

## ANALYTICAL REPORT

Job Number: 480-164221-1

Job Description: Camp Smith #360140

Contract Number: C100700

For:

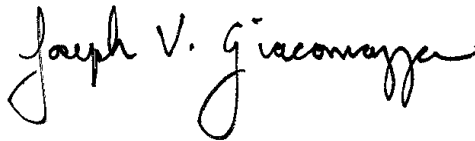
New York State D.E.C.

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11th Floor

Albany, NY 12233-3256

Attention: Mr. Daniel Lanners



Approved for release.  
Joe V Giacomazza  
Project Management Assistant II  
1/10/2020 11:35 AM

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Designee for  
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01/10/2020

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

**Eurofins TestAmerica, Buffalo**

10 Hazelwood Drive, Amherst, NY 14228-2298

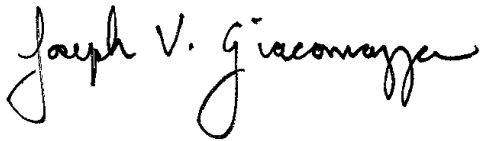
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Job Number: 480-164221-1

Job Description: Camp Smith #360140

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Approved for release.  
Joe V Giacomazza  
Project Management Assistant II  
1/10/2020 11:35 AM

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Designee for  
Judy L Stone

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**Job Narrative**  
**480-164221-1**

**Comments**

No additional comments.

**Receipt**

The samples were received on 12/14/2019 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 2.7° C, 2.9° C, 3.2° C and 3.4° C.

**GC/MS Semi VOA**

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

**LCMS**

Method 537 (modified): The matrix spike duplicate (MSD) recoveries and precision for preparation batch 200-150841 and analytical batch 200-150985 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) precision was within acceptance limits.

Method 537 (modified): The Ion Ratio associated with PFOS in sample AOI 3 GW 2 DER (480-164221-6) fails our in-house defined limits, however the result is being reported because the peaks observed for both mass transitions are within the expected retention time windows for the branched chain isomers in our calibration mix. Since many of these isomers are at very low levels in our mixed calibration source (many are less than 5% of the solution), it's difficult to project how the different isomer's responses differ at higher levels, so we don't feel comfortable rejecting the detect based solely upon the ratio failure

Method 537 (modified): 13C2 PFUnA, 13C2 PFDoA, d3-NMeFOSAA, d5-NEtFOSAA and 13C2 PFTeDA Isotope Dilution Analyte (IDA) recoveries associated with the following sample is below the method recommended limit: AOI 1 GW1 DER (480-164221-13). Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample(s). All detection limits are below the lower calibration.

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

**Organic Prep**

Method 3510C: Due to the matrix, the initial volume(s) used for the following sample deviated from the standard procedure: AOI 3 GW 2 DER (480-164221-6). The reporting limits (RLs) have been adjusted proportionately.

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

# Definitions/Glossary

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

## Qualifiers

### GC/MS Semi VOA

Qualifier	Qualifier Description
E	Result exceeded calibration range.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### LCMS

Qualifier	Qualifier Description
*	Isotope Dilution analyte is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

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

# Sample Summary

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-164221-1	CS RW 2 DER	Water	12/12/19 12:34	12/14/19 09:00	
480-164221-2	FIELD DUP 2	Water	12/12/19 00:00	12/14/19 09:00	
480-164221-3	CS RW 1 DER	Water	12/12/19 12:10	12/14/19 09:00	
480-164221-4	CS SW 04 DER	Water	12/12/19 11:31	12/14/19 09:00	
480-164221-5	FIELD DUP	Water	12/12/19 00:00	12/14/19 09:00	
480-164221-6	AOI 3 GW 2 DER	Water	12/10/19 13:40	12/14/19 09:00	
480-164221-7	AOI 1 GW 2 DER	Water	12/11/19 12:25	12/14/19 09:00	
480-164221-8	CS SW 01 DER	Water	12/12/19 09:00	12/14/19 09:00	
480-164221-9	EQUIPMENT BLANK	Water	12/11/19 12:35	12/14/19 09:00	
480-164221-10	CS SW 05 DER	Water	12/11/19 15:25	12/14/19 09:00	
480-164221-11	CS SW 03 DER	Water	12/12/19 10:35	12/14/19 09:00	
480-164221-12	CS SW 02 DER	Water	12/12/19 09:50	12/14/19 09:00	
480-164221-13	AOI 1 GW1 DER	Water	12/11/19 11:35	12/14/19 09:00	
480-164221-14	AOI 3 GW1 DER	Water	12/10/19 15:05	12/14/19 09:00	
480-164221-15	AOI 1 GW3 DER	Water	12/11/19 09:45	12/14/19 09:00	

# Detection Summary

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

## Client Sample ID: CS RW 2 DER

Lab Sample ID: 480-164221-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	4.3		1.7	0.87	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	6.2		1.7	0.55	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	8.4		1.7	0.66	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.6		1.7	0.79	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	5.2		1.7	0.70	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.32	J	1.7	0.23	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.1		1.7	0.43	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	22		1.7	0.69	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	49		1.7	0.53	ng/L	1		537 (modified)	Total/NA

## Client Sample ID: FIELD DUP 2

Lab Sample ID: 480-164221-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	5.3		1.9	0.94	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	9.9		1.9	0.59	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	12		1.9	0.72	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	3.2		1.9	0.86	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	6.2		1.9	0.76	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.26	J	1.9	0.25	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.5		1.9	0.46	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	26		1.9	0.75	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	43		1.9	0.57	ng/L	1		537 (modified)	Total/NA

## Client Sample ID: CS RW 1 DER

Lab Sample ID: 480-164221-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	5.4		1.9	0.97	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	10		1.9	0.61	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	12		1.9	0.74	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	3.5		1.9	0.88	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	5.9		1.9	0.78	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.31	J	1.9	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.5		1.9	0.47	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	25		1.9	0.77	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	45		1.9	0.59	ng/L	1		537 (modified)	Total/NA

## Client Sample ID: CS SW 04 DER

Lab Sample ID: 480-164221-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluoropentanoic acid (PFPeA)	0.64	J	1.7	0.54	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	1.7		1.7	0.70	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.35	J	1.7	0.23	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.57	J	1.7	0.42	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.82	J	1.7	0.69	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.1	J	1.7	0.52	ng/L	1		537 (modified)	Total/NA

## Client Sample ID: FIELD DUP

Lab Sample ID: 480-164221-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	1.0	J	1.6	0.82	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	1.7		1.6	0.67	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.31	J	1.6	0.22	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.50	J	1.6	0.40	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Buffalo

# Detection Summary

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

## Client Sample ID: AOI 3 GW 2 DER

Lab Sample ID: 480-164221-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	4.0		1.9	0.95	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	4.7		1.9	0.60	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	4.0		1.9	0.72	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	2.4		1.9	0.87	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	12		1.9	0.77	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.69	J	1.9	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.7	J	1.9	0.47	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	0.90	J	1.9	0.76	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.5	I	1.9	0.58	ng/L	1		537 (modified)	Total/NA

## Client Sample ID: AOI 1 GW 2 DER

Lab Sample ID: 480-164221-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	4.0		1.8	0.92	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	1.2	J	1.8	0.58	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	1.1	J	1.8	0.70	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	1.1	J	1.8	0.83	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	6.9		1.8	0.74	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	1.6	J	1.8	0.25	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.75	J	1.8	0.45	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.0		1.8	0.73	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.4		1.8	0.56	ng/L	1		537 (modified)	Total/NA

## Client Sample ID: CS SW 01 DER

Lab Sample ID: 480-164221-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	0.81	J	1.7	0.69	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.3	J	1.7	0.68	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.5	J	1.7	0.52	ng/L	1		537 (modified)	Total/NA

## Client Sample ID: EQUIPMENT BLANK

Lab Sample ID: 480-164221-9

No Detections.

## Client Sample ID: CS SW 05 DER

Lab Sample ID: 480-164221-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	1.4	J	1.7	0.86	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	0.79	J	1.7	0.54	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	0.72	J	1.7	0.66	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	1.9		1.7	0.70	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.55	J	1.7	0.23	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.78	J	1.7	0.42	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.4	J	1.7	0.69	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	1.6	J	1.7	0.53	ng/L	1		537 (modified)	Total/NA

## Client Sample ID: CS SW 03 DER

Lab Sample ID: 480-164221-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.94	J	1.8	0.89	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	0.92	J	1.8	0.72	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Buffalo

# Detection Summary

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

## Client Sample ID: CS SW 02 DER

## Lab Sample ID: 480-164221-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorooctanoic acid (PFOA)	1.1	J	1.7	0.70	ng/L	1		537 (modified)	Total/NA

## Client Sample ID: AOI 1 GW1 DER

## Lab Sample ID: 480-164221-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	0.18	J	0.20	0.10	ug/L	1		8270D SIM ID	Total/NA
Perfluorobutanoic acid (PFBA)	12		1.7	0.84	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	9.0		1.7	0.53	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	12		1.7	0.64	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	6.6		1.7	0.77	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	35		1.7	0.68	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	9.1		1.7	0.23	ng/L	1		537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	2.3		1.7	0.65	ng/L	1		537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	0.96	J	1.7	0.66	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.7		1.7	0.41	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	17		1.7	0.67	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	28		1.7	0.51	ng/L	1		537 (modified)	Total/NA

## Client Sample ID: AOI 3 GW1 DER

## Lab Sample ID: 480-164221-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	28		1.8	0.92	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	34		1.8	0.58	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	34		1.8	0.70	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	14		1.8	0.84	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	65		1.8	0.75	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	7.2		1.8	0.25	ng/L	1		537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	1.1	J	1.8	0.71	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	5.0		1.8	0.45	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	8.2		1.8	0.74	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	17		1.8	0.56	ng/L	1		537 (modified)	Total/NA

## Client Sample ID: AOI 1 GW3 DER

## Lab Sample ID: 480-164221-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	45		1.9	0.97	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	11		1.9	0.61	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	8.8		1.9	0.73	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	5.8		1.9	0.88	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	33		1.9	0.78	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	4.2		1.9	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	0.80	J	1.9	0.74	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.4		1.9	0.47	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	5.2		1.9	0.77	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	7.8		1.9	0.59	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

# Method Summary

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

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<b>Method</b>	<b>Method Description</b>	<b>Protocol</b>	<b>Laboratory</b>
8270D SIM ID	Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)	SW846	TAL BUF
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL BUR
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL BUF
3535	Solid-Phase Extraction (SPE)	SW846	TAL BUR

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**Protocol References:**

EPA = US Environmental Protection Agency

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

**Laboratory References:**

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

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

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

**Client Sample ID: CS RW 2 DER**

**Lab Sample ID: 480-164221-1**

**Date Collected: 12/12/19 12:34**

**Matrix: Water**

**Date Received: 12/14/19 09:00**

**Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20	0.10	ug/L		12/16/19 15:35	12/18/19 01:16	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	25		15 - 110				12/16/19 15:35	12/18/19 01:16	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	4.3		1.7	0.87	ng/L		12/18/19 10:57	12/24/19 14:53	1
Perfluoropentanoic acid (PFPeA)	6.2		1.7	0.55	ng/L		12/18/19 10:57	12/24/19 14:53	1
Perfluorohexanoic acid (PFHxA)	8.4		1.7	0.66	ng/L		12/18/19 10:57	12/24/19 14:53	1
Perfluoroheptanoic acid (PFHpA)	2.6		1.7	0.79	ng/L		12/18/19 10:57	12/24/19 14:53	1
Perfluorooctanoic acid (PFOA)	5.2		1.7	0.70	ng/L		12/18/19 10:57	12/24/19 14:53	1
Perfluorononanoic acid (PFNA)	0.32	J	1.7	0.23	ng/L		12/18/19 10:57	12/24/19 14:53	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.67	ng/L		12/18/19 10:57	12/24/19 14:53	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.68	ng/L		12/18/19 10:57	12/24/19 14:53	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.51	ng/L		12/18/19 10:57	12/24/19 14:53	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7	0.52	ng/L		12/18/19 10:57	12/24/19 14:53	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.80	ng/L		12/18/19 10:57	12/24/19 14:53	1
Perfluorobutanesulfonic acid (PFBS)	3.1		1.7	0.43	ng/L		12/18/19 10:57	12/24/19 14:53	1
Perfluorohexanesulfonic acid (PFHxS)	22		1.7	0.69	ng/L		12/18/19 10:57	12/24/19 14:53	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.82	ng/L		12/18/19 10:57	12/24/19 14:53	1
Perfluorooctanesulfonic acid (PFOS)	49		1.7	0.53	ng/L		12/18/19 10:57	12/24/19 14:53	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.78	ng/L		12/18/19 10:57	12/24/19 14:53	1
Perfluorooctanesulfonamide (PFOSA)	ND		8.7	8.7	ng/L		12/18/19 10:57	12/24/19 14:53	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		17	1.5	ng/L		12/18/19 10:57	12/24/19 14:53	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		17	1.3	ng/L		12/18/19 10:57	12/24/19 14:53	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	4.8	ng/L		12/18/19 10:57	12/24/19 14:53	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	2.5	ng/L		12/18/19 10:57	12/24/19 14:53	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	102		50 - 150				12/18/19 10:57	12/24/19 14:53	1
13C4 PFHpA	99		50 - 150				12/18/19 10:57	12/24/19 14:53	1
13C4 PFOA	94		50 - 150				12/18/19 10:57	12/24/19 14:53	1
13C4 PFOS	89		50 - 150				12/18/19 10:57	12/24/19 14:53	1
13C5 PFNA	88		50 - 150				12/18/19 10:57	12/24/19 14:53	1
13C4 PFBA	85		25 - 150				12/18/19 10:57	12/24/19 14:53	1
13C2 PFHxA	99		50 - 150				12/18/19 10:57	12/24/19 14:53	1
13C2 PFDA	75		50 - 150				12/18/19 10:57	12/24/19 14:53	1
13C2 PFUnA	71		50 - 150				12/18/19 10:57	12/24/19 14:53	1
13C2 PFDoA	62		50 - 150				12/18/19 10:57	12/24/19 14:53	1
13C8 FOSA	74		25 - 150				12/18/19 10:57	12/24/19 14:53	1
13C5 PFPeA	105		25 - 150				12/18/19 10:57	12/24/19 14:53	1
13C2 PFTeDA	70		50 - 150				12/18/19 10:57	12/24/19 14:53	1
d3-NMeFOSAA	67		50 - 150				12/18/19 10:57	12/24/19 14:53	1
d5-NEtFOSAA	79		50 - 150				12/18/19 10:57	12/24/19 14:53	1



# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

**Client Sample ID: CS RW 2 DER**

**Lab Sample ID: 480-164221-1**

Date Collected: 12/12/19 12:34

Matrix: Water

Date Received: 12/14/19 09:00

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-6:2 FTS	79		25 - 150	12/18/19 10:57	12/24/19 14:53	1
M2-8:2 FTS	80		25 - 150	12/18/19 10:57	12/24/19 14:53	1
13C3 PFBS	102		50 - 150	12/18/19 10:57	12/24/19 14:53	1

**Client Sample ID: FIELD DUP 2**

**Lab Sample ID: 480-164221-2**

Date Collected: 12/12/19 00:00

Matrix: Water

Date Received: 12/14/19 09:00

**Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20	0.10	ug/L		12/16/19 15:35	12/18/19 01:39	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	39		15 - 110	12/16/19 15:35	12/18/19 01:39	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	5.3		1.9	0.94	ng/L		12/18/19 10:57	12/24/19 15:01	1
Perfluoropentanoic acid (PFPeA)	9.9		1.9	0.59	ng/L		12/18/19 10:57	12/24/19 15:01	1
Perfluorohexanoic acid (PFHxA)	12		1.9	0.72	ng/L		12/18/19 10:57	12/24/19 15:01	1
Perfluoroheptanoic acid (PFHpA)	3.2		1.9	0.86	ng/L		12/18/19 10:57	12/24/19 15:01	1
Perfluorooctanoic acid (PFOA)	6.2		1.9	0.76	ng/L		12/18/19 10:57	12/24/19 15:01	1
Perfluorononanoic acid (PFNA)	0.26	J	1.9	0.25	ng/L		12/18/19 10:57	12/24/19 15:01	1
Perfluorodecanoic acid (PFDA)	ND		1.9	0.73	ng/L		12/18/19 10:57	12/24/19 15:01	1
Perfluoroundecanoic acid (PFUnA)	ND		1.9	0.73	ng/L		12/18/19 10:57	12/24/19 15:01	1
Perfluorododecanoic acid (PFDoA)	ND		1.9	0.56	ng/L		12/18/19 10:57	12/24/19 15:01	1
Perfluorotridecanoic acid (PFTriA)	ND		1.9	0.57	ng/L		12/18/19 10:57	12/24/19 15:01	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.9	0.87	ng/L		12/18/19 10:57	12/24/19 15:01	1
Perfluorobutanesulfonic acid (PFBS)	3.5		1.9	0.46	ng/L		12/18/19 10:57	12/24/19 15:01	1
Perfluorohexanesulfonic acid (PFHxS)	26		1.9	0.75	ng/L		12/18/19 10:57	12/24/19 15:01	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.9	0.89	ng/L		12/18/19 10:57	12/24/19 15:01	1
Perfluorooctanesulfonic acid (PFOS)	43		1.9	0.57	ng/L		12/18/19 10:57	12/24/19 15:01	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.9	0.85	ng/L		12/18/19 10:57	12/24/19 15:01	1
Perfluorooctanesulfonamide (PFOSA)	ND		9.4	9.4	ng/L		12/18/19 10:57	12/24/19 15:01	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		19	1.6	ng/L		12/18/19 10:57	12/24/19 15:01	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		19	1.4	ng/L		12/18/19 10:57	12/24/19 15:01	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		19	5.2	ng/L		12/18/19 10:57	12/24/19 15:01	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		19	2.7	ng/L		12/18/19 10:57	12/24/19 15:01	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	110		50 - 150	12/18/19 10:57	12/24/19 15:01	1
13C4 PFHpA	108		50 - 150	12/18/19 10:57	12/24/19 15:01	1
13C4 PFOA	103		50 - 150	12/18/19 10:57	12/24/19 15:01	1
13C4 PFOS	108		50 - 150	12/18/19 10:57	12/24/19 15:01	1
13C5 PFNA	99		50 - 150	12/18/19 10:57	12/24/19 15:01	1
13C4 PFBA	92		25 - 150	12/18/19 10:57	12/24/19 15:01	1

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

**Client Sample ID: FIELD DUP 2**

**Lab Sample ID: 480-164221-2**

**Date Collected: 12/12/19 00:00**

**Matrix: Water**

**Date Received: 12/14/19 09:00**

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	99		50 - 150	12/18/19 10:57	12/24/19 15:01	1
13C2 PFDA	91		50 - 150	12/18/19 10:57	12/24/19 15:01	1
13C2 PFUnA	88		50 - 150	12/18/19 10:57	12/24/19 15:01	1
13C2 PFDoA	74		50 - 150	12/18/19 10:57	12/24/19 15:01	1
13C8 FOSA	86		25 - 150	12/18/19 10:57	12/24/19 15:01	1
13C5 PFPeA	104		25 - 150	12/18/19 10:57	12/24/19 15:01	1
13C2 PFTeDA	81		50 - 150	12/18/19 10:57	12/24/19 15:01	1
d3-NMeFOSAA	82		50 - 150	12/18/19 10:57	12/24/19 15:01	1
d5-NEtFOSAA	85		50 - 150	12/18/19 10:57	12/24/19 15:01	1
M2-6:2 FTS	78		25 - 150	12/18/19 10:57	12/24/19 15:01	1
M2-8:2 FTS	103		25 - 150	12/18/19 10:57	12/24/19 15:01	1
13C3 PFBS	103		50 - 150	12/18/19 10:57	12/24/19 15:01	1

**Client Sample ID: CS RW 1 DER**

**Lab Sample ID: 480-164221-3**

**Date Collected: 12/12/19 12:10**

**Matrix: Water**

**Date Received: 12/14/19 09:00**

**Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20	0.10	ug/L		12/16/19 15:35	12/17/19 22:29	1
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1,4-Dioxane-d8	31		15 - 110	12/16/19 15:35	12/17/19 22:29	1			

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	5.4		1.9	0.97	ng/L		12/18/19 10:57	12/24/19 15:09	1
Perfluoropentanoic acid (PFPeA)	10		1.9	0.61	ng/L		12/18/19 10:57	12/24/19 15:09	1
Perfluorohexanoic acid (PFHxA)	12		1.9	0.74	ng/L		12/18/19 10:57	12/24/19 15:09	1
Perfluoroheptanoic acid (PFHpA)	3.5		1.9	0.88	ng/L		12/18/19 10:57	12/24/19 15:09	1
Perfluorooctanoic acid (PFOA)	5.9		1.9	0.78	ng/L		12/18/19 10:57	12/24/19 15:09	1
Perfluorononanoic acid (PFNA)	0.31	J	1.9	0.26	ng/L		12/18/19 10:57	12/24/19 15:09	1
Perfluorodecanoic acid (PFDA)	ND		1.9	0.75	ng/L		12/18/19 10:57	12/24/19 15:09	1
Perfluoroundecanoic acid (PFUnA)	ND		1.9	0.76	ng/L		12/18/19 10:57	12/24/19 15:09	1
Perfluorododecanoic acid (PFDoA)	ND	F2	1.9	0.57	ng/L		12/18/19 10:57	12/24/19 15:09	1
Perfluorotridecanoic acid (PFTriA)	ND		1.9	0.58	ng/L		12/18/19 10:57	12/24/19 15:09	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.9	0.89	ng/L		12/18/19 10:57	12/24/19 15:09	1
Perfluorobutanesulfonic acid (PFBS)	3.5		1.9	0.47	ng/L		12/18/19 10:57	12/24/19 15:09	1
Perfluorohexanesulfonic acid (PFHxS)	25		1.9	0.77	ng/L		12/18/19 10:57	12/24/19 15:09	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.9	0.92	ng/L		12/18/19 10:57	12/24/19 15:09	1
Perfluorooctanesulfonic acid (PFOS)	45		1.9	0.59	ng/L		12/18/19 10:57	12/24/19 15:09	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.9	0.87	ng/L		12/18/19 10:57	12/24/19 15:09	1
Perfluorooctanesulfonamide (PFOSA)	ND		9.7	9.7	ng/L		12/18/19 10:57	12/24/19 15:09	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		19	1.6	ng/L		12/18/19 10:57	12/24/19 15:09	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		19	1.5	ng/L		12/18/19 10:57	12/24/19 15:09	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		19	5.3	ng/L		12/18/19 10:57	12/24/19 15:09	1

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

**Client Sample ID: CS RW 1 DER**

**Lab Sample ID: 480-164221-3**

**Date Collected: 12/12/19 12:10**

**Matrix: Water**

**Date Received: 12/14/19 09:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		19	2.8	ng/L		12/18/19 10:57	12/24/19 15:09	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	108		50 - 150				12/18/19 10:57	12/24/19 15:09	1
13C4 PFHpA	110		50 - 150				12/18/19 10:57	12/24/19 15:09	1
13C4 PFOA	107		50 - 150				12/18/19 10:57	12/24/19 15:09	1
13C4 PFOS	106		50 - 150				12/18/19 10:57	12/24/19 15:09	1
13C5 PFNA	98		50 - 150				12/18/19 10:57	12/24/19 15:09	1
13C4 PFBA	90		25 - 150				12/18/19 10:57	12/24/19 15:09	1
13C2 PFHxA	101		50 - 150				12/18/19 10:57	12/24/19 15:09	1
13C2 PFDA	92		50 - 150				12/18/19 10:57	12/24/19 15:09	1
13C2 PFUnA	93		50 - 150				12/18/19 10:57	12/24/19 15:09	1
13C2 PFDoA	78		50 - 150				12/18/19 10:57	12/24/19 15:09	1
13C8 FOSA	85		25 - 150				12/18/19 10:57	12/24/19 15:09	1
13C5 PFPeA	106		25 - 150				12/18/19 10:57	12/24/19 15:09	1
13C2 PFTeDA	88		50 - 150				12/18/19 10:57	12/24/19 15:09	1
d3-NMeFOSAA	86		50 - 150				12/18/19 10:57	12/24/19 15:09	1
d5-NEtFOSAA	84		50 - 150				12/18/19 10:57	12/24/19 15:09	1
M2-6:2 FTS	80		25 - 150				12/18/19 10:57	12/24/19 15:09	1
M2-8:2 FTS	98		25 - 150				12/18/19 10:57	12/24/19 15:09	1
13C3 PFBS	108		50 - 150				12/18/19 10:57	12/24/19 15:09	1

**Client Sample ID: CS SW 04 DER**

**Lab Sample ID: 480-164221-4**

**Date Collected: 12/12/19 11:31**

**Matrix: Water**

**Date Received: 12/14/19 09:00**

**Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20	0.10	ug/L		12/16/19 15:35	12/18/19 00:53	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	28		15 - 110				12/16/19 15:35	12/18/19 00:53	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		1.7	0.86	ng/L		12/18/19 10:57	12/24/19 15:34	1
<b>Perfluoropentanoic acid (PFPeA)</b>	<b>0.64</b>	<b>J</b>	1.7	0.54	ng/L		12/18/19 10:57	12/24/19 15:34	1
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.65	ng/L		12/18/19 10:57	12/24/19 15:34	1
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.78	ng/L		12/18/19 10:57	12/24/19 15:34	1
<b>Perfluorooctanoic acid (PFOA)</b>	<b>1.7</b>		1.7	0.70	ng/L		12/18/19 10:57	12/24/19 15:34	1
<b>Perfluorononanoic acid (PFNA)</b>	<b>0.35</b>	<b>J</b>	1.7	0.23	ng/L		12/18/19 10:57	12/24/19 15:34	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.66	ng/L		12/18/19 10:57	12/24/19 15:34	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.67	ng/L		12/18/19 10:57	12/24/19 15:34	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.51	ng/L		12/18/19 10:57	12/24/19 15:34	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7	0.52	ng/L		12/18/19 10:57	12/24/19 15:34	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.79	ng/L		12/18/19 10:57	12/24/19 15:34	1
<b>Perfluorobutanesulfonic acid (PFBS)</b>	<b>0.57</b>	<b>J</b>	1.7	0.42	ng/L		12/18/19 10:57	12/24/19 15:34	1
<b>Perfluorohexanesulfonic acid (PFHxS)</b>	<b>0.82</b>	<b>J</b>	1.7	0.69	ng/L		12/18/19 10:57	12/24/19 15:34	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.82	ng/L		12/18/19 10:57	12/24/19 15:34	1

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

**Client Sample ID: CS SW 04 DER**

**Lab Sample ID: 480-164221-4**

**Date Collected: 12/12/19 11:31**

**Matrix: Water**

**Date Received: 12/14/19 09:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Perfluorooctanesulfonic acid (PFOS)</b>	<b>1.1</b>	<b>J</b>	1.7	0.52	ng/L		12/18/19 10:57	12/24/19 15:34	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.77	ng/L		12/18/19 10:57	12/24/19 15:34	1
Perfluorooctanesulfonamide (PFOSA)	ND		8.6	8.6	ng/L		12/18/19 10:57	12/24/19 15:34	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		17	1.5	ng/L		12/18/19 10:57	12/24/19 15:34	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		17	1.3	ng/L		12/18/19 10:57	12/24/19 15:34	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	4.7	ng/L		12/18/19 10:57	12/24/19 15:34	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	2.5	ng/L		12/18/19 10:57	12/24/19 15:34	1
<b>Isotope Dilution</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
18O2 PFHxS	102		50 - 150				12/18/19 10:57	12/24/19 15:34	1
13C4 PFHpA	105		50 - 150				12/18/19 10:57	12/24/19 15:34	1
13C4 PFOA	100		50 - 150				12/18/19 10:57	12/24/19 15:34	1
13C4 PFOS	95		50 - 150				12/18/19 10:57	12/24/19 15:34	1
13C5 PFNA	100		50 - 150				12/18/19 10:57	12/24/19 15:34	1
13C4 PFBA	82		25 - 150				12/18/19 10:57	12/24/19 15:34	1
13C2 PFHxA	99		50 - 150				12/18/19 10:57	12/24/19 15:34	1
13C2 PFDA	94		50 - 150				12/18/19 10:57	12/24/19 15:34	1
13C2 PFUnA	89		50 - 150				12/18/19 10:57	12/24/19 15:34	1
13C2 PFDoA	84		50 - 150				12/18/19 10:57	12/24/19 15:34	1
13C8 FOSA	83		25 - 150				12/18/19 10:57	12/24/19 15:34	1
13C5 PFPeA	104		25 - 150				12/18/19 10:57	12/24/19 15:34	1
13C2 PFTeDA	79		50 - 150				12/18/19 10:57	12/24/19 15:34	1
d3-NMeFOSAA	84		50 - 150				12/18/19 10:57	12/24/19 15:34	1
d5-NEtFOSAA	89		50 - 150				12/18/19 10:57	12/24/19 15:34	1
M2-6:2 FTS	77		25 - 150				12/18/19 10:57	12/24/19 15:34	1
M2-8:2 FTS	95		25 - 150				12/18/19 10:57	12/24/19 15:34	1
13C3 PFBS	99		50 - 150				12/18/19 10:57	12/24/19 15:34	1

**Client Sample ID: FIELD DUP**

**Lab Sample ID: 480-164221-5**

**Date Collected: 12/12/19 00:00**

**Matrix: Water**

**Date Received: 12/14/19 09:00**

**Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20	0.10	ug/L		12/16/19 15:35	12/18/19 02:03	1
<b>Isotope Dilution</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,4-Dioxane-d8	29		15 - 110				12/16/19 15:35	12/18/19 02:03	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Perfluorobutanoic acid (PFBA)</b>	<b>1.0</b>	<b>J</b>	1.6	0.82	ng/L		12/18/19 10:57	12/24/19 15:59	1
Perfluoropentanoic acid (PFPeA)	ND		1.6	0.52	ng/L		12/18/19 10:57	12/24/19 15:59	1
Perfluorohexanoic acid (PFHxA)	ND		1.6	0.63	ng/L		12/18/19 10:57	12/24/19 15:59	1
Perfluoroheptanoic acid (PFHpA)	ND		1.6	0.75	ng/L		12/18/19 10:57	12/24/19 15:59	1
<b>Perfluorooctanoic acid (PFOA)</b>	<b>1.7</b>		1.6	0.67	ng/L		12/18/19 10:57	12/24/19 15:59	1
<b>Perfluorononanoic acid (PFNA)</b>	<b>0.31</b>	<b>J</b>	1.6	0.22	ng/L		12/18/19 10:57	12/24/19 15:59	1
Perfluorodecanoic acid (PFDA)	ND		1.6	0.63	ng/L		12/18/19 10:57	12/24/19 15:59	1

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

**Client Sample ID: FIELD DUP**

**Lab Sample ID: 480-164221-5**

**Date Collected: 12/12/19 00:00**

**Matrix: Water**

**Date Received: 12/14/19 09:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.64	ng/L		12/18/19 10:57	12/24/19 15:59	1
Perfluorododecanoic acid (PFDoA)	ND		1.6	0.49	ng/L		12/18/19 10:57	12/24/19 15:59	1
Perfluorotridecanoic acid (PFTriA)	ND		1.6	0.49	ng/L		12/18/19 10:57	12/24/19 15:59	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.6	0.76	ng/L		12/18/19 10:57	12/24/19 15:59	1
<b>Perfluorobutanesulfonic acid (PFBS)</b>	<b>0.50</b>	<b>J</b>	1.6	0.40	ng/L		12/18/19 10:57	12/24/19 15:59	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.6	0.66	ng/L		12/18/19 10:57	12/24/19 15:59	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.6	0.78	ng/L		12/18/19 10:57	12/24/19 15:59	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.6	0.50	ng/L		12/18/19 10:57	12/24/19 15:59	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.74	ng/L		12/18/19 10:57	12/24/19 15:59	1
Perfluorooctanesulfonamide (PFOSA)	ND		8.2	8.2	ng/L		12/18/19 10:57	12/24/19 15:59	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		16	1.4	ng/L		12/18/19 10:57	12/24/19 15:59	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		16	1.2	ng/L		12/18/19 10:57	12/24/19 15:59	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		16	4.5	ng/L		12/18/19 10:57	12/24/19 15:59	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		16	2.4	ng/L		12/18/19 10:57	12/24/19 15:59	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	105		50 - 150	12/18/19 10:57	12/24/19 15:59	1
13C4 PFHpA	102		50 - 150	12/18/19 10:57	12/24/19 15:59	1
13C4 PFOA	94		50 - 150	12/18/19 10:57	12/24/19 15:59	1
13C4 PFOS	95		50 - 150	12/18/19 10:57	12/24/19 15:59	1
13C5 PFNA	88		50 - 150	12/18/19 10:57	12/24/19 15:59	1
13C4 PFBA	80		25 - 150	12/18/19 10:57	12/24/19 15:59	1
13C2 PFHxA	95		50 - 150	12/18/19 10:57	12/24/19 15:59	1
13C2 PFDA	90		50 - 150	12/18/19 10:57	12/24/19 15:59	1
13C2 PFUnA	88		50 - 150	12/18/19 10:57	12/24/19 15:59	1
13C2 PFDoA	75		50 - 150	12/18/19 10:57	12/24/19 15:59	1
13C8 FOSA	81		25 - 150	12/18/19 10:57	12/24/19 15:59	1
13C5 PFPeA	93		25 - 150	12/18/19 10:57	12/24/19 15:59	1
13C2 PFTeDA	71		50 - 150	12/18/19 10:57	12/24/19 15:59	1
d3-NMeFOSAA	79		50 - 150	12/18/19 10:57	12/24/19 15:59	1
d5-NEtFOSAA	78		50 - 150	12/18/19 10:57	12/24/19 15:59	1
M2-6:2 FTS	82		25 - 150	12/18/19 10:57	12/24/19 15:59	1
M2-8:2 FTS	93		25 - 150	12/18/19 10:57	12/24/19 15:59	1
13C3 PFBS	96		50 - 150	12/18/19 10:57	12/24/19 15:59	1

**Client Sample ID: AOI 3 GW 2 DER**

**Lab Sample ID: 480-164221-6**

**Date Collected: 12/10/19 13:40**

**Matrix: Water**

**Date Received: 12/14/19 09:00**

**Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.67	0.33	ug/L		12/16/19 15:35	12/18/19 02:26	1
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1,4-Dioxane-d8	29		15 - 110	12/16/19 15:35	12/18/19 02:26	1			

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

**Client Sample ID: AOI 3 GW 2 DER**

**Lab Sample ID: 480-164221-6**

Date Collected: 12/10/19 13:40

Matrix: Water

Date Received: 12/14/19 09:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	4.0		1.9	0.95	ng/L		12/18/19 10:57	12/24/19 16:07	1
Perfluoropentanoic acid (PFPeA)	4.7		1.9	0.60	ng/L		12/18/19 10:57	12/24/19 16:07	1
Perfluorohexanoic acid (PFHxA)	4.0		1.9	0.72	ng/L		12/18/19 10:57	12/24/19 16:07	1
Perfluoroheptanoic acid (PFHpA)	2.4		1.9	0.87	ng/L		12/18/19 10:57	12/24/19 16:07	1
Perfluorooctanoic acid (PFOA)	12		1.9	0.77	ng/L		12/18/19 10:57	12/24/19 16:07	1
Perfluorononanoic acid (PFNA)	0.69	J	1.9	0.26	ng/L		12/18/19 10:57	12/24/19 16:07	1
Perfluorodecanoic acid (PFDA)	ND		1.9	0.73	ng/L		12/18/19 10:57	12/24/19 16:07	1
Perfluoroundecanoic acid (PFUnA)	ND		1.9	0.74	ng/L		12/18/19 10:57	12/24/19 16:07	1
Perfluorododecanoic acid (PFDoA)	ND		1.9	0.56	ng/L		12/18/19 10:57	12/24/19 16:07	1
Perfluorotridecanoic acid (PFTriA)	ND		1.9	0.57	ng/L		12/18/19 10:57	12/24/19 16:07	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.9	0.88	ng/L		12/18/19 10:57	12/24/19 16:07	1
Perfluorobutanesulfonic acid (PFBS)	1.7	J	1.9	0.47	ng/L		12/18/19 10:57	12/24/19 16:07	1
Perfluorohexanesulfonic acid (PFHxS)	0.90	J	1.9	0.76	ng/L		12/18/19 10:57	12/24/19 16:07	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.9	0.90	ng/L		12/18/19 10:57	12/24/19 16:07	1
Perfluorooctanesulfonic acid (PFOS)	4.5	I	1.9	0.58	ng/L		12/18/19 10:57	12/24/19 16:07	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.9	0.86	ng/L		12/18/19 10:57	12/24/19 16:07	1
Perfluorooctanesulfonamide (PFOSA)	ND		9.5	9.5	ng/L		12/18/19 10:57	12/24/19 16:07	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		19	1.6	ng/L		12/18/19 10:57	12/24/19 16:07	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		19	1.4	ng/L		12/18/19 10:57	12/24/19 16:07	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		19	5.2	ng/L		12/18/19 10:57	12/24/19 16:07	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		19	2.8	ng/L		12/18/19 10:57	12/24/19 16:07	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	105		50 - 150				12/18/19 10:57	12/24/19 16:07	1
13C4 PFHpA	99		50 - 150				12/18/19 10:57	12/24/19 16:07	1
13C4 PFOA	98		50 - 150				12/18/19 10:57	12/24/19 16:07	1
13C4 PFOS	97		50 - 150				12/18/19 10:57	12/24/19 16:07	1
13C5 PFNA	91		50 - 150				12/18/19 10:57	12/24/19 16:07	1
13C4 PFBA	82		25 - 150				12/18/19 10:57	12/24/19 16:07	1
13C2 PFHxA	94		50 - 150				12/18/19 10:57	12/24/19 16:07	1
13C2 PFDA	89		50 - 150				12/18/19 10:57	12/24/19 16:07	1
13C2 PFUnA	91		50 - 150				12/18/19 10:57	12/24/19 16:07	1
13C2 PFDoA	78		50 - 150				12/18/19 10:57	12/24/19 16:07	1
13C8 FOSA	87		25 - 150				12/18/19 10:57	12/24/19 16:07	1
13C5 PFPeA	104		25 - 150				12/18/19 10:57	12/24/19 16:07	1
13C2 PFTeDA	73		50 - 150				12/18/19 10:57	12/24/19 16:07	1
d3-NMeFOSAA	73		50 - 150				12/18/19 10:57	12/24/19 16:07	1
d5-NEtFOSAA	74		50 - 150				12/18/19 10:57	12/24/19 16:07	1
M2-6:2 FTS	76		25 - 150				12/18/19 10:57	12/24/19 16:07	1
M2-8:2 FTS	94		25 - 150				12/18/19 10:57	12/24/19 16:07	1
13C3 PFBS	102		50 - 150				12/18/19 10:57	12/24/19 16:07	1



# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

**Client Sample ID: AOI 1 GW 2 DER**

**Lab Sample ID: 480-164221-7**

**Date Collected: 12/11/19 12:25**

**Matrix: Water**

**Date Received: 12/14/19 09:00**

**Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20	0.10	ug/L		12/16/19 15:35	12/18/19 02:49	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	32		15 - 110				12/16/19 15:35	12/18/19 02:49	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	4.0		1.8	0.92	ng/L		12/18/19 10:57	12/24/19 16:15	1
Perfluoropentanoic acid (PFPeA)	1.2	J	1.8	0.58	ng/L		12/18/19 10:57	12/24/19 16:15	1
Perfluorohexanoic acid (PFHxA)	1.1	J	1.8	0.70	ng/L		12/18/19 10:57	12/24/19 16:15	1
Perfluoroheptanoic acid (PFHpA)	1.1	J	1.8	0.83	ng/L		12/18/19 10:57	12/24/19 16:15	1
Perfluorooctanoic acid (PFOA)	6.9		1.8	0.74	ng/L		12/18/19 10:57	12/24/19 16:15	1
Perfluorononanoic acid (PFNA)	1.6	J	1.8	0.25	ng/L		12/18/19 10:57	12/24/19 16:15	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.71	ng/L		12/18/19 10:57	12/24/19 16:15	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.71	ng/L		12/18/19 10:57	12/24/19 16:15	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.54	ng/L		12/18/19 10:57	12/24/19 16:15	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8	0.55	ng/L		12/18/19 10:57	12/24/19 16:15	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.84	ng/L		12/18/19 10:57	12/24/19 16:15	1
Perfluorobutanesulfonic acid (PFBS)	0.75	J	1.8	0.45	ng/L		12/18/19 10:57	12/24/19 16:15	1
Perfluorohexanesulfonic acid (PFHxS)	2.0		1.8	0.73	ng/L		12/18/19 10:57	12/24/19 16:15	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.87	ng/L		12/18/19 10:57	12/24/19 16:15	1
Perfluorooctanesulfonic acid (PFOS)	4.4		1.8	0.56	ng/L		12/18/19 10:57	12/24/19 16:15	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.82	ng/L		12/18/19 10:57	12/24/19 16:15	1
Perfluorooctanesulfonamide (PFOSA)	ND		9.2	9.2	ng/L		12/18/19 10:57	12/24/19 16:15	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		18	1.6	ng/L		12/18/19 10:57	12/24/19 16:15	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		18	1.4	ng/L		12/18/19 10:57	12/24/19 16:15	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		18	5.0	ng/L		12/18/19 10:57	12/24/19 16:15	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		18	2.7	ng/L		12/18/19 10:57	12/24/19 16:15	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	103		50 - 150				12/18/19 10:57	12/24/19 16:15	1
13C4 PFHpA	102		50 - 150				12/18/19 10:57	12/24/19 16:15	1
13C4 PFOA	103		50 - 150				12/18/19 10:57	12/24/19 16:15	1
13C4 PFOS	96		50 - 150				12/18/19 10:57	12/24/19 16:15	1
13C5 PFNA	93		50 - 150				12/18/19 10:57	12/24/19 16:15	1
13C4 PFBA	87		25 - 150				12/18/19 10:57	12/24/19 16:15	1
13C2 PFHxA	95		50 - 150				12/18/19 10:57	12/24/19 16:15	1
13C2 PFDA	90		50 - 150				12/18/19 10:57	12/24/19 16:15	1
13C2 PFUnA	92		50 - 150				12/18/19 10:57	12/24/19 16:15	1
13C2 PFDoA	78		50 - 150				12/18/19 10:57	12/24/19 16:15	1
13C8 FOSA	74		25 - 150				12/18/19 10:57	12/24/19 16:15	1
13C5 PFPeA	109		25 - 150				12/18/19 10:57	12/24/19 16:15	1
13C2 PFTeDA	82		50 - 150				12/18/19 10:57	12/24/19 16:15	1
d3-NMeFOSAA	80		50 - 150				12/18/19 10:57	12/24/19 16:15	1
d5-NEtFOSAA	83		50 - 150				12/18/19 10:57	12/24/19 16:15	1

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

**Client Sample ID: AOI 1 GW 2 DER**

**Lab Sample ID: 480-164221-7**

Date Collected: 12/11/19 12:25

Matrix: Water

Date Received: 12/14/19 09:00

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-6:2 FTS	76		25 - 150	12/18/19 10:57	12/24/19 16:15	1
M2-8:2 FTS	93		25 - 150	12/18/19 10:57	12/24/19 16:15	1
13C3 PFBS	98		50 - 150	12/18/19 10:57	12/24/19 16:15	1

**Client Sample ID: CS SW 01 DER**

**Lab Sample ID: 480-164221-8**

Date Collected: 12/12/19 09:00

Matrix: Water

Date Received: 12/14/19 09:00

**Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20	0.10	ug/L		12/16/19 15:35	12/18/19 03:12	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	27		15 - 110	12/16/19 15:35	12/18/19 03:12	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		1.7	0.85	ng/L		12/18/19 10:57	12/24/19 16:23	1
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.53	ng/L		12/18/19 10:57	12/24/19 16:23	1
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.64	ng/L		12/18/19 10:57	12/24/19 16:23	1
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.77	ng/L		12/18/19 10:57	12/24/19 16:23	1
<b>Perfluorooctanoic acid (PFOA)</b>	<b>0.81</b>	<b>J</b>	1.7	0.69	ng/L		12/18/19 10:57	12/24/19 16:23	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.23	ng/L		12/18/19 10:57	12/24/19 16:23	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.65	ng/L		12/18/19 10:57	12/24/19 16:23	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.66	ng/L		12/18/19 10:57	12/24/19 16:23	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.50	ng/L		12/18/19 10:57	12/24/19 16:23	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7	0.51	ng/L		12/18/19 10:57	12/24/19 16:23	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.78	ng/L		12/18/19 10:57	12/24/19 16:23	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.41	ng/L		12/18/19 10:57	12/24/19 16:23	1
<b>Perfluorohexanesulfonic acid (PFHxS)</b>	<b>1.3</b>	<b>J</b>	1.7	0.68	ng/L		12/18/19 10:57	12/24/19 16:23	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.80	ng/L		12/18/19 10:57	12/24/19 16:23	1
<b>Perfluorooctanesulfonic acid (PFOS)</b>	<b>1.5</b>	<b>J</b>	1.7	0.52	ng/L		12/18/19 10:57	12/24/19 16:23	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.76	ng/L		12/18/19 10:57	12/24/19 16:23	1
Perfluorooctanesulfonamide (PFOSA)	ND		8.5	8.5	ng/L		12/18/19 10:57	12/24/19 16:23	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		17	1.4	ng/L		12/18/19 10:57	12/24/19 16:23	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		17	1.3	ng/L		12/18/19 10:57	12/24/19 16:23	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	4.7	ng/L		12/18/19 10:57	12/24/19 16:23	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	2.5	ng/L		12/18/19 10:57	12/24/19 16:23	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	108		50 - 150	12/18/19 10:57	12/24/19 16:23	1
13C4 PFHpA	112		50 - 150	12/18/19 10:57	12/24/19 16:23	1
13C4 PFOA	103		50 - 150	12/18/19 10:57	12/24/19 16:23	1
13C4 PFOS	101		50 - 150	12/18/19 10:57	12/24/19 16:23	1
13C5 PFNA	103		50 - 150	12/18/19 10:57	12/24/19 16:23	1
13C4 PFBA	85		25 - 150	12/18/19 10:57	12/24/19 16:23	1



# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

**Client Sample ID: CS SW 01 DER**

**Lab Sample ID: 480-164221-8**

Date Collected: 12/12/19 09:00

Matrix: Water

Date Received: 12/14/19 09:00

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFHxA	94		50 - 150	12/18/19 10:57	12/24/19 16:23	1
13C2 PFDA	95		50 - 150	12/18/19 10:57	12/24/19 16:23	1
13C2 PFUnA	100		50 - 150	12/18/19 10:57	12/24/19 16:23	1
13C2 PFDoA	90		50 - 150	12/18/19 10:57	12/24/19 16:23	1
13C8 FOSA	44		25 - 150	12/18/19 10:57	12/24/19 16:23	1
13C5 PFPeA	105		25 - 150	12/18/19 10:57	12/24/19 16:23	1
13C2 PFTeDA	77		50 - 150	12/18/19 10:57	12/24/19 16:23	1
d3-NMeFOSAA	87		50 - 150	12/18/19 10:57	12/24/19 16:23	1
d5-NEtFOSAA	84		50 - 150	12/18/19 10:57	12/24/19 16:23	1
M2-6:2 FTS	78		25 - 150	12/18/19 10:57	12/24/19 16:23	1
M2-8:2 FTS	106		25 - 150	12/18/19 10:57	12/24/19 16:23	1
13C3 PFBS	102		50 - 150	12/18/19 10:57	12/24/19 16:23	1

**Client Sample ID: EQUIPMENT BLANK**

**Lab Sample ID: 480-164221-9**

Date Collected: 12/11/19 12:35

Matrix: Water

Date Received: 12/14/19 09:00

**Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20	0.10	ug/L		12/16/19 15:35	12/18/19 03:36	1
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1,4-Dioxane-d8	27		15 - 110	12/16/19 15:35	12/18/19 03:36	1			

**Client Sample ID: CS SW 05 DER**

**Lab Sample ID: 480-164221-10**

Date Collected: 12/11/19 15:25

Matrix: Water

Date Received: 12/14/19 09:00

**Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20	0.10	ug/L		12/16/19 15:35	12/18/19 03:59	1
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1,4-Dioxane-d8	28		15 - 110	12/16/19 15:35	12/18/19 03:59	1			

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	1.4	J	1.7	0.86	ng/L		12/18/19 10:57	12/24/19 16:39	1
Perfluoropentanoic acid (PFPeA)	0.79	J	1.7	0.54	ng/L		12/18/19 10:57	12/24/19 16:39	1
Perfluorohexanoic acid (PFHxA)	0.72	J	1.7	0.66	ng/L		12/18/19 10:57	12/24/19 16:39	1
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.79	ng/L		12/18/19 10:57	12/24/19 16:39	1
Perfluorooctanoic acid (PFOA)	1.9		1.7	0.70	ng/L		12/18/19 10:57	12/24/19 16:39	1
Perfluorononanoic acid (PFNA)	0.55	J	1.7	0.23	ng/L		12/18/19 10:57	12/24/19 16:39	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.67	ng/L		12/18/19 10:57	12/24/19 16:39	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.67	ng/L		12/18/19 10:57	12/24/19 16:39	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.51	ng/L		12/18/19 10:57	12/24/19 16:39	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7	0.52	ng/L		12/18/19 10:57	12/24/19 16:39	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.80	ng/L		12/18/19 10:57	12/24/19 16:39	1
Perfluorobutanesulfonic acid (PFBS)	0.78	J	1.7	0.42	ng/L		12/18/19 10:57	12/24/19 16:39	1
Perfluorohexanesulfonic acid (PFHxS)	1.4	J	1.7	0.69	ng/L		12/18/19 10:57	12/24/19 16:39	1

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

**Client Sample ID: CS SW 05 DER**

**Lab Sample ID: 480-164221-10**

Date Collected: 12/11/19 15:25

Matrix: Water

Date Received: 12/14/19 09:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.82	ng/L		12/18/19 10:57	12/24/19 16:39	1
<b>Perfluorooctanesulfonic acid (PFOS)</b>	<b>1.6</b>	<b>J</b>	1.7	0.53	ng/L		12/18/19 10:57	12/24/19 16:39	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.78	ng/L		12/18/19 10:57	12/24/19 16:39	1
Perfluorooctanesulfonamide (PFOSA)	ND		8.6	8.6	ng/L		12/18/19 10:57	12/24/19 16:39	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		17	1.5	ng/L		12/18/19 10:57	12/24/19 16:39	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		17	1.3	ng/L		12/18/19 10:57	12/24/19 16:39	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	4.8	ng/L		12/18/19 10:57	12/24/19 16:39	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	2.5	ng/L		12/18/19 10:57	12/24/19 16:39	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	104		50 - 150				12/18/19 10:57	12/24/19 16:39	1
13C4 PFHpA	107		50 - 150				12/18/19 10:57	12/24/19 16:39	1
13C4 PFOA	101		50 - 150				12/18/19 10:57	12/24/19 16:39	1
13C4 PFOS	101		50 - 150				12/18/19 10:57	12/24/19 16:39	1
13C5 PFNA	95		50 - 150				12/18/19 10:57	12/24/19 16:39	1
13C4 PFBA	85		25 - 150				12/18/19 10:57	12/24/19 16:39	1
13C2 PFHxA	97		50 - 150				12/18/19 10:57	12/24/19 16:39	1
13C2 PFDA	96		50 - 150				12/18/19 10:57	12/24/19 16:39	1
13C2 PFUnA	92		50 - 150				12/18/19 10:57	12/24/19 16:39	1
13C2 PFDoA	78		50 - 150				12/18/19 10:57	12/24/19 16:39	1
13C8 FOSA	83		25 - 150				12/18/19 10:57	12/24/19 16:39	1
13C5 PFPeA	106		25 - 150				12/18/19 10:57	12/24/19 16:39	1
13C2 PFTeDA	79		50 - 150				12/18/19 10:57	12/24/19 16:39	1
d3-NMeFOSAA	82		50 - 150				12/18/19 10:57	12/24/19 16:39	1
d5-NEtFOSAA	87		50 - 150				12/18/19 10:57	12/24/19 16:39	1
M2-6:2 FTS	79		25 - 150				12/18/19 10:57	12/24/19 16:39	1
M2-8:2 FTS	105		25 - 150				12/18/19 10:57	12/24/19 16:39	1
13C3 PFBS	104		50 - 150				12/18/19 10:57	12/24/19 16:39	1

**Client Sample ID: CS SW 03 DER**

**Lab Sample ID: 480-164221-11**

Date Collected: 12/12/19 10:35

Matrix: Water

Date Received: 12/14/19 09:00

**Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20	0.10	ug/L		12/16/19 15:35	12/18/19 04:22	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	37		15 - 110				12/16/19 15:35	12/18/19 04:22	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Perfluorobutanoic acid (PFBA)</b>	<b>0.94</b>	<b>J</b>	1.8	0.89	ng/L		12/18/19 10:57	12/24/19 16:48	1
Perfluoropentanoic acid (PFPeA)	ND		1.8	0.56	ng/L		12/18/19 10:57	12/24/19 16:48	1
Perfluorohexanoic acid (PFHxA)	ND		1.8	0.68	ng/L		12/18/19 10:57	12/24/19 16:48	1
Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.81	ng/L		12/18/19 10:57	12/24/19 16:48	1
<b>Perfluorooctanoic acid (PFOA)</b>	<b>0.92</b>	<b>J</b>	1.8	0.72	ng/L		12/18/19 10:57	12/24/19 16:48	1

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

**Client Sample ID: CS SW 03 DER**

**Lab Sample ID: 480-164221-11**

**Date Collected: 12/12/19 10:35**

**Matrix: Water**

**Date Received: 12/14/19 09:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanoic acid (PFNA)	ND		1.8	0.24	ng/L		12/18/19 10:57	12/24/19 16:48	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.69	ng/L		12/18/19 10:57	12/24/19 16:48	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.70	ng/L		12/18/19 10:57	12/24/19 16:48	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.53	ng/L		12/18/19 10:57	12/24/19 16:48	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8	0.54	ng/L		12/18/19 10:57	12/24/19 16:48	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.82	ng/L		12/18/19 10:57	12/24/19 16:48	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.44	ng/L		12/18/19 10:57	12/24/19 16:48	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.8	0.71	ng/L		12/18/19 10:57	12/24/19 16:48	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.85	ng/L		12/18/19 10:57	12/24/19 16:48	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.54	ng/L		12/18/19 10:57	12/24/19 16:48	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.80	ng/L		12/18/19 10:57	12/24/19 16:48	1
Perfluorooctanesulfonamide (PFOSA)	ND		8.9	8.9	ng/L		12/18/19 10:57	12/24/19 16:48	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		18	1.5	ng/L		12/18/19 10:57	12/24/19 16:48	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		18	1.3	ng/L		12/18/19 10:57	12/24/19 16:48	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		18	4.9	ng/L		12/18/19 10:57	12/24/19 16:48	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		18	2.6	ng/L		12/18/19 10:57	12/24/19 16:48	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	110		50 - 150				12/18/19 10:57	12/24/19 16:48	1
13C4 PFHpA	104		50 - 150				12/18/19 10:57	12/24/19 16:48	1
13C4 PFOA	102		50 - 150				12/18/19 10:57	12/24/19 16:48	1
13C4 PFOS	99		50 - 150				12/18/19 10:57	12/24/19 16:48	1
13C5 PFNA	94		50 - 150				12/18/19 10:57	12/24/19 16:48	1
13C4 PFBA	82		25 - 150				12/18/19 10:57	12/24/19 16:48	1
13C2 PFHxA	97		50 - 150				12/18/19 10:57	12/24/19 16:48	1
13C2 PFDA	96		50 - 150				12/18/19 10:57	12/24/19 16:48	1
13C2 PFUnA	99		50 - 150				12/18/19 10:57	12/24/19 16:48	1
13C2 PFDoA	81		50 - 150				12/18/19 10:57	12/24/19 16:48	1
13C8 FOSA	87		25 - 150				12/18/19 10:57	12/24/19 16:48	1
13C5 PFPeA	99		25 - 150				12/18/19 10:57	12/24/19 16:48	1
13C2 PFTeDA	79		50 - 150				12/18/19 10:57	12/24/19 16:48	1
d3-NMeFOSAA	72		50 - 150				12/18/19 10:57	12/24/19 16:48	1
d5-NEtFOSAA	94		50 - 150				12/18/19 10:57	12/24/19 16:48	1
M2-6:2 FTS	83		25 - 150				12/18/19 10:57	12/24/19 16:48	1
M2-8:2 FTS	94		25 - 150				12/18/19 10:57	12/24/19 16:48	1
13C3 PFBS	97		50 - 150				12/18/19 10:57	12/24/19 16:48	1

**Client Sample ID: CS SW 02 DER**

**Lab Sample ID: 480-164221-12**

**Date Collected: 12/12/19 09:50**

**Matrix: Water**

**Date Received: 12/14/19 09:00**

**Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20	0.10	ug/L		12/16/19 15:35	12/18/19 04:45	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	29		15 - 110				12/16/19 15:35	12/18/19 04:45	1

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

**Client Sample ID: CS SW 02 DER**

**Lab Sample ID: 480-164221-12**

**Date Collected: 12/12/19 09:50**

**Matrix: Water**

**Date Received: 12/14/19 09:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		1.7	0.86	ng/L		12/18/19 10:57	12/24/19 16:56	1
Perfluoropentanoic acid (PFPeA)	ND		1.7	0.54	ng/L		12/18/19 10:57	12/24/19 16:56	1
Perfluorohexanoic acid (PFHxA)	ND		1.7	0.66	ng/L		12/18/19 10:57	12/24/19 16:56	1
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.79	ng/L		12/18/19 10:57	12/24/19 16:56	1
<b>Perfluorooctanoic acid (PFOA)</b>	<b>1.1</b>	<b>J</b>	1.7	0.70	ng/L		12/18/19 10:57	12/24/19 16:56	1
Perfluorononanoic acid (PFNA)	ND		1.7	0.23	ng/L		12/18/19 10:57	12/24/19 16:56	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.66	ng/L		12/18/19 10:57	12/24/19 16:56	1
Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.67	ng/L		12/18/19 10:57	12/24/19 16:56	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.51	ng/L		12/18/19 10:57	12/24/19 16:56	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7	0.52	ng/L		12/18/19 10:57	12/24/19 16:56	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.79	ng/L		12/18/19 10:57	12/24/19 16:56	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.42	ng/L		12/18/19 10:57	12/24/19 16:56	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.7	0.69	ng/L		12/18/19 10:57	12/24/19 16:56	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.82	ng/L		12/18/19 10:57	12/24/19 16:56	1
Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.53	ng/L		12/18/19 10:57	12/24/19 16:56	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.78	ng/L		12/18/19 10:57	12/24/19 16:56	1
Perfluorooctanesulfonamide (PFOSA)	ND		8.6	8.6	ng/L		12/18/19 10:57	12/24/19 16:56	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		17	1.5	ng/L		12/18/19 10:57	12/24/19 16:56	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		17	1.3	ng/L		12/18/19 10:57	12/24/19 16:56	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	4.7	ng/L		12/18/19 10:57	12/24/19 16:56	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	2.5	ng/L		12/18/19 10:57	12/24/19 16:56	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	106		50 - 150				12/18/19 10:57	12/24/19 16:56	1
13C4 PFHpA	108		50 - 150				12/18/19 10:57	12/24/19 16:56	1
13C4 PFOA	105		50 - 150				12/18/19 10:57	12/24/19 16:56	1
13C4 PFOS	103		50 - 150				12/18/19 10:57	12/24/19 16:56	1
13C5 PFNA	96		50 - 150				12/18/19 10:57	12/24/19 16:56	1
13C4 PFBA	86		25 - 150				12/18/19 10:57	12/24/19 16:56	1
13C2 PFHxA	101		50 - 150				12/18/19 10:57	12/24/19 16:56	1
13C2 PFDA	99		50 - 150				12/18/19 10:57	12/24/19 16:56	1
13C2 PFUnA	96		50 - 150				12/18/19 10:57	12/24/19 16:56	1
13C2 PFDoA	80		50 - 150				12/18/19 10:57	12/24/19 16:56	1
13C8 FOSA	86		25 - 150				12/18/19 10:57	12/24/19 16:56	1
13C5 PFPeA	104		25 - 150				12/18/19 10:57	12/24/19 16:56	1
13C2 PFTeA	85		50 - 150				12/18/19 10:57	12/24/19 16:56	1
d3-NMeFOSAA	77		50 - 150				12/18/19 10:57	12/24/19 16:56	1
d5-NEtFOSAA	89		50 - 150				12/18/19 10:57	12/24/19 16:56	1
M2-6:2 FTS	81		25 - 150				12/18/19 10:57	12/24/19 16:56	1
M2-8:2 FTS	112		25 - 150				12/18/19 10:57	12/24/19 16:56	1
13C3 PFBS	103		50 - 150				12/18/19 10:57	12/24/19 16:56	1

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

**Client Sample ID: AOI 1 GW1 DER**

**Lab Sample ID: 480-164221-13**

Date Collected: 12/11/19 11:35

Matrix: Water

Date Received: 12/14/19 09:00

**Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.18	J	0.20	0.10	ug/L		12/16/19 15:35	12/18/19 05:09	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	32		15 - 110				12/16/19 15:35	12/18/19 05:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	12		1.7	0.84	ng/L		12/18/19 10:57	12/24/19 17:04	1
Perfluoropentanoic acid (PFPeA)	9.0		1.7	0.53	ng/L		12/18/19 10:57	12/24/19 17:04	1
Perfluorohexanoic acid (PFHxA)	12		1.7	0.64	ng/L		12/18/19 10:57	12/24/19 17:04	1
Perfluoroheptanoic acid (PFHpA)	6.6		1.7	0.77	ng/L		12/18/19 10:57	12/24/19 17:04	1
Perfluorooctanoic acid (PFOA)	35		1.7	0.68	ng/L		12/18/19 10:57	12/24/19 17:04	1
Perfluorononanoic acid (PFNA)	9.1		1.7	0.23	ng/L		12/18/19 10:57	12/24/19 17:04	1
Perfluorodecanoic acid (PFDA)	2.3		1.7	0.65	ng/L		12/18/19 10:57	12/24/19 17:04	1
Perfluoroundecanoic acid (PFUnA)	0.96	J	1.7	0.66	ng/L		12/18/19 10:57	12/24/19 17:04	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.50	ng/L		12/18/19 10:57	12/24/19 17:04	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7	0.50	ng/L		12/18/19 10:57	12/24/19 17:04	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.77	ng/L		12/18/19 10:57	12/24/19 17:04	1
Perfluorobutanesulfonic acid (PFBS)	3.7		1.7	0.41	ng/L		12/18/19 10:57	12/24/19 17:04	1
Perfluorohexanesulfonic acid (PFHxS)	17		1.7	0.67	ng/L		12/18/19 10:57	12/24/19 17:04	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.80	ng/L		12/18/19 10:57	12/24/19 17:04	1
Perfluorooctanesulfonic acid (PFOS)	28		1.7	0.51	ng/L		12/18/19 10:57	12/24/19 17:04	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.76	ng/L		12/18/19 10:57	12/24/19 17:04	1
Perfluorooctanesulfonamide (PFOSA)	ND		8.4	8.4	ng/L		12/18/19 10:57	12/24/19 17:04	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		17	1.4	ng/L		12/18/19 10:57	12/24/19 17:04	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		17	1.3	ng/L		12/18/19 10:57	12/24/19 17:04	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	4.6	ng/L		12/18/19 10:57	12/24/19 17:04	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	2.4	ng/L		12/18/19 10:57	12/24/19 17:04	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	88		50 - 150				12/18/19 10:57	12/24/19 17:04	1
13C4 PFHpA	90		50 - 150				12/18/19 10:57	12/24/19 17:04	1
13C4 PFOA	85		50 - 150				12/18/19 10:57	12/24/19 17:04	1
13C4 PFOS	57		50 - 150				12/18/19 10:57	12/24/19 17:04	1
13C5 PFNA	60		50 - 150				12/18/19 10:57	12/24/19 17:04	1
13C4 PFBA	72		25 - 150				12/18/19 10:57	12/24/19 17:04	1
13C2 PFHxA	88		50 - 150				12/18/19 10:57	12/24/19 17:04	1
13C2 PFDA	52		50 - 150				12/18/19 10:57	12/24/19 17:04	1
13C2 PFUnA	48	*	50 - 150				12/18/19 10:57	12/24/19 17:04	1
13C2 PFDoA	48	*	50 - 150				12/18/19 10:57	12/24/19 17:04	1
13C8 FOSA	47		25 - 150				12/18/19 10:57	12/24/19 17:04	1
13C5 PFPeA	85		25 - 150				12/18/19 10:57	12/24/19 17:04	1
13C2 PFTeDA	45	*	50 - 150				12/18/19 10:57	12/24/19 17:04	1
d3-NMeFOSAA	41	*	50 - 150				12/18/19 10:57	12/24/19 17:04	1

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

**Client Sample ID: AOI 1 GW1 DER**

**Lab Sample ID: 480-164221-13**

Date Collected: 12/11/19 11:35

Matrix: Water

Date Received: 12/14/19 09:00

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	49	*	50 - 150	12/18/19 10:57	12/24/19 17:04	1
M2-6:2 FTS	65		25 - 150	12/18/19 10:57	12/24/19 17:04	1
M2-8:2 FTS	57		25 - 150	12/18/19 10:57	12/24/19 17:04	1
13C3 PFBS	85		50 - 150	12/18/19 10:57	12/24/19 17:04	1

**Client Sample ID: AOI 3 GW1 DER**

**Lab Sample ID: 480-164221-14**

Date Collected: 12/10/19 15:05

Matrix: Water

Date Received: 12/14/19 09:00

**Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20	0.10	ug/L		12/16/19 15:35	12/18/19 05:32	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	30		15 - 110	12/16/19 15:35	12/18/19 05:32	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	28		1.8	0.92	ng/L		12/18/19 10:57	12/24/19 17:12	1
Perfluoropentanoic acid (PFPeA)	34		1.8	0.58	ng/L		12/18/19 10:57	12/24/19 17:12	1
Perfluorohexanoic acid (PFHxA)	34		1.8	0.70	ng/L		12/18/19 10:57	12/24/19 17:12	1
Perfluoroheptanoic acid (PFHpA)	14		1.8	0.84	ng/L		12/18/19 10:57	12/24/19 17:12	1
Perfluorooctanoic acid (PFOA)	65		1.8	0.75	ng/L		12/18/19 10:57	12/24/19 17:12	1
Perfluorononanoic acid (PFNA)	7.2		1.8	0.25	ng/L		12/18/19 10:57	12/24/19 17:12	1
Perfluorodecanoic acid (PFDA)	1.1	J	1.8	0.71	ng/L		12/18/19 10:57	12/24/19 17:12	1
Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.72	ng/L		12/18/19 10:57	12/24/19 17:12	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.54	ng/L		12/18/19 10:57	12/24/19 17:12	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8	0.55	ng/L		12/18/19 10:57	12/24/19 17:12	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.85	ng/L		12/18/19 10:57	12/24/19 17:12	1
Perfluorobutanesulfonic acid (PFBS)	5.0		1.8	0.45	ng/L		12/18/19 10:57	12/24/19 17:12	1
Perfluorohexanesulfonic acid (PFHxS)	8.2		1.8	0.74	ng/L		12/18/19 10:57	12/24/19 17:12	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.87	ng/L		12/18/19 10:57	12/24/19 17:12	1
Perfluorooctanesulfonic acid (PFOS)	17		1.8	0.56	ng/L		12/18/19 10:57	12/24/19 17:12	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.83	ng/L		12/18/19 10:57	12/24/19 17:12	1
Perfluorooctanesulfonamide (PFOSA)	ND		9.2	9.2	ng/L		12/18/19 10:57	12/24/19 17:12	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		18	1.6	ng/L		12/18/19 10:57	12/24/19 17:12	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		18	1.4	ng/L		12/18/19 10:57	12/24/19 17:12	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		18	5.1	ng/L		12/18/19 10:57	12/24/19 17:12	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		18	2.7	ng/L		12/18/19 10:57	12/24/19 17:12	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	98		50 - 150	12/18/19 10:57	12/24/19 17:12	1
13C4 PFHpA	99		50 - 150	12/18/19 10:57	12/24/19 17:12	1
13C4 PFOA	96		50 - 150	12/18/19 10:57	12/24/19 17:12	1
13C4 PFOS	87		50 - 150	12/18/19 10:57	12/24/19 17:12	1
13C5 PFNA	92		50 - 150	12/18/19 10:57	12/24/19 17:12	1

Eurofins TestAmerica, Buffalo



# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

**Client Sample ID: AOI 3 GW1 DER**

**Lab Sample ID: 480-164221-14**

Date Collected: 12/10/19 15:05

Matrix: Water

Date Received: 12/14/19 09:00

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	62		25 - 150	12/18/19 10:57	12/24/19 17:12	1
13C2 PFHxA	93		50 - 150	12/18/19 10:57	12/24/19 17:12	1
13C2 PFDA	82		50 - 150	12/18/19 10:57	12/24/19 17:12	1
13C2 PFUnA	84		50 - 150	12/18/19 10:57	12/24/19 17:12	1
13C2 PFDoA	72		50 - 150	12/18/19 10:57	12/24/19 17:12	1
13C8 FOSA	47		25 - 150	12/18/19 10:57	12/24/19 17:12	1
13C5 PFPeA	96		25 - 150	12/18/19 10:57	12/24/19 17:12	1
13C2 PFTeDA	65		50 - 150	12/18/19 10:57	12/24/19 17:12	1
d3-NMeFOSAA	67		50 - 150	12/18/19 10:57	12/24/19 17:12	1
d5-NEtFOSAA	75		50 - 150	12/18/19 10:57	12/24/19 17:12	1
M2-6:2 FTS	90		25 - 150	12/18/19 10:57	12/24/19 17:12	1
M2-8:2 FTS	95		25 - 150	12/18/19 10:57	12/24/19 17:12	1
13C3 PFBS	92		50 - 150	12/18/19 10:57	12/24/19 17:12	1

**Client Sample ID: AOI 1 GW3 DER**

**Lab Sample ID: 480-164221-15**

Date Collected: 12/11/19 09:45

Matrix: Water

Date Received: 12/14/19 09:00

**Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20	0.10	ug/L		12/16/19 15:35	12/18/19 05:55	1
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1,4-Dioxane-d8	28		15 - 110	12/16/19 15:35	12/18/19 05:55	1			

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	45		1.9	0.97	ng/L		12/18/19 10:57	12/24/19 17:20	1
Perfluoropentanoic acid (PFPeA)	11		1.9	0.61	ng/L		12/18/19 10:57	12/24/19 17:20	1
Perfluorohexanoic acid (PFHxA)	8.8		1.9	0.73	ng/L		12/18/19 10:57	12/24/19 17:20	1
Perfluoroheptanoic acid (PFHpA)	5.8		1.9	0.88	ng/L		12/18/19 10:57	12/24/19 17:20	1
Perfluorooctanoic acid (PFOA)	33		1.9	0.78	ng/L		12/18/19 10:57	12/24/19 17:20	1
Perfluorononanoic acid (PFNA)	4.2		1.9	0.26	ng/L		12/18/19 10:57	12/24/19 17:20	1
Perfluorodecanoic acid (PFDA)	0.80 J		1.9	0.74	ng/L		12/18/19 10:57	12/24/19 17:20	1
Perfluoroundecanoic acid (PFUnA)	ND		1.9	0.75	ng/L		12/18/19 10:57	12/24/19 17:20	1
Perfluorododecanoic acid (PFDoA)	ND		1.9	0.57	ng/L		12/18/19 10:57	12/24/19 17:20	1
Perfluorotridecanoic acid (PFTriA)	ND		1.9	0.58	ng/L		12/18/19 10:57	12/24/19 17:20	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.9	0.89	ng/L		12/18/19 10:57	12/24/19 17:20	1
Perfluorobutanesulfonic acid (PFBS)	3.4		1.9	0.47	ng/L		12/18/19 10:57	12/24/19 17:20	1
Perfluorohexanesulfonic acid (PFHxS)	5.2		1.9	0.77	ng/L		12/18/19 10:57	12/24/19 17:20	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.9	0.92	ng/L		12/18/19 10:57	12/24/19 17:20	1
Perfluorooctanesulfonic acid (PFOS)	7.8		1.9	0.59	ng/L		12/18/19 10:57	12/24/19 17:20	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.9	0.87	ng/L		12/18/19 10:57	12/24/19 17:20	1
Perfluorooctanesulfonamide (PFOSA)	ND		9.7	9.7	ng/L		12/18/19 10:57	12/24/19 17:20	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		19	1.6	ng/L		12/18/19 10:57	12/24/19 17:20	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		19	1.4	ng/L		12/18/19 10:57	12/24/19 17:20	1

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

**Client Sample ID: AOI 1 GW3 DER**

**Lab Sample ID: 480-164221-15**

**Date Collected: 12/11/19 09:45**

**Matrix: Water**

**Date Received: 12/14/19 09:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		19	5.3	ng/L		12/18/19 10:57	12/24/19 17:20	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		19	2.8	ng/L		12/18/19 10:57	12/24/19 17:20	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	97		50 - 150				12/18/19 10:57	12/24/19 17:20	1
13C4 PFHpA	105		50 - 150				12/18/19 10:57	12/24/19 17:20	1
13C4 PFOA	96		50 - 150				12/18/19 10:57	12/24/19 17:20	1
13C4 PFOS	89		50 - 150				12/18/19 10:57	12/24/19 17:20	1
13C5 PFNA	90		50 - 150				12/18/19 10:57	12/24/19 17:20	1
13C4 PFBA	88		25 - 150				12/18/19 10:57	12/24/19 17:20	1
13C2 PFHxA	98		50 - 150				12/18/19 10:57	12/24/19 17:20	1
13C2 PFDA	84		50 - 150				12/18/19 10:57	12/24/19 17:20	1
13C2 PFUnA	83		50 - 150				12/18/19 10:57	12/24/19 17:20	1
13C2 PFDoA	76		50 - 150				12/18/19 10:57	12/24/19 17:20	1
13C8 FOSA	75		25 - 150				12/18/19 10:57	12/24/19 17:20	1
13C5 PFPeA	104		25 - 150				12/18/19 10:57	12/24/19 17:20	1
13C2 PFTeDA	74		50 - 150				12/18/19 10:57	12/24/19 17:20	1
d3-NMeFOSAA	77		50 - 150				12/18/19 10:57	12/24/19 17:20	1
d5-NEtFOSAA	74		50 - 150				12/18/19 10:57	12/24/19 17:20	1
M2-6:2 FTS	80		25 - 150				12/18/19 10:57	12/24/19 17:20	1
M2-8:2 FTS	83		25 - 150				12/18/19 10:57	12/24/19 17:20	1
13C3 PFBS	109		50 - 150				12/18/19 10:57	12/24/19 17:20	1



# Isotope Dilution Summary

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

## Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)								
Lab Sample ID	Client Sample ID	DXE (15-110)								
480-164221-1	CS RW 2 DER	25								
480-164221-2	FIELD DUP 2	39								
480-164221-3	CS RW 1 DER	31								
480-164221-3 MS	CS RW 1 DER	32								
480-164221-3 MSD	CS RW 1 DER	36								
480-164221-4	CS SW 04 DER	28								
480-164221-4 MS	CS SW 04 DER	32								
480-164221-4 MSD	CS SW 04 DER	30								
480-164221-5	FIELD DUP	29								
480-164221-6	AOI 3 GW 2 DER	29								
480-164221-7	AOI 1 GW 2 DER	32								
480-164221-8	CS SW 01 DER	27								
480-164221-9	EQUIPMENT BLANK	27								
480-164221-10	CS SW 05 DER	28								
480-164221-11	CS SW 03 DER	37								
480-164221-12	CS SW 02 DER	29								
480-164221-13	AOI 1 GW1 DER	32								
480-164221-14	AOI 3 GW1 DER	30								
480-164221-15	AOI 1 GW3 DER	28								
LCS 480-510121/2-A	Lab Control Sample	24								
MB 480-510121/1-A	Method Blank	32								
<b>Surrogate Legend</b>										
DXE = 1,4-Dioxane-d8										

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

Matrix: Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFHxS (50-150)	PFHpA (50-150)	PFOA (50-150)	PFOS (50-150)	PFNA (50-150)	PFBA (25-150)	PFHxA (50-150)	PFDA (50-150)
480-164221-1	CS RW 2 DER	102	99	94	89	88	85	99	75
480-164221-2	FIELD DUP 2	110	108	103	108	99	92	99	91
480-164221-3	CS RW 1 DER	108	110	107	106	98	90	101	92
480-164221-3 MS	CS RW 1 DER	116	115	113	101	101	93	104	97
480-164221-3 MSD	CS RW 1 DER	106	100	100	88	93	89	103	75
480-164221-4	CS SW 04 DER	102	105	100	95	100	82	99	94
480-164221-4 MS	CS SW 04 DER	111	106	102	104	101	85	102	103
480-164221-4 MSD	CS SW 04 DER	105	104	101	104	101	86	106	91
480-164221-5	FIELD DUP	105	102	94	95	88	80	95	90
480-164221-6	AOI 3 GW 2 DER	105	99	98	97	91	82	94	89
480-164221-7	AOI 1 GW 2 DER	103	102	103	96	93	87	95	90
480-164221-8	CS SW 01 DER	108	112	103	101	103	85	94	95
480-164221-10	CS SW 05 DER	104	107	101	101	95	85	97	96
480-164221-11	CS SW 03 DER	110	104	102	99	94	82	97	96
480-164221-12	CS SW 02 DER	106	108	105	103	96	86	101	99
480-164221-13	AOI 1 GW1 DER	88	90	85	57	60	72	88	52
480-164221-14	AOI 3 GW1 DER	98	99	96	87	92	62	93	82
480-164221-15	AOI 1 GW3 DER	97	105	96	89	90	88	98	84
LCS 200-150841/2-A	Lab Control Sample	100	99	100	106	98	89	103	95

# Isotope Dilution Summary

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFHxS (50-150)	PFHpA (50-150)	PFOA (50-150)	PFOS (50-150)	PFNA (50-150)	PFBA (25-150)	PFHxA (50-150)	PFDA (50-150)
MB 200-150841/1-A	Method Blank	103	101	108	104	109	90	106	96

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFUnA (50-150)	PFDoA (50-150)	PFOSA (25-150)	PFPeA (25-150)	PFTDA (50-150)	-NMeFOS (50-150)	-NEtFOS/ (50-150)	M262FTS (25-150)
480-164221-1	CS RW 2 DER	71	62	74	105	70	67	79	79
480-164221-2	FIELD DUP 2	88	74	86	104	81	82	85	78
480-164221-3	CS RW 1 DER	93	78	85	106	88	86	84	80
480-164221-3 MS	CS RW 1 DER	98	90	94	114	91	83	94	90
480-164221-3 MSD	CS RW 1 DER	71	66	83	109	74	77	79	78
480-164221-4	CS SW 04 DER	89	84	83	104	79	84	89	77
480-164221-4 MS	CS SW 04 DER	93	82	91	101	85	75	90	83
480-164221-4 MSD	CS SW 04 DER	95	78	92	106	78	84	91	82
480-164221-5	FIELD DUP	88	75	81	93	71	79	78	82
480-164221-6	AOI 3 GW 2 DER	91	78	87	104	73	73	74	76
480-164221-7	AOI 1 GW 2 DER	92	78	74	109	82	80	83	76
480-164221-8	CS SW 01 DER	100	90	44	105	77	87	84	78
480-164221-10	CS SW 05 DER	92	78	83	106	79	82	87	79
480-164221-11	CS SW 03 DER	99	81	87	99	79	72	94	83
480-164221-12	CS SW 02 DER	96	80	86	104	85	77	89	81
480-164221-13	AOI 1 GW1 DER	48 *	48 *	47	85	45 *	41 *	49 *	65
480-164221-14	AOI 3 GW1 DER	84	72	47	96	65	67	75	90
480-164221-15	AOI 1 GW3 DER	83	76	75	104	74	77	74	80
LCS 200-150841/2-A	Lab Control Sample	84	66	69	106	62	90	78	77
MB 200-150841/1-A	Method Blank	92	84	74	111	79	90	92	81

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)	
		M282FTS (25-150)	3C3-PFB: (50-150)
480-164221-1	CS RW 2 DER	80	102
480-164221-2	FIELD DUP 2	103	103
480-164221-3	CS RW 1 DER	98	108
480-164221-3 MS	CS RW 1 DER	95	113
480-164221-3 MSD	CS RW 1 DER	79	102
480-164221-4	CS SW 04 DER	95	99
480-164221-4 MS	CS SW 04 DER	98	103
480-164221-4 MSD	CS SW 04 DER	92	105
480-164221-5	FIELD DUP	93	96
480-164221-6	AOI 3 GW 2 DER	94	102
480-164221-7	AOI 1 GW 2 DER	93	98
480-164221-8	CS SW 01 DER	106	102
480-164221-10	CS SW 05 DER	105	104
480-164221-11	CS SW 03 DER	94	97
480-164221-12	CS SW 02 DER	112	103
480-164221-13	AOI 1 GW1 DER	57	85
480-164221-14	AOI 3 GW1 DER	95	92
480-164221-15	AOI 1 GW3 DER	83	109
LCS 200-150841/2-A	Lab Control Sample	100	106
MB 200-150841/1-A	Method Blank	108	106

**Surrogate Legend**

PFHxS = 18O2 PFHxS

# Isotope Dilution Summary

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

PFHpA = 13C4 PFHpA  
PFOA = 13C4 PFOA  
PFOS = 13C4 PFOS  
PFNA = 13C5 PFNA  
PFBA = 13C4 PFBA  
PFHxA = 13C2 PFHxA  
PFDA = 13C2 PFDA  
PFUnA = 13C2 PFUnA  
PFDoA = 13C2 PFDoA  
PFOSA = 13C8 FOSA  
PFPeA = 13C5 PFPeA  
PFTDA = 13C2 PFTeDA  
d3-NMeFOSAA = d3-NMeFOSAA  
d5-NEtFOSAA = d5-NEtFOSAA  
M262FTS = M2-6:2 FTS  
M282FTS = M2-8:2 FTS  
13C3-PFBS = 13C3 PFBS

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

## Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

**Lab Sample ID: MB 480-510121/1-A**  
**Matrix: Water**  
**Analysis Batch: 510312**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 510121**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20	0.10	ug/L		12/16/19 15:35	12/17/19 20:56	1
Isotope Dilution		MB %Recovery	MB Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8		32		15 - 110			12/16/19 15:35	12/17/19 20:56	1

**Lab Sample ID: LCS 480-510121/2-A**  
**Matrix: Water**  
**Analysis Batch: 510312**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 510121**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,4-Dioxane	1.00	1.14		ug/L		114	40 - 140
Isotope Dilution		LCS %Recovery	LCS Qualifier	Limits			
1,4-Dioxane-d8		24		15 - 110			

**Lab Sample ID: 480-164221-3 MS**  
**Matrix: Water**  
**Analysis Batch: 510312**

**Client Sample ID: CS RW 1 DER**  
**Prep Type: Total/NA**  
**Prep Batch: 510121**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
1,4-Dioxane	ND		1.00	1.15		ug/L		115	40 - 140
Isotope Dilution		MS %Recovery	MS Qualifier	Limits					
1,4-Dioxane-d8		32		15 - 110					

**Lab Sample ID: 480-164221-3 MSD**  
**Matrix: Water**  
**Analysis Batch: 510312**

**Client Sample ID: CS RW 1 DER**  
**Prep Type: Total/NA**  
**Prep Batch: 510121**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,4-Dioxane	ND		1.00	1.17		ug/L		117	40 - 140	2	20
Isotope Dilution		MSD %Recovery	MSD Qualifier	Limits							
1,4-Dioxane-d8		36		15 - 110							

**Lab Sample ID: 480-164221-4 MS**  
**Matrix: Water**  
**Analysis Batch: 510313**

**Client Sample ID: CS SW 04 DER**  
**Prep Type: Total/NA**  
**Prep Batch: 510121**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
1,4-Dioxane	ND		1.00	1.17		ug/L		117	40 - 140
Isotope Dilution		MS %Recovery	MS Qualifier	Limits					
1,4-Dioxane-d8		32		15 - 110					

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

## Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution) (Continued)

Lab Sample ID: 480-164221-4 MSD

Matrix: Water

Analysis Batch: 510313

Client Sample ID: CS SW 04 DER

Prep Type: Total/NA

Prep Batch: 510121

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane	ND		1.00	1.21	E	ug/L		121	40 - 140	3	20
<b>MSD MSD</b>											
Isotope Dilution	%Recovery	Qualifier	Limits								
1,4-Dioxane-d8	30		15 - 110								

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

Lab Sample ID: MB 200-150841/1-A

Matrix: Water

Analysis Batch: 150985

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 150841

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Perfluorobutanoic acid (PFBA)	ND		2.0	1.0	ng/L		12/18/19 10:57	12/24/19 14:12	1	
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.63	ng/L		12/18/19 10:57	12/24/19 14:12	1	
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.76	ng/L		12/18/19 10:57	12/24/19 14:12	1	
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.91	ng/L		12/18/19 10:57	12/24/19 14:12	1	
Perfluorooctanoic acid (PFOA)	ND		2.0	0.81	ng/L		12/18/19 10:57	12/24/19 14:12	1	
Perfluorononanoic acid (PFNA)	ND		2.0	0.27	ng/L		12/18/19 10:57	12/24/19 14:12	1	
Perfluorodecanoic acid (PFDA)	ND		2.0	0.77	ng/L		12/18/19 10:57	12/24/19 14:12	1	
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.78	ng/L		12/18/19 10:57	12/24/19 14:12	1	
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.59	ng/L		12/18/19 10:57	12/24/19 14:12	1	
Perfluorotridecanoic acid (PFTriA)	ND		2.0	0.60	ng/L		12/18/19 10:57	12/24/19 14:12	1	
Perfluorotetradecanoic acid (PFTeA)	ND		2.0	0.92	ng/L		12/18/19 10:57	12/24/19 14:12	1	
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.49	ng/L		12/18/19 10:57	12/24/19 14:12	1	
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.80	ng/L		12/18/19 10:57	12/24/19 14:12	1	
Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0	0.95	ng/L		12/18/19 10:57	12/24/19 14:12	1	
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.61	ng/L		12/18/19 10:57	12/24/19 14:12	1	
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.90	ng/L		12/18/19 10:57	12/24/19 14:12	1	
Perfluorooctanesulfonamide (PFOSA)	ND		10	10	ng/L		12/18/19 10:57	12/24/19 14:12	1	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		20	1.7	ng/L		12/18/19 10:57	12/24/19 14:12	1	
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		20	1.5	ng/L		12/18/19 10:57	12/24/19 14:12	1	
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		20	5.5	ng/L		12/18/19 10:57	12/24/19 14:12	1	
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		20	2.9	ng/L		12/18/19 10:57	12/24/19 14:12	1	
<b>MB MB</b>										
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac				
18O2 PFHxS	103		50 - 150	12/18/19 10:57	12/24/19 14:12	1				
13C4 PFHpA	101		50 - 150	12/18/19 10:57	12/24/19 14:12	1				
13C4 PFOA	108		50 - 150	12/18/19 10:57	12/24/19 14:12	1				
13C4 PFOS	104		50 - 150	12/18/19 10:57	12/24/19 14:12	1				
13C5 PFNA	109		50 - 150	12/18/19 10:57	12/24/19 14:12	1				
13C4 PFBA	90		25 - 150	12/18/19 10:57	12/24/19 14:12	1				
13C2 PFHxA	106		50 - 150	12/18/19 10:57	12/24/19 14:12	1				
13C2 PFDA	96		50 - 150	12/18/19 10:57	12/24/19 14:12	1				
13C2 PFUnA	92		50 - 150	12/18/19 10:57	12/24/19 14:12	1				

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# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

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

**Lab Sample ID: MB 200-150841/1-A**  
**Matrix: Water**  
**Analysis Batch: 150985**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 150841**

Isotope Dilution	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C2 PFDoA	84		50 - 150	12/18/19 10:57	12/24/19 14:12	1
13C8 FOSA	74		25 - 150	12/18/19 10:57	12/24/19 14:12	1
13C5 PFPeA	111		25 - 150	12/18/19 10:57	12/24/19 14:12	1
13C2 PFTeDA	79		50 - 150	12/18/19 10:57	12/24/19 14:12	1
d3-NMeFOSAA	90		50 - 150	12/18/19 10:57	12/24/19 14:12	1
d5-NEtFOSAA	92		50 - 150	12/18/19 10:57	12/24/19 14:12	1
M2-6:2 FTS	81		25 - 150	12/18/19 10:57	12/24/19 14:12	1
M2-8:2 FTS	108		25 - 150	12/18/19 10:57	12/24/19 14:12	1
13C3 PFBS	106		50 - 150	12/18/19 10:57	12/24/19 14:12	1

**Lab Sample ID: LCS 200-150841/2-A**  
**Matrix: Water**  
**Analysis Batch: 150985**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 150841**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Perfluorobutanoic acid (PFBA)	40.0	41.6		ng/L		104	50 - 150
Perfluoropentanoic acid (PFPeA)	40.0	35.7		ng/L		89	50 - 150
Perfluorohexanoic acid (PFHxA)	40.0	38.1		ng/L		95	70 - 130
Perfluoroheptanoic acid (PFHpA)	40.0	40.0		ng/L		100	70 - 130
Perfluorooctanoic acid (PFOA)	40.0	36.4		ng/L		91	70 - 130
Perfluorononanoic acid (PFNA)	40.0	38.8		ng/L		97	70 - 130
Perfluorodecanoic acid (PFDA)	40.0	38.8		ng/L		97	70 - 130
Perfluoroundecanoic acid (PFUnA)	40.0	37.1		ng/L		93	70 - 130
Perfluorododecanoic acid (PFDoA)	40.0	48.0		ng/L		120	70 - 130
Perfluorotridecanoic acid (PFTriA)	40.0	38.5		ng/L		96	70 - 130
Perfluorotetradecanoic acid (PFTeA)	40.0	51.2		ng/L		128	70 - 130
Perfluorobutanesulfonic acid (PFBS)	35.4	30.6		ng/L		87	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	36.4	33.6		ng/L		92	70 - 130
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	33.0		ng/L		87	50 - 150
Perfluorooctanesulfonic acid (PFOS)	37.1	35.5		ng/L		96	70 - 130
Perfluorodecanesulfonic acid (PFDS)	38.6	32.0		ng/L		83	50 - 150
Perfluorooctanesulfonamide (PFOSA)	40.0	32.3		ng/L		81	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	40.3		ng/L		101	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	40.2		ng/L		100	70 - 130
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	37.9	35.5		ng/L		94	50 - 150
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	38.3	33.9		ng/L		89	50 - 150

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

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

Isotope Dilution	LCS	LCS	Limits
	%Recovery	Qualifier	
18O2 PFHxS	100		50 - 150
13C4 PFHpA	99		50 - 150
13C4 PFOA	100		50 - 150
13C4 PFOS	106		50 - 150
13C5 PFNA	98		50 - 150
13C4 PFBA	89		25 - 150
13C2 PFHxA	103		50 - 150
13C2 PFDA	95		50 - 150
13C2 PFUnA	84		50 - 150
13C2 PFDoA	66		50 - 150
13C8 FOSA	69		25 - 150
13C5 PFPeA	106		25 - 150
13C2 PFTeDA	62		50 - 150
d3-NMeFOSAA	90		50 - 150
d5-NEtFOSAA	78		50 - 150
M2-6:2 FTS	77		25 - 150
M2-8:2 FTS	100		25 - 150
13C3 PFBS	106		50 - 150

**Lab Sample ID: 480-164221-3 MS**

**Matrix: Water**

**Analysis Batch: 150985**

**Client Sample ID: CS RW 1 DER**

**Prep Type: Total/NA**

**Prep Batch: 150841**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
Perfluorobutanoic acid (PFBA)	5.4		37.7	46.6		ng/L		109	40 - 160
Perfluoropentanoic acid (PFPeA)	10		37.7	43.3		ng/L		88	40 - 160
Perfluorohexanoic acid (PFHxA)	12		37.7	49.7		ng/L		100	40 - 160
Perfluoroheptanoic acid (PFHpA)	3.5		37.7	37.6		ng/L		90	40 - 160
Perfluorooctanoic acid (PFOA)	5.9		37.7	41.5		ng/L		94	40 - 160
Perfluorononanoic acid (PFNA)	0.31	J	37.7	38.9		ng/L		102	40 - 160
Perfluorodecanoic acid (PFDA)	ND		37.7	37.3		ng/L		99	40 - 160
Perfluoroundecanoic acid (PFUnA)	ND		37.7	35.3		ng/L		94	40 - 160
Perfluorododecanoic acid (PFDoA)	ND	F2	37.7	37.4		ng/L		99	40 - 160
Perfluorotridecanoic acid (PFTriA)	ND		37.7	35.0		ng/L		93	40 - 160
Perfluorotetradecanoic acid (PFTeA)	ND		37.7	49.9		ng/L		132	40 - 160
Perfluorobutanesulfonic acid (PFBS)	3.5		33.3	34.9		ng/L		94	40 - 160
Perfluorohexanesulfonic acid (PFHxS)	25		34.3	55.2		ng/L		88	40 - 160
Perfluoroheptanesulfonic Acid (PFHpS)	ND		35.9	40.4		ng/L		112	40 - 160
Perfluorooctanesulfonic acid (PFOS)	45		35.0	84.3		ng/L		111	40 - 160
Perfluorodecanesulfonic acid (PFDS)	ND		36.4	38.1		ng/L		105	40 - 160
Perfluorooctanesulfonamide (PFOSA)	ND		37.7	37.8		ng/L		100	40 - 160
N-methylperfluorooctanesulfonamide	ND		37.7	38.1		ng/L		101	40 - 160
N-ethylperfluorooctanesulfonamide	ND		37.7	35.4		ng/L		94	40 - 160
doacetic acid (NEtFOSAA)									

Eurofins TestAmerica, Buffalo

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

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

**Lab Sample ID: 480-164221-3 MS**  
**Matrix: Water**  
**Analysis Batch: 150985**

**Client Sample ID: CS RW 1 DER**  
**Prep Type: Total/NA**  
**Prep Batch: 150841**  
**%Rec.**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		35.8	32.5		ng/L		91	40 - 160
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		36.1	33.9		ng/L		94	40 - 160
		<b>MS MS</b>							
<b>Isotope Dilution</b>		<b>%Recovery</b>			<b>Qualifier</b>				<b>Limits</b>
18O2 PFHxS		116							50 - 150
13C4 PFHpA		115							50 - 150
13C4 PFOA		113							50 - 150
13C4 PFOS		101							50 - 150
13C5 PFNA		101							50 - 150
13C4 PFBA		93							25 - 150
13C2 PFHxA		104							50 - 150
13C2 PFDA		97							50 - 150
13C2 PFUnA		98							50 - 150
13C2 PFDoA		90							50 - 150
13C8 FOSA		94							25 - 150
13C5 PFPeA		114							25 - 150
13C2 PFTeDA		91							50 - 150
d3-NMeFOSAA		83							50 - 150
d5-NEtFOSAA		94							50 - 150
M2-6:2 FTS		90							25 - 150
M2-8:2 FTS		95							25 - 150
13C3 PFBS		113							50 - 150

**Lab Sample ID: 480-164221-3 MSD**  
**Matrix: Water**  
**Analysis Batch: 150985**

**Client Sample ID: CS RW 1 DER**  
**Prep Type: Total/NA**  
**Prep Batch: 150841**  
**%Rec.**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Perfluorobutanoic acid (PFBA)	5.4		37.1	45.0		ng/L		107	40 - 160	4	30
Perfluoropentanoic acid (PFPeA)	10		37.1	43.1		ng/L		89	40 - 160	1	30
Perfluorohexanoic acid (PFHxA)	12		37.1	49.8		ng/L		101	40 - 160	0	20
Perfluoroheptanoic acid (PFHpA)	3.5		37.1	44.1		ng/L		109	40 - 160	16	20
Perfluorooctanoic acid (PFOA)	5.9		37.1	41.6		ng/L		96	40 - 160	0	20
Perfluorononanoic acid (PFNA)	0.31	J	37.1	40.8		ng/L		109	40 - 160	5	20
Perfluorodecanoic acid (PFDA)	ND		37.1	45.5		ng/L		122	40 - 160	20	20
Perfluoroundecanoic acid (PFUnA)	ND		37.1	38.8		ng/L		104	40 - 160	9	20
Perfluorododecanoic acid (PFDoA)	ND	F2	37.1	46.8	F2	ng/L		126	40 - 160	22	20
Perfluorotridecanoic acid (PFTriA)	ND		37.1	39.4		ng/L		106	40 - 160	12	20
Perfluorotetradecanoic acid (PFTeA)	ND		37.1	47.3		ng/L		127	40 - 160	6	20
Perfluorobutanesulfonic acid (PFBS)	3.5		32.8	35.9		ng/L		99	40 - 160	3	20
Perfluorohexanesulfonic acid (PFHxS)	25		33.8	54.9		ng/L		88	40 - 160	1	20
Perfluoroheptanesulfonic Acid (PFHpS)	ND		35.4	39.2		ng/L		111	40 - 160	3	30



# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

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

**Lab Sample ID: 480-164221-3 MSD**

**Matrix: Water**

**Analysis Batch: 150985**

**Client Sample ID: CS RW 1 DER**

**Prep Type: Total/NA**

**Prep Batch: 150841**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Perfluorooctanesulfonic acid (PFOS)	45		34.5	87.4		ng/L		121	40 - 160	4	20
Perfluorodecanesulfonic acid (PFDS)	ND		35.8	35.5		ng/L		99	40 - 160	7	30
Perfluorooctanesulfonamide (PFOSA)	ND		37.1	37.0		ng/L		100	40 - 160	2	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		37.1	34.7		ng/L		93	40 - 160	9	20
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		37.1	39.2		ng/L		106	40 - 160	10	20
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		35.2	35.3		ng/L		100	40 - 160	8	30
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		35.6	35.0		ng/L		98	40 - 160	3	30
<b>MSD MSD</b>											
<b>Isotope Dilution</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>								
18O2 PFHxS	106		50 - 150								
13C4 PFHpA	100		50 - 150								
13C4 PFOA	100		50 - 150								
13C4 PFOS	88		50 - 150								
13C5 PFNA	93		50 - 150								
13C4 PFBA	89		25 - 150								
13C2 PFHxA	103		50 - 150								
13C2 PFDA	75		50 - 150								
13C2 PFUnA	71		50 - 150								
13C2 PFDoA	66		50 - 150								
13C8 FOSA	83		25 - 150								
13C5 PFPeA	109		25 - 150								
13C2 PFTeDA	74		50 - 150								
d3-NMeFOSAA	77		50 - 150								
d5-NEtFOSAA	79		50 - 150								
M2-6:2 FTS	78		25 - 150								
M2-8:2 FTS	79		25 - 150								
13C3 PFBS	102		50 - 150								

**Lab Sample ID: 480-164221-4 MS**

**Matrix: Water**

**Analysis Batch: 150985**

**Client Sample ID: CS SW 04 DER**

**Prep Type: Total/NA**

**Prep Batch: 150841**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Perfluorobutanoic acid (PFBA)	ND		33.4	36.4		ng/L		109	40 - 160	
Perfluoropentanoic acid (PFPeA)	0.64	J	33.4	30.7		ng/L		90	40 - 160	
Perfluorohexanoic acid (PFHxA)	ND		33.4	32.0		ng/L		96	40 - 160	
Perfluoroheptanoic acid (PFHpA)	ND		33.4	32.2		ng/L		96	40 - 160	
Perfluorooctanoic acid (PFOA)	1.7		33.4	30.6		ng/L		87	40 - 160	
Perfluorononanoic acid (PFNA)	0.35	J	33.4	32.7		ng/L		97	40 - 160	
Perfluorodecanoic acid (PFDA)	ND		33.4	29.6		ng/L		89	40 - 160	
Perfluoroundecanoic acid (PFUnA)	ND		33.4	32.7		ng/L		98	40 - 160	
Perfluorododecanoic acid (PFDoA)	ND		33.4	33.7		ng/L		101	40 - 160	

Eurofins TestAmerica, Buffalo

## QC Sample Results

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

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

**Lab Sample ID: 480-164221-4 MS**  
**Matrix: Water**  
**Analysis Batch: 150985**

**Client Sample ID: CS SW 04 DER**  
**Prep Type: Total/NA**  
**Prep Batch: 150841**  
**%Rec. Limits**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Perfluorotridecanoic acid (PFTriA)	ND		33.4	33.0		ng/L		99	40 - 160
Perfluorotetradecanoic acid (PFTeA)	ND		33.4	38.0		ng/L		114	40 - 160
Perfluorobutanesulfonic acid (PFBS)	0.57	J	29.6	27.7		ng/L		92	40 - 160
Perfluorohexanesulfonic acid (PFHxS)	0.82	J	30.4	28.1		ng/L		90	40 - 160
Perfluoroheptanesulfonic Acid (PFHpS)	ND		31.8	31.4		ng/L		99	40 - 160
Perfluorooctanesulfonic acid (PFOS)	1.1	J	31.0	29.0		ng/L		90	40 - 160
Perfluorodecanesulfonic acid (PFDS)	ND		32.2	29.5		ng/L		92	40 - 160
Perfluorooctanesulfonamide (PFOSA)	ND		33.4	32.2		ng/L		96	40 - 160
N-methylperfluorooctanesulfonamide (NMeFOSAA)	ND		33.4	39.0		ng/L		117	40 - 160
N-ethylperfluorooctanesulfonamide (NEtFOSAA)	ND		33.4	32.5		ng/L		97	40 - 160
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		31.7	26.8		ng/L		85	40 - 160
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		32.0	28.3		ng/L		88	40 - 160
Isotope Dilution	%Recovery	MS Qualifier	MS Qualifier	Limits					
18O2 PFHxS	111			50 - 150					
13C4 PFHpA	106			50 - 150					
13C4 PFOA	102			50 - 150					
13C4 PFOS	104			50 - 150					
13C5 PFNA	101			50 - 150					
13C4 PFBA	85			25 - 150					
13C2 PFHxA	102			50 - 150					
13C2 PFDA	103			50 - 150					
13C2 PFUnA	93			50 - 150					
13C2 PFDoA	82			50 - 150					
13C8 FOSA	91			25 - 150					
13C5 PFPeA	101			25 - 150					
13C2 PFTeDA	85			50 - 150					
d3-NMeFOSAA	75			50 - 150					
d5-NEtFOSAA	90			50 - 150					
M2-6:2 FTS	83			25 - 150					
M2-8:2 FTS	98			25 - 150					
13C3 PFBS	103			50 - 150					

**Lab Sample ID: 480-164221-4 MSD**  
**Matrix: Water**  
**Analysis Batch: 150985**

**Client Sample ID: CS SW 04 DER**  
**Prep Type: Total/NA**  
**Prep Batch: 150841**  
**%Rec. RPD**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Perfluorobutanoic acid (PFBA)	ND		33.0	35.2		ng/L		107	40 - 160	3	30
Perfluoropentanoic acid (PFPeA)	0.64	J	33.0	29.9		ng/L		89	40 - 160	3	30

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# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

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

**Lab Sample ID: 480-164221-4 MSD**

**Matrix: Water**

**Analysis Batch: 150985**

**Client Sample ID: CS SW 04 DER**

**Prep Type: Total/NA**

**Prep Batch: 150841**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	RPD	
									%Rec. Limits	RPD Limit
Perfluorohexanoic acid (PFHxA)	ND		33.0	31.5		ng/L		95	40 - 160	2 20
Perfluoroheptanoic acid (PFHpA)	ND		33.0	33.5		ng/L		101	40 - 160	4 20
Perfluorooctanoic acid (PFOA)	1.7		33.0	34.6		ng/L		100	40 - 160	12 20
Perfluorononanoic acid (PFNA)	0.35	J	33.0	34.9		ng/L		105	40 - 160	6 20
Perfluorodecanoic acid (PFDA)	ND		33.0	35.1		ng/L		106	40 - 160	17 20
Perfluoroundecanoic acid (PFUnA)	ND		33.0	33.9		ng/L		103	40 - 160	3 20
Perfluorododecanoic acid (PFDoA)	ND		33.0	37.0		ng/L		112	40 - 160	10 20
Perfluorotridecanoic acid (PFTriA)	ND		33.0	34.6		ng/L		105	40 - 160	5 20
Perfluorotetradecanoic acid (PFTeA)	ND		33.0	44.2		ng/L		134	40 - 160	15 20
Perfluorobutanesulfonic acid (PFBS)	0.57	J	29.2	27.9		ng/L		94	40 - 160	1 20
Perfluorohexanesulfonic acid (PFHxS)	0.82	J	30.0	29.0		ng/L		94	40 - 160	3 20
Perfluoroheptanesulfonic Acid (PFHpS)	ND		31.4	31.6		ng/L		101	40 - 160	1 30
Perfluorooctanesulfonic acid (PFOS)	1.1	J	30.6	31.1		ng/L		98	40 - 160	7 20
Perfluorodecanesulfonic acid (PFDS)	ND		31.8	29.7		ng/L		93	40 - 160	0 30
Perfluorooctanesulfonamide (PFOSA)	ND		33.0	30.0		ng/L		91	40 - 160	7 30
N-methylperfluorooctanesulfonamide (NMeFOSAA)	ND		33.0	35.4		ng/L		107	40 - 160	10 20
N-ethylperfluorooctanesulfonamide (NEtFOSAA)	ND		33.0	34.6		ng/L		105	40 - 160	6 20
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		31.3	30.8		ng/L		99	40 - 160	14 30
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		31.6	29.1		ng/L		92	40 - 160	3 30

Isotope Dilution	MSD		Limits
	%Recovery	Qualifier	
18O2 PFHxS	105		50 - 150
13C4 PFHpA	104		50 - 150
13C4 PFOA	101		50 - 150
13C4 PFOS	104		50 - 150
13C5 PFNA	101		50 - 150
13C4 PFBA	86		25 - 150
13C2 PFHxA	106		50 - 150
13C2 PFDA	91		50 - 150
13C2 PFUnA	95		50 - 150
13C2 PFDoA	78		50 - 150
13C8 FOSA	92		25 - 150
13C5 PFPeA	106		25 - 150
13C2 PFTeDA	78		50 - 150
d3-NMeFOSAA	84		50 - 150
d5-NEtFOSAA	91		50 - 150
M2-6:2 FTS	82		25 - 150
M2-8:2 FTS	92		25 - 150

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

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

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Lab Sample ID: 480-164221-4 MSD  
Matrix: Water  
Analysis Batch: 150985

Client Sample ID: CS SW 04 DER  
Prep Type: Total/NA  
Prep Batch: 150841

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>MSD MSD Qualifier</i>	<i>Limits</i>
<u><i><sup>13</sup>C3 PFBS</i></u>	<u>105</u>		<u>50 - 150</u>

# QC Association Summary

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

## GC/MS Semi VOA

### Prep Batch: 510121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-164221-1	CS RW 2 DER	Total/NA	Water	3510C	
480-164221-2	FIELD DUP 2	Total/NA	Water	3510C	
480-164221-3	CS RW 1 DER	Total/NA	Water	3510C	
480-164221-4	CS SW 04 DER	Total/NA	Water	3510C	
480-164221-5	FIELD DUP	Total/NA	Water	3510C	
480-164221-6	AOI 3 GW 2 DER	Total/NA	Water	3510C	
480-164221-7	AOI 1 GW 2 DER	Total/NA	Water	3510C	
480-164221-8	CS SW 01 DER	Total/NA	Water	3510C	
480-164221-9	EQUIPMENT BLANK	Total/NA	Water	3510C	
480-164221-10	CS SW 05 DER	Total/NA	Water	3510C	
480-164221-11	CS SW 03 DER	Total/NA	Water	3510C	
480-164221-12	CS SW 02 DER	Total/NA	Water	3510C	
480-164221-13	AOI 1 GW1 DER	Total/NA	Water	3510C	
480-164221-14	AOI 3 GW1 DER	Total/NA	Water	3510C	
480-164221-15	AOI 1 GW3 DER	Total/NA	Water	3510C	
MB 480-510121/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-510121/2-A	Lab Control Sample	Total/NA	Water	3510C	
480-164221-3 MS	CS RW 1 DER	Total/NA	Water	3510C	
480-164221-3 MSD	CS RW 1 DER	Total/NA	Water	3510C	
480-164221-4 MS	CS SW 04 DER	Total/NA	Water	3510C	
480-164221-4 MSD	CS SW 04 DER	Total/NA	Water	3510C	

### Analysis Batch: 510312

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-164221-3	CS RW 1 DER	Total/NA	Water	8270D SIM ID	510121
MB 480-510121/1-A	Method Blank	Total/NA	Water	8270D SIM ID	510121
LCS 480-510121/2-A	Lab Control Sample	Total/NA	Water	8270D SIM ID	510121
480-164221-3 MS	CS RW 1 DER	Total/NA	Water	8270D SIM ID	510121
480-164221-3 MSD	CS RW 1 DER	Total/NA	Water	8270D SIM ID	510121

### Analysis Batch: 510313

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-164221-1	CS RW 2 DER	Total/NA	Water	8270D SIM ID	510121
480-164221-2	FIELD DUP 2	Total/NA	Water	8270D SIM ID	510121
480-164221-4	CS SW 04 DER	Total/NA	Water	8270D SIM ID	510121
480-164221-5	FIELD DUP	Total/NA	Water	8270D SIM ID	510121
480-164221-6	AOI 3 GW 2 DER	Total/NA	Water	8270D SIM ID	510121
480-164221-7	AOI 1 GW 2 DER	Total/NA	Water	8270D SIM ID	510121
480-164221-8	CS SW 01 DER	Total/NA	Water	8270D SIM ID	510121
480-164221-9	EQUIPMENT BLANK	Total/NA	Water	8270D SIM ID	510121
480-164221-10	CS SW 05 DER	Total/NA	Water	8270D SIM ID	510121
480-164221-11	CS SW 03 DER	Total/NA	Water	8270D SIM ID	510121
480-164221-12	CS SW 02 DER	Total/NA	Water	8270D SIM ID	510121
480-164221-13	AOI 1 GW1 DER	Total/NA	Water	8270D SIM ID	510121
480-164221-14	AOI 3 GW1 DER	Total/NA	Water	8270D SIM ID	510121
480-164221-15	AOI 1 GW3 DER	Total/NA	Water	8270D SIM ID	510121
480-164221-4 MS	CS SW 04 DER	Total/NA	Water	8270D SIM ID	510121
480-164221-4 MSD	CS SW 04 DER	Total/NA	Water	8270D SIM ID	510121

# QC Association Summary

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

## LCMS

### Prep Batch: 150841

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-164221-1	CS RW 2 DER	Total/NA	Water	3535	
480-164221-2	FIELD DUP 2	Total/NA	Water	3535	
480-164221-3	CS RW 1 DER	Total/NA	Water	3535	
480-164221-4	CS SW 04 DER	Total/NA	Water	3535	
480-164221-5	FIELD DUP	Total/NA	Water	3535	
480-164221-6	AOI 3 GW 2 DER	Total/NA	Water	3535	
480-164221-7	AOI 1 GW 2 DER	Total/NA	Water	3535	
480-164221-8	CS SW 01 DER	Total/NA	Water	3535	
480-164221-10	CS SW 05 DER	Total/NA	Water	3535	
480-164221-11	CS SW 03 DER	Total/NA	Water	3535	
480-164221-12	CS SW 02 DER	Total/NA	Water	3535	
480-164221-13	AOI 1 GW1 DER	Total/NA	Water	3535	
480-164221-14	AOI 3 GW1 DER	Total/NA	Water	3535	
480-164221-15	AOI 1 GW3 DER	Total/NA	Water	3535	
MB 200-150841/1-A	Method Blank	Total/NA	Water	3535	
LCS 200-150841/2-A	Lab Control Sample	Total/NA	Water	3535	
480-164221-3 MS	CS RW 1 DER	Total/NA	Water	3535	
480-164221-3 MSD	CS RW 1 DER	Total/NA	Water	3535	
480-164221-4 MS	CS SW 04 DER	Total/NA	Water	3535	
480-164221-4 MSD	CS SW 04 DER	Total/NA	Water	3535	

### Analysis Batch: 150985

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-164221-1	CS RW 2 DER	Total/NA	Water	537 (modified)	150841
480-164221-2	FIELD DUP 2	Total/NA	Water	537 (modified)	150841
480-164221-3	CS RW 1 DER	Total/NA	Water	537 (modified)	150841
480-164221-4	CS SW 04 DER	Total/NA	Water	537 (modified)	150841
480-164221-5	FIELD DUP	Total/NA	Water	537 (modified)	150841
480-164221-6	AOI 3 GW 2 DER	Total/NA	Water	537 (modified)	150841
480-164221-7	AOI 1 GW 2 DER	Total/NA	Water	537 (modified)	150841
480-164221-8	CS SW 01 DER	Total/NA	Water	537 (modified)	150841
480-164221-10	CS SW 05 DER	Total/NA	Water	537 (modified)	150841
480-164221-11	CS SW 03 DER	Total/NA	Water	537 (modified)	150841
480-164221-12	CS SW 02 DER	Total/NA	Water	537 (modified)	150841
480-164221-13	AOI 1 GW1 DER	Total/NA	Water	537 (modified)	150841
480-164221-14	AOI 3 GW1 DER	Total/NA	Water	537 (modified)	150841
480-164221-15	AOI 1 GW3 DER	Total/NA	Water	537 (modified)	150841
MB 200-150841/1-A	Method Blank	Total/NA	Water	537 (modified)	150841
LCS 200-150841/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	150841
480-164221-3 MS	CS RW 1 DER	Total/NA	Water	537 (modified)	150841
480-164221-3 MSD	CS RW 1 DER	Total/NA	Water	537 (modified)	150841
480-164221-4 MS	CS SW 04 DER	Total/NA	Water	537 (modified)	150841
480-164221-4 MSD	CS SW 04 DER	Total/NA	Water	537 (modified)	150841

