(1.30-3.91)	100	3644	
* 22 13C2 PFOA										
415.00 > 370.00	4.115	4.109	0.006		5068511	1.25			6617	
D 25 13C4 PFOS										
503.00 > 80.00	4.401	4.398	0.003	1.070	2779952	1.21		101	5359	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.401	4.396	0.005	1.000	631203	1.22		102	3980	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.401	4.398	0.003	1.000	6000595	2.35	Target=4.37	101	5887	M
499.00 > 99.00	4.401	4.398	0.003	1.000	1396173		4.30(2.18-6.55)	101	3939	M
26 Perfluorononanoic acid										
463.00 > 419.00	4.427	4.421	0.006	1.000	10970847	2.44	Target=4.48	97.6	6537	
463.00 > 169.00	4.427	4.421	0.006	1.000	2464006		4.45(2.24-6.72)	97.6	3677	
D 27 13C5 PFNA										
468.00 > 423.00	4.427	4.421	0.006	1.076	6530042	1.31		104	9513	
63 9CIFOS										
531.00 > 351.00	4.560	4.558	0.002	1.036	12172388	2.42		104	14403	

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	4.681	4.682	-0.001	1.063	5588794	2.46	Target=3.84	103	7671	
549.00 > 99.00	4.681	4.682	-0.001	1.063	1450714		3.85(1.92-5.77)	103	6528	
D 34 13C8 FOSA										
506.00 > 78.00	4.706	4.700	0.006	1.144	3925140	1.26		101	3526	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.706	4.700	0.006	1.000	7793889	2.62		105	5548	
D 32 13C2 PFDA										
515.00 > 470.00	4.715	4.709	0.006	1.146	6089778	1.26		101	14437	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.715	4.709	0.006	1.000	11732225	2.50	Target=11.50	99.9	7826	
513.00 > 169.00	4.715	4.709	0.006	1.000	1018364		11.52(5.75-17.25)	99.9	705	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.723	4.721	0.002	1.148	1009120	1.20		100	1395	
31 8:2 FTS										
527.00 > 507.00	4.723	4.721	0.002	1.000	2871784	2.41		101	6481	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.861	4.854	0.007	1.181	704135	1.24		99.1	389	
36 NMeFOSAA										
570.00 > 419.00	4.861	4.858	0.003	1.000	1388453	2.53		101	2376	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.949	4.942	0.007	1.124	5327635	2.46	Target=3.69	102	10179	
599.00 > 99.00	4.949	4.942	0.007	1.124	1431128		3.72(1.84-5.53)	102	5115	
D 39 13C2 PFUnA										
565.00 > 520.00	4.975	4.973	0.002	1.209	6174640	1.28		102	14454	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.975	4.973	0.002	1.000	12257781	2.56	Target=8.29	102	7424	
563.00 > 169.00	4.975	4.973	0.002	1.000	1503895		8.15(4.14-12.43)	102	8135	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.992	4.989	0.003	1.213	794601	1.27		102	2275	
40 NEtFOSA										
584.00 > 419.00	5.002	4.995	0.007	1.002	1650265	2.60		104	1770	M
57 11C1FOS										
631.00 > 451.00	5.082	5.075	0.007	1.155	9558929	2.46		104	14157	
D 43 13C2 PFDaA										
615.00 > 570.00	5.213	5.207	0.006	1.267	6505443	1.29		103	10949	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.213	5.207	0.006	1.000	13073136	2.48	Target=6.82	99.3	8814	
613.00 > 169.00	5.213	5.207	0.006	1.000	1948476		6.71(3.41-10.23)	99.3	3479	
50 10:2 FTS										
627.00 > 607.00	5.231	5.231	0.0	1.107	4709912	2.46		102	6324	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.283	5.279	0.004	1.284	776280	1.28		102	754	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.283	5.281	0.002	1.284	566057	1.31		105	57.3	
61 NMeFOSA										
512.00 > 169.00	5.292	5.286	0.006	1.002	1214999	2.60		104	895	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
49 N-MeFOSE-M										
616.00 > 59.00	5.292	5.290	0.002	1.002	1865207	2.54		101	2011	
54 PFDoS										
699.00 > 80.00	5.383	5.383	0.0	1.223	5276708	2.47	Target=4.36	102	9784	
699.00 > 99.00	5.383	5.383	0.0	1.223	1254746		4.21(2.18-6.55)	102	5045	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.424	5.417	0.007	1.041	11543259	2.67	Target=6.19	107	9880	
663.00 > 169.00	5.424	5.417	0.007	1.041	1819566		6.34(3.09-9.28)	107	6021	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.444	5.437	0.007	1.323	783063	1.28		103	357	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.454	5.450	0.004	1.326	450709	1.26		101	807	
62 N-EtFOSE-M										
630.00 > 59.00	5.454	5.450	0.004	1.002	2095667	2.52		101	2171	
56 N-EtFOSA-M										
526.00 > 169.00	5.464	5.457	0.007	1.002	1143584	2.65		106	904	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.607	5.600	0.007	1.363	4899401	1.27		102	8377	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.607	5.600	0.007	1.000	1318730	2.50	Target=1.09	100	3876	
713.00 > 219.00	5.596	5.600	-0.004	0.998	1277934		1.03(0.54-1.63)	100	5686	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.912	5.907	0.005	1.437	3338421	1.28		102	5731	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.912	5.907	0.005	1.000	7276278	2.55	Target=8.22	102	5973	
813.00 > 169.00	5.912	5.907	0.005	1.000	878228		8.29(4.11-12.33)	102	1795	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.169	6.162	0.007	1.043	6895688	2.62	Target=11.60	105	5678	
913.00 > 169.00	6.164	6.162	0.002	1.043	603620		11.42(5.80-17.40)	105	2085	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L5PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_010.d

Injection Date: 09-Jan-2022 11:11:04

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

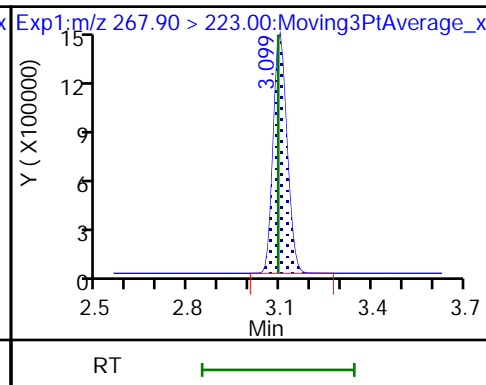
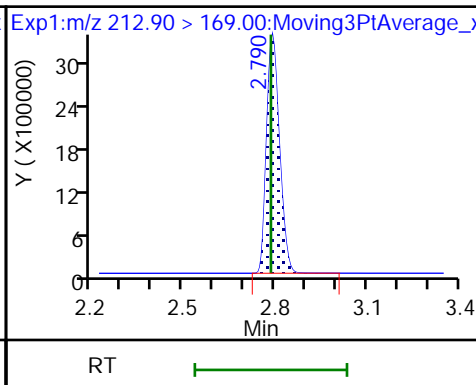
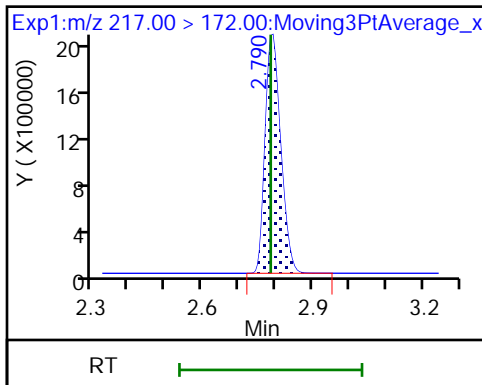
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

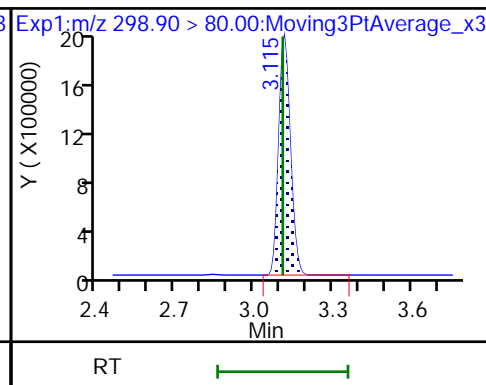
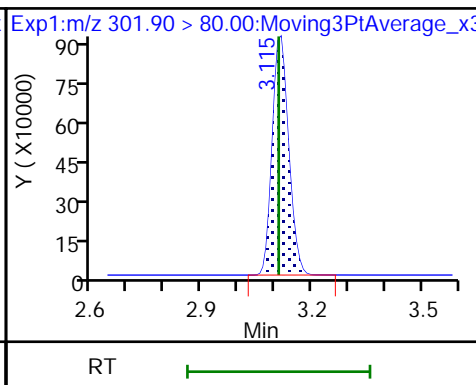
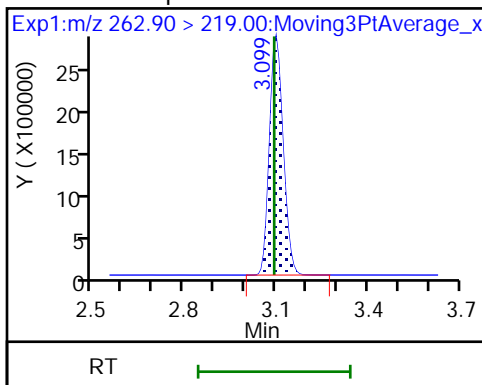
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

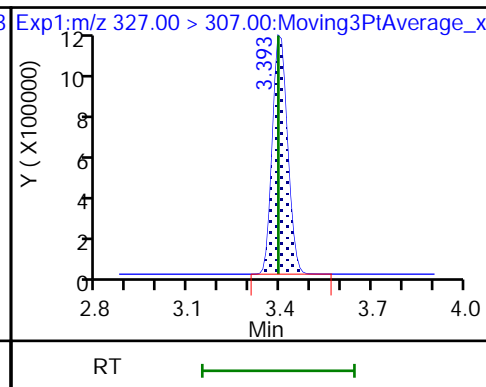
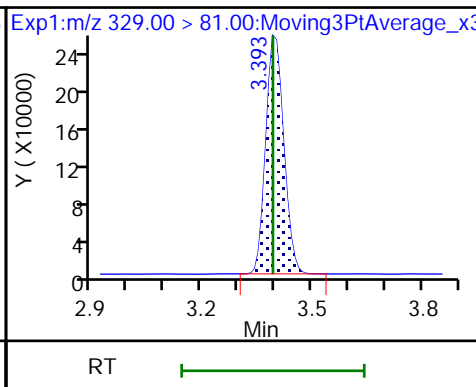
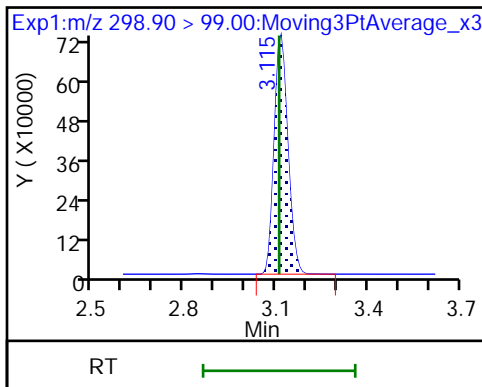
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

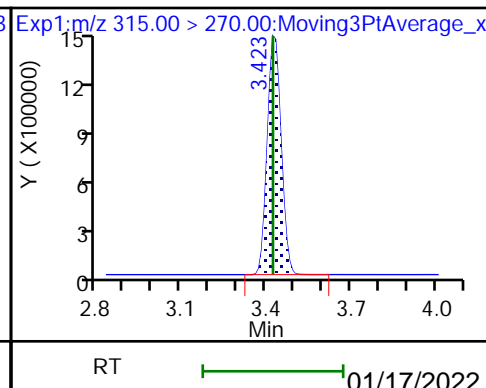
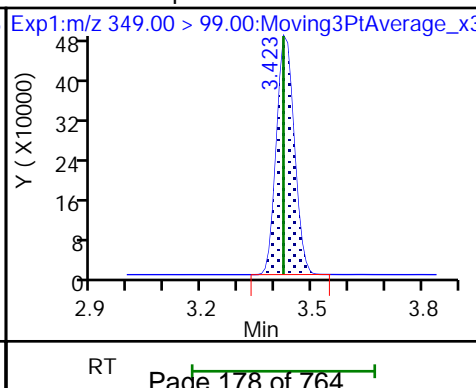
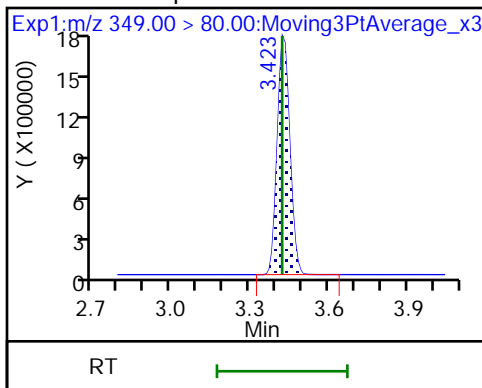
7 4:2 FTS

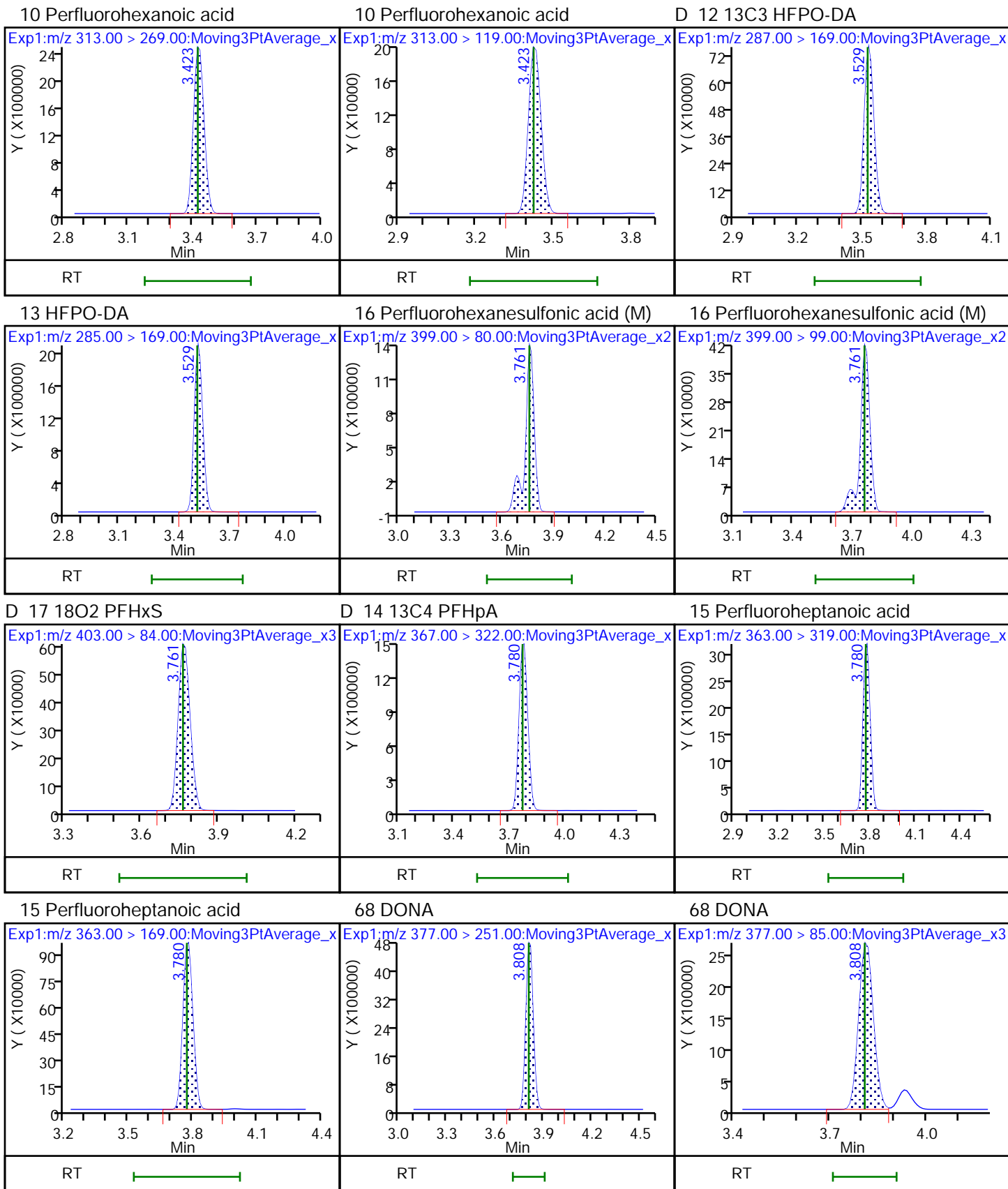


11 Perfluoropentanesulfonic acid

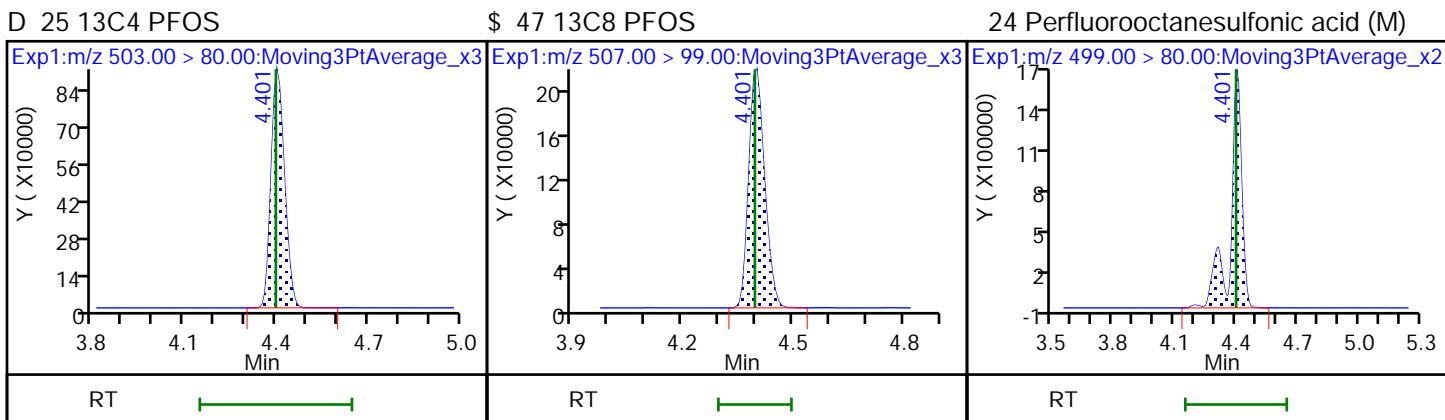
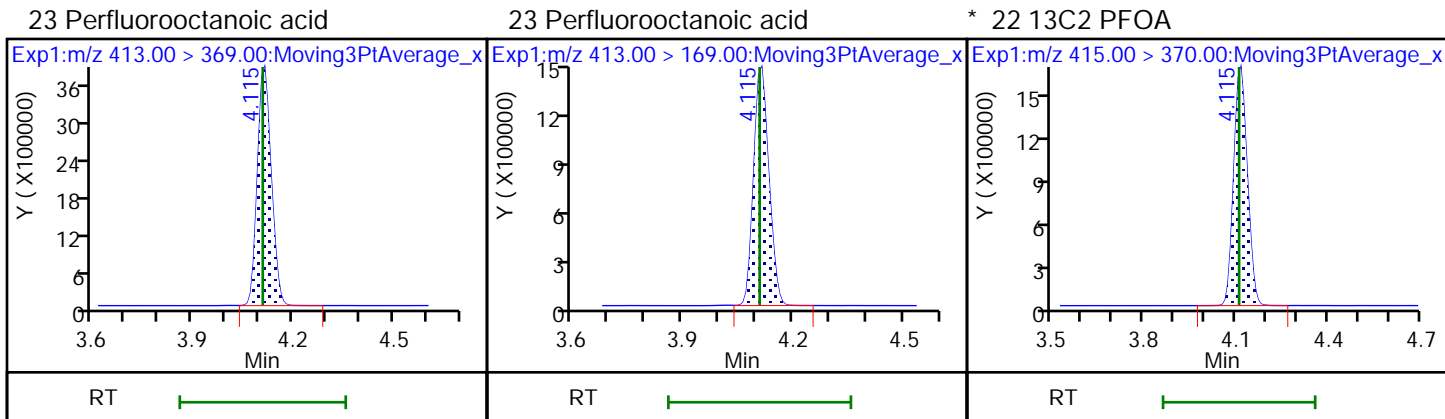
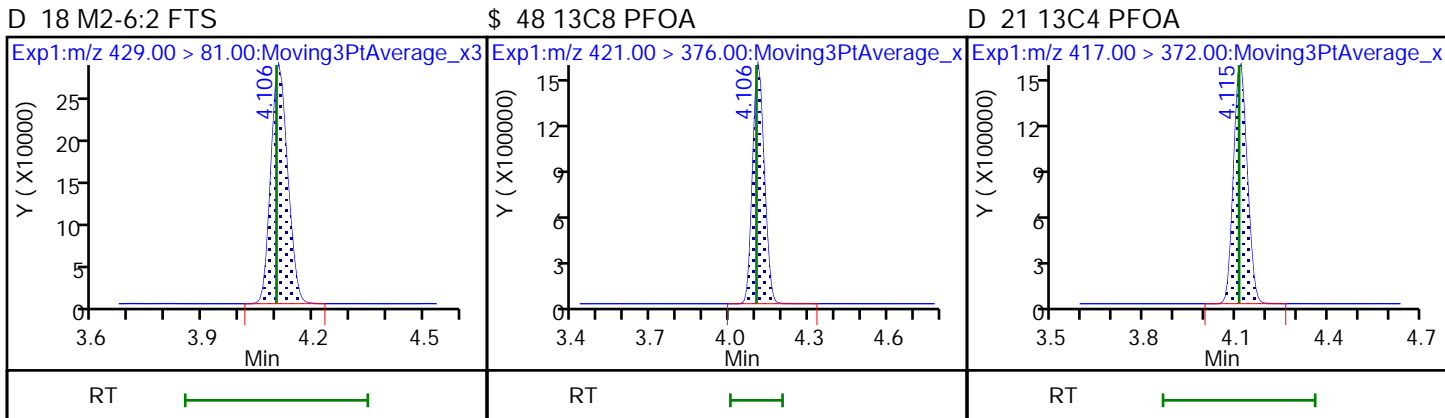
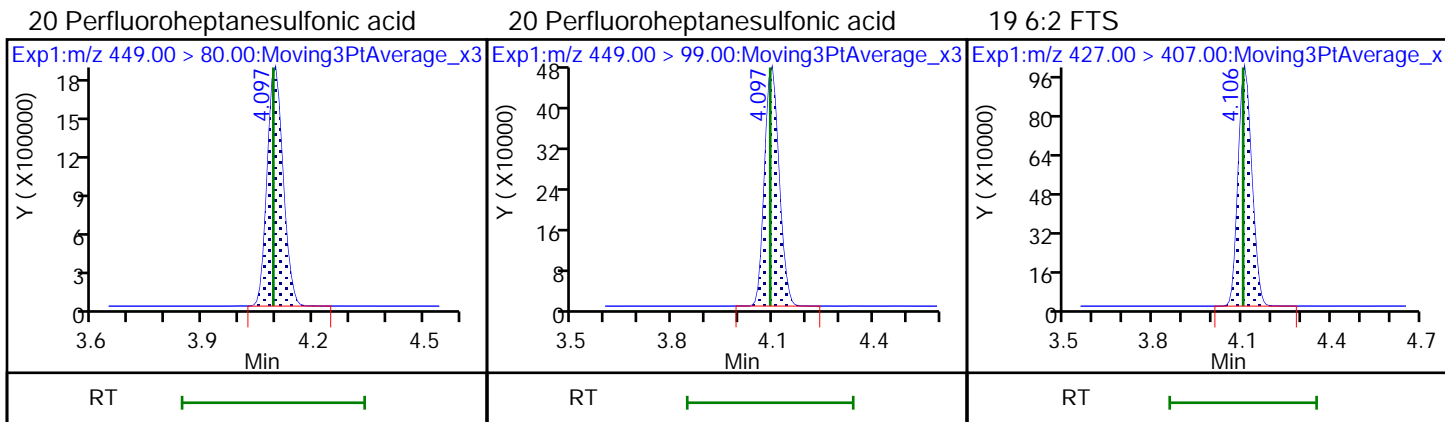
11 Perfluoropentanesulfonic acid

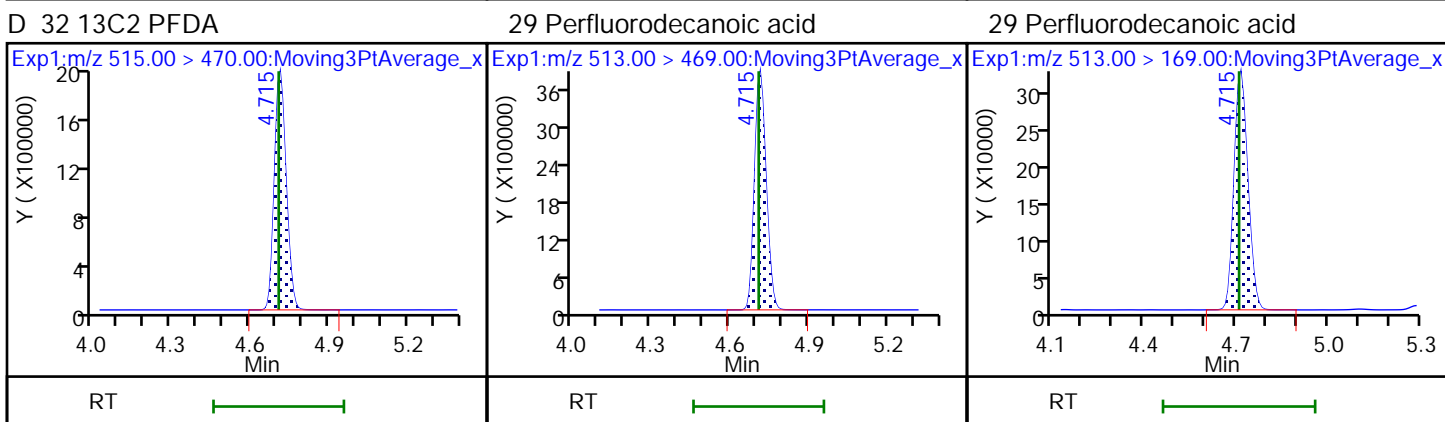
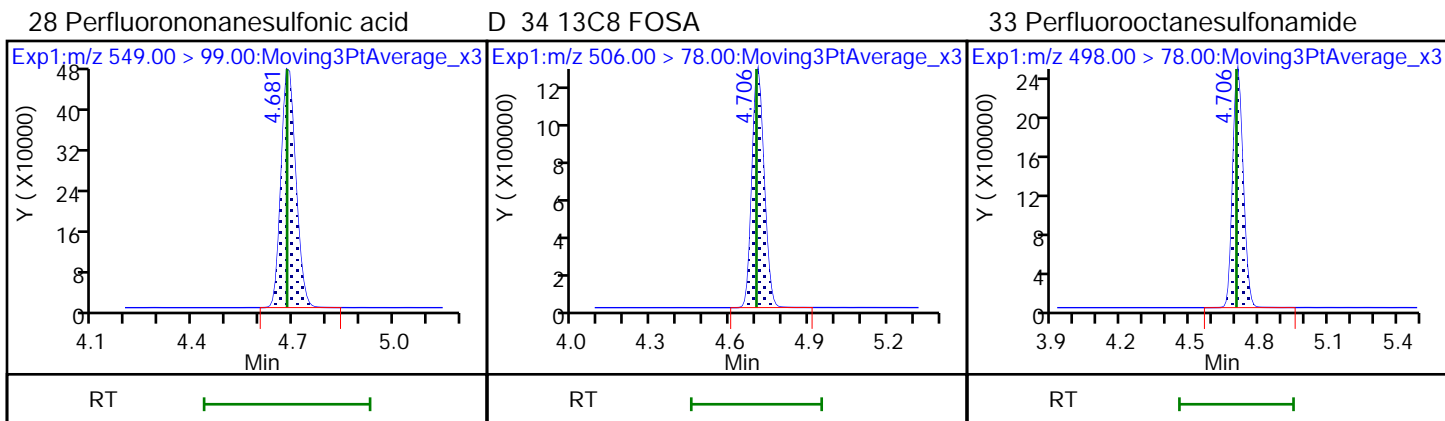
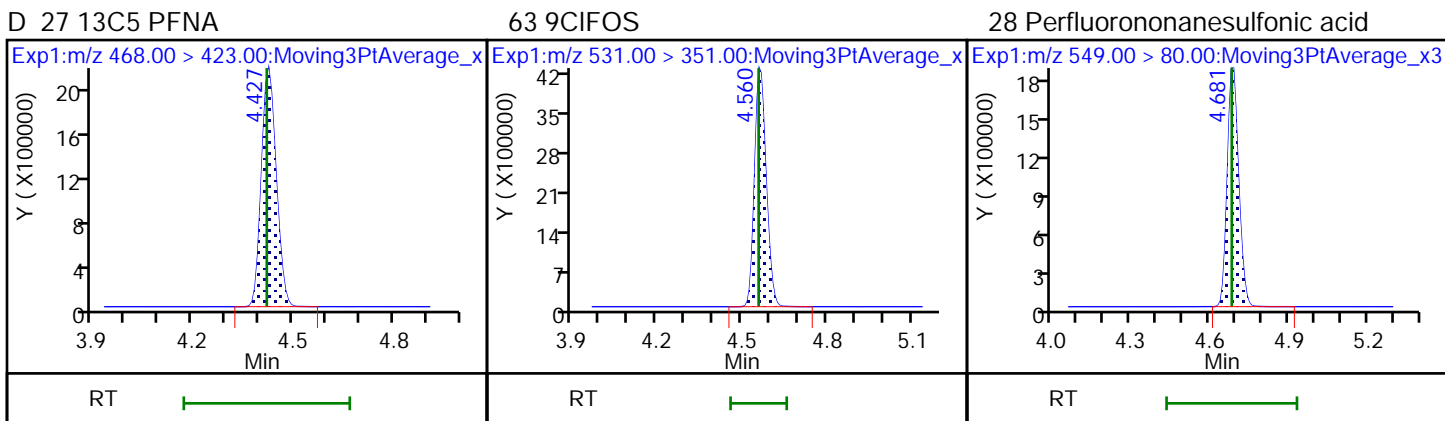
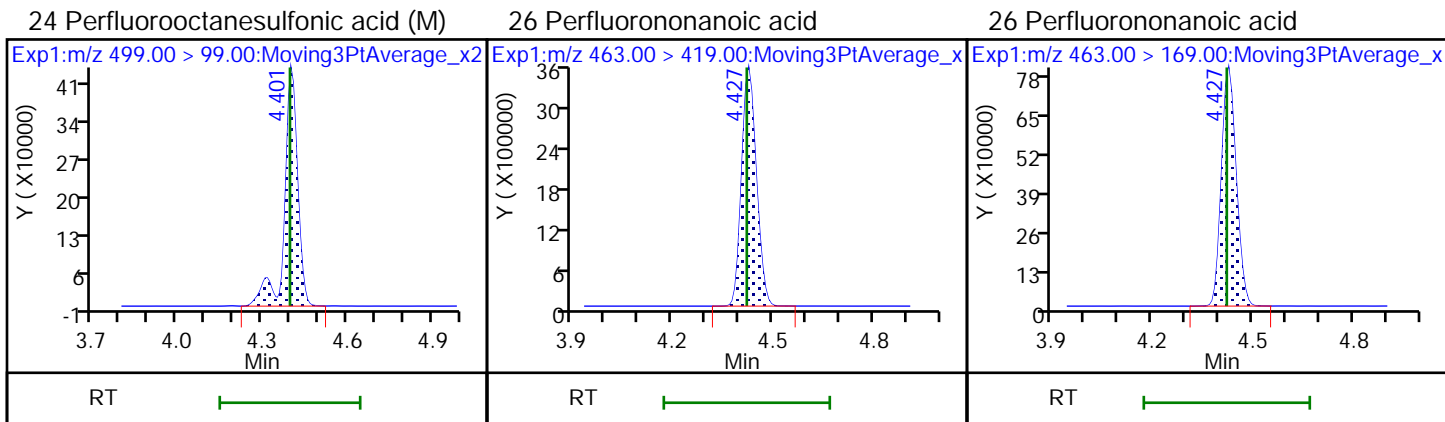
D 9 13C2 PFHxA







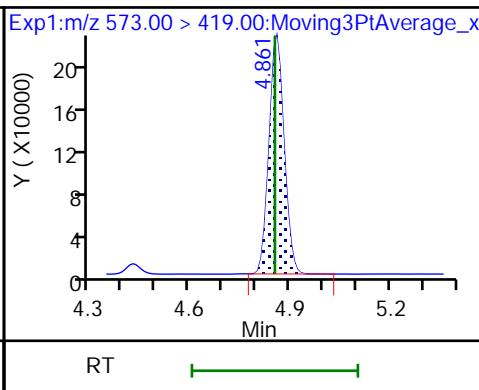
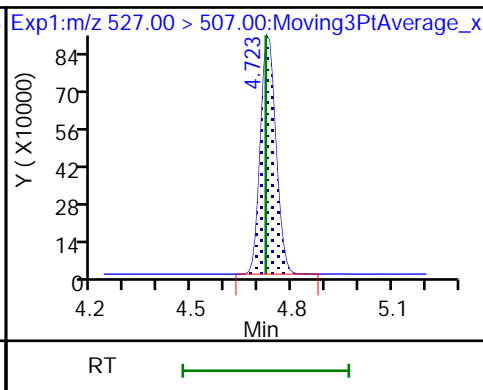
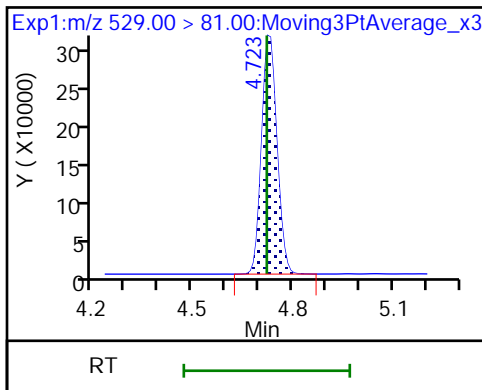




D 30 M2-8:2 FTS

31 8:2 FTS

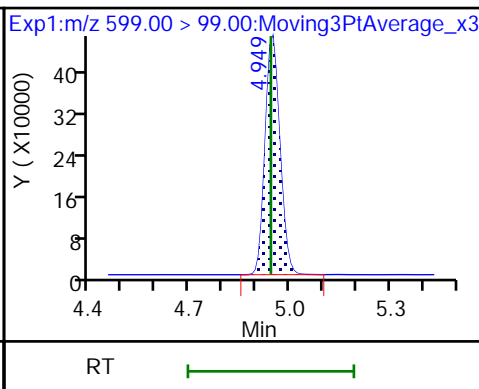
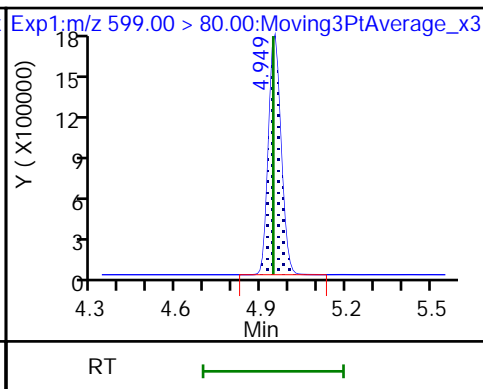
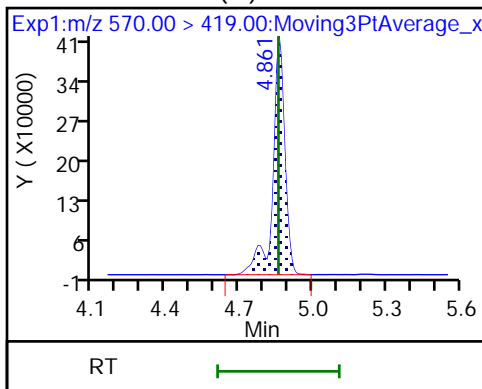
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

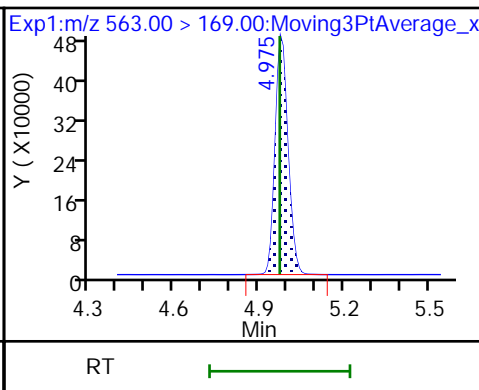
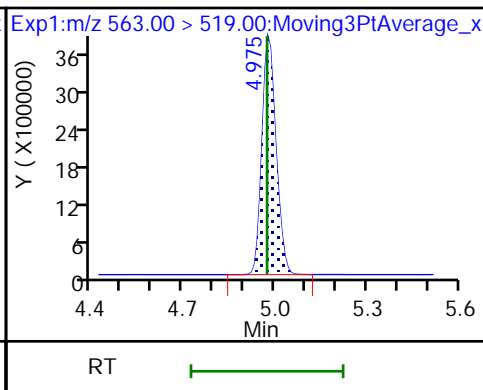
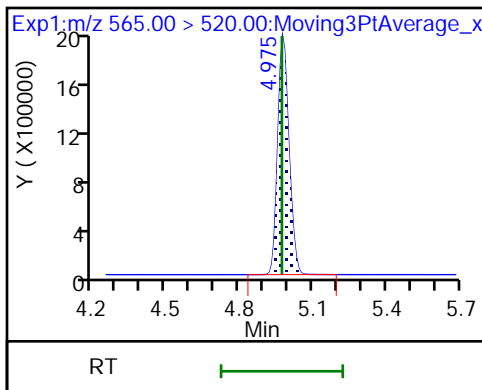
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

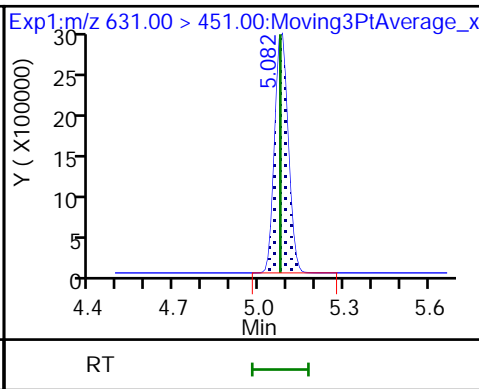
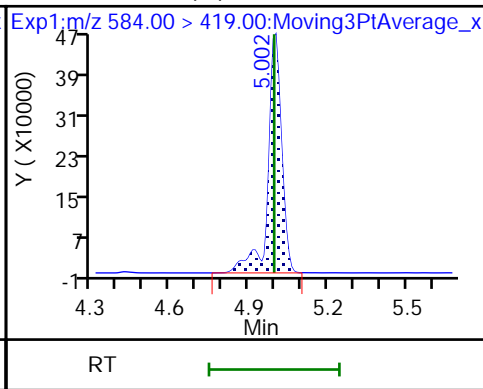
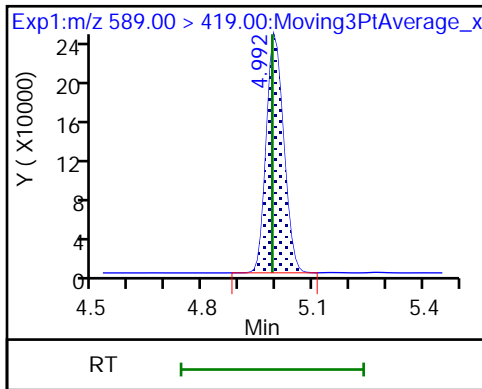
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA (M)

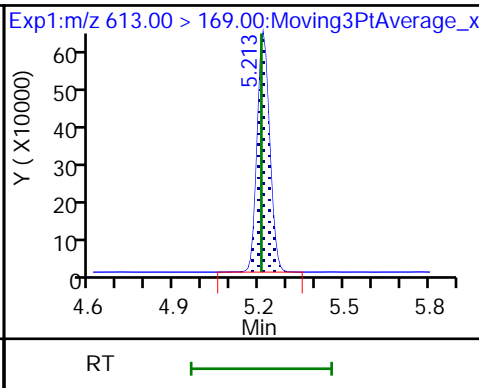
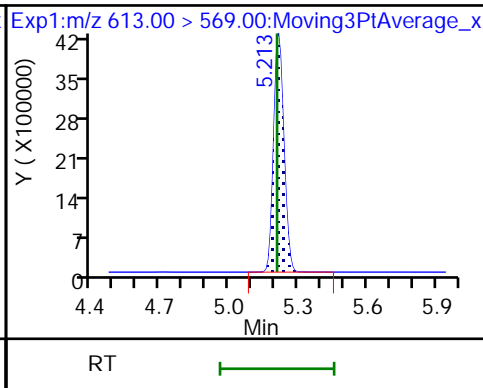
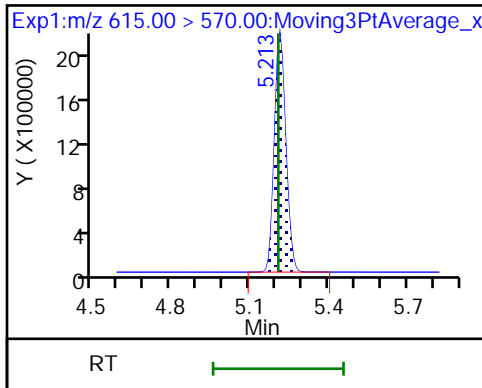
57 11CIFOS



D 43 13C2 PFDaA

42 Perfluorododecanoic acid

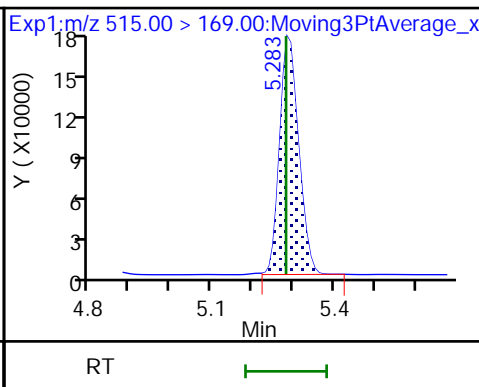
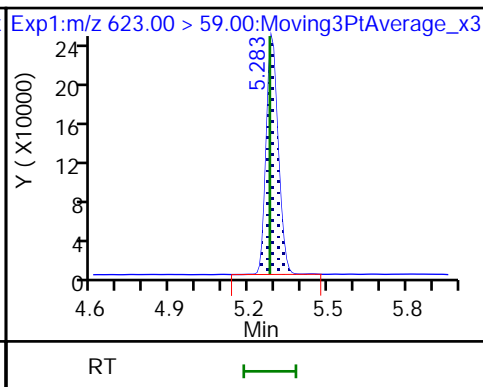
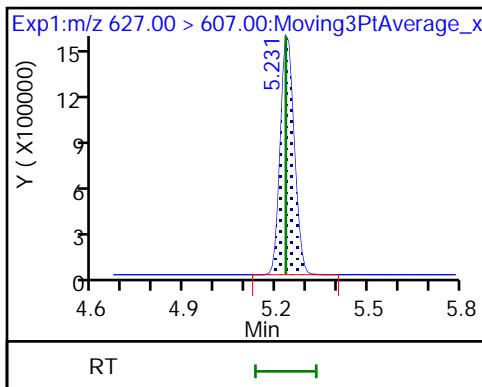
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

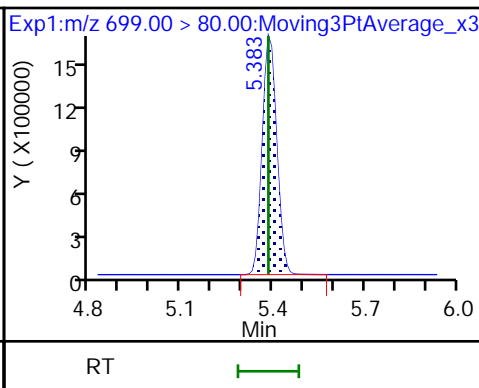
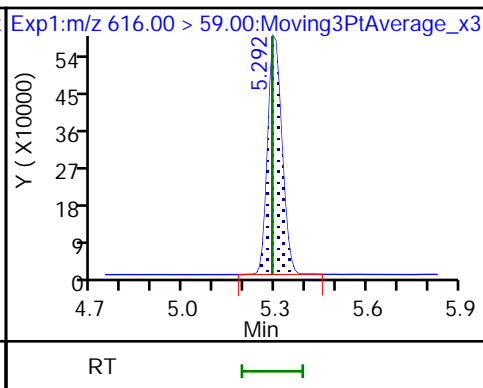
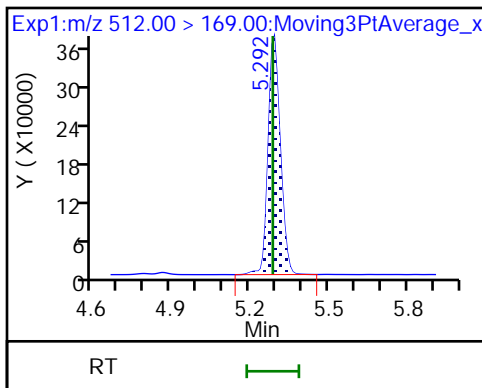
D 58 d-N-MeFOSA-M



61 NMeFOSA

49 N-MeFOSE-M

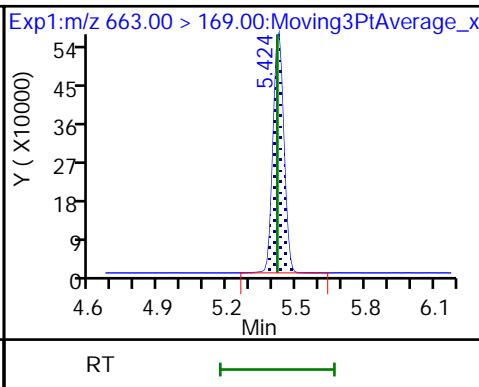
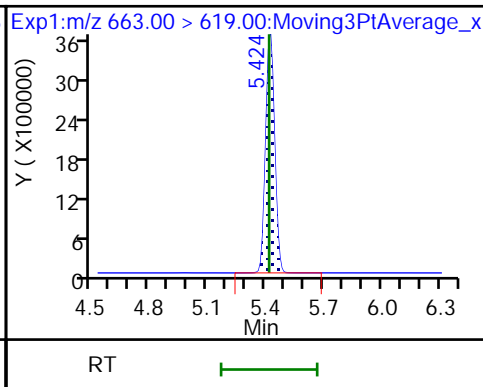
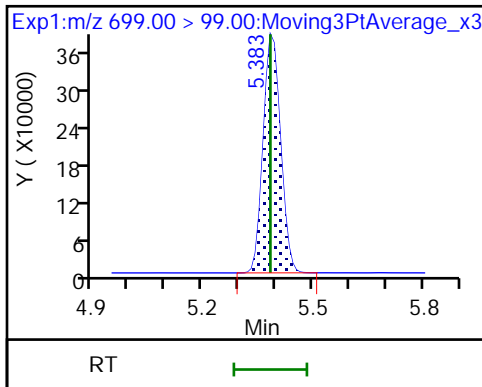
54 PFDoS



54 PFDoS

44 Perfluorotridecanoic acid

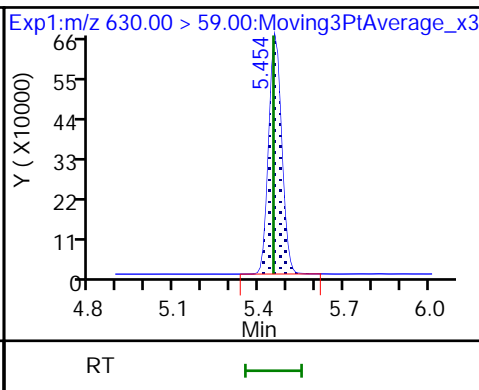
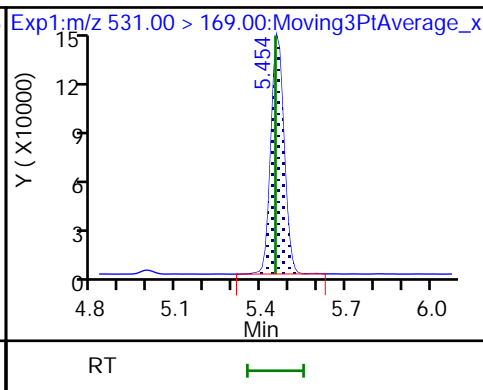
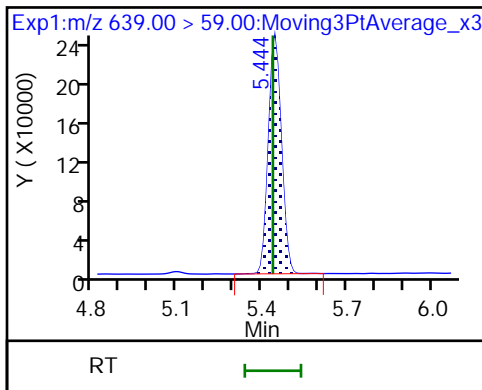
44 Perfluorotridecanoic acid



D 53 d9-N-EtFOSE-M

D 52 d-N-EtFOSA-M

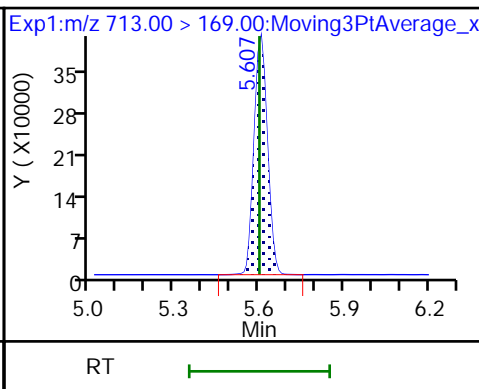
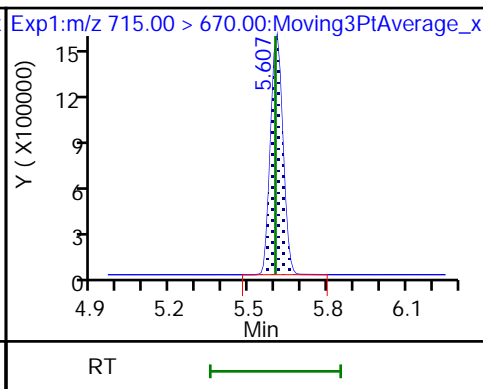
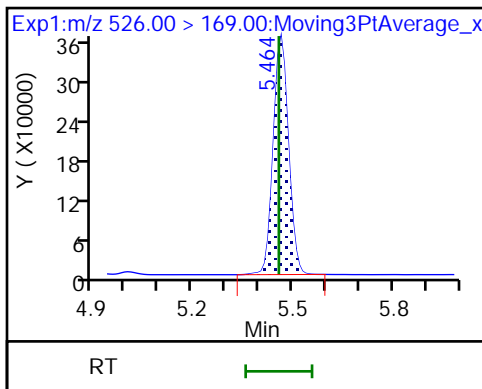
62 N-EtFOSE-M



56 N-EtFOSA-M

D 46 13C2 PFTeDA

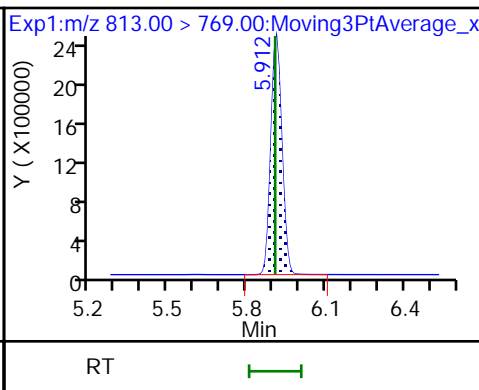
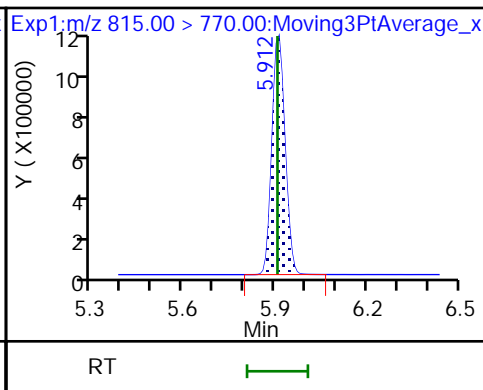
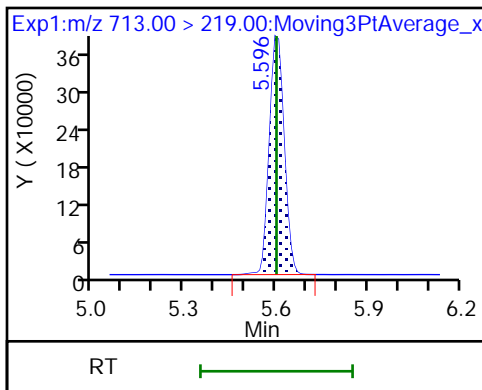
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

D 59 13C2 PFHxDA

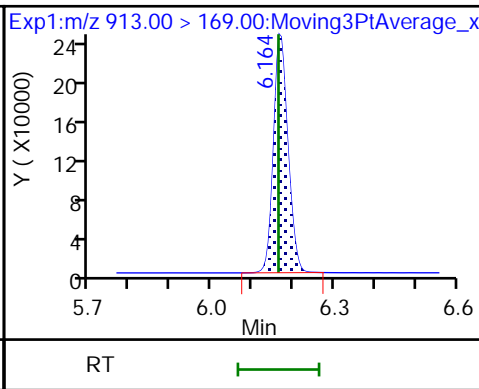
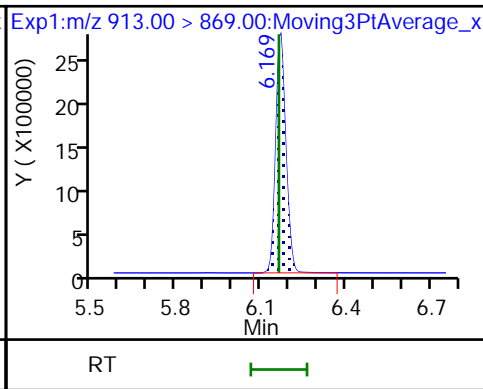
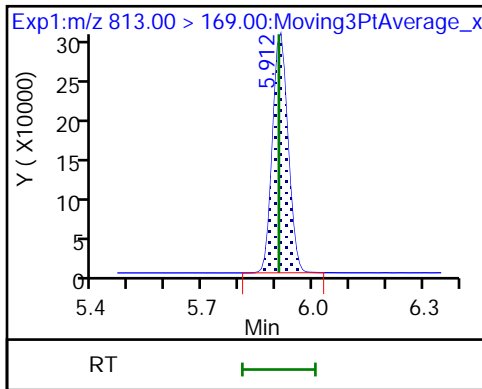
55 Perfluorohexadecanoic acid



55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid





Eurofins TestAmerica, Knoxville

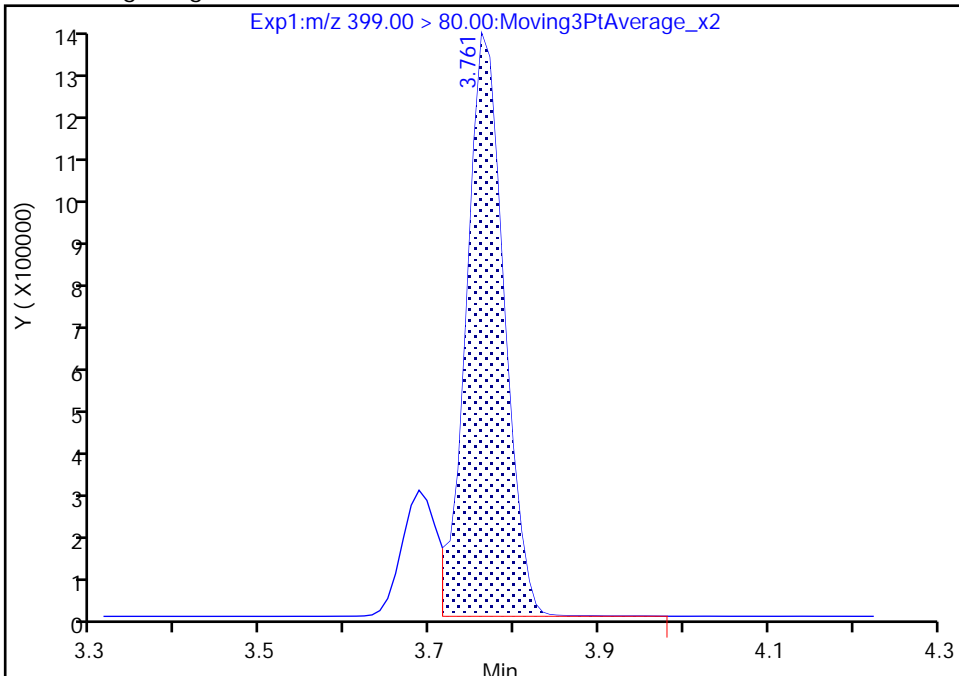
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_010.d  
Injection Date: 09-Jan-2022 11:11:04 Instrument ID: LCA  
Lims ID: IC 5  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

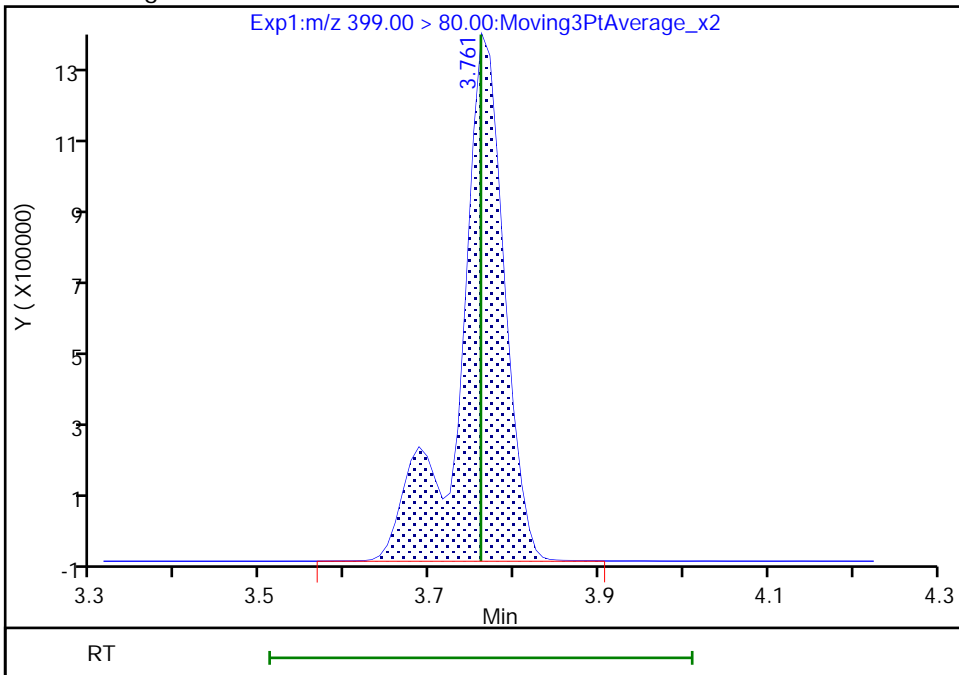
RT: 3.76  
Area: 4233028  
Amount: 1.969553  
Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
Area: 5056303  
Amount: 2.233871  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:22:54  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

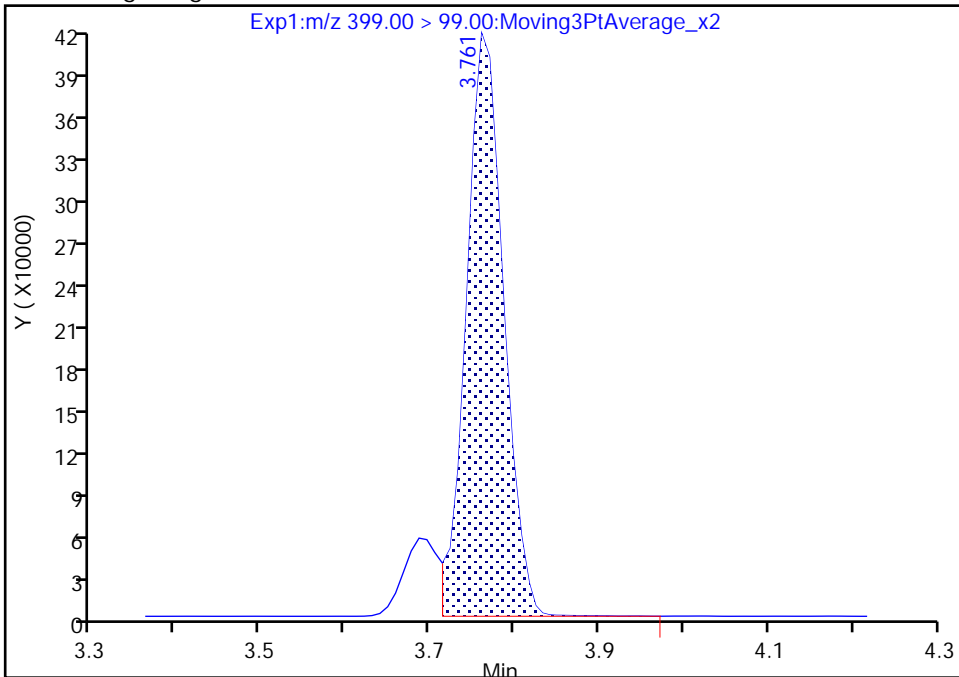
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_010.d  
Injection Date: 09-Jan-2022 11:11:04 Instrument ID: LCA  
Lims ID: IC 5  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

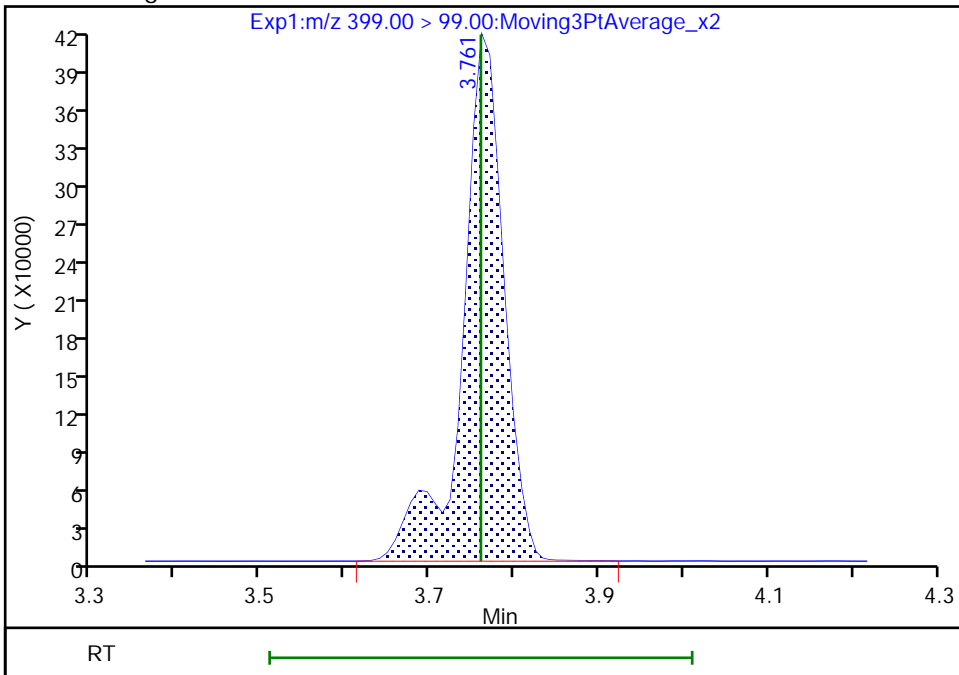
RT: 3.76  
Area: 1251304  
Amount: 1.969553  
Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
Area: 1405119  
Amount: 2.233871  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:23:01

Audit Action: Manually Integrated

Audit Reason: Baseline



Eurofins TestAmerica, Knoxville

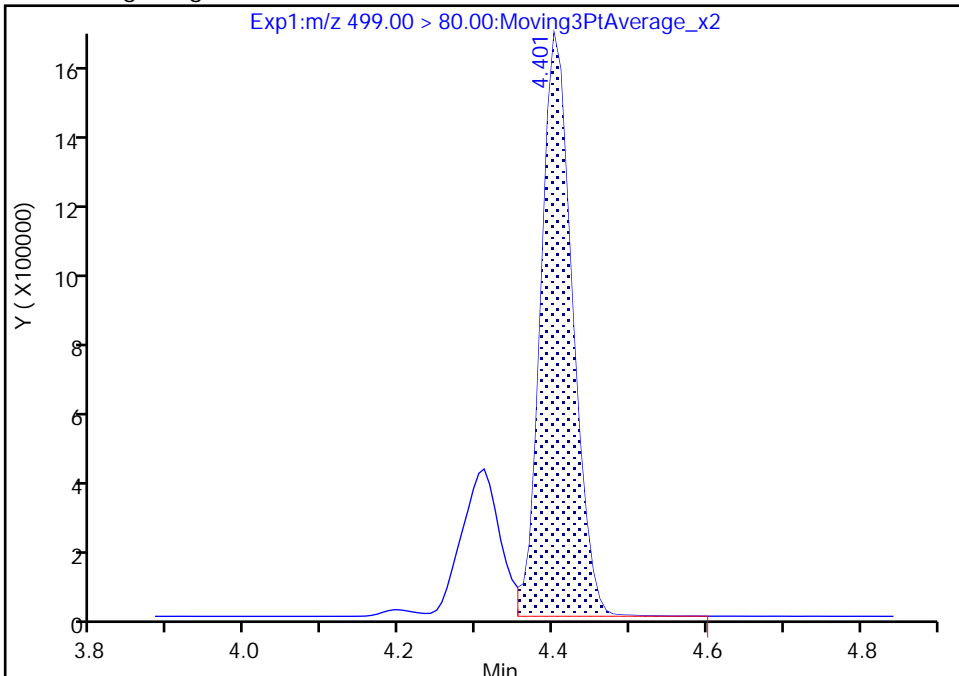
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_010.d  
Injection Date: 09-Jan-2022 11:11:04 Instrument ID: LCA  
Lims ID: IC 5  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

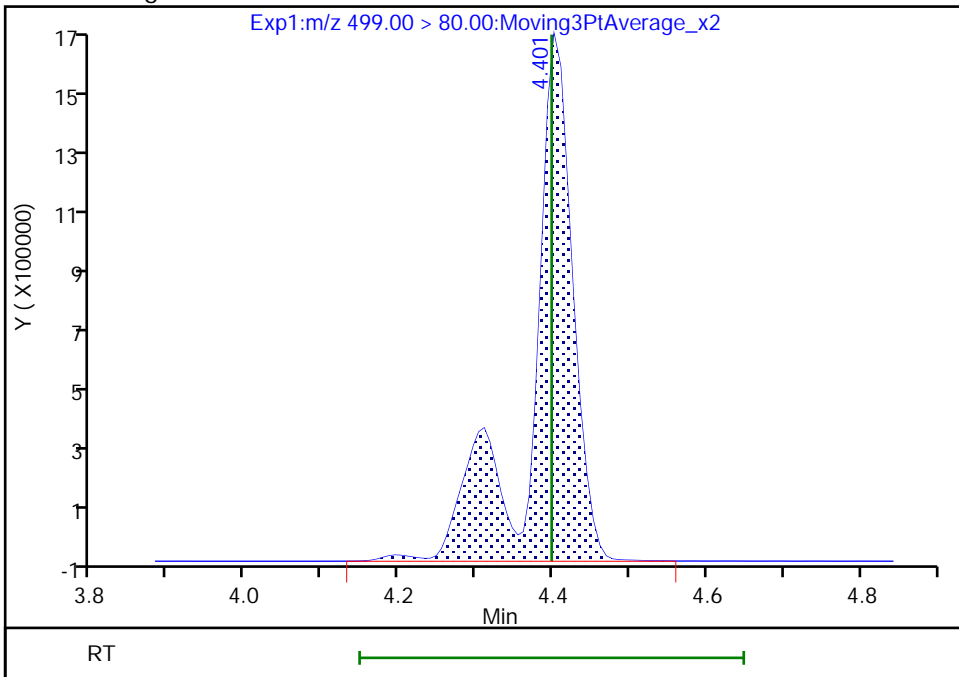
RT: 4.40  
Area: 4547376  
Amount: 1.897366  
Amount Units: ng/ml

Processing Integration Results



RT: 4.40  
Area: 6000595  
Amount: 2.347510  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:23:11  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

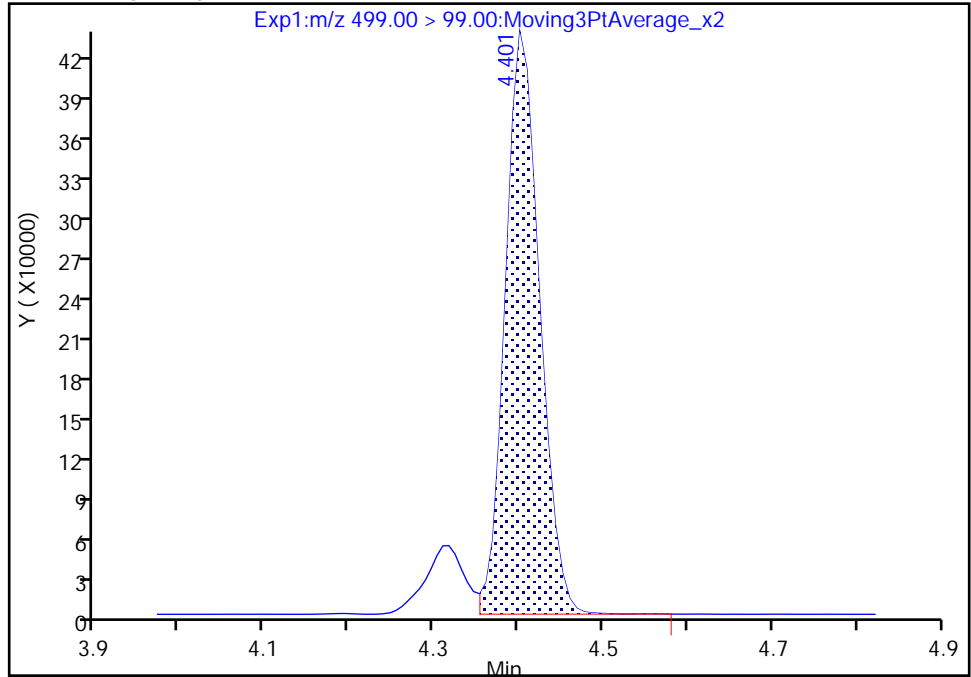
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_010.d  
Injection Date: 09-Jan-2022 11:11:04 Instrument ID: LCA  
Lims ID: IC 5  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

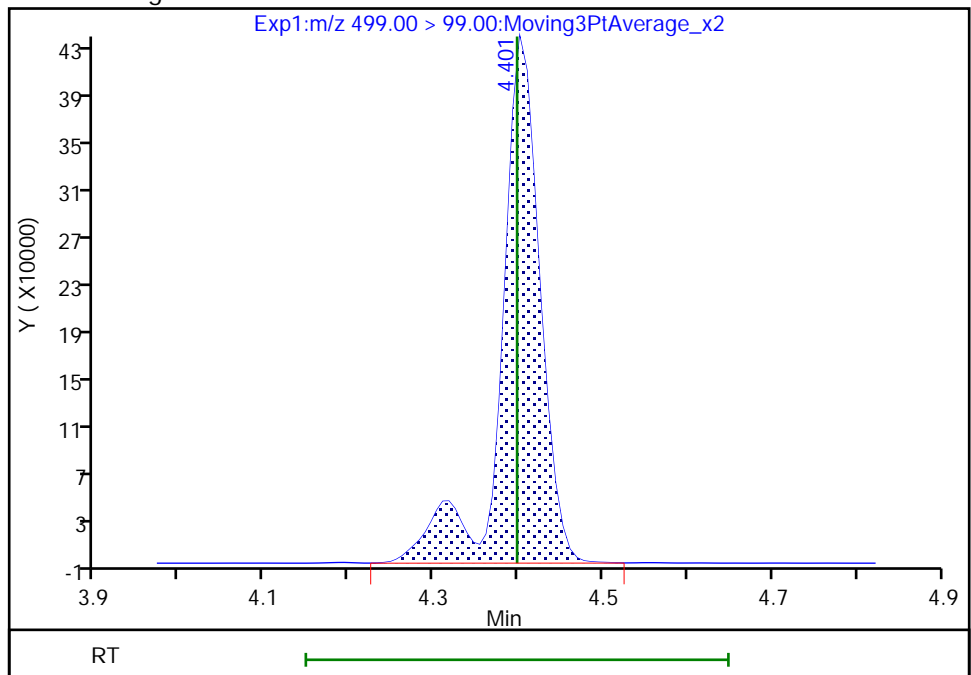
RT: 4.40  
Area: 1230008  
Amount: 1.897366  
Amount Units: ng/ml

Processing Integration Results



RT: 4.40  
Area: 1396173  
Amount: 2.347510  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:23:19

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

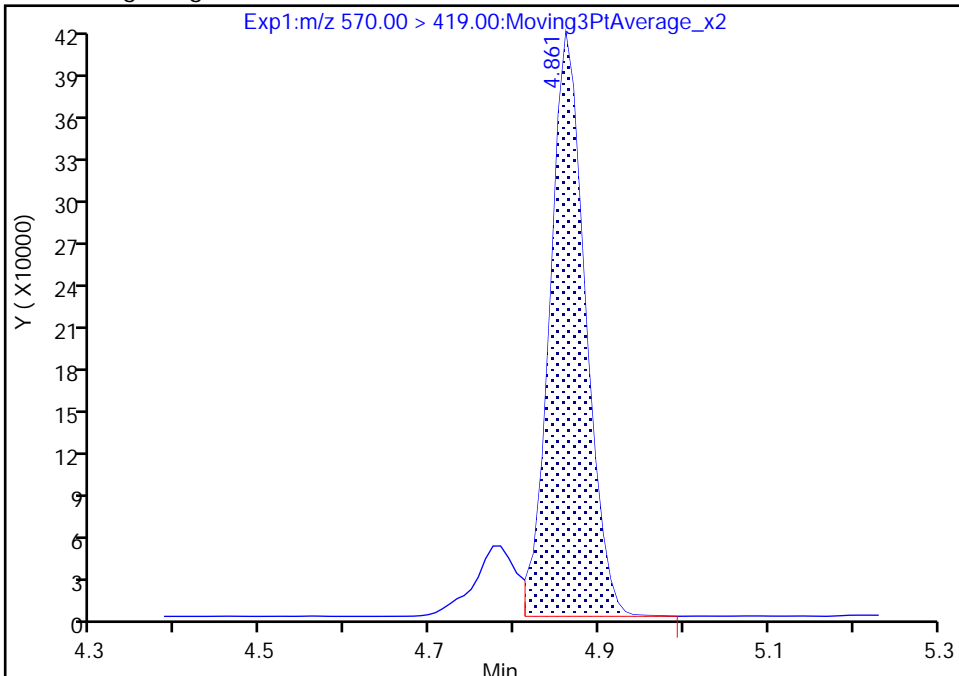
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_010.d  
Injection Date: 09-Jan-2022 11:11:04 Instrument ID: LCA  
Lims ID: IC 5  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

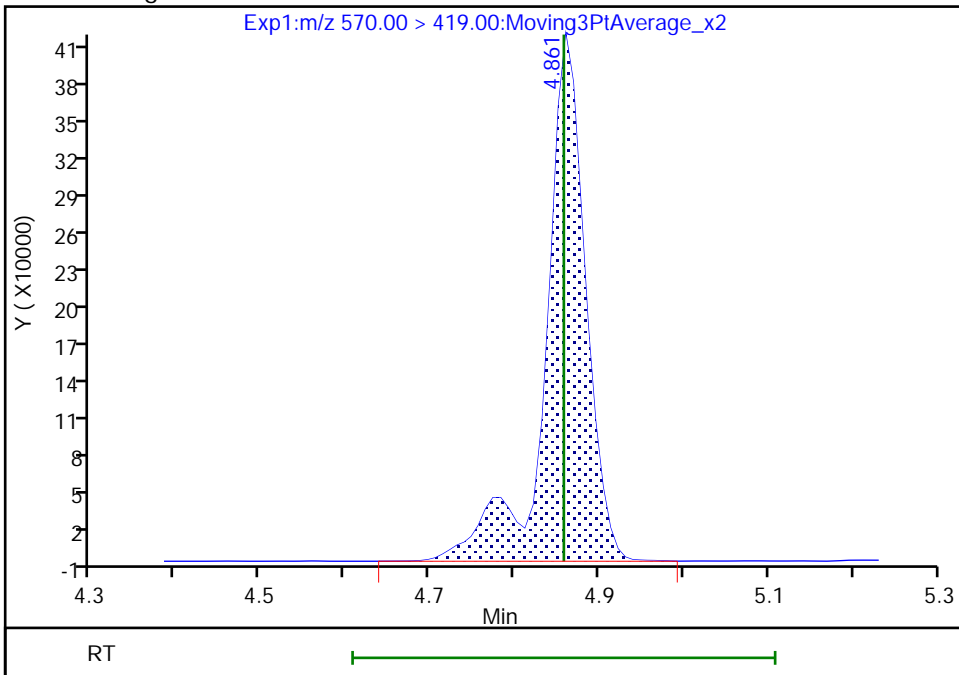
RT: 4.86  
Area: 1213585  
Amount: 2.364152  
Amount Units: ng/ml

Processing Integration Results



RT: 4.86  
Area: 1388453  
Amount: 2.530139  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:23:30  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

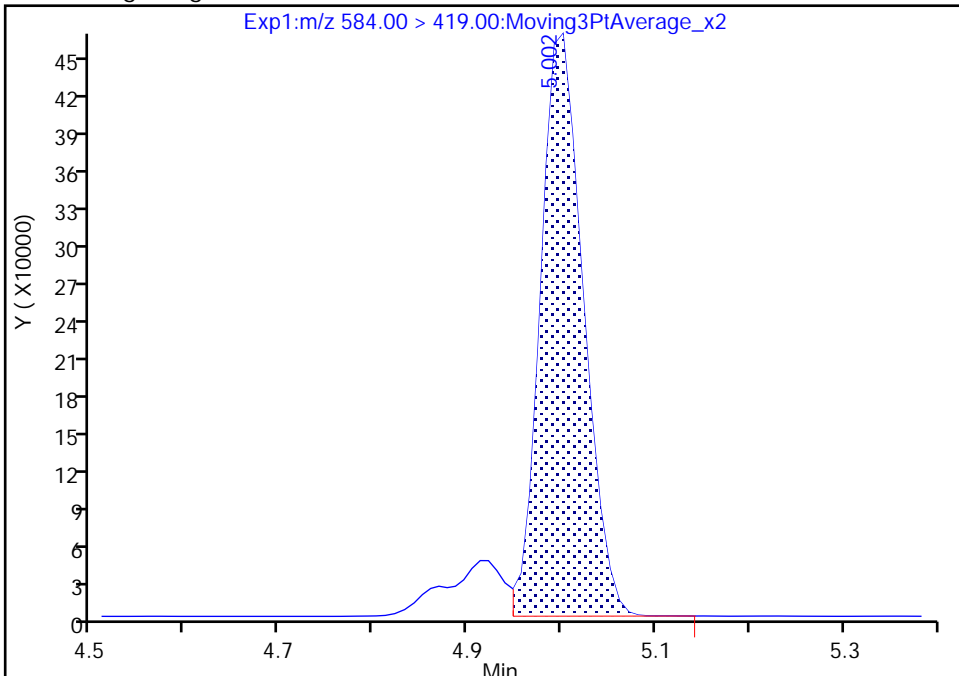
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_010.d  
Injection Date: 09-Jan-2022 11:11:04 Instrument ID: LCA  
Lims ID: IC 5  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

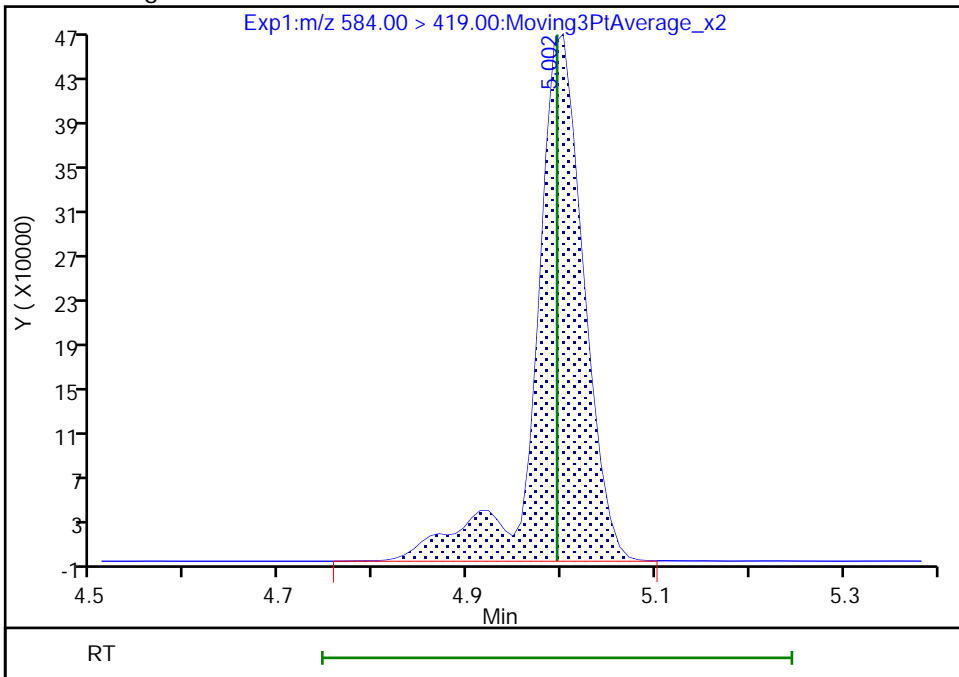
RT: 5.00  
Area: 1458310  
Amount: 2.369291  
Amount Units: ng/ml

Processing Integration Results



RT: 5.00  
Area: 1650265  
Amount: 2.595463  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:23:39  
Audit Action: Manually Integrated

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_011.d  
 Lims ID: IC 6  
 Client ID:  
 Sample Type: IC Calib Level: 6  
 Inject. Date: 09-Jan-2022 11:19:53 ALS Bottle#: 11 Worklist Smp#: 11  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022186-011 ic 6  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 12:31:58 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1686

First Level Reviewer: cochranj Date: 09-Jan-2022 11:37:53

Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										
212.90 > 169.00	2.784	2.785	-0.001	1.000	17680839	5.10		102	4884	
D 1 13C4 PFBA										
217.00 > 172.00	2.784	2.784	0.0	0.678	5525998	1.25		100	12131	
4 Perfluoropentanoic acid										
262.90 > 219.00	3.089	3.093	-0.004	1.000	16756830	5.21		104	4802	
D 3 13C5 PFPeA										
267.90 > 223.00	3.089	3.093	-0.004	0.752	4222495	1.23		98.5	10122	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	3.106	3.109	-0.003	1.000	11661043	4.44	Target=2.68	100	5719	
298.90 > 99.00	3.106	3.109	-0.003	1.000	4287479		2.72(1.34-4.02)	100	5792	
D 6 13C3 PFBS										
301.90 > 80.00	3.106	3.109	-0.003	0.756	2783042	1.22		105	10006	
7 4:2 FTS										
327.00 > 307.00	3.391	3.393	-0.002	1.000	7289864	4.93		105	7601	
D 8 M2-4:2 FTS										
329.00 > 81.00	3.391	3.393	-0.002	0.826	767242	1.09		93.3	1436	
11 Perfluoropentanesulfonic acid										
349.00 > 80.00	3.421	3.422	-0.001	1.102	11177909	4.81	Target=3.48	102	15982	
349.00 > 99.00	3.421	3.422	-0.001	1.102	3116298		3.59(1.74-5.22)	102	8596	
10 Perfluorohexanoic acid										
313.00 > 269.00	3.421	3.423	-0.002	1.000	15740477	4.96	Target=12.57	99.3	5188	
313.00 > 119.00	3.421	3.423	-0.002	1.000	1288002		12.22(6.28-18.85)	99.3	1802	
D 9 13C2 PFHxA										
315.00 > 270.00	3.421	3.423	-0.002	0.833	4565306	1.24		99.6	8520	
13 HFPO-DA										
285.00 > 169.00	3.518	3.524	-0.006	1.000	12316846	5.14		103	6599	

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	3.518	3.524	-0.006	0.857	2216220	1.26		101	4067	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.759	3.760	-0.001	1.000	9867857	4.70	Target=3.48	103	9065	M
399.00 > 99.00	3.759	3.760	-0.001	1.000	2796783		3.53(1.74-5.21)	103	6880	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.759	3.761	-0.002	0.915	1801353	1.18		99.7	5509	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.768	3.772	-0.004	1.000	18186660	4.97	Target=3.29	99.4	6615	
363.00 > 169.00	3.768	3.772	-0.004	1.000	5866419		3.10(1.65-4.94)	99.4	3228	
D 14 13C4 PFHpA										
367.00 > 322.00	3.768	3.772	-0.004	0.918	4368922	1.25		99.6	8514	
68 DONA										
377.00 > 251.00	3.806	3.807	-0.001	0.866	28147768	4.85	Target=1.76	103	11112	
377.00 > 85.00	3.806	3.807	-0.001	0.866	16484052		1.71(0.88-2.64)	103	176	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.089	4.092	-0.003	0.931	10290455	4.89	Target=3.91	103	9975	
449.00 > 99.00	4.089	4.092	-0.003	0.931	2678835		3.84(1.95-5.86)	103	9433	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.098	4.100	-0.002	0.998	4428641	1.26		101	7922	
19 6:2 FTS										
427.00 > 407.00	4.098	4.101	-0.003	1.000	5660505	4.88		103	8692	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.098	4.100	-0.002	0.998	764954	1.08		90.7	2559	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.106	4.109	-0.003	1.000	20503881	5.08	Target=2.61	102	6203	
413.00 > 169.00	4.106	4.109	-0.003	1.000	8046315		2.55(1.30-3.91)	102	4659	
* 22 13C2 PFOA										
415.00 > 370.00	4.106	4.109	-0.003		4837679	1.25			10314	
D 21 13C4 PFOA										
417.00 > 372.00	4.106	4.109	-0.003	1.000	4399864	1.21		97.0	7529	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.394	4.396	-0.002	1.000	582576	1.19		99.5	2914	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.394	4.398	-0.004	1.000	11516632	4.75	Target=4.37	102	5977	M
499.00 > 99.00	4.394	4.398	-0.004	1.000	2633758		4.37(2.18-6.55)	102	4663	M
D 25 13C4 PFOS										
503.00 > 80.00	4.394	4.398	-0.004	1.070	2637457	1.20		100	3375	
26 Perfluorononanoic acid										
463.00 > 419.00	4.419	4.421	-0.002	1.000	20662331	5.04	Target=4.48	101	10170	
463.00 > 169.00	4.419	4.421	-0.002	1.000	4518493		4.57(2.24-6.72)	101	4972	
D 27 13C5 PFNA										
468.00 > 423.00	4.419	4.421	-0.002	1.076	5842775	1.22		97.9	10264	
63 9CIFOS										
531.00 > 351.00	4.553	4.558	-0.005	1.036	22796459	4.70		101	14071	

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	4.681	4.682	-0.001	1.065	10858318	5.05	Target=3.84	105	8870	
549.00 > 99.00	4.673	4.682	-0.009	1.063	2794524		3.89(1.92-5.77)	105	7645	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.698	4.700	-0.002	1.000	13658161	5.25		105	4554	
D 34 13C8 FOSA										
506.00 > 78.00	4.698	4.700	-0.002	1.144	3437917	1.16		92.5	3326	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.706	4.709	-0.003	1.000	21676188	5.08	Target=11.50	102	10730	
513.00 > 169.00	4.706	4.709	-0.003	1.000	1933112		11.21(5.75-17.25)	102	975	
D 32 13C2 PFDA										
515.00 > 470.00	4.706	4.709	-0.003	1.146	5533817	1.20		96.0	7856	
31 8:2 FTS										
527.00 > 507.00	4.715	4.721	-0.006	1.000	5273346	4.88		102	4793	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.715	4.721	-0.006	1.148	914379	1.14		95.3	1706	
36 NMeFOSAA										
570.00 > 419.00	4.852	4.858	-0.006	1.000	2665259	5.00		99.9	3287	M
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.852	4.854	-0.002	1.182	681894	1.26		101	246	
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.940	4.942	-0.002	1.124	10146252	4.94	Target=3.69	102	17395	
599.00 > 99.00	4.940	4.942	-0.002	1.124	2708533		3.75(1.84-5.53)	102	7810	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.966	4.973	-0.007	1.000	21821508	5.01	Target=8.29	100	11225	
563.00 > 169.00	4.966	4.973	-0.007	1.000	2576527		8.47(4.14-12.43)	100	7658	
D 39 13C2 PFUnA										
565.00 > 520.00	4.966	4.973	-0.007	1.209	5615452	1.22		97.6	11414	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.984	4.989	-0.005	1.214	724743	1.22		97.4	2973	
40 NEtFOSA										
584.00 > 419.00	4.993	4.995	-0.002	1.002	2908898	4.97		99.4	2217	M
57 11C1FOS										
631.00 > 451.00	5.072	5.075	-0.003	1.154	18048233	4.89		104	11373	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.205	5.207	-0.002	1.000	24177058	5.15	Target=6.82	103	12884	
613.00 > 169.00	5.205	5.207	-0.002	1.000	3559201		6.79(3.41-10.23)	103	5331	
D 43 13C2 PFDoA										
615.00 > 570.00	5.205	5.207	-0.002	1.268	5892161	1.22		97.7	13986	
50 10:2 FTS										
627.00 > 607.00	5.231	5.231	0.0	1.110	8656158	4.98		103	13205	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.275	5.279	-0.004	1.285	723771	1.25		99.8	690	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.275	5.281	-0.006	1.285	520919	1.26		101	51.5	
61 NMeFOSA										
512.00 > 169.00	5.284	5.286	-0.002	1.002	2239289	5.06		101	875	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
49 N-MeFOSE-M										
616.00 > 59.00	5.284	5.290	-0.006	1.002	3444502	4.95		99.0	3358	
54 PFDoS										
699.00 > 80.00	5.384	5.383	0.001	1.225	10381999	5.13	Target=4.36	106	10226	
699.00 > 99.00	5.384	5.383	0.001	1.225	2391072		4.34(2.18-6.55)	106	7411	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.415	5.417	-0.003	1.040	20229864	5.18	Target=6.19	104	13159	
663.00 > 169.00	5.415	5.417	-0.003	1.040	3291184		6.15(3.09-9.28)	104	7600	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.435	5.437	-0.002	1.324	736824	1.27		101	318	
62 N-EtFOSE-M										
630.00 > 59.00	5.445	5.450	-0.005	1.002	3918307	5.01		100	2964	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.445	5.450	-0.005	1.326	442829	1.30		104	751	
56 N-EtFOSA-M										
526.00 > 169.00	5.455	5.457	-0.002	1.002	2160439	5.10		102	753	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.598	5.600	-0.002	1.000	2545905	5.06	Target=1.09	101	6436	
713.00 > 219.00	5.598	5.600	-0.002	1.000	2402723		1.06(0.54-1.63)	101	7866	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.598	5.600	-0.002	1.363	4681083	1.27		102	8707	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.905	5.907	-0.002	1.000	13832628	5.05	Target=8.22	101	6893	
813.00 > 169.00	5.905	5.907	-0.002	1.000	1712351		8.08(4.11-12.33)	101	3164	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.905	5.907	-0.002	1.438	3181783	1.28		102	5990	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.160	6.162	-0.002	1.043	12749801	5.09	Target=11.60	102	8028	
913.00 > 169.00	6.160	6.162	-0.002	1.043	1124331		11.34(5.80-17.40)	102	2805	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

63L6PFC2T3\_00001

Amount Added: 1.00

Units: mL



Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_011.d

Injection Date: 09-Jan-2022 11:19:53

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

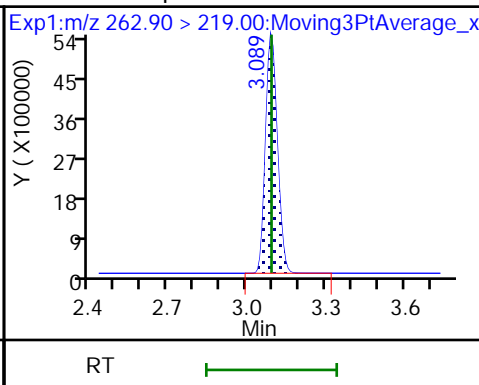
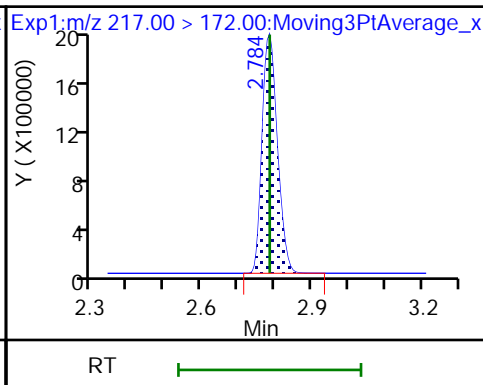
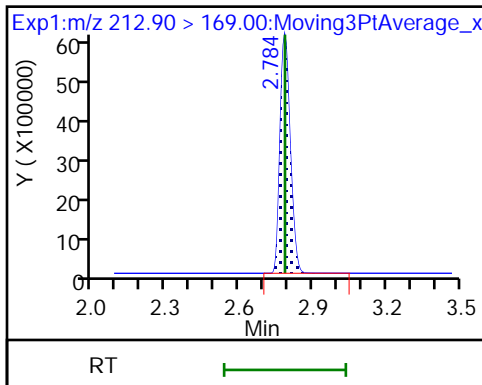
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

2 Perfluorobutanoic acid

D 1 13C4 PFBA

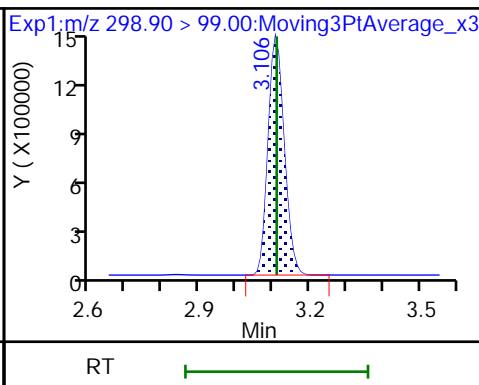
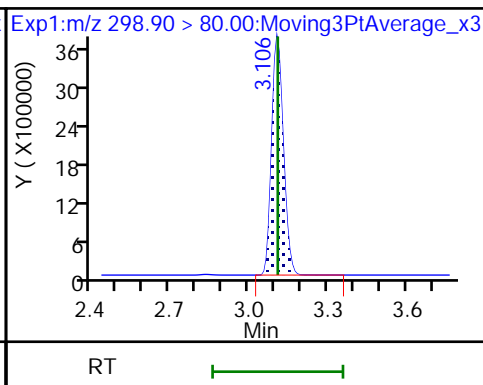
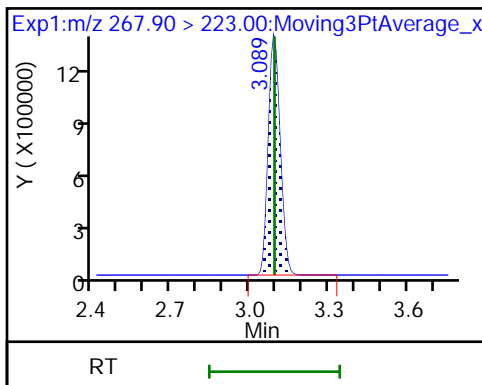
4 Perfluoropentanoic acid



D 3 13C5 PFPeA

5 Perfluorobutanesulfonic acid

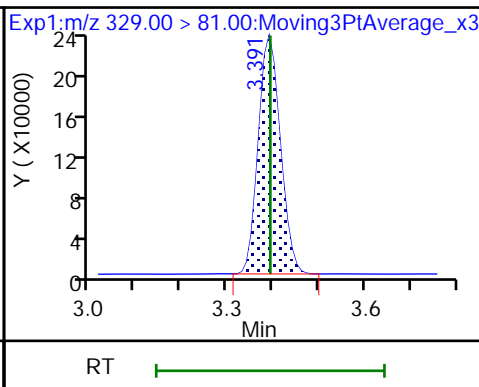
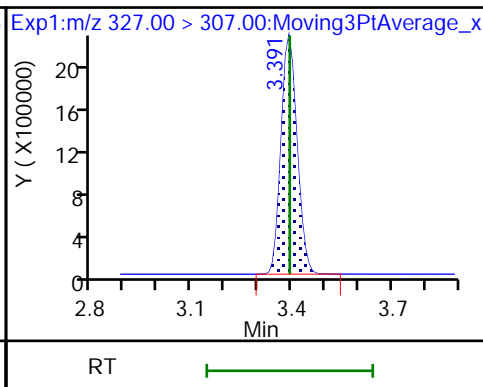
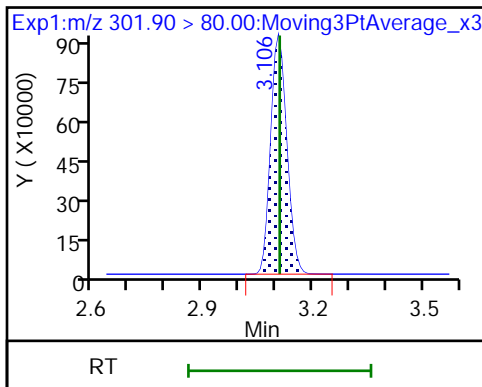
5 Perfluorobutanesulfonic acid



D 6 13C3 PFBS

7 4:2 FTS

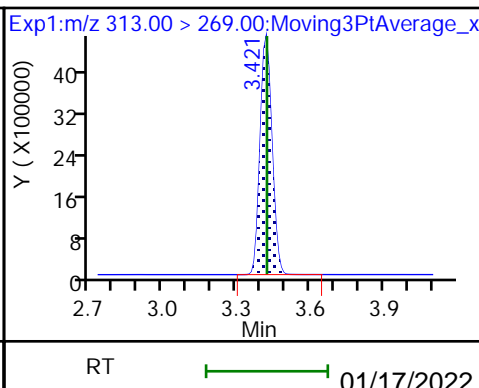
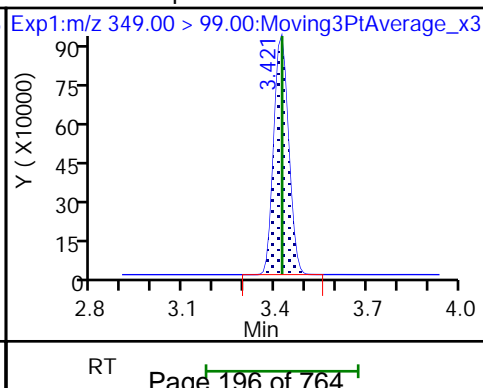
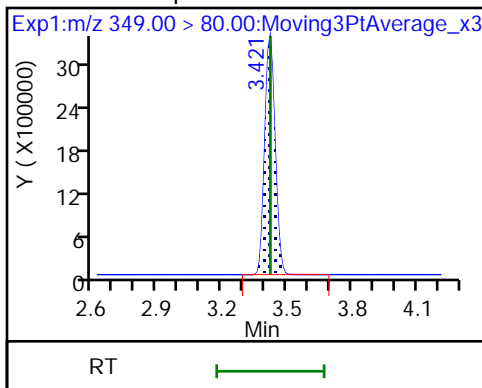
D 8 M2-4:2 FTS

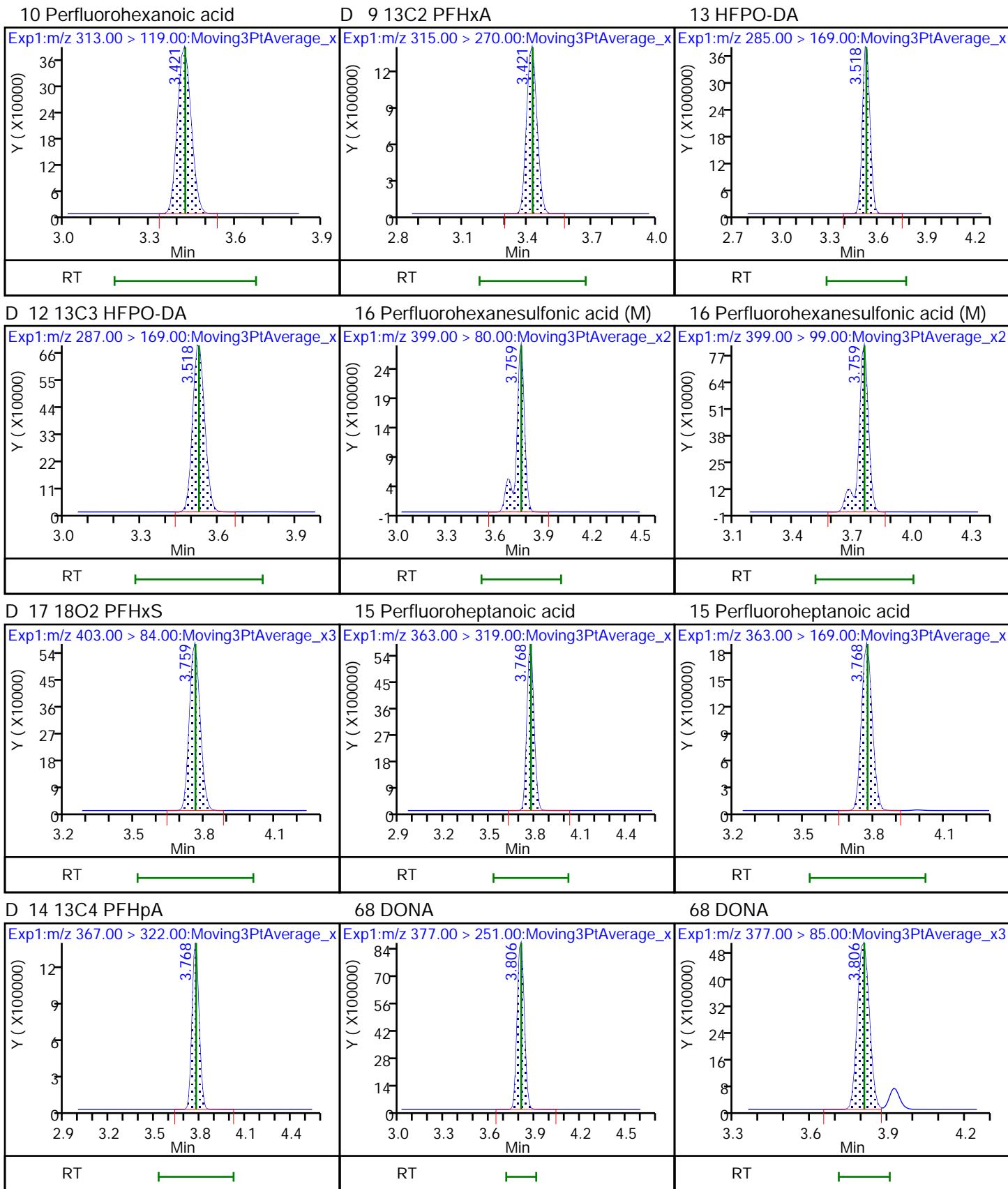


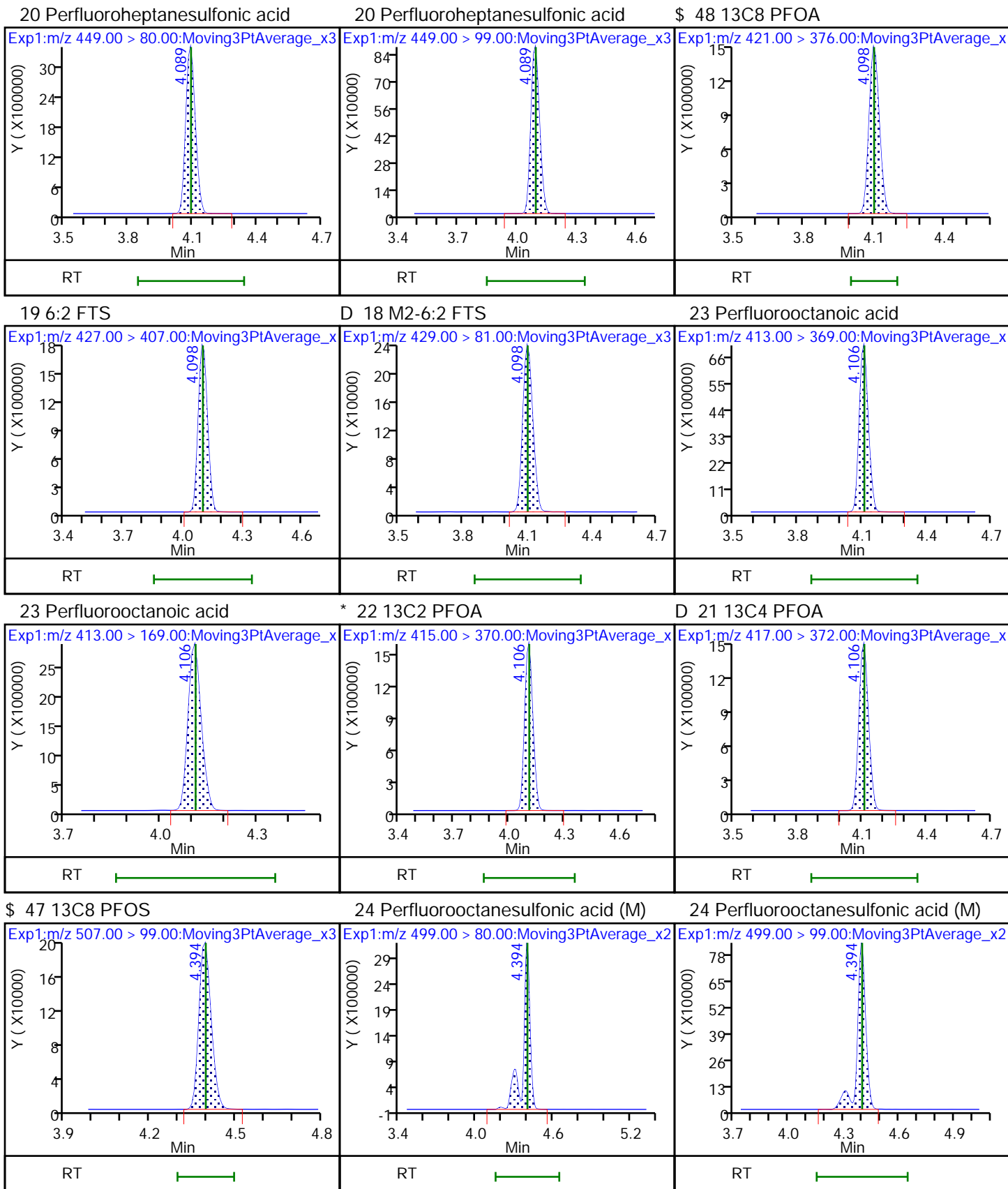
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

10 Perfluorohexanoic acid



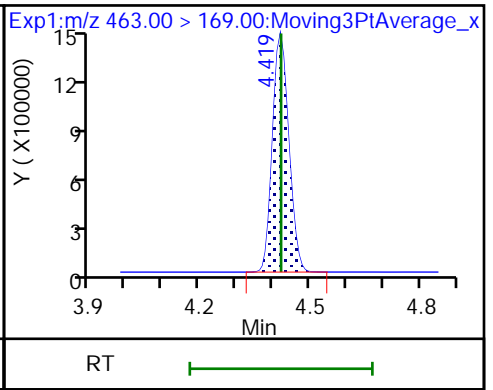
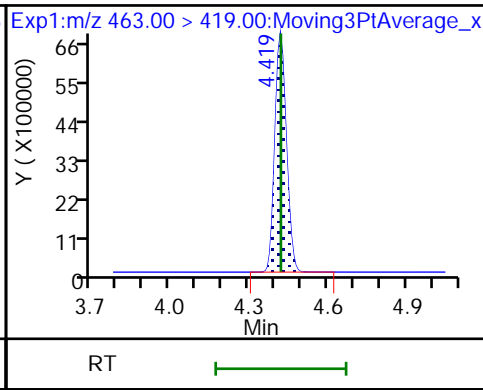
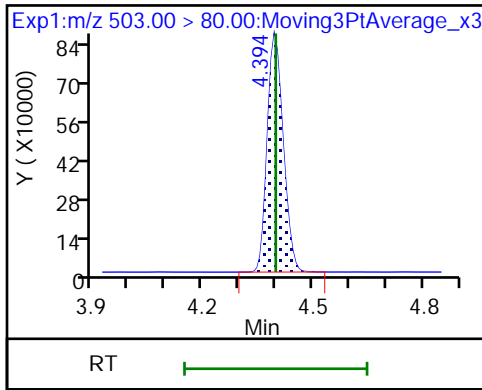




D 25 13C4 PFOS

26 Perfluorononanoic acid

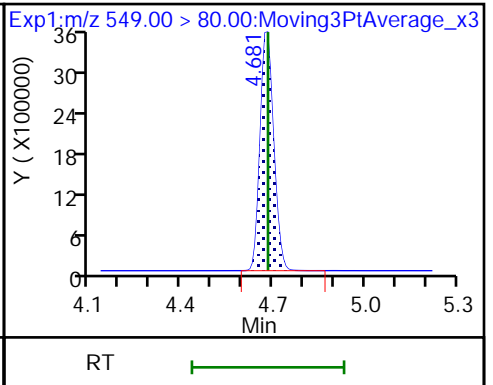
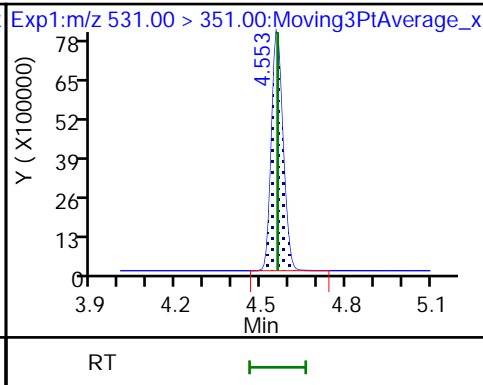
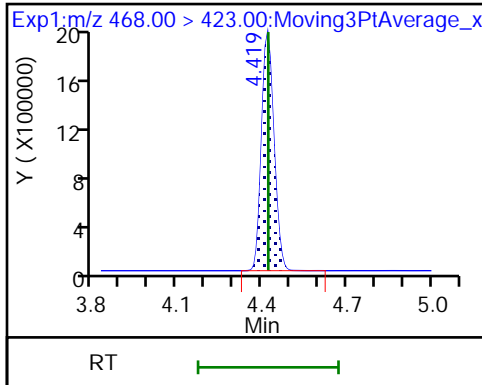
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS

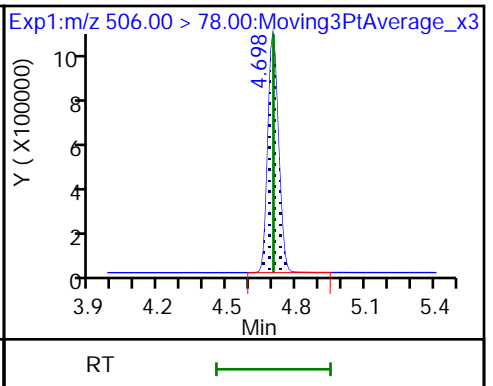
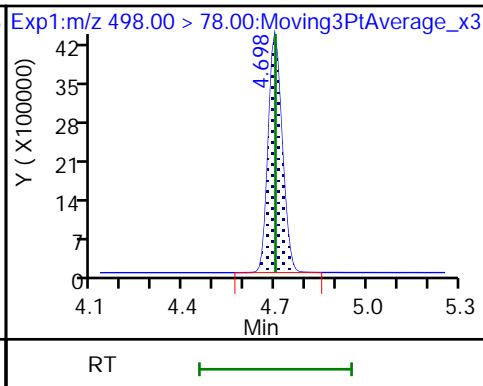
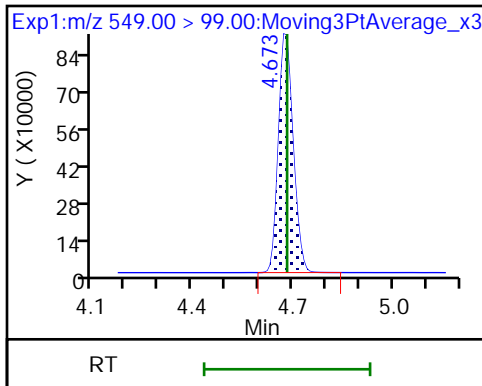
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

33 Perfluorooctanesulfonamide

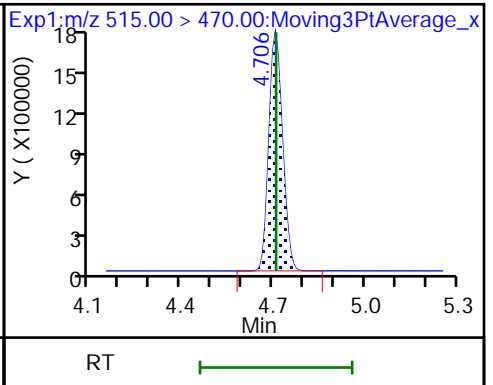
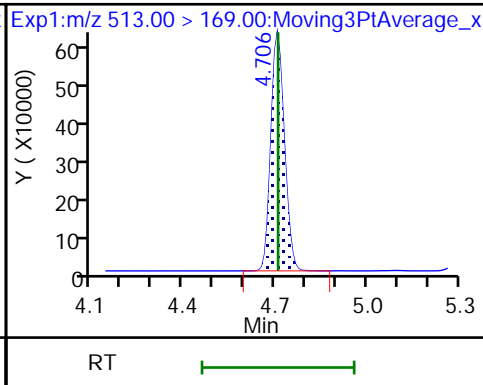
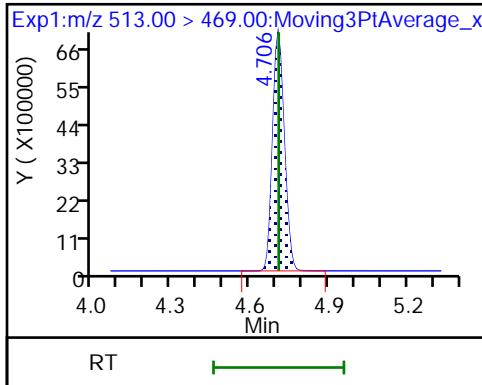
D 34 13C8 FOSA

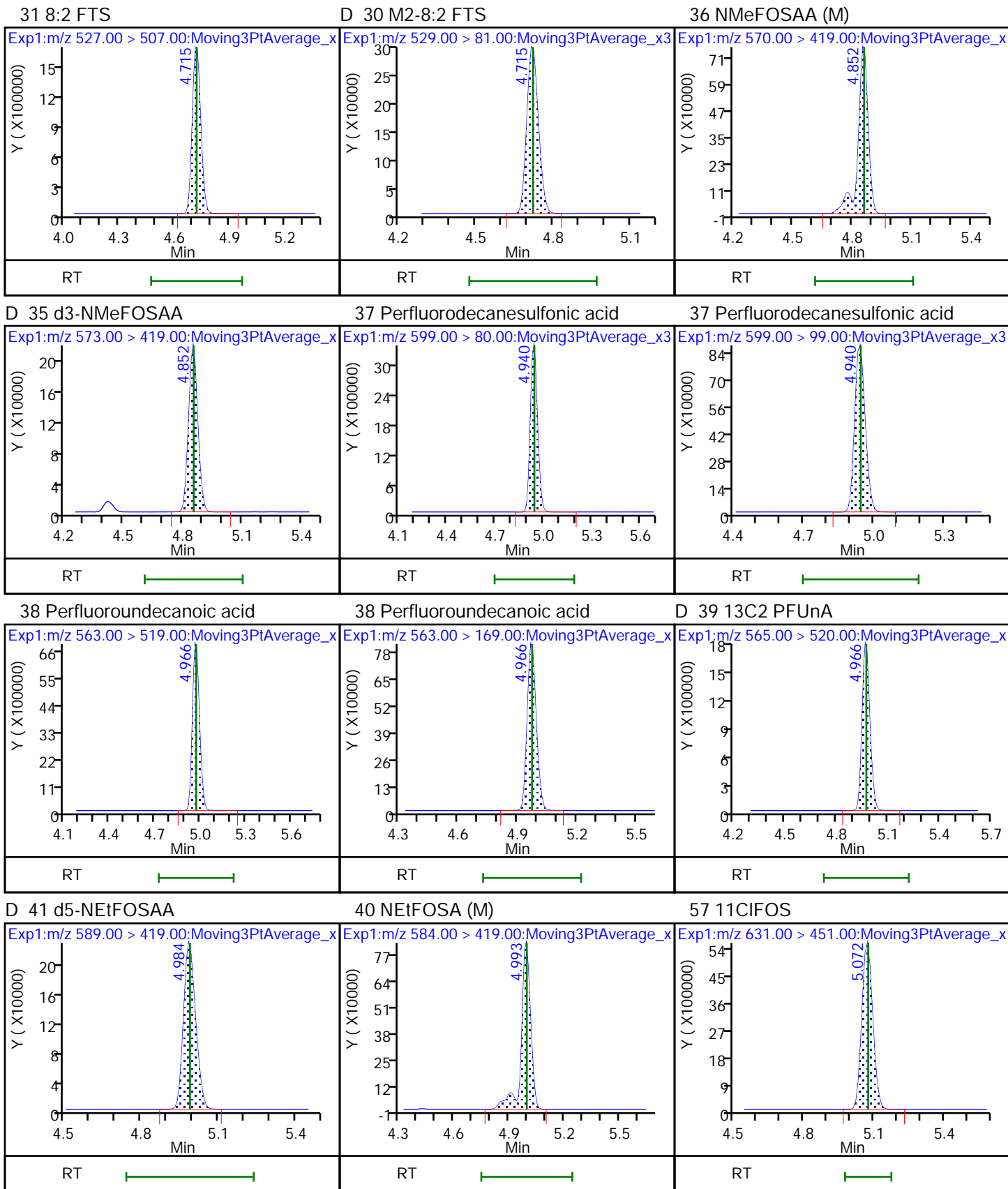


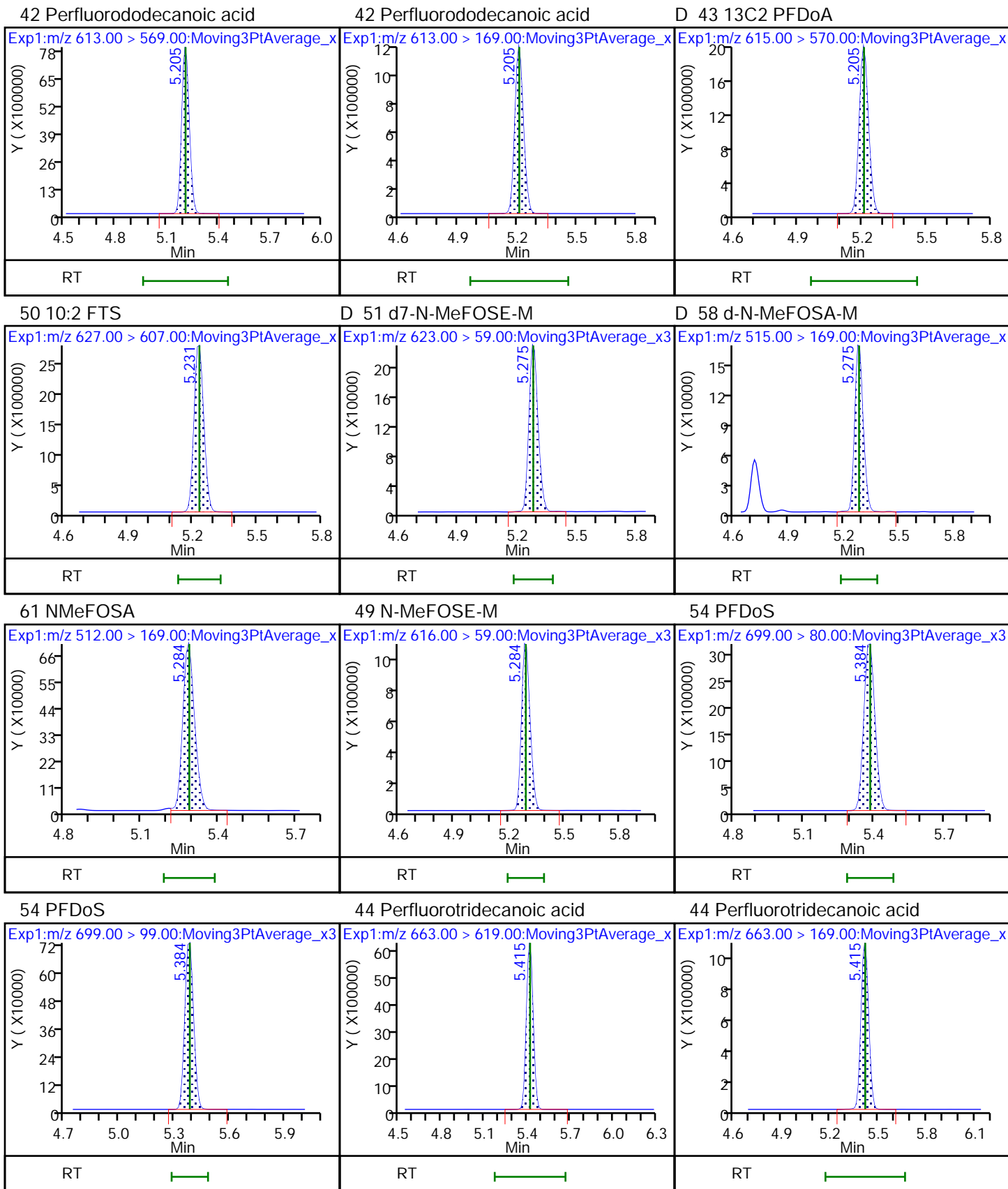
29 Perfluorodecanoic acid

29 Perfluorodecanoic acid

D 32 13C2 PFDA



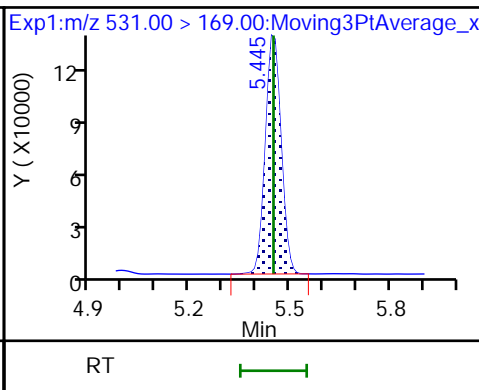
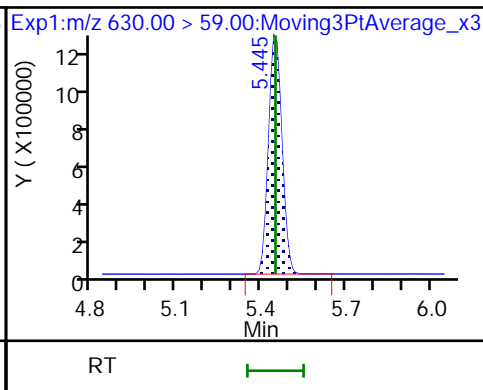
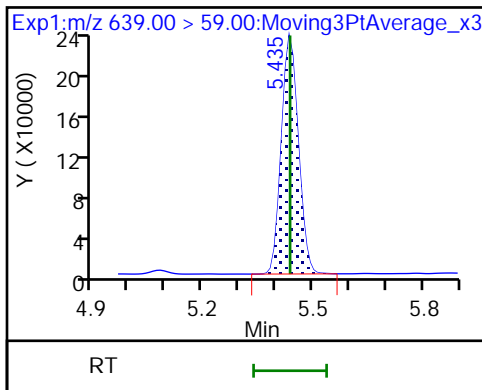




D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M

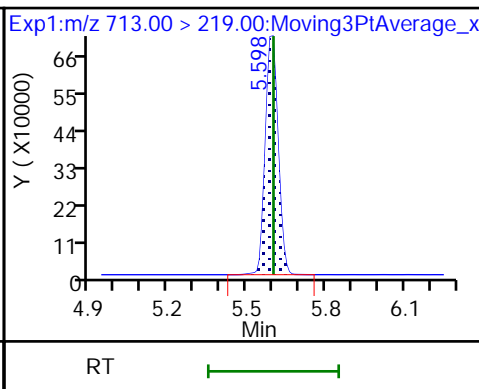
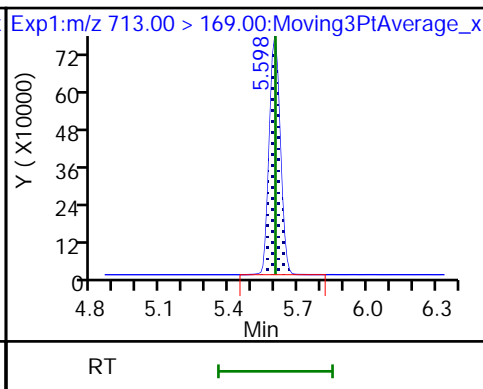
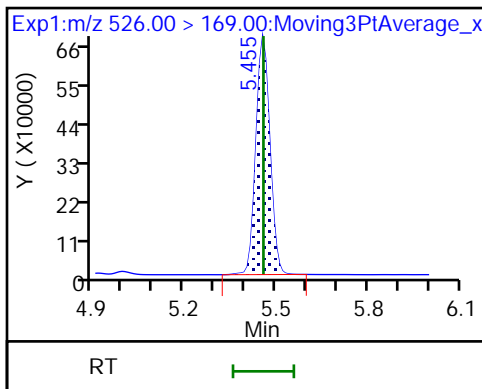
D 52 d-N-EtFOSA-M



56 N-EtFOSA-M

45 Perfluorotetradecanoic acid

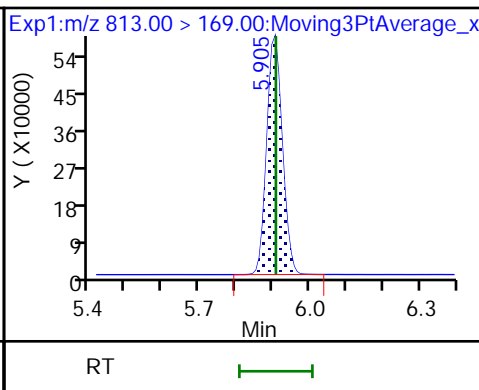
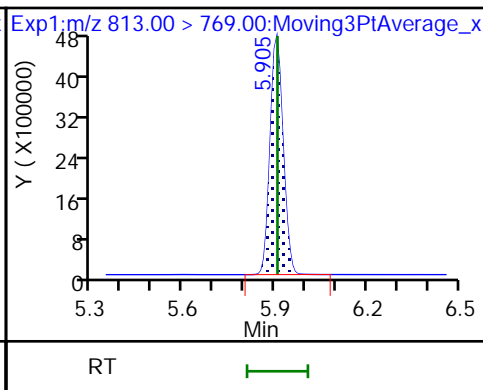
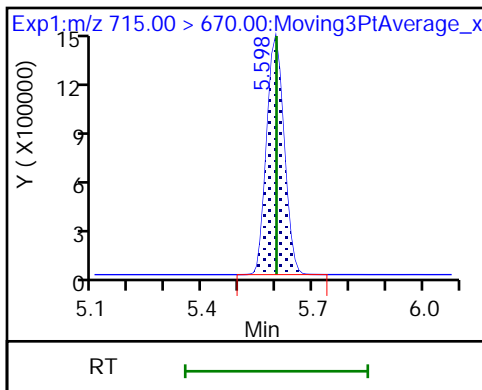
45 Perfluorotetradecanoic acid



D 46 13C2 PFTeDA

55 Perfluorohexadecanoic acid

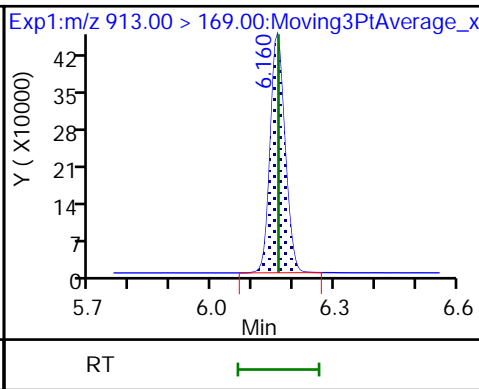
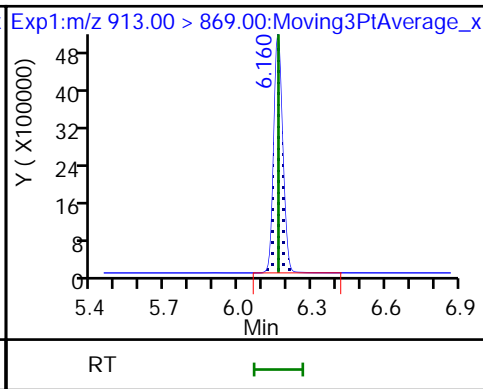
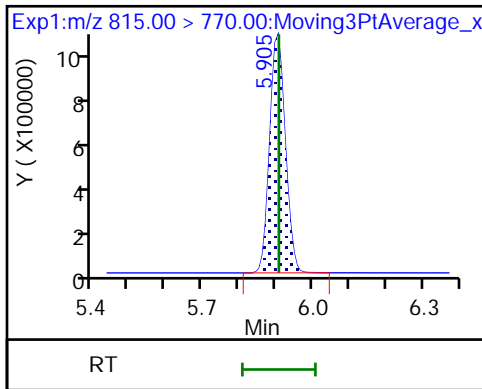
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid







Eurofins TestAmerica, Knoxville

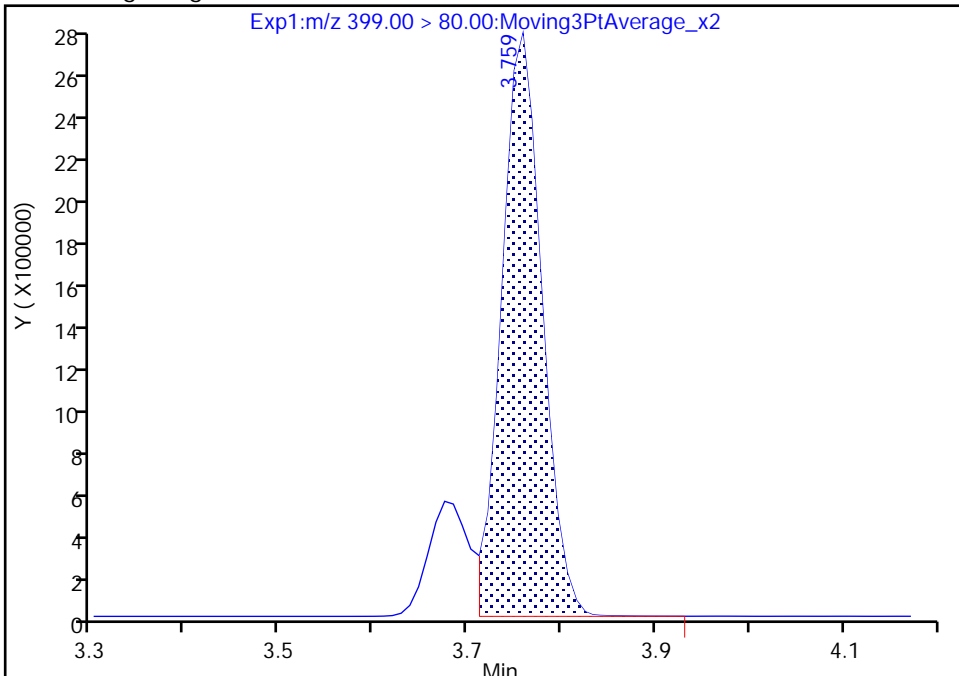
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_011.d  
Injection Date: 09-Jan-2022 11:19:53 Instrument ID: LCA  
Lims ID: IC 6  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 11 Worklist Smp#: 11  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

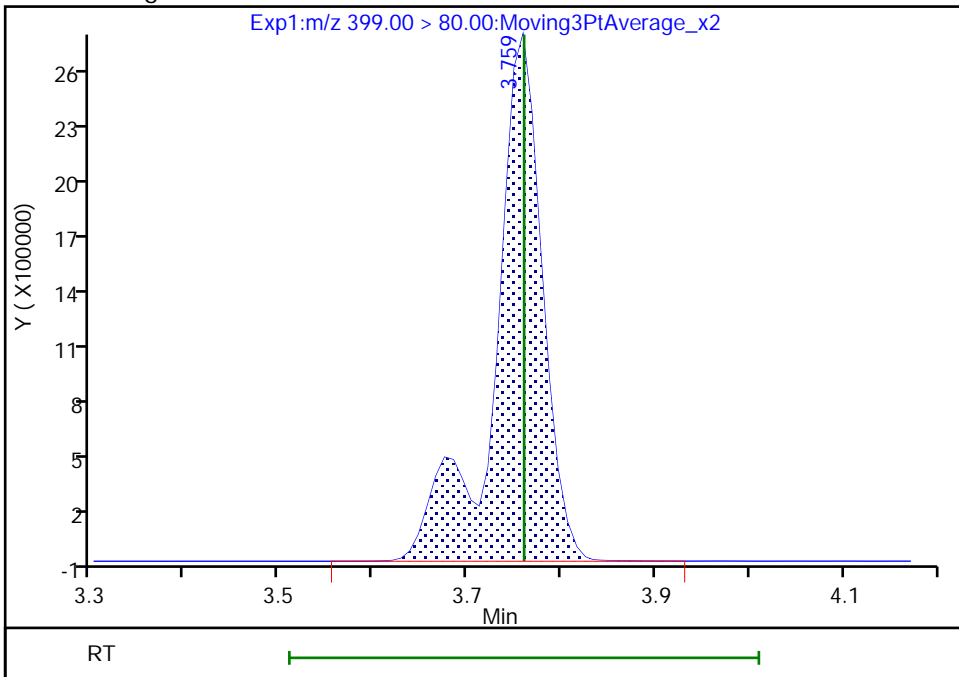
RT: 3.76  
Area: 8235487  
Amount: 4.081766  
Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
Area: 9867857  
Amount: 4.703557  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:36:47  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

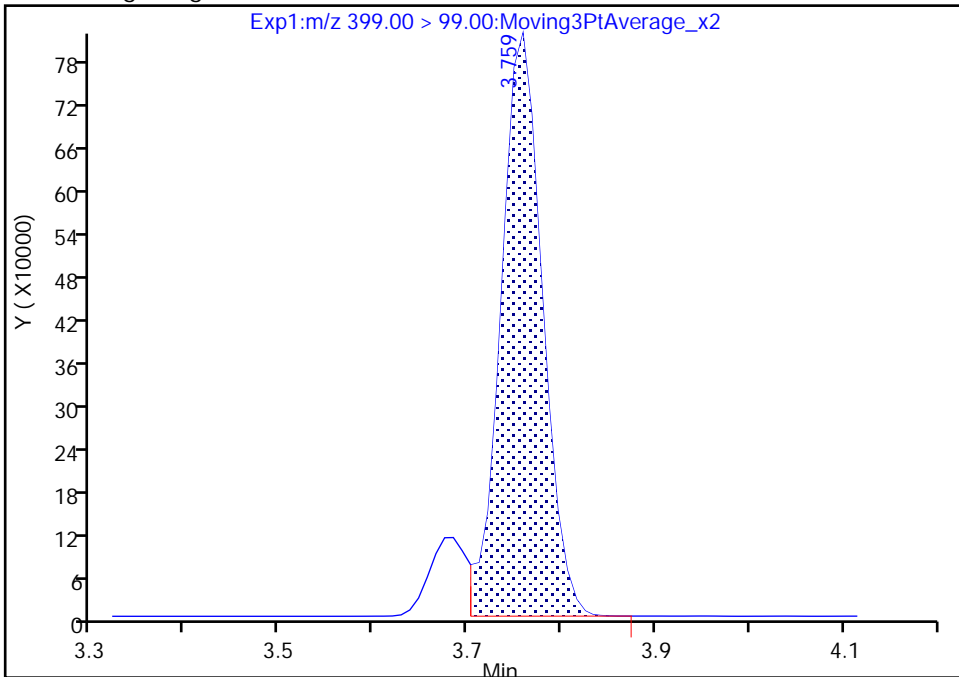
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_011.d  
Injection Date: 09-Jan-2022 11:19:53 Instrument ID: LCA  
Lims ID: IC 6  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 11 Worklist Smp#: 11  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

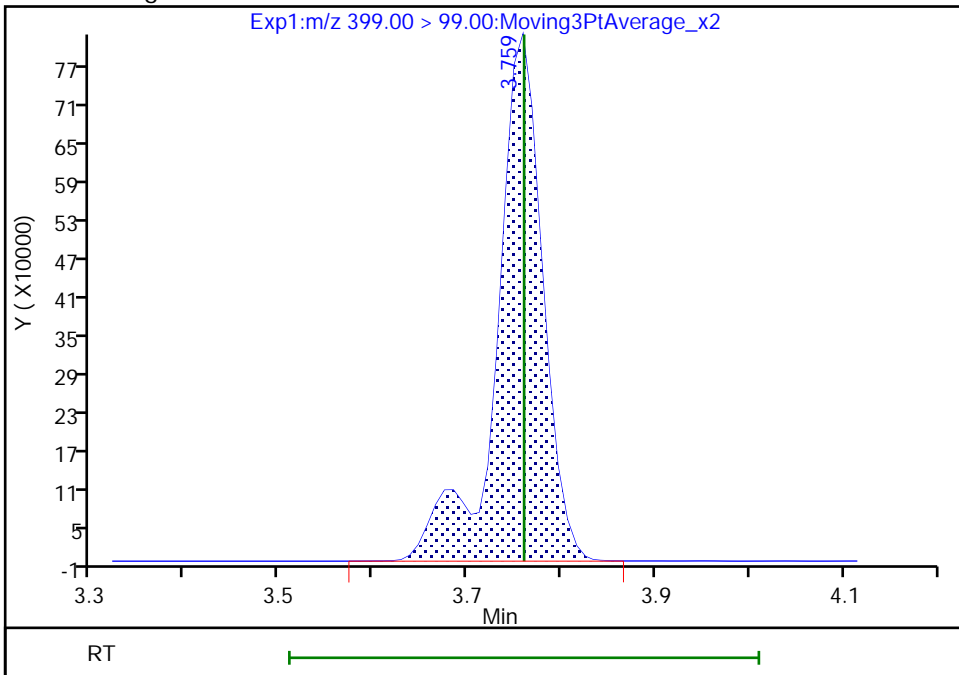
RT: 3.76  
Area: 2500128  
Amount: 4.081766  
Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
Area: 2796783  
Amount: 4.703557  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:36:56

Audit Action: Manually Integrated

Audit Reason: Baseline  
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Eurofins TestAmerica, Knoxville

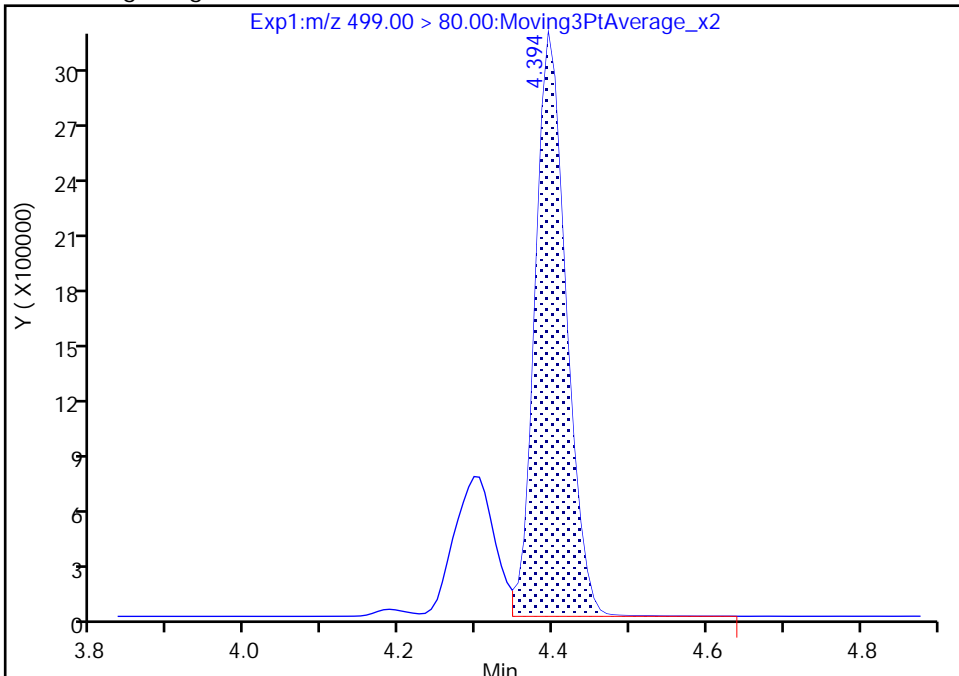
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Injection Date: 09-Jan-2022 11:19:53 Instrument ID: LCA  
Lims ID: IC 6  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 11 Worklist Smp#: 11  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

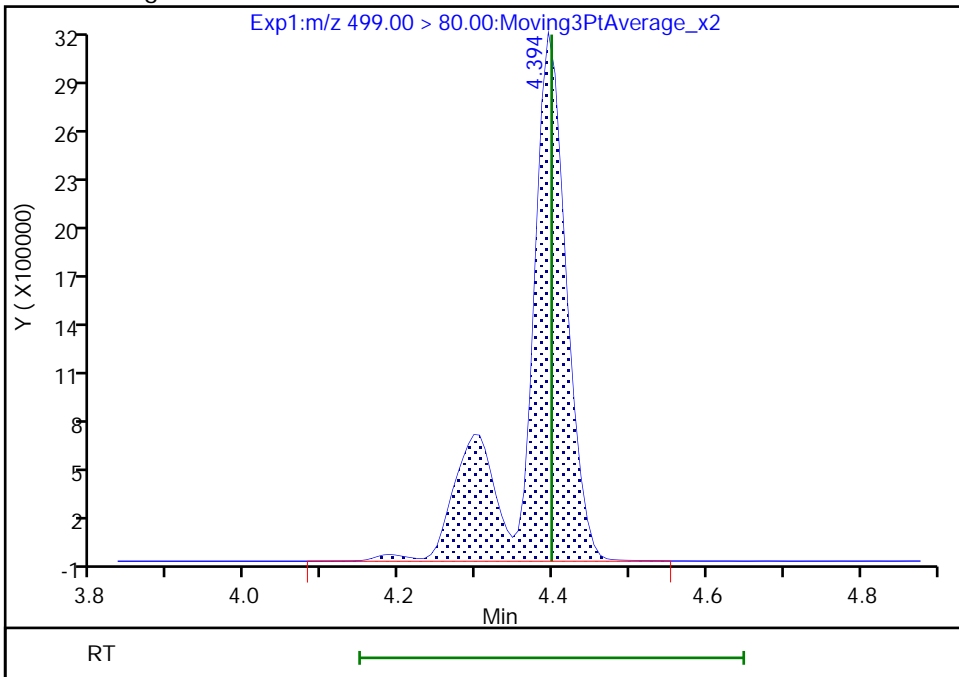
RT: 4.39  
Area: 8696026  
Amount: 3.770615  
Amount Units: ng/ml

Processing Integration Results



RT: 4.39  
Area: 11516632  
Amount: 4.748873  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:37:09  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

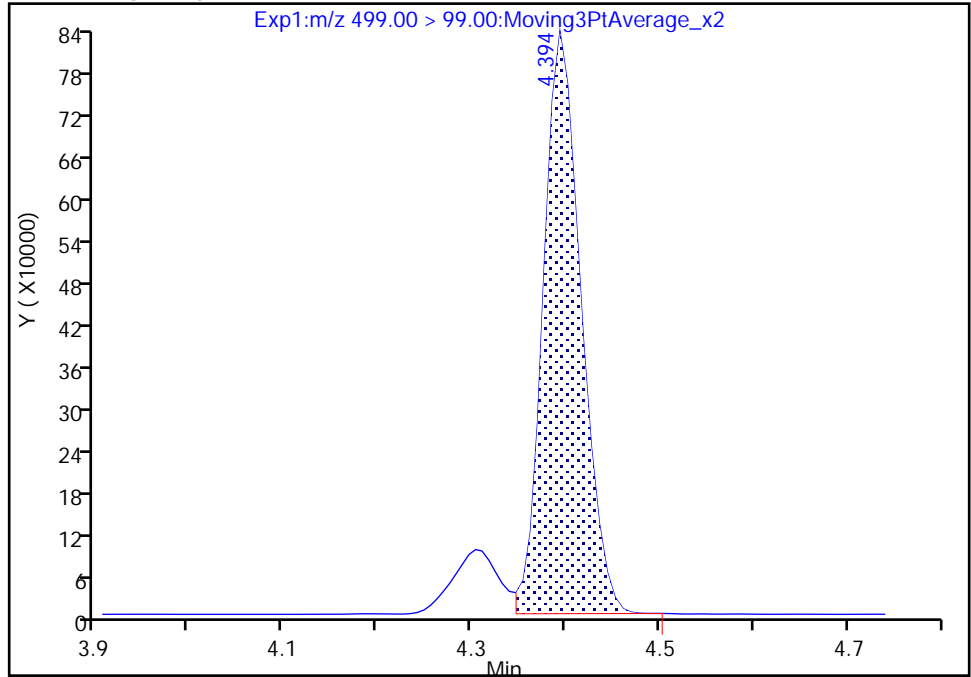
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_011.d  
Injection Date: 09-Jan-2022 11:19:53 Instrument ID: LCA  
Lims ID: IC 6  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 11 Worklist Smp#: 11  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

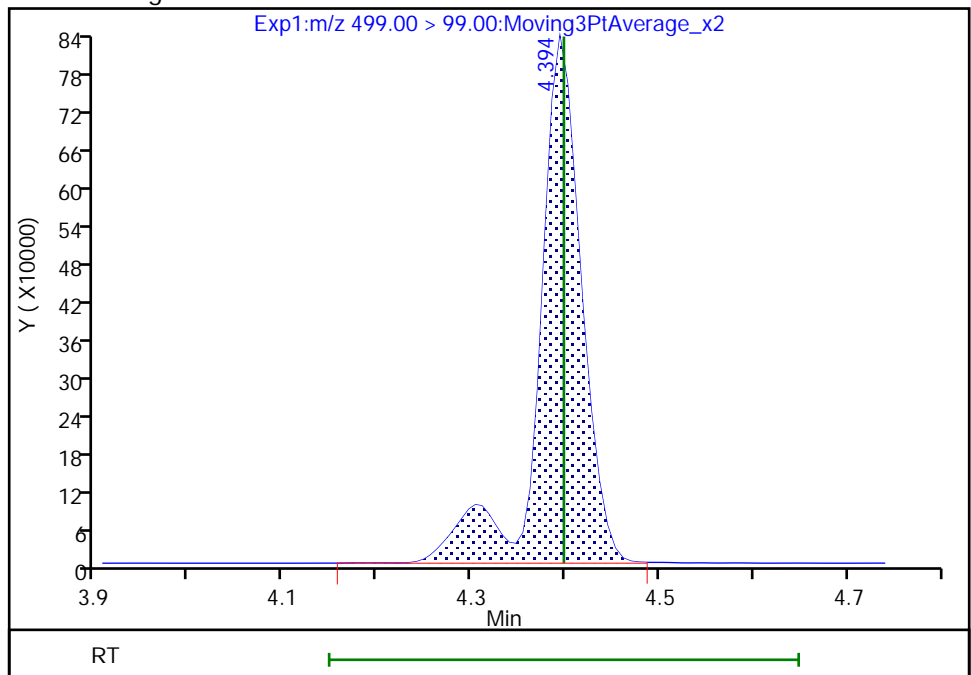
RT: 4.39  
Area: 2309451  
Amount: 3.770615  
Amount Units: ng/ml

Processing Integration Results



RT: 4.39  
Area: 2633758  
Amount: 4.748873  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:37:18

Audit Action: Manually Integrated

Audit Reason: Baseline  
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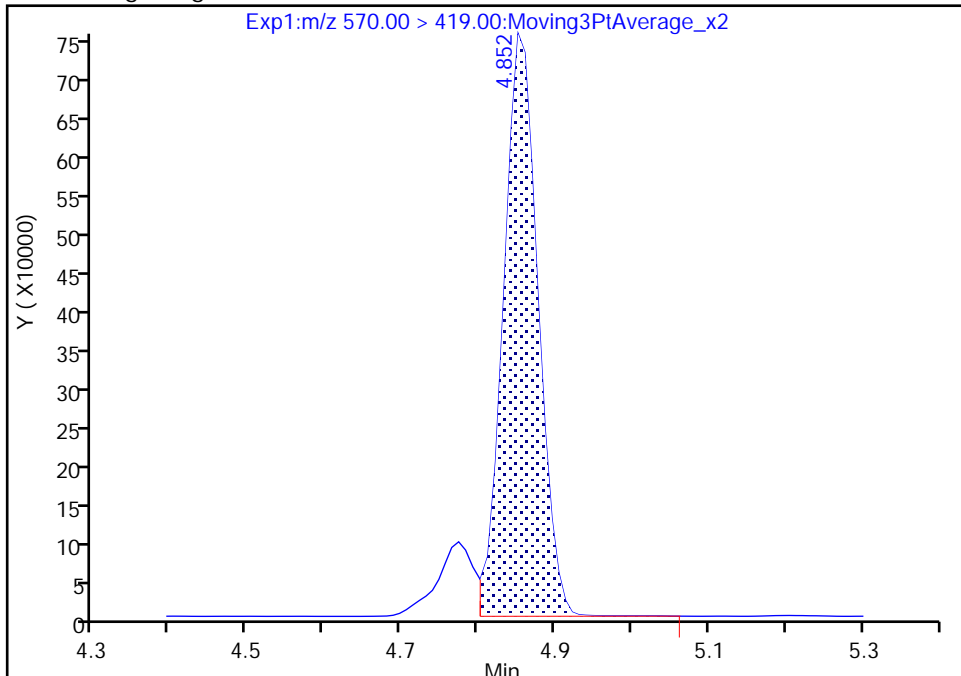
Data File:	\\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_011.d		
Injection Date:	09-Jan-2022 11:19:53	Instrument ID:	LCA
Lims ID:	IC 6		
Client ID:			
Operator ID:	Cochran, Bobby	ALS Bottle#:	11
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	PFC_LCA	Limit Group:	LC - PFC- ICAL
Column:		Detector:	EXP1
		Worklist Smp#:	11

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

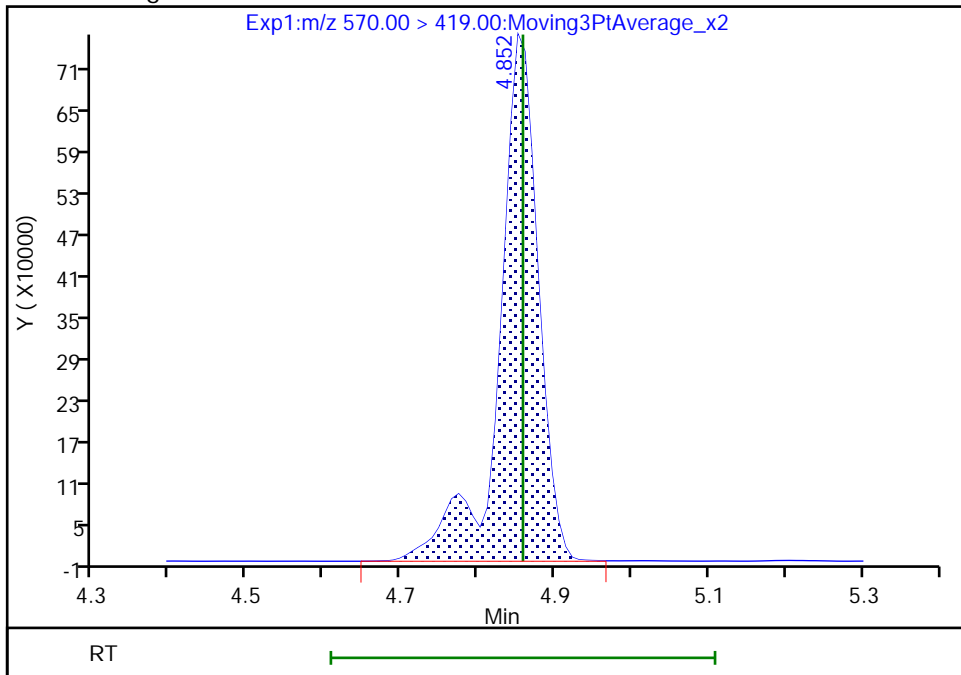
RT: 4.85  
 Area: 2353462  
 Amount: 4.669570  
 Amount Units: ng/ml

Processing Integration Results



RT: 4.85  
 Area: 2665259  
 Amount: 4.996143  
 Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:37:29  
 Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

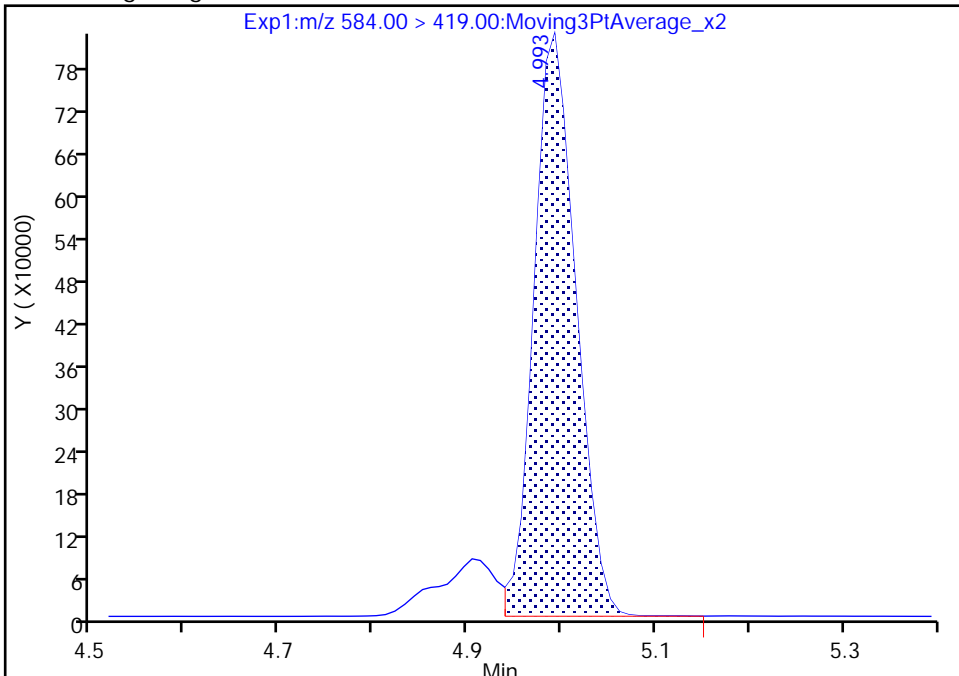
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_011.d  
Injection Date: 09-Jan-2022 11:19:53 Instrument ID: LCA  
Lims ID: IC 6  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 11 Worklist Smp#: 11  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

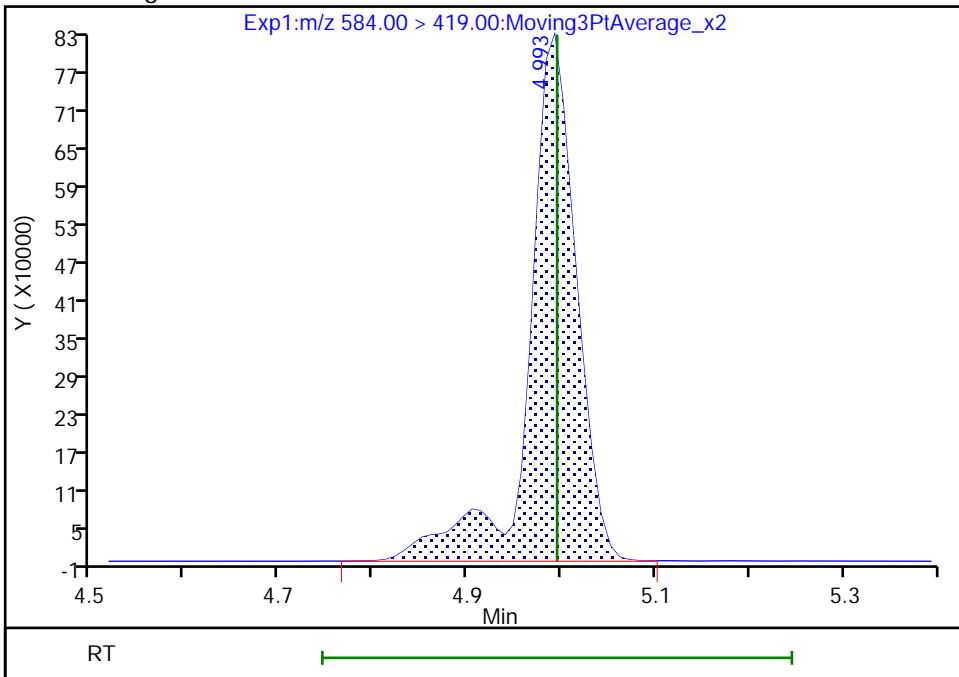
RT: 4.99  
Area: 2560706  
Amount: 4.533381  
Amount Units: ng/ml

Processing Integration Results



RT: 4.99  
Area: 2908898  
Amount: 4.967985  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:37:42  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Lims ID: IC 7  
 Client ID:  
 Sample Type: IC Calib Level: 7  
 Inject. Date: 09-Jan-2022 11:28:41 ALS Bottle#: 12 Worklist Smp#: 12  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022186-012 ic 7  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16

Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 12:32:03 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1686

First Level Reviewer: cochranj Date: 09-Jan-2022 11:41:25

Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										
212.90 > 169.00	2.779	2.785	-0.006	1.000	33917760	10.4		104	8834	
D 1 13C4 PFBA										
217.00 > 172.00	2.779	2.784	-0.005	0.677	5179011	1.27		102	10771	
4 Perfluoropentanoic acid										
262.90 > 219.00	3.091	3.093	-0.002	1.000	31649969	10.3		103	7455	
D 3 13C5 PFPeA										
267.90 > 223.00	3.091	3.093	-0.002	0.753	4018830	1.27		102	7936	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	3.107	3.109	-0.002	1.000	22993357	9.33	Target=2.68	105	6255	
298.90 > 99.00	3.107	3.109	-0.002	1.000	8513657		2.70(1.34-4.02)	105	7137	
D 6 13C3 PFBS										
301.90 > 80.00	3.107	3.109	-0.002	0.757	2612686	1.24		107	9951	
D 8 M2-4:2 FTS										
329.00 > 81.00	3.392	3.393	-0.001	0.826	700903	1.08		92.6	1510	
7 4:2 FTS										
327.00 > 307.00	3.392	3.393	-0.001	1.000	13006427	9.62		103	10586	
11 Perfluoropentanesulfonic acid										
349.00 > 80.00	3.422	3.422	0.0	1.101	21695732	9.94	Target=3.48	106	15394	
349.00 > 99.00	3.422	3.422	0.0	1.101	6215557		3.49(1.74-5.22)	106	12756	
D 9 13C2 PFHxA										
315.00 > 270.00	3.422	3.423	-0.001	0.833	4180045	1.24		99.0	8017	
10 Perfluorohexanoic acid										
313.00 > 269.00	3.422	3.423	-0.001	1.000	29136720	10.0	Target=12.57	100	7487	
313.00 > 119.00	3.422	3.423	-0.001	1.000	2390043		12.19(6.28-18.85)	100	2729	
13 HFPO-DA										
285.00 > 169.00	3.519	3.524	-0.005	1.000	24536421	10.4		104	10251	

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	3.519	3.524	-0.005	0.857	2186460	1.35		108	4221	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.760	3.760	0.0	1.000	18986869	9.63	Target=3.48	106	8330	M
399.00 > 99.00	3.760	3.760	0.0	1.000	5426352		3.50(1.74-5.21)	106	8540	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.760	3.761	-0.001	0.916	1692118	1.20		102	6312	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.770	3.772	-0.002	1.000	35239396	10.6	Target=3.29	106	7141	
363.00 > 169.00	3.770	3.772	-0.002	1.000	10884931		3.24(1.65-4.94)	106	3574	
D 14 13C4 PFHpA										
367.00 > 322.00	3.770	3.772	-0.002	0.918	3984356	1.23		98.7	5606	
68 DONA										
377.00 > 251.00	3.807	3.807	0.0	0.867	55134858	9.69	Target=1.76	103	12694	
377.00 > 85.00	3.807	3.807	0.0	0.867	32133956		1.72(0.88-2.64)	103	211	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.089	4.092	-0.003	0.931	20869230	10.1	Target=3.91	106	10321	
449.00 > 99.00	4.089	4.092	-0.003	0.931	5228998		3.99(1.95-5.86)	106	9782	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.098	4.100	-0.002	0.998	4086595	1.24		99.5	7807	
19 6:2 FTS										
427.00 > 407.00	4.098	4.101	-0.003	1.000	9913283	9.48		100.0	8045	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.098	4.100	-0.002	0.998	690189	1.06		88.9	2443	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.107	4.109	-0.002	1.000	38426557	10.2	Target=2.61	102	7314	
413.00 > 169.00	4.107	4.109	-0.002	1.000	14632708		2.63(1.30-3.91)	102	5627	
* 22 13C2 PFOA										
415.00 > 370.00	4.107	4.109	-0.002		4453891	1.25			8043	
D 21 13C4 PFOA										
417.00 > 372.00	4.107	4.109	-0.002	1.000	4109093	1.23		98.4	6464	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.393	4.396	-0.003	1.000	593950	1.24		104	3217	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.393	4.398	-0.005	1.000	23013451	9.68	Target=4.37	104	6321	M
499.00 > 99.00	4.393	4.398	-0.005	1.000	5311089		4.33(2.18-6.55)	104	8507	M
D 25 13C4 PFOS										
503.00 > 80.00	4.393	4.398	-0.005	1.070	2584771	1.28		107	4193	
26 Perfluorononanoic acid										
463.00 > 419.00	4.418	4.421	-0.003	1.000	40670324	10.0	Target=4.48	100	13239	
463.00 > 169.00	4.418	4.421	-0.003	1.000	8986626		4.53(2.24-6.72)	100	8115	
D 27 13C5 PFNA										
468.00 > 423.00	4.418	4.421	-0.003	1.076	5610570	1.28		102	9189	
63 9CIFOS										
531.00 > 351.00	4.560	4.558	0.002	1.038	45057750	9.21		98.9	13185	



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	4.681	4.682	-0.001	1.065	21224656	10.1	Target=3.84	105	12358	
549.00 > 99.00	4.681	4.682	-0.001	1.065	5427955		3.91(1.92-5.77)	105	11342	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.698	4.700	-0.002	1.000	24296365	10.0		100	5598	
D 34 13C8 FOSA										
506.00 > 78.00	4.698	4.700	-0.002	1.144	3199127	1.17		93.5	3460	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.706	4.709	-0.003	1.000	38547965	10.1	Target=11.50	101	12152	
513.00 > 169.00	4.706	4.709	-0.003	1.000	3434555		11.22(5.75-17.25)	101	792	
D 32 13C2 PFDA										
515.00 > 470.00	4.706	4.709	-0.003	1.146	4962518	1.17		93.6	8219	
31 8:2 FTS										
527.00 > 507.00	4.723	4.721	0.002	1.000	9167971	9.84		103	5365	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.723	4.721	0.002	1.150	788680	1.07		89.3	1437	
36 NMeFOSAA										
570.00 > 419.00	4.852	4.858	-0.006	1.000	5246503	10.0		100	4191	M
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.852	4.854	-0.002	1.181	665518	1.33		107	146	
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.940	4.942	-0.002	1.124	19735300	9.80	Target=3.69	102	13659	
599.00 > 99.00	4.940	4.942	-0.002	1.124	5208981		3.79(1.84-5.53)	102	10279	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.975	4.973	0.002	1.000	42351559	10.3	Target=8.29	103	14580	
563.00 > 169.00	4.975	4.973	0.002	1.000	5126352		8.26(4.14-12.43)	103	7917	
D 39 13C2 PFUnA										
565.00 > 520.00	4.975	4.973	0.002	1.211	5308482	1.25		100	9804	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.993	4.989	0.004	1.216	683862	1.25		99.9	2715	
40 NEtFOSA										
584.00 > 419.00	4.993	4.995	-0.002	1.000	5632715	10.0		99.9	2544	M
57 11C1FOS										
631.00 > 451.00	5.072	5.075	-0.003	1.154	34786454	9.62		102	15935	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.205	5.207	-0.002	1.000	45718210	9.86	Target=6.82	98.6	15928	
613.00 > 169.00	5.205	5.207	-0.002	1.000	7233572		6.32(3.41-10.23)	98.6	8576	
D 43 13C2 PFDaA										
615.00 > 570.00	5.205	5.207	-0.002	1.267	5995500	1.35		108	14186	
50 10:2 FTS										
627.00 > 607.00	5.231	5.231	0.0	1.107	15277484	10.2		106	14512	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.284	5.279	0.005	1.287	694443	1.30		104	650	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.284	5.281	0.003	1.287	534306	1.40		112	59.6	
61 NMeFOSA										
512.00 > 169.00	5.284	5.286	-0.002	1.000	4741063	9.87		98.7	860	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
49 N-MeFOSE-M										
616.00 > 59.00	5.292	5.290	0.002	1.002	6898231	10.0		100	4174	
54 PFDoS										
699.00 > 80.00	5.383	5.383	0.0	1.225	19843930	10.0	Target=4.36	103	15467	
699.00 > 99.00	5.383	5.383	0.0	1.225	4701871		4.22(2.18-6.55)	103	10457	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.414	5.417	-0.003	1.040	37925934	9.54	Target=6.19	95.4	12317	
663.00 > 169.00	5.414	5.417	-0.003	1.040	6334473		5.99(3.09-9.28)	95.4	12151	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.434	5.437	-0.003	1.323	698997	1.30		104	250	
62 N-EtFOSE-M										
630.00 > 59.00	5.454	5.450	0.004	1.004	7686908	10.4		104	4043	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.454	5.450	0.004	1.328	431073	1.37		110	730	
56 N-EtFOSA-M										
526.00 > 169.00	5.454	5.457	-0.003	1.000	4268012	10.4		104	751	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.596	5.600	-0.004	1.000	4925818	10.4	Target=1.09	104	9256	
713.00 > 219.00	5.596	5.600	-0.004	1.000	4711850		1.05(0.54-1.63)	104	10177	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.596	5.600	-0.004	1.363	4423066	1.31		104	7918	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.903	5.907	-0.004	1.000	26960696	9.92	Target=8.22	99.2	9689	
813.00 > 169.00	5.903	5.907	-0.004	1.000	3363491		8.02(4.11-12.33)	99.2	4924	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.903	5.907	-0.004	1.438	3121615	1.36		109	6288	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.159	6.162	-0.003	1.043	25570850	10.4	Target=11.60	104	6174	
913.00 > 169.00	6.159	6.162	-0.003	1.043	2292471		11.15(5.80-17.40)	104	4218	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

63L7PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_012.d

Injection Date: 09-Jan-2022 11:28:41

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

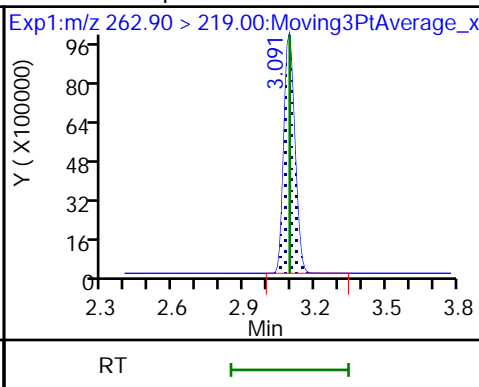
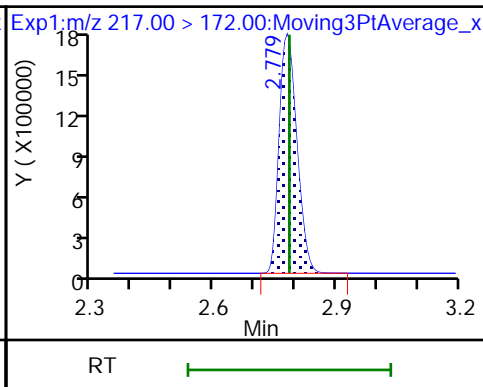
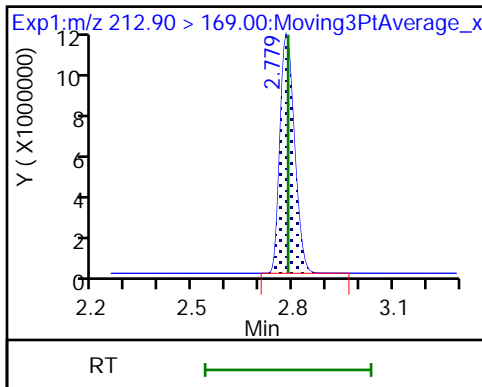
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

2 Perfluorobutanoic acid

D 1 13C4 PFBA

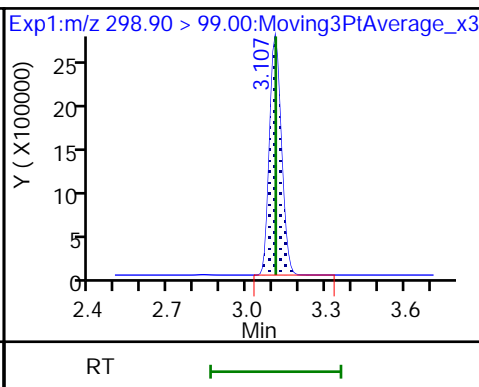
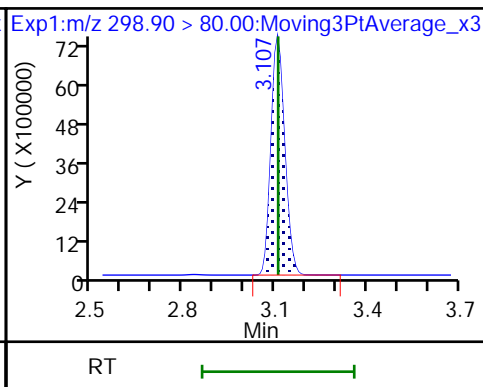
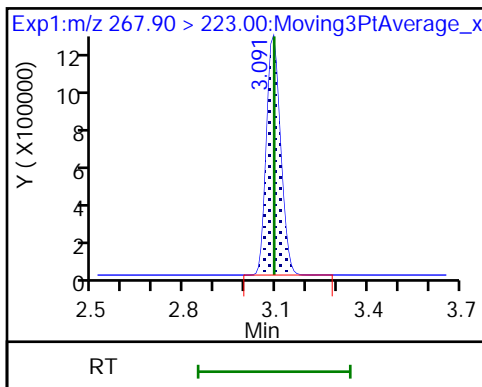
4 Perfluoropentanoic acid



D 3 13C5 PFPeA

5 Perfluorobutanesulfonic acid

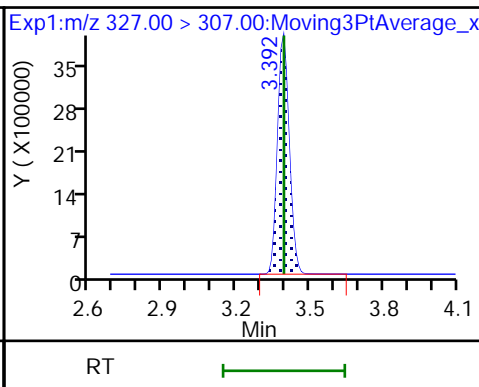
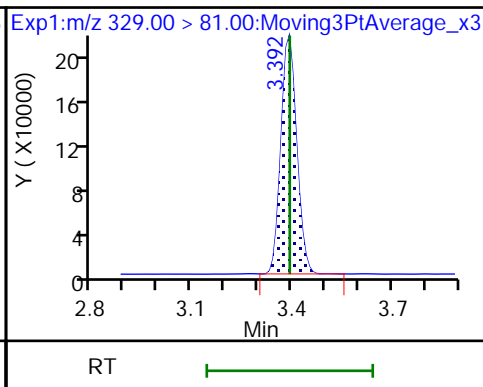
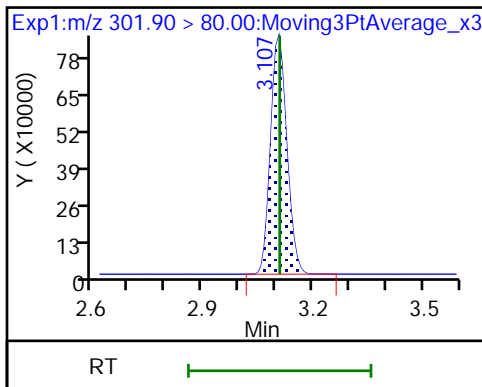
5 Perfluorobutanesulfonic acid



D 6 13C3 PFBS

D 8 M2-4:2 FTS

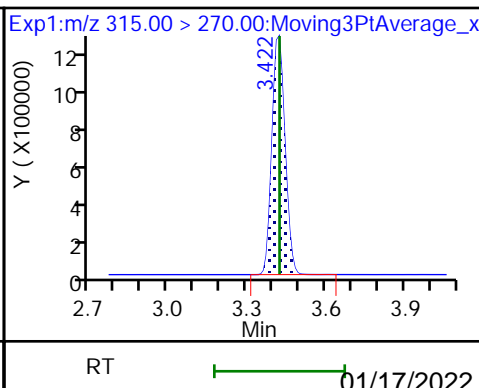
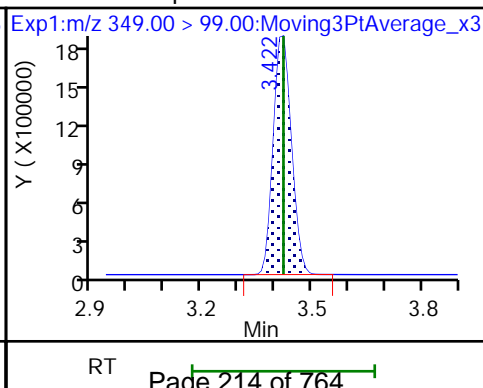
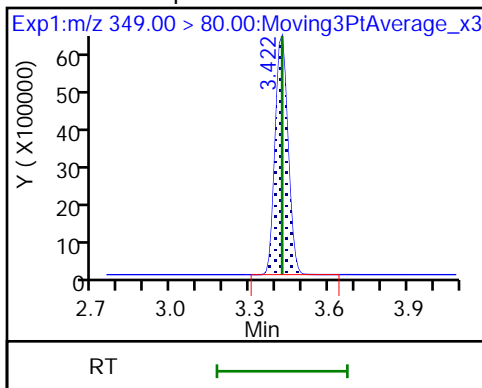
7 4:2 FTS

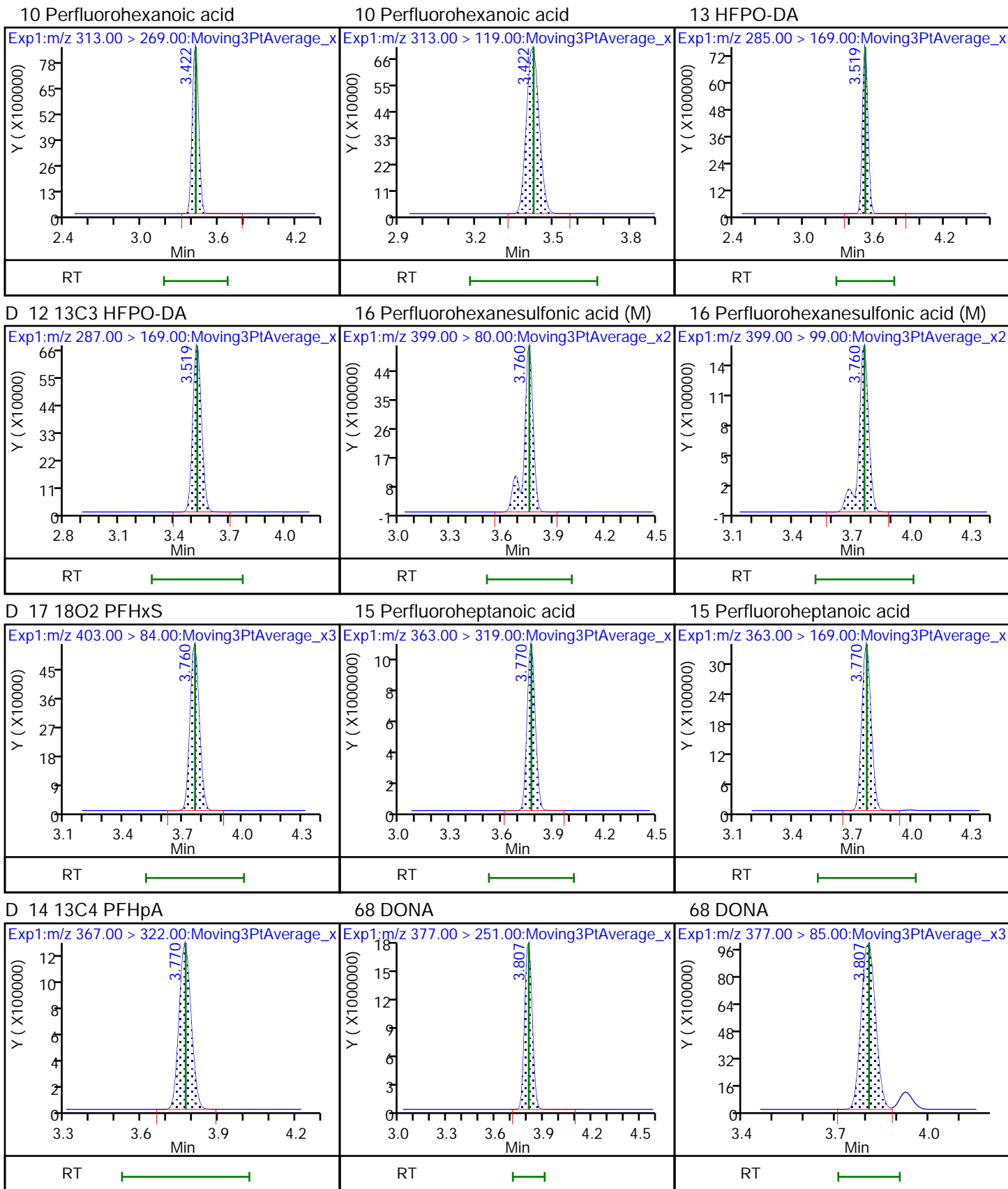


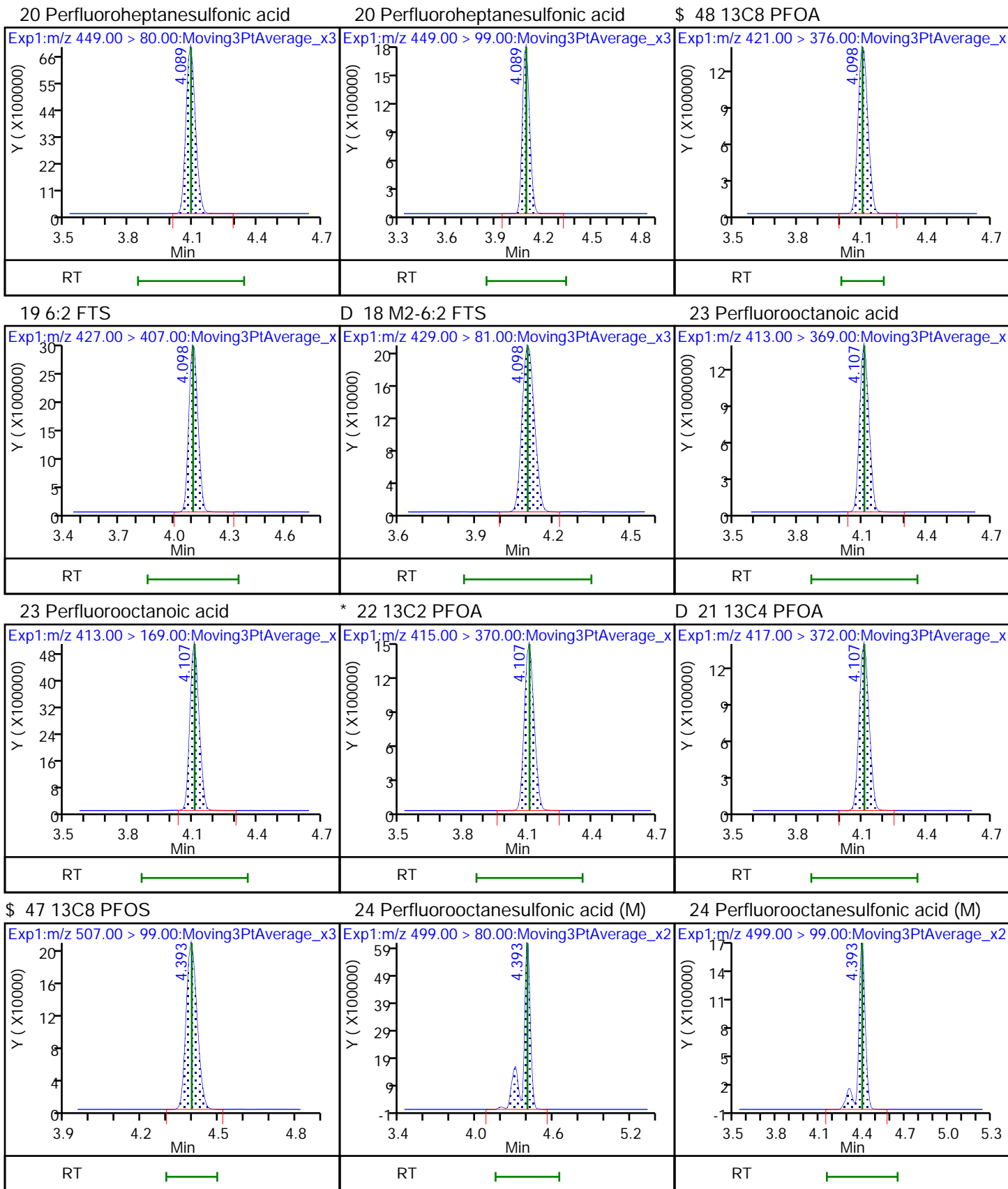
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA



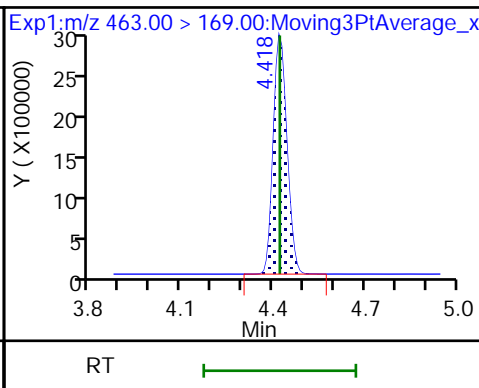
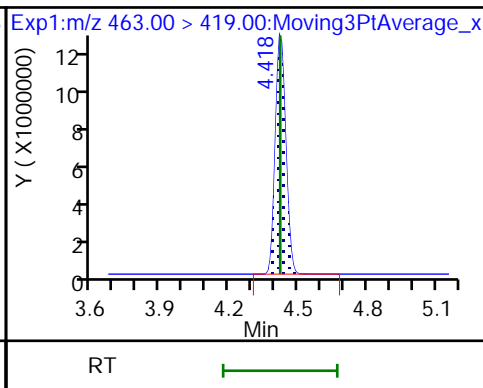
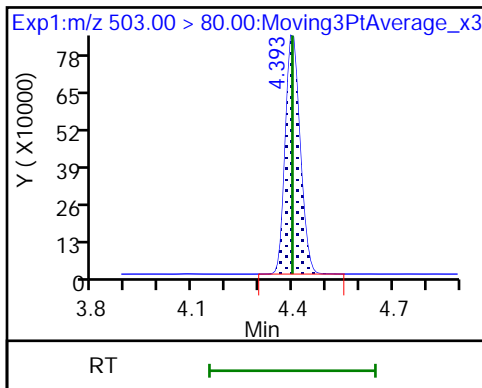




D 25 13C4 PFOS

26 Perfluorononanoic acid

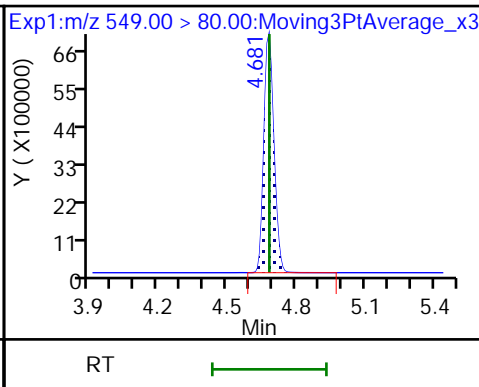
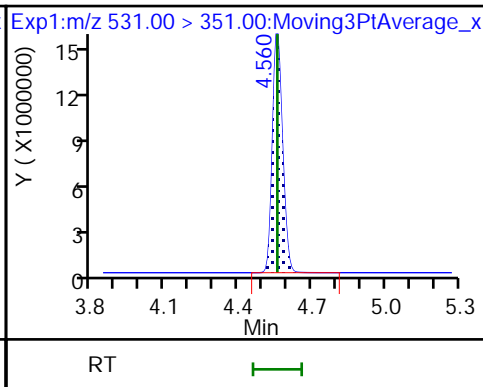
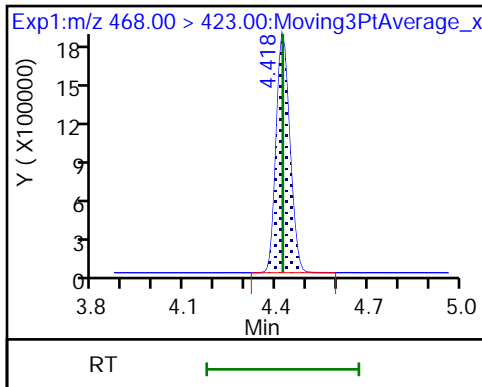
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS

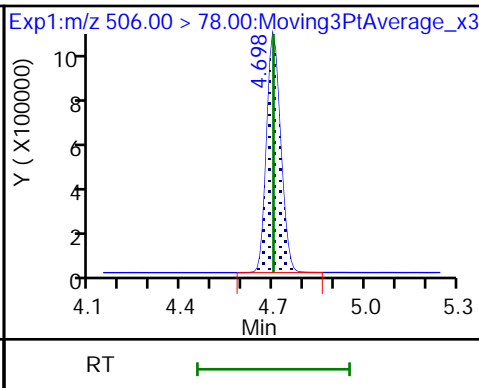
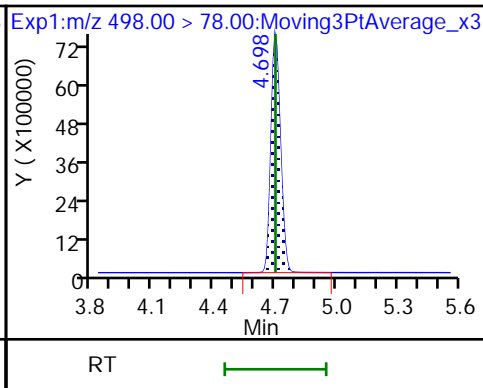
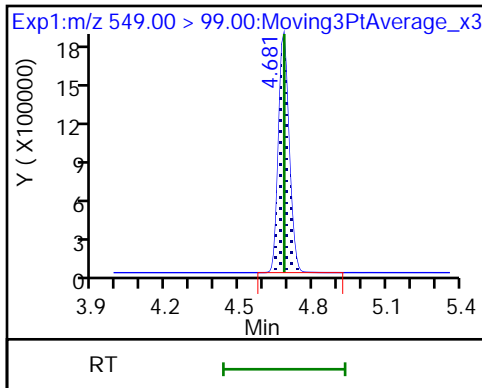
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

33 Perfluorooctanesulfonamide

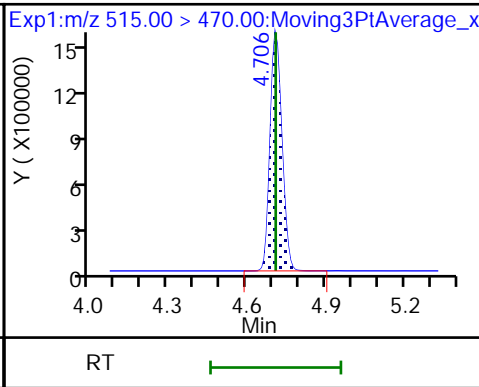
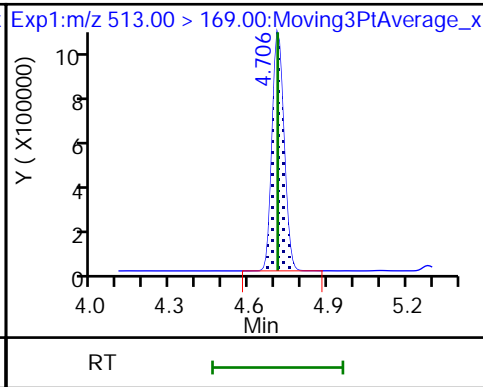
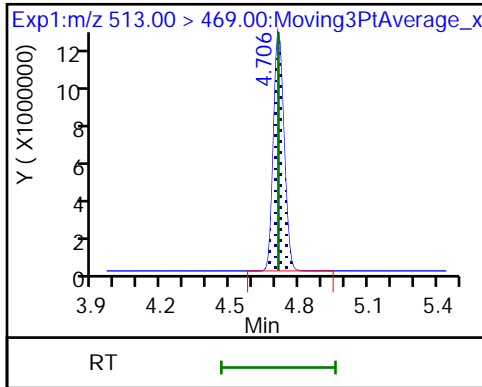
D 34 13C8 FOSA

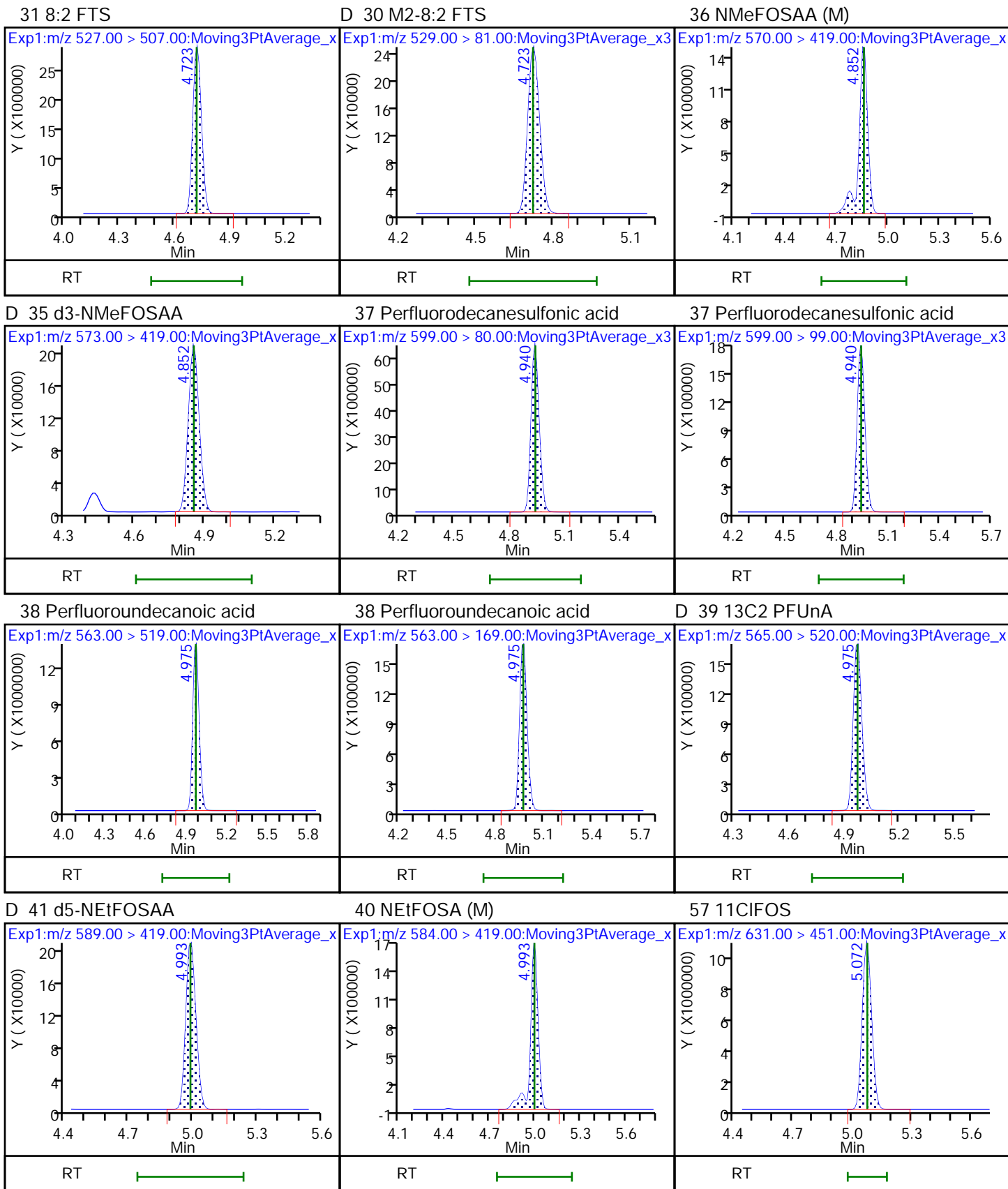


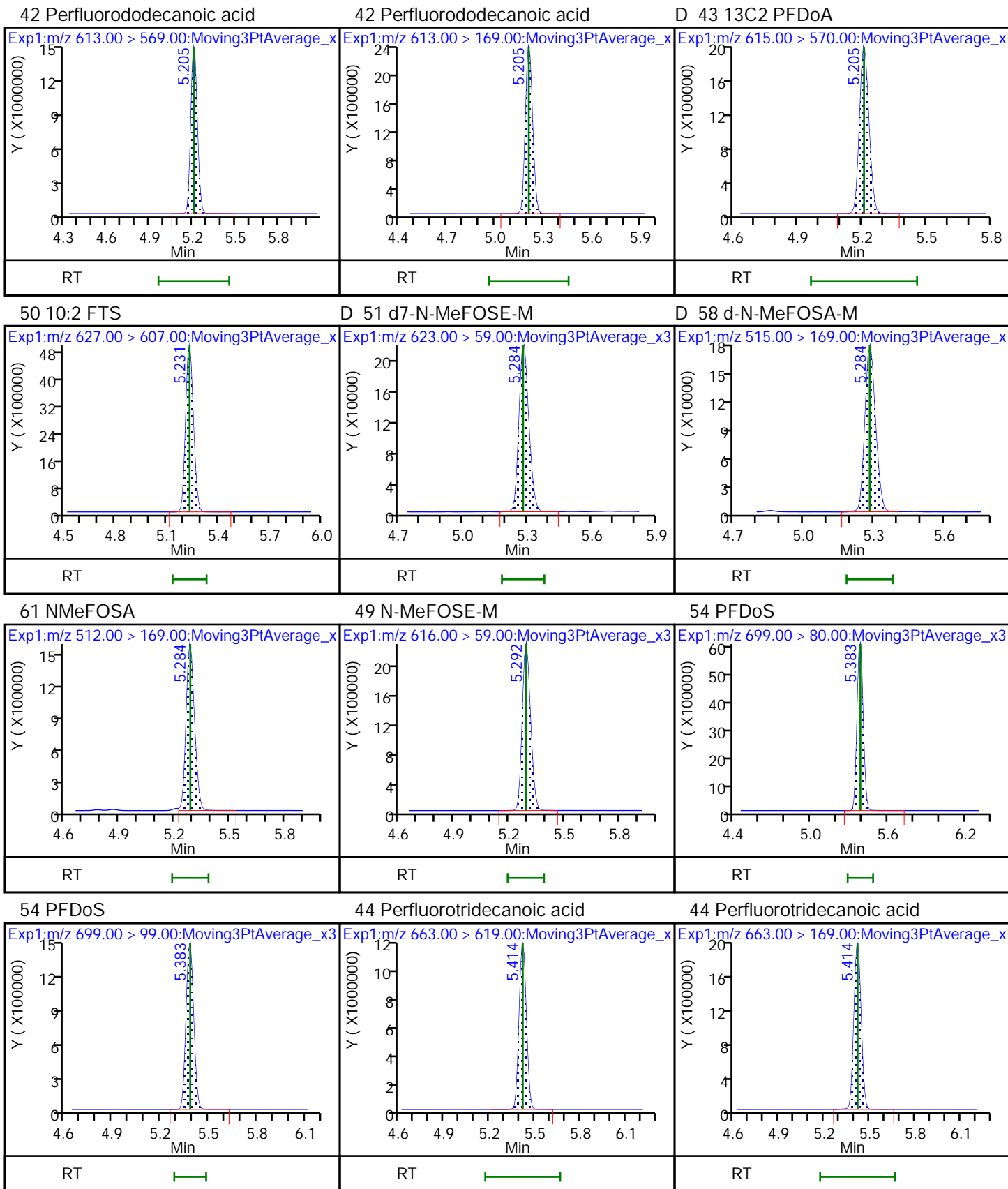
29 Perfluorodecanoic acid

29 Perfluorodecanoic acid

D 32 13C2 PFDA





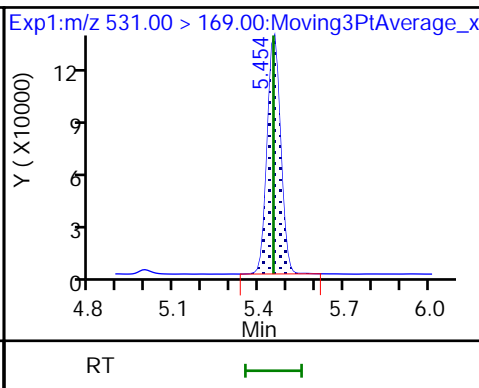
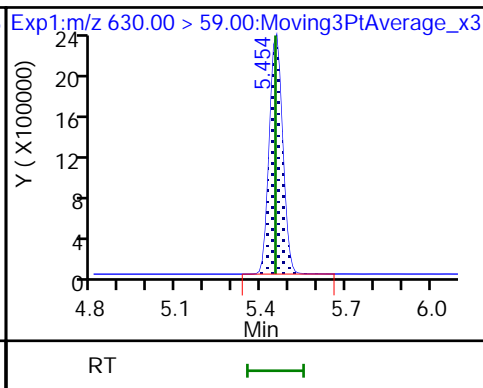
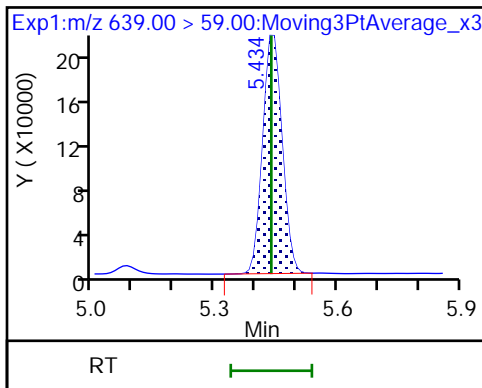




D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M

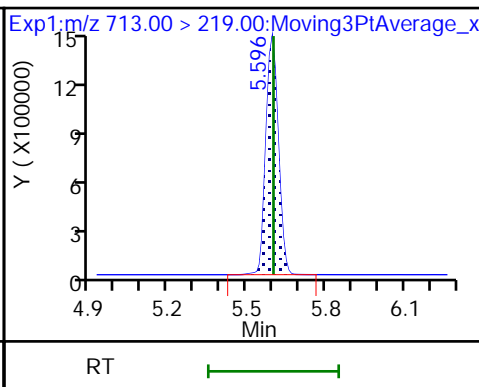
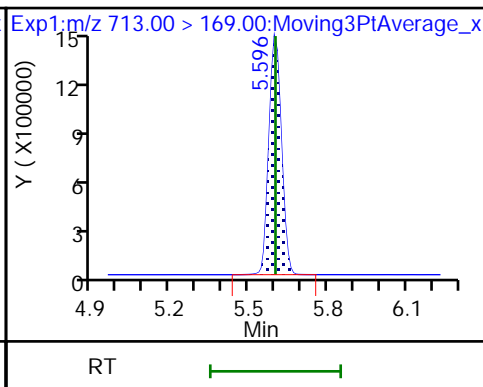
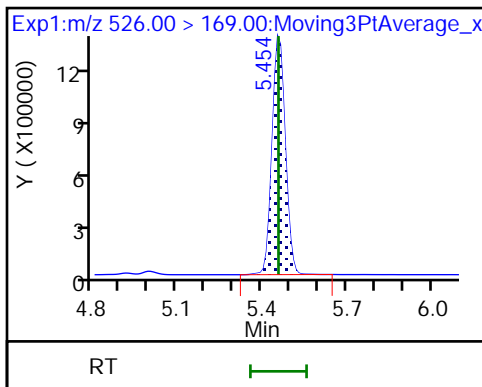
D 52 d-N-EtFOSA-M



56 N-EtFOSA-M

45 Perfluorotetradecanoic acid

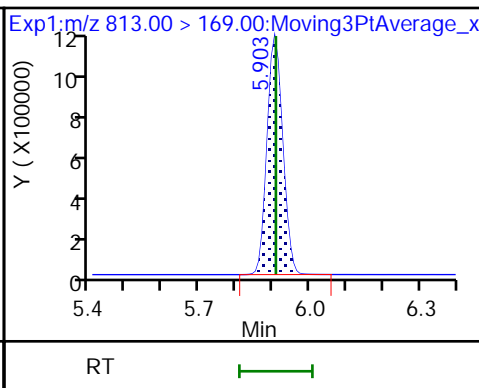
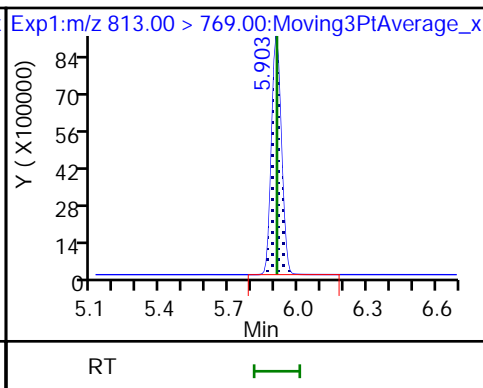
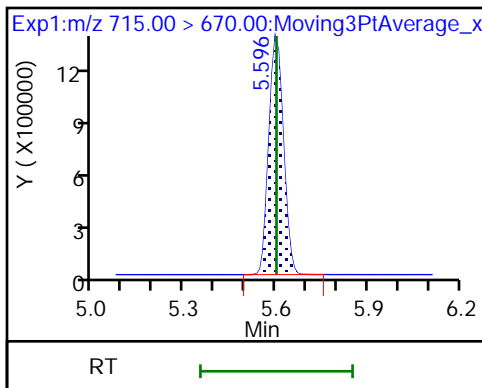
45 Perfluorotetradecanoic acid



D 46 13C2 PFTeDA

55 Perfluorohexadecanoic acid

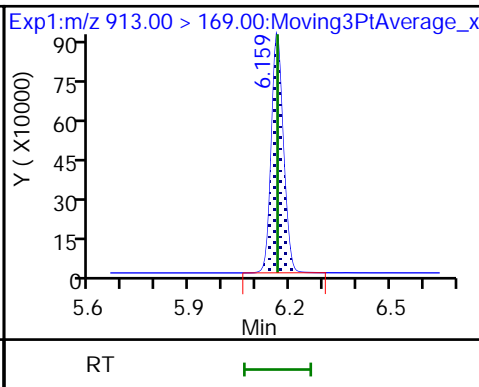
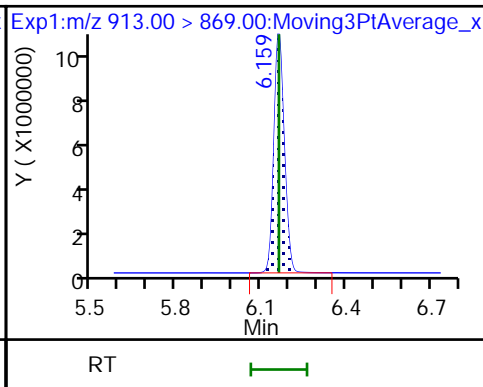
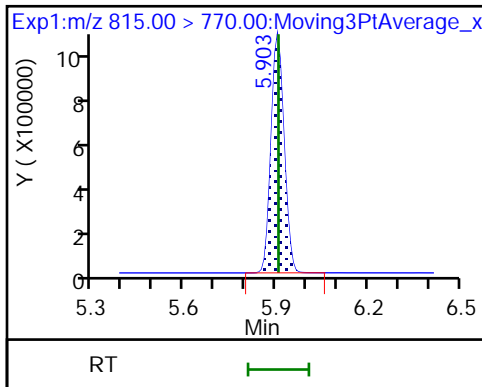
55 Perfluorohexadecanoic acid



D 59 13C2 PFHxDA

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid





Eurofins TestAmerica, Knoxville

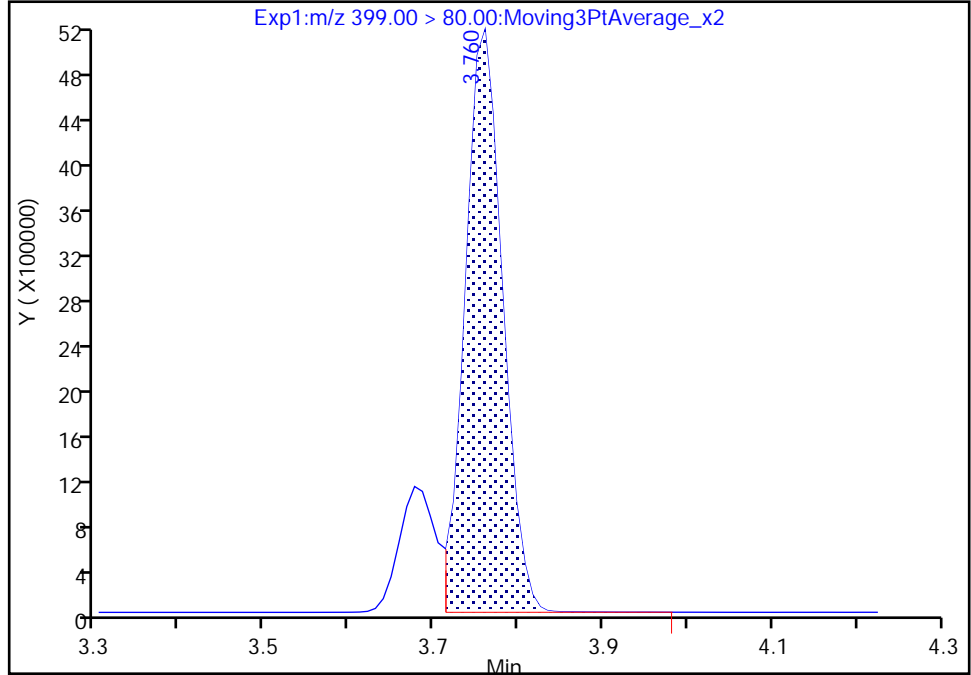
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Injection Date: 09-Jan-2022 11:28:41 Instrument ID: LCA  
Lims ID: IC 7  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 12 Worklist Smp#: 12  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

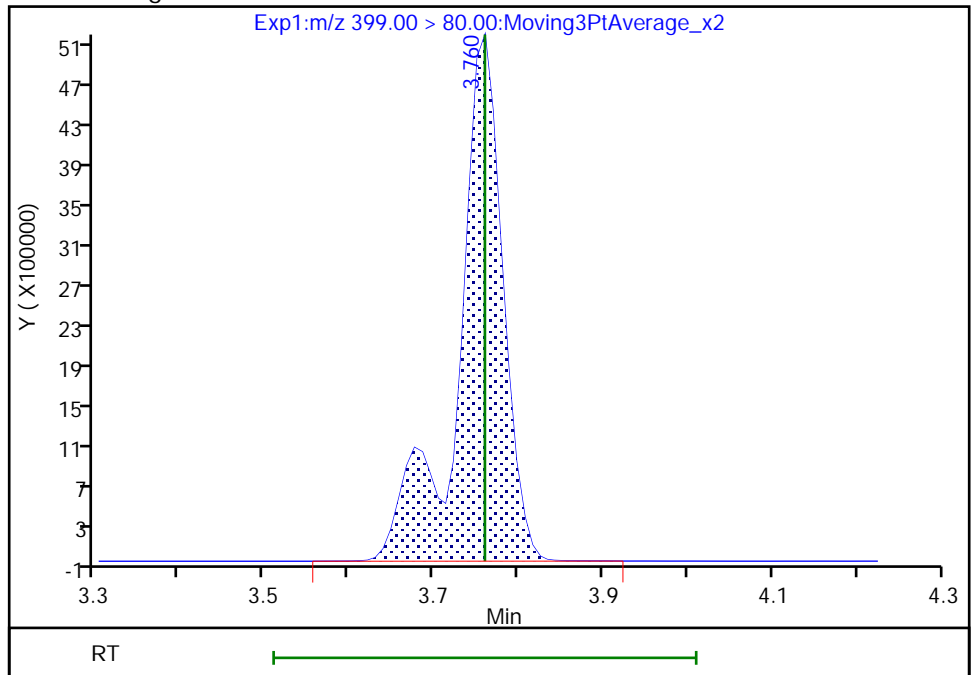
RT: 3.76  
Area: 15678186  
Amount: 8.170856  
Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
Area: 18986869  
Amount: 9.634409  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:40:20  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

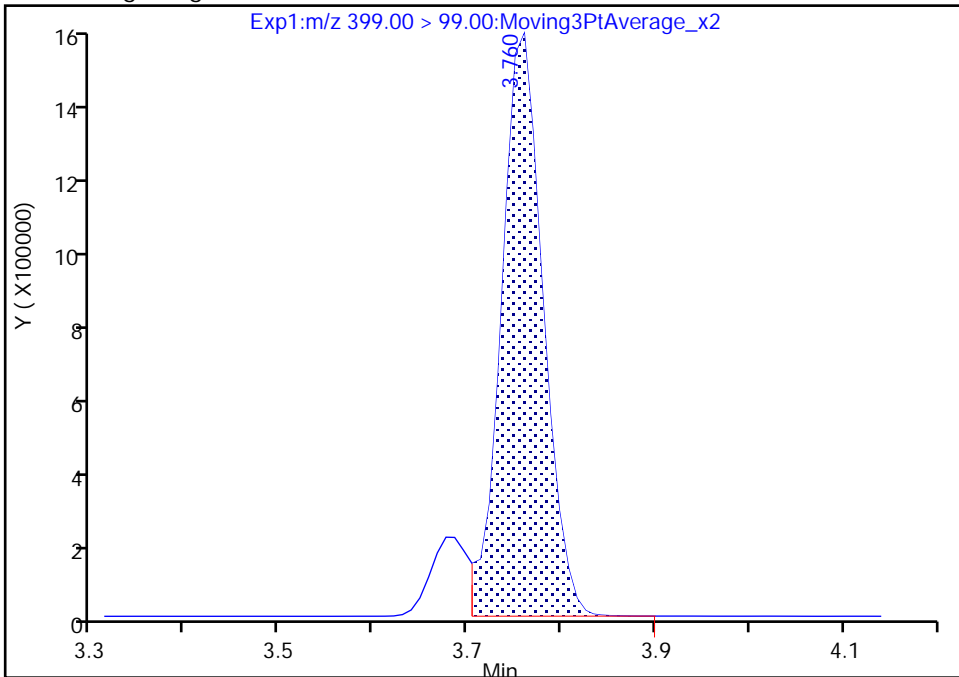
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Injection Date: 09-Jan-2022 11:28:41 Instrument ID: LCA  
Lims ID: IC 7  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 12 Worklist Smp#: 12  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

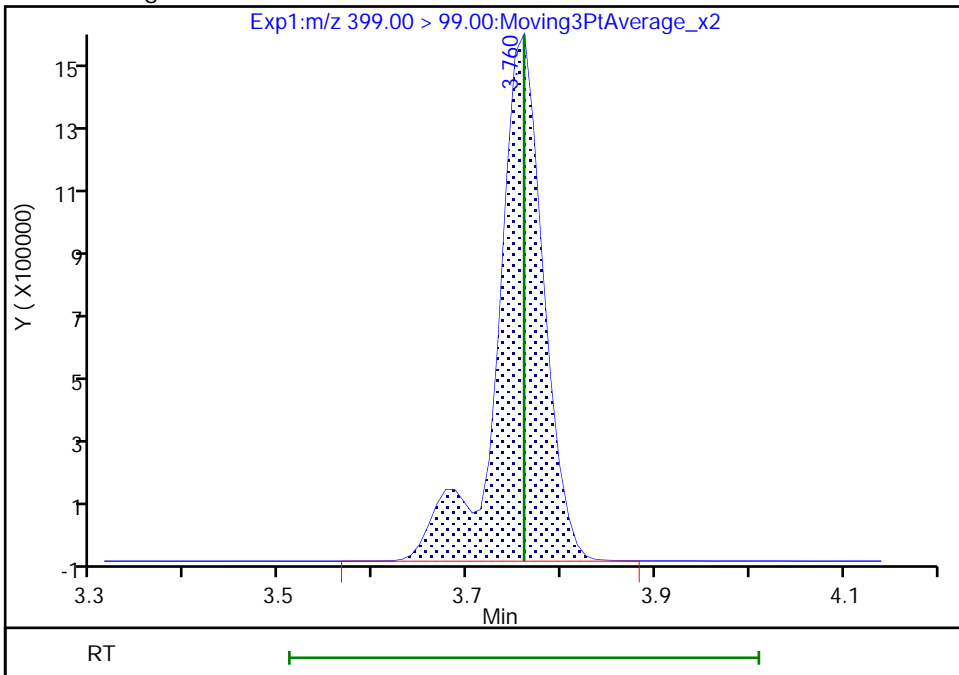
RT: 3.76  
Area: 4848547  
Amount: 8.170856  
Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
Area: 5426352  
Amount: 9.634409  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:40:33

Audit Action: Manually Integrated

Audit Reason: Baseline  
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01/17/2022

Eurofins TestAmerica, Knoxville

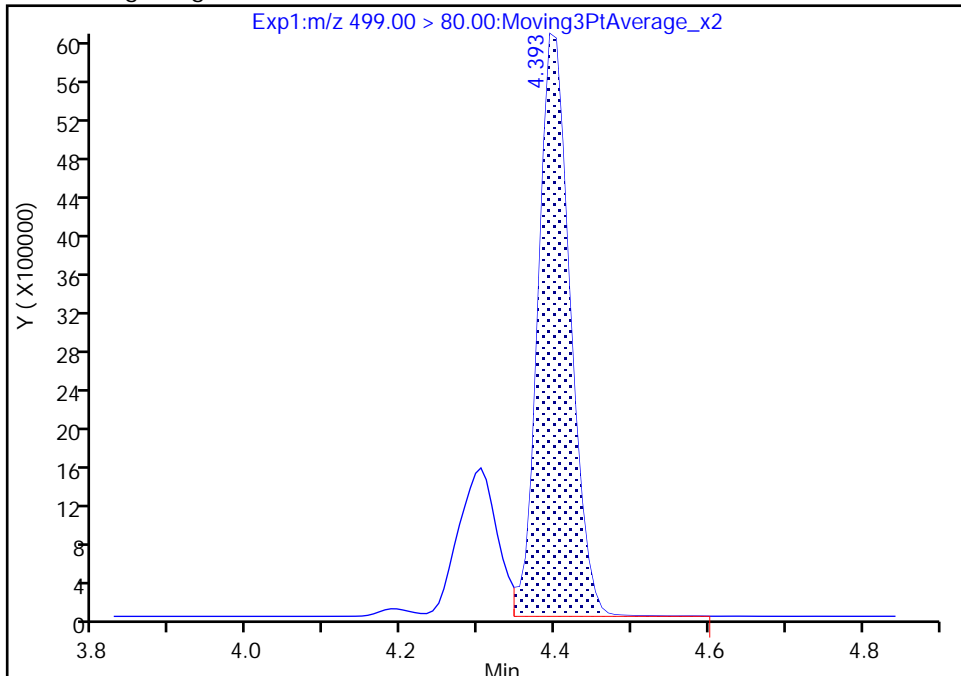
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Injection Date: 09-Jan-2022 11:28:41 Instrument ID: LCA  
Lims ID: IC 7  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 12 Worklist Smp#: 12  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

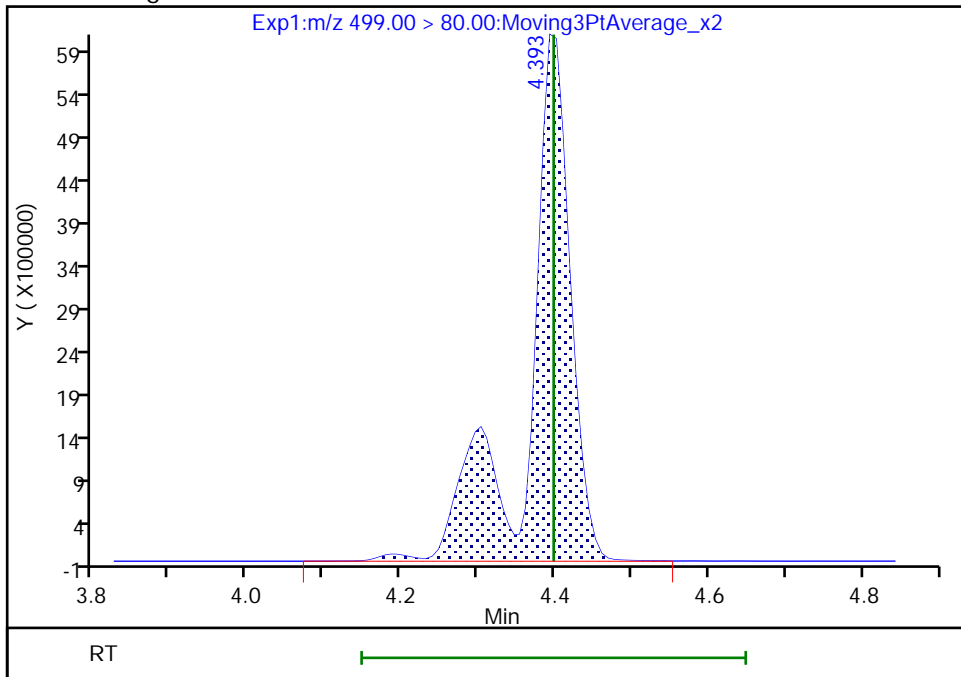
RT: 4.39  
Area: 17397980  
Amount: 7.596576  
Amount Units: ng/ml

Processing Integration Results



RT: 4.39  
Area: 23013451  
Amount: 9.683005  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:40:43  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

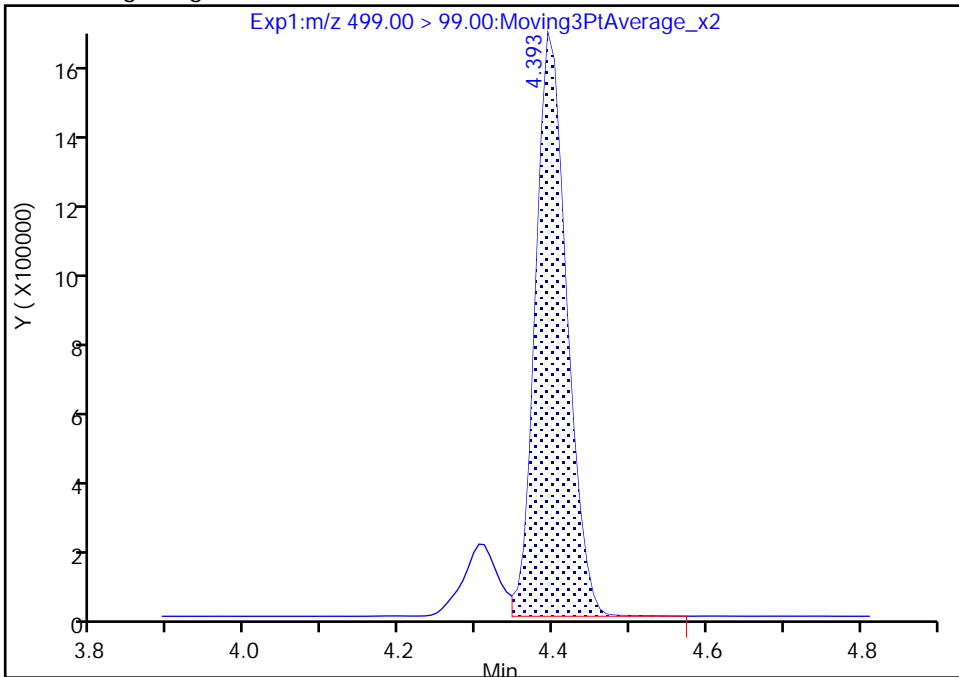
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
Injection Date: 09-Jan-2022 11:28:41 Instrument ID: LCA  
Lims ID: IC 7  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 12 Worklist Smp#: 12  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

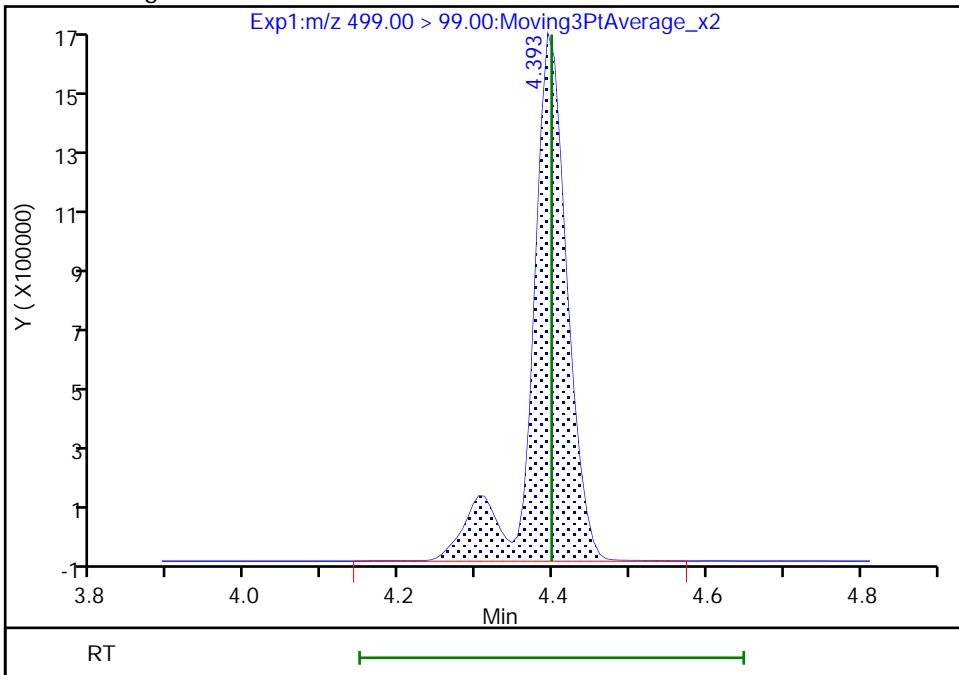
RT: 4.39  
Area: 4659336  
Amount: 7.596576  
Amount Units: ng/ml

Processing Integration Results



RT: 4.39  
Area: 5311089  
Amount: 9.683005  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:40:50

Audit Action: Manually Integrated

Audit Reason: Baseline  
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Eurofins TestAmerica, Knoxville

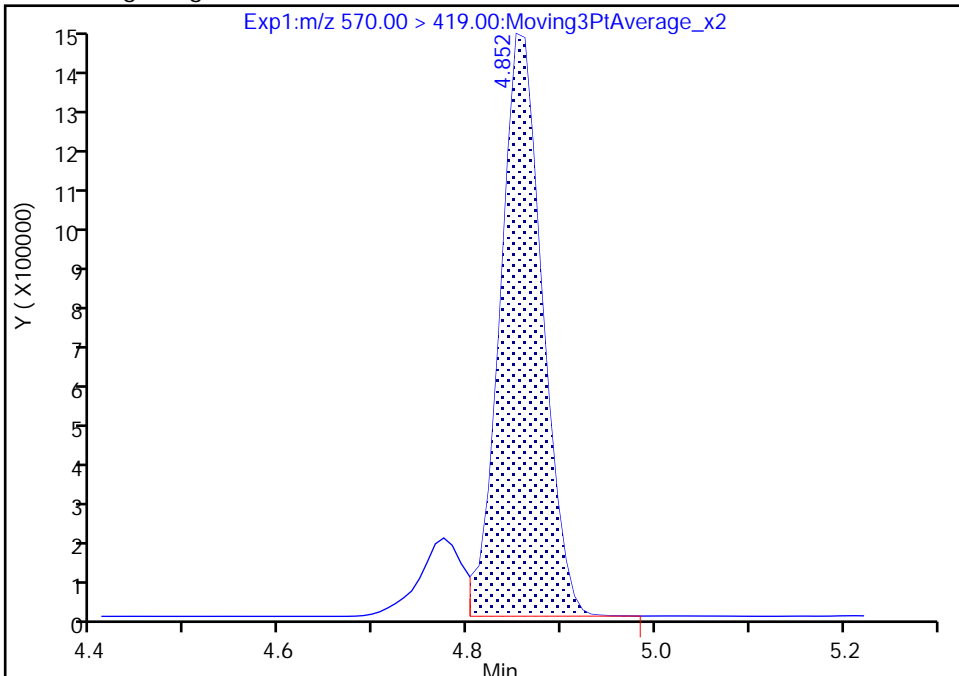
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_012.d  
Injection Date: 09-Jan-2022 11:28:41 Instrument ID: LCA  
Lims ID: IC 7  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 12 Worklist Smp#: 12  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

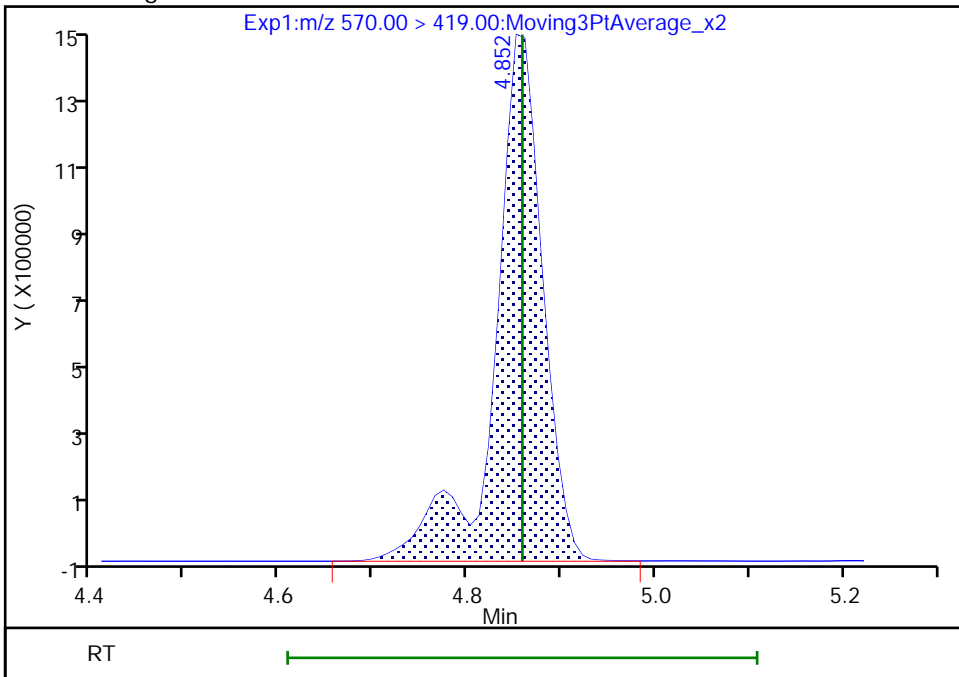
RT: 4.85  
Area: 4616573  
Amount: 9.302530  
Amount Units: ng/ml

Processing Integration Results



RT: 4.85  
Area: 5246503  
Amount: 9.999542  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:41:02  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

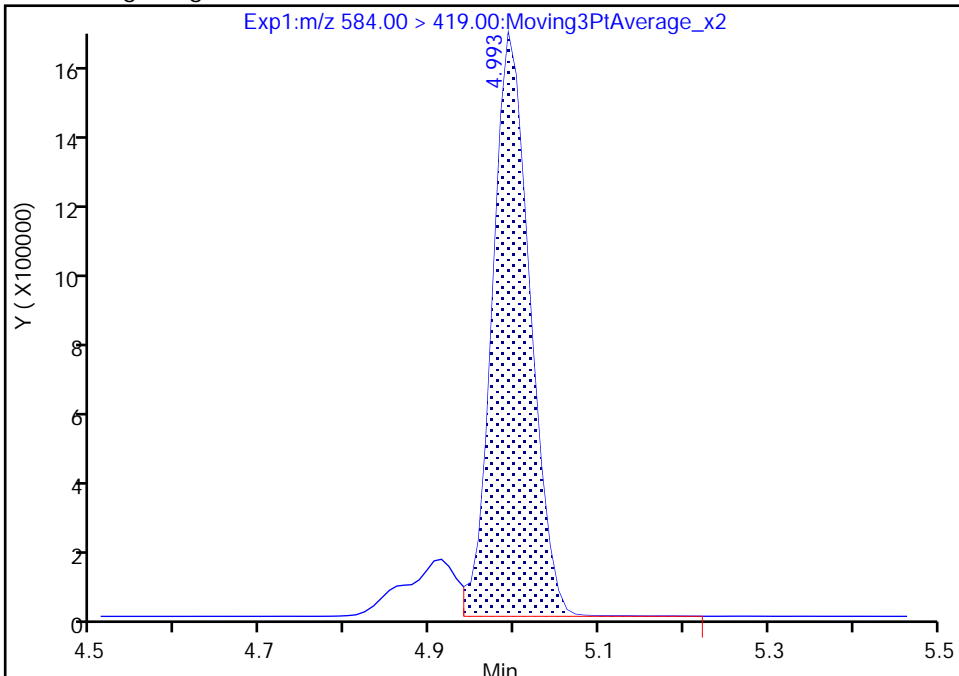
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Injection Date: 09-Jan-2022 11:28:41 Instrument ID: LCA  
Lims ID: IC 7  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 12 Worklist Smp#: 12  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NEtFOSA, CAS: 2991-50-6

Signal: 1

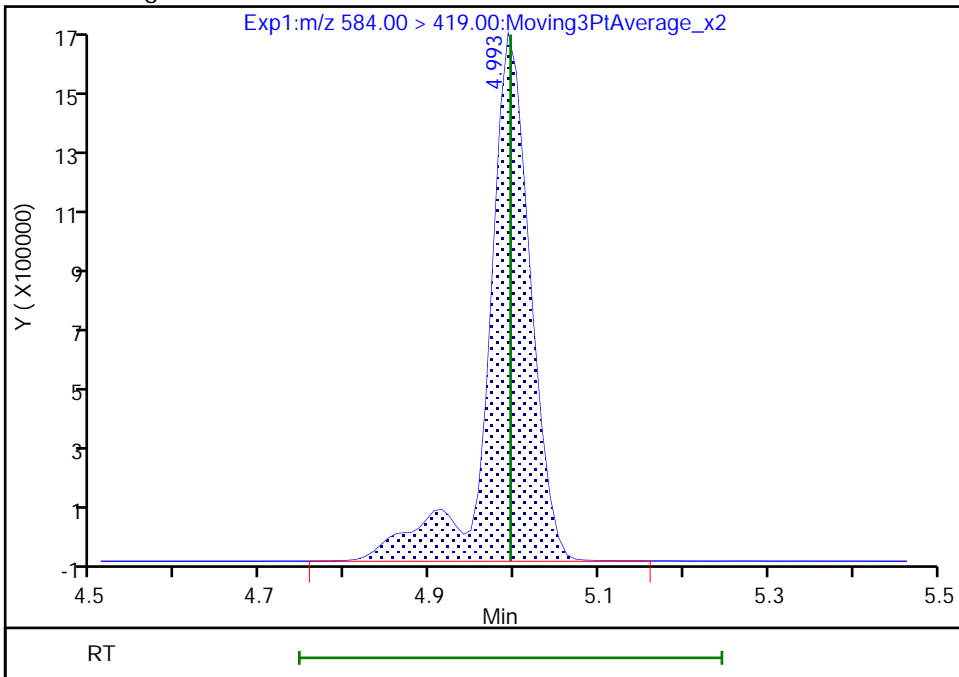
RT: 4.99  
Area: 4962861  
Amount: 9.239473  
Amount Units: ng/ml

Processing Integration Results



RT: 4.99  
Area: 5632715  
Amount: 9.992908  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:41:13  
Audit Action: Manually Integrated

Audit Reason: Baseline



**Calibration**

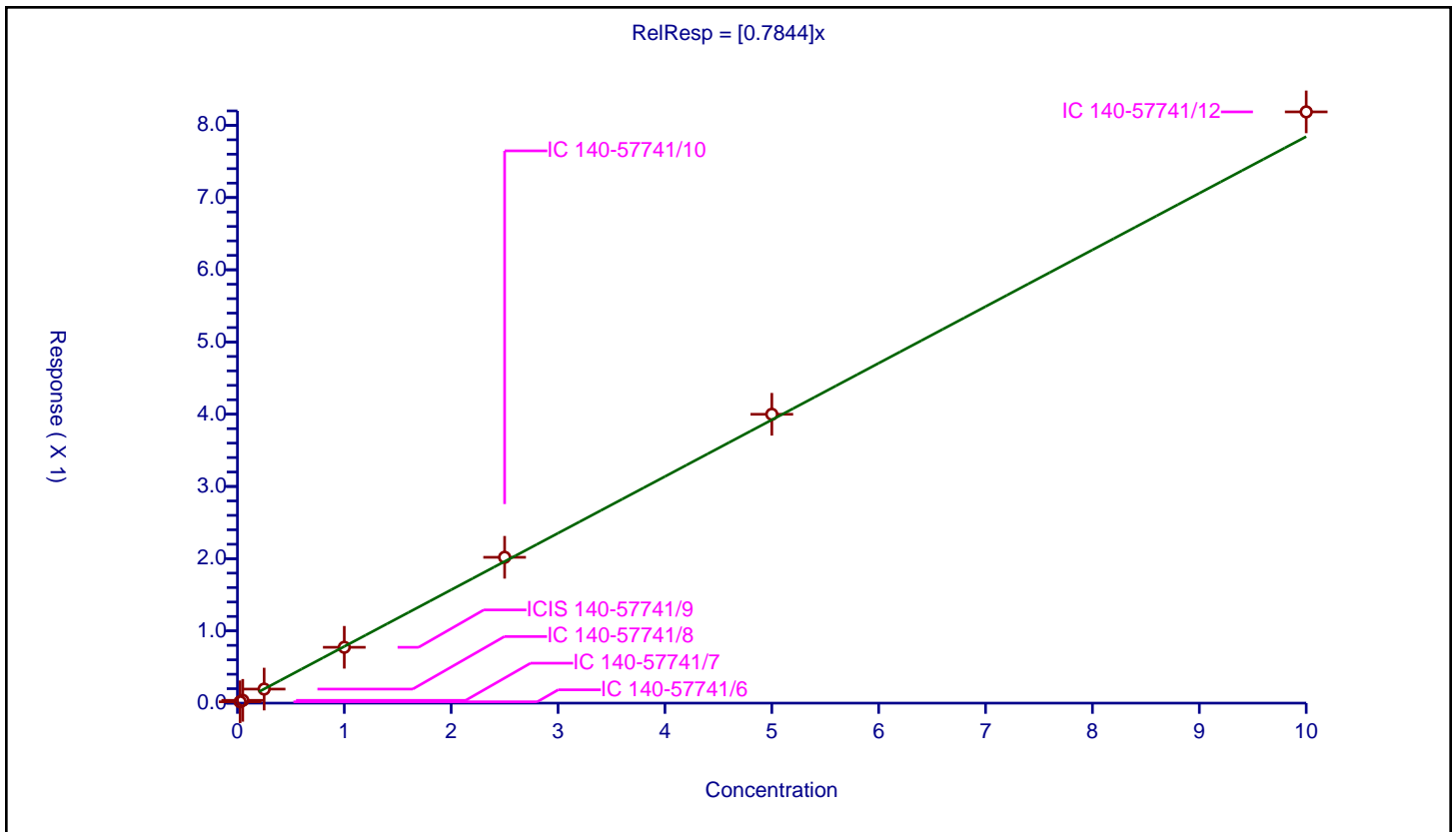
/ Perfluorobutanoic acid

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.7844

Error Coefficients	
Standard Error:	16200000
Relative Standard Error:	3.2
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.018661	1.25	5616269.0	0.746448	Y
2	IC 140-57741/7	0.05	0.038361	1.25	6088323.0	0.767223	Y
3	IC 140-57741/8	0.25	0.194497	1.25	6184171.0	0.777986	Y
4	ICIS 140-57741/9	1.0	0.773206	1.25	6230665.0	0.773206	Y
5	IC 140-57741/10	2.5	2.018985	1.25	5967237.0	0.807594	Y
6	IC 140-57741/11	5.0	3.999467	1.25	5525998.0	0.799893	Y
7	IC 140-57741/12	10.0	8.186351	1.25	5179011.0	0.818635	Y



Calibration

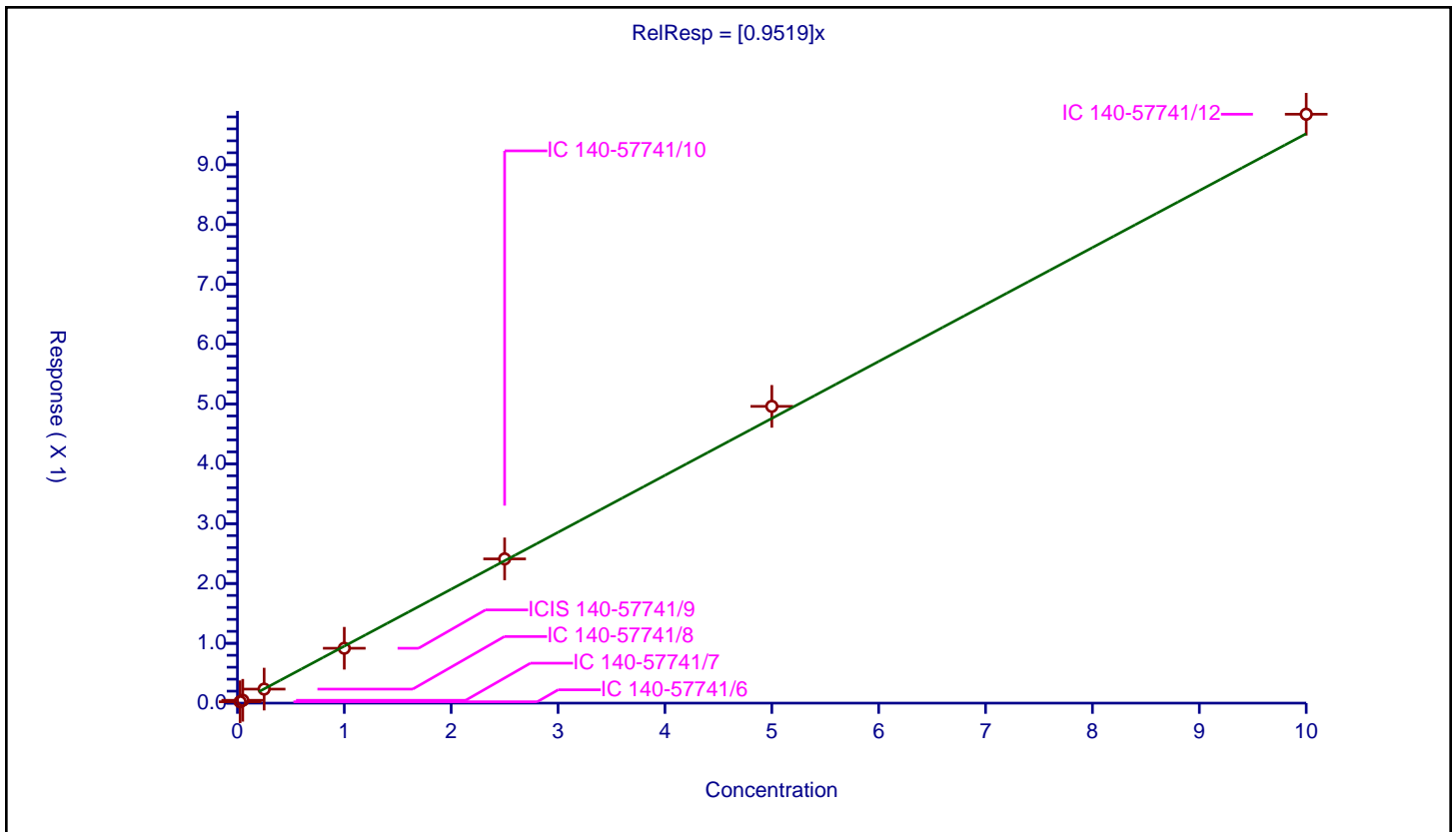
/ Perfluoropentanoic acid

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.9519

Error Coefficients	
Standard Error:	15100000
Relative Standard Error:	3.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.023058	1.25	4394817.0	0.922314	Y
2	IC 140-57741/7	0.05	0.047263	1.25	4866698.0	0.945266	Y
3	IC 140-57741/8	0.25	0.234387	1.25	4763774.0	0.937549	Y
4	ICIS 140-57741/9	1.0	0.917268	1.25	4810256.0	0.917268	Y
5	IC 140-57741/10	2.5	2.411144	1.25	4603395.0	0.964458	Y
6	IC 140-57741/11	5.0	4.960583	1.25	4222495.0	0.992117	Y
7	IC 140-57741/12	10.0	9.844273	1.25	4018830.0	0.984427	Y



**Calibration**

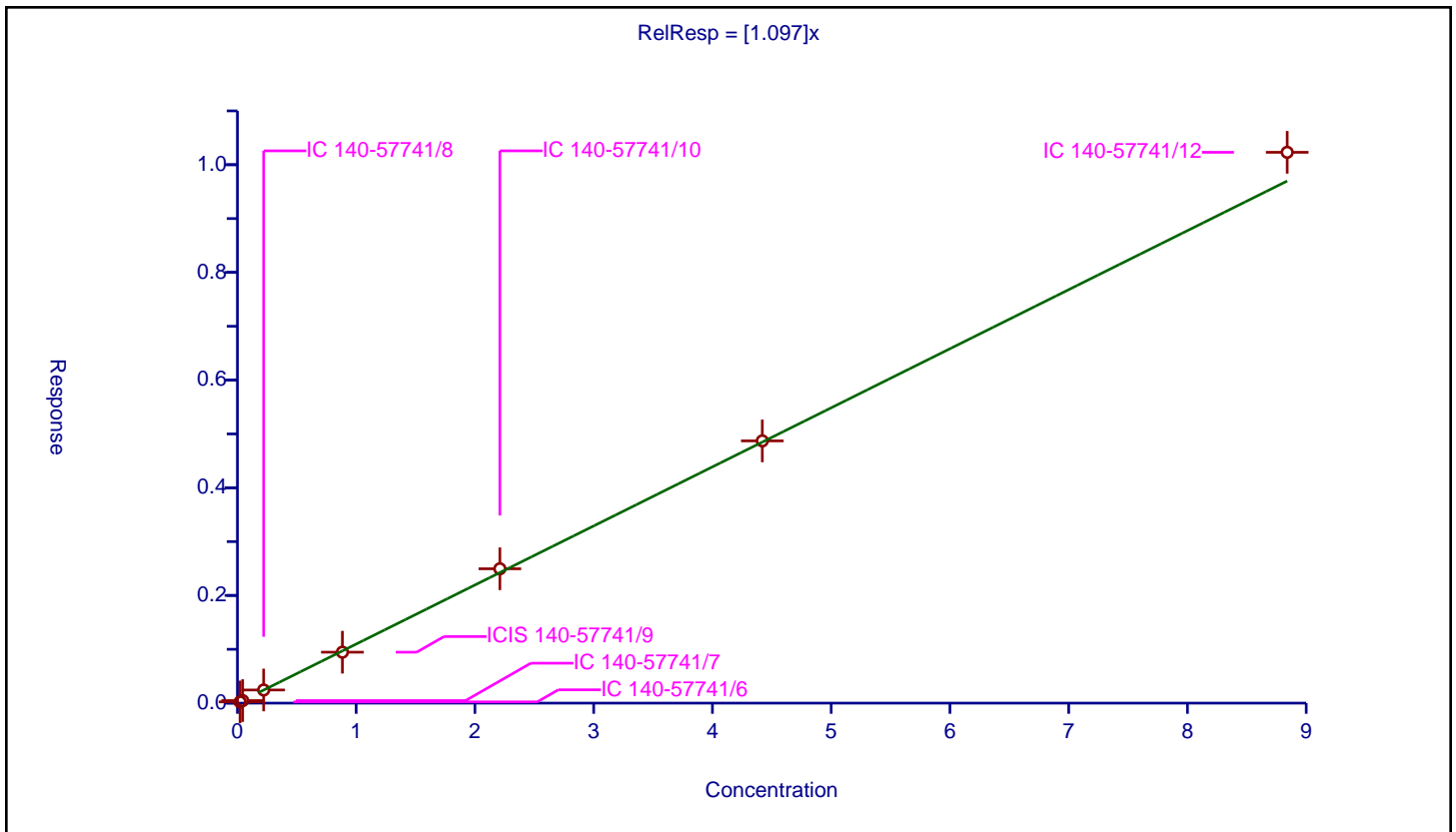
/ Perfluorobutanesulfonic acid

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.097

Error Coefficients	
Standard Error:	10900000
Relative Standard Error:	3.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.0221	0.023208	1.1625	2602922.0	1.050128	Y
2	IC 140-57741/7	0.0442	0.047131	1.1625	2950306.0	1.066315	Y
3	IC 140-57741/8	0.221	0.244005	1.1625	2844272.0	1.104096	Y
4	ICIS 140-57741/9	0.884	0.946127	1.1625	2970104.0	1.070279	Y
5	IC 140-57741/10	2.21	2.495178	1.1625	2853192.0	1.12904	Y
6	IC 140-57741/11	4.42	4.870916	1.1625	2783042.0	1.102017	Y
7	IC 140-57741/12	8.84	10.230765	1.1625	2612686.0	1.157326	Y



Calibration

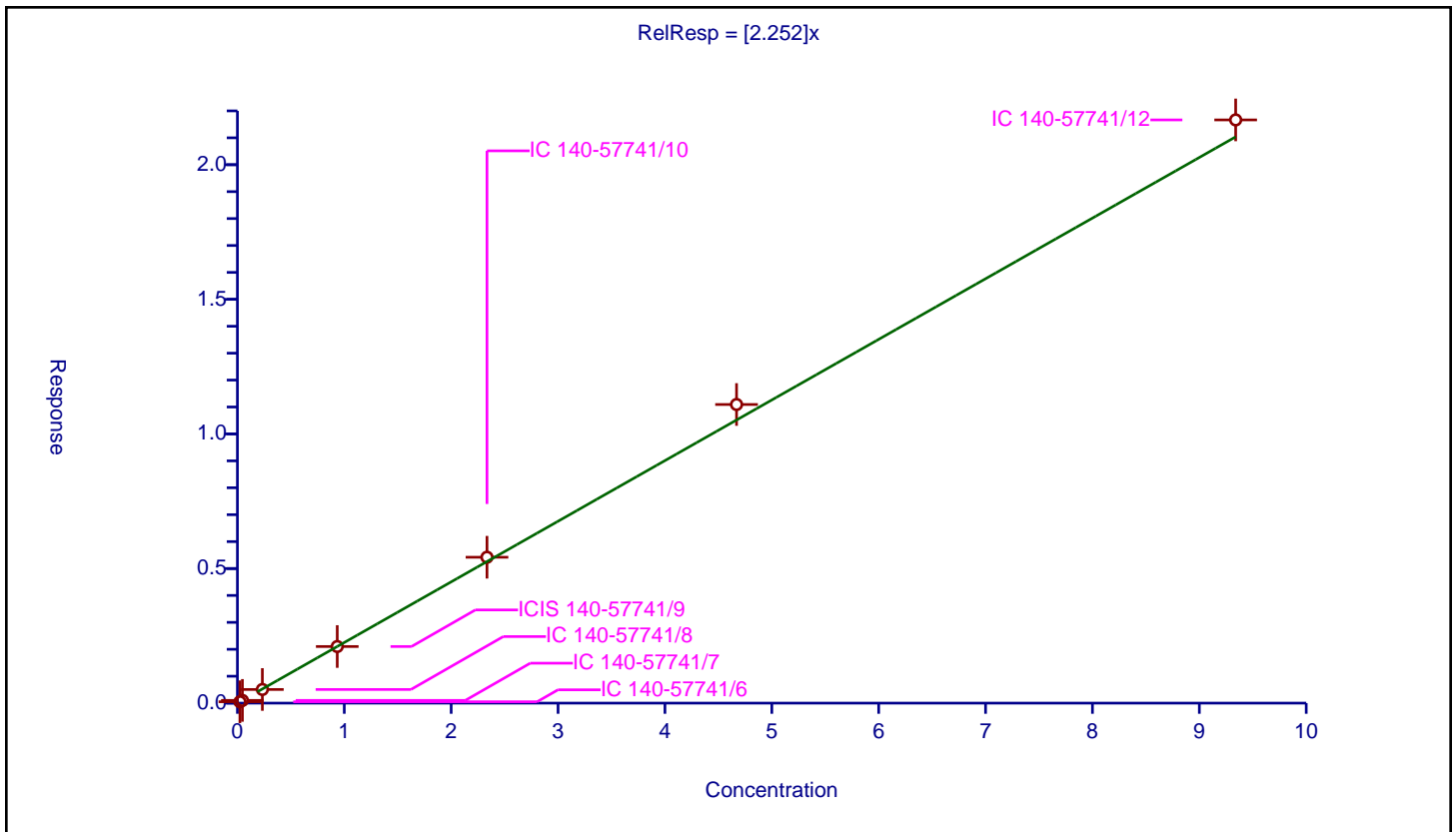
/ 1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2)

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	2.252

Error Coefficients	
Standard Error:	6340000
Relative Standard Error:	3.9
Correlation Coefficient:	0.995
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.02335	0.050487	1.1675	842014.0	2.162197	Y
2	IC 140-57741/7	0.0467	0.101045	1.1675	1013216.0	2.163704	Y
3	IC 140-57741/8	0.2335	0.507092	1.1675	941348.0	2.1717	Y
4	ICIS 140-57741/9	0.934	2.103035	1.1675	979480.0	2.251644	Y
5	IC 140-57741/10	2.335	5.419337	1.1675	855340.0	2.320915	Y
6	IC 140-57741/11	4.67	11.092871	1.1675	767242.0	2.375347	Y
7	IC 140-57741/12	9.34	21.664914	1.1675	700903.0	2.319584	Y



**Calibration**

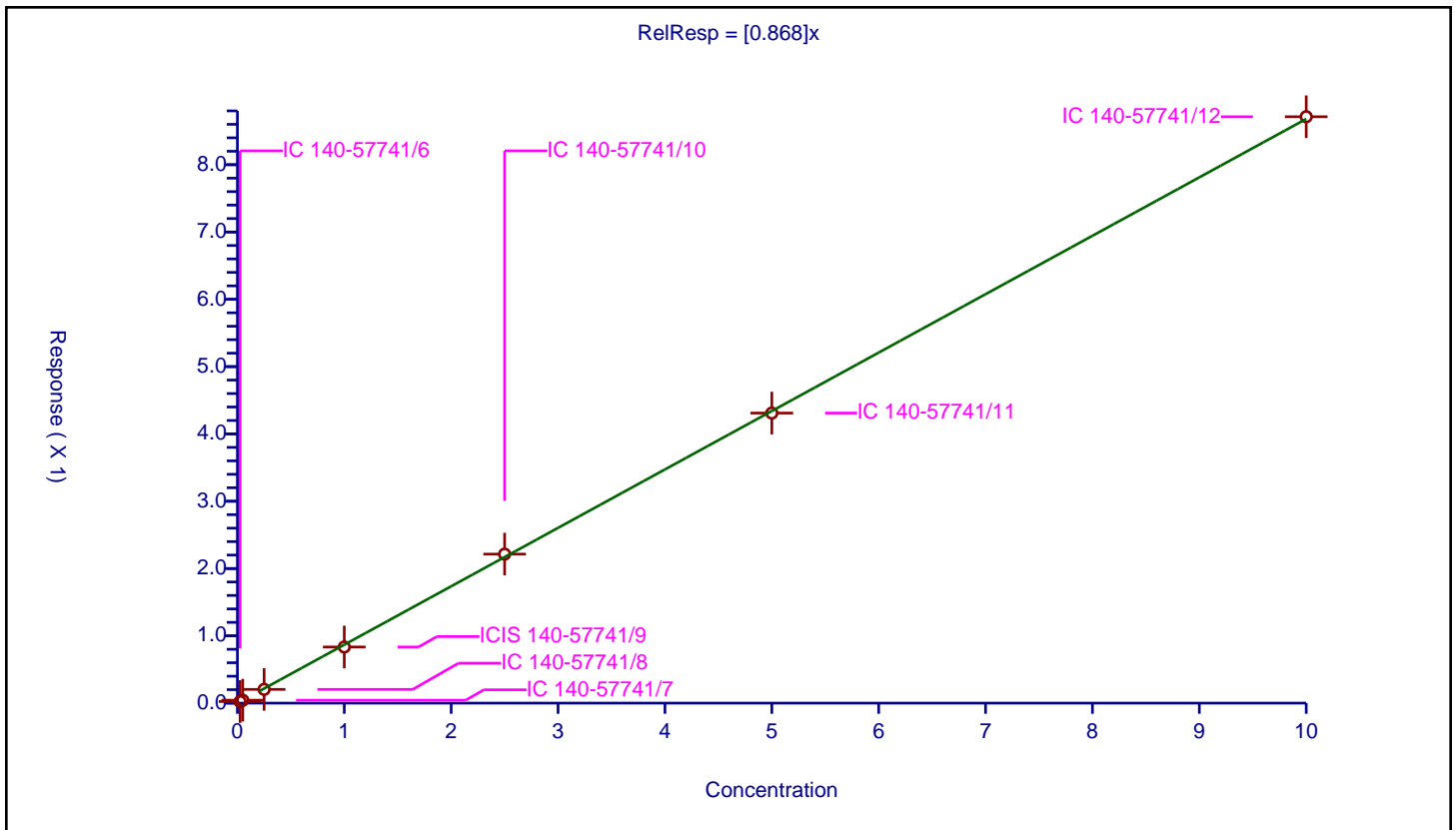
/ Perfluorohexanoic acid

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.868

Error Coefficients	
Standard Error:	14000000
Relative Standard Error:	4.7
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.023624	1.25	4759129.0	0.944942	Y
2	IC 140-57741/7	0.05	0.043134	1.25	5219880.0	0.862673	Y
3	IC 140-57741/8	0.25	0.203955	1.25	5323274.0	0.81582	Y
4	ICIS 140-57741/9	1.0	0.834091	1.25	5102737.0	0.834091	Y
5	IC 140-57741/10	2.5	2.213847	1.25	4746918.0	0.885539	Y
6	IC 140-57741/11	5.0	4.309809	1.25	4565306.0	0.861962	Y
7	IC 140-57741/12	10.0	8.71304	1.25	4180045.0	0.871304	Y



Calibration

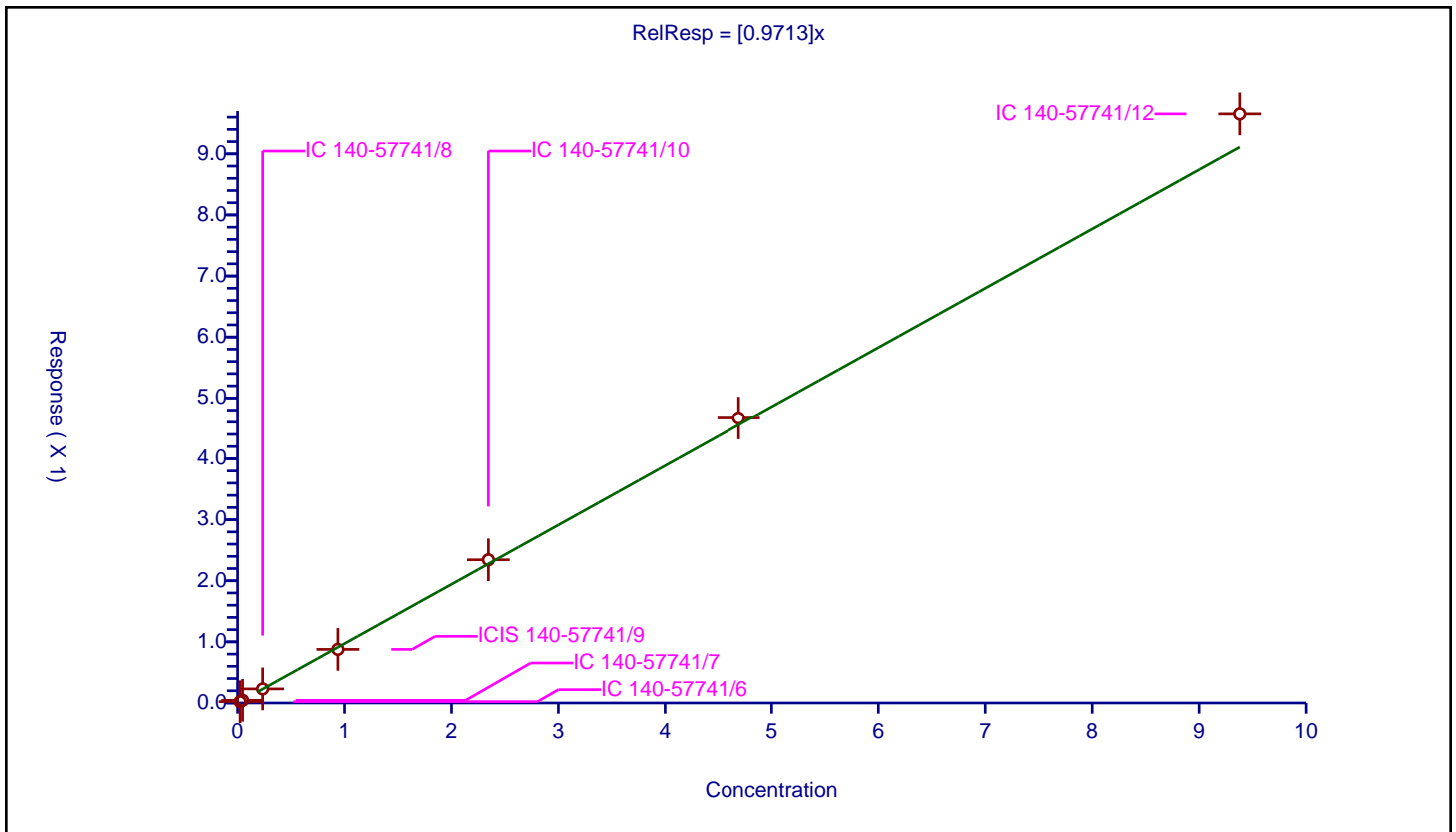
/ Perfluoropentanesulfonic acid

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.9713

Error Coefficients	
Standard Error:	10300000
Relative Standard Error:	4.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.02345	0.021624	1.1625	2602922.0	0.922138	Y
2	IC 140-57741/7	0.0469	0.04388	1.1625	2950306.0	0.935617	Y
3	IC 140-57741/8	0.2345	0.230417	1.1625	2844272.0	0.98259	Y
4	ICIS 140-57741/9	0.938	0.876668	1.1625	2970104.0	0.934615	Y
5	IC 140-57741/10	2.345	2.343746	1.1625	2853192.0	0.999465	Y
6	IC 140-57741/11	4.69	4.669106	1.1625	2783042.0	0.995545	Y
7	IC 140-57741/12	9.38	9.653394	1.1625	2612686.0	1.029147	Y



**Calibration**

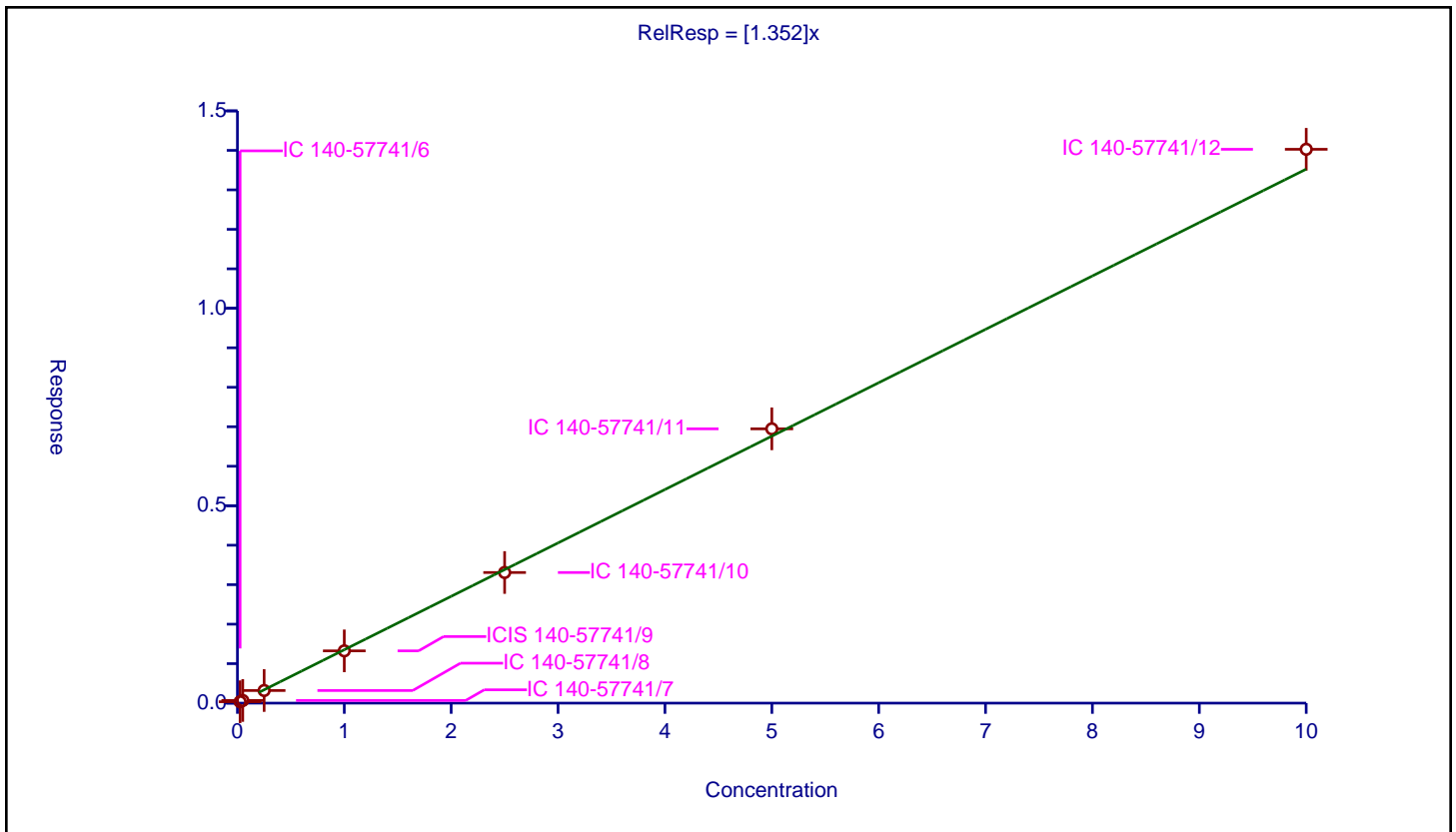
**/ Perfluoro(2-propoxypropanoic) acid**

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.352

Error Coefficients	
Standard Error:	11600000
Relative Standard Error:	3.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.035229	1.25	2187985.0	1.409173	Y
2	IC 140-57741/7	0.05	0.067131	1.25	2389614.0	1.342623	Y
3	IC 140-57741/8	0.25	0.319074	1.25	2429399.0	1.276297	Y
4	ICIS 140-57741/9	1.0	1.323793	1.25	2440057.0	1.323793	Y
5	IC 140-57741/10	2.5	3.308417	1.25	2402042.0	1.323367	Y
6	IC 140-57741/11	5.0	6.94699	1.25	2216220.0	1.389398	Y
7	IC 140-57741/12	10.0	14.027481	1.25	2186460.0	1.402748	Y



Calibration

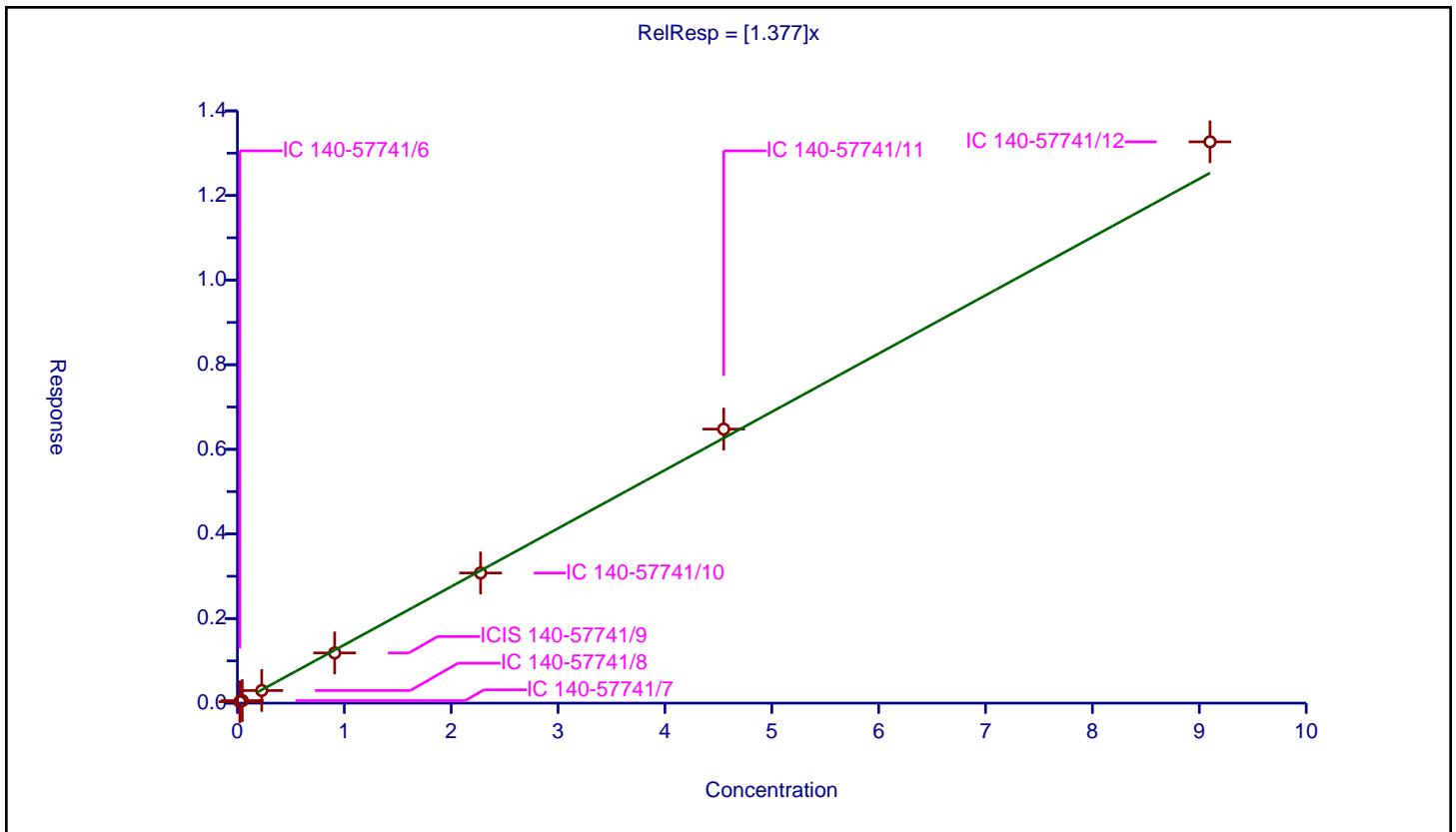
/ Perfluorohexanesulfonic acid

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.377

Error Coefficients	
Standard Error:	9020000
Relative Standard Error:	5.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.02275	0.033841	1.1825	1831227.0	1.487534	Y
2	IC 140-57741/7	0.0455	0.059364	1.1825	2043270.0	1.304697	Y
3	IC 140-57741/8	0.2275	0.297972	1.1825	1985027.0	1.309768	Y
4	ICIS 140-57741/9	0.91	1.186971	1.1825	2043432.0	1.304364	Y
5	IC 140-57741/10	2.275	3.076499	1.1825	1943468.0	1.352307	Y
6	IC 140-57741/11	4.55	6.477765	1.1825	1801353.0	1.423685	Y
7	IC 140-57741/12	9.1	13.268562	1.1825	1692118.0	1.458084	Y





**Calibration**

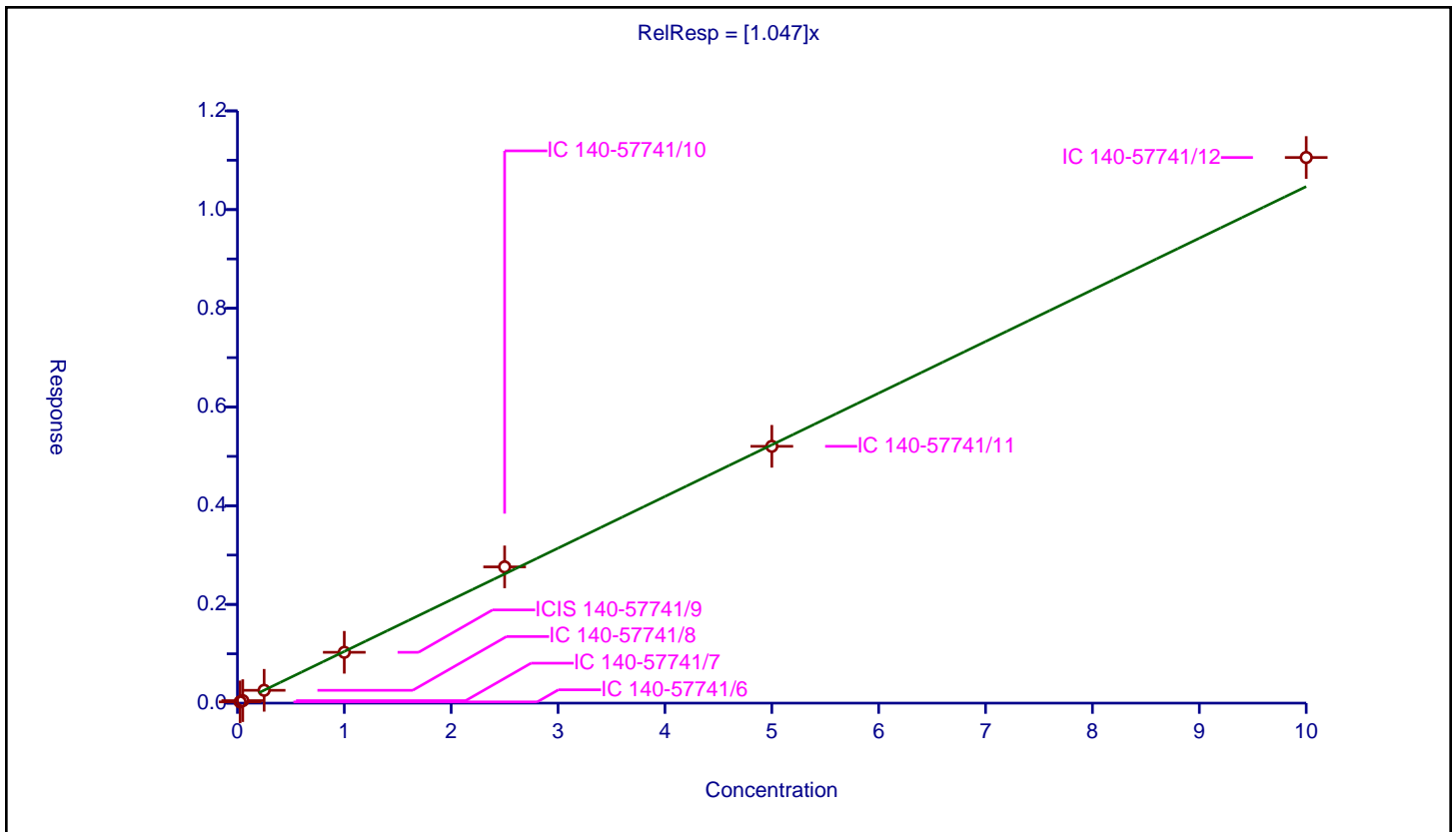
/ Perfluoroheptanoic acid

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.047

Error Coefficients	
Standard Error:	16800000
Relative Standard Error:	4.1
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.025073	1.25	4573137.0	1.0029	Y
2	IC 140-57741/7	0.05	0.050215	1.25	5005273.0	1.004296	Y
3	IC 140-57741/8	0.25	0.259896	1.25	4848796.0	1.039583	Y
4	ICIS 140-57741/9	1.0	1.029701	1.25	4996367.0	1.029701	Y
5	IC 140-57741/10	2.5	2.760381	1.25	4645602.0	1.104153	Y
6	IC 140-57741/11	5.0	5.203417	1.25	4368922.0	1.040683	Y
7	IC 140-57741/12	10.0	11.05555	1.25	3984356.0	1.105555	Y



Calibration

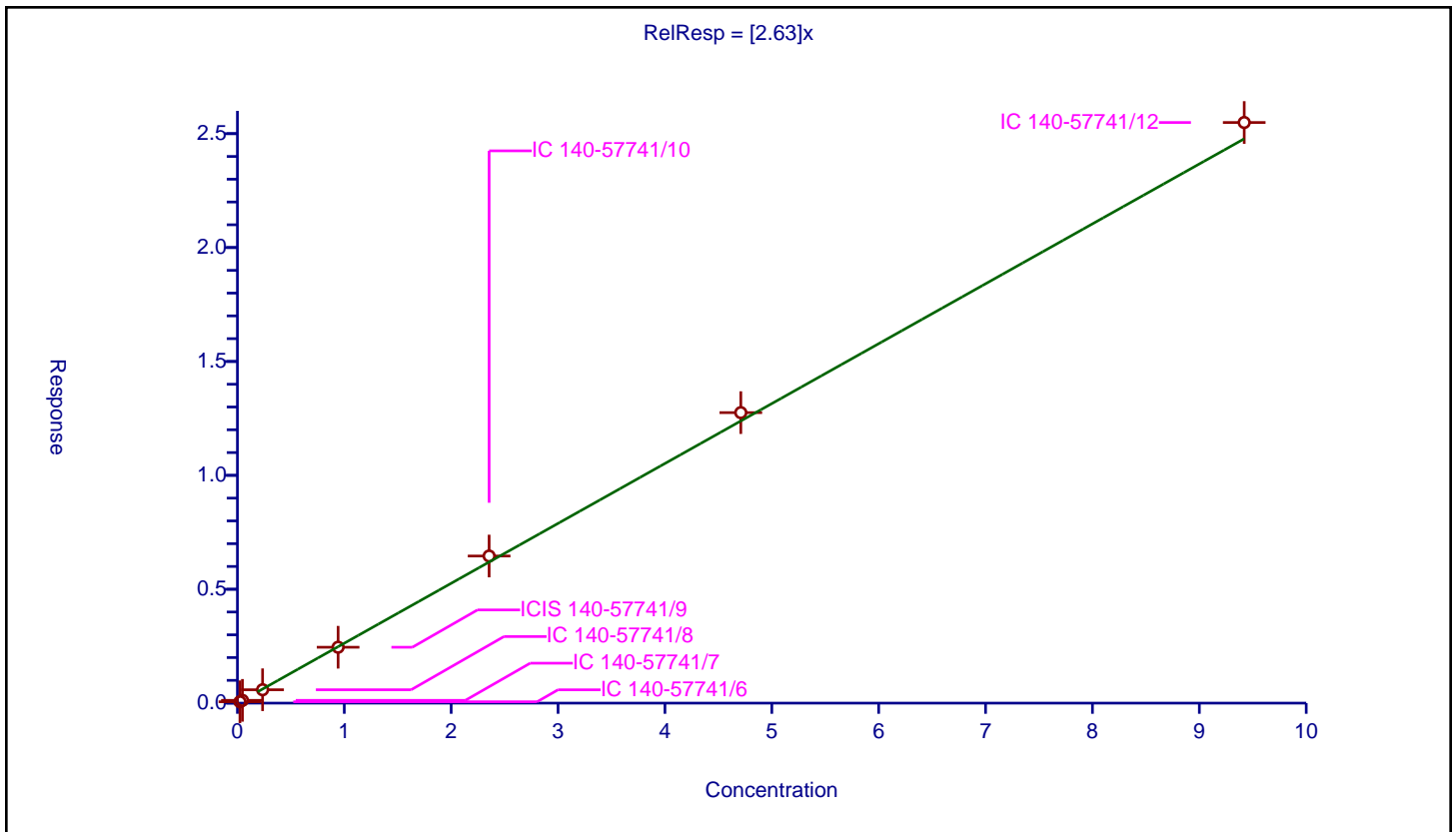
/ DONA

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	2.63

Error Coefficients	
Standard Error:	26100000
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 140-57741/6	0.02355	0.060459	1.195	2592602.0	2.567255	Y
2	IC 140-57741/7	0.0471	0.121738	1.195	2894864.0	2.584672	Y
3	IC 140-57741/8	0.2355	0.588105	1.195	3000906.0	2.497259	Y
4	ICIS 140-57741/9	0.942	2.453757	1.195	2896304.0	2.604837	Y
5	IC 140-57741/10	2.355	6.458278	1.195	2779952.0	2.742369	Y
6	IC 140-57741/11	4.71	12.753415	1.195	2637457.0	2.707731	Y
7	IC 140-57741/12	9.42	25.490133	1.195	2584771.0	2.705959	Y



**Calibration**

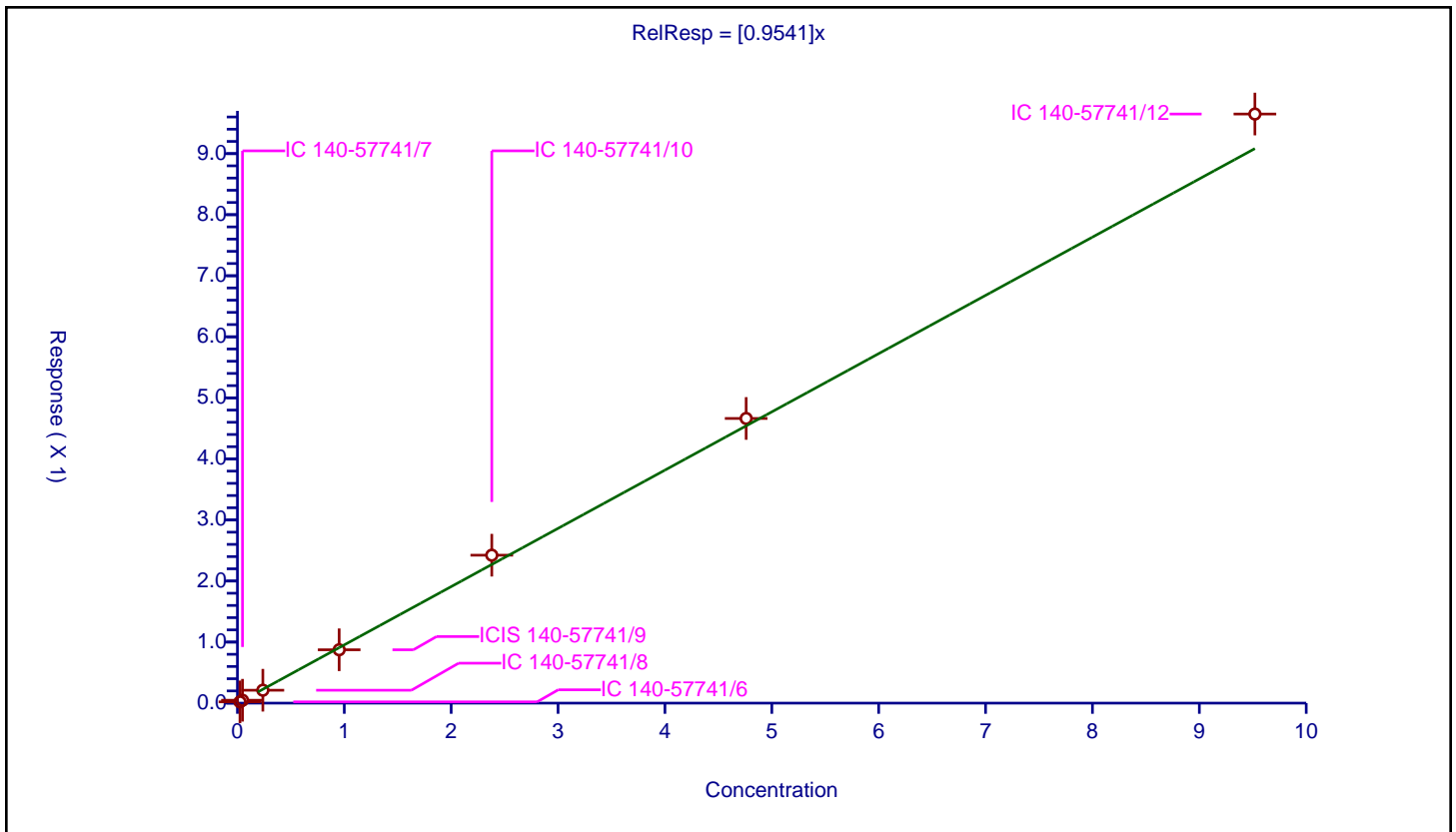
/ Perfluoroheptanesulfonic acid

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.9541

Error Coefficients	
Standard Error:	9810000
Relative Standard Error:	6.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.0238	0.020646	1.195	2592602.0	0.867472	Y
2	IC 140-57741/7	0.0476	0.047302	1.195	2894864.0	0.993747	Y
3	IC 140-57741/8	0.238	0.211406	1.195	3000906.0	0.888259	Y
4	ICIS 140-57741/9	0.952	0.87387	1.195	2896304.0	0.91793	Y
5	IC 140-57741/10	2.38	2.422781	1.195	2779952.0	1.017975	Y
6	IC 140-57741/11	4.76	4.662481	1.195	2637457.0	0.979513	Y
7	IC 140-57741/12	9.52	9.648332	1.195	2584771.0	1.01348	Y



Calibration

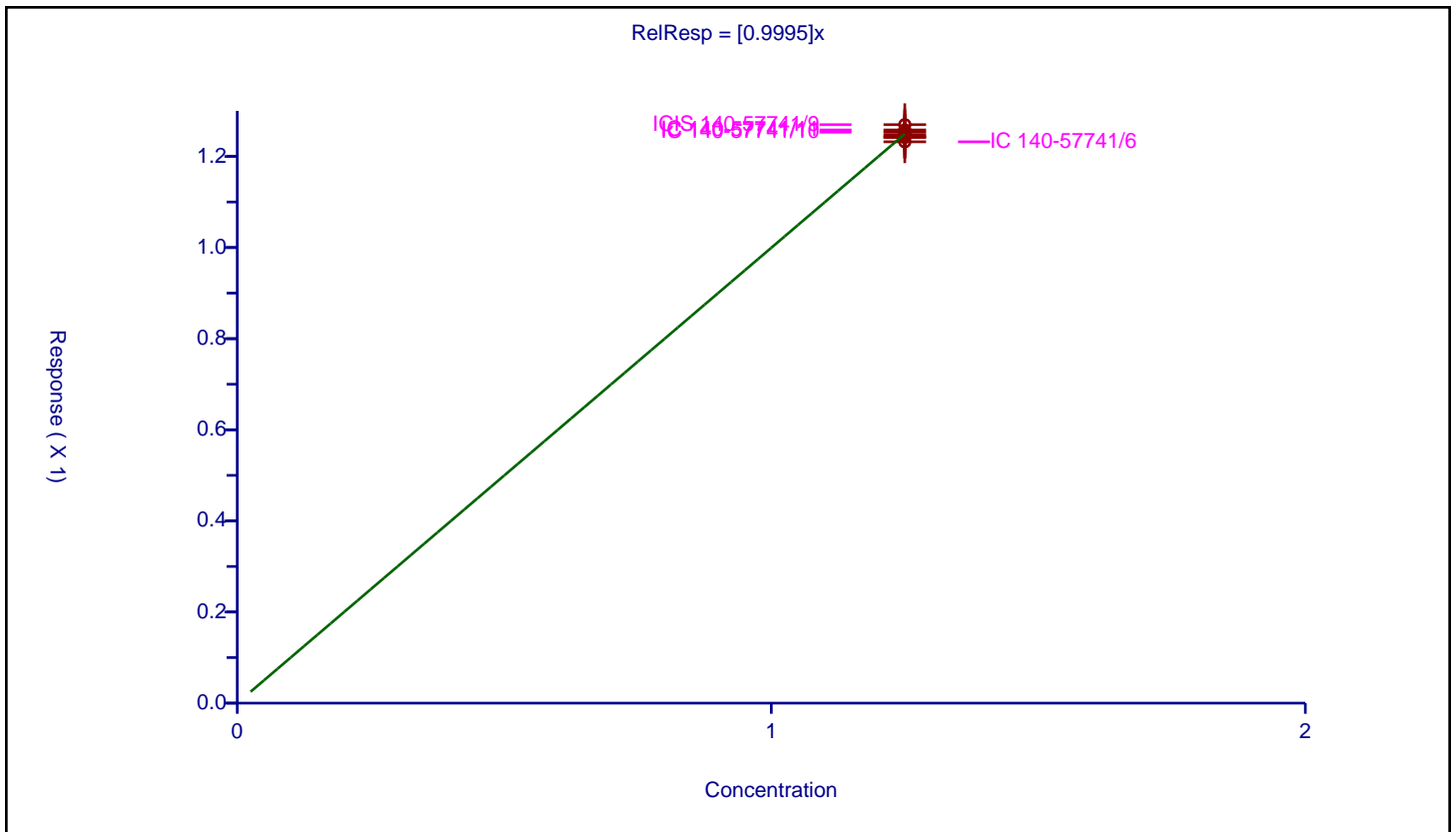
/ 13C8 PFOA

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.9995

Error Coefficients	
Standard Error:	5190000
Relative Standard Error:	1.0
Correlation Coefficient:	0.00000000000000000000
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	1.25	1.232123	1.25	4740402.0	0.985698	Y
2	IC 140-57741/7	1.25	1.247429	1.25	5175029.0	0.997943	Y
3	IC 140-57741/8	1.25	1.241606	1.25	5168548.0	0.993285	Y
4	ICIS 140-57741/9	1.25	1.269757	1.25	5153161.0	1.015806	Y
5	IC 140-57741/10	1.25	1.253261	1.25	4797778.0	1.002609	Y
6	IC 140-57741/11	1.25	1.258176	1.25	4399864.0	1.00654	Y
7	IC 140-57741/12	1.25	1.243156	1.25	4109093.0	0.994525	Y



**Calibration**

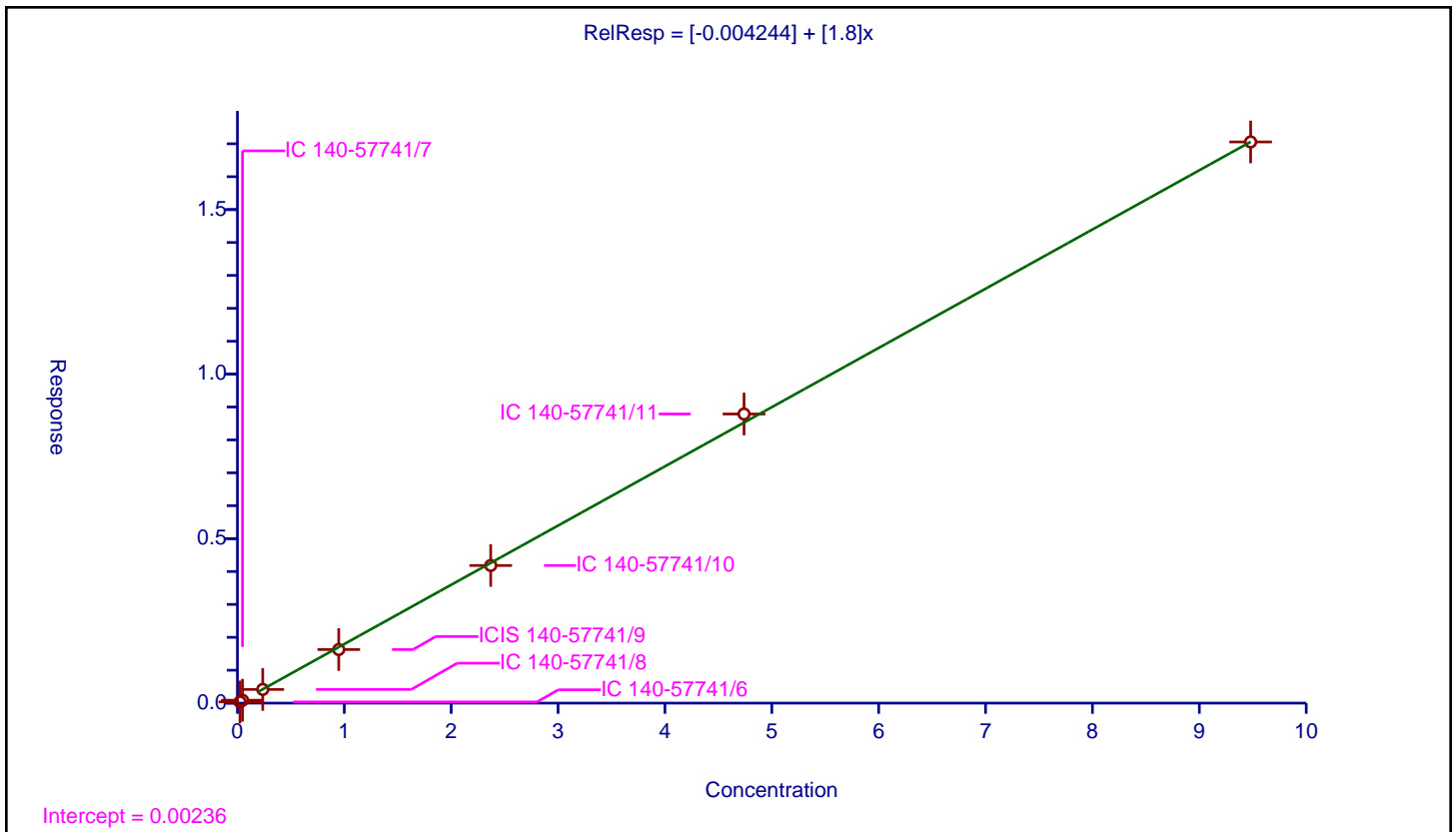
/ 1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)