# Lab Chronicle

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

## Client Sample ID: CS RW 2 DER

Lab Sample ID: 480-164221-1

Date Collected: 12/12/19 12:34

Matrix: Water

Date Received: 12/14/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			510121	12/16/19 15:35	ATG	TAL BUF
Total/NA	Analysis	8270D SIM ID		1	510313	12/18/19 01:16	RJS	TAL BUF
Total/NA	Prep	3535			150841	12/18/19 10:57	MBM	TAL BUR
Total/NA	Analysis	537 (modified)		1	150985	12/24/19 14:53	JM1	TAL BUR

## Client Sample ID: FIELD DUP 2

Lab Sample ID: 480-164221-2

Date Collected: 12/12/19 00:00

Matrix: Water

Date Received: 12/14/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			510121	12/16/19 15:35	ATG	TAL BUF
Total/NA	Analysis	8270D SIM ID		1	510313	12/18/19 01:39	RJS	TAL BUF
Total/NA	Prep	3535			150841	12/18/19 10:57	MBM	TAL BUR
Total/NA	Analysis	537 (modified)		1	150985	12/24/19 15:01	JM1	TAL BUR

## Client Sample ID: CS RW 1 DER

Lab Sample ID: 480-164221-3

Date Collected: 12/12/19 12:10

Matrix: Water

Date Received: 12/14/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			510121	12/16/19 15:35	ATG	TAL BUF
Total/NA	Analysis	8270D SIM ID		1	510312	12/17/19 22:29	RJS	TAL BUF
Total/NA	Prep	3535			150841	12/18/19 10:57	MBM	TAL BUR
Total/NA	Analysis	537 (modified)		1	150985	12/24/19 15:09	JM1	TAL BUR

## Client Sample ID: CS SW 04 DER

Lab Sample ID: 480-164221-4

Date Collected: 12/12/19 11:31

Matrix: Water

Date Received: 12/14/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			510121	12/16/19 15:35	ATG	TAL BUF
Total/NA	Analysis	8270D SIM ID		1	510313	12/18/19 00:53	RJS	TAL BUF
Total/NA	Prep	3535			150841	12/18/19 10:57	MBM	TAL BUR
Total/NA	Analysis	537 (modified)		1	150985	12/24/19 15:34	JM1	TAL BUR

## Client Sample ID: FIELD DUP

Lab Sample ID: 480-164221-5

Date Collected: 12/12/19 00:00

Matrix: Water

Date Received: 12/14/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			510121	12/16/19 15:35	ATG	TAL BUF
Total/NA	Analysis	8270D SIM ID		1	510313	12/18/19 02:03	RJS	TAL BUF
Total/NA	Prep	3535			150841	12/18/19 10:57	MBM	TAL BUR
Total/NA	Analysis	537 (modified)		1	150985	12/24/19 15:59	JM1	TAL BUR

# Lab Chronicle

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

## Client Sample ID: AOI 3 GW 2 DER

Lab Sample ID: 480-164221-6

Date Collected: 12/10/19 13:40

Matrix: Water

Date Received: 12/14/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			510121	12/16/19 15:35	ATG	TAL BUF
Total/NA	Analysis	8270D SIM ID		1	510313	12/18/19 02:26	RJS	TAL BUF
Total/NA	Prep	3535			150841	12/18/19 10:57	MBM	TAL BUR
Total/NA	Analysis	537 (modified)		1	150985	12/24/19 16:07	JM1	TAL BUR

## Client Sample ID: AOI 1 GW 2 DER

Lab Sample ID: 480-164221-7

Date Collected: 12/11/19 12:25

Matrix: Water

Date Received: 12/14/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			510121	12/16/19 15:35	ATG	TAL BUF
Total/NA	Analysis	8270D SIM ID		1	510313	12/18/19 02:49	RJS	TAL BUF
Total/NA	Prep	3535			150841	12/18/19 10:57	MBM	TAL BUR
Total/NA	Analysis	537 (modified)		1	150985	12/24/19 16:15	JM1	TAL BUR

## Client Sample ID: CS SW 01 DER

Lab Sample ID: 480-164221-8

Date Collected: 12/12/19 09:00

Matrix: Water

Date Received: 12/14/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			510121	12/16/19 15:35	ATG	TAL BUF
Total/NA	Analysis	8270D SIM ID		1	510313	12/18/19 03:12	RJS	TAL BUF
Total/NA	Prep	3535			150841	12/18/19 10:57	MBM	TAL BUR
Total/NA	Analysis	537 (modified)		1	150985	12/24/19 16:23	JM1	TAL BUR

## Client Sample ID: EQUIPMENT BLANK

Lab Sample ID: 480-164221-9

Date Collected: 12/11/19 12:35

Matrix: Water

Date Received: 12/14/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			510121	12/16/19 15:35	ATG	TAL BUF
Total/NA	Analysis	8270D SIM ID		1	510313	12/18/19 03:36	RJS	TAL BUF

## Client Sample ID: CS SW 05 DER

Lab Sample ID: 480-164221-10

Date Collected: 12/11/19 15:25

Matrix: Water

Date Received: 12/14/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			510121	12/16/19 15:35	ATG	TAL BUF
Total/NA	Analysis	8270D SIM ID		1	510313	12/18/19 03:59	RJS	TAL BUF
Total/NA	Prep	3535			150841	12/18/19 10:57	MBM	TAL BUR
Total/NA	Analysis	537 (modified)		1	150985	12/24/19 16:39	JM1	TAL BUR



# Lab Chronicle

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

**Client Sample ID: CS SW 03 DER**

**Lab Sample ID: 480-164221-11**

**Date Collected: 12/12/19 10:35**

**Matrix: Water**

**Date Received: 12/14/19 09:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			510121	12/16/19 15:35	ATG	TAL BUF
Total/NA	Analysis	8270D SIM ID		1	510313	12/18/19 04:22	RJS	TAL BUF
Total/NA	Prep	3535			150841	12/18/19 10:57	MBM	TAL BUR
Total/NA	Analysis	537 (modified)		1	150985	12/24/19 16:48	JM1	TAL BUR

**Client Sample ID: CS SW 02 DER**

**Lab Sample ID: 480-164221-12**

**Date Collected: 12/12/19 09:50**

**Matrix: Water**

**Date Received: 12/14/19 09:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			510121	12/16/19 15:35	ATG	TAL BUF
Total/NA	Analysis	8270D SIM ID		1	510313	12/18/19 04:45	RJS	TAL BUF
Total/NA	Prep	3535			150841	12/18/19 10:57	MBM	TAL BUR
Total/NA	Analysis	537 (modified)		1	150985	12/24/19 16:56	JM1	TAL BUR

**Client Sample ID: AOI 1 GW1 DER**

**Lab Sample ID: 480-164221-13**

**Date Collected: 12/11/19 11:35**

**Matrix: Water**

**Date Received: 12/14/19 09:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			510121	12/16/19 15:35	ATG	TAL BUF
Total/NA	Analysis	8270D SIM ID		1	510313	12/18/19 05:09	RJS	TAL BUF
Total/NA	Prep	3535			150841	12/18/19 10:57	MBM	TAL BUR
Total/NA	Analysis	537 (modified)		1	150985	12/24/19 17:04	JM1	TAL BUR

**Client Sample ID: AOI 3 GW1 DER**

**Lab Sample ID: 480-164221-14**

**Date Collected: 12/10/19 15:05**

**Matrix: Water**

**Date Received: 12/14/19 09:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			510121	12/16/19 15:35	ATG	TAL BUF
Total/NA	Analysis	8270D SIM ID		1	510313	12/18/19 05:32	RJS	TAL BUF
Total/NA	Prep	3535			150841	12/18/19 10:57	MBM	TAL BUR
Total/NA	Analysis	537 (modified)		1	150985	12/24/19 17:12	JM1	TAL BUR

**Client Sample ID: AOI 1 GW3 DER**

**Lab Sample ID: 480-164221-15**

**Date Collected: 12/11/19 09:45**

**Matrix: Water**

**Date Received: 12/14/19 09:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			510121	12/16/19 15:35	ATG	TAL BUF
Total/NA	Analysis	8270D SIM ID		1	510313	12/18/19 05:55	RJS	TAL BUF
Total/NA	Prep	3535			150841	12/18/19 10:57	MBM	TAL BUR
Total/NA	Analysis	537 (modified)		1	150985	12/24/19 17:20	JM1	TAL BUR

# Lab Chronicle

Client: New York State D.E.C.  
Project/Site: Camp Smith #360140

Job ID: 480-164221-1

## Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

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

# Accreditation/Certification Summary

Client: New York State D.E.C.  
 Project/Site: Camp Smith #360140

Job ID: 480-164221-1

## Laboratory: Eurofins TestAmerica, Buffalo

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

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	03-31-20

## Laboratory: Eurofins TestAmerica, Burlington

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

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10391	04-01-20

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

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

# Method 8270D

## SIM-ID

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Semivolatile Organic Compounds  
(GC/MS SIM / Isotope Dilution) by  
Method 8270D

FORM II  
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Buffalo

Job No.: 480-164221-1

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

Matrix: Water

Level: Low

GC Column (1): RXI-5Sil MS ID: 0.25 (mm)

Client Sample ID	Lab Sample ID	DXE #
CS RW 2 DER	480-164221-1	25
FIELD DUP 2	480-164221-2	39
CS RW 1 DER	480-164221-3	31
CS SW 04 DER	480-164221-4	28
FIELD DUP	480-164221-5	29
AOI 3 GW 2 DER	480-164221-6	29
AOI 1 GW 2 DER	480-164221-7	32
CS SW 01 DER	480-164221-8	27
EQUIPMENT BLANK	480-164221-9	27
CS SW 05 DER	480-164221-10	28
CS SW 03 DER	480-164221-11	37
CS SW 02 DER	480-164221-12	29
AOI 1 GW1 DER	480-164221-13	32
AOI 3 GW1 DER	480-164221-14	30
AOI 1 GW3 DER	480-164221-15	28
	MB 480-510121/1-A	32
	LCS 480-510121/2-A	24
CS RW 1 DER MS	480-164221-3 MS	32
CS SW 04 DER MS	480-164221-4 MS	32
CS RW 1 DER MSD	480-164221-3 MSD	36
CS SW 04 DER MSD	480-164221-4 MSD	30

DXE = 1,4-Dioxane-d8

QC LIMITS  
15-110

# Column to be used to flag recovery values

FORM II 8270D SIM ID

FORM III  
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1

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

Matrix: Water Level: Low Lab File ID: U33155087.D

Lab ID: LCS 480-510121/2-A Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	1.00	1.14	114	40-140	
1,4-Dioxane-d8	10.0	2.38	24	15-110	

# Column to be used to flag recovery and RPD values

FORM III 8270D SIM ID

FORM III  
GC/MS SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Water Level: Low Lab File ID: U33155088.D  
 Lab ID: 480-164221-3 MS Client ID: CS RW 1 DER MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,4-Dioxane	1.00	ND	1.15	115	40-140	
1,4-Dioxane-d8	10.0	3.1	3.15	32	15-110	

# Column to be used to flag recovery and RPD values  
 FORM III 8270D SIM ID

FORM III  
GC/MS SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Water Level: Low Lab File ID: U33155094.D  
 Lab ID: 480-164221-4 MS Client ID: CS SW 04 DER MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,4-Dioxane	1.00	ND	1.17	117	40-140	
1,4-Dioxane-d8	10.0	2.8	3.16	32	15-110	

# Column to be used to flag recovery and RPD values  
 FORM III 8270D SIM ID



FORM III  
GC/MS SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1

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

Matrix: Water Level: Low Lab File ID: U33155089.D

Lab ID: 480-164221-3 MSD Client ID: CS RW 1 DER MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
1,4-Dioxane	1.00	1.17	117	2	20	40-140	
1,4-Dioxane-d8	10.0	3.57	36			15-110	

# Column to be used to flag recovery and RPD values

FORM III  
GC/MS SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Water Level: Low Lab File ID: U33155095.D  
 Lab ID: 480-164221-4 MSD Client ID: CS SW 04 DER MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
1,4-Dioxane	1.00	1.21	121	3	20	40-140	E
1,4-Dioxane-d8	10.0	3.05	30			15-110	

# Column to be used to flag recovery and RPD values  
 FORM III 8270D SIM ID

FORM IV  
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: U33155086.D Lab Sample ID: MB 480-510121/1-A  
 Matrix: Water Date Extracted: 12/16/2019 15:35  
 Instrument ID: HP5973U Date Analyzed: 12/17/2019 20:56  
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 480-510121/2-A	U33155087.D	12/17/2019 21:19
CS RW 1 DER MS	480-164221-3 MS	U33155088.D	12/17/2019 21:42
CS RW 1 DER MSD	480-164221-3 MSD	U33155089.D	12/17/2019 22:05
CS RW 1 DER	480-164221-3	U33155090.D	12/17/2019 22:29
CS SW 04 DER MS	480-164221-4 MS	U33155094.D	12/18/2019 00:06
CS SW 04 DER MSD	480-164221-4 MSD	U33155095.D	12/18/2019 00:30
CS SW 04 DER	480-164221-4	U33155096.D	12/18/2019 00:53
CS RW 2 DER	480-164221-1	U33155097.D	12/18/2019 01:16
FIELD DUP 2	480-164221-2	U33155098.D	12/18/2019 01:39
FIELD DUP	480-164221-5	U33155099.D	12/18/2019 02:03
AOI 3 GW 2 DER	480-164221-6	U33155100.D	12/18/2019 02:26
AOI 1 GW 2 DER	480-164221-7	U33155101.D	12/18/2019 02:49
CS SW 01 DER	480-164221-8	U33155102.D	12/18/2019 03:12
EQUIPMENT BLANK	480-164221-9	U33155103.D	12/18/2019 03:36
CS SW 05 DER	480-164221-10	U33155104.D	12/18/2019 03:59
CS SW 03 DER	480-164221-11	U33155105.D	12/18/2019 04:22
CS SW 02 DER	480-164221-12	U33155106.D	12/18/2019 04:45
AOI 1 GW1 DER	480-164221-13	U33155107.D	12/18/2019 05:09
AOI 3 GW1 DER	480-164221-14	U33155108.D	12/18/2019 05:32
AOI 1 GW3 DER	480-164221-15	U33155109.D	12/18/2019 05:55

FORM V  
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: U33154640.D DFTPP Injection Date: 11/25/2019  
 Instrument ID: HP5973U DFTPP Injection Time: 09:52  
 Analysis Batch No.: 506566

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10-80% of Base Peak	48.6
68	Less than 2% of mass 69	0.0 (0.0) 1
69	Mass 69 Relative abundance	58.3
70	Less than 2% of mass 69	0.3 (0.6) 1
127	10-80% of Base Peak	55.9
197	Less than 2% of mass 198	0.0
198	Base peak	100.0
199	5-9% of mass 198	6.4
275	10-60% of Base Peak	25.5
365	Greater than 1% of mass 198	2.8
441	present but less than 24% of mass 442	10.7 (15.8) 2
442	Greater than 50% of mass 198	67.6
443	15-24% of mass 442	13.3 (19.6) 2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 480-506566/3	U33154641.D	11/25/2019	10:19
	IC 480-506566/4	U33154642.D	11/25/2019	10:43
	ICIS 480-506566/5	U33154643.D	11/25/2019	11:06
	IC 480-506566/6	U33154644.D	11/25/2019	11:29
	IC 480-506566/7	U33154645.D	11/25/2019	11:53
	IC 480-506566/8	U33154646.D	11/25/2019	12:16

FORM V  
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: U33155062.D DFTPP Injection Date: 12/17/2019  
 Instrument ID: HP5973U DFTPP Injection Time: 11:26  
 Analysis Batch No.: 510312

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10-80% of Base Peak	55.2
68	Less than 2% of mass 69	0.0 (0.0) 1
69	Mass 69 Relative abundance	64.0
70	Less than 2% of mass 69	0.3 (0.5) 1
127	10-80% of Base Peak	62.6
197	Less than 2% of mass 198	0.0
198	Base peak	100.0
199	5-9% of mass 198	7.0
275	10-60% of Base Peak	23.3
365	Greater than 1% of mass 198	2.9
441	present but less than 24% of mass 442	8.3 (15.8) 2
442	Greater than 50% of mass 198	52.6
443	15-24% of mass 442	9.9 (18.8) 2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 480-510312/3	U33155063.D	12/17/2019	11:53
	MB 480-510121/1-A	U33155086.D	12/17/2019	20:56
	LCS 480-510121/2-A	U33155087.D	12/17/2019	21:19
CS RW 1 DER MS	480-164221-3 MS	U33155088.D	12/17/2019	21:42
CS RW 1 DER MSD	480-164221-3 MSD	U33155089.D	12/17/2019	22:05
CS RW 1 DER	480-164221-3	U33155090.D	12/17/2019	22:29

FORM V  
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: U33155092.D DFTPP Injection Date: 12/17/2019  
 Instrument ID: HP5973U DFTPP Injection Time: 23:15  
 Analysis Batch No.: 510313

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10-80% of Base Peak	49.7
68	Less than 2% of mass 69	0.0 (0.0) 1
69	Mass 69 Relative abundance	60.6
70	Less than 2% of mass 69	0.3 (0.6) 1
127	10-80% of Base Peak	60.1
197	Less than 2% of mass 198	0.5
198	Base peak	100.0
199	5-9% of mass 198	6.6
275	10-60% of Base Peak	22.2
365	Greater than 1% of mass 198	3.1
441	present but less than 24% of mass 442	8.4 (15.2) 2
442	Greater than 50% of mass 198	55.3
443	15-24% of mass 442	10.4 (18.8) 2

1-Value is % mass 69

2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 480-510313/3	U33155093.D	12/17/2019	23:43
CS SW 04 DER MS	480-164221-4 MS	U33155094.D	12/18/2019	00:06
CS SW 04 DER MSD	480-164221-4 MSD	U33155095.D	12/18/2019	00:30
CS SW 04 DER	480-164221-4	U33155096.D	12/18/2019	00:53
CS RW 2 DER	480-164221-1	U33155097.D	12/18/2019	01:16
FIELD DUP 2	480-164221-2	U33155098.D	12/18/2019	01:39
FIELD DUP	480-164221-5	U33155099.D	12/18/2019	02:03
AOI 3 GW 2 DER	480-164221-6	U33155100.D	12/18/2019	02:26
AOI 1 GW 2 DER	480-164221-7	U33155101.D	12/18/2019	02:49
CS SW 01 DER	480-164221-8	U33155102.D	12/18/2019	03:12
EQUIPMENT BLANK	480-164221-9	U33155103.D	12/18/2019	03:36
CS SW 05 DER	480-164221-10	U33155104.D	12/18/2019	03:59
CS SW 03 DER	480-164221-11	U33155105.D	12/18/2019	04:22
CS SW 02 DER	480-164221-12	U33155106.D	12/18/2019	04:45
AOI 1 GW1 DER	480-164221-13	U33155107.D	12/18/2019	05:09
AOI 3 GW1 DER	480-164221-14	U33155108.D	12/18/2019	05:32
AOI 1 GW3 DER	480-164221-15	U33155109.D	12/18/2019	05:55

FORM VIII  
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: ICIS 480-506566/5 Date Analyzed: 11/25/2019 11:06  
 Instrument ID: HP5973U GC Column: RXI-5Sil MS(0.5 ID: 0.25(mm)  
 Lab File ID (Standard): U33154643.D Heated Purge: (Y/N) N  
 Calibration ID: 38301

	DCBd4					
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	413989	5.50				
UPPER LIMIT	827978	6.00				
LOWER LIMIT	206995	5.00				
LAB SAMPLE ID	CLIENT SAMPLE ID					
CCVIS 480-510312/3		572423	5.48			
CCVIS 480-510313/3		451385	5.48			

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area  
 RT Limit = ± 0.5 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 8270D SIM ID

FORM VIII  
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVIS 480-510312/3 Date Analyzed: 12/17/2019 11:53  
 Instrument ID: HP5973U GC Column: RXI-5Sil MS(0.5 ID: 0.25(mm)  
 Lab File ID (Standard): U33155063.D Heated Purge: (Y/N) N  
 Calibration ID: 38301

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		572423	5.48				
UPPER LIMIT		1144846	5.98				
LOWER LIMIT		286212	4.98				
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 480-510121/1-A		390746	5.49				
LCS 480-510121/2-A		462187	5.49				
480-164221-3 MS	CS RW 1 DER MS	325597	5.49				
480-164221-3 MSD	CS RW 1 DER MSD	313643	5.49				
480-164221-3	CS RW 1 DER	354300	5.49				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area  
 RT Limit = ± 0.5 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM VIII 8270D SIM ID



FORM VIII  
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVIS 480-510313/3 Date Analyzed: 12/17/2019 23:43  
 Instrument ID: HP5973U GC Column: RXI-5Sil MS(0.5 ID: 0.25 (mm)  
 Lab File ID (Standard): U33155093.D Heated Purge: (Y/N) N  
 Calibration ID: 38301

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		451385	5.48				
UPPER LIMIT		902770	5.98				
LOWER LIMIT		225693	4.98				
LAB SAMPLE ID	CLIENT SAMPLE ID						
480-164221-4 MS	CS SW 04 DER MS	335568	5.49				
480-164221-4 MSD	CS SW 04 DER MSD	319344	5.49				
480-164221-4	CS SW 04 DER	443598	5.49				
480-164221-1	CS RW 2 DER	437957	5.49				
480-164221-2	FIELD DUP 2	293102	5.49				
480-164221-5	FIELD DUP	330509	5.49				
480-164221-6	AOI 3 GW 2 DER	351361	5.49				
480-164221-7	AOI 1 GW 2 DER	290188	5.48				
480-164221-8	CS SW 01 DER	343445	5.49				
480-164221-9	EQUIPMENT BLANK	347401	5.48				
480-164221-10	CS SW 05 DER	338451	5.48				
480-164221-11	CS SW 03 DER	306323	5.49				
480-164221-12	CS SW 02 DER	351193	5.48				
480-164221-13	AOI 1 GW1 DER	316418	5.49				
480-164221-14	AOI 3 GW1 DER	325049	5.49				
480-164221-15	AOI 1 GW3 DER	349798	5.49				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area  
 RT Limit = ± 0.5 minutes of internal standard RT

# Column used to flag values outside QC limits

FORM I  
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS RW 2 DER Lab Sample ID: 480-164221-1  
 Matrix: Water Lab File ID: U33155097.D  
 Analysis Method: 8270D SIM ID Date Collected: 12/12/2019 12:34  
 Extract. Method: 3510C Date Extracted: 12/16/2019 15:35  
 Sample wt/vol: 1000 (mL) Date Analyzed: 12/18/2019 01:16  
 Con. Extract Vol.: 1 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) Level: (low/med) Low  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 510313 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	ND		0.20	0.10

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	25		15-110

Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155097.D  
 Lims ID: 480-164221-B-1-A  
 Client ID: CS RW 2 DER  
 Sample Type: Client  
 Inject. Date: 18-Dec-2019 01:16:30 ALS Bottle#: 37 Worklist Smp#: 7  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 37  
 Operator ID: bs Instrument ID: HP5973U  
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 18-Dec-2019 12:07:28 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: RT Order ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D  
 Column 1 : Det: MS SCAN  
 Process Host: CTX1002

First Level Reviewer: schickr Date: 18-Dec-2019 12:05:02

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ul	%Rec	Flags
D 1 1,4-Dioxane-d8	96	2.138	2.056	0.082	91	135986	2.54	25.4	
3 1,4-Dioxane	88		2.093				ND		U
* 2 1,4-Dichlorobenzene-d4	152	5.487	5.479	0.008	97	437957	4.00		

**QC Flag Legend**

Review Flags  
U - Marked Undetected

**Reagents:**

MB\_LLIS\_WRK\_00184 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155097.D

Injection Date: 18-Dec-2019 01:16:30

Instrument ID: HP5973U

Operator ID: bs

Lims ID: 480-164221-B-1-A

Lab Sample ID: 480-164221-1

Worklist Smp#: 7

Client ID: CS RW 2 DER

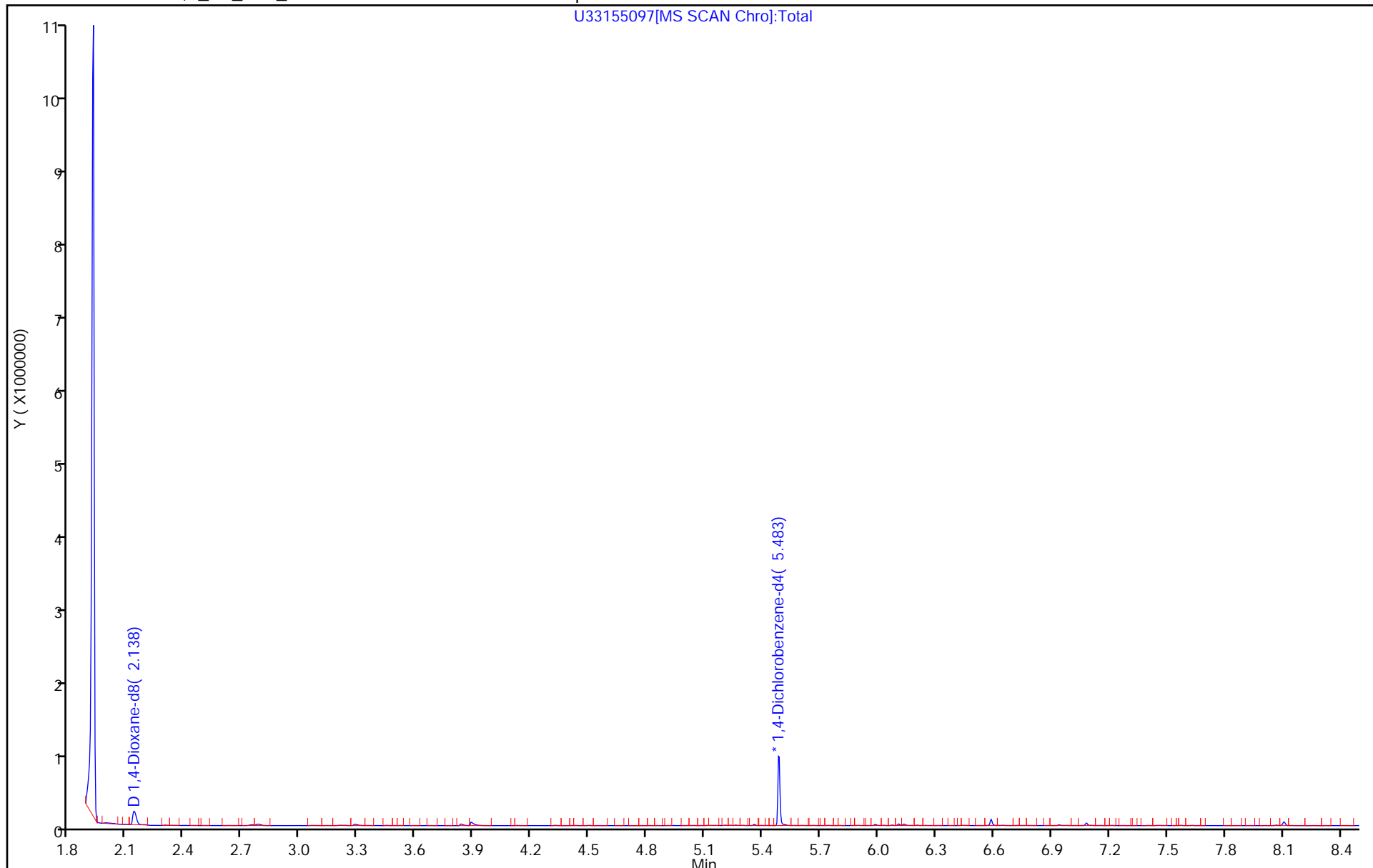
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 37

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155097.D

Injection Date: 18-Dec-2019 01:16:30

Instrument ID: HP5973U

Lims ID: 480-164221-B-1-A

Lab Sample ID: 480-164221-1

Client ID: CS RW 2 DER

Operator ID: bs

ALS Bottle#: 37 Worklist Smp#: 7

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

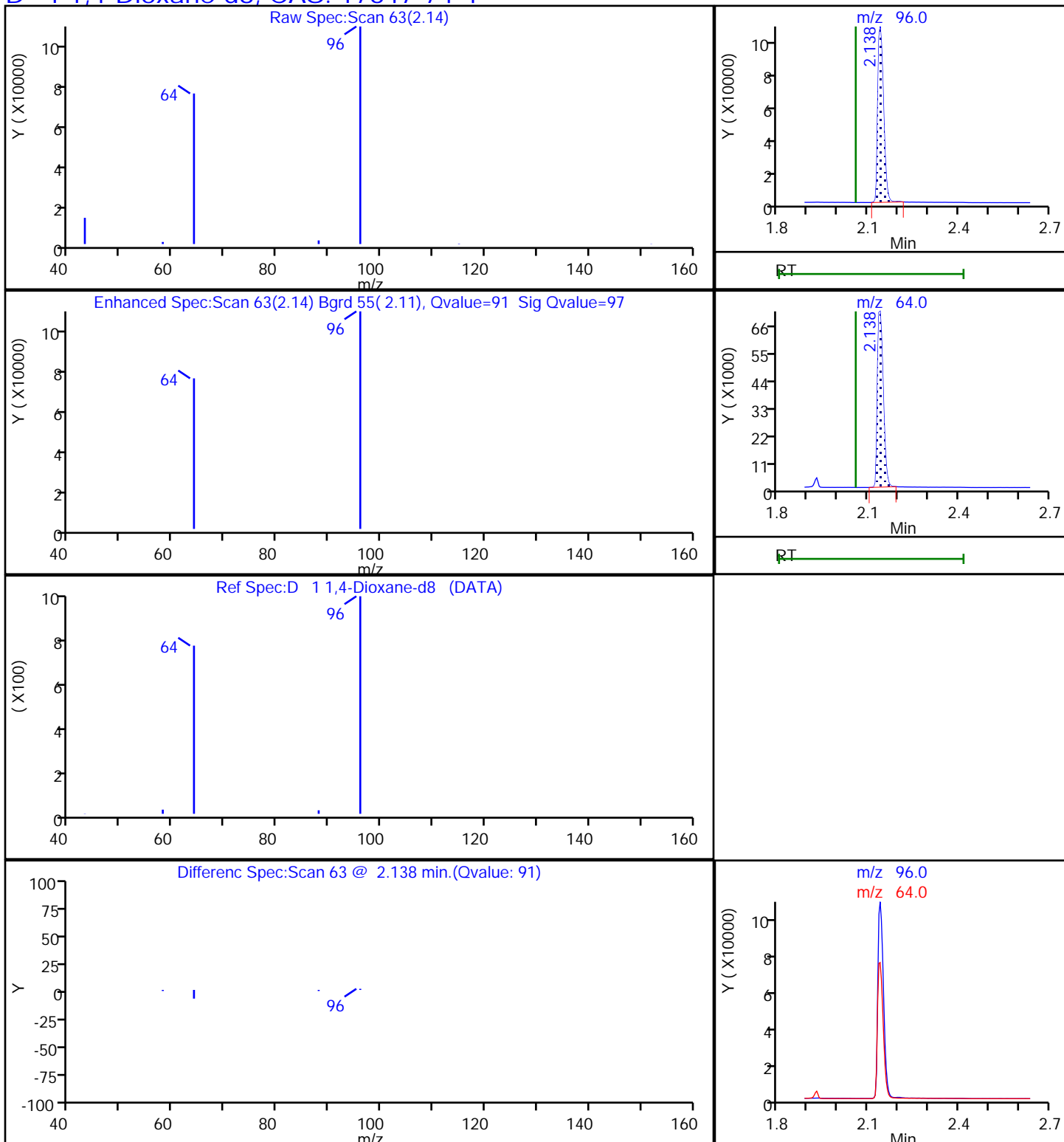
Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

Column:

Detector: MS SCAN

**D 1 1,4-Dioxane-d8, CAS: 17647-74-4**



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155097.D

Injection Date: 18-Dec-2019 01:16:30

Instrument ID: HP5973U

Lims ID: 480-164221-B-1-A

Lab Sample ID: 480-164221-1

Client ID: CS RW 2 DER

Operator ID: bs

ALS Bottle#: 37

Worklist Smp#: 7

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

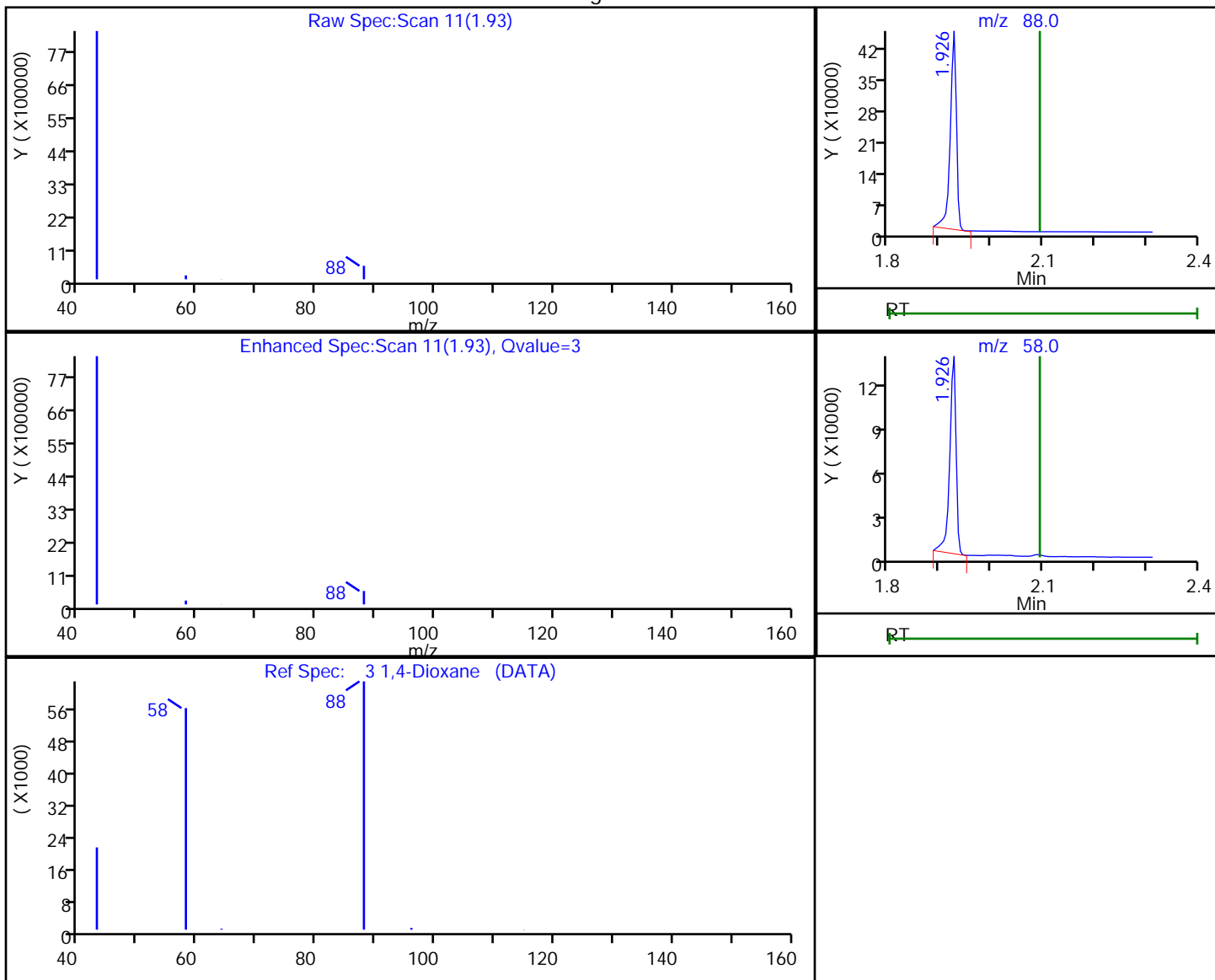
Column:

Detector

MS SCAN

3 1,4-Dioxane, CAS: 123-91-1

Processing Results



RT	Mass	Response	Amount
1.93	88.00	374740	25.042764
1.93	58.00	110515	

Reviewer: schickr, 18-Dec-2019 12:05:01

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I  
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: FIELD DUP 2 Lab Sample ID: 480-164221-2  
 Matrix: Water Lab File ID: U33155098.D  
 Analysis Method: 8270D SIM ID Date Collected: 12/12/2019 00:00  
 Extract. Method: 3510C Date Extracted: 12/16/2019 15:35  
 Sample wt/vol: 1000 (mL) Date Analyzed: 12/18/2019 01:39  
 Con. Extract Vol.: 1 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) Level: (low/med) Low  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 510313 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	ND		0.20	0.10

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	39		15-110

Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155098.D  
 Lims ID: 480-164221-B-2-A  
 Client ID: FIELD DUP 2  
 Sample Type: Client  
 Inject. Date: 18-Dec-2019 01:39:30 ALS Bottle#: 38 Worklist Smp#: 8  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 38  
 Operator ID: bs Instrument ID: HP5973U  
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 18-Dec-2019 12:07:28 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: RT Order ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D  
 Column 1 : Det: MS SCAN  
 Process Host: CTX1002

First Level Reviewer: schickr Date: 18-Dec-2019 12:05:06

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ul	%Rec	Flags
D 1 1,4-Dioxane-d8	96	2.142	2.056	0.086	91	140143	3.91	39.1	
3 1,4-Dioxane	88		2.093				ND		U
* 2 1,4-Dichlorobenzene-d4	152	5.487	5.479	0.008	99	293102	4.00		

**QC Flag Legend**

Review Flags  
U - Marked Undetected

**Reagents:**

MB\_LLIS\_WRK\_00184 Amount Added: 20.00 Units: uL Run Reagent



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155098.D

Injection Date: 18-Dec-2019 01:39:30

Instrument ID: HP5973U

Operator ID: bs

Lims ID: 480-164221-B-2-A

Lab Sample ID: 480-164221-2

Worklist Smp#: 8

Client ID: FIELD DUP 2

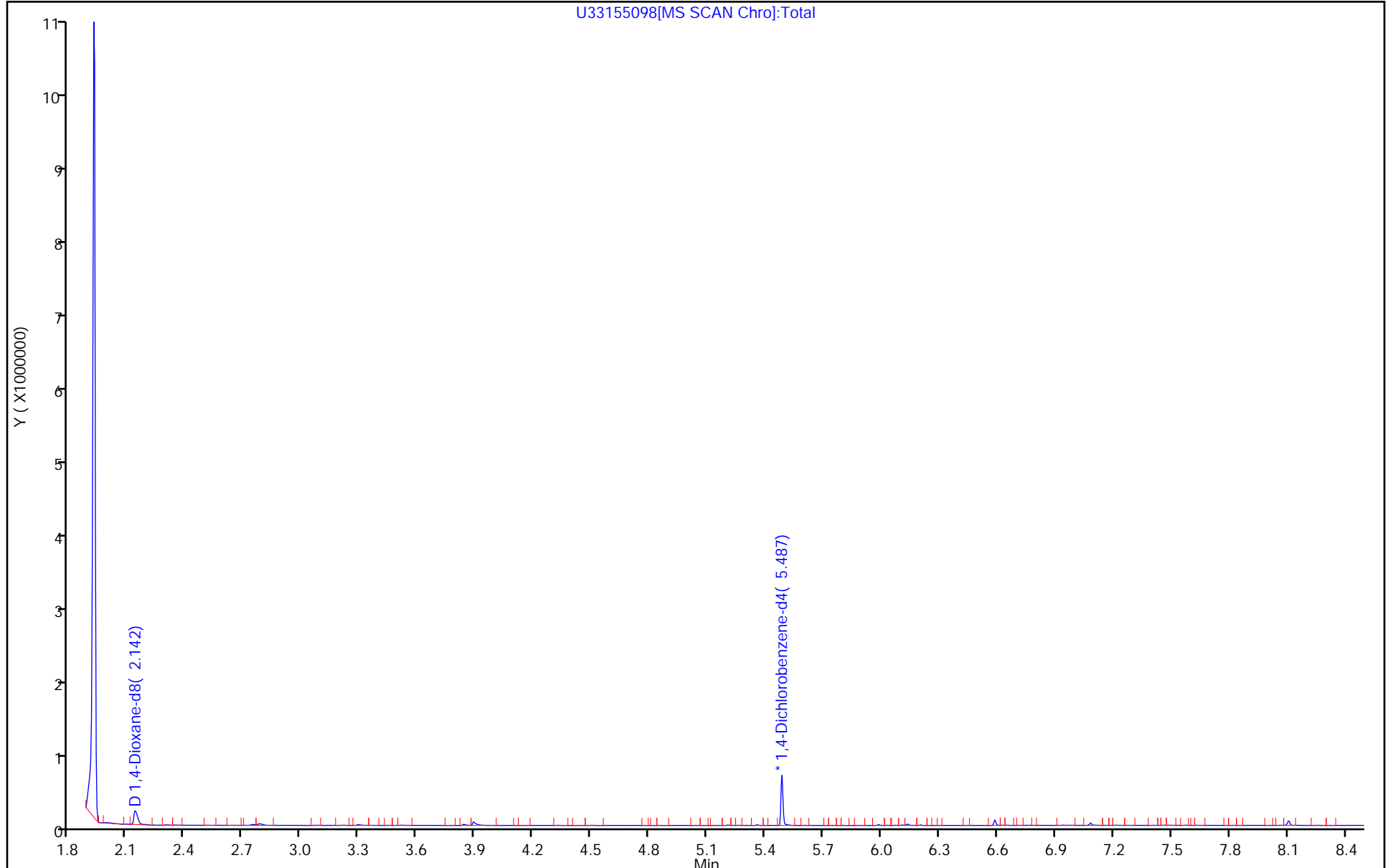
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 38

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155098.D

Injection Date: 18-Dec-2019 01:39:30

Instrument ID: HP5973U

Lims ID: 480-164221-B-2-A

Lab Sample ID: 480-164221-2

Client ID: FIELD DUP 2

Operator ID: bs

ALS Bottle#: 38

Worklist Smp#: 8

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

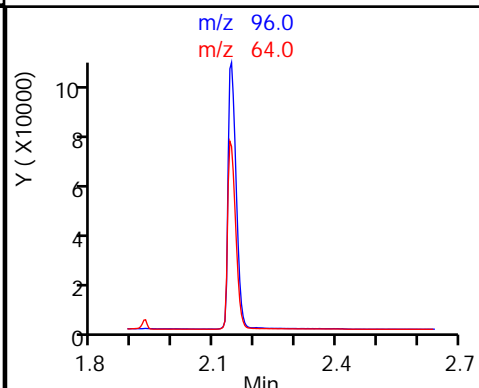
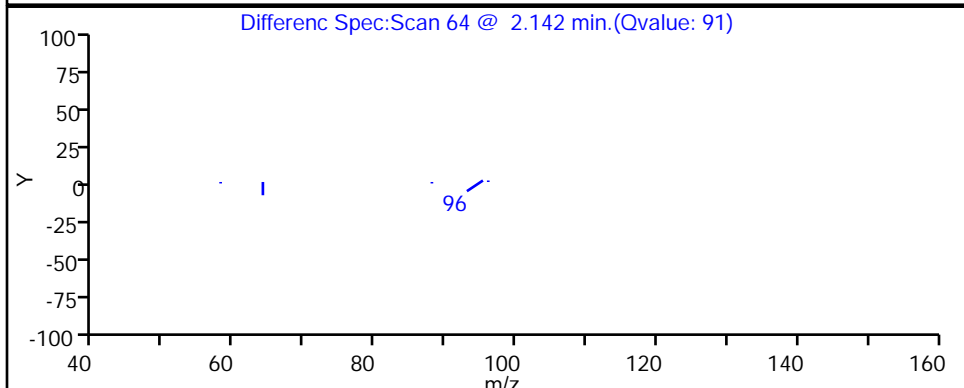
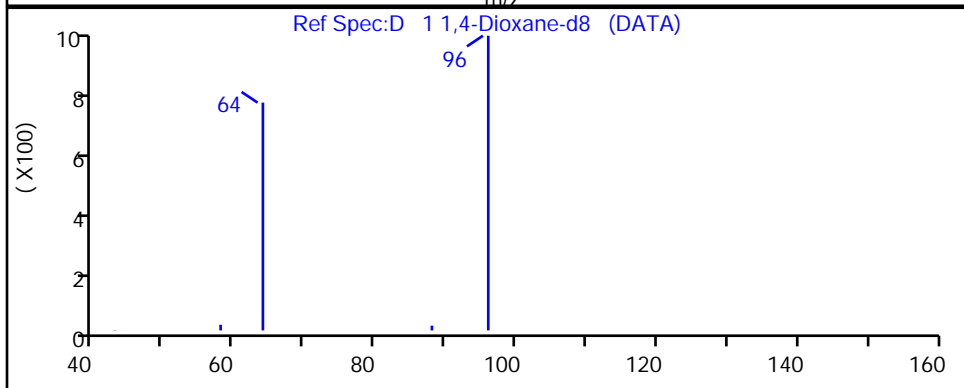
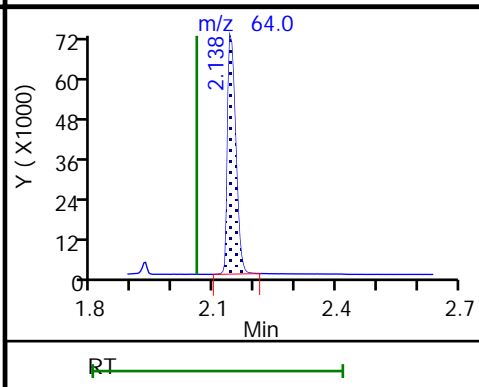
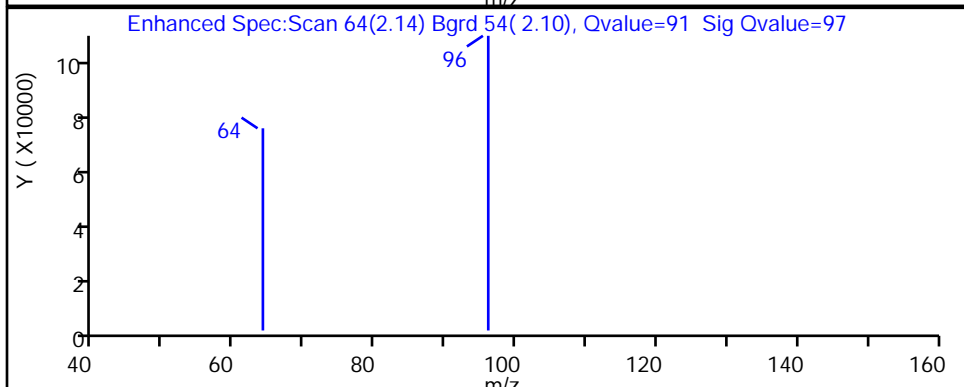
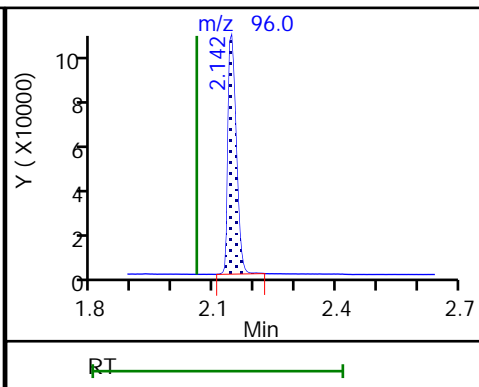
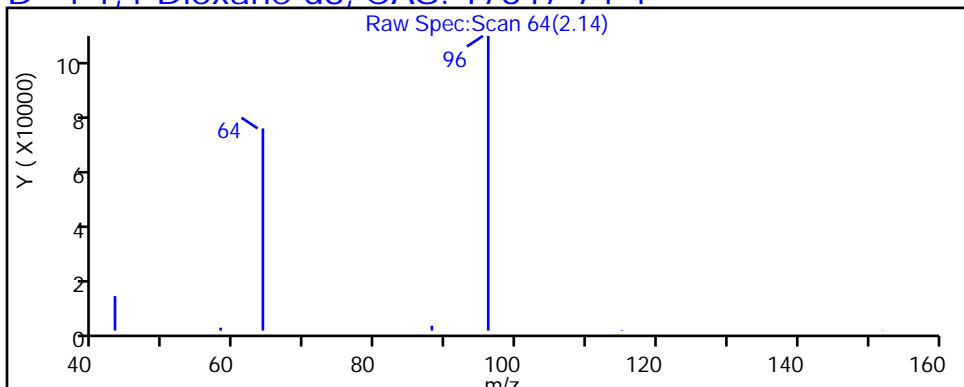
Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

Column:

Detector: MS SCAN

D 1 1,4-Dioxane-d8, CAS: 17647-74-4



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155098.D

Injection Date: 18-Dec-2019 01:39:30

Instrument ID: HP5973U

Lims ID: 480-164221-B-2-A

Lab Sample ID: 480-164221-2

Client ID: FIELD DUP 2

Operator ID: bs

ALS Bottle#: 38

Worklist Smp#: 8

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

Method: 1,4\_Dx\_SIM\_HP5973U

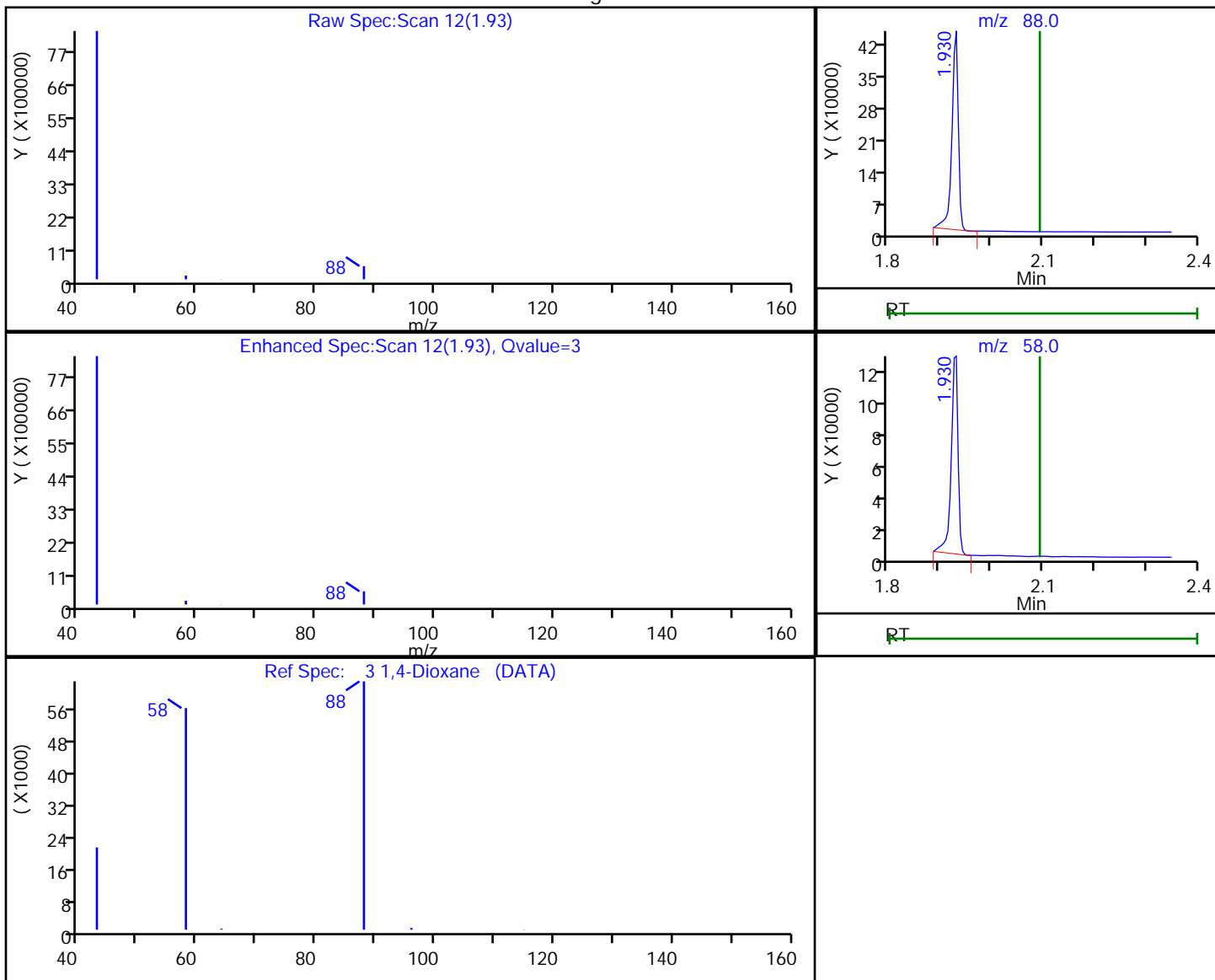
Limit Group: MB - 8270D SIM ID ICAL

Column:

Detector: MS SCAN

3 1,4-Dioxane, CAS: 123-91-1

Processing Results



RT	Mass	Response	Amount
1.93	88.00	381513	24.739126
1.93	58.00	111905	

Reviewer: schickr, 18-Dec-2019 12:05:05

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I  
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS RW 1 DER Lab Sample ID: 480-164221-3  
 Matrix: Water Lab File ID: U33155090.D  
 Analysis Method: 8270D SIM ID Date Collected: 12/12/2019 12:10  
 Extract. Method: 3510C Date Extracted: 12/16/2019 15:35  
 Sample wt/vol: 1000 (mL) Date Analyzed: 12/17/2019 22:29  
 Con. Extract Vol.: 1 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) Level: (low/med) Low  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 510312 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	ND		0.20	0.10

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	31		15-110

Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86990.b\U33155090.D  
 Lims ID: 480-164221-B-3-B  
 Client ID: CS RW 1 DER  
 Sample Type: Client  
 Inject. Date: 17-Dec-2019 22:29:30 ALS Bottle#: 30 Worklist Smp#: 30  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 30  
 Operator ID: bs Instrument ID: HP5973U  
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191217-86990.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 18-Dec-2019 11:30:27 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: RT Order ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D  
 Column 1 : Det: MS SCAN  
 Process Host: CTX1002

First Level Reviewer: schickr Date: 18-Dec-2019 11:30:27

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ul	%Rec	Flags
D 1 1,4-Dioxane-d8	96	2.134	2.060	0.074	91	134765	3.11	31.1	
3 1,4-Dioxane	88		2.093				ND		U
* 2 1,4-Dichlorobenzene-d4	152	5.487	5.479	0.008	99	354300	4.00		

**QC Flag Legend**

Review Flags

U - Marked Undetected

**Reagents:**

MB\_LLIS\_WRK\_00184 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86990.b\U33155090.D

Injection Date: 17-Dec-2019 22:29:30

Instrument ID: HP5973U

Operator ID: bs

Lims ID: 480-164221-B-3-B

Lab Sample ID: 480-164221-3

Worklist Smp#: 30

Client ID: CS RW 1 DER

Injection Vol: 1.0 ul

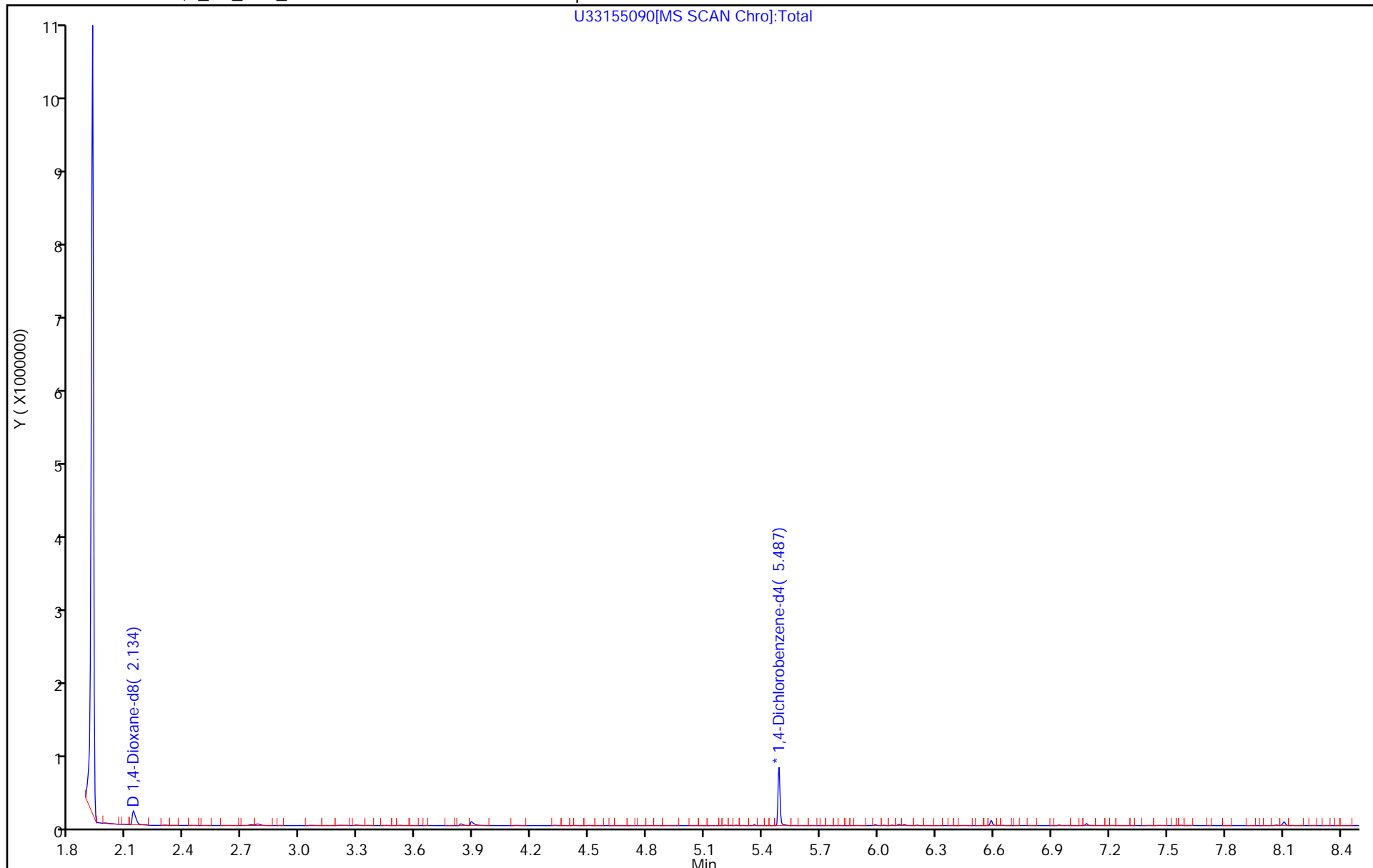
Dil. Factor: 1.0000

ALS Bottle#: 30

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

U33155090[MS SCAN Chrom]:Total



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86990.b\U33155090.D

Injection Date: 17-Dec-2019 22:29:30

Instrument ID: HP5973U

Lims ID: 480-164221-B-3-B

Lab Sample ID: 480-164221-3

Client ID: CS RW 1 DER

Operator ID: bs

ALS Bottle#: 30

Worklist Smp#: 30

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

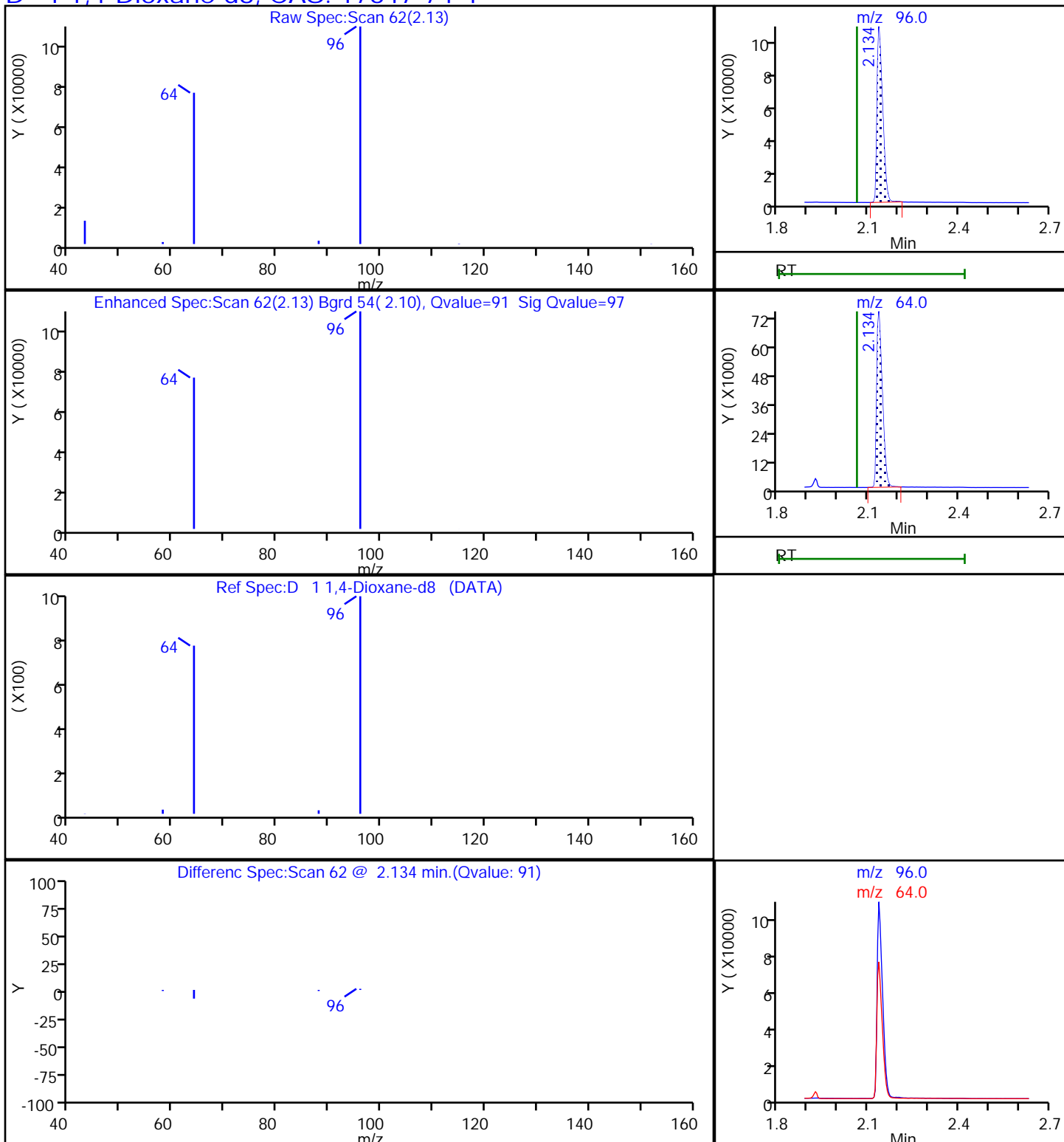
Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

Column:

Detector MS SCAN

D 1 1,4-Dioxane-d8, CAS: 17647-74-4



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86990.b\U33155090.D

Injection Date: 17-Dec-2019 22:29:30

Instrument ID: HP5973U

Lims ID: 480-164221-B-3-B

Lab Sample ID: 480-164221-3

Client ID: CS RW 1 DER

Operator ID: bs

ALS Bottle#: 30

Worklist Smp#: 30

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

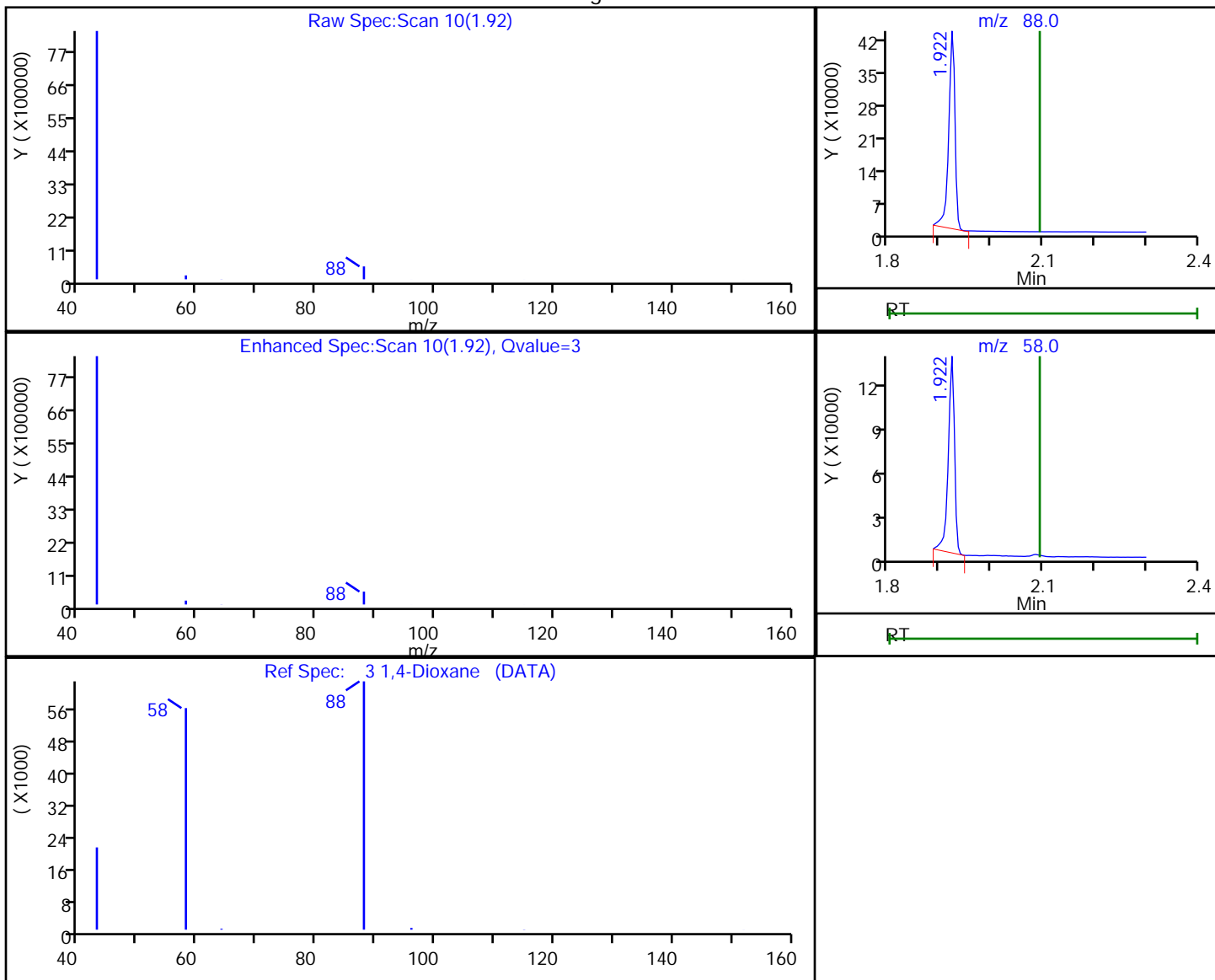
Column:

Detector

MS SCAN

3 1,4-Dioxane, CAS: 123-91-1

Processing Results



RT	Mass	Response	Amount
1.92	88.00	361549	24.380155
1.92	58.00	107142	

Reviewer: schickr, 18-Dec-2019 11:30:19

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID



FORM I  
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS SW 04 DER Lab Sample ID: 480-164221-4  
 Matrix: Water Lab File ID: U33155096.D  
 Analysis Method: 8270D SIM ID Date Collected: 12/12/2019 11:31  
 Extract. Method: 3510C Date Extracted: 12/16/2019 15:35  
 Sample wt/vol: 1000 (mL) Date Analyzed: 12/18/2019 00:53  
 Con. Extract Vol.: 1 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) Level: (low/med) Low  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 510313 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	ND		0.20	0.10

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	28		15-110

Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155096.D  
 Lims ID: 480-164221-A-4-A  
 Client ID: CS SW 04 DER  
 Sample Type: Client  
 Inject. Date: 18-Dec-2019 00:53:30 ALS Bottle#: 36 Worklist Smp#: 6  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 36  
 Operator ID: bs Instrument ID: HP5973U  
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 18-Dec-2019 12:07:28 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: RT Order ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D  
 Column 1 : Det: MS SCAN  
 Process Host: CTX1002

First Level Reviewer: schickr Date: 18-Dec-2019 12:04:57

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ul	%Rec	Flags
D 1 1,4-Dioxane-d8	96	2.146	2.056	0.090	91	153384	2.82	28.2	
3 1,4-Dioxane	88		2.093				ND		U
* 2 1,4-Dichlorobenzene-d4	152	5.487	5.479	0.008	98	443598	4.00		

**QC Flag Legend**

Review Flags

U - Marked Undetected

**Reagents:**

MB\_LLIS\_WRK\_00184 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155096.D

Injection Date: 18-Dec-2019 00:53:30

Instrument ID: HP5973U

Operator ID: bs

Lims ID: 480-164221-A-4-A

Lab Sample ID: 480-164221-4

Worklist Smp#: 6

Client ID: CS SW 04 DER

Injection Vol: 1.0 ul

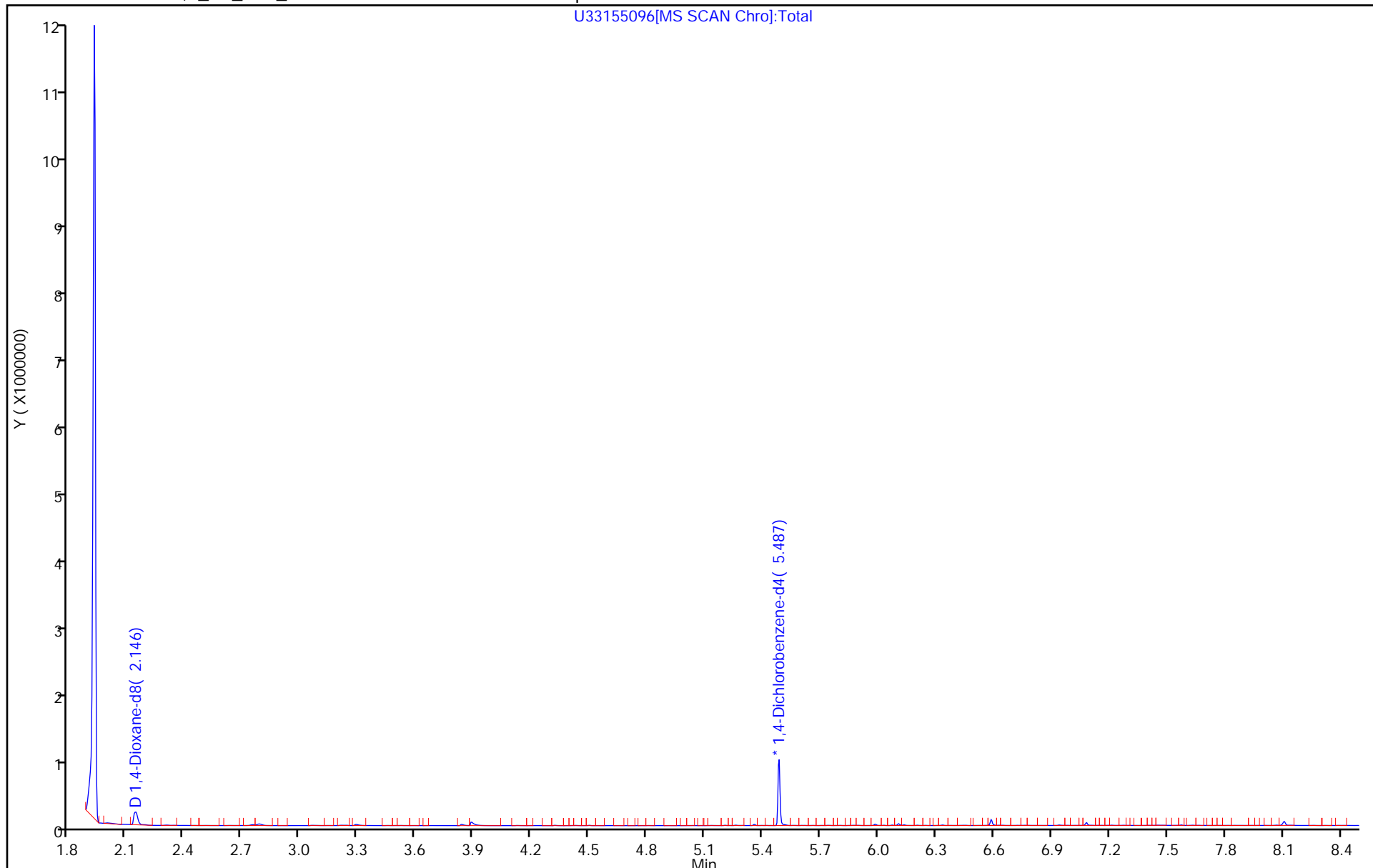
Dil. Factor: 1.0000

ALS Bottle#: 36

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

U33155096[MS SCAN Chrom]:Total



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155096.D

Injection Date: 18-Dec-2019 00:53:30

Instrument ID: HP5973U

Lims ID: 480-164221-A-4-A

Lab Sample ID: 480-164221-4

Client ID: CS SW 04 DER

Operator ID: bs

ALS Bottle#: 36

Worklist Smp#: 6

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

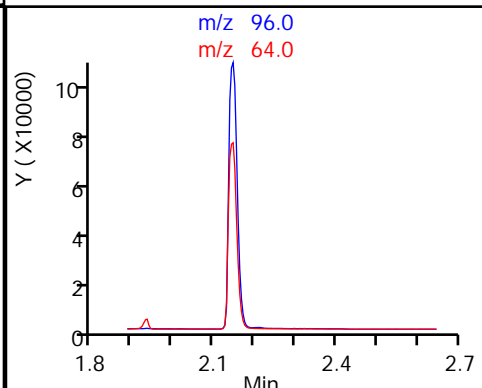
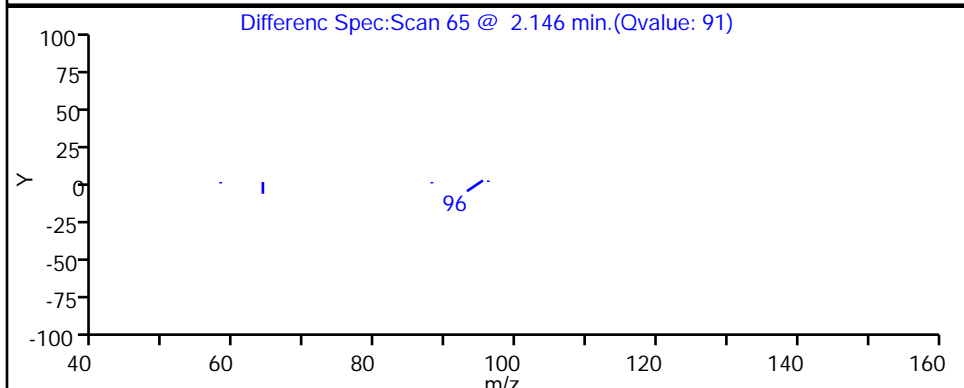
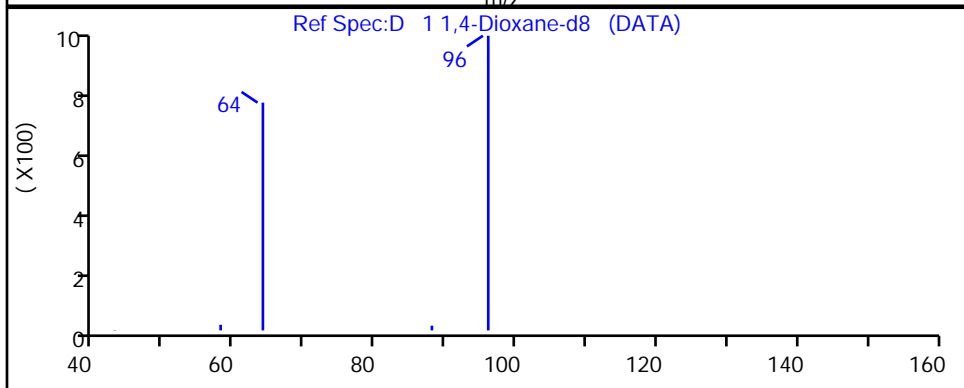
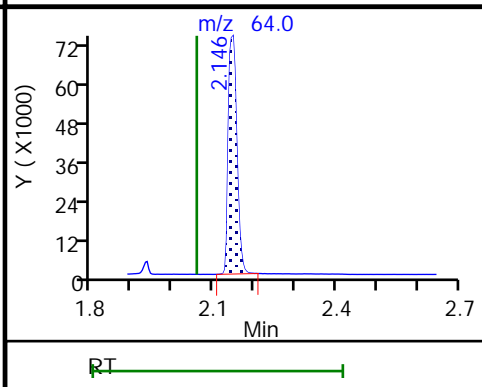
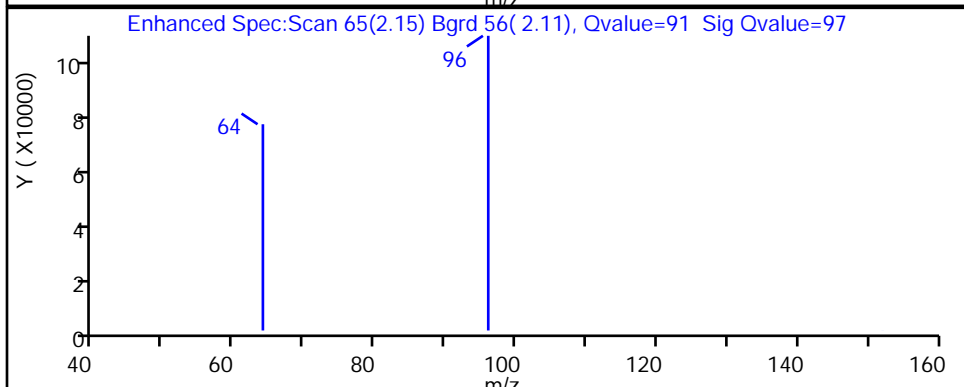
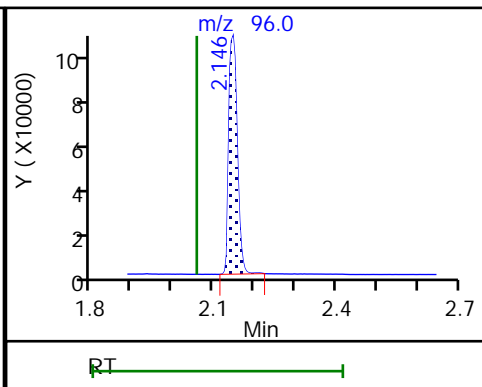
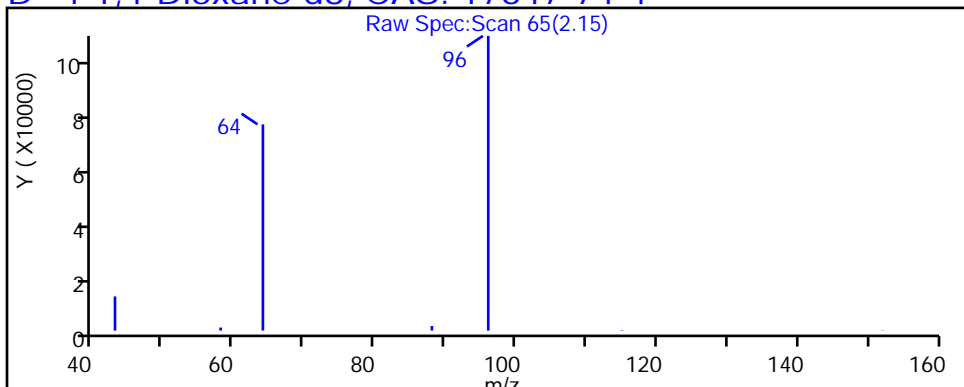
Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

Column:

Detector MS SCAN

D 1 1,4-Dioxane-d8, CAS: 17647-74-4



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155096.D

Injection Date: 18-Dec-2019 00:53:30

Instrument ID: HP5973U

Lims ID: 480-164221-A-4-A

Lab Sample ID: 480-164221-4

Client ID: CS SW 04 DER

Operator ID: bs

ALS Bottle#: 36

Worklist Smp#: 6

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

Method: 1,4\_Dx\_SIM\_HP5973U

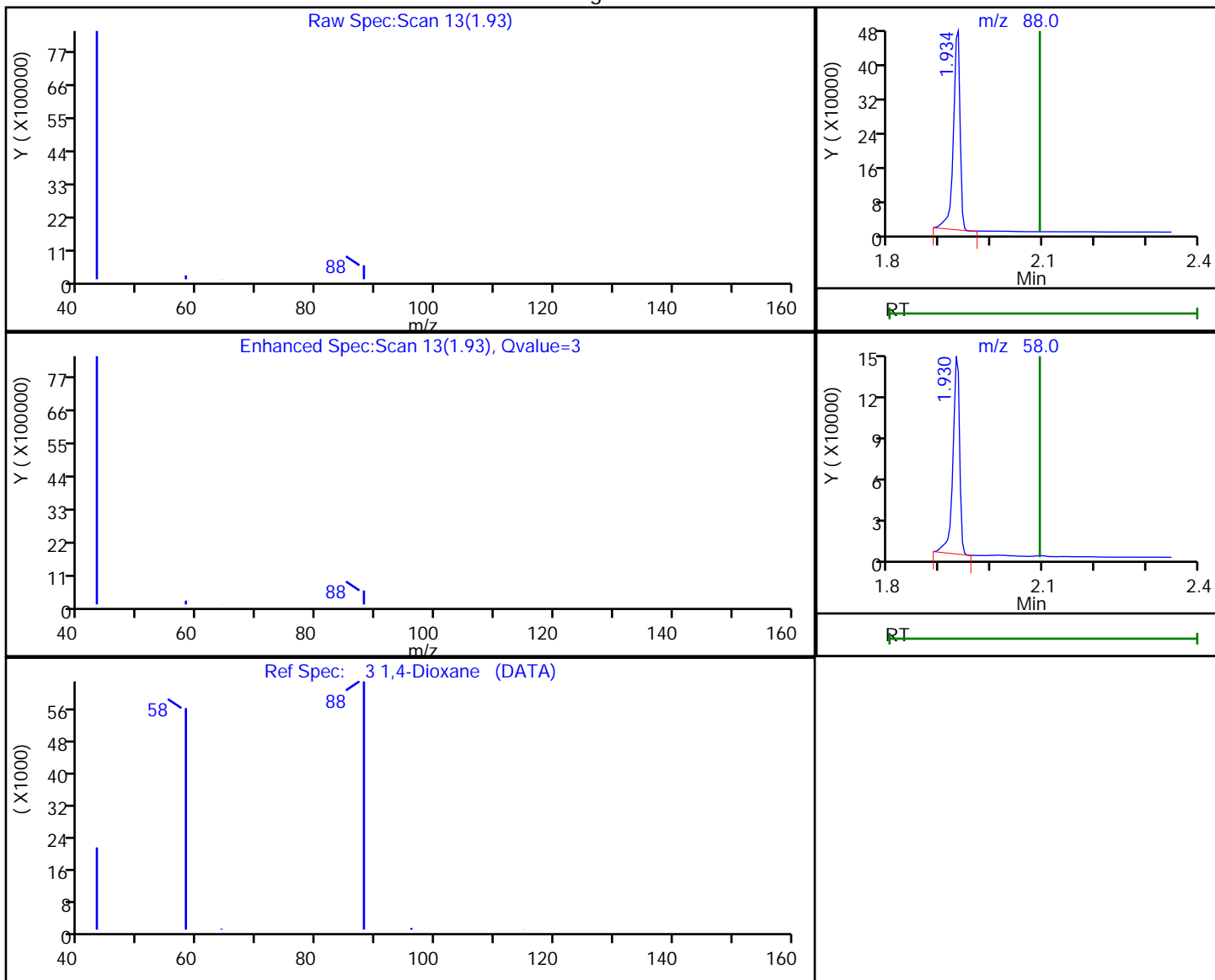
Limit Group: MB - 8270D SIM ID ICAL

Column:

Detector: MS SCAN

3 1,4-Dioxane, CAS: 123-91-1

Processing Results



RT	Mass	Response	Amount
1.93	88.00	422456	25.029250
1.93	58.00	124510	

Reviewer: schickr, 18-Dec-2019 12:04:55

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I  
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: FIELD DUP Lab Sample ID: 480-164221-5  
 Matrix: Water Lab File ID: U33155099.D  
 Analysis Method: 8270D SIM ID Date Collected: 12/12/2019 00:00  
 Extract. Method: 3510C Date Extracted: 12/16/2019 15:35  
 Sample wt/vol: 1000 (mL) Date Analyzed: 12/18/2019 02:03  
 Con. Extract Vol.: 1 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) Level: (low/med) Low  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 510313 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	ND		0.20	0.10

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	29		15-110

Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155099.D  
 Lims ID: 480-164221-A-5-A  
 Client ID: FIELD DUP  
 Sample Type: Client  
 Inject. Date: 18-Dec-2019 02:03:30 ALS Bottle#: 39 Worklist Smp#: 9  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 39  
 Operator ID: bs Instrument ID: HP5973U  
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 18-Dec-2019 12:07:28 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: RT Order ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D  
 Column 1 : Det: MS SCAN  
 Process Host: CTX1002

First Level Reviewer: schickr Date: 18-Dec-2019 12:05:11

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ul	%Rec	Flags
D 1 1,4-Dioxane-d8	96	2.134	2.056	0.078	91	118456	2.93	29.3	
3 1,4-Dioxane	88		2.093				ND		U
* 2 1,4-Dichlorobenzene-d4	152	5.487	5.479	0.008	98	330509	4.00		

**QC Flag Legend**

Review Flags

U - Marked Undetected

**Reagents:**

MB\_LLIS\_WRK\_00184 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155099.D

Injection Date: 18-Dec-2019 02:03:30

Instrument ID: HP5973U

Operator ID: bs

Lims ID: 480-164221-A-5-A

Lab Sample ID: 480-164221-5

Worklist Smp#: 9

Client ID: FIELD DUP

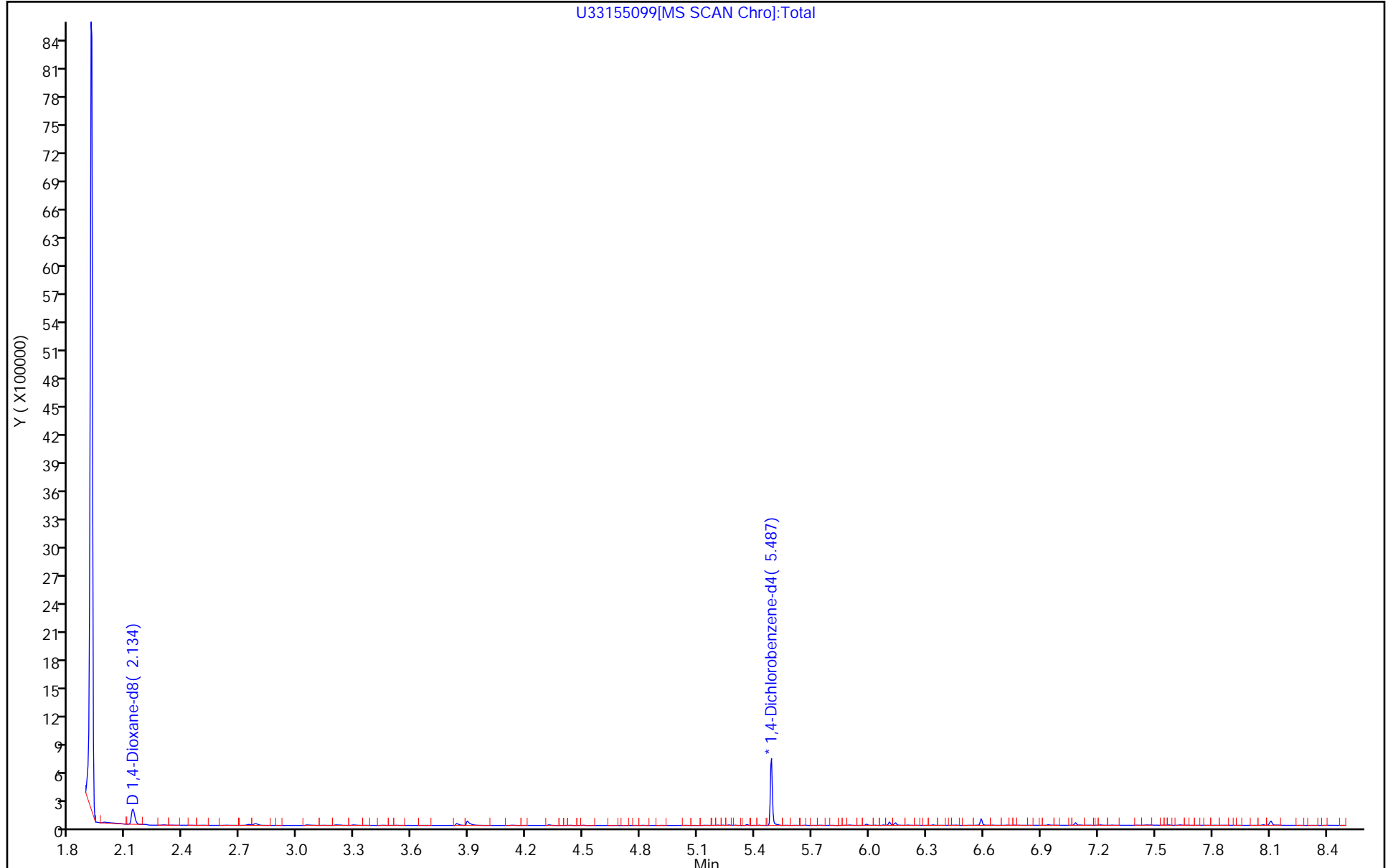
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 39

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL





Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155099.D

Injection Date: 18-Dec-2019 02:03:30

Instrument ID: HP5973U

Lims ID: 480-164221-A-5-A

Lab Sample ID: 480-164221-5

Client ID: FIELD DUP

Operator ID: bs

ALS Bottle#: 39

Worklist Smp#: 9

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

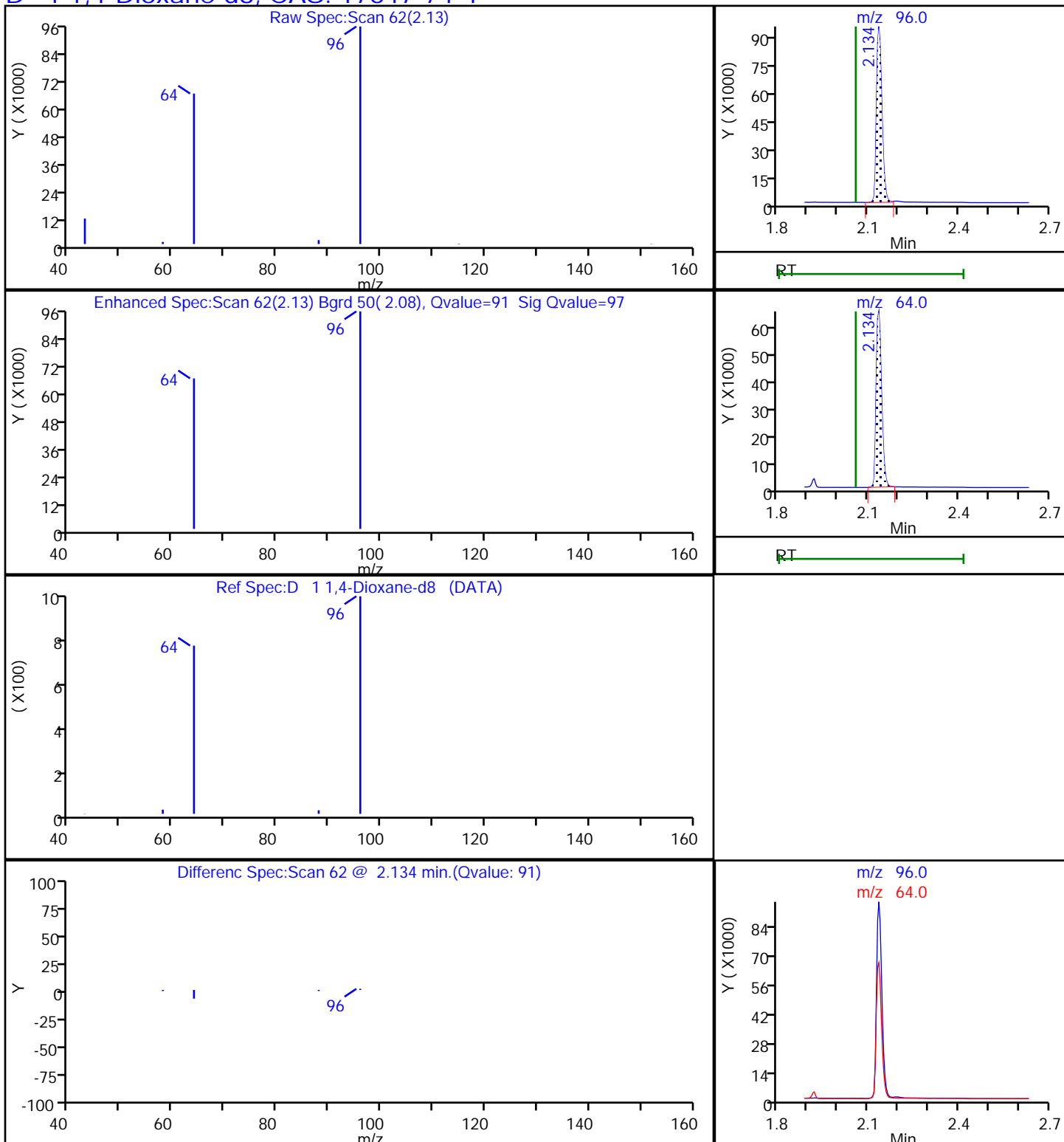
Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

Column:

Detector: MS SCAN

D 1 1,4-Dioxane-d8, CAS: 17647-74-4

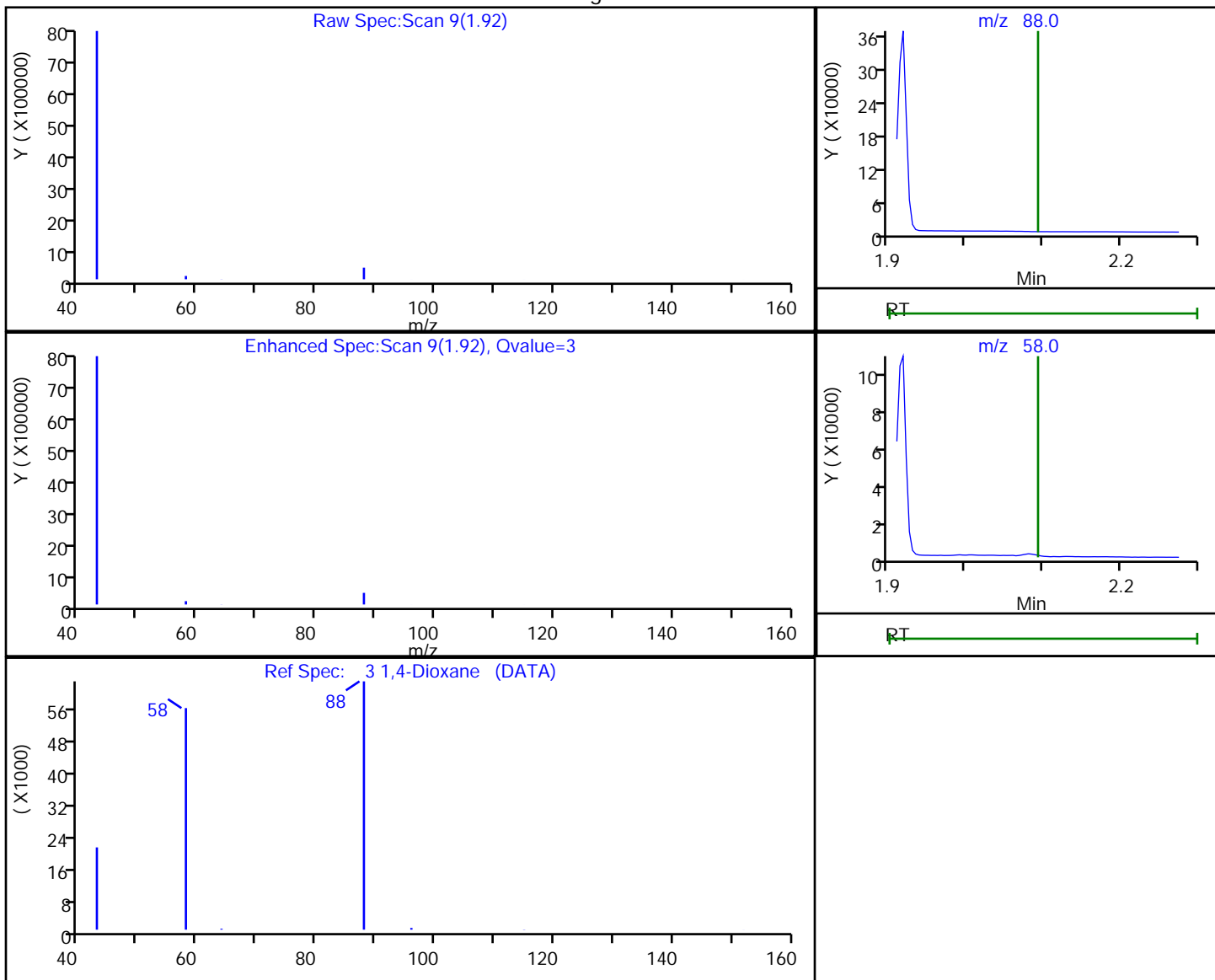


Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155099.D  
 Injection Date: 18-Dec-2019 02:03:30 Instrument ID: HP5973U  
 Lims ID: 480-164221-A-5-A Lab Sample ID: 480-164221-5  
 Client ID: FIELD DUP  
 Operator ID: bs ALS Bottle#: 39 Worklist Smp#: 9  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Method: 1,4\_Dx\_SIM\_HP5973U Limit Group: MB - 8270D SIM ID ICAL  
 Column: Detector MS SCAN

3 1,4-Dioxane, CAS: 123-91-1

Processing Results



RT	Mass	Response	Amount
1.92	88.00	294469	22.590661
1.92	58.00	87632	

Reviewer: schickr, 18-Dec-2019 12:05:10

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I  
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AOI 3 GW 2 DER Lab Sample ID: 480-164221-6  
 Matrix: Water Lab File ID: U33155100.D  
 Analysis Method: 8270D SIM ID Date Collected: 12/10/2019 13:40  
 Extract. Method: 3510C Date Extracted: 12/16/2019 15:35  
 Sample wt/vol: 300 (mL) Date Analyzed: 12/18/2019 02:26  
 Con. Extract Vol.: 1 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) Level: (low/med) Low  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 510313 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	ND		0.67	0.33

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	29		15-110

Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155100.D  
 Lims ID: 480-164221-A-6-A  
 Client ID: AOI 3 GW 2 DER  
 Sample Type: Client  
 Inject. Date: 18-Dec-2019 02:26:30 ALS Bottle#: 40 Worklist Smp#: 10  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 40  
 Operator ID: bs Instrument ID: HP5973U  
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 18-Dec-2019 12:07:28 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: RT Order ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D  
 Column 1 : Det: MS SCAN  
 Process Host: CTX1002

First Level Reviewer: schickr Date: 18-Dec-2019 12:05:14

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ul	%Rec	Flags
D 1 1,4-Dioxane-d8	96	2.130	2.056	0.074	92	122940	2.86	28.6	
3 1,4-Dioxane	88		2.093				ND		U
* 2 1,4-Dichlorobenzene-d4	152	5.487	5.479	0.008	98	351361	4.00		

**QC Flag Legend**

Review Flags  
U - Marked Undetected

**Reagents:**

MB\_LLIS\_WRK\_00184 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155100.D

Injection Date: 18-Dec-2019 02:26:30

Instrument ID: HP5973U

Operator ID: bs

Lims ID: 480-164221-A-6-A

Lab Sample ID: 480-164221-6

Worklist Smp#: 10

Client ID: AOI 3 GW 2 DER

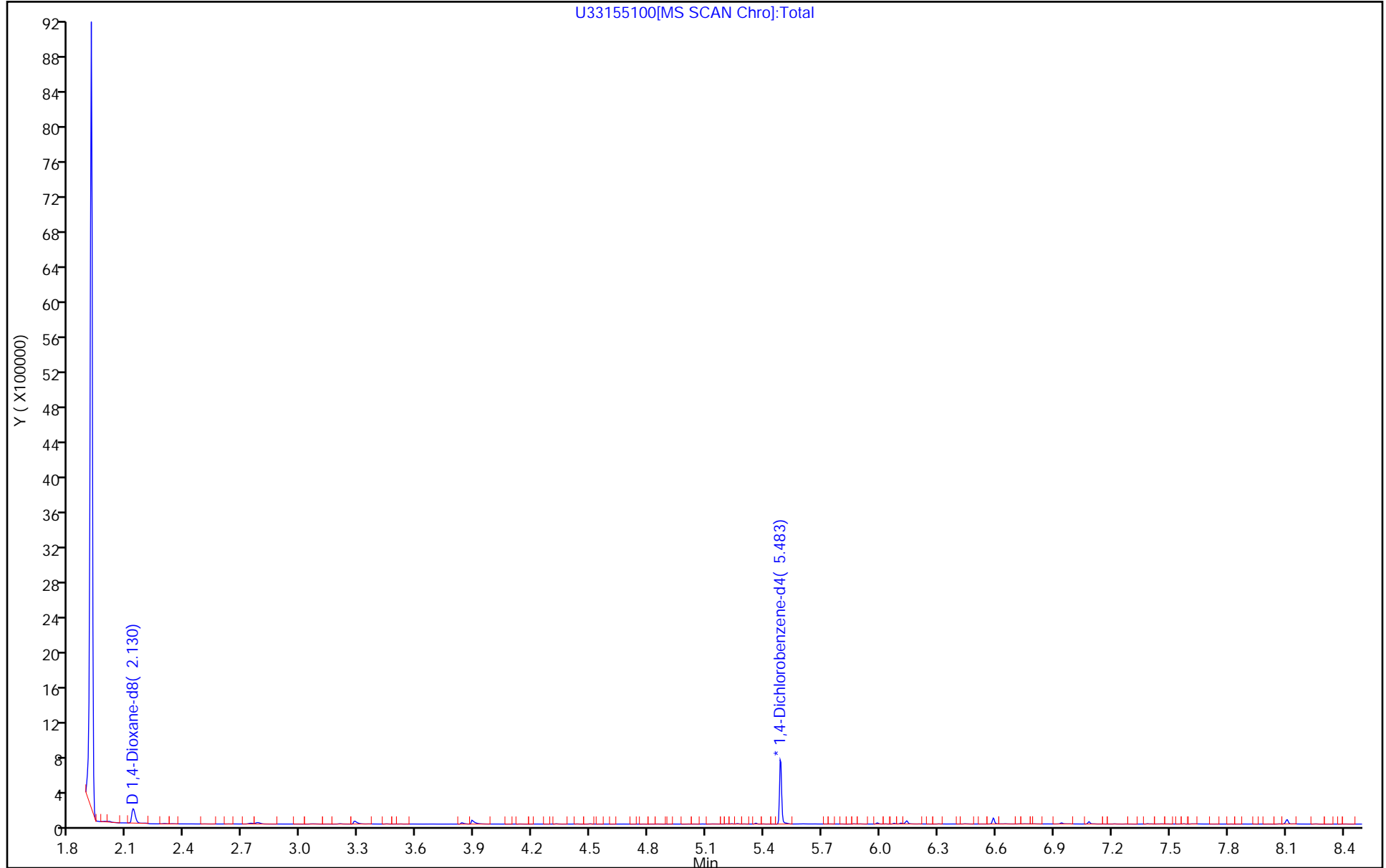
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 40

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155100.D

Injection Date: 18-Dec-2019 02:26:30

Instrument ID: HP5973U

Lims ID: 480-164221-A-6-A

Lab Sample ID: 480-164221-6

Client ID: AOI 3 GW 2 DER

Operator ID: bs

ALS Bottle#: 40

Worklist Smp#: 10

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

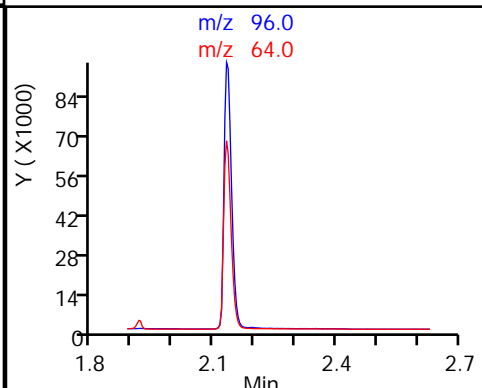
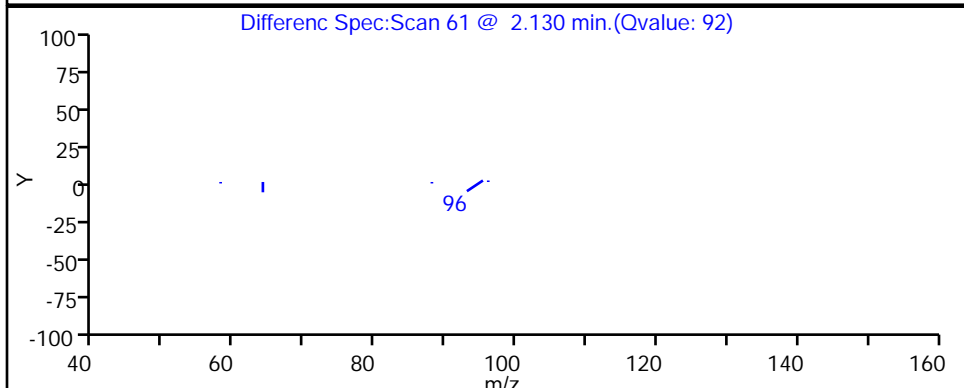
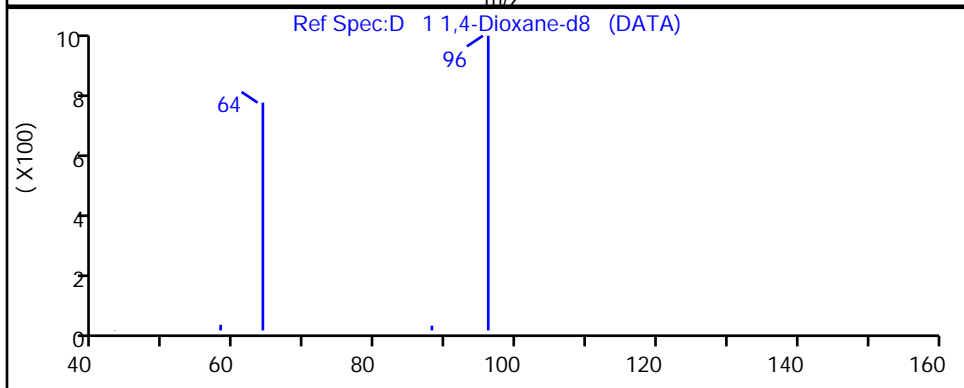
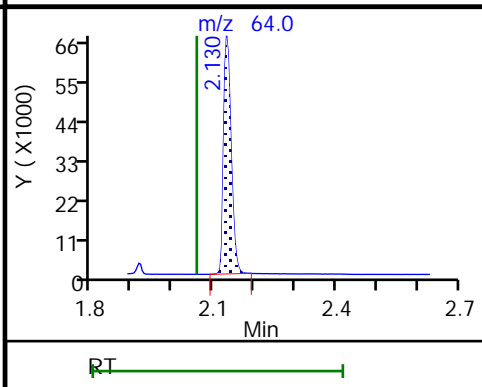
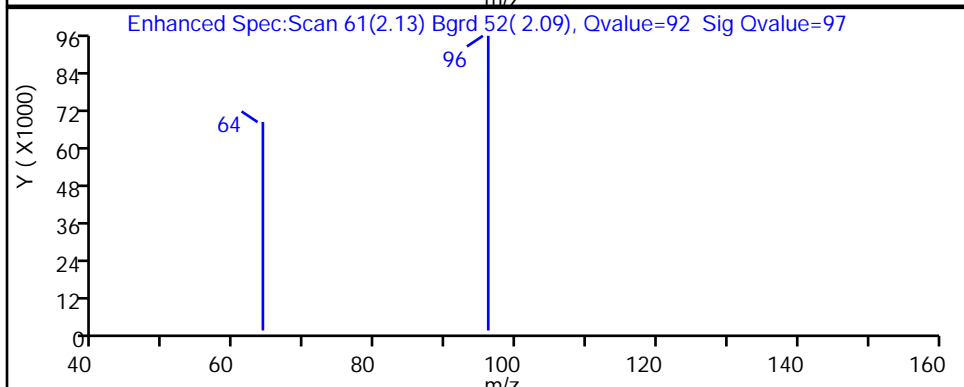
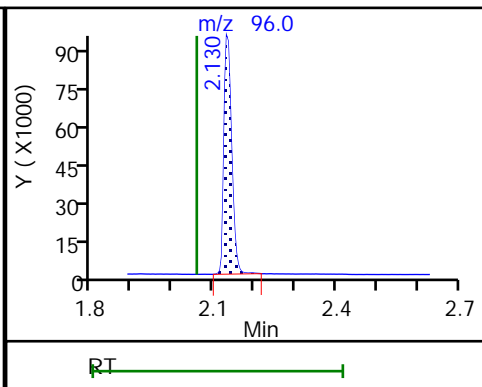
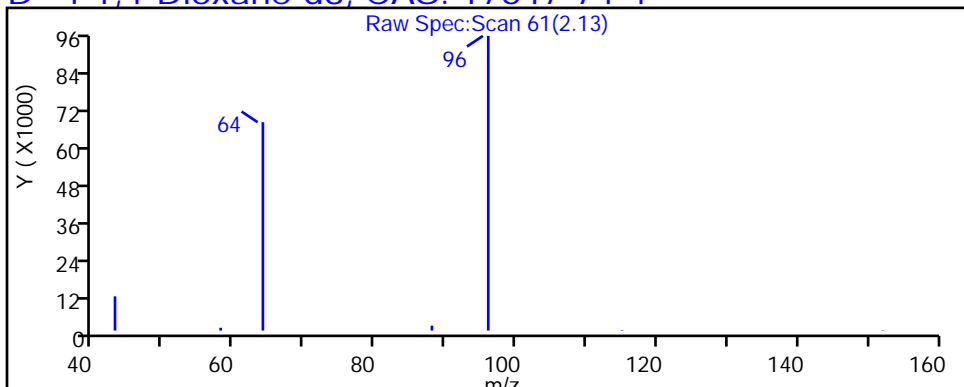
Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

Column:

Detector MS SCAN

D 1 1,4-Dioxane-d8, CAS: 17647-74-4



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155100.D

Injection Date: 18-Dec-2019 02:26:30

Instrument ID: HP5973U

Lims ID: 480-164221-A-6-A

Lab Sample ID: 480-164221-6

Client ID: AOI 3 GW 2 DER

Operator ID: bs

ALS Bottle#: 40 Worklist Smp#: 10

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

Method: 1,4\_Dx\_SIM\_HP5973U

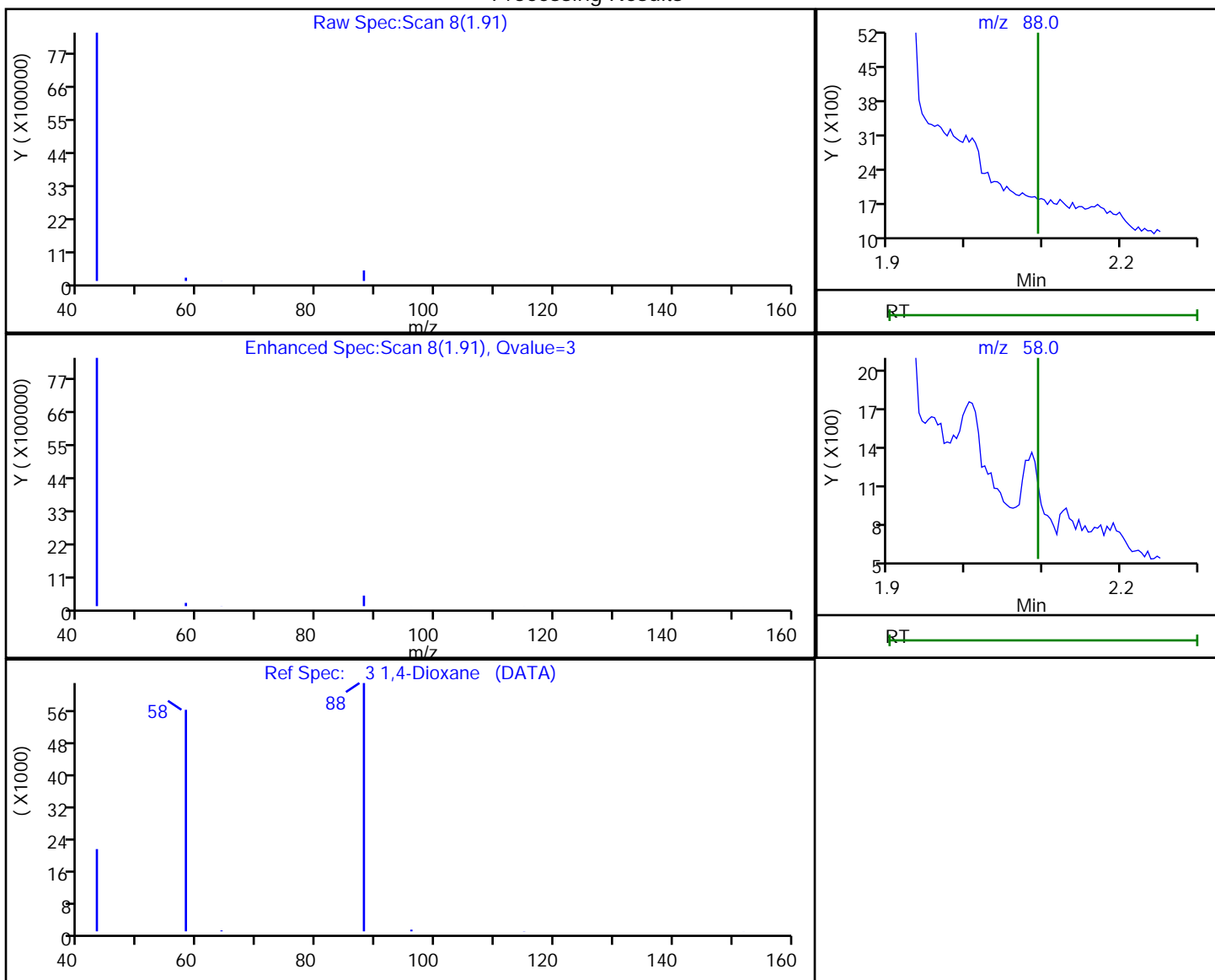
Limit Group: MB - 8270D SIM ID ICAL

Column:

Detector: MS SCAN

3 1,4-Dioxane, CAS: 123-91-1

Processing Results



RT	Mass	Response	Amount
1.91	88.00	299427	22.133198
1.91	58.00	88924	

Reviewer: schickr, 18-Dec-2019 12:05:14

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I  
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AOI 1 GW 2 DER Lab Sample ID: 480-164221-7  
 Matrix: Water Lab File ID: U33155101.D  
 Analysis Method: 8270D SIM ID Date Collected: 12/11/2019 12:25  
 Extract. Method: 3510C Date Extracted: 12/16/2019 15:35  
 Sample wt/vol: 1000 (mL) Date Analyzed: 12/18/2019 02:49  
 Con. Extract Vol.: 1 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) Level: (low/med) Low  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 510313 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	ND		0.20	0.10

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	32		15-110



Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155101.D  
 Lims ID: 480-164221-A-7-A  
 Client ID: AOI 1 GW 2 DER  
 Sample Type: Client  
 Inject. Date: 18-Dec-2019 02:49:30 ALS Bottle#: 41 Worklist Smp#: 11  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 41  
 Operator ID: bs Instrument ID: HP5973U  
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 18-Dec-2019 12:07:28 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: RT Order ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D  
 Column 1 : Det: MS SCAN  
 Process Host: CTX1002

First Level Reviewer: schickr Date: 18-Dec-2019 12:05:18

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ul	%Rec	Flags
D 1 1,4-Dioxane-d8	96	2.126	2.056	0.070	92	113916	3.21	32.1	
3 1,4-Dioxane	88		2.093				ND		U
* 2 1,4-Dichlorobenzene-d4	152	5.483	5.479	0.004	100	290188	4.00		

**QC Flag Legend**

Review Flags  
U - Marked Undetected

**Reagents:**

MB\_LLIS\_WRK\_00184 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155101.D

Injection Date: 18-Dec-2019 02:49:30

Instrument ID: HP5973U

Operator ID: bs

Lims ID: 480-164221-A-7-A

Lab Sample ID: 480-164221-7

Worklist Smp#: 11

Client ID: AOI 1 GW 2 DER

Injection Vol: 1.0 ul

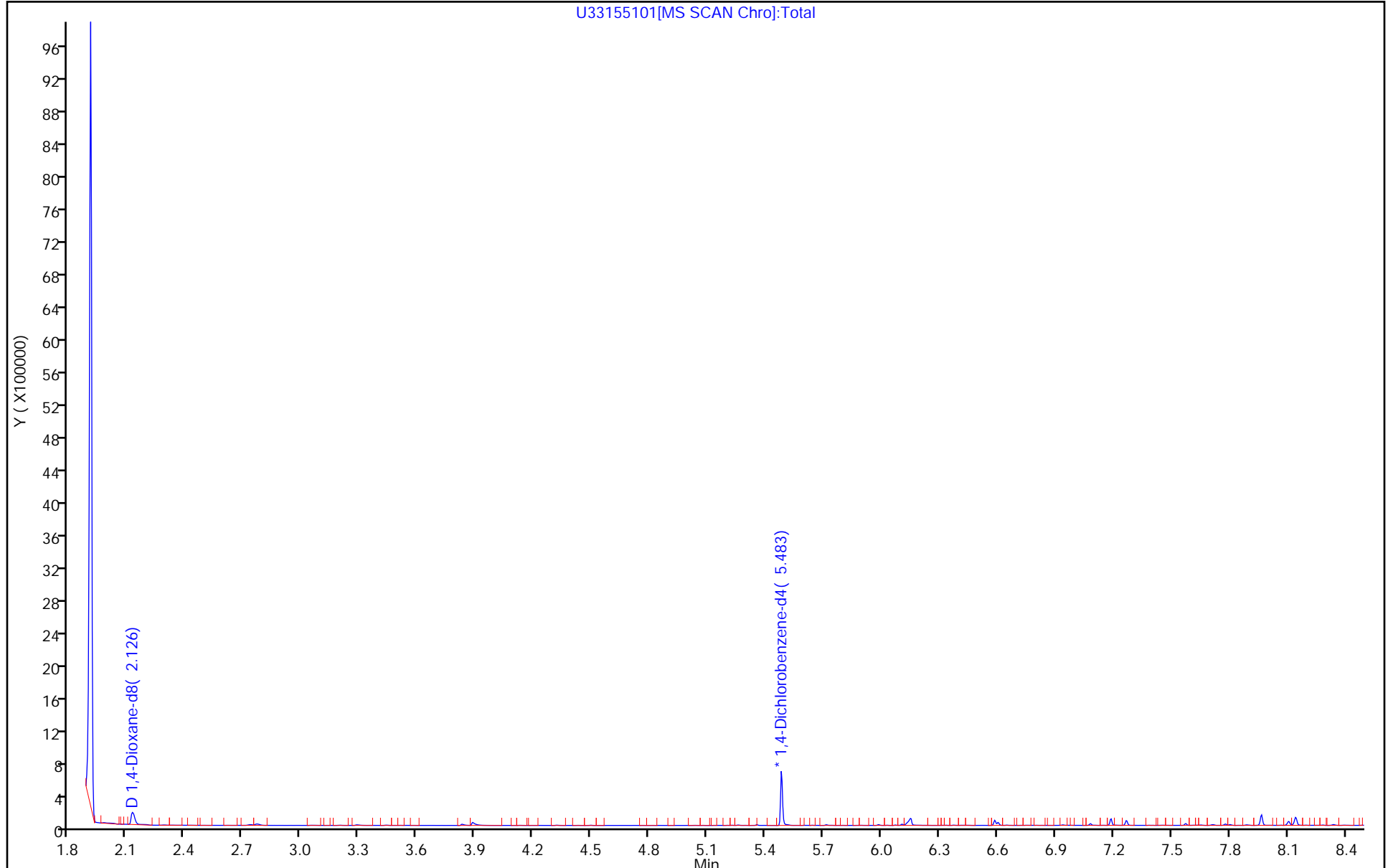
Dil. Factor: 1.0000

ALS Bottle#: 41

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

U33155101[MS SCAN Chrom]:Total



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155101.D

Injection Date: 18-Dec-2019 02:49:30

Instrument ID: HP5973U

Lims ID: 480-164221-A-7-A

Lab Sample ID: 480-164221-7

Client ID: AOI 1 GW 2 DER

Operator ID: bs

ALS Bottle#: 41

Worklist Smp#: 11

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

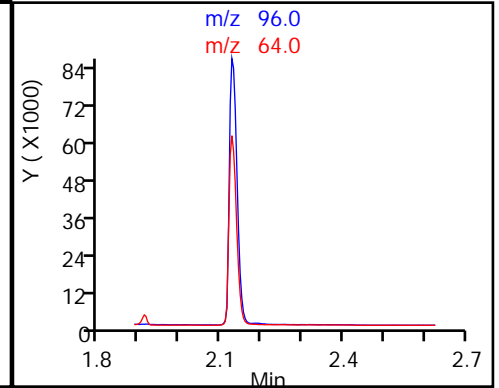
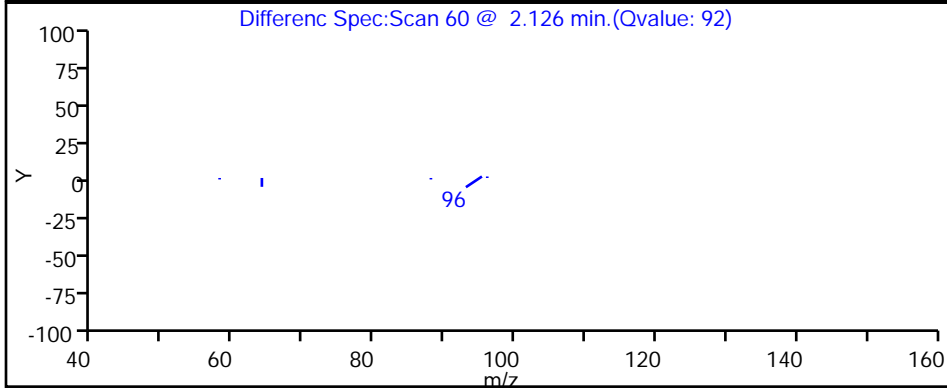
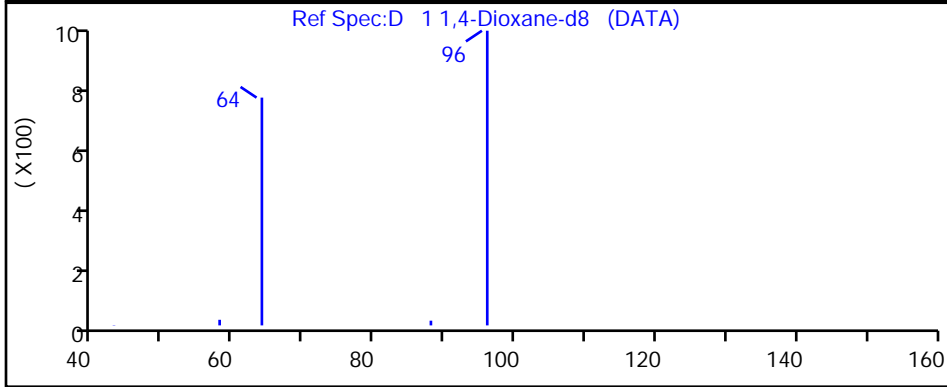
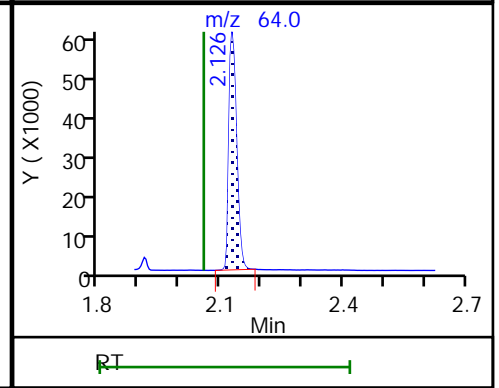
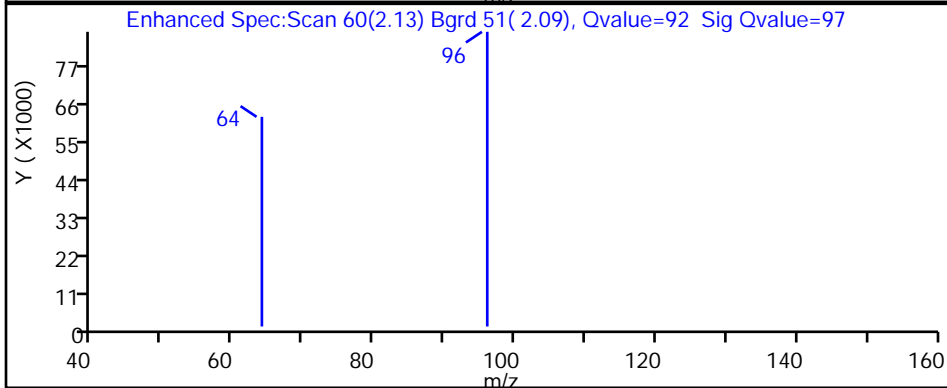
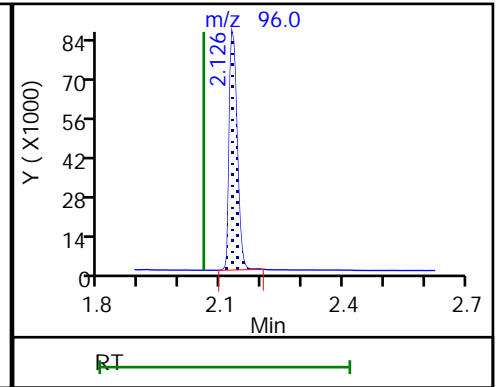
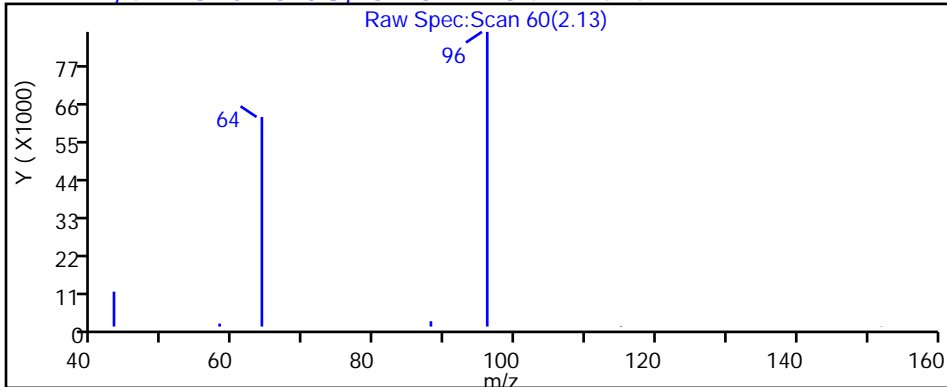
Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

Column:

Detector MS SCAN

D 1 1,4-Dioxane-d8, CAS: 17647-74-4



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155101.D

Injection Date: 18-Dec-2019 02:49:30

Instrument ID: HP5973U

Lims ID: 480-164221-A-7-A

Lab Sample ID: 480-164221-7

Client ID: AOI 1 GW 2 DER

Operator ID: bs

ALS Bottle#: 41

Worklist Smp#: 11

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

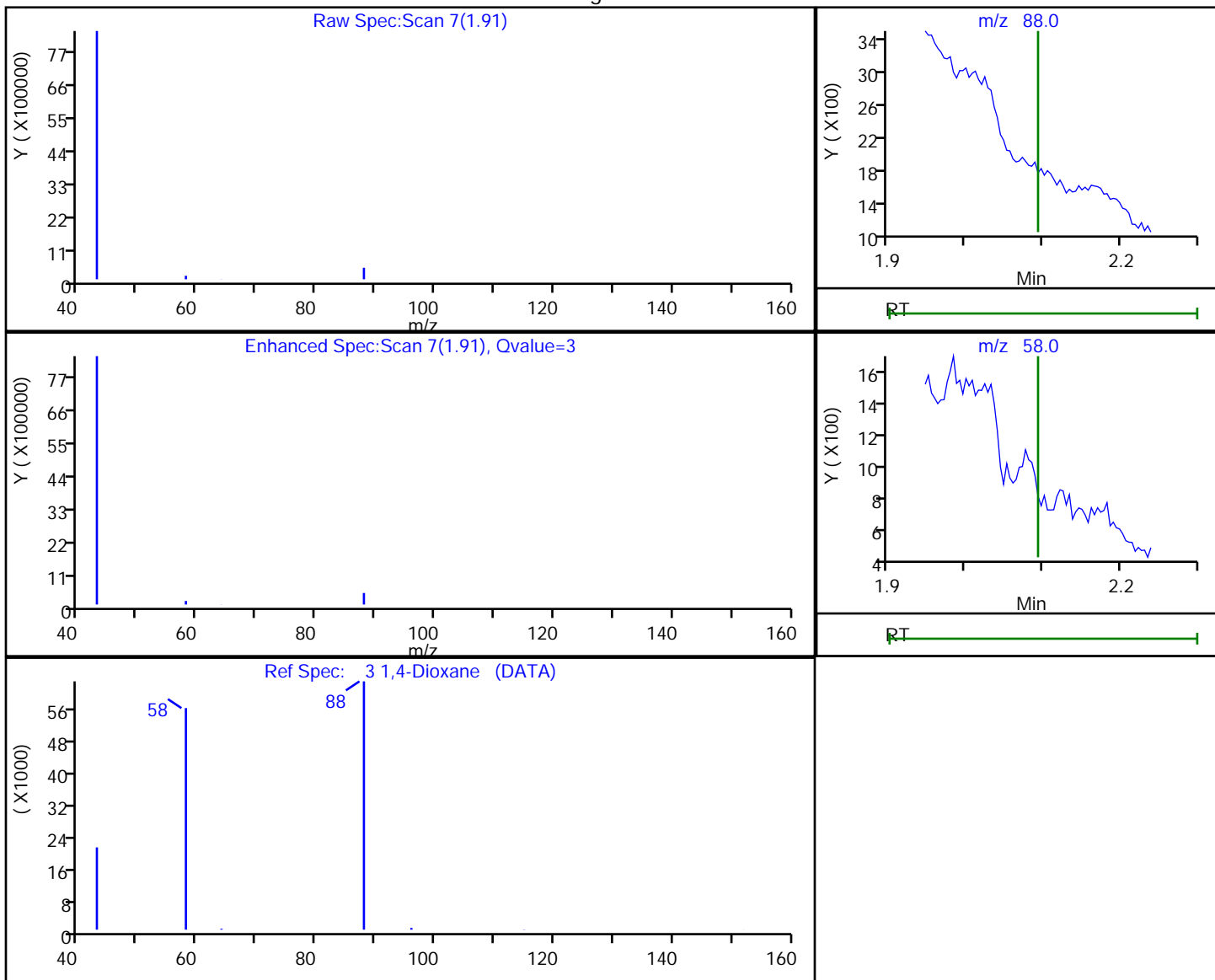
Column:

Detector

MS SCAN

3 1,4-Dioxane, CAS: 123-91-1

Processing Results



RT	Mass	Response	Amount
1.91	88.00	322205	25.703601
1.91	58.00	94396	

Reviewer: schickr, 18-Dec-2019 12:05:17

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I  
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS SW 01 DER Lab Sample ID: 480-164221-8  
 Matrix: Water Lab File ID: U33155102.D  
 Analysis Method: 8270D SIM ID Date Collected: 12/12/2019 09:00  
 Extract. Method: 3510C Date Extracted: 12/16/2019 15:35  
 Sample wt/vol: 1000 (mL) Date Analyzed: 12/18/2019 03:12  
 Con. Extract Vol.: 1 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) Level: (low/med) Low  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 510313 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	ND		0.20	0.10

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	27		15-110

Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155102.D  
 Lims ID: 480-164221-A-8-A  
 Client ID: CS SW 01 DER  
 Sample Type: Client  
 Inject. Date: 18-Dec-2019 03:12:30 ALS Bottle#: 42 Worklist Smp#: 12  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 42  
 Operator ID: bs Instrument ID: HP5973U  
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 18-Dec-2019 12:07:28 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: RT Order ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D  
 Column 1 : Det: MS SCAN  
 Process Host: CTX1002

First Level Reviewer: schickr Date: 18-Dec-2019 12:05:21

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ul	%Rec	Flags
D 1 1,4-Dioxane-d8	96	2.130	2.056	0.074	92	113772	2.71	27.1	M
3 1,4-Dioxane	88		2.093				ND		U
* 2 1,4-Dichlorobenzene-d4	152	5.487	5.479	0.008	98	343445	4.00		

**QC Flag Legend**

Review Flags

M - Manually Integrated

U - Marked Undetected

**Reagents:**

MB\_LLIS\_WRK\_00184 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155102.D

Injection Date: 18-Dec-2019 03:12:30

Instrument ID: HP5973U

Operator ID: bs

Lims ID: 480-164221-A-8-A

Lab Sample ID: 480-164221-8

Worklist Smp#: 12

Client ID: CS SW 01 DER

Injection Vol: 1.0 ul

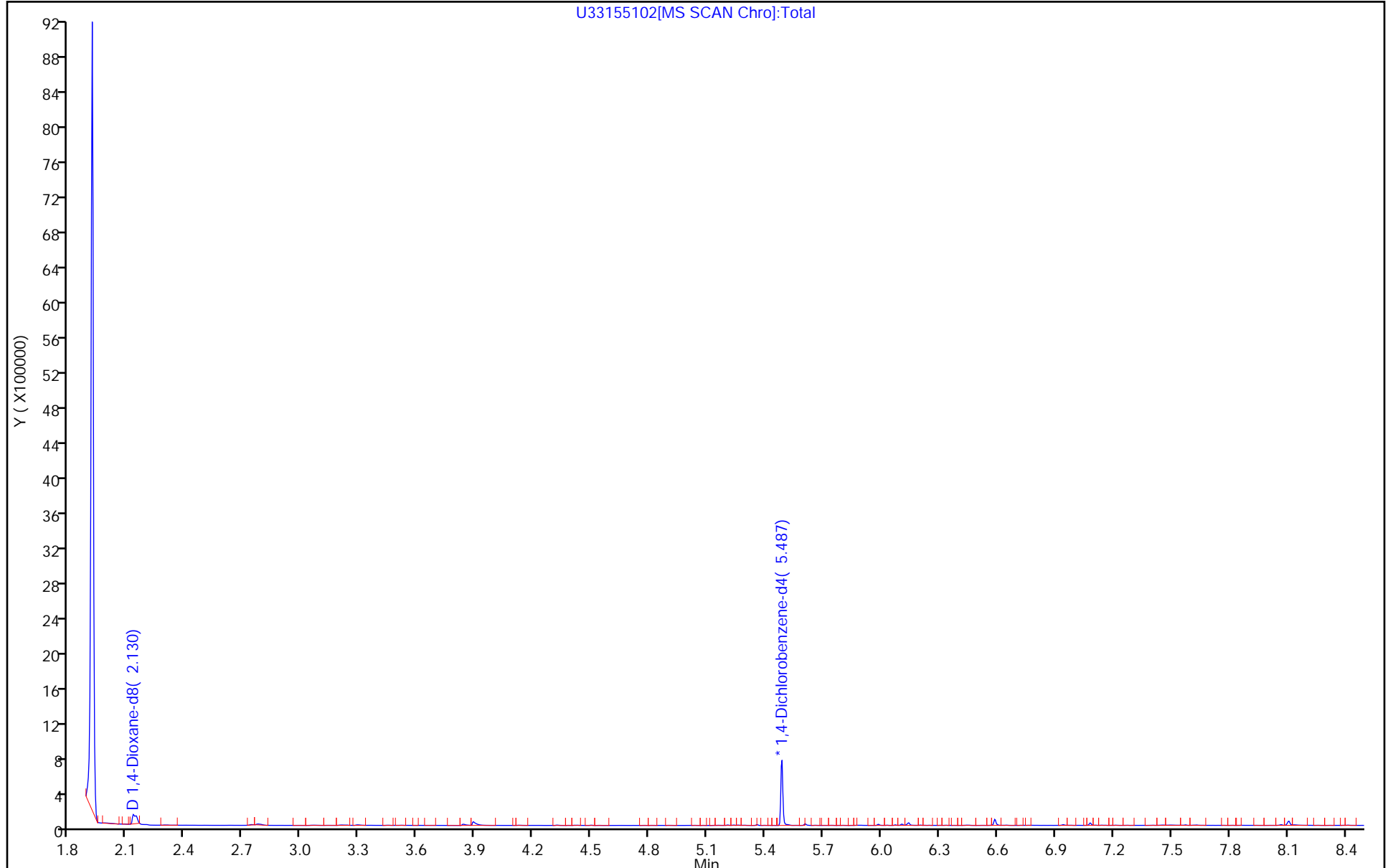
Dil. Factor: 1.0000

ALS Bottle#: 42

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

U33155102[MS SCAN Chrom]:Total



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155102.D

Injection Date: 18-Dec-2019 03:12:30

Instrument ID: HP5973U

Lims ID: 480-164221-A-8-A

Lab Sample ID: 480-164221-8

Client ID: CS SW 01 DER

Operator ID: bs

ALS Bottle#: 42

Worklist Smp#: 12

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

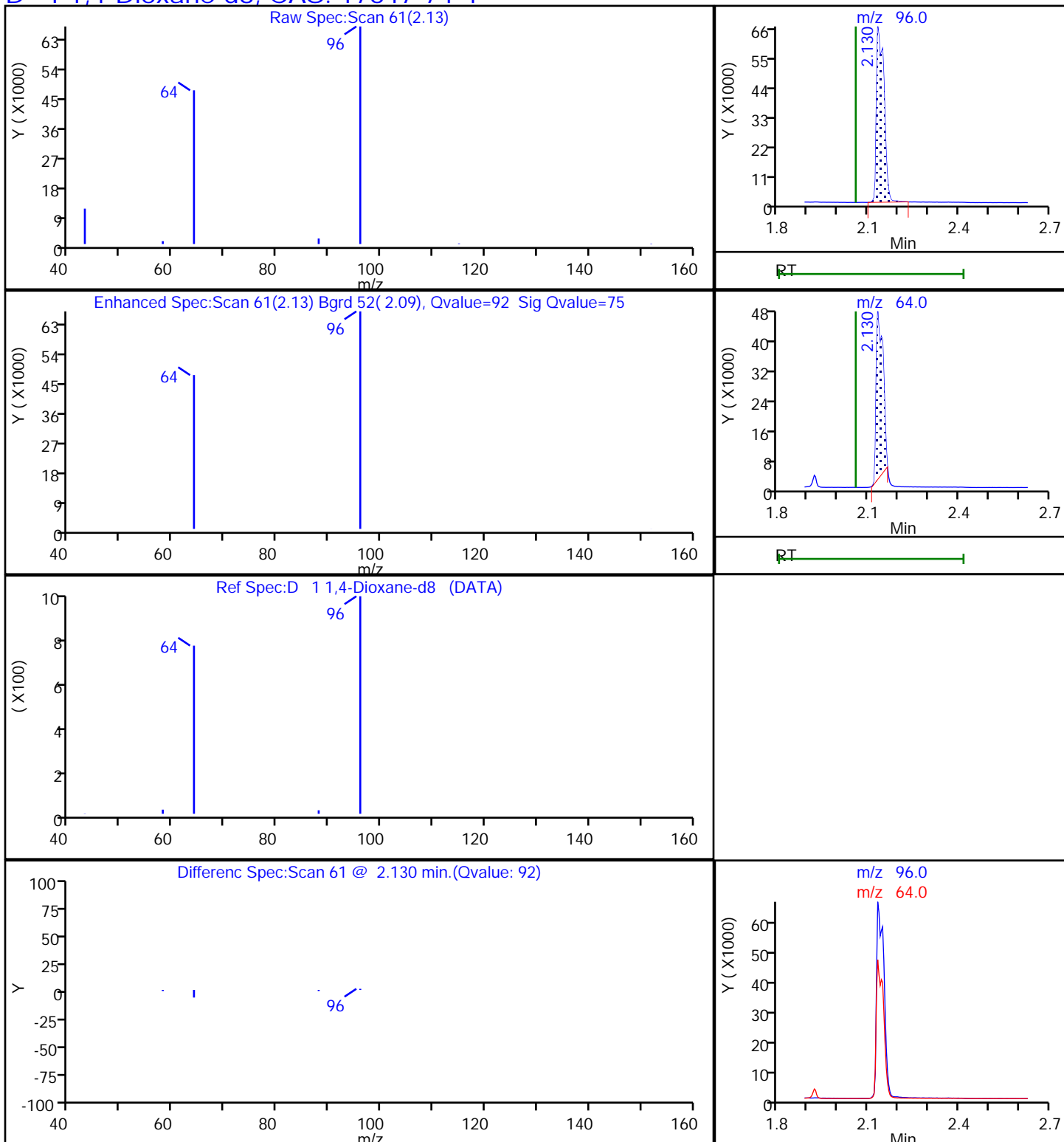
Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

Column:

Detector MS SCAN

D 1 1,4-Dioxane-d8, CAS: 17647-74-4



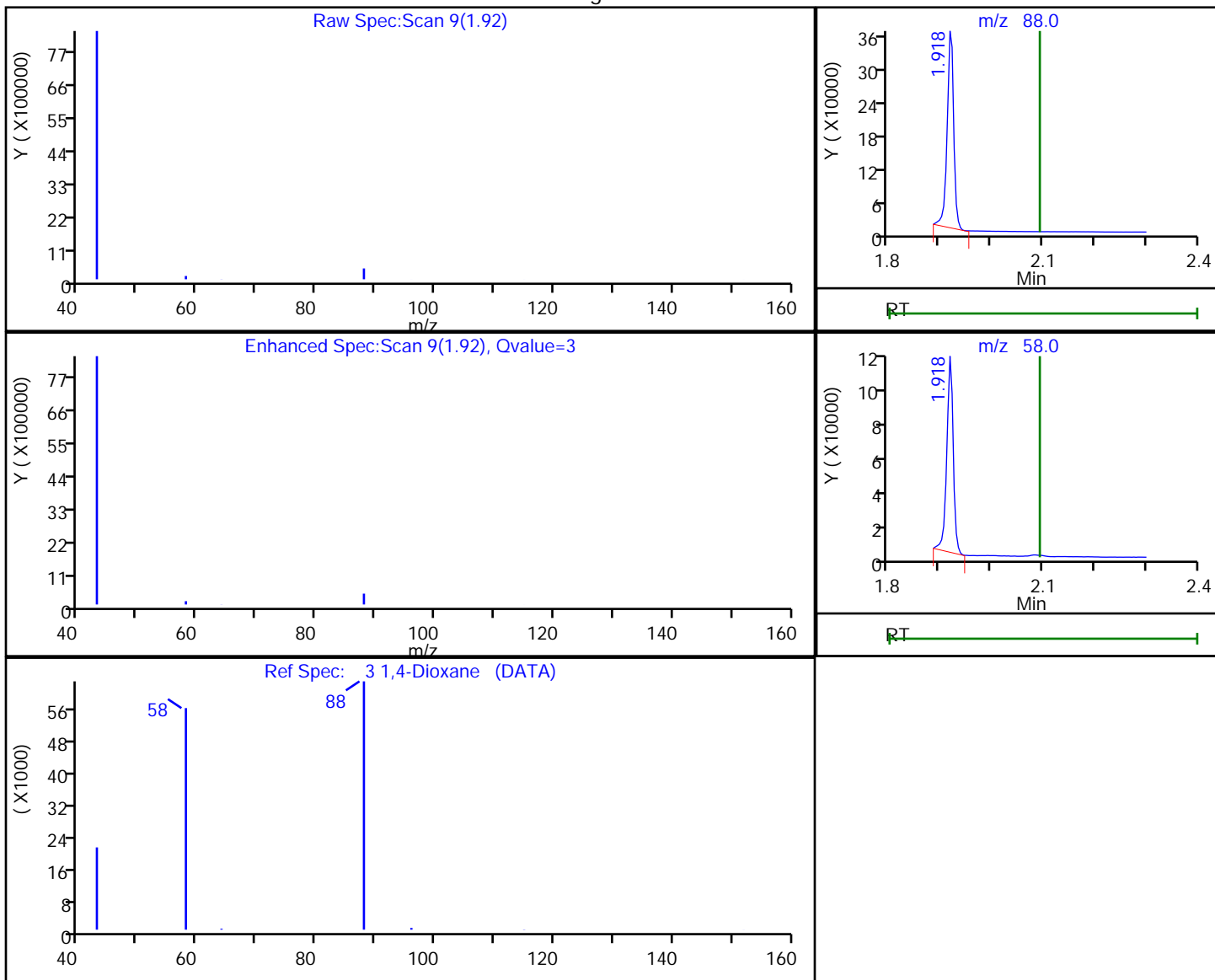


Euofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155102.D  
 Injection Date: 18-Dec-2019 03:12:30 Instrument ID: HP5973U  
 Lims ID: 480-164221-A-8-A Lab Sample ID: 480-164221-8  
 Client ID: CS SW 01 DER  
 Operator ID: bs ALS Bottle#: 42 Worklist Smp#: 12  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Method: 1,4\_Dx\_SIM\_HP5973U Limit Group: MB - 8270D SIM ID ICAL  
 Column: Detector MS SCAN

3 1,4-Dioxane, CAS: 123-91-1

Processing Results



RT	Mass	Response	Amount
1.92	88.00	317131	56.591874
1.92	58.00	93747	

Reviewer: schickr, 18-Dec-2019 12:05:20

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

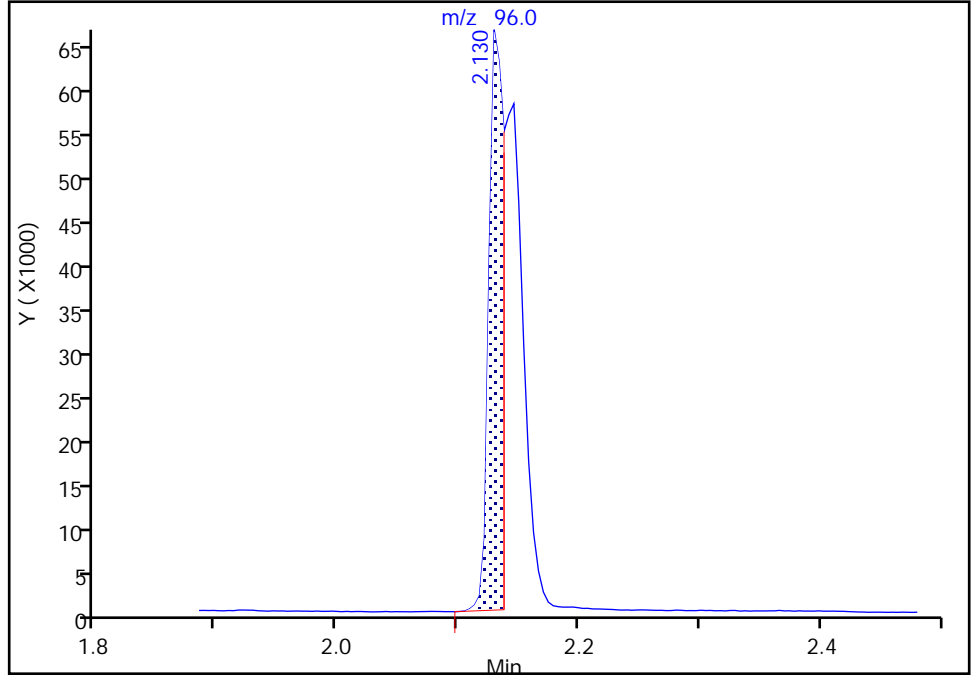
Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155102.D  
Injection Date: 18-Dec-2019 03:12:30 Instrument ID: HP5973U  
Lims ID: 480-164221-A-8-A Lab Sample ID: 480-164221-8  
Client ID: CS SW 01 DER  
Operator ID: bs ALS Bottle#: 42 Worklist Smp#: 12  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 1,4\_Dx\_SIM\_HP5973U Limit Group: MB - 8270D SIM ID ICAL  
Column: Detector MS SCAN

D 1 1,4-Dioxane-d8, CAS: 17647-74-4  
Signal: 1

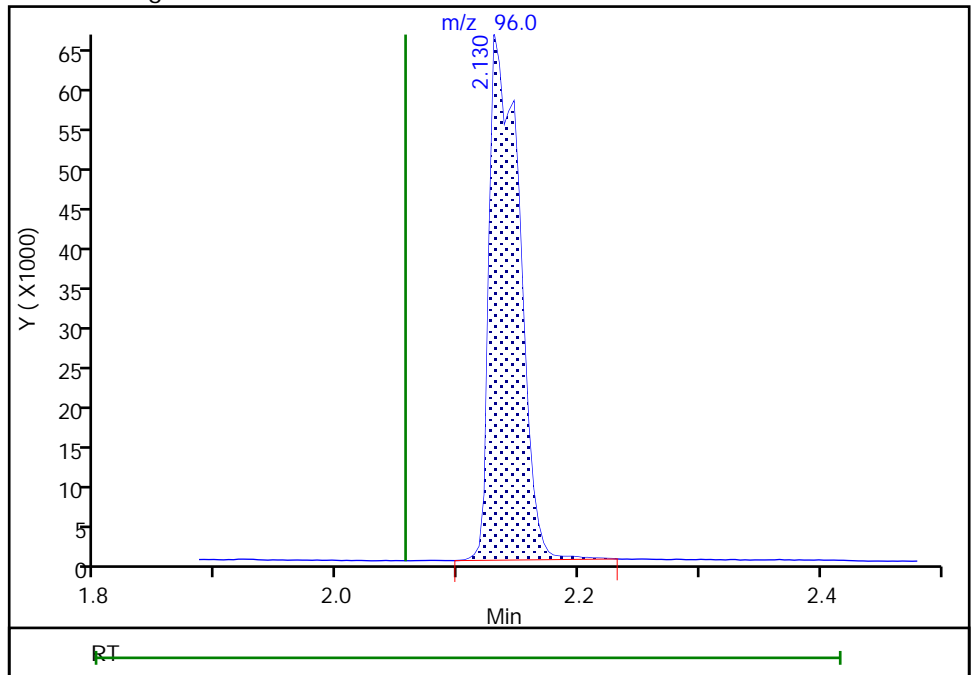
RT: 2.13  
Area: 50925  
Amount: 1.211018  
Amount Units: ng/ul

Processing Integration Results



RT: 2.13  
Area: 113772  
Amount: 2.705546  
Amount Units: ng/ul

Manual Integration Results



Reviewer: schickr, 18-Dec-2019 12:05:33  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

FORM I  
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: EQUIPMENT BLANK Lab Sample ID: 480-164221-9  
 Matrix: Water Lab File ID: U33155103.D  
 Analysis Method: 8270D SIM ID Date Collected: 12/11/2019 12:35  
 Extract. Method: 3510C Date Extracted: 12/16/2019 15:35  
 Sample wt/vol: 1000 (mL) Date Analyzed: 12/18/2019 03:36  
 Con. Extract Vol.: 1 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) Level: (low/med) Low  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 510313 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	ND		0.20	0.10

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	27		15-110

Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155103.D  
 Lims ID: 480-164221-A-9-A  
 Client ID: EQUIPMENT BLANK  
 Sample Type: Client  
 Inject. Date: 18-Dec-2019 03:36:30 ALS Bottle#: 43 Worklist Smp#: 13  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 43  
 Operator ID: bs Instrument ID: HP5973U  
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 18-Dec-2019 12:07:28 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: RT Order ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D  
 Column 1 : Det: MS SCAN  
 Process Host: CTX1002

First Level Reviewer: schickr Date: 18-Dec-2019 12:05:39

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ul	%Rec	Flags
D 1 1,4-Dioxane-d8	96	2.130	2.056	0.074	91	116270	2.73	27.3	
3 1,4-Dioxane	88		2.093				ND		U
* 2 1,4-Dichlorobenzene-d4	152	5.483	5.479	0.004	100	347401	4.00		

**QC Flag Legend**

Review Flags  
U - Marked Undetected

**Reagents:**

MB\_LLIS\_WRK\_00184 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155103.D

Injection Date: 18-Dec-2019 03:36:30

Instrument ID: HP5973U

Operator ID: bs

Lims ID: 480-164221-A-9-A

Lab Sample ID: 480-164221-9

Worklist Smp#: 13

Client ID: EQUIPMENT BLANK

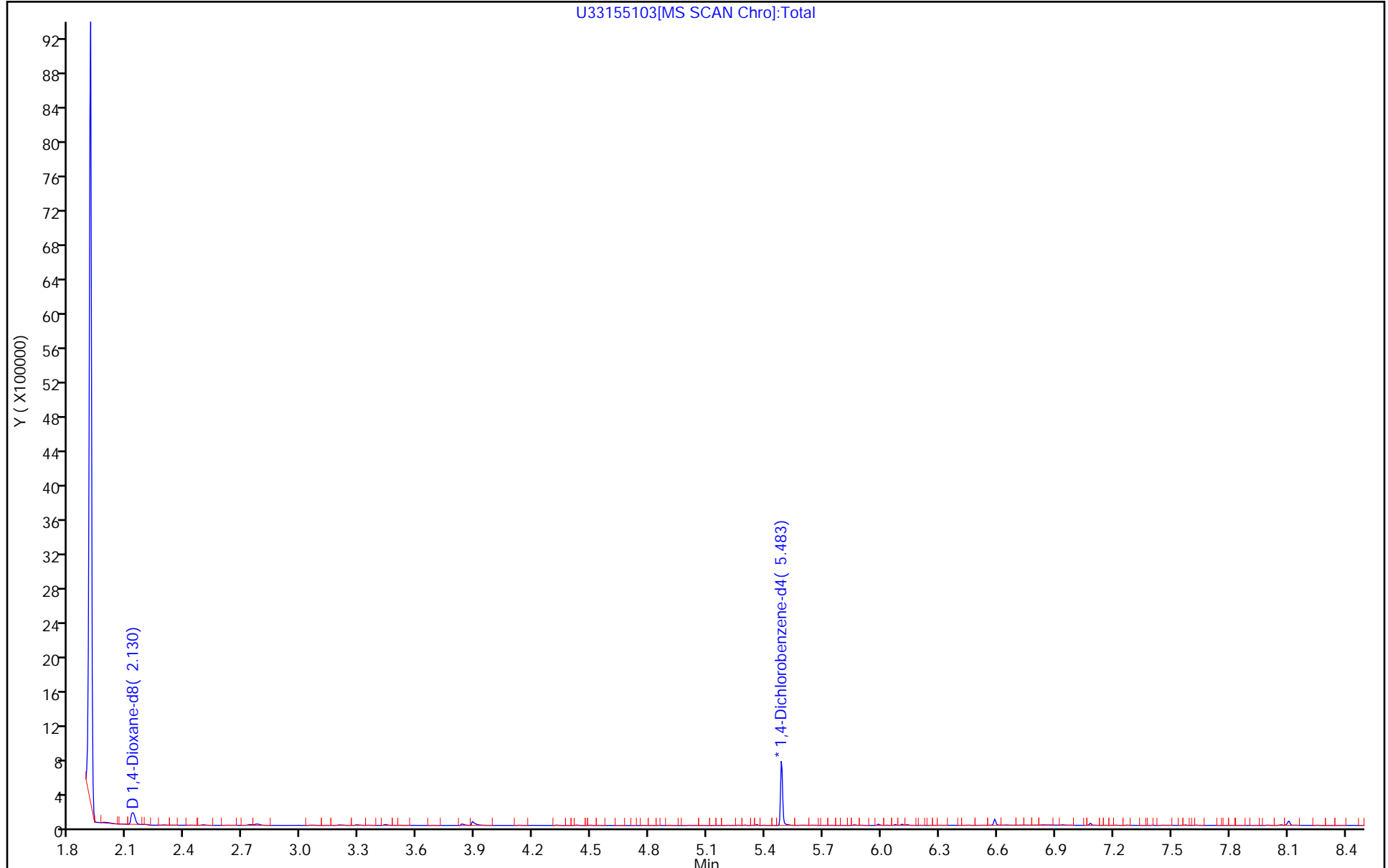
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 43

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155103.D

Injection Date: 18-Dec-2019 03:36:30

Instrument ID: HP5973U

Lims ID: 480-164221-A-9-A

Lab Sample ID: 480-164221-9

Client ID: EQUIPMENT BLANK

Operator ID: bs

ALS Bottle#: 43

Worklist Smp#: 13

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

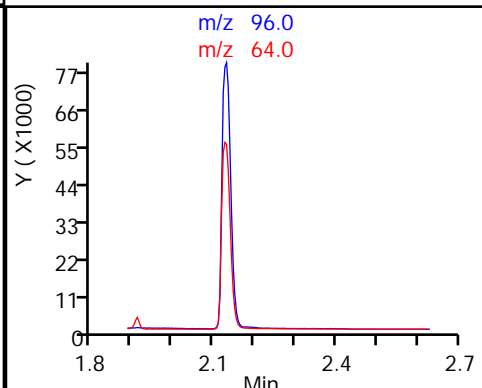
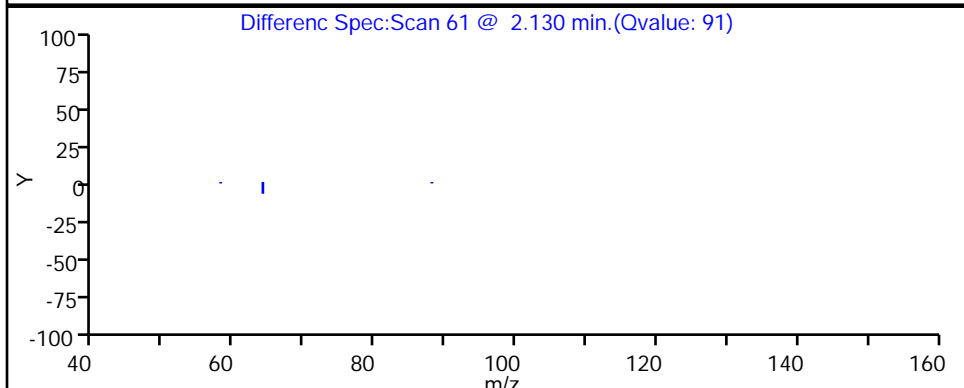
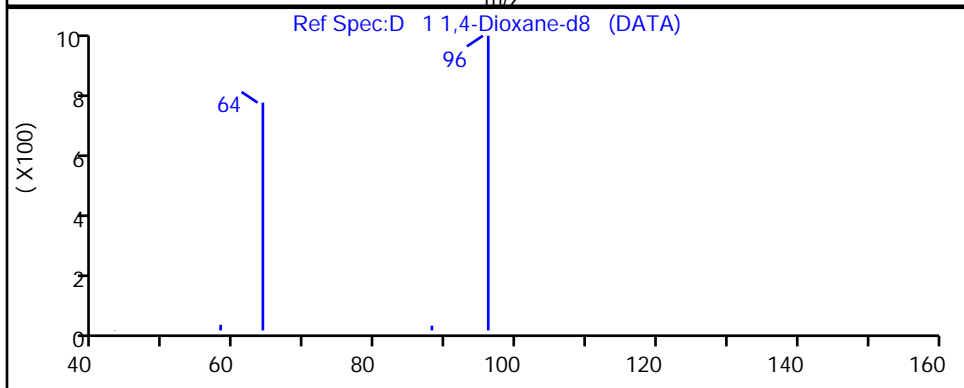
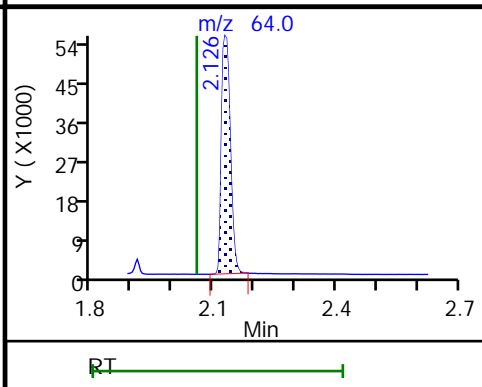
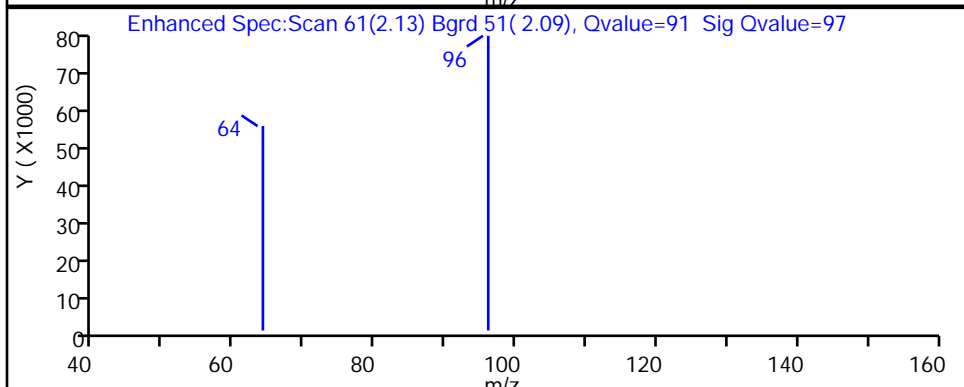
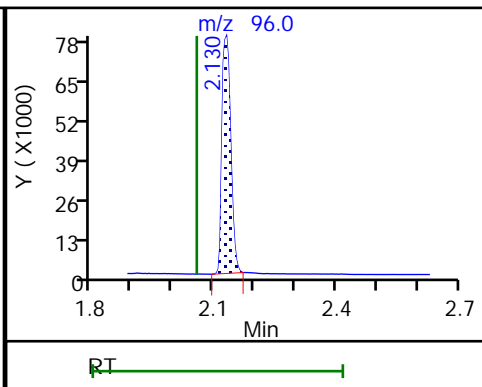
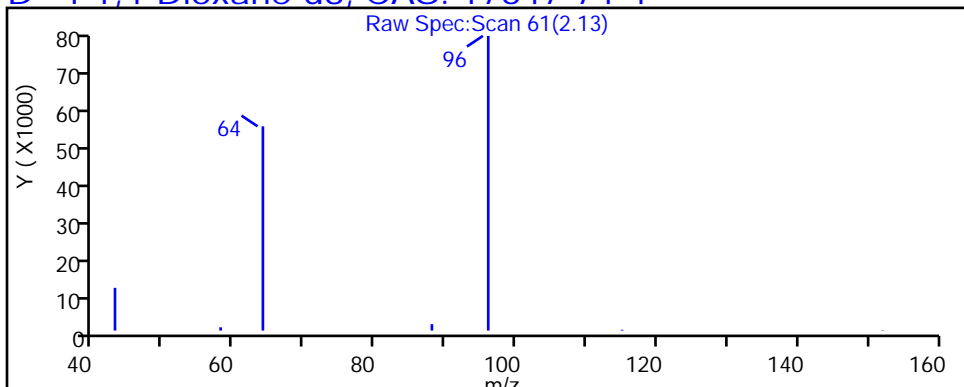
Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

Column:

Detector MS SCAN

D 1 1,4-Dioxane-d8, CAS: 17647-74-4



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155103.D

Injection Date: 18-Dec-2019 03:36:30

Instrument ID: HP5973U

Lims ID: 480-164221-A-9-A

Lab Sample ID: 480-164221-9

Client ID: EQUIPMENT BLANK

Operator ID: bs

ALS Bottle#: 43 Worklist Smp#: 13

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

Method: 1,4\_Dx\_SIM\_HP5973U

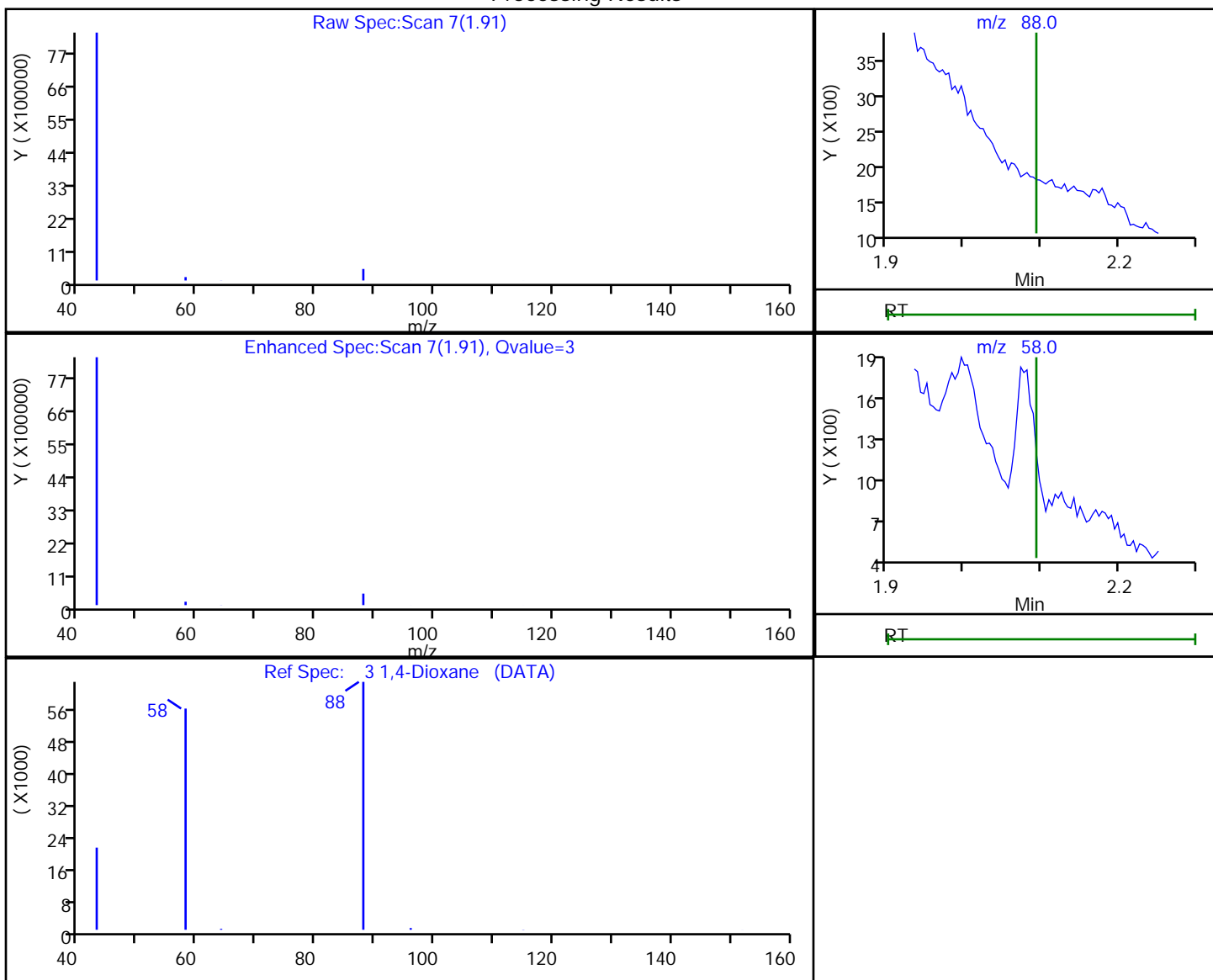
Limit Group: MB - 8270D SIM ID ICAL

Column:

Detector: MS SCAN

3 1,4-Dioxane, CAS: 123-91-1

Processing Results



RT	Mass	Response	Amount
1.91	88.00	306497	23.955485
1.91	58.00	90676	

Reviewer: schickr, 18-Dec-2019 12:05:38

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I  
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS SW 05 DER Lab Sample ID: 480-164221-10  
 Matrix: Water Lab File ID: U33155104.D  
 Analysis Method: 8270D SIM ID Date Collected: 12/11/2019 15:25  
 Extract. Method: 3510C Date Extracted: 12/16/2019 15:35  
 Sample wt/vol: 1000 (mL) Date Analyzed: 12/18/2019 03:59  
 Con. Extract Vol.: 1 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) Level: (low/med) Low  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 510313 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	ND		0.20	0.10

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	28		15-110



Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155104.D  
 Lims ID: 480-164221-B-10-A  
 Client ID: CS SW 05 DER  
 Sample Type: Client  
 Inject. Date: 18-Dec-2019 03:59:30 ALS Bottle#: 44 Worklist Smp#: 14  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 44  
 Operator ID: bs Instrument ID: HP5973U  
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 18-Dec-2019 12:07:28 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: RT Order ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D  
 Column 1 : Det: MS SCAN  
 Process Host: CTX1002

First Level Reviewer: schickr Date: 18-Dec-2019 12:05:44

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ul	%Rec	Flags
D 1 1,4-Dioxane-d8	96	2.134	2.056	0.078	91	116591	2.81	28.1	
3 1,4-Dioxane	88		2.093				ND		U
* 2 1,4-Dichlorobenzene-d4	152	5.483	5.479	0.004	100	338451	4.00		

**QC Flag Legend**

Review Flags

U - Marked Undetected

**Reagents:**

MB\_LLIS\_WRK\_00184 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155104.D

Injection Date: 18-Dec-2019 03:59:30

Instrument ID: HP5973U

Operator ID: bs

Lims ID: 480-164221-B-10-A

Lab Sample ID: 480-164221-10

Worklist Smp#: 14

Client ID: CS SW 05 DER

Injection Vol: 1.0 ul

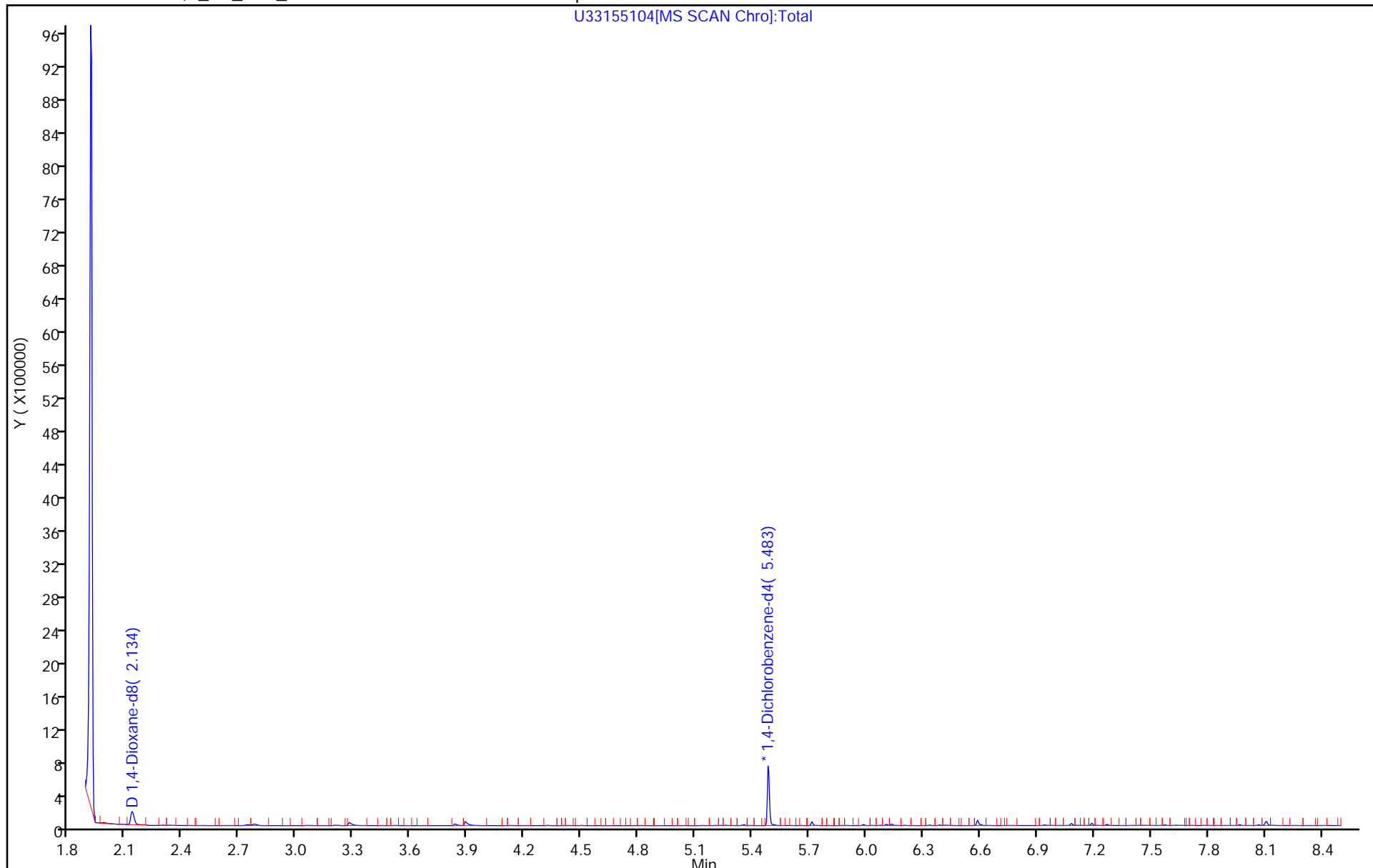
Dil. Factor: 1.0000

ALS Bottle#: 44

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

U33155104[MS SCAN Chro]:Total



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155104.D

Injection Date: 18-Dec-2019 03:59:30

Instrument ID: HP5973U

Lims ID: 480-164221-B-10-A

Lab Sample ID: 480-164221-10

Client ID: CS SW 05 DER

Operator ID: bs

ALS Bottle#: 44

Worklist Smp#: 14

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

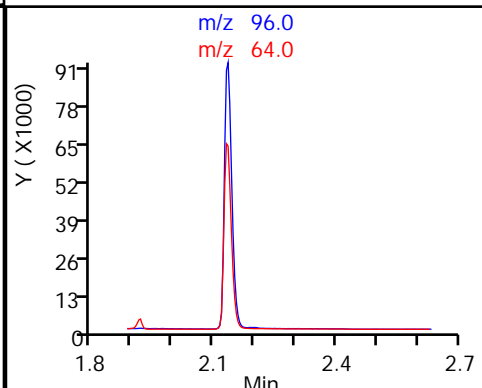
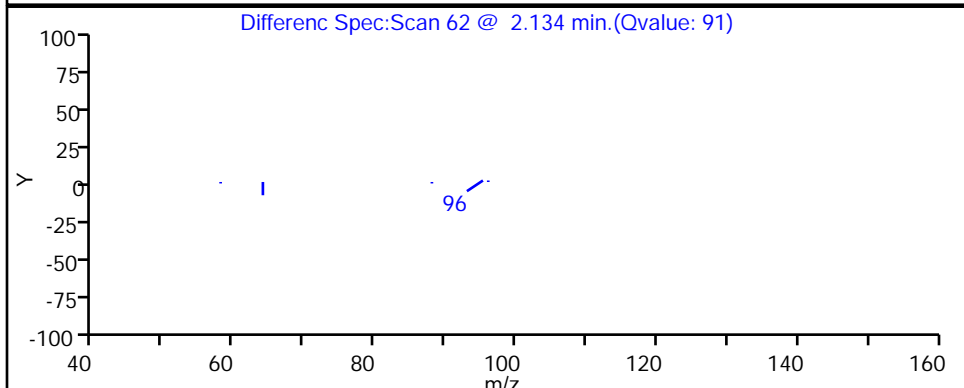
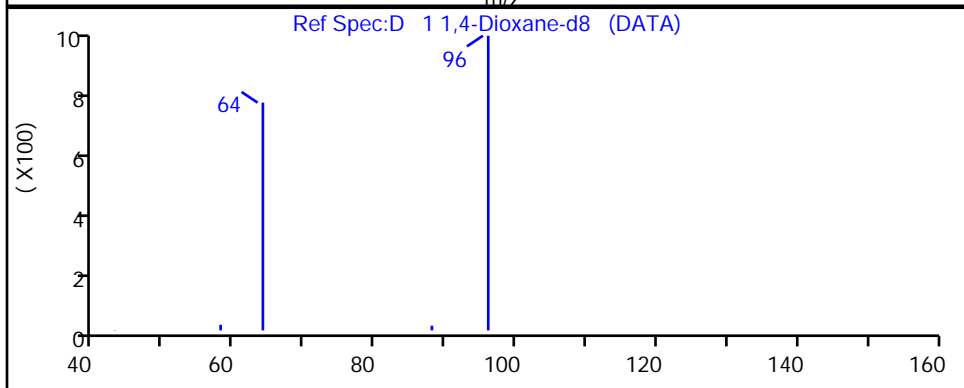
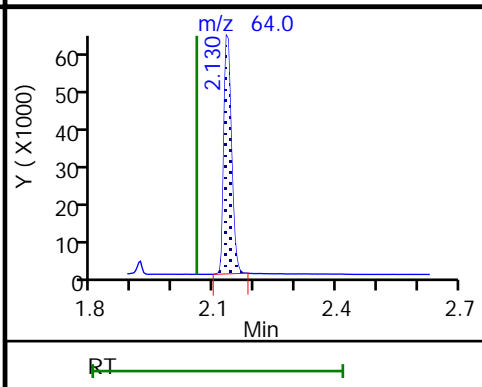
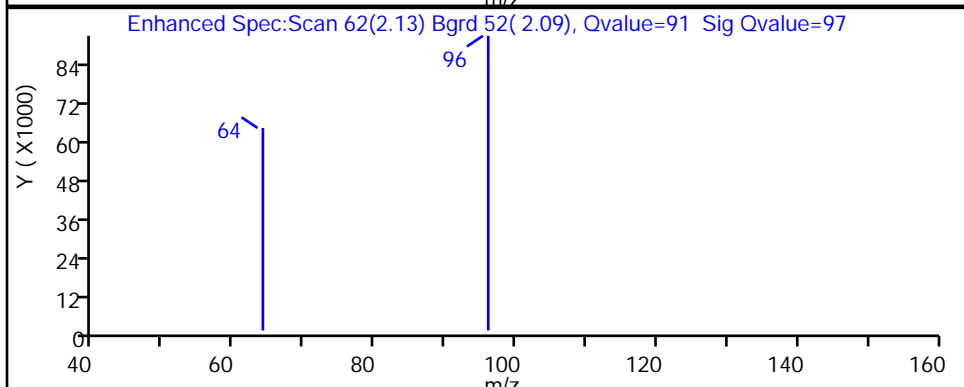
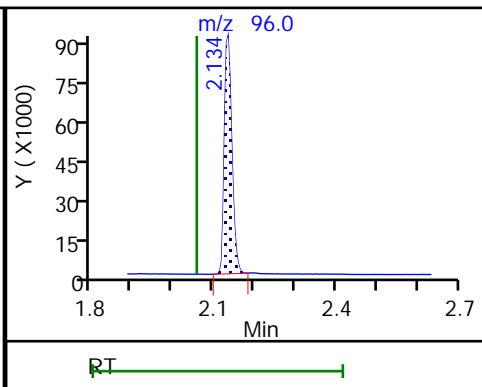
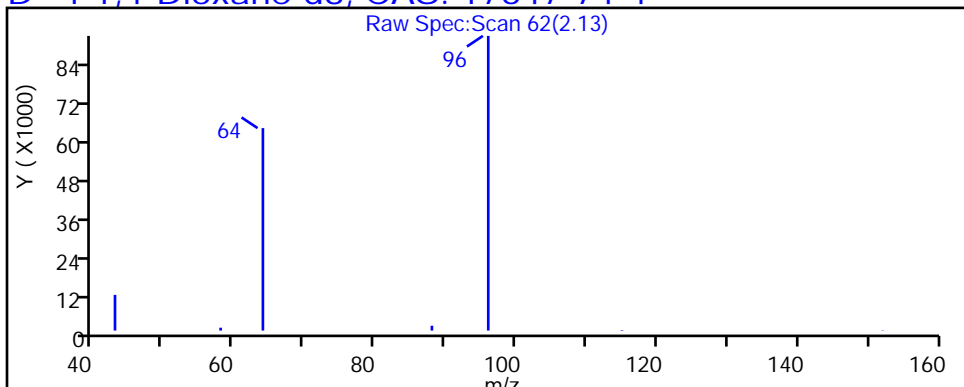
Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

Column:

Detector MS SCAN

D 1 1,4-Dioxane-d8, CAS: 17647-74-4



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155104.D

Injection Date: 18-Dec-2019 03:59:30

Instrument ID: HP5973U

Lims ID: 480-164221-B-10-A

Lab Sample ID: 480-164221-10

Client ID: CS SW 05 DER

Operator ID: bs

ALS Bottle#: 44

Worklist Smp#: 14

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

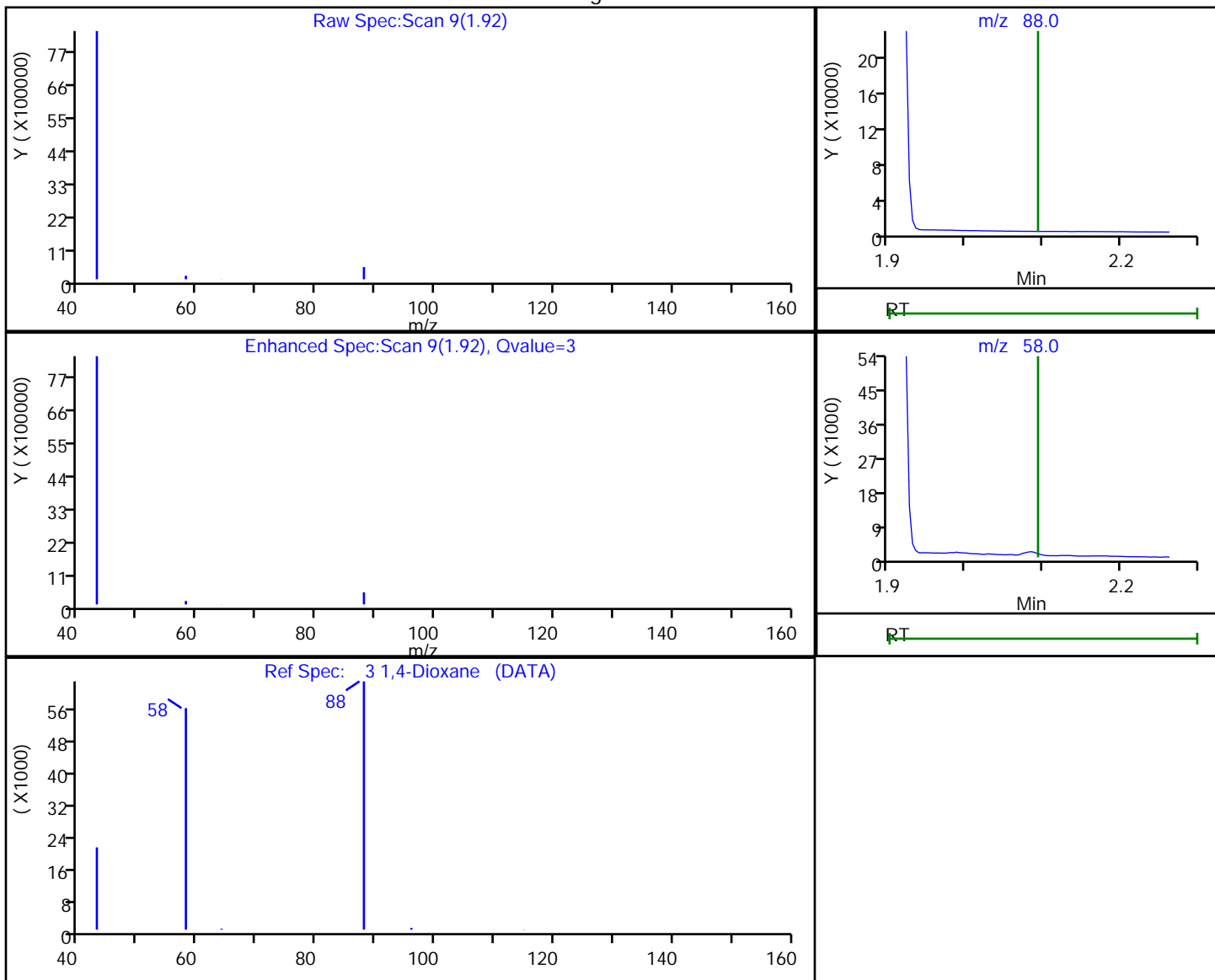
Column:

Detector

MS SCAN

3 1,4-Dioxane, CAS: 123-91-1

Processing Results



RT	Mass	Response	Amount
1.92	88.00	339395	26.453725
1.92	58.00	99719	

Reviewer: schickr, 18-Dec-2019 12:05:43

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I  
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS SW 03 DER Lab Sample ID: 480-164221-11  
 Matrix: Water Lab File ID: U33155105.D  
 Analysis Method: 8270D SIM ID Date Collected: 12/12/2019 10:35  
 Extract. Method: 3510C Date Extracted: 12/16/2019 15:35  
 Sample wt/vol: 1000 (mL) Date Analyzed: 12/18/2019 04:22  
 Con. Extract Vol.: 1 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) Level: (low/med) Low  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 510313 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	ND		0.20	0.10

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	37		15-110

Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155105.D  
 Lims ID: 480-164221-B-11-A  
 Client ID: CS SW 03 DER  
 Sample Type: Client  
 Inject. Date: 18-Dec-2019 04:22:30 ALS Bottle#: 45 Worklist Smp#: 15  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 45  
 Operator ID: bs Instrument ID: HP5973U  
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 18-Dec-2019 12:07:28 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: RT Order ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D  
 Column 1 : Det: MS SCAN  
 Process Host: CTX1002

First Level Reviewer: schickr Date: 18-Dec-2019 12:05:48

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ul	%Rec	Flags
D 1 1,4-Dioxane-d8	96	2.142	2.056	0.086	91	139431	3.72	37.2	
3 1,4-Dioxane	88		2.093				ND		U
* 2 1,4-Dichlorobenzene-d4	152	5.487	5.479	0.008	98	306323	4.00		

**QC Flag Legend**

Review Flags

U - Marked Undetected

**Reagents:**

MB\_LLIS\_WRK\_00184 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155105.D

Injection Date: 18-Dec-2019 04:22:30

Instrument ID: HP5973U

Operator ID: bs

Lims ID: 480-164221-B-11-A

Lab Sample ID: 480-164221-11

Worklist Smp#: 15

Client ID: CS SW 03 DER

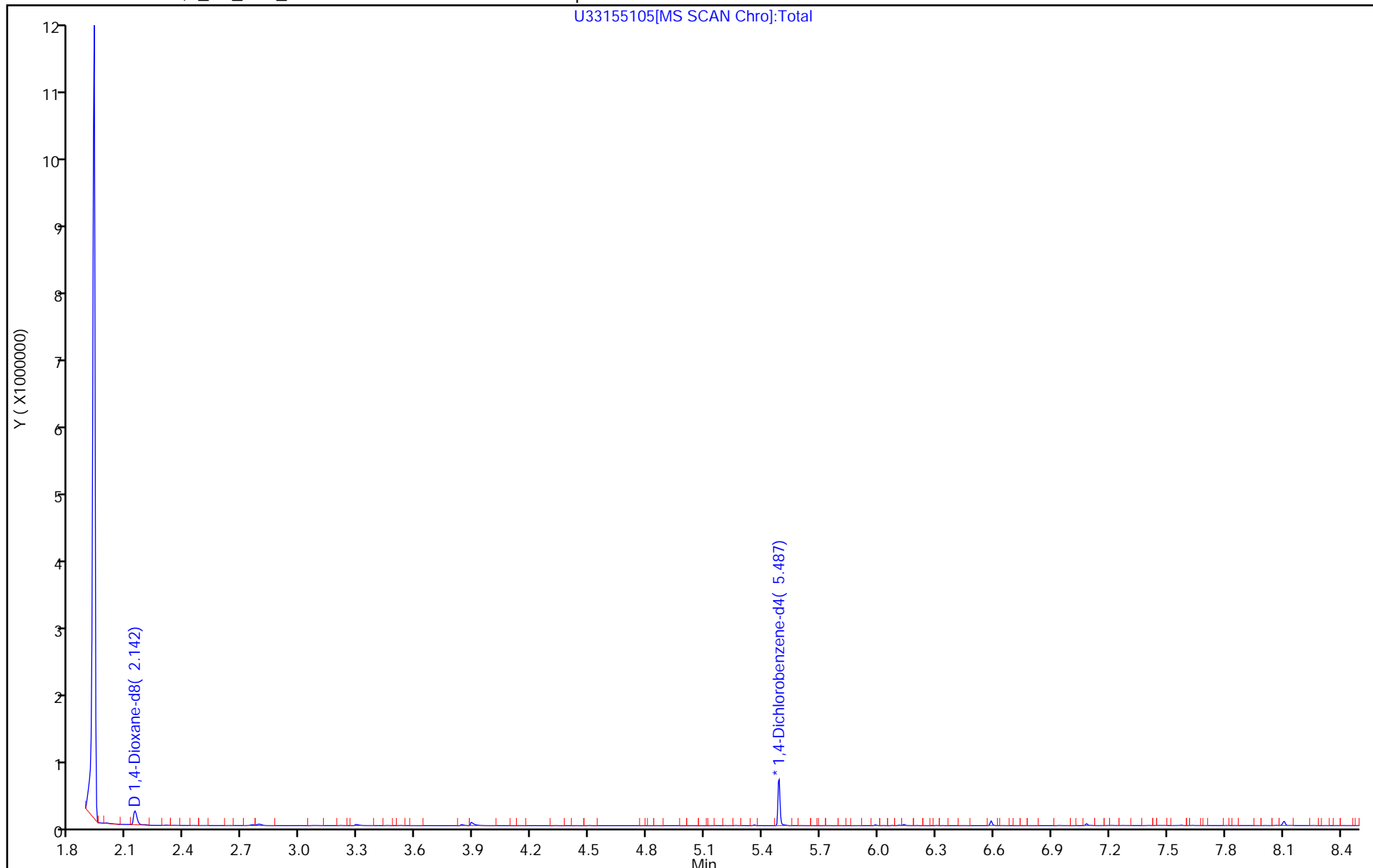
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 45

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155105.D

Injection Date: 18-Dec-2019 04:22:30

Instrument ID: HP5973U

Lims ID: 480-164221-B-11-A

Lab Sample ID: 480-164221-11

Client ID: CS SW 03 DER

Operator ID: bs

ALS Bottle#: 45

Worklist Smp#: 15

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

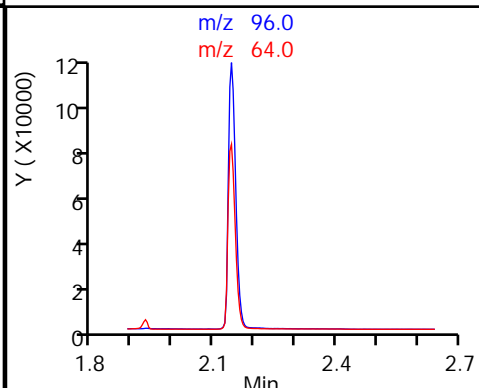
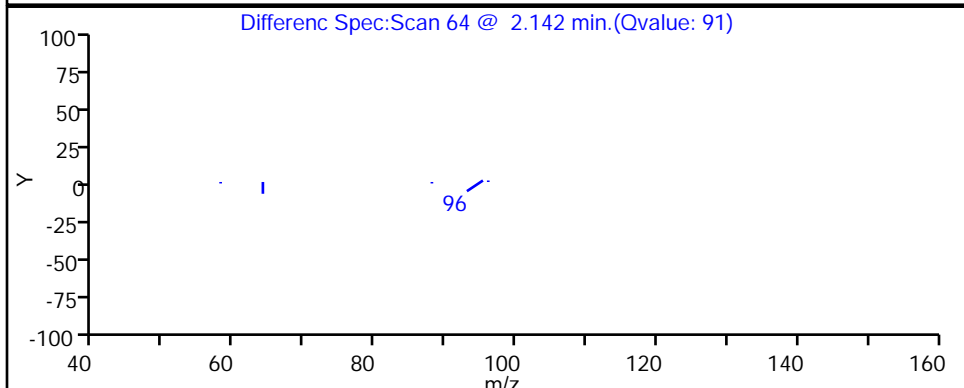
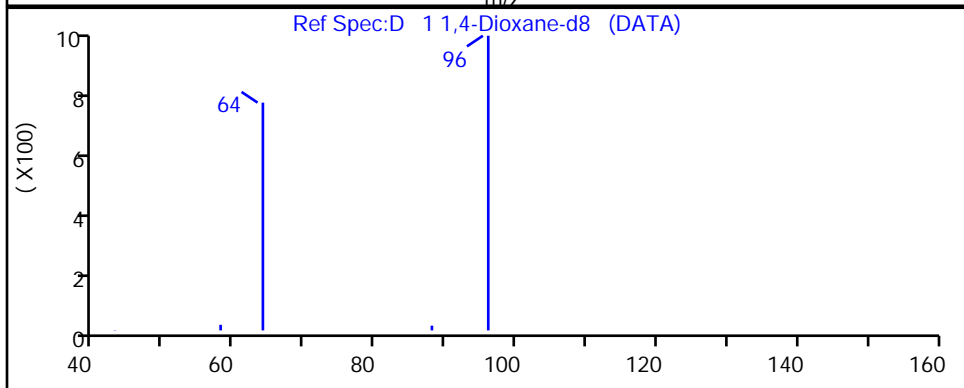
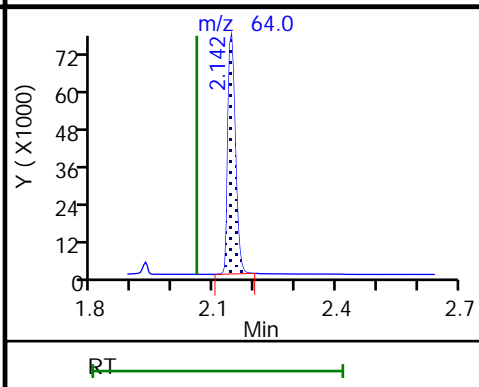
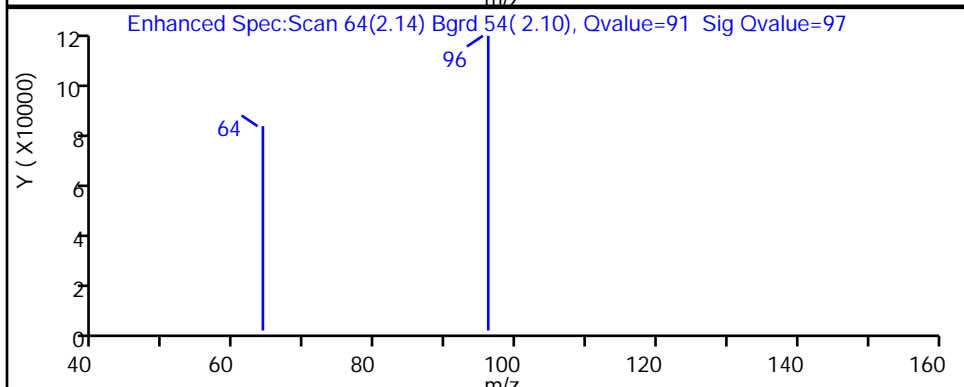
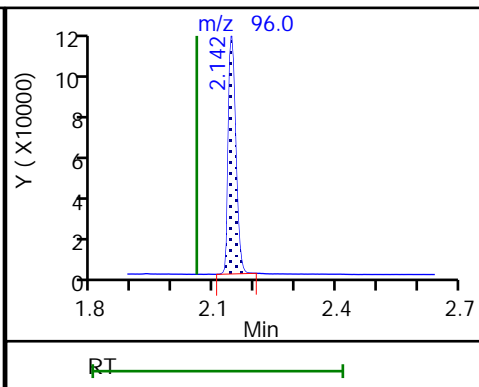
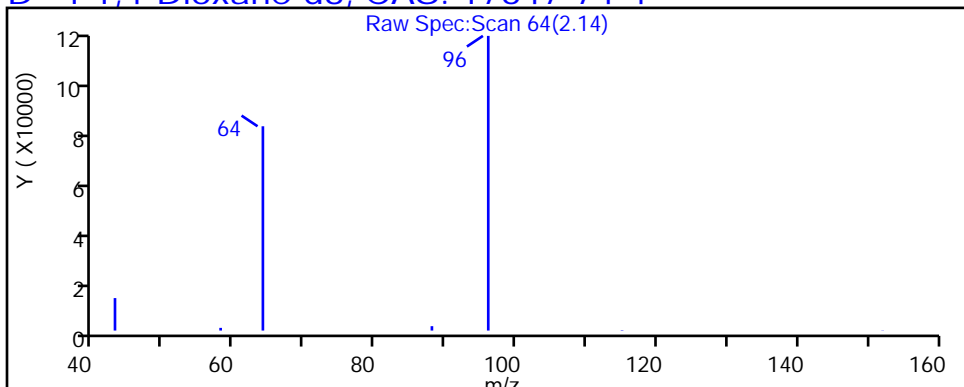
Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

Column:

Detector: MS SCAN

D 1 1,4-Dioxane-d8, CAS: 17647-74-4





Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155105.D

Injection Date: 18-Dec-2019 04:22:30

Instrument ID: HP5973U

Lims ID: 480-164221-B-11-A

Lab Sample ID: 480-164221-11

Client ID: CS SW 03 DER

Operator ID: bs

ALS Bottle#: 45

Worklist Smp#: 15

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

Method: 1,4\_Dx\_SIM\_HP5973U

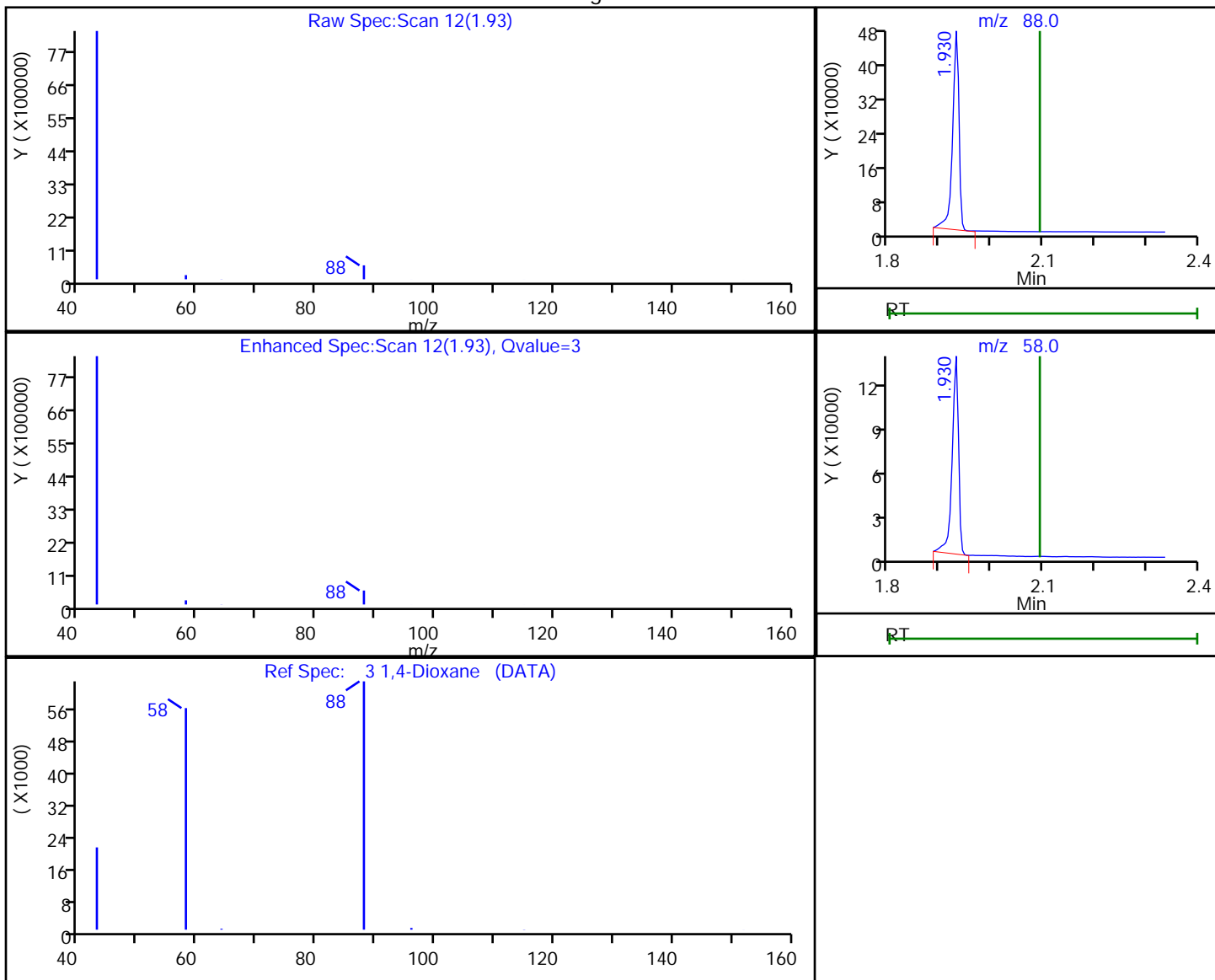
Limit Group: MB - 8270D SIM ID ICAL

Column:

Detector: MS SCAN

3 1,4-Dioxane, CAS: 123-91-1

Processing Results



RT	Mass	Response	Amount
1.93	88.00	402232	26.215835
1.93	58.00	118313	

Reviewer: schickr, 18-Dec-2019 12:05:47

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I  
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS SW 02 DER Lab Sample ID: 480-164221-12  
 Matrix: Water Lab File ID: U33155106.D  
 Analysis Method: 8270D SIM ID Date Collected: 12/12/2019 09:50  
 Extract. Method: 3510C Date Extracted: 12/16/2019 15:35  
 Sample wt/vol: 1000 (mL) Date Analyzed: 12/18/2019 04:45  
 Con. Extract Vol.: 1 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) Level: (low/med) Low  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 510313 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	ND		0.20	0.10

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	29		15-110

Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155106.D  
 Lims ID: 480-164221-A-12-A  
 Client ID: CS SW 02 DER  
 Sample Type: Client  
 Inject. Date: 18-Dec-2019 04:45:30 ALS Bottle#: 46 Worklist Smp#: 16  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 46  
 Operator ID: bs Instrument ID: HP5973U  
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 18-Dec-2019 12:07:28 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: RT Order ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D  
 Column 1 : Det: MS SCAN  
 Process Host: CTX1002

First Level Reviewer: schickr Date: 18-Dec-2019 12:05:52

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ul	%Rec	Flags
D 1 1,4-Dioxane-d8	96	2.130	2.056	0.074	95	123747	2.88	28.8	
3 1,4-Dioxane	88		2.093				ND		U
* 2 1,4-Dichlorobenzene-d4	152	5.483	5.479	0.004	100	351193	4.00		

**QC Flag Legend**

Review Flags

U - Marked Undetected

**Reagents:**

MB\_LLIS\_WRK\_00184 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155106.D

Injection Date: 18-Dec-2019 04:45:30

Instrument ID: HP5973U

Operator ID: bs

Lims ID: 480-164221-A-12-A

Lab Sample ID: 480-164221-12

Worklist Smp#: 16

Client ID: CS SW 02 DER

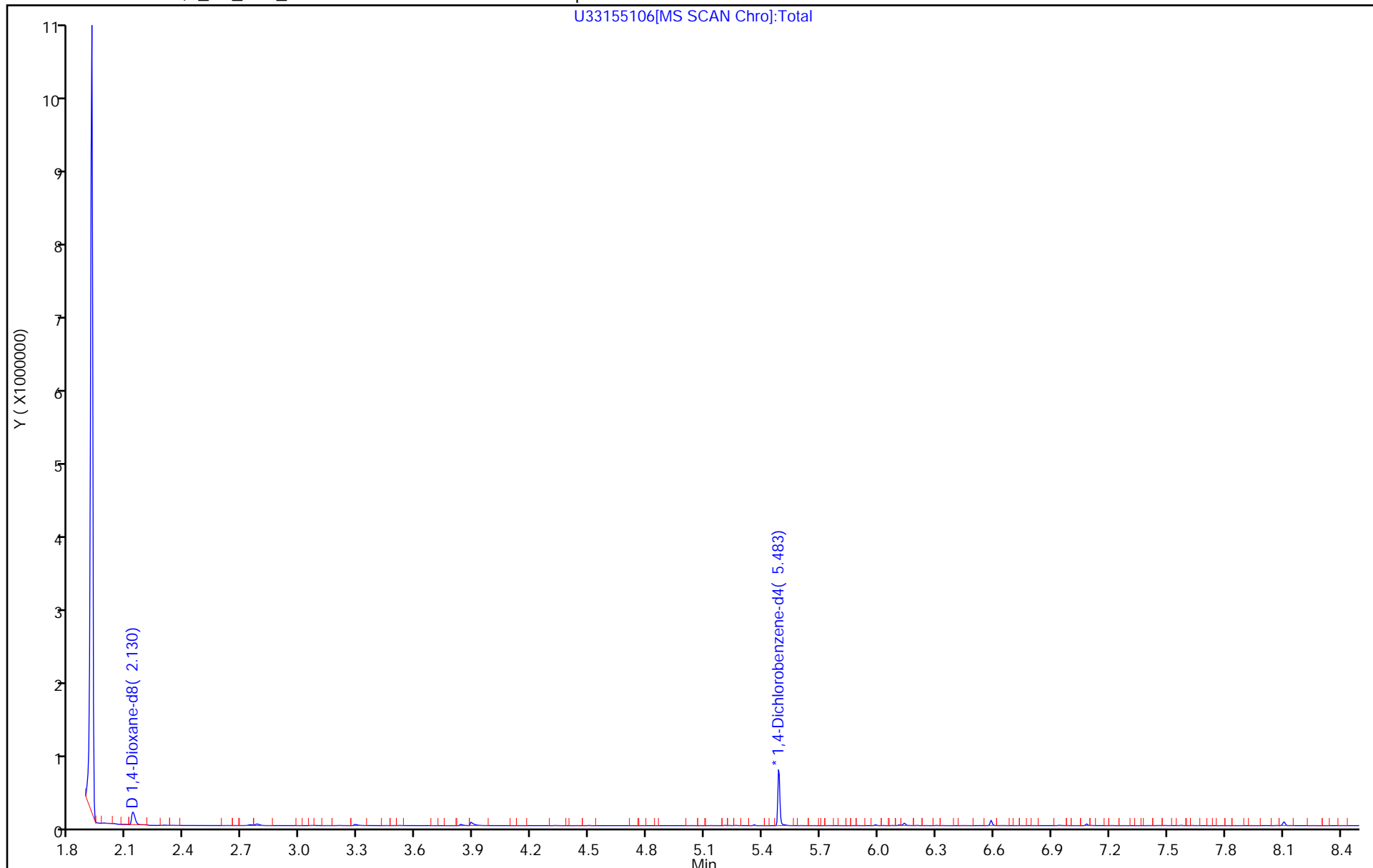
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 46

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155106.D

Injection Date: 18-Dec-2019 04:45:30

Instrument ID: HP5973U

Lims ID: 480-164221-A-12-A

Lab Sample ID: 480-164221-12

Client ID: CS SW 02 DER

Operator ID: bs

ALS Bottle#: 46

Worklist Smp#: 16

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

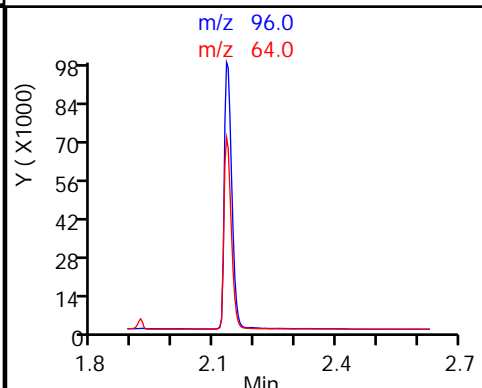
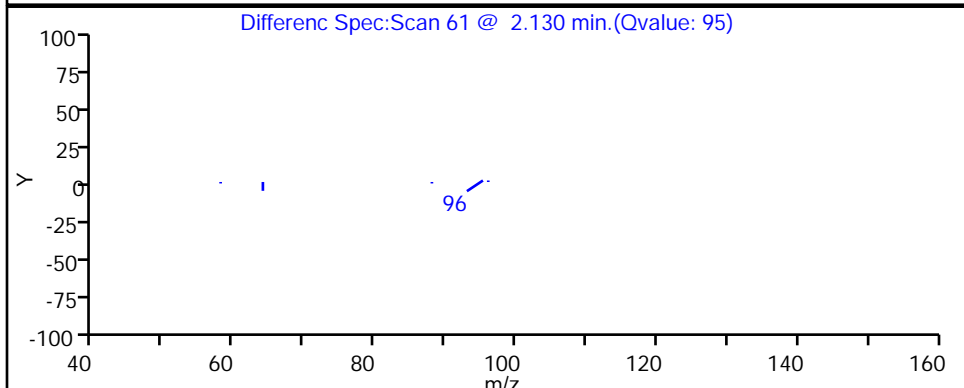
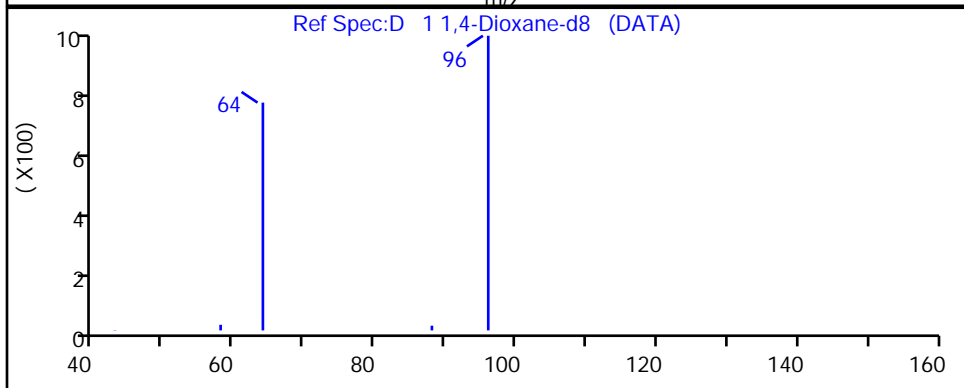
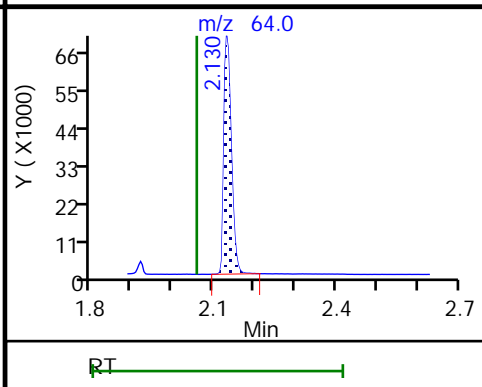
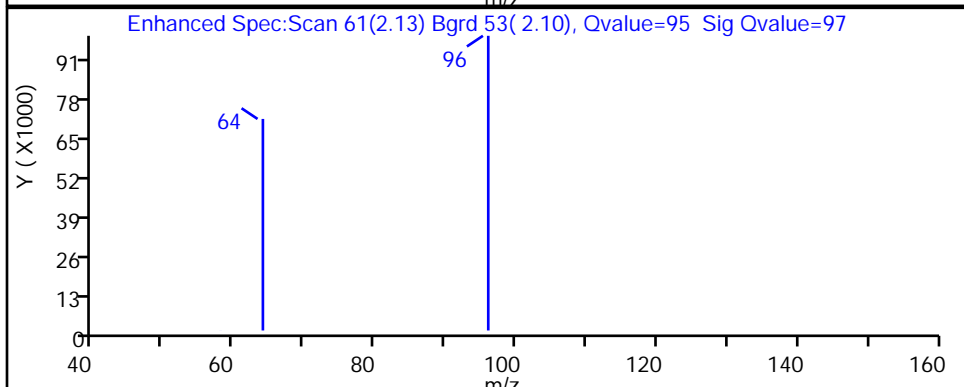
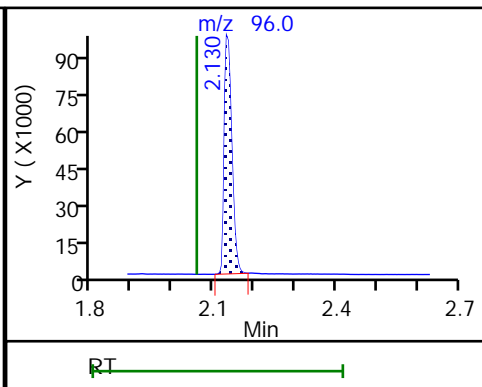
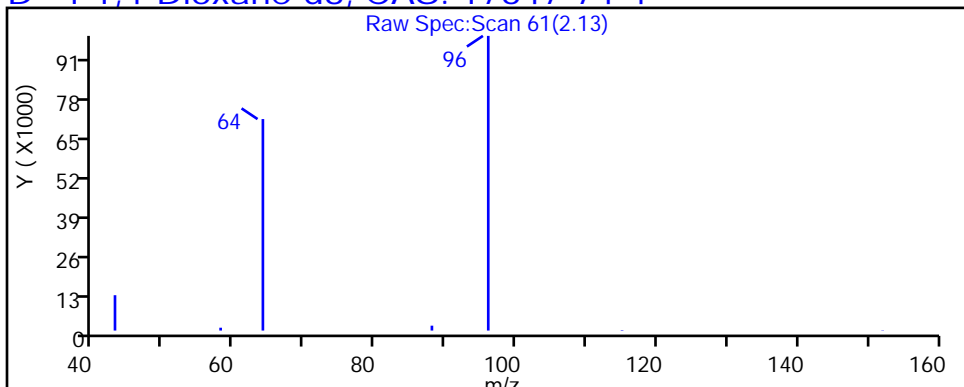
Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

Column:

Detector MS SCAN

D 1 1,4-Dioxane-d8, CAS: 17647-74-4



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155106.D

Injection Date: 18-Dec-2019 04:45:30

Instrument ID: HP5973U

Lims ID: 480-164221-A-12-A

Lab Sample ID: 480-164221-12

Client ID: CS SW 02 DER

Operator ID: bs

ALS Bottle#: 46

Worklist Smp#: 16

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

Method: 1,4\_Dx\_SIM\_HP5973U

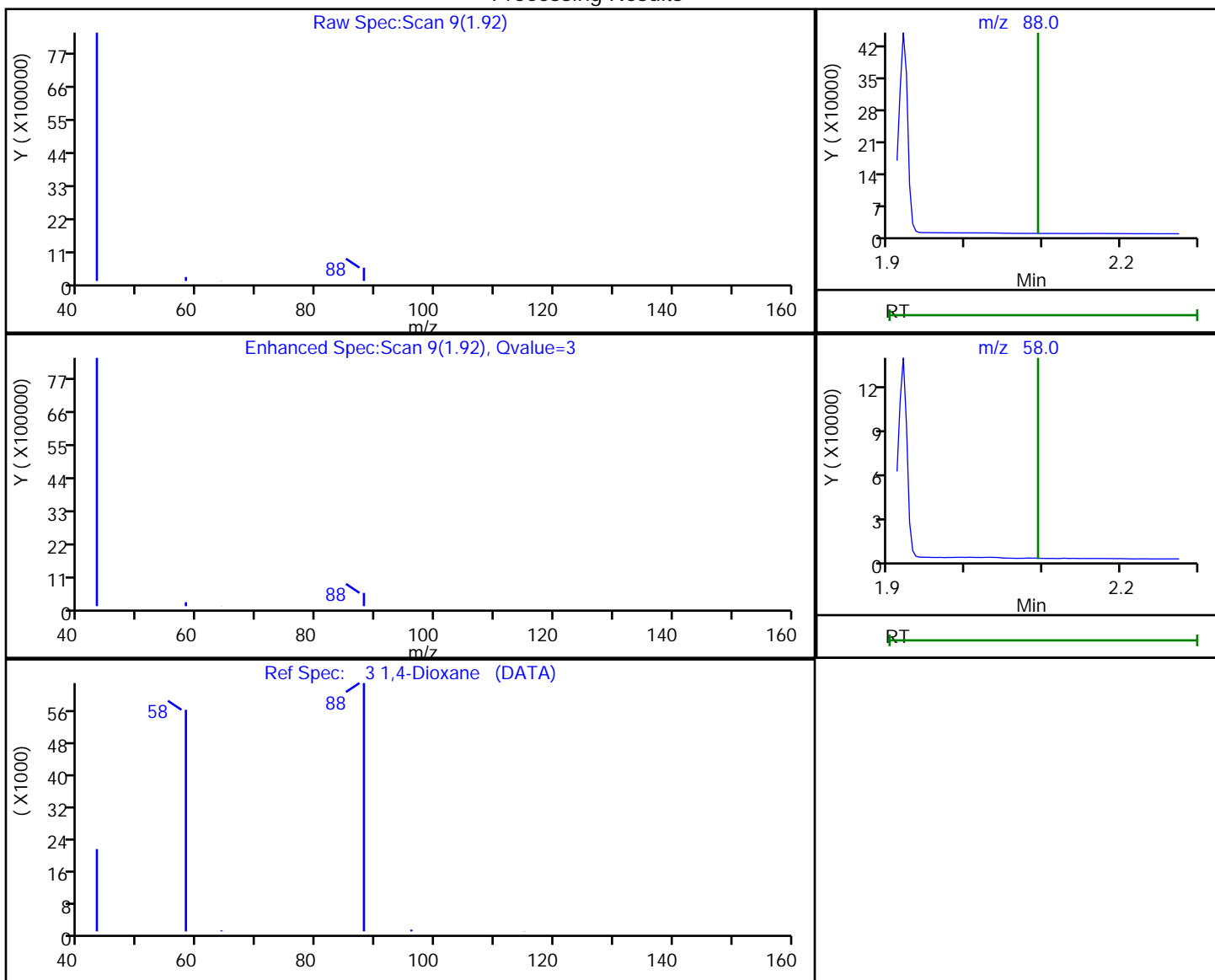
Limit Group: MB - 8270D SIM ID ICAL

Column:

Detector: MS SCAN

3 1,4-Dioxane, CAS: 123-91-1

Processing Results



RT	Mass	Response	Amount
1.92	88.00	363425	26.688646
1.92	58.00	106801	

Reviewer: schickr, 18-Dec-2019 12:05:51

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I  
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AOI 1 GW1 DER Lab Sample ID: 480-164221-13  
 Matrix: Water Lab File ID: U33155107.D  
 Analysis Method: 8270D SIM ID Date Collected: 12/11/2019 11:35  
 Extract. Method: 3510C Date Extracted: 12/16/2019 15:35  
 Sample wt/vol: 1000 (mL) Date Analyzed: 12/18/2019 05:09  
 Con. Extract Vol.: 1 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) Level: (low/med) Low  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 510313 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.18	J	0.20	0.10

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	32		15-110

Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155107.D  
 Lims ID: 480-164221-A-13-A  
 Client ID: AOI 1 GW1 DER  
 Sample Type: Client  
 Inject. Date: 18-Dec-2019 05:09:30 ALS Bottle#: 47 Worklist Smp#: 17  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 47  
 Operator ID: bs Instrument ID: HP5973U  
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 18-Dec-2019 12:07:28 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: RT Order ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D  
 Column 1 : Det: MS SCAN  
 Process Host: CTX1002

First Level Reviewer: schickr Date: 18-Dec-2019 12:06:03

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ul	%Rec	Flags
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D 1 1,4-Dioxane-d8	96	2.134	2.056	0.078	92	125689	3.24	32.4	
3 1,4-Dioxane	88	2.166	2.093	0.073	80	2421	0.1750		
* 2 1,4-Dichlorobenzene-d4	152	5.487	5.479	0.008	99	316418	4.00		

Reagents:

MB\_LLIS\_WRK\_00184 Amount Added: 20.00 Units: uL Run Reagent



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155107.D

Injection Date: 18-Dec-2019 05:09:30

Instrument ID: HP5973U

Operator ID: bs

Lims ID: 480-164221-A-13-A

Lab Sample ID: 480-164221-13

Worklist Smp#: 17

Client ID: AOI 1 GW1 DER

Injection Vol: 1.0 ul

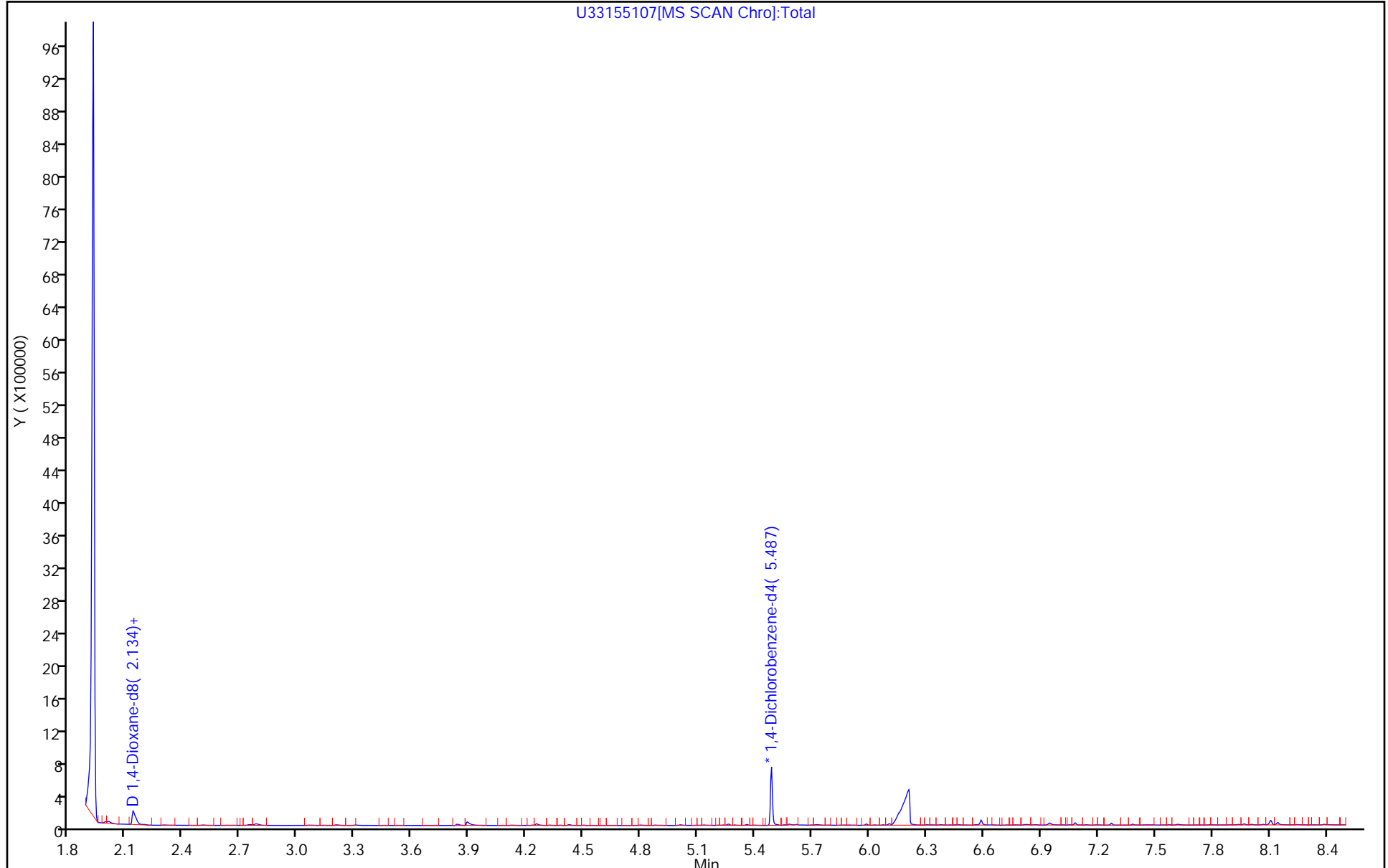
Dil. Factor: 1.0000

ALS Bottle#: 47

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

U33155107[MS SCAN Chro]:Total



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155107.D

Injection Date: 18-Dec-2019 05:09:30

Instrument ID: HP5973U

Lims ID: 480-164221-A-13-A

Lab Sample ID: 480-164221-13

Client ID: AOI 1 GW1 DER

Operator ID: bs

ALS Bottle#: 47

Worklist Smp#: 17

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

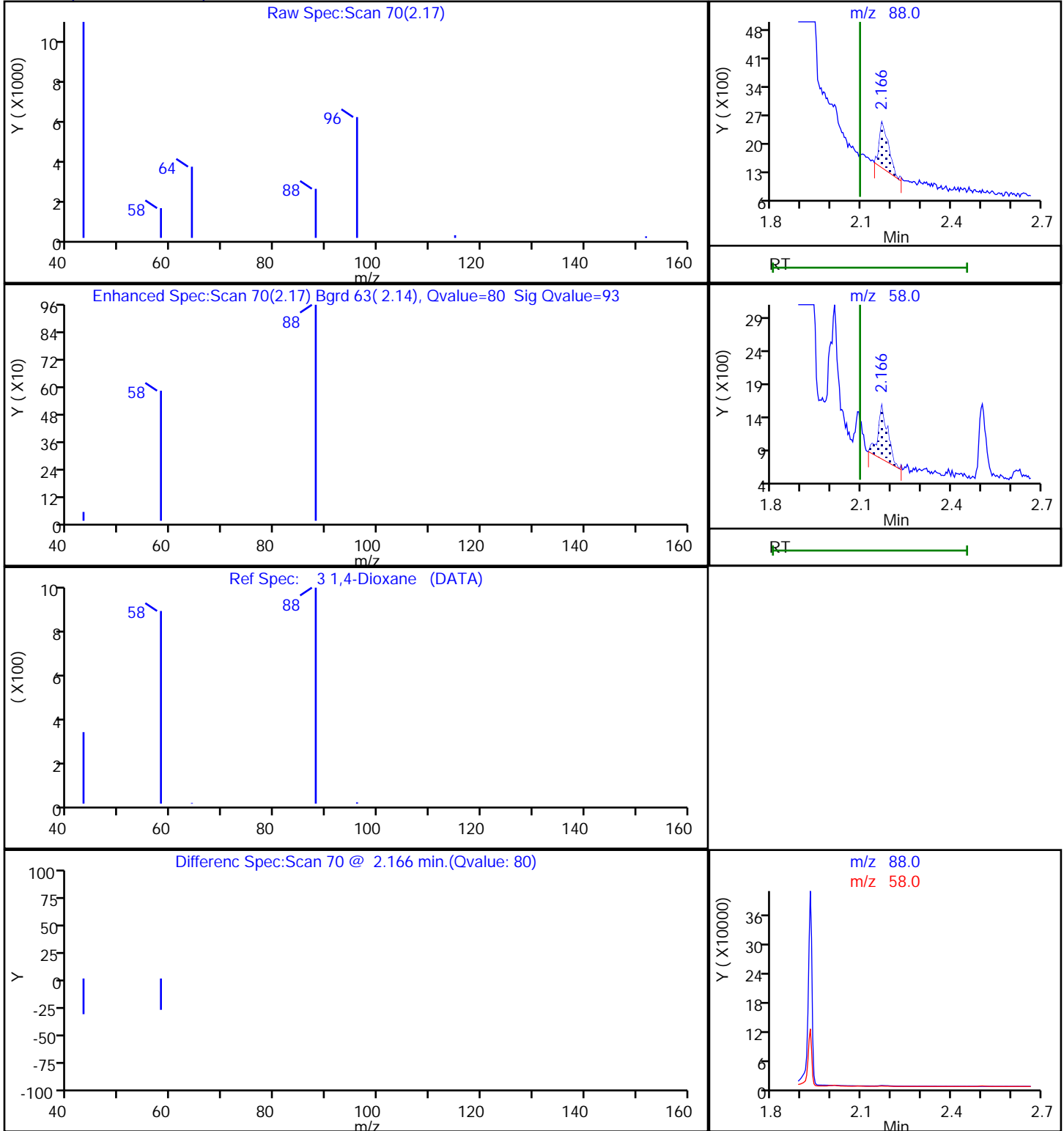
Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