Curve Type: Linear  
 Weighting: Conc\_Sq  
 Origin: None  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	-0.004244
Slope:	1.8

Error Coefficients	
Standard Error:	5330000
Relative Standard Error:	5.1
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.0237	0.036635	1.1875	938909.0	1.545789	Y
2	IC 140-57741/7	0.0474	0.088649	1.1875	1026945.0	1.870225	Y
3	IC 140-57741/8	0.237	0.415677	1.1875	966110.0	1.753912	Y
4	ICIS 140-57741/9	0.948	1.628179	1.1875	968049.0	1.717488	Y
5	IC 140-57741/10	2.37	4.183048	1.1875	899627.0	1.764999	Y
6	IC 140-57741/11	4.74	8.78726	1.1875	764954.0	1.853852	Y
7	IC 140-57741/12	9.48	17.056232	1.1875	690189.0	1.799181	Y



**Calibration**

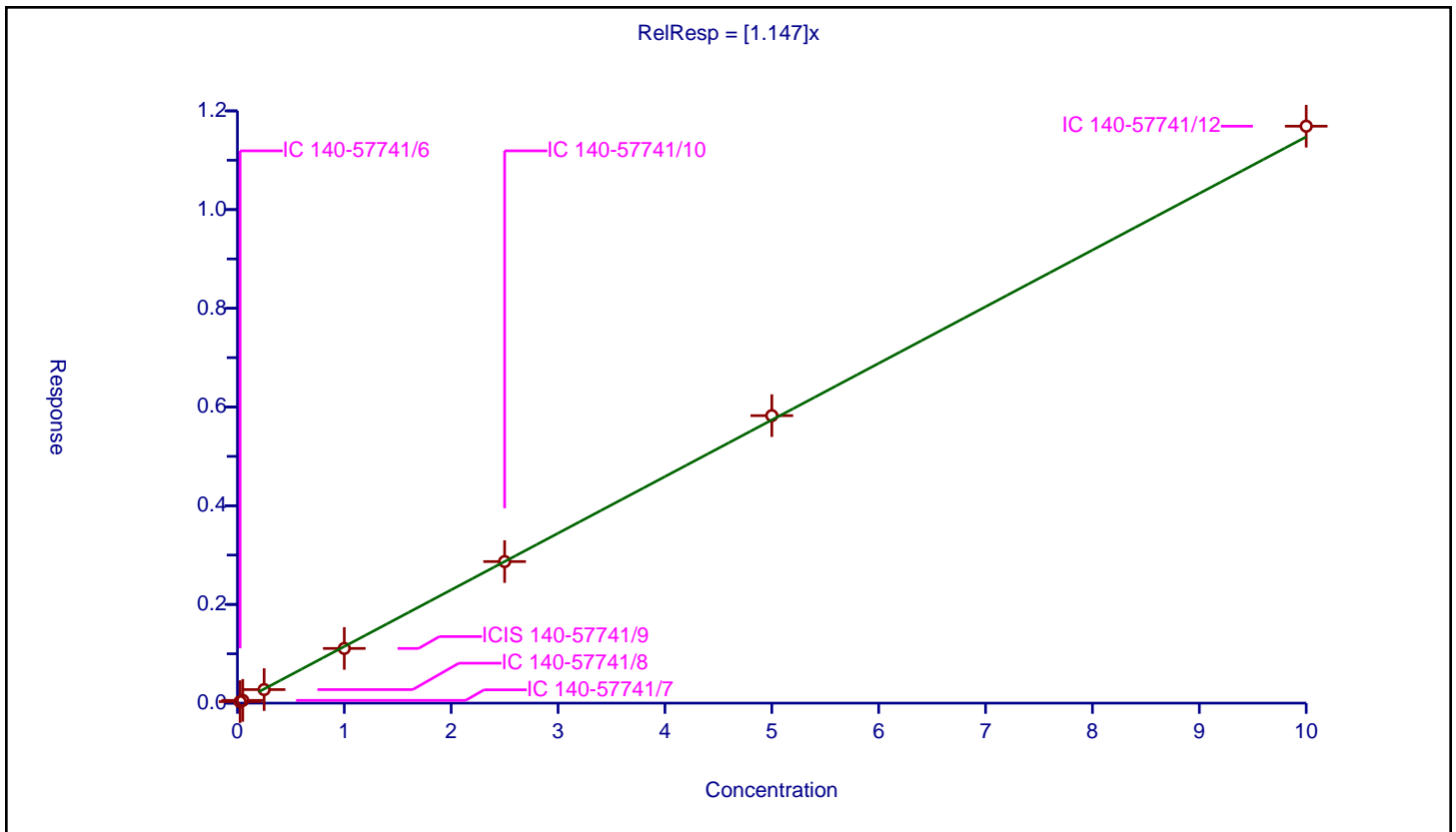
/ Perfluorooctanoic acid

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.147

Error Coefficients	
Standard Error:	18400000
Relative Standard Error:	3.8
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.030613	1.25	4740402.0	1.224506	Y
2	IC 140-57741/7	0.05	0.056055	1.25	5175029.0	1.121105	Y
3	IC 140-57741/8	0.25	0.274197	1.25	5168548.0	1.096788	Y
4	ICIS 140-57741/9	1.0	1.108225	1.25	5153161.0	1.108225	Y
5	IC 140-57741/10	2.5	2.868724	1.25	4797778.0	1.14749	Y
6	IC 140-57741/11	5.0	5.825146	1.25	4399864.0	1.165029	Y
7	IC 140-57741/12	10.0	11.689489	1.25	4109093.0	1.168949	Y



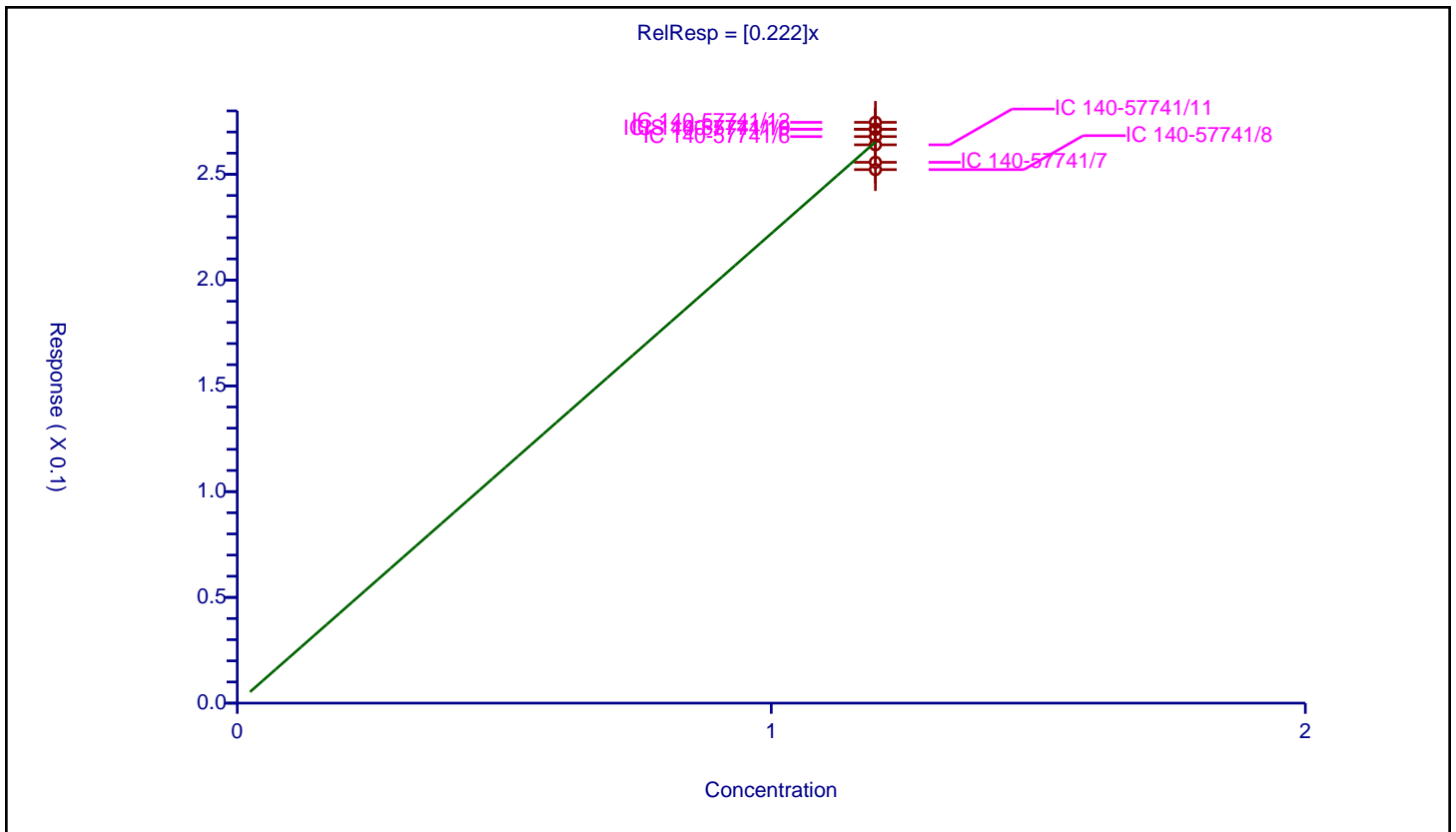
Calibration

/ 13C8 PFOS

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.222
Error Coefficients	
Standard Error:	664000
Relative Standard Error:	3.2
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0.0000000000000000222

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	1.195	0.267853	1.195	2592602.0	0.224145	Y
2	IC 140-57741/7	1.195	0.255696	1.195	2894864.0	0.213972	Y
3	IC 140-57741/8	1.195	0.252229	1.195	3000906.0	0.211071	Y
4	ICIS 140-57741/9	1.195	0.271358	1.195	2896304.0	0.227078	Y
5	IC 140-57741/10	1.195	0.271331	1.195	2779952.0	0.227055	Y
6	IC 140-57741/11	1.195	0.263958	1.195	2637457.0	0.220885	Y
7	IC 140-57741/12	1.195	0.274597	1.195	2584771.0	0.229788	Y



**Calibration**

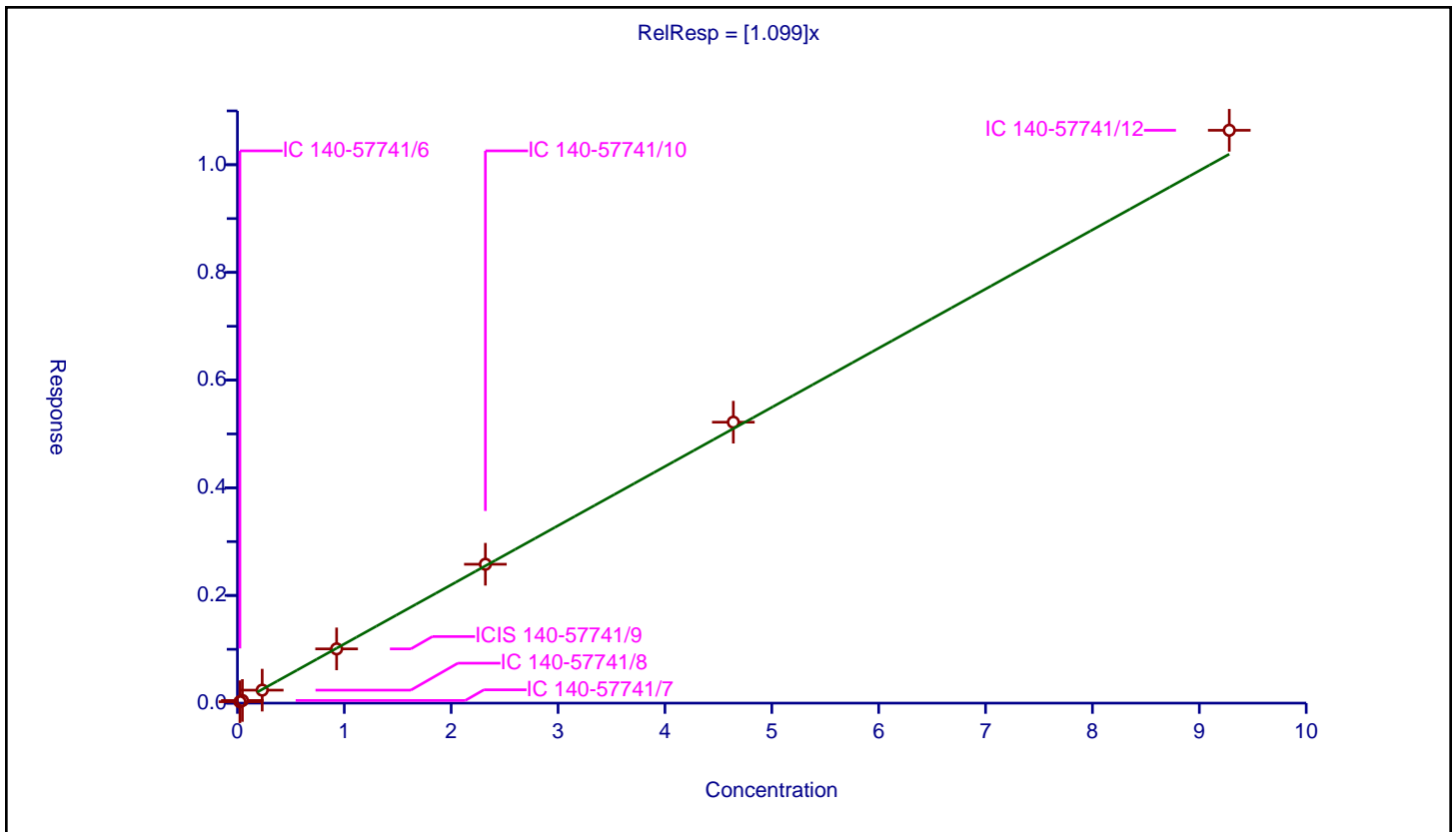
/ Perfluorooctanesulfonic acid

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.099

Error Coefficients	
Standard Error:	10800000
Relative Standard Error:	3.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.0232	0.02609	1.195	2592602.0	1.124562	Y
2	IC 140-57741/7	0.0464	0.049099	1.195	2894864.0	1.058165	Y
3	IC 140-57741/8	0.232	0.241328	1.195	3000906.0	1.040208	Y
4	ICIS 140-57741/9	0.928	1.007551	1.195	2896304.0	1.085723	Y
5	IC 140-57741/10	2.32	2.579437	1.195	2779952.0	1.111826	Y
6	IC 140-57741/11	4.64	5.218047	1.195	2637457.0	1.124579	Y
7	IC 140-57741/12	9.28	10.639656	1.195	2584771.0	1.146515	Y





Calibration

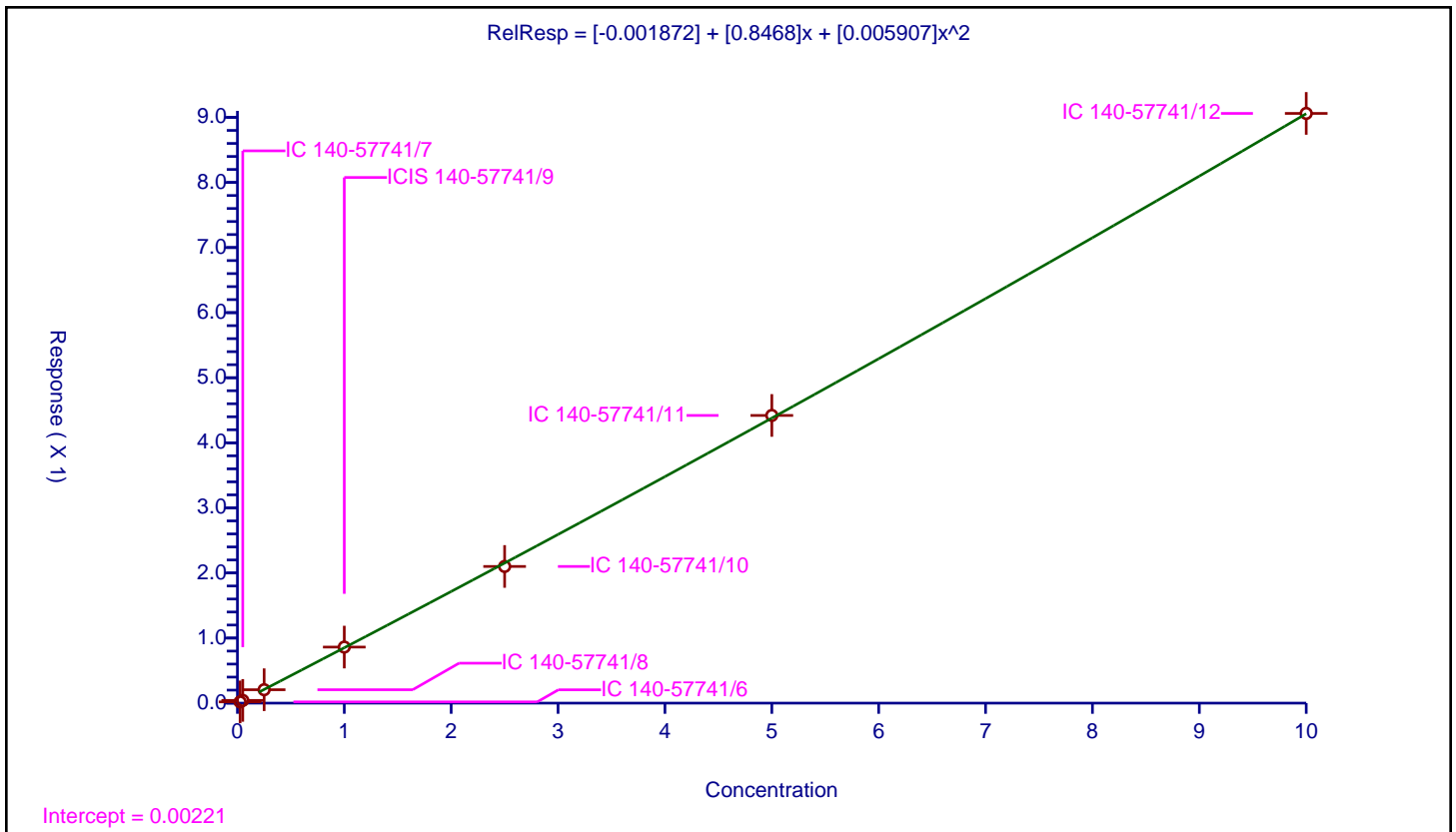
/ Perfluorononanoic acid

Curve Type: Quadratic  
 Weighting: Conc\_Sq  
 Origin: None  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	-0.001872
Slope:	0.8468
Second Order:	0.005907

Error Coefficients	
Standard Error:	23600000
Relative Standard Error:	2.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.018926	1.25	6169153.0	0.757057	Y
2	IC 140-57741/7	0.05	0.042138	1.25	6594522.0	0.842768	Y
3	IC 140-57741/8	0.25	0.206174	1.25	6772318.0	0.824695	Y
4	ICIS 140-57741/9	1.0	0.861255	1.25	6551468.0	0.861255	Y
5	IC 140-57741/10	2.5	2.100072	1.25	6530042.0	0.840029	Y
6	IC 140-57741/11	5.0	4.420487	1.25	5842775.0	0.884097	Y
7	IC 140-57741/12	10.0	9.061095	1.25	5610570.0	0.906109	Y



**Calibration**

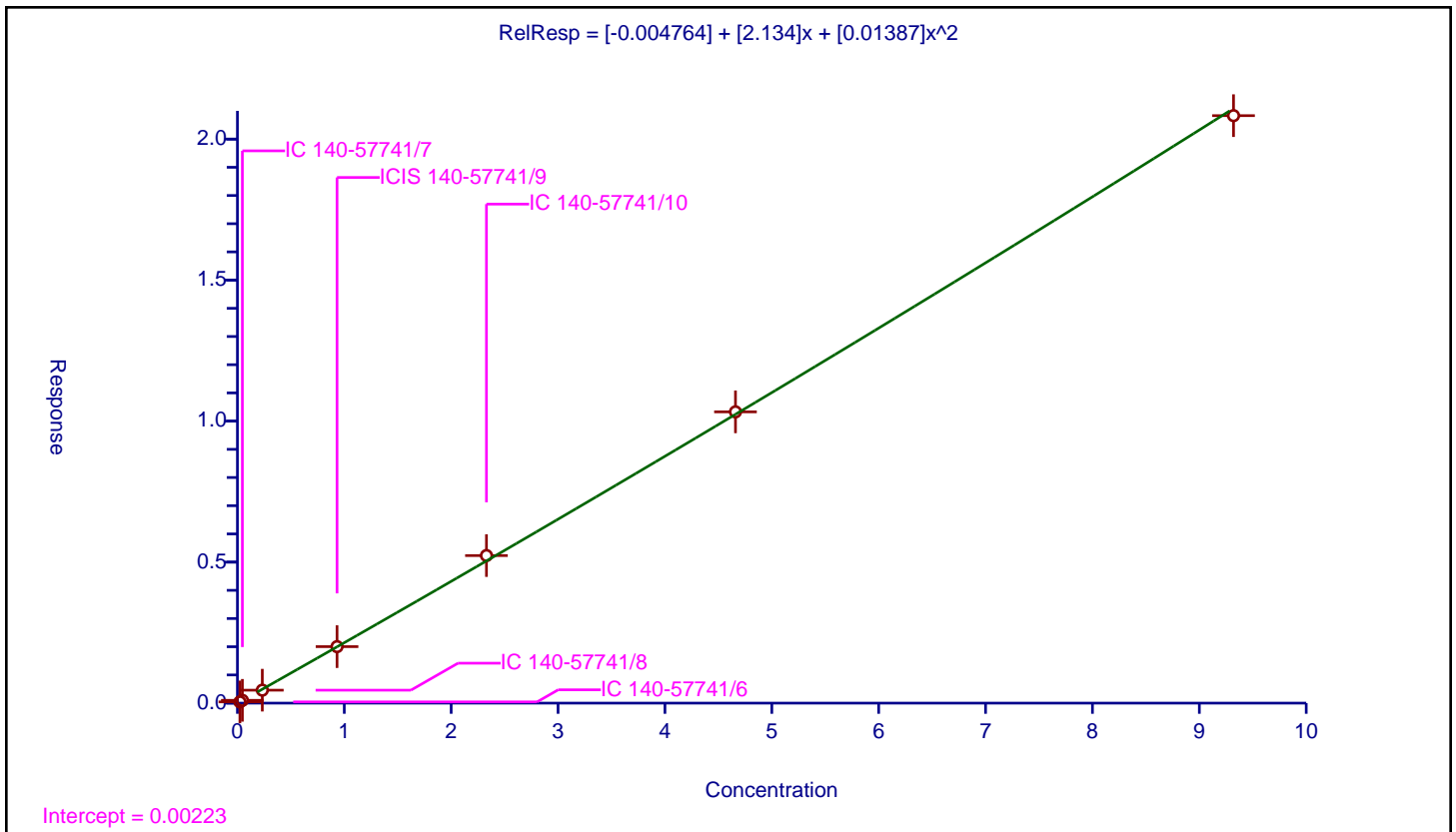
**/ 9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid**

**Curve Type:** Quadratic  
**Weighting:** Conc\_Sq  
**Origin:** None  
**Dependency:** Response  
**Calib Mode:** IsoDil  
**Response Base:** AREA  
**RF Rounding:** 0

Curve Coefficients	
<b>Intercept:</b>	-0.004764
<b>Slope:</b>	2.134
<b>Second Order:</b>	0.01387

Error Coefficients	
<b>Standard Error:</b>	26100000
<b>Relative Standard Error:</b>	4.6
<b>Correlation Coefficient:</b>	0.999
<b>Coefficient of Determination (Adjusted):</b>	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.0233	0.044111	1.195	2592602.0	1.893163	Y
2	IC 140-57741/7	0.0466	0.09936	1.195	2894864.0	2.132183	Y
3	IC 140-57741/8	0.233	0.459566	1.195	3000906.0	1.972385	Y
4	ICIS 140-57741/9	0.932	2.003365	1.195	2896304.0	2.149534	Y
5	IC 140-57741/10	2.33	5.232466	1.195	2779952.0	2.245693	Y
6	IC 140-57741/11	4.66	10.328801	1.195	2637457.0	2.216481	Y
7	IC 140-57741/12	9.32	20.83125	1.195	2584771.0	2.235113	Y



**Calibration**

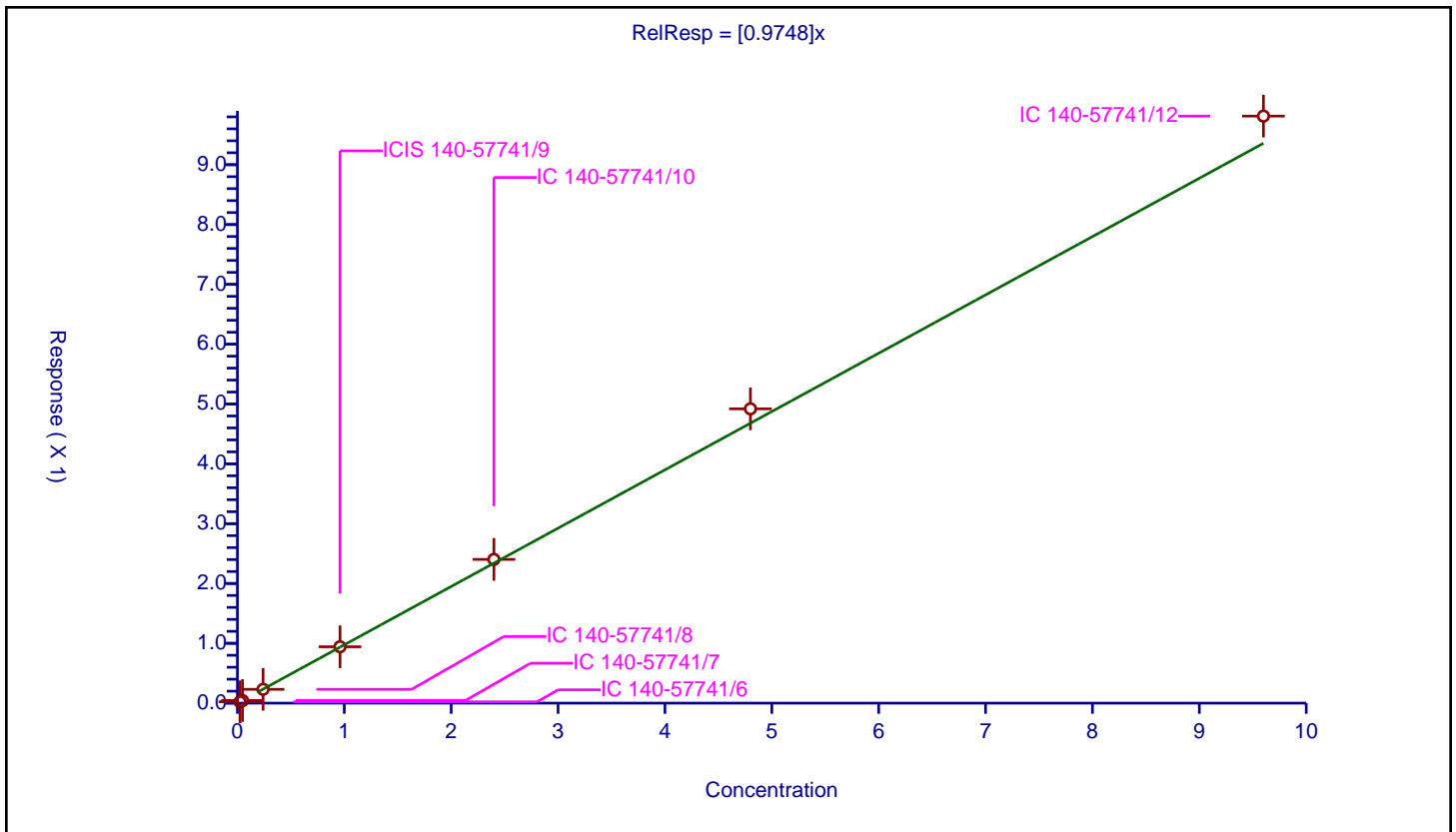
**/ Perfluorononanesulfonic acid**

**Curve Type:** Average  
**Weighting:** Conc\_Sq  
**Origin:** Force  
**Dependency:** Response  
**Calib Mode:** IsoDil  
**Response Base:** AREA  
**RF Rounding:** 0

Curve Coefficients	
<b>Intercept:</b>	0
<b>Slope:</b>	0.9748

Error Coefficients	
<b>Standard Error:</b>	10000000
<b>Relative Standard Error:</b>	4.7
<b>Correlation Coefficient:</b>	1.000
<b>Coefficient of Determination (Adjusted):</b>	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.024	0.022039	1.195	2592602.0	0.918301	Y
2	IC 140-57741/7	0.048	0.043849	1.195	2894864.0	0.913518	Y
3	IC 140-57741/8	0.24	0.231028	1.195	3000906.0	0.962619	Y
4	ICIS 140-57741/9	0.96	0.9421	1.195	2896304.0	0.981354	Y
5	IC 140-57741/10	2.4	2.402419	1.195	2779952.0	1.001008	Y
6	IC 140-57741/11	4.8	4.919773	1.195	2637457.0	1.024953	Y
7	IC 140-57741/12	9.6	9.812654	1.195	2584771.0	1.022151	Y



**Calibration**

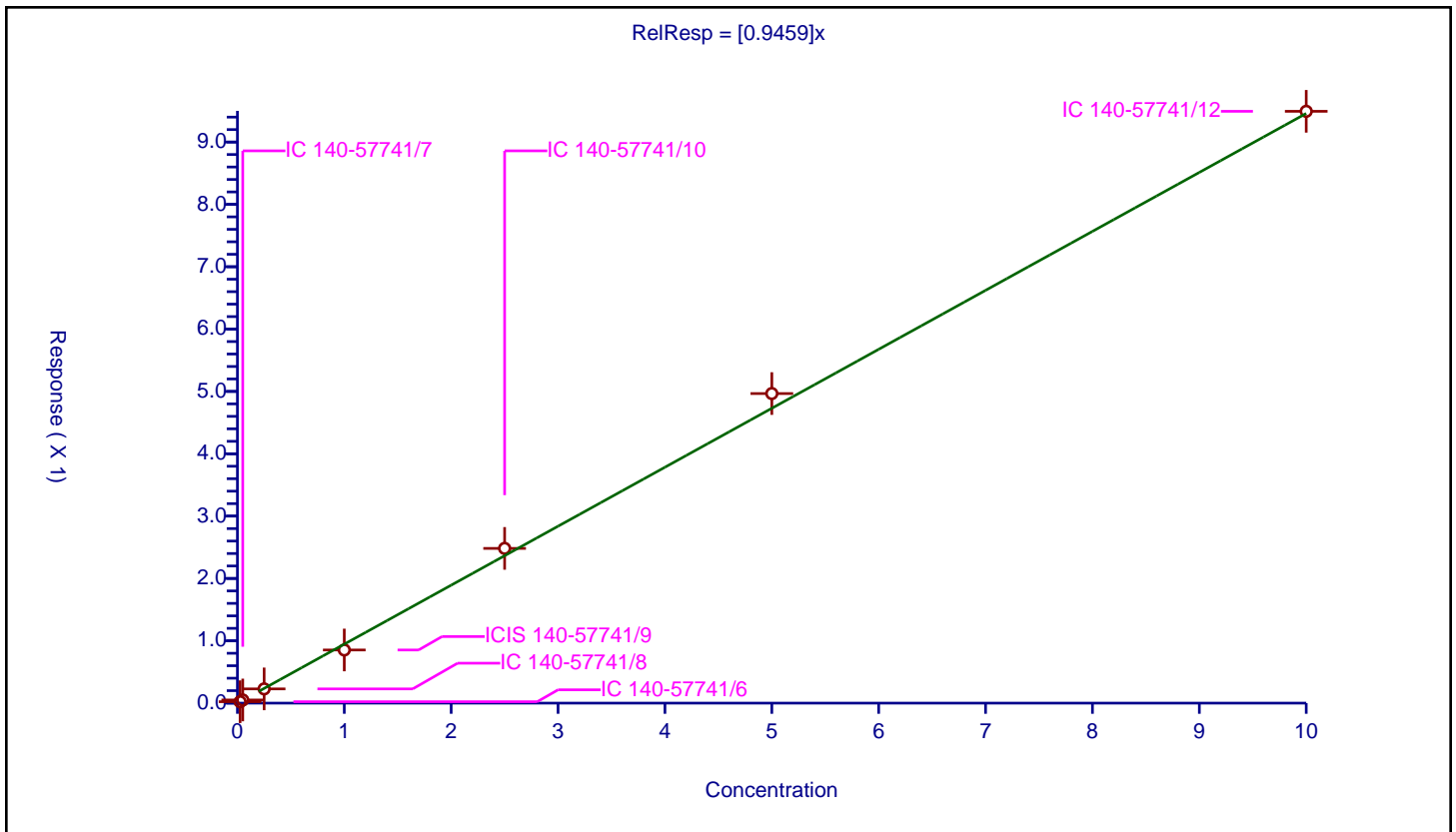
**/ Perfluorooctanesulfonamide**

**Curve Type:** Average  
**Weighting:** Conc\_Sq  
**Origin:** Force  
**Dependency:** Response  
**Calib Mode:** IsoDil  
**Response Base:** AREA  
**RF Rounding:** 0

Curve Coefficients	
<b>Intercept:</b>	0
<b>Slope:</b>	0.9459

Error Coefficients	
<b>Standard Error:</b>	11900000
<b>Relative Standard Error:</b>	6.0
<b>Correlation Coefficient:</b>	0.993
<b>Coefficient of Determination (Adjusted):</b>	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.022763	1.25	3954372.0	0.910536	Y
2	IC 140-57741/7	0.05	0.050449	1.25	4386245.0	1.008989	Y
3	IC 140-57741/8	0.25	0.228457	1.25	4301021.0	0.913828	Y
4	ICIS 140-57741/9	1.0	0.852608	1.25	4333664.0	0.852608	Y
5	IC 140-57741/10	2.5	2.482042	1.25	3925140.0	0.992817	Y
6	IC 140-57741/11	5.0	4.966002	1.25	3437917.0	0.9932	Y
7	IC 140-57741/12	10.0	9.493357	1.25	3199127.0	0.949336	Y



**Calibration**

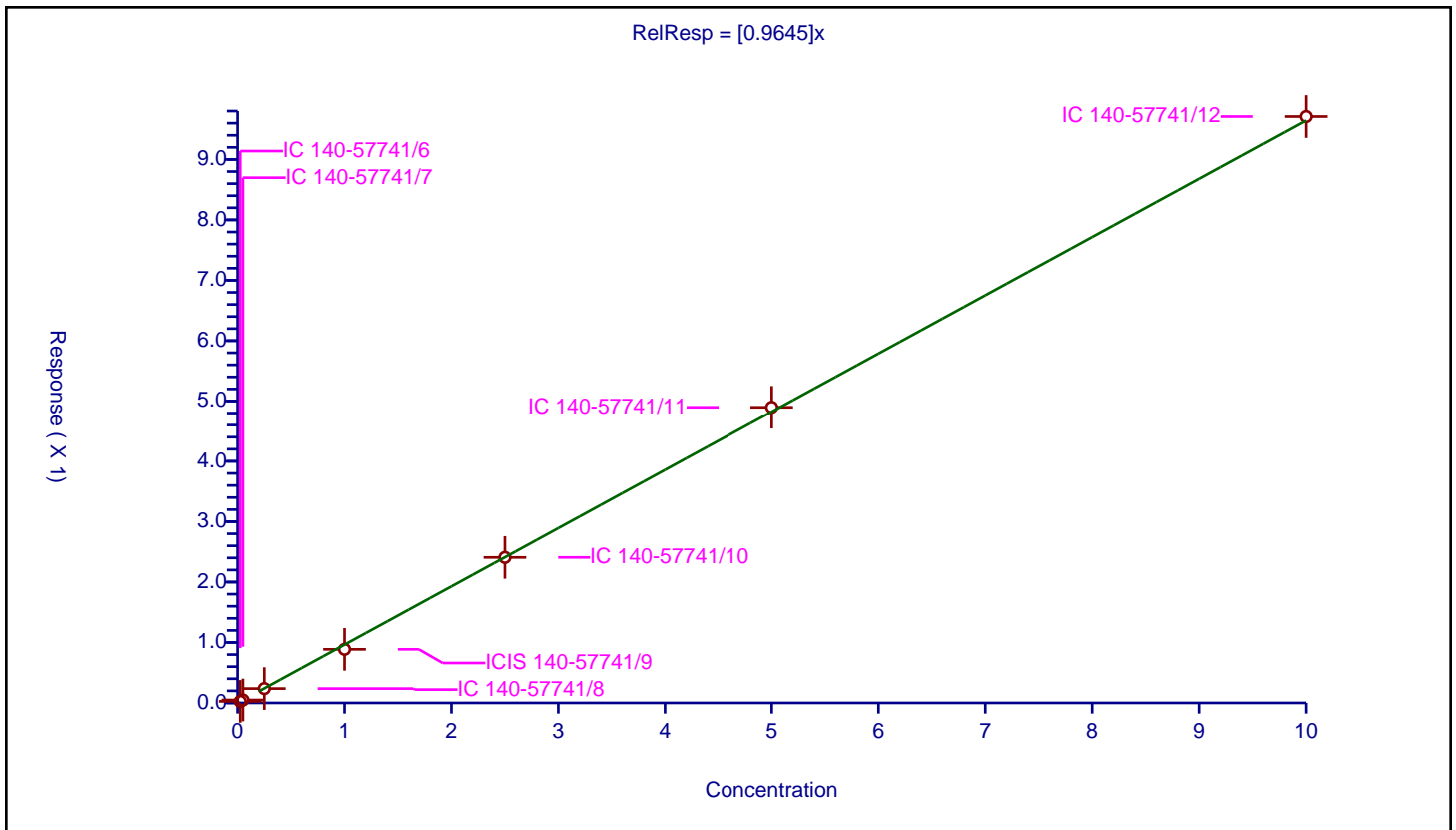
/ Perfluorodecanoic acid

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.9645

Error Coefficients	
Standard Error:	18800000
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 140-57741/6	0.025	0.025675	1.25	6130663.0	1.026985	Y
2	IC 140-57741/7	0.05	0.048729	1.25	6667781.0	0.974586	Y
3	IC 140-57741/8	0.25	0.237341	1.25	6595470.0	0.949364	Y
4	ICIS 140-57741/9	1.0	0.886749	1.25	6684781.0	0.886749	Y
5	IC 140-57741/10	2.5	2.40818	1.25	6089778.0	0.963272	Y
6	IC 140-57741/11	5.0	4.896301	1.25	5533817.0	0.97926	Y
7	IC 140-57741/12	10.0	9.70978	1.25	4962518.0	0.970978	Y



Calibration

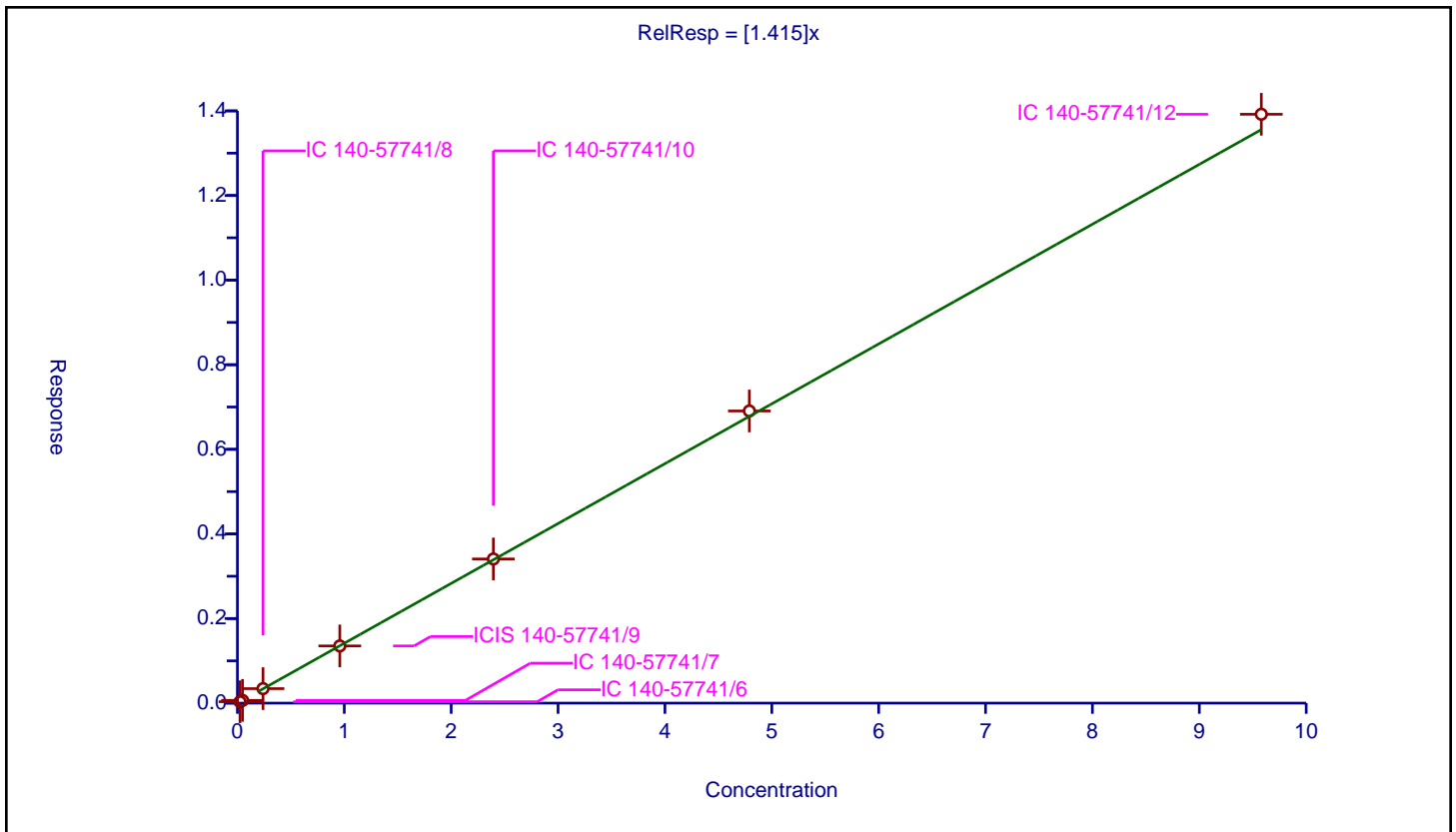
/ 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.415

Error Coefficients	
Standard Error:	4510000
Relative Standard Error:	2.3
Correlation Coefficient:	0.993
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.02395	0.033121	1.1975	1037522.0	1.38291	Y
2	IC 140-57741/7	0.0479	0.065227	1.1975	1115730.0	1.361732	Y
3	IC 140-57741/8	0.2395	0.342934	1.1975	1128836.0	1.431873	Y
4	ICIS 140-57741/9	0.958	1.352249	1.1975	1117378.0	1.411533	Y
5	IC 140-57741/10	2.395	3.407881	1.1975	1009120.0	1.422915	Y
6	IC 140-57741/11	4.79	6.906143	1.1975	914379.0	1.441783	Y
7	IC 140-57741/12	9.58	13.920279	1.1975	788680.0	1.453056	Y



**Calibration**

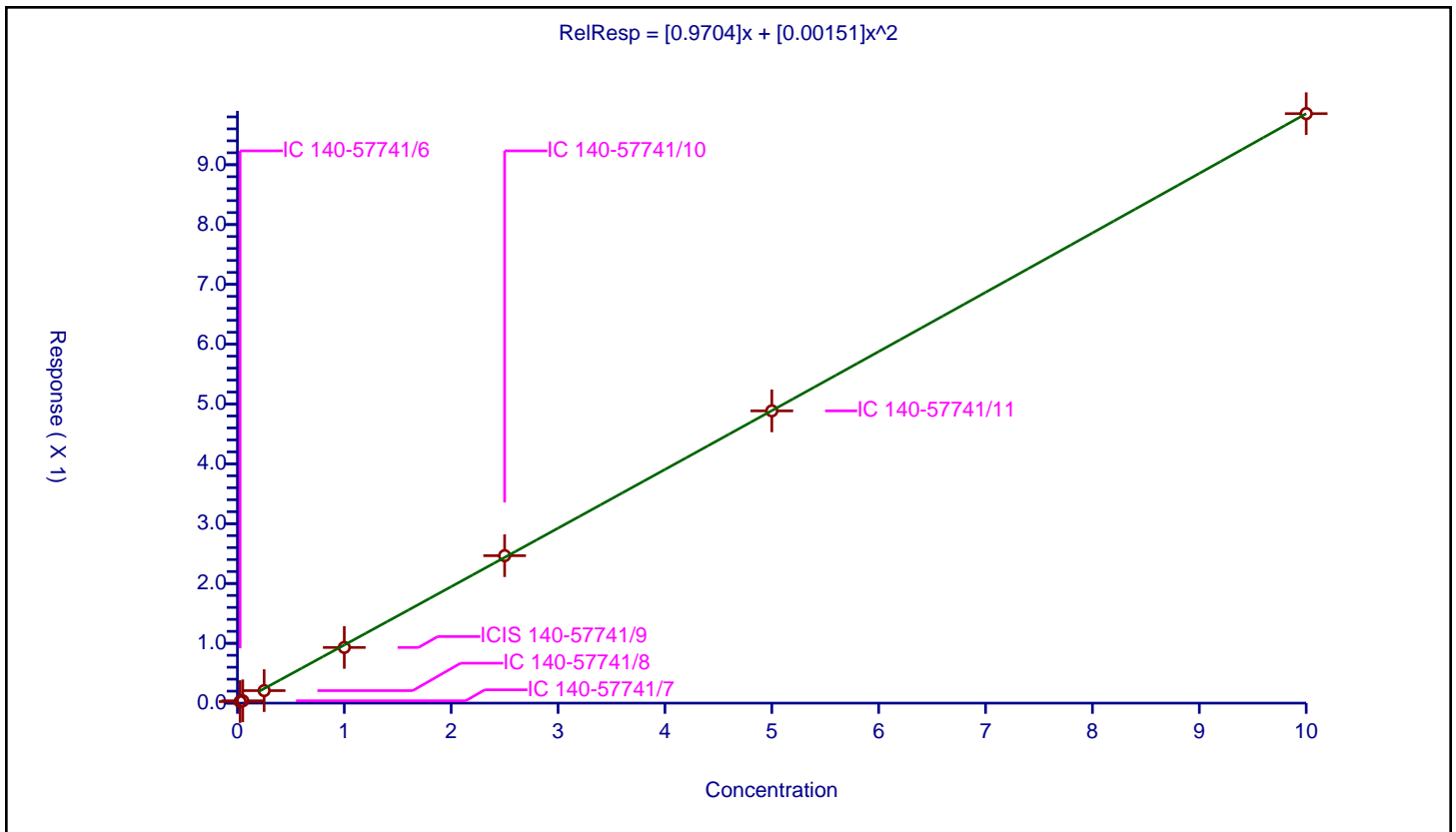
**/ N-methylperfluorooctanesulfonamidoacetic acid**

Curve Type: Quadratic  
 Weighting: None  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.9704
Second Order:	0.00151

Error Coefficients	
Standard Error:	2720000
Relative Standard Error:	11.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	1.000

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.025916	1.25	665125.0	1.036647	Y
2	IC 140-57741/7	0.05	0.038919	1.25	725830.0	0.778385	Y
3	IC 140-57741/8	0.25	0.20903	1.25	808216.0	0.836119	Y
4	ICIS 140-57741/9	1.0	0.930625	1.25	751488.0	0.930625	Y
5	IC 140-57741/10	2.5	2.46482	1.25	704135.0	0.985928	Y
6	IC 140-57741/11	5.0	4.885765	1.25	681894.0	0.977153	Y
7	IC 140-57741/12	10.0	9.854172	1.25	665518.0	0.985417	Y



**Calibration**

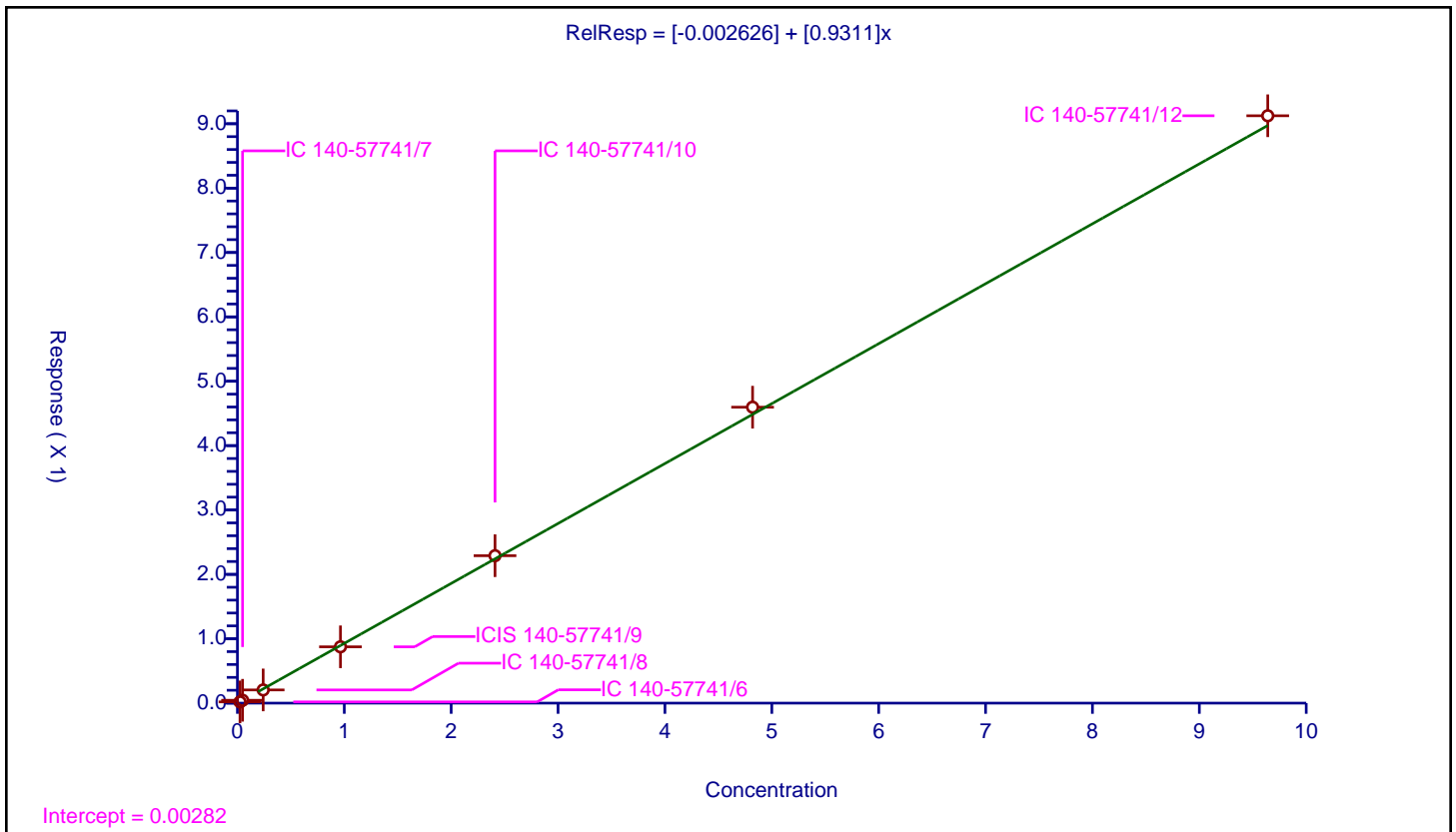
**/ Perfluorodecanesulfonic acid**

**Curve Type:** Linear  
**Weighting:** Conc\_Sq  
**Origin:** None  
**Dependency:** Response  
**Calib Mode:** IsoDil  
**Response Base:** AREA  
**RF Rounding:** 0

Curve Coefficients	
<b>Intercept:</b>	-0.002626
<b>Slope:</b>	0.9311

Error Coefficients	
<b>Standard Error:</b>	10300000
<b>Relative Standard Error:</b>	4.6
<b>Correlation Coefficient:</b>	1.000
<b>Coefficient of Determination (Adjusted):</b>	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.0241	0.019388	1.195	2592602.0	0.804499	Y
2	IC 140-57741/7	0.0482	0.044638	1.195	2894864.0	0.926102	Y
3	IC 140-57741/8	0.241	0.204817	1.195	3000906.0	0.849864	Y
4	ICIS 140-57741/9	0.964	0.874732	1.195	2896304.0	0.907398	Y
5	IC 140-57741/10	2.41	2.290156	1.195	2779952.0	0.950272	Y
6	IC 140-57741/11	4.82	4.597145	1.195	2637457.0	0.953764	Y
7	IC 140-57741/12	9.64	9.12409	1.195	2584771.0	0.946482	Y





**Calibration**

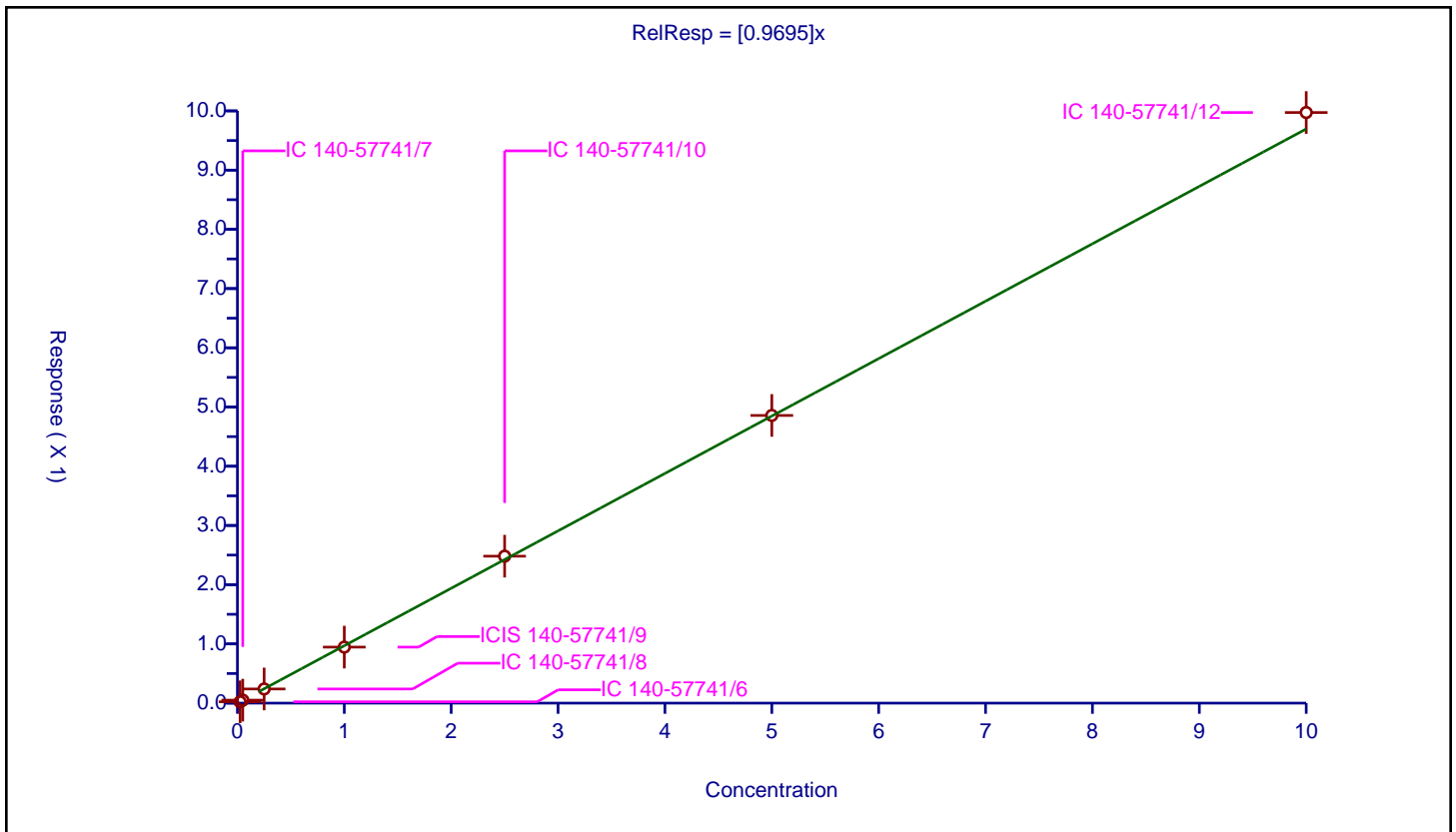
/ Perfluoroundecanoic acid

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.9695

Error Coefficients	
Standard Error:	20200000
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 140-57741/6	0.025	0.022817	1.25	5903076.0	0.912694	Y
2	IC 140-57741/7	0.05	0.050544	1.25	6518160.0	1.010883	Y
3	IC 140-57741/8	0.25	0.238986	1.25	6493725.0	0.955942	Y
4	ICIS 140-57741/9	1.0	0.945763	1.25	6490846.0	0.945763	Y
5	IC 140-57741/10	2.5	2.481477	1.25	6174640.0	0.992591	Y
6	IC 140-57741/11	5.0	4.857469	1.25	5615452.0	0.971494	Y
7	IC 140-57741/12	10.0	9.972615	1.25	5308482.0	0.997262	Y



**Calibration**

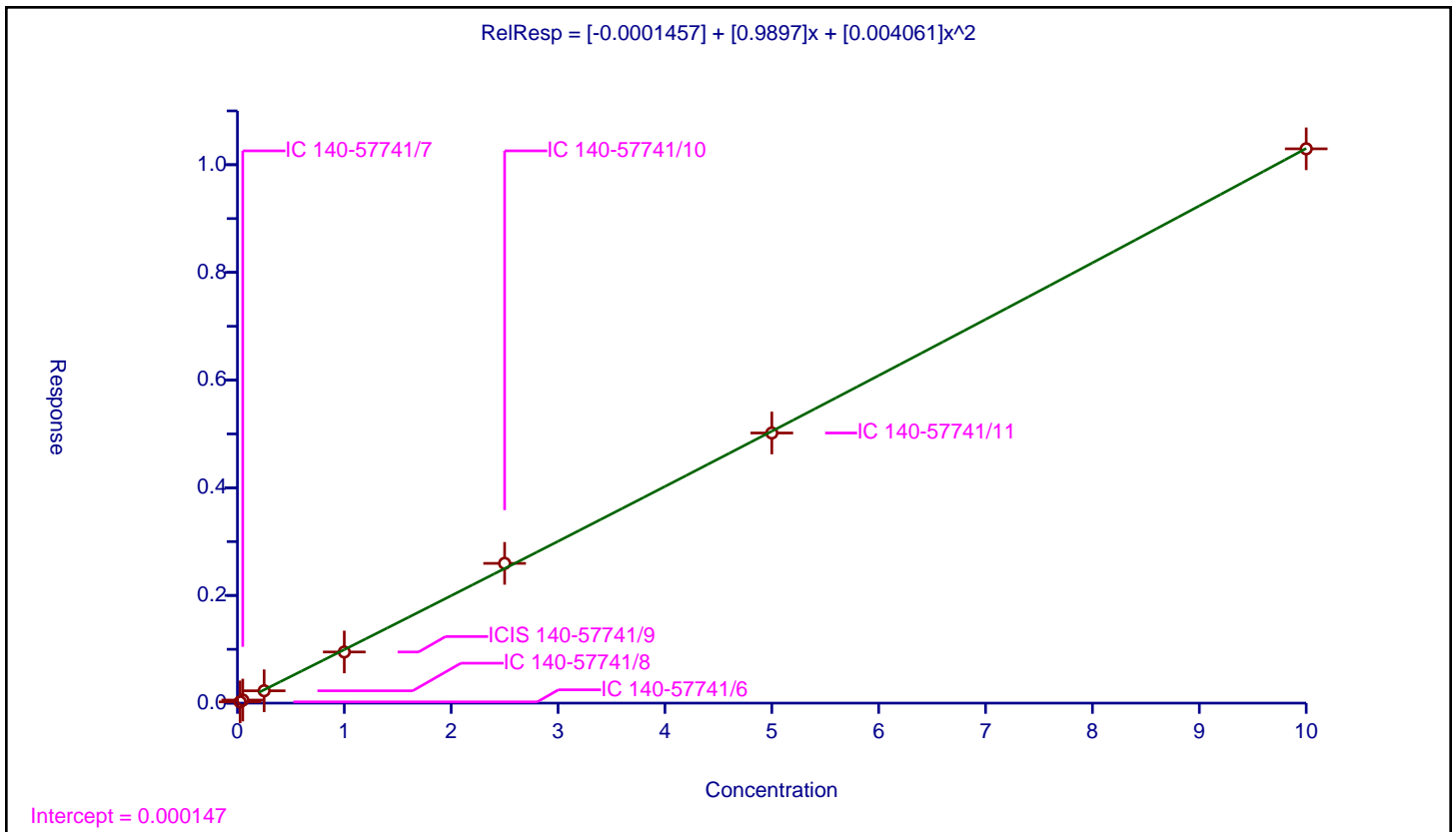
**/ N-ethylperfluorooctanesulfonamidoacetic acid**

**Curve Type:** Quadratic  
**Weighting:** Conc\_Sq  
**Origin:** None  
**Dependency:** Response  
**Calib Mode:** IsoDil  
**Response Base:** AREA  
**RF Rounding:** 0

Curve Coefficients	
<b>Intercept:</b>	-0.0001457
<b>Slope:</b>	0.9897
<b>Second Order:</b>	0.004061

Error Coefficients	
<b>Standard Error:</b>	3290000
<b>Relative Standard Error:</b>	9.7
<b>Correlation Coefficient:</b>	0.997
<b>Coefficient of Determination (Adjusted):</b>	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.022873	1.25	776364.0	0.914906	Y
2	IC 140-57741/7	0.05	0.057064	1.25	826795.0	1.141274	Y
3	IC 140-57741/8	0.25	0.229382	1.25	858732.0	0.917527	Y
4	ICIS 140-57741/9	1.0	0.94996	1.25	831002.0	0.94996	Y
5	IC 140-57741/10	2.5	2.596059	1.25	794601.0	1.038424	Y
6	IC 140-57741/11	5.0	5.01712	1.25	724743.0	1.003424	Y
7	IC 140-57741/12	10.0	10.295782	1.25	683862.0	1.029578	Y



**Calibration**

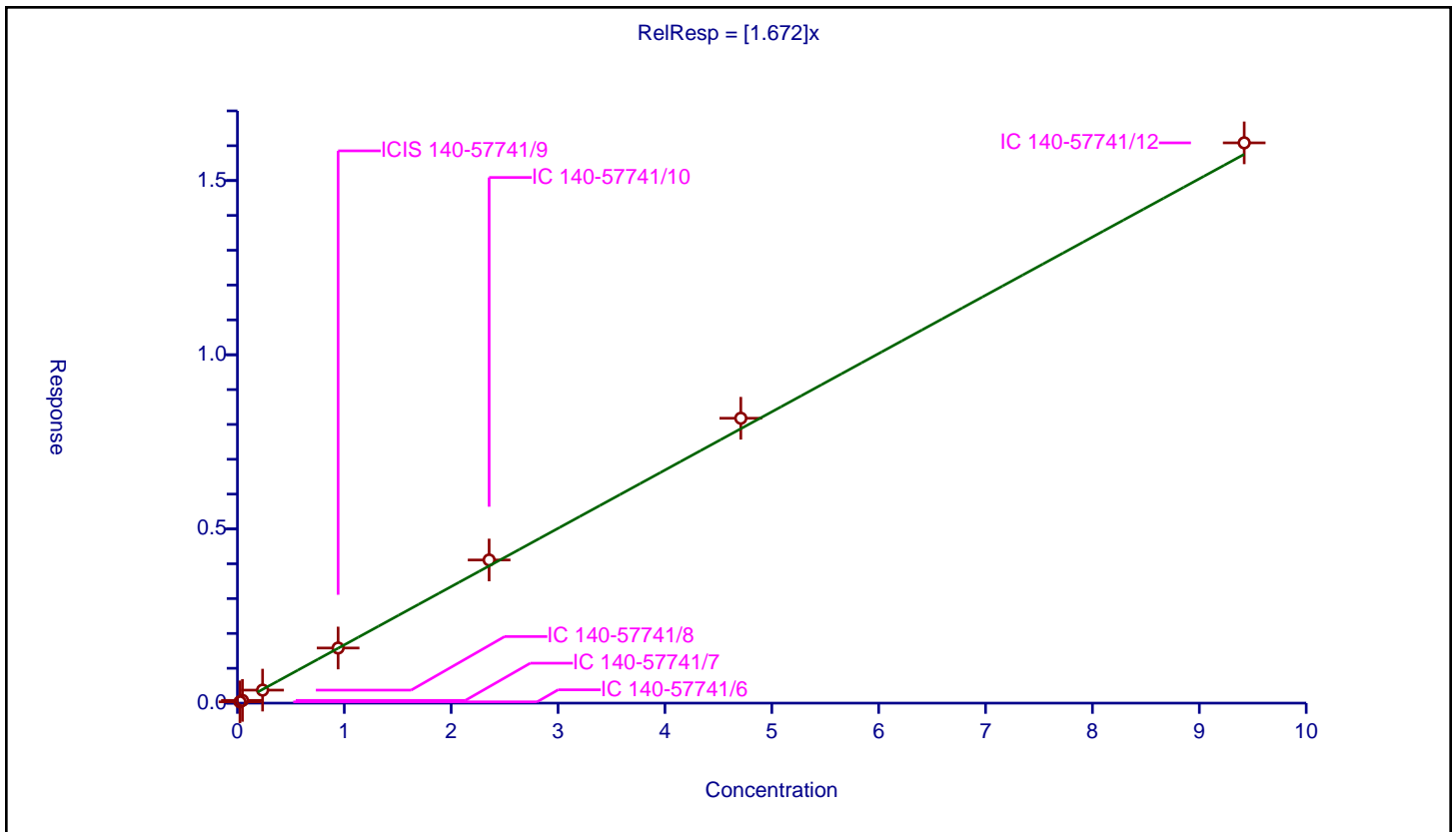
**/ 11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid**

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	1.672

Error Coefficients	
Standard Error:	16500000
Relative Standard Error:	3.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.02355	0.037405	1.195	2592602.0	1.588329	Y
2	IC 140-57741/7	0.0471	0.078463	1.195	2894864.0	1.665872	Y
3	IC 140-57741/8	0.2355	0.373261	1.195	3000906.0	1.584973	Y
4	ICIS 140-57741/9	0.942	1.582124	1.195	2896304.0	1.679537	Y
5	IC 140-57741/10	2.355	4.109035	1.195	2779952.0	1.744813	Y
6	IC 140-57741/11	4.71	8.177437	1.195	2637457.0	1.736186	Y
7	IC 140-57741/12	9.42	16.08259	1.195	2584771.0	1.707281	Y



**Calibration**

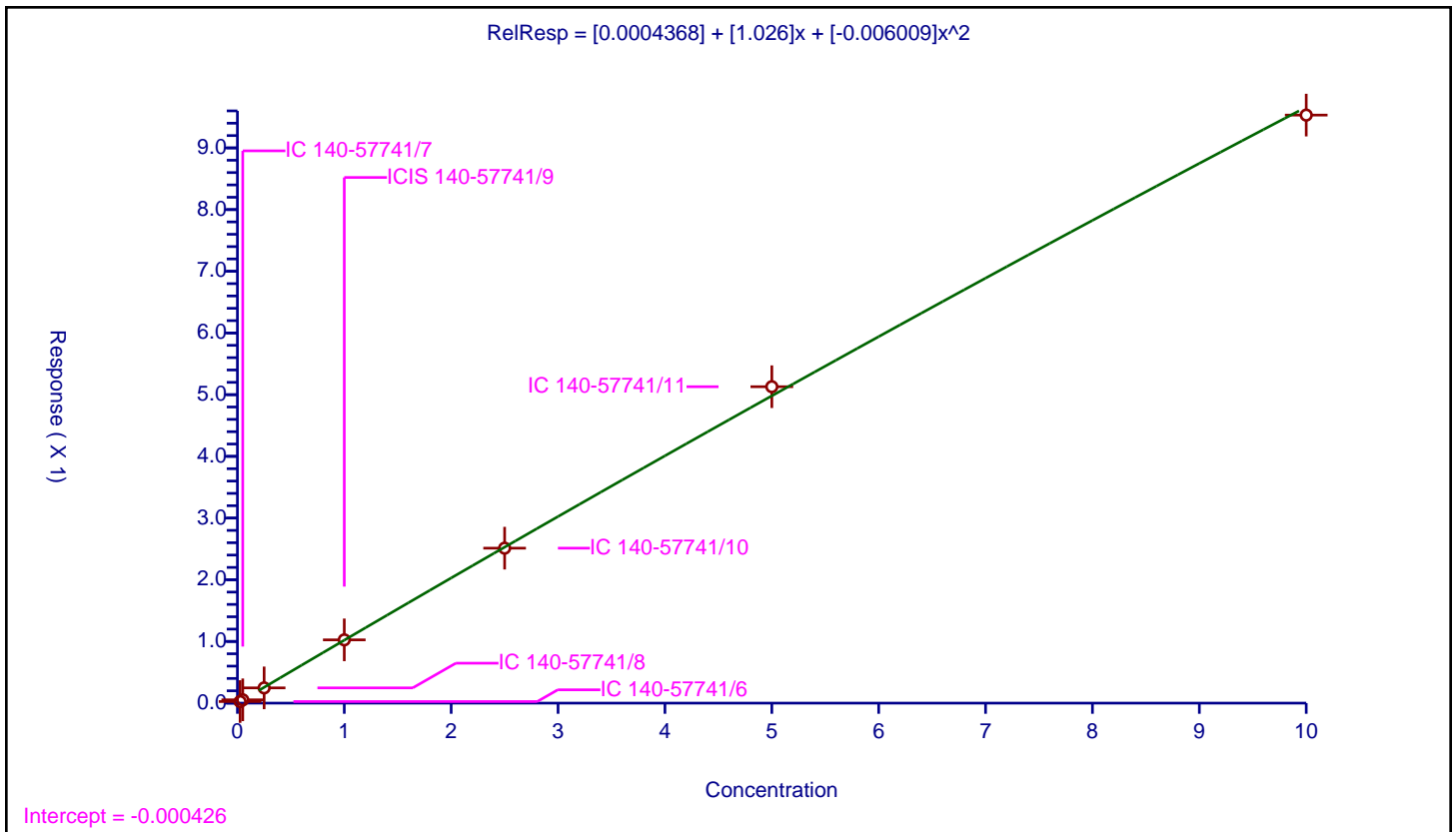
/ Perfluorododecanoic acid

Curve Type: Quadratic  
 Weighting: Conc\_Sq  
 Origin: None  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.0004368
Slope:	1.026
Second Order:	-0.006009

Error Coefficients	
Standard Error:	26800000
Relative Standard Error:	3.3
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.025698	1.25	6031799.0	1.027902	Y
2	IC 140-57741/7	0.05	0.053648	1.25	6475956.0	1.072961	Y
3	IC 140-57741/8	0.25	0.24704	1.25	6942988.0	0.98816	Y
4	ICIS 140-57741/9	1.0	1.025707	1.25	6649050.0	1.025707	Y
5	IC 140-57741/10	2.5	2.511961	1.25	6505443.0	1.004784	Y
6	IC 140-57741/11	5.0	5.129073	1.25	5892161.0	1.025815	Y
7	IC 140-57741/12	10.0	9.531776	1.25	5995500.0	0.953178	Y



**Calibration**

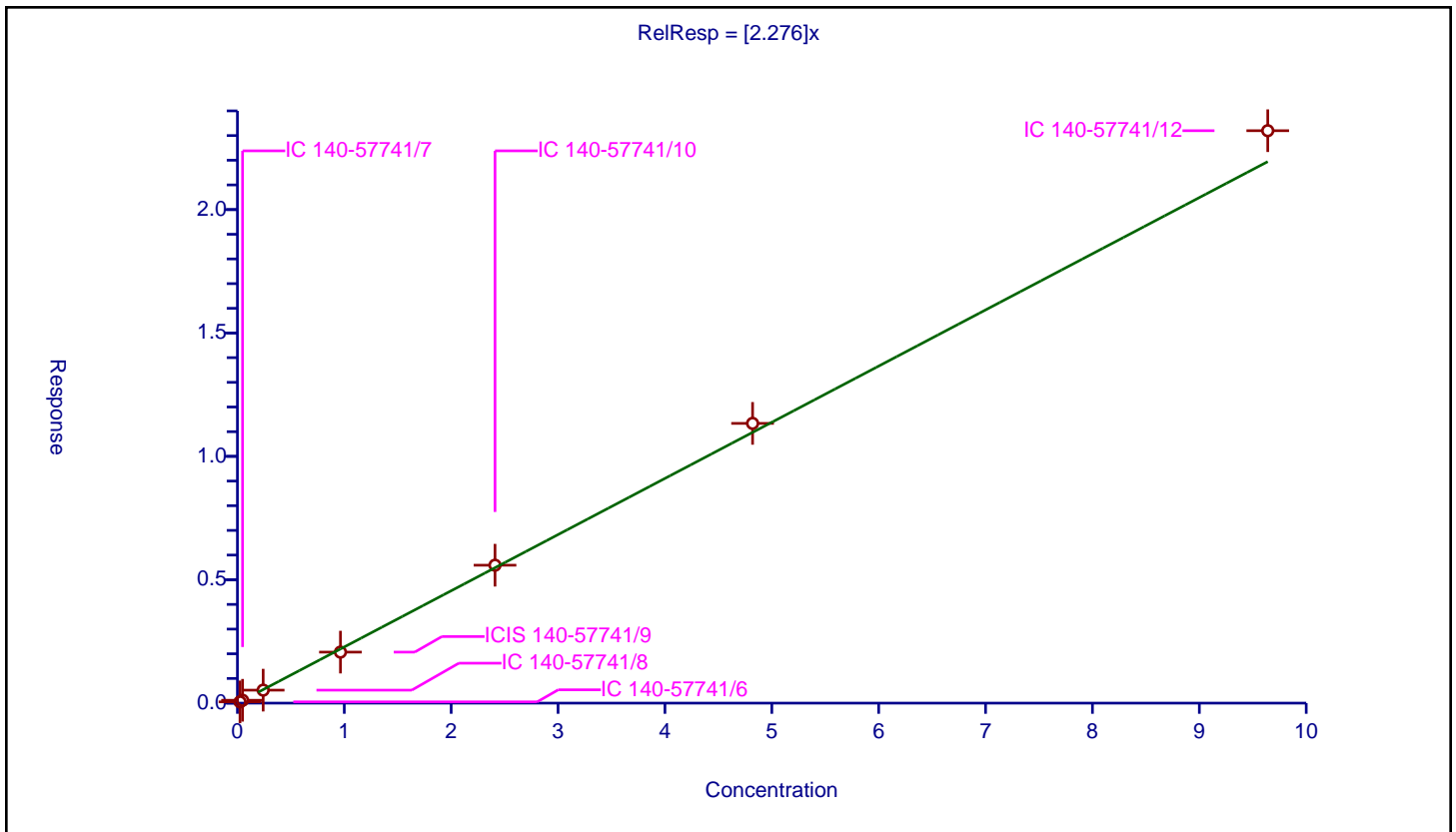
/ 1H,1H,2H,2H-perfluorododecanesulfonic acid (10:2)

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	2.276

Error Coefficients	
Standard Error:	7470000
Relative Standard Error:	5.3
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.0241	0.051429	1.1975	1037522.0	2.133963	Y
2	IC 140-57741/7	0.0482	0.115549	1.1975	1115730.0	2.397285	Y
3	IC 140-57741/8	0.241	0.525623	1.1975	1128836.0	2.181008	Y
4	ICIS 140-57741/9	0.964	2.067343	1.1975	1117378.0	2.144547	Y
5	IC 140-57741/10	2.41	5.589147	1.1975	1009120.0	2.319148	Y
6	IC 140-57741/11	4.82	11.336382	1.1975	914379.0	2.351946	Y
7	IC 140-57741/12	9.64	23.196717	1.1975	788680.0	2.406298	Y



Calibration

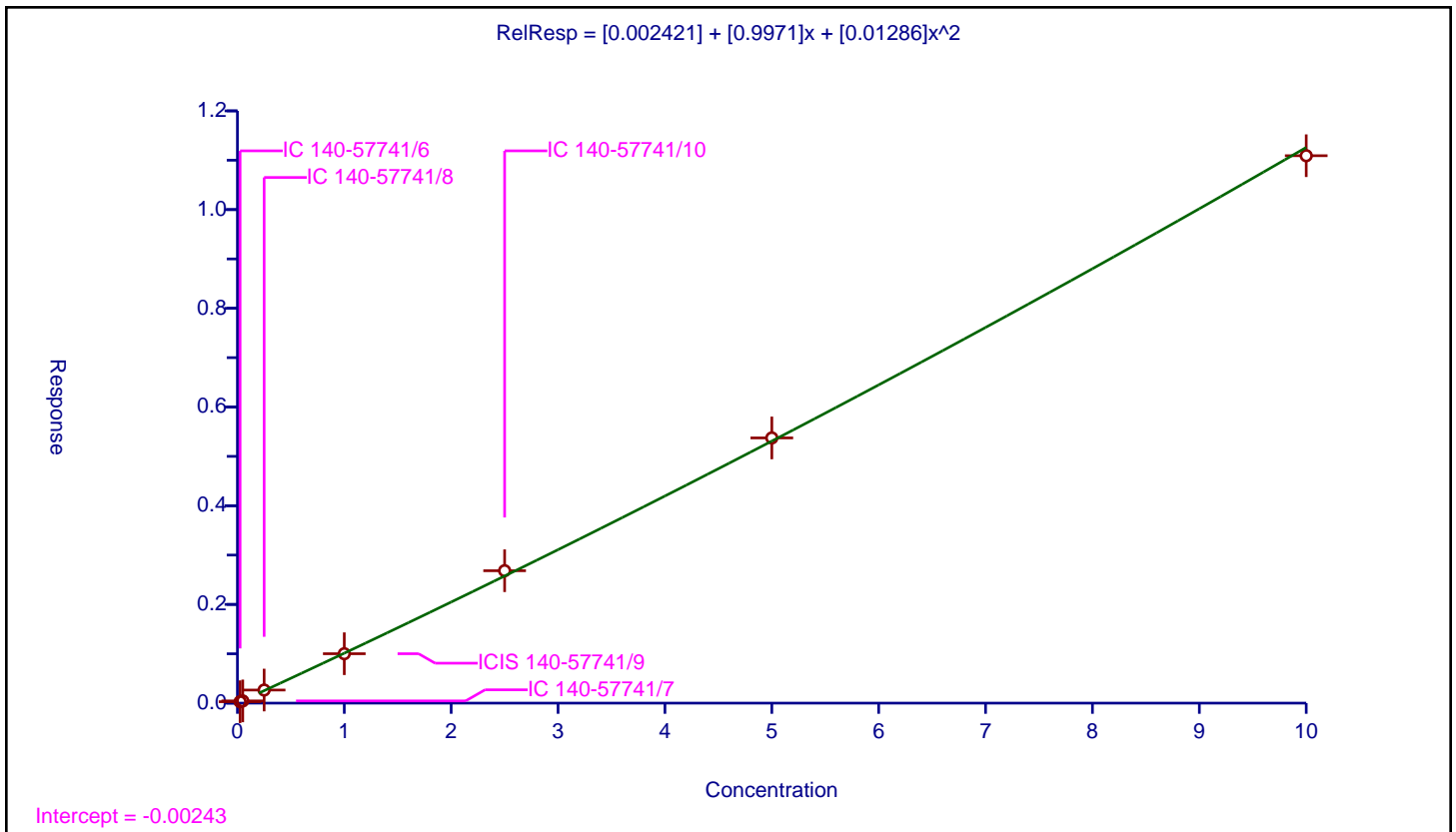
/ NMeFOSA

Curve Type: Quadratic  
 Weighting: Conc\_Sq  
 Origin: None  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.002421
Slope:	0.9971
Second Order:	0.01286

Error Coefficients	
Standard Error:	2700000
Relative Standard Error:	8.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.029071	1.25	499646.0	1.162823	Y
2	IC 140-57741/7	0.05	0.044919	1.25	564600.0	0.898379	Y
3	IC 140-57741/8	0.25	0.265276	1.25	528614.0	1.061105	Y
4	ICIS 140-57741/9	1.0	1.001301	1.25	595309.0	1.001301	Y
5	IC 140-57741/10	2.5	2.683031	1.25	566057.0	1.073213	Y
6	IC 140-57741/11	5.0	5.37341	1.25	520919.0	1.074682	Y
7	IC 140-57741/12	10.0	11.091638	1.25	534306.0	1.109164	Y



**Calibration**

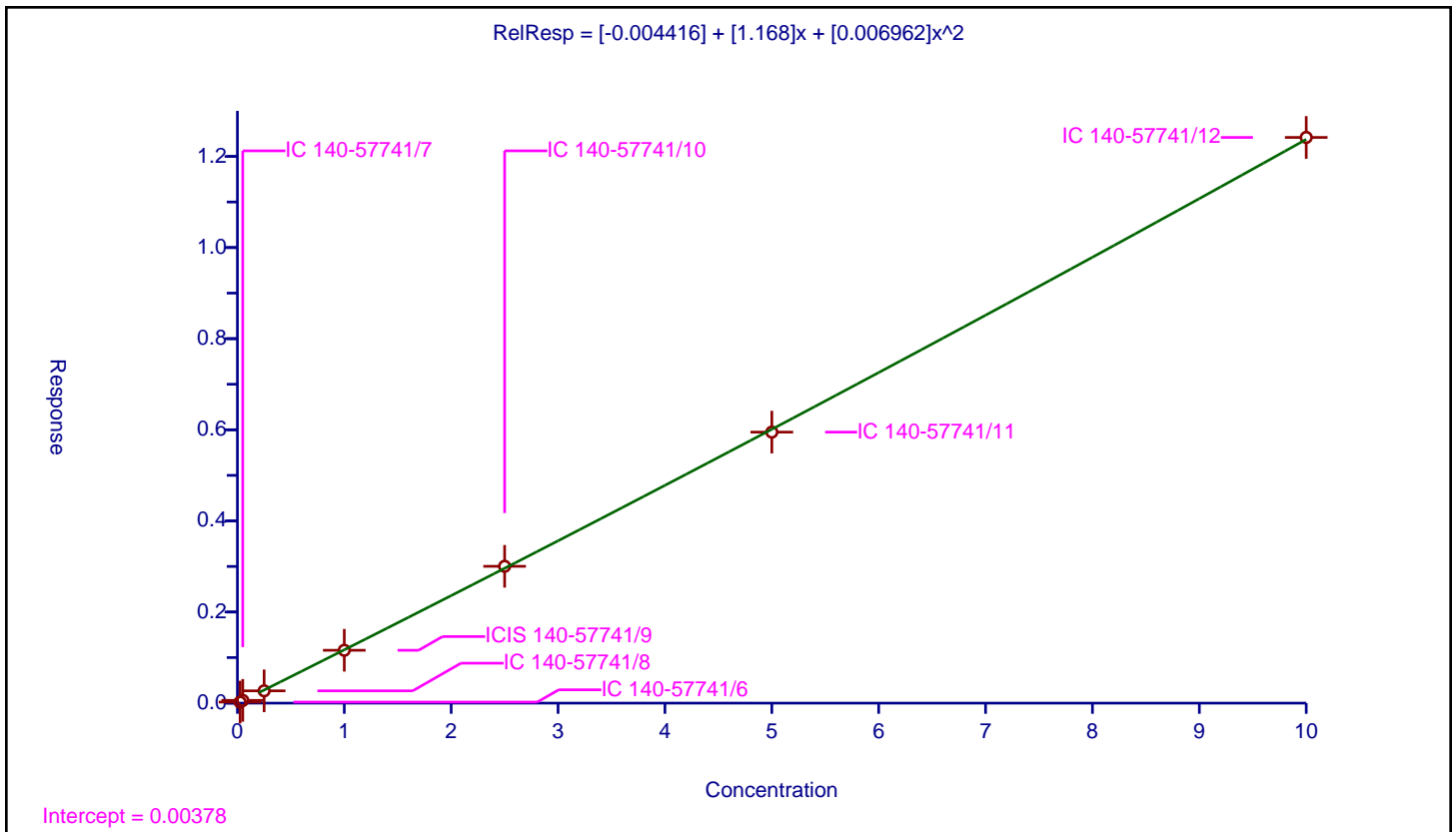
**/ 2-(N-methylperfluoro-1-octanesulfonamido) ethanol**

Curve Type: Quadratic  
 Weighting: Conc\_Sq  
 Origin: None  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	-0.004416
Slope:	1.168
Second Order:	0.006962

Error Coefficients	
Standard Error:	3980000
Relative Standard Error:	7.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.023319	1.25	748523.0	0.93277	Y
2	IC 140-57741/7	0.05	0.060656	1.25	813503.0	1.213118	Y
3	IC 140-57741/8	0.25	0.270021	1.25	792935.0	1.080082	Y
4	ICIS 140-57741/9	1.0	1.1601	1.25	803090.0	1.1601	Y
5	IC 140-57741/10	2.5	3.003438	1.25	776280.0	1.201375	Y
6	IC 140-57741/11	5.0	5.948881	1.25	723771.0	1.189776	Y
7	IC 140-57741/12	10.0	12.416842	1.25	694443.0	1.241684	Y



**Calibration**

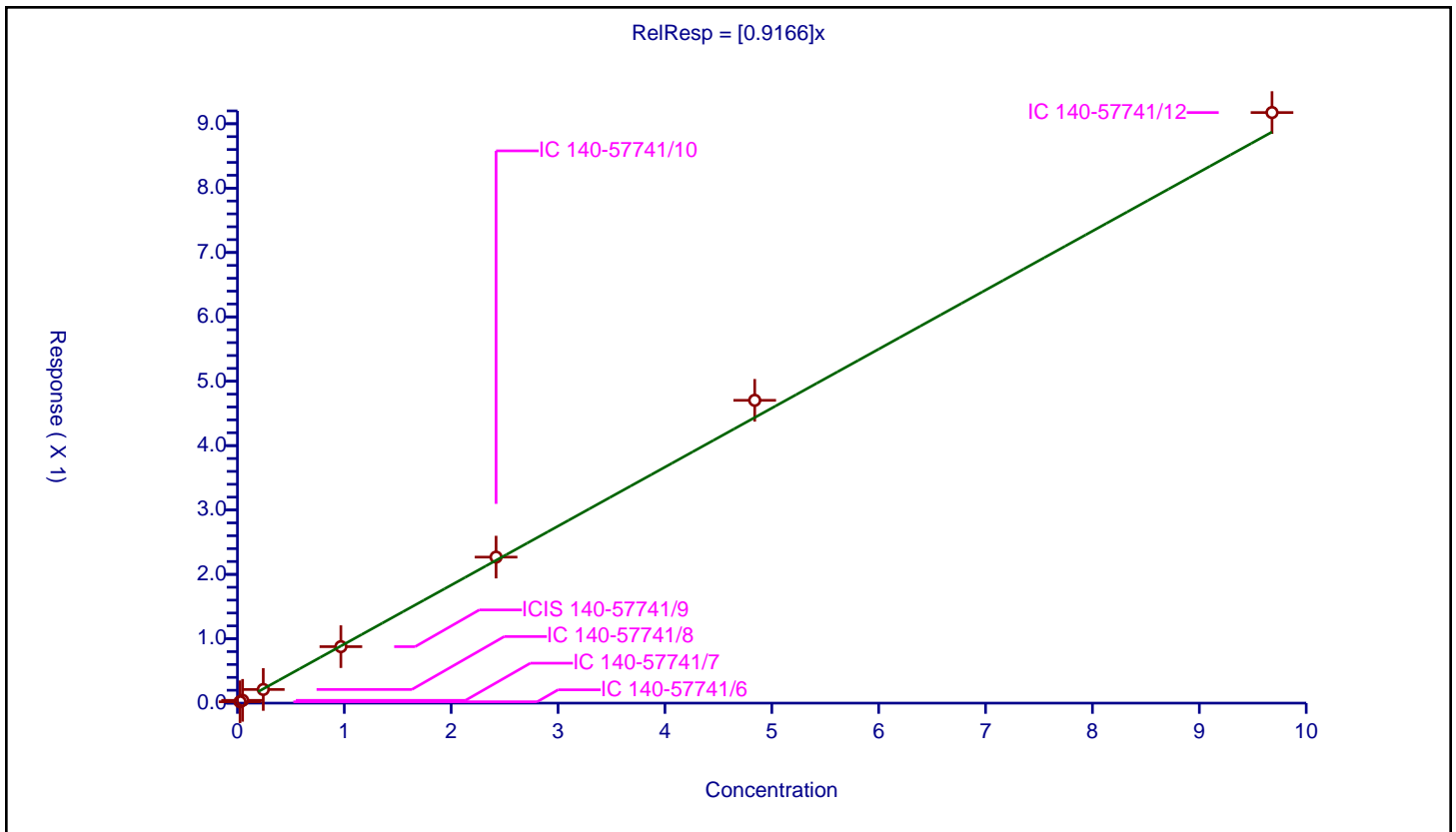
**/ Perfluorododecanesulfonic acid (PFDoS)**

**Curve Type:** Average  
**Weighting:** Conc\_Sq  
**Origin:** Force  
**Dependency:** Response  
**Calib Mode:** IsoDil  
**Response Base:** AREA  
**RF Rounding:** 0

Curve Coefficients	
Intercept:	0
Slope:	0.9166

Error Coefficients	
Standard Error:	9440000
Relative Standard Error:	3.9
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.0242	0.021398	1.195	2592602.0	0.884218	Y
2	IC 140-57741/7	0.0484	0.04323	1.195	2894864.0	0.893183	Y
3	IC 140-57741/8	0.242	0.211844	1.195	3000906.0	0.875389	Y
4	ICIS 140-57741/9	0.968	0.877308	1.195	2896304.0	0.90631	Y
5	IC 140-57741/10	2.42	2.268264	1.195	2779952.0	0.937299	Y
6	IC 140-57741/11	4.84	4.703959	1.195	2637457.0	0.971892	Y
7	IC 140-57741/12	9.68	9.174312	1.195	2584771.0	0.94776	Y





**Calibration**

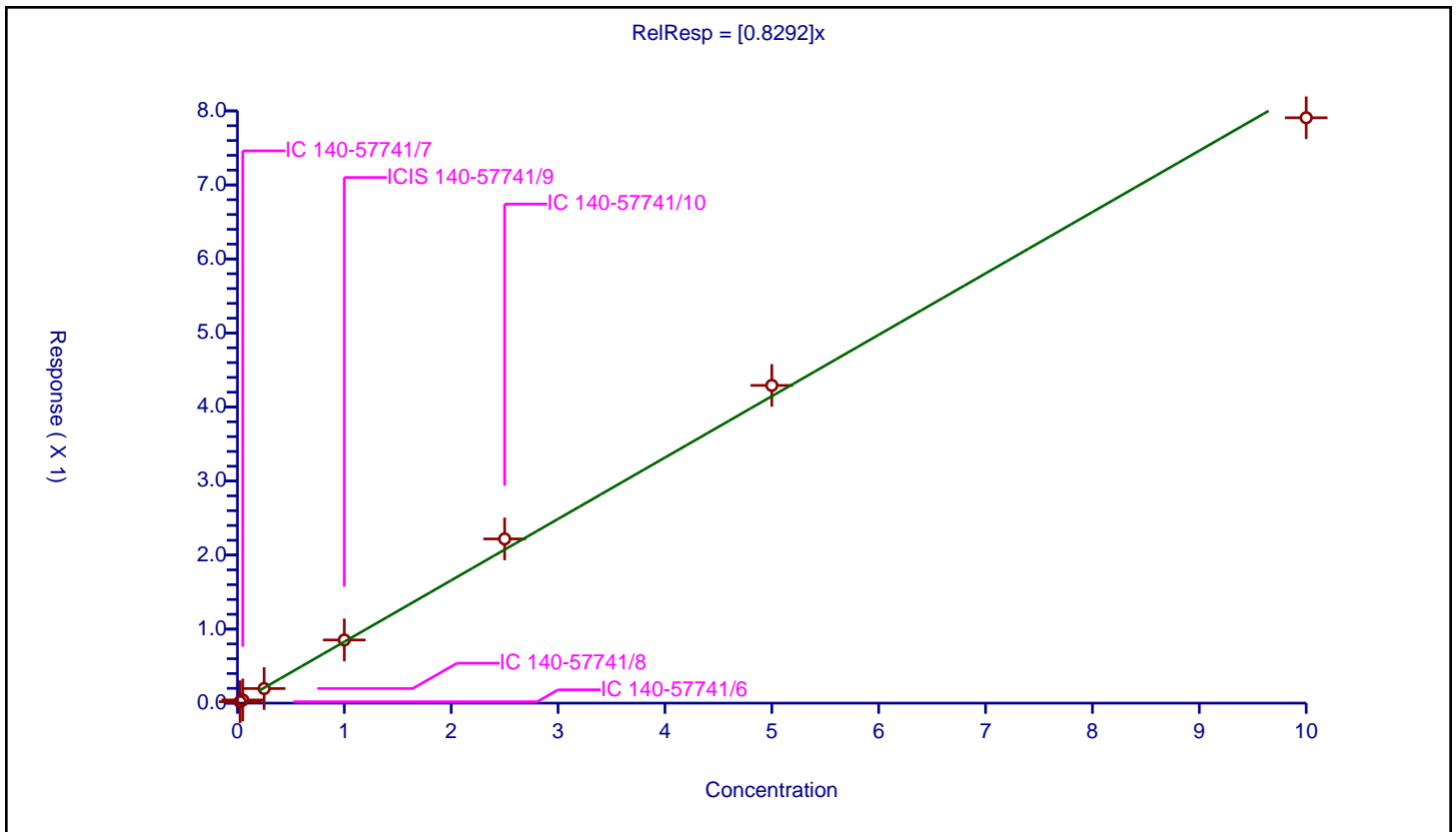
/ Perfluorotridecanoic acid

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.8292

Error Coefficients	
Standard Error:	18300000
Relative Standard Error:	5.6
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.019179	1.25	6031799.0	0.767143	Y
2	IC 140-57741/7	0.05	0.043004	1.25	6475956.0	0.860078	Y
3	IC 140-57741/8	0.25	0.196934	1.25	6942988.0	0.787736	Y
4	ICIS 140-57741/9	1.0	0.853041	1.25	6649050.0	0.853041	Y
5	IC 140-57741/10	2.5	2.218	1.25	6505443.0	0.8872	Y
6	IC 140-57741/11	5.0	4.29169	1.25	5892161.0	0.858338	Y
7	IC 140-57741/12	10.0	7.907167	1.25	5995500.0	0.790717	Y



**Calibration**

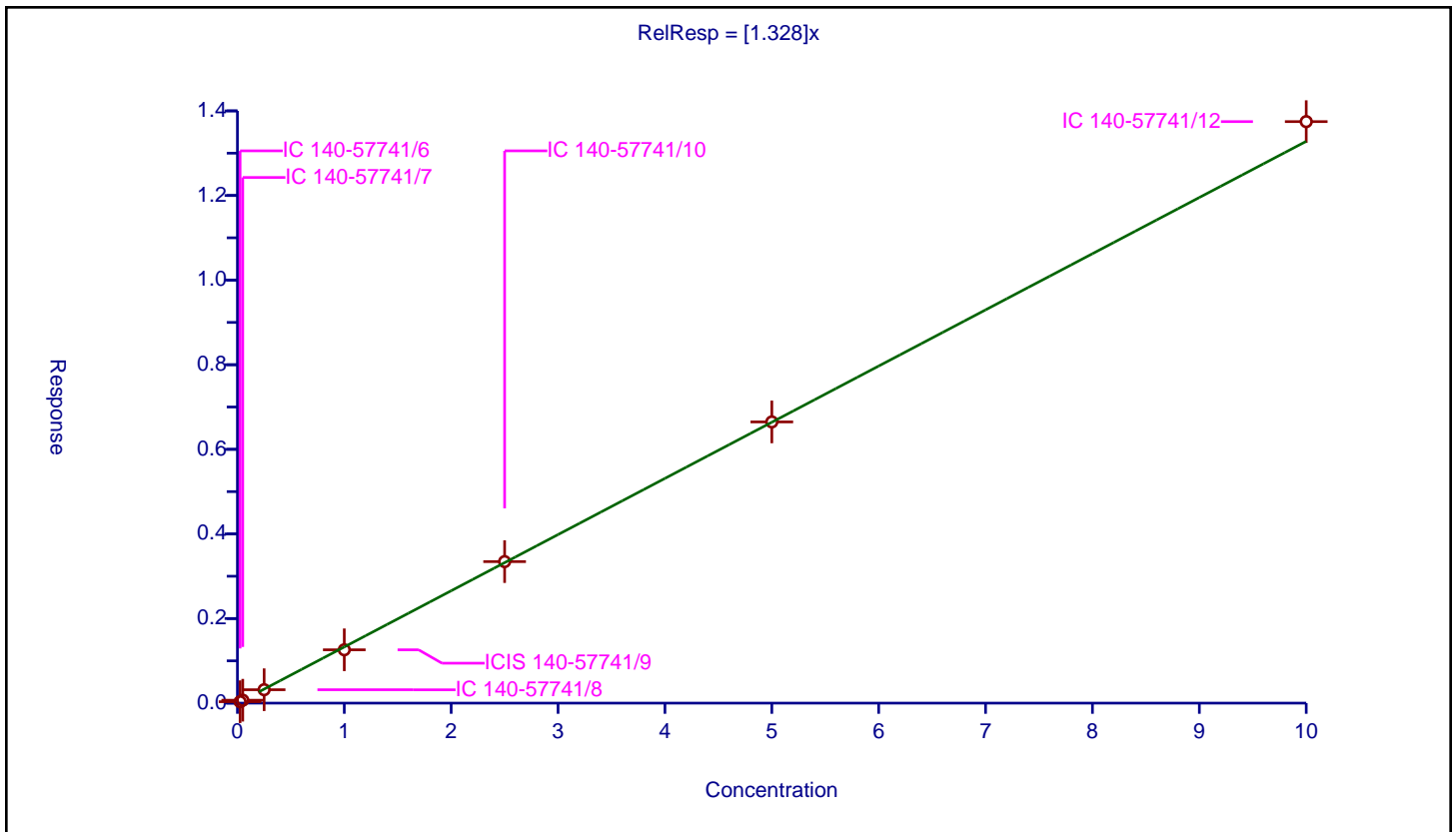
**/ 2-(N-ethylperfluoro-1-octanesulfonamido) ethanol**

**Curve Type:** Average  
**Weighting:** Conc\_Sq  
**Origin:** Force  
**Dependency:** Response  
**Calib Mode:** IsoDil  
**Response Base:** AREA  
**RF Rounding:** 0

Curve Coefficients	
Intercept:	0
Slope:	1.328

Error Coefficients	
Standard Error:	3640000
Relative Standard Error:	3.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.033506	1.25	737451.0	1.340225	Y
2	IC 140-57741/7	0.05	0.06919	1.25	811853.0	1.38381	Y
3	IC 140-57741/8	0.25	0.317283	1.25	791757.0	1.269133	Y
4	ICIS 140-57741/9	1.0	1.260831	1.25	809270.0	1.260831	Y
5	IC 140-57741/10	2.5	3.345304	1.25	783063.0	1.338122	Y
6	IC 140-57741/11	5.0	6.647291	1.25	736824.0	1.329458	Y
7	IC 140-57741/12	10.0	13.746318	1.25	698997.0	1.374632	Y



**Calibration**

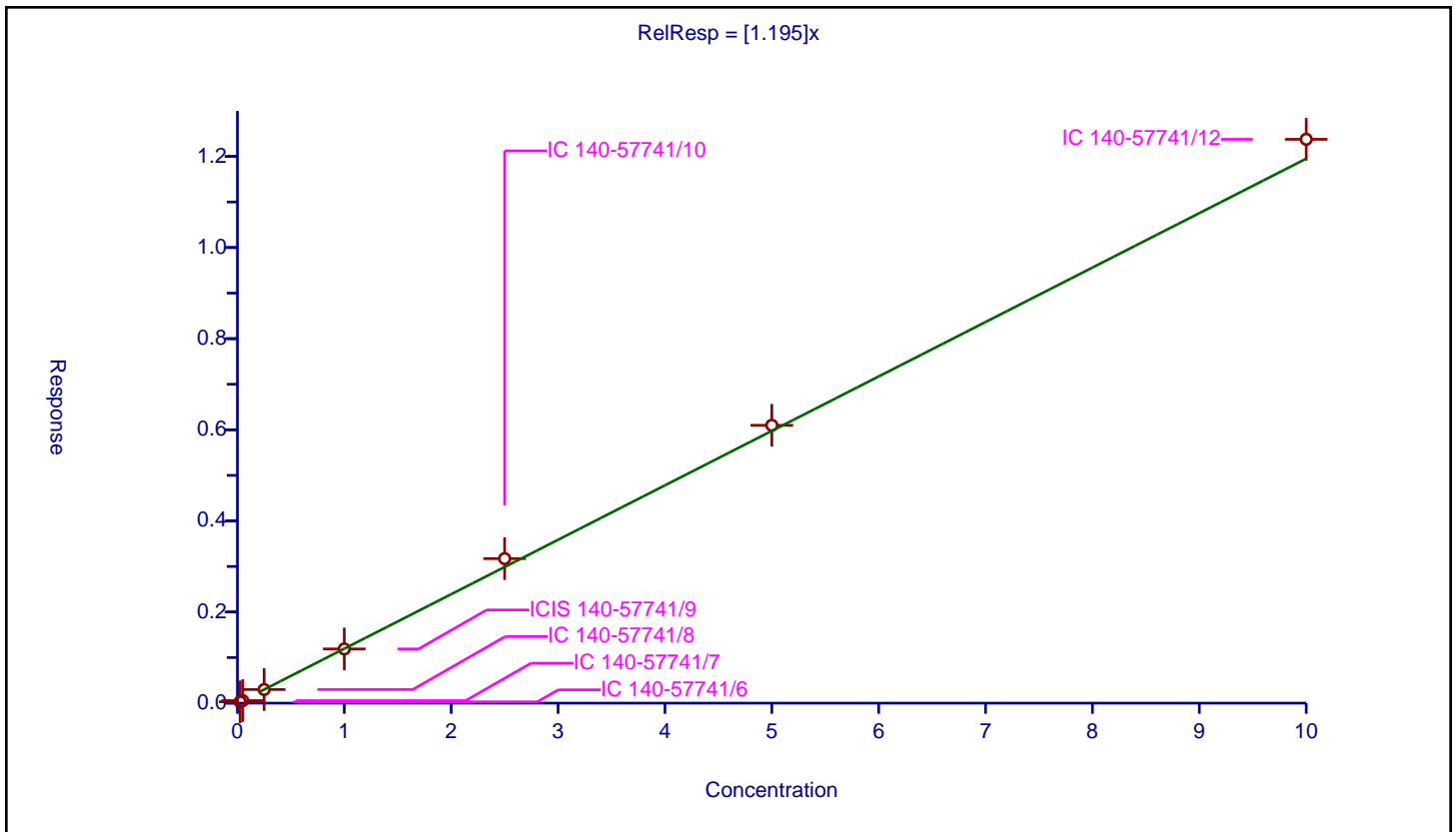
**/ N-ethylperfluoro-1-octanesulfonamide**

**Curve Type:** Average  
**Weighting:** Conc\_Sq  
**Origin:** Force  
**Dependency:** Response  
**Calib Mode:** IsoDil  
**Response Base:** AREA  
**RF Rounding:** 0

Curve Coefficients	
<b>Intercept:</b>	0
<b>Slope:</b>	1.195

Error Coefficients	
<b>Standard Error:</b>	2020000
<b>Relative Standard Error:</b>	4.6
<b>Correlation Coefficient:</b>	1.000
<b>Coefficient of Determination (Adjusted):</b>	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.028897	1.25	418161.0	1.155894	Y
2	IC 140-57741/7	0.05	0.055051	1.25	471424.0	1.101026	Y
3	IC 140-57741/8	0.25	0.298356	1.25	457457.0	1.193424	Y
4	ICIS 140-57741/9	1.0	1.189332	1.25	475911.0	1.189332	Y
5	IC 140-57741/10	2.5	3.171625	1.25	450709.0	1.26865	Y
6	IC 140-57741/11	5.0	6.098401	1.25	442829.0	1.21968	Y
7	IC 140-57741/12	10.0	12.376129	1.25	431073.0	1.237613	Y



**Calibration**

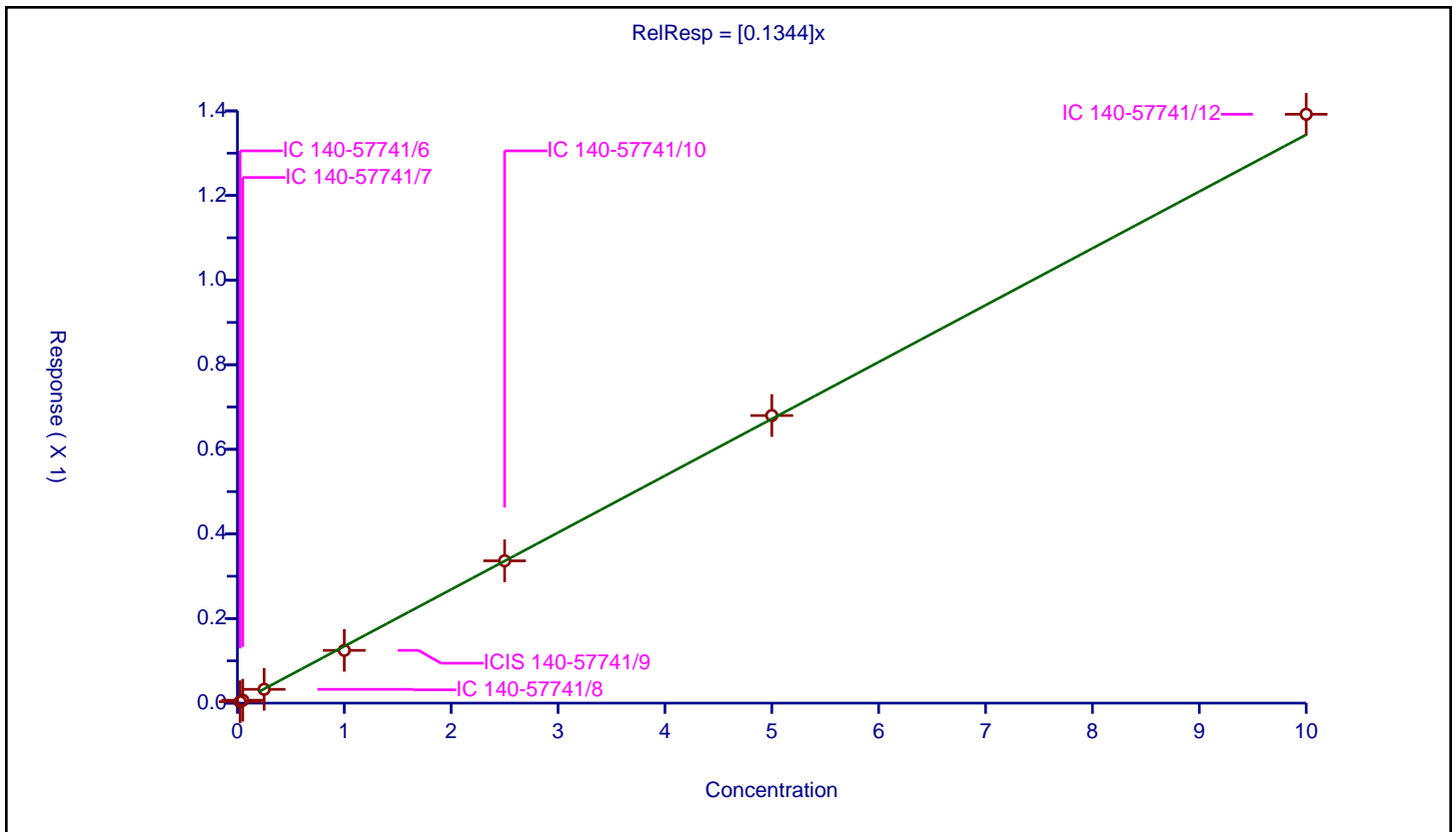
/ Perfluorotetradecanoic acid

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.1344

Error Coefficients	
Standard Error:	2340000
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 140-57741/6	0.025	0.003443	1.25	4691070.0	0.137719	Y
2	IC 140-57741/7	0.05	0.006889	1.25	4981370.0	0.137773	Y
3	IC 140-57741/8	0.25	0.03267	1.25	5107852.0	0.130681	Y
4	ICIS 140-57741/9	1.0	0.124732	1.25	5150989.0	0.124732	Y
5	IC 140-57741/10	2.5	0.336452	1.25	4899401.0	0.134581	Y
6	IC 140-57741/11	5.0	0.679839	1.25	4681083.0	0.135968	Y
7	IC 140-57741/12	10.0	1.392082	1.25	4423066.0	0.139208	Y



**Calibration**

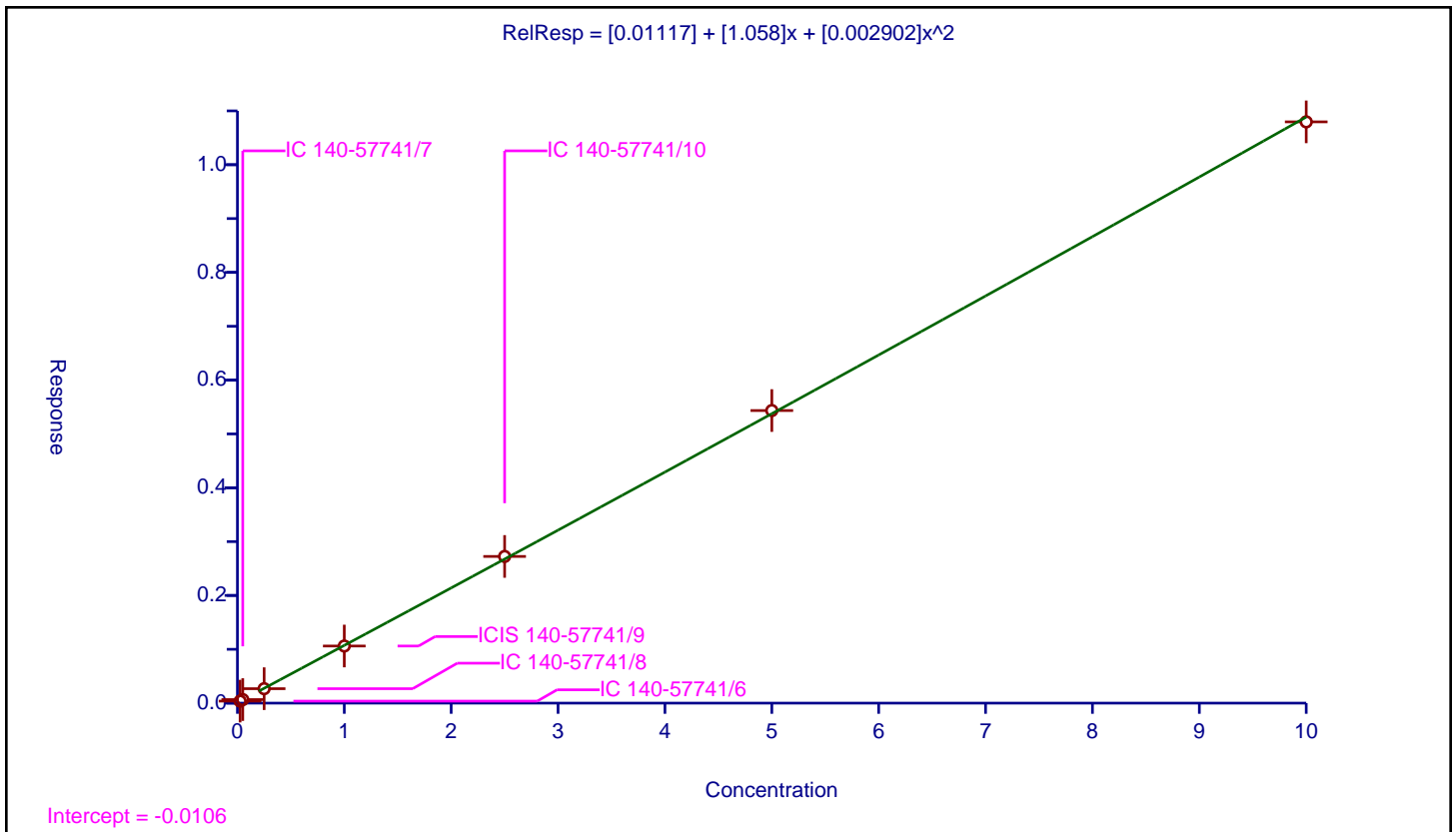
/ Perfluorohexadecanoic acid

Curve Type: Quadratic  
 Weighting: Conc\_Sq  
 Origin: None  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0.01117
Slope:	1.058
Second Order:	0.002902

Error Coefficients	
Standard Error:	15700000
Relative Standard Error:	2.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.037283	1.25	3064643.0	1.491332	Y
2	IC 140-57741/7	0.05	0.065826	1.25	3465880.0	1.316513	Y
3	IC 140-57741/8	0.25	0.268141	1.25	3400742.0	1.072566	Y
4	ICIS 140-57741/9	1.0	1.060967	1.25	3410021.0	1.060967	Y
5	IC 140-57741/10	2.5	2.724446	1.25	3338421.0	1.089778	Y
6	IC 140-57741/11	5.0	5.434307	1.25	3181783.0	1.086861	Y
7	IC 140-57741/12	10.0	10.795973	1.25	3121615.0	1.079597	Y



Calibration

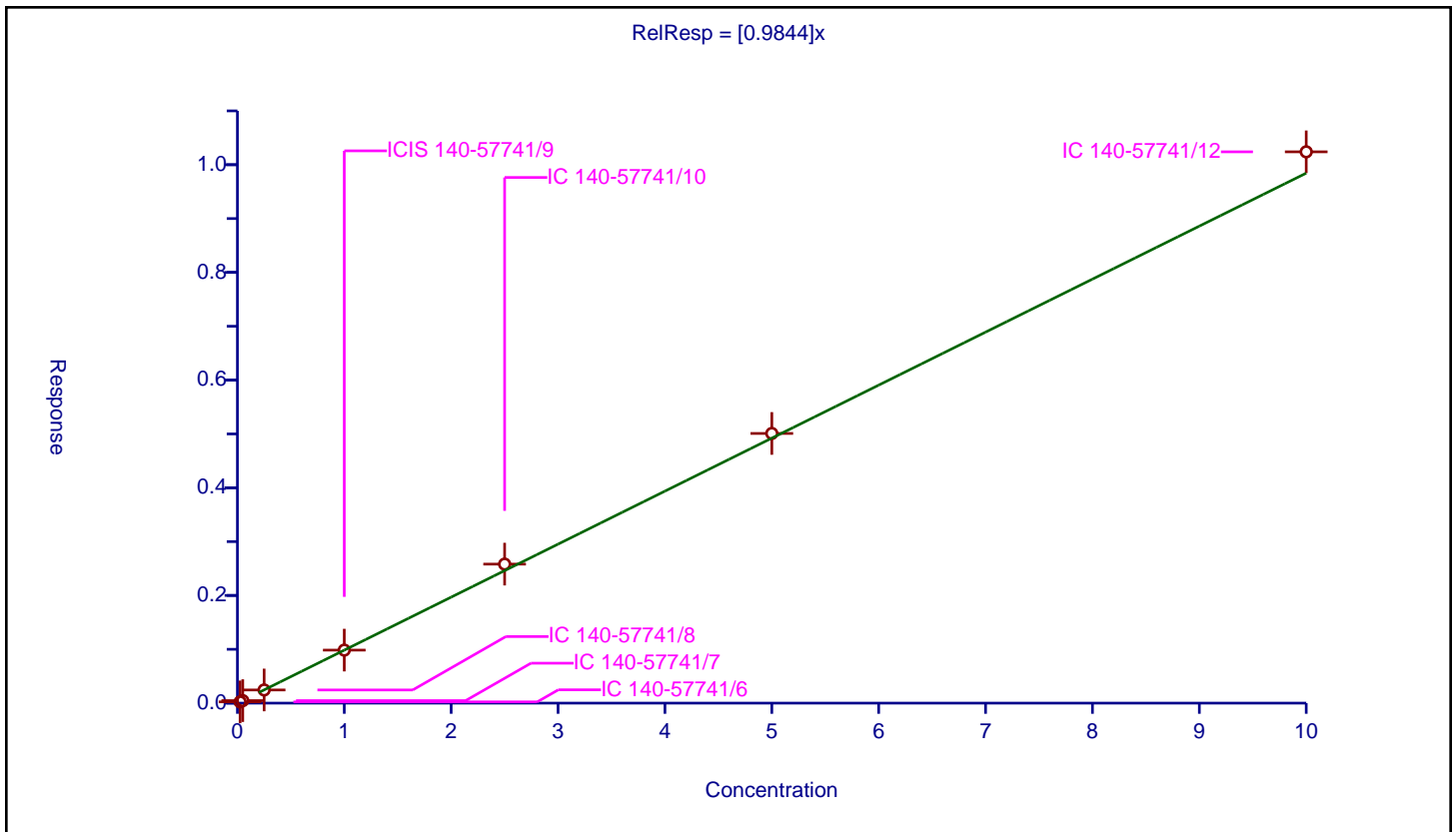
/ Perfluorooctadecanoic acid

Curve Type: Average  
 Weighting: Conc\_Sq  
 Origin: Force  
 Dependency: Response  
 Calib Mode: IsoDil  
 Response Base: AREA  
 RF Rounding: 0

Curve Coefficients	
Intercept:	0
Slope:	0.9844

Error Coefficients	
Standard Error:	12100000
Relative Standard Error:	4.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 140-57741/6	0.025	0.023432	1.25	3064643.0	0.937271	Y
2	IC 140-57741/7	0.05	0.04656	1.25	3465880.0	0.931207	Y
3	IC 140-57741/8	0.25	0.244739	1.25	3400742.0	0.978957	Y
4	ICIS 140-57741/9	1.0	0.984613	1.25	3410021.0	0.984613	Y
5	IC 140-57741/10	2.5	2.581942	1.25	3338421.0	1.032777	Y
6	IC 140-57741/11	5.0	5.008906	1.25	3181783.0	1.001781	Y
7	IC 140-57741/12	10.0	10.239431	1.25	3121615.0	1.023943	Y



FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 140-57741/14 Calibration Date: 01/09/2022 11:46  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 Lab File ID: \_014.d Conc. Units: ng/mL

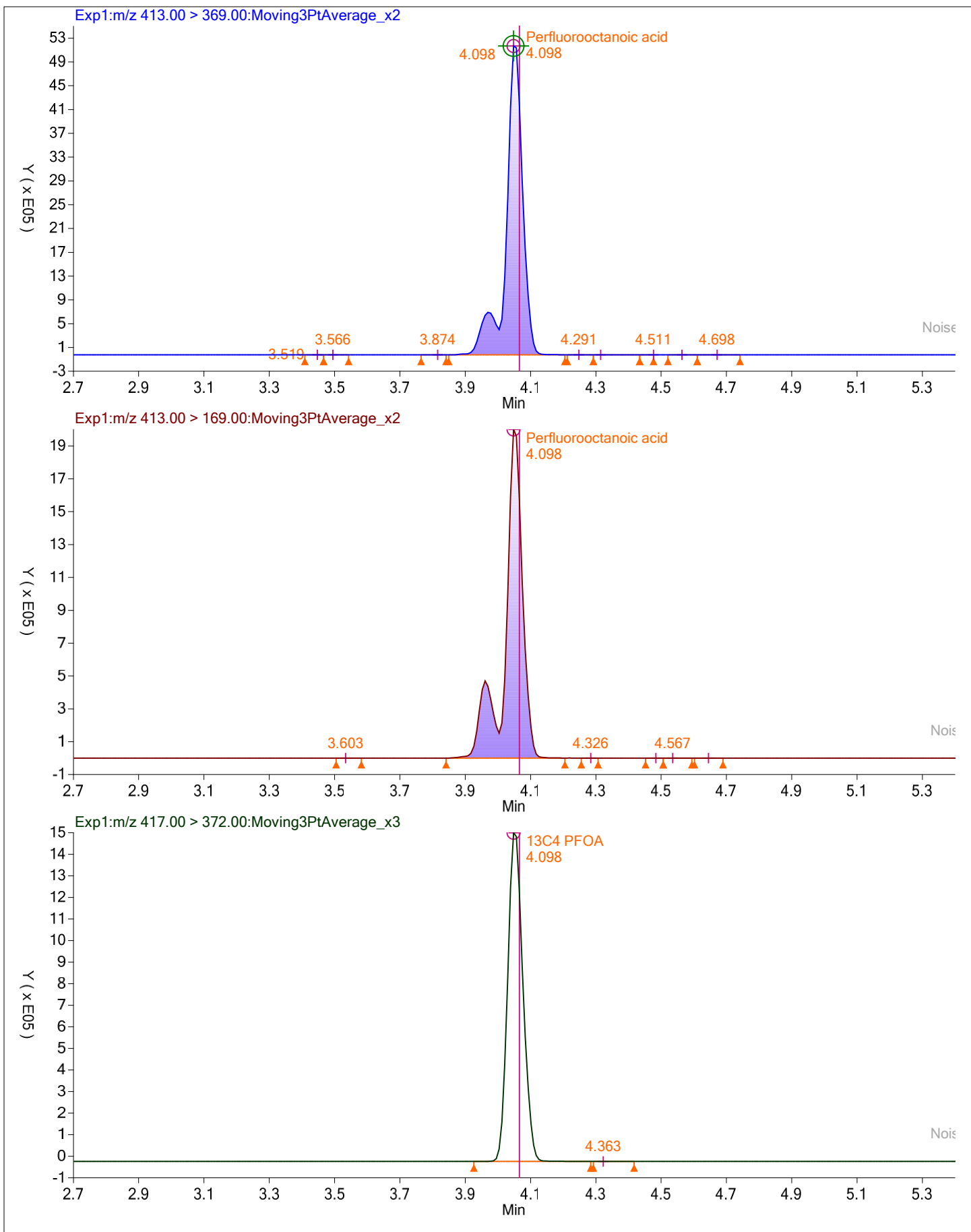
ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7844	0.8299		2.15	2.03	5.8	40.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9519	1.036		2.25	2.07	8.8	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.097	1.208		2.48	2.25	10.1	40.0
4:2 FTS	AveID	2.252	2.212		2.07	2.10	-1.8	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8680	0.9918		2.57	2.25	14.3	40.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	0.9713	0.9547		2.07	2.11	-1.7	40.0
HFPO-DA	AveID	1.352	1.606		2.67	2.25	18.7	40.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.377	1.481		2.42	2.25	7.5	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.047	1.244		2.67	2.25	18.8	40.0
DONA	AveID	2.630	2.856		2.44	2.25	8.6	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9541	0.9309		2.09	2.14	-2.4	40.0
6:2 FTS	L2ID		1.758		2.09	2.14	-2.2	40.0
Perfluorooctanoic acid (PFOA)	AveID	1.147	1.329		2.61	2.25	15.8	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.099	1.235		2.53	2.25	12.4	40.0
Perfluorononanoic acid (PFNA)	Q2ID		1.047		2.73	2.25	21.4	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	Q2ID		2.374		2.47	2.25	9.6	50.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9748	0.9343		2.07	2.16	-4.2	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9459	0.9049		2.15	2.25	-4.3	40.0
Perfluorodecanoic acid (PFDA)	AveID	0.9645	1.165		2.72	2.25	20.8	40.0
8:2 FTS	AveID	1.415	1.410		2.21	2.22	-0.3	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	QuaIF		1.134		2.62	2.25	16.4	40.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		0.8984		2.10	2.17	-3.4	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9695	1.192		2.77	2.25	22.9	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Q2ID		1.202		2.70	2.25	20.1	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.672	1.878		2.53	2.25	12.3	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		1.235		2.75	2.25	22.3	40.0
10:2 FTS	AveID	2.276	2.257		2.15	2.17	-0.9	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	Q2ID		1.143		2.18	2.25	-3.2	40.0
NMeFOSA	Q2ID		1.003		2.20	2.25	-2.3	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9166	0.9316		2.21	2.18	1.6	40.0

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 140-57741/14 Calibration Date: 01/09/2022 11:46  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 Lab File ID: \_014.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTriA)	AveID	0.8292	0.9802		2.66	2.25	18.2	40.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	AveID	1.328	1.300		2.20	2.25	-2.1	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.195	1.196		2.25	2.25	0.0	40.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1344	0.1539		2.58	2.25	14.5	40.0
Perfluorohexadecanoic acid	Q2ID		1.044		2.20	2.25	-2.4	40.0
Perfluorooctadecanoic acid	AveID	0.9844	0.9757		2.23	2.25	-0.9	40.0
13C4 PFBA	Ave	1.142	1.144		1.25	1.25	0.2	50.0
13C5 PFPeA	Ave	0.8865	0.8934		1.26	1.25	0.8	50.0
13C3 PFBS	Ave	0.5913	0.5993		1.18	1.16	1.4	50.0
M2-4:2 FTS	Ave	0.1820	0.1814		1.16	1.17	-0.3	50.0
13C2 PFHxA	Ave	0.9479	0.9706		1.28	1.25	2.4	50.0
13C3 HFPO-DA	Ave	0.4556	0.4519		1.24	1.25	-0.8	50.0
18O2 PFHxS	Ave	0.3946	0.3929		1.18	1.18	-0.4	50.0
13C4 PFHpA	Ave	0.9067	0.9208		1.27	1.25	1.6	50.0
M2-6:2 FTS	Ave	0.1835	0.1817		1.18	1.19	-1.0	50.0
13C4 PFOA	Ave	0.9376	0.9198		1.23	1.25	-1.9	50.0
13C4 PFOS	Ave	0.5681	0.5746		1.21	1.20	1.1	50.0
13C5 PFNA	Ave	1.234	1.226		1.24	1.25	-0.7	50.0
13C8 FOSA	Ave	0.7682	0.7880		1.28	1.25	2.6	50.0
13C2 PFDA	Ave	1.191	1.164		1.22	1.25	-2.3	50.0
M2-8:2 FTS	Ave	0.2070	0.1970		1.14	1.20	-4.8	50.0
d3-NMeFOSAA	Ave	0.1401	0.1413		1.26	1.25	0.9	50.0
13C2 PFUnA	Ave	1.189	1.175		1.24	1.25	-1.2	50.0
d5-NEtFOSAA	Ave	0.1537	0.1529		1.24	1.25	-0.5	50.0
13C2 PFDoA	Ave	1.247	1.238		1.24	1.25	-0.7	50.0
d7-N-MeFOSE-M	Ave	0.1499	0.1467		1.22	1.25	-2.2	50.0
d-N-MeFOSA-M	Ave	0.1069	0.1107		1.30	1.25	3.6	50.0
d9-N-EtFOSE-M	Ave	0.1504	0.1488		1.24	1.25	-1.0	50.0
d-N-EtFOSA-M	Ave	0.0883	0.0888		1.26	1.25	0.6	50.0
13C2 PFTeDA	Ave	0.9508	0.9505		1.25	1.25	-0.0	50.0
13C2 PFHxDA	Ave	0.6444	0.6595		1.28	1.25	2.3	50.0
13C8 PFOA	AveID	0.999	1.046		1.31	1.25	4.6	50.0
13C8 PFOS	AveID	0.2220	0.2315		1.25	1.20	4.3	50.0





Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_014.d  
 Lims ID: ICV  
 Client ID:  
 Sample Type: ICV  
 Inject. Date: 09-Jan-2022 11:46:17 ALS Bottle#: 14 Worklist Smp#: 14  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022186-014 icv  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist:

Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 12:40:53 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1686

First Level Reviewer: cochranj Date: 09-Jan-2022 11:59:58

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	2.785	2.779	0.006	0.677	5618862	1.25	100	12283	
2 Perfluorobutanoic acid	212.90 > 169.00	2.790	2.779	0.011	1.002	7576025	2.15		2052	
D 3 13C5 PFPeA	267.90 > 223.00	3.099	3.091	0.008	0.753	4386829	1.26	101	9494	
4 Perfluoropentanoic acid	262.90 > 219.00	3.099	3.091	0.008	1.000	7521176	2.25		2326	
D 6 13C3 PFBS	301.90 > 80.00	3.107	3.107	0.0	0.755	2736912	1.18	101	14308	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.115	3.107	0.008	1.003	6397243	2.48	Target=2.65	18295	
	298.90 > 99.00	3.115	3.107	0.008	1.003	2350161		2.72(1.32-3.97)	9765	
D 8 M2-4:2 FTS	329.00 > 81.00	3.392	3.392	0.0	0.824	831880	1.16	99.7	1531	
7 4:2 FTS	327.00 > 307.00	3.392	3.392	0.0	1.000	3313815	2.07		8283	
D 9 13C2 PFHxA	315.00 > 270.00	3.422	3.422	0.0	0.832	4766044	1.28	102	9189	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.422	3.422	0.0	1.101	4743679	2.07	Target=3.44	9260	
	349.00 > 99.00	3.422	3.422	0.0	1.101	1372660		3.46(1.72-5.16)	9247	
10 Perfluorohexanoic acid	313.00 > 269.00	3.422	3.422	0.0	1.000	8508513	2.57	Target=11.80	3110	
	313.00 > 119.00	3.422	3.422	0.0	1.000	719840		11.82(5.90-17.70)	987	
D 12 13C3 HFPO-DA	287.00 > 169.00	3.529	3.519	0.010	0.858	2219038	1.24	99.2	4285	

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	3.529	3.519	0.010	1.000	6414572	2.67			4074	
D 17 18O2 PFHxS										
403.00 > 84.00	3.760	3.760	0.0	0.914	1825253	1.18		99.6	6834	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.760	3.760	0.0	1.000	5143829	2.42	Target=3.40		7241	M
399.00 > 99.00	3.760	3.760	0.0	1.000	1516543		3.39(1.70-5.10)		5482	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.770	3.770	0.0	0.916	4521592	1.27		102	7454	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.779	3.770	0.009	1.002	10123525	2.67	Target=3.29		4234	
363.00 > 169.00	3.779	3.770	0.009	1.002	3114751		3.25(1.65-4.94)		4290	
68 DONA										
377.00 > 251.00	3.807	3.807	0.0	0.865	14503826	2.44	Target=1.82		10398	
377.00 > 85.00	3.807	3.807	0.0	0.865	8565950		1.69(0.91-2.74)		5813	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.098	4.089	0.009	0.931	4500822	2.09	Target=3.92		6324	
449.00 > 99.00	4.098	4.089	0.009	0.931	1140960		3.94(1.96-5.87)		5921	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.107	4.098	0.009	0.998	847535	1.18		99.0	3373	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.107	4.098	0.009	0.998	4722519	1.31		105	11713	
19 6:2 FTS										
427.00 > 407.00	4.107	4.098	0.009	1.000	2679570	2.09			5004	
D 21 13C4 PFOA										
417.00 > 372.00	4.115	4.107	0.008	1.000	4516484	1.23		98.1	7051	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.115	4.107	0.008	1.000	10801437	2.61	Target=2.59		3489	
413.00 > 169.00	4.115	4.107	0.008	1.000	4250386		2.54(1.30-3.89)		2767	
* 22 13C2 PFOA										
415.00 > 370.00	4.115	4.107	0.008		4910276	1.25			6389	
D 25 13C4 PFOS										
503.00 > 80.00	4.402	4.393	0.009	1.070	2697342	1.21		101	4188	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.402	4.393	0.009	1.000	624476	1.25		104	5124	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.402	4.393	0.009	1.000	6270976	2.53	Target=4.65		6475	M
499.00 > 99.00	4.402	4.393	0.009	1.000	1370135		4.58(2.32-6.97)		5353	M
D 27 13C5 PFNA										
468.00 > 423.00	4.427	4.418	0.009	1.076	6018694	1.24		99.3	10880	
26 Perfluorononanoic acid										
463.00 > 419.00	4.427	4.418	0.009	1.000	11340690	2.73	Target=4.65		7772	
463.00 > 169.00	4.427	4.418	0.009	1.000	2582883		4.39(2.32-6.97)		4040	
63 9CIFOS										
531.00 > 351.00	4.560	4.560	0.0	1.036	12058676	2.47			10916	

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	4.681	4.681	0.0	1.063	4554451	2.07	Target=4.06		7908	
549.00 > 99.00	4.681	4.681	0.0	1.063	1212084		3.76(2.03-6.09)		5300	
D 34 13C8 FOSA										
506.00 > 78.00	4.706	4.698	0.008	1.144	3869059	1.28		103	4343	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.706	4.698	0.008	1.000	6301782	2.15			4400	
D 32 13C2 PFDA										
515.00 > 470.00	4.715	4.706	0.009	1.146	5716265	1.22		97.7	9970	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.715	4.706	0.009	1.000	11987010	2.72	Target=11.30		7687	
513.00 > 169.00	4.715	4.706	0.009	1.000	1018027		11.77(5.65-16.95)		1014	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.723	4.723	0.0	1.148	926925	1.14		95.2	1412	
31 8:2 FTS										
527.00 > 507.00	4.723	4.723	0.0	1.000	2424074	2.21			7819	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.861	4.852	0.009	1.181	693908	1.26		101	419	
36 NMeFOSAA										
570.00 > 419.00	4.861	4.852	0.009	1.000	1416349	2.62			2816	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.949	4.940	0.009	1.124	4398505	2.10	Target=3.79		10029	
599.00 > 99.00	4.949	4.940	0.009	1.124	1210588		3.63(1.90-5.69)		8720	
D 39 13C2 PFUnA										
565.00 > 520.00	4.975	4.975	0.0	1.209	5768456	1.24		98.8	7332	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.975	4.975	0.0	1.000	12374975	2.77	Target=8.45		8318	
563.00 > 169.00	4.975	4.975	0.0	1.000	1450287		8.53(4.22-12.67)		3842	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.993	4.993	0.0	1.213	750996	1.24		99.5	3344	
40 NEtFOSA										
584.00 > 419.00	5.002	4.993	0.009	1.002	1625259	2.70			1806	M
57 11C1FOS										
631.00 > 451.00	5.072	5.072	0.0	1.152	9536270	2.53			13825	
D 43 13C2 PFDa										
615.00 > 570.00	5.213	5.205	0.008	1.267	6080847	1.24		99.3	10489	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.213	5.205	0.008	1.000	13512486	2.75	Target=6.99		9355	
613.00 > 169.00	5.213	5.205	0.008	1.000	1908348		7.08(3.50-10.49)		2953	
50 10:2 FTS										
627.00 > 607.00	5.231	5.231	0.0	1.107	3790981	2.15			6775	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.284	5.284	0.0	1.284	720274	1.22		97.8	763	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.284	5.284	0.0	1.284	543464	1.29		104	53.8	
61 NMeFOSA										
512.00 > 169.00	5.292	5.284	0.008	1.002	981348	2.20			721	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
49 N-MeFOSE-M										
616.00 > 59.00	5.292	5.292	0.0	1.002	1482344	2.18			1826	
54 PFDoS										
699.00 > 80.00	5.383	5.383	0.0	1.223	4580042	2.21	Target=4.24		8837	
699.00 > 99.00	5.383	5.383	0.0	1.223	1054677		4.34(2.12-6.35)		8837	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.425	5.414	0.011	1.041	10728911	2.66	Target=6.20		8952	
663.00 > 169.00	5.425	5.414	0.011	1.041	1731218		6.20(3.10-9.30)		4677	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.444	5.434	0.010	1.323	730859	1.24		99.0	357	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.454	5.454	0.0	1.326	436082	1.26		101	891	
62 N-EtFOSE-M										
630.00 > 59.00	5.454	5.454	0.0	1.002	1710606	2.20			1609	
56 N-EtFOSA-M										
526.00 > 169.00	5.464	5.454	0.010	1.002	938916	2.25			557	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.607	5.596	0.011	1.363	4667251	1.25		100.0	9194	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.607	5.596	0.011	1.000	1292634	2.58	Target=1.05		4606	
713.00 > 219.00	5.596	5.596	0.0	0.998	1268940		1.02(0.53-1.58)		5336	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.912	5.903	0.009	1.437	3238191	1.28		102	6246	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.912	5.903	0.009	1.000	6086077	2.20	Target=8.09		5684	
813.00 > 169.00	5.912	5.903	0.009	1.000	742274		8.20(4.05-12.14)		2198	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.169	6.159	0.010	1.043	5687126	2.23	Target=11.53		4670	
913.00 > 169.00	6.164	6.159	0.005	1.043	495627		11.47(5.77-17.30)		1954	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

63ICVPFC2\_FUL\_00005

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_014.d

Injection Date: 09-Jan-2022 11:46:17

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

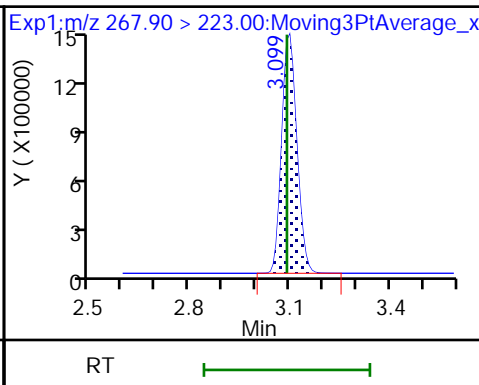
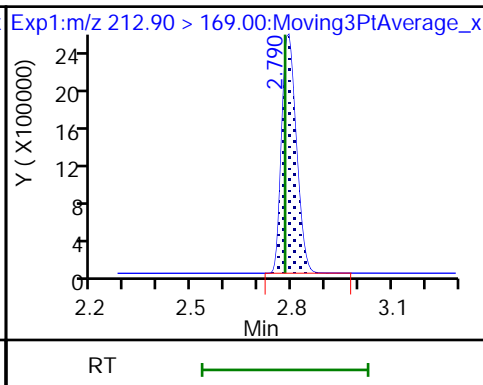
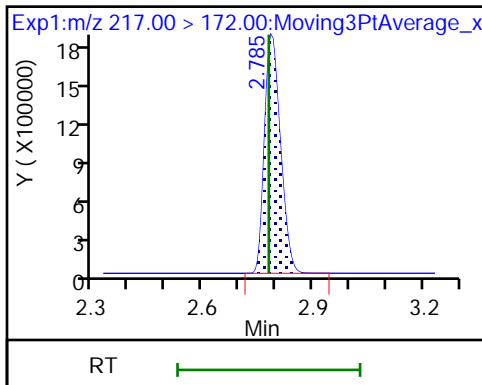
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

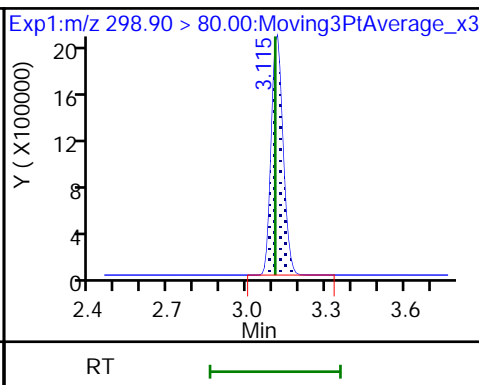
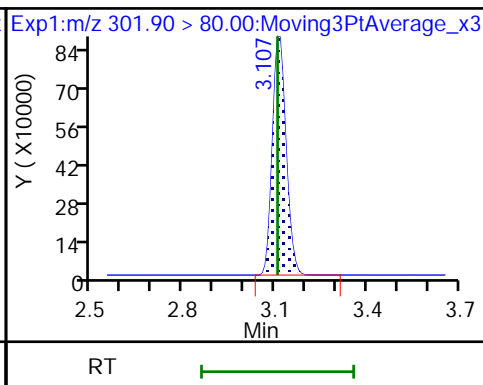
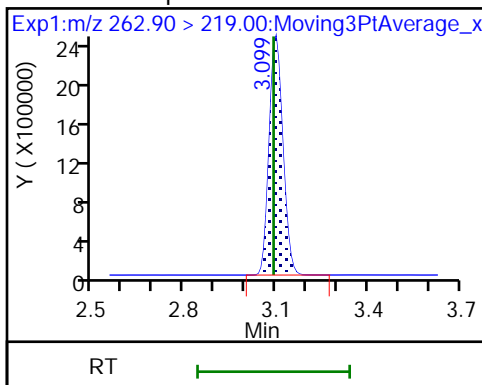
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

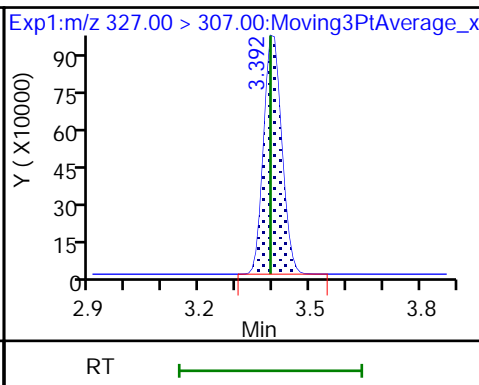
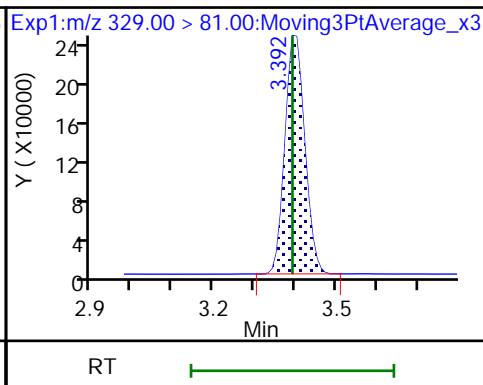
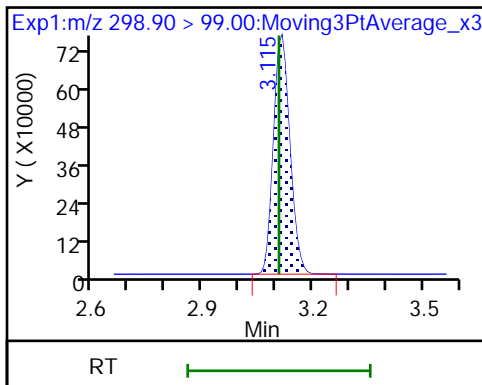
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

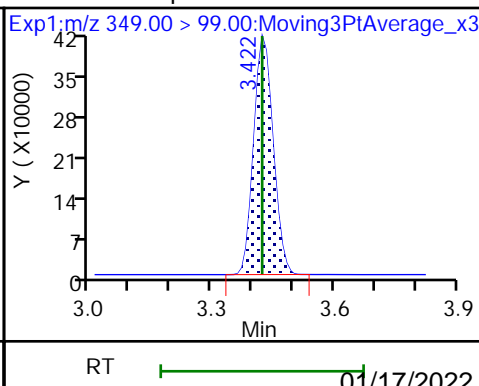
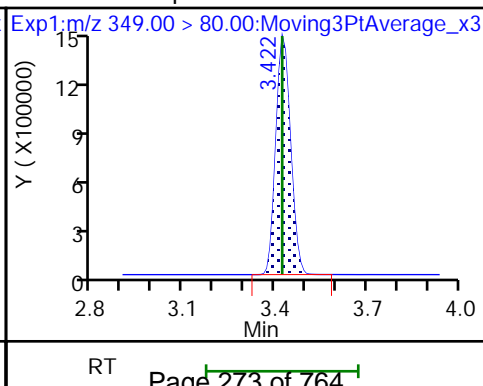
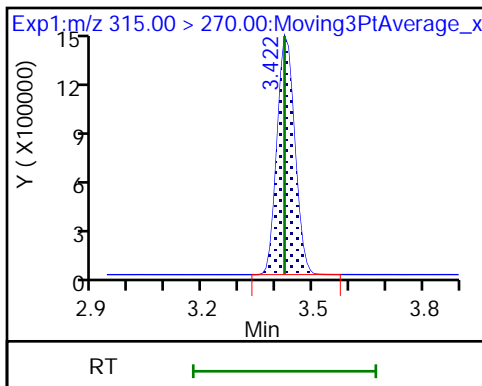
7 4:2 FTS

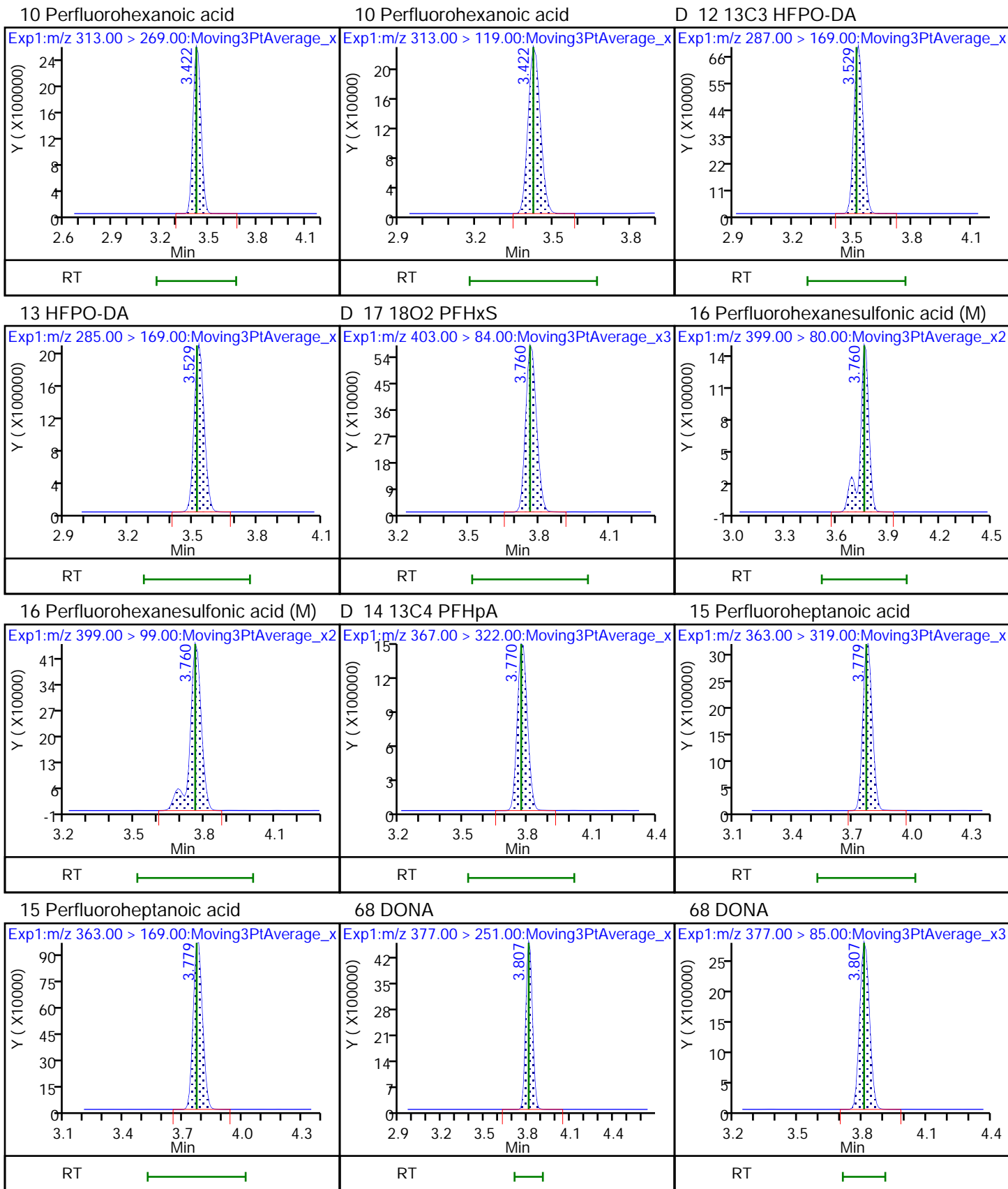


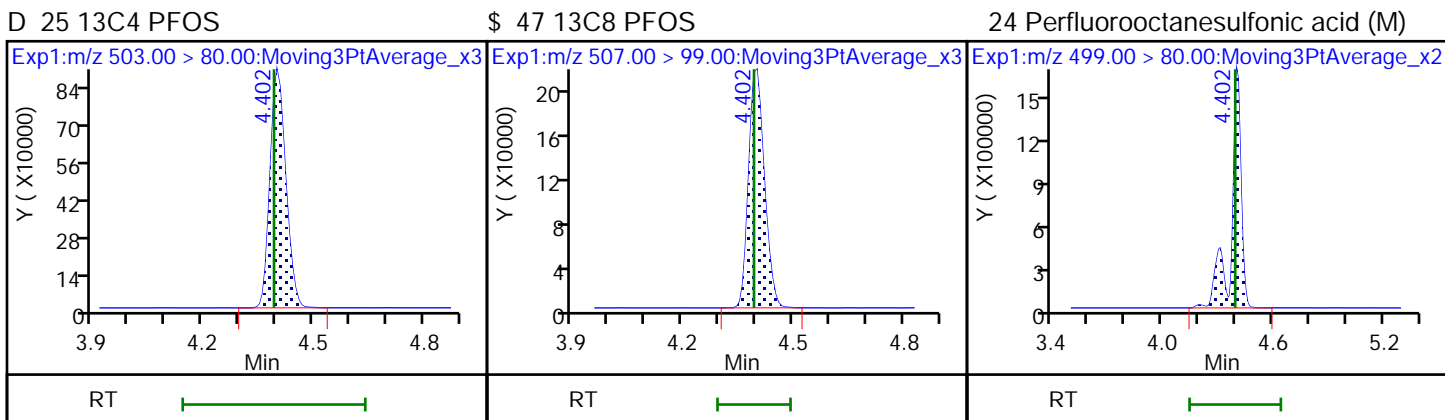
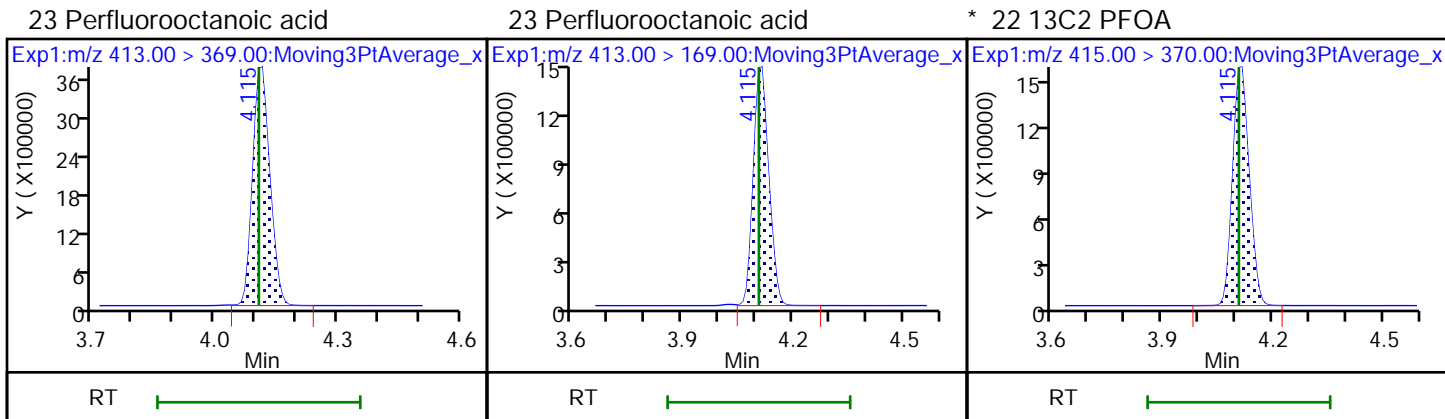
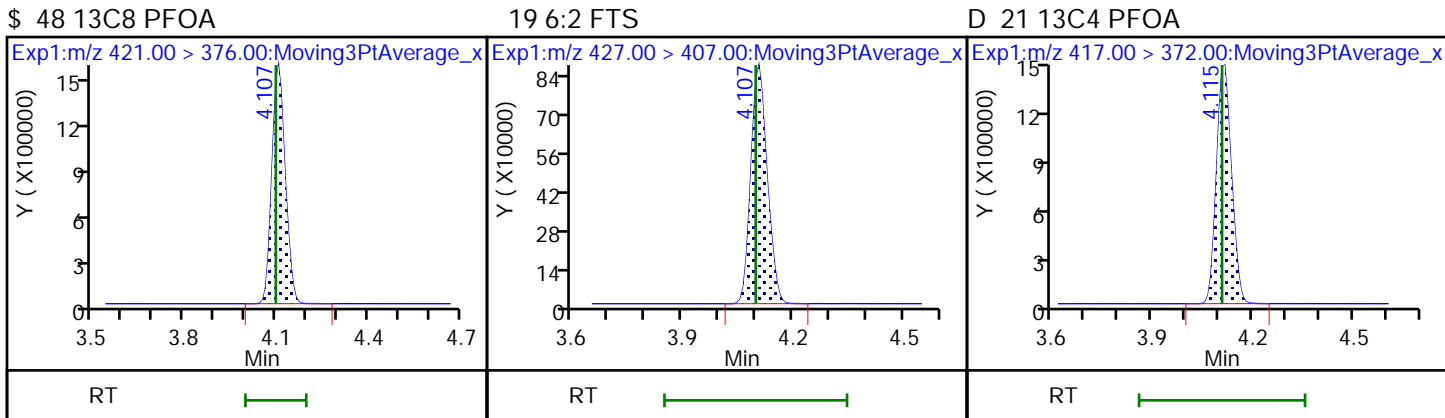
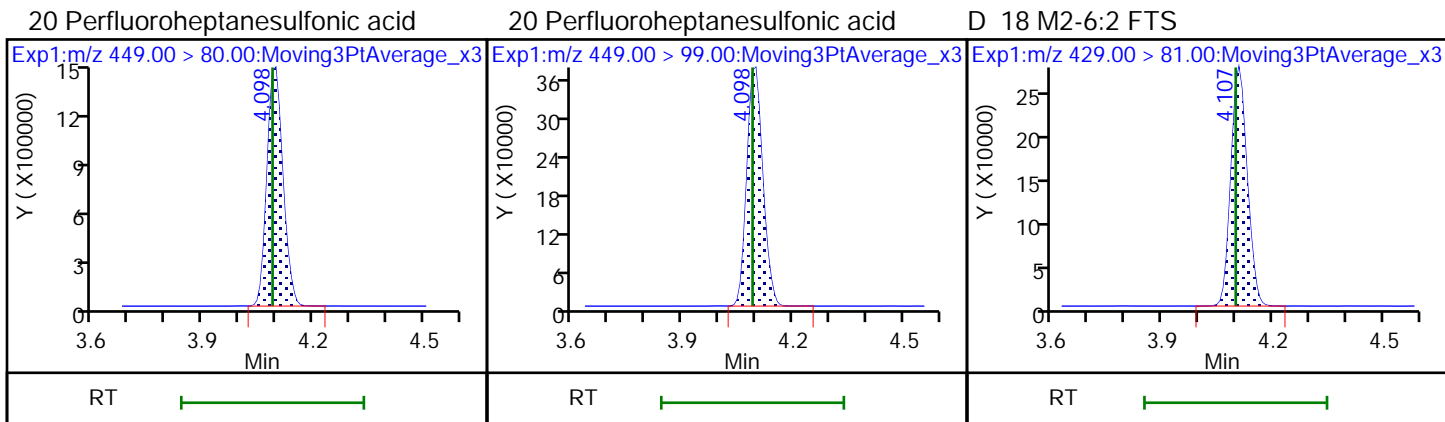
D 9 13C2 PFHxA

11 Perfluoropentanesulfonic acid

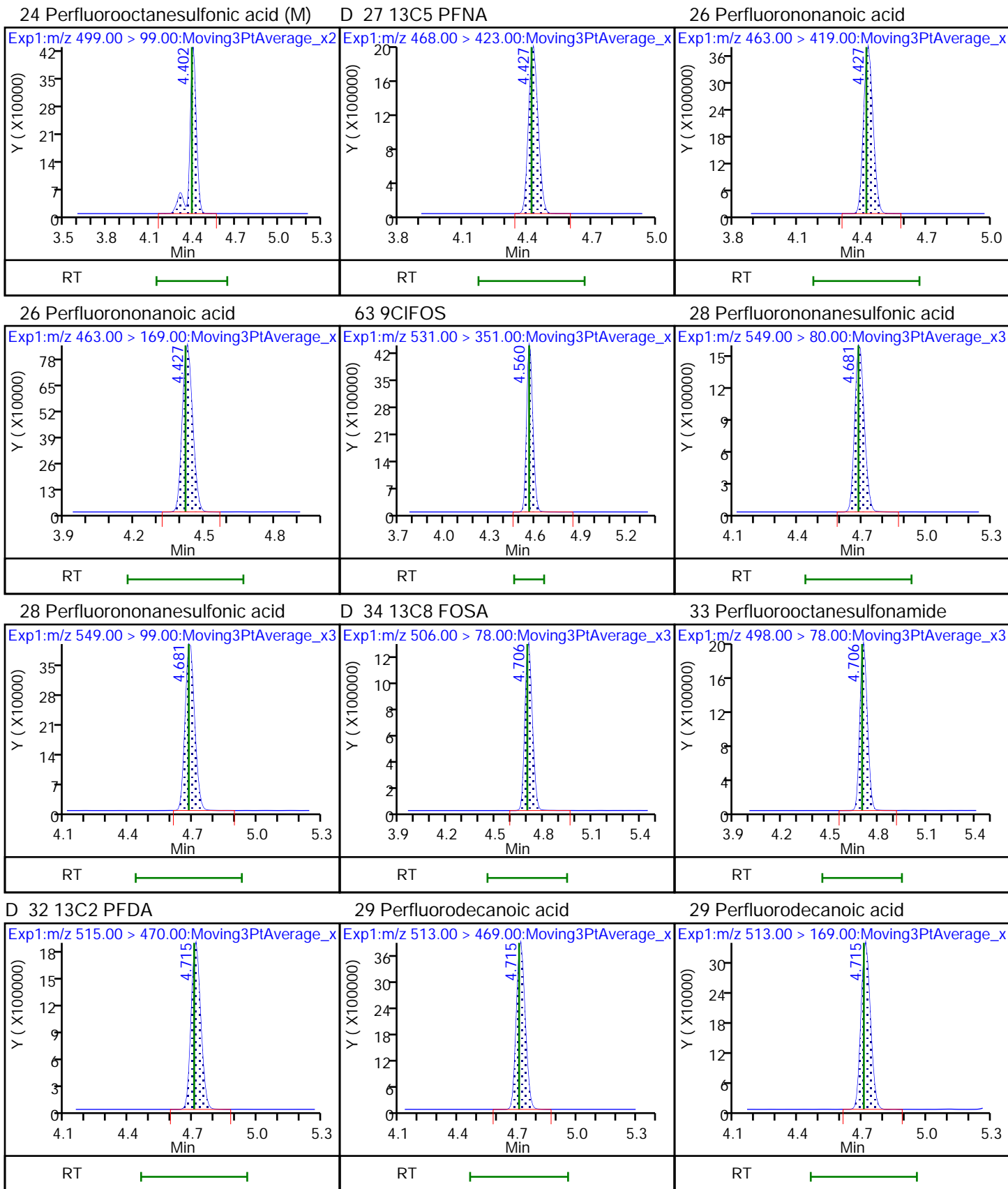
11 Perfluoropentanesulfonic acid







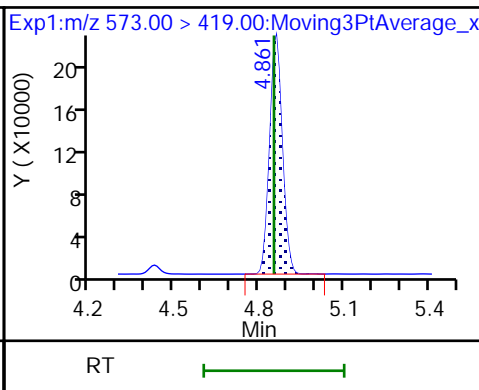
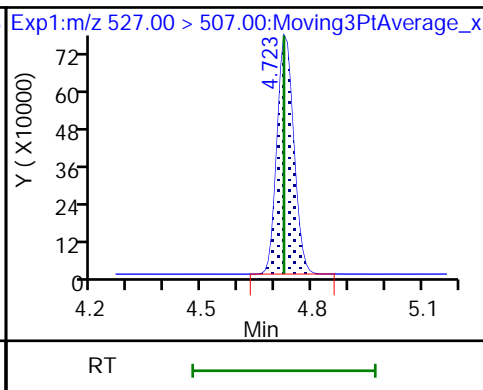
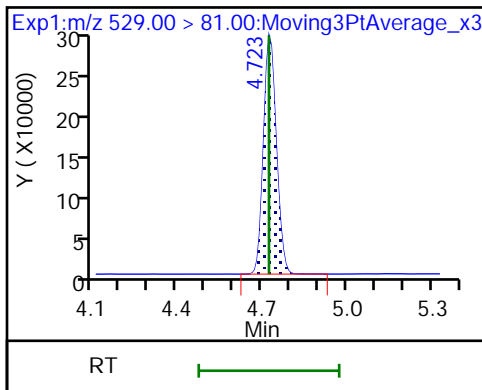




D 30 M2-8:2 FTS

31 8:2 FTS

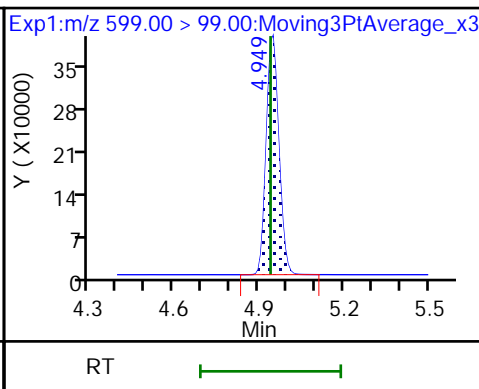
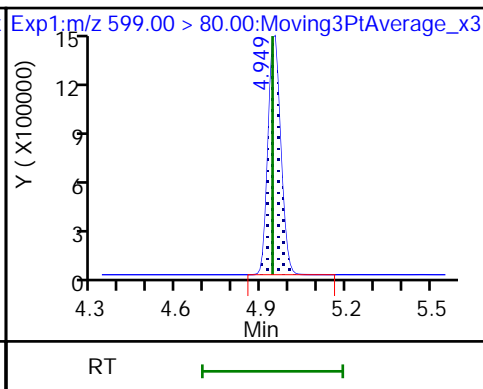
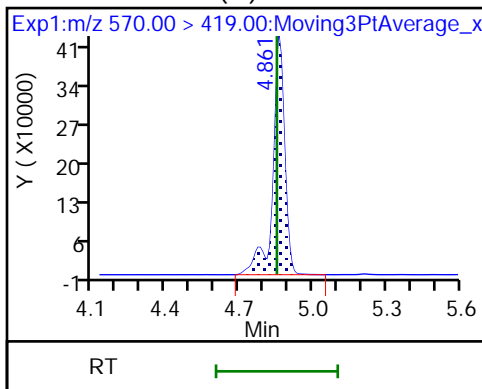
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

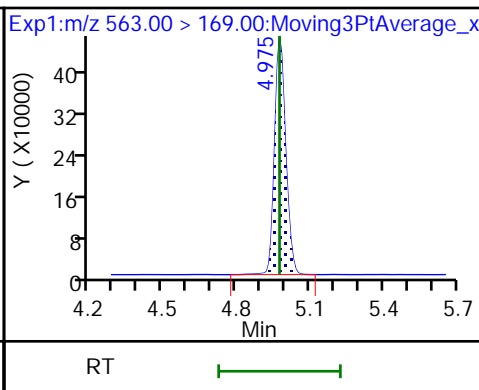
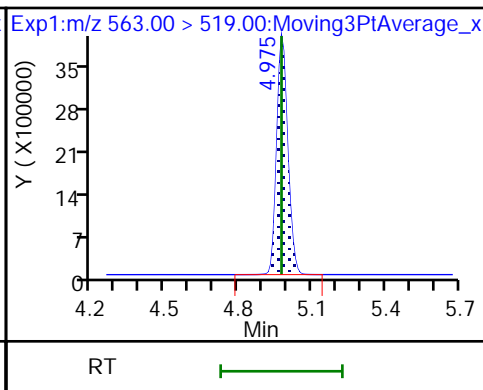
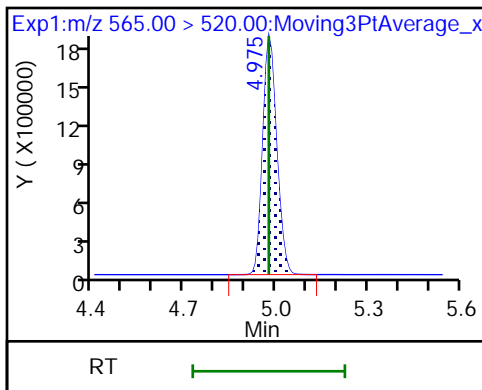
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

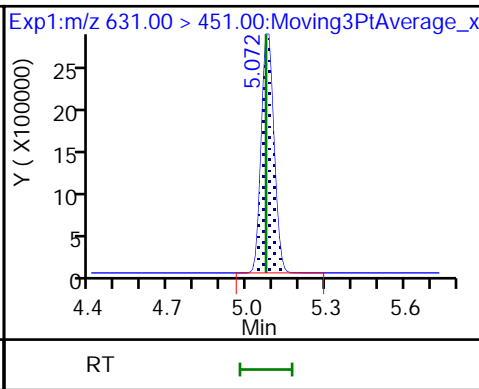
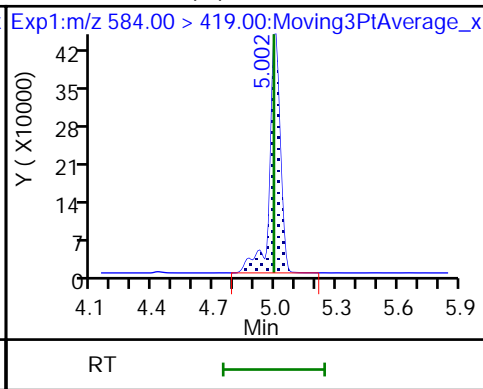
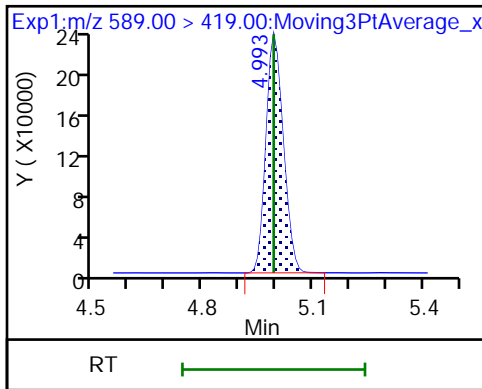
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA (M)

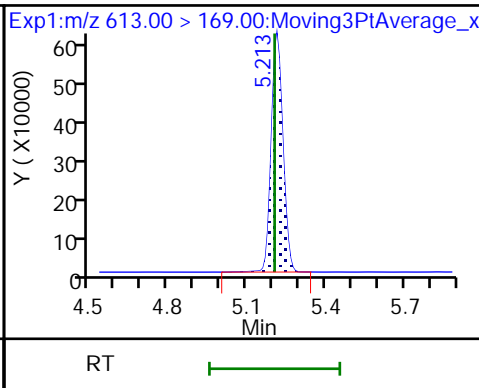
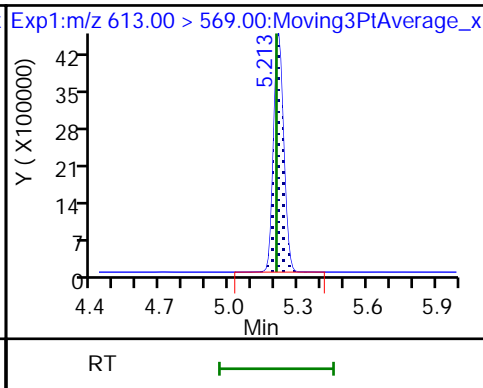
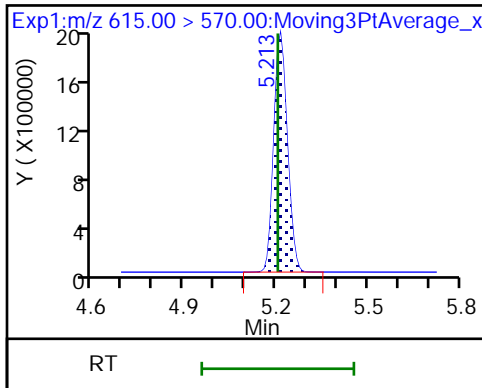
57 11C1FOS



D 43 13C2 PFDoA

42 Perfluorododecanoic acid

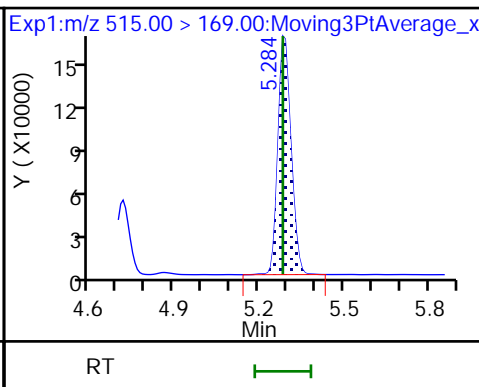
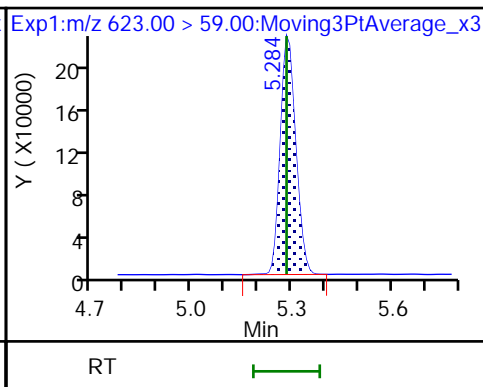
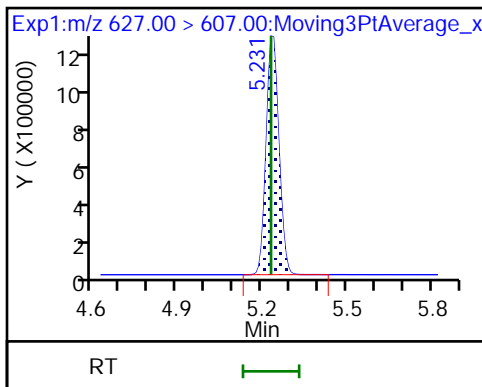
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

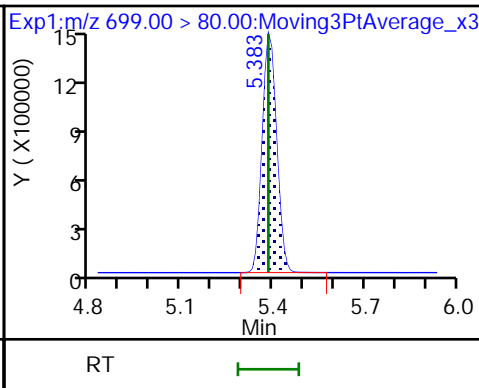
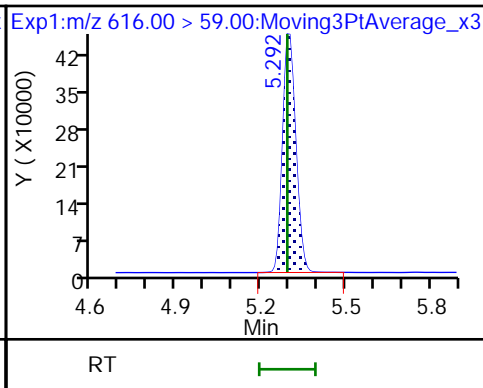
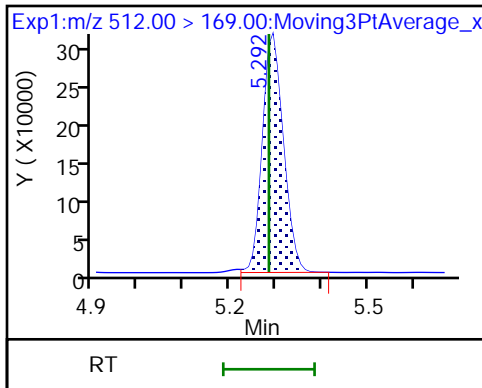
D 58 d-N-MeFOSA-M



61 NMeFOSA

49 N-MeFOSE-M

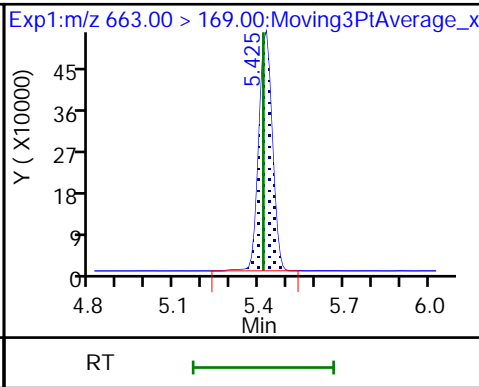
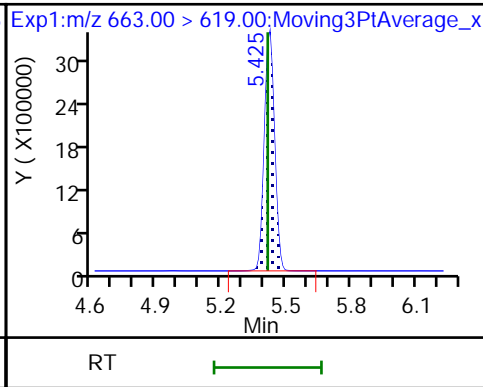
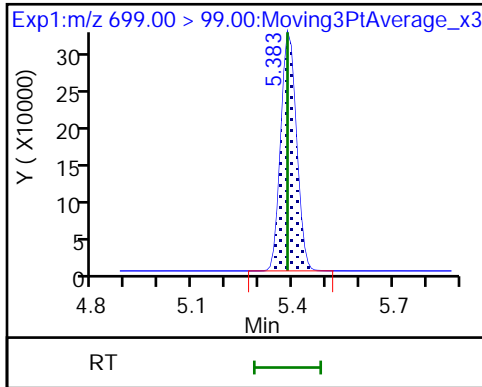
54 PFDoS



54 PFDoS

44 Perfluorotridecanoic acid

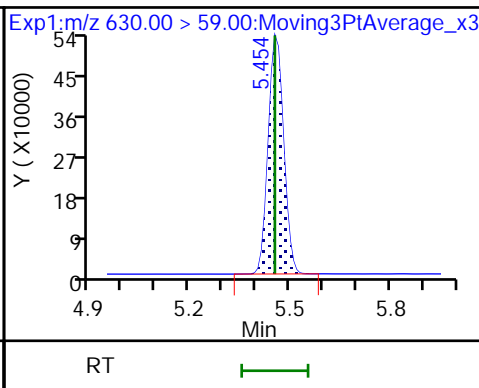
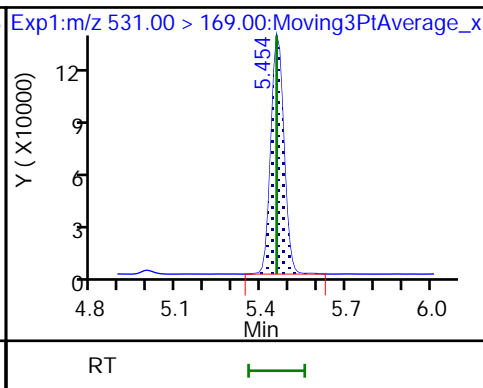
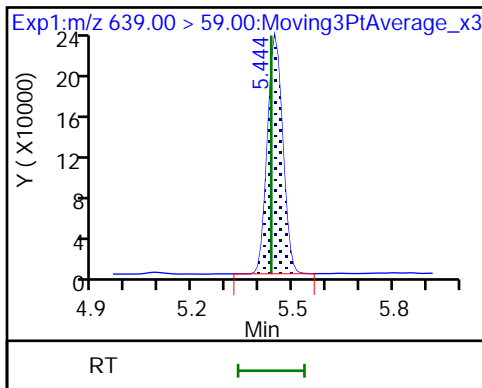
44 Perfluorotridecanoic acid



D 53 d9-N-EtFOSE-M

D 52 d-N-EtFOSA-M

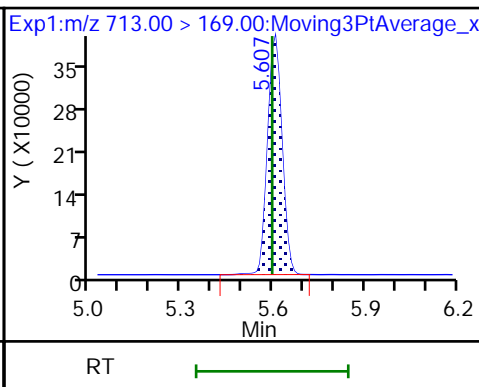
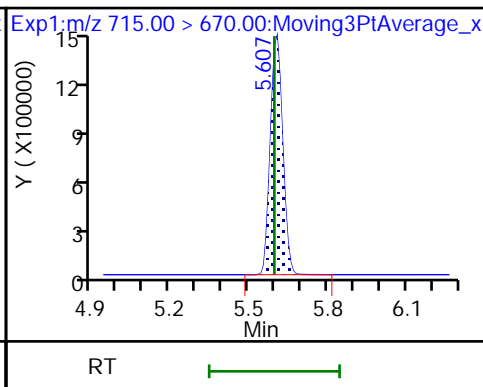
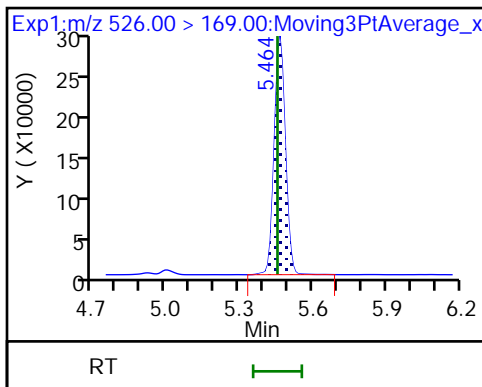
62 N-EtFOSE-M



56 N-EtFOSA-M

D 46 13C2 PFTeDA

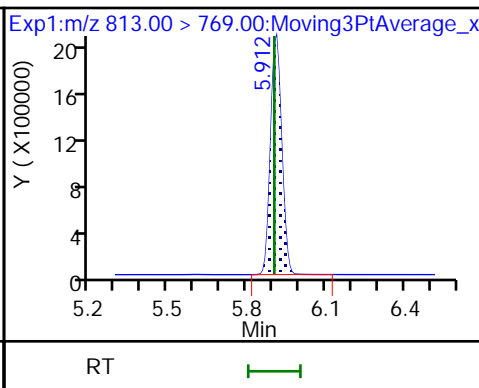
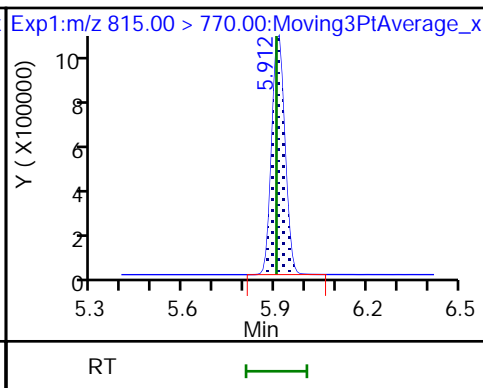
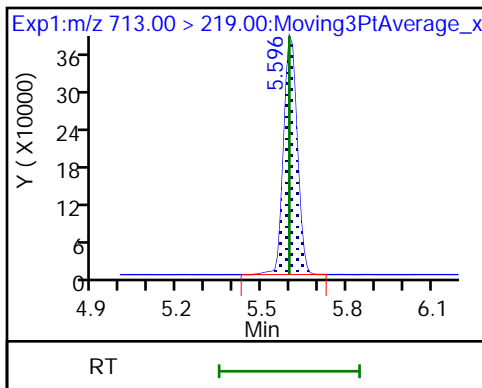
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

D 59 13C2 PFHxDA

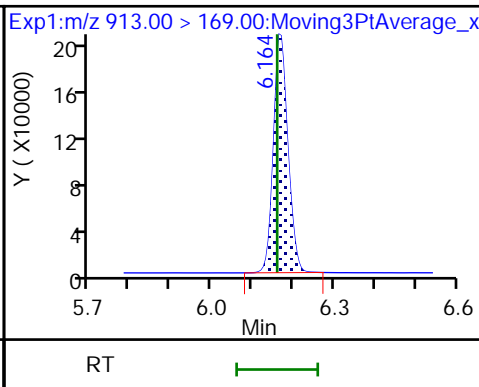
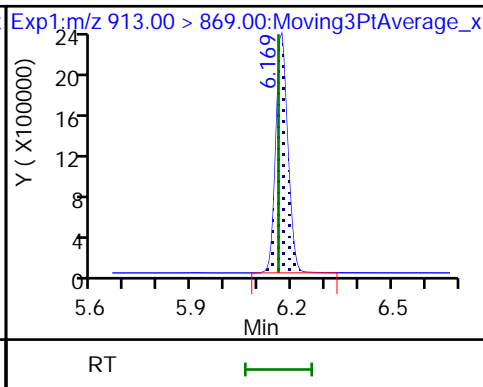
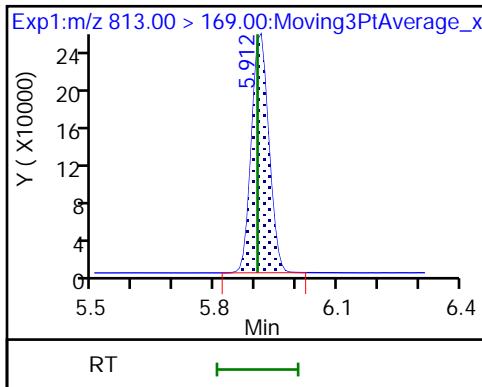
55 Perfluorohexadecanoic acid



55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid





Eurofins TestAmerica, Knoxville

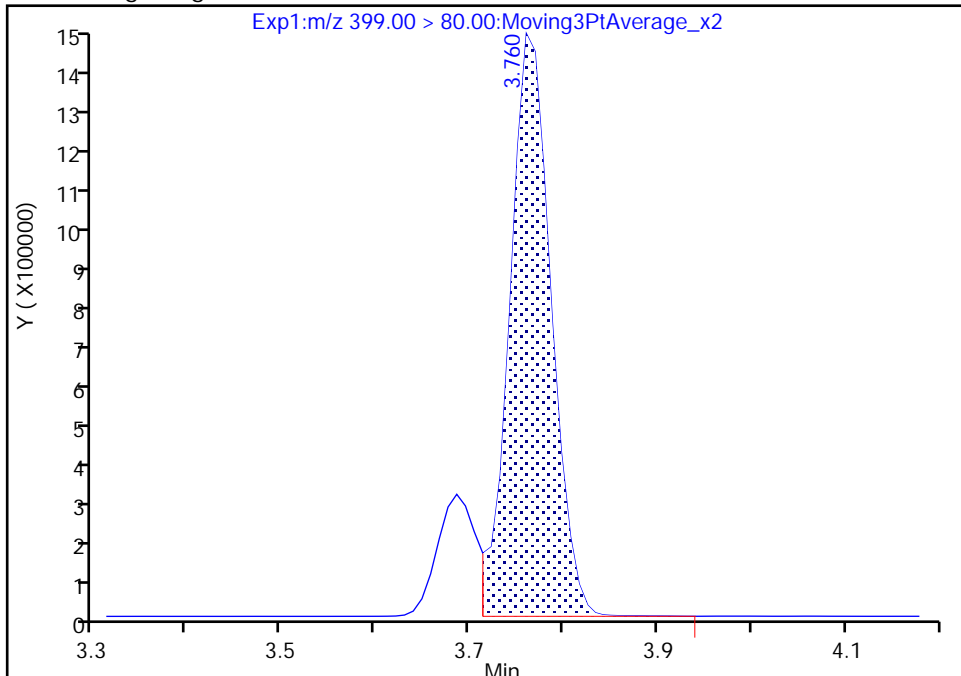
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\\_014.d  
Injection Date: 09-Jan-2022 11:46:17 Instrument ID: LCA  
Lims ID: ICV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 14 Worklist Smp#: 14  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

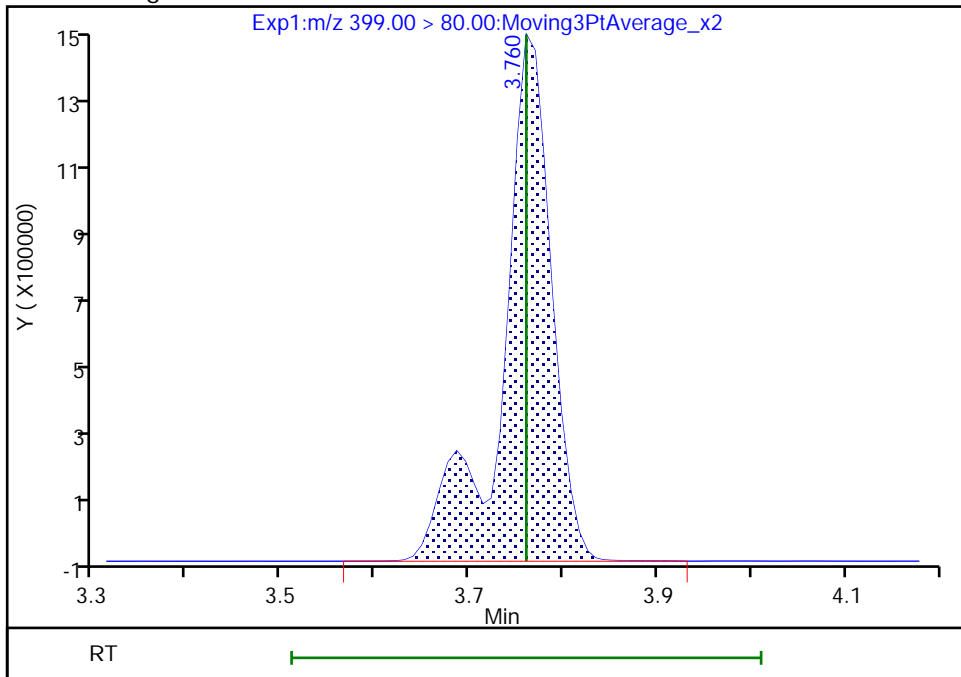
RT: 3.76  
Area: 4324860  
Amount: 2.034470  
Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
Area: 5143829  
Amount: 2.419724  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:58:50  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

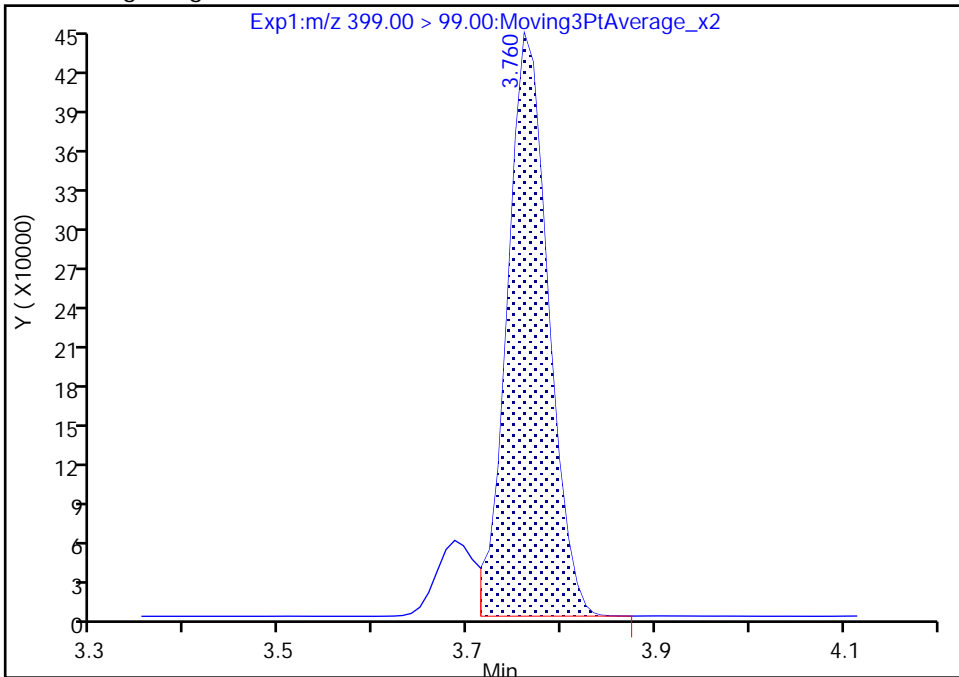
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Injection Date: 09-Jan-2022 11:46:17 Instrument ID: LCA  
Lims ID: ICV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 14 Worklist Smp#: 14  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

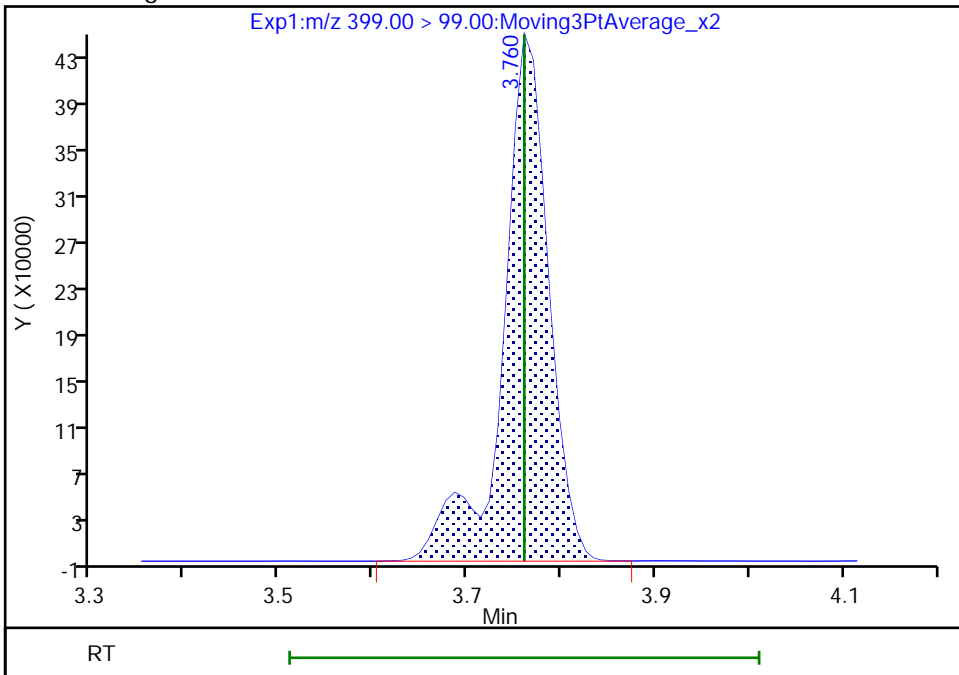
RT: 3.76  
Area: 1353817  
Amount: 2.034470  
Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
Area: 1516543  
Amount: 2.419724  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:58:57

Audit Action: Manually Integrated

Audit Reason: Baseline  
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Eurofins TestAmerica, Knoxville

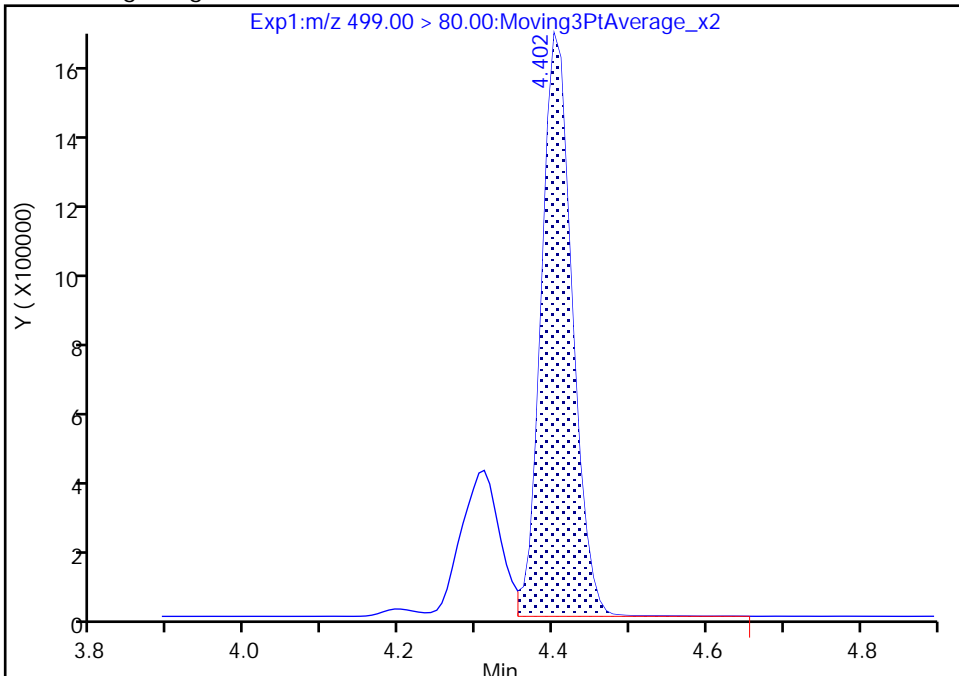
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Injection Date: 09-Jan-2022 11:46:17 Instrument ID: LCA  
Lims ID: ICV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 14 Worklist Smp#: 14  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

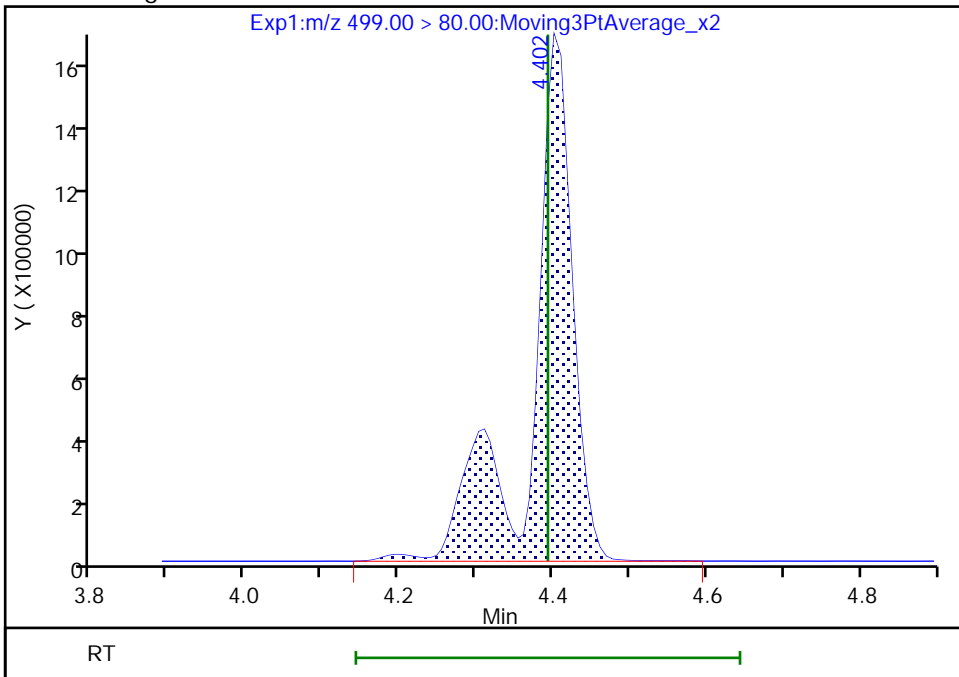
RT: 4.40  
Area: 4719755  
Amount: 1.902979  
Amount Units: ng/ml

Processing Integration Results



RT: 4.40  
Area: 6270976  
Amount: 2.528422  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:59:12  
Audit Action: Manually Integrated

Audit Reason: Baseline



Eurofins TestAmerica, Knoxville

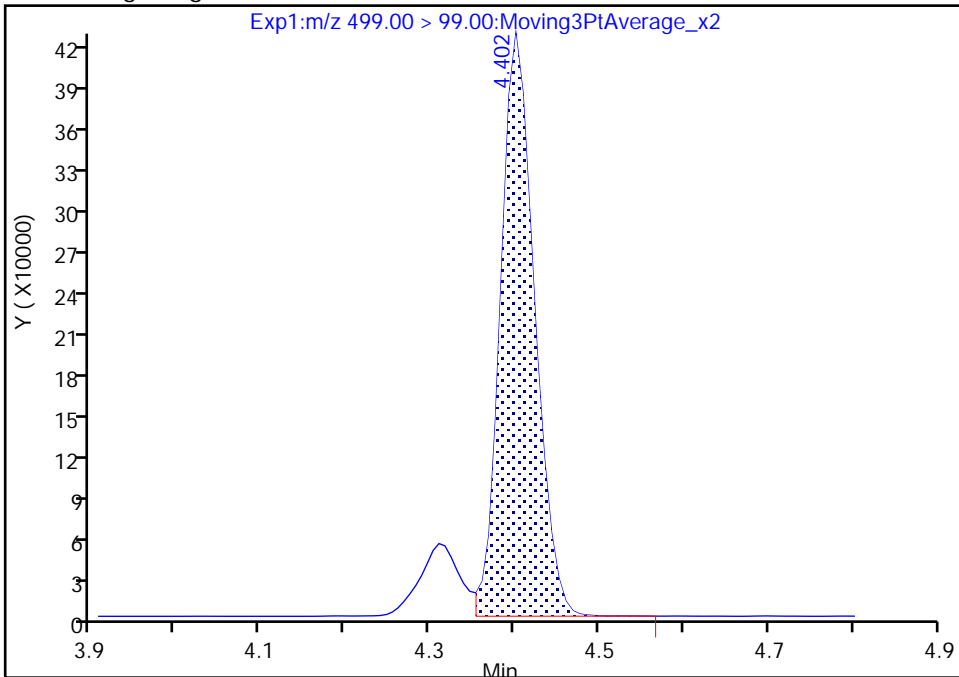
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Injection Date: 09-Jan-2022 11:46:17 Instrument ID: LCA  
Lims ID: ICV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 14 Worklist Smp#: 14  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

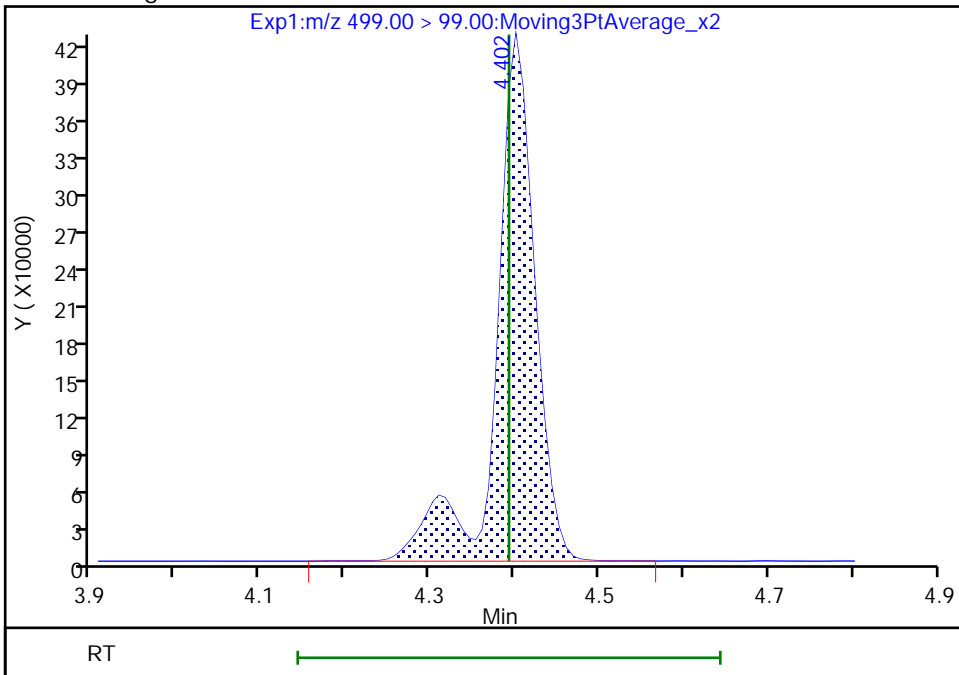
RT: 4.40  
Area: 1193342  
Amount: 1.902979  
Amount Units: ng/ml

Processing Integration Results



RT: 4.40  
Area: 1370135  
Amount: 2.528422  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:59:23

Audit Action: Manually Integrated

Audit Reason: Baseline  
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Eurofins TestAmerica, Knoxville

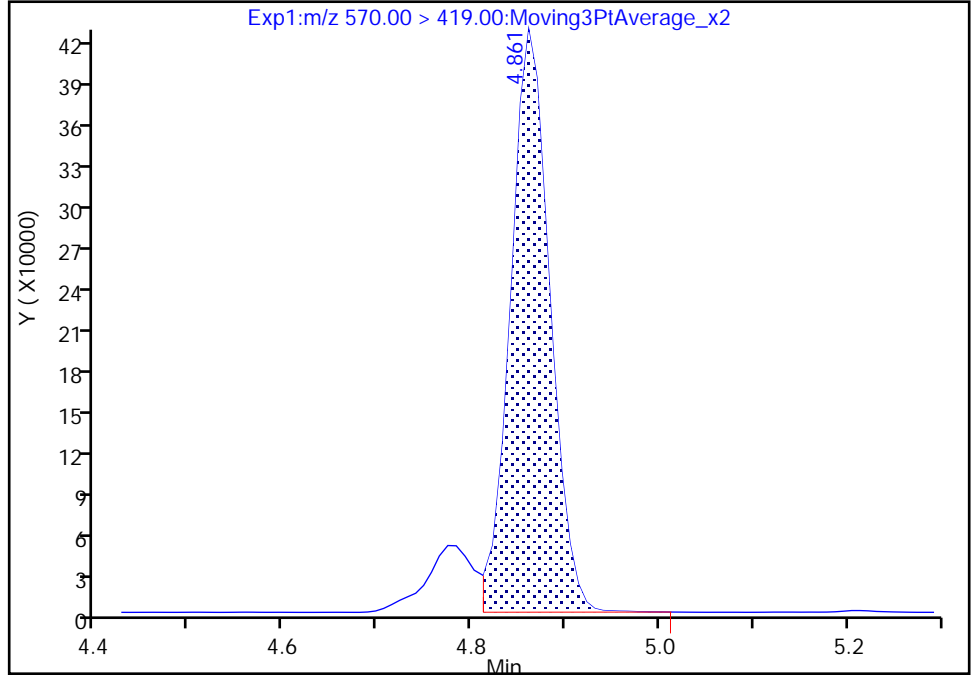
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Injection Date: 09-Jan-2022 11:46:17 Instrument ID: LCA  
Lims ID: ICV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 14 Worklist Smp#: 14  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

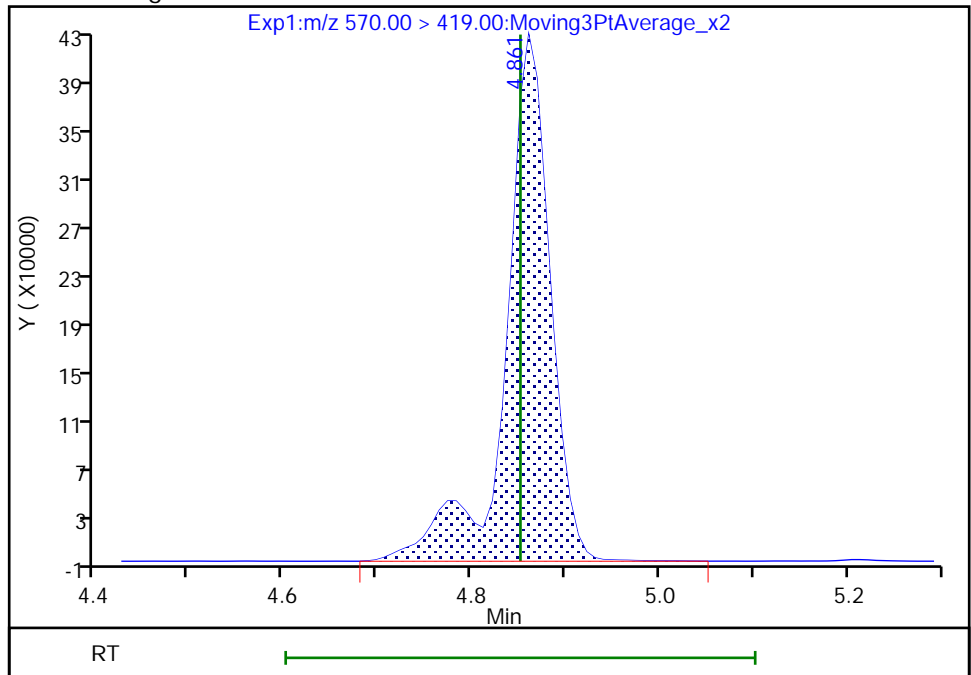
RT: 4.86  
Area: 1241790  
Amount: 2.397855  
Amount Units: ng/ml

Processing Integration Results



RT: 4.86  
Area: 1416349  
Amount: 2.618653  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:59:36  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

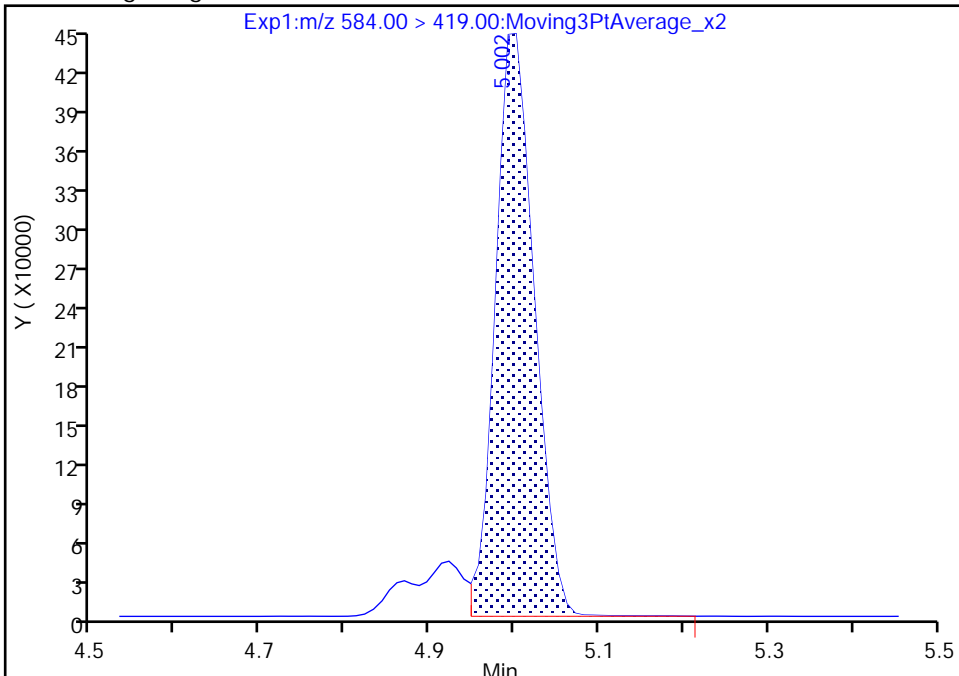
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Injection Date:	09-Jan-2022 11:46:17	Instrument ID:	LCA
Lims ID:	ICV		
Client ID:			
Operator ID:	Cochran, Bobby	ALS Bottle#:	14
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	PFC_LCA	Limit Group:	LC - PFC- ICAL
Column:		Detector:	EXP1
		Worklist Smp#:	14

40 NEtFOSA, CAS: 2991-50-6

Signal: 1

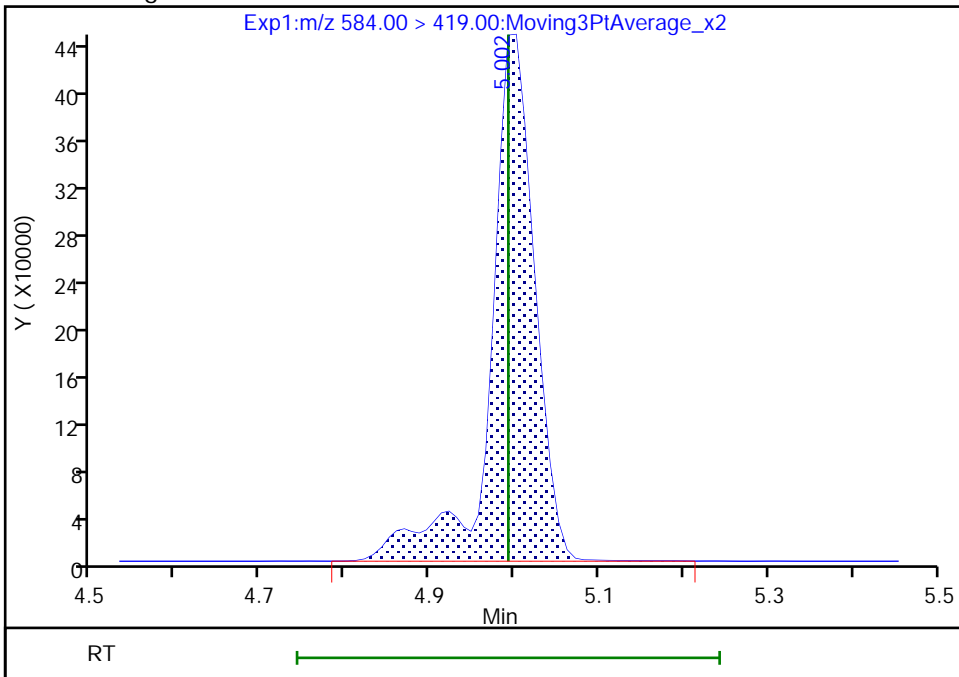
RT: 5.00  
 Area: 1430991  
 Amount: 2.383339  
 Amount Units: ng/ml

Processing Integration Results



RT: 5.00  
 Area: 1625259  
 Amount: 2.703361  
 Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 11:59:46  
 Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVL 140-57742/4 Calibration Date: 01/09/2022 12:31  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 Lab File ID: \_004.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7844	0.7575		0.0483	0.0500	-3.4	50.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9519	0.9598		0.0504	0.0500	0.8	50.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.097	1.057		0.0426	0.0442	-3.6	50.0
4:2 FTS	AveID	2.252	2.202		0.0457	0.0467	-2.2	50.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8680	0.8472		0.0488	0.0500	-2.4	50.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	0.9713	0.9252		0.0447	0.0469	-4.7	50.0
HFPO-DA	AveID	1.352	1.304		0.0482	0.0500	-3.6	50.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.377	1.404		0.0464	0.0455	1.9	50.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.047	1.075		0.0514	0.0500	2.7	50.0
DONA	AveID	2.630	2.698		0.0483	0.0471	2.6	50.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9541	1.004		0.0501	0.0476	5.3	50.0
6:2 FTS	L2ID		1.952		0.0538	0.0474	13.4	50.0
Perfluorooctanoic acid (PFOA)	AveID	1.147	1.148		0.0500	0.0500	0.0	50.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.099	1.102		0.0465	0.0464	0.3	50.0
Perfluorononanoic acid (PFNA)	Q2ID		0.8806		0.0542	0.0500	8.4	50.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	Q2ID		2.243		0.0512	0.0466	9.9	50.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9748	1.042		0.0513	0.0480	6.8	50.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9459	0.9721		0.0514	0.0500	2.8	50.0
Perfluorodecanoic acid (PFDA)	AveID	0.9645	0.9734		0.0505	0.0500	0.9	50.0
8:2 FTS	AveID	1.415	1.577		0.0534	0.0479	11.5	50.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	QuaIF		0.9565		0.0493	0.0500	-1.4	50.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		0.9216		0.0505	0.0482	4.8	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9695	0.9849		0.0508	0.0500	1.6	50.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Q2ID		0.9342		0.0473	0.0500	-5.3	50.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.672	1.730		0.0487	0.0471	3.5	50.0
Perfluorododecanoic acid (PFDoA)	Q2ID		1.062		0.0513	0.0500	2.6	50.0
10:2 FTS	AveID	2.276	2.427		0.0514	0.0482	6.6	50.0
NMeFOSA	Q2ID		1.003		0.0479	0.0500	-4.3	50.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	Q2ID		1.067		0.0494	0.0500	-1.1	50.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9166	0.9304		0.0491	0.0484	1.5	50.0

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVL 140-57742/4 Calibration Date: 01/09/2022 12:31  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 Lab File ID: \_004.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTriA)	AveID	0.8292	0.8501		0.0513	0.0500	2.5	50.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	AveID	1.328	1.161		0.0437	0.0500	-12.6	50.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.195	1.152		0.0482	0.0500	-3.6	50.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1344	0.1275		0.0475	0.0500	-5.1	50.0
Perfluorohexadecanoic acid	Q2ID		1.324		0.0520	0.0500	4.0	50.0
Perfluorooctadecanoic acid	AveID	0.9844	1.026		0.0521	0.0500	4.2	50.0
13C4 PFBA	Ave	1.142	1.136		1.24	1.25	-0.5	50.0
13C5 PFPeA	Ave	0.8865	0.8753		1.23	1.25	-1.3	50.0
13C3 PFBS	Ave	0.5913	0.5768		1.13	1.16	-2.4	50.0
M2-4:2 FTS	Ave	0.1820	0.1815		1.16	1.17	-0.3	50.0
13C2 PFHxA	Ave	0.9479	0.9699		1.28	1.25	2.3	50.0
13C3 HFPO-DA	Ave	0.4556	0.4384		1.20	1.25	-3.8	50.0
18O2 PFHxS	Ave	0.3946	0.3863		1.16	1.18	-2.1	50.0
13C4 PFHpA	Ave	0.9067	0.9130		1.26	1.25	0.7	50.0
13C4 PFOA	Ave	0.9376	0.9310		1.24	1.25	-0.7	50.0
M2-6:2 FTS	Ave	0.1835	0.1857		1.20	1.19	1.2	50.0
13C4 PFOS	Ave	0.5681	0.5357		1.13	1.20	-5.7	50.0
13C5 PFNA	Ave	1.234	1.207		1.22	1.25	-2.2	50.0
13C8 FOSA	Ave	0.7682	0.7764		1.26	1.25	1.1	50.0
13C2 PFDA	Ave	1.191	1.207		1.27	1.25	1.3	50.0
M2-8:2 FTS	Ave	0.2070	0.2153		1.25	1.20	4.0	50.0
d3-NMeFOSAA	Ave	0.1401	0.1396		1.25	1.25	-0.4	50.0
13C2 PFUnA	Ave	1.189	1.193		1.25	1.25	0.3	50.0
d5-NEtFOSAA	Ave	0.1537	0.1638		1.33	1.25	6.5	50.0
13C2 PFDoA	Ave	1.247	1.206		1.21	1.25	-3.3	50.0
d7-N-MeFOSE-M	Ave	0.1499	0.1496		1.25	1.25	-0.2	50.0
d-N-MeFOSA-M	Ave	0.1069	0.0999		1.17	1.25	-6.6	50.0
d9-N-EtFOSE-M	Ave	0.1504	0.1491		1.24	1.25	-0.9	50.0
d-N-EtFOSA-M	Ave	0.0883	0.0831		1.18	1.25	-5.9	50.0
13C2 PFTeDA	Ave	0.9508	0.9235		1.21	1.25	-2.9	50.0
13C2 PFHxDA	Ave	0.6444	0.6146		1.19	1.25	-4.6	50.0
13C8 PFOA	AveID	0.999	0.9943		1.24	1.25	-0.5	50.0
13C8 PFOS	AveID	0.2220	0.2247		1.21	1.20	1.2	50.0

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_004.d  
 Lims ID: CCVL  
 Client ID:  
 Sample Type: CCVL  
 Inject. Date: 09-Jan-2022 12:31:49 ALS Bottle#: 4 Worklist Smp#: 4  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022187-004 CCVL  
 Misc. Info.: Plate: 11 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 15:07:58 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1641

First Level Reviewer: cochranj Date: 09-Jan-2022 12:42:57

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	2.784	2.779	0.005	0.678	6447148	1.24	99.5	15492	
2 Perfluorobutanoic acid	212.90 > 169.00	2.790	2.779	0.011	1.002	195352	0.0483	96.6	50.0	
D 3 13C5 PFPeA	267.90 > 223.00	3.098	3.091	0.007	0.755	4968713	1.23	98.7	11525	
4 Perfluoropentanoic acid	262.90 > 219.00	3.098	3.091	0.007	1.000	190763	0.0504	101	66.9	
D 6 13C3 PFBS	301.90 > 80.00	3.106	3.107	-0.001	0.757	3045407	1.13	97.6	12711	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.115	3.107	0.008	1.003	122418	0.0426	Target=2.65	96.4	760
	298.90 > 99.00	3.115	3.107	0.008	1.003	46364		2.64(1.32-3.97)		297
D 8 M2-4:2 FTS	329.00 > 81.00	3.391	3.392	-0.001	0.826	962475	1.16	99.7	1943	
7 4:2 FTS	327.00 > 307.00	3.401	3.392	0.009	1.003	84770	0.0457	97.8	1081	
D 9 13C2 PFHxA	315.00 > 270.00	3.422	3.422	0.0	0.833	5506183	1.28	102	10336	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.422	3.422	0.0	1.101	113677	0.0447	Target=3.44	95.3	385
	349.00 > 99.00	3.422	3.422	0.0	1.101	35596		3.19(1.72-5.16)		427
10 Perfluorohexanoic acid	313.00 > 269.00	3.422	3.422	0.0	1.000	186589	0.0488	Target=11.80	97.6	91.8
	313.00 > 119.00	3.422	3.422	0.0	1.000	17931		10.41(5.90-17.70)		31.5
D 12 13C3 HFPO-DA	287.00 > 169.00	3.528	3.519	0.009	0.859	2488865	1.20	96.2	4065	

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	3.528	3.519	0.009	1.000	129811	0.0482		96.4	108	
D 17 18O2 PFHxS										
403.00 > 84.00	3.760	3.760	0.0	0.916	2074432	1.16		97.9	7970	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.760	3.760	0.0	1.000	112060	0.0464	Target=3.40	102	549	M
399.00 > 99.00	3.760	3.760	0.0	1.000	34674		3.23(1.70-5.10)		363	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.769	3.770	-0.001	0.918	5183008	1.26		101	8600	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.769	3.770	-0.001	1.000	222965	0.0514	Target=3.29	103	142	
363.00 > 169.00	3.769	3.770	-0.001	1.000	66971		3.33(1.65-4.94)		187	
68 DONA										
377.00 > 251.00	3.807	3.807	0.0	0.865	309164	0.0483	Target=1.82	103	751	
377.00 > 85.00	3.807	3.807	0.0	0.865	179180		1.73(0.91-2.74)		133	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.089	4.089	0.0	0.929	116316	0.0501	Target=3.92	105	683	
449.00 > 99.00	4.089	4.089	0.0	0.929	29419		3.95(1.96-5.87)		289	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.106	4.098	0.008	1.000	1001437	1.20		101	3095	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.106	4.098	0.008	1.000	5254718	1.24		99.5	7794	
19 6:2 FTS										
427.00 > 407.00	4.106	4.098	0.008	1.000	78045	0.0538		113	479	
D 21 13C4 PFOA										
417.00 > 372.00	4.106	4.107	-0.001	1.000	5285060	1.24		99.3	9097	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.106	4.107	-0.001	1.000	242644	0.0500	Target=2.59	100	164	
413.00 > 169.00	4.106	4.107	-0.001	1.000	92161		2.63(1.30-3.89)		177	
* 22 13C2 PFOA										
415.00 > 370.00	4.106	4.107	-0.001		5676885	1.25			8535	
D 25 13C4 PFOS										
503.00 > 80.00	4.402	4.393	0.009	1.072	2907516	1.13		94.3	3928	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.393	4.393	0.0	0.998	653440	1.21		101	4742	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.402	4.393	0.009	1.000	124364	0.0465	Target=4.65	100	406	M
499.00 > 99.00	4.402	4.393	0.009	1.000	27749		4.48(2.32-6.97)		188	M
D 27 13C5 PFNA										
468.00 > 423.00	4.419	4.418	0.0	1.076	6850515	1.22		97.8	10957	
26 Perfluorononanoic acid										
463.00 > 419.00	4.419	4.418	0.0	1.000	241294	0.0542	Target=4.65	108	351	
463.00 > 169.00	4.427	4.418	0.009	1.002	51363		4.70(2.32-6.97)		102	
63 9CIFOS										
531.00 > 351.00	4.560	4.560	0.0	1.036	254309	0.0512		110	1095	

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	4.681	4.681	0.0	1.064	121639	0.0513	Target=4.06	107	376	
549.00 > 99.00	4.681	4.681	0.0	1.064	29942		4.06(2.03-6.09)		256	
D 34 13C8 FOSA										
506.00 > 78.00	4.698	4.698	0.0	1.144	4407575	1.26		101	4145	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.698	4.698	0.0	1.000	171391	0.0514		103	807	
D 32 13C2 PFDA										
515.00 > 470.00	4.707	4.706	0.001	1.146	6850080	1.27		101	12140	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.707	4.706	0.001	1.000	266715	0.0505	Target=11.30	101	419	
513.00 > 169.00	4.707	4.706	0.001	1.000	21712		12.28(5.65-16.95)		87.1	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.724	4.723	0.001	1.150	1171092	1.25		104	1647	
31 8:2 FTS										
527.00 > 507.00	4.724	4.723	0.001	1.000	73891	0.0534		111	861	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.853	4.852	0.001	1.182	792335	1.25		99.6	2631	
36 NMeFOSAA										
570.00 > 419.00	4.861	4.852	0.009	1.002	30314	0.0493		98.6	66.1	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.941	4.940	0.001	1.122	108081	0.0505	Target=3.79	105	681	
599.00 > 99.00	4.941	4.940	0.001	1.122	23284		4.64(1.90-5.69)		178	
D 39 13C2 PFUnA										
565.00 > 520.00	4.976	4.975	0.001	1.212	6771393	1.25		100	10008	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.976	4.975	0.001	1.000	266762	0.0508	Target=8.45	102	441	
563.00 > 169.00	4.976	4.975	0.001	1.000	29934		8.91(4.22-12.67)		176	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.993	4.993	0.0	1.216	929634	1.33		107	2909	
40 NEtFOSA										
584.00 > 419.00	4.993	4.993	0.0	1.000	34737	0.0473		94.7	232	M
57 11C1FOS										
631.00 > 451.00	5.072	5.072	0.0	1.152	198284	0.0487		103	1212	
D 43 13C2 PFDaA										
615.00 > 570.00	5.205	5.205	0.0	1.268	6846338	1.21		96.7	13735	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.205	5.205	0.0	1.000	290713	0.0513	Target=6.99	103	390	
613.00 > 169.00	5.205	5.205	0.0	1.000	44161		6.58(3.50-10.49)		97.8	
50 10:2 FTS										
627.00 > 607.00	5.232	5.231	0.001	1.108	114425	0.0514		107	826	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.284	5.284	0.0	1.287	849178	1.25		99.8	891	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.284	5.284	0.0	1.287	566861	1.17		93.4	57.5	
61 NMeFOSA										
512.00 > 169.00	5.284	5.284	0.0	1.000	22752	0.0479		95.7	131	



Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
49 N-MeFOSE-M										
616.00 > 59.00	5.293	5.292	0.001	1.002	36251	0.0494		98.9	65.3	
54 PFDoS										
699.00 > 80.00	5.384	5.383	0.001	1.223	109568	0.0491	Target=4.24	102	406	
699.00 > 99.00	5.384	5.383	0.001	1.223	23212		4.72(2.12-6.35)		199	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.415	5.414	0.001	1.040	232795	0.0513	Target=6.20	103	323	
663.00 > 169.00	5.415	5.414	0.001	1.040	36235		6.42(3.10-9.30)		220	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.435	5.434	0.001	1.324	846546	1.24		99.1	430	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.455	5.454	0.001	1.328	471646	1.18		94.1	724	
62 N-EtFOSE-M										
630.00 > 59.00	5.455	5.454	0.001	1.004	39325	0.0437		87.4	53.4	
56 N-EtFOSA-M										
526.00 > 169.00	5.455	5.454	0.001	1.000	21736	0.0482		96.4	159	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.599	5.596	0.003	1.363	5242476	1.21		97.1	10247	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.599	5.596	0.003	1.000	26742	0.0474	Target=1.05	94.9	141	
713.00 > 219.00	5.599	5.596	0.003	1.000	26572		1.01(0.53-1.58)		238	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.905	5.903	0.002	1.438	3488983	1.19		95.4	5907	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.905	5.903	0.002	1.000	184800	0.0520	Target=8.09	104	508	
813.00 > 169.00	5.905	5.903	0.002	1.000	21548		8.58(4.05-12.14)		111	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.165	6.159	0.006	1.044	143176	0.0521	Target=11.53	104	445	
913.00 > 169.00	6.165	6.159	0.006	1.044	12364		11.58(5.77-17.30)		83.2	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

63L2PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\\_004.d

Injection Date: 09-Jan-2022 12:31:49

Instrument ID: LCA

Lims ID: CCVL

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 4

Worklist Smp#: 4

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

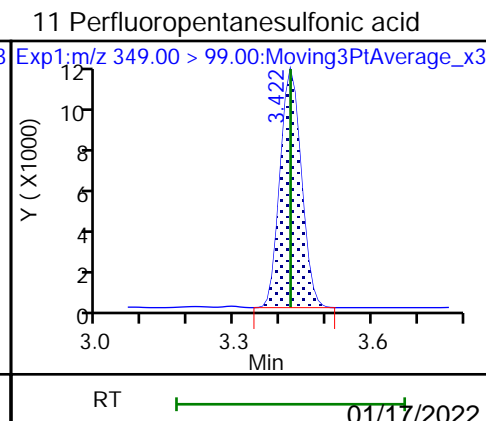
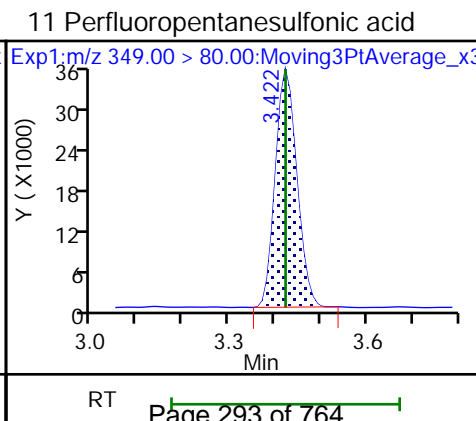
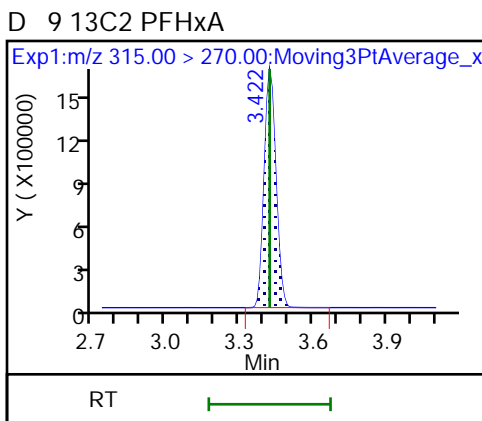
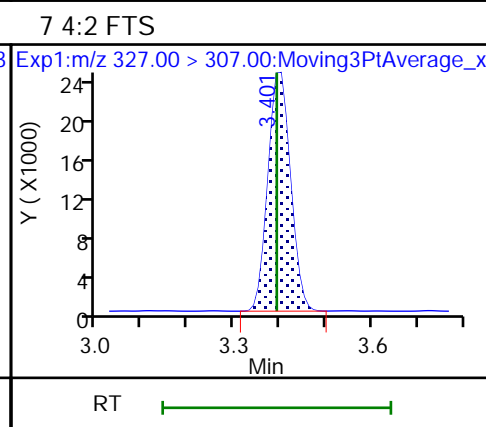
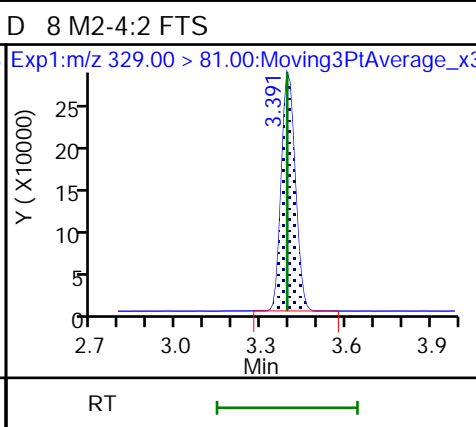
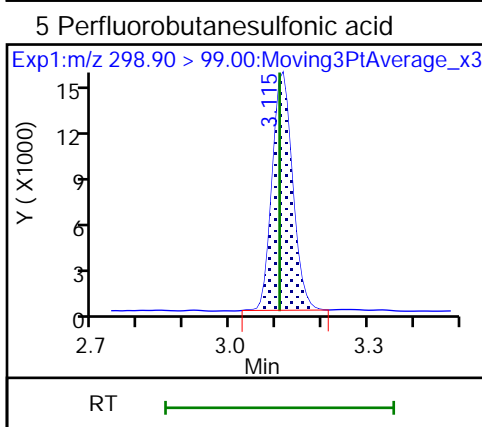
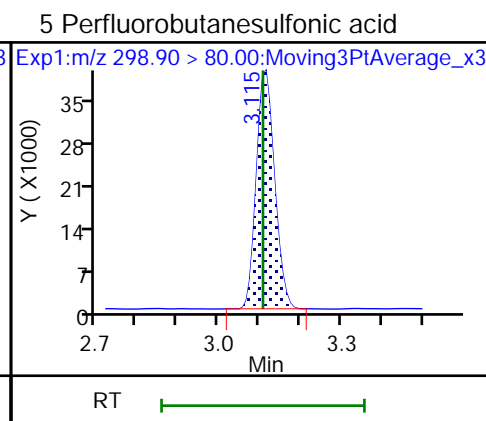
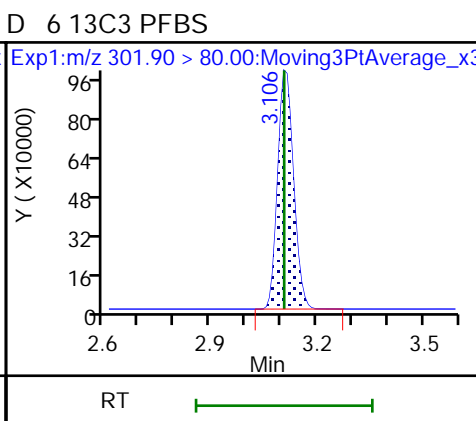
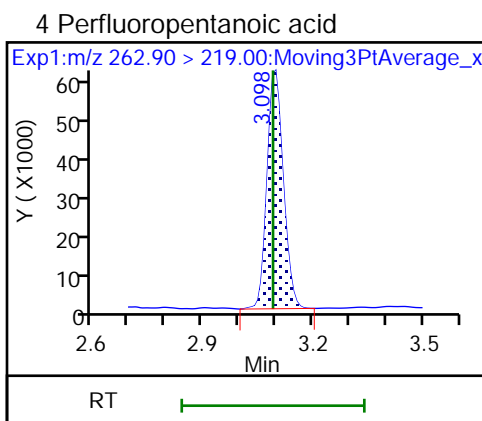
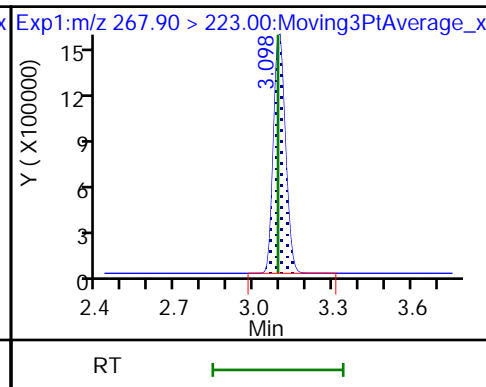
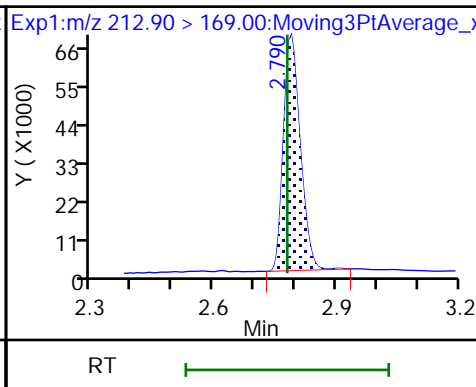
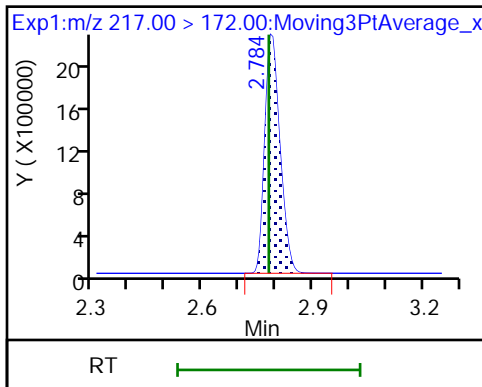
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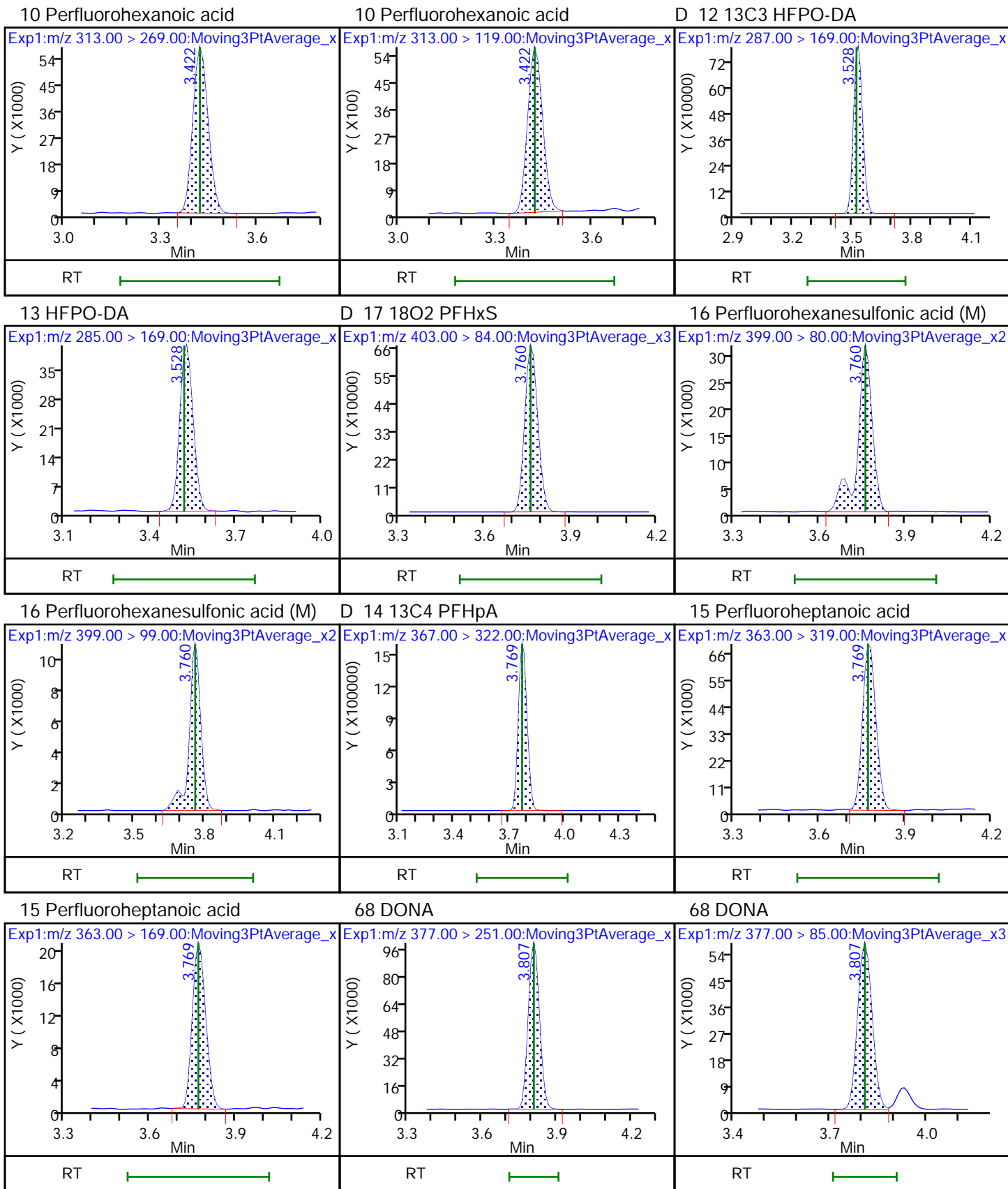
Limit Group: LC - PFC- ICAL

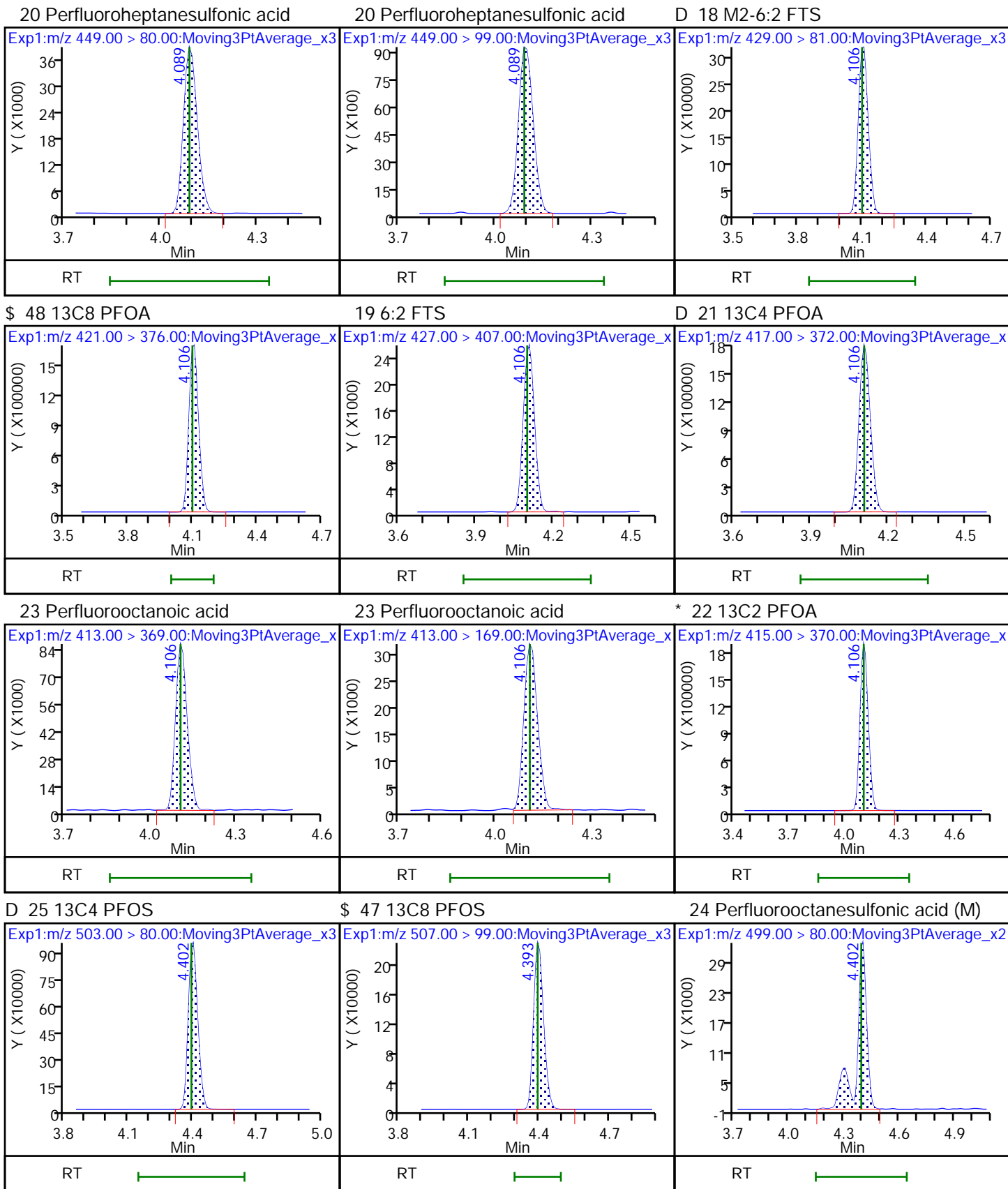
D 1 13C4 PFBA

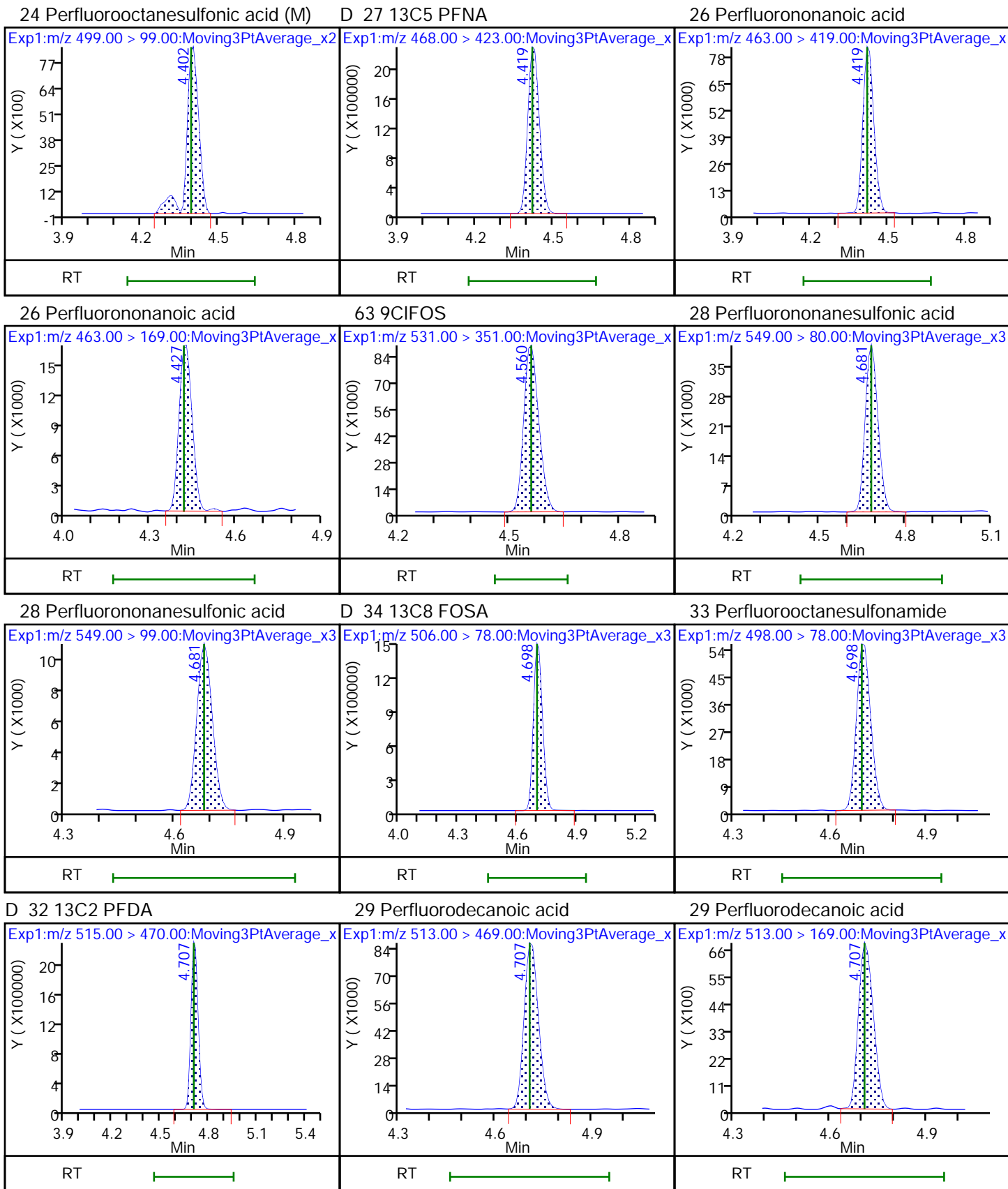
2 Perfluorobutanoic acid

D 3 13C5 PFPeA





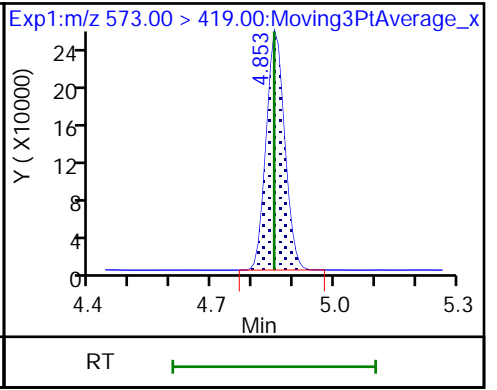
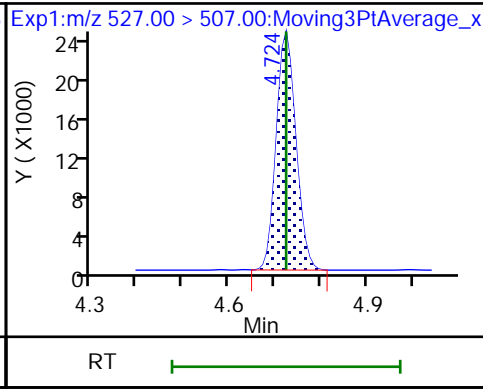
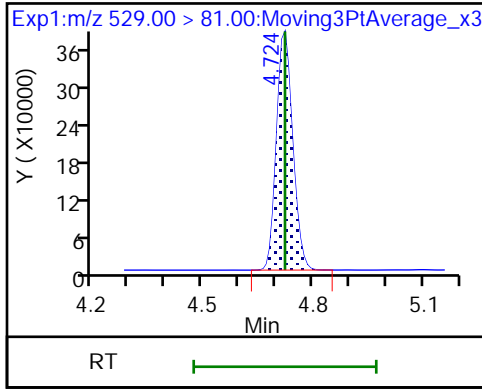




D 30 M2-8:2 FTS

31 8:2 FTS

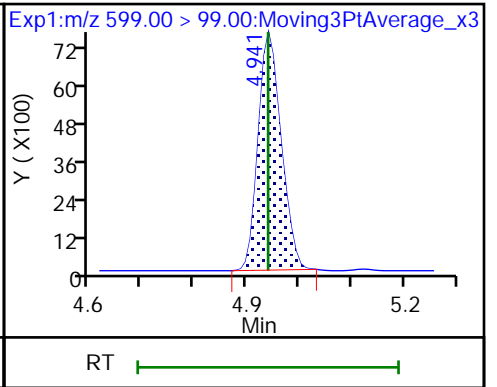
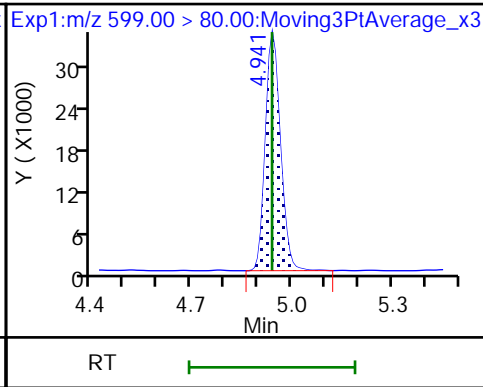
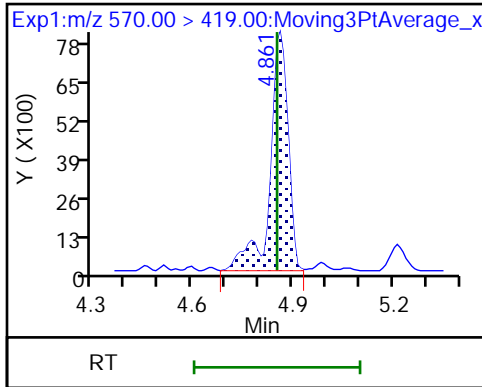
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

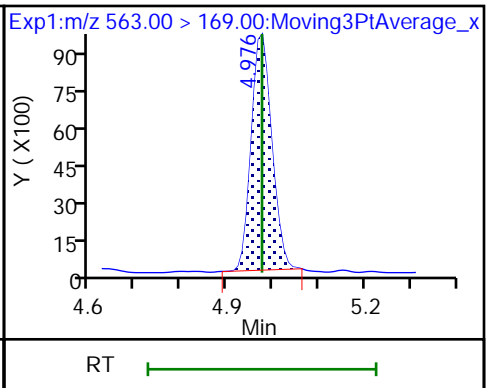
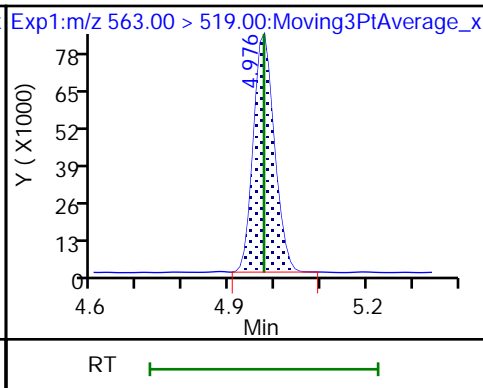
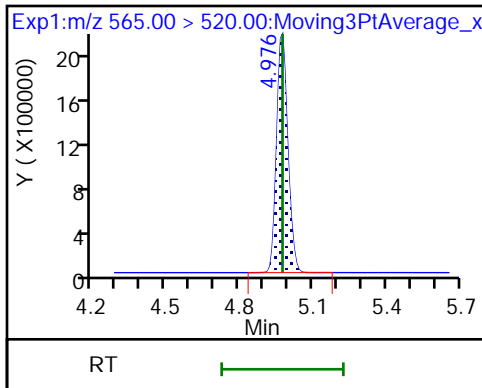
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

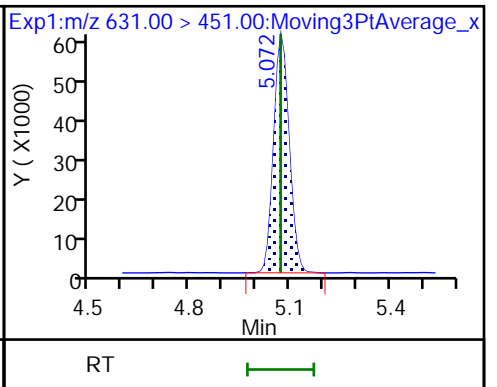
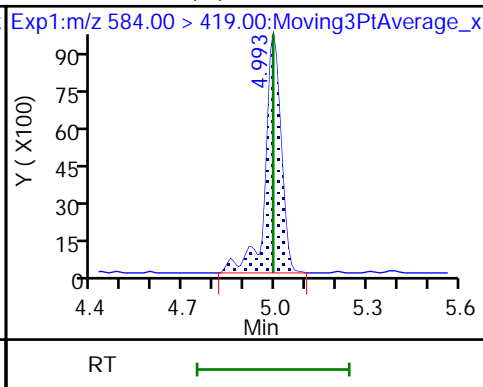
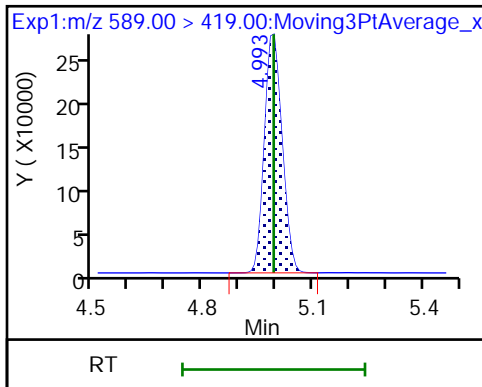
38 Perfluoroundecanoic acid

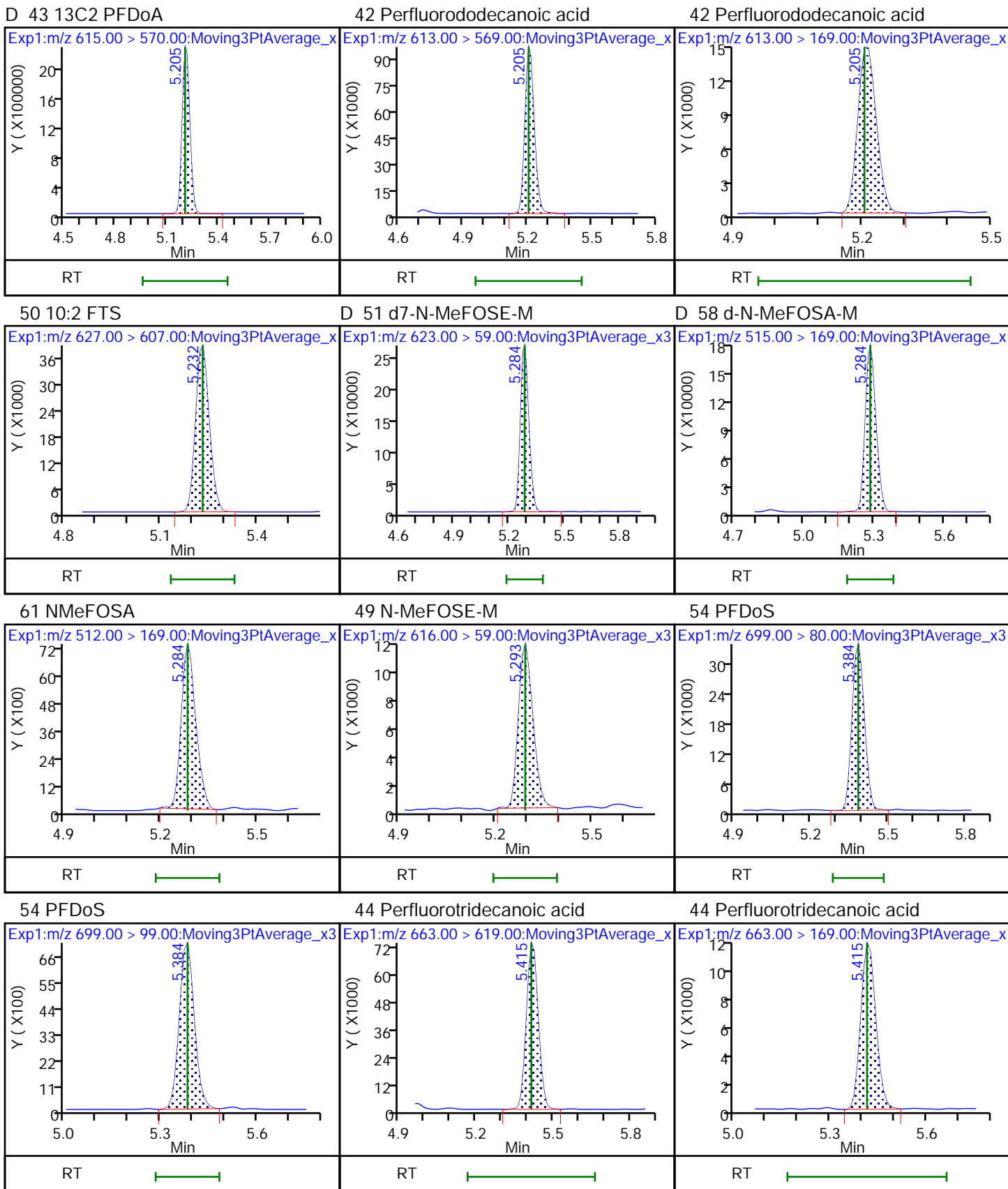


D 41 d5-NEtFOSAA

40 NEtFOSA (M)

57 11CIFOS

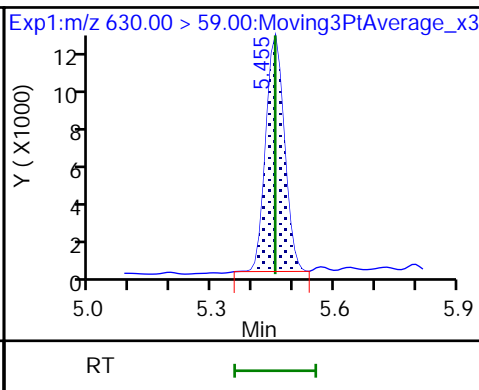
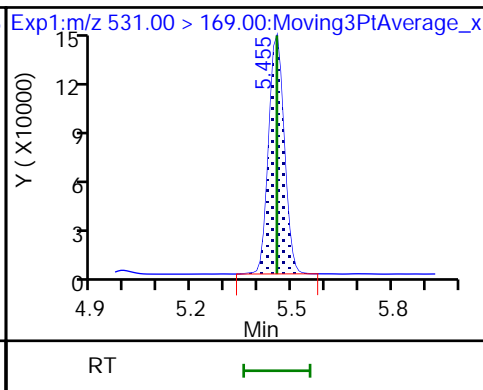
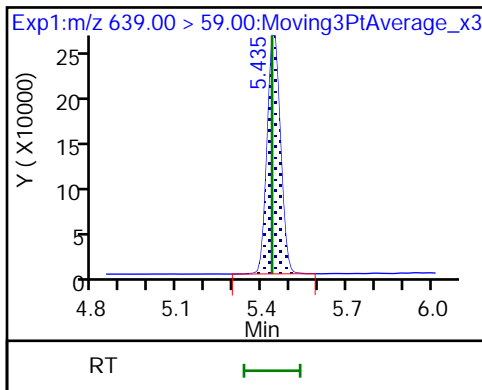




D 53 d9-N-EtFOSE-M

D 52 d-N-EtFOSA-M

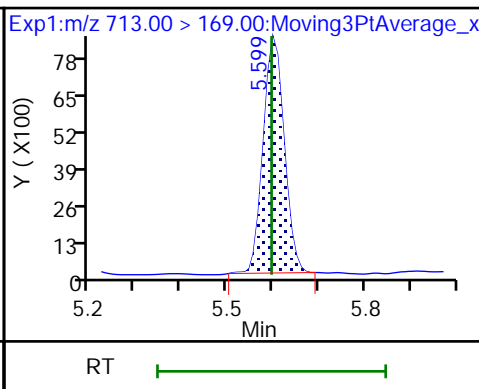
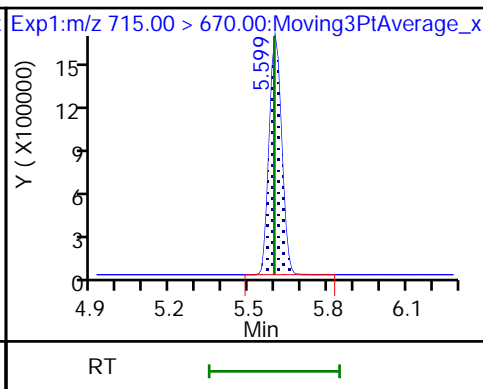
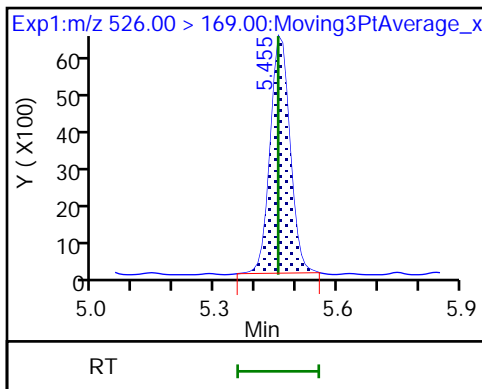
62 N-EtFOSE-M



56 N-EtFOSA-M

D 46 13C2 PFTeDA

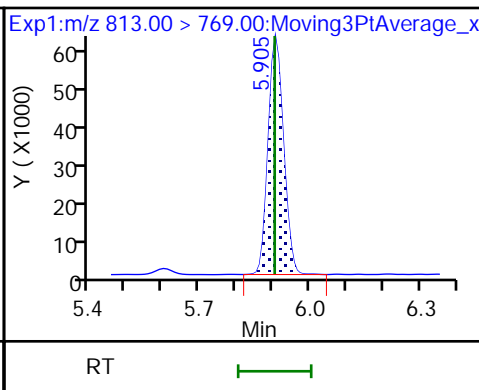
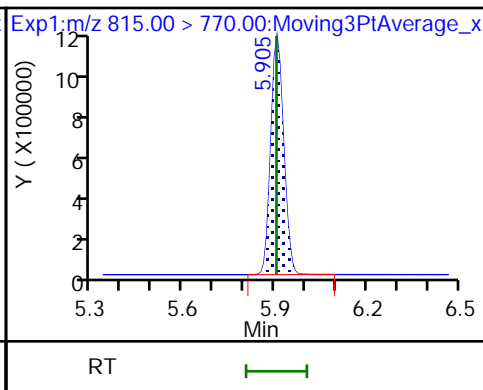
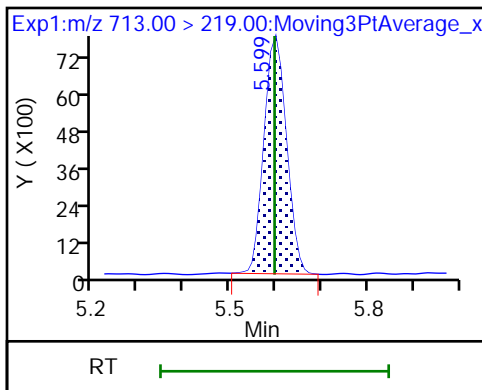
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

D 59 13C2 PFHxDA

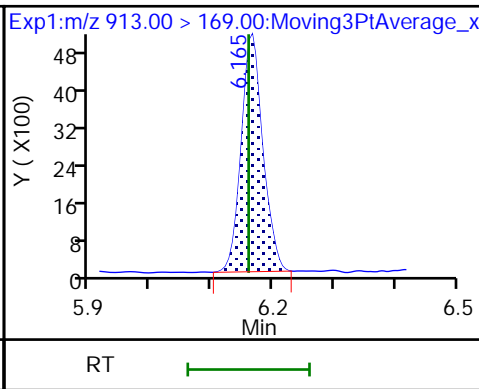
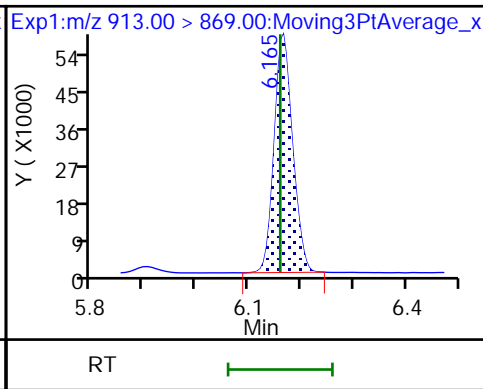
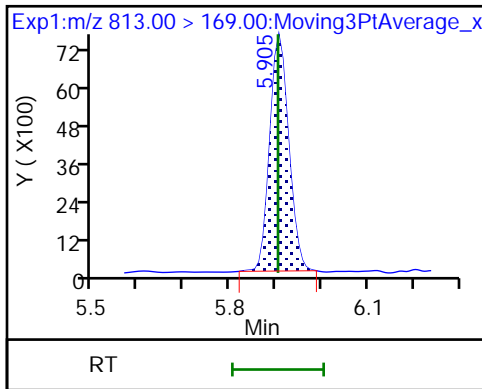
55 Perfluorohexadecanoic acid



55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid







Eurofins TestAmerica, Knoxville

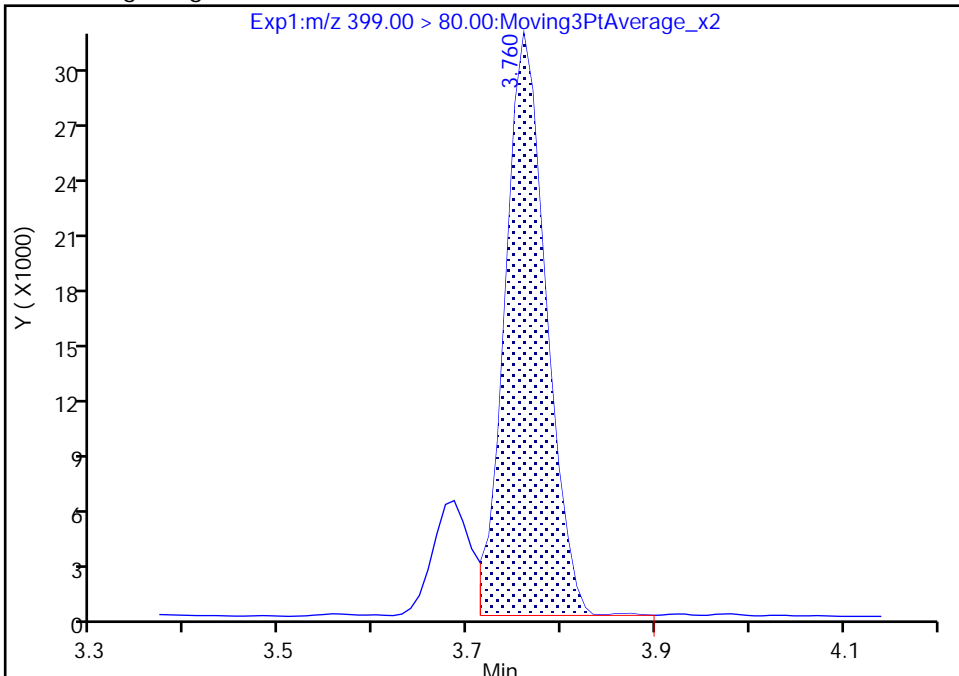
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Lims ID: CCVL  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 4 Worklist Smp#: 4  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

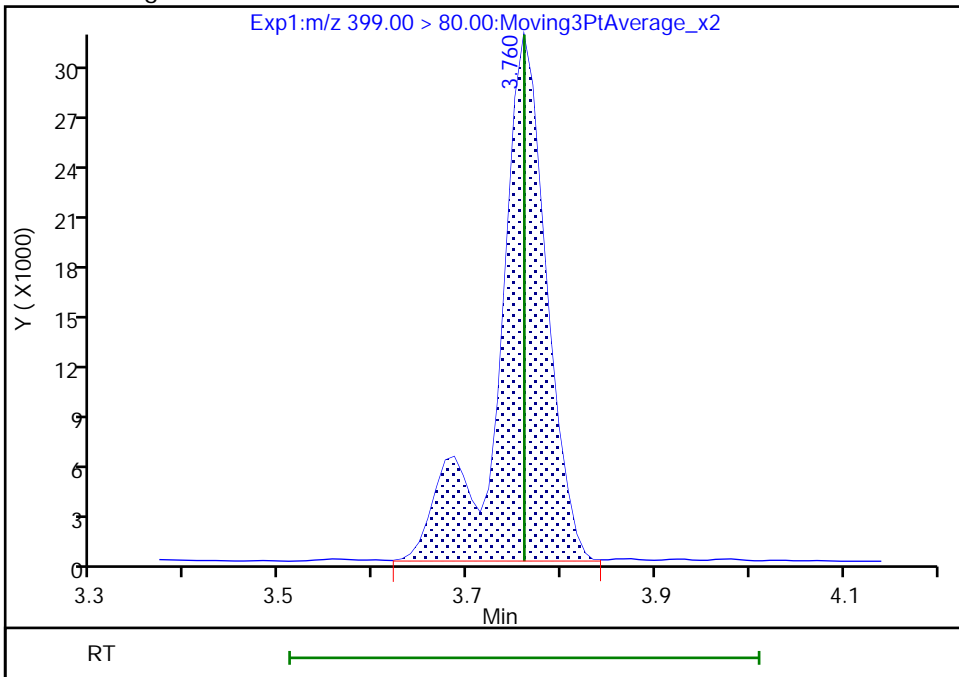
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Amount: 0.039215  
Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
Area: 112060  
Amount: 0.046382  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 12:42:02  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

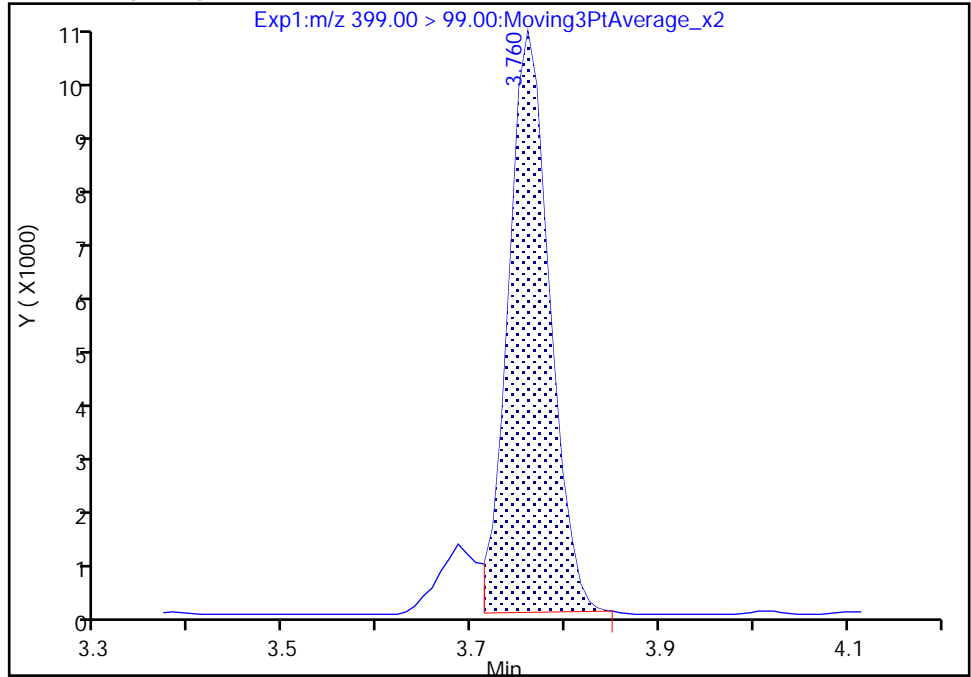
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Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 4 Worklist Smp#: 4  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

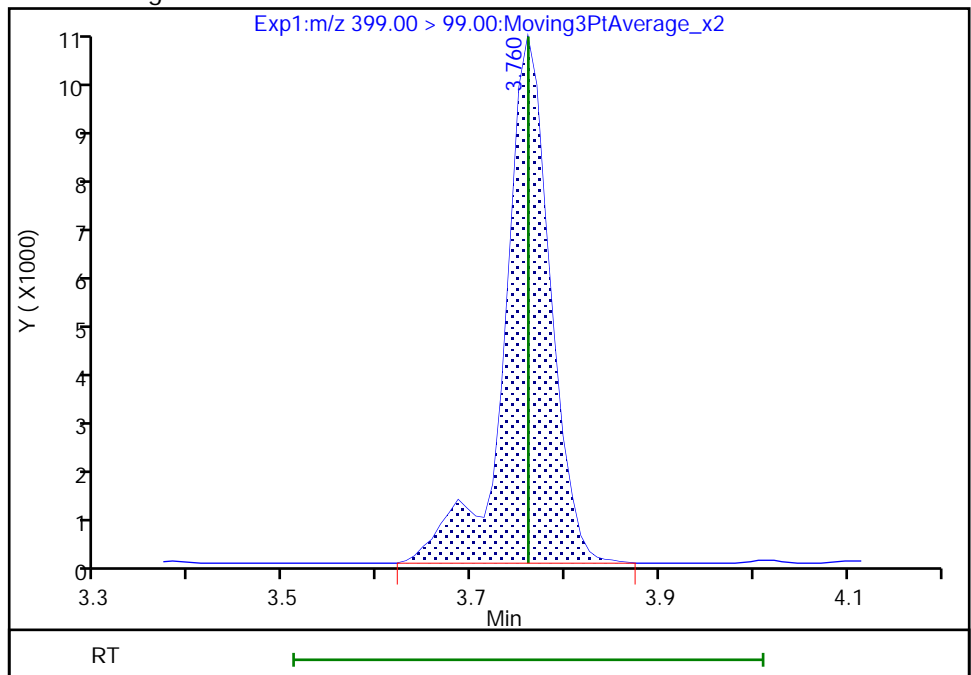
RT: 3.76  
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Amount: 0.039215  
Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
Area: 34674  
Amount: 0.046382  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 12:42:08

Audit Action: Manually Integrated

Audit Reason: Baseline  
Page 302 of 764

01/17/2022

Eurofins TestAmerica, Knoxville

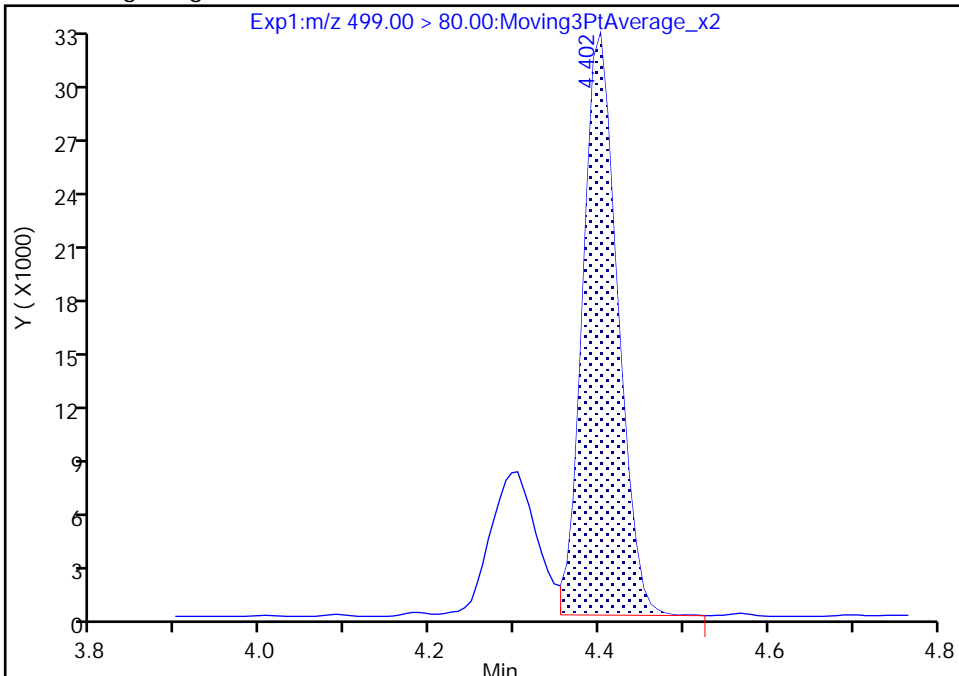
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Operator ID: Cochran, Bobby ALS Bottle#: 4 Worklist Smp#: 4  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

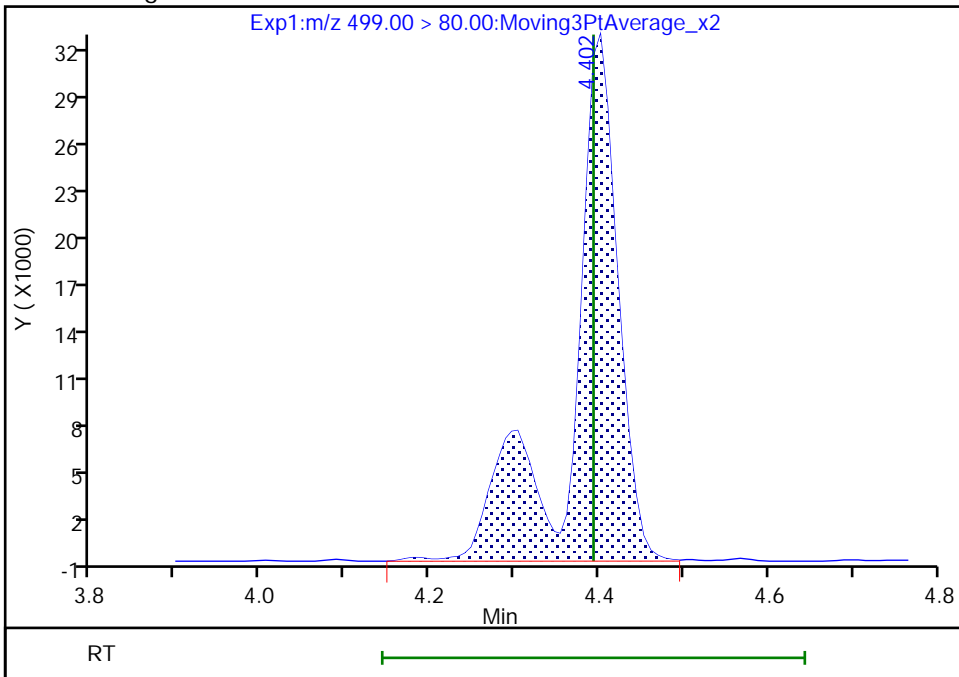
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Area: 92498  
Amount: 0.034599  
Amount Units: ng/ml

Processing Integration Results



RT: 4.40  
Area: 124364  
Amount: 0.046518  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 12:42:19  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

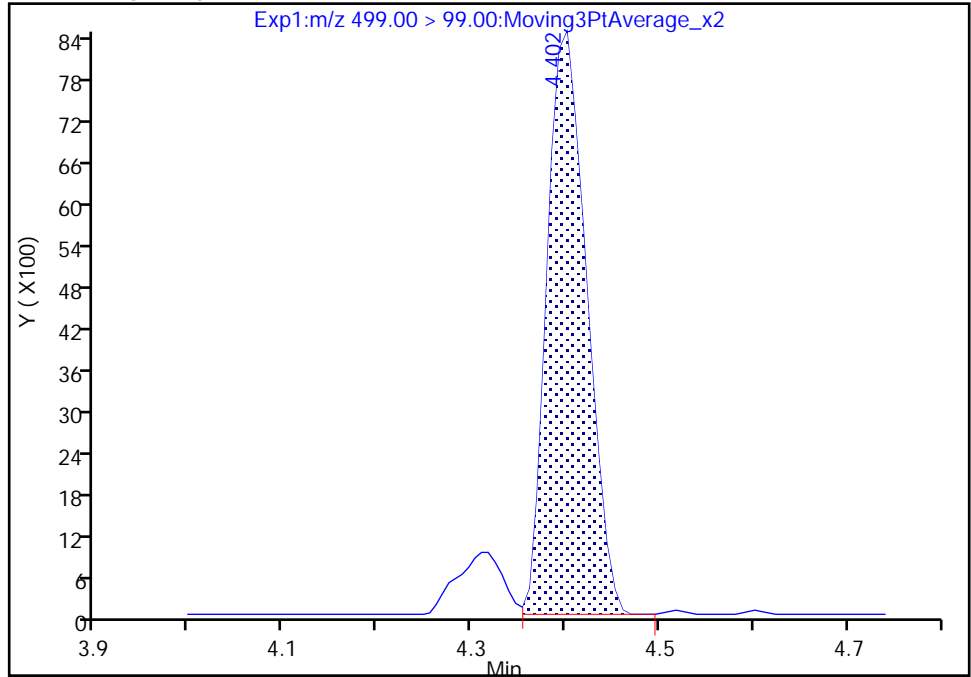
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_004.d  
Injection Date: 09-Jan-2022 12:31:49 Instrument ID: LCA  
Lims ID: CCVL  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 4 Worklist Smp#: 4  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

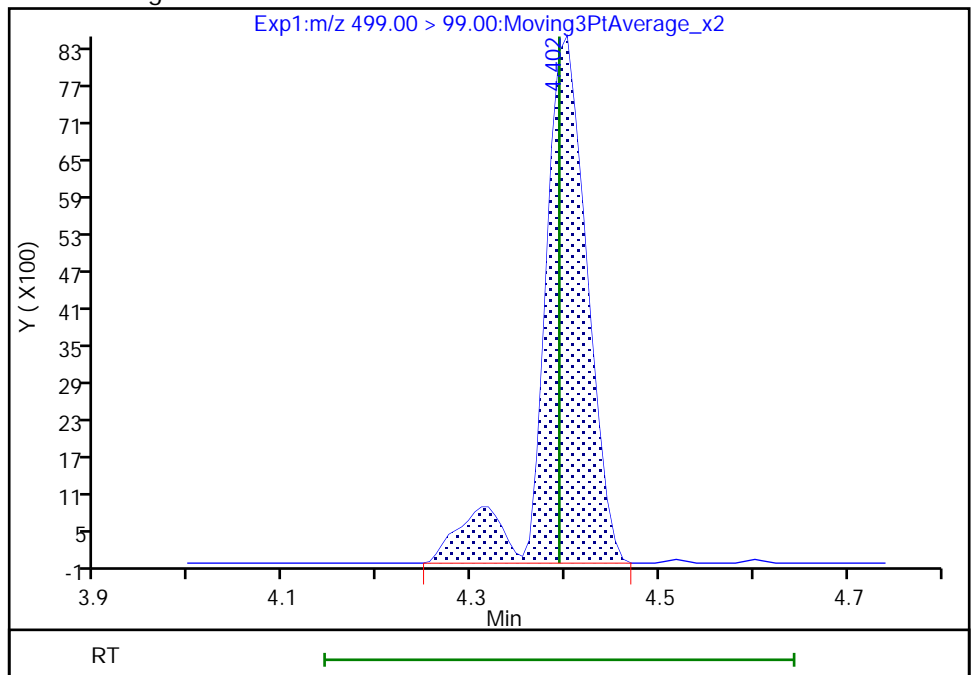
RT: 4.40  
Area: 24690  
Amount: 0.034599  
Amount Units: ng/ml

Processing Integration Results



RT: 4.40  
Area: 27749  
Amount: 0.046518  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 12:42:26

Audit Action: Manually Integrated

Audit Reason: Baseline  
Page 304 of 764

Eurofins TestAmerica, Knoxville

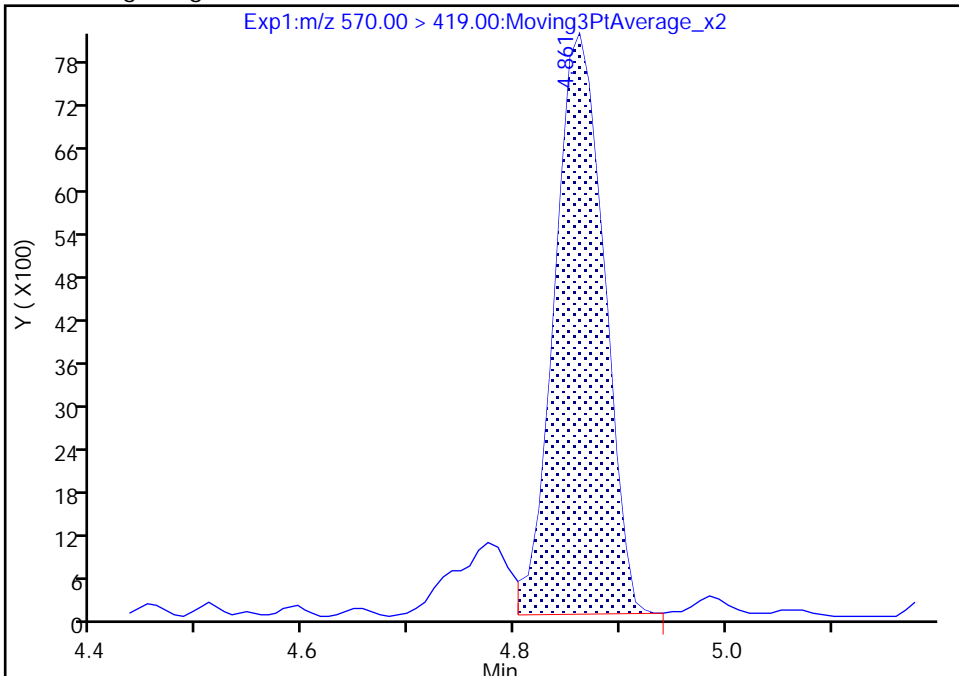
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_004.d  
Injection Date: 09-Jan-2022 12:31:49 Instrument ID: LCA  
Lims ID: CCVL  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 4 Worklist Smp#: 4  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

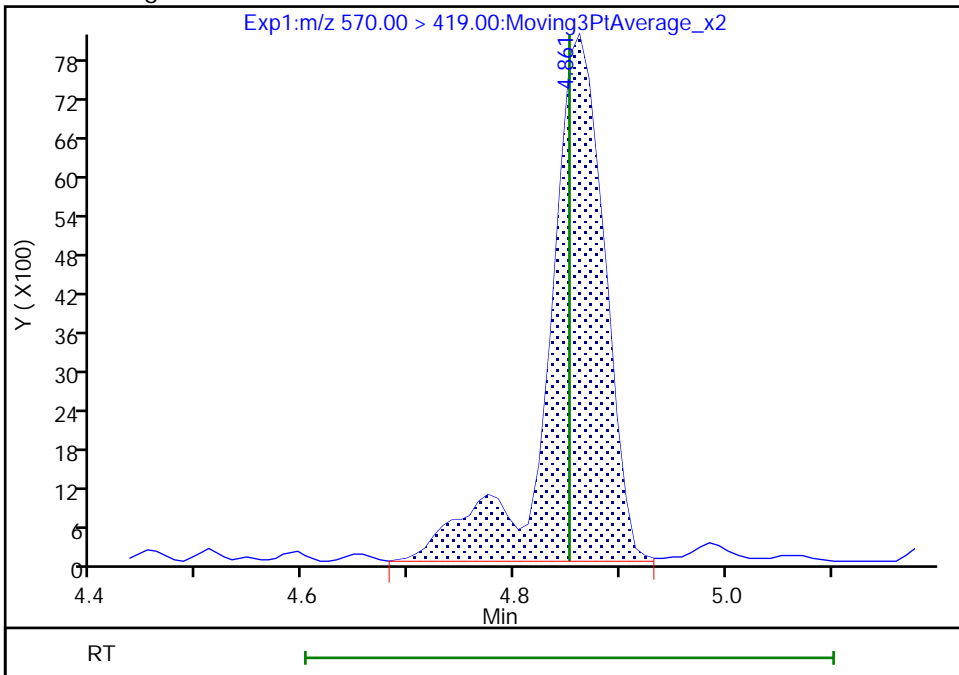
RT: 4.86  
Area: 26284  
Amount: 0.042730  
Amount Units: ng/ml

Processing Integration Results



RT: 4.86  
Area: 30314  
Amount: 0.049281  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 12:42:38  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

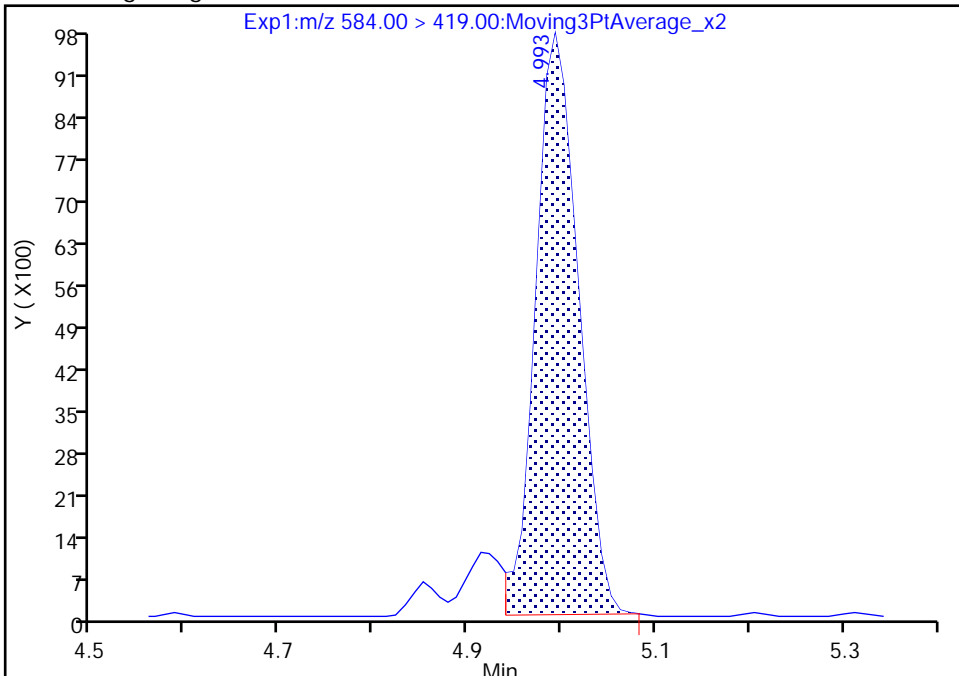
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\\_004.d  
Injection Date: 09-Jan-2022 12:31:49 Instrument ID: LCA  
Lims ID: CCVL  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 4 Worklist Smp#: 4  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