Column:

Detector: MS SCAN

### 3 1,4-Dioxane, CAS: 123-91-1



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155107.D

Injection Date: 18-Dec-2019 05:09:30

Instrument ID: HP5973U

Lims ID: 480-164221-A-13-A

Lab Sample ID: 480-164221-13

Client ID: AOI 1 GW1 DER

Operator ID: bs

ALS Bottle#: 47

Worklist Smp#: 17

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

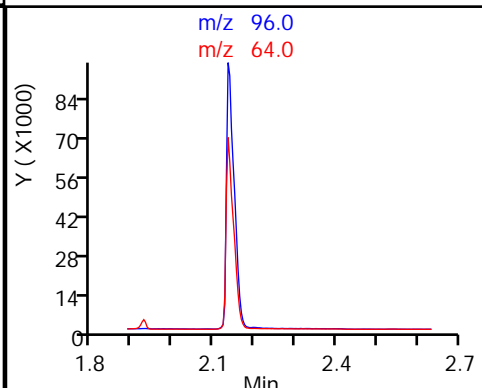
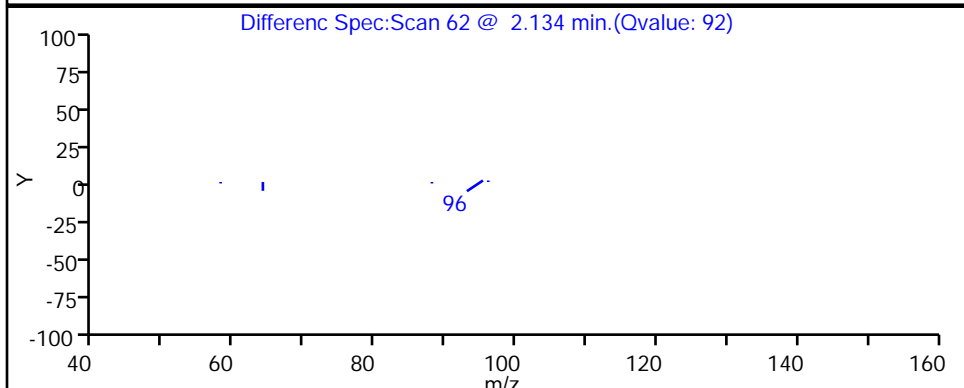
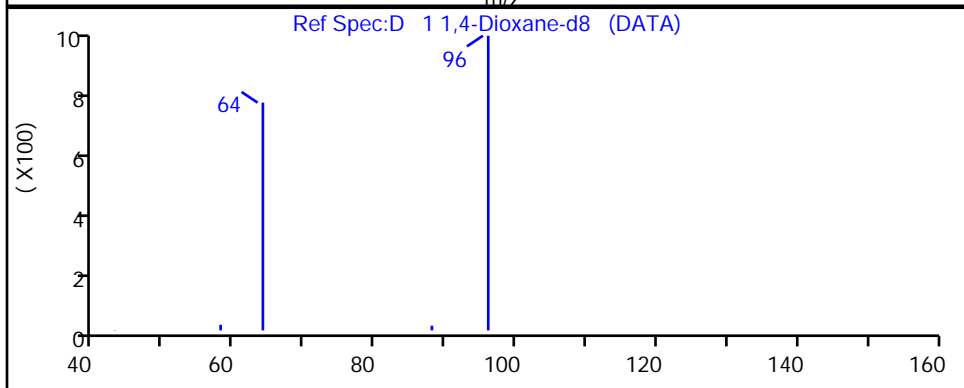
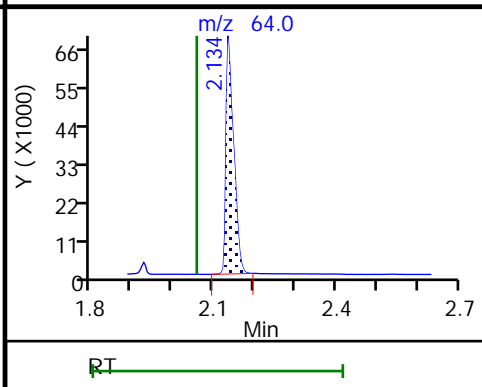
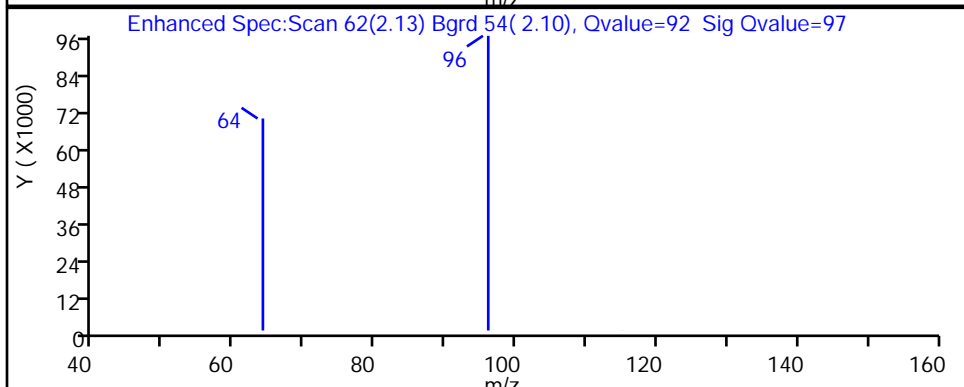
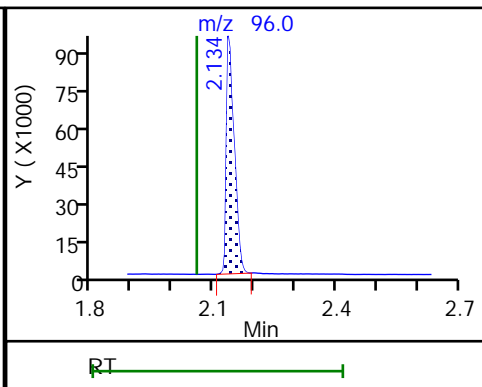
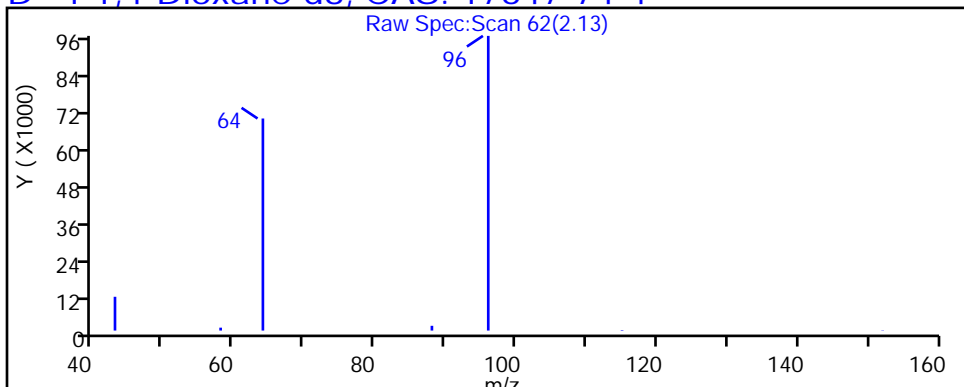
Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

Column:

Detector MS SCAN

D 1 1,4-Dioxane-d8, CAS: 17647-74-4



FORM I  
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AOI 3 GW1 DER Lab Sample ID: 480-164221-14  
 Matrix: Water Lab File ID: U33155108.D  
 Analysis Method: 8270D SIM ID Date Collected: 12/10/2019 15:05  
 Extract. Method: 3510C Date Extracted: 12/16/2019 15:35  
 Sample wt/vol: 1000 (mL) Date Analyzed: 12/18/2019 05:32  
 Con. Extract Vol.: 1 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) Level: (low/med) Low  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 510313 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	ND		0.20	0.10

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	30		15-110

Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155108.D  
 Lims ID: 480-164221-A-14-A  
 Client ID: AOI 3 GW1 DER  
 Sample Type: Client  
 Inject. Date: 18-Dec-2019 05:32:30 ALS Bottle#: 48 Worklist Smp#: 18  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 48  
 Operator ID: bs Instrument ID: HP5973U  
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 18-Dec-2019 12:07:28 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: RT Order ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D  
 Column 1 : Det: MS SCAN  
 Process Host: CTX1002

First Level Reviewer: schickr Date: 18-Dec-2019 12:06:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ul	%Rec	Flags
D 1 1,4-Dioxane-d8	96	2.130	2.056	0.074	90	117664	2.96	29.6	
3 1,4-Dioxane	88		2.093				ND		U
* 2 1,4-Dichlorobenzene-d4	152	5.487	5.479	0.008	98	325049	4.00		

**QC Flag Legend**

Review Flags  
U - Marked Undetected

**Reagents:**

MB\_LLIS\_WRK\_00184 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155108.D

Injection Date: 18-Dec-2019 05:32:30

Instrument ID: HP5973U

Operator ID: bs

Lims ID: 480-164221-A-14-A

Lab Sample ID: 480-164221-14

Worklist Smp#: 18

Client ID: AOI 3 GW1 DER

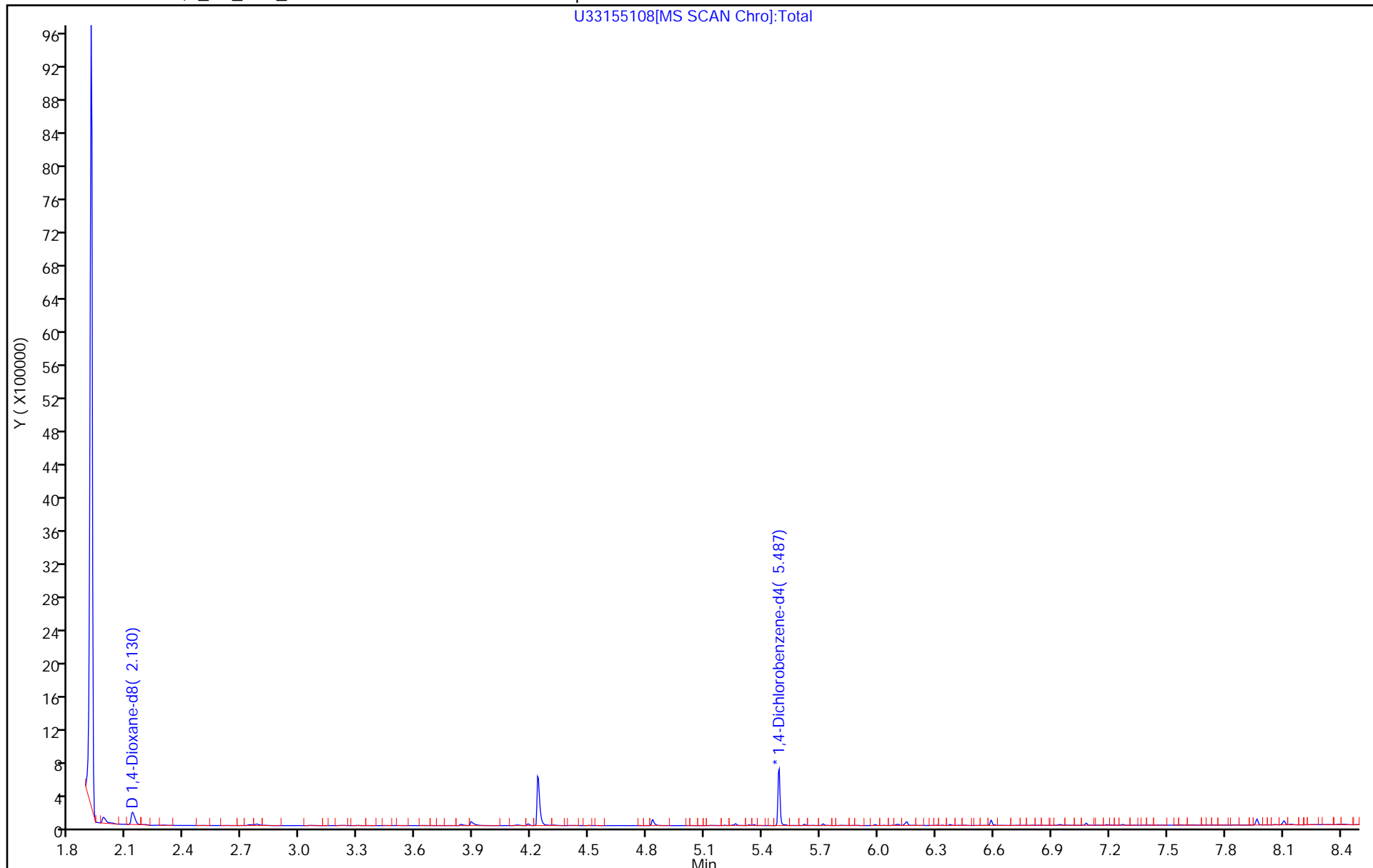
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 48

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155108.D

Injection Date: 18-Dec-2019 05:32:30

Instrument ID: HP5973U

Lims ID: 480-164221-A-14-A

Lab Sample ID: 480-164221-14

Client ID: AOI 3 GW1 DER

Operator ID: bs

ALS Bottle#: 48

Worklist Smp#: 18

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

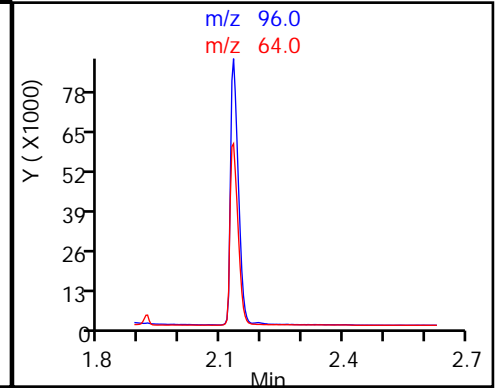
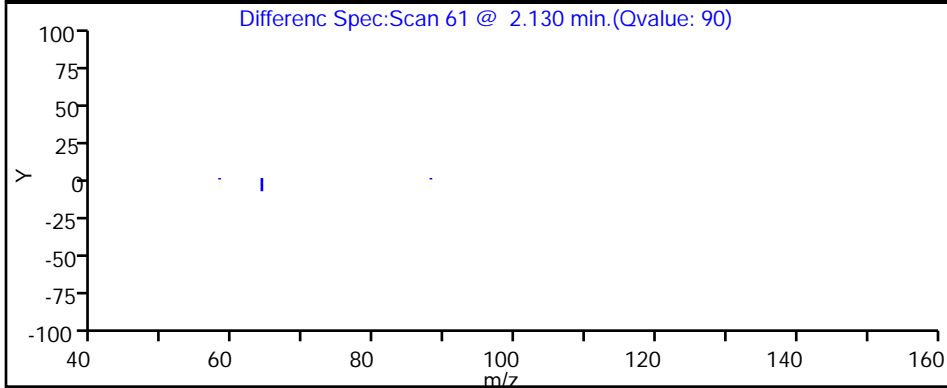
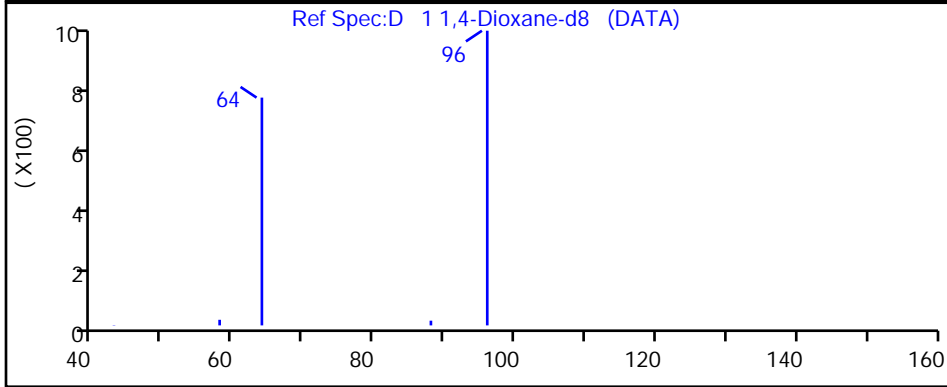
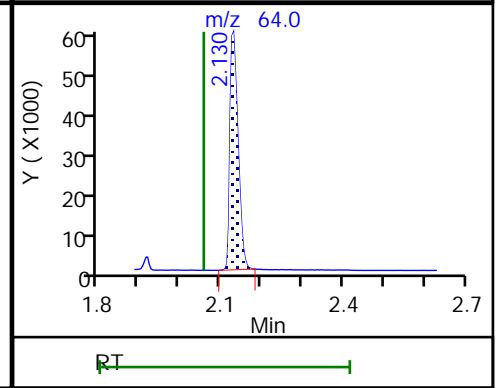
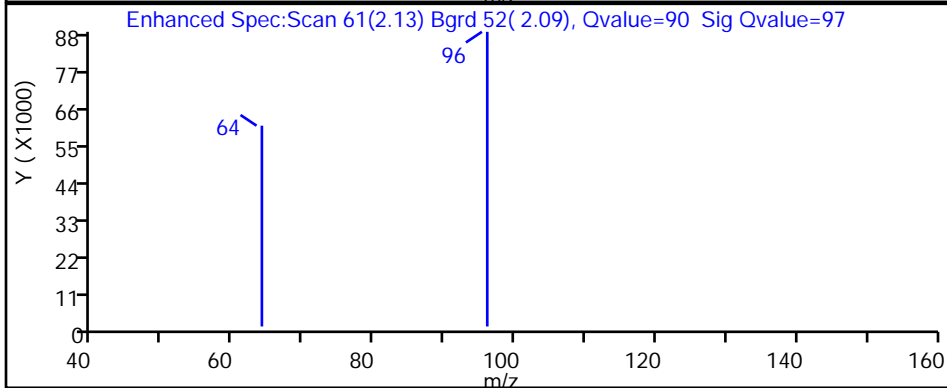
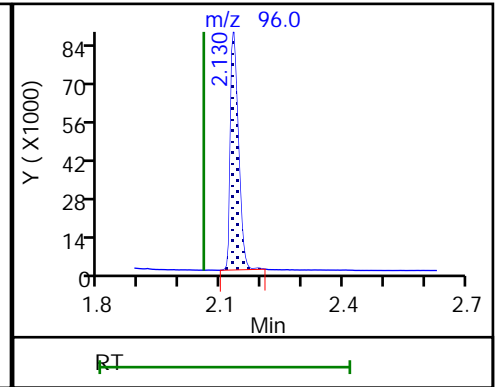
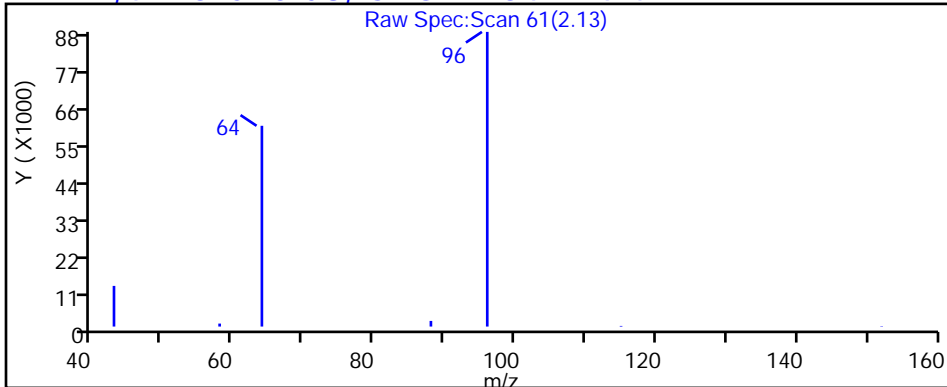
Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

Column:

Detector MS SCAN

D 1 1,4-Dioxane-d8, CAS: 17647-74-4



Euofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155108.D

Injection Date: 18-Dec-2019 05:32:30

Instrument ID: HP5973U

Lims ID: 480-164221-A-14-A

Lab Sample ID: 480-164221-14

Client ID: AOI 3 GW1 DER

Operator ID: bs

ALS Bottle#: 48 Worklist Smp#: 18

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

Method: 1,4\_Dx\_SIM\_HP5973U

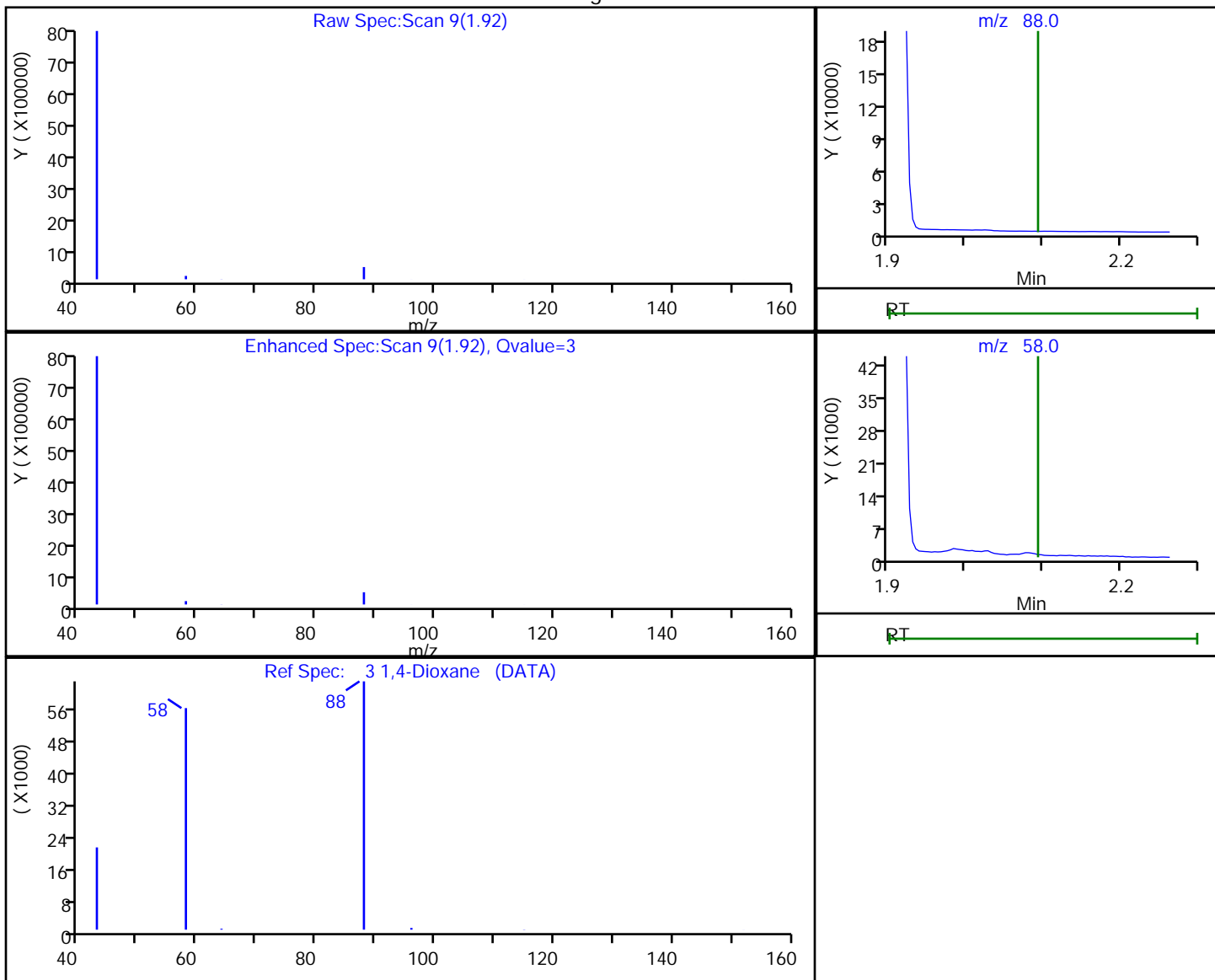
Limit Group: MB - 8270D SIM ID ICAL

Column:

Detector: MS SCAN

3 1,4-Dioxane, CAS: 123-91-1

Processing Results



RT	Mass	Response	Amount
1.92	88.00	327681	25.307781
1.91	58.00	96692	

Reviewer: schickr, 18-Dec-2019 12:06:24

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID



FORM I  
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AOI 1 GW3 DER Lab Sample ID: 480-164221-15  
 Matrix: Water Lab File ID: U33155109.D  
 Analysis Method: 8270D SIM ID Date Collected: 12/11/2019 09:45  
 Extract. Method: 3510C Date Extracted: 12/16/2019 15:35  
 Sample wt/vol: 1000 (mL) Date Analyzed: 12/18/2019 05:55  
 Con. Extract Vol.: 1 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) Level: (low/med) Low  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 510313 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	ND		0.20	0.10

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	28		15-110

Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155109.D  
 Lims ID: 480-164221-B-15-A  
 Client ID: AOI 1 GW3 DER  
 Sample Type: Client  
 Inject. Date: 18-Dec-2019 05:55:30 ALS Bottle#: 49 Worklist Smp#: 19  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 49  
 Operator ID: bs Instrument ID: HP5973U  
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 18-Dec-2019 12:07:28 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: RT Order ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D  
 Column 1 : Det: MS SCAN  
 Process Host: CTX1002

First Level Reviewer: schickr Date: 18-Dec-2019 12:06:36

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng/ul	%Rec	Flags
D 1 1,4-Dioxane-d8	96	2.142	2.056	0.086	90	120880	2.82	28.2	
3 1,4-Dioxane	88		2.093				ND		U
* 2 1,4-Dichlorobenzene-d4	152	5.487	5.479	0.008	99	349798	4.00		

**QC Flag Legend**

Review Flags  
U - Marked Undetected

**Reagents:**

MB\_LLIS\_WRK\_00184 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155109.D

Injection Date: 18-Dec-2019 05:55:30

Instrument ID: HP5973U

Operator ID: bs

Lims ID: 480-164221-B-15-A

Lab Sample ID: 480-164221-15

Worklist Smp#: 19

Client ID: AOI 1 GW3 DER

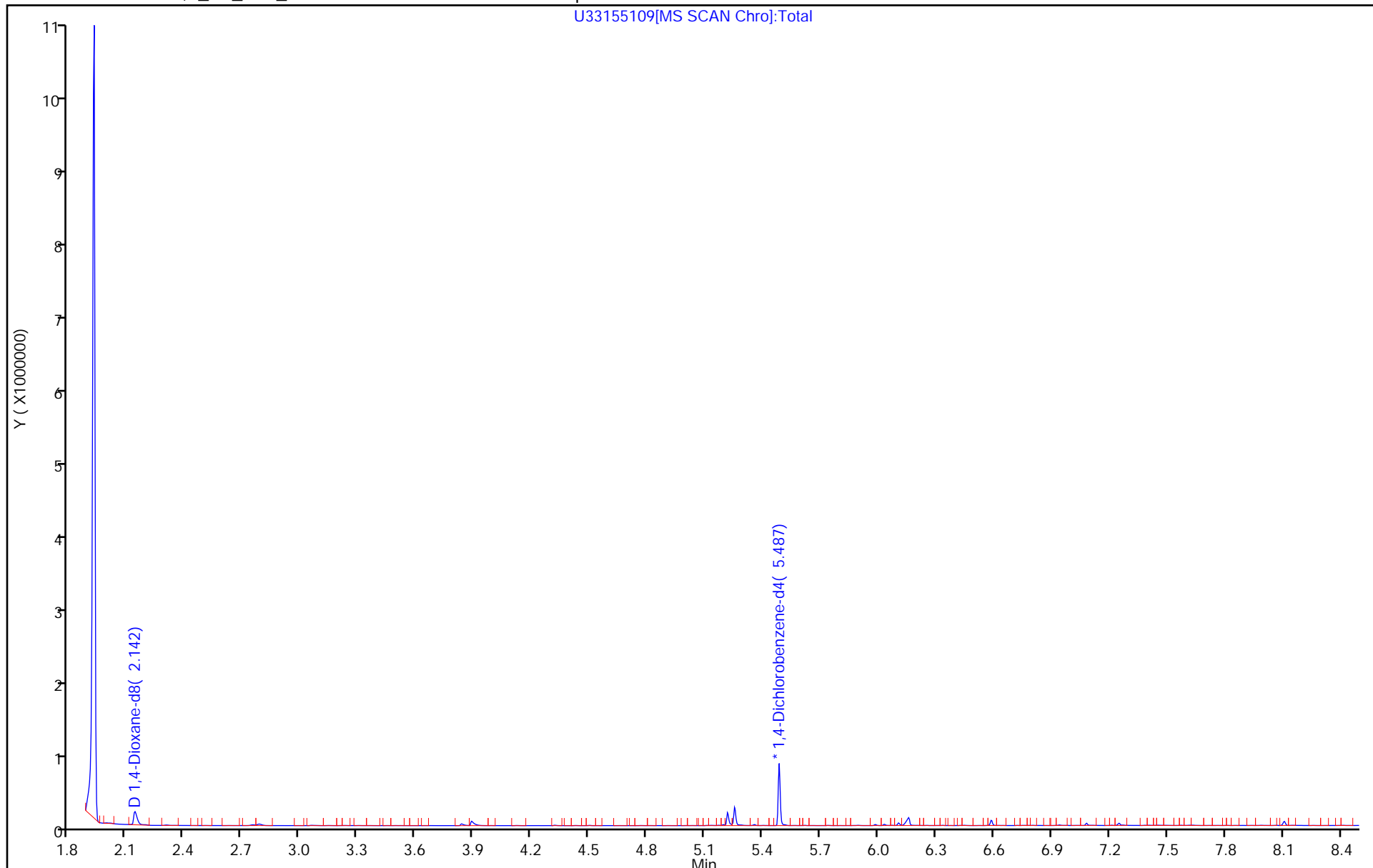
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 49

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155109.D

Injection Date: 18-Dec-2019 05:55:30

Instrument ID: HP5973U

Lims ID: 480-164221-B-15-A

Lab Sample ID: 480-164221-15

Client ID: AOI 1 GW3 DER

Operator ID: bs

ALS Bottle#: 49

Worklist Smp#: 19

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

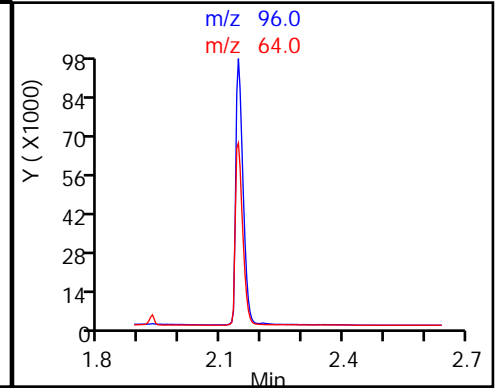
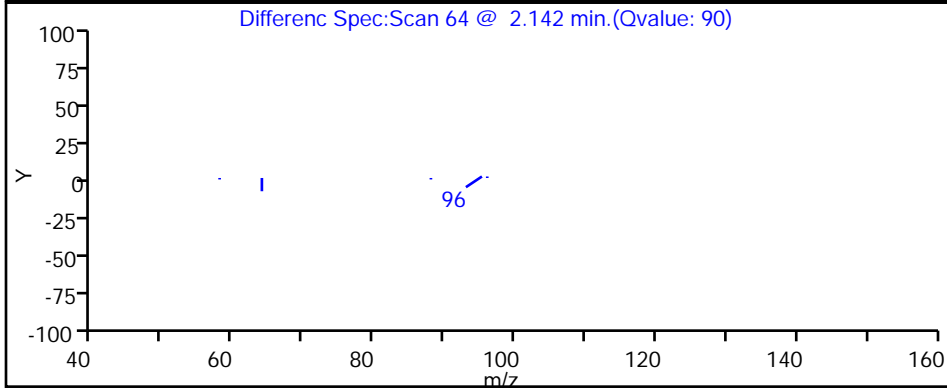
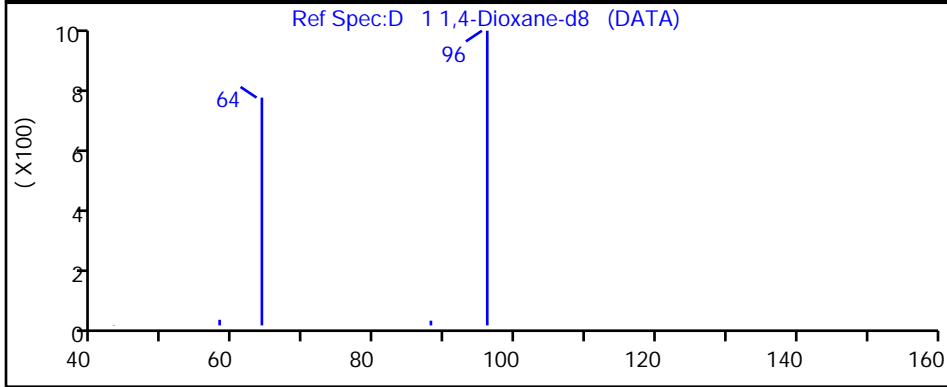
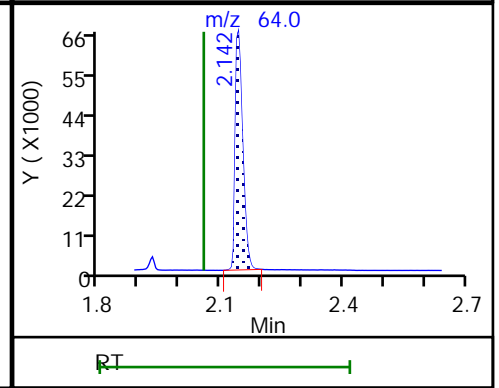
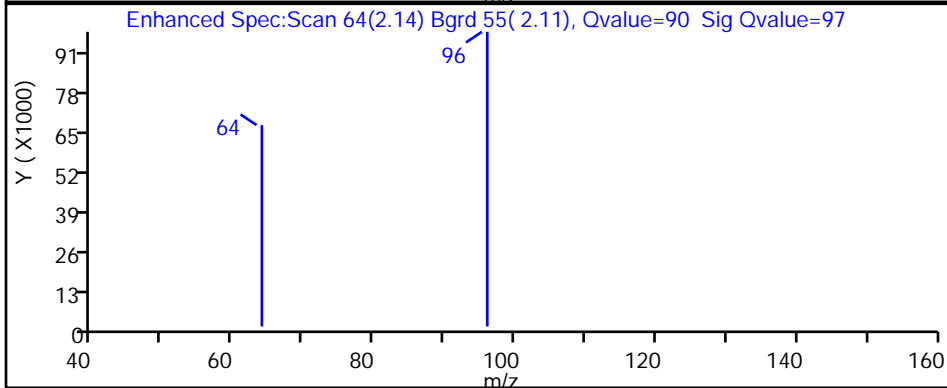
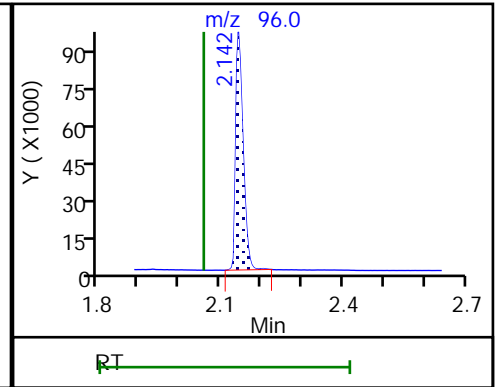
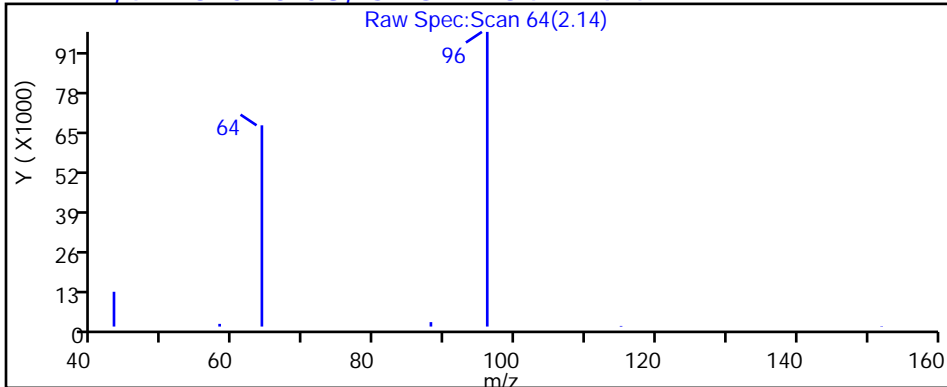
Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

Column:

Detector MS SCAN

D 1 1,4-Dioxane-d8, CAS: 17647-74-4



Euofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155109.D

Injection Date: 18-Dec-2019 05:55:30

Instrument ID: HP5973U

Lims ID: 480-164221-B-15-A

Lab Sample ID: 480-164221-15

Client ID: AOI 1 GW3 DER

Operator ID: bs

ALS Bottle#: 49

Worklist Smp#: 19

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

Method: 1,4\_Dx\_SIM\_HP5973U

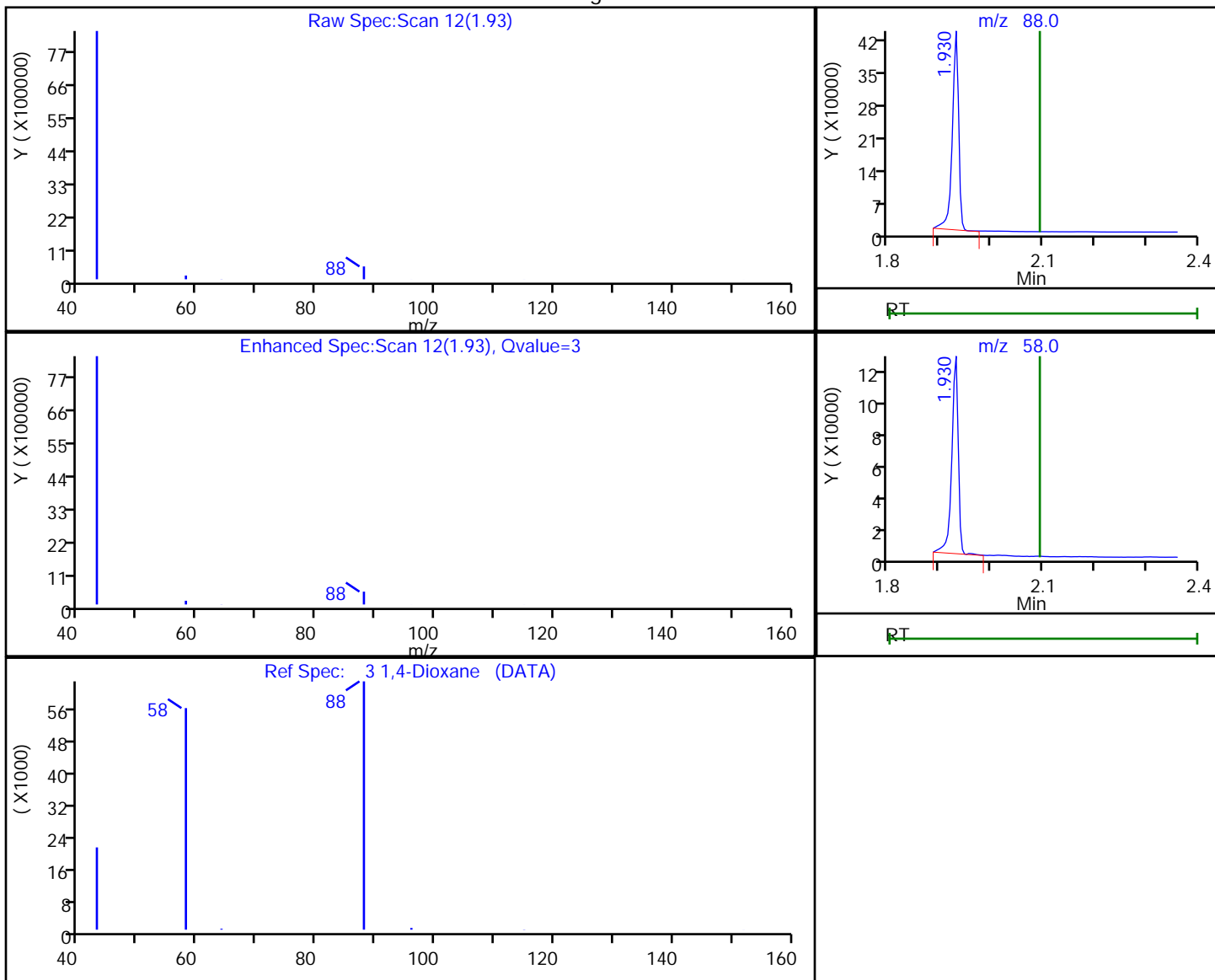
Limit Group: MB - 8270D SIM ID ICAL

Column:

Detector: MS SCAN

3 1,4-Dioxane, CAS: 123-91-1

Processing Results



RT	Mass	Response	Amount
1.93	88.00	368222	27.682270
1.93	58.00	107833	

Reviewer: schickr, 18-Dec-2019 12:06:30

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM VI  
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA  
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1 Analy Batch No.: 506566

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

Instrument ID: HP5973U GC Column: RXI-5Sil MS ID: 0.25 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2019 10:19 Calibration End Date: 11/25/2019 12:16 Calibration ID: 38301

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 480-506566/3	U33154641.D
Level 2	IC 480-506566/4	U33154642.D
Level 3	ICIS 480-506566/5	U33154643.D
Level 4	IC 480-506566/6	U33154644.D
Level 5	IC 480-506566/7	U33154645.D
Level 6	IC 480-506566/8	U33154646.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,4-Dioxane	1.0860 1.0887	1.1210	1.1001	1.0853	1.1215	AveID		1.1004			0.0100	1.5		20.0			
1,4-Dioxane-d8	0.4837 0.4831	0.4833	0.4828	0.5040	0.5016	Ave		0.4898			0.0100	2.1		20.0			

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

FORM VI  
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA  
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1 Analy Batch No.: 506566

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

Instrument ID: HP5973U GC Column: RXI-5Sil MS ID: 0.25 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 11/25/2019 10:19 Calibration End Date: 11/25/2019 12:16 Calibration ID: 38301

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 480-506566/3	U33154641.D
Level 2	IC 480-506566/4	U33154642.D
Level 3	ICIS 480-506566/5	U33154643.D
Level 4	IC 480-506566/6	U33154644.D
Level 5	IC 480-506566/7	U33154645.D
Level 6	IC 480-506566/8	U33154646.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
1,4-Dioxane		AveID	10350 58836	21425	32985	42110	53700	0.200 1.20	0.400	0.600	0.800	1.00
1,4-Dioxane-d8	DCBd 4	Ave	95307 540439	191130	299827	388019	478842	2.00 12.0	4.00	6.00	8.00	10.0

Curve Type Legend:

Ave = Average ISTD AveID = Average isotope dilution
--

Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154641.D  
 Lims ID: IC - SIM - 0.2  
 Client ID:  
 Sample Type: IC Calib Level: 1  
 Inject. Date: 25-Nov-2019 10:19:30 ALS Bottle#: 3 Worklist Smp#: 3  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 480-0086424-003  
 Operator ID: JM Instrument ID: HP5973U  
 Sublist: chrom-1,4\_Dx\_SIM\_HP5973U\*sub1

Method: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 25-Nov-2019 14:39:45 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: RT Order ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D

Column 1 : Det: MS SCAN  
 Process Host: CTX0324

First Level Reviewer: marshallj Date: 25-Nov-2019 14:38:06

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
D 1 1,4-Dioxane-d8	96	2.081	2.073	0.008	94	95307	2.00	1.98	
3 1,4-Dioxane	88	2.113	2.105	0.008	88	10350	0.2000	0.1974	M
* 2 1,4-Dichlorobenzene-d4	152	5.495	5.495	0.000	100	394051	4.00	4.00	

**QC Flag Legend**

Review Flags

M - Manually Integrated

**Reagents:**

MB\_1,4SIM\_WRK\_00078 Amount Added: 1.00 Units: mL  
 MB\_LLIS\_WRK\_00182 Amount Added: 20.00 Units: uL Run Reagent



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154641.D

Injection Date: 25-Nov-2019 10:19:30

Instrument ID: HP5973U

Operator ID: JM

Lims ID: IC - SIM - 0.2

Worklist Smp#: 3

Client ID:

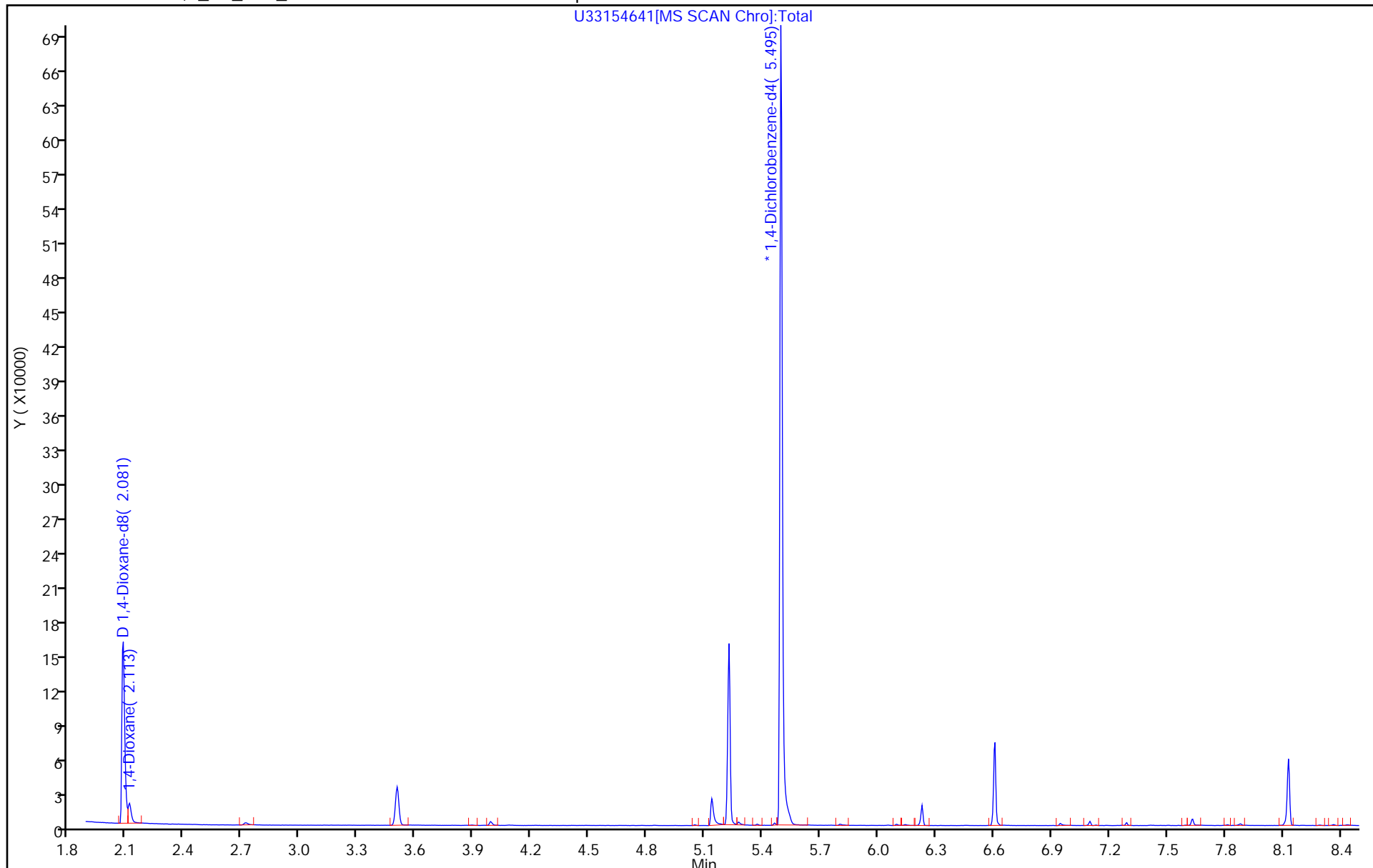
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 3

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL



Euofins TestAmerica, Buffalo

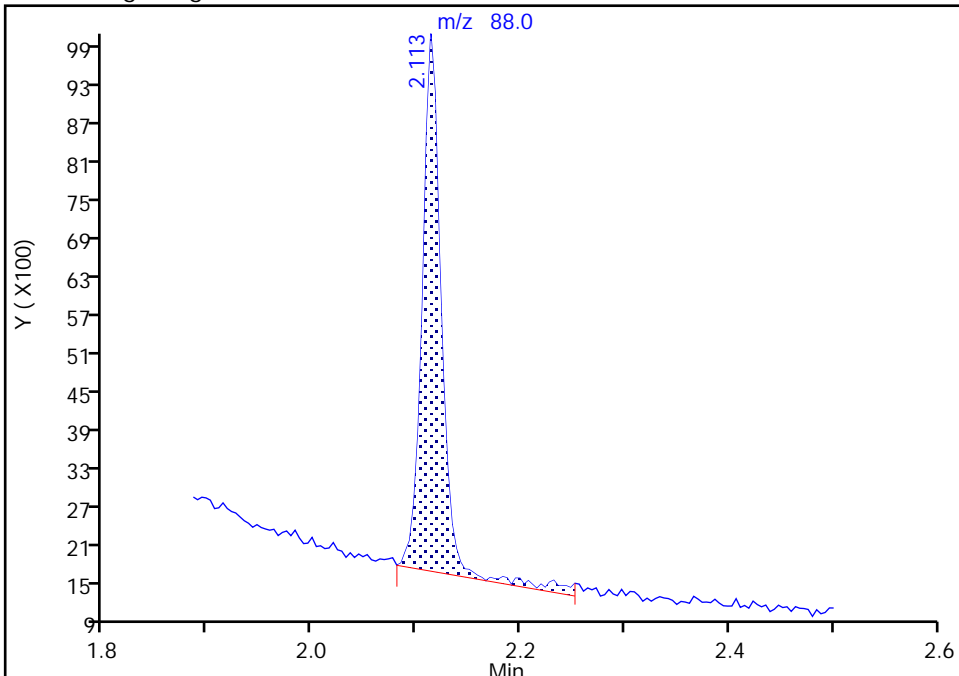
Data File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154641.D  
Injection Date: 25-Nov-2019 10:19:30 Instrument ID: HP5973U  
Lims ID: IC - SIM - 0.2  
Client ID:  
Operator ID: JM ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 1,4\_Dx\_SIM\_HP5973U Limit Group: MB - 8270D SIM ID ICAL  
Column: Detector MS SCAN

3 1,4-Dioxane, CAS: 123-91-1

Signal: 1

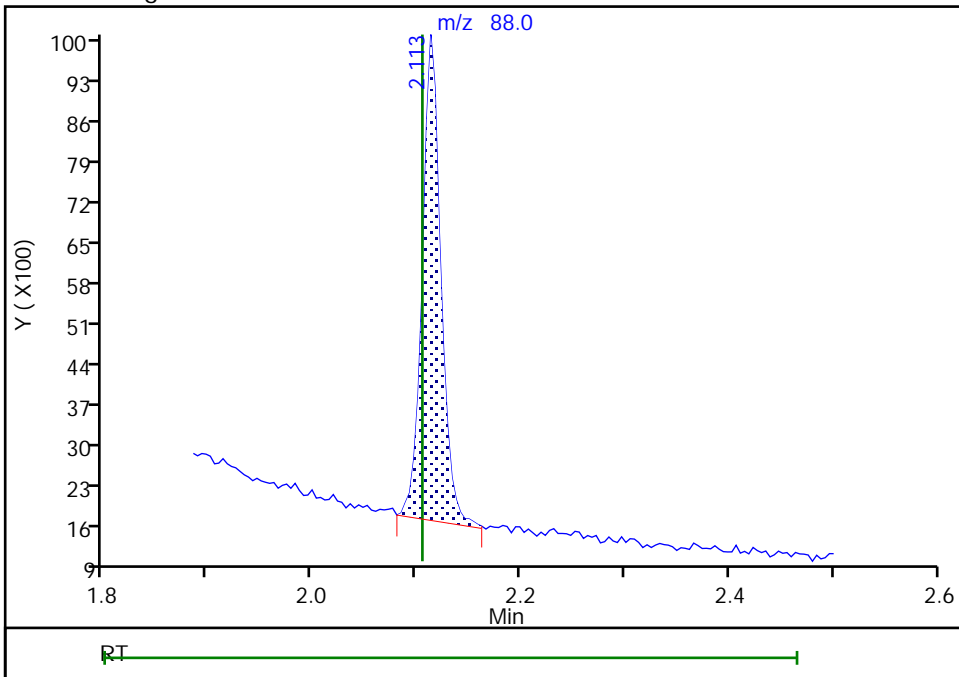
RT: 2.11  
Area: 10826  
Amount: 0.204902  
Amount Units: ng/ul

Processing Integration Results



RT: 2.11  
Area: 10350  
Amount: 0.197375  
Amount Units: ng/ul

Manual Integration Results



Reviewer: marshallj, 25-Nov-2019 14:38:02  
Audit Action: Split an Integrated Peak

Audit Reason: Split Peak

Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154642.D  
 Lims ID: IC - SIM - 0.4  
 Client ID:  
 Sample Type: IC Calib Level: 2  
 Inject. Date: 25-Nov-2019 10:43:30 ALS Bottle#: 4 Worklist Smp#: 4  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 480-0086424-004  
 Operator ID: JM Instrument ID: HP5973U  
 Sublist: chrom-1,4\_Dx\_SIM\_HP5973U\*sub1  
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 25-Nov-2019 14:39:46 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: RT Order ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D  
 Column 1 : Det: MS SCAN  
 Process Host: CTX0324

First Level Reviewer: marshallj Date: 25-Nov-2019 14:38:12

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
D 1 1,4-Dioxane-d8	96	2.081	2.073	0.008	94	191130	4.00	3.95	
3 1,4-Dioxane	88	2.113	2.105	0.008	89	21425	0.4000	0.4075	
* 2 1,4-Dichlorobenzene-d4	152	5.495	5.495	0.000	100	395469	4.00	4.00	

Reagents:

MB\_1,4SIM\_WRK\_00079 Amount Added: 1.00 Units: mL  
 MB\_LLIS\_WRK\_00182 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154642.D

Injection Date: 25-Nov-2019 10:43:30

Instrument ID: HP5973U

Operator ID: JM

Lims ID: IC - SIM - 0.4

Worklist Smp#: 4

Client ID:

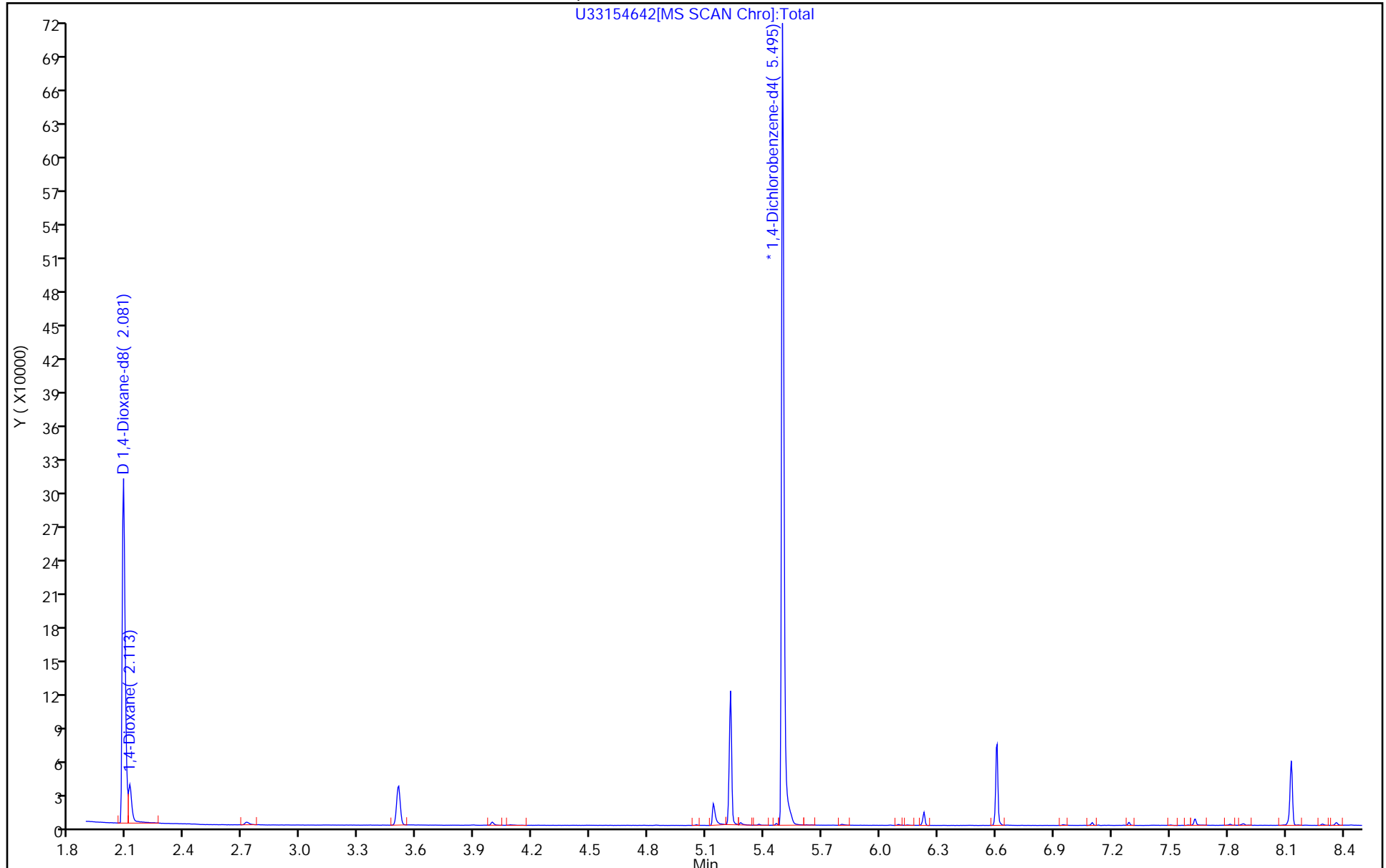
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 4

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL



Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154643.D  
 Lims ID: ICIS - SIM - 0.6  
 Client ID:  
 Sample Type: ICIS Calib Level: 3  
 Inject. Date: 25-Nov-2019 11:06:30 ALS Bottle#: 5 Worklist Smp#: 5  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 480-0086424-005  
 Operator ID: JM Instrument ID: HP5973U  
 Sublist: chrom-1,4\_Dx\_SIM\_HP5973U\*sub1

Method: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 25-Nov-2019 14:39:47 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: RT Order ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D

Column 1 : Det: MS SCAN  
 Process Host: CTX0324

First Level Reviewer: marshallj Date: 25-Nov-2019 14:37:14

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
D 1 1,4-Dioxane-d8	96	2.073	2.073	0.000	96	299827	6.00	5.92	
3 1,4-Dioxane	88	2.105	2.105	0.000	90	32985	0.6000	0.5999	
* 2 1,4-Dichlorobenzene-d4	152	5.495	5.495	0.000	99	413989	4.00	4.00	

Reagents:

MB\_1,4SIM\_WRK\_00080 Amount Added: 1.00 Units: mL  
 MB\_LLIS\_WRK\_00182 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154643.D

Injection Date: 25-Nov-2019 11:06:30

Instrument ID: HP5973U

Operator ID: JM

Lims ID: ICIS - SIM - 0.6

Worklist Smp#: 5

Client ID:

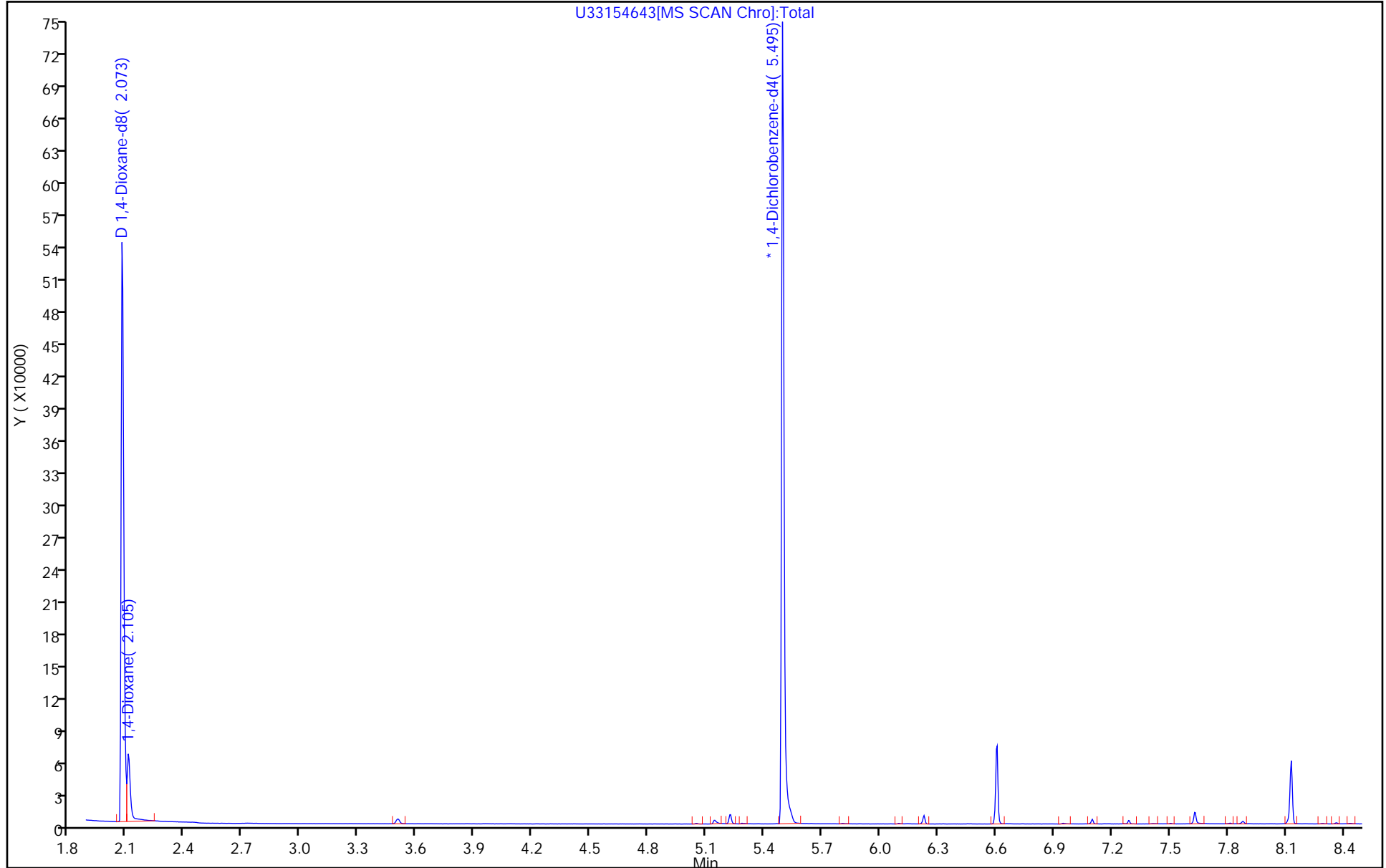
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 5

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL



Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154644.D  
 Lims ID: IC - SIM - 0.8  
 Client ID:  
 Sample Type: IC Calib Level: 4  
 Inject. Date: 25-Nov-2019 11:29:30 ALS Bottle#: 6 Worklist Smp#: 6  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 480-0086424-006  
 Operator ID: JM Instrument ID: HP5973U  
 Sublist: chrom-1,4\_Dx\_SIM\_HP5973U\*sub1

Method: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 25-Nov-2019 14:39:48 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: RT Order ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D

Column 1 : Det: MS SCAN  
 Process Host: CTX0324

First Level Reviewer: marshallj Date: 25-Nov-2019 14:38:21

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
D 1 1,4-Dioxane-d8	96	2.077	2.073	0.004	95	388019	8.00	8.23	
3 1,4-Dioxane	88	2.109	2.105	0.004	88	42110	0.8000	0.7890	
* 2 1,4-Dichlorobenzene-d4	152	5.495	5.495	0.000	99	384938	4.00	4.00	

Reagents:

MB\_1,4SIM\_WRK\_00081 Amount Added: 1.00 Units: mL  
 MB\_LLIS\_WRK\_00182 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154644.D

Injection Date: 25-Nov-2019 11:29:30

Instrument ID: HP5973U

Operator ID: JM

Lims ID: IC - SIM - 0.8

Worklist Smp#: 6

Client ID:

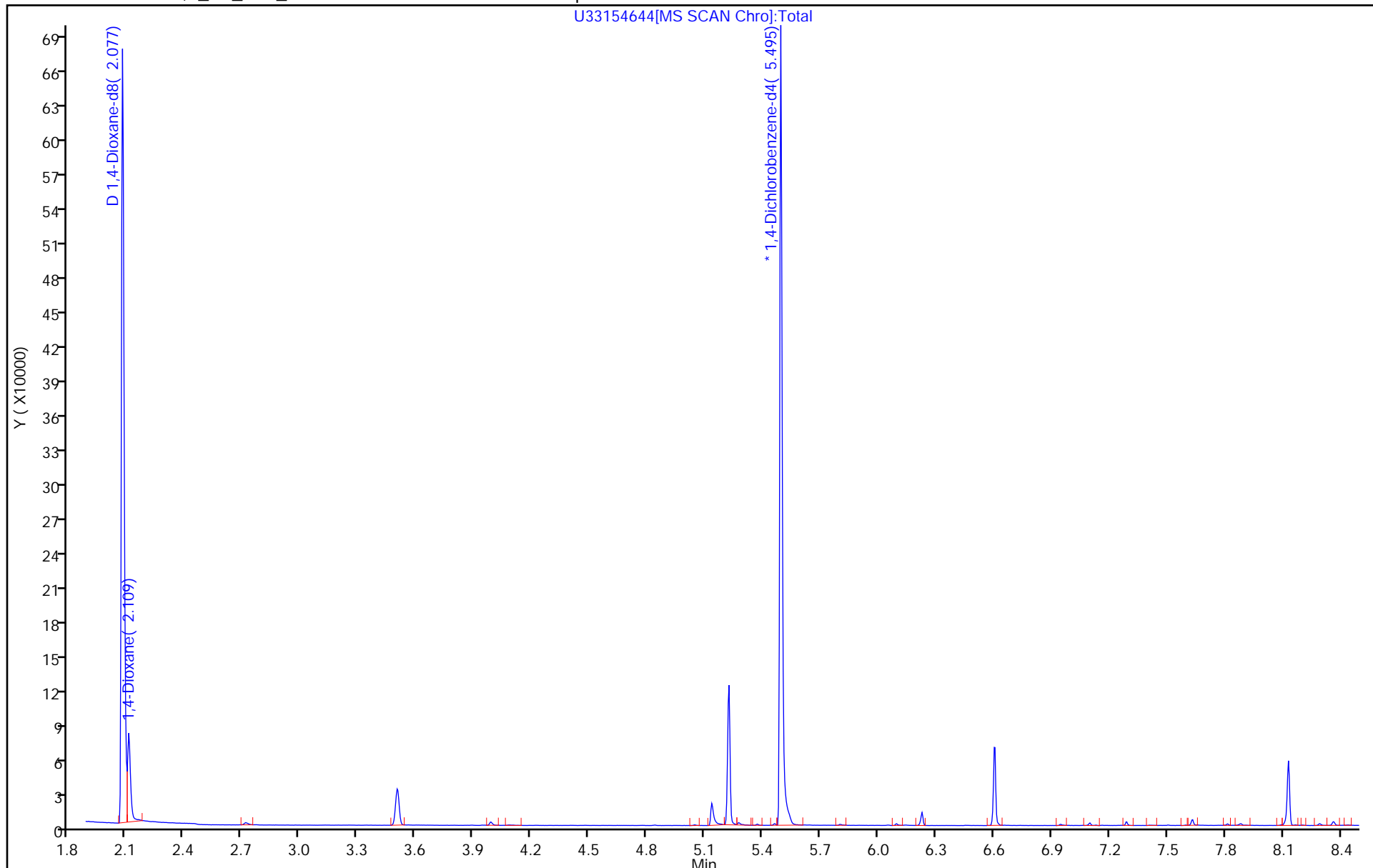
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 6

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL





Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154645.D  
 Lims ID: IC - SIM - 1.0  
 Client ID:  
 Sample Type: IC Calib Level: 5  
 Inject. Date: 25-Nov-2019 11:53:30 ALS Bottle#: 7 Worklist Smp#: 7  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 480-0086424-007  
 Operator ID: JM Instrument ID: HP5973U  
 Sublist: chrom-1,4\_Dx\_SIM\_HP5973U\*sub1  
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 25-Nov-2019 14:39:48 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: RT Order ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D  
 Column 1 : Det: MS SCAN  
 Process Host: CTX0324

First Level Reviewer: marshallj Date: 25-Nov-2019 14:38:25

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
D 1 1,4-Dioxane-d8	96	2.077	2.073	0.004	95	478842	10.0	10.2	
3 1,4-Dioxane	88	2.109	2.105	0.004	90	53700	1.00	1.02	
* 2 1,4-Dichlorobenzene-d4	152	5.495	5.495	0.000	99	381870	4.00	4.00	

Reagents:

MB\_1,4SIM\_WRK\_00082 Amount Added: 1.00 Units: mL  
 MB\_LLIS\_WRK\_00182 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154645.D

Injection Date: 25-Nov-2019 11:53:30

Instrument ID: HP5973U

Operator ID: JM

Lims ID: IC - SIM - 1.0

Worklist Smp#: 7

Client ID:

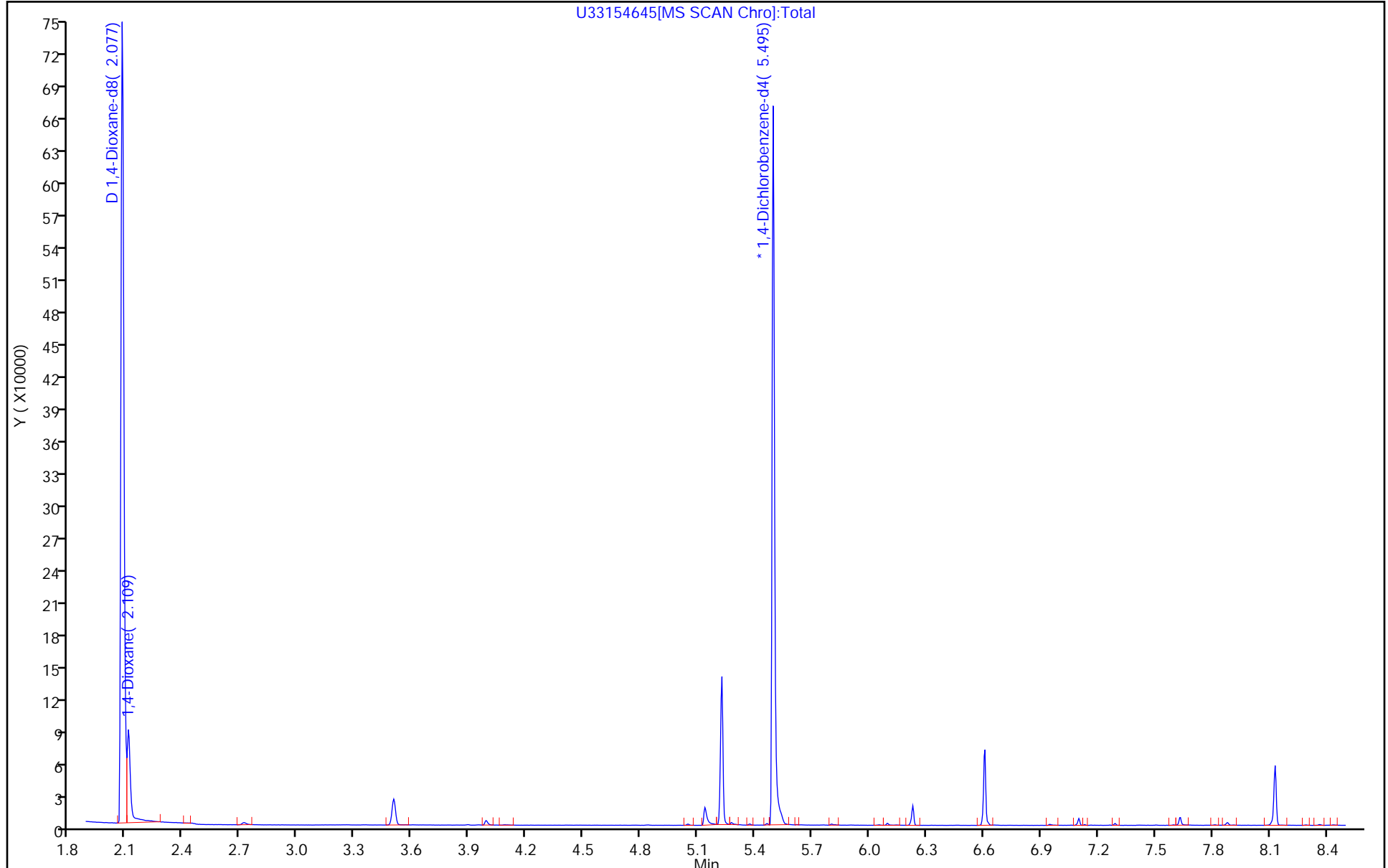
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 7

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL



Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D  
 Lims ID: IC - SIM - 1.2  
 Client ID:  
 Sample Type: IC Calib Level: 6  
 Inject. Date: 25-Nov-2019 12:16:30 ALS Bottle#: 8 Worklist Smp#: 8  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 480-0086424-008  
 Operator ID: JM Instrument ID: HP5973U  
 Sublist: chrom-1,4\_Dx\_SIM\_HP5973U\*sub1  
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 25-Nov-2019 14:39:49 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: RT Order ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D  
 Column 1 : Det: MS SCAN  
 Process Host: CTX0324

First Level Reviewer: marshallj Date: 25-Nov-2019 14:38:28

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
D 1 1,4-Dioxane-d8	96	2.068	2.073	-0.005	92	540439	12.0	11.8	
3 1,4-Dioxane	88	2.101	2.105	-0.004	87	58836	1.20	1.19	
* 2 1,4-Dichlorobenzene-d4	152	5.495	5.495	0.000	99	372876	4.00	4.00	

Reagents:

MB\_1,4SIM\_WRK\_00083 Amount Added: 1.00 Units: mL  
 MB\_LLIS\_WRK\_00182 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D

Injection Date: 25-Nov-2019 12:16:30

Instrument ID: HP5973U

Operator ID: JM

Lims ID: IC - SIM - 1.2

Worklist Smp#: 8

Client ID:

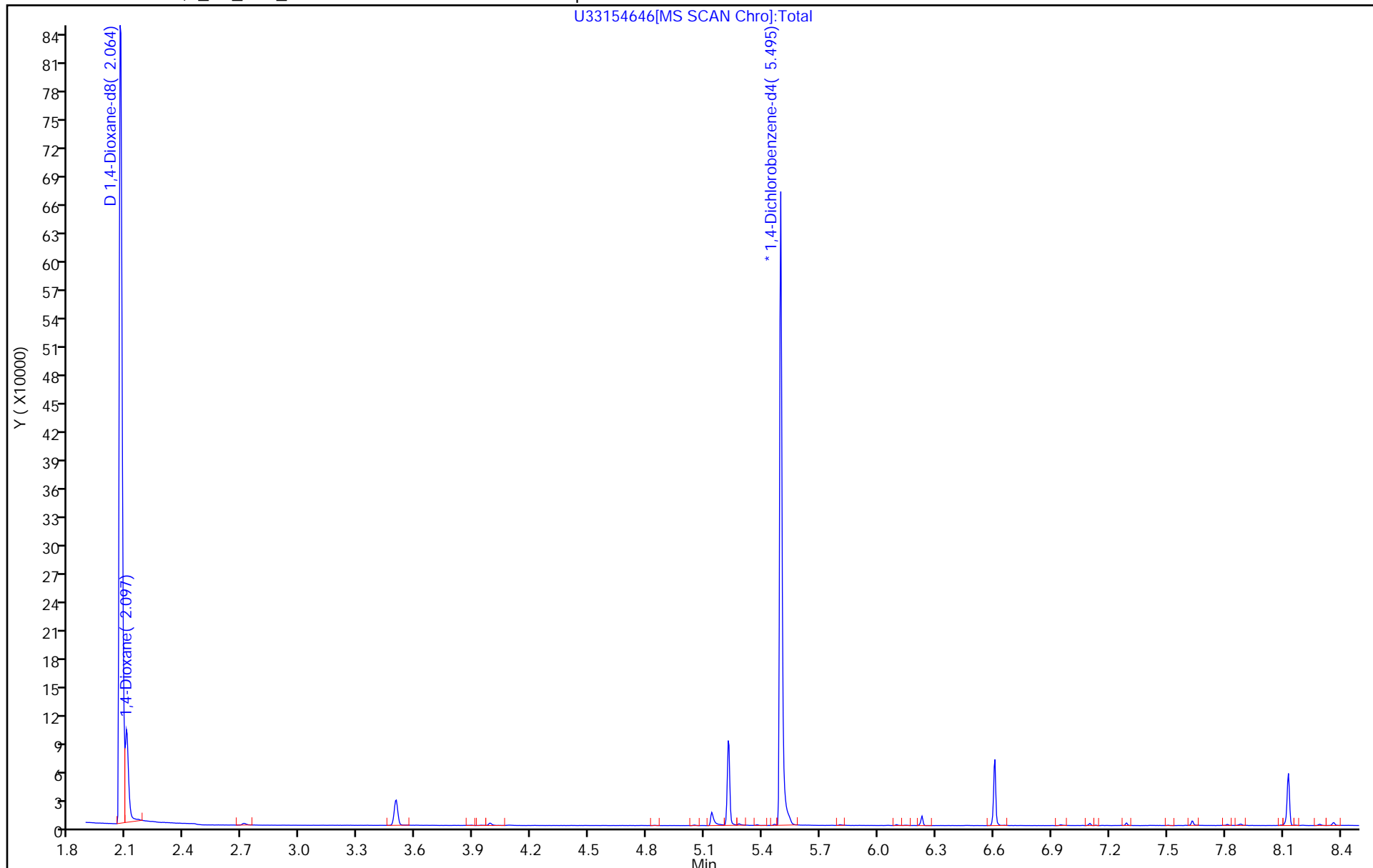
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 8

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL



FORM VII  
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 480-510312/3 Calibration Date: 12/17/2019 11:53  
 Instrument ID: HP5973U Calib Start Date: 11/25/2019 10:19  
 GC Column: RXI-5Sil MS(0.5 ID: 0.25 (mm) Calib End Date: 11/25/2019 12:16  
 Lab File ID: U33155063.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	AveID	1.100	1.072	0.0100	584	600	-2.6	20.0
1,4-Dioxane-d8	Ave	0.4898	0.5155	0.0100	6320	6000	5.3	20.0

Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86990.b\U33155063.D  
 Lims ID: CCVIS  
 Client ID:  
 Sample Type: CCVIS  
 Inject. Date: 17-Dec-2019 11:53:30 ALS Bottle#: 3 Worklist Smp#: 3  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 3  
 Operator ID: bs Instrument ID: HP5973U  
 Sublist: chrom-1,4\_Dx\_SIM\_HP5973U\*sub1  
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191217-86990.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 17-Dec-2019 15:08:04 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: RT Order ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D  
 Column 1 : Det: MS SCAN  
 Process Host: CTX1006

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
D 1 1,4-Dioxane-d8	96	2.060	2.060	0.000	96	442607	6.00	6.32	
3 1,4-Dioxane	88	2.093	2.093	0.000	89	47435	0.6000	0.5844	
* 2 1,4-Dichlorobenzene-d4	152	5.479	5.479	0.000	100	572423	4.00	4.00	

Reagents:

MB\_1,4SIM\_WRK\_00080 Amount Added: 1.00 Units: mL  
 MB\_LLIS\_WRK\_00184 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86990.b\U33155063.D

Injection Date: 17-Dec-2019 11:53:30

Instrument ID: HP5973U

Operator ID: bs

Lims ID: CCVIS

Worklist Smp#: 3

Client ID:

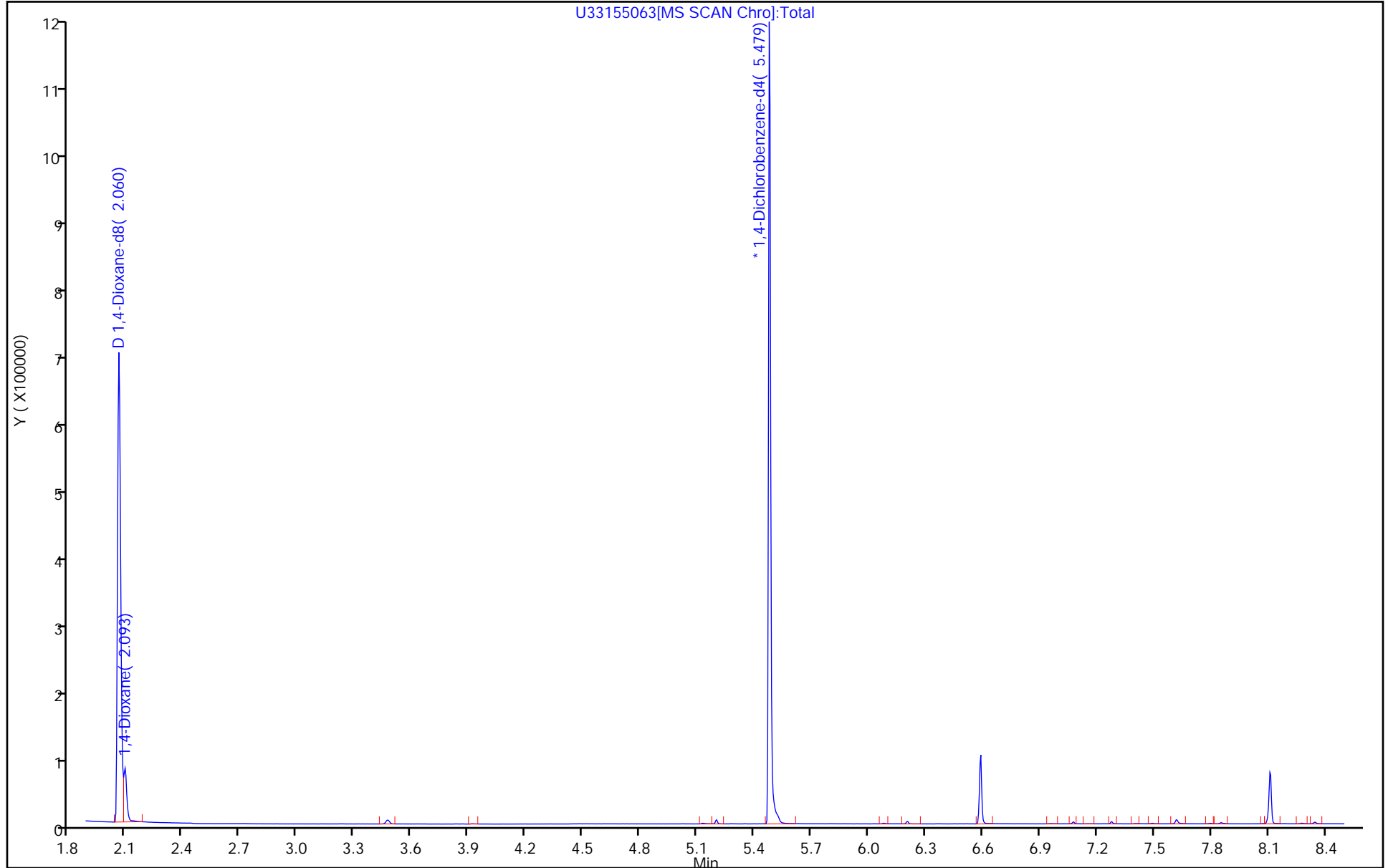
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 3

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL



FORM VII  
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 480-510313/3 Calibration Date: 12/17/2019 23:43  
 Instrument ID: HP5973U Calib Start Date: 11/25/2019 10:19  
 GC Column: RXI-5Sil MS(0.5 ID: 0.25 (mm) Calib End Date: 11/25/2019 12:16  
 Lab File ID: U33155093.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	AveID	1.100	0.995	0.0100	543	600	-9.6	20.0
1,4-Dioxane-d8	Ave	0.4898	0.5648	0.0100	6920	6000	15.3	20.0



Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155093.D  
 Lims ID: CCVIS  
 Client ID:  
 Sample Type: CCVIS  
 Inject. Date: 17-Dec-2019 23:43:30 ALS Bottle#: 33 Worklist Smp#: 3  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 33  
 Operator ID: bs Instrument ID: HP5973U  
 Sublist: chrom-1,4\_Dx\_SIM\_HP5973U\*sub1

Method: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 18-Dec-2019 12:07:28 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: RT Order ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D

Column 1 : Det: MS SCAN  
 Process Host: CTX1002

First Level Reviewer: schickr Date: 18-Dec-2019 12:04:42

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
D 1 1,4-Dioxane-d8	96	2.056	2.056	0.000	96	382427	6.00	6.92	
3 1,4-Dioxane	88	2.093	2.093	0.000	87	38058	0.6000	0.5426	
* 2 1,4-Dichlorobenzene-d4	152	5.479	5.479	0.000	100	451385	4.00	4.00	

Reagents:

MB\_1,4SIM\_WRK\_00080 Amount Added: 1.00 Units: mL  
 MB\_LLIS\_WRK\_00184 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155093.D

Injection Date: 17-Dec-2019 23:43:30

Instrument ID: HP5973U

Operator ID: bs

Lims ID: CCVIS

Worklist Smp#: 3

Client ID:

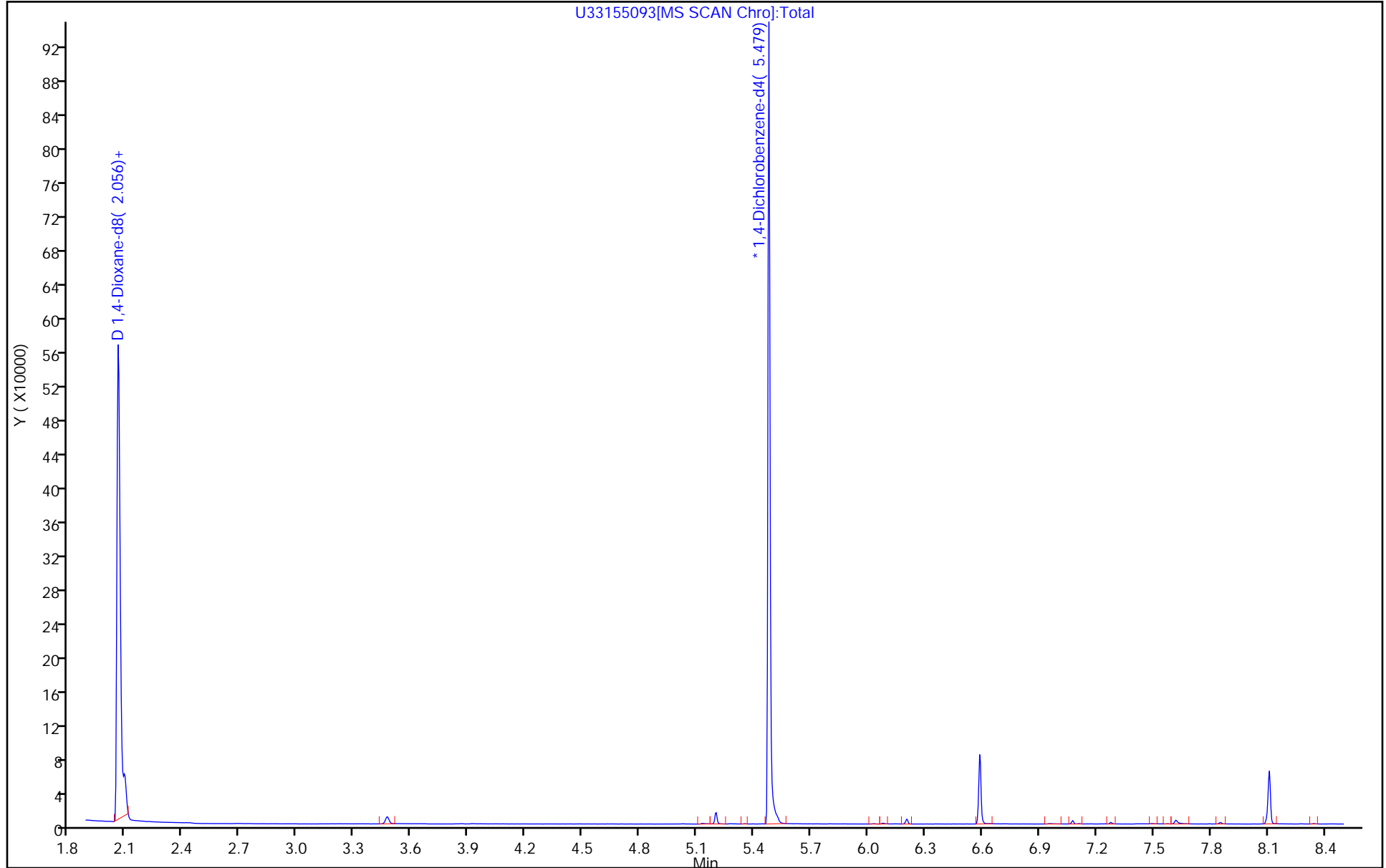
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 33

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL



Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154640.D  
 Lims ID: DFTPP  
 Client ID:  
 Sample Type: DFTPP  
 Inject. Date: 25-Nov-2019 09:52:30 ALS Bottle#: 2 Worklist Smp#: 2  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: DFTPP  
 Operator ID: JM Instrument ID: HP5973U  
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 25-Nov-2019 14:39:42 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: Deconvolution ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D  
 Column 1 : Det: MS SCAN  
 Process Host: CTX0324

First Level Reviewer: marshallj Date: 25-Nov-2019 10:14:20

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
4 DFTPP									
7 4,4'-DDE	246		10.818					ND	
5 4,4'-DDD	235		10.930					ND	
6 4,4'-DDT	235	11.095	11.095	0.000	97	749050	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

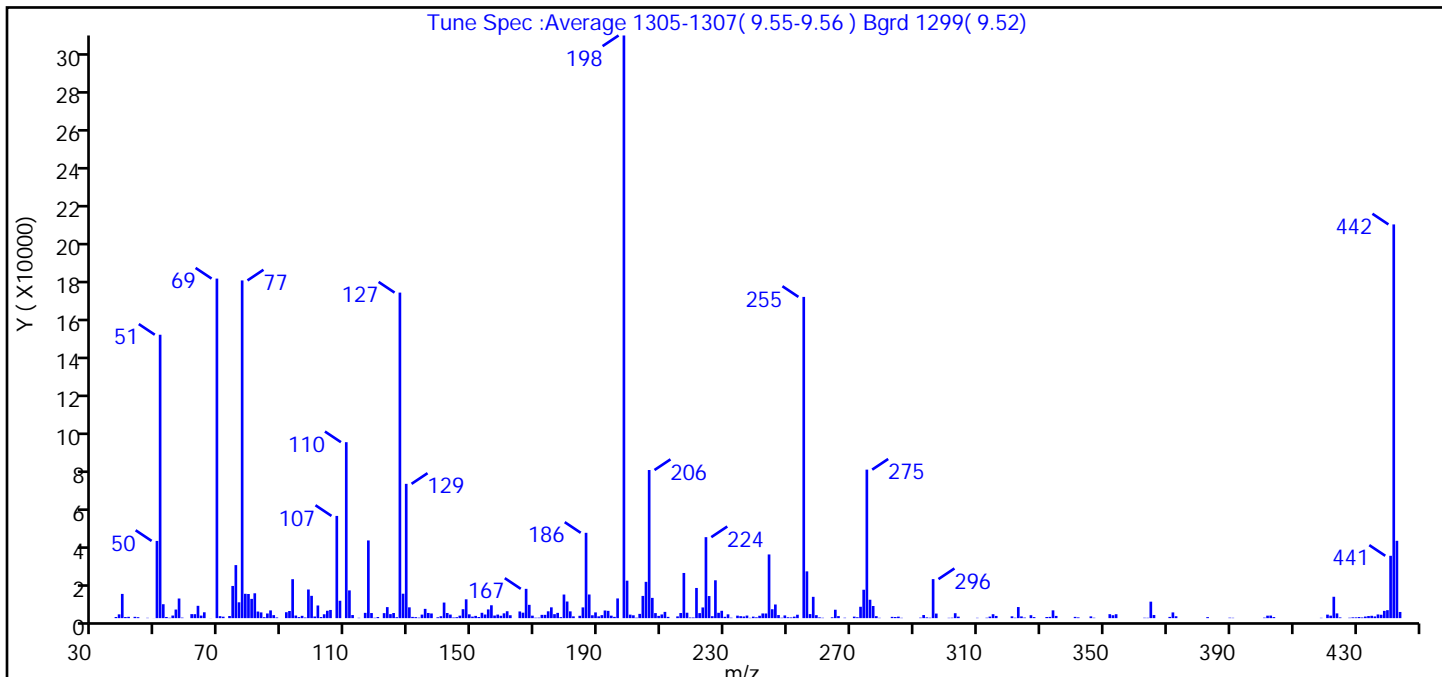
Reagents:

MB\_DFTPP\_WRK\_00363 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154640.D  
 Injection Date: 25-Nov-2019 09:52:30 Instrument ID: HP5973U  
 Lims ID: DFTPP  
 Client ID:  
 Operator ID: JM ALS Bottle#: 2 Worklist Smp#: 2  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Method: 1,4\_Dx\_SIM\_HP5973U Limit Group: MB - 8270D SIM ID ICAL  
 Tune Method: DFTPP Method 8270D, BP 198

4 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	base peak, or >90% of 442	100.0 (148.0)
51	10-80% of the base peak	48.6
68	<2% of mass 69	0.0 (0.0)
69	Present	58.3
70	<2% of mass 69	0.3 (0.6)
127	10-80% of the base peak	55.9
197	<2% of mass 198	0.0
199	5-9% of mass 198	6.4
275	10-60% of the base peak	25.5
365	>1% of mass 198	2.8
441	present but <24% of mass 442	10.7 (15.8)
442	base peak, or >50% of 198	67.6
443	15-24% of mass 442	13.3 (19.6)

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154640.D\1,4\_Dx\_SIM\_HP5973U.rslt\spc  
 Injection Date: 25-Nov-2019 09:52:30  
 Spectrum: Tune Spec :Average 1305-1307( 9.55-9.56 ) Bgrd 1299( 9.52)  
 Base Peak: 198.00  
 Minimum % Base Peak: 0  
 Number of Points: 287

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	589	125.00	2679	202.00	245	286.00	173
38.00	1975	126.00	484	203.00	2215	292.00	257
39.00	12627	127.00	169600	204.00	11575	293.00	1626
40.00	574	128.00	12732	205.00	18912	294.00	392
41.00	686	129.00	69968	206.00	77168	295.00	214
43.00	684	130.00	5632	207.00	10553	296.00	20336
44.00	491	131.00	646	208.00	2631	297.00	2390
47.00	169	132.00	524	209.00	1171	301.00	169
49.00	32	133.00	260	210.00	1923	302.00	225
50.00	40224	134.00	1843	211.00	3259	303.00	2566
51.00	147648	135.00	4838	212.00	669	304.00	781
52.00	7252	136.00	2684	215.00	913	310.00	167
53.00	603	137.00	2444	216.00	2672	313.00	216
54.00	181	139.00	456	217.00	23536	314.00	801
55.00	1359	140.00	999	218.00	2824	315.00	2045
56.00	4479	141.00	8120	219.00	334	316.00	1146
57.00	10226	142.00	2683	220.00	328	321.00	945
58.00	275	143.00	1861	221.00	15724	322.00	218
61.00	2094	144.00	335	222.00	2619	323.00	5782
62.00	2065	145.00	503	223.00	5576	324.00	899
63.00	6423	146.00	1294	224.00	42192	325.00	289
64.00	1327	147.00	4657	225.00	11509	327.00	1536
65.00	3052	148.00	9817	226.00	1015	328.00	548
67.00	37	149.00	1988	227.00	19720	332.00	582
69.00	176896	150.00	789	228.00	2780	333.00	655
70.00	1034	151.00	1182	229.00	3831	334.00	4065
71.00	762	152.00	590	230.00	703	335.00	1158
73.00	1105	153.00	2792	231.00	1986	341.00	659
74.00	16768	154.00	1885	232.00	232	342.00	383
75.00	27632	155.00	4548	234.00	1300	346.00	919
76.00	8255	156.00	6709	235.00	1028	347.00	218
77.00	175936	157.00	1363	236.00	863	352.00	2057
78.00	12683	158.00	1851	237.00	1347	353.00	1533

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154640.D\1\_4\_Dx\_SIM\_HP5973U.rslt\spc

Injection Date: 25-Nov-2019 09:52:30

Spectrum: Tune Spec :Average 1305-1307( 9.55-9.56 ) Bgrd 1299( 9.52)

Base Peak: 198.00

Minimum % Base Peak: 0

Number of Points: 287

m/z	Y	m/z	Y	m/z	Y	m/z	Y
79.00	12584	159.00	1233	238.00	169	354.00	2043
80.00	10037	160.00	2514	239.00	792	363.00	211
81.00	12950	161.00	3600	240.00	423	364.00	183
82.00	3444	162.00	1518	241.00	1232	365.00	8586
83.00	2994	165.00	3485	242.00	2448	366.00	1627
84.00	491	166.00	2849	243.00	2430	371.00	646
85.00	2434	167.00	15267	244.00	33184	372.00	2985
86.00	4033	168.00	6934	245.00	4637	373.00	979
87.00	1564	169.00	1296	246.00	7114	383.00	529
88.00	361	170.00	225	247.00	1603	390.00	235
91.00	3087	171.00	260	248.00	212	391.00	181
92.00	3714	172.00	1706	249.00	1420	401.00	276
93.00	20296	173.00	1719	250.00	457	402.00	1295
94.00	1360	174.00	3565	251.00	366	403.00	1341
95.00	554	175.00	5630	252.00	778	404.00	548
96.00	1204	176.00	2071	253.00	1774	419.00	168
97.00	323	177.00	2745	255.00	167360	421.00	1834
98.00	14924	178.00	535	256.00	24368	422.00	1300
99.00	11625	179.00	12302	257.00	2116	423.00	11137
100.00	845	180.00	8664	258.00	11100	424.00	2478
101.00	6595	181.00	3536	259.00	1553	425.00	375
102.00	573	182.00	930	260.00	396	428.00	221
103.00	2021	184.00	1222	261.00	195	429.00	409
104.00	3848	185.00	5605	264.00	430	430.00	390
105.00	4267	186.00	44456	265.00	4380	431.00	576
107.00	53256	187.00	12322	266.00	1059	432.00	357
108.00	9063	188.00	1501	268.00	216	433.00	829
110.00	91672	189.00	2993	271.00	782	434.00	1097
111.00	14462	190.00	930	272.00	454	435.00	1225
112.00	1612	191.00	1565	273.00	5925	436.00	892
114.00	172	192.00	3992	274.00	14799	437.00	1923
116.00	2751	193.00	3806	275.00	77368	438.00	1767
117.00	40480	194.00	1296	276.00	9589	439.00	3794
118.00	2655	195.00	676	277.00	6328	440.00	4157

Report Date: 25-Nov-2019 14:39:44

Chrom Revision: 2.3 09-Oct-2019 11:13:36

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154640.D\1,4\_Dx\_SIM\_HP5973U.rsl\sp

Injection Date: 25-Nov-2019 09:52:30

Spectrum: Tune Spec :Average 1305-1307( 9.55-9.56 ) Bgrd 1299( 9.52)

Base Peak: 198.00

Minimum % Base Peak: 0

Number of Points: 287

m/z	Y	m/z	Y	m/z	Y	m/z	Y
119.00	202	196.00	10272	278.00	1037	441.00	32480
120.00	587	198.00	303552	279.00	171	442.00	205120
122.00	2609	199.00	19520	283.00	674	443.00	40296
123.00	5746	200.00	1825	284.00	588	444.00	3218
124.00	2093	201.00	1483	285.00	775		

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154640.D

Injection Date: 25-Nov-2019 09:52:30

Instrument ID: HP5973U

Lims ID: DFTPP

Client ID:

Operator ID: JM

ALS Bottle#: 2

Worklist Smp#: 2

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

6 4,4'-DDT, Detector: MS SCAN

SW-846 Method

%Breakdown =

(Area Breakdown Cpnds/  
Total Area Breakdown Cpnds) \* 100

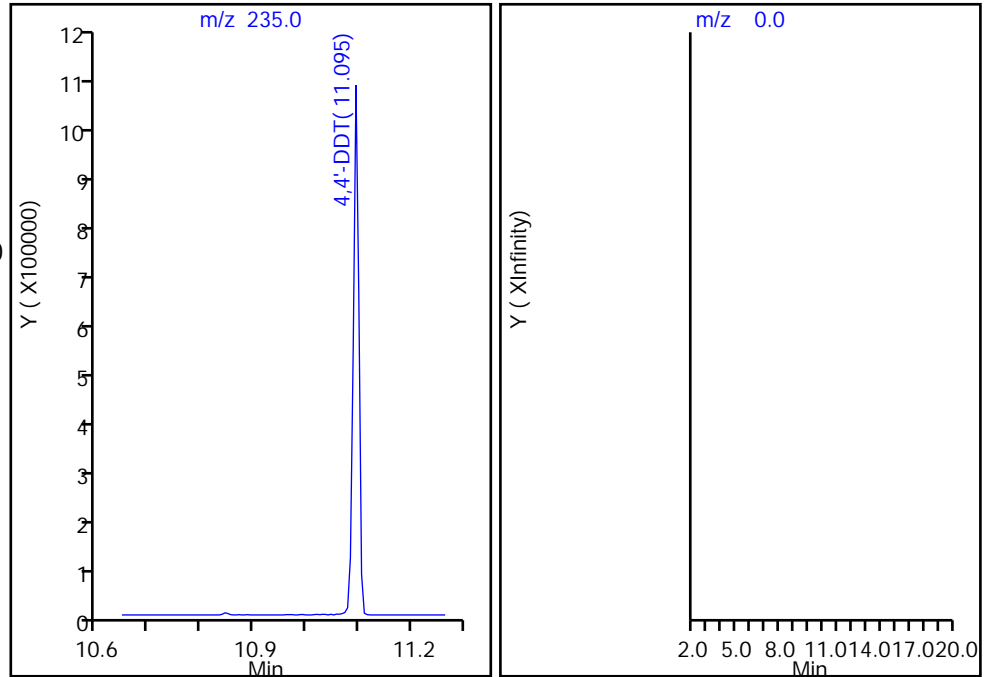
6 4,4'-DDT, Area = 749050

5 4,4'-DDD, Area = 0

7 4,4'-DDE, Area = 0

%Breakdown: 0.00%, <= 20.00%

Passed





Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86990.b\U33155062.D  
 Lims ID: DFTPP  
 Client ID:  
 Sample Type: DFTPP  
 Inject. Date: 17-Dec-2019 11:26:30 ALS Bottle#: 2 Worklist Smp#: 2  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 2  
 Operator ID: bs Instrument ID: HP5973U  
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191217-86990.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 17-Dec-2019 15:08:03 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: Deconvolution ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D  
 Column 1 : Det: MS SCAN  
 Process Host: CTX1006

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
4 DFTPP									
5 4,4'-DDD	235	10.833	10.833	0.000	93	23948			NR
7 4,4'-DDE	246		10.839						ND
6 4,4'-DDT	235	11.079	11.079	0.000	95	775708	NR		NR

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

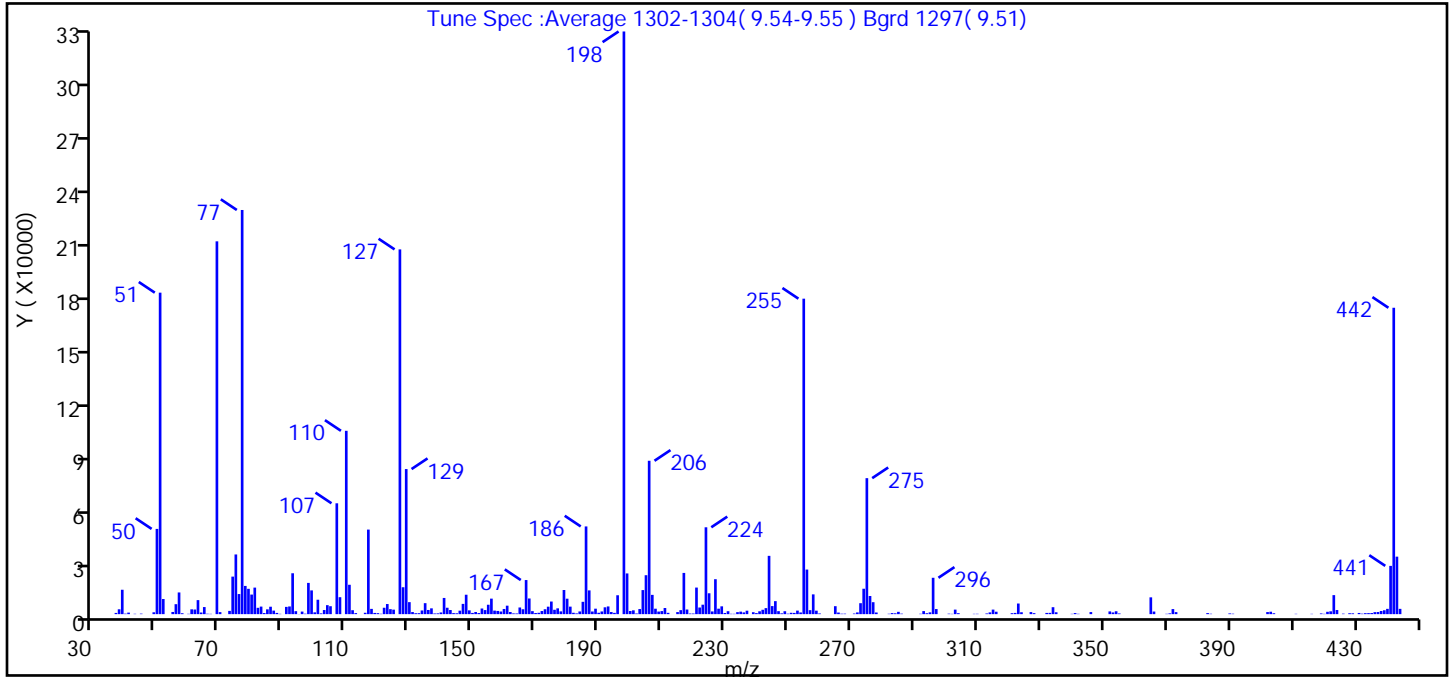
Reagents:

MB\_DFTPP\_WRK\_00365 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86990.b\U33155062.D  
 Injection Date: 17-Dec-2019 11:26:30 Instrument ID: HP5973U  
 Lims ID: DFTPP  
 Client ID:  
 Operator ID: bs ALS Bottle#: 2 Worklist Smp#: 2  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Method: 1,4\_Dx\_SIM\_HP5973U Limit Group: MB - 8270D SIM ID ICAL  
 Tune Method: DFTPP Method 8270D, BP 198

4 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	base peak, or >90% of 442	100.0 (190.2)
51	10-80% of the base peak	55.2
68	<2% of mass 69	0.0 (0.0)
69	Present	64.0
70	<2% of mass 69	0.3 (0.5)
127	10-80% of the base peak	62.6
197	<2% of mass 198	0.0
199	5-9% of mass 198	7.0
275	10-60% of the base peak	23.3
365	>1% of mass 198	2.9
441	present but <24% of mass 442	8.3 (15.8)
442	base peak, or >50% of 198	52.6
443	15-24% of mass 442	9.9 (18.8)

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86990.b\U33155062.D\1,4\_Dx\_SIM\_HP5973U.rslt\spc  
Injection Date: 17-Dec-2019 11:26:30  
Spectrum: Tune Spec :Average 1302-1304( 9.54-9.55 ) Bgrd 1297( 9.51)  
Base Peak: 198.00  
Minimum % Base Peak: 0  
Number of Points: 292

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	688	127.00	205568	201.00	2150	286.00	280
38.00	2738	128.00	15165	202.00	366	292.00	209
39.00	13744	129.00	81768	203.00	2879	293.00	1716
40.00	280	130.00	6764	204.00	13560	294.00	525
41.00	866	131.00	1178	205.00	21944	295.00	1007
43.00	199	132.00	518	206.00	86440	296.00	20496
45.00	288	133.00	540	207.00	10862	297.00	2871
49.00	1042	134.00	2073	208.00	3067	301.00	266
50.00	48040	135.00	6187	209.00	1454	302.00	168
51.00	181184	136.00	2354	210.00	1722	303.00	2553
52.00	8525	137.00	3271	211.00	3456	304.00	542
55.00	1225	138.00	379	212.00	738	309.00	176
56.00	5615	139.00	439	215.00	1158	310.00	195
57.00	12227	140.00	946	216.00	2244	313.00	385
58.00	517	141.00	9126	217.00	23232	314.00	987
60.00	185	142.00	3604	218.00	2610	315.00	2560
61.00	2709	143.00	2327	219.00	348	316.00	1365
62.00	2604	144.00	582	220.00	341	321.00	544
63.00	7902	145.00	483	221.00	14979	322.00	690
64.00	914	146.00	1952	222.00	3737	323.00	5990
65.00	3994	147.00	5782	223.00	5324	324.00	1072
66.00	228	148.00	10942	224.00	48952	327.00	1166
67.00	172	149.00	2140	225.00	11764	328.00	563
69.00	210112	150.00	691	226.00	1524	332.00	690
70.00	1140	151.00	1206	227.00	19688	333.00	724
73.00	1829	152.00	606	228.00	3074	334.00	3912
74.00	21152	153.00	3173	229.00	4402	335.00	1059
75.00	33640	154.00	2290	230.00	651	340.00	177
76.00	11326	155.00	5300	231.00	1652	341.00	603
77.00	227776	156.00	8745	232.00	201	342.00	191
78.00	15900	157.00	1984	233.00	192	346.00	1164
79.00	14272	158.00	1805	234.00	1135	352.00	1544
80.00	11031	159.00	1485	235.00	1409	353.00	959

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86990.b\U33155062.D\1\_4\_Dx\_SIM\_HP5973U.rsl\spc

Injection Date: 17-Dec-2019 11:26:30

Spectrum: Tune Spec :Average 1302-1304( 9.54-9.55 ) Bgrd 1297( 9.51)

Base Peak: 198.00

Minimum % Base Peak: 0

Number of Points: 292

m/z	Y	m/z	Y	m/z	Y	m/z	Y
81.00	14955	160.00	2910	236.00	977	354.00	1621
82.00	3567	161.00	4769	237.00	1939	355.00	380
83.00	4256	162.00	1204	239.00	1089	365.00	9467
84.00	604	163.00	422	240.00	597	366.00	1467
85.00	2703	164.00	375	241.00	1606	370.00	193
86.00	4185	165.00	3753	242.00	2457	371.00	439
87.00	1990	166.00	2755	243.00	3393	372.00	2854
88.00	695	167.00	19216	244.00	32856	373.00	1140
89.00	175	168.00	8824	245.00	4536	383.00	600
91.00	4091	169.00	1685	246.00	7327	384.00	229
92.00	4333	170.00	637	247.00	1675	390.00	405
93.00	23040	171.00	759	248.00	441	391.00	249
94.00	1674	172.00	1755	249.00	1645	402.00	1170
95.00	61	173.00	2756	250.00	260	403.00	1363
96.00	1446	174.00	4206	251.00	765	404.00	508
97.00	259	175.00	7107	252.00	696	411.00	180
98.00	17608	176.00	2465	253.00	1984	416.00	171
99.00	13383	177.00	3269	254.00	945	419.00	396
100.00	1011	178.00	1559	255.00	177792	420.00	178
101.00	8123	179.00	13601	256.00	25128	421.00	1327
102.00	430	180.00	8705	257.00	2240	422.00	1595
103.00	2319	181.00	4229	258.00	11145	423.00	10718
104.00	5065	182.00	772	259.00	1955	424.00	2325
105.00	4471	183.00	421	260.00	391	426.00	283
107.00	62472	184.00	1515	265.00	4486	428.00	515
108.00	9551	185.00	6948	266.00	907	429.00	463
110.00	103320	186.00	49432	267.00	247	431.00	662
111.00	16552	187.00	13389	268.00	273	432.00	269
112.00	2225	188.00	1491	271.00	344	433.00	544
113.00	587	189.00	3080	272.00	976	434.00	587
116.00	769	190.00	777	273.00	6171	435.00	627
117.00	47656	191.00	1512	274.00	14316	436.00	1132
118.00	2965	192.00	3852	275.00	76640	437.00	1196
119.00	682	193.00	4344	276.00	10221	438.00	1779

Report Date: 17-Dec-2019 15:08:04

Chrom Revision: 2.3 15-Dec-2019 06:20:02

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86990.b\U33155062.D\1,4\_Dx\_SIM\_HP5973U.rsl\sp

Injection Date: 17-Dec-2019 11:26:30

Spectrum: Tune Spec :Average 1302-1304( 9.54-9.55 ) Bgrd 1297( 9.51)

Base Peak: 198.00

Minimum % Base Peak: 0

Number of Points: 292

m/z	Y	m/z	Y	m/z	Y	m/z	Y
120.00	558	194.00	1185	277.00	6733	439.00	2188
121.00	211	195.00	720	278.00	927	440.00	2981
122.00	3602	196.00	10648	282.00	216	441.00	27200
123.00	5699	198.00	328384	283.00	598	442.00	172672
124.00	2807	199.00	22944	284.00	471	443.00	32400
125.00	2532	200.00	1771	285.00	1304	444.00	2981

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86990.b\U33155062.D

Injection Date: 17-Dec-2019 11:26:30

Instrument ID: HP5973U

Lims ID: DFTPP

Client ID:

Operator ID: bs

ALS Bottle#: 2

Worklist Smp#: 2

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

6 4,4'-DDT, Detector: MS SCAN

SW-846 Method

%Breakdown =  
(Area Breakdown Cpnds/  
Total Area Breakdown Cpnds) \* 100

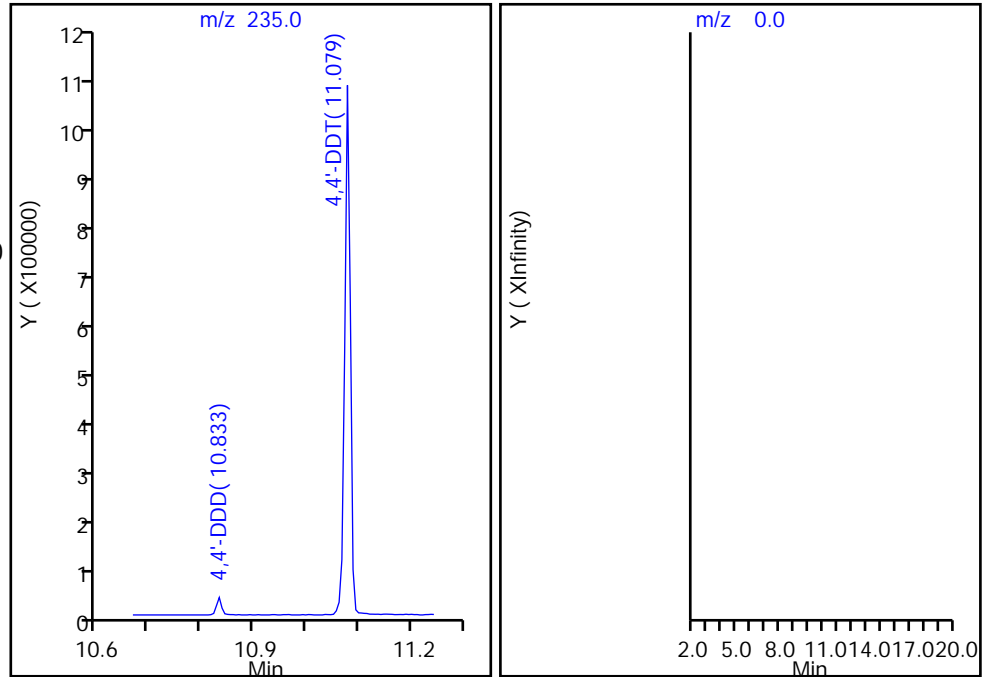
6 4,4'-DDT, Area = 775708

5 4,4'-DDD, Area = 23948

7 4,4'-DDE, Area = 0

%Breakdown: 2.99%, <= 20.00%

Passed



Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155092.D  
 Lims ID: DFTPP  
 Client ID:  
 Sample Type: DFTPP  
 Inject. Date: 17-Dec-2019 23:15:30 ALS Bottle#: 32 Worklist Smp#: 2  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 32  
 Operator ID: bs Instrument ID: HP5973U  
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 18-Dec-2019 12:07:27 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: Deconvolution ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D  
 Column 1 : Det: MS SCAN  
 Process Host: CTX1002

First Level Reviewer: schickr Date: 18-Dec-2019 12:03:58

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
4 DFTPP									
7 4,4'-DDE	246	10.817	10.817	0.000	0	548			NR
5 4,4'-DDD	235	10.828	10.828	0.000	94	69000			NR
6 4,4'-DDT	235	11.079	11.079	0.000	96	687103	NR		NR

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

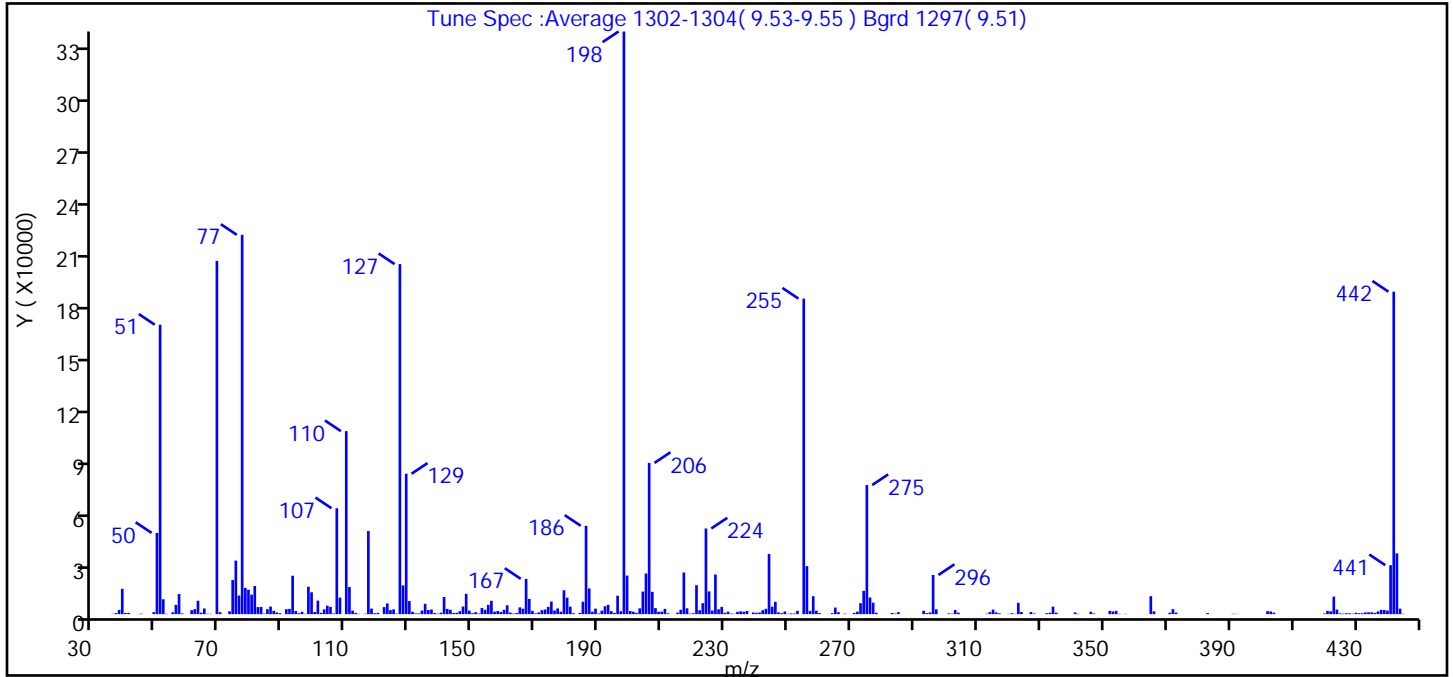
Reagents:

MB\_DFTPP\_WRK\_00365 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155092.D  
 Injection Date: 17-Dec-2019 23:15:30 Instrument ID: HP5973U  
 Lims ID: DFTPP  
 Client ID:  
 Operator ID: bs ALS Bottle#: 32 Worklist Smp#: 2  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Method: 1,4\_Dx\_SIM\_HP5973U Limit Group: MB - 8270D SIM ID ICAL  
 Tune Method: DFTPP Method 8270D, BP 198

4 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	base peak, or >90% of 442	100.0 (180.7)
51	10-80% of the base peak	49.7
68	<2% of mass 69	0.0 (0.0)
69	Present	60.6
70	<2% of mass 69	0.3 (0.6)
127	10-80% of the base peak	60.1
197	<2% of mass 198	0.5
199	5-9% of mass 198	6.6
275	10-60% of the base peak	22.2
365	>1% of mass 198	3.1
441	present but <24% of mass 442	8.4 (15.2)
442	base peak, or >50% of 198	55.3
443	15-24% of mass 442	10.4 (18.8)



Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155092.D\1,4\_Dx\_SIM\_HP5973U.rsl\sp  
Injection Date: 17-Dec-2019 23:15:30  
Spectrum: Tune Spec :Average 1302-1304( 9.53-9.55 ) Bgrd 1297( 9.51)  
Base Peak: 198.00  
Minimum % Base Peak: 0  
Number of Points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	168	124.00	2296	198.00	332800	285.00	1124
37.00	608	125.00	2743	199.00	22032	293.00	1917
38.00	2405	126.00	255	200.00	1777	294.00	568
39.00	14462	127.00	199936	201.00	1389	295.00	978
40.00	659	128.00	16400	202.00	733	296.00	22376
41.00	722	129.00	80192	203.00	3325	297.00	2726
44.00	106	130.00	7478	204.00	12903	301.00	434
45.00	287	131.00	1362	205.00	23232	302.00	293
49.00	1162	132.00	448	206.00	86376	303.00	2363
50.00	46384	133.00	433	207.00	12742	304.00	846
51.00	165312	134.00	2054	208.00	3448	313.00	276
52.00	8493	135.00	5894	209.00	1328	314.00	1167
53.00	220	136.00	2375	210.00	1453	315.00	2596
55.00	1027	137.00	2638	211.00	3009	316.00	1012
56.00	5302	138.00	626	212.00	461	317.00	469
57.00	11475	139.00	274	215.00	884	320.00	173
58.00	438	140.00	825	216.00	2522	321.00	548
61.00	2277	141.00	9787	217.00	23800	322.00	190
62.00	2895	142.00	2982	218.00	3335	323.00	6484
63.00	7669	143.00	2505	219.00	294	324.00	1240
64.00	839	144.00	688	220.00	504	327.00	1201
65.00	3230	145.00	772	221.00	16536	328.00	371
66.00	208	146.00	1707	222.00	2241	332.00	570
67.00	186	147.00	4327	223.00	6247	333.00	776
69.00	201792	148.00	11625	224.00	48912	334.00	4285
70.00	1125	149.00	1996	225.00	13013	335.00	866
73.00	1622	150.00	539	226.00	2054	341.00	944
74.00	19480	151.00	1122	227.00	22640	342.00	197
75.00	30576	152.00	345	228.00	2754	346.00	1371
76.00	10639	153.00	3548	229.00	4137	347.00	377
77.00	216640	154.00	2487	230.00	737	352.00	1900
78.00	15011	155.00	5326	231.00	1413	353.00	1517
79.00	13943	156.00	7616	232.00	313	354.00	1887

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155092.D\1\_4\_Dx\_SIM\_HP5973U.rslt\spc

Injection Date: 17-Dec-2019 23:15:30

Spectrum: Tune Spec :Average 1302-1304( 9.53-9.55 ) Bgrd 1297( 9.51)

Base Peak: 198.00

Minimum % Base Peak: 0

Number of Points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	11128	157.00	1423	233.00	209	355.00	190
81.00	16067	158.00	1798	234.00	1312	357.00	175
82.00	4008	159.00	1209	235.00	1600	365.00	10280
83.00	4117	160.00	2445	236.00	1404	366.00	1585
84.00	304	161.00	5056	237.00	1825	371.00	799
85.00	2860	162.00	890	239.00	930	372.00	2848
86.00	4345	163.00	317	240.00	777	373.00	913
87.00	1886	164.00	636	241.00	916	383.00	623
88.00	951	165.00	3885	242.00	2271	391.00	215
89.00	555	166.00	3103	243.00	3048	392.00	180
91.00	2829	167.00	20144	244.00	34392	402.00	1701
92.00	2996	168.00	8689	245.00	4253	403.00	1497
93.00	21936	169.00	1855	246.00	7076	404.00	839
94.00	1803	170.00	407	247.00	1023	420.00	381
95.00	540	171.00	962	248.00	583	421.00	1876
96.00	1364	172.00	2241	249.00	1524	422.00	1635
97.00	214	173.00	2648	250.00	210	423.00	10010
98.00	15642	174.00	4164	251.00	423	424.00	2587
99.00	12477	175.00	7193	252.00	356	425.00	413
100.00	1223	176.00	2088	253.00	1896	426.00	302
101.00	7732	177.00	3260	255.00	180224	427.00	521
102.00	753	178.00	1373	256.00	27416	428.00	480
103.00	2741	179.00	13620	257.00	1850	429.00	240
104.00	4835	180.00	9408	258.00	10254	430.00	784
105.00	4147	181.00	4265	259.00	1979	431.00	522
106.00	401	182.00	537	260.00	608	432.00	534
107.00	60488	184.00	696	264.00	584	433.00	975
108.00	9407	185.00	7101	265.00	3756	434.00	1061
110.00	104528	186.00	50448	266.00	1097	435.00	1040
111.00	15480	187.00	14667	268.00	285	436.00	747
112.00	2022	188.00	1407	271.00	712	437.00	1570
113.00	694	189.00	3152	272.00	1427	438.00	2450
114.00	184	190.00	391	273.00	6237	439.00	2376
116.00	236	191.00	1992	274.00	13288	440.00	2043

Report Date: 18-Dec-2019 12:07:27

Chrom Revision: 2.3 15-Dec-2019 06:20:02

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155092.D\1,4\_Dx\_SIM\_HP5973U.rslt\spc

Injection Date: 17-Dec-2019 23:15:30

Spectrum: Tune Spec :Average 1302-1304( 9.53-9.55 ) Bgrd 1297( 9.51)

Base Peak: 198.00

Minimum % Base Peak: 0

Number of Points: 291

m/z	Y	m/z	Y	m/z	Y	m/z	Y
117.00	47472	192.00	4502	275.00	73744	441.00	27976
118.00	3161	193.00	5312	276.00	9500	442.00	184192
119.00	522	194.00	1688	277.00	6523	443.00	34696
120.00	742	195.00	679	278.00	814	444.00	3156
122.00	4028	196.00	10513	283.00	691	445.00	215
123.00	6103	197.00	1654	284.00	299		

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155092.D

Injection Date: 17-Dec-2019 23:15:30

Instrument ID: HP5973U

Lims ID: DFTPP

Client ID:

Operator ID: bs

ALS Bottle#: 32

Worklist Smp#: 2

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

6 4,4'-DDT, Detector: MS SCAN

SW-846 Method

%Breakdown =

$$\left( \frac{\text{Area Breakdown Cpnds}}{\text{Total Area Breakdown Cpnds}} \right) * 100$$

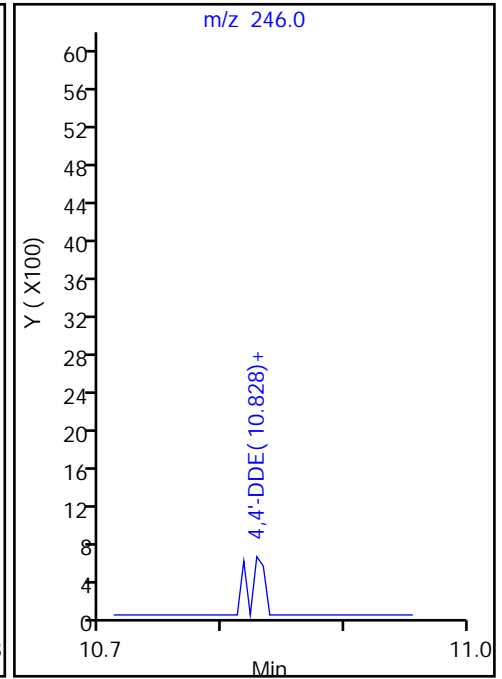
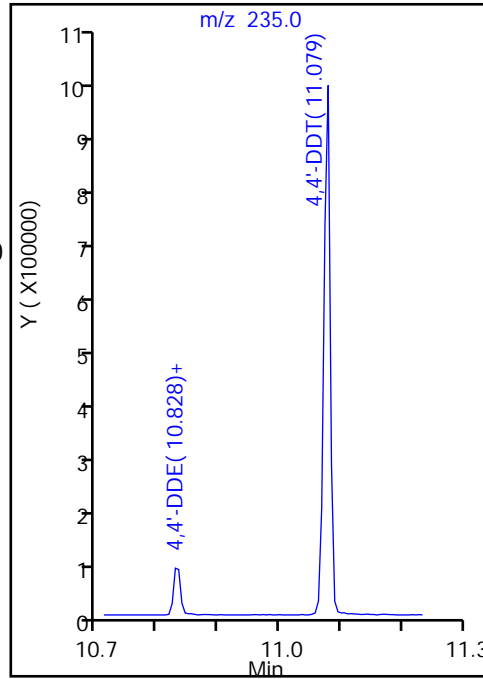
6 4,4'-DDT, Area = 687103

5 4,4'-DDD, Area = 69000

7 4,4'-DDE, Area = 548

%Breakdown: 9.19%, <= 20.00%

Passed



FORM I  
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 480-510121/1-A  
 Matrix: Water Lab File ID: U33155086.D  
 Analysis Method: 8270D SIM ID Date Collected: \_\_\_\_\_  
 Extract. Method: 3510C Date Extracted: 12/16/2019 15:35  
 Sample wt/vol: 1000 (mL) Date Analyzed: 12/17/2019 20:56  
 Con. Extract Vol.: 1 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) Level: (low/med) Low  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 510312 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	ND		0.20	0.10

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	32		15-110

Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86990.b\U33155086.D  
 Lims ID: MB 480-510121/1-A  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 17-Dec-2019 20:56:30 ALS Bottle#: 26 Worklist Smp#: 26  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 26  
 Operator ID: bs Instrument ID: HP5973U  
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191217-86990.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 18-Dec-2019 11:30:27 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: RT Order ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D  
 Column 1 : Det: MS SCAN  
 Process Host: CTX1002

First Level Reviewer: schickr Date: 18-Dec-2019 11:29:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
D 1 1,4-Dioxane-d8	96	2.138	2.060	0.078	91	154269	10.0	3.22	M
3 1,4-Dioxane	88		2.093					ND	U
* 2 1,4-Dichlorobenzene-d4	152	5.487	5.479	0.008	99	390746	4.00	4.00	

**QC Flag Legend**

Review Flags

M - Manually Integrated

U - Marked Undetected

**Reagents:**

MB\_LLIS\_WRK\_00184 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86990.b\U33155086.D

Injection Date: 17-Dec-2019 20:56:30

Instrument ID: HP5973U

Operator ID: bs

Lims ID: MB 480-510121/1-A

Worklist Smp#: 26

Client ID:

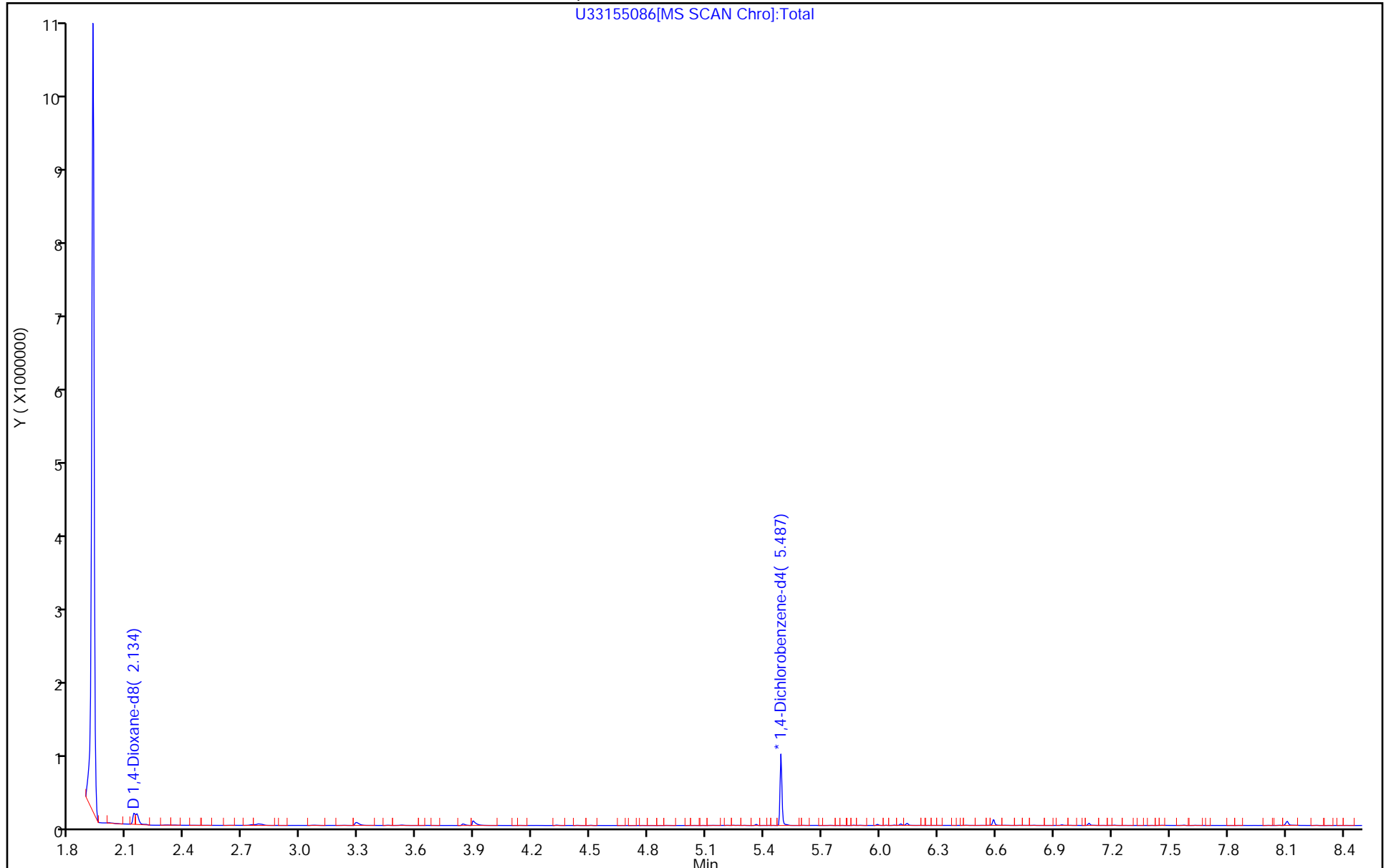
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 26

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86990.b\U33155086.D

Injection Date: 17-Dec-2019 20:56:30

Instrument ID: HP5973U

Lims ID: MB 480-510121/1-A

Client ID:

Operator ID: bs

ALS Bottle#: 26

Worklist Smp#: 26

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

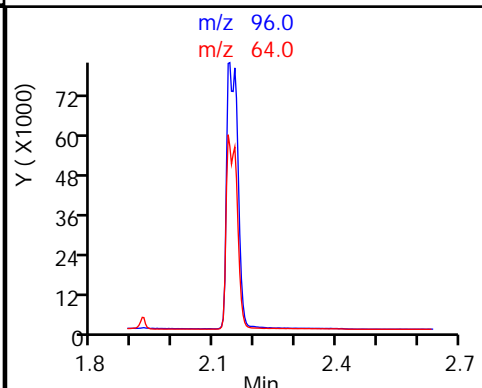
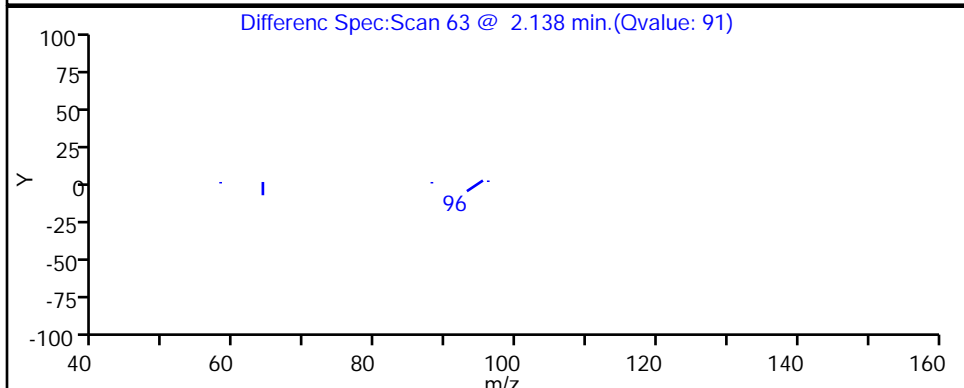
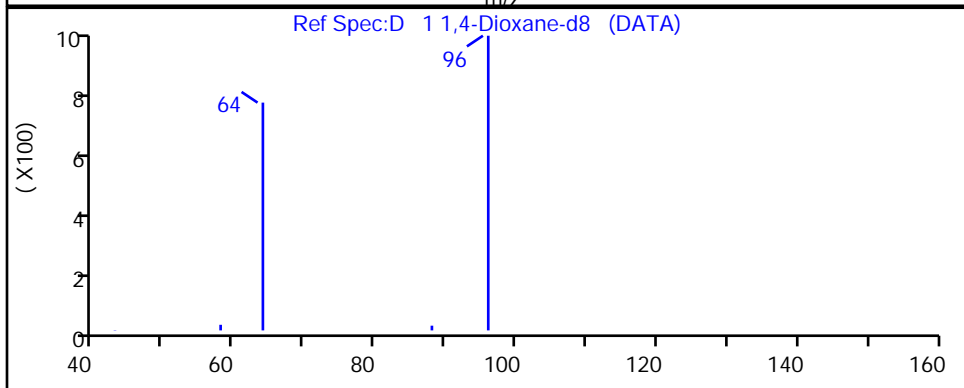
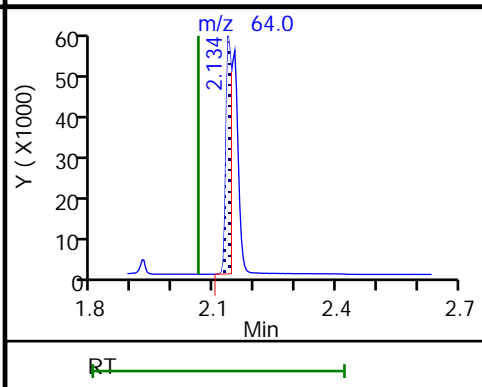
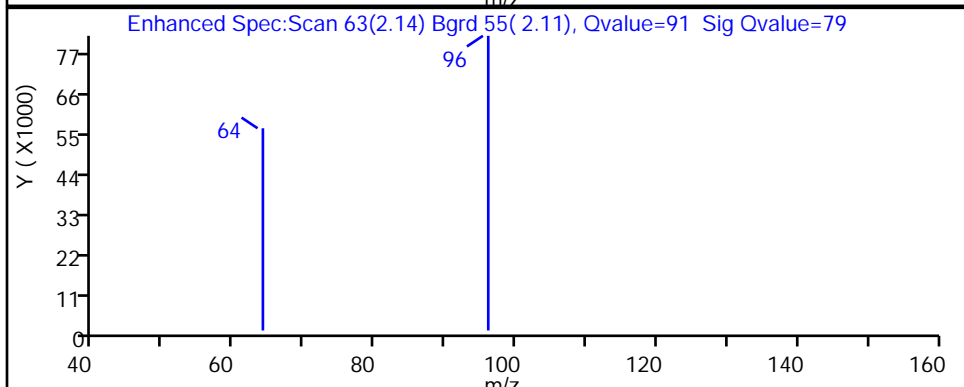
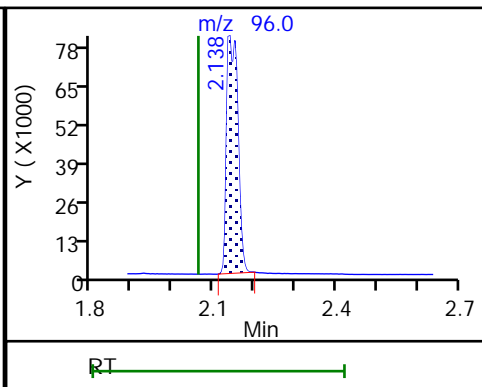
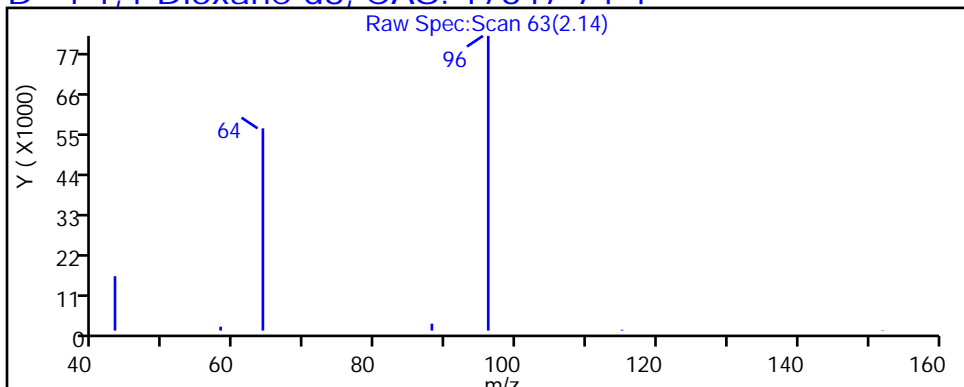
Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

Column:

Detector MS SCAN

D 1 1,4-Dioxane-d8, CAS: 17647-74-4





Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86990.b\U33155086.D

Injection Date: 17-Dec-2019 20:56:30

Instrument ID: HP5973U

Lims ID: MB 480-510121/1-A

Client ID:

Operator ID: bs

ALS Bottle#: 26

Worklist Smp#: 26

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

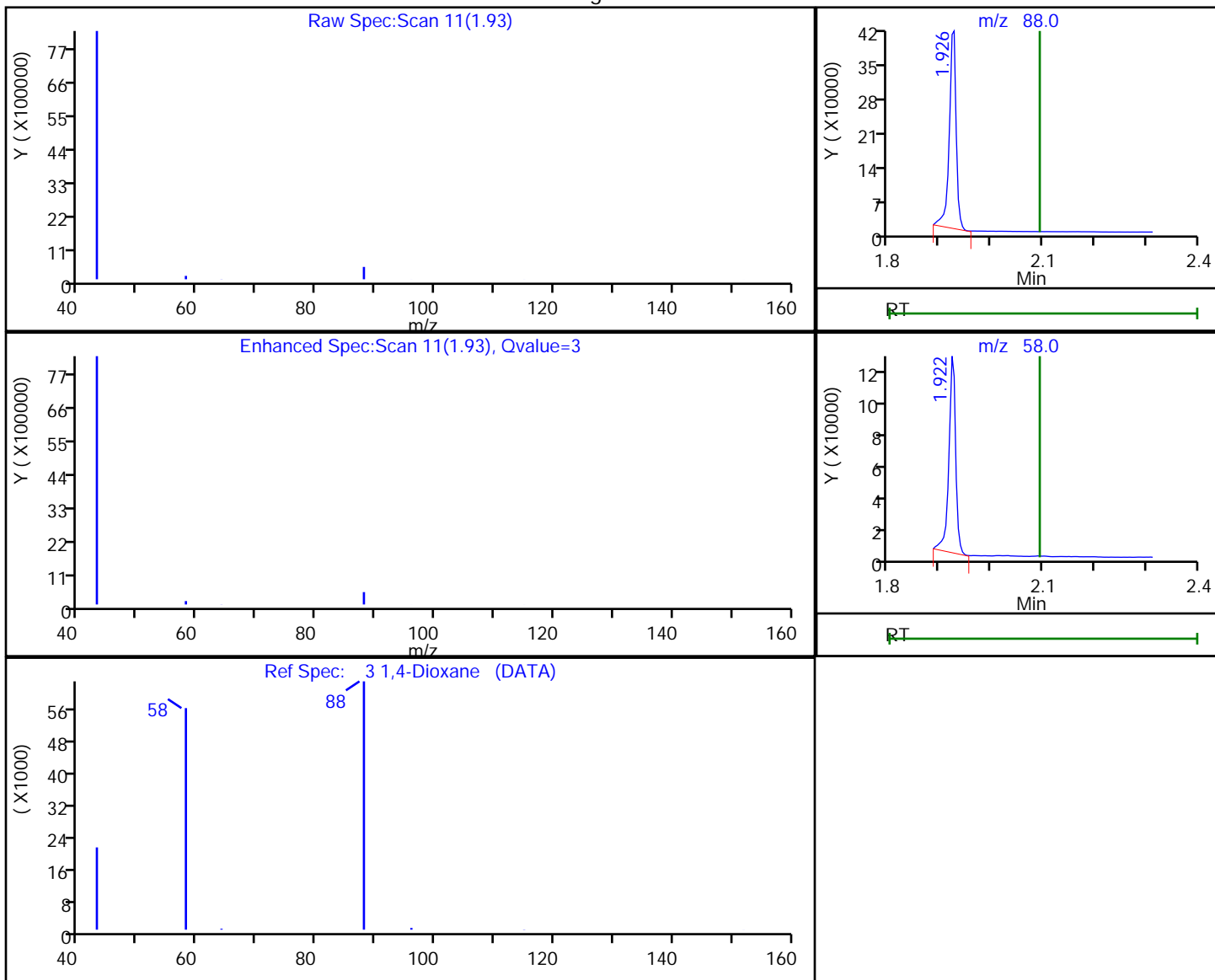
Column:

Detector

MS SCAN

3 1,4-Dioxane, CAS: 123-91-1

Processing Results



RT	Mass	Response	Amount
1.93	88.00	378120	24.494288
1.92	58.00	112807	

Reviewer: schickr, 18-Dec-2019 11:29:18

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

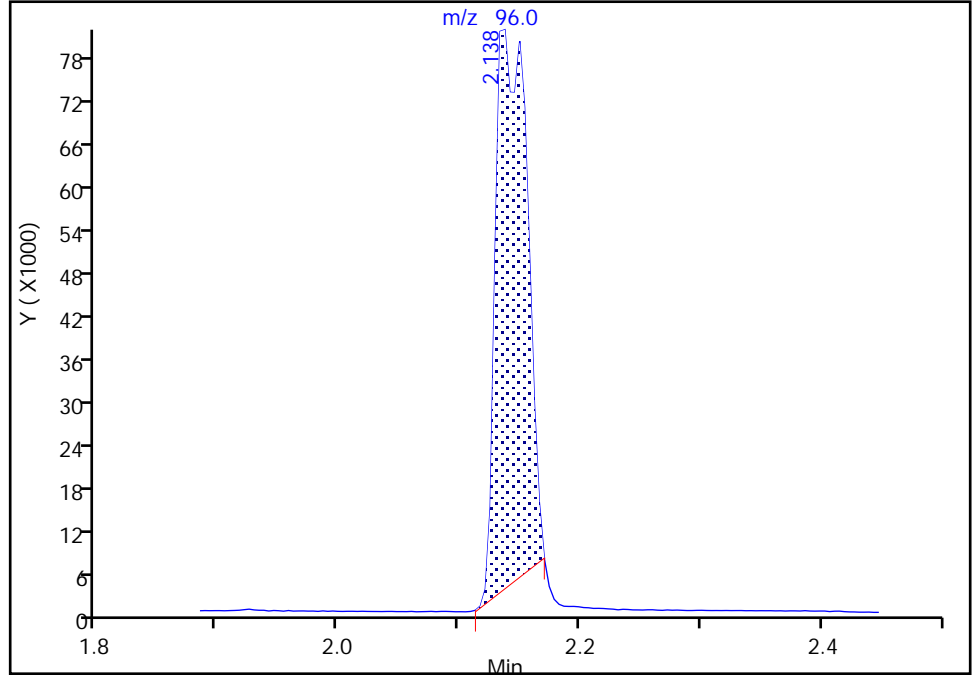
Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86990.b\U33155086.D  
Injection Date: 17-Dec-2019 20:56:30 Instrument ID: HP5973U  
Lims ID: MB 480-510121/1-A  
Client ID:  
Operator ID: bs ALS Bottle#: 26 Worklist Smp#: 26  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 1,4\_Dx\_SIM\_HP5973U Limit Group: MB - 8270D SIM ID ICAL  
Column: Detector MS SCAN

D 1 1,4-Dioxane-d8, CAS: 17647-74-4  
Signal: 1

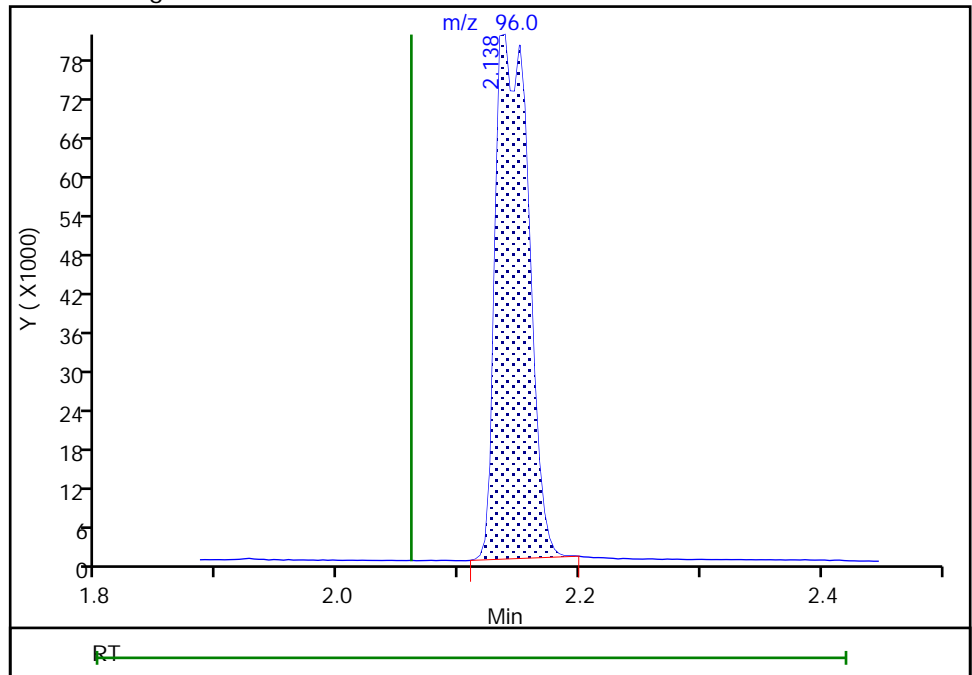
RT: 2.14  
Area: 140285  
Amount: 2.932199  
Amount Units: ng/ul

Processing Integration Results



RT: 2.14  
Area: 154269  
Amount: 3.224489  
Amount Units: ng/ul

Manual Integration Results



FORM I  
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 480-510121/2-A  
 Matrix: Water Lab File ID: U33155087.D  
 Analysis Method: 8270D SIM ID Date Collected: \_\_\_\_\_  
 Extract. Method: 3510C Date Extracted: 12/16/2019 15:35  
 Sample wt/vol: 1000 (mL) Date Analyzed: 12/17/2019 21:19  
 Con. Extract Vol.: 1 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) Level: (low/med) Low  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 510312 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.14		0.20	0.10

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	24		15-110

Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86990.b\U33155087.D  
 Lims ID: LCS 480-510121/2-A  
 Client ID:  
 Sample Type: LCS  
 Inject. Date: 17-Dec-2019 21:19:30 ALS Bottle#: 27 Worklist Smp#: 27  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 27  
 Operator ID: bs Instrument ID: HP5973U  
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191217-86990.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 18-Dec-2019 11:30:27 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: RT Order ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D  
 Column 1 : Det: MS SCAN  
 Process Host: CTX1002

First Level Reviewer: schickr Date: 18-Dec-2019 11:30:05

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
D 1 1,4-Dioxane-d8	96	2.174	2.060	0.114	90	134708	10.0	2.38	
3 1,4-Dioxane	88	2.207	2.093	0.114	63	16867	1.00	1.14	
* 2 1,4-Dichlorobenzene-d4	152	5.491	5.479	0.012	98	462187	4.00	4.00	

Reagents:

MB\_LLIS\_WRK\_00184 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86990.b\U33155087.D

Injection Date: 17-Dec-2019 21:19:30

Instrument ID: HP5973U

Operator ID: bs

Lims ID: LCS 480-510121/2-A

Worklist Smp#: 27

Client ID:

Injection Vol: 1.0 ul

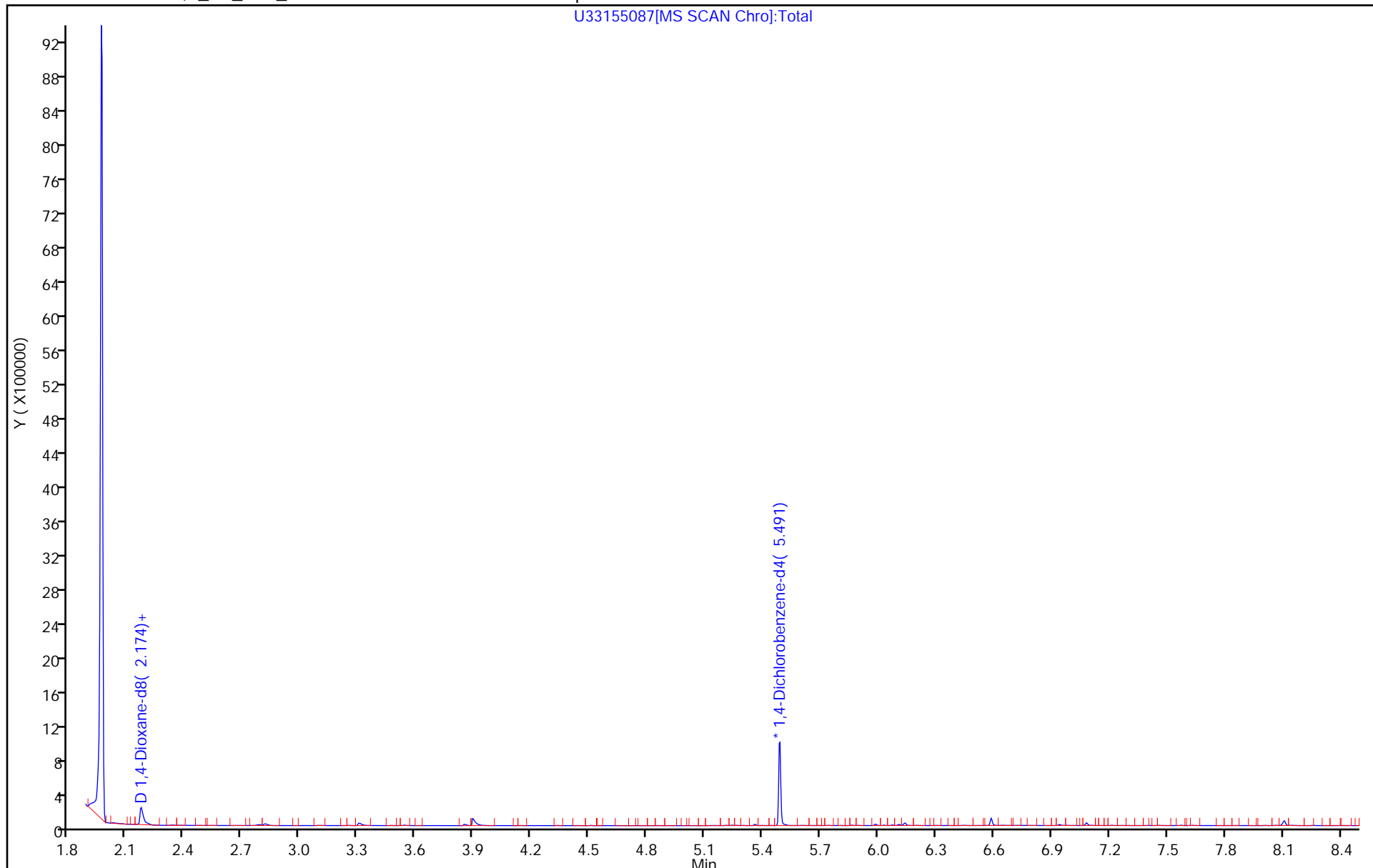
Dil. Factor: 1.0000

ALS Bottle#: 27

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

U33155087[MS SCAN Chro]:Total



FORM I  
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS RW 1 DER MS Lab Sample ID: 480-164221-3 MS  
 Matrix: Water Lab File ID: U33155088.D  
 Analysis Method: 8270D SIM ID Date Collected: 12/12/2019 12:10  
 Extract. Method: 3510C Date Extracted: 12/16/2019 15:35  
 Sample wt/vol: 1000 (mL) Date Analyzed: 12/17/2019 21:42  
 Con. Extract Vol.: 1 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) Level: (low/med) Low  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 510312 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.15		0.20	0.10

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	32		15-110

Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86990.b\U33155088.D  
 Lims ID: 480-164221-A-3-A MS  
 Client ID: CS RW 1 DER  
 Sample Type: MS  
 Inject. Date: 17-Dec-2019 21:42:30 ALS Bottle#: 28 Worklist Smp#: 28  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 28  
 Operator ID: bs Instrument ID: HP5973U  
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191217-86990.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 18-Dec-2019 11:30:27 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: RT Order ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D  
 Column 1 : Det: MS SCAN  
 Process Host: CTX1002

First Level Reviewer: schickr Date: 18-Dec-2019 11:30:09

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
D 1 1,4-Dioxane-d8	96	2.170	2.060	0.110	95	125658	10.0	3.15	
3 1,4-Dioxane	88	2.203	2.093	0.110	64	15899	1.00	1.15	
* 2 1,4-Dichlorobenzene-d4	152	5.491	5.479	0.012	98	325597	4.00	4.00	
5 4,4'-DDD	235		10.833					ND	
7 4,4'-DDE	246		10.839					ND	
6 4,4'-DDT	235		11.079					ND	

Reagents:

MB\_LLIS\_WRK\_00184 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86990.b\U33155088.D

Injection Date: 17-Dec-2019 21:42:30

Instrument ID: HP5973U

Operator ID: bs

Lims ID: 480-164221-A-3-A MS

Worklist Smp#: 28

Client ID: CS RW 1 DER

Injection Vol: 1.0 ul

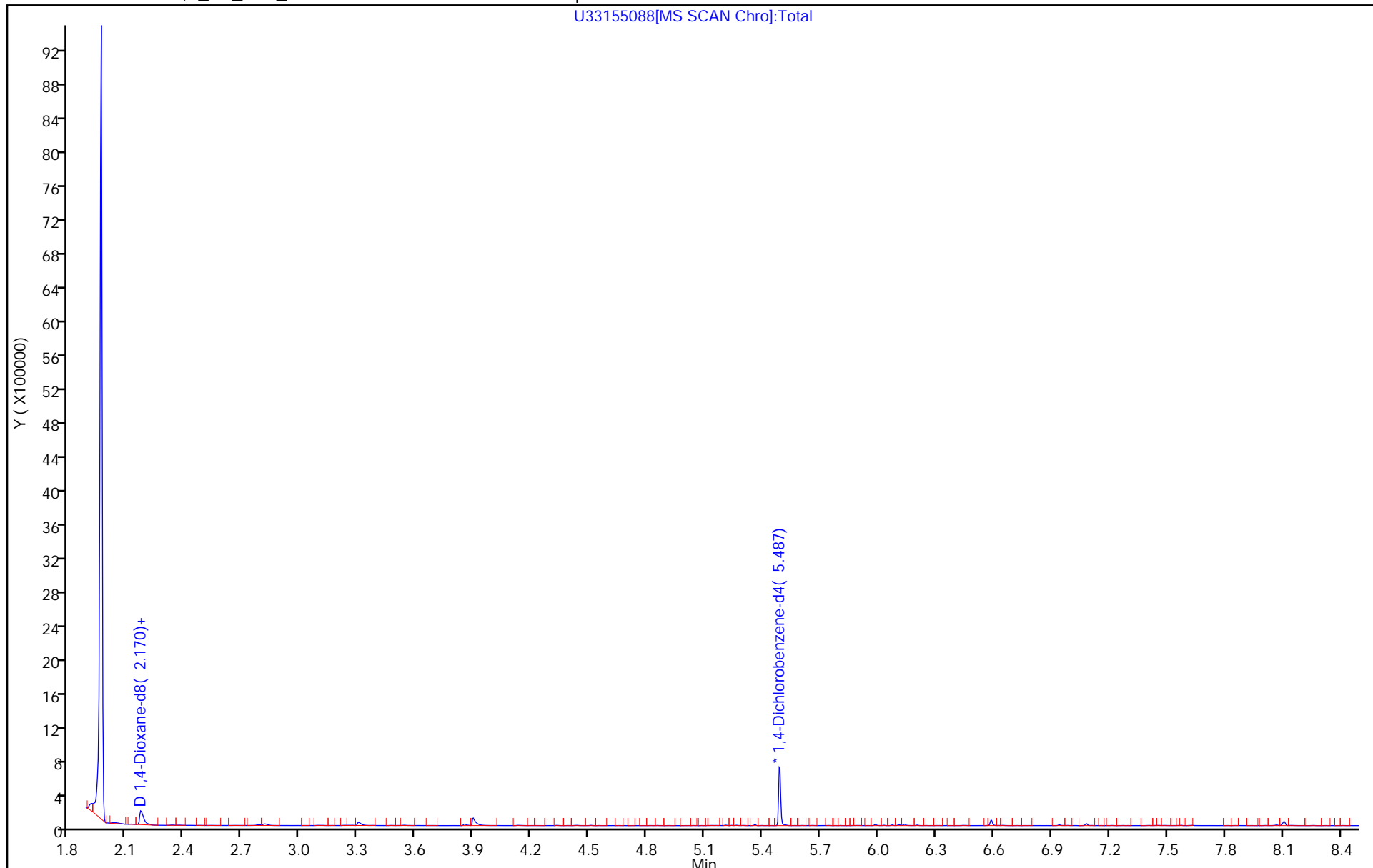
Dil. Factor: 1.0000

ALS Bottle#: 28

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

U33155088[MS SCAN Chro]:Total





FORM I  
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS SW 04 DER MS Lab Sample ID: 480-164221-4 MS  
 Matrix: Water Lab File ID: U33155094.D  
 Analysis Method: 8270D SIM ID Date Collected: 12/12/2019 11:31  
 Extract. Method: 3510C Date Extracted: 12/16/2019 15:35  
 Sample wt/vol: 1000 (mL) Date Analyzed: 12/18/2019 00:06  
 Con. Extract Vol.: 1 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) Level: (low/med) Low  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 510313 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.17		0.20	0.10

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	32		15-110

Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155094.D  
 Lims ID: 480-164221-B-4-A MS  
 Client ID: CS SW 04 DER  
 Sample Type: MS  
 Inject. Date: 18-Dec-2019 00:06:30 ALS Bottle#: 34 Worklist Smp#: 4  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 34  
 Operator ID: bs Instrument ID: HP5973U  
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 18-Dec-2019 12:07:28 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: RT Order ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D  
 Column 1 : Det: MS SCAN  
 Process Host: CTX1002

First Level Reviewer: schickr Date: 18-Dec-2019 12:04:47

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
D 1 1,4-Dioxane-d8	96	2.174	2.056	0.118	93	129956	10.0	3.16	
3 1,4-Dioxane	88	2.207	2.093	0.114	61	16796	1.00	1.17	
* 2 1,4-Dichlorobenzene-d4	152	5.487	5.479	0.008	100	335568	4.00	4.00	
7 4,4'-DDE	246		10.817					ND	
5 4,4'-DDD	235		10.828					ND	
6 4,4'-DDT	235		11.079					ND	

Reagents:

MB\_LLIS\_WRK\_00184 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155094.D

Injection Date: 18-Dec-2019 00:06:30

Instrument ID: HP5973U

Operator ID: bs

Lims ID: 480-164221-B-4-A MS

Worklist Smp#: 4

Client ID: CS SW 04 DER

Injection Vol: 1.0 ul

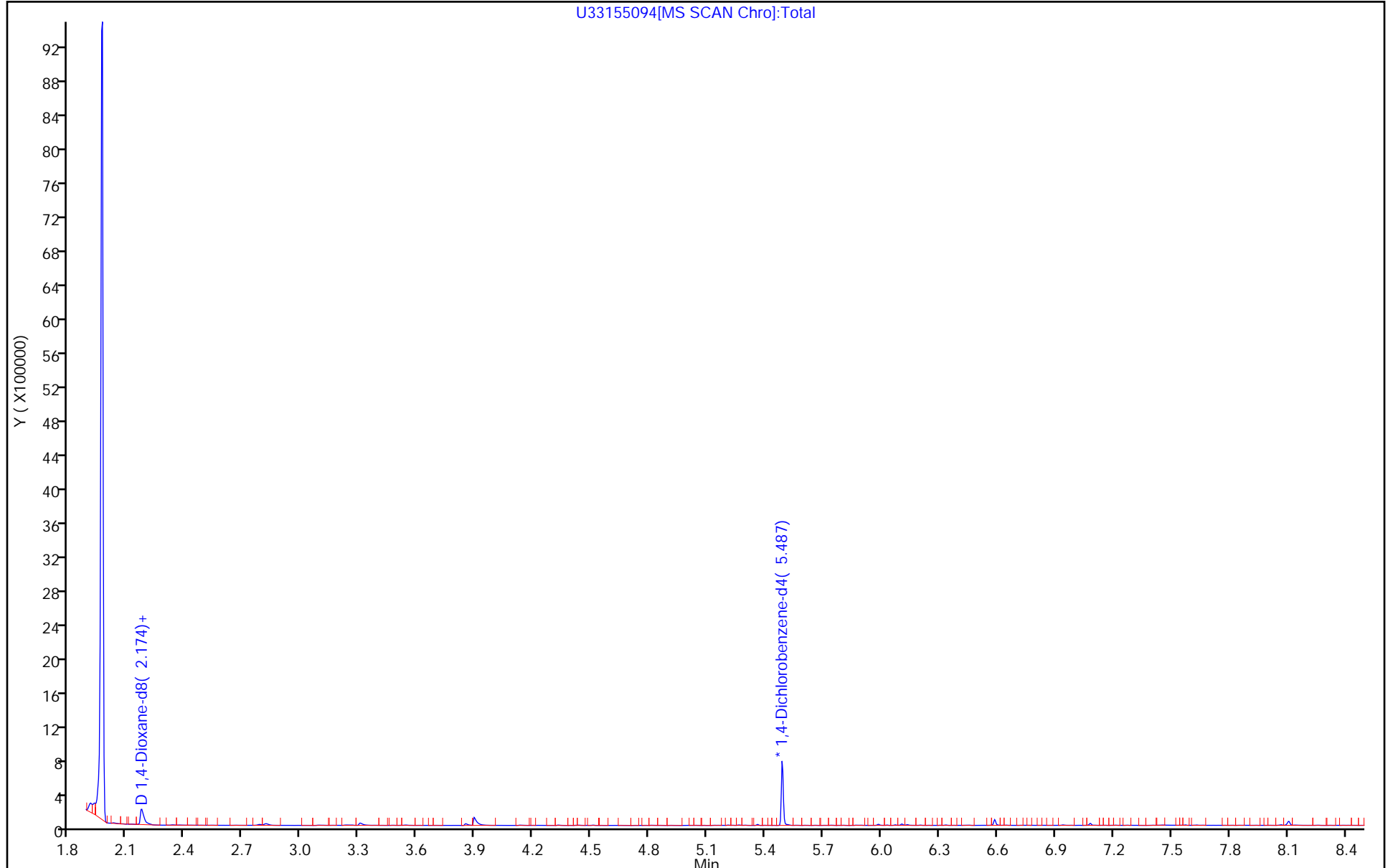
Dil. Factor: 1.0000

ALS Bottle#: 34

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

U33155094[MS SCAN Chro]:Total



FORM I  
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS RW 1 DER MSD Lab Sample ID: 480-164221-3 MSD  
 Matrix: Water Lab File ID: U33155089.D  
 Analysis Method: 8270D SIM ID Date Collected: 12/12/2019 12:10  
 Extract. Method: 3510C Date Extracted: 12/16/2019 15:35  
 Sample wt/vol: 1000 (mL) Date Analyzed: 12/17/2019 22:05  
 Con. Extract Vol.: 1 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) Level: (low/med) Low  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 510312 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.17		0.20	0.10

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	36		15-110

Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86990.b\U33155089.D  
 Lims ID: 480-164221-B-3-A MSD  
 Client ID: CS RW 1 DER  
 Sample Type: MSD  
 Inject. Date: 17-Dec-2019 22:05:30 ALS Bottle#: 29 Worklist Smp#: 29  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 29  
 Operator ID: bs Instrument ID: HP5973U  
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191217-86990.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 18-Dec-2019 11:30:27 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: RT Order ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D  
 Column 1 : Det: MS SCAN  
 Process Host: CTX1002

First Level Reviewer: schickr Date: 18-Dec-2019 11:30:16

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
D 1 1,4-Dioxane-d8	96	2.183	2.060	0.123	93	137103	10.0	3.57	
3 1,4-Dioxane	88	2.215	2.093	0.122	60	17623	1.00	1.17	a
* 2 1,4-Dichlorobenzene-d4	152	5.491	5.479	0.012	98	313643	4.00	4.00	
5 4,4'-DDD	235		10.833					ND	
7 4,4'-DDE	246		10.839					ND	
6 4,4'-DDT	235		11.079					ND	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

MB\_LLIS\_WRK\_00184 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86990.b\U33155089.D

Injection Date: 17-Dec-2019 22:05:30

Instrument ID: HP5973U

Operator ID: bs

Lims ID: 480-164221-B-3-A MSD

Worklist Smp#: 29

Client ID: CS RW 1 DER

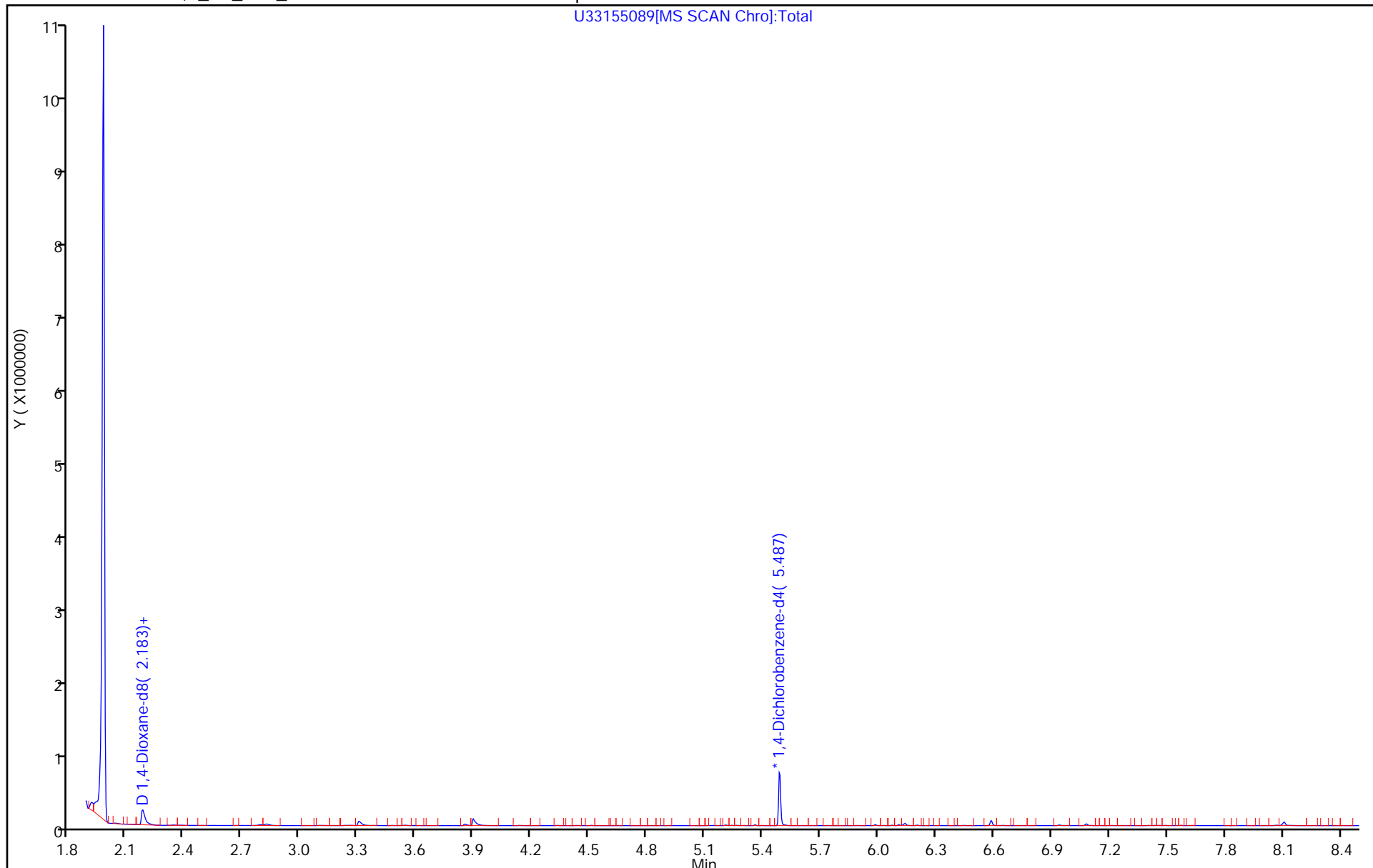
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 29

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL



Eurofins TestAmerica, Buffalo

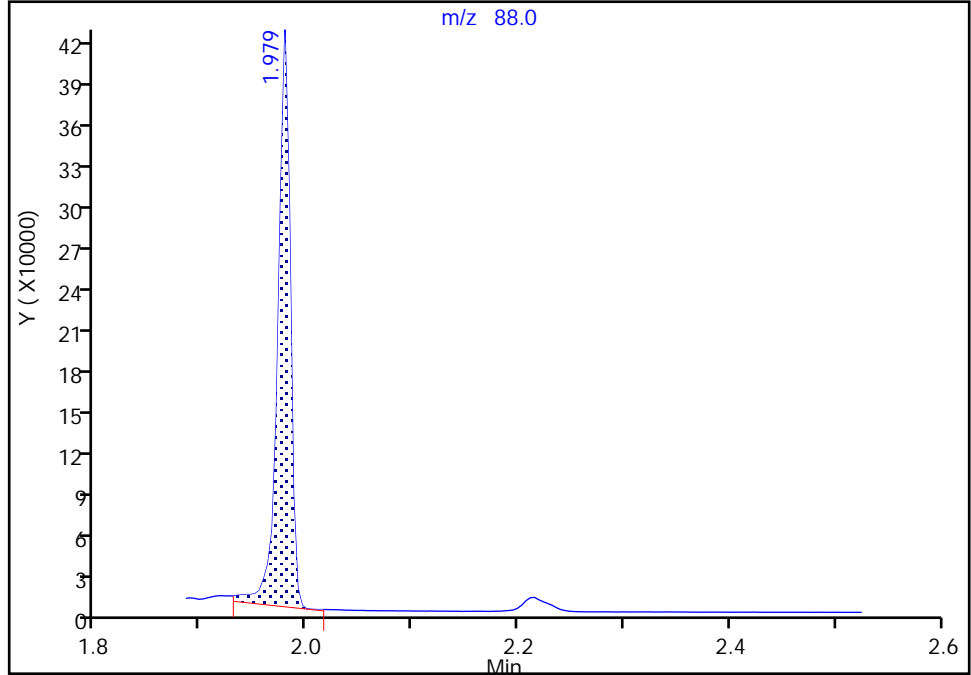
Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86990.b\U33155089.D  
Injection Date: 17-Dec-2019 22:05:30 Instrument ID: HP5973U  
Lims ID: 480-164221-B-3-A MSD  
Client ID: CS RW 1 DER  
Operator ID: bs ALS Bottle#: 29 Worklist Smp#: 29  
Injection Vol: 1.0 ul Dil. Factor: 1.0000  
Method: 1,4\_Dx\_SIM\_HP5973U Limit Group: MB - 8270D SIM ID ICAL  
Column: Detector MS SCAN

3 1,4-Dioxane, CAS: 123-91-1

Signal: 1

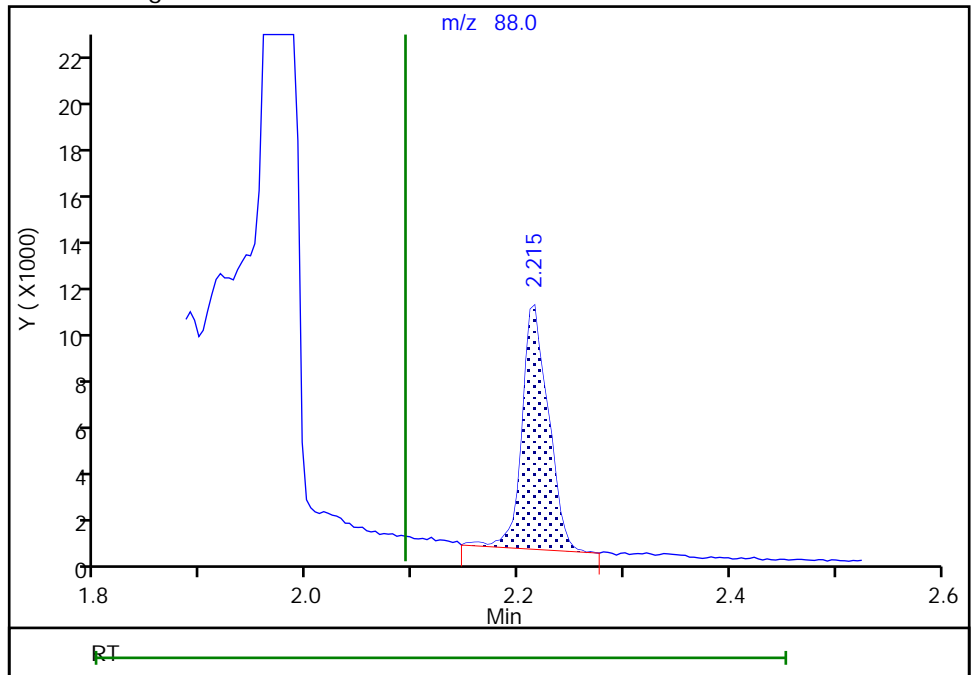
RT: 1.98  
Area: 340082  
Amount: 22.541515  
Amount Units: ng/ul

Processing Integration Results



RT: 2.22  
Area: 17623  
Amount: 1.168098  
Amount Units: ng/ul

Manual Integration Results



Reviewer: schickr, 18-Dec-2019 11:30:13  
Audit Action: Assigned Compound ID

Audit Reason: Peak assignment corrected

FORM I  
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS SW 04 DER MSD Lab Sample ID: 480-164221-4 MSD  
 Matrix: Water Lab File ID: U33155095.D  
 Analysis Method: 8270D SIM ID Date Collected: 12/12/2019 11:31  
 Extract. Method: 3510C Date Extracted: 12/16/2019 15:35  
 Sample wt/vol: 1000 (mL) Date Analyzed: 12/18/2019 00:30  
 Con. Extract Vol.: 1 (mL) Dilution Factor: 1  
 Injection Volume: 1 (uL) Level: (low/med) Low  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 510313 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.21		0.20	0.10

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	30		15-110



Eurofins TestAmerica, Buffalo  
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155095.D  
 Lims ID: 480-164221-B-4-B MSD  
 Client ID: CS SW 04 DER  
 Sample Type: MSD  
 Inject. Date: 18-Dec-2019 00:30:30 ALS Bottle#: 35 Worklist Smp#: 5  
 Injection Vol: 1.0 ul Dil. Factor: 1.0000  
 Sample Info: 35  
 Operator ID: bs Instrument ID: HP5973U  
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\1,4\_Dx\_SIM\_HP5973U.m  
 Limit Group: MB - 8270D SIM ID ICAL  
 Last Update: 18-Dec-2019 12:07:28 Calib Date: 25-Nov-2019 12:16:30  
 Integrator: Picker ID Type: RT Order ID  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20191125-86424.b\U33154646.D

Column 1 : Det: MS SCAN  
 Process Host: CTX1002

First Level Reviewer: schickr Date: 18-Dec-2019 12:04:52

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng/ul	OnCol Amt ng/ul	Flags
D 1 1,4-Dioxane-d8	96	2.175	2.056	0.119	94	119208	10.0	3.05	
3 1,4-Dioxane	88	2.207	2.093	0.114	60	15845	1.00	1.21	E
* 2 1,4-Dichlorobenzene-d4	152	5.487	5.479	0.008	100	319344	4.00	4.00	
7 4,4'-DDE	246		10.817					ND	
5 4,4'-DDD	235		10.828					ND	
6 4,4'-DDT	235		11.079					ND	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Reagents:

MB\_LLIS\_WRK\_00184 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191217-86992.b\U33155095.D

Injection Date: 18-Dec-2019 00:30:30

Instrument ID: HP5973U

Operator ID: bs

Lims ID: 480-164221-B-4-B MSD

Worklist Smp#: 5

Client ID: CS SW 04 DER

Injection Vol: 1.0 ul

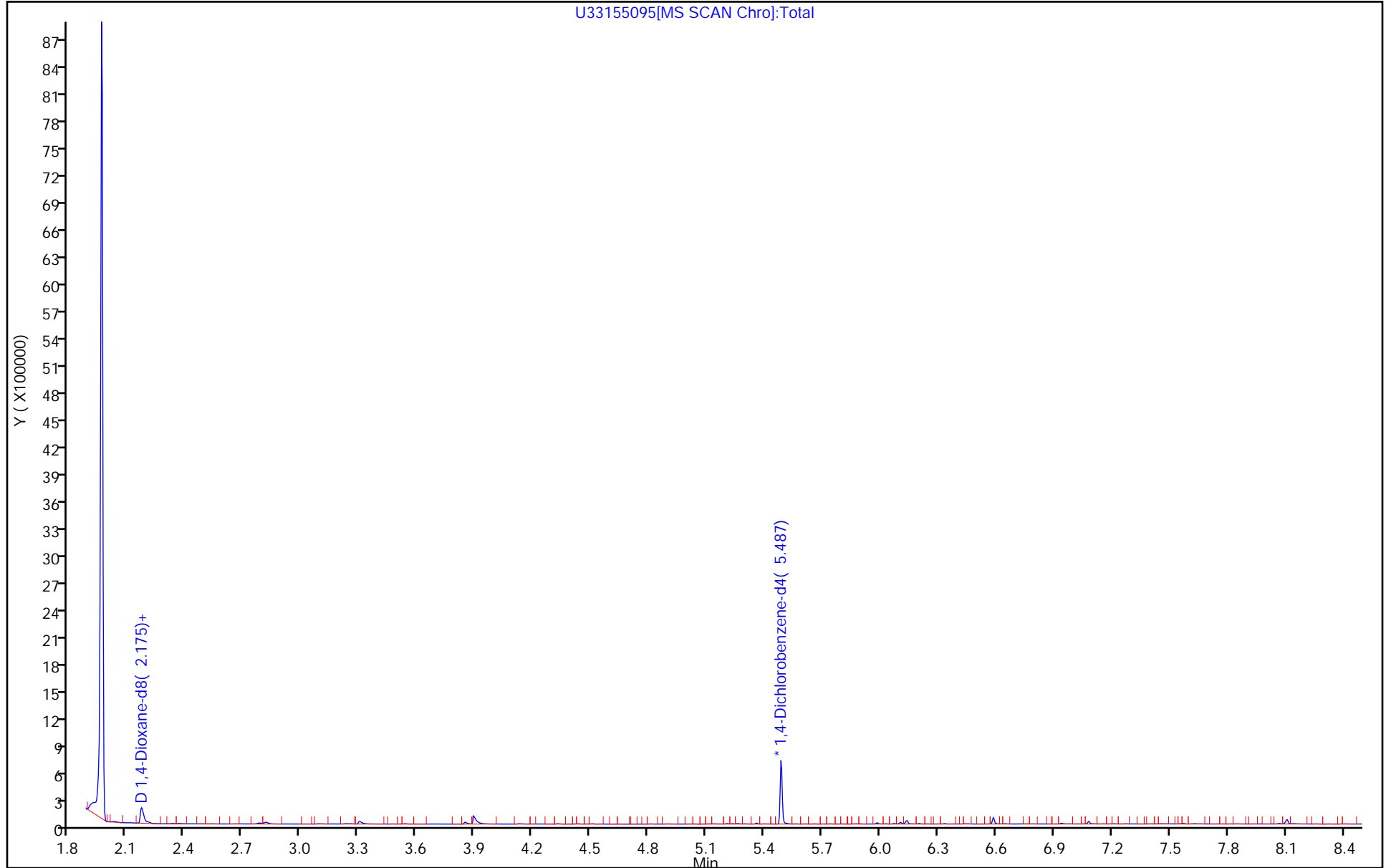
Dil. Factor: 1.0000

ALS Bottle#: 35

Method: 1,4\_Dx\_SIM\_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

U33155095[MS SCAN Chrom]:Total



## GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, BuffaloJob No.: 480-164221-1

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

Instrument ID: HP5973UStart Date: 11/25/2019 09:52Analysis Batch Number: 506566End Date: 11/25/2019 17:44

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 480-506566/2		11/25/2019 09:52	1	U33154640.D	RXI-5Sil MS(0.5 0.25 (mm))
IC 480-506566/3		11/25/2019 10:19	1	U33154641.D	RXI-5Sil MS(0.5 0.25 (mm))
IC 480-506566/4		11/25/2019 10:43	1	U33154642.D	RXI-5Sil MS(0.5 0.25 (mm))
ICIS 480-506566/5		11/25/2019 11:06	1	U33154643.D	RXI-5Sil MS(0.5 0.25 (mm))
IC 480-506566/6		11/25/2019 11:29	1	U33154644.D	RXI-5Sil MS(0.5 0.25 (mm))
IC 480-506566/7		11/25/2019 11:53	1	U33154645.D	RXI-5Sil MS(0.5 0.25 (mm))
IC 480-506566/8		11/25/2019 12:16	1	U33154646.D	RXI-5Sil MS(0.5 0.25 (mm))
ICV 480-506566/9		11/25/2019 12:39	1		RXI-5Sil MS(0.5 0.25 (mm))
CCVIS 480-506566/10		11/25/2019 13:03	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		11/25/2019 13:27	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		11/25/2019 13:50	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		11/25/2019 14:14	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		11/25/2019 14:38	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		11/25/2019 15:01	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		11/25/2019 15:25	5		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		11/25/2019 15:48	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		11/25/2019 16:11	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		11/25/2019 16:34	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		11/25/2019 16:58	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		11/25/2019 17:21	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		11/25/2019 17:44	1		RXI-5Sil MS(0.5 0.25 (mm))

## GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, BuffaloJob No.: 480-164221-1

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

Instrument ID: HP5973UStart Date: 12/17/2019 11:26Analysis Batch Number: 510312End Date: 12/17/2019 22:29

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 480-510312/2		12/17/2019 11:26	1	U33155062.D	RXI-5Sil MS(0.5 0.25 (mm))
CCVIS 480-510312/3		12/17/2019 11:53	1	U33155063.D	RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		12/17/2019 12:17	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		12/17/2019 13:27	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		12/17/2019 13:50	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		12/17/2019 14:14	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		12/17/2019 14:37	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		12/17/2019 15:01	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		12/17/2019 15:25	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		12/17/2019 15:48	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		12/17/2019 16:12	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		12/17/2019 16:36	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		12/17/2019 17:00	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		12/17/2019 17:24	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		12/17/2019 17:48	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		12/17/2019 18:12	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		12/17/2019 18:36	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		12/17/2019 18:59	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		12/17/2019 19:23	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		12/17/2019 19:46	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		12/17/2019 20:09	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		12/17/2019 20:32	1		RXI-5Sil MS(0.5 0.25 (mm))
MB 480-510121/1-A		12/17/2019 20:56	1	U33155086.D	RXI-5Sil MS(0.5 0.25 (mm))
LCS 480-510121/2-A		12/17/2019 21:19	1	U33155087.D	RXI-5Sil MS(0.5 0.25 (mm))
480-164221-3 MS		12/17/2019 21:42	1	U33155088.D	RXI-5Sil MS(0.5 0.25 (mm))
480-164221-3 MSD		12/17/2019 22:05	1	U33155089.D	RXI-5Sil MS(0.5 0.25 (mm))
480-164221-3		12/17/2019 22:29	1	U33155090.D	RXI-5Sil MS(0.5 0.25 (mm))

## GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, BuffaloJob No.: 480-164221-1

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

Instrument ID: HP5973UStart Date: 12/17/2019 23:15Analysis Batch Number: 510313End Date: 12/18/2019 05:55

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 480-510313/2		12/17/2019 23:15	1	U33155092.D	RXI-5Sil MS(0.5 0.25 (mm))
CCVIS 480-510313/3		12/17/2019 23:43	1	U33155093.D	RXI-5Sil MS(0.5 0.25 (mm))
480-164221-4 MS		12/18/2019 00:06	1	U33155094.D	RXI-5Sil MS(0.5 0.25 (mm))
480-164221-4 MSD		12/18/2019 00:30	1	U33155095.D	RXI-5Sil MS(0.5 0.25 (mm))
480-164221-4		12/18/2019 00:53	1	U33155096.D	RXI-5Sil MS(0.5 0.25 (mm))
480-164221-1		12/18/2019 01:16	1	U33155097.D	RXI-5Sil MS(0.5 0.25 (mm))
480-164221-2		12/18/2019 01:39	1	U33155098.D	RXI-5Sil MS(0.5 0.25 (mm))
480-164221-5		12/18/2019 02:03	1	U33155099.D	RXI-5Sil MS(0.5 0.25 (mm))
480-164221-6		12/18/2019 02:26	1	U33155100.D	RXI-5Sil MS(0.5 0.25 (mm))
480-164221-7		12/18/2019 02:49	1	U33155101.D	RXI-5Sil MS(0.5 0.25 (mm))
480-164221-8		12/18/2019 03:12	1	U33155102.D	RXI-5Sil MS(0.5 0.25 (mm))
480-164221-9		12/18/2019 03:36	1	U33155103.D	RXI-5Sil MS(0.5 0.25 (mm))
480-164221-10		12/18/2019 03:59	1	U33155104.D	RXI-5Sil MS(0.5 0.25 (mm))
480-164221-11		12/18/2019 04:22	1	U33155105.D	RXI-5Sil MS(0.5 0.25 (mm))
480-164221-12		12/18/2019 04:45	1	U33155106.D	RXI-5Sil MS(0.5 0.25 (mm))
480-164221-13		12/18/2019 05:09	1	U33155107.D	RXI-5Sil MS(0.5 0.25 (mm))
480-164221-14		12/18/2019 05:32	1	U33155108.D	RXI-5Sil MS(0.5 0.25 (mm))
480-164221-15		12/18/2019 05:55	1	U33155109.D	RXI-5Sil MS(0.5 0.25 (mm))

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1

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

Batch Number: 510121 Batch Start Date: 12/16/19 15:35 Batch Analyst: Gruning, Anton T

Batch Method: 3510C Batch End Date: \_\_\_\_\_

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ReceivedpH	FirstAdjustpH	OP_SIM LCS 00008	OP_SimSurr 00019
MB 480-510121/1		3510C, 8270D SIM ID		1000 mL	1 mL	7 SU	<2 SU		1 mL
LCS 480-510121/2		3510C, 8270D SIM ID		1000 mL	1 mL	7 SU	<2 SU	1 mL	1 mL
480-164221-A-3 MS	CS RW 1 DER	3510C, 8270D SIM ID	T	1000 mL	1 mL	7 SU	<2 SU	1 mL	1 mL
480-164221-B-3 MSD	CS RW 1 DER	3510C, 8270D SIM ID	T	1000 mL	1 mL	7 SU	<2 SU	1 mL	1 mL
480-164221-B-4 MS	CS SW 04 DER	3510C, 8270D SIM ID	T	1000 mL	1 mL	5 SU	<2 SU	1 mL	1 mL
480-164221-B-4 MSD	CS SW 04 DER	3510C, 8270D SIM ID	T	1000 mL	1 mL	5 SU	<2 SU	1 mL	1 mL
480-164221-B-3	CS RW 1 DER	3510C, 8270D SIM ID	T	1000 mL	1 mL	7 SU	<2 SU		1 mL
480-164221-A-4	CS SW 04 DER	3510C, 8270D SIM ID	T	1000 mL	1 mL	5 SU	<2 SU		1 mL
480-164221-B-1	CS RW 2 DER	3510C, 8270D SIM ID	T	1000 mL	1 mL	7 SU	<2 SU		1 mL
480-164221-B-2	FIELD DUP 2	3510C, 8270D SIM ID	T	1000 mL	1 mL	7 SU	<2 SU		1 mL
480-164221-A-5	FIELD DUP	3510C, 8270D SIM ID	T	1000 mL	1 mL	5 SU	<2 SU		1 mL
480-164221-A-6	AOI 3 GW 2 DER	3510C, 8270D SIM ID	T	300 mL	1 mL	7 SU	<2 SU		1 mL
480-164221-A-7	AOI 1 GW 2 DER	3510C, 8270D SIM ID	T	1000 mL	1 mL	7 SU	<2 SU		1 mL
480-164221-A-8	CS SW 01 DER	3510C, 8270D SIM ID	T	1000 mL	1 mL	5 SU	<2 SU		1 mL
480-164221-A-9	EQUIPMENT BLANK	3510C, 8270D SIM ID	T	1000 mL	1 mL	5 SU	<2 SU		1 mL
480-164221-B-10	CS SW 05 DER	3510C, 8270D SIM ID	T	1000 mL	1 mL	5 SU	<2 SU		1 mL
480-164221-B-11	CS SW 03 DER	3510C, 8270D SIM ID	T	1000 mL	1 mL	5 SU	<2 SU		1 mL
480-164221-A-12	CS SW 02 DER	3510C, 8270D SIM ID	T	1000 mL	1 mL	5 SU	<2 SU		1 mL
480-164221-A-13	AOI 1 GW1 DER	3510C, 8270D SIM ID	T	1000 mL	1 mL	7 SU	<2 SU		1 mL
480-164221-A-14	AOI 3 GW1 DER	3510C, 8270D SIM ID	T	1000 mL	1 mL	7 SU	<2 SU		1 mL
480-164221-B-15	AOI 1 GW3 DER	3510C, 8270D SIM ID	T	1000 mL	1 mL	7 SU	<2 SU		1 mL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

## GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1

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

Batch Number: 510121 Batch Start Date: 12/16/19 15:35 Batch Analyst: Gruning, Anton TBatch Method: 3510C Batch End Date: \_\_\_\_\_

Lab Sample ID	Client Sample ID	Method Chain	Basis	AnalysisComment				
MB 480-510121/1		3510C, 8270D SIM ID						
LCS 480-510121/2		3510C, 8270D SIM ID						
480-164221-A-3 MS	CS RW 1 DER	3510C, 8270D SIM ID	T					
480-164221-B-3 MSD	CS RW 1 DER	3510C, 8270D SIM ID	T					
480-164221-B-4 MS	CS SW 04 DER	3510C, 8270D SIM ID	T					
480-164221-B-4 MSD	CS SW 04 DER	3510C, 8270D SIM ID	T					
480-164221-B-3	CS RW 1 DER	3510C, 8270D SIM ID	T					
480-164221-A-4	CS SW 04 DER	3510C, 8270D SIM ID	T					
480-164221-B-1	CS RW 2 DER	3510C, 8270D SIM ID	T					
480-164221-B-2	FIELD DUP 2	3510C, 8270D SIM ID	T					
480-164221-A-5	FIELD DUP	3510C, 8270D SIM ID	T					
480-164221-A-6	AOI 3 GW 2 DER	3510C, 8270D SIM ID	T	cloudy matrix				
480-164221-A-7	AOI 1 GW 2 DER	3510C, 8270D SIM ID	T					
480-164221-A-8	CS SW 01 DER	3510C, 8270D SIM ID	T					
480-164221-A-9	EQUIPMENT BLANK	3510C, 8270D SIM ID	T					
480-164221-B-10	CS SW 05 DER	3510C, 8270D SIM ID	T					
480-164221-B-11	CS SW 03 DER	3510C, 8270D SIM ID	T					
480-164221-A-12	CS SW 02 DER	3510C, 8270D SIM ID	T					
480-164221-A-13	AOI 1 GW1 DER	3510C, 8270D SIM ID	T					
480-164221-A-14	AOI 3 GW1 DER	3510C, 8270D SIM ID	T					
480-164221-B-15	AOI 1 GW3 DER	3510C, 8270D SIM ID	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.

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-164221-1

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

Batch Number: 510121 Batch Start Date: 12/16/19 15:35 Batch Analyst: Gruning, Anton T

Batch Method: 3510C Batch End Date: \_\_\_\_\_

Batch Notes	
Acid Used for pH Adjustment ID	5670322
Analyst ID - Concentration	AG, AP
Analyst ID - Extraction	AG
Method/Fraction	3510C/8270D_SIM_MS_ID
Na2SO4 ID	5675092
Prep Solvent ID	5678088/5692931
Prep Solvent Volume Used	180 mL
Analyst ID - Spike Analyst	AG
Analyst ID - Spike Witness Analyst	AG
Sufficient Volume for Batch QC	Yes
Vial Lot Number	1709111094

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.



# PFC\_IDA

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## Fluorinated Alkyl Substances

FORM II  
LCMS SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1

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

Matrix: Water Level: Low

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

Client Sample ID	Lab Sample ID	PFBA #	PFPeA #	PFBS #	PFHxA #	PFHpA #	PFHxS #	M262FTS #	PFOA #
CS RW 2 DER	480-164221-1	85	105	102	99	99	102	79	94
FIELD DUP 2	480-164221-2	92	104	103	99	108	110	78	103
CS RW 1 DER	480-164221-3	90	106	108	101	110	108	80	107
CS SW 04 DER	480-164221-4	82	104	99	99	105	102	77	100
FIELD DUP	480-164221-5	80	93	96	95	102	105	82	94
AOI 3 GW 2 DER	480-164221-6	82	104	102	94	99	105	76	98
AOI 1 GW 2 DER	480-164221-7	87	109	98	95	102	103	76	103
CS SW 01 DER	480-164221-8	85	105	102	94	112	108	78	103
CS SW 05 DER	480-164221-10	85	106	104	97	107	104	79	101
CS SW 03 DER	480-164221-11	82	99	97	97	104	110	83	102
CS SW 02 DER	480-164221-12	86	104	103	101	108	106	81	105
AOI 1 GW1 DER	480-164221-13	72	85	85	88	90	88	65	85
AOI 3 GW1 DER	480-164221-14	62	96	92	93	99	98	90	96
AOI 1 GW3 DER	480-164221-15	88	104	109	98	105	97	80	96
	MB 200-150841/1-A	90	111	106	106	101	103	81	108
	LCS 200-150841/2-A	89	106	106	103	99	100	77	100
CS RW 1 DER MS	480-164221-3 MS	93	114	113	104	115	116	90	113
CS SW 04 DER MS	480-164221-4 MS	85	101	103	102	106	111	83	102
CS RW 1 DER MSD	480-164221-3 MSD	89	109	102	103	100	106	78	100
CS SW 04 DER MSD	480-164221-4 MSD	86	106	105	106	104	105	82	101

QC LIMITS

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

# Column to be used to flag recovery values

FORM II 537 (modified)

FORM II  
LCMS SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1

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

Matrix: Water Level: Low

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

Client Sample ID	Lab Sample ID	PFOS #	PFNA #	PFDA #	M282FTS #	PFOSA #	d3NMFOS #	PFUnA #	d5NEFOS #
CS RW 2 DER	480-164221-1	89	88	75	80	74	67	71	79
FIELD DUP 2	480-164221-2	108	99	91	103	86	82	88	85
CS RW 1 DER	480-164221-3	106	98	92	98	85	86	93	84
CS SW 04 DER	480-164221-4	95	100	94	95	83	84	89	89
FIELD DUP	480-164221-5	95	88	90	93	81	79	88	78
AOI 3 GW 2 DER	480-164221-6	97	91	89	94	87	73	91	74
AOI 1 GW 2 DER	480-164221-7	96	93	90	93	74	80	92	83
CS SW 01 DER	480-164221-8	101	103	95	106	44	87	100	84
CS SW 05 DER	480-164221-10	101	95	96	105	83	82	92	87
CS SW 03 DER	480-164221-11	99	94	96	94	87	72	99	94
CS SW 02 DER	480-164221-12	103	96	99	112	86	77	96	89
AOI 1 GW1 DER	480-164221-13	57	60	52	57	47	41 *	48 *	49 *
AOI 3 GW1 DER	480-164221-14	87	92	82	95	47	67	84	75
AOI 1 GW3 DER	480-164221-15	89	90	84	83	75	77	83	74
	MB 200-150841/1-A	104	109	96	108	74	90	92	92
	LCS 200-150841/2-A	106	98	95	100	69	90	84	78
CS RW 1 DER MS	480-164221-3 MS	101	101	97	95	94	83	98	94
CS SW 04 DER MS	480-164221-4 MS	104	101	103	98	91	75	93	90
CS RW 1 DER MSD	480-164221-3 MSD	88	93	75	79	83	77	71	79
CS SW 04 DER MSD	480-164221-4 MSD	104	101	91	92	92	84	95	91

QC LIMITS

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

# Column to be used to flag recovery values

FORM II 537 (modified)

FORM II  
LCMS SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1

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

Matrix: Water Level: Low

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

Client Sample ID	Lab Sample ID	PFD <sub>o</sub> A #	PFTDA #
CS RW 2 DER	480-164221-1	62	70
FIELD DUP 2	480-164221-2	74	81
CS RW 1 DER	480-164221-3	78	88
CS SW 04 DER	480-164221-4	84	79
FIELD DUP	480-164221-5	75	71
AOI 3 GW 2 DER	480-164221-6	78	73
AOI 1 GW 2 DER	480-164221-7	78	82
CS SW 01 DER	480-164221-8	90	77
CS SW 05 DER	480-164221-10	78	79
CS SW 03 DER	480-164221-11	81	79
CS SW 02 DER	480-164221-12	80	85
AOI 1 GW1 DER	480-164221-13	48 *	45 *
AOI 3 GW1 DER	480-164221-14	72	65
AOI 1 GW3 DER	480-164221-15	76	74
	MB 200-150841/1-A	84	79
	LCS 200-150841/2-A	66	62
CS RW 1 DER MS	480-164221-3 MS	90	91
CS SW 04 DER MS	480-164221-4 MS	82	85
CS RW 1 DER MSD	480-164221-3 MSD	66	74
CS SW 04 DER MSD	480-164221-4 MSD	78	78

PFD<sub>o</sub>A = 13C2 PFD<sub>o</sub>A  
PFTDA = 13C2 PFTeDA

QC LIMITS  
50-150  
50-150

# Column to be used to flag recovery values

FORM II 537 (modified)

FORM III  
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1

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

Matrix: Water Level: Low Lab File ID: SC122319B004.d

Lab ID: LCS 200-150841/2-A Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ng/L)	LCS CONCENTRATION (ng/L)	LCS % REC	QC LIMITS REC	#
Perfluorobutanoic acid (PFBA)	40.0	41.6	104	50-150	
Perfluoropentanoic acid (PFPeA)	40.0	35.7	89	50-150	
Perfluorohexanoic acid (PFHxA)	40.0	38.1	95	70-130	
Perfluoroheptanoic acid (PFHpA)	40.0	40.0	100	70-130	
Perfluorooctanoic acid (PFOA)	40.0	36.4	91	70-130	
Perfluorononanoic acid (PFNA)	40.0	38.8	97	70-130	
Perfluorodecanoic acid (PFDA)	40.0	38.8	97	70-130	
Perfluoroundecanoic acid (PFUnA)	40.0	37.1	93	70-130	
Perfluorododecanoic acid (PFDoA)	40.0	48.0	120	70-130	
Perfluorotridecanoic acid (PFTriA)	40.0	38.5	96	70-130	
Perfluorotetradecanoic acid (PFTeA)	40.0	51.2	128	70-130	
Perfluorobutanesulfonic acid (PFBS)	35.4	30.6	87	70-130	
Perfluorohexanesulfonic acid (PFHxS)	36.4	33.6	92	70-130	
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	33.0	87	50-150	
Perfluorooctanesulfonic acid (PFOS)	37.1	35.5	96	70-130	
Perfluorodecanesulfonic acid (PFDS)	38.6	32.0	83	50-150	
Perfluorooctanesulfonamide (PFOSA)	40.0	32.3	81	50-150	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	40.3	101	70-130	
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	40.2	100	70-130	
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	37.9	35.5	94	50-150	
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	38.3	33.9	89	50-150	
18O2 PFHxS	94.6	94.9	100	50-150	
13C4 PFHpA	100	99.2	99	50-150	
13C4 PFOA	100	100	100	50-150	
13C4 PFOS	95.6	101	106	50-150	
13C5 PFNA	100	98.4	98	50-150	
13C4 PFBA	100	89.1	89	25-150	
13C2 PFHxA	100	103	103	50-150	
13C2 PFDA	100	95.2	95	50-150	
13C2 PFUnA	100	84.2	84	50-150	

# Column to be used to flag recovery and RPD values

FORM III 537 (modified)

FORM III  
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Burlington      Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Water      Level: Low      Lab File ID: SC122319B004.d  
 Lab ID: LCS 200-150841/2-A      Client ID: \_\_\_\_\_

COMPOUND	SPIKE ADDED (ng/L)	LCS CONCENTRATION (ng/L)	LCS % REC	QC LIMITS REC	#
13C2 PFDoA	100	65.6	66	50-150	
13C8 FOSA	100	69.5	69	25-150	
13C5 PFPeA	100	106	106	25-150	
13C2 PFTeDA	100	61.9	62	50-150	
d3-NMeFOSAA	100	90.4	90	50-150	
d5-NEtFOSAA	100	78.3	78	50-150	
M2-6:2 FTS	95.0	73.5	77	25-150	
M2-8:2 FTS	95.8	96.0	100	25-150	
13C3 PFBS	93.0	98.3	106	50-150	

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

FORM III  
LCMS MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Burlington      Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Water      Level: Low      Lab File ID: SC122319B011.d  
 Lab ID: 480-164221-3 MS      Client ID: CS RW 1 DER MS

COMPOUND	SPIKE ADDED (ng/L)	SAMPLE CONCENTRATION (ng/L)	MS CONCENTRATION (ng/L)	MS % REC	QC LIMITS REC	#
Perfluorobutanoic acid (PFBA)	37.7	5.4	46.6	109	40-160	
Perfluoropentanoic acid (PFPeA)	37.7	10	43.3	88	40-160	
Perfluorohexanoic acid (PFHxA)	37.7	12	49.7	100	40-160	
Perfluoroheptanoic acid (PFHpA)	37.7	3.5	37.6	90	40-160	
Perfluorooctanoic acid (PFOA)	37.7	5.9	41.5	94	40-160	
Perfluorononanoic acid (PFNA)	37.7	0.31 J	38.9	102	40-160	
Perfluorodecanoic acid (PFDA)	37.7	ND	37.3	99	40-160	
Perfluoroundecanoic acid (PFUnA)	37.7	ND	35.3	94	40-160	
Perfluorododecanoic acid (PFDoA)	37.7	ND	37.4	99	40-160	
Perfluorotridecanoic acid (PFTriA)	37.7	ND	35.0	93	40-160	
Perfluorotetradecanoic acid (PFTeA)	37.7	ND	49.9	132	40-160	
Perfluorobutanesulfonic acid (PFBS)	33.3	3.5	34.9	94	40-160	
Perfluorohexanesulfonic acid (PFHxS)	34.3	25	55.2	88	40-160	
Perfluoroheptanesulfonic Acid (PFHpS)	35.9	ND	40.4	112	40-160	
Perfluorooctanesulfonic acid (PFOS)	35.0	45	84.3	111	40-160	
Perfluorodecanesulfonic acid (PFDS)	36.4	ND	38.1	105	40-160	
Perfluorooctanesulfonamide (PFOSA)	37.7	ND	37.8	100	40-160	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	37.7	ND	38.1	101	40-160	
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	37.7	ND	35.4	94	40-160	
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	35.8	ND	32.5	91	40-160	
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	36.1	ND	33.9	94	40-160	
18O2 PFHxS	89.2	99	103	116	50-150	
13C4 PFHpA	94.3	110	108	115	50-150	
13C4 PFOA	94.3	100	107	113	50-150	
13C4 PFOS	90.2	98	91.4	101	50-150	
13C5 PFNA	94.3	95	94.8	101	50-150	
13C4 PFBA	94.3	87	87.5	93	25-150	
13C2 PFHxA	94.3	98	97.8	104	50-150	
13C2 PFDA	94.3	90	91.7	97	50-150	
13C2 PFUnA	94.3	90	92.1	98	50-150	

# Column to be used to flag recovery and RPD values

FORM III  
LCMS MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Burlington      Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Water      Level: Low      Lab File ID: SC122319B011.d  
 Lab ID: 480-164221-3 MS      Client ID: CS RW 1 DER MS

COMPOUND	SPIKE ADDED (ng/L)	SAMPLE CONCENTRATION (ng/L)	MS CONCENTRATION (ng/L)	MS % REC	QC LIMITS REC	#
13C2 PFDoA	94.3	75	85.3	90	50-150	
13C8 FOSA	94.3	83	88.8	94	25-150	
13C5 PFPeA	94.3	100	107	114	25-150	
13C2 PFTeDA	94.3	86	85.9	91	50-150	
d3-NMeFOSAA	94.3	83	78.4	83	50-150	
d5-NEtFOSAA	94.3	82	88.6	94	50-150	
M2-6:2 FTS	89.6	73	80.8	90	25-150	
M2-8:2 FTS	90.3	91	85.9	95	25-150	
13C3 PFBS	87.7	97	99.3	113	50-150	

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



FORM III  
LCMS MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Burlington      Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Water      Level: Low      Lab File ID: SC122319B014.d  
 Lab ID: 480-164221-4 MS      Client ID: CS SW 04 DER MS

COMPOUND	SPIKE ADDED (ng/L)	SAMPLE CONCENTRATION (ng/L)	MS CONCENTRATION (ng/L)	MS % REC	QC LIMITS REC	#
Perfluorobutanoic acid (PFBA)	33.4	ND	36.4	109	40-160	
Perfluoropentanoic acid (PFPeA)	33.4	0.64 J	30.7	90	40-160	
Perfluorohexanoic acid (PFHxA)	33.4	ND	32.0	96	40-160	
Perfluoroheptanoic acid (PFHpA)	33.4	ND	32.2	96	40-160	
Perfluorooctanoic acid (PFOA)	33.4	1.7	30.6	87	40-160	
Perfluorononanoic acid (PFNA)	33.4	0.35 J	32.7	97	40-160	
Perfluorodecanoic acid (PFDA)	33.4	ND	29.6	89	40-160	
Perfluoroundecanoic acid (PFUnA)	33.4	ND	32.7	98	40-160	
Perfluorododecanoic acid (PFDoA)	33.4	ND	33.7	101	40-160	
Perfluorotridecanoic acid (PFTriA)	33.4	ND	33.0	99	40-160	
Perfluorotetradecanoic acid (PFTeA)	33.4	ND	38.0	114	40-160	
Perfluorobutanesulfonic acid (PFBS)	29.6	0.57 J	27.7	92	40-160	
Perfluorohexanesulfonic acid (PFHxS)	30.4	0.82 J	28.1	90	40-160	
Perfluoroheptanesulfonic Acid (PFHpS)	31.8	ND	31.4	99	40-160	
Perfluorooctanesulfonic acid (PFOS)	31.0	1.1 J	29.0	90	40-160	
Perfluorodecanesulfonic acid (PFDS)	32.2	ND	29.5	92	40-160	
Perfluorooctanesulfonamide (PFOSA)	33.4	ND	32.2	96	40-160	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	33.4	ND	39.0	117	40-160	
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	33.4	ND	32.5	97	40-160	
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	31.7	ND	26.8	85	40-160	
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	32.0	ND	28.3	88	40-160	
18O2 PFHxS	79.1	83	87.4	111	50-150	
13C4 PFHpA	83.6	90	88.3	106	50-150	
13C4 PFOA	83.6	86	85.2	102	50-150	
13C4 PFOS	79.9	78	83.2	104	50-150	
13C5 PFNA	83.6	86	84.9	101	50-150	
13C4 PFBA	83.6	71	70.9	85	25-150	
13C2 PFHxA	83.6	85	85.3	102	50-150	
13C2 PFDA	83.6	81	86.1	103	50-150	
13C2 PFUnA	83.6	76	77.4	93	50-150	

# Column to be used to flag recovery and RPD values

FORM III  
LCMS MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Burlington      Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Water      Level: Low      Lab File ID: SC122319B014.d  
 Lab ID: 480-164221-4 MS      Client ID: CS SW 04 DER MS

COMPOUND	SPIKE ADDED (ng/L)	SAMPLE CONCENTRATION (ng/L)	MS CONCENTRATION (ng/L)	MS % REC	QC LIMITS REC	#
13C2 PFDoA	83.6	72	68.6	82	50-150	
13C8 FOSA	83.6	71	75.7	91	25-150	
13C5 PFPeA	83.6	89	84.6	101	25-150	
13C2 PFTeDA	83.6	68	70.7	85	50-150	
d3-NMeFOSAA	83.6	72	62.9	75	50-150	
d5-NEtFOSAA	83.6	77	75.4	90	50-150	
M2-6:2 FTS	79.4	63	66.2	83	25-150	
M2-8:2 FTS	80.1	78	78.2	98	25-150	
13C3 PFBS	77.8	79	80.2	103	50-150	

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

FORM III  
LCMS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1

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

Matrix: Water Level: Low Lab File ID: SC122319B012.d

Lab ID: 480-164221-3 MSD Client ID: CS RW 1 DER MSD

COMPOUND	SPIKE ADDED (ng/L)	MSD CONCENTRATION (ng/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Perfluorobutanoic acid (PFBA)	37.1	45.0	107	4	30	40-160	
Perfluoropentanoic acid (PFPeA)	37.1	43.1	89	1	30	40-160	
Perfluorohexanoic acid (PFHxA)	37.1	49.8	101	0	20	40-160	
Perfluoroheptanoic acid (PFHpA)	37.1	44.1	109	16	20	40-160	
Perfluorooctanoic acid (PFOA)	37.1	41.6	96	0	20	40-160	
Perfluorononanoic acid (PFNA)	37.1	40.8	109	5	20	40-160	
Perfluorodecanoic acid (PFDA)	37.1	45.5	122	20	20	40-160	
Perfluoroundecanoic acid (PFUnA)	37.1	38.8	104	9	20	40-160	
Perfluorododecanoic acid (PFDoA)	37.1	46.8	126	22	20	40-160	F2
Perfluorotridecanoic acid (PFTriA)	37.1	39.4	106	12	20	40-160	
Perfluorotetradecanoic acid (PFTeA)	37.1	47.3	127	6	20	40-160	
Perfluorobutanesulfonic acid (PFBS)	32.8	35.9	99	3	20	40-160	
Perfluorohexanesulfonic acid (PFHxS)	33.8	54.9	88	1	20	40-160	
Perfluoroheptanesulfonic Acid (PFHpS)	35.4	39.2	111	3	30	40-160	
Perfluorooctanesulfonic acid (PFOS)	34.5	87.4	121	4	20	40-160	
Perfluorodecanesulfonic acid (PFDS)	35.8	35.5	99	7	30	40-160	
Perfluorooctanesulfonamide (PFOSA)	37.1	37.0	100	2	30	40-160	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	37.1	34.7	93	9	20	40-160	
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	37.1	39.2	106	10	20	40-160	
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	35.2	35.3	100	8	30	40-160	
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	35.6	35.0	98	3	30	40-160	
18O2 PFHxS	87.9	93.5	106			50-150	
13C4 PFHpA	92.9	92.6	100			50-150	
13C4 PFOA	92.9	92.6	100			50-150	
13C4 PFOS	88.8	78.5	88			50-150	
13C5 PFNA	92.9	86.2	93			50-150	
13C4 PFBA	92.9	82.6	89			25-150	
13C2 PFHxA	92.9	95.6	103			50-150	
13C2 PFDA	92.9	69.3	75			50-150	
13C2 PFUnA	92.9	66.0	71			50-150	

# Column to be used to flag recovery and RPD values

FORM III 537 (modified)

FORM III  
LCMS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Burlington      Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Water      Level: Low      Lab File ID: SC122319B012.d  
 Lab ID: 480-164221-3 MSD      Client ID: CS RW 1 DER MSD

COMPOUND	SPIKE ADDED (ng/L)	MSD CONCENTRATION (ng/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
13C2 PFDoA	92.9	61.7	66			50-150	
13C8 FOSA	92.9	77.5	83			25-150	
13C5 PFPeA	92.9	101	109			25-150	
13C2 PFTeDA	92.9	68.9	74			50-150	
d3-NMeFOSAA	92.9	71.1	77			50-150	
d5-NEtFOSAA	92.9	72.9	79			50-150	
M2-6:2 FTS	88.2	68.7	78			25-150	
M2-8:2 FTS	89.0	70.1	79			25-150	
13C3 PFBS	86.4	88.0	102			50-150	

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

FORM III  
LCMS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1

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

Matrix: Water Level: Low Lab File ID: SC122319B015.d

Lab ID: 480-164221-4 MSD Client ID: CS SW 04 DER MSD

COMPOUND	SPIKE ADDED (ng/L)	MSD CONCENTRATION (ng/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Perfluorobutanoic acid (PFBA)	33.0	35.2	107	3	30	40-160	
Perfluoropentanoic acid (PFPeA)	33.0	29.9	89	3	30	40-160	
Perfluorohexanoic acid (PFHxA)	33.0	31.5	95	2	20	40-160	
Perfluoroheptanoic acid (PFHpA)	33.0	33.5	101	4	20	40-160	
Perfluorooctanoic acid (PFOA)	33.0	34.6	100	12	20	40-160	
Perfluorononanoic acid (PFNA)	33.0	34.9	105	6	20	40-160	
Perfluorodecanoic acid (PFDA)	33.0	35.1	106	17	20	40-160	
Perfluoroundecanoic acid (PFUnA)	33.0	33.9	103	3	20	40-160	
Perfluorododecanoic acid (PFDoA)	33.0	37.0	112	10	20	40-160	
Perfluorotridecanoic acid (PFTriA)	33.0	34.6	105	5	20	40-160	
Perfluorotetradecanoic acid (PFTeA)	33.0	44.2	134	15	20	40-160	
Perfluorobutanesulfonic acid (PFBS)	29.2	27.9	94	1	20	40-160	
Perfluorohexanesulfonic acid (PFHxS)	30.0	29.0	94	3	20	40-160	
Perfluoroheptanesulfonic Acid (PFHpS)	31.4	31.6	101	1	30	40-160	
Perfluorooctanesulfonic acid (PFOS)	30.6	31.1	98	7	20	40-160	
Perfluorodecanesulfonic acid (PFDS)	31.8	29.7	93	0	30	40-160	
Perfluorooctanesulfonamide (PFOSA)	33.0	30.0	91	7	30	40-160	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	33.0	35.4	107	10	20	40-160	
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	33.0	34.6	105	6	20	40-160	
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	31.3	30.8	99	14	30	40-160	
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	31.6	29.1	92	3	30	40-160	
18O2 PFHxS	78.1	81.9	105			50-150	
13C4 PFHpA	82.5	86.1	104			50-150	
13C4 PFOA	82.5	83.5	101			50-150	
13C4 PFOS	78.9	81.7	104			50-150	
13C5 PFNA	82.5	83.4	101			50-150	
13C4 PFBA	82.5	70.9	86			25-150	
13C2 PFHxA	82.5	87.3	106			50-150	
13C2 PFDA	82.5	75.5	91			50-150	
13C2 PFUnA	82.5	78.7	95			50-150	

# Column to be used to flag recovery and RPD values

FORM III 537 (modified)

FORM III  
LCMS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Burlington      Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Matrix: Water      Level: Low      Lab File ID: SC122319B015.d  
 Lab ID: 480-164221-4 MSD      Client ID: CS SW 04 DER MSD

COMPOUND	SPIKE ADDED (ng/L)	MSD CONCENTRATION (ng/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
13C2 PFDoA	82.5	64.4	78			50-150	
13C8 FOSA	82.5	75.8	92			25-150	
13C5 PFPeA	82.5	87.2	106			25-150	
13C2 PFTeDA	82.5	64.2	78			50-150	
d3-NMeFOSAA	82.5	69.0	84			50-150	
d5-NEtFOSAA	82.5	75.3	91			50-150	
M2-6:2 FTS	78.4	64.0	82			25-150	
M2-8:2 FTS	79.0	72.9	92			25-150	
13C3 PFBS	76.7	80.4	105			50-150	

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

FORM IV  
LCMS METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Burlington      Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Lab File ID: SC122319B003.d      Lab Sample ID: MB 200-150841/1-A  
 Matrix: Water      Date Extracted: 12/18/2019 10:57  
 Instrument ID: LC812      Date Analyzed: 12/24/2019 14:12  
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 200-150841/2-A	SC122319B00 4.d	12/24/2019 14:20
CS RW 2 DER	480-164221-1	SC122319B00 8.d	12/24/2019 14:53
FIELD DUP 2	480-164221-2	SC122319B00 9.d	12/24/2019 15:01
CS RW 1 DER	480-164221-3	SC122319B01 0.d	12/24/2019 15:09
CS RW 1 DER MS	480-164221-3 MS	SC122319B01 1.d	12/24/2019 15:18
CS RW 1 DER MSD	480-164221-3 MSD	SC122319B01 2.d	12/24/2019 15:26
CS SW 04 DER	480-164221-4	SC122319B01 3.d	12/24/2019 15:34
CS SW 04 DER MS	480-164221-4 MS	SC122319B01 4.d	12/24/2019 15:42
CS SW 04 DER MSD	480-164221-4 MSD	SC122319B01 5.d	12/24/2019 15:50
FIELD DUP	480-164221-5	SC122319B01 6.d	12/24/2019 15:59
AOI 3 GW 2 DER	480-164221-6	SC122319B01 7.d	12/24/2019 16:07
AOI 1 GW 2 DER	480-164221-7	SC122319B01 8.d	12/24/2019 16:15
CS SW 01 DER	480-164221-8	SC122319B01 9.d	12/24/2019 16:23
CS SW 05 DER	480-164221-10	SC122319B02 1.d	12/24/2019 16:39
CS SW 03 DER	480-164221-11	SC122319B02 2.d	12/24/2019 16:48
CS SW 02 DER	480-164221-12	SC122319B02 3.d	12/24/2019 16:56
AOI 1 GW1 DER	480-164221-13	SC122319B02 4.d	12/24/2019 17:04
AOI 3 GW1 DER	480-164221-14	SC122319B02 5.d	12/24/2019 17:12
AOI 1 GW3 DER	480-164221-15	SC122319B02 6.d	12/24/2019 17:20

FORM VIII  
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: ICIS 200-150448/8 Date Analyzed: 12/06/2019 14:57  
 Instrument ID: LC812 GC Column: C-18 ID: 4.6 (mm)  
 Lab File ID (Standard): SC120619ICAL008.d Heated Purge: (Y/N) N  
 Calibration ID: 42812

	13PFOA					
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	1852009	3.43				
UPPER LIMIT	2778014	3.63				
LOWER LIMIT	926005	3.23				
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 200-150448/12		2193286	3.43			
CCVL 200-150985/1		1565893	3.43			
CCVIS 200-150985/2		1554295	3.43			

13PFOA = 13C2 PFOA

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

# Column used to flag values outside QC limits

FORM VIII 537 (MODIFIED)