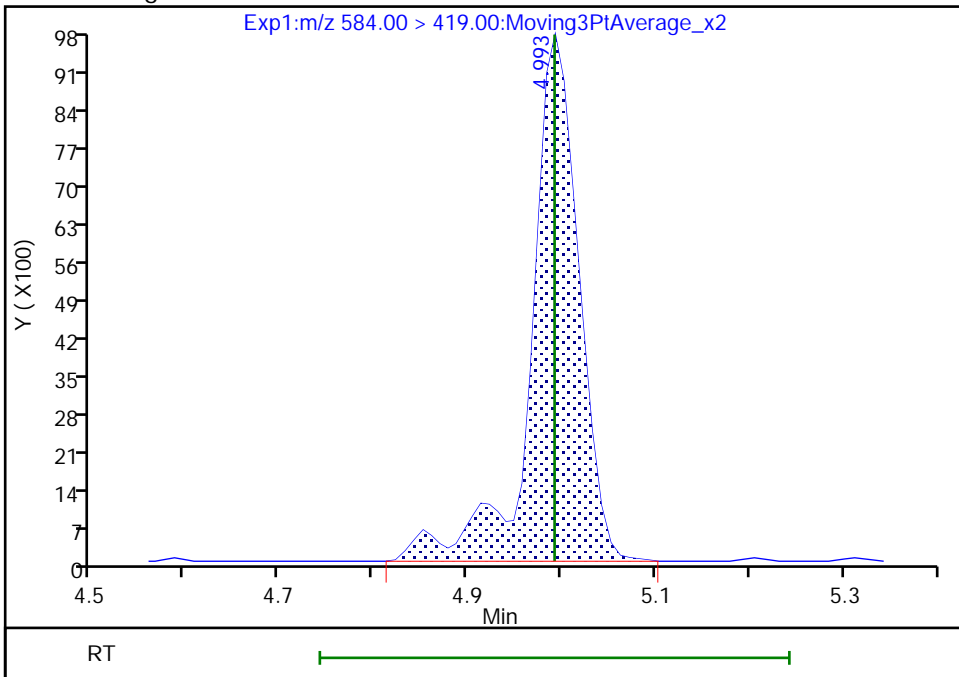
RT: 4.99  
Area: 30524  
Amount: 0.041608  
Amount Units: ng/ml

Processing Integration Results



RT: 4.99  
Area: 34737  
Amount: 0.047330  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 09-Jan-2022 12:42:48  
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 140-57742/5 Calibration Date: 01/09/2022 12:40  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 Lab File ID: \_005.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7844	0.7653		0.976	1.00	-2.4	40.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9519	0.8942		0.939	1.00	-6.1	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.097	1.083		0.872	0.884	-1.3	40.0
4:2 FTS	AveID	2.252	2.178		0.903	0.934	-3.3	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8680	0.8267		0.952	1.00	-4.8	40.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	0.9713	0.9534		0.921	0.938	-1.8	40.0
HFPO-DA	AveID	1.352	1.287		0.952	1.00	-4.8	40.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.377	1.327		0.877	0.910	-3.6	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.047	1.018		0.973	1.00	-2.8	40.0
DONA	AveID	2.630	2.614		0.936	0.942	-0.6	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9541	0.9288		0.927	0.952	-2.6	40.0
6:2 FTS	L2ID		1.782		0.941	0.948	-0.7	40.0
Perfluorooctanoic acid (PFOA)	AveID	1.147	1.097		0.956	1.00	-4.4	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.099	1.052		0.888	0.928	-4.3	40.0
Perfluorononanoic acid (PFNA)	Q2ID		0.8417		0.989	1.00	-1.1	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	Q2ID		2.134		0.929	0.932	-0.4	50.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9748	0.9321		0.918	0.960	-4.4	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9459	0.9365		0.990	1.00	-1.0	40.0
Perfluorodecanoic acid (PFDA)	AveID	0.9645	0.9333		0.968	1.00	-3.2	40.0
8:2 FTS	AveID	1.415	1.396		0.945	0.958	-1.4	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	QuaIF		0.9683		0.996	1.00	-0.4	40.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		0.8649		0.898	0.964	-6.8	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9695	0.9671		0.998	1.00	-0.2	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Q2ID		0.9625		0.969	1.00	-3.1	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.672	1.662		0.936	0.942	-0.6	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9757		0.956	1.00	-4.4	40.0
10:2 FTS	AveID	2.276	2.044		0.866	0.964	-10.2	40.0
NMeFOSA	Q2ID		1.060		1.05	1.00	4.6	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	Q2ID		1.134		0.969	1.00	-3.1	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9166	0.8800		0.929	0.968	-4.0	40.0



FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 140-57742/5 Calibration Date: 01/09/2022 12:40  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 Lab File ID: \_005.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTriA)	AveID	0.8292	0.8237		0.993	1.00	-0.7	40.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	AveID	1.328	1.278		0.962	1.00	-3.8	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.195	1.185		0.992	1.00	-0.8	40.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1344	0.1289		0.959	1.00	-4.1	40.0
Perfluorohexadecanoic acid	Q2ID		1.059		0.987	1.00	-1.3	40.0
Perfluorooctadecanoic acid	AveID	0.9844	1.015		1.03	1.00	3.1	40.0
13C4 PFBA	Ave	1.142	1.125		1.23	1.25	-1.5	50.0
13C5 PFPeA	Ave	0.8865	0.9062		1.28	1.25	2.2	50.0
13C3 PFBS	Ave	0.5913	0.5854		1.15	1.16	-1.0	50.0
M2-4:2 FTS	Ave	0.1820	0.1909		1.23	1.17	4.9	50.0
13C2 PFHxA	Ave	0.9479	0.9784		1.29	1.25	3.2	50.0
13C3 HFPO-DA	Ave	0.4556	0.4517		1.24	1.25	-0.9	50.0
18O2 PFHxS	Ave	0.3946	0.3887		1.17	1.18	-1.5	50.0
13C4 PFHpA	Ave	0.9067	0.9192		1.27	1.25	1.4	50.0
13C4 PFOA	Ave	0.9376	0.9388		1.25	1.25	0.1	50.0
M2-6:2 FTS	Ave	0.1835	0.1829		1.18	1.19	-0.3	50.0
13C4 PFOS	Ave	0.5681	0.5578		1.17	1.20	-1.8	50.0
13C5 PFNA	Ave	1.234	1.218		1.23	1.25	-1.3	50.0
13C8 FOSA	Ave	0.7682	0.7707		1.25	1.25	0.3	50.0
13C2 PFDA	Ave	1.191	1.175		1.23	1.25	-1.4	50.0
M2-8:2 FTS	Ave	0.2070	0.2064		1.19	1.20	-0.3	50.0
d3-NMeFOSAA	Ave	0.1401	0.1389		1.24	1.25	-0.9	50.0
13C2 PFUnA	Ave	1.189	1.194		1.26	1.25	0.4	50.0
d5-NEtFOSAA	Ave	0.1537	0.1582		1.29	1.25	2.9	50.0
13C2 PFDoA	Ave	1.247	1.257		1.26	1.25	0.8	50.0
d7-N-MeFOSE-M	Ave	0.1499	0.1409		1.18	1.25	-6.0	50.0
d-N-MeFOSA-M	Ave	0.1069	0.1037		1.21	1.25	-2.9	50.0
d9-N-EtFOSE-M	Ave	0.1504	0.1521		1.26	1.25	1.2	50.0
d-N-EtFOSA-M	Ave	0.0883	0.0853		1.21	1.25	-3.4	50.0
13C2 PFTeDA	Ave	0.9508	0.9528		1.25	1.25	0.2	50.0
13C2 PFHxDA	Ave	0.6444	0.6224		1.21	1.25	-3.4	50.0
13C8 PFOA	AveID	0.999	0.9671		1.21	1.25	-3.2	50.0
13C8 PFOS	AveID	0.2220	0.2176		1.17	1.20	-2.0	50.0

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_005.d  
 Lims ID: CCVIS  
 Client ID:  
 Sample Type: CCVIS  
 Inject. Date: 09-Jan-2022 12:40:40 ALS Bottle#: 5 Worklist Smp#: 5  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022187-005 CCVIS  
 Misc. Info.: Plate: 11 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 15:08:06 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1641

First Level Reviewer: cochranj Date: 10-Jan-2022 09:11:29

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	2.790	2.790	0.0	0.679	6367670	1.23	98.5	14660	
2 Perfluorobutanoic acid	212.90 > 169.00	2.790	2.785	0.005	1.000	3898601	0.9756	97.6	958	
D 3 13C5 PFPeA	267.90 > 223.00	3.098	3.098	0.0	0.755	5128347	1.28	102	10452	
4 Perfluoropentanoic acid	262.90 > 219.00	3.098	3.093	0.005	1.000	3668428	0.9393	93.9	1143	
D 6 13C3 PFBS	301.90 > 80.00	3.115	3.115	0.0	0.759	3081181	1.15	99.0	13130	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.115	3.109	0.006	1.000	2536732	0.8724	Target=2.65	98.7	4407
	298.90 > 99.00	3.115	3.109	0.006	1.000	923746		2.75(1.32-3.97)		3212
D 8 M2-4:2 FTS	329.00 > 81.00	3.391	3.391	0.0	0.826	1009102	1.22	105	1763	
7 4:2 FTS	327.00 > 307.00	3.402	3.393	0.009	1.003	1758250	0.9032	96.7	6414	
D 9 13C2 PFHxA	315.00 > 270.00	3.422	3.422	0.0	0.833	5537068	1.29	103	8038	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.422	3.422	0.0	1.099	2370404	0.9208	Target=3.44	98.2	6290
	349.00 > 99.00	3.422	3.422	0.0	1.099	684041		3.47(1.72-5.16)		3801
10 Perfluorohexanoic acid	313.00 > 269.00	3.422	3.423	-0.001	1.000	3661783	0.9523	Target=11.80	95.2	1634
	313.00 > 119.00	3.422	3.423	-0.001	1.000	298294		12.28(5.90-17.70)		477
D 12 13C3 HFPO-DA	287.00 > 169.00	3.528	3.528	0.0	0.859	2556245	1.24	99.1	5068	

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	3.528	3.524	0.004	1.000	2632733	0.9519		95.2	1905	
D 17 18O2 PFHxS										
403.00 > 84.00	3.760	3.760	0.0	0.916	2080789	1.16		98.5	6453	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.760	3.760	0.0	1.000	2124992	0.8769	Target=3.40	96.4	6566	M
399.00 > 99.00	3.760	3.760	0.0	1.000	603408		3.52(1.70-5.10)		2858	M
D 14 13C4 PFHpA										
367.00 > 322.00	3.769	3.769	0.0	0.918	5202117	1.27		101	8125	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.769	3.772	-0.003	1.000	4236139	0.9725	Target=3.29	97.2	2476	
363.00 > 169.00	3.769	3.772	-0.003	1.000	1325544		3.20(1.65-4.94)		1928	
68 DONA										
377.00 > 251.00	3.807	3.807	0.0	0.865	6218020	0.9362	Target=1.82	99.4	7593	
377.00 > 85.00	3.807	3.807	0.0	0.865	3493736		1.78(0.91-2.74)		181	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.089	4.092	-0.003	0.929	2232910	0.9268	Target=3.92	97.4	5831	
449.00 > 99.00	4.089	4.092	-0.003	0.929	564652		3.95(1.96-5.87)		4044	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.106	4.106	0.0	1.000	983468	1.18		99.7	3385	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.106	4.100	0.006	1.000	5138196	1.21		96.8	9354	
19 6:2 FTS										
427.00 > 407.00	4.106	4.101	0.005	1.000	1399139	0.9410		99.3	4926	
D 21 13C4 PFOA										
417.00 > 372.00	4.106	4.106	0.0	1.000	5312782	1.25		100	9225	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.106	4.109	-0.003	1.000	4661452	0.9558	Target=2.59	95.6	2242	
413.00 > 169.00	4.106	4.109	-0.003	1.000	1777903		2.62(1.30-3.89)		2622	
* 22 13C2 PFOA										
415.00 > 370.00	4.106	4.109	-0.003		5659179	1.25			8146	
D 25 13C4 PFOS										
503.00 > 80.00	4.401	4.401	0.0	1.072	3017801	1.17		98.2	3665	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.393	4.396	-0.003	0.998	656746	1.17		98.0	3365	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.401	4.398	0.003	1.000	2464700	0.8882	Target=4.65	95.7	4177	M
499.00 > 99.00	4.401	4.398	0.003	1.000	575561		4.28(2.32-6.97)		3061	M
D 27 13C5 PFNA										
468.00 > 423.00	4.427	4.427	0.0	1.078	6892089	1.23		98.7	10432	
26 Perfluorononanoic acid										
463.00 > 419.00	4.427	4.421	0.006	1.000	4640752	0.9893	Target=4.65	98.9	4462	
463.00 > 169.00	4.427	4.421	0.006	1.000	1022199		4.54(2.32-6.97)		1768	
63 9CIFOS										
531.00 > 351.00	4.560	4.558	0.002	1.036	5022882	0.9287		99.6	11879	

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	4.681	4.682	-0.001	1.063	2259649	0.9179	Target=4.06	95.6	5320	
549.00 > 99.00	4.681	4.682	-0.001	1.063	583530		3.87(2.03-6.09)		3633	
D 34 13C8 FOSA										
506.00 > 78.00	4.706	4.706	0.0	1.146	4361794	1.25		100	3188	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.706	4.700	0.006	1.000	3267696	0.99		99.0	4163	
D 32 13C2 PFDA										
515.00 > 470.00	4.715	4.715	0.0	1.148	6647723	1.23		98.6	9583	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.715	4.709	0.006	1.000	4963529	0.9677	Target=11.30	96.8	4924	
513.00 > 169.00	4.715	4.709	0.006	1.000	431792		11.50(5.65-16.95)		739	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.723	4.723	0.0	1.150	1119081	1.19		99.7	1670	
31 8:2 FTS										
527.00 > 507.00	4.723	4.721	0.002	1.000	1249717	0.9450		98.6	5310	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.852	4.852	0.0	1.182	785893	1.24		99.1	817	
36 NMeFOSAA										
570.00 > 419.00	4.861	4.858	0.003	1.002	608781	1.00		99.6	1168	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.940	4.942	-0.002	1.122	2105671	0.8984	Target=3.79	93.2	5650	
599.00 > 99.00	4.940	4.942	-0.002	1.122	560322		3.76(1.90-5.69)		5192	
D 39 13C2 PFUnA										
565.00 > 520.00	4.975	4.975	0.0	1.212	6754829	1.26		100	12512	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.975	4.973	0.002	1.000	5226221	1.00	Target=8.45	99.8	4881	
563.00 > 169.00	4.975	4.973	0.002	1.000	628952		8.31(4.22-12.67)		2410	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.993	4.993	0.0	1.216	895232	1.29		103	3041	
40 NEtFOSA										
584.00 > 419.00	4.993	4.995	-0.002	1.000	689299	0.9687		96.9	1481	M
57 11C1FOS										
631.00 > 451.00	5.072	5.075	-0.003	1.152	3954456	0.9363		99.4	8135	
D 43 13C2 PFDoA										
615.00 > 570.00	5.213	5.213	0.0	1.270	7115904	1.26		101	14001	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.213	5.207	0.006	1.000	5554622	0.9558	Target=6.99	95.6	4585	
613.00 > 169.00	5.213	5.207	0.006	1.000	774808		7.17(3.50-10.49)		2015	
50 10:2 FTS										
627.00 > 607.00	5.231	5.231	0.0	1.107	1841671	0.8658		89.8	8253	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.284	5.284	0.0	1.287	797603	1.18		94.0	773	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.284	5.284	0.0	1.287	587090	1.21		97.1	52.4	
61 NMeFOSA										
512.00 > 169.00	5.284	5.286	-0.002	1.000	497652	1.05		105	700	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
49 N-MeFOSE-M										
616.00 > 59.00	5.292	5.290	0.002	1.002	723654	0.9689		96.9	1090	
54 PFDoS										
699.00 > 80.00	5.383	5.383	0.0	1.223	2151098	0.9293	Target=4.24	96.0	5147	
699.00 > 99.00	5.383	5.383	0.0	1.223	521813		4.12(2.12-6.35)		3947	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.414	5.417	-0.003	1.039	4689354	0.99	Target=6.20	99.3	4427	
663.00 > 169.00	5.414	5.417	-0.003	1.039	739010		6.35(3.10-9.30)		2891	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.444	5.444	0.0	1.326	860978	1.26		101	382	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.454	5.454	0.0	1.328	482528	1.21		96.6	751	
62 N-EtFOSE-M										
630.00 > 59.00	5.454	5.450	0.004	1.002	880141	0.9622		96.2	1037	
56 N-EtFOSA-M										
526.00 > 169.00	5.464	5.457	0.007	1.002	457621	0.99		99.2	655	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.607	5.607	0.0	1.365	5391830	1.25		100	11376	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.607	5.600	0.007	1.000	555991	0.9592	Target=1.05	95.9	3214	
713.00 > 219.00	5.596	5.600	-0.004	0.998	524354		1.06(0.53-1.58)		3225	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.904	5.904	0.0	1.438	3522426	1.21		96.6	6362	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.904	5.907	-0.003	1.000	2982967	0.9869	Target=8.09	98.7	4048	
813.00 > 169.00	5.904	5.907	-0.003	1.000	363521		8.21(4.05-12.14)		1352	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.164	6.162	0.002	1.044	2860126	1.03	Target=11.53	103	4031	
913.00 > 169.00	6.164	6.162	0.002	1.044	246097		11.62(5.77-17.30)		1247	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

63L4PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_005.d

Injection Date: 09-Jan-2022 12:40:40

Instrument ID: LCA

Lims ID: CCVIS

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 5

Worklist Smp#: 5

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

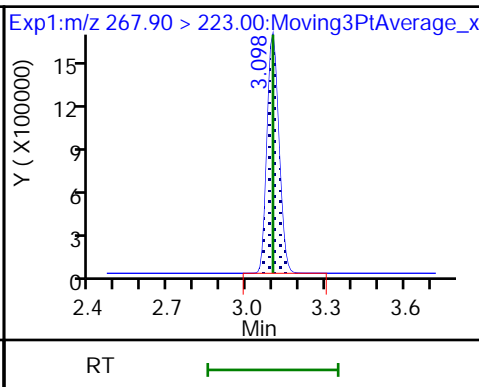
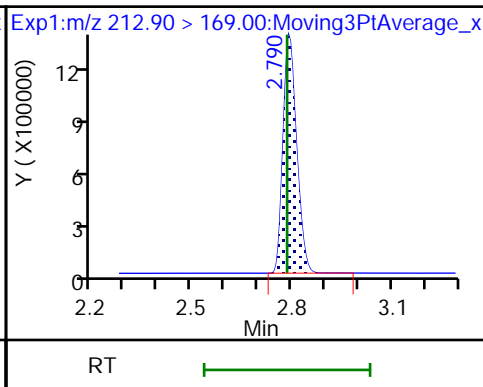
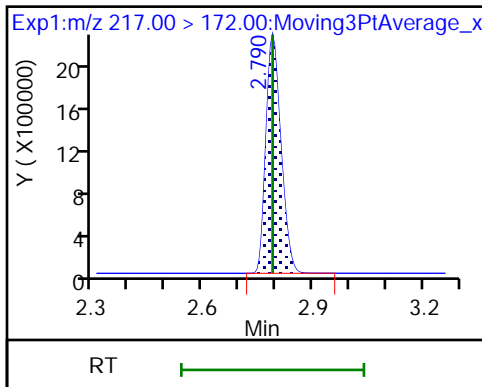
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

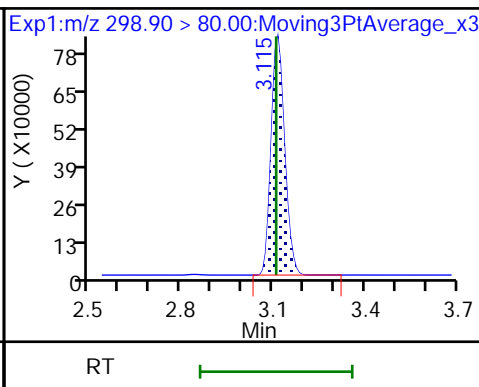
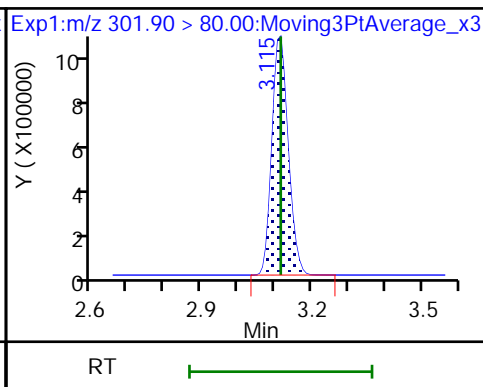
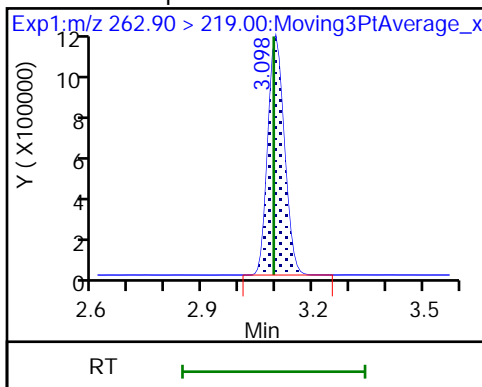
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

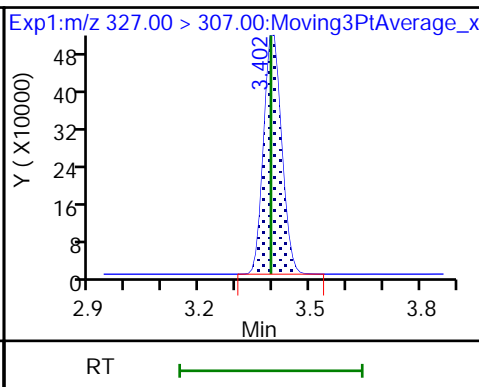
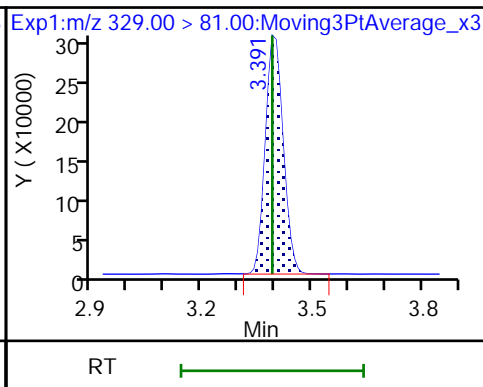
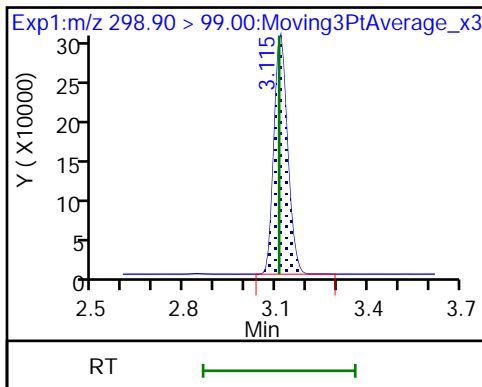
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

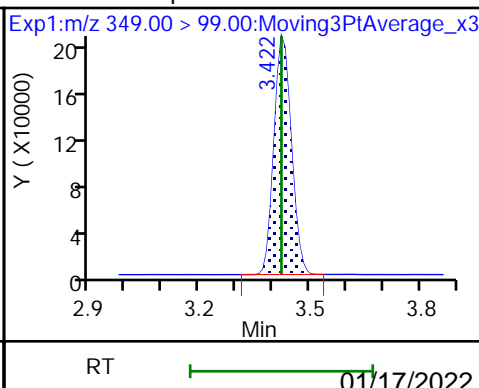
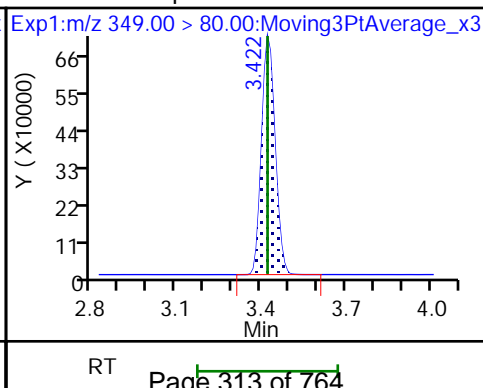
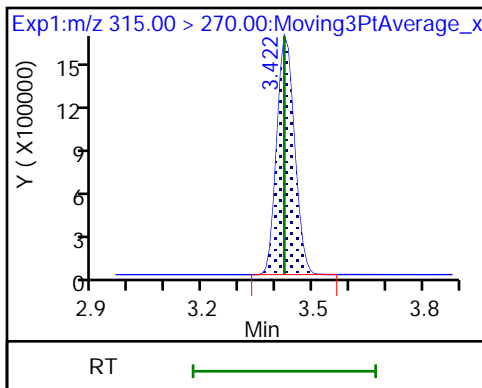
7 4:2 FTS

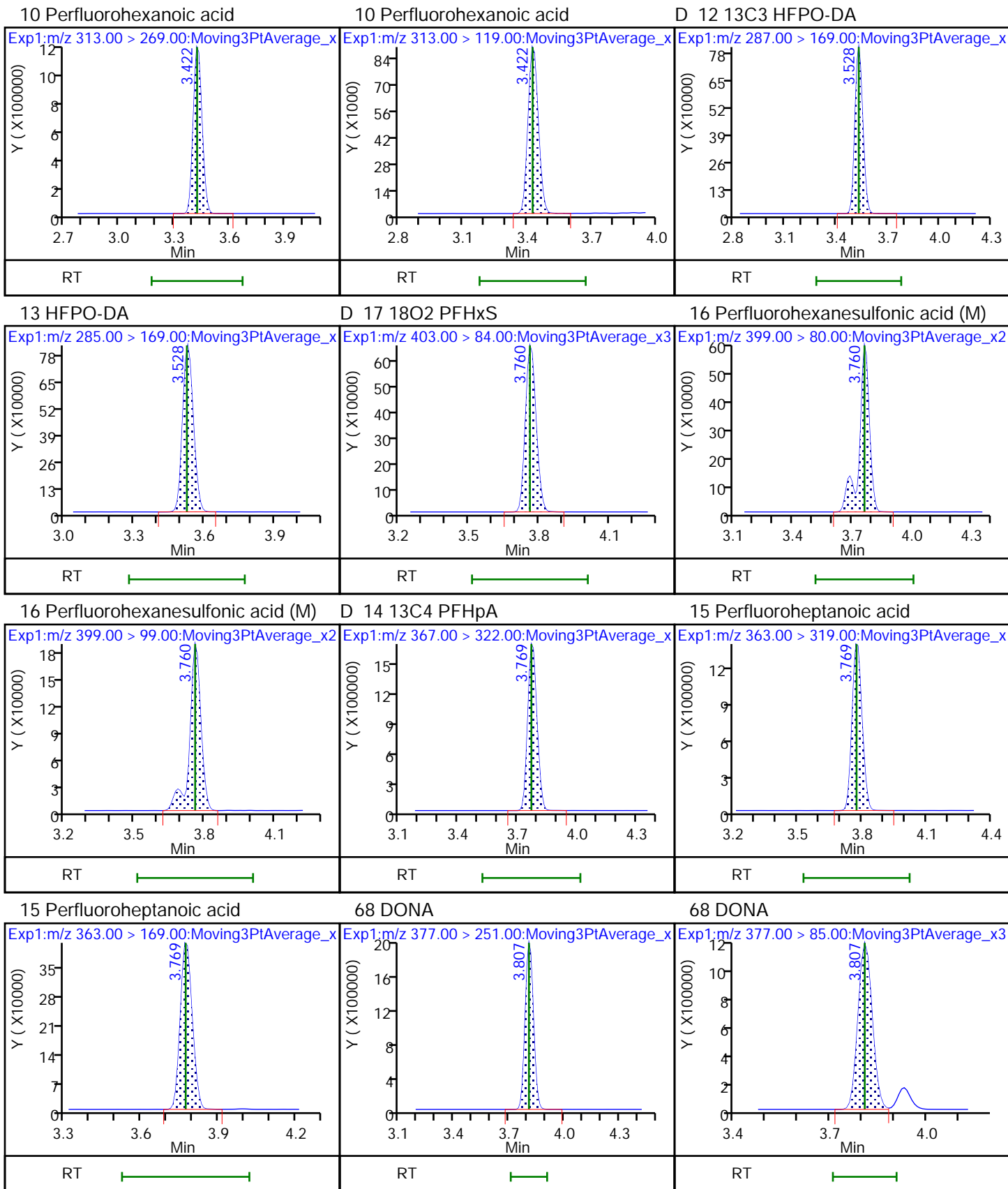


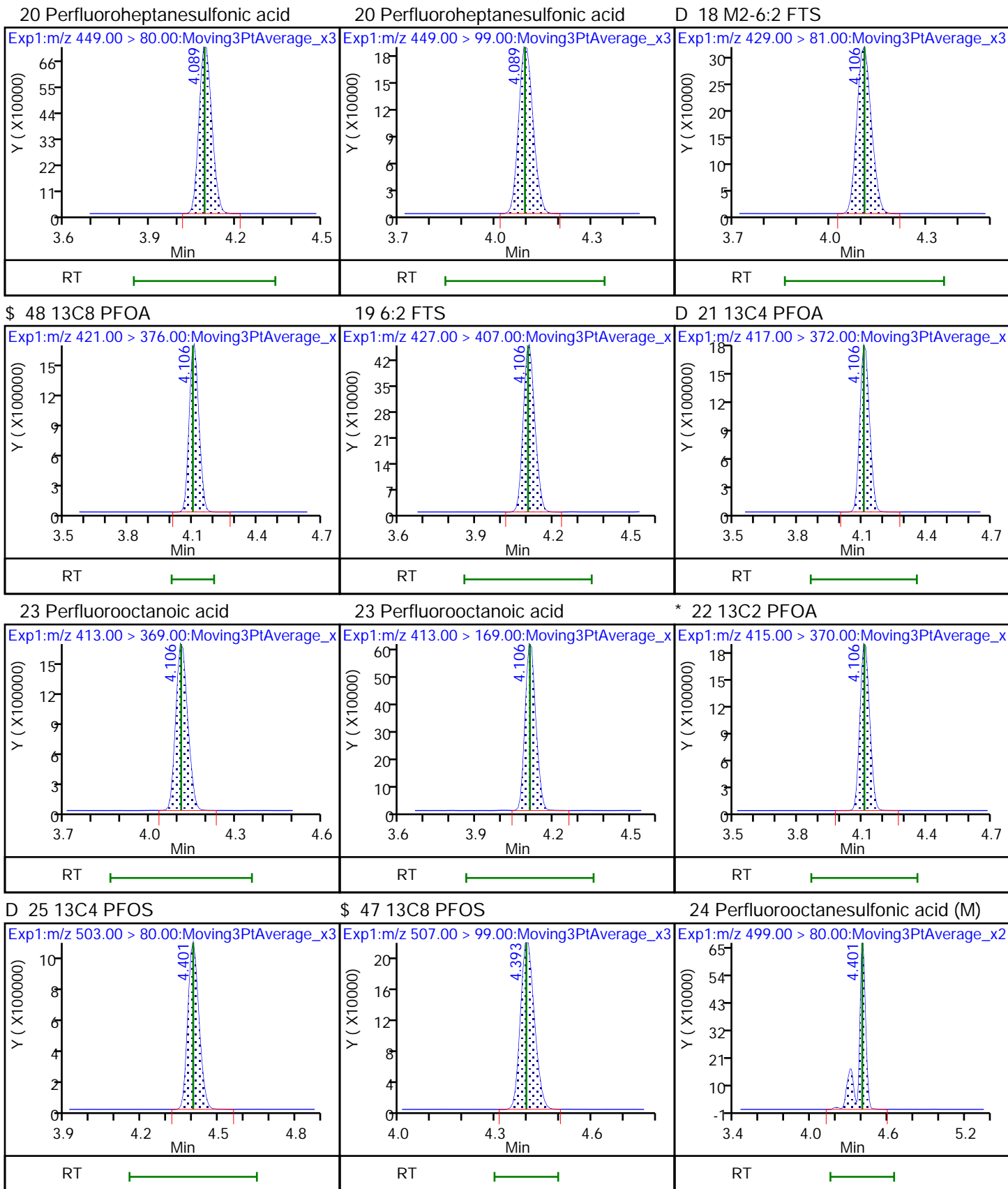
D 9 13C2 PFHxA

11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid





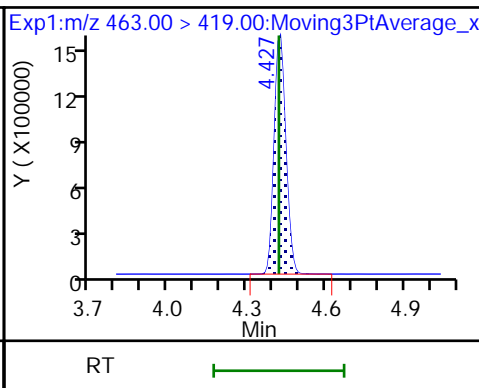
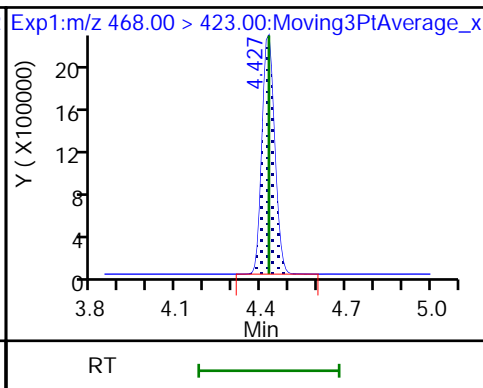
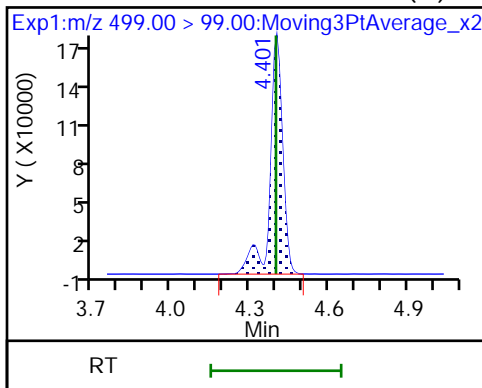




24 Perfluorooctanesulfonic acid (M)

D 27 13C5 PFNA

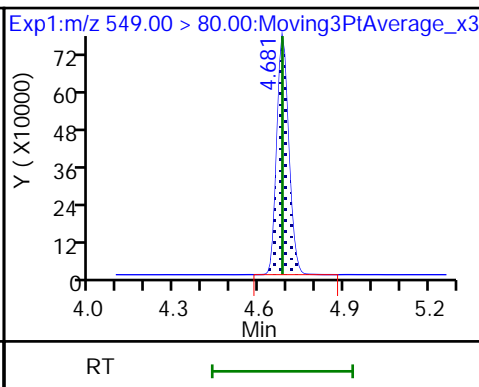
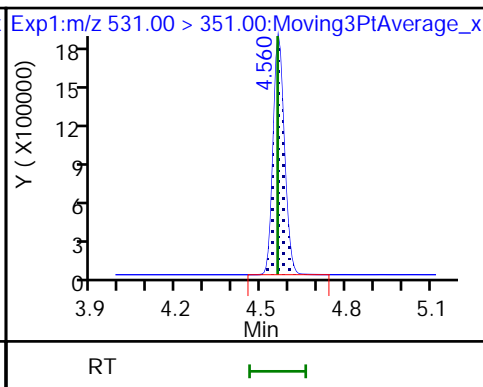
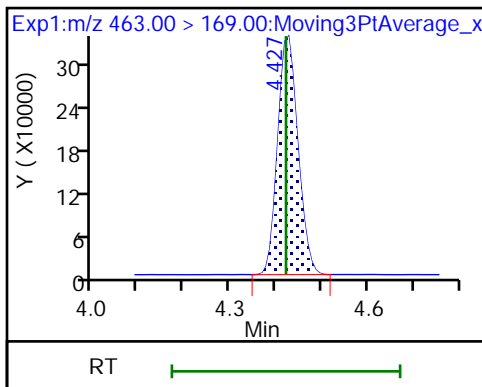
26 Perfluorononanoic acid



26 Perfluorononanoic acid

63 9CIFOS

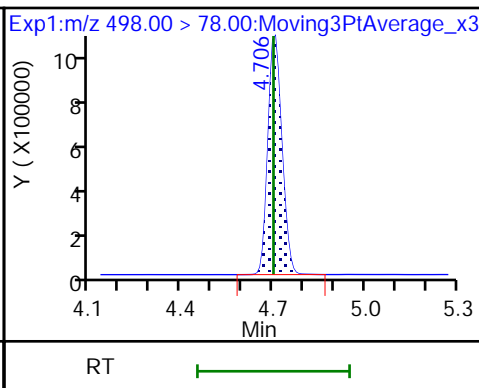
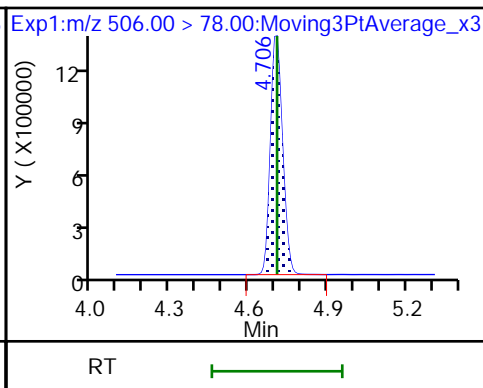
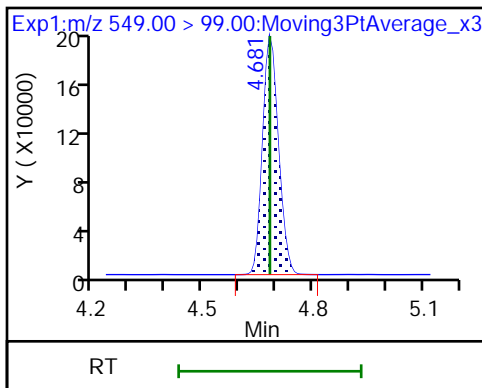
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

D 34 13C8 FOSA

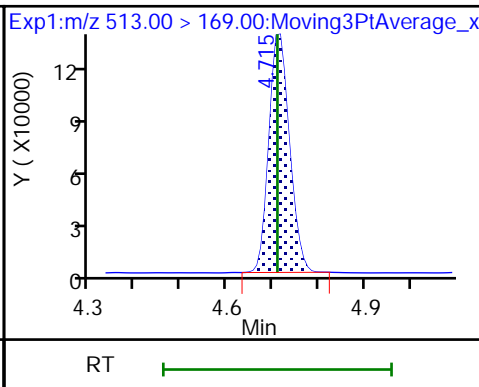
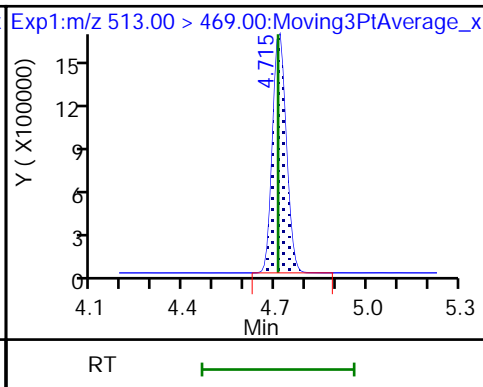
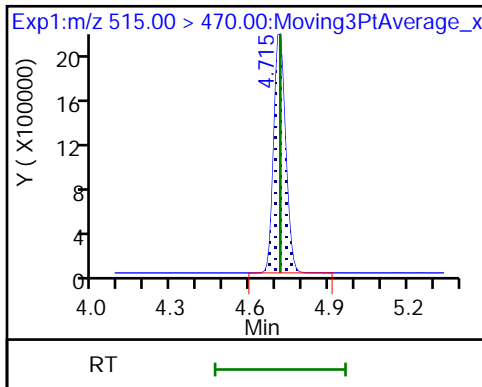
33 Perfluorooctanesulfonamide



D 32 13C2 PFDA

29 Perfluorodecanoic acid

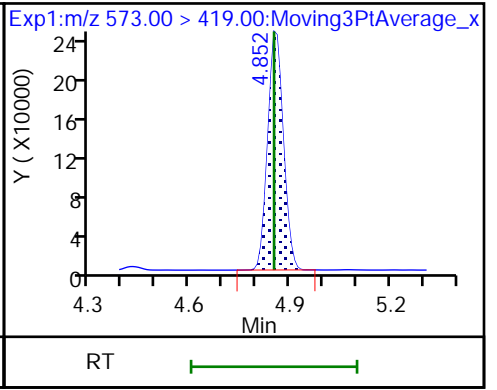
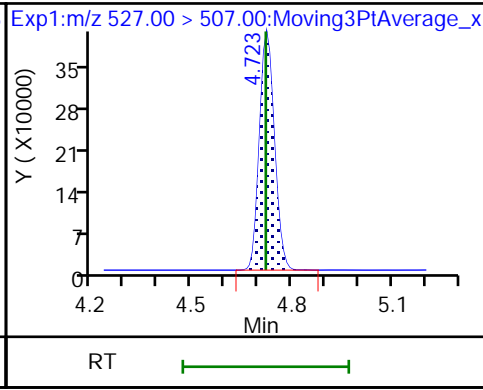
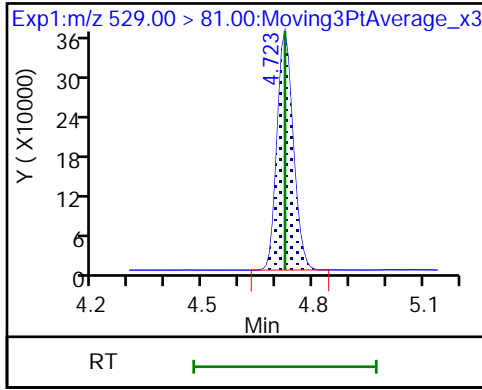
29 Perfluorodecanoic acid



D 30 M2-8:2 FTS

31 8:2 FTS

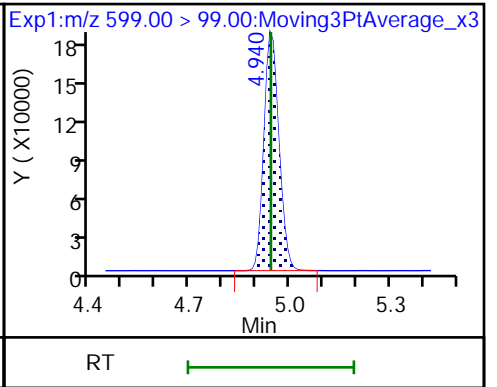
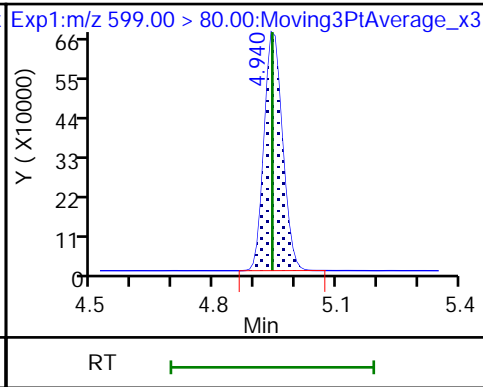
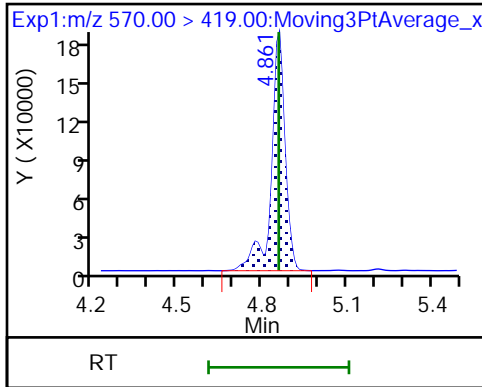
D 35 d3-NMeFOSAA



36 NMeFOSAA (M)

37 Perfluorodecanesulfonic acid

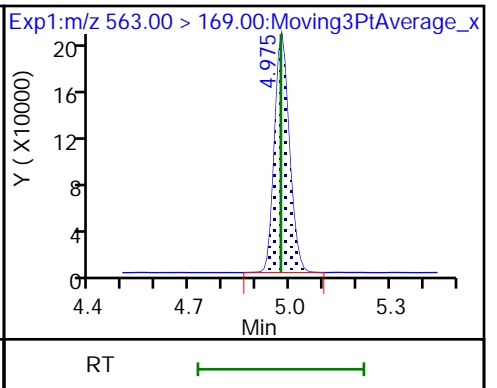
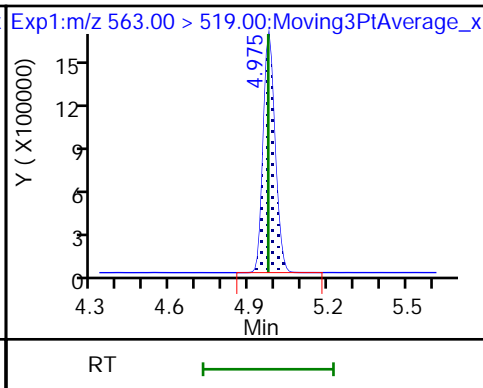
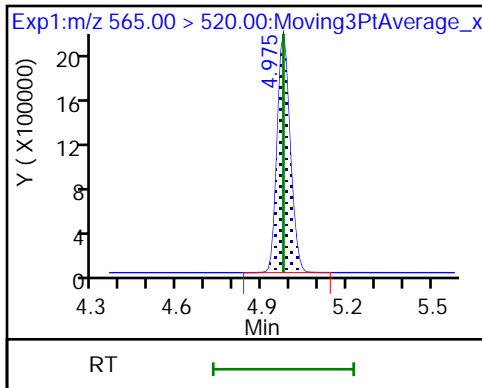
37 Perfluorodecanesulfonic acid



D 39 13C2 PFUnA

38 Perfluoroundecanoic acid

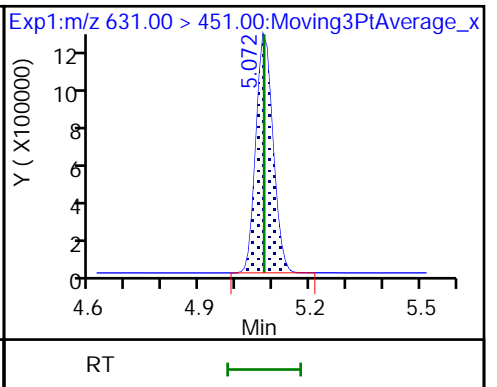
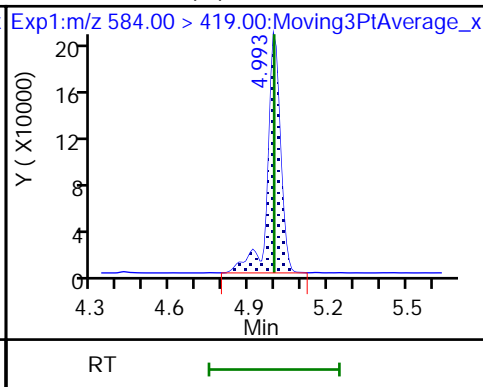
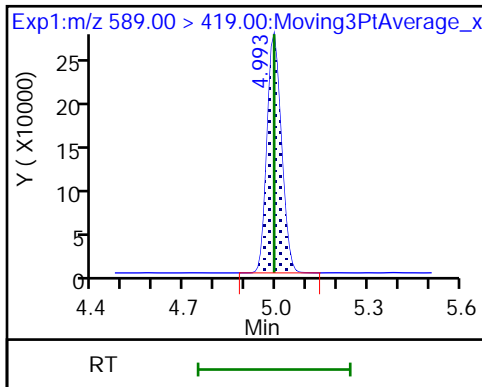
38 Perfluoroundecanoic acid



D 41 d5-NEtFOSAA

40 NEtFOSA (M)

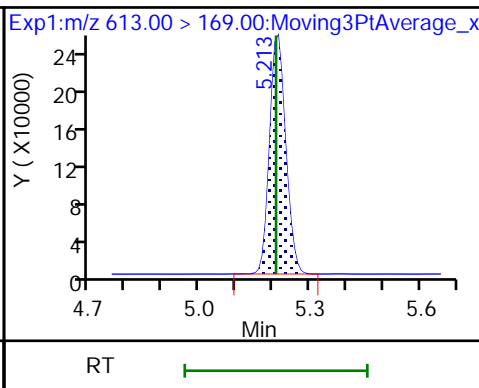
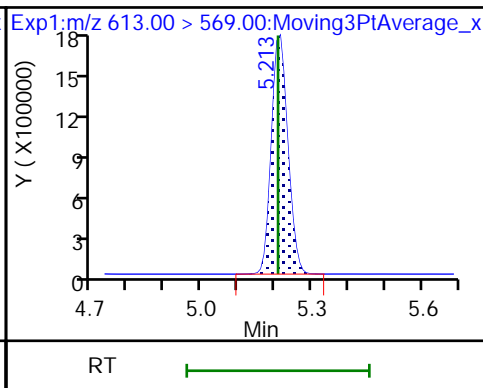
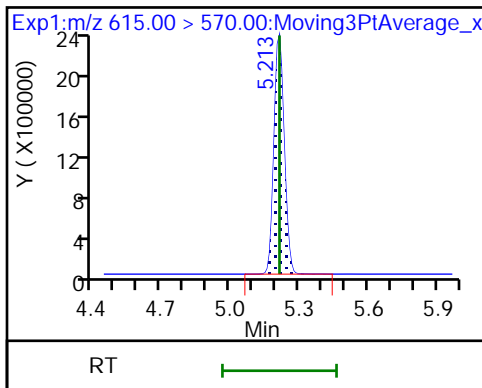
57 11C1FOS



D 43 13C2 PFDaA

42 Perfluorododecanoic acid

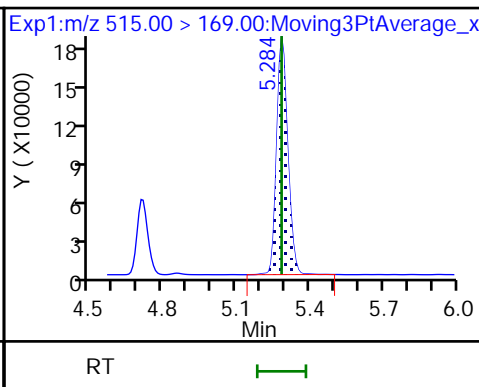
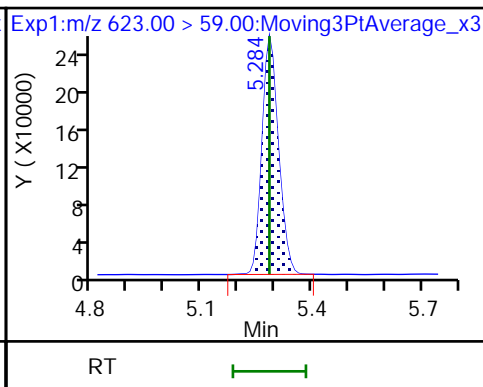
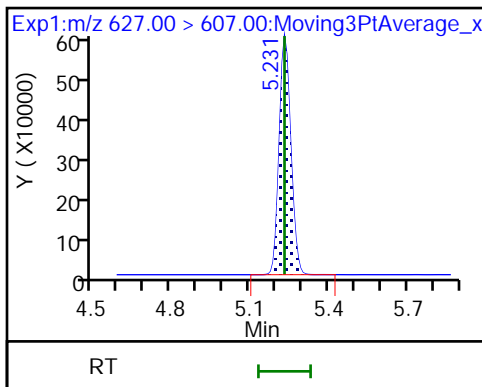
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

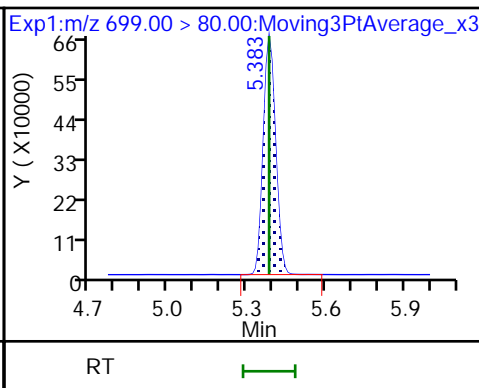
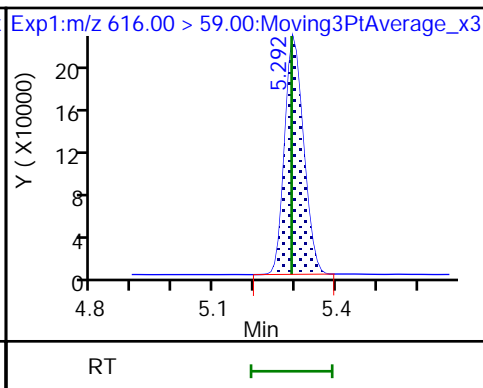
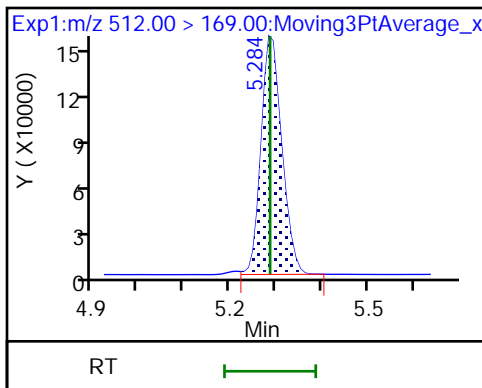
D 58 d-N-MeFOSA-M



61 NMeFOSA

49 N-MeFOSE-M

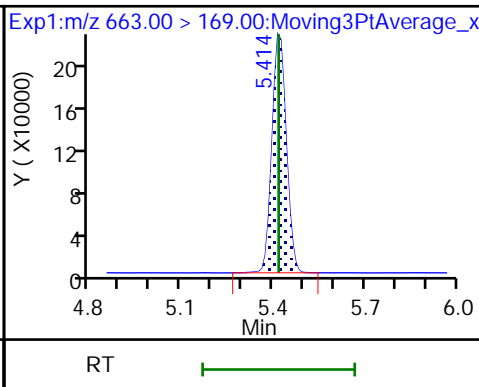
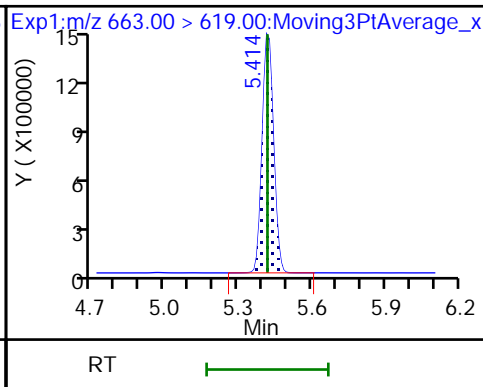
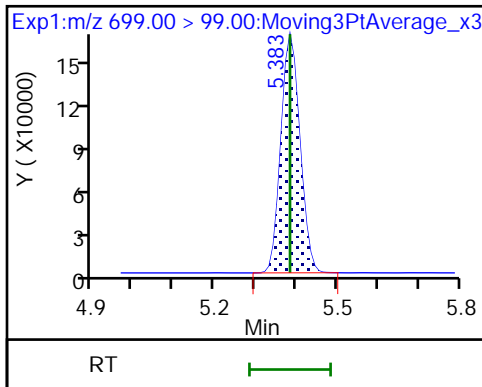
54 PFDoS



54 PFDoS

44 Perfluorotridecanoic acid

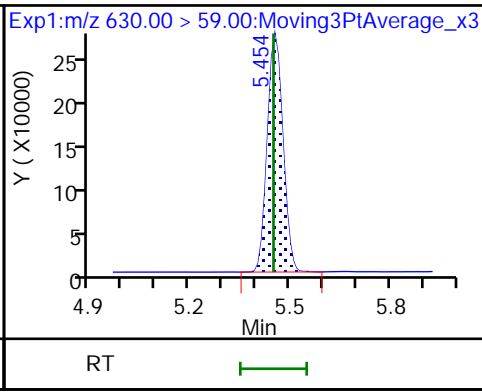
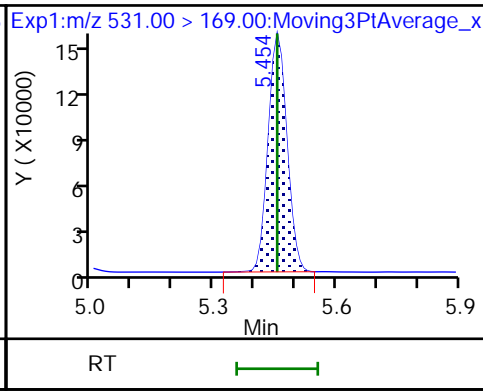
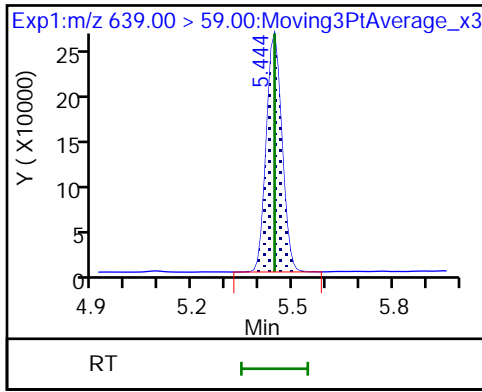
44 Perfluorotridecanoic acid



D 53 d9-N-EtFOSE-M

D 52 d-N-EtFOSA-M

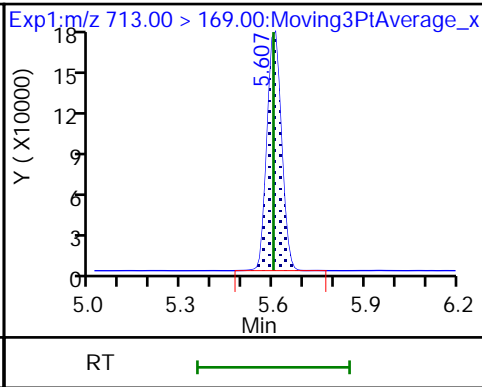
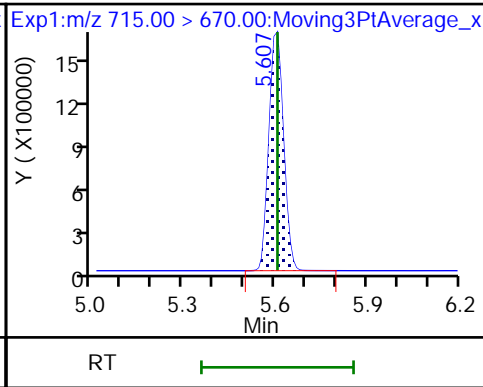
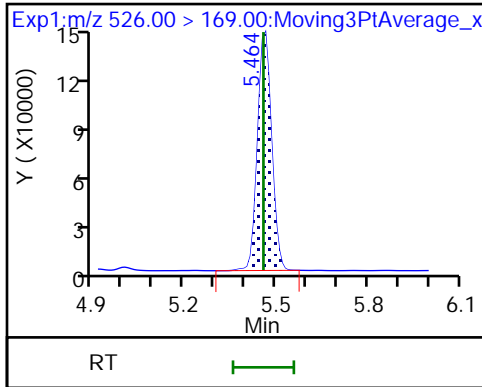
62 N-EtFOSE-M



56 N-EtFOSA-M

D 46 13C2 PFTeDA

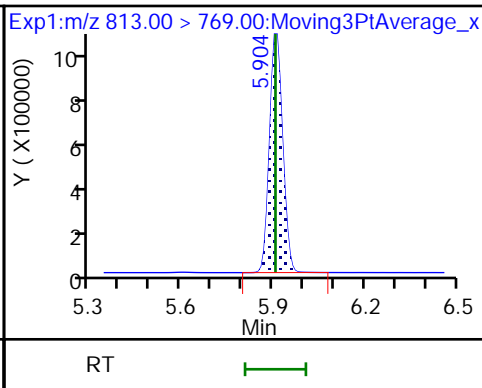
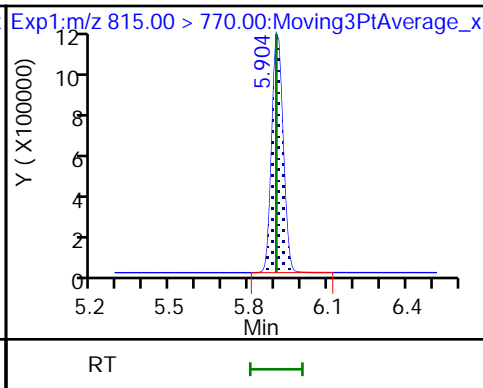
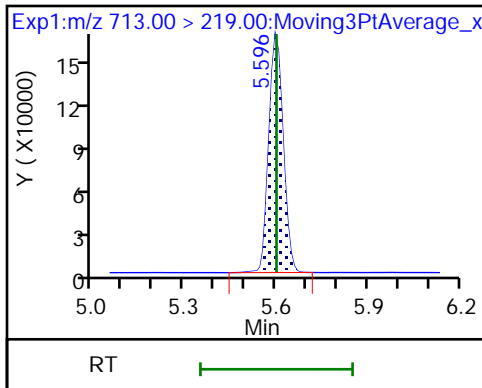
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

D 59 13C2 PFHxDA

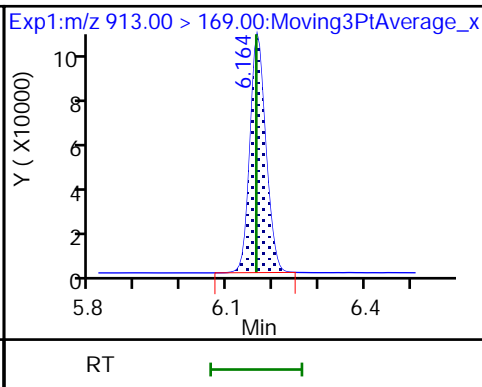
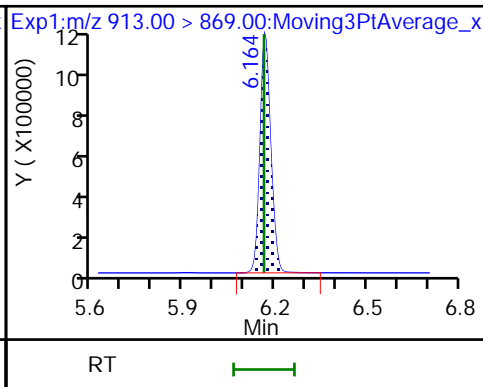
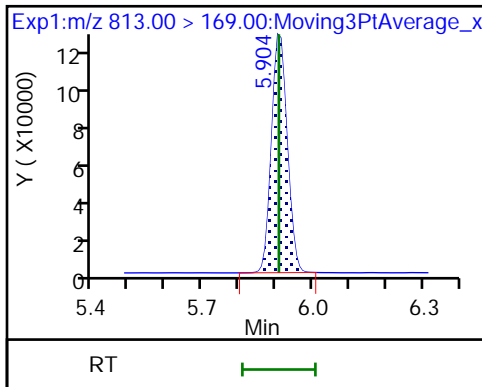
55 Perfluorohexadecanoic acid



55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid





Eurofins TestAmerica, Knoxville

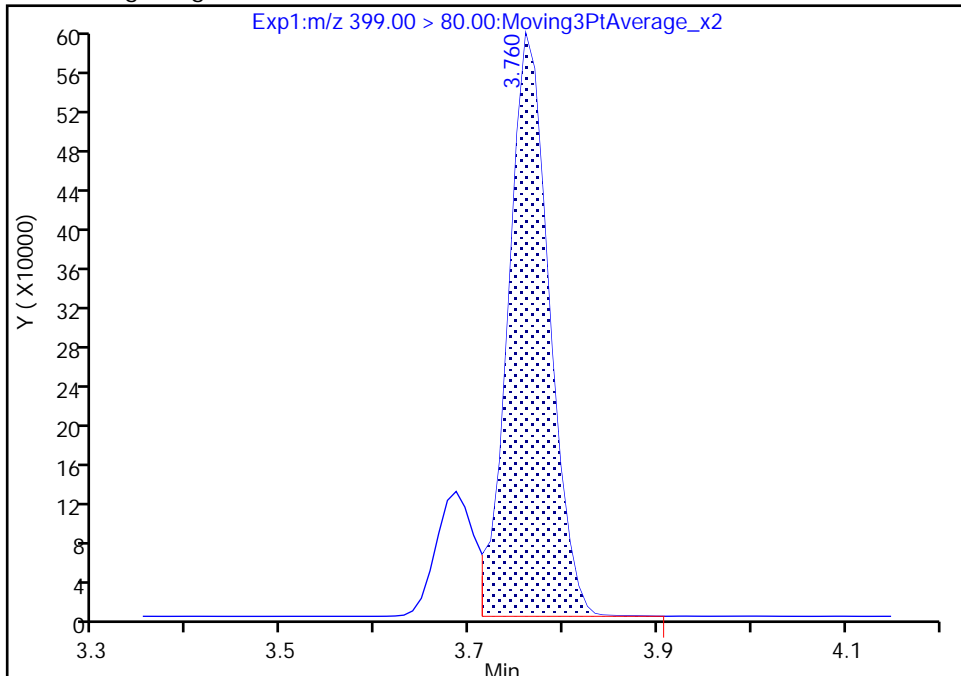
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Injection Date: 09-Jan-2022 12:40:40 Instrument ID: LCA  
Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 5 Worklist Smp#: 5  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

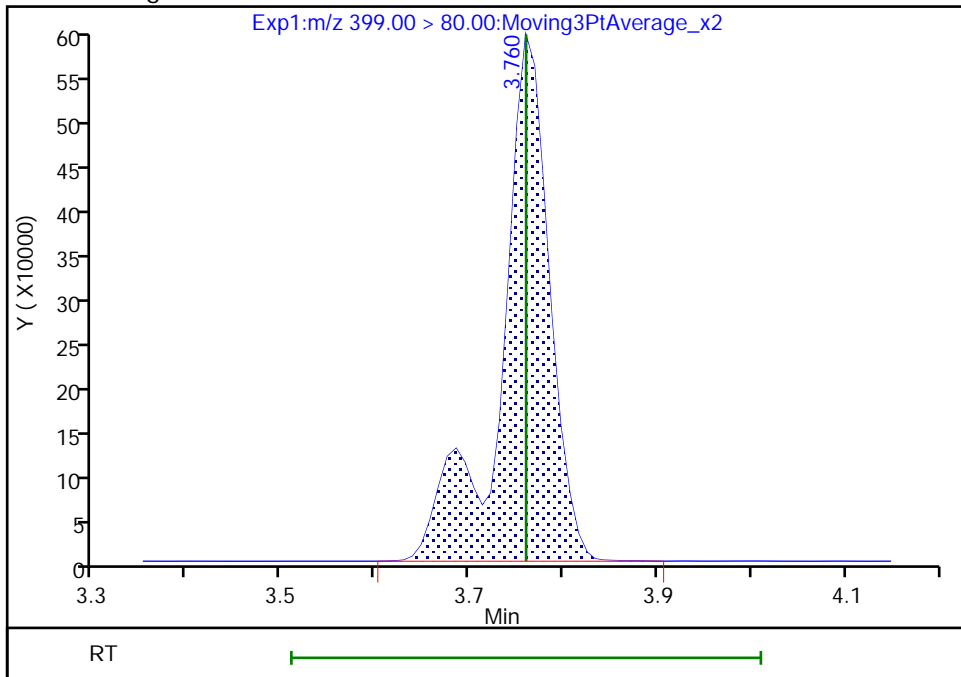
RT: 3.76  
Area: 1777365  
Amount: 0.733417  
Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
Area: 2124992  
Amount: 0.876863  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 09:10:11  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

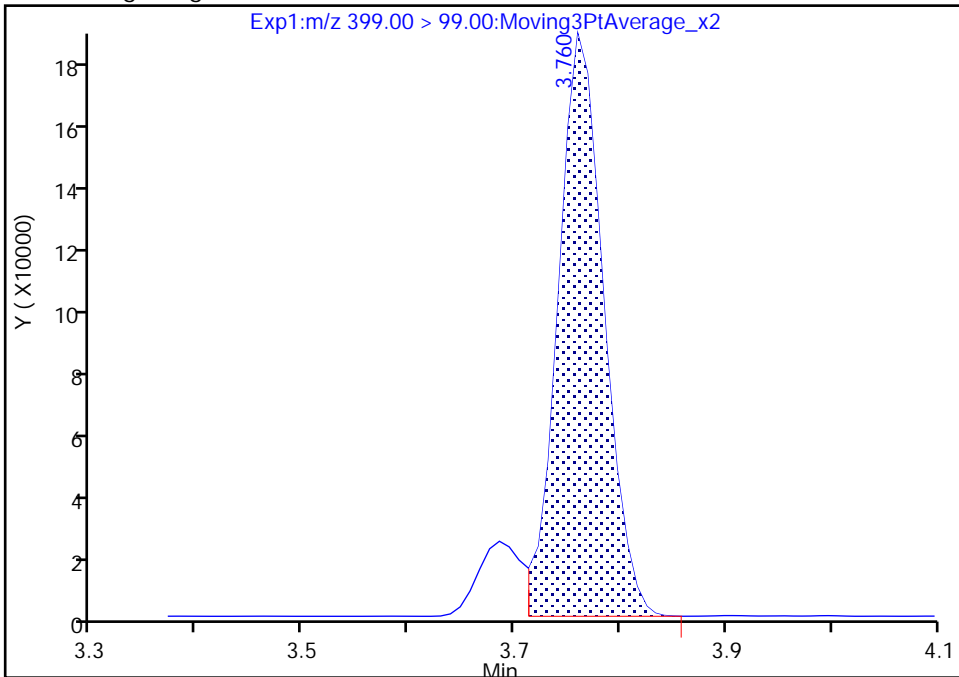
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Injection Date: 09-Jan-2022 12:40:40 Instrument ID: LCA  
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Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 5 Worklist Smp#: 5  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

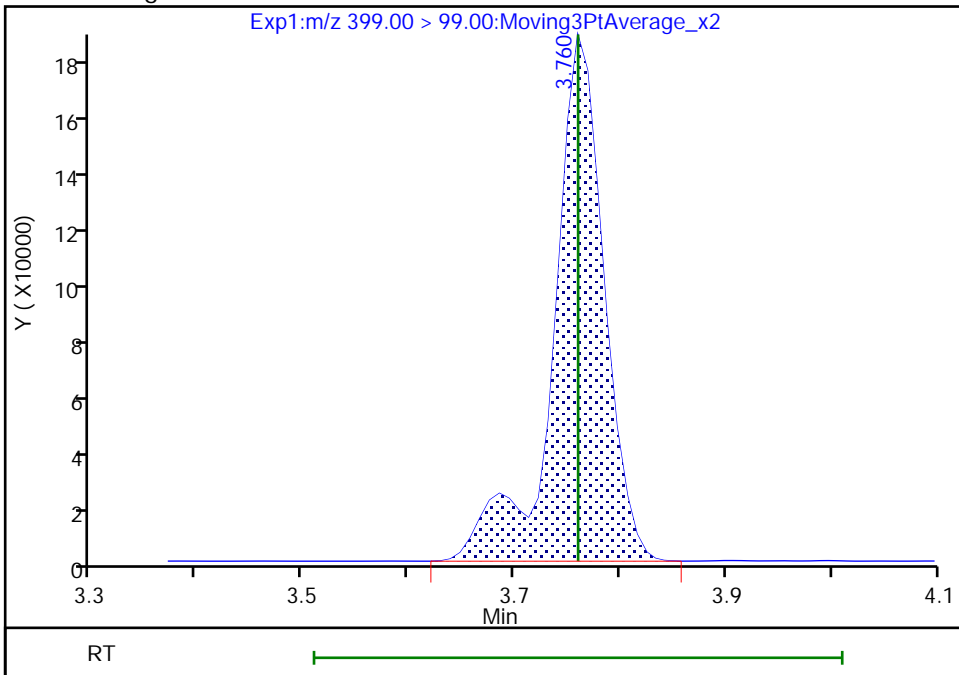
RT: 3.76  
Area: 538499  
Amount: 0.733417  
Amount Units: ng/ml

Processing Integration Results



RT: 3.76  
Area: 603408  
Amount: 0.876863  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 09:10:22  
Audit Action: Manually Integrated

Eurofins TestAmerica, Knoxville

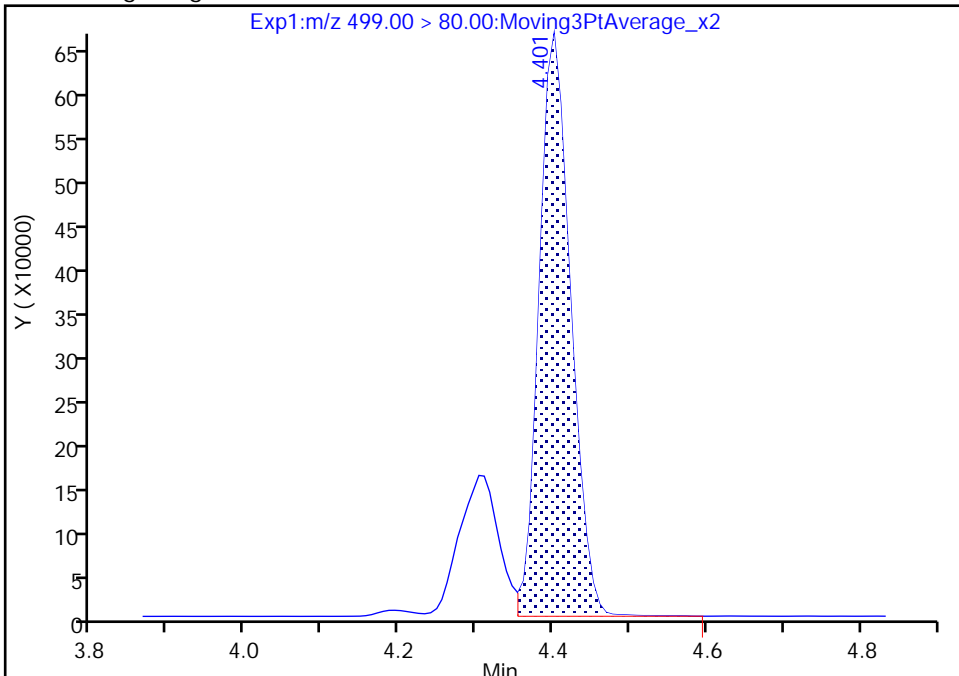
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\\_005.d  
Injection Date: 09-Jan-2022 12:40:40 Instrument ID: LCA  
Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 5 Worklist Smp#: 5  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

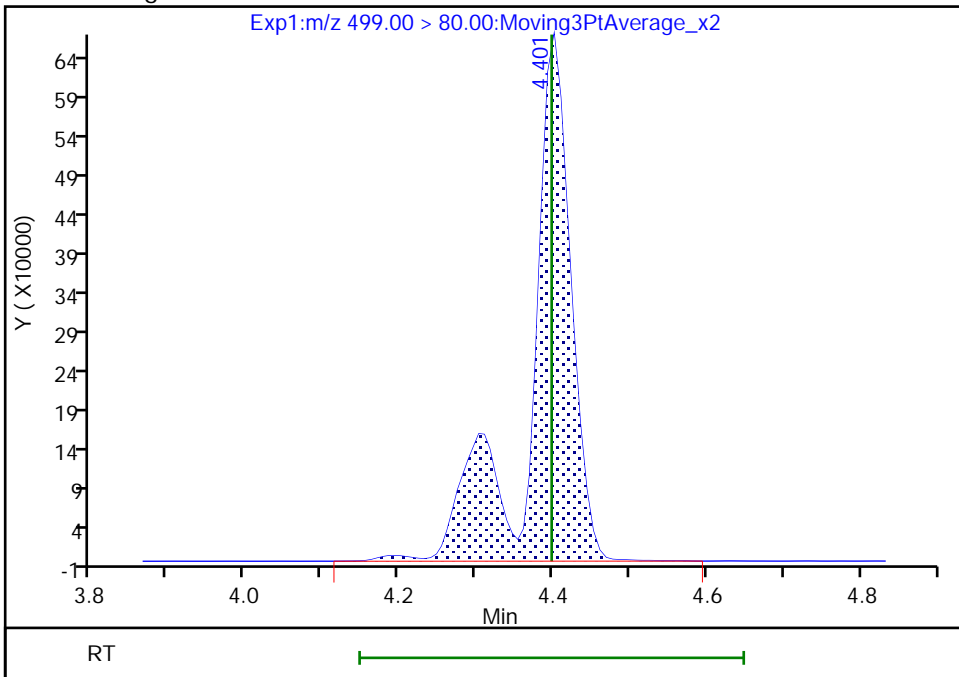
RT: 4.40  
Area: 1873908  
Amount: 0.675318  
Amount Units: ng/ml

Processing Integration Results



RT: 4.40  
Area: 2464700  
Amount: 0.888227  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 09:10:35  
Audit Action: Manually Integrated

Audit Reason: Baseline



Eurofins TestAmerica, Knoxville

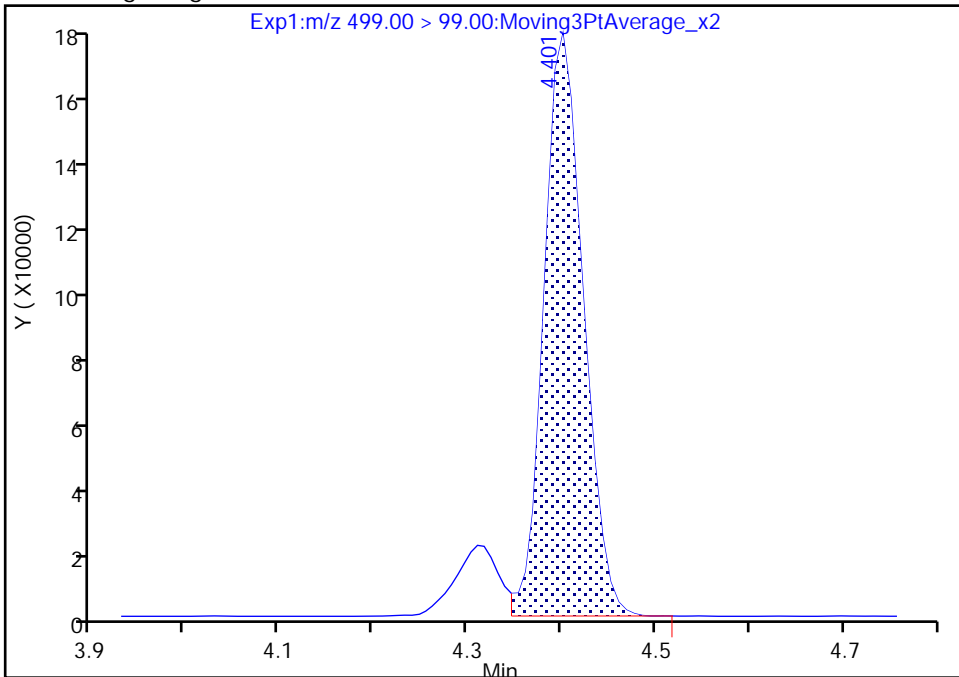
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_005.d  
Injection Date: 09-Jan-2022 12:40:40 Instrument ID: LCA  
Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 5 Worklist Smp#: 5  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

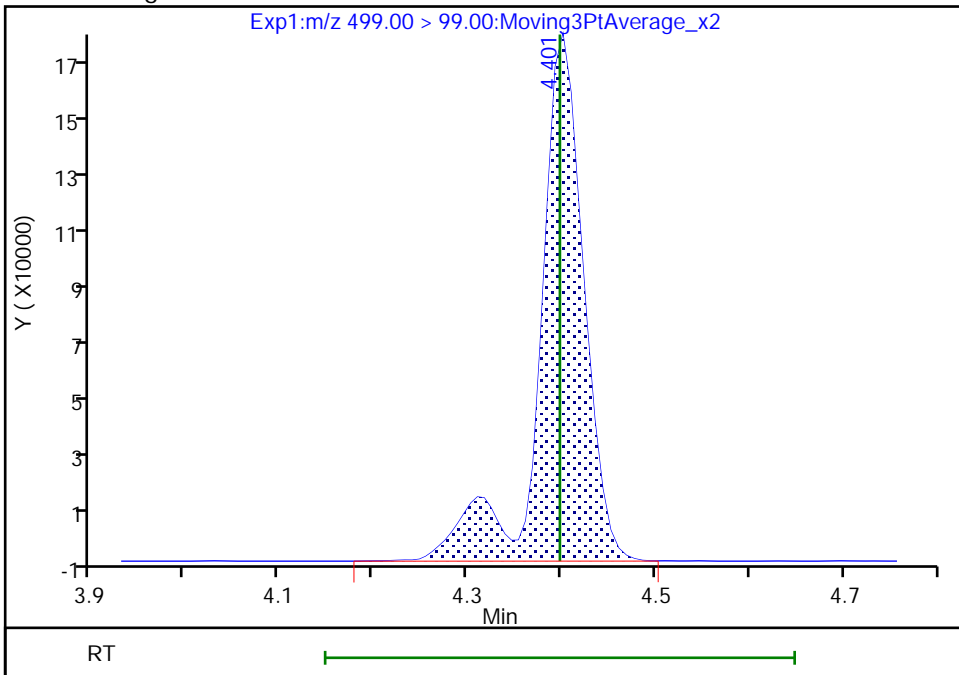
RT: 4.40  
Area: 506673  
Amount: 0.675318  
Amount Units: ng/ml

Processing Integration Results



RT: 4.40  
Area: 575561  
Amount: 0.888227  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 09:10:41

Audit Action: Manually Integrated

Audit Reason: Baseline  
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Eurofins TestAmerica, Knoxville

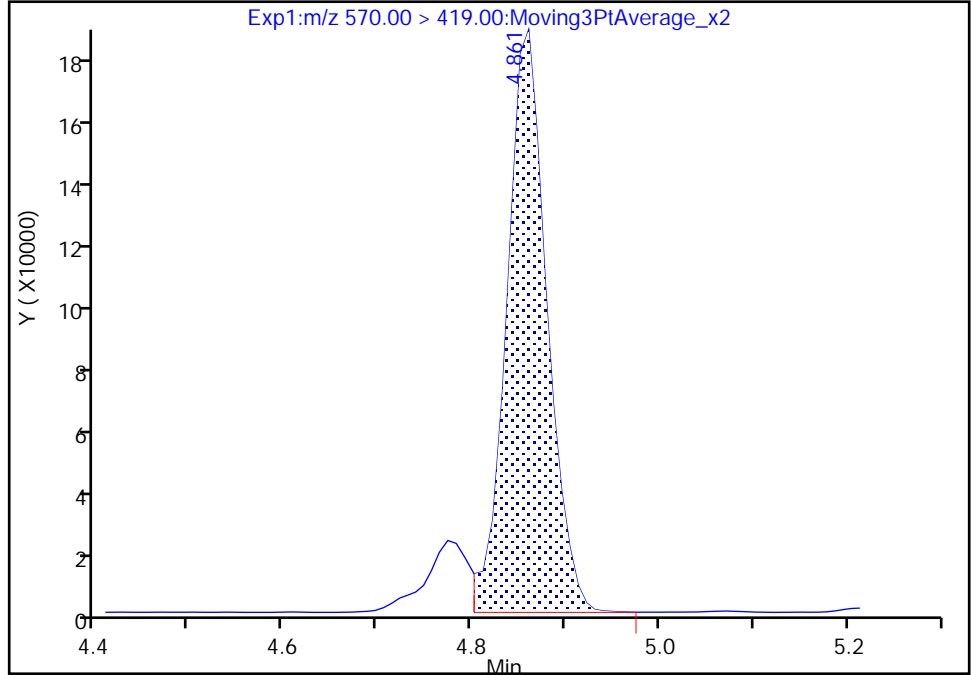
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\\_005.d  
Injection Date: 09-Jan-2022 12:40:40 Instrument ID: LCA  
Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 5 Worklist Smp#: 5  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

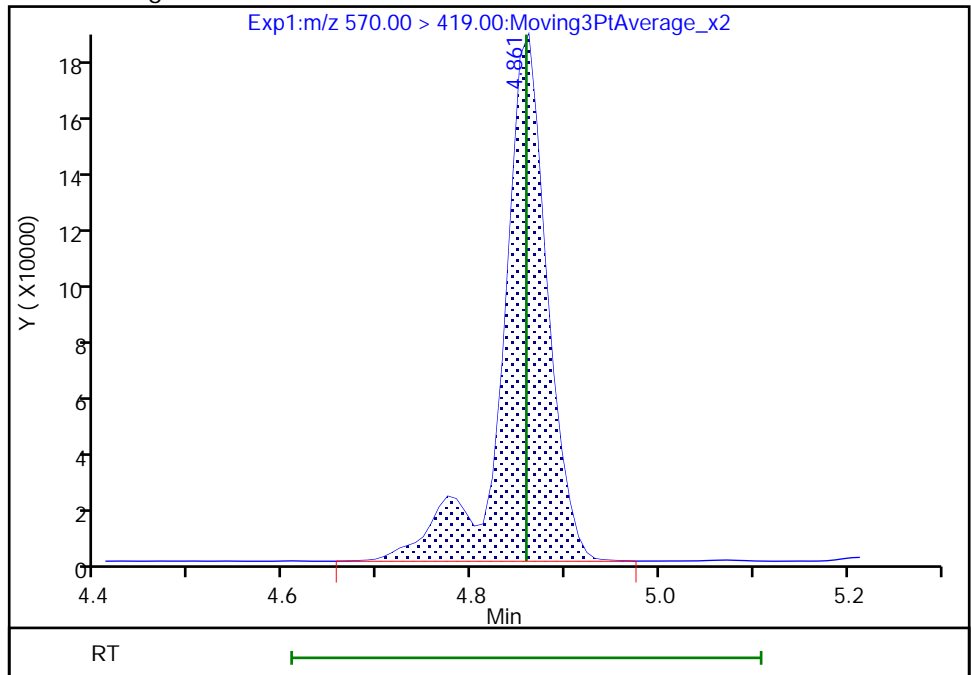
RT: 4.86  
Area: 539718  
Amount: 0.883451  
Amount Units: ng/ml

Processing Integration Results



RT: 4.86  
Area: 608781  
Amount: 0.996324  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 09:10:54  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

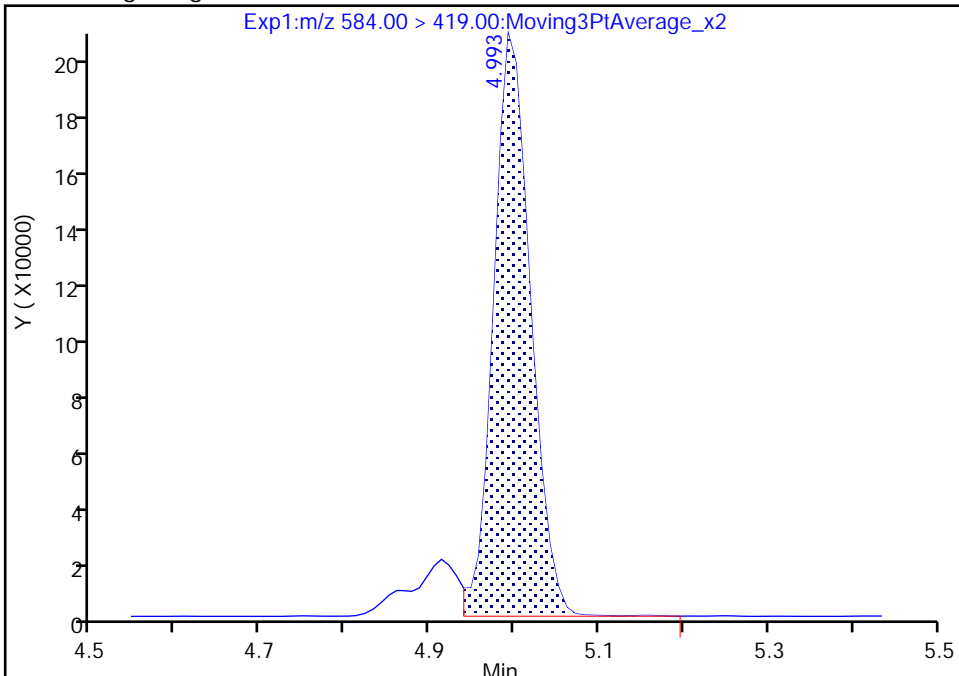
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Injection Date: 09-Jan-2022 12:40:40 Instrument ID: LCA  
Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 5 Worklist Smp#: 5  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

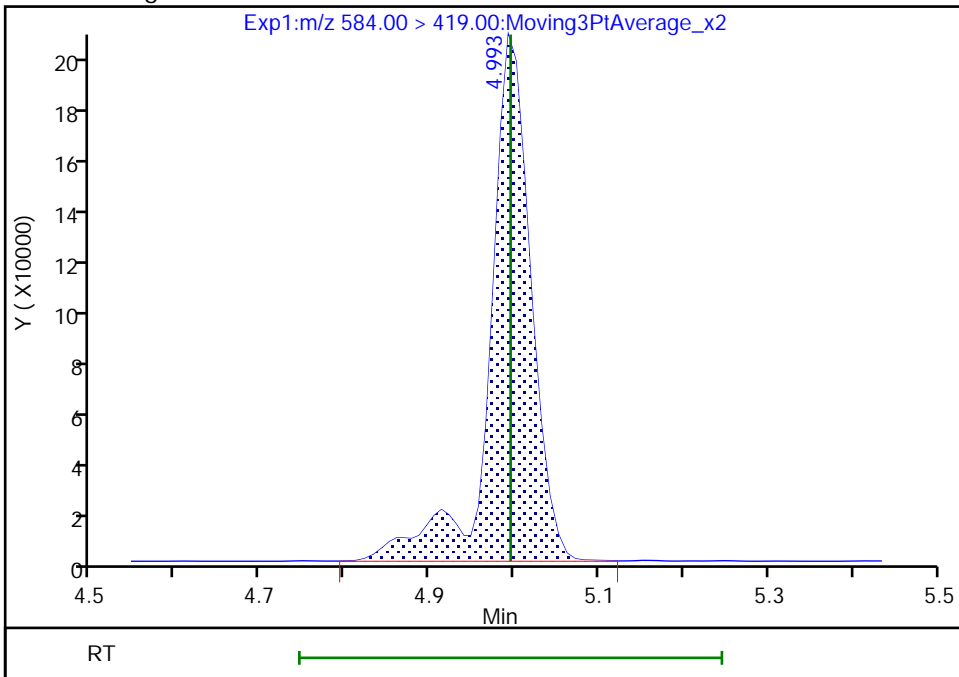
RT: 4.99  
Area: 614187  
Amount: 0.863552  
Amount Units: ng/ml

Processing Integration Results



RT: 4.99  
Area: 689299  
Amount: 0.968726  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 09:11:05  
Audit Action: Manually Integrated

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-57742/17 Calibration Date: 01/09/2022 14:26  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 Lab File ID: \_017.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7844	0.7969		2.54	2.50	1.6	40.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9519	0.9721		2.55	2.50	2.1	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.097	1.131		2.28	2.21	3.1	40.0
4:2 FTS	AveID	2.252	2.337		2.42	2.34	3.8	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8680	0.8573		2.47	2.50	-1.2	40.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	0.9713	1.027		2.48	2.35	5.7	40.0
HFPO-DA	AveID	1.352	1.312		2.43	2.50	-3.0	40.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.377	1.411		2.33	2.28	2.5	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.047	1.082		2.59	2.50	3.4	40.0
DONA	AveID	2.630	2.777		2.49	2.36	5.6	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9541	0.9607		2.40	2.38	0.7	40.0
6:2 FTS	L2ID		1.763		2.32	2.37	-2.0	40.0
Perfluorooctanoic acid (PFOA)	AveID	1.147	1.161		2.53	2.50	1.2	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.099	1.113		2.35	2.32	1.3	40.0
Perfluorononanoic acid (PFNA)	Q2ID		0.9144		2.65	2.50	6.1	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	Q2ID		2.196		2.36	2.33	1.4	50.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9748	0.9701		2.39	2.40	-0.5	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9459	0.9575		2.53	2.50	1.2	40.0
Perfluorodecanoic acid (PFDA)	AveID	0.9645	1.000		2.59	2.50	3.7	40.0
8:2 FTS	AveID	1.415	1.509		2.55	2.40	6.6	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	QuaIF		0.9721		2.50	2.50	-0.2	40.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		0.9345		2.42	2.41	0.5	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9695	0.9872		2.55	2.50	1.8	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Q2ID		1.026		2.56	2.50	2.5	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.672	1.760		2.48	2.36	5.2	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		1.047		2.59	2.50	3.6	40.0
10:2 FTS	AveID	2.276	2.435		2.58	2.41	7.0	40.0
NMeFOSA	Q2ID		1.086		2.63	2.50	5.3	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	Q2ID		1.208		2.55	2.50	2.0	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9166	0.9086		2.40	2.42	-0.9	40.0

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-57742/17 Calibration Date: 01/09/2022 14:26  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 Lab File ID: \_017.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTriA)	AveID	0.8292	0.8756		2.64	2.50	5.6	40.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	AveID	1.328	1.407		2.65	2.50	6.0	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.195	1.317		2.76	2.50	10.2	40.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1344	0.1266		2.35	2.50	-5.8	40.0
Perfluorohexadecanoic acid	Q2ID		1.120		2.62	2.50	4.7	40.0
Perfluorooctadecanoic acid	AveID	0.9844	1.043		2.65	2.50	6.0	40.0
13C4 PFBA	Ave	1.142	1.161		1.27	1.25	1.7	50.0
13C5 PFPeA	Ave	0.8865	0.8945		1.26	1.25	0.9	50.0
13C3 PFBS	Ave	0.5913	0.5888		1.16	1.16	-0.4	50.0
M2-4:2 FTS	Ave	0.1820	0.1851		1.19	1.17	1.7	50.0
13C2 PFHxA	Ave	0.9479	0.9726		1.28	1.25	2.6	50.0
13C3 HFPO-DA	Ave	0.4556	0.4838		1.33	1.25	6.2	50.0
18O2 PFHxS	Ave	0.3946	0.3752		1.12	1.18	-4.9	50.0
13C4 PFHpA	Ave	0.9067	0.9229		1.27	1.25	1.8	50.0
13C4 PFOA	Ave	0.9376	0.9473		1.26	1.25	1.0	50.0
M2-6:2 FTS	Ave	0.1835	0.1854		1.20	1.19	1.0	50.0
13C4 PFOS	Ave	0.5681	0.5722		1.20	1.20	0.7	50.0
13C5 PFNA	Ave	1.234	1.226		1.24	1.25	-0.6	50.0
13C8 FOSA	Ave	0.7682	0.7765		1.26	1.25	1.1	50.0
13C2 PFDA	Ave	1.191	1.205		1.27	1.25	1.2	50.0
M2-8:2 FTS	Ave	0.2070	0.1916		1.11	1.20	-7.4	50.0
d3-NMeFOSAA	Ave	0.1401	0.1556		1.39	1.25	11.0	50.0
13C2 PFUnA	Ave	1.189	1.223		1.29	1.25	2.9	50.0
d5-NEtFOSAA	Ave	0.1537	0.1635		1.33	1.25	6.4	50.0
13C2 PFDoA	Ave	1.247	1.234		1.24	1.25	-1.0	50.0
d7-N-MeFOSE-M	Ave	0.1499	0.1545		1.29	1.25	3.1	50.0
d-N-MeFOSA-M	Ave	0.1069	0.1036		1.21	1.25	-3.1	50.0
d9-N-EtFOSE-M	Ave	0.1504	0.1458		1.21	1.25	-3.0	50.0
d-N-EtFOSA-M	Ave	0.0883	0.0847		1.20	1.25	-4.1	50.0
13C2 PFTeDA	Ave	0.9508	1.034		1.36	1.25	8.7	50.0
13C2 PFHxDA	Ave	0.6444	0.6601		1.28	1.25	2.4	50.0
13C8 PFOA	AveID	0.999	0.9910		1.24	1.25	-0.9	50.0
13C8 PFOS	AveID	0.2220	0.2151		1.16	1.20	-3.1	50.0

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_017.d  
 Lims ID: CCV  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 09-Jan-2022 14:26:14 ALS Bottle#: 17 Worklist Smp#: 17  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022187-017 CCV  
 Misc. Info.: Plate: 11 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 15:08:48 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1641

First Level Reviewer: cochranj Date: 10-Jan-2022 13:36:40

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	2.779	2.790	-0.011	0.678	6182549	1.27	102	13487	
2 Perfluorobutanoic acid	212.90 > 169.00	2.779	2.790	-0.011	1.000	9853830	2.54	102	2409	
D 3 13C5 PFPeA	267.90 > 223.00	3.090	3.098	-0.008	0.754	4763604	1.26	101	9042	
4 Perfluoropentanoic acid	262.90 > 219.00	3.090	3.098	-0.008	1.000	9261683	2.55	102	3369	
D 6 13C3 PFBS	301.90 > 80.00	3.098	3.115	-0.017	0.756	2916055	1.16	99.6	13438	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.106	3.115	-0.009	1.003	6272560	2.28	Target=2.65	103	5459
	298.90 > 99.00	3.106	3.115	-0.009	1.003	2307185	2.72(1.32-3.97)			5609
D 8 M2-4:2 FTS	329.00 > 81.00	3.382	3.391	-0.009	0.825	920693	1.19	102	1615	
7 4:2 FTS	327.00 > 307.00	3.382	3.402	-0.020	1.000	4303673	2.42	104	9175	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.412	3.422	-0.010	1.101	6041604	2.48	Target=3.44	106	10627
	349.00 > 99.00	3.412	3.422	-0.010	1.101	1740201	3.47(1.72-5.16)			11325
D 9 13C2 PFHxA	315.00 > 270.00	3.412	3.422	-0.010	0.833	5179132	1.28	103	9265	
10 Perfluorohexanoic acid	313.00 > 269.00	3.412	3.422	-0.010	1.000	8880029	2.47	Target=11.80	98.8	3726
	313.00 > 119.00	3.412	3.422	-0.010	1.000	713228	12.45(5.90-17.70)			1138
D 12 13C3 HFPO-DA	287.00 > 169.00	3.519	3.528	-0.009	0.859	2576322	1.33	106	5011	

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	3.519	3.528	-0.009	1.000	6760074	2.43		97.0	5593	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.751	3.760	-0.009	1.000	5133204	2.33	Target=3.40	102	8317	M
399.00 > 99.00	3.751	3.760	-0.009	1.000	1462866		3.51(1.70-5.10)		6667	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.751	3.760	-0.009	0.915	1890325	1.12		95.1	6784	
D 14 13C4 PFHpA										
367.00 > 322.00	3.760	3.769	-0.009	0.918	4914716	1.27		102	10013	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.760	3.769	-0.009	1.000	10636333	2.58	Target=3.29	103	4685	
363.00 > 169.00	3.760	3.769	-0.009	1.000	3282437		3.24(1.65-4.94)		3034	
68 DONA										
377.00 > 251.00	3.797	3.807	-0.010	0.866	15940526	2.49	Target=1.82	106	10529	
377.00 > 85.00	3.797	3.807	-0.010	0.866	8911848		1.79(0.91-2.74)		185	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.080	4.089	-0.009	0.930	5573290	2.40	Target=3.92	101	8706	
449.00 > 99.00	4.080	4.089	-0.009	0.930	1443456		3.86(1.96-5.87)		5534	
19 6:2 FTS										
427.00 > 407.00	4.089	4.106	-0.017	0.998	3299261	2.32		98.0	5551	
D 21 13C4 PFOA										
417.00 > 372.00	4.098	4.106	-0.008	1.000	5044529	1.26		101	8369	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.098	4.106	-0.008	1.000	937817	1.20		101	4425	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.098	4.106	-0.008	1.000	4998882	1.24		99.1	9451	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.098	4.106	-0.008	1.000	11710937	2.53	Target=2.59	101	5264	
413.00 > 169.00	4.098	4.106	-0.008	1.000	4590443		2.55(1.30-3.89)		4385	
* 22 13C2 PFOA										
415.00 > 370.00	4.098	4.106	-0.008		5325263	1.25			9827	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.385	4.393	-0.008	1.000	626440	1.16		96.9	4145	
D 25 13C4 PFOS										
503.00 > 80.00	4.385	4.401	-0.016	1.070	2912815	1.20		101	5232	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.385	4.401	-0.016	1.000	6295888	2.35	Target=4.65	101	5278	M
499.00 > 99.00	4.385	4.401	-0.016	1.000	1418173		4.44(2.32-6.97)		3689	M
D 27 13C5 PFNA										
468.00 > 423.00	4.410	4.427	-0.017	1.076	6531248	1.24		99.4	11908	
26 Perfluorononanoic acid										
463.00 > 419.00	4.410	4.427	-0.017	1.000	11943976	2.65	Target=4.65	106	9744	
463.00 > 169.00	4.410	4.427	-0.017	1.000	2584028		4.62(2.32-6.97)		3973	
63 9CIFOS										
531.00 > 351.00	4.546	4.560	-0.014	1.037	12469541	2.36		101	9911	

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	4.673	4.681	-0.008	1.066	5675151	2.39	Target=4.06	99.5	8874	
549.00 > 99.00	4.673	4.681	-0.008	1.066	1471710		3.86(2.03-6.09)		8005	
D 34 13C8 FOSA										
506.00 > 78.00	4.689	4.706	-0.017	1.144	4134947	1.26		101	3975	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.689	4.706	-0.017	1.000	7918706	2.53		101	5126	
D 32 13C2 PFDA										
515.00 > 470.00	4.698	4.715	-0.017	1.146	6419039	1.27		101	10018	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.698	4.715	-0.017	1.000	12834464	2.59	Target=11.30	104	9994	
513.00 > 169.00	4.698	4.715	-0.017	1.000	1131996		11.34(5.65-16.95)		876	
31 8:2 FTS										
527.00 > 507.00	4.715	4.723	-0.008	1.000	2949861	2.55		107	5794	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.715	4.723	-0.008	1.151	977540	1.11		92.6	1575	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.843	4.852	-0.009	1.182	828459	1.39		111	497	
36 NMeFOSAA										
570.00 > 419.00	4.843	4.861	-0.018	1.000	1610684	2.49		99.8	1843	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.931	4.940	-0.009	1.124	5489895	2.42	Target=3.79	100	13138	
599.00 > 99.00	4.931	4.940	-0.009	1.124	1470748		3.73(1.90-5.69)		4678	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.966	4.975	-0.009	1.000	12859199	2.55	Target=8.45	102	12572	
563.00 > 169.00	4.966	4.975	-0.009	1.000	1519743		8.46(4.22-12.67)		6423	
D 39 13C2 PFUnA										
565.00 > 520.00	4.966	4.975	-0.009	1.212	6513279	1.29		103	11946	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.975	4.993	-0.018	1.214	870915	1.33		106	3486	
40 NEtFOSA										
584.00 > 419.00	4.984	4.993	-0.009	1.002	1786304	2.56		103	2905	M
57 11C1FOS										
631.00 > 451.00	5.062	5.072	-0.010	1.154	10103048	2.48		105	12084	
D 43 13C2 PFDaA										
615.00 > 570.00	5.196	5.213	-0.017	1.268	6572416	1.24		99.0	9457	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.196	5.213	-0.017	1.000	13766449	2.59	Target=6.99	104	9952	
613.00 > 169.00	5.196	5.213	-0.017	1.000	1965441		7.00(3.50-10.49)		3444	
50 10:2 FTS										
627.00 > 607.00	5.222	5.231	-0.009	1.108	4791356	2.58		107	10451	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.275	5.284	-0.009	1.287	822905	1.29		103	827	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.275	5.284	-0.009	1.287	551725	1.21		96.9	58.0	
61 NMeFOSA										
512.00 > 169.00	5.275	5.284	-0.009	1.000	1198652	2.63		105	795	



Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
49 N-MeFOSE-M										
616.00 > 59.00	5.284	5.292	-0.008	1.002	1988311	2.55		102	2164	
54 PFDoS										
699.00 > 80.00	5.373	5.383	-0.010	1.225	5359725	2.40	Target=4.24	99.1	7500	
699.00 > 99.00	5.373	5.383	-0.010	1.225	1306115		4.10(2.12-6.35)		4715	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.404	5.414	-0.010	1.040	11510233	2.64	Target=6.20	106	8125	
663.00 > 169.00	5.404	5.414	-0.010	1.040	1887572		6.10(3.10-9.30)		5617	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.435	5.444	-0.009	1.326	776615	1.21		97.0	377	
62 N-EtFOSE-M										
630.00 > 59.00	5.444	5.454	-0.010	1.002	2185573	2.65		106	2020	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.444	5.454	-0.010	1.329	450991	1.20		95.9	761	
56 N-EtFOSA-M										
526.00 > 169.00	5.454	5.464	-0.010	1.002	1188121	2.76		110	627	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.585	5.607	-0.022	1.363	5505228	1.36		109	10356	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.585	5.607	-0.022	1.000	1393376	2.35	Target=1.05	94.2	5596	
713.00 > 219.00	5.585	5.607	-0.022	1.000	1352735		1.03(0.53-1.58)		5326	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.895	5.904	-0.009	1.439	3515368	1.28		102	5971	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.895	5.904	-0.009	1.000	7875218	2.62	Target=8.09	105	5871	
813.00 > 169.00	5.895	5.904	-0.009	1.000	934936		8.42(4.05-12.14)		2832	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.155	6.164	-0.009	1.044	7335338	2.65	Target=11.53	106	5039	
913.00 > 169.00	6.155	6.164	-0.009	1.044	615934		11.91(5.77-17.30)		2293	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L5PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_017.d

Injection Date: 09-Jan-2022 14:26:14

Instrument ID: LCA

Lims ID: CCV

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 17

Worklist Smp#: 17

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

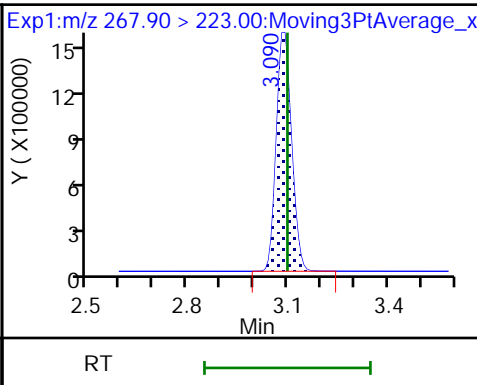
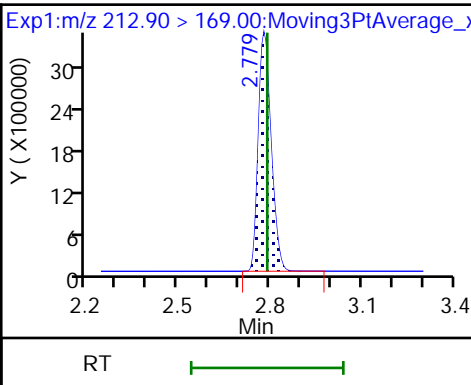
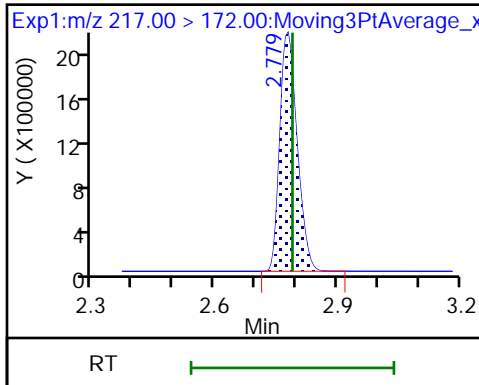
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

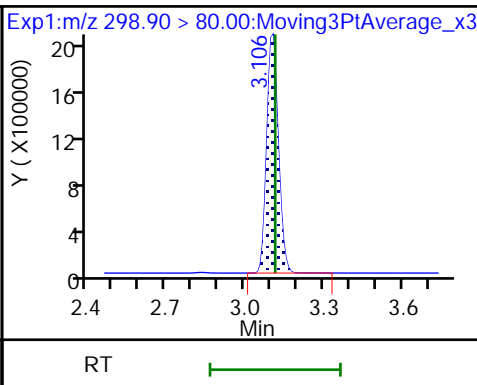
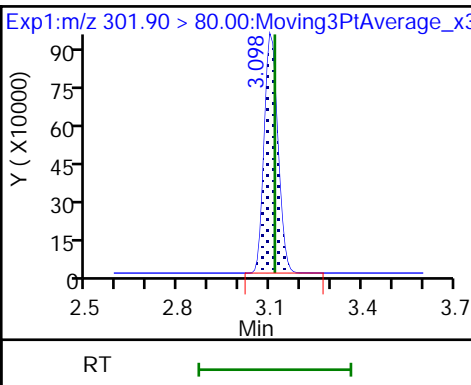
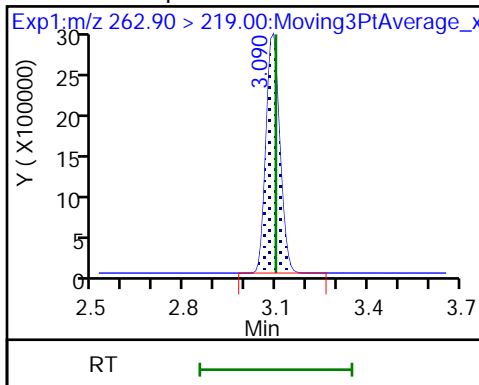
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

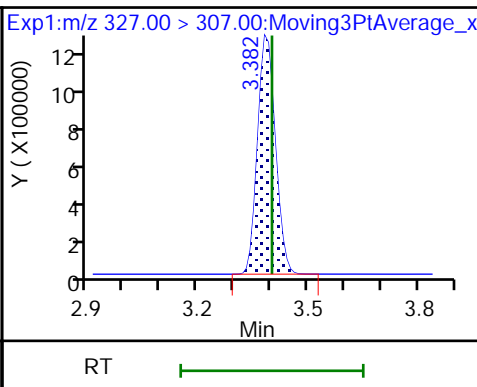
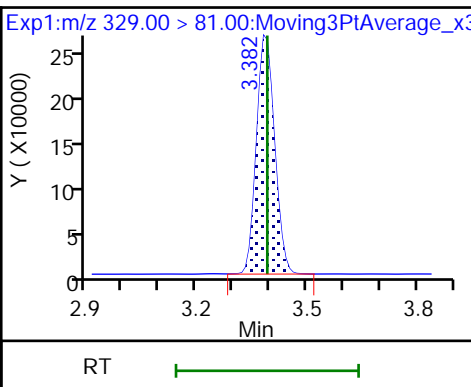
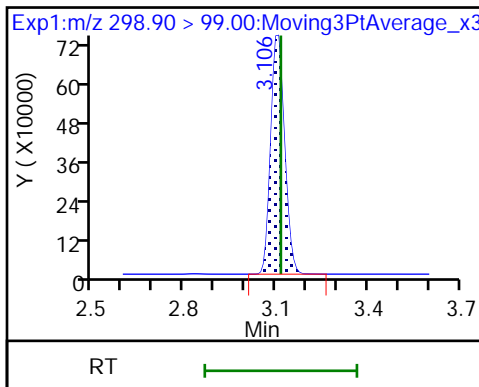
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

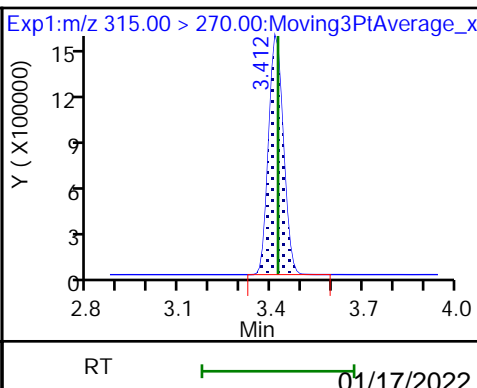
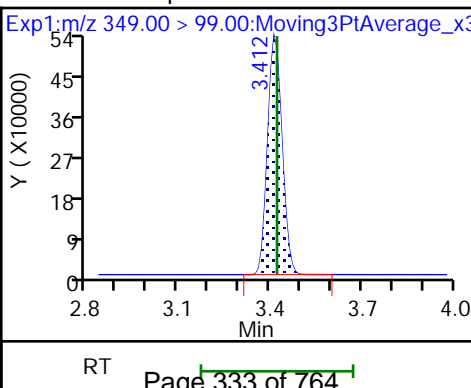
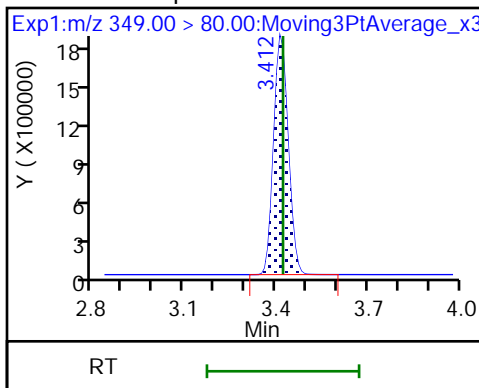
7 4:2 FTS

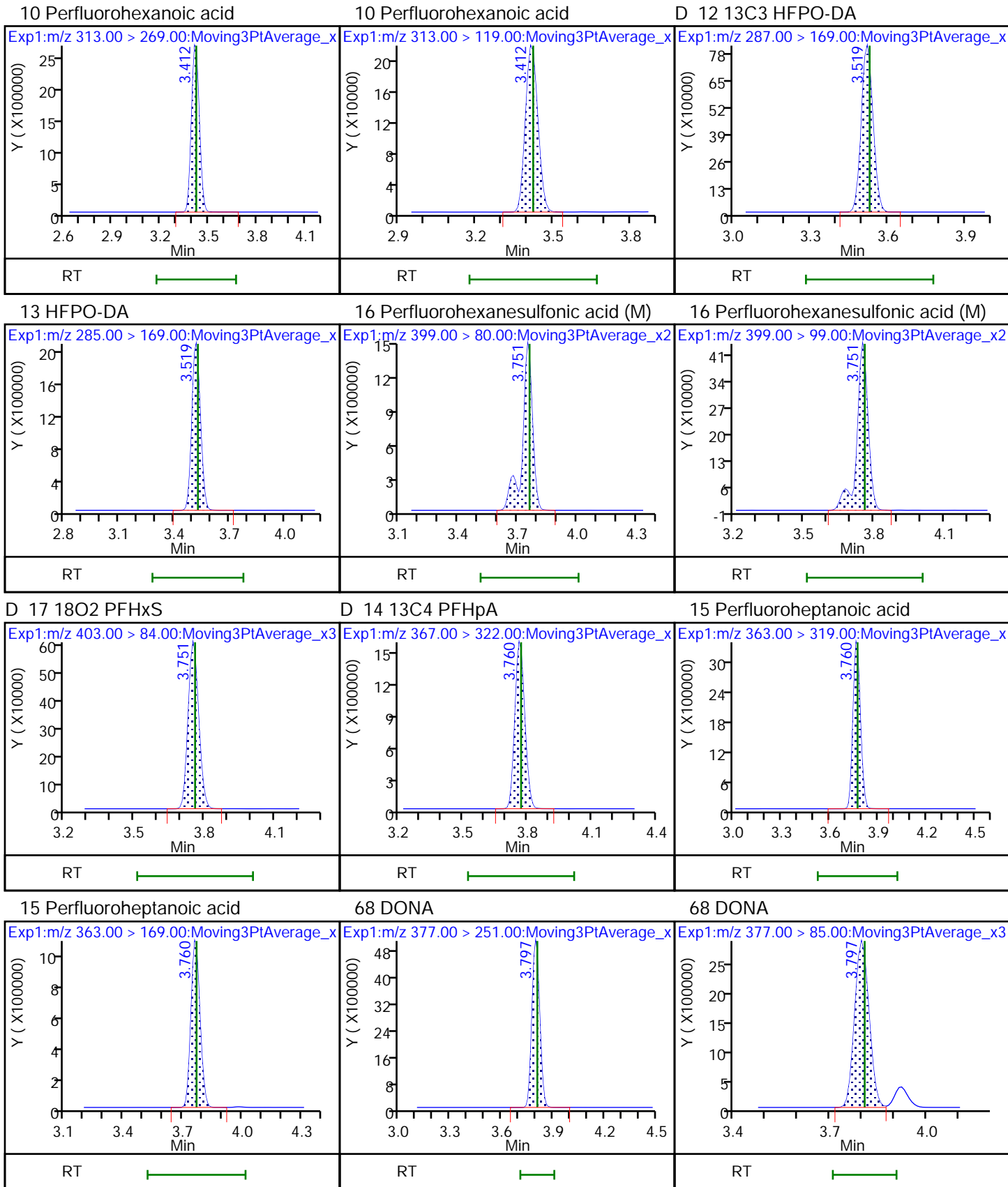


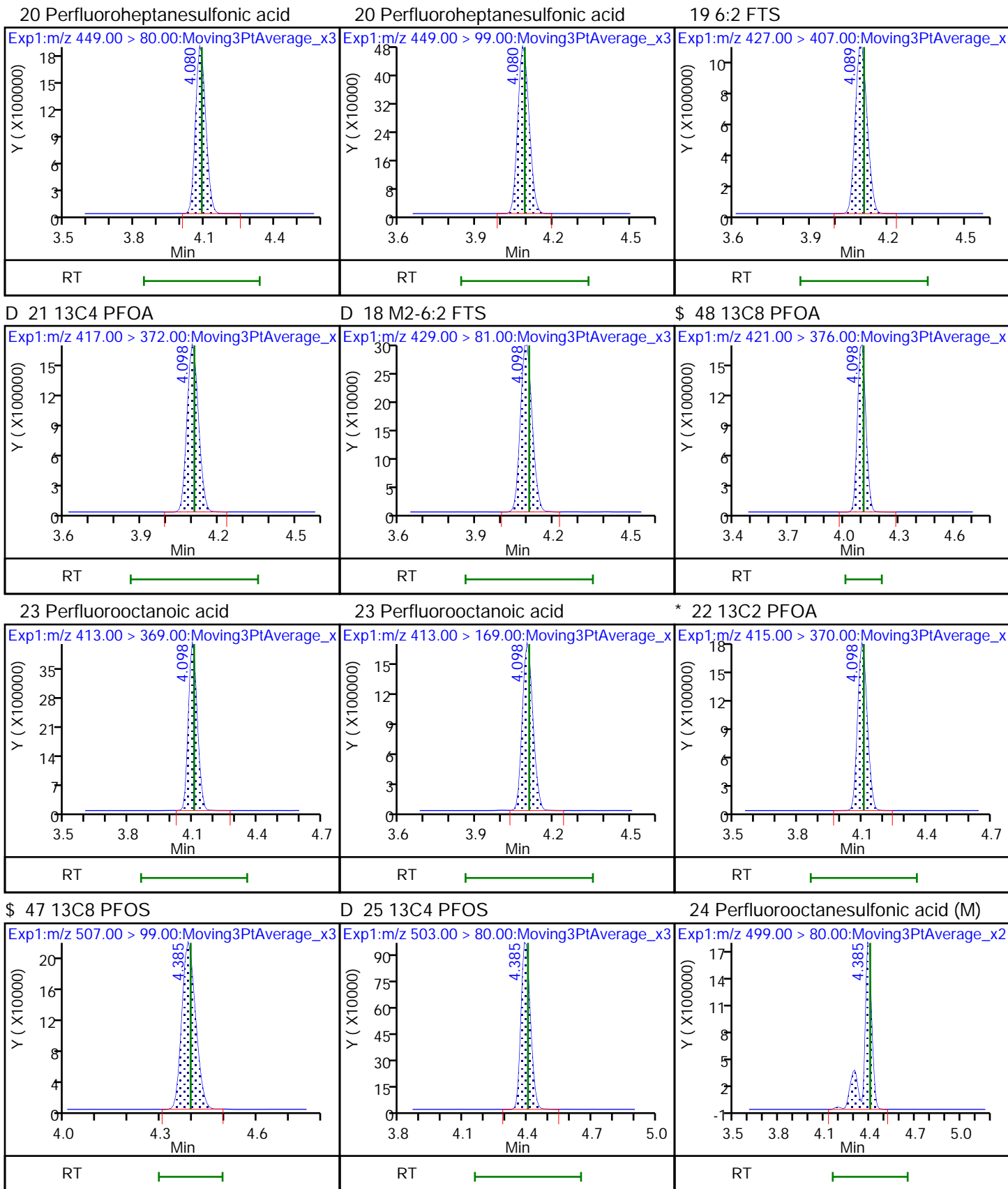
11 Perfluoropentanesulfonic acid

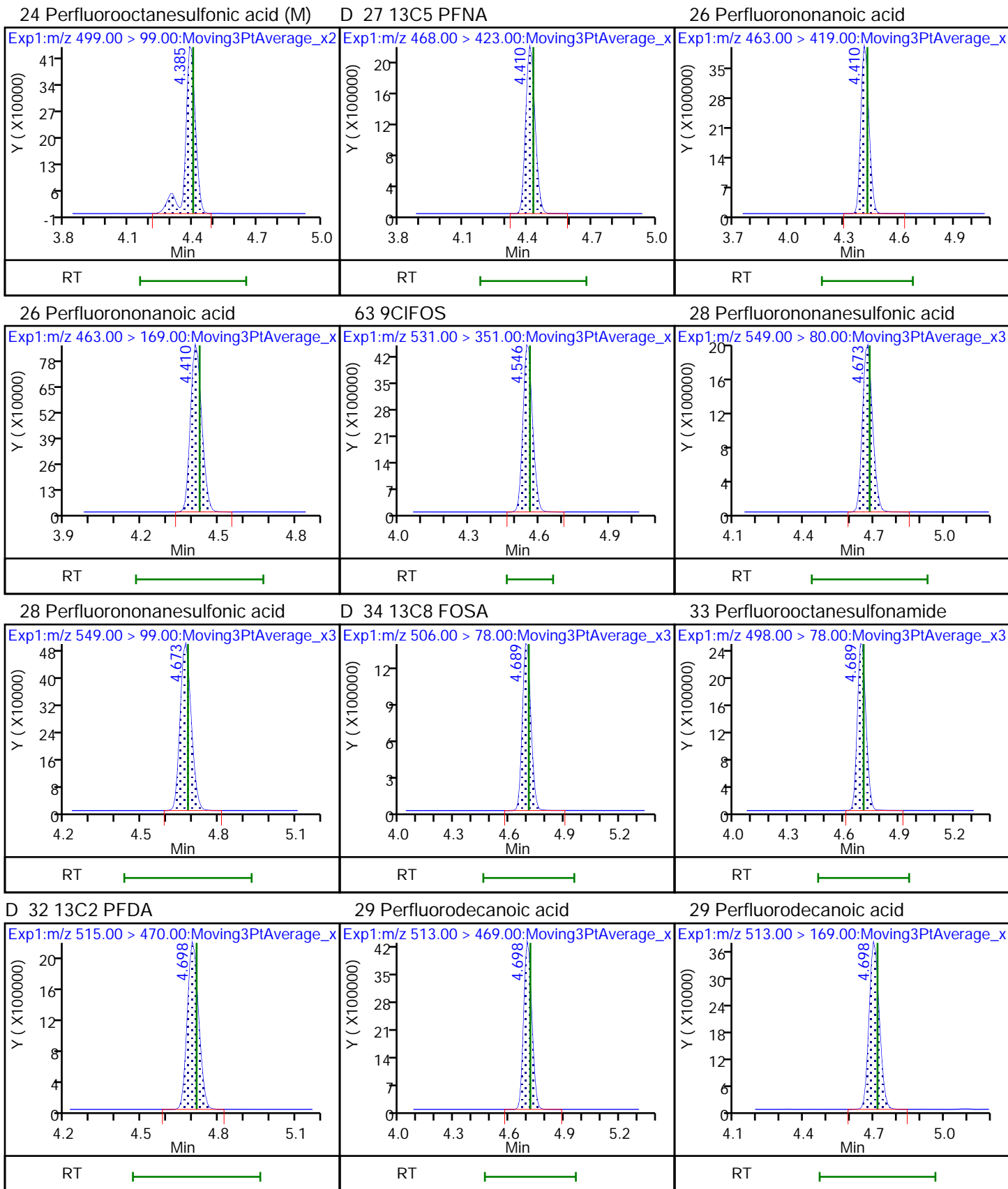
11 Perfluoropentanesulfonic acid

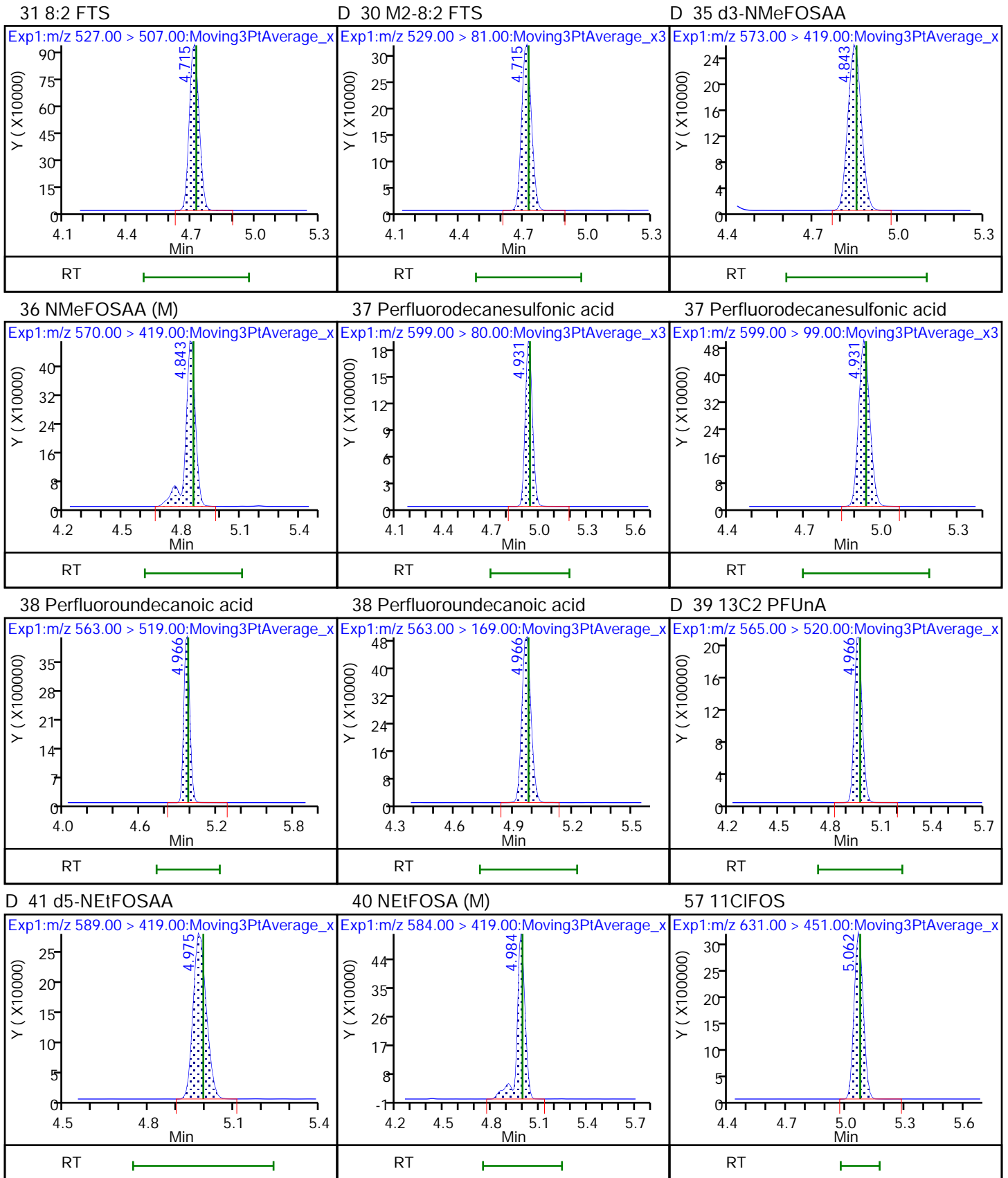
D 9 13C2 PFXa

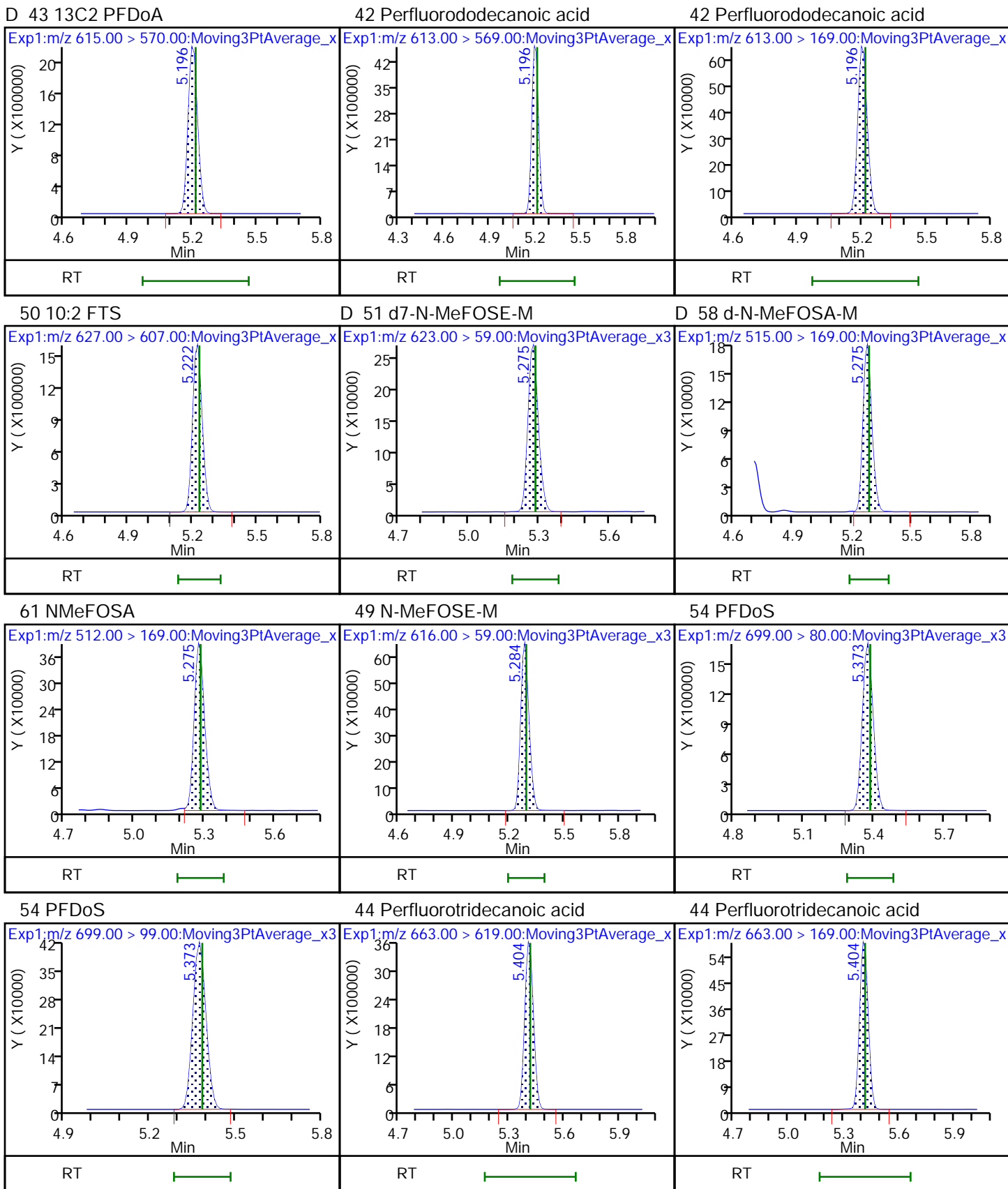








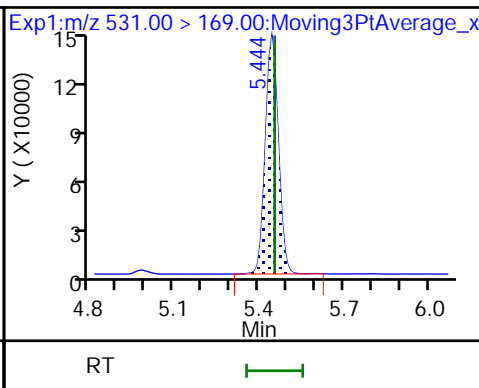
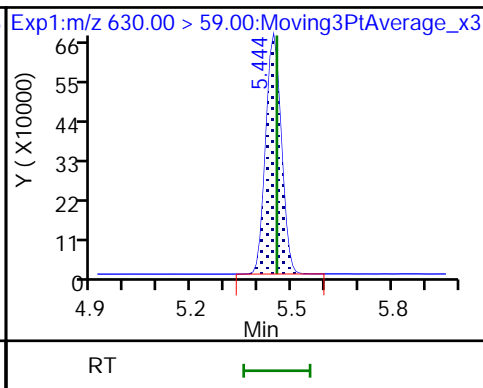
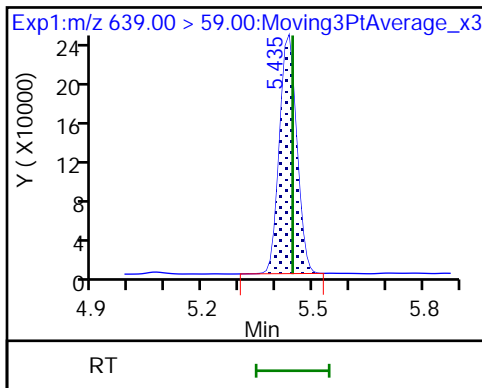




D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M

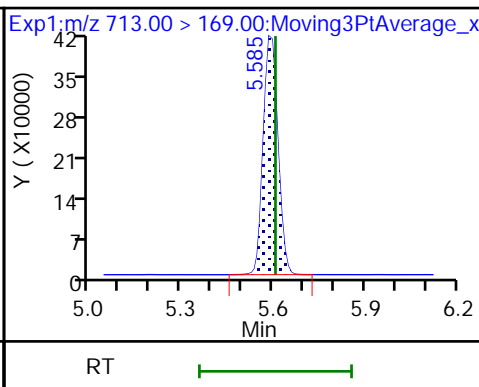
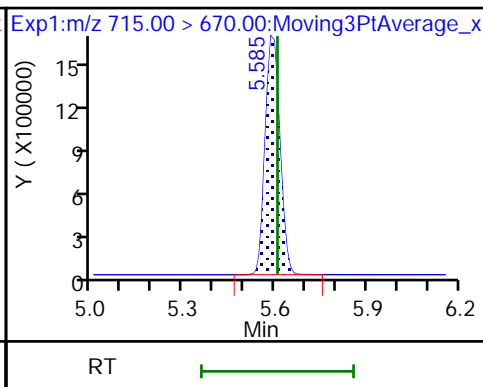
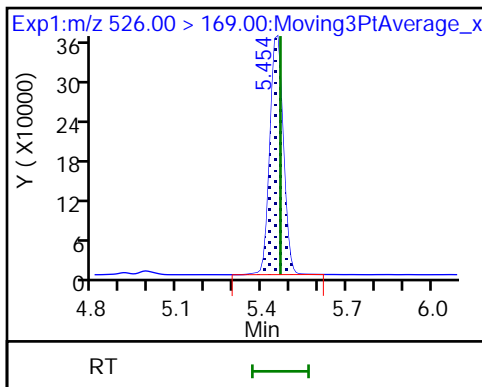
D 52 d-N-EtFOSA-M



56 N-EtFOSA-M

D 46 13C2 PFTeDA

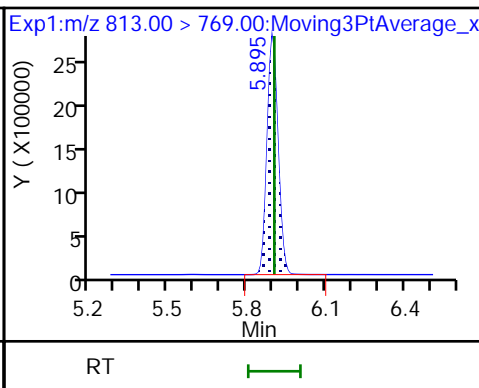
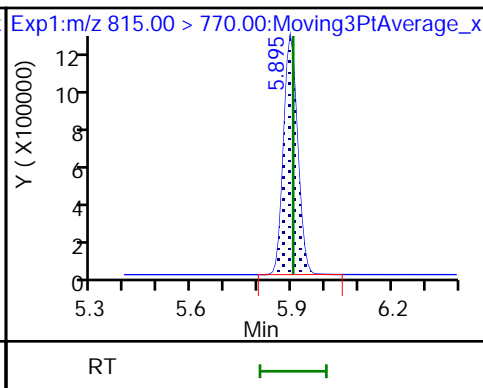
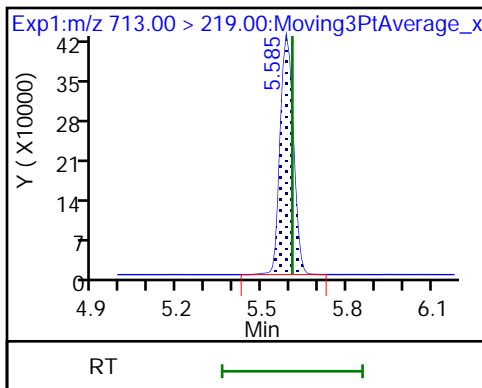
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

D 59 13C2 PFHxDA

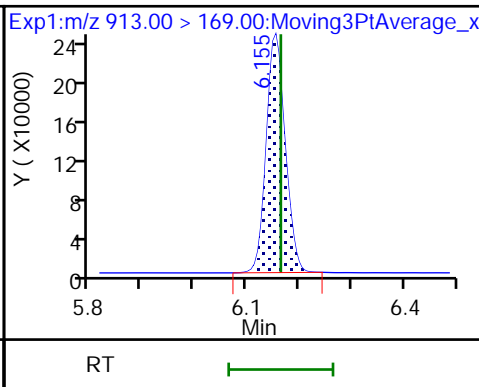
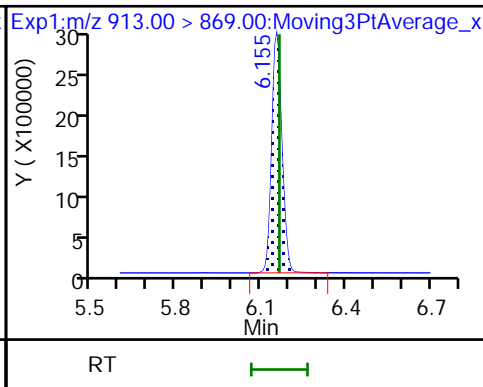
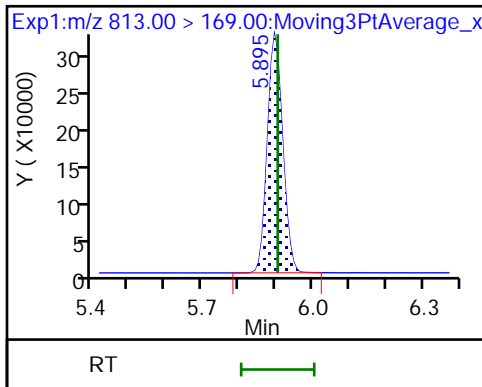
55 Perfluorohexadecanoic acid



55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid







Eurofins TestAmerica, Knoxville

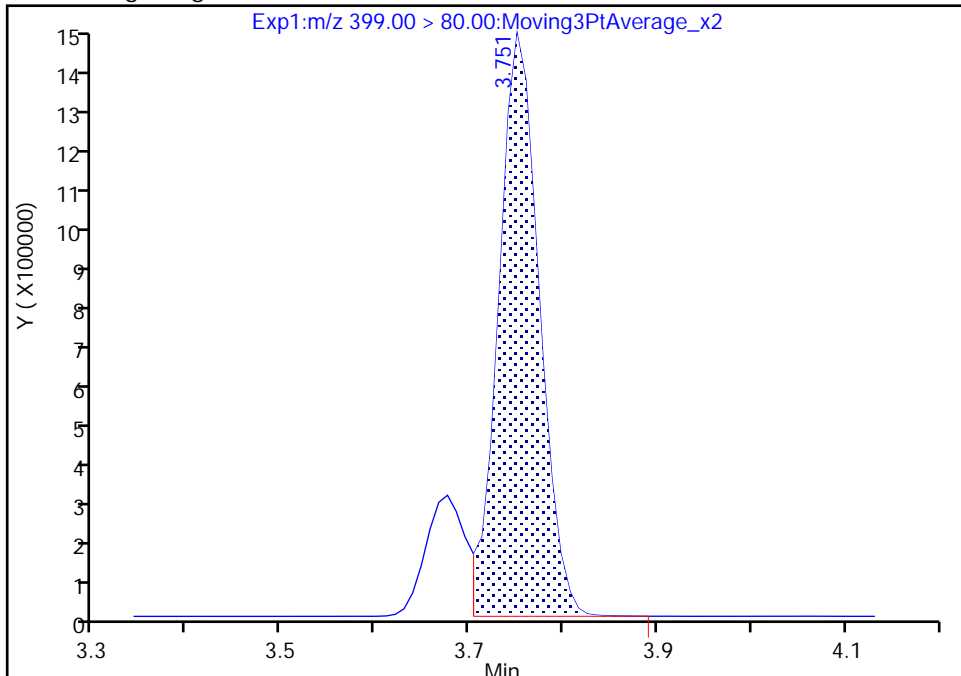
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Injection Date: 09-Jan-2022 14:26:14 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

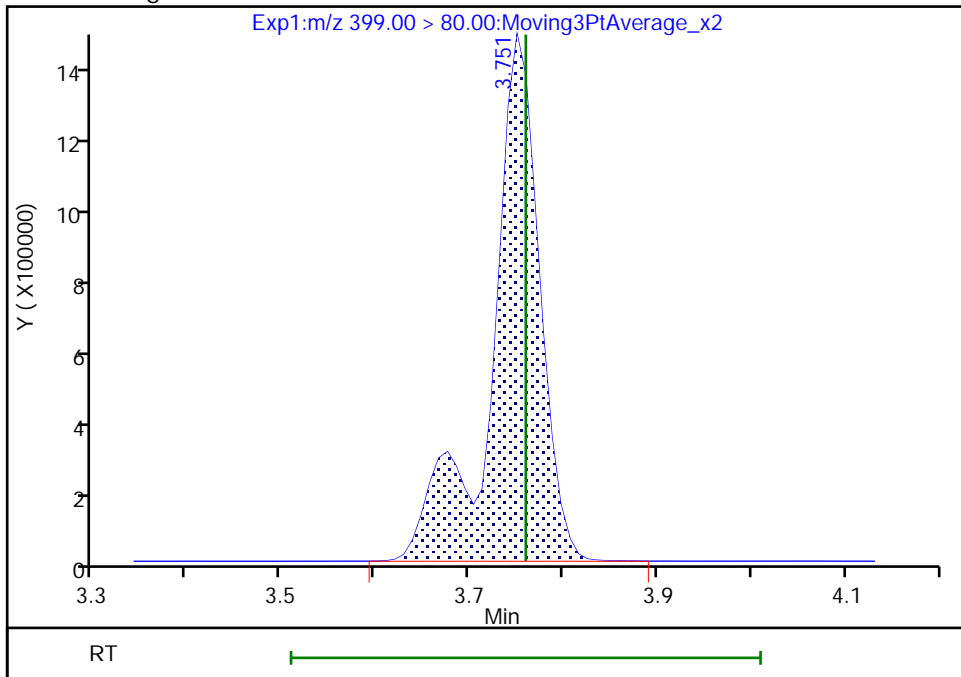
RT: 3.75  
Area: 4279385  
Amount: 1.943781  
Amount Units: ng/ml

Processing Integration Results



RT: 3.75  
Area: 5133204  
Amount: 2.331602  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 13:35:42  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

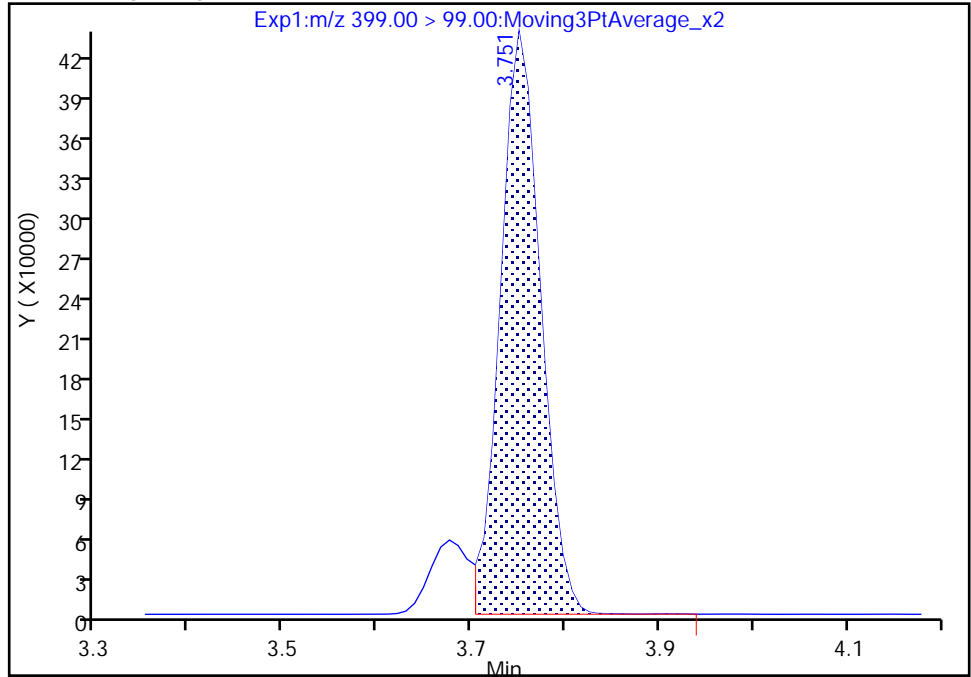
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Injection Date: 09-Jan-2022 14:26:14 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

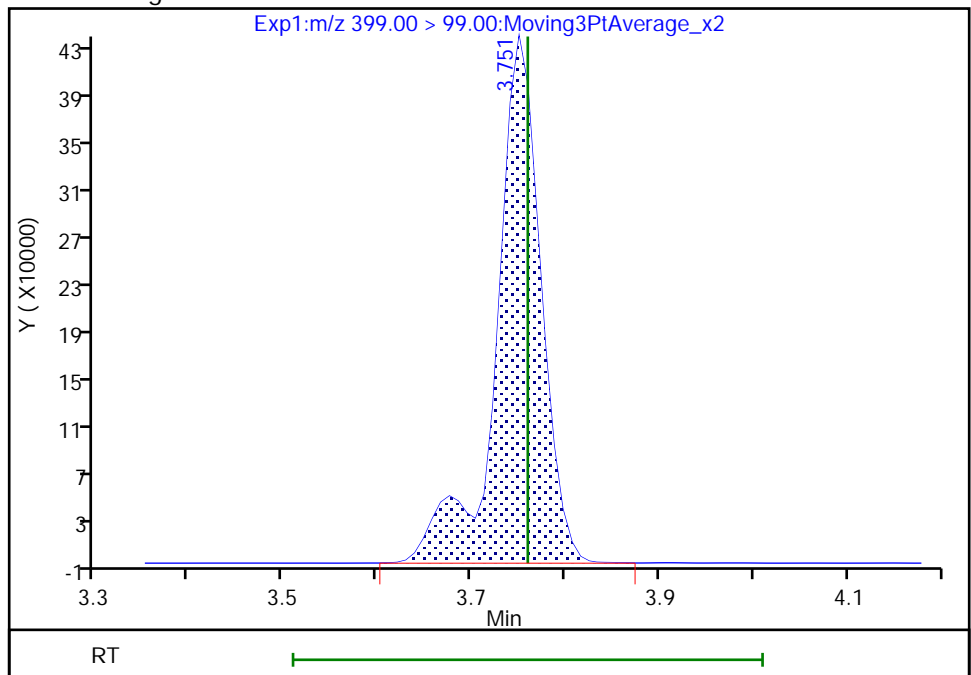
RT: 3.75  
Area: 1302260  
Amount: 1.943781  
Amount Units: ng/ml

Processing Integration Results



RT: 3.75  
Area: 1462866  
Amount: 2.331602  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 13:35:48

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

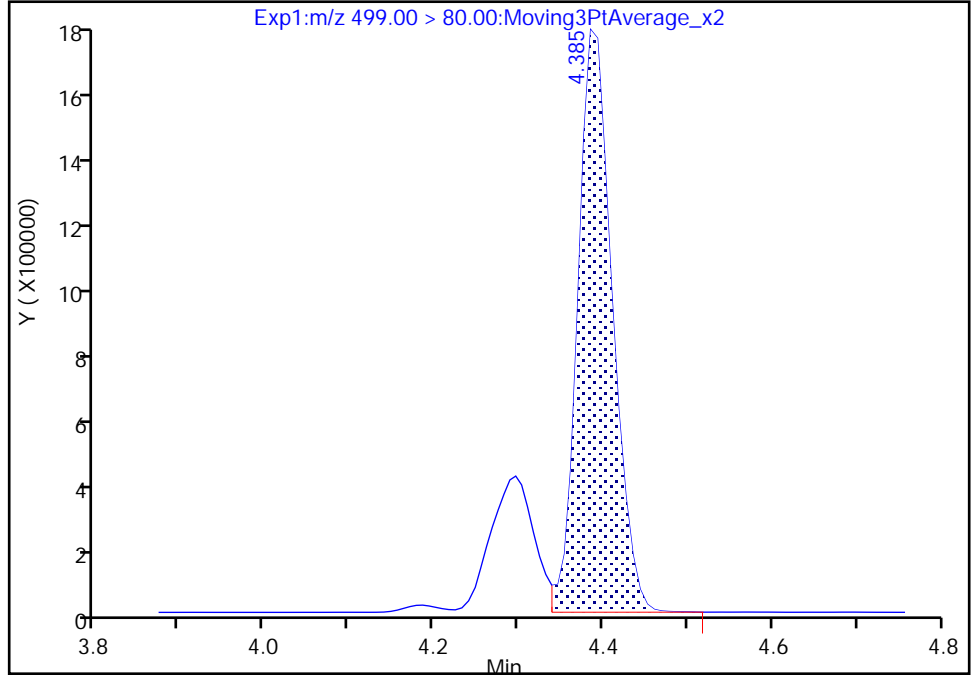
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Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

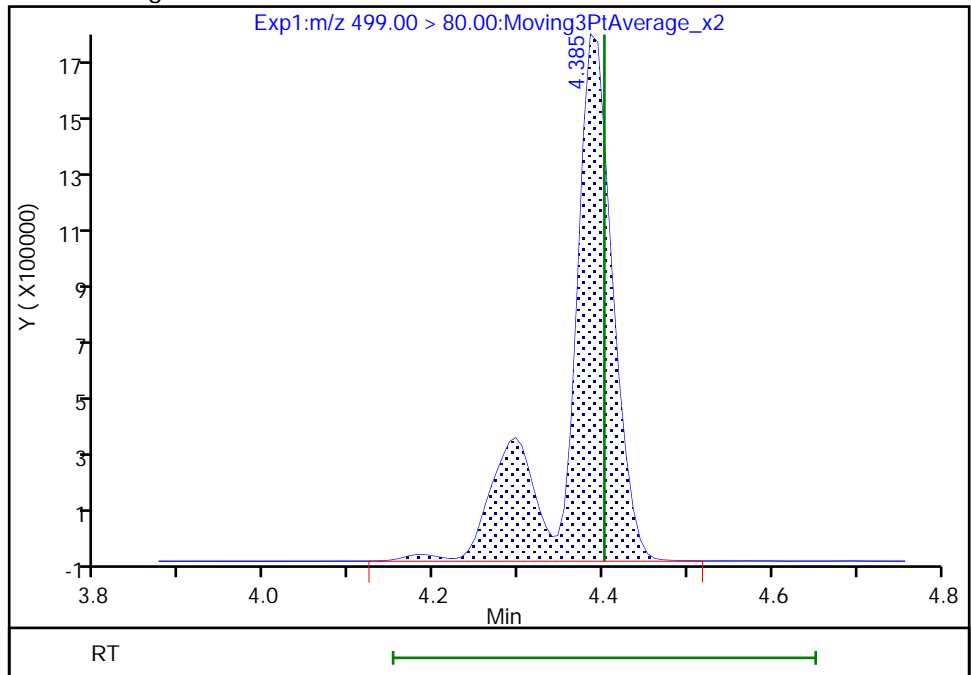
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Area: 4813560  
Amount: 1.797231  
Amount Units: ng/ml

Processing Integration Results



RT: 4.39  
Area: 6295888  
Amount: 2.350686  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 13:36:00  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

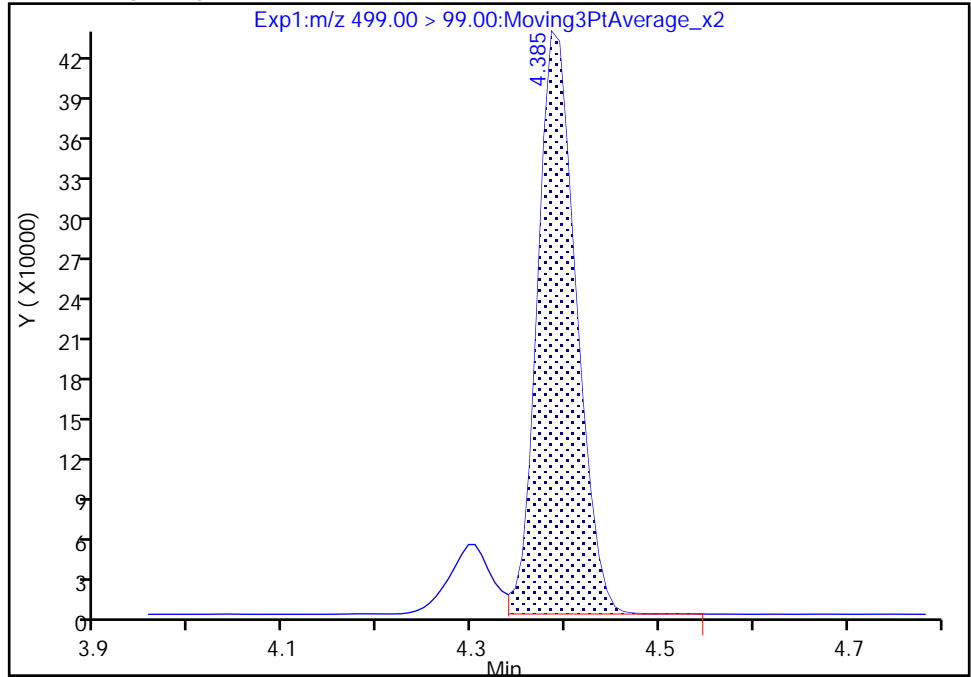
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Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

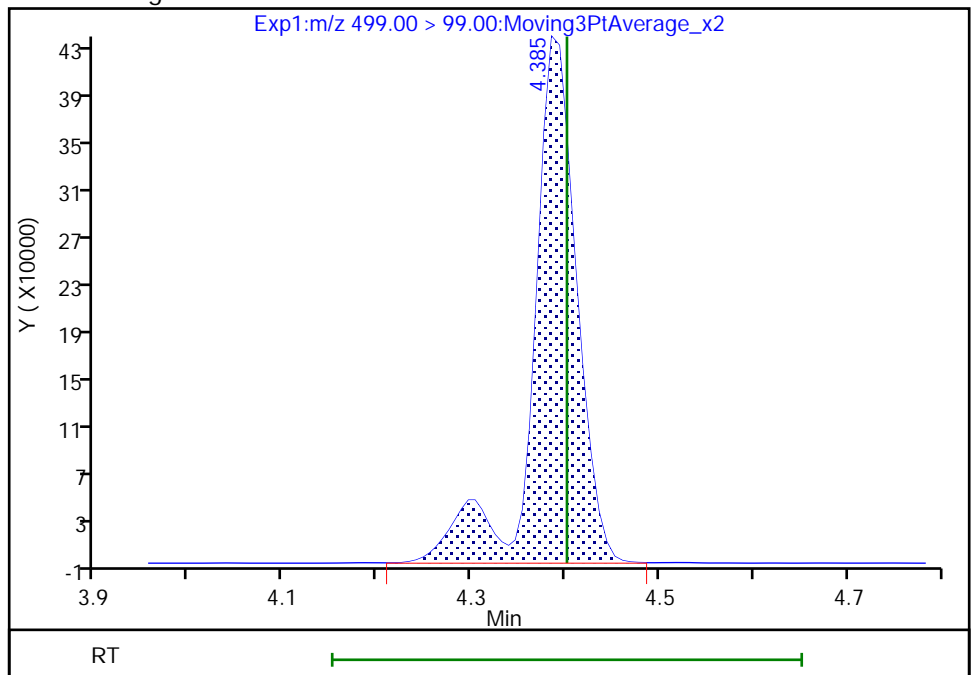
RT: 4.39  
Area: 1251599  
Amount: 1.797231  
Amount Units: ng/ml

Processing Integration Results



RT: 4.39  
Area: 1418173  
Amount: 2.350686  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 13:36:08

Audit Action: Manually Integrated

Audit Reason: Baseline  
Page 344 of 764

01/17/2022

Eurofins TestAmerica, Knoxville

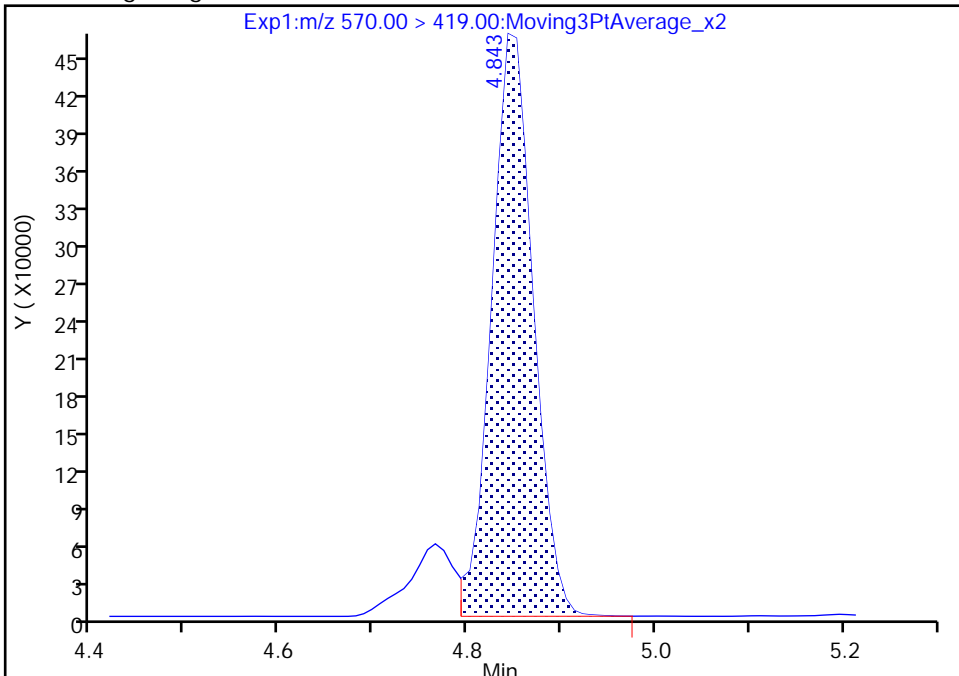
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Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

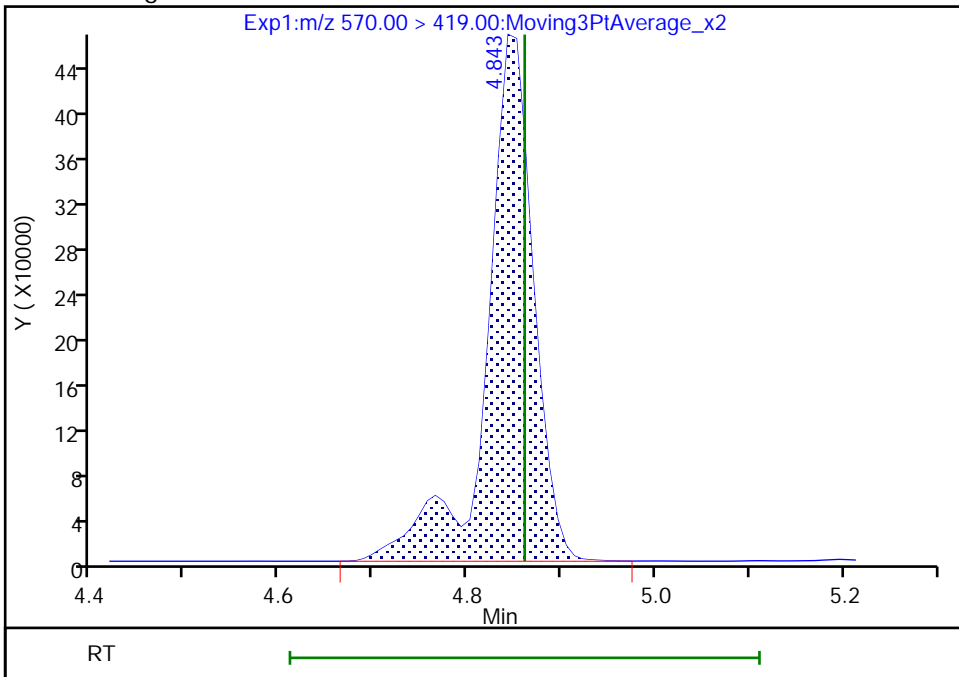
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Area: 1421403  
Amount: 2.202601  
Amount Units: ng/ml

Processing Integration Results



RT: 4.84  
Area: 1610684  
Amount: 2.494780  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 13:36:21  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_017.d  
Injection Date: 09-Jan-2022 14:26:14 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 17  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

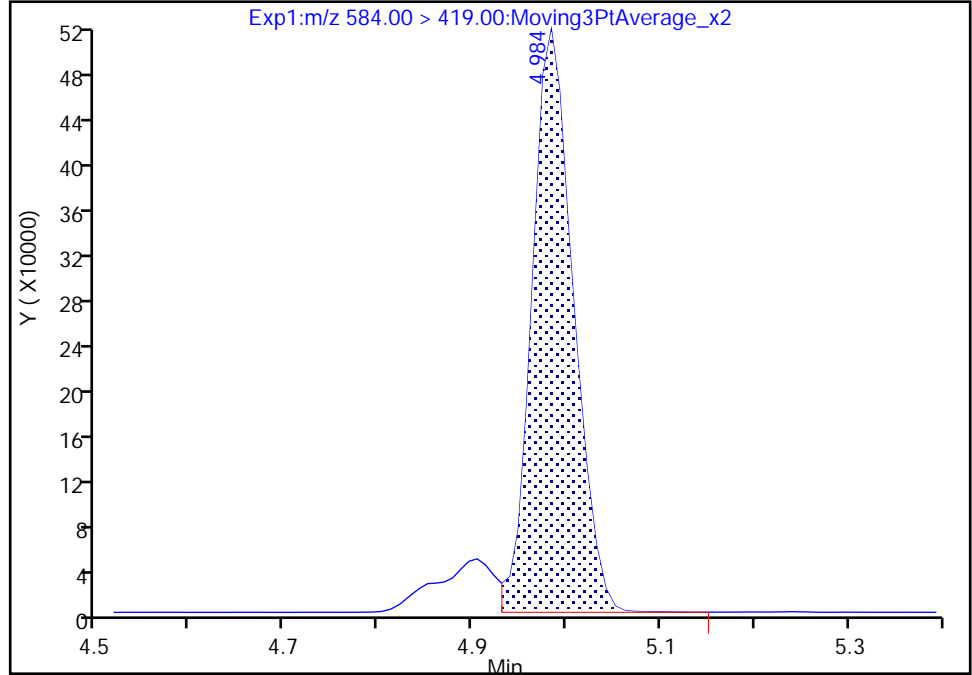
Worklist Smp#: 17

40 NETFOSA, CAS: 2991-50-6

Signal: 1

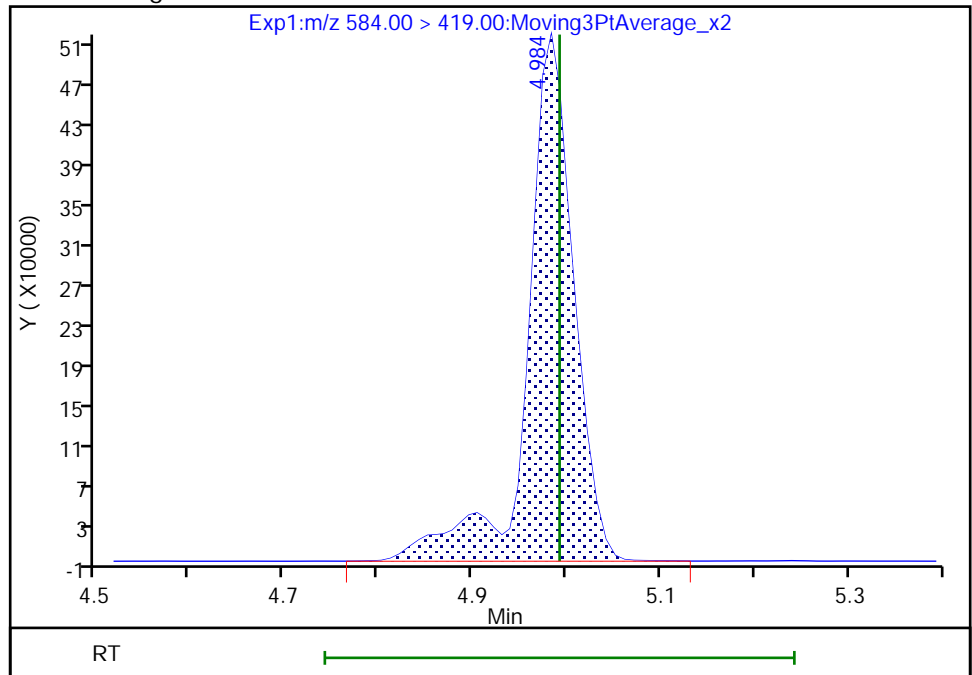
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Area: 1583683  
Amount: 2.275467  
Amount Units: ng/ml

Processing Integration Results



RT: 4.98  
Area: 1786304  
Amount: 2.563577  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 13:36:32  
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-57742/30 Calibration Date: 01/09/2022 16:20  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 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	0.7844	0.7331		0.935	1.00	-6.5	40.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9519	0.9311		0.978	1.00	-2.2	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.097	1.079		0.870	0.884	-1.6	40.0
4:2 FTS	AveID	2.252	2.230		0.925	0.934	-1.0	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8680	0.7907		0.911	1.00	-8.9	40.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	0.9713	0.9266		0.895	0.938	-4.6	40.0
HFPO-DA	AveID	1.352	1.308		0.967	1.00	-3.3	40.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.377	1.324		0.875	0.910	-3.8	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.047	1.019		0.973	1.00	-2.7	40.0
DONA	AveID	2.630	2.526		0.905	0.942	-4.0	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9541	0.9373		0.935	0.952	-1.8	40.0
6:2 FTS	L2ID		1.739		0.918	0.948	-3.1	40.0
Perfluorooctanoic acid (PFOA)	AveID	1.147	1.067		0.930	1.00	-7.0	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.099	1.047		0.884	0.928	-4.7	40.0
Perfluorononanoic acid (PFNA)	Q2ID		0.8521		1.00	1.00	0.1	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	Q2ID		2.106		0.917	0.932	-1.6	50.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9748	0.9418		0.928	0.960	-3.4	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9459	0.9267		0.980	1.00	-2.0	40.0
Perfluorodecanoic acid (PFDA)	AveID	0.9645	0.9155		0.949	1.00	-5.1	40.0
8:2 FTS	AveID	1.415	1.365		0.924	0.958	-3.5	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	QuaIF		0.9130		0.940	1.00	-6.0	40.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		0.8867		0.921	0.964	-4.5	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9695	0.9693		1.000	1.00	-0.0	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Q2ID		0.9704		0.977	1.00	-2.3	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.672	1.579		0.889	0.942	-5.6	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9596		0.940	1.00	-6.0	40.0
10:2 FTS	AveID	2.276	2.306		0.977	0.964	1.3	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	Q2ID		1.216		1.04	1.00	3.8	40.0
NMeFOSA	Q2ID		1.031		1.02	1.00	1.9	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9166	0.8757		0.925	0.968	-4.5	40.0



FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-57742/30 Calibration Date: 01/09/2022 16:20  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 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)	AveID	0.8292	0.8275		0.998	1.00	-0.2	40.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	AveID	1.328	1.224		0.922	1.00	-7.8	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.195	1.196		1.00	1.00	0.0	40.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1344	0.1279		0.952	1.00	-4.8	40.0
Perfluorohexadecanoic acid	Q2ID		1.062		0.990	1.00	-1.0	40.0
Perfluorooctadecanoic acid	AveID	0.9844	0.9439		0.959	1.00	-4.1	40.0
13C4 PFBA	Ave	1.142	1.191		1.30	1.25	4.3	50.0
13C5 PFPeA	Ave	0.8865	0.9038		1.27	1.25	2.0	50.0
13C3 PFBS	Ave	0.5913	0.6293		1.24	1.16	6.4	50.0
M2-4:2 FTS	Ave	0.1820	0.1897		1.22	1.17	4.2	50.0
13C2 PFHxA	Ave	0.9479	0.9880		1.30	1.25	4.2	50.0
13C3 HFPO-DA	Ave	0.4556	0.4653		1.28	1.25	2.1	50.0
18O2 PFHxS	Ave	0.3946	0.3946		1.18	1.18	0.0	50.0
13C4 PFHpA	Ave	0.9067	0.9452		1.30	1.25	4.2	50.0
13C4 PFOA	Ave	0.9376	0.9490		1.27	1.25	1.2	50.0
M2-6:2 FTS	Ave	0.1835	0.1892		1.22	1.19	3.1	50.0
13C4 PFOS	Ave	0.5681	0.5887		1.24	1.20	3.6	50.0
13C5 PFNA	Ave	1.234	1.225		1.24	1.25	-0.7	50.0
13C8 FOSA	Ave	0.7682	0.8299		1.35	1.25	8.0	50.0
13C2 PFDA	Ave	1.191	1.207		1.27	1.25	1.4	50.0
M2-8:2 FTS	Ave	0.2070	0.2025		1.17	1.20	-2.2	50.0
d3-NMeFOSAA	Ave	0.1401	0.1608		1.44	1.25	14.8	50.0
13C2 PFUnA	Ave	1.189	1.178		1.24	1.25	-0.9	50.0
d5-NEtFOSAA	Ave	0.1537	0.1674		1.36	1.25	8.9	50.0
13C2 PFDoA	Ave	1.247	1.243		1.25	1.25	-0.3	50.0
d7-N-MeFOSE-M	Ave	0.1499	0.1306		1.09	1.25	-12.9	50.0
d-N-MeFOSA-M	Ave	0.1069	0.1049		1.23	1.25	-1.9	50.0
d9-N-EtFOSE-M	Ave	0.1504	0.1484		1.23	1.25	-1.3	50.0
d-N-EtFOSA-M	Ave	0.0883	0.0860		1.22	1.25	-2.6	50.0
13C2 PFTeDA	Ave	0.9508	0.9504		1.25	1.25	-0.0	50.0
13C2 PFHxDA	Ave	0.6444	0.6577		1.28	1.25	2.1	50.0
13C8 PFOA	AveID	0.999	1.011		1.26	1.25	1.1	50.0
13C8 PFOS	AveID	0.2220	0.2206		1.19	1.20	-0.6	50.0

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_030.d  
 Lims ID: CCV  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 09-Jan-2022 16:20:40 ALS Bottle#: 30 Worklist Smp#: 30  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022187-030 CCV  
 Misc. Info.: Plate: 11 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 15:09:13 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1641

First Level Reviewer: cochranj Date: 10-Jan-2022 14:27:02

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	2.779	2.790	-0.011	0.678	6665373	1.30	104	14175	
2 Perfluorobutanoic acid	212.90 > 169.00	2.779	2.790	-0.011	1.000	3909228	0.9346	93.5	879	
D 3 13C5 PFPeA	267.90 > 223.00	3.091	3.098	-0.007	0.754	5060225	1.27	102	10866	
4 Perfluoropentanoic acid	262.90 > 219.00	3.091	3.098	-0.007	1.000	3769375	0.9782	97.8	1479	
D 6 13C3 PFBS	301.90 > 80.00	3.107	3.115	-0.008	0.758	3276396	1.24	106	11338	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.107	3.115	-0.008	1.000	2689252	0.8698	Target=2.65	98.4	4302
	298.90 > 99.00	3.107	3.115	-0.008	1.000	976888		2.75(1.32-3.97)		3840
D 8 M2-4:2 FTS	329.00 > 81.00	3.383	3.391	-0.008	0.826	991899	1.22	104	1927	
7 4:2 FTS	327.00 > 307.00	3.383	3.402	-0.019	1.000	1769613	0.9248	99.0	9381	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.413	3.422	-0.009	1.098	2449710	0.8949	Target=3.44	95.4	5914
	349.00 > 99.00	3.413	3.422	-0.009	1.098	694330		3.53(1.72-5.16)		6340
D 9 13C2 PFHxA	315.00 > 270.00	3.413	3.422	-0.009	0.833	5531698	1.30	104	9892	
10 Perfluorohexanoic acid	313.00 > 269.00	3.413	3.422	-0.009	1.000	3499193	0.9109	Target=11.80	91.1	1894
	313.00 > 119.00	3.413	3.422	-0.009	1.000	292565		11.96(5.90-17.70)		523
D 12 13C3 HFPO-DA	287.00 > 169.00	3.520	3.528	-0.008	0.859	2604805	1.28	102	5565	

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	3.520	3.528	-0.008	1.000	2726119	0.9673		96.7	3040	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.752	3.760	-0.008	1.000	2129851	0.8750	Target=3.40	96.2	5098	M
399.00 > 99.00	3.752	3.760	-0.008	1.000	604310		3.52(1.70-5.10)		2448	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.752	3.760	-0.008	0.916	2089917	1.18		100	7130	
D 14 13C4 PFHpA										
367.00 > 322.00	3.761	3.769	-0.008	0.918	5291639	1.30		104	8934	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.761	3.769	-0.008	1.000	4313202	0.9734	Target=3.29	97.3	2870	
363.00 > 169.00	3.761	3.769	-0.008	1.000	1294209		3.33(1.65-4.94)		2066	
68 DONA										
377.00 > 251.00	3.798	3.807	-0.009	0.865	6273813	0.9046	Target=1.82	96.0	8783	
377.00 > 85.00	3.798	3.807	-0.009	0.865	3526433		1.78(0.91-2.74)		170	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.080	4.089	-0.009	0.929	2353080	0.9353	Target=3.92	98.2	8299	
449.00 > 99.00	4.088	4.089	-0.001	0.931	598491		3.93(1.96-5.87)		2970	
19 6:2 FTS										
427.00 > 407.00	4.097	4.106	-0.009	1.000	1396993	0.9183		96.9	4084	
D 21 13C4 PFOA										
417.00 > 372.00	4.097	4.106	-0.009	1.000	5313447	1.27		101	8206	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.097	4.106	-0.009	1.000	1006199	1.22		103	3425	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.097	4.106	-0.009	1.000	5371480	1.26		101	7749	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.097	4.106	-0.009	1.000	4537243	0.9302	Target=2.59	93.0	2907	
413.00 > 169.00	4.097	4.106	-0.009	1.000	1765751		2.57(1.30-3.89)		3163	
* 22 13C2 PFOA										
415.00 > 370.00	4.097	4.106	-0.009		5598719	1.25			8840	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.385	4.393	-0.008	0.998	695263	1.19		99.4	4136	
D 25 13C4 PFOS										
503.00 > 80.00	4.393	4.401	-0.008	1.072	3151173	1.24		104	6079	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.393	4.401	-0.008	1.000	2562395	0.8844	Target=4.65	95.3	4507	M
499.00 > 99.00	4.393	4.401	-0.008	1.000	573020		4.47(2.32-6.97)		2129	M
D 27 13C5 PFNA										
468.00 > 423.00	4.418	4.427	-0.009	1.078	6860967	1.24		99.3	12015	
26 Perfluorononanoic acid										
463.00 > 419.00	4.418	4.427	-0.009	1.000	4676782	1.00	Target=4.65	100	5499	
463.00 > 169.00	4.418	4.427	-0.009	1.000	1024459		4.57(2.32-6.97)		1821	
63 9CIFOS										
531.00 > 351.00	4.552	4.560	-0.008	1.036	5175952	0.9166		98.4	12716	

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	4.672	4.681	-0.009	1.064	2384260	0.9275	Target=4.06	96.6	5987	
549.00 > 99.00	4.672	4.681	-0.009	1.064	620478		3.84(2.03-6.09)		3982	
D 34 13C8 FOSA										
506.00 > 78.00	4.697	4.706	-0.009	1.146	4646540	1.35		108	4091	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.697	4.706	-0.009	1.000	3444905	0.9797		98.0	4646	
D 32 13C2 PFDA										
515.00 > 470.00	4.706	4.715	-0.009	1.149	6759133	1.27		101	9260	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.706	4.715	-0.009	1.000	4950250	0.9492	Target=11.30	94.9	5880	
513.00 > 169.00	4.706	4.715	-0.009	1.000	433321		11.42(5.65-16.95)		722	
31 8:2 FTS										
527.00 > 507.00	4.714	4.723	-0.009	1.000	1186499	0.9244		96.5	2725	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.714	4.723	-0.009	1.151	1086197	1.17		97.8	2044	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.851	4.852	-0.001	1.184	900431	1.43		115	1065	
36 NMeFOSAA										
570.00 > 419.00	4.851	4.861	-0.010	1.000	657678	0.9395		94.0	1195	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.930	4.940	-0.010	1.122	2253994	0.9209	Target=3.79	95.5	6553	
599.00 > 99.00	4.939	4.940	-0.001	1.124	629965		3.58(1.90-5.69)		3870	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.965	4.975	-0.010	1.000	5113903	1.00	Target=8.45	100.0	6745	
563.00 > 169.00	4.965	4.975	-0.010	1.000	598588		8.54(4.22-12.67)		2724	
D 39 13C2 PFUnA										
565.00 > 520.00	4.965	4.975	-0.010	1.212	6594777	1.24		99.1	12103	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.983	4.993	-0.010	1.216	937396	1.36		109	3225	
40 NEtFOSA										
584.00 > 419.00	4.983	4.993	-0.010	1.000	727749	0.9767		97.7	1617	M
57 11C1FOS										
631.00 > 451.00	5.071	5.072	-0.001	1.154	3921877	0.8893		94.4	9295	
D 43 13C2 PFDoA										
615.00 > 570.00	5.203	5.213	-0.010	1.270	6957212	1.25		99.7	11272	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.203	5.213	-0.010	1.000	5341124	0.9399	Target=6.99	94.0	4968	
613.00 > 169.00	5.203	5.213	-0.010	1.000	798577		6.69(3.50-10.49)		1699	
50 10:2 FTS										
627.00 > 607.00	5.221	5.231	-0.010	1.108	2016404	0.9766		101	9503	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.274	5.284	-0.010	1.287	731347	1.09		87.1	858	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.274	5.284	-0.010	1.287	587055	1.23		98.1	50.4	
61 NMeFOSA										
512.00 > 169.00	5.282	5.284	-0.002	1.002	484364	1.02		102	581	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
49 N-MeFOSE-M										
616.00 > 59.00	5.282	5.292	-0.010	1.002	711569	1.04		104	1089	
54 PFDoS										
699.00 > 80.00	5.372	5.383	-0.011	1.223	2235283	0.9248	Target=4.24	95.5	6000	
699.00 > 99.00	5.372	5.383	-0.011	1.223	534882		4.18(2.12-6.35)		2416	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.413	5.414	-0.001	1.040	4605874	1.00	Target=6.20	99.8	4234	
663.00 > 169.00	5.413	5.414	-0.001	1.040	738766		6.23(3.10-9.30)		3361	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.433	5.444	-0.011	1.326	831058	1.23		98.7	408	
62 N-EtFOSE-M										
630.00 > 59.00	5.443	5.454	-0.011	1.002	813713	0.9216		92.2	981	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.443	5.454	-0.011	1.329	481614	1.22		97.4	644	
56 N-EtFOSA-M										
526.00 > 169.00	5.453	5.464	-0.011	1.002	460795	1.00		100	534	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.595	5.607	-0.012	1.366	5320853	1.25		100.0	10956	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.595	5.607	-0.012	1.000	544549	0.9520	Target=1.05	95.2	2702	
713.00 > 219.00	5.584	5.607	-0.023	0.998	531294		1.02(0.53-1.58)		3250	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.903	5.904	-0.001	1.441	3682104	1.28		102	6589	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.903	5.904	-0.001	1.000	3127855	0.9900	Target=8.09	99.0	3839	
813.00 > 169.00	5.903	5.904	-0.001	1.000	372573		8.40(4.05-12.14)		1390	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.159	6.164	-0.005	1.043	2780288	0.9588	Target=11.53	95.9	3730	
913.00 > 169.00	6.159	6.164	-0.005	1.043	238871		11.64(5.77-17.30)		1255	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

63L4PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\\_030.d

Injection Date: 09-Jan-2022 16:20:40

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

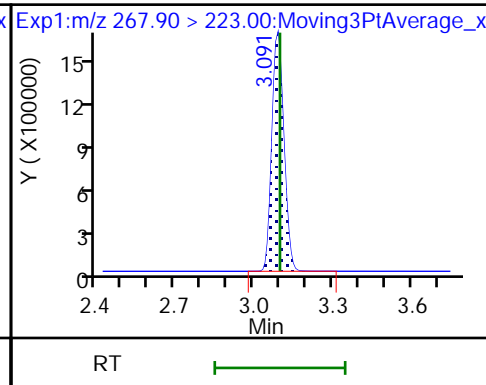
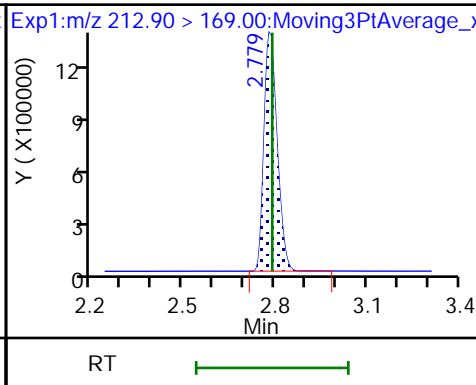
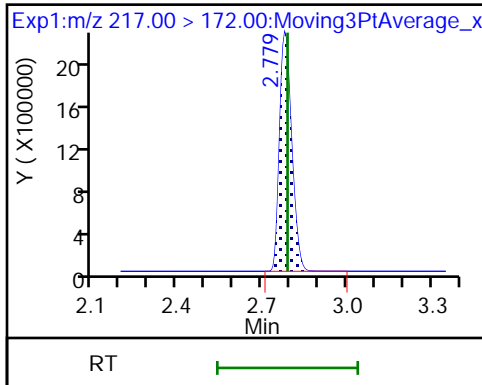
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

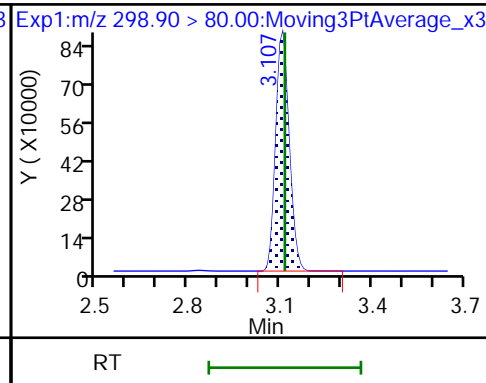
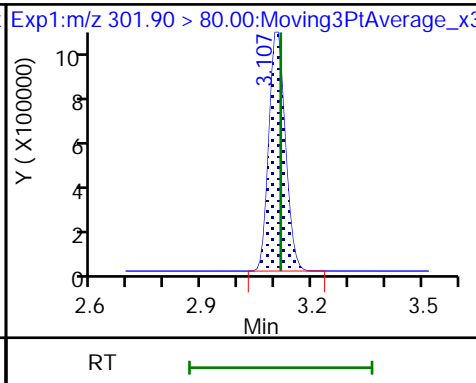
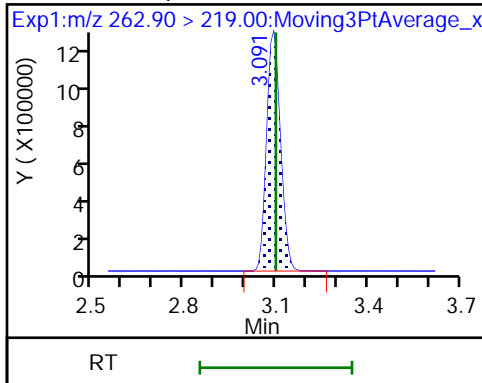
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

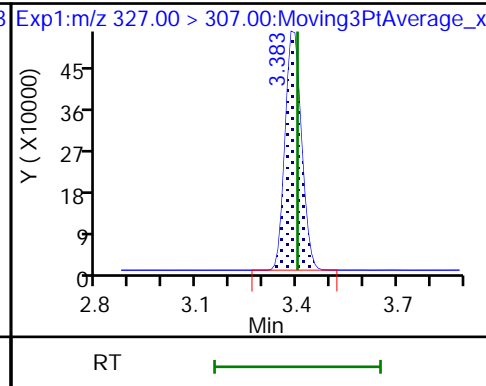
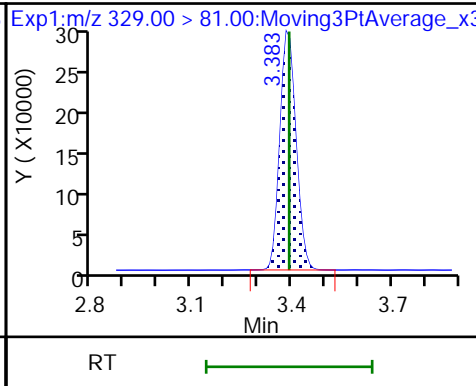
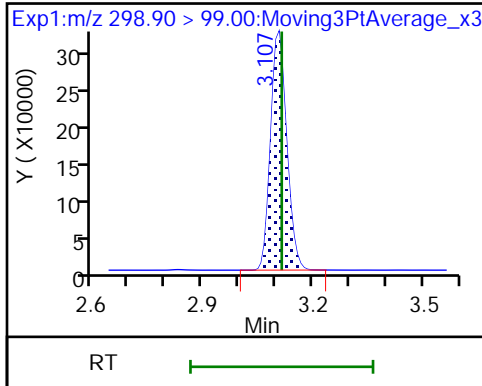
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

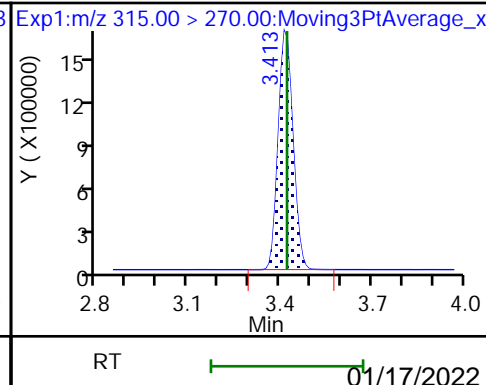
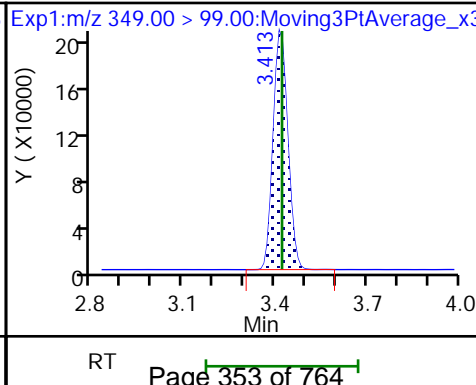
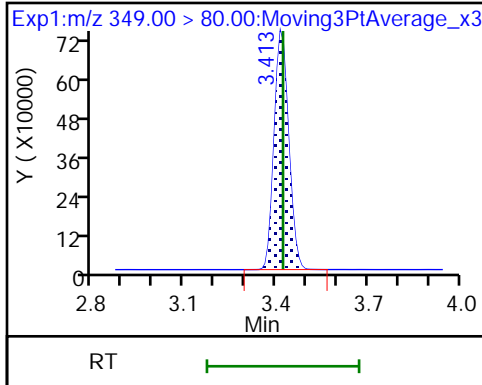
7 4:2 FTS

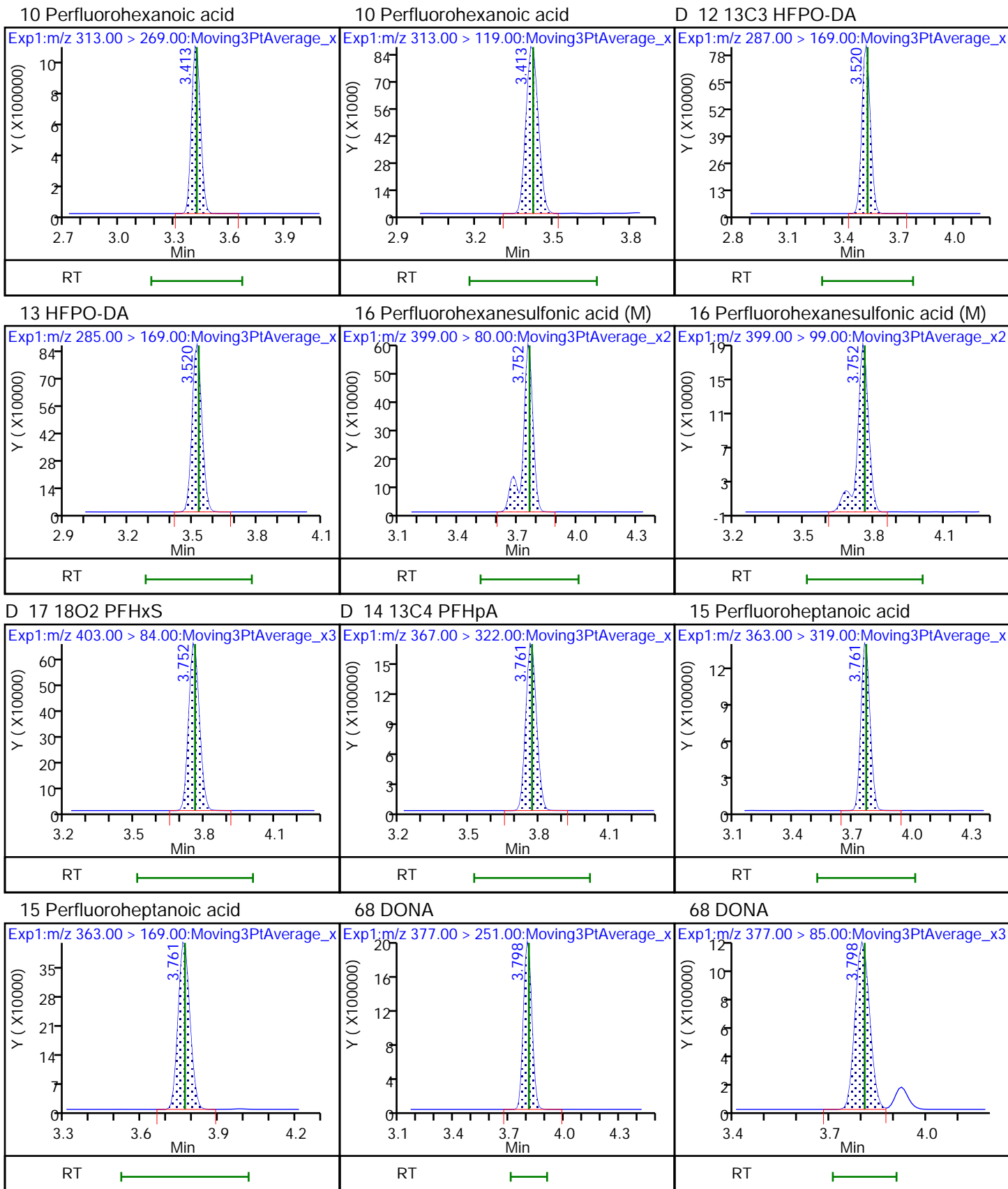


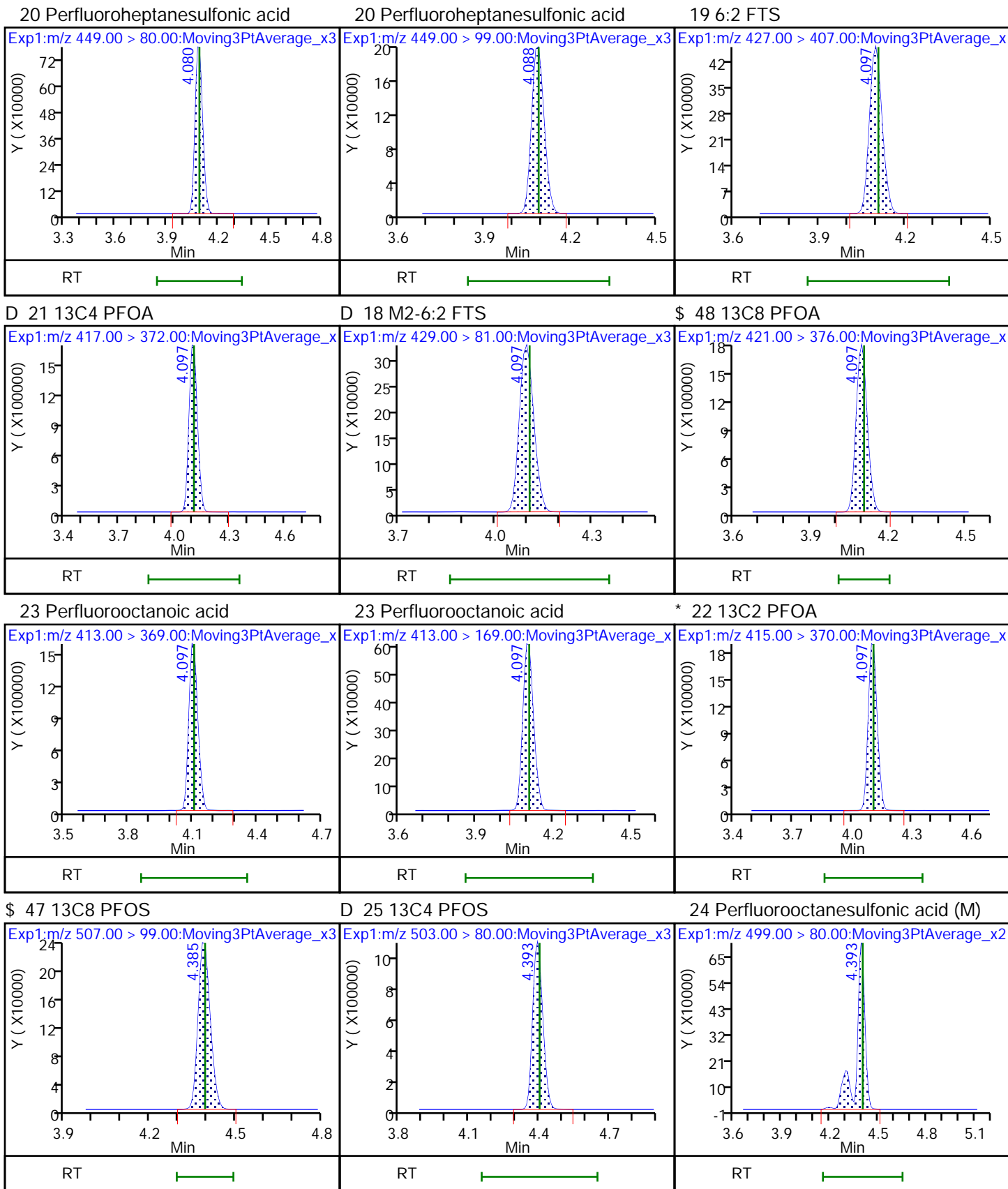
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

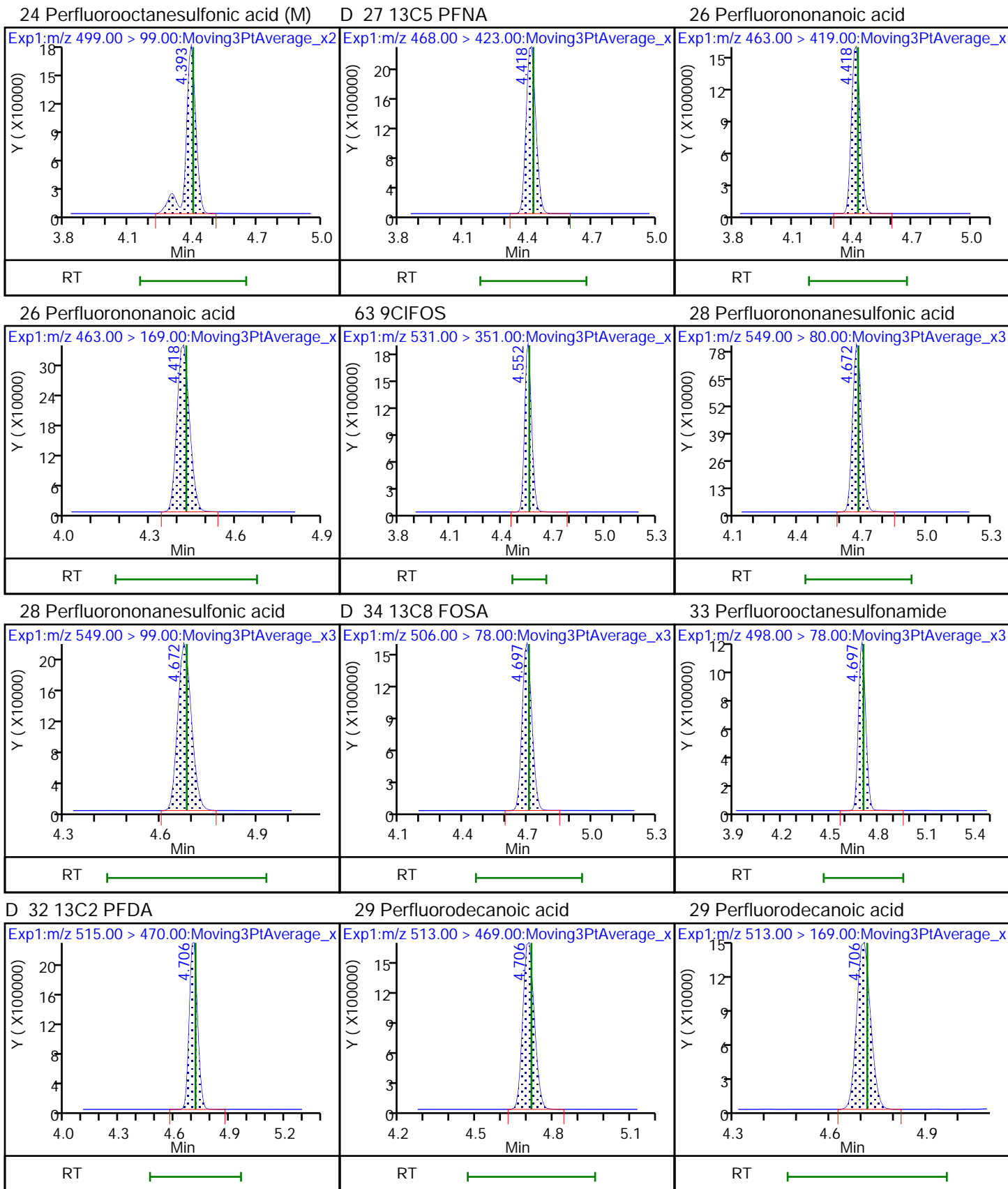
D 9 13C2 PFXa

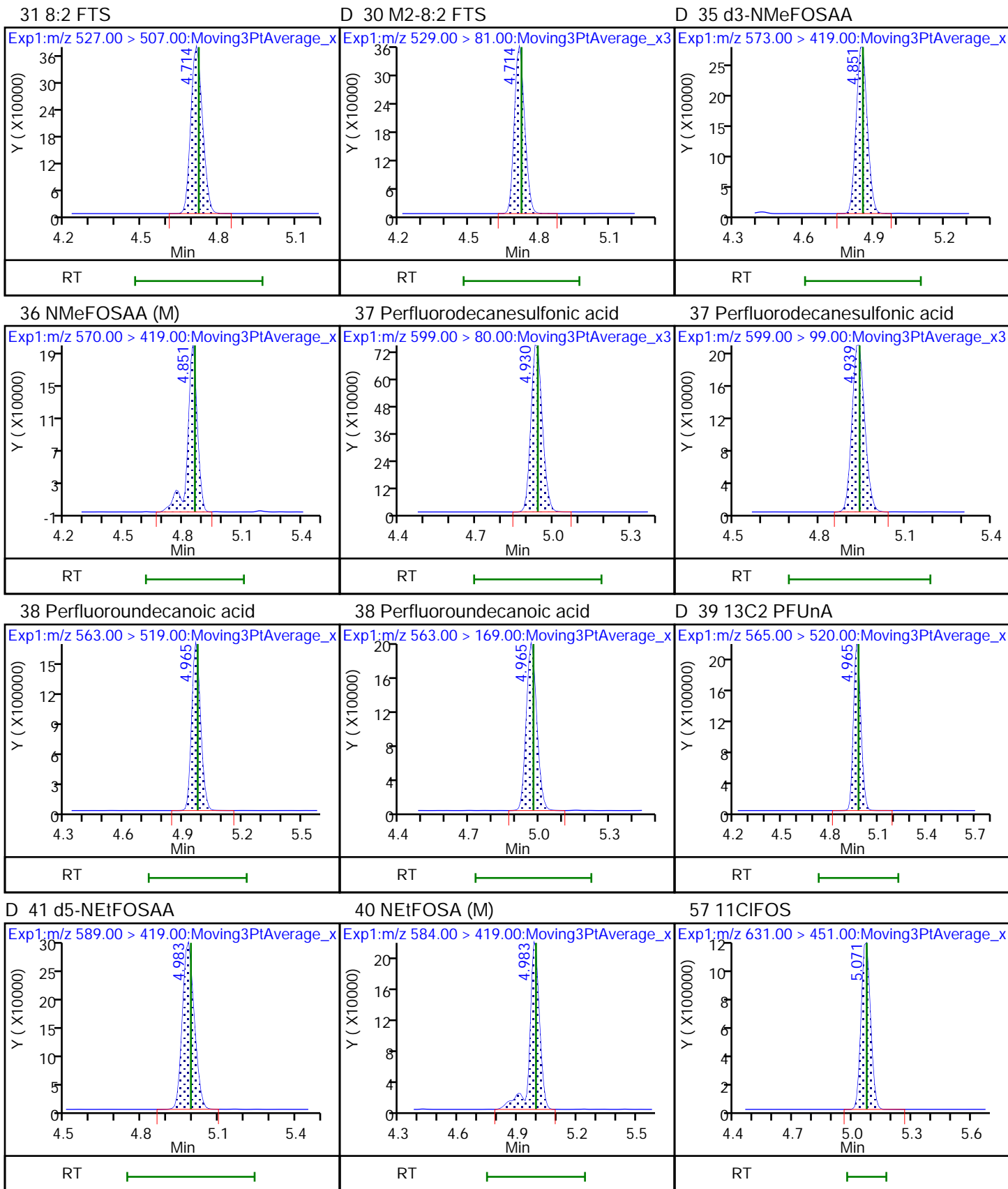








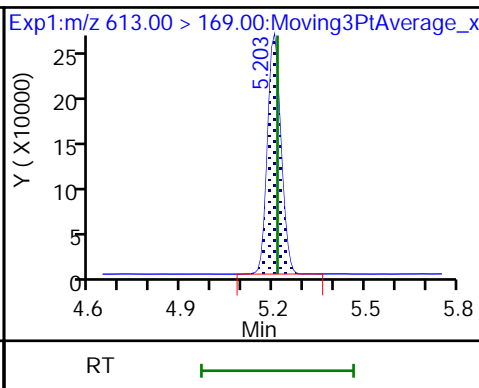
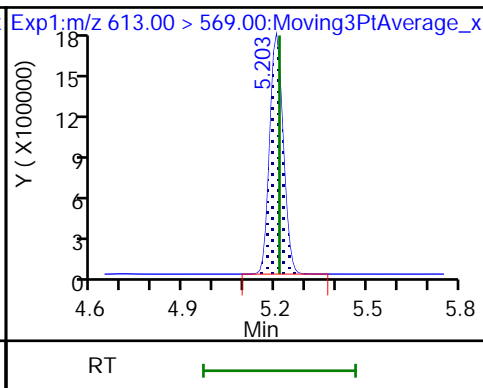
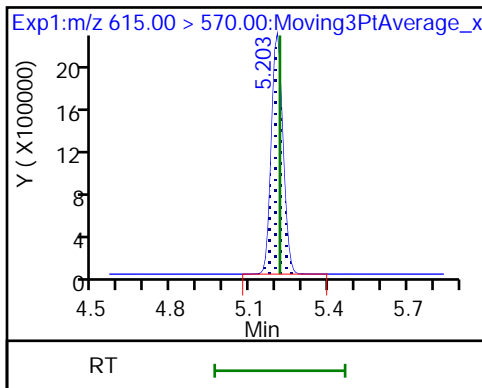




D 43 13C2 PFDaA

42 Perfluorododecanoic acid

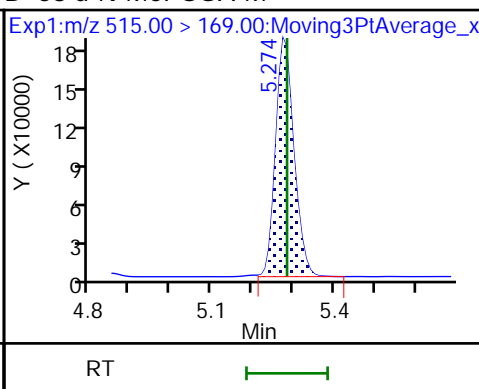
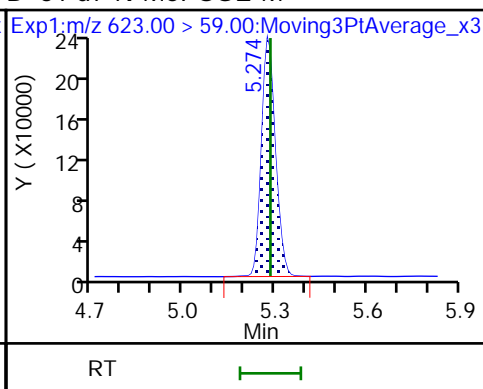
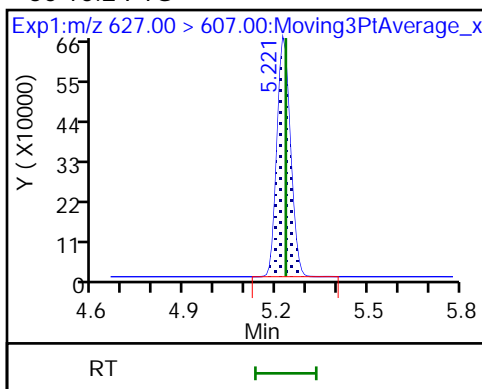
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

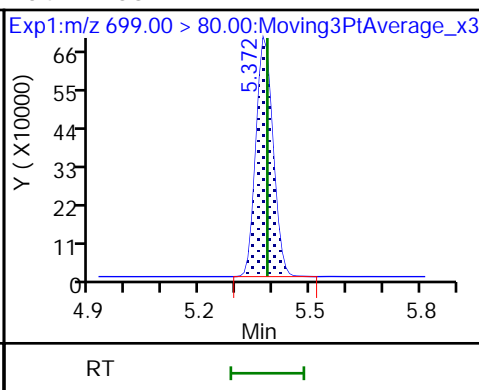
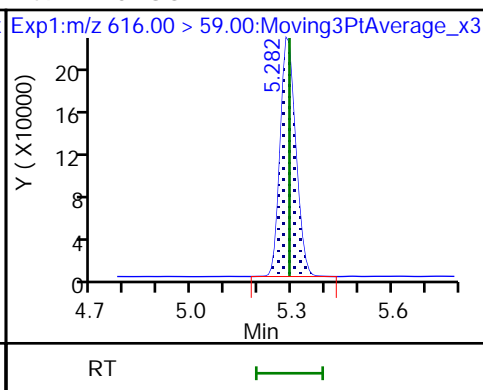
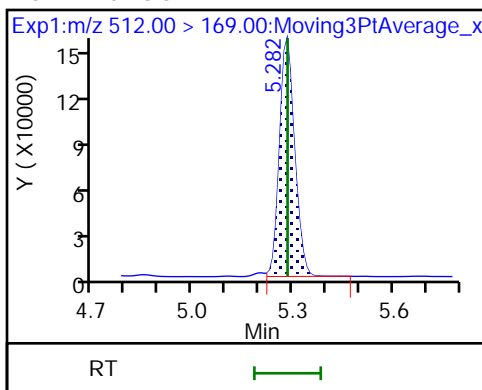
D 58 d-N-MeFOSA-M



61 NMeFOSA

49 N-MeFOSE-M

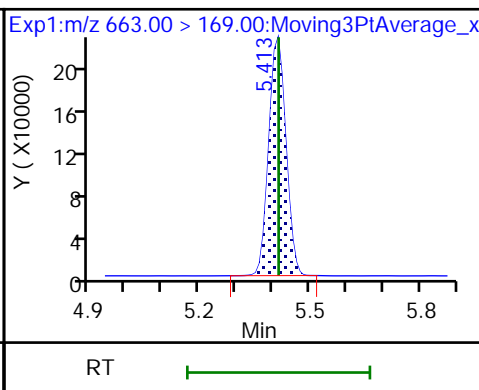
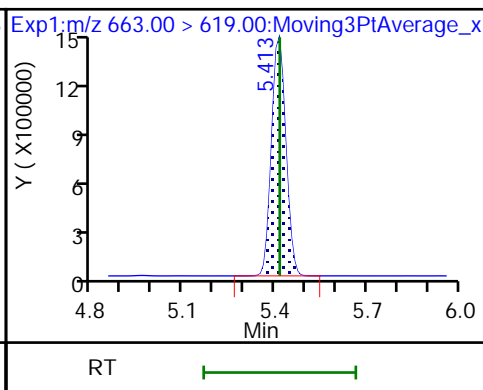
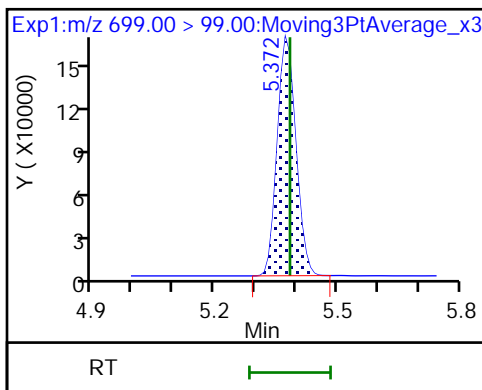
54 PFDoS



54 PFDoS

44 Perfluorotridecanoic acid

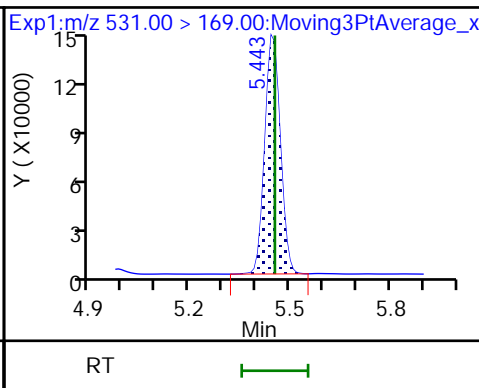
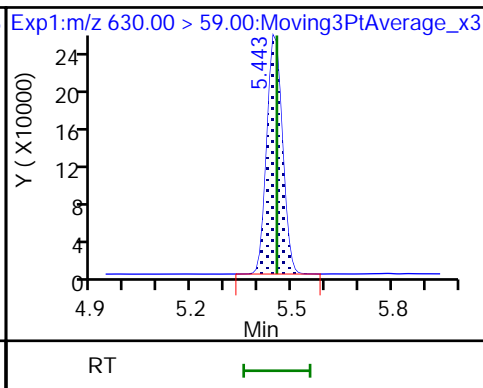
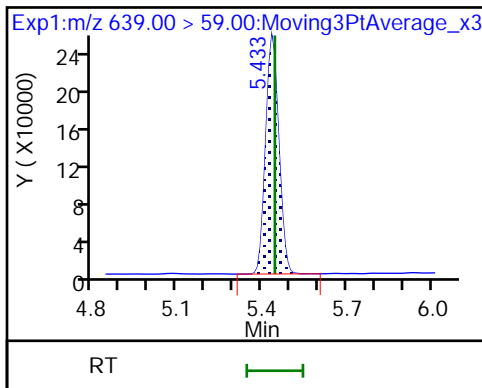
44 Perfluorotridecanoic acid



D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M

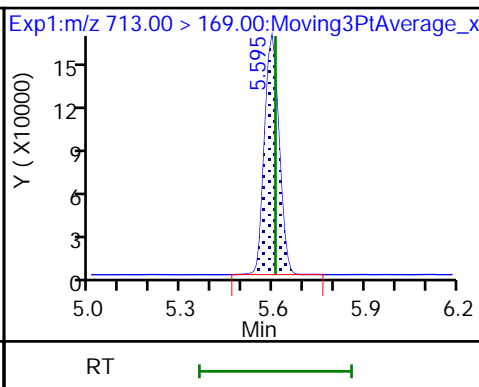
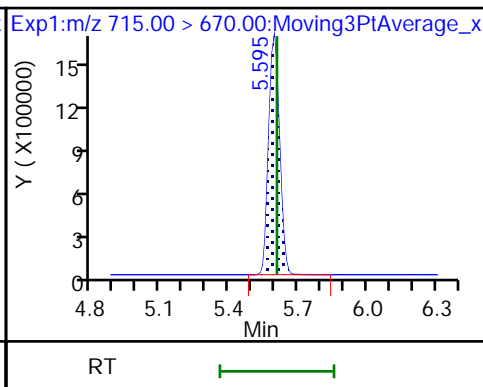
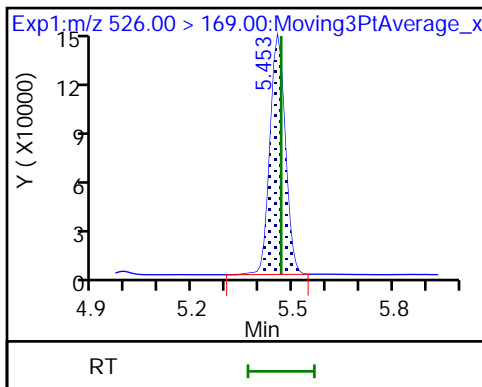
D 52 d-N-EtFOSA-M



56 N-EtFOSA-M

D 46 13C2 PFTeDA

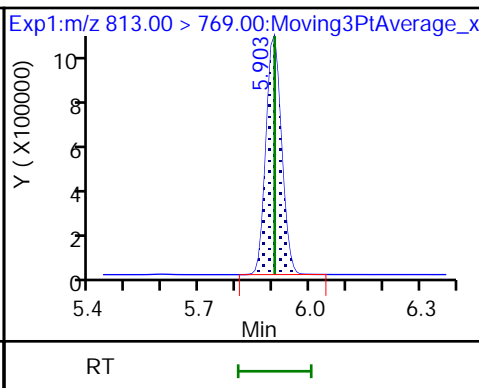
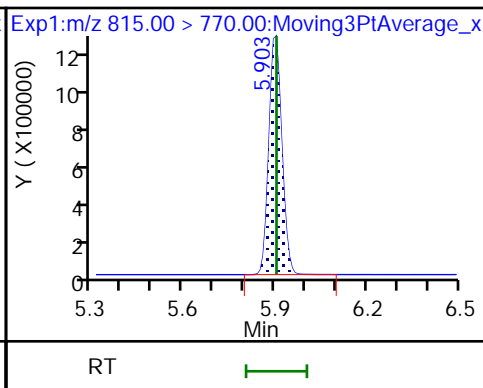
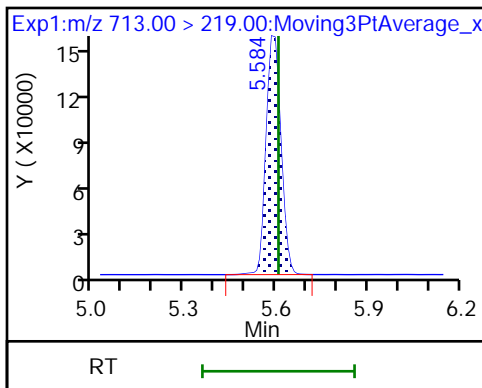
45 Perfluorotetradecanoic acid



45 Perfluorotetradecanoic acid

D 59 13C2 PFHxDA

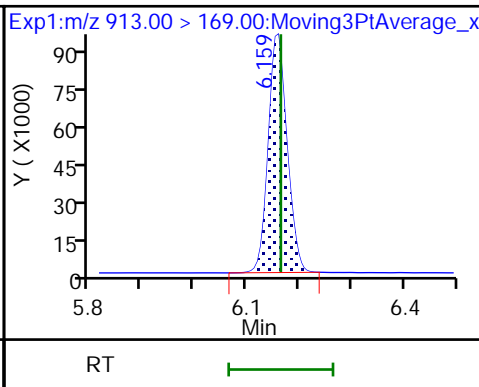
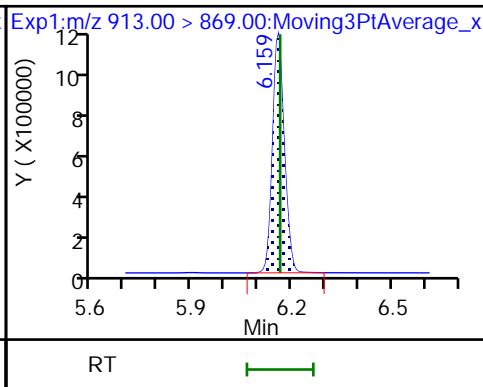
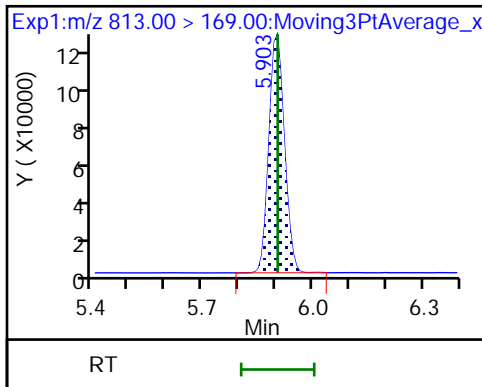
55 Perfluorohexadecanoic acid



55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid

60 Perfluorooctadecanoic acid





Eurofins TestAmerica, Knoxville

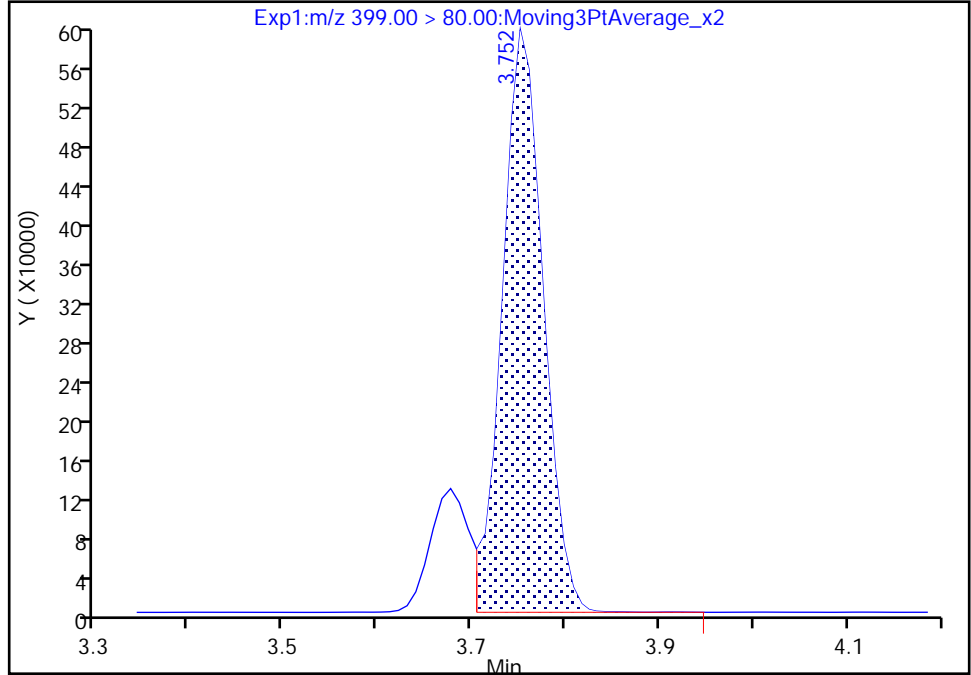
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Injection Date: 09-Jan-2022 16:20:40 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 30 Worklist Smp#: 30  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

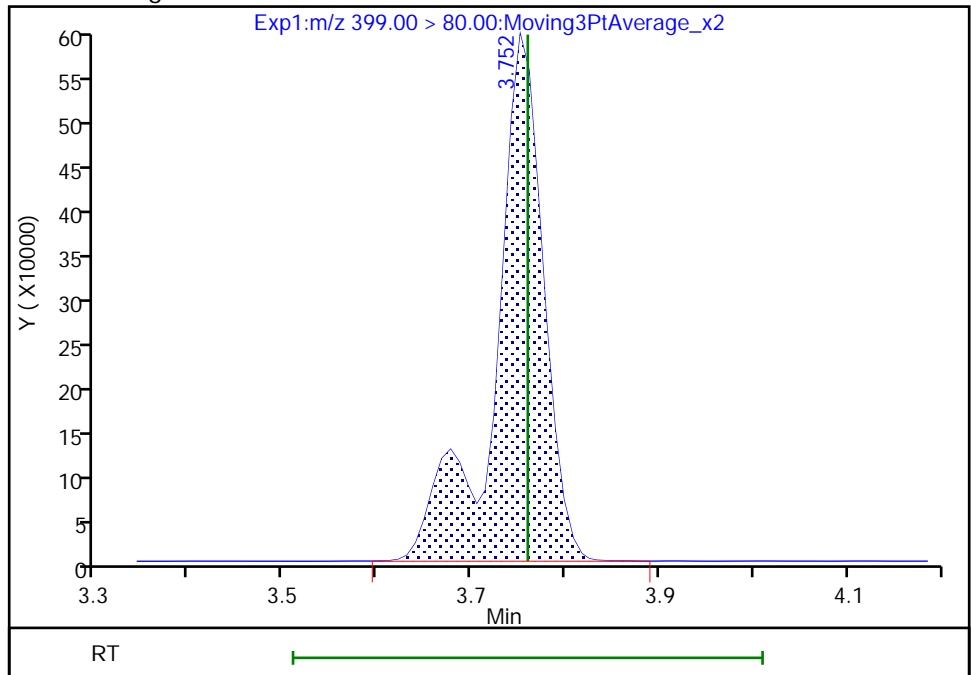
RT: 3.75  
Area: 1777973  
Amount: 0.730463  
Amount Units: ng/ml

Processing Integration Results



RT: 3.75  
Area: 2129851  
Amount: 0.875029  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 14:25:54  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

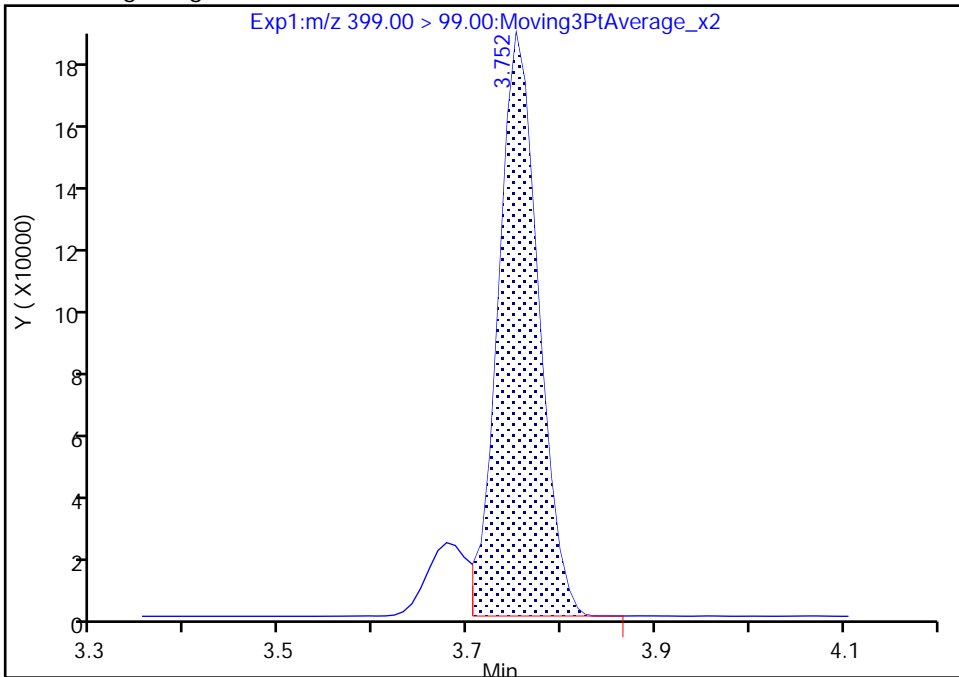
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Injection Date: 09-Jan-2022 16:20:40 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 30 Worklist Smp#: 30  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

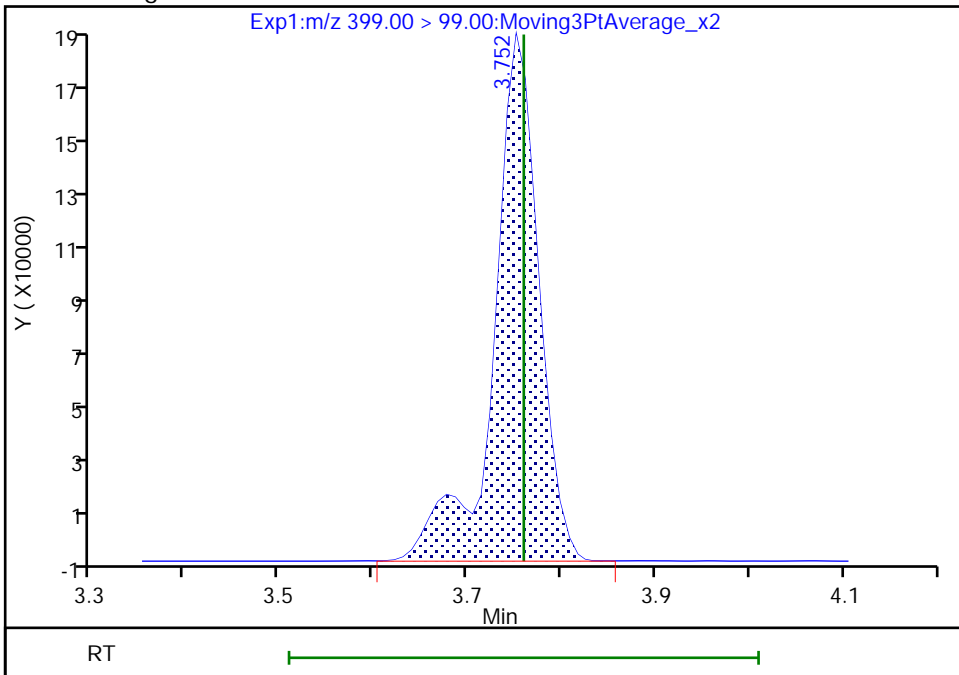
RT: 3.75  
Area: 536174  
Amount: 0.730463  
Amount Units: ng/ml

Processing Integration Results



RT: 3.75  
Area: 604310  
Amount: 0.875029  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 14:26:01

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

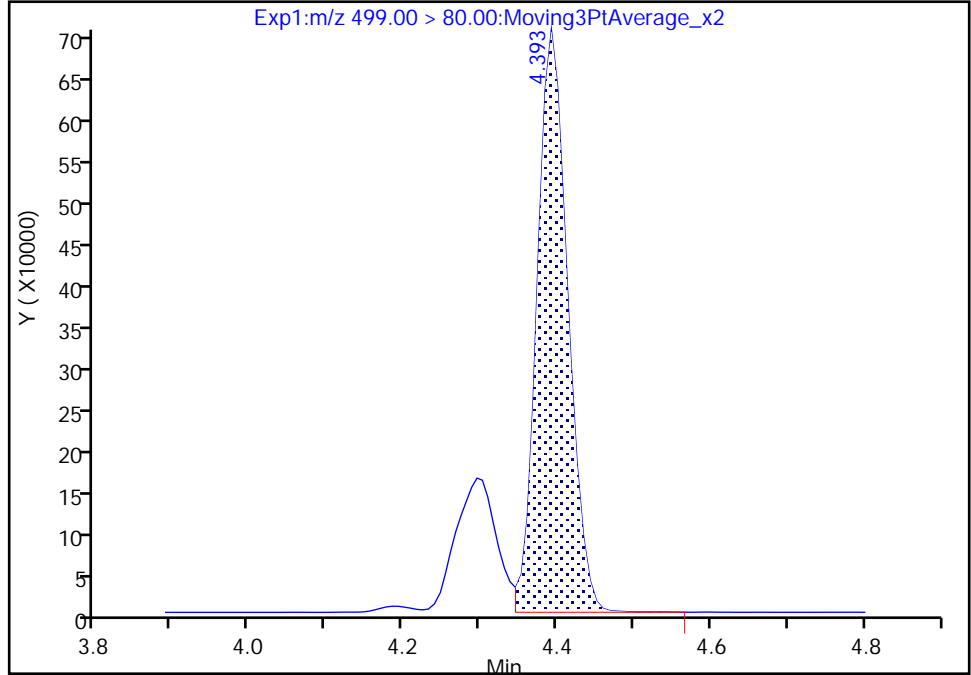
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Injection Date: 09-Jan-2022 16:20:40 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 30 Worklist Smp#: 30  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

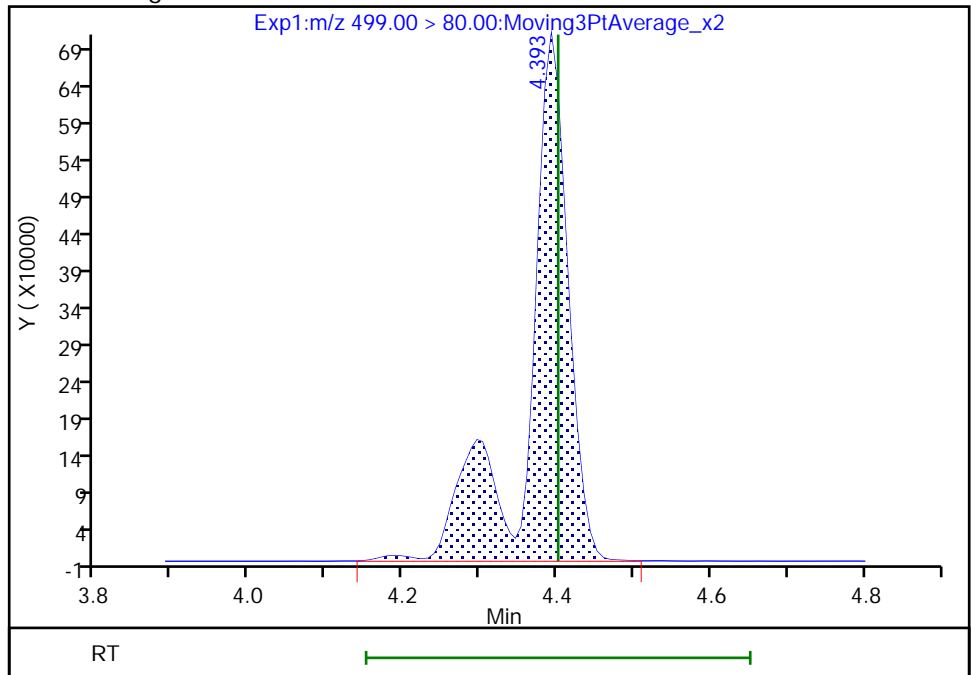
RT: 4.39  
Area: 1946249  
Amount: 0.671702  
Amount Units: ng/ml

Processing Integration Results



RT: 4.39  
Area: 2562395  
Amount: 0.884350  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 14:26:15  
Audit Action: Manually Integrated



Eurofins TestAmerica, Knoxville

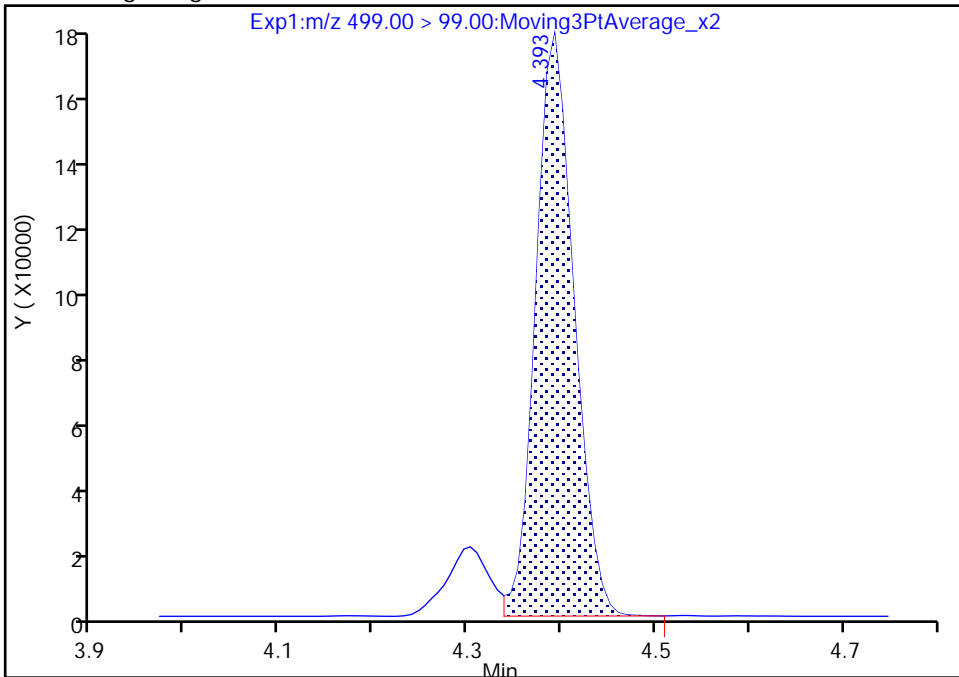
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Injection Date: 09-Jan-2022 16:20:40 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 30 Worklist Smp#: 30  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

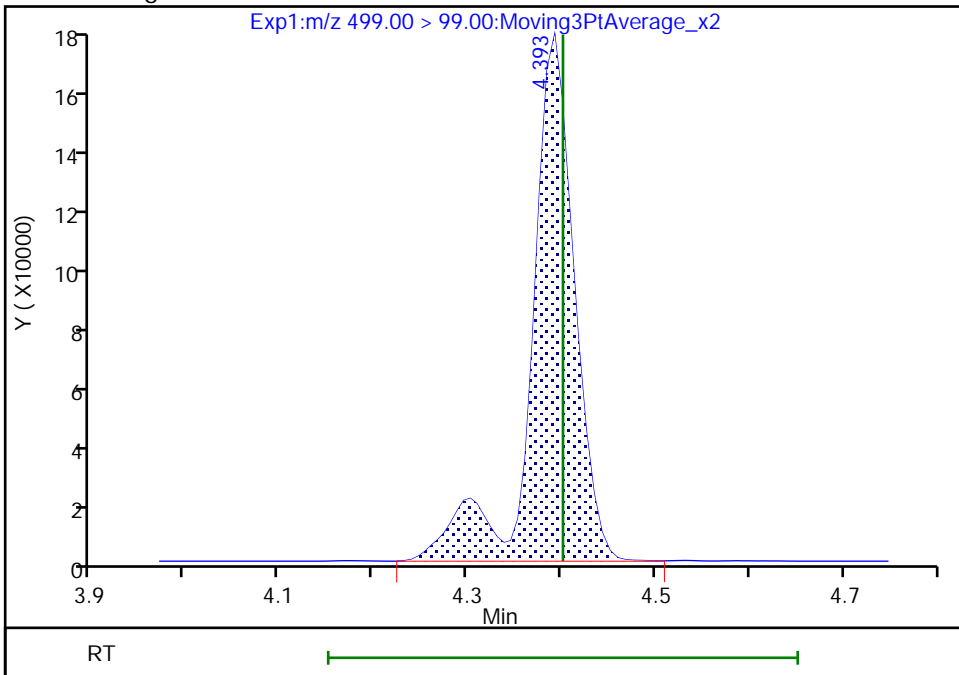
RT: 4.39  
Area: 505457  
Amount: 0.671702  
Amount Units: ng/ml

Processing Integration Results



RT: 4.39  
Area: 573020  
Amount: 0.884350  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 14:26:24

Audit Action: Manually Integrated

Audit Reason: Baseline  
Page 364 of 764

Eurofins TestAmerica, Knoxville

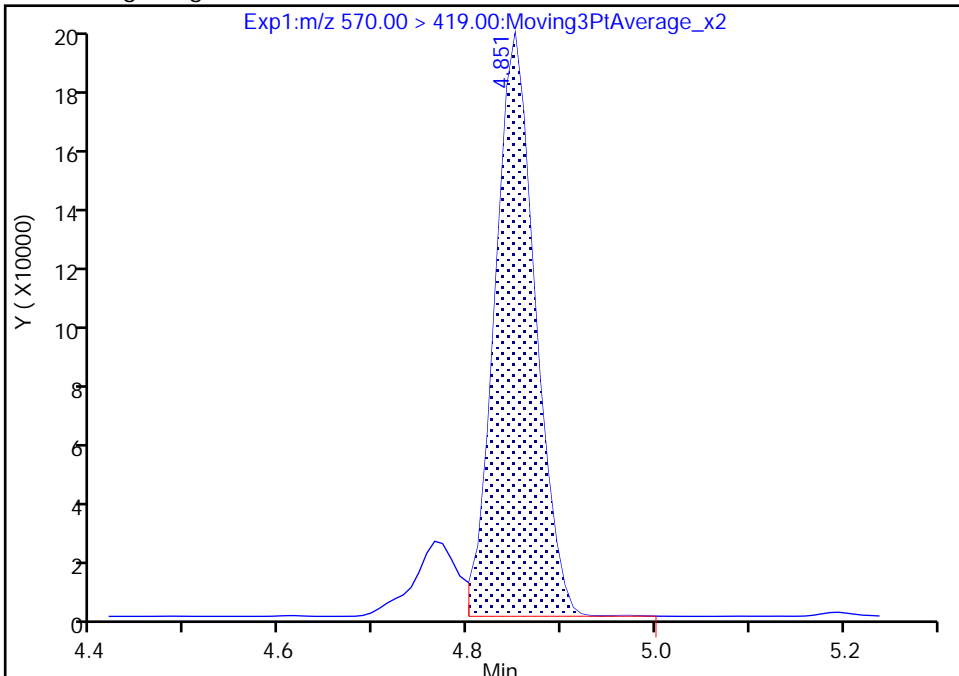
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Injection Date: 09-Jan-2022 16:20:40 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 30 Worklist Smp#: 30  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

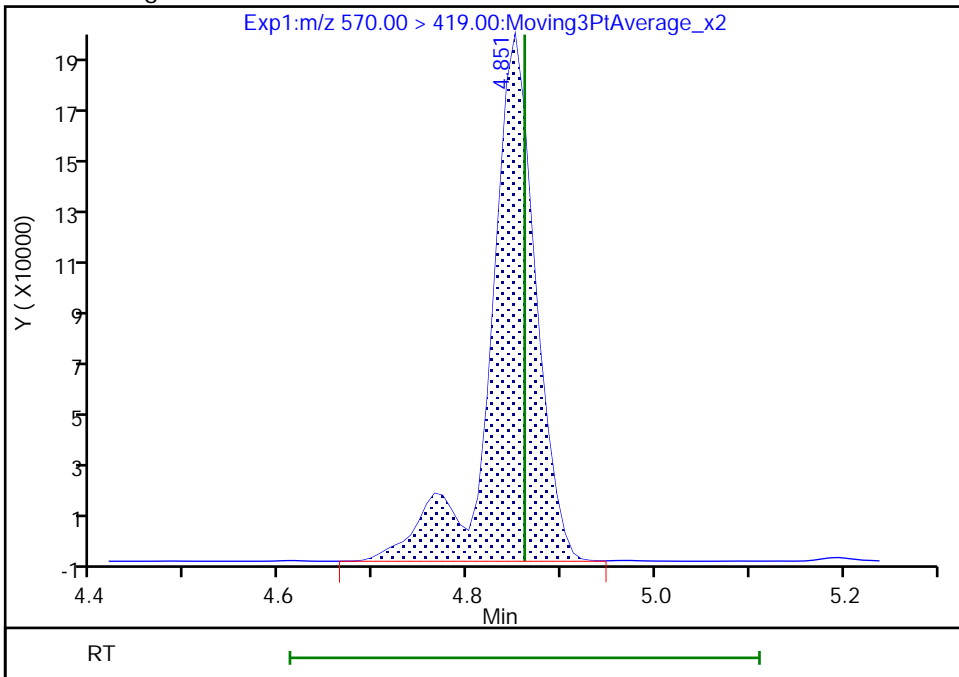
RT: 4.85  
Area: 576847  
Amount: 0.824194  
Amount Units: ng/ml

Processing Integration Results



RT: 4.85  
Area: 657678  
Amount: 0.939516  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 14:26:37  
Audit Action: Manually Integrated

Eurofins TestAmerica, Knoxville

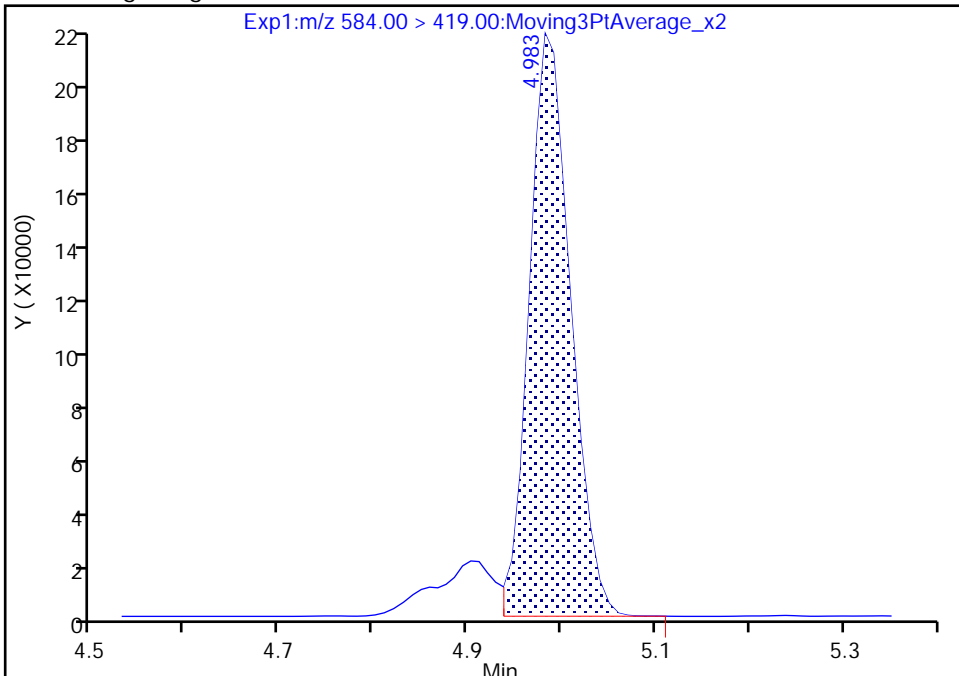
Data File:	\\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_030.d		
Injection Date:	09-Jan-2022 16:20:40	Instrument ID:	LCA
Lims ID:	CCV		
Client ID:			
Operator ID:	Cochran, Bobby	ALS Bottle#:	30
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	PFC_LCA	Limit Group:	LC - PFC- ICAL
Column:		Detector:	EXP1
		Worklist Smp#:	30

40 NETFOSA, CAS: 2991-50-6

Signal: 1

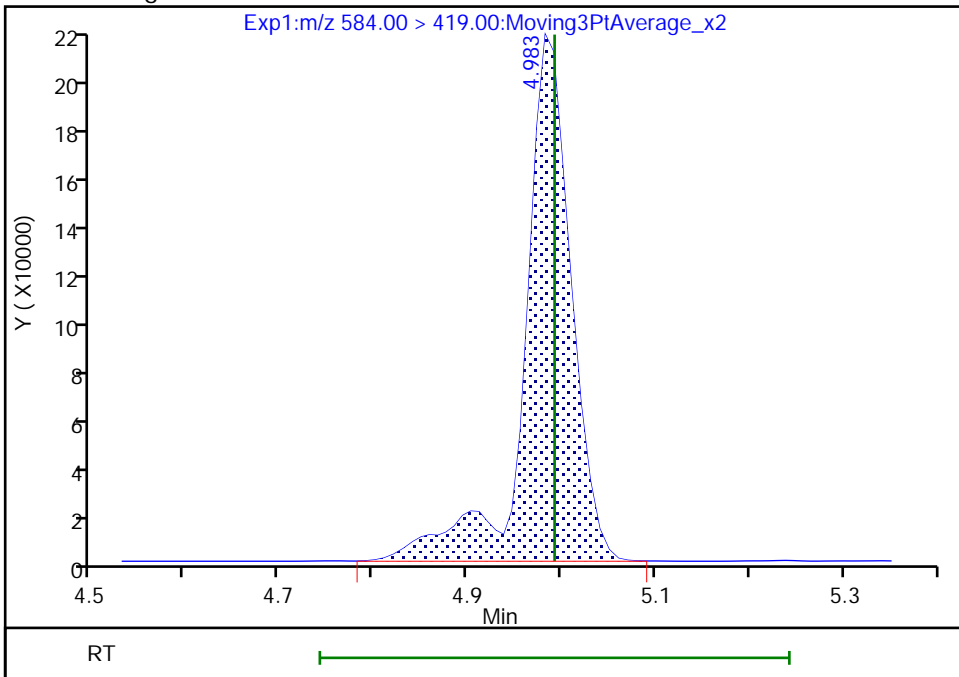
RT: 4.98  
 Area: 638933  
 Amount: 0.857959  
 Amount Units: ng/ml

Processing Integration Results



RT: 4.98  
 Area: 727749  
 Amount: 0.976726  
 Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 14:26:49  
 Audit Action: Manually Integrated

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVL 140-57822/6 Calibration Date: 01/11/2022 17:39  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 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	0.7844	0.7531		0.0480	0.0500	-4.0	50.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9519	0.9511		0.0500	0.0500	-0.0	50.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.097	1.129		0.0455	0.0442	2.9	50.0
4:2 FTS	AveID	2.252	2.326		0.0482	0.0467	3.3	50.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8680	0.8994		0.0518	0.0500	3.6	50.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	0.9713	0.9840		0.0475	0.0469	1.3	50.0
HFPO-DA	AveID	1.352	1.325		0.0490	0.0500	-2.0	50.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.377	1.418		0.0468	0.0455	3.0	50.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.047	1.069		0.0511	0.0500	2.1	50.0
DONA	AveID	2.630	2.573		0.0461	0.0471	-2.2	50.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9541	0.8795		0.0439	0.0476	-7.8	50.0
6:2 FTS	L2ID		1.796		0.0497	0.0474	4.8	50.0
Perfluorooctanoic acid (PFOA)	AveID	1.147	1.176		0.0513	0.0500	2.5	50.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.099	1.072		0.0453	0.0464	-2.5	50.0
Perfluorononanoic acid (PFNA)	Q2ID		0.8546		0.0527	0.0500	5.3	50.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	Q2ID		2.080		0.0476	0.0466	2.2	50.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9459	0.8813		0.0466	0.0500	-6.8	50.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9748	0.9911		0.0488	0.0480	1.7	50.0
Perfluorodecanoic acid (PFDA)	AveID	0.9645	1.015		0.0526	0.0500	5.3	50.0
8:2 FTS	AveID	1.415	1.515		0.0513	0.0479	7.0	50.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	QuaIF		0.9245		0.0476	0.0500	-4.7	50.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		0.9176		0.0503	0.0482	4.4	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9695	0.9688		0.0500	0.0500	-0.0	50.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Q2ID		1.002		0.0507	0.0500	1.5	50.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.672	1.504		0.0424	0.0471	-10.1	50.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9853		0.0476	0.0500	-4.8	50.0
10:2 FTS	AveID	2.276	2.174		0.0460	0.0482	-4.5	50.0
NMeFOSA	Q2ID		1.221		0.0588	0.0500	17.5	50.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	Q2ID		1.126		0.0520	0.0500	3.9	50.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9166	0.8629		0.0456	0.0484	-5.9	50.0

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVL 140-57822/6 Calibration Date: 01/11/2022 17:39  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 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	AveID	1.328	1.258		0.0474	0.0500	-5.2	50.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.195	1.268		0.0530	0.0500	6.1	50.0
Perfluorotridecanoic acid (PFTrIA)	AveID	0.8292	0.8246		0.0497	0.0500	-0.5	50.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1344	0.1435		0.0534	0.0500	6.8	50.0
Perfluorohexadecanoic acid	Q2ID		1.326		0.0521	0.0500	4.1	50.0
Perfluorooctadecanoic acid	AveID	0.9844	0.9216		0.0468	0.0500	-6.4	50.0
13C4 PFBA	Ave	1.142	1.013		1.11	1.25	-11.3	50.0
13C5 PFPeA	Ave	0.8865	0.8213		1.16	1.25	-7.4	50.0
13C3 PFBS	Ave	0.5913	0.5455		1.07	1.16	-7.7	50.0
M2-4:2 FTS	Ave	0.1820	0.1892		1.21	1.17	4.0	50.0
13C2 PFHxA	Ave	0.9479	0.8436		1.11	1.25	-11.0	50.0
13C3 HFPO-DA	Ave	0.4556	0.4025		1.10	1.25	-11.7	50.0
18O2 PFHxS	Ave	0.3946	0.3987		1.20	1.18	1.0	50.0
13C4 PFHpA	Ave	0.9067	0.8573		1.18	1.25	-5.4	50.0
13C4 PFOA	Ave	0.9376	0.9458		1.26	1.25	0.9	50.0
M2-6:2 FTS	Ave	0.1835	0.1803		1.17	1.19	-1.7	50.0
13C4 PFOS	Ave	0.5681	0.5545		1.17	1.20	-2.4	50.0
13C5 PFNA	Ave	1.234	1.183		1.20	1.25	-4.1	50.0
13C8 FOSA	Ave	0.7682	0.7818		1.27	1.25	1.8	50.0
13C2 PFDA	Ave	1.191	1.193		1.25	1.25	0.2	50.0
M2-8:2 FTS	Ave	0.2070	0.2099		1.21	1.20	1.4	50.0
d3-NMeFOSAA	Ave	0.1401	0.1622		1.45	1.25	15.7	50.0
13C2 PFUnA	Ave	1.189	1.142		1.20	1.25	-3.9	50.0
d5-NEtFOSAA	Ave	0.1537	0.1761		1.43	1.25	14.5	50.0
13C2 PFDoA	Ave	1.247	1.126		1.13	1.25	-9.7	50.0
d7-N-MeFOSE-M	Ave	0.1499	0.1327		1.11	1.25	-11.5	50.0
d-N-MeFOSA-M	Ave	0.1069	0.0942		1.10	1.25	-11.8	50.0
d9-N-EtFOSE-M	Ave	0.1504	0.1347		1.12	1.25	-10.4	50.0
d-N-EtFOSA-M	Ave	0.0883	0.0787		1.11	1.25	-10.9	50.0
13C2 PFTeDA	Ave	0.9508	0.7926		1.04	1.25	-16.6	50.0
13C2 PFHxDA	Ave	0.6444	0.5309		1.03	1.25	-17.6	50.0
13C8 PFOA	AveID	0.999	1.008		1.26	1.25	0.9	50.0
13C8 PFOS	AveID	0.2220	0.2271		1.22	1.20	2.3	50.0

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

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 Client ID:  
 Sample Type: CCVL  
 Inject. Date: 11-Jan-2022 17:39:19 ALS Bottle#: 6 Worklist Smp#: 6  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022220-006 ccvl  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 12-Jan-2022 18:43:08 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1648

First Level Reviewer: cochranj Date: 11-Jan-2022 17:51:50

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	2.815	2.814	0.001	0.677	5737276	1.11	88.7	14399	
2 Perfluorobutanoic acid	212.90 > 169.00	2.822	2.814	0.008	1.002	172821	0.0480	96.0	52.6	
D 3 13C5 PFPeA	267.90 > 223.00	3.132	3.131	0.001	0.753	4651392	1.16	92.6	10870	
4 Perfluoropentanoic acid	262.90 > 219.00	3.132	3.131	0.001	1.000	176953	0.0500	99.9	93.8	
D 6 13C3 PFBS	301.90 > 80.00	3.148	3.147	0.001	0.757	2873390	1.07	92.3	12200	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.148	3.147	0.001	1.000	123309	0.0455	Target=2.65	103	971
	298.90 > 99.00	3.148	3.147	0.001	1.000	43390		2.84(1.32-3.97)		403
D 8 M2-4:2 FTS	329.00 > 81.00	3.442	3.442	0.0	0.828	1000839	1.21	104	1841	
7 4:2 FTS	327.00 > 307.00	3.442	3.442	0.0	1.000	93117	0.0482	103	1579	
D 9 13C2 PFHxA	315.00 > 270.00	3.473	3.472	0.001	0.836	4777819	1.11	89.0	11564	
10 Perfluorohexanoic acid	313.00 > 269.00	3.473	3.472	0.001	1.000	171883	0.0518	Target=11.80	104	117
	313.00 > 119.00	3.473	3.472	0.001	1.000	14122		12.17(5.90-17.70)		19.7
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.473	3.472	0.001	1.103	114071	0.0475	Target=3.44	101	441
	349.00 > 99.00	3.473	3.472	0.001	1.103	34995		3.26(1.72-5.16)		541

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	3.574	0.001	1.000	120809	0.0490		98.0	105	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.807	3.807	0.0	1.000	116541	0.0468	Target=3.40	103	671	M
399.00 > 99.00	3.807	3.807	0.0	1.000	31296		3.72(1.70-5.10)		300	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.807	3.807	0.0	0.916	2136204	1.19		101	7750	
D 14 13C4 PFHpA										
367.00 > 322.00	3.826	3.825	0.001	0.920	4855593	1.18		94.6	9333	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.826	3.825	0.001	1.000	207619	0.0511	Target=3.29	102	189	
363.00 > 169.00	3.826	3.825	0.001	1.000	61479		3.38(1.65-4.94)		205	
68 DONA										
377.00 > 251.00	3.858	3.858	0.0	0.867	304483	0.0461	Target=1.82	97.8	1084	
377.00 > 85.00	3.858	3.858	0.0	0.867	178713		1.70(0.91-2.74)		132	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.140	4.140	0.0	0.930	105177	0.0439	Target=3.92	92.2	675	
449.00 > 99.00	4.140	4.140	0.0	0.930	29768		3.53(1.96-5.87)		304	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.156	4.149	0.007	1.000	970176	1.17		98.3	3545	
D 21 13C4 PFOA										
417.00 > 372.00	4.156	4.156	0.0	1.000	5356797	1.26		101	11643	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.156	4.156	0.0	1.000	5402324	1.26		101	11672	
19 6:2 FTS										
427.00 > 407.00	4.156	4.156	0.0	1.000	69558	0.0497		105	486	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.156	4.156	0.0	1.000	251999	0.0512	Target=2.59	102	229	
413.00 > 169.00	4.156	4.156	0.0	1.000	97113		2.59(1.30-3.89)		251	
* 22 13C2 PFOA										
415.00 > 370.00	4.156	4.156	0.0		5663654	1.25			9406	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.444	4.444	0.0	0.998	681696	1.22		102	4282	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.452	4.452	0.0	1.000	124955	0.0453	Target=4.65	97.5	557	M
499.00 > 99.00	4.452	4.452	0.0	1.000	25318		4.94(2.32-6.97)		161	M
D 25 13C4 PFOS										
503.00 > 80.00	4.452	4.452	0.0	1.071	3002349	1.17		97.6	7420	
26 Perfluorononanoic acid										
463.00 > 419.00	4.469	4.469	0.0	0.998	229106	0.0526	Target=4.65	105	358	
463.00 > 169.00	4.478	4.469	0.009	1.000	50091		4.57(2.32-6.97)		99.4	
D 27 13C5 PFNA										
468.00 > 423.00	4.478	4.469	0.009	1.077	6702421	1.20		95.9	9997	
63 9CIFOS										
531.00 > 351.00	4.608	4.608	0.0	1.035	243487	0.0476		102	1388	
D 34 13C8 FOSA										
506.00 > 78.00	4.724	4.723	0.001	1.136	4427901	1.27		102	5055	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
33 Perfluorooctanesulfonamide	498.00 > 78.00	4.724	4.723	0.001	1.000	156097	0.0466	93.2	562	
28 Perfluorononanesulfonic acid	549.00 > 80.00	4.732	4.732	0.0	1.063	119520	0.0488	Target=4.06	102	690
	549.00 > 99.00	4.732	4.732	0.0	1.063	30418	3.93(2.03-6.09)			382
D 32 13C2 PFDA	515.00 > 470.00	4.757	4.757	0.0	1.145	6756582	1.25		100	13688
29 Perfluorodecanoic acid	513.00 > 469.00	4.757	4.757	0.0	1.000	274384	0.0526	Target=11.30	105	321
	513.00 > 169.00	4.757	4.757	0.0	1.000	26248	10.45(5.65-16.95)			67.9
31 8:2 FTS	527.00 > 507.00	4.775	4.774	0.001	1.000	68988	0.0513		107	505
D 30 M2-8:2 FTS	529.00 > 81.00	4.775	4.774	0.001	1.149	1138776	1.21		101	1926
D 35 d3-NMeFOSAA	573.00 > 419.00	4.905	4.905	0.0	1.180	918426	1.45		116	3757
36 NMeFOSAA	570.00 > 419.00	4.905	4.905	0.0	1.000	33965	0.0476		95.3	96.8
										M
37 Perfluorodecanesulfonic acid	599.00 > 80.00	4.993	4.992	0.001	1.121	111117	0.0503	Target=3.79	104	651
	599.00 > 99.00	4.993	4.992	0.001	1.121	30314	3.67(1.90-5.69)			303
38 Perfluoroundecanoic acid	563.00 > 519.00	5.032	5.022	0.010	1.002	250609	0.0500	Target=8.45	99.9	514
	563.00 > 169.00	5.022	5.022	0.0	1.000	29667	8.45(4.22-12.67)			147
D 39 13C2 PFUnA	565.00 > 520.00	5.022	5.022	0.0	1.208	6467096	1.20		96.1	11039
40 NEtFOSA	584.00 > 419.00	5.042	5.042	0.0	1.000	39966	0.0507		101	185
										M
D 41 d5-NEtFOSAA	589.00 > 419.00	5.042	5.042	0.0	1.213	997403	1.43		115	6011
57 11C1FOS	631.00 > 451.00	5.122	5.122	0.0	1.150	177991	0.0424		89.9	1106
D 43 13C2 PFDoA	615.00 > 570.00	5.257	5.257	0.0	1.265	6374687	1.13		90.3	11468
42 Perfluorododecanoic acid	613.00 > 569.00	5.257	5.257	0.0	1.000	251248	0.0476	Target=6.99	95.2	295
	613.00 > 169.00	5.257	5.257	0.0	1.000	40213	6.25(3.50-10.49)			135
50 10:2 FTS	627.00 > 607.00	5.284	5.275	0.009	1.107	99669	0.0460		95.5	487
D 51 d7-N-MeFOSE-M	623.00 > 59.00	5.292	5.292	0.0	1.273	751777	1.11		88.5	614
D 58 d-N-MeFOSA-M	515.00 > 169.00	5.292	5.292	0.0	1.273	533759	1.10		88.2	54.1
61 NMeFOSA	512.00 > 169.00	5.292	5.292	0.0	1.000	26070	0.0588		118	181
49 N-MeFOSE-M	616.00 > 59.00	5.301	5.301	0.0	1.002	33859	0.0520		104	40.1



Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
54 PFDoS										
699.00 > 80.00	5.435	5.425	0.011	1.221	104931	0.0456	Target=4.24	94.1	567	
699.00 > 99.00	5.435	5.425	0.011	1.221	27521		3.81(2.12-6.35)		253	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.444	5.444	0.0	1.310	762923	1.12		89.6	416	
62 N-EtFOSE-M										
630.00 > 59.00	5.464	5.464	0.0	1.004	38403	0.0474		94.8	35.8	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.464	5.464	0.0	1.039	210271	0.0497	Target=6.20	99.5	408	
663.00 > 169.00	5.464	5.464	0.0	1.039	32432		6.48(3.10-9.30)		163	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.464	5.464	0.0	1.315	445713	1.11		89.1	710	
56 N-EtFOSA-M										
526.00 > 169.00	5.464	5.464	0.0	1.000	22602	0.0530		106	171	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.648	5.650	-0.002	1.359	4488748	1.04		83.4	10283	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.648	5.650	-0.002	1.000	25762	0.0534	Target=1.05	107	115	
713.00 > 219.00	5.648	5.650	-0.002	1.000	21607		1.19(0.53-1.58)		130	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.955	5.948	0.007	1.433	3007083	1.03		82.4	5740	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.955	5.948	0.007	1.000	159489	0.0521	Target=8.09	104	399	
813.00 > 169.00	5.955	5.948	0.007	1.000	17969		8.88(4.05-12.14)		65.7	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.218	6.209	0.009	1.044	110854	0.0468	Target=11.53	93.6	292	
913.00 > 169.00	6.213	6.209	0.004	1.043	9200		12.05(5.77-17.30)		41.9	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

63L2PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\\_006.d

Injection Date: 11-Jan-2022 17:39:19

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

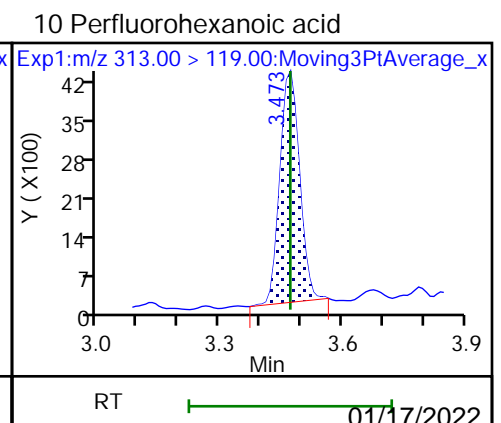
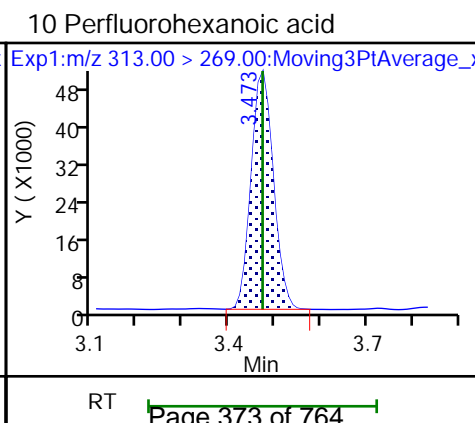
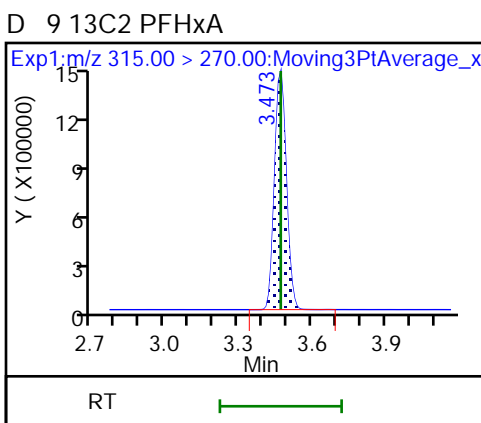
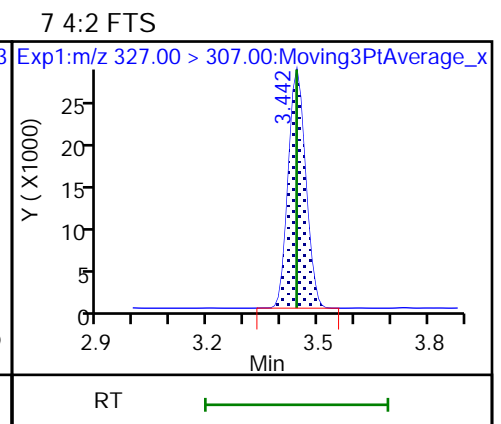
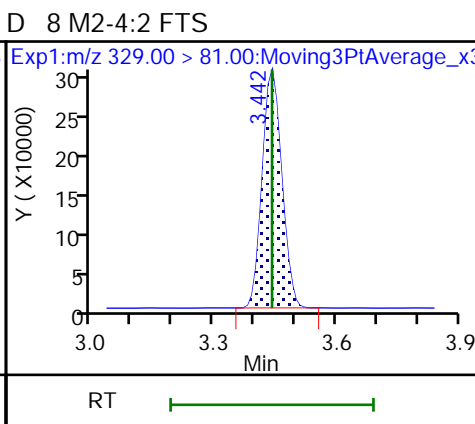
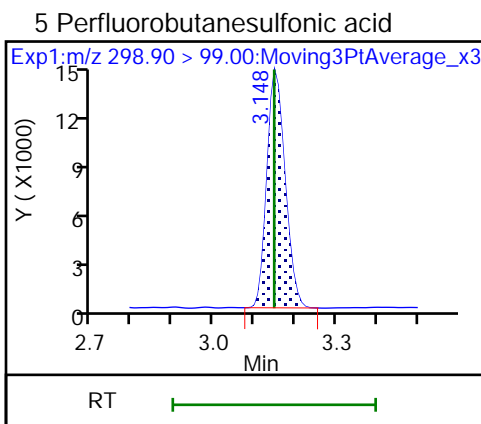
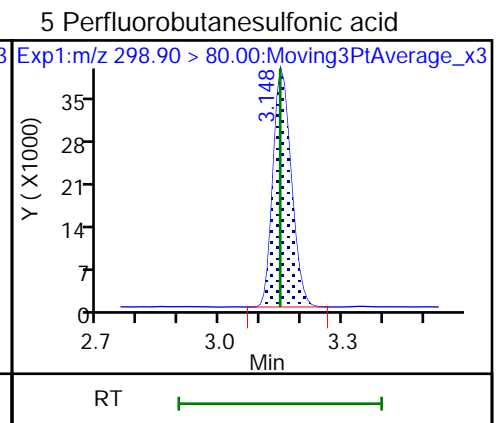
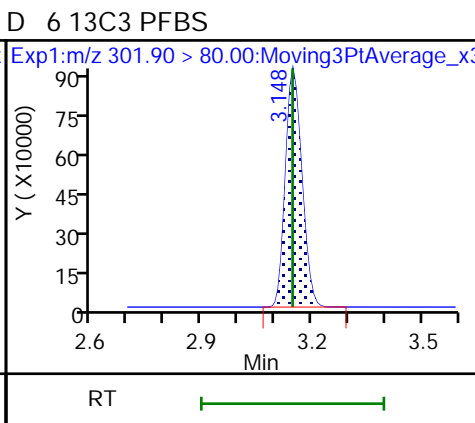
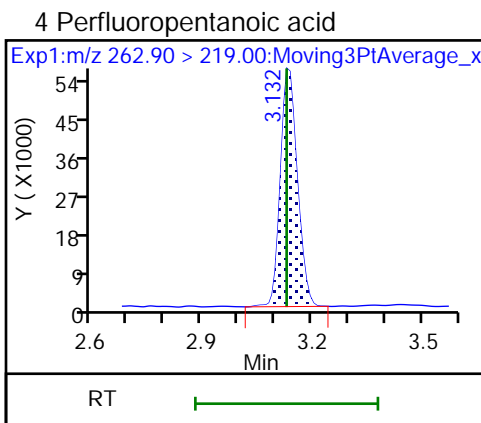
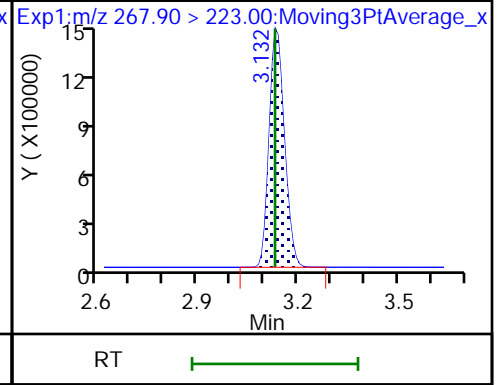
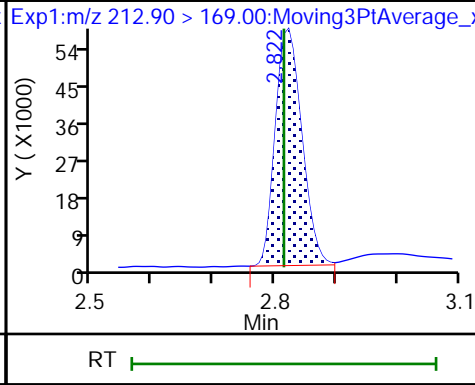
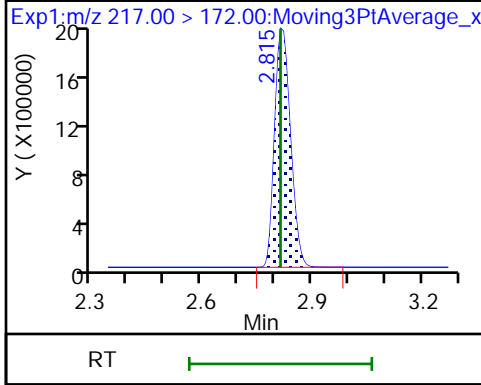
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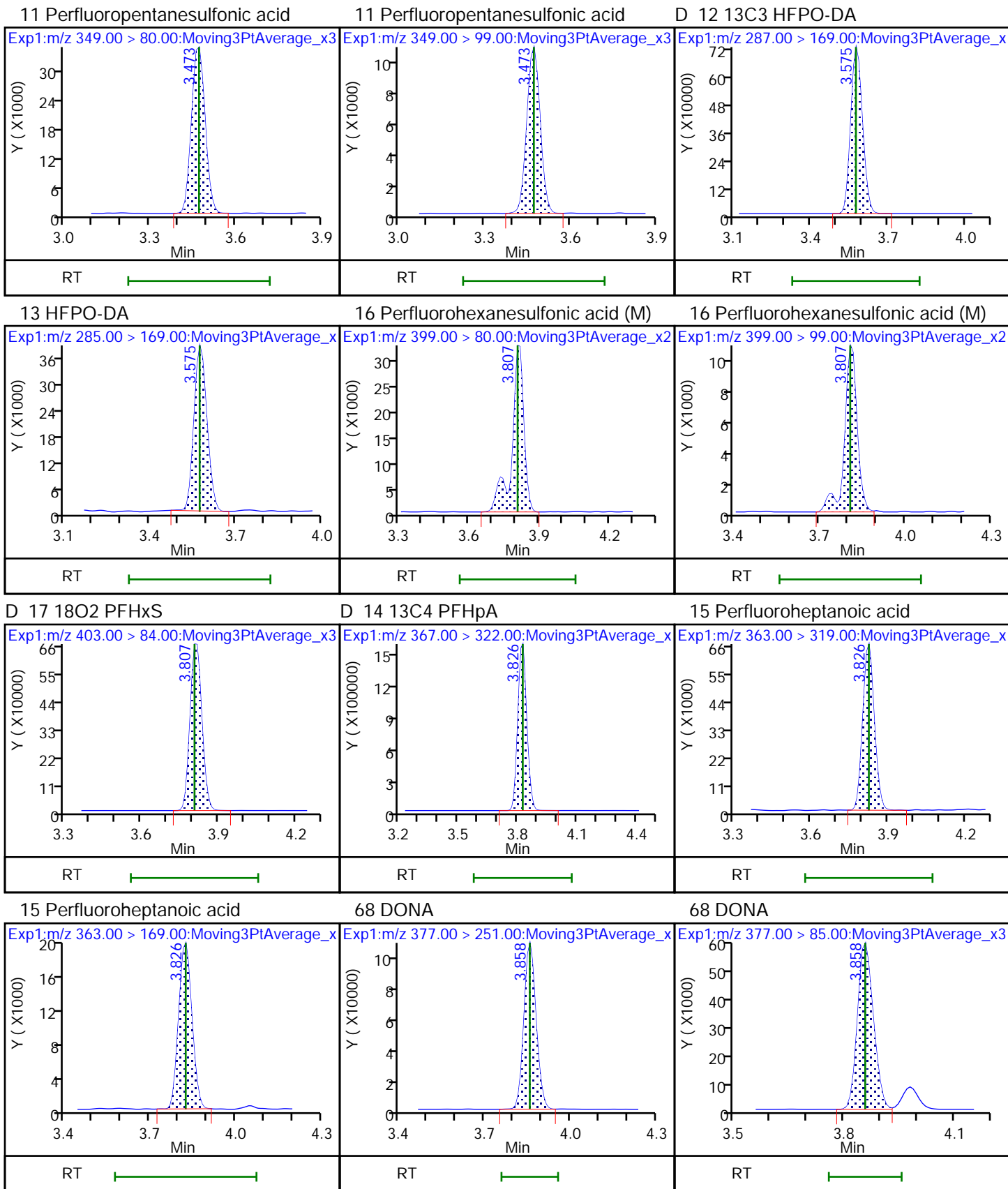
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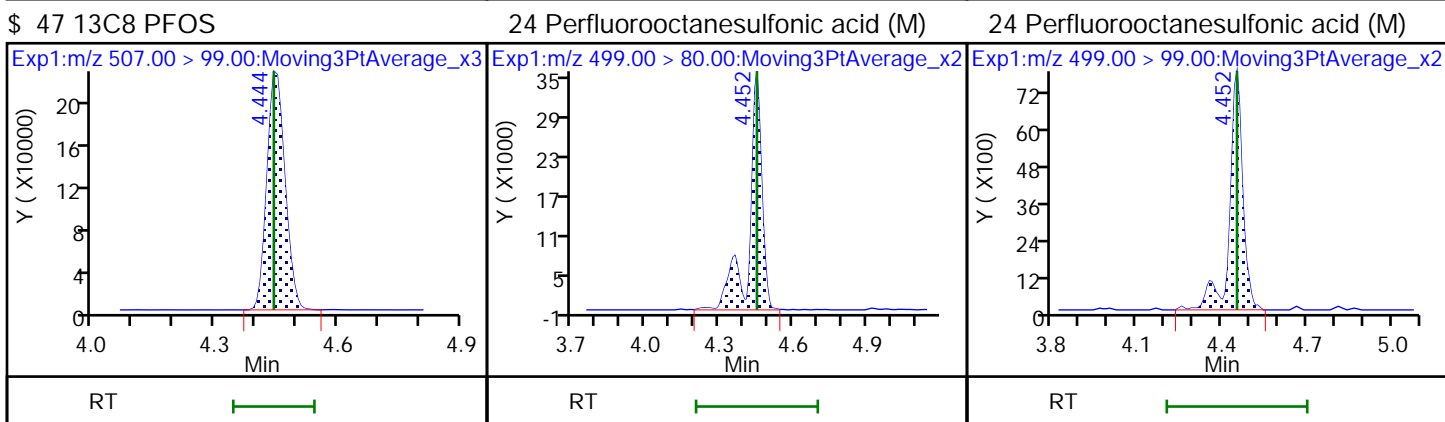
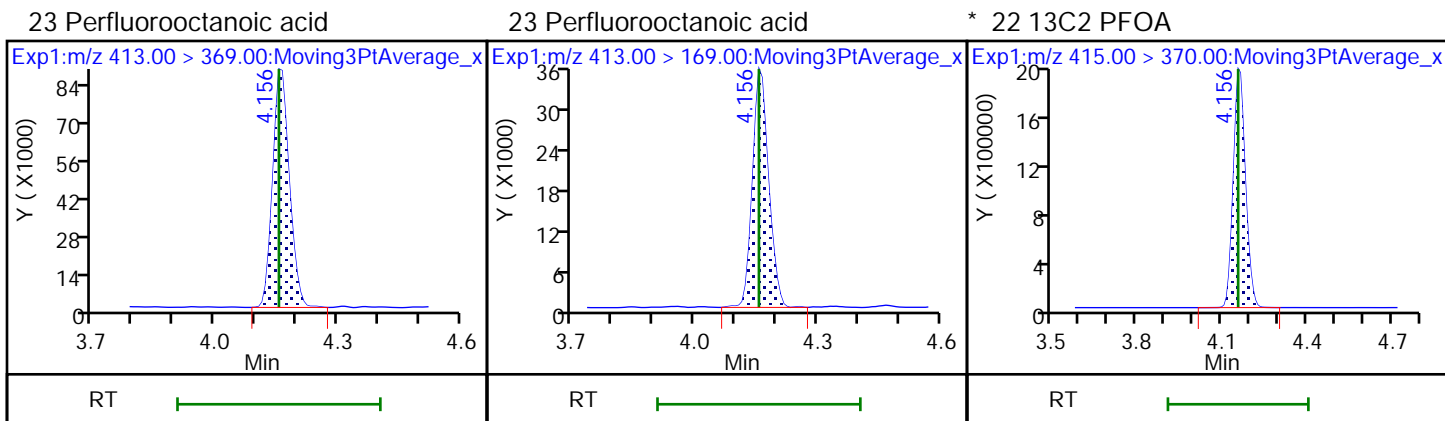
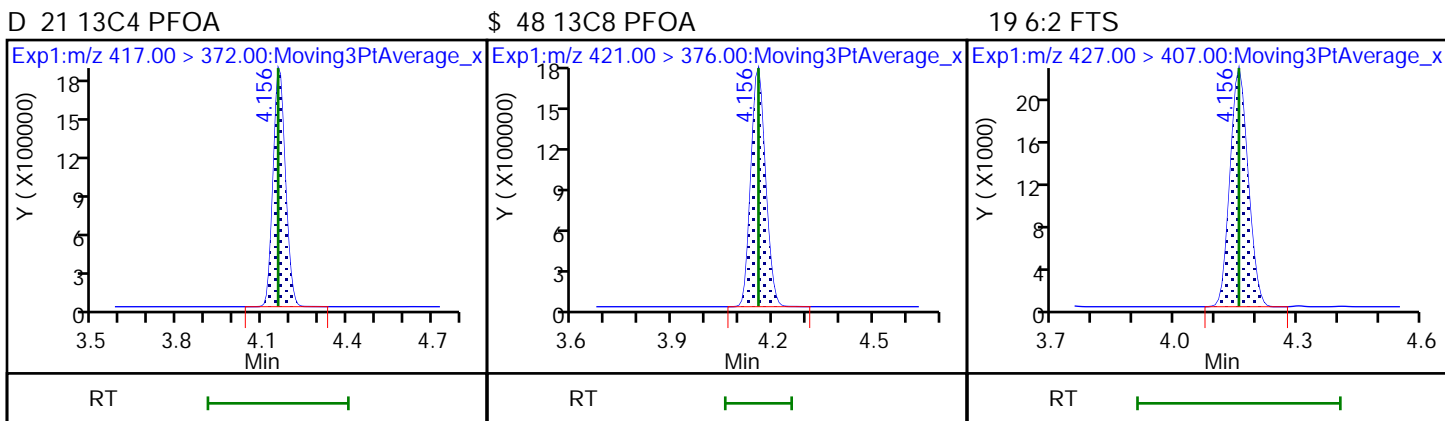
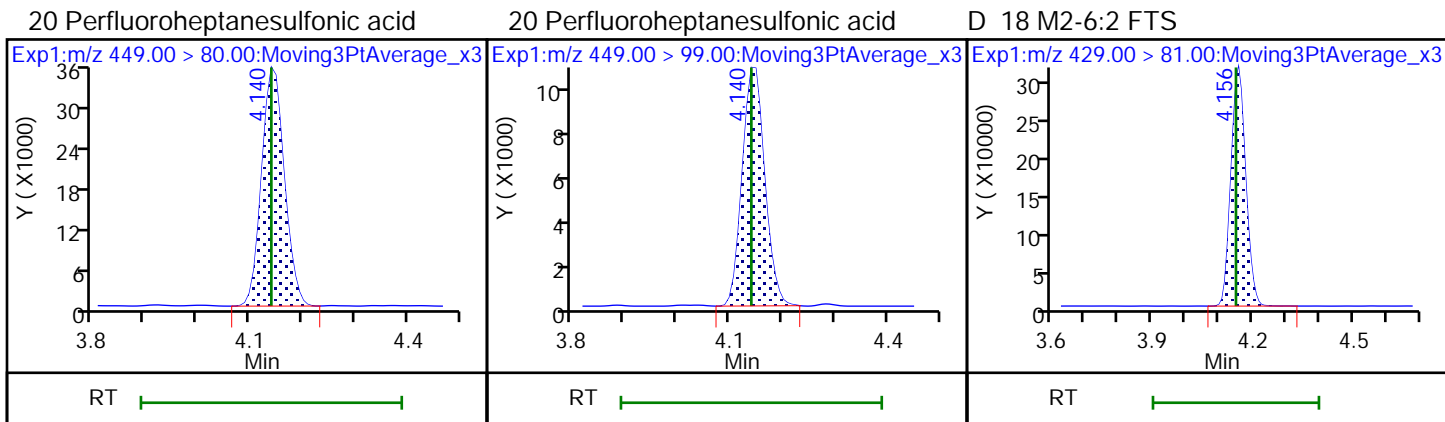
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2 Perfluorobutanoic acid

D 3 13C5 PFPeA



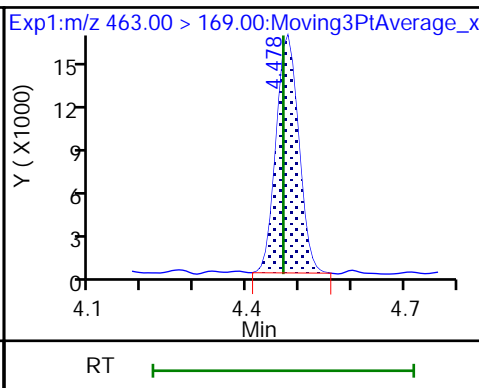
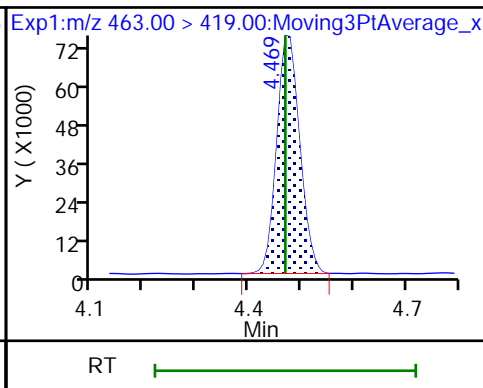
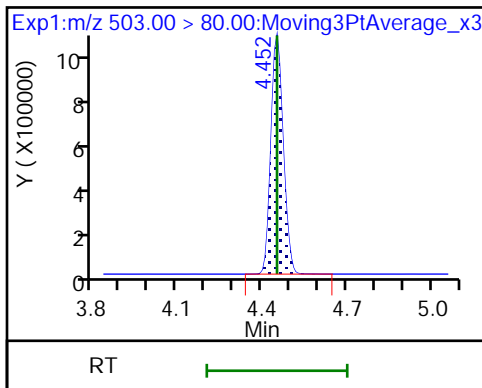




D 25 13C4 PFOS

26 Perfluorononanoic acid

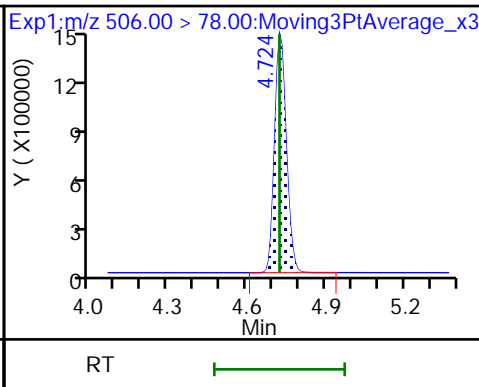
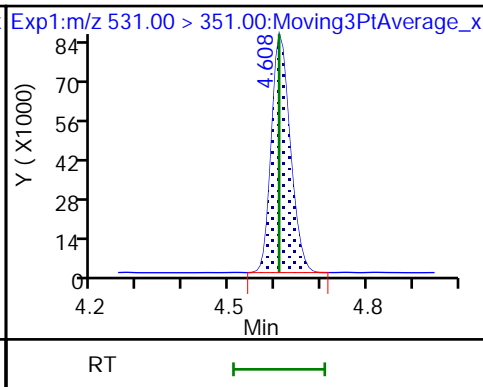
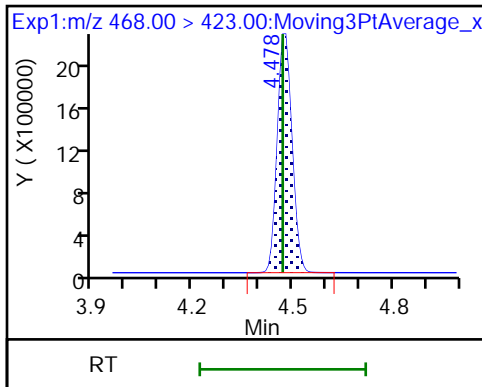
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS

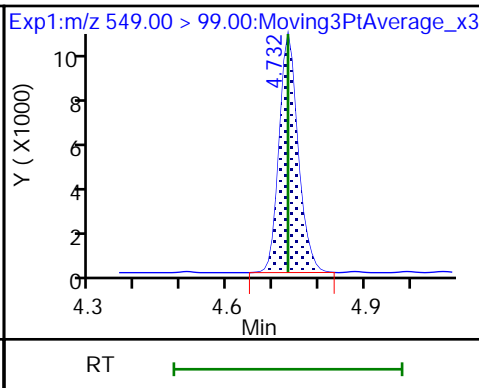
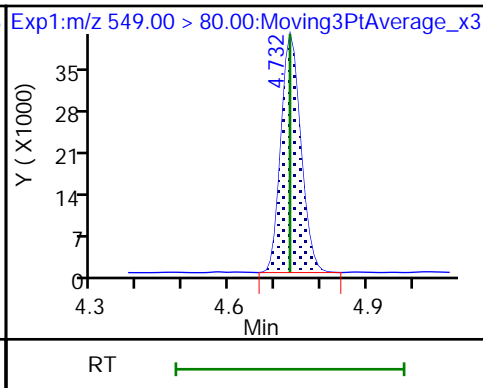
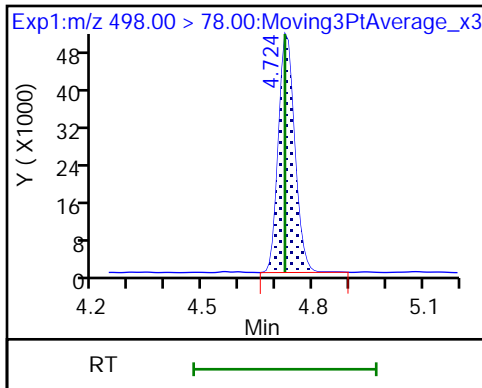
D 34 13C8 FOSA



33 Perfluorooctanesulfonamide

28 Perfluorononanesulfonic acid

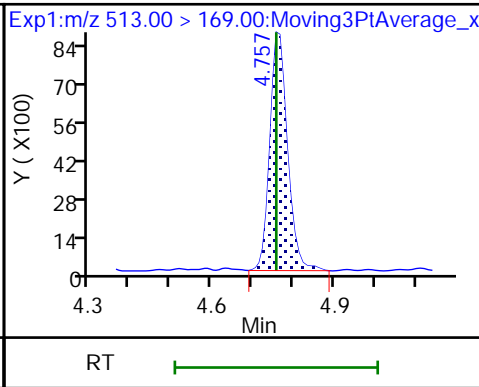
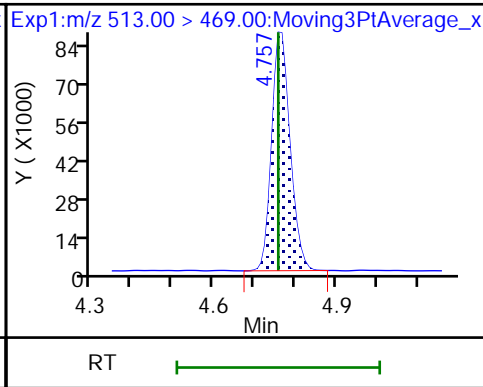
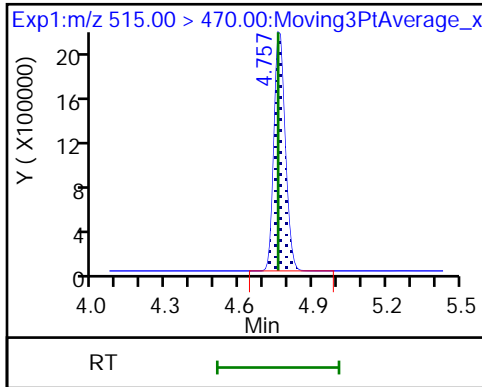
28 Perfluorononanesulfonic acid