FORM VIII  
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Sample No.: CCVIS 200-150985/2 Date Analyzed: 12/24/2019 14:04  
 Instrument ID: LC812 GC Column: C-18 ID: 4.6 (mm)  
 Lab File ID (Standard): SC122319B002.d Heated Purge: (Y/N) N  
 Calibration ID: 42812

	13PFOA					
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD	1554295	3.43				
UPPER LIMIT	2331443	3.63				
LOWER LIMIT	777148	3.23				
LAB SAMPLE ID	CLIENT SAMPLE ID					
MB 200-150841/1-A		1826742	3.43			
LCS 200-150841/2-A		1751527	3.42			
480-164221-1	CS RW 2 DER	1925527	3.43			
480-164221-2	FIELD DUP 2	1659044	3.42			
480-164221-3	CS RW 1 DER	1627681	3.42			
480-164221-3 MS	CS RW 1 DER MS	1716790	3.42			
480-164221-3 MSD	CS RW 1 DER MSD	1669312	3.42			
480-164221-4	CS SW 04 DER	1707378	3.42			
480-164221-4 MS	CS SW 04 DER MS	1617167	3.43			
480-164221-4 MSD	CS SW 04 DER MSD	1534971	3.42			
480-164221-5	FIELD DUP	1611745	3.43			
480-164221-6	AOI 3 GW 2 DER	1804843	3.42			
480-164221-7	AOI 1 GW 2 DER	1659538	3.42			
480-164221-8	CS SW 01 DER	1592089	3.42			
CCV 200-150985/20		1667558	3.42			
480-164221-10	CS SW 05 DER	1622199	3.42			
480-164221-11	CS SW 03 DER	1546571	3.42			
480-164221-12	CS SW 02 DER	1565764	3.42			
480-164221-13	AOI 1 GW1 DER	1736929	3.42			
480-164221-14	AOI 3 GW1 DER	1590148	3.42			
480-164221-15	AOI 1 GW3 DER	1609521	3.42			
CCV 200-150985/35		1584684	3.42			

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  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS RW 2 DER Lab Sample ID: 480-164221-1  
 Matrix: Water Lab File ID: SC122319B008.d  
 Analysis Method: 537 (modified) Date Collected: 12/12/2019 12:34  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 288.2 (mL) Date Analyzed: 12/24/2019 14:53  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 20 (uL) GC Column: C-18 ID: 4.6 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	4.3		1.7	0.87
2706-90-3	Perfluoropentanoic acid (PFPeA)	6.2		1.7	0.55
307-24-4	Perfluorohexanoic acid (PFHxA)	8.4		1.7	0.66
375-85-9	Perfluoroheptanoic acid (PFHpA)	2.6		1.7	0.79
335-67-1	Perfluorooctanoic acid (PFOA)	5.2		1.7	0.70
375-95-1	Perfluorononanoic acid (PFNA)	0.32	J	1.7	0.23
335-76-2	Perfluorodecanoic acid (PFDA)	ND		1.7	0.67
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.68
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		1.7	0.51
72629-94-8	Perfluorotridecanoic acid (PFTriA)	ND		1.7	0.52
376-06-7	Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.80
375-73-5	Perfluorobutanesulfonic acid (PFBS)	3.1		1.7	0.43
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	22		1.7	0.69
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.82
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	49		1.7	0.53
335-77-3	Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.78
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND		8.7	8.7
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		17	1.5
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		17	1.3
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	4.8
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	2.5

FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS RW 2 DER Lab Sample ID: 480-164221-1  
 Matrix: Water Lab File ID: SC122319B008.d  
 Analysis Method: 537 (modified) Date Collected: 12/12/2019 12:34  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 288.2 (mL) Date Analyzed: 12/24/2019 14:53  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 20 (uL) GC Column: C-18 ID: 4.6 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	102		50-150
STL01892	13C4 PFHpA	99		50-150
STL00990	13C4 PFOA	94		50-150
STL00991	13C4 PFOS	89		50-150
STL00995	13C5 PFNA	88		50-150
STL00992	13C4 PFBA	85		25-150
STL00993	13C2 PFHxA	99		50-150
STL00996	13C2 PFDA	75		50-150
STL00997	13C2 PFUnA	71		50-150
STL00998	13C2 PFDoA	62		50-150
STL01056	13C8 FOSA	74		25-150
STL01893	13C5 PFPeA	105		25-150
STL02116	13C2 PFTeDA	70		50-150
STL02118	d3-NMeFOSAA	67		50-150
STL02117	d5-NEtFOSAA	79		50-150
STL02279	M2-6:2 FTS	79		25-150
STL02280	M2-8:2 FTS	80		25-150
STL02337	13C3 PFBS	102		50-150

Eurofins TestAmerica, Burlington  
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B008.d  
 Lims ID: 480-164221-C-1-A  
 Client ID: CS RW 2 DER  
 Sample Type: Client  
 Inject. Date: 24-Dec-2019 14:53:26 ALS Bottle#: 8 Worklist Smp#: 8  
 Injection Vol: 20.0 ul Dil. Factor: 1.0000  
 Sample Info: 480-164221-C-1-A  
 Misc. Info.: 200-0039355-008 Plate: 1 Rack: 2  
 Operator ID: lc812tech Instrument ID: LC812  
 Method: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\PFC\_LC812.m  
 Limit Group: LC\_PFC\_ICAL  
 Last Update: 30-Dec-2019 15:06:05 Calib Date: 06-Dec-2019 15:13:26  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Column 1 : C-18 ( 4.60 mm) Det: EXP1  
 Process Host: CTX0330

First Level Reviewer: lautenschlagery Date: 27-Dec-2019 10:49:30  
 Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	1.907	1.908	-0.001	0.556	1739689	2.13	85.3	2964	
2 Perfluorobutanoic acid										M
212.90 > 169.00	1.907	1.908	-0.001	1.000	86118	0.1244		26.3		M
D 3 13C5 PFPeA	267.90 > 223.00	2.257	2.257	0.0	0.658	1644855	2.64	105	6970	
4 Perfluoropentanoic acid	262.90 > 219.00	2.257	2.271	-0.014	1.000	132100	0.1773		12.8	
D 47 13C3 PFBS	301.90 > 80.00	2.271	2.285	-0.014	0.662	1760262	2.37	102	274896	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	2.284	2.285	-0.001	1.006	74432	0.0905	Target=2.03	89.5	
298.90 > 99.00	2.284	2.285	-0.001	1.006	45328		1.64(1.01-3.04)	70.6		
D 7 13C2 PFHxA	315.00 > 270.00	2.660	2.648	0.012	0.776	1715157	2.47	98.6	5494	
6 Perfluorohexanoic acid										M
313.00 > 269.00	2.660	2.661	-0.001	1.000	169240	0.2416	Target=13.76	64.1		
313.00 > 119.00	2.660	2.661	-0.001	1.000	13408		12.62(6.88-20.64)	40.0		M
D 11 18O2 PFHxS	403.00 > 84.00	3.044	3.044	0.0	0.887	1423416	2.42	102	8062	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.044	3.044	0.0	1.000	439439	0.6451	Target=3.90	654		M
399.00 > 99.00	3.044	3.044	0.0	1.000	97438		4.51(1.95-5.85)	366		M
D 9 13C4 PFHpA	367.00 > 322.00	3.044	3.044	0.0	0.887	1630457	2.47	98.9	5694	
10 Perfluoroheptanoic acid										M
363.00 > 319.00	3.044	3.044	0.0	1.000	51226	0.0743	Target=3.95	26.3		M
363.00 > 169.00	3.044	3.044	0.0	1.000	12938		3.96(1.97-5.92)	60.6		M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
16 Perfluoroheptanesulfonic acid										M
449.00 > 80.00	3.413	3.413	0.0	0.897	11606	0.0228	Target=6.46	27.4		
449.00 > 99.00	3.413	3.413	0.0	0.897	2560		4.53(3.23-9.69)	19.3		M
13 1H,1H,2H,2H-perfluorooctanesulfoni										M
427.00 > 407.00	3.413	3.413	0.0	0.998	986	0.0131		25.1		M
D 12 M2-6:2 FTS										
429.00 > 81.00	3.422	3.413	0.009	0.998	189697	1.88		79.1	731	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.430	3.430	0.0	1.002	109598	0.1509	Target=2.40	46.0		
413.00 > 169.00	3.430	3.430	0.0	1.002	56129		1.95(1.20-3.60)	225		
D 14 13C4 PFOA										
417.00 > 372.00	3.422	3.430	-0.008	0.998	1636176	2.34		93.5	4539	
* 62 13C2 PFOA										
415.00 > 370.00	3.430	3.430	0.0		1925527	2.50			3760	
D 18 13C4 PFOS										
503.00 > 80.00	3.805	3.793	0.012	1.109	992343	2.13		89.1	4806	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.805	3.793	0.012	1.000	635646	1.42	Target=5.74	1415		M
499.00 > 99.00	3.793	3.793	0.0	0.997	99950		6.36(2.87-8.61)	498		M
D 19 13C5 PFNA										
468.00 > 423.00	3.817	3.817	0.0	1.113	1421150	2.21		88.3	7153	
20 Perfluorononanoic acid										M
463.00 > 419.00	3.817	3.817	0.0	1.000	5097	0.009144	Target=7.01	2.5		M
463.00 > 169.00	3.817	3.817	0.0	1.000	711		7.17(3.50-10.51)	9.2		M
D 23 13C2 PFDA										
515.00 > 470.00	4.164	4.164	0.0	1.214	1194546	1.88		75.4	4981	
24 Perfluorodecanoic acid										M
513.00 > 469.00	4.153	4.164	-0.011	0.997	1396	0.003020	Target=7.28	2.3		M
513.00 > 169.00	4.164	4.164	0.0	1.000	349		4.00(3.64-10.91)	3.6		M
25 1H,1H,2H,2H-perfluorodecanesulfoni										M
527.00 > 507.00	4.185	4.164	0.021	1.003	187	0.004194		4.3		M
D 26 M2-8:2 FTS										
529.00 > 81.00	4.175	4.175	0.0	1.217	231329	1.92		80.3	1584	
D 21 13C8 FOSA										
506.00 > 78.00	4.218	4.218	0.0	1.230	1539252	1.86		74.2	3057	
22 Perfluorooctanesulfonamide										M
498.00 > 78.00	4.207	4.218	-0.011	0.997	308	0.000503		4.2		M
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.317	4.305	0.012	1.258	101721	1.67		66.6	1237	
D 30 13C2 PFUnA										
565.00 > 520.00	4.442	4.443	-0.001	1.295	958974	1.78		71.2	8084	
31 Perfluoroundecanoic acid										M
563.00 > 519.00	4.442	4.443	-0.001	1.000	2640	0.008117	Target=5.78	3.5		M
563.00 > 169.00	4.442	4.443	-0.001	1.000	747		3.53(2.89-8.67)	11.2		M
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.456	4.456	0.0	1.299	134356	1.98		79.4	1509	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 36 13C2 PFDaA										
615.00 > 570.00	4.683	4.683	0.0	1.365	913049	1.54		61.8	4046	
42 Perfluorotetradecanoic acid										M
713.00 > 169.00	5.108	5.108	0.0	1.000	360	0.005180	Target=1.05		4.6	M
713.00 > 219.00	5.094	5.108	-0.014	0.997	372		0.97(0.52-1.57)		8.0	M
D 43 13C2 PFTeDA										
715.00 > 670.00	5.108	5.108	0.0	1.489	864897	1.75		69.8	6108	

**QC Flag Legend**

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B008.d

Injection Date: 24-Dec-2019 14:53:26

Instrument ID: LC812

Lims ID: 480-164221-C-1-A

Lab Sample ID: 200-164221-1

Client ID: CS RW 2 DER

Operator ID: lc812tech

ALS Bottle#: 8

Worklist Smp#: 8

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

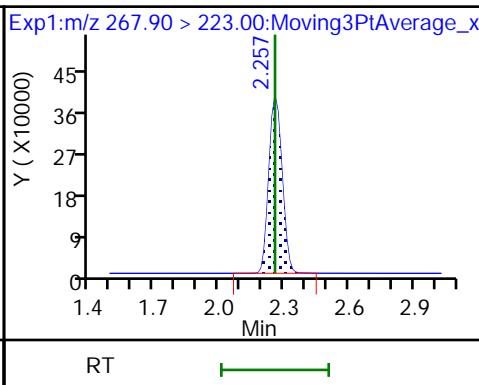
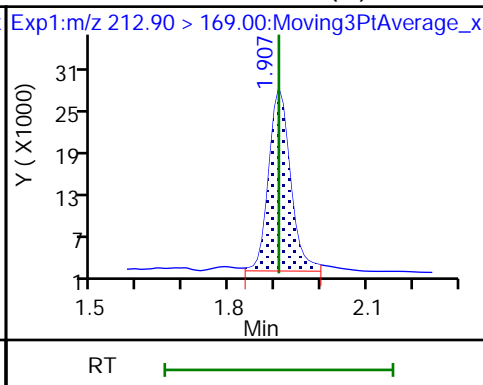
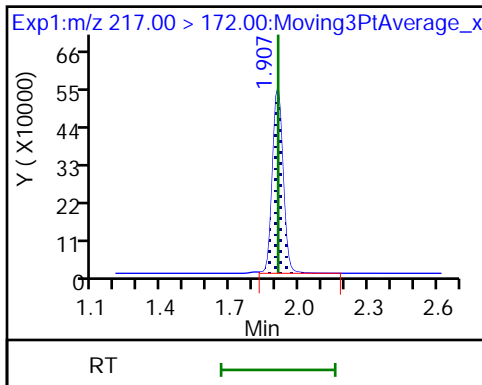
Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid (M)

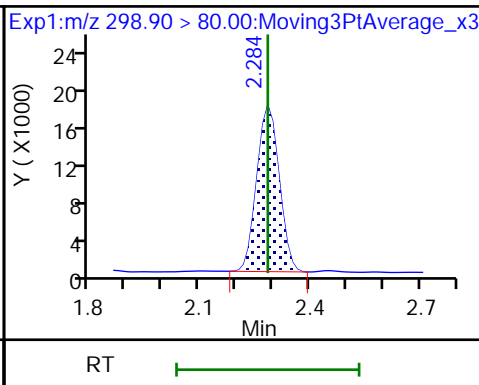
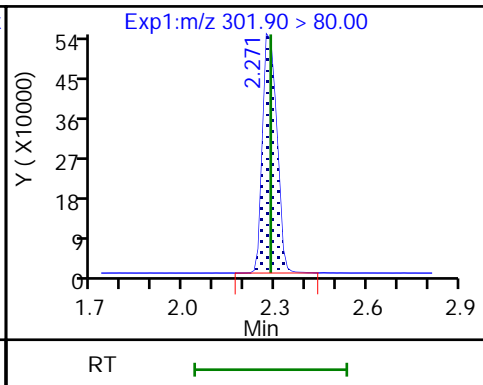
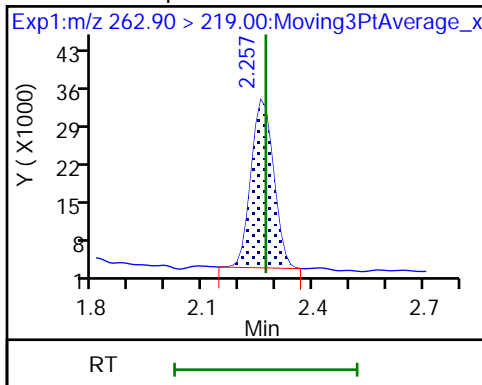
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 47 13C3 PFBS

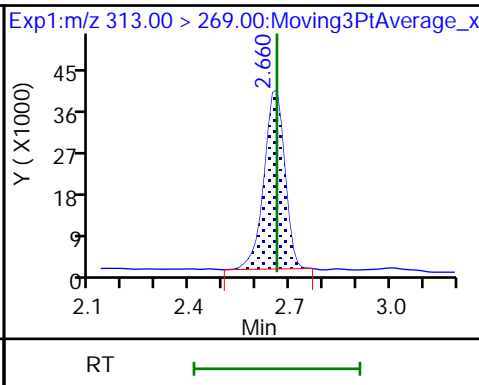
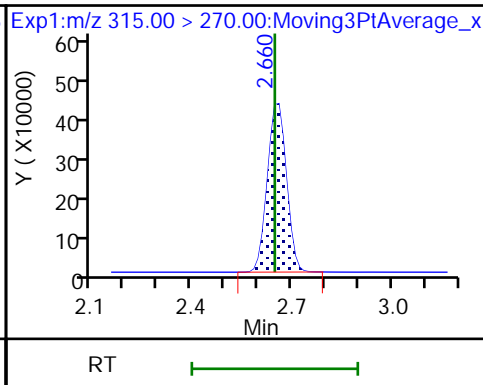
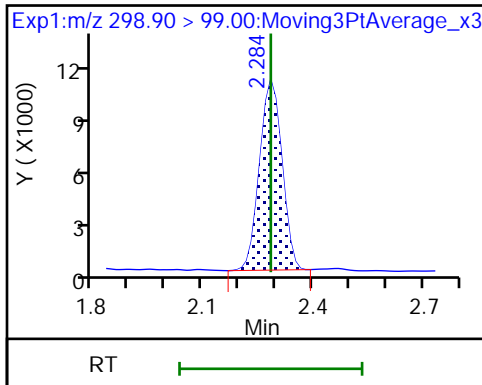
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 7 13C2 PFHxA

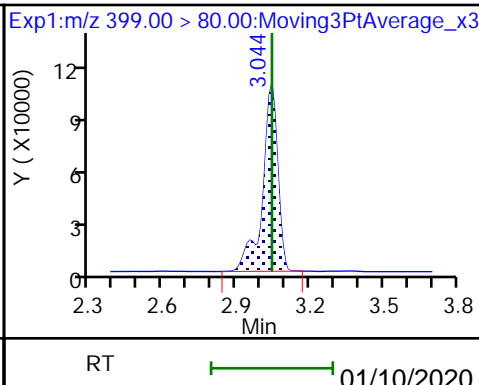
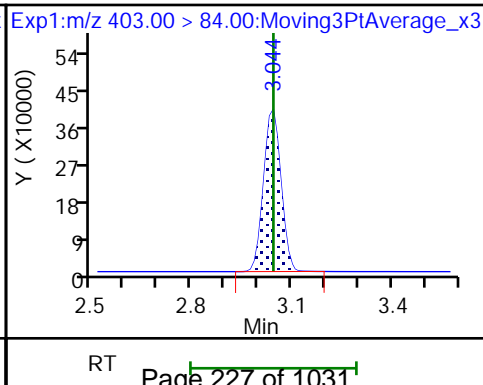
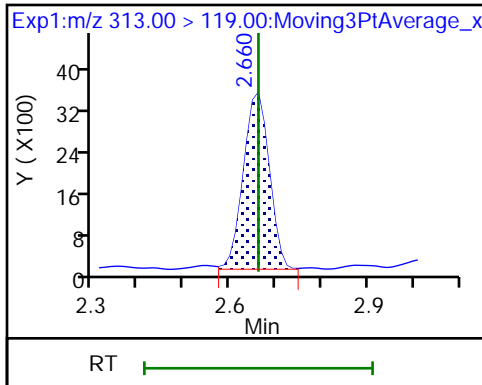
6 Perfluorohexanoic acid



6 Perfluorohexanoic acid (M)

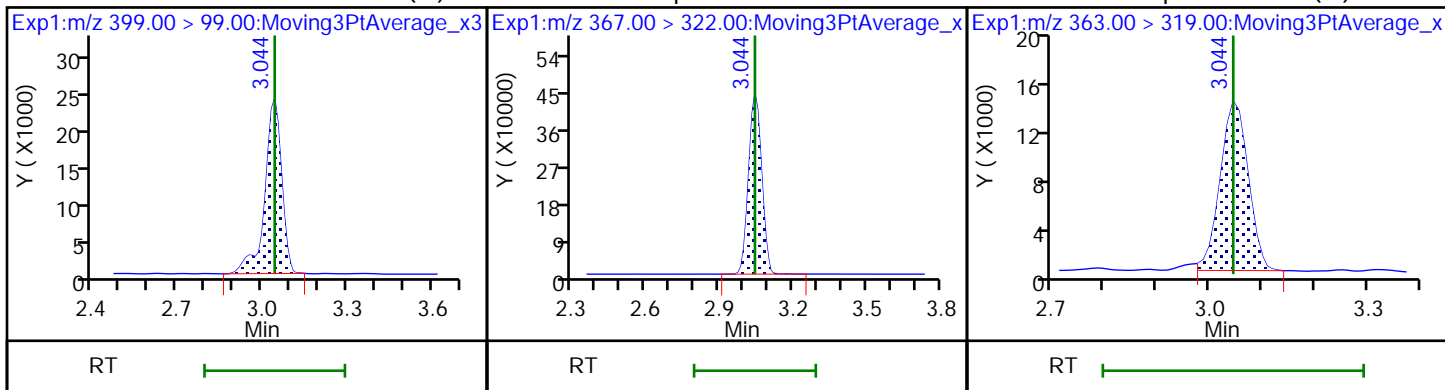
D 11 18O2 PFHxS

8 Perfluorohexanesulfonic acid (M)



8 Perfluorohexanesulfonic acid (M) D 9 13C4 PFHpA

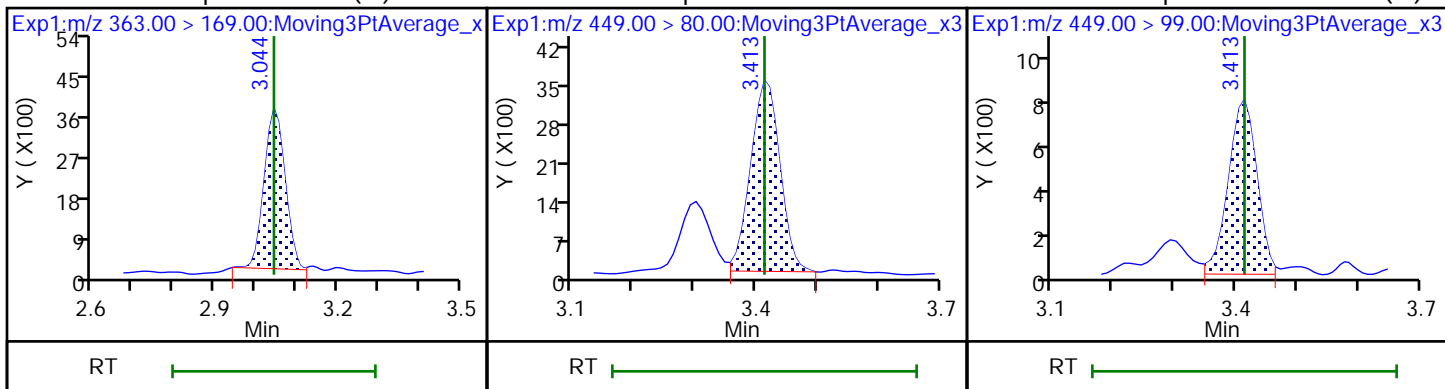
10 Perfluoroheptanoic acid (M)



10 Perfluoroheptanoic acid (M)

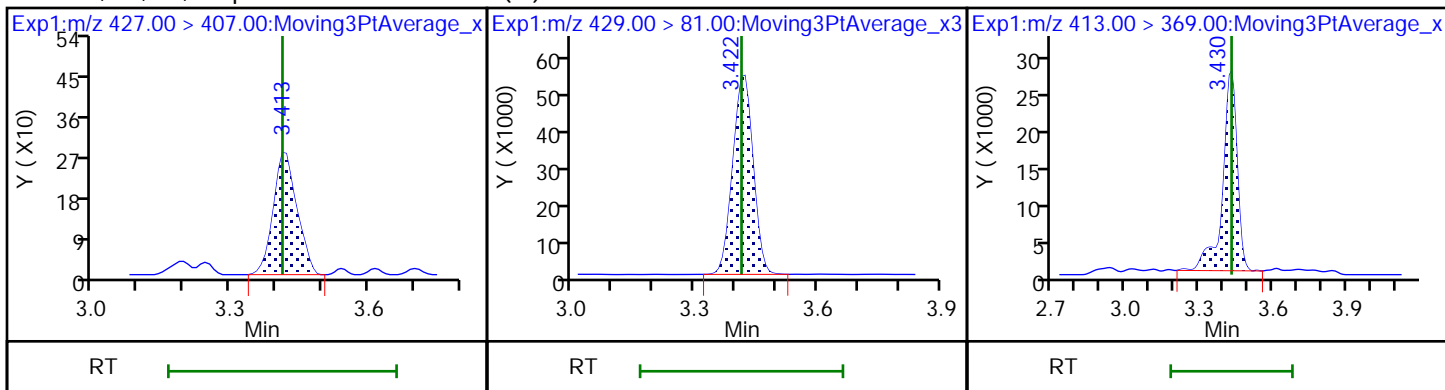
16 Perfluoroheptanesulfonic acid

16 Perfluoroheptanesulfonic acid (M)



13 1H,1H,2H,2H-perfluorooctanesulfonate (M) M2-6:2 FTS

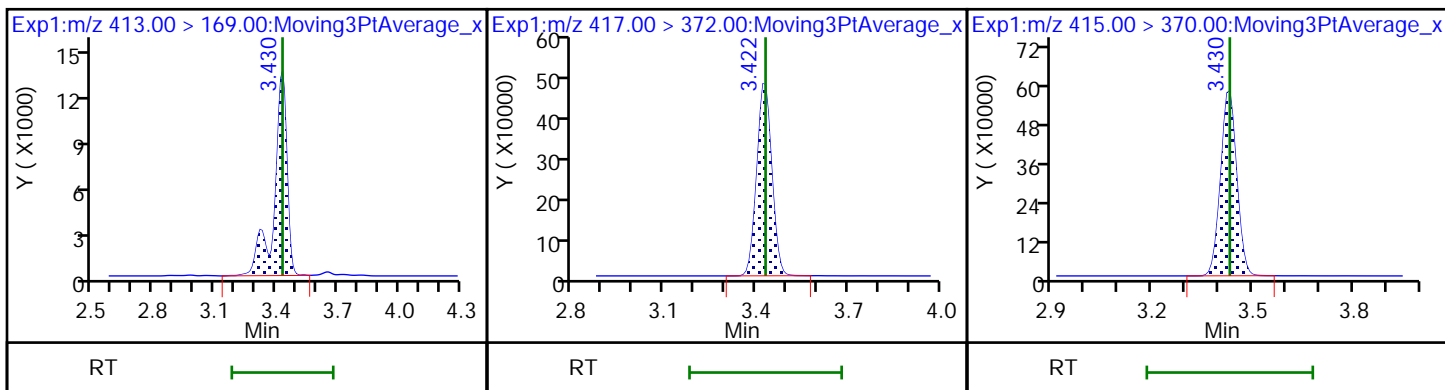
15 Perfluorooctanoic acid



15 Perfluorooctanoic acid

D 14 13C4 PFOA

\* 62 13C2 PFOA

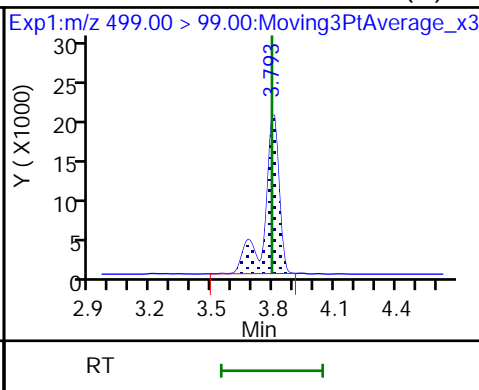
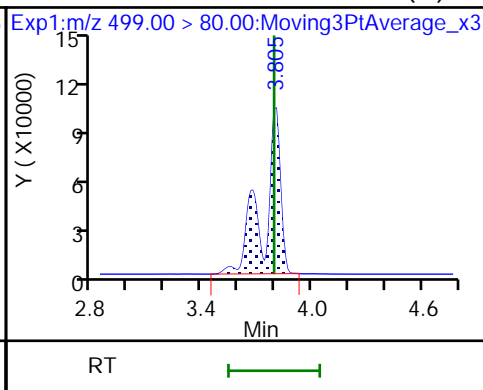
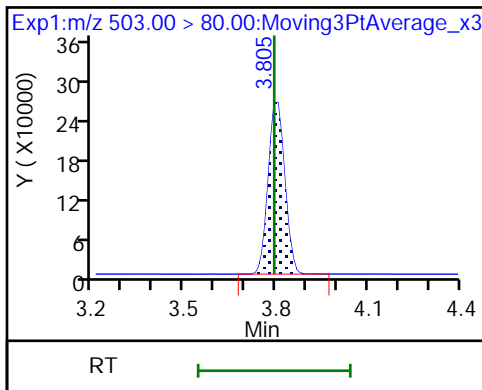




D 18 13C4 PFOS

17 Perfluorooctanesulfonic acid (M)

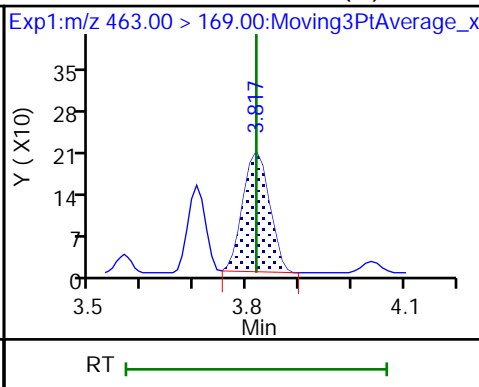
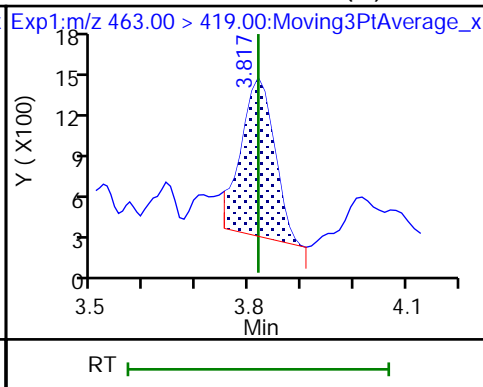
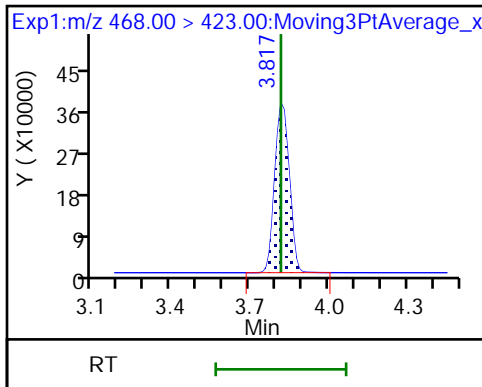
17 Perfluorooctanesulfonic acid (M)



D 19 13C5 PFNA

20 Perfluorononanoic acid (M)

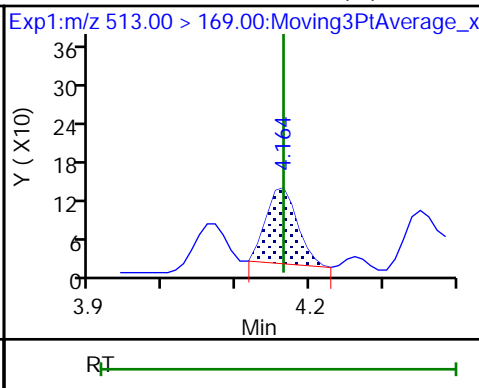
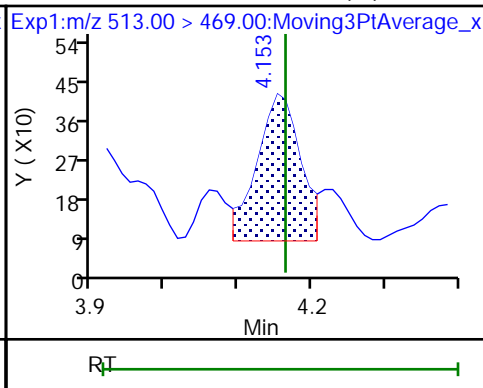
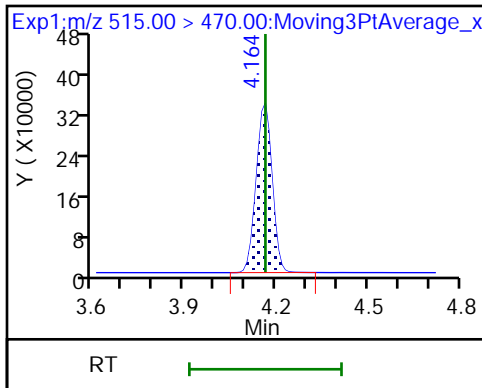
20 Perfluorononanoic acid (M)



D 23 13C2 PFDA

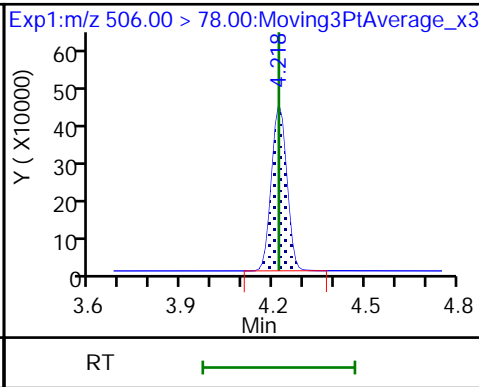
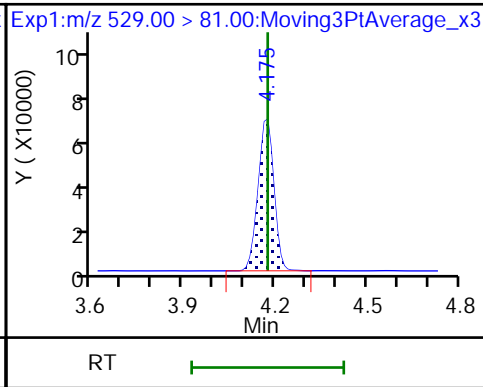
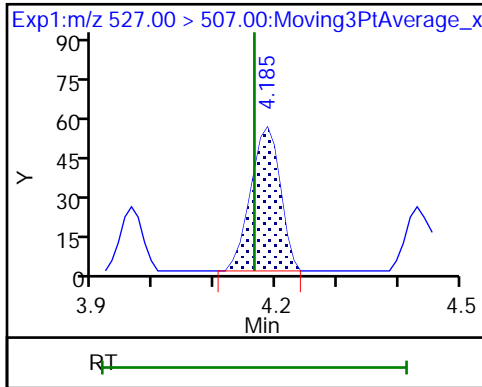
24 Perfluorodecanoic acid (M)

24 Perfluorodecanoic acid (M)



25 1H,1H,2H,2H-perfluorodecanesulfonic acid (M) M2-8:2 FTS

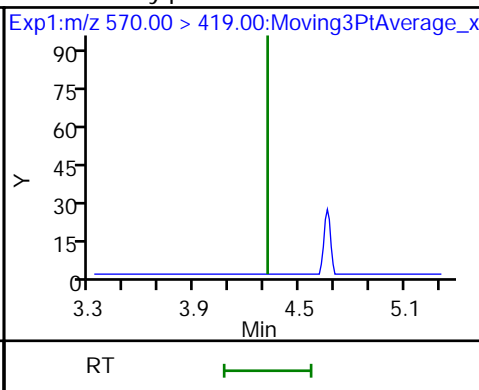
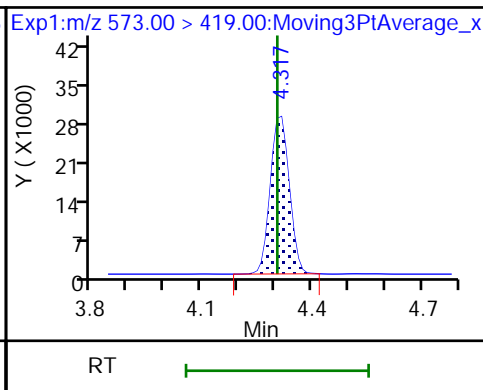
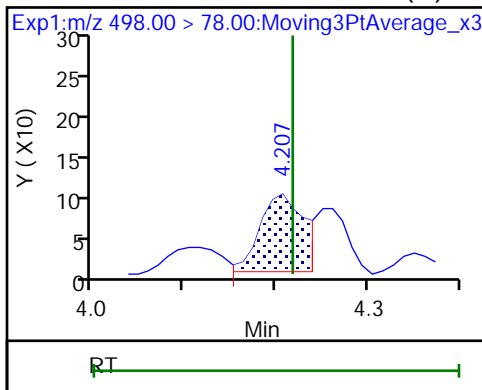
D 21 13C8 FOSA



22 Perfluorooctanesulfonamide (M)

D 27 d3-NMeFOSAA

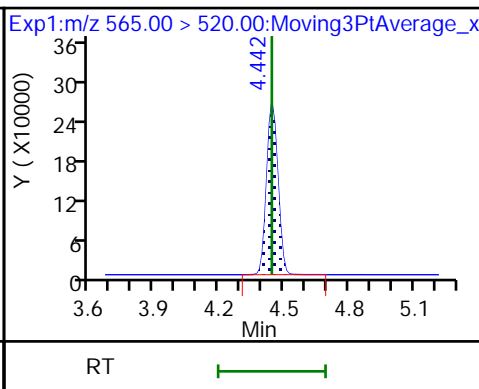
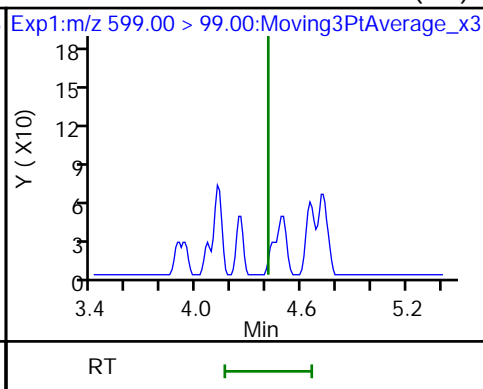
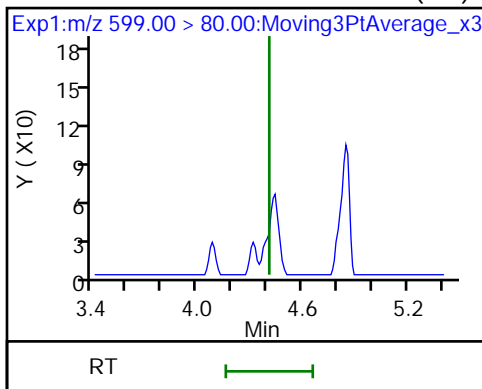
28 N-methylperfluorooctanesulfonamido (ND)



29 Perfluorodecanesulfonic acid (ND)

29 Perfluorodecanesulfonic acid (ND)

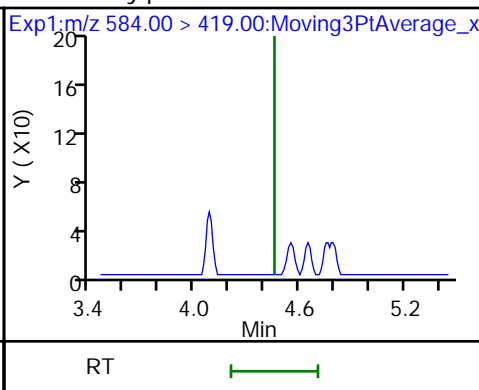
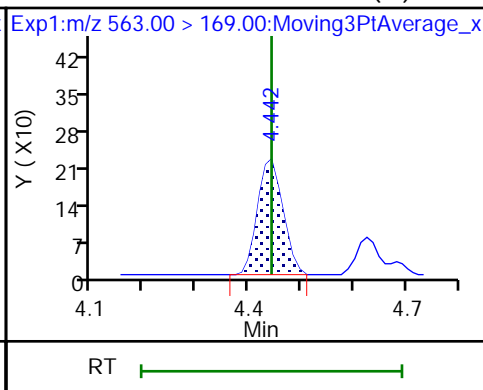
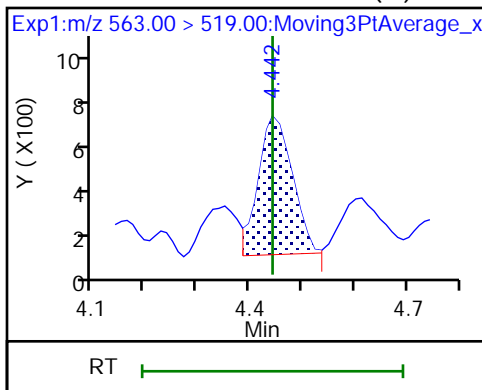
D 30 13C2 PFUnA



31 Perfluoroundecanoic acid (M)

31 Perfluoroundecanoic acid (M)

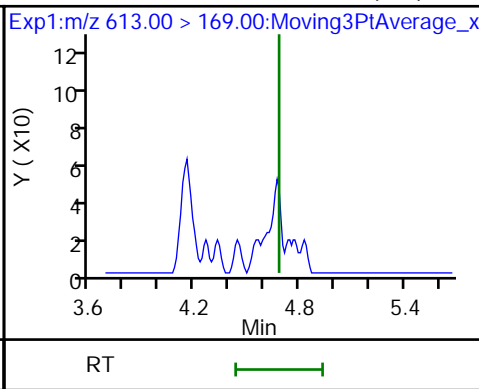
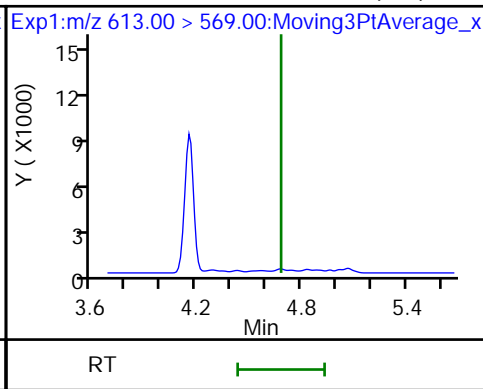
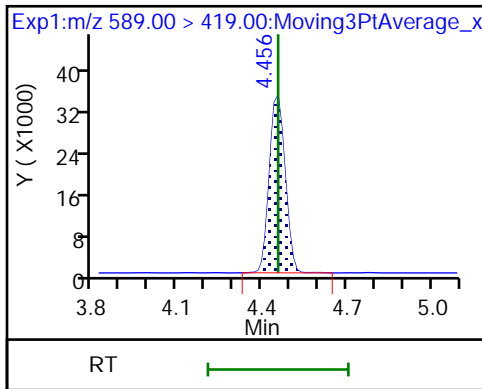
33 N-ethylperfluorooctanesulfonamidoa (ND)



D 32 d5-NEtFOSAA

37 Perfluorododecanoic acid (ND)

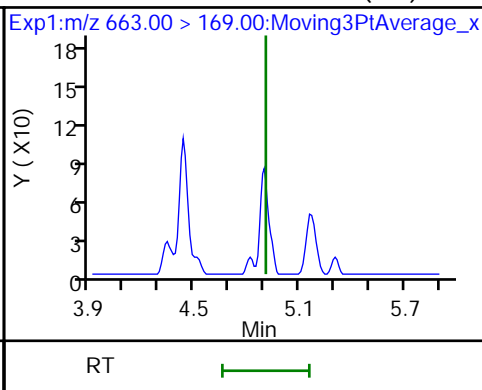
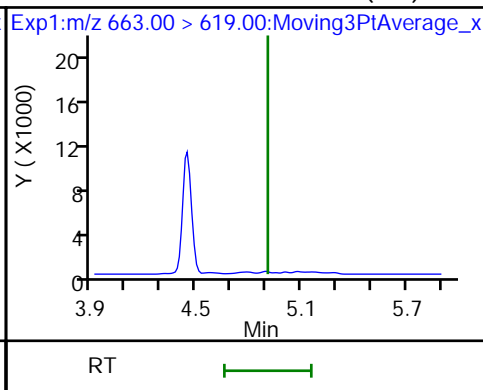
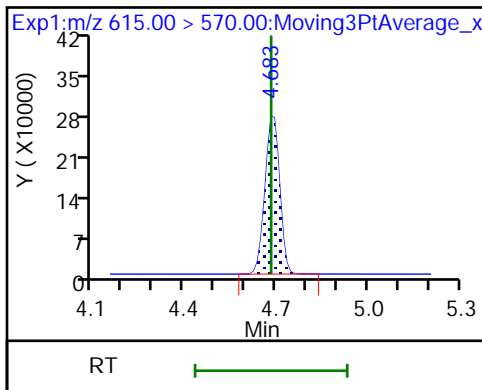
37 Perfluorododecanoic acid (ND)



D 36 13C2 PFDoA

41 Perfluorotridecanoic acid (ND)

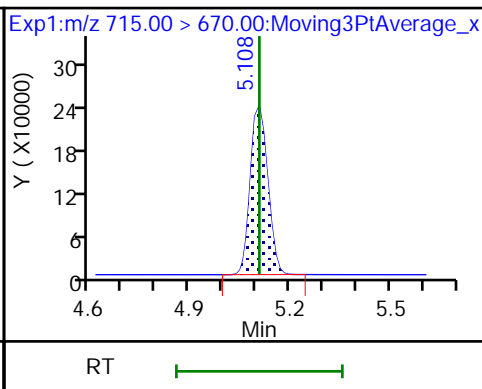
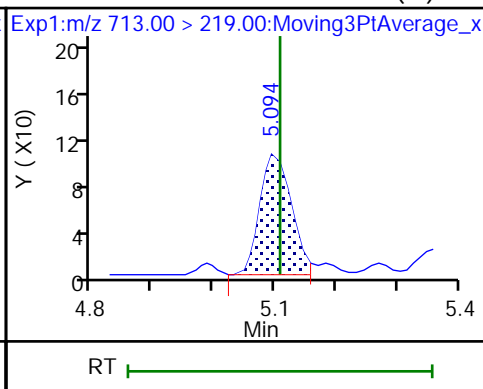
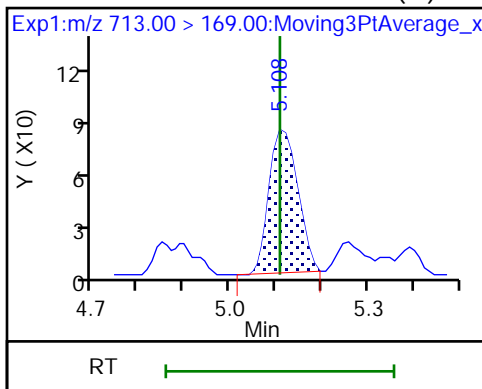
41 Perfluorotridecanoic acid (ND)



42 Perfluorotetradecanoic acid (M)

42 Perfluorotetradecanoic acid (M)

D 43 13C2 PFTeDA



Eurofins TestAmerica, Burlington

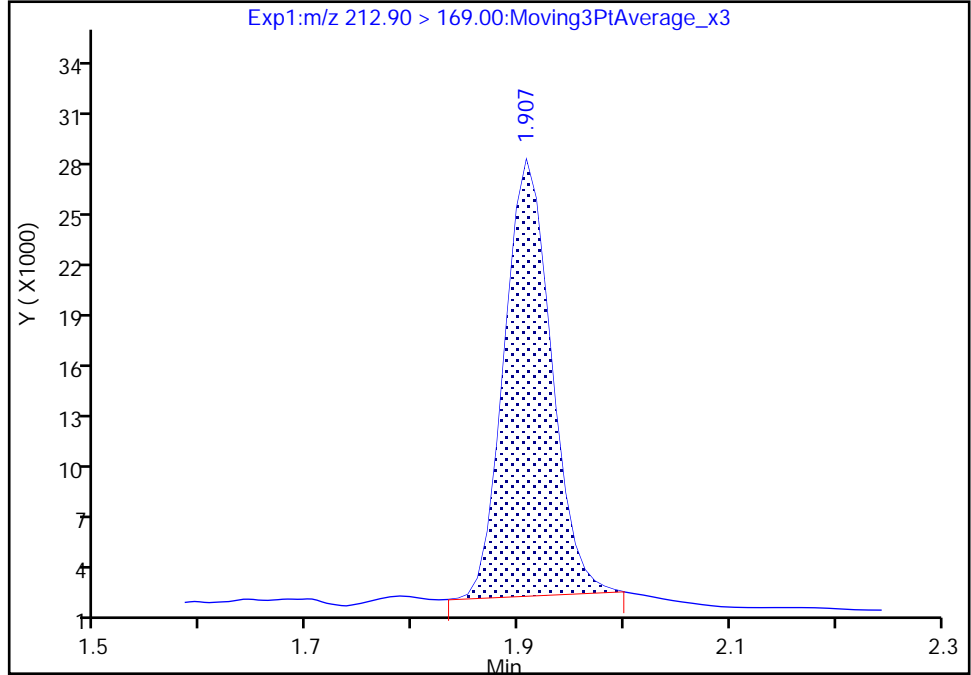
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B008.d  
Injection Date: 24-Dec-2019 14:53:26 Instrument ID: LC812  
Lims ID: 480-164221-C-1-A Lab Sample ID: 200-164221-1  
Client ID: CS RW 2 DER  
Operator ID: lc812tech ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

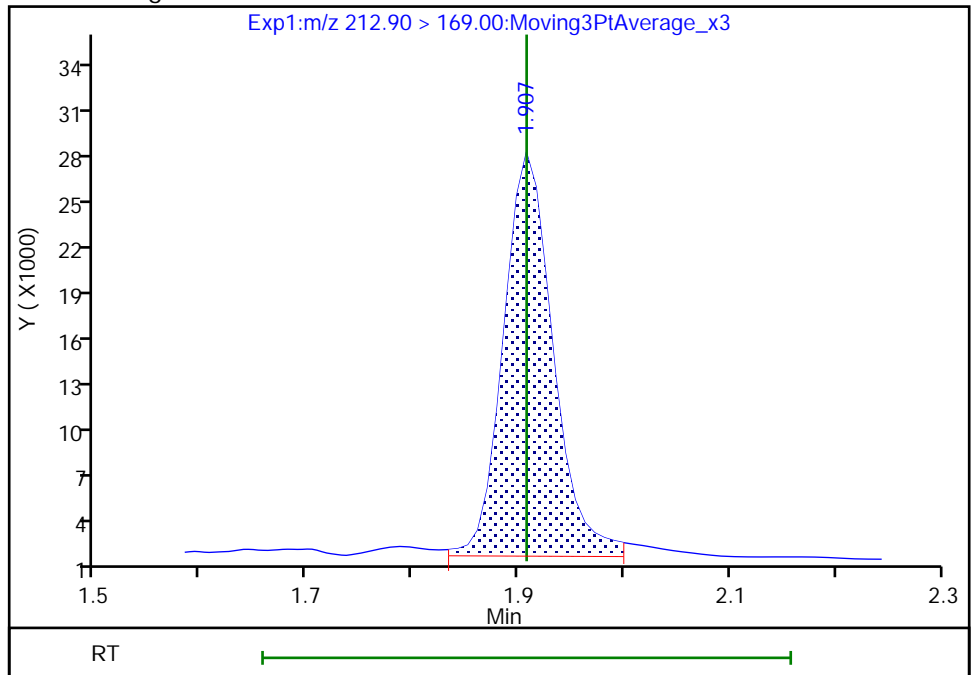
RT: 1.91  
Area: 79669  
Amount: 0.115073  
Amount Units: ng/ml

Processing Integration Results



RT: 1.91  
Area: 86118  
Amount: 0.124388  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 10:49:19

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

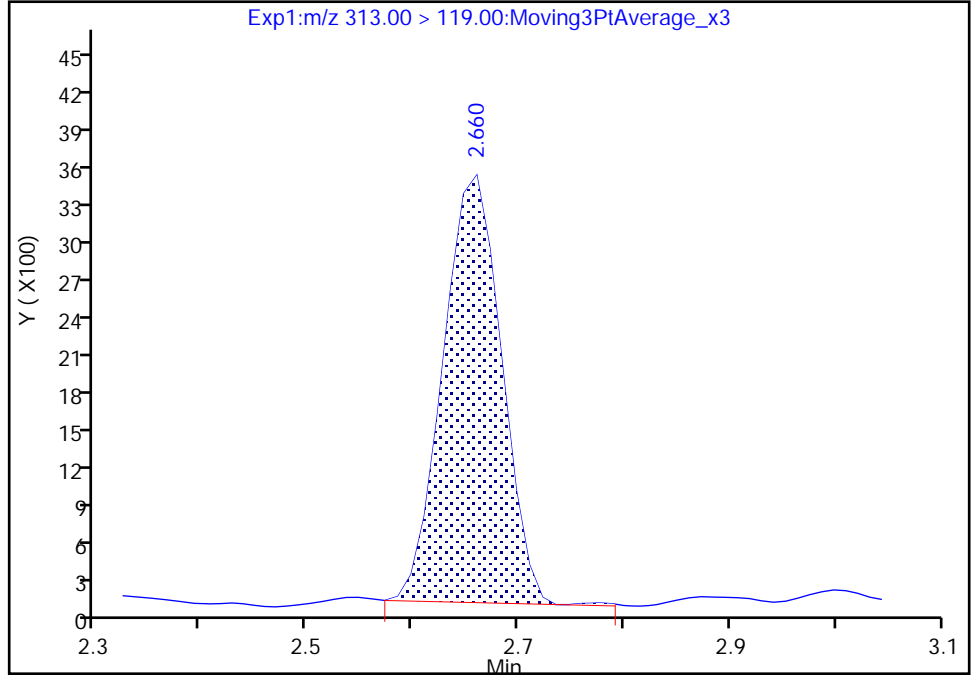
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B008.d  
Injection Date: 24-Dec-2019 14:53:26 Instrument ID: LC812  
Lims ID: 480-164221-C-1-A Lab Sample ID: 200-164221-1  
Client ID: CS RW 2 DER  
Operator ID: lc812tech ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

6 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 2

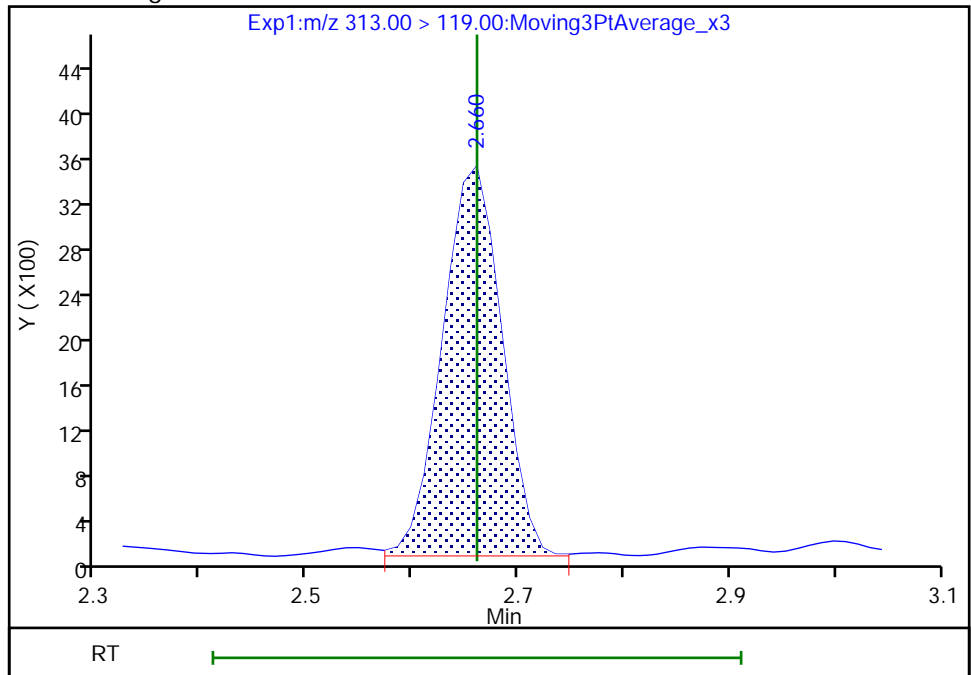
RT: 2.66  
Area: 13129  
Amount: 0.241612  
Amount Units: ng/ml

Processing Integration Results



RT: 2.66  
Area: 13408  
Amount: 0.241612  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagery, 27-Dec-2019 10:48:42

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

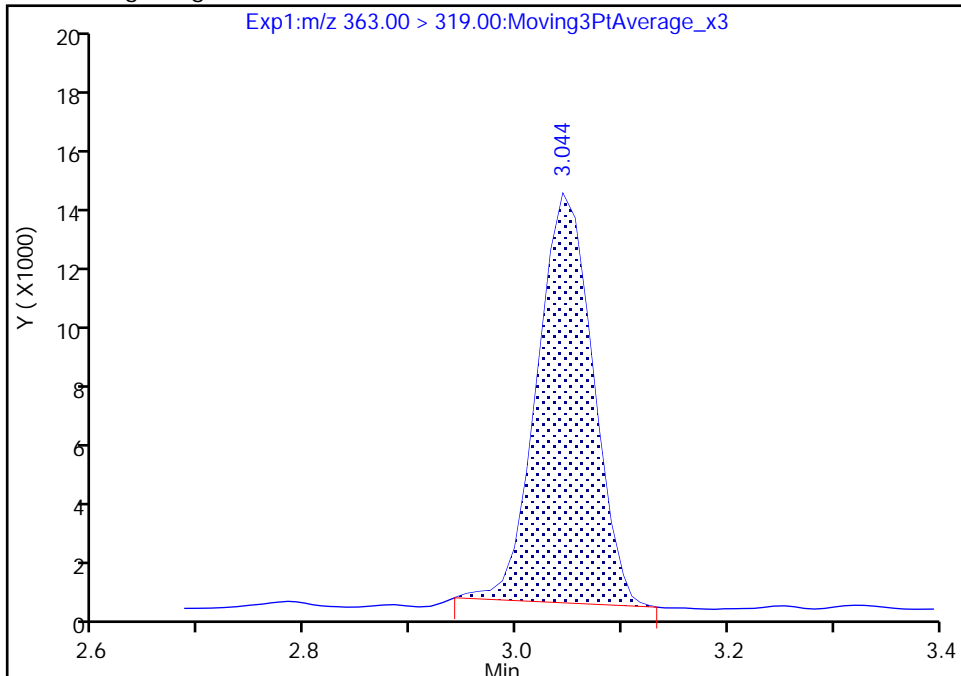
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B008.d  
Injection Date: 24-Dec-2019 14:53:26 Instrument ID: LC812  
Lims ID: 480-164221-C-1-A Lab Sample ID: 200-164221-1  
Client ID: CS RW 2 DER  
Operator ID: lc812tech ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

10 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

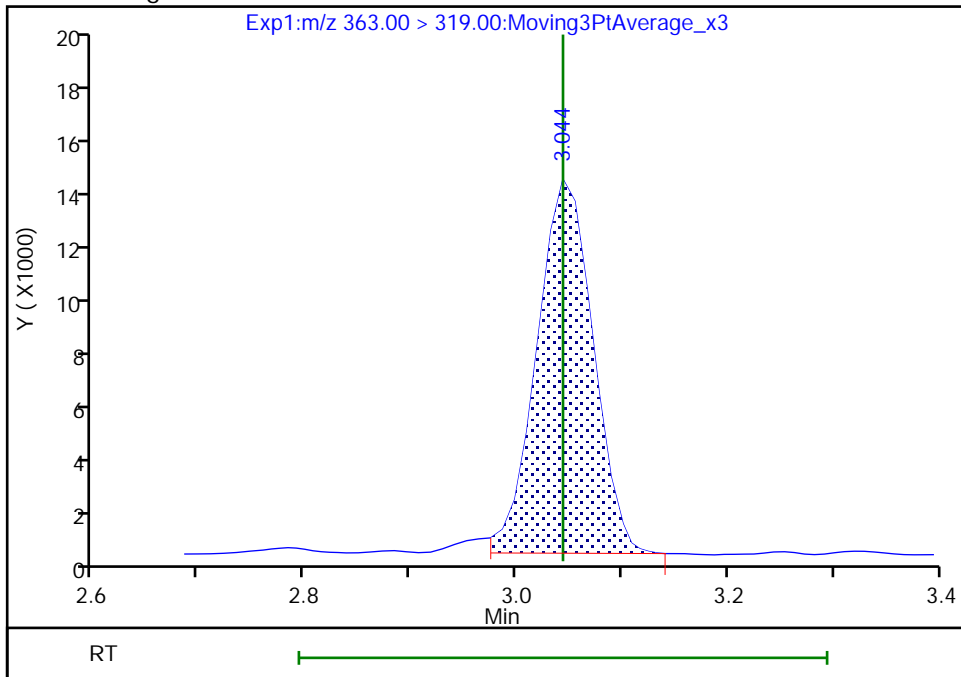
RT: 3.04  
Area: 50261  
Amount: 0.072892  
Amount Units: ng/ml

Processing Integration Results



RT: 3.04  
Area: 51226  
Amount: 0.074292  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 10:47:07

Audit Action: Manually Integrated

Audit Reason: Split Peak

Euofins TestAmerica, Burlington

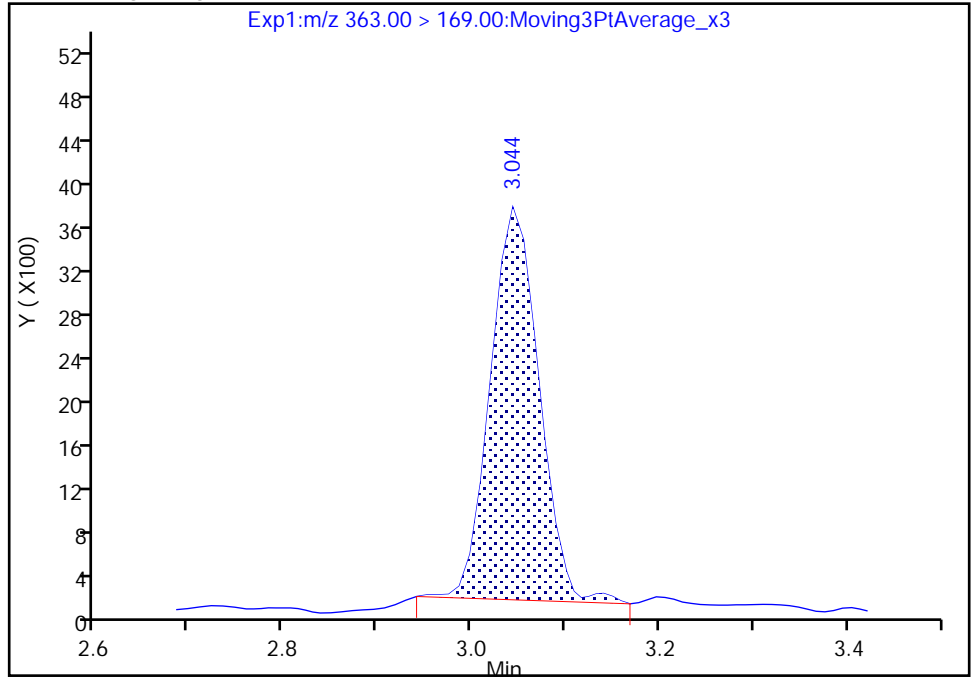
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B008.d  
Injection Date: 24-Dec-2019 14:53:26 Instrument ID: LC812  
Lims ID: 480-164221-C-1-A Lab Sample ID: 200-164221-1  
Client ID: CS RW 2 DER  
Operator ID: lc812tech ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

10 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 2

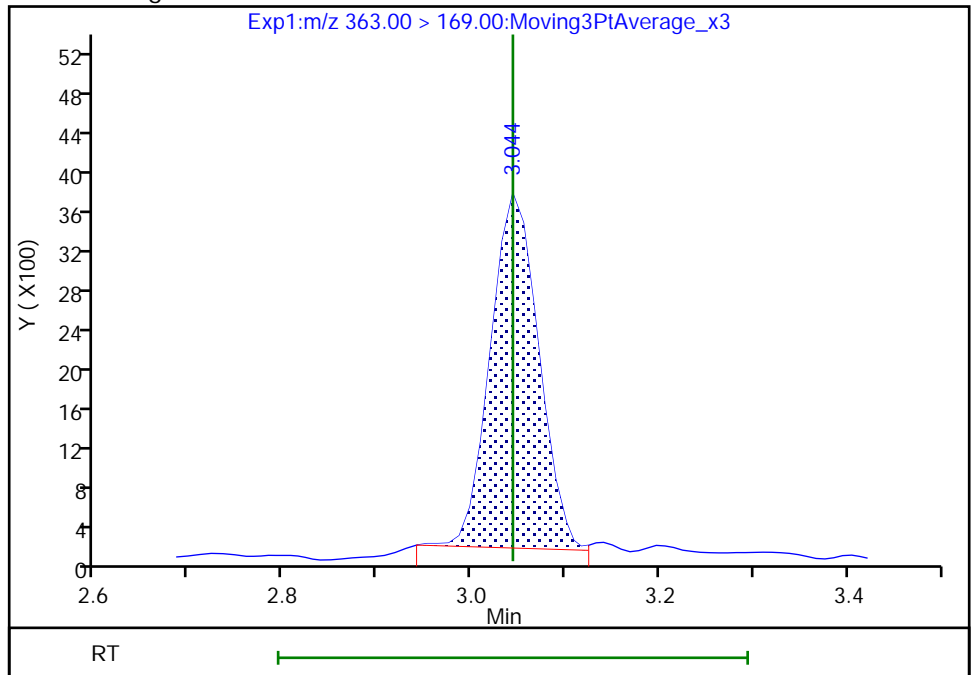
RT: 3.04  
Area: 13087  
Amount: 0.072892  
Amount Units: ng/ml

Processing Integration Results



RT: 3.04  
Area: 12938  
Amount: 0.074292  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 10:47:15

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

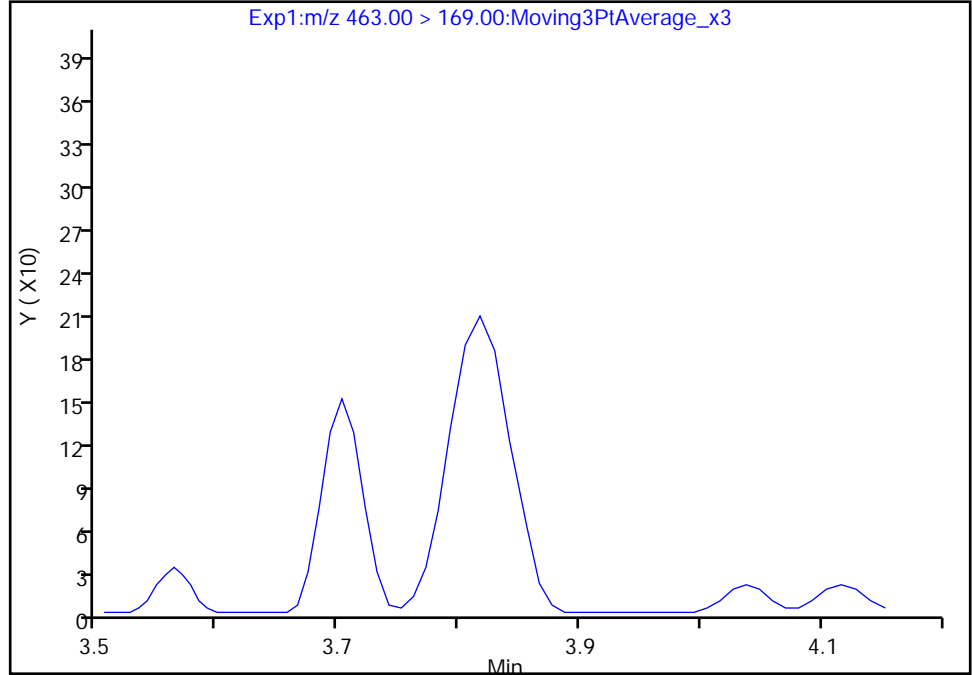
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B008.d  
Injection Date: 24-Dec-2019 14:53:26 Instrument ID: LC812  
Lims ID: 480-164221-C-1-A Lab Sample ID: 200-164221-1  
Client ID: CS RW 2 DER  
Operator ID: lc812tech ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

20 Perfluorononanoic acid, CAS: 375-95-1

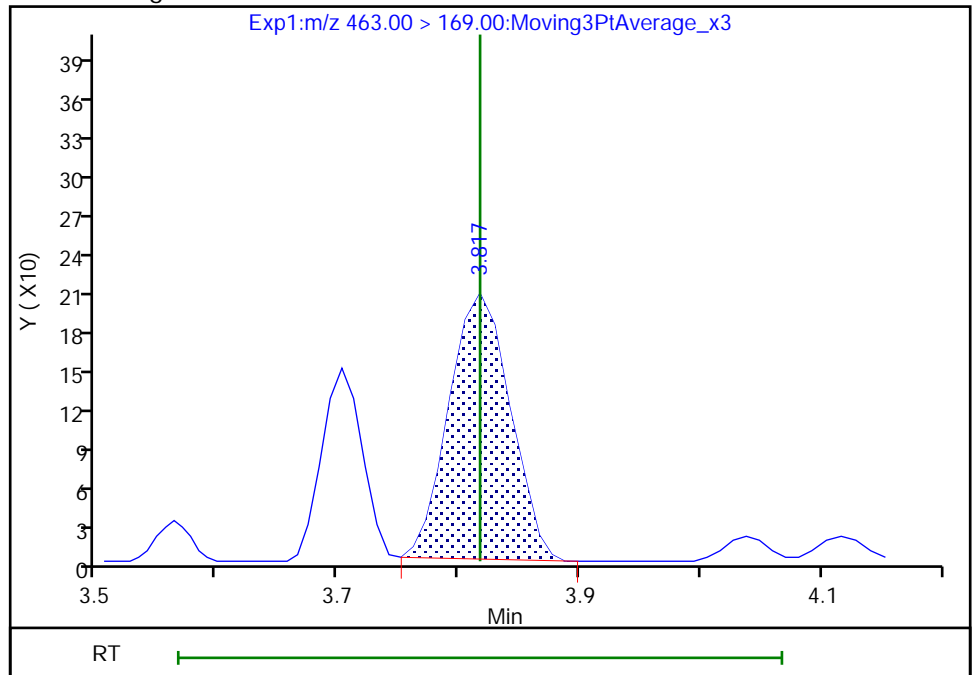
Signal: 2

Not Detected  
Expected RT: 3.82

Processing Integration Results



Manual Integration Results



RT: 3.82  
Area: 711  
Amount: 0.009144  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

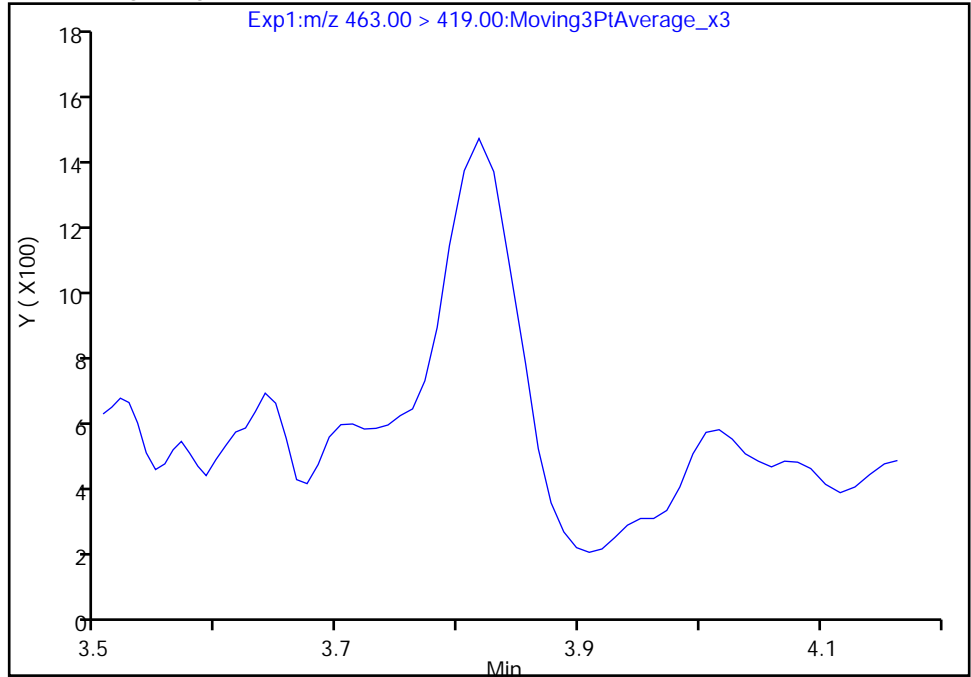
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B008.d  
Injection Date: 24-Dec-2019 14:53:26 Instrument ID: LC812  
Lims ID: 480-164221-C-1-A Lab Sample ID: 200-164221-1  
Client ID: CS RW 2 DER  
Operator ID: lc812tech ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

20 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

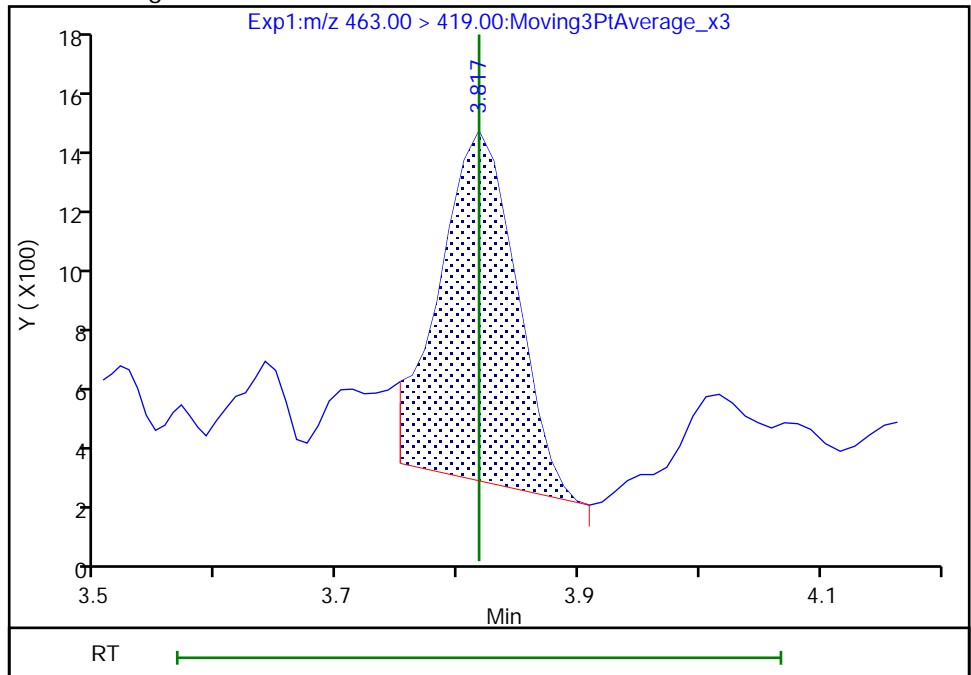
Not Detected  
Expected RT: 3.82

Processing Integration Results



RT: 3.82  
Area: 5097  
Amount: 0.009144  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagern, 27-Dec-2019 10:44:07

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

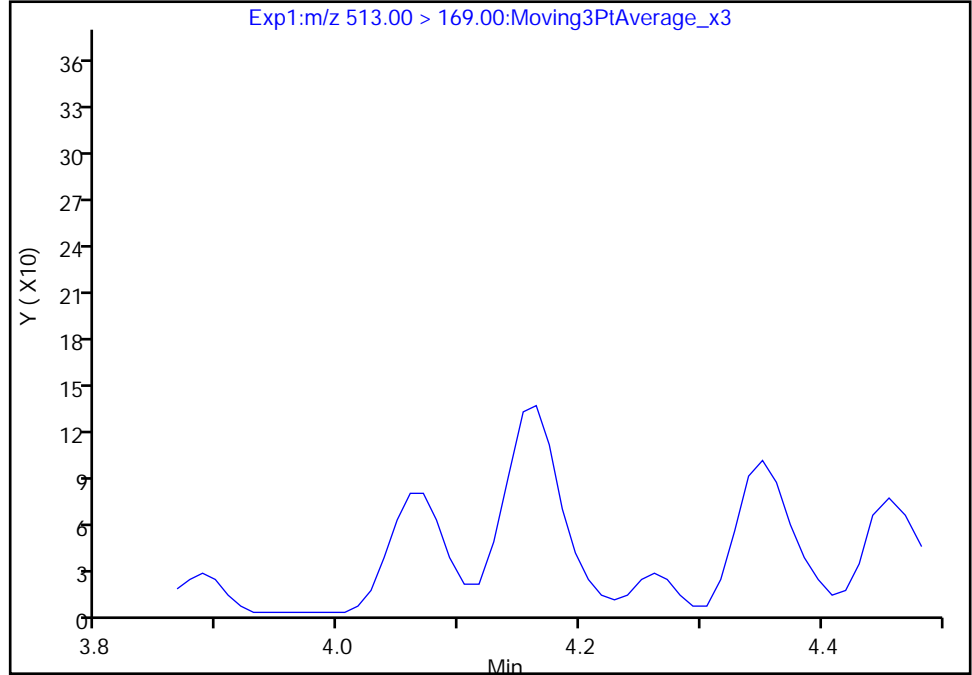
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B008.d  
Injection Date: 24-Dec-2019 14:53:26 Instrument ID: LC812  
Lims ID: 480-164221-C-1-A Lab Sample ID: 200-164221-1  
Client ID: CS RW 2 DER  
Operator ID: lc812tech ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

24 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 2

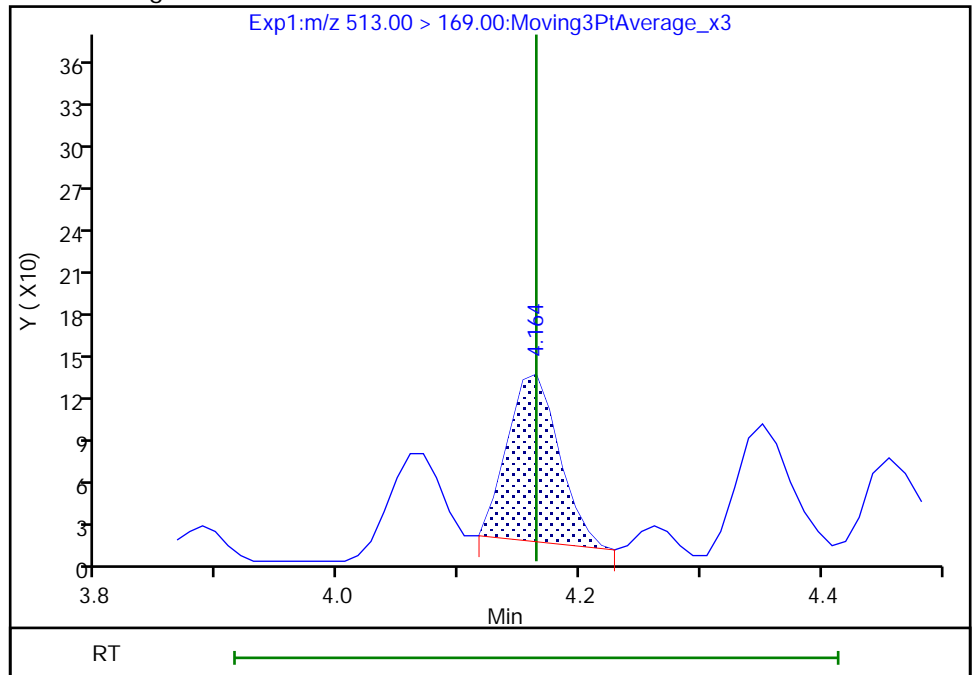
Not Detected  
Expected RT: 4.16

Processing Integration Results



Manual Integration Results

RT: 4.16  
Area: 349  
Amount: 0.003020  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 10:42:19

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

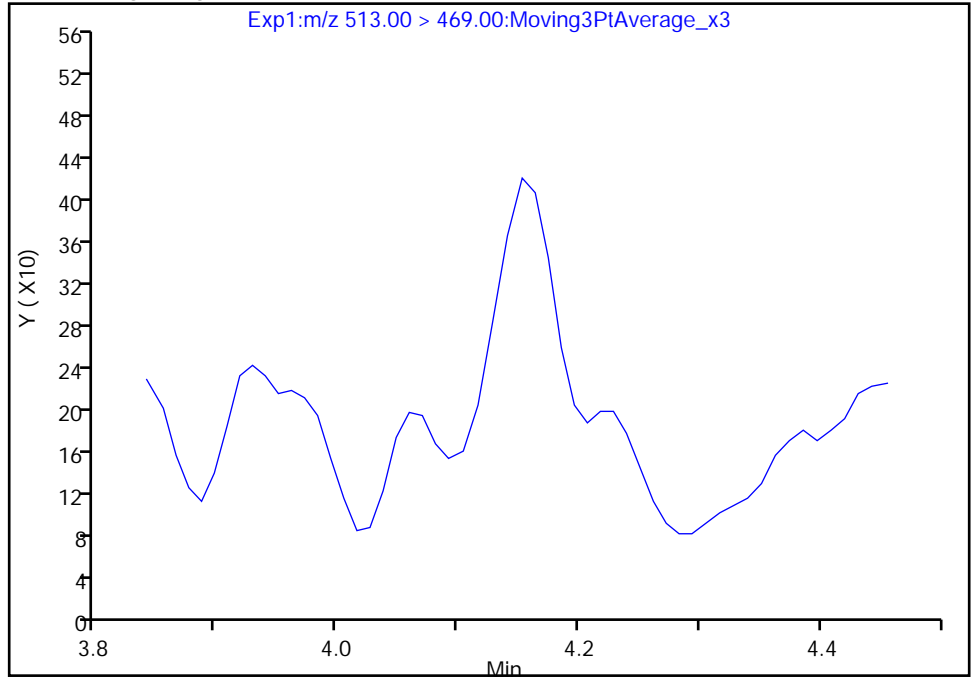
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B008.d  
Injection Date: 24-Dec-2019 14:53:26 Instrument ID: LC812  
Lims ID: 480-164221-C-1-A Lab Sample ID: 200-164221-1  
Client ID: CS RW 2 DER  
Operator ID: lc812tech ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

24 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 1

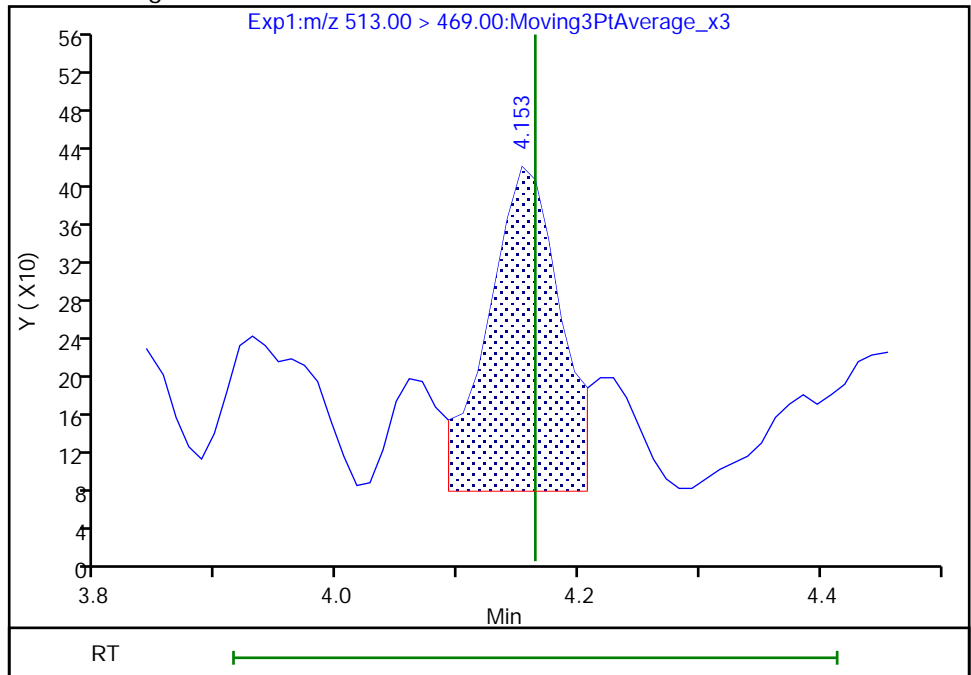
Not Detected  
Expected RT: 4.16

Processing Integration Results



Manual Integration Results

RT: 4.15  
Area: 1396  
Amount: 0.003020  
Amount Units: ng/ml



Euofins TestAmerica, Burlington

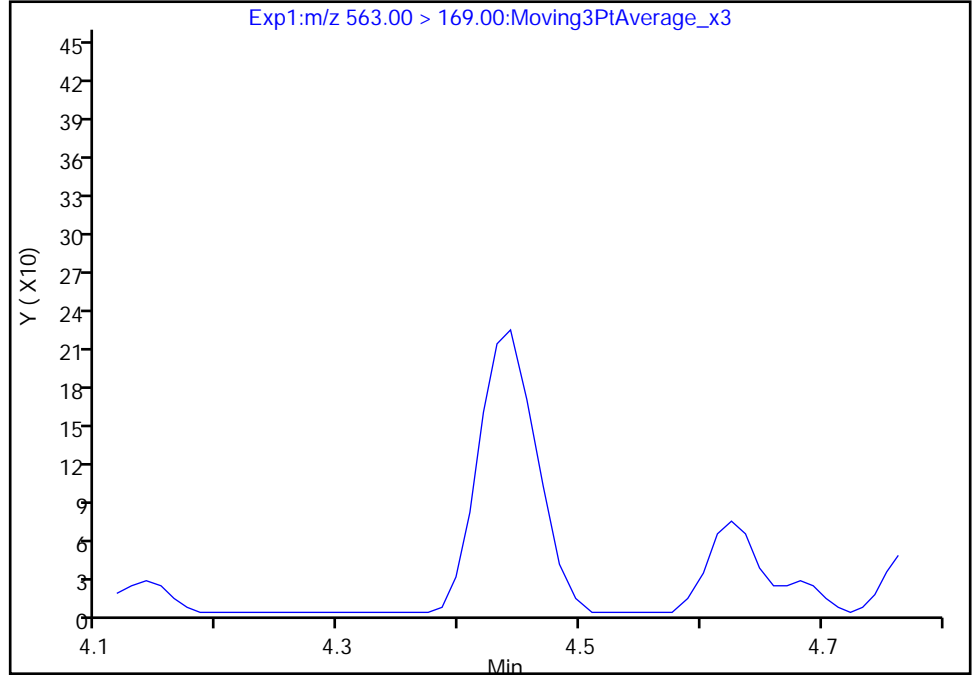
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B008.d  
Injection Date: 24-Dec-2019 14:53:26 Instrument ID: LC812  
Lims ID: 480-164221-C-1-A Lab Sample ID: 200-164221-1  
Client ID: CS RW 2 DER  
Operator ID: lc812tech ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 2

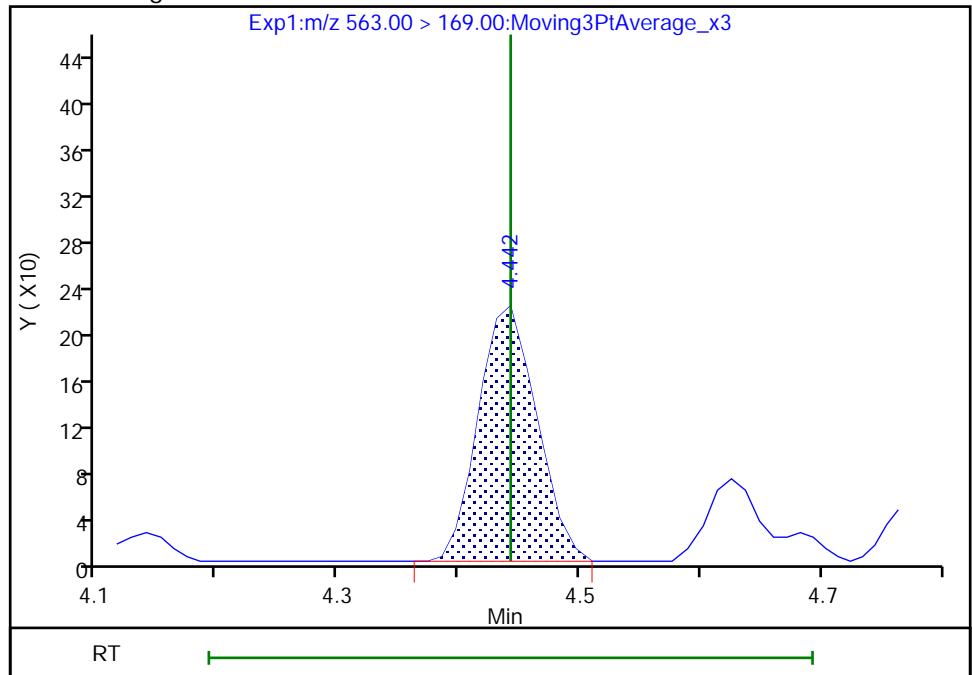
Not Detected  
Expected RT: 4.44

Processing Integration Results



Manual Integration Results

RT: 4.44  
Area: 747  
Amount: 0.008117  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 10:41:15  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

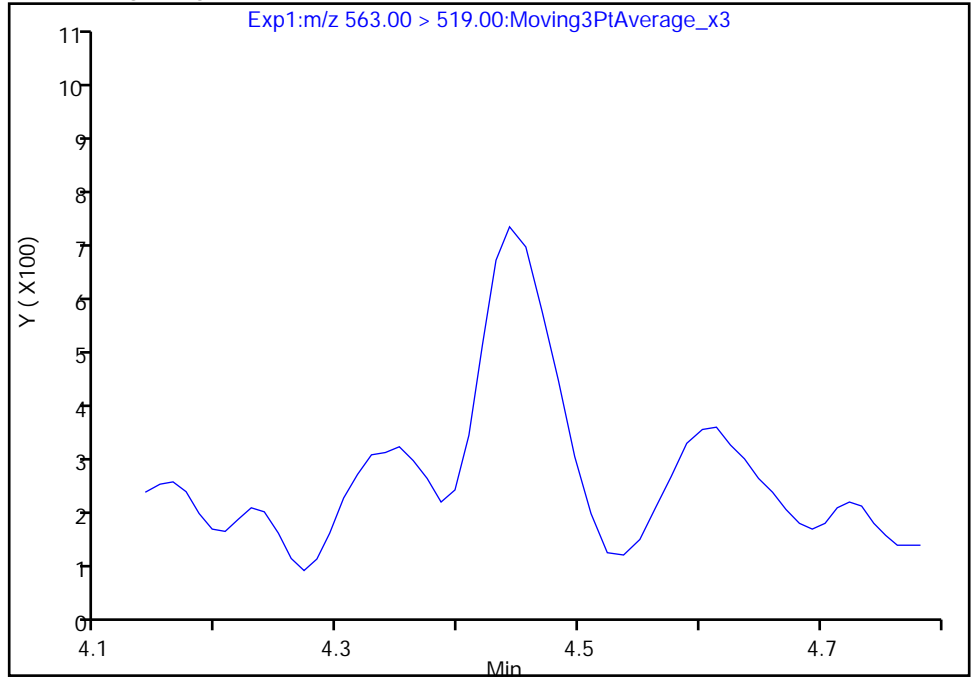
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B008.d  
Injection Date: 24-Dec-2019 14:53:26 Instrument ID: LC812  
Lims ID: 480-164221-C-1-A Lab Sample ID: 200-164221-1  
Client ID: CS RW 2 DER  
Operator ID: lc812tech ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 1

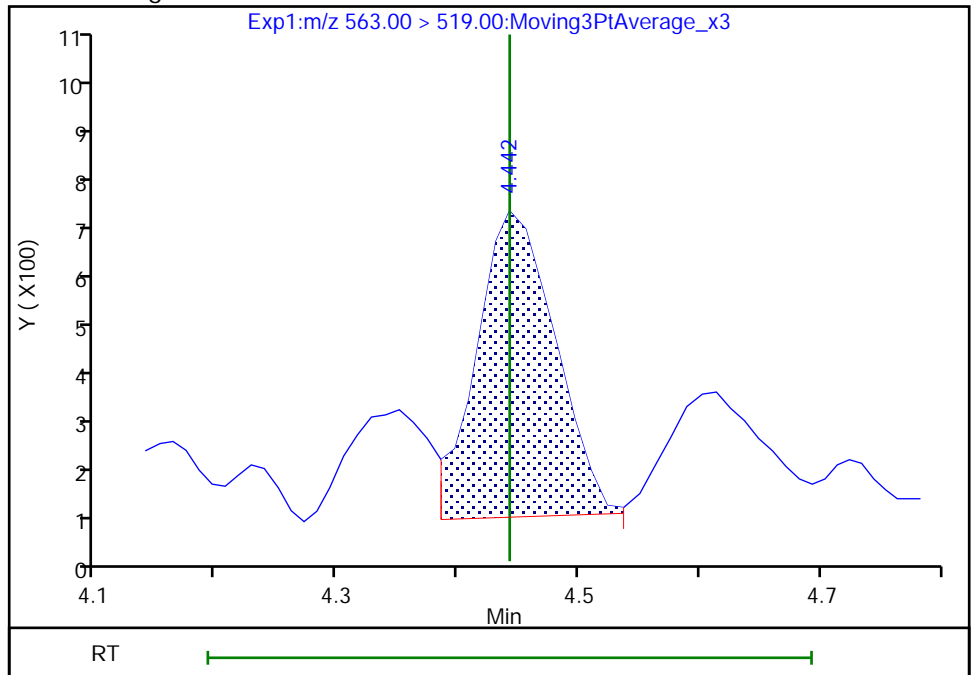
Not Detected  
Expected RT: 4.44

Processing Integration Results



Manual Integration Results

RT: 4.44  
Area: 2640  
Amount: 0.008117  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

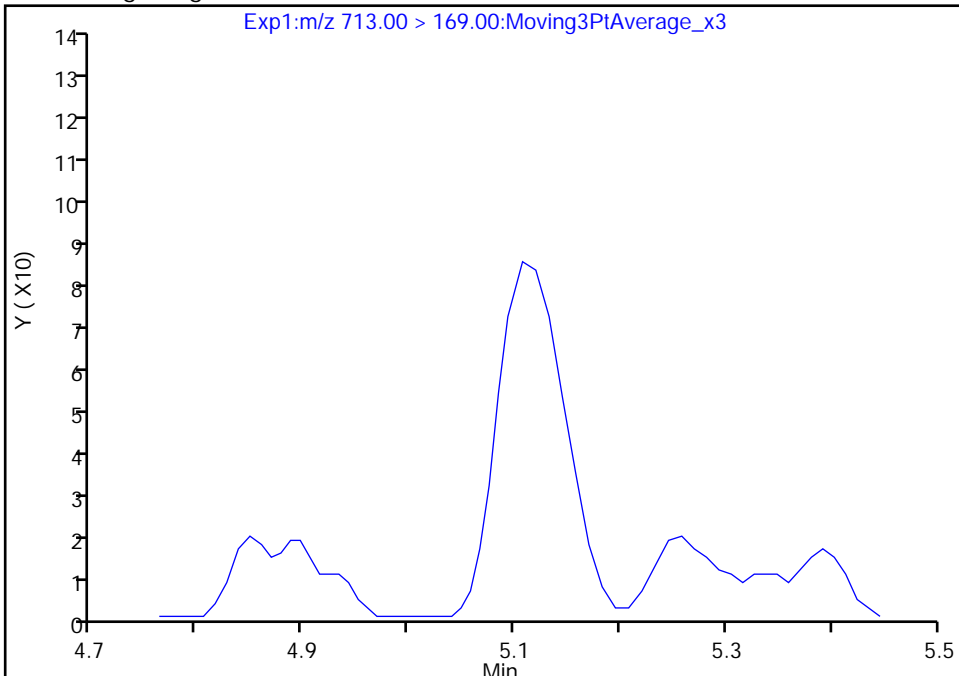
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B008.d  
Injection Date: 24-Dec-2019 14:53:26 Instrument ID: LC812  
Lims ID: 480-164221-C-1-A Lab Sample ID: 200-164221-1  
Client ID: CS RW 2 DER  
Operator ID: lc812tech ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 1

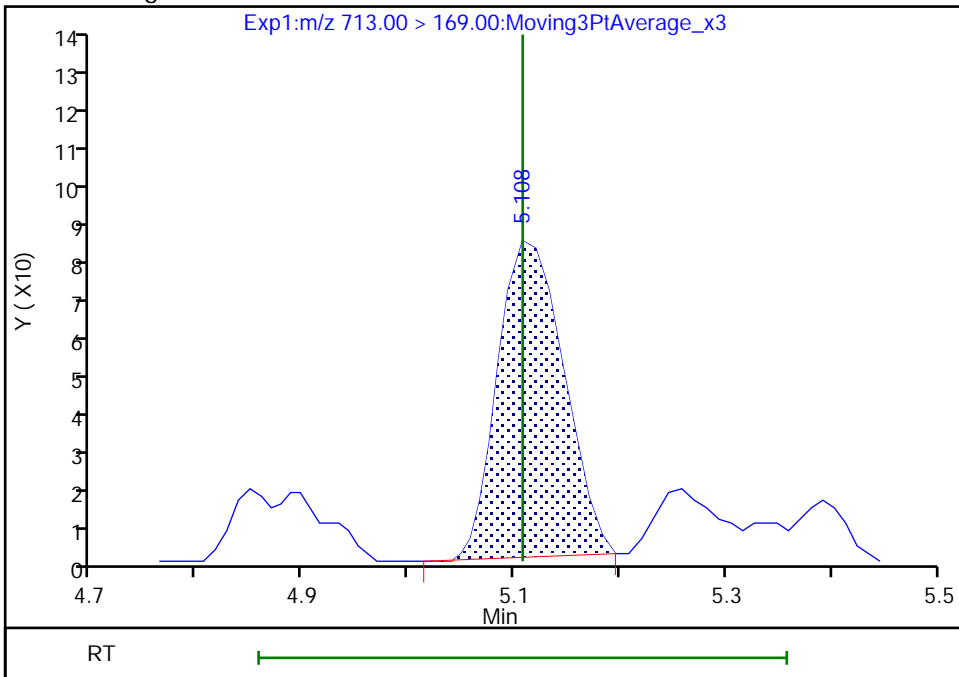
Not Detected  
Expected RT: 5.11

Processing Integration Results



RT: 5.11  
Area: 360  
Amount: 0.005180  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagern, 27-Dec-2019 10:40:00  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

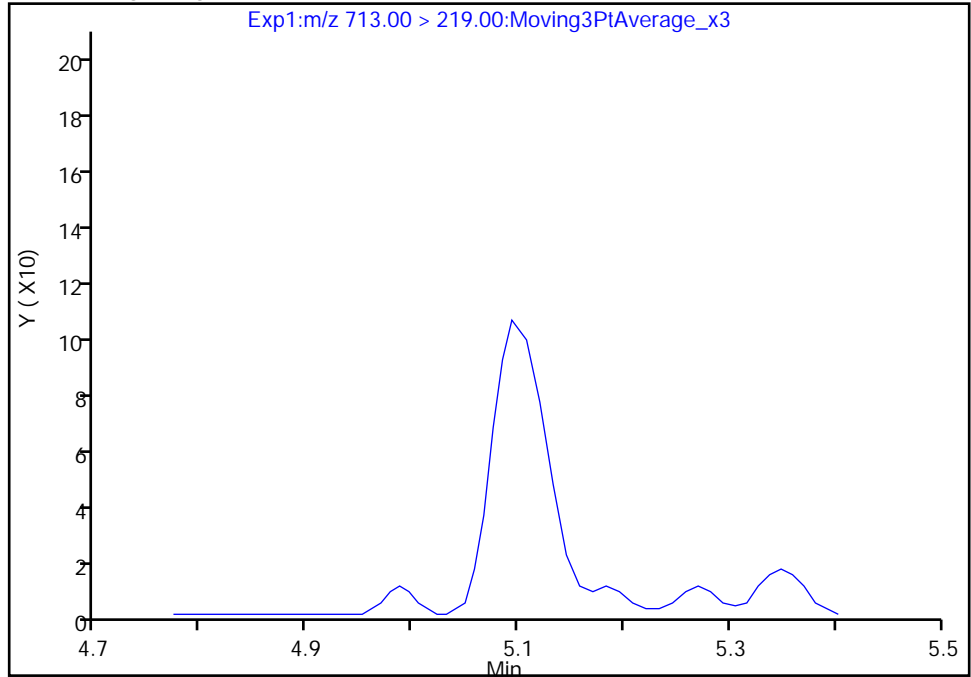
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B008.d  
Injection Date: 24-Dec-2019 14:53:26 Instrument ID: LC812  
Lims ID: 480-164221-C-1-A Lab Sample ID: 200-164221-1  
Client ID: CS RW 2 DER  
Operator ID: lc812tech ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 2

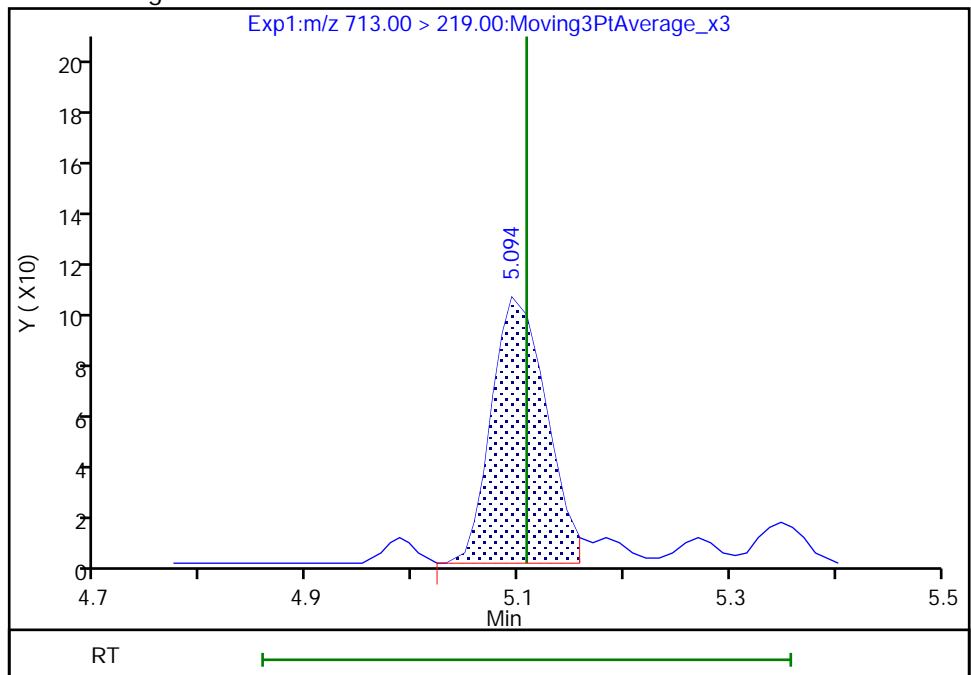
Not Detected  
Expected RT: 5.11

Processing Integration Results



Manual Integration Results

RT: 5.09  
Area: 372  
Amount: 0.005180  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 10:40:36

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

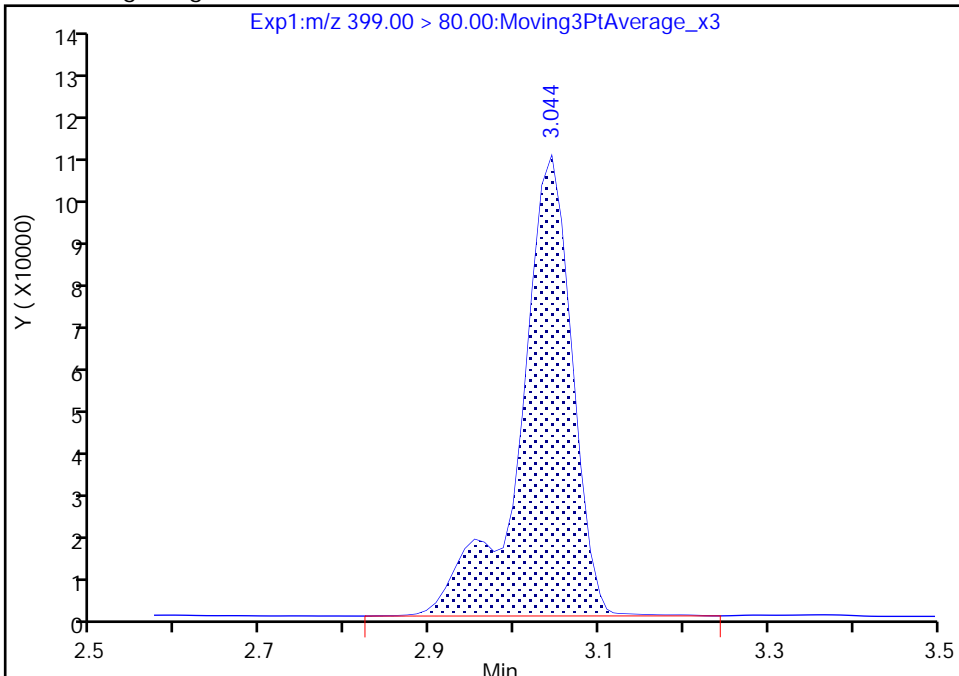
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B008.d  
Injection Date: 24-Dec-2019 14:53:26 Instrument ID: LC812  
Lims ID: 480-164221-C-1-A Lab Sample ID: 200-164221-1  
Client ID: CS RW 2 DER  
Operator ID: lc812tech ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

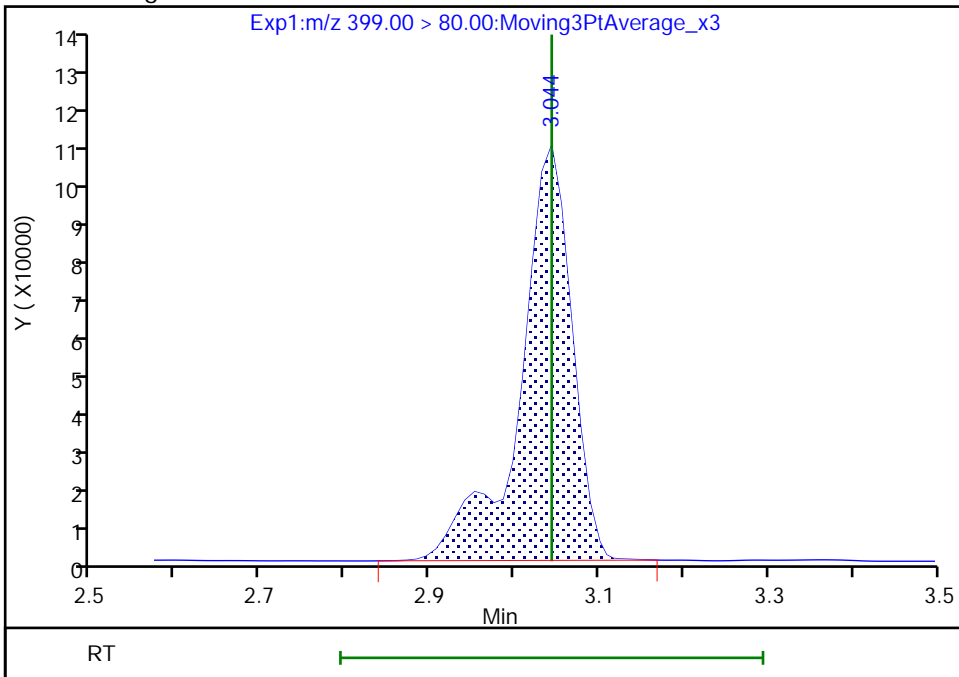
RT: 3.04  
Area: 441997  
Amount: 0.648881  
Amount Units: ng/ml

Processing Integration Results



RT: 3.04  
Area: 439439  
Amount: 0.645126  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 10:47:48  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Eurofins TestAmerica, Burlington

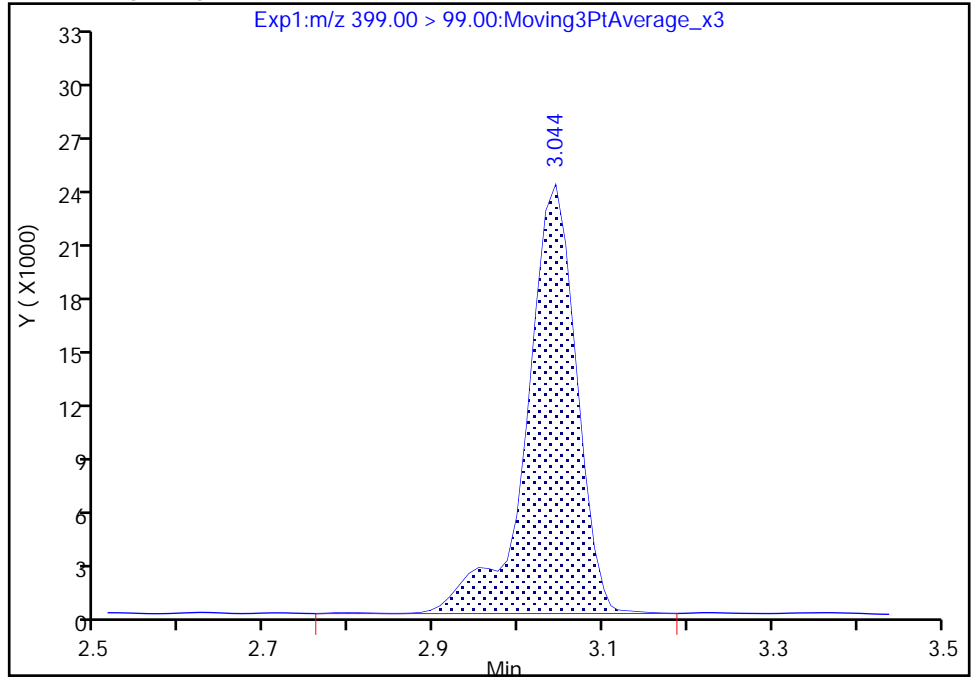
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B008.d  
Injection Date: 24-Dec-2019 14:53:26 Instrument ID: LC812  
Lims ID: 480-164221-C-1-A Lab Sample ID: 200-164221-1  
Client ID: CS RW 2 DER  
Operator ID: lc812tech ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

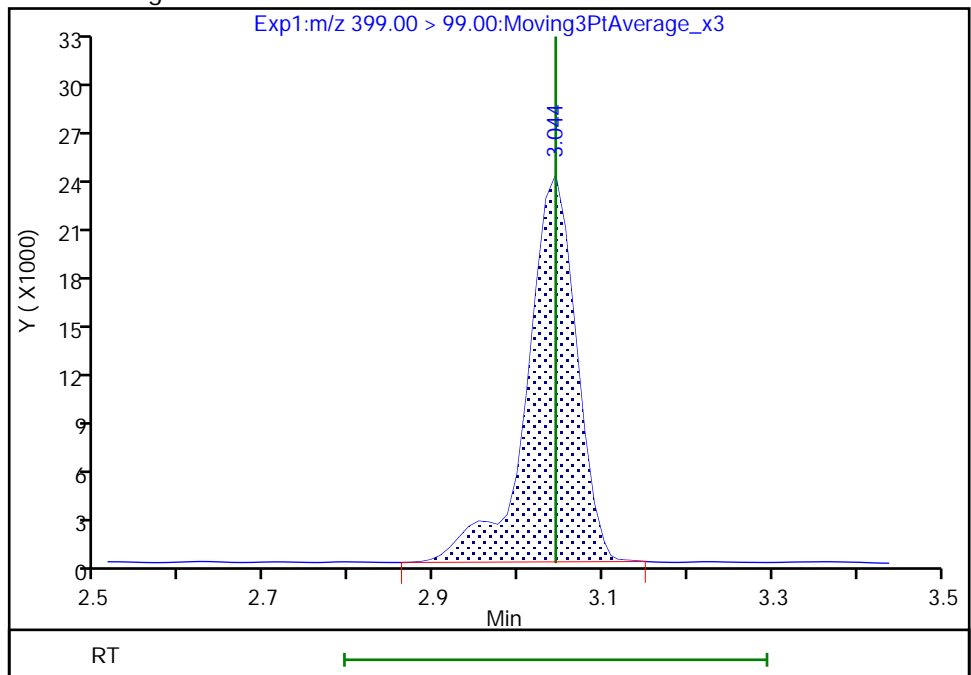
RT: 3.04  
Area: 98130  
Amount: 0.648881  
Amount Units: ng/ml

Processing Integration Results



RT: 3.04  
Area: 97438  
Amount: 0.645126  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 10:47:57

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Euofins TestAmerica, Burlington