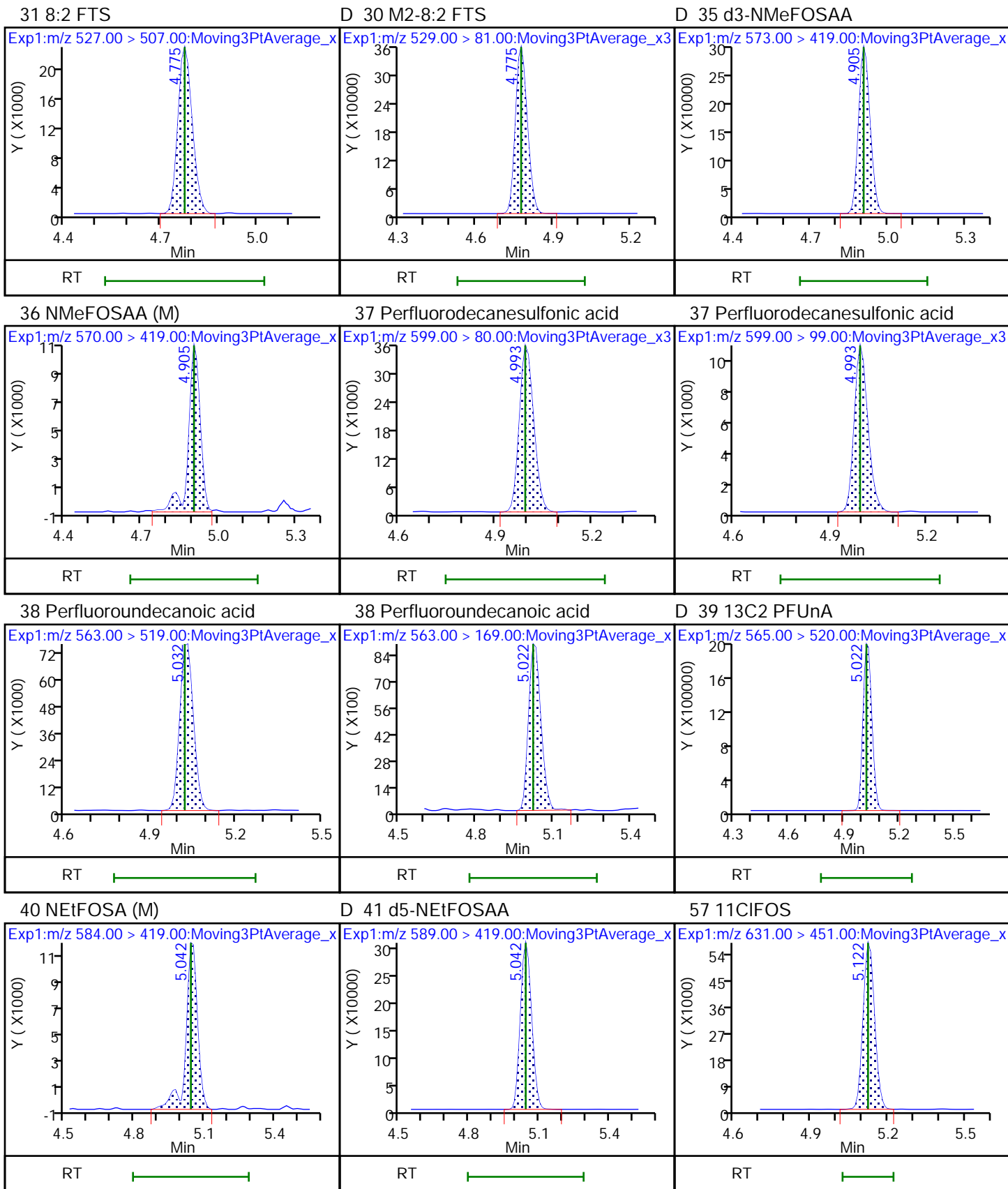


D 32 13C2 PFDA

29 Perfluorodecanoic acid

29 Perfluorodecanoic acid

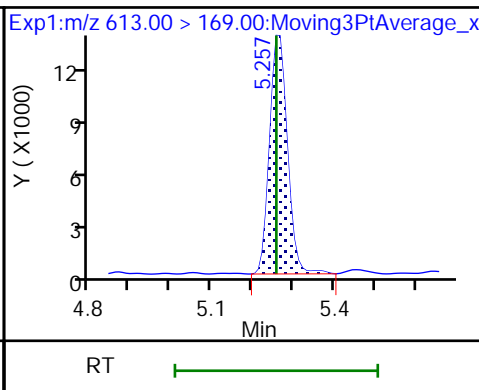
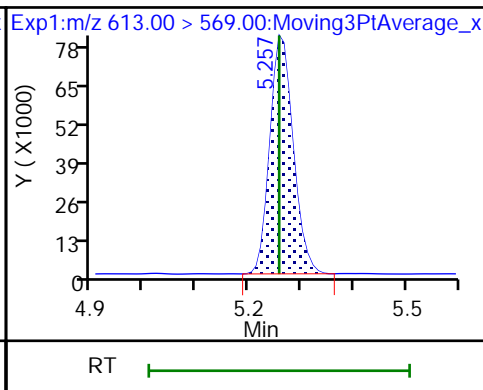
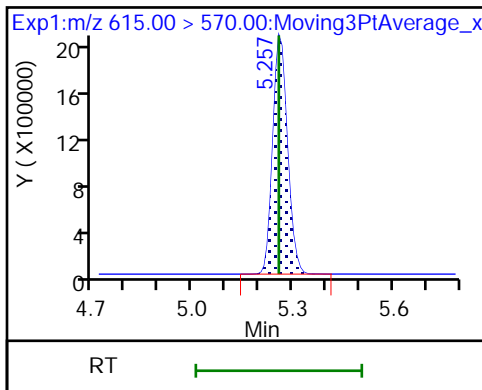




D 43 13C2 PFDaA

42 Perfluorododecanoic acid

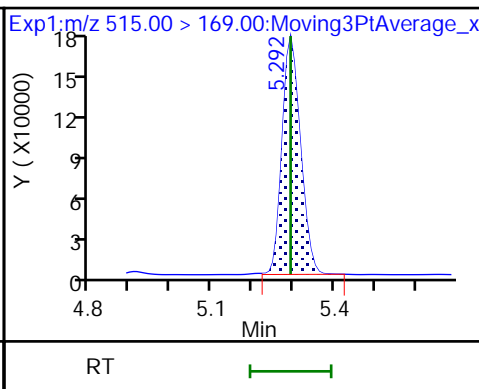
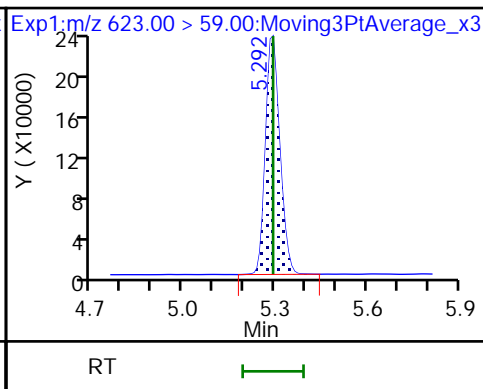
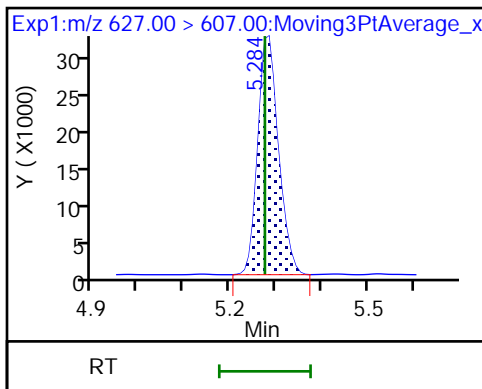
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

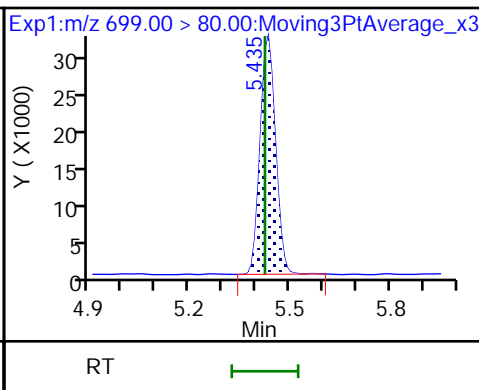
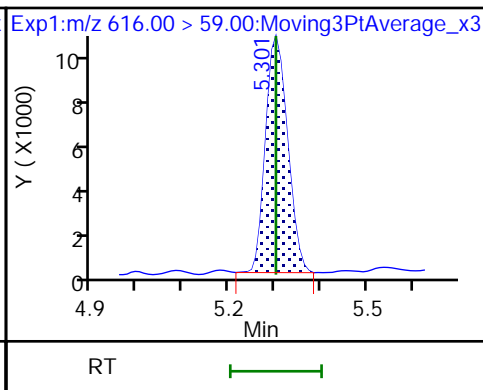
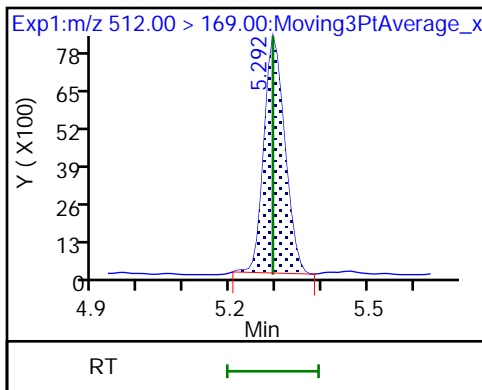
D 58 d-N-MeFOSE-M



61 NMeFOSE

49 N-MeFOSE-M

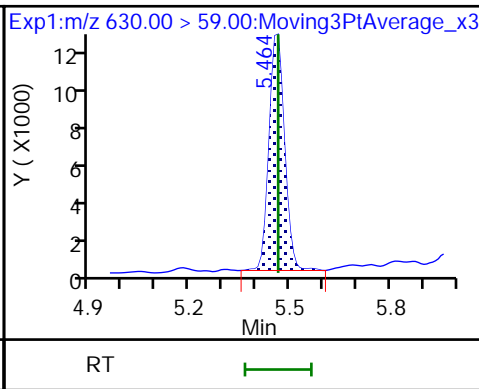
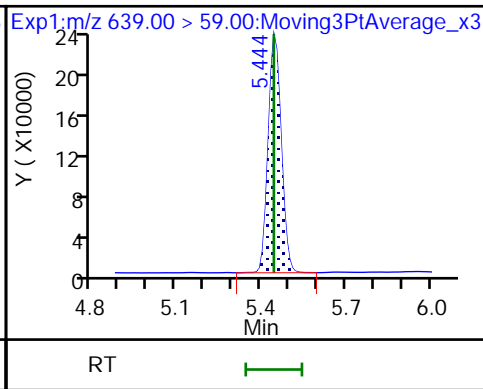
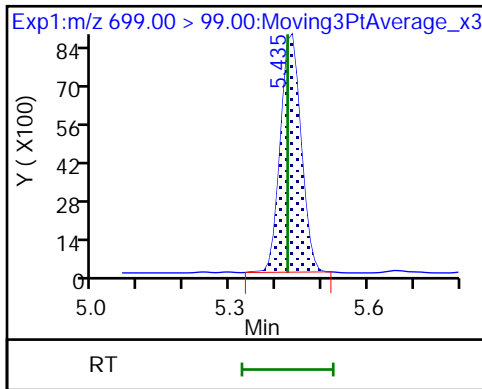
54 PFDoS

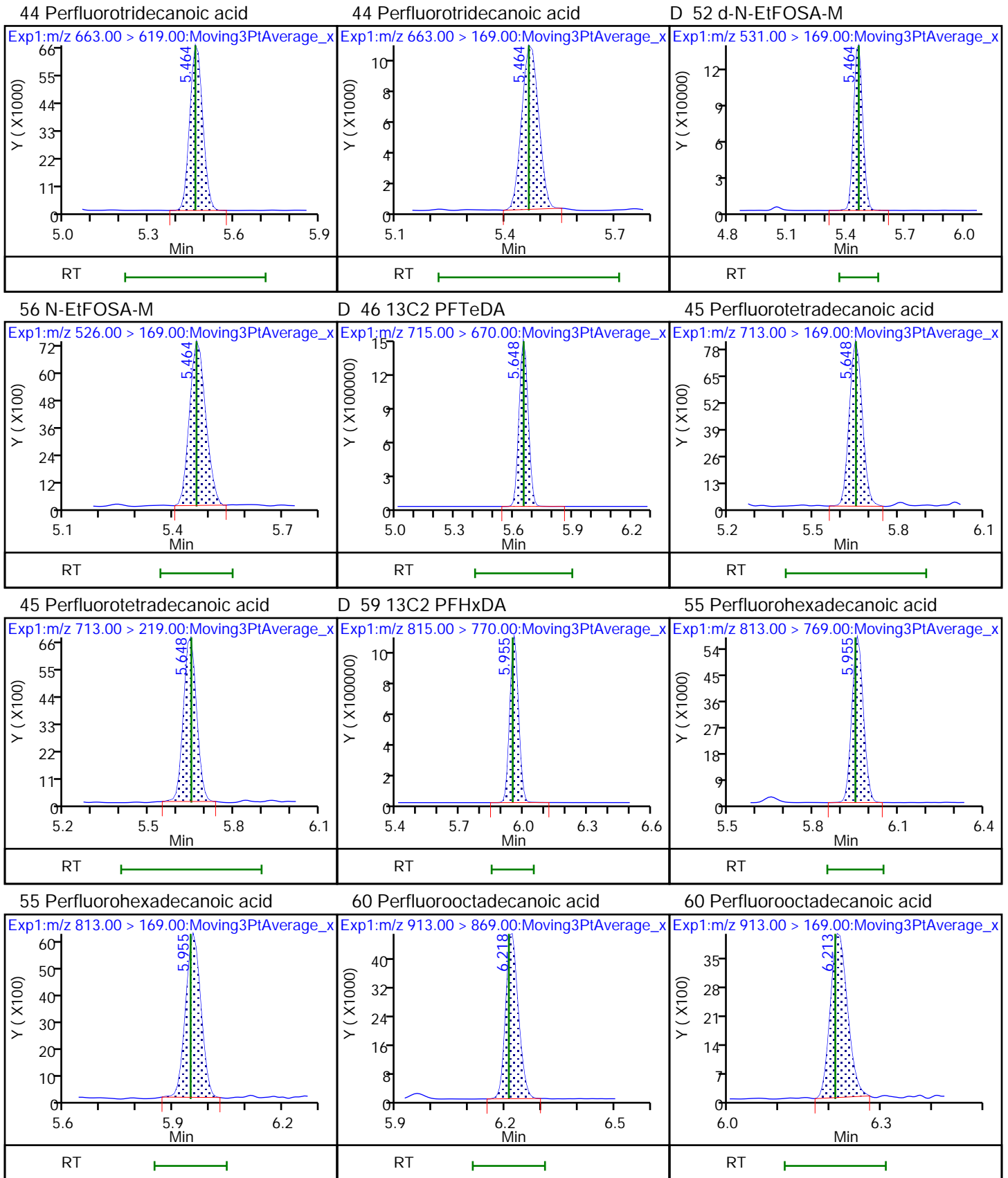


54 PFDoS

D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M









Eurofins TestAmerica, Knoxville

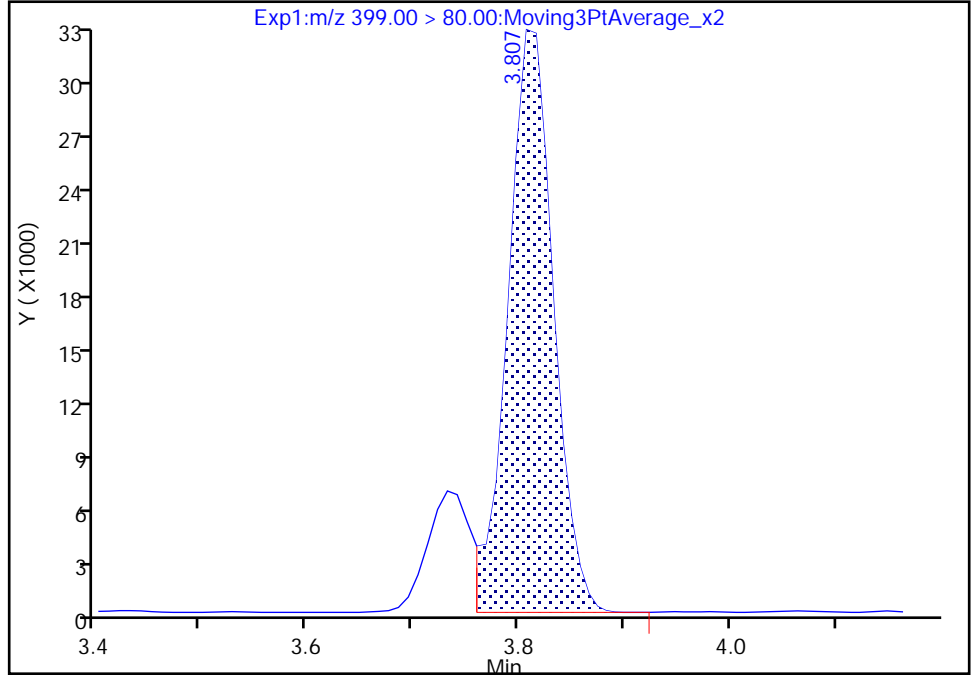
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Injection Date: 11-Jan-2022 17:39:19 Instrument ID: LCA  
Lims ID: CCVL  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

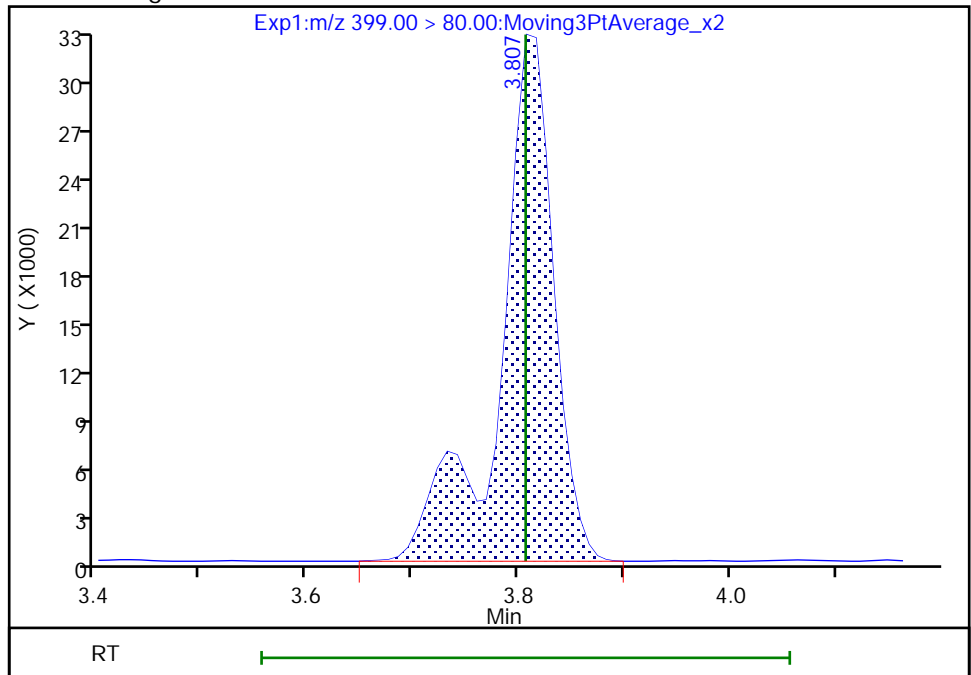
RT: 3.81  
Area: 97844  
Amount: 0.039327  
Amount Units: ng/ml

Processing Integration Results



RT: 3.81  
Area: 116541  
Amount: 0.046842  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 11-Jan-2022 17:59:54  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

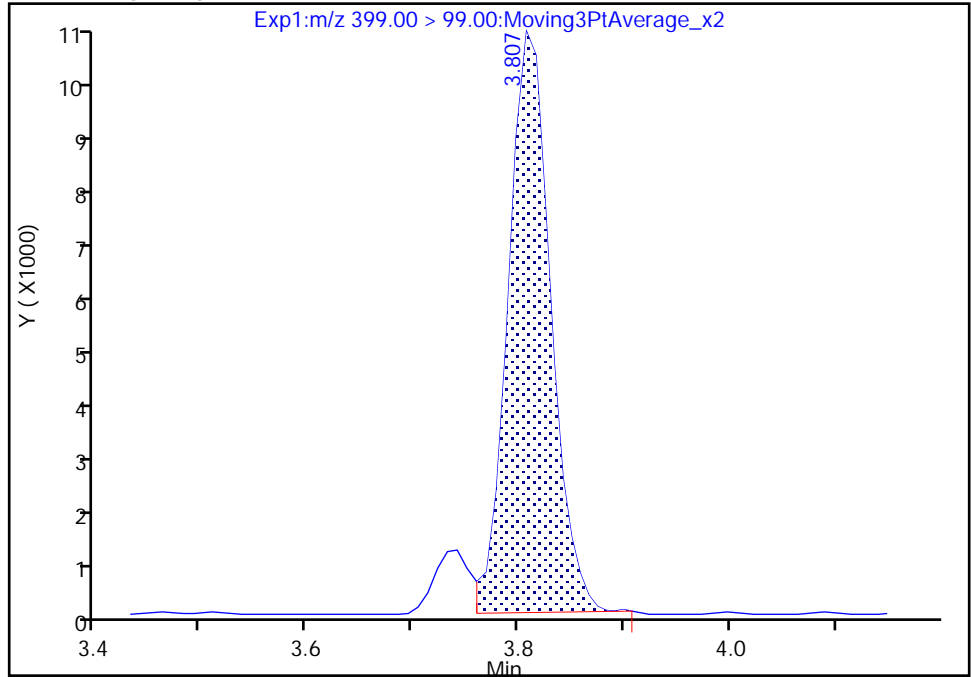
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Injection Date: 11-Jan-2022 17:39:19 Instrument ID: LCA  
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Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

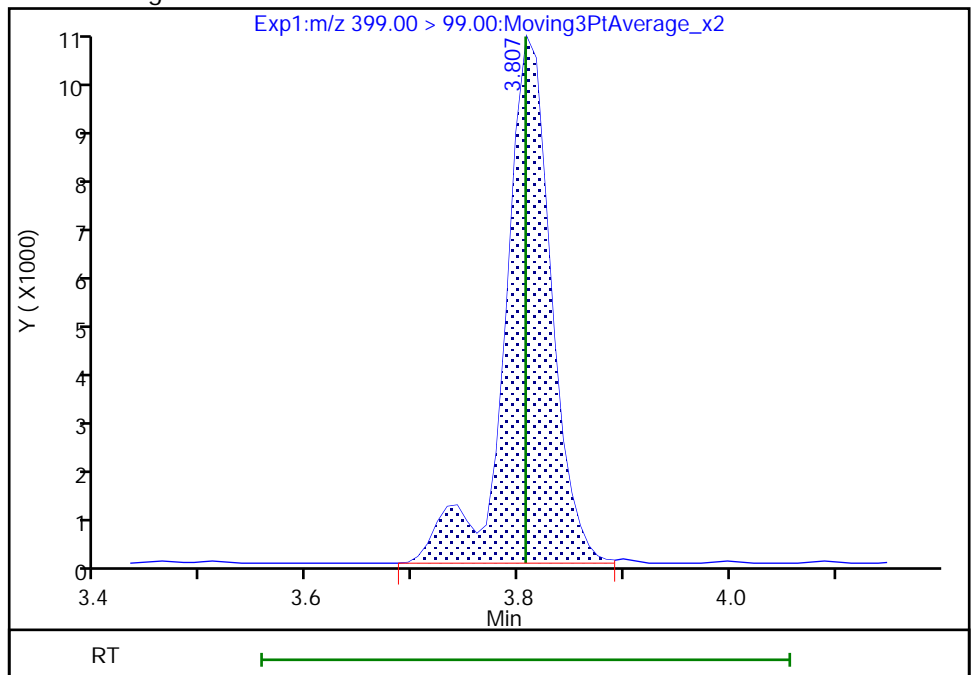
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Amount: 0.039327  
Amount Units: ng/ml

Processing Integration Results



RT: 3.81  
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Amount: 0.046842  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 11-Jan-2022 18:00:00

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

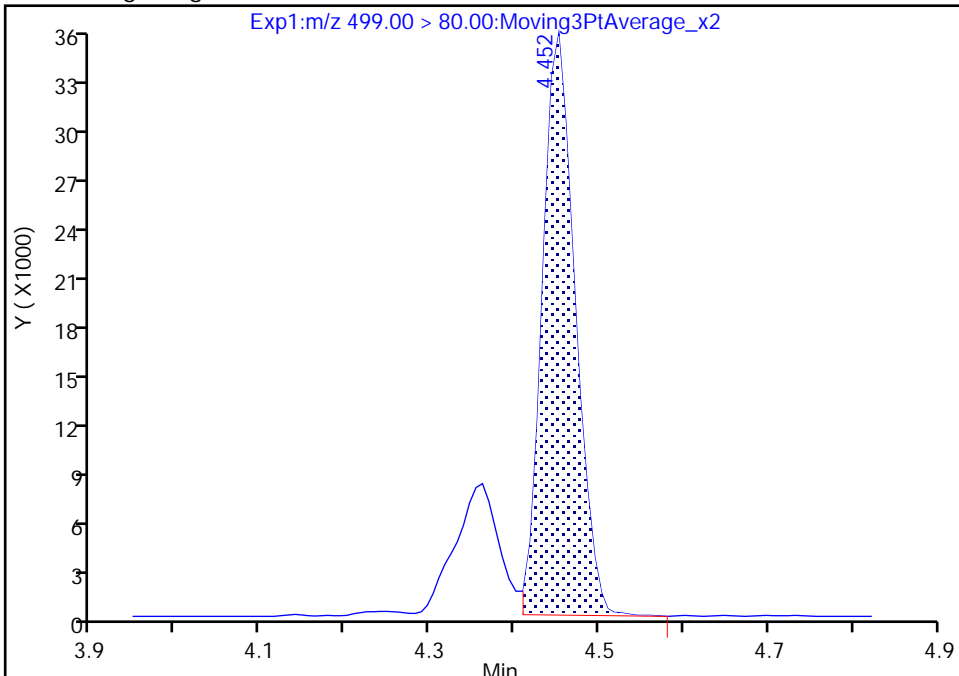
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Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

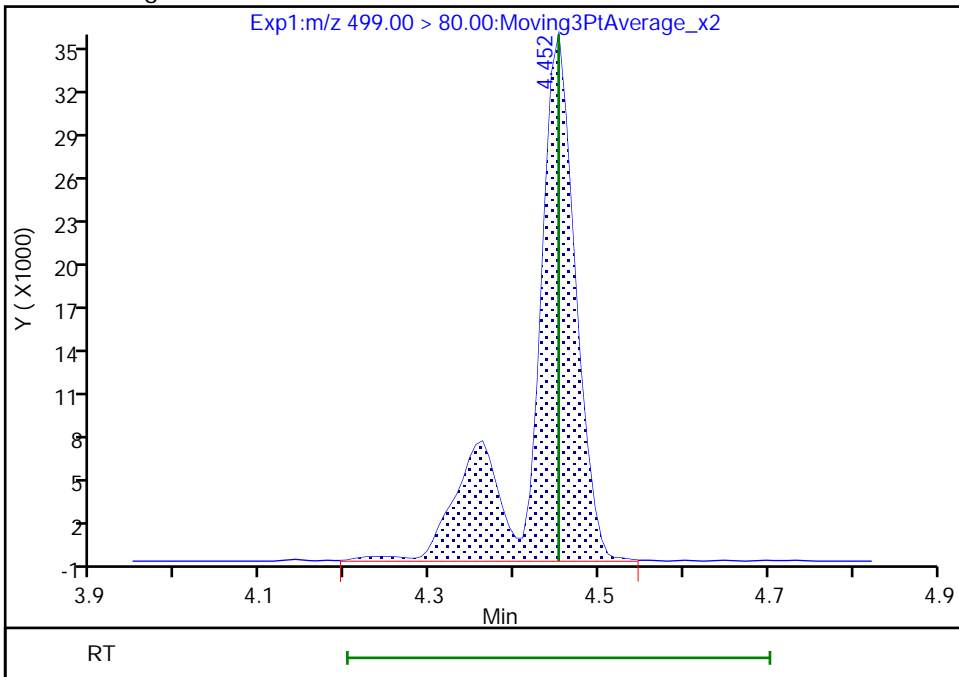
RT: 4.45  
Area: 93997  
Amount: 0.034049  
Amount Units: ng/ml

Processing Integration Results



RT: 4.45  
Area: 124955  
Amount: 0.045263  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 11-Jan-2022 18:00:12  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

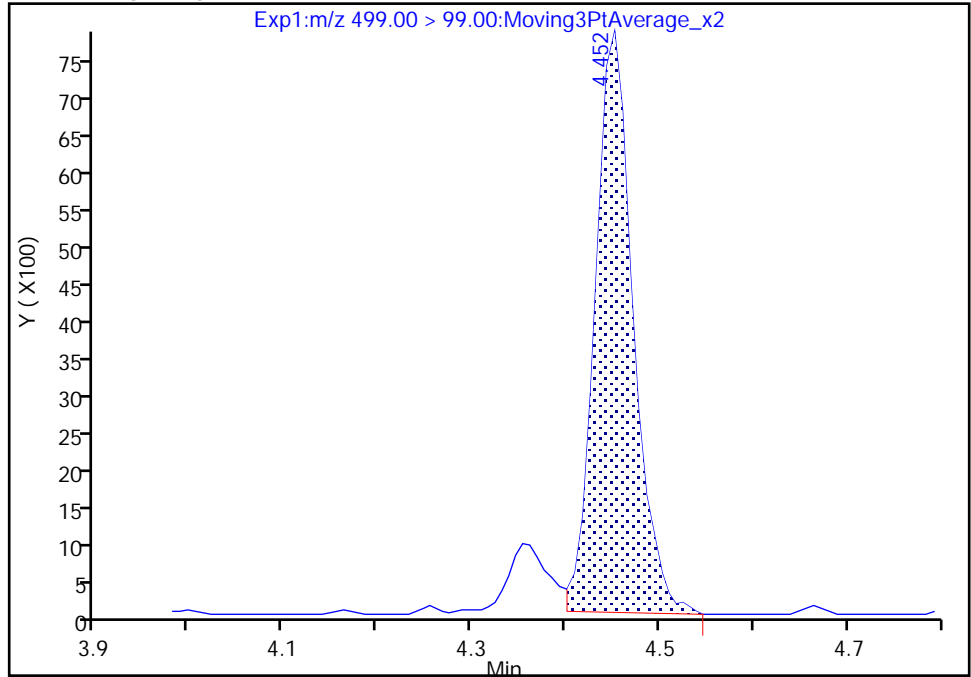
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Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

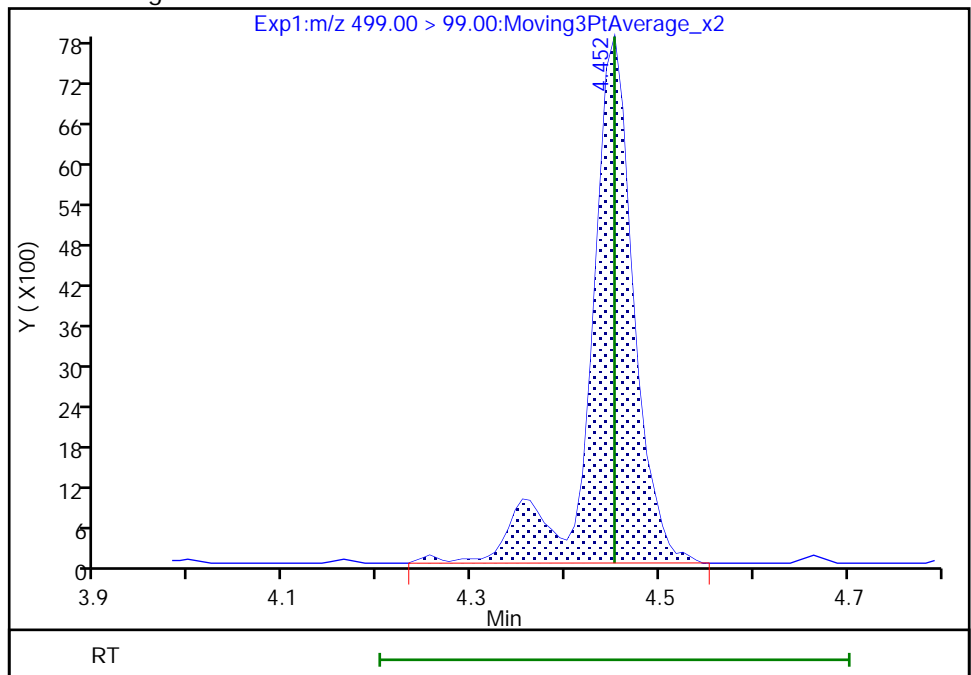
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Area: 22056  
Amount: 0.034049  
Amount Units: ng/ml

Processing Integration Results



RT: 4.45  
Area: 25318  
Amount: 0.045263  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 11-Jan-2022 18:00:19

Audit Action: Manually Integrated

Audit Reason: Baseline  
Page 384 of 764

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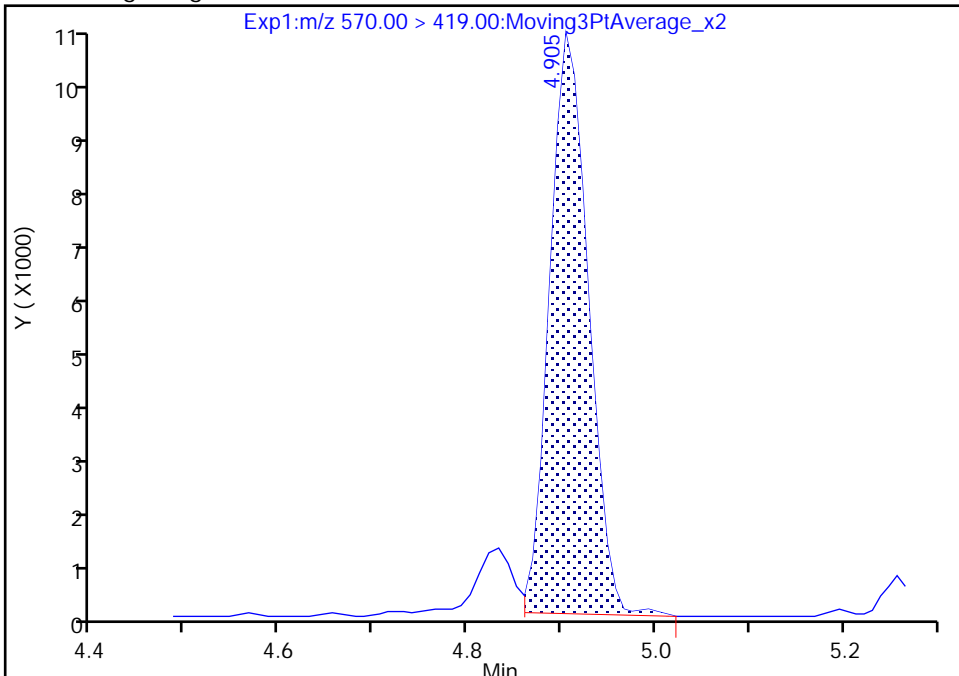
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Lims ID: CCVL  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

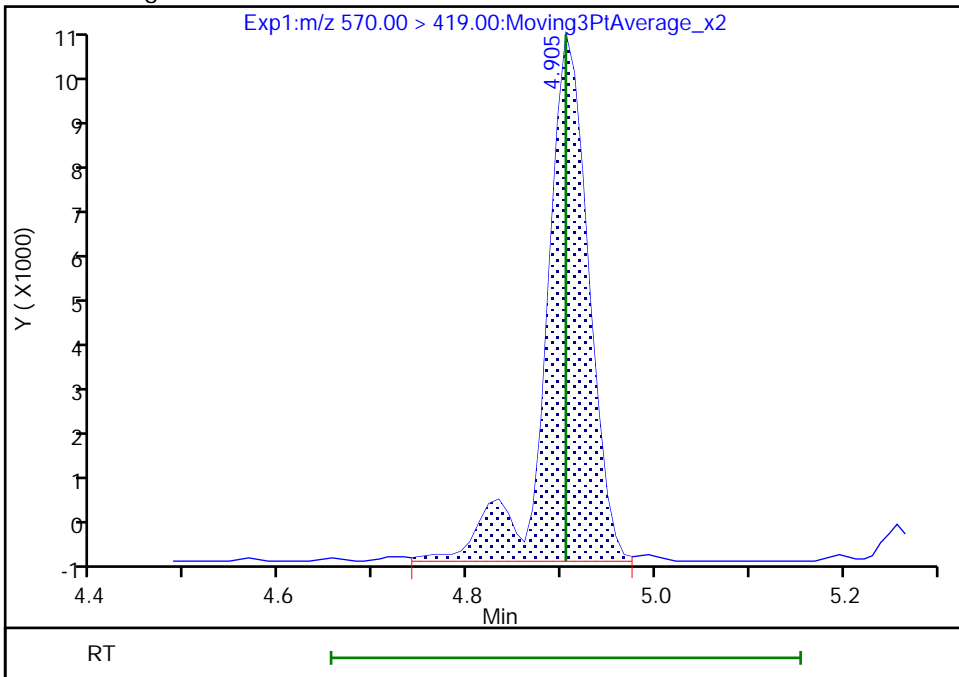
RT: 4.90  
Area: 30264  
Amount: 0.042445  
Amount Units: ng/ml

Processing Integration Results



RT: 4.90  
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Amount: 0.047636  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 11-Jan-2022 18:00:31  
Audit Action: Manually Integrated

Eurofins TestAmerica, Knoxville

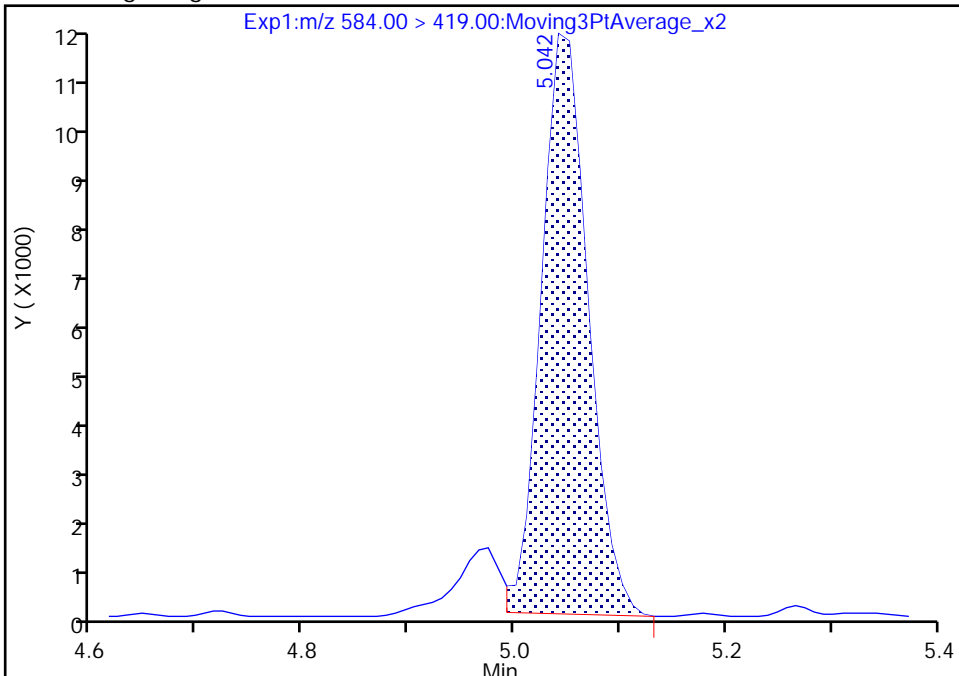
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Injection Date: 11-Jan-2022 17:39:19 Instrument ID: LCA  
Lims ID: CCVL  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NEtFOSA, CAS: 2991-50-6

Signal: 1

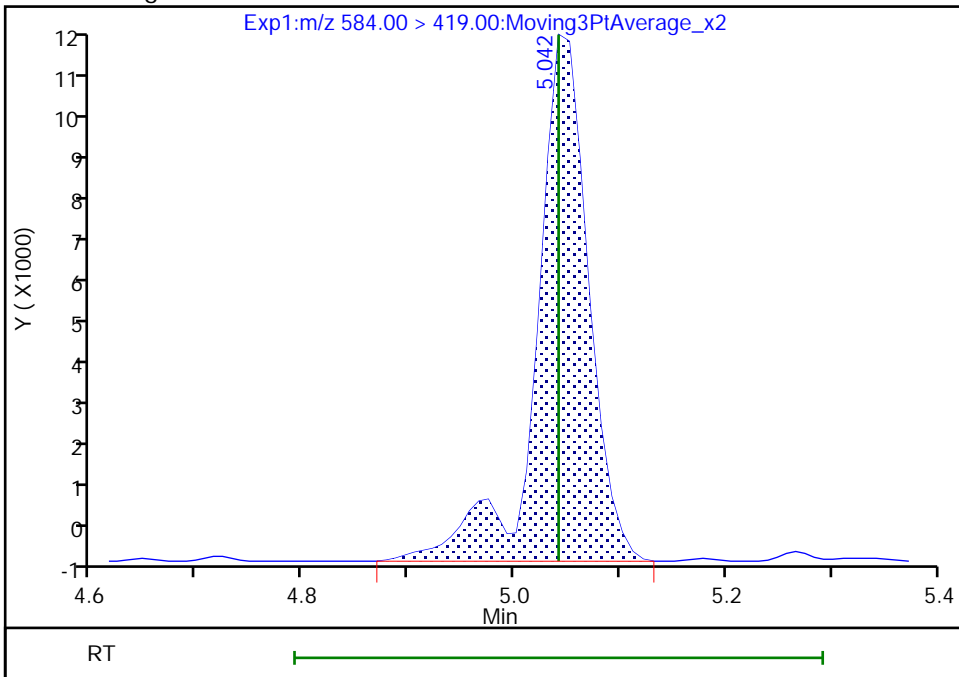
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Amount: 0.045184  
Amount Units: ng/ml

Processing Integration Results



RT: 5.04  
Area: 39966  
Amount: 0.050743  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 11-Jan-2022 18:00:41  
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 140-57822/7 Calibration Date: 01/11/2022 17:48  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 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	0.7844	0.7403		0.944	1.00	-5.6	40.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9519	0.9286		0.976	1.00	-2.4	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.097	1.106		0.891	0.884	0.8	40.0
4:2 FTS	AveID	2.252	2.126		0.882	0.934	-5.6	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8680	0.8054		0.928	1.00	-7.2	40.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	0.9713	0.9943		0.960	0.938	2.4	40.0
HFPO-DA	AveID	1.352	1.337		0.988	1.00	-1.2	40.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.377	1.277		0.844	0.910	-7.3	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.047	1.029		0.983	1.00	-1.7	40.0
DONA	AveID	2.630	2.593		0.929	0.942	-1.4	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9541	0.9436		0.942	0.952	-1.1	40.0
6:2 FTS	L2ID		1.676		0.885	0.948	-6.6	40.0
Perfluorooctanoic acid (PFOA)	AveID	1.147	1.060		0.924	1.00	-7.6	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.099	1.035		0.874	0.928	-5.8	40.0
Perfluorononanoic acid (PFNA)	Q2ID		0.8347		0.981	1.00	-1.9	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	Q2ID		2.080		0.905	0.932	-2.9	50.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9459	0.9263		0.979	1.00	-2.1	40.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9748	0.9096		0.896	0.960	-6.7	40.0
Perfluorodecanoic acid (PFDA)	AveID	0.9645	0.9321		0.967	1.00	-3.4	40.0
8:2 FTS	AveID	1.415	1.441		0.976	0.958	1.8	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	QuaIF		0.9571		0.985	1.00	-1.5	40.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		0.8581		0.891	0.964	-7.5	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9695	0.9655		0.996	1.00	-0.4	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Q2ID		0.9585		0.965	1.00	-3.5	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.672	1.567		0.883	0.942	-6.3	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9856		0.966	1.00	-3.4	40.0
10:2 FTS	AveID	2.276	2.138		0.905	0.964	-6.1	40.0
NMeFOSA	Q2ID		0.9889		0.977	1.00	-2.3	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	Q2ID		1.056		0.903	1.00	-9.7	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9166	0.8895		0.939	0.968	-3.0	40.0



FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 140-57822/7 Calibration Date: 01/11/2022 17:48  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 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	AveID	1.328	1.215		0.915	1.00	-8.5	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.195	1.239		1.04	1.00	3.7	40.0
Perfluorotridecanoic acid (PFTriA)	AveID	0.8292	0.7746		0.934	1.00	-6.6	40.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1344	0.1297		0.966	1.00	-3.5	40.0
Perfluorohexadecanoic acid	Q2ID		1.075		1.00	1.00	0.2	40.0
Perfluorooctadecanoic acid	AveID	0.9844	0.9008		0.915	1.00	-8.5	40.0
13C4 PFBA	Ave	1.142	1.056		1.16	1.25	-7.5	50.0
13C5 PFPeA	Ave	0.8865	0.8479		1.20	1.25	-4.4	50.0
13C3 PFBS	Ave	0.5913	0.5722		1.13	1.16	-3.2	50.0
M2-4:2 FTS	Ave	0.1820	0.2070		1.33	1.17	13.7	50.0
13C2 PFHxA	Ave	0.9479	0.8789		1.16	1.25	-7.3	50.0
13C3 HFPO-DA	Ave	0.4556	0.4263		1.17	1.25	-6.4	50.0
18O2 PFHxS	Ave	0.3946	0.4144		1.24	1.18	5.0	50.0
13C4 PFHpA	Ave	0.9067	0.9018		1.24	1.25	-0.5	50.0
M2-6:2 FTS	Ave	0.1835	0.1876		1.21	1.19	2.2	50.0
13C4 PFOA	Ave	0.9376	0.9577		1.28	1.25	2.1	50.0
13C4 PFOS	Ave	0.5681	0.5709		1.20	1.20	0.5	50.0
13C5 PFNA	Ave	1.234	1.191		1.21	1.25	-3.4	50.0
13C8 FOSA	Ave	0.7682	0.7794		1.27	1.25	1.5	50.0
13C2 PFDA	Ave	1.191	1.200		1.26	1.25	0.8	50.0
M2-8:2 FTS	Ave	0.2070	0.2075		1.20	1.20	0.3	50.0
d3-NMeFOSAA	Ave	0.1401	0.1598		1.43	1.25	14.0	50.0
13C2 PFUnA	Ave	1.189	1.195		1.26	1.25	0.6	50.0
d5-NEtFOSAA	Ave	0.1537	0.1779		1.45	1.25	15.7	50.0
13C2 PFDoA	Ave	1.247	1.190		1.19	1.25	-4.6	50.0
d7-N-MeFOSE-M	Ave	0.1499	0.1390		1.16	1.25	-7.3	50.0
d-N-MeFOSA-M	Ave	0.1069	0.1034		1.21	1.25	-3.3	50.0
d9-N-EtFOSE-M	Ave	0.1504	0.1464		1.22	1.25	-2.7	50.0
d-N-EtFOSA-M	Ave	0.0883	0.0812		1.15	1.25	-8.0	50.0
13C2 PFTeDA	Ave	0.9508	0.8326		1.10	1.25	-12.4	50.0
13C2 PFHxDA	Ave	0.6444	0.5645		1.10	1.25	-12.4	50.0
13C8 PFOA	AveID	0.999	1.023		1.28	1.25	2.4	50.0
13C8 PFOS	AveID	0.2220	0.2198		1.18	1.20	-1.0	50.0

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_007.d  
 Lims ID: CCVIS  
 Client ID:  
 Sample Type: CCVIS  
 Inject. Date: 11-Jan-2022 17:48:06 ALS Bottle#: 7 Worklist Smp#: 7  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022220-007 ccvis  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 12-Jan-2022 18:43:11 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1648

First Level Reviewer: cochranj Date: 11-Jan-2022 17:58:36

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	2.814	2.814	0.0	0.677	5810475	1.16	92.5	13771	
2 Perfluorobutanoic acid	212.90 > 169.00	2.814	2.814	0.0	1.000	3441163	0.9437	94.4	1162	
D 3 13C5 PFPeA	267.90 > 223.00	3.131	3.131	0.0	0.753	4665144	1.20	95.6	9915	
4 Perfluoropentanoic acid	262.90 > 219.00	3.131	3.131	0.0	1.000	3465722	0.9755	97.6	1533	
D 6 13C3 PFBS	301.90 > 80.00	3.147	3.147	0.0	0.757	2927798	1.13	96.8	13179	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.147	3.147	0.0	1.000	2461717	0.8910	Target=2.65	101	4659
	298.90 > 99.00	3.147	3.147	0.0	1.000	898739		2.74(1.32-3.97)		3763
D 8 M2-4:2 FTS	329.00 > 81.00	3.442	3.442	0.0	0.828	1063756	1.33	114	2130	
7 4:2 FTS	327.00 > 307.00	3.442	3.442	0.0	1.000	1809128	0.8816	94.4	8643	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.472	3.472	0.0	1.103	2348908	0.9602	Target=3.44	102	6438
	349.00 > 99.00	3.472	3.472	0.0	1.103	680410		3.45(1.72-5.16)		6223
D 9 13C2 PFHxA	315.00 > 270.00	3.472	3.472	0.0	0.835	4835408	1.16	92.7	9700	
10 Perfluorohexanoic acid	313.00 > 269.00	3.472	3.472	0.0	1.000	3115452	0.9278	Target=11.80	92.8	1887
	313.00 > 119.00	3.472	3.472	0.0	1.000	247313		12.60(5.90-17.70)		385
D 12 13C3 HFPO-DA	287.00 > 169.00	3.574	3.574	0.0	0.860	2345371	1.17	93.6	5746	

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	3.574	3.574	0.0	1.000	2507862	0.9883		98.8	2113	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.807	3.807	0.0	1.000	2119859	0.8439	Target=3.40	92.7	7163	M
399.00 > 99.00	3.807	3.807	0.0	1.000	612888		3.46(1.70-5.10)		4203	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.807	3.807	0.0	0.916	2156829	1.24		105	9552	
D 14 13C4 PFHpA										
367.00 > 322.00	3.825	3.825	0.0	0.920	4961431	1.24		99.5	10131	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.825	3.825	0.0	1.000	4085486	0.9834	Target=3.29	98.3	3244	
363.00 > 169.00	3.825	3.825	0.0	1.000	1270946		3.21(1.65-4.94)		2009	
68 DONA										
377.00 > 251.00	3.858	3.858	0.0	0.866	6137183	0.9286	Target=1.82	98.6	8262	
377.00 > 85.00	3.858	3.858	0.0	0.866	3566089		1.72(0.91-2.74)		162	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.140	4.140	0.0	0.930	2257399	0.9416	Target=3.92	98.9	7392	
449.00 > 99.00	4.140	4.140	0.0	0.930	573558		3.94(1.96-5.87)		4679	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.149	4.149	0.0	0.998	980579	1.21		102	3433	
D 21 13C4 PFOA										
417.00 > 372.00	4.156	4.156	0.0	1.000	5269434	1.28		102	9871	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.156	4.156	0.0	1.000	5390935	1.28		102	10046	
19 6:2 FTS										
427.00 > 407.00	4.156	4.156	0.0	1.002	1312158	0.8852		93.4	5624	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.156	4.156	0.0	1.000	4469105	0.9239	Target=2.59	92.4	2800	
413.00 > 169.00	4.156	4.156	0.0	1.000	1765772		2.53(1.30-3.89)		2988	
* 22 13C2 PFOA										
415.00 > 370.00	4.156	4.156	0.0		5501943	1.25			14385	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.444	4.444	0.0	0.998	659987	1.18		99.0	5036	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.452	4.452	0.0	1.000	2414182	0.8743	Target=4.65	94.2	4568	M
499.00 > 99.00	4.452	4.452	0.0	1.000	565909		4.27(2.32-6.97)		2767	M
D 25 13C4 PFOS										
503.00 > 80.00	4.452	4.452	0.0	1.071	3002898	1.20		100	5948	
26 Perfluorononanoic acid										
463.00 > 419.00	4.469	4.469	0.0	1.000	4377001	0.9811	Target=4.65	98.1	4591	
463.00 > 169.00	4.469	4.469	0.0	1.000	968115		4.52(2.32-6.97)		2020	
D 27 13C5 PFNA										
468.00 > 423.00	4.469	4.469	0.0	1.075	6554947	1.21		96.6	15598	
63 9CIFOS										
531.00 > 351.00	4.608	4.608	0.0	1.035	4871647	0.9054		97.1	10224	
D 34 13C8 FOSA										
506.00 > 78.00	4.723	4.723	0.0	1.136	4288445	1.27		101	3542	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
33 Perfluorooctanesulfonamide	498.00 > 78.00	4.723	4.723	0.0	1.000	3178024	0.9793	97.9	5326	
28 Perfluorononanesulfonic acid	549.00 > 80.00	4.732	4.732	0.0	1.063	2194322	0.8958	Target=4.06	93.3	7154
	549.00 > 99.00	4.732	4.732	0.0	1.063	574240		3.82(2.03-6.09)		3782
D 32 13C2 PFDA	515.00 > 470.00	4.757	4.757	0.0	1.145	6603985	1.26		101	8672
29 Perfluorodecanoic acid	513.00 > 469.00	4.757	4.757	0.0	1.000	4924632	0.9665	Target=11.30	96.6	3902
	513.00 > 169.00	4.757	4.757	0.0	1.000	424791		11.59(5.65-16.95)		619
31 8:2 FTS	527.00 > 507.00	4.774	4.774	0.0	1.000	1261249	0.9757		102	4877
D 30 M2-8:2 FTS	529.00 > 81.00	4.774	4.774	0.0	1.149	1093897	1.20		100	1909
D 35 d3-NMeFOSAA	573.00 > 419.00	4.905	4.905	0.0	1.180	879181	1.43		114	709
36 NMeFOSAA	570.00 > 419.00	4.905	4.905	0.0	1.000	673153	0.9848		98.5	1409
										M
37 Perfluorodecanesulfonic acid	599.00 > 80.00	4.992	4.992	0.0	1.121	2078641	0.8913	Target=3.79	92.5	7055
	599.00 > 99.00	4.992	4.992	0.0	1.121	577536		3.60(1.90-5.69)		4154
38 Perfluoroundecanoic acid	563.00 > 519.00	5.022	5.022	0.0	1.000	5079870	1.00	Target=8.45	99.6	6073
	563.00 > 169.00	5.022	5.022	0.0	1.000	583473		8.71(4.22-12.67)		2594
D 39 13C2 PFUnA	565.00 > 520.00	5.022	5.022	0.0	1.208	6576480	1.26		101	13040
40 NEtFOSA	584.00 > 419.00	5.042	5.042	0.0	1.000	750429	0.9647		96.5	1535
										M
D 41 d5-NEtFOSAA	589.00 > 419.00	5.042	5.042	0.0	1.213	978682	1.45		116	3832
57 11CIFOS	631.00 > 451.00	5.122	5.122	0.0	1.150	3709585	0.8827		93.7	10041
D 43 13C2 PFDoA	615.00 > 570.00	5.257	5.257	0.0	1.265	6547698	1.19		95.4	12963
42 Perfluorododecanoic acid	613.00 > 569.00	5.257	5.257	0.0	1.000	5162987	0.9656	Target=6.99	96.6	4552
	613.00 > 169.00	5.257	5.257	0.0	1.000	736031		7.01(3.50-10.49)		1593
50 10:2 FTS	627.00 > 607.00	5.275	5.275	0.0	1.105	1882500	0.9053		93.9	6963
D 51 d7-N-MeFOSE-M	623.00 > 59.00	5.292	5.292	0.0	1.273	764651	1.16		92.7	638
D 58 d-N-MeFOSA-M	515.00 > 169.00	5.292	5.292	0.0	1.273	568715	1.21		96.7	54.3
61 NMeFOSA	512.00 > 169.00	5.292	5.292	0.0	1.000	449933	0.9771		97.7	636
49 N-MeFOSE-M	616.00 > 59.00	5.301	5.301	0.0	1.002	646255	0.9032		90.3	785

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
54 PFDoS										
699.00 > 80.00	5.425	5.425	0.0	1.218	2163664	0.9394	Target=4.24	97.0	4710	
699.00 > 99.00	5.425	5.425	0.0	1.218	507944		4.26(2.12-6.35)		2526	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.444	5.444	0.0	1.310	805442	1.22		97.3	400	
62 N-EtFOSE-M										
630.00 > 59.00	5.464	5.464	0.0	1.004	782837	0.9148		91.5	709	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.464	5.464	0.0	1.039	4057386	0.9342	Target=6.20	93.4	5336	
663.00 > 169.00	5.464	5.464	0.0	1.039	691531		5.87(3.10-9.30)		3748	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.464	5.464	0.0	1.315	447017	1.15		92.0	666	
56 N-EtFOSA-M										
526.00 > 169.00	5.464	5.464	0.0	1.000	443037	1.04		104	525	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.650	5.650	0.0	1.359	4580954	1.09		87.6	9171	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.650	5.650	0.0	1.000	475461	0.9655	Target=1.05	96.5	1732	
713.00 > 219.00	5.640	5.650	-0.010	0.998	465483		1.02(0.53-1.58)		2104	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.948	5.948	0.0	1.431	3105756	1.09		87.6	6281	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.948	5.948	0.0	1.000	2670009	1.00	Target=8.09	100	3673	
813.00 > 169.00	5.948	5.948	0.0	1.000	316541		8.43(4.05-12.14)		599	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.209	6.209	0.0	1.044	2238084	0.9151	Target=11.53	91.5	3222	
913.00 > 169.00	6.209	6.209	0.0	1.044	194073		11.53(5.77-17.30)		703	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

63L4PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfins\Knoxville\ChromData\LCA\20220111-22220.b\\_007.d

Injection Date: 11-Jan-2022 17:48:06

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

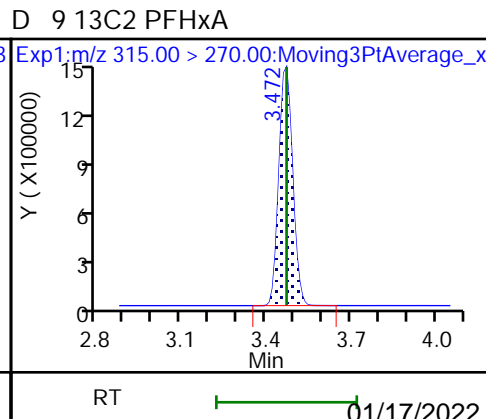
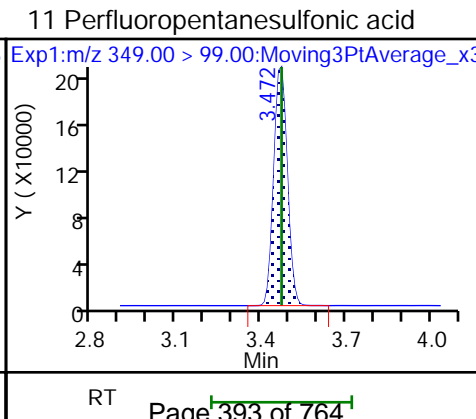
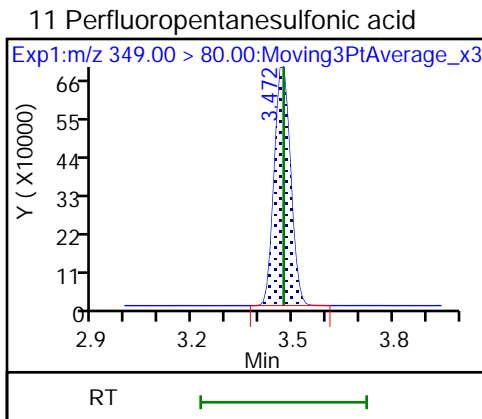
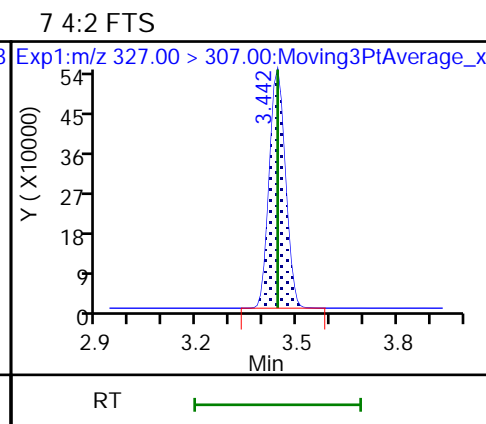
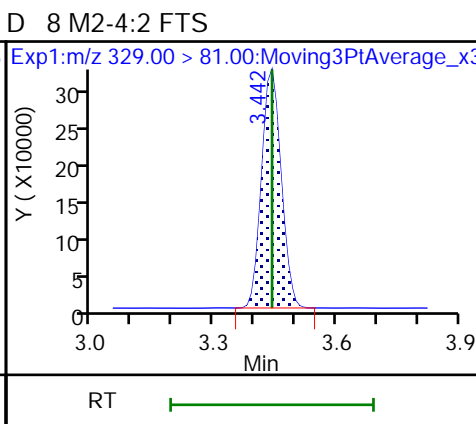
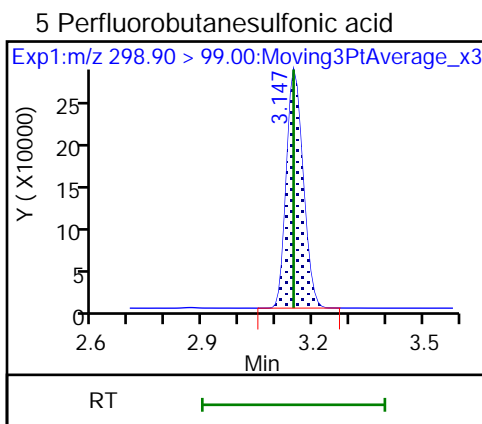
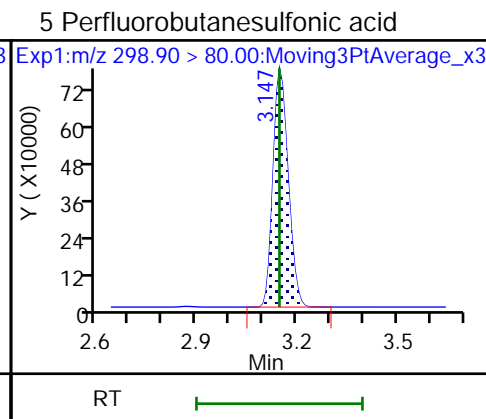
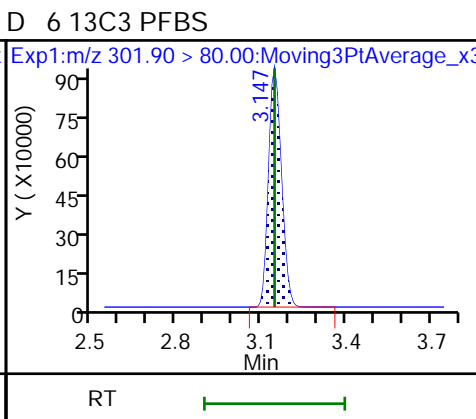
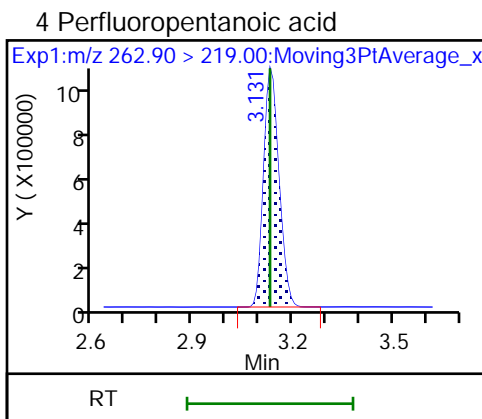
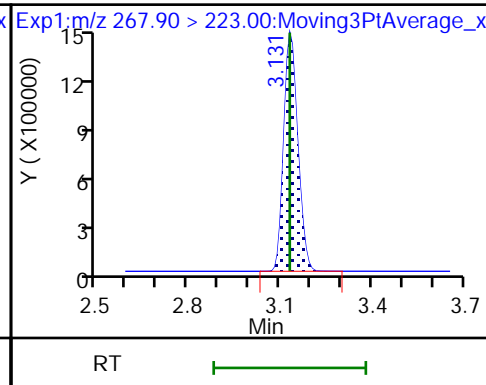
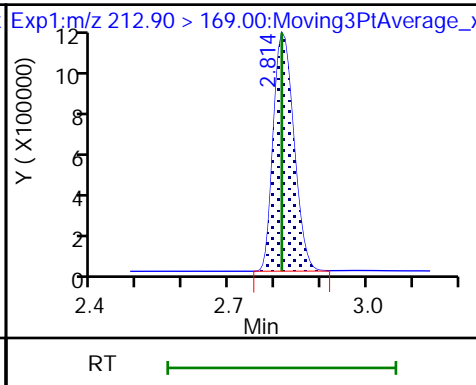
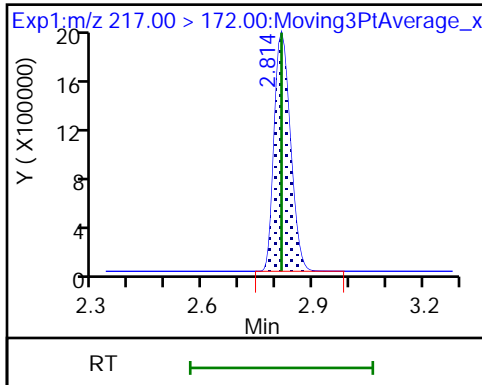
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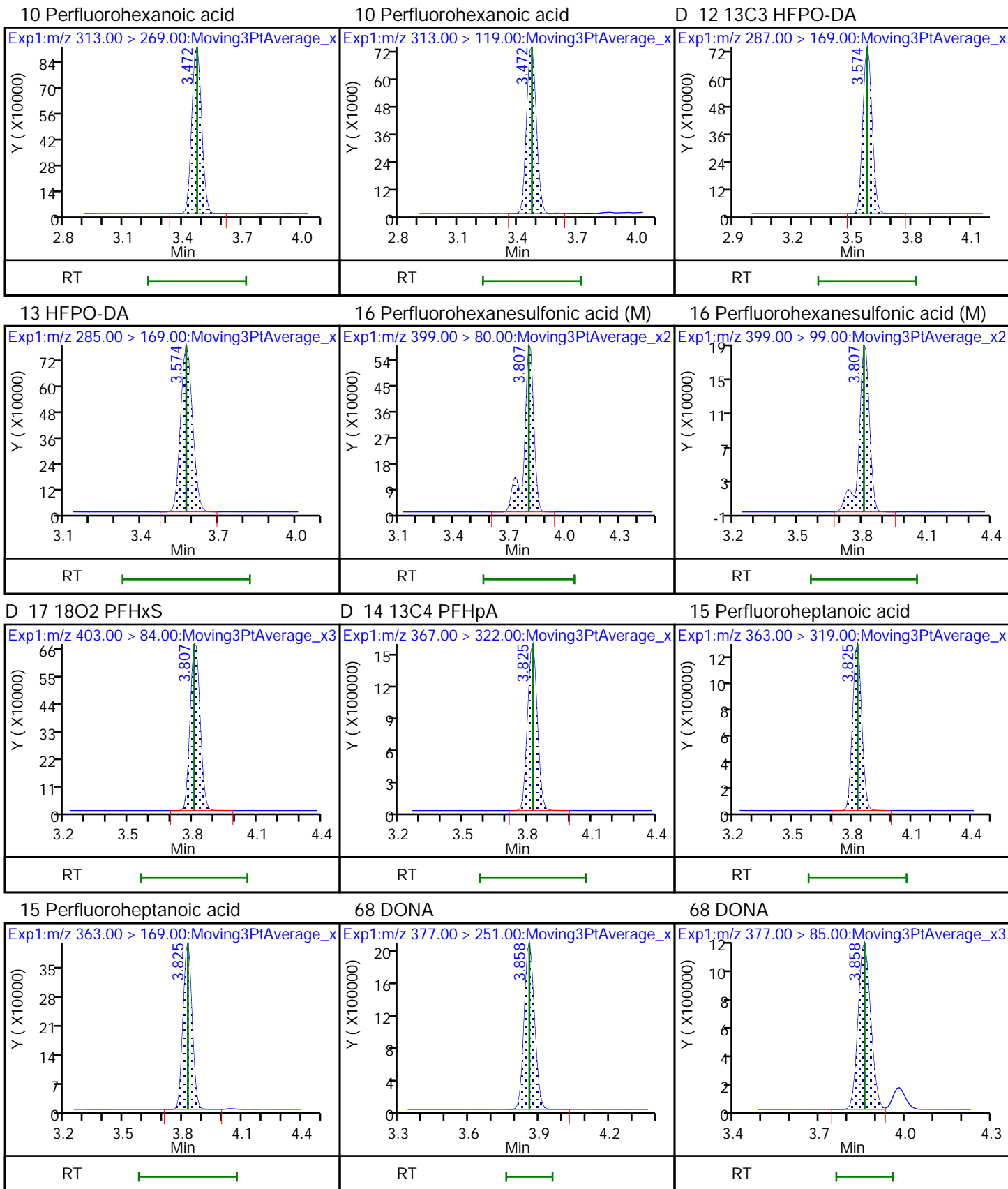
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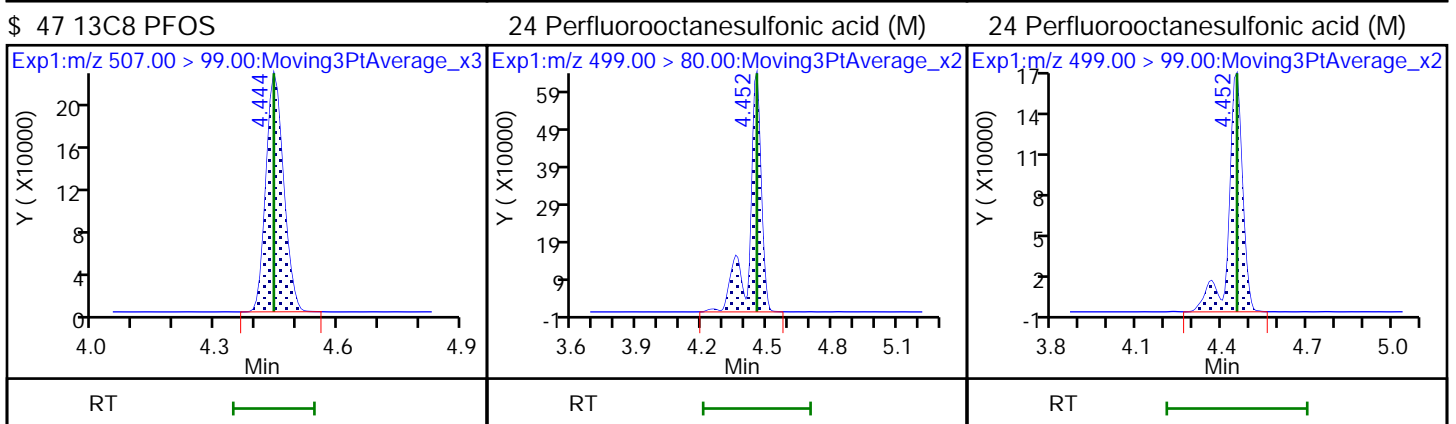
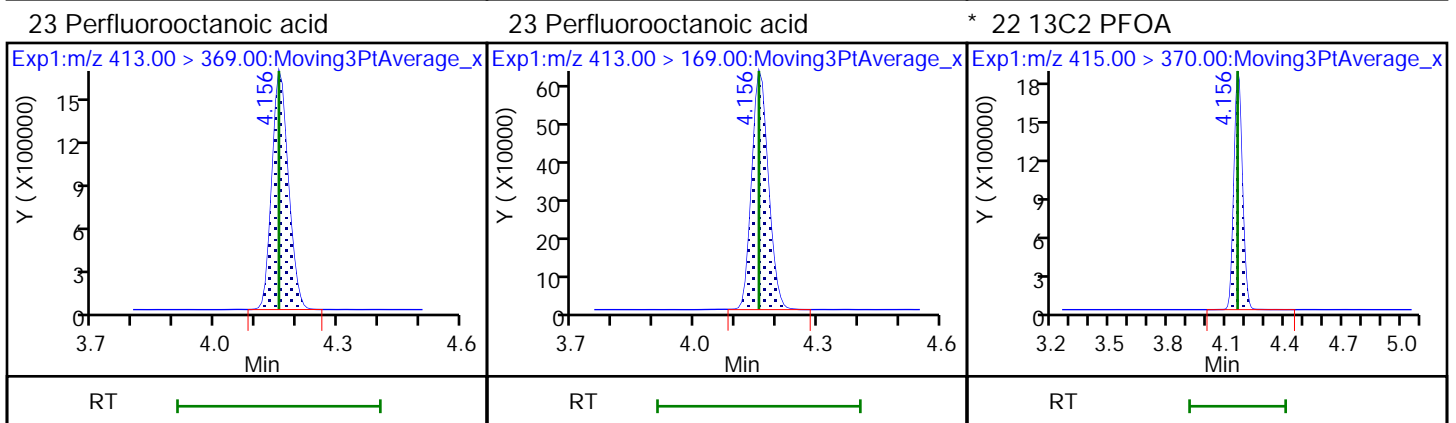
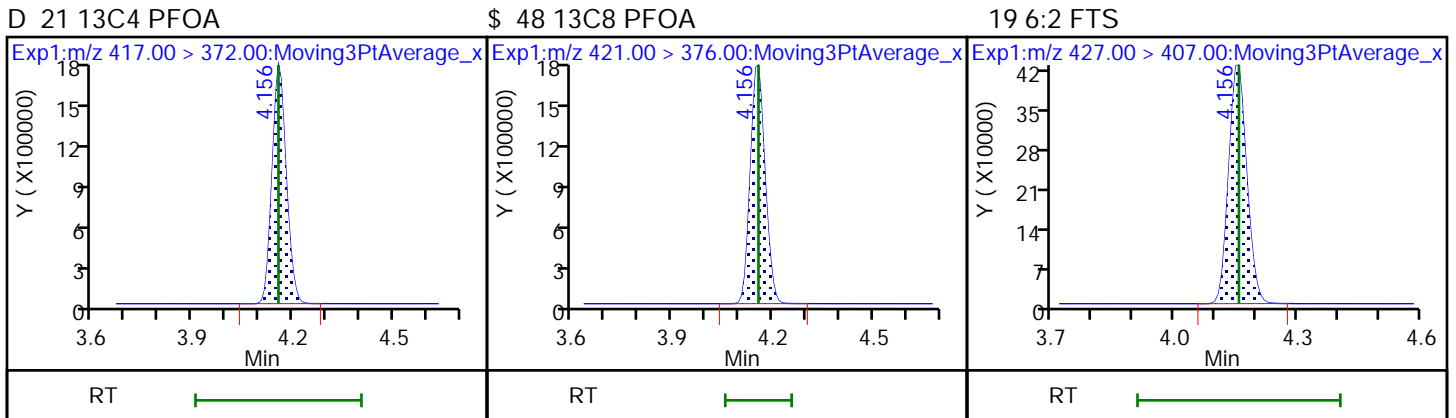
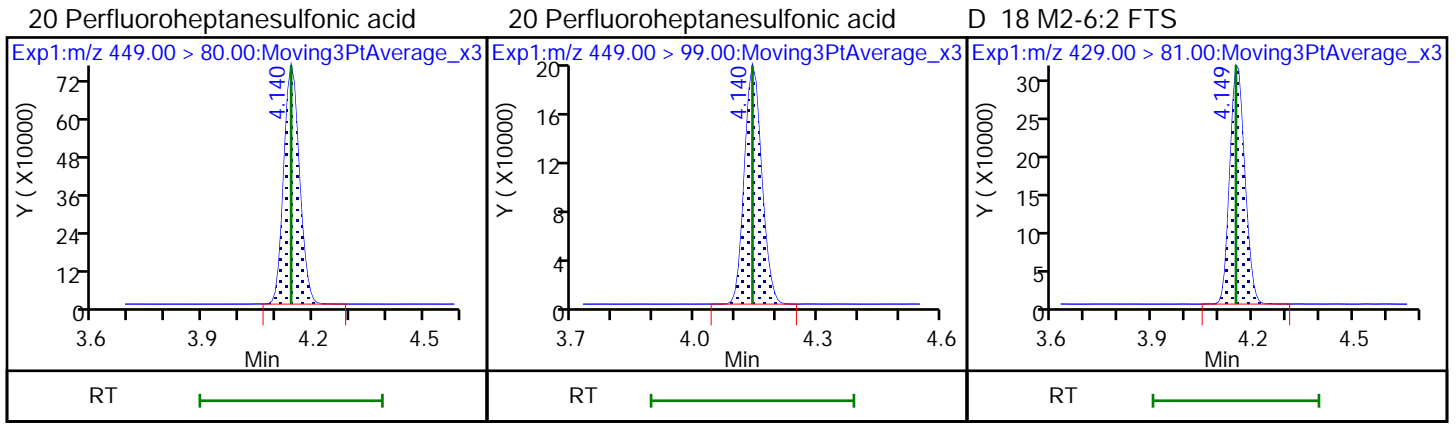
D 1 13C4 PFBA

2 Perfluorobutanoic acid

D 3 13C5 PFPeA





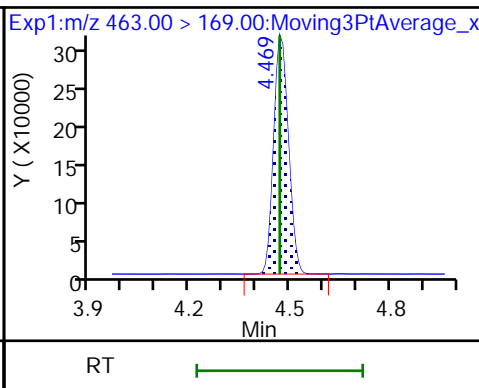
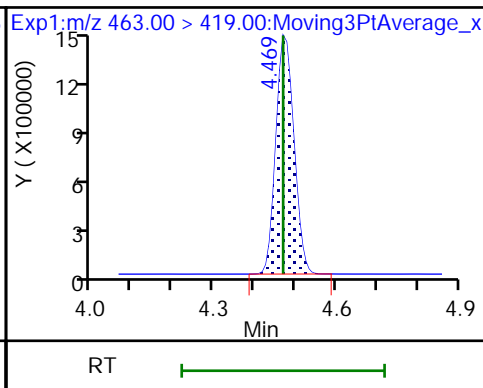
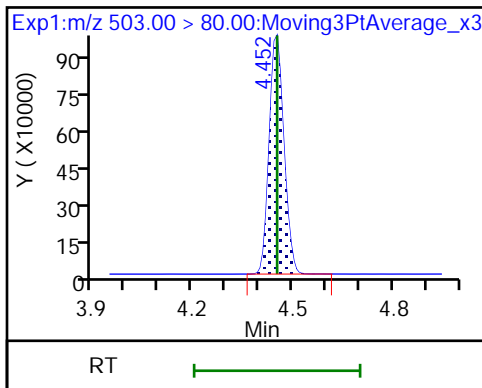




D 25 13C4 PFOS

26 Perfluorononanoic acid

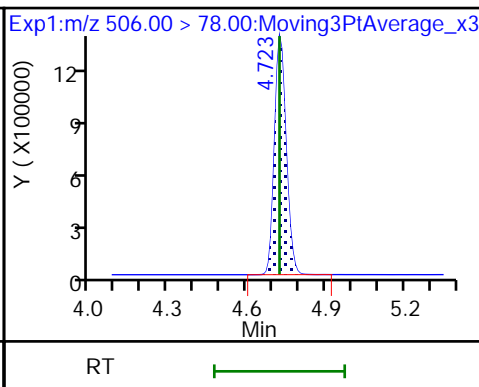
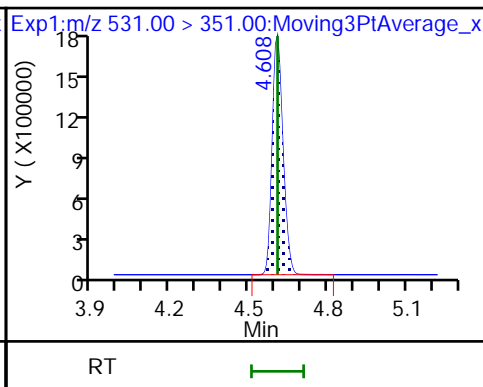
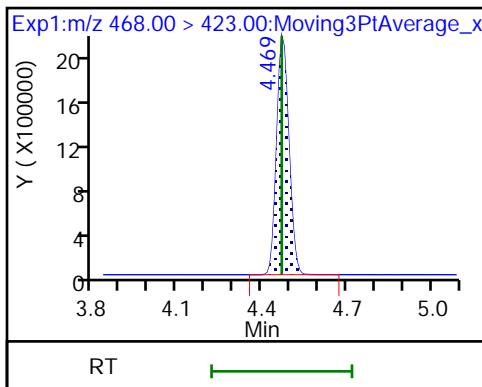
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS

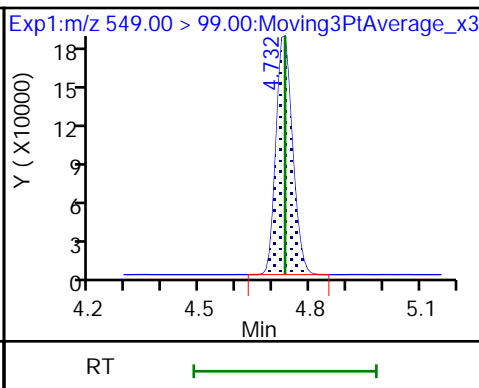
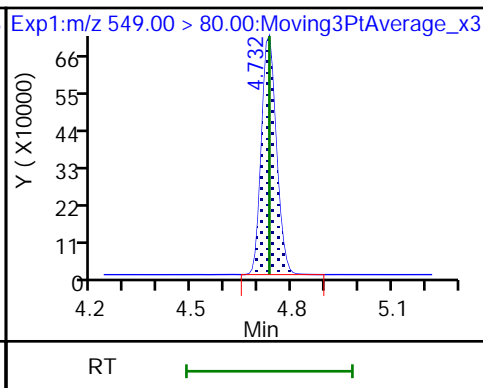
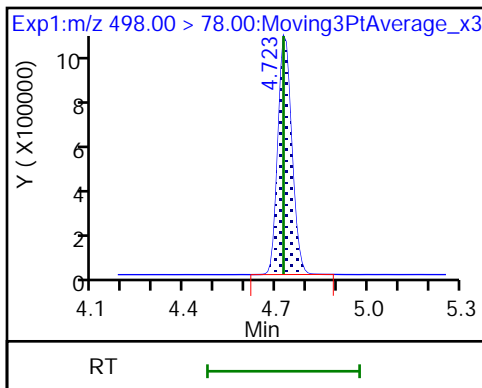
D 34 13C8 FOSA



33 Perfluorooctanesulfonamide

28 Perfluorononanesulfonic acid

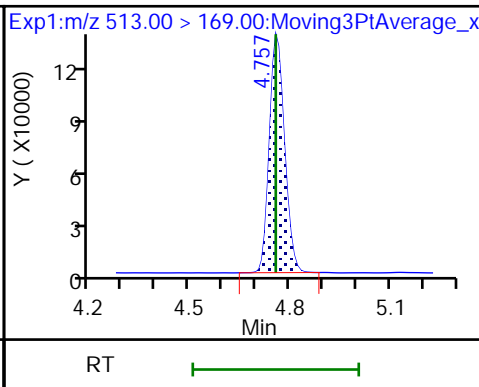
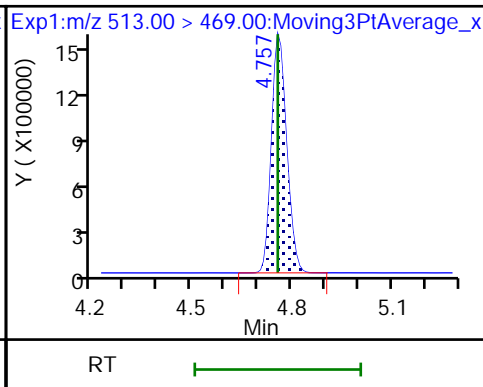
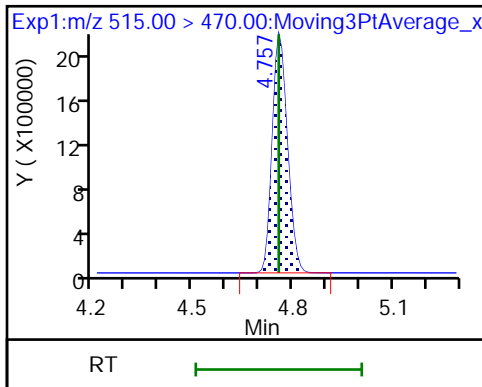
28 Perfluorononanesulfonic acid

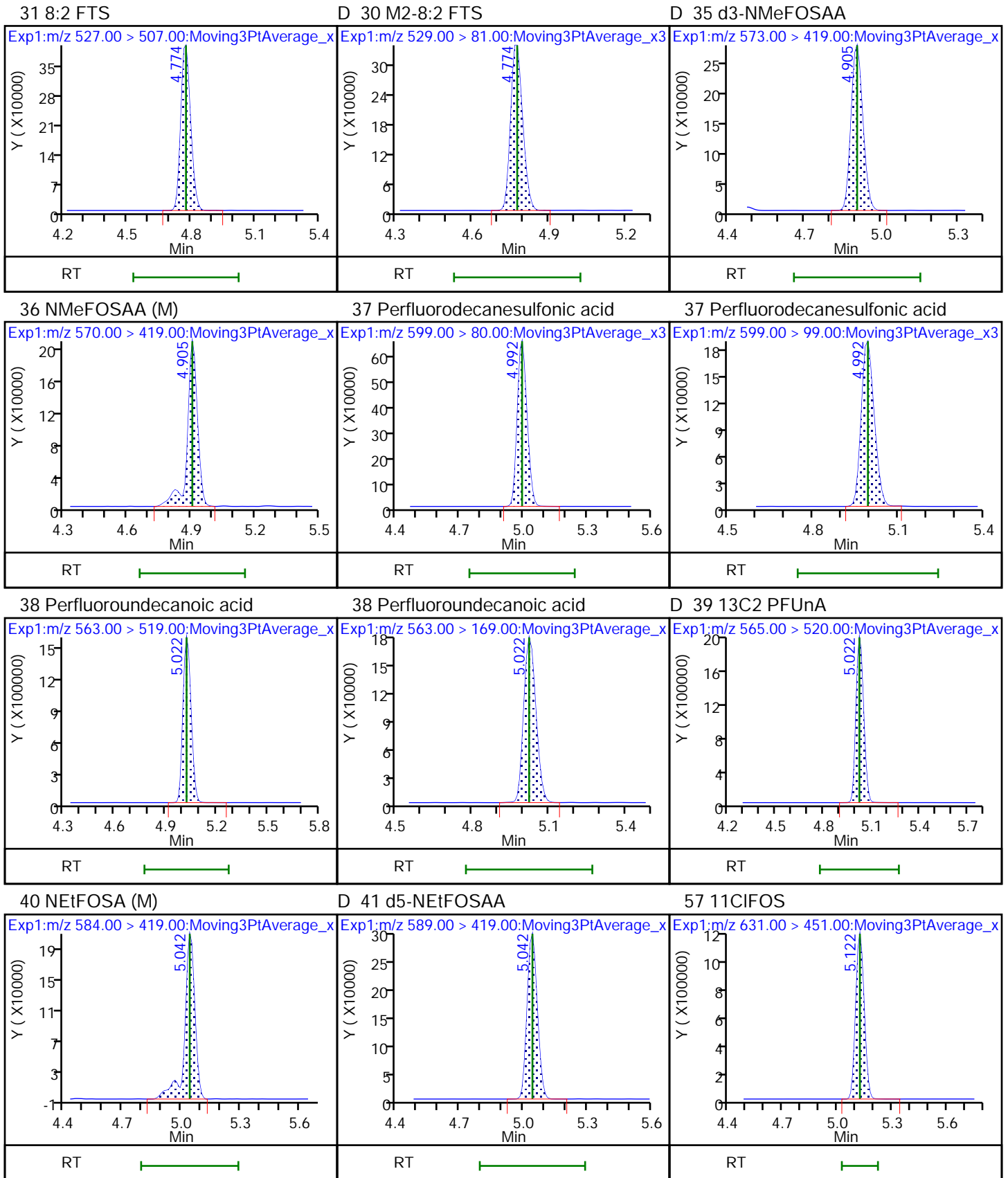


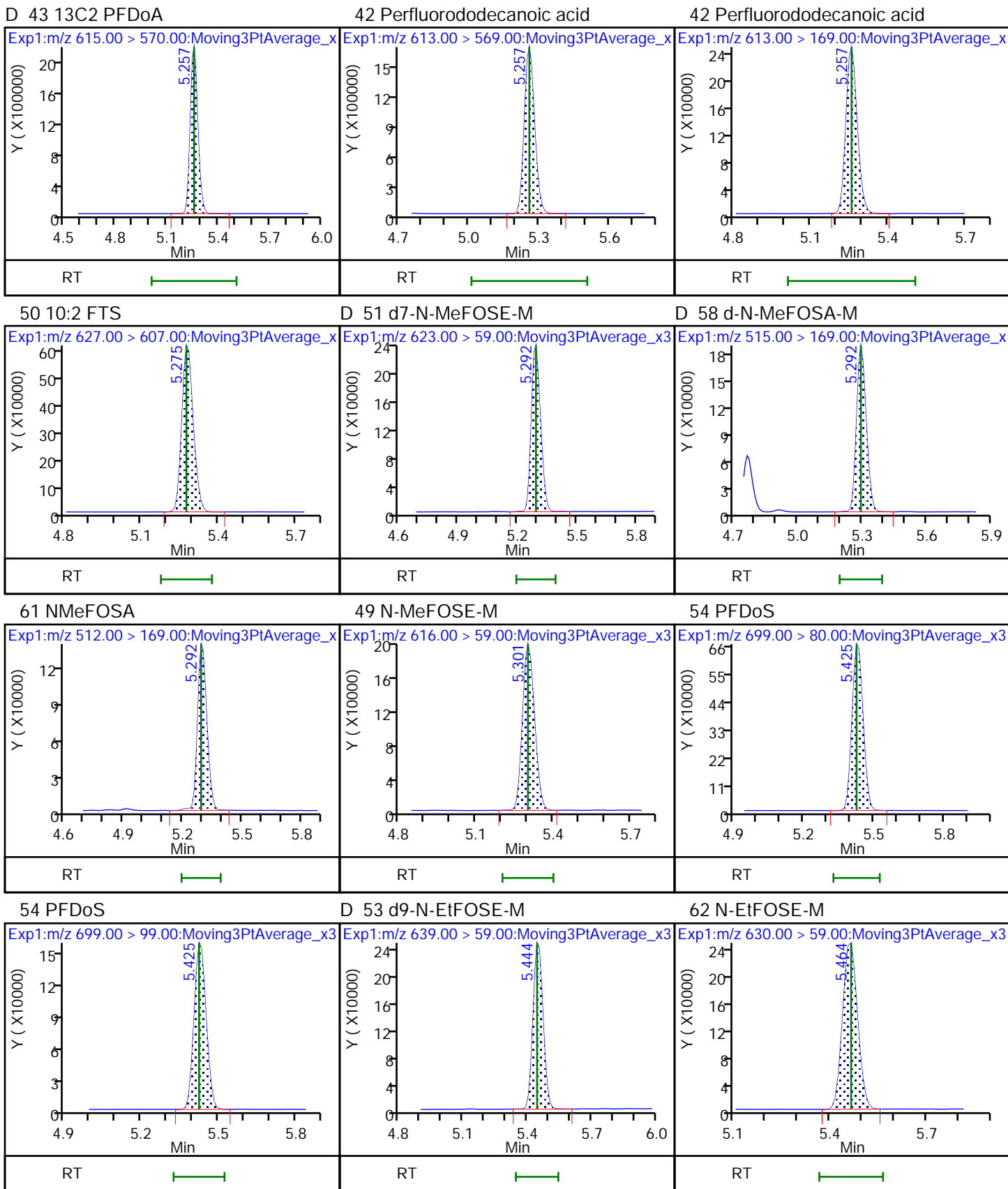
D 32 13C2 PFDA

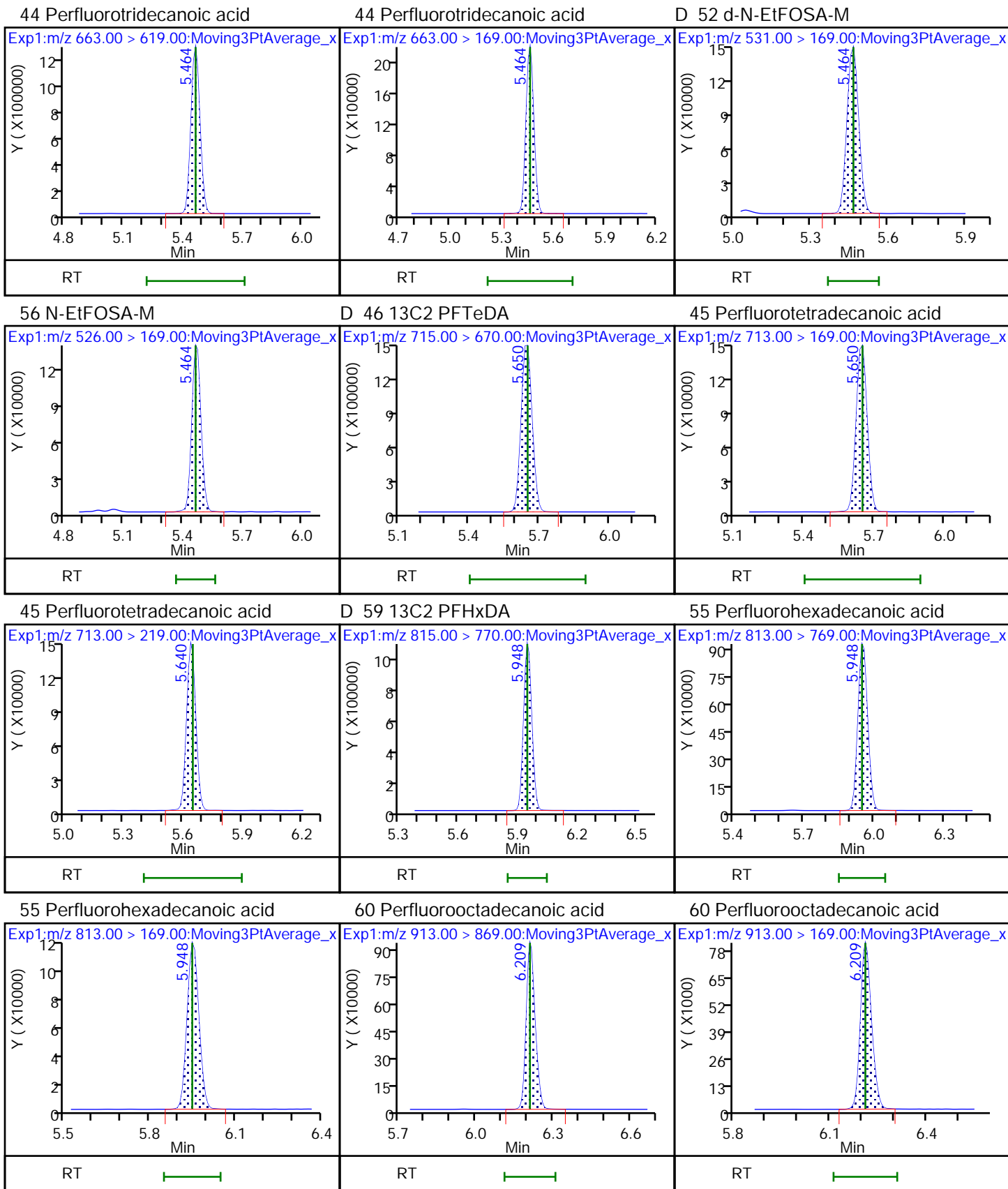
29 Perfluorodecanoic acid

29 Perfluorodecanoic acid











Eurofins TestAmerica, Knoxville

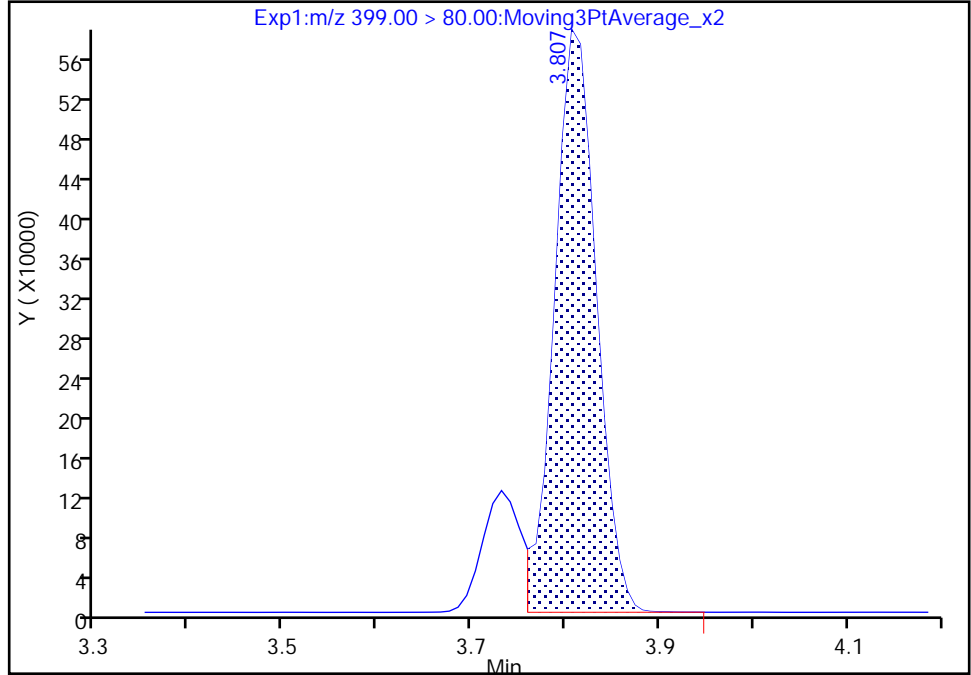
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Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

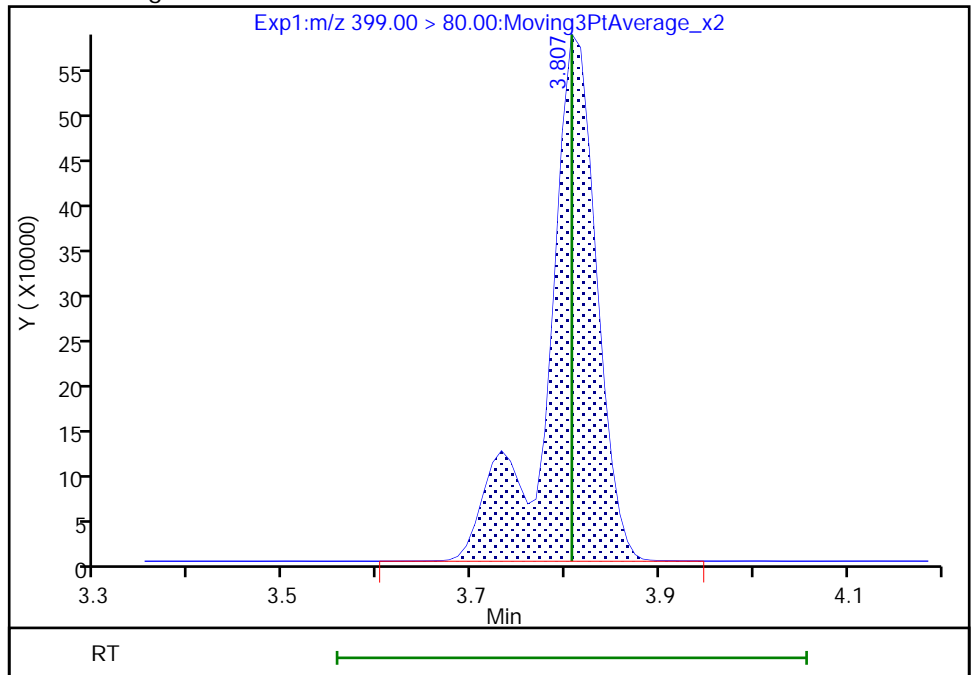
RT: 3.81  
Area: 1786052  
Amount: 0.711018  
Amount Units: ng/ml

Processing Integration Results



RT: 3.81  
Area: 2119859  
Amount: 0.843905  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 11-Jan-2022 18:01:39  
Audit Action: Manually Integrated

Eurofins TestAmerica, Knoxville

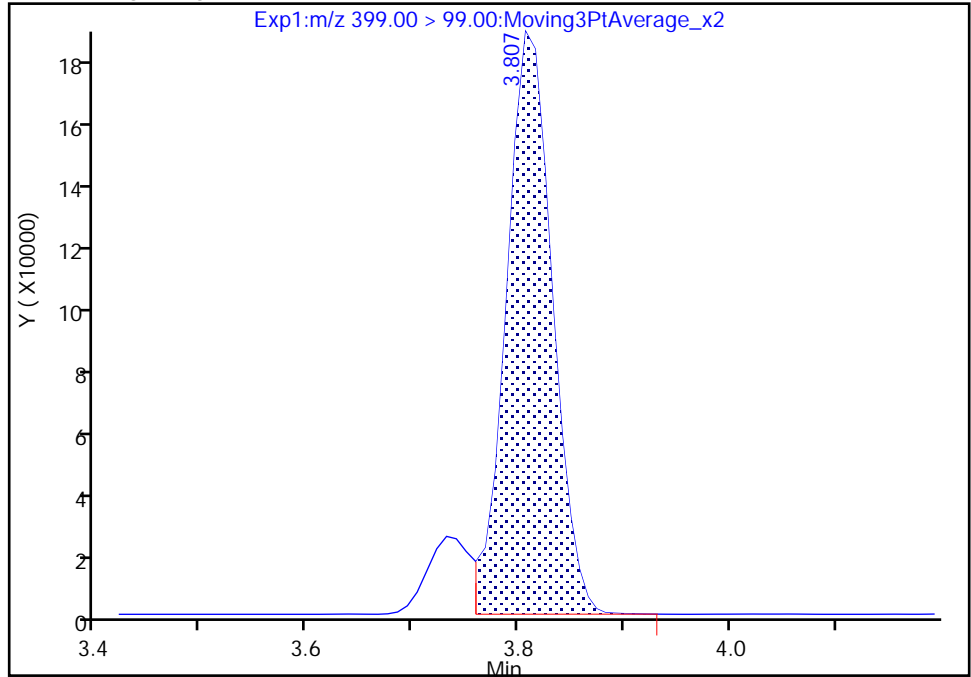
Data File: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_007.d  
Injection Date: 11-Jan-2022 17:48:06 Instrument ID: LCA  
Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

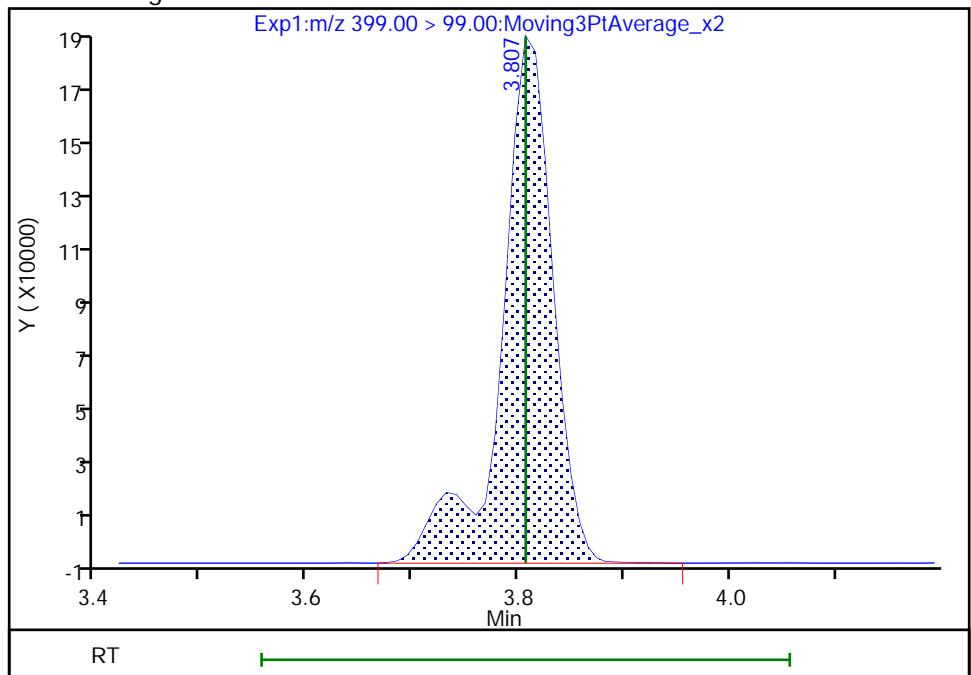
RT: 3.81  
Area: 545874  
Amount: 0.711018  
Amount Units: ng/ml

Processing Integration Results



RT: 3.81  
Area: 612888  
Amount: 0.843905  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 11-Jan-2022 18:01:47

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

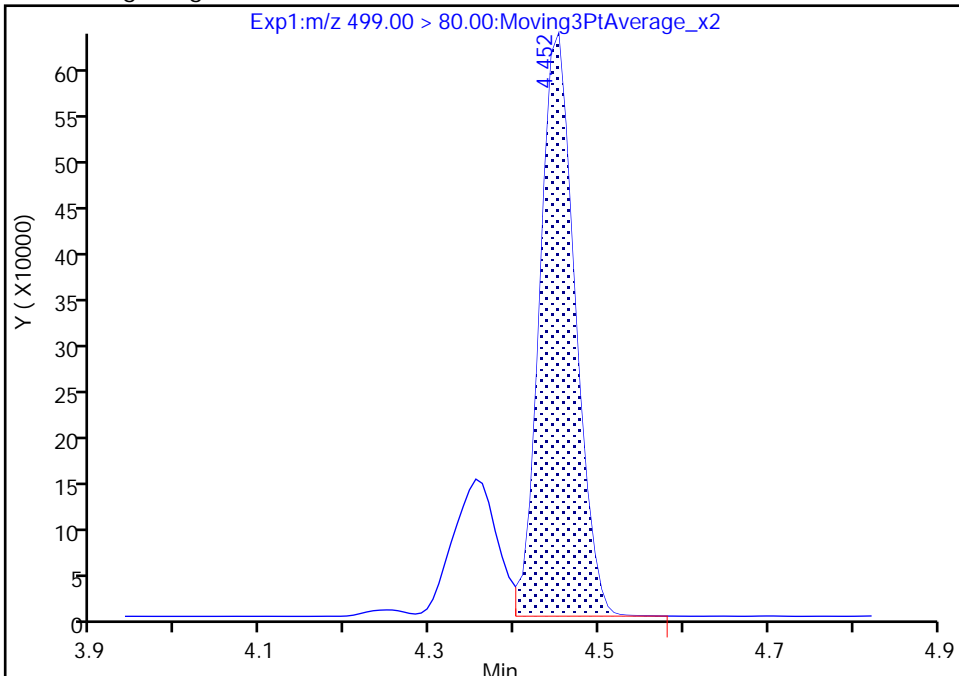
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Injection Date: 11-Jan-2022 17:48:06 Instrument ID: LCA  
Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

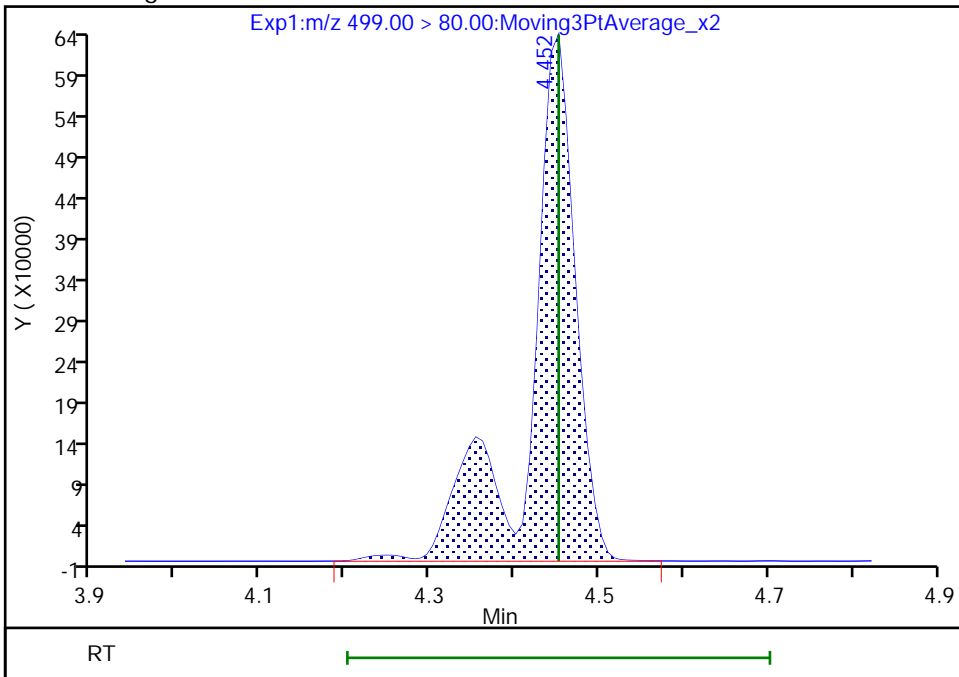
RT: 4.45  
Area: 1843139  
Amount: 0.667526  
Amount Units: ng/ml

Processing Integration Results



RT: 4.45  
Area: 2414182  
Amount: 0.874339  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 11-Jan-2022 18:02:02  
Audit Action: Manually Integrated



Eurofins TestAmerica, Knoxville

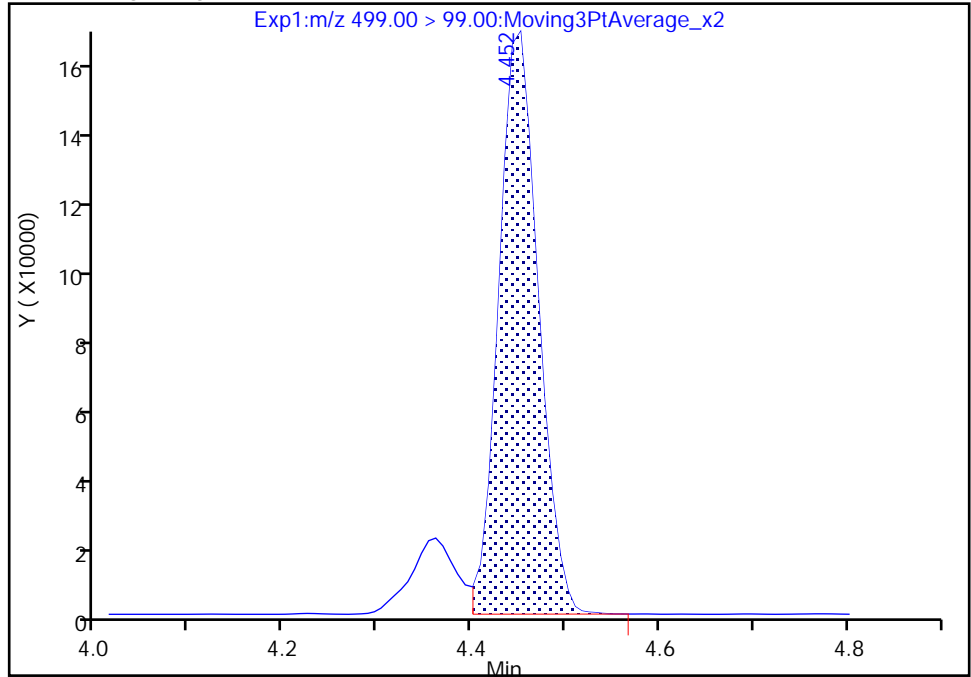
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Injection Date: 11-Jan-2022 17:48:06 Instrument ID: LCA  
Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

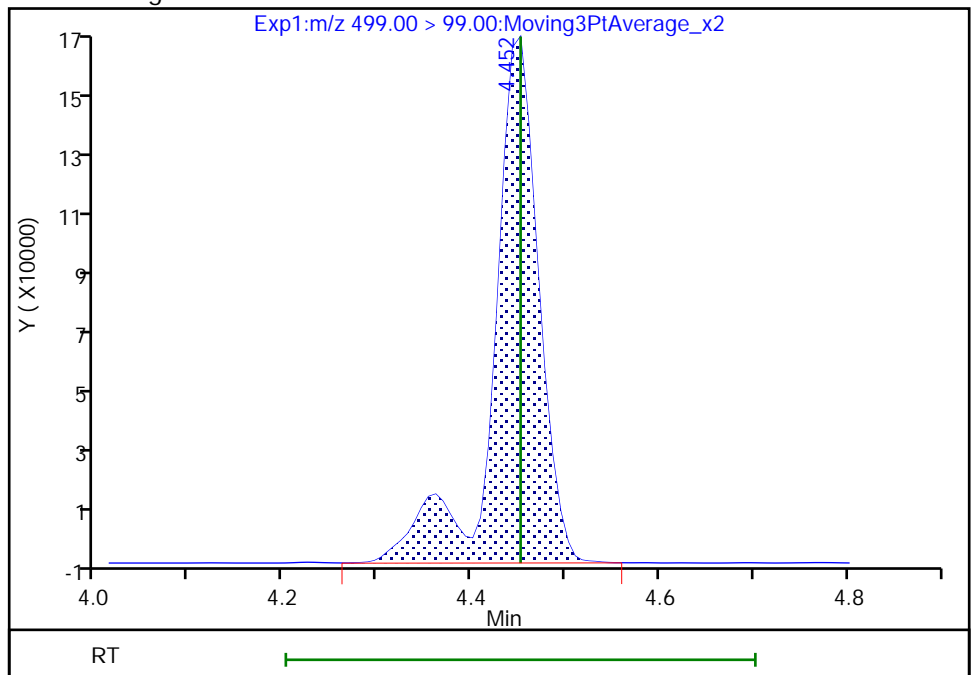
RT: 4.45  
Area: 491383  
Amount: 0.667526  
Amount Units: ng/ml

Processing Integration Results



RT: 4.45  
Area: 565909  
Amount: 0.874339  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 11-Jan-2022 18:02:07

Audit Action: Manually Integrated

Audit Reason: Baseline  
Page 404 of 764

Eurofins TestAmerica, Knoxville

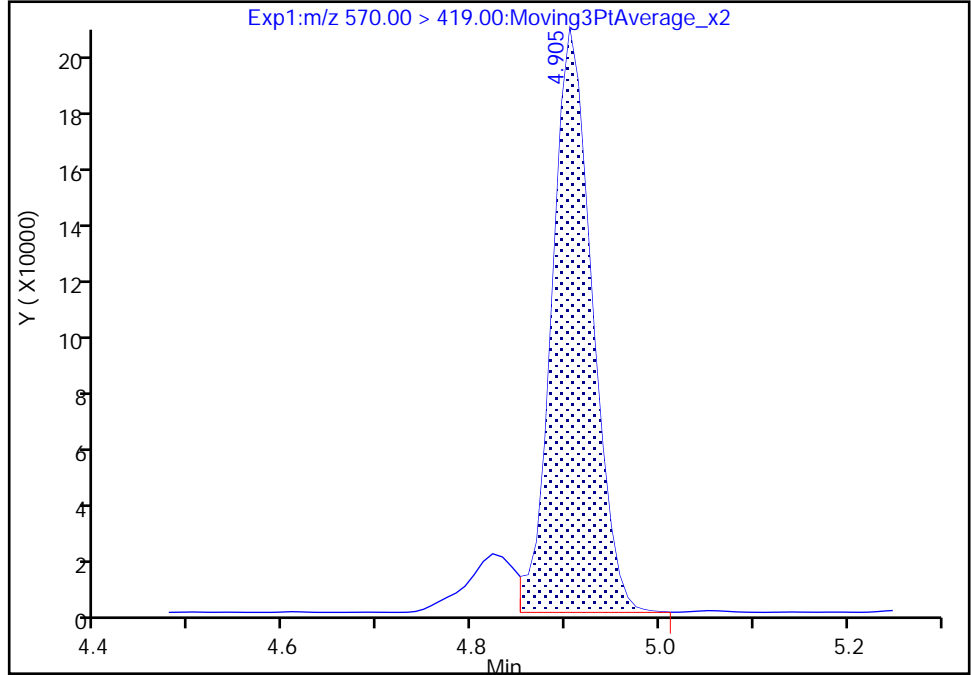
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Injection Date: 11-Jan-2022 17:48:06 Instrument ID: LCA  
Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

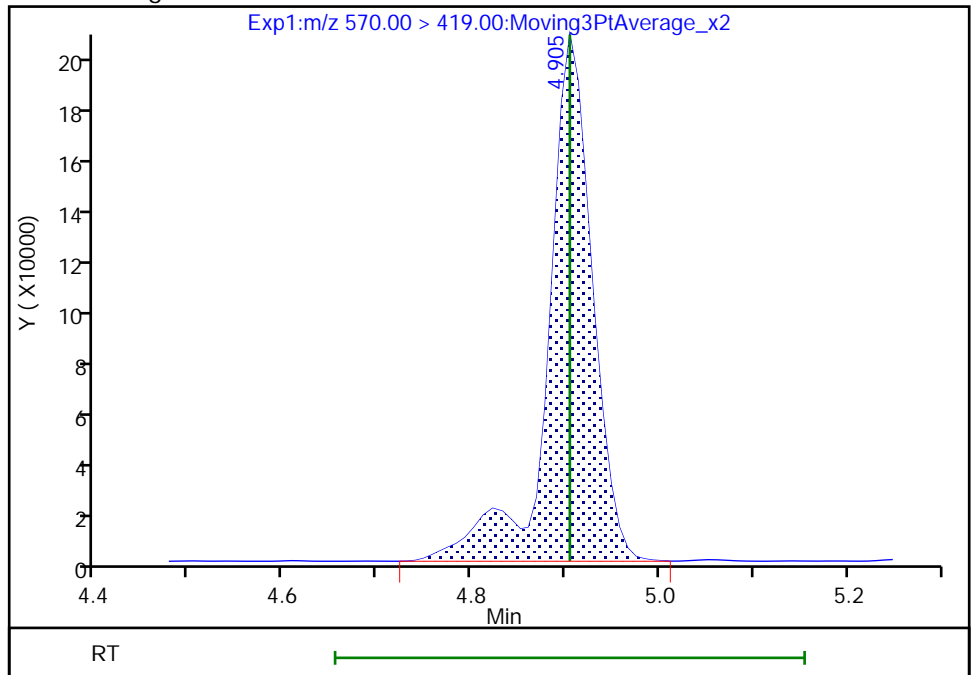
RT: 4.90  
Area: 602017  
Amount: 0.880869  
Amount Units: ng/ml

Processing Integration Results



RT: 4.90  
Area: 673153  
Amount: 0.984796  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 11-Jan-2022 18:02:19  
Audit Action: Manually Integrated

Eurofins TestAmerica, Knoxville

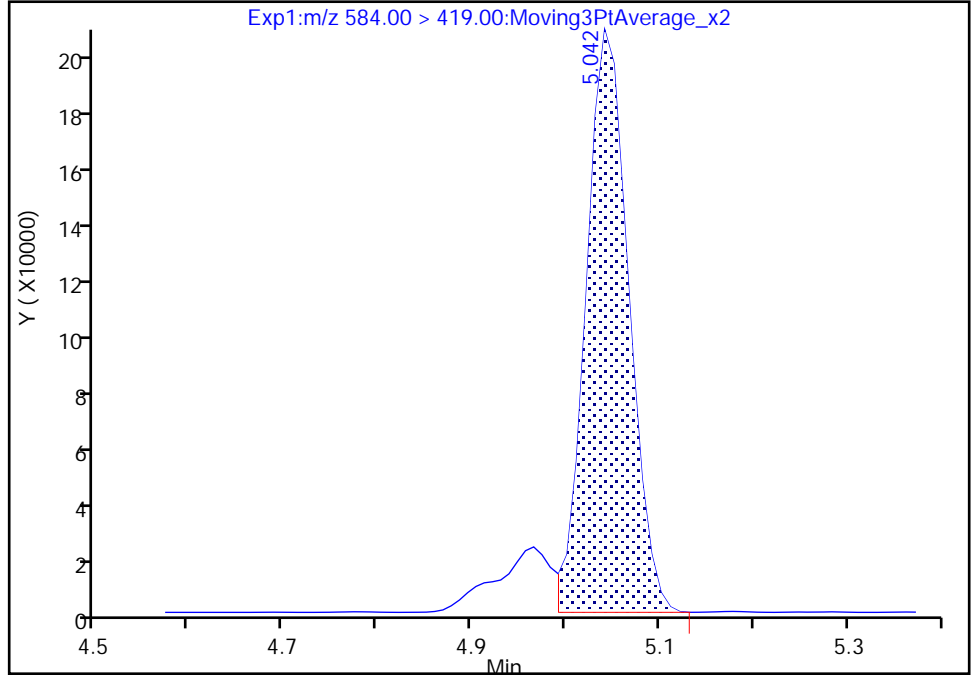
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Injection Date: 11-Jan-2022 17:48:06 Instrument ID: LCA  
Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

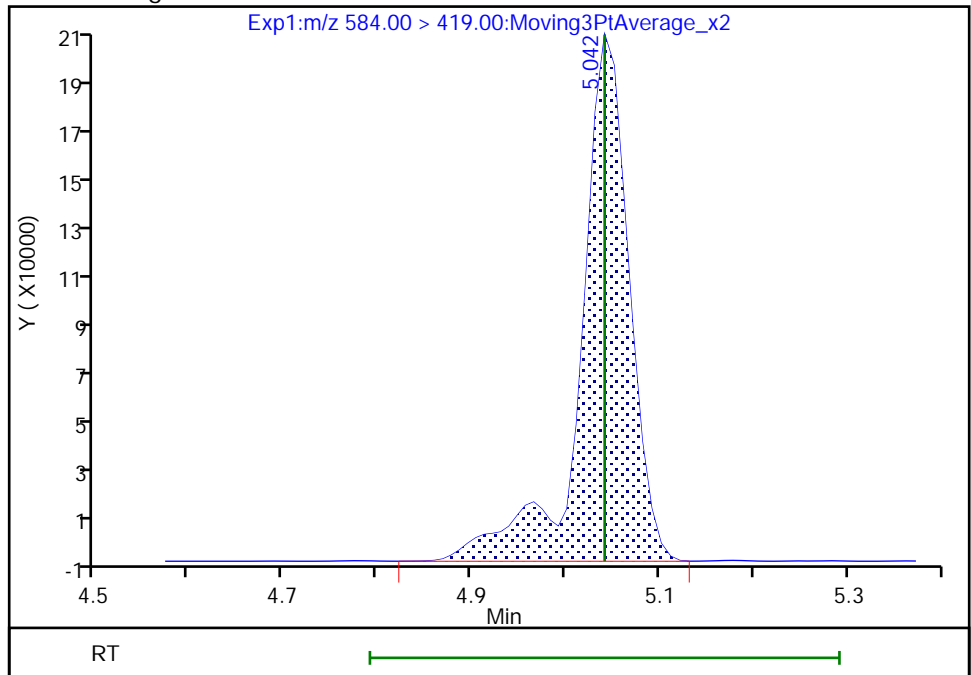
RT: 5.04  
Area: 655907  
Amount: 0.843648  
Amount Units: ng/ml

Processing Integration Results



RT: 5.04  
Area: 750429  
Amount: 0.964727  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 11-Jan-2022 18:02:27  
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-57822/19 Calibration Date: 01/11/2022 19:33  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 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	0.7844	0.7889		2.51	2.50	0.6	40.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9519	0.998		2.62	2.50	4.9	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.097	1.145		2.31	2.21	4.4	40.0
4:2 FTS	AveID	2.252	2.314		2.40	2.34	2.8	40.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	0.9713	1.033		2.49	2.35	6.3	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8680	0.8882		2.56	2.50	2.3	40.0
HFPO-DA	AveID	1.352	1.442		2.67	2.50	6.6	40.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.377	1.354		2.24	2.28	-1.7	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.047	1.085		2.59	2.50	3.6	40.0
DONA	AveID	2.630	2.717		2.43	2.36	3.3	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9541	1.011		2.52	2.38	5.9	40.0
6:2 FTS	L2ID		1.947		2.57	2.37	8.3	40.0
Perfluorooctanoic acid (PFOA)	AveID	1.147	1.127		2.46	2.50	-1.8	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.099	1.123		2.37	2.32	2.2	40.0
Perfluorononanoic acid (PFNA)	Q2ID		0.8888		2.58	2.50	3.2	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	Q2ID		2.283		2.46	2.33	5.4	50.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9748	1.033		2.54	2.40	6.0	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9459	0.9322		2.46	2.50	-1.5	40.0
Perfluorodecanoic acid (PFDA)	AveID	0.9645	1.012		2.62	2.50	4.9	40.0
8:2 FTS	AveID	1.415	1.453		2.46	2.40	2.7	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	QuaIF		0.9745		2.50	2.50	0.0	40.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		0.9621		2.49	2.41	3.4	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9695	1.008		2.60	2.50	4.0	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Q2ID		1.016		2.54	2.50	1.6	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.672	1.711		2.41	2.36	2.3	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.999		2.47	2.50	-1.2	40.0
10:2 FTS	AveID	2.276	2.437		2.58	2.41	7.1	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	Q2ID		1.284		2.71	2.50	8.3	40.0
NMeFOSA	Q2ID		1.085		2.63	2.50	5.2	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9166	0.9874		2.61	2.42	7.7	40.0

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-57822/19 Calibration Date: 01/11/2022 19:33  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 Lab File ID: \_019.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTriA)	AveID	0.8292	0.8289		2.50	2.50	-0.0	40.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	AveID	1.328	1.331		2.51	2.50	0.2	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.195	1.263		2.64	2.50	5.6	40.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1344	0.1331		2.48	2.50	-1.0	40.0
Perfluorohexadecanoic acid	Q2ID		1.096		2.56	2.50	2.4	40.0
Perfluorooctadecanoic acid	AveID	0.9844	0.9799		2.49	2.50	-0.5	40.0
13C4 PFBA	Ave	1.142	1.102		1.21	1.25	-3.5	50.0
13C5 PFPeA	Ave	0.8865	0.8596		1.21	1.25	-3.0	50.0
13C3 PFBS	Ave	0.5913	0.5931		1.17	1.16	0.3	50.0
M2-4:2 FTS	Ave	0.1820	0.1752		1.12	1.17	-3.7	50.0
13C2 PFHxA	Ave	0.9479	0.9093		1.20	1.25	-4.1	50.0
13C3 HFPO-DA	Ave	0.4556	0.4365		1.20	1.25	-4.2	50.0
18O2 PFHxS	Ave	0.3946	0.4141		1.24	1.18	4.9	50.0
13C4 PFHpA	Ave	0.9067	0.9204		1.27	1.25	1.5	50.0
M2-6:2 FTS	Ave	0.1835	0.1681		1.09	1.19	-8.4	50.0
13C4 PFOA	Ave	0.9376	0.9522		1.27	1.25	1.5	50.0
13C4 PFOS	Ave	0.5681	0.5827		1.23	1.20	2.6	50.0
13C5 PFNA	Ave	1.234	1.228		1.24	1.25	-0.5	50.0
13C8 FOSA	Ave	0.7682	0.8121		1.32	1.25	5.7	50.0
13C2 PFDA	Ave	1.191	1.149		1.21	1.25	-3.5	50.0
M2-8:2 FTS	Ave	0.2070	0.1884		1.09	1.20	-9.0	50.0
d3-NMeFOSAA	Ave	0.1401	0.1902		1.70	1.25	35.8	50.0
13C2 PFUnA	Ave	1.189	1.176		1.24	1.25	-1.0	50.0
d5-NEtFOSAA	Ave	0.1537	0.1795		1.46	1.25	16.8	50.0
13C2 PFDoA	Ave	1.247	1.270		1.27	1.25	1.8	50.0
d7-N-MeFOSE-M	Ave	0.1499	0.1356		1.13	1.25	-9.6	50.0
d-N-MeFOSA-M	Ave	0.1069	0.1047		1.23	1.25	-2.0	50.0
d9-N-EtFOSE-M	Ave	0.1504	0.1483		1.23	1.25	-1.4	50.0
d-N-EtFOSA-M	Ave	0.0883	0.0844		1.20	1.25	-4.4	50.0
13C2 PFTeDA	Ave	0.9508	0.9442		1.24	1.25	-0.7	50.0
13C2 PFHxDA	Ave	0.6444	0.6391		1.24	1.25	-0.8	50.0
13C8 PFOA	AveID	0.999	0.9887		1.24	1.25	-1.1	50.0
13C8 PFOS	AveID	0.2220	0.2274		1.22	1.20	2.4	50.0

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_019.d  
 Lims ID: CCV  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 11-Jan-2022 19:33:44 ALS Bottle#: 19 Worklist Smp#: 19  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022220-019 ccv  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 12-Jan-2022 18:43:32 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1648

First Level Reviewer: cochranj Date: 12-Jan-2022 18:42:52

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	2.784	2.814	-0.030	0.677	5905024	1.21	96.5	13809	
2 Perfluorobutanoic acid	212.90 > 169.00	2.784	2.814	-0.030	1.000	9317012	2.51	101	2846	
D 3 13C5 PFPeA	267.90 > 223.00	3.098	3.131	-0.033	0.753	4608266	1.21	97.0	11990	
4 Perfluoropentanoic acid	262.90 > 219.00	3.098	3.131	-0.033	1.000	9200256	2.62	105	3209	
D 6 13C3 PFBS	301.90 > 80.00	3.107	3.147	-0.040	0.755	2957131	1.17	100	13039	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.115	3.147	-0.032	1.003	6438409	2.31	Target=2.65	104	5684
	298.90 > 99.00	3.115	3.147	-0.032	1.003	2339875		2.75(1.32-3.97)		4856
D 8 M2-4:2 FTS	329.00 > 81.00	3.402	3.442	-0.040	0.827	877179	1.12	96.3	1680	
7 4:2 FTS	327.00 > 307.00	3.402	3.442	-0.040	1.000	4059932	2.40	103	11628	
10 Perfluorohexanoic acid	313.00 > 269.00	3.432	3.472	-0.040	1.003	8659473	2.56	Target=11.80	102	3299
	313.00 > 119.00	3.422	3.472	-0.050	1.000	678056		12.77(5.90-17.70)		1105
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.422	3.472	-0.050	1.101	6159071	2.49	Target=3.44	106	10962
	349.00 > 99.00	3.422	3.472	-0.050	1.101	1732978		3.55(1.72-5.16)		8814
D 9 13C2 PFHxA	315.00 > 270.00	3.422	3.472	-0.050	0.832	4874590	1.20	95.9	11542	
D 12 13C3 HFPO-DA	287.00 > 169.00	3.528	3.574	-0.046	0.857	2339792	1.20	95.8	4479	

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	3.528	3.574	-0.046	1.000	6748114	2.67		107	3723	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.769	3.807	-0.038	1.000	5472581	2.24	Target=3.40	98.3	6388	M
399.00 > 99.00	3.769	3.807	-0.038	1.000	1577736		3.47(1.70-5.10)		4915	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.769	3.807	-0.038	0.916	2100195	1.24		105	11203	
D 14 13C4 PFHpA										
367.00 > 322.00	3.778	3.825	-0.047	0.918	4934222	1.27		102	7829	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.778	3.825	-0.047	1.000	10703234	2.59	Target=3.29	104	5468	
363.00 > 169.00	3.778	3.825	-0.047	1.000	3322767		3.22(1.65-4.94)		2741	
68 DONA										
377.00 > 251.00	3.816	3.858	-0.042	0.867	15987954	2.43	Target=1.82	103	10545	
377.00 > 85.00	3.807	3.858	-0.051	0.865	9279300		1.72(0.91-2.74)		170	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.098	4.140	-0.042	0.931	6010653	2.52	Target=3.92	106	7280	
449.00 > 99.00	4.098	4.140	-0.042	0.931	1534345		3.92(1.96-5.87)		7187	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.106	4.149	-0.043	0.998	855927	1.09		91.6	2625	
D 21 13C4 PFOA										
417.00 > 372.00	4.115	4.156	-0.041	1.000	5104422	1.27		102	8570	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.106	4.156	-0.050	0.998	5046552	1.24		98.9	8756	
19 6:2 FTS										
427.00 > 407.00	4.106	4.156	-0.050	1.000	3325889	2.57		108	10194	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.115	4.156	-0.041	1.000	11505121	2.46	Target=2.59	98.2	4646	
413.00 > 169.00	4.115	4.156	-0.041	1.000	4455159		2.58(1.30-3.89)		5202	
* 22 13C2 PFOA										
415.00 > 370.00	4.115	4.156	-0.041		5360856	1.25			8789	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.402	4.444	-0.042	1.000	678930	1.22		102	3907	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.402	4.452	-0.050	1.000	6511310	2.37	Target=4.65	102	5814	M
499.00 > 99.00	4.402	4.452	-0.050	1.000	1461843		4.45(2.32-6.97)		5382	M
D 25 13C4 PFOS										
503.00 > 80.00	4.402	4.452	-0.050	1.070	2986229	1.23		103	5158	
26 Perfluorononanoic acid										
463.00 > 419.00	4.428	4.469	-0.041	1.000	11697119	2.58	Target=4.65	103	8741	
463.00 > 169.00	4.428	4.469	-0.041	1.000	2577190		4.54(2.32-6.97)		4781	
D 27 13C5 PFNA										
468.00 > 423.00	4.428	4.469	-0.041	1.076	6580631	1.24		99.5	12391	
63 9CIFOS										
531.00 > 351.00	4.560	4.608	-0.048	1.036	13295456	2.46		105	15217	
D 34 13C8 FOSA										
506.00 > 78.00	4.689	4.723	-0.034	1.140	4353543	1.32		106	4284	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
33 Perfluorooctanesulfonamide	498.00 > 78.00	4.689	4.723	-0.034	1.000	8116626	2.46	98.5	5067	
28 Perfluorononanesulfonic acid	549.00 > 80.00	4.681	4.732	-0.051	1.063	6195256	2.54	Target=4.06	106	7706
	549.00 > 99.00	4.681	4.732	-0.051	1.063	1510610		4.10(2.03-6.09)		7310
D 32 13C2 PFDA	515.00 > 470.00	4.715	4.757	-0.042	1.146	6160751	1.21		96.5	8534
29 Perfluorodecanoic acid	513.00 > 469.00	4.715	4.757	-0.042	1.000	12463432	2.62	Target=11.30	105	8161
	513.00 > 169.00	4.715	4.757	-0.042	1.000	1046463		11.91(5.65-16.95)		704
31 8:2 FTS	527.00 > 507.00	4.723	4.774	-0.051	1.000	2811799	2.46		103	7358
D 30 M2-8:2 FTS	529.00 > 81.00	4.723	4.774	-0.051	1.148	967607	1.09		91.0	1421
D 35 d3-NMeFOSAA	573.00 > 419.00	4.861	4.905	-0.044	1.181	1019766	1.70		136	672
36 NMeFOSAA	570.00 > 419.00	4.861	4.905	-0.044	1.000	1987540	2.50		100	3429 M
37 Perfluorodecanesulfonic acid	599.00 > 80.00	4.940	4.992	-0.052	1.122	5794077	2.49	Target=3.79	103	7930
	599.00 > 99.00	4.940	4.992	-0.052	1.122	1517842		3.82(1.90-5.69)		6781
38 Perfluoroundecanoic acid	563.00 > 519.00	4.975	5.022	-0.047	1.000	12718685	2.60	Target=8.45	104	9831
	563.00 > 169.00	4.975	5.022	-0.047	1.000	1471724		8.64(4.22-12.67)		5652
D 39 13C2 PFUnA	565.00 > 520.00	4.975	5.022	-0.047	1.209	6306773	1.24		99.0	9627
40 NEtFOSA	584.00 > 419.00	4.993	5.042	-0.049	1.000	1956125	2.54		102	2328 M
D 41 d5-NEtFOSAA	589.00 > 419.00	4.993	5.042	-0.049	1.213	962458	1.46		117	3995
57 11CIFOS	631.00 > 451.00	5.072	5.122	-0.050	1.152	10070176	2.41		102	10104
D 43 13C2 PFDoA	615.00 > 570.00	5.213	5.257	-0.044	1.267	6805635	1.27		102	12760
42 Perfluorododecanoic acid	613.00 > 569.00	5.213	5.257	-0.044	1.000	13599842	2.47	Target=6.99	98.8	7397
	613.00 > 169.00	5.213	5.257	-0.044	1.000	2108107		6.45(3.50-10.49)		3607
50 10:2 FTS	627.00 > 607.00	5.231	5.275	-0.044	1.107	4745850	2.58		107	7205
D 51 d7-N-MeFOSE-M	623.00 > 59.00	5.266	5.292	-0.026	1.280	726667	1.13		90.4	586
D 58 d-N-MeFOSA-M	515.00 > 169.00	5.266	5.292	-0.026	1.280	561353	1.22		98.0	50.3
61 NMeFOSA	512.00 > 169.00	5.275	5.292	-0.017	1.002	1218080	2.63		105	645
49 N-MeFOSE-M	616.00 > 59.00	5.275	5.301	-0.026	1.002	1865976	2.71		108	2112



Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
54 PFDoS										
699.00 > 80.00	5.383	5.425	-0.041	1.223	5971004	2.61	Target=4.24	108	9167	
699.00 > 99.00	5.383	5.425	-0.041	1.223	1413551		4.22(2.12-6.35)		5181	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.425	5.444	-0.019	1.318	795015	1.23		98.6	404	
62 N-EtFOSE-M										
630.00 > 59.00	5.435	5.464	-0.029	1.002	2116068	2.51		100	1900	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.414	5.464	-0.050	1.039	11282861	2.50	Target=6.20	100.0	7735	
663.00 > 169.00	5.414	5.464	-0.050	1.039	1949178		5.79(3.10-9.30)		5081	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.435	5.464	-0.029	1.321	452642	1.20		95.6	673	
56 N-EtFOSA-M										
526.00 > 169.00	5.444	5.464	-0.020	1.002	1142957	2.64		106	562	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.598	5.650	-0.052	1.360	5061646	1.24		99.3	8469	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.598	5.650	-0.052	1.000	1346990	2.48	Target=1.05	99.0	4457	
713.00 > 219.00	5.598	5.650	-0.052	1.000	1339546		1.01(0.53-1.58)		5218	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.905	5.948	-0.043	1.435	3425895	1.24		99.2	6624	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.905	5.948	-0.043	1.000	7507559	2.56	Target=8.09	102	5979	
813.00 > 169.00	5.905	5.948	-0.043	1.000	931204		8.06(4.05-12.14)		2644	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.165	6.209	-0.044	1.044	6713730	2.49	Target=11.53	99.5	5639	
913.00 > 169.00	6.165	6.209	-0.044	1.044	590639		11.37(5.77-17.30)		2175	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

63L5PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\\_019.d

Injection Date: 11-Jan-2022 19:33:44

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

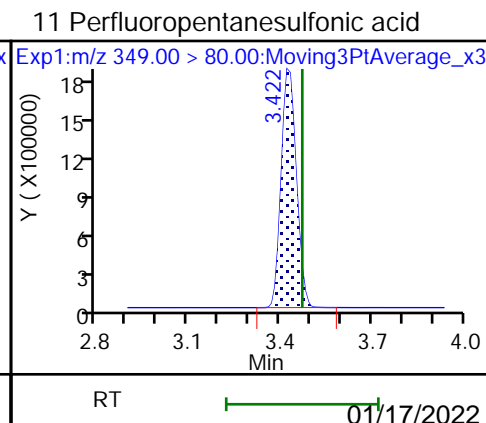
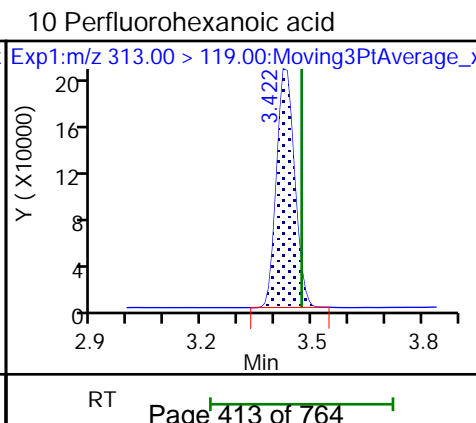
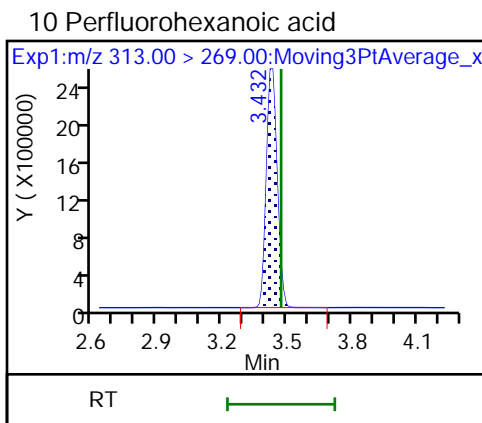
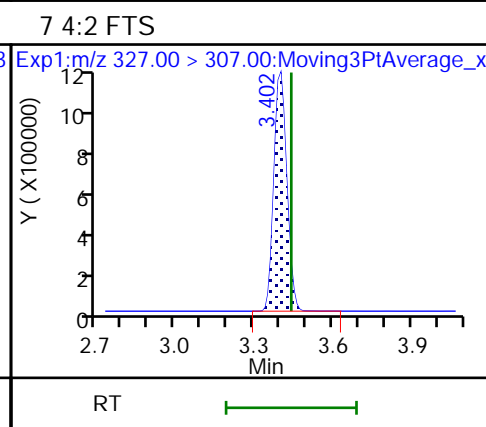
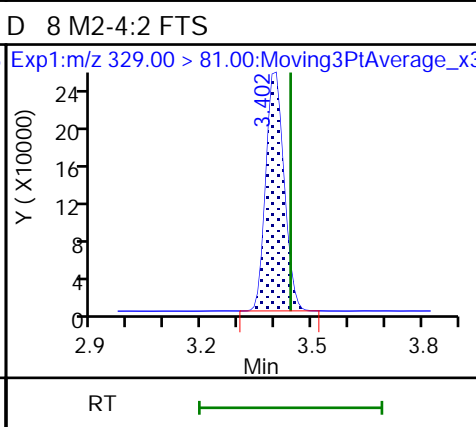
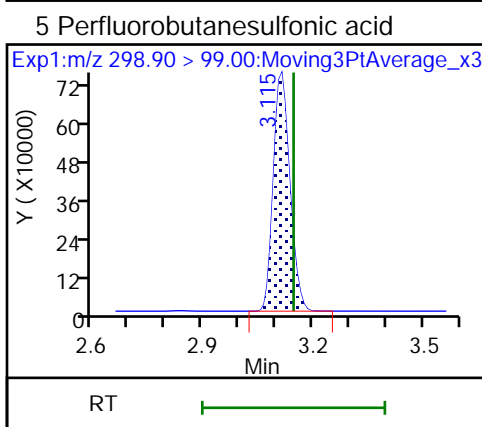
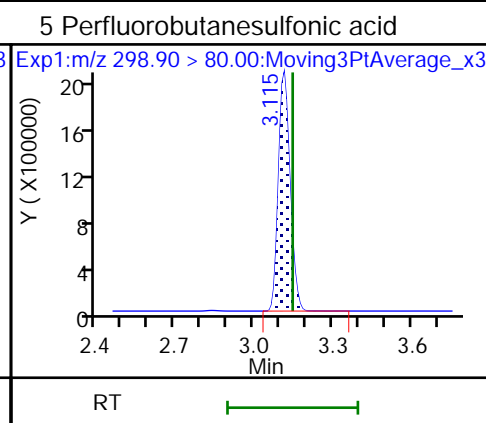
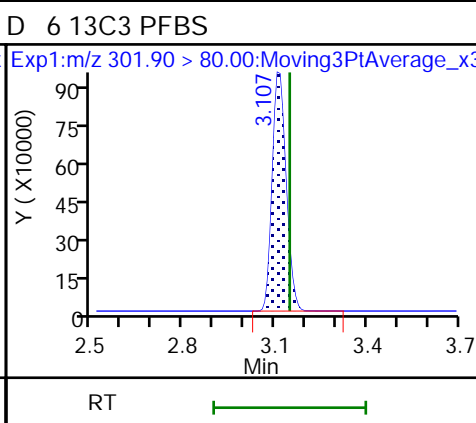
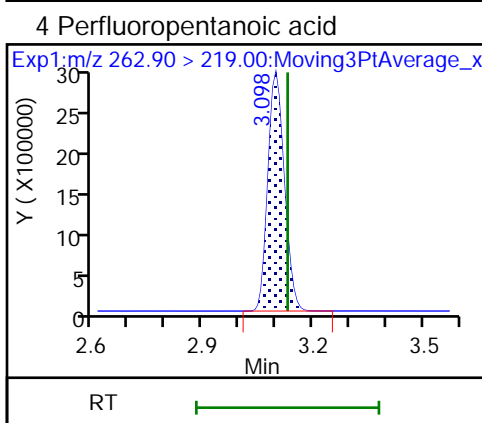
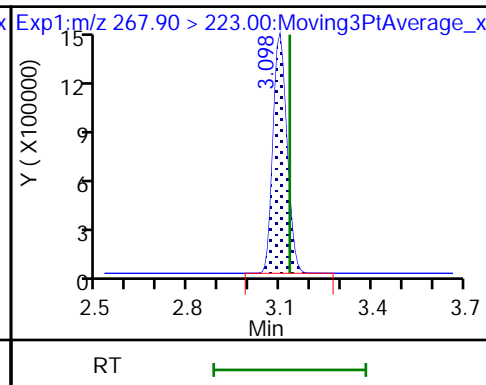
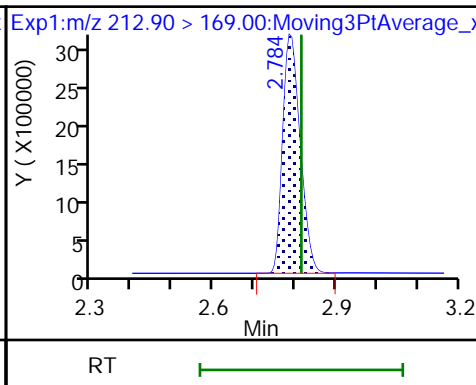
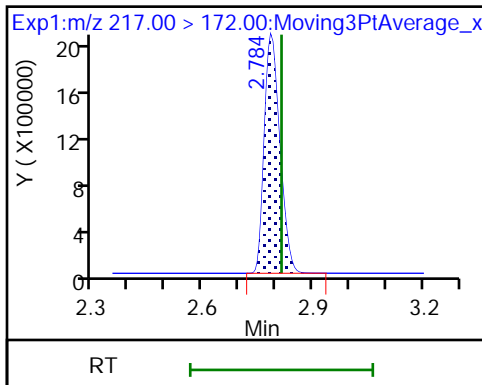
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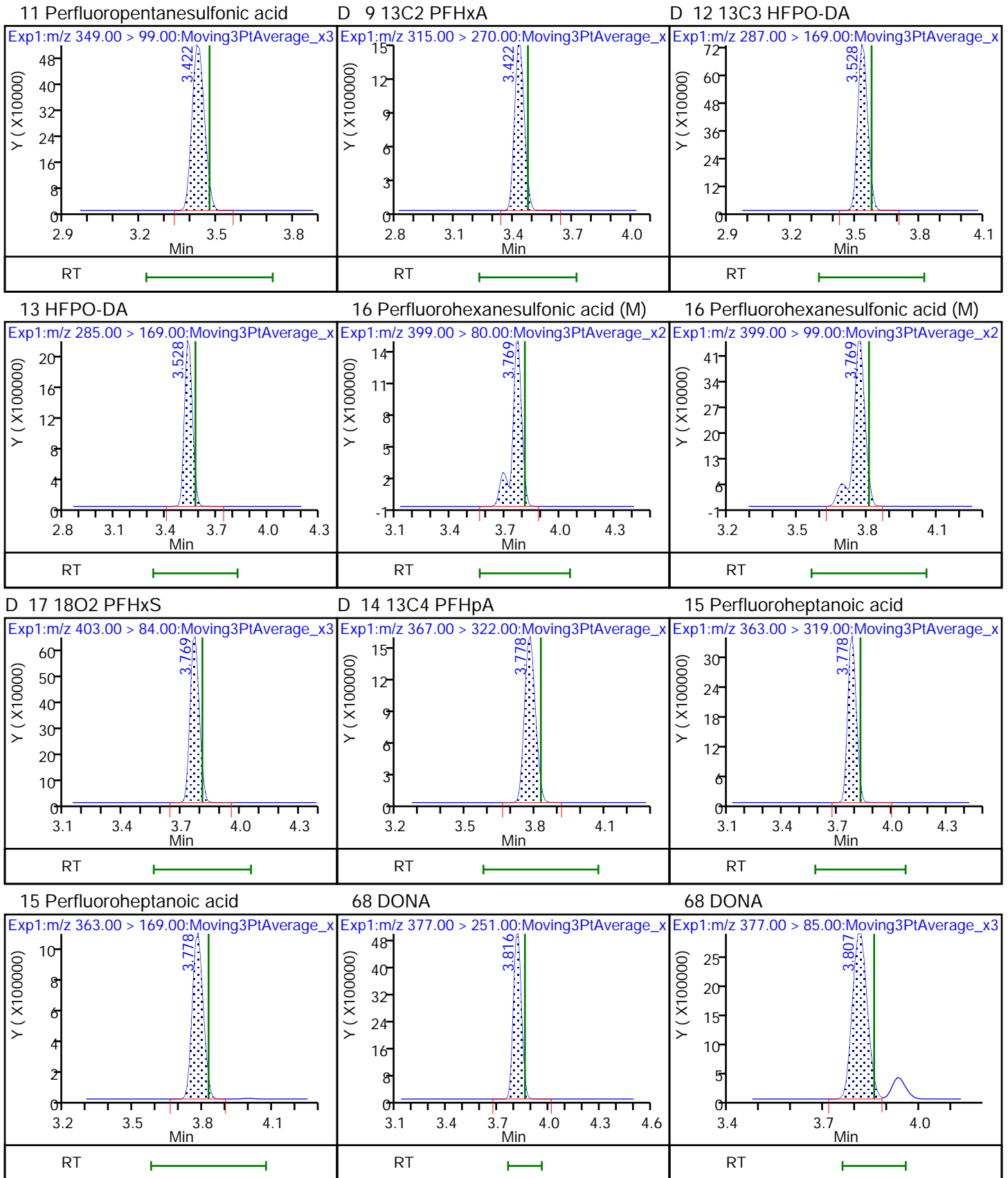
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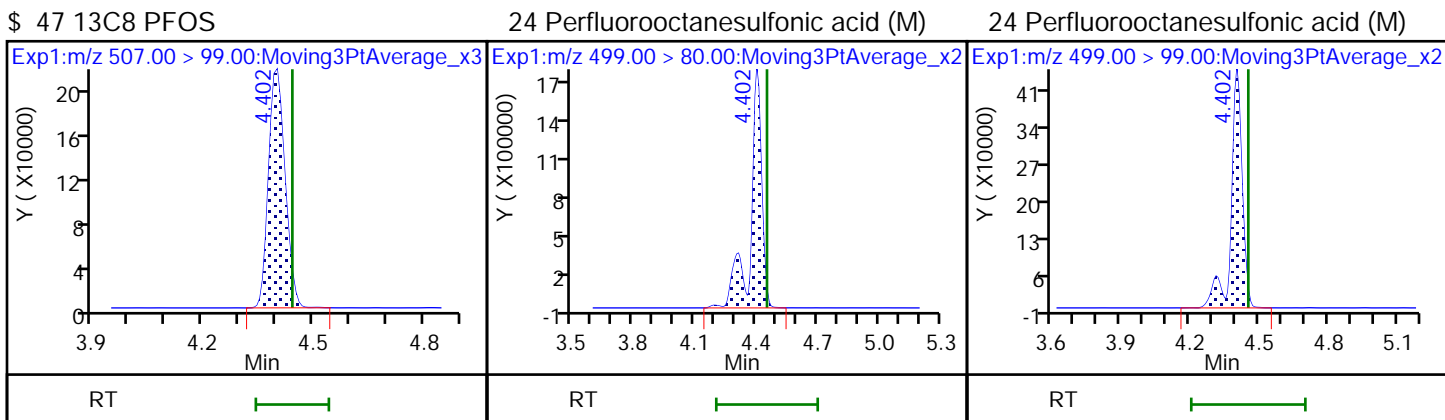
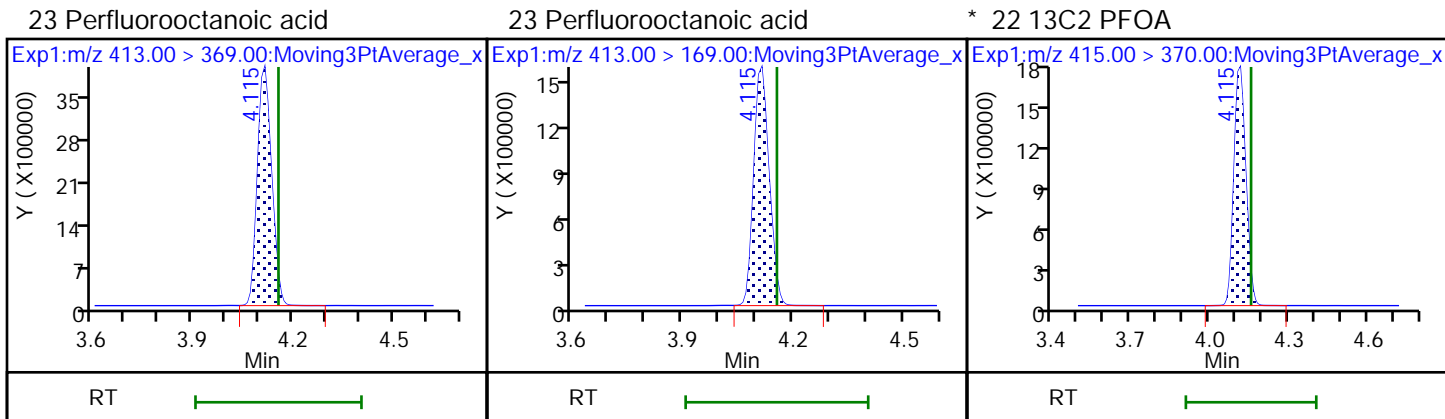
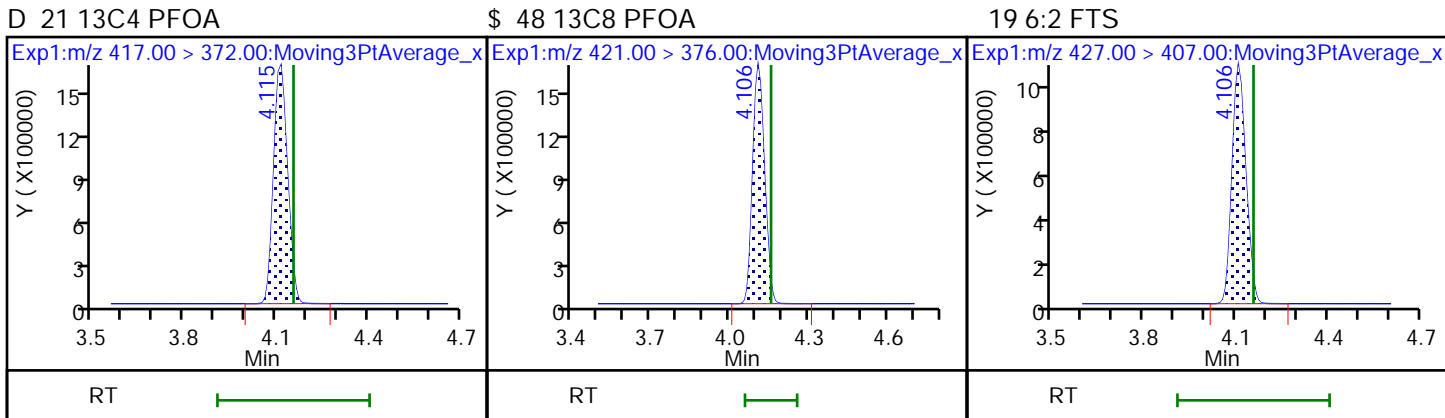
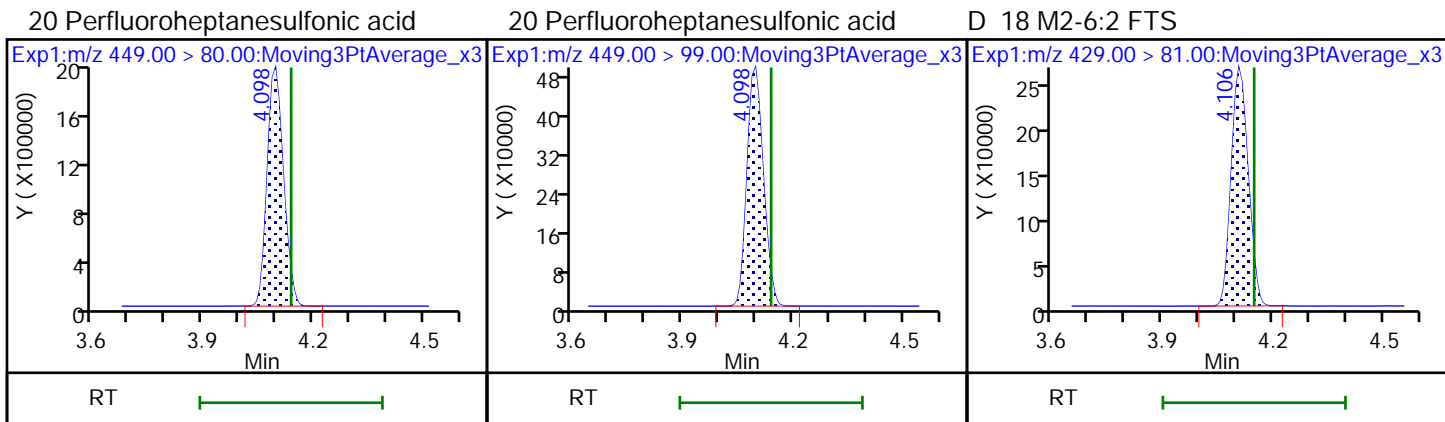
D 1 13C4 PFBA

2 Perfluorobutanoic acid

D 3 13C5 PFPeA



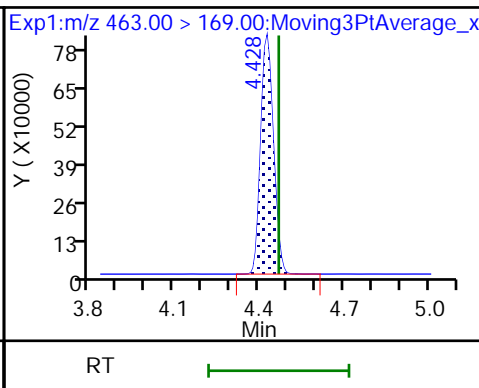
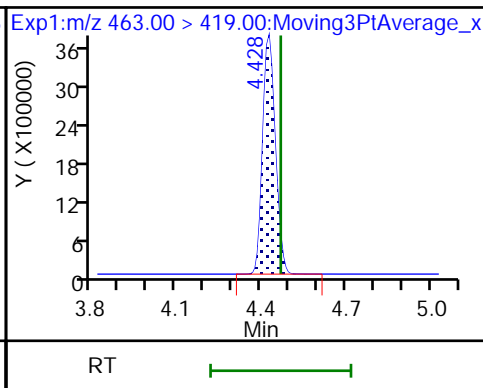
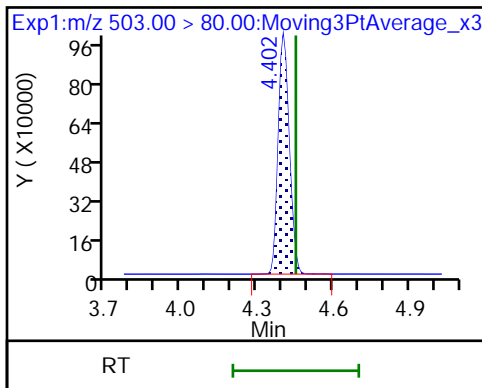




D 25 13C4 PFOS

26 Perfluorononanoic acid

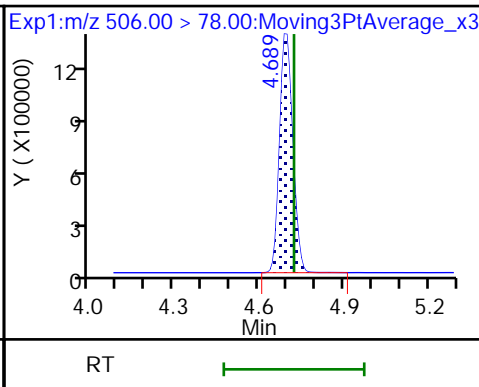
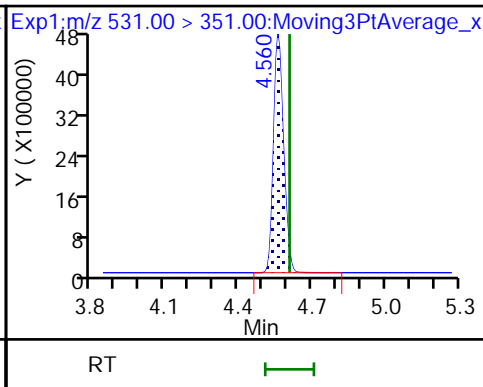
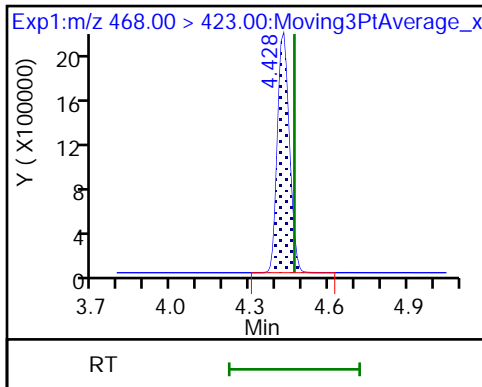
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS

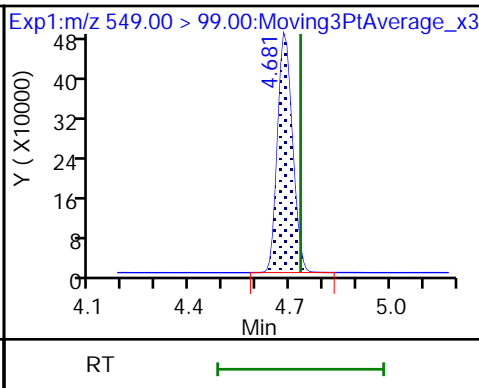
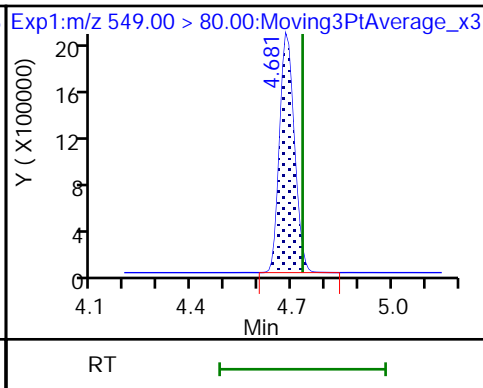
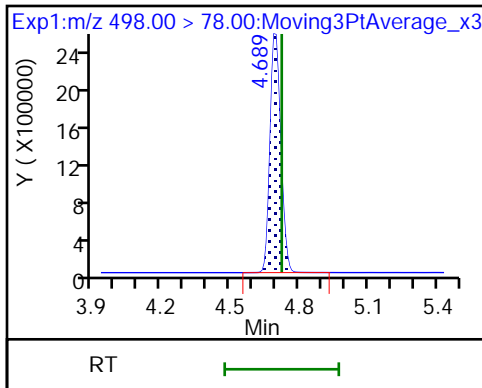
D 34 13C8 FOSA



33 Perfluorooctanesulfonamide

28 Perfluorononanesulfonic acid

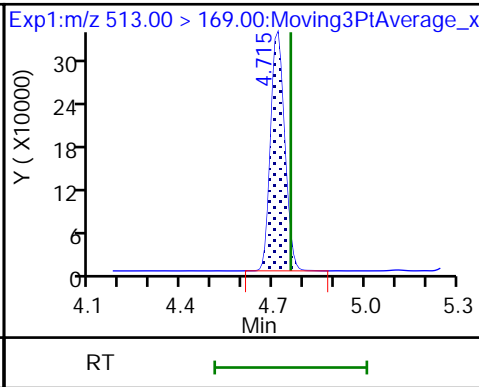
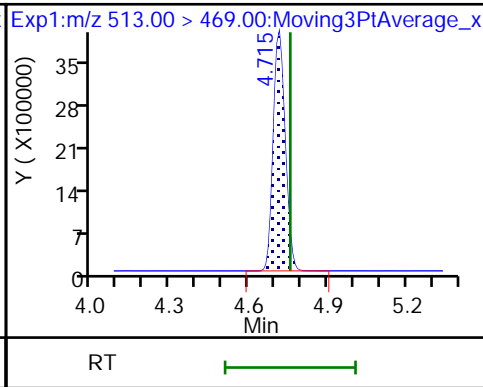
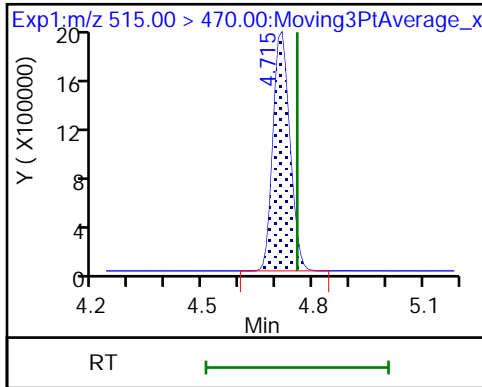
28 Perfluorononanesulfonic acid

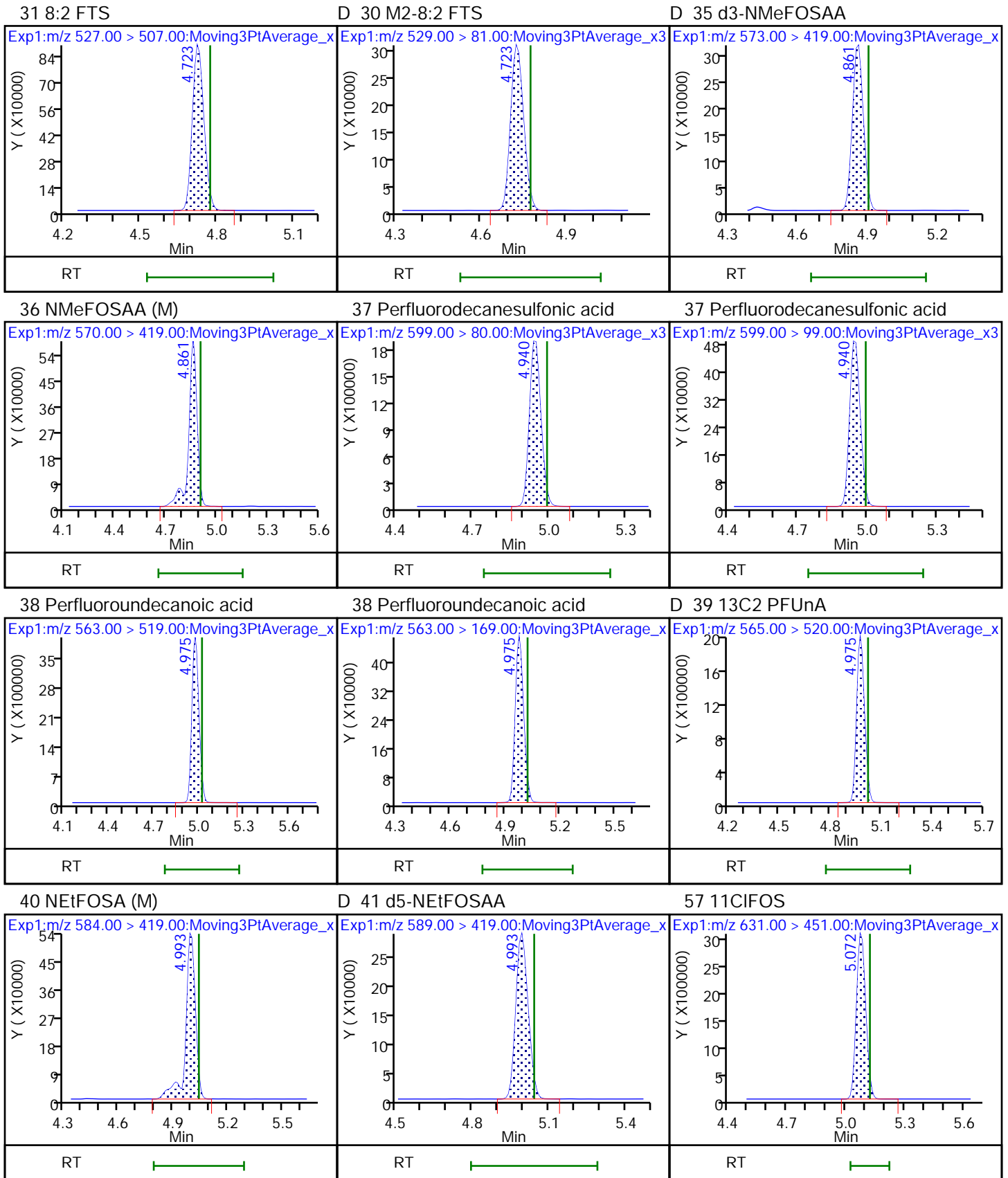


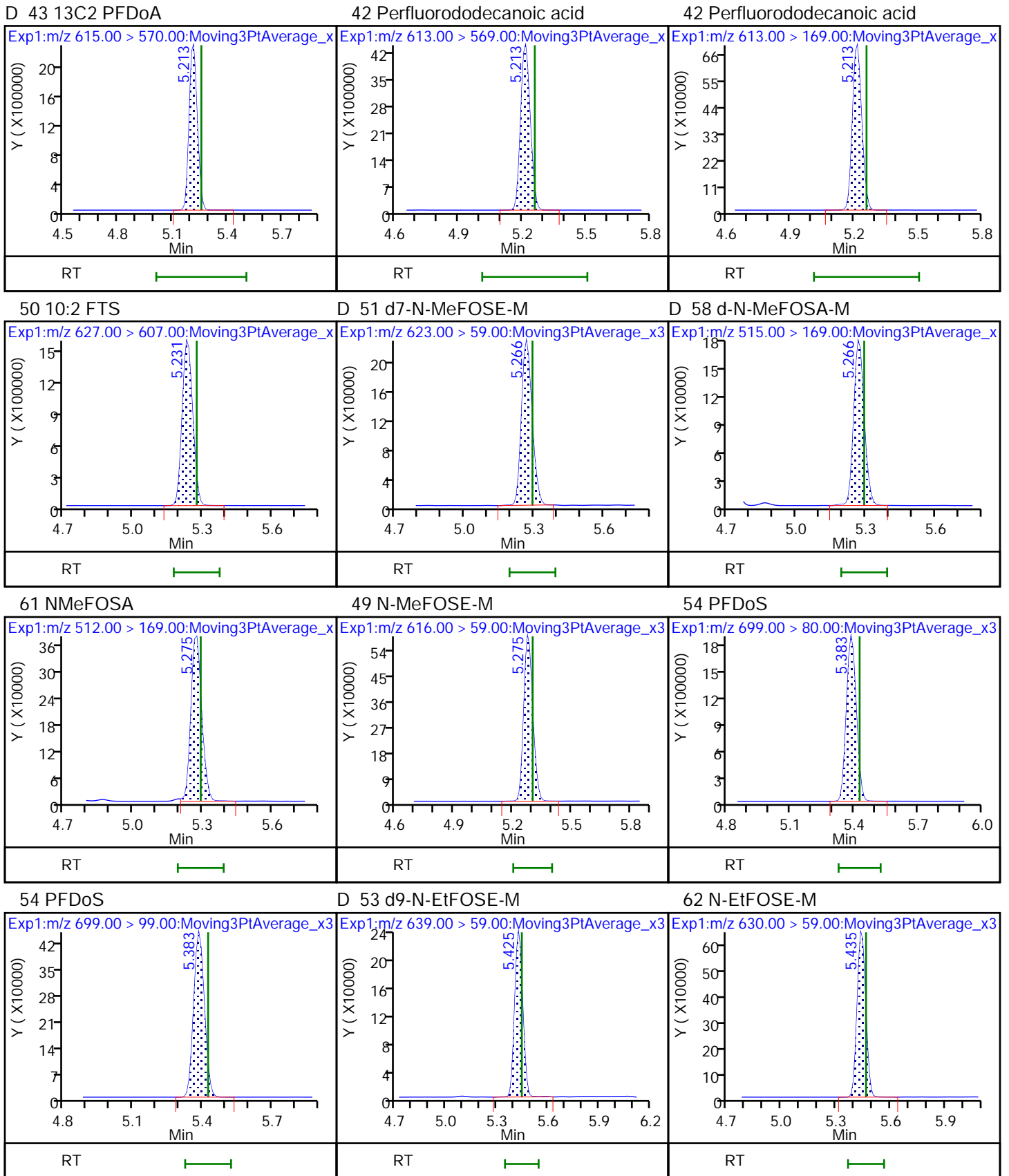
D 32 13C2 PFDA

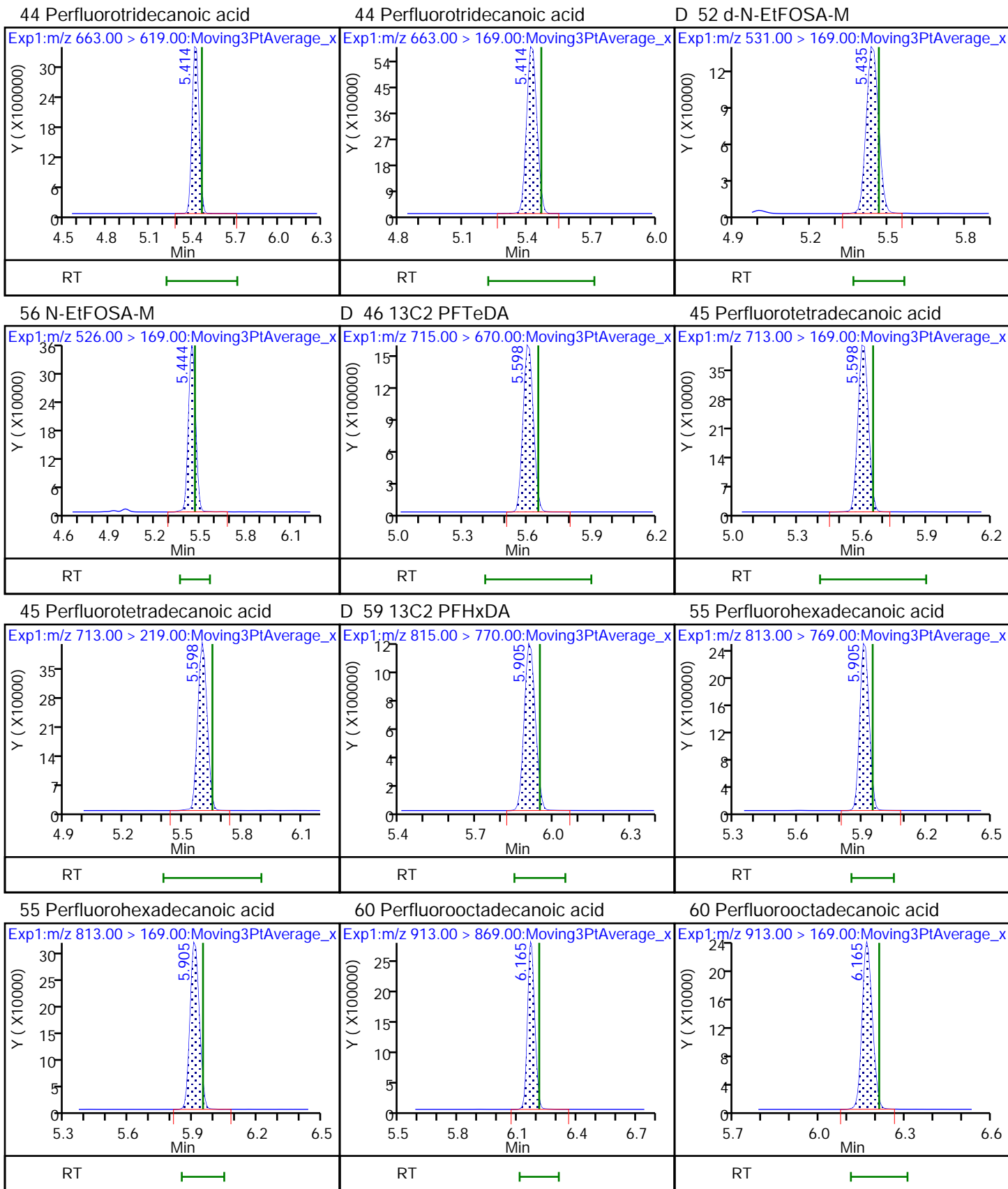
29 Perfluorodecanoic acid

29 Perfluorodecanoic acid













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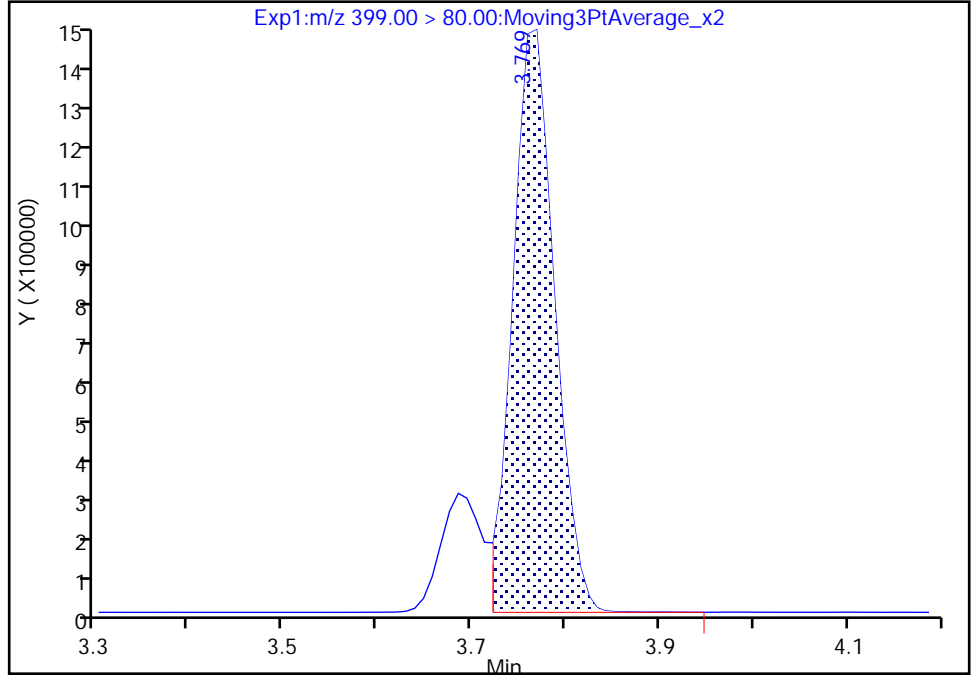
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Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

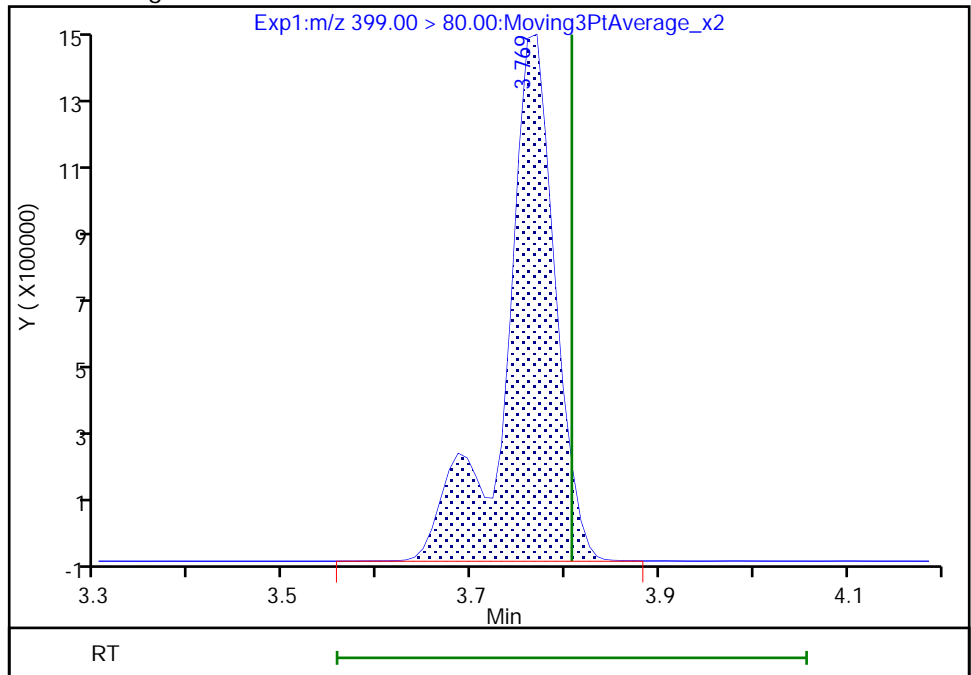
RT: 3.77  
Area: 4542952  
Amount: 1.857295  
Amount Units: ng/ml

Processing Integration Results



RT: 3.77  
Area: 5472581  
Amount: 2.237355  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 12-Jan-2022 18:41:47  
Audit Action: Manually Integrated

Eurofins TestAmerica, Knoxville

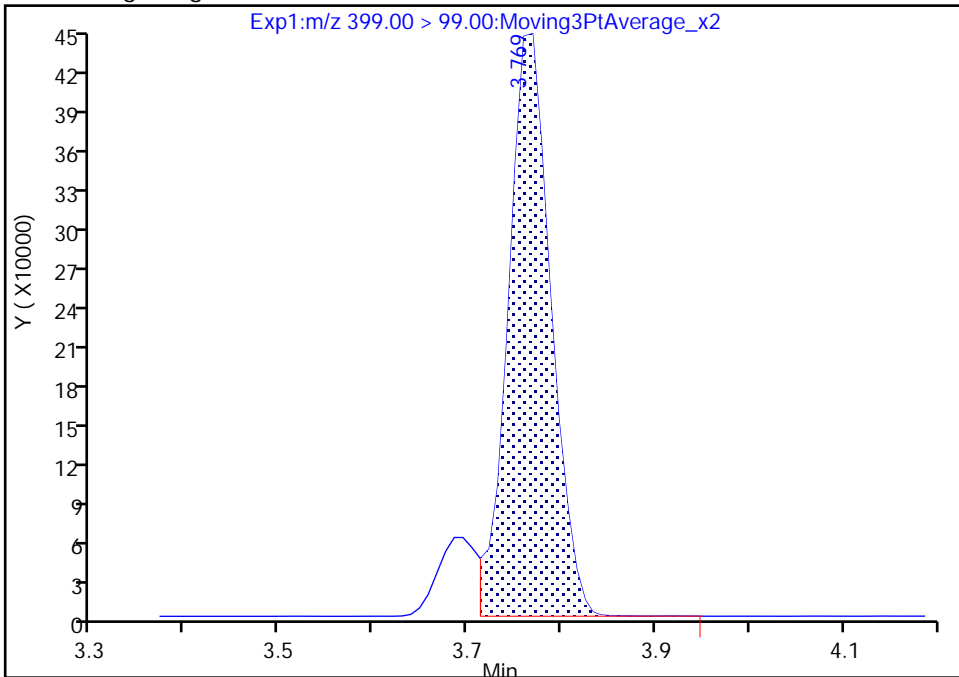
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Operator ID: Cochran, Bobby ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

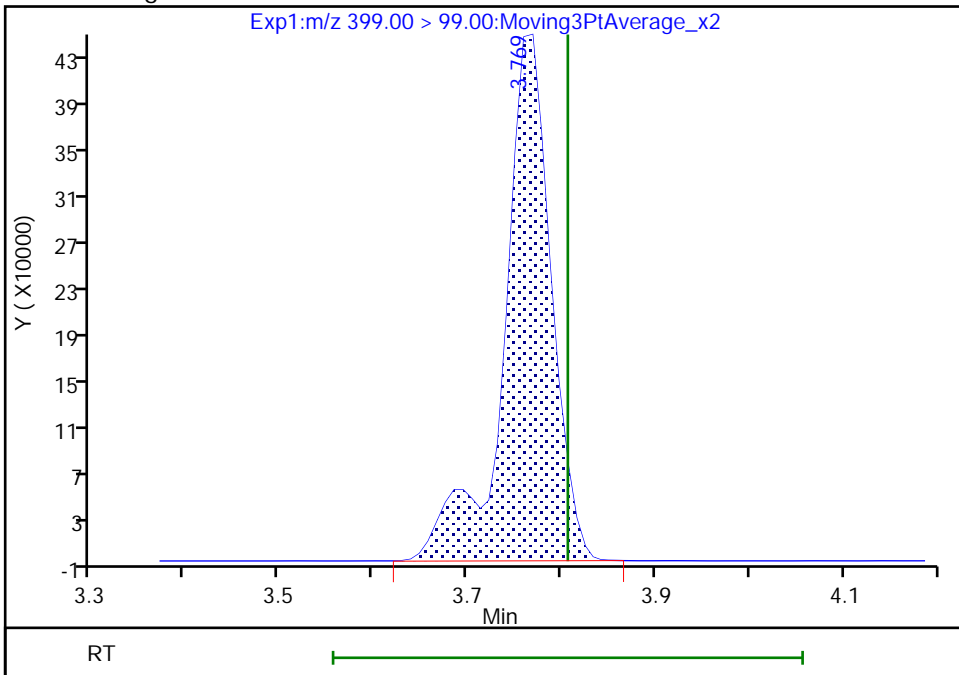
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Area: 1409292  
Amount: 1.857295  
Amount Units: ng/ml

Processing Integration Results



RT: 3.77  
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Amount: 2.237355  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 12-Jan-2022 18:41:52

Audit Action: Manually Integrated

Audit Reason: Baseline  
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Eurofins TestAmerica, Knoxville

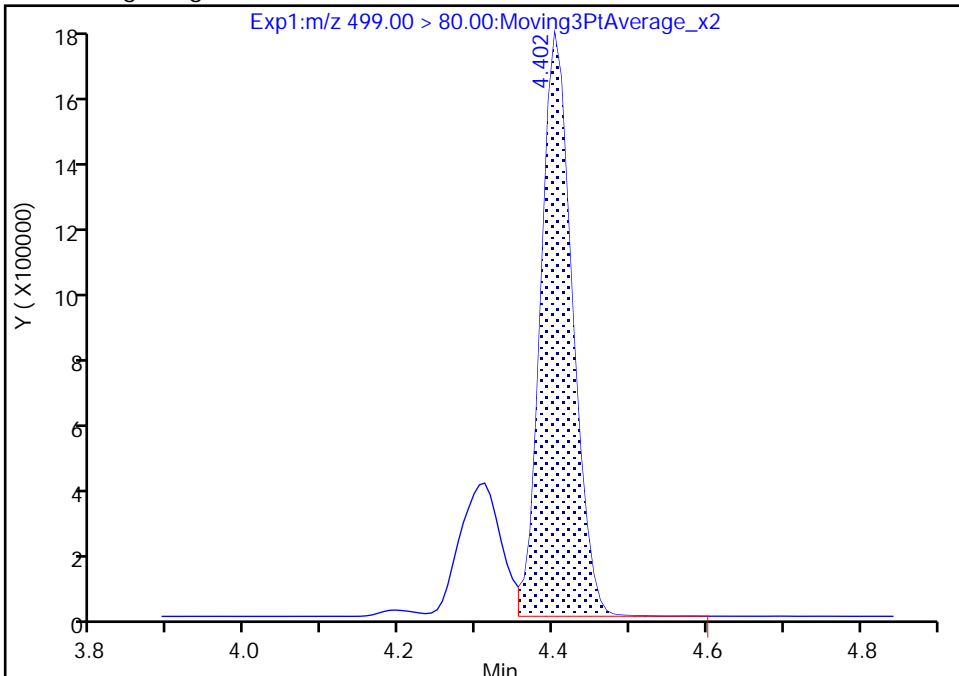
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Operator ID: Cochran, Bobby ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

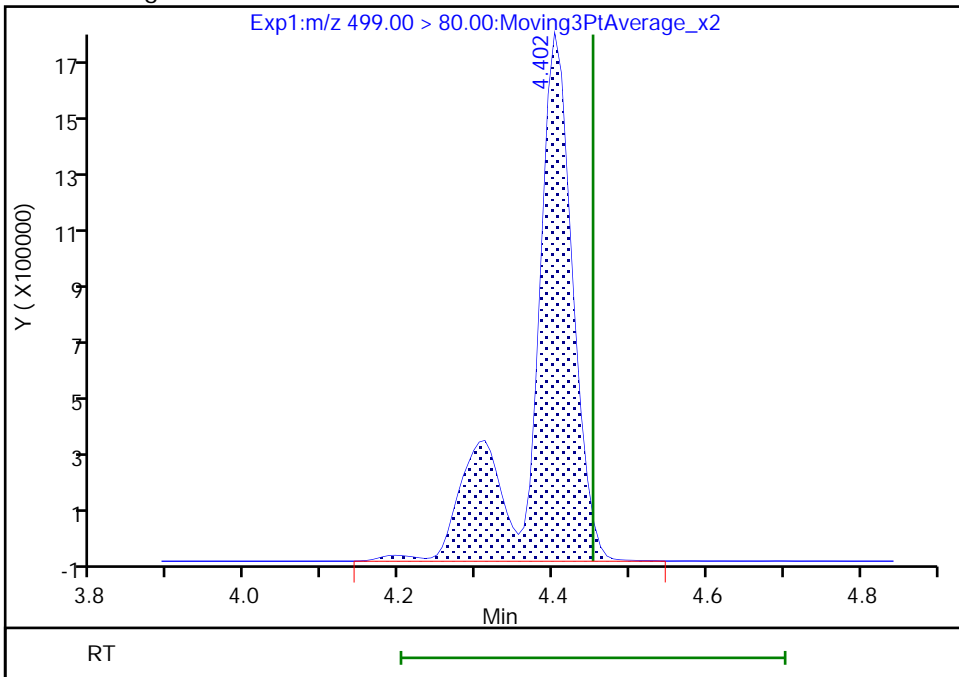
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Area: 4961460  
Amount: 1.806911  
Amount Units: ng/ml

Processing Integration Results



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Area: 6511310  
Amount: 2.371350  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 12-Jan-2022 18:42:04  
Audit Action: Manually Integrated

Eurofins TestAmerica, Knoxville

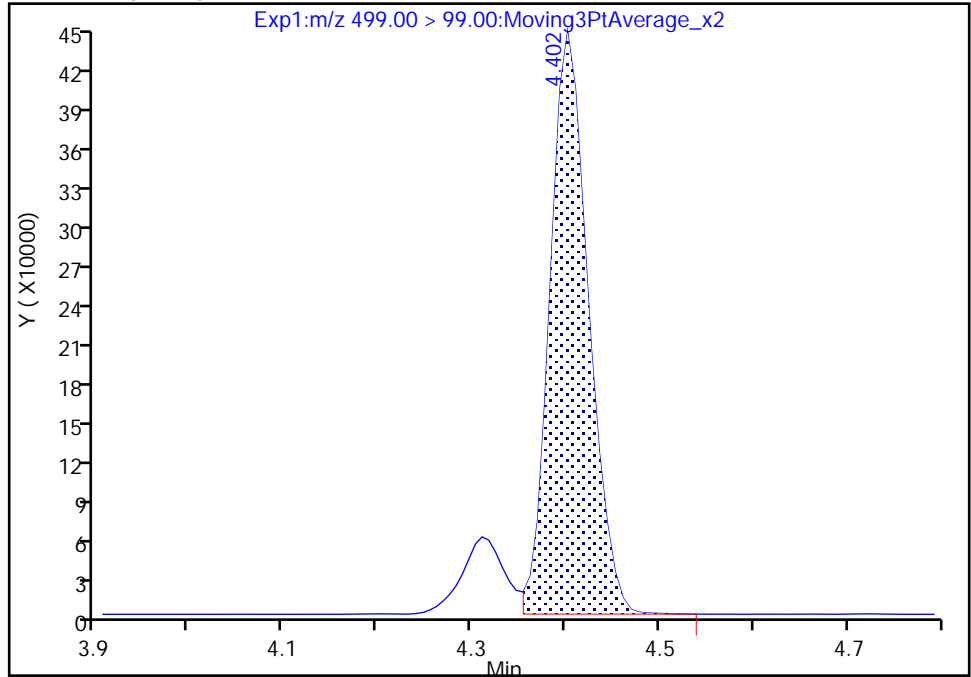
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Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

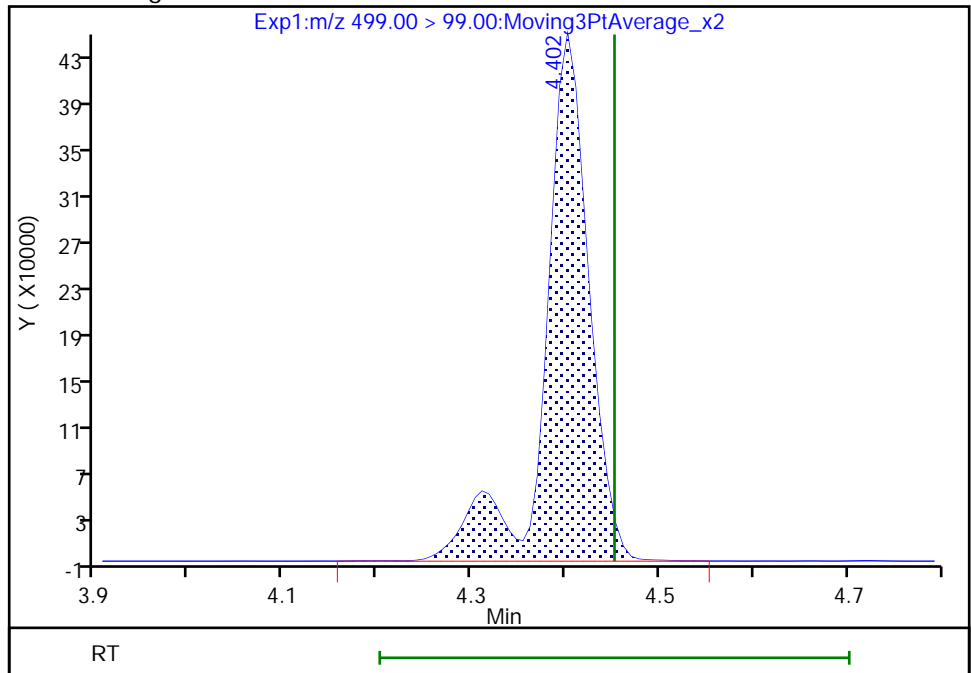
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Area: 1271982  
Amount: 1.806911  
Amount Units: ng/ml

Processing Integration Results



RT: 4.40  
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Amount: 2.371350  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 12-Jan-2022 18:42:12

Audit Action: Manually Integrated

Audit Reason: Baseline  
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01/17/2022

Eurofins TestAmerica, Knoxville

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Injection Date: 11-Jan-2022 19:33:44 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

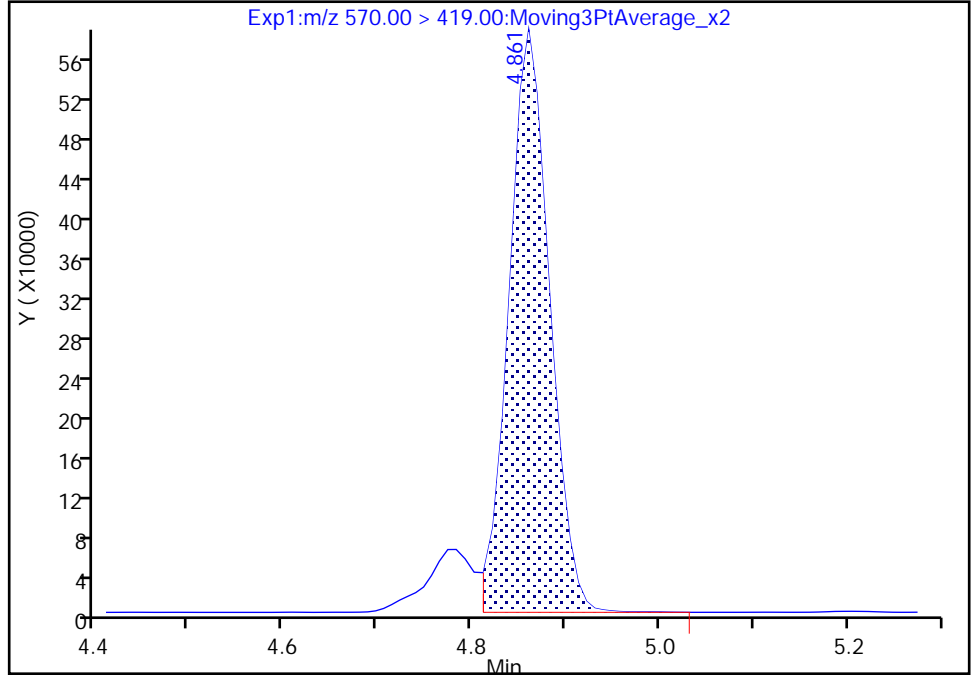
Worklist Smp#: 19

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

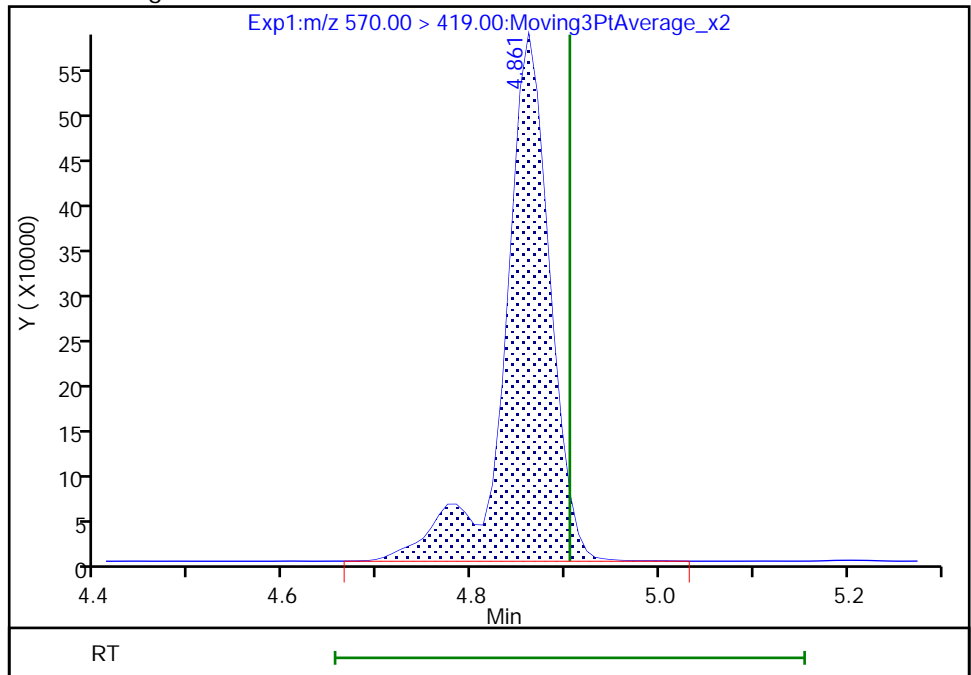
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Area: 1759883  
Amount: 2.215462  
Amount Units: ng/ml

Processing Integration Results



RT: 4.86  
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Amount: 2.500945  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 12-Jan-2022 18:42:23  
Audit Action: Manually Integrated

Eurofins TestAmerica, Knoxville

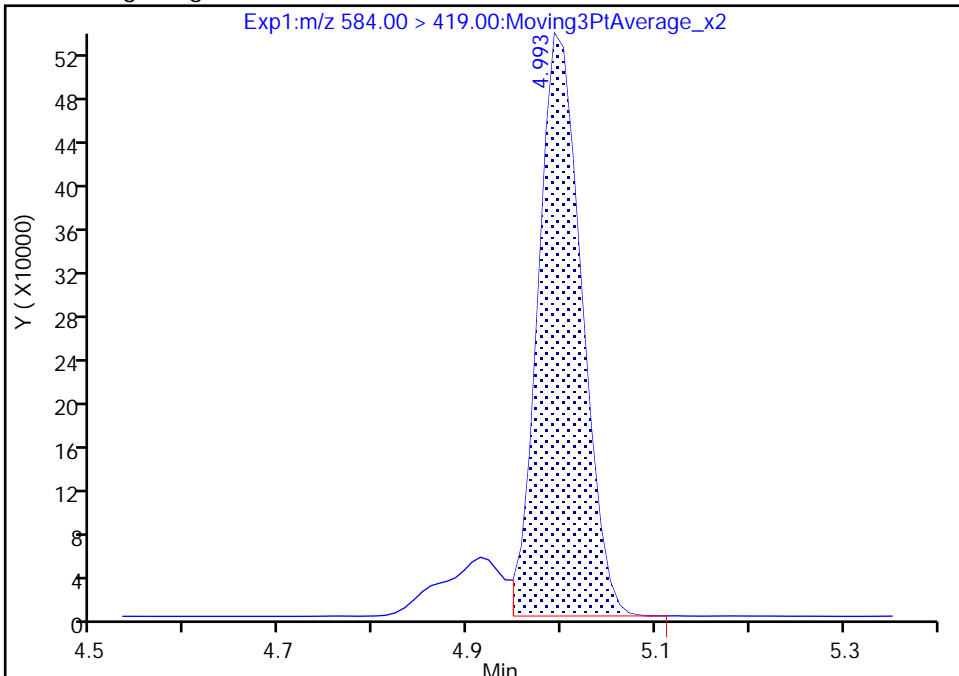
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Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

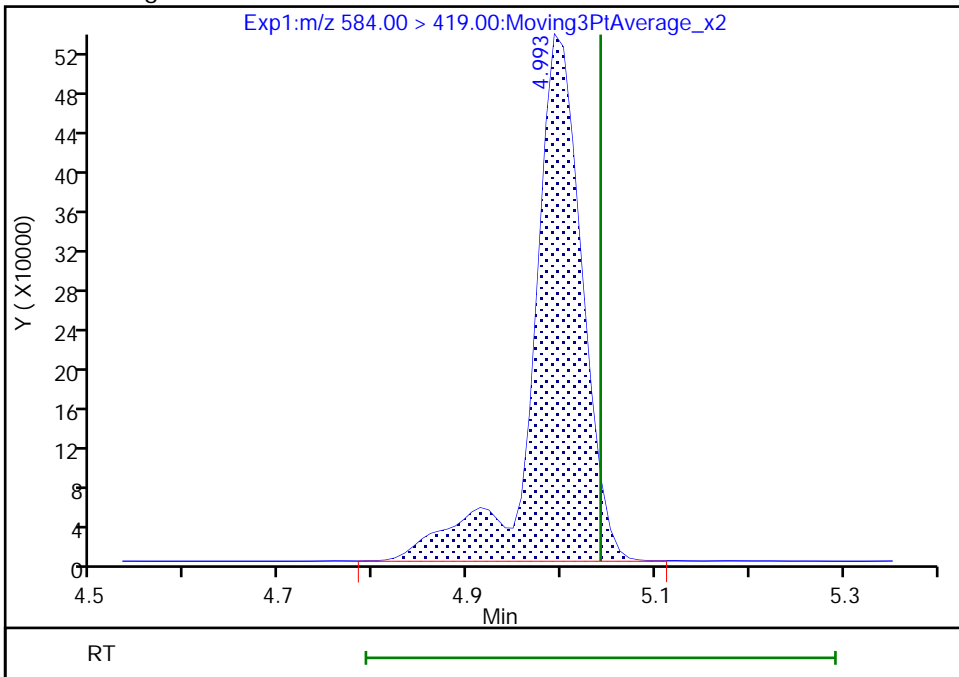
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Area: 1704804  
Amount: 2.217046  
Amount Units: ng/ml

Processing Integration Results



RT: 4.99  
Area: 1956125  
Amount: 2.540519  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 12-Jan-2022 18:42:35  
Audit Action: Manually Integrated

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVL 140-57865/6 Calibration Date: 01/12/2022 18:27  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 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	0.7844	0.7503		0.0478	0.0500	-4.3	50.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9519	0.9712		0.0510	0.0500	2.0	50.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.097	1.087		0.0438	0.0442	-0.9	50.0
4:2 FTS	AveID	2.252	2.386		0.0495	0.0467	5.9	50.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8680	0.9096		0.0524	0.0500	4.8	50.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	0.9713	0.9646		0.0466	0.0469	-0.7	50.0
HFPO-DA	AveID	1.352	1.420		0.0525	0.0500	5.0	50.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.377	1.431		0.0473	0.0455	3.9	50.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.047	1.056		0.0504	0.0500	0.9	50.0
DONA	AveID	2.630	2.572		0.0461	0.0471	-2.2	50.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9541	0.9712		0.0485	0.0476	1.8	50.0
6:2 FTS	L2ID		1.628		0.0452	0.0474	-4.6	50.0
Perfluorooctanoic acid (PFOA)	AveID	1.147	1.230		0.0536	0.0500	7.2	50.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.099	1.066		0.0450	0.0464	-3.0	50.0
Perfluorononanoic acid (PFNA)	Q2ID		0.8953		0.0551	0.0500	10.1	50.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	Q2ID		2.070		0.0474	0.0466	1.8	50.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9748	0.9675		0.0476	0.0480	-0.8	50.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9459	0.9446		0.0499	0.0500	-0.1	50.0
Perfluorodecanoic acid (PFDA)	AveID	0.9645	0.9587		0.0497	0.0500	-0.6	50.0
8:2 FTS	AveID	1.415	1.528		0.0517	0.0479	8.0	50.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	QuaIF		0.9051		0.0466	0.0500	-6.7	50.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		0.8455		0.0466	0.0482	-3.3	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9695	0.9530		0.0492	0.0500	-1.7	50.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Q2ID		0.8473		0.0429	0.0500	-14.1	50.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.672	1.622		0.0457	0.0471	-3.0	50.0
Perfluorododecanoic acid (PFDoA)	Q2ID		1.006		0.0486	0.0500	-2.8	50.0
10:2 FTS	AveID	2.276	2.420		0.0512	0.0482	6.3	50.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	Q2ID		1.040		0.0483	0.0500	-3.5	50.0
NMeFOSA	Q2ID		0.8899		0.0422	0.0500	-15.6	50.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9166	0.8693		0.0459	0.0484	-5.2	50.0



FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVL 140-57865/6 Calibration Date: 01/12/2022 18:27  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 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	AveID	1.328	1.115		0.0420	0.0500	-16.1	50.0
Perfluorotridecanoic acid (PFTriA)	AveID	0.8292	0.8251		0.0498	0.0500	-0.5	50.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.195	1.253		0.0524	0.0500	4.9	50.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1344	0.1233		0.0459	0.0500	-8.2	50.0
Perfluorohexadecanoic acid	Q2ID		1.266		0.0492	0.0500	-1.5	50.0
Perfluorooctadecanoic acid	AveID	0.9844	0.9756		0.0496	0.0500	-0.9	50.0
13C4 PFBA	Ave	1.142	1.089		1.19	1.25	-4.6	50.0
13C5 PFPeA	Ave	0.8865	0.8586		1.21	1.25	-3.2	50.0
13C3 PFBS	Ave	0.5913	0.5788		1.14	1.16	-2.1	50.0
M2-4:2 FTS	Ave	0.1820	0.1907		1.22	1.17	4.8	50.0
13C2 PFHxA	Ave	0.9479	0.9257		1.22	1.25	-2.3	50.0
13C3 HFPO-DA	Ave	0.4556	0.4409		1.21	1.25	-3.2	50.0
18O2 PFHxS	Ave	0.3946	0.4120		1.24	1.18	4.4	50.0
13C4 PFHpA	Ave	0.9067	0.9210		1.27	1.25	1.6	50.0
13C4 PFOA	Ave	0.9376	0.9546		1.27	1.25	1.8	50.0
M2-6:2 FTS	Ave	0.1835	0.1864		1.21	1.19	1.6	50.0
13C4 PFOS	Ave	0.5681	0.5820		1.22	1.20	2.4	50.0
13C5 PFNA	Ave	1.234	1.215		1.23	1.25	-1.5	50.0
13C8 FOSA	Ave	0.7682	0.8266		1.35	1.25	7.6	50.0
13C2 PFDA	Ave	1.191	1.231		1.29	1.25	3.4	50.0
M2-8:2 FTS	Ave	0.2070	0.1994		1.15	1.20	-3.7	50.0
d3-NMeFOSAA	Ave	0.1401	0.1816		1.62	1.25	29.6	50.0
13C2 PFUnA	Ave	1.189	1.275		1.34	1.25	7.2	50.0
d5-NEtFOSAA	Ave	0.1537	0.2017		1.64	1.25	31.2	50.0
13C2 PFDoA	Ave	1.247	1.275		1.28	1.25	2.2	50.0
d7-N-MeFOSE-M	Ave	0.1499	0.1464		1.22	1.25	-2.4	50.0
d-N-MeFOSA-M	Ave	0.1069	0.1047		1.22	1.25	-2.1	50.0
d9-N-EtFOSE-M	Ave	0.1504	0.1564		1.30	1.25	4.0	50.0
d-N-EtFOSA-M	Ave	0.0883	0.0862		1.22	1.25	-2.3	50.0
13C2 PFTeDA	Ave	0.9508	0.9357		1.23	1.25	-1.6	50.0
13C2 PFHxDA	Ave	0.6444	0.6153		1.19	1.25	-4.5	50.0
13C8 PFOA	AveID	0.999	1.048		1.31	1.25	4.8	50.0
13C8 PFOS	AveID	0.2220	0.2300		1.24	1.20	3.6	50.0

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_006.d  
 Lims ID: CCVL  
 Client ID:  
 Sample Type: CCVL  
 Inject. Date: 12-Jan-2022 18:27:00 ALS Bottle#: 6 Worklist Smp#: 6  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022237-006 ccvl  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:15:12 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 12-Jan-2022 19:11:33

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										
212.90 > 169.00	2.808	2.802	0.006	1.000	171286	0.0478		95.7	35.9	
D 1 13C4 PFBA										
217.00 > 172.00	2.808	2.802	0.006	0.678	5706952	1.19		95.4	14675	
D 3 13C5 PFPeA										
267.90 > 223.00	3.123	3.116	0.007	0.754	4499691	1.21		96.8	10415	
4 Perfluoropentanoic acid										
262.90 > 219.00	3.123	3.116	0.007	1.000	174812	0.0510		102	74.5	
D 6 13C3 PFBS										
301.90 > 80.00	3.132	3.132	0.0	0.756	2821286	1.14		97.9	12485	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	3.140	3.132	0.008	1.003	116650	0.0438	Target=2.65	99.1	965	
298.90 > 99.00	3.140	3.132	0.008	1.003	42754		2.73(1.32-3.97)		308	
D 8 M2-4:2 FTS										
329.00 > 81.00	3.423	3.423	0.0	0.827	933274	1.22		105	1727	
7 4:2 FTS										
327.00 > 307.00	3.423	3.423	0.0	1.000	89076	0.0495		106	1547	
11 Perfluoropentanesulfonic acid										
349.00 > 80.00	3.453	3.444	0.009	1.103	109796	0.0466	Target=3.44	99.3	370	
349.00 > 99.00	3.453	3.444	0.009	1.103	34403		3.19(1.72-5.16)		468	
D 9 13C2 PFHxA										
315.00 > 270.00	3.453	3.444	0.009	0.834	4851360	1.22		97.7	11071	
10 Perfluorohexanoic acid										
313.00 > 269.00	3.453	3.444	0.009	1.000	176504	0.0524	Target=11.80	105	90.8	
313.00 > 119.00	3.453	3.444	0.009	1.000	14199		12.43(5.90-17.70)		19.4	
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.557	3.548	0.009	0.859	2310692	1.21		96.8	5274	

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	3.557	3.548	0.009	1.000	131249	0.0525		105	159	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.798	3.789	0.009	1.000	112500	0.0473	Target=3.40	104	703	M
399.00 > 99.00	3.798	3.789	0.009	1.000	31737		3.54(1.70-5.10)		211	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.798	3.789	0.009	0.917	2042844	1.23		104	8200	
D 14 13C4 PFHpA										
367.00 > 322.00	3.808	3.799	0.009	0.920	4826831	1.27		102	9741	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.808	3.799	0.009	1.000	203845	0.0504	Target=3.29	101	154	
363.00 > 169.00	3.808	3.799	0.009	1.000	60927		3.35(1.65-4.94)		177	
68 DONA										
377.00 > 251.00	3.841	3.834	0.007	0.866	295653	0.0461	Target=1.82	97.8	1013	
377.00 > 85.00	3.841	3.834	0.007	0.866	157593		1.88(0.91-2.74)		126	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.131	4.115	0.016	0.931	112811	0.0485	Target=3.92	102	603	
449.00 > 99.00	4.131	4.115	0.016	0.931	25548		4.42(1.96-5.87)		202	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.140	4.132	0.008	1.000	928260	1.21		102	2113	
D 21 13C4 PFOA										
417.00 > 372.00	4.140	4.132	0.008	1.000	5002903	1.27		102	12715	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.140	4.132	0.008	1.000	5242088	1.31		105	6478	
19 6:2 FTS										
427.00 > 407.00	4.140	4.132	0.008	1.000	60316	0.0452		95.4	409	
* 22 13C2 PFOA										
415.00 > 370.00	4.140	4.132	0.008		5241011	1.25			9718	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.140	4.132	0.008	1.000	246043	0.0536	Target=2.59	107	172	
413.00 > 169.00	4.140	4.132	0.008	1.000	91692		2.68(1.30-3.89)		187	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.435	4.419	0.016	1.000	670803	1.24		104	3421	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.435	4.428	0.007	1.000	120698	0.0450	Target=4.65	97.0	456	M
499.00 > 99.00	4.435	4.428	0.007	1.000	24889		4.85(2.32-6.97)		181	M
D 25 13C4 PFOS										
503.00 > 80.00	4.435	4.428	0.007	1.071	2915990	1.22		102	5623	
26 Perfluorononanoic acid										
463.00 > 419.00	4.461	4.445	0.016	1.000	228056	0.0551	Target=4.65	110	248	
463.00 > 169.00	4.461	4.445	0.016	1.000	45957		4.96(2.32-6.97)		122	
D 27 13C5 PFNA										
468.00 > 423.00	4.461	4.445	0.016	1.077	6368200	1.23		98.5	8888	
63 9CIFOS										
531.00 > 351.00	4.594	4.581	0.013	1.036	235383	0.0474		102	1238	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.715	4.706	0.009	1.000	163681	0.0499		99.9	613	

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	4.715	4.706	0.009	1.063	113316	0.0476	Target=4.06	99.2	682	
549.00 > 99.00	4.715	4.706	0.009	1.063	27377		4.14(2.03-6.09)		286	
D 34 13C8 FOSA										
506.00 > 78.00	4.715	4.706	0.009	1.139	4332002	1.34		108	4964	
D 32 13C2 PFDA										
515.00 > 470.00	4.749	4.732	0.017	1.147	6452439	1.29		103	10420	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.749	4.732	0.017	1.000	247428	0.0497	Target=11.30	99.4	237	
513.00 > 169.00	4.749	4.732	0.017	1.000	25008		9.89(5.65-16.95)		74.0	
31 8:2 FTS										
527.00 > 507.00	4.757	4.749	0.008	1.000	61180	0.0517		108	546	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.757	4.749	0.008	1.149	1001062	1.15		96.3	1586	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.887	4.878	0.009	1.180	951876	1.62		130	3667	
36 NMeFOSAA										
570.00 > 419.00	4.896	4.887	0.009	1.002	34462	0.0466		93.3	61.3	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.975	4.966	0.009	1.122	99447	0.0466	Target=3.79	96.7	442	
599.00 > 99.00	4.975	4.966	0.009	1.122	24684		4.03(1.90-5.69)		249	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.012	5.002	0.010	1.000	254703	0.0492	Target=8.45	98.3	425	
563.00 > 169.00	5.012	5.002	0.010	1.000	26058		9.77(4.22-12.67)		105	
D 39 13C2 PFUnA										
565.00 > 520.00	5.012	5.002	0.010	1.210	6681322	1.34		107	10418	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.022	5.012	0.010	1.213	1057275	1.64		131	3840	
40 NEtFOSA										
584.00 > 419.00	5.032	5.022	0.010	1.002	35832	0.0429		85.9	157	M
57 11CIFOS										
631.00 > 451.00	5.112	5.102	0.010	1.153	186428	0.0457		97.0	1417	
D 43 13C2 PFDoA										
615.00 > 570.00	5.248	5.231	0.017	1.268	6681838	1.28		102	13235	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.248	5.231	0.017	1.000	268758	0.0486	Target=6.99	97.2	292	
613.00 > 169.00	5.248	5.231	0.017	1.000	37191		7.23(3.50-10.49)		81.8	
50 10:2 FTS										
627.00 > 607.00	5.266	5.257	0.009	1.107	97513	0.0512		106	480	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.284	5.275	0.009	1.276	767120	1.22		97.6	585	
49 N-MeFOSE-M										
616.00 > 59.00	5.292	5.284	0.008	1.002	31901	0.0483		96.5	44.2	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.284	5.284	0.0	1.276	548472	1.22		97.9	45.8	
61 NMeFOSA										
512.00 > 169.00	5.292	5.284	0.008	1.002	19524	0.0422		84.4	130	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
54 PFDoS										
699.00 > 80.00	5.414	5.404	0.010	1.221	102668	0.0459	Target=4.24	94.8	431	
699.00 > 99.00	5.414	5.404	0.010	1.221	24799		4.14(2.12-6.35)		226	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.444	5.435	0.009	1.315	819694	1.30		104	448	
62 N-EtFOSE-M										
630.00 > 59.00	5.454	5.445	0.009	1.002	36551	0.0420		83.9	40.1	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.454	5.445	0.009	1.039	220532	0.0498	Target=6.20	99.5	331	
663.00 > 169.00	5.454	5.445	0.009	1.039	35254		6.26(3.10-9.30)		201	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.454	5.445	0.009	1.317	451889	1.22		97.7	669	
56 N-EtFOSA-M										
526.00 > 169.00	5.464	5.455	0.009	1.002	22657	0.0524		105	191	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.640	5.629	0.011	1.362	4904125	1.23		98.4	10556	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.629	5.629	0.0	0.998	24196	0.0459	Target=1.05	91.8	129	
713.00 > 219.00	5.629	5.629	0.0	0.998	21654		1.12(0.53-1.58)		121	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.939	5.931	0.008	1.435	3224633	1.19		95.5	5584	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.939	5.931	0.008	1.000	163260	0.0492	Target=8.09	98.5	404	
813.00 > 169.00	5.939	5.931	0.008	1.000	20033		8.15(4.05-12.14)		57.6	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.199	6.195	0.004	1.044	125835	0.0496	Target=11.53	99.1	395	
913.00 > 169.00	6.199	6.195	0.004	1.044	10787		11.67(5.77-17.30)		54.1	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

63L2PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\\_006.d

Injection Date: 12-Jan-2022 18:27:00

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

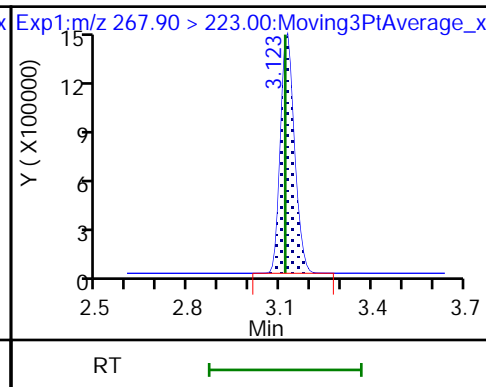
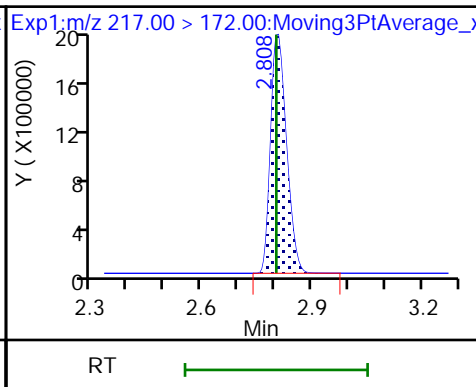
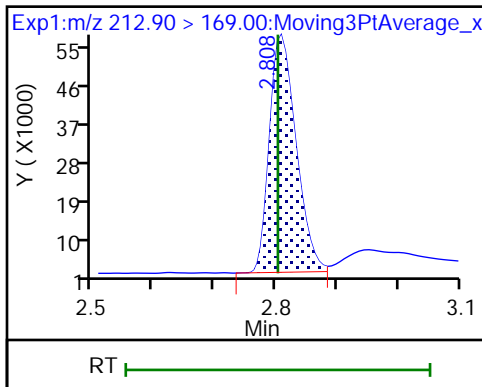
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

2 Perfluorobutanoic acid

D 1 13C4 PFBA

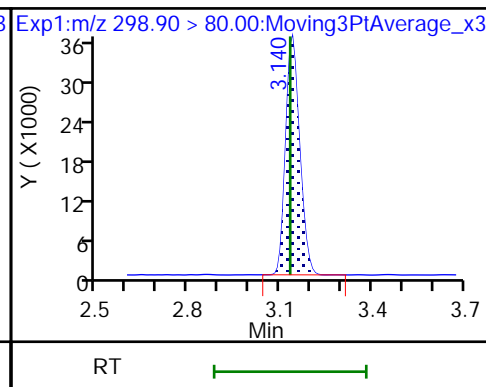
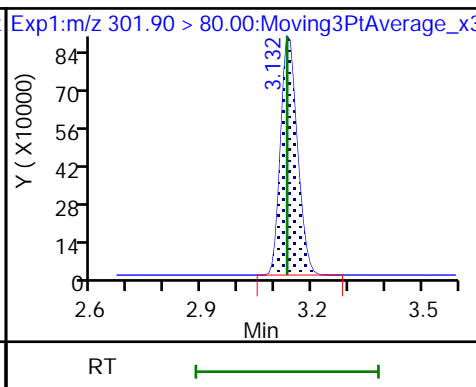
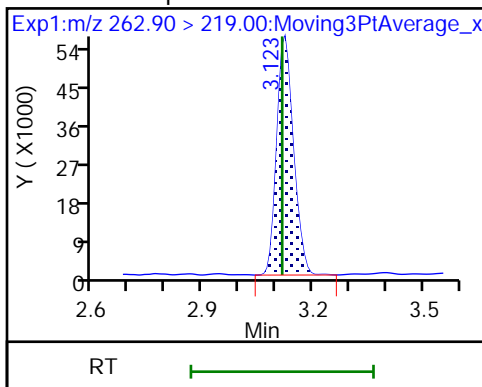
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

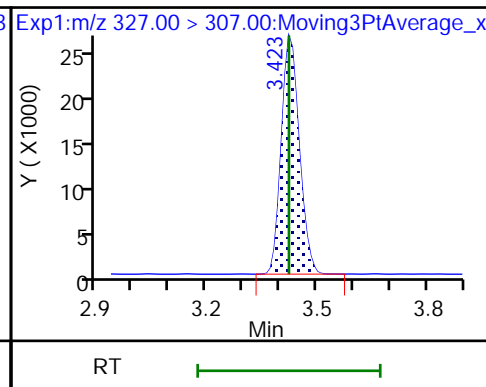
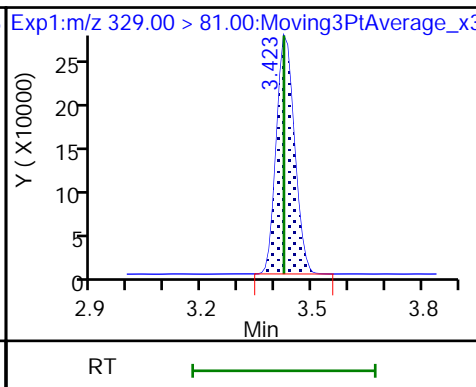
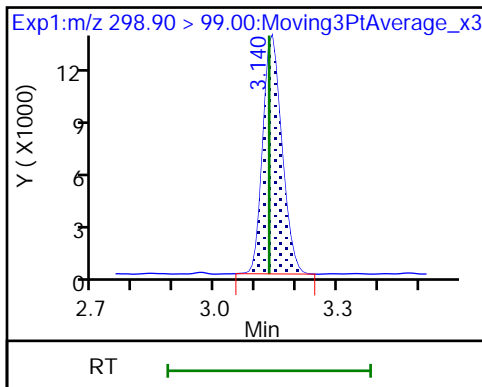
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

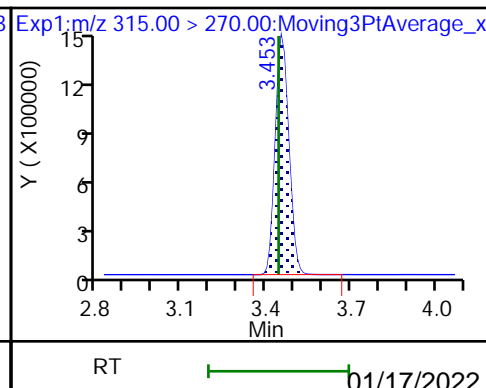
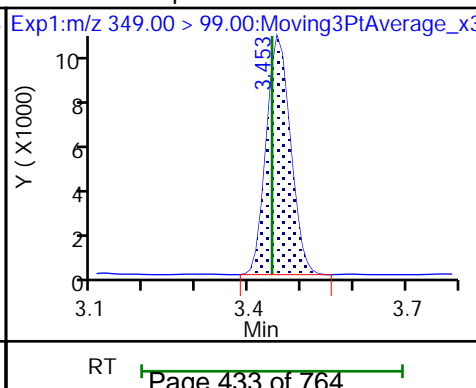
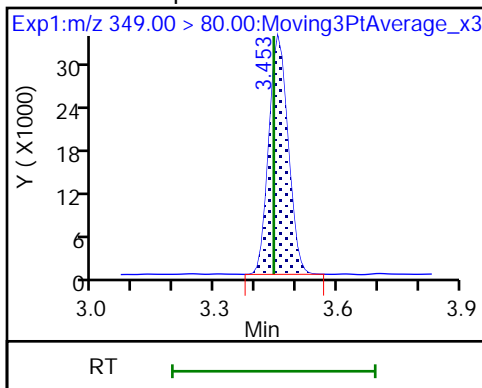
7 4:2 FTS

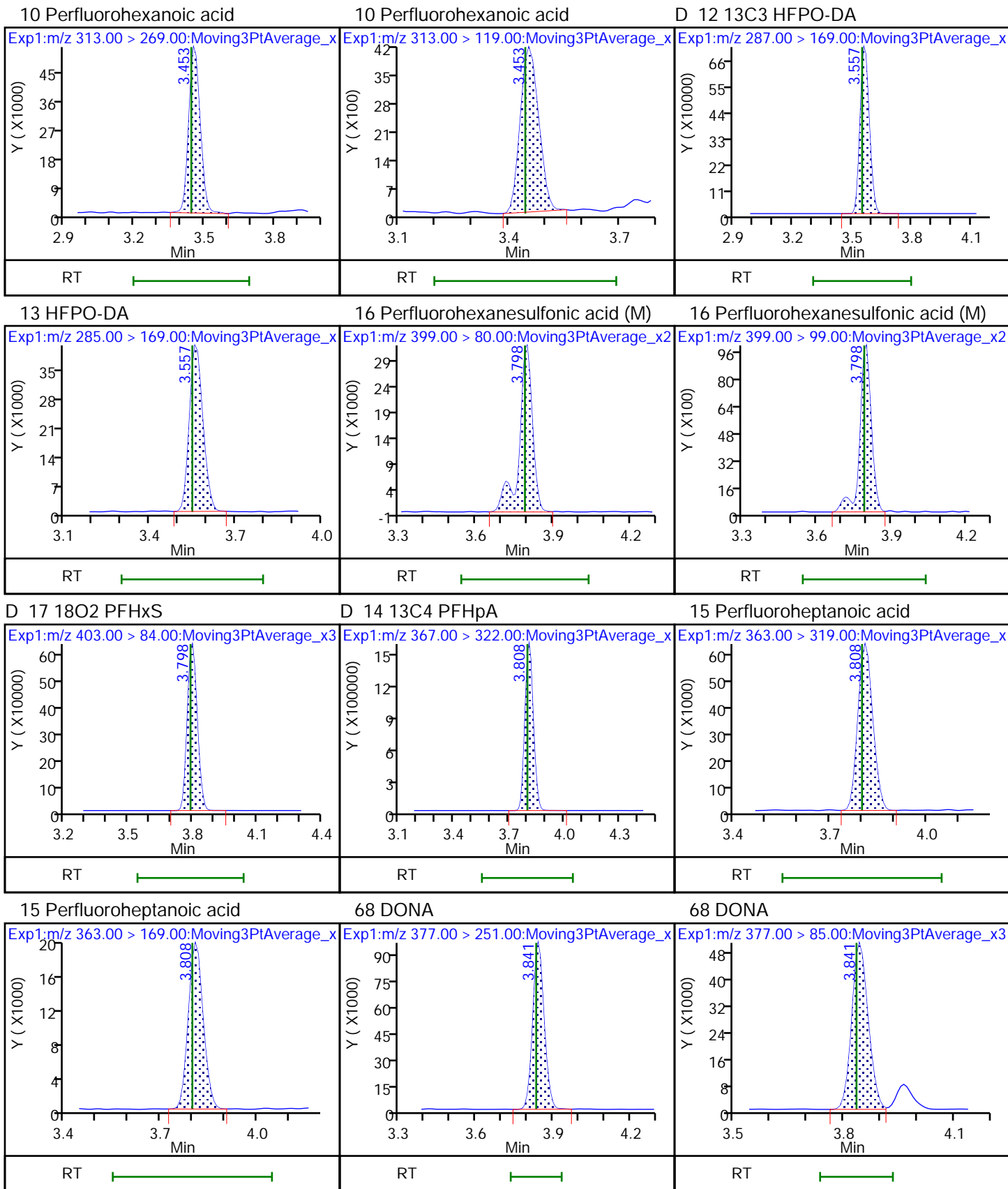


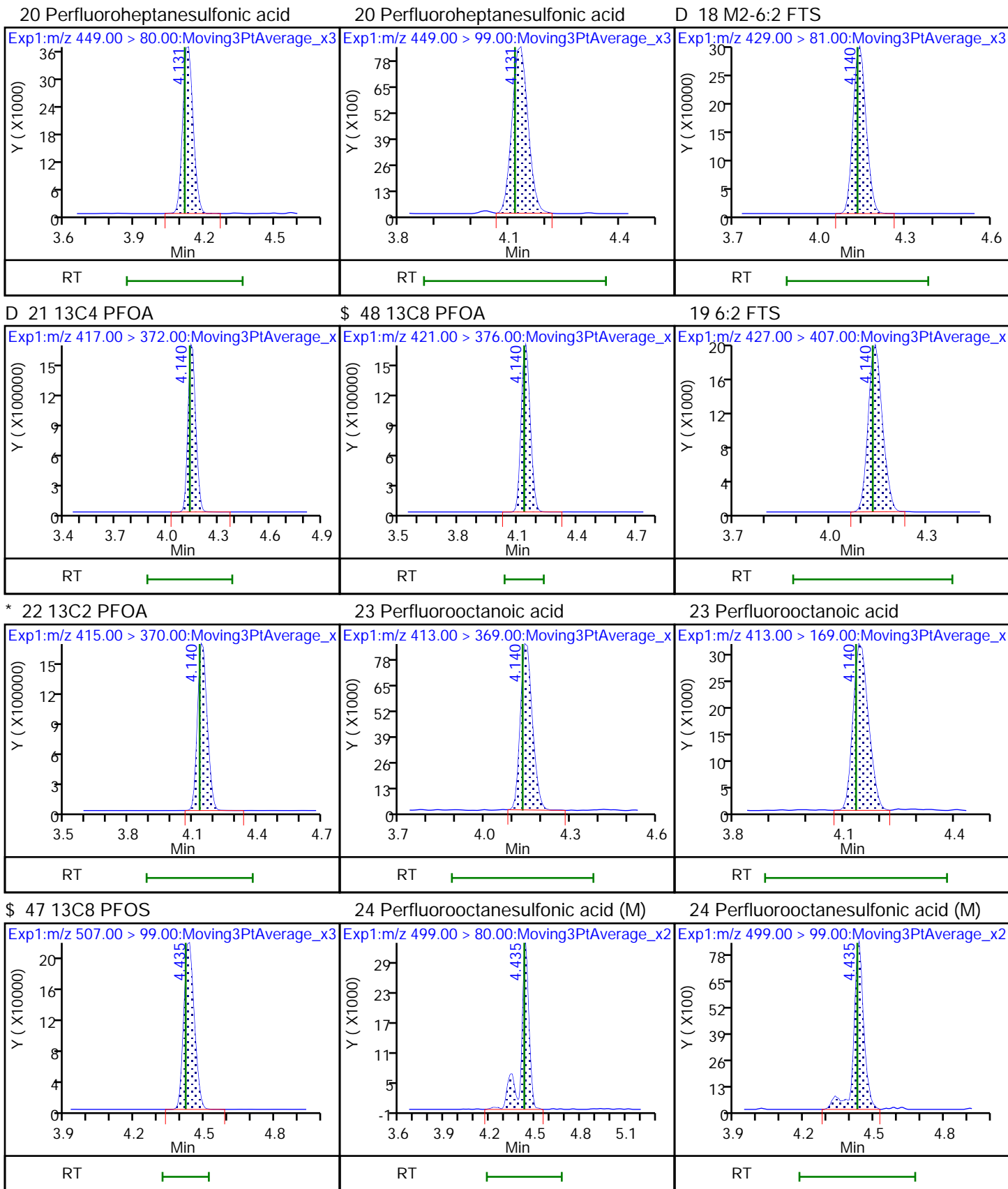
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

D 9 13C2 PFXa





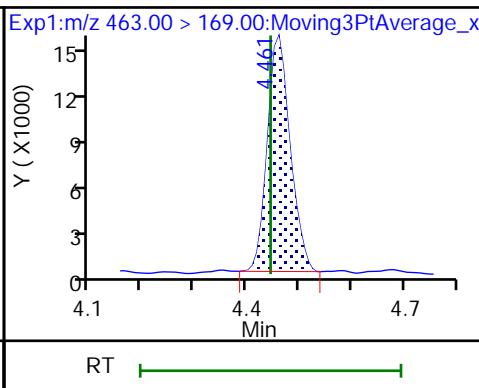
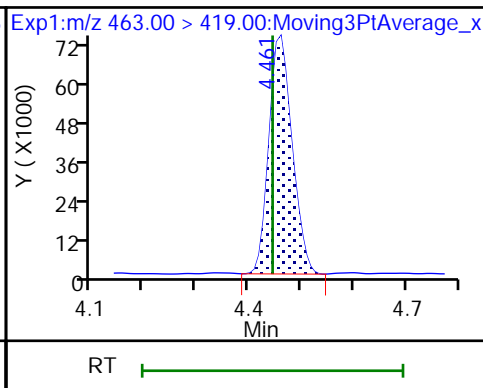
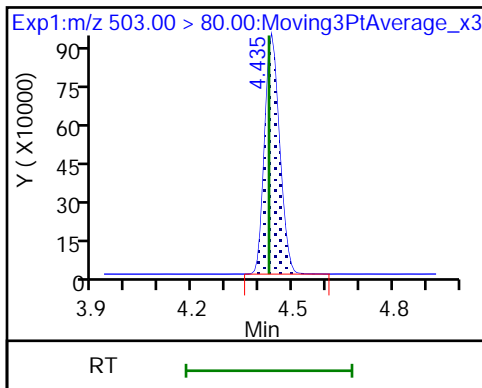




D 25 13C4 PFOS

26 Perfluorononanoic acid

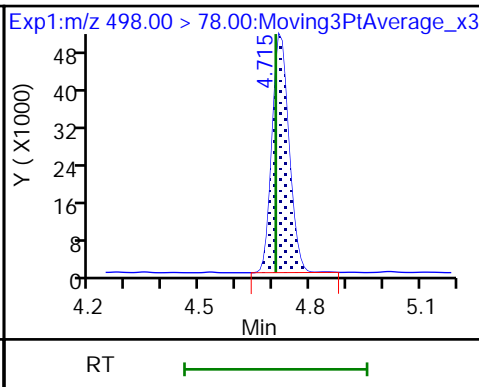
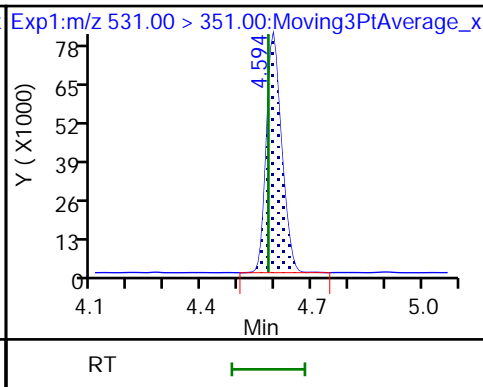
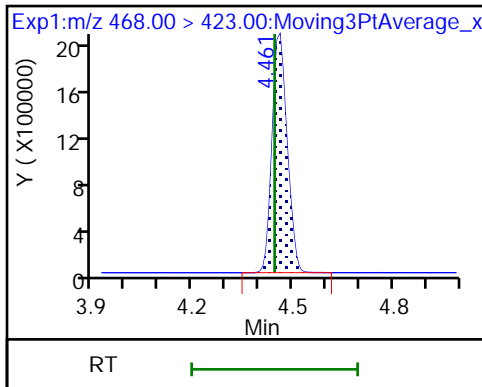
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS

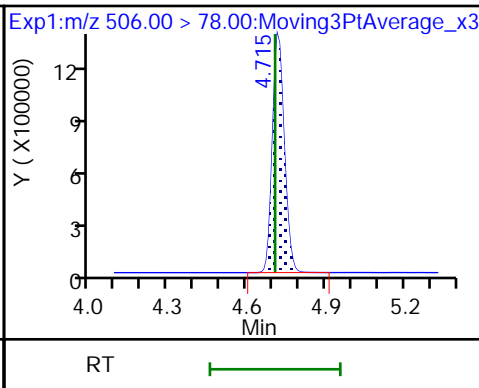
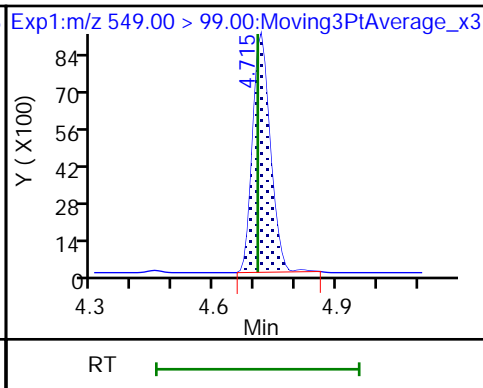
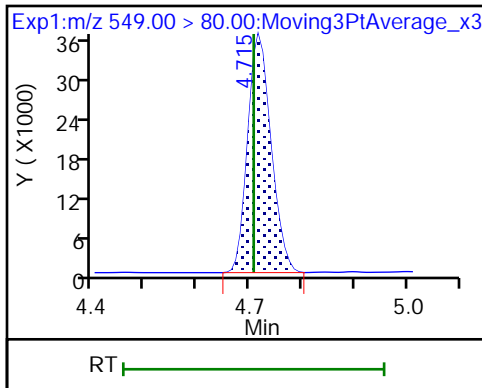
33 Perfluorooctanesulfonamide



28 Perfluorononanesulfonic acid

28 Perfluorononanesulfonic acid

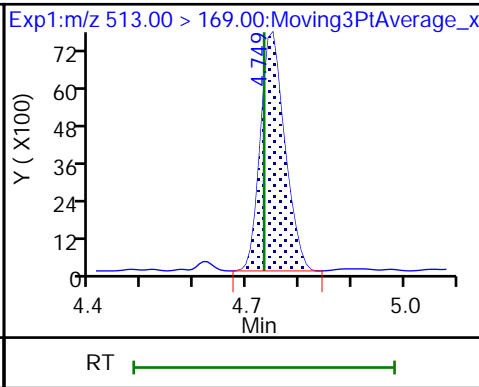
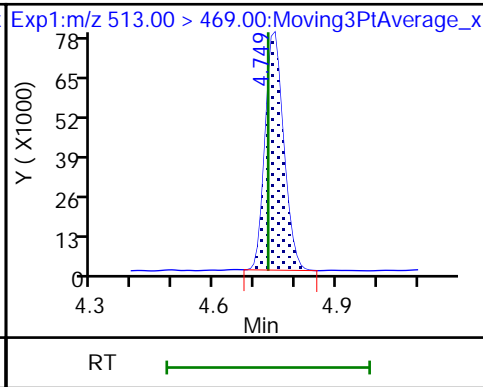
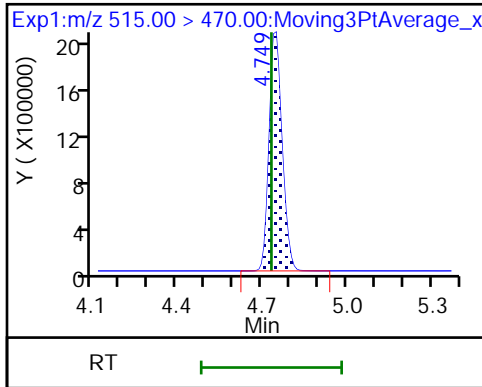
D 34 13C8 FOSA

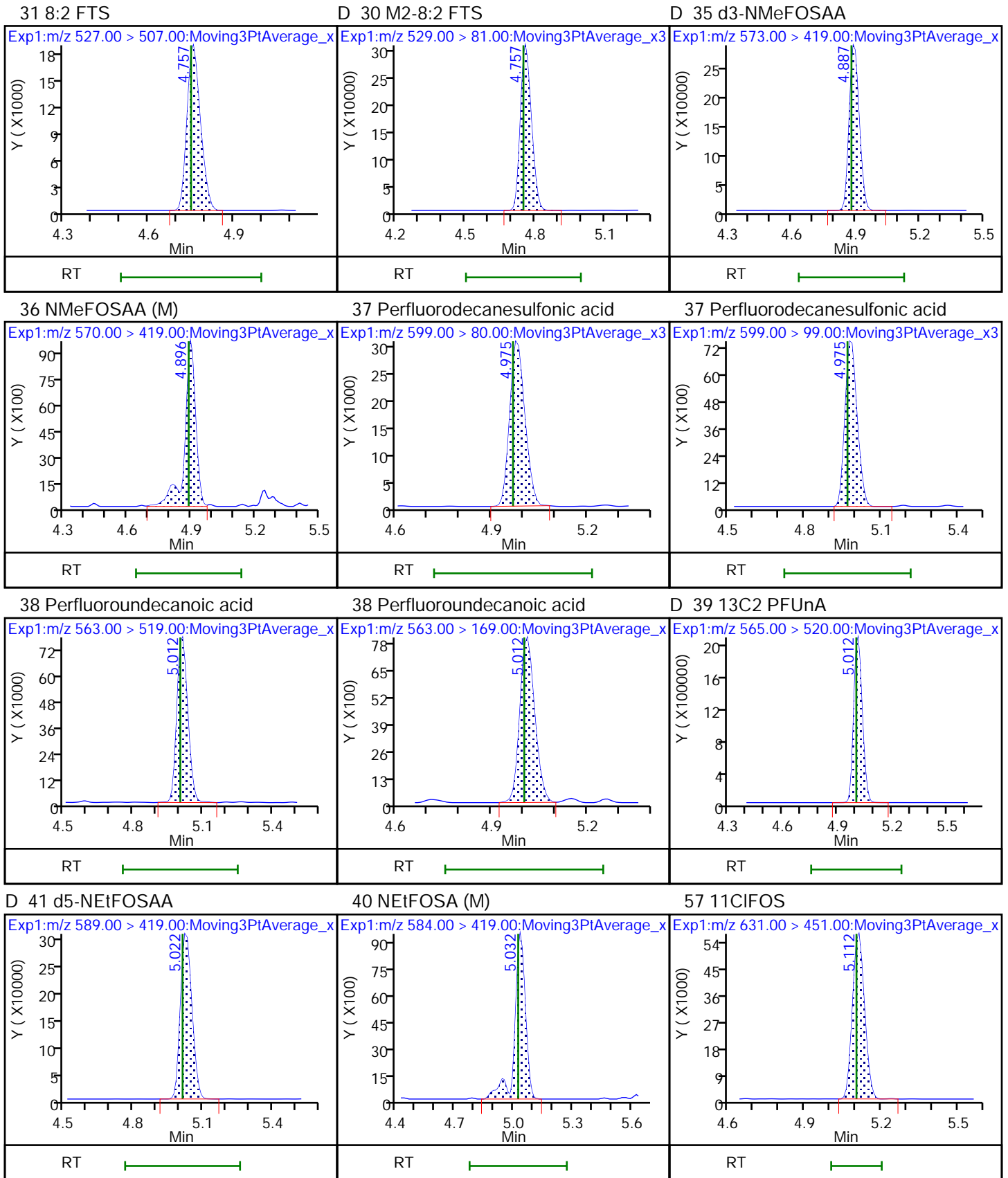


D 32 13C2 PFDA

29 Perfluorodecanoic acid

29 Perfluorodecanoic acid

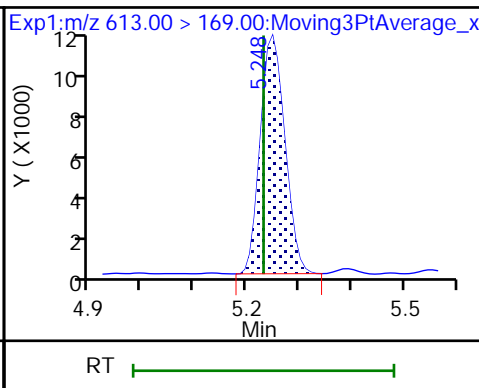
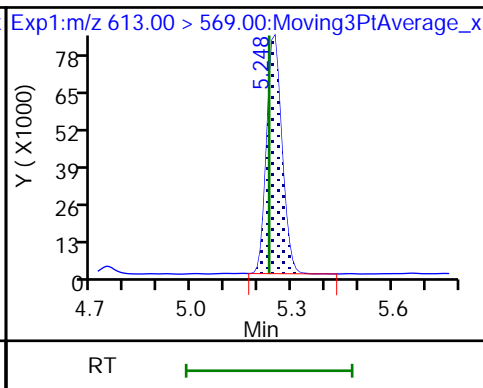
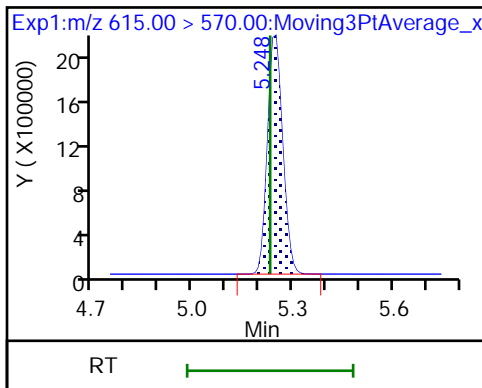




D 43 13C2 PFDaA

42 Perfluorododecanoic acid

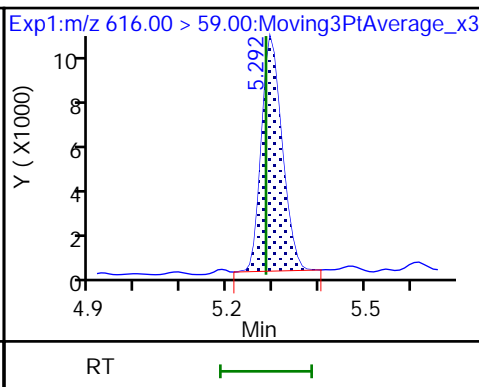
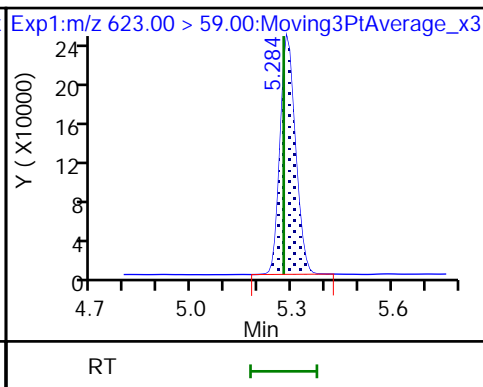
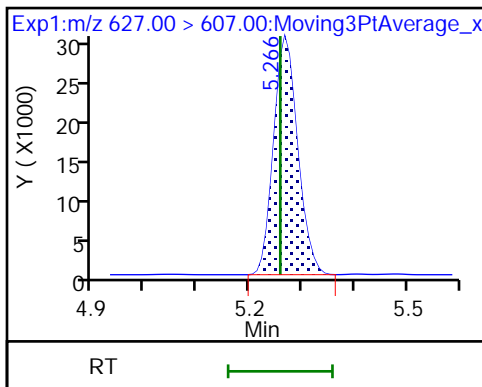
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

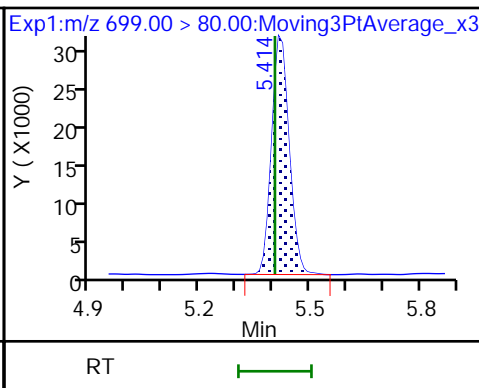
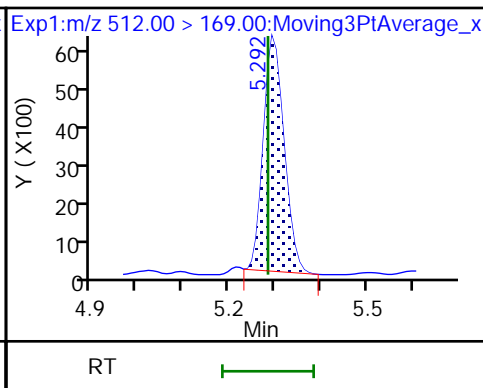
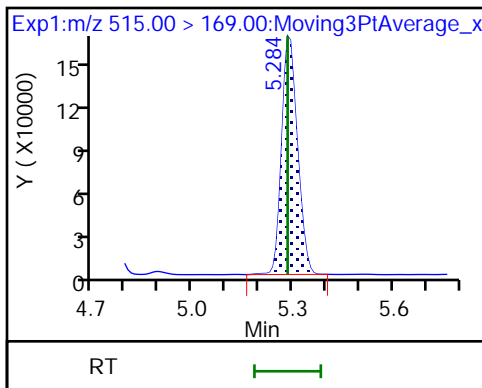
49 N-MeFOSE-M



D 58 d-N-MeFOSA-M

61 NMeFOSA

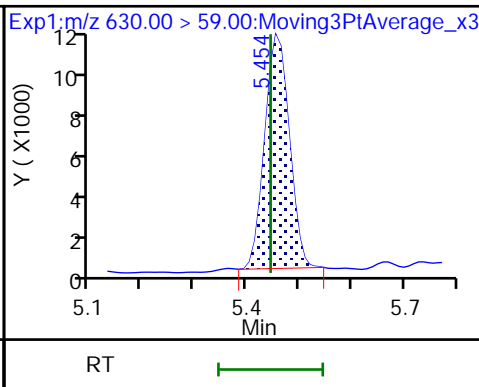
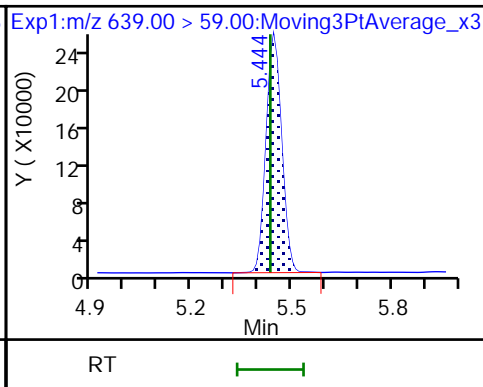
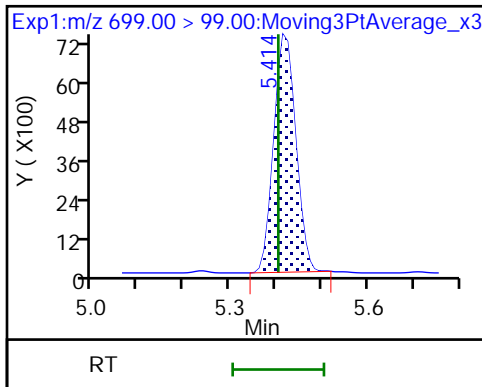
54 PFDoS

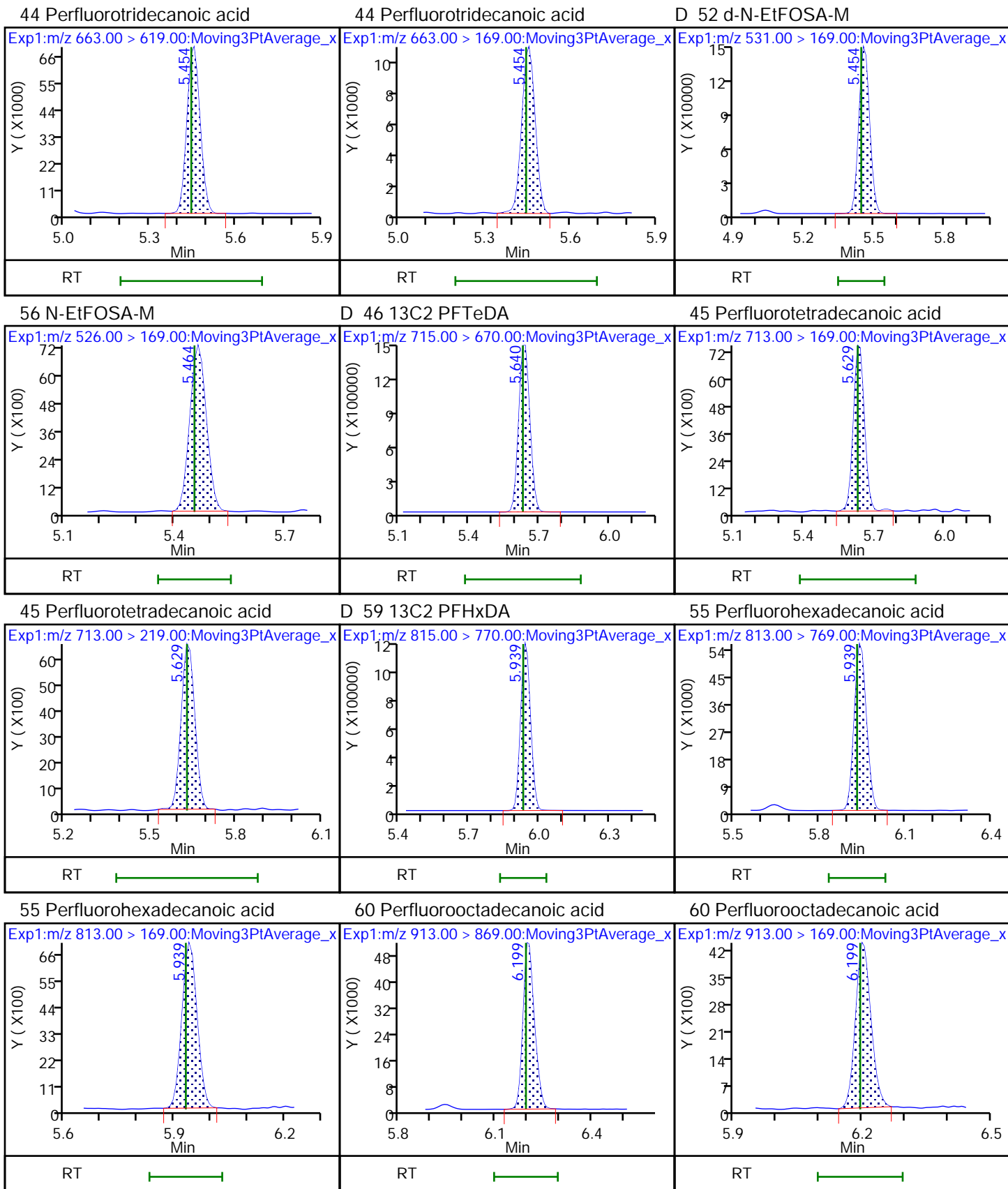


54 PFDoS

D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M







Eurofins TestAmerica, Knoxville

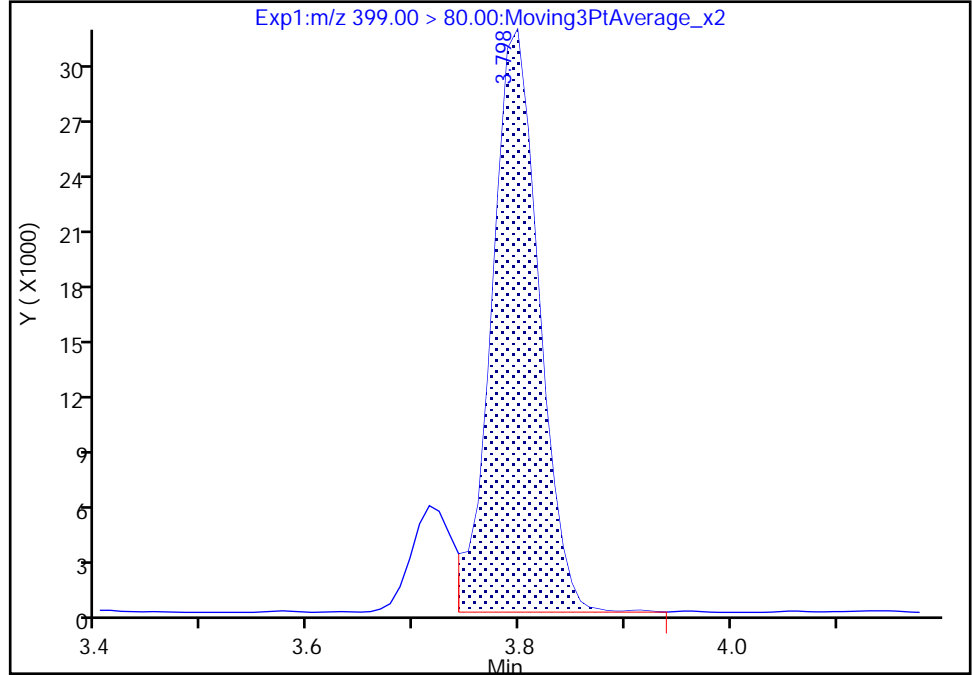
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Injection Date: 12-Jan-2022 18:27:00 Instrument ID: LCA  
Lims ID: CCVL  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

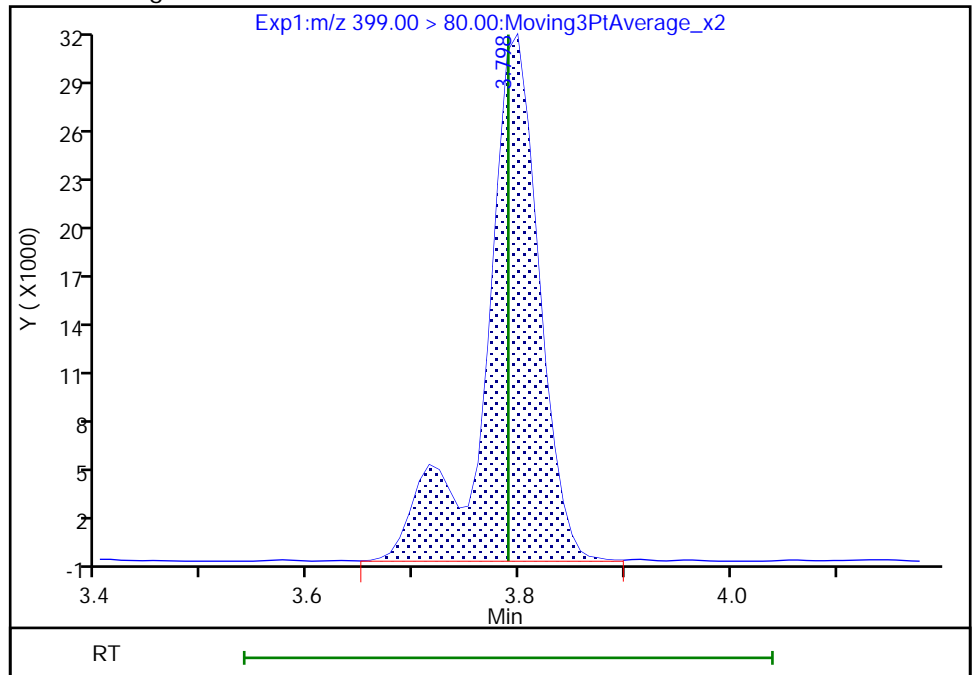
RT: 3.80  
Area: 97472  
Amount: 0.040968  
Amount Units: ng/ml

Processing Integration Results



RT: 3.80  
Area: 112500  
Amount: 0.047285  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:36:09  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

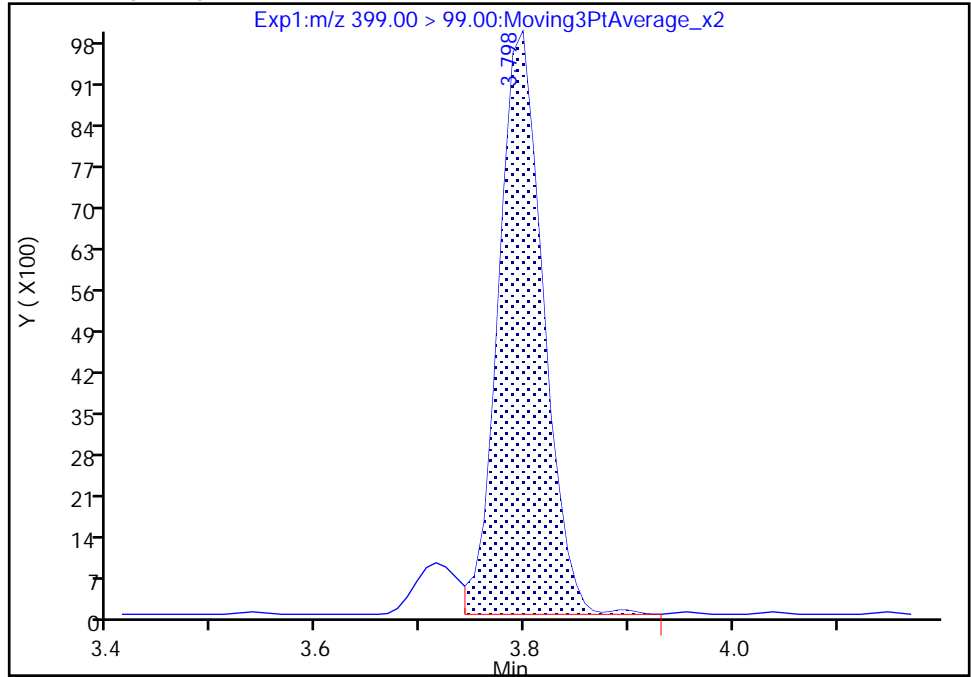
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Lims ID: CCVL  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

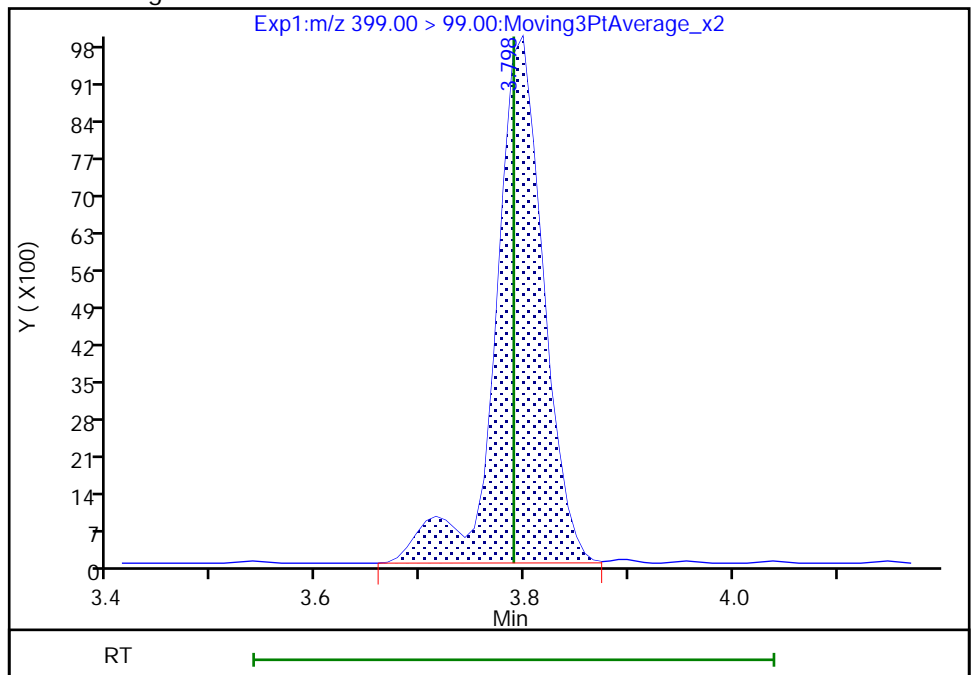
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Area: 29507  
Amount: 0.040968  
Amount Units: ng/ml

Processing Integration Results



RT: 3.80  
Area: 31737  
Amount: 0.047285  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:36:18

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

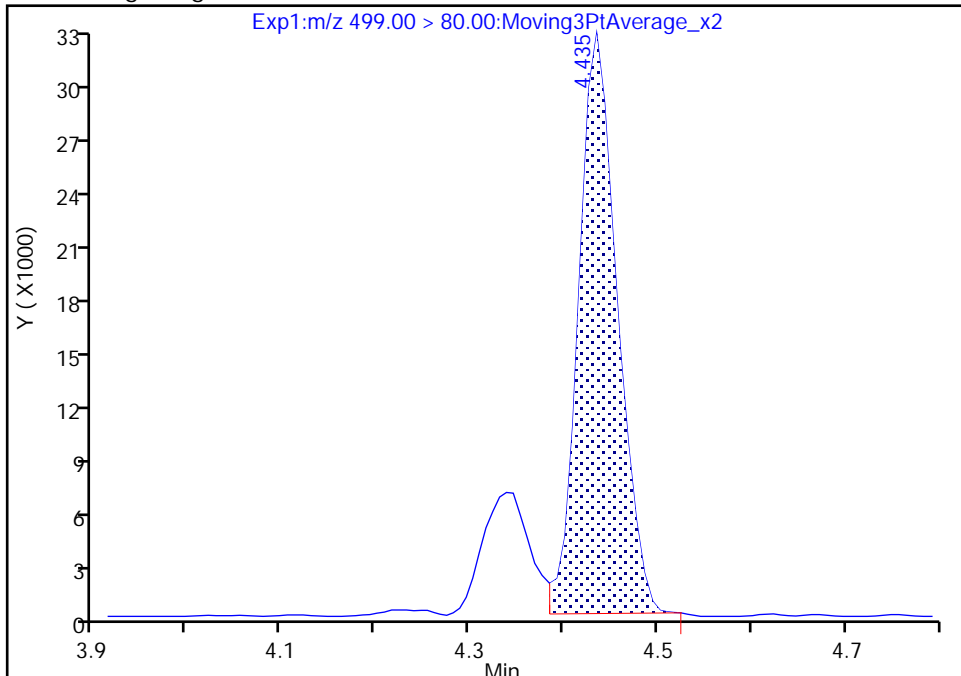
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Lims ID: CCVL  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

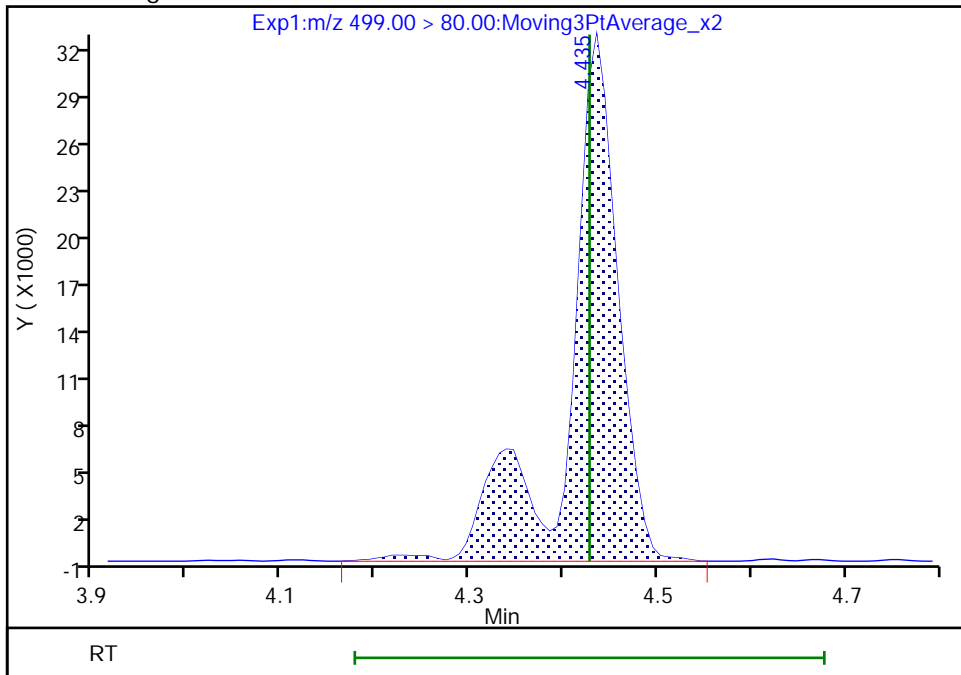
RT: 4.44  
Area: 93207  
Amount: 0.034763  
Amount Units: ng/ml

Processing Integration Results



RT: 4.44  
Area: 120698  
Amount: 0.045016  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:37:34  
Audit Action: Manually Integrated

Audit Reason: Baseline



Eurofins TestAmerica, Knoxville

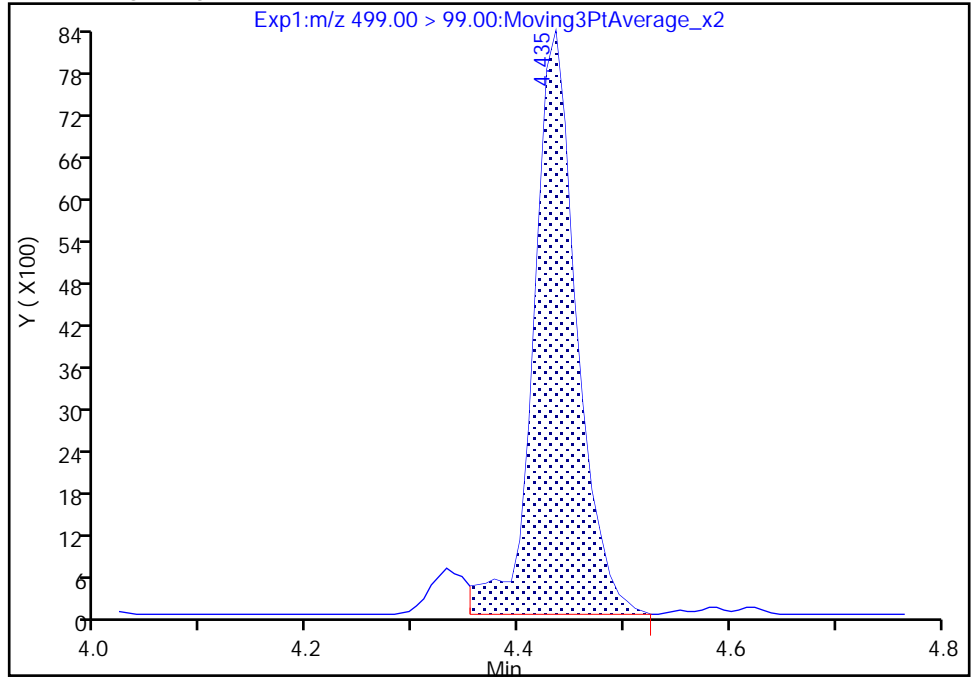
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Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

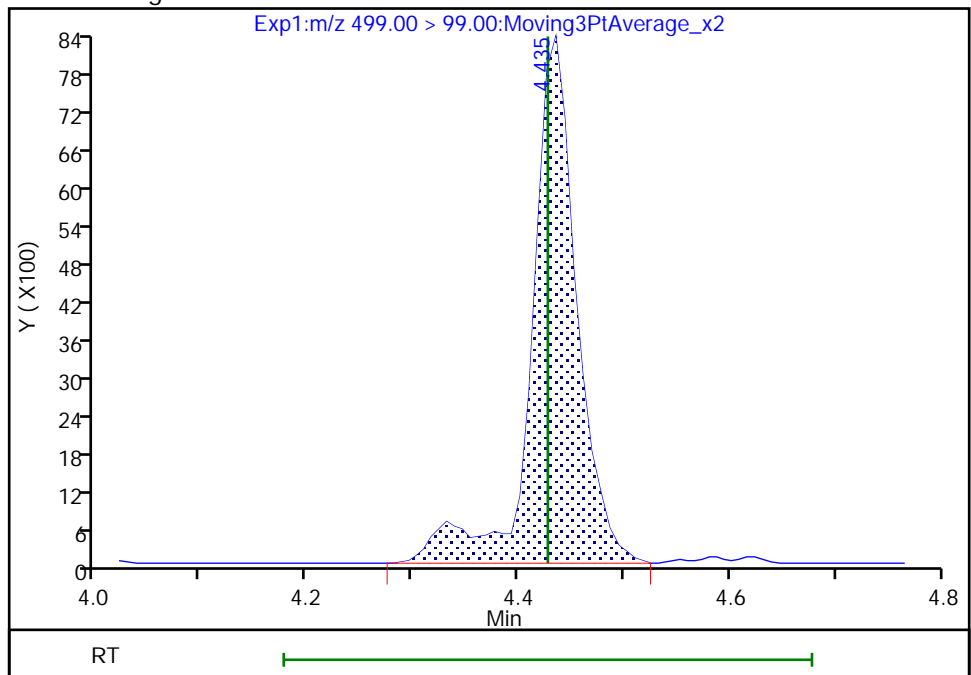
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Area: 23434  
Amount: 0.034763  
Amount Units: ng/ml

Processing Integration Results



RT: 4.44  
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Amount: 0.045016  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:37:40

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

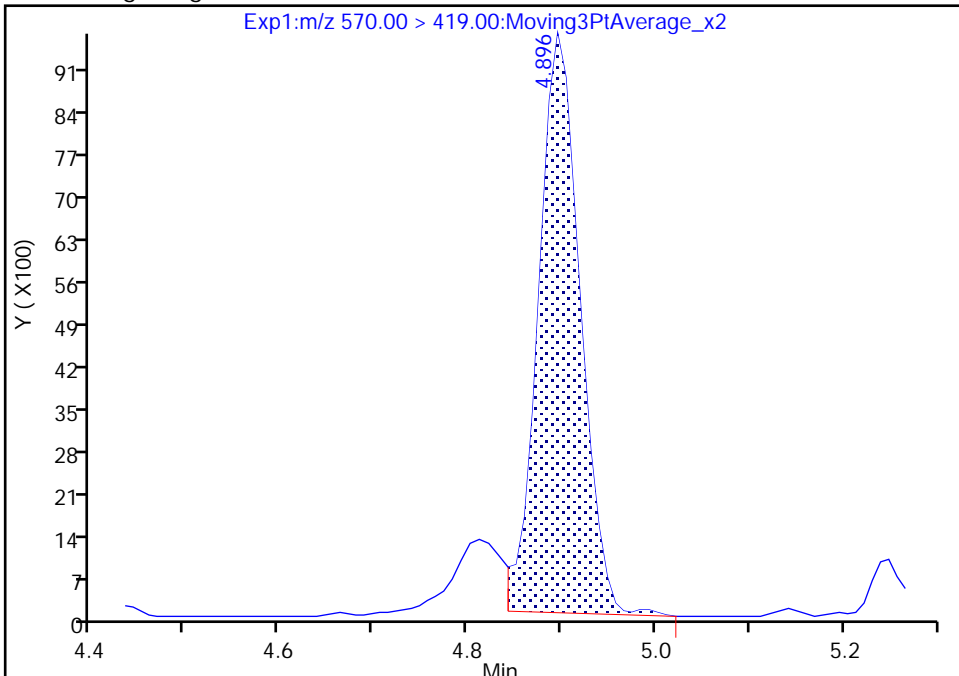
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Lims ID: CCVL  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

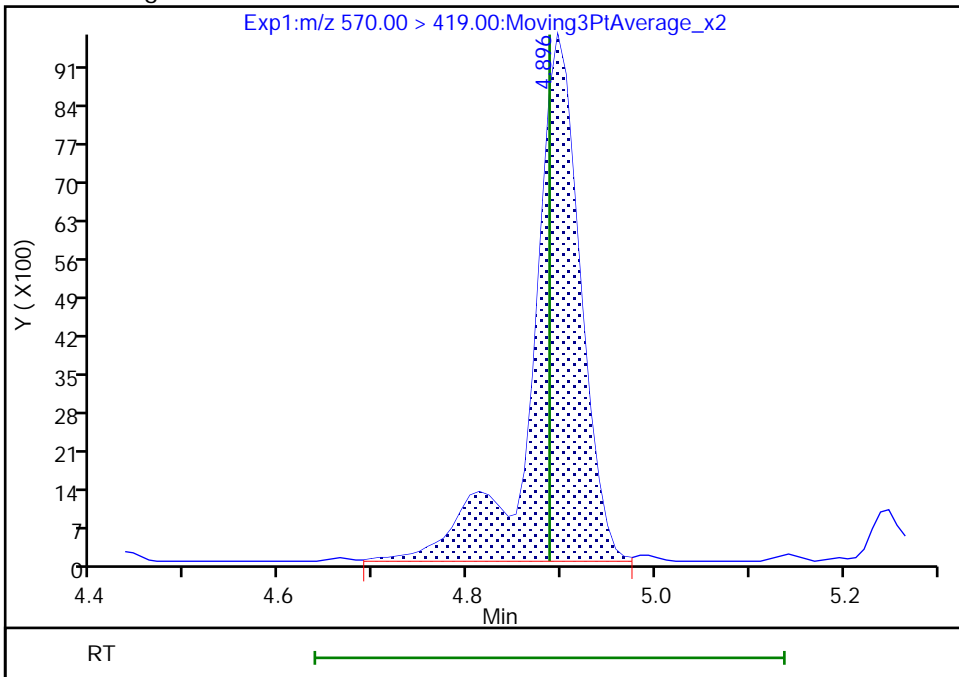
RT: 4.90  
Area: 29378  
Amount: 0.039755  
Amount Units: ng/ml

Processing Integration Results



RT: 4.90  
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Amount: 0.046634  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:38:01  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

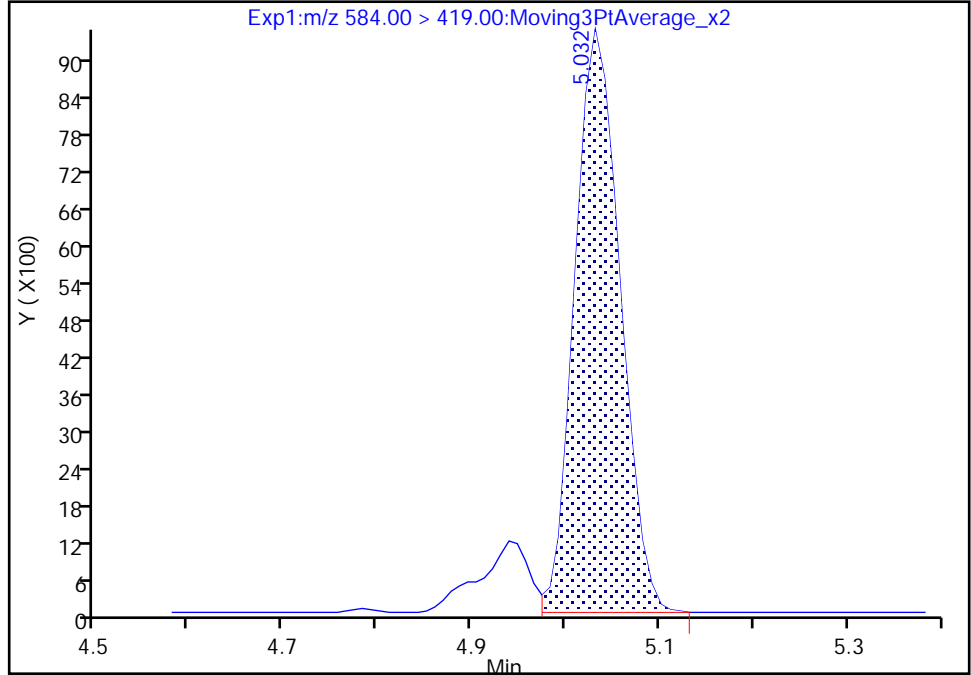
Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\\_006.d  
Injection Date: 12-Jan-2022 18:27:00 Instrument ID: LCA  
Lims ID: CCVL  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

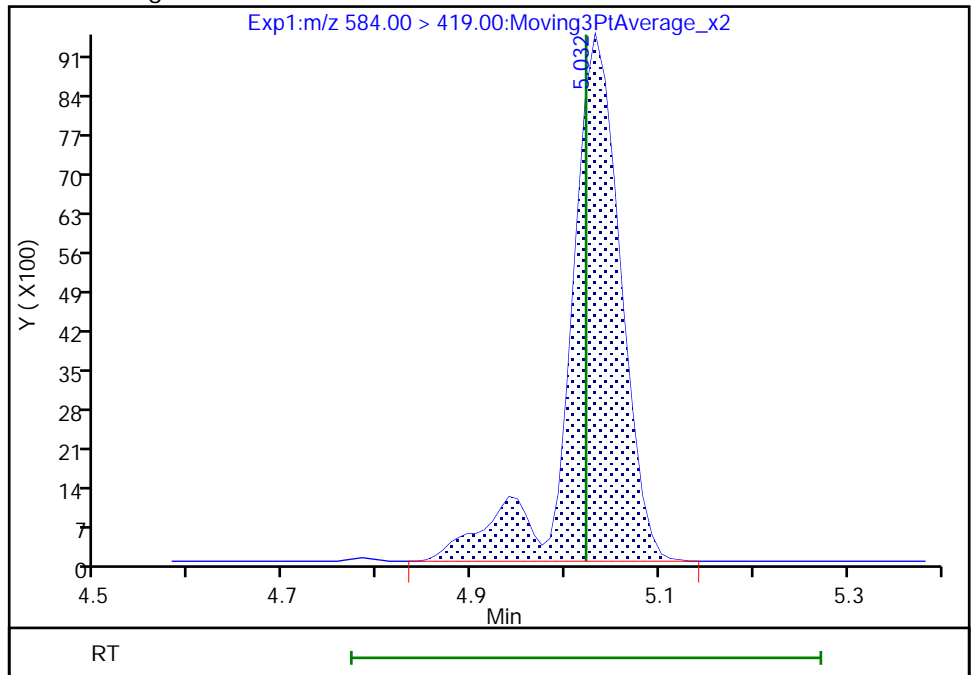
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Amount: 0.037934  
Amount Units: ng/ml

Processing Integration Results



RT: 5.03  
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Amount: 0.042942  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:38:13  
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 140-57865/7 Calibration Date: 01/12/2022 18:35  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 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	0.7844	0.7422		0.946	1.00	-5.4	40.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9519	0.9214		0.968	1.00	-3.2	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.097	1.062		0.856	0.884	-3.2	40.0
4:2 FTS	AveID	2.252	2.232		0.926	0.934	-0.9	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8680	0.8373		0.965	1.00	-3.5	40.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	0.9713	0.9797		0.946	0.938	0.9	40.0
HFPO-DA	AveID	1.352	1.314		0.972	1.00	-2.8	40.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.377	1.322		0.874	0.910	-4.0	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.047	1.042		0.995	1.00	-0.5	40.0
DONA	AveID	2.630	2.495		0.894	0.942	-5.1	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9541	0.8926		0.891	0.952	-6.4	40.0
6:2 FTS	L2ID		1.737		0.917	0.948	-3.3	40.0
Perfluorooctanoic acid (PFOA)	AveID	1.147	1.084		0.945	1.00	-5.5	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.099	0.9915		0.837	0.928	-9.8	40.0
Perfluorononanoic acid (PFNA)	Q2ID		0.8481		0.997	1.00	-0.3	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	Q2ID		2.005		0.873	0.932	-6.3	50.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9748	0.8932		0.880	0.960	-8.4	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9459	0.9224		0.975	1.00	-2.5	40.0
Perfluorodecanoic acid (PFDA)	AveID	0.9645	0.9478		0.983	1.00	-1.7	40.0
8:2 FTS	AveID	1.415	1.399		0.947	0.958	-1.1	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	QuaIF		0.8925		0.919	1.00	-8.2	40.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		0.8656		0.899	0.964	-6.7	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9695	0.9644		0.995	1.00	-0.5	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Q2ID		0.9229		0.929	1.00	-7.1	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.672	1.507		0.849	0.942	-9.9	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9890		0.969	1.00	-3.1	40.0
10:2 FTS	AveID	2.276	2.329		0.986	0.964	2.3	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	Q2ID		1.112		0.950	1.00	-5.0	40.0
NMeFOSA	Q2ID		1.015		1.00	1.00	0.3	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9166	0.8517		0.900	0.968	-7.1	40.0

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 140-57865/7 Calibration Date: 01/12/2022 18:35  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 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	AveID	1.328	1.281		0.964	1.00	-3.6	40.0
Perfluorotridecanoic acid (PFTriA)	AveID	0.8292	0.8030		0.968	1.00	-3.2	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.195	1.152		0.964	1.00	-3.6	40.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1344	0.1308		0.973	1.00	-2.7	40.0
Perfluorohexadecanoic acid	Q2ID		1.037		0.967	1.00	-3.3	40.0
Perfluorooctadecanoic acid	AveID	0.9844	0.9028		0.917	1.00	-8.3	40.0
13C4 PFBA	Ave	1.142	1.076		1.18	1.25	-5.7	50.0
13C5 PFPeA	Ave	0.8865	0.8254		1.16	1.25	-6.9	50.0
13C3 PFBS	Ave	0.5913	0.5737		1.13	1.16	-3.0	50.0
M2-4:2 FTS	Ave	0.1820	0.1790		1.15	1.17	-1.7	50.0
13C2 PFHxA	Ave	0.9479	0.8698		1.15	1.25	-8.2	50.0
13C3 HFPO-DA	Ave	0.4556	0.4453		1.22	1.25	-2.3	50.0
18O2 PFHxS	Ave	0.3946	0.4000		1.20	1.18	1.4	50.0
13C4 PFHpA	Ave	0.9067	0.8863		1.22	1.25	-2.3	50.0
13C4 PFOA	Ave	0.9376	0.9409		1.25	1.25	0.3	50.0
M2-6:2 FTS	Ave	0.1835	0.1767		1.14	1.19	-3.7	50.0
13C4 PFOS	Ave	0.5681	0.5903		1.24	1.20	3.9	50.0
13C5 PFNA	Ave	1.234	1.201		1.22	1.25	-2.7	50.0
13C8 FOSA	Ave	0.7682	0.8015		1.30	1.25	4.3	50.0
13C2 PFDA	Ave	1.191	1.210		1.27	1.25	1.6	50.0
M2-8:2 FTS	Ave	0.2070	0.1838		1.06	1.20	-11.2	50.0
d3-NMeFOSAA	Ave	0.1401	0.1789		1.60	1.25	27.7	50.0
13C2 PFUnA	Ave	1.189	1.230		1.29	1.25	3.5	50.0
d5-NEtFOSAA	Ave	0.1537	0.1885		1.53	1.25	22.6	50.0
13C2 PFDoA	Ave	1.247	1.247		1.25	1.25	-0.0	50.0
d7-N-MeFOSE-M	Ave	0.1499	0.1431		1.19	1.25	-4.5	50.0
d-N-MeFOSA-M	Ave	0.1069	0.1024		1.20	1.25	-4.1	50.0
d9-N-EtFOSE-M	Ave	0.1504	0.1476		1.23	1.25	-1.9	50.0
d-N-EtFOSA-M	Ave	0.0883	0.0853		1.21	1.25	-3.3	50.0
13C2 PFTeDA	Ave	0.9508	0.8973		1.18	1.25	-5.6	50.0
13C2 PFHxDA	Ave	0.6444	0.6182		1.20	1.25	-4.1	50.0
13C8 PFOA	AveID	0.999	1.044		1.31	1.25	4.4	50.0
13C8 PFOS	AveID	0.2220	0.2136		1.15	1.20	-3.8	50.0

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_007.d  
 Lims ID: CCVIS  
 Client ID:  
 Sample Type: CCVIS  
 Inject. Date: 12-Jan-2022 18:35:48 ALS Bottle#: 7 Worklist Smp#: 7  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022237-007 ccvis  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:15:14 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 09:35:38