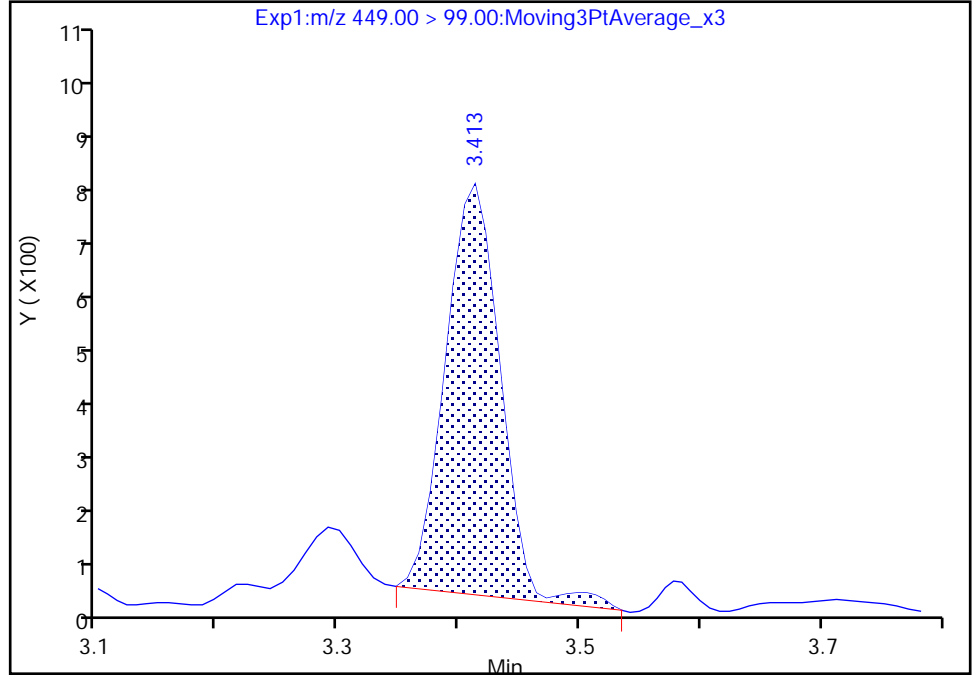
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B008.d  
Injection Date: 24-Dec-2019 14:53:26 Instrument ID: LC812  
Lims ID: 480-164221-C-1-A Lab Sample ID: 200-164221-1  
Client ID: CS RW 2 DER  
Operator ID: lc812tech ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

16 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 2

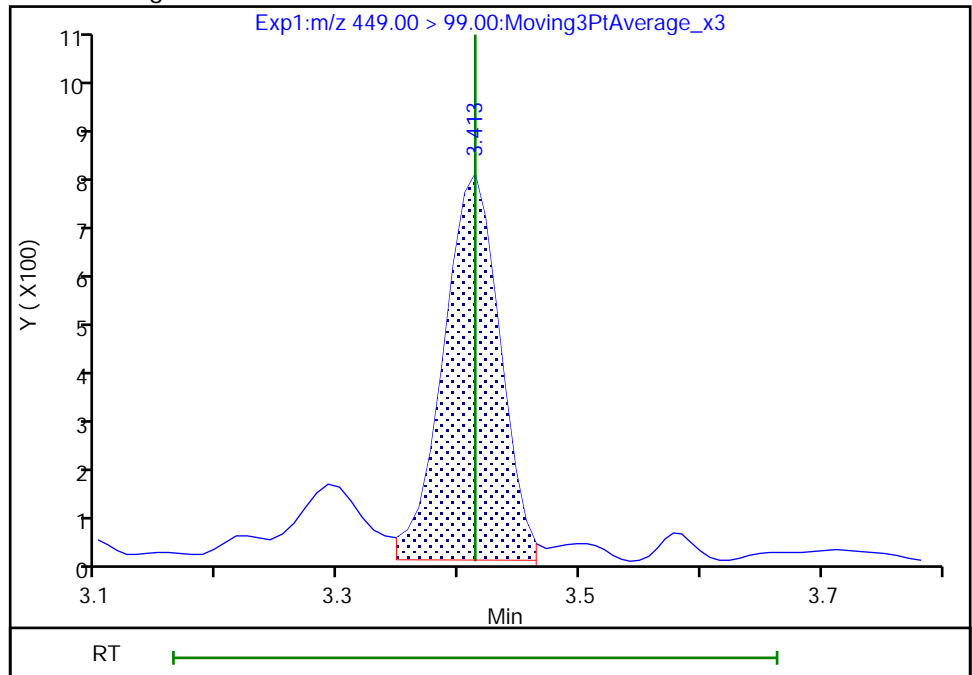
RT: 3.41  
Area: 2406  
Amount: 0.022821  
Amount Units: ng/ml

Processing Integration Results



RT: 3.41  
Area: 2560  
Amount: 0.022821  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 10:46:05

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

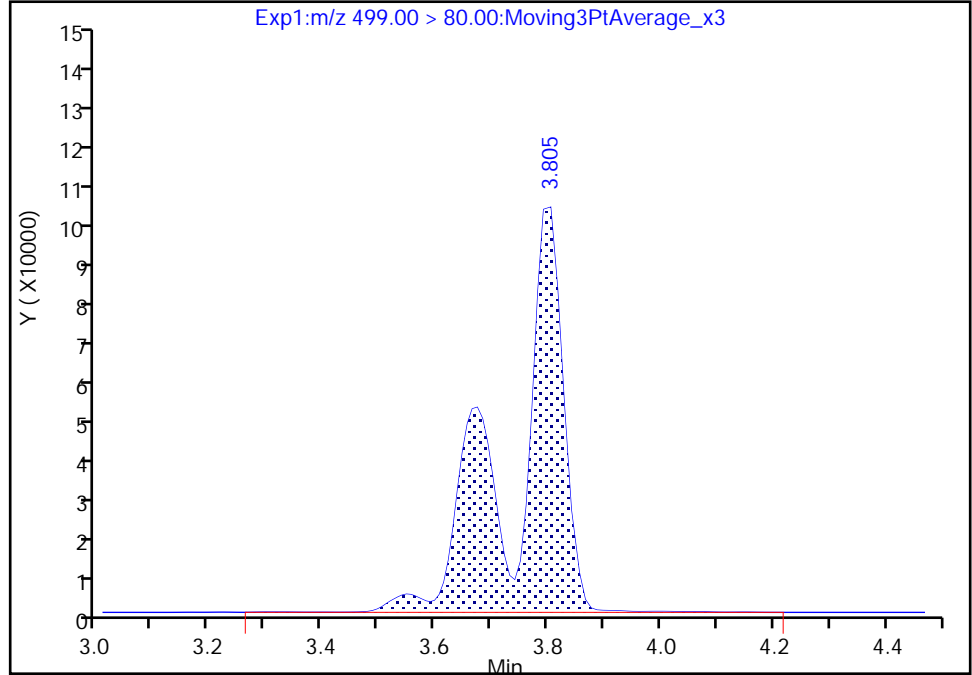
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B008.d  
Injection Date: 24-Dec-2019 14:53:26 Instrument ID: LC812  
Lims ID: 480-164221-C-1-A Lab Sample ID: 200-164221-1  
Client ID: CS RW 2 DER  
Operator ID: lc812tech ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

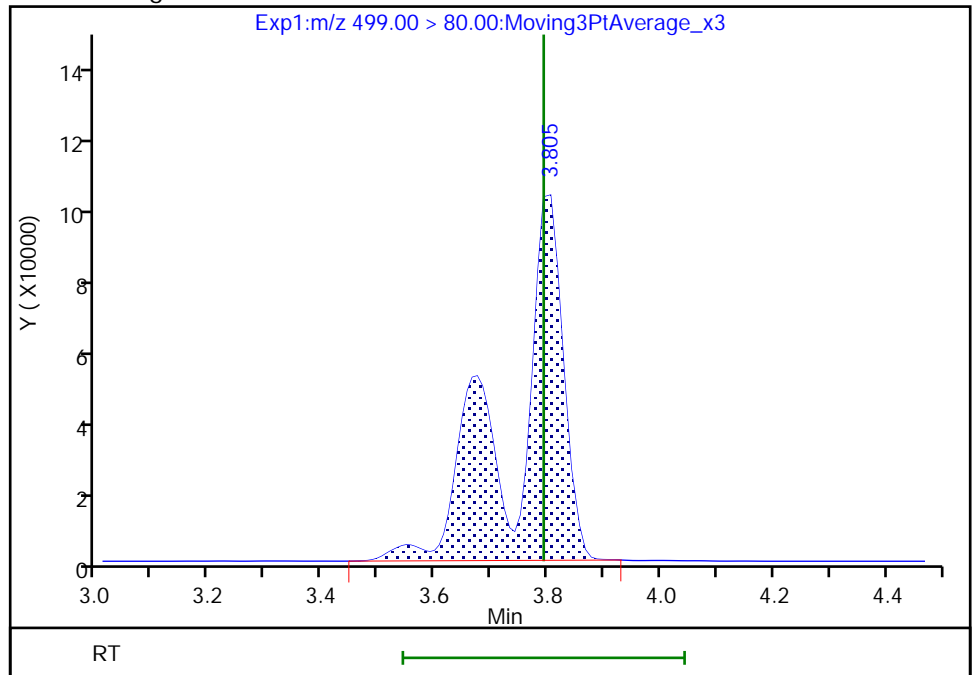
RT: 3.80  
Area: 643178  
Amount: 1.434932  
Amount Units: ng/ml

Processing Integration Results



RT: 3.80  
Area: 635646  
Amount: 1.418128  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 10:45:09  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

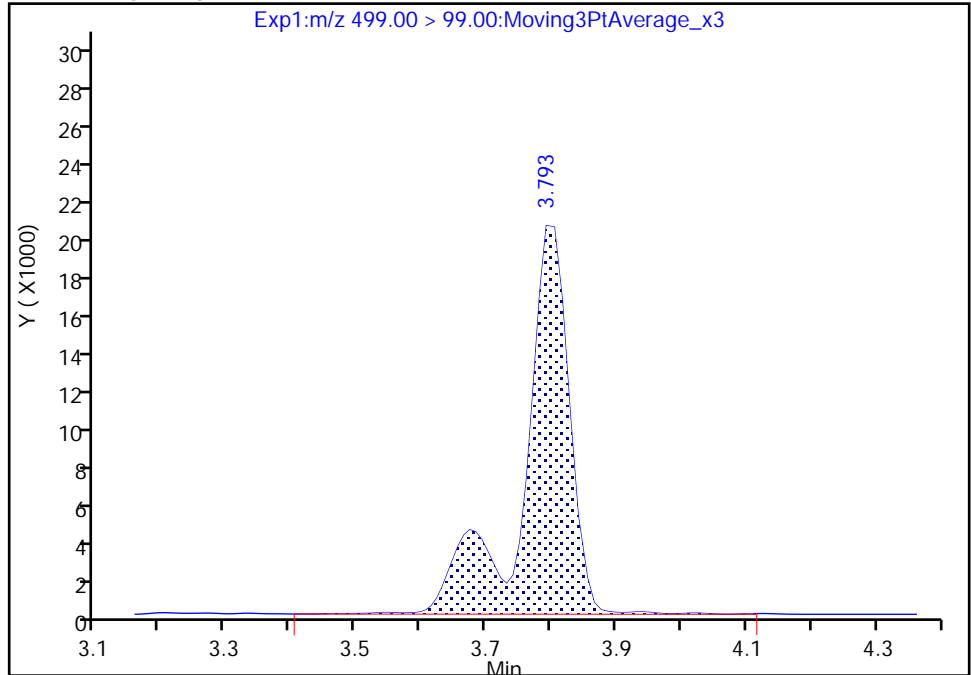
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B008.d  
Injection Date: 24-Dec-2019 14:53:26 Instrument ID: LC812  
Lims ID: 480-164221-C-1-A Lab Sample ID: 200-164221-1  
Client ID: CS RW 2 DER  
Operator ID: lc812tech ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 (4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

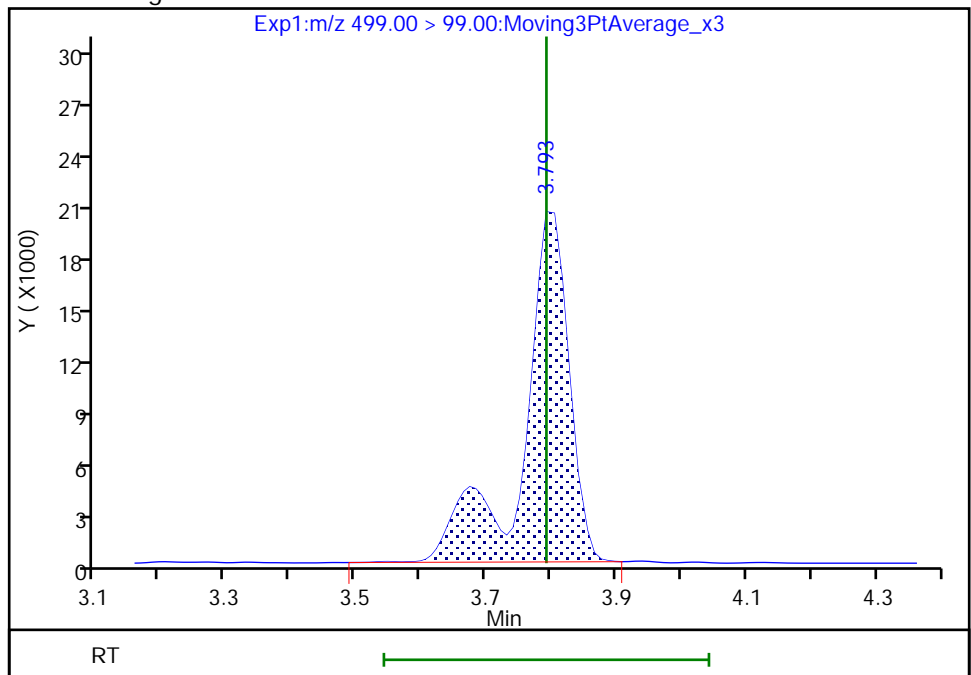
RT: 3.79  
Area: 101961  
Amount: 1.434932  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 99950  
Amount: 1.418128  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 10:45:17

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

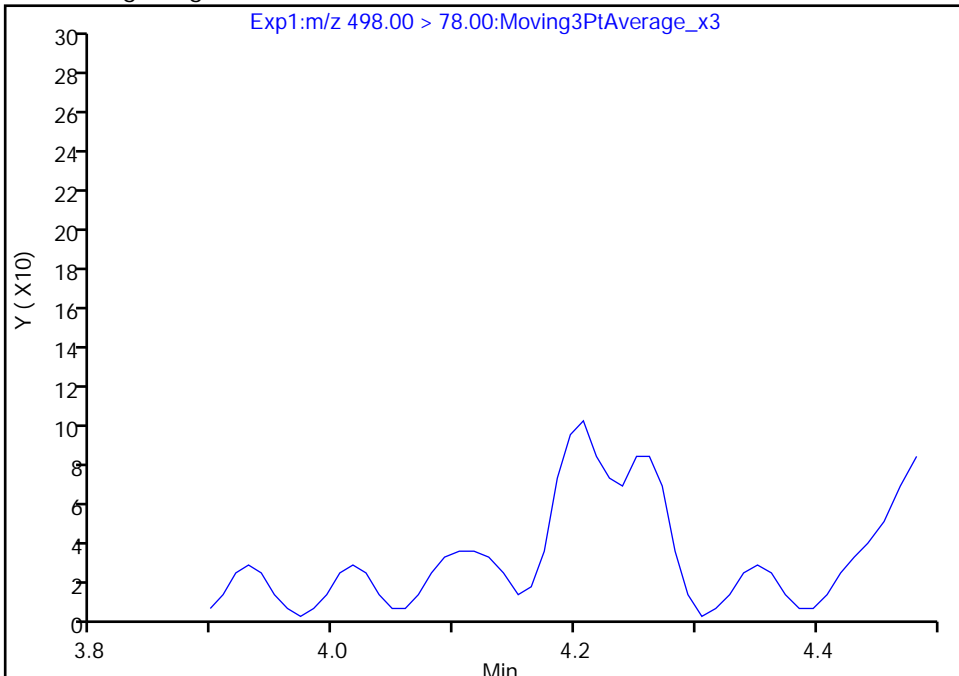
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B008.d  
Injection Date: 24-Dec-2019 14:53:26 Instrument ID: LC812  
Lims ID: 480-164221-C-1-A Lab Sample ID: 200-164221-1  
Client ID: CS RW 2 DER  
Operator ID: lc812tech ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

22 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

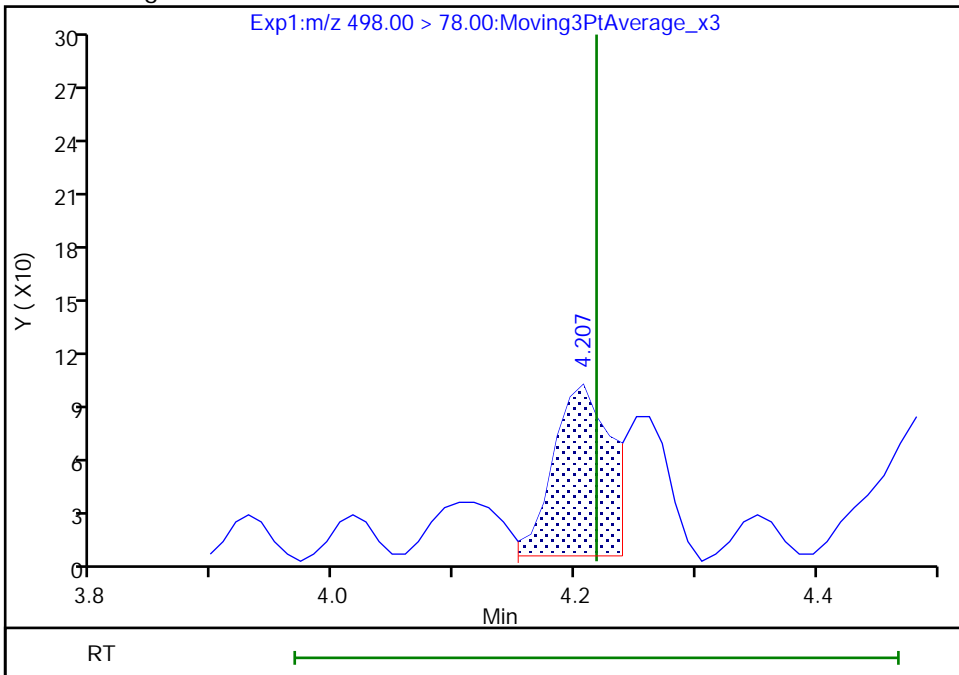
Not Detected  
Expected RT: 4.22

Processing Integration Results



Manual Integration Results

RT: 4.21  
Area: 308  
Amount: 0.000503  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 10:43:16  
Audit Action: Manually Integrated

Audit Reason: Baseline

Euofins TestAmerica, Burlington

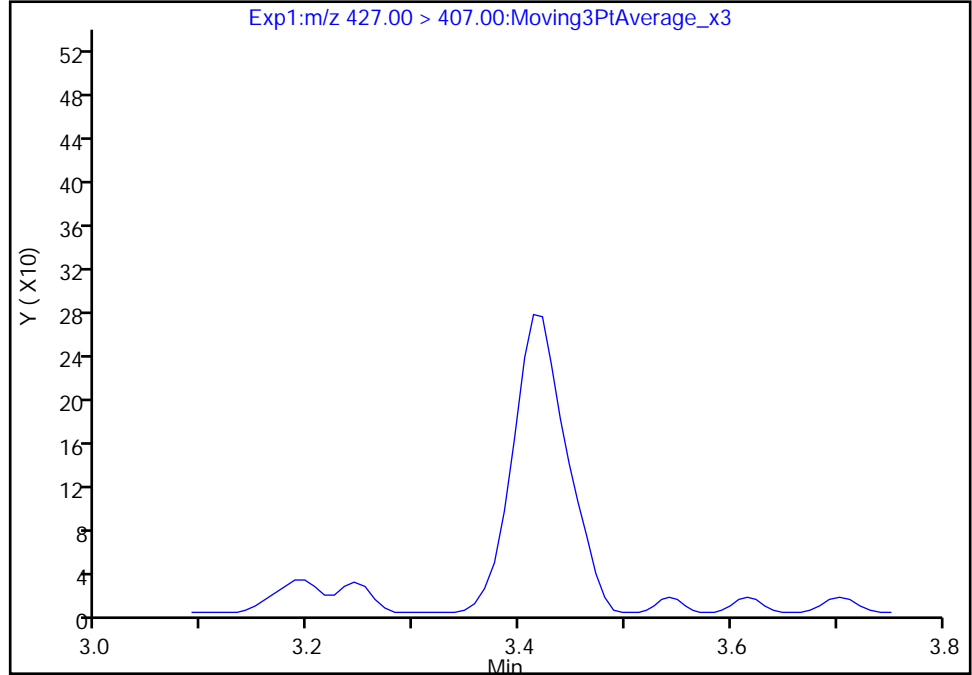
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B008.d  
Injection Date: 24-Dec-2019 14:53:26 Instrument ID: LC812  
Lims ID: 480-164221-C-1-A Lab Sample ID: 200-164221-1  
Client ID: CS RW 2 DER  
Operator ID: lc812tech ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

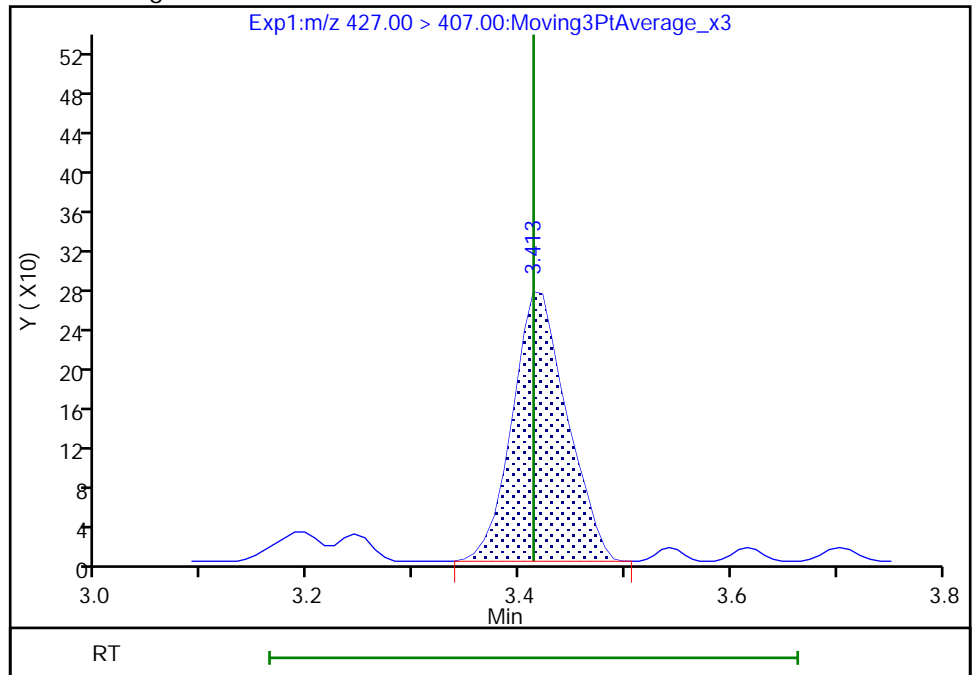
Not Detected  
Expected RT: 3.41

Processing Integration Results



Manual Integration Results

RT: 3.41  
Area: 986  
Amount: 0.013081  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 10:46:38  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

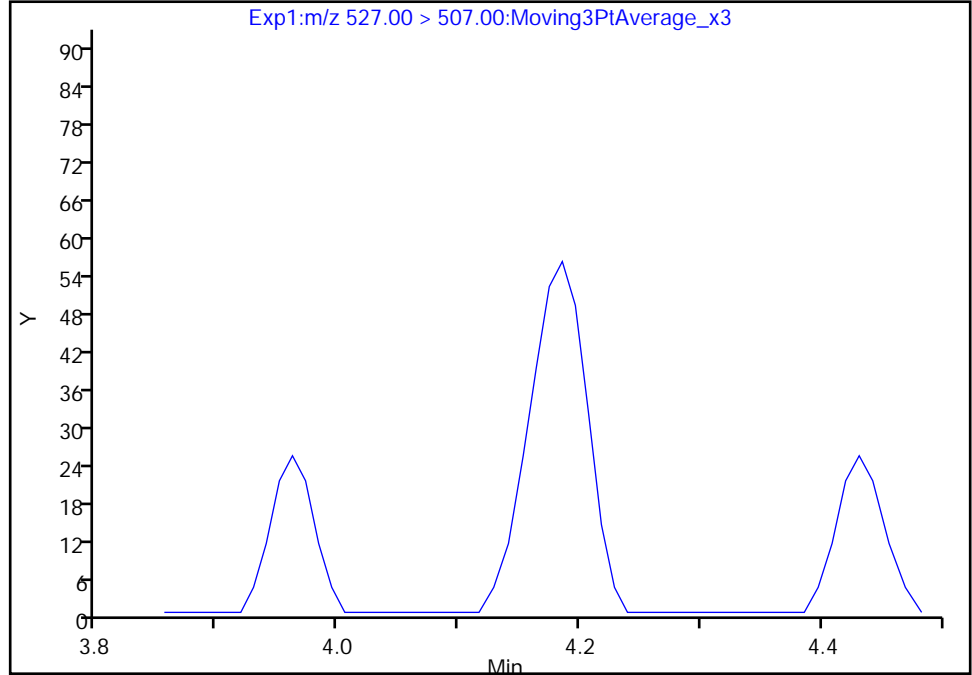
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B008.d  
Injection Date: 24-Dec-2019 14:53:26 Instrument ID: LC812  
Lims ID: 480-164221-C-1-A Lab Sample ID: 200-164221-1  
Client ID: CS RW 2 DER  
Operator ID: lc812tech ALS Bottle#: 8 Worklist Smp#: 8  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

25 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:, CAS: 39108-34-4

Signal: 1

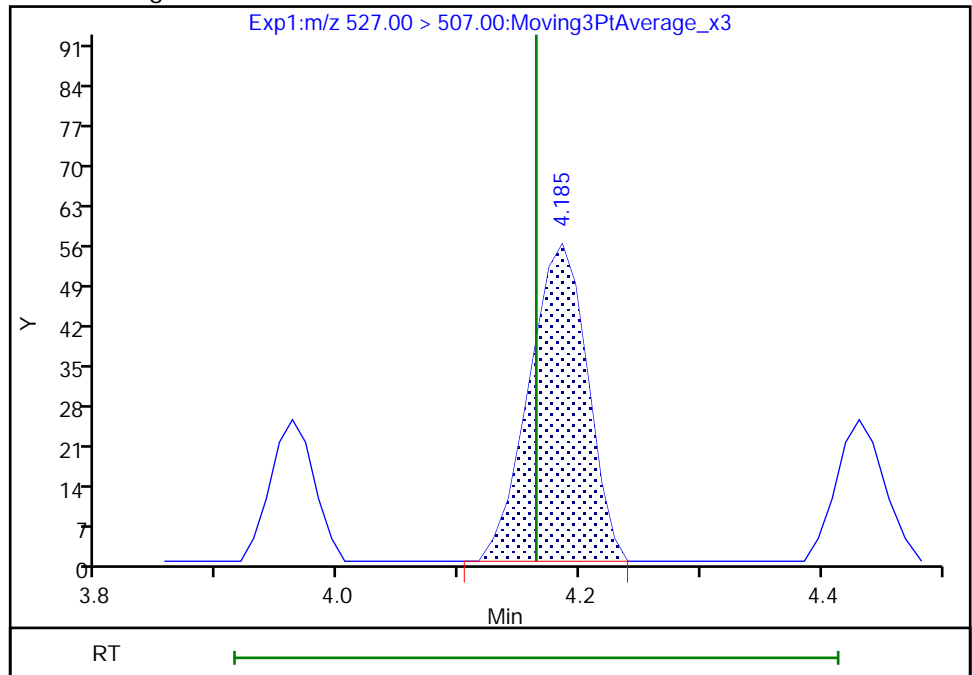
Not Detected  
Expected RT: 4.16

Processing Integration Results



Manual Integration Results

RT: 4.19  
Area: 187  
Amount: 0.004194  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 10:41:56  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: FIELD DUP 2 Lab Sample ID: 480-164221-2  
 Matrix: Water Lab File ID: SC122319B009.d  
 Analysis Method: 537 (modified) Date Collected: 12/12/2019 00:00  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 265.4 (mL) Date Analyzed: 12/24/2019 15:01  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 20 (uL) GC Column: C-18 ID: 4.6 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	5.3		1.9	0.94
2706-90-3	Perfluoropentanoic acid (PFPeA)	9.9		1.9	0.59
307-24-4	Perfluorohexanoic acid (PFHxA)	12		1.9	0.72
375-85-9	Perfluoroheptanoic acid (PFHpA)	3.2		1.9	0.86
335-67-1	Perfluorooctanoic acid (PFOA)	6.2		1.9	0.76
375-95-1	Perfluorononanoic acid (PFNA)	0.26	J	1.9	0.25
335-76-2	Perfluorodecanoic acid (PFDA)	ND		1.9	0.73
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		1.9	0.73
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		1.9	0.56
72629-94-8	Perfluorotridecanoic acid (PFTriA)	ND		1.9	0.57
376-06-7	Perfluorotetradecanoic acid (PFTeA)	ND		1.9	0.87
375-73-5	Perfluorobutanesulfonic acid (PFBS)	3.5		1.9	0.46
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	26		1.9	0.75
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.9	0.89
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	43		1.9	0.57
335-77-3	Perfluorodecanesulfonic acid (PFDS)	ND		1.9	0.85
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND		9.4	9.4
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		19	1.6
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		19	1.4
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		19	5.2
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		19	2.7



FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: FIELD DUP 2 Lab Sample ID: 480-164221-2  
 Matrix: Water Lab File ID: SC122319B009.d  
 Analysis Method: 537 (modified) Date Collected: 12/12/2019 00:00  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 265.4 (mL) Date Analyzed: 12/24/2019 15:01  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 20 (uL) GC Column: C-18 ID: 4.6 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	110		50-150
STL01892	13C4 PFHpA	108		50-150
STL00990	13C4 PFOA	103		50-150
STL00991	13C4 PFOS	108		50-150
STL00995	13C5 PFNA	99		50-150
STL00992	13C4 PFBA	92		25-150
STL00993	13C2 PFHxA	99		50-150
STL00996	13C2 PFDA	91		50-150
STL00997	13C2 PFUnA	88		50-150
STL00998	13C2 PFDoA	74		50-150
STL01056	13C8 FOSA	86		25-150
STL01893	13C5 PFPeA	104		25-150
STL02116	13C2 PFTeDA	81		50-150
STL02118	d3-NMeFOSAA	82		50-150
STL02117	d5-NEtFOSAA	85		50-150
STL02279	M2-6:2 FTS	78		25-150
STL02280	M2-8:2 FTS	103		25-150
STL02337	13C3 PFBS	103		50-150

Eurofins TestAmerica, Burlington  
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B009.d  
 Lims ID: 480-164221-C-2-A  
 Client ID: FIELD DUP 2  
 Sample Type: Client  
 Inject. Date: 24-Dec-2019 15:01:36 ALS Bottle#: 9 Worklist Smp#: 9  
 Injection Vol: 20.0 ul Dil. Factor: 1.0000  
 Sample Info: 480-164221-C-2-A  
 Misc. Info.: 200-0039355-009 Plate: 1 Rack: 2  
 Operator ID: lc812tech Instrument ID: LC812  
 Method: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\PFC\_LC812.m  
 Limit Group: LC\_PFC\_ICAL  
 Last Update: 30-Dec-2019 15:06:05 Calib Date: 06-Dec-2019 15:13:26  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Column 1 : C-18 ( 4.60 mm) Det: EXP1  
 Process Host: CTX0330

First Level Reviewer: lautenschlagery Date: 27-Dec-2019 11:25:25  
 Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	1.898	1.908	-0.010	0.555	1615624	2.30	91.9	3597	
2 Perfluorobutanoic acid										M
212.90 > 169.00	1.898	1.908	-0.010	1.000	89653	0.1394		27.4		M
D 3 13C5 PFPeA	267.90 > 223.00	2.257	2.257	0.0	0.660	1403758	2.61	104	5085	
4 Perfluoropentanoic acid										M
262.90 > 219.00	2.257	2.271	-0.014	1.000	167704	0.2638		17.4		M
D 47 13C3 PFBS	301.90 > 80.00	2.271	2.285	-0.014	0.664	1532693	2.39	103	482531	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.285	2.285	0.0	1.006	67233	0.0938	Target=2.03	83.5		
298.90 > 99.00	2.271	2.285	-0.014	1.000	38731		1.74(1.01-3.04)	61.9		
D 7 13C2 PFHxA	315.00 > 270.00	2.648	2.648	0.0	0.774	1475977	2.46	98.5	5616	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.648	2.661	-0.013	1.000	191851	0.3183	Target=13.76	70.2		
313.00 > 119.00	2.648	2.661	-0.013	1.000	13730		13.97(6.88-20.64)	55.1		
D 11 18O2 PFHxS	403.00 > 84.00	3.033	3.044	-0.012	0.886	1315549	2.60	110	6743	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.033	3.044	-0.012	1.000	427698	0.6794	Target=3.90	677		M
399.00 > 99.00	3.033	3.044	-0.012	1.000	90370		4.73(1.95-5.85)	305		M
D 9 13C4 PFHpA	367.00 > 322.00	3.033	3.044	-0.012	0.886	1539954	2.71	108	4452	
10 Perfluoroheptanoic acid										M
363.00 > 319.00	3.044	3.044	0.0	1.004	55202	0.0848	Target=3.95	27.5		M
363.00 > 169.00	3.033	3.044	-0.012	1.000	17295		3.19(1.97-5.92)	68.7		

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
16 Perfluoroheptanesulfonic acid										M
449.00 > 80.00	3.405	3.413	-0.008	0.898	11349	0.0214	Target=6.46	23.2		
449.00 > 99.00	3.405	3.413	-0.008	0.898	1861		6.10(3.23-9.69)	13.4		M
13 1H,1H,2H,2H-perfluorooctanesulfoni										M
427.00 > 407.00	3.405	3.413	-0.008	1.000	925	0.0145		13.4		M
D 12 M2-6:2 FTS										
429.00 > 81.00	3.405	3.413	-0.008	0.995	160564	1.85		77.7	657	
15 Perfluorooctanoic acid										M
413.00 > 369.00	3.422	3.430	-0.008	1.000	112255	0.1635	Target=2.40	49.1		M
413.00 > 169.00	3.422	3.430	-0.008	1.000	50484		2.22(1.20-3.60)	245		
D 14 13C4 PFOA										
417.00 > 372.00	3.422	3.430	-0.008	1.000	1546893	2.57		103	5230	
* 62 13C2 PFOA										
415.00 > 370.00	3.422	3.430	-0.008		1659044	2.50			7264	
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.793	0.0	1.108	1035282	2.58		108	4237	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.793	3.793	0.0	1.000	536817	1.15	Target=5.74	1467		M
499.00 > 99.00	3.793	3.793	0.0	1.000	83117		6.46(2.87-8.61)	861		M
D 19 13C5 PFNA										
468.00 > 423.00	3.817	3.817	0.0	1.116	1378012	2.49		99.4	9845	
20 Perfluorononanoic acid										M
463.00 > 419.00	3.817	3.817	0.0	1.000	3679	0.006807	Target=7.01	1.9		M
463.00 > 169.00	3.817	3.817	0.0	1.000	359		10.25(3.50-10.51)	5.9		M
D 23 13C2 PFDA										
515.00 > 470.00	4.153	4.164	-0.011	1.214	1248837	2.29		91.4	4832	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.164	4.175	-0.011	1.217	255931	2.47		103	1345	
D 21 13C8 FOSA										
506.00 > 78.00	4.207	4.218	-0.011	1.230	1531289	2.14		85.7	3398	
22 Perfluorooctanesulfonamide										M
498.00 > 78.00	4.207	4.218	-0.011	1.000	904	0.001483		9.2		M
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.305	4.305	0.0	1.258	108213	2.06		82.3	1344	
28 N-methylperfluorooctanesulfonamido										M
570.00 > 419.00	4.305	4.317	-0.012	1.000	67	0.001781		1.9		M
D 30 13C2 PFUnA										
565.00 > 520.00	4.431	4.443	-0.012	1.295	1023099	2.20		88.1	5746	
31 Perfluoroundecanoic acid										M
563.00 > 519.00	4.431	4.443	-0.012	1.000	2560	0.007378	Target=5.78	4.0		M
563.00 > 169.00	4.443	4.443	0.0	1.003	681		3.76(2.89-8.67)	8.8		M
33 N-ethylperfluorooctanesulfonamidoa										M
584.00 > 419.00	4.443	4.456	-0.013	1.000	68	0.001649		1.7		M
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.443	4.456	-0.013	1.298	124526	2.14		85.4	645	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
37 Perfluorododecanoic acid										M
613.00 > 569.00	4.672	4.683	-0.011	0.998	963	0.002765	Target=5.13	0.4		M
613.00 > 169.00	4.683	4.683	0.0	1.000	217		4.44(2.56-7.69)	4.4		M
D 36 13C2 PFDaA										
615.00 > 570.00	4.683	4.683	0.0	1.369	942252	1.85		74.0	4738	
41 Perfluorotridecanoic acid										M
663.00 > 619.00	4.915	4.906	0.009	1.050	434	0.001312	Target=3.82	0.3		M
663.00 > 169.00	4.897	4.906	-0.009	1.046	203		2.14(1.91-5.74)	3.5		M
42 Perfluorotetradecanoic acid										M
713.00 > 169.00	5.094	5.108	-0.014	1.000	391	0.005602	Target=1.05	9.4		M
713.00 > 219.00	5.094	5.108	-0.014	1.000	374		1.05(0.52-1.57)	13.3		M
D 43 13C2 PFTeDA										
715.00 > 670.00	5.094	5.108	-0.014	1.489	868532	2.03		81.4	6950	

**QC Flag Legend**

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B009.d

Injection Date: 24-Dec-2019 15:01:36

Instrument ID: LC812

Lims ID: 480-164221-C-2-A

Lab Sample ID: 200-164221-2

Client ID: FIELD DUP 2

Operator ID: lc812tech

ALS Bottle#: 9

Worklist Smp#: 9

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

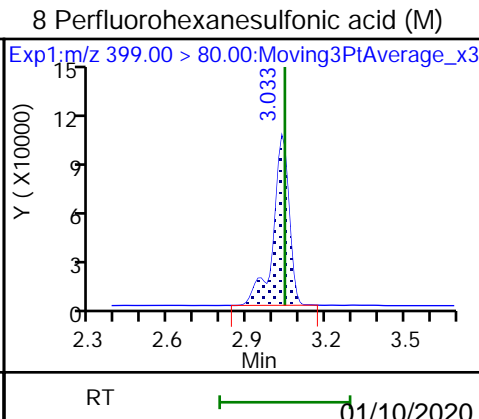
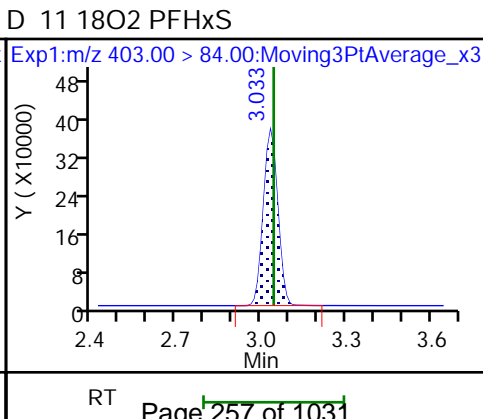
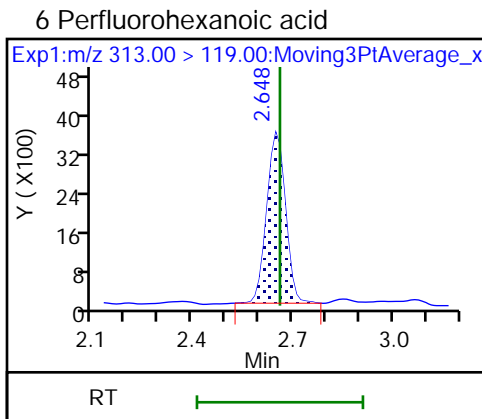
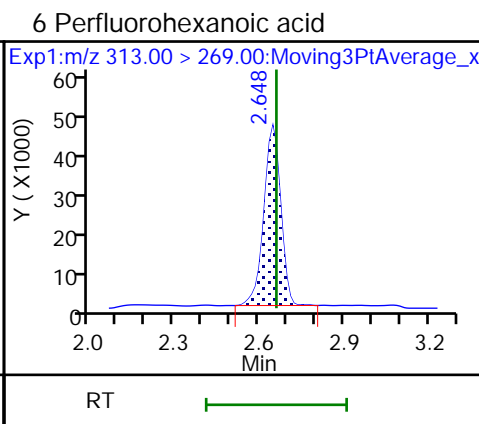
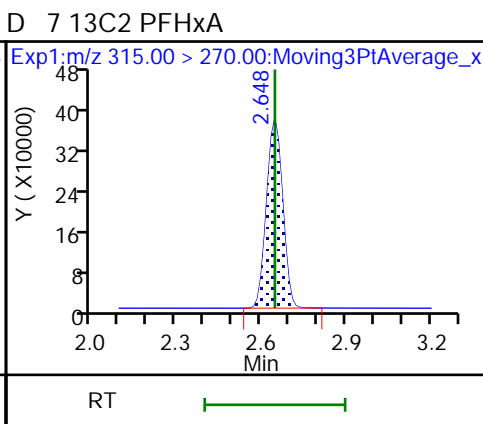
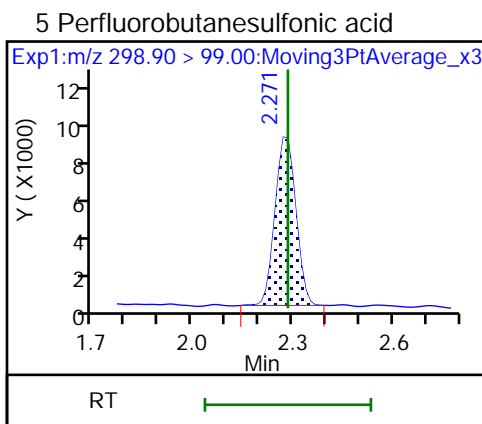
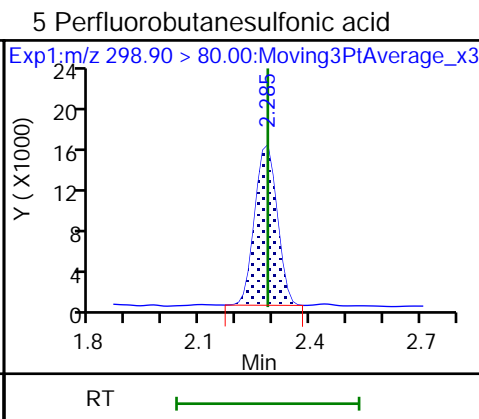
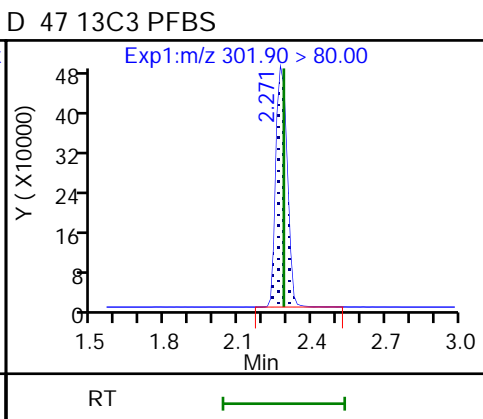
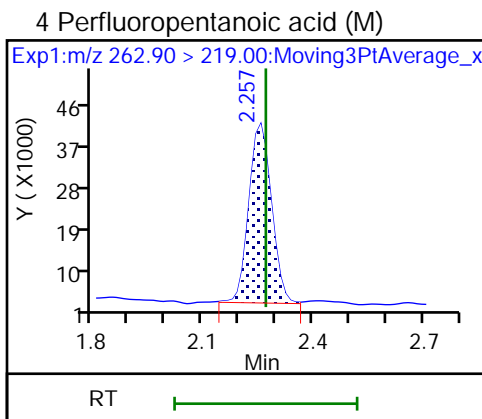
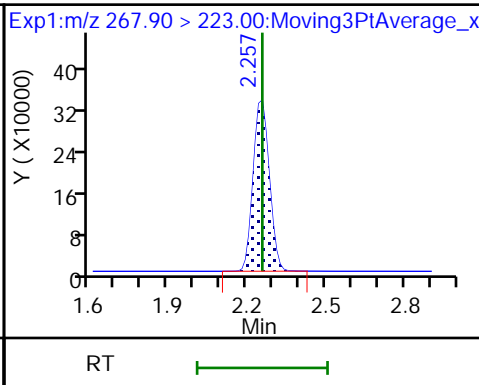
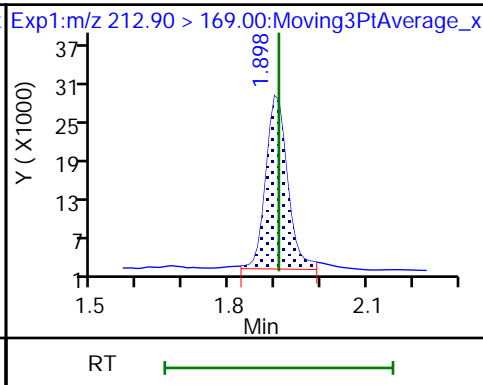
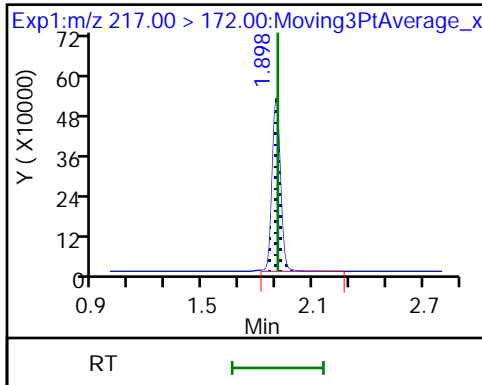
Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid (M)

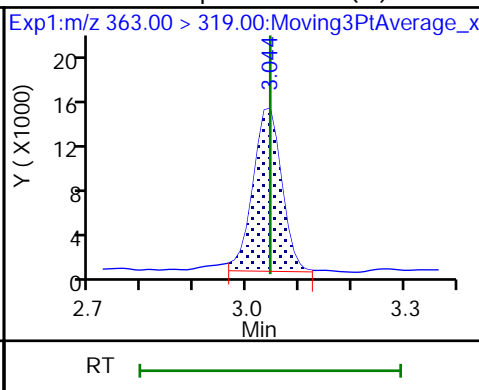
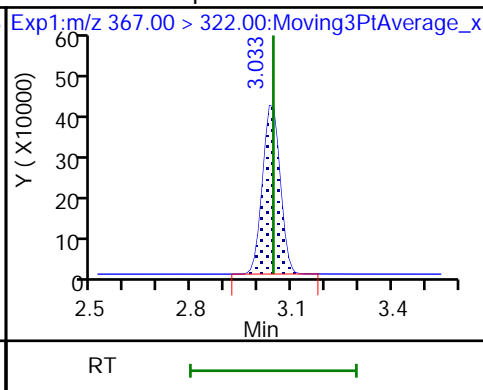
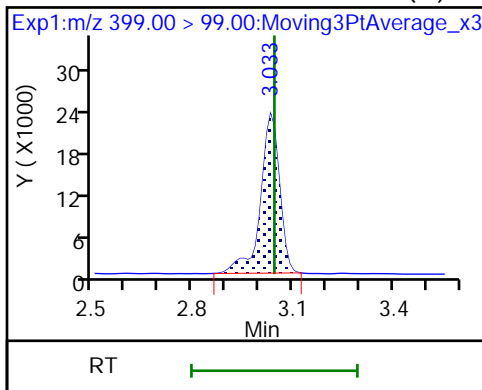
D 3 13C5 PFPeA



8 Perfluorohexanesulfonic acid (M)

D 9 13C4 PFHpA

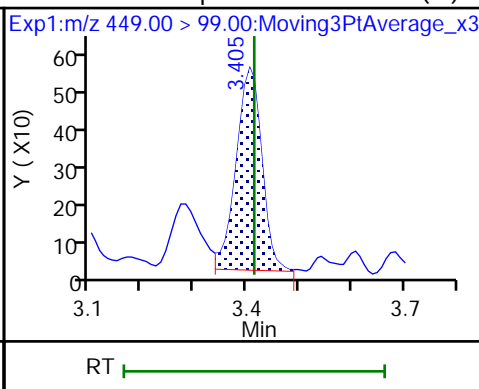
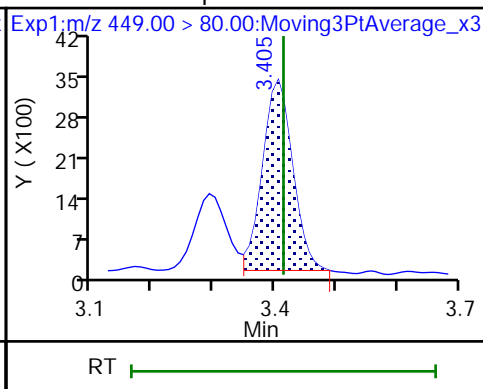
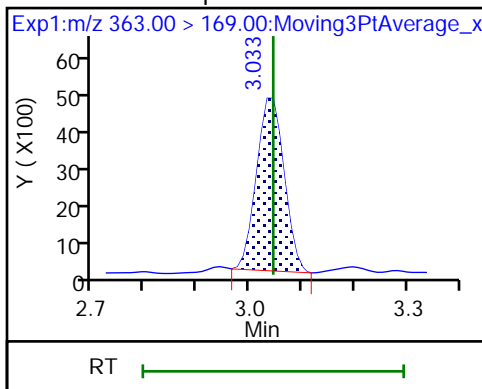
10 Perfluoroheptanoic acid (M)



10 Perfluoroheptanoic acid

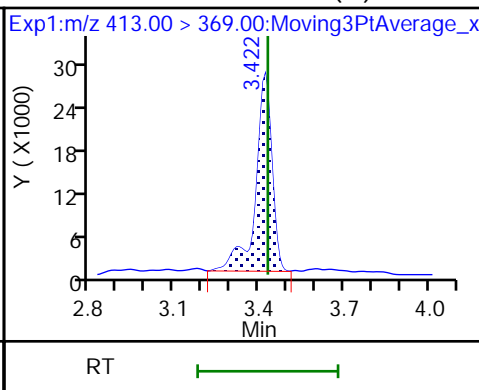
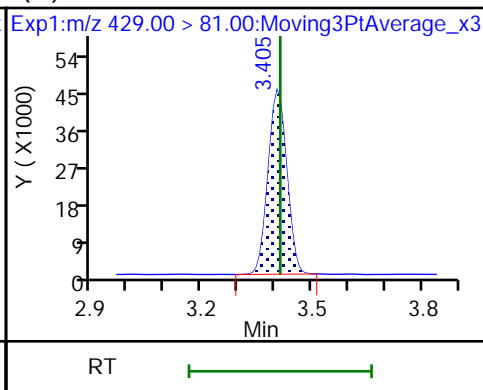
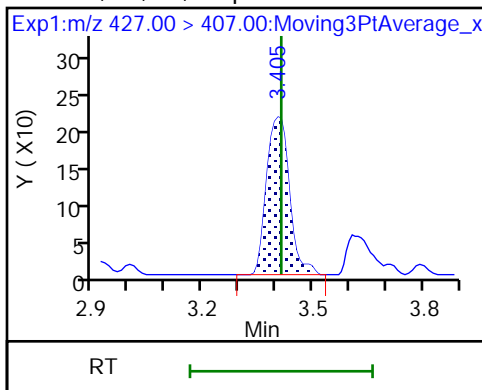
16 Perfluoroheptanesulfonic acid

16 Perfluoroheptanesulfonic acid (M)



13 1H,1H,2H,2H-perfluorooctanesulfonate (M) M2-6:2 FTS

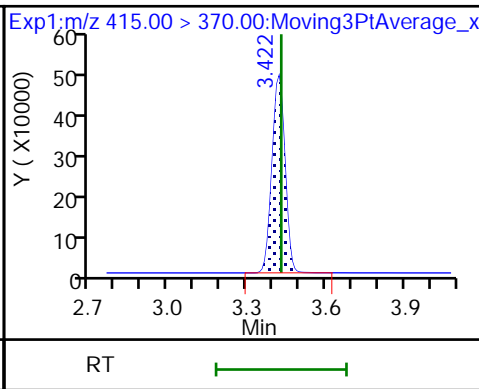
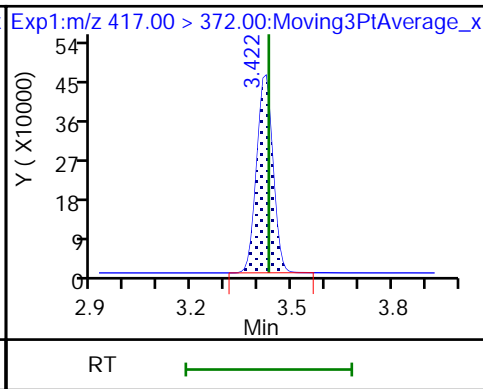
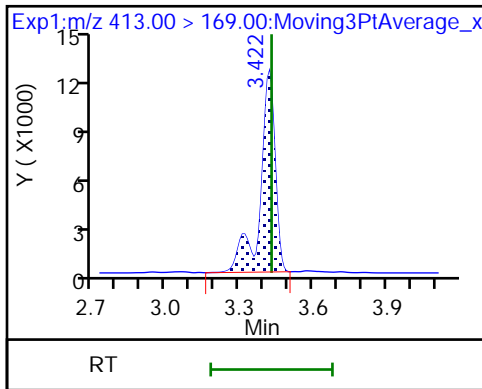
15 Perfluorooctanoic acid (M)



15 Perfluorooctanoic acid

D 14 13C4 PFOA

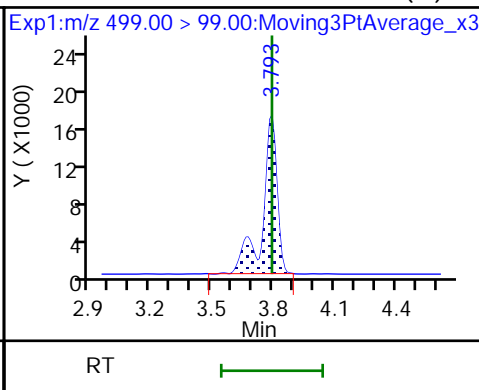
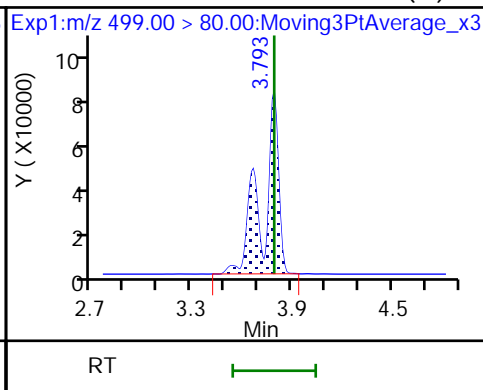
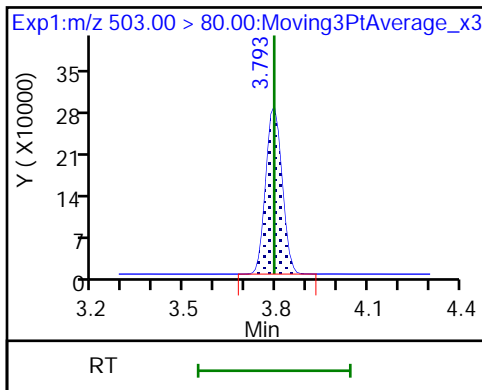
\* 62 13C2 PFOA



D 18 13C4 PFOS

17 Perfluorooctanesulfonic acid (M)

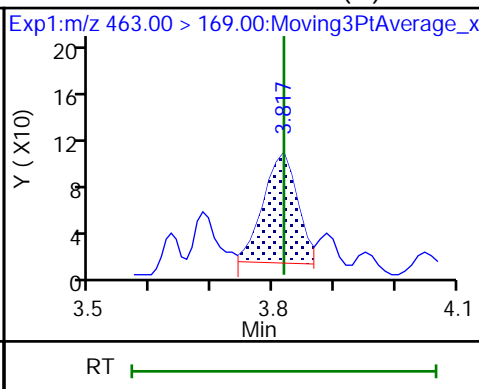
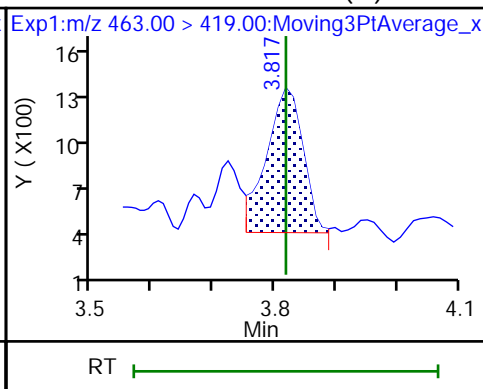
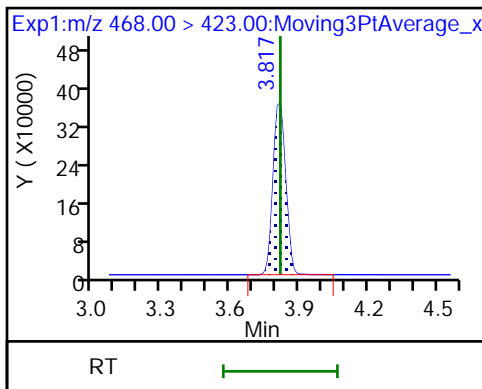
17 Perfluorooctanesulfonic acid (M)



D 19 13C5 PFNA

20 Perfluorononanoic acid (M)

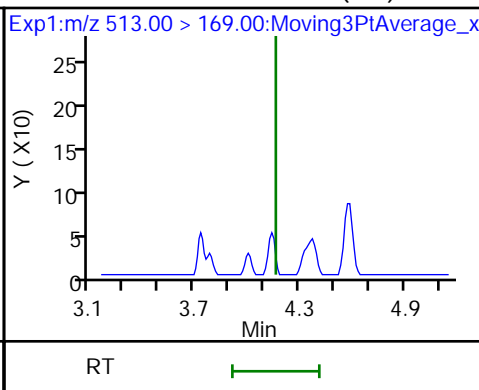
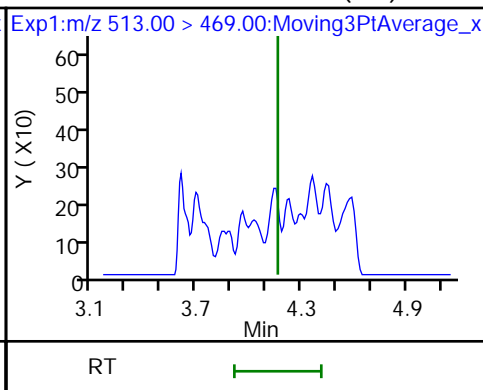
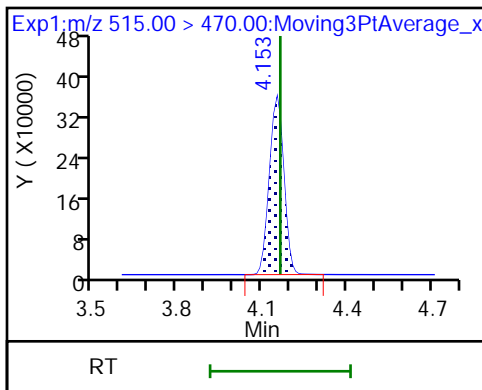
20 Perfluorononanoic acid (M)



D 23 13C2 PFDA

24 Perfluorodecanoic acid (ND)

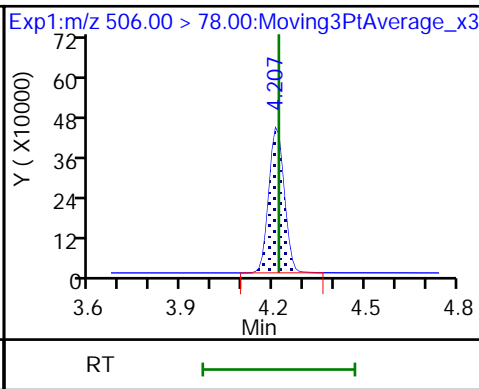
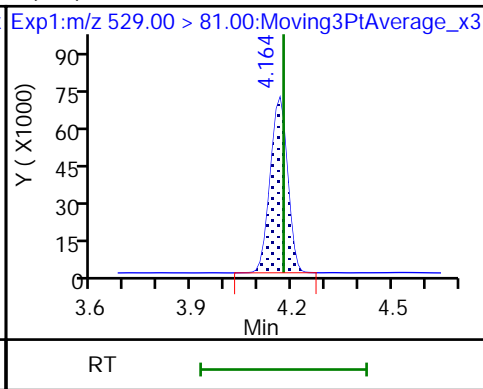
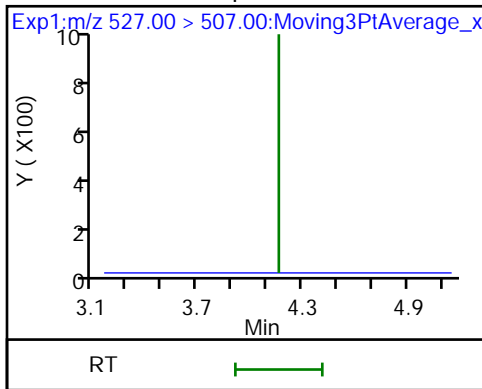
24 Perfluorodecanoic acid (ND)



25 1H,1H,2H,2H-perfluorodecanesulfonic acid (ND)

M2-8:2 FTS

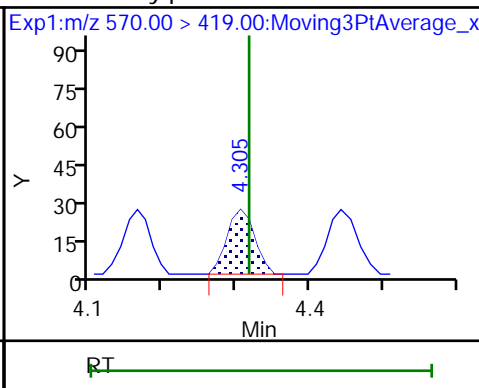
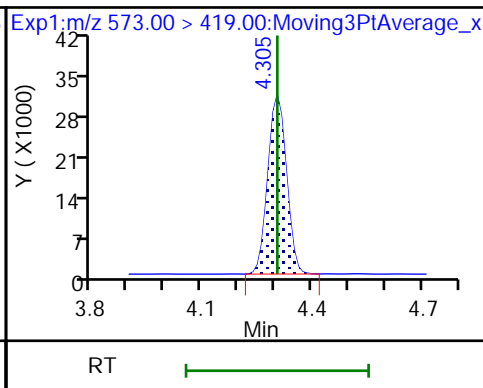
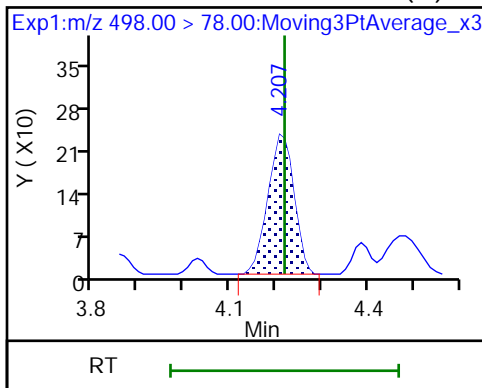
D 21 13C8 FOSA



22 Perfluorooctanesulfonamide (M)

D 27 d3-NMeFOSAA

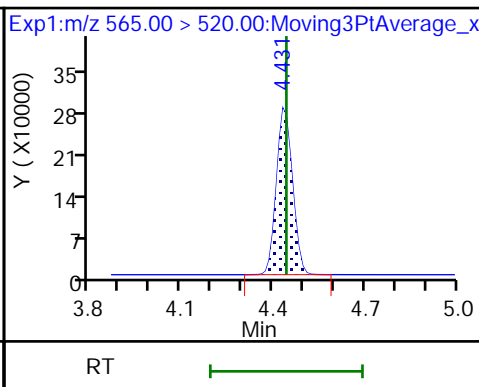
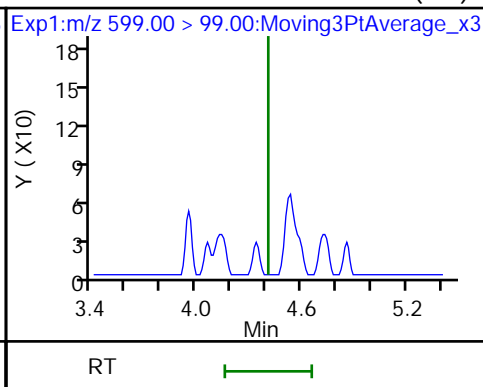
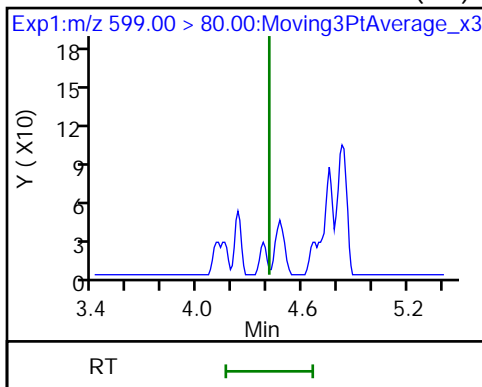
28 N-methylperfluorooctanesulfonamido (M)



29 Perfluorodecanesulfonic acid (ND)

29 Perfluorodecanesulfonic acid (ND)

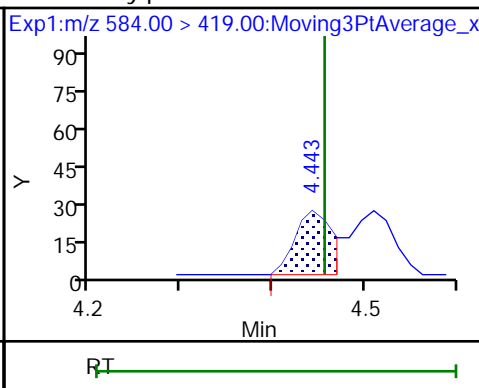
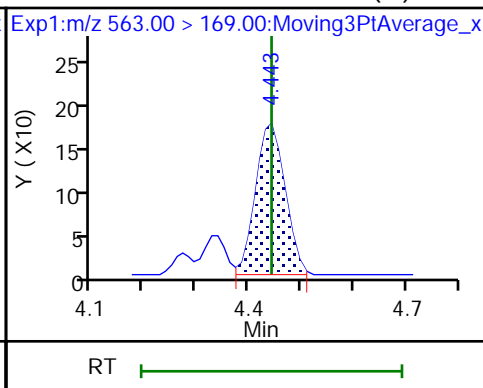
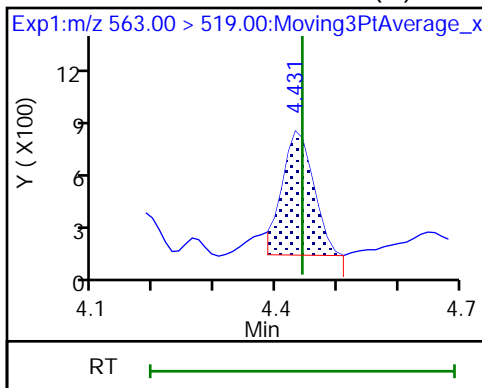
D 30 13C2 PFUoA



31 Perfluoroundecanoic acid (M)

31 Perfluoroundecanoic acid (M)

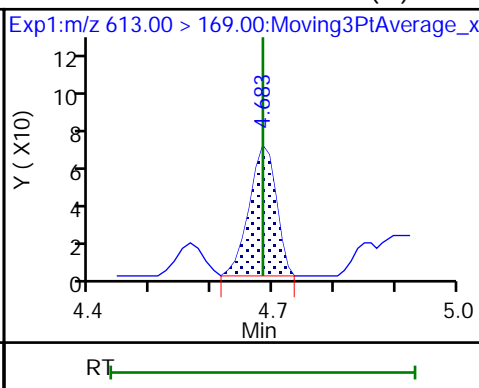
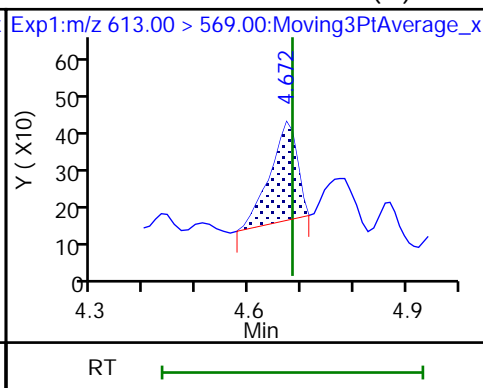
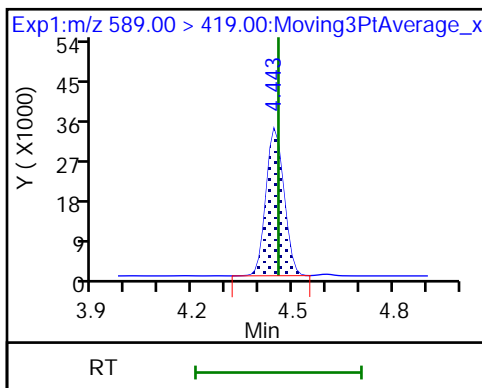
33 N-ethylperfluorooctanesulfonamidoa (M)



D 32 d5-NEtFOSAA

37 Perfluorododecanoic acid (M)

37 Perfluorododecanoic acid (M)

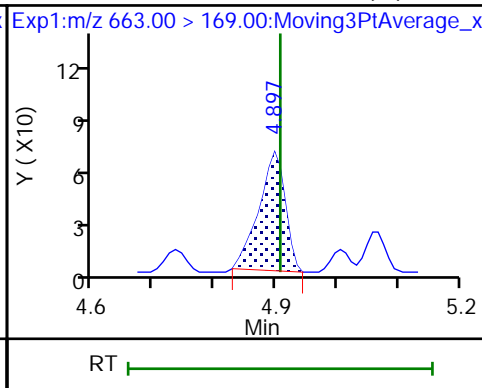
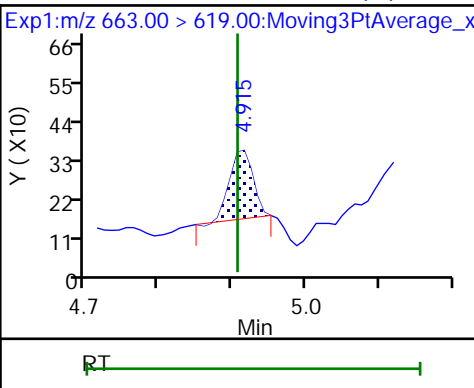
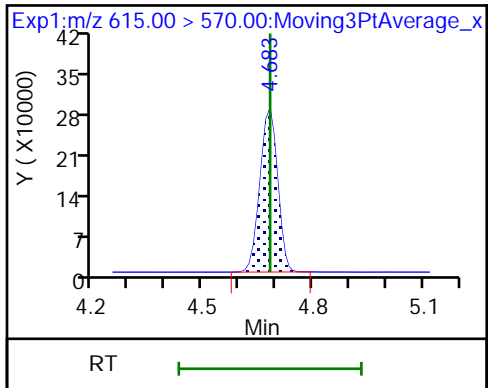




D 36 13C2 PFDaA

41 Perfluorotridecanoic acid (M)

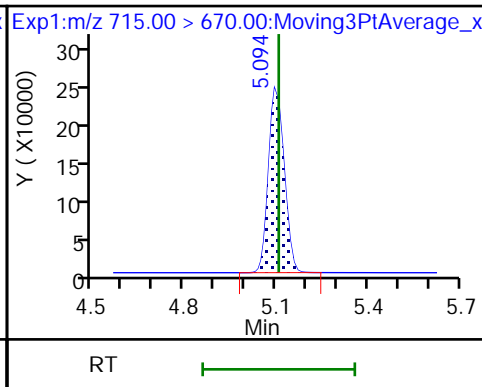
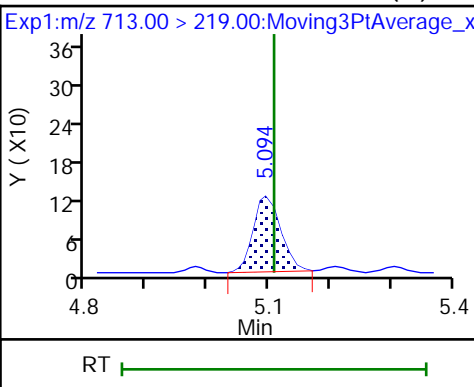
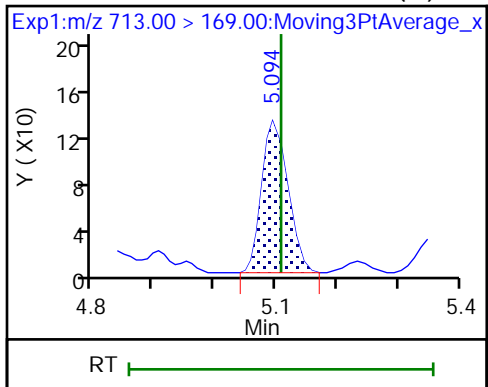
41 Perfluorotridecanoic acid (M)



42 Perfluorotetradecanoic acid (M)

42 Perfluorotetradecanoic acid (M)

D 43 13C2 PFTeDA



Euofins TestAmerica, Burlington

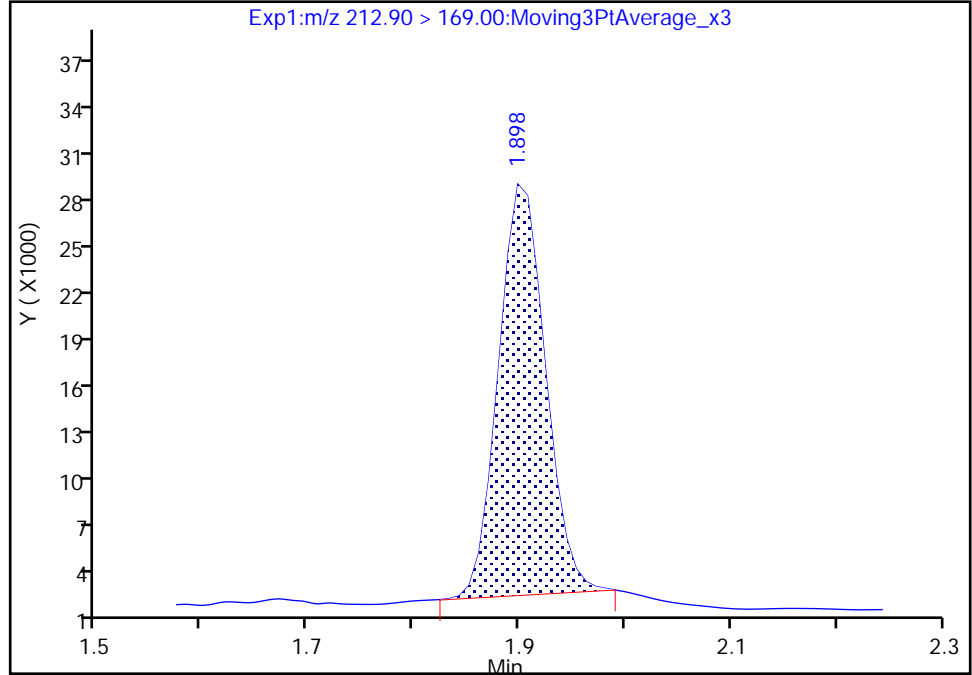
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Injection Date: 24-Dec-2019 15:01:36 Instrument ID: LC812  
Lims ID: 480-164221-C-2-A Lab Sample ID: 200-164221-2  
Client ID: FIELD DUP 2  
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

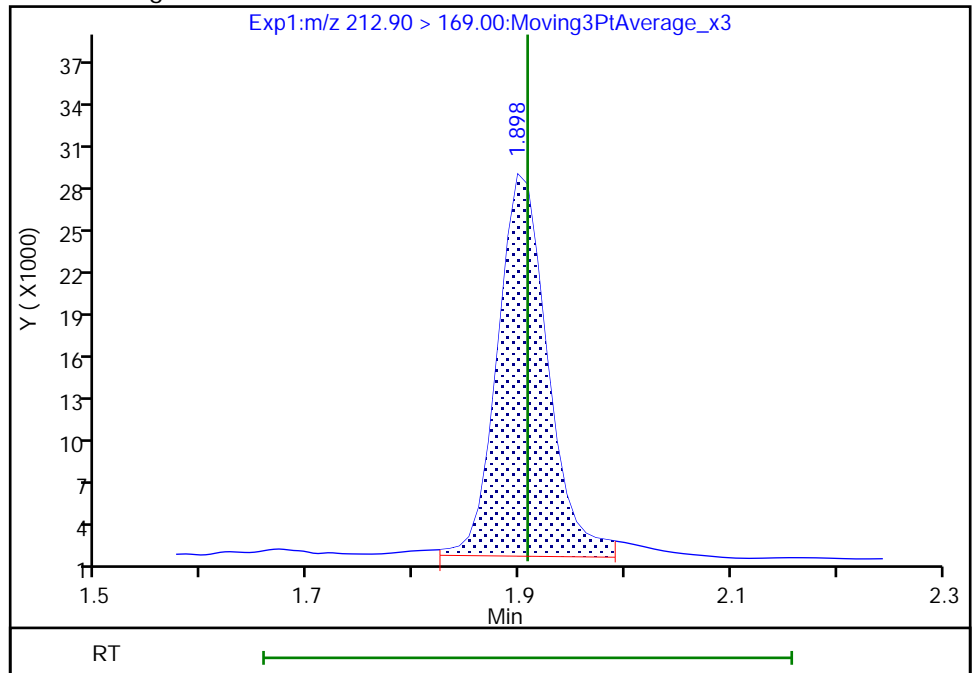
RT: 1.90  
Area: 82044  
Amount: 0.127603  
Amount Units: ng/ml

Processing Integration Results



RT: 1.90  
Area: 89653  
Amount: 0.139438  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagery, 27-Dec-2019 11:15:53

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

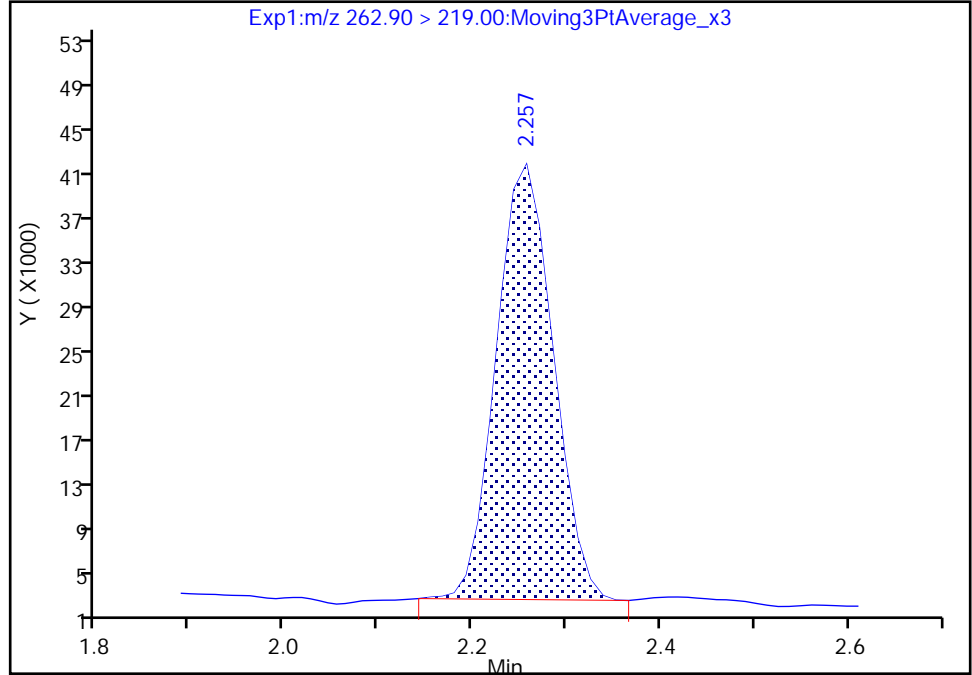
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Injection Date: 24-Dec-2019 15:01:36 Instrument ID: LC812  
Lims ID: 480-164221-C-2-A Lab Sample ID: 200-164221-2  
Client ID: FIELD DUP 2  
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

4 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

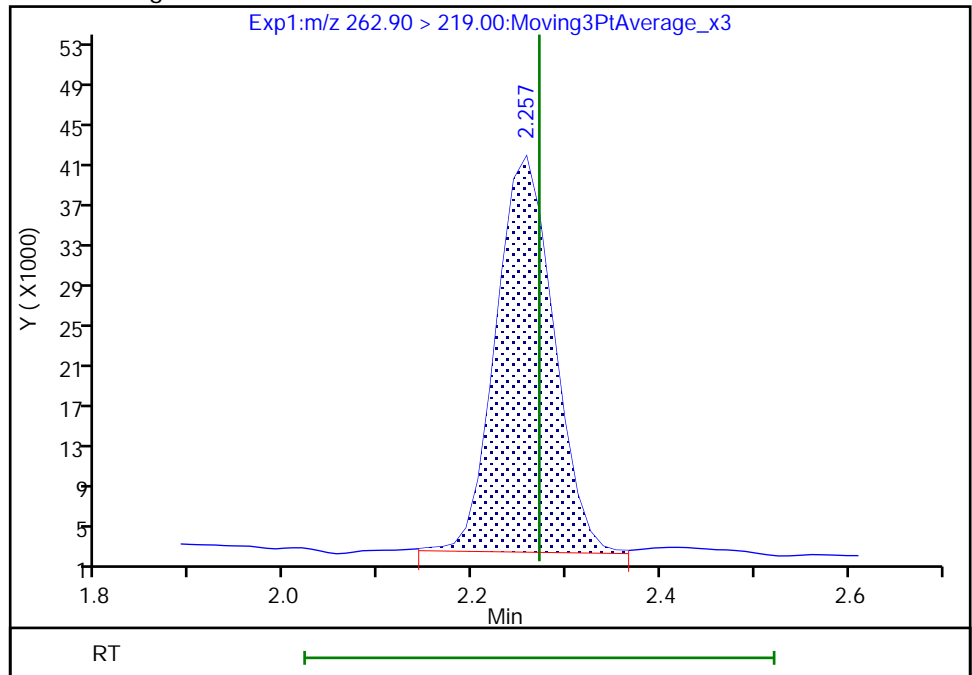
RT: 2.26  
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Amount: 0.258479  
Amount Units: ng/ml

Processing Integration Results



RT: 2.26  
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Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 11:16:36  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

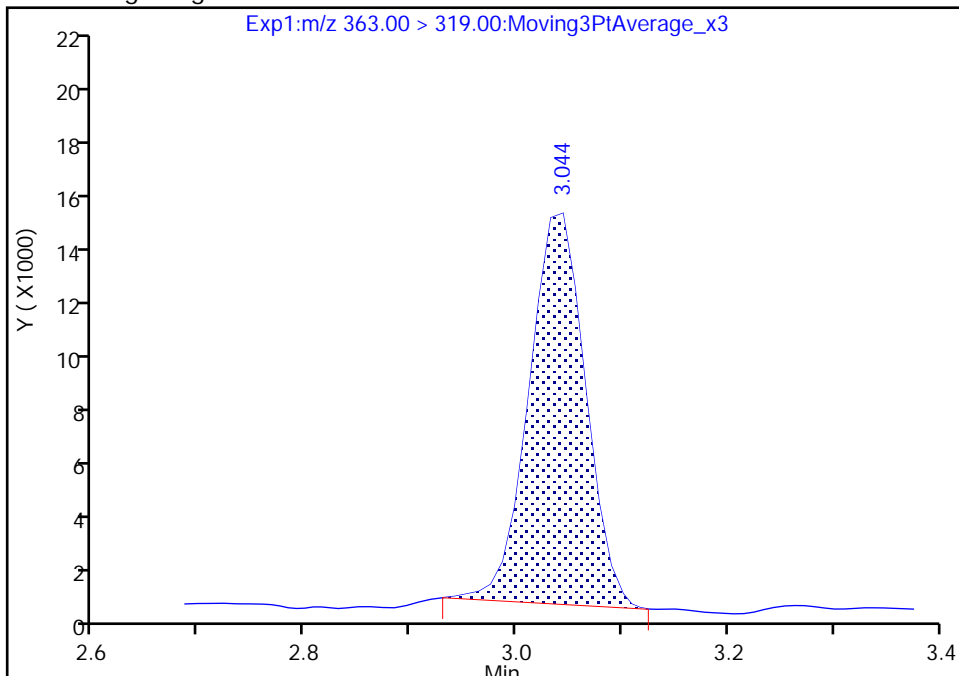
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B009.d  
Injection Date: 24-Dec-2019 15:01:36 Instrument ID: LC812  
Lims ID: 480-164221-C-2-A Lab Sample ID: 200-164221-2  
Client ID: FIELD DUP 2  
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

10 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

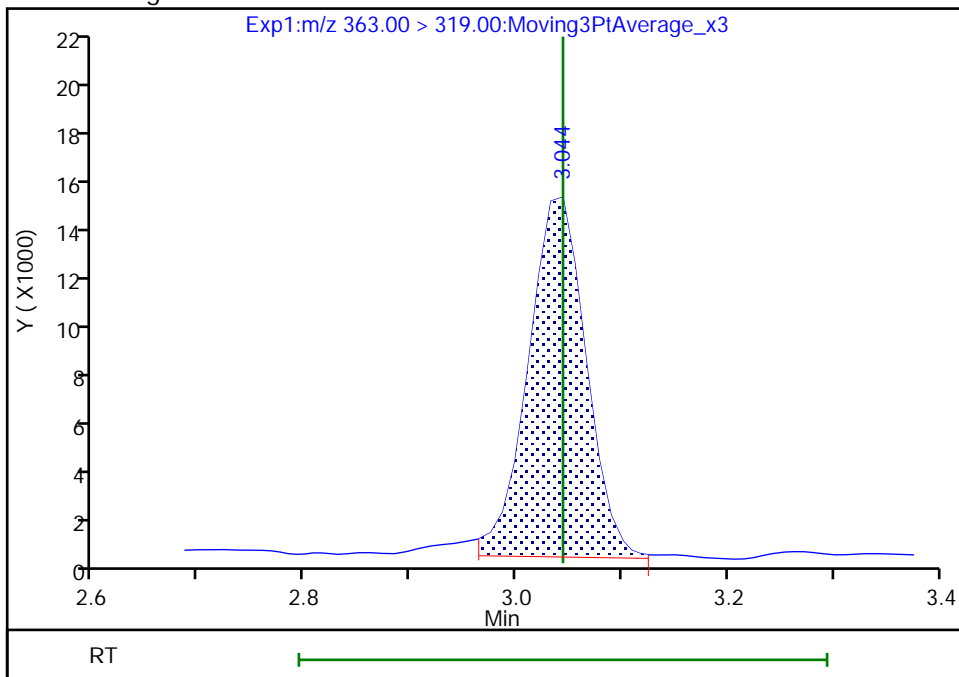
RT: 3.04  
Area: 53017  
Amount: 0.081408  
Amount Units: ng/ml

Processing Integration Results



RT: 3.04  
Area: 55202  
Amount: 0.084763  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 11:18:06

Audit Action: Manually Integrated

Audit Reason: Split Peak

Euofins TestAmerica, Burlington

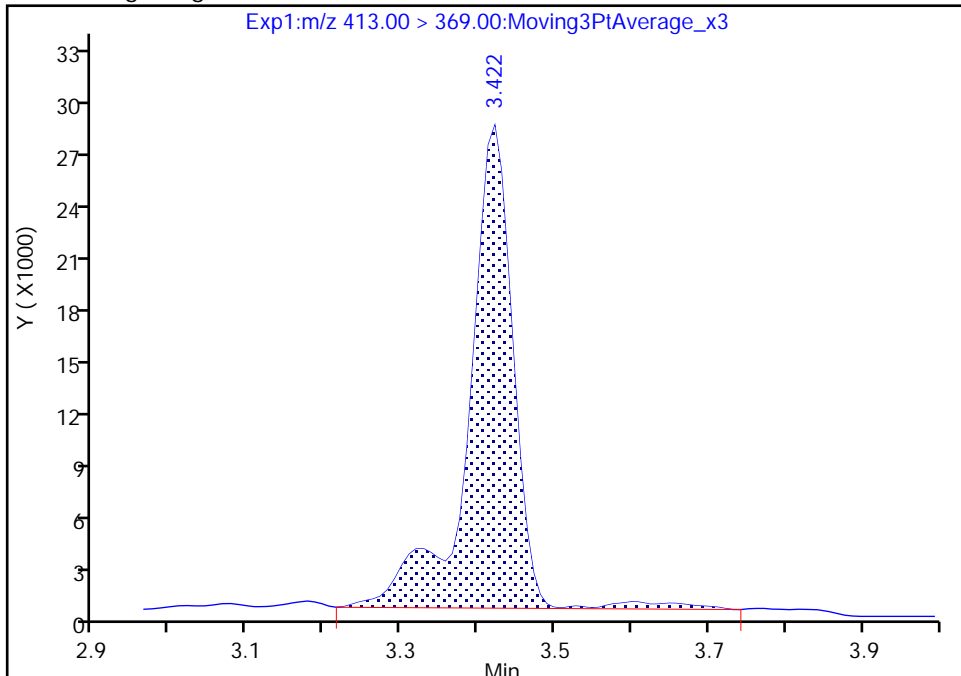
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B009.d  
Injection Date: 24-Dec-2019 15:01:36 Instrument ID: LC812  
Lims ID: 480-164221-C-2-A Lab Sample ID: 200-164221-2  
Client ID: FIELD DUP 2  
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

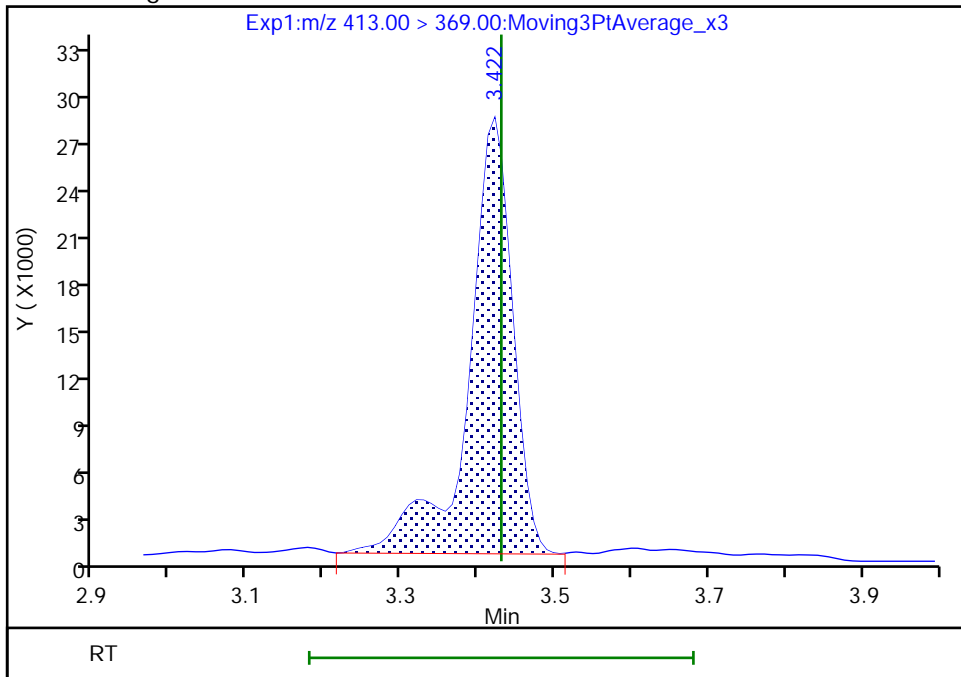
RT: 3.42  
Area: 115125  
Amount: 0.167692  
Amount Units: ng/ml

Processing Integration Results



RT: 3.42  
Area: 112255  
Amount: 0.163512  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 11:18:57

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

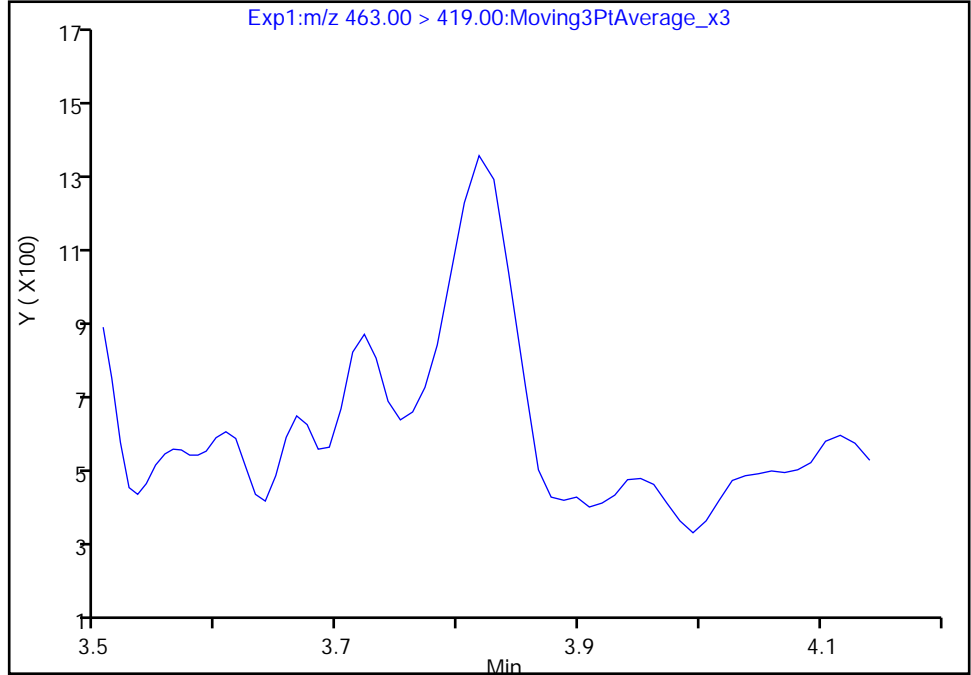
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B009.d  
Injection Date: 24-Dec-2019 15:01:36 Instrument ID: LC812  
Lims ID: 480-164221-C-2-A Lab Sample ID: 200-164221-2  
Client ID: FIELD DUP 2  
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

20 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

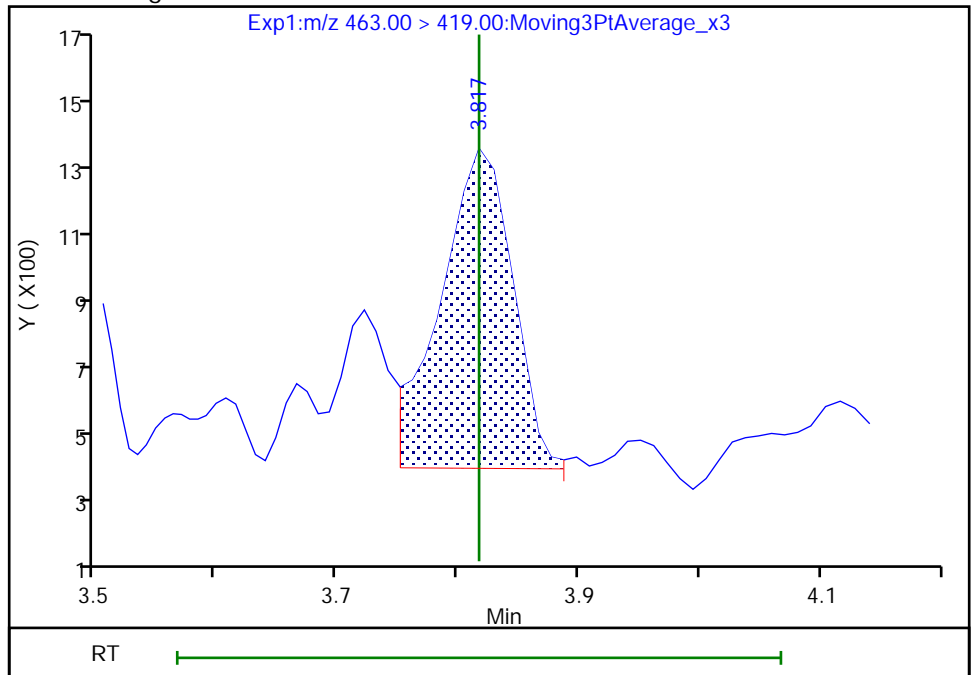
Not Detected  
Expected RT: 3.82

Processing Integration Results



Manual Integration Results

RT: 3.82  
Area: 3679  
Amount: 0.006807  
Amount Units: ng/ml



Reviewer: lautenschlagery, 27-Dec-2019 11:20:49

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

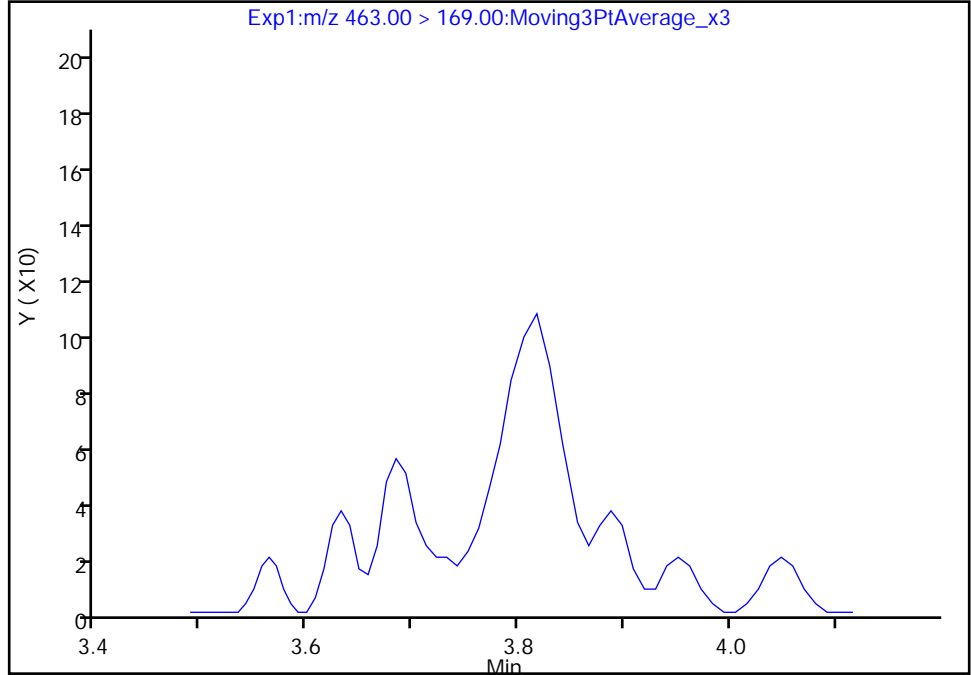
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B009.d  
Injection Date: 24-Dec-2019 15:01:36 Instrument ID: LC812  
Lims ID: 480-164221-C-2-A Lab Sample ID: 200-164221-2  
Client ID: FIELD DUP 2  
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

20 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

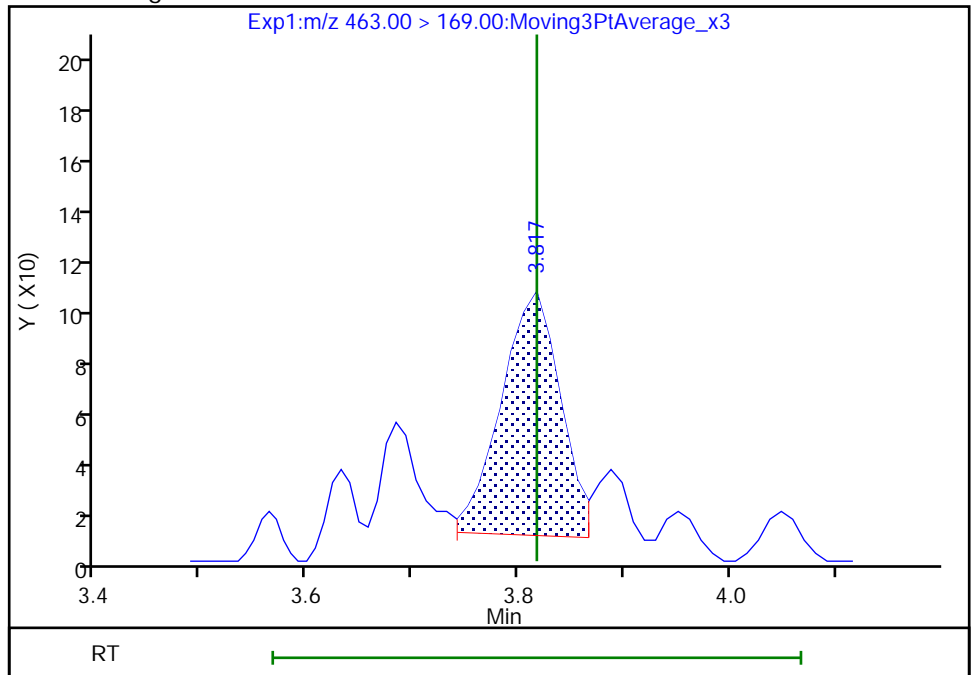
Not Detected  
Expected RT: 3.82

Processing Integration Results



Manual Integration Results

RT: 3.82  
Area: 359  
Amount: 0.006807  
Amount Units: ng/ml



Euofins TestAmerica, Burlington

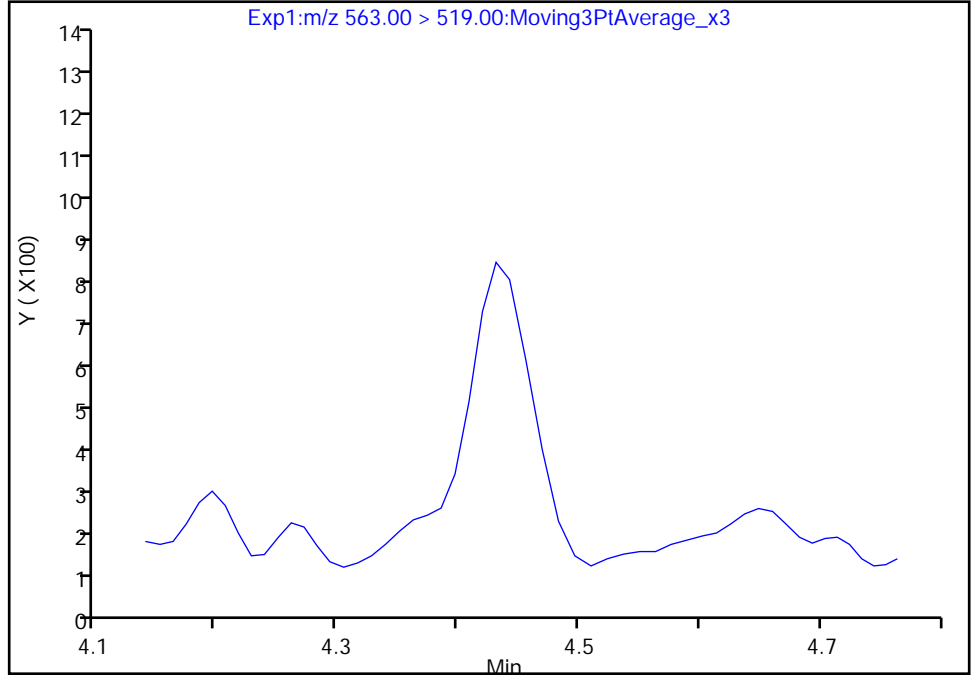
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B009.d  
Injection Date: 24-Dec-2019 15:01:36 Instrument ID: LC812  
Lims ID: 480-164221-C-2-A Lab Sample ID: 200-164221-2  
Client ID: FIELD DUP 2  
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 1

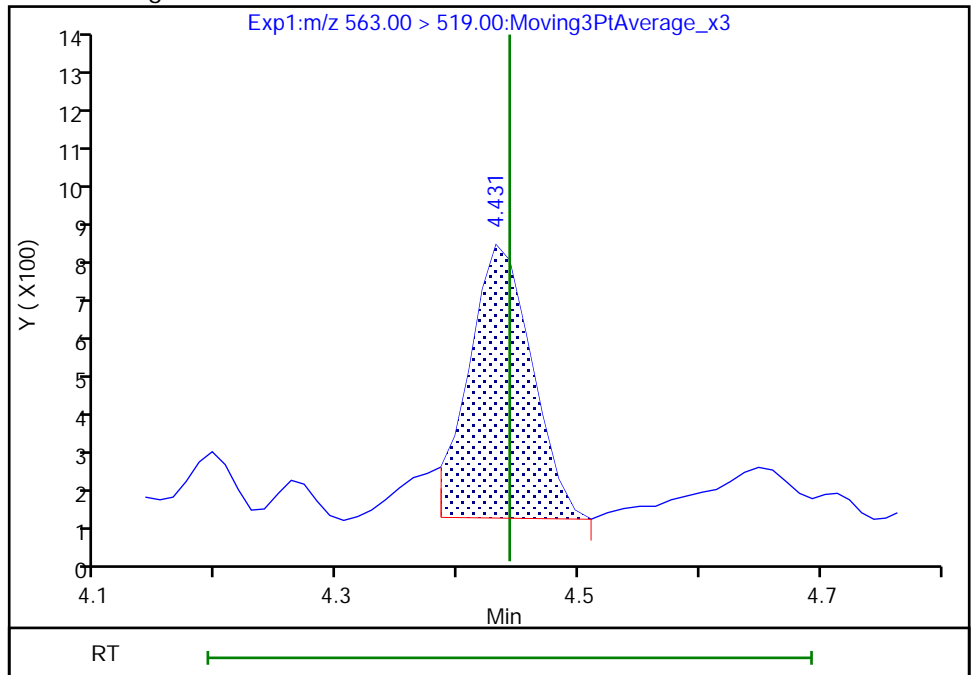
Not Detected  
Expected RT: 4.44

Processing Integration Results



Manual Integration Results

RT: 4.43  
Area: 2560  
Amount: 0.007378  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 11:22:25

Audit Action: Manually Integrated

Audit Reason: Split Peak



Eurofins TestAmerica, Burlington

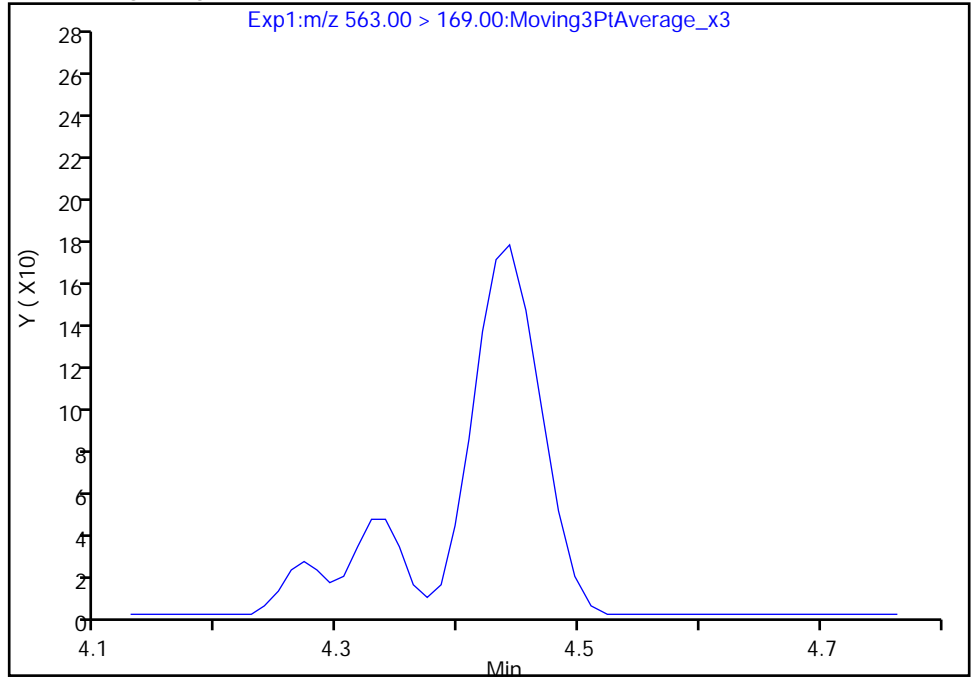
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B009.d  
Injection Date: 24-Dec-2019 15:01:36 Instrument ID: LC812  
Lims ID: 480-164221-C-2-A Lab Sample ID: 200-164221-2  
Client ID: FIELD DUP 2  
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 (4.60 mm) Detector: EXP1

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 2

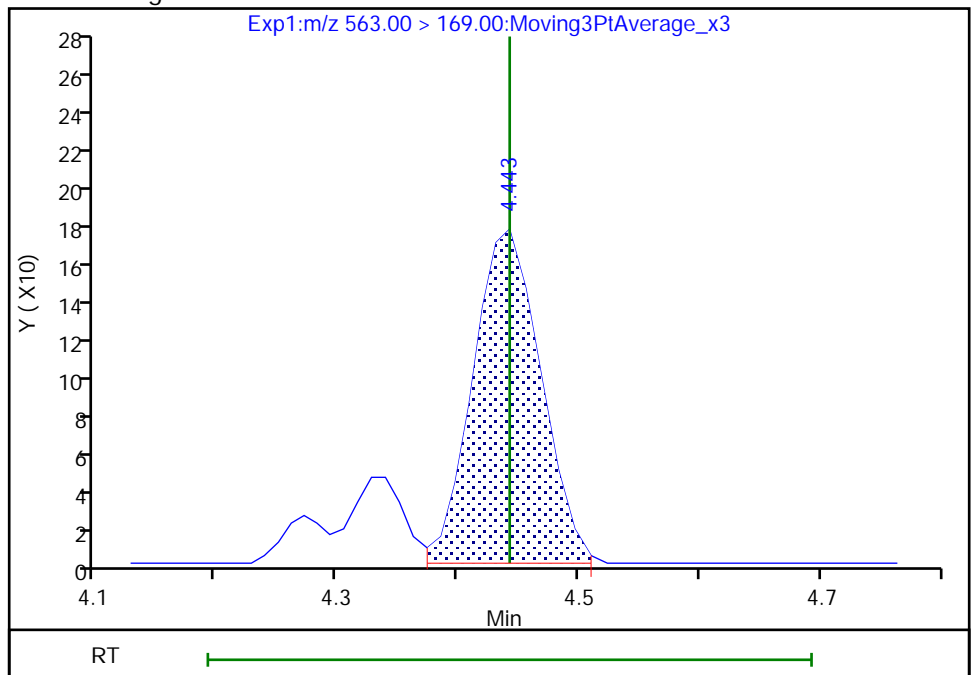
Not Detected  
Expected RT: 4.44

Processing Integration Results



Manual Integration Results

RT: 4.44  
Area: 681  
Amount: 0.007378  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 11:22:50

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

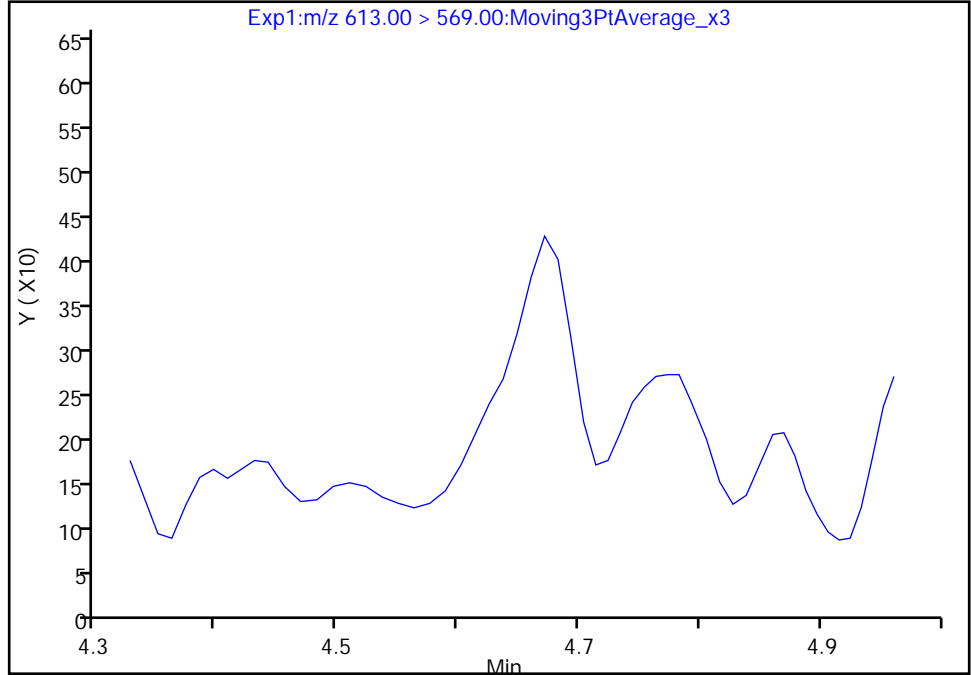
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B009.d  
Injection Date: 24-Dec-2019 15:01:36 Instrument ID: LC812  
Lims ID: 480-164221-C-2-A Lab Sample ID: 200-164221-2  
Client ID: FIELD DUP 2  
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