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										
212.90 > 169.00	2.802	2.802	0.0	1.000	3504446	0.9462		94.6	856	
D 1 13C4 PFBA										
217.00 > 172.00	2.802	2.802	0.0	0.678	5902109	1.18		94.3	13869	
D 3 13C5 PFPeA										
267.90 > 223.00	3.116	3.116	0.0	0.754	4526738	1.16		93.1	9478	
4 Perfluoropentanoic acid										
262.90 > 219.00	3.116	3.116	0.0	1.000	3336776	0.9680		96.8	1315	
D 6 13C3 PFBS										
301.90 > 80.00	3.132	3.132	0.0	0.758	2925856	1.13		97.0	14868	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	3.132	3.132	0.0	1.000	2363113	0.8559	Target=2.65	96.8	4503	
298.90 > 99.00	3.132	3.132	0.0	1.000	872769		2.71(1.32-3.97)		3468	
D 8 M2-4:2 FTS										
329.00 > 81.00	3.423	3.423	0.0	0.828	916714	1.15		98.3	2064	
7 4:2 FTS										
327.00 > 307.00	3.423	3.423	0.0	1.000	1636626	0.9255		99.1	8542	
10 Perfluorohexanoic acid										
313.00 > 269.00	3.444	3.444	0.0	1.000	3195279	0.9646	Target=11.80	96.5	1532	
313.00 > 119.00	3.444	3.444	0.0	1.000	247387		12.92(5.90-17.70)		373	
11 Perfluoropentanesulfonic acid										
349.00 > 80.00	3.444	3.444	0.0	1.099	2312795	0.9461	Target=3.44	101	6036	
349.00 > 99.00	3.444	3.444	0.0	1.099	640124		3.61(1.72-5.16)		6121	
D 9 13C2 PFHxA										
315.00 > 270.00	3.444	3.444	0.0	0.833	4769958	1.15		91.8	8358	
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.548	3.548	0.0	0.859	2442066	1.22		97.7	4984	

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	3.548	0.0	1.000	2567958	0.9719		97.2	3017	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.789	3.789	0.0	1.000	2111511	0.8736	Target=3.40	96.0	6466	M
399.00 > 99.00	3.789	3.789	0.0	1.000	599468		3.52(1.70-5.10)		3731	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.789	3.789	0.0	0.917	2075380	1.20		101	7681	
D 14 13C4 PFHpA										
367.00 > 322.00	3.799	3.799	0.0	0.919	4860347	1.22		97.7	8727	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.799	3.799	0.0	1.000	4049961	1.00	Target=3.29	99.5	2383	
363.00 > 169.00	3.799	3.799	0.0	1.000	1227508		3.30(1.65-4.94)		1730	
68 DONA										
377.00 > 251.00	3.834	3.834	0.0	0.866	6086623	0.8937	Target=1.82	94.9	7350	
377.00 > 85.00	3.834	3.834	0.0	0.866	3460815		1.76(0.91-2.74)		144	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.115	4.115	0.0	0.929	2200645	0.8907	Target=3.92	93.6	5909	
449.00 > 99.00	4.115	4.115	0.0	0.929	567412		3.88(1.96-5.87)		2787	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.132	4.132	0.0	1.000	920438	1.14		96.3	2804	
D 21 13C4 PFOA										
417.00 > 372.00	4.132	4.132	0.0	1.000	5159992	1.25		100	12422	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.132	4.132	0.0	1.000	5386165	1.31		104	8554	
19 6:2 FTS										
427.00 > 407.00	4.132	4.132	0.0	1.000	1276132	0.9171		96.7	6959	
* 22 13C2 PFOA										
415.00 > 370.00	4.132	4.132	0.0		5484136	1.25			8908	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.132	4.132	0.0	1.000	4476143	0.9450	Target=2.59	94.5	2196	
413.00 > 169.00	4.132	4.132	0.0	1.000	1716769		2.61(1.30-3.89)		2203	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.419	4.419	0.0	0.998	660956	1.15		96.2	4973	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.428	4.428	0.0	1.000	2382706	0.8374	Target=4.65	90.2	3192	M
499.00 > 99.00	4.428	4.428	0.0	1.000	543317		4.39(2.32-6.97)		1859	M
D 25 13C4 PFOS										
503.00 > 80.00	4.428	4.428	0.0	1.071	3094632	1.24		104	5882	
26 Perfluorononanoic acid										
463.00 > 419.00	4.445	4.445	0.0	1.000	4467728	1.00	Target=4.65	99.7	4277	
463.00 > 169.00	4.453	4.445	0.008	1.002	934532		4.78(2.32-6.97)		1834	
D 27 13C5 PFNA										
468.00 > 423.00	4.445	4.445	0.0	1.076	6584947	1.22		97.3	9859	
63 9CIFOS										
531.00 > 351.00	4.581	4.581	0.0	1.035	4839293	0.8730		93.7	7756	
D 34 13C8 FOSA										
506.00 > 78.00	4.706	4.706	0.0	1.139	4395352	1.30		104	3790	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
33 Perfluorooctanesulfonamide	498.00 > 78.00	4.706	4.706	0.0	1.000	3243289	0.9751	97.5	3949	
28 Perfluorononanesulfonic acid	549.00 > 80.00	4.706	4.706	0.0	1.063	2220591	0.8796	Target=4.06	91.6	5498
	549.00 > 99.00	4.706	4.706	0.0	1.063	560543		3.96(2.03-6.09)		3745
D 32 13C2 PFDA	515.00 > 470.00	4.732	4.732	0.0	1.145	6635382	1.27		102	11214
29 Perfluorodecanoic acid	513.00 > 469.00	4.732	4.732	0.0	1.000	5031277	0.9827	Target=11.30	98.3	4438
	513.00 > 169.00	4.732	4.732	0.0	1.000	450105		11.18(5.65-16.95)		620
31 8:2 FTS	527.00 > 507.00	4.749	4.749	0.0	1.000	1080857	0.9472		98.9	4235
D 30 M2-8:2 FTS	529.00 > 81.00	4.749	4.749	0.0	1.149	965596	1.06		88.8	1588
D 35 d3-NMeFOSAA	573.00 > 419.00	4.878	4.878	0.0	1.181	981330	1.60		128	1046
36 NMeFOSAA	570.00 > 419.00	4.887	4.887	0.0	1.002	700690	0.9185		91.8	1460 M
37 Perfluorodecanesulfonic acid	599.00 > 80.00	4.966	4.966	0.0	1.122	2160801	0.8990	Target=3.79	93.3	6260
	599.00 > 99.00	4.966	4.966	0.0	1.122	592028		3.65(1.90-5.69)		3261
38 Perfluoroundecanoic acid	563.00 > 519.00	5.002	5.002	0.0	1.000	5204792	0.99	Target=8.45	99.5	5234
	563.00 > 169.00	5.002	5.002	0.0	1.000	597055		8.72(4.22-12.67)		2646
D 39 13C2 PFUnA	565.00 > 520.00	5.002	5.002	0.0	1.210	6746391	1.29		103	16557
D 41 d5-NEtFOSAA	589.00 > 419.00	5.012	5.012	0.0	1.213	1033970	1.53		123	4233
40 NEtFOSA	584.00 > 419.00	5.022	5.022	0.0	1.002	763376	0.9290		92.9	1428 M
57 11CIFOS	631.00 > 451.00	5.102	5.102	0.0	1.152	3675383	0.8486		90.1	9034
D 43 13C2 PFDoA	615.00 > 570.00	5.231	5.231	0.0	1.266	6836281	1.25		100.0	12933
42 Perfluorododecanoic acid	613.00 > 569.00	5.231	5.231	0.0	1.000	5408706	0.9689	Target=6.99	96.9	4626
	613.00 > 169.00	5.231	5.231	0.0	1.000	789027		6.85(3.50-10.49)		1854
50 10:2 FTS	627.00 > 607.00	5.257	5.257	0.0	1.107	1810044	0.9861		102	9097
D 51 d7-N-MeFOSE-M	623.00 > 59.00	5.275	5.275	0.0	1.277	784769	1.19		95.5	633
49 N-MeFOSE-M	616.00 > 59.00	5.284	5.284	0.0	1.002	698122	0.9502		95.0	941
D 58 d-N-MeFOSA-M	515.00 > 169.00	5.284	5.284	0.0	1.279	561840	1.20		95.9	50.3
61 NMeFOSA	512.00 > 169.00	5.284	5.284	0.0	1.000	456256	1.00		100	574



Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
54 PFDoS										
699.00 > 80.00	5.404	5.404	0.0	1.221	2135070	0.8995	Target=4.24	92.9	5748	
699.00 > 99.00	5.404	5.404	0.0	1.221	510377		4.18(2.12-6.35)		2709	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.435	5.435	0.0	1.315	809335	1.23		98.1	439	
62 N-EtFOSE-M										
630.00 > 59.00	5.445	5.445	0.0	1.002	829124	0.9643		96.4	861	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.445	5.445	0.0	1.041	4391640	0.9684	Target=6.20	96.8	4412	
663.00 > 169.00	5.445	5.445	0.0	1.041	714268		6.15(3.10-9.30)		2255	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.445	5.445	0.0	1.318	467961	1.21		96.7	653	
56 N-EtFOSA-M										
526.00 > 169.00	5.455	5.455	0.0	1.002	431329	0.9641		96.4	534	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.629	5.629	0.0	1.362	4921018	1.18		94.4	8970	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.629	5.629	0.0	1.000	514760	0.9730	Target=1.05	97.3	2434	
713.00 > 219.00	5.619	5.629	-0.010	0.998	487834		1.06(0.53-1.58)		2152	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.931	5.931	0.0	1.435	3390481	1.20		95.9	5938	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.931	5.931	0.0	1.000	2812941	0.9667	Target=8.09	96.7	3803	
813.00 > 169.00	5.931	5.931	0.0	1.000	342499		8.21(4.05-12.14)		744	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.195	6.195	0.0	1.044	2448806	0.9172	Target=11.53	91.7	3350	
913.00 > 169.00	6.195	6.195	0.0	1.044	219805		11.14(5.77-17.30)		946	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

63L4PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_007.d

Injection Date: 12-Jan-2022 18:35:48

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

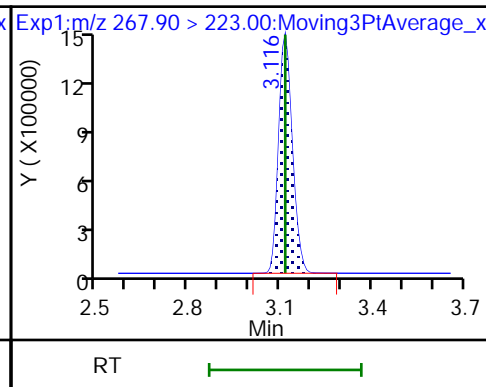
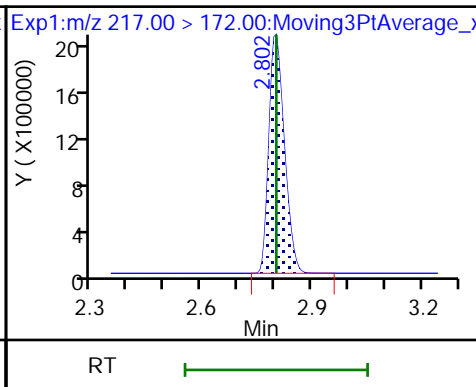
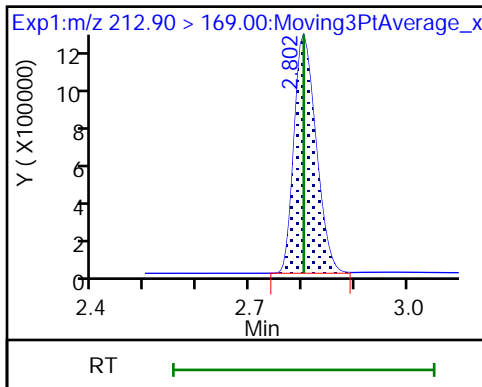
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

2 Perfluorobutanoic acid

D 1 13C4 PFBA

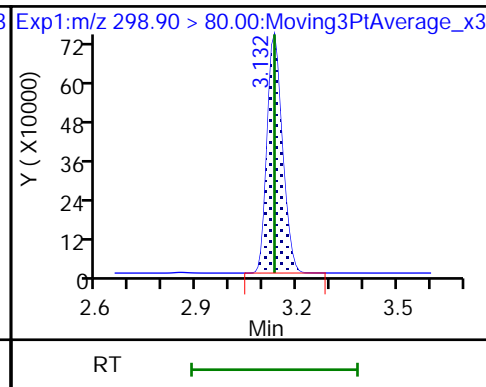
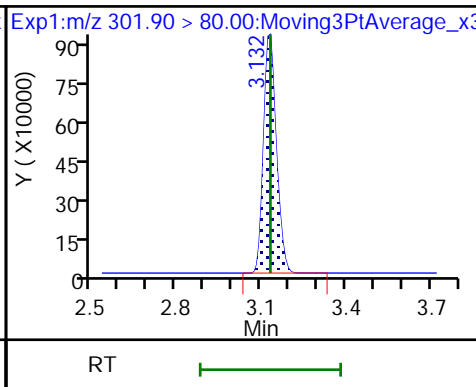
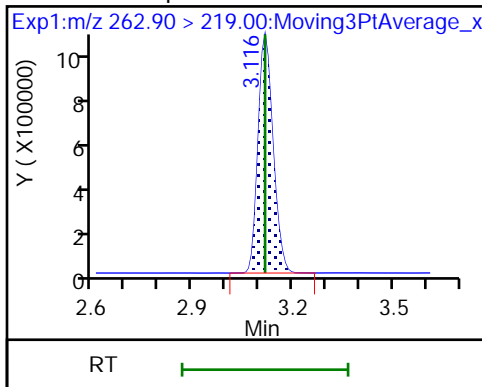
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

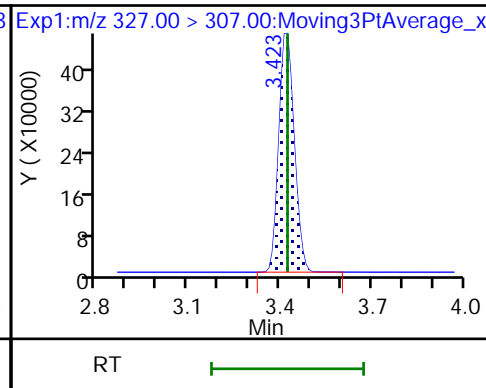
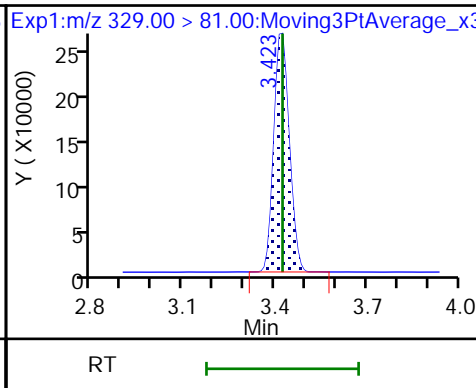
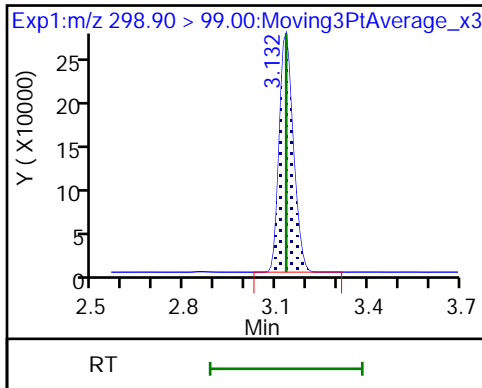
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

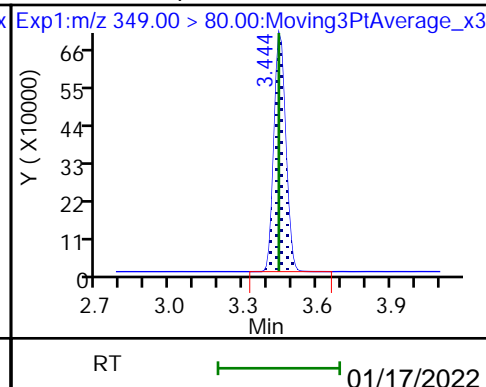
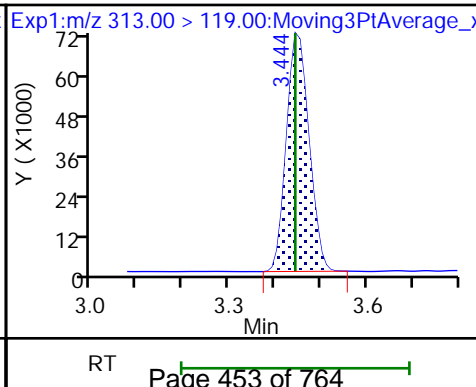
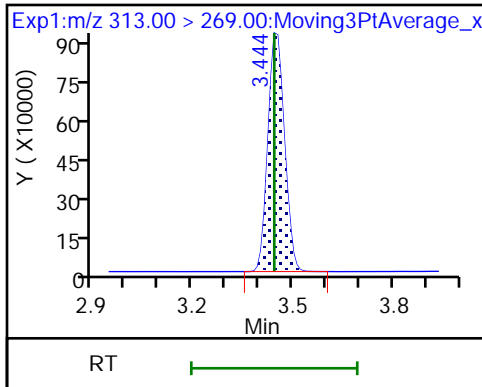
7 4:2 FTS

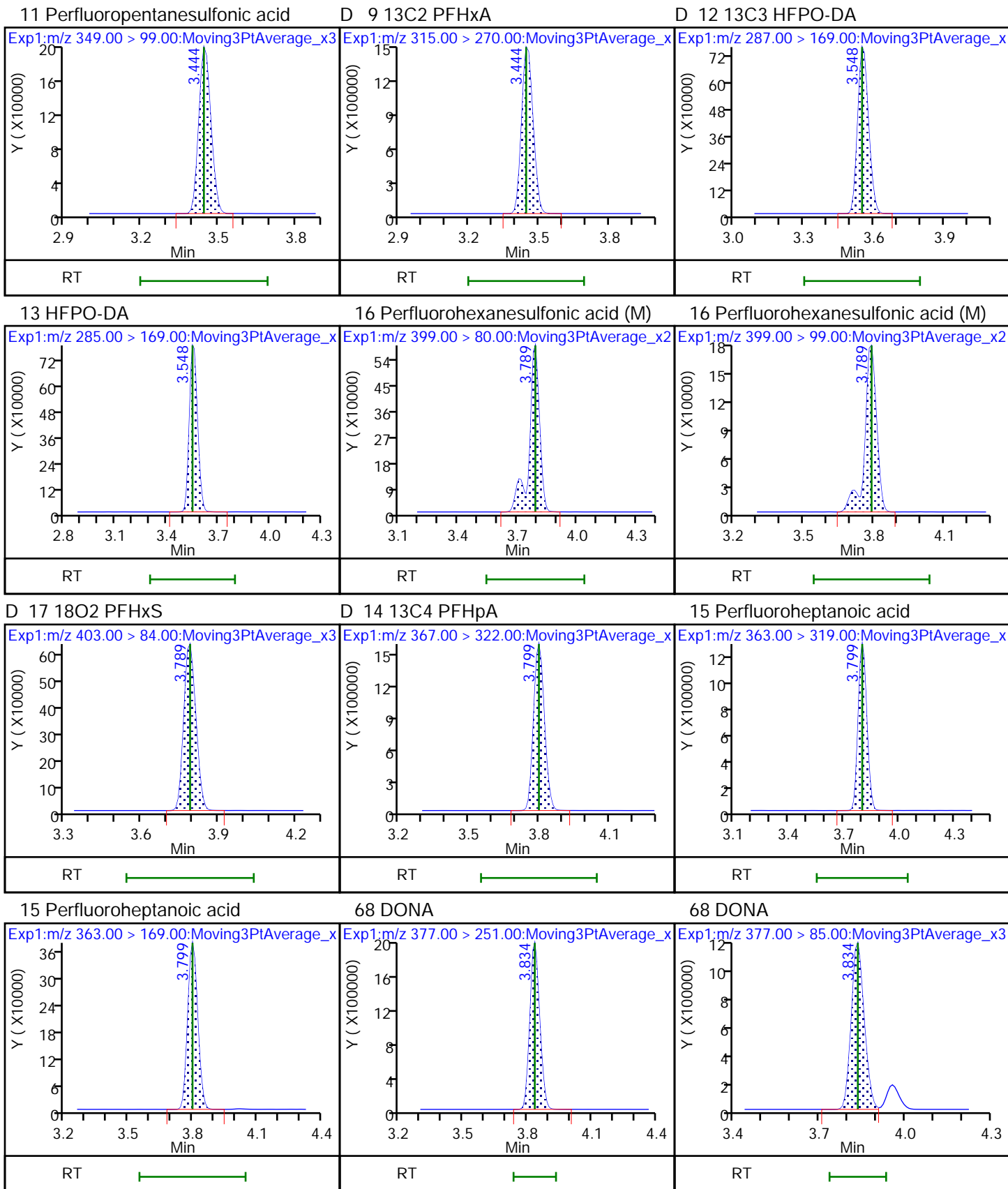


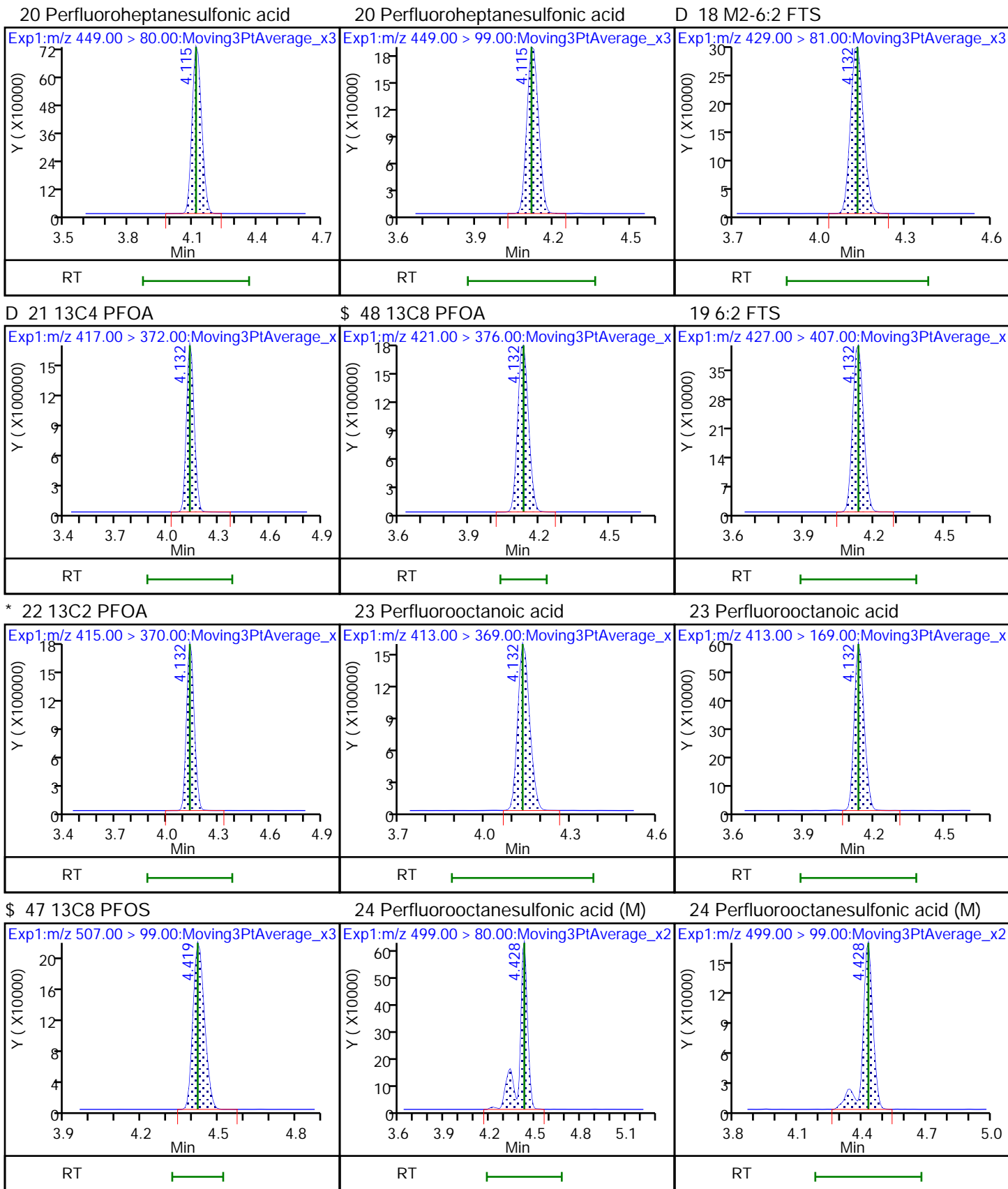
10 Perfluorohexanoic acid

10 Perfluorohexanoic acid

11 Perfluoropentanesulfonic acid



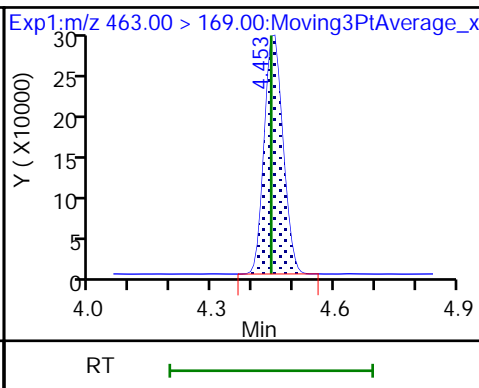
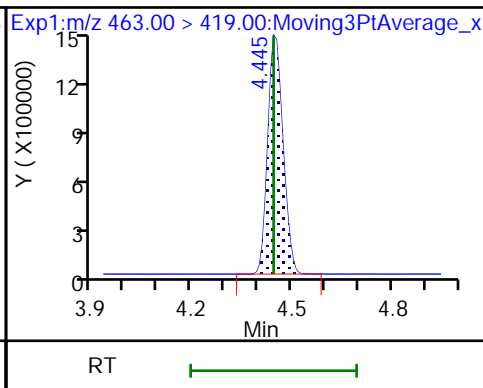
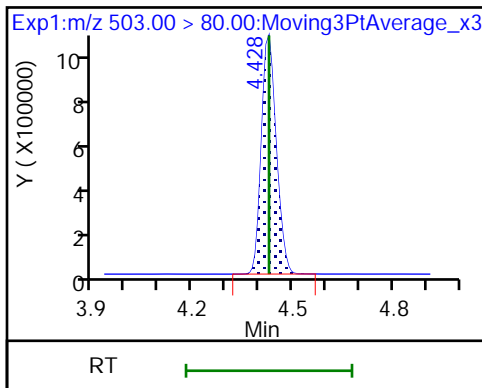




D 25 13C4 PFOS

26 Perfluorononanoic acid

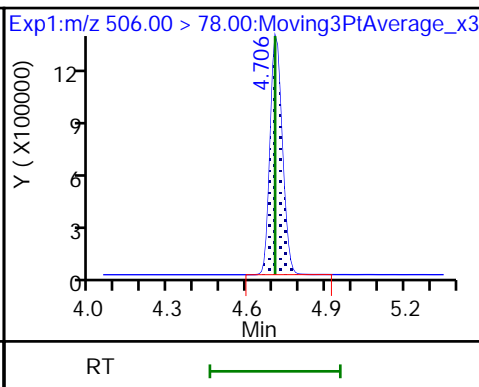
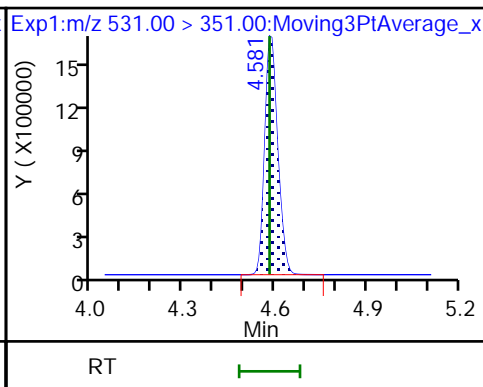
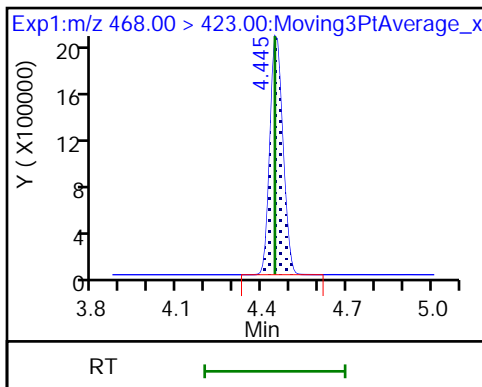
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS

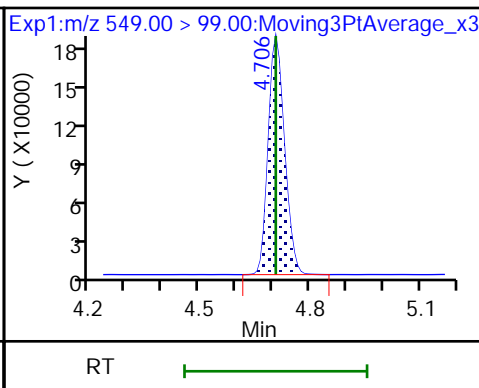
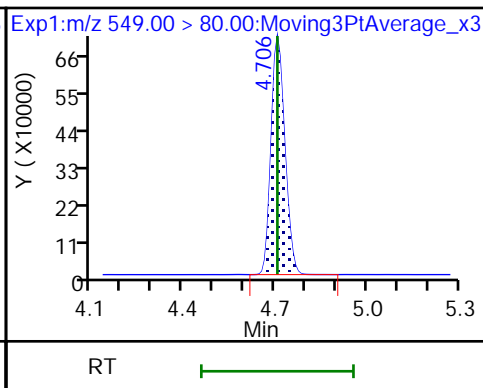
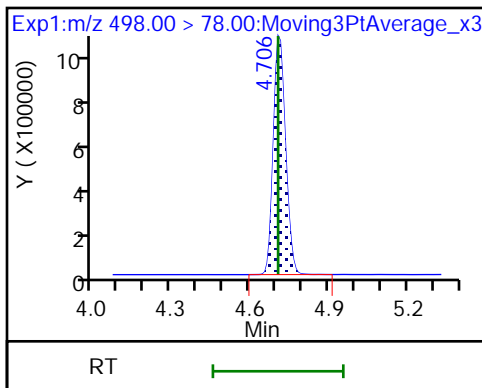
D 34 13C8 FOSA



33 Perfluorooctanesulfonamide

28 Perfluorononanesulfonic acid

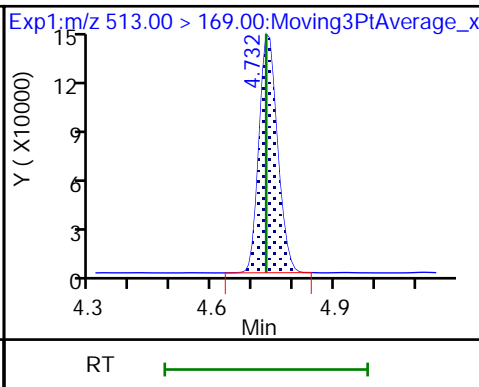
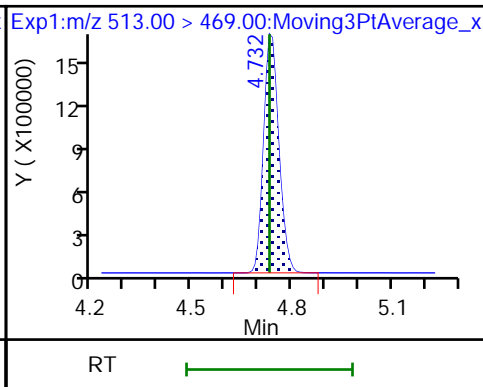
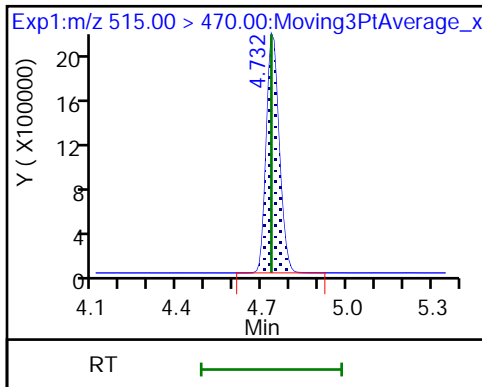
28 Perfluorononanesulfonic acid

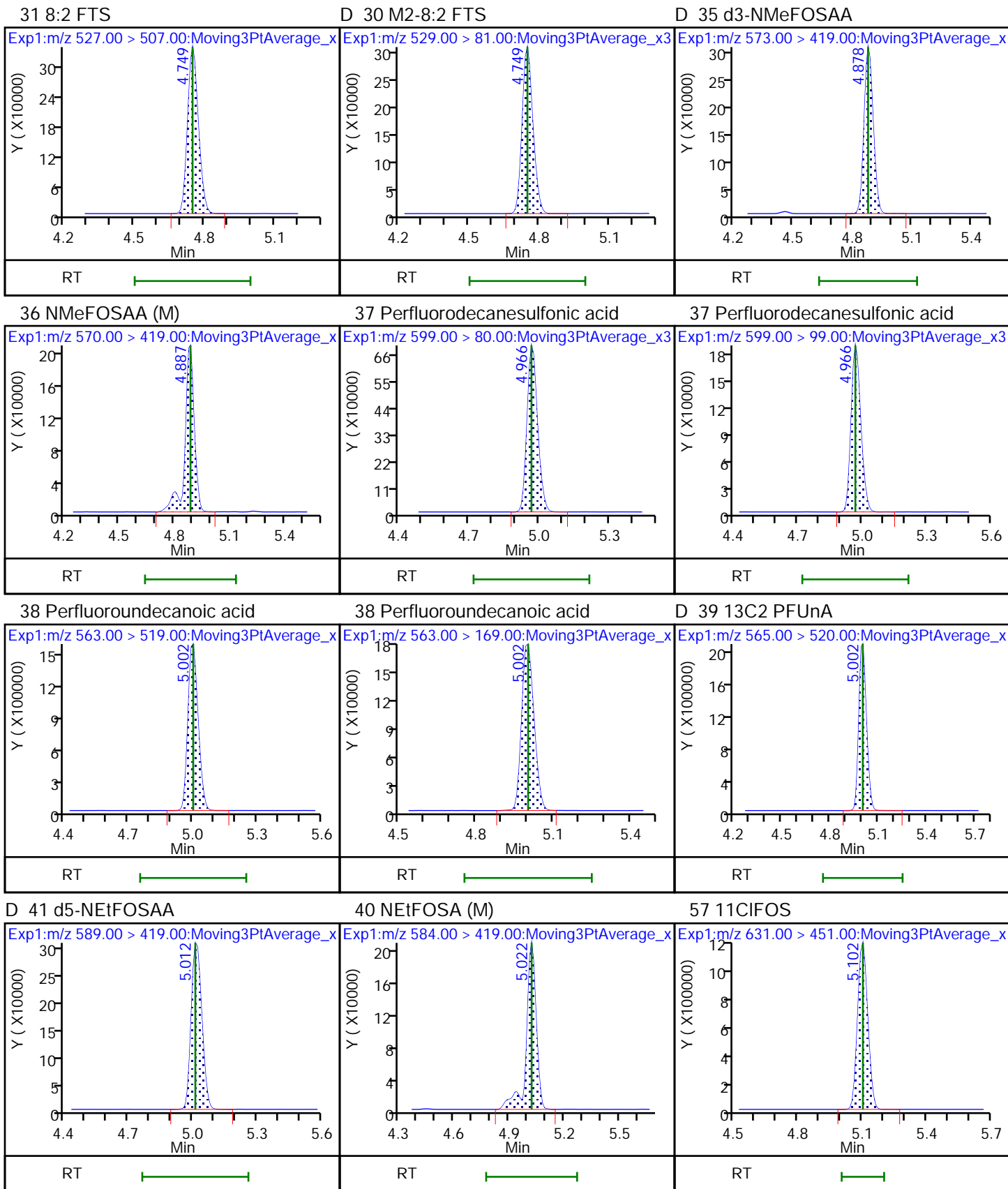


D 32 13C2 PFDA

29 Perfluorodecanoic acid

29 Perfluorodecanoic acid

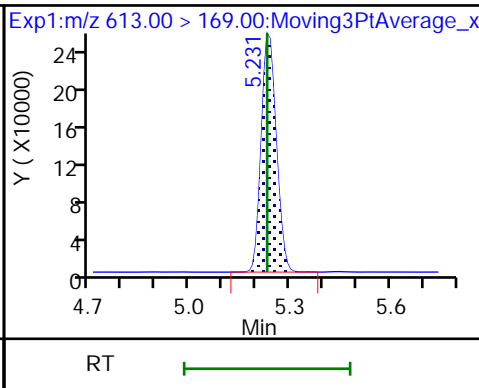
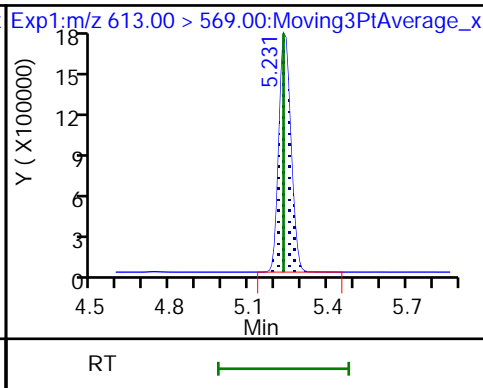
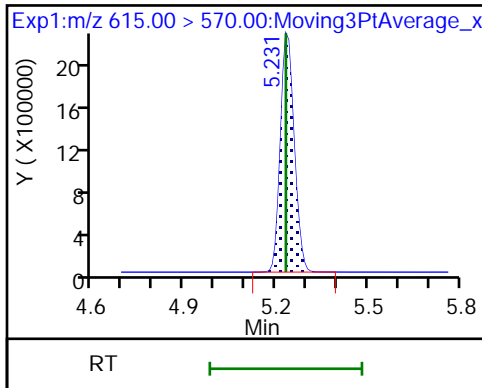




D 43 13C2 PFDaA

42 Perfluorododecanoic acid

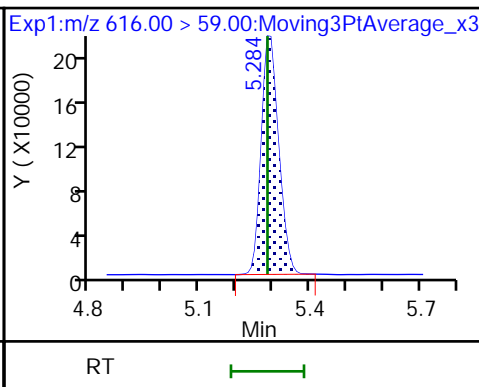
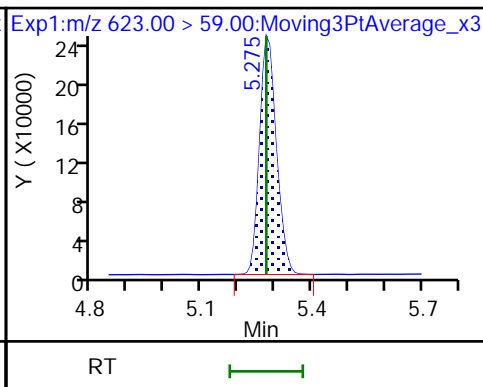
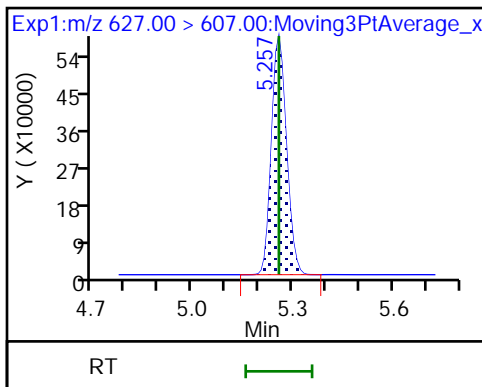
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

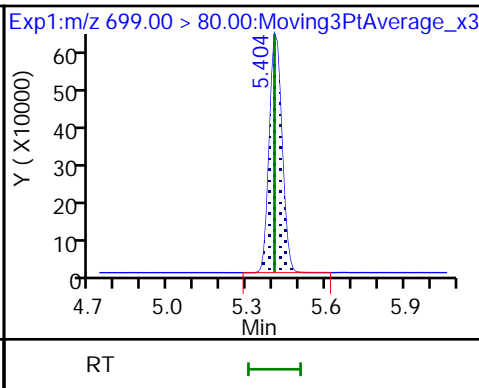
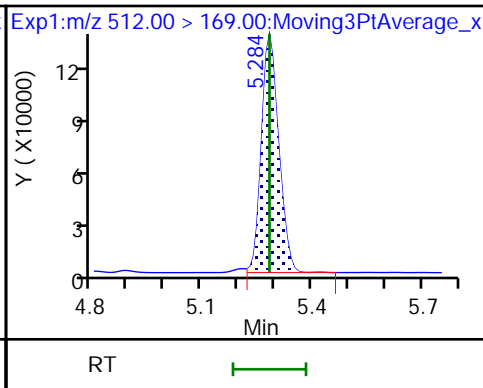
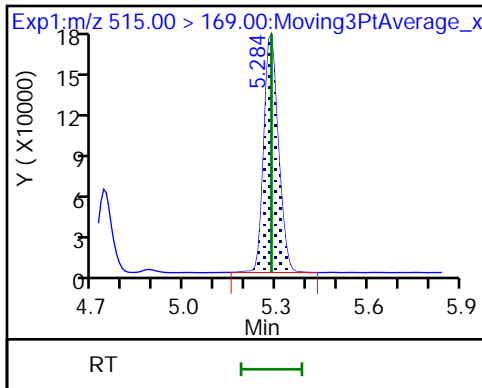
49 N-MeFOSE-M



D 58 d-N-MeFOSA-M

61 NMeFOSA

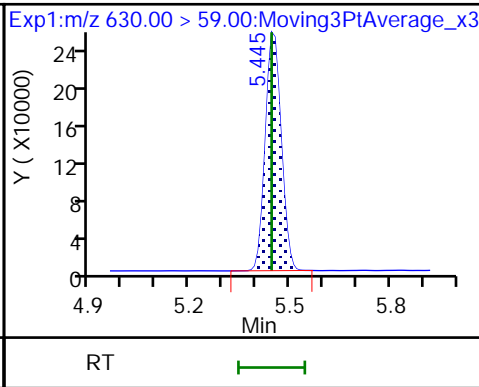
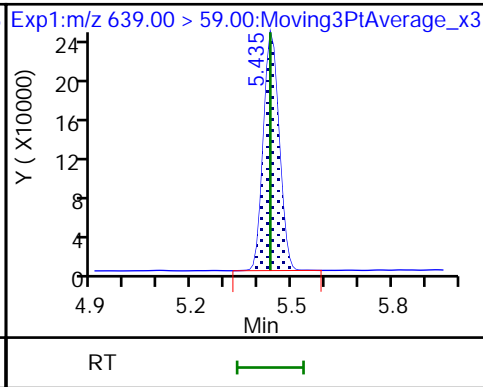
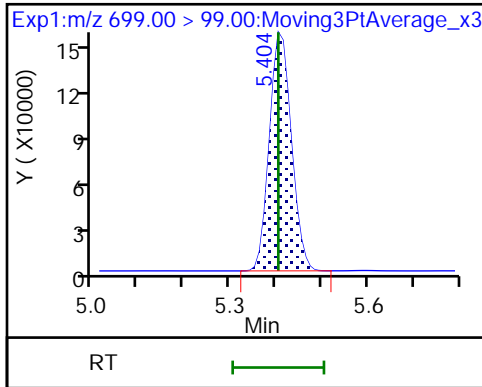
54 PFDoS

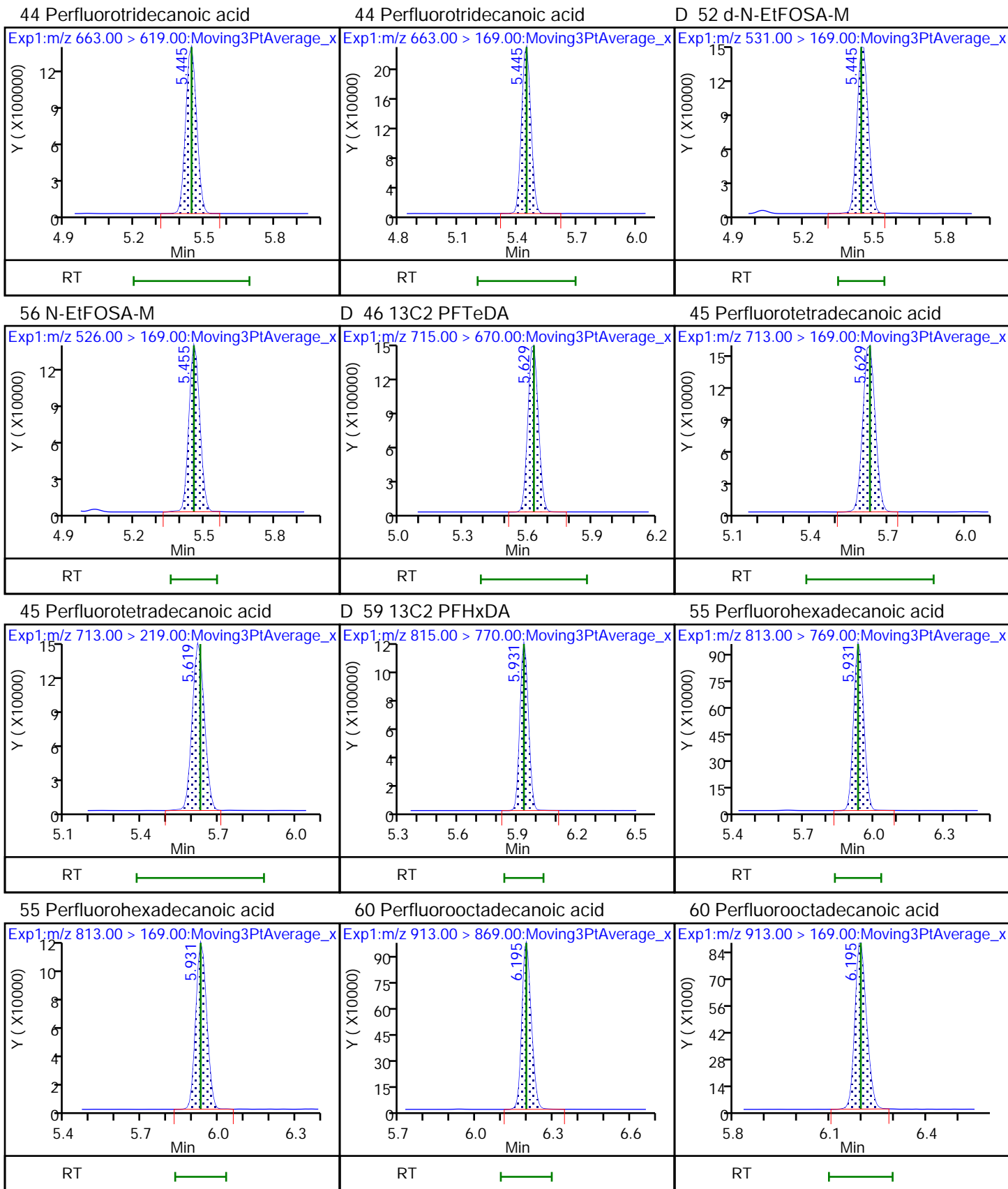


54 PFDoS

D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M









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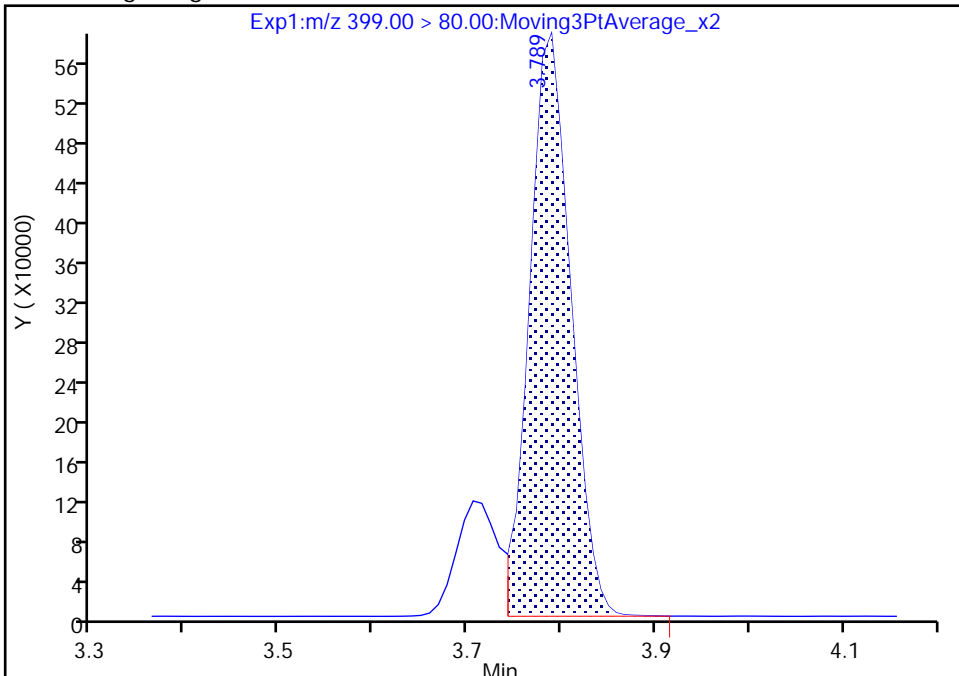
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Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

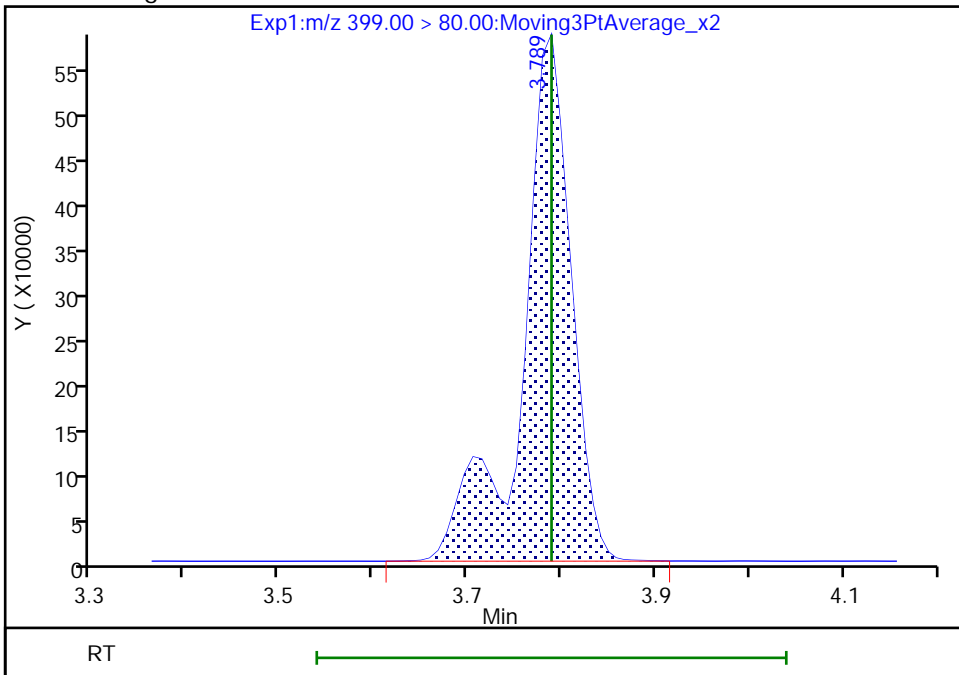
RT: 3.79  
Area: 1762040  
Amount: 0.728988  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 2111511  
Amount: 0.873571  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:39:01  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

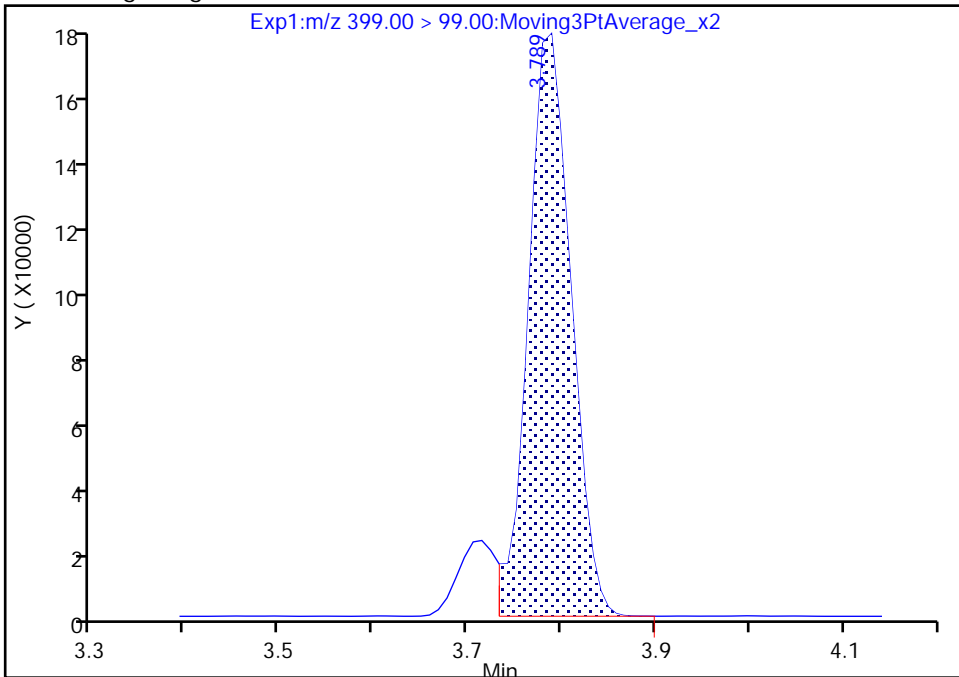
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Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

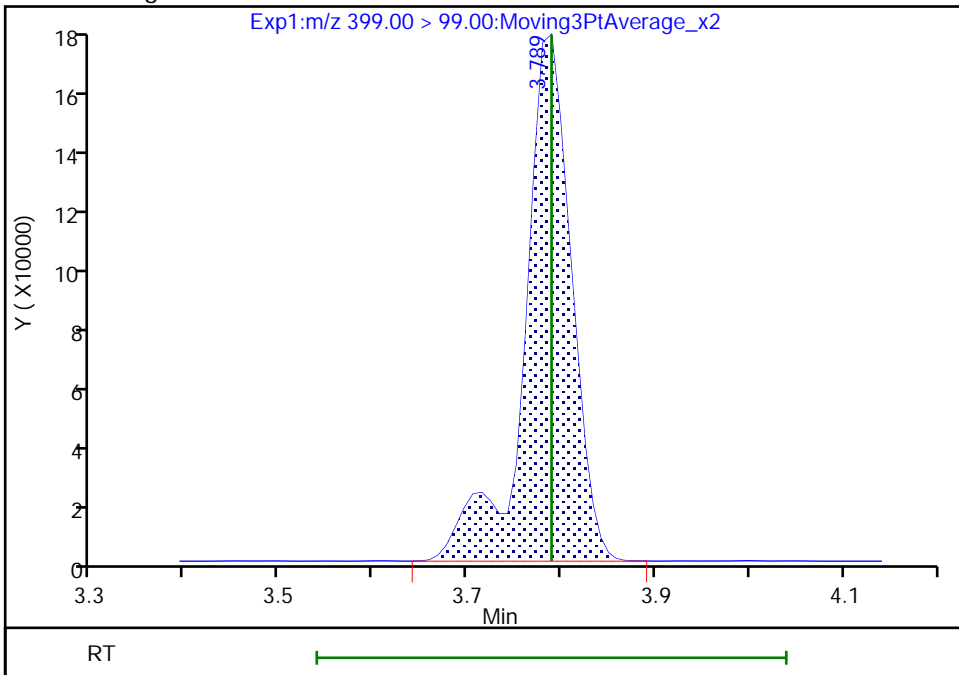
RT: 3.79  
Area: 539317  
Amount: 0.728988  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 599468  
Amount: 0.873571  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:39:07

Audit Action: Manually Integrated

Audit Reason: Baseline  
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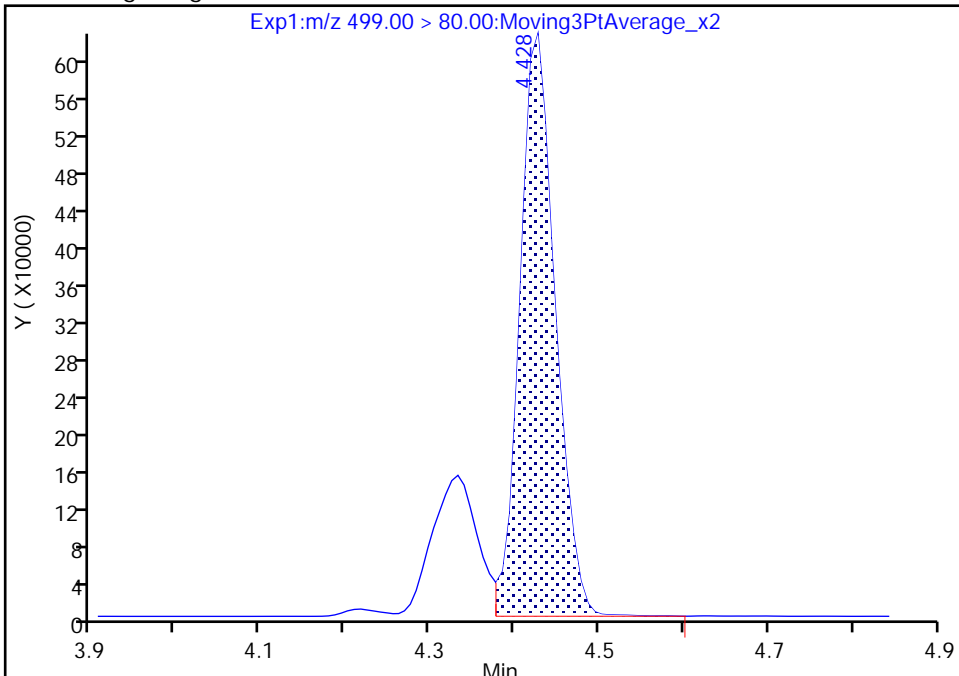
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Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

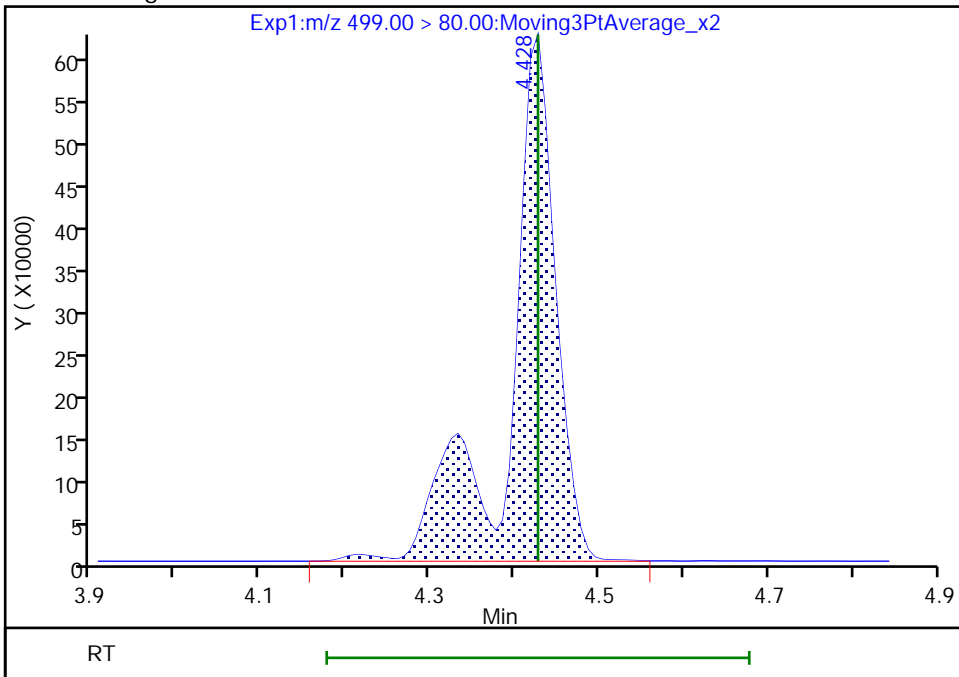
RT: 4.43  
Area: 1803200  
Amount: 0.633702  
Amount Units: ng/ml

Processing Integration Results



RT: 4.43  
Area: 2382706  
Amount: 0.837359  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:39:20  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

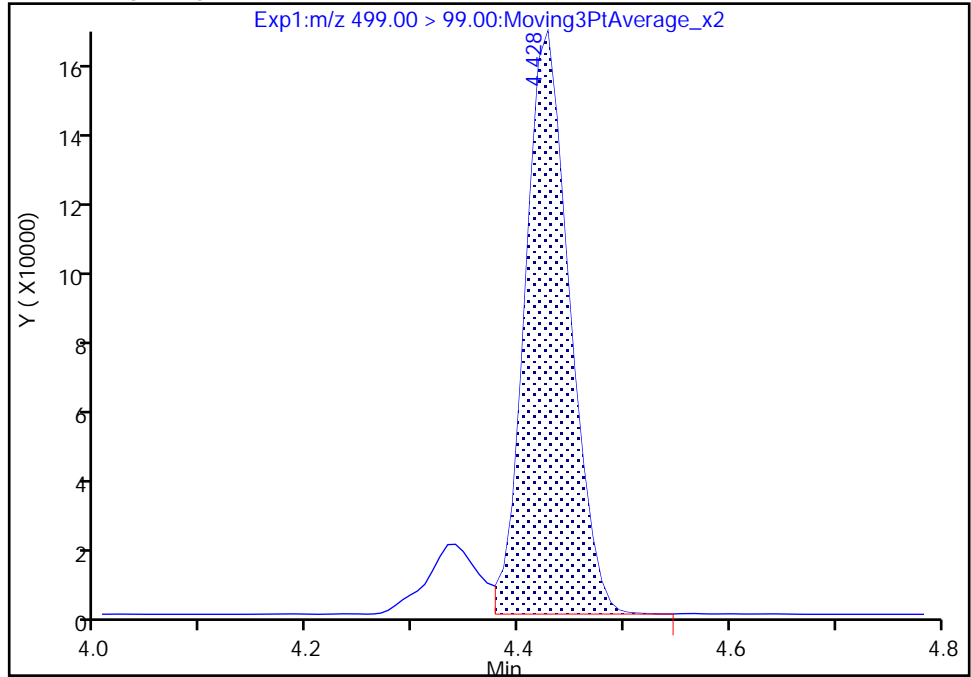
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Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

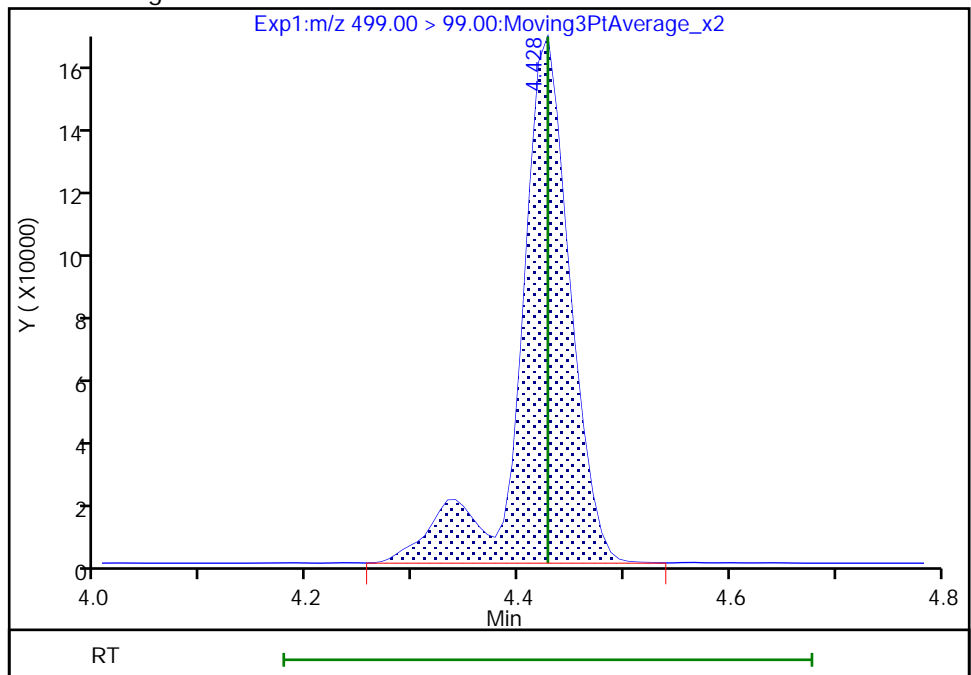
RT: 4.43  
Area: 475908  
Amount: 0.633702  
Amount Units: ng/ml

Processing Integration Results



RT: 4.43  
Area: 543317  
Amount: 0.837359  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:39:27

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

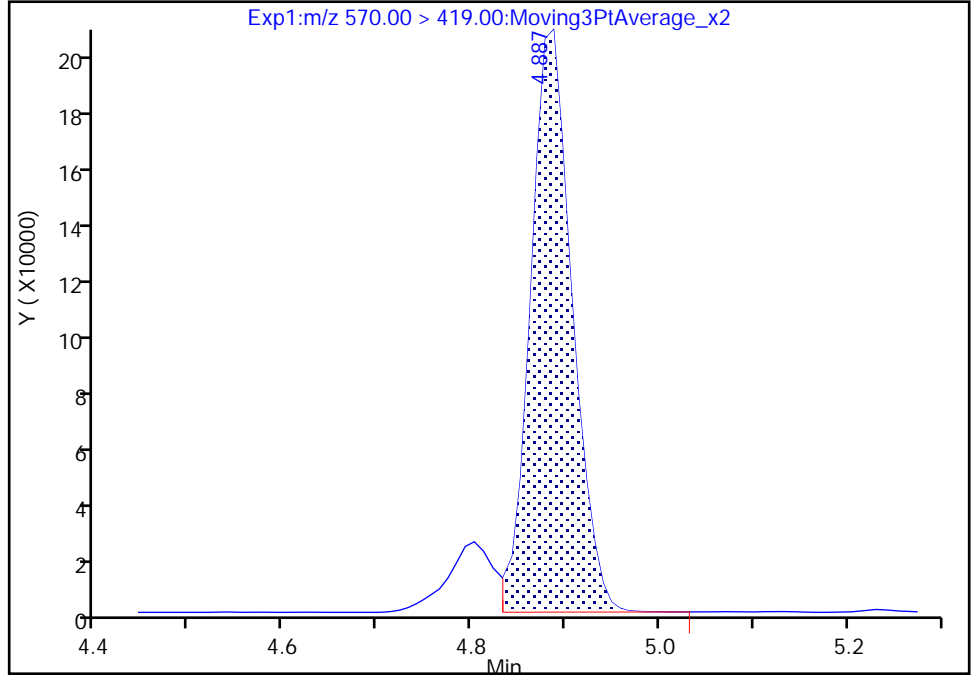
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Injection Date: 12-Jan-2022 18:35:48 Instrument ID: LCA  
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Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

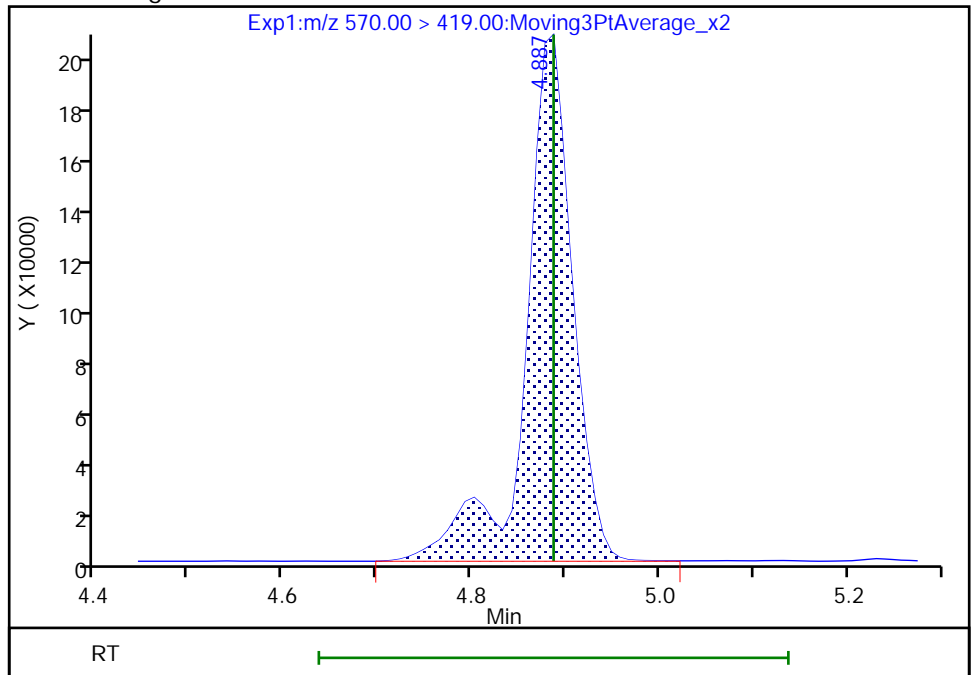
RT: 4.89  
Area: 618022  
Amount: 0.810247  
Amount Units: ng/ml

Processing Integration Results



RT: 4.89  
Area: 700690  
Amount: 0.918473  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:39:40  
Audit Action: Manually Integrated

Eurofins TestAmerica, Knoxville

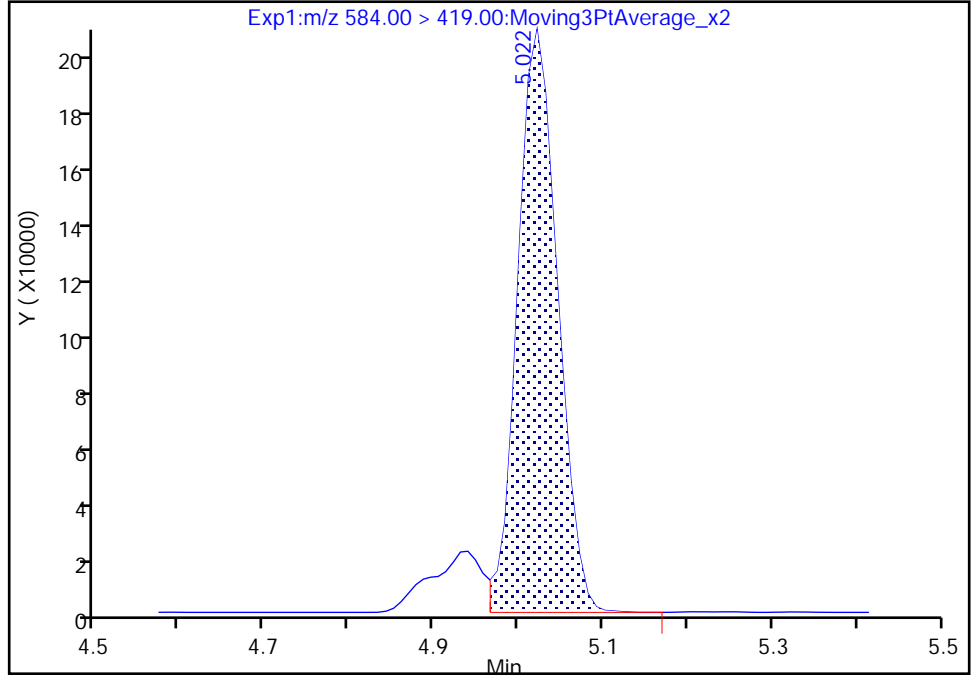
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Injection Date: 12-Jan-2022 18:35:48 Instrument ID: LCA  
Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NEtFOSA, CAS: 2991-50-6

Signal: 1

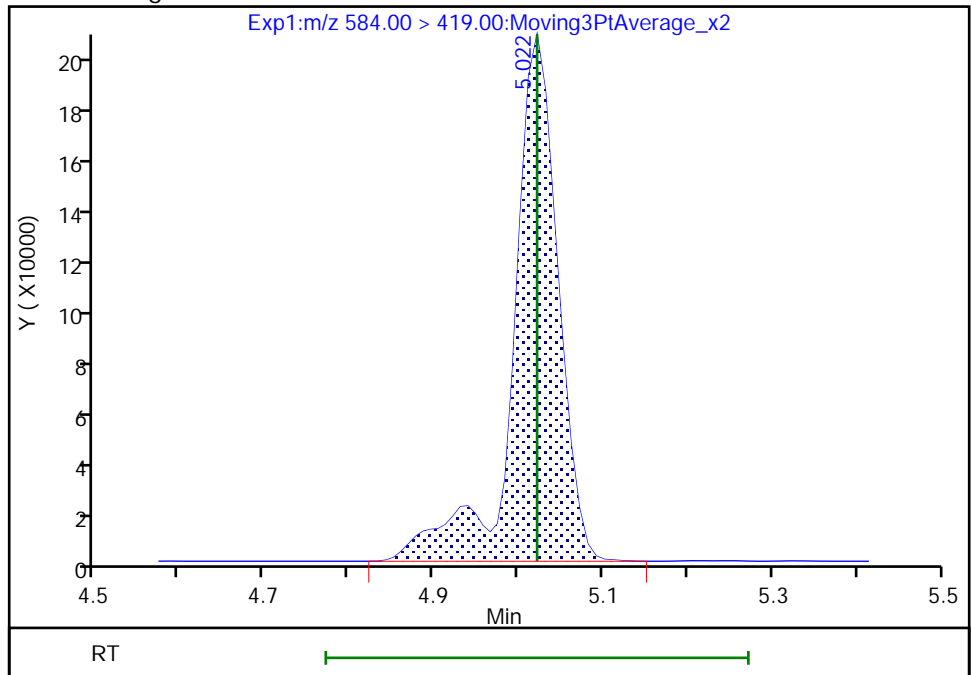
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Amount: 0.819064  
Amount Units: ng/ml

Processing Integration Results



RT: 5.02  
Area: 763376  
Amount: 0.929036  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:39:51  
Audit Action: Manually Integrated

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-57865/19 Calibration Date: 01/12/2022 20:21  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 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	0.7844	0.7695		2.45	2.50	-1.9	40.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9519	0.9854		2.59	2.50	3.5	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.097	1.182		2.38	2.21	7.7	40.0
4:2 FTS	AveID	2.252	2.342		2.43	2.34	4.0	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8680	0.8538		2.46	2.50	-1.6	40.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	0.9713	1.068		2.58	2.35	10.0	40.0
HFPO-DA	AveID	1.352	1.420		2.62	2.50	5.0	40.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.377	1.343		2.22	2.28	-2.5	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.047	1.044		2.49	2.50	-0.2	40.0
DONA	AveID	2.630	2.820		2.53	2.36	7.2	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9541	1.023		2.55	2.38	7.2	40.0
6:2 FTS	L2ID		1.824		2.41	2.37	1.5	40.0
Perfluorooctanoic acid (PFOA)	AveID	1.147	1.177		2.57	2.50	2.6	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.099	1.125		2.38	2.32	2.4	40.0
Perfluorononanoic acid (PFNA)	Q2ID		0.9259		2.69	2.50	7.4	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	Q2ID		2.299		2.47	2.33	6.1	50.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9748	1.016		2.50	2.40	4.2	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9459	0.9457		2.50	2.50	-0.0	40.0
Perfluorodecanoic acid (PFDA)	AveID	0.9645	0.9891		2.56	2.50	2.6	40.0
8:2 FTS	AveID	1.415	1.502		2.54	2.40	6.1	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	QuaIF		0.9636		2.47	2.50	-1.1	40.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		0.9264		2.40	2.41	-0.4	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9695	1.011		2.61	2.50	4.3	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Q2ID		0.9750		2.44	2.50	-2.5	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.672	1.748		2.46	2.36	4.5	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		1.025		2.53	2.50	1.4	40.0
10:2 FTS	AveID	2.276	2.512		2.66	2.41	10.4	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	Q2ID		1.180		2.49	2.50	-0.4	40.0
NMeFOSA	Q2ID		1.067		2.59	2.50	3.5	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9166	0.9818		2.59	2.42	7.1	40.0



FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-57865/19 Calibration Date: 01/12/2022 20:21  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 Lab File ID: \_019.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTriA)	AveID	0.8292	0.8542		2.58	2.50	3.0	40.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	AveID	1.328	1.405		2.65	2.50	5.8	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.195	1.263		2.64	2.50	5.7	40.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1344	0.1347		2.51	2.50	0.2	40.0
Perfluorohexadecanoic acid	Q2ID		1.097		2.56	2.50	2.5	40.0
Perfluorooctadecanoic acid	AveID	0.9844	1.049		2.66	2.50	6.5	40.0
13C4 PFBA	Ave	1.142	1.097		1.20	1.25	-3.9	50.0
13C5 PFPeA	Ave	0.8865	0.8559		1.21	1.25	-3.5	50.0
13C3 PFBS	Ave	0.5913	0.5676		1.12	1.16	-4.0	50.0
M2-4:2 FTS	Ave	0.1820	0.1737		1.11	1.17	-4.6	50.0
13C2 PFHxA	Ave	0.9479	0.9123		1.20	1.25	-3.8	50.0
13C3 HFPO-DA	Ave	0.4556	0.4513		1.24	1.25	-0.9	50.0
18O2 PFHxS	Ave	0.3946	0.4200		1.26	1.18	6.4	50.0
13C4 PFHpA	Ave	0.9067	0.9063		1.25	1.25	-0.0	50.0
M2-6:2 FTS	Ave	0.1835	0.1682		1.09	1.19	-8.4	50.0
13C4 PFOA	Ave	0.9376	0.9110		1.21	1.25	-2.8	50.0
13C4 PFOS	Ave	0.5681	0.5634		1.19	1.20	-0.8	50.0
13C5 PFNA	Ave	1.234	1.184		1.20	1.25	-4.1	50.0
13C8 FOSA	Ave	0.7682	0.8064		1.31	1.25	5.0	50.0
13C2 PFDA	Ave	1.191	1.197		1.26	1.25	0.5	50.0
M2-8:2 FTS	Ave	0.2070	0.1791		1.04	1.20	-13.5	50.0
d3-NMeFOSAA	Ave	0.1401	0.1888		1.68	1.25	34.7	50.0
13C2 PFUnA	Ave	1.189	1.182		1.24	1.25	-0.5	50.0
d5-NEtFOSAA	Ave	0.1537	0.1968		1.60	1.25	28.0	50.0
13C2 PFDoA	Ave	1.247	1.260		1.26	1.25	1.1	50.0
d7-N-MeFOSE-M	Ave	0.1499	0.1438		1.20	1.25	-4.1	50.0
d-N-MeFOSA-M	Ave	0.1069	0.1074		1.26	1.25	0.5	50.0
d9-N-EtFOSE-M	Ave	0.1504	0.1408		1.17	1.25	-6.4	50.0
d-N-EtFOSA-M	Ave	0.0883	0.0856		1.21	1.25	-3.1	50.0
13C2 PFTeDA	Ave	0.9508	0.9577		1.26	1.25	0.7	50.0
13C2 PFHxDA	Ave	0.6444	0.6188		1.20	1.25	-4.0	50.0
13C8 PFOA	AveID	0.999	1.050		1.31	1.25	5.1	50.0
13C8 PFOS	AveID	0.2220	0.2361		1.27	1.20	6.4	50.0

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_019.d  
 Lims ID: CCV  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 12-Jan-2022 20:21:20 ALS Bottle#: 19 Worklist Smp#: 19  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022237-019 ccv  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:15:30 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 10:03:08

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										
212.90 > 169.00	2.807	2.802	0.005	1.000	8971887	2.45		98.1	2248	
D 1 13C4 PFBA										
217.00 > 172.00	2.807	2.802	0.005	0.677	5829982	1.20		96.1	14345	
D 3 13C5 PFPeA										
267.90 > 223.00	3.123	3.116	0.007	0.753	4546638	1.21		96.5	9768	
4 Perfluoropentanoic acid										
262.90 > 219.00	3.123	3.116	0.007	1.000	8960328	2.59		104	2895	
D 6 13C3 PFBS										
301.90 > 80.00	3.139	3.132	0.007	0.757	2804327	1.12		96.0	12305	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	3.139	3.132	0.007	1.000	6301595	2.38	Target=2.65	108	5450	
298.90 > 99.00	3.139	3.132	0.007	1.000	2335697		2.70(1.32-3.97)		4964	
D 8 M2-4:2 FTS										
329.00 > 81.00	3.422	3.423	-0.001	0.825	861648	1.11		95.4	1615	
7 4:2 FTS										
327.00 > 307.00	3.422	3.423	-0.001	1.000	4036770	2.43		104	9974	
D 9 13C2 PFHxA										
315.00 > 270.00	3.452	3.444	0.008	0.832	4846012	1.20		96.2	10189	
10 Perfluorohexanoic acid										
313.00 > 269.00	3.452	3.444	0.008	1.000	8275070	2.46	Target=11.80	98.4	2968	
313.00 > 119.00	3.452	3.444	0.008	1.000	684506		12.09(5.90-17.70)		992	
11 Perfluoropentanesulfonic acid										
349.00 > 80.00	3.452	3.444	0.008	1.100	6043281	2.58	Target=3.44	110	12144	
349.00 > 99.00	3.452	3.444	0.008	1.100	1716833		3.52(1.72-5.16)		7943	
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.556	3.548	0.008	0.857	2397412	1.24		99.1	4947	

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	3.556	3.548	0.008	1.000	6807408	2.62		105	4276	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.797	3.789	0.008	1.000	5452920	2.22	Target=3.40	97.5	7482	M
399.00 > 99.00	3.797	3.789	0.008	1.000	1598932		3.41(1.70-5.10)		5614	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.797	3.789	0.008	0.915	2110675	1.26		106	5759	
D 14 13C4 PFHpA										
367.00 > 322.00	3.807	3.799	0.008	0.918	4814259	1.25		100.0	8566	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.807	3.799	0.008	1.000	10054213	2.49	Target=3.29	99.8	4825	
363.00 > 169.00	3.807	3.799	0.008	1.000	3169310		3.17(1.65-4.94)		3047	
68 DONA										
377.00 > 251.00	3.841	3.834	0.007	0.866	15899674	2.53	Target=1.82	107	11362	
377.00 > 85.00	3.841	3.834	0.007	0.866	9211958		1.73(0.91-2.74)		186	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.131	4.115	0.016	0.931	5826487	2.55	Target=3.92	107	8235	
449.00 > 99.00	4.123	4.115	0.008	0.930	1490884		3.91(1.96-5.87)		5772	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.140	4.132	0.008	0.998	848612	1.09		91.6	2957	
D 21 13C4 PFOA										
417.00 > 372.00	4.149	4.132	0.017	1.000	4839215	1.21		97.2	9524	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.140	4.132	0.008	0.998	5081628	1.31		105	9534	
19 6:2 FTS										
427.00 > 407.00	4.140	4.132	0.008	1.000	3089995	2.40		101	6540	
* 22 13C2 PFOA										
415.00 > 370.00	4.149	4.132	0.017		5312145	1.25			9812	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.140	4.132	0.008	0.998	11394165	2.56	Target=2.59	103	4706	
413.00 > 169.00	4.140	4.132	0.008	0.998	4432962		2.57(1.30-3.89)		4529	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.435	4.419	0.016	1.000	675505	1.27		106	4074	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.435	4.428	0.007	1.000	6247322	2.37	Target=4.65	102	4168	M
499.00 > 99.00	4.435	4.428	0.007	1.000	1464945		4.26(2.32-6.97)		4626	M
D 25 13C4 PFOS										
503.00 > 80.00	4.435	4.428	0.007	1.069	2860949	1.18		99.2	4858	
26 Perfluorononanoic acid										
463.00 > 419.00	4.461	4.445	0.016	1.000	11645862	2.69	Target=4.65	107	8711	
463.00 > 169.00	4.461	4.445	0.016	1.000	2455625		4.74(2.32-6.97)		3757	
D 27 13C5 PFNA										
468.00 > 423.00	4.461	4.445	0.016	1.075	6288677	1.20		95.9	9786	
63 9CIFOS										
531.00 > 351.00	4.594	4.581	0.013	1.036	12824442	2.47		106	14985	

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	4.715	4.706	0.009	1.063	5837363	2.50	Target=4.06	104	7068	
549.00 > 99.00	4.715	4.706	0.009	1.063	1520919		3.84(2.03-6.09)		6368	
D 34 13C8 FOSA										
506.00 > 78.00	4.732	4.706	0.026	1.141	4283694	1.31		105	3540	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.732	4.706	0.026	1.000	8102187	2.50		100.0	4416	
D 32 13C2 PFDA										
515.00 > 470.00	4.749	4.732	0.017	1.145	6356906	1.26		100	8710	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.749	4.732	0.017	1.000	12575273	2.56	Target=11.30	103	6839	
513.00 > 169.00	4.749	4.732	0.017	1.000	1091114		11.53(5.65-16.95)		730	
31 8:2 FTS										
527.00 > 507.00	4.757	4.749	0.008	1.000	2738303	2.54		106	5530	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.757	4.749	0.008	1.147	911602	1.04		86.5	1556	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.887	4.878	0.009	1.178	1002983	1.68		135	658	
36 NMeFOSAA										
570.00 > 419.00	4.896	4.887	0.009	1.002	1932897	2.47		98.9	2856	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.975	4.966	0.009	1.122	5345019	2.40	Target=3.79	99.6	8200	
599.00 > 99.00	4.975	4.966	0.009	1.122	1504307		3.55(1.90-5.69)		5161	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.012	5.002	0.010	1.000	12701250	2.61	Target=8.45	104	8705	
563.00 > 169.00	5.012	5.002	0.010	1.000	1459831		8.70(4.22-12.67)		4389	
D 39 13C2 PFUnA										
565.00 > 520.00	5.012	5.002	0.010	1.208	6280665	1.24		99.5	14017	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.032	5.012	0.020	1.213	1045575	1.60		128	3559	
40 NEtFOSA										
584.00 > 419.00	5.032	5.022	0.010	1.000	2038828	2.44		97.5	2000	M
57 11C1FOS										
631.00 > 451.00	5.112	5.102	0.010	1.153	9856914	2.46		105	11230	
D 43 13C2 PFDaA										
615.00 > 570.00	5.249	5.231	0.018	1.265	6694272	1.26		101	10889	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.249	5.231	0.018	1.000	13722542	2.53	Target=6.99	101	9413	
613.00 > 169.00	5.249	5.231	0.018	1.000	1934597		7.09(3.50-10.49)		4522	
50 10:2 FTS										
627.00 > 607.00	5.266	5.257	0.009	1.107	4609415	2.66		110	9976	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.301	5.275	0.026	1.278	763876	1.20		95.9	741	
49 N-MeFOSE-M										
616.00 > 59.00	5.312	5.284	0.028	1.002	1802259	2.49		99.6	1885	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.301	5.284	0.017	1.278	570530	1.26		100	51.0	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
61 NMeFOSA	512.00 > 169.00	5.312	5.284	0.028	1.002	1217980	2.59	104	668	
54 PFDoS	699.00 > 80.00	5.414	5.404	0.010	1.221	5688067	2.59	Target=4.24	107	8424
	699.00 > 99.00	5.414	5.404	0.010	1.221	1298430		4.38(2.12-6.35)		5581
D 53 d9-N-EtFOSE-M	639.00 > 59.00	5.464	5.435	0.029	1.317	747957	1.17	93.6	374	
62 N-EtFOSE-M	630.00 > 59.00	5.474	5.445	0.029	1.002	2101963	2.65	106	1706	
44 Perfluorotridecanoic acid	663.00 > 619.00	5.455	5.445	0.010	1.039	11436937	2.58	Target=6.20	103	9329
	663.00 > 169.00	5.455	5.445	0.010	1.039	1850867		6.18(3.10-9.30)		5515
D 52 d-N-EtFOSA-M	531.00 > 169.00	5.474	5.445	0.029	1.319	454625	1.21	96.9	699	
56 N-EtFOSA-M	526.00 > 169.00	5.483	5.455	0.028	1.002	1148126	2.64	106	694	
D 46 13C2 PFTeDA	715.00 > 670.00	5.629	5.629	0.0	1.357	5087439	1.26	101	10236	
45 Perfluorotetradecanoic acid	713.00 > 169.00	5.640	5.629	0.011	1.002	1370080	2.51	Target=1.05	100	5440
	713.00 > 219.00	5.629	5.629	0.0	1.000	1323927		1.03(0.53-1.58)		5952
D 59 13C2 PFHxDA	815.00 > 770.00	5.940	5.931	0.009	1.432	3287121	1.20	96.0	5794	
55 Perfluorohexadecanoic acid	813.00 > 769.00	5.940	5.931	0.009	1.000	7211370	2.56	Target=8.09	102	5482
	813.00 > 169.00	5.940	5.931	0.009	1.000	890834		8.10(4.05-12.14)		3105
60 Perfluorooctadecanoic acid	913.00 > 869.00	6.199	6.195	0.004	1.044	6893567	2.66	Target=11.53	107	4422
	913.00 > 169.00	6.199	6.195	0.004	1.044	590623		11.67(5.77-17.30)		2008

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

63L5PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_019.d

Injection Date: 12-Jan-2022 20:21:20

Instrument ID: LCA

Lims ID: CCV

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 19

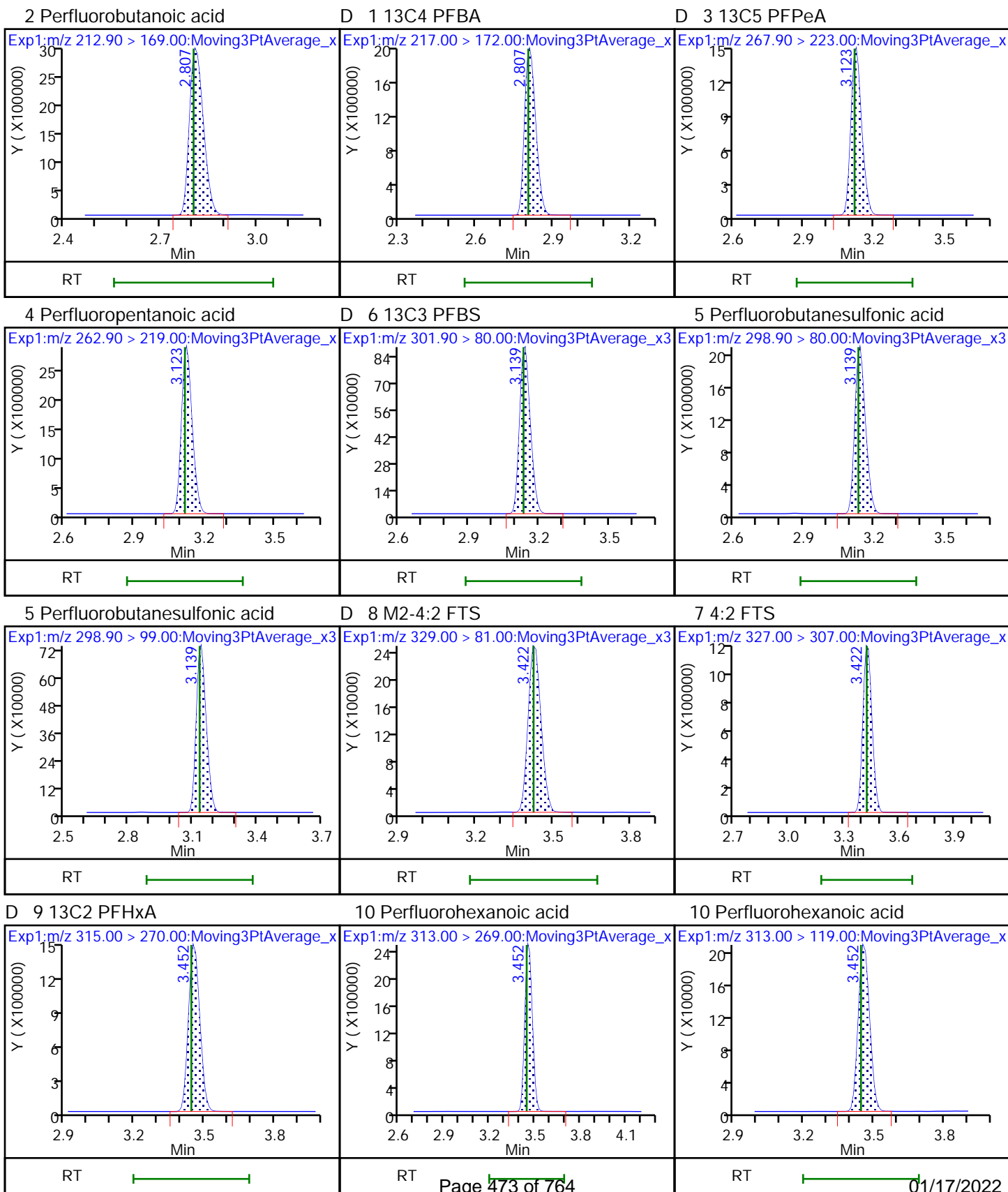
Worklist Smp#: 19

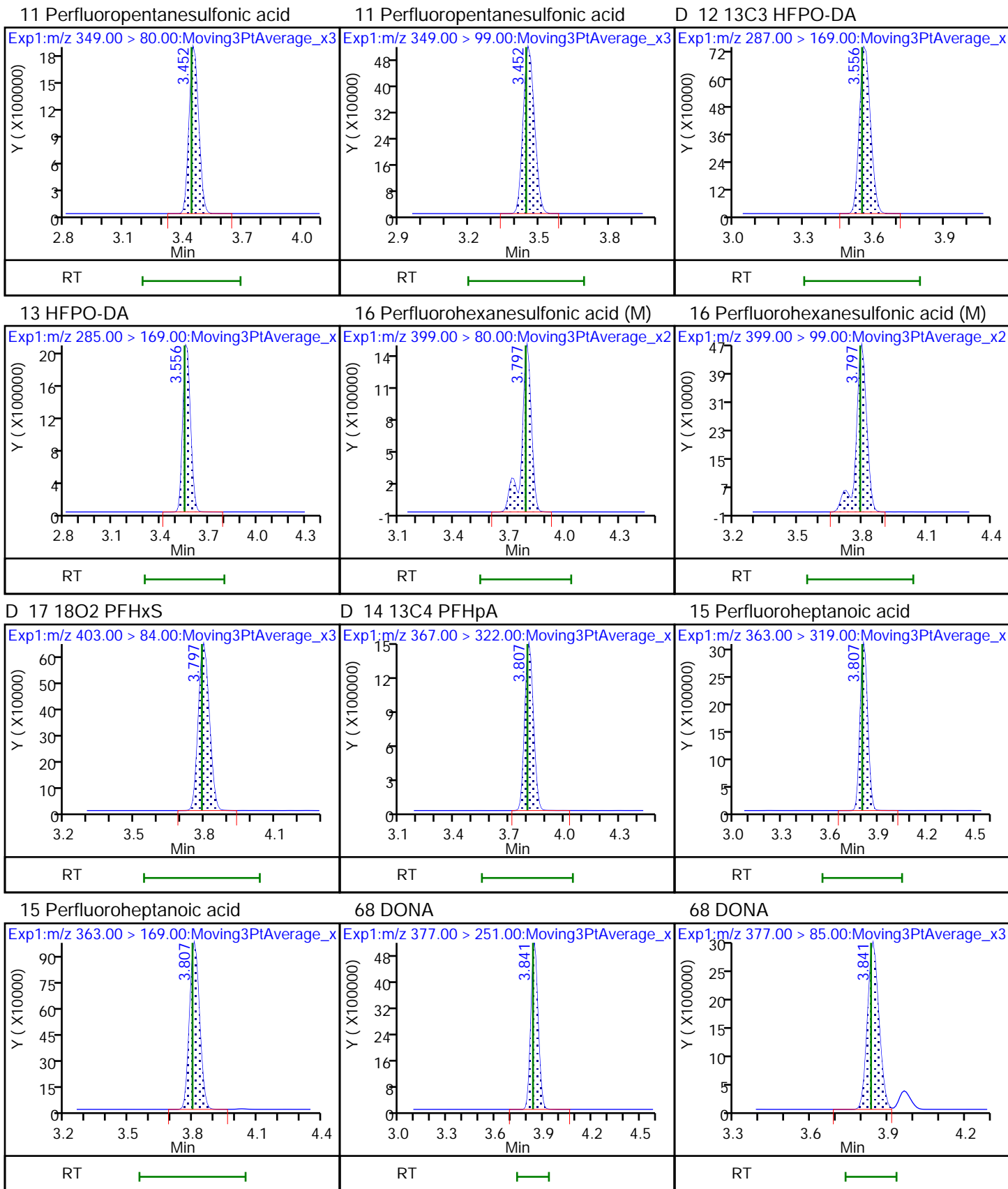
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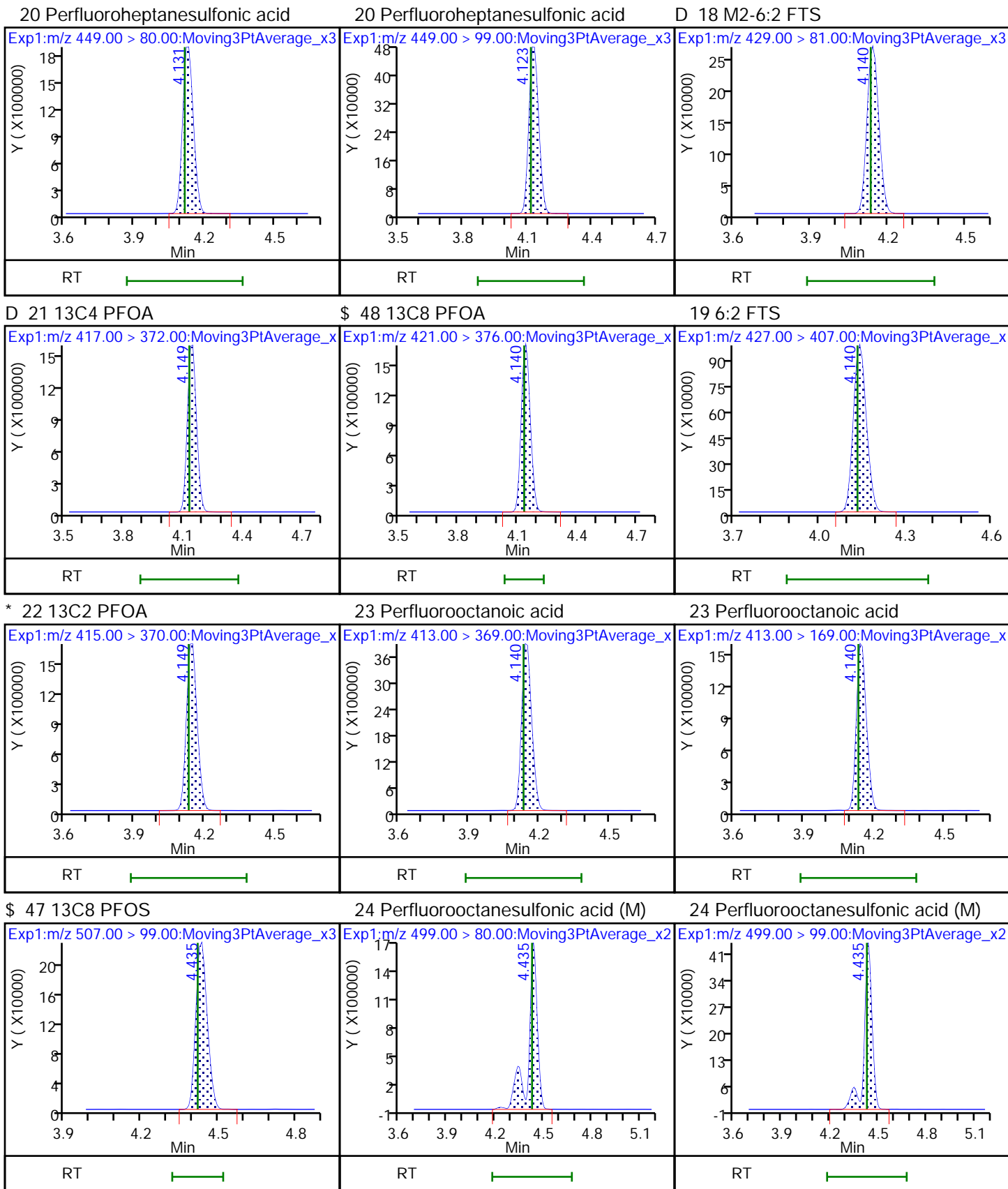
Dil. Factor: 1.0000

Method: PFC\_LCA

Limit Group: LC - PFC- ICAL





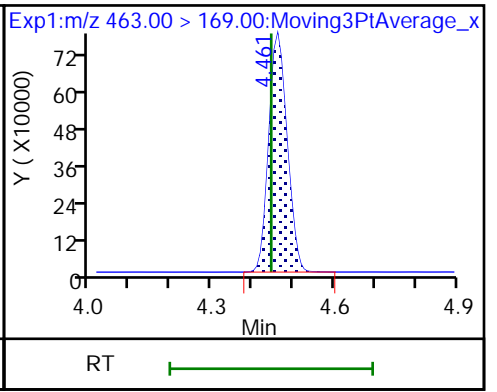
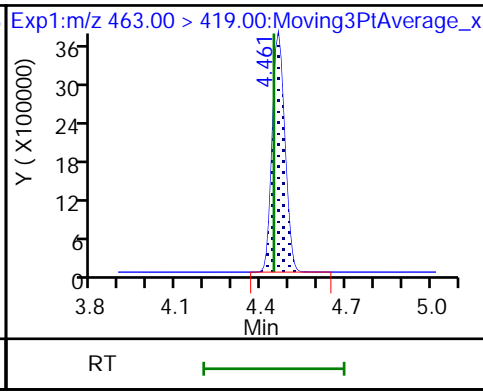
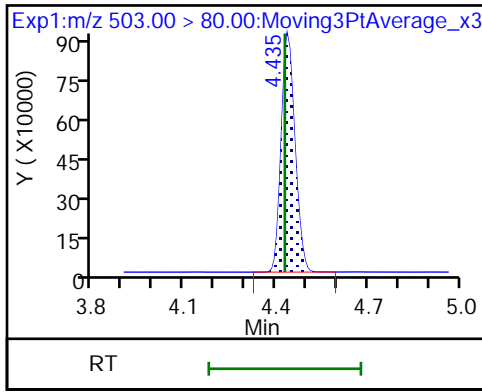




D 25 13C4 PFOS

26 Perfluorononanoic acid

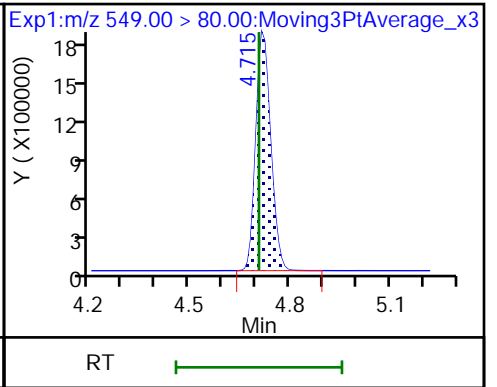
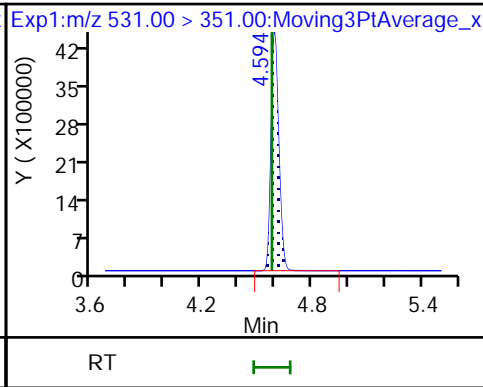
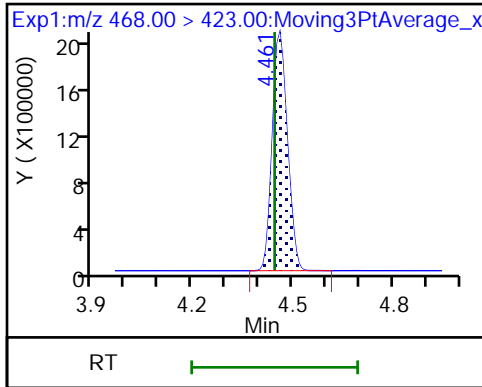
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS

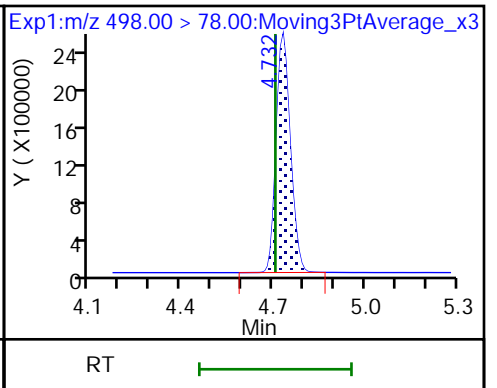
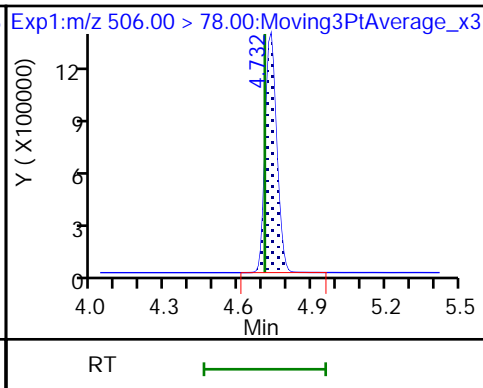
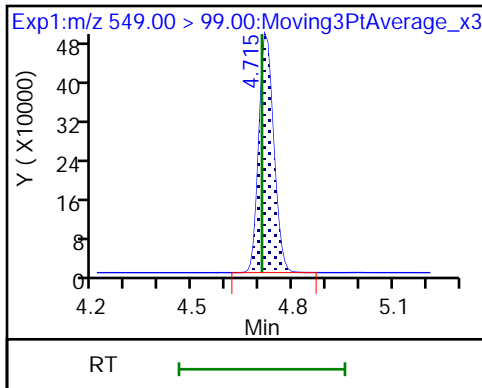
28 Perfluorononanesulfonic acid



28 Perfluorononanesulfonic acid

D 34 13C8 FOSA

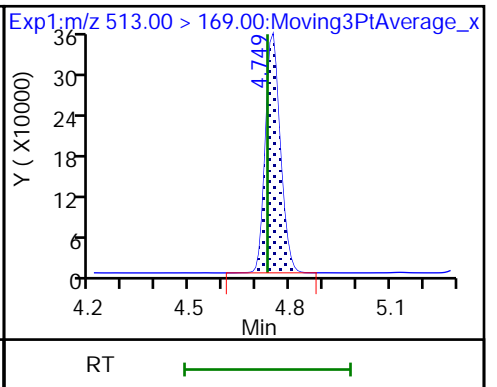
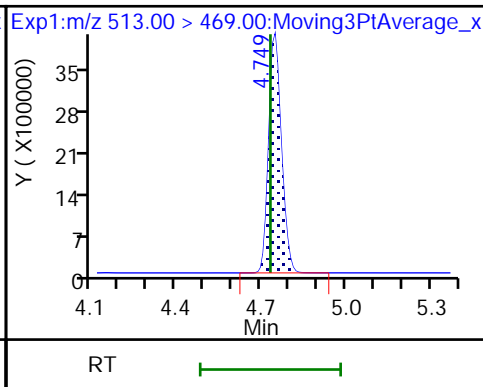
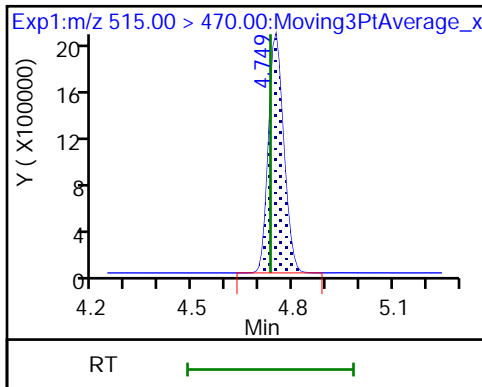
33 Perfluorooctanesulfonamide

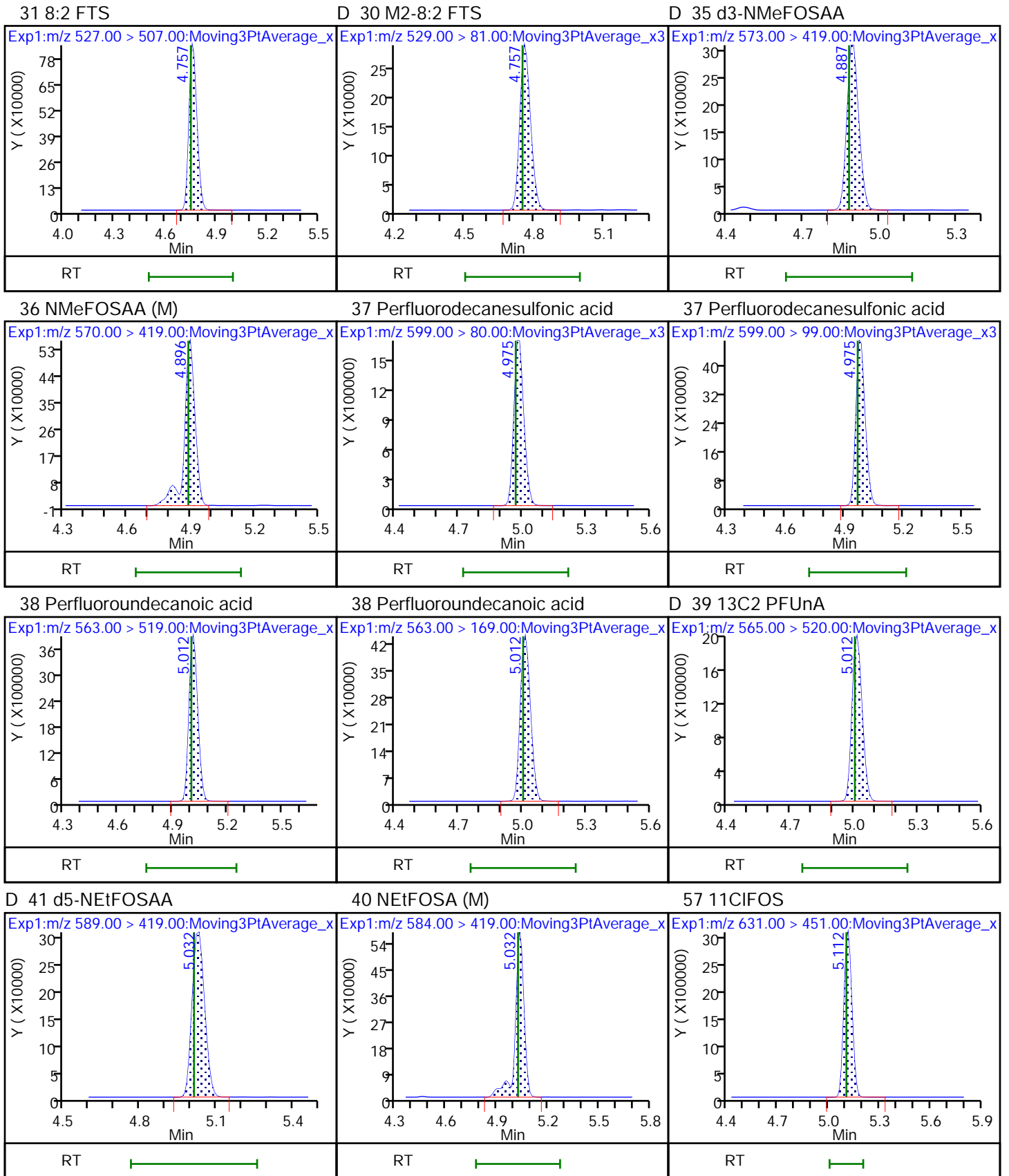


D 32 13C2 PFDA

29 Perfluorodecanoic acid

29 Perfluorodecanoic acid

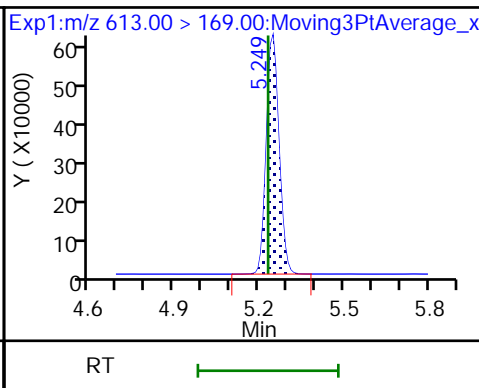
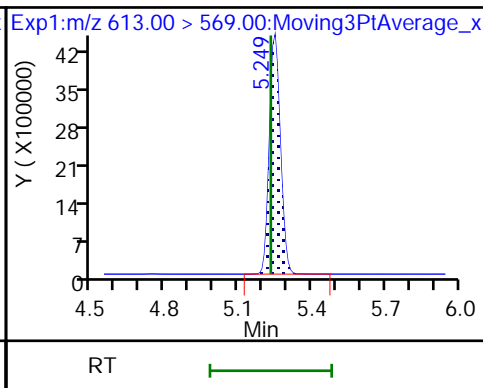
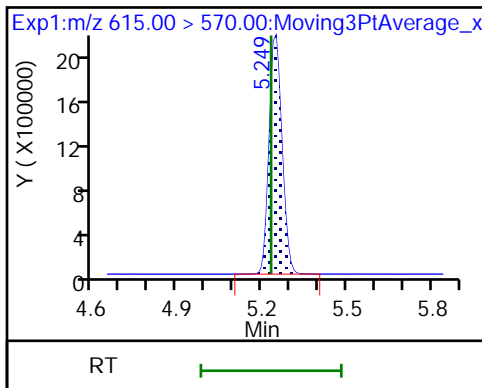




D 43 13C2 PFDaA

42 Perfluorododecanoic acid

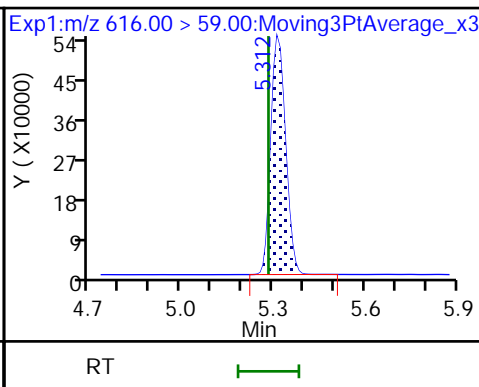
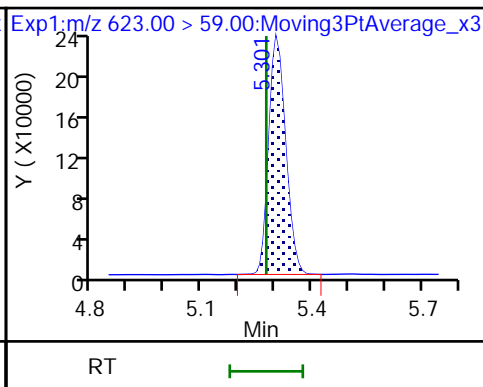
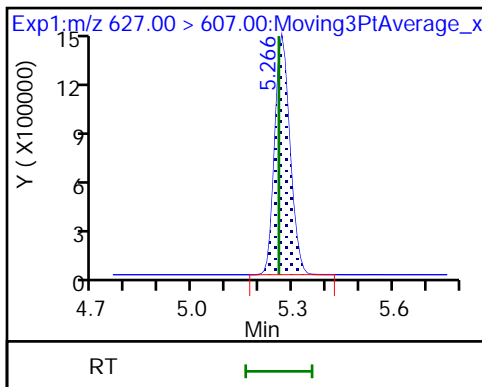
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

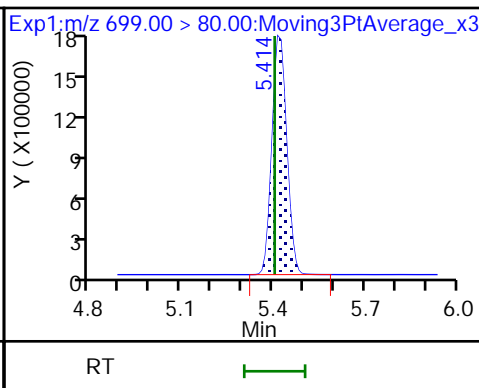
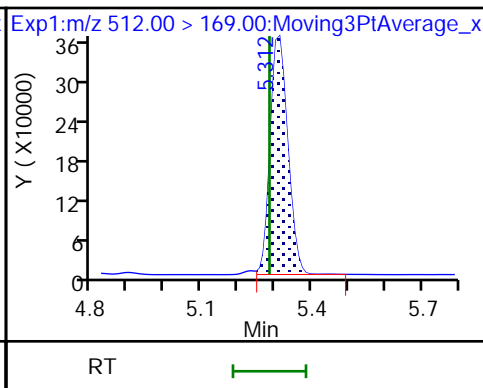
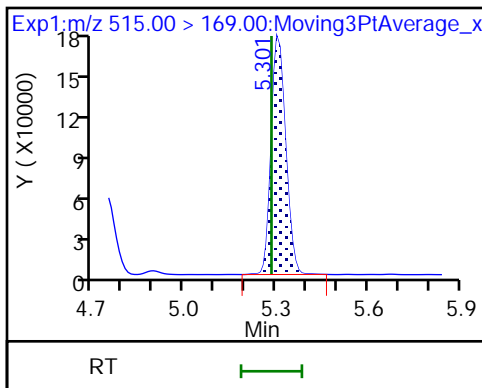
49 N-MeFOSE-M



D 58 d-N-MeFOSA-M

61 NMeFOSA

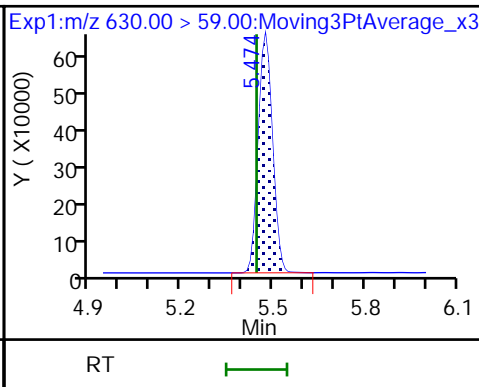
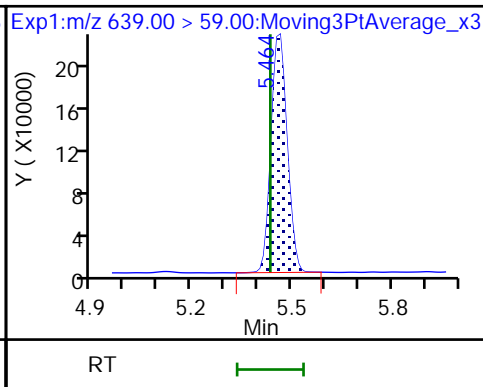
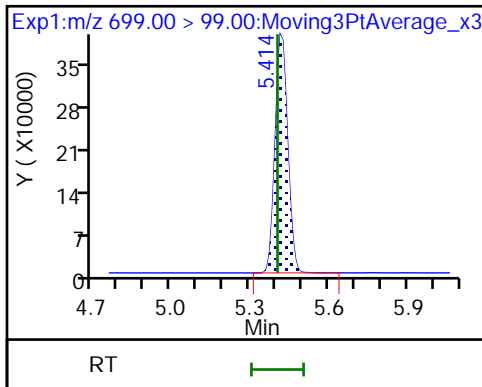
54 PFDoS

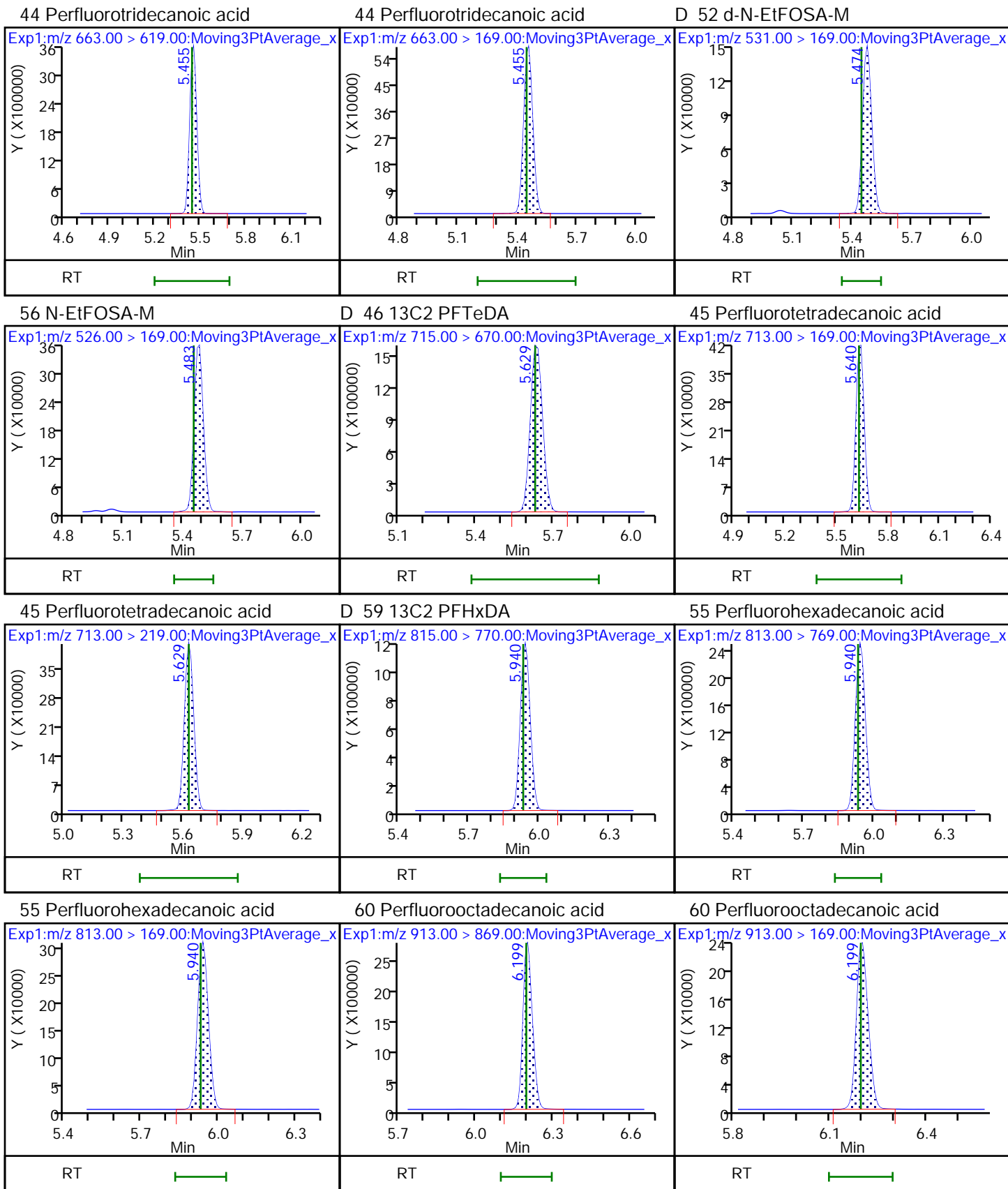


54 PFDoS

D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M







Eurofins TestAmerica, Knoxville

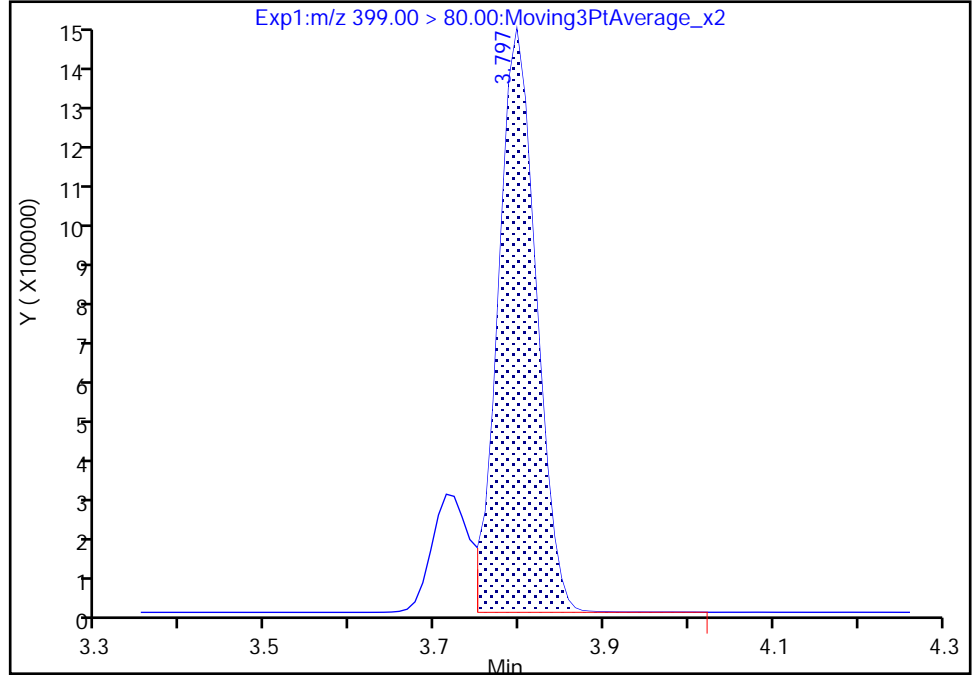
Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_019.d  
Injection Date: 12-Jan-2022 20:21:20 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

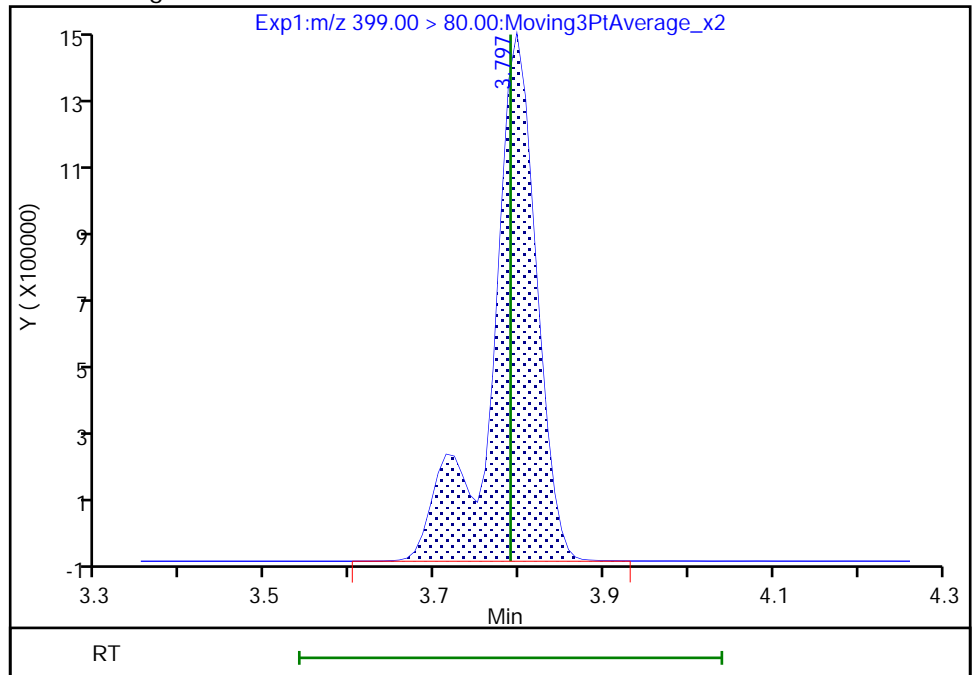
RT: 3.80  
Area: 4553901  
Amount: 1.852527  
Amount Units: ng/ml

Processing Integration Results



RT: 3.80  
Area: 5452920  
Amount: 2.218248  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 10:01:40  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

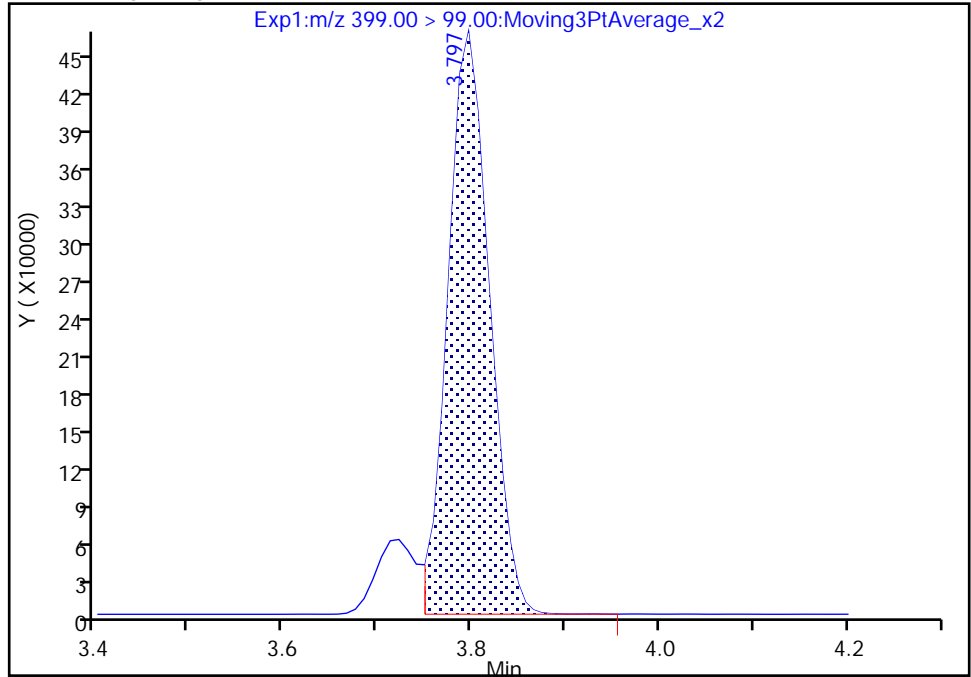
Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_019.d  
Injection Date: 12-Jan-2022 20:21:20 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

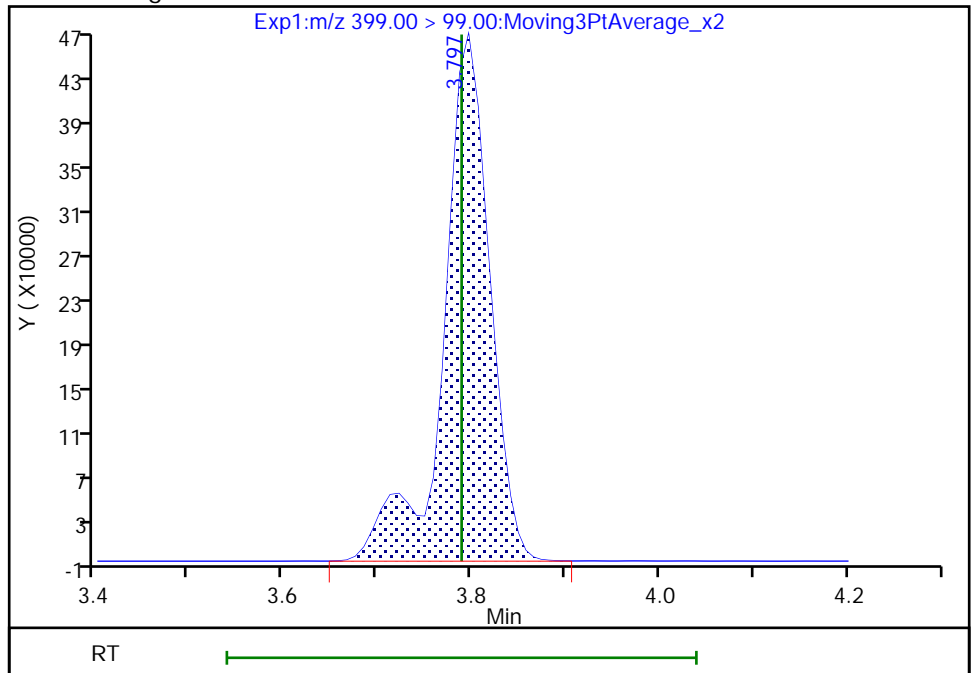
RT: 3.80  
Area: 1419436  
Amount: 1.852527  
Amount Units: ng/ml

Processing Integration Results



RT: 3.80  
Area: 1598932  
Amount: 2.218248  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 10:01:48

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

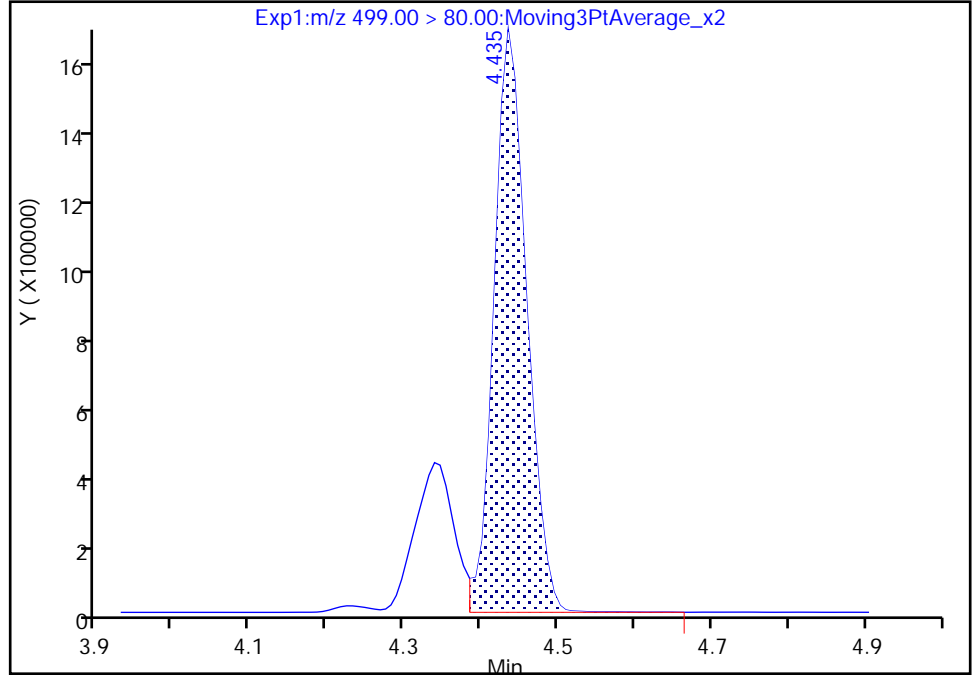
Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\019.d  
Injection Date: 12-Jan-2022 20:21:20 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

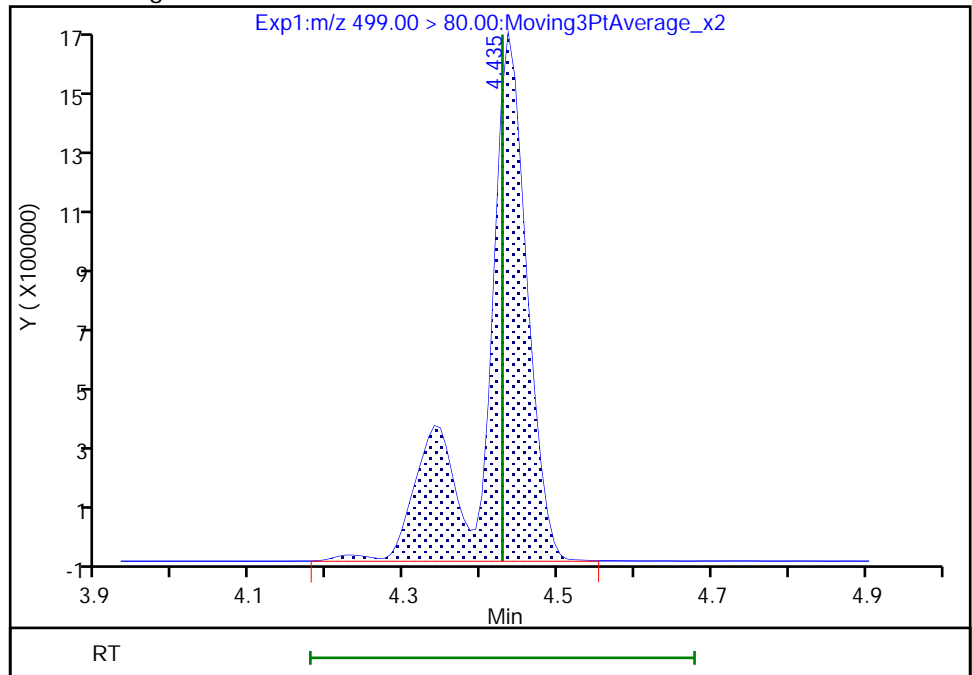
RT: 4.44  
Area: 4734980  
Amount: 1.799942  
Amount Units: ng/ml

Processing Integration Results



RT: 4.44  
Area: 6247322  
Amount: 2.374839  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 10:02:00  
Audit Action: Manually Integrated

Audit Reason: Baseline



Eurofins TestAmerica, Knoxville

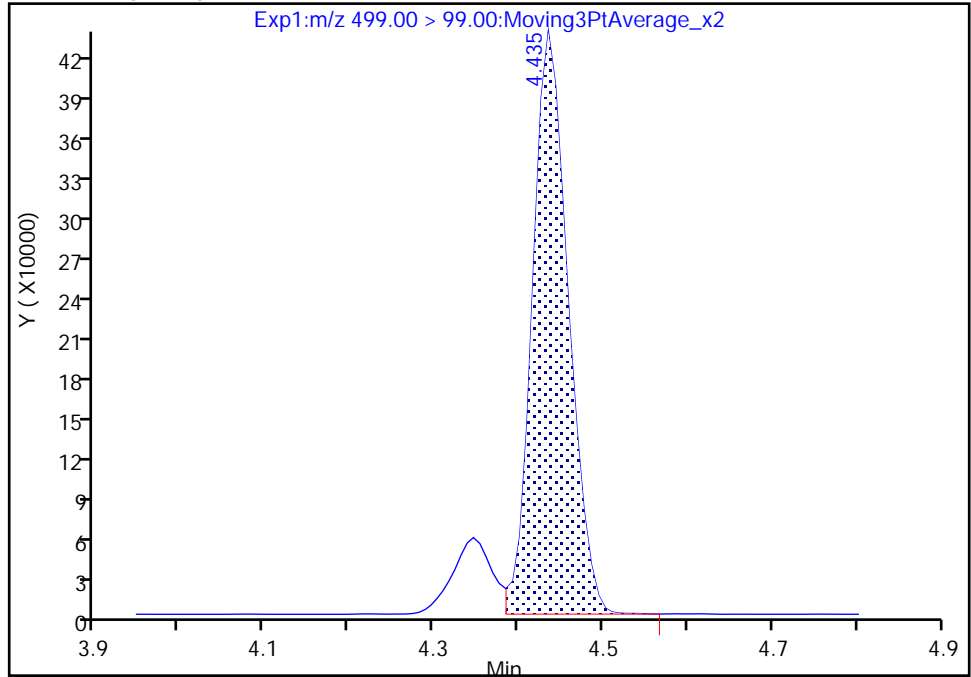
Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_019.d  
Injection Date: 12-Jan-2022 20:21:20 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

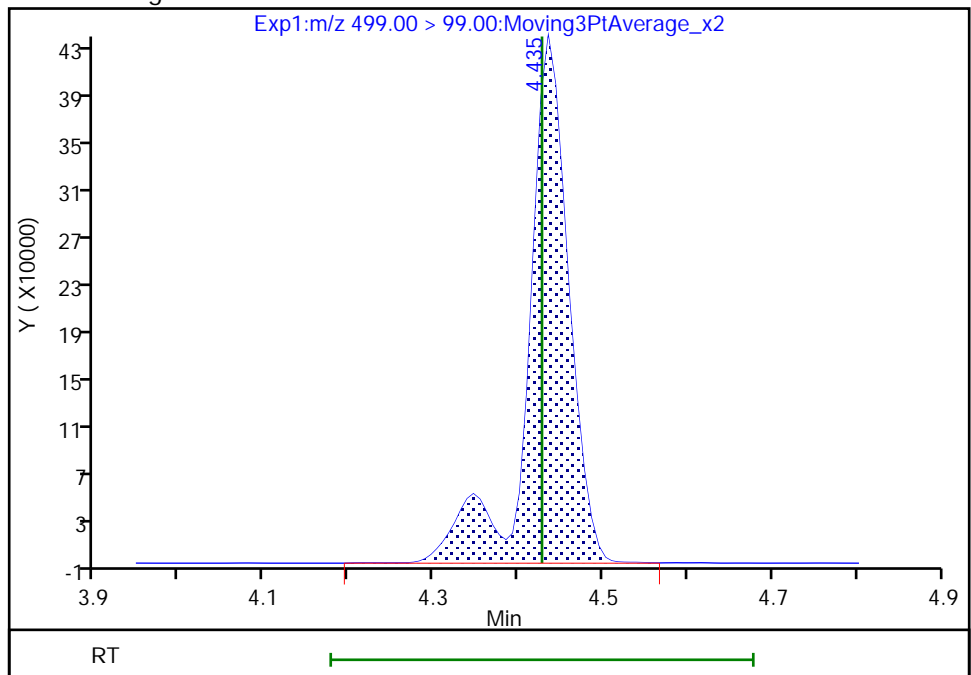
RT: 4.44  
Area: 1277837  
Amount: 1.799942  
Amount Units: ng/ml

Processing Integration Results



RT: 4.44  
Area: 1464945  
Amount: 2.374839  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 10:02:07

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

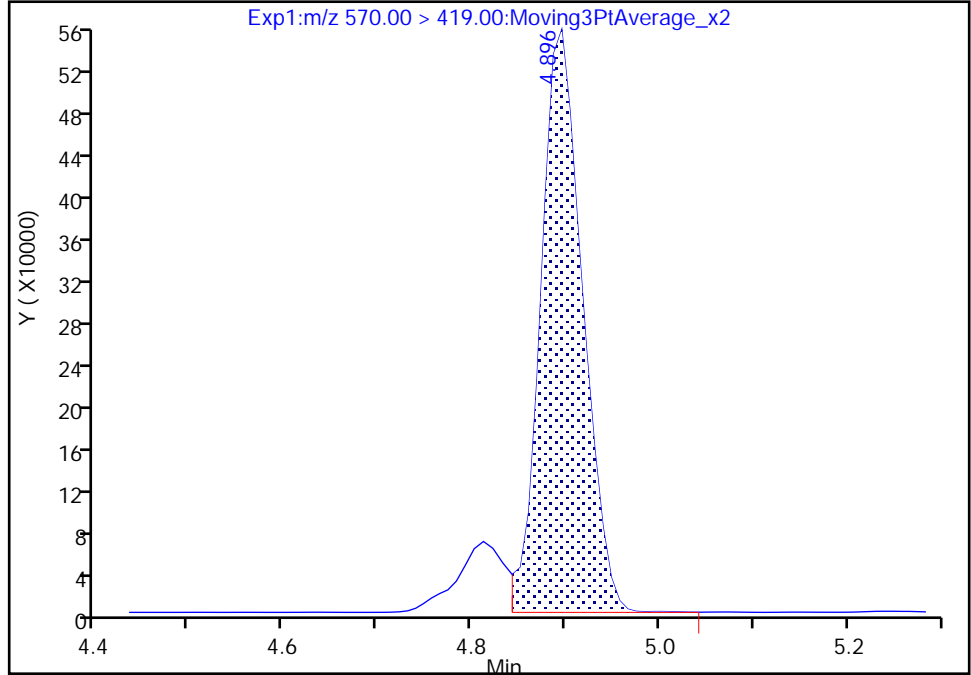
Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_019.d  
Injection Date: 12-Jan-2022 20:21:20 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

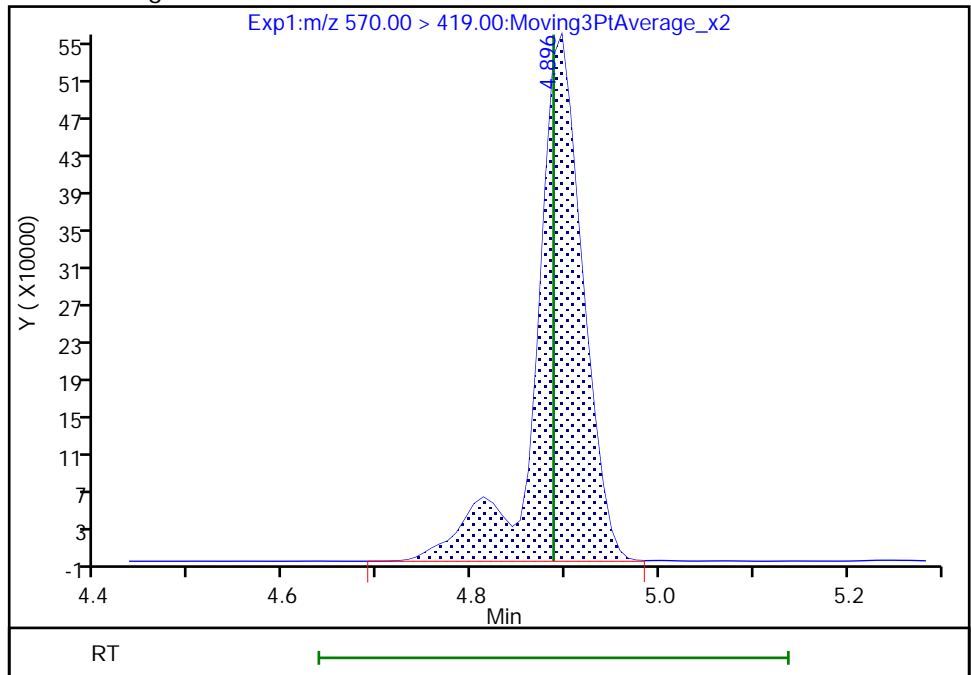
RT: 4.90  
Area: 1705089  
Amount: 2.182512  
Amount Units: ng/ml

Processing Integration Results



RT: 4.90  
Area: 1932897  
Amount: 2.472992  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 10:02:21  
Audit Action: Manually Integrated

Eurofins TestAmerica, Knoxville

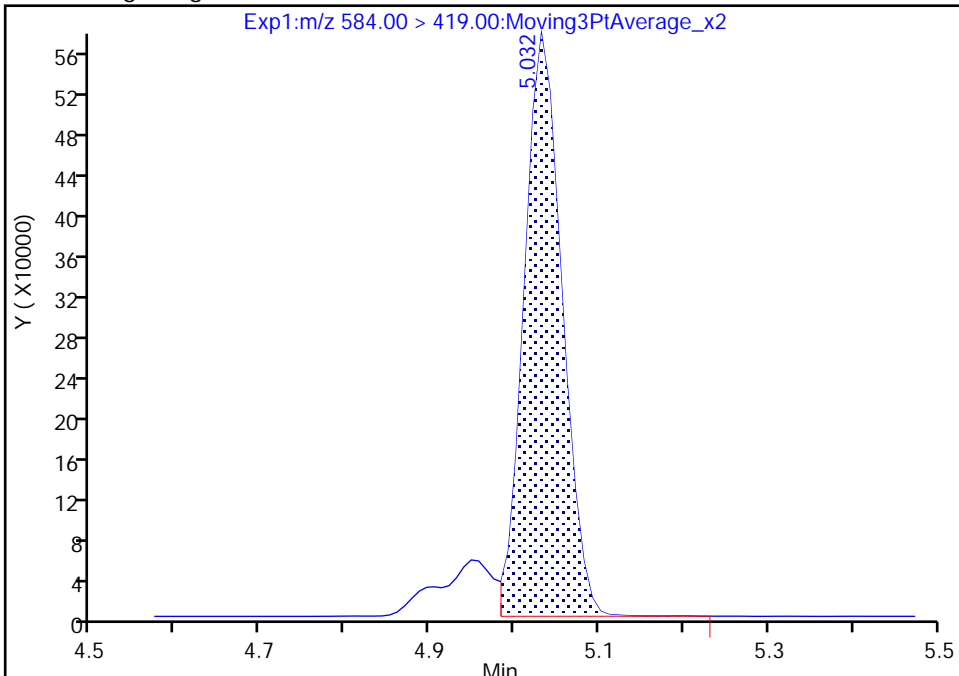
Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\\_019.d  
Injection Date: 12-Jan-2022 20:21:20 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

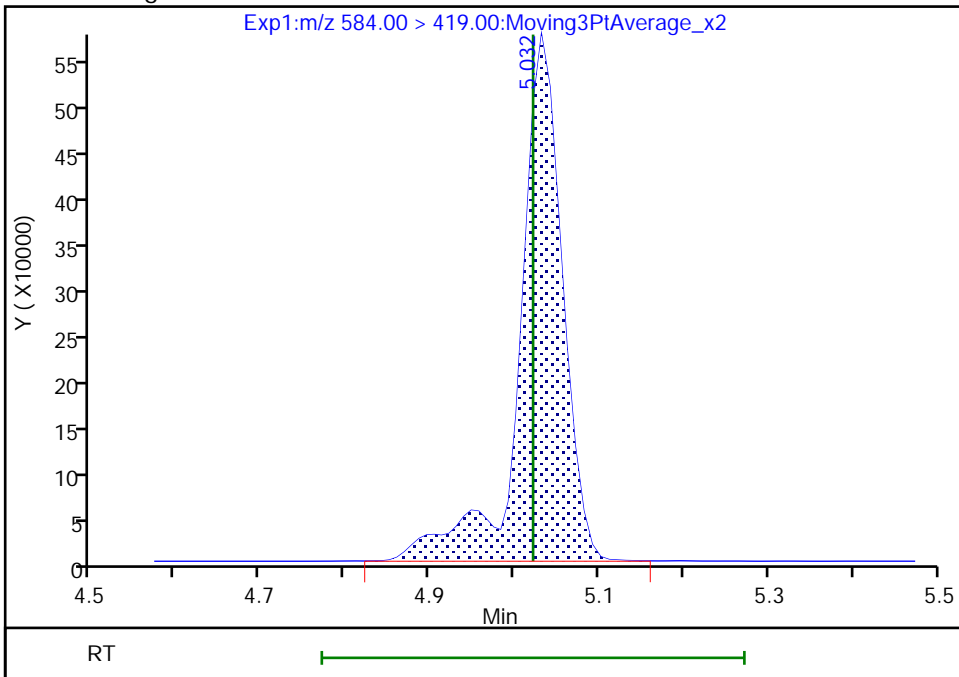
RT: 5.03  
Area: 1788686  
Amount: 2.141878  
Amount Units: ng/ml

Processing Integration Results



RT: 5.03  
Area: 2038828  
Amount: 2.438451  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 10:02:30  
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-57865/31 Calibration Date: 01/12/2022 22:06  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 Lab File ID: \_031.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7844	0.7377		0.940	1.00	-6.0	40.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9519	0.9188		0.965	1.00	-3.5	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.097	1.060		0.854	0.884	-3.4	40.0
4:2 FTS	AveID	2.252	2.297		0.953	0.934	2.0	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8680	0.8002		0.922	1.00	-7.8	40.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	0.9713	0.9852		0.952	0.938	1.4	40.0
HFPO-DA	AveID	1.352	1.331		0.984	1.00	-1.6	40.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.377	1.300		0.859	0.910	-5.6	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.047	1.009		0.964	1.00	-3.6	40.0
DONA	AveID	2.630	2.563		0.918	0.942	-2.6	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9541	0.9365		0.935	0.952	-1.8	40.0
6:2 FTS	L2ID		1.791		0.946	0.948	-0.2	40.0
Perfluorooctanoic acid (PFOA)	AveID	1.147	1.109		0.967	1.00	-3.3	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.099	1.064		0.899	0.928	-3.2	40.0
Perfluorononanoic acid (PFNA)	Q2ID		0.8866		1.04	1.00	4.2	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	Q2ID		2.167		0.943	0.932	1.1	50.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9748	0.9542		0.940	0.960	-2.1	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9459	0.9279		0.981	1.00	-1.9	40.0
Perfluorodecanoic acid (PFDA)	AveID	0.9645	0.9364		0.971	1.00	-2.9	40.0
8:2 FTS	AveID	1.415	1.437		0.973	0.958	1.6	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	QuaIF		0.9390		0.966	1.00	-3.4	40.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		0.9035		0.938	0.964	-2.7	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9695	0.9428		0.972	1.00	-2.8	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Q2ID		0.8973		0.903	1.00	-9.7	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.672	1.687		0.950	0.942	0.9	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		1.000		0.980	1.00	-2.0	40.0
10:2 FTS	AveID	2.276	2.465		1.04	0.964	8.3	40.0
NMeFOSA	Q2ID		1.044		1.03	1.00	3.1	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	Q2ID		1.155		0.986	1.00	-1.4	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9166	0.8993		0.950	0.968	-1.9	40.0

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-57865/31 Calibration Date: 01/12/2022 22:06  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 Lab File ID: \_031.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTriA)	AveID	0.8292	0.7928		0.956	1.00	-4.4	40.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	AveID	1.328	1.318		0.992	1.00	-0.8	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.195	1.209		1.01	1.00	1.1	40.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1344	0.1190		0.886	1.00	-11.4	40.0
Perfluorohexadecanoic acid	Q2ID		1.038		0.968	1.00	-3.2	40.0
Perfluorooctadecanoic acid	AveID	0.9844	0.9682		0.984	1.00	-1.6	40.0
13C4 PFBA	Ave	1.142	1.115		1.22	1.25	-2.4	50.0
13C5 PFPeA	Ave	0.8865	0.8722		1.23	1.25	-1.6	50.0
13C3 PFBS	Ave	0.5913	0.5885		1.16	1.16	-0.5	50.0
M2-4:2 FTS	Ave	0.1820	0.1637		1.05	1.17	-10.0	50.0
13C2 PFHxA	Ave	0.9479	0.9173		1.21	1.25	-3.2	50.0
13C3 HFPO-DA	Ave	0.4556	0.4599		1.26	1.25	0.9	50.0
18O2 PFHxS	Ave	0.3946	0.4145		1.24	1.18	5.0	50.0
13C4 PFHpA	Ave	0.9067	0.9268		1.28	1.25	2.2	50.0
M2-6:2 FTS	Ave	0.1835	0.1634		1.06	1.19	-11.0	50.0
13C4 PFOA	Ave	0.9376	0.9319		1.24	1.25	-0.6	50.0
13C4 PFOS	Ave	0.5681	0.5786		1.22	1.20	1.8	50.0
13C5 PFNA	Ave	1.234	1.167		1.18	1.25	-5.4	50.0
13C8 FOSA	Ave	0.7682	0.8150		1.33	1.25	6.1	50.0
13C2 PFDA	Ave	1.191	1.197		1.26	1.25	0.5	50.0
M2-8:2 FTS	Ave	0.2070	0.1764		1.02	1.20	-14.8	50.0
d3-NMeFOSAA	Ave	0.1401	0.1878		1.68	1.25	34.1	50.0
13C2 PFUnA	Ave	1.189	1.219		1.28	1.25	2.5	50.0
d5-NEtFOSAA	Ave	0.1537	0.2023		1.65	1.25	31.6	50.0
13C2 PFDoA	Ave	1.247	1.270		1.27	1.25	1.8	50.0
d7-N-MeFOSE-M	Ave	0.1499	0.1432		1.19	1.25	-4.5	50.0
d-N-MeFOSA-M	Ave	0.1069	0.1063		1.24	1.25	-0.5	50.0
d9-N-EtFOSE-M	Ave	0.1504	0.1454		1.21	1.25	-3.3	50.0
d-N-EtFOSA-M	Ave	0.0883	0.0851		1.21	1.25	-3.6	50.0
13C2 PFTeDA	Ave	0.9508	0.9673		1.27	1.25	1.7	50.0
13C2 PFHxDA	Ave	0.6444	0.6432		1.25	1.25	-0.2	50.0
13C8 PFOA	AveID	0.999	1.072		1.34	1.25	7.3	50.0
13C8 PFOS	AveID	0.2220	0.2256		1.21	1.20	1.6	50.0

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_031.d  
 Lims ID: CCV  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 12-Jan-2022 22:06:59 ALS Bottle#: 31 Worklist Smp#: 31  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022237-031 ccv  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:15:42 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 10:07:00

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										
212.90 > 169.00	2.795	2.802	-0.007	1.000	3596366	0.9404		94.0	765	
D 1 13C4 PFBA										
217.00 > 172.00	2.795	2.802	-0.007	0.677	6093849	1.22		97.6	12969	
D 3 13C5 PFPeA										
267.90 > 223.00	3.106	3.116	-0.010	0.752	4767975	1.23		98.4	10641	
4 Perfluoropentanoic acid										
262.90 > 219.00	3.115	3.116	-0.001	1.003	3504506	0.9652		96.5	1202	
D 6 13C3 PFBS										
301.90 > 80.00	3.123	3.132	-0.009	0.756	2991570	1.16		99.5	12317	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	3.131	3.132	-0.001	1.003	2410824	0.8540	Target=2.65	96.6	5160	
298.90 > 99.00	3.123	3.132	-0.009	1.000	879632		2.74(1.32-3.97)		3055	
D 8 M2-4:2 FTS										
329.00 > 81.00	3.412	3.423	-0.011	0.826	835949	1.05		90.0	1548	
7 4:2 FTS										
327.00 > 307.00	3.412	3.423	-0.011	1.000	1536283	0.9527		102	6885	
11 Perfluoropentanesulfonic acid										
349.00 > 80.00	3.442	3.444	-0.002	1.102	2378210	0.9515	Target=3.44	101	6428	
349.00 > 99.00	3.442	3.444	-0.002	1.102	668770		3.56(1.72-5.16)		5376	
D 9 13C2 PFHxA										
315.00 > 270.00	3.442	3.444	-0.002	0.833	5014167	1.21		96.8	10666	
10 Perfluorohexanoic acid										
313.00 > 269.00	3.442	3.444	-0.002	1.000	3209692	0.9218	Target=11.80	92.2	1329	
313.00 > 119.00	3.442	3.444	-0.002	1.000	268874		11.94(5.90-17.70)		446	
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.547	3.548	-0.001	0.858	2513911	1.26		101	5121	

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	3.547	3.548	-0.001	1.000	2677381	0.9843		98.4	3375	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.778	3.789	-0.011	1.000	2144189	0.8589	Target=3.40	94.4	5986	M
399.00 > 99.00	3.778	3.789	-0.011	1.000	605337		3.54(1.70-5.10)		3087	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.778	3.789	-0.011	0.915	2143415	1.24		105	7148	
D 14 13C4 PFHpA										
367.00 > 322.00	3.797	3.799	-0.002	0.919	5066544	1.28		102	8810	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.797	3.799	-0.002	1.000	4088731	0.9638	Target=3.29	96.4	2317	
363.00 > 169.00	3.797	3.799	-0.002	1.000	1280785		3.19(1.65-4.94)		1961	
68 DONA										
377.00 > 251.00	3.825	3.834	-0.009	0.866	6108652	0.9179	Target=1.82	97.4	7586	
377.00 > 85.00	3.825	3.834	-0.009	0.866	3540459		1.73(0.91-2.74)		166	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.115	4.115	0.0	0.931	2256093	0.9345	Target=3.92	98.2	6257	
449.00 > 99.00	4.115	4.115	0.0	0.931	596947		3.78(1.96-5.87)		5018	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.123	4.132	-0.009	0.998	848399	1.06		89.0	3858	
D 21 13C4 PFOA										
417.00 > 372.00	4.132	4.132	0.0	1.000	5094262	1.24		99.4	7662	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.123	4.132	-0.009	0.998	5462982	1.34		107	8106	
19 6:2 FTS										
427.00 > 407.00	4.123	4.132	-0.009	1.000	1213005	0.9456		99.8	5161	
* 22 13C2 PFOA										
415.00 > 370.00	4.132	4.132	0.0		5466439	1.25			7996	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.132	4.132	0.0	1.000	4520324	0.9666	Target=2.59	96.7	2538	
413.00 > 169.00	4.132	4.132	0.0	1.000	1708869		2.65(1.30-3.89)		2892	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.418	4.419	-0.001	1.000	682190	1.21		102	3188	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.418	4.428	-0.010	1.000	2498910	0.8987	Target=4.65	96.8	4192	M
499.00 > 99.00	4.418	4.428	-0.010	1.000	559519		4.47(2.32-6.97)		2398	M
D 25 13C4 PFOS										
503.00 > 80.00	4.418	4.428	-0.010	1.069	3023910	1.22		102	5650	
26 Perfluorononanoic acid										
463.00 > 419.00	4.444	4.445	-0.001	1.000	4525808	1.04	Target=4.65	104	4255	
463.00 > 169.00	4.444	4.445	-0.001	1.000	959705		4.72(2.32-6.97)		2055	
D 27 13C5 PFNA										
468.00 > 423.00	4.444	4.445	-0.001	1.076	6380737	1.18		94.6	12208	
63 9CIFOS										
531.00 > 351.00	4.581	4.581	0.0	1.037	5109511	0.9427		101	11114	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.715	4.706	0.009	1.000	3307123	0.9810		98.1	3860	

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	4.698	4.706	-0.008	1.063	2317899	0.9396	Target=4.06	97.9	5510	
549.00 > 99.00	4.698	4.706	-0.008	1.063	608981		3.81(2.03-6.09)		2260	
D 34 13C8 FOSA										
506.00 > 78.00	4.715	4.706	0.009	1.141	4454913	1.33		106	3263	
D 32 13C2 PFDA										
515.00 > 470.00	4.732	4.732	0.0	1.145	6541193	1.26		100	11185	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.732	4.732	0.0	1.000	4900008	0.9709	Target=11.30	97.1	3906	
513.00 > 169.00	4.732	4.732	0.0	1.000	415311		11.80(5.65-16.95)		580	
31 8:2 FTS										
527.00 > 507.00	4.740	4.749	-0.009	1.000	1062468	0.9731		102	4018	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.740	4.749	-0.009	1.147	923895	1.02		85.2	1428	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.870	4.878	-0.008	1.179	1026820	1.68		134	1275	
36 NMeFOSAA										
570.00 > 419.00	4.878	4.887	-0.009	1.002	771349	0.9662		96.6	1555	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.957	4.966	-0.009	1.122	2204025	0.9383	Target=3.79	97.3	5826	
599.00 > 99.00	4.957	4.966	-0.009	1.122	581580		3.79(1.90-5.69)		3983	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.993	5.002	-0.009	1.000	5023860	0.9724	Target=8.45	97.2	4768	
563.00 > 169.00	4.993	5.002	-0.009	1.000	589278		8.53(4.22-12.67)		3183	
D 39 13C2 PFUnA										
565.00 > 520.00	4.993	5.002	-0.009	1.208	6661171	1.28		103	13478	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.012	5.012	0.0	1.213	1106049	1.65		132	4150	
40 NEtFOSA										
584.00 > 419.00	5.012	5.022	-0.010	1.000	793957	0.9034		90.3	1257	M
57 11CIFOS										
631.00 > 451.00	5.092	5.102	-0.010	1.152	4020668	0.9501		101	8730	
D 43 13C2 PFDoA										
615.00 > 570.00	5.231	5.231	0.0	1.266	6940107	1.27		102	13631	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.222	5.231	-0.009	0.998	5551441	0.9796	Target=6.99	98.0	4303	
613.00 > 169.00	5.222	5.231	-0.009	0.998	760001		7.30(3.50-10.49)		1876	
50 10:2 FTS										
627.00 > 607.00	5.248	5.257	-0.009	1.107	1833242	1.04		108	5731	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.284	5.275	0.009	1.279	782697	1.19		95.5	661	
49 N-MeFOSE-M										
616.00 > 59.00	5.301	5.284	0.017	1.003	723049	0.9864		98.6	1133	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.292	5.284	0.008	1.281	581127	1.24		99.5	52.9	
61 NMeFOSA										
512.00 > 169.00	5.292	5.284	0.008	1.000	485178	1.03		103	529	



Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
54 PFDoS										
699.00 > 80.00	5.394	5.404	-0.010	1.221	2202897	0.9498	Target=4.24	98.1	6489	
699.00 > 99.00	5.394	5.404	-0.010	1.221	512209		4.30(2.12-6.35)		2609	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.445	5.435	0.010	1.318	794742	1.21		96.7	407	
62 N-EtFOSE-M										
630.00 > 59.00	5.455	5.445	0.009	1.002	837794	0.99		99.2	847	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.435	5.445	-0.010	1.039	4401547	0.9561	Target=6.20	95.6	3695	
663.00 > 169.00	5.435	5.445	-0.010	1.039	725905		6.06(3.10-9.30)		2191	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.455	5.445	0.009	1.320	465036	1.20		96.4	693	
56 N-EtFOSA-M										
526.00 > 169.00	5.464	5.455	0.009	1.002	449659	1.01		101	655	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.619	5.629	-0.010	1.360	5287737	1.27		102	12722	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.619	5.629	-0.010	1.000	503381	0.8855	Target=1.05	88.6	3500	
713.00 > 219.00	5.609	5.629	-0.020	0.998	508240		0.99(0.53-1.58)		3291	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.922	5.931	-0.009	1.433	3515908	1.25		99.8	5632	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.922	5.931	-0.009	1.000	2919894	0.9677	Target=8.09	96.8	3667	
813.00 > 169.00	5.922	5.931	-0.009	1.000	357579		8.17(4.05-12.14)		1669	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.175	6.195	-0.020	1.043	2723185	0.9835	Target=11.53	98.4	3642	
913.00 > 169.00	6.175	6.195	-0.020	1.043	238179		11.43(5.77-17.30)		1308	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

63L4PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\\_031.d

Injection Date: 12-Jan-2022 22:06:59

Instrument ID: LCA

Lims ID: CCV

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 31

Worklist Smp#: 31

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

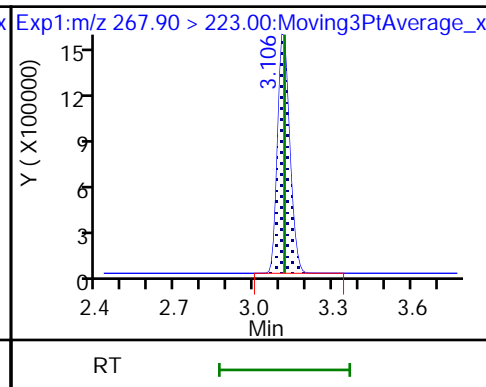
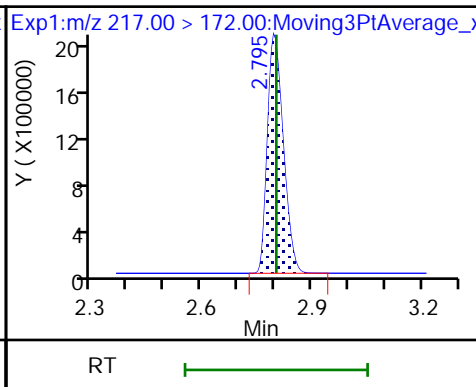
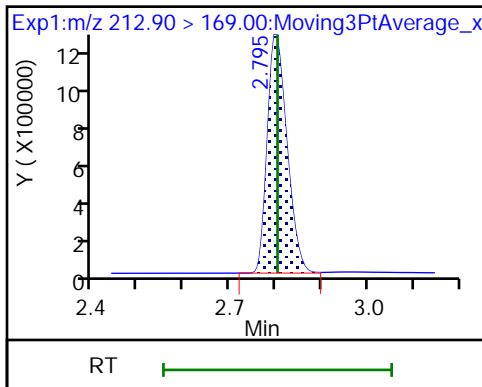
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

2 Perfluorobutanoic acid

D 1 13C4 PFBA

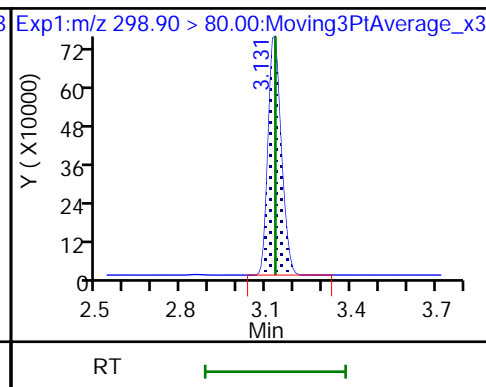
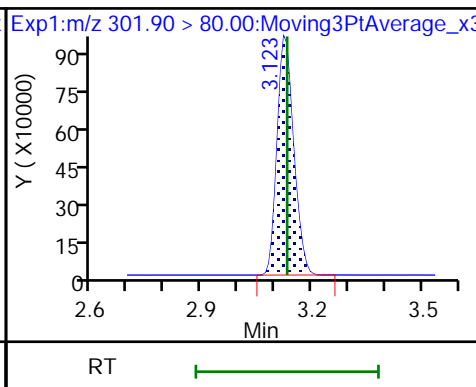
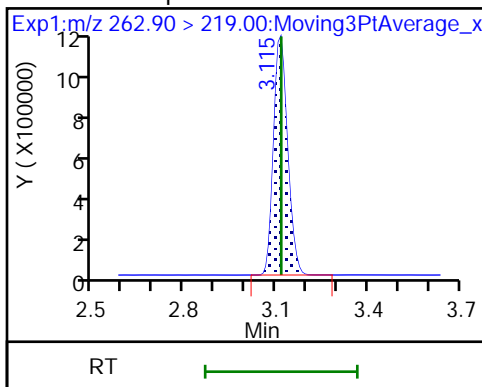
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

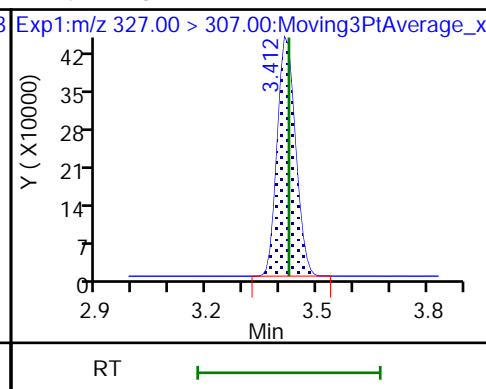
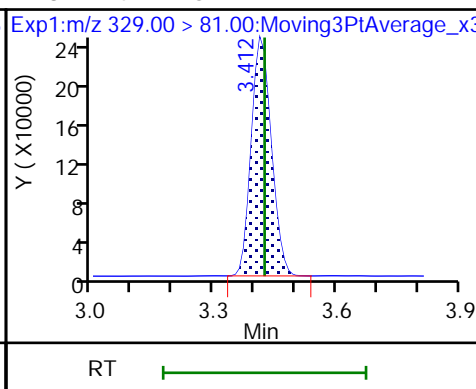
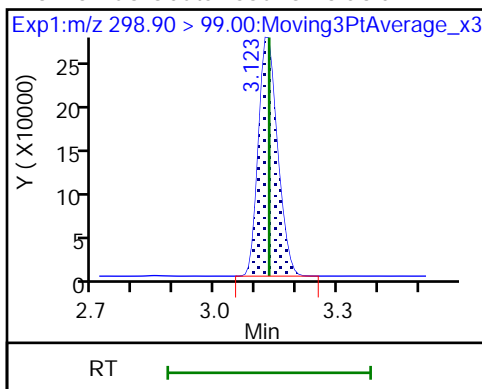
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

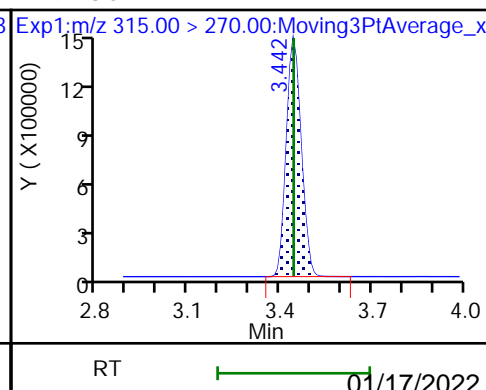
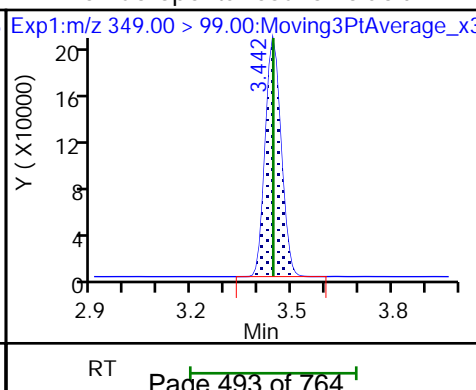
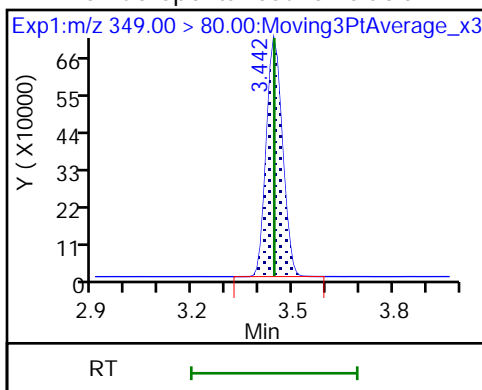
7 4:2 FTS

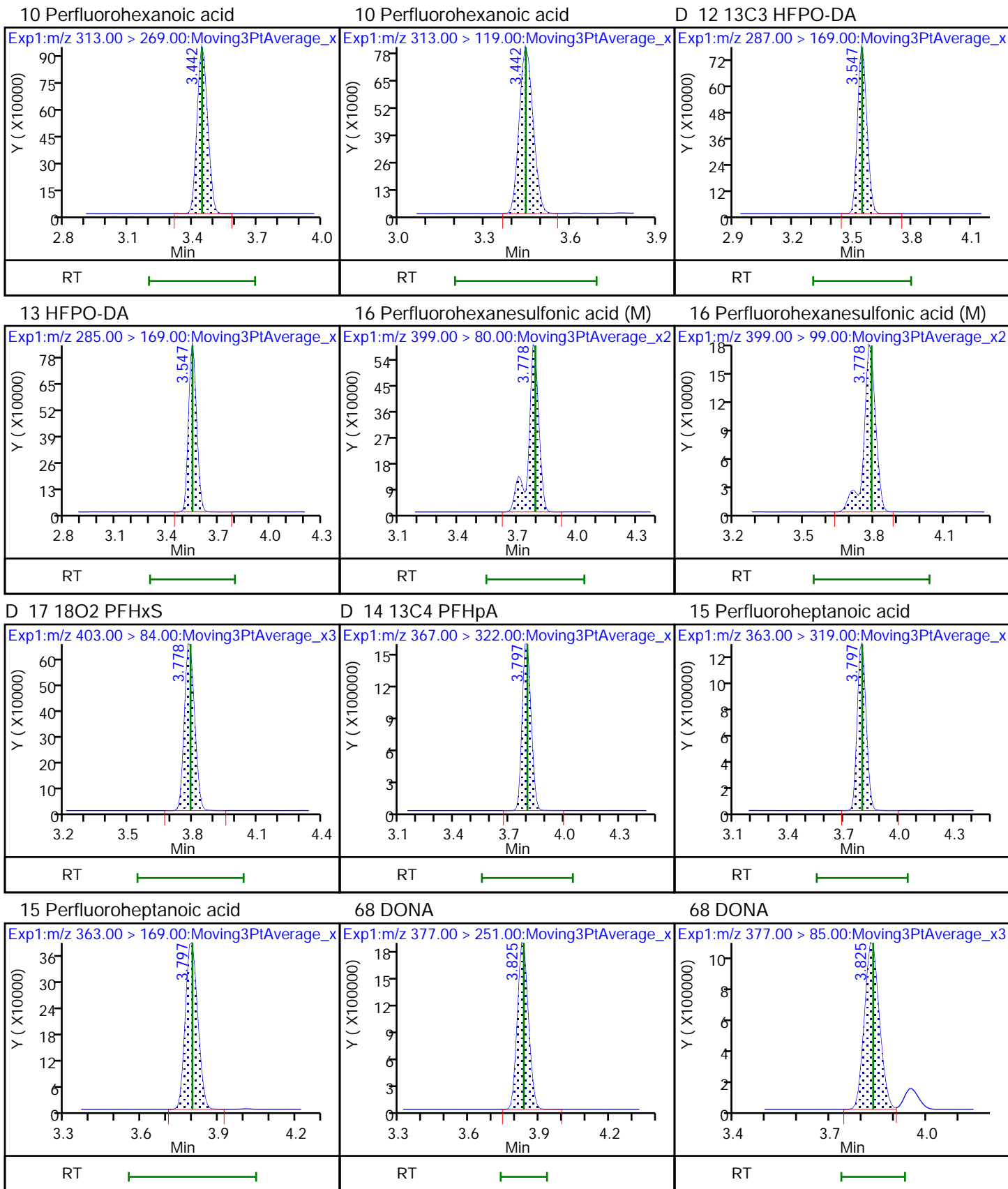


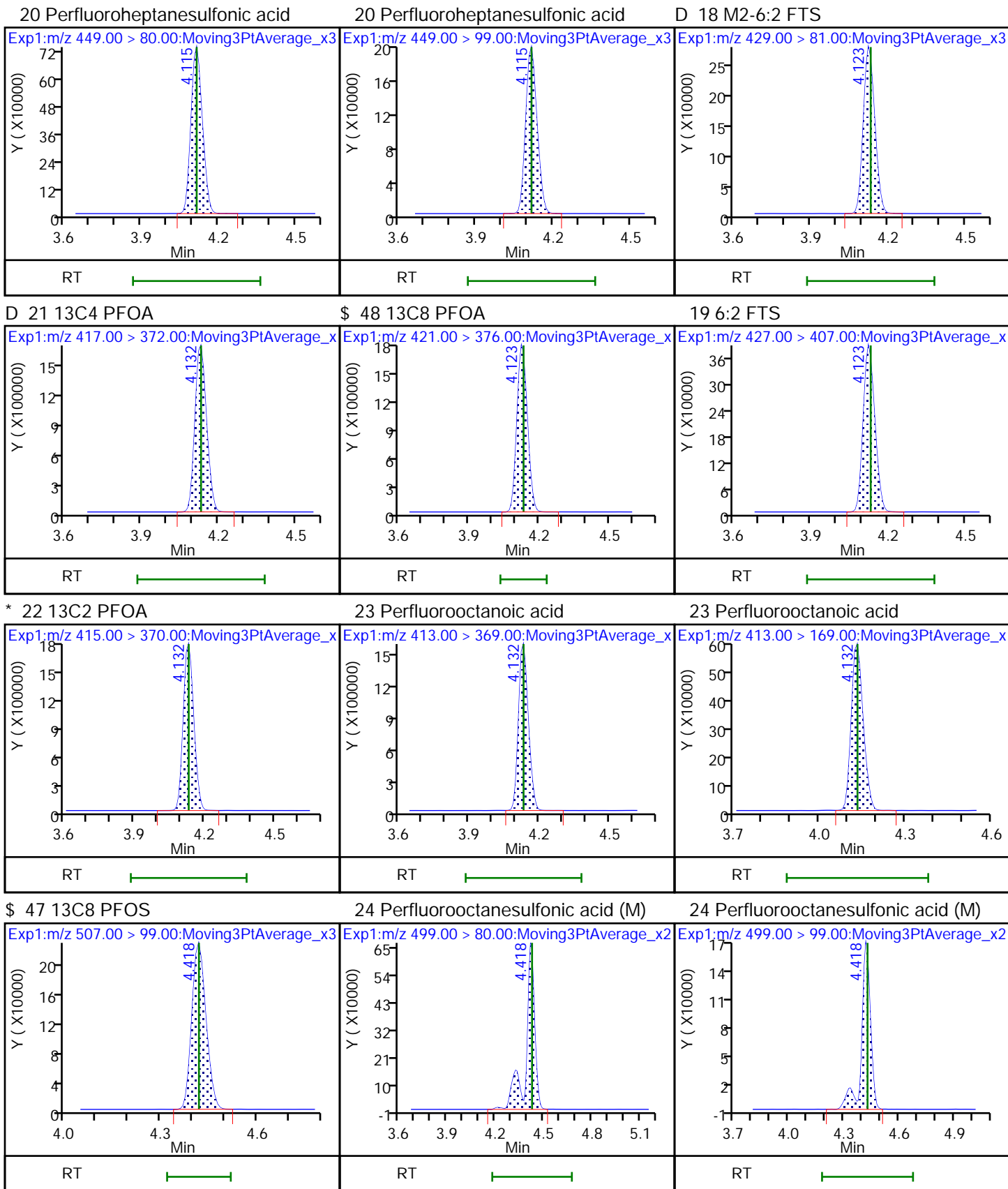
11 Perfluoropentanesulfonic acid

11 Perfluoropentanesulfonic acid

D 9 13C2 PFHxA



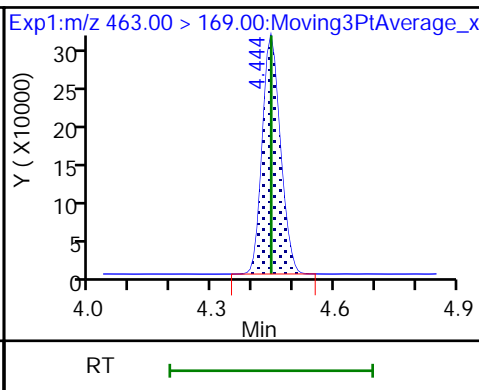
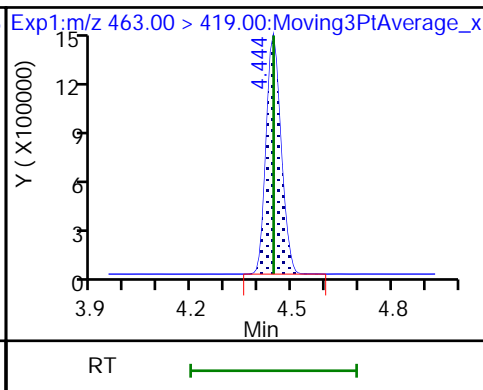
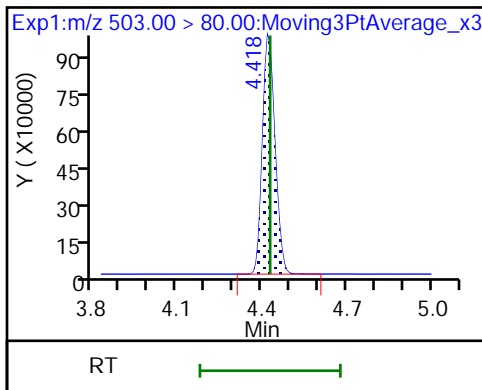




D 25 13C4 PFOS

26 Perfluorononanoic acid

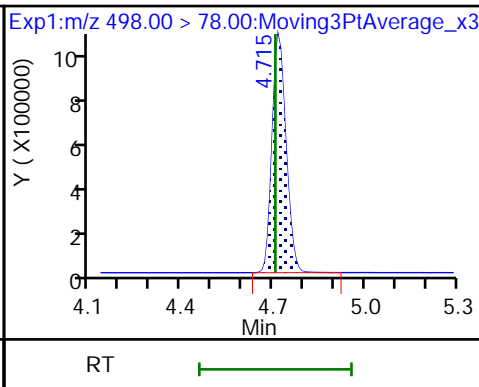
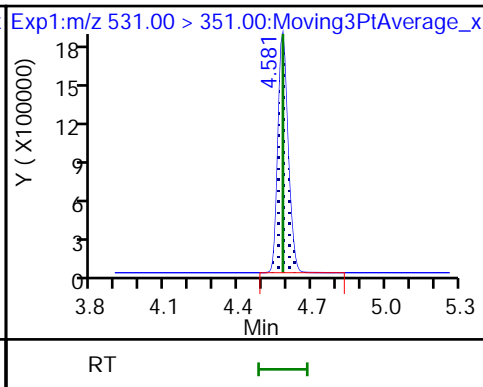
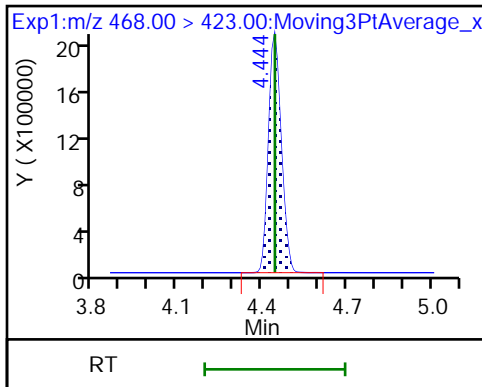
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS

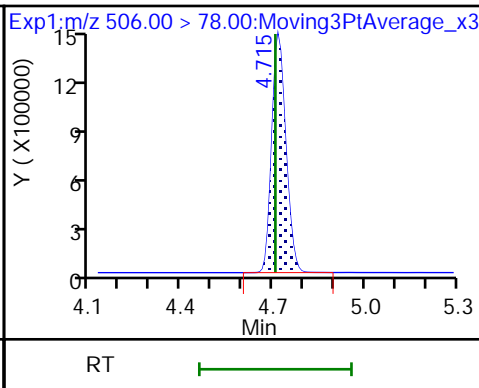
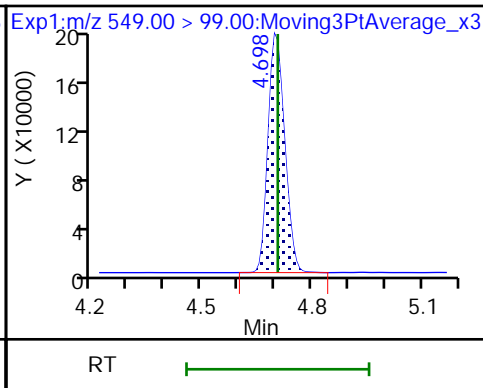
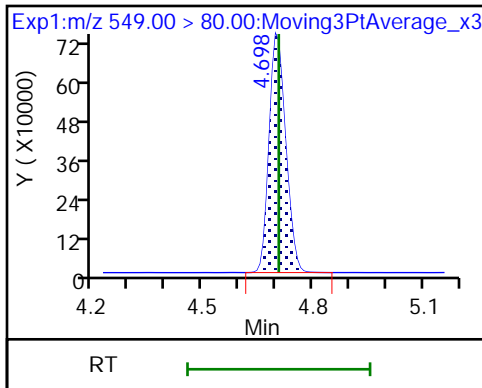
33 Perfluorooctanesulfonamide



28 Perfluorononanesulfonic acid

28 Perfluorononanesulfonic acid

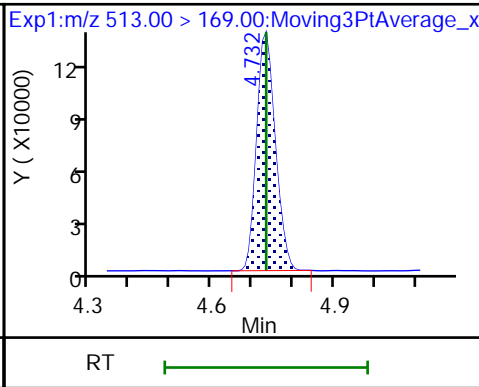
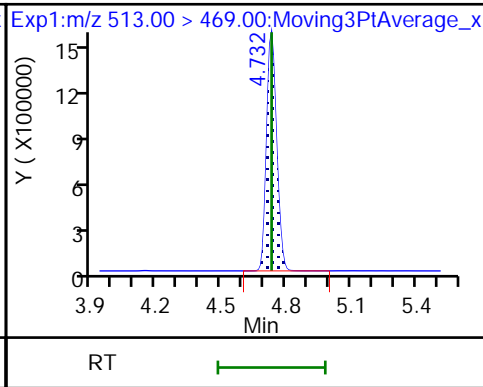
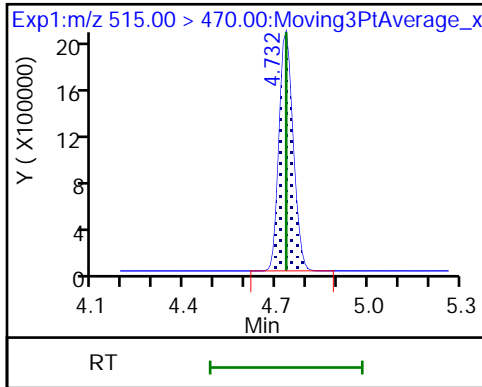
D 34 13C8 FOSA

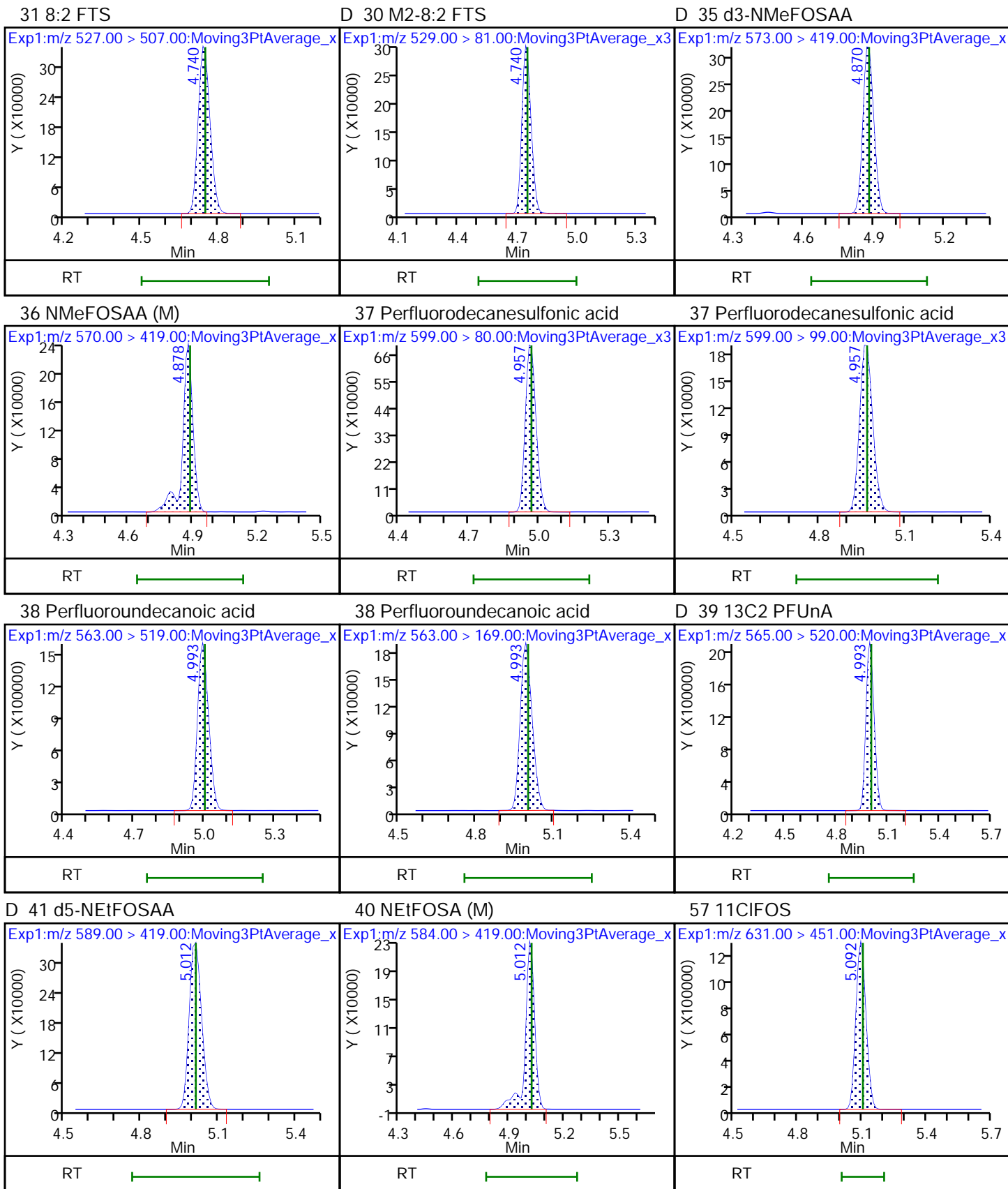


D 32 13C2 PFDA

29 Perfluorodecanoic acid

29 Perfluorodecanoic acid

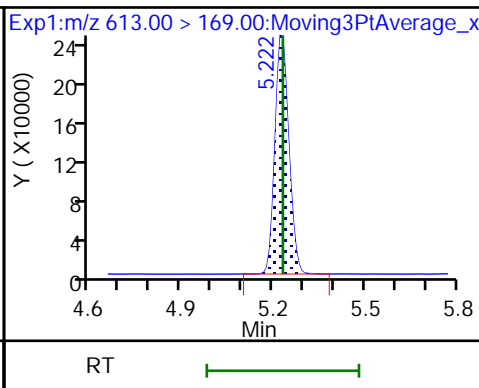
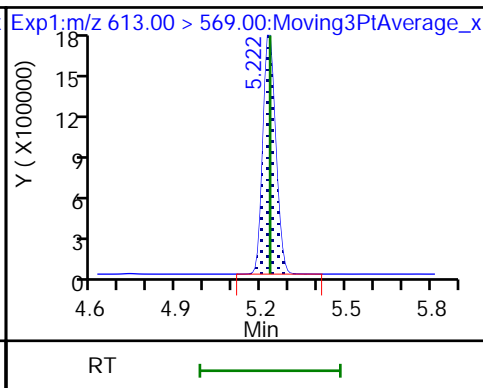
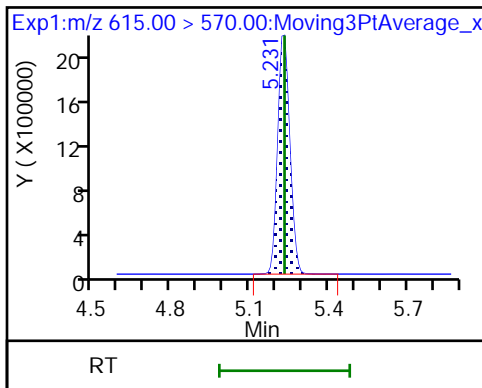




D 43 13C2 PFDaA

42 Perfluorododecanoic acid

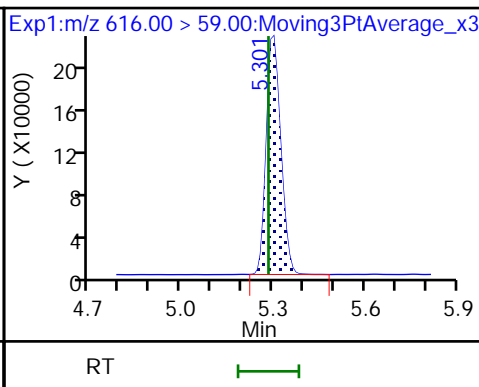
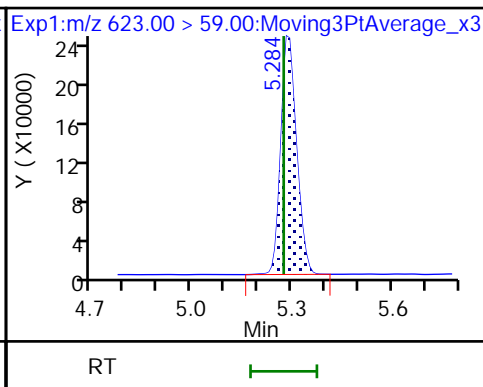
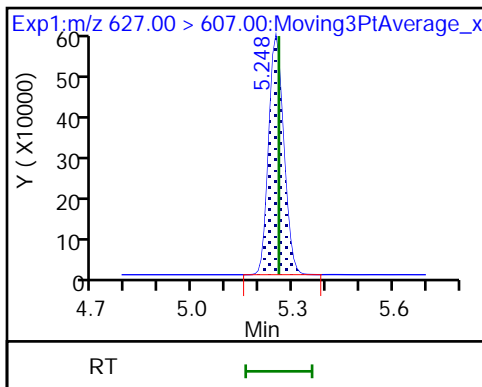
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

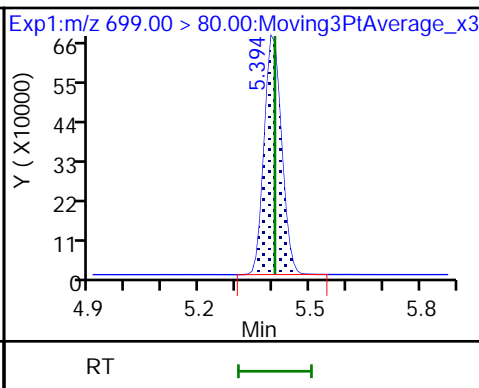
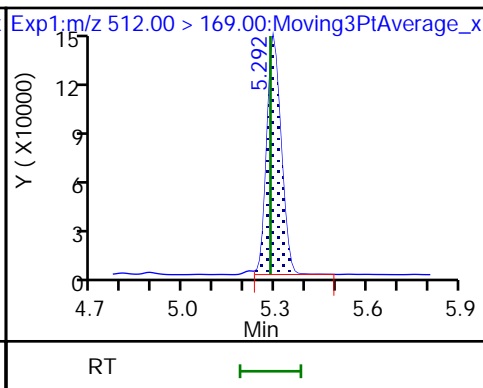
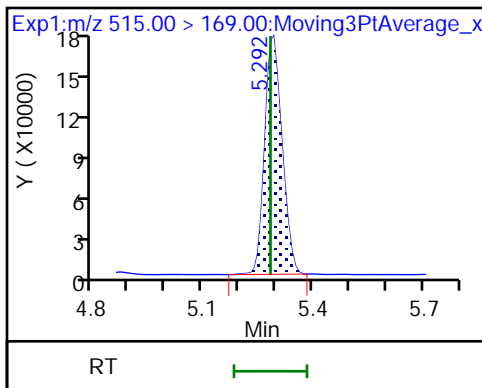
49 N-MeFOSE-M



D 58 d-N-MeFOSA-M

61 NMeFOSA

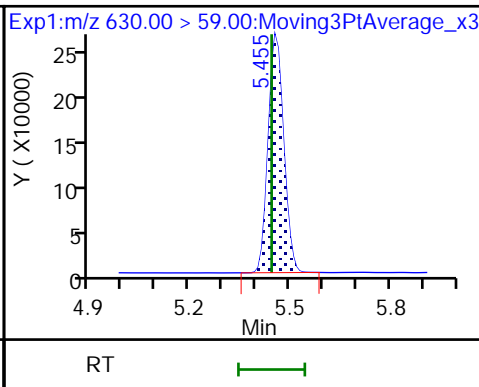
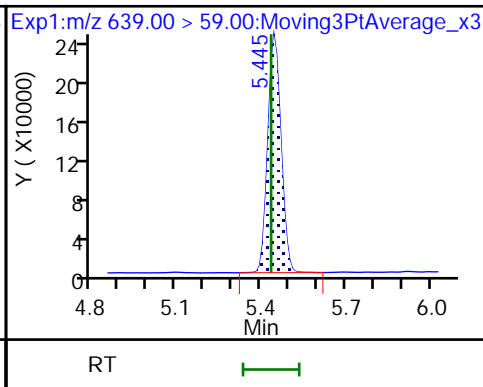
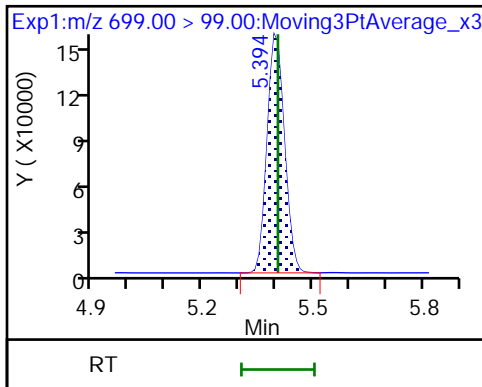
54 PFDoS

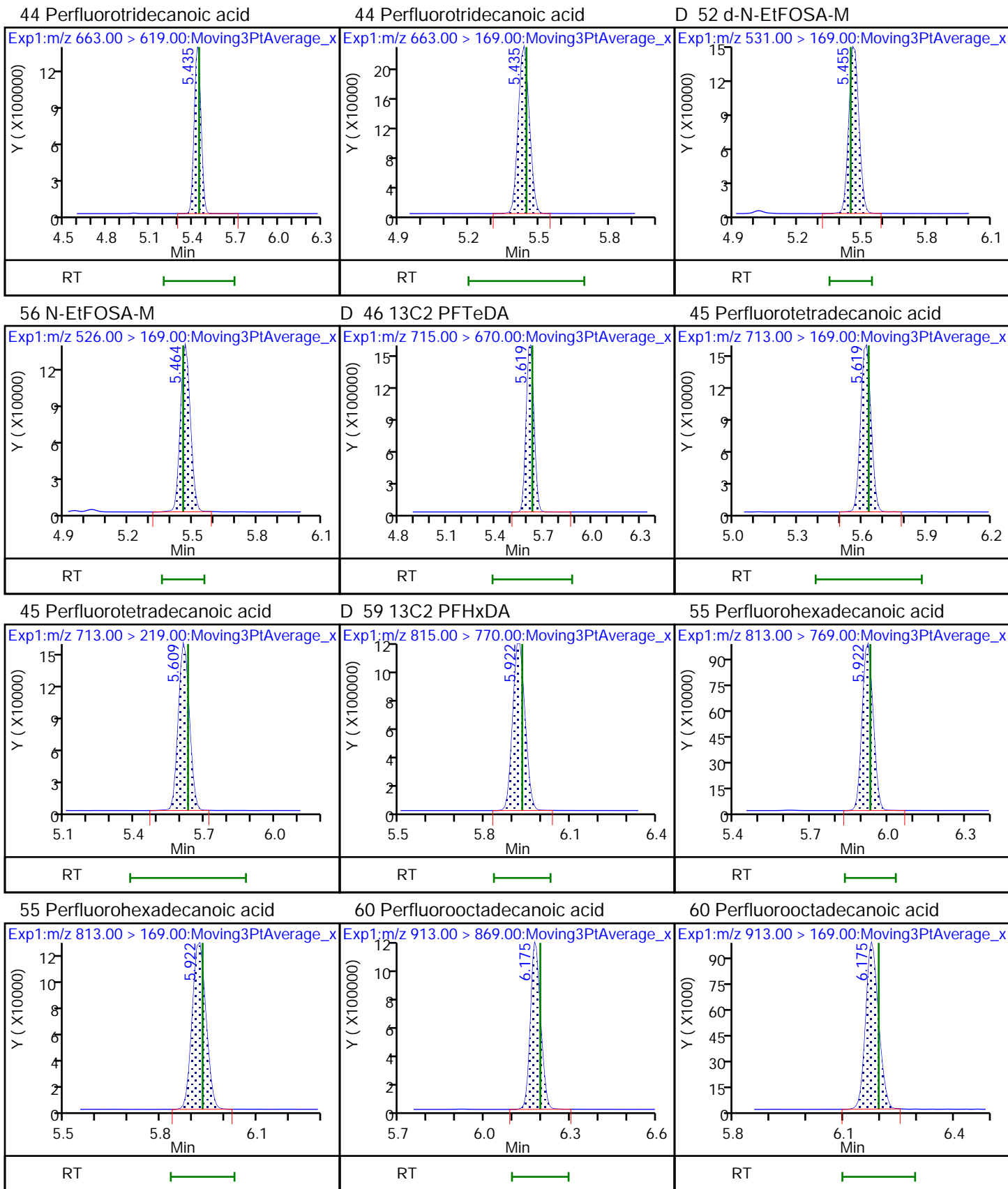


54 PFDoS

D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M









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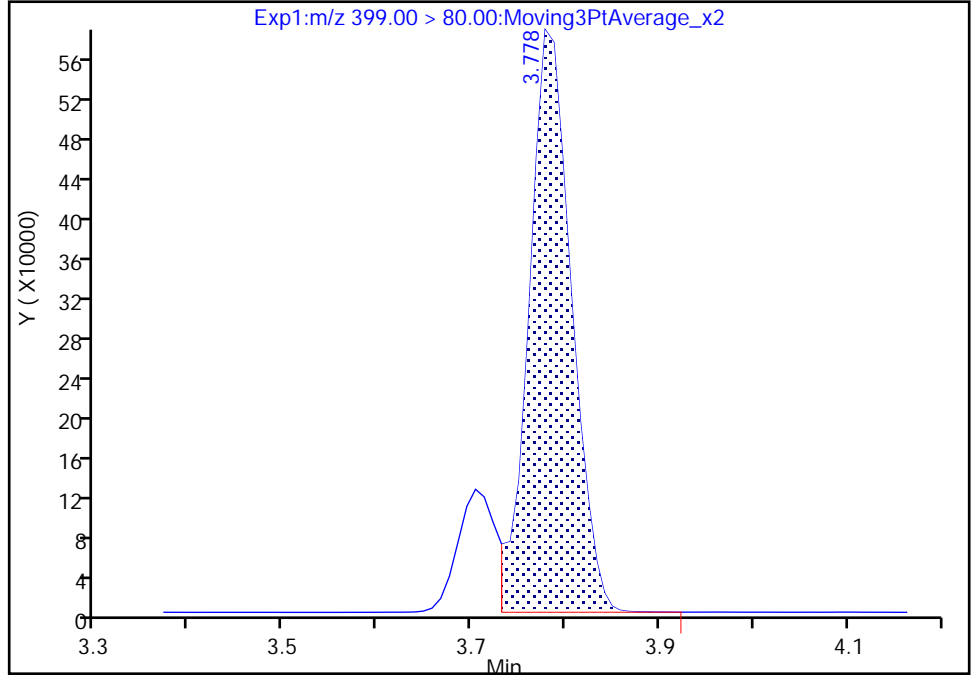
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Injection Date: 12-Jan-2022 22:06:59 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 31 Worklist Smp#: 31  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

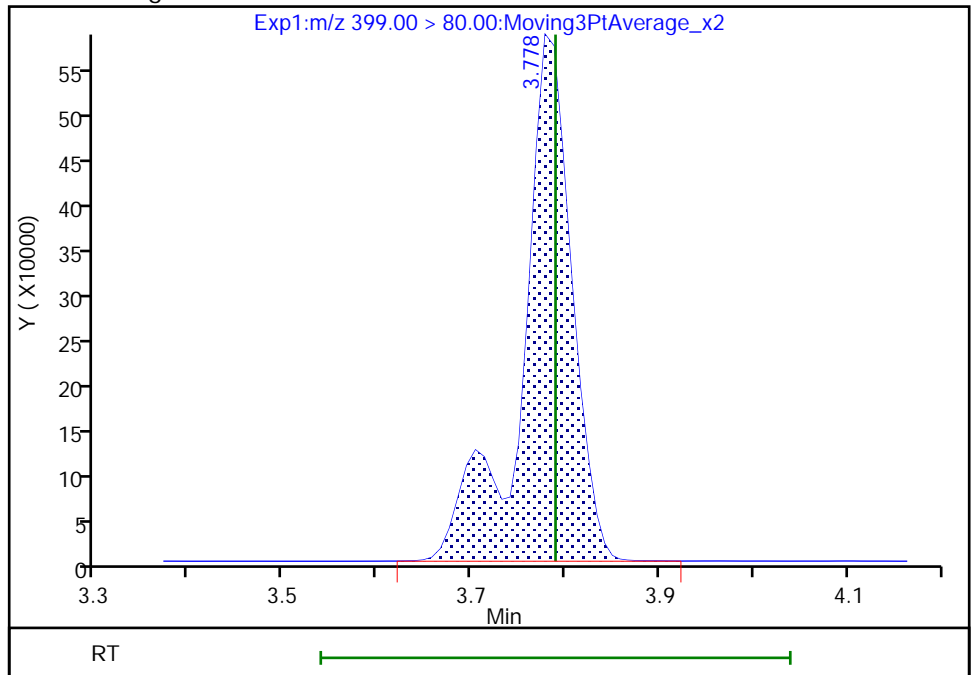
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Area: 1812563  
Amount: 0.726088  
Amount Units: ng/ml

Processing Integration Results



RT: 3.78  
Area: 2144189  
Amount: 0.858933  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 10:06:02  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

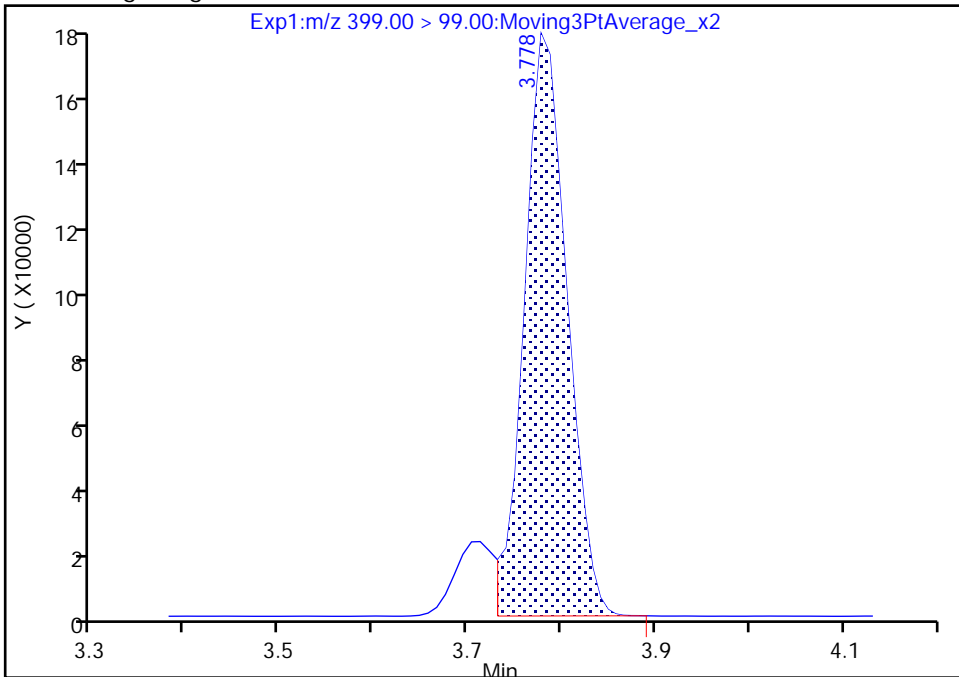
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Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 31 Worklist Smp#: 31  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

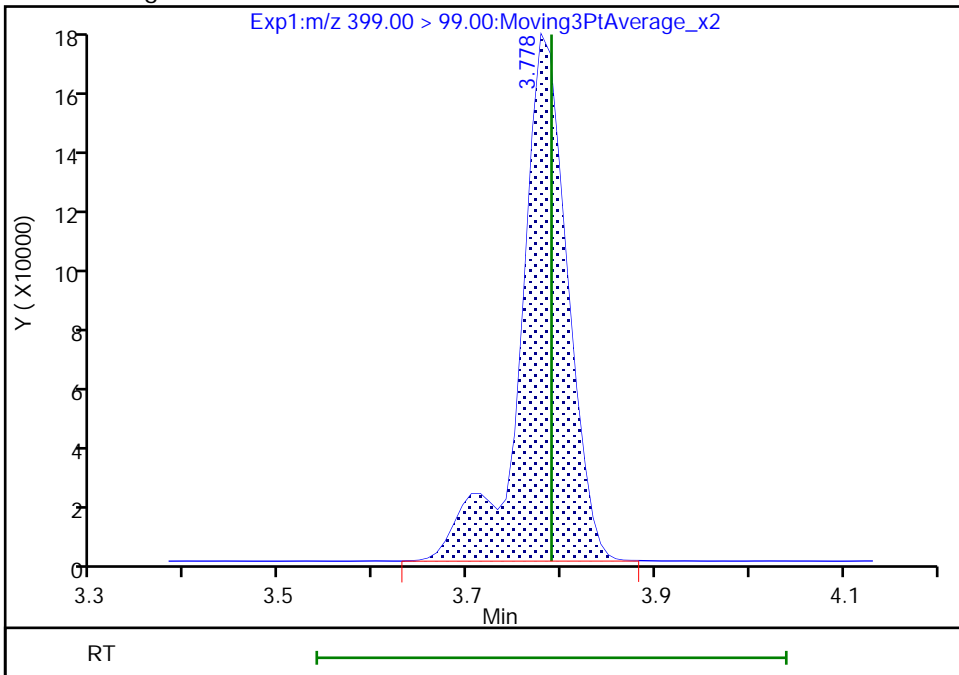
RT: 3.78  
Area: 541601  
Amount: 0.726088  
Amount Units: ng/ml

Processing Integration Results



RT: 3.78  
Area: 605337  
Amount: 0.858933  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 10:06:08

Audit Action: Manually Integrated

Audit Reason: Baseline  
Page 502 of 764

Eurofins TestAmerica, Knoxville

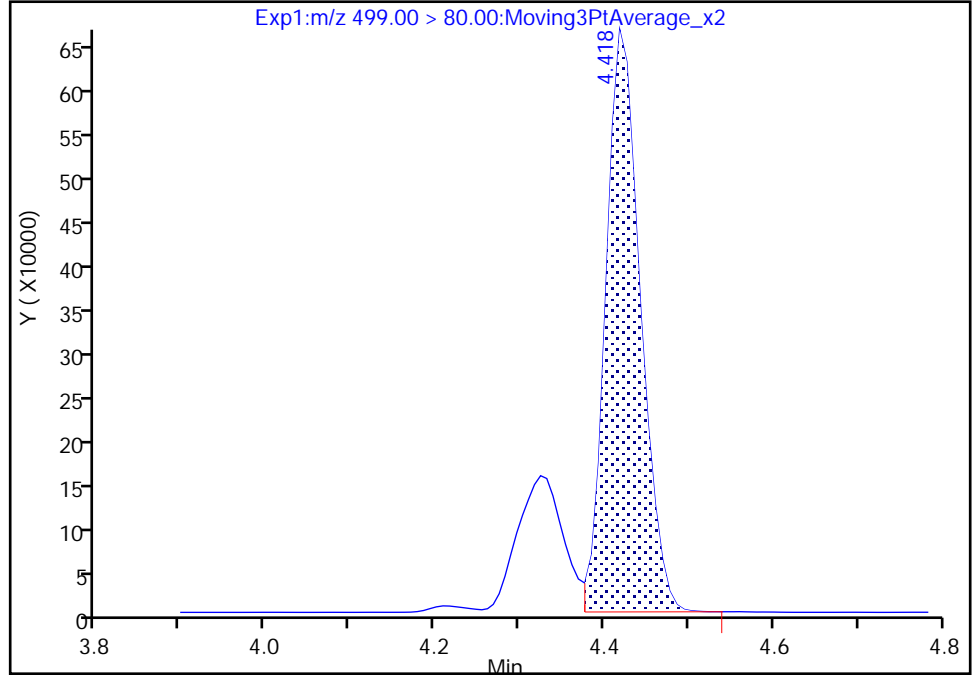
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Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 31 Worklist Smp#: 31  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

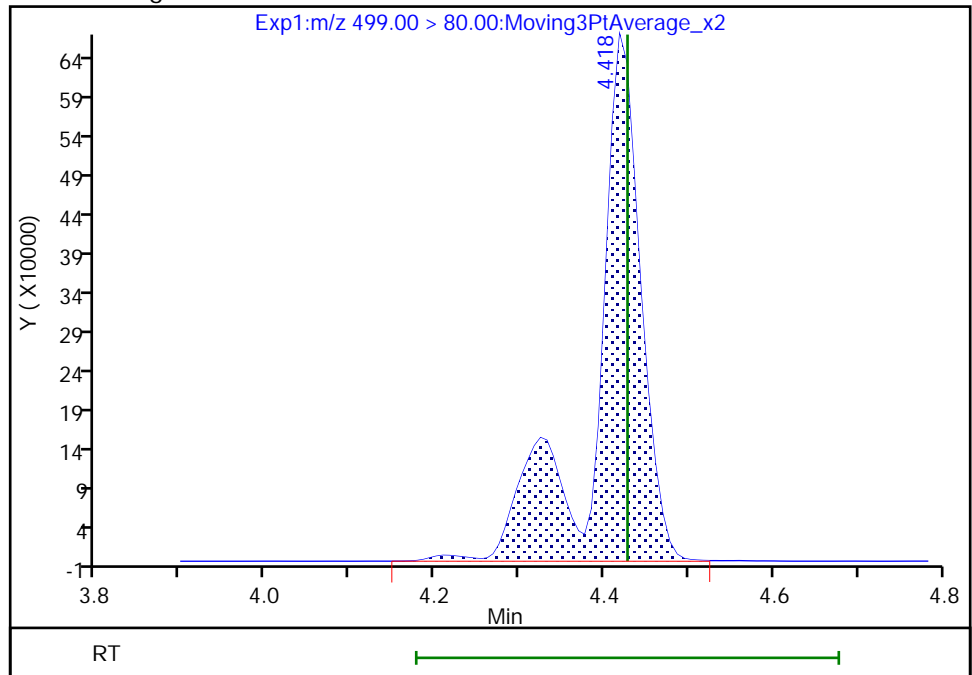
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Area: 1883096  
Amount: 0.677258  
Amount Units: ng/ml

Processing Integration Results



RT: 4.42  
Area: 2498910  
Amount: 0.898736  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 10:06:43  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

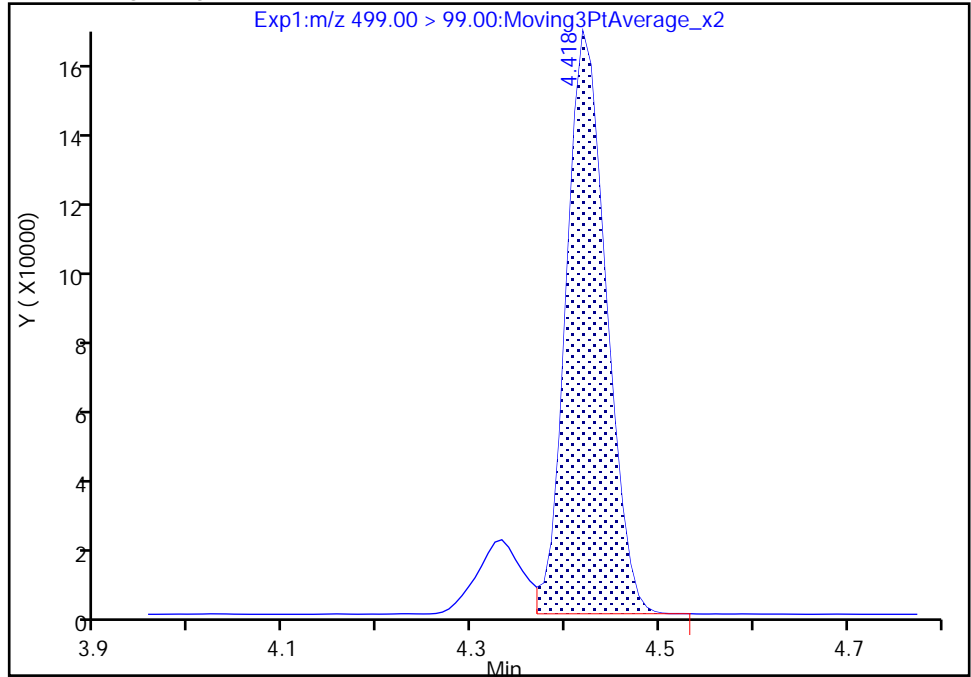
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Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 31 Worklist Smp#: 31  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

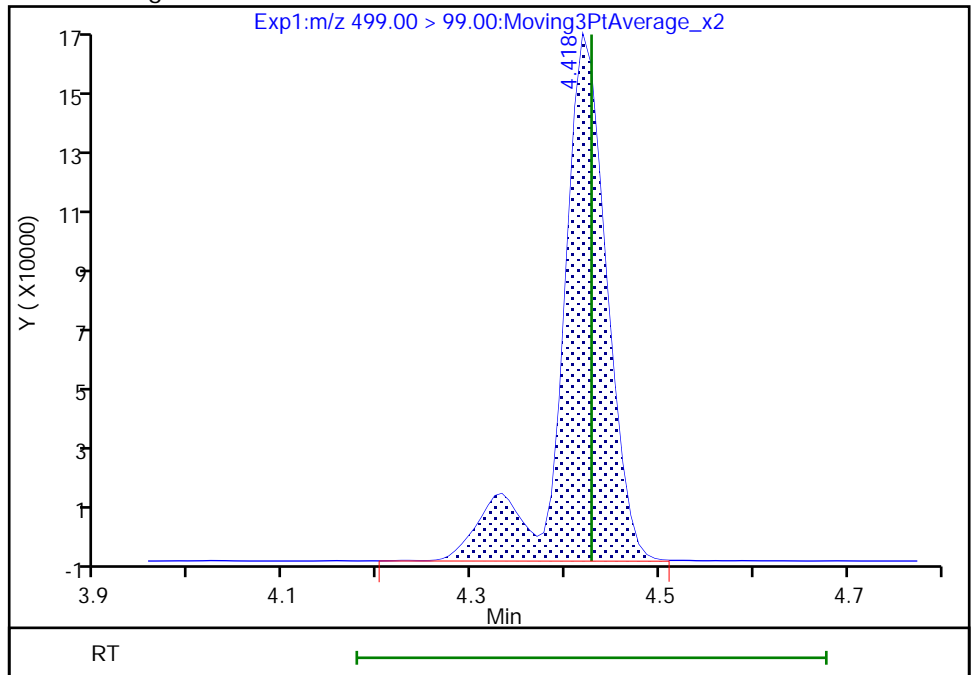
RT: 4.42  
Area: 487119  
Amount: 0.677258  
Amount Units: ng/ml

Processing Integration Results



RT: 4.42  
Area: 559519  
Amount: 0.898736  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 10:06:49

Audit Action: Manually Integrated

Audit Reason: Baseline  
Page 504 of 764

01/17/2022

Eurofins TestAmerica, Knoxville

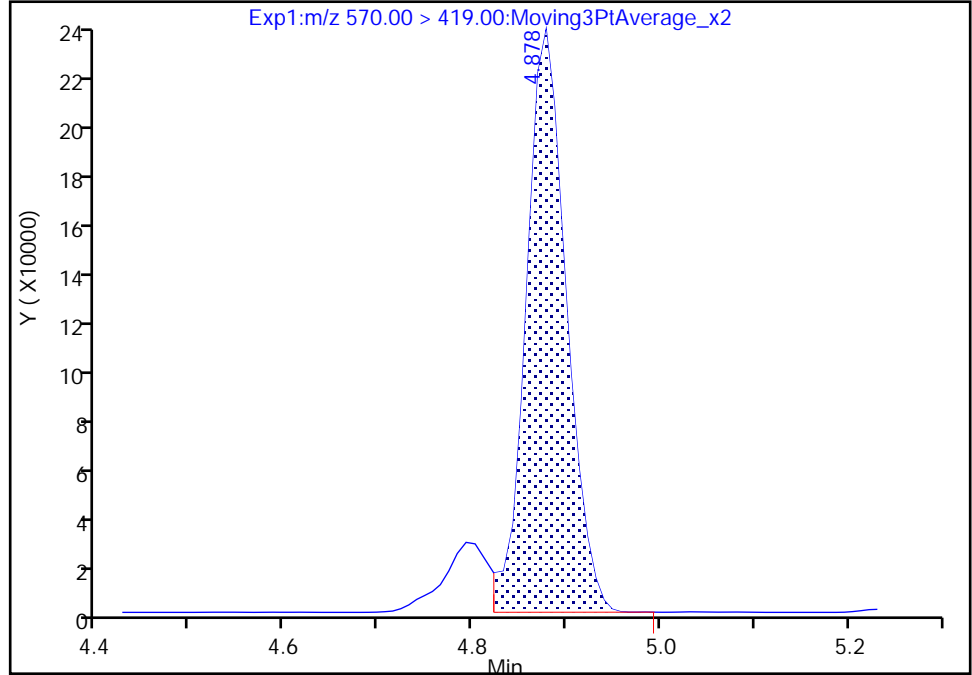
Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\\_031.d  
Injection Date: 12-Jan-2022 22:06:59 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 31 Worklist Smp#: 31  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

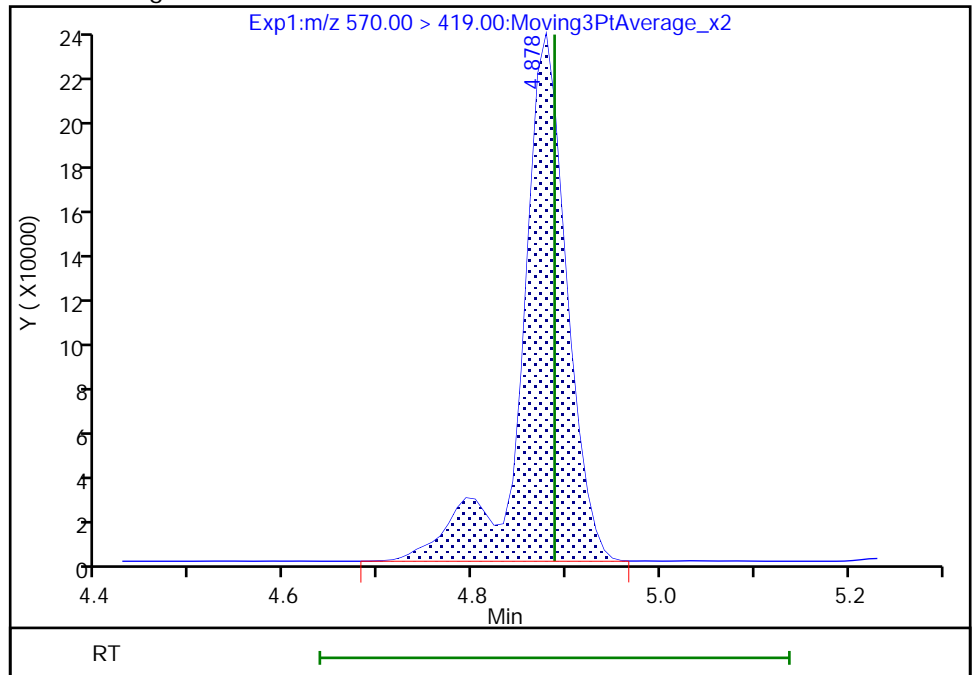
RT: 4.88  
Area: 681541  
Amount: 0.853880  
Amount Units: ng/ml

Processing Integration Results



RT: 4.88  
Area: 771349  
Amount: 0.966228  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 10:07:52  
Audit Action: Manually Integrated

Eurofins TestAmerica, Knoxville

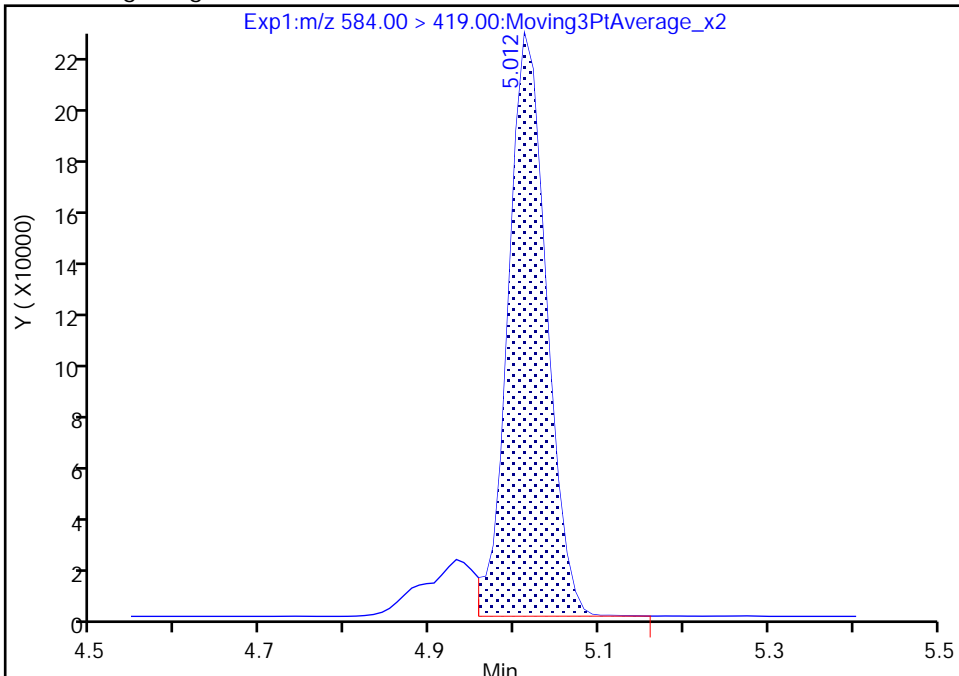
Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\\_031.d  
Injection Date: 12-Jan-2022 22:06:59 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 31 Worklist Smp#: 31  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

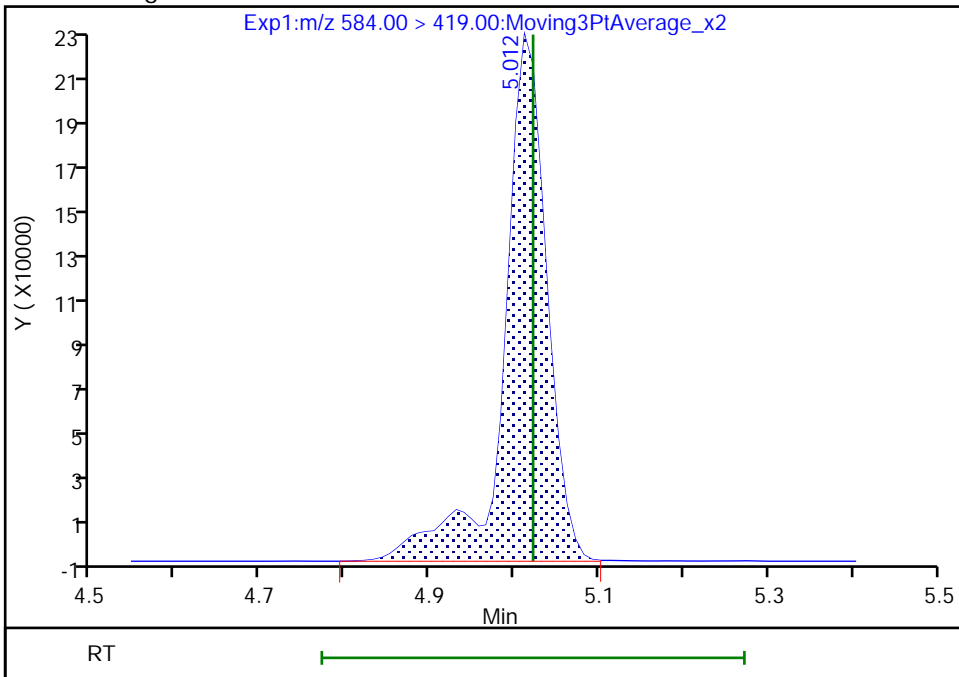
RT: 5.01  
Area: 703151  
Amount: 0.800416  
Amount Units: ng/ml

Processing Integration Results



RT: 5.01  
Area: 793957  
Amount: 0.903384  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 10:08:00  
Audit Action: Manually Integrated

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-57865/43 Calibration Date: 01/12/2022 23:52  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 Lab File ID: \_043.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.7844	0.7984		2.55	2.50	1.8	40.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9519	0.9649		2.53	2.50	1.4	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.097	1.169		2.35	2.21	6.5	40.0
4:2 FTS	AveID	2.252	2.274		2.36	2.34	1.0	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8680	0.8413		2.42	2.50	-3.1	40.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	0.9713	1.059		2.56	2.35	9.1	40.0
HFPO-DA	AveID	1.352	1.397		2.58	2.50	3.3	40.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.377	1.370		2.26	2.28	-0.5	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.047	1.057		2.53	2.50	1.0	40.0
DONA	AveID	2.630	2.774		2.48	2.36	5.5	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9541	1.000		2.50	2.38	4.8	40.0
6:2 FTS	L2ID		1.854		2.44	2.37	3.1	40.0
Perfluorooctanoic acid (PFOA)	AveID	1.147	1.199		2.61	2.50	4.5	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.099	1.119		2.36	2.32	1.8	40.0
Perfluorononanoic acid (PFNA)	Q2ID		0.8772		2.55	2.50	1.9	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	Q2ID		2.229		2.40	2.33	2.9	50.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9748	0.9750		2.40	2.40	0.0	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9459	0.9808		2.59	2.50	3.7	40.0
Perfluorodecanoic acid (PFDA)	AveID	0.9645	0.9605		2.49	2.50	-0.4	40.0
8:2 FTS	AveID	1.415	1.498		2.54	2.40	5.8	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	QuaIF		0.9741		2.50	2.50	0.0	40.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		0.8988		2.33	2.41	-3.3	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9695	1.023		2.64	2.50	5.5	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Q2ID		1.040		2.60	2.50	4.0	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.672	1.726		2.43	2.36	3.2	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9931		2.45	2.50	-1.8	40.0
10:2 FTS	AveID	2.276	2.590		2.74	2.41	13.8	40.0
NMeFOSA	Q2ID		1.072		2.60	2.50	3.9	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	Q2ID		1.212		2.56	2.50	2.4	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9166	0.9259		2.45	2.42	1.0	40.0



FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-57865/43 Calibration Date: 01/12/2022 23:52  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 Lab File ID: \_043.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTriA)	AveID	0.8292	0.8183		2.47	2.50	-1.3	40.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	AveID	1.328	1.345		2.53	2.50	1.3	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.195	1.261		2.64	2.50	5.5	40.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1344	0.1399		2.60	2.50	4.1	40.0
Perfluorohexadecanoic acid	Q2ID		1.126		2.63	2.50	5.2	40.0
Perfluorooctadecanoic acid	AveID	0.9844	1.028		2.61	2.50	4.4	40.0
13C4 PFBA	Ave	1.142	1.125		1.23	1.25	-1.5	50.0
13C5 PFPeA	Ave	0.8865	0.8930		1.26	1.25	0.7	50.0
13C3 PFBS	Ave	0.5913	0.5847		1.15	1.16	-1.1	50.0
M2-4:2 FTS	Ave	0.1820	0.1679		1.08	1.17	-7.8	50.0
13C2 PFHxA	Ave	0.9479	0.9527		1.26	1.25	0.5	50.0
13C3 HFPO-DA	Ave	0.4556	0.4807		1.32	1.25	5.5	50.0
18O2 PFHxS	Ave	0.3946	0.4170		1.25	1.18	5.7	50.0
13C4 PFHpA	Ave	0.9067	0.9599		1.32	1.25	5.9	50.0
M2-6:2 FTS	Ave	0.1835	0.1614		1.05	1.19	-12.0	50.0
13C4 PFOA	Ave	0.9376	0.9313		1.24	1.25	-0.7	50.0
13C4 PFOS	Ave	0.5681	0.5998		1.26	1.20	5.6	50.0
13C5 PFNA	Ave	1.234	1.258		1.27	1.25	2.0	50.0
13C8 FOSA	Ave	0.7682	0.8198		1.33	1.25	6.7	50.0
13C2 PFDA	Ave	1.191	1.205		1.27	1.25	1.2	50.0
M2-8:2 FTS	Ave	0.2070	0.1701		0.984	1.20	-17.8	50.0
d3-NMeFOSAA	Ave	0.1401	0.1864		1.66	1.25	33.0	50.0
13C2 PFUnA	Ave	1.189	1.261		1.33	1.25	6.1	50.0
d5-NEtFOSAA	Ave	0.1537	0.1877		1.53	1.25	22.1	50.0
13C2 PFDoA	Ave	1.247	1.330		1.33	1.25	6.6	50.0
d7-N-MeFOSE-M	Ave	0.1499	0.1404		1.17	1.25	-6.3	50.0
d-N-MeFOSA-M	Ave	0.1069	0.1113		1.30	1.25	4.2	50.0
d9-N-EtFOSE-M	Ave	0.1504	0.1513		1.26	1.25	0.6	50.0
d-N-EtFOSA-M	Ave	0.0883	0.0891		1.26	1.25	1.0	50.0
13C2 PFTeDA	Ave	0.9508	0.9615		1.26	1.25	1.1	50.0
13C2 PFHxDA	Ave	0.6444	0.6531		1.27	1.25	1.3	50.0
13C8 PFOA	AveID	0.999	1.066		1.33	1.25	6.6	50.0
13C8 PFOS	AveID	0.2220	0.2193		1.18	1.20	-1.2	50.0

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_043.d  
 Lims ID: CCV  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 12-Jan-2022 23:52:40 ALS Bottle#: 43 Worklist Smp#: 43  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022237-043 ccv  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:15:51 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 13-Jan-2022 16:59:35

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										
212.90 > 169.00	2.789	2.802	-0.013	1.000	9188773	2.54		102	2028	
D 1 13C4 PFBA										
217.00 > 172.00	2.789	2.802	-0.013	0.678	5754551	1.23		98.5	13030	
D 3 13C5 PFPeA										
267.90 > 223.00	3.098	3.116	-0.018	0.753	4568733	1.26		101	9810	
4 Perfluoropentanoic acid										
262.90 > 219.00	3.098	3.116	-0.018	1.000	8816945	2.53		101	2685	
D 6 13C3 PFBS										
301.90 > 80.00	3.114	3.132	-0.018	0.757	2781748	1.15		98.9	12310	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	3.114	3.132	-0.018	1.000	6180410	2.35	Target=2.65	107	5641	
298.90 > 99.00	3.114	3.132	-0.018	1.000	2296001		2.69(1.32-3.97)		5318	
D 8 M2-4:2 FTS										
329.00 > 81.00	3.401	3.423	-0.022	0.827	802132	1.08		92.2	1610	
7 4:2 FTS										
327.00 > 307.00	3.401	3.423	-0.022	1.000	3647482	2.36		101	8395	
10 Perfluorohexanoic acid										
313.00 > 269.00	3.432	3.444	-0.012	1.000	8200915	2.42	Target=11.80	96.9	2836	
313.00 > 119.00	3.432	3.444	-0.012	1.000	651883		12.58(5.90-17.70)		893	
11 Perfluoropentanesulfonic acid										
349.00 > 80.00	3.432	3.444	-0.012	1.102	5944653	2.56	Target=3.44	109	10908	
349.00 > 99.00	3.432	3.444	-0.012	1.102	1681037		3.54(1.72-5.16)		8714	
D 9 13C2 PFHxA										
315.00 > 270.00	3.432	3.444	-0.012	0.834	4873960	1.26		101	9771	
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.528	3.548	-0.020	0.857	2459262	1.32		106	4851	

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	3.537	3.548	-0.011	1.003	6871514	2.58		103	1831	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.769	3.789	-0.020	1.000	5319438	2.26	Target=3.40	99.5	7574	M
399.00 > 99.00	3.769	3.789	-0.020	1.000	1511780		3.52(1.70-5.10)		4211	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.769	3.789	-0.020	0.916	2018079	1.25		106	6054	
D 14 13C4 PFHpA										
367.00 > 322.00	3.778	3.799	-0.021	0.918	4910726	1.32		106	9023	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.778	3.799	-0.021	1.000	10385364	2.53	Target=3.29	101	4479	
363.00 > 169.00	3.778	3.799	-0.021	1.000	3181197		3.26(1.65-4.94)		2947	
68 DONA										
377.00 > 251.00	3.816	3.834	-0.018	0.867	16038569	2.48	Target=1.82	105	9780	
377.00 > 85.00	3.816	3.834	-0.018	0.867	8957276		1.79(0.91-2.74)		170	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.098	4.115	-0.017	0.931	5842587	2.49	Target=3.92	105	9282	
449.00 > 99.00	4.098	4.115	-0.017	0.931	1507220		3.88(1.96-5.87)		6821	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.106	4.132	-0.026	0.998	784646	1.04		88.0	3124	
D 21 13C4 PFOA										
417.00 > 372.00	4.115	4.132	-0.017	1.000	4764762	1.24		99.3	9419	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.106	4.132	-0.026	0.998	5078733	1.33		107	8657	
19 6:2 FTS										
427.00 > 407.00	4.106	4.132	-0.026	1.000	2903199	2.44		103	6291	
* 22 13C2 PFOA										
415.00 > 370.00	4.115	4.132	-0.017		5116086	1.25			8294	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.115	4.132	-0.017	1.000	11428046	2.61	Target=2.59	105	4877	
413.00 > 169.00	4.115	4.132	-0.017	1.000	4101462		2.79(1.30-3.89)		4171	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.402	4.419	-0.017	1.000	643317	1.18		98.8	2717	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.410	4.428	-0.018	1.002	6373396	2.36	Target=4.65	102	7285	M
499.00 > 99.00	4.402	4.428	-0.026	1.000	1483910		4.30(2.32-6.97)		5143	M
D 25 13C4 PFOS										
503.00 > 80.00	4.402	4.428	-0.026	1.070	2933623	1.26		106	6022	
26 Perfluorononanoic acid										
463.00 > 419.00	4.427	4.445	-0.018	1.000	11291089	2.55	Target=4.65	102	7999	
463.00 > 169.00	4.427	4.445	-0.018	1.000	2474152		4.56(2.32-6.97)		4702	
D 27 13C5 PFNA										
468.00 > 423.00	4.427	4.445	-0.018	1.076	6435667	1.27		102	12169	
63 9CIFOS										
531.00 > 351.00	4.567	4.581	-0.014	1.038	12748181	2.40		103	14644	
D 34 13C8 FOSA										
506.00 > 78.00	4.706	4.706	0.0	1.144	4194117	1.33		107	5104	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
33 Perfluorooctanesulfonamide	498.00 > 78.00	4.706	4.706	0.0	1.000	8227281	2.59	104	6449	
28 Perfluorononanesulfonic acid	549.00 > 80.00	4.689	4.706	-0.017	1.065	5744308	2.40	Target=4.06	100	8061
	549.00 > 99.00	4.689	4.706	-0.017	1.065	1504146		3.82(2.03-6.09)		6012
D 32 13C2 PFDA	515.00 > 470.00	4.715	4.732	-0.017	1.146	6165395	1.26		101	9262
29 Perfluorodecanoic acid	513.00 > 469.00	4.715	4.732	-0.017	1.000	11843730	2.49	Target=11.30	99.6	7845
	513.00 > 169.00	4.715	4.732	-0.017	1.000	1024561		11.56(5.65-16.95)		669
31 8:2 FTS	527.00 > 507.00	4.732	4.749	-0.017	1.000	2497791	2.54		106	6642
D 30 M2-8:2 FTS	529.00 > 81.00	4.732	4.749	-0.017	1.150	833787	0.9841		82.2	1475
D 35 d3-NMeFOSAA	573.00 > 419.00	4.861	4.878	-0.017	1.181	953413	1.66		133	930
36 NMeFOSAA	570.00 > 419.00	4.861	4.887	-0.026	1.000	1857485	2.50		100	2635 M
37 Perfluorodecanesulfonic acid	599.00 > 80.00	4.949	4.966	-0.017	1.124	5317616	2.33	Target=3.79	96.7	9410
	599.00 > 99.00	4.949	4.966	-0.017	1.124	1428608		3.72(1.90-5.69)		4040
38 Perfluoroundecanoic acid	563.00 > 519.00	4.984	5.002	-0.018	1.000	13195058	2.64	Target=8.45	106	9750
	563.00 > 169.00	4.975	5.002	-0.027	0.998	1516441		8.70(4.22-12.67)		5731
D 39 13C2 PFUnA	565.00 > 520.00	4.984	5.002	-0.018	1.211	6450128	1.33		106	10809
D 41 d5-NEtFOSAA	589.00 > 419.00	4.993	5.012	-0.019	1.213	960281	1.53		122	4043
40 NEtFOSA	584.00 > 419.00	5.002	5.022	-0.020	1.002	1998033	2.60		104	2349 M
57 11CIFOS	631.00 > 451.00	5.082	5.102	-0.020	1.155	9977011	2.43		103	13299
D 43 13C2 PFDoA	615.00 > 570.00	5.213	5.231	-0.018	1.267	6803253	1.33		107	13070
42 Perfluorododecanoic acid	613.00 > 569.00	5.213	5.231	-0.018	1.000	13512040	2.45	Target=6.99	98.2	9771
	613.00 > 169.00	5.213	5.231	-0.018	1.000	1914606		7.06(3.50-10.49)		3470
50 10:2 FTS	627.00 > 607.00	5.240	5.257	-0.017	1.107	4345671	2.74		114	10316
D 51 d7-N-MeFOSE-M	623.00 > 59.00	5.284	5.275	0.009	1.284	718380	1.17		93.7	659
49 N-MeFOSE-M	616.00 > 59.00	5.292	5.284	0.008	1.002	1741817	2.56		102	1723
D 58 d-N-MeFOSA-M	515.00 > 169.00	5.284	5.284	0.0	1.284	569597	1.30		104	64.3
61 NMeFOSA	512.00 > 169.00	5.284	5.284	0.0	1.000	1220769	2.60		104	830

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
54 PFDoS										
699.00 > 80.00	5.394	5.404	-0.010	1.225	5500700	2.44	Target=4.24	101	8450	
699.00 > 99.00	5.394	5.404	-0.010	1.225	1295855		4.24(2.12-6.35)		5080	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.435	5.435	0.0	1.321	774304	1.26		101	359	
62 N-EtFOSE-M										
630.00 > 59.00	5.454	5.445	0.009	1.004	2083267	2.53		101	1669	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.425	5.445	-0.020	1.041	11134357	2.47	Target=6.20	98.7	8746	
663.00 > 169.00	5.425	5.445	-0.020	1.041	1778935		6.26(3.10-9.30)		5170	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.454	5.445	0.009	1.326	455999	1.26		101	586	
56 N-EtFOSA-M										
526.00 > 169.00	5.454	5.455	-0.001	1.000	1150043	2.64		106	691	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.609	5.629	-0.020	1.363	4919081	1.26		101	8886	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.609	5.629	-0.020	1.000	1376415	2.60	Target=1.05	104	4532	
713.00 > 219.00	5.609	5.629	-0.020	1.000	1310338		1.05(0.53-1.58)		5501	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.913	5.931	-0.018	1.437	3341434	1.27		101	6741	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.913	5.931	-0.018	1.000	7523278	2.63	Target=8.09	105	6206	
813.00 > 169.00	5.913	5.931	-0.018	1.000	919842		8.18(4.05-12.14)		3110	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.170	6.195	-0.025	1.043	6866716	2.61	Target=11.53	104	5520	
913.00 > 169.00	6.170	6.195	-0.025	1.043	594116		11.56(5.77-17.30)		2423	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

63L5PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\\_043.d

Injection Date: 12-Jan-2022 23:52:40

Instrument ID: LCA

Lims ID: CCV

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 43

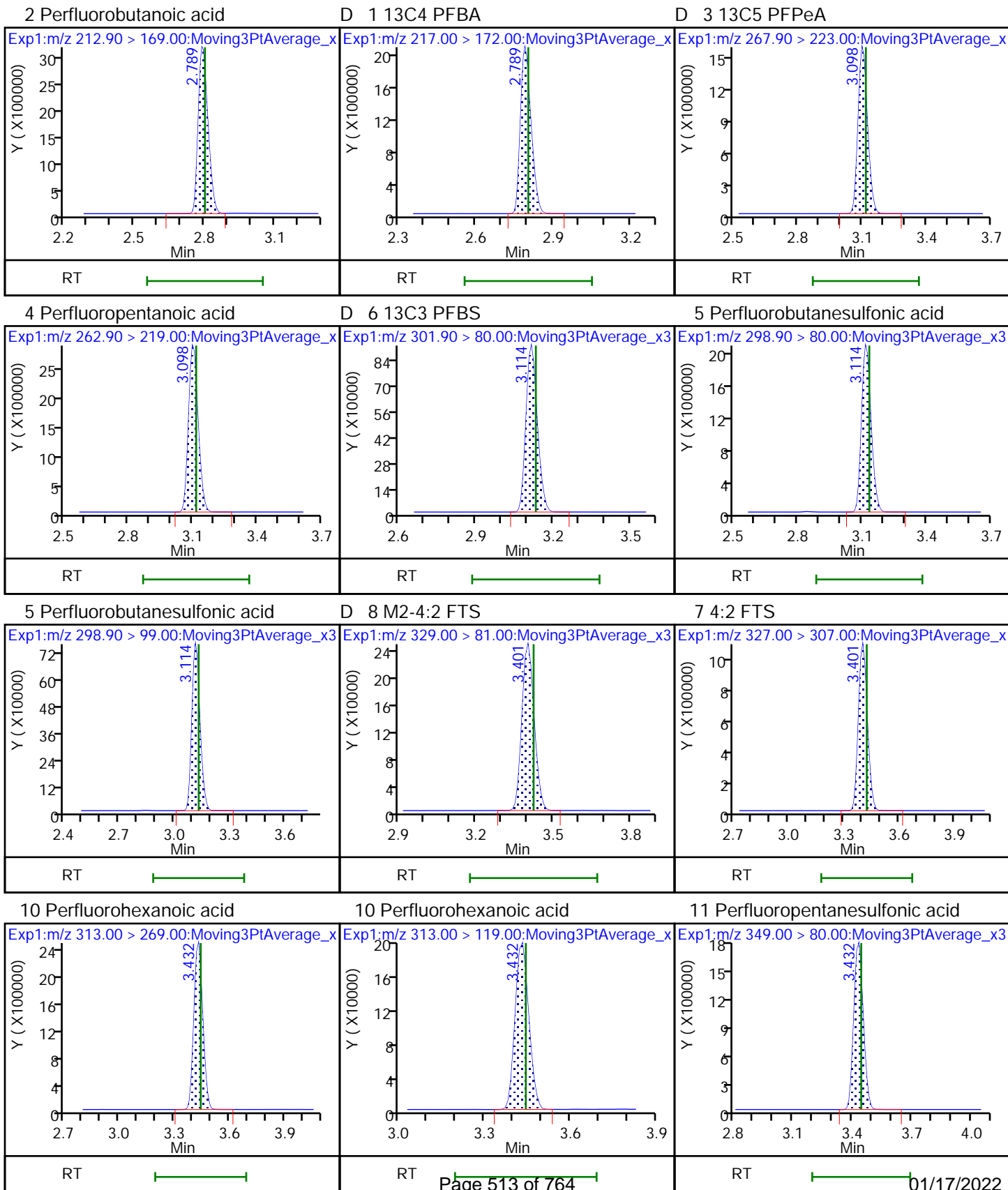
Worklist Smp#: 43

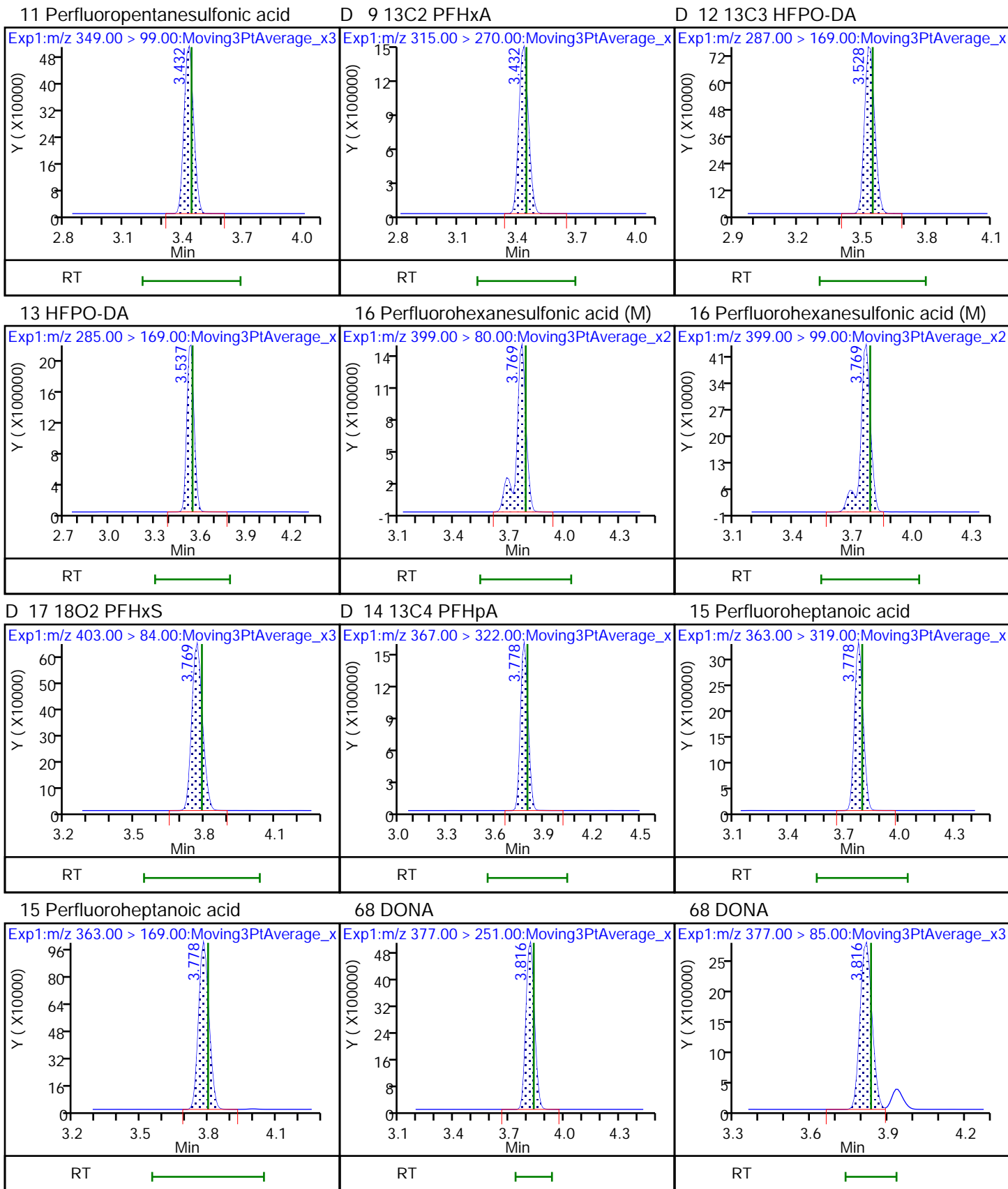
Injection Vol: 1.0 ul

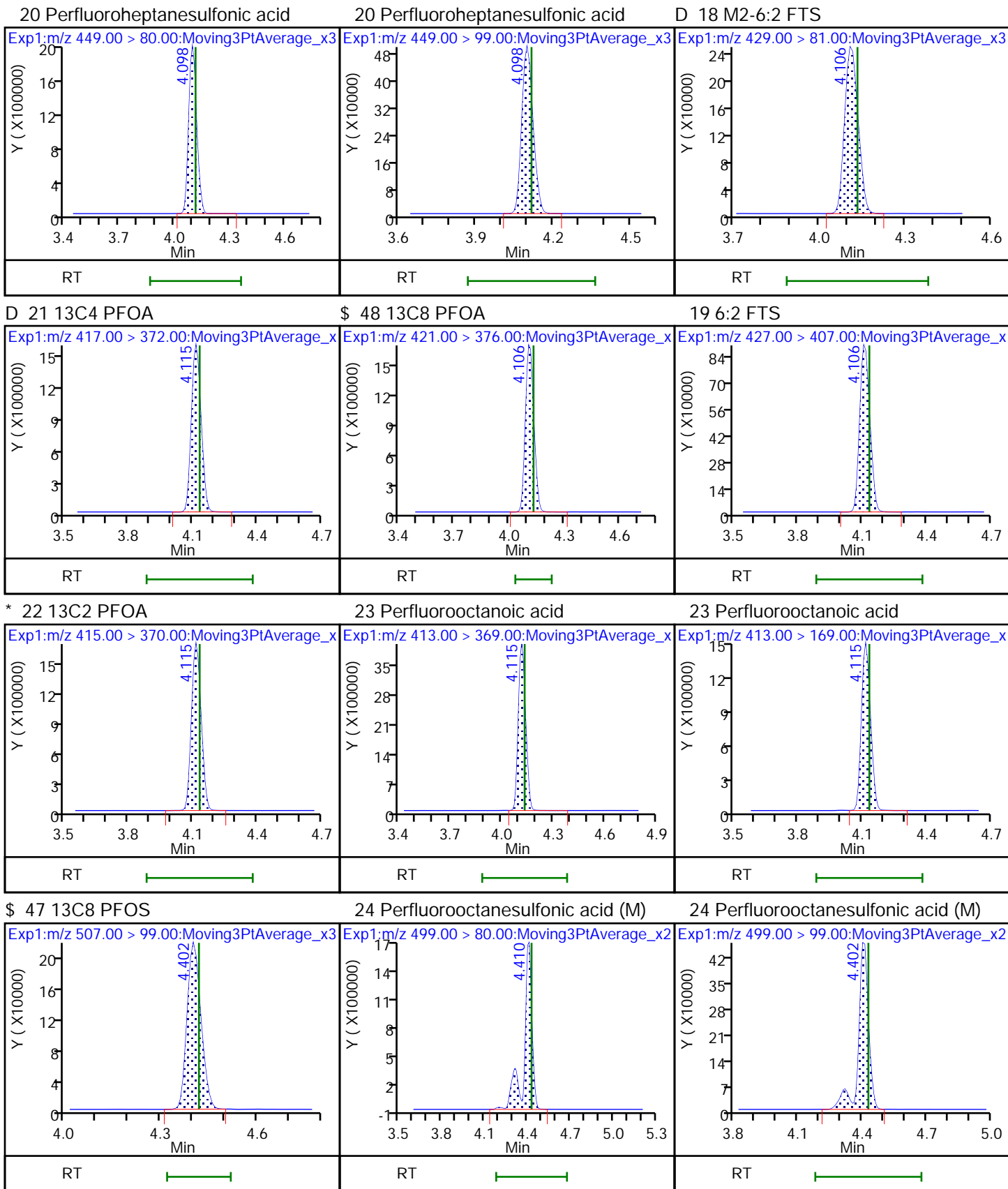
Dil. Factor: 1.0000

Method: PFC\_LCA

Limit Group: LC - PFC- ICAL





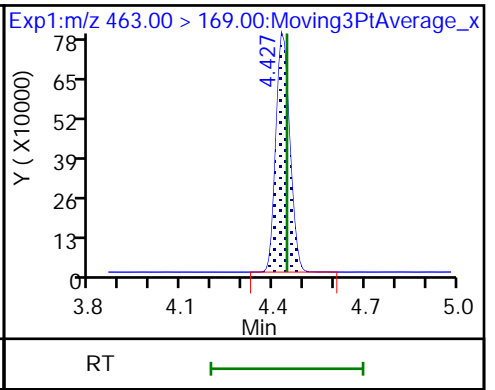
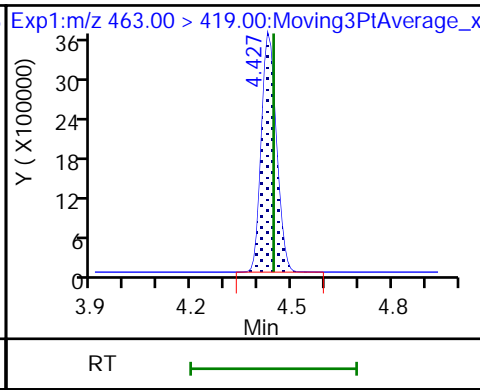
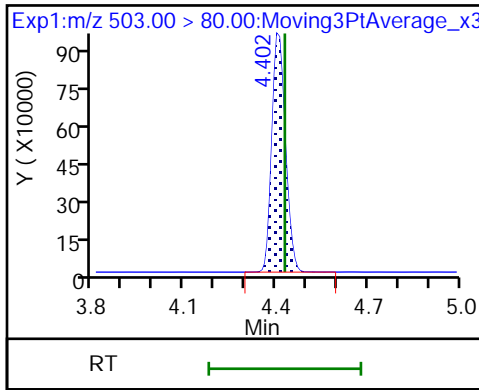




D 25 13C4 PFOS

26 Perfluorononanoic acid

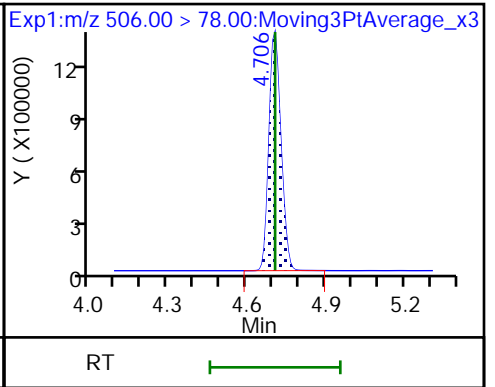
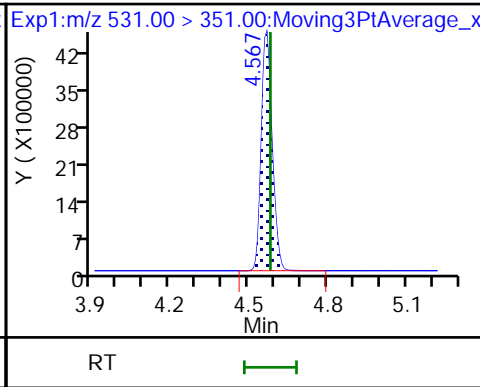
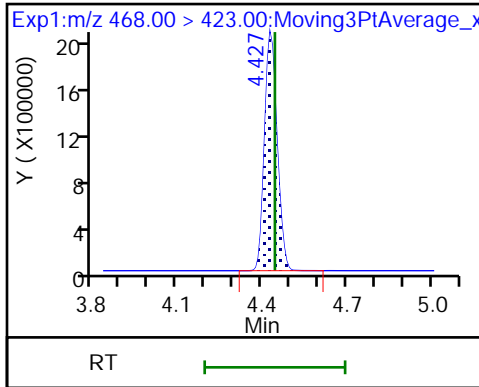
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS

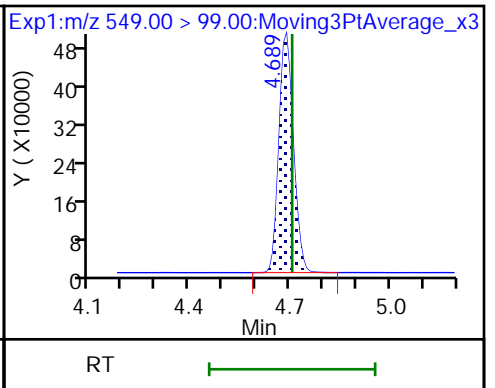
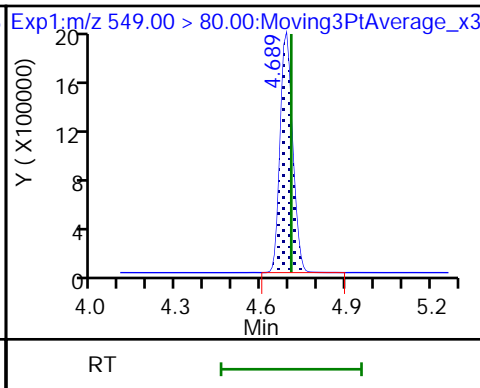
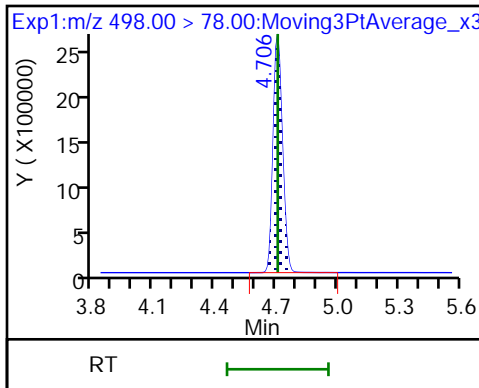
D 34 13C8 FOSA



33 Perfluorooctanesulfonamide

28 Perfluorononanesulfonic acid

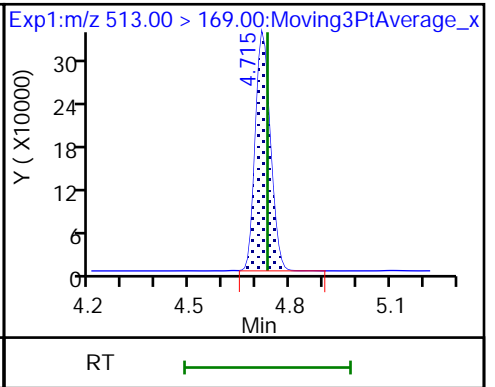
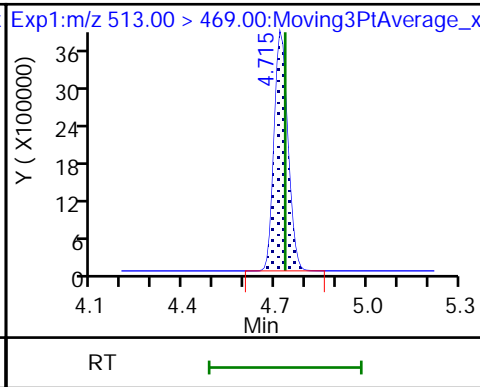
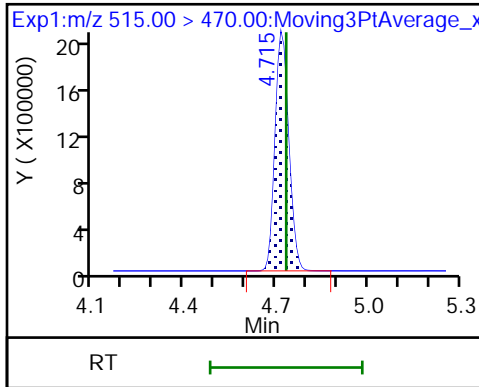
28 Perfluorononanesulfonic acid

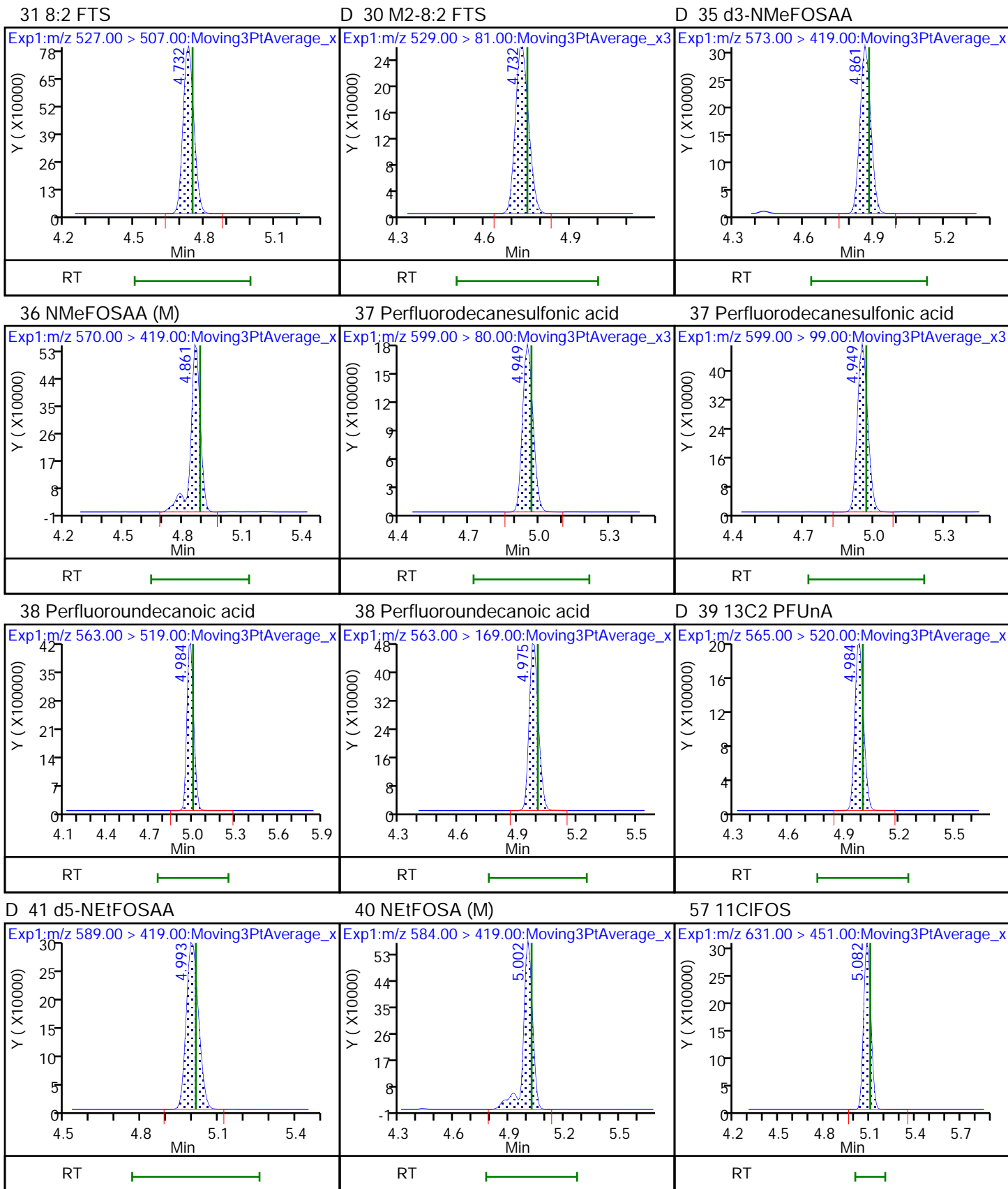


D 32 13C2 PFDA

29 Perfluorodecanoic acid

29 Perfluorodecanoic acid

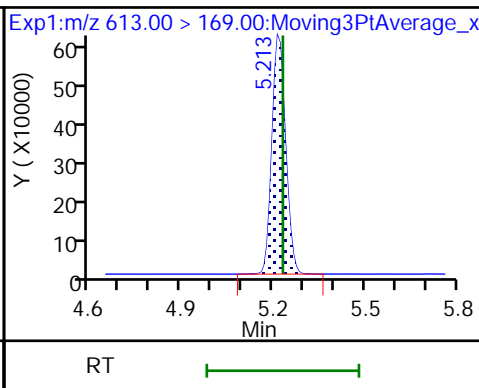
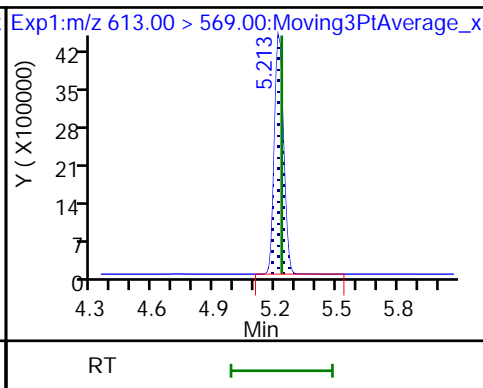
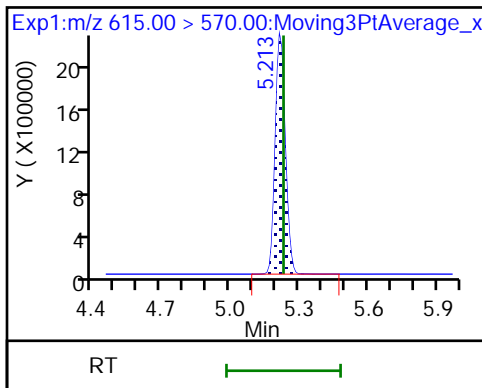




D 43 13C2 PFDaA

42 Perfluorododecanoic acid

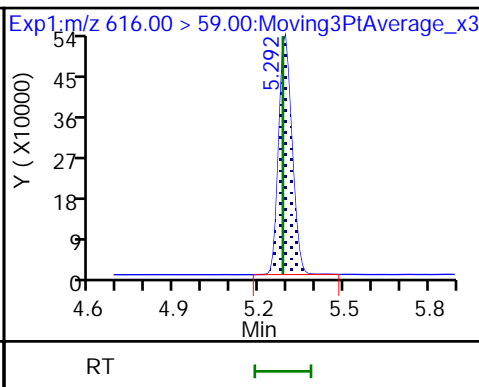
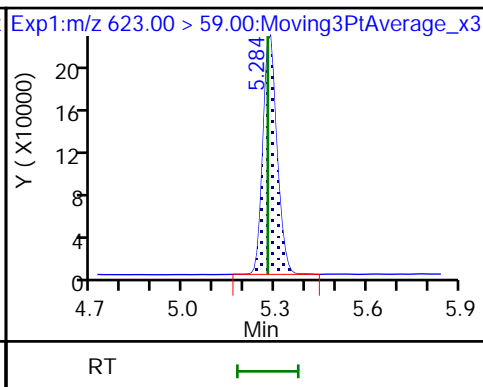
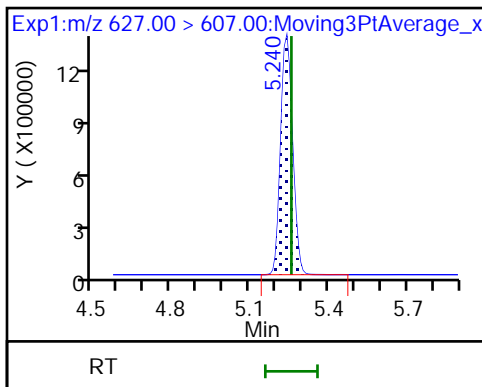
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

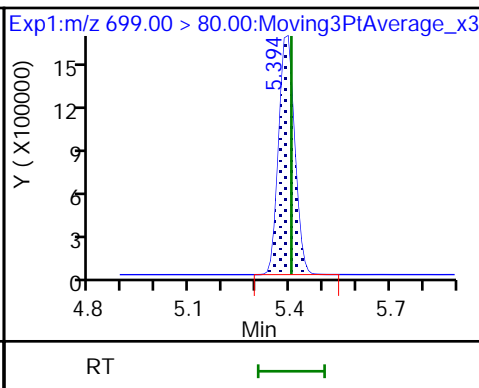
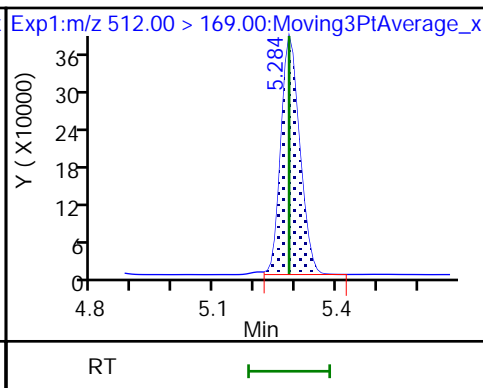
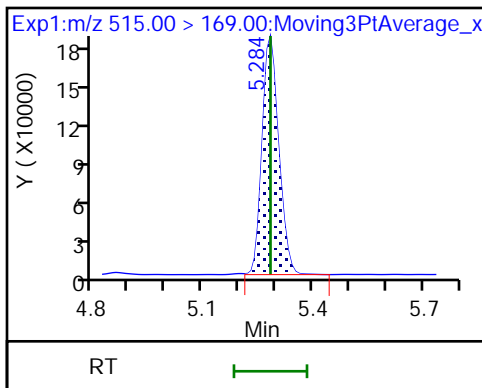
49 N-MeFOSE-M



D 58 d-N-MeFOSA-M

61 NMeFOSA

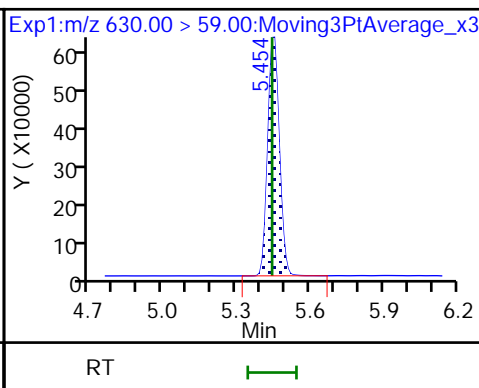
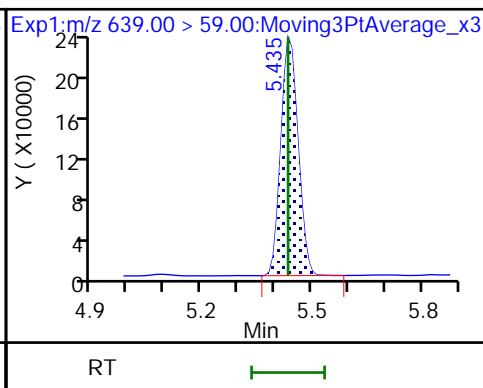
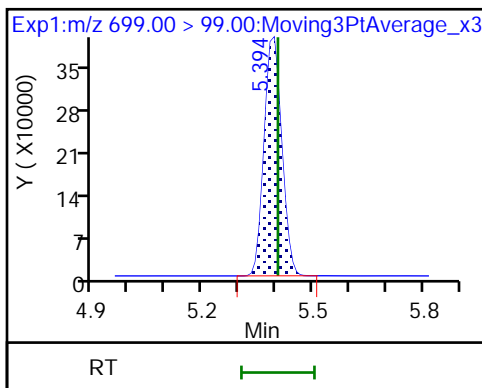
54 PFDoS

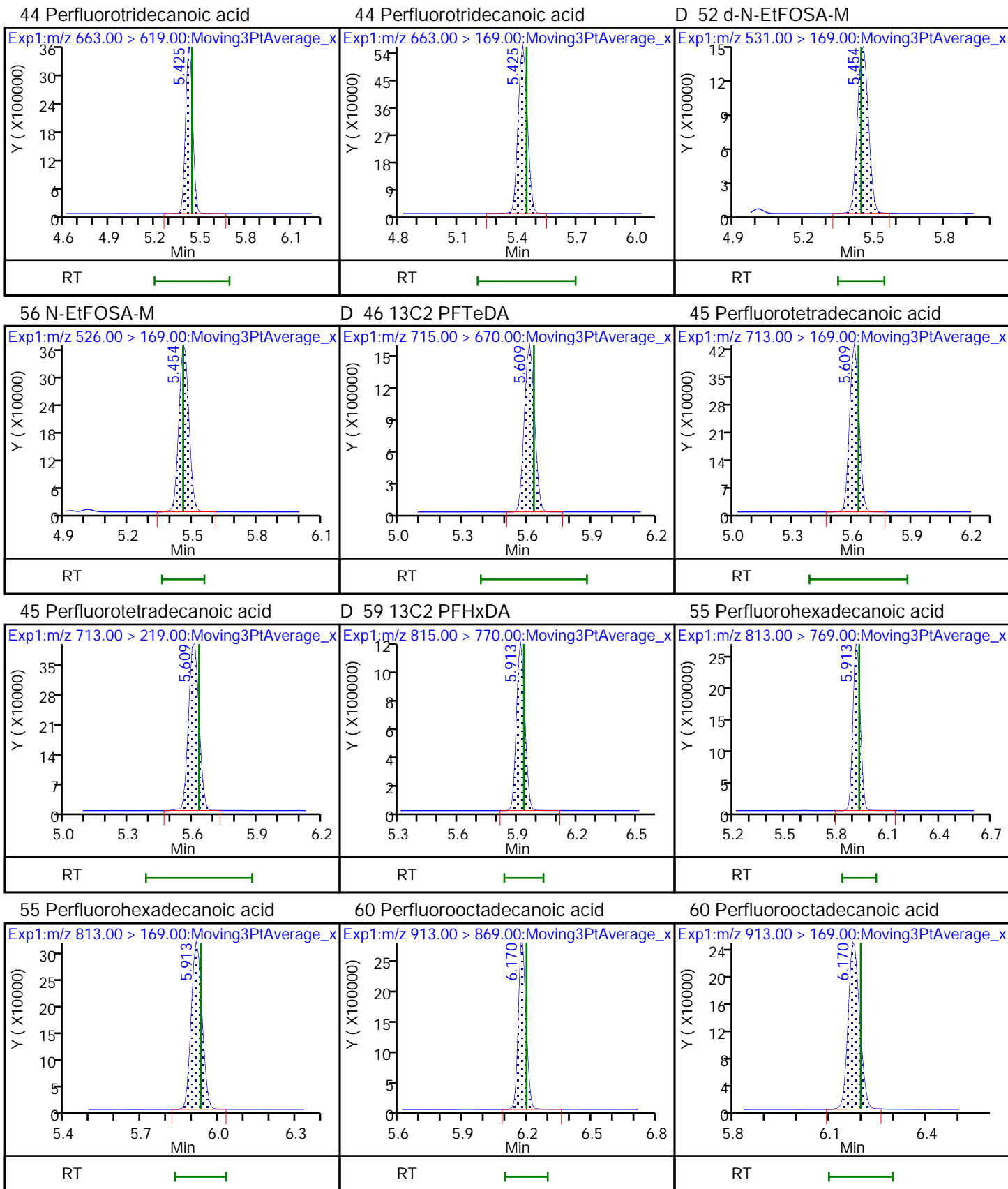


54 PFDoS

D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M







Eurofins TestAmerica, Knoxville

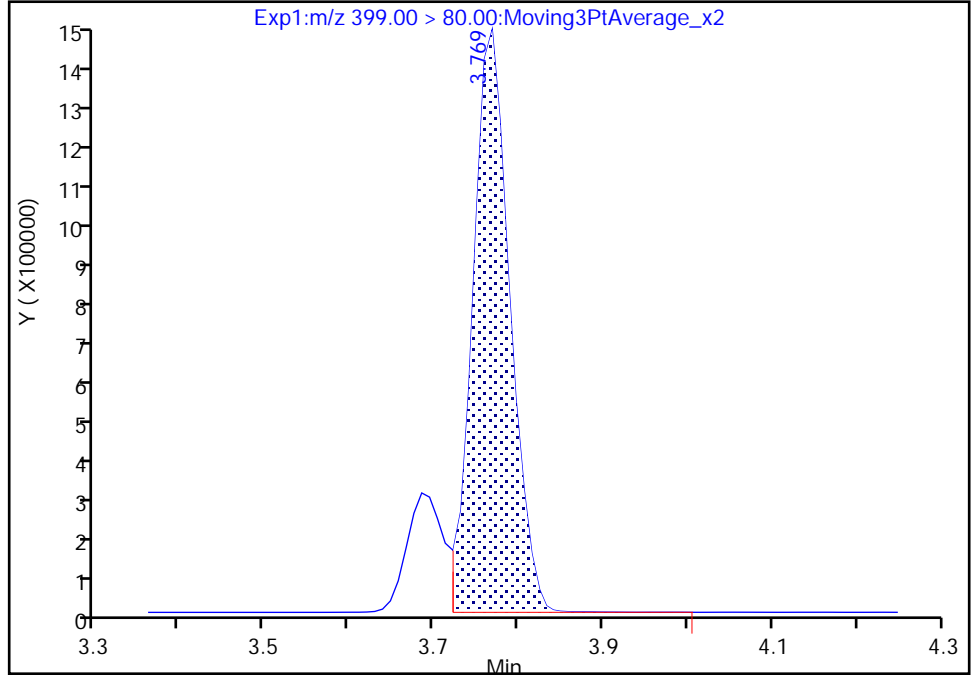
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Injection Date: 12-Jan-2022 23:52:40 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 43 Worklist Smp#: 43  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

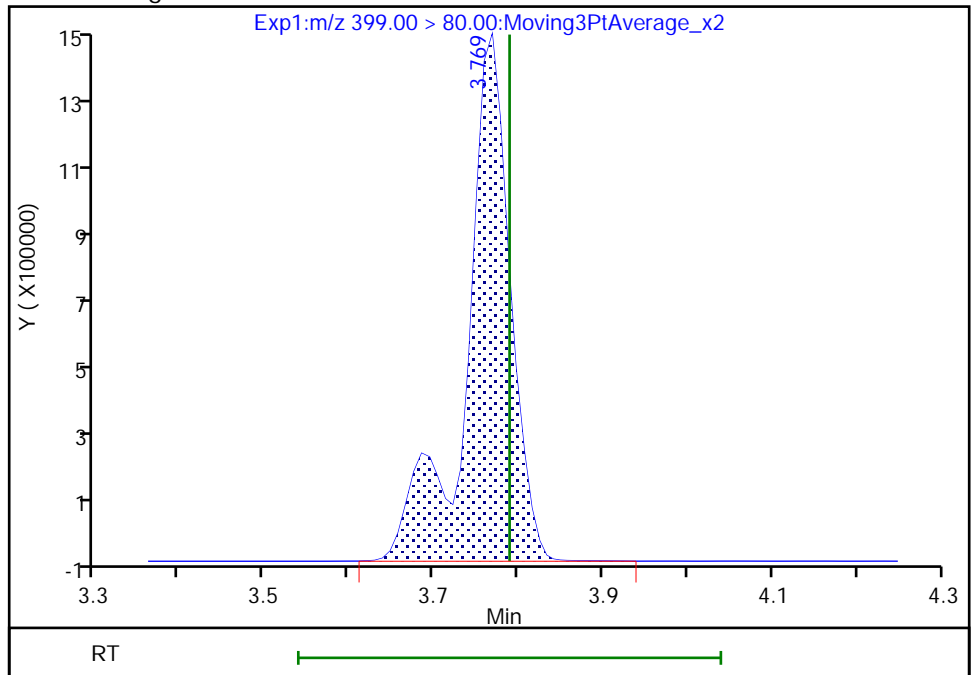
RT: 3.77  
Area: 4425427  
Amount: 1.882866  
Amount Units: ng/ml

Processing Integration Results



RT: 3.77  
Area: 5319438  
Amount: 2.263237  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 10:11:56  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

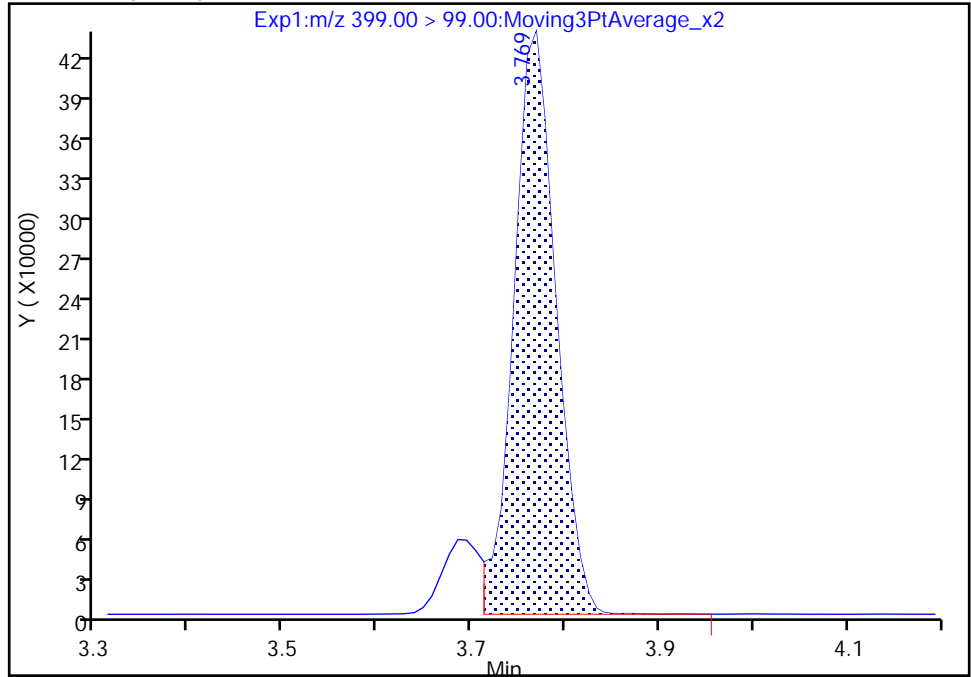
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Injection Date: 12-Jan-2022 23:52:40 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 43 Worklist Smp#: 43  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

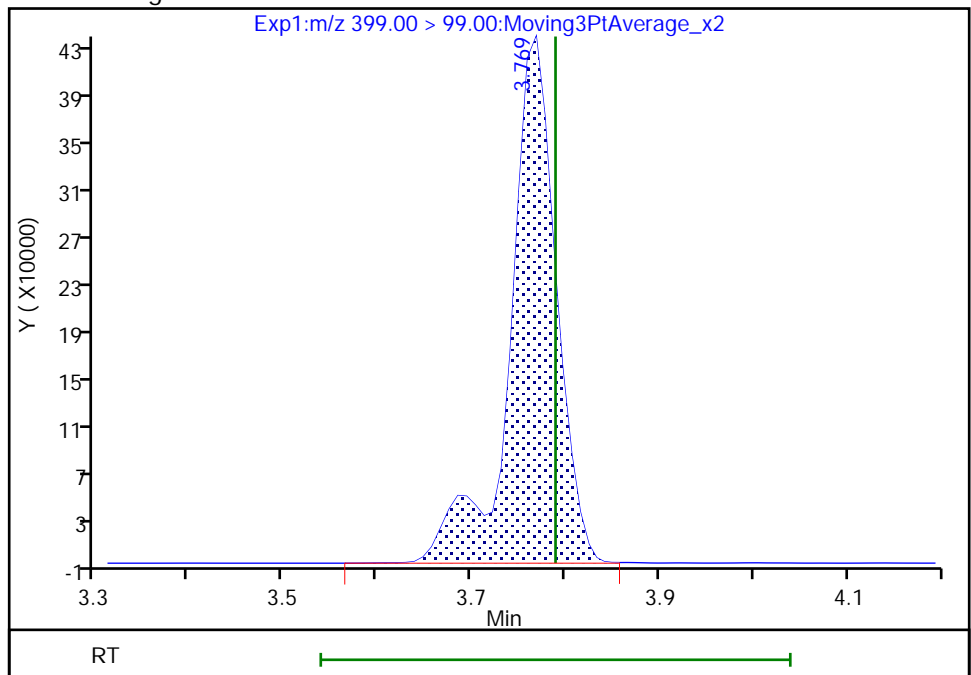
RT: 3.77  
Area: 1359259  
Amount: 1.882866  
Amount Units: ng/ml

Processing Integration Results



RT: 3.77  
Area: 1511780  
Amount: 2.263237  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 10:12:03

Audit Action: Manually Integrated

Audit Reason: Baseline  
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Eurofins TestAmerica, Knoxville

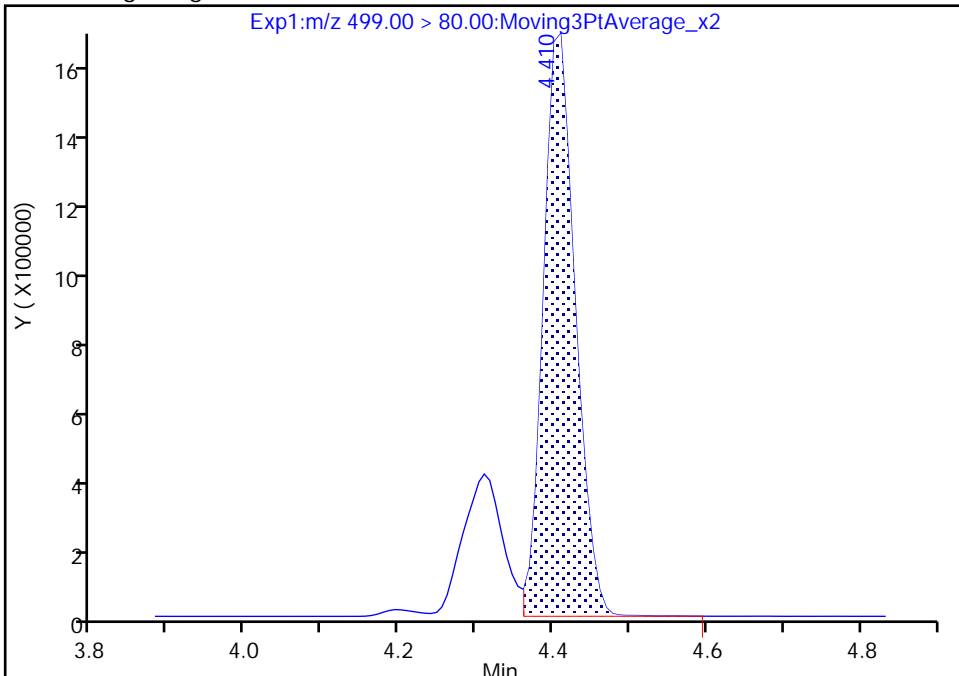
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Injection Date: 12-Jan-2022 23:52:40 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 43 Worklist Smp#: 43  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

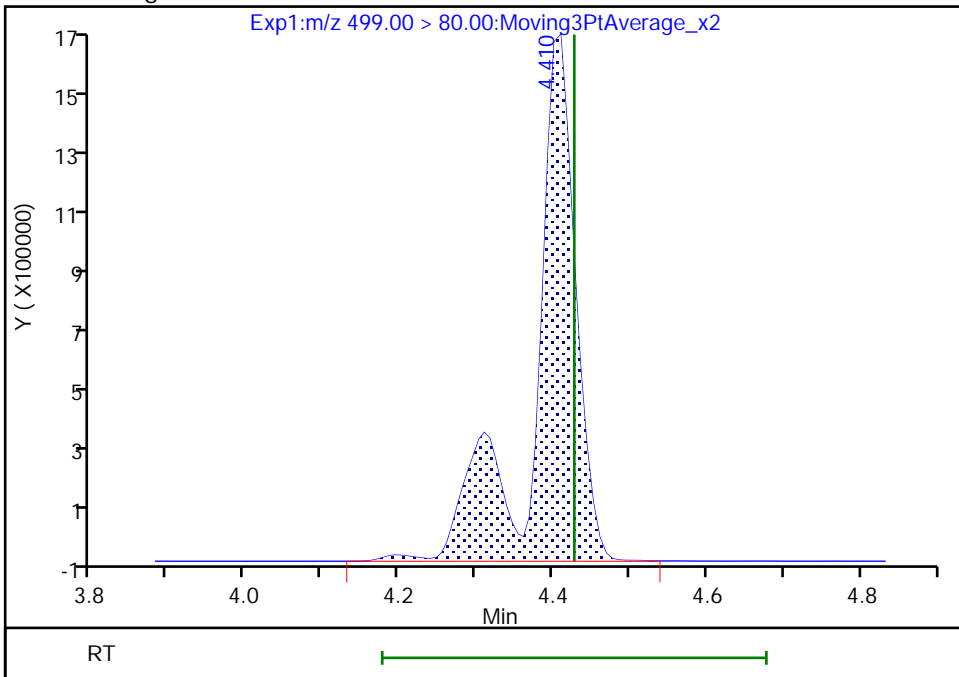
RT: 4.41  
Area: 4836377  
Amount: 1.792942  
Amount Units: ng/ml

Processing Integration Results



RT: 4.41  
Area: 6373396  
Amount: 2.362746  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 10:12:14  
Audit Action: Manually Integrated



Eurofins TestAmerica, Knoxville

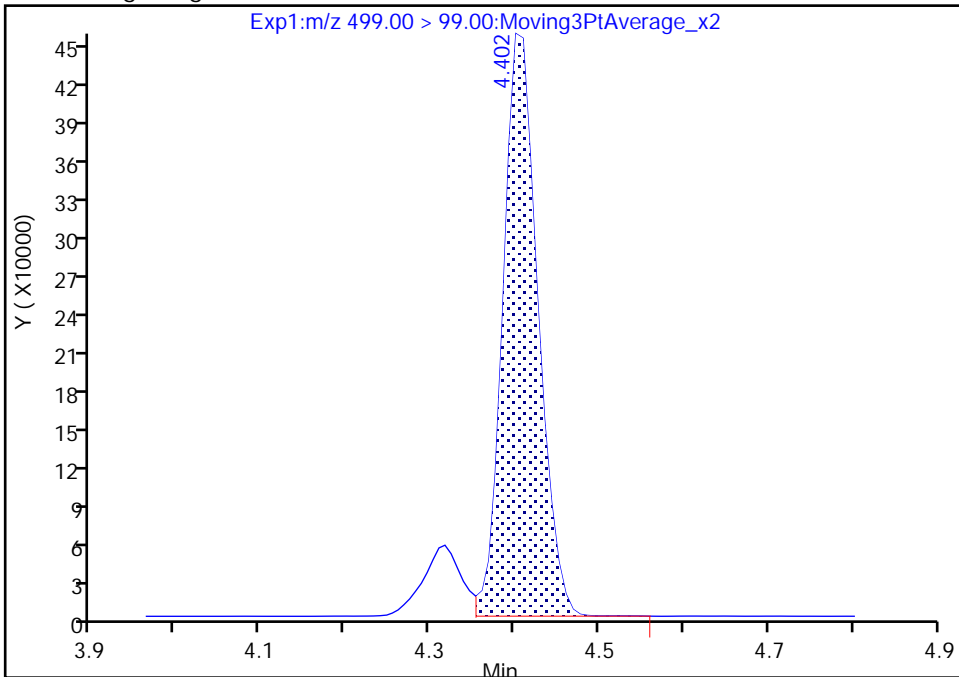
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Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 43 Worklist Smp#: 43  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

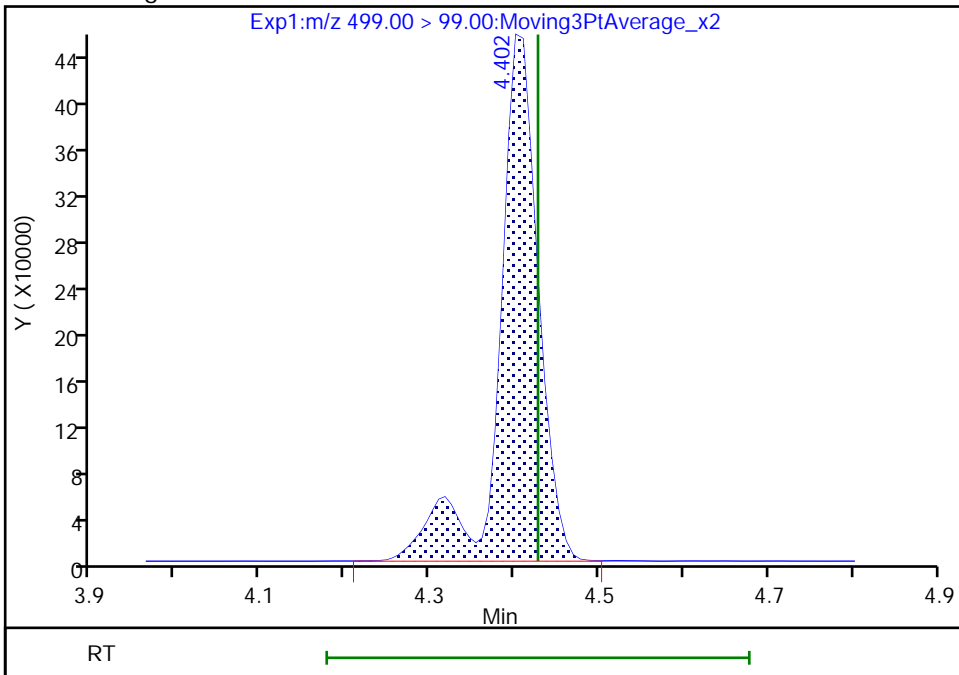
RT: 4.40  
Area: 1308920  
Amount: 1.792942  
Amount Units: ng/ml

Processing Integration Results



RT: 4.40  
Area: 1483910  
Amount: 2.362746  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 10:12:20

Audit Action: Manually Integrated

Audit Reason: Baseline  
Page 524 of 764

Eurofins TestAmerica, Knoxville

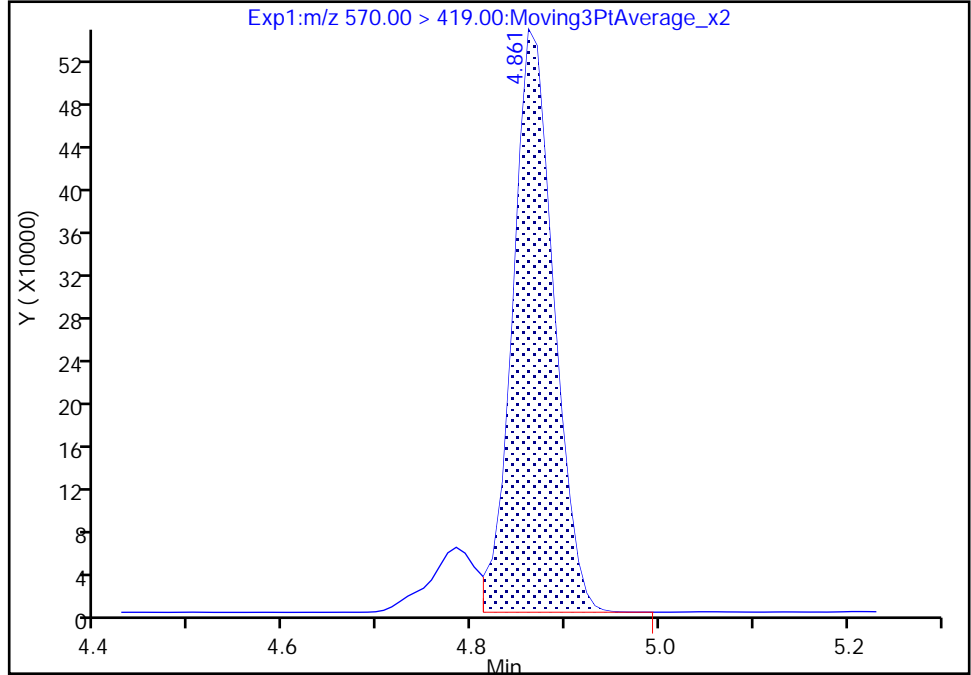
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Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 43 Worklist Smp#: 43  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

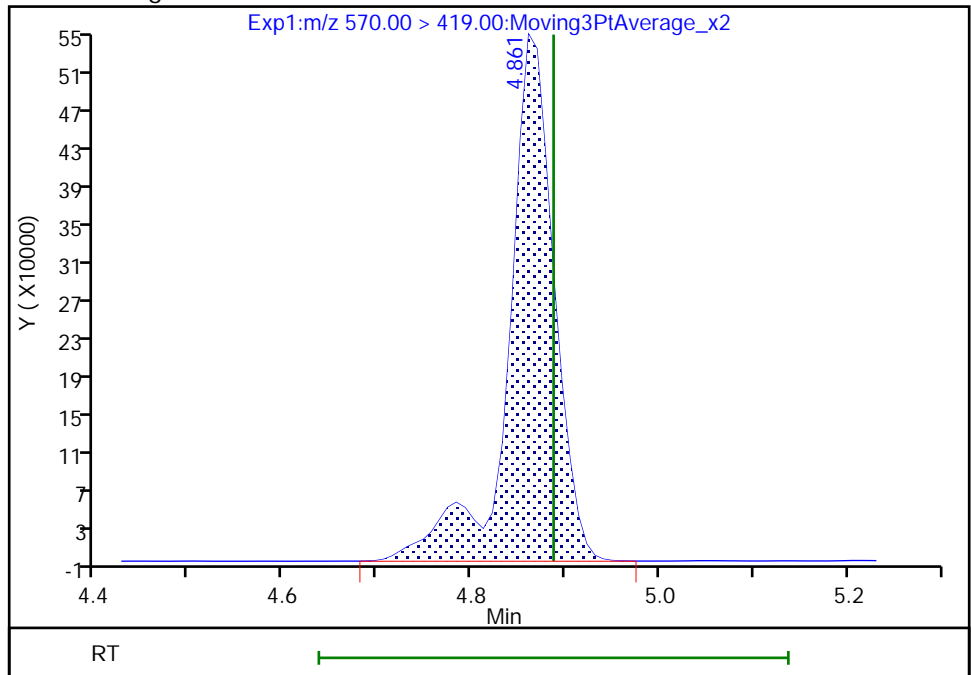
RT: 4.86  
Area: 1649463  
Amount: 2.220950  
Amount Units: ng/ml

Processing Integration Results



RT: 4.86  
Area: 1857485  
Amount: 2.499964  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 10:12:31  
Audit Action: Manually Integrated

Eurofins TestAmerica, Knoxville

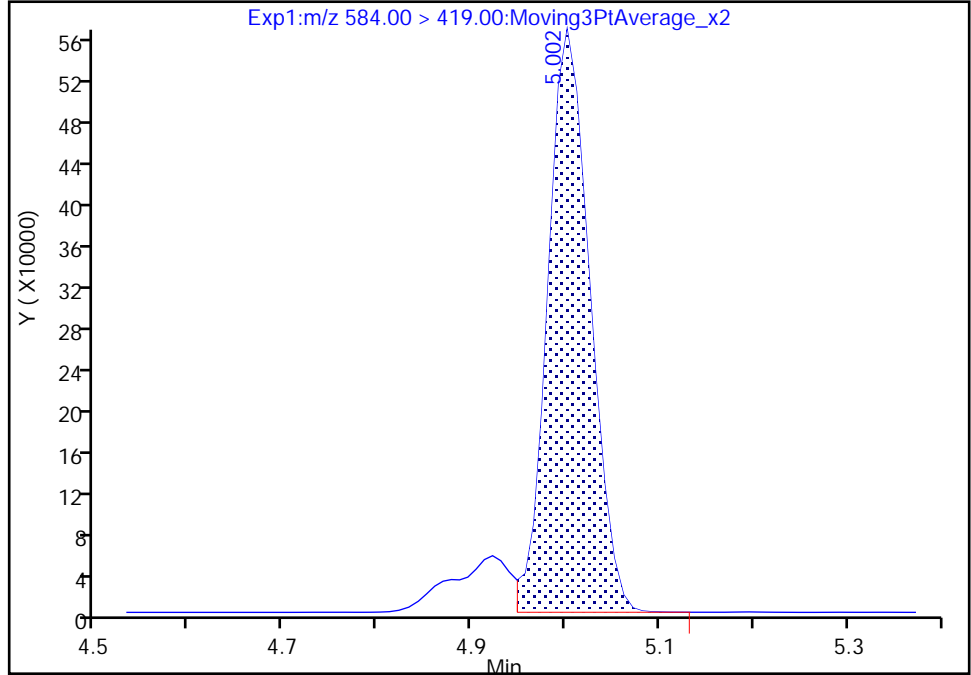
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Injection Date: 12-Jan-2022 23:52:40 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 43 Worklist Smp#: 43  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

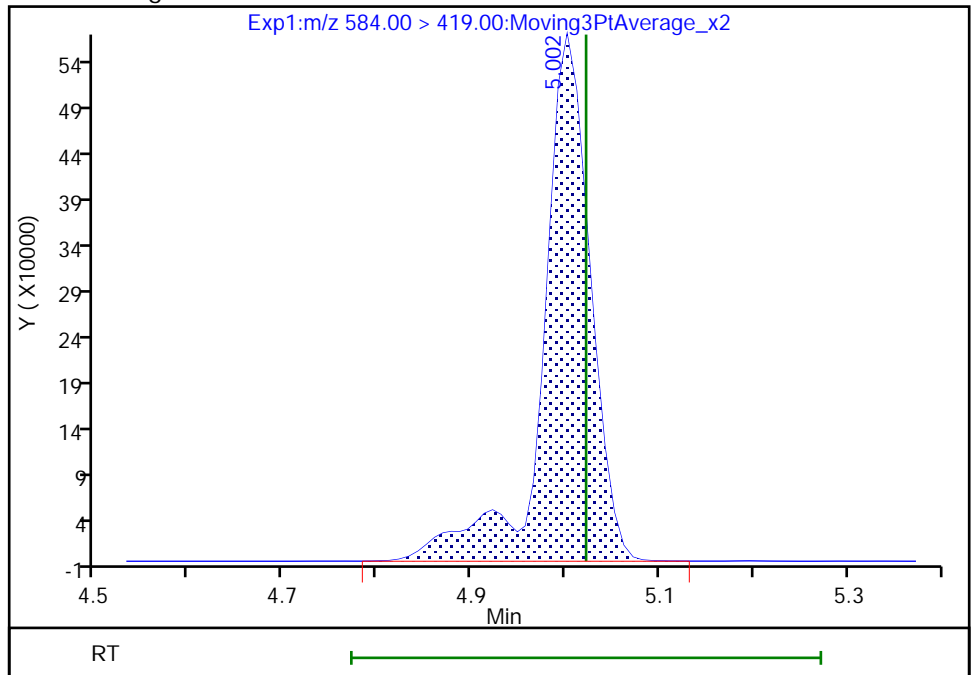
RT: 5.00  
Area: 1761547  
Amount: 2.295297  
Amount Units: ng/ml

Processing Integration Results



RT: 5.00  
Area: 1998033  
Amount: 2.600196  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 10:12:42  
Audit Action: Manually Integrated

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVL 140-57893/6 Calibration Date: 01/13/2022 19:31  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 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	0.7844	0.7466		0.0476	0.0500	-4.8	50.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9519	0.9218		0.0484	0.0500	-3.2	50.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.097	1.059		0.0427	0.0442	-3.4	50.0
4:2 FTS	AveID	2.252	2.334		0.0484	0.0467	3.7	50.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8680	0.8494		0.0489	0.0500	-2.1	50.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	0.9713	1.027		0.0496	0.0469	5.8	50.0
HFPO-DA	AveID	1.352	1.389		0.0514	0.0500	2.7	50.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.377	1.411		0.0466	0.0455	2.4	50.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.047	1.051		0.0502	0.0500	0.5	50.0
DONA	AveID	2.630	2.845		0.0510	0.0471	8.2	50.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9541	0.9569		0.0477	0.0476	0.3	50.0
6:2 FTS	L2ID		1.771		0.0490	0.0474	3.4	50.0
Perfluorooctanoic acid (PFOA)	AveID	1.147	1.225		0.0534	0.0500	6.8	50.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.099	1.085		0.0458	0.0464	-1.3	50.0
Perfluorononanoic acid (PFNA)	Q2ID		0.8768		0.0540	0.0500	7.9	50.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	Q2ID		2.245		0.0513	0.0466	10.0	50.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9748	1.023		0.0504	0.0480	4.9	50.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9459	0.9184		0.0486	0.0500	-2.9	50.0
Perfluorodecanoic acid (PFDA)	AveID	0.9645	0.9901		0.0513	0.0500	2.7	50.0
8:2 FTS	AveID	1.415	1.340		0.0454	0.0479	-5.3	50.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	QuaIF		0.9478		0.0488	0.0500	-2.3	50.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		0.9337		0.0512	0.0482	6.1	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9695	1.035		0.0534	0.0500	6.8	50.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Q2ID		0.9401		0.0476	0.0500	-4.7	50.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.672	1.576		0.0444	0.0471	-5.8	50.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9718		0.0469	0.0500	-6.1	50.0
10:2 FTS	AveID	2.276	2.507		0.0531	0.0482	10.1	50.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	Q2ID		1.227		0.0563	0.0500	12.5	50.0
NMeFOSA	Q2ID		1.174		0.0564	0.0500	12.8	50.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9166	0.8441		0.0446	0.0484	-7.9	50.0

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVL 140-57893/6 Calibration Date: 01/13/2022 19:31  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 Lab File ID: \_006.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTriA)	AveID	0.8292	0.7992		0.0482	0.0500	-3.6	50.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	AveID	1.328	1.236		0.0466	0.0500	-6.9	50.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.195	1.169		0.0489	0.0500	-2.2	50.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1344	0.1364		0.0508	0.0500	1.5	50.0
Perfluorohexadecanoic acid	Q2ID		1.343		0.0529	0.0500	5.7	50.0
Perfluorooctadecanoic acid	AveID	0.9844	0.9578		0.0487	0.0500	-2.7	50.0
13C4 PFBA	Ave	1.142	1.084		1.19	1.25	-5.1	50.0
13C5 PFPeA	Ave	0.8865	0.8325		1.17	1.25	-6.1	50.0
13C3 PFBS	Ave	0.5913	0.5428		1.07	1.16	-8.2	50.0
M2-4:2 FTS	Ave	0.1820	0.1805		1.16	1.17	-0.8	50.0
13C2 PFHxA	Ave	0.9479	0.9346		1.23	1.25	-1.4	50.0
13C3 HFPO-DA	Ave	0.4556	0.4468		1.23	1.25	-1.9	50.0
18O2 PFHxS	Ave	0.3946	0.4053		1.22	1.18	2.7	50.0
13C4 PFHpA	Ave	0.9067	0.9237		1.27	1.25	1.9	50.0
13C4 PFOA	Ave	0.9376	0.9512		1.27	1.25	1.4	50.0
M2-6:2 FTS	Ave	0.1835	0.1701		1.10	1.19	-7.3	50.0
13C4 PFOS	Ave	0.5681	0.5437		1.14	1.20	-4.3	50.0
13C5 PFNA	Ave	1.234	1.176		1.19	1.25	-4.7	50.0
13C8 FOSA	Ave	0.7682	0.8032		1.31	1.25	4.6	50.0
13C2 PFDA	Ave	1.191	1.160		1.22	1.25	-2.6	50.0
M2-8:2 FTS	Ave	0.2070	0.1890		1.09	1.20	-8.7	50.0
d3-NMeFOSAA	Ave	0.1401	0.1752		1.56	1.25	25.0	50.0
13C2 PFUnA	Ave	1.189	1.178		1.24	1.25	-0.9	50.0
d5-NEtFOSAA	Ave	0.1537	0.1919		1.56	1.25	24.8	50.0
13C2 PFDoA	Ave	1.247	1.216		1.22	1.25	-2.5	50.0
d7-N-MeFOSE-M	Ave	0.1499	0.1368		1.14	1.25	-8.7	50.0
d-N-MeFOSA-M	Ave	0.1069	0.0986		1.15	1.25	-7.8	50.0
d9-N-EtFOSE-M	Ave	0.1504	0.1384		1.15	1.25	-8.0	50.0
d-N-EtFOSA-M	Ave	0.0883	0.0816		1.16	1.25	-7.6	50.0
13C2 PFTeDA	Ave	0.9508	0.8914		1.17	1.25	-6.2	50.0
13C2 PFHxDA	Ave	0.6444	0.5886		1.14	1.25	-8.7	50.0
13C8 PFOA	AveID	0.999	1.014		1.27	1.25	1.4	50.0
13C8 PFOS	AveID	0.2220	0.2229		1.20	1.20	0.4	50.0

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\_006.d  
 Lims ID: CCVL  
 Client ID:  
 Sample Type: CCVL  
 Inject. Date: 13-Jan-2022 19:31:06 ALS Bottle#: 6 Worklist Smp#: 6  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022248-006 ccvl  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:52:52 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 09:02:38

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										
212.90 > 169.00	2.806	2.796	0.010	1.000	168916	0.0476		95.2	32.6	
D 1 13C4 PFBA										
217.00 > 172.00	2.806	2.796	0.010	0.678	5656398	1.19		94.9	15792	
D 3 13C5 PFPeA										
267.90 > 223.00	3.122	3.107	0.015	0.754	4344287	1.17		93.9	10769	
4 Perfluoropentanoic acid										
262.90 > 219.00	3.122	3.107	0.015	1.000	160177	0.0484		96.8	65.8	
D 6 13C3 PFBS										
301.90 > 80.00	3.130	3.123	0.007	0.756	2634486	1.07		91.8	12784	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	3.138	3.123	0.015	1.003	106117	0.0427	Target=2.65	96.6	773	
298.90 > 99.00	3.138	3.123	0.015	1.003	41485		2.56(1.32-3.97)		264	
D 8 M2-4:2 FTS										
329.00 > 81.00	3.421	3.413	0.008	0.826	879576	1.16		99.2	1943	
7 4:2 FTS										
327.00 > 307.00	3.421	3.413	0.008	1.000	82134	0.0484		104	1537	
10 Perfluorohexanoic acid										
313.00 > 269.00	3.451	3.443	0.008	1.000	165719	0.0489	Target=11.80	97.9	92.7	
313.00 > 119.00	3.451	3.443	0.008	1.000	12824		12.92(5.90-17.70)		23.8	
11 Perfluoropentanesulfonic acid										
349.00 > 80.00	3.451	3.443	0.008	1.103	109189	0.0496	Target=3.44	106	522	
349.00 > 99.00	3.451	3.443	0.008	1.103	29667		3.68(1.72-5.16)		491	
D 9 13C2 PFHxA										
315.00 > 270.00	3.451	3.443	0.008	0.833	4877305	1.23		98.6	12460	
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.555	3.548	0.007	0.859	2331863	1.23		98.1	4756	

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	3.555	3.548	0.007	1.000	129599	0.0514		103	113	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.787	3.779	0.008	1.000	108624	0.0466	Target=3.40	102	645	M
399.00 > 99.00	3.787	3.779	0.008	1.000	31977		3.40(1.70-5.10)		200	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.787	3.779	0.008	0.915	2000981	1.21		103	8314	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.796	3.789	0.007	1.000	202719	0.0502	Target=3.29	100	170	
363.00 > 169.00	3.796	3.789	0.007	1.000	62566		3.24(1.65-4.94)		192	
D 14 13C4 PFHpA										
367.00 > 322.00	3.796	3.789	0.007	0.917	4820155	1.27		102	7852	
68 DONA										
377.00 > 251.00	3.833	3.825	0.008	0.866	304192	0.0510	Target=1.82	108	1133	
377.00 > 85.00	3.833	3.825	0.008	0.866	169875		1.79(0.91-2.74)		121	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.123	4.115	0.008	0.931	103387	0.0477	Target=3.92	100	762	
449.00 > 99.00	4.123	4.115	0.008	0.931	27085		3.82(1.96-5.87)		196	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.132	4.123	0.009	0.998	843398	1.10		92.7	3409	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.132	4.123	0.009	1.000	5033179	1.27		101	8828	
19 6:2 FTS										
427.00 > 407.00	4.132	4.123	0.009	1.000	59615	0.0490		103	433	
D 21 13C4 PFOA										
417.00 > 372.00	4.132	4.131	0.001	0.998	4963895	1.27		101	10001	
* 22 13C2 PFOA										
415.00 > 370.00	4.141	4.131	0.010		5218551	1.25			8448	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.132	4.131	0.001	1.000	243298	0.0534	Target=2.59	107	217	
413.00 > 169.00	4.141	4.131	0.010	1.002	94703		2.57(1.30-3.89)		220	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.427	4.418	0.009	1.000	604655	1.20		100	2916	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.427	4.418	0.009	1.000	114245	0.0458	Target=4.65	98.7	486	M
499.00 > 99.00	4.427	4.418	0.009	1.000	26610		4.29(2.32-6.97)		222	M
D 25 13C4 PFOS										
503.00 > 80.00	4.427	4.418	0.009	1.069	2712437	1.14		95.7	3706	
D 27 13C5 PFNA										
468.00 > 423.00	4.452	4.444	0.008	1.075	6136961	1.19		95.3	10623	
26 Perfluorononanoic acid										
463.00 > 419.00	4.452	4.444	0.008	1.000	215242	0.0540	Target=4.65	108	351	
463.00 > 169.00	4.452	4.444	0.008	1.000	46693		4.61(2.32-6.97)		122	
63 9CIFOS										
531.00 > 351.00	4.588	4.580	0.008	1.036	237478	0.0512		110	1380	

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	4.707	4.697	0.010	1.063	111430	0.0504	Target=4.06	105	475	
549.00 > 99.00	4.707	4.697	0.010	1.063	26139		4.26(2.03-6.09)		281	
D 34 13C8 FOSA										
506.00 > 78.00	4.715	4.706	0.009	1.139	4191548	1.31		105	4278	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.715	4.706	0.009	1.000	153986	0.0485		97.1	524	
D 32 13C2 PFDA										
515.00 > 470.00	4.741	4.732	0.009	1.145	6054731	1.22		97.4	11678	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.741	4.732	0.009	1.000	239787	0.0513	Target=11.30	103	272	
513.00 > 169.00	4.741	4.732	0.009	1.000	20828		11.51(5.65-16.95)		79.7	
31 8:2 FTS										
527.00 > 507.00	4.749	4.740	0.009	1.000	50639	0.0454		94.7	348	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.740	0.009	1.147	944734	1.09		91.3	1645	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.879	4.878	0.001	1.178	914037	1.56		125	3161	
36 NMeFOSAA										
570.00 > 419.00	4.887	4.878	0.009	1.002	34653	0.0488		97.7	82.6	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.966	4.966	0.0	1.122	102151	0.0512	Target=3.79	106	434	
599.00 > 99.00	4.966	4.966	0.0	1.122	23191		4.40(1.90-5.69)		215	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.002	4.992	0.010	1.000	254517	0.0534	Target=8.45	107	448	
563.00 > 169.00	5.002	4.992	0.010	1.000	29067		8.76(4.22-12.67)		235	
D 39 13C2 PFUnA										
565.00 > 520.00	5.002	4.992	0.010	1.208	6146454	1.24		99.1	13517	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.022	5.012	0.010	1.213	1001238	1.56		125	4903	
40 NEtFOSA										
584.00 > 419.00	5.022	5.012	0.010	1.000	37650	0.0476		95.3	194	M
57 11C1FOS										
631.00 > 451.00	5.102	5.092	0.010	1.152	168453	0.0444		94.2	735	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.240	5.231	0.009	1.000	246620	0.0469	Target=6.99	93.9	289	
613.00 > 169.00	5.231	5.231	0.0	0.998	33716		7.31(3.50-10.49)		120	
D 43 13C2 PFDoA										
615.00 > 570.00	5.240	5.231	0.009	1.266	6344632	1.22		97.5	15396	
50 10:2 FTS										
627.00 > 607.00	5.257	5.248	0.009	1.107	95341	0.0531		110	881	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.284	5.283	0.001	1.276	514428	1.15		92.2	52.0	
61 NMeFOSA										
512.00 > 169.00	5.293	5.283	0.010	1.002	24164	0.0564		113	143	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.284	5.283	0.001	1.276	713993	1.14		91.3	619	



Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
49 N-MeFOSE-M										
616.00 > 59.00	5.293	5.292	0.001	1.002	35033	0.0563		113	54.3	
54 PFDoS										
699.00 > 80.00	5.414	5.404	0.010	1.223	92731	0.0446	Target=4.24	92.1	479	
699.00 > 99.00	5.414	5.404	0.010	1.223	22952		4.04(2.12-6.35)		142	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.445	5.434	0.011	1.315	722055	1.15		92.0	418	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.445	5.434	0.011	1.039	202815	0.0482	Target=6.20	96.4	288	
663.00 > 169.00	5.445	5.434	0.011	1.039	33021		6.14(3.10-9.30)		163	
62 N-EtFOSE-M										
630.00 > 59.00	5.455	5.454	0.001	1.002	35706	0.0465		93.1	34.9	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.455	5.454	0.001	1.317	425805	1.16		92.4	673	
56 N-EtFOSA-M										
526.00 > 169.00	5.465	5.454	0.011	1.002	19906	0.0489		97.8	158	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.629	5.617	0.012	1.360	4651953	1.17		93.8	10591	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.629	5.617	0.012	1.000	25388	0.0508	Target=1.05	102	139	
713.00 > 219.00	5.619	5.617	0.002	0.998	24438		1.04(0.53-1.58)		158	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.931	5.929	0.002	1.000	164943	0.0529	Target=8.09	106	429	
813.00 > 169.00	5.931	5.929	0.002	1.000	18859		8.75(4.05-12.14)		45.7	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.931	5.929	0.002	1.432	3071480	1.14		91.3	5814	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.195	6.189	0.006	1.044	117677	0.0487	Target=11.53	97.3	382	
913.00 > 169.00	6.195	6.189	0.006	1.044	9890		11.90(5.77-17.30)		64.3	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

63L2PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\\_006.d

Injection Date: 13-Jan-2022 19:31:06

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

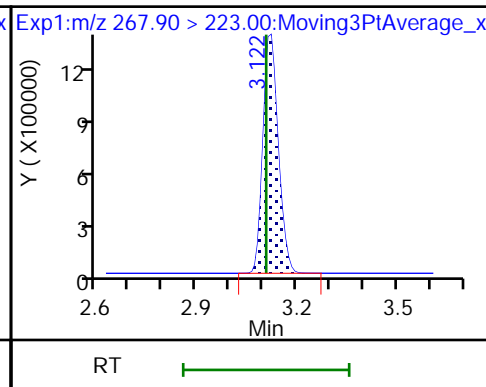
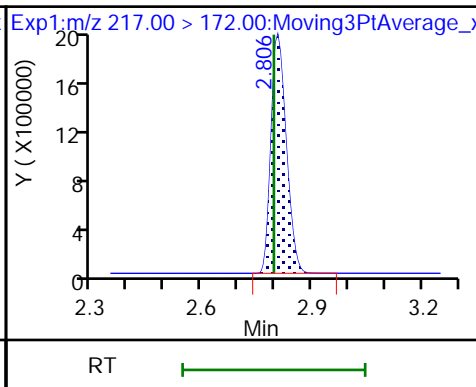
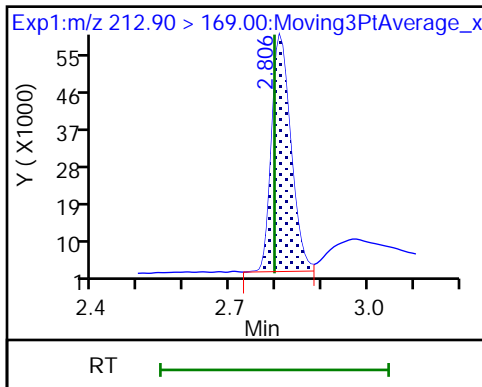
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

2 Perfluorobutanoic acid

D 1 13C4 PFBA

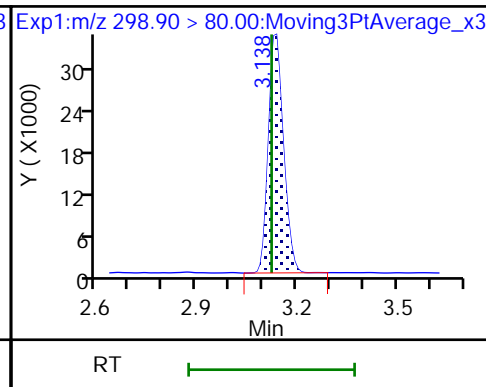
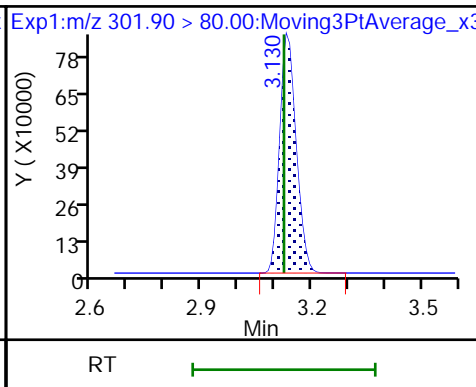
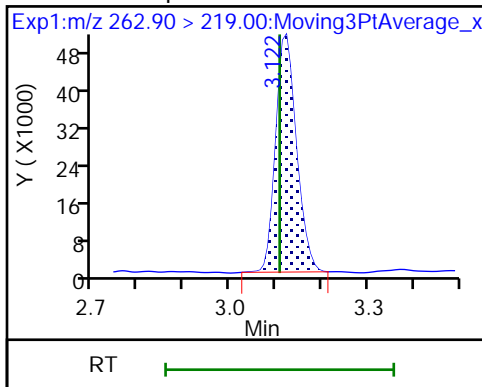
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

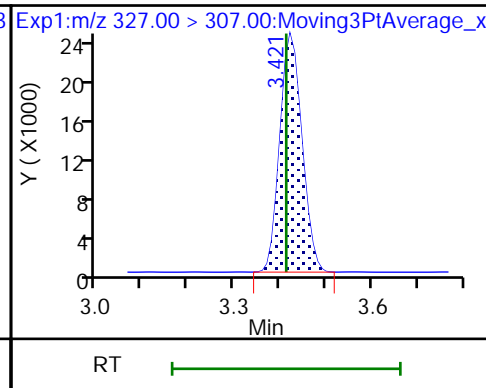
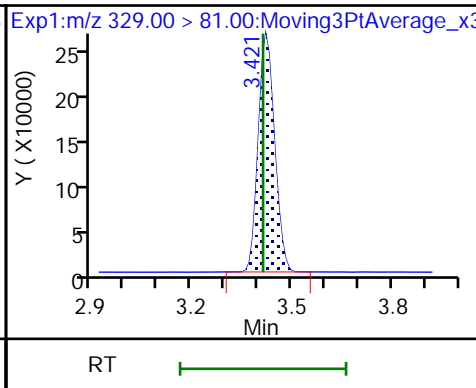
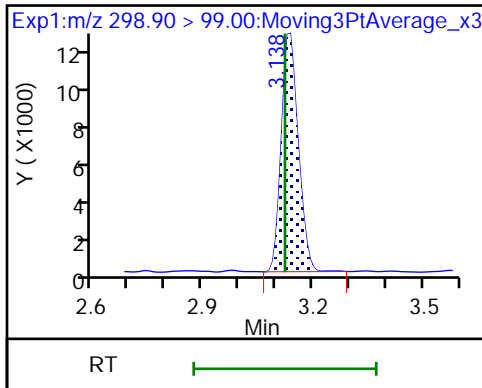
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

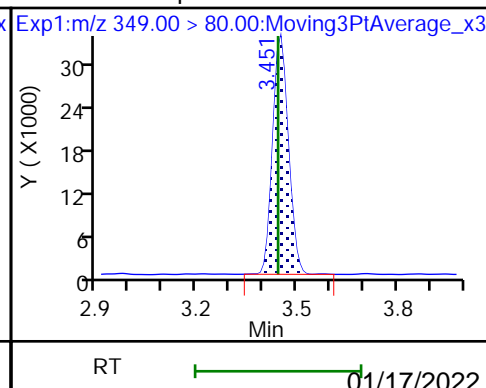
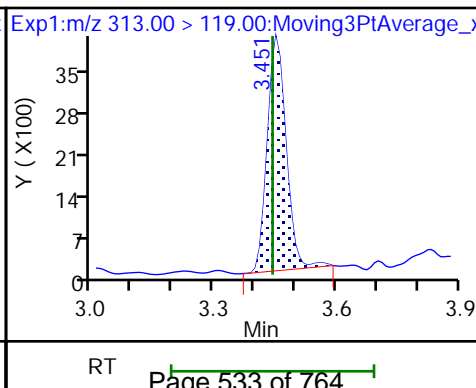
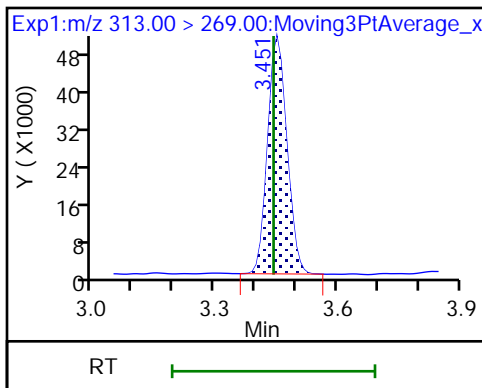
7 4:2 FTS

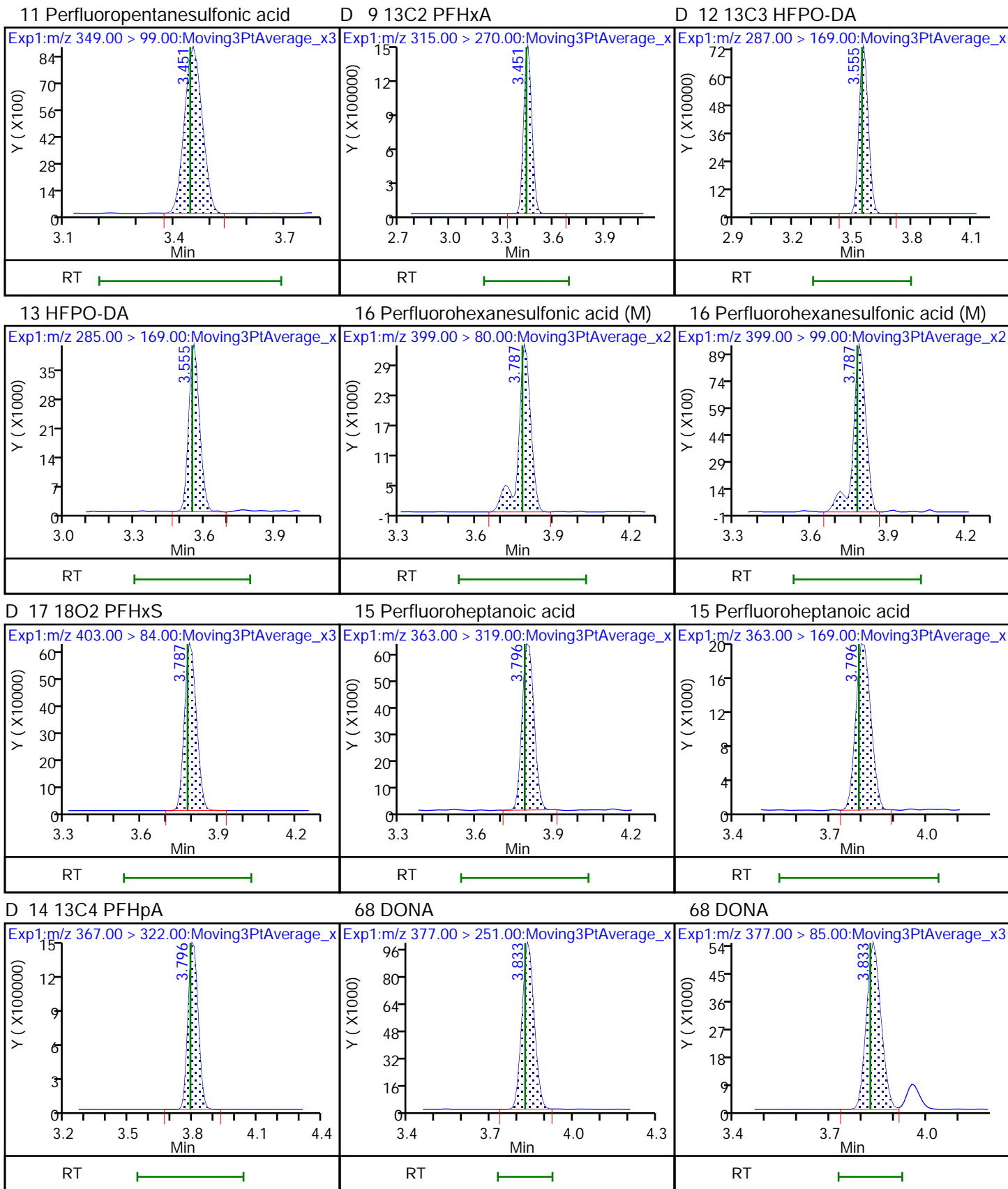


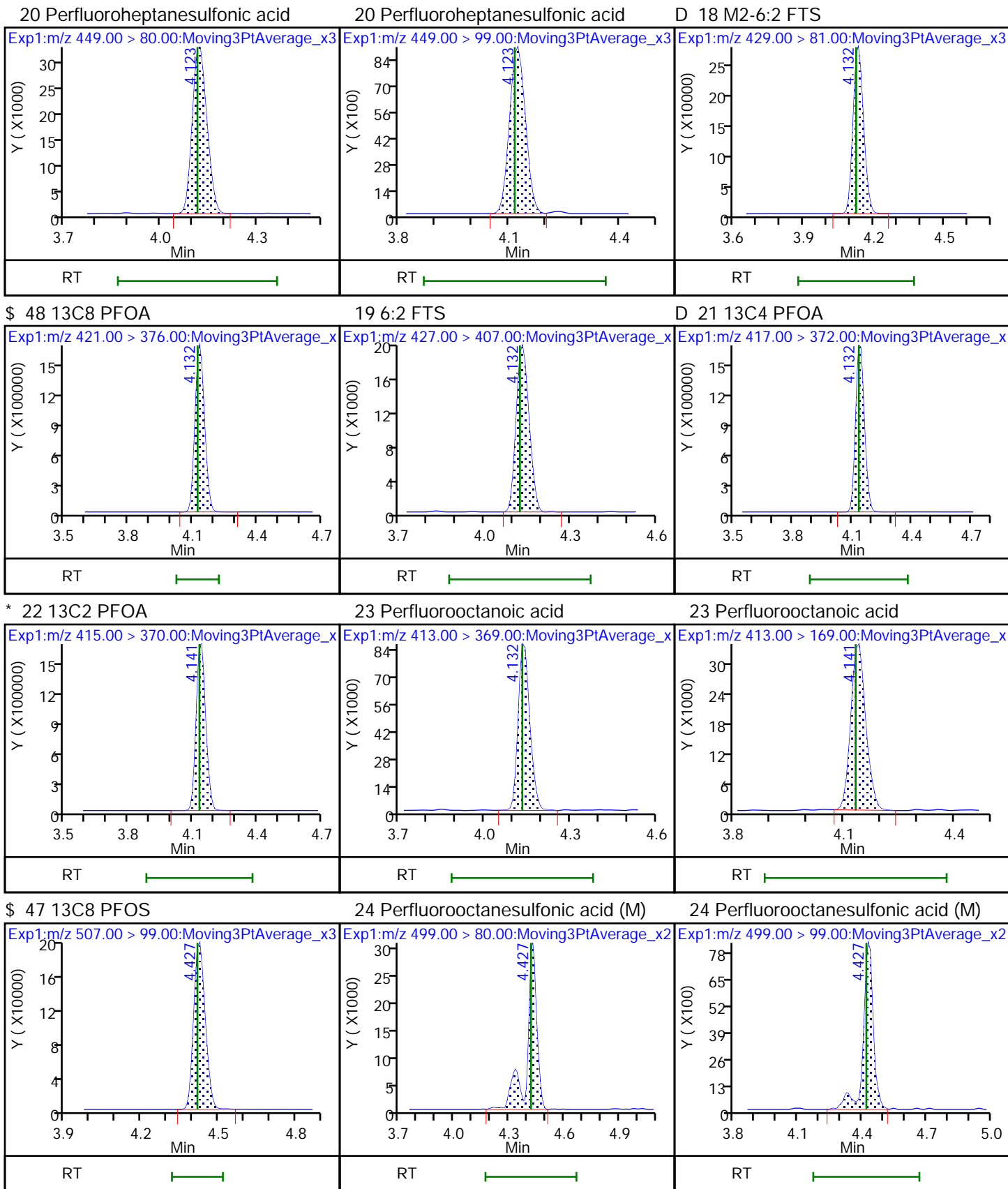
10 Perfluorohexanoic acid

10 Perfluorohexanoic acid

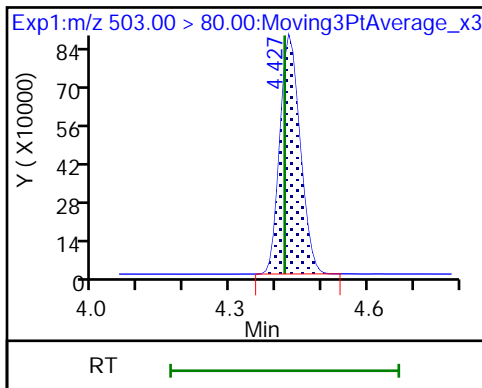
11 Perfluoropentanesulfonic acid



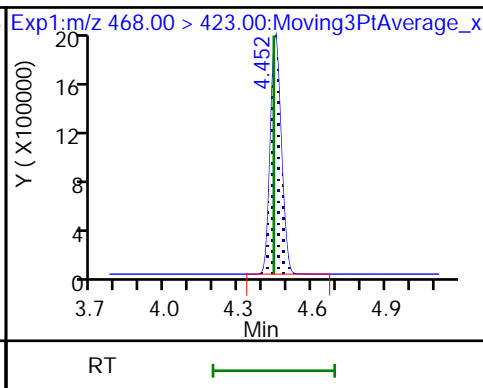




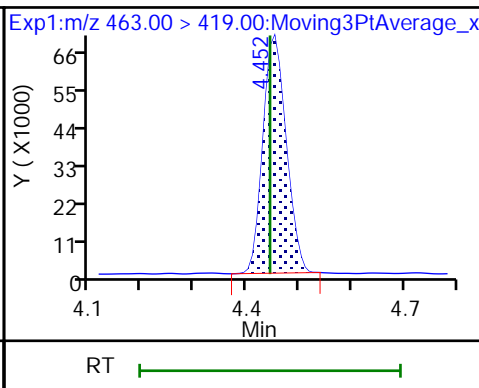
D 25 13C4 PFOS



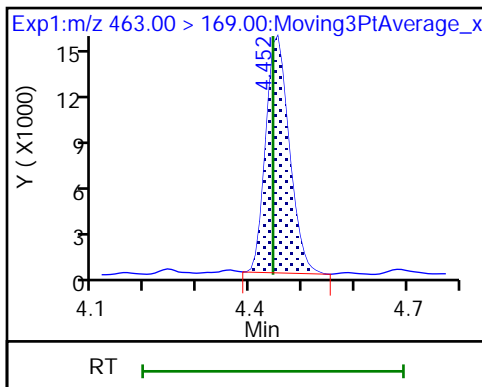
D 27 13C5 PFNA



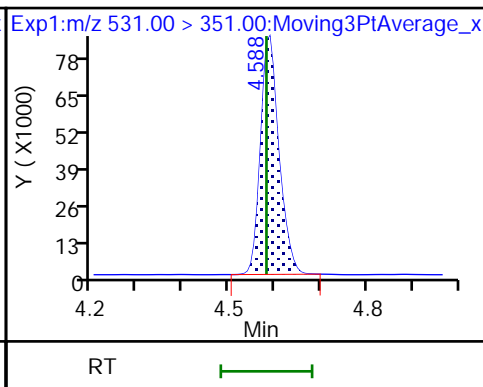
26 Perfluorononanoic acid



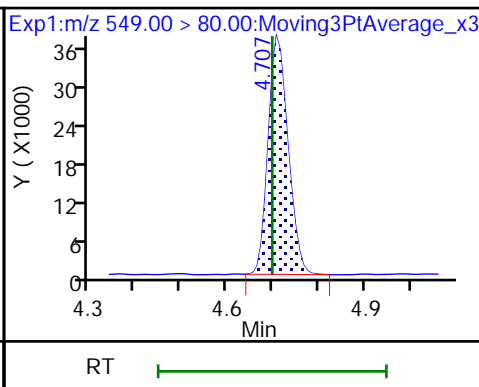
26 Perfluorononanoic acid



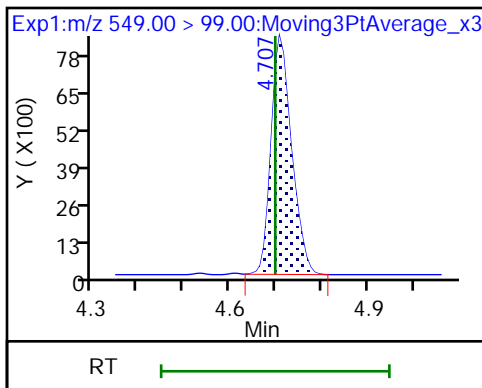
63 9CIFOS



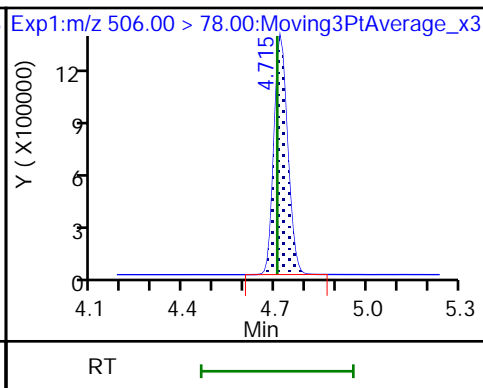
28 Perfluorononanesulfonic acid



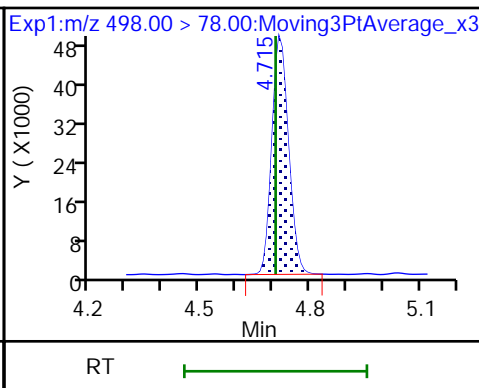
28 Perfluorononanesulfonic acid



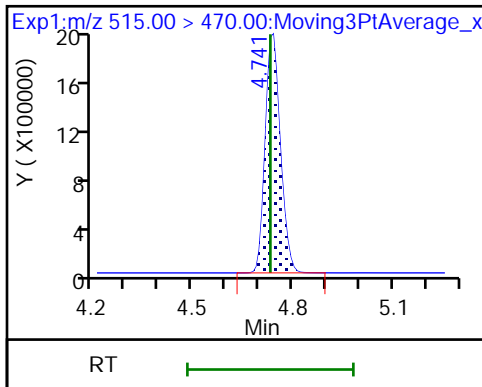
D 34 13C8 FOSA



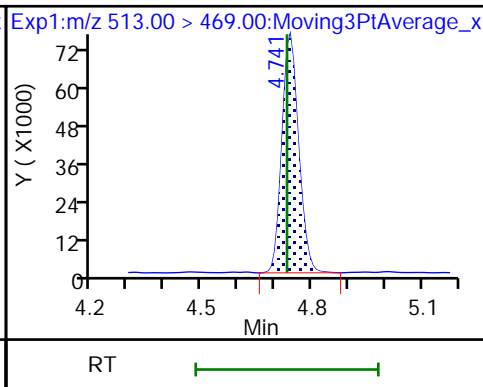
33 Perfluorooctanesulfonamide



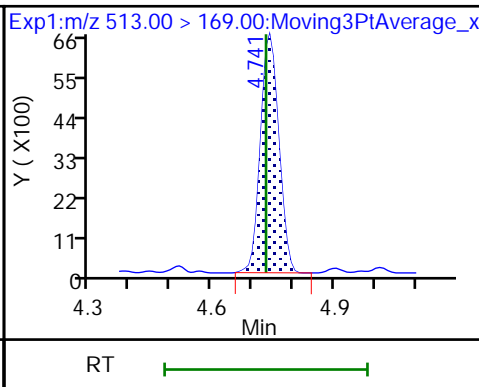
D 32 13C2 PFDA

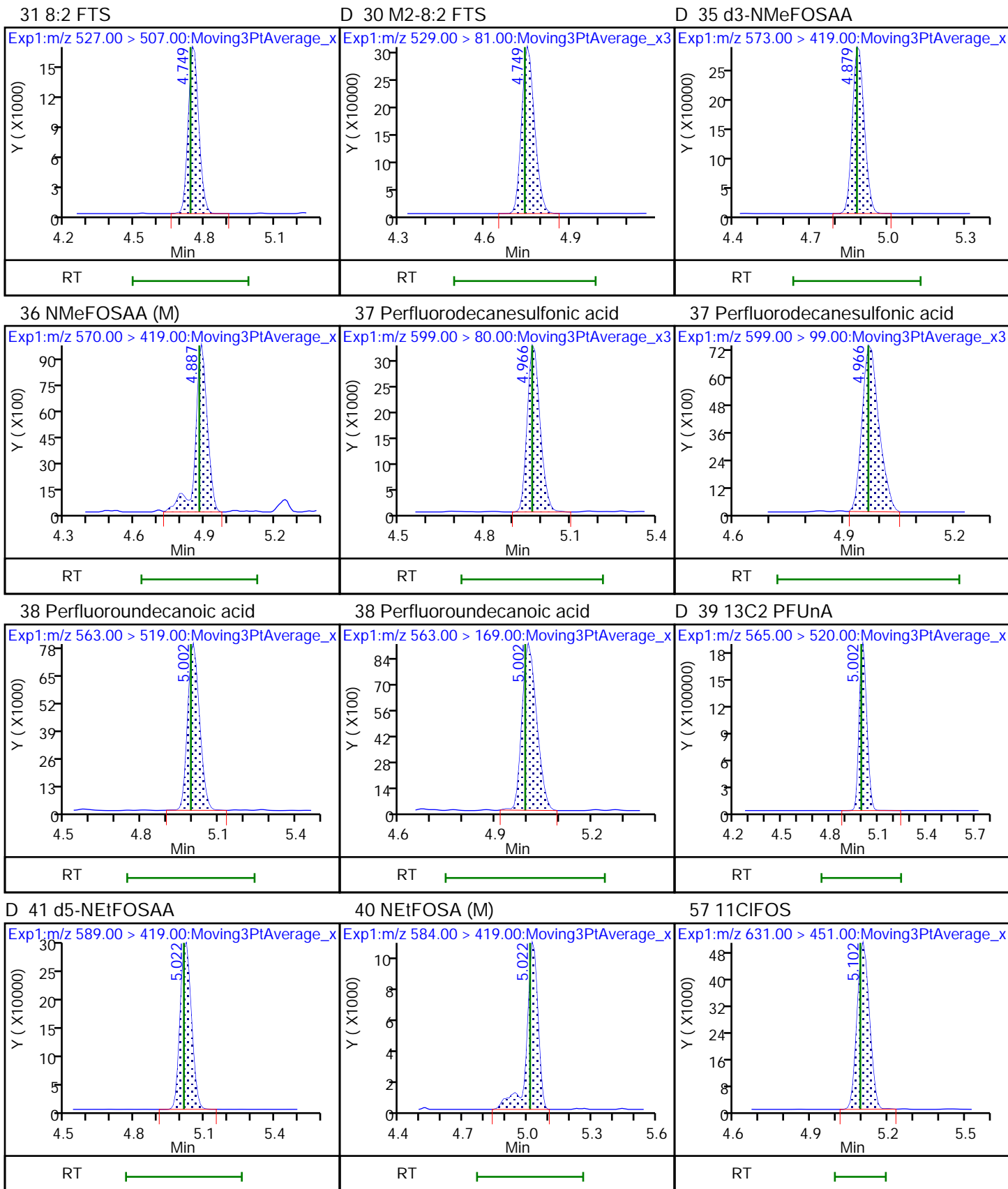


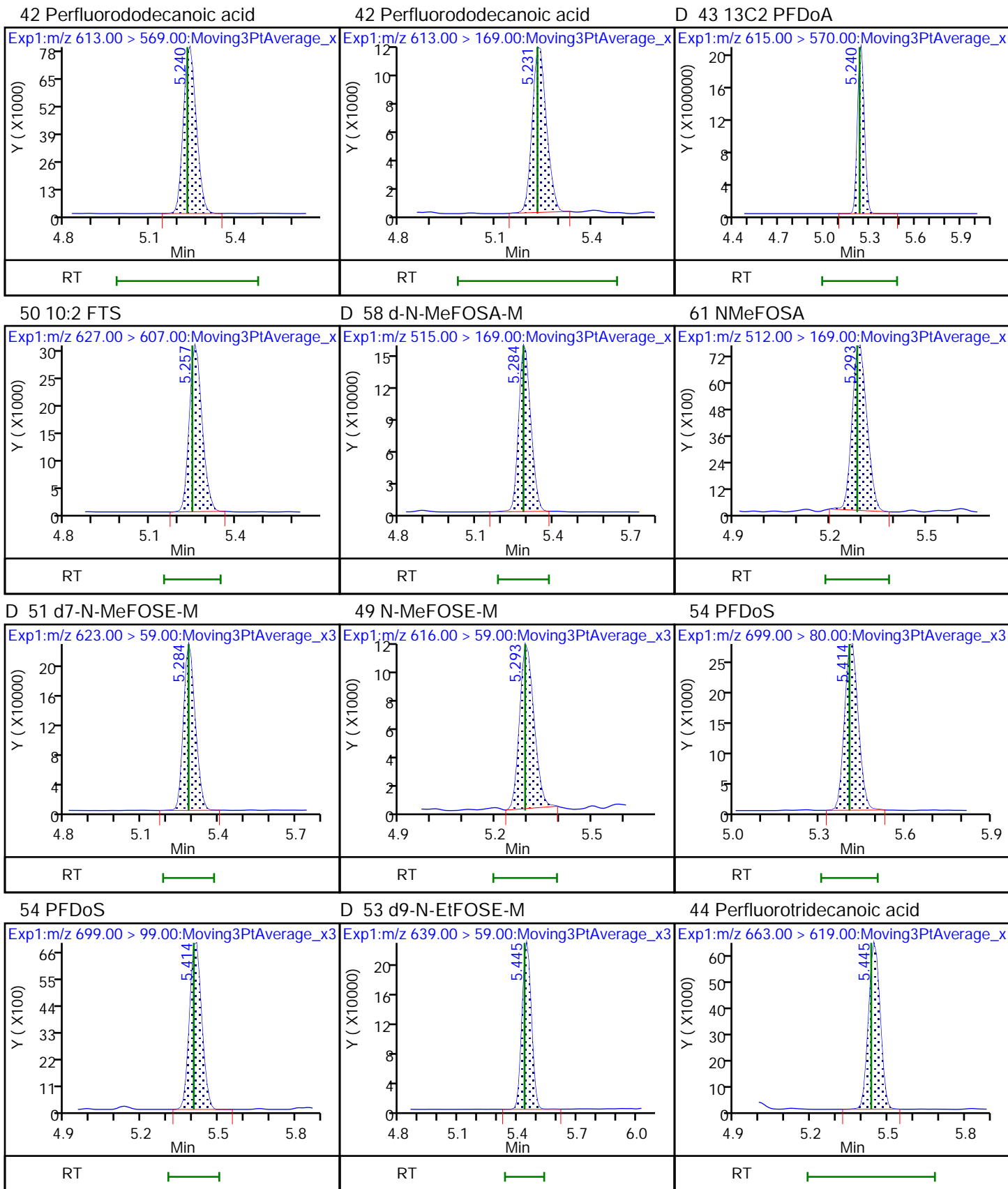
29 Perfluorodecanoic acid

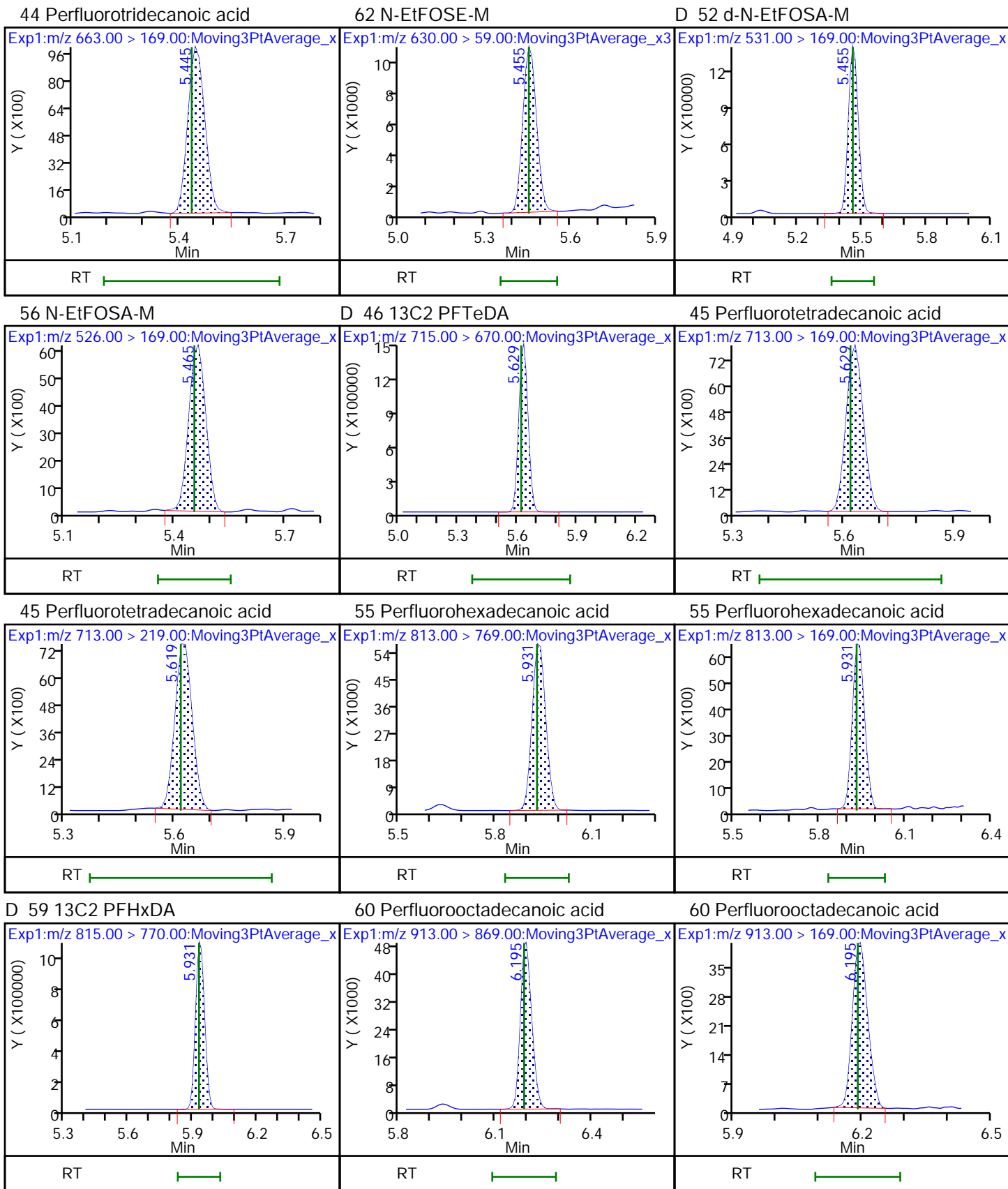


29 Perfluorodecanoic acid













Eurofins TestAmerica, Knoxville

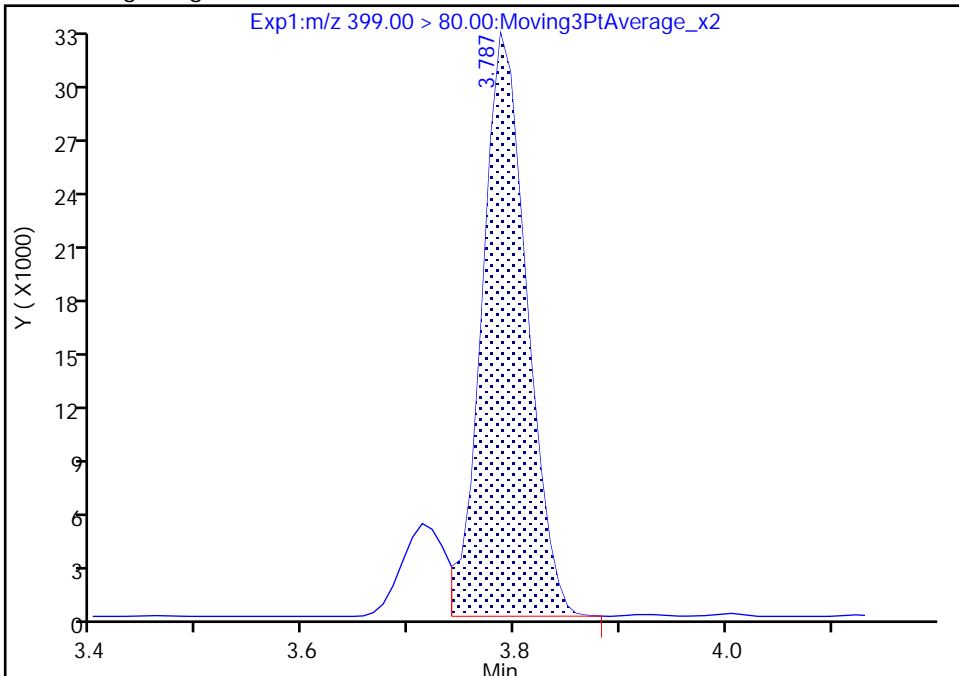
Data File: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\\_006.d  
Injection Date: 13-Jan-2022 19:31:06 Instrument ID: LCA  
Lims ID: CCVL  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

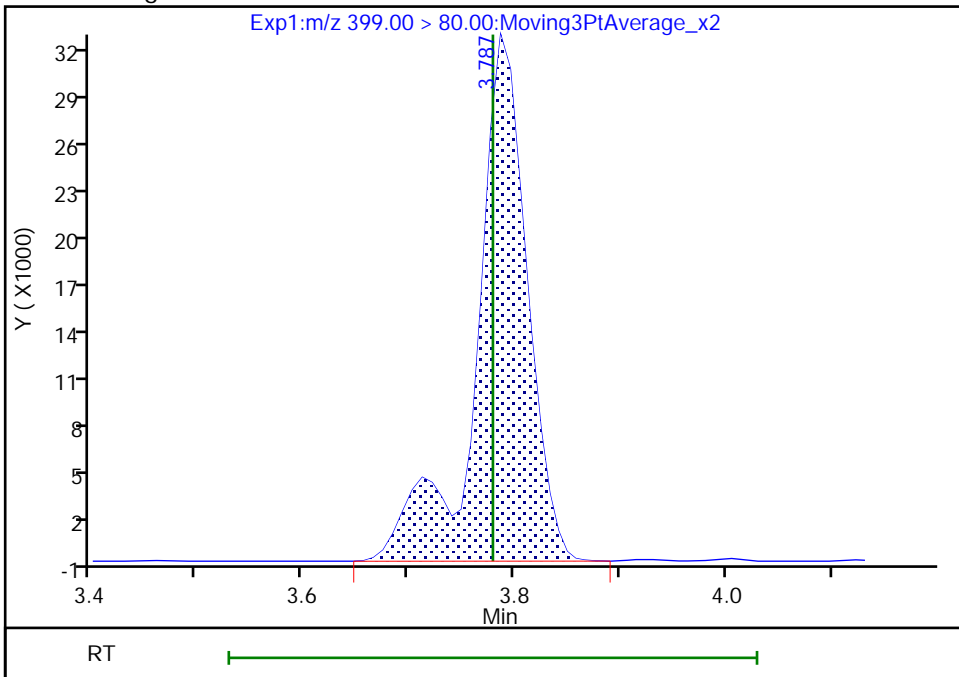
RT: 3.79  
Area: 94512  
Amount: 0.040555  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 108624  
Amount: 0.046611  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:01:28  
Audit Action: Manually Integrated

Eurofins TestAmerica, Knoxville

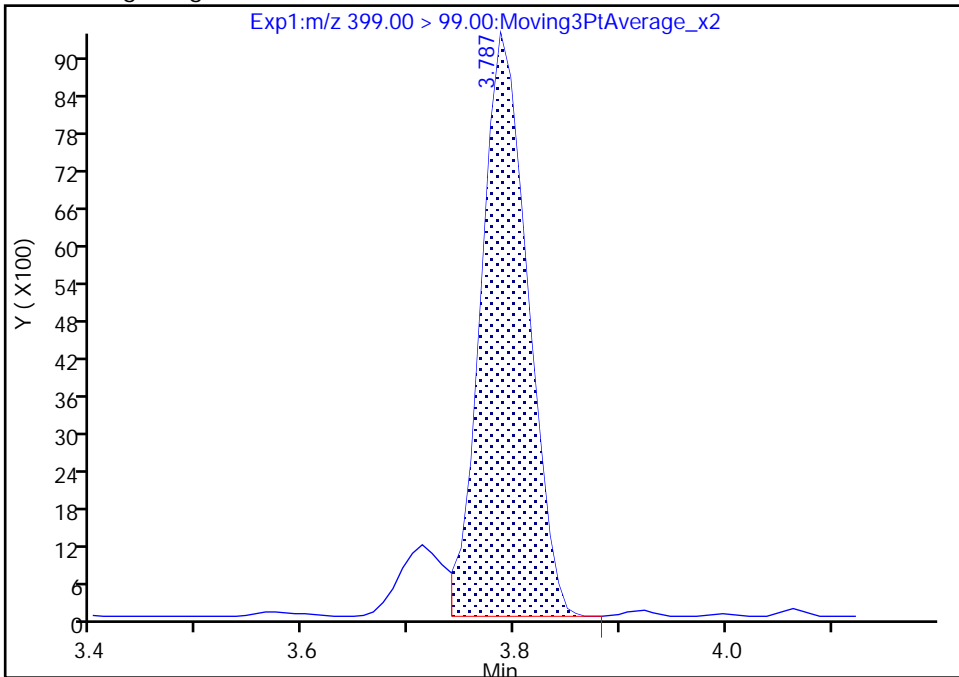
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Injection Date: 13-Jan-2022 19:31:06 Instrument ID: LCA  
Lims ID: CCVL  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

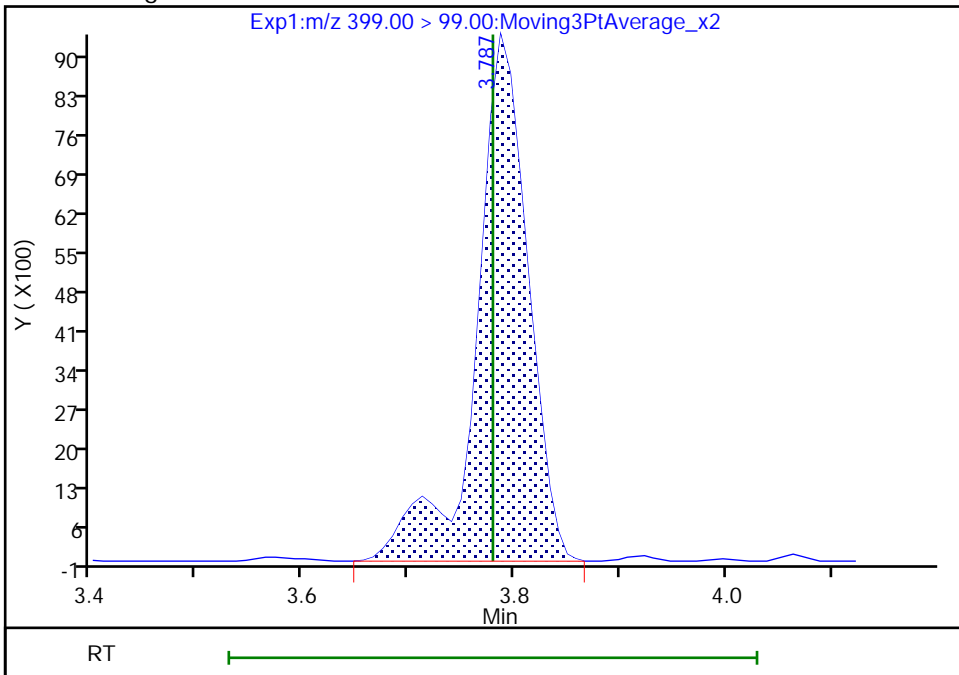
RT: 3.79  
Area: 28691  
Amount: 0.040555  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 31977  
Amount: 0.046611  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:01:34

Audit Action: Manually Integrated

Audit Reason: Baseline  
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Eurofins TestAmerica, Knoxville

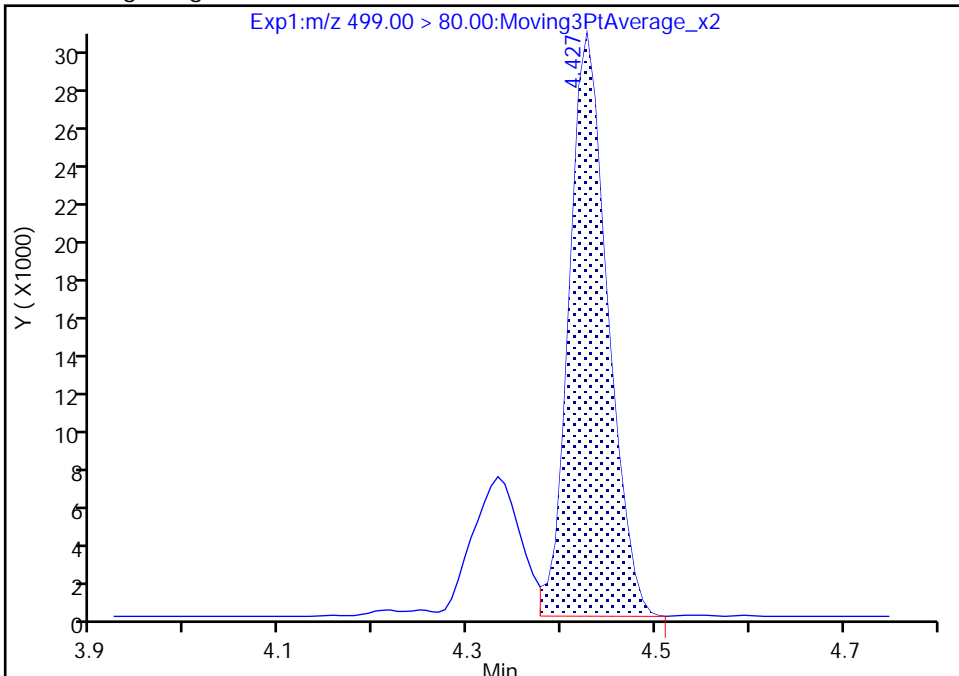
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Injection Date: 13-Jan-2022 19:31:06 Instrument ID: LCA  
Lims ID: CCVL  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

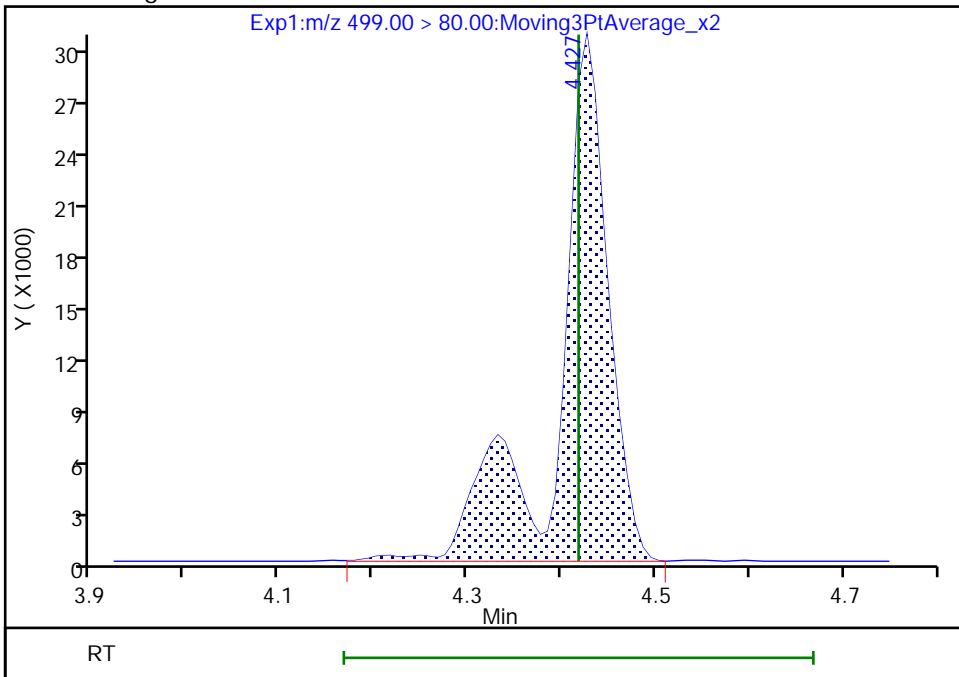
RT: 4.43  
Area: 86966  
Amount: 0.034869  
Amount Units: ng/ml

Processing Integration Results



RT: 4.43  
Area: 114245  
Amount: 0.045807  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:01:55  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

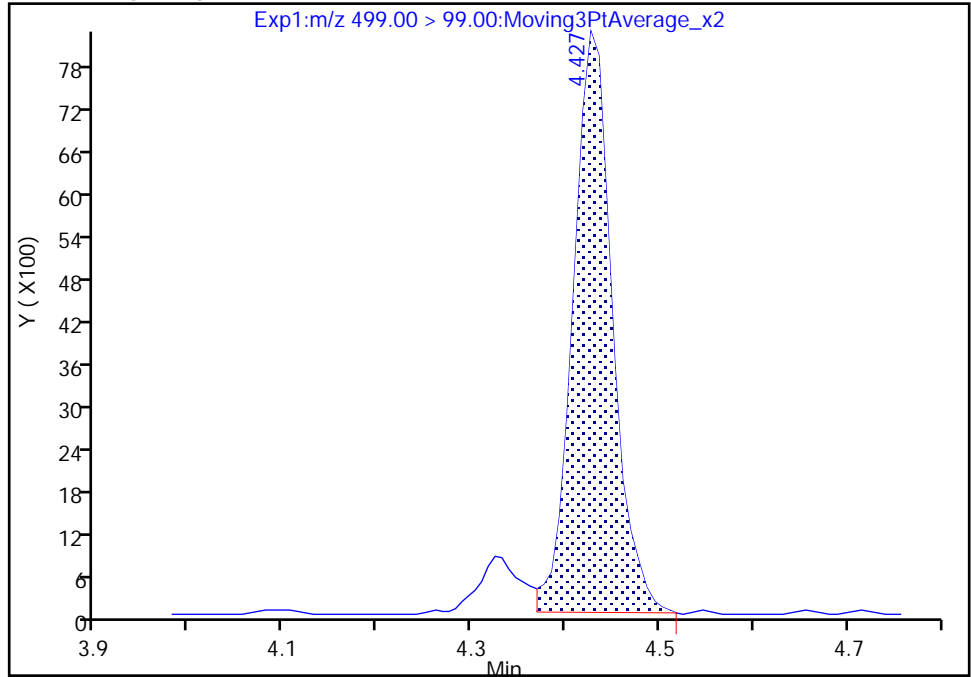
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Injection Date: 13-Jan-2022 19:31:06 Instrument ID: LCA  
Lims ID: CCVL  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

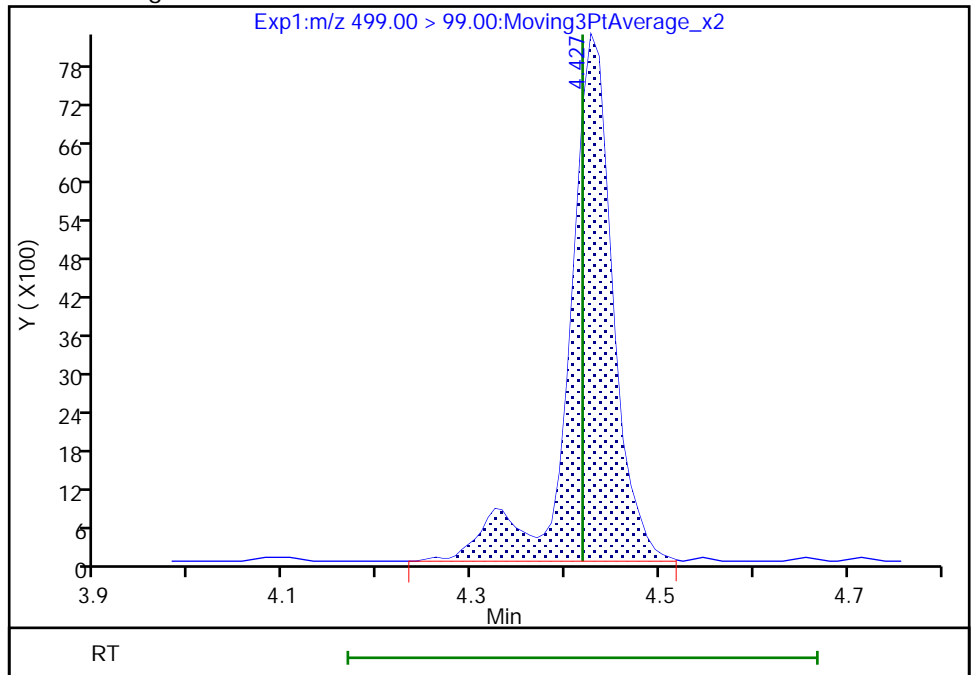
RT: 4.43  
Area: 23763  
Amount: 0.034869  
Amount Units: ng/ml

Processing Integration Results



RT: 4.43  
Area: 26610  
Amount: 0.045807  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:02:00

Audit Action: Manually Integrated

Audit Reason: Baseline  
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Eurofins TestAmerica, Knoxville

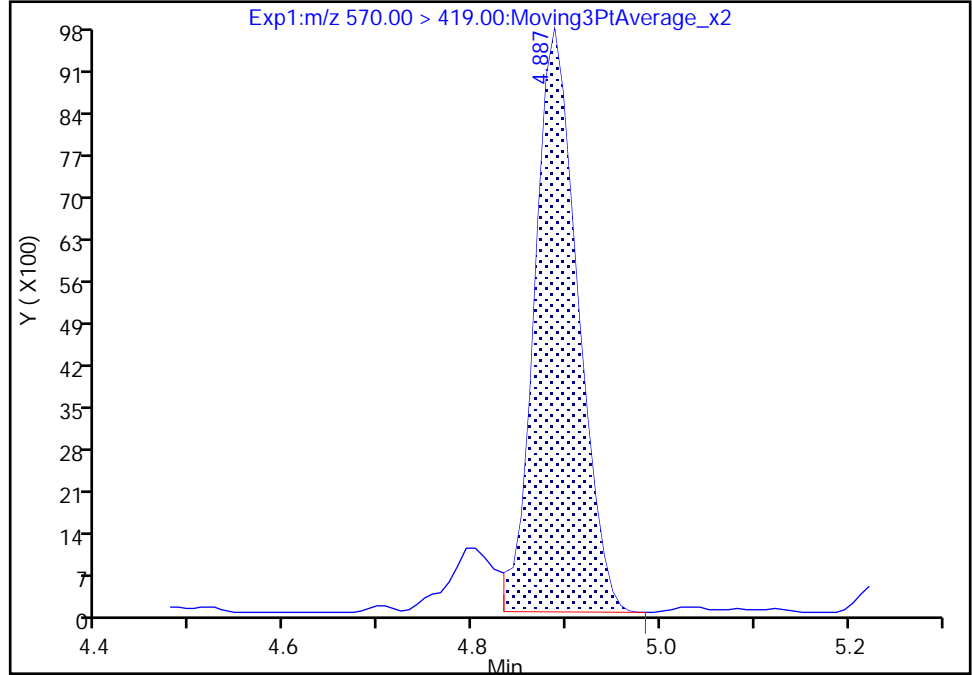
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Injection Date: 13-Jan-2022 19:31:06 Instrument ID: LCA  
Lims ID: CCVL  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

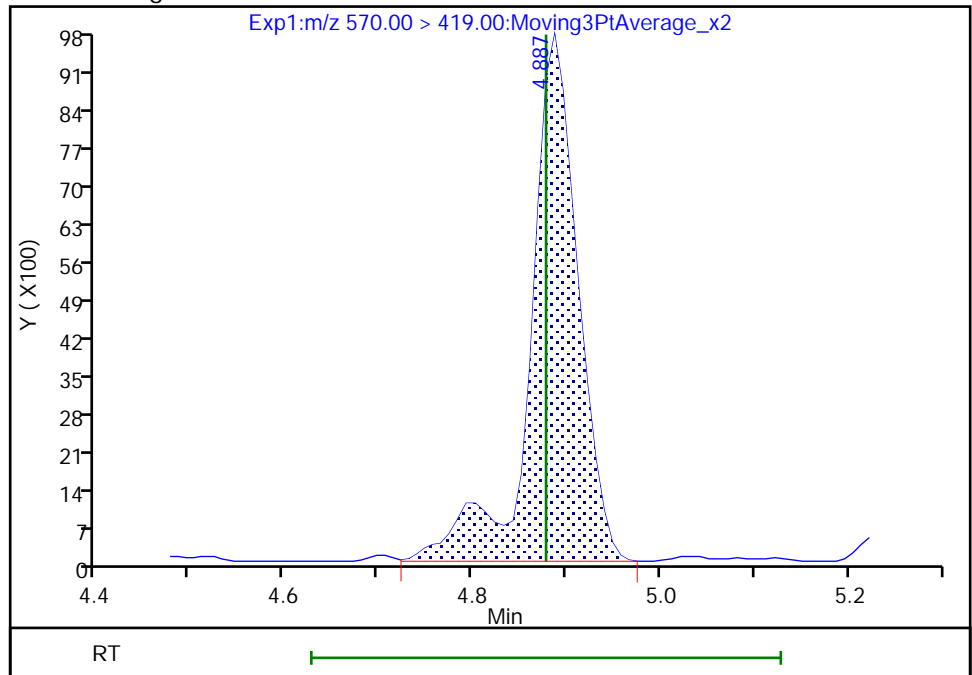
RT: 4.89  
Area: 30917  
Amount: 0.043569  
Amount Units: ng/ml

Processing Integration Results



RT: 4.89  
Area: 34653  
Amount: 0.048834  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:02:14  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

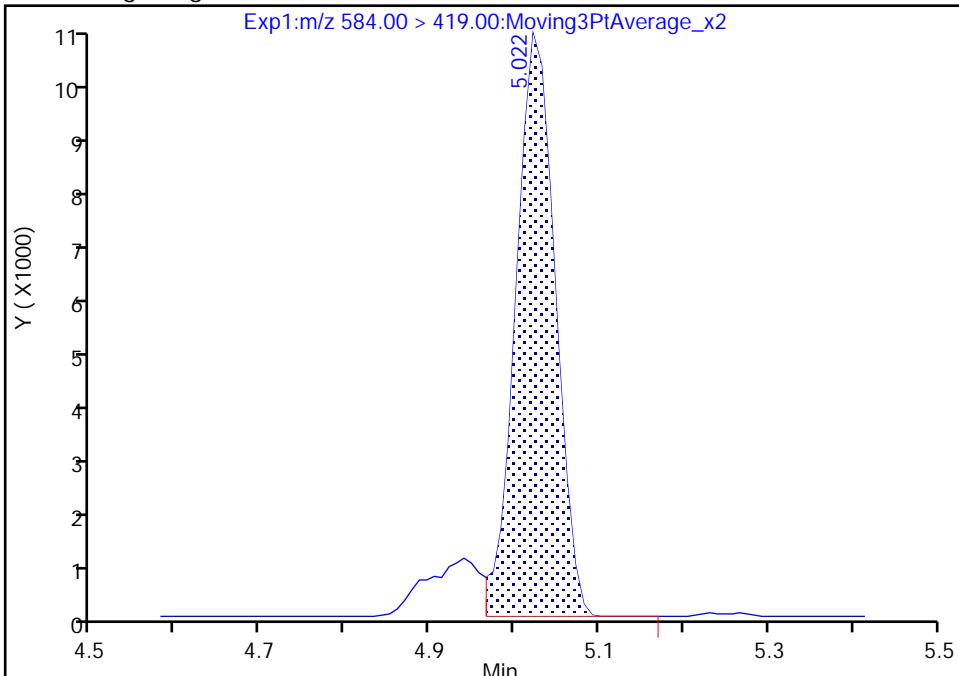
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Injection Date: 13-Jan-2022 19:31:06 Instrument ID: LCA  
Lims ID: CCVL  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NEtFOSA, CAS: 2991-50-6

Signal: 1

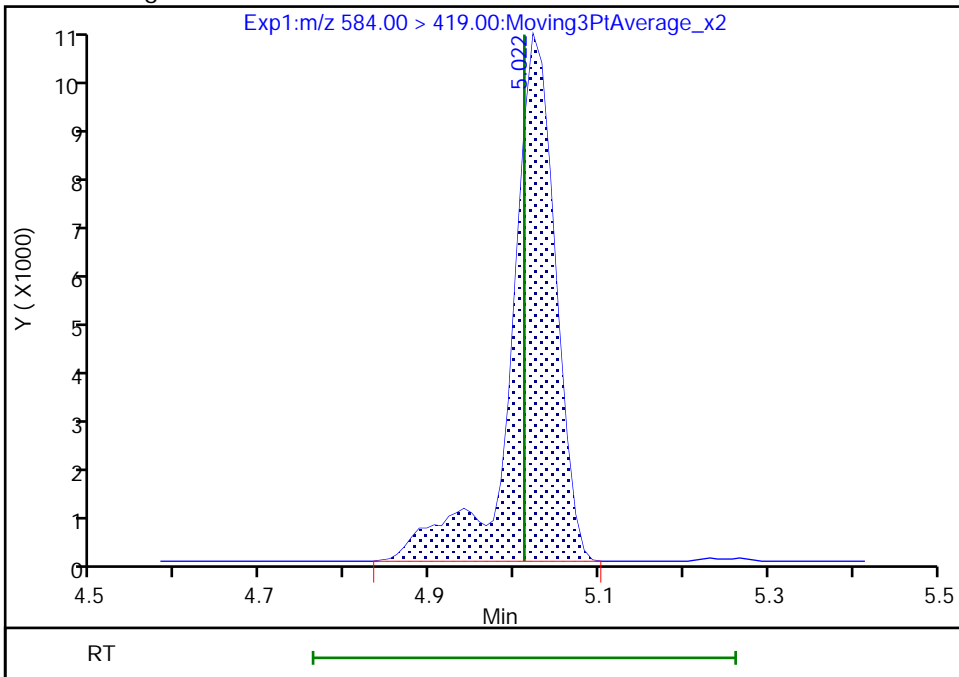
RT: 5.02  
Area: 33159  
Amount: 0.041966  
Amount Units: ng/ml

Processing Integration Results



RT: 5.02  
Area: 37650  
Amount: 0.047629  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:02:29  
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 140-57893/7 Calibration Date: 01/13/2022 19:39  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 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	0.7844	0.7327		0.934	1.00	-6.6	40.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9519	0.9213		0.968	1.00	-3.2	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.097	1.081		0.871	0.884	-1.5	40.0
4:2 FTS	AveID	2.252	2.209		0.916	0.934	-1.9	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8680	0.8130		0.937	1.00	-6.3	40.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	0.9713	0.998		0.963	0.938	2.7	40.0
HFPO-DA	AveID	1.352	1.389		1.03	1.00	2.7	40.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.377	1.328		0.877	0.910	-3.6	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.047	0.998		0.954	1.00	-4.6	40.0
DONA	AveID	2.630	2.674		0.958	0.942	1.7	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9541	0.9313		0.929	0.952	-2.4	40.0
6:2 FTS	L2ID		1.796		0.949	0.948	0.0	40.0
Perfluorooctanoic acid (PFOA)	AveID	1.147	1.117		0.973	1.00	-2.7	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.099	1.024		0.865	0.928	-6.8	40.0
Perfluorononanoic acid (PFNA)	Q2ID		0.8460		0.994	1.00	-0.6	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	Q2ID		2.078		0.904	0.932	-3.0	50.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9748	0.9147		0.901	0.960	-6.2	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9459	0.8734		0.923	1.00	-7.7	40.0
Perfluorodecanoic acid (PFDA)	AveID	0.9645	0.9656		1.00	1.00	0.1	40.0
8:2 FTS	AveID	1.415	1.476		0.999	0.958	4.3	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	QuaIF		0.9157		0.942	1.00	-5.8	40.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		0.8639		0.897	0.964	-6.9	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9695	1.010		1.04	1.00	4.1	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Q2ID		0.9808		0.987	1.00	-1.3	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.672	1.573		0.886	0.942	-6.0	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9556		0.936	1.00	-6.4	40.0
10:2 FTS	AveID	2.276	2.218		0.940	0.964	-2.5	40.0
NMeFOSA	Q2ID		1.042		1.03	1.00	2.9	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	Q2ID		1.163		0.993	1.00	-0.7	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9166	0.8508		0.899	0.968	-7.2	40.0



FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 140-57893/7 Calibration Date: 01/13/2022 19:39  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 Lab File ID: \_007.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTriA)	AveID	0.8292	0.8232		0.993	1.00	-0.7	40.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	AveID	1.328	1.242		0.935	1.00	-6.5	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.195	1.223		1.02	1.00	2.3	40.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1344	0.1230		0.915	1.00	-8.5	40.0
Perfluorohexadecanoic acid	Q2ID		1.047		0.976	1.00	-2.4	40.0
Perfluorooctadecanoic acid	AveID	0.9844	0.9533		0.969	1.00	-3.2	40.0
13C4 PFBA	Ave	1.142	1.141		1.25	1.25	-0.0	50.0
13C5 PFPeA	Ave	0.8865	0.8696		1.23	1.25	-1.9	50.0
13C3 PFBS	Ave	0.5913	0.5660		1.11	1.16	-4.3	50.0
M2-4:2 FTS	Ave	0.1820	0.1897		1.22	1.17	4.2	50.0
13C2 PFHxA	Ave	0.9479	0.9094		1.20	1.25	-4.1	50.0
13C3 HFPO-DA	Ave	0.4556	0.4485		1.23	1.25	-1.6	50.0
18O2 PFHxS	Ave	0.3946	0.4038		1.21	1.18	2.3	50.0
13C4 PFHpA	Ave	0.9067	0.9417		1.30	1.25	3.9	50.0
M2-6:2 FTS	Ave	0.1835	0.1795		1.16	1.19	-2.2	50.0
13C4 PFOA	Ave	0.9376	0.9458		1.26	1.25	0.9	50.0
13C4 PFOS	Ave	0.5681	0.5902		1.24	1.20	3.9	50.0
13C5 PFNA	Ave	1.234	1.250		1.27	1.25	1.3	50.0
13C8 FOSA	Ave	0.7682	0.8435		1.37	1.25	9.8	50.0
13C2 PFDA	Ave	1.191	1.183		1.24	1.25	-0.7	50.0
M2-8:2 FTS	Ave	0.2070	0.1886		1.09	1.20	-8.9	50.0
d3-NMeFOSAA	Ave	0.1401	0.1840		1.64	1.25	31.3	50.0
13C2 PFUnA	Ave	1.189	1.182		1.24	1.25	-0.6	50.0
d5-NEtFOSAA	Ave	0.1537	0.1952		1.59	1.25	26.9	50.0
13C2 PFDoA	Ave	1.247	1.234		1.24	1.25	-1.1	50.0
d7-N-MeFOSE-M	Ave	0.1499	0.1377		1.15	1.25	-8.1	50.0
d-N-MeFOSA-M	Ave	0.1069	0.1016		1.19	1.25	-5.0	50.0
d9-N-EtFOSE-M	Ave	0.1504	0.1469		1.22	1.25	-2.3	50.0
d-N-EtFOSA-M	Ave	0.0883	0.0832		1.18	1.25	-5.7	50.0
13C2 PFTeDA	Ave	0.9508	0.9546		1.26	1.25	0.4	50.0
13C2 PFHxDA	Ave	0.6444	0.6085		1.18	1.25	-5.6	50.0
13C8 PFOA	AveID	0.999	1.055		1.32	1.25	5.6	50.0
13C8 PFOS	AveID	0.2220	0.2268		1.22	1.20	2.1	50.0

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\_007.d  
 Lims ID: CCVIS  
 Client ID:  
 Sample Type: CCVIS  
 Inject. Date: 13-Jan-2022 19:39:54 ALS Bottle#: 7 Worklist Smp#: 7  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022248-007 ccvis  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:52:54 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 09:06:25

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										
212.90 > 169.00	2.796	2.796	0.0	1.000	3412324	0.9341		93.4	636	
D 1 13C4 PFBA										
217.00 > 172.00	2.796	2.796	0.0	0.677	5821341	1.25		100.0	14677	
D 3 13C5 PFPeA										
267.90 > 223.00	3.107	3.107	0.0	0.752	4435223	1.23		98.1	10436	
4 Perfluoropentanoic acid										
262.90 > 219.00	3.107	3.107	0.0	1.000	3268814	0.9678		96.8	1246	
D 6 13C3 PFBS										
301.90 > 80.00	3.123	3.123	0.0	0.756	2684796	1.11		95.7	12473	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	3.123	3.123	0.0	1.000	2206076	0.8707	Target=2.65	98.5	4559	
298.90 > 99.00	3.123	3.123	0.0	1.000	831903		2.65(1.32-3.97)		3112	
D 8 M2-4:2 FTS										
329.00 > 81.00	3.413	3.413	0.0	0.826	903578	1.22		104	1694	
7 4:2 FTS										
327.00 > 307.00	3.413	3.413	0.0	1.000	1597115	0.9163		98.1	7412	
10 Perfluorohexanoic acid										
313.00 > 269.00	3.443	3.443	0.0	1.000	3016672	0.9366	Target=11.80	93.7	1604	
313.00 > 119.00	3.443	3.443	0.0	1.000	242294		12.45(5.90-17.70)		361	
11 Perfluoropentanesulfonic acid										
349.00 > 80.00	3.443	3.443	0.0	1.102	2161151	0.9634	Target=3.44	103	5553	
349.00 > 99.00	3.443	3.443	0.0	1.102	632544		3.42(1.72-5.16)		6592	
D 9 13C2 PFHxA										
315.00 > 270.00	3.443	3.443	0.0	0.833	4638224	1.20		95.9	7662	
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.548	3.548	0.0	0.859	2287690	1.23		98.4	5305	

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	3.548	0.0	1.000	2542168	1.03		103	2009	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.779	3.779	0.0	1.000	1991243	0.8774	Target=3.40	96.4	6834	M
399.00 > 99.00	3.779	3.779	0.0	1.000	567375		3.51(1.70-5.10)		2786	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.779	3.779	0.0	0.915	1948581	1.21		102	8570	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.789	3.789	0.0	1.000	3836503	0.9538	Target=3.29	95.4	2318	
363.00 > 169.00	3.789	3.789	0.0	1.000	1212015		3.17(1.65-4.94)		2168	
D 14 13C4 PFHpA										
367.00 > 322.00	3.789	3.789	0.0	0.917	4803402	1.30		104	8185	
68 DONA										
377.00 > 251.00	3.825	3.825	0.0	0.866	6067680	0.9579	Target=1.82	102	8548	
377.00 > 85.00	3.825	3.825	0.0	0.866	3452393		1.76(0.91-2.74)		156	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.115	4.115	0.0	0.931	2135304	0.9293	Target=3.92	97.6	6457	
449.00 > 99.00	4.115	4.115	0.0	0.931	532204		4.01(1.96-5.87)		4451	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.123	4.123	0.0	0.998	869603	1.16		97.8	3212	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.123	4.123	0.0	0.998	5090955	1.32		106	9971	
19 6:2 FTS										
427.00 > 407.00	4.123	4.123	0.0	1.000	1247138	0.9485		100	4333	
D 21 13C4 PFOA										
417.00 > 372.00	4.131	4.131	0.0	1.000	4823883	1.26		101	8919	
* 22 13C2 PFOA										
415.00 > 370.00	4.131	4.131	0.0		5100546	1.25			10428	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.131	4.131	0.0	1.000	4309174	0.9731	Target=2.59	97.3	2612	
413.00 > 169.00	4.131	4.131	0.0	1.000	1640895		2.63(1.30-3.89)		2623	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.418	4.418	0.0	1.000	652673	1.22		102	4196	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.418	4.418	0.0	1.000	2289693	0.8652	Target=4.65	93.2	3459	M
499.00 > 99.00	4.418	4.418	0.0	1.000	525119		4.36(2.32-6.97)		2124	M
D 25 13C4 PFOS										
503.00 > 80.00	4.418	4.418	0.0	1.069	2878113	1.24		104	5048	
D 27 13C5 PFNA										
468.00 > 423.00	4.444	4.444	0.0	1.076	6375370	1.27		101	9401	
26 Perfluorononanoic acid										
463.00 > 419.00	4.444	4.444	0.0	1.000	4314675	0.99	Target=4.65	99.4	4217	
463.00 > 169.00	4.444	4.444	0.0	1.000	954275		4.52(2.32-6.97)		1976	
63 9CIFOS										
531.00 > 351.00	4.580	4.580	0.0	1.037	4663977	0.9044		97.0	12940	

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	4.697	4.697	0.0	1.063	2114949	0.9008	Target=4.06	93.8	6231	
549.00 > 99.00	4.697	4.697	0.0	1.063	545646		3.88(2.03-6.09)		3497	
D 34 13C8 FOSA										
506.00 > 78.00	4.706	4.706	0.0	1.139	4302190	1.37		110	3805	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.706	4.706	0.0	1.000	3006039	0.9234		92.3	4806	
D 32 13C2 PFDA										
515.00 > 470.00	4.732	4.732	0.0	1.145	6034561	1.24		99.3	9411	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.732	4.732	0.0	1.000	4661537	1.00	Target=11.30	100	4526	
513.00 > 169.00	4.732	4.732	0.0	1.000	376259		12.39(5.65-16.95)		594	
31 8:2 FTS										
527.00 > 507.00	4.740	4.740	0.0	1.000	1088160	1.00		104	5807	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.740	4.740	0.0	1.147	921517	1.09		91.1	1758	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.878	4.878	0.0	1.181	938713	1.64		131	1497	
36 NMeFOSAA										
570.00 > 419.00	4.878	4.878	0.0	1.000	687650	0.9423		94.2	1570	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.966	4.966	0.0	1.124	2005812	0.8973	Target=3.79	93.1	8255	
599.00 > 99.00	4.966	4.966	0.0	1.124	532674		3.77(1.90-5.69)		2908	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.992	4.992	0.0	1.000	4868349	1.04	Target=8.45	104	5355	
563.00 > 169.00	4.992	4.992	0.0	1.000	566903		8.59(4.22-12.67)		3366	
D 39 13C2 PFUnA										
565.00 > 520.00	4.992	4.992	0.0	1.208	6027684	1.24		99.4	11771	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.012	5.012	0.0	1.213	995435	1.59		127	3688	
40 NEtFOSA										
584.00 > 419.00	5.012	5.012	0.0	1.000	781080	0.9871		98.7	1888	M
57 11C1FOS										
631.00 > 451.00	5.092	5.092	0.0	1.152	3568180	0.8858		94.0	8715	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.231	5.231	0.0	1.000	4810027	0.9360	Target=6.99	93.6	4295	
613.00 > 169.00	5.231	5.231	0.0	1.000	682203		7.05(3.50-10.49)		2078	
D 43 13C2 PFDoA										
615.00 > 570.00	5.231	5.231	0.0	1.266	6291787	1.24		98.9	13655	
50 10:2 FTS										
627.00 > 607.00	5.248	5.248	0.0	1.107	1645737	0.9395		97.5	8844	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.283	5.283	0.0	1.279	518065	1.19		95.0	48.1	
61 NMeFOSA										
512.00 > 169.00	5.283	5.283	0.0	1.000	431689	1.03		103	645	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.283	5.283	0.0	1.279	702525	1.15		91.9	681	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
49 N-MeFOSE-M										
616.00 > 59.00	5.292	5.292	0.0	1.002	653426	0.99		99.3	872	
54 PFDoS										
699.00 > 80.00	5.404	5.404	0.0	1.223	1983463	0.8985	Target=4.24	92.8	4544	
699.00 > 99.00	5.404	5.404	0.0	1.223	463207		4.28(2.12-6.35)		3097	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.434	5.434	0.0	1.315	749309	1.22		97.7	431	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.434	5.434	0.0	1.039	4143297	0.99	Target=6.20	99.3	4315	
663.00 > 169.00	5.434	5.434	0.0	1.039	658455		6.29(3.10-9.30)		2436	
62 N-EtFOSE-M										
630.00 > 59.00	5.454	5.454	0.0	1.004	744301	0.9350		93.5	711	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.454	5.454	0.0	1.320	424515	1.18		94.3	608	
56 N-EtFOSA-M										
526.00 > 169.00	5.454	5.454	0.0	1.000	415295	1.02		102	526	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.617	5.617	0.0	1.360	4869162	1.26		100	9866	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.617	5.617	0.0	1.000	479093	0.9153	Target=1.05	91.5	2202	
713.00 > 219.00	5.617	5.617	0.0	1.000	445920		1.07(0.53-1.58)		2286	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.929	5.929	0.0	1.000	2599872	0.9761	Target=8.09	97.6	3897	
813.00 > 169.00	5.929	5.929	0.0	1.000	329886		7.88(4.05-12.14)		738	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.929	5.929	0.0	1.435	3103720	1.18		94.4	5602	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.189	6.189	0.0	1.044	2367079	0.9685	Target=11.53	96.8	3445	
913.00 > 169.00	6.184	6.189	-0.005	1.043	203793		11.62(5.77-17.30)		1082	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

63L4PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\_007.d

Injection Date: 13-Jan-2022 19:39:54

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

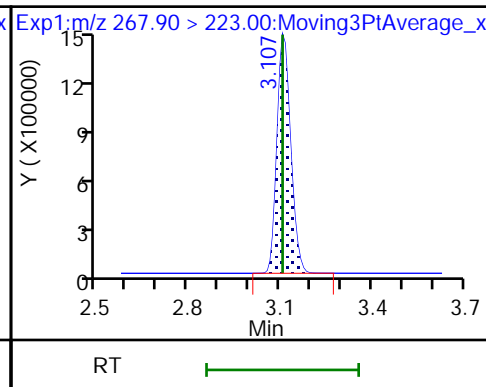
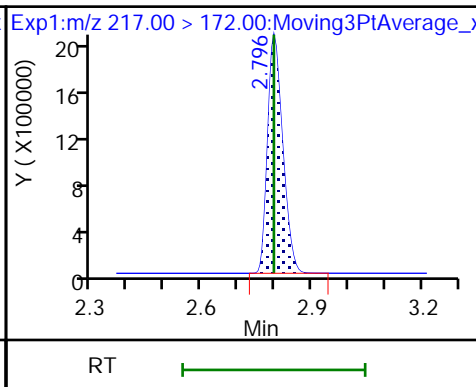
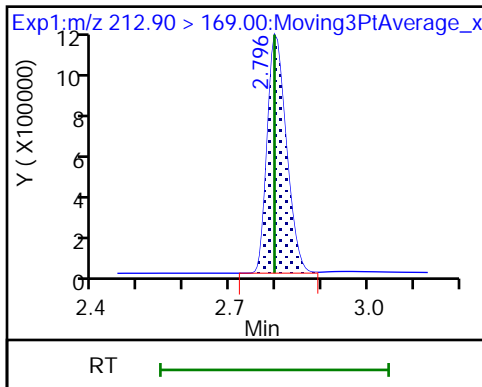
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

2 Perfluorobutanoic acid

D 1 13C4 PFBA

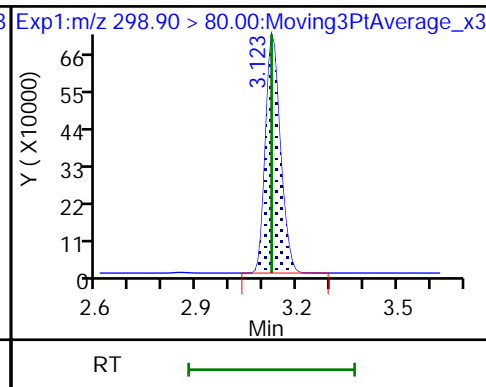
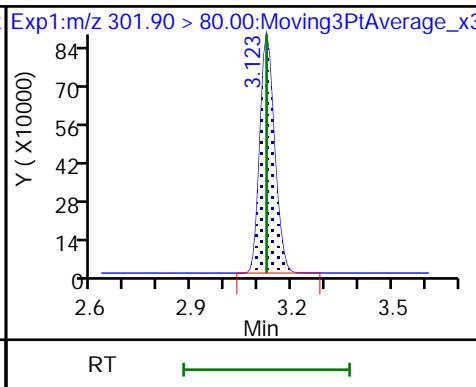
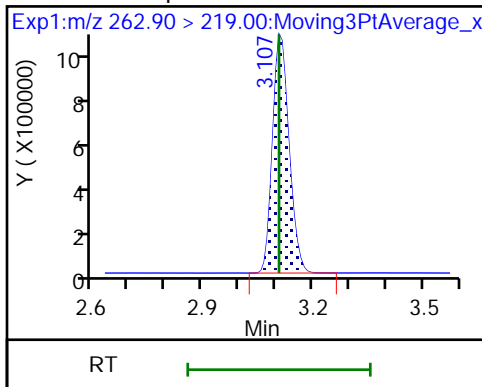
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

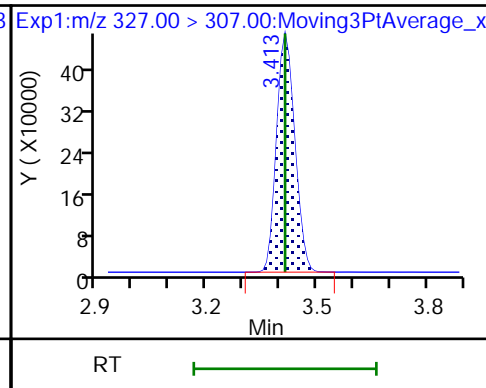
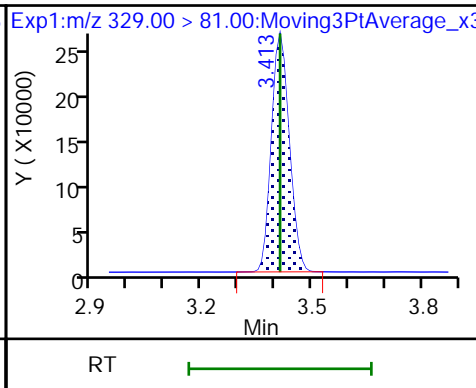
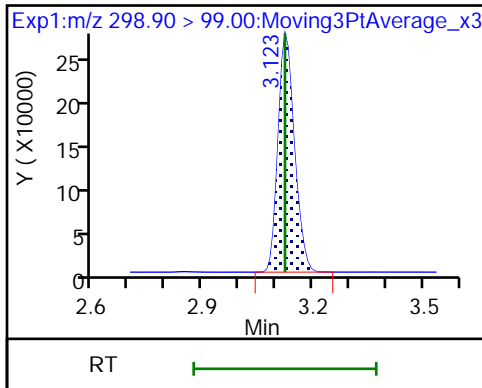
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

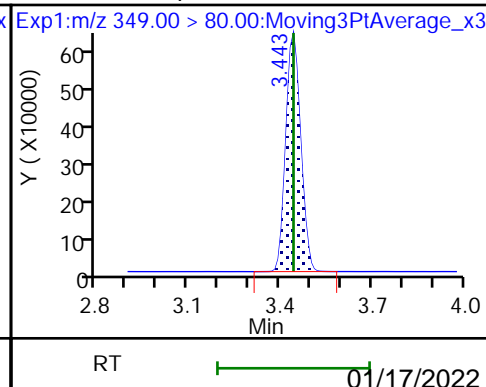
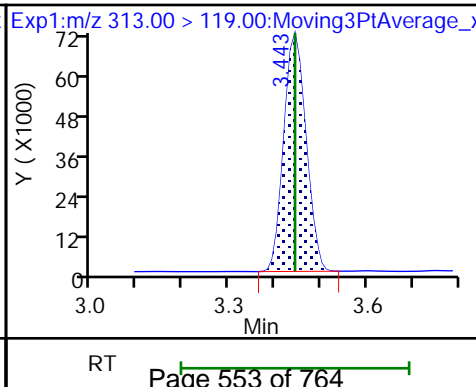
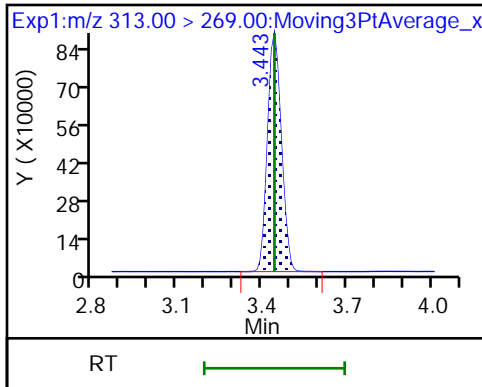
7 4:2 FTS

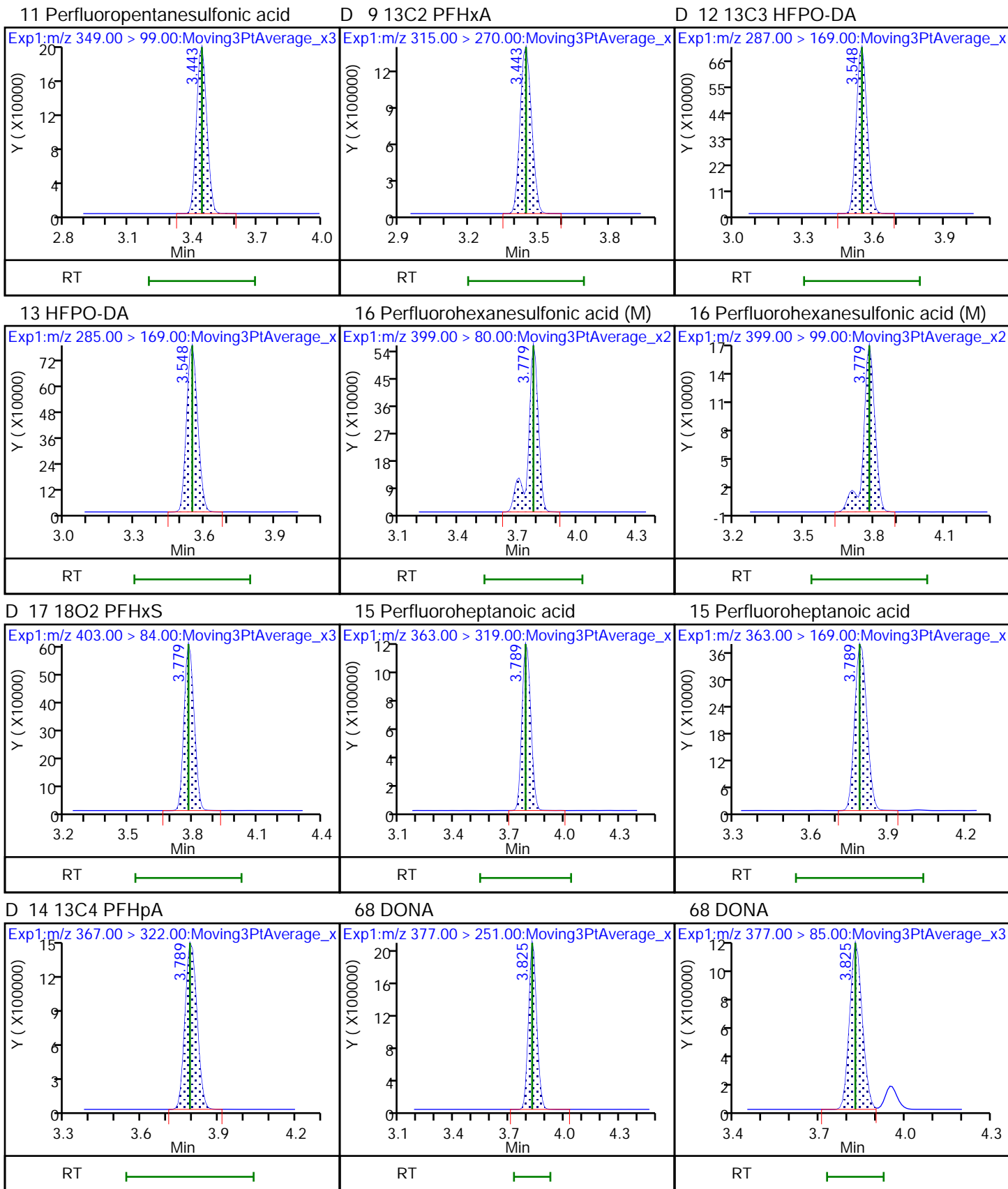


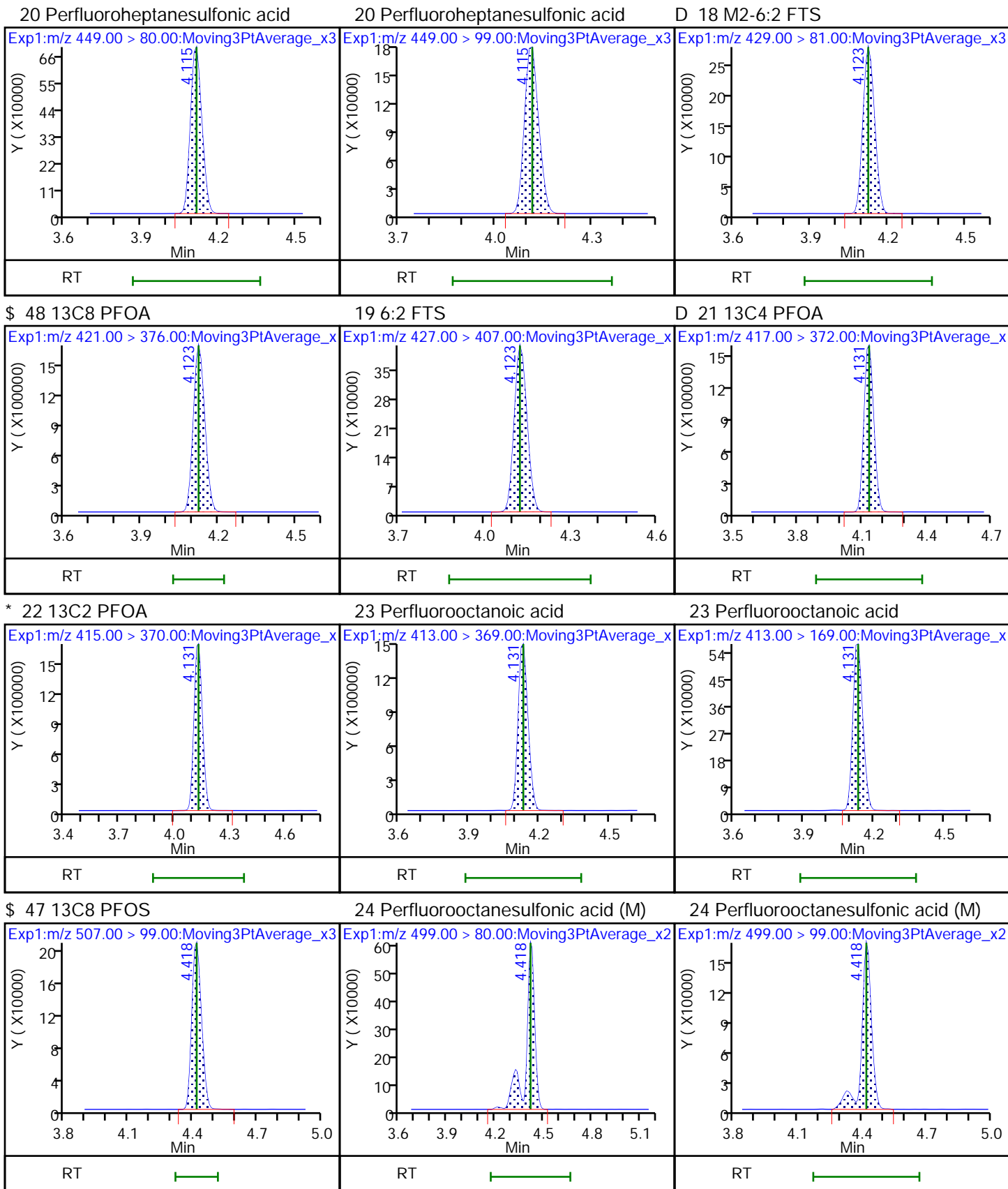
10 Perfluorohexanoic acid

10 Perfluorohexanoic acid

11 Perfluoropentanesulfonic acid





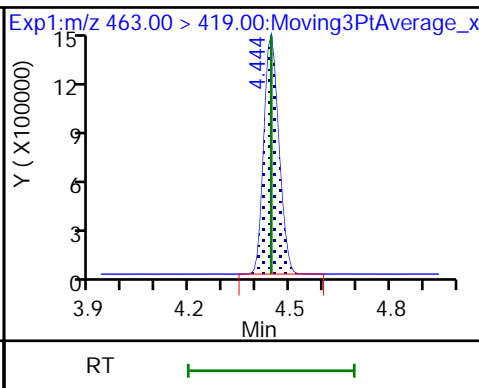
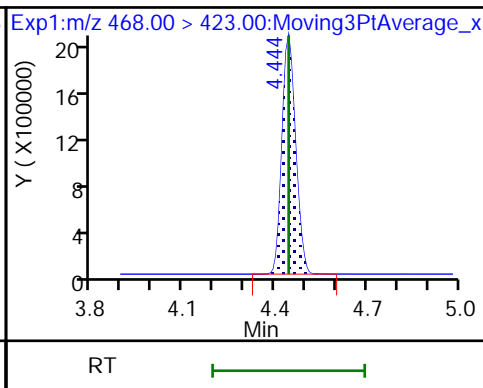
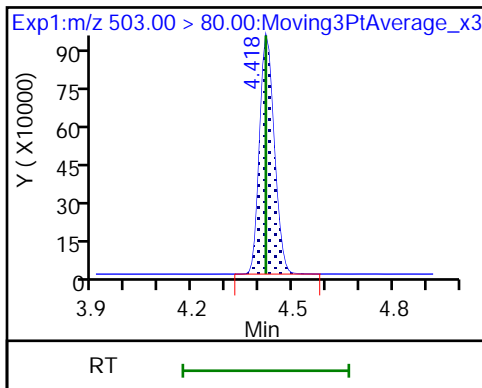




D 25 13C4 PFOS

D 27 13C5 PFNA

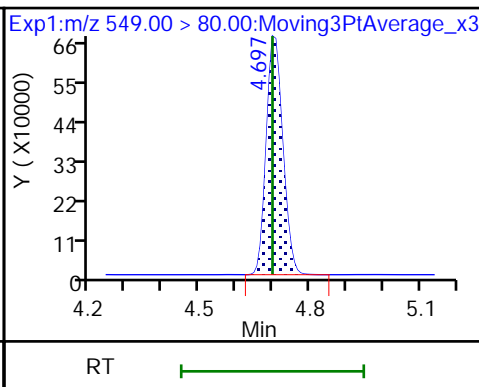
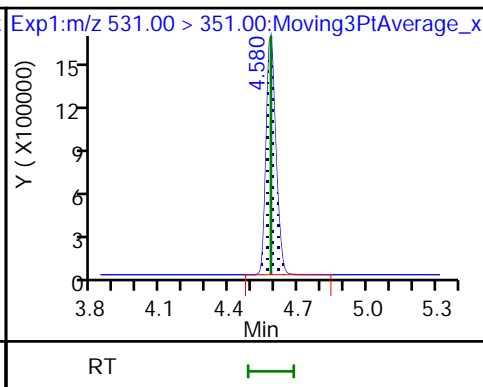
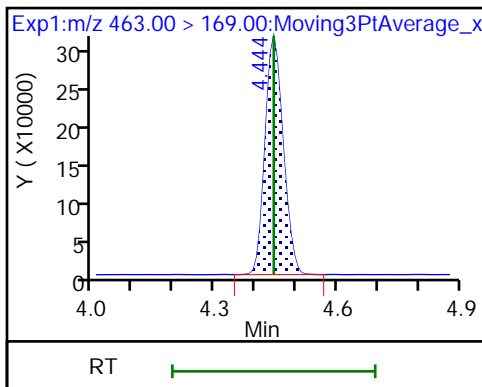
26 Perfluorononanoic acid



26 Perfluorononanoic acid

63 9CIFOS

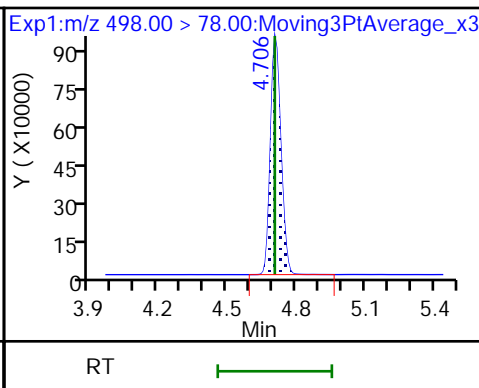
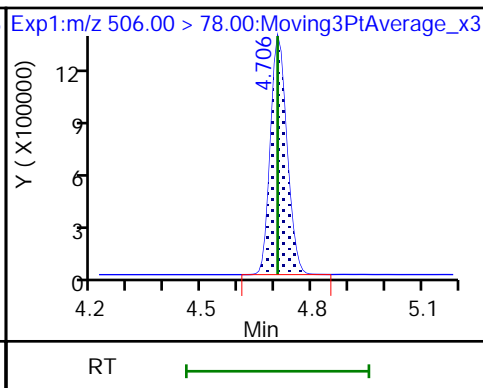
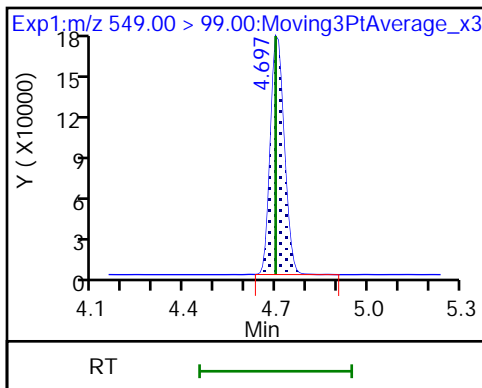
28 Perfluoronanesulfonic acid



28 Perfluoronanesulfonic acid

D 34 13C8 FOSA

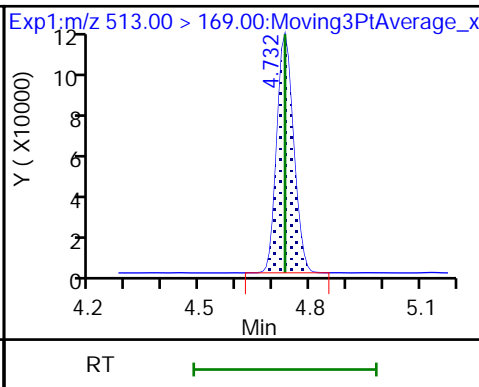
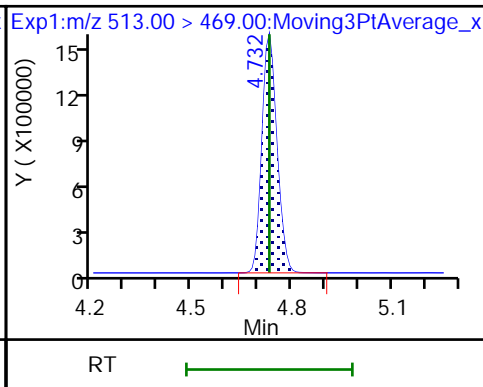
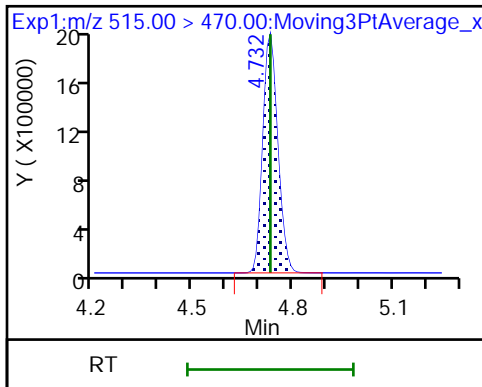
33 Perfluorooctanesulfonamide

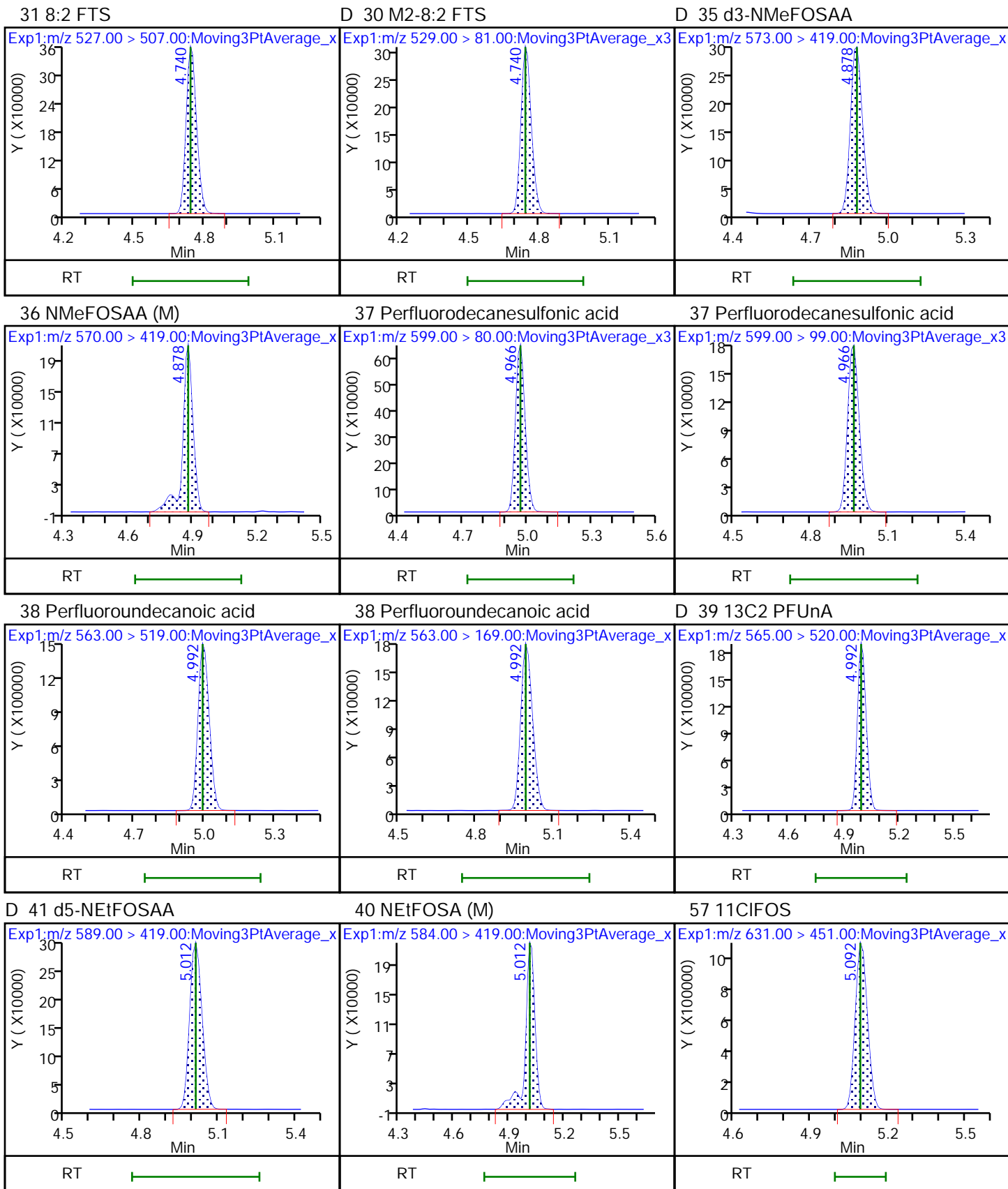


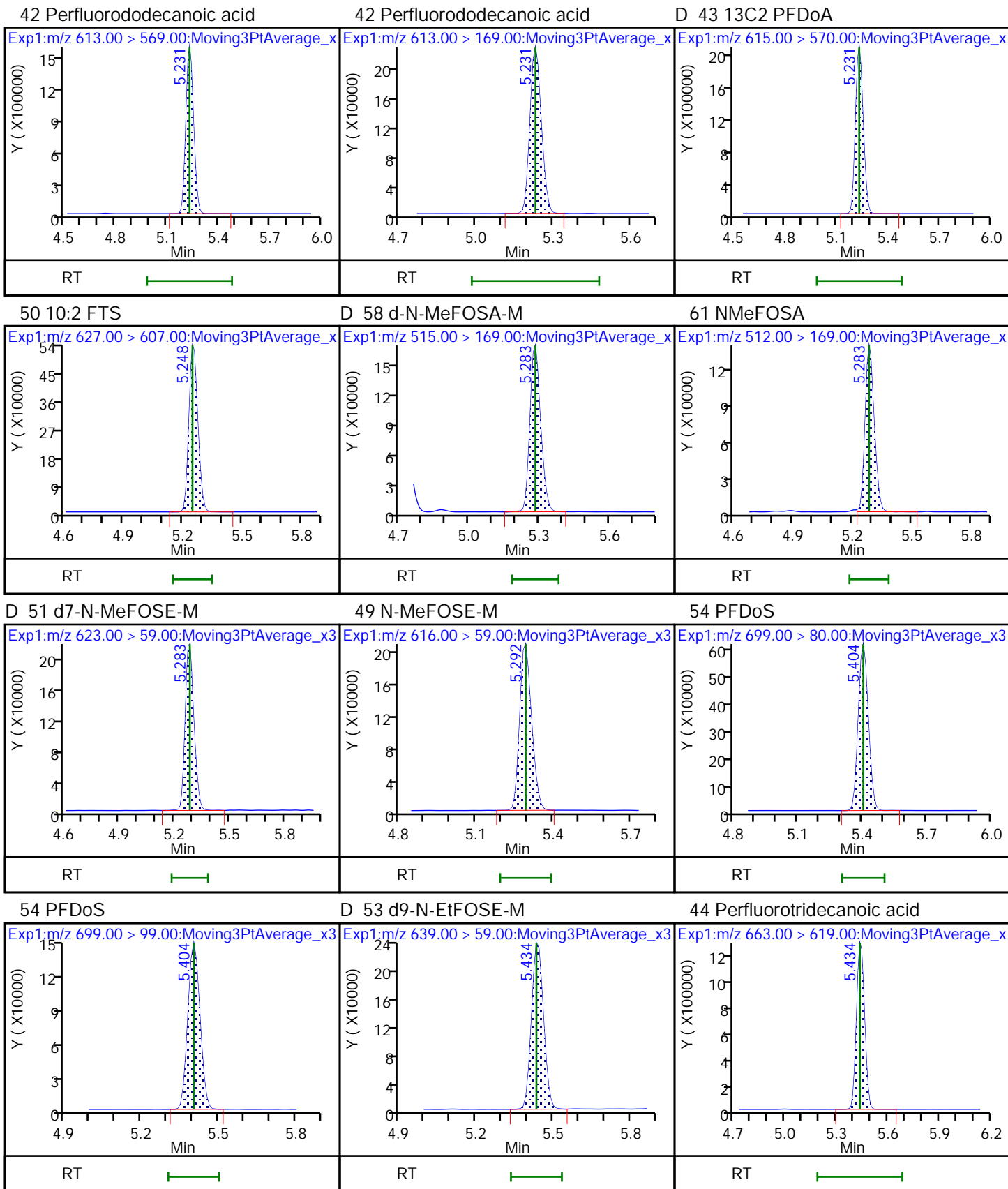
D 32 13C2 PFDA

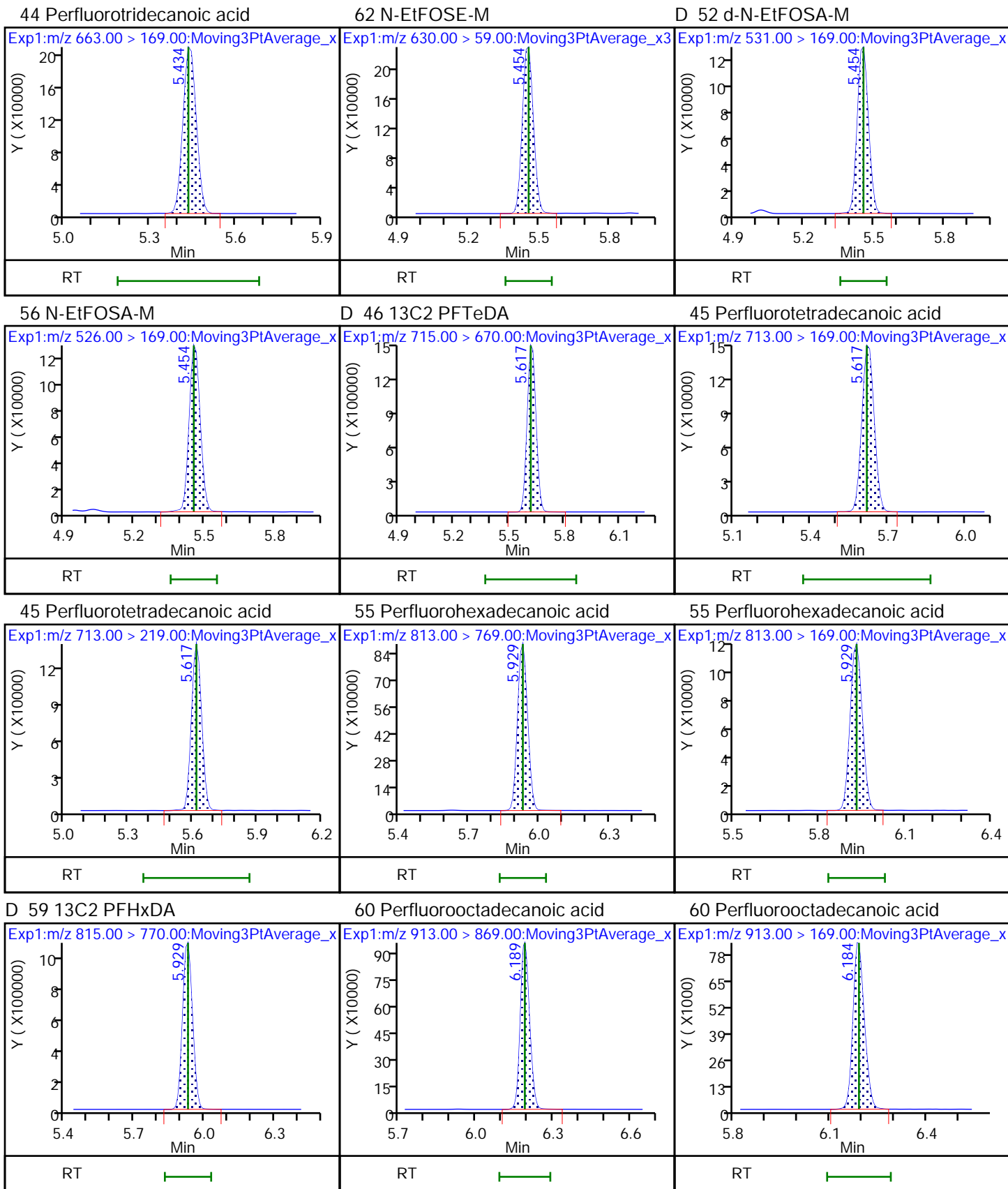
29 Perfluorodecanoic acid

29 Perfluorodecanoic acid











Eurofins TestAmerica, Knoxville

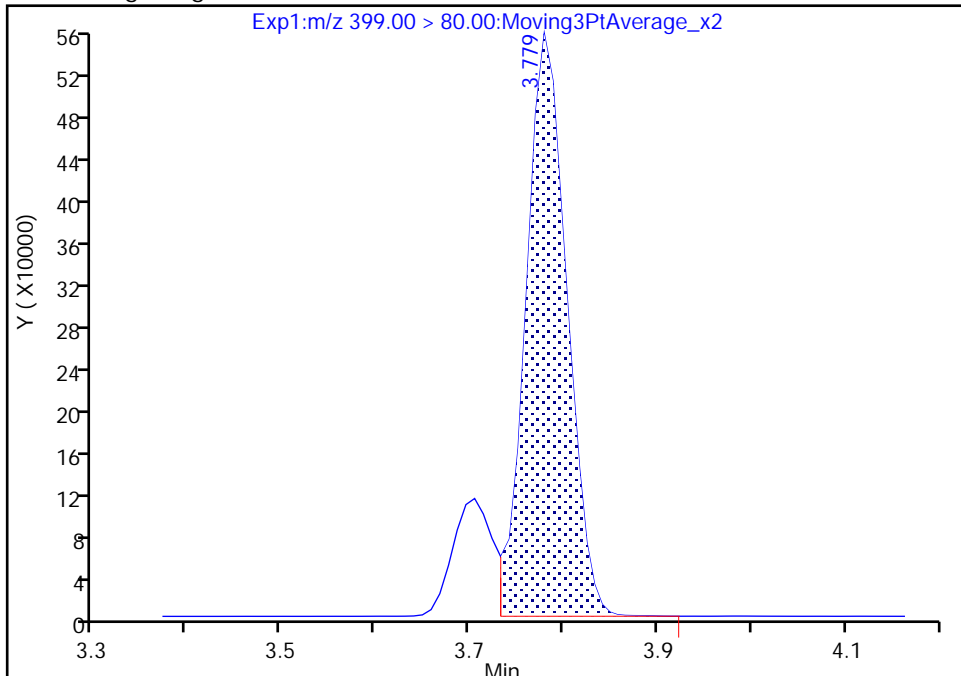
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Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

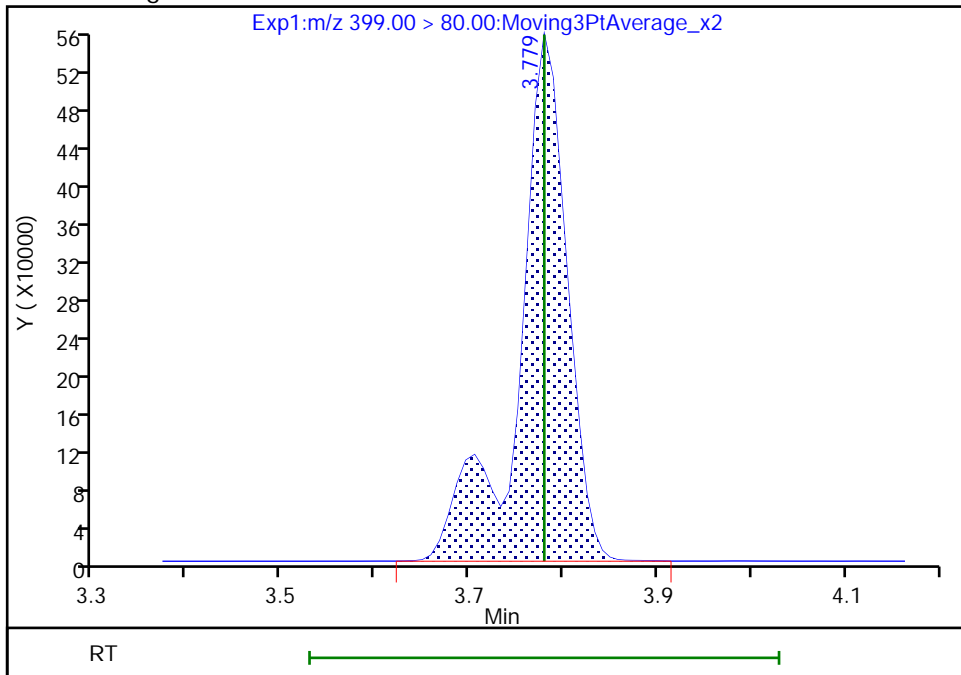
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Amount: 0.735288  
Amount Units: ng/ml

Processing Integration Results



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Area: 1991243  
Amount: 0.877421  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:03:21  
Audit Action: Manually Integrated

Eurofins TestAmerica, Knoxville

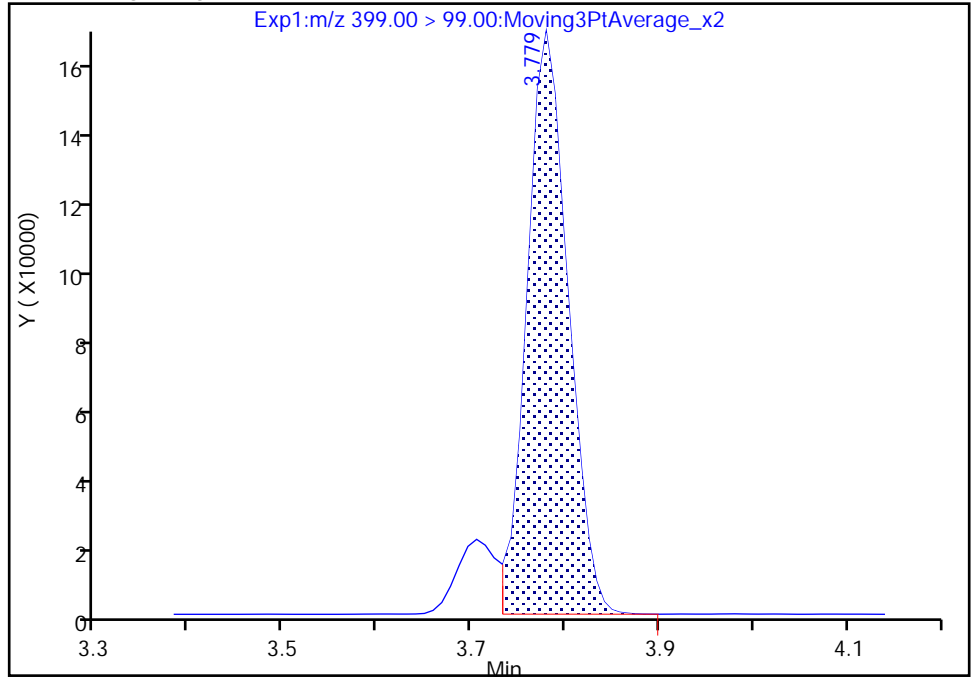
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Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

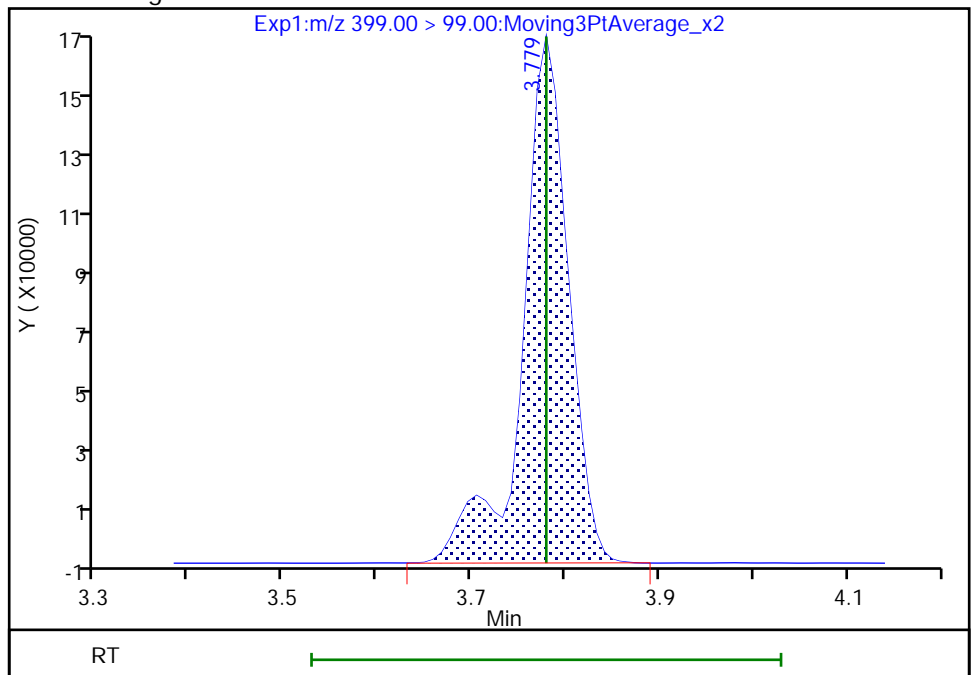
RT: 3.78  
Area: 506070  
Amount: 0.735288  
Amount Units: ng/ml

Processing Integration Results



RT: 3.78  
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Amount: 0.877421  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:05:26

Audit Action: Manually Integrated

Audit Reason: Baseline  
Page 562 of 764

01/17/2022

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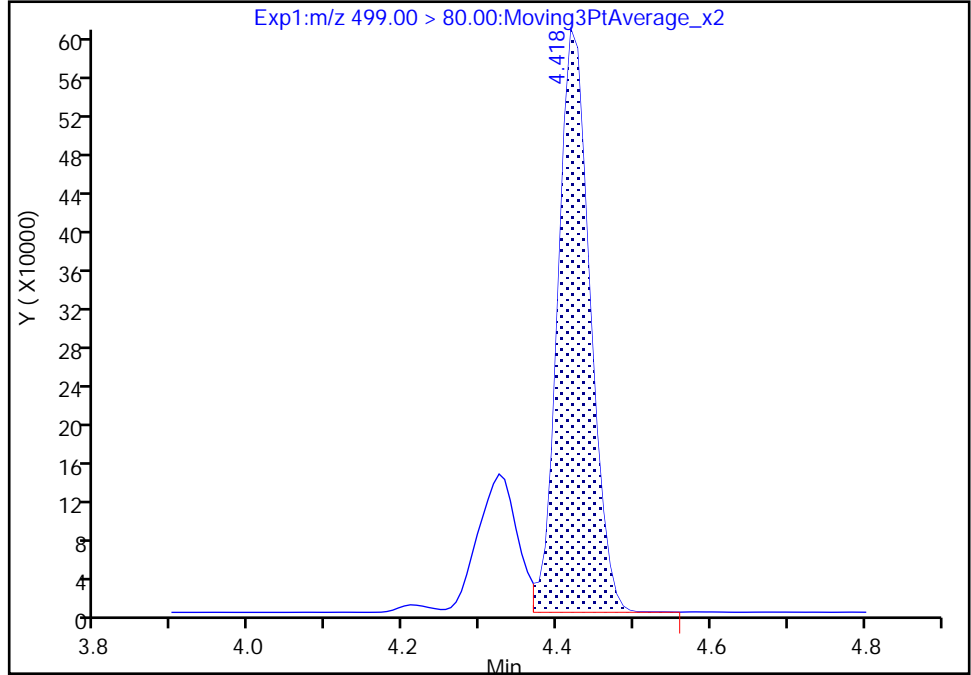
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Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

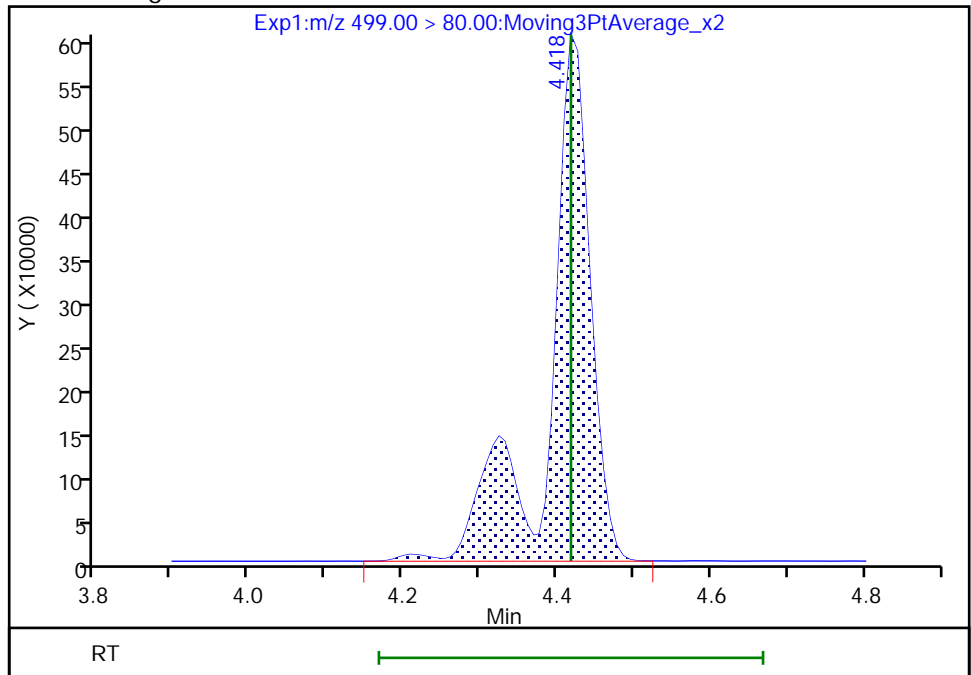
RT: 4.42  
Area: 1757689  
Amount: 0.664178  
Amount Units: ng/ml

Processing Integration Results



RT: 4.42  
Area: 2289693  
Amount: 0.865207  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:05:38  
Audit Action: Manually Integrated

Audit Reason: Baseline



Eurofins TestAmerica, Knoxville

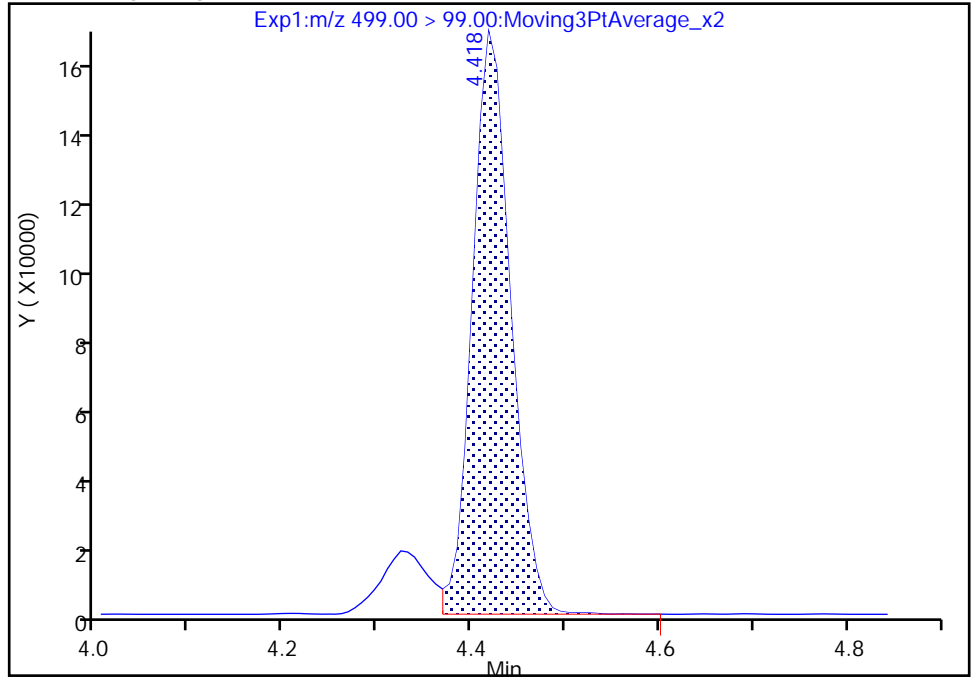
Data File: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\_007.d  
Injection Date: 13-Jan-2022 19:39:54 Instrument ID: LCA  
Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

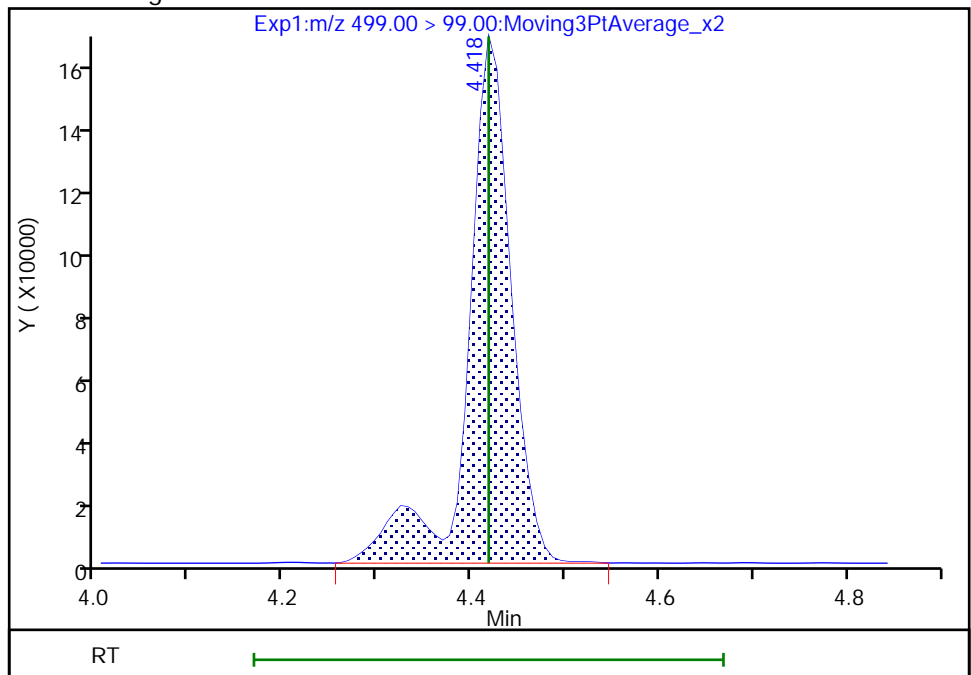
RT: 4.42  
Area: 463026  
Amount: 0.664178  
Amount Units: ng/ml

Processing Integration Results



RT: 4.42  
Area: 525119  
Amount: 0.865207  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:05:47

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

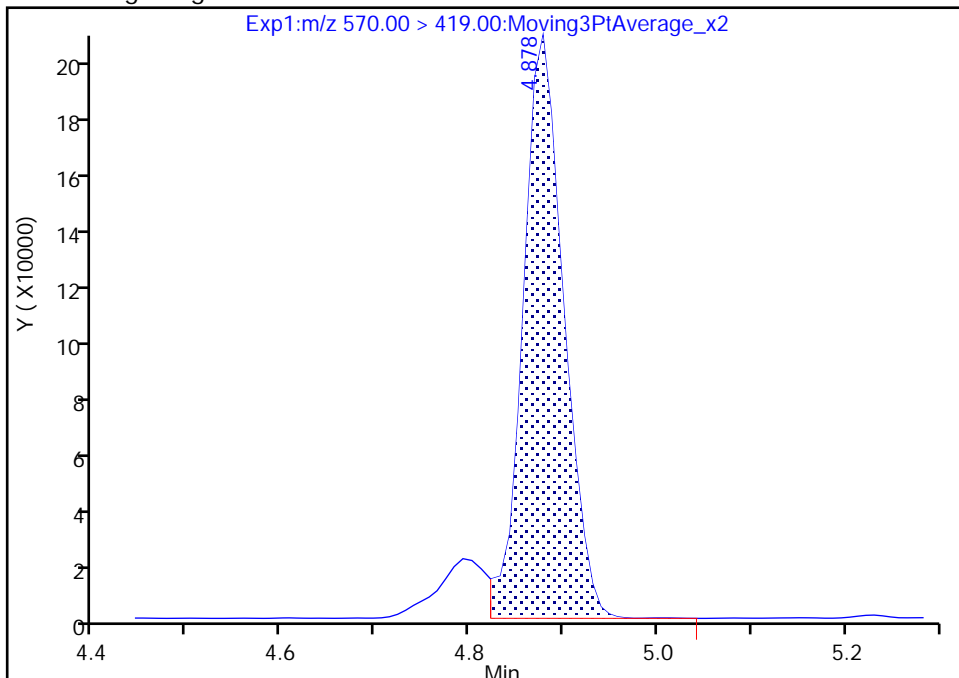
Data File: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\\_007.d  
Injection Date: 13-Jan-2022 19:39:54 Instrument ID: LCA  
Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

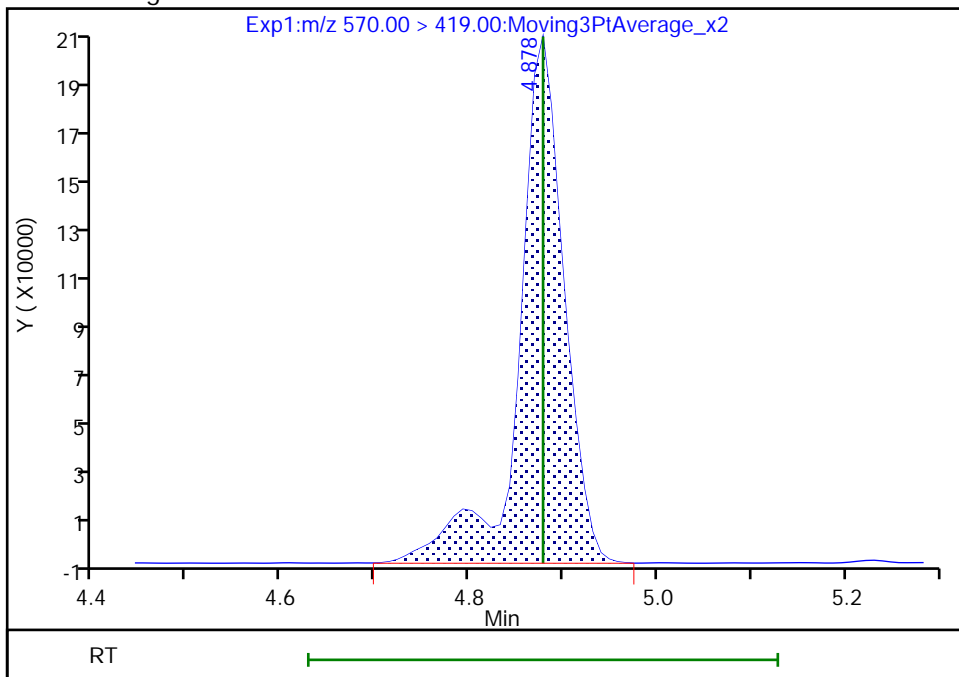
RT: 4.88  
Area: 614412  
Amount: 0.842042  
Amount Units: ng/ml

Processing Integration Results



RT: 4.88  
Area: 687650  
Amount: 0.942267  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:06:01  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

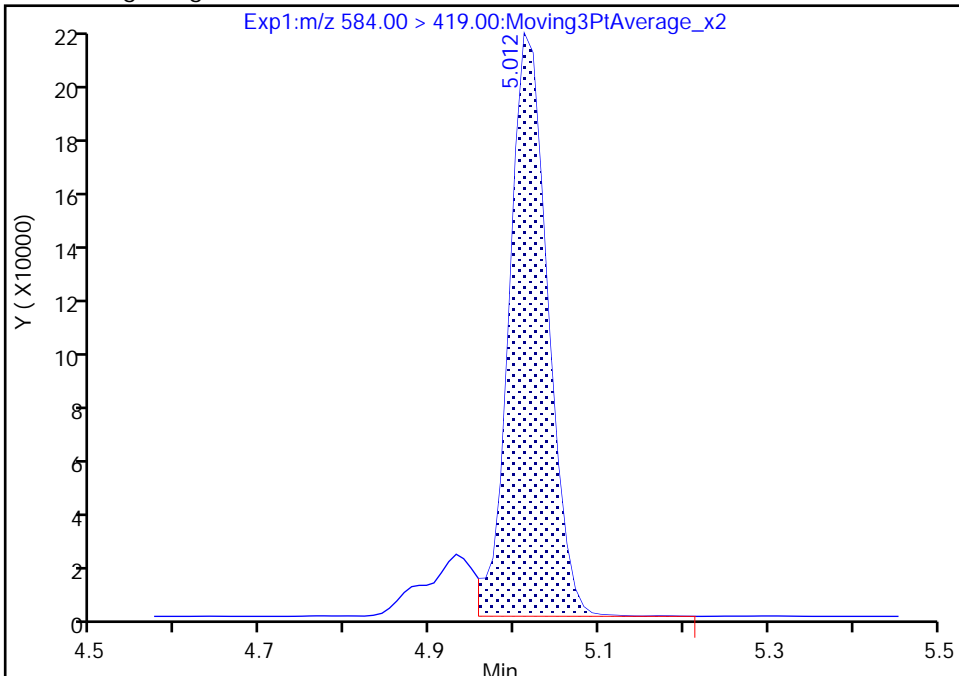
Data File: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\\_007.d  
Injection Date: 13-Jan-2022 19:39:54 Instrument ID: LCA  
Lims ID: CCVIS  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 7 Worklist Smp#: 7  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

40 NETFOSA, CAS: 2991-50-6

Signal: 1

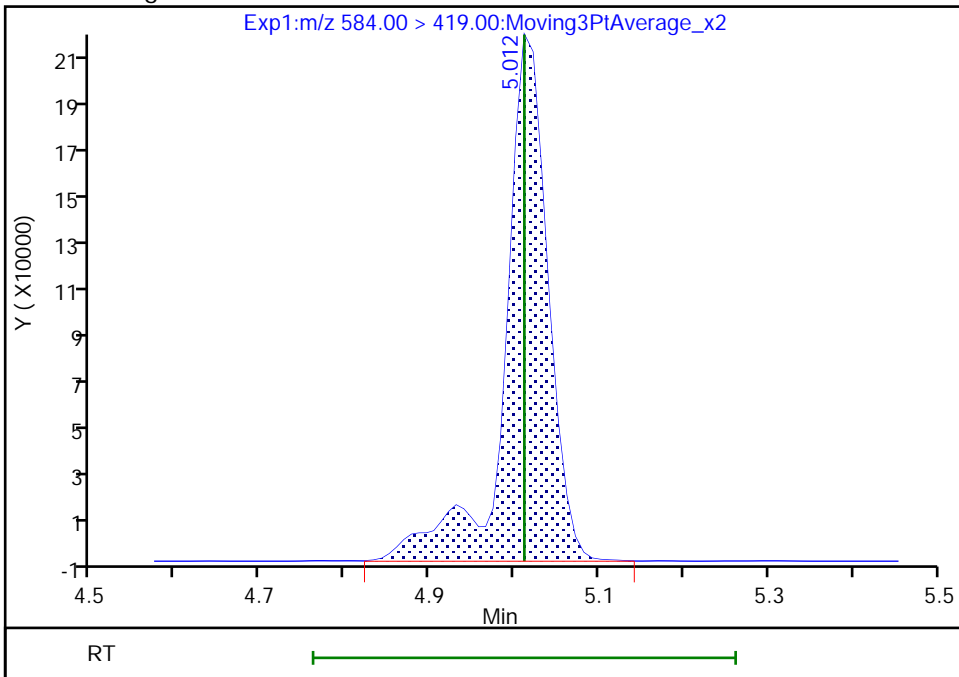
RT: 5.01  
Area: 688882  
Amount: 0.871047  
Amount Units: ng/ml

Processing Integration Results



RT: 5.01  
Area: 781080  
Amount: 0.987137  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:06:16  
Audit Action: Manually Integrated

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-57893/19 Calibration Date: 01/13/2022 21:25  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 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	0.7844	0.7793		2.48	2.50	-0.7	40.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9519	0.9897		2.60	2.50	4.0	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.097	1.125		2.27	2.21	2.6	40.0
4:2 FTS	AveID	2.252	2.404		2.49	2.34	6.8	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8680	0.8594		2.48	2.50	-1.0	40.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	0.9713	1.037		2.51	2.35	6.8	40.0
HFPO-DA	AveID	1.352	1.383		2.56	2.50	2.2	40.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.377	1.314		2.17	2.28	-4.6	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.047	1.078		2.57	2.50	2.9	40.0
DONA	AveID	2.630	2.761		2.47	2.36	5.0	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9541	0.9879		2.46	2.38	3.5	40.0
6:2 FTS	L2ID		1.850		2.44	2.37	2.9	40.0
Perfluorooctanoic acid (PFOA)	AveID	1.147	1.170		2.55	2.50	1.9	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.099	1.110		2.34	2.32	1.0	40.0
Perfluorononanoic acid (PFNA)	Q2ID		0.9136		2.65	2.50	6.0	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	Q2ID		2.226		2.40	2.33	2.8	50.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9748	0.9778		2.41	2.40	0.3	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9459	0.9516		2.52	2.50	0.6	40.0
Perfluorodecanoic acid (PFDA)	AveID	0.9645	0.997		2.58	2.50	3.4	40.0
8:2 FTS	AveID	1.415	1.471		2.49	2.40	4.0	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	QuaIF		0.9336		2.40	2.50	-4.1	40.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		0.8697		2.25	2.41	-6.5	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9695	0.9717		2.51	2.50	0.2	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Q2ID		1.016		2.54	2.50	1.6	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.672	1.744		2.46	2.36	4.3	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.9901		2.45	2.50	-2.1	40.0
10:2 FTS	AveID	2.276	2.469		2.61	2.41	8.5	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	Q2ID		1.212		2.56	2.50	2.4	40.0
NMeFOSA	Q2ID		1.081		2.62	2.50	4.8	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9166	0.9353		2.47	2.42	2.0	40.0

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-57893/19 Calibration Date: 01/13/2022 21:25  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 Lab File ID: \_019.d Conc. Units: ng/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorotridecanoic acid (PFTriA)	AveID	0.8292	0.8044		2.43	2.50	-3.0	40.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	AveID	1.328	1.317		2.48	2.50	-0.8	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.195	1.224		2.56	2.50	2.4	40.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1344	0.1298		2.42	2.50	-3.4	40.0
Perfluorohexadecanoic acid	Q2ID		1.083		2.53	2.50	1.2	40.0
Perfluorooctadecanoic acid	AveID	0.9844	0.9818		2.49	2.50	-0.3	40.0
13C4 PFBA	Ave	1.142	1.119		1.23	1.25	-2.0	50.0
13C5 PFPeA	Ave	0.8865	0.8537		1.20	1.25	-3.7	50.0
13C3 PFBS	Ave	0.5913	0.5831		1.15	1.16	-1.4	50.0
M2-4:2 FTS	Ave	0.1820	0.1701		1.09	1.17	-6.5	50.0
13C2 PFHxA	Ave	0.9479	0.9143		1.21	1.25	-3.5	50.0
13C3 HFPO-DA	Ave	0.4556	0.4586		1.26	1.25	0.7	50.0
18O2 PFHxS	Ave	0.3946	0.4282		1.28	1.18	8.5	50.0
13C4 PFHpA	Ave	0.9067	0.9093		1.25	1.25	0.3	50.0
M2-6:2 FTS	Ave	0.1835	0.1744		1.13	1.19	-5.0	50.0
13C4 PFOA	Ave	0.9376	0.9302		1.24	1.25	-0.8	50.0
13C4 PFOS	Ave	0.5681	0.5937		1.25	1.20	4.5	50.0
13C5 PFNA	Ave	1.234	1.207		1.22	1.25	-2.2	50.0
13C8 FOSA	Ave	0.7682	0.8272		1.35	1.25	7.7	50.0
13C2 PFDA	Ave	1.191	1.134		1.19	1.25	-4.8	50.0
M2-8:2 FTS	Ave	0.2070	0.1810		1.05	1.20	-12.6	50.0
d3-NMeFOSAA	Ave	0.1401	0.1942		1.73	1.25	38.6	50.0
13C2 PFUnA	Ave	1.189	1.200		1.26	1.25	0.9	50.0
d5-NEtFOSAA	Ave	0.1537	0.1896		1.54	1.25	23.3	50.0
13C2 PFDoA	Ave	1.247	1.237		1.24	1.25	-0.8	50.0
d7-N-MeFOSE-M	Ave	0.1499	0.1372		1.14	1.25	-8.5	50.0
d-N-MeFOSA-M	Ave	0.1069	0.1062		1.24	1.25	-0.6	50.0
d9-N-EtFOSE-M	Ave	0.1504	0.1420		1.18	1.25	-5.6	50.0
d-N-EtFOSA-M	Ave	0.0883	0.0870		1.23	1.25	-1.5	50.0
13C2 PFTeDA	Ave	0.9508	0.9394		1.24	1.25	-1.2	50.0
13C2 PFHxDA	Ave	0.6444	0.6319		1.23	1.25	-1.9	50.0
13C8 PFOA	AveID	0.999	1.046		1.31	1.25	4.6	50.0
13C8 PFOS	AveID	0.2220	0.2119		1.14	1.20	-4.5	50.0

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\_019.d  
 Lims ID: CCV  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 13-Jan-2022 21:25:32 ALS Bottle#: 19 Worklist Smp#: 19  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022248-019 ccv  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:53:11 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 09:20:42

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										
212.90 > 169.00	2.795	2.796	-0.001	1.000	8971917	2.48		99.3	2331	
D 1 13C4 PFBA										
217.00 > 172.00	2.795	2.796	-0.001	0.678	5756391	1.23		98.0	16385	
D 3 13C5 PFPeA										
267.90 > 223.00	3.107	3.107	0.0	0.754	4391068	1.20		96.3	12476	
4 Perfluoropentanoic acid										
262.90 > 219.00	3.107	3.107	0.0	1.000	8691792	2.60		104	2689	
D 6 13C3 PFBS										
301.90 > 80.00	3.123	3.123	0.0	0.757	2789316	1.15		98.6	16129	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	3.123	3.123	0.0	1.000	5965960	2.27	Target=2.65	103	5447	
298.90 > 99.00	3.123	3.123	0.0	1.000	2256182		2.64(1.32-3.97)		4767	
D 8 M2-4:2 FTS										
329.00 > 81.00	3.412	3.413	-0.001	0.828	817282	1.09		93.5	1607	
7 4:2 FTS										
327.00 > 307.00	3.412	3.413	-0.001	1.000	3930099	2.49		107	9077	
10 Perfluorohexanoic acid										
313.00 > 269.00	3.442	3.443	-0.001	1.000	8083374	2.48	Target=11.80	99.0	2822	
313.00 > 119.00	3.442	3.443	-0.001	1.000	640861		12.61(5.90-17.70)		985	
11 Perfluoropentanesulfonic acid										
349.00 > 80.00	3.442	3.443	-0.001	1.102	5837080	2.50	Target=3.44	107	9952	
349.00 > 99.00	3.442	3.443	-0.001	1.102	1628393		3.58(1.72-5.16)		8696	
D 9 13C2 PFHxA										
315.00 > 270.00	3.442	3.443	-0.001	0.835	4702906	1.21		96.5	9218	
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.538	3.548	-0.010	0.858	2358736	1.26		101	5620	

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	3.538	3.548	-0.010	1.000	6522098	2.56		102	6258	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.779	3.779	0.0	1.000	5266094	2.17	Target=3.40	95.4	6007	M
399.00 > 99.00	3.779	3.779	0.0	1.000	1525712		3.45(1.70-5.10)		4396	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.779	3.779	0.0	0.916	2083729	1.28		109	12739	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.788	3.789	-0.001	1.000	10079482	2.57	Target=3.29	103	4747	
363.00 > 169.00	3.788	3.789	-0.001	1.000	3024339		3.33(1.65-4.94)		2989	
D 14 13C4 PFHpA										
367.00 > 322.00	3.788	3.789	-0.001	0.919	4677025	1.25		100	9589	
68 DONA										
377.00 > 251.00	3.825	3.825	0.0	0.867	15885032	2.47	Target=1.82	105	9181	
377.00 > 85.00	3.825	3.825	0.0	0.867	8907024		1.78(0.91-2.74)		211	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.107	4.115	-0.008	0.931	5743894	2.46	Target=3.92	104	8599	
449.00 > 99.00	4.107	4.115	-0.008	0.931	1419182		4.05(1.96-5.87)		6872	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.115	4.123	-0.008	0.998	852100	1.13		95.0	3726	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.115	4.123	-0.008	0.998	5003399	1.31		105	9934	
19 6:2 FTS										
427.00 > 407.00	4.115	4.123	-0.008	1.000	3146639	2.44		103	8548	
D 21 13C4 PFOA										
417.00 > 372.00	4.123	4.131	-0.008	1.000	4784213	1.24		99.2	9939	
* 22 13C2 PFOA										
415.00 > 370.00	4.123	4.131	-0.008		5143479	1.25			10400	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.123	4.131	-0.008	1.000	11192686	2.55	Target=2.59	102	4071	
413.00 > 169.00	4.123	4.131	-0.008	1.000	4229431		2.65(1.30-3.89)		3357	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.410	4.418	-0.008	1.000	618720	1.14		95.5	4636	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.418	4.418	0.0	1.002	6292007	2.34	Target=4.65	101	6578	M
499.00 > 99.00	4.410	4.418	-0.008	1.000	1458292		4.31(2.32-6.97)		3728	M
D 25 13C4 PFOS										
503.00 > 80.00	4.410	4.418	-0.008	1.070	2919403	1.25		105	5369	
D 27 13C5 PFNA										
468.00 > 423.00	4.435	4.444	-0.009	1.076	6208936	1.22		97.8	11099	
26 Perfluorononanoic acid										
463.00 > 419.00	4.435	4.444	-0.009	1.000	11345572	2.65	Target=4.65	106	7641	
463.00 > 169.00	4.435	4.444	-0.009	1.000	2492454		4.55(2.32-6.97)		3287	
63 9CIFOS										
531.00 > 351.00	4.574	4.580	-0.006	1.037	12668221	2.40		103	14221	

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	4.698	4.697	0.001	1.065	5733122	2.41	Target=4.06	100	8386	
549.00 > 99.00	4.698	4.697	0.001	1.065	1505382		3.81(2.03-6.09)		7814	
D 34 13C8 FOSA										
506.00 > 78.00	4.706	4.706	0.0	1.142	4254919	1.35		108	3311	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.715	4.706	0.009	1.002	8097634	2.51		101	4866	
D 32 13C2 PFDA										
515.00 > 470.00	4.724	4.732	-0.008	1.146	5830514	1.19		95.2	10024	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.724	4.732	-0.008	1.000	11623435	2.58	Target=11.30	103	8376	
513.00 > 169.00	4.724	4.732	-0.008	1.000	1005825		11.56(5.65-16.95)		817	
31 8:2 FTS										
527.00 > 507.00	4.741	4.740	0.001	1.000	2624130	2.49		104	4234	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.741	4.740	0.001	1.150	891833	1.05		87.4	1439	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.870	4.878	-0.008	1.181	998975	1.73		139	905	
36 NMeFOSAA										
570.00 > 419.00	4.870	4.878	-0.008	1.000	1865237	2.40		95.9	3205	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.958	4.966	-0.008	1.124	5120571	2.25	Target=3.79	93.5	8398	
599.00 > 99.00	4.958	4.966	-0.008	1.124	1388528		3.69(1.90-5.69)		5419	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.993	4.992	0.001	1.002	11992628	2.51	Target=8.45	100	7565	
563.00 > 169.00	4.984	4.992	-0.008	1.000	1413042		8.49(4.22-12.67)		4484	
D 39 13C2 PFUnA										
565.00 > 520.00	4.984	4.992	-0.008	1.209	6171169	1.26		101	11377	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.002	5.012	-0.010	1.213	975260	1.54		123	5080	
40 NEtFOSA										
584.00 > 419.00	5.012	5.012	0.0	1.002	1981123	2.54		102	2469	M
57 11C1FOS										
631.00 > 451.00	5.092	5.092	0.0	1.155	10031658	2.46		104	11056	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.222	5.231	-0.009	1.000	12599936	2.45	Target=6.99	97.9	8316	
613.00 > 169.00	5.222	5.231	-0.009	1.000	1852408		6.80(3.50-10.49)		3620	
D 43 13C2 PFDaA										
615.00 > 570.00	5.222	5.231	-0.009	1.267	6363046	1.24		99.2	16050	
50 10:2 FTS										
627.00 > 607.00	5.249	5.248	0.001	1.107	4431071	2.61		108	7122	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.284	5.283	0.001	1.282	546299	1.24		99.4	56.3	
61 NMeFOSA										
512.00 > 169.00	5.293	5.283	0.010	1.002	1180797	2.62		105	781	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.284	5.283	0.001	1.282	705553	1.14		91.5	616	



Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
49 N-MeFOSE-M										
616.00 > 59.00	5.293	5.292	0.001	1.002	1710712	2.56		102	2242	
54 PFDoS										
699.00 > 80.00	5.394	5.404	-0.010	1.223	5529402	2.47	Target=4.24	102	10507	
699.00 > 99.00	5.394	5.404	-0.010	1.223	1290770		4.28(2.12-6.35)		6294	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.445	5.434	0.011	1.321	730504	1.18		94.4	408	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.435	5.434	0.001	1.041	10237059	2.43	Target=6.20	97.0	7730	
663.00 > 169.00	5.435	5.434	0.001	1.041	1645390		6.22(3.10-9.30)		5212	
62 N-EtFOSE-M										
630.00 > 59.00	5.455	5.454	0.001	1.002	1924387	2.48		99.2	1569	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.455	5.454	0.001	1.323	447355	1.23		98.5	628	
56 N-EtFOSA-M										
526.00 > 169.00	5.465	5.454	0.011	1.002	1095215	2.56		102	629	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.619	5.617	0.002	1.363	4831967	1.24		98.8	12785	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.619	5.617	0.002	1.000	1254825	2.42	Target=1.05	96.6	5278	
713.00 > 219.00	5.609	5.617	-0.008	0.998	1207260		1.04(0.53-1.58)		6393	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.922	5.929	-0.007	1.000	7037205	2.53	Target=8.09	101	6432	
813.00 > 169.00	5.922	5.929	-0.007	1.000	851763		8.26(4.05-12.14)		2969	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.922	5.929	-0.007	1.436	3250250	1.23		98.1	6755	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.180	6.189	-0.009	1.043	6382156	2.49	Target=11.53	99.7	4806	
913.00 > 169.00	6.180	6.189	-0.009	1.043	551294		11.58(5.77-17.30)		2203	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

63L5PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\_019.d

Injection Date: 13-Jan-2022 21:25:32

Instrument ID: LCA

Lims ID: CCV

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 19

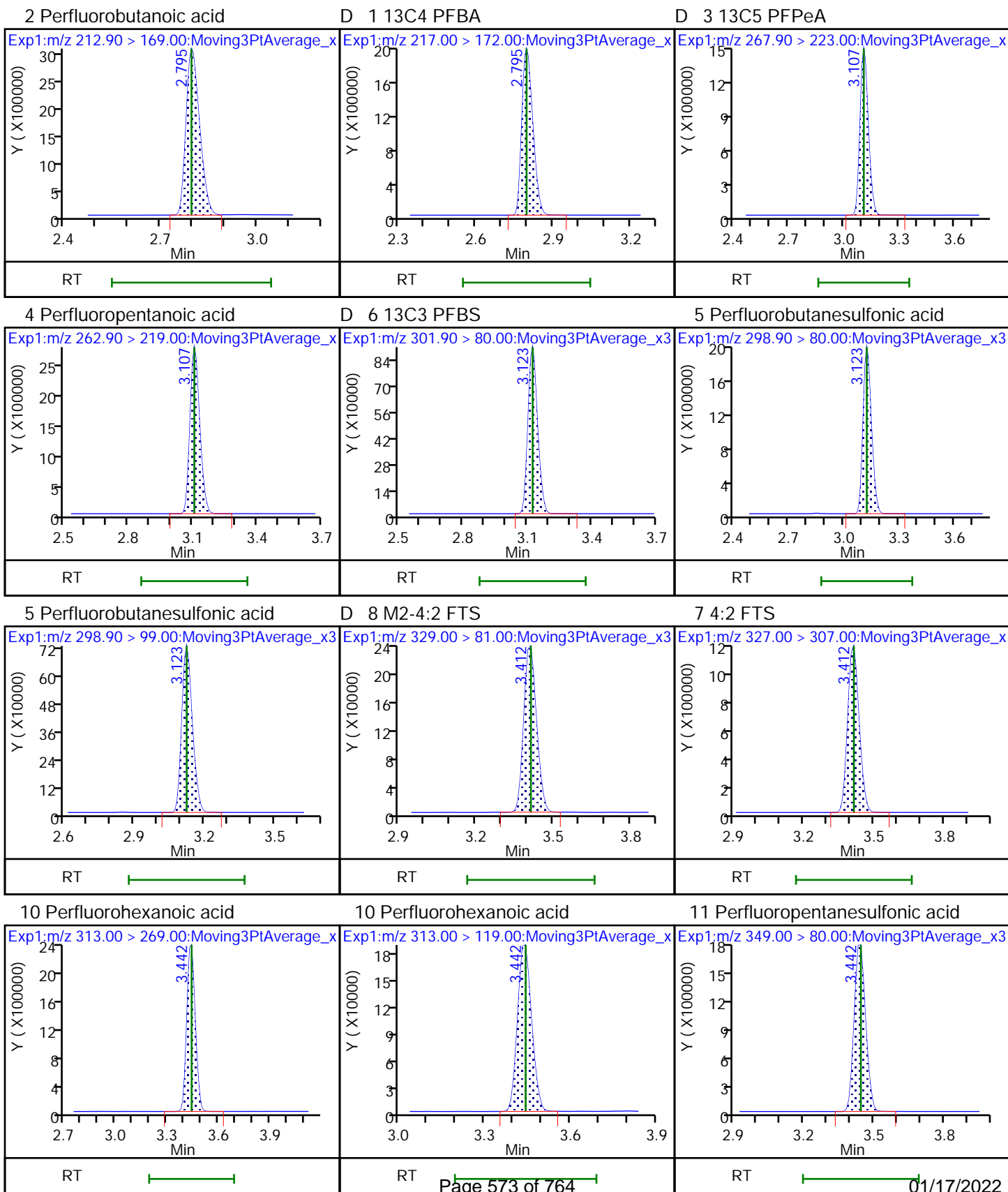
Worklist Smp#: 19

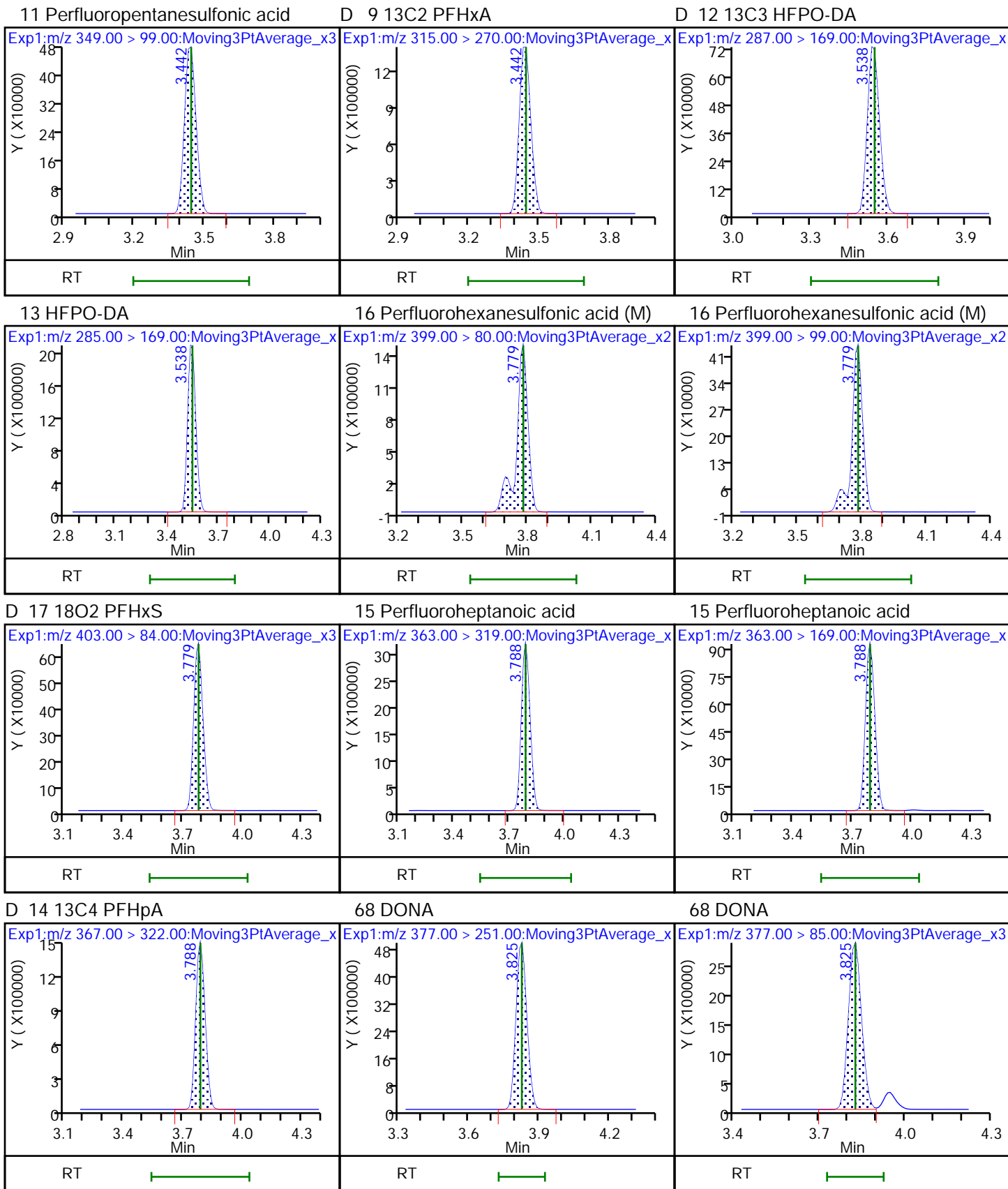
Injection Vol: 1.0 ul

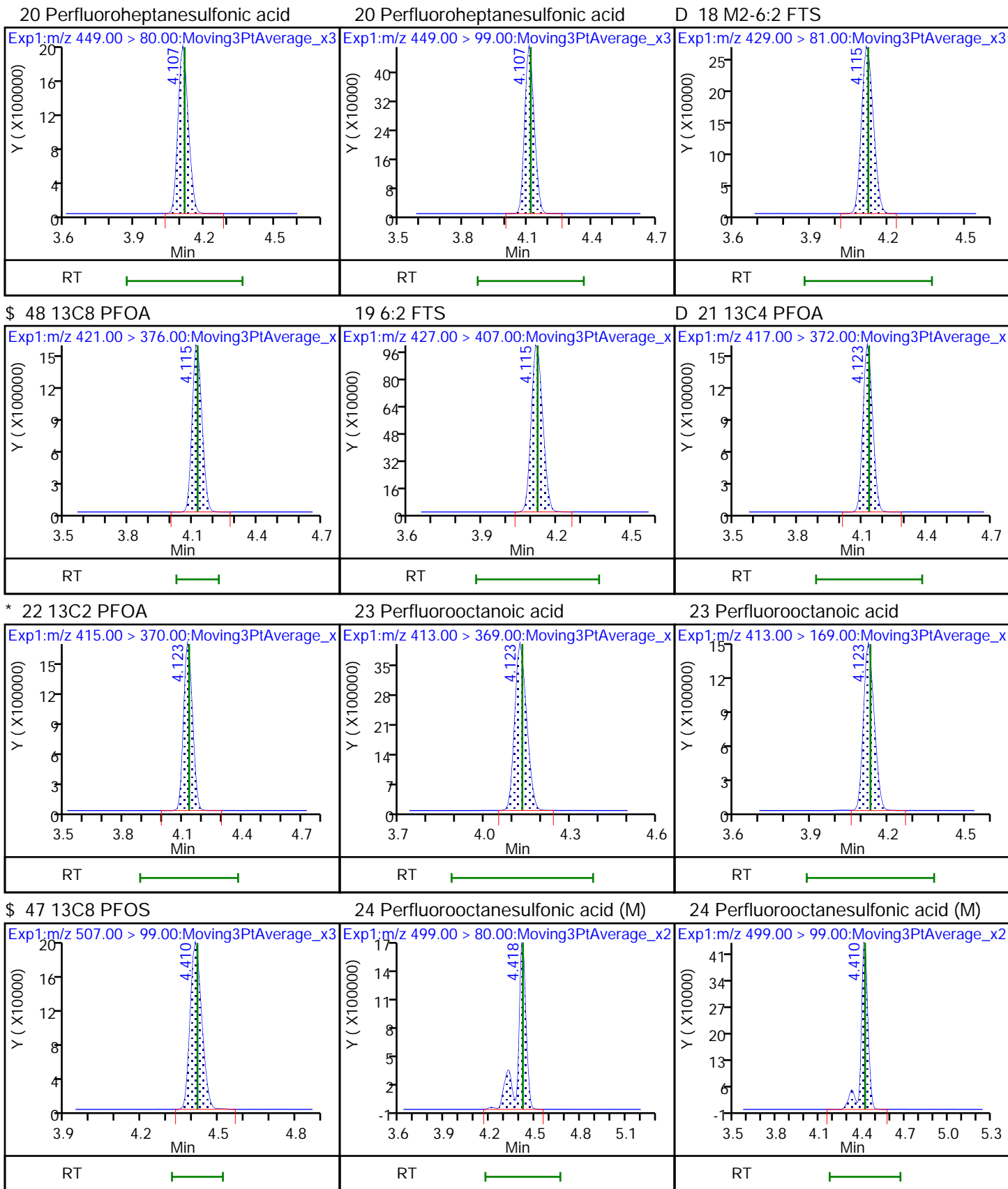
Dil. Factor: 1.0000

Method: PFC\_LCA

Limit Group: LC - PFC- ICAL



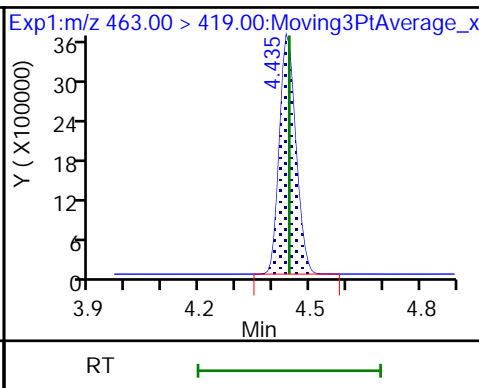
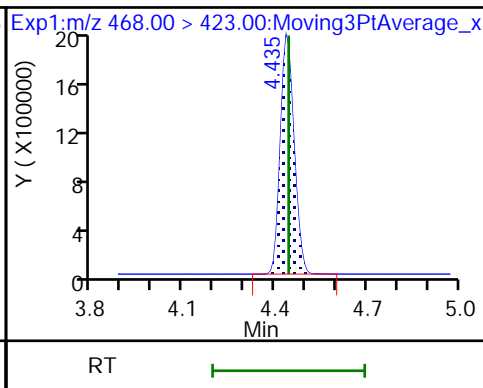
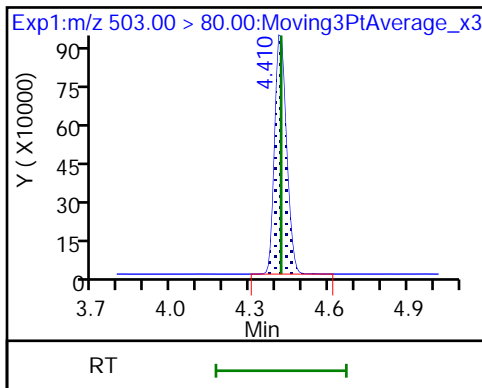




D 25 13C4 PFOS

D 27 13C5 PFNA

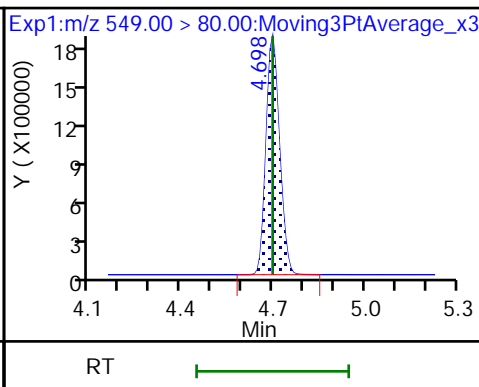
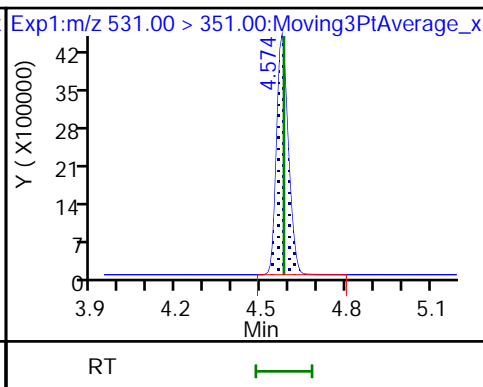
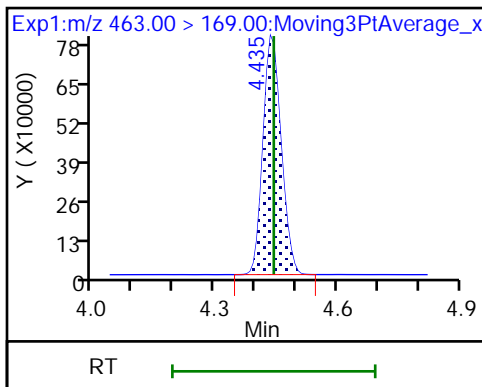
26 Perfluorononanoic acid



26 Perfluorononanoic acid

63 9CIFOS

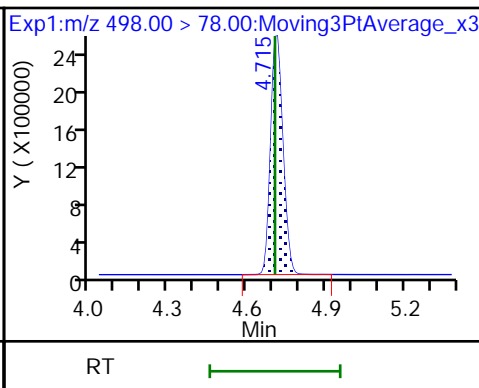
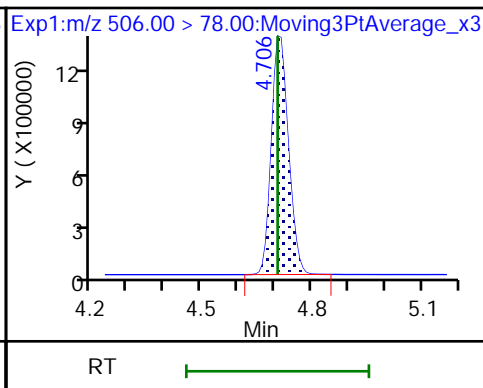
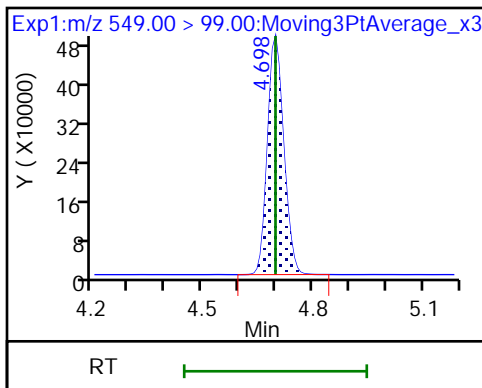
28 Perfluoronanesulfonic acid



28 Perfluoronanesulfonic acid

D 34 13C8 FOSA

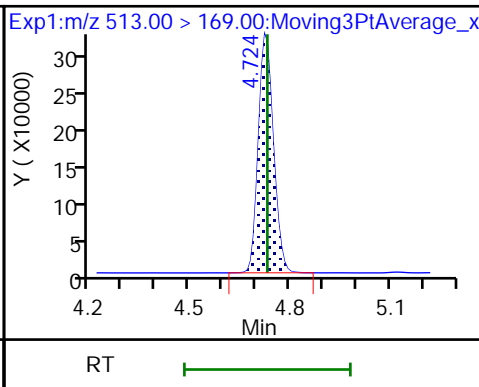
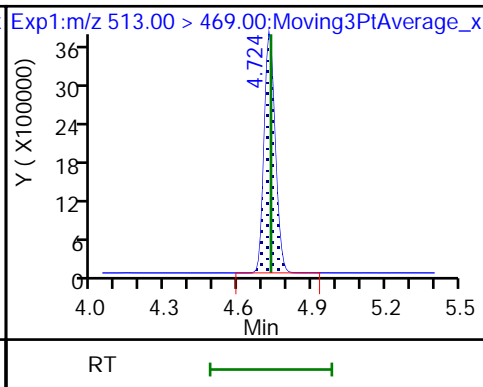
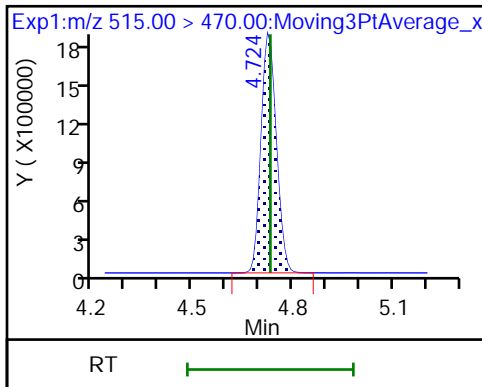
33 Perfluorooctanesulfonamide

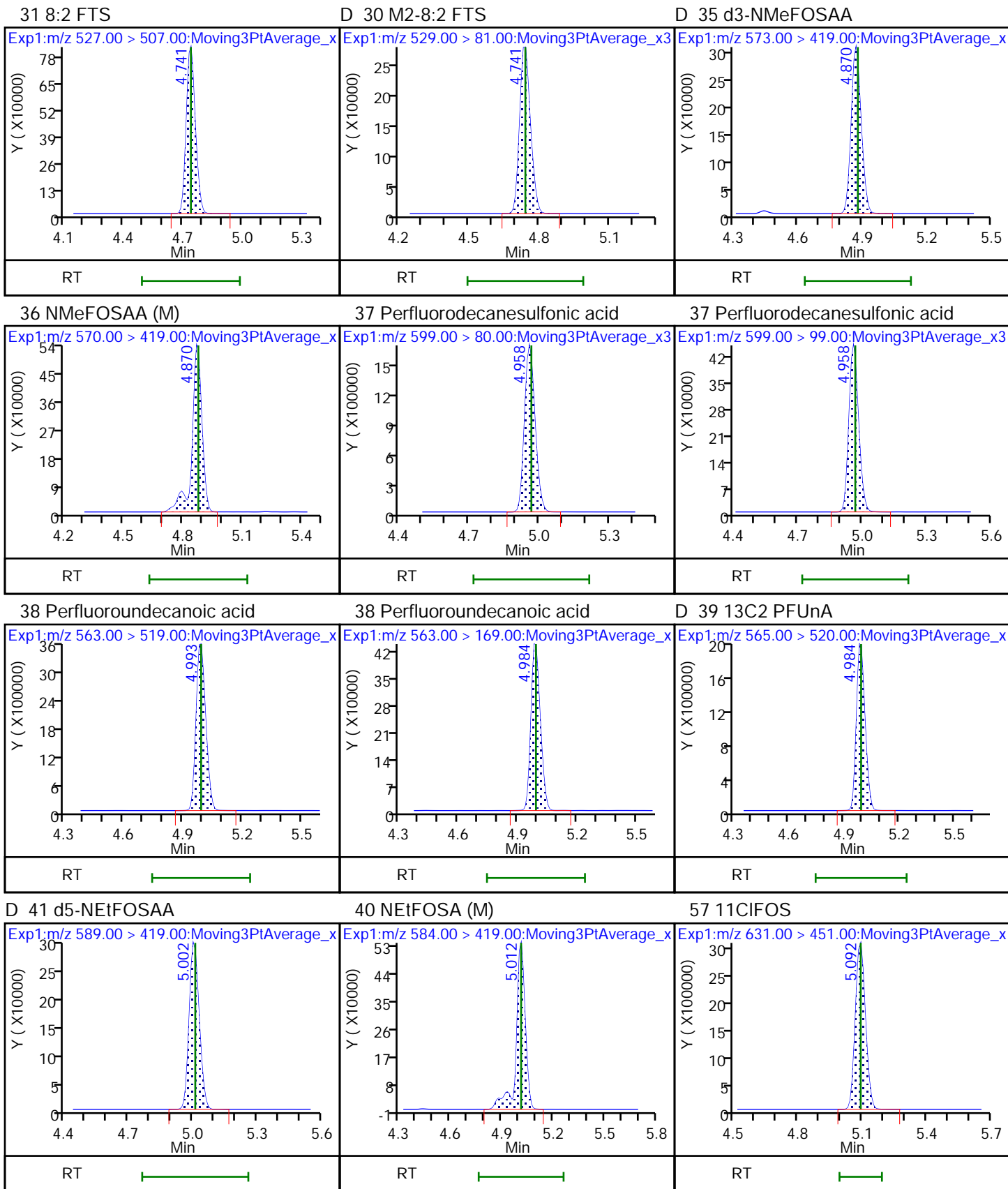


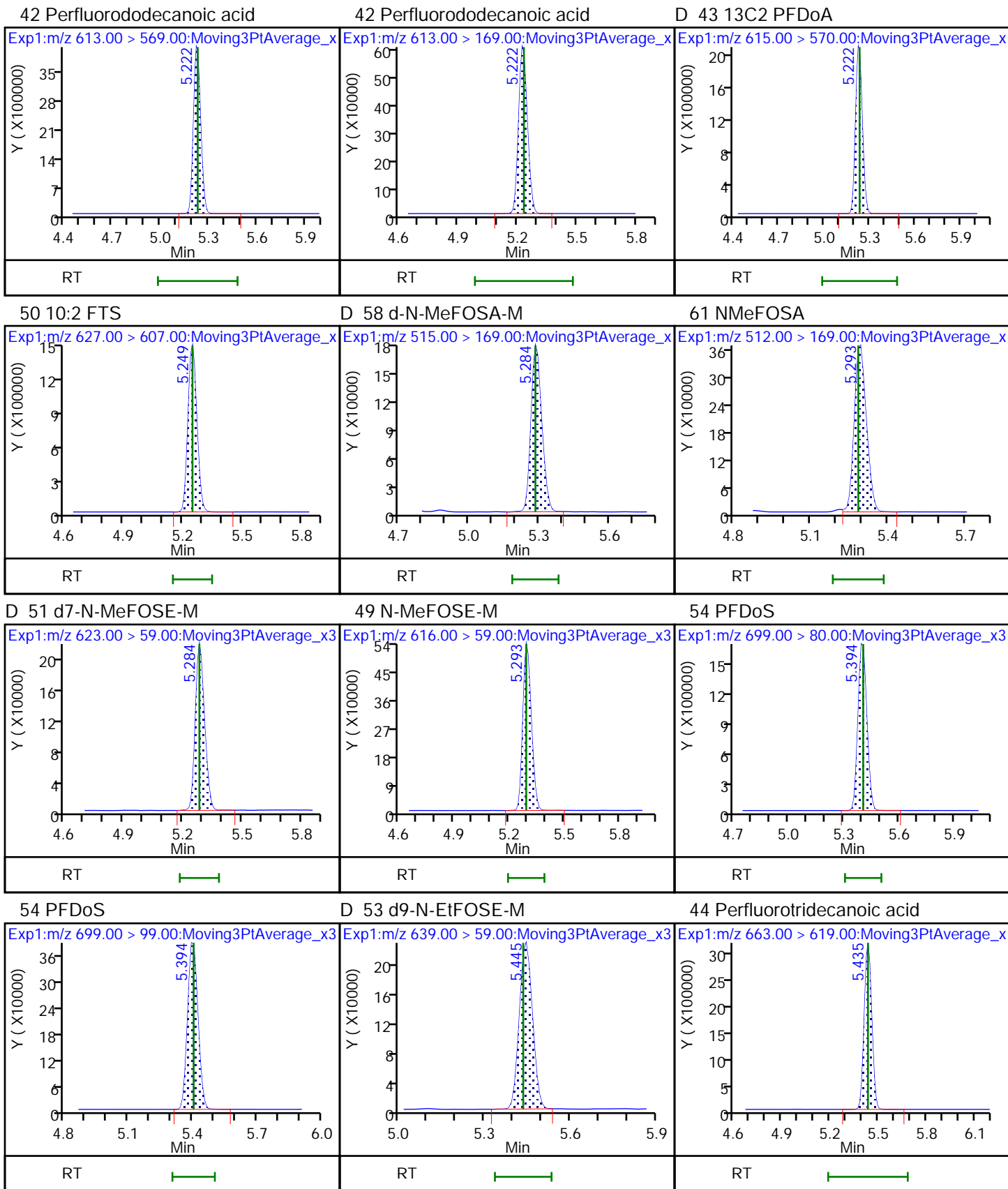
D 32 13C2 PFDA

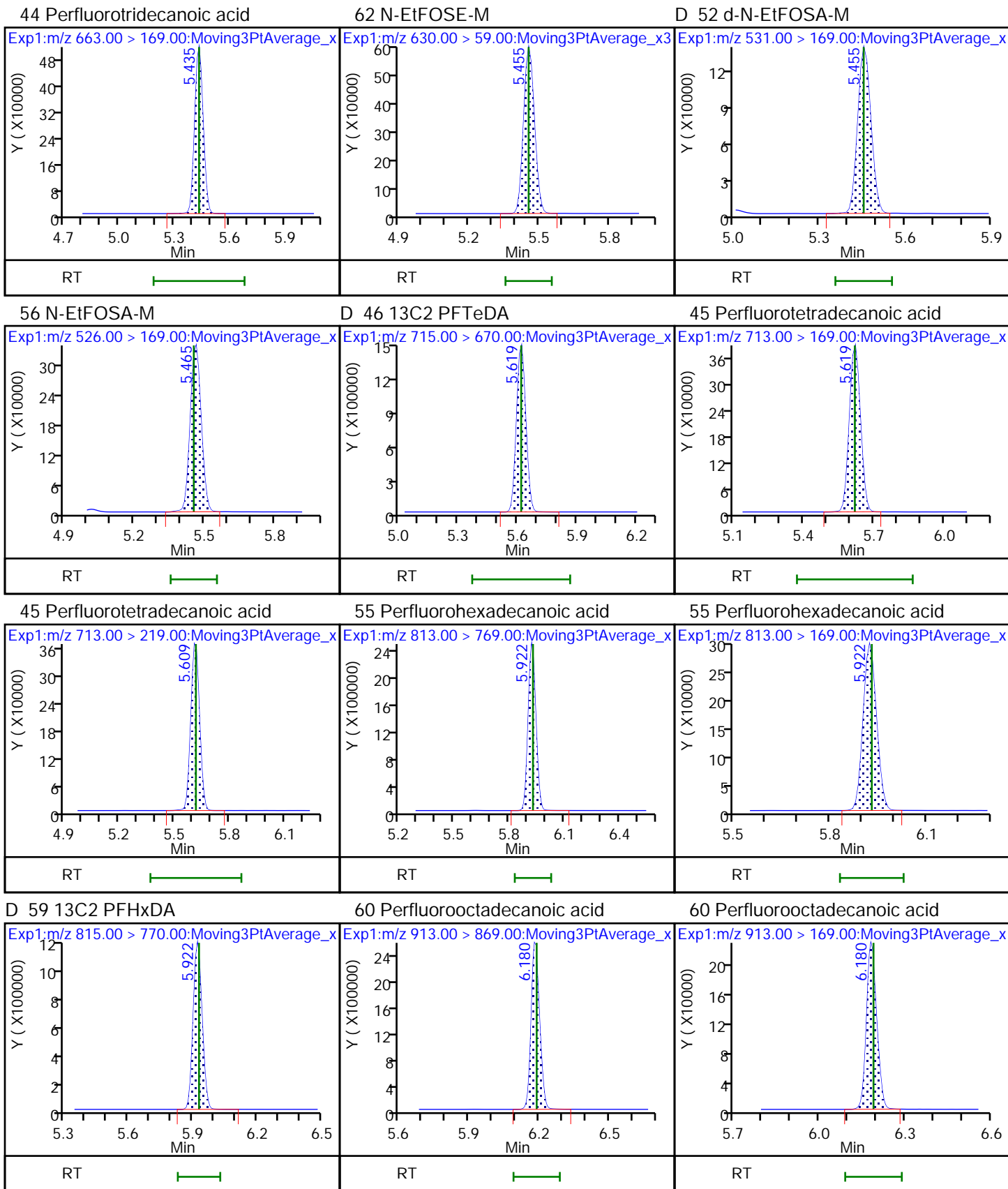
29 Perfluorodecanoic acid

29 Perfluorodecanoic acid













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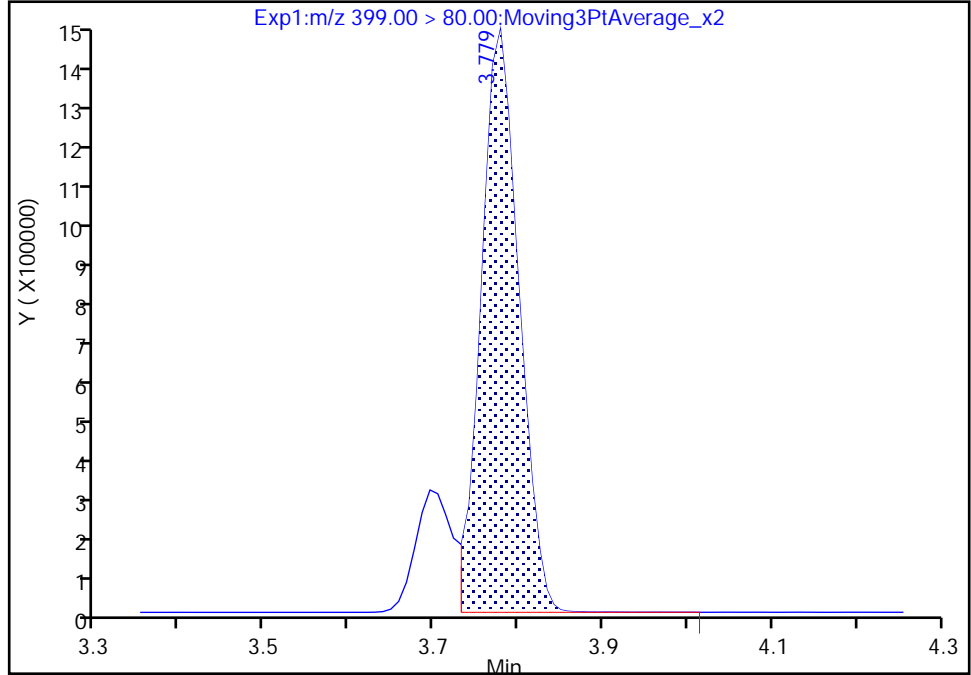
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Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

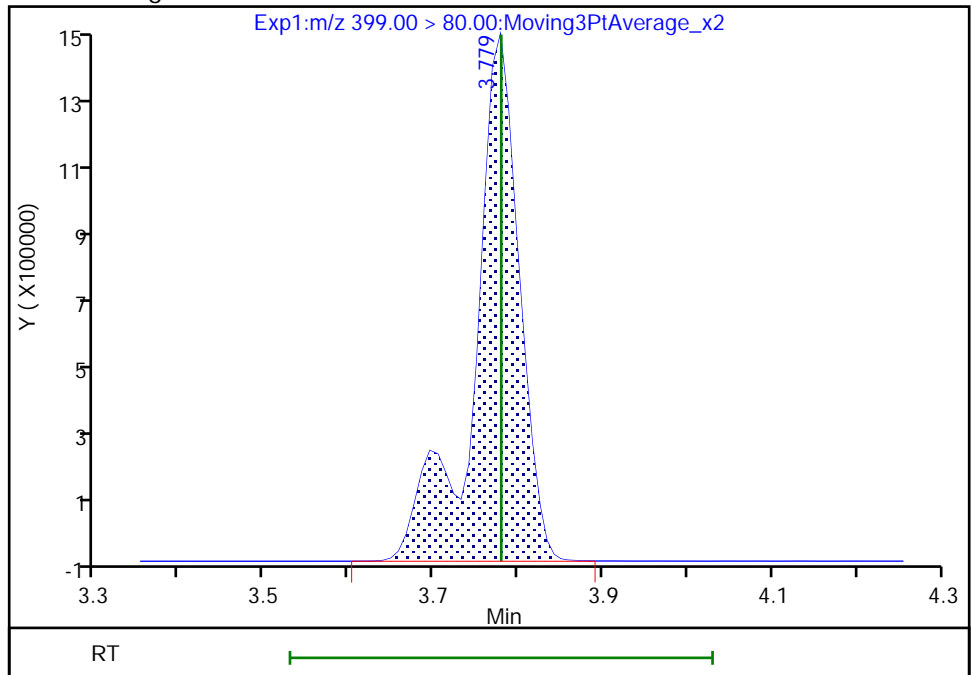
RT: 3.78  
Area: 4379305  
Amount: 1.804539  
Amount Units: ng/ml

Processing Integration Results



RT: 3.78  
Area: 5266094  
Amount: 2.169950  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:19:24  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

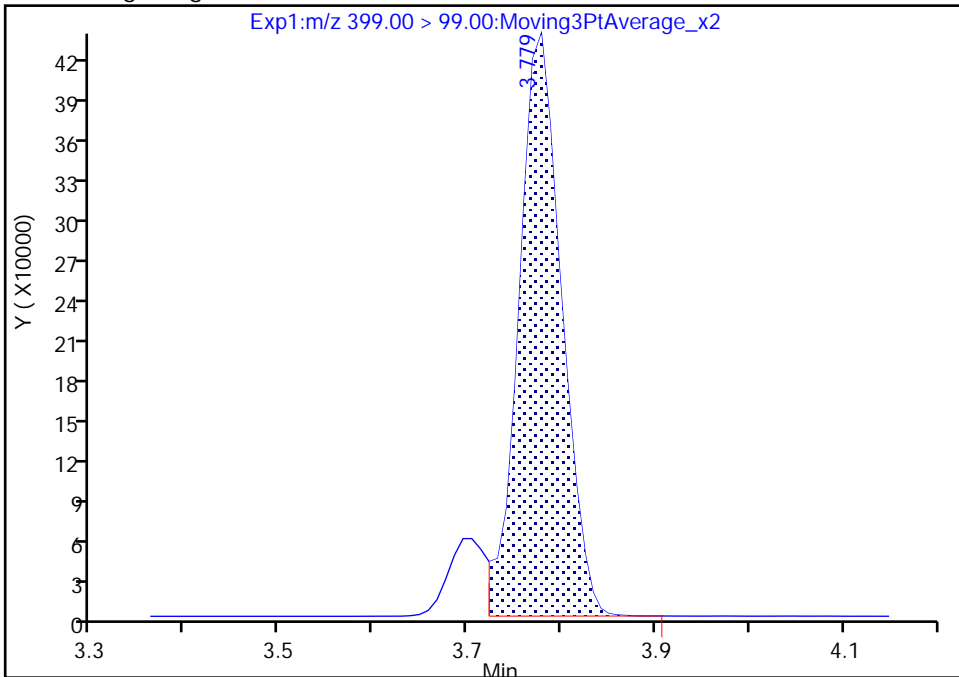
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Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

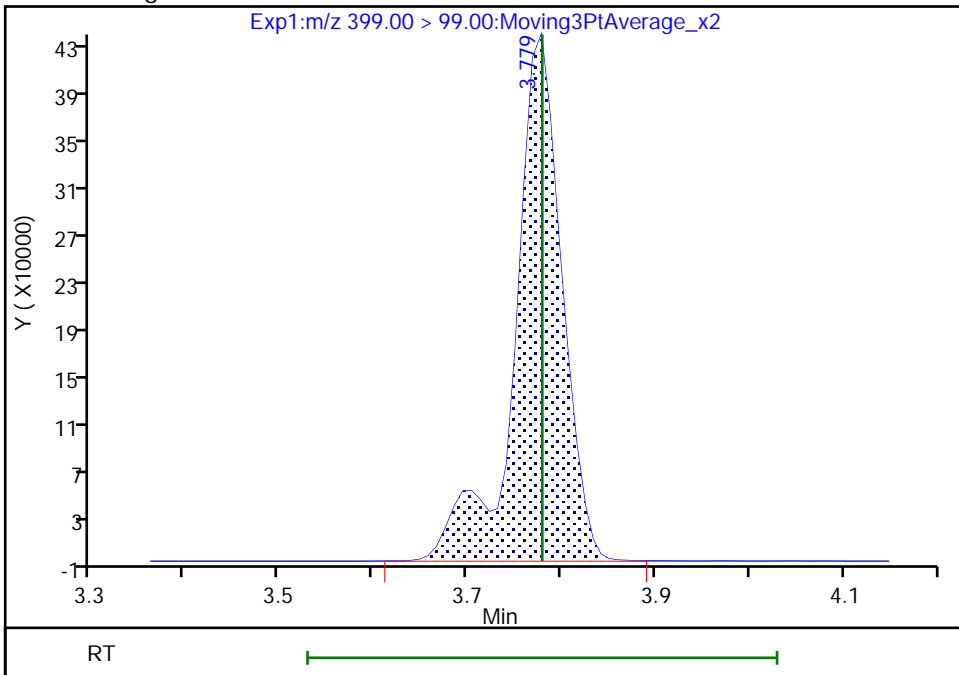
RT: 3.78  
Area: 1368664  
Amount: 1.804539  
Amount Units: ng/ml

Processing Integration Results



RT: 3.78  
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Amount: 2.169950  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:19:34

Audit Action: Manually Integrated

Audit Reason: Baseline  
Page 582 of 764

Eurofins TestAmerica, Knoxville

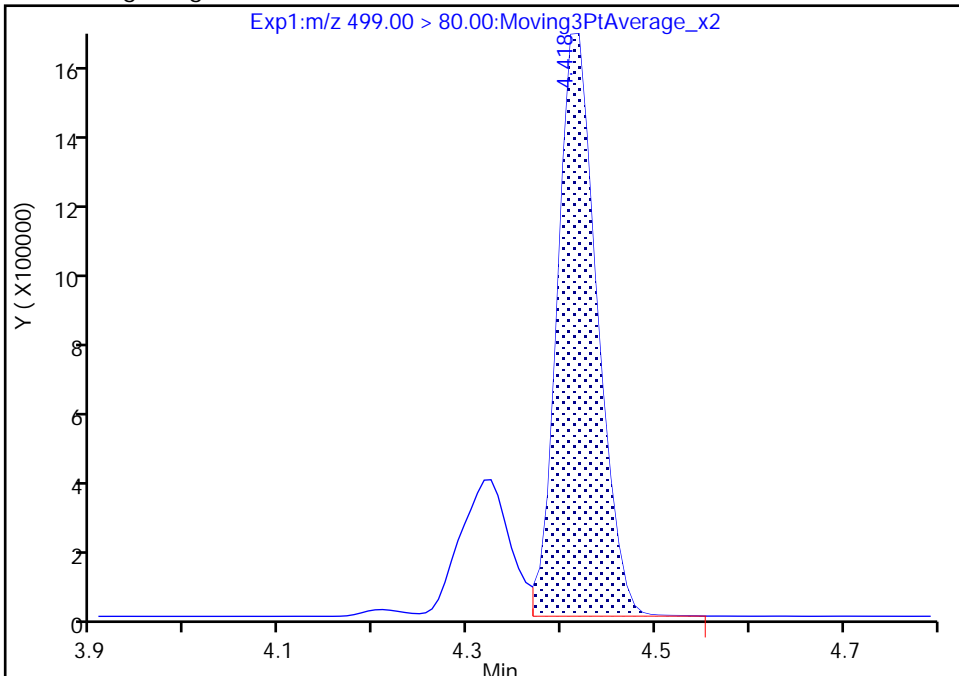
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Operator ID: Cochran, Bobby ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

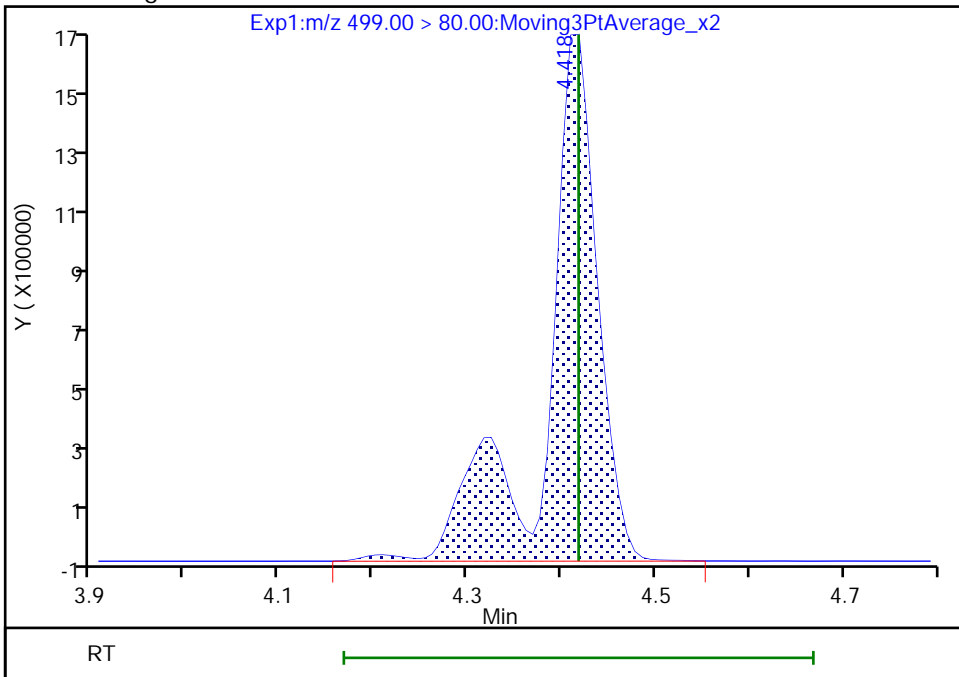
RT: 4.42  
Area: 4811506  
Amount: 1.792410  
Amount Units: ng/ml

Processing Integration Results



RT: 4.42  
Area: 6292007  
Amount: 2.343935  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:19:49  
Audit Action: Manually Integrated

Eurofins TestAmerica, Knoxville

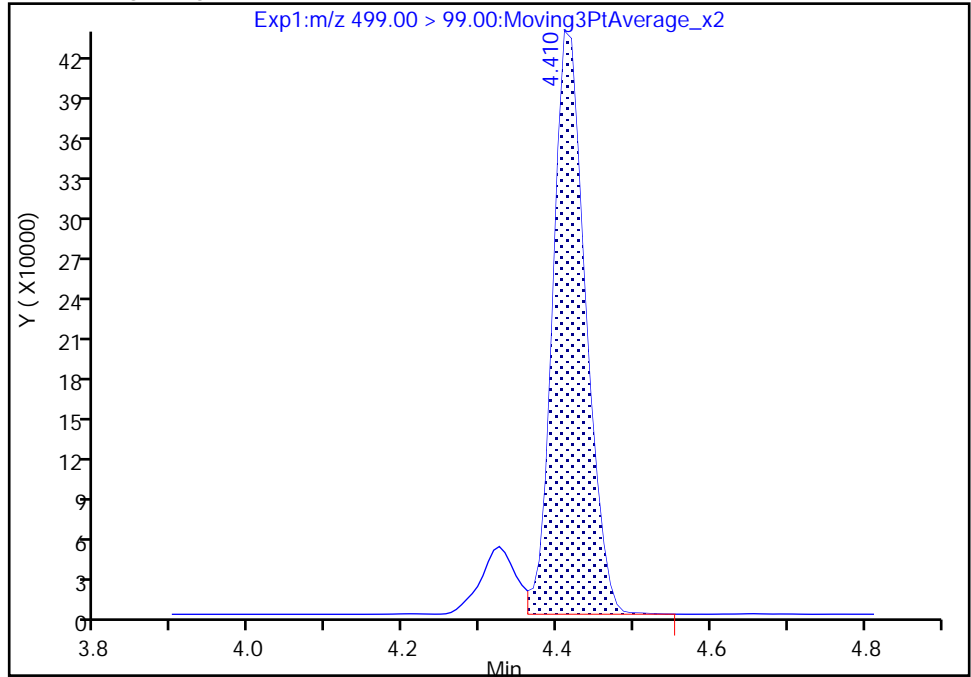
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Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

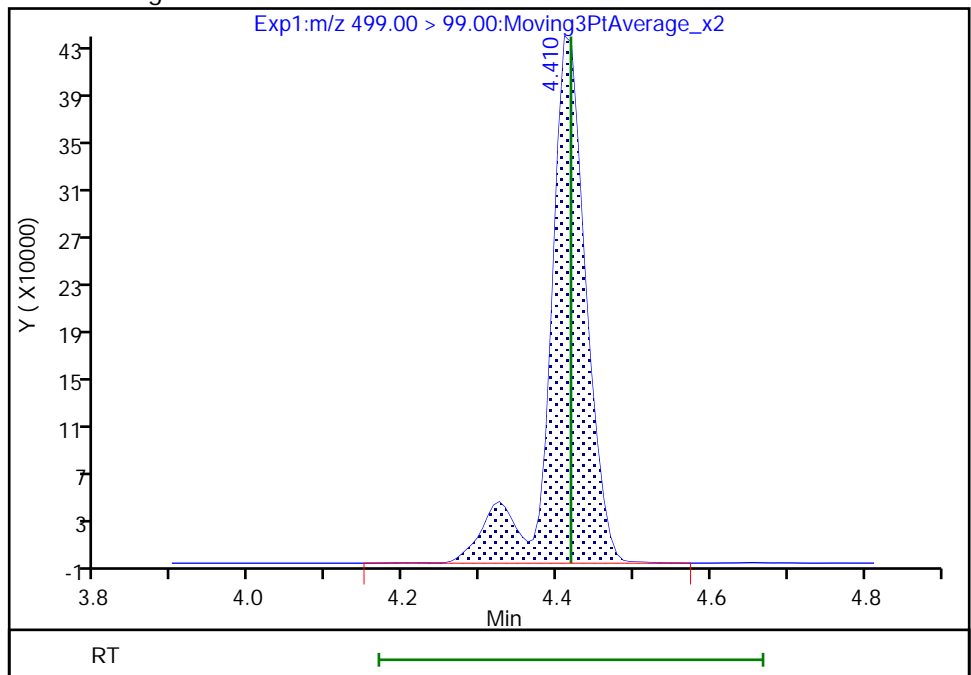
RT: 4.41  
Area: 1294791  
Amount: 1.792410  
Amount Units: ng/ml

Processing Integration Results



RT: 4.41  
Area: 1458292  
Amount: 2.343935  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:19:59

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

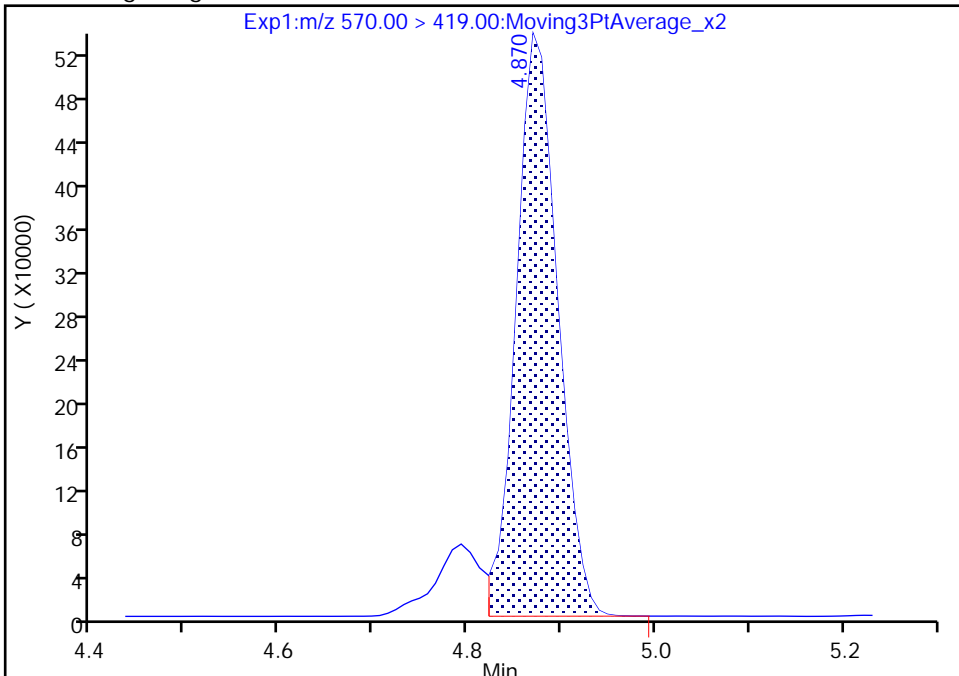
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Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

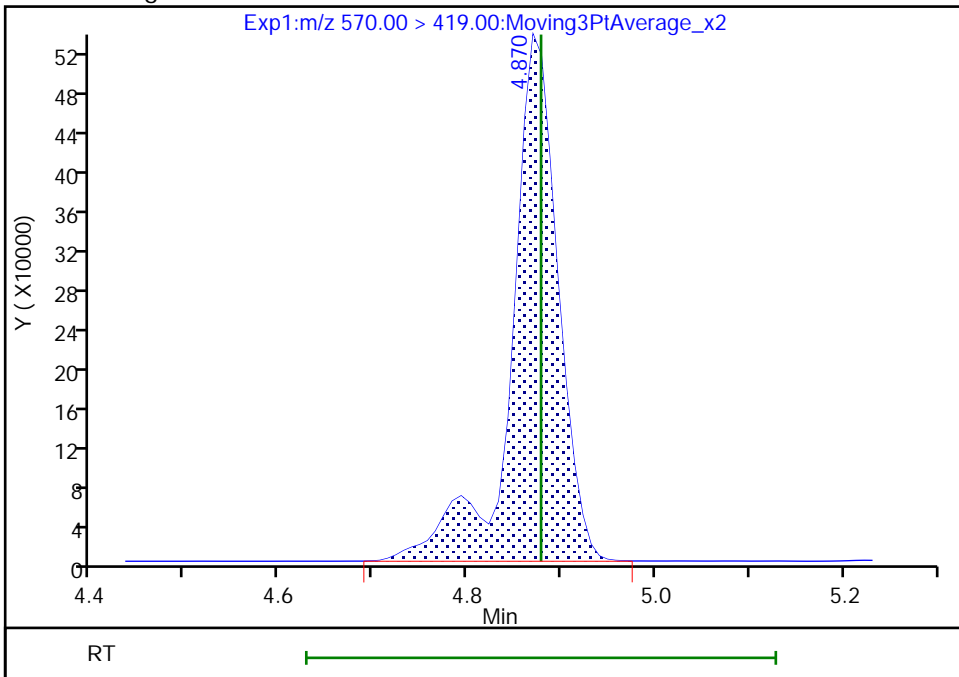
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Area: 1640108  
Amount: 2.108003  
Amount Units: ng/ml

Processing Integration Results



RT: 4.87  
Area: 1865237  
Amount: 2.396286  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:20:14  
Audit Action: Manually Integrated

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\\_019.d  
Injection Date: 13-Jan-2022 21:25:32 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 19  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

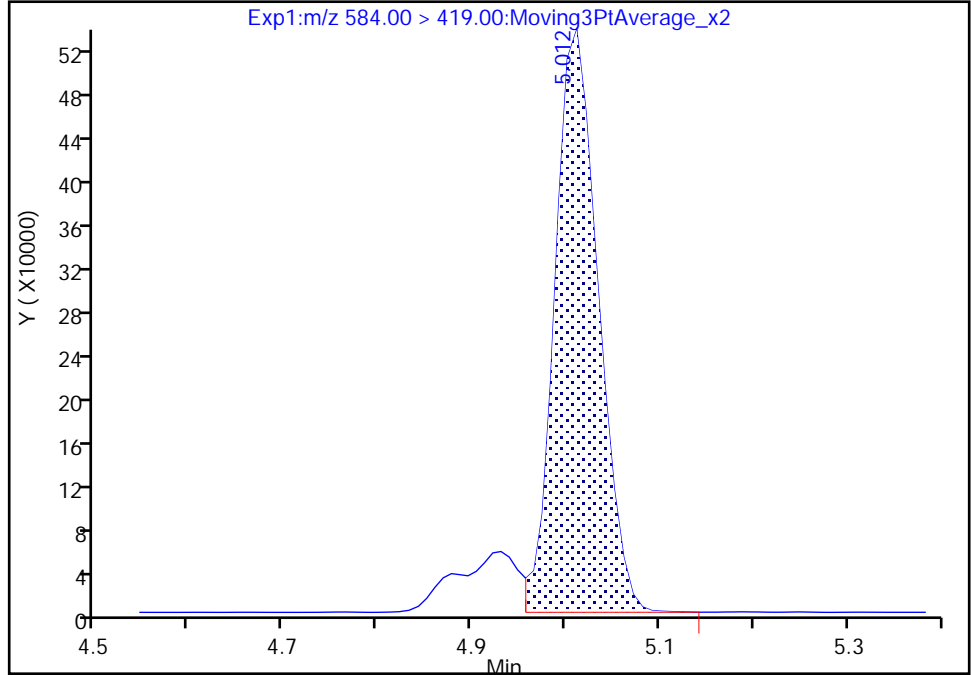
Worklist Smp#: 19

40 NETFOSA, CAS: 2991-50-6

Signal: 1

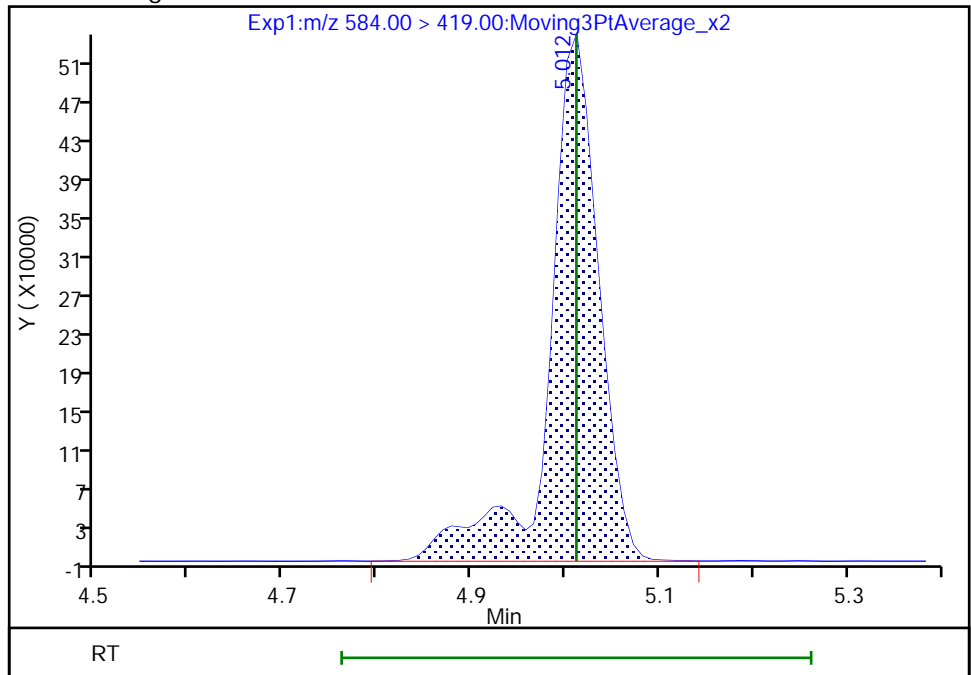
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Amount: 2.214157  
Amount Units: ng/ml

Processing Integration Results



RT: 5.01  
Area: 1981123  
Amount: 2.539223  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:20:29  
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-57893/30 Calibration Date: 01/13/2022 23:02  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 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	0.7844	0.7346		0.936	1.00	-6.4	40.0
Perfluoropentanoic acid (PFPeA)	AveID	0.9519	0.9284		0.975	1.00	-2.5	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.097	1.079		0.869	0.884	-1.7	40.0
4:2 FTS	AveID	2.252	2.244		0.931	0.934	-0.4	40.0
Perfluorohexanoic acid (PFHxA)	AveID	0.8680	0.8049		0.927	1.00	-7.3	40.0
Perfluoropentanesulfonic acid (PFPeS)	AveID	0.9713	1.005		0.971	0.938	3.5	40.0
HFPO-DA	AveID	1.352	1.287		0.951	1.00	-4.9	40.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.377	1.355		0.895	0.910	-1.6	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.047	1.021		0.976	1.00	-2.4	40.0
DONA	AveID	2.630	2.599		0.931	0.942	-1.2	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	0.9541	0.9252		0.923	0.952	-3.0	40.0
6:2 FTS	L2ID		1.847		0.975	0.948	2.9	40.0
Perfluorooctanoic acid (PFOA)	AveID	1.147	1.131		0.986	1.00	-1.4	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.099	1.049		0.886	0.928	-4.6	40.0
Perfluorononanoic acid (PFNA)	Q2ID		0.8705		1.02	1.00	2.3	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	Q2ID		2.153		0.937	0.932	0.5	50.0
Perfluorononanesulfonic acid (PFNS)	AveID	0.9748	0.9325		0.918	0.960	-4.3	40.0
Perfluorooctanesulfonamide (FOSA)	AveID	0.9459	0.9395		0.993	1.00	-0.7	40.0
Perfluorodecanoic acid (PFDA)	AveID	0.9645	0.9306		0.965	1.00	-3.5	40.0
8:2 FTS	AveID	1.415	1.491		1.01	0.958	5.4	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	QuaIF		0.9228		0.950	1.00	-5.0	40.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		0.8633		0.897	0.964	-7.0	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.9695	0.9468		0.977	1.00	-2.3	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	Q2ID		0.9281		0.934	1.00	-6.6	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.672	1.662		0.936	0.942	-0.6	40.0
Perfluorododecanoic acid (PFDoA)	Q2ID		0.996		0.976	1.00	-2.4	40.0
10:2 FTS	AveID	2.276	2.366		1.00	0.964	3.9	40.0
NMeFOSA	Q2ID		1.015		1.00	1.00	0.3	40.0
2-(N-methylperfluoro-1-octanesulfonamido) ethanol	Q2ID		1.062		0.908	1.00	-9.2	40.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.9166	0.8969		0.947	0.968	-2.1	40.0



FORM VII  
PFAS CONTINUING CALIBRATION DATA

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 140-57893/30 Calibration Date: 01/13/2022 23:02  
 Instrument ID: LCA Calib Start Date: 01/09/2022 10:35  
 GC Column: GeminiC18 3x100 ID: 3.00 (mm) Calib End Date: 01/09/2022 11:28  
 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)	AveID	0.8292	0.8142		0.982	1.00	-1.8	40.0
2-(N-ethylperfluoro-1-octanesulfonamido) ethanol	AveID	1.328	1.250		0.941	1.00	-5.9	40.0
N-ethylperfluoro-1-octanesulfonamide	AveID	1.195	1.244		1.04	1.00	4.1	40.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1344	0.1234		0.919	1.00	-8.1	40.0
Perfluorohexadecanoic acid	Q2ID		1.081		1.01	1.00	0.8	40.0
Perfluorooctadecanoic acid	AveID	0.9844	0.9640		0.979	1.00	-2.1	40.0
13C4 PFBA	Ave	1.142	1.175		1.29	1.25	2.9	50.0
13C5 PFPeA	Ave	0.8865	0.9099		1.28	1.25	2.6	50.0
13C3 PFBS	Ave	0.5913	0.5952		1.17	1.16	0.7	50.0
M2-4:2 FTS	Ave	0.1820	0.1849		1.19	1.17	1.6	50.0
13C2 PFHxA	Ave	0.9479	0.9600		1.27	1.25	1.3	50.0
13C3 HFPO-DA	Ave	0.4556	0.4706		1.29	1.25	3.3	50.0
18O2 PFHxS	Ave	0.3946	0.4024		1.21	1.18	2.0	50.0
13C4 PFHpA	Ave	0.9067	0.9530		1.31	1.25	5.1	50.0
13C4 PFOA	Ave	0.9376	0.9467		1.26	1.25	1.0	50.0
M2-6:2 FTS	Ave	0.1835	0.1625		1.05	1.19	-11.5	50.0
13C4 PFOS	Ave	0.5681	0.5866		1.23	1.20	3.2	50.0
13C5 PFNA	Ave	1.234	1.217		1.23	1.25	-1.4	50.0
13C8 FOSA	Ave	0.7682	0.8065		1.31	1.25	5.0	50.0
13C2 PFDA	Ave	1.191	1.240		1.30	1.25	4.1	50.0
M2-8:2 FTS	Ave	0.2070	0.1813		1.05	1.20	-12.4	50.0
d3-NMeFOSAA	Ave	0.1401	0.1984		1.77	1.25	41.6	50.0
13C2 PFUnA	Ave	1.189	1.235		1.30	1.25	3.9	50.0
d5-NEtFOSAA	Ave	0.1537	0.2028		1.65	1.25	31.9	50.0
13C2 PFDoA	Ave	1.247	1.232		1.24	1.25	-1.2	50.0
d7-N-MeFOSE-M	Ave	0.1499	0.1437		1.20	1.25	-4.1	50.0
d-N-MeFOSA-M	Ave	0.1069	0.1045		1.22	1.25	-2.2	50.0
d9-N-EtFOSE-M	Ave	0.1504	0.1493		1.24	1.25	-0.7	50.0
d-N-EtFOSA-M	Ave	0.0883	0.0847		1.20	1.25	-4.0	50.0
13C2 PFTeDA	Ave	0.9508	0.9684		1.27	1.25	1.9	50.0
13C2 PFHxDA	Ave	0.6444	0.6359		1.23	1.25	-1.3	50.0
13C8 PFOA	AveID	0.999	1.055		1.32	1.25	5.5	50.0
13C8 PFOS	AveID	0.2220	0.2123		1.14	1.20	-4.4	50.0

Eurofins TestAmerica, Knoxville  
 Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\_030.d  
 Lims ID: CCV  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 13-Jan-2022 23:02:27 ALS Bottle#: 30 Worklist Smp#: 30  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022248-030 ccv  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Sublist: chrom-PFC\_LCA\*sub16

Method: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:53:25 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d

Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 09:24:42

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										
212.90 > 169.00	2.790	2.796	-0.006	1.000	3697517	0.9364		93.6	868	
D 1 13C4 PFBA										
217.00 > 172.00	2.790	2.796	-0.006	0.678	6292089	1.29		103	15542	
D 3 13C5 PFPeA										
267.90 > 223.00	3.099	3.107	-0.008	0.753	4874396	1.28		103	10715	
4 Perfluoropentanoic acid										
262.90 > 219.00	3.099	3.107	-0.008	1.000	3620382	0.9753		97.5	1273	
D 6 13C3 PFBS										
301.90 > 80.00	3.115	3.123	-0.008	0.757	2965473	1.17		101	12591	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	3.115	3.123	-0.008	1.000	2432543	0.8692	Target=2.65	98.3	5119	
298.90 > 99.00	3.115	3.123	-0.008	1.000	904333		2.69(1.32-3.97)		3298	
D 8 M2-4:2 FTS										
329.00 > 81.00	3.402	3.413	-0.011	0.827	925366	1.19		102	1804	
7 4:2 FTS										
327.00 > 307.00	3.402	3.413	-0.011	1.000	1661312	0.9307		99.6	9501	
10 Perfluorohexanoic acid										
313.00 > 269.00	3.432	3.443	-0.011	1.000	3311617	0.9273	Target=11.80	92.7	1584	
313.00 > 119.00	3.432	3.443	-0.011	1.000	266595		12.42(5.90-17.70)		369	
11 Perfluoropentanesulfonic acid										
349.00 > 80.00	3.432	3.443	-0.011	1.102	2405505	0.9708	Target=3.44	104	7111	
349.00 > 99.00	3.432	3.443	-0.011	1.102	675318		3.56(1.72-5.16)		4998	
D 9 13C2 PFHxA										
315.00 > 270.00	3.432	3.443	-0.011	0.834	5142860	1.27		101	9425	
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.538	3.548	-0.010	0.860	2521291	1.29		103	4334	

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	3.538	3.548	-0.010	1.000	2594923	0.9512		95.1	2854	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.769	3.779	-0.010	1.000	2126386	0.8952	Target=3.40	98.4	4688	M
399.00 > 99.00	3.769	3.779	-0.010	1.000	596332		3.57(1.70-5.10)		3672	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.769	3.779	-0.010	0.916	2039574	1.21		102	5410	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.779	3.789	-0.010	1.000	4171664	0.9758	Target=3.29	97.6	2835	
363.00 > 169.00	3.779	3.789	-0.010	1.000	1302331		3.20(1.65-4.94)		2458	
D 14 13C4 PFHpA										
367.00 > 322.00	3.779	3.789	-0.010	0.918	5105521	1.31		105	7590	
68 DONA										
377.00 > 251.00	3.816	3.825	-0.009	0.865	6155562	0.9310	Target=1.82	98.8	9086	
377.00 > 85.00	3.816	3.825	-0.009	0.865	3533962		1.74(0.91-2.74)		167	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.098	4.115	-0.017	0.929	2214212	0.9232	Target=3.92	97.0	6210	
449.00 > 99.00	4.098	4.115	-0.017	0.929	543300		4.08(1.96-5.87)		3261	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.115	4.123	-0.008	1.000	826865	1.05		88.5	3277	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.115	4.123	-0.008	1.000	5348287	1.32		106	9124	
19 6:2 FTS										
427.00 > 407.00	4.115	4.123	-0.008	1.000	1219352	0.9753		103	4803	
D 21 13C4 PFOA										
417.00 > 372.00	4.115	4.131	-0.016	1.000	5071683	1.26		101	7892	
* 22 13C2 PFOA										
415.00 > 370.00	4.115	4.131	-0.016		5357206	1.25			7518	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.115	4.131	-0.016	1.000	4590337	0.9860	Target=2.59	98.6	2919	
413.00 > 169.00	4.115	4.131	-0.016	1.000	1735370		2.65(1.30-3.89)		2454	
\$ 47 13C8 PFOS										
507.00 > 99.00	4.402	4.418	-0.016	0.998	637694	1.14		95.6	3321	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.411	4.418	-0.007	1.000	2446137	0.8856	Target=4.65	95.4	3972	M
499.00 > 99.00	4.411	4.418	-0.007	1.000	553124		4.42(2.32-6.97)		2521	M
D 25 13C4 PFOS										
503.00 > 80.00	4.411	4.418	-0.007	1.072	3004101	1.23		103	6089	
D 27 13C5 PFNA										
468.00 > 423.00	4.428	4.444	-0.016	1.076	6519155	1.23		98.6	11070	
26 Perfluorononanoic acid										
463.00 > 419.00	4.428	4.444	-0.016	1.000	4539868	1.02	Target=4.65	102	4121	
463.00 > 169.00	4.428	4.444	-0.016	1.000	965977		4.70(2.32-6.97)		1923	
63 9CIFOS										
531.00 > 351.00	4.567	4.580	-0.013	1.035	5043744	0.9368		101	8717	

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	4.689	4.697	-0.008	1.063	2250483	0.9183	Target=4.06	95.7	5290	
549.00 > 99.00	4.689	4.697	-0.008	1.063	559734		4.02(2.03-6.09)		3517	
D 34 13C8 FOSA										
506.00 > 78.00	4.706	4.706	0.0	1.144	4320468	1.31		105	4246	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.706	4.706	0.0	1.000	3247238	0.99		99.3	5002	
D 32 13C2 PFDA										
515.00 > 470.00	4.715	4.732	-0.017	1.146	6642704	1.30		104	10600	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.715	4.732	-0.017	1.000	4945475	0.9649	Target=11.30	96.5	4483	
513.00 > 169.00	4.724	4.732	-0.008	1.002	428549		11.54(5.65-16.95)		700	
31 8:2 FTS										
527.00 > 507.00	4.732	4.740	-0.008	1.000	1109528	1.01		105	4399	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.732	4.740	-0.008	1.150	930224	1.05		87.6	1645	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.870	4.878	-0.008	1.183	1062743	1.77		142	1558	
36 NMeFOSAA										
570.00 > 419.00	4.870	4.878	-0.008	1.000	784530	0.9495		95.0	1920	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.949	4.966	-0.017	1.122	2092034	0.8966	Target=3.79	93.0	7374	
599.00 > 99.00	4.949	4.966	-0.017	1.122	556525		3.76(1.90-5.69)		4003	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.984	4.992	-0.008	1.000	5011874	0.9765	Target=8.45	97.7	4531	
563.00 > 169.00	4.984	4.992	-0.008	1.000	565708		8.86(4.22-12.67)		2362	
D 39 13C2 PFUnA										
565.00 > 520.00	4.984	4.992	-0.008	1.211	6617006	1.30		104	9222	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.002	5.012	-0.010	1.215	1086329	1.65		132	4630	
40 NEtFOSA										
584.00 > 419.00	5.002	5.012	-0.010	1.000	806555	0.9343		93.4	1873	M
57 11C1FOS										
631.00 > 451.00	5.082	5.092	-0.010	1.152	3934937	0.9359		99.4	9678	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.222	5.231	-0.009	1.000	5259504	0.9755	Target=6.99	97.6	4714	
613.00 > 169.00	5.222	5.231	-0.009	1.000	747949		7.03(3.50-10.49)		1779	
D 43 13C2 PFDaA										
615.00 > 570.00	5.222	5.231	-0.009	1.269	6602434	1.24		98.8	9388	
50 10:2 FTS										
627.00 > 607.00	5.240	5.248	-0.008	1.107	1771399	1.00		104	6345	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.284	5.283	0.001	1.284	559648	1.22		97.8	55.4	
61 NMeFOSA										
512.00 > 169.00	5.284	5.283	0.001	1.000	454402	1.00		100	596	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.284	5.283	0.001	1.284	769979	1.20		95.9	751	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
49 N-MeFOSE-M										
616.00 > 59.00	5.293	5.292	0.0	1.002	653977	0.9076		90.8	1038	
54 PFDoS										
699.00 > 80.00	5.394	5.404	-0.010	1.223	2182548	0.9472	Target=4.24	97.9	5626	
699.00 > 99.00	5.394	5.404	-0.010	1.223	493979		4.42(2.12-6.35)		2558	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.435	5.434	0.001	1.321	799881	1.24		99.3	450	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.425	5.434	-0.009	1.039	4300717	0.9820	Target=6.20	98.2	4032	
663.00 > 169.00	5.425	5.434	-0.009	1.039	704626		6.10(3.10-9.30)		2591	
62 N-EtFOSE-M										
630.00 > 59.00	5.455	5.454	0.001	1.004	799638	0.9410		94.1	807	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.455	5.454	0.001	1.325	453807	1.20		96.0	679	
56 N-EtFOSA-M										
526.00 > 169.00	5.464	5.454	0.010	1.002	451552	1.04		104	493	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.609	5.617	-0.008	1.363	5187781	1.27		102	10974	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.609	5.617	-0.008	1.000	512338	0.9186	Target=1.05	91.9	3351	
713.00 > 219.00	5.609	5.617	-0.008	1.000	485682		1.05(0.53-1.58)		3771	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.913	5.929	-0.016	1.000	2947127	1.01	Target=8.09	101	3656	
813.00 > 169.00	5.913	5.929	-0.016	1.000	347020		8.49(4.05-12.14)		1538	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.913	5.929	-0.016	1.437	3406389	1.23		98.7	6384	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.175	6.189	-0.014	1.044	2627059	0.9793	Target=11.53	97.9	3365	
913.00 > 169.00	6.175	6.189	-0.014	1.044	225805		11.63(5.77-17.30)		1361	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

**Reagents:**

63L4PFC2T3\_00001

Amount Added: 1.00

Units: mL

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\\_030.d

Injection Date: 13-Jan-2022 23:02:27

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

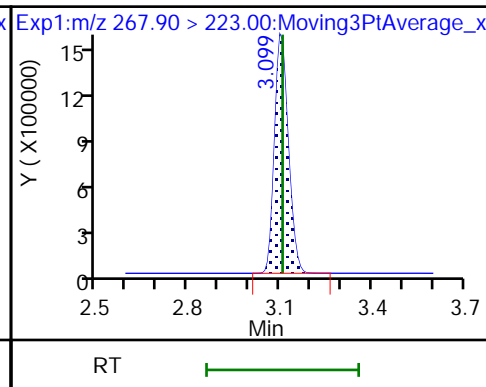
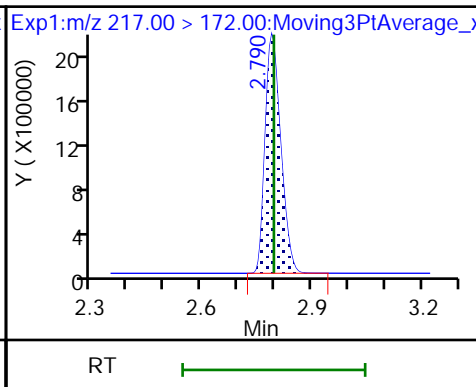
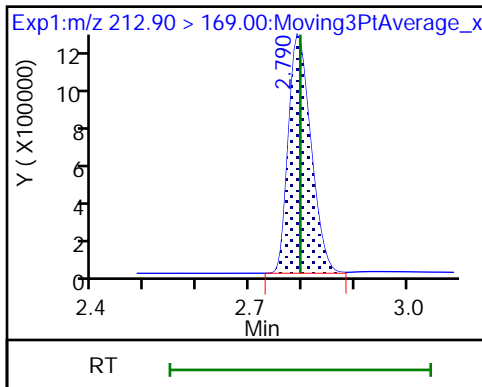
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

2 Perfluorobutanoic acid

D 1 13C4 PFBA

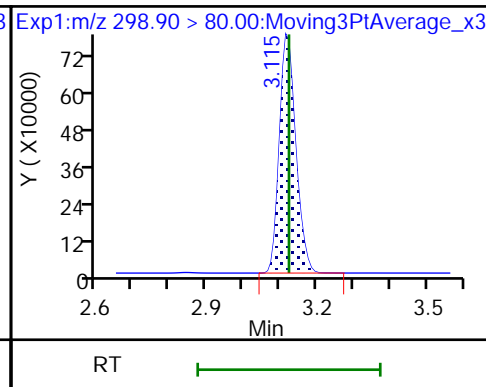
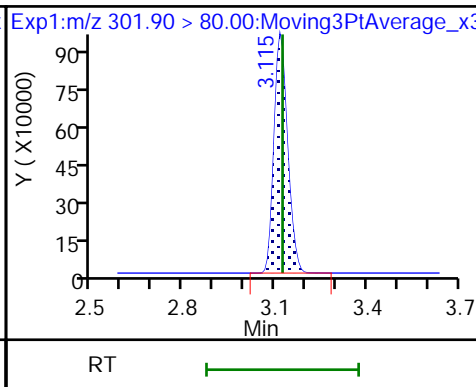
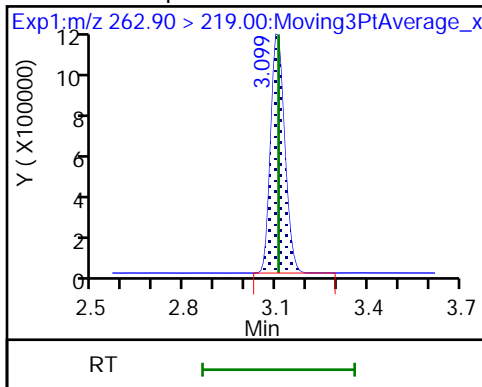
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

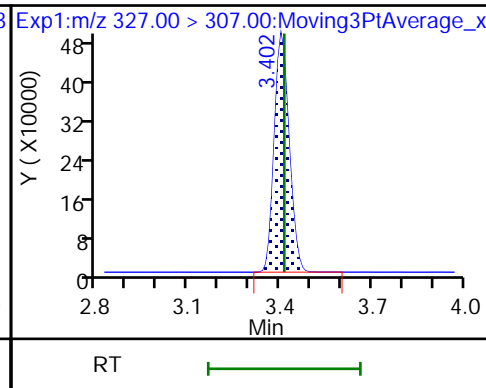
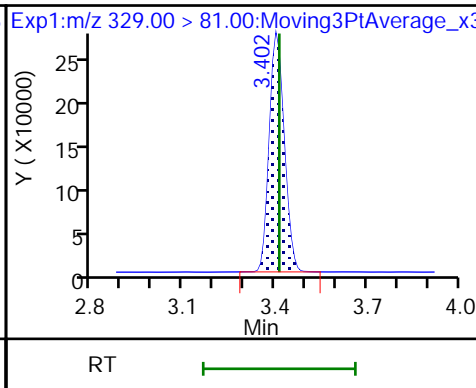
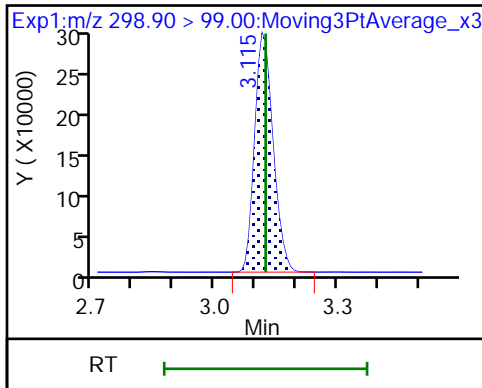
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

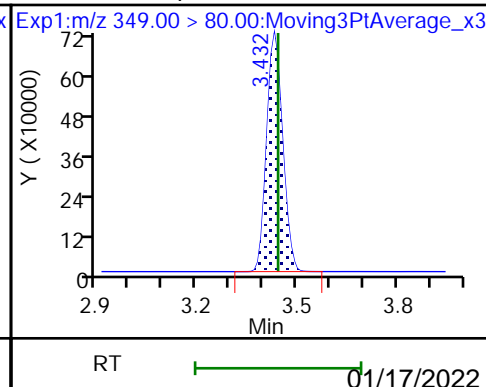
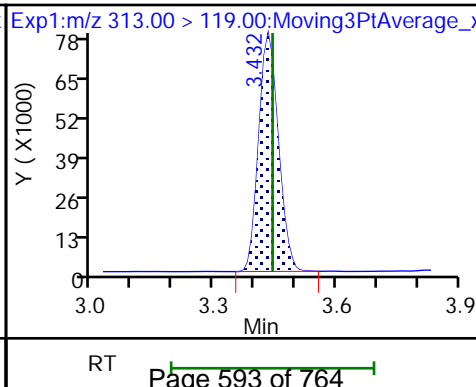
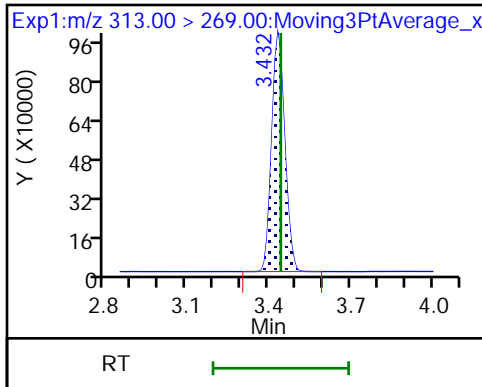
7 4:2 FTS

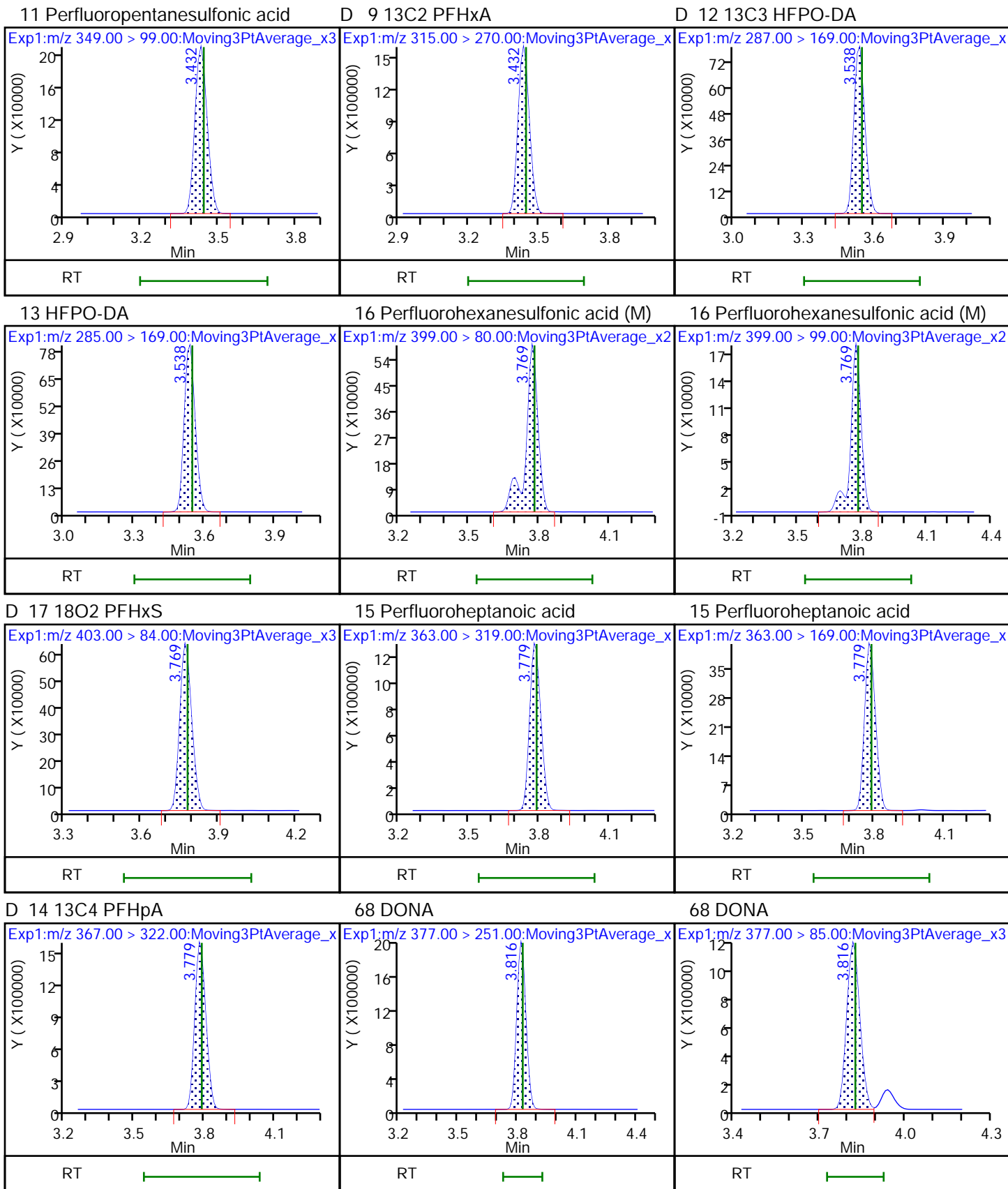


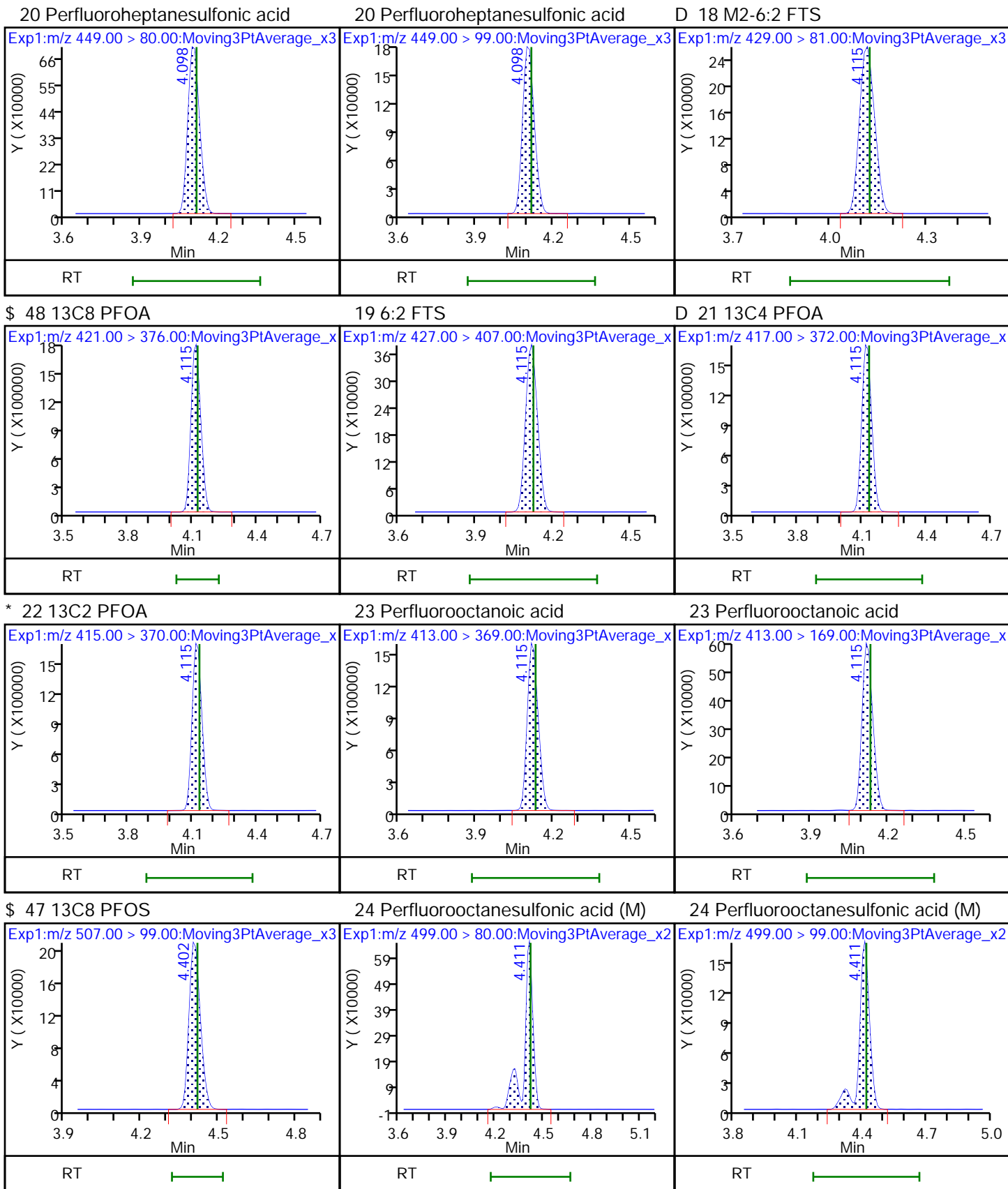
10 Perfluorohexanoic acid

10 Perfluorohexanoic acid

11 Perfluoropentanesulfonic acid





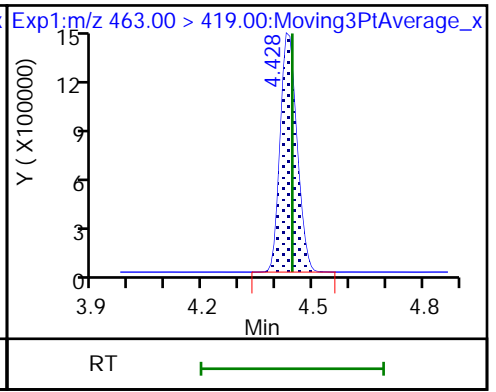
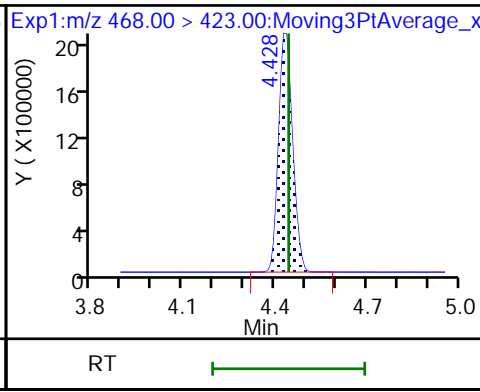
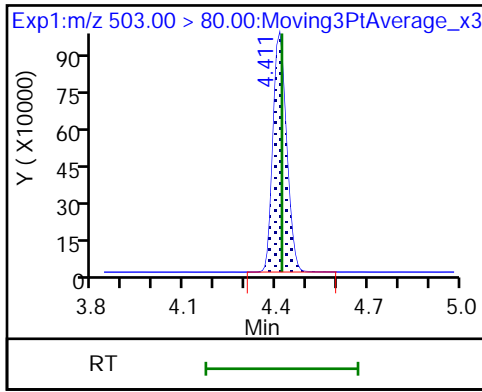




D 25 13C4 PFOS

D 27 13C5 PFNA

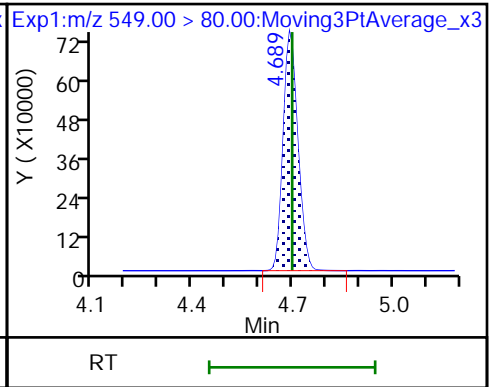
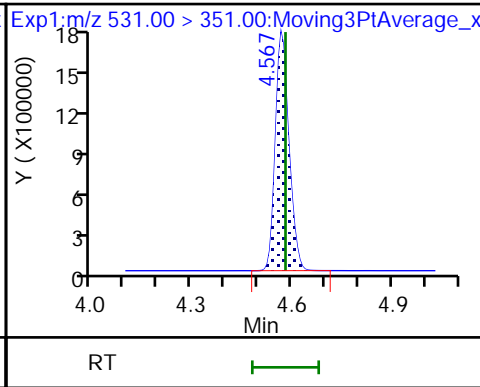
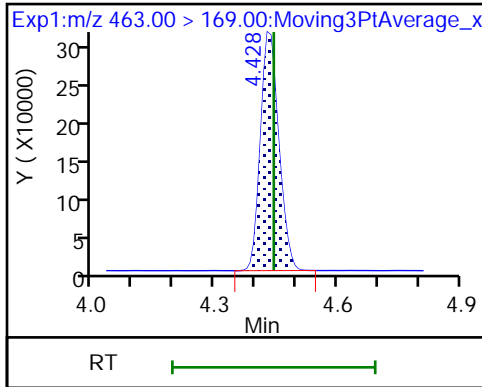
26 Perfluorononanoic acid



26 Perfluorononanoic acid

63 9CIFOS

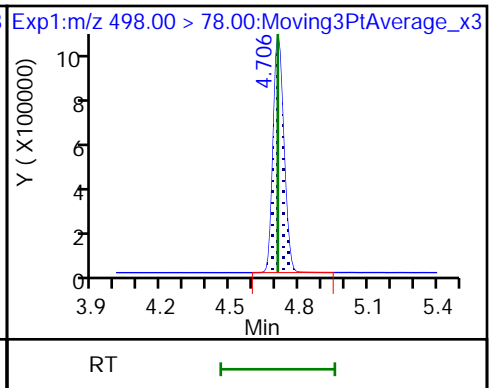
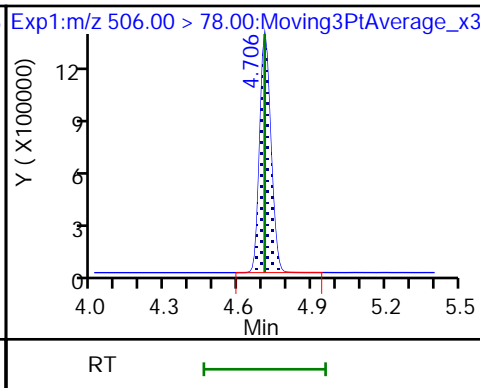
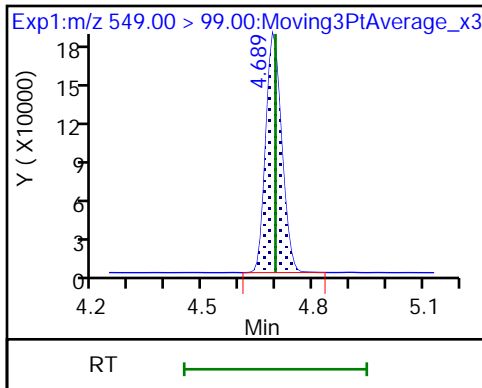
28 Perfluoronanesulfonic acid



28 Perfluoronanesulfonic acid

D 34 13C8 FOSA

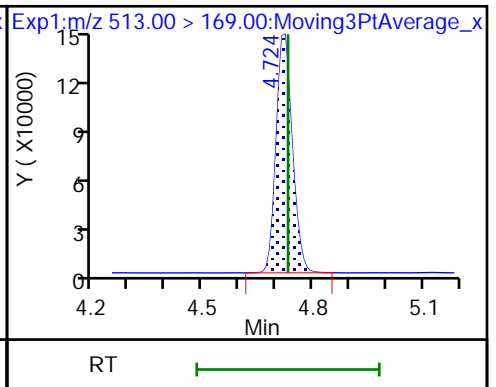
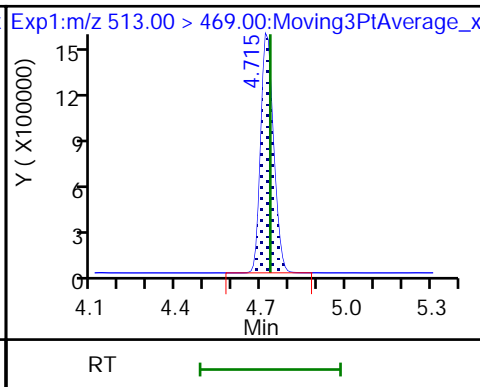
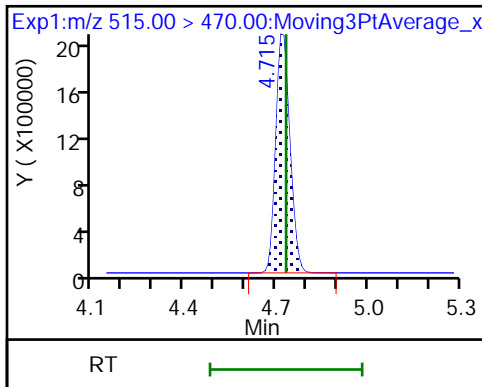
33 Perfluorooctanesulfonamide

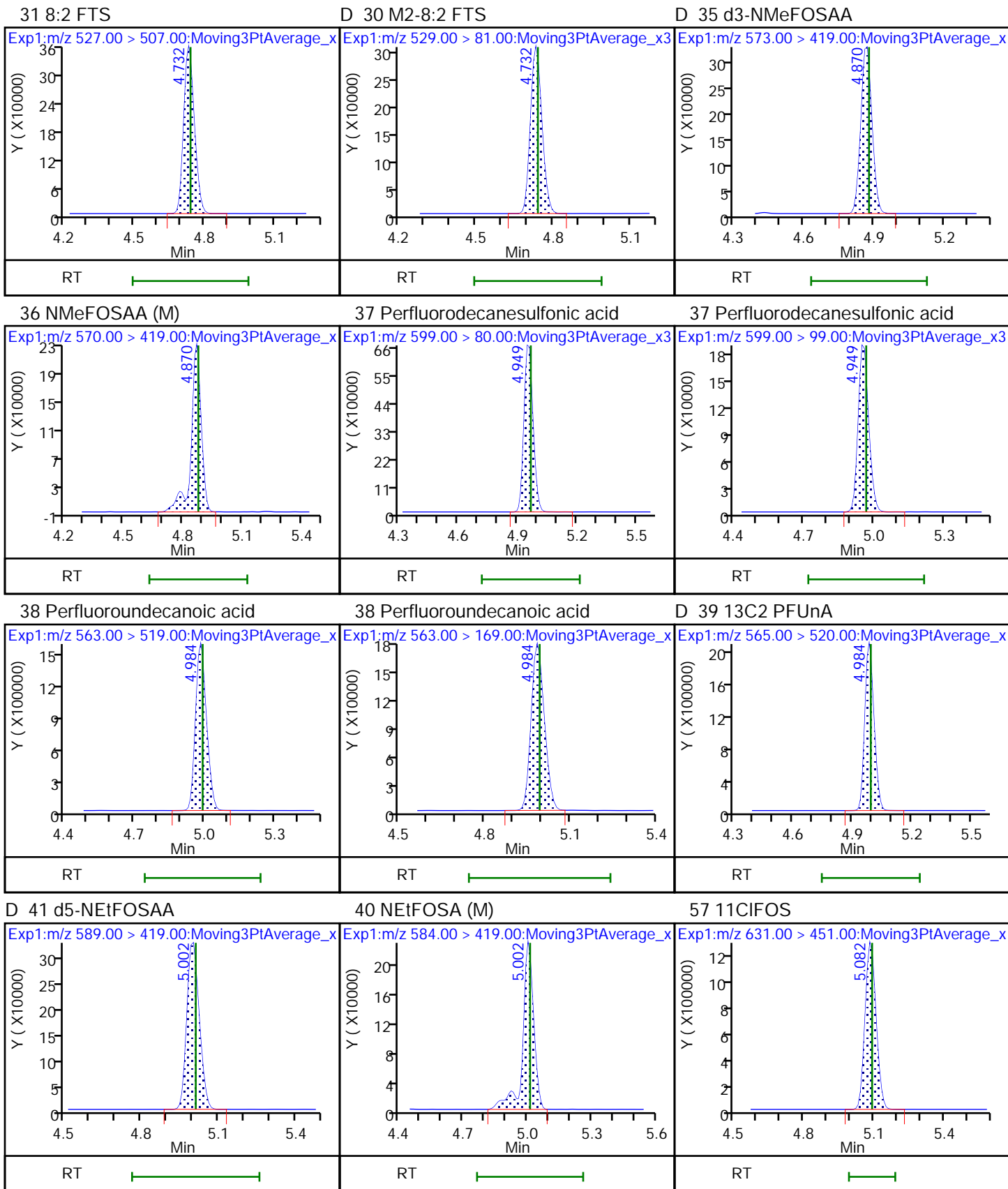


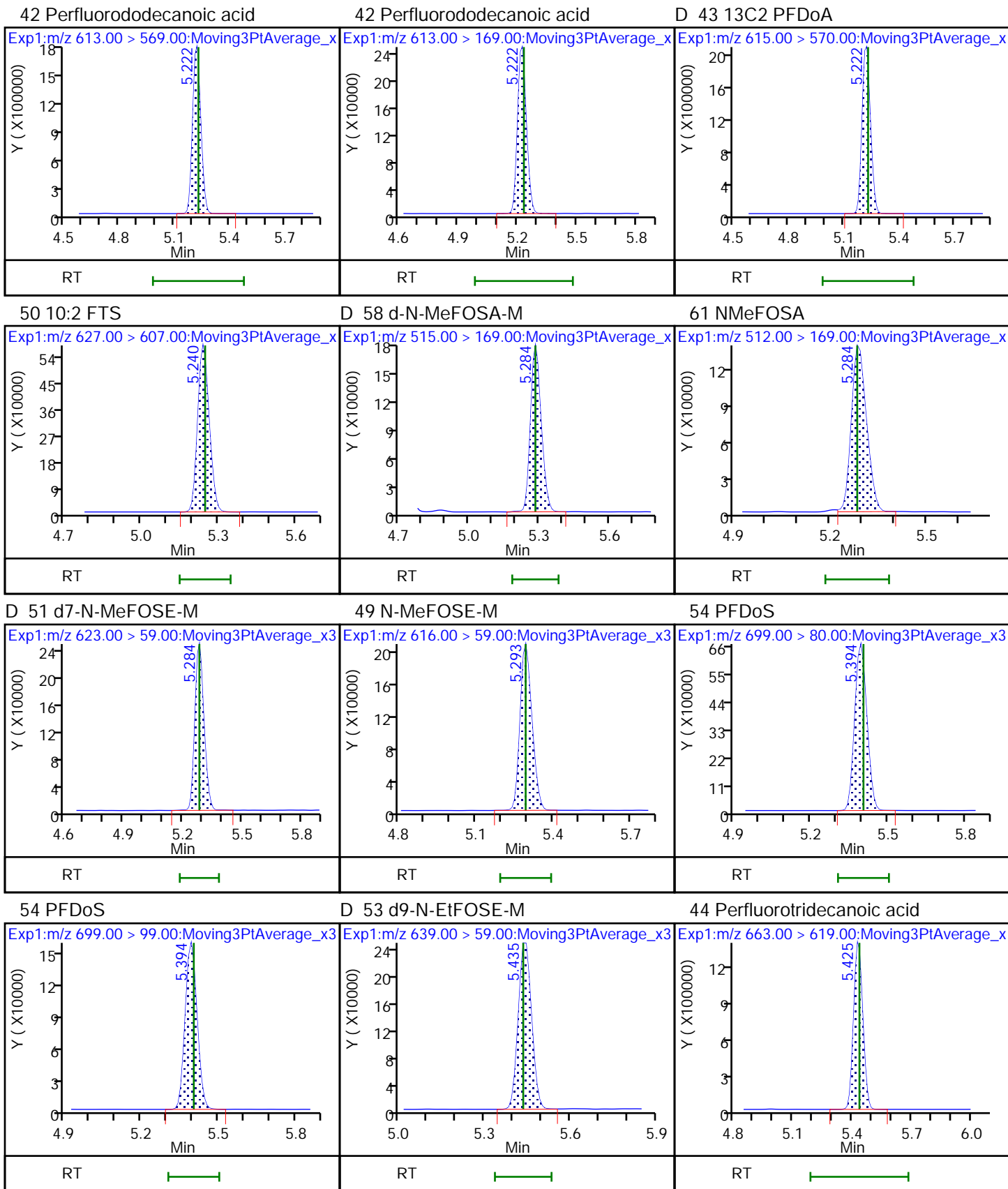
D 32 13C2 PFDA

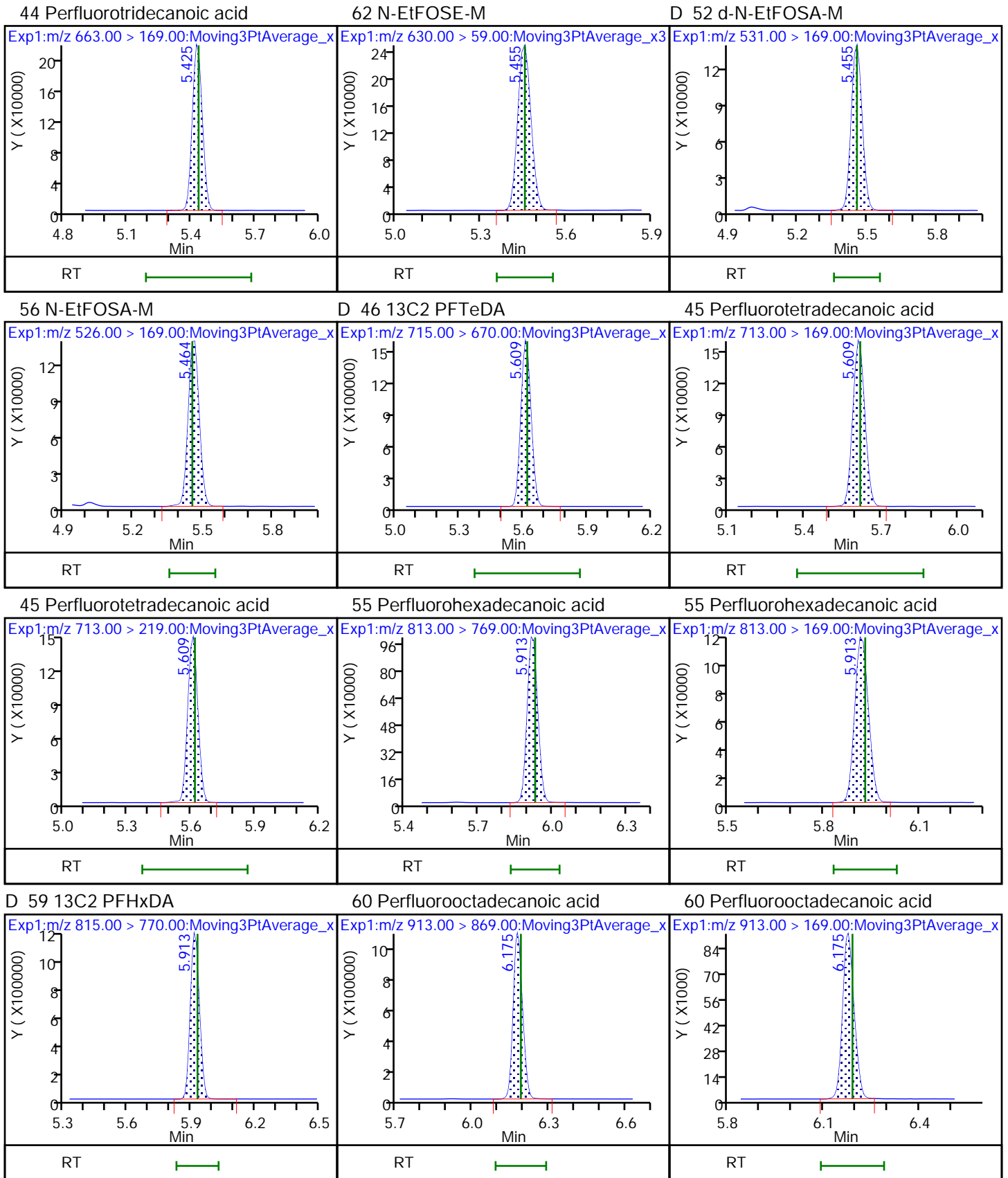
29 Perfluorodecanoic acid

29 Perfluorodecanoic acid











Eurofins TestAmerica, Knoxville

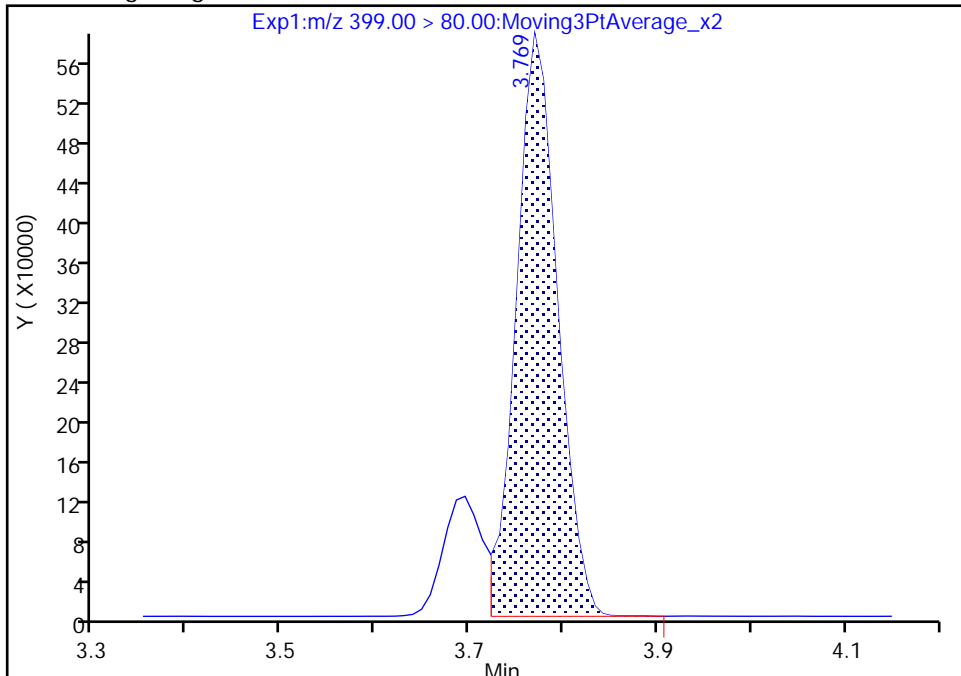
Data File: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\\_030.d  
Injection Date: 13-Jan-2022 23:02:27 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 30 Worklist Smp#: 30  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