37 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 1

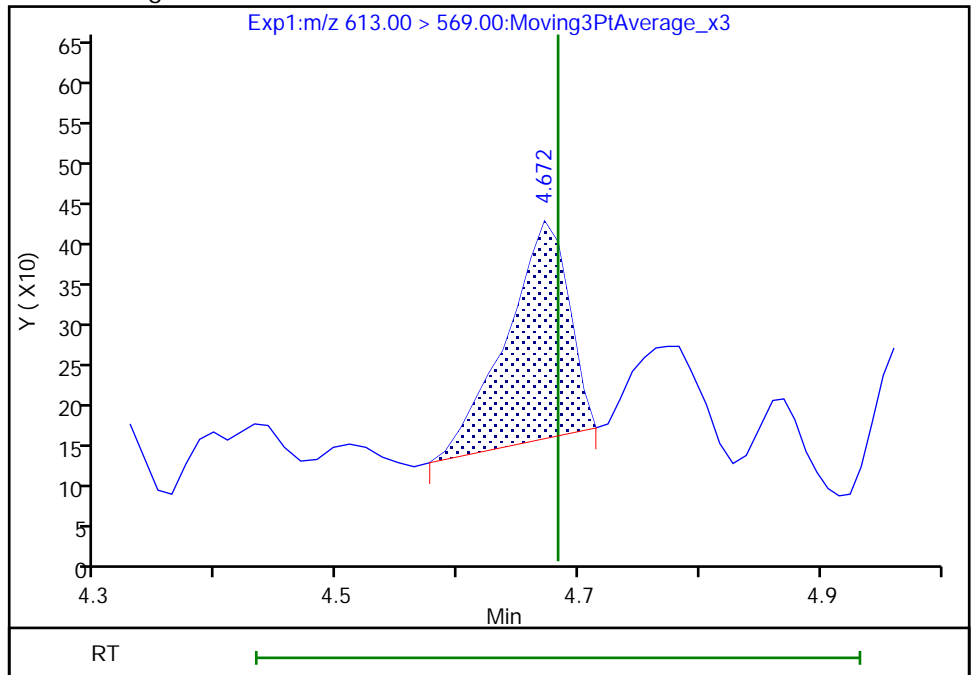
Not Detected  
Expected RT: 4.68

Processing Integration Results



RT: 4.67  
Area: 963  
Amount: 0.002765  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 11:24:18  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

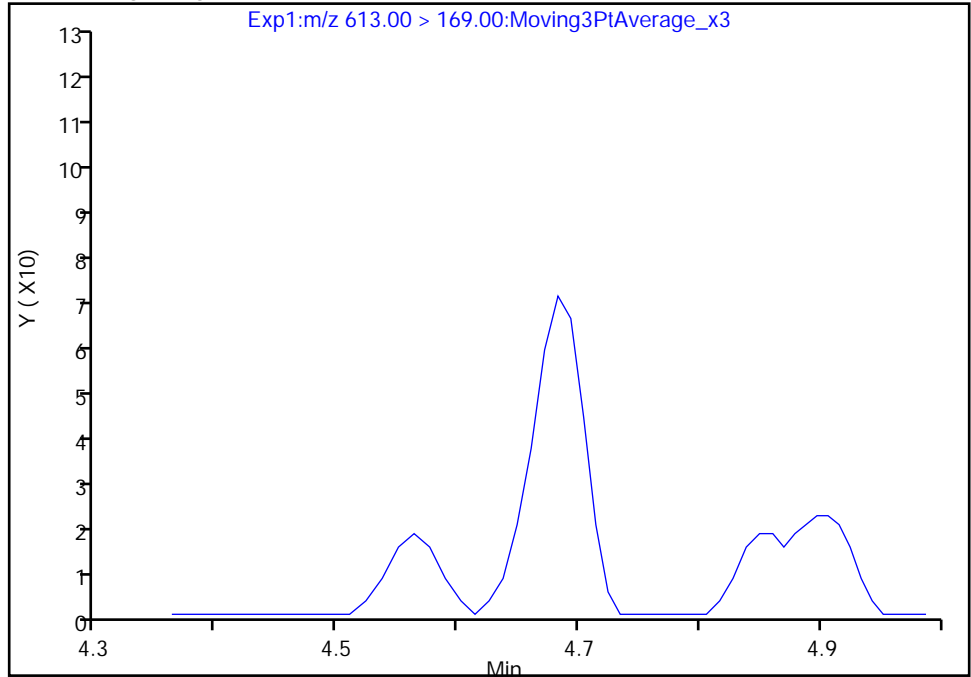
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B009.d  
Injection Date: 24-Dec-2019 15:01:36 Instrument ID: LC812  
Lims ID: 480-164221-C-2-A Lab Sample ID: 200-164221-2  
Client ID: FIELD DUP 2  
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

37 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 2

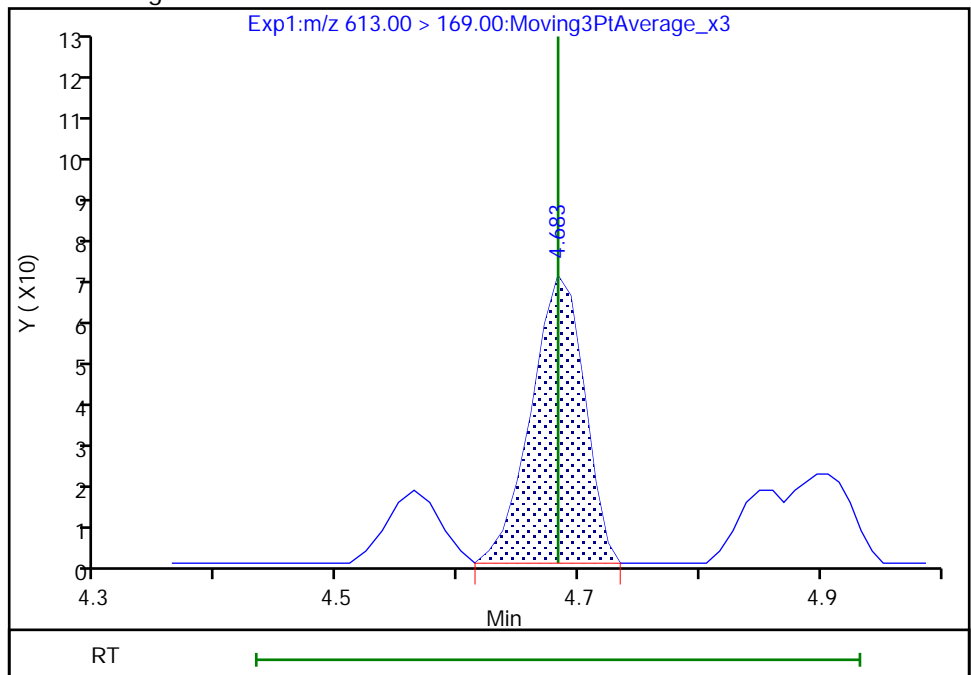
Not Detected  
Expected RT: 4.68

Processing Integration Results



Manual Integration Results

RT: 4.68  
Area: 217  
Amount: 0.002765  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 11:24:24

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

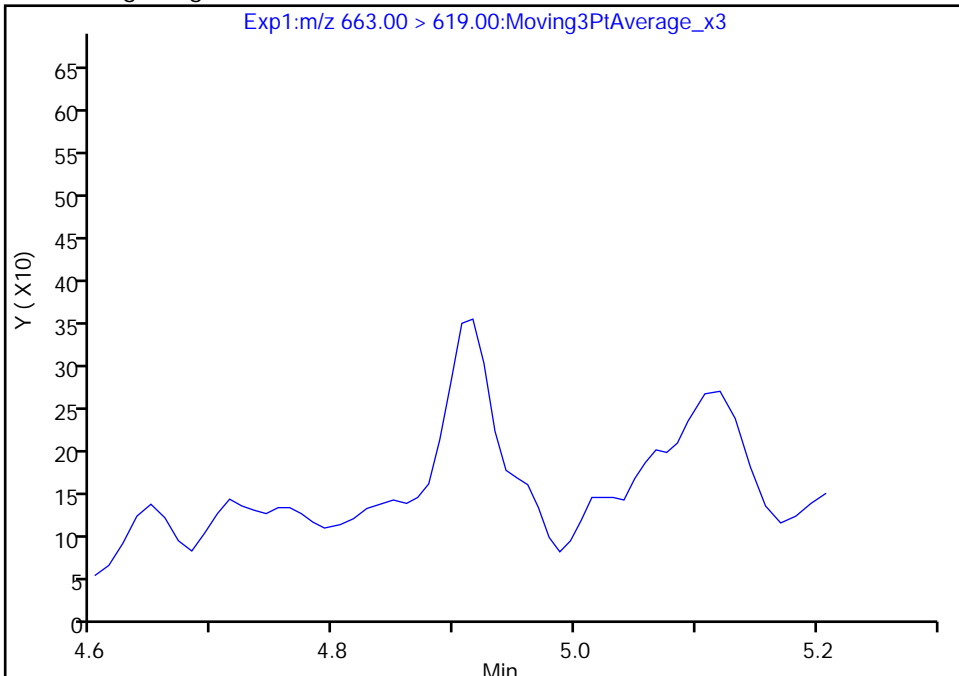
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B009.d  
Injection Date: 24-Dec-2019 15:01:36 Instrument ID: LC812  
Lims ID: 480-164221-C-2-A Lab Sample ID: 200-164221-2  
Client ID: FIELD DUP 2  
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

41 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 1

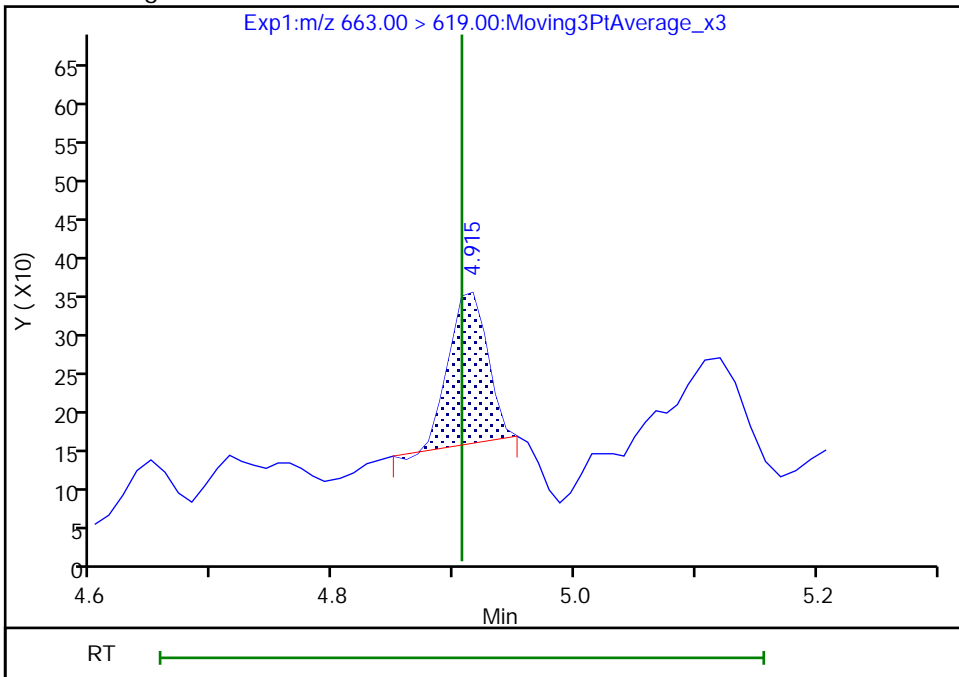
Not Detected  
Expected RT: 4.91

Processing Integration Results



Manual Integration Results

RT: 4.92  
Area: 434  
Amount: 0.001312  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 11:24:41  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Euofins TestAmerica, Burlington

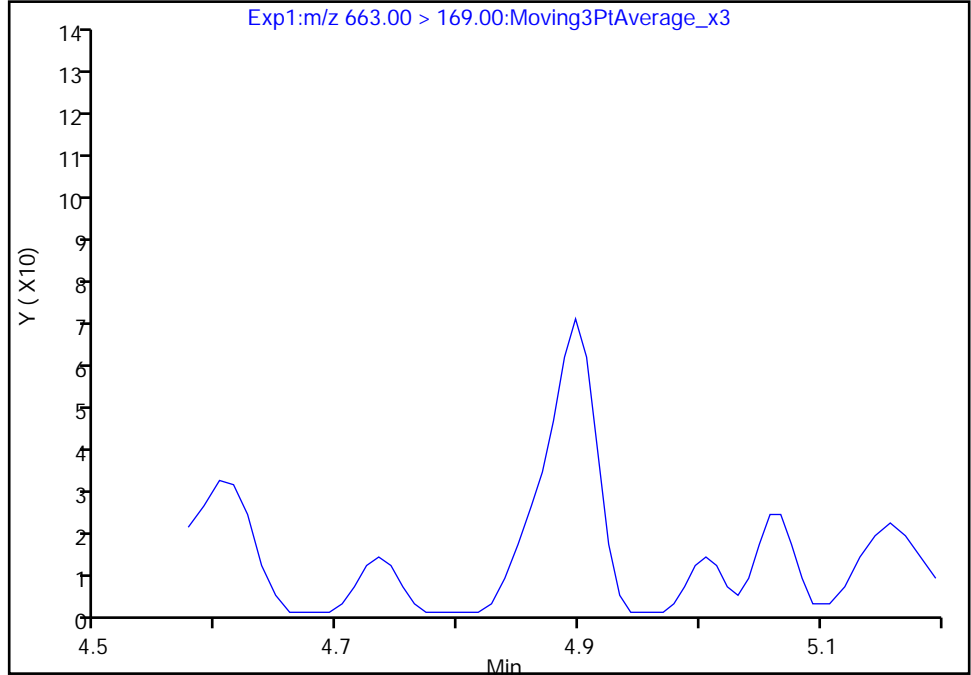
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B009.d  
Injection Date: 24-Dec-2019 15:01:36 Instrument ID: LC812  
Lims ID: 480-164221-C-2-A Lab Sample ID: 200-164221-2  
Client ID: FIELD DUP 2  
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

41 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 2

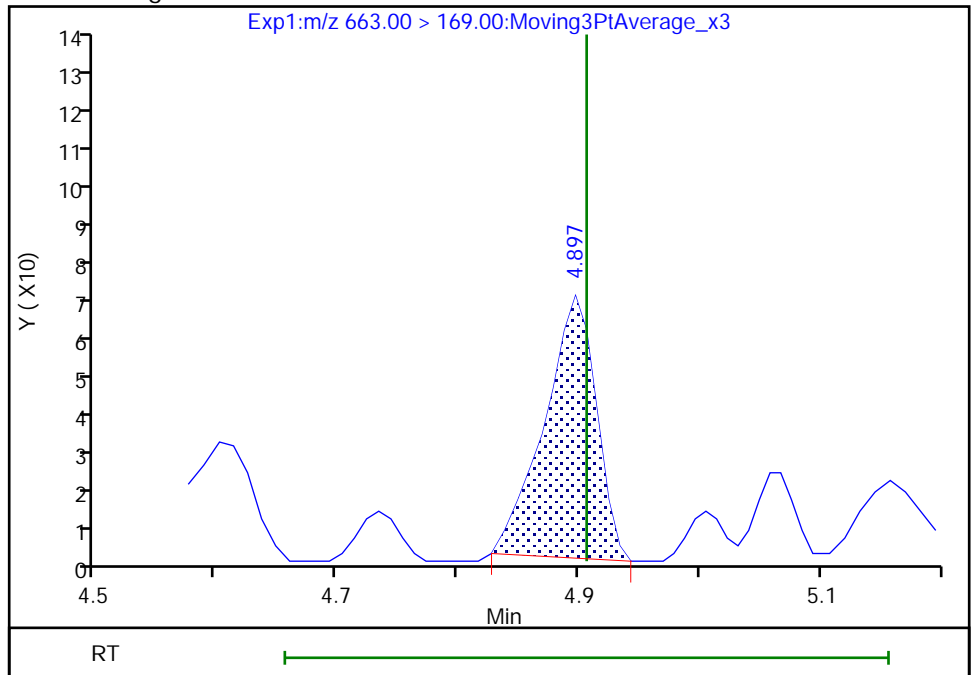
Not Detected  
Expected RT: 4.91

Processing Integration Results



Manual Integration Results

RT: 4.90  
Area: 203  
Amount: 0.001312  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 11:24:46

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

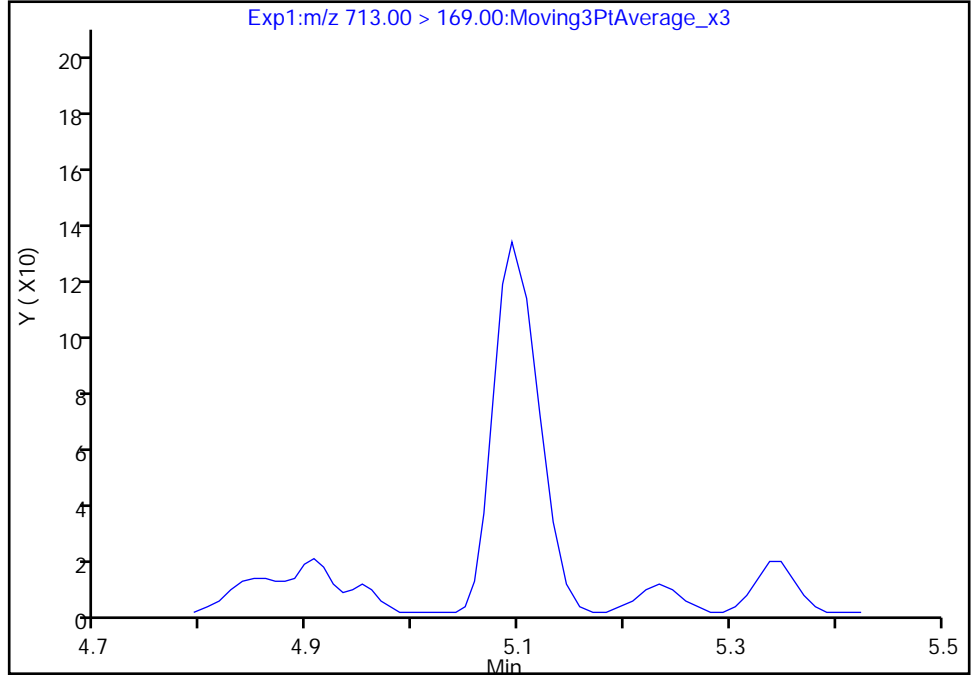
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B009.d  
Injection Date: 24-Dec-2019 15:01:36 Instrument ID: LC812  
Lims ID: 480-164221-C-2-A Lab Sample ID: 200-164221-2  
Client ID: FIELD DUP 2  
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 1

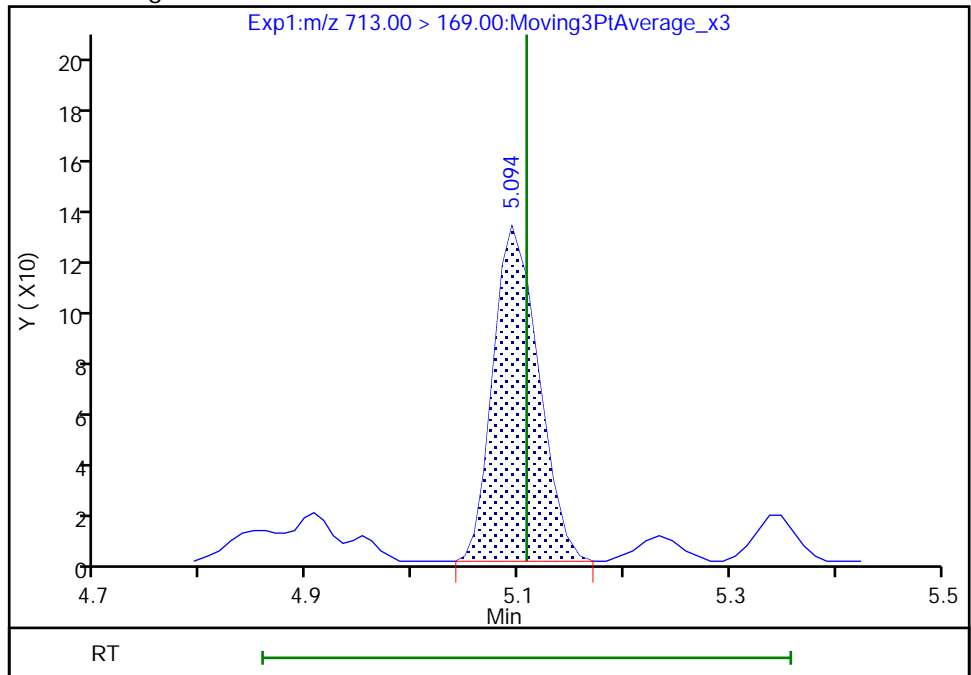
Not Detected  
Expected RT: 5.11

Processing Integration Results



Manual Integration Results

RT: 5.09  
Area: 391  
Amount: 0.005602  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 11:25:07

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

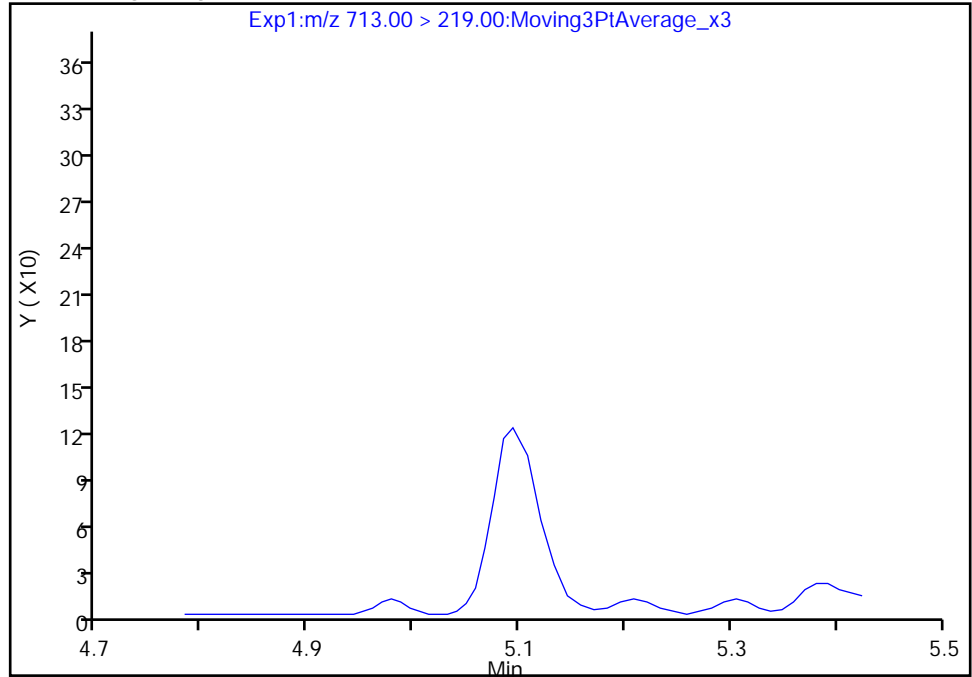
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B009.d  
Injection Date: 24-Dec-2019 15:01:36 Instrument ID: LC812  
Lims ID: 480-164221-C-2-A Lab Sample ID: 200-164221-2  
Client ID: FIELD DUP 2  
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 2

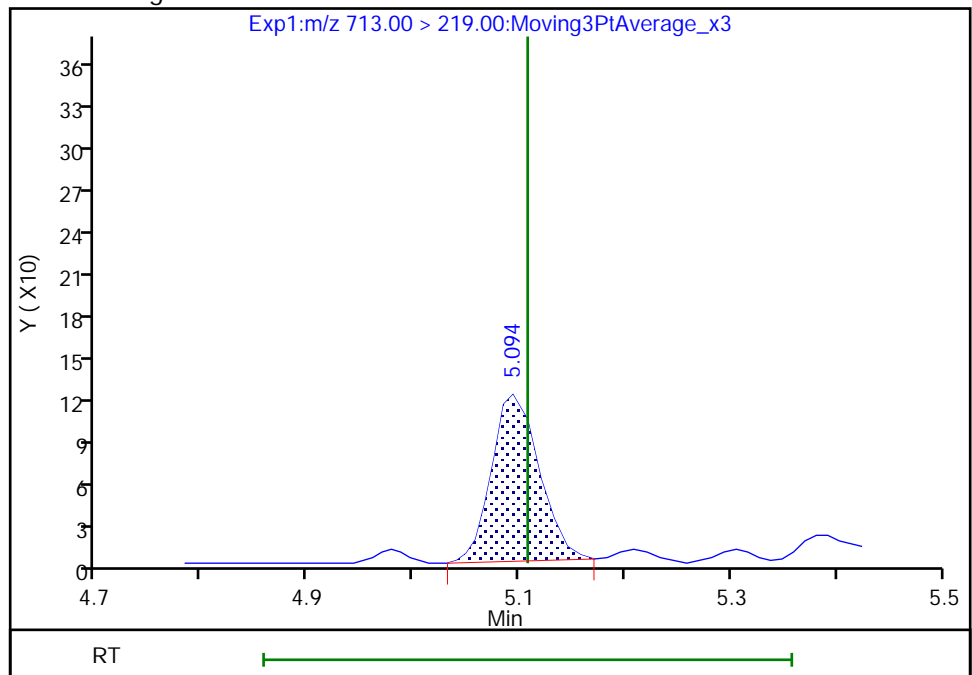
Not Detected  
Expected RT: 5.11

Processing Integration Results



Manual Integration Results

RT: 5.09  
Area: 374  
Amount: 0.005602  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 11:25:15

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

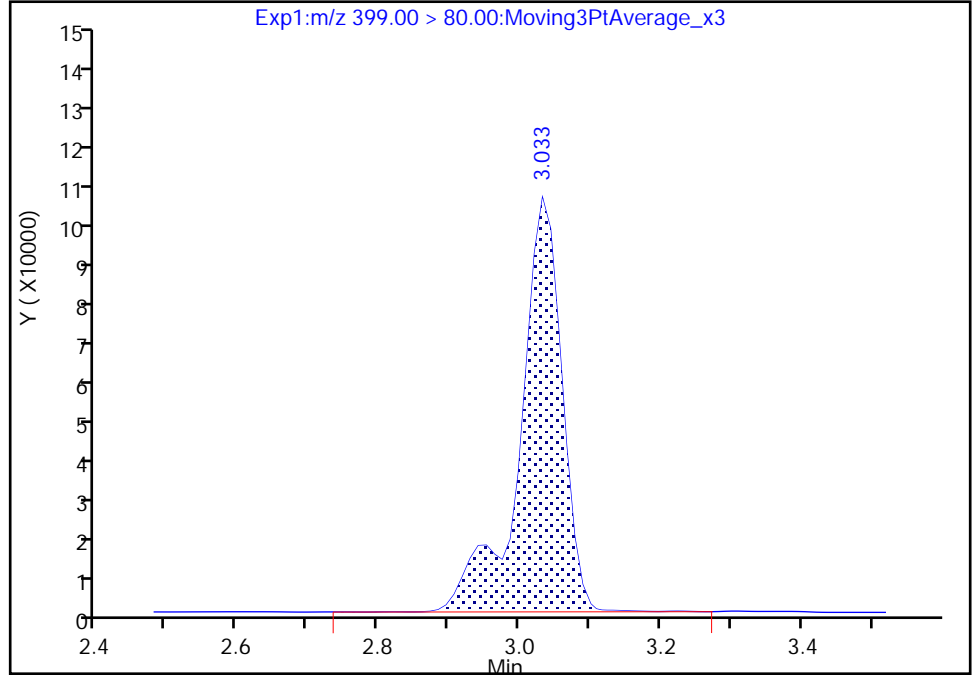
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B009.d  
Injection Date: 24-Dec-2019 15:01:36 Instrument ID: LC812  
Lims ID: 480-164221-C-2-A Lab Sample ID: 200-164221-2  
Client ID: FIELD DUP 2  
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

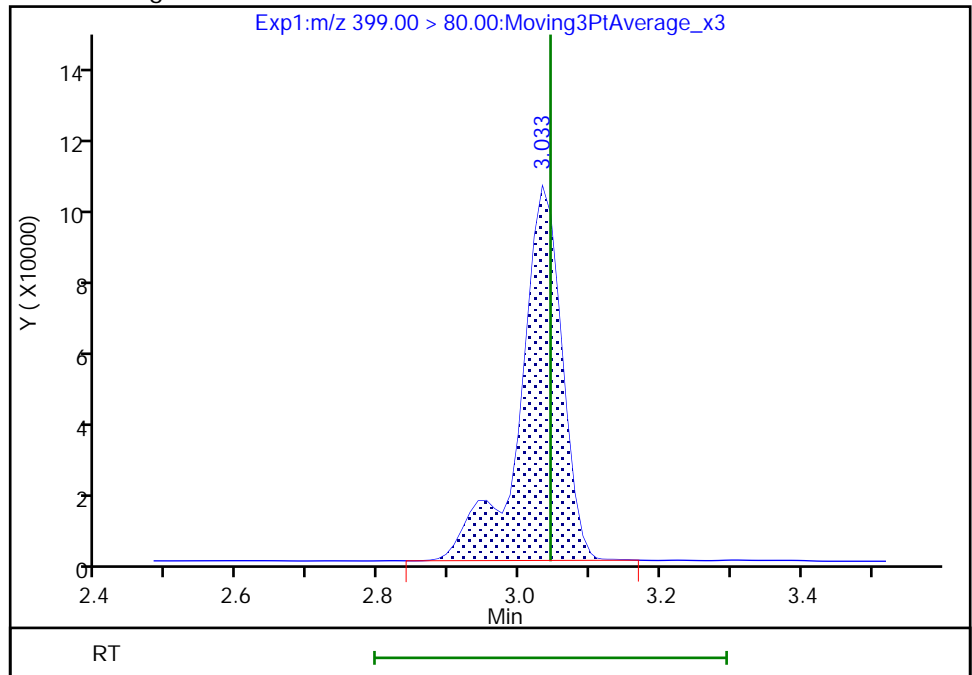
RT: 3.03  
Area: 429995  
Amount: 0.683021  
Amount Units: ng/ml

Processing Integration Results



RT: 3.03  
Area: 427698  
Amount: 0.679373  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 11:17:05  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Eurofins TestAmerica, Burlington

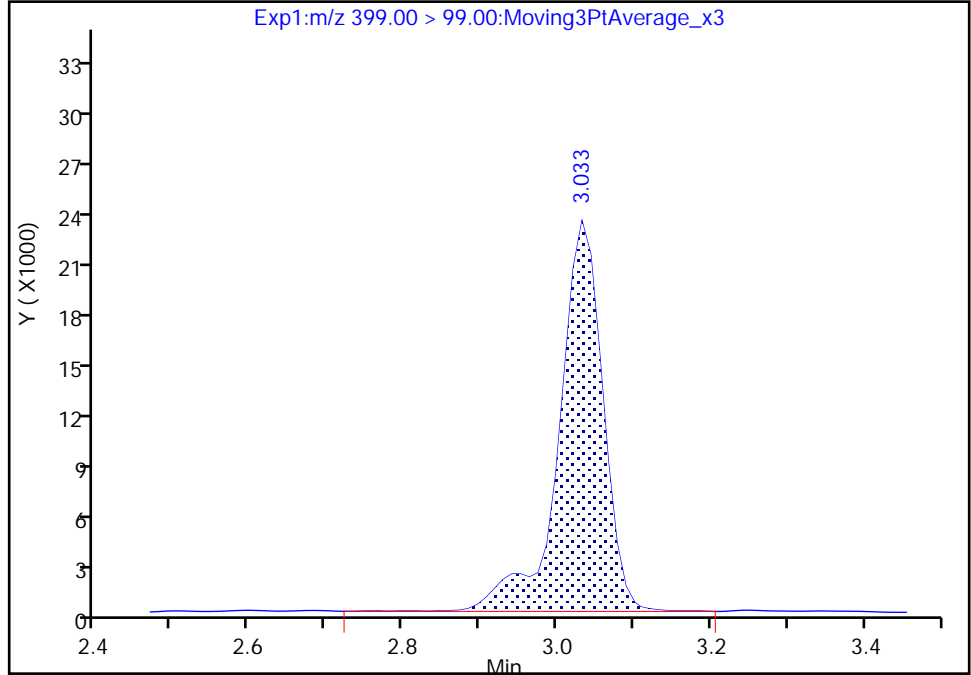
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B009.d  
Injection Date: 24-Dec-2019 15:01:36 Instrument ID: LC812  
Lims ID: 480-164221-C-2-A Lab Sample ID: 200-164221-2  
Client ID: FIELD DUP 2  
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

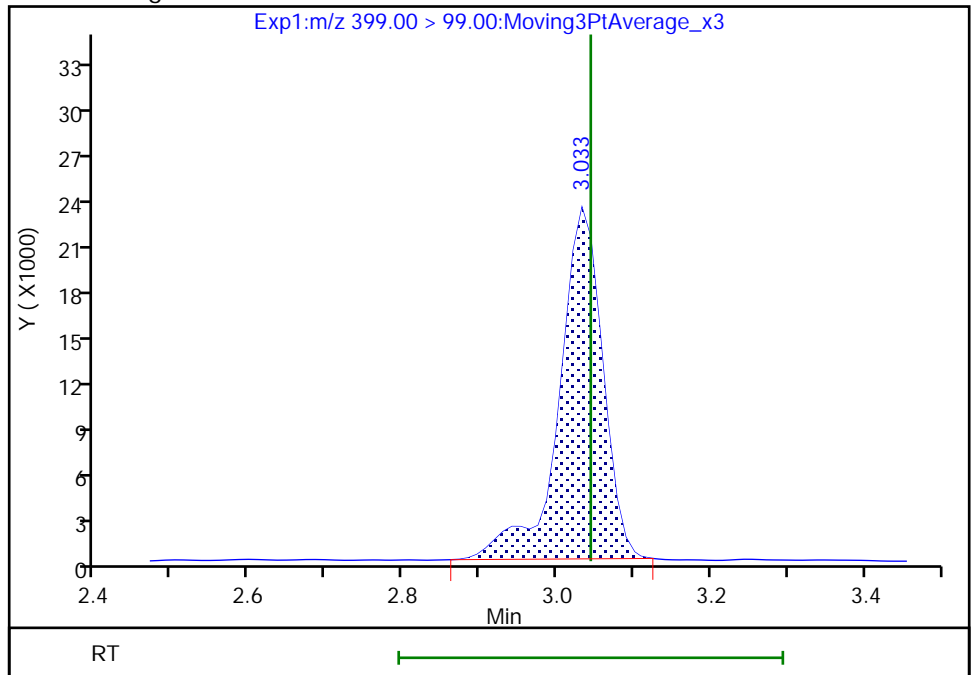
RT: 3.03  
Area: 92033  
Amount: 0.683021  
Amount Units: ng/ml

Processing Integration Results



RT: 3.03  
Area: 90370  
Amount: 0.679373  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 11:17:19

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

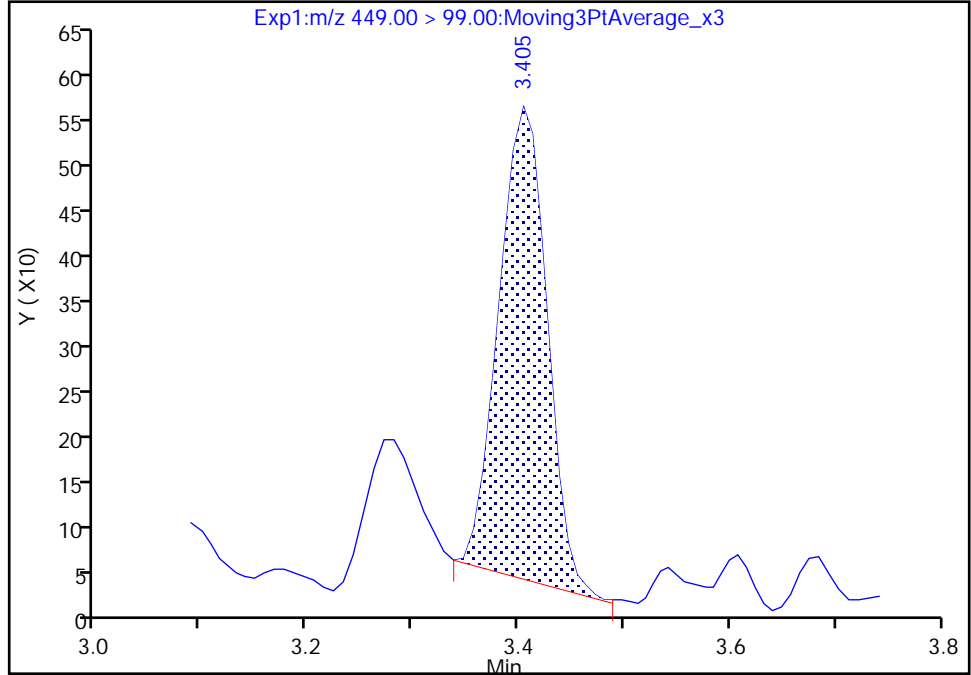
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B009.d  
Injection Date: 24-Dec-2019 15:01:36 Instrument ID: LC812  
Lims ID: 480-164221-C-2-A Lab Sample ID: 200-164221-2  
Client ID: FIELD DUP 2  
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

16 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 2

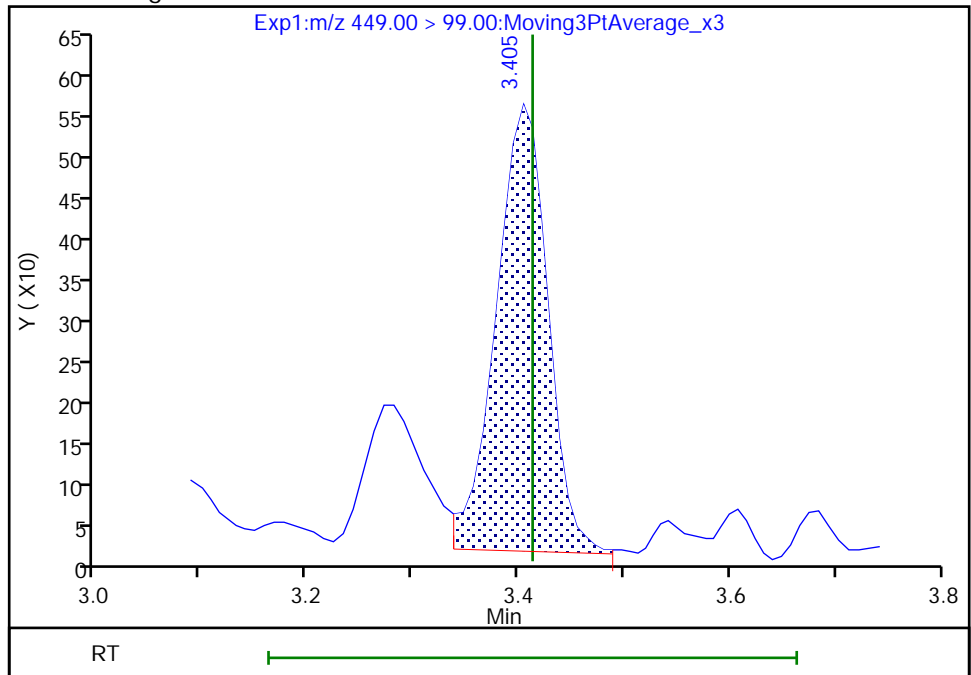
RT: 3.40  
Area: 1663  
Amount: 0.021390  
Amount Units: ng/ml

Processing Integration Results



RT: 3.40  
Area: 1861  
Amount: 0.021390  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagern, 27-Dec-2019 11:19:23

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

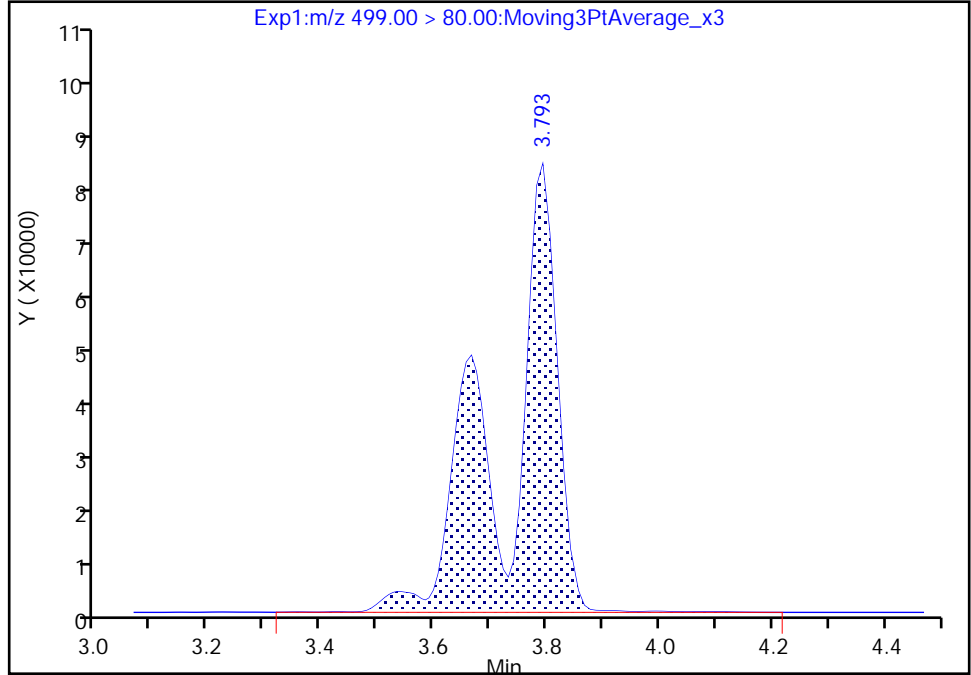
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B009.d  
Injection Date: 24-Dec-2019 15:01:36 Instrument ID: LC812  
Lims ID: 480-164221-C-2-A Lab Sample ID: 200-164221-2  
Client ID: FIELD DUP 2  
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

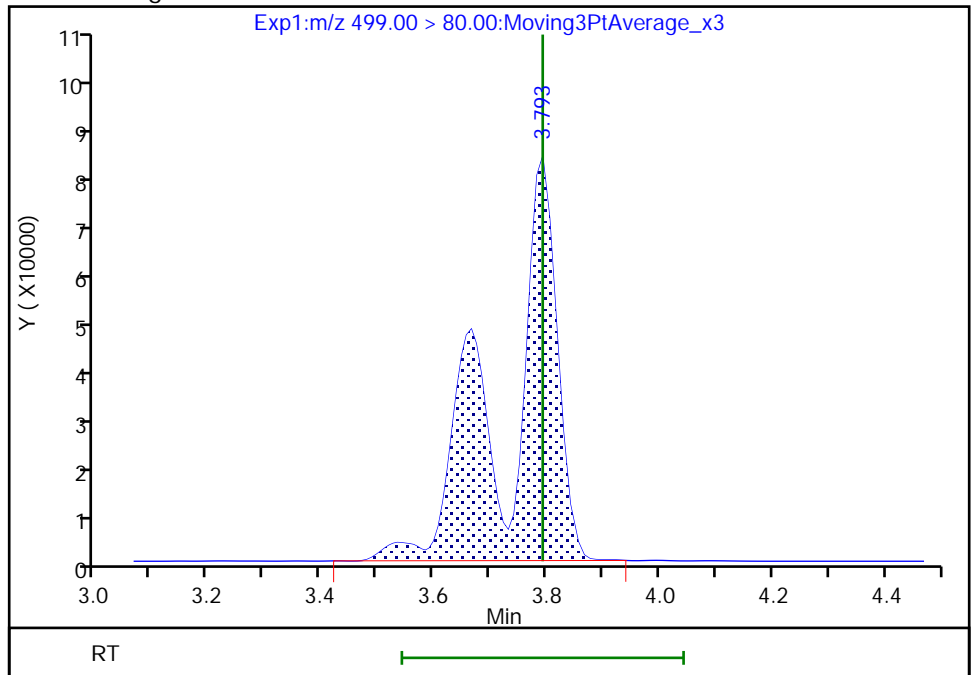
RT: 3.79  
Area: 541806  
Amount: 1.158636  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 536817  
Amount: 1.147967  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 11:19:47

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

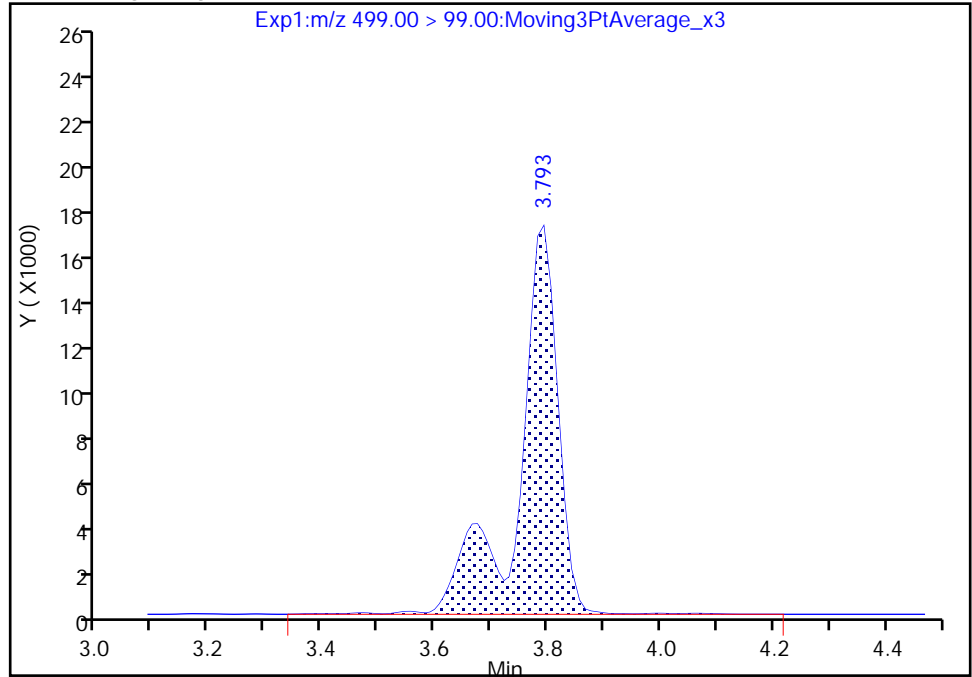
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B009.d  
Injection Date: 24-Dec-2019 15:01:36 Instrument ID: LC812  
Lims ID: 480-164221-C-2-A Lab Sample ID: 200-164221-2  
Client ID: FIELD DUP 2  
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

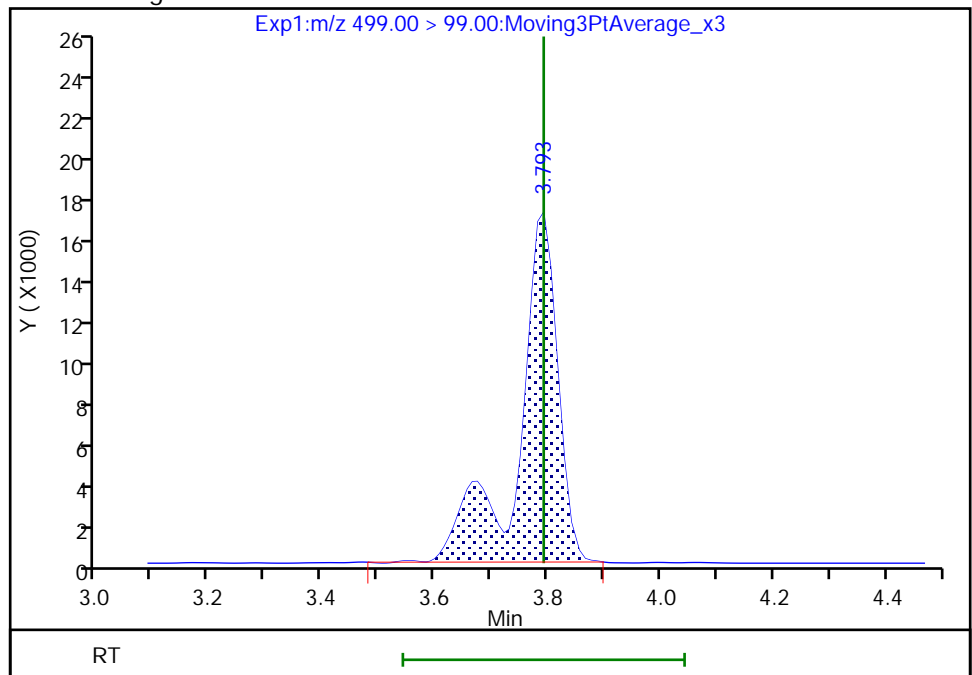
RT: 3.79  
Area: 85015  
Amount: 1.158636  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 83117  
Amount: 1.147967  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 11:19:58

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

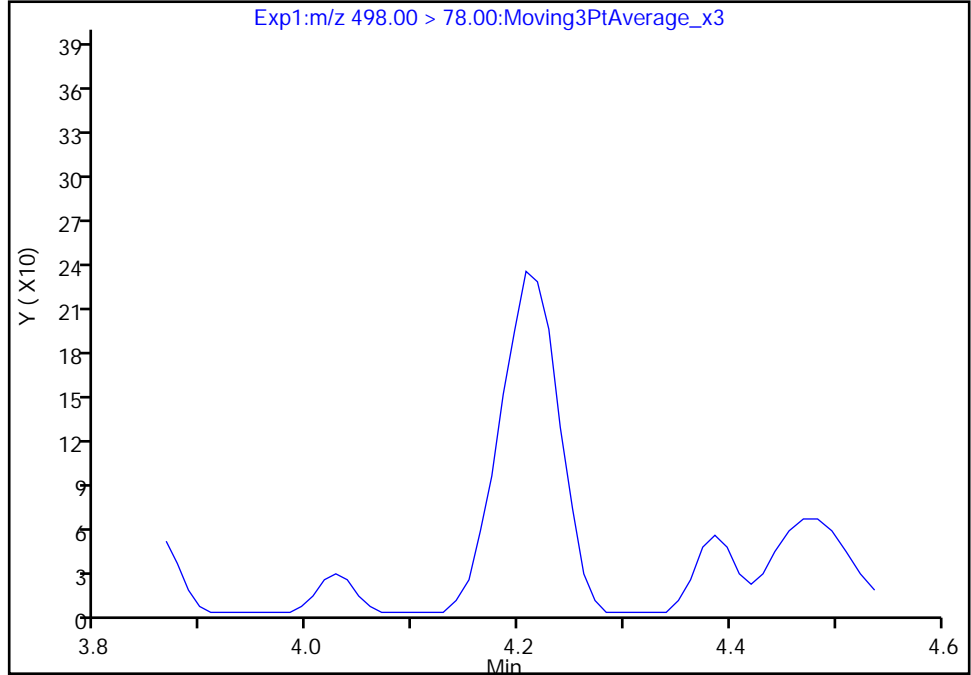
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B009.d  
Injection Date: 24-Dec-2019 15:01:36 Instrument ID: LC812  
Lims ID: 480-164221-C-2-A Lab Sample ID: 200-164221-2  
Client ID: FIELD DUP 2  
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

22 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

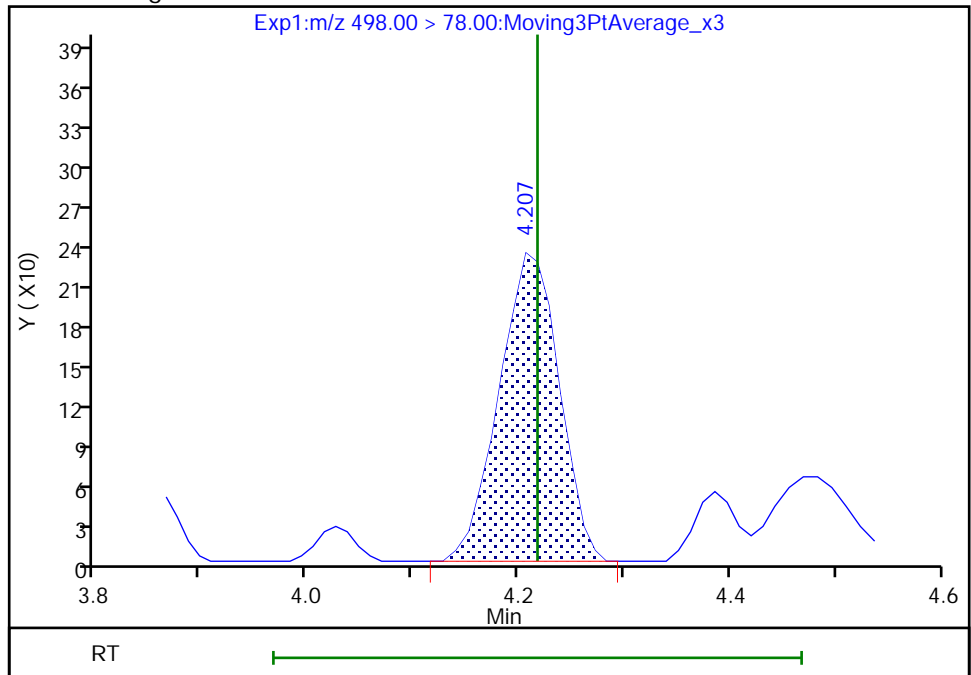
Not Detected  
Expected RT: 4.22

Processing Integration Results



Manual Integration Results

RT: 4.21  
Area: 904  
Amount: 0.001483  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 11:21:25  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

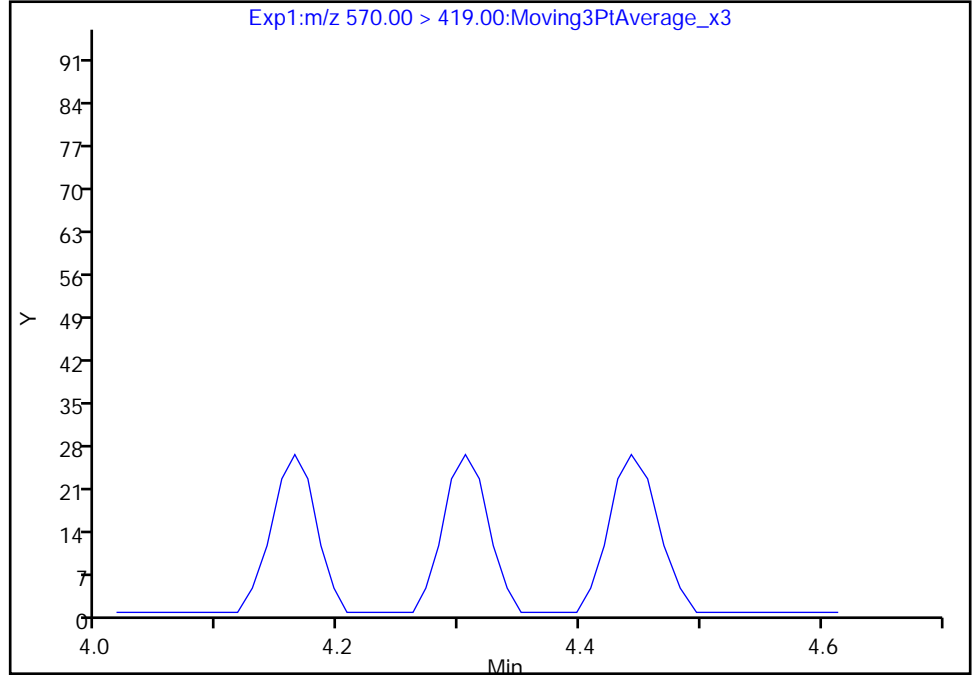
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B009.d  
Injection Date: 24-Dec-2019 15:01:36 Instrument ID: LC812  
Lims ID: 480-164221-C-2-A Lab Sample ID: 200-164221-2  
Client ID: FIELD DUP 2  
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

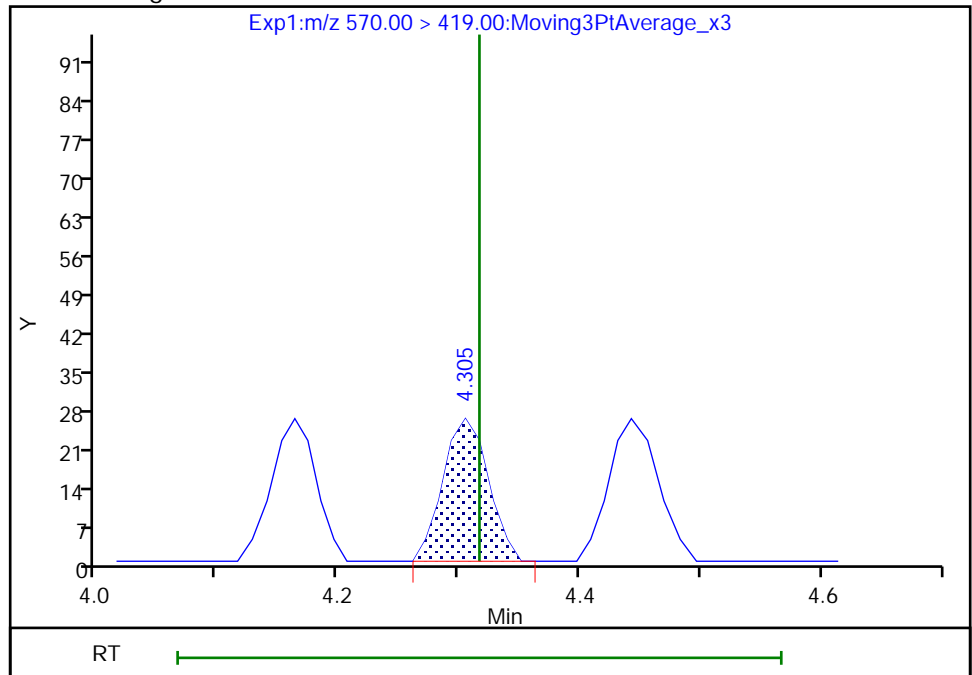
Not Detected  
Expected RT: 4.32

Processing Integration Results



RT: 4.31  
Area: 67  
Amount: 0.001781  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 11:21:43  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Euofins TestAmerica, Burlington

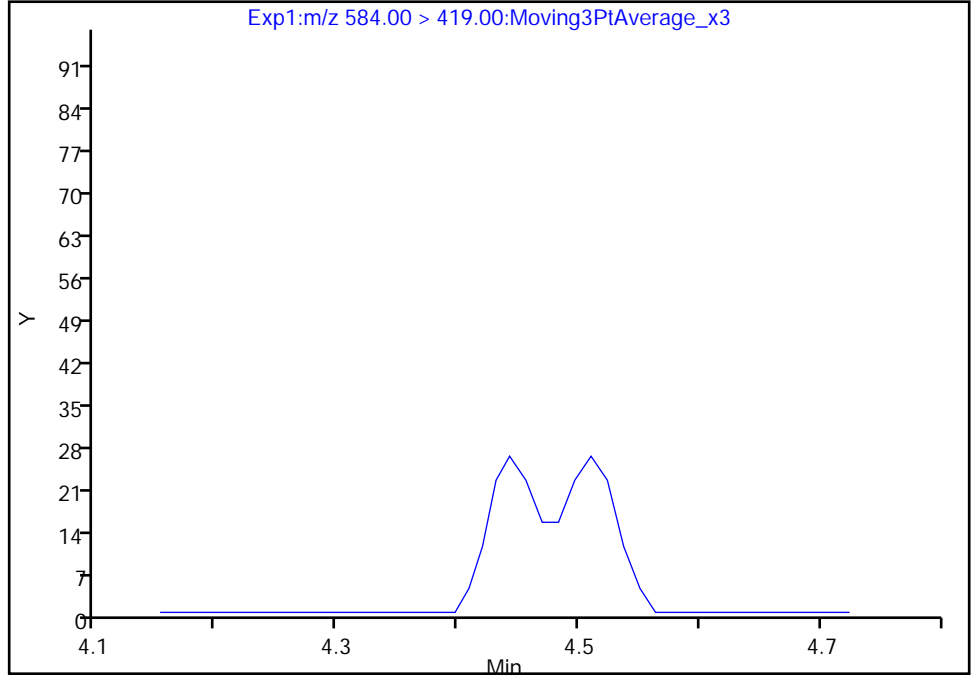
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B009.d  
Injection Date: 24-Dec-2019 15:01:36 Instrument ID: LC812  
Lims ID: 480-164221-C-2-A Lab Sample ID: 200-164221-2  
Client ID: FIELD DUP 2  
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

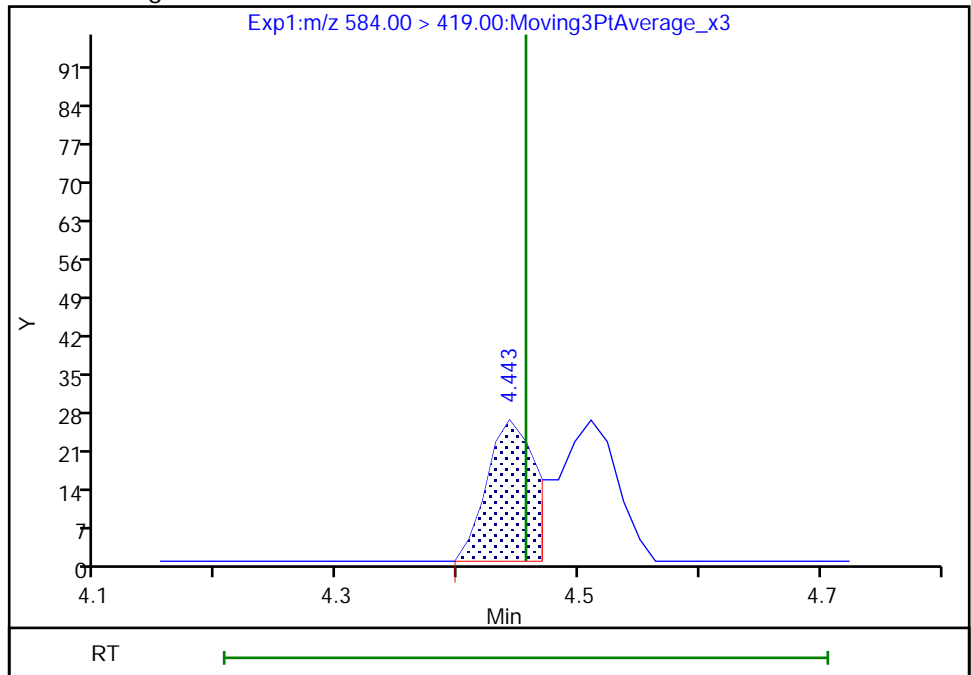
Not Detected  
Expected RT: 4.46

Processing Integration Results



RT: 4.44  
Area: 68  
Amount: 0.001649  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 11:23:40  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

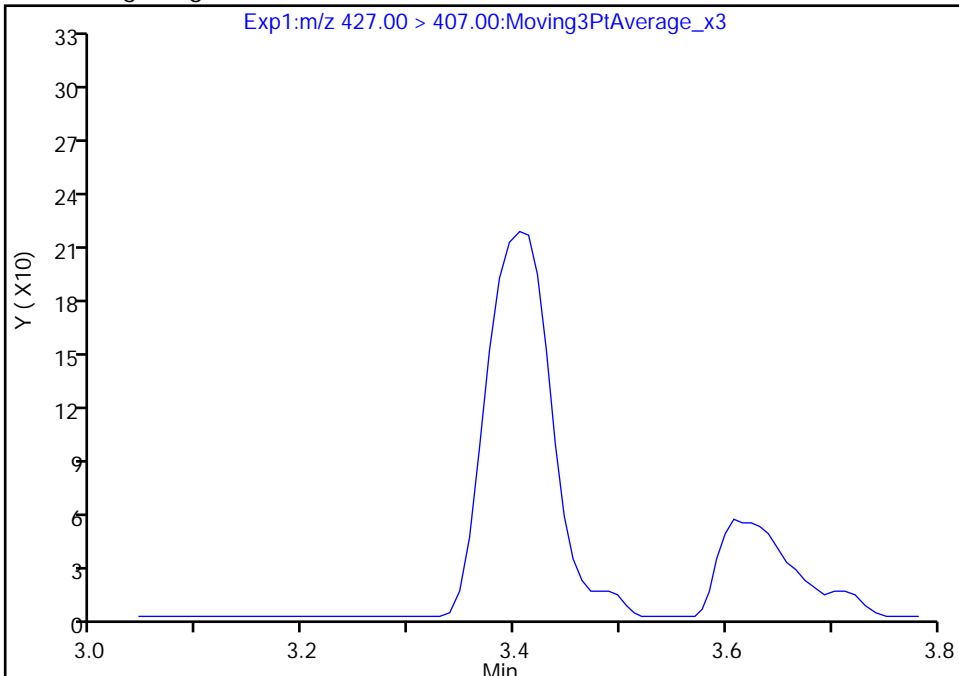
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Injection Date: 24-Dec-2019 15:01:36 Instrument ID: LC812  
Lims ID: 480-164221-C-2-A Lab Sample ID: 200-164221-2  
Client ID: FIELD DUP 2  
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 9  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

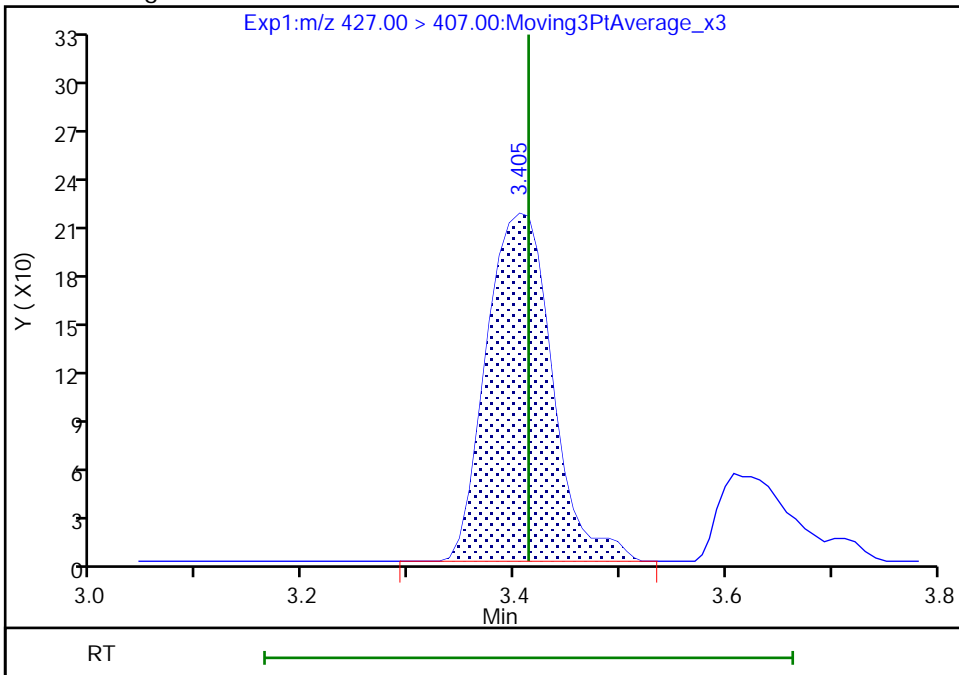
Not Detected  
Expected RT: 3.41

Processing Integration Results



Manual Integration Results

RT: 3.40  
Area: 925  
Amount: 0.014498  
Amount Units: ng/ml



Reviewer: lautenschlagerng, 27-Dec-2019 11:18:31  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS RW 1 DER Lab Sample ID: 480-164221-3  
 Matrix: Water Lab File ID: SC122319B010.d  
 Analysis Method: 537 (modified) Date Collected: 12/12/2019 12:10  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 258.1 (mL) Date Analyzed: 12/24/2019 15:09  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 20 (uL) GC Column: C-18 ID: 4.6 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	5.4		1.9	0.97
2706-90-3	Perfluoropentanoic acid (PFPeA)	10		1.9	0.61
307-24-4	Perfluorohexanoic acid (PFHxA)	12		1.9	0.74
375-85-9	Perfluoroheptanoic acid (PFHpA)	3.5		1.9	0.88
335-67-1	Perfluorooctanoic acid (PFOA)	5.9		1.9	0.78
375-95-1	Perfluorononanoic acid (PFNA)	0.31	J	1.9	0.26
335-76-2	Perfluorodecanoic acid (PFDA)	ND		1.9	0.75
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		1.9	0.76
307-55-1	Perfluorododecanoic acid (PFDoA)	ND	F2	1.9	0.57
72629-94-8	Perfluorotridecanoic acid (PFTriA)	ND		1.9	0.58
376-06-7	Perfluorotetradecanoic acid (PFTeA)	ND		1.9	0.89
375-73-5	Perfluorobutanesulfonic acid (PFBS)	3.5		1.9	0.47
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	25		1.9	0.77
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.9	0.92
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	45		1.9	0.59
335-77-3	Perfluorodecanesulfonic acid (PFDS)	ND		1.9	0.87
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND		9.7	9.7
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		19	1.6
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		19	1.5
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		19	5.3
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		19	2.8

FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS RW 1 DER Lab Sample ID: 480-164221-3  
 Matrix: Water Lab File ID: SC122319B010.d  
 Analysis Method: 537 (modified) Date Collected: 12/12/2019 12:10  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 258.1(mL) Date Analyzed: 12/24/2019 15:09  
 Con. Extract Vol.: 10(mL) Dilution Factor: 1  
 Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	108		50-150
STL01892	13C4 PFHpA	110		50-150
STL00990	13C4 PFOA	107		50-150
STL00991	13C4 PFOS	106		50-150
STL00995	13C5 PFNA	98		50-150
STL00992	13C4 PFBA	90		25-150
STL00993	13C2 PFHxA	101		50-150
STL00996	13C2 PFDA	92		50-150
STL00997	13C2 PFUnA	93		50-150
STL00998	13C2 PFDoA	78		50-150
STL01056	13C8 FOSA	85		25-150
STL01893	13C5 PFPeA	106		25-150
STL02116	13C2 PFTeDA	88		50-150
STL02118	d3-NMeFOSAA	86		50-150
STL02117	d5-NEtFOSAA	84		50-150
STL02279	M2-6:2 FTS	80		25-150
STL02280	M2-8:2 FTS	98		25-150
STL02337	13C3 PFBS	108		50-150

Eurofins TestAmerica, Burlington  
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B010.d  
 Lims ID: 480-164221-C-3-A  
 Client ID: CS RW 1 DER  
 Sample Type: Client  
 Inject. Date: 24-Dec-2019 15:09:48 ALS Bottle#: 10 Worklist Smp#: 10  
 Injection Vol: 20.0 ul Dil. Factor: 1.0000  
 Sample Info: 480-164221-C-3-A  
 Misc. Info.: 200-0039355-010 Plate: 1 Rack: 2  
 Operator ID: lc812tech Instrument ID: LC812  
 Method: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\PFC\_LC812.m  
 Limit Group: LC\_PFC\_ICAL  
 Last Update: 30-Dec-2019 15:06:05 Calib Date: 06-Dec-2019 15:13:26  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Column 1 : C-18 ( 4.60 mm) Det: EXP1  
 Process Host: CTX0330

First Level Reviewer: lautenschlagery Date: 27-Dec-2019 12:04:00  
 Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	1.898	1.908	-0.010	0.555	1543766	2.24	89.5	3239	
2 Perfluorobutanoic acid	212.90 > 169.00	1.898	1.908	-0.010	1.000	85509	0.1392		26.8	
D 3 13C5 PFPeA	267.90 > 223.00	2.258	2.257	0.001	0.660	1395012	2.65	106	5116	
4 Perfluoropentanoic acid	262.90 > 219.00	2.258	2.271	-0.013	1.000	163902	0.2594		16.8	M
D 47 13C3 PFBS	301.90 > 80.00	2.271	2.285	-0.014	0.664	1576779	2.51	108	244272	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	2.285	2.285	0.0	1.006	66068	0.0896	Target=2.03	87.0	
	298.90 > 99.00	2.271	2.285	-0.014	1.000	34335		1.92(1.01-3.04)	49.4	
D 60 M2-4:2 FTS	329.00 > 81.00	2.611	2.611	0.0	0.763	109826	1.87	80.2	148	
61 1H,1H,2H,2H-perfluorohexanesulfoni	327.00 > 307.00	2.574	2.611	-0.037	0.986	157	0.001927		4.3	M
D 7 13C2 PFHxA	315.00 > 270.00	2.648	2.648	0.0	0.774	1484722	2.53	101	7558	
6 Perfluorohexanoic acid	313.00 > 269.00	2.648	2.661	-0.013	1.000	191029	0.3150	Target=13.76	73.6	M
	313.00 > 119.00	2.648	2.661	-0.013	1.000	15400		12.40(6.88-20.64)	54.4	M
70 Perfluoropentanesulfonic acid	349.00 > 80.00	2.648	2.661	-0.013	0.873	47284	0.0758	Target=3.50	109	
	349.00 > 99.00	2.648	2.661	-0.013	0.873	17103		2.76(1.75-5.25)	50.1	
D 64 13C3 HFPO-DA	332.10 > 287.00	2.760	2.768	-0.008	0.807	116697	4.55		182	1580

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 11 18O2 PFHxS										
403.00 > 84.00	3.033	3.044	-0.011	0.886	1270540	2.56		108	4374	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.033	3.044	-0.011	1.000	394468	0.6488	Target=3.90		614	M
399.00 > 99.00	3.033	3.044	-0.011	1.000	93257		4.23(1.95-5.85)		289	M
D 9 13C4 PFHpA										
367.00 > 322.00	3.044	3.044	0.0	0.890	1529389	2.74		110	6845	
10 Perfluoroheptanoic acid										M
363.00 > 319.00	3.044	3.044	0.0	1.000	59197	0.0915	Target=3.95		30.4	M
363.00 > 169.00	3.044	3.044	0.0	1.000	17083		3.47(1.97-5.92)		68.9	
16 Perfluoroheptanesulfonic acid										M
449.00 > 80.00	3.405	3.413	-0.008	0.898	11258	0.0219	Target=6.46		25.4	M
449.00 > 99.00	3.413	3.413	0.0	0.900	2055		5.48(3.23-9.69)		17.1	M
13 1H,1H,2H,2H-perfluorooctanesulfoni										M
427.00 > 407.00	3.430	3.413	0.017	1.007	574	0.008947			12.0	M
D 12 M2-6:2 FTS										
429.00 > 81.00	3.405	3.413	-0.008	0.995	161457	1.89		79.7	595	
15 Perfluorooctanoic acid										M
413.00 > 369.00	3.422	3.430	-0.008	1.000	106229	0.1515	Target=2.40		45.4	M
413.00 > 169.00	3.422	3.430	-0.008	1.000	51537		2.06(1.20-3.60)		188	
D 14 13C4 PFOA										
417.00 > 372.00	3.422	3.430	-0.008	1.000	1579621	2.67		107	4718	
* 62 13C2 PFOA										
415.00 > 370.00	3.422	3.430	-0.008		1627681	2.50			4462	
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.793	0.0	1.108	1001362	2.54		106	6110	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.793	3.793	0.0	1.000	531058	1.17	Target=5.74		1391	M
499.00 > 99.00	3.793	3.793	0.0	1.000	79878		6.65(2.87-8.61)		536	M
D 19 13C5 PFNA										
468.00 > 423.00	3.817	3.817	0.0	1.116	1334341	2.45		98.1	5919	
20 Perfluorononanoic acid										M
463.00 > 419.00	3.805	3.817	-0.012	0.997	4226	0.008075	Target=7.01		2.5	M
463.00 > 169.00	3.817	3.817	0.0	1.000	420		10.06(3.50-10.51)		8.2	M
69 9-Chlorohexadecafluoro-3-oxanonane										M
531.00 > 351.00	3.973	3.984	-0.011	1.047	388	0.000751			5.1	M
D 23 13C2 PFDA										
515.00 > 470.00	4.153	4.164	-0.011	1.214	1238850	2.31		92.4	5176	
25 1H,1H,2H,2H-perfluorodecanesulfoni										M
527.00 > 507.00	4.153	4.164	-0.011	0.997	66	0.001429				M
D 26 M2-8:2 FTS										
529.00 > 81.00	4.164	4.175	-0.011	1.217	239675	2.36		98.4	1452	
D 21 13C8 FOSA										
506.00 > 78.00	4.207	4.218	-0.011	1.230	1493627	2.13		85.2	4552	
22 Perfluorooctanesulfonamide										M
498.00 > 78.00	4.218	4.218	0.0	1.003	645	0.001085			9.5	M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.305	4.305	0.0	1.258	110406	2.14		85.6	1983	
D 30 13C2 PFUnA										
565.00 > 520.00	4.431	4.443	-0.012	1.295	1055847	2.32		92.7	5776	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.431	4.443	-0.012	1.000	2407	0.006722	Target=5.78	4.3		M
563.00 > 169.00	4.431	4.443	-0.012	1.000	532		4.52(2.89-8.67)	11.8		M
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.443	4.456	-0.013	1.298	120823	2.11		84.5	961	
66 11-Chloroeicosafuoro-3-oxaundecan										
631.00 > 451.00	4.537	4.551	-0.014	1.196	64	0.000131		1.1		M
D 36 13C2 PFDaA										
615.00 > 570.00	4.683	4.683	0.0	1.369	968766	1.94		77.5	4410	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.094	5.108	-0.014	1.000	253	0.003406	Target=1.05	4.5		M
713.00 > 219.00	5.094	5.108	-0.014	1.000	197		1.28(0.52-1.57)	3.8		M
D 43 13C2 PFTeDA										
715.00 > 670.00	5.094	5.108	-0.014	1.489	924354	2.21		88.3	7722	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.482	5.491	-0.009	1.000	8727	-0.004907	Target=3.20	4.6		
813.00 > 169.00	5.482	5.491	-0.009	1.000	3214		2.72(1.60-4.80)	82.1		
D 44 13C2 PFHxDA										
815.00 > 770.00	5.482	5.491	-0.009	1.602	1006640	2.61		104	7291	

**QC Flag Legend**

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B010.d

Injection Date: 24-Dec-2019 15:09:48

Instrument ID: LC812

Lims ID: 480-164221-C-3-A

Lab Sample ID: 200-164221-3

Client ID: CS RW 1 DER

Operator ID: lc812tech

ALS Bottle#: 10

Worklist Smp#: 10

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

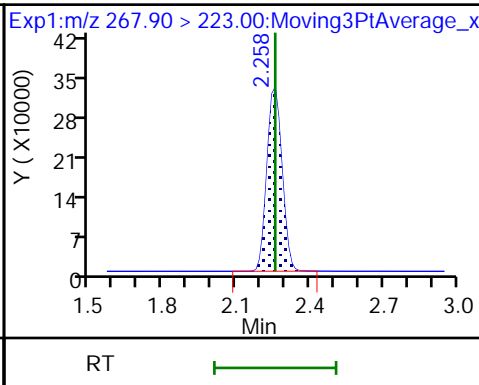
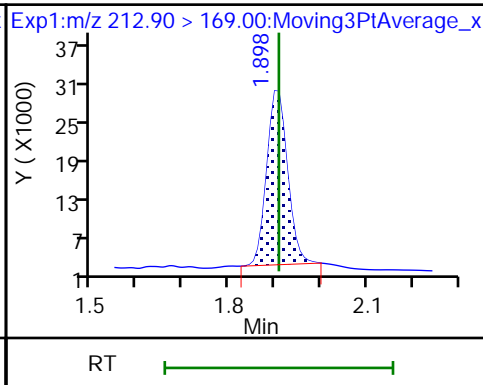
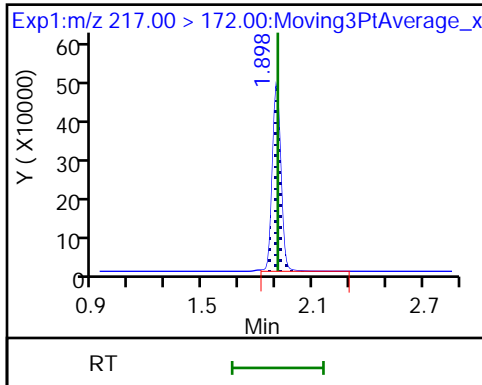
Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

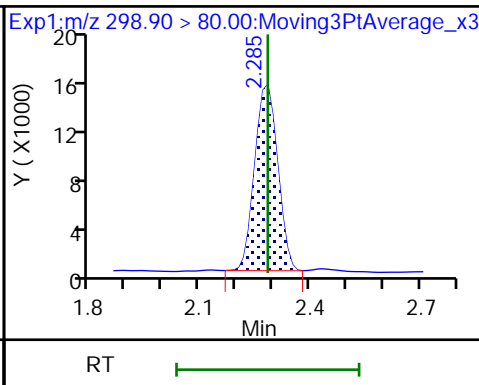
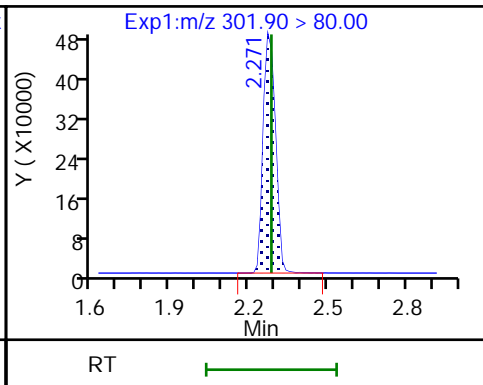
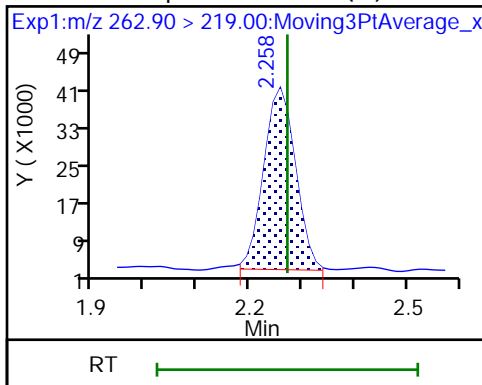
D 3 13C5 PFPeA



4 Perfluoropentanoic acid (M)

D 47 13C3 PFBS

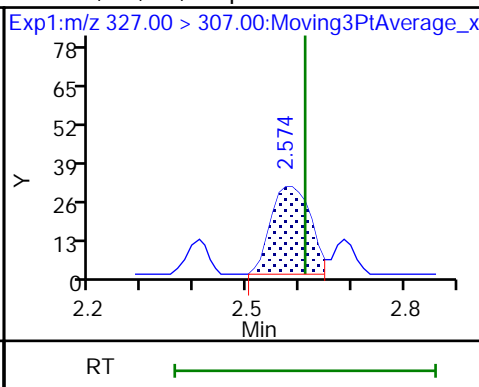
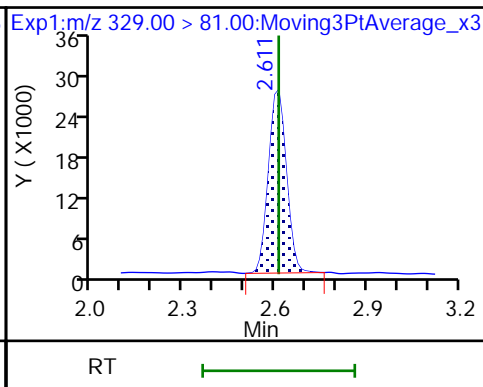
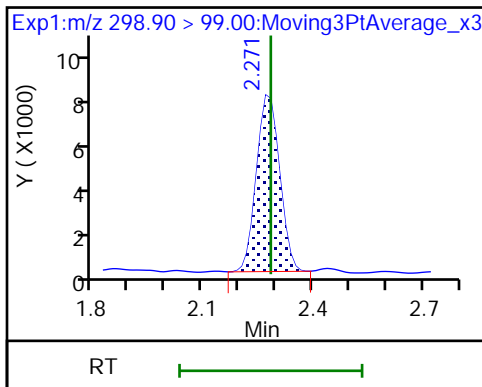
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 60 M2-4:2 FTS

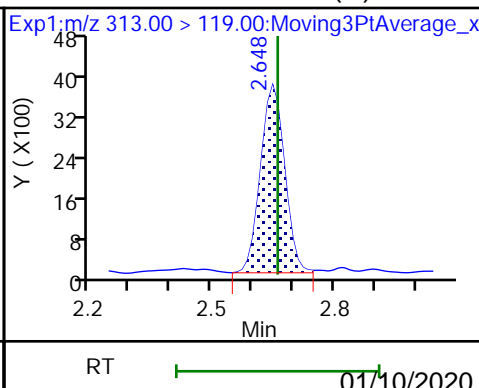
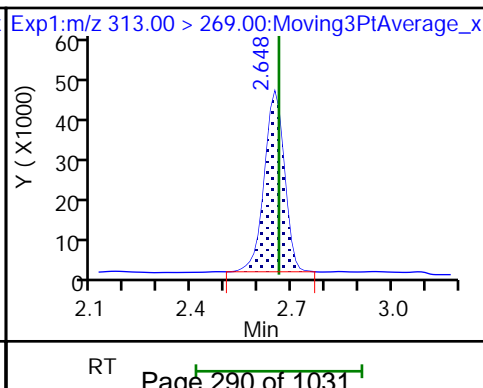
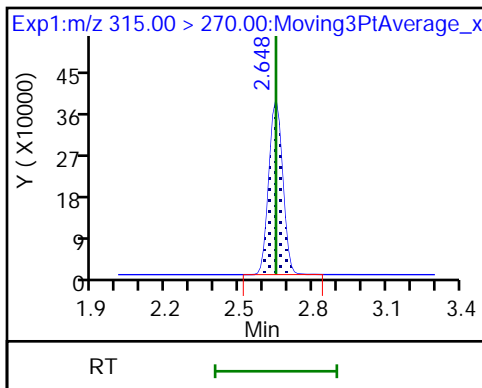
61 1H,1H,2H,2H-perfluorohexanesulfoni (M)

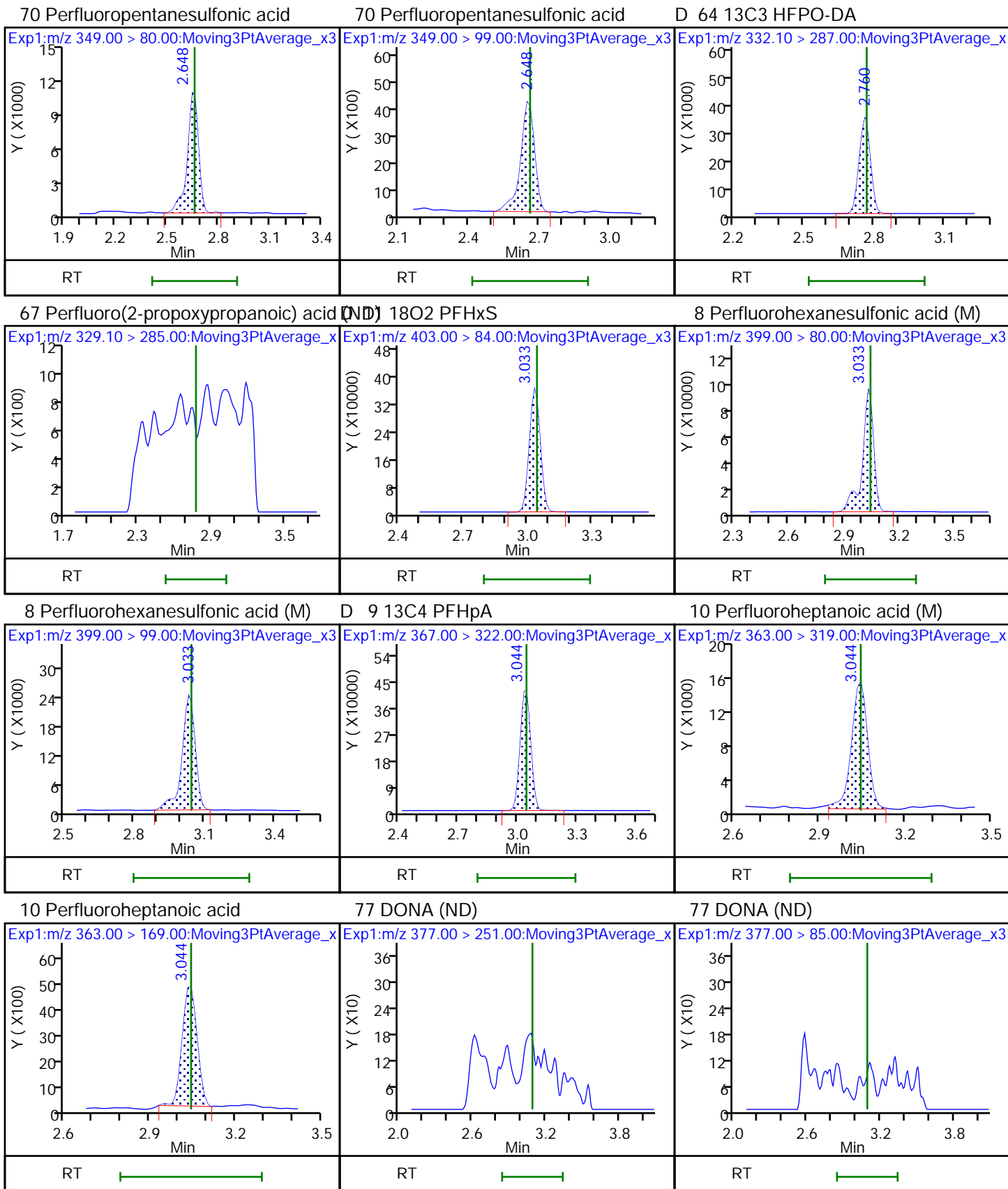


D 7 13C2 PFHxA

6 Perfluorohexanoic acid

6 Perfluorohexanoic acid (M)

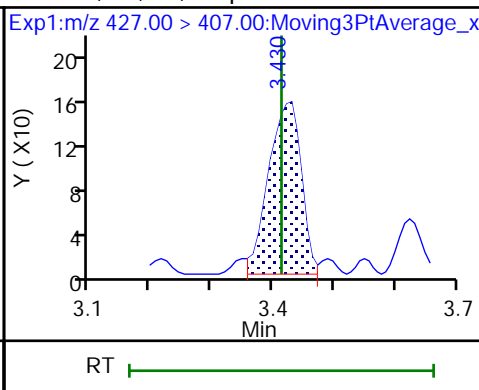
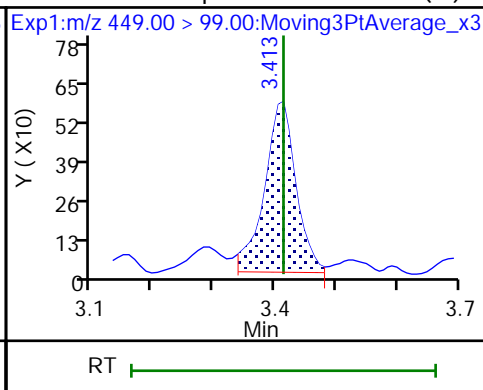
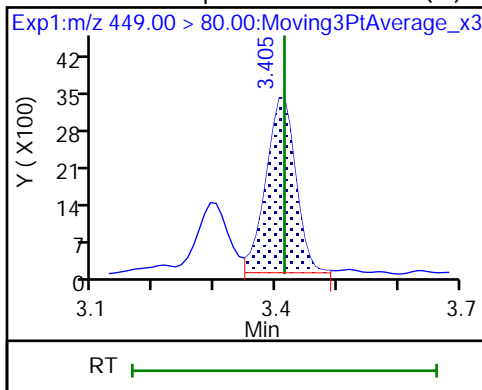




16 Perfluoroheptanesulfonic acid (M)

16 Perfluoroheptanesulfonic acid (M)

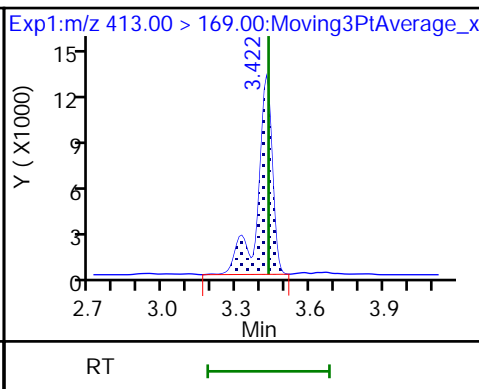
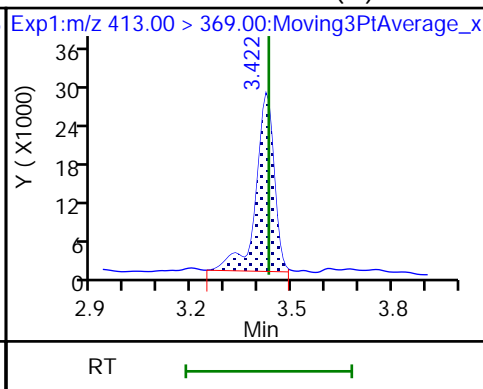
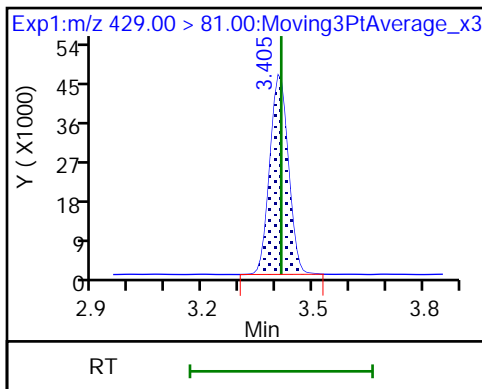
13 1H,1H,2H,2H-perfluorooctanesulfoni (M)



D 12 M2-6:2 FTS

15 Perfluorooctanoic acid (M)

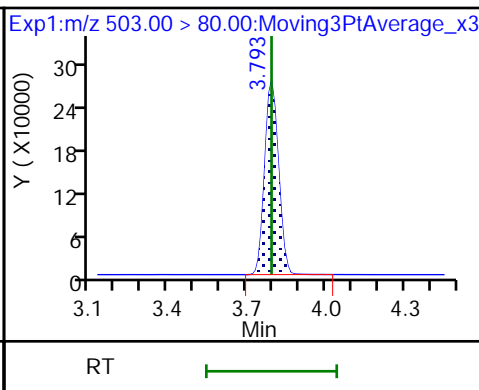
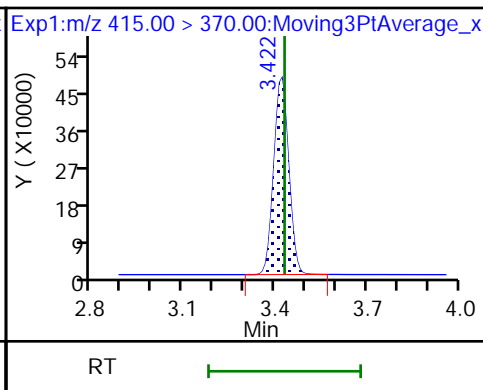
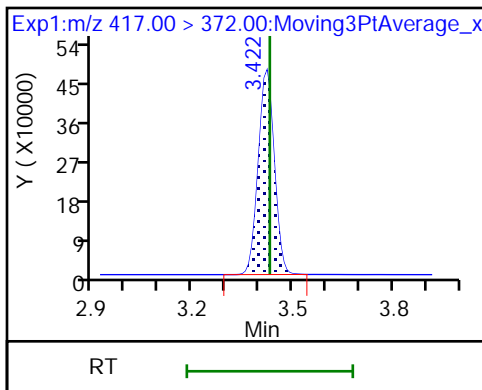
15 Perfluorooctanoic acid



D 14 13C4 PFOA

\* 62 13C2 PFOA

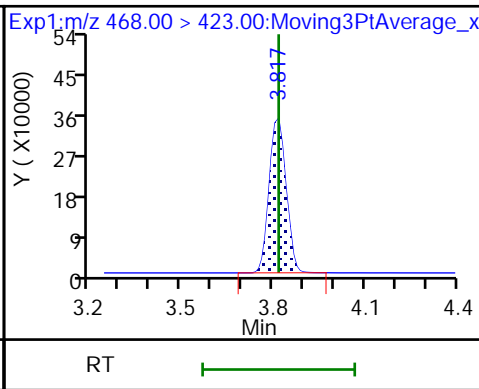
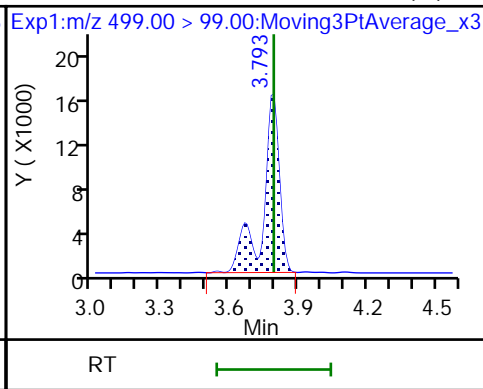
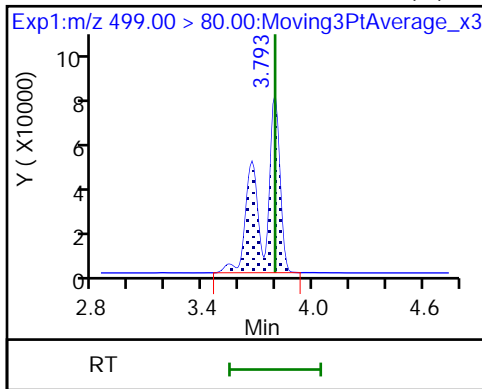
D 18 13C4 PFOS



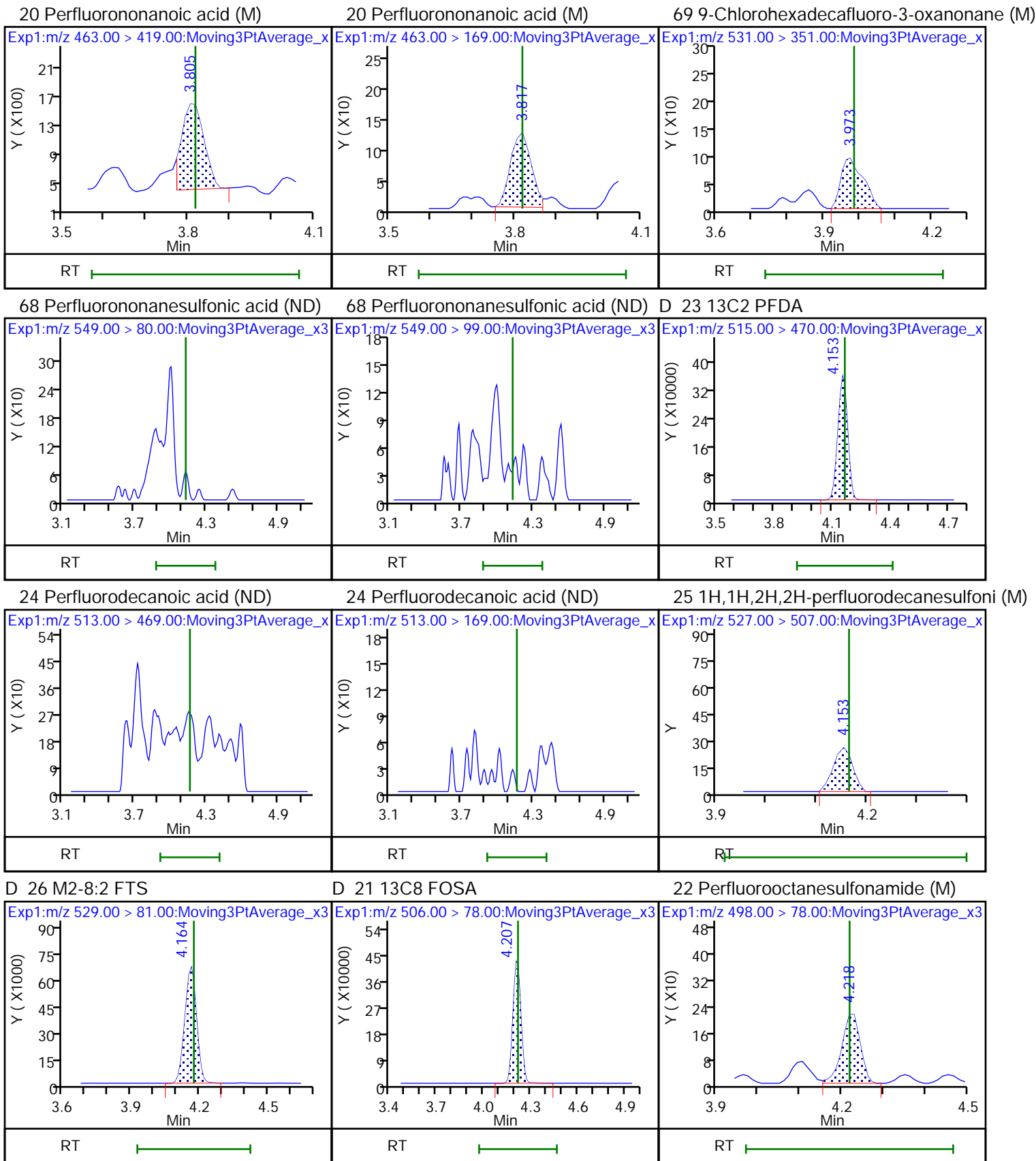
17 Perfluorooctanesulfonic acid (M)

17 Perfluorooctanesulfonic acid (M)

D 19 13C5 PFNA

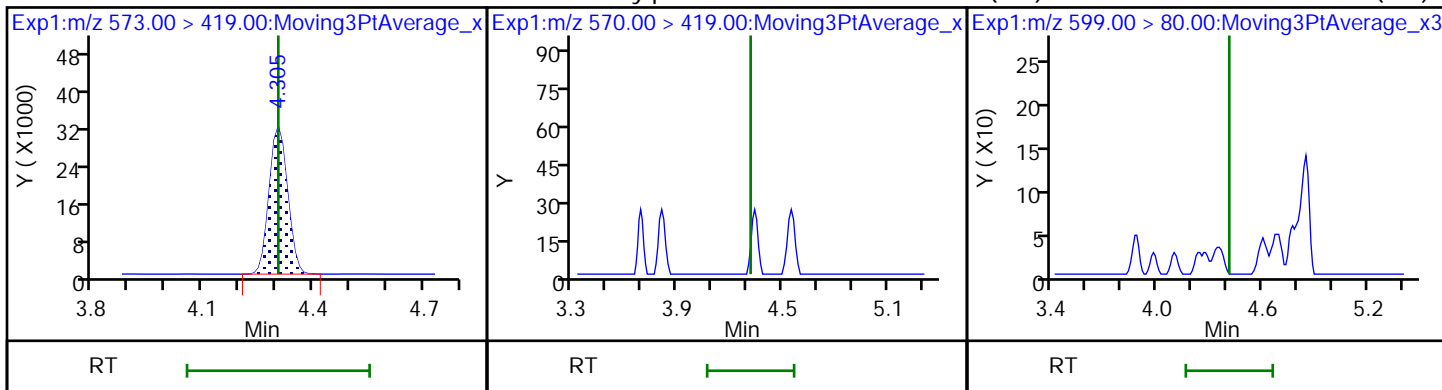






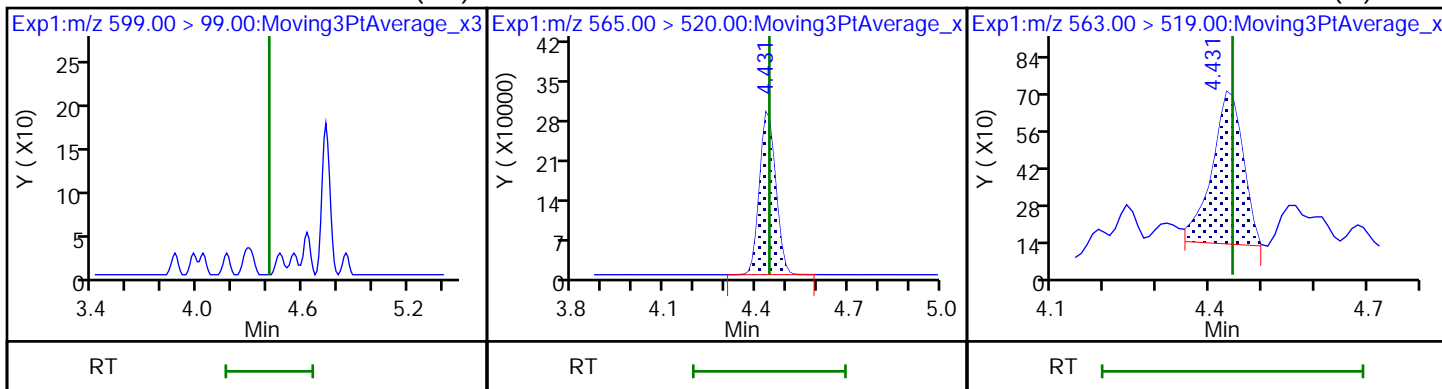
D 27 d3-NMeFOSAA

28 N-methylperfluorooctanesulfonamido (ND) Perfluorodecanesulfonic acid (ND)



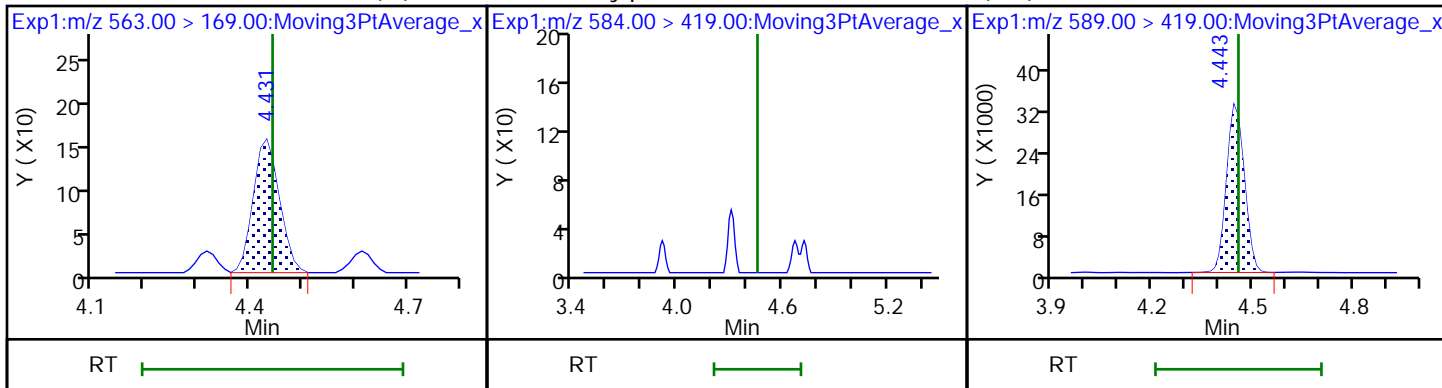
29 Perfluorodecanesulfonic acid (ND) D 30 13C2 PFUoA

31 Perfluoroundecanoic acid (M)



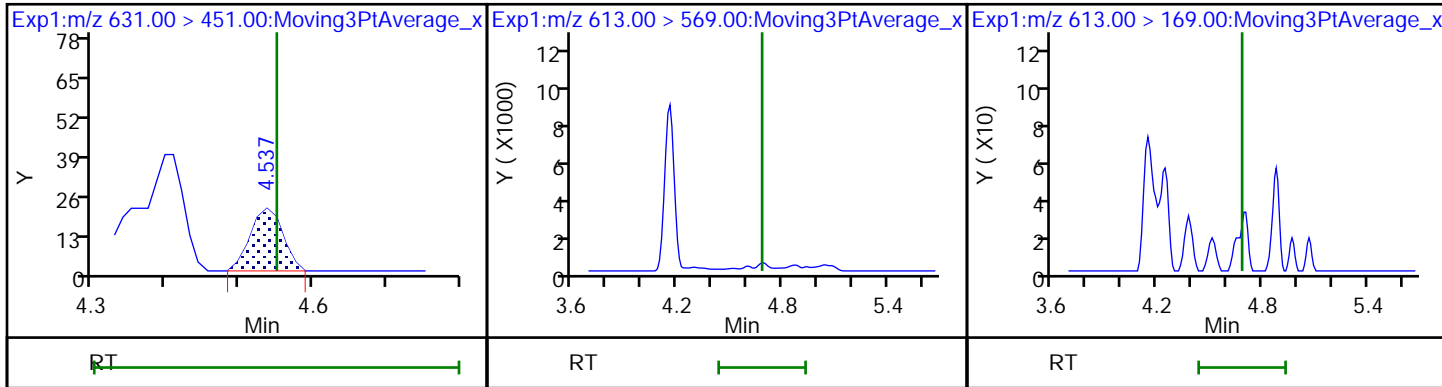
31 Perfluoroundecanoic acid (M)

33 N-ethylperfluorooctanesulfonamido (ND) d5-NEtFOSAA



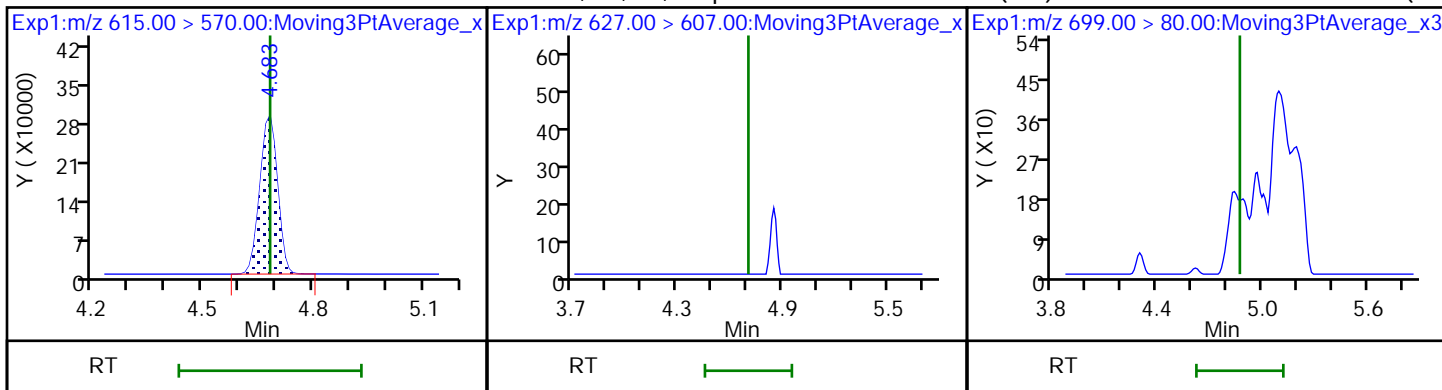
66 11-Chloroeicosafuoro-3-oxaundecanoic acid (M) Perfluorododecanoic acid (ND)

37 Perfluorododecanoic acid (ND)



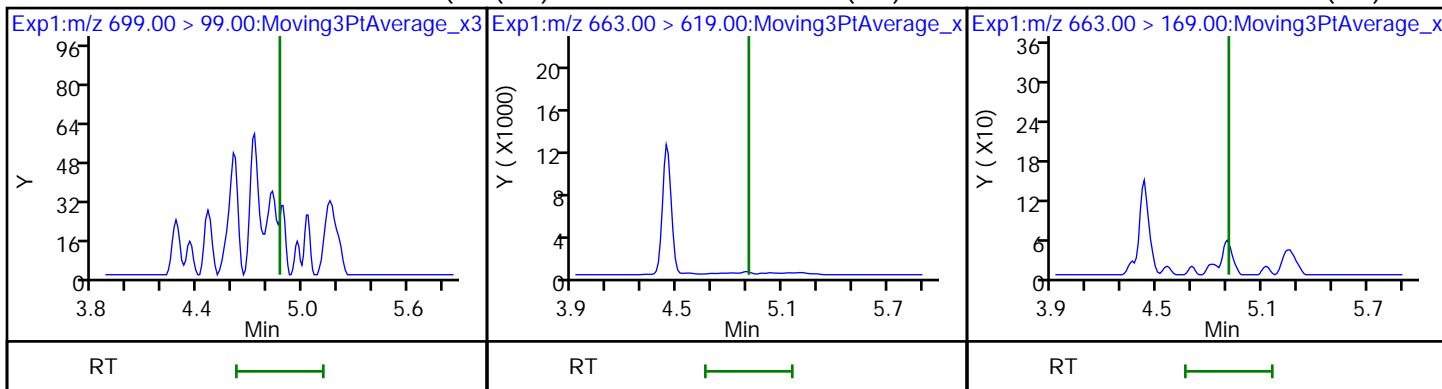
D 36 13C2 PFDaA

74 1H,1H,2H,2H-perfluorododecanesulfo(ND) Perfluorododecanesulfonic acid (PF (ND)



75 Perfluorododecanesulfonic acid (PF (ND) Perfluorotridecanoic acid (ND)

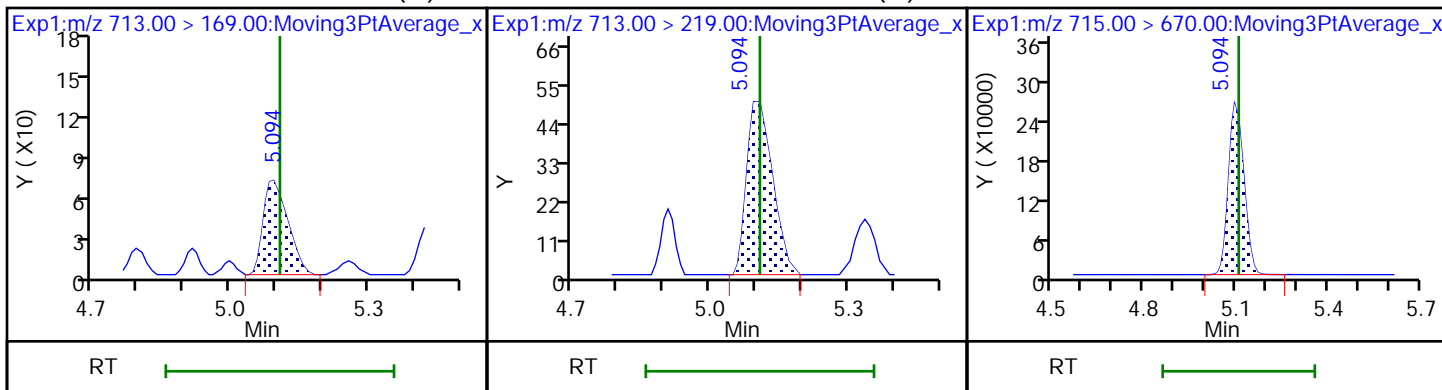
41 Perfluorotridecanoic