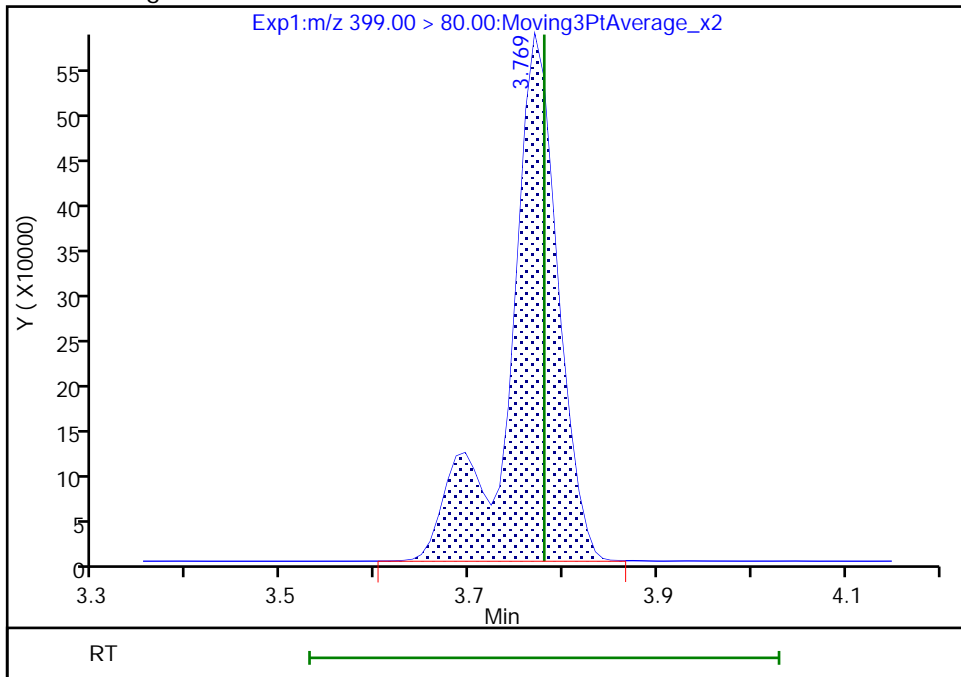
RT: 3.77  
Area: 1781587  
Amount: 0.750015  
Amount Units: ng/ml

Processing Integration Results



RT: 3.77  
Area: 2126386  
Amount: 0.895169  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:23:27  
Audit Action: Manually Integrated

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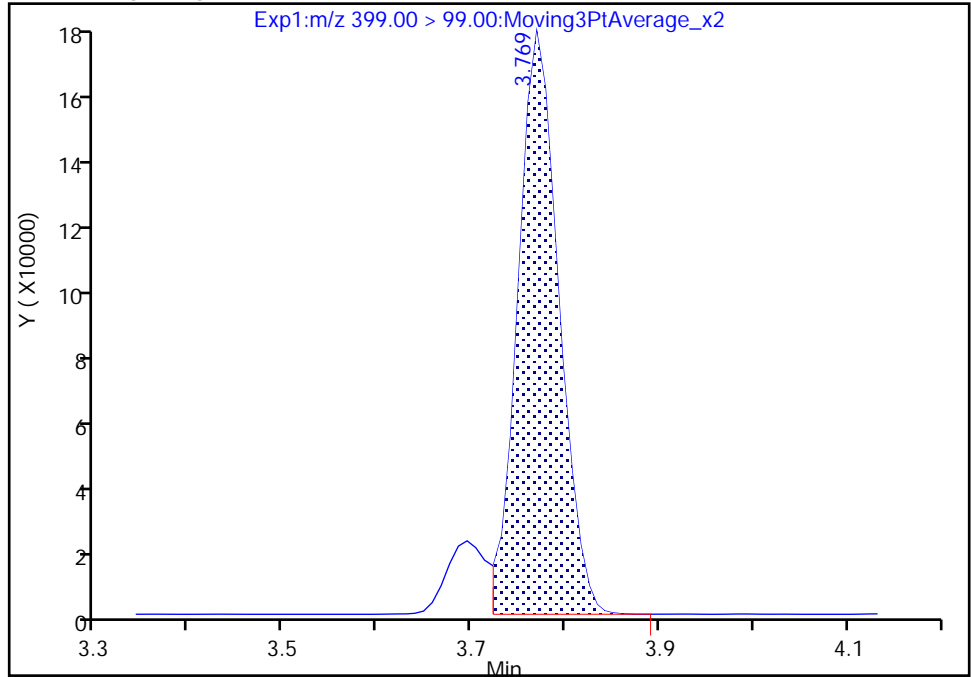
Data File: \\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\_030.d  
Injection Date: 13-Jan-2022 23:02:27 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 30 Worklist Smp#: 30  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

16 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

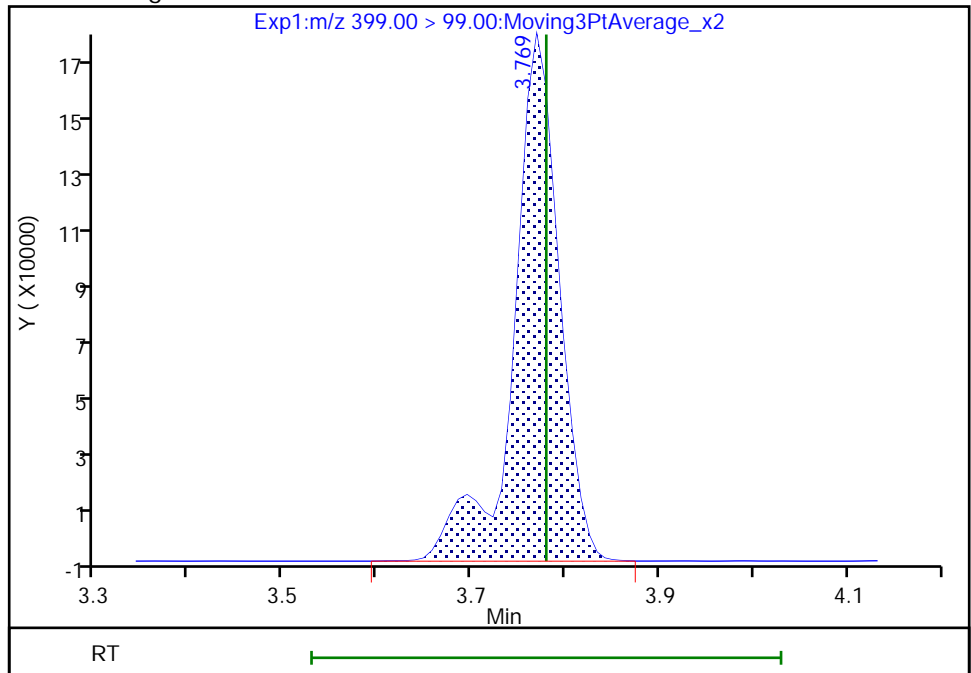
RT: 3.77  
Area: 531676  
Amount: 0.750015  
Amount Units: ng/ml

Processing Integration Results



RT: 3.77  
Area: 596332  
Amount: 0.895169  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:23:34

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Knoxville

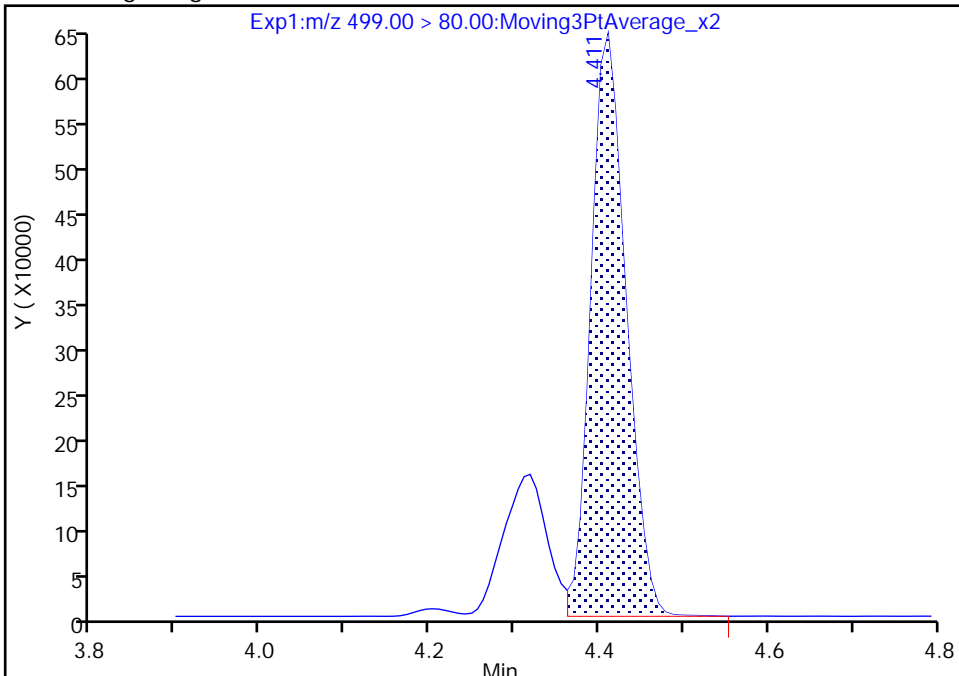
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Injection Date: 13-Jan-2022 23:02:27 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 30 Worklist Smp#: 30  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

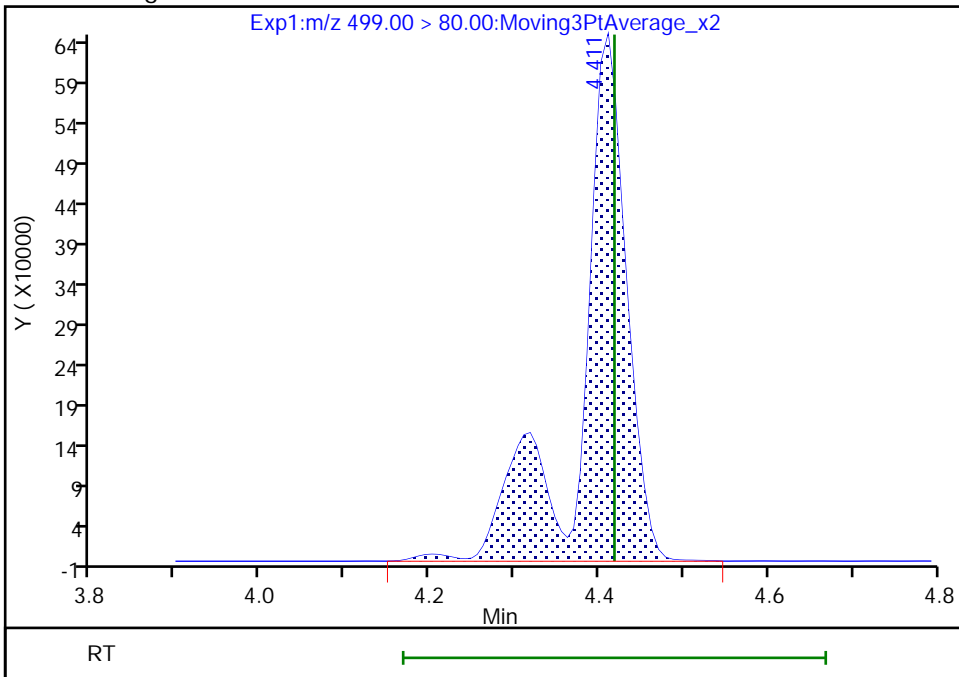
RT: 4.41  
Area: 1857349  
Amount: 0.672403  
Amount Units: ng/ml

Processing Integration Results



RT: 4.41  
Area: 2446137  
Amount: 0.885557  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:23:47  
Audit Action: Manually Integrated



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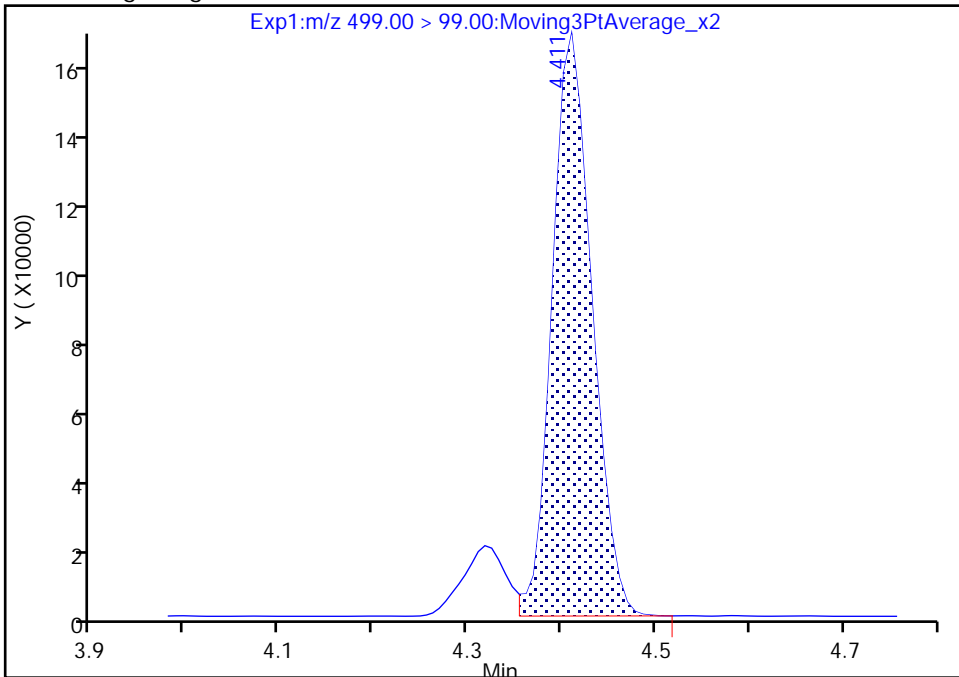
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Injection Date: 13-Jan-2022 23:02:27 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 30 Worklist Smp#: 30  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

24 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

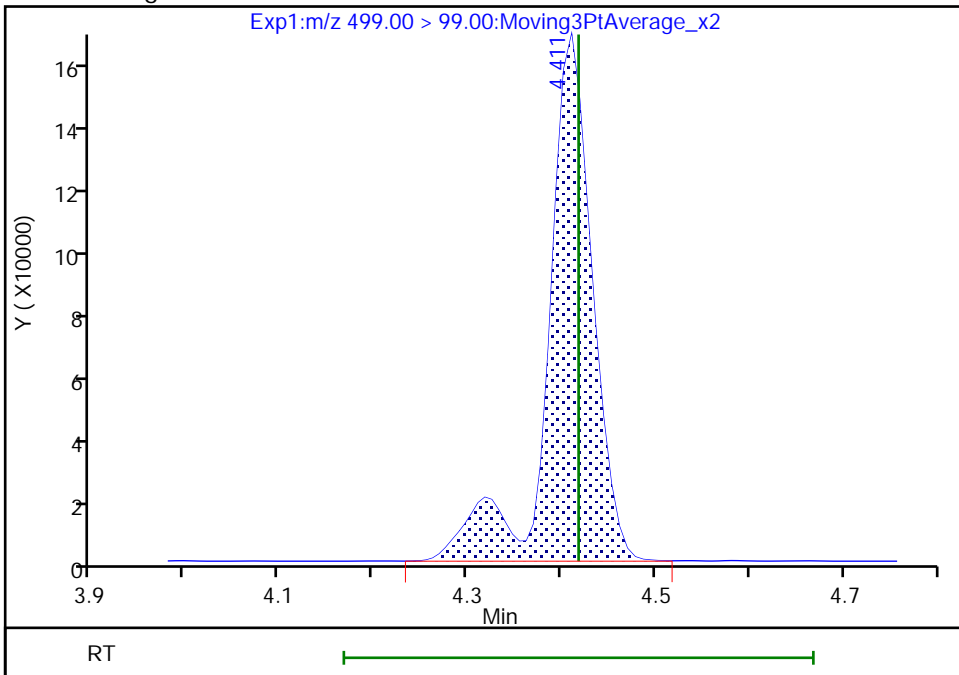
RT: 4.41  
Area: 488568  
Amount: 0.672403  
Amount Units: ng/ml

Processing Integration Results



RT: 4.41  
Area: 553124  
Amount: 0.885557  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:23:56

Audit Action: Manually Integrated

Audit Reason: Baseline  
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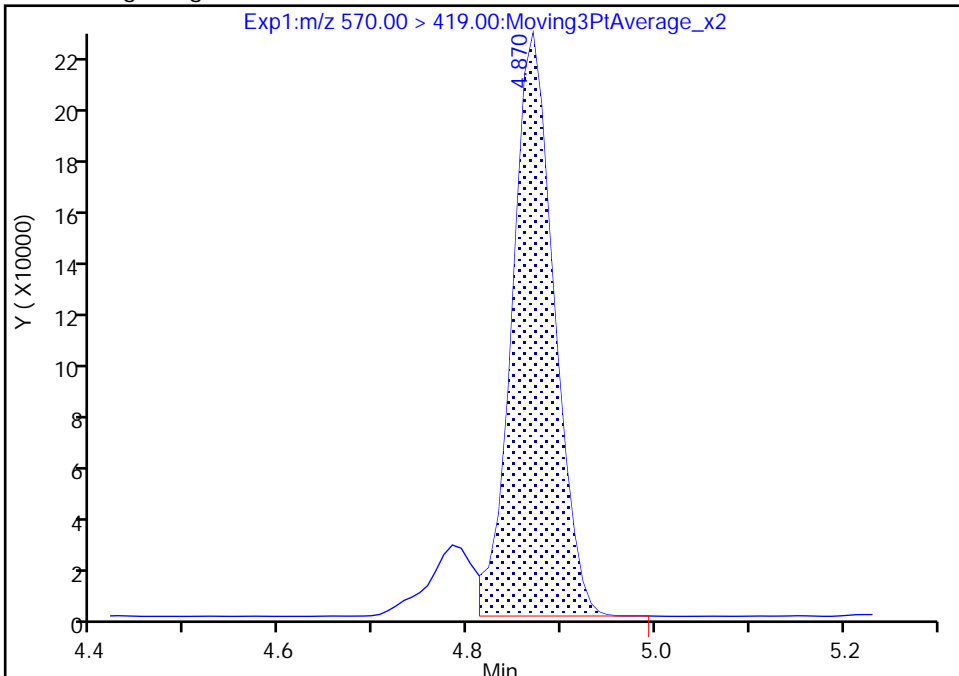
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Injection Date: 13-Jan-2022 23:02:27 Instrument ID: LCA  
Lims ID: CCV  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 30 Worklist Smp#: 30  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

36 NMeFOSAA, CAS: 2355-31-9

Signal: 1

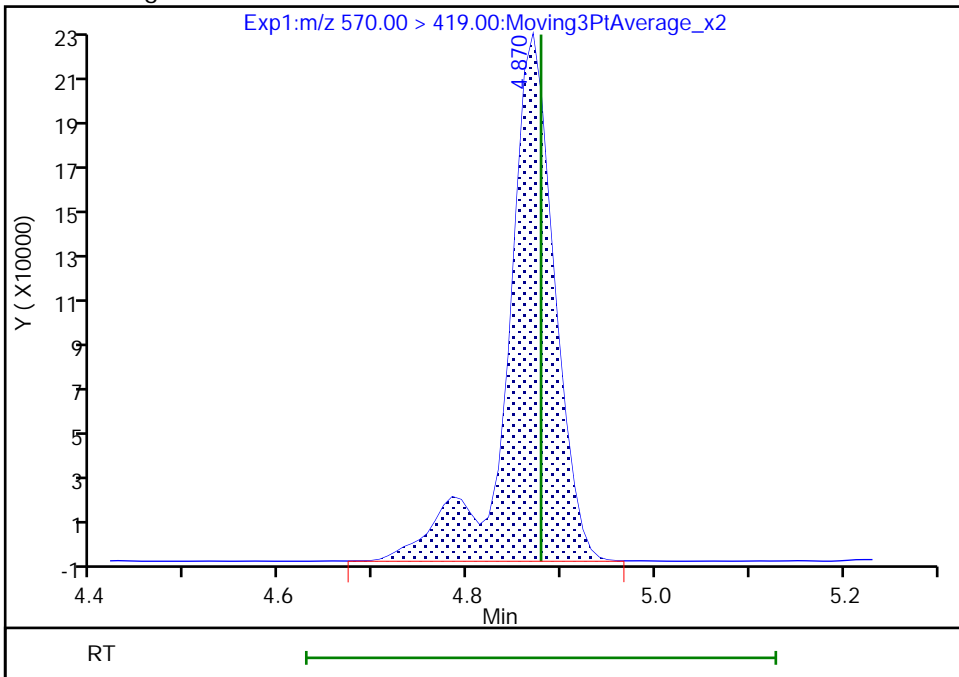
RT: 4.87  
Area: 693418  
Amount: 0.839413  
Amount Units: ng/ml

Processing Integration Results



RT: 4.87  
Area: 784530  
Amount: 0.949545  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:24:07  
Audit Action: Manually Integrated

Eurofins TestAmerica, Knoxville

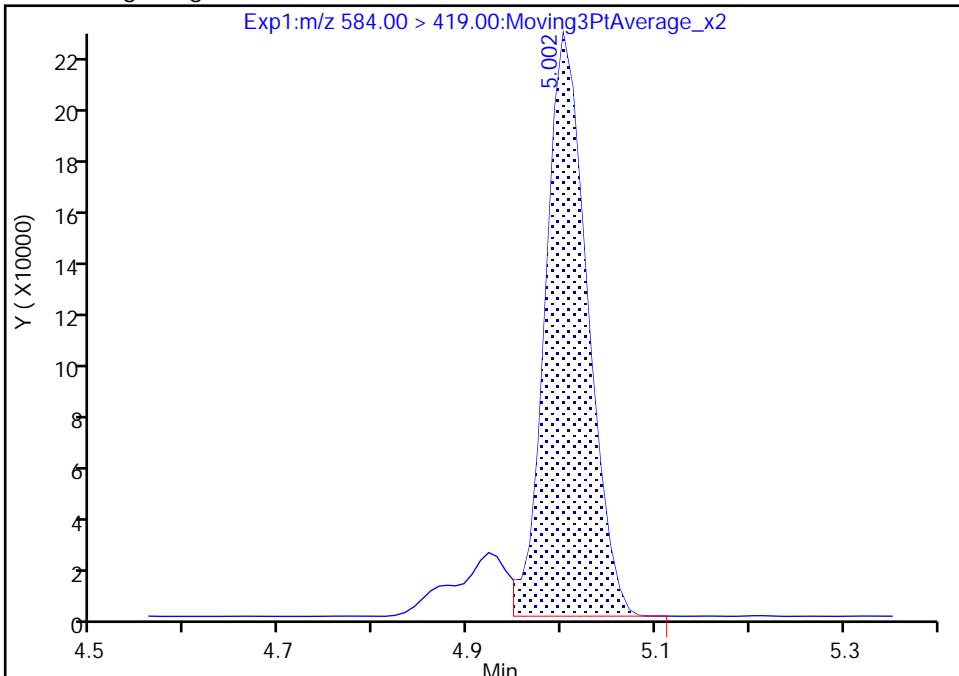
Data File:	\\chromfs\Knoxville\ChromData\LCA\20220113-22248.b\_030.d		
Injection Date:	13-Jan-2022 23:02:27	Instrument ID:	LCA
Lims ID:	CCV		
Client ID:			
Operator ID:	Cochran, Bobby	ALS Bottle#:	30
Injection Vol:	1.0 ul	Dil. Factor:	1.0000
Method:	PFC_LCA	Limit Group:	LC - PFC- ICAL
Column:		Detector:	EXP1
		Worklist Smp#:	30

40 NETFOSA, CAS: 2991-50-6

Signal: 1

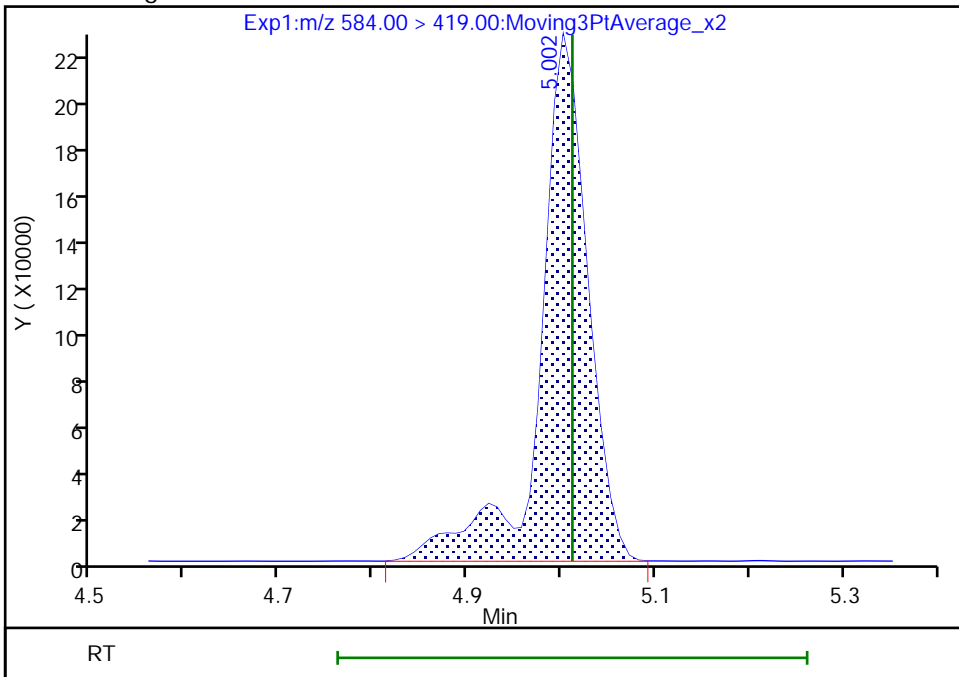
RT: 5.00  
 Area: 708501  
 Amount: 0.821073  
 Amount Units: ng/ml

Processing Integration Results



RT: 5.00  
 Area: 806555  
 Amount: 0.934254  
 Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 15-Jan-2022 09:24:30  
 Audit Action: Manually Integrated

Audit Reason: Baseline

FORM I  
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 140-57611/1-B  
 Matrix: Air Lab File ID: \_010.d  
 Analysis Method: 537 (modified) Date Collected: \_\_\_\_\_  
 Extraction Method: None Date Extracted: 01/04/2022 08:32  
 Sample wt/vol: 1 (Sample) Date Analyzed: 01/11/2022 18:14  
 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.: 57822 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	83		25-150

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_010.d  
 Lims ID: MB 140-57611/1-B  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 11-Jan-2022 18:14:31 ALS Bottle#: 10 Worklist Smp#: 10  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022220-010 mb 140-57611/1-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 12-Jan-2022 18:43:11 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1648

First Level Reviewer: cochranj Date: 11-Jan-2022 18:38:27  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_007.d

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	2.807	2.814	-0.007	0.678	5452826	1.10	87.7	13173	
2 Perfluorobutanoic acid										7
212.90 > 169.00	2.807	2.814	-0.007	1.000	16230	0.004743		4.1	7	
LOD = 0.0100										
D 3 13C5 PFPeA	267.90 > 223.00	3.123	3.131	-0.008	0.754	4207967	1.09	87.2	7782	
4 Perfluoropentanoic acid										7
262.90 > 219.00	3.123	3.131	-0.008	1.000	6520	0.002035		1.8	7	
LOD = 0.006500										
D 6 13C3 PFBS	301.90 > 80.00	3.139	3.147	-0.008	0.758	2702696	1.05	90.3	8762	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00		3.147				ND				
298.90 > 99.00		3.147								
D 8 M2-4:2 FTS	329.00 > 81.00	3.422	3.442	-0.020	0.826	944541	1.19	102	1370	
7 4:2 FTS										
327.00 > 307.00		3.442				ND				
10 Perfluorohexanoic acid										7
313.00 > 269.00	3.452	3.472	-0.020	1.000	17031	0.005652	Target=12.60	9.9	7	
313.00 > 119.00	3.452	3.472	-0.020	1.000	1348		12.63(6.30-18.90)	2.0		
LOD = 0.008000										
11 Perfluoropentanesulfonic acid										
349.00 > 80.00		3.472				ND				
349.00 > 99.00		3.472								

D 9 13C2 PFHxA	315.00 > 270.00	3.452	3.472	-0.020	0.834	4339341	1.05	84.1	8443	
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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	3.556	3.574	-0.018	0.859	2068893	1.04		83.4	4312	
13 HFPO-DA										
285.00 > 169.00	3.556	3.574	-0.018	1.000	10539	0.004708		10.9	7	7
LOD = 0.008250										
S 65 ADONA										
377.00 > 251.00		3.592				0				
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.788	3.807	-0.019	1.000	7433	0.003338	Target=3.46	46.0	7	7
399.00 > 99.00	3.788	3.807	-0.019	1.000	2268		3.28(1.73-5.19)	18.1		
LOD = 0.005000										
D 17 18O2 PFHxS										
403.00 > 84.00	3.788	3.807	-0.019	0.915	1911898	1.11		94.1	6883	
D 14 13C4 PFHpA										
367.00 > 322.00	3.807	3.825	-0.018	0.919	4520294	1.15		91.6	8984	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.807	3.825	-0.018	1.000	5408	0.001429	Target=3.21	3.4	7	7
363.00 > 169.00	3.797	3.825	-0.028	0.997	1746		3.10(1.61-4.82)	3.8		
LOD = 0.004250										
68 DONA										
377.00 > 251.00		3.858				ND				
377.00 > 85.00		3.858								
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00		4.140				ND				
449.00 > 99.00		4.140								
D 18 M2-6:2 FTS										
429.00 > 81.00	4.132	4.149	-0.017	0.998	937780	1.17		98.8	2518	
D 21 13C4 PFOA										
417.00 > 372.00	4.141	4.156	-0.015	1.000	4783543	1.17		93.7	9067	
\$ 48 13C8 PFOA										
421.00 > 376.00		4.156				ND				
19 6:2 FTS										
427.00 > 407.00	4.132	4.156	-0.024	1.000	12819	0.0114		98.8		
23 Perfluorooctanoic acid										
413.00 > 369.00	4.141	4.156	-0.015	1.000	20861	0.004751	Target=2.53	14.3	7	7
413.00 > 169.00	4.141	4.156	-0.015	1.000	6956		3.00(1.27-3.80)	19.9		
LOD = 0.007800										
* 22 13C2 PFOA										
415.00 > 370.00	4.141	4.156	-0.015		5442494	1.25			6979	
\$ 47 13C8 PFOS										
507.00 > 99.00		4.444				ND				
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.402	4.452	-0.050	0.994	13147	0.005393	Target=4.27	14.3	7M	7M
499.00 > 99.00	4.452	4.452	0.0	0.000	0		0.00(2.13-6.40)			
LOD = 0.005500										
D 25 13C4 PFOS										
503.00 > 80.00	4.427	4.452	-0.025	1.069	2651262	1.07		89.7	3571	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
26 Perfluorononanoic acid										7
463.00 > 419.00	4.444	4.469	-0.025	0.998	4133	0.003274	Target=4.52	4.2	7	
463.00 > 169.00	4.444	4.469	-0.025	0.998	696		5.94(2.26-6.78)	2.6		
LOD = 0.004250										
D 27 13C5 PFNA										
468.00 > 423.00	4.452	4.469	-0.017	1.075	5738656	1.07		85.5	9828	
63 9CIFOS										
531.00 > 351.00		4.608				ND				
D 34 13C8 FOSA										
506.00 > 78.00	4.715	4.723	-0.008	1.139	3994103	1.19		95.5	4317	
33 Perfluorooctanesulfonamide										7
498.00 > 78.00	4.715	4.723	-0.008	1.000	1895	0.000627		9.3	7	
LOD = 0.004400										
28 Perfluorononanesulfonic acid										
549.00 > 80.00		4.732				ND				
549.00 > 99.00		4.732								
D 32 13C2 PFDA										
515.00 > 470.00	4.741	4.757	-0.016	1.145	5762831	1.11		88.9	11489	
29 Perfluorodecanoic acid										R7
513.00 > 469.00	4.741	4.757	-0.016	1.000	17323	0.003896	Target=11.59	17.1	R7	
513.00 > 169.00	4.741	4.757	-0.016	1.000	3767		4.60(5.80-17.39)	14.0		
LOD = 0.004450										
31 8:2 FTS										
527.00 > 507.00		4.774				ND				
D 30 M2-8:2 FTS										
529.00 > 81.00	4.757	4.774	-0.017	1.149	1067007	1.18		98.9	1818	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.887	4.905	-0.018	1.180	829393	1.36		109	3630	
36 NMeFOSAA										
570.00 > 419.00		4.905				ND				
69 Perfluoro-3,6,9-trioxatridecanoic acid										
561.00 > 467.00		4.970				ND				
561.00 > 235.00		4.970								
37 Perfluorodecanesulfonic acid										
599.00 > 80.00		4.992				ND				
599.00 > 99.00		4.992								
38 Perfluoroundecanoic acid										
563.00 > 519.00		5.022				ND				
563.00 > 169.00		5.022								
D 39 13C2 PFUnA										
565.00 > 520.00	5.002	5.022	-0.020	1.208	5948233	1.15		91.9	11916	
40 NEtFOSA										
584.00 > 419.00		5.042				ND				
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.022	5.042	-0.020	1.213	948049	1.42		113	4783	
57 11CIFOS										
631.00 > 451.00		5.122				ND				

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 43 13C2 PFDaA										
615.00 > 570.00	5.240	5.257	-0.017	1.265	5690832	1.05		83.9	8957	
42 Perfluorododecanoic acid										
613.00 > 569.00		5.257				ND				
613.00 > 169.00		5.257								
50 10:2 FTS										
627.00 > 607.00	5.266	5.275	-0.009	1.107	8972	0.004423		39.3		M
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.284	5.292	-0.008	1.276	728025	1.12		89.2	516	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.284	5.292	-0.008	1.276	497031	1.07		85.5	58.7	
61 NMeFOSA										
512.00 > 169.00		5.292				ND				
49 N-MeFOSE-M										
616.00 > 59.00		5.301				ND				
54 PFDoS										
699.00 > 80.00		5.425				ND				
699.00 > 99.00		5.425								
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.445	5.444	0.001	1.315	681362	1.04		83.2	318	
62 N-EtFOSE-M										
630.00 > 59.00		5.464				ND				
44 Perfluorotridecanoic acid										
663.00 > 619.00		5.464				ND				
663.00 > 169.00		5.464								
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.455	5.464	-0.009	1.317	403864	1.05		84.1	584	
56 N-EtFOSA-M										
526.00 > 169.00		5.464				ND				
D 46 13C2 PFTeDA										
715.00 > 670.00	5.629	5.650	-0.021	1.360	4276838	1.03		82.7	7401	
45 Perfluorotetradecanoic acid										
713.00 > 169.00		5.650				ND				
713.00 > 219.00		5.650								
D 59 13C2 PFHxDA										
815.00 > 770.00	5.940	5.948	-0.008	1.434	2949878	1.05		84.1	5102	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.940	5.948	-0.008	1.000	29388	0.001210	Target=8.43	83.2		7
813.00 > 169.00	5.940	5.948	-0.008	1.000	4213		6.98(4.22-12.65)	10.0		
LOD = 0.009000										
60 Perfluorooctadecanoic acid										
913.00 > 869.00		6.209				ND				
913.00 > 169.00		6.209								
S 66 F-53B										
212.90 > 169.00		0.0				0				



Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
--------	----	--------	--------	--------	----------	--------------	---------------	------	-----	-------

S 67 NaDONA

377.00 > 251.00 0.0

377.00 > 85.00 0.0

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\20220111-22220.b\_010.d

Injection Date: 11-Jan-2022 18:14:31

Instrument ID: LCA

Lims ID: MB 140-57611/1-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 10

Worklist Smp#: 10

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

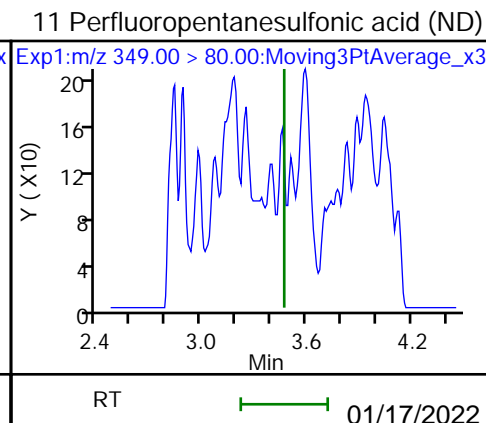
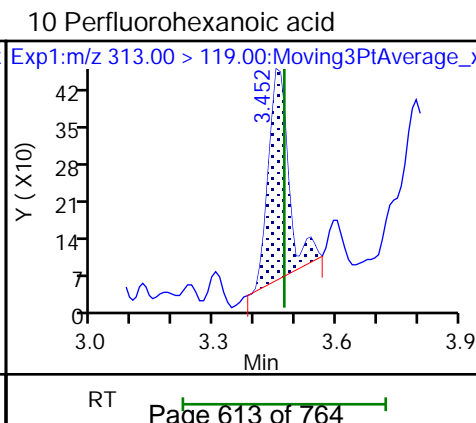
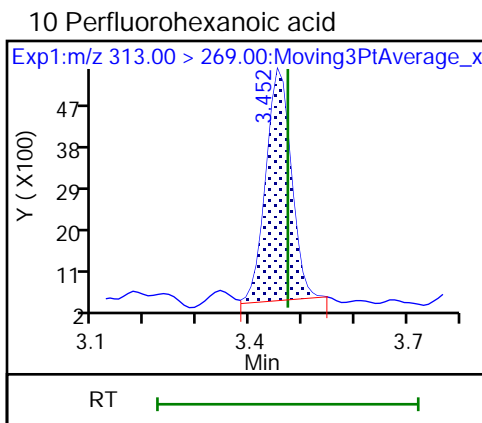
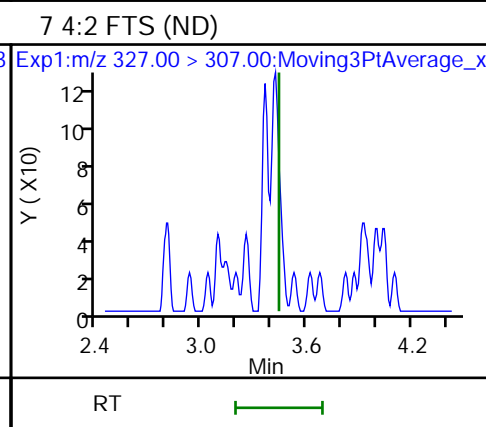
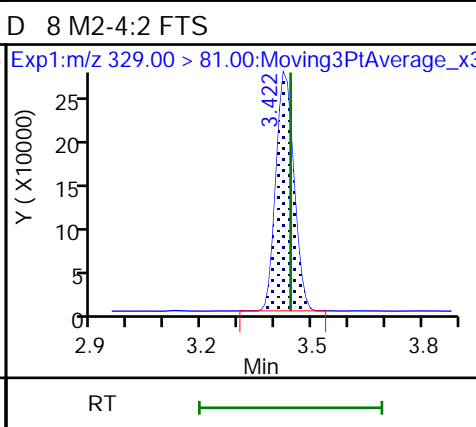
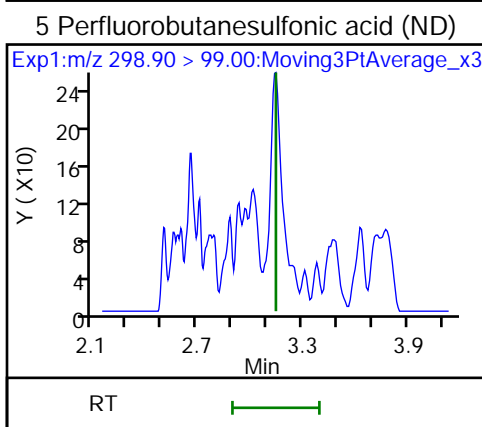
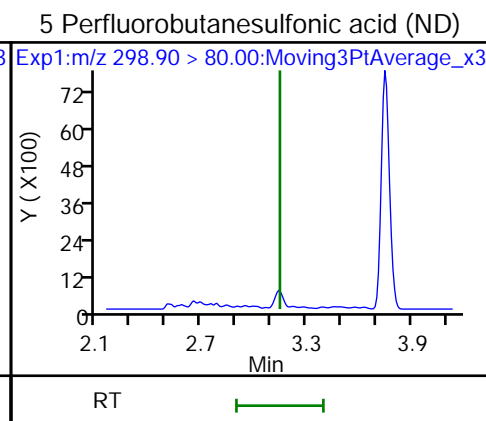
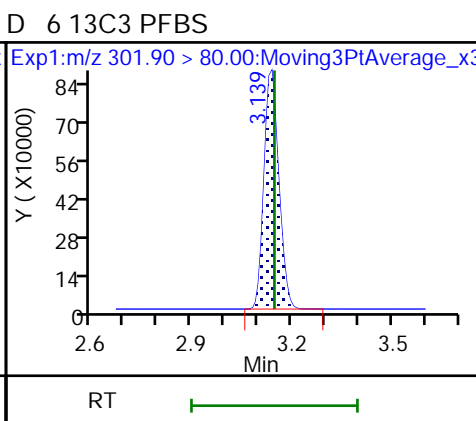
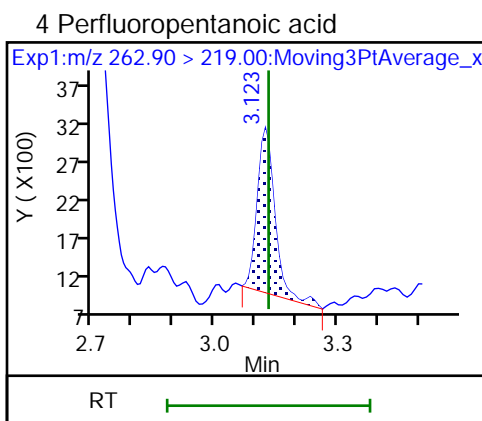
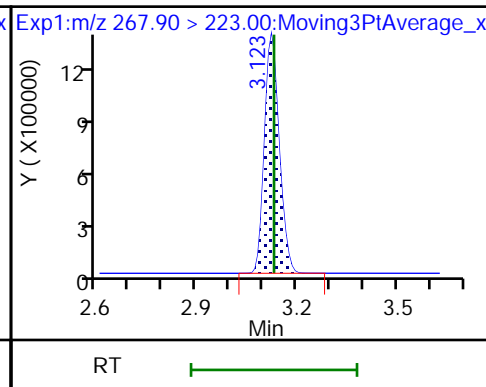
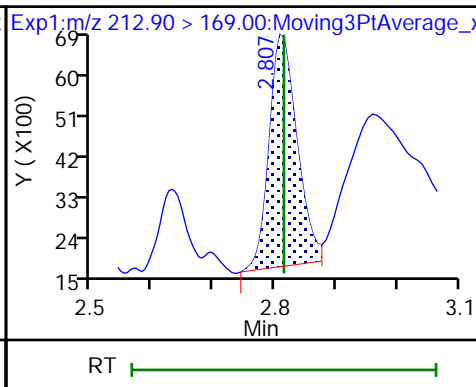
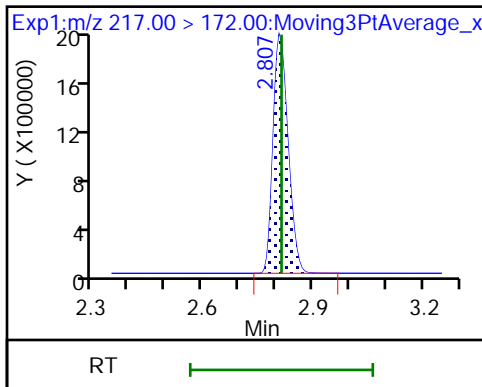
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

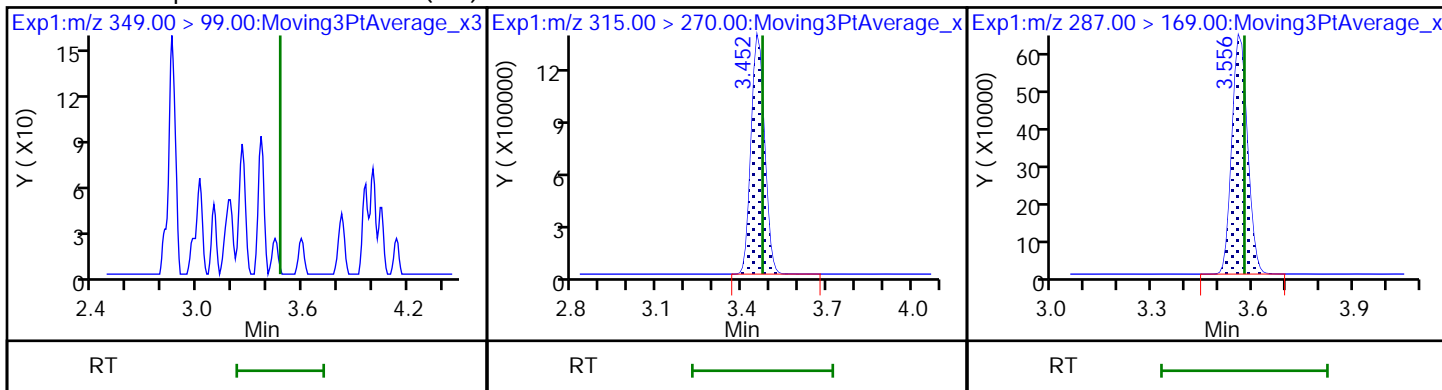
2 Perfluorobutanoic acid

D 3 13C5 PFPeA



11 Perfluoropentanesulfonic acid (ND) D 9 13C2 PFHxA

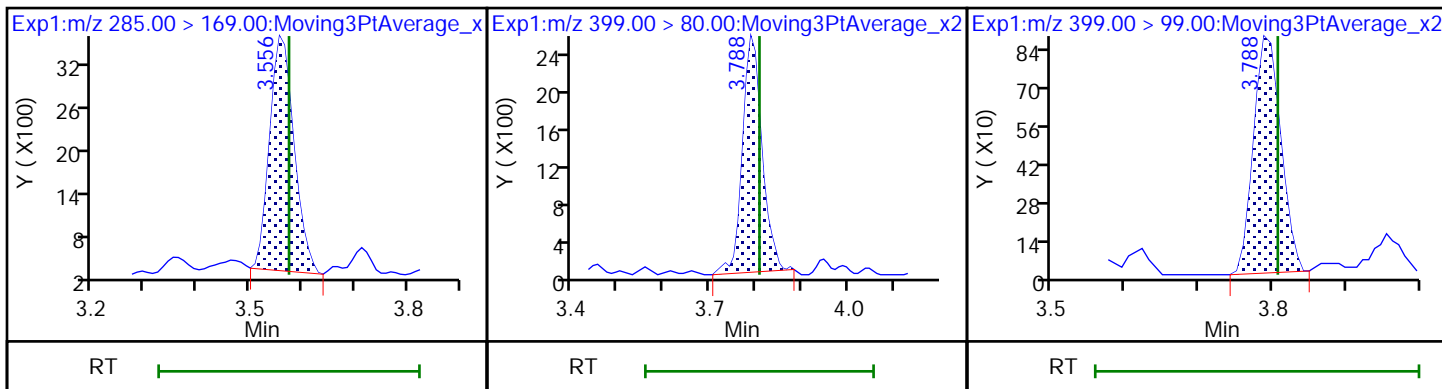
D 12 13C3 HFPO-DA



13 HFPO-DA

16 Perfluorohexanesulfonic acid

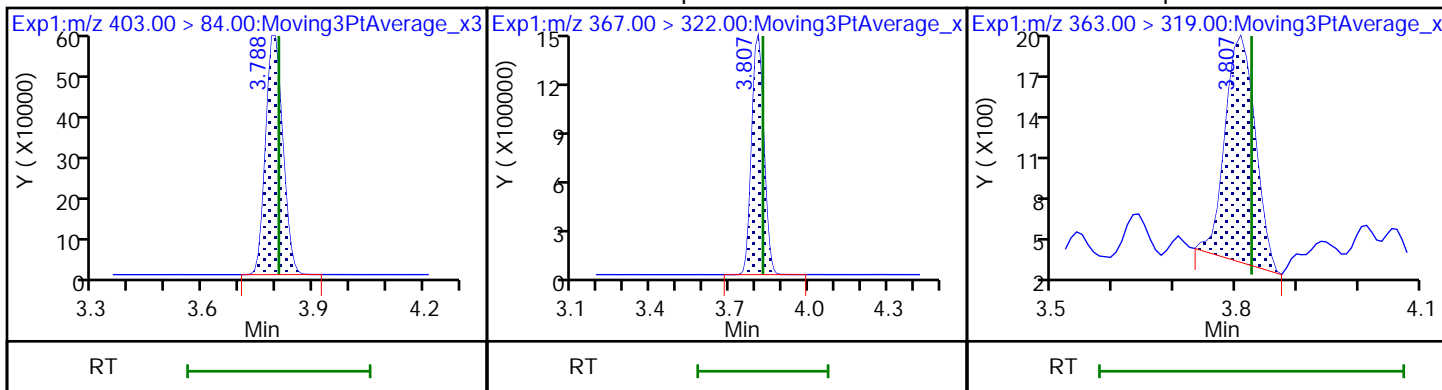
16 Perfluorohexanesulfonic acid



D 17 18O2 PFHxS

D 14 13C4 PFHpA

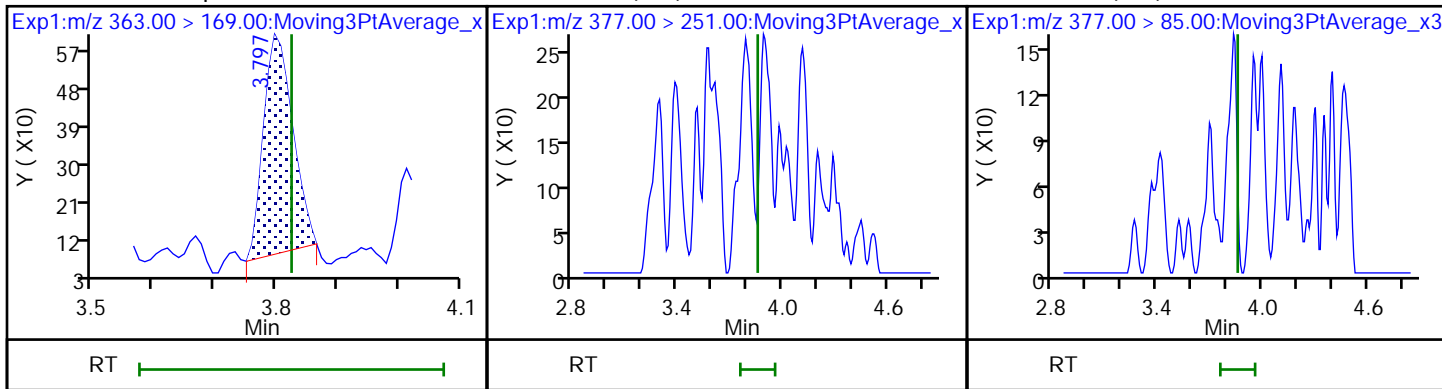
15 Perfluoroheptanoic acid



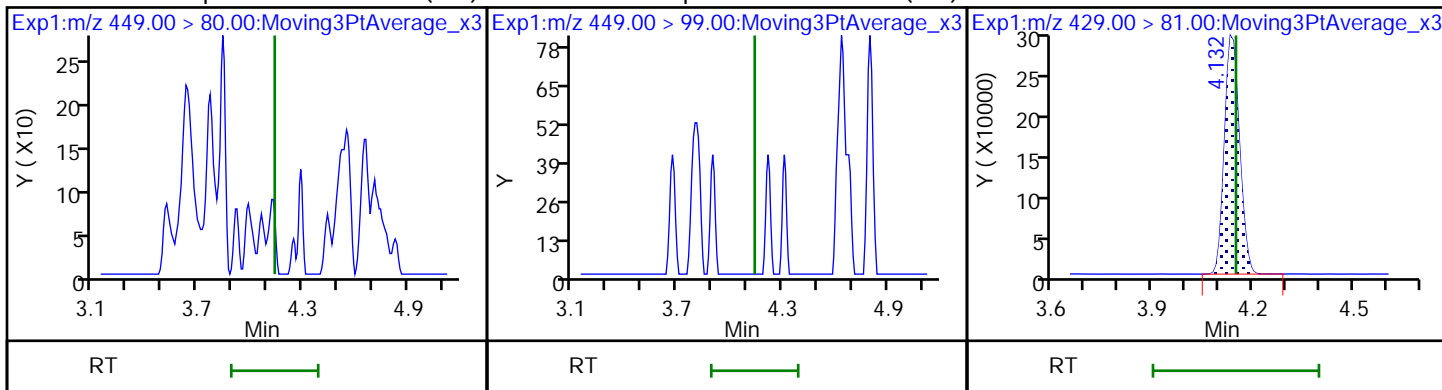
15 Perfluoroheptanoic acid

68 DONA (ND)

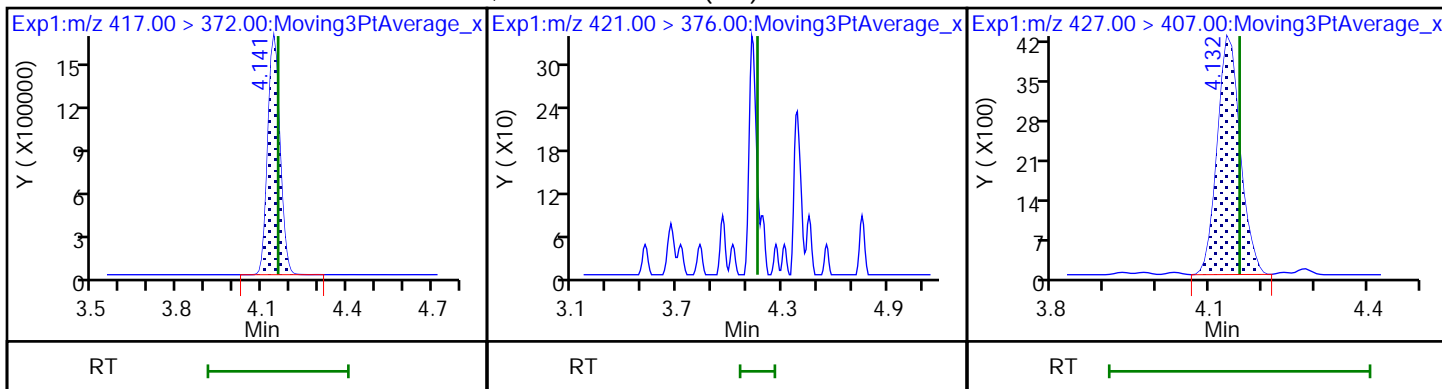
68 DONA (ND)



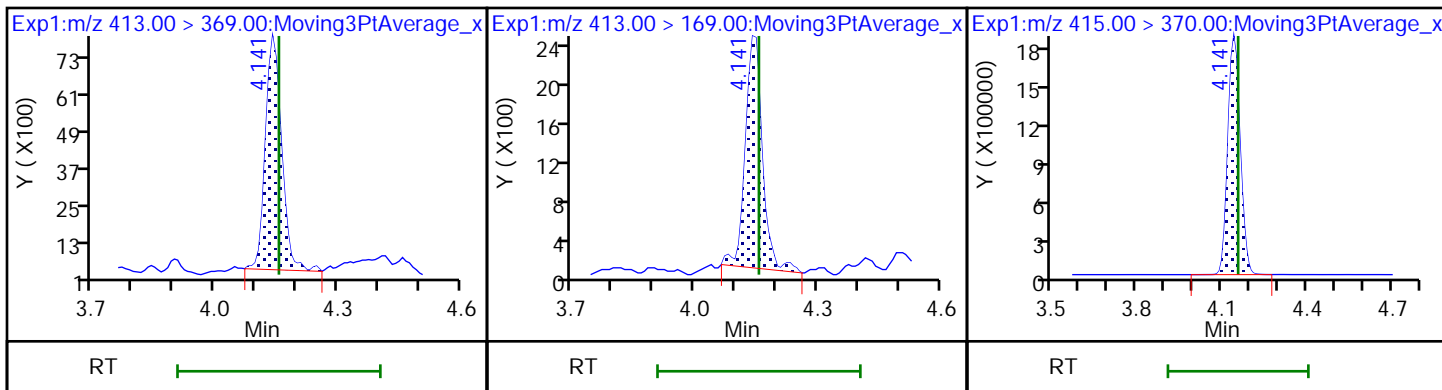
20 Perfluoroheptanesulfonic acid (ND) 20 Perfluoroheptanesulfonic acid (ND) D 18 M2-6:2 FTS



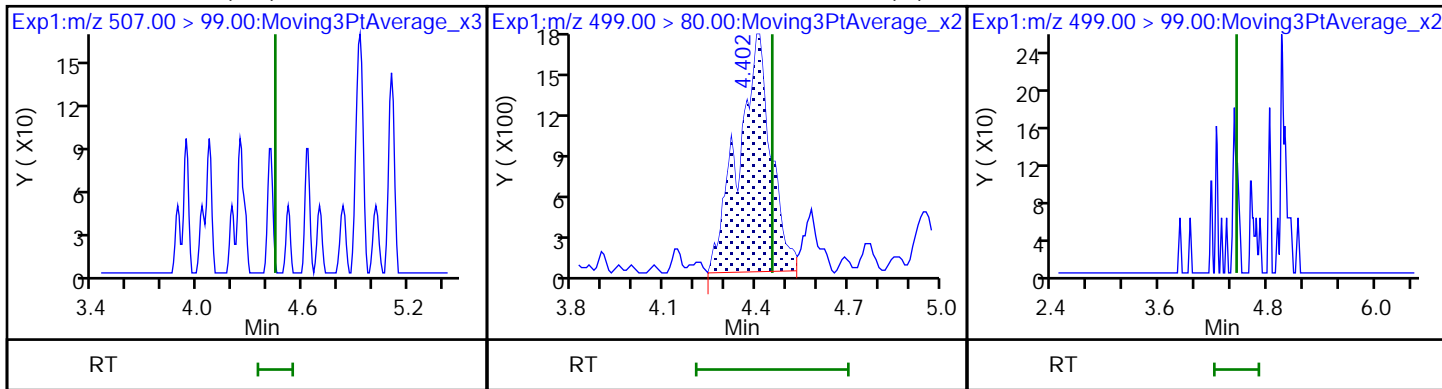
D 21 13C4 PFOA \$ 48 13C8 PFOA (ND) 19 6:2 FTS



23 Perfluorooctanoic acid 23 Perfluorooctanoic acid \* 22 13C2 PFOA



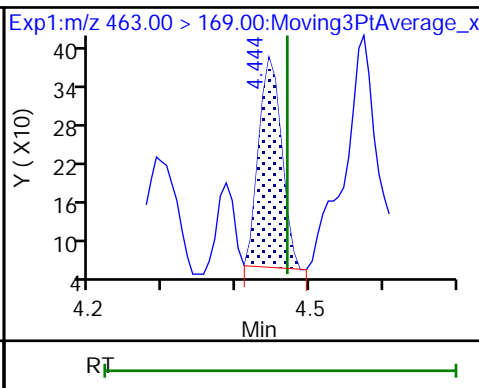
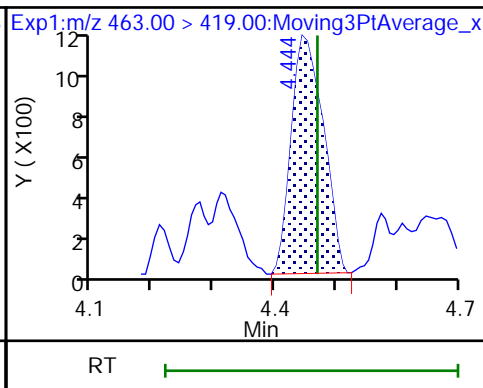
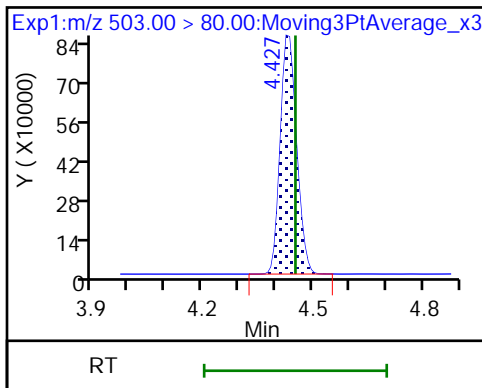
\$ 47 13C8 PFOS (ND) 24 Perfluorooctanesulfonic acid (M) 24 Perfluorooctanesulfonic acid



D 25 13C4 PFOS

26 Perfluorononanoic acid

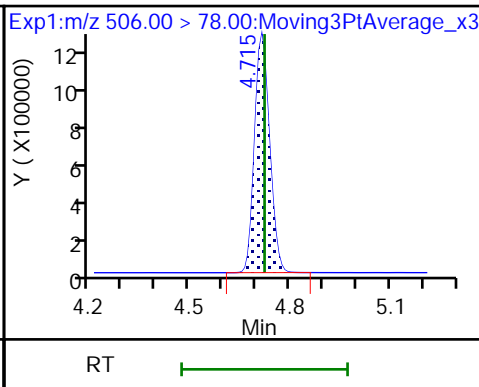
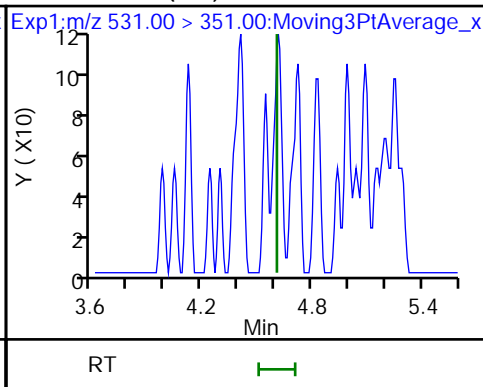
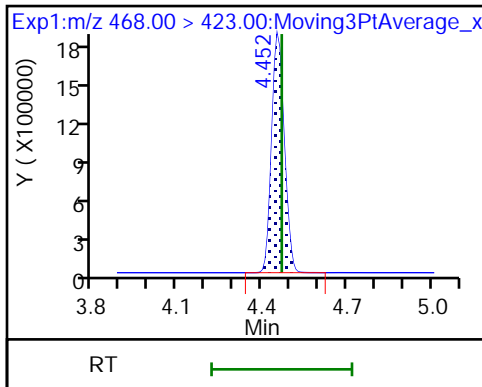
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS (ND)

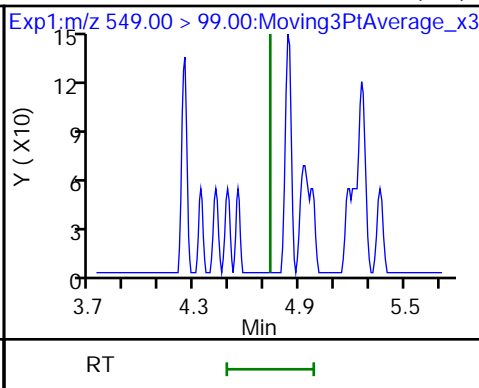
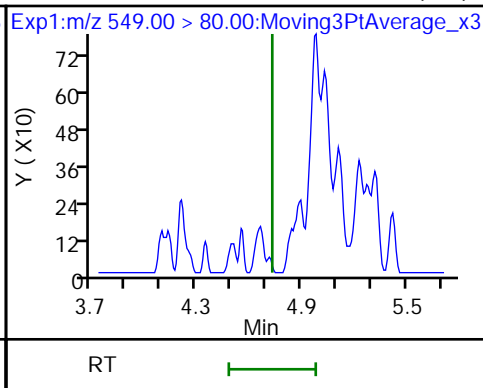
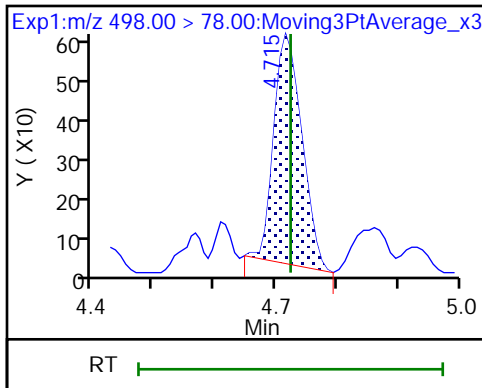
D 34 13C8 FOSA



33 Perfluorooctanesulfonamide

28 Perfluorononanesulfonic acid (ND)

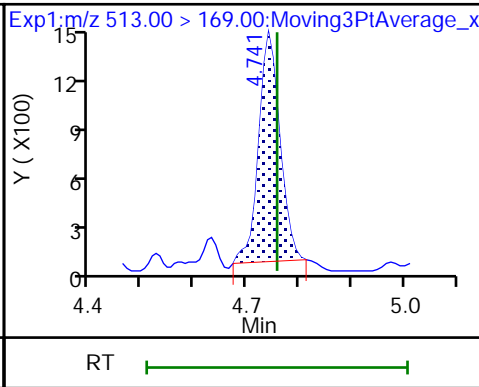
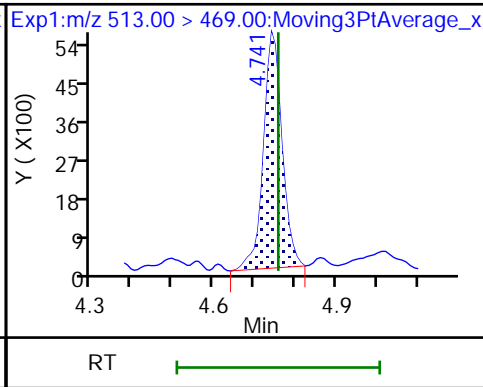
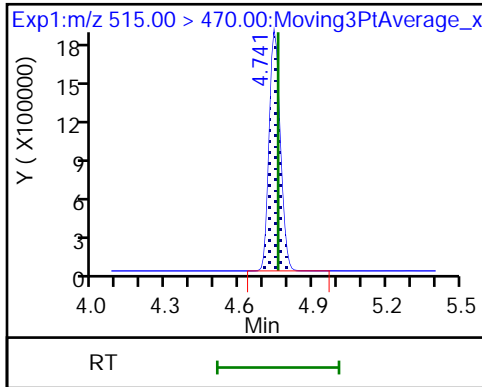
28 Perfluorononanesulfonic acid (ND)

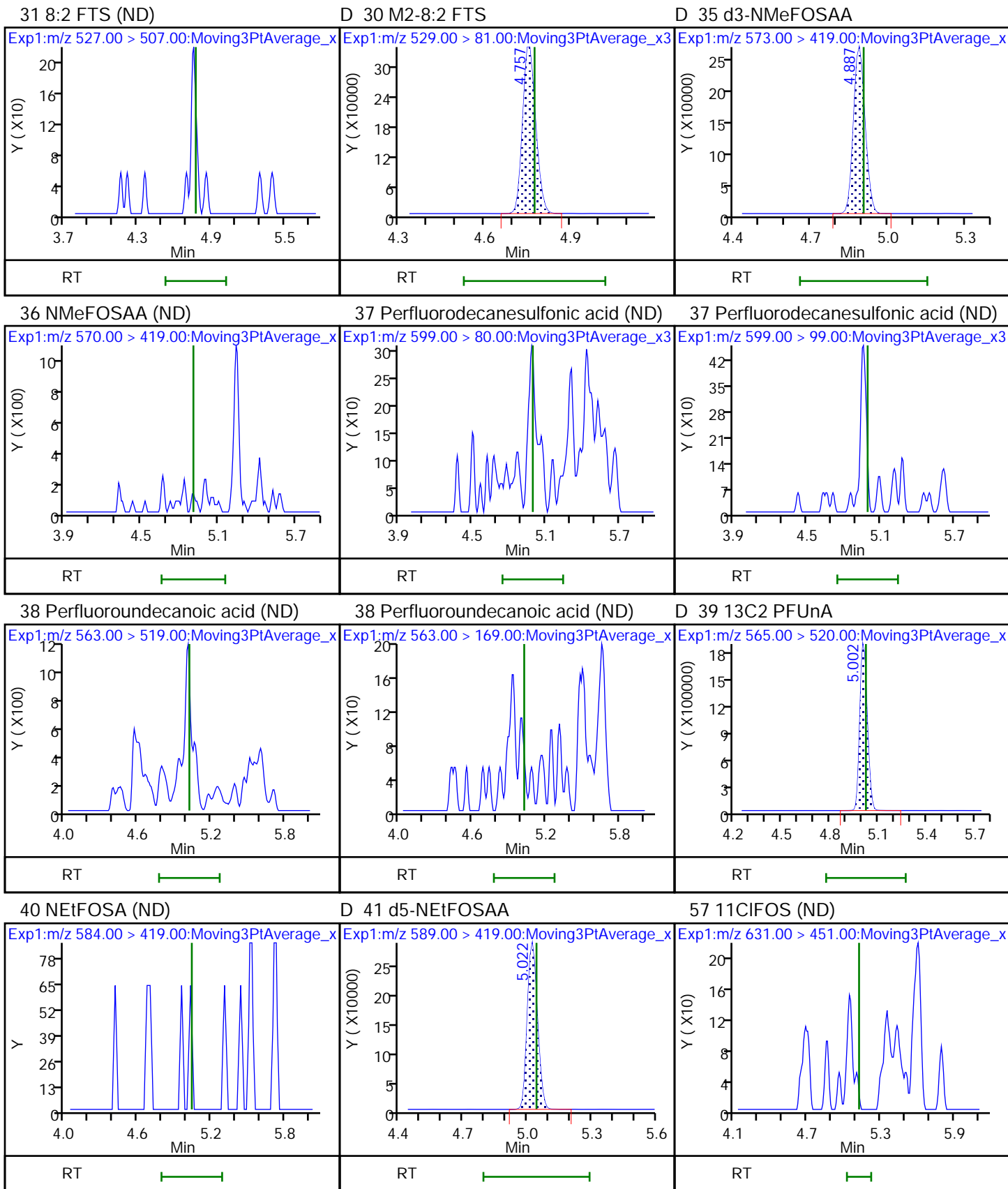


D 32 13C2 PFDA

29 Perfluorodecanoic acid

29 Perfluorodecanoic acid

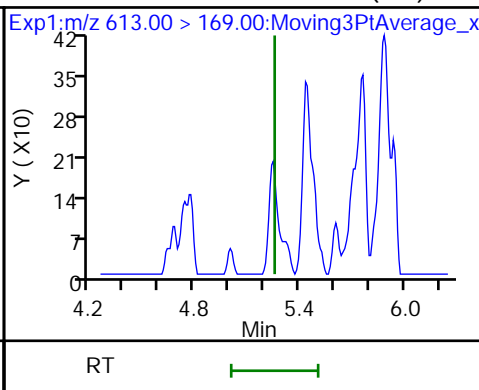
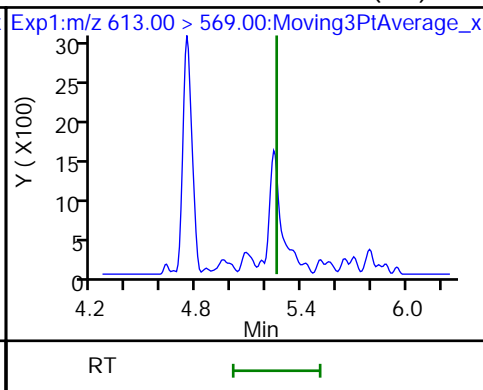
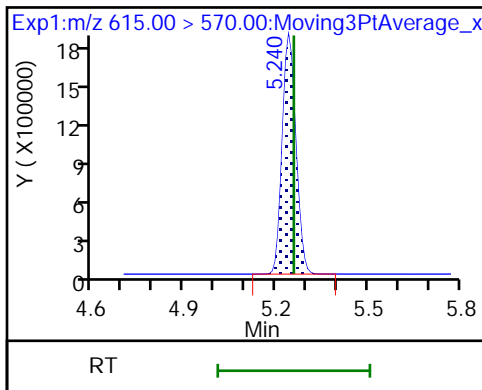




D 43 13C2 PFDaA

42 Perfluorododecanoic acid (ND)

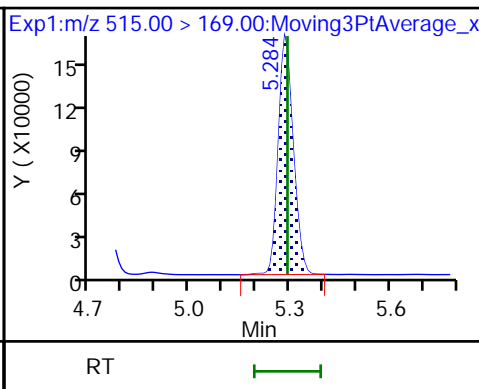
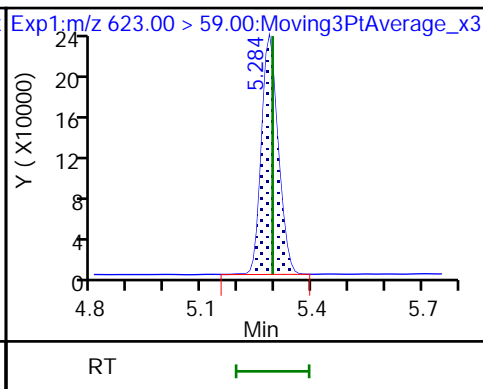
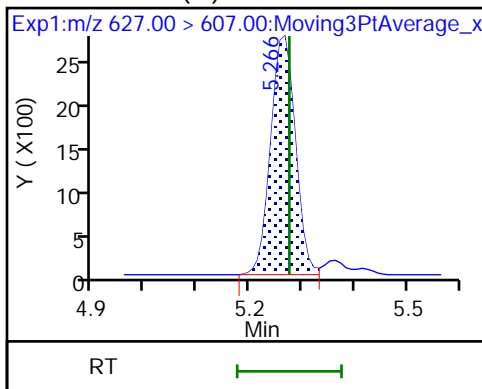
42 Perfluorododecanoic acid (ND)



50 10:2 FTS (M)

D 51 d7-N-MeFOSE-M

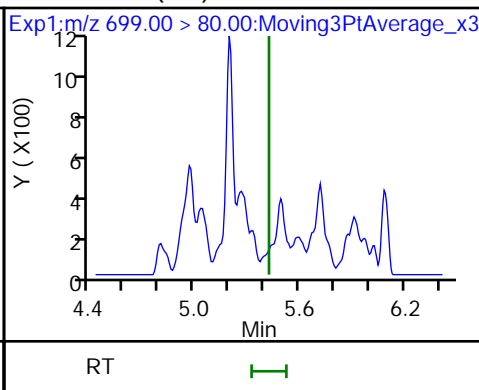
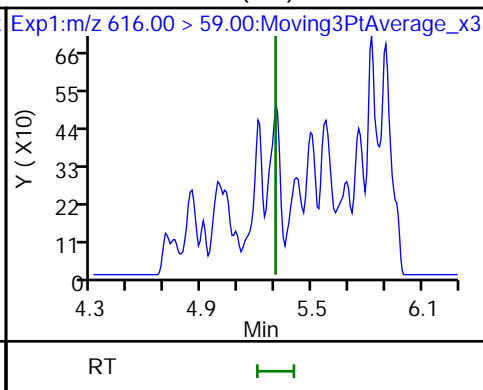
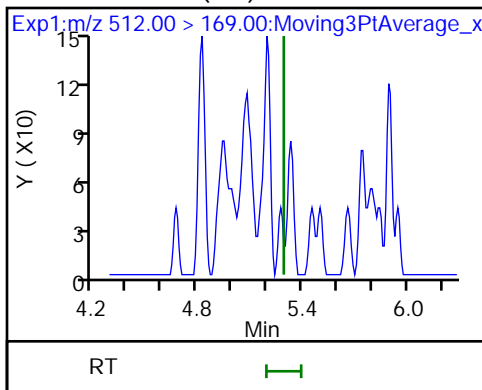
D 58 d-N-MeFOSA-M



61 NMeFOSA (ND)

49 N-MeFOSE-M (ND)

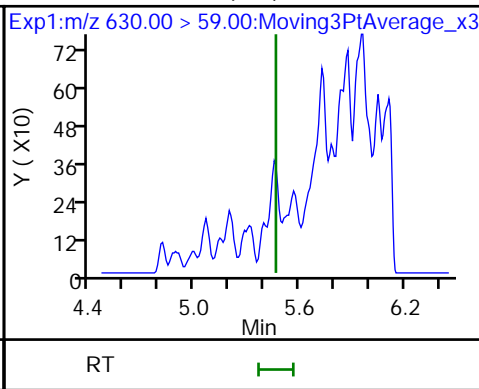
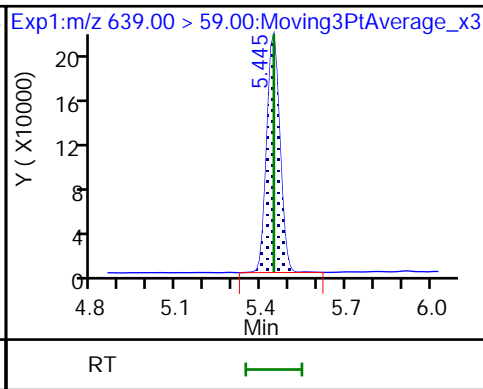
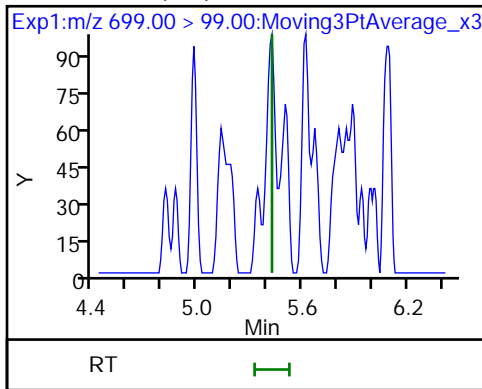
54 PFDoS (ND)

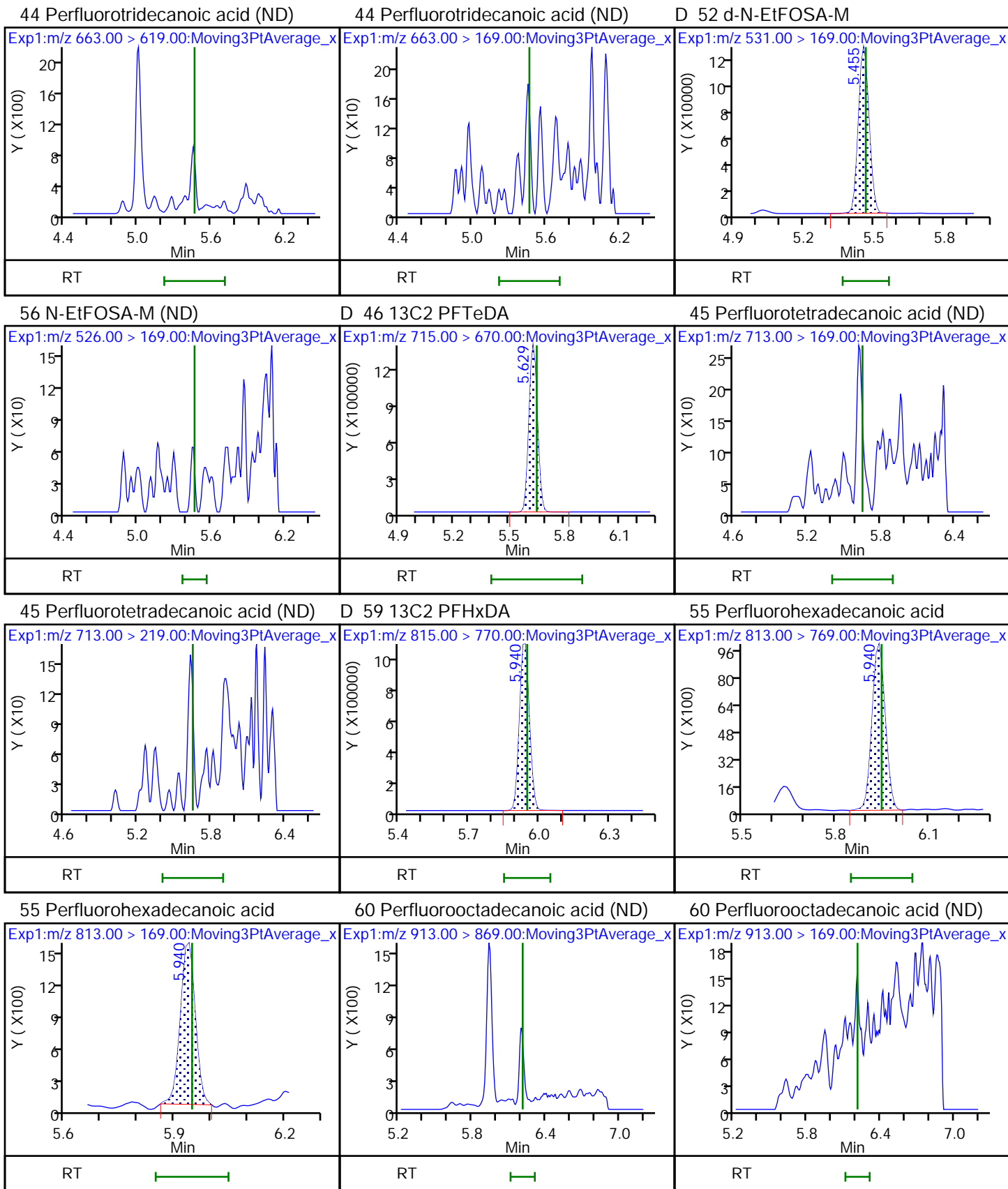


54 PFDoS (ND)

D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M (ND)









FORM I  
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 140-57613/1-B  
 Matrix: Air Lab File ID: 008.d  
 Analysis Method: 537 (modified) Date Collected: \_\_\_\_\_  
 Extraction Method: None Date Extracted: 01/04/2022 08:59  
 Sample wt/vol: 1 (Sample) Date Analyzed: 01/12/2022 18:44  
 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.: 57865 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\20220112-22237.b\_008.d  
 Lims ID: MB 140-57613/1-B  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 12-Jan-2022 18:44:37 ALS Bottle#: 8 Worklist Smp#: 8  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022237-008 mb 140-57613/1-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:15:14 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 09:48:23  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_007.d

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	2.806	2.802	0.004	1.000	147857	0.0412	14.9		
D 1 13C4 PFBA	217.00 > 172.00	2.806	2.802	0.004	0.678	5712622	1.21	97.1	10901	
D 3 13C5 PFPeA	267.90 > 223.00	3.122	3.116	0.006	0.754	4676559	1.28	102	8192	
4 Perfluoropentanoic acid	262.90 > 219.00	3.122	3.116	0.006	1.000	20440	0.005739	3.1		7
	LOD = 0.006500									
D 6 13C3 PFBS	301.90 > 80.00	3.130	3.132	-0.002	0.756	2573430	1.06	90.8	5521	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.130	3.132	-0.002	1.000	5865	0.002415	6.2		7
	298.90 > 99.00	3.138	3.132	0.006	1.003	2447	2.40(1.35-4.06)	4.3		
	LOD = 0.003450									
D 8 M2-4:2 FTS	329.00 > 81.00	3.421	3.423	-0.002	0.826	1009818	1.35	115	1282	
7 4:2 FTS	327.00 > 307.00		3.423				ND			
D 9 13C2 PFHxA	315.00 > 270.00	3.451	3.444	0.007	0.833	4867871	1.25	99.6	8902	
10 Perfluorohexanoic acid	313.00 > 269.00	3.451	3.444	0.007	1.000	83446	0.0247	22.7		
	313.00 > 119.00	3.451	3.444	0.007	1.000	6094	13.69(6.46-19.37)	6.1		
11 Perfluoropentanesulfonic acid	349.00 > 80.00		3.444				ND			
	349.00 > 99.00		3.444							

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	3.555	3.548	0.007	0.859	2232227	1.19		95.1	4809	
13 HFPO-DA										
285.00 > 169.00	3.555	3.548	0.007	1.000	11528	0.004773		10.5	7	7
LOD = 0.008250										
S 65 ADONA										
377.00 > 251.00		3.592				0				
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.796	3.789	0.007	1.000	8669	0.004104	Target=3.52	26.5	7	7
399.00 > 99.00	3.787	3.789	-0.002	0.998	2564		3.38(1.76-5.28)	27.3		
LOD = 0.005000										
D 17 18O2 PFHxS										
403.00 > 84.00	3.796	3.789	0.007	0.917	1813621	1.11		94.3	7395	
D 14 13C4 PFHpA										
367.00 > 322.00	3.806	3.799	0.007	0.919	4671370	1.25		100.0	8611	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.806	3.799	0.007	1.000	302604	0.0774	Target=3.30	125		
363.00 > 169.00	3.806	3.799	0.007	1.000	100314		3.02(1.65-4.95)	260		
68 DONA										
377.00 > 251.00		3.834				ND				
377.00 > 85.00		3.834								
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00		4.115				ND				
449.00 > 99.00		4.115								
D 18 M2-6:2 FTS										
429.00 > 81.00	4.132	4.132	0.0	0.998	978282	1.29		109	2607	
D 21 13C4 PFOA										
417.00 > 372.00	4.141	4.132	0.009	1.000	5071648	1.31		105	8701	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.141	4.132	0.009	1.000	1714	0.000423		7.6		
19 6:2 FTS										
427.00 > 407.00	4.132	4.132	0.0	1.000	310878	0.2120		1478		
* 22 13C2 PFOA										
415.00 > 370.00	4.141	4.132	0.009		5153682	1.25		9119		
23 Perfluorooctanoic acid										
413.00 > 369.00	4.141	4.132	0.009	1.000	42331	0.009093	Target=2.61	23.2		
413.00 > 169.00	4.141	4.132	0.009	1.000	14917		2.84(1.30-3.91)	39.5		
\$ 47 13C8 PFOS										
507.00 > 99.00		4.419				ND				
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.427	4.428	-0.001	1.000	4049	0.001705	Target=4.39	7.3	7M	7M
499.00 > 99.00	4.428	4.428	0.0	0.000	0		0.00(2.19-6.58)			
LOD = 0.005500										
D 25 13C4 PFOS										
503.00 > 80.00	4.427	4.428	-0.001	1.069	2581972	1.10		92.2	5100	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
26 Perfluorononanoic acid										7
463.00 > 419.00	4.452	4.445	0.007	1.000	5129	0.003367	Target=4.78	4.5	7	
463.00 > 169.00	4.461	4.445	0.016	1.002	1484		3.46(2.39-7.17)	3.4		
LOD = 0.004250										
D 27 13C5 PFNA										
468.00 > 423.00	4.452	4.445	0.007	1.075	6551604	1.29		103	11320	
63 9CIFOS										
531.00 > 351.00		4.581				ND				
28 Perfluorononanesulfonic acid										
549.00 > 80.00		4.706				ND				
549.00 > 99.00		4.706								
D 34 13C8 FOSA										
506.00 > 78.00	4.715	4.706	0.009	1.139	4243537	1.34		107	4854	
33 Perfluorooctanesulfonamide										7M
498.00 > 78.00	4.715	4.706	0.009	1.000	3485	0.001085		13.3	7M	
LOD = 0.004400										
D 32 13C2 PFDA										
515.00 > 470.00	4.741	4.732	0.009	1.145	6711946	1.37		109	10547	
29 Perfluorodecanoic acid										M
513.00 > 469.00	4.741	4.732	0.009	1.000	39935	0.007711	Target=11.18	31.3		
513.00 > 169.00	4.749	4.732	0.017	1.002	4199		9.51(5.59-16.77)	12.4	M	
31 8:2 FTS										7
527.00 > 507.00	4.749	4.749	0.0	1.000	2236	0.001750		9.1	7	
LOD = 0.007000										
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.749	0.0	1.147	1080978	1.27		106	1807	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.887	4.878	0.009	1.180	987899	1.71		137	3179	
36 NMeFOSAA										7
570.00 > 419.00	4.878	4.887	-0.009	0.998	1041	0.001357		3.3	7	
LOD = 0.006000										
37 Perfluorodecanesulfonic acid										
599.00 > 80.00		4.966				ND				
599.00 > 99.00		4.966								
69 Perfluoro-3,6,9-trioxatridecanoic acid										M
561.00 > 467.00	4.931	4.970	-0.039	1.114	2007	NC	Target=0.00	4.8	M	
561.00 > 235.00	4.914	4.970	-0.056	1.110	2416		0.83(0.00-0.00)	2.3	M	
38 Perfluoroundecanoic acid										
563.00 > 519.00		5.002				ND				
563.00 > 169.00		5.002								
D 39 13C2 PFUnA										
565.00 > 520.00	5.002	5.002	0.0	1.208	6560943	1.34		107	13938	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.022	5.012	0.010	1.213	1040572	1.64		131	6383	
40 NEtFOSA										
584.00 > 419.00		5.022				ND				
57 11CIFOS										7
631.00 > 451.00	5.112	5.102	0.010	1.155	874	0.000242		4.6	7	
LOD = 0.004350										

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 43 13C2 PFDaA										
615.00 > 570.00	5.240	5.231	0.009	1.266	6443183	1.25		100	18848	
42 Perfluorododecanoic acid										
613.00 > 569.00		5.231				ND				
613.00 > 169.00		5.231								
50 10:2 FTS										
627.00 > 607.00	5.266	5.257	0.009	1.109	10531	0.005125			94.8	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.284	5.275	0.009	1.276	821393	1.33		106	599	
49 N-MeFOSE-M										
616.00 > 59.00	5.249	5.284	-0.035	0.993	58350	0.0797		9.0		M
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.284	5.284	0.0	1.276	531673	1.21		96.5	45.6	
61 NMeFOSA										
512.00 > 169.00		5.284				ND				
54 PFDoS										
699.00 > 80.00		5.404				ND				
699.00 > 99.00		5.404								
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.445	5.435	0.010	1.315	754828	1.22		97.4	419	
62 N-EtFOSE-M										
630.00 > 59.00		5.445				ND				
44 Perfluorotridecanoic acid										
663.00 > 619.00		5.445				ND				
663.00 > 169.00		5.445								
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.455	5.445	0.010	1.317	413990	1.14		91.0	648	
56 N-EtFOSA-M										
526.00 > 169.00		5.455				ND				
D 46 13C2 PFTeDA										
715.00 > 670.00	5.629	5.629	0.0	1.360	4436198	1.13		90.5	9874	
45 Perfluorotetradecanoic acid										
713.00 > 169.00		5.629				ND				
713.00 > 219.00		5.629								
D 59 13C2 PFHxDA										
815.00 > 770.00	5.940	5.931	0.009	1.434	2094030	0.7881		63.1	4800	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.940	5.931	0.009	1.000	23268	0.002567	Target=8.21	69.6		7
813.00 > 169.00	5.940	5.931	0.009	1.000	3430		6.78(4.11-12.32)	10.2		7
LOD = 0.009000										
60 Perfluorooctadecanoic acid										
913.00 > 869.00		6.195				ND				
913.00 > 169.00		6.195								
S 66 F-53B										
212.90 > 169.00		0.0				0				

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

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\\_008.d

Injection Date: 12-Jan-2022 18:44:37

Instrument ID: LCA

Lims ID: MB 140-57613/1-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 8

Worklist Smp#: 8

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

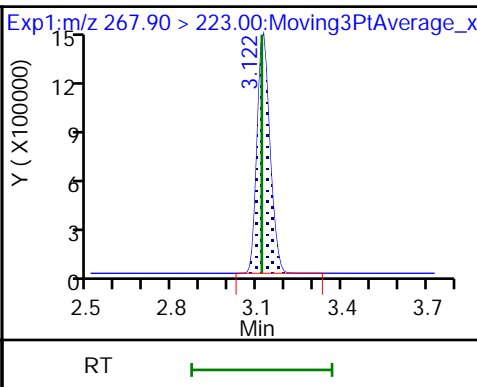
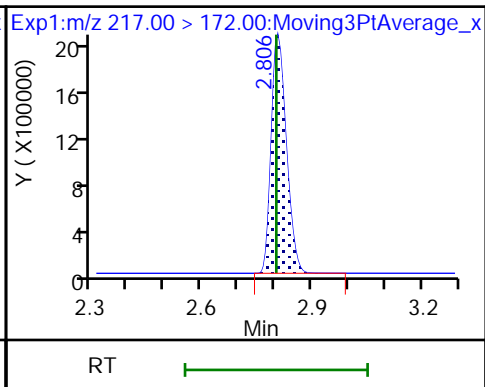
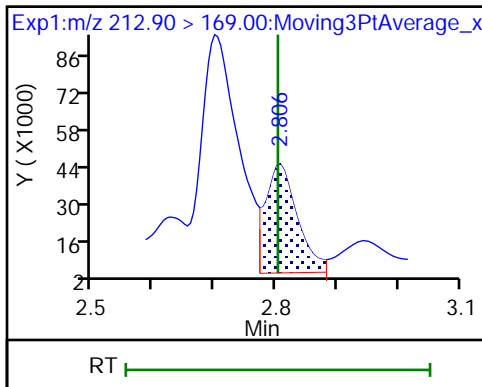
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

2 Perfluorobutanoic acid

D 1 13C4 PFBA

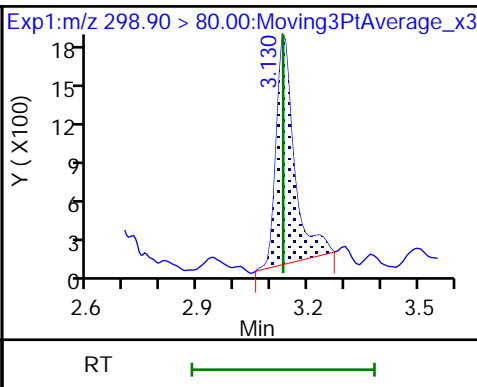
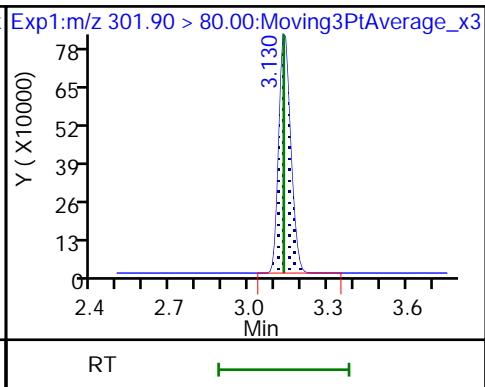
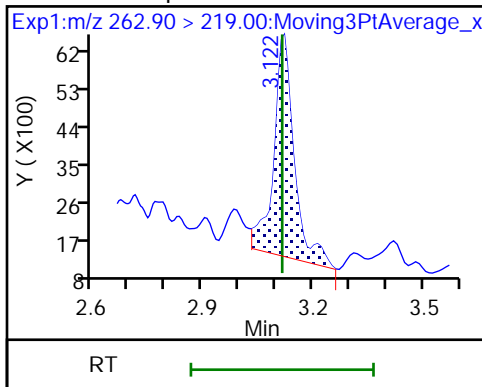
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

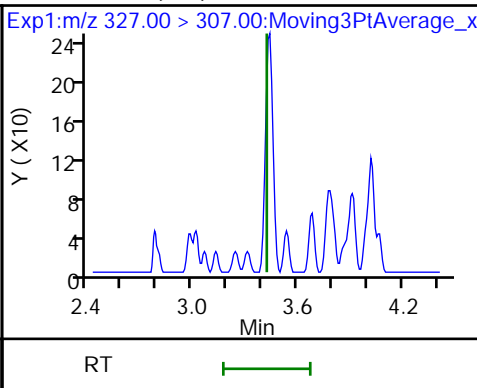
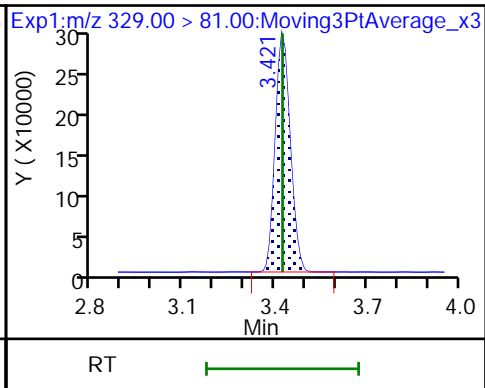
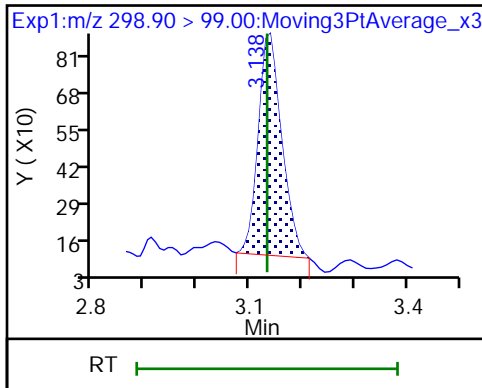
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

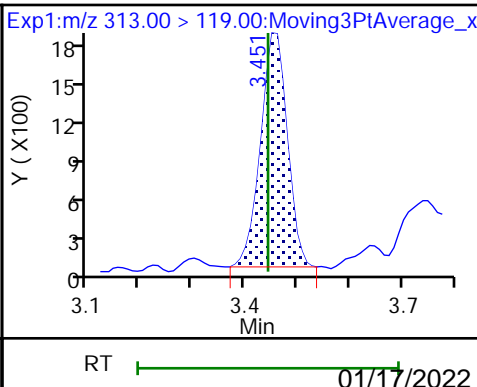
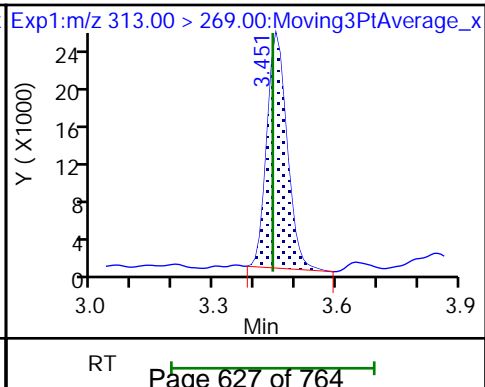
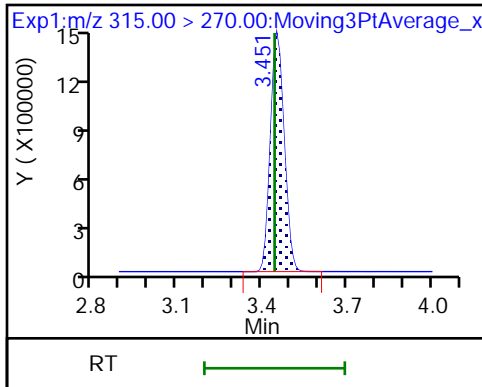
7 4:2 FTS (ND)



D 9 13C2 PFHxA

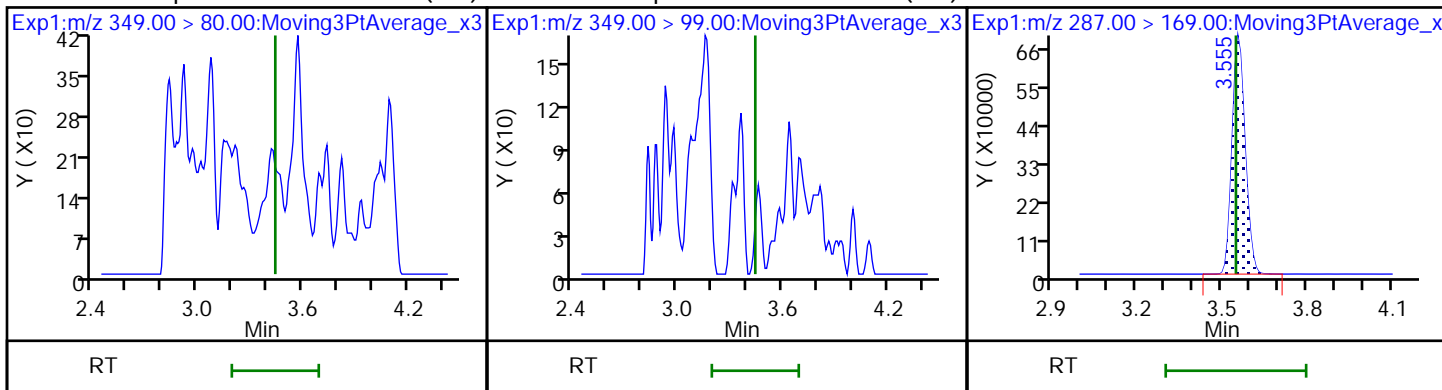
10 Perfluorohexanoic acid

10 Perfluorohexanoic acid

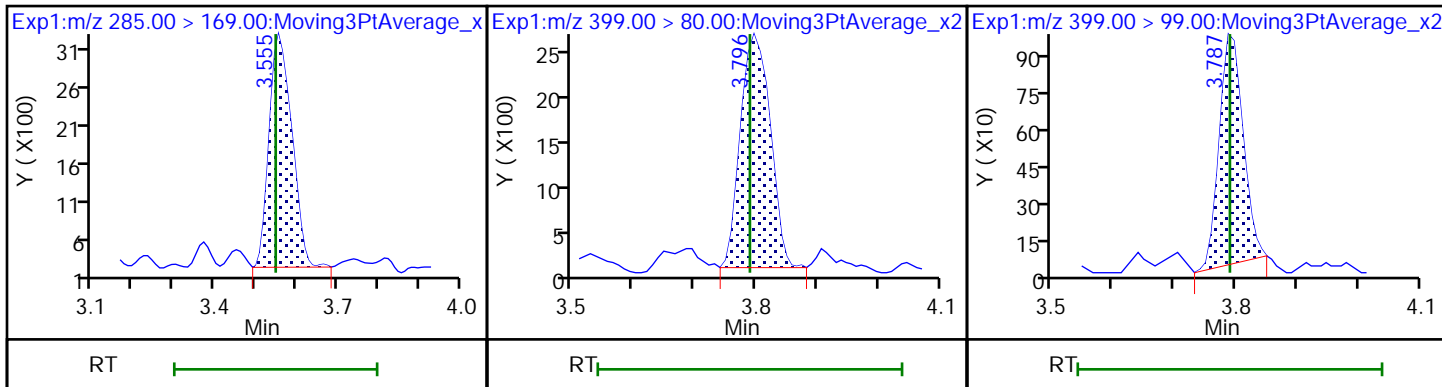




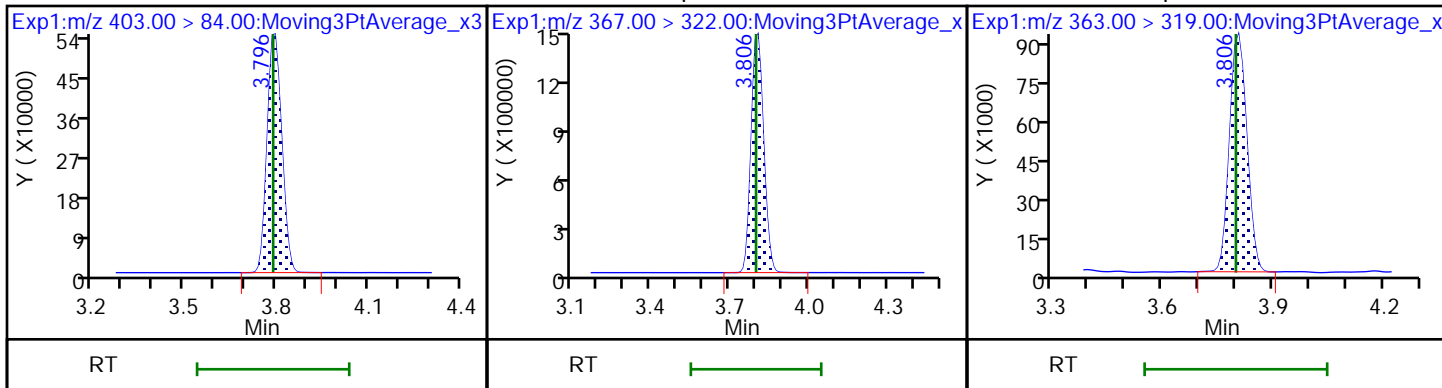
11 Perfluoropentanesulfonic acid (ND) 11 Perfluoropentanesulfonic acid (ND) D 12 13C3 HFPO-DA



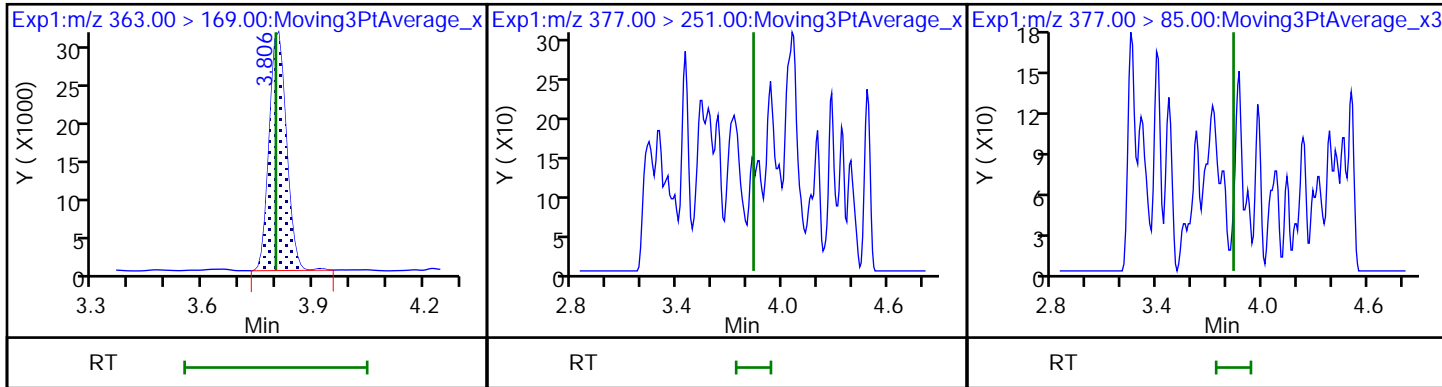
13 HFPO-DA 16 Perfluorohexanesulfonic acid 16 Perfluorohexanesulfonic acid



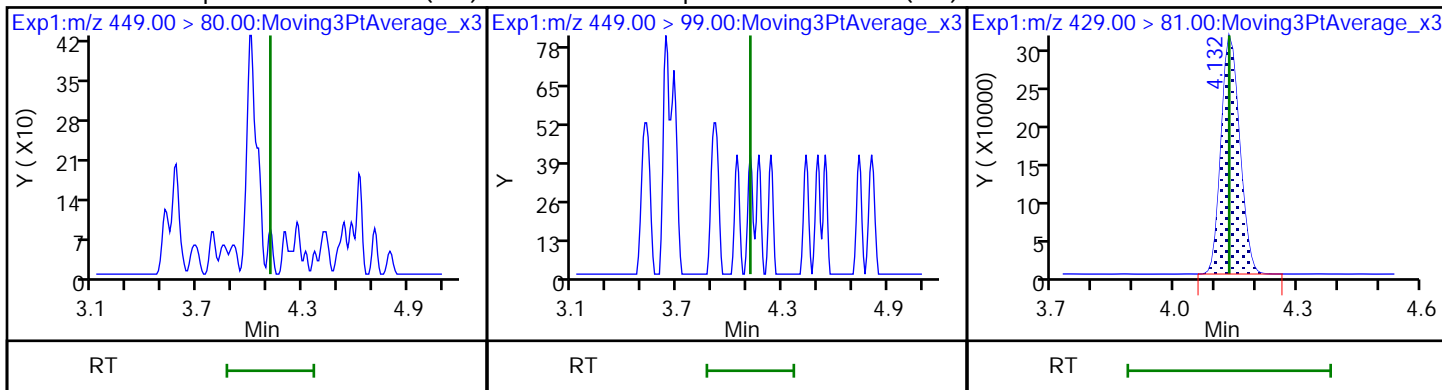
D 17 18O2 PFHxS D 14 13C4 PFHpA 15 Perfluoroheptanoic acid



15 Perfluoroheptanoic acid 68 DONA (ND) 68 DONA (ND)



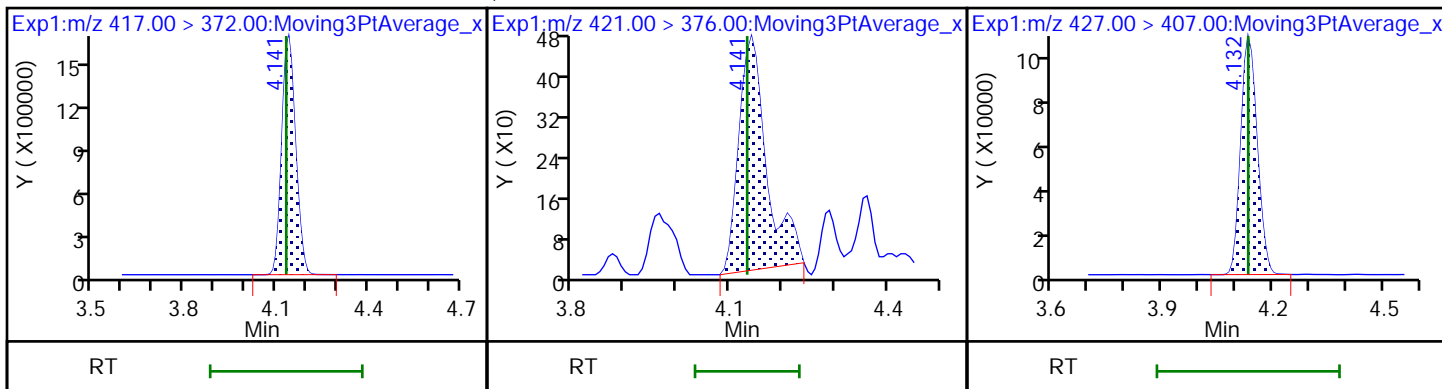
20 Perfluoroheptanesulfonic acid (ND) 20 Perfluoroheptanesulfonic acid (ND) D 18 M2-6:2 FTS



D 21 13C4 PFOA

\$ 48 13C8 PFOA

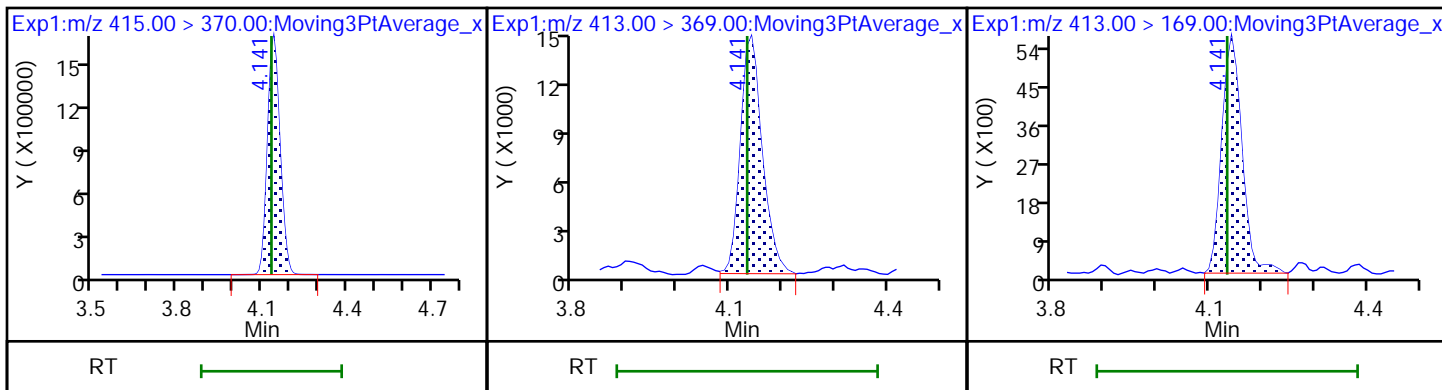
19 6:2 FTS



\* 22 13C2 PFOA

23 Perfluorooctanoic acid

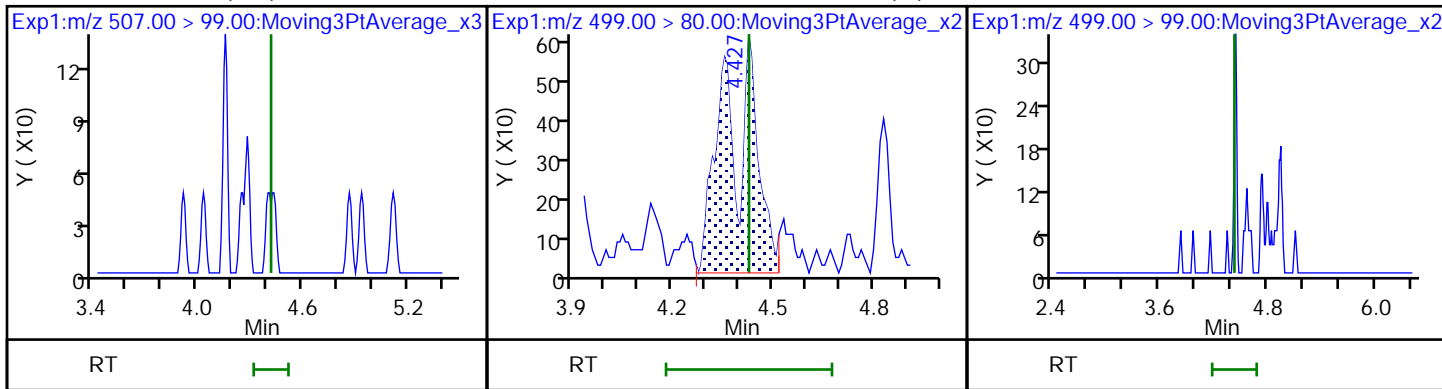
23 Perfluorooctanoic acid



\$ 47 13C8 PFOS (ND)

24 Perfluorooctanesulfonic acid (M)

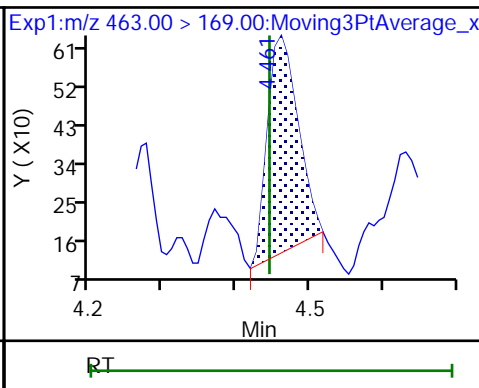
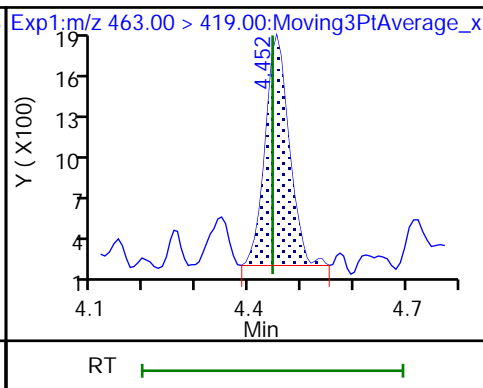
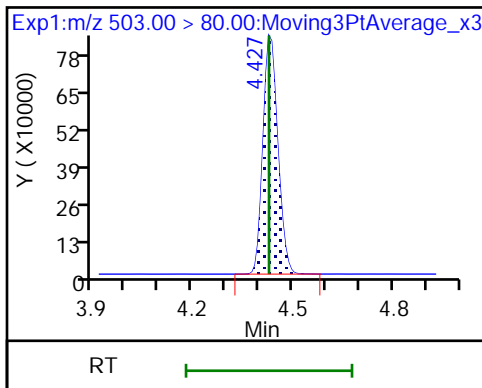
24 Perfluorooctanesulfonic acid



D 25 13C4 PFOS

26 Perfluorononanoic acid

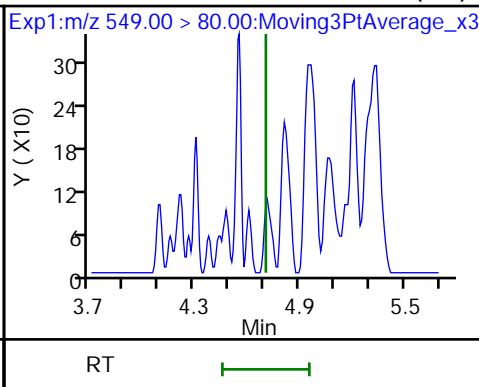
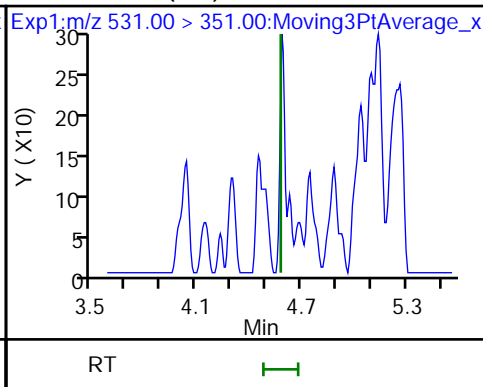
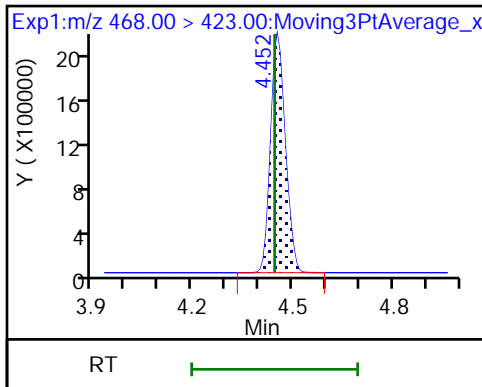
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS (ND)

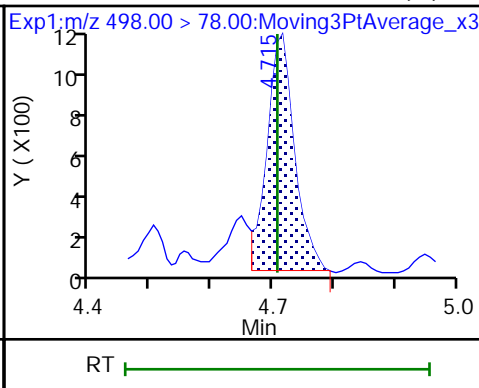
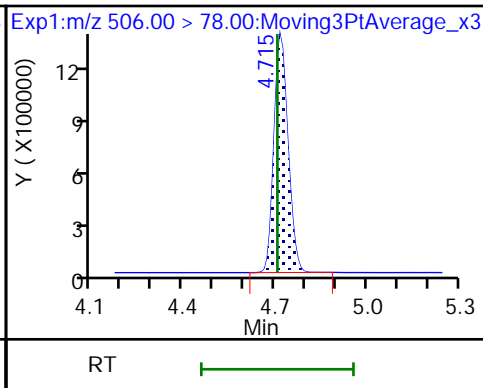
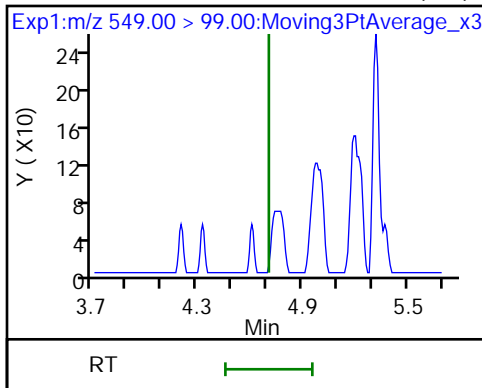
28 Perfluorononanesulfonic acid (ND)



28 Perfluorononanesulfonic acid (ND)

D 34 13C8 FOSA

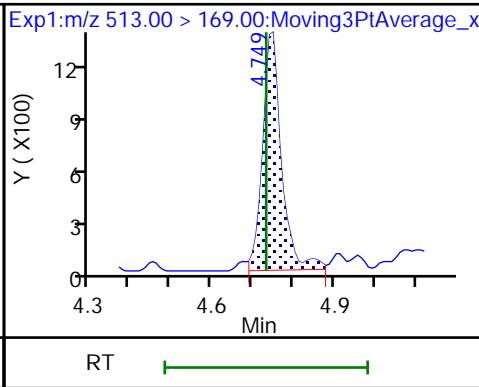
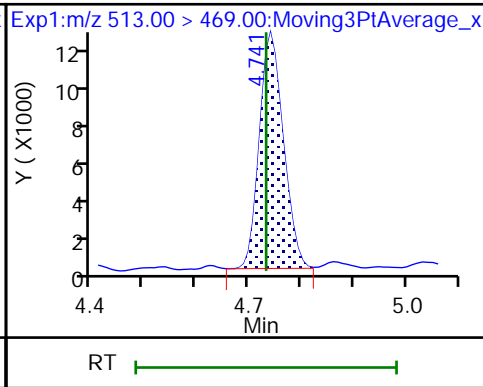
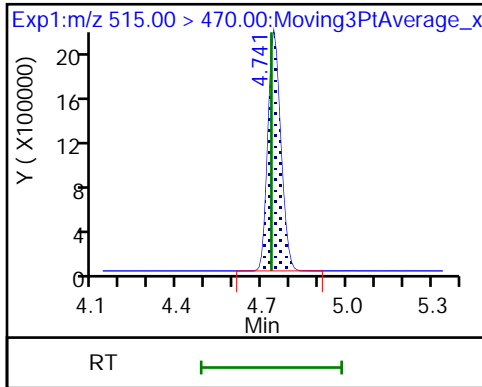
33 Perfluorooctanesulfonamide (M)

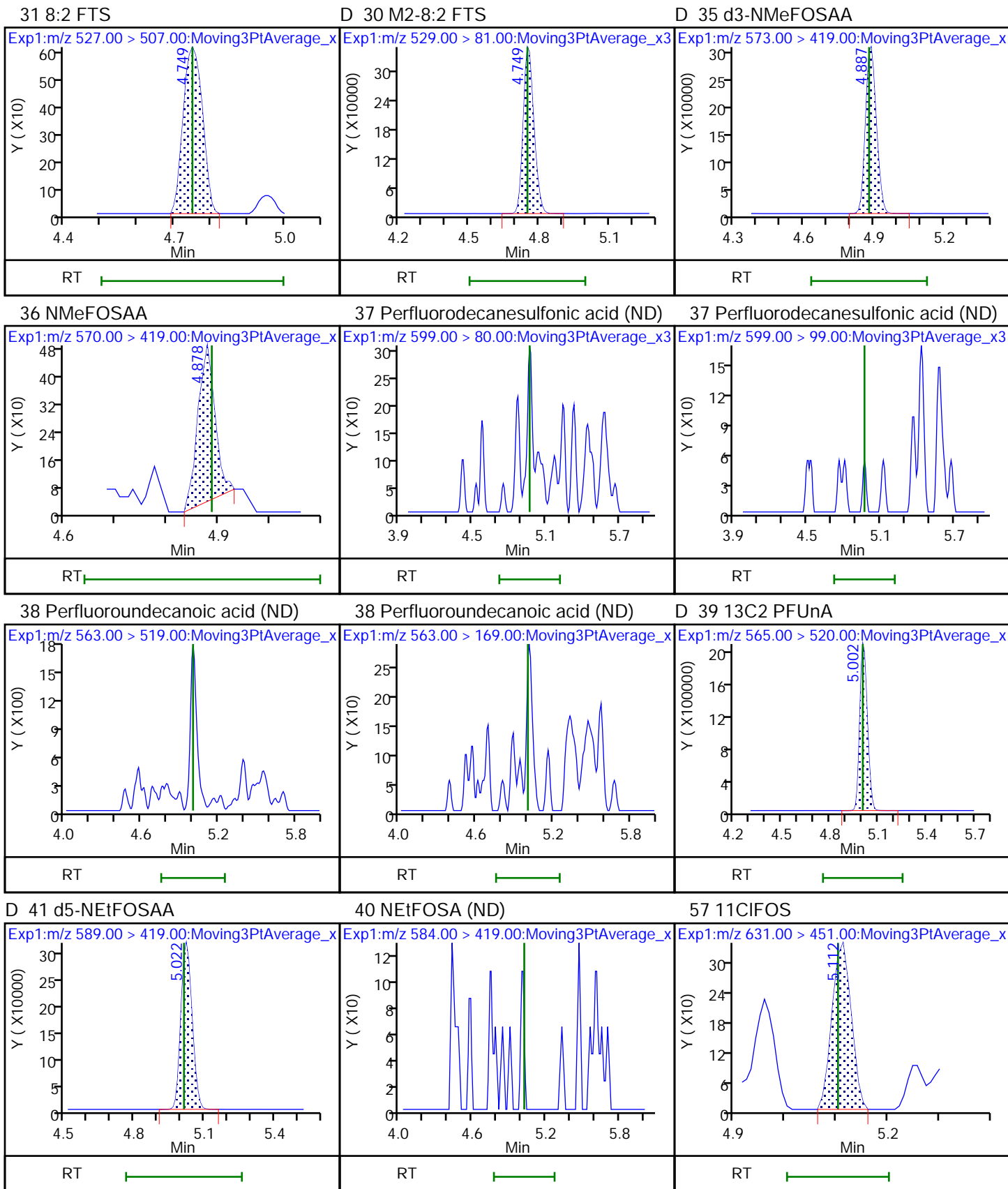


D 32 13C2 PFDA

29 Perfluorodecanoic acid

29 Perfluorodecanoic acid (M)

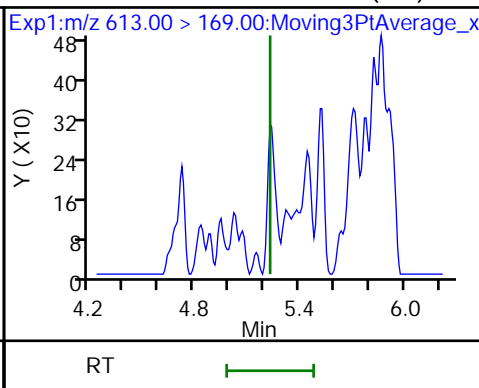
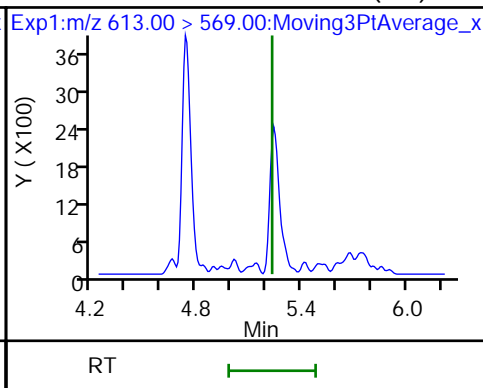
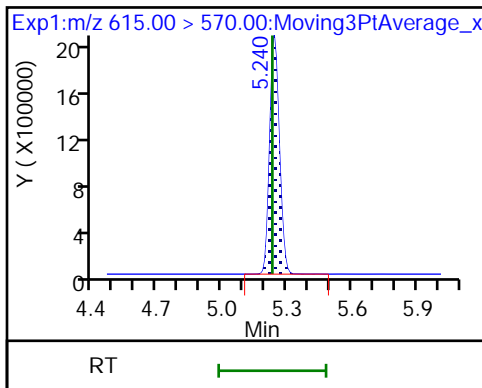




D 43 13C2 PFDaA

42 Perfluorododecanoic acid (ND)

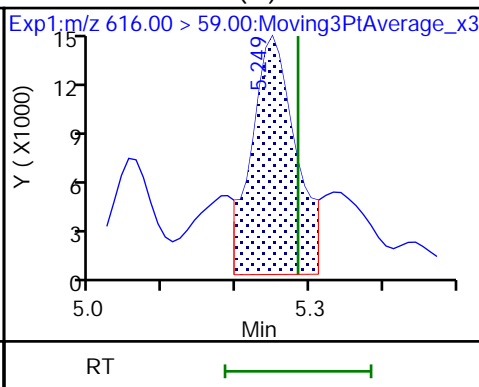
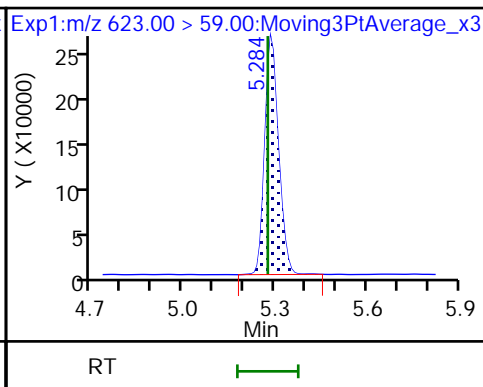
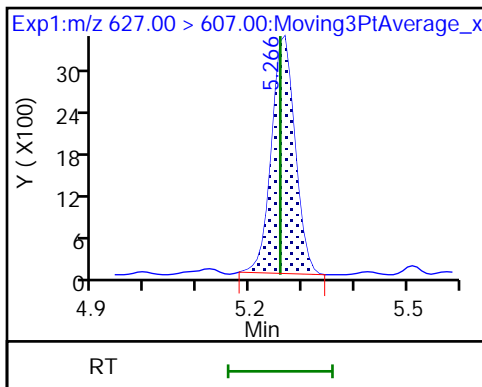
42 Perfluorododecanoic acid (ND)



50 10:2 FTS

D 51 d7-N-MeFOSE-M

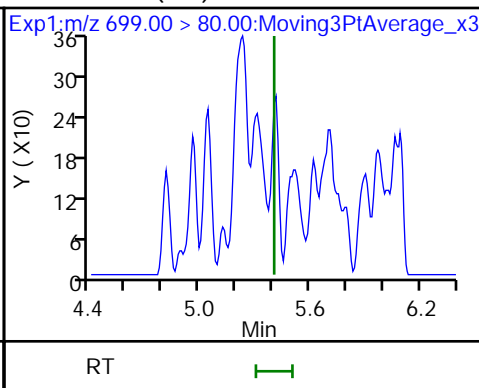
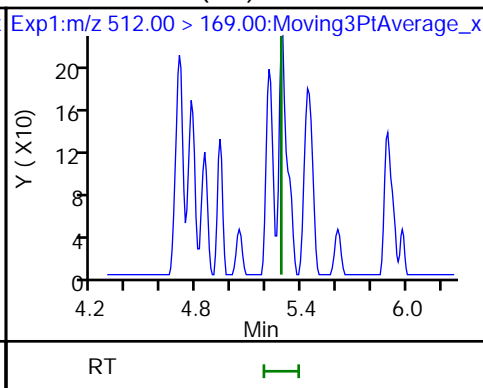
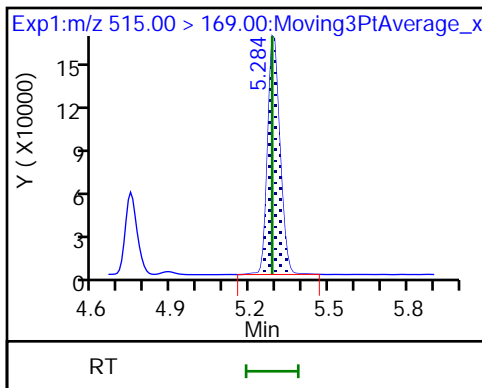
49 N-MeFOSE-M (M)



D 58 d-N-MeFOSA-M

61 NMeFOSA (ND)

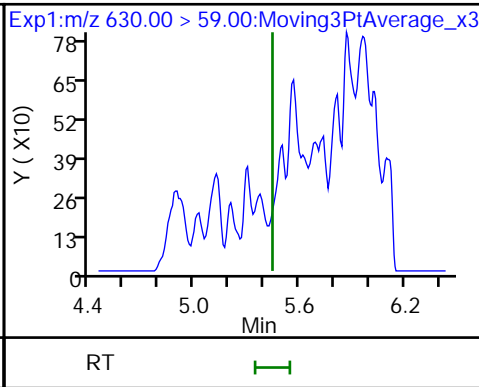
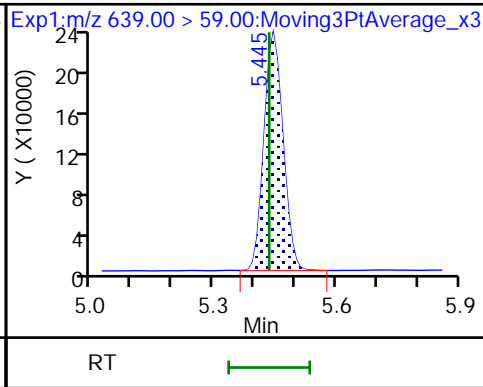
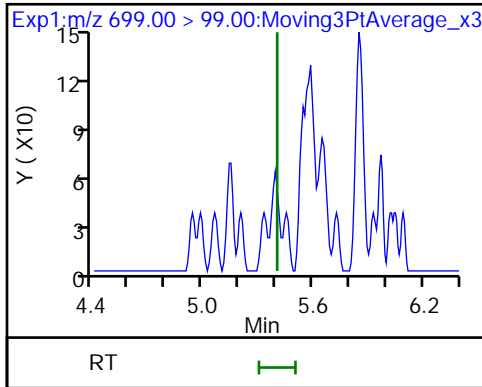
54 PFDoS (ND)

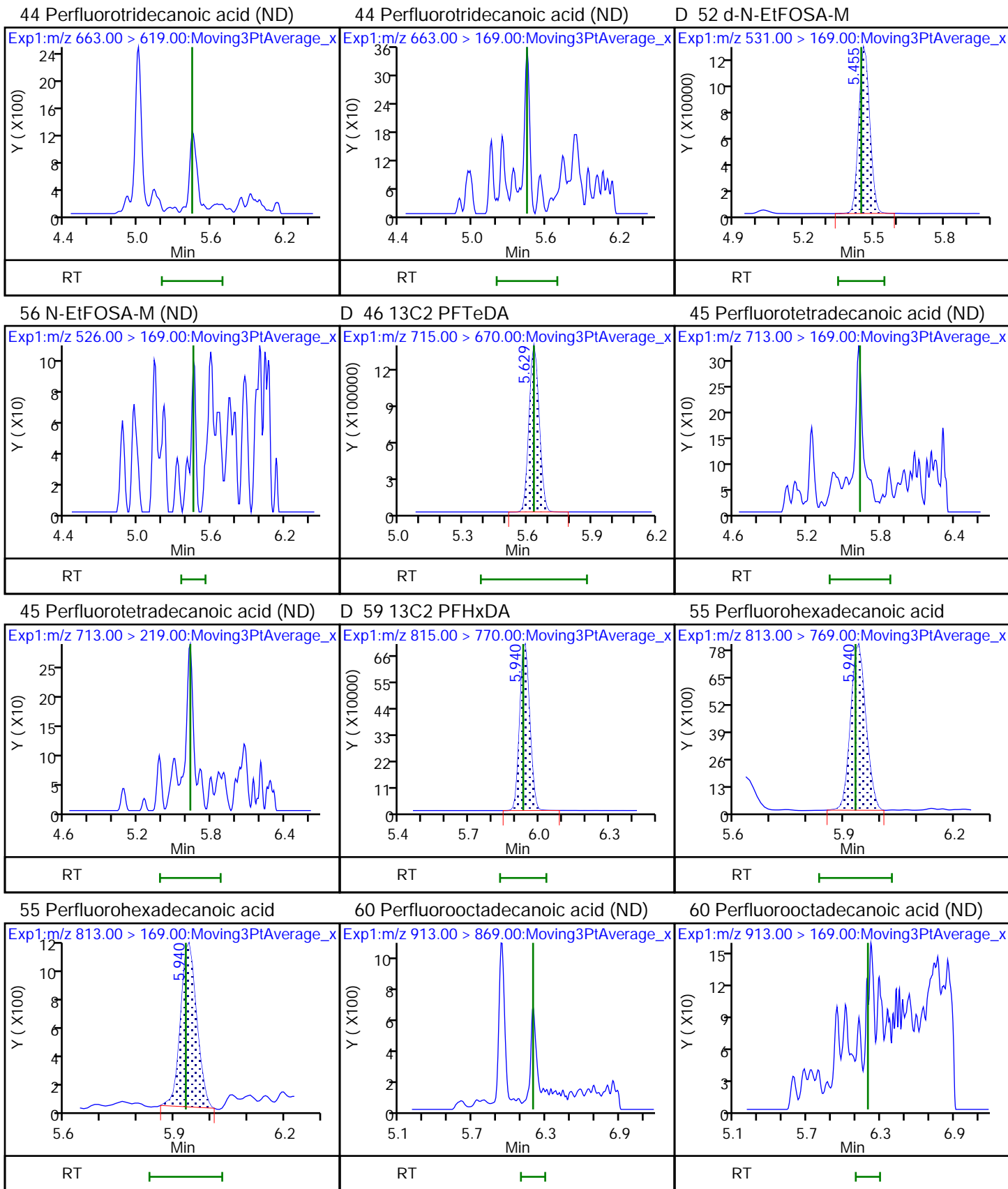


54 PFDoS (ND)

D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M (ND)







Eurofins TestAmerica, Knoxville  
Recovery Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_008.d  
 Lims ID: MB 140-57613/1-B  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 12-Jan-2022 18:44:37 ALS Bottle#: 8 Worklist Smp#: 8  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022237-008 mb 140-57613/1-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:15:14 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 09:48:23

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

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 140-57613/14-B  
 Matrix: Air Lab File ID: \_033.d  
 Analysis Method: 537 (modified) Date Collected: \_\_\_\_\_  
 Extraction Method: None Date Extracted: 01/04/2022 08:59  
 Sample wt/vol: 1 (Sample) Date Analyzed: 01/12/2022 22:24  
 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.: 57865 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	97		25-150

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_033.d  
 Lims ID: MB 140-57613/14-B  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 12-Jan-2022 22:24:35 ALS Bottle#: 33 Worklist Smp#: 33  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022237-033 mb 140-57613/14-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:15:42 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 10:10:01  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_031.d

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	2.785	2.802	-0.017	0.998	158142	0.0417			13.8	
D 1 13C4 PFBA										
217.00 > 172.00	2.790	2.802	-0.012	0.678	6042289	1.19		95.5	11682	
D 3 13C5 PFPeA										
267.90 > 223.00	3.099	3.116	-0.017	0.753	4884065	1.24		99.5	8243	
4 Perfluoropentanoic acid										
262.90 > 219.00	3.099	3.116	-0.017	1.000	14335	0.003854		2.3		7
LOD = 0.006500										
D 6 13C3 PFBS										
301.90 > 80.00	3.115	3.132	-0.017	0.757	2713796	1.04		89.1	5912	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00		3.132				ND				
298.90 > 99.00		3.132								
D 8 M2-4:2 FTS										
329.00 > 81.00	3.402	3.423	-0.021	0.827	1107810	1.37		118	1580	
7 4:2 FTS										
327.00 > 307.00	3.392	3.423	-0.031	0.997	1111	0.000520		14.8		7
LOD = 0.003200										
10 Perfluorohexanoic acid										
313.00 > 269.00	3.423	3.444	-0.021	1.000	75699	0.0205	Target=11.94		19.7	
313.00 > 119.00	3.423	3.444	-0.021	1.000	5296		14.29(5.97-17.91)		5.8	
11 Perfluoropentanesulfonic acid										
349.00 > 80.00		3.444				ND				
349.00 > 99.00		3.444								
D 9 13C2 PFHxA										
315.00 > 270.00	3.423	3.444	-0.021	0.832	5317258	1.27		101	8701	

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	3.529	3.548	-0.019	0.858	2441023	1.21		96.7	4779	
13 HFPO-DA										
285.00 > 169.00	3.529	3.548	-0.019	1.000	4449	0.001684		5.3	7	7
LOD = 0.008250										
S 65 ADONA										
377.00 > 251.00		3.592				0				
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.770	3.789	-0.019	1.002	8712	0.003845	Target=3.54	38.6	7	7
399.00 > 99.00	3.770	3.789	-0.019	1.002	1831		4.76(1.77-5.31)	16.0		
LOD = 0.005000										
D 17 18O2 PFHxS										
403.00 > 84.00	3.761	3.789	-0.028	0.914	1945580	1.11		94.1	8371	
D 14 13C4 PFHpA										
367.00 > 322.00	3.779	3.799	-0.020	0.919	5090420	1.27		101	9892	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.779	3.799	-0.020	1.000	218650	0.0513	Target=3.19	72.1		
363.00 > 169.00	3.779	3.799	-0.020	1.000	73922		2.96(1.60-4.79)	219		
68 DONA										
377.00 > 251.00		3.834				ND				
377.00 > 85.00		3.834								
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00		4.115				ND				
449.00 > 99.00		4.115								
D 18 M2-6:2 FTS										
429.00 > 81.00	4.105	4.132	-0.027	0.998	1103837	1.36		114	3521	
D 21 13C4 PFOA										
417.00 > 372.00	4.114	4.132	-0.018	1.000	5443017	1.31		105	9030	
\$ 48 13C8 PFOA										
421.00 > 376.00	4.105	4.132	-0.027	0.998	1436	0.000330		12.5		M
19 6:2 FTS										
427.00 > 407.00	4.105	4.132	-0.027	1.000	321756	0.1947		1716		
* 22 13C2 PFOA										
415.00 > 370.00	4.114	4.132	-0.018		5539318	1.25		9670		
23 Perfluorooctanoic acid										
413.00 > 369.00	4.114	4.132	-0.018	1.000	41440	0.008294	Target=2.65	19.2		
413.00 > 169.00	4.114	4.132	-0.018	1.000	10599		3.91(1.32-3.97)	31.2		
\$ 47 13C8 PFOS										
507.00 > 99.00		4.419				ND				
24 Perfluorooctanesulfonic acid										
499.00 > 80.00		4.428				ND				
499.00 > 99.00		4.428								
D 25 13C4 PFOS										
503.00 > 80.00	4.400	4.428	-0.028	1.070	2989215	1.19		99.4	5512	
26 Perfluorononanoic acid										
463.00 > 419.00	4.426	4.445	-0.019	1.000	3594	0.002976	Target=4.72	3.4	7	7
463.00 > 169.00	4.417	4.445	-0.028	0.998	1308		2.75(2.36-7.07)	3.0		
LOD = 0.004250										

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\\_033.d

Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\\_031.d

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	4.426	4.445	-0.019	1.076	6934039	1.27		101	12252	
63 9CIFOS										
531.00 > 351.00		4.581				ND				
D 34 13C8 FOSA										
506.00 > 78.00	4.697	4.706	-0.009	1.142	4524787	1.33		106	4327	
33 Perfluorooctanesulfonamide										
498.00 > 78.00		4.706				ND				
28 Perfluorononanesulfonic acid										
549.00 > 80.00		4.706				ND				
549.00 > 99.00		4.706								
D 32 13C2 PFDA										
515.00 > 470.00	4.714	4.732	-0.018	1.146	7062137	1.34		107	12210	
29 Perfluorodecanoic acid										
513.00 > 469.00		4.732				ND				
513.00 > 169.00		4.732								
31 8:2 FTS										7
527.00 > 507.00	4.731	4.749	-0.018	1.002	1422	0.001167		6.5	7	
LOD = 0.007000										
D 30 M2-8:2 FTS										
529.00 > 81.00	4.722	4.749	-0.027	1.148	1031419	1.12		93.9	2145	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.859	4.878	-0.019	1.181	1105032	1.78		142	4772	
36 NMeFOSAA										7
570.00 > 419.00	5.030	4.887	0.143	1.035	593	0.000691		3.2	7	
LOD = 0.006000										
37 Perfluorodecanesulfonic acid										
599.00 > 80.00		4.966				ND				
599.00 > 99.00		4.966								
69 Perfluoro-3,6,9-trioxatridecanoic acid										
561.00 > 467.00		4.970				ND				
561.00 > 235.00		4.970								
38 Perfluoroundecanoic acid										
563.00 > 519.00		5.002				ND				
563.00 > 169.00		5.002								
D 39 13C2 PFUnA										
565.00 > 520.00	4.973	5.002	-0.029	1.209	6779325	1.29		103	12019	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.991	5.012	-0.021	1.213	1041005	1.53		122	4265	
40 NEtFOSA										
584.00 > 419.00		5.022				ND				
57 11CIFOS										
631.00 > 451.00		5.102				ND				
D 43 13C2 PFDaA										
615.00 > 570.00	5.212	5.231	-0.019	1.267	7089845	1.28		103	14476	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
42 Perfluorododecanoic acid										R7
613.00 > 569.00	5.212	5.231	-0.019	1.000	4294	0.000312	Target=7.30	6.3		R7
613.00 > 169.00	5.203	5.231	-0.028	0.998	1374		3.13(3.65-10.96)	5.8		
LOD = 0.005000										
50 10:2 FTS										
627.00 > 607.00	5.229	5.257	-0.028	1.107	12065	0.006154			119	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.273	5.275	-0.002	1.282	838134	1.26		101	560	
49 N-MeFOSE-M										M
616.00 > 59.00	5.229	5.284	-0.055	0.992	57783	0.0775		8.6		M
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.273	5.284	-0.011	1.282	553783	1.17		93.5	52.6	
61 NMeFOSA										
512.00 > 169.00		5.284				ND				
54 PFDoS										
699.00 > 80.00		5.404				ND				
699.00 > 99.00		5.404								
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.433	5.435	-0.002	1.321	830036	1.25		99.6	404	
62 N-EtFOSE-M										
630.00 > 59.00		5.445				ND				
44 Perfluorotridecanoic acid										
663.00 > 619.00		5.445				ND				
663.00 > 169.00		5.445								
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.443	5.445	-0.002	1.323	433611	1.11		88.7	539	
56 N-EtFOSA-M										
526.00 > 169.00		5.455				ND				
D 46 13C2 PFTeDA										
715.00 > 670.00	5.605	5.629	-0.024	1.363	4882524	1.16		92.7	8080	
45 Perfluorotetradecanoic acid										
713.00 > 169.00		5.629				ND				
713.00 > 219.00		5.629								
D 59 13C2 PFHxDA										
815.00 > 770.00	5.911	5.931	-0.020	1.437	1570829	0.5501		44.0	4442	
55 Perfluorohexadecanoic acid										7
813.00 > 769.00	5.911	5.931	-0.020	1.000	15824	0.001341	Target=8.17	45.2		7
813.00 > 169.00	5.911	5.931	-0.020	1.000	1891		8.37(4.08-12.25)	11.5		
LOD = 0.009000										
60 Perfluorooctadecanoic acid										
913.00 > 869.00		6.195				ND				
913.00 > 169.00		6.195								
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

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\\_033.d

Injection Date: 12-Jan-2022 22:24:35

Instrument ID: LCA

Lims ID: MB 140-57613/14-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 33

Worklist Smp#: 33

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

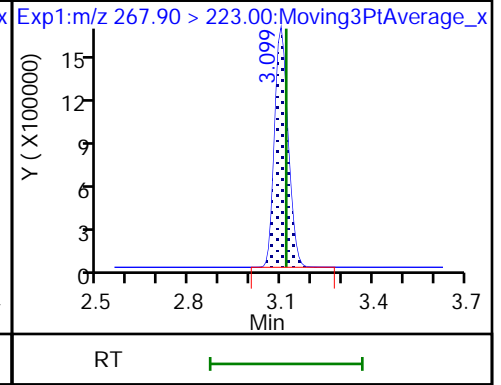
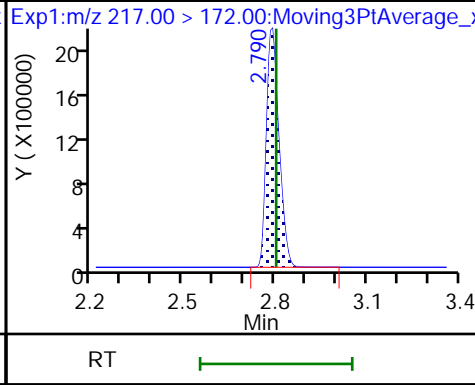
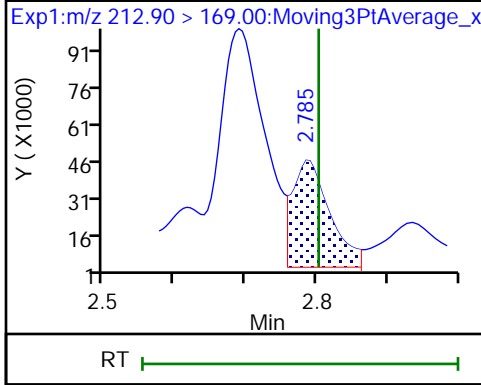
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

2 Perfluorobutanoic acid

D 1 13C4 PFBA

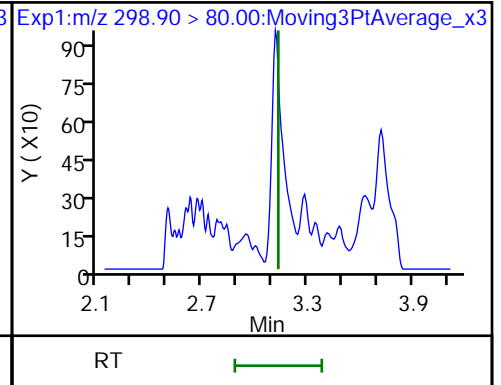
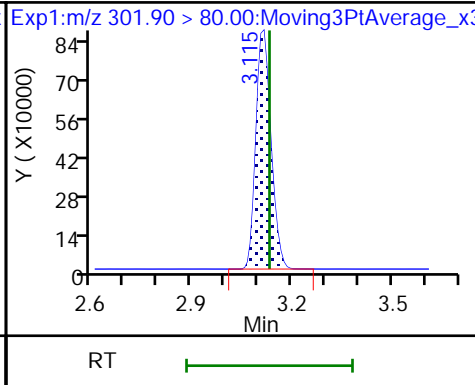
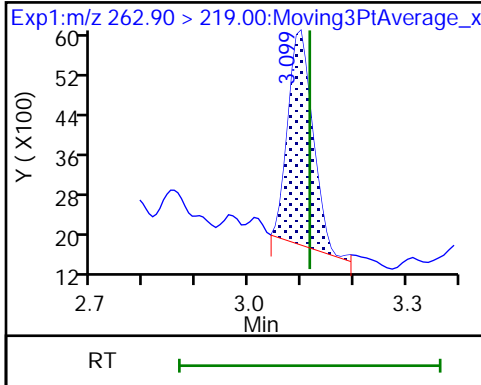
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

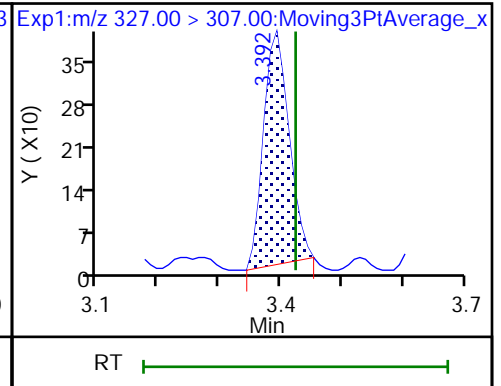
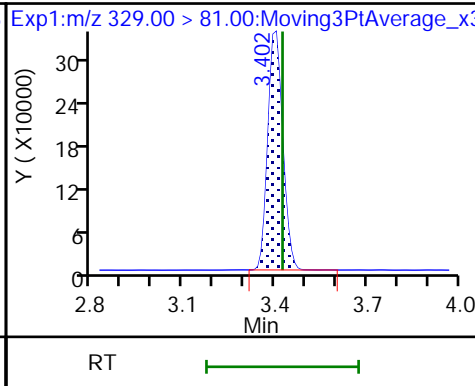
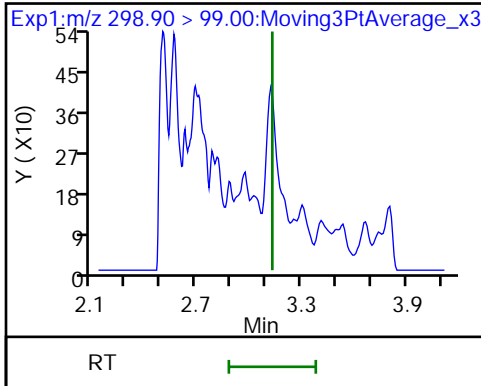
5 Perfluorobutanesulfonic acid (ND)



5 Perfluorobutanesulfonic acid (ND)

D 8 M2-4:2 FTS

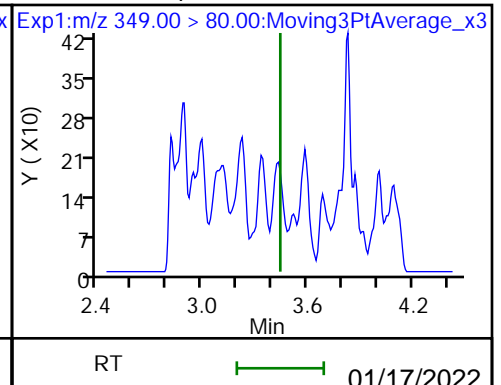
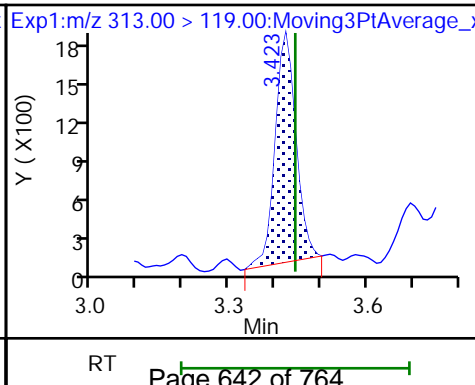
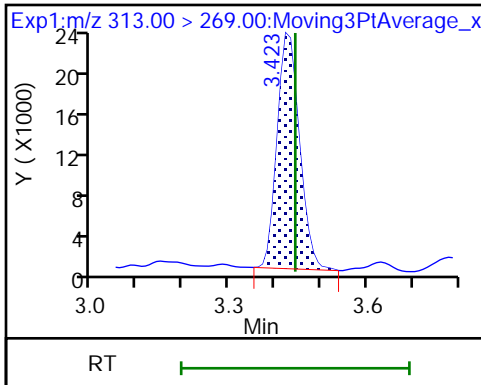
7 4:2 FTS



10 Perfluorohexanoic acid

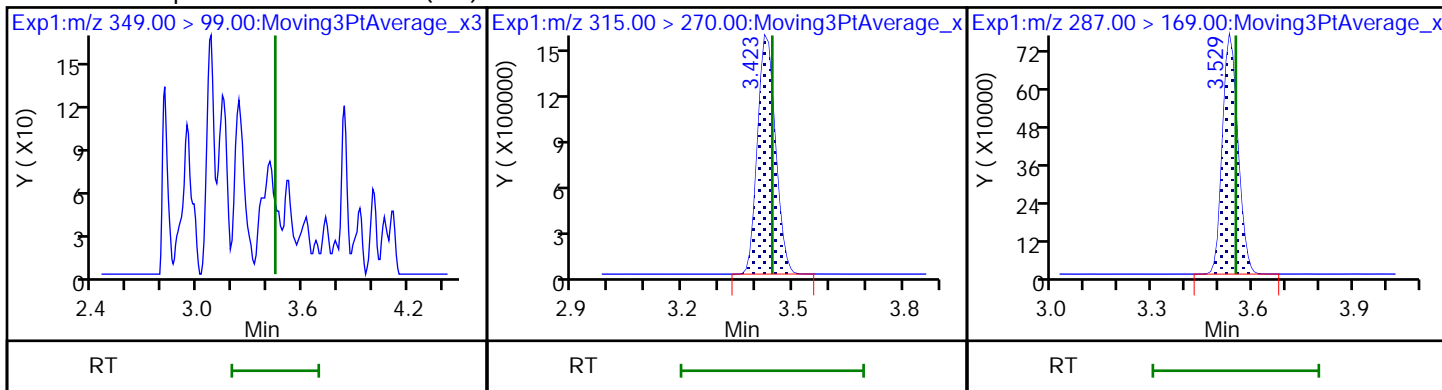
10 Perfluorohexanoic acid

11 Perfluoropentanesulfonic acid (ND)



11 Perfluoropentanesulfonic acid (ND) D 9 13C2 PFHxA

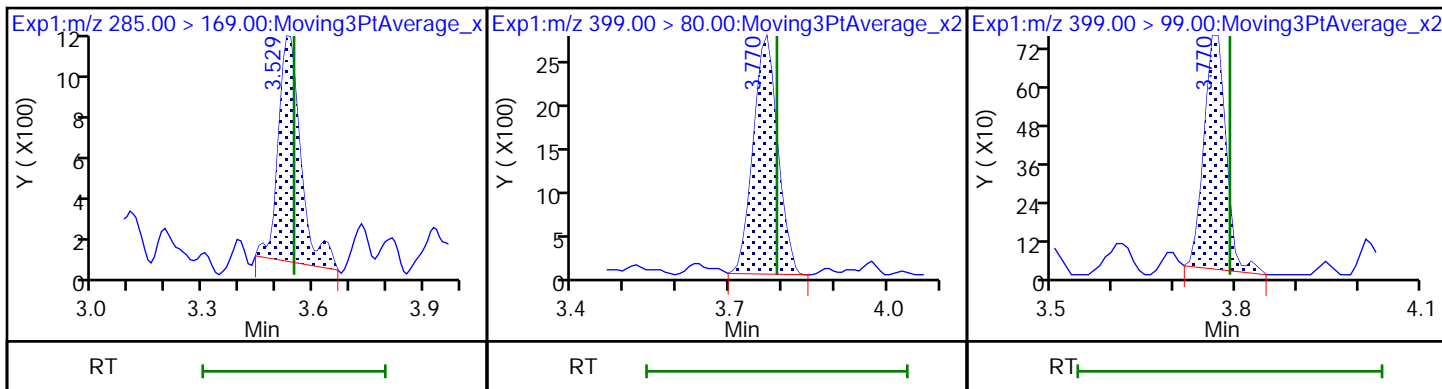
D 12 13C3 HFPO-DA



13 HFPO-DA

16 Perfluorohexanesulfonic acid

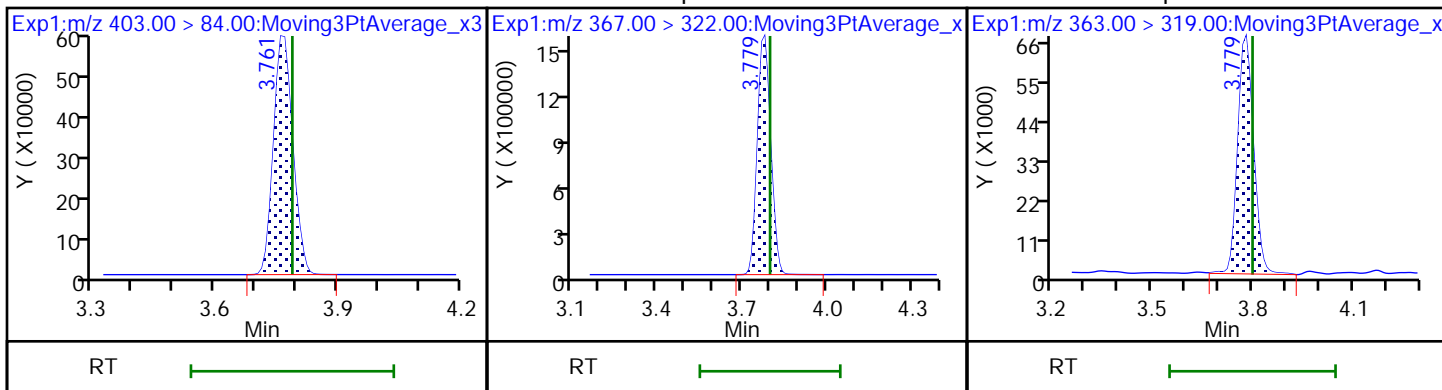
16 Perfluorohexanesulfonic acid



D 17 18O2 PFHxS

D 14 13C4 PFHpA

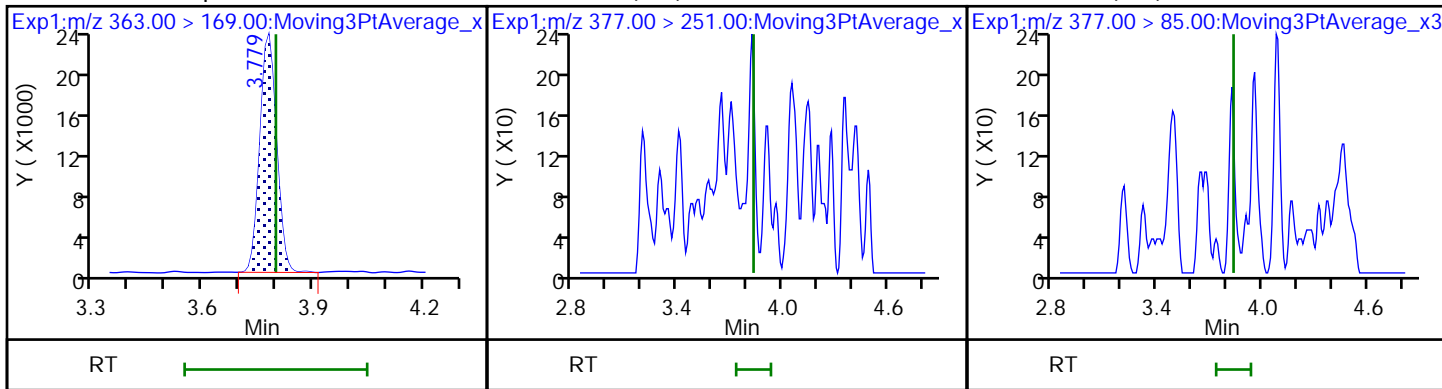
15 Perfluoroheptanoic acid



15 Perfluoroheptanoic acid

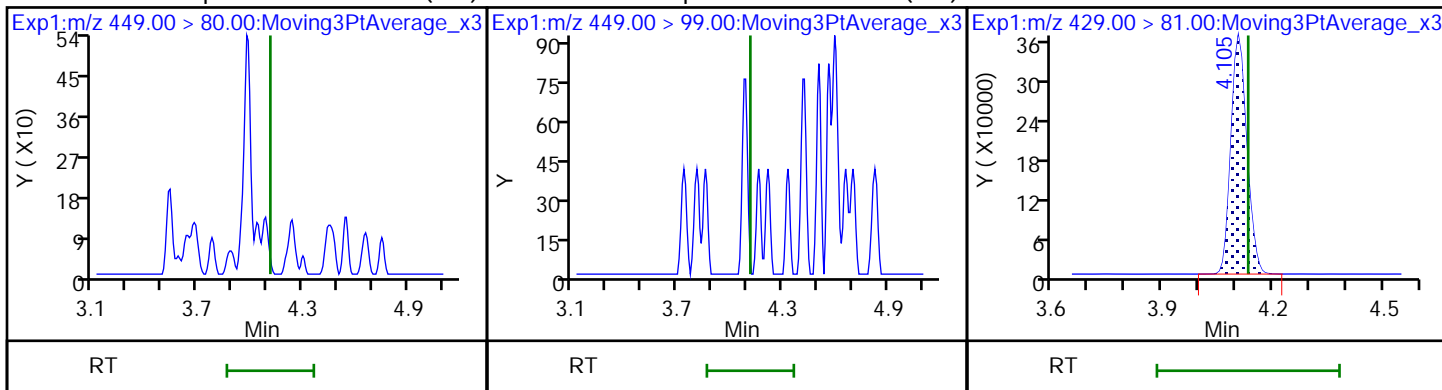
68 DONA (ND)

68 DONA (ND)

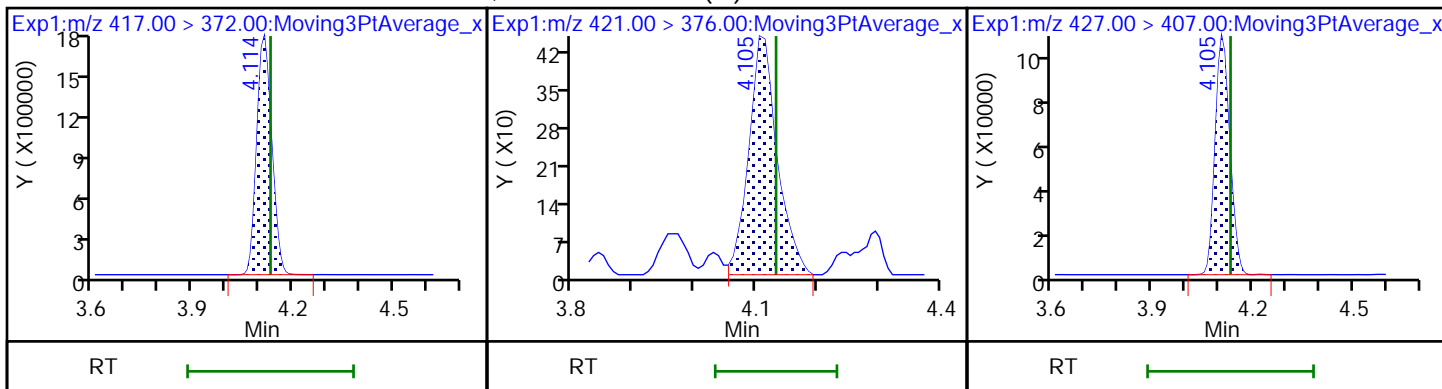




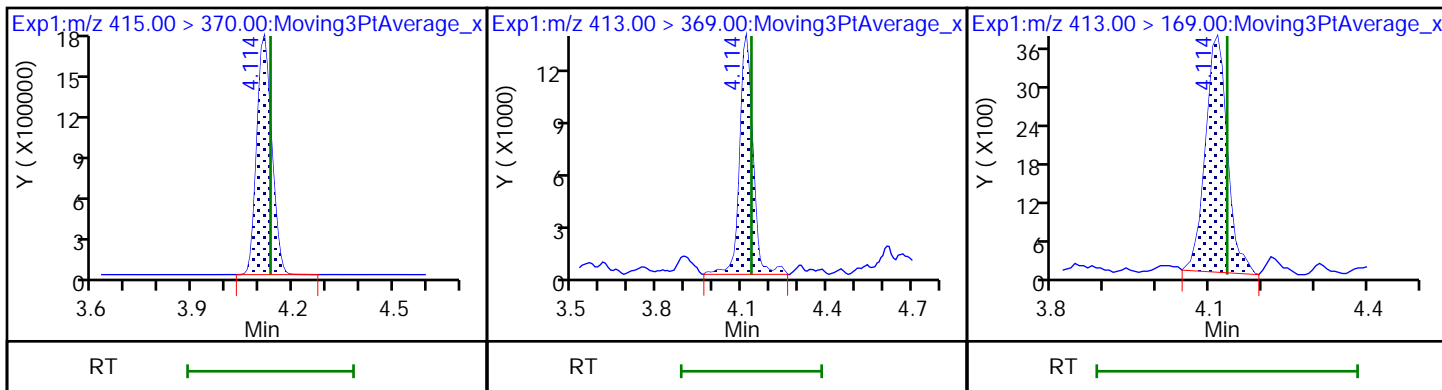
20 Perfluoroheptanesulfonic acid (ND) 20 Perfluoroheptanesulfonic acid (ND) D 18 M2-6:2 FTS



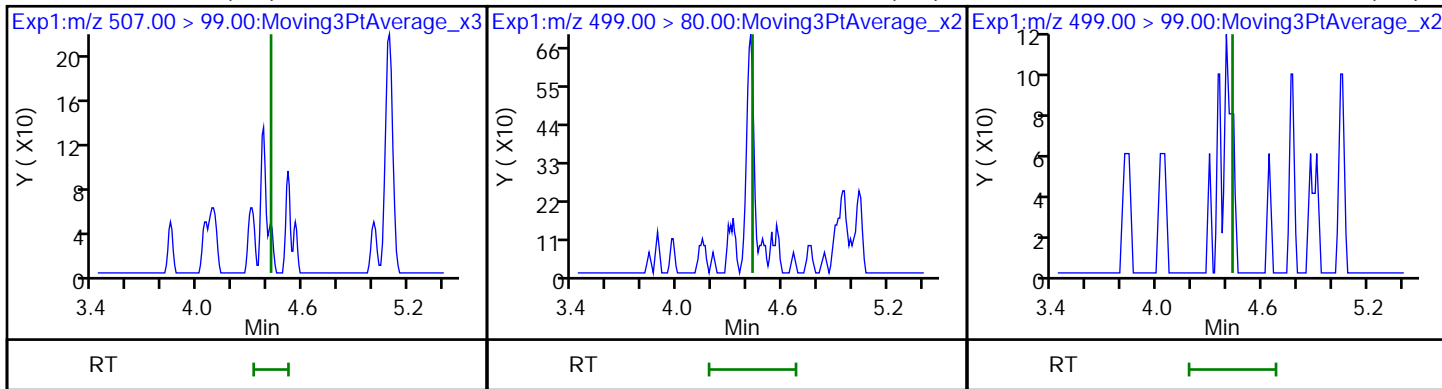
D 21 13C4 PFOA \$ 48 13C8 PFOA (M) 19 6:2 FTS



\* 22 13C2 PFOA 23 Perfluorooctanoic acid 23 Perfluorooctanoic acid



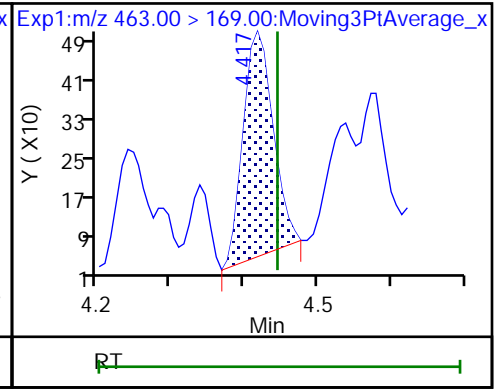
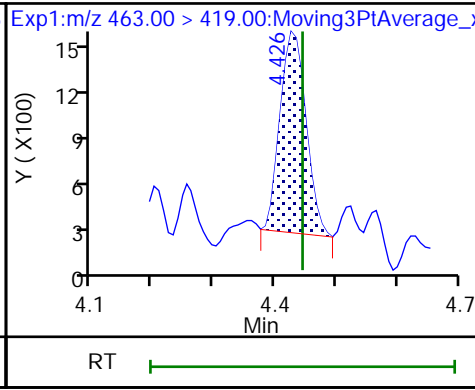
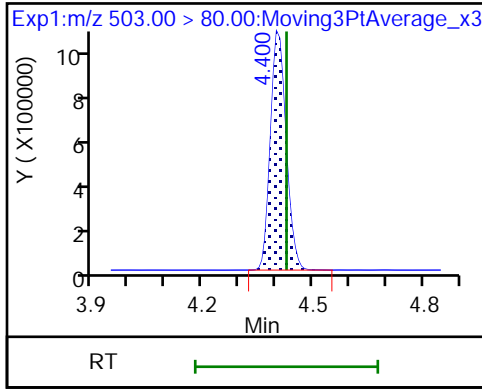
\$ 47 13C8 PFOS (ND) 24 Perfluorooctanesulfonic acid (ND) 24 Perfluorooctanesulfonic acid (ND)



D 25 13C4 PFOS

26 Perfluorononanoic acid

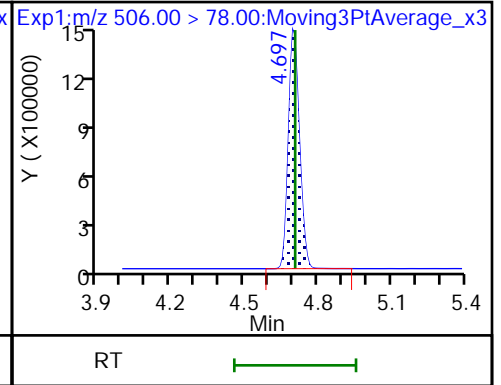
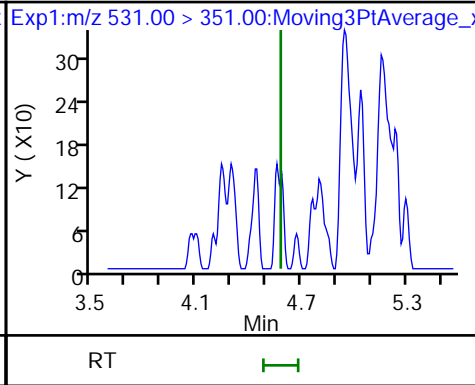
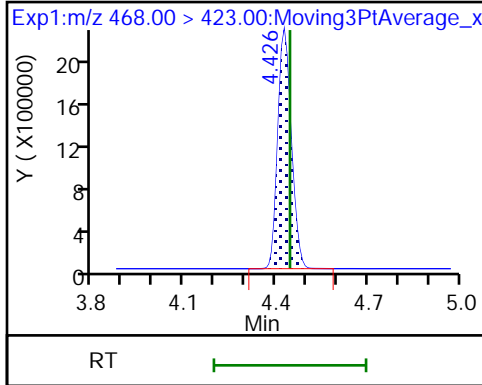
26 Perfluorononanoic acid



D 27 13C5 PFNA

63 9CIFOS (ND)

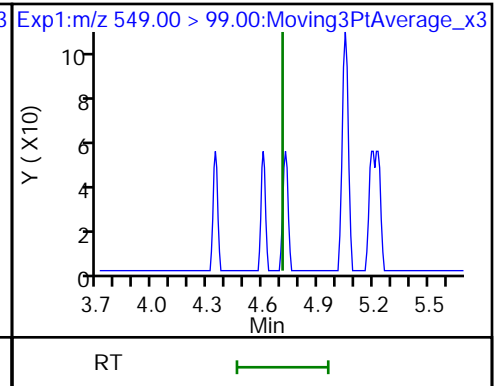
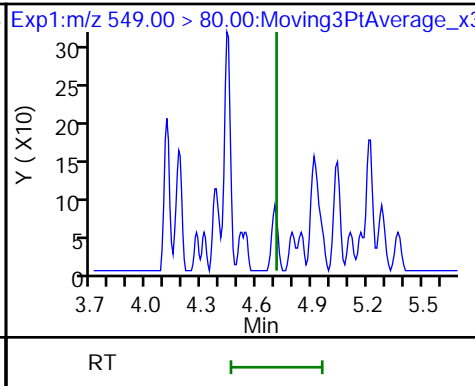
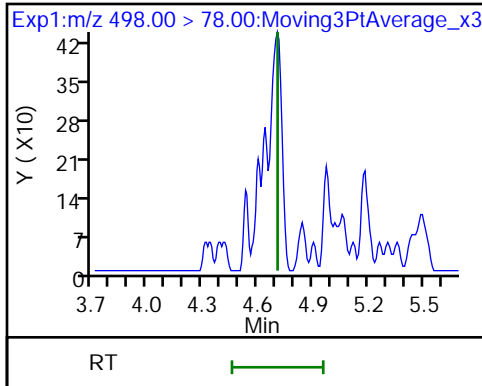
D 34 13C8 FOSA



33 Perfluorooctanesulfonamide (ND)

28 Perfluorononanesulfonic acid (ND)

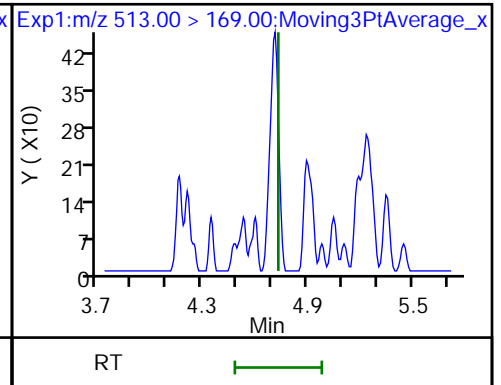
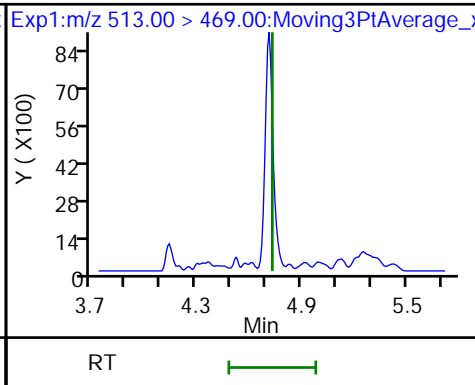
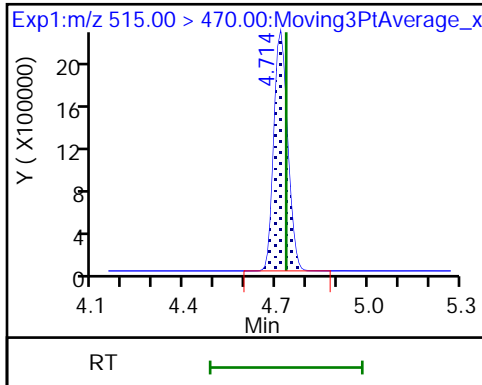
28 Perfluorononanesulfonic acid (ND)

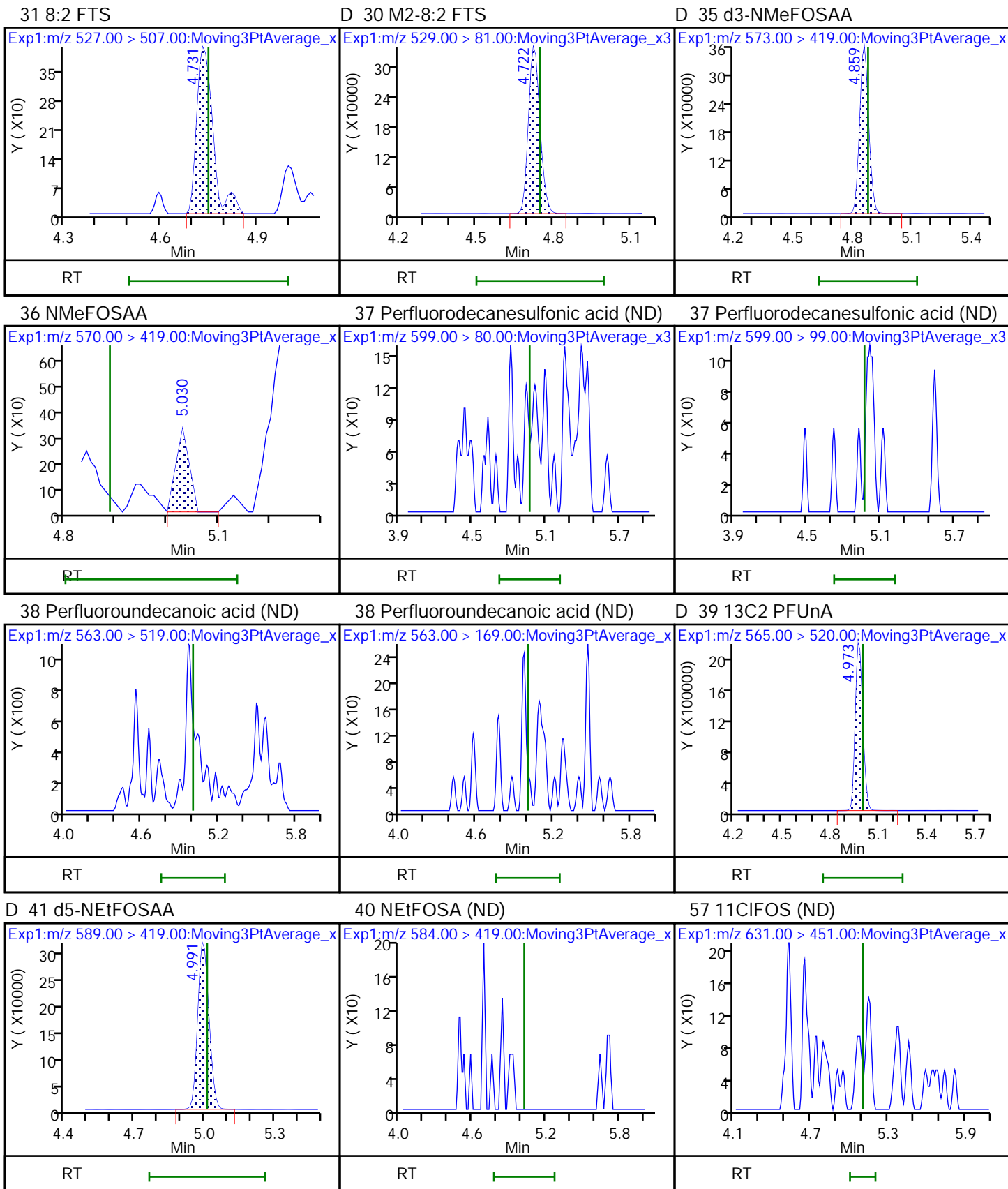


D 32 13C2 PFDA

29 Perfluorodecanoic acid (ND)

29 Perfluorodecanoic acid (ND)

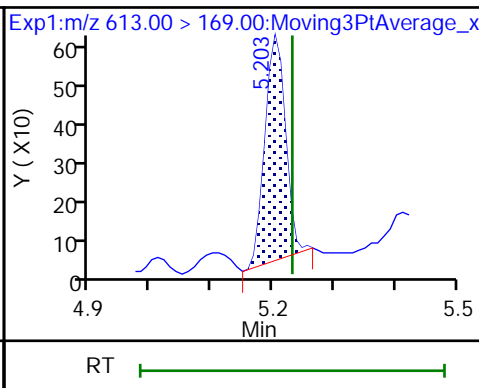
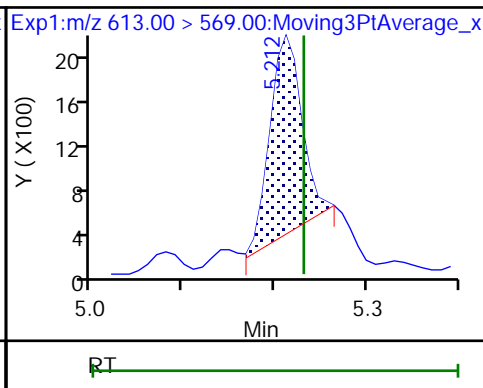
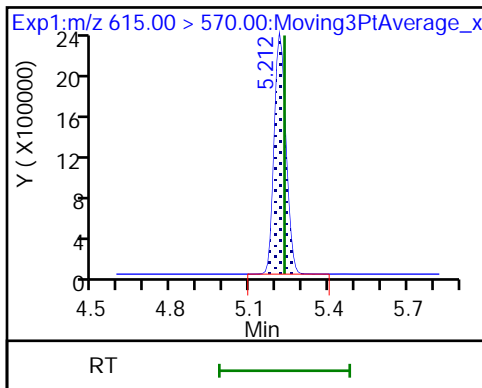




D 43 13C2 PFDaA

42 Perfluorododecanoic acid

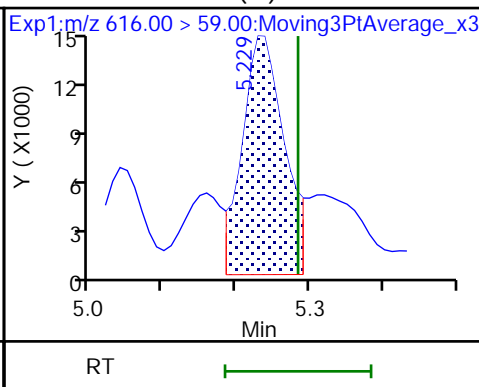
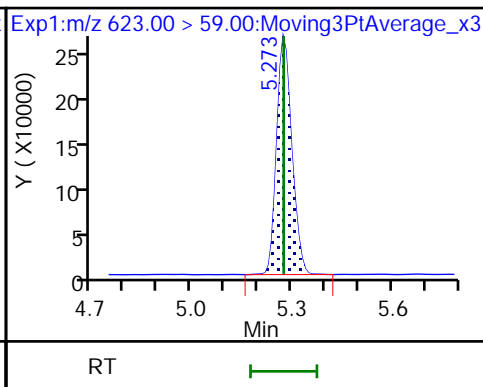
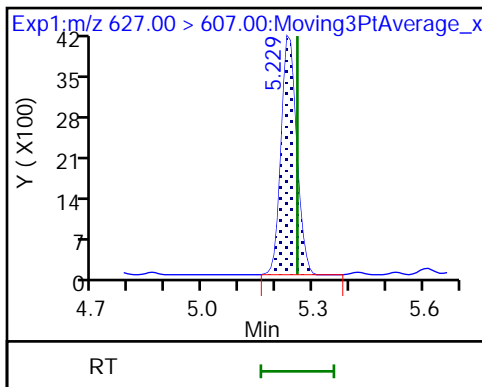
42 Perfluorododecanoic acid



50 10:2 FTS

D 51 d7-N-MeFOSE-M

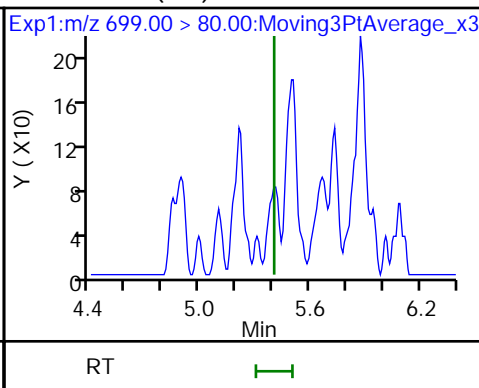
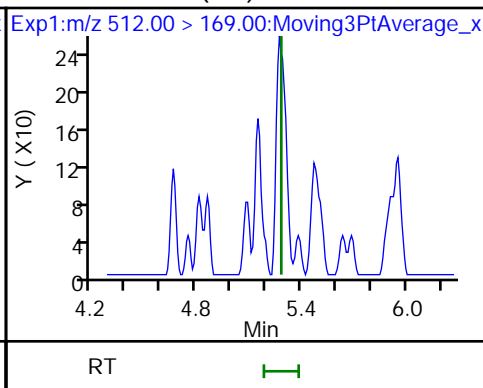
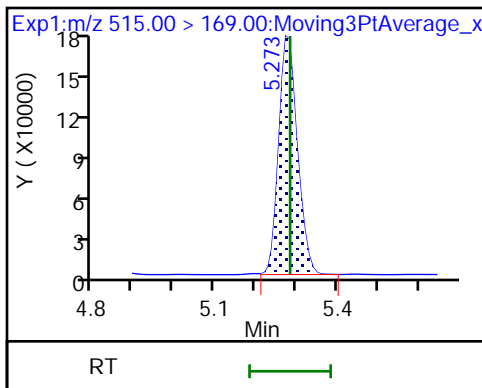
49 N-MeFOSE-M (M)



D 58 d-N-MeFOSA-M

61 NMeFOSA (ND)

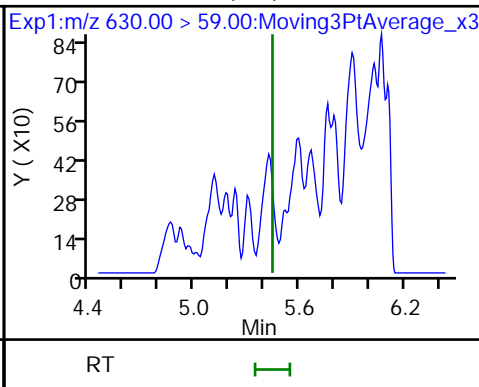
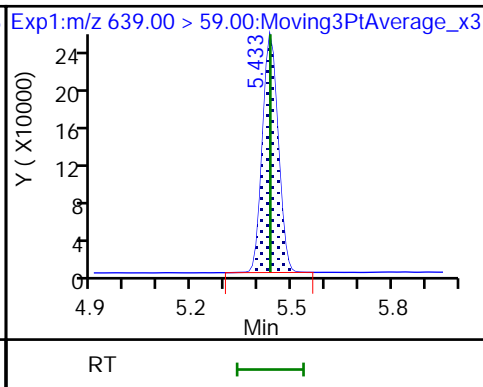
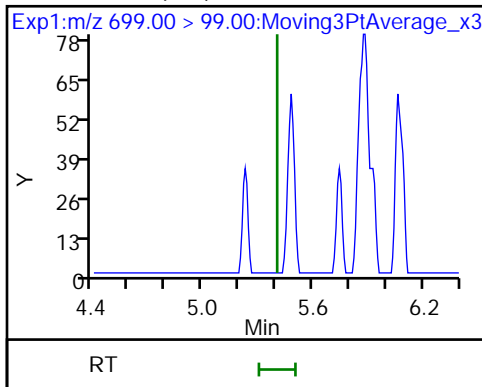
54 PFDoS (ND)

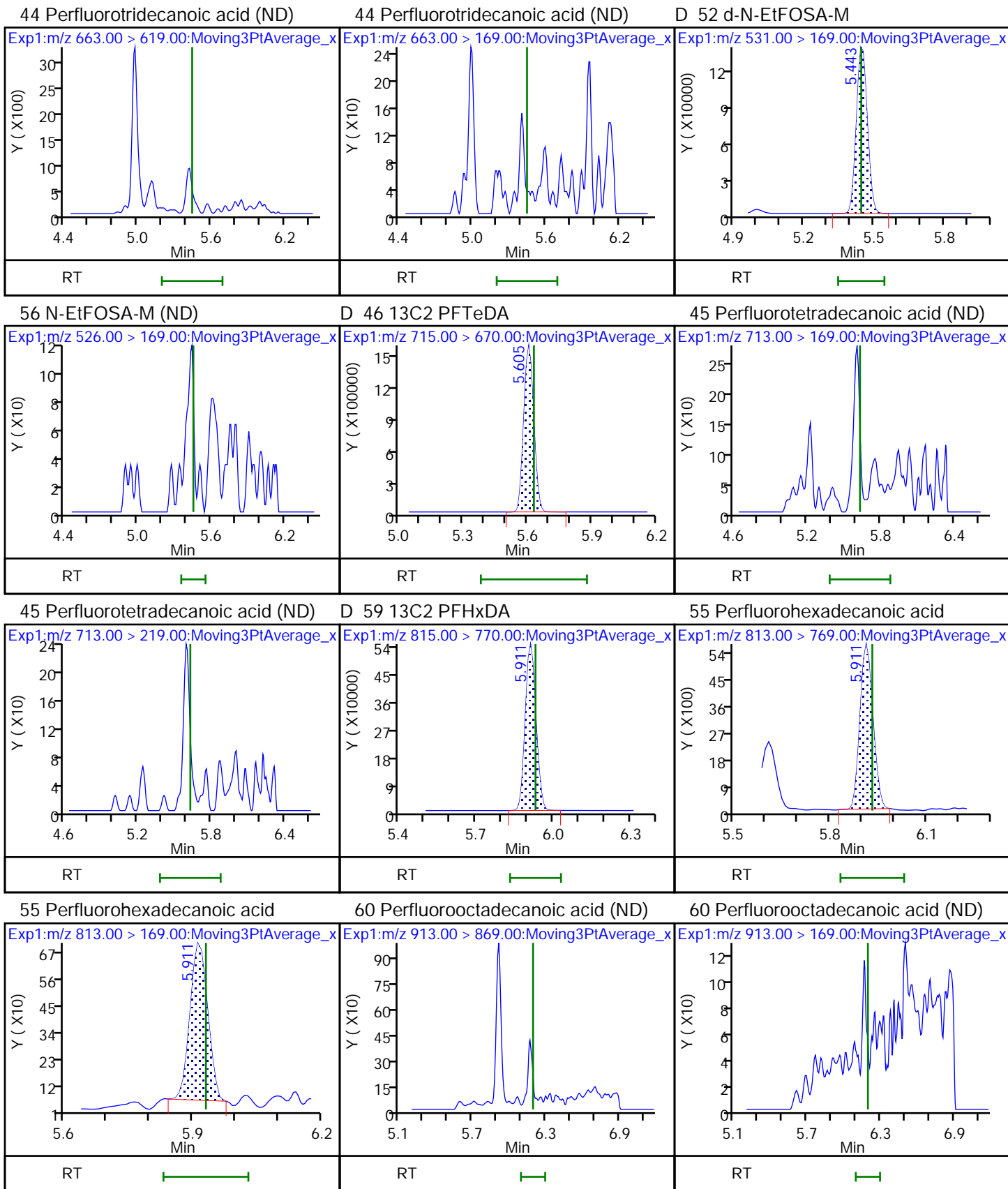


54 PFDoS (ND)

D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M (ND)







Eurofins TestAmerica, Knoxville  
Recovery Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_033.d  
 Lims ID: MB 140-57613/14-B  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 12-Jan-2022 22:24:35 ALS Bottle#: 33 Worklist Smp#: 33  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022237-033 mb 140-57613/14-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:15:42 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 10:10:01

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

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 140-57645/1-B  
 Matrix: Air Lab File ID: 006.d  
 Analysis Method: 537 (modified) Date Collected: \_\_\_\_\_  
 Extraction Method: None Date Extracted: 01/04/2022 14:49  
 Sample wt/vol: 1 (Sample) Date Analyzed: 01/09/2022 12:49  
 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.: 57742 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	102		25-150



Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_006.d  
 Lims ID: MB 140-57645/1-B  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 09-Jan-2022 12:49:27 ALS Bottle#: 6 Worklist Smp#: 6  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022187-006 MB 140-57645/1-B  
 Misc. Info.: Plate: 11 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 15:08:06 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1641

First Level Reviewer: cochranj Date: 10-Jan-2022 09:14:35  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_005.d

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	2.779	2.790	-0.011	0.678	6338742	1.26	101	13190	
2 Perfluorobutanoic acid										7
212.90 > 169.00	2.774	2.790	-0.016	0.998	2408	0.000605		0.7	7	
LOD =	0.0100									
D 3 13C5 PFPeA	267.90 > 223.00	3.083	3.098	-0.015	0.752	4898929	1.26	101	9557	
4 Perfluoropentanoic acid										7
262.90 > 219.00	3.083	3.098	-0.015	1.000	6310	0.001691		2.2	7	
LOD =	0.006500									
D 6 13C3 PFBS	301.90 > 80.00	3.099	3.115	-0.016	0.756	2968447	1.14	98.3	12796	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00		3.115					ND			
298.90 > 99.00		3.115								
D 8 M2-4:2 FTS	329.00 > 81.00	3.383	3.391	-0.008	0.826	935254	1.17	100	1555	
7 4:2 FTS										
327.00 > 307.00		3.402					ND			
11 Perfluoropentanesulfonic acid										
349.00 > 80.00		3.422					ND			
349.00 > 99.00		3.422								
D 9 13C2 PFHxA	315.00 > 270.00	3.413	3.422	-0.009	0.833	5261759	1.26	101	8916	
10 Perfluorohexanoic acid										
313.00 > 269.00		3.422					ND			
313.00 > 119.00		3.422								

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	3.520	3.528	-0.008	0.859	2548857	1.27		102	4310	
13 HFPO-DA										
285.00 > 169.00	3.520	3.528	-0.008	1.000	2264	0.000821		2.0	7M	7M
LOD = 0.008250										
S 65 ADONA										
377.00 > 251.00		3.592				0				
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.752	3.760	-0.008	1.000	8789	0.003772	Target=3.52	51.9	7	7
399.00 > 99.00	3.752	3.760	-0.008	1.000	2369		3.71(1.76-5.28)	24.8		
LOD = 0.005000										
D 17 18O2 PFHxS										
403.00 > 84.00	3.752	3.760	-0.008	0.916	2000836	1.15		97.6	6418	
D 14 13C4 PFHpA										
367.00 > 322.00	3.761	3.769	-0.008	0.918	5197611	1.31		104	6986	
15 Perfluoroheptanoic acid										
363.00 > 319.00		3.769				ND				
363.00 > 169.00		3.769								
68 DONA										
377.00 > 251.00		3.807				ND				
377.00 > 85.00		3.807								
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00		4.089				ND				
449.00 > 99.00		4.089								
19 6:2 FTS										
427.00 > 407.00	4.089	4.106	-0.017	0.998	3615	0.004635		23.1	7	7
LOD = 0.005000										
D 21 13C4 PFOA										
417.00 > 372.00	4.097	4.106	-0.009	1.000	5404979	1.31		105	7759	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.097	4.106	-0.009	1.000	1047343	1.30		109	3194	
\$ 48 13C8 PFOA										
421.00 > 376.00		4.106				ND				
23 Perfluorooctanoic acid										
413.00 > 369.00	4.097	4.106	-0.009	1.000	22491	0.004533	Target=2.62	16.4	7	7
413.00 > 169.00	4.097	4.106	-0.009	1.000	8833		2.55(1.31-3.93)	19.4		
LOD = 0.007800										
* 22 13C2 PFOA										
415.00 > 370.00	4.097	4.106	-0.009		5489432	1.25			9434	
\$ 47 13C8 PFOS										
507.00 > 99.00		4.393				ND				
D 25 13C4 PFOS										
503.00 > 80.00	4.393	4.401	-0.008	1.072	3007011	1.21		101	4456	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00		4.401				ND				
499.00 > 99.00		4.401								
D 27 13C5 PFNA										
468.00 > 423.00	4.410	4.427	-0.017	1.076	6805153	1.26		100	8930	

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		4.427				ND				
463.00 > 169.00		4.427								
63 9CIFOS										
531.00 > 351.00		4.560				ND				
28 Perfluorononanesulfonic acid										
549.00 > 80.00		4.681				ND				
549.00 > 99.00		4.681								
D 34 13C8 FOSA										
506.00 > 78.00	4.689	4.706	-0.017	1.144	4589441	1.36		109	4163	
33 Perfluorooctanesulfonamide										
498.00 > 78.00		4.706				ND				
D 32 13C2 PFDA										
515.00 > 470.00	4.698	4.715	-0.017	1.146	6793902	1.30		104	11998	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.698	4.715	-0.017	1.000	15253	0.002910	Target=11.50	23.8	7	7M
513.00 > 169.00	4.698	4.715	-0.017	1.000	2089		7.30(5.75-17.24)	7.4	M	
LOD = 0.004450										
31 8:2 FTS										
527.00 > 507.00		4.723				ND				
D 30 M2-8:2 FTS										
529.00 > 81.00	4.715	4.723	-0.008	1.151	1102158	1.21		101	1823	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.843	4.852	-0.009	1.182	748284	1.22		97.3	3449	
36 NMeFOSAA										
570.00 > 419.00		4.861				ND				
37 Perfluorodecanesulfonic acid										
599.00 > 80.00		4.940				ND				
599.00 > 99.00		4.940								
69 Perfluoro-3,6,9-trioxatridecanoic acid										
561.00 > 467.00		4.970				ND				
561.00 > 235.00		4.970								
38 Perfluoroundecanoic acid										
563.00 > 519.00		4.975				ND				
563.00 > 169.00		4.975								
D 39 13C2 PFUnA										
565.00 > 520.00	4.966	4.975	-0.009	1.212	6394993	1.22		98.0	9309	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.984	4.993	-0.009	1.216	867741	1.29		103	3824	
40 NEtFOSA										
584.00 > 419.00		4.993				ND				
57 11CIFOS										
631.00 > 451.00		5.072				ND				
D 43 13C2 PFDaA										
615.00 > 570.00	5.196	5.213	-0.017	1.268	7199137	1.31		105	15004	

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		5.213				ND				
613.00 > 169.00		5.213								
50 10:2 FTS										
627.00 > 607.00	5.222	5.231	-0.009	1.108	10871	0.005189			99.0	M
										M
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.275	5.284	-0.009	1.287	804895	1.22		97.8	702	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.275	5.284	-0.009	1.287	559645	1.19		95.4	49.8	
61 NMeFOSA										
512.00 > 169.00		5.284				ND				
49 N-MeFOSE-M										
616.00 > 59.00		5.292				ND				
54 PFDoS										
699.00 > 80.00		5.383				ND				
699.00 > 99.00		5.383								
44 Perfluorotridecanoic acid										
663.00 > 619.00		5.414				ND				
663.00 > 169.00		5.414								
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.434	5.444	-0.010	1.326	858717	1.30		104	370	
62 N-EtFOSE-M										
630.00 > 59.00		5.454				ND				
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.444	5.454	-0.010	1.329	451019	1.16		93.1	774	
56 N-EtFOSA-M										
526.00 > 169.00		5.464				ND				
D 46 13C2 PFTeDA										
715.00 > 670.00	5.585	5.607	-0.022	1.363	5367661	1.29		103	11114	
45 Perfluorotetradecanoic acid										
713.00 > 169.00		5.607				ND				
713.00 > 219.00		5.607								
D 59 13C2 PFHxDA										
815.00 > 770.00	5.895	5.904	-0.009	1.439	3600187	1.27		102	5932	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.895	5.904	-0.009	1.000	36385	0.001380	Target=8.21	99.7		7
813.00 > 169.00	5.895	5.904	-0.009	1.000	4211		8.64(4.10-12.31)	21.8		7
LOD = 0.009000										
60 Perfluorooctadecanoic acid										
913.00 > 869.00		6.164				ND				
913.00 > 169.00		6.164								
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

7 - Failed Limit of Detection

### Review Flags

M - Manually Integrated

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\\_006.d

Injection Date: 09-Jan-2022 12:49:27

Instrument ID: LCA

Lims ID: MB 140-57645/1-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 6

Worklist Smp#: 6

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

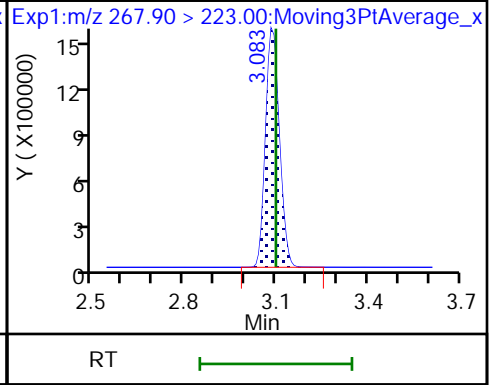
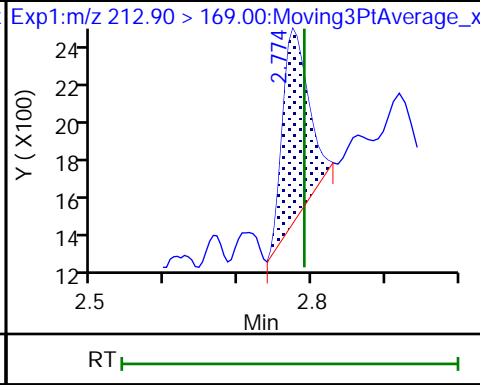
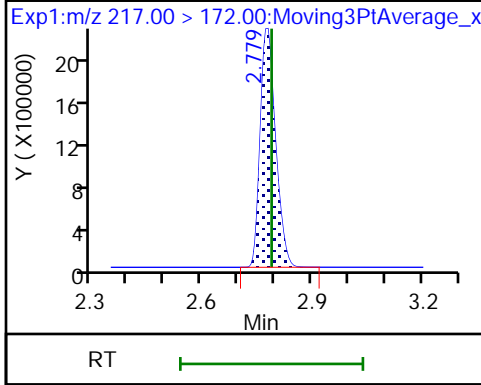
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

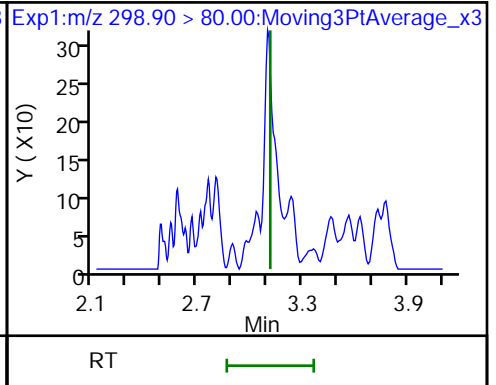
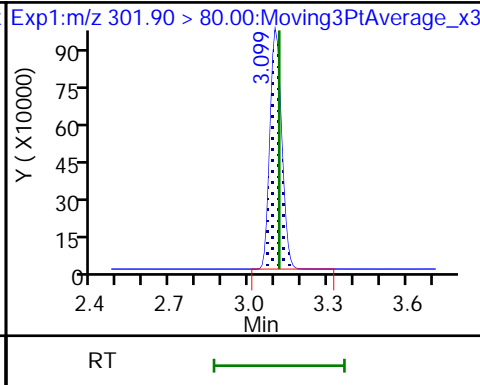
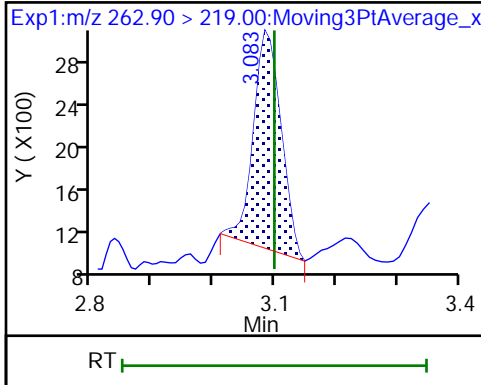
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

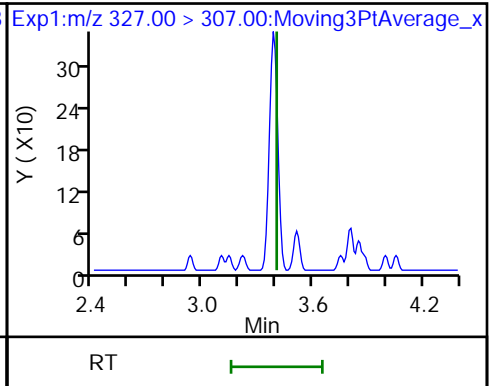
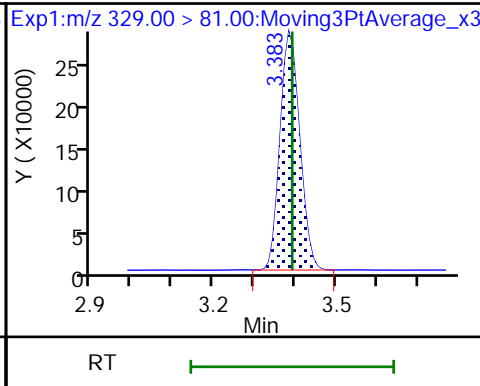
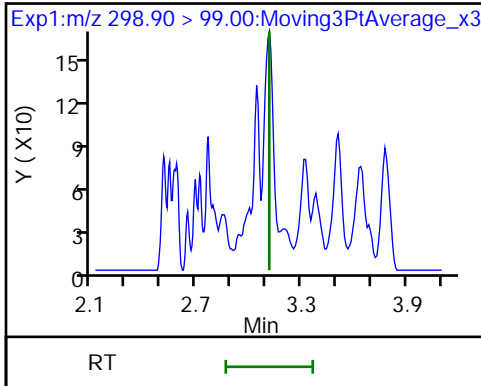
5 Perfluorobutanesulfonic acid (ND)



5 Perfluorobutanesulfonic acid (ND)

D 8 M2-4:2 FTS

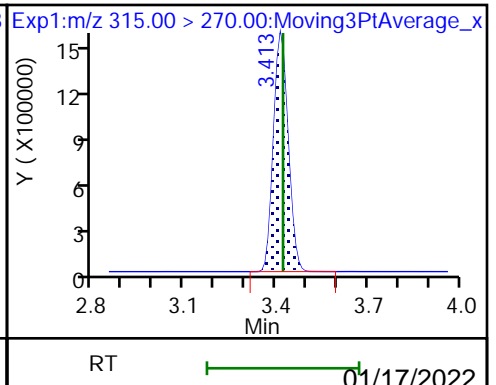
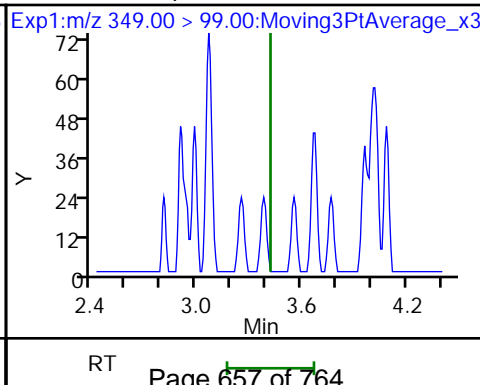
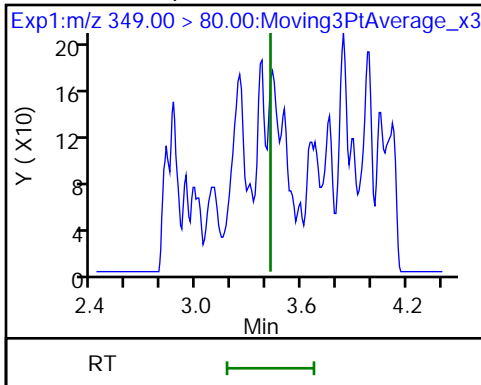
7 4:2 FTS (ND)

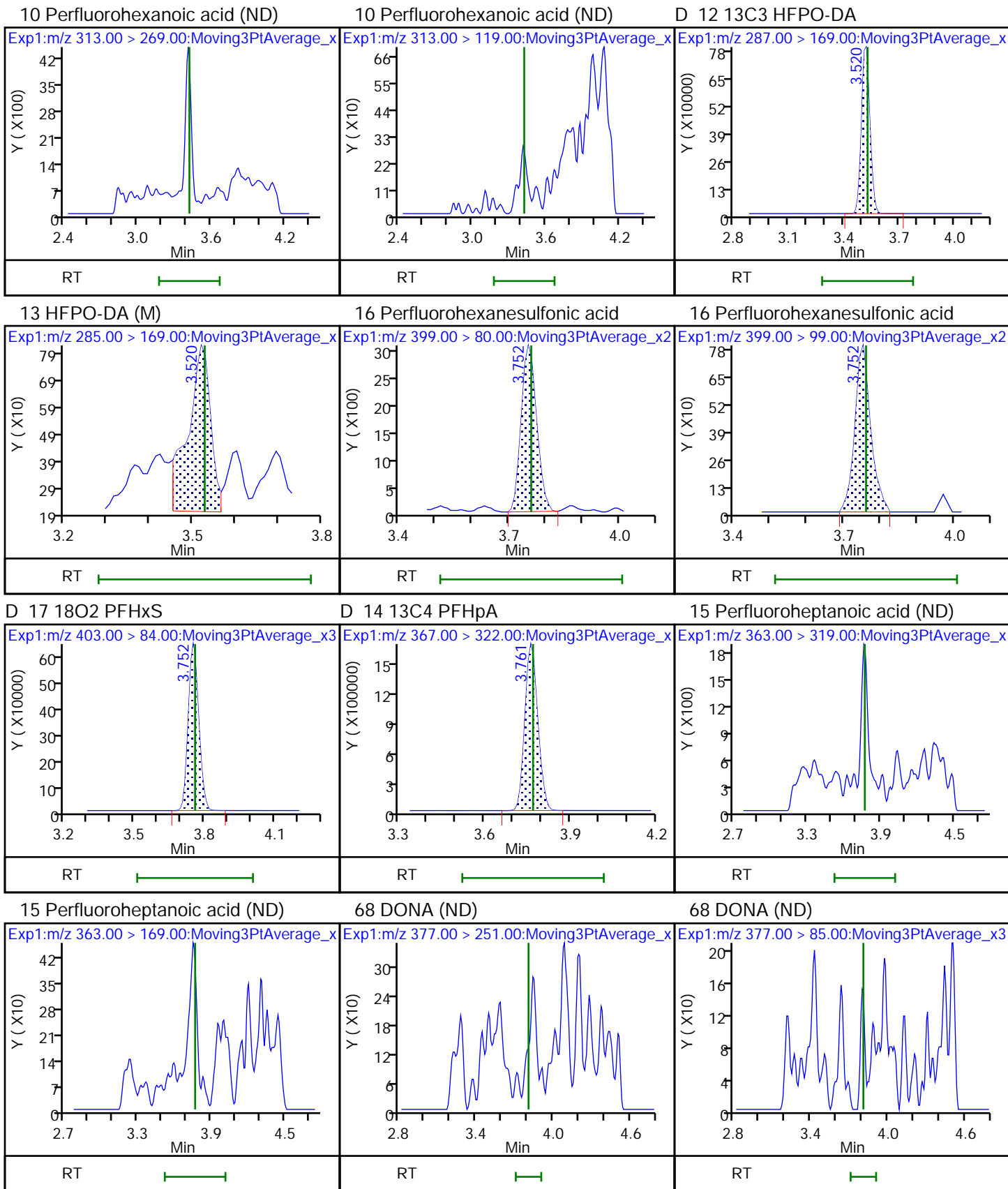


11 Perfluoropentanesulfonic acid (ND)

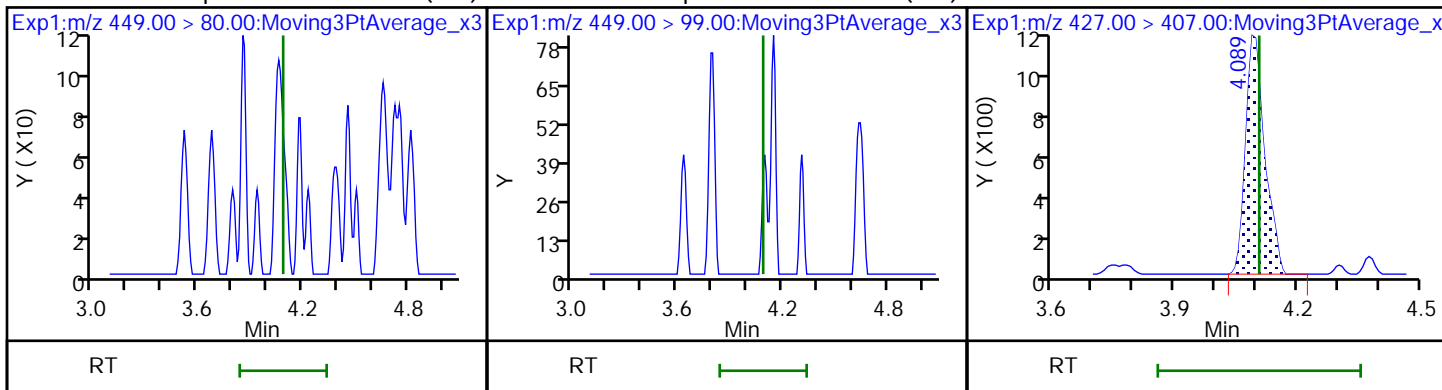
11 Perfluoropentanesulfonic acid (ND)

D 9 13C2 PFHxA





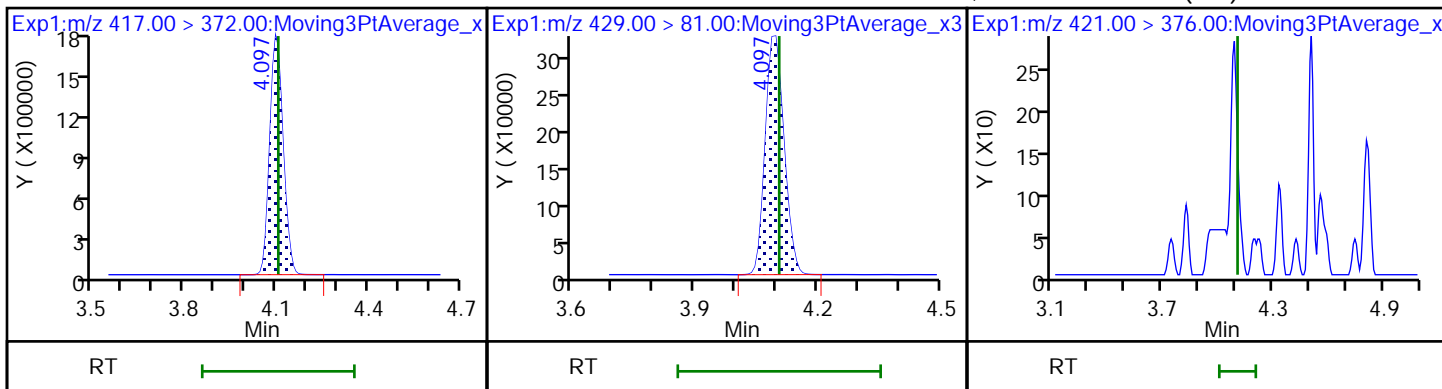
20 Perfluoroheptanesulfonic acid (ND) 20 Perfluoroheptanesulfonic acid (ND) 19 6:2 FTS



D 21 13C4 PFOA

D 18 M2-6:2 FTS

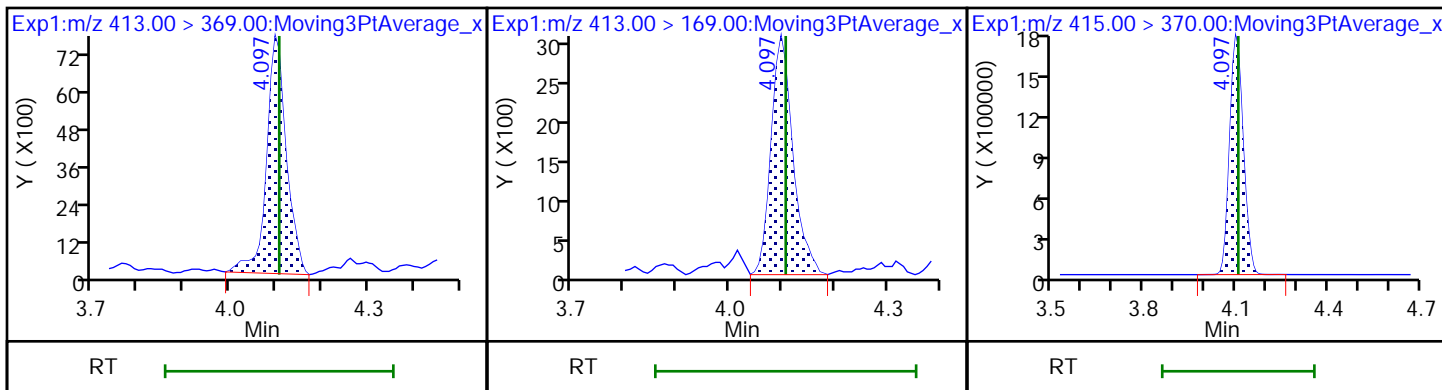
\$ 48 13C8 PFOA (ND)



23 Perfluorooctanoic acid

23 Perfluorooctanoic acid

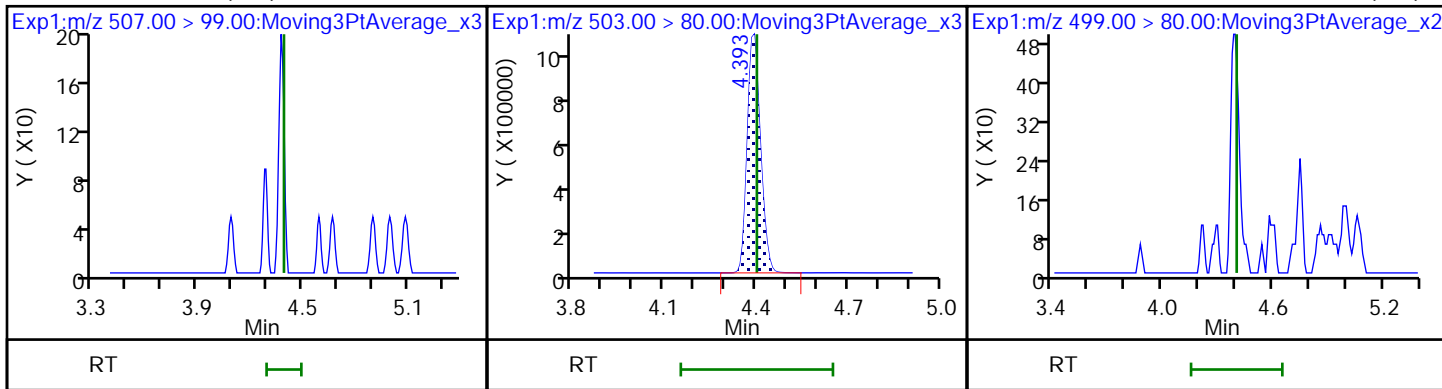
\* 22 13C2 PFOA



\$ 47 13C8 PFOS (ND)

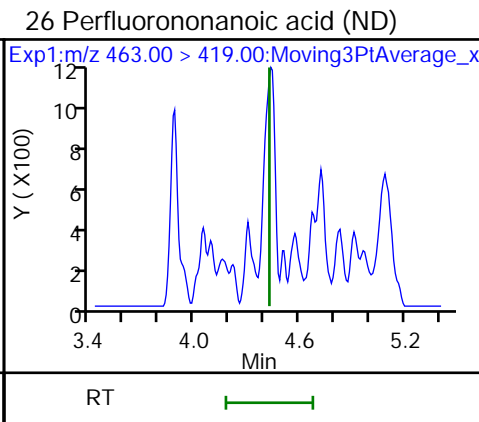
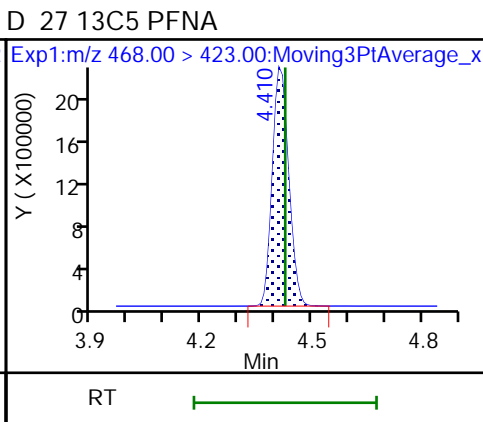
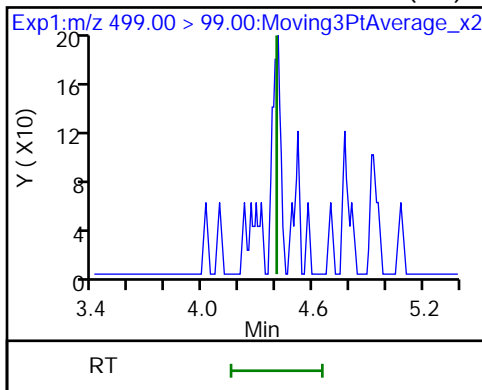
D 25 13C4 PFOS

24 Perfluorooctanesulfonic acid (ND)

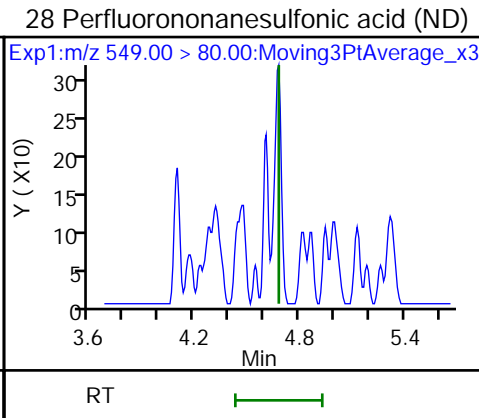
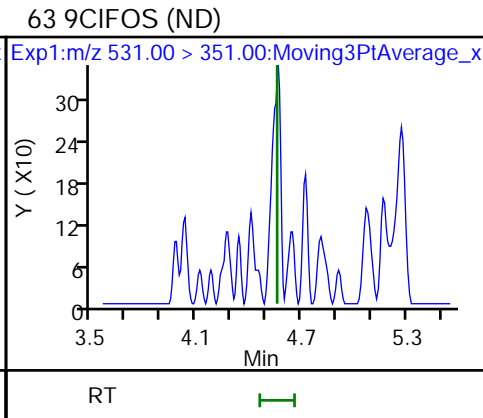
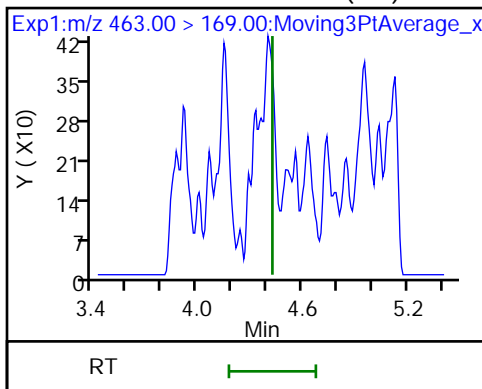




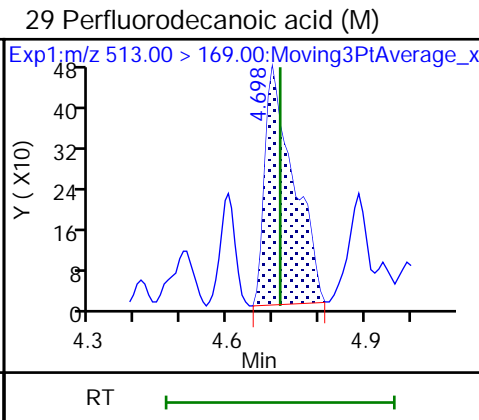
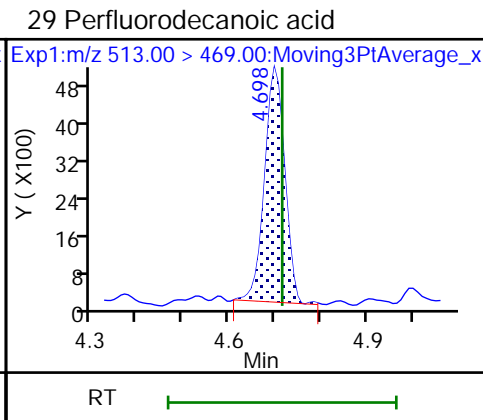
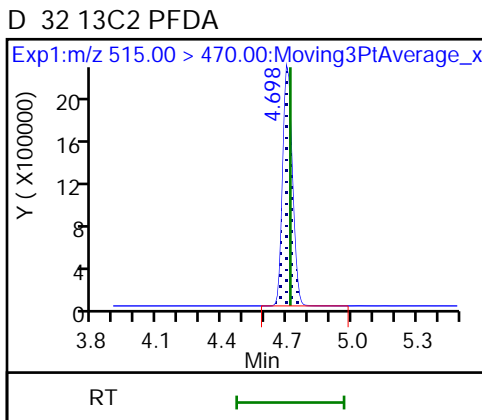
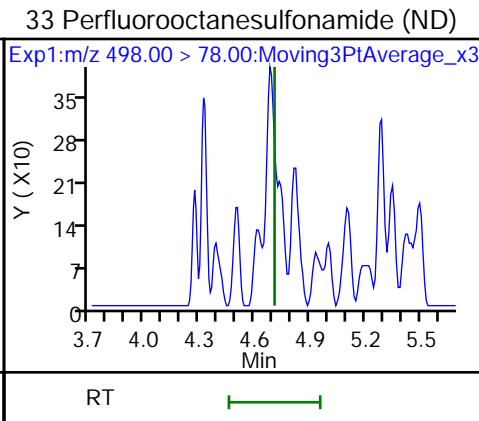
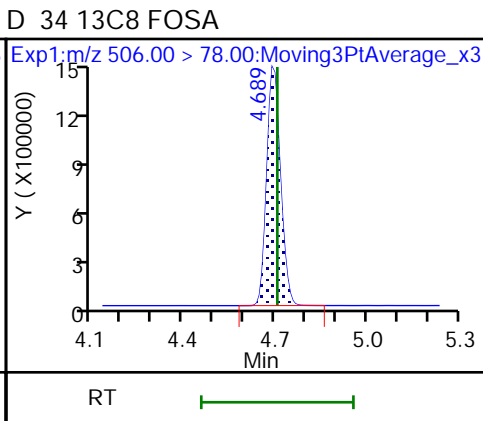
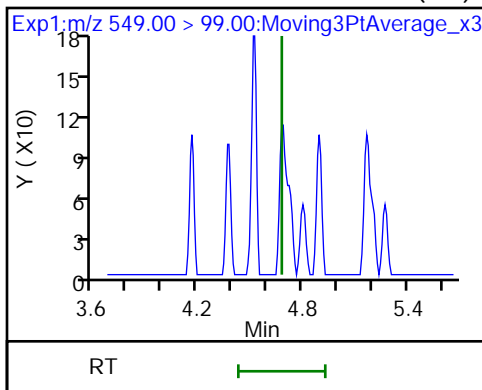
24 Perfluorooctanesulfonic acid (ND) D 27 13C5 PFNA

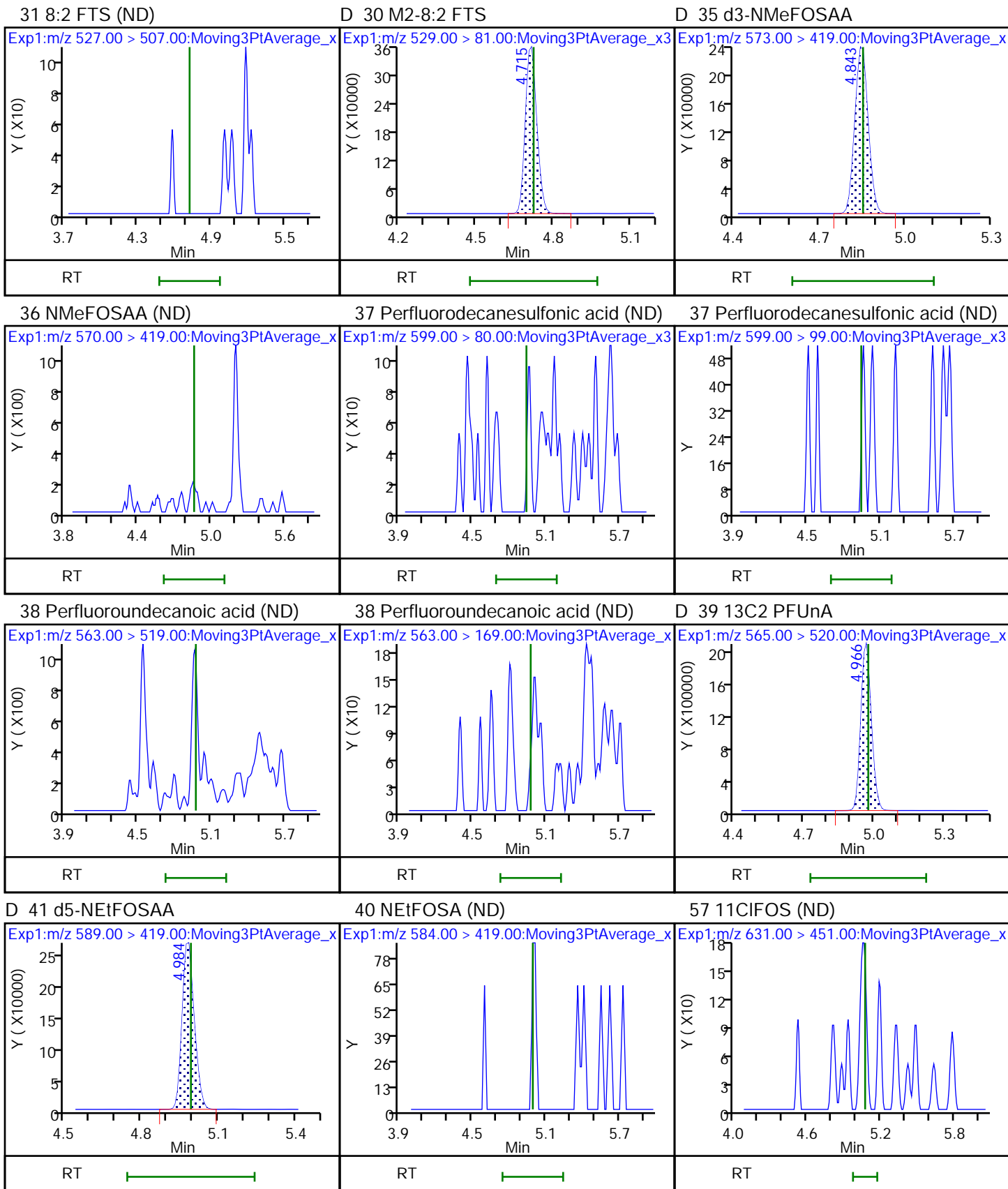


26 Perfluorononanoic acid (ND)



28 Perfluorononanesulfonic acid (ND) D 34 13C8 FOSA

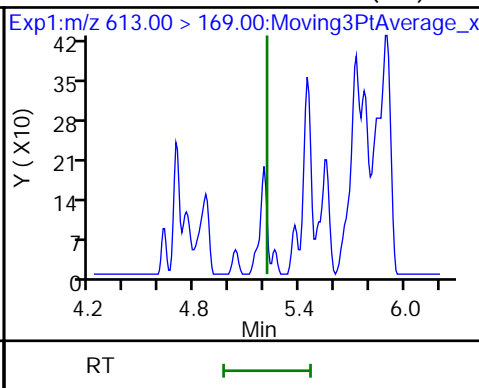
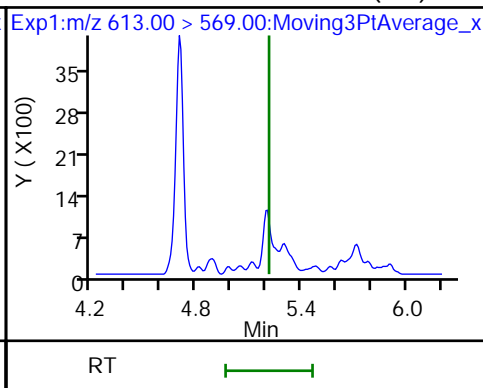
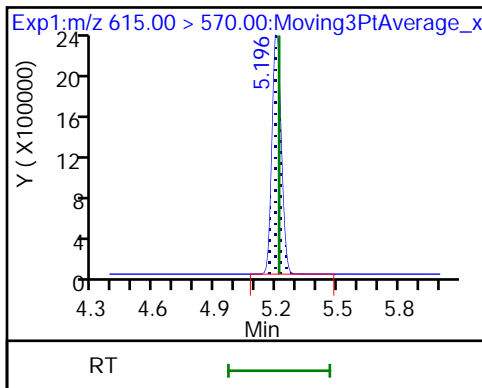




D 43 13C2 PFDaA

42 Perfluorododecanoic acid (ND)

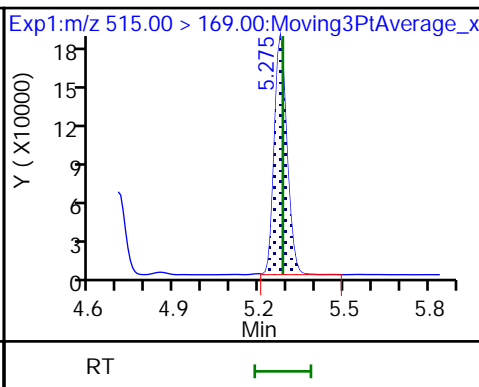
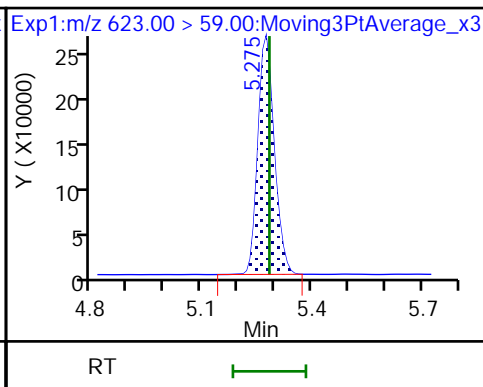
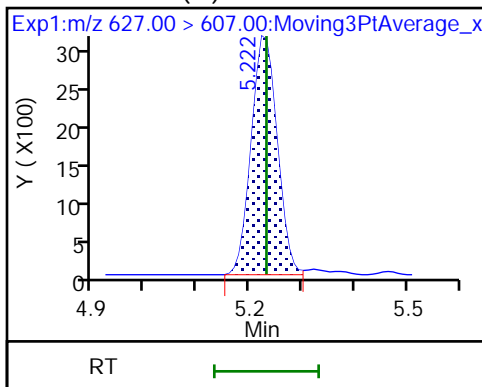
42 Perfluorododecanoic acid (ND)



50 10:2 FTS (M)

D 51 d7-N-MeFOSE-M

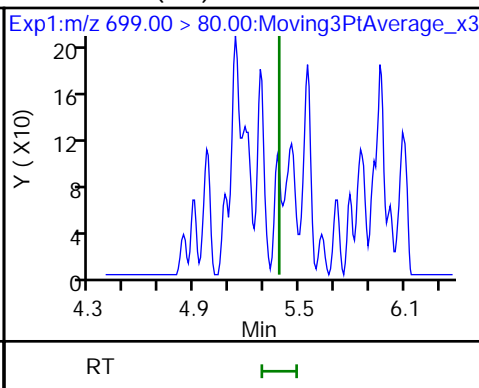
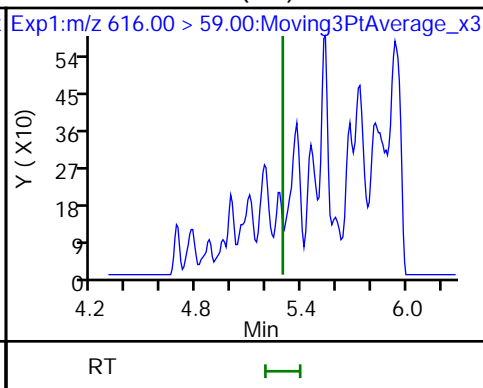
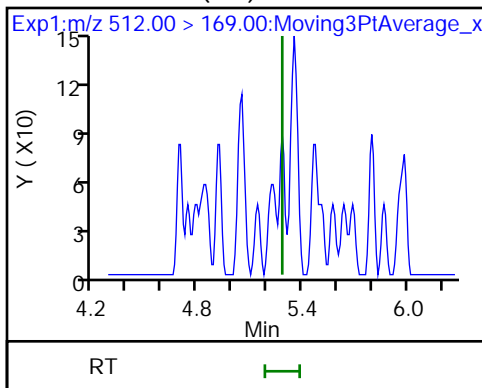
D 58 d-N-MeFOSA-M



61 NMeFOSA (ND)

49 N-MeFOSE-M (ND)

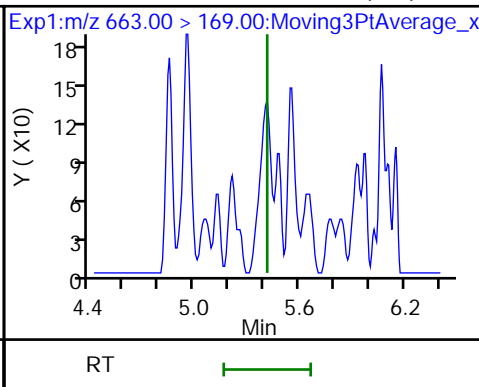
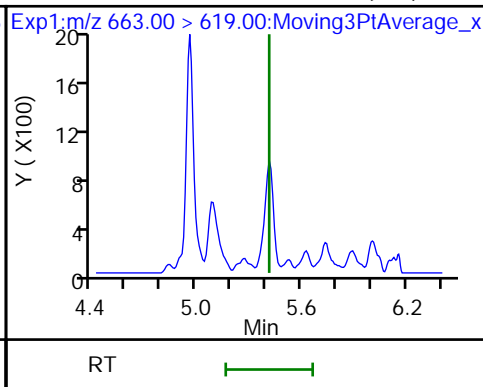
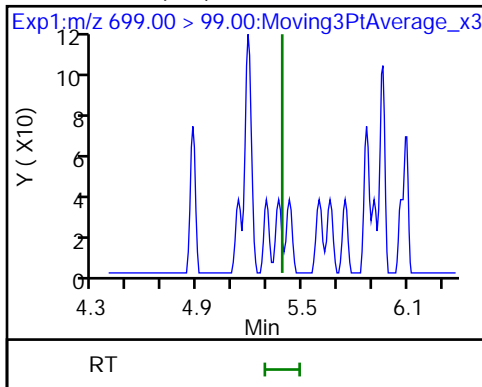
54 PFDoS (ND)



54 PFDoS (ND)

44 Perfluorotridecanoic acid (ND)

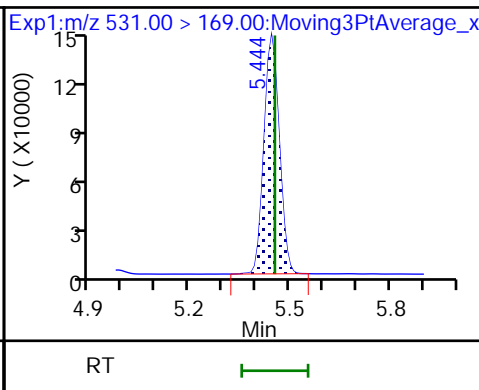
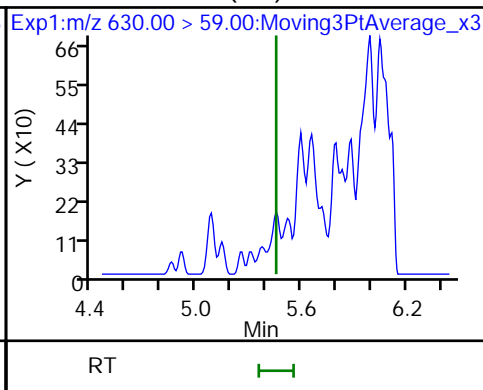
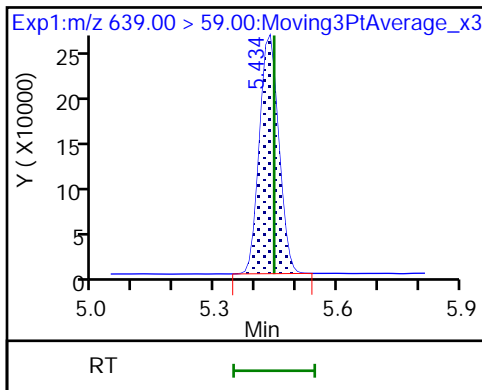
44 Perfluorotridecanoic acid (ND)



D 53 d9-N-EtFOSE-M

62 N-EtFOSE-M (ND)

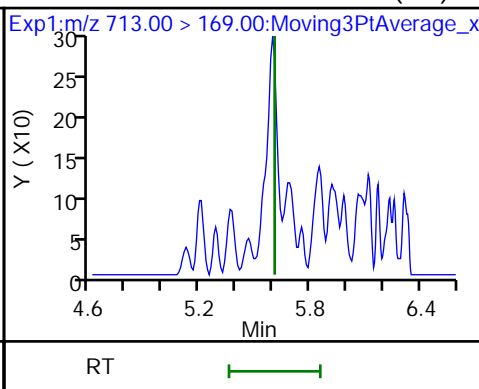
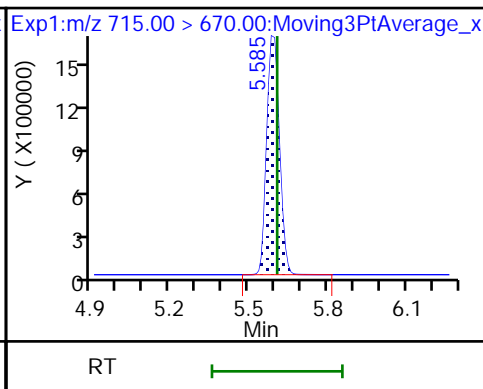
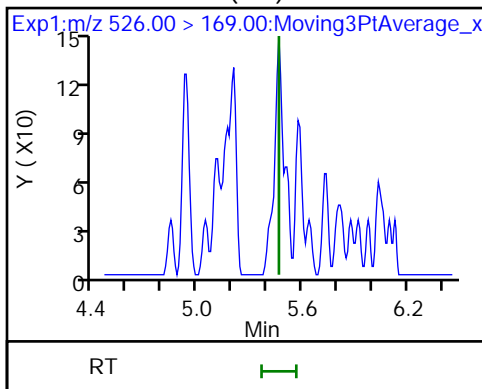
D 52 d-N-EtFOSA-M



56 N-EtFOSA-M (ND)

D 46 13C2 PFTeDA

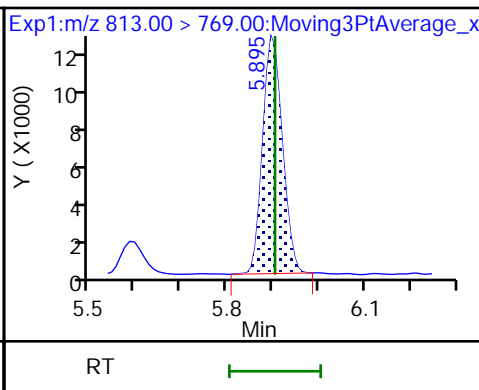
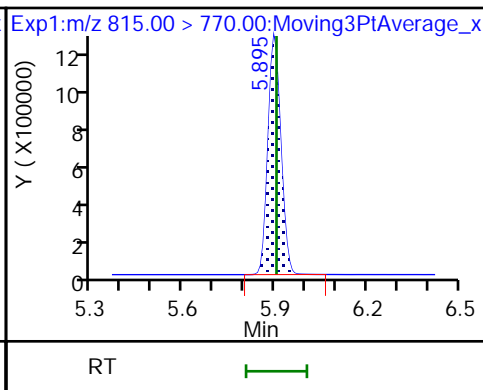
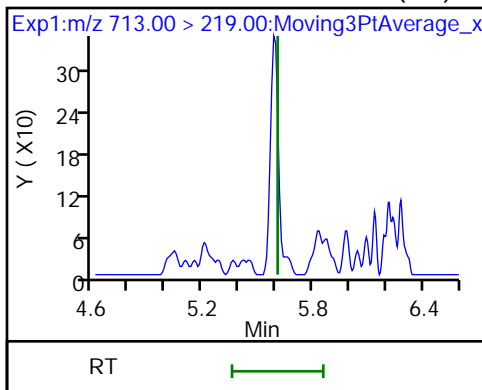
45 Perfluorotetradecanoic acid (ND)



45 Perfluorotetradecanoic acid (ND)

D 59 13C2 PFHxDA

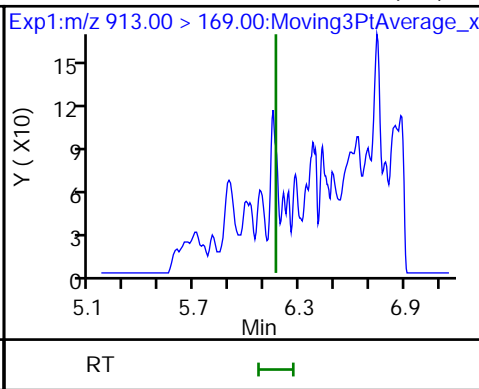
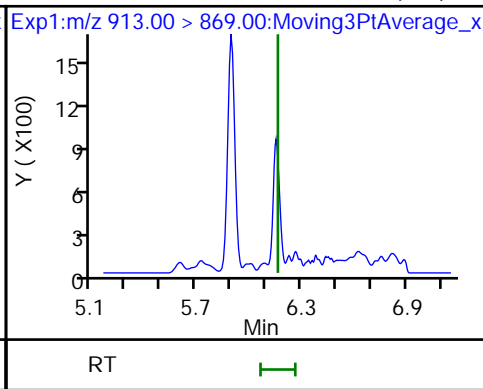
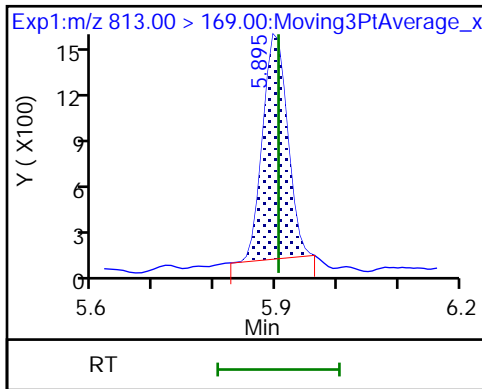
55 Perfluorohexadecanoic acid



55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid (ND)

60 Perfluorooctadecanoic acid (ND)





Eurofins TestAmerica, Knoxville

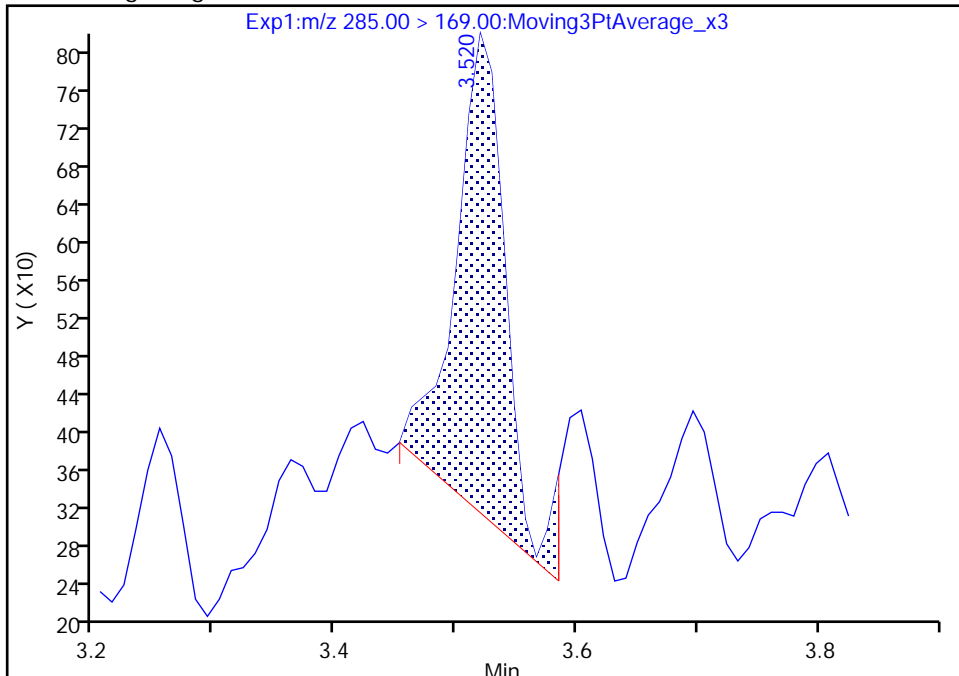
Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_006.d  
Injection Date: 09-Jan-2022 12:49:27 Instrument ID: LCA  
Lims ID: MB 140-57645/1-B  
Client ID:  
Operator ID: Cochran, Bobby ALS Bottle#: 6 Worklist Smp#: 6  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: PFC\_LCA Limit Group: LC - PFC- ICAL  
Column: Detector EXP1

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

Signal: 1

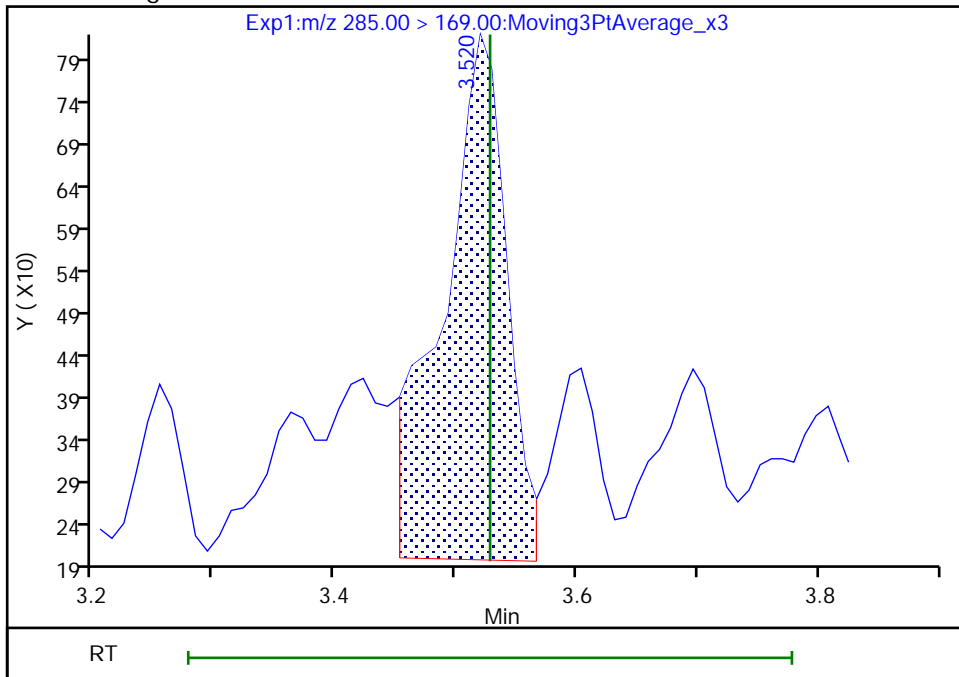
RT: 3.52  
Area: 1440  
Amount: 0.000522  
Amount Units: ng/ml

Processing Integration Results



RT: 3.52  
Area: 2264  
Amount: 0.000821  
Amount Units: ng/ml

Manual Integration Results



Reviewer: cochranj, 10-Jan-2022 09:13:01  
Audit Action: Manually Integrated

Audit Reason: Baseline

FORM I  
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 140-57611/2-B  
 Matrix: Air Lab File ID: \_011.d  
 Analysis Method: 537 (modified) Date Collected: \_\_\_\_\_  
 Extraction Method: None Date Extracted: 01/04/2022 08:32  
 Sample wt/vol: 1 (Sample) Date Analyzed: 01/11/2022 18:23  
 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.: 57822 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.02126		0.00100	0.000580

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\20220111-22220.b\_011.d  
 Lims ID: LCS 140-57611/2-B  
 Client ID:  
 Sample Type: LCS  
 Inject. Date: 11-Jan-2022 18:23:19 ALS Bottle#: 11 Worklist Smp#: 11  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022220-011 lcs 140-57611/2-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 12-Jan-2022 18:43:11 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1648

First Level Reviewer: cochranj Date: 11-Jan-2022 18:40:00  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_007.d

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	2.795	2.814	-0.019	0.676	5413912	1.13	90.5	11607	
2 Perfluorobutanoic acid	212.90 > 169.00	2.800	2.814	-0.014	1.002	3561642	1.05	105	943	
D 3 13C5 PFPeA	267.90 > 223.00	3.114	3.131	-0.017	0.754	4266446	1.15	91.8	9311	
4 Perfluoropentanoic acid	262.90 > 219.00	3.114	3.131	-0.017	1.000	3404486	1.05	105	921	
D 6 13C3 PFBS	301.90 > 80.00	3.130	3.147	-0.017	0.757	2745869	1.11	95.3	7887	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.130	3.147	-0.017	1.000	2395711	0.9245	Target=2.74	105	2249
	298.90 > 99.00	3.130	3.147	-0.017	1.000	891996		2.69(1.37-4.11)		3710
D 8 M2-4:2 FTS	329.00 > 81.00	3.411	3.442	-0.031	0.825	949780	1.24	107	1375	
7 4:2 FTS	327.00 > 307.00	3.411	3.442	-0.031	1.000	1799482	0.9822	105	11617	
10 Perfluorohexanoic acid	313.00 > 269.00	3.441	3.472	-0.031	1.000	3075099	1.01	Target=12.60	101	1364
	313.00 > 119.00	3.441	3.472	-0.031	1.000	254999		12.06(6.30-18.90)		391
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.441	3.472	-0.031	1.099	2315328	1.01	Target=3.45	108	4529
	349.00 > 99.00	3.441	3.472	-0.031	1.099	649527		3.56(1.73-5.18)		4734
D 9 13C2 PFHxA	315.00 > 270.00	3.441	3.472	-0.031	0.833	4368549	1.10	87.9	8278	
D 12 13C3 HFPO-DA	287.00 > 169.00	3.546	3.574	-0.028	0.858	2096767	1.10	87.8	4550	



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	3.546	3.574	-0.028	1.000	2411736	1.06		106	2223	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.787	3.807	-0.020	1.000	2067269	0.9277	Target=3.46	102	4373	M
399.00 > 99.00	3.787	3.807	-0.020	1.000	599821		3.45(1.73-5.19)		3130	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.787	3.807	-0.020	0.916	1913236	1.16		97.8	7083	
D 14 13C4 PFHpA										
367.00 > 322.00	3.796	3.825	-0.029	0.919	4458910	1.17		93.8	8882	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.796	3.825	-0.029	1.000	3968774	1.06	Target=3.21	106	2248	
363.00 > 169.00	3.796	3.825	-0.029	1.000	1236838		3.21(1.61-4.82)		2420	
68 DONA										
377.00 > 251.00	3.834	3.858	-0.024	0.867	5909362	1.02	Target=1.72	108	7584	
377.00 > 85.00	3.834	3.858	-0.024	0.867	3375300		1.75(0.86-2.58)		5581	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.115	4.140	-0.025	0.931	2284349	1.09	Target=3.94	114	5868	
449.00 > 99.00	4.115	4.140	-0.025	0.931	575192		3.97(1.97-5.90)		5808	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.124	4.149	-0.025	0.998	945414	1.23		103	2023	
D 21 13C4 PFOA										
417.00 > 372.00	4.132	4.156	-0.024	1.000	4705883	1.20		95.8	8887	
19 6:2 FTS										
427.00 > 407.00	4.132	4.156	-0.024	1.002	1344492	0.9406		99.2	3870	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.132	4.156	-0.024	1.000	4310825	1.00	Target=2.53	99.8	2725	
413.00 > 169.00	4.132	4.156	-0.024	1.000	1659516		2.60(1.27-3.80)		3222	
* 22 13C2 PFOA										
415.00 > 370.00	4.132	4.156	-0.024		5240791	1.25			9168	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.419	4.452	-0.033	1.000	2432904	1.01	Target=4.27	109	3191	M
499.00 > 99.00	4.419	4.452	-0.033	1.000	535509		4.54(2.13-6.40)		2477	M
D 25 13C4 PFOS										
503.00 > 80.00	4.419	4.452	-0.033	1.069	2627227	1.10		92.3	4711	
26 Perfluorononanoic acid										
463.00 > 419.00	4.445	4.469	-0.024	1.000	4305633	1.03	Target=4.52	103	3890	
463.00 > 169.00	4.445	4.469	-0.024	1.000	947885		4.54(2.26-6.78)		2453	
D 27 13C5 PFNA										
468.00 > 423.00	4.445	4.469	-0.024	1.076	6162855	1.19		95.3	11510	
63 9CIFOS										
531.00 > 351.00	4.581	4.608	-0.027	1.037	4846270	1.03		110	10604	
D 34 13C8 FOSA										
506.00 > 78.00	4.706	4.723	-0.017	1.139	4005896	1.24		99.5	3860	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.706	4.723	-0.017	1.000	3128062	1.03		103	4396	

Data File: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_011.d

Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_007.d

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	4.732	-0.026	1.065	2264880	1.06	Target=3.82	110	2750	
549.00 > 99.00	4.706	4.732	-0.026	1.065	560870		4.04(1.91-5.73)		3434	
D 32 13C2 PFDA										
515.00 > 470.00	4.732	4.757	-0.025	1.145	5870858	1.18		94.1	9456	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.732	4.757	-0.025	1.000	4758395	1.05	Target=11.59	105	3114	
513.00 > 169.00	4.732	4.757	-0.025	1.000	411365		11.57(5.80-17.39)		498	
31 8:2 FTS										
527.00 > 507.00	4.749	4.774	-0.025	1.000	1253057	1.02		107	4171	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.774	-0.025	1.149	1038872	1.20		100.0	1852	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.878	4.905	-0.027	1.181	884367	1.51		120	877	
36 NMeFOSAA										
570.00 > 419.00	4.878	4.905	-0.027	1.000	677142	0.9848		98.5	1505	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.966	4.992	-0.026	1.124	2041880	1.00	Target=3.60	104	4403	
599.00 > 99.00	4.966	4.992	-0.026	1.124	566257		3.61(1.80-5.40)		2825	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.993	5.022	-0.029	1.000	4892690	1.02	Target=8.71	102	5117	
563.00 > 169.00	4.993	5.022	-0.029	1.000	571937		8.55(4.35-13.06)		2349	
D 39 13C2 PFUnA										
565.00 > 520.00	4.993	5.022	-0.029	1.208	6202589	1.24		99.6	10604	
40 NEtFOSA										
584.00 > 419.00	5.022	5.042	-0.020	1.002	778407	1.03		103	2345	M
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.012	5.042	-0.030	1.213	954784	1.48		119	3128	
57 11C1FOS										
631.00 > 451.00	5.092	5.122	-0.030	1.152	3756819	1.02		108	7632	
D 43 13C2 PFDoA										
615.00 > 570.00	5.231	5.257	-0.026	1.266	5728418	1.10		87.7	16390	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.231	5.257	-0.026	1.000	4958559	1.06	Target=7.01	106	4600	
613.00 > 169.00	5.231	5.257	-0.026	1.000	707183		7.01(3.51-10.52)		1864	
50 10:2 FTS										
627.00 > 607.00	5.257	5.275	-0.018	1.107	2097183	1.06		110	5949	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.275	5.292	-0.017	1.277	715526	1.14		91.1	480	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.275	5.292	-0.017	1.277	510387	1.14		91.1	49.3	
61 NMeFOSA										
512.00 > 169.00	5.284	5.292	-0.008	1.002	449078	1.09		109	629	
49 N-MeFOSE-M										
616.00 > 59.00	5.284	5.301	-0.017	1.002	675473	1.01		101	781	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
54 PFDoS										
699.00 > 80.00	5.404	5.425	-0.020	1.223	2094630	1.04	Target=4.26	107	1978	
699.00 > 99.00	5.404	5.425	-0.020	1.223	493155		4.25(2.13-6.39)		2620	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.435	5.444	-0.009	1.315	698696	1.11		88.6	299	
62 N-EtFOSE-M										
630.00 > 59.00	5.445	5.464	-0.019	1.002	734659	0.9897		99.0	702	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.435	5.464	-0.029	1.039	3962901	1.04	Target=5.87	104	4328	
663.00 > 169.00	5.435	5.464	-0.029	1.039	682363		5.81(2.93-8.80)		3279	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.445	5.464	-0.019	1.318	400628	1.08		86.6	552	
56 N-EtFOSA-M										
526.00 > 169.00	5.455	5.464	-0.009	1.002	421527	1.10		110	607	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.619	5.650	-0.031	1.360	4410421	1.11		88.5	8583	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.619	5.650	-0.031	1.000	481479	1.02	Target=1.02	102	1685	
713.00 > 219.00	5.619	5.650	-0.031	1.000	461658		1.04(0.51-1.53)		2175	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.922	5.948	-0.026	1.433	2937146	1.09		87.0	5840	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.931	5.948	-0.017	1.001	2745767	1.09	Target=8.43	109	3697	
813.00 > 169.00	5.922	5.948	-0.026	1.000	331679		8.28(4.22-12.65)		662	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.185	6.209	-0.024	1.044	2473448	1.07	Target=11.53	107	3372	
913.00 > 169.00	6.185	6.209	-0.024	1.044	207924		11.90(5.77-17.30)		815	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_011.d

Injection Date: 11-Jan-2022 18:23:19

Instrument ID: LCA

Lims ID: LCS 140-57611/2-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 11

Worklist Smp#: 11

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

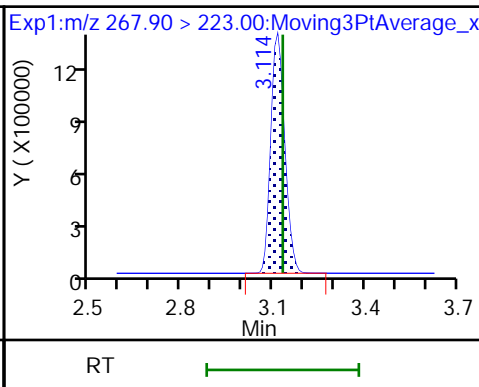
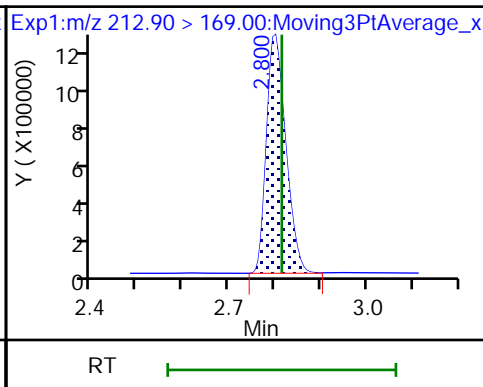
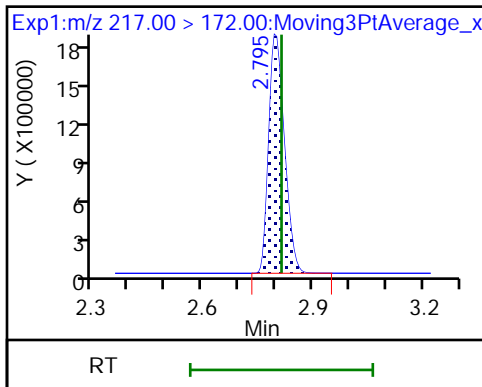
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

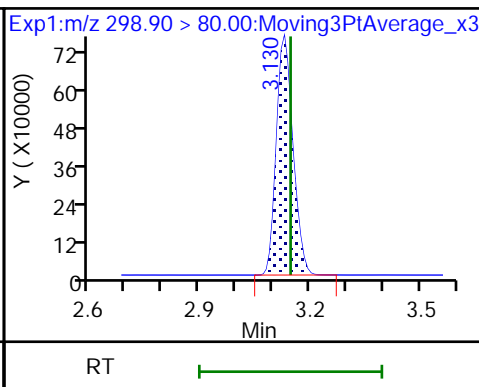
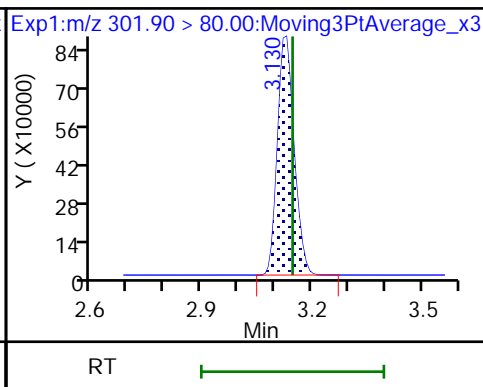
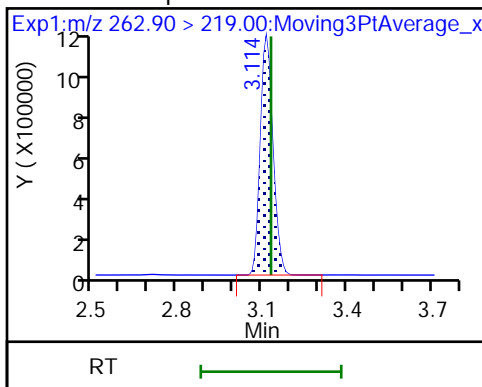
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

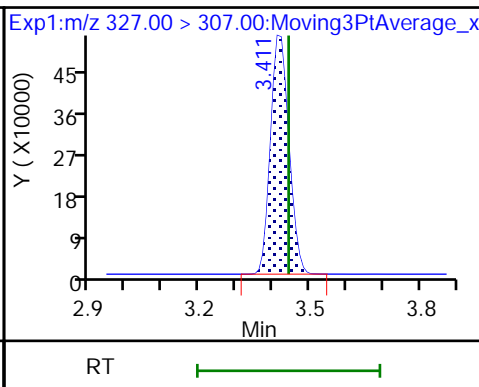
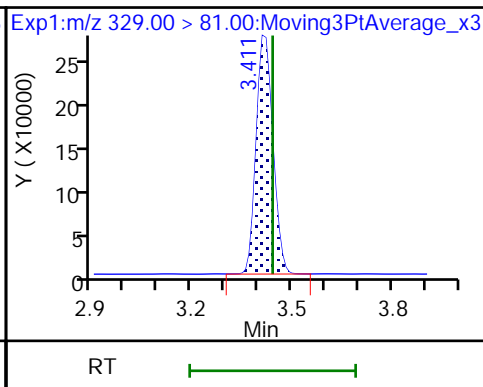
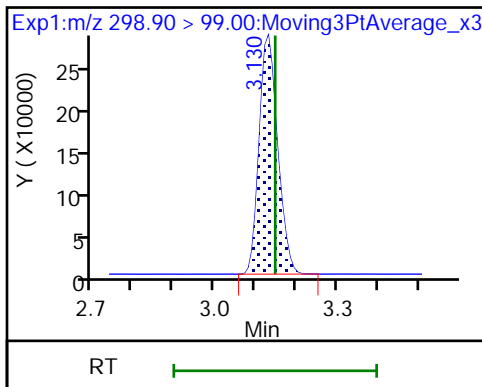
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

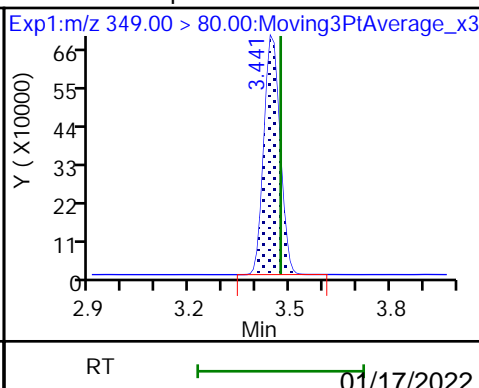
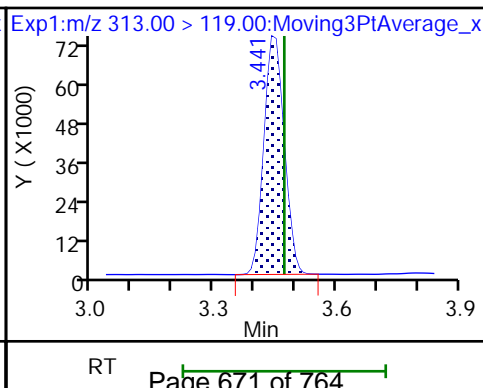
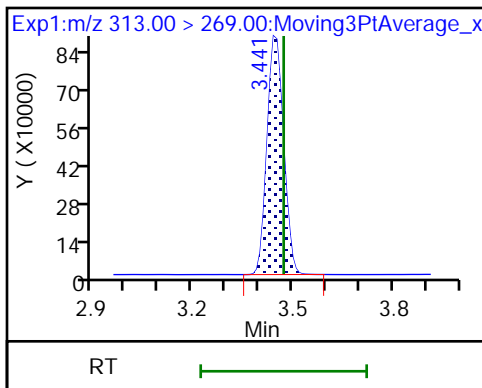
7 4:2 FTS

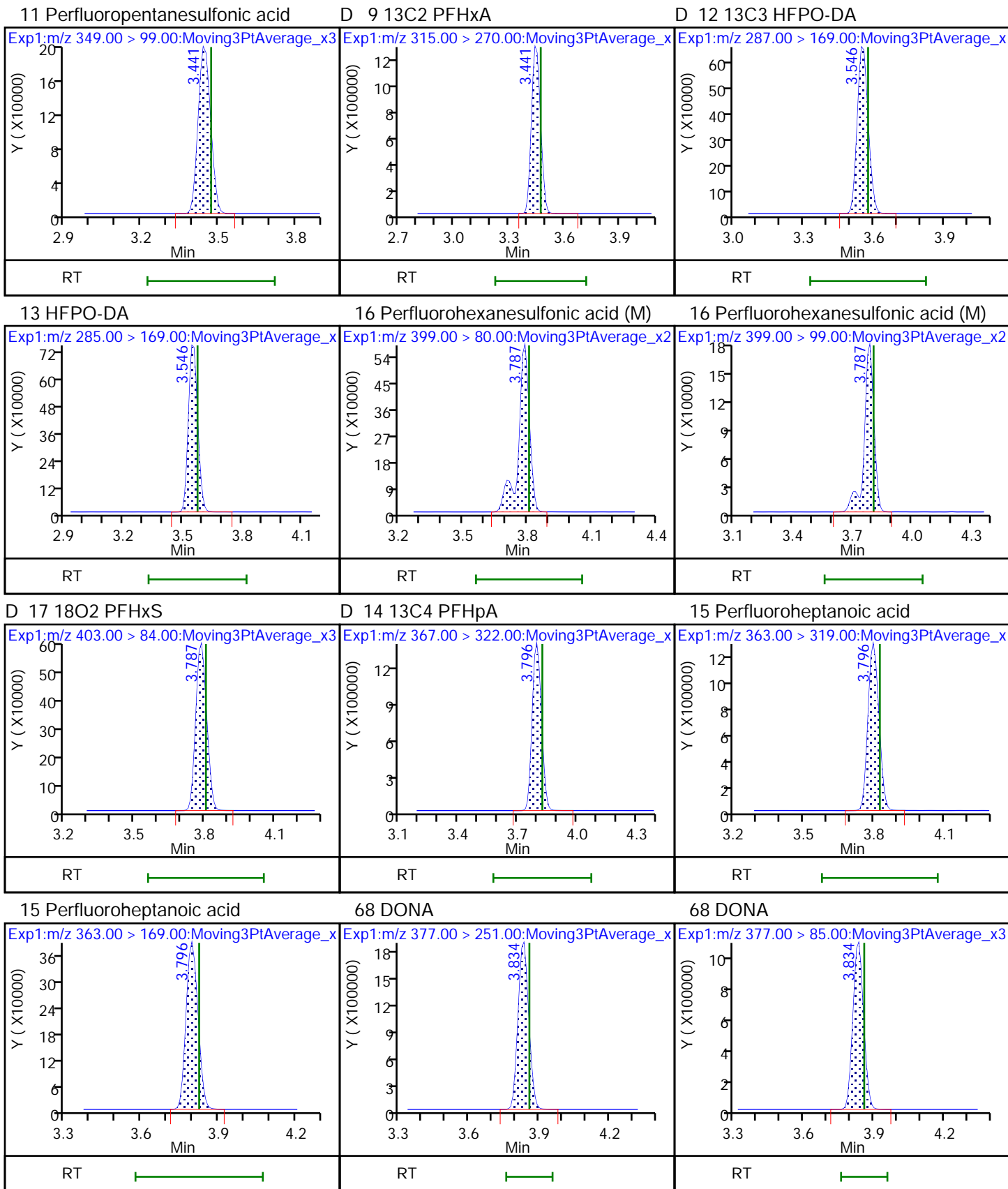


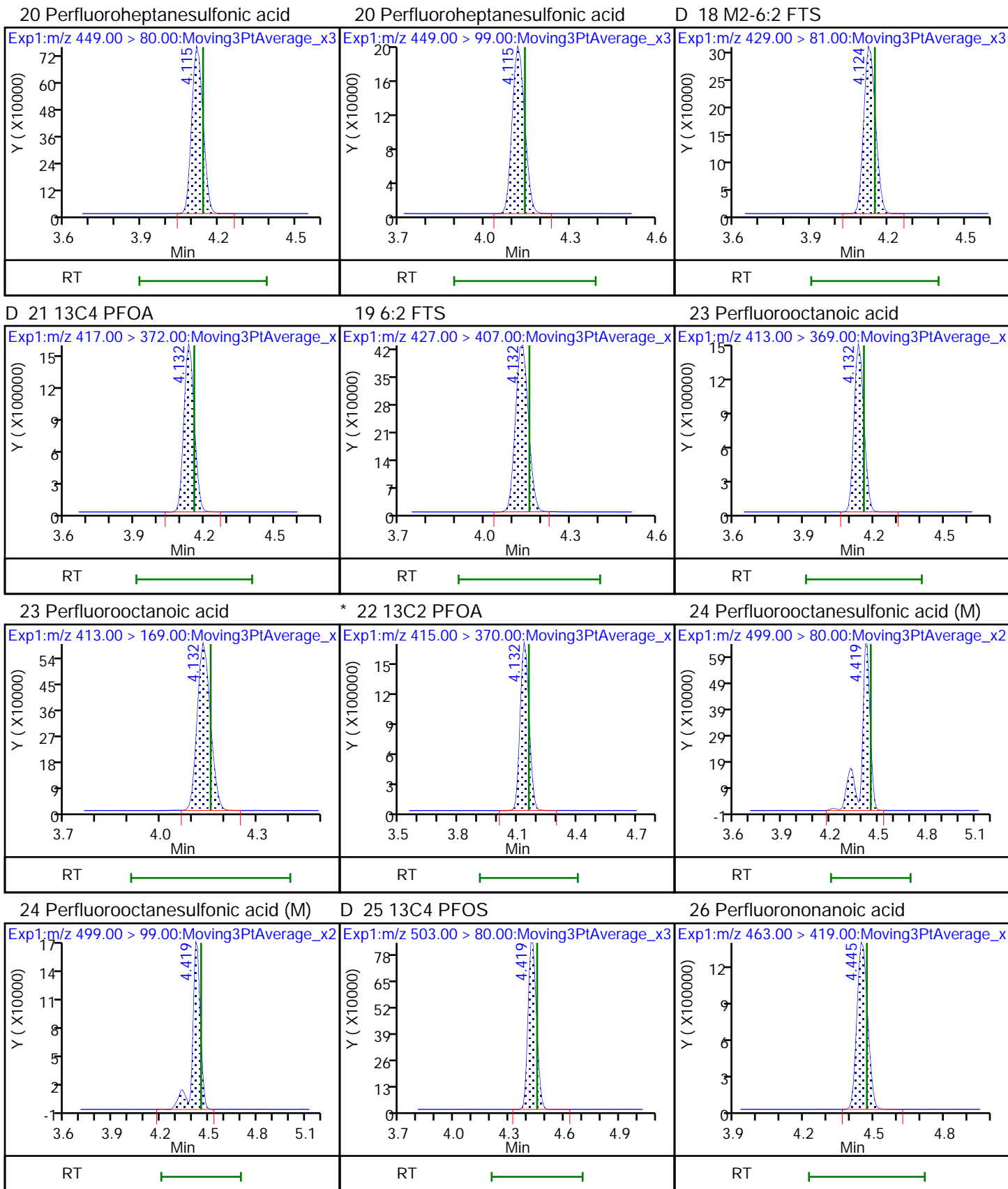
10 Perfluorohexanoic acid

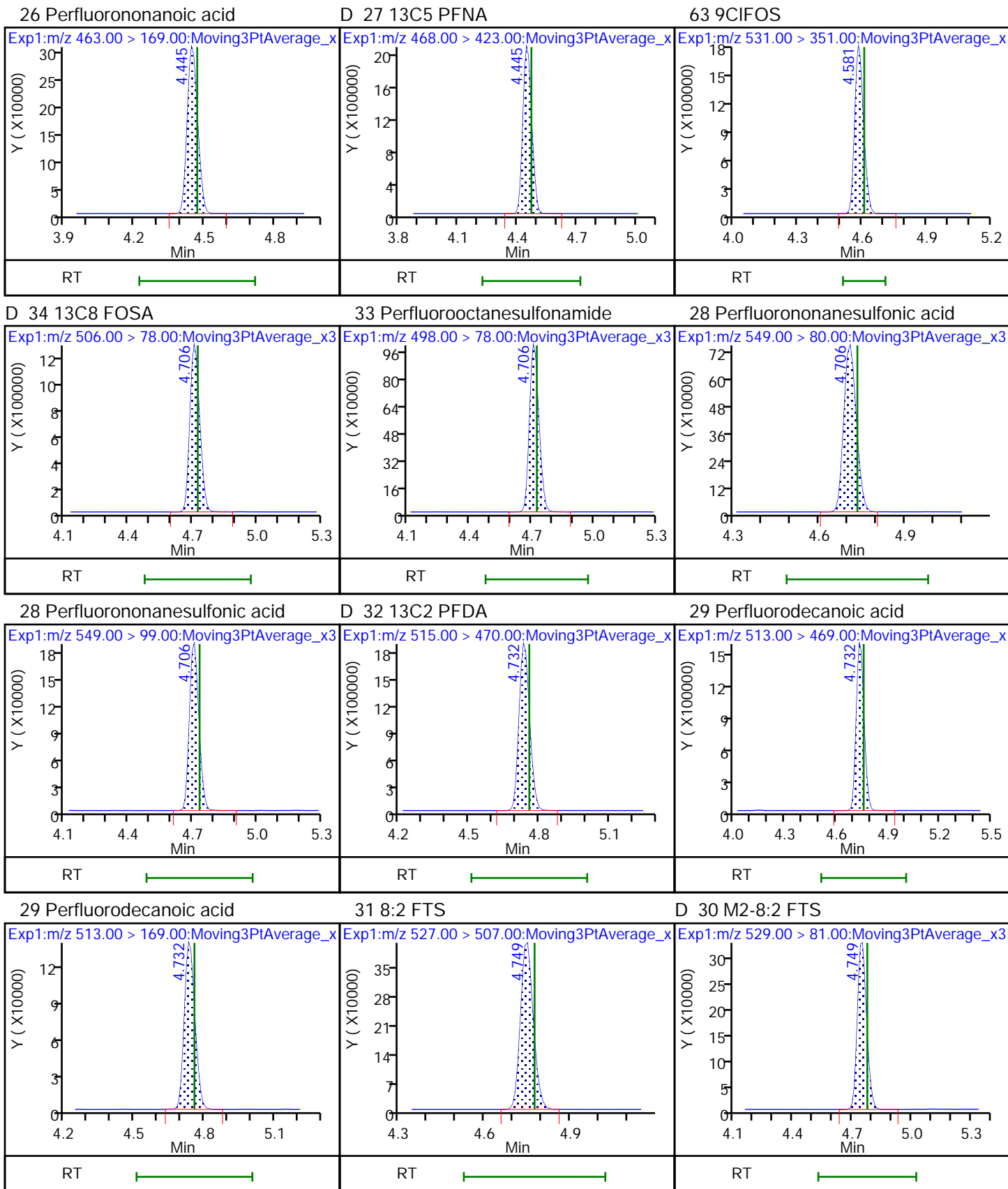
10 Perfluorohexanoic acid

11 Perfluoropentanesulfonic acid





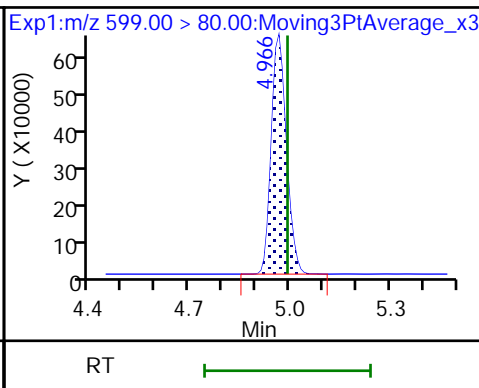
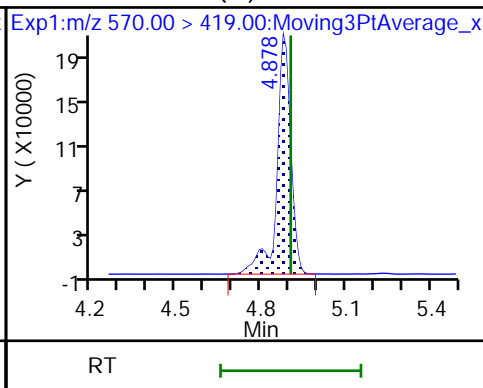
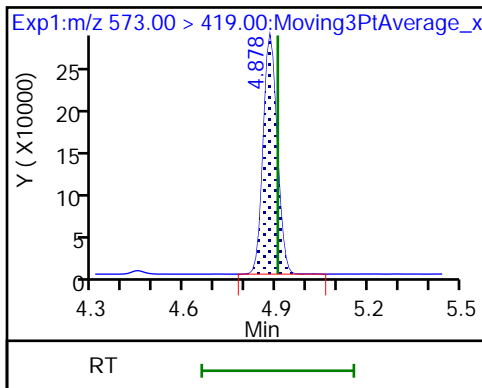




D 35 d3-NMeFOSAA

36 NMeFOSAA (M)

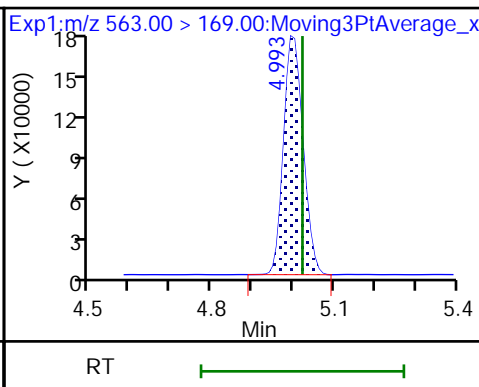
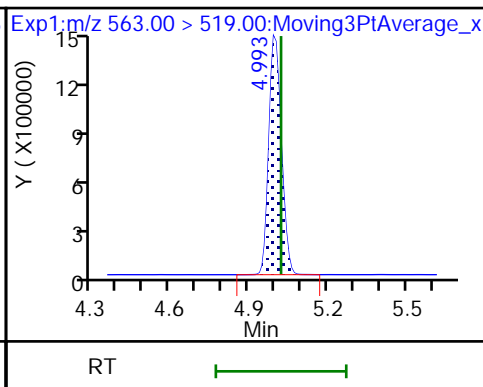
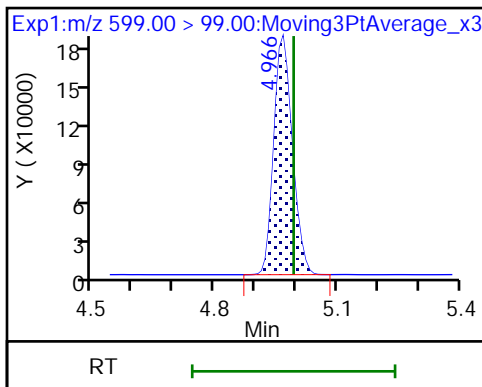
37 Perfluorodecanesulfonic acid



37 Perfluorodecanesulfonic acid

38 Perfluoroundecanoic acid

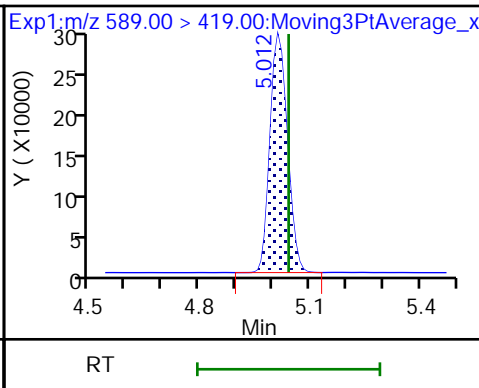
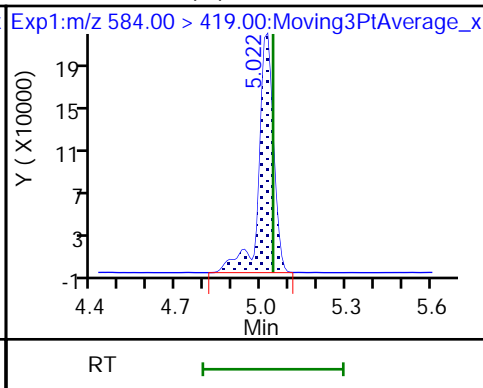
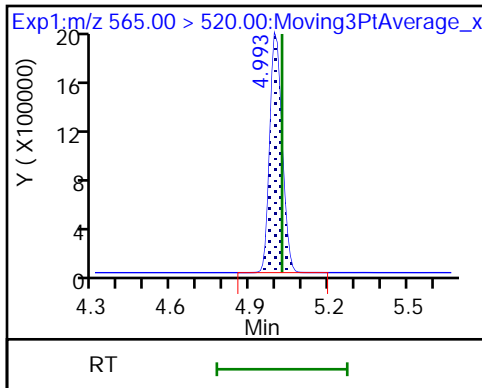
38 Perfluoroundecanoic acid



D 39 13C2 PFUnA

40 NEtFOSA (M)

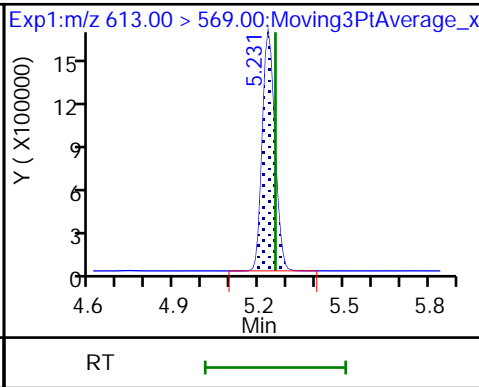
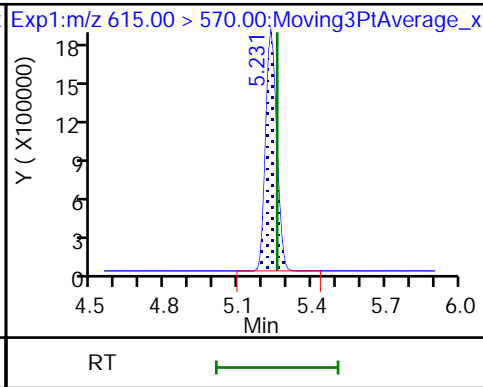
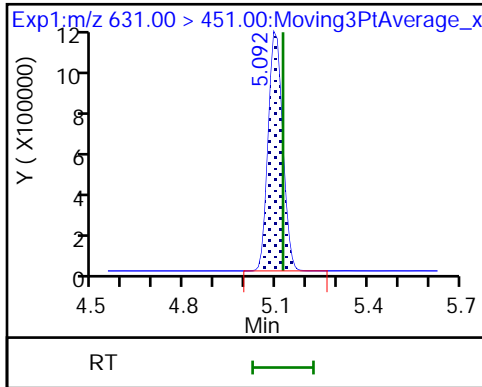
D 41 d5-NEtFOSAA



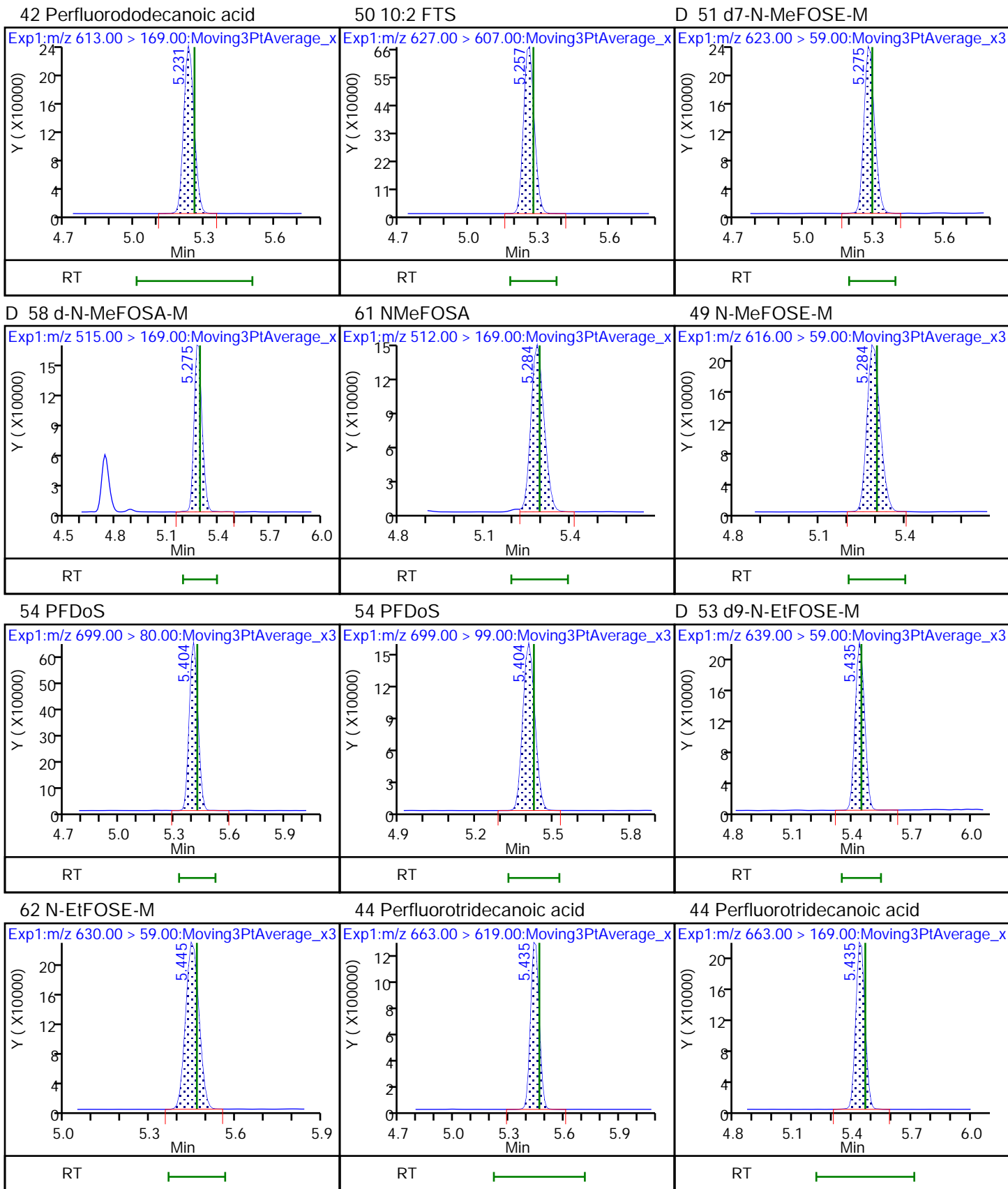
57 11CIFOS

D 43 13C2 PFDoA

42 Perfluorododecanoic acid



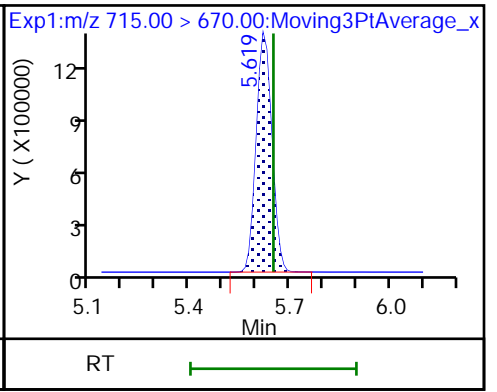
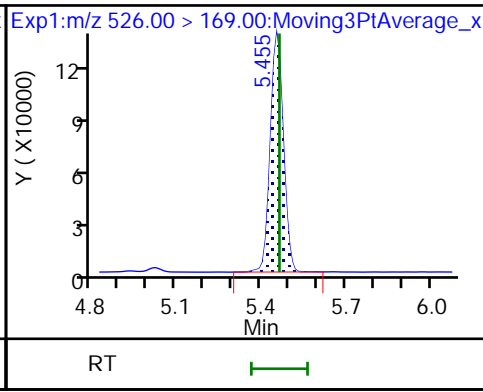
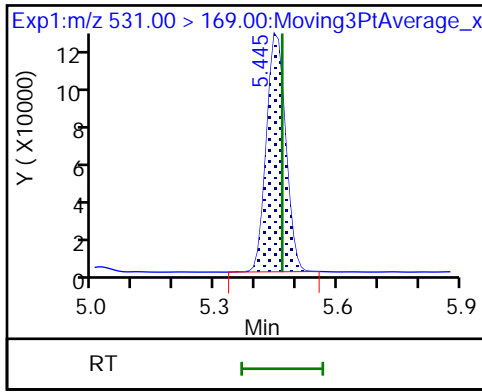




D 52 d-N-EtFOSA-M

56 N-EtFOSA-M

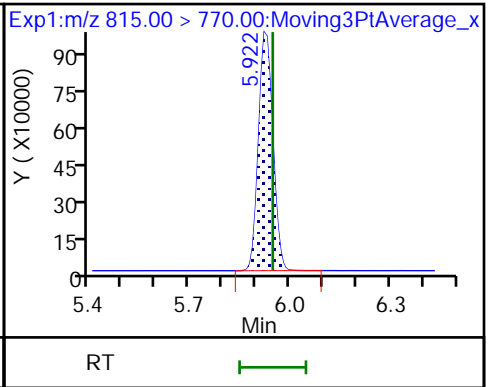
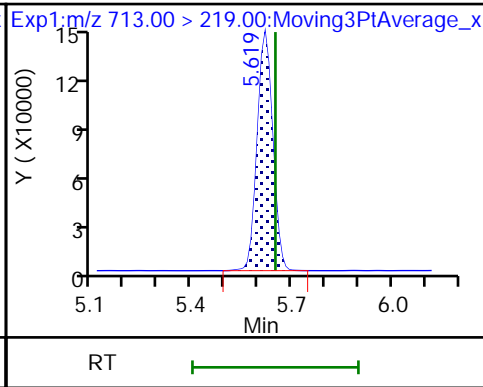
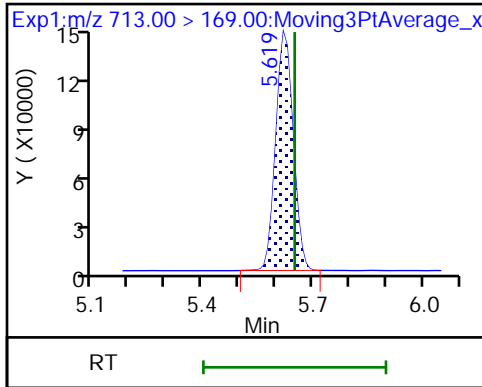
D 46 13C2 PFTeDA



45 Perfluorotetradecanoic acid

45 Perfluorotetradecanoic acid

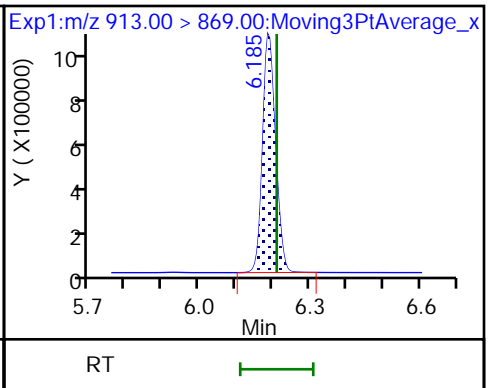
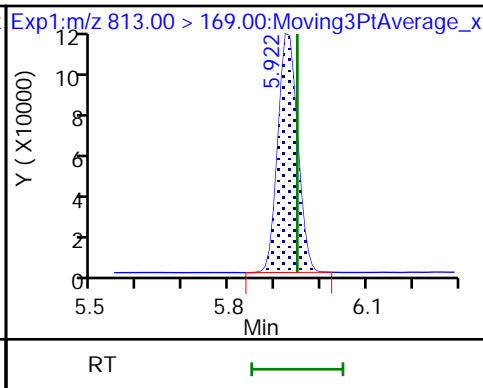
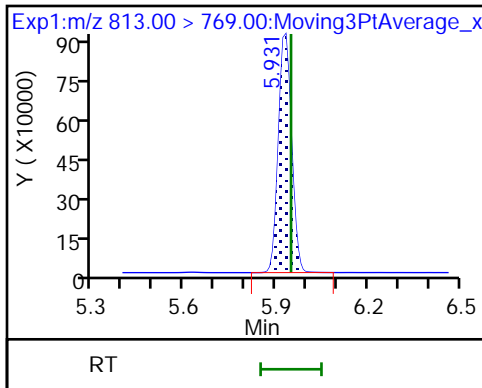
D 59 13C2 PFHxDA



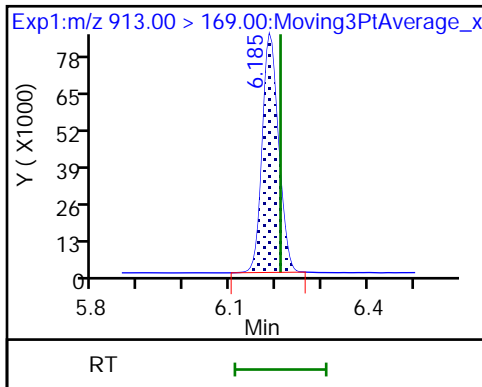
55 Perfluorohexadecanoic acid

55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid



60 Perfluorooctadecanoic acid



FORM I  
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 140-57613/2-B  
 Matrix: Air Lab File ID: 009.d  
 Analysis Method: 537 (modified) Date Collected: \_\_\_\_\_  
 Extraction Method: None Date Extracted: 01/04/2022 08:59  
 Sample wt/vol: 1 (Sample) Date Analyzed: 01/12/2022 18:53  
 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.: 57865 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.01948		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\20220112-22237.b\_009.d  
 Lims ID: LCS 140-57613/2-B  
 Client ID:  
 Sample Type: LCS  
 Inject. Date: 12-Jan-2022 18:53:22 ALS Bottle#: 9 Worklist Smp#: 9  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022237-009 lcs 140-57613/2-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:15:14 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 09:50:04  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_007.d

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	2.796	2.802	-0.006	1.000	3656801	1.00	100	402	
D 1 13C4 PFBA	217.00 > 172.00	2.796	2.802	-0.006	0.677	5808758	1.19	94.8	9867	
D 3 13C5 PFPeA	267.90 > 223.00	3.107	3.116	-0.009	0.752	4667183	1.23	98.1	8098	
4 Perfluoropentanoic acid	262.90 > 219.00	3.115	3.116	-0.001	1.003	3527452	0.99	99.2	544	
D 6 13C3 PFBS	301.90 > 80.00	3.124	3.132	-0.008	0.756	2600639	1.02	88.2	5674	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.124	3.132	-0.008	1.000	2149185	0.8757	Target=2.71	99.1	3106
	298.90 > 99.00	3.124	3.132	-0.008	1.000	802009		2.68(1.35-4.06)		1143
D 8 M2-4:2 FTS	329.00 > 81.00	3.413	3.423	-0.010	0.826	1081054	1.38	119	1356	
7 4:2 FTS	327.00 > 307.00	3.413	3.423	-0.010	1.000	1925467	0.9233	98.9	9027	
D 9 13C2 PFHxA	315.00 > 270.00	3.443	3.444	-0.001	0.833	4993295	1.23	98.2	10167	
10 Perfluorohexanoic acid	313.00 > 269.00	3.443	3.444	-0.001	1.000	3255496	0.9389	Target=12.92	93.9	756
	313.00 > 119.00	3.443	3.444	-0.001	1.000	261071		12.47(6.46-19.37)		236
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.443	3.444	-0.001	1.102	2083776	0.9590	Target=3.61	102	3556
	349.00 > 99.00	3.443	3.444	-0.001	1.102	590131		3.53(1.81-5.42)		2654
D 12 13C3 HFPO-DA	287.00 > 169.00	3.548	3.548	0.0	0.859	2323065	1.19	95.0	5747	

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	3.548	0.0	1.000	2447688	0.9738		97.4	2461	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.780	3.789	-0.009	1.000	1940166	0.8989	Target=3.52	98.8	4568	M
399.00 > 99.00	3.780	3.789	-0.009	1.000	540468		3.59(1.76-5.28)		2313	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.780	3.789	-0.009	0.915	1853220	1.09		92.5	6899	
D 14 13C4 PFHpA										
367.00 > 322.00	3.798	3.799	-0.001	0.919	4940396	1.27		102	8959	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.798	3.799	-0.001	1.000	4328929	1.05	Target=3.30	105	1366	
363.00 > 169.00	3.798	3.799	-0.001	1.000	1308310		3.31(1.65-4.95)		2942	
68 DONA										
377.00 > 251.00	3.833	3.834	-0.001	0.866	6052180	1.01	Target=1.76	107	6741	
377.00 > 85.00	3.833	3.834	-0.001	0.866	3588701		1.69(0.88-2.64)		5103	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.115	4.115	0.0	0.930	2005700	0.9235	Target=3.88	97.0	4442	
449.00 > 99.00	4.115	4.115	0.0	0.930	517354		3.88(1.94-5.82)		2396	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.123	4.132	-0.009	0.998	1023476	1.30		109	2950	
D 21 13C4 PFOA										
417.00 > 372.00	4.131	4.132	-0.001	1.000	5221690	1.30		104	11075	
19 6:2 FTS										
427.00 > 407.00	4.123	4.132	-0.009	1.000	1744491	1.13		119	6267	
* 22 13C2 PFOA										
415.00 > 370.00	4.131	4.132	-0.001		5364999	1.25			8546	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.131	4.132	-0.001	1.000	4594104	0.9584	Target=2.61	95.8	2021	
413.00 > 169.00	4.131	4.132	-0.001	1.000	1748972		2.63(1.30-3.91)		3110	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.427	4.428	-0.001	1.000	2166845	0.8663	Target=4.39	93.4	2732	M
499.00 > 99.00	4.427	4.428	-0.001	1.000	508190		4.26(2.19-6.58)		2315	M
D 25 13C4 PFOS										
503.00 > 80.00	4.427	4.428	-0.001	1.071	2720206	1.12		93.3	4940	
26 Perfluorononanoic acid										
463.00 > 419.00	4.452	4.445	0.007	1.000	4525050	1.00	Target=4.78	100	3022	
463.00 > 169.00	4.452	4.445	0.007	1.000	965331		4.69(2.39-7.17)		2031	
D 27 13C5 PFNA										
468.00 > 423.00	4.452	4.445	0.007	1.078	6644500	1.25		100	9503	
63 9CIFOS										
531.00 > 351.00	4.587	4.581	0.006	1.036	4429807	0.9088		97.5	8307	
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.706	4.706	0.0	1.063	2025444	0.9127	Target=3.96	95.1	5689	
549.00 > 99.00	4.706	4.706	0.0	1.063	508793		3.98(1.98-5.94)		3272	
D 34 13C8 FOSA										
506.00 > 78.00	4.715	4.706	0.009	1.141	4375534	1.33		106	4983	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.715	4.706	0.009	1.000	3265260	0.9862		98.6	4350	

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	4.740	4.732	0.008	1.147	6598552	1.29		103	10263	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.740	4.732	0.008	1.000	5166010	1.01	Target=11.18	101	3895	
513.00 > 169.00	4.740	4.732	0.008	1.000	423294		12.20(5.59-16.77)		665	
31 8:2 FTS										
527.00 > 507.00	4.749	4.749	0.0	1.000	1259599	0.9643		101	4692	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.749	4.749	0.0	1.149	1105353	1.24		104	1761	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.878	4.878	0.0	1.181	983617	1.64		131	1147	
36 NMeFOSAA										
570.00 > 419.00	4.887	4.887	0.0	1.002	710351	0.9290		92.9	1947	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.966	4.966	0.0	1.122	1769226	0.8376	Target=3.65	86.9	4418	
599.00 > 99.00	4.966	4.966	0.0	1.122	493835		3.58(1.82-5.47)		3565	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.002	5.002	0.0	1.000	5217344	0.9644	Target=8.72	96.4	5180	
563.00 > 169.00	5.002	5.002	0.0	1.000	618440		8.44(4.36-13.08)		2354	
D 39 13C2 PFUnA										
565.00 > 520.00	5.002	5.002	0.0	1.211	6975314	1.37		109	11785	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.022	5.012	0.010	1.215	1086329	1.65		132	4376	
40 NEtFOSA										
584.00 > 419.00	5.022	5.022	0.0	1.000	810802	0.9392		93.9	2155	M
57 11CIFOS										
631.00 > 451.00	5.102	5.102	0.0	1.152	3433510	0.9019		95.7	7193	
D 43 13C2 PFDoA										
615.00 > 570.00	5.240	5.231	0.009	1.268	6655008	1.24		99.5	10337	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.240	5.231	0.009	1.000	5102107	0.9386	Target=6.85	93.9	4083	
613.00 > 169.00	5.240	5.231	0.009	1.000	733443		6.96(3.43-10.28)		1584	
50 10:2 FTS										
627.00 > 607.00	5.257	5.257	0.0	1.107	1887390	0.8983		93.2	6535	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.284	5.275	0.009	1.279	826762	1.28		103	497	
49 N-MeFOSE-M										
616.00 > 59.00	5.292	5.284	0.008	1.002	791919	1.02		102	187	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.284	5.284	0.0	1.279	552549	1.20		96.4	51.4	
61 NMeFOSA										
512.00 > 169.00	5.292	5.284	0.008	1.002	473094	1.06		106	883	
54 PFDoS										
699.00 > 80.00	5.414	5.404	0.010	1.223	1524686	0.7308	Target=4.18	75.5	3695	
699.00 > 99.00	5.414	5.404	0.010	1.223	368018		4.14(2.09-6.27)		2474	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.445	5.435	0.010	1.318	824946	1.28		102	377	

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	5.455	5.445	0.010	1.002	797909	0.9104		91.0	684	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.445	5.445	0.0	1.039	4092215	0.9270	Target=6.15	92.7	4579	
663.00 > 169.00	5.445	5.445	0.0	1.039	682717		5.99(3.07-9.22)		2778	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.455	5.445	0.010	1.320	443710	1.17		93.7	689	
56 N-EtFOSA-M										
526.00 > 169.00	5.464	5.455	0.009	1.002	424543	1.00		100	532	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.629	5.629	0.0	1.363	4660142	1.14		91.4	9346	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.629	5.629	0.0	1.000	470434	0.9390	Target=1.06	93.9	2428	
713.00 > 219.00	5.629	5.629	0.0	1.000	470207		1.00(0.53-1.58)		2522	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.931	5.931	0.0	1.436	1750910	0.6330		50.6	4945	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.940	5.931	0.009	1.001	1541149	1.03	Target=8.21	103	2704	
813.00 > 169.00	5.940	5.931	0.009	1.001	181142		8.51(4.11-12.32)		460	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.195	6.195	-0.001	1.044	65372	0.0474	Target=11.14	4.7	242	
913.00 > 169.00	6.195	6.195	-0.001	1.044	5376		12.16(5.57-16.71)		30.0	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_009.d

Injection Date: 12-Jan-2022 18:53:22

Instrument ID: LCA

Lims ID: LCS 140-57613/2-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 9

Worklist Smp#: 9

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

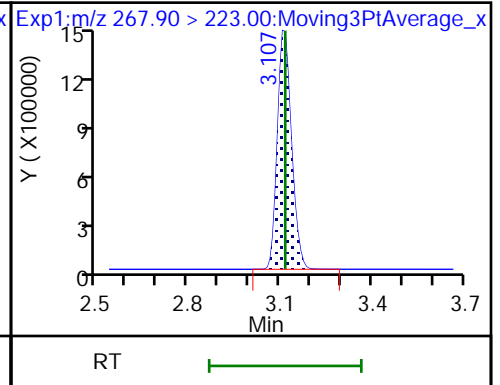
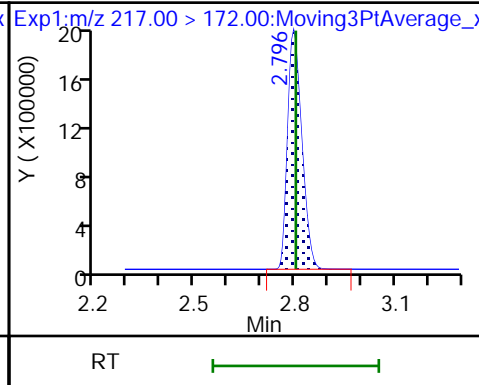
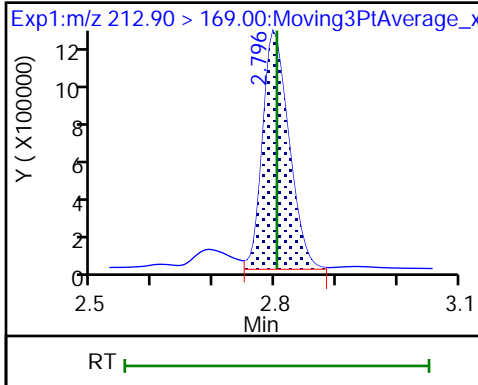
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Limit Group: LC - PFC- ICAL

2 Perfluorobutanoic acid

D 1 13C4 PFBA

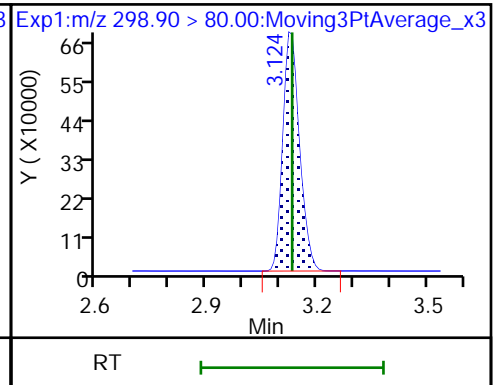
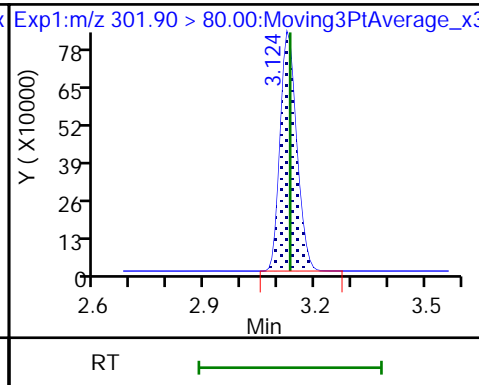
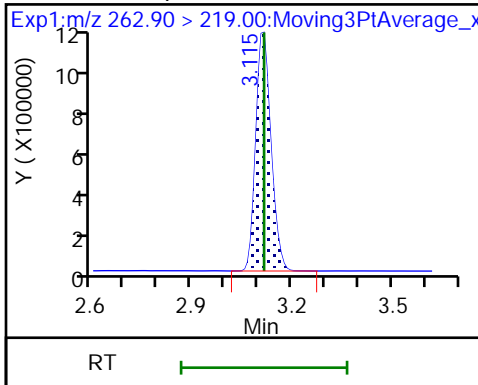
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

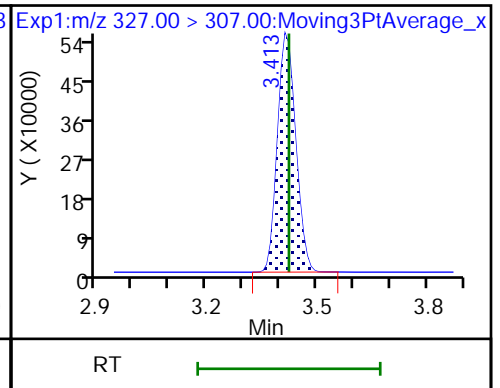
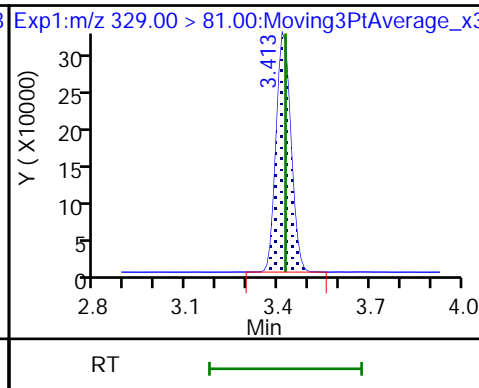
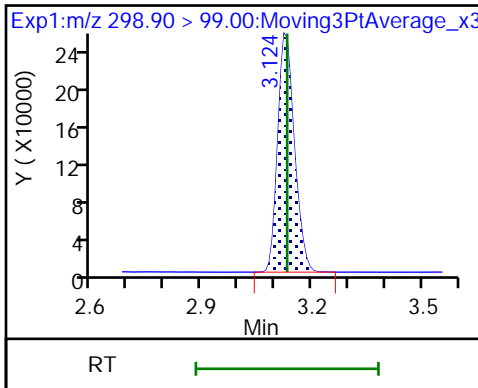
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

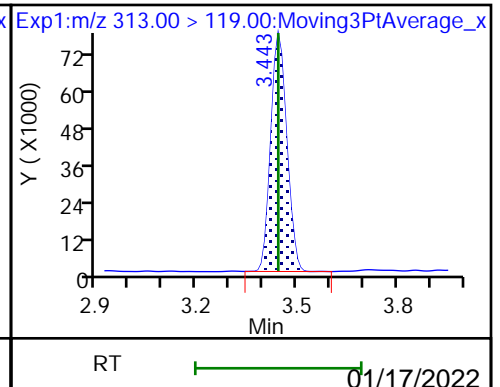
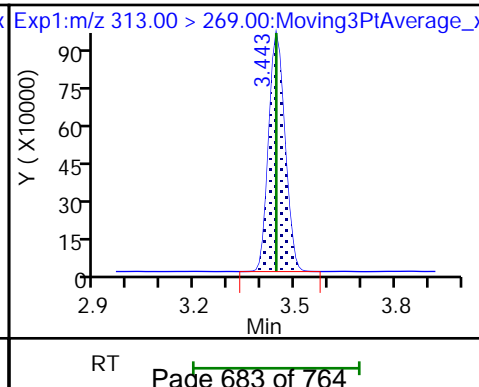
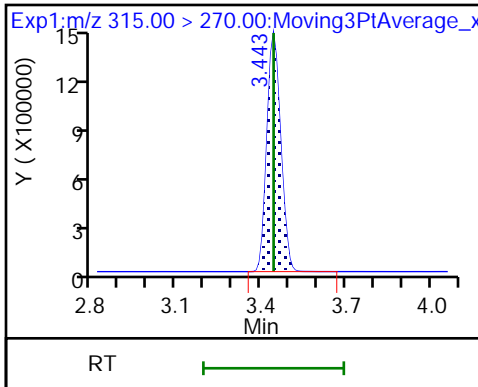
7 4:2 FTS



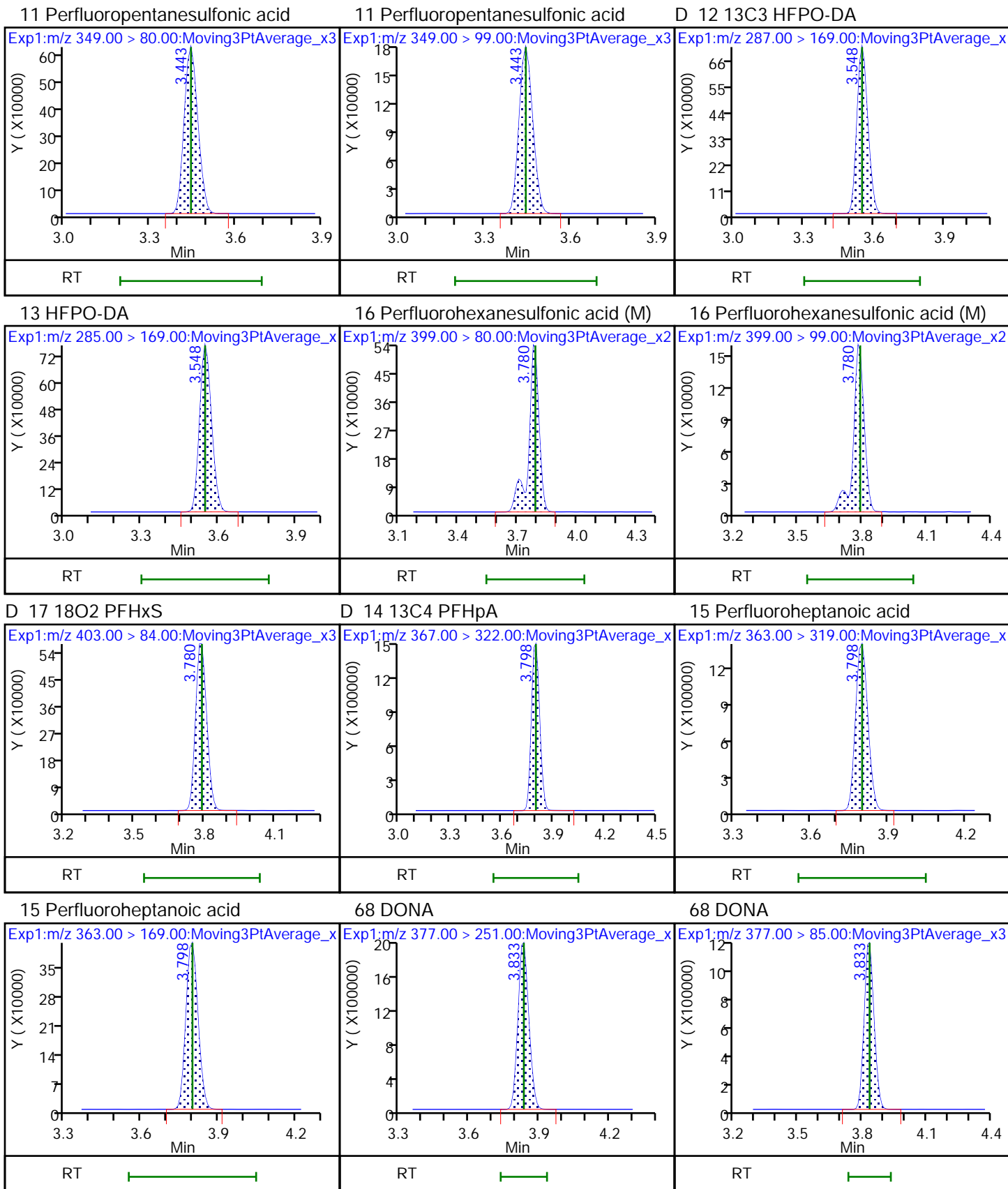
D 9 13C2 PFHxA

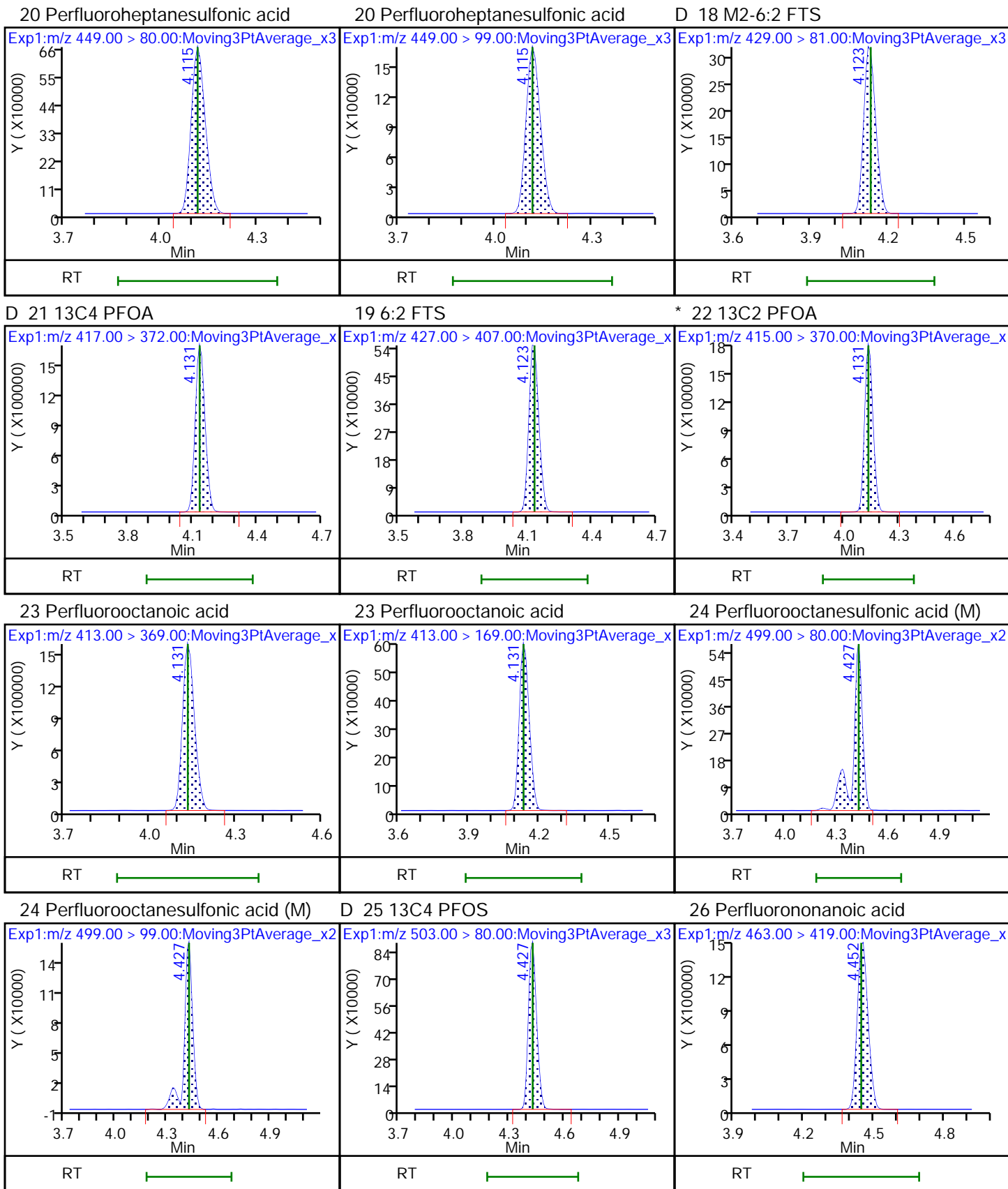
10 Perfluorohexanoic acid

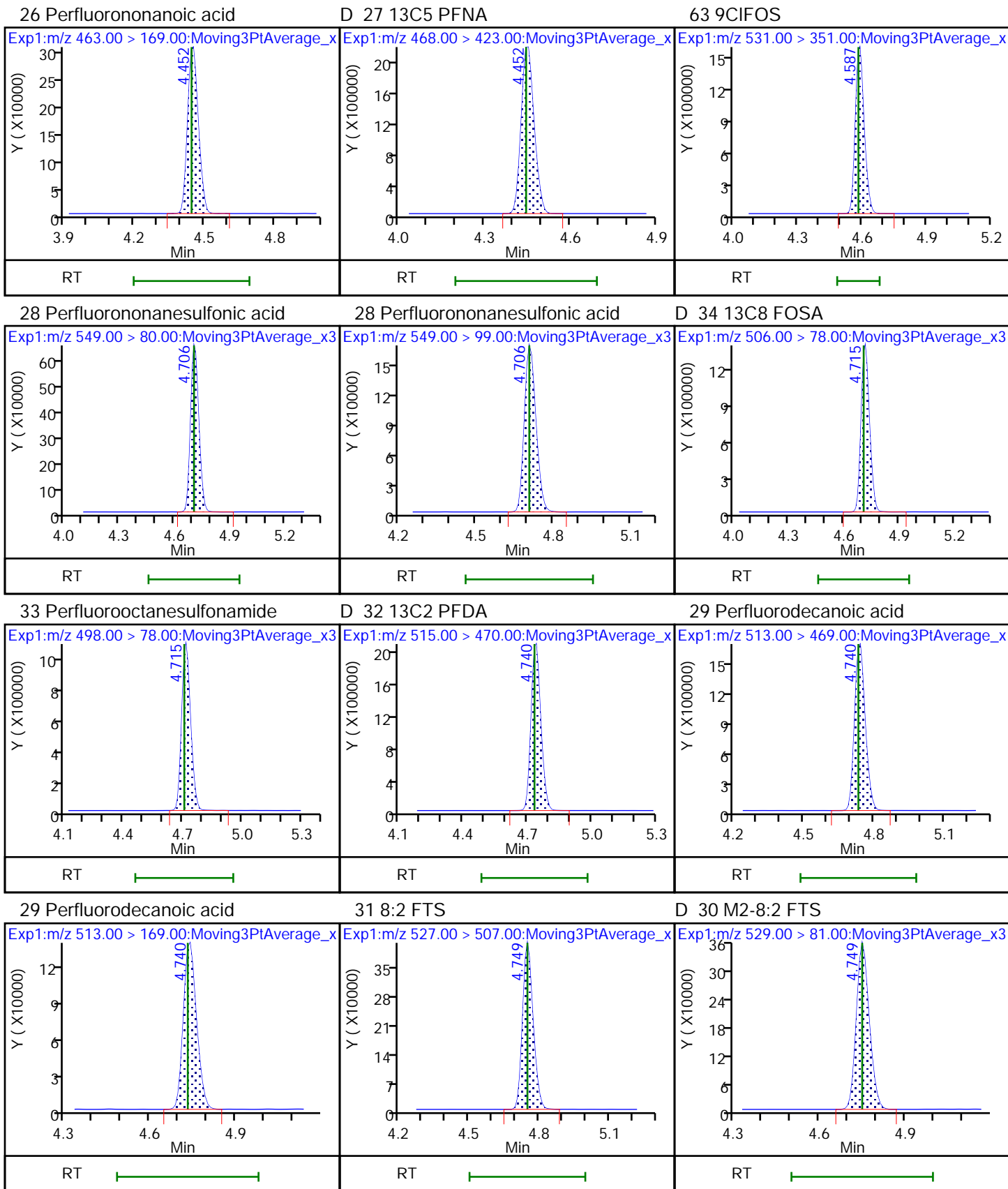
10 Perfluorohexanoic acid







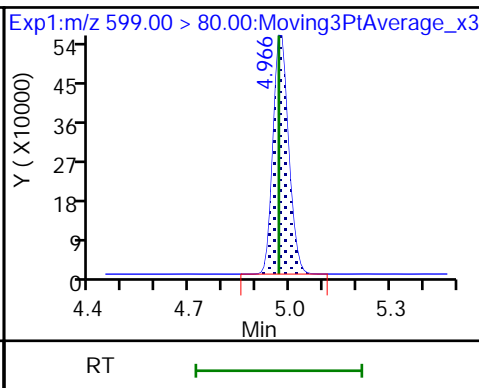
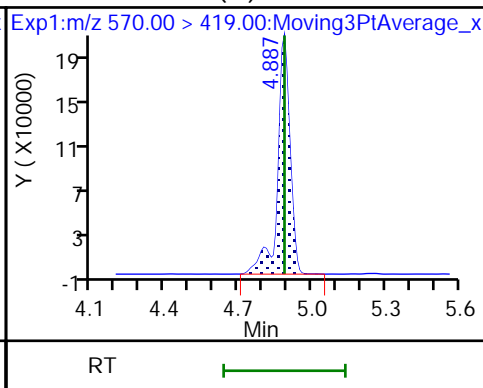
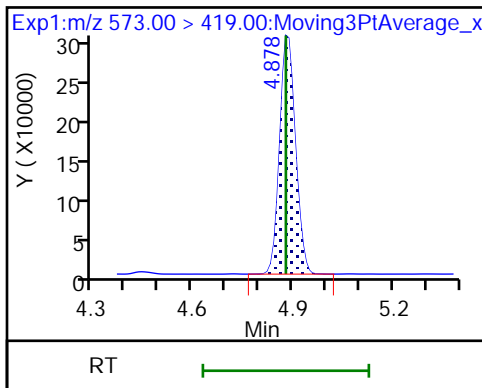




D 35 d3-NMeFOSAA

36 NMeFOSAA (M)

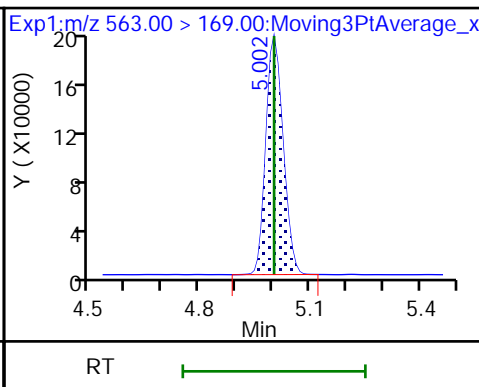
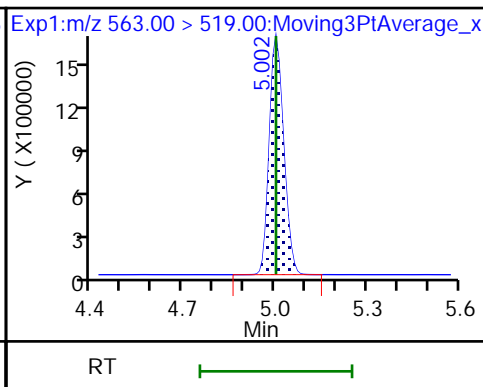
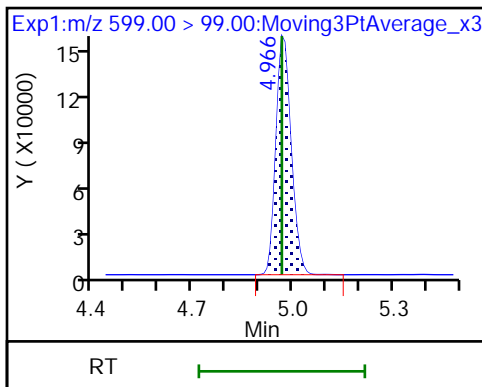
37 Perfluorodecanesulfonic acid



37 Perfluorodecanesulfonic acid

38 Perfluoroundecanoic acid

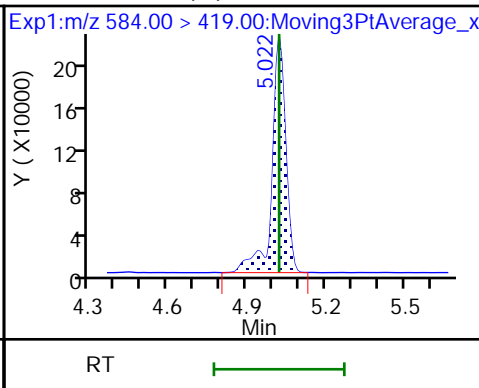
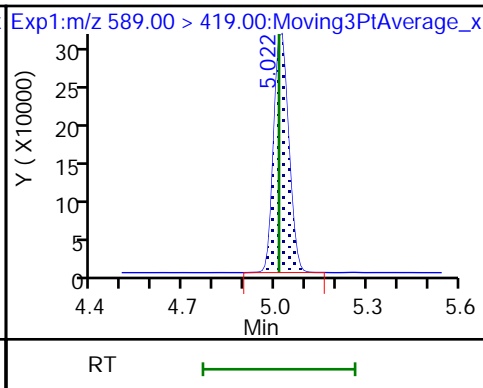
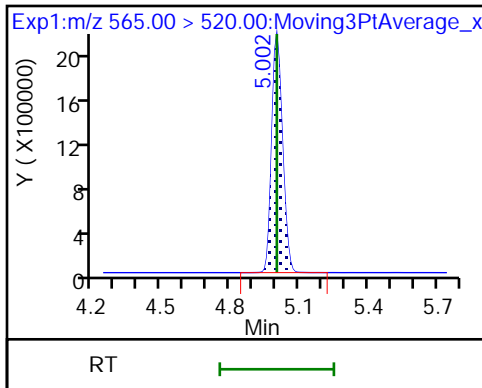
38 Perfluoroundecanoic acid



D 39 13C2 PFUnA

D 41 d5-NEtFOSAA

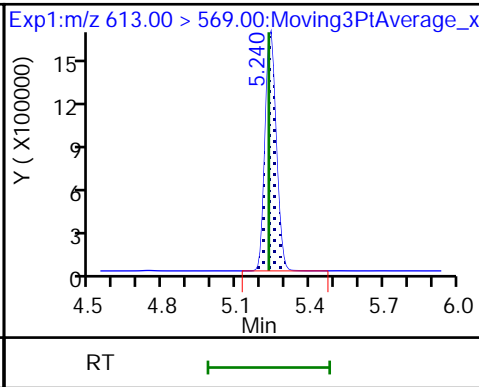
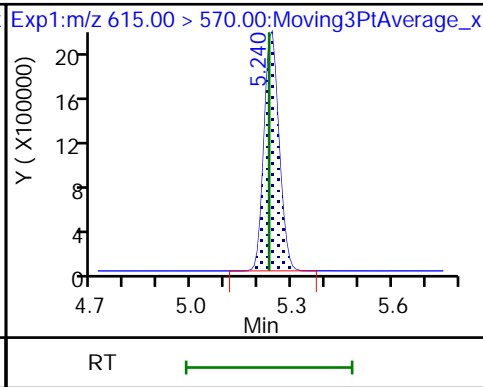
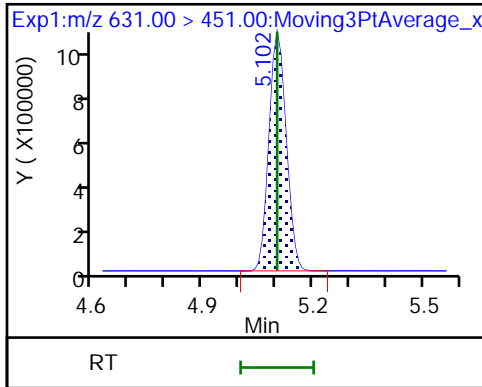
40 NEtFOSA (M)

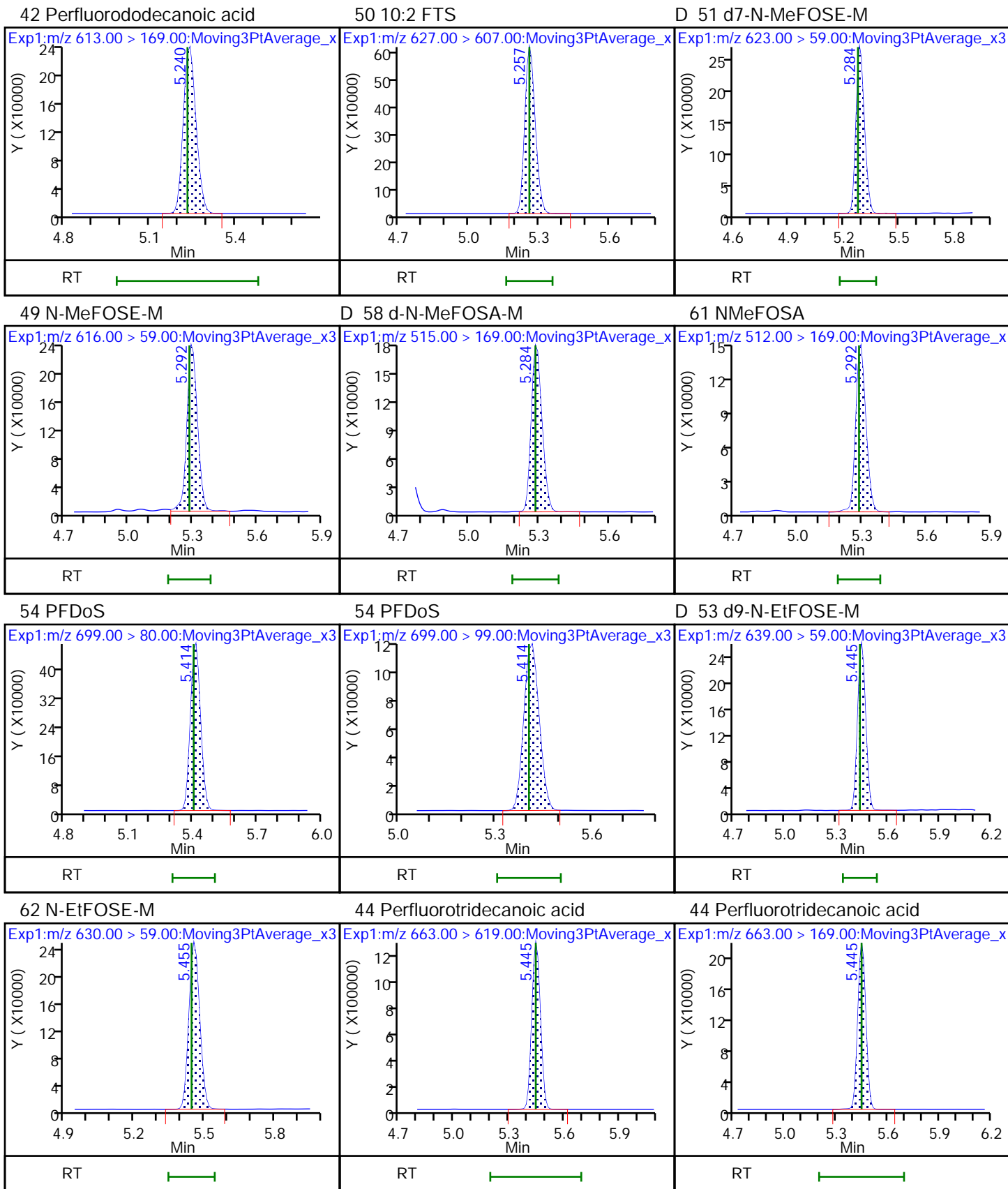


57 11C1FOS

D 43 13C2 PFDoA

42 Perfluorododecanoic acid

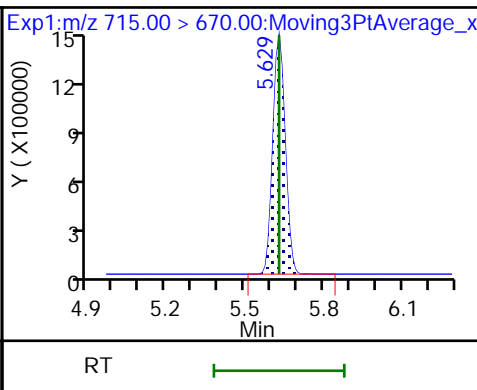
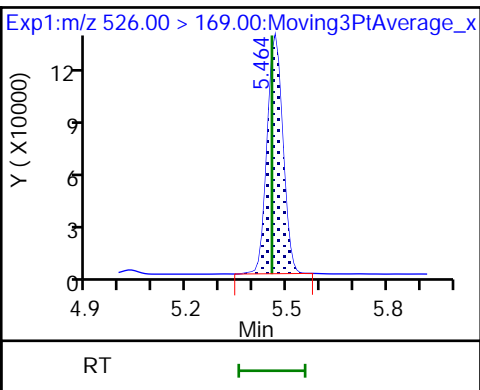
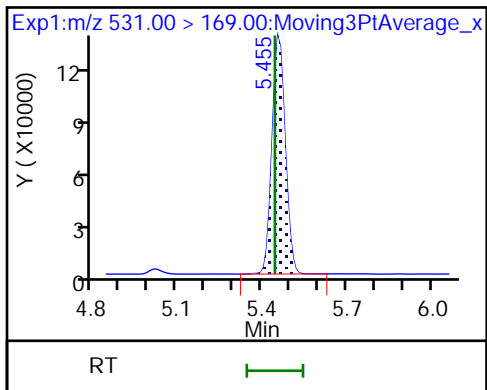




D 52 d-N-EtFOSA-M

56 N-EtFOSA-M

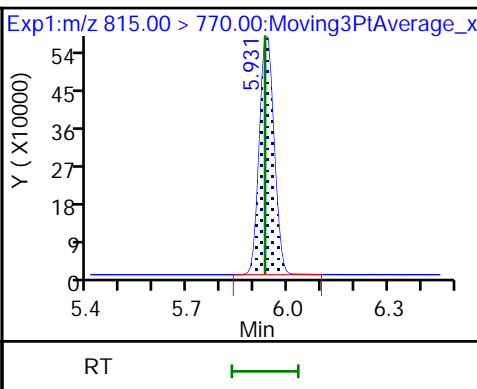
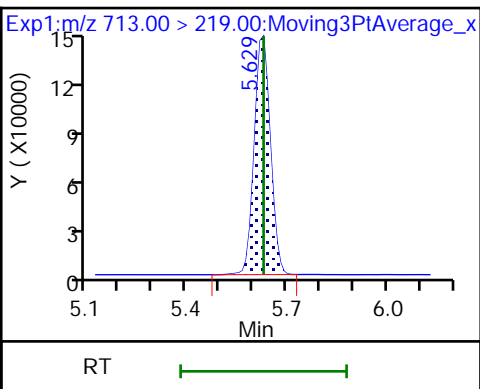
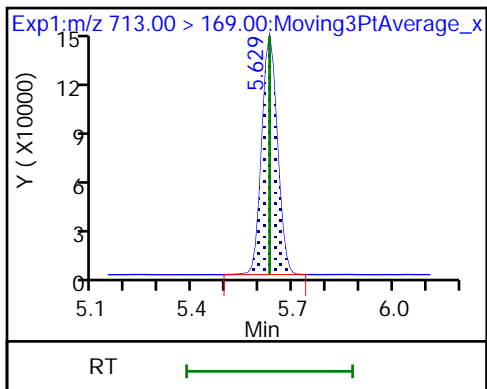
D 46 13C2 PFTeDA



45 Perfluorotetradecanoic acid

45 Perfluorotetradecanoic acid

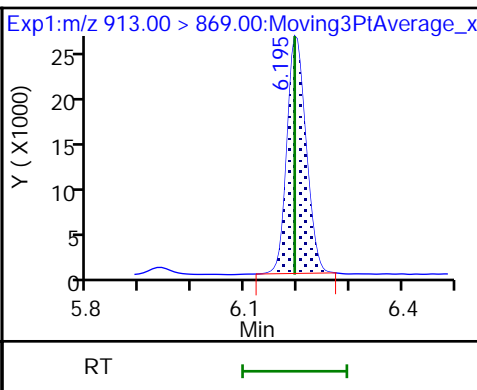
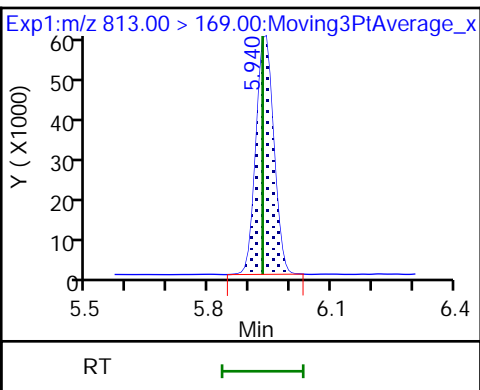
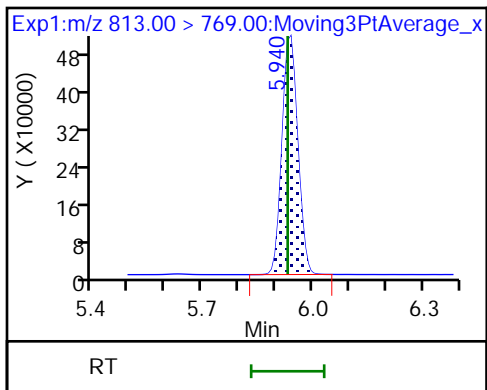
D 59 13C2 PFHxDA



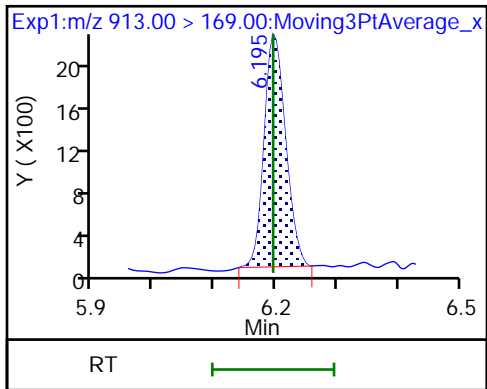
55 Perfluorohexadecanoic acid

55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid



60 Perfluorooctadecanoic acid



FORM I  
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 140-57645/2-B  
 Matrix: Air Lab File ID: 007.d  
 Analysis Method: 537 (modified) Date Collected: \_\_\_\_\_  
 Extraction Method: None Date Extracted: 01/04/2022 14:49  
 Sample wt/vol: 1 (Sample) Date Analyzed: 01/09/2022 12:58  
 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.: 57742 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.009965		0.000500	0.0000825

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\20220109-22187.b\_007.d  
 Lims ID: LCS 140-57645/2-B  
 Client ID:  
 Sample Type: LCS  
 Inject. Date: 09-Jan-2022 12:58:16 ALS Bottle#: 7 Worklist Smp#: 7  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022187-007 LCS 140-57645/2-B  
 Misc. Info.: Plate: 11 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 15:08:06 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1641

First Level Reviewer: cochranj Date: 10-Jan-2022 12:51:43  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_005.d

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	2.779	2.790	-0.011	0.678	6305108	1.29	103	13791	
2 Perfluorobutanoic acid	212.90 > 169.00	2.779	2.790	-0.011	1.000	3921710	0.99	99.1	998	
D 3 13C5 PFPeA	267.90 > 223.00	3.091	3.098	-0.007	0.754	5078053	1.34	107	9661	
4 Perfluoropentanoic acid	262.90 > 219.00	3.091	3.098	-0.007	1.000	3926926	1.02	102	1282	
D 6 13C3 PFBS	301.90 > 80.00	3.099	3.115	-0.016	0.756	3014162	1.19	102	11654	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.107	3.115	-0.008	1.003	2581348	0.9075	Target=2.75	103	8826
	298.90 > 99.00	3.099	3.115	-0.016	1.000	931257		2.77(1.37-4.12)		5018
D 8 M2-4:2 FTS	329.00 > 81.00	3.383	3.391	-0.008	0.826	930407	1.19	102	1539	
7 4:2 FTS	327.00 > 307.00	3.383	3.402	-0.019	1.000	1673232	0.9323	99.8	7108	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.413	3.422	-0.009	1.101	2427413	0.9639	Target=3.47	103	4716
	349.00 > 99.00	3.413	3.422	-0.009	1.101	690004		3.52(1.73-5.20)		6987
D 9 13C2 PFHxA	315.00 > 270.00	3.413	3.422	-0.009	0.833	5378882	1.32	106	9428	
10 Perfluorohexanoic acid	313.00 > 269.00	3.413	3.422	-0.009	1.000	3774580	1.01	Target=12.28	101	1740
	313.00 > 119.00	3.413	3.422	-0.009	1.000	296916		12.71(6.14-18.41)		487
D 12 13C3 HFPO-DA	287.00 > 169.00	3.520	3.528	-0.008	0.859	2523103	1.29	103	4139	



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	3.520	3.528	-0.008	1.000	2720481	1.00		99.7	2203	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.752	3.760	-0.008	1.000	2078477	0.8726	Target=3.52	95.9	5590	M
399.00 > 99.00	3.752	3.760	-0.008	1.000	605363		3.43(1.76-5.28)		3393	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.752	3.760	-0.008	0.916	2045157	1.21		102	6800	
D 14 13C4 PFHpA										
367.00 > 322.00	3.761	3.769	-0.008	0.918	5164711	1.33		106	8696	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.761	3.769	-0.008	1.000	4417999	1.02	Target=3.20	102	2242	
363.00 > 169.00	3.761	3.769	-0.008	1.000	1372138		3.22(1.60-4.79)		2543	
68 DONA										
377.00 > 251.00	3.798	3.807	-0.009	0.865	6439240	0.9600	Target=1.78	102	7264	
377.00 > 85.00	3.798	3.807	-0.009	0.865	3670136		1.75(0.89-2.67)		5211	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.080	4.089	-0.009	0.929	2304100	0.9469	Target=3.95	99.5	6747	
449.00 > 99.00	4.080	4.089	-0.009	0.929	581276		3.96(1.98-5.93)		4166	
19 6:2 FTS										
427.00 > 407.00	4.097	4.106	-0.009	1.000	1445064	0.9532		101	5275	
D 21 13C4 PFOA										
417.00 > 372.00	4.097	4.106	-0.009	1.000	5333445	1.33		106	12891	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.097	4.106	-0.009	1.000	1002680	1.28		107	3260	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.097	4.106	-0.009	1.000	4862284	0.99	Target=2.62	99.3	2914	
413.00 > 169.00	4.097	4.106	-0.009	1.000	1882572		2.58(1.31-3.93)		3036	
* 22 13C2 PFOA										
415.00 > 370.00	4.097	4.106	-0.009		5356156	1.25			7414	
D 25 13C4 PFOS										
503.00 > 80.00	4.393	4.401	-0.008	1.072	3047767	1.25		105	3859	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.393	4.401	-0.008	1.000	2525228	0.9011	Target=4.28	97.1	4747	M
499.00 > 99.00	4.393	4.401	-0.008	1.000	577517		4.37(2.14-6.42)		1844	M
D 27 13C5 PFNA										
468.00 > 423.00	4.418	4.427	-0.009	1.078	6806843	1.29		103	11602	
26 Perfluorononanoic acid										
463.00 > 419.00	4.418	4.427	-0.009	1.000	4736538	1.02	Target=4.54	102	3721	
463.00 > 169.00	4.418	4.427	-0.009	1.000	1047226		4.52(2.27-6.81)		1917	
63 9CIFOS										
531.00 > 351.00	4.553	4.560	-0.007	1.036	5069545	0.9281		99.6	11096	
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.673	4.681	-0.008	1.064	2358359	0.9486	Target=3.87	98.8	6180	
549.00 > 99.00	4.673	4.681	-0.008	1.064	602301		3.92(1.94-5.81)		3749	
D 34 13C8 FOSA										
506.00 > 78.00	4.698	4.706	-0.008	1.146	4393392	1.33		107	3959	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.698	4.706	-0.008	1.000	3345400	1.01		101	4420	

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_007.d

Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_005.d

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	4.698	4.715	-0.017	1.146	6868549	1.35		108	10221	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.706	4.715	-0.009	1.002	5209486	0.9830	Target=11.50	98.3	4243	
513.00 > 169.00	4.698	4.715	-0.017	1.000	448844		11.61(5.75-17.24)		691	
31 8:2 FTS										
527.00 > 507.00	4.715	4.723	-0.008	1.000	1307151	1.07		112	3589	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.715	4.723	-0.008	1.151	1034274	1.17		97.4	1421	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.843	4.852	-0.009	1.182	727279	1.21		96.9	627	
36 NMeFOSAA										
570.00 > 419.00	4.852	4.861	-0.009	1.002	584726	1.03		103	1305	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.931	4.940	-0.009	1.122	2165428	0.9147	Target=3.76	94.9	5800	
599.00 > 99.00	4.931	4.940	-0.009	1.122	575736		3.76(1.88-5.64)		3174	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.966	4.975	-0.009	1.000	5237037	1.02	Target=8.31	102	4977	
563.00 > 169.00	4.966	4.975	-0.009	1.000	604980		8.66(4.15-12.46)		2107	
D 39 13C2 PFUnA										
565.00 > 520.00	4.966	4.975	-0.009	1.212	6640418	1.30		104	11911	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.984	4.993	-0.009	1.216	881818	1.34		107	5125	
40 NEtFOSA										
584.00 > 419.00	4.984	4.993	-0.009	1.000	665986	0.9503		95.0	1157	M
57 11CIFOS										
631.00 > 451.00	5.062	5.072	-0.010	1.152	3926574	0.9206		97.7	8183	
D 43 13C2 PFDoA										
615.00 > 570.00	5.205	5.213	-0.008	1.270	7289827	1.36		109	17478	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.205	5.213	-0.008	1.000	5924995	1.00	Target=7.17	99.5	4783	
613.00 > 169.00	5.205	5.213	-0.008	1.000	876539		6.76(3.58-10.75)		2079	
50 10:2 FTS										
627.00 > 607.00	5.222	5.231	-0.009	1.108	2022111	1.03		107	7085	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.275	5.284	-0.009	1.287	791900	1.23		98.6	860	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.275	5.284	-0.009	1.287	555451	1.21		97.0	59.8	
61 NMeFOSA										
512.00 > 169.00	5.284	5.284	0.0	1.002	472732	1.05		105	612	
49 N-MeFOSE-M										
616.00 > 59.00	5.284	5.292	-0.008	1.002	740353	1.00		99.8	1022	
54 PFDoS										
699.00 > 80.00	5.373	5.383	-0.010	1.223	2204426	0.9430	Target=4.12	97.4	5897	
699.00 > 99.00	5.373	5.383	-0.010	1.223	516927		4.26(2.06-6.18)		3138	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.414	5.414	0.0	1.040	4612353	0.9538	Target=6.35	95.4	4868	
663.00 > 169.00	5.414	5.414	0.0	1.040	768111		6.00(3.17-9.52)		2922	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.435	5.444	-0.009	1.326	820772	1.27		102	386	
62 N-EtFOSE-M										
630.00 > 59.00	5.445	5.454	-0.009	1.002	848882	0.9735		97.3	853	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.445	5.454	-0.009	1.329	452368	1.20		95.7	742	
56 N-EtFOSA-M										
526.00 > 169.00	5.455	5.464	-0.009	1.002	456227	1.05		105	577	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.598	5.607	-0.009	1.366	5402581	1.33		106	10937	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.598	5.607	-0.009	1.000	585985	1.01	Target=1.06	101	2725	
713.00 > 219.00	5.587	5.607	-0.020	0.998	518634		1.13(0.53-1.59)		3396	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.896	5.904	-0.008	1.439	3563143	1.29		103	6800	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.896	5.904	-0.008	1.000	3171773	1.04	Target=8.21	104	4124	
813.00 > 169.00	5.896	5.904	-0.008	1.000	391676		8.10(4.10-12.31)		1253	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.155	6.164	-0.009	1.044	2949051	1.05	Target=11.62	105	3498	
913.00 > 169.00	6.155	6.164	-0.009	1.044	251712		11.72(5.81-17.43)		1202	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\\_007.d

Injection Date: 09-Jan-2022 12:58:16

Instrument ID: LCA

Lims ID: LCS 140-57645/2-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 7

Worklist Smp#: 7

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

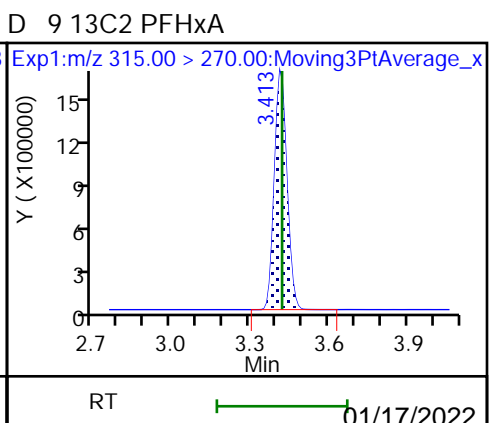
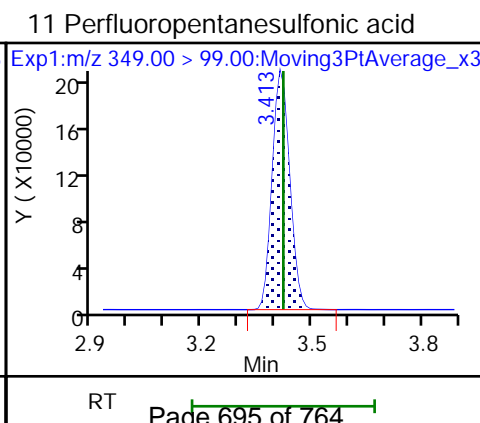
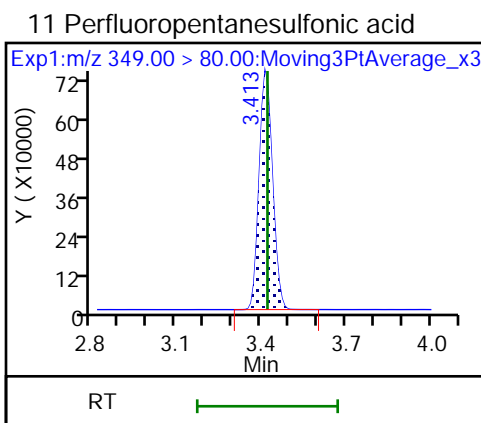
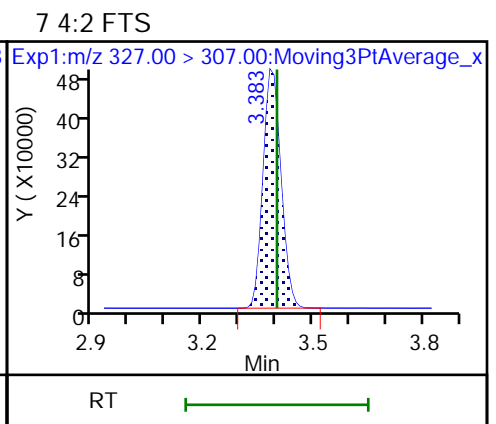
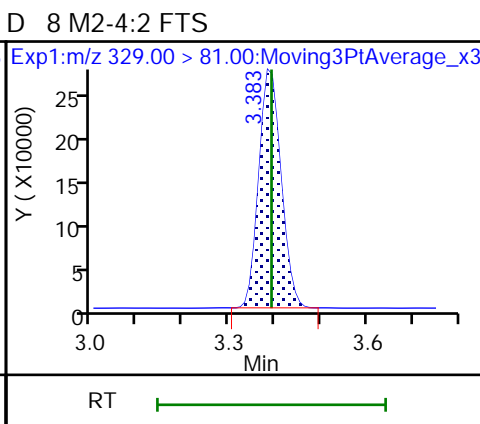
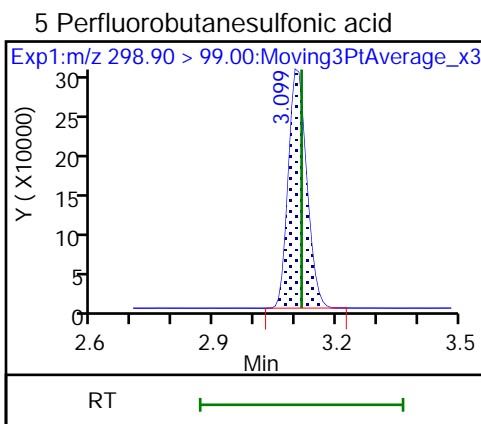
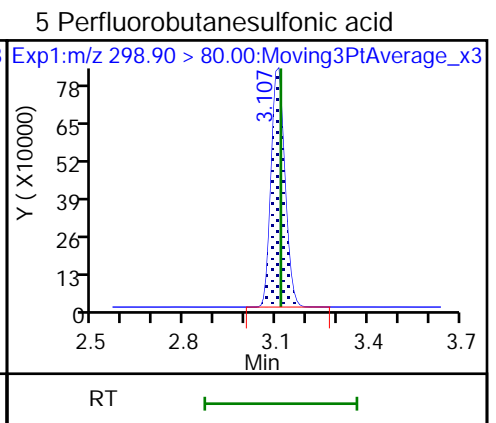
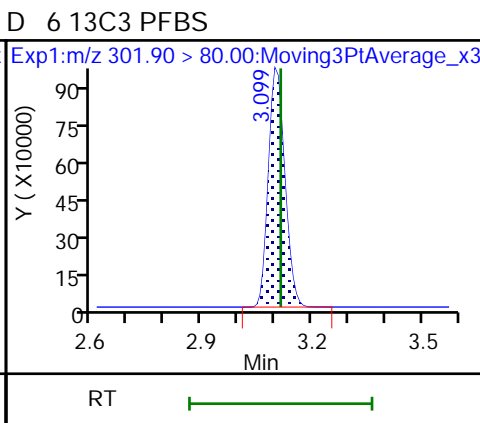
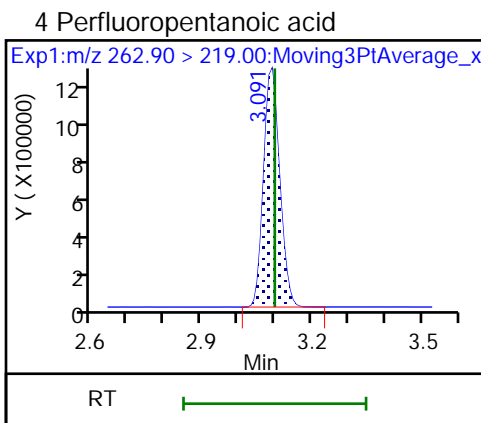
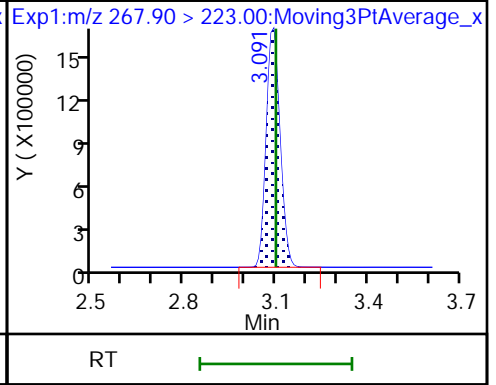
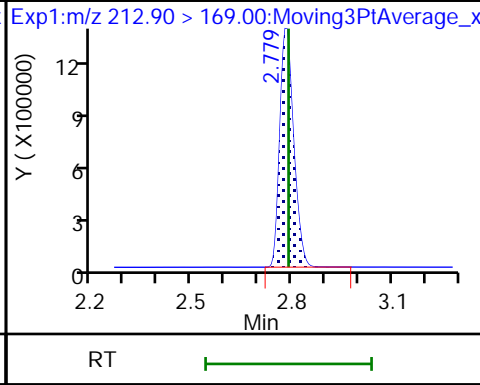
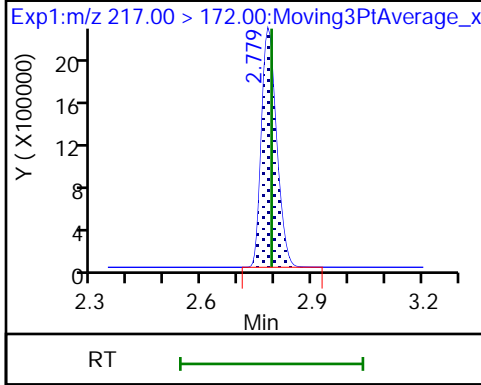
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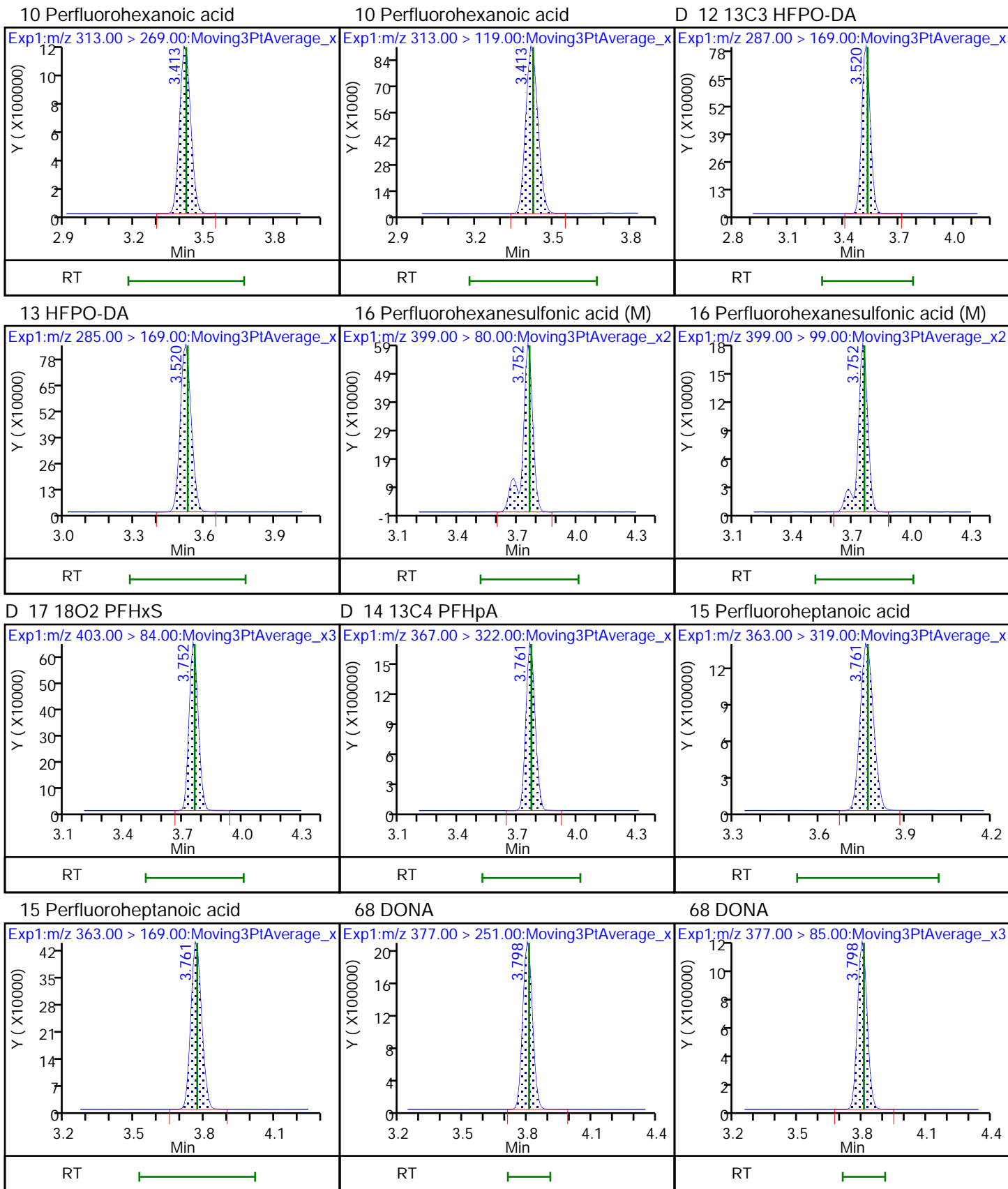
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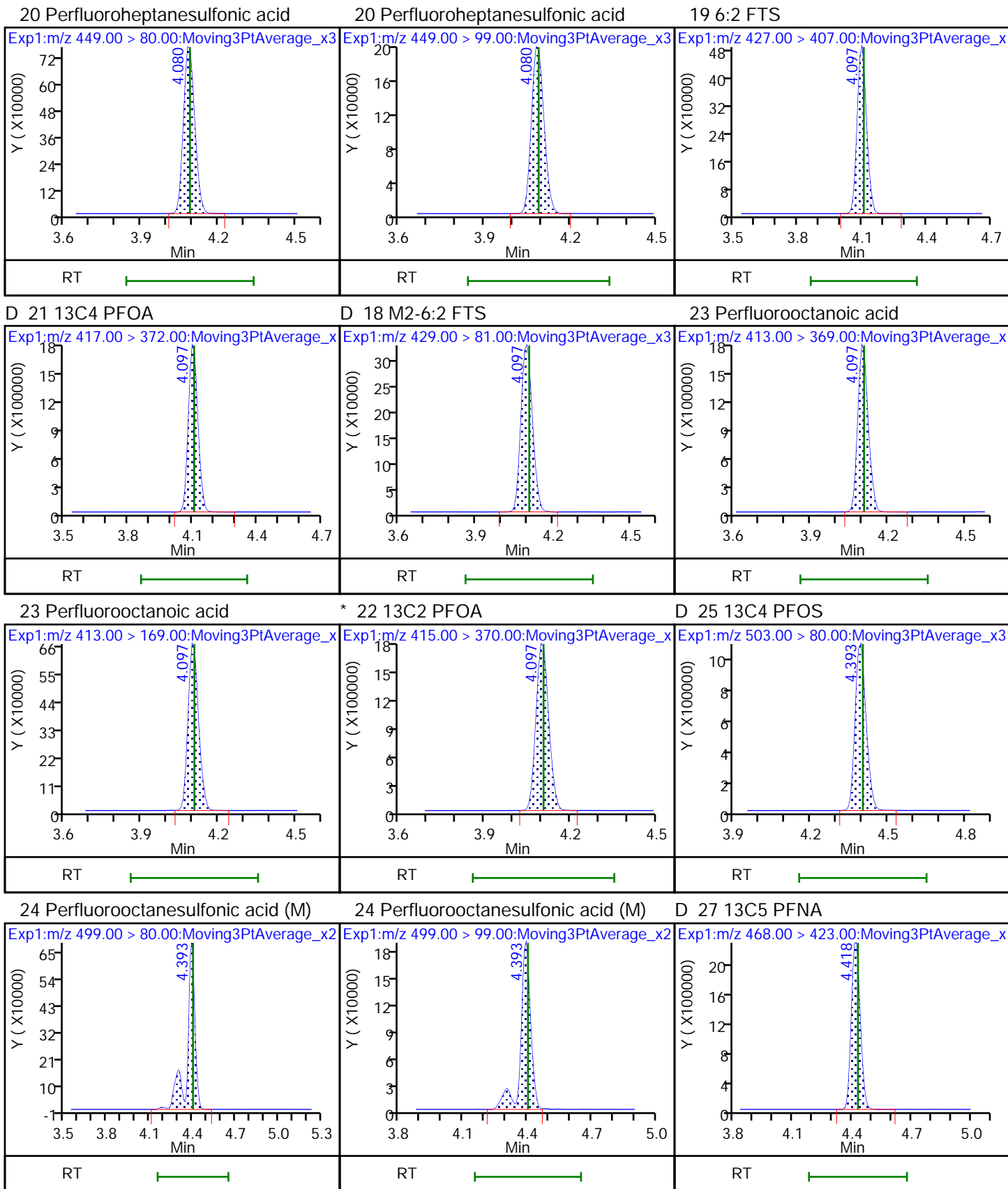
D 1 13C4 PFBA

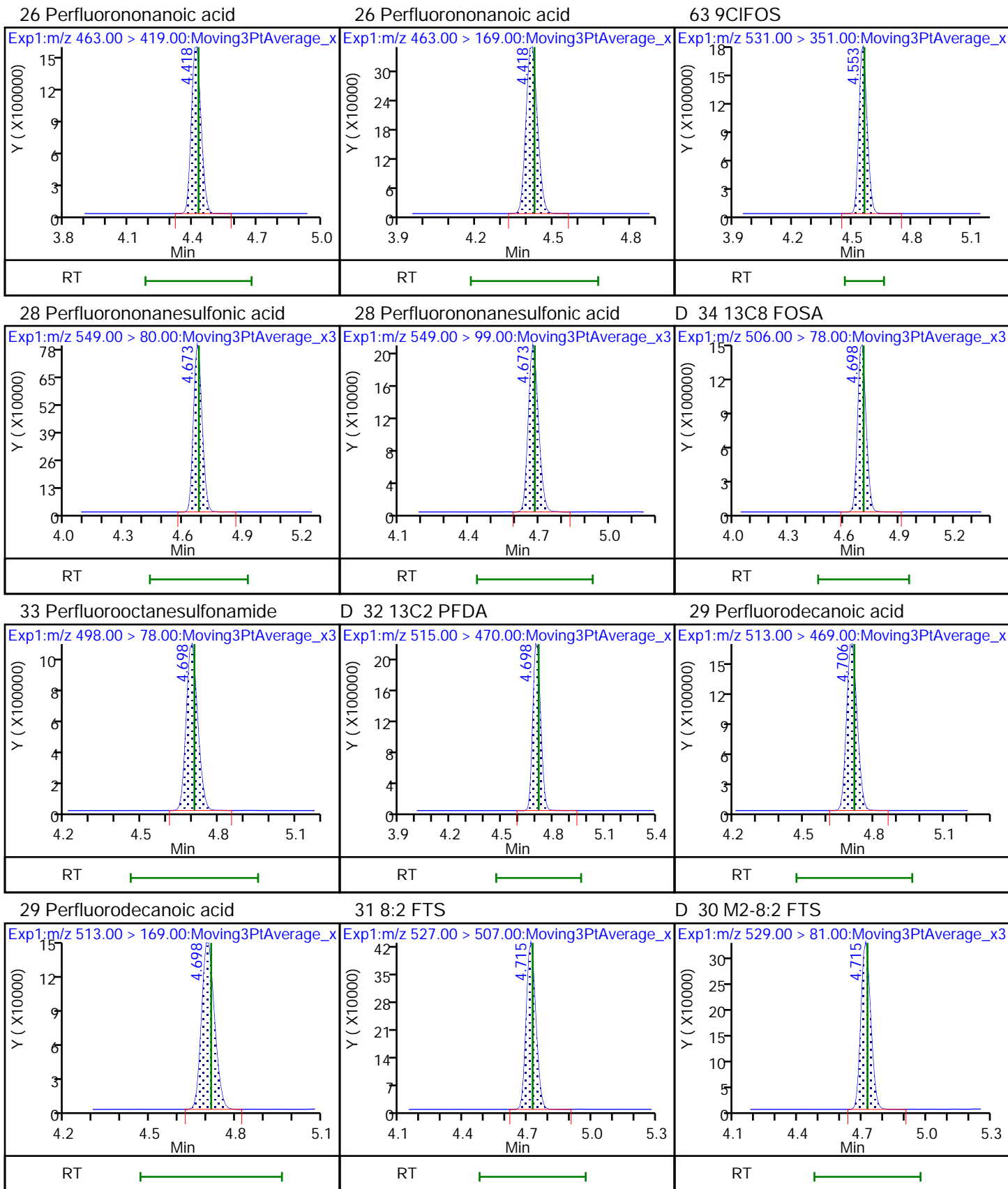
2 Perfluorobutanoic acid

D 3 13C5 PFPeA





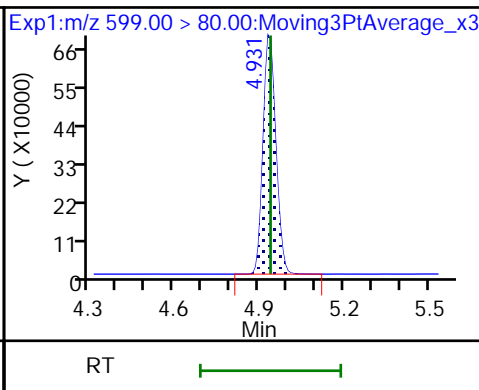
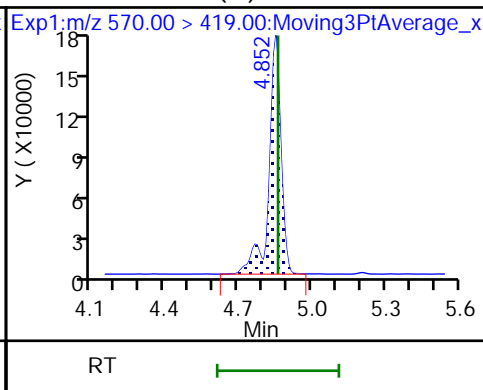
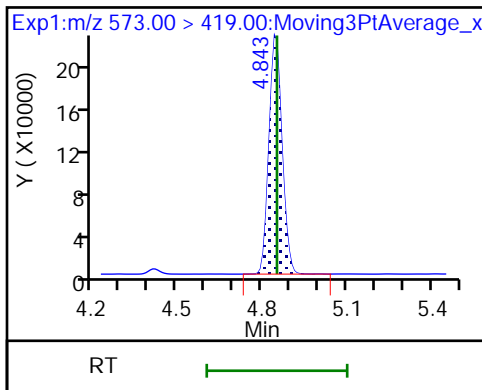




D 35 d3-NMeFOSAA

36 NMeFOSAA (M)

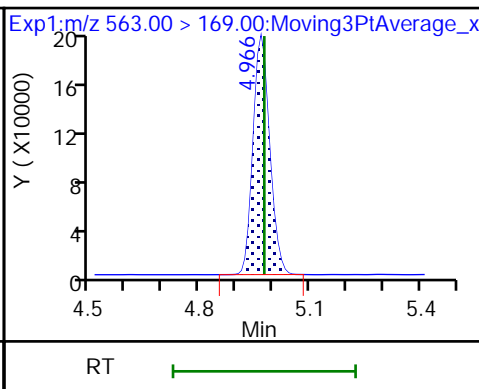
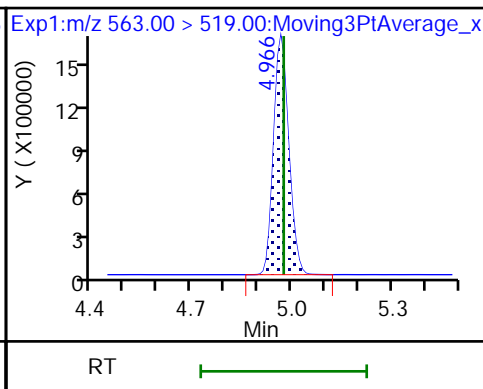
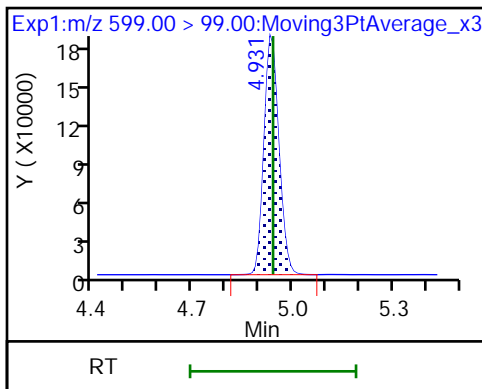
37 Perfluorodecanesulfonic acid



37 Perfluorodecanesulfonic acid

38 Perfluoroundecanoic acid

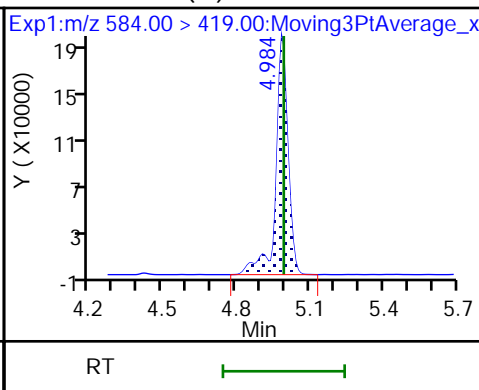
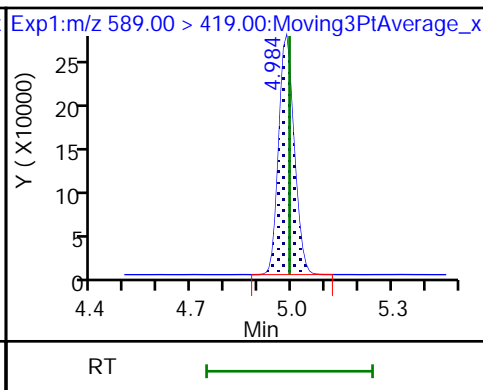
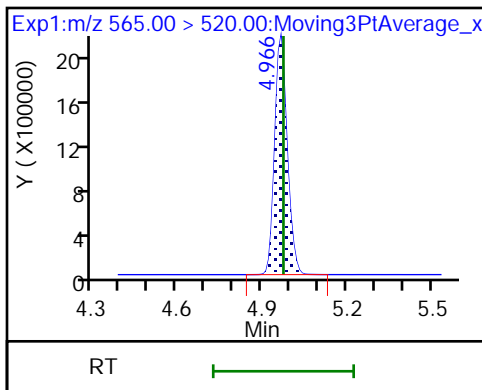
38 Perfluoroundecanoic acid



D 39 13C2 PFUnA

D 41 d5-NEtFOSAA

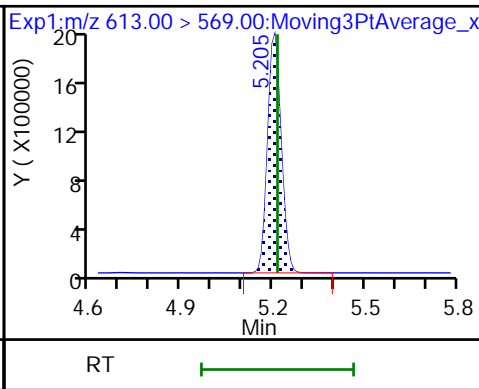
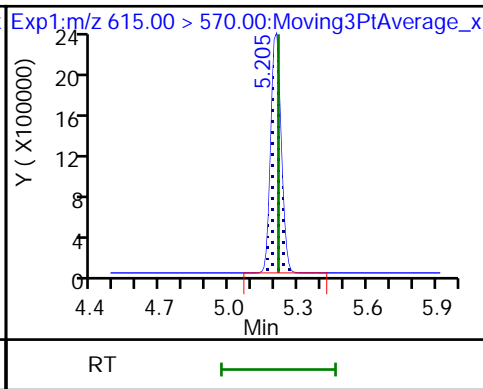
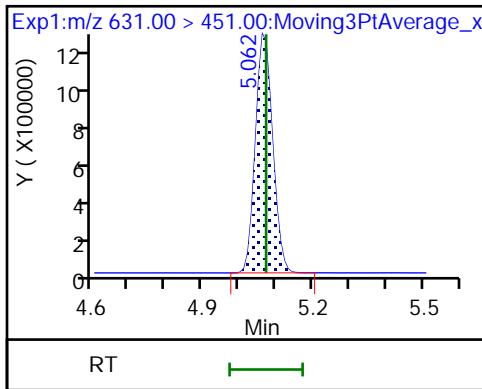
40 NEtFOSA (M)



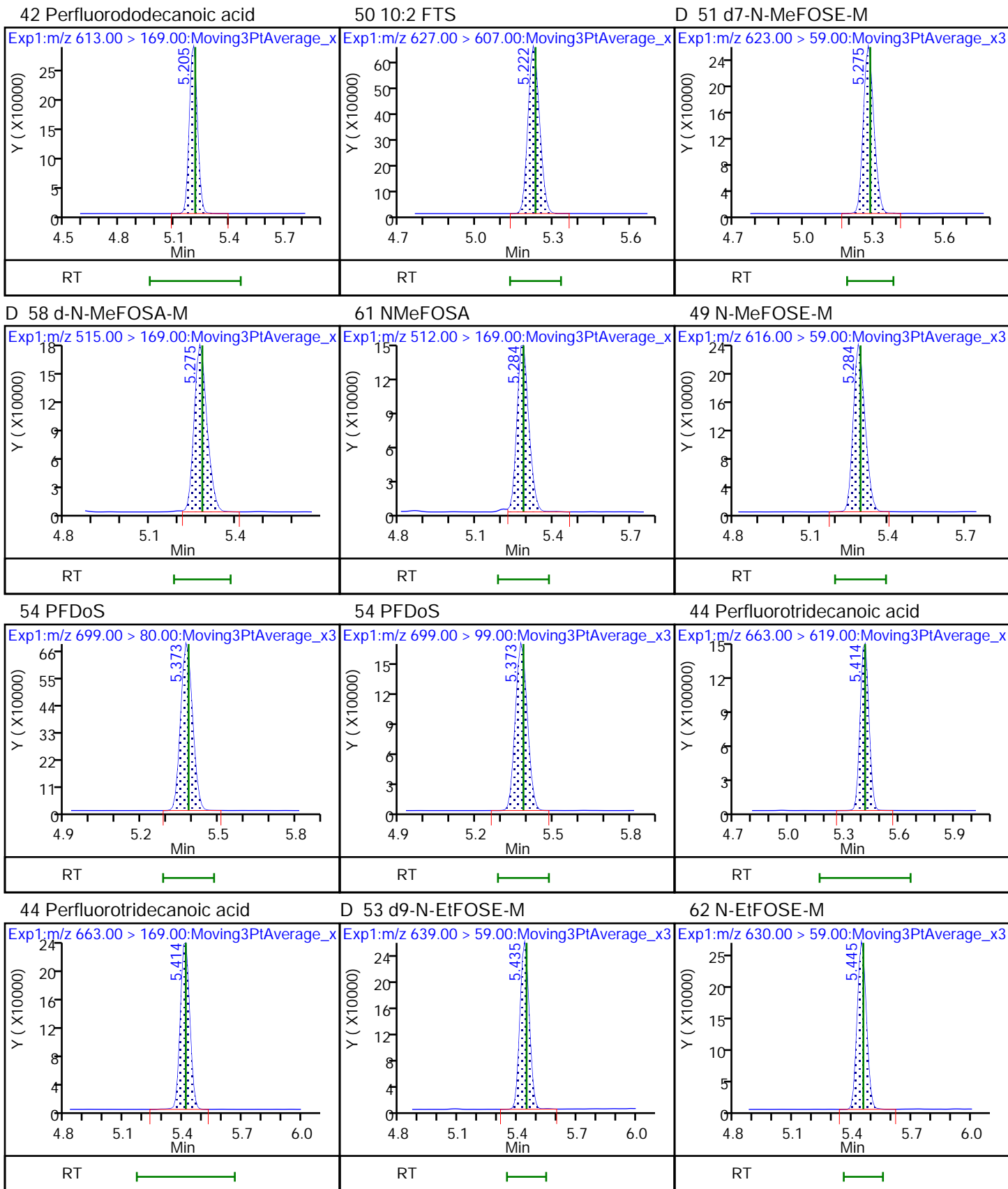
57 11CIFOS

D 43 13C2 PFDaA

42 Perfluorododecanoic acid



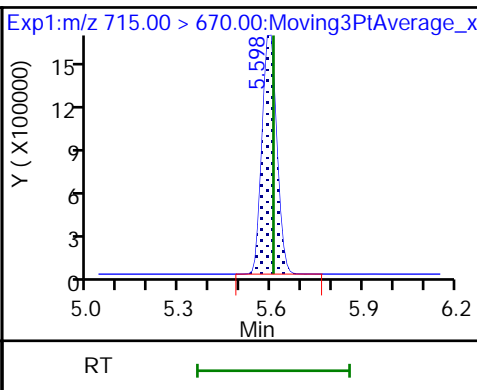
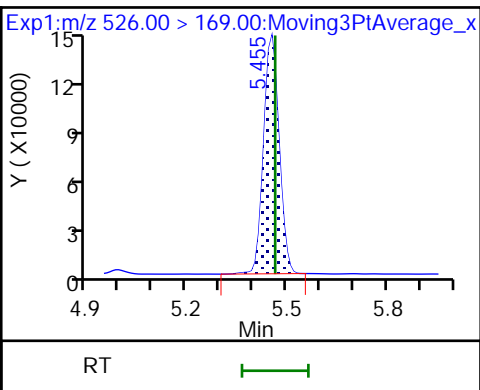
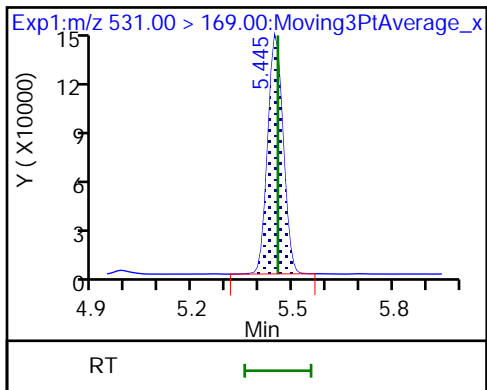




D 52 d-N-EtFOSA-M

56 N-EtFOSA-M

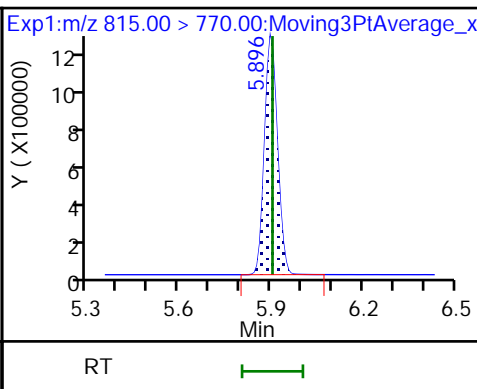
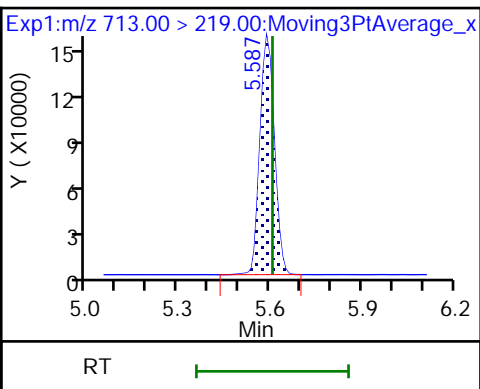
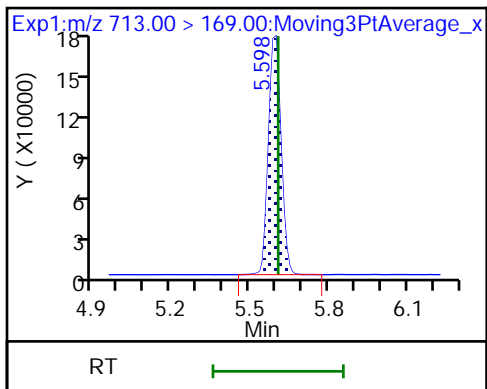
D 46 13C2 PFTeDA



45 Perfluorotetradecanoic acid

45 Perfluorotetradecanoic acid

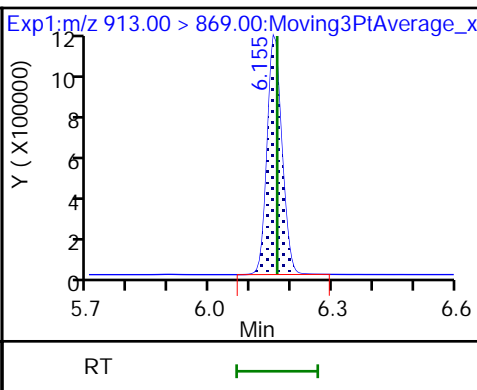
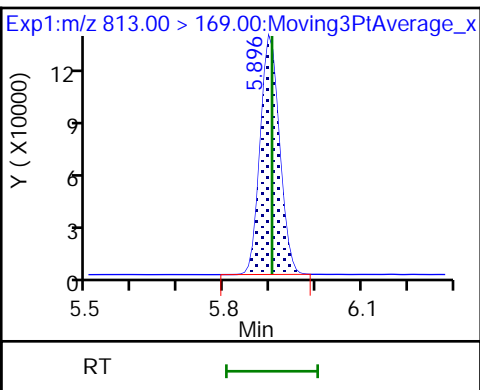
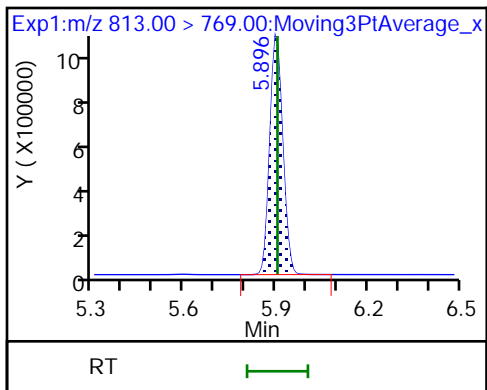
D 59 13C2 PFHxDA



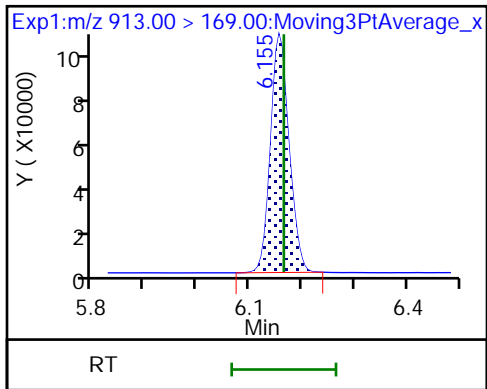
55 Perfluorohexadecanoic acid

55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid



60 Perfluorooctadecanoic acid



FORM I  
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCSD 140-57611/3-B  
 Matrix: Air Lab File ID: 012.d  
 Analysis Method: 537 (modified) Date Collected: \_\_\_\_\_  
 Extraction Method: None Date Extracted: 01/04/2022 08:32  
 Sample wt/vol: 1(Sample) Date Analyzed: 01/11/2022 18:32  
 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.: 57822 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.02252		0.00100	0.000580

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\20220111-22220.b\_012.d  
 Lims ID: LCSD 140-57611/3-B  
 Client ID:  
 Sample Type: LCSD  
 Inject. Date: 11-Jan-2022 18:32:07 ALS Bottle#: 12 Worklist Smp#: 12  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022220-012 lcsd 140-57611/3-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 12-Jan-2022 18:43:11 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1648

First Level Reviewer: cochranj Date: 12-Jan-2022 18:37:31  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_007.d

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	2.814	-0.018	0.678	5533266	1.13	90.2	13398	
2 Perfluorobutanoic acid	212.90 > 169.00	2.796	2.814	-0.018	1.000	3682735	1.06	106	970	
D 3 13C5 PFPeA	267.90 > 223.00	3.108	3.131	-0.023	0.754	4271051	1.12	89.7	8979	
4 Perfluoropentanoic acid	262.90 > 219.00	3.108	3.131	-0.023	1.000	3508676	1.08	108	870	
D 6 13C3 PFBS	301.90 > 80.00	3.124	3.147	-0.023	0.758	2768880	1.09	93.7	7137	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.124	3.147	-0.023	1.000	2531247	0.9687	Target=2.74	110	2159
	298.90 > 99.00	3.124	3.147	-0.023	1.000	941040		2.69(1.37-4.11)		4879
D 8 M2-4:2 FTS	329.00 > 81.00	3.413	3.442	-0.029	0.828	884858	1.13	96.9	1287	
7 4:2 FTS	327.00 > 307.00	3.413	3.442	-0.029	1.000	1666486	0.9763	105	6942	
10 Perfluorohexanoic acid	313.00 > 269.00	3.443	3.472	-0.029	1.000	3162606	1.04	Target=12.60	104	1339
	313.00 > 119.00	3.443	3.472	-0.029	1.000	266775		11.85(6.30-18.90)		358
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.443	3.472	-0.029	1.102	2388359	1.03	Target=3.45	110	4711
	349.00 > 99.00	3.443	3.472	-0.029	1.102	666085		3.59(1.73-5.18)		3897
D 9 13C2 PFHxA	315.00 > 270.00	3.443	3.472	-0.029	0.835	4387776	1.08	86.1	9778	
D 12 13C3 HFPO-DA	287.00 > 169.00	3.539	3.574	-0.035	0.858	2095104	1.07	85.6	3879	

Data File: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_012.d

Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_007.d

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	3.574	-0.026	1.003	2552199	1.13		113	2379	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.780	3.807	-0.027	1.000	2234599	0.9851	Target=3.46	108	4470	M
399.00 > 99.00	3.780	3.807	-0.027	1.000	618486		3.61(1.73-5.19)		3018	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.780	3.807	-0.027	0.917	1947783	1.15		97.1	8524	
D 14 13C4 PFHpA										
367.00 > 322.00	3.789	3.825	-0.036	0.919	4573452	1.17		93.9	10533	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.789	3.825	-0.036	1.000	4204018	1.10	Target=3.21	110	2431	
363.00 > 169.00	3.789	3.825	-0.036	1.000	1262978		3.33(1.61-4.82)		2552	
68 DONA										
377.00 > 251.00	3.825	3.858	-0.033	0.866	6417648	1.03	Target=1.72	110	8349	
377.00 > 85.00	3.825	3.858	-0.033	0.866	3577744		1.79(0.86-2.58)		5185	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.106	4.140	-0.034	0.929	2337299	1.04	Target=3.94	109	6313	
449.00 > 99.00	4.106	4.140	-0.034	0.929	598725		3.90(1.97-5.90)		4128	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.123	4.149	-0.026	1.000	978008	1.24		104	2515	
D 21 13C4 PFOA										
417.00 > 372.00	4.123	4.156	-0.033	1.000	4823177	1.20		95.7	10195	
19 6:2 FTS										
427.00 > 407.00	4.123	4.156	-0.033	1.000	1438439	0.9727		103	6046	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.123	4.156	-0.033	1.000	4640642	1.05	Target=2.53	105	2747	
413.00 > 169.00	4.123	4.156	-0.033	1.000	1770941		2.62(1.27-3.80)		2963	
* 22 13C2 PFOA										
415.00 > 370.00	4.123	4.156	-0.033		5373279	1.25			7596	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.419	4.452	-0.033	1.000	2597332	1.00	Target=4.27	108	4327	M
499.00 > 99.00	4.419	4.452	-0.033	1.000	576522		4.51(2.13-6.40)		2598	M
D 25 13C4 PFOS										
503.00 > 80.00	4.419	4.452	-0.033	1.072	2823071	1.16		96.7	4828	
26 Perfluorononanoic acid										
463.00 > 419.00	4.435	4.469	-0.034	1.000	4630865	1.07	Target=4.52	107	4059	
463.00 > 169.00	4.435	4.469	-0.034	1.000	998602		4.64(2.26-6.78)		1945	
D 27 13C5 PFNA										
468.00 > 423.00	4.435	4.469	-0.034	1.076	6332504	1.19		95.5	11807	
63 9CIFOS										
531.00 > 351.00	4.574	4.608	-0.034	1.035	5122731	1.01		109	11218	
D 34 13C8 FOSA										
506.00 > 78.00	4.698	4.723	-0.025	1.139	4067363	1.23		98.5	3731	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.706	4.723	-0.017	1.002	3314390	1.08		108	4469	

Data File: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_012.d

Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_007.d

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	4.698	4.732	-0.034	1.063	2310103	1.00	Target=3.82	104	2966	
549.00 > 99.00	4.698	4.732	-0.034	1.063	591578		3.90(1.91-5.73)		4191	
D 32 13C2 PFDA										
515.00 > 470.00	4.724	4.757	-0.033	1.146	6075333	1.19		94.9	11482	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.724	4.757	-0.033	1.000	4902611	1.05	Target=11.59	105	4118	
513.00 > 169.00	4.724	4.757	-0.033	1.000	412899		11.87(5.80-17.39)		660	
31 8:2 FTS										
527.00 > 507.00	4.741	4.774	-0.033	1.000	1293253	1.08		113	3994	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.741	4.774	-0.033	1.150	1012429	1.14		95.0	1517	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.870	4.905	-0.035	1.181	894108	1.48		119	1087	
36 NMeFOSAA										
570.00 > 419.00	4.870	4.905	-0.035	1.000	699337	1.01		101	1375	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.958	4.992	-0.034	1.122	2134841	0.9734	Target=3.60	101	5230	
599.00 > 99.00	4.958	4.992	-0.034	1.122	558739		3.82(1.80-5.40)		4253	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.993	5.022	-0.029	1.000	5288415	1.13	Target=8.71	113	5648	
563.00 > 169.00	4.993	5.022	-0.029	1.000	607349		8.71(4.35-13.06)		2408	
D 39 13C2 PFUnA										
565.00 > 520.00	4.993	5.022	-0.029	1.211	6016990	1.18		94.2	8468	
40 NEtFOSA										
584.00 > 419.00	5.012	5.042	-0.030	1.002	791125	1.02		102	1699	M
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.002	5.042	-0.040	1.213	977716	1.48		118	4942	
57 11C1FOS										
631.00 > 451.00	5.092	5.122	-0.030	1.152	3840364	0.9720		103	10458	
D 43 13C2 PFDoA										
615.00 > 570.00	5.222	5.257	-0.035	1.267	5907163	1.10		88.2	12157	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.222	5.257	-0.035	1.000	5159245	1.07	Target=7.01	107	4627	
613.00 > 169.00	5.222	5.257	-0.035	1.000	719631		7.17(3.51-10.52)		2245	
50 10:2 FTS										
627.00 > 607.00	5.249	5.275	-0.026	1.107	2029960	1.05		109	6256	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.275	5.292	-0.017	1.279	687638	1.07		85.4	537	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.275	5.292	-0.017	1.279	496180	1.08		86.4	50.9	
61 NMeFOSA										
512.00 > 169.00	5.275	5.292	-0.017	1.000	464656	1.15		115	589	
49 N-MeFOSE-M										
616.00 > 59.00	5.284	5.301	-0.017	1.002	706786	1.10		110	757	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
54 PFDoS										
699.00 > 80.00	5.394	5.425	-0.030	1.221	2197076	1.01	Target=4.26	105	2339	
699.00 > 99.00	5.394	5.425	-0.030	1.221	528207		4.16(2.13-6.39)		2688	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.435	5.444	-0.009	1.318	717477	1.11		88.8	305	
62 N-EtFOSE-M										
630.00 > 59.00	5.445	5.464	-0.019	1.002	781986	1.03		103	772	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.435	5.464	-0.029	1.041	4247745	1.08	Target=5.87	108	4623	
663.00 > 169.00	5.435	5.464	-0.029	1.041	713516		5.95(2.93-8.80)		2659	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.445	5.464	-0.019	1.321	418094	1.10		88.1	573	
56 N-EtFOSA-M										
526.00 > 169.00	5.455	5.464	-0.009	1.002	442659	1.11		111	636	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.619	5.650	-0.031	1.363	4471417	1.09		87.5	8604	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.619	5.650	-0.031	1.000	506406	1.05	Target=1.02	105	2058	
713.00 > 219.00	5.609	5.650	-0.041	0.998	489424		1.03(0.51-1.53)		2151	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.922	5.948	-0.026	1.436	3067347	1.11		88.6	5320	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.922	5.948	-0.026	1.000	2855378	1.09	Target=8.43	109	3751	
813.00 > 169.00	5.922	5.948	-0.026	1.000	349743		8.16(4.22-12.65)		686	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.180	6.209	-0.029	1.044	2513236	1.04	Target=11.53	104	3286	
913.00 > 169.00	6.180	6.209	-0.029	1.044	224164		11.21(5.77-17.30)		914	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220111-22220.b\_012.d

Injection Date: 11-Jan-2022 18:32:07

Instrument ID: LCA

Lims ID: LCSD 140-57611/3-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 12

Worklist Smp#: 12

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

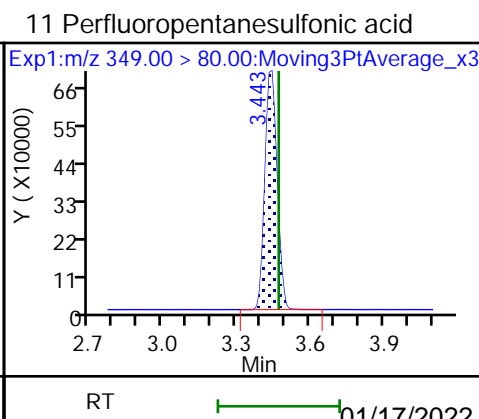
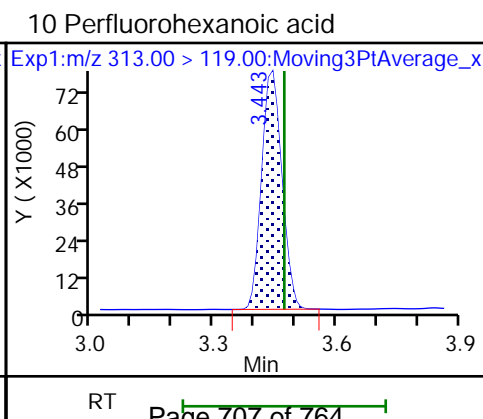
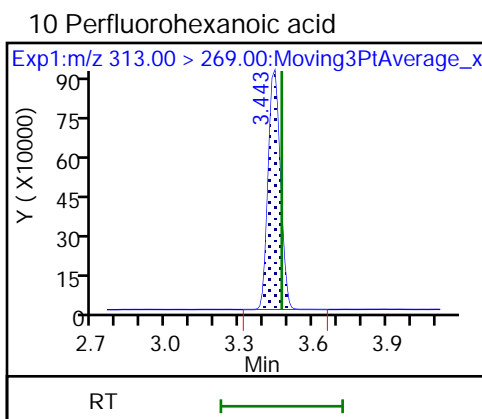
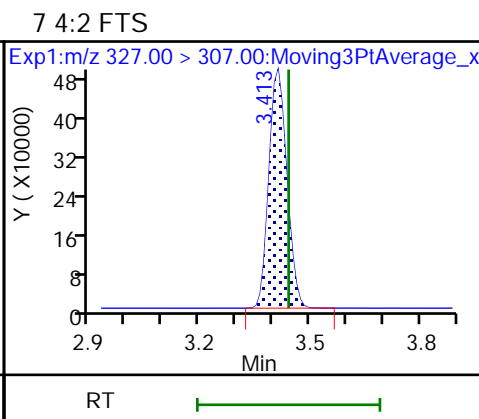
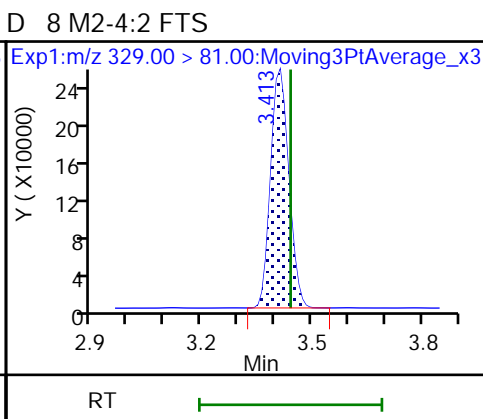
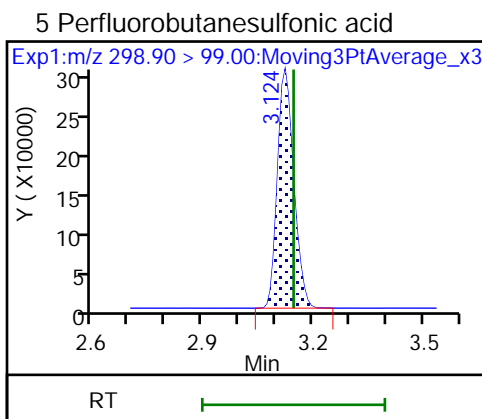
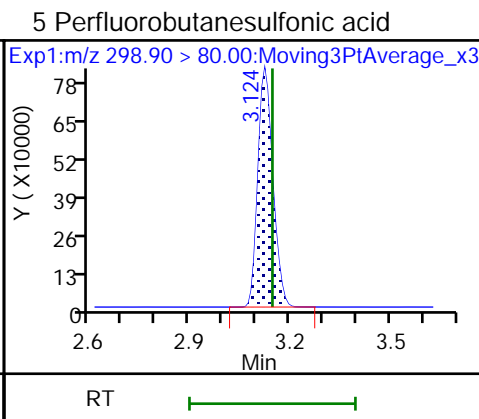
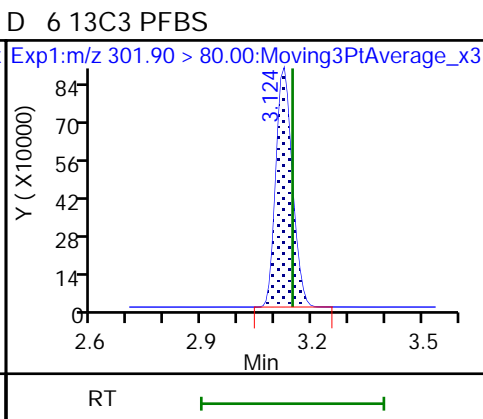
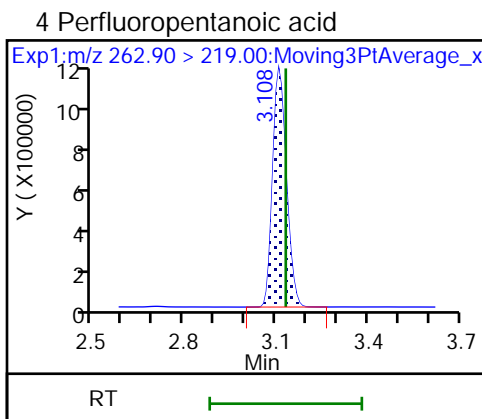
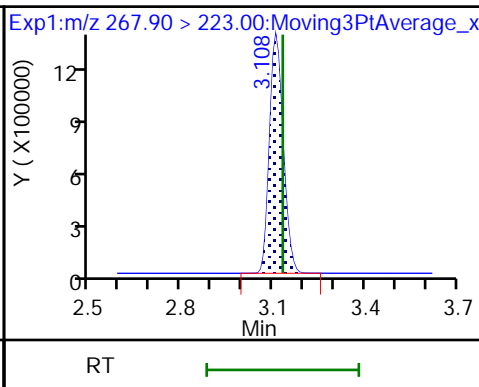
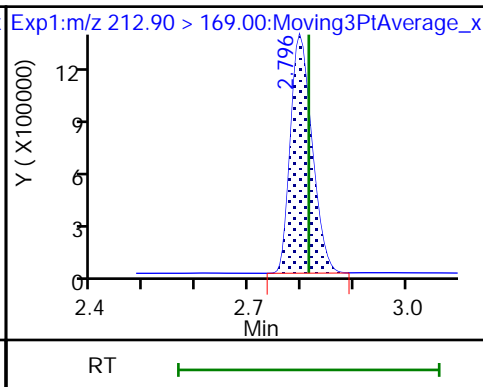
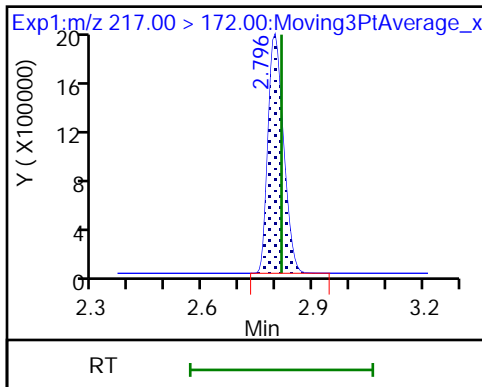
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

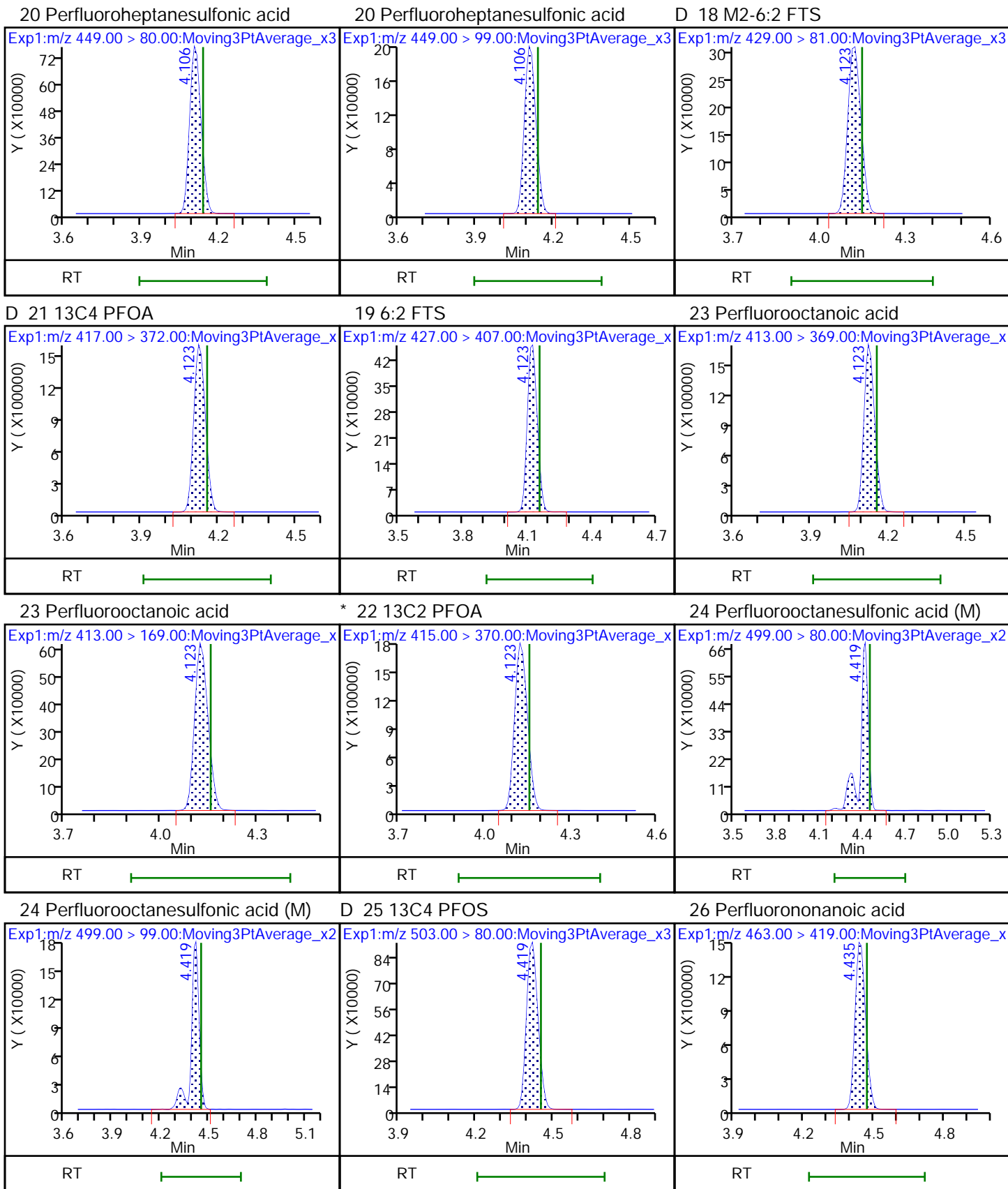
2 Perfluorobutanoic acid

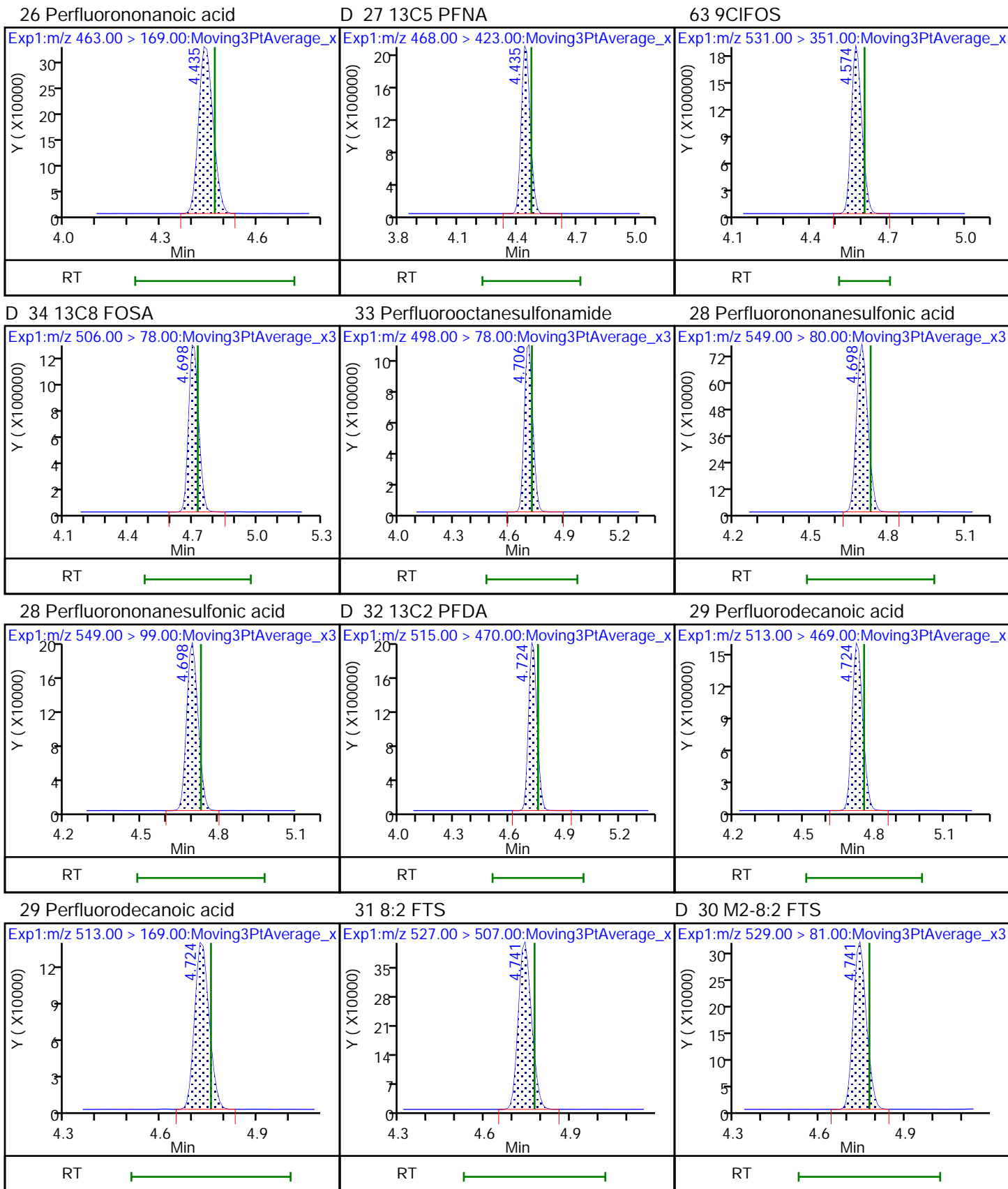
D 3 13C5 PFPeA







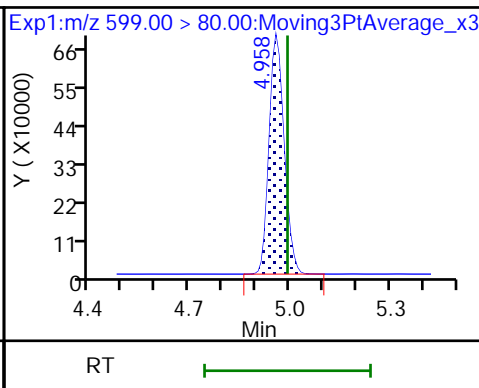
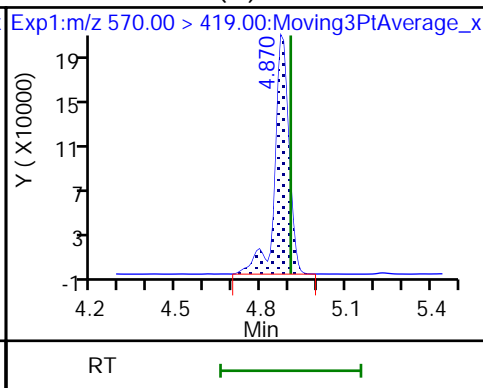
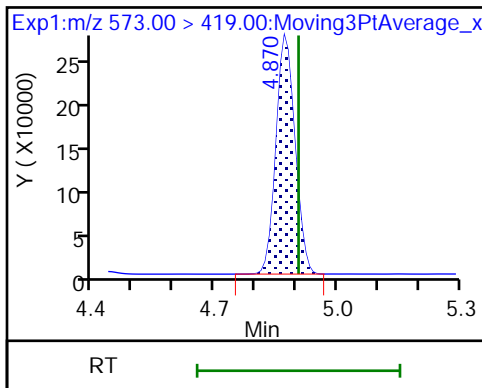




D 35 d3-NMeFOSAA

36 NMeFOSAA (M)

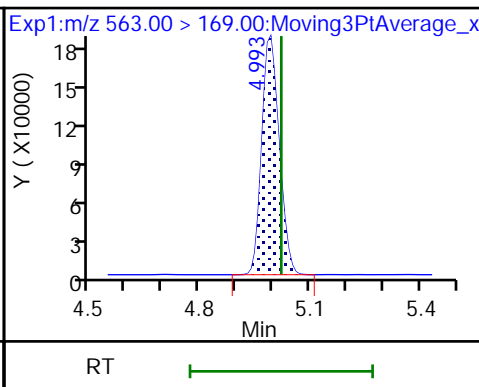
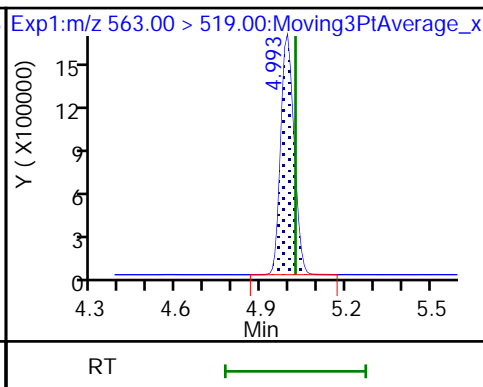
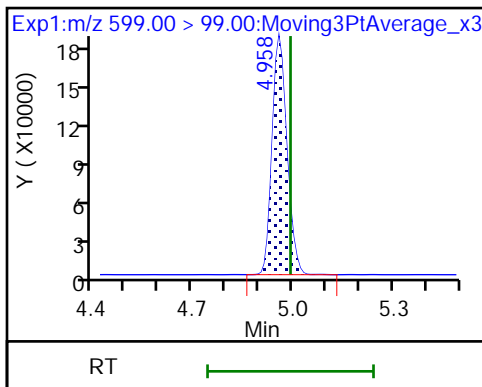
37 Perfluorodecanesulfonic acid



37 Perfluorodecanesulfonic acid

38 Perfluoroundecanoic acid

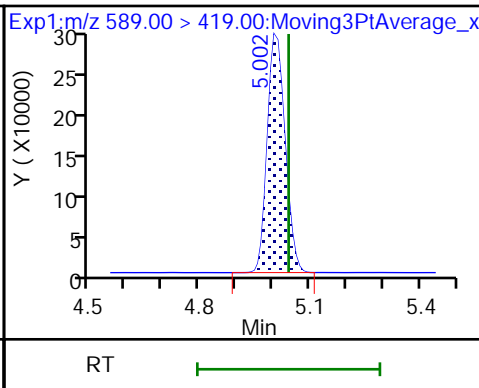
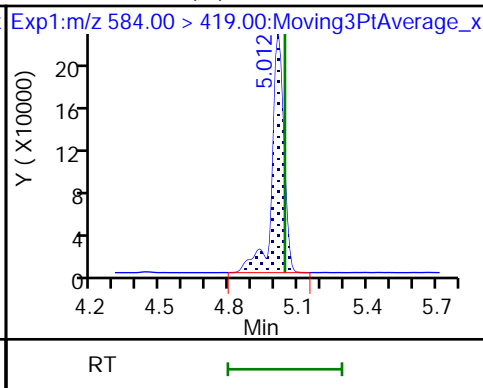
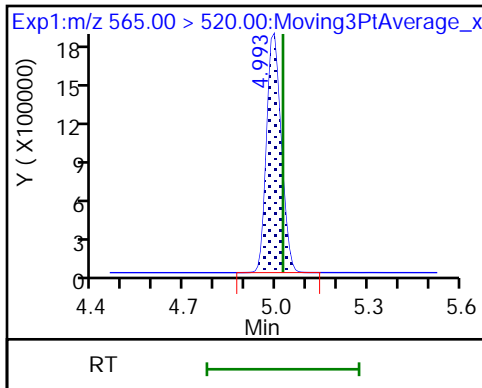
38 Perfluoroundecanoic acid



D 39 13C2 PFUnA

40 NEtFOSA (M)

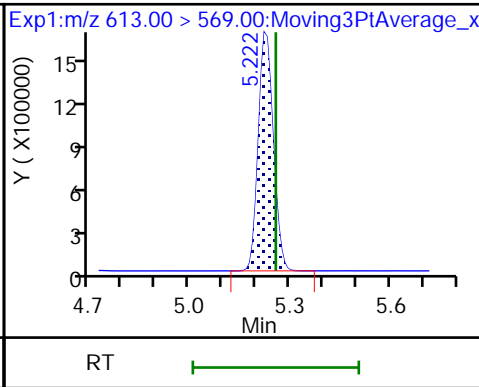
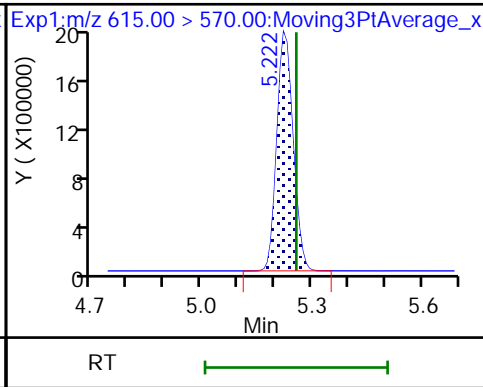
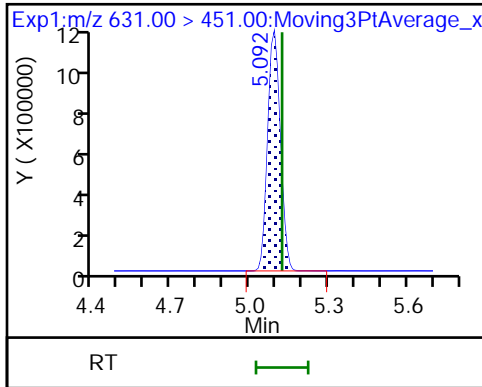
D 41 d5-NEtFOSAA

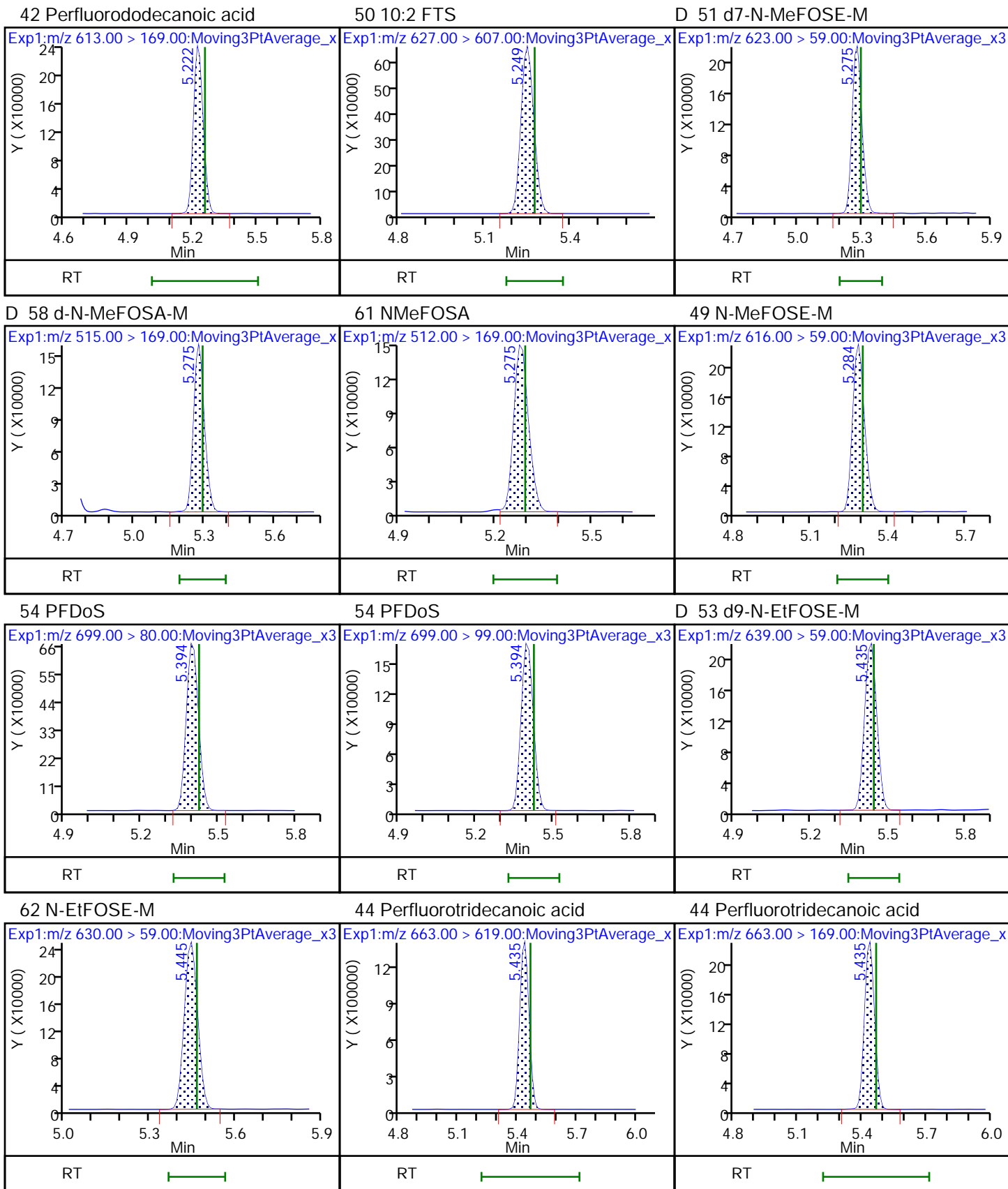


57 11CIFOS

D 43 13C2 PFDaA

42 Perfluorododecanoic acid

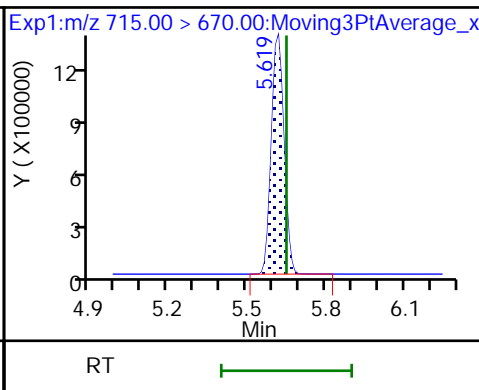
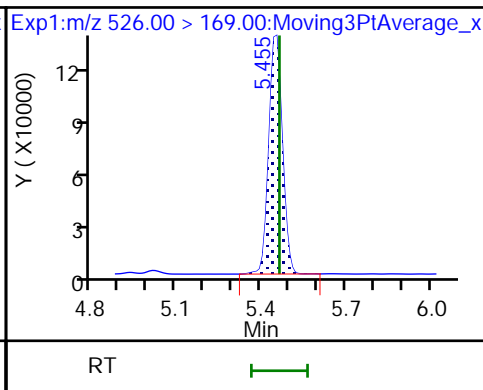
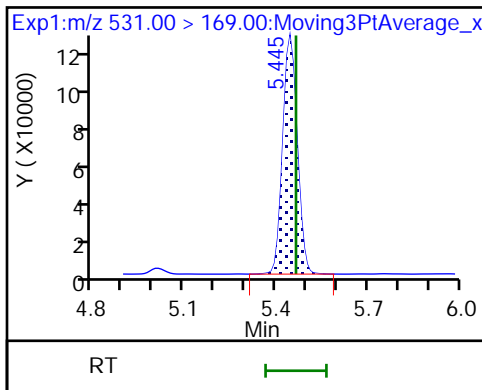




D 52 d-N-EtFOSA-M

56 N-EtFOSA-M

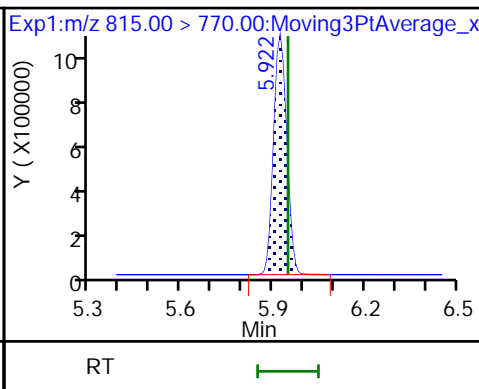
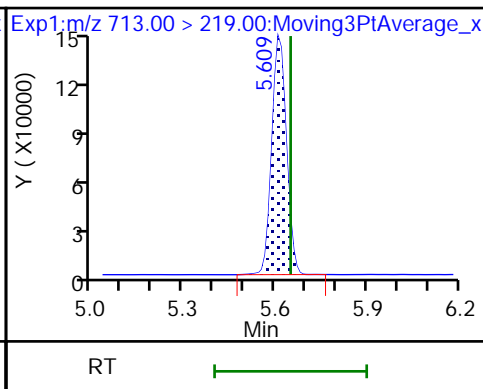
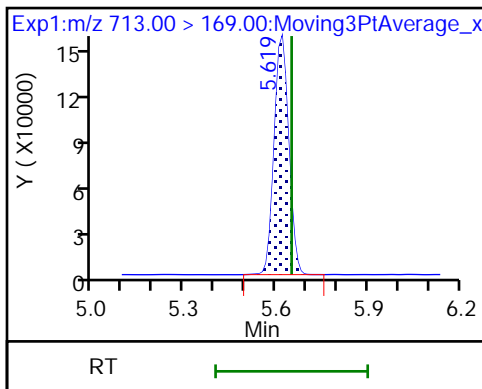
D 46 13C2 PFTeDA



45 Perfluorotetradecanoic acid

45 Perfluorotetradecanoic acid

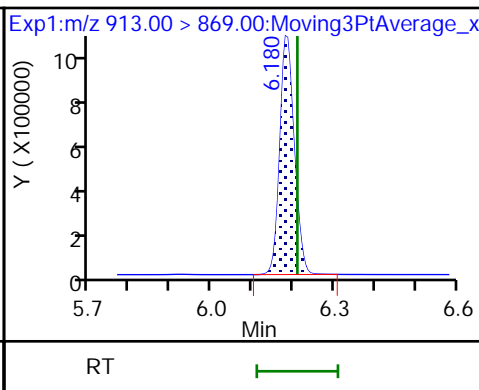
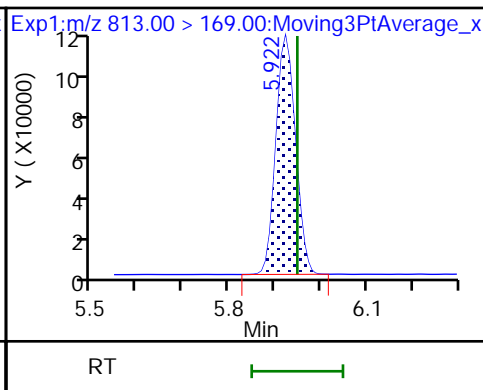
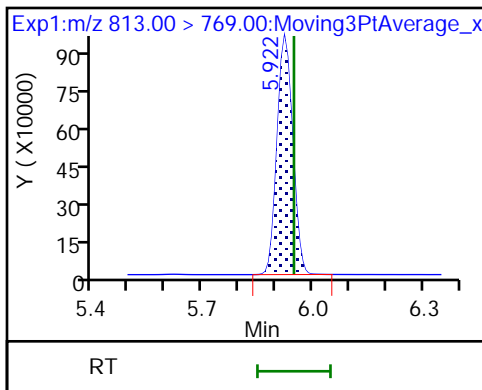
D 59 13C2 PFHxDA



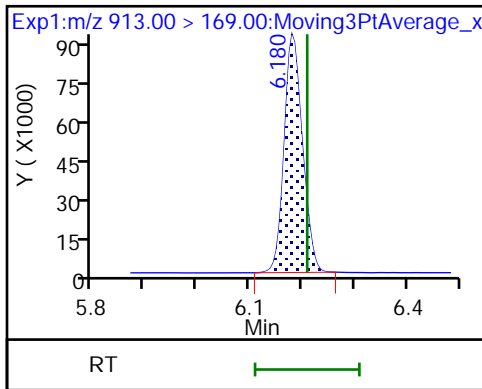
55 Perfluorohexadecanoic acid

55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid



60 Perfluorooctadecanoic acid



FORM I  
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCSD 140-57613/3-B  
 Matrix: Air Lab File ID: \_010.d  
 Analysis Method: 537 (modified) Date Collected: \_\_\_\_\_  
 Extraction Method: None Date Extracted: 01/04/2022 08:59  
 Sample wt/vol: 1 (Sample) Date Analyzed: 01/12/2022 19:02  
 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.: 57865 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.02130		0.00160	0.00140

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\20220112-22237.b\_010.d  
 Lims ID: LCSD 140-57613/3-B  
 Client ID:  
 Sample Type: LCSD  
 Inject. Date: 12-Jan-2022 19:02:06 ALS Bottle#: 10 Worklist Smp#: 10  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022237-010 lcsd 140-57613/3-b  
 Misc. Info.: Plate: 10 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 15-Jan-2022 10:15:14 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1674

First Level Reviewer: cochranj Date: 15-Jan-2022 09:51:57  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\_007.d

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	2.808	2.802	0.006	1.000	3959446	1.10		110	411	
D 1 13C4 PFBA										
217.00 > 172.00	2.808	2.802	0.006	0.677	5713424	1.23		98.7	9534	
D 3 13C5 PFPeA										
267.90 > 223.00	3.123	3.116	0.007	0.753	4734954	1.32		105	8140	
4 Perfluoropentanoic acid										
262.90 > 219.00	3.123	3.116	0.007	1.000	3864910	1.07		107	579	
D 6 13C3 PFBS										
301.90 > 80.00	3.132	3.132	0.0	0.755	2527120	1.05		90.6	5359	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	3.140	3.132	0.008	1.003	2289855	0.9602	Target=2.71	109	2910	
298.90 > 99.00	3.140	3.132	0.008	1.003	852414		2.69(1.35-4.06)		1109	
D 8 M2-4:2 FTS										
329.00 > 81.00	3.423	3.423	0.0	0.825	1067798	1.45		124	1292	
7 4:2 FTS										
327.00 > 307.00	3.423	3.423	0.0	1.000	2131452	1.03		111	7830	
D 9 13C2 PFHxA										
315.00 > 270.00	3.453	3.444	0.009	0.832	5078988	1.32		106	8912	
10 Perfluorohexanoic acid										
313.00 > 269.00	3.453	3.444	0.009	1.000	3689989	1.05	Target=12.92	105	753	
313.00 > 119.00	3.453	3.444	0.009	1.000	295669		12.48(6.46-19.37)		243	
11 Perfluoropentanesulfonic acid										
349.00 > 80.00	3.453	3.444	0.009	1.103	2123592	1.01	Target=3.61	107	2832	
349.00 > 99.00	3.453	3.444	0.009	1.103	637726		3.33(1.81-5.42)		2824	
D 12 13C3 HFPO-DA										
287.00 > 169.00	3.557	3.548	0.009	0.858	2374561	1.28		103	4529	



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	3.566	3.548	0.018	1.003	2736048	1.06		106	3011	
16 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.798	3.789	0.009	1.000	1937425	0.9257	Target=3.52	102	4684	M
399.00 > 99.00	3.798	3.789	0.009	1.000	568775		3.41(1.76-5.28)		2369	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.798	3.789	0.009	0.916	1797074	1.12		94.9	6720	
D 14 13C4 PFHpA										
367.00 > 322.00	3.808	3.799	0.009	0.918	4970875	1.35		108	7803	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.808	3.799	0.009	1.000	4637083	1.11	Target=3.30	111	1358	
363.00 > 169.00	3.808	3.799	0.009	1.000	1451045		3.20(1.65-4.95)		3004	
68 DONA										
377.00 > 251.00	3.841	3.834	0.007	0.866	6786301	1.28	Target=1.76	135	8456	
377.00 > 85.00	3.841	3.834	0.007	0.866	3863287		1.76(0.88-2.64)		4525	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.131	4.115	0.016	0.932	2048618	1.06	Target=3.88	111	4612	
449.00 > 99.00	4.131	4.115	0.016	0.932	509832		4.02(1.94-5.82)		3441	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.140	4.132	0.008	0.998	1000213	1.34		113	3382	
D 21 13C4 PFOA										
417.00 > 372.00	4.148	4.132	0.016	1.000	5196494	1.37		109	9154	
19 6:2 FTS										
427.00 > 407.00	4.140	4.132	0.008	1.000	1829901	1.21		128	4397	
* 22 13C2 PFOA										
415.00 > 370.00	4.148	4.132	0.016		5070128	1.25			9773	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.148	4.132	0.016	1.000	4942162	1.04	Target=2.61	104	2009	
413.00 > 169.00	4.148	4.132	0.016	1.000	1898004		2.60(1.30-3.91)		2792	
24 Perfluorooctanesulfonic acid										M
499.00 > 80.00	4.434	4.428	0.006	1.000	2124279	0.9554	Target=4.39	103	3517	M
499.00 > 99.00	4.434	4.428	0.006	1.000	487987		4.35(2.19-6.58)		2563	M
D 25 13C4 PFOS										
503.00 > 80.00	4.434	4.428	0.006	1.069	2418059	1.05		87.8	5071	
26 Perfluorononanoic acid										
463.00 > 419.00	4.460	4.445	0.015	1.000	4968511	1.12	Target=4.78	112	3413	
463.00 > 169.00	4.460	4.445	0.015	1.000	1069156		4.65(2.39-7.17)		2449	
D 27 13C5 PFNA										
468.00 > 423.00	4.460	4.445	0.015	1.075	6491674	1.30		104	10865	
63 9CIFOS										
531.00 > 351.00	4.593	4.581	0.012	1.036	4430039	1.02		110	10834	
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.714	4.706	0.008	1.063	1945215	0.9861	Target=3.96	103	4611	
549.00 > 99.00	4.714	4.706	0.008	1.063	475354		4.09(1.98-5.94)		2808	
D 34 13C8 FOSA										
506.00 > 78.00	4.722	4.706	0.016	1.139	4110480	1.32		106	3598	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.722	4.706	0.016	1.000	4110480	1.01		101	4114	

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	4.732	0.016	1.145	6441813	1.33		107	10750	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.748	4.732	0.016	1.000	5544635	1.12	Target=11.18	112	4165	
513.00 > 169.00	4.748	4.732	0.016	1.000	459076		12.08(5.59-16.77)		721	
31 8:2 FTS										
527.00 > 507.00	4.756	4.749	0.007	1.000	1284895	1.05		110	4956	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.756	4.749	0.007	1.147	1031305	1.23		103	1355	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.894	4.878	0.016	1.180	946535	1.67		133	1031	
36 NMeFOSAA										
570.00 > 419.00	4.894	4.887	0.007	1.000	771451	1.05		105	2031	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.973	4.966	0.007	1.122	1655614	0.8816	Target=3.65	91.5	5779	
599.00 > 99.00	4.973	4.966	0.007	1.122	418598		3.96(1.82-5.47)		2154	
38 Perfluoroundecanoic acid										
563.00 > 519.00	5.010	5.002	0.008	1.000	5568780	1.08	Target=8.72	108	5297	
563.00 > 169.00	5.010	5.002	0.008	1.000	645161		8.63(4.36-13.08)		2577	
D 39 13C2 PFUnA										
565.00 > 520.00	5.010	5.002	0.008	1.208	6640906	1.38		110	9030	
D 41 d5-NEtFOSAA										
589.00 > 419.00	5.020	5.012	0.008	1.210	1018829	1.63		131	3925	
40 NEtFOSA										
584.00 > 419.00	5.030	5.022	0.008	1.002	838718	1.04		104	2028	M
57 11CIFOS										
631.00 > 451.00	5.110	5.102	0.008	1.152	3133999	0.9261		98.3	8780	
D 43 13C2 PFDaA										
615.00 > 570.00	5.247	5.231	0.016	1.265	6364125	1.26		101	13686	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.247	5.231	0.016	1.000	5626569	1.08	Target=6.85	108	4941	
613.00 > 169.00	5.238	5.231	0.007	0.998	763258		7.37(3.43-10.28)		1875	
50 10:2 FTS										
627.00 > 607.00	5.264	5.257	0.007	1.107	1896466	0.9674		100	8879	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.291	5.275	0.016	1.276	815591	1.34		107	567	
49 N-MeFOSE-M										
616.00 > 59.00	5.299	5.284	0.015	1.002	879133	1.15		115	201	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.291	5.284	0.007	1.276	512947	1.18		94.7	44.1	
61 NMeFOSA										
512.00 > 169.00	5.299	5.284	0.015	1.002	451862	1.09		109	697	
54 PFDoS										
699.00 > 80.00	5.413	5.404	0.009	1.221	1001361	0.5399	Target=4.18	55.8	2394	
699.00 > 99.00	5.413	5.404	0.009	1.221	227468		4.40(2.09-6.27)		1947	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.453	5.435	0.018	1.315	728913	1.19		95.6	352	

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	5.463	5.445	0.018	1.002	774526	1.00		100	685	
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.453	5.445	0.008	1.039	4097037	0.9705	Target=6.15	97.0	4568	
663.00 > 169.00	5.443	5.445	-0.002	1.037	647458		6.33(3.07-9.22)		2316	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.463	5.445	0.018	1.317	385815	1.08		86.2	707	
56 N-EtFOSA-M										
526.00 > 169.00	5.472	5.455	0.017	1.002	403535	1.09		109	462	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.627	5.629	-0.002	1.357	3974932	1.03		82.5	8403	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.627	5.629	-0.002	1.000	427160	1.00	Target=1.06	100.0	2357	
713.00 > 219.00	5.627	5.629	-0.002	1.000	406677		1.05(0.53-1.58)		2022	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.937	5.931	0.006	1.431	948814	0.3630		29.0	3450	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.937	5.931	0.006	1.000	885998	1.09	Target=8.21	109	1936	
813.00 > 169.00	5.937	5.931	0.006	1.000	103373		8.57(4.11-12.32)		297	
60 Perfluorooctadecanoic acid										M
913.00 > 869.00	6.193	6.195	-0.002	1.043	30345	0.0406	Target=11.14	4.1	132	
913.00 > 169.00	6.188	6.195	-0.007	1.042	2848		10.65(5.57-16.71)		17.5	M

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220112-22237.b\\_010.d

Injection Date: 12-Jan-2022 19:02:06

Instrument ID: LCA

Lims ID: LCSD 140-57613/3-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 10

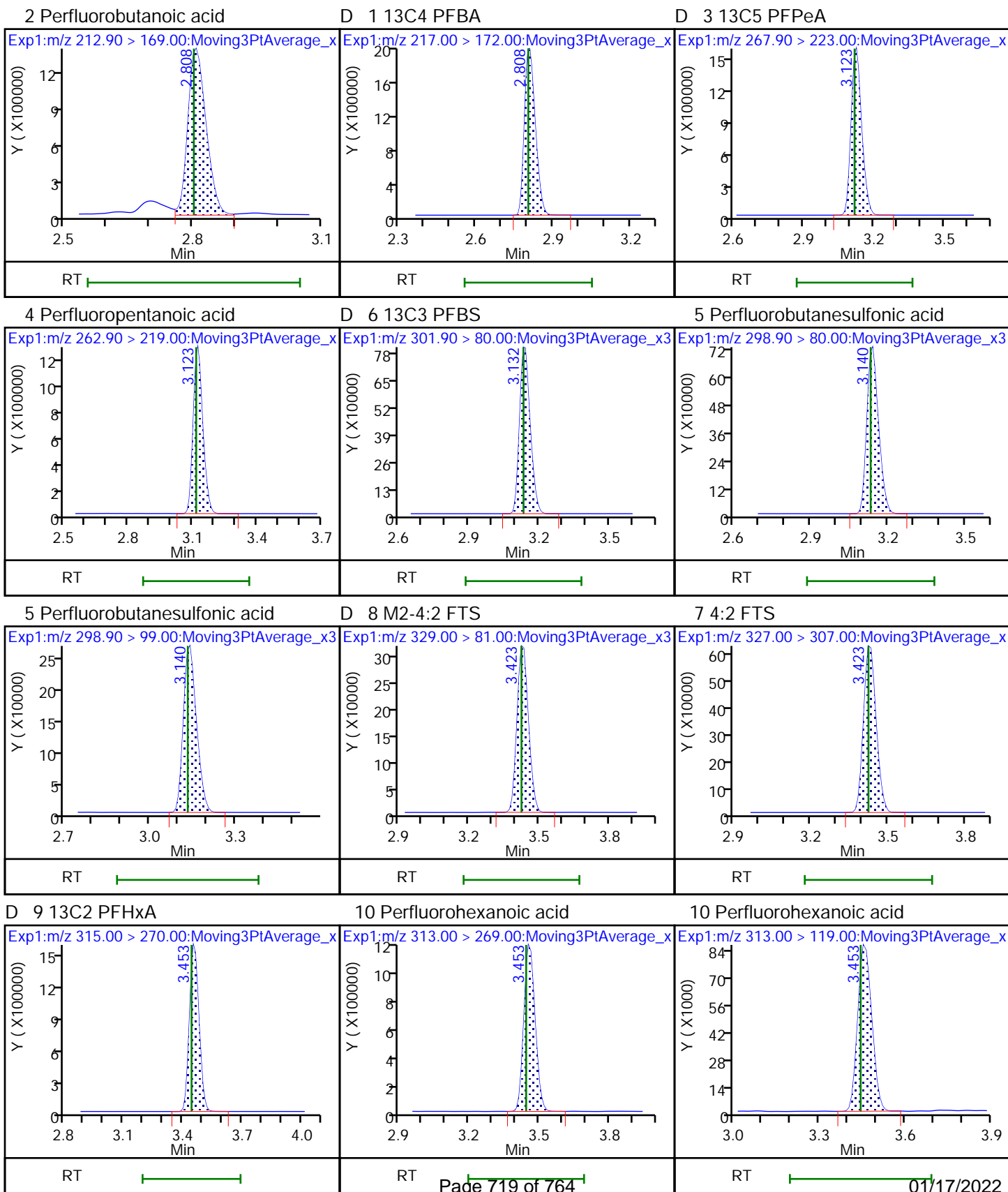
Worklist Smp#: 10

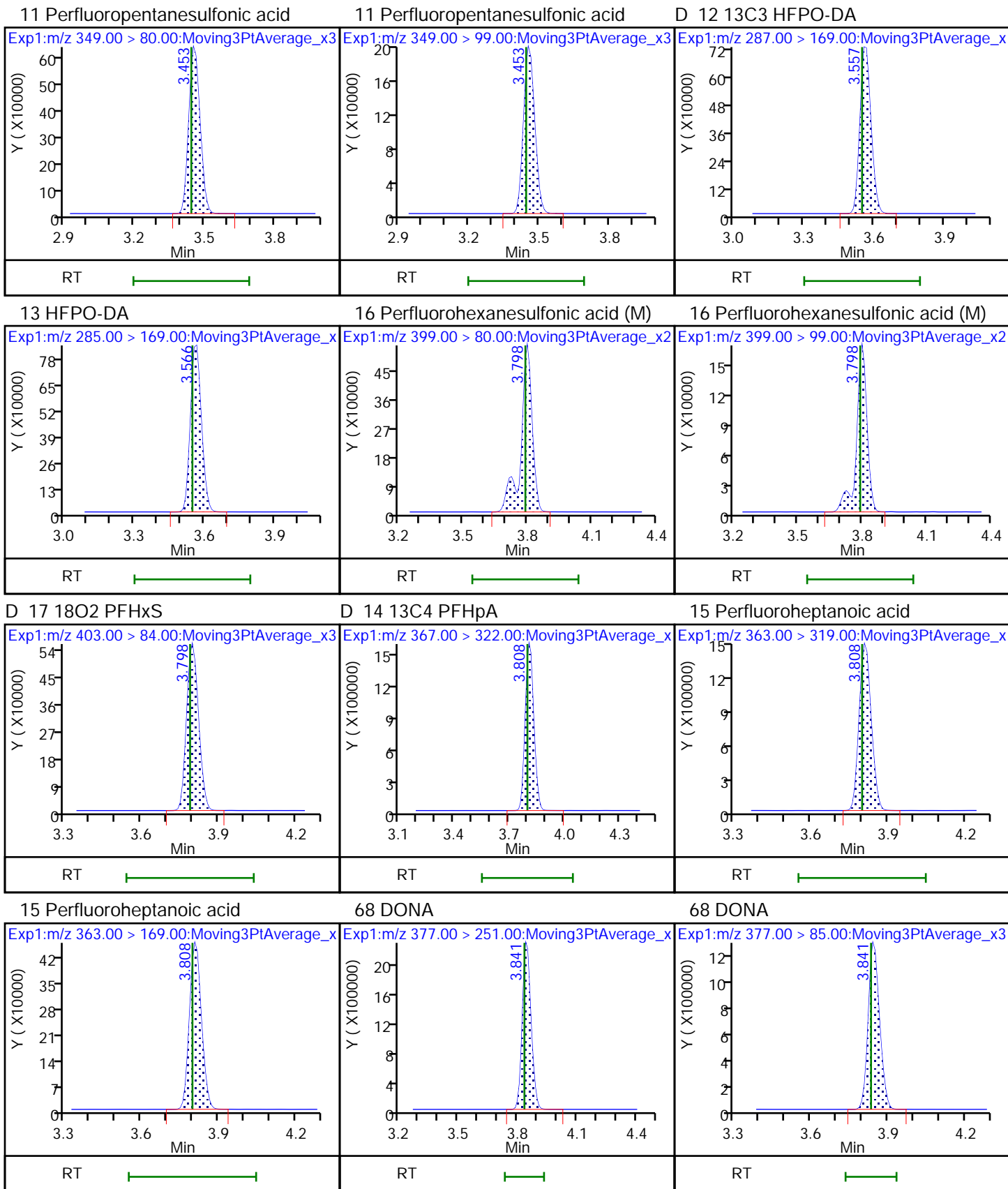
Injection Vol: 1.0 ul

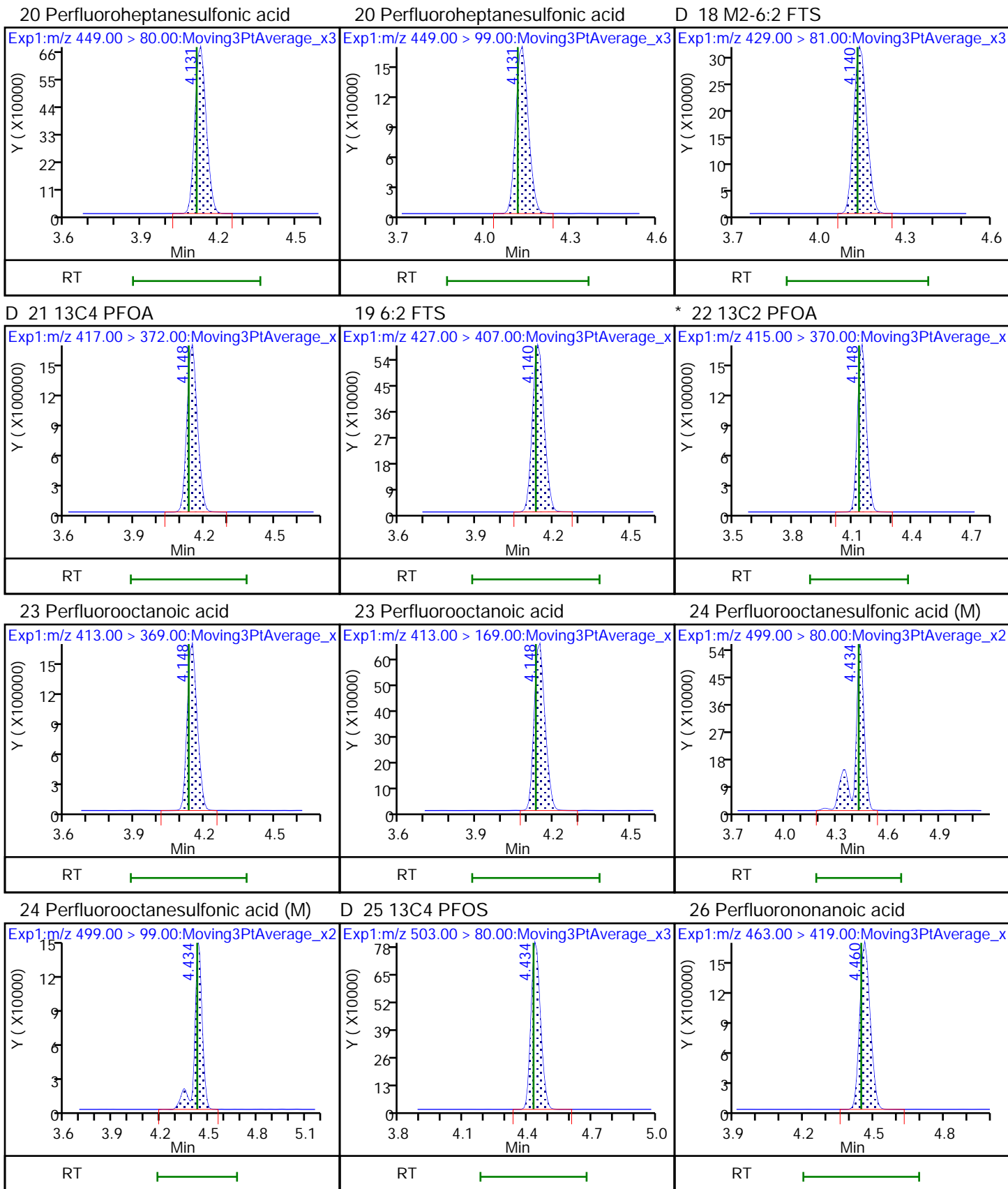
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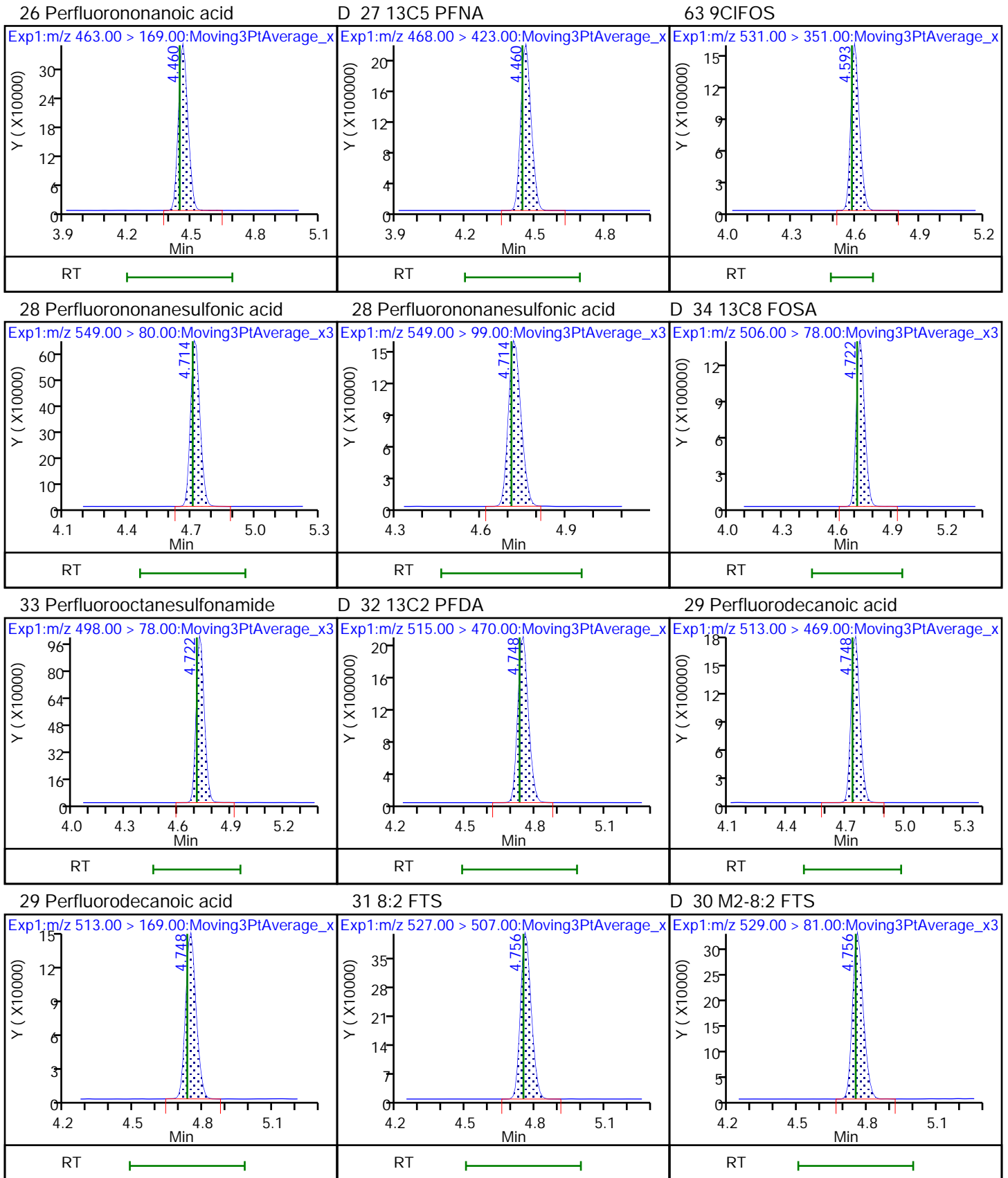
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL





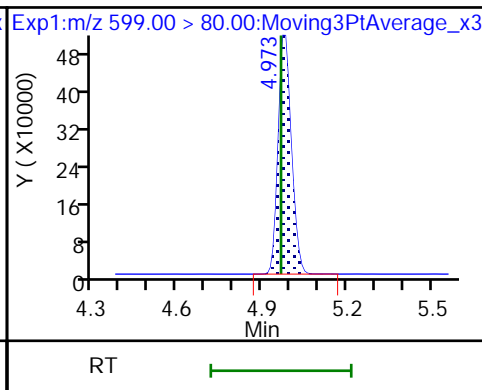
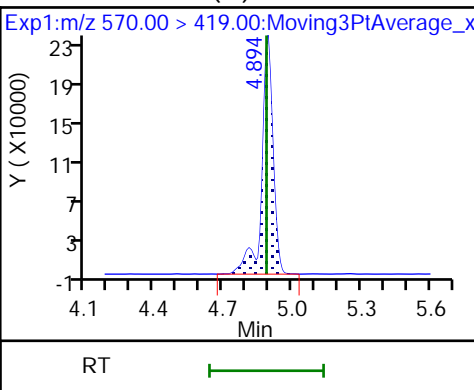
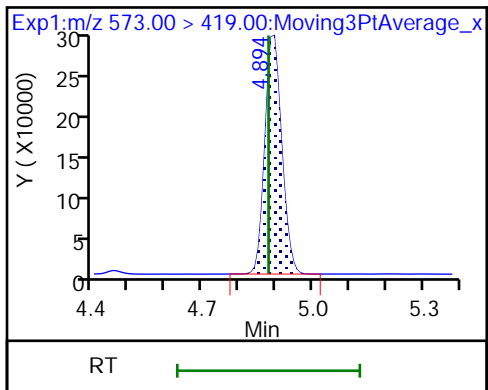




D 35 d3-NMeFOSAA

36 NMeFOSAA (M)

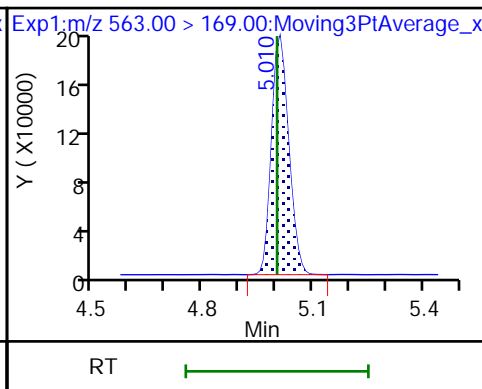
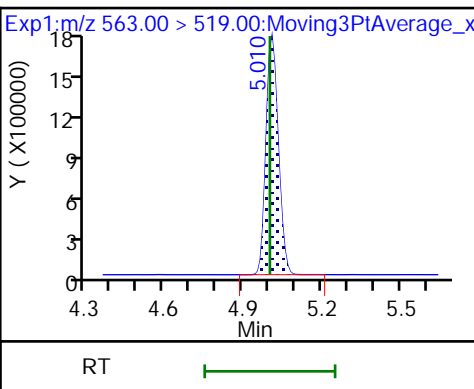
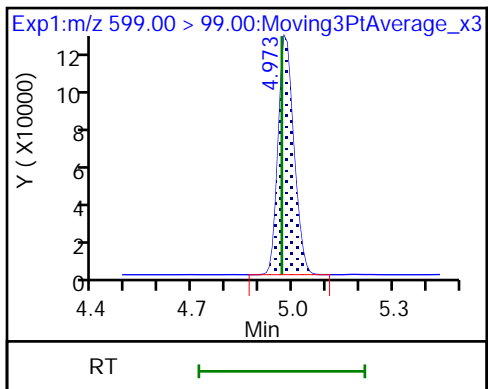
37 Perfluorodecanesulfonic acid



37 Perfluorodecanesulfonic acid

38 Perfluoroundecanoic acid

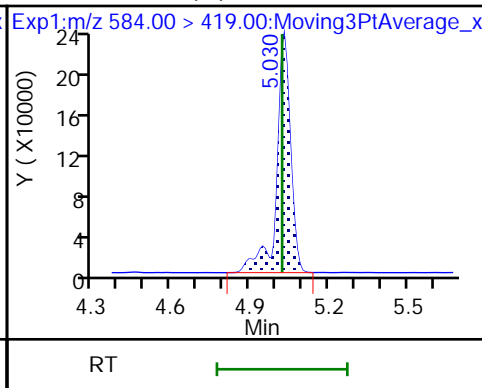
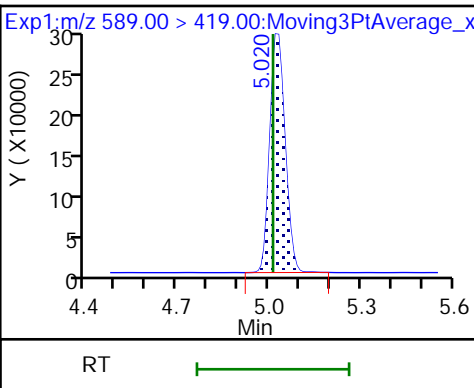
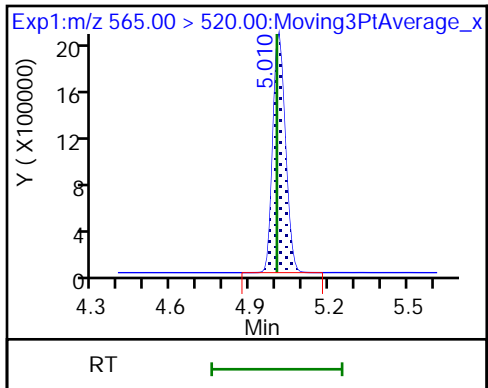
38 Perfluoroundecanoic acid



D 39 13C2 PFUnA

D 41 d5-NEtFOSAA

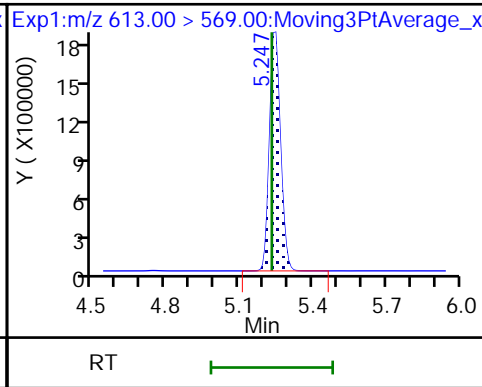
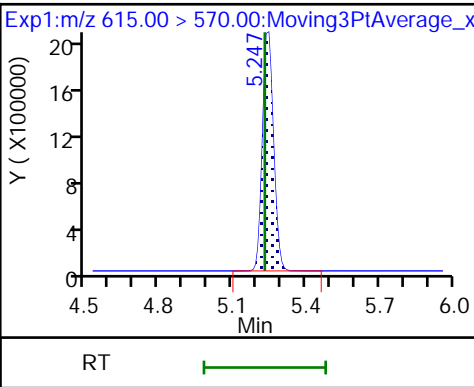
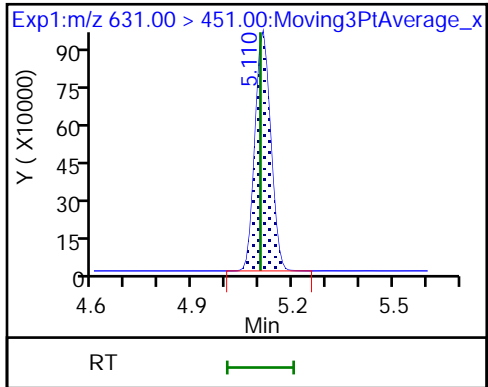
40 NEtFOSA (M)



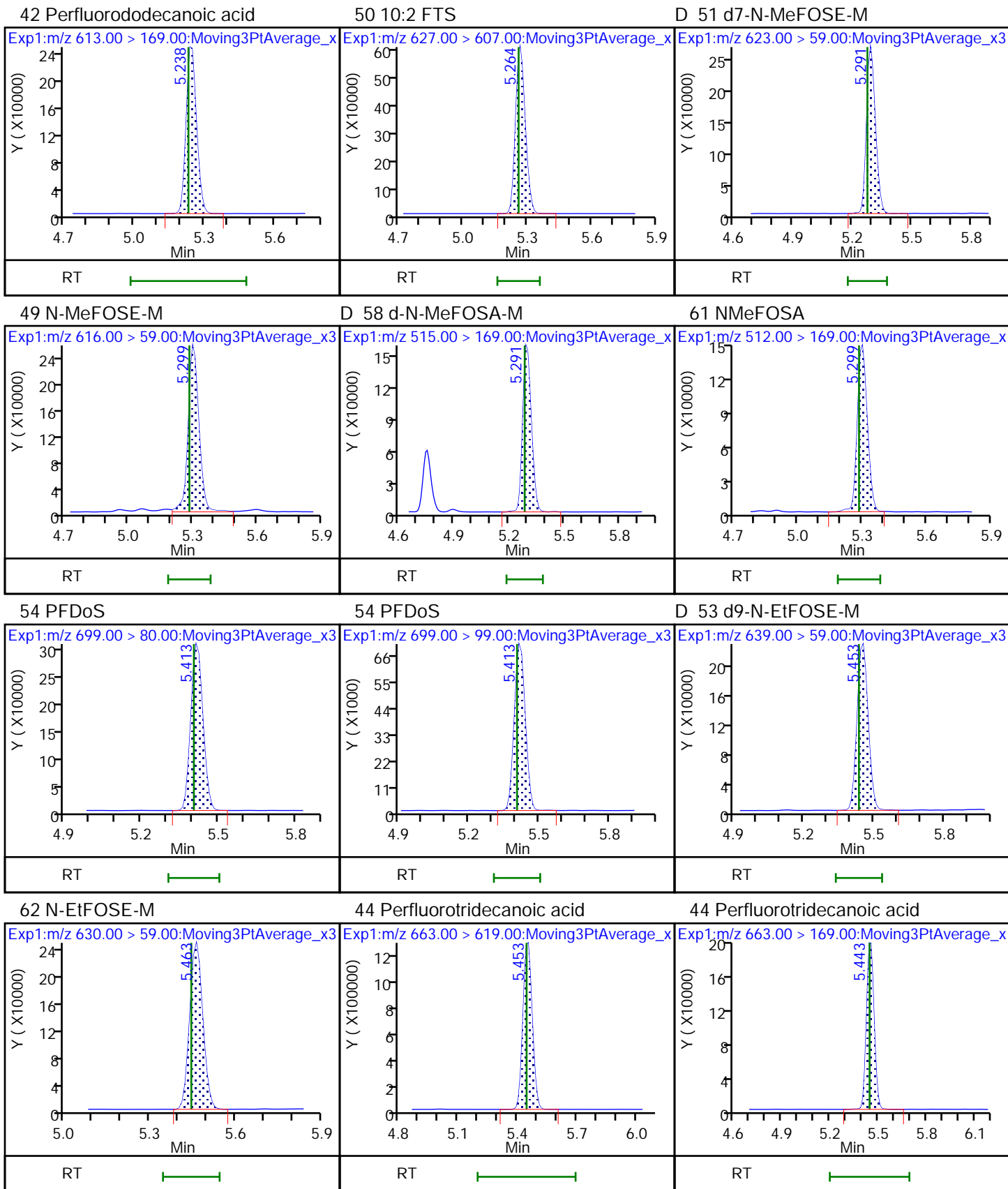
57 11C1FOS

D 43 13C2 PFDoA

42 Perfluorododecanoic acid



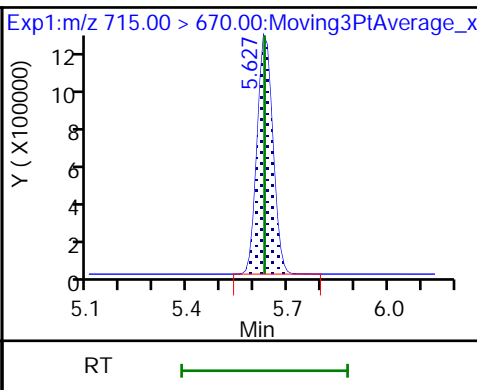
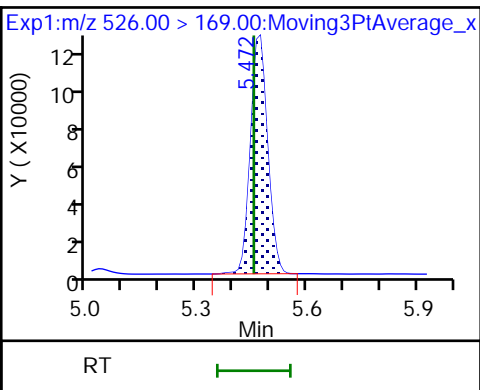
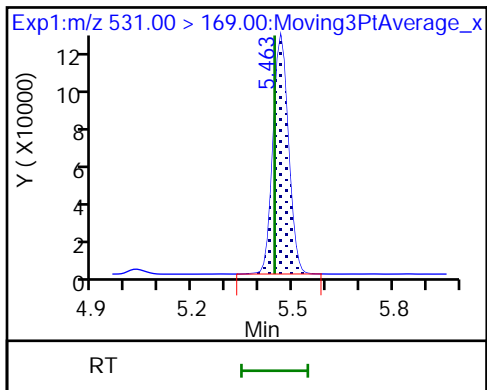




D 52 d-N-EtFOSA-M

56 N-EtFOSA-M

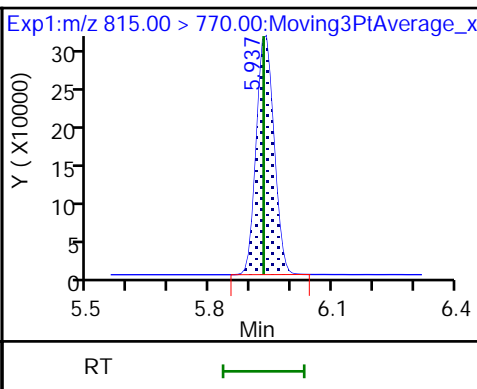
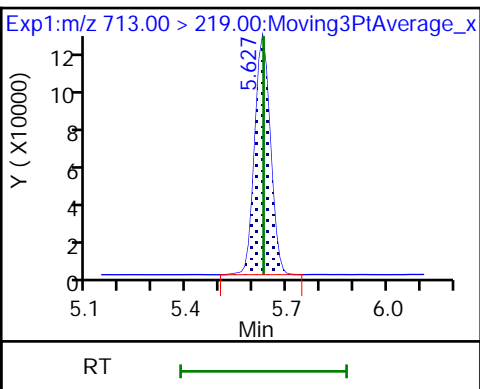
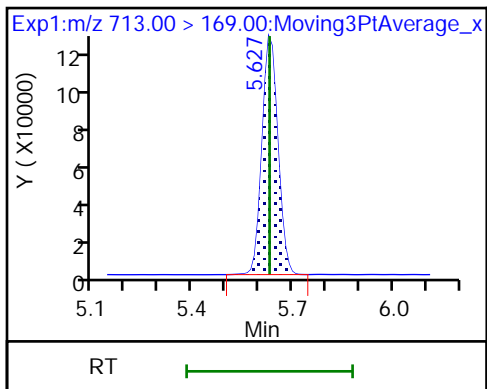
D 46 13C2 PFTeDA



45 Perfluorotetradecanoic acid

45 Perfluorotetradecanoic acid

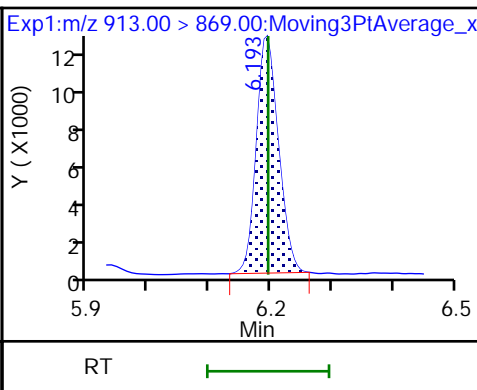
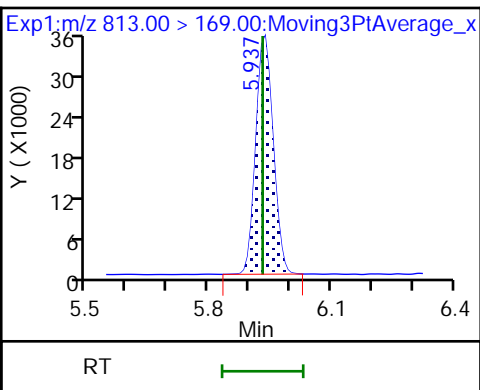
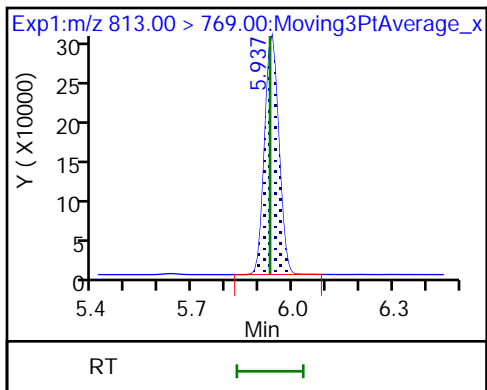
D 59 13C2 PFHxDA



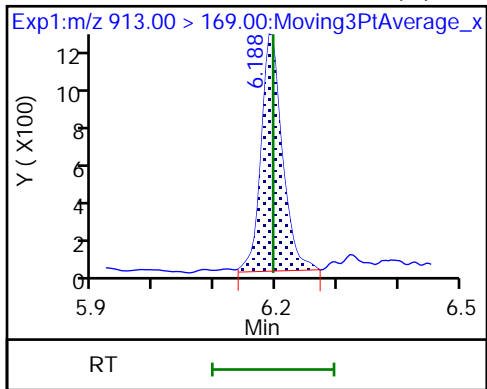
55 Perfluorohexadecanoic acid

55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid



60 Perfluorooctadecanoic acid (M)



FORM I  
PFAS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Knoxville Job No.: 140-25860-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCSD 140-57645/3-B  
 Matrix: Air Lab File ID: 008.d  
 Analysis Method: 537 (modified) Date Collected: \_\_\_\_\_  
 Extraction Method: None Date Extracted: 01/04/2022 14:49  
 Sample wt/vol: 1 (Sample) Date Analyzed: 01/09/2022 13:07  
 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.: 57742 Units: ug/Sample

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
13252-13-6	HFPO-DA	0.009816		0.000500	0.0000825

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL02255	13C3 HFPO-DA	101		25-150

Eurofins TestAmerica, Knoxville  
Target Compound Quantitation Report

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_008.d  
 Lims ID: LCSD 140-57645/3-B  
 Client ID:  
 Sample Type: LCSD  
 Inject. Date: 09-Jan-2022 13:07:04 ALS Bottle#: 8 Worklist Smp#: 8  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 140-0022187-008 LCSD 140-57645/3-B  
 Misc. Info.: Plate: 11 Rack: 1  
 Operator ID: Cochran, Bobby Instrument ID: LCA  
 Method: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\PFC\_LCA.m  
 Limit Group: LC - PFC- ICAL  
 Last Update: 10-Jan-2022 15:08:06 Calib Date: 09-Jan-2022 11:28:41  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromfs\Knoxville\ChromData\LCA\20220109-22186.b\_012.d  
 Column 1 : Det: EXP1  
 Process Host: CTX1641

First Level Reviewer: cochranj Date: 10-Jan-2022 13:28:09  
 Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_005.d

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	2.779	2.790	-0.011	0.678	6120986	1.23	98.2	14044	
2 Perfluorobutanoic acid	212.90 > 169.00	2.779	2.790	-0.011	1.000	4051364	1.05	105	979	
D 3 13C5 PFPeA	267.90 > 223.00	3.082	3.098	-0.016	0.752	4928916	1.27	102	9973	
4 Perfluoropentanoic acid	262.90 > 219.00	3.082	3.098	-0.016	1.000	3918333	1.04	104	1275	
D 6 13C3 PFBS	301.90 > 80.00	3.098	3.115	-0.017	0.756	2882481	1.12	96.0	12661	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	3.098	3.115	-0.017	1.000	2571164	0.9452	Target=2.75	107	8013
	298.90 > 99.00	3.098	3.115	-0.017	1.000	948701		2.71(1.37-4.12)		4596
D 8 M2-4:2 FTS	329.00 > 81.00	3.382	3.391	-0.009	0.825	875719	1.10	94.4	1336	
7 4:2 FTS	327.00 > 307.00	3.382	3.402	-0.020	1.000	1707707	1.01	108	7125	
11 Perfluoropentanesulfonic acid	349.00 > 80.00	3.412	3.422	-0.010	1.101	2484819	1.03	Target=3.47	110	5271
	349.00 > 99.00	3.412	3.422	-0.010	1.101	682108		3.64(1.73-5.20)		6264
D 9 13C2 PFHxA	315.00 > 270.00	3.412	3.422	-0.010	0.833	5249380	1.27	101	8115	
10 Perfluorohexanoic acid	313.00 > 269.00	3.412	3.422	-0.010	1.000	3683113	1.01	Target=12.28	101	1555
	313.00 > 119.00	3.412	3.422	-0.010	1.000	300799		12.24(6.14-18.41)		483
D 12 13C3 HFPO-DA	287.00 > 169.00	3.519	3.528	-0.009	0.859	2510868	1.26	101	3675	

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	3.519	3.528	-0.009	1.000	2666670	0.9816		98.2	2034	
16 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.751	3.760	-0.009	1.000	2159838	0.9299	Target=3.52	102	5335	M
399.00 > 99.00	3.751	3.760	-0.009	1.000	623471		3.46(1.76-5.28)		3952	M
D 17 18O2 PFHxS										
403.00 > 84.00	3.751	3.760	-0.009	0.915	1994225	1.16		97.8	10571	
D 14 13C4 PFHpA										
367.00 > 322.00	3.760	3.769	-0.009	0.918	5168008	1.31		104	8925	
15 Perfluoroheptanoic acid										
363.00 > 319.00	3.760	3.769	-0.009	1.000	4345997	1.00	Target=3.20	100	2386	
363.00 > 169.00	3.760	3.769	-0.009	1.000	1333076		3.26(1.60-4.79)		2438	
68 DONA										
377.00 > 251.00	3.797	3.807	-0.010	0.866	6389232	1.06	Target=1.78	113	6383	
377.00 > 85.00	3.797	3.807	-0.010	0.866	3633696		1.76(0.89-2.67)		6179	
20 Perfluoroheptanesulfonic acid										
449.00 > 80.00	4.080	4.089	-0.009	0.930	2268034	1.04	Target=3.95	109	6363	
449.00 > 99.00	4.080	4.089	-0.009	0.930	575530		3.94(1.98-5.93)		3089	
19 6:2 FTS										
427.00 > 407.00	4.089	4.106	-0.017	1.000	1426444	1.03		109	4821	
D 21 13C4 PFOA										
417.00 > 372.00	4.098	4.106	-0.008	1.000	4990611	1.22		97.5	10546	
D 18 M2-6:2 FTS										
429.00 > 81.00	4.089	4.106	-0.017	0.998	915451	1.14		96.2	2782	
23 Perfluorooctanoic acid										
413.00 > 369.00	4.098	4.106	-0.008	1.000	4787018	1.04	Target=2.62	104	2785	
413.00 > 169.00	4.098	4.106	-0.008	1.000	1914136		2.50(1.31-3.93)		2816	
* 22 13C2 PFOA										
415.00 > 370.00	4.098	4.106	-0.008		5459523	1.25			10310	
D 25 13C4 PFOS										
503.00 > 80.00	4.385	4.401	-0.016	1.070	2731259	1.10		92.1	4401	
24 Perfluorooctanesulfonic acid										
499.00 > 80.00	4.385	4.401	-0.016	1.000	2515017	1.00	Target=4.28	108	4350	M
499.00 > 99.00	4.385	4.401	-0.016	1.000	556962		4.52(2.14-6.42)		2355	M
D 27 13C5 PFNA										
468.00 > 423.00	4.410	4.427	-0.017	1.076	6671289	1.24		99.0	13712	
26 Perfluorononanoic acid										
463.00 > 419.00	4.410	4.427	-0.017	1.000	4786931	1.05	Target=4.54	105	4213	
463.00 > 169.00	4.410	4.427	-0.017	1.000	1028838		4.65(2.27-6.81)		1623	
63 9CIFOS										
531.00 > 351.00	4.546	4.560	-0.014	1.037	4957041	1.01		109	9968	
28 Perfluorononanesulfonic acid										
549.00 > 80.00	4.673	4.681	-0.008	1.066	2372782	1.06	Target=3.87	111	7501	
549.00 > 99.00	4.673	4.681	-0.008	1.066	625612		3.79(1.94-5.81)		4992	
D 34 13C8 FOSA										
506.00 > 78.00	4.690	4.706	-0.016	1.144	4241117	1.26		101	3477	
33 Perfluorooctanesulfonamide										
498.00 > 78.00	4.690	4.706	-0.016	1.000	3367108	1.03		103	4990	

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_008.d

Ratio Calibration: CCV Sample: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_005.d

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	4.698	4.715	-0.017	1.147	6805449	1.31		105	11364	
29 Perfluorodecanoic acid										
513.00 > 469.00	4.698	4.715	-0.017	1.000	5504092	1.05	Target=11.50	105	5142	
513.00 > 169.00	4.698	4.715	-0.017	1.000	473763		11.62(5.75-17.24)		711	
31 8:2 FTS										
527.00 > 507.00	4.707	4.723	-0.016	1.000	1228268	0.99		104	4366	
D 30 M2-8:2 FTS										
529.00 > 81.00	4.707	4.723	-0.016	1.149	1047991	1.16		96.8	1640	
D 35 d3-NMeFOSAA										
573.00 > 419.00	4.844	4.852	-0.008	1.182	762865	1.25		99.7	779	
36 NMeFOSAA										
570.00 > 419.00	4.852	4.861	-0.009	1.002	609703	1.03		103	1033	M
37 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.931	4.940	-0.009	1.125	2207874	1.04	Target=3.76	108	8472	
599.00 > 99.00	4.931	4.940	-0.009	1.125	581120		3.80(1.88-5.64)		3709	
38 Perfluoroundecanoic acid										
563.00 > 519.00	4.958	4.975	-0.017	1.000	5214694	1.03	Target=8.31	103	5138	
563.00 > 169.00	4.958	4.975	-0.017	1.000	629834		8.28(4.15-12.46)		3398	
D 39 13C2 PFUnA										
565.00 > 520.00	4.958	4.975	-0.017	1.210	6510205	1.25		100	11811	
D 41 d5-NEtFOSAA										
589.00 > 419.00	4.975	4.993	-0.018	1.214	838251	1.25		99.9	3858	
40 NEtFOSA										
584.00 > 419.00	4.984	4.993	-0.009	1.002	668555	1.00		100	2057	M
57 11CIFOS										
631.00 > 451.00	5.062	5.072	-0.010	1.154	3964368	1.04		110	8510	
D 43 13C2 PFDoA										
615.00 > 570.00	5.196	5.213	-0.017	1.268	6938857	1.27		102	16908	
42 Perfluorododecanoic acid										
613.00 > 569.00	5.196	5.213	-0.017	1.000	5818089	1.03	Target=7.17	103	6075	
613.00 > 169.00	5.196	5.213	-0.017	1.000	822407		7.07(3.58-10.75)		1840	
50 10:2 FTS										
627.00 > 607.00	5.223	5.231	-0.008	1.110	2107121	1.06		110	7303	
D 51 d7-N-MeFOSE-M										
623.00 > 59.00	5.275	5.284	-0.009	1.287	737495	1.13		90.1	684	
D 58 d-N-MeFOSA-M										
515.00 > 169.00	5.275	5.284	-0.009	1.287	550816	1.18		94.4	46.8	
61 NMeFOSA										
512.00 > 169.00	5.275	5.284	-0.009	1.000	467829	1.05		105	706	
49 N-MeFOSE-M										
616.00 > 59.00	5.284	5.292	-0.008	1.002	794290	1.15		115	1100	
54 PFDoS										
699.00 > 80.00	5.374	5.383	-0.009	1.225	2171218	1.04	Target=4.12	107	5486	
699.00 > 99.00	5.374	5.383	-0.009	1.225	506525		4.29(2.06-6.18)		4195	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
44 Perfluorotridecanoic acid										
663.00 > 619.00	5.404	5.414	-0.010	1.040	4791517	1.04	Target=6.35	104	5089	
663.00 > 169.00	5.404	5.414	-0.010	1.040	740963		6.47(3.17-9.52)		2691	
D 53 d9-N-EtFOSE-M										
639.00 > 59.00	5.425	5.444	-0.019	1.324	819239	1.25		99.8	413	
62 N-EtFOSE-M										
630.00 > 59.00	5.445	5.454	-0.009	1.004	911020	1.05		105	948	
D 52 d-N-EtFOSA-M										
531.00 > 169.00	5.445	5.454	-0.009	1.329	434964	1.13		90.3	721	
56 N-EtFOSA-M										
526.00 > 169.00	5.445	5.464	-0.019	1.000	453978	1.09		109	541	
D 46 13C2 PFTeDA										
715.00 > 670.00	5.588	5.607	-0.019	1.364	5355370	1.29		103	10501	
45 Perfluorotetradecanoic acid										
713.00 > 169.00	5.588	5.607	-0.019	1.000	569034	0.9884	Target=1.06	98.8	2231	
713.00 > 219.00	5.588	5.607	-0.019	1.000	519671		1.09(0.53-1.59)		2700	
D 59 13C2 PFHxDA										
815.00 > 770.00	5.896	5.904	-0.008	1.439	3436326	1.22		97.7	5942	
55 Perfluorohexadecanoic acid										
813.00 > 769.00	5.896	5.904	-0.008	1.000	3247113	1.10	Target=8.21	110	4022	
813.00 > 169.00	5.896	5.904	-0.008	1.000	377724		8.60(4.10-12.31)		1235	
60 Perfluorooctadecanoic acid										
913.00 > 869.00	6.155	6.164	-0.009	1.044	2963865	1.10	Target=11.62	110	3726	
913.00 > 169.00	6.150	6.164	-0.014	1.043	255121		11.62(5.81-17.43)		1091	

**QC Flag Legend**

Processing Flags

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Knoxville

Data File: \\chromfs\Knoxville\ChromData\LCA\20220109-22187.b\_008.d

Injection Date: 09-Jan-2022 13:07:04

Instrument ID: LCA

Lims ID: LCSD 140-57645/3-B

Client ID:

Operator ID: Cochran, Bobby

ALS Bottle#: 8

Worklist Smp#: 8

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

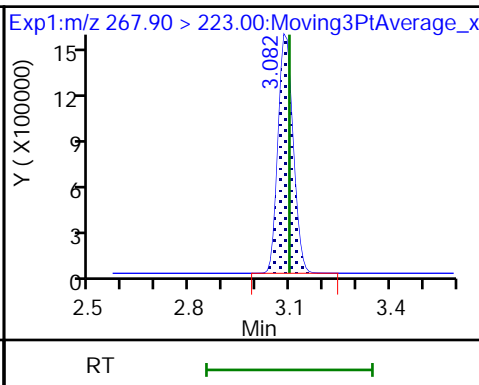
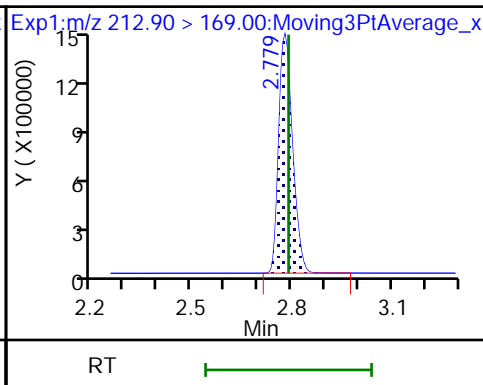
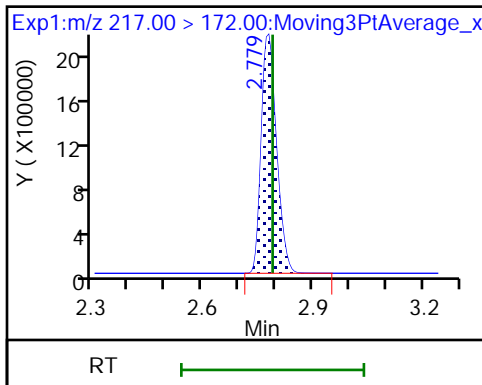
Method: PFC\_LCA

Limit Group: LC - PFC- ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

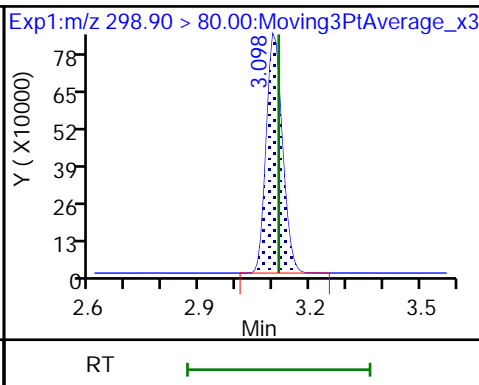
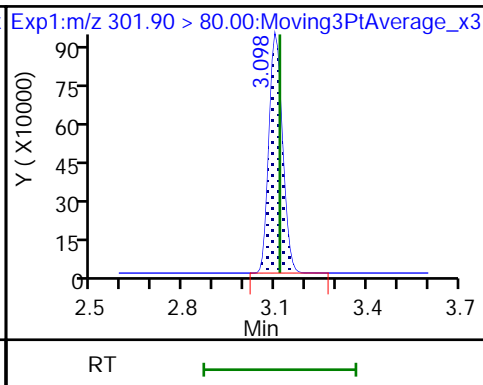
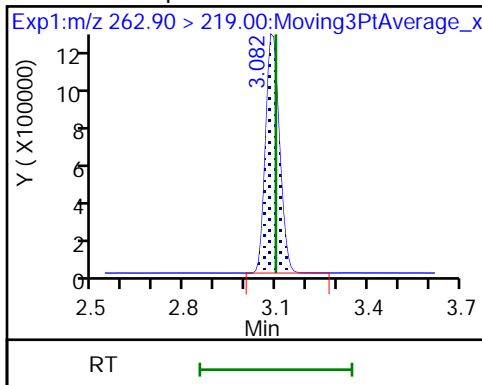
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 6 13C3 PFBS

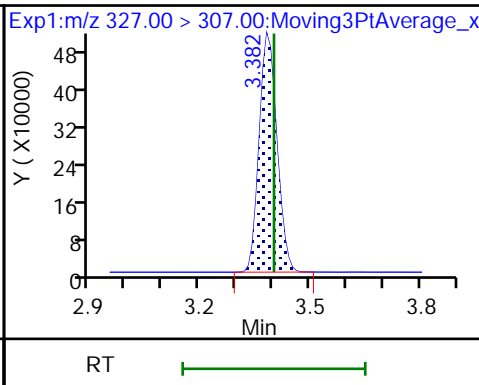
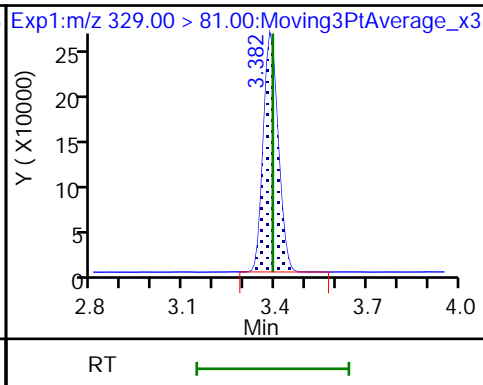
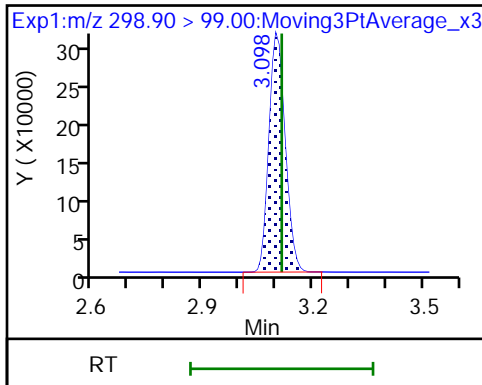
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 8 M2-4:2 FTS

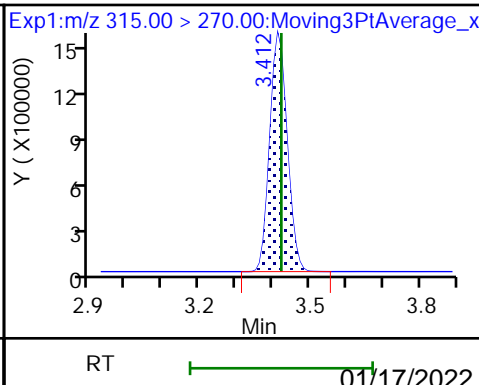
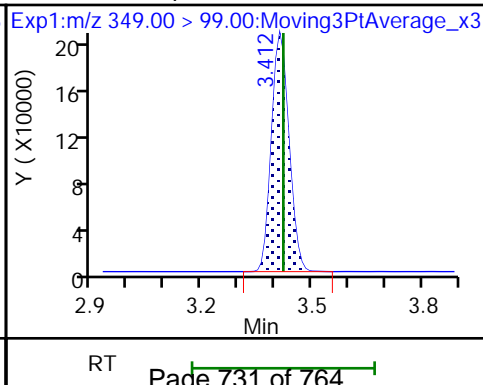
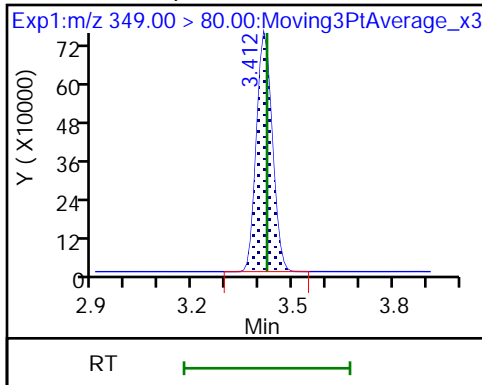
7 4:2 FTS



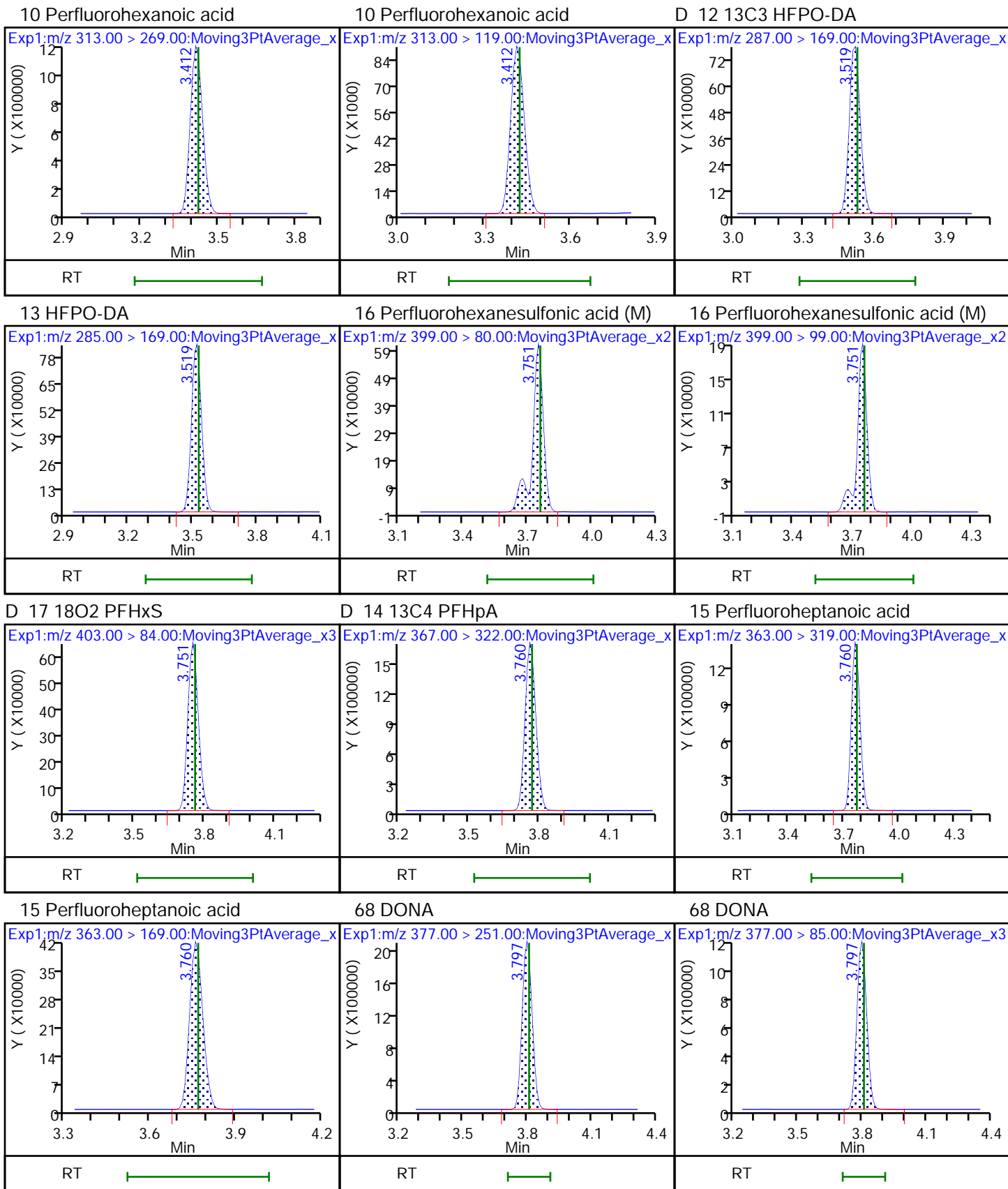
11 Perfluoropentanesulfonic acid

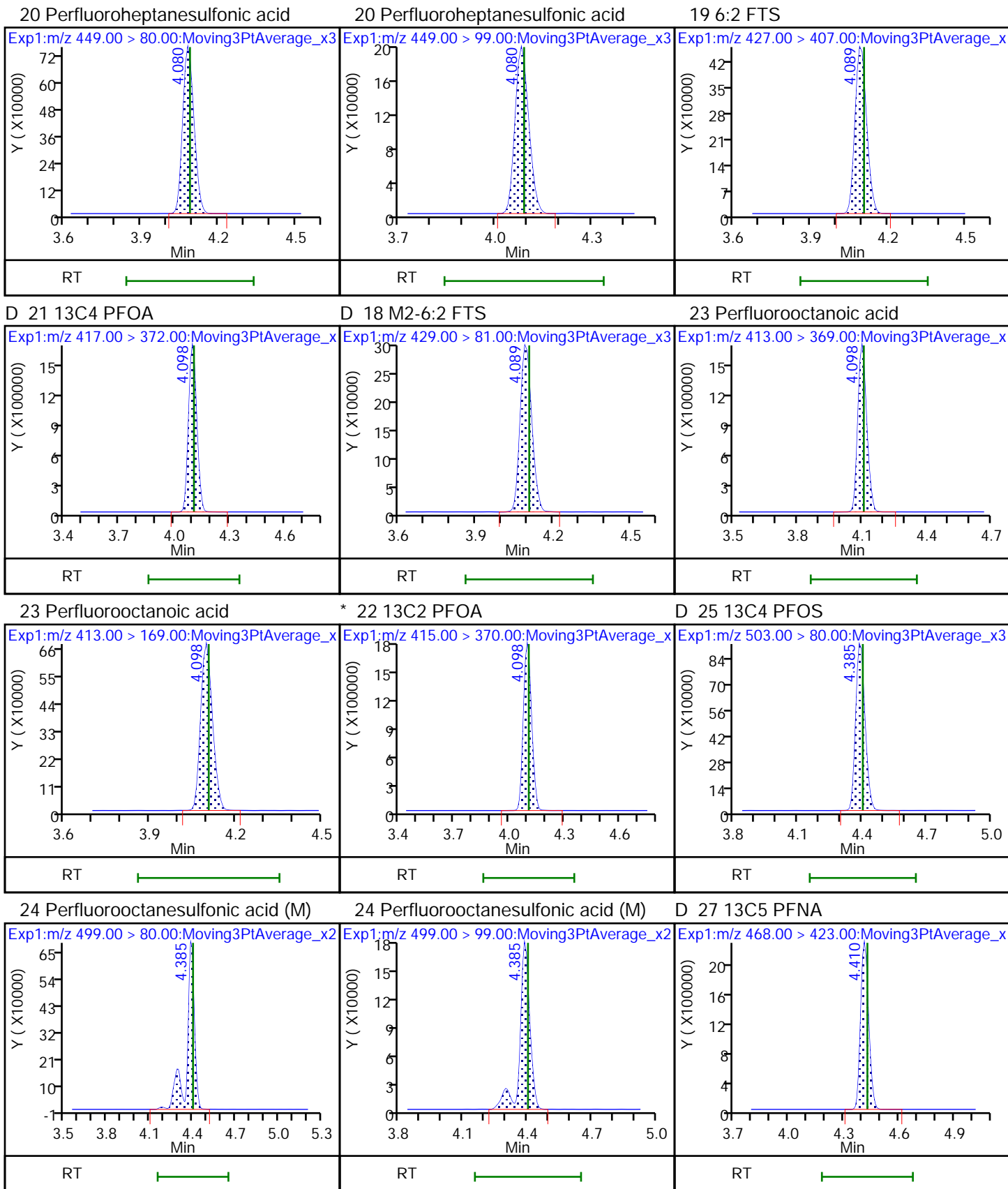
11 Perfluoropentanesulfonic acid

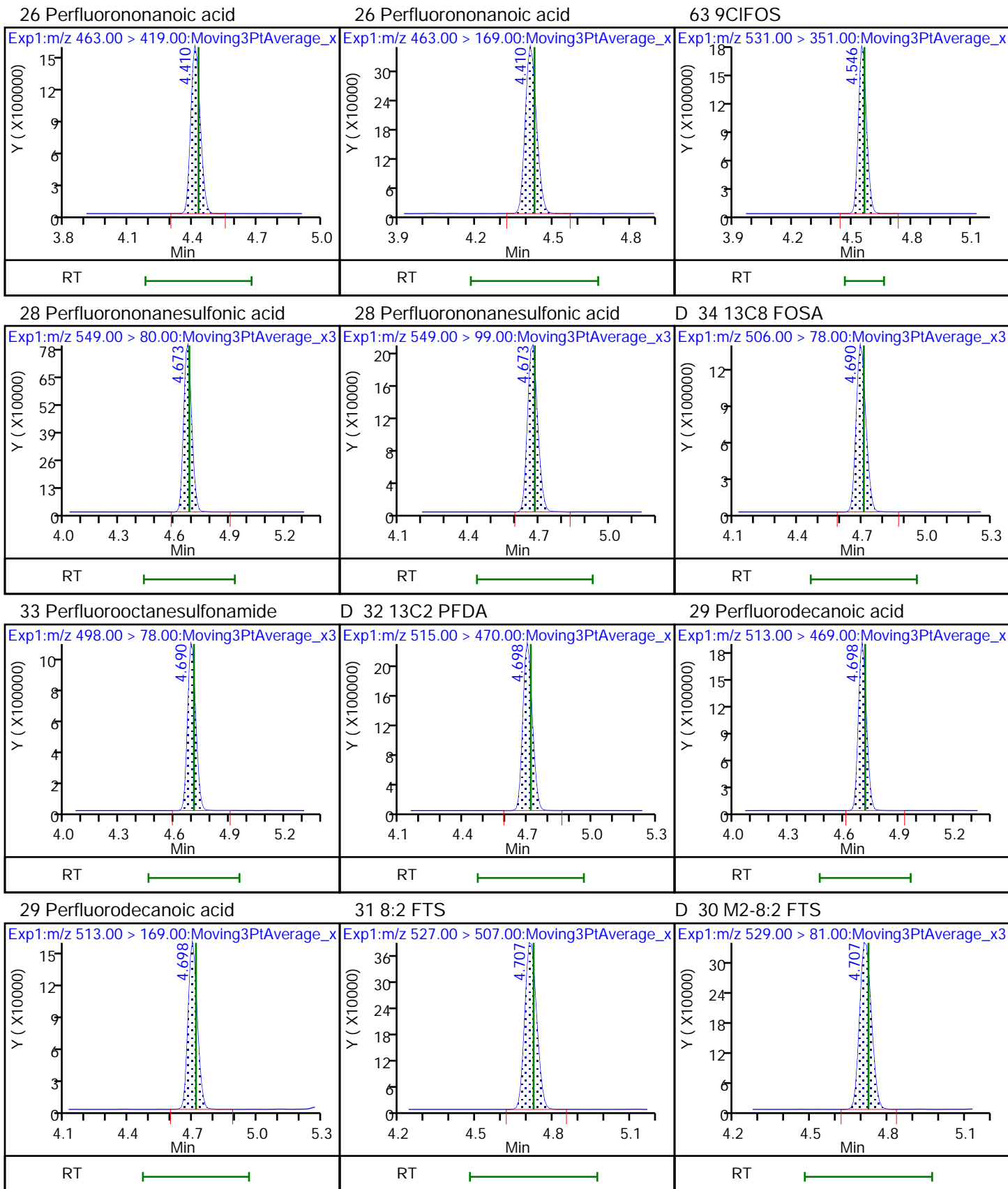
D 9 13C2 PFHxA







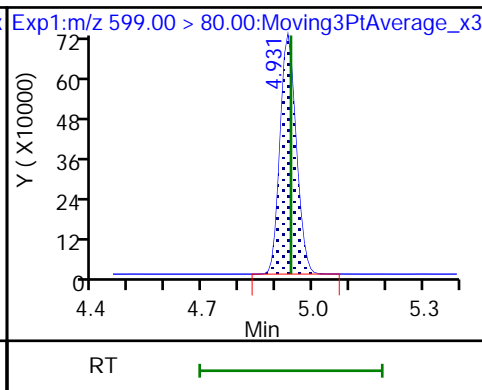
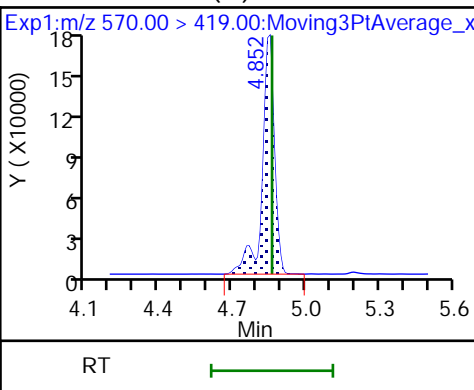
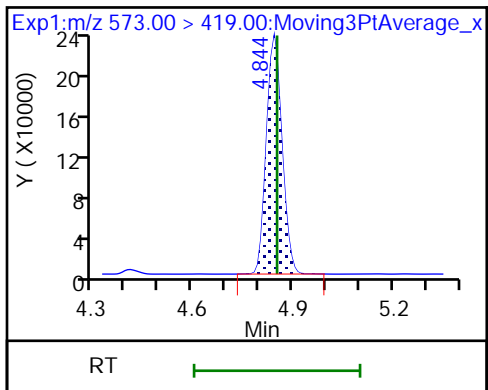




D 35 d3-NMeFOSAA

36 NMeFOSAA (M)

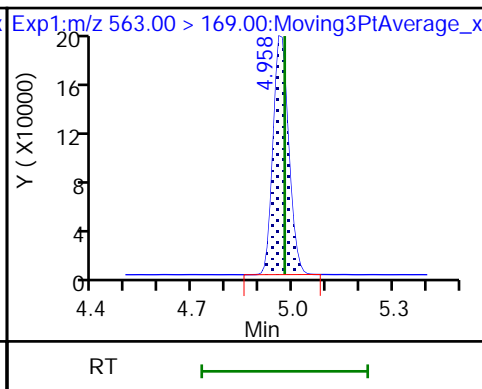
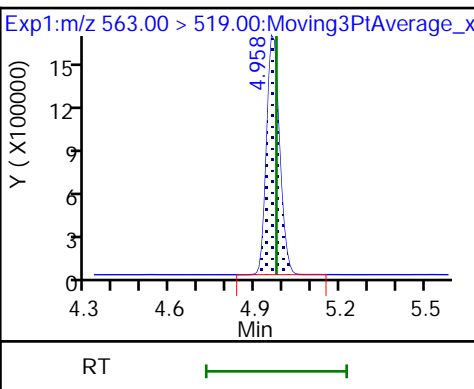
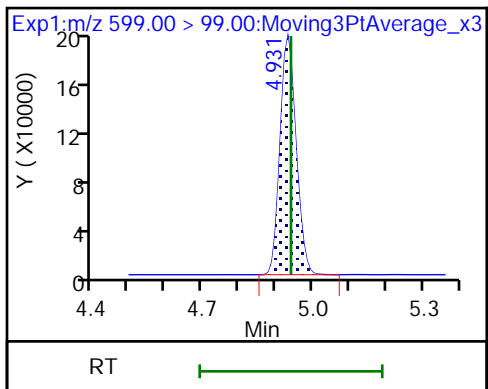
37 Perfluorodecanesulfonic acid



37 Perfluorodecanesulfonic acid

38 Perfluoroundecanoic acid

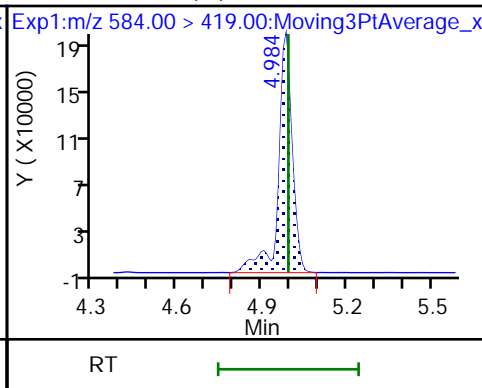
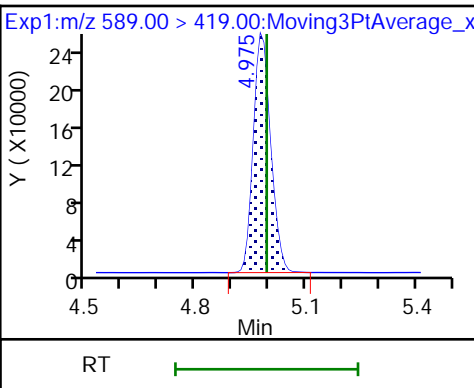
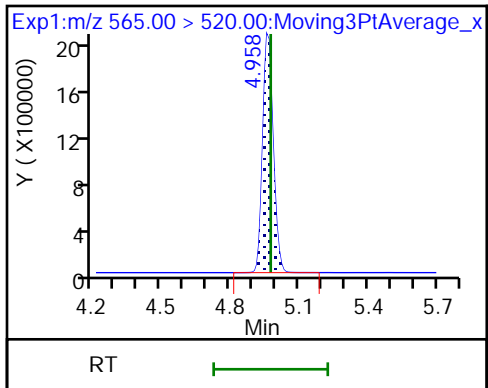
38 Perfluoroundecanoic acid



D 39 13C2 PFUnA

D 41 d5-NEtFOSAA

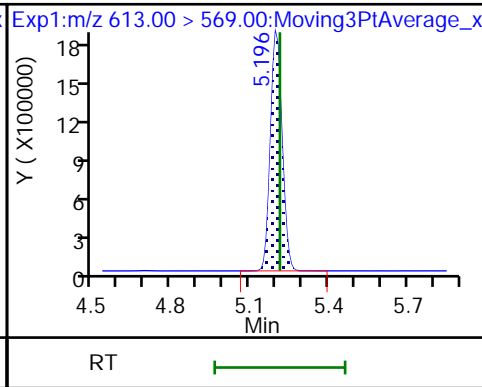
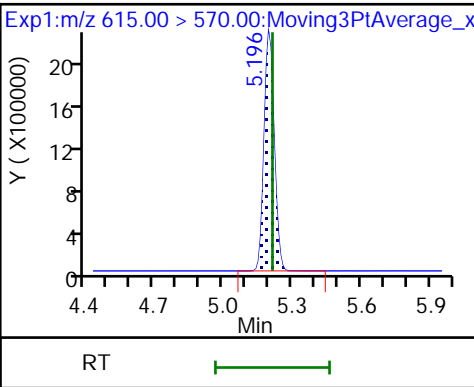
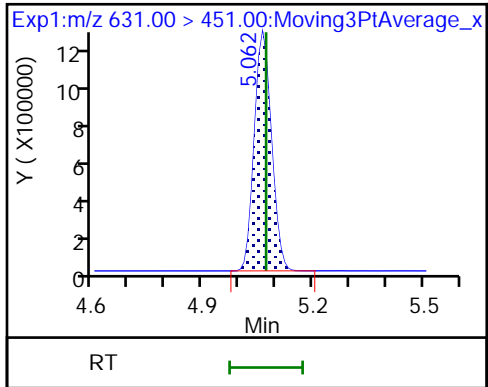
40 NEtFOSA (M)

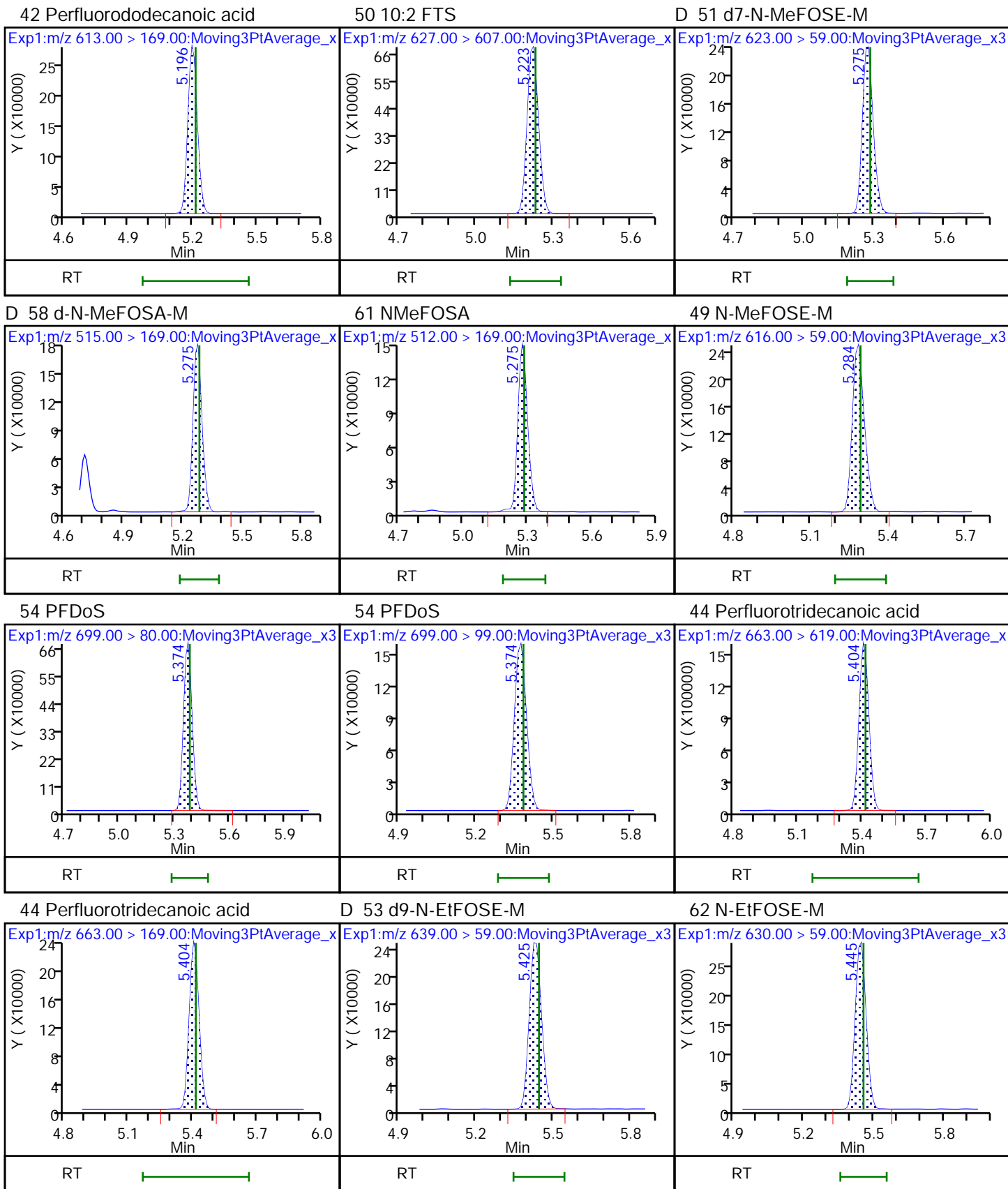


57 11CIFOS

D 43 13C2 PFDaA

42 Perfluorododecanoic acid

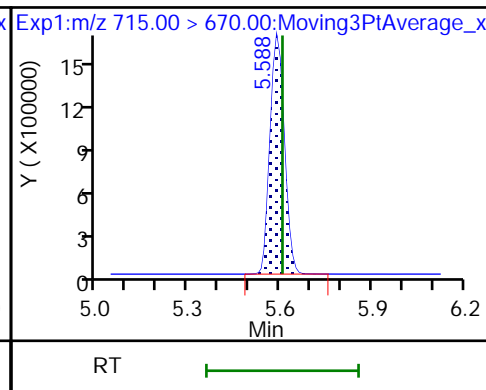
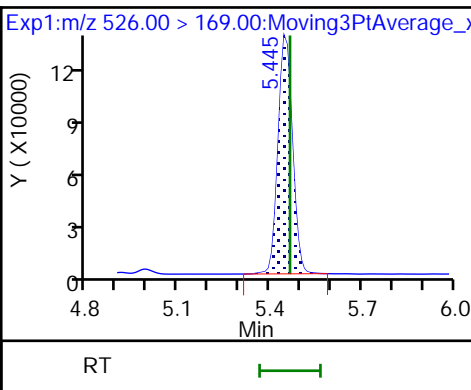
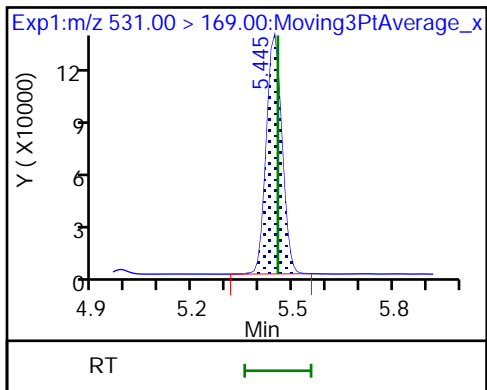




D 52 d-N-EtFOSA-M

56 N-EtFOSA-M

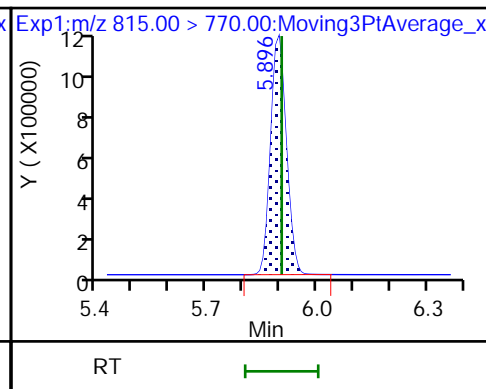
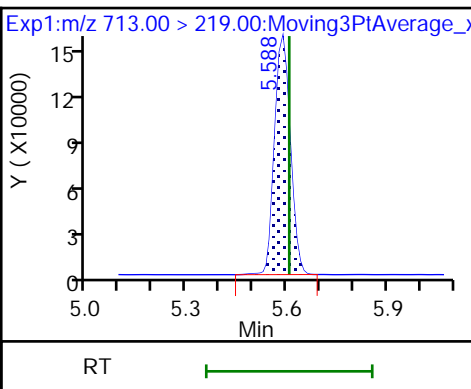
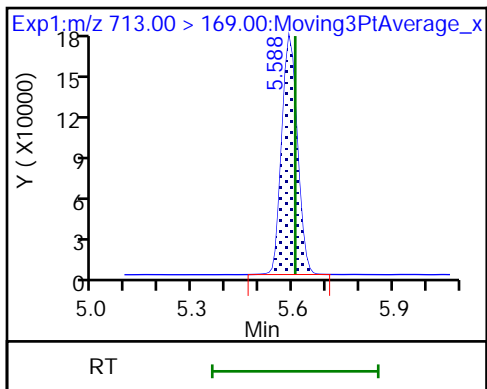
D 46 13C2 PFTeDA



45 Perfluorotetradecanoic acid

45 Perfluorotetradecanoic acid

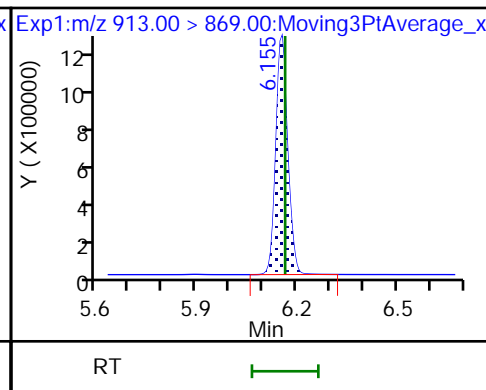
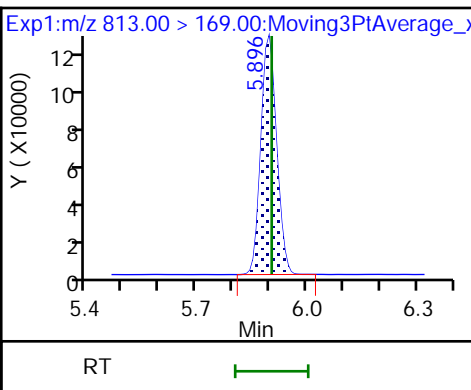
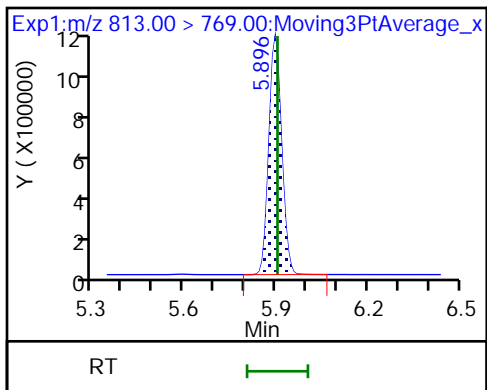
D 59 13C2 PFHxDA



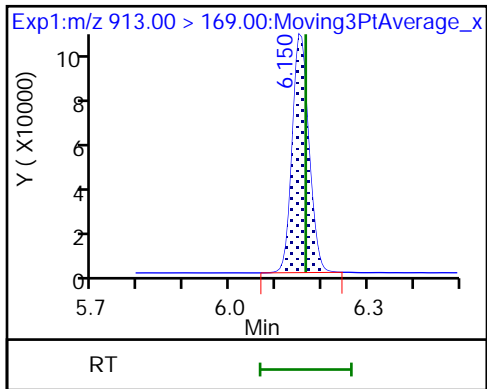
55 Perfluorohexadecanoic acid

55 Perfluorohexadecanoic acid

60 Perfluorooctadecanoic acid



60 Perfluorooctadecanoic acid



PFAS BATCH WORKSHEET

Lab Name: Eurofins Knoxville Job No.: 140-25860-1

SDG No.:

Batch Number: 57611 Batch Start Date: 01/04/22 08:32 Batch Analyst: Stout, David W

Batch Method: None Batch End Date: 01/05/22 15:07

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	CalcMsg	63xxMPFC IDA	63xxPFC3LSP
MB 140-57611/1		None, Split, 537 (modified)		1 Sample	50 mL	CALC NOT SET TO RUN	00041	00006
LCS 140-57611/2		None, Split, 537 (modified)		1 Sample	50 mL	CALC NOT SET TO RUN		1 mL
LCS 140-57611/3		None, Split, 537 (modified)		1 Sample	50 mL	CALC NOT SET TO RUN		1 mL

Batch Notes	
Methanol ID	5% NH4OH / MeOH 440020
Extraction Start Date	01/04/2022
Extraction Start time	13:20
Extraction End Date	01/05/2022
Extraction End time	08:06
Analyst ID - Extraction	DWS/CAC
Analyst ID - Spike Analyst	DWS
Analyst ID - Spike Witness Analyst	CAC
Filter ID	427675
Hot Block ID	F
Oven, Bath or Block Temperature 1	60 Degrees C

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 Knoxville Job No.: 140-25860-1

SDG No.:

Batch Number: 57611 Batch Start Date: 01/04/22 08:32 Batch Analyst: Stout, David W

Batch Method: None Batch End Date: 01/05/22 15:07

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	CalcMsg	63xxMPFC_IDA
140-25860-A-1	K-1783, 1784 VEN CARBON BED INLET R1 OTM-45 FH	None, Split, Dilution, 537 (modified)	T	1 Sample	130 mL	CALC NOT SET TO RUN	0.5 mL
140-25860-A-5	K-1790, 1791 VEN CARBON BED INLET R2 OTM-45 FH	None, Split, Dilution, 537 (modified)	T	1 Sample	128 mL	CALC NOT SET TO RUN	0.5 mL
140-25860-A-9	K-1797, 1798 VEN CARBON BED INLET R3 OTM-45 FH	None, Split, Dilution, 537 (modified)	T	1 Sample	114 mL	CALC NOT SET TO RUN	0.5 mL

Batch Notes	
Methanol ID	5% NH4OH / MeOH 440020
Extraction Start Date	01/04/2022
Extraction Start time	13:20
Extraction End Date	01/05/2022
Extraction End time	08:06
Analyst ID - Extraction	DWS/CAC
Analyst ID - Spike Analyst	DWS
Analyst ID - Spike Witness Analyst	CAC
Filter ID	427675
Hot Block ID	F
Oven, Bath or Block Temperature 1	60 Degrees C

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.



EurofinsTestAmerica Knoxville Extraction Sheet  
PFAS in Source Air Front Half Fraction

Prep Batch Number: 140-57611  
 Split Batch Number: **57685**  
 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 PVDE filter disk.
MB 140-57611/1	NA	✓	✓	✓	✓	50	✓	✓	✓	✓	✓
LCS 140-57611/2	NA	✓	✓	✓	✓	49	✓	✓	✓	✓	✓
140-25858-A-1 (140-453612)	✓	✓	NA	✓	NA	50	✓	✓	✓	✓	✓
140-25858-A-7 (140-453621)	✓	✓	NA	✓	NA	50	✓	✓	✓	✓	✓
140-25858-A-13 (140-453630)	87	✓	NA	✓	NA	82	✓	✓	✓	✓	✓
140-25859-A-1 (140-453634)	80	✓	NA	✓	NA	80	✓	✓	✓	✓	✓
140-25859-A-5 (140-453641)	71	✓	NA	✓	NA	71	✓	✓	✓	✓	✓
140-25859-A-9 (140-453648)	130	✓	NA	✓	NA	130	✓	✓	✓	✓	✓
140-25860-A-1 (140-453671)	128	✓	NA	✓	NA	128	✓	✓	✓	✓	✓
140-25860-A-5 (140-453678)	114	✓	NA	✓	NA	114	✓	✓	✓	✓	✓
140-25860-A-9 (140-453685)	NA	✓	NA	✓	NA	50	✓	✓	✓	✓	✓
140-25966-A-1 MDLV	NA	✓	NA	✓	NA	50	✓	✓	✓	✓	✓
CAC 1/11/22											
CAC 1/11/22											

PFAS BATCH WORKSHEET

Lab Name: Eurofins Knoxville Job No.: 140-25860-1

SDG No.:

Batch Number: 57613 Batch Start Date: 01/04/22 08:59 Batch Analyst: Stout, David W

Batch Method: None Batch End Date: 01/11/22 13:20

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	63xxMPFC_IDA 00041	63xxPFC3LSP 00006
MB 140-57613/1		None, Split, 537 (modified)		1 Sample	360 mL	0.5 mL	
LCS 140-57613/2		None, Split, 537 (modified)		1 Sample	360 mL	0.5 mL	1 mL
LCS 140-57613/3		None, Split, 537 (modified)		1 Sample	360 mL	0.5 mL	1 mL
MB 140-57613/14		None, Split, 537 (modified)		1 Sample	360 mL	0.5 mL	
140-25860-A-4	K-1789 VEN CARBON BED INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	None, Split, 537 (modified)	T	1 Sample	360 mL	0.5 mL	
140-25860-A-8	K-1796 VEN CARBON BED INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	None, Split, 537 (modified)	T	1 Sample	360 mL	0.5 mL	
140-25860-A-12	K-1803 VEN CARBON BED INLET 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 Knoxville Job No.: 140-25860-1 Batch Start Date: 01/04/22 08:59 Batch Analyst: Stout, David W  
 SDG No.: Batch Number: 57613 Batch End Date: 01/11/22 13:20  
 Batch Method: None

Batch Notes	
H2O/ 5% NH4OH ID	5% NH4OH/MeOH 455378
Extraction 1 Start Time	01/04/2022 13:25
Extraction 1 End Time	01/05/2022 08:45
Extraction 2 Start Time	01/05/2022 11:15
Extraction 2 End Time	01/07/2022 17:45
Analyst ID - Extraction	DWS/CAC
Analyst ID - Spike Analyst	DWS
Analyst ID - Spike Witness Analyst	CAC
Methanol ID	5% NH4OH / MeOH 455378
PVDF Filter ID	419756
XAD ID	438442
Hot Block ID	F
Oven, Bath or Block Temperature 1	60 Degrees C

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 Knoxville Job No.: 140-25860-1

SDG No.:

Batch Number: 57613 Batch Start Date: 01/04/22 08:59 Batch Analyst: Stout, David W

Batch Method: None Batch End Date: 01/11/22 13:20

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	63xMPFC_IDA 00041
140-25860-A-2	K-1785, 1786, 1789 VEN CARBON BED INLET RI OTM-45 BH	None, Split, Dilution, 537 (modified)	T	1 Sample	360 mL	0.5 mL
140-25860-A-6	K-1792, 1793, 1795 VEN CARBON BED INLET R2 OTM-45 BH	None, Split, Dilution, 537 (modified)	T	1 Sample	360 mL	0.5 mL
140-25860-A-10	K-1799, 1800, 1802 VEN CARBON BED INLET R3 OTM-45 BH	None, Split, Dilution, 537 (modified)	T	1 Sample	360 mL	0.5 mL

Batch Notes	
H2O/ 5% NH4OH ID	5% NH4OH/MeOH 455378
Extraction 1 Start Time	01/04/2022 13:25
Extraction 1 End Time	01/05/2022 08:45
Extraction 2 Start Time	01/05/2022 11:15
Extraction 2 End Time	01/07/2022 17:45
Analyst ID - Extraction	DWS/CAC
Analyst ID - Spike Analyst	DWS
Analyst ID - Spike Witness Analyst	CAC
Methanol ID	5% NH4OH / MeOH 455378
PVDF Filter ID	419756
XAD ID	438442
Hot Block ID	F
Oven, Bath or Block Temperature 1	60 Degrees C

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 Knoxville Job No.: 140-25860-1

SDG No.:

Batch Number: 57645 Batch Start Date: 01/04/22 14:49 Batch Analyst: Stout, David W

Batch Method: None Batch End Date: 01/05/22 09:04

Lab Sample ID	Client Sample ID	Method Chain	Basis	VolumeCollect	VolCondUsed	InitialAmount	FinalAmount	63xxMPFC_IDA 00041	63xxMPFOA-IS 00045
MB 140-57645/1		None, Split, 537 (modified)				1 Sample	10 mL	0.25 mL	0.25 mL
LCS 140-57645/2		None, Split, 537 (modified)				1 Sample	10 mL	0.25 mL	0.25 mL
LCSD 140-57645/3		None, Split, 537 (modified)				1 Sample	10 mL	0.25 mL	0.25 mL
140-25860-A-3	K-1787 VEN CARBON BED INLET R1 OTM-45 IMPINGERS 1,2&3 COND	None, Split, 537 (modified)	T	310 mL	2 mL	0.00645 Sample	10 mL	0.25 mL	0.25 mL
140-25860-A-7	K-1794 VEN CARBON BED INLET R2 OTM-45 IMPINGERS 1,2&3 COND	None, Split, 537 (modified)	T	300 mL	2 mL	0.00667 Sample	10 mL	0.25 mL	0.25 mL
140-25860-A-11	K-1801 VEN CARBON BED INLET R3 OTM-45 IMPINGERS 1,2&3 COND	None, Split, 537 (modified)	T	305 mL	2 mL	0.00656 Sample	10 mL	0.25 mL	0.25 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	VolumeCollect	VolCondUsed	InitialAmount	FinalAmount	63xxEFC3LSP 00006	
MB 140-57645/1		None, Split, 537 (modified)							
LCS 140-57645/2		None, Split, 537 (modified)		0.5 mL					
LCSD 140-57645/3		None, Split, 537 (modified)		0.5 mL					
140-25860-A-3	K-1787 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 Knoxville Job No.: 140-25860-1

SDG No.:

Batch Number: 57645 Batch Start Date: 01/04/22 14:49 Batch Analyst: Stout, David W

Batch Method: None Batch End Date: 01/05/22 09:04

Lab Sample ID	Client Sample ID	Method Chain	Basis	63xxPFC3LSP 00006		
140-25860-A-7	K-1794 VEN CARBON BED INLET R2 OTM-45 IMPINGERS 1,2&3 COND	None, Split, 537 (modified)	T			
140-25860-A-11	K-1801 VEN CARBON BED INLET R3 OTM-45 IMPINGERS 1,2&3 COND	None, Split, 537 (modified)	T			

Batch Notes	
Solvent	methanol lot: 214330
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 Knoxville Job No.: 140-25860-1

SDG No.:

Batch Number: 57659 Batch Start Date: 01/05/22 09:07 Batch Analyst: Clark, Courtney A

Batch Method: Split Batch End Date: 01/05/22 09:08

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount
MB 140-57645/1-A		Split, 537 (modified)		10 mL	10 mL
LCS 140-57645/2-A		Split, 537 (modified)		10 mL	10 mL
LCSD 140-57645/3-A		Split, 537 (modified)		10 mL	10 mL
140-25860-A-3-A	K-1787 VEN CARBON BED INLET R1 OTM-45 IMPINGERS 1,2&3 COND	Split, 537 (modified)	T	10 mL	10 mL
140-25860-A-7-A	K-1794 VEN CARBON BED INLET R2 OTM-45 IMPINGERS 1,2&3 COND	Split, 537 (modified)	T	10 mL	10 mL
140-25860-A-11-A	K-1801 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: 140-57645


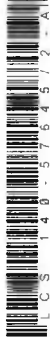
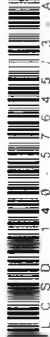
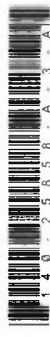
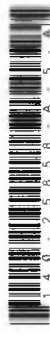
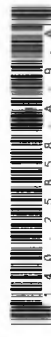




Analyst: Stout, David W

Batch Open: 1/4/2022 2:49:00PM

Method Code: 140-LCMS\_COND\_Prep-140

Batch End:

## Leaching Procedure for Condensate

Input Sample Lab ID (Analytical Method)	SDG (Job #)	GrossWt TareWt	InitAmt FinAmt	Rcvd	PHS Adj1	Adj2	Due Date	Analytical TAT	Div Rank	Comments	Output Sample Lab ID
1 MB-140-57645/1 N/A	N/A		1 Sample				N/A	N/A	N/A		 M B - 1 4 0 - 5 7 6 4 5 / 1 - A
2 LCS-140-57645/2 N/A	N/A		1 Sample				N/A	N/A	N/A		 L C S - 1 4 0 - 5 7 6 4 5 / 2 - A
3 LCSD-140-57645/3 N/A	N/A		1 Sample				N/A	N/A	N/A		 L C S D - 1 4 0 - 5 7 6 4 5 / 3 - A
4 140-25858-A-3 (PFC_IDA)	N/A (140-25858-1)	350mc	1 Sample				1/6/22	12_Day_Rush	4		 1 4 0 - 2 5 8 5 8 - A - 3 - A
5 140-25858-A-5 (PFC_IDA)	N/A (140-25858-1)	152mc	1 Sample				1/6/22	12_Day_Rush	4		 1 4 0 - 2 5 8 5 8 - A - 5 - A
6 140-25858-A-9 (PFC_IDA)	N/A (140-25858-1)	310mc	1 Sample				1/6/22	12_Day_Rush	4		 1 4 0 - 2 5 8 5 8 - A - 9 - A
7 140-25859-A-3 (PFC_IDA)	N/A (140-25859-1)	355mc	1 Sample				1/6/22	12_Days	4		 1 4 0 - 2 5 8 5 9 - A - 3 - A
8 140-25859-A-7 (PFC_IDA)	N/A (140-25859-1)	295mc	1 Sample				1/6/22	12_Days	4		 1 4 0 - 2 5 8 5 9 - A - 7 - A
9 140-25859-A-11 (PFC_IDA)	N/A (140-25859-1)	250mc	1 Sample				1/6/22	12_Days	4		 1 4 0 - 2 5 8 5 9 - A - 1 1 - A
10 140-25860-A-3 (PFC_IDA)	N/A (140-25860-1)	310mc	1 Sample				1/6/22	12_Days	4		 1 4 0 - 2 5 8 6 0 - A - 3 - A



# Aqueous Extraction Analysis Sheet

(To Accompany Samples to Instruments)


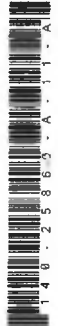

Batch Number: 140-57645

Analyst: Stout, David W

Batch Open: 1/4/2022 2:49:00PM

Method Code: 140-LCMS\_COND\_Prep-140

Batch End:

11	140-25860-A-7 (PFC_IDA)	N/A (140-25860-1)	300 mL ✓					1/6/22	12_Days	4	
12	140-25860-A-11 (PFC_IDA)	N/A (140-25860-1)	305 mL ✓					1/6/22	12_Days	4	
13	140-25967-A-1-MDLV (PFC_IDA)	2022 Q1 - PFAS (140-25967-1) (oil-shoot) MDLV	1 Sample					3/29/22	61_Days	N/A	

PFAS BATCH WORKSHEET

Lab Name: Eurofins Knoxville Job No.: 140-25860-1

SDG No.:

Batch Number: 57685 Batch Start Date: 01/05/22 15:08 Batch Analyst: Clark, Courtney A

Batch Method: Split Batch End Date: 01/11/22 10:10

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	63xMPFOA-IS 00045
MB 140-57611/1-A		Split, 537 (modified)		25 mL	10 mL	250 uL
LCS 140-57611/2-A		Split, 537 (modified)		25 mL	10 mL	250 uL
LCS 140-57611/3-A		Split, 537 (modified)		25 mL	10 mL	250 uL

Batch Notes	
Analyst ID - IS Reagent Drop	dws
Analyst ID - IS Reagent Drop Witness	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 Knoxville Job No.: 140-25860-1

SDG No.:

Batch Number: 57685 Batch Start Date: 01/05/22 15:08 Batch Analyst: Clark, Courtney A

Batch Method: Split Batch End Date: 01/11/22 10:10

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	63xxMPFOA-IS 00045
140-25860-A-1-A	K-1783, 1784 VEN CARBON BED INLET R1 OTM-45 FH	Split, Dilution, 537 (modified)	T	65 mL	10 mL	250 uL
140-25860-A-5-A	K-1790, 1791 VEN CARBON BED INLET R2 OTM-45 FH	Split, Dilution, 537 (modified)	T	64 mL	10 mL	250 uL
140-25860-A-9-A	K-1797, 1798 VEN CARBON BED INLET R3 OTM-45 FH	Split, Dilution, 537 (modified)	T	57 mL	10 mL	250 uL

Batch Notes	
Analyst ID - IS Reagent Drop	dws
Analyst ID - IS Reagent Drop Witness	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.

**EurofinsTestAmerica Knoxville Extraction Sheet**  
**PFAS in Source Air Front Half Fraction**

Prep Batch Number: 140-57611  
 Split Batch Number: 57685  
 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 140-57611/1	NA	✓	✓	✓	NA	50	✓	✓	✓	✓	✓
LCS D 140-57611/2	✓	✓	✓	✓	NA	49	✓	✓	✓	✓	✓
140-25858-A-1 (140-453612)	✓	✓	✓	✓	NA	50	✓	✓	✓	✓	✓
140-25858-A-7 (140-453621)	✓	✓	✓	✓	NA	87	✓	✓	✓	✓	✓
140-25858-A-13 (140-453630)	✓	✓	✓	✓	NA	80	✓	✓	✓	✓	✓
140-25859-A-1 (140-453634)	87	✓	✓	✓	NA	71	✓	✓	✓	✓	✓
140-25859-A-5 (140-453641)	80	✓	✓	✓	NA	130	✓	✓	✓	✓	✓
140-25859-A-9 (140-453648)	71	✓	✓	✓	NA	128	✓	✓	✓	✓	✓
140-25860-A-1 (140-453671)	130	✓	✓	✓	NA	114	✓	✓	✓	✓	✓
140-25860-A-5 (140-453678)	128	✓	✓	✓	NA	59	✓	✓	✓	✓	✓
140-25860-A-9 (140-453685)	114	✓	✓	✓	NA	0.25/CAC	✓	✓	✓	✓	✓
140-25966-A-1 MDLV	114	✓	✓	✓	NA	0.25/CAC	✓	✓	✓	✓	✓
CAC 1/11/21	NA	✓	✓	✓	NA	0.25/CAC	✓	✓	✓	✓	✓
CAC 1/11/22	NA	✓	✓	✓	NA	0.25/CAC	✓	✓	✓	✓	✓

PFAS BATCH WORKSHEET

Lab Name: Eurofins Knoxville Job No.: 140-25860-1

SDG No.:

Batch Number: 57746 Batch Start Date: 01/09/22 13:05 Batch Analyst: Stout, David W

Batch Method: Split Batch End Date: 01/12/22 12:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	63xMPFOA-IS 00045
MB 140-57613/1-A		Split, 537 (modified)		180 mL	10 mL	250 uL
LCS 140-57613/2-A		Split, 537 (modified)		180 mL	10 mL	250 uL
LCS 140-57613/3-A		Split, 537 (modified)		180 mL	10 mL	250 uL
MB 140-57613/14-A		Split, 537 (modified)		180 mL	10 mL	250 uL
140-25860-A-4-A	K-1789 VEN CARBON BED INLET R1 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Split, 537 (modified)	T	180 mL	10 mL	250 uL
140-25860-A-8-A	K-1796 VEN CARBON BED INLET R2 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Split, 537 (modified)	T	180 mL	10 mL	250 uL
140-25860-A-12-A	K-1803 VEN CARBON BED INLET R3 OTM-45 BREAKTHROUGH XAD-2 RESIN TUBE	Split, 537 (modified)	T	180 mL	10 mL	250 uL

Batch Notes	
Analyst ID - IS Reagent Drop	cac
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 Knoxville Job No.: 140-25860-1

SDG No.:

Batch Number: 57746 Batch Start Date: 01/09/22 13:05 Batch Analyst: Stout, David W

Batch Method: Split Batch End Date: 01/12/22 12:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	63xxMPFOA-IS 00045
140-25860-A-2-A	K-1785, 1786,1789 VEN CARBON BED INLET R1 OTM-45 BH	Split, Dilution, 537 (modified)	T	180 mL	10 mL	250 uL
140-25860-A-6-A	K-1792, 1793, 1795 VEN CARBON BED INLET R2 OTM-45 BH	Split, Dilution, 537 (modified)	T	180 mL	10 mL	250 uL
140-25860-A-10-A	K-1799, 1800, 1802 VEN CARBON BED INLET R3 OTM-45 BH	Split, Dilution, 537 (modified)	T	180 mL	10 mL	250 uL

Batch Notes	
Analyst ID - IS Reagent Drop	cac
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.

**EurofinsTestAmerica Knoxville Extraction Sheet**  
**PFAS in Source Air Back Half Fraction**

Prep Batch Number: 140-57613  
 Split Batch Number: 57746  
 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% 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 0.45µm PVDF filter disk.
MB 140-57613/1	NA	✓	✓	✓	NA	190	✓	✓	✓	✓	✓	✓	✓	✓
LCS 140-57613/2	✓	✓	✓	✓	NA	190	✓	✓	✓	✓	✓	✓	✓	✓
LCSD 140-57613/3	220	NA	✓	✓	NA	190	✓	✓	✓	✓	✓	✓	✓	✓
140-25858-A-2 (140-453614)	NA	NA	✓	✓	NA	190	✓	✓	✓	✓	✓	✓	✓	✓
140-25858-A-4 (140-453618)	NA	NA	✓	✓	NA	190	✓	✓	✓	✓	✓	✓	✓	✓
140-25858-A-6 (140-453620)	NA	NA	✓	✓	NA	190	✓	✓	✓	✓	✓	✓	✓	✓
140-25858-A-8 (140-453623)	110.3	NA	✓	✓	NA	190	✓	✓	✓	✓	✓	✓	✓	✓
140-25858-A-10 (140-453627)	NA	NA	✓	✓	NA	190	✓	✓	✓	✓	✓	✓	✓	✓
140-25858-A-12 (140-453629)	198	NA	✓	✓	NA	190	✓	✓	✓	✓	✓	✓	✓	✓
140-25859-A-2 (140-453636)	NA	NA	✓	✓	NA	190	✓	✓	✓	✓	✓	✓	✓	✓
140-25859-A-4 (140-453640)	222	NA	✓	✓	NA	190	✓	✓	✓	✓	✓	✓	✓	✓
140-25859-A-6 (140-453643)	NA	NA	✓	✓	NA	190	✓	✓	✓	✓	✓	✓	✓	✓
140-25859-A-8 (140-453647)	203	NA	✓	✓	NA	190	✓	✓	✓	✓	✓	✓	✓	✓
MB 140-57613/14	NA	NA	✓	✓	NA	190	✓	✓	✓	✓	✓	✓	✓	✓
140-25859-A-10 (140-453650)	198	NA	✓	✓	NA	190	✓	✓	✓	✓	✓	✓	✓	✓
140-25859-A-12 (140-453654)	187	NA	✓	✓	NA	190	✓	✓	✓	✓	✓	✓	✓	✓
140-25860-A-2 (140-453673)	214	NA	✓	✓	NA	190	✓	✓	✓	✓	✓	✓	✓	✓
140-25860-A-4 (140-453677)	NA	NA	✓	✓	NA	190	✓	✓	✓	✓	✓	✓	✓	✓
140-25860-A-6 (140-453680)	NA	NA	✓	✓	NA	190	✓	✓	✓	✓	✓	✓	✓	✓
140-25860-A-8 (140-453684)	NA	NA	✓	✓	NA	190	✓	✓	✓	✓	✓	✓	✓	✓
140-25860-A-10 (140-453687)	NA	NA	✓	✓	NA	190	✓	✓	✓	✓	✓	✓	✓	✓
140-25860-A-12 (140-453691)	NA	NA	✓	✓	NA	190	✓	✓	✓	✓	✓	✓	✓	✓
140-259655-A-1 MDLV	NA	NA	✓	✓	NA	190	✓	✓	✓	✓	✓	✓	✓	✓
CAC 01/12/22	NA	NA	✓	✓	NA	190	✓	✓	✓	✓	✓	✓	✓	✓

OP136R2 081721 PFAS Back Half (TALS)

PFAS BATCH WORKSHEET

Lab Name: Eurofins Knoxville Job No.: 140-25860-1

SDG No.:

Batch Number: 57913 Batch Start Date: 01/13/22 18:00 Batch Analyst: Cochran, James R

Batch Method: Dilution Batch End Date: 01/13/22 18:20

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialVolume1	FinalVolume1	InitialVolume2	FinalVolume2	DilutionFactor	CalcMsg
140-25860-A-1-B	K-1783, 1784 VEN CARBON BED INLET R1 OTM-45 FH	Dilution, 537 (modified)	T	100 uL	10000 uL	1000 uL	10000 uL	1000 No Unit	OK
140-25860-A-5-B	K-1790, 1791 VEN CARBON BED INLET R2 OTM-45 FH	Dilution, 537 (modified)	T	100 uL	10000 uL	1000 uL	10000 uL	1000 No Unit	OK
140-25860-A-9-B	K-1797, 1798 VEN CARBON BED INLET R3 OTM-45 FH	Dilution, 537 (modified)	T	100 uL	10000 uL	1000 uL	10000 uL	1000 No Unit	OK
140-25860-A-2-B	K-1785, 1789 VEN CARBON BED INLET R1 OTM-45 BH	Dilution, 537 (modified)	T	200 uL	10000 uL	100 uL	10000 uL	5000 No Unit	OK
140-25860-A-6-B	K-1792, 1793, 1795 VEN CARBON BED INLET R2 OTM-45 BH	Dilution, 537 (modified)	T	200 uL	10000 uL	100 uL	10000 uL	5000 No Unit	OK
140-25860-A-10-B	K-1799, 1800, 1802 VEN CARBON BED INLET R3 OTM-45 BH	Dilution, 537 (modified)	T	200 uL	10000 uL	100 uL	10000 uL	5000 No Unit	OK

Lab Sample ID	Client Sample ID	Method Chain	Basis	63xxMPFC_IDA 00038	63xxMPFOA-IS 00042
140-25860-A-1-B	K-1783, 1784 VEN CARBON BED INLET R1 OTM-45 FH	Dilution, 537 (modified)	T	0.25 mL	0.25 mL
140-25860-A-5-B	K-1790, 1791 VEN CARBON BED INLET R2 OTM-45 FH	Dilution, 537 (modified)	T	0.25 mL	0.25 mL
140-25860-A-9-B	K-1797, 1798 VEN CARBON BED INLET R3 OTM-45 FH	Dilution, 537 (modified)	T	0.25 mL	0.25 mL
140-25860-A-2-B	K-1785, 1789 VEN CARBON BED INLET R1 OTM-45 BH	Dilution, 537 (modified)	T	0.25 mL	0.25 mL
140-25860-A-6-B	K-1792, 1793, 1795 VEN CARBON BED INLET R2 OTM-45 BH	Dilution, 537 (modified)	T	0.25 mL	0.25 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 Knoxville Job No.: 140-25860-1

SDG No.:

Batch Number: 57913 Batch Start Date: 01/13/22 18:00 Batch Analyst: Cochran, James R

Batch Method: Dilution Batch End Date: 01/13/22 18:20

Lab Sample ID	Client Sample ID	Method Chain	Basis	63xxMPFC_IDA	63xxMPFOA-IS		
140-25860-A-10-B	K-1799, 1800, 1802 VEN CARBON BED INLET R3 OTM-45 BH	Dilution, 537 (modified)	T	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.

# Shipping and Receiving Documents

<b>Project Identification:</b> 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
<b>Analytical Testing QC Requirements:</b> 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	

<b>Laboratory Deliverable Turnaround Requirements:</b>	
Analytical Due Date: (Review-Released Data)	21 Days from Lab Receipt
Data Package Due Date:	28 Days from Lab Receipt
<b>Laboratory Destination:</b> TestAmerica Laboratories, Inc. 5815 Middlebrook Pike Knoxville, TN 37921	
<b>Lab Phone Number:</b>	865.291.3000
<b>Courier:</b>	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.

<b>Analytical Parameter:</b> HFPO-DA (CAS No. 13252-13-6)	<b>Holding Time Requirements:</b> 14 Days to Extraction; 40 Days to Analysis	<b>Preservation Requirements:</b> Cool, 4°C
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Field Sample No./Sample Coding ID	Run No.	Sample Collection Date	Project QC Requirements	Sample Bottle/ Container	Sample Type/Analysis	Analytical Specifications
K-1783 VEN Carbon Bed Inlet R1 OTM-45 Particulate Filter  (Combine with K-1784)	1	12/16/21		125 mL HDPE Wide-Mouth Bottle	Particulate Filter (82.6 mm Whatman Glass Microfiber)  OTM-45 Train  HFPO-DA Analysis	<b>Knoxville:</b> 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-1784 VEN Carbon Bed Inlet R1 OTM-45 FH of Filter Holder & Probe Methanol Rinse  (Combine with K-1783)	1	12/16/21		125 mL HDPE Wide-Mouth Bottle	Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse  OTM-45 Train  HFPO-DA Analysis	<b>Knoxville:</b> Use this solvent sample in the Particulate Filter extraction.
K-1785 VEN Carbon Bed Inlet R1 OTM-45 XAD-2 Resin Tube	1	12/16/21		XAD-2 Resin Tube	XAD-2 Resin Tube  OTM-45 Train  HFPO-DA Analysis	<b>Knoxville:</b> 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-1786 VEN Carbon Bed Inlet R1 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse  (Combine with K-1785)	1	12/16/21		125 mL HDPE Wide- Mouth Bottle	<b>Back Half of Filter Holder &amp; Coil Condenser Methanol/5% Ammonium Hydroxide Rinse</b>  OTM-45 Train  HFPO-DA Analysis	<b>Knoxville:</b> Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction.
K-1787 VEN Carbon Bed Inlet R1 OTM-45 Impingers 1,2 & 3 Condensate	1	12/16/21		500 mL HDPE Wide- Mouth Bottle	<b>Impinger #1, #2 &amp; #3 Condensate</b>  OTM-45 Train  HFPO-DA Analysis	<b>Knoxville:</b> Analyze the sample for HFPO-DA.
K-1788 VEN Carbon Bed Inlet R1 OTM-45 Impinger Glassware MeOH Rinse  (Combine with K-1785)	1	12/16/21		250 mL HDPE Wide- Mouth Bottle	<b>Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse</b>  OTM-45 Train  HFPO-DA Analysis	<b>Knoxville:</b> Use this solvent sample in the XAD-2 Resin Extraction.
K-1789 VEN Carbon Bed Inlet R1 OTM-45 Breakthrough XAD-2 Resin Tube	1	12/16/21		XAD-2 Resin Tube	<b>Breakthrough XAD-2 Resin Tube</b>  OTM-45 Train  HFPO-DA Analysis	<b>Knoxville:</b> 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-1790 VEN Carbon Bed Inlet R2 OTM-45 Particulate Filter  (Combine with K-1791)	2	12/16/21		125 mL HDPE Wide- Mouth Bottle	<b>Particulate Filter (82.6 mm Whatman Glass Microfiber)</b>  OTM-45 Train  HFPO-DA Analysis	<b>Knoxville:</b> 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-1791 VEN Carbon Bed Inlet R2 OTM-45 Front Half of Filter Holder & Probe Methanol Rinse  (Combine with K-1790)	2	12/16/21		125 mL HDPE Wide- Mouth Bottle	<b>Front Half of Filter Holder &amp; Probe Methanol/5% Ammonium Hydroxide Rinse</b>  OTM-45 Train  HFPO-DA Analysis	<b>Knoxville:</b> 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-1792 VEN Carbon Bed Inlet R2 OTM-45 XAD-2 Resin Tube	2	12/16/21		XAD-2 Resin Tube	XAD-2 Resin Tube  OTM-45 Train  HFPO-DA Analysis	<b>Knoxville:</b> 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-1793 VEN Carbon Bed Inlet R2 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse  (Combine with K-1792)	2	12/16/21		125 mL HDPE Wide-Mouth Bottle	Back Half of Filter Holder & Coil Condenser Methanol/5% Ammonium Hydroxide Rinse  OTM-45 Train  HFPO-DA Analysis	<b>Knoxville:</b> Use this solvent sample and the Impinger Glassware Methanol Rinse in the XAD-2 Resin extraction.
K-1794 VEN Carbon Bed Inlet R2 OTM-45 Impingers 1,2 & 3 Condensate	2	12/16/21		500 mL HDPE Wide-Mouth Bottle	Impinger #1, #2 & #3 Condensate  OTM-45 Train  HFPO-DA Analysis	<b>Knoxville:</b> Analyze the sample for HFPO-DA.
K-1795 VEN Carbon Bed Inlet R2 OTM-45 Impinger Glassware MeOH Rinse  (Combine with K-1792)	2	12/16/21		250 mL HDPE Wide-Mouth Bottle	Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse  OTM-45 Train  HFPO-DA Analysis	<b>Knoxville:</b> Use this solvent sample in the XAD-2 Resin Extraction.
K-1796 VEN Carbon Bed Inlet R2 OTM-45 Breakthrough XAD-2 Resin Tube	2	12/16/21		XAD-2 Resin Tube	Breakthrough XAD-2 Resin Tube  OTM-45 Train  HFPO-DA Analysis	<b>Knoxville:</b> 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-1797 VEN Carbon Bed Inlet R3 OTM-45 Particulate Filter  (Combine with K-1798)	3	12/16/21		125 mL HDPE Wide- Mouth Bottle	Particulate Filter (82.6 mm Whatman Glass Microfiber)  OTM-45 Train  HFPO-DA Analysis	<b>Knoxville:</b> Spike sample with the Isotope Dilution Internal Standard (DIS) 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-1798 VEN Carbon Bed Inlet R3 OTM-45 Front Half of Filter Holder & Probe Methanol Rinse  (Combine with K-1797)	3	12/16/21		125 mL HDPE Wide- Mouth Bottle	Front Half of Filter Holder & Probe Methanol/5% Ammonium Hydroxide Rinse  OTM-45 Train  HFPO-DA Analysis	<b>Knoxville:</b> Use this solvent sample in the Particulate Filter extraction.
K-1799 VEN Carbon Bed Inlet R3 OTM-45 XAD- 2 Resin Tube	3	12/16/21		XAD-2 Resin Tube	XAD-2 Resin Tube  OTM-45 Train  HFPO-DA Analysis	<b>Knoxville:</b> Spike sample with the Isotope Dilution Internal Standard (DIS) 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-1800 VEN Carbon Bed Inlet R3 OTM-45 BH of Filter Holder & Coil Condenser Methanol Rinse  (Combine with K-1799)	3	12/16/21		125 mL HDPE Wide- Mouth Bottle	Back Half of Filter Holder & Coil Condenser Methanol/5% Ammonium Hydroxide Rinse  OTM-45 Train  HFPO-DA Analysis	<b>Knoxville:</b> 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-1801 VEN Carbon Bed Inlet R3 OTM-45 Impingers 1,2 & 3 Condensate	3	12/16/21		500 mL HDPE Wide- Mouth Bottle	Impinger #1, #2 & #3 Condensate  OTM-45 Train  HFPO-DA Analysis	<b>Knoxville:</b> Analyze the sample for HFPO-DA.
K-1802 VEN Carbon Bed Inlet R3 OTM-45 Impinger Glassware MeOH Rinse  (Combine with K-1799)	3	12/16/21		250 mL HDPE Wide- Mouth Bottle	Impinger Glassware Methanol/5% Ammonium Hydroxide Rinse  OTM-45 Train  HFPO-DA Analysis	<b>Knoxville:</b> 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-1803 VEN Carbon Bed Inlet R3 OTM-45 Breakthrough XAD-2 Resin Tube	3	12/11/21		XAD-2 Resin Tube	Breakthrough XAD-2 Resin Tube  OTM-45 Train  HFPO-DA Analysis	<b>Knoxville:</b> 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:

N/A 1.6°C / 1.5°C RACT

(3) Record any apparent sample loss/breakage.

N/A

(4) Record any unidentified samples transported with this shipment of samples:

N/A

(5) Indicate if all samples were received according to the project's required specifications (i.e. no nonconformances):


N/A

**Custody Transfer:**

Relinquished By:	<u>Patricia May</u> Name	<u>AST</u> Company	<u>12/16/21 1915</u> Date/Time
Accepted By:	<u>Day Gill</u> Name	<u>ETA KNOX</u> Company	<u>12/16/21 1915</u> Date/Time
Relinquished By:	<u>Day Gill</u> Name	<u>ETA KNOX</u> Company	<u>12/18/21 1630</u> Date/Time
Accepted By:	<u>Paulette Harris</u> Name	<u>ETA KNOX</u> Company	<u>12/18/21 16:30</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



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 checked="" type="checkbox"/>	<input type="checkbox"/> Checked in lab	
3. The coolers/containers custody seal if present, is it intact?			<input checked="" type="checkbox"/>	<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>SC-71</u> Correction factor: <u>-0.1°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 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	Labeling Verified by: _____ Date: _____
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	pH test strip lot number: _____
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	Box 16A: pH Preservation Box 18A: Residual Chlorine
15. Were samples received within holding time?	<input checked="" type="checkbox"/>			<input type="checkbox"/> Holding Time - Receipt	Preservative: _____ Lot Number: _____
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	Exp Date: _____ Analyst: _____ Date: _____ Time: _____
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:			<input checked="" type="checkbox"/>		
19. For 1613B water samples is pH<9?			<input checked="" type="checkbox"/>	<input type="checkbox"/> If no, notify lab to adjust	
20. For rad samples was sample activity info. Provided?			<input checked="" type="checkbox"/>	<input type="checkbox"/> Project missing info	
Project #:				PM Instructions: 	

## Appendix D

Location Chemours Company - Fayetteville Works Facility, NC

Source VEN Carbon Bed Inlet

Project No. 2021-3126

Parameter HFPO-DA

Date	Nozzle ID	#1	#2	Nozzle Diameter (in.)		Difference	Criteria	Material
				#3	Dn (Average)			
12/15/21	G-1	0.256	0.256	0.256	0.256	0.000	≤ 0.004 in.	glass
Date	Pitot ID	Evidence of damage?	Evidence of mis-alignment?	Calibration or Repair required?				
12/15/21	P4-1	no	no	no				
Date	Probe or Thermocouple ID	Reference Temp. (°F)	Indicated Temp. (°F)	Difference	Criteria	Probe Length		
12/15/21	TC 7D	33.0	34.0	0.2%	± 1.5 % (absolute)	5 feet		
Field Balance Check								
Date	12/16/21							
Balance ID:	Citizen							
Test Weight ID:	Troemner							
Certified Weight (g):	200.0							
Measured Weight (g):	200.2							
Weight Difference (g):	-0.2	--	--	--	--	--		
Date	Barometric Pressure	Evidence of damage?	Reading Verified	Calibration or Repair required?	Weather Station Location			
12/15/21	Weather Station	NA	NA	NA	Fayetteville, NC			
Date	Meter Box ID	Positive Pressure Leak Check						
12/16/21	5	Pass						
Reagent	Lot#	Field Prep performed	Field Lot	Date	By			
DH2O	TA/Eurofins							
Methanol/Ammonia Mix	TA/Eurofins							

**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 #	K' FACTOR (AVG)	TESTED VACUUM (in Hg)	DGM READINGS (FT <sup>3</sup> )		TEMPERATURES °F			ELAPSED TIME (MIN)	DGM DH (in H <sub>2</sub> O)	V <sub>m</sub> (STD)	(1)	(2)	(3)	Y % Diff to Average Y	Y % Diff with other orifices	DH <sub>g</sub>
				INITIAL	FINAL	INITIAL	FINAL	DGM INLET									
METER PART #:		DATE: 1/11/2021		METER SERIAL #: MB 5		BAROMETRIC PRESSURE (in Hg):		INITIAL	FINAL	AVG (P <sub>bar</sub> )							
				CRITICAL ORIFICE SET SERIAL #: 1393				29.92	29.92	29.92							
11	1	0.306	23.5	606.287	614.284	7.997	64	65	66	67	66	66	8.0016	0.995	0.43	0.82	1.80
													AVG =	0.995			
16	1	0.4268	22	614.297	619.908	5.611	65	66	67	66	66	66.25	5.5749	0.988	-0.36	0.02	1.91
													AVG =	0.988			
18	1	0.4961	21	619.923	626.441	6.518	66	67	68	66	66	66.75	6.4739	0.987	-0.38	-0.02	1.89
													AVG =	0.987			
26	1	0.7131	19	626.447	635.794	9.347	66	68	72	67	67	68.5	9.3057	0.989	-0.18	0.20	1.90
													AVG =	0.989			
31	1	0.8358	17.5	635.813	646.695	10.882	67	71	74	68	69	70.5	10.9392	0.996	0.50	0.89	1.90
													AVG =	0.996			

**USING THE CRITICAL ORIFICES AS CALIBRATION STANDARDS:**  
 The following equations are used to calculate the standard volumes of air passed through the DGM, V<sub>m</sub> (std), and the critical orifice, V<sub>cr</sub> (std), and the DGM calibration factor, Y. These equations are automatically calculated in the spreadsheet above.

$$(1) \quad V_{m(std)} = K' * I_{m} * \frac{P_{bar} + (\Delta H / 13.6)}{I_{m}}$$

$$(2) \quad V_{cr(std)} = K' * \frac{P_{bar} * \Theta}{\sqrt{I_{amb}}}$$

$$(3) \quad Y = \frac{V_{cr(std)}}{V_{m(std)}}$$

= Net volume of gas sample passed through DGM, corrected to standard conditions  
 K<sub>1</sub> = 17.64 °R/in. Hg (English), 0.3858 °K/mm Hg (Metric)

T<sub>m</sub> = Absolute DGM avg. temperature (°R - English, °K - Metric)

= Volume of gas sample passed through the critical orifice, corrected to standard conditions  
 T<sub>amb</sub> = 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 = 0.991

AVERAGE DH<sub>g</sub> = 1.88

$$DH_g = \left( \frac{0.75 d}{V_{cr}(std)} \right)^2 DH \left( \frac{V_m(Std)}{V_m} \right)$$

### 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
$\alpha_1$ (-10° = $\alpha_1$ = + 10°)	1
$\alpha_2$ (-10° = $\alpha_2$ = + 10°)	0
$\beta_1$ (-5° = $\beta_1$ = + 5°)	1
$\beta_2$ (-5° = $\beta_2$ = + 5°)	1
$\gamma$	1
$\Theta$	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

Degree indicating level position for determining  $\alpha_1$  and  $\alpha_2$ .

Degree indicating level position for determining  $\beta_1$  and  $\beta_2$ .

Degree indicating level position for determining  $\Theta$ .

Degree indicating level position for determining  $\gamma$  then calculate Z.

#### 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

	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

Location Chemours Company - Fayetteville Works Facility, NC

Source VEN Carbon Bed Outlet

Project No. 2021-3126

Parameter HFPO-DA

Date	Nozzle ID	#1	#2	Nozzle Diameter (in.)		Difference	Criteria	Material
				#3	Dn (Average)			
12/15/21	G-2	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?				
12/15/21	P4-2	no	no	no				
Date	Probe or Thermocouple ID	Reference Temp. (°F)	Indicated Temp. (°F)	Difference	Criteria	Probe Length		
12/15/21	TC 5D	33.0	33.0	0.0%	± 1.5 % (absolute)	5 feet		
Field Balance Check								
Date	12/16/21							
Balance ID:	Citizen							
Test Weight ID:	Troemner							
Certified Weight (g):	200.0							
Measured Weight (g):	200.2							
Weight Difference (g):	-0.2	--	--	--	--	--		
Date	Barometric Pressure	Evidence of damage?	Reading Verified	Calibration or Repair required?	Weather Station Location			
12/15/21	Weather Station	NA	NA	NA	Fayetteville, NC			
Date	Meter Box ID	Positive Pressure Leak Check						
12/16/21	15	Pass						
Reagent	Lot#	Field Prep performed	Field Lot	Date	By			
DH2O	TA/Eurofins							
Methanol/Ammonia Mix	TA/Eurofins							



**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: 1/29/2021		METER SERIAL #: MB 15		INITIAL BAROMETRIC PRESSURE (in Hg): 30.31		FINAL AVG (P <sub>bar</sub> ): 30.31								
METER PART #:		CRITICAL ORIFICE SET SERIAL #: 1393		TEMPERATURES - F		ELAPSED TIME (MIN)		DGM DH (in H <sub>2</sub> O)		Y % Diff to Average Y		Y % Diff with other orifices		
ORIFICE #	RUN #	K' FACTOR (AVG)	TESTED VACUUM (in Hg)	DGM READINGS (FT <sup>3</sup> )		DGM INLET	DGM OUTLET	DGM INLET	DGM OUTLET	DGM AVG	(1) V <sub>m</sub> (STD)	(2) V <sub>c</sub> (STD)	(3) Y	
				INITIAL	FINAL									INITIAL
11	1	0.306	23.5	904.166	911.776	62	61	63	61	63	7.8088	8.1214	1.040	1.75
	2	0.306												
	3	0.306												
16	1	0.4268	22.5	911.776	917.160	62	63	62	63	62	5.5260	5.6638	1.025	1.80
	2	0.4268												
	3	0.4268												
18	1	0.4961	20.5	920.808	927.087	62	63	64	63	64	6.4354	6.5834	1.023	1.60
	2	0.4961												
	3	0.4961												
26	1	0.7131	17.5	927.087	936.166	62	64	65	64	65	9.3211	9.4630	1.015	1.74
	2	0.7131												
	3	0.7131												
31	1	0.8358	17.5	936.166	946.770	62	65	66	65	66	10.8892	11.1246	1.022	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<sub>m</sub> (std), and the critical orifice, V<sub>c</sub> (std), and the DGM calibration factor, Y. These equations are automatically calculated in the spreadsheet above.

$$(1) Vm_{(std)} = K_1 * Vm * Pbar + (\Delta H / 13.6) / Tm$$

$$(2) Vcr_{(std)} = K' * Pbar * \Theta / \sqrt{Tamb}$$

$$(3) Y = Vcr_{(std)} / Vm_{(std)}$$

= Net volume of gas sample passed through DGM, corrected to standard conditions

K<sub>1</sub> = 17.64 °R/(in. Hg (English), 0.3858 °K/mm Hg (Metric))

T<sub>m</sub> = Absolute DGM avg. temperature (°R - English, °K - Metric)

= Volume of gas sample passed through the critical orifice, corrected to standard conditions

T<sub>amb</sub> = 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<sub>g</sub> = 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 P4-2/TC-5D

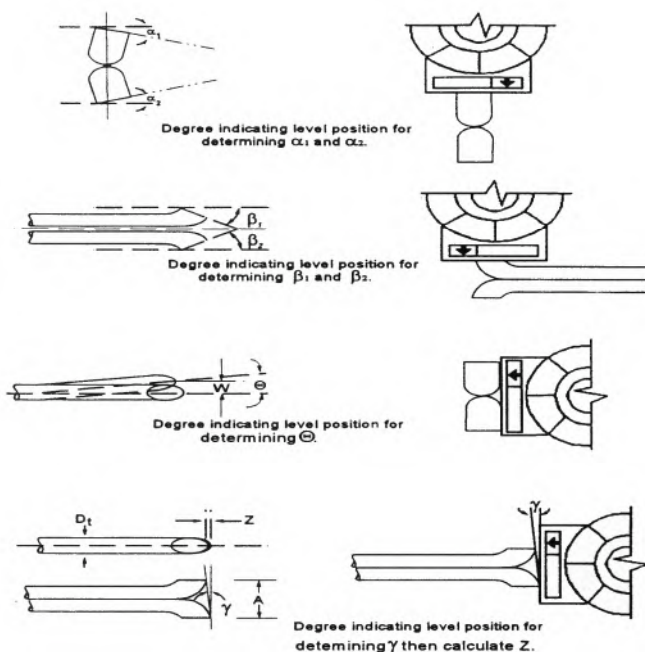
 Date 01/28/21

 Technician SRW

#### "S" Type Pitot Calibration

Is the Pitot Level and Perpendicular?	Yes
Is There any Obstruction?	No
Is the Pitot Damaged	No
$\alpha_1$ (-10° = $\alpha_1$ = + 10°)	2
$\alpha_2$ (-10° = $\alpha_2$ = + 10°)	1
$\beta_1$ (-5° = $\beta_1$ = + 5°)	1
$\beta_2$ (-5° = $\beta_2$ = + 5°)	1
$\gamma$	1
$\Theta$	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



#### 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.

$Y \geq 7.62 \text{ cm (3 in.)}$

#### Thermocouple Calibration

	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%



## Appendix E

Date 12/16/2021

Time	800	900	1000	1100	1200	1300	1400	1500	1600
Stack Testing			Run 1: 923-1128			Run 2: 1208-1408		Run 3: 1444-1646	
VEN Product	PSEPVE								
VEN Precursor									
VEN Condensation (HFPO)									
VEN ABR	Burnout								
VEN Refining									
Stripper Column Vent									

**Last Page of Report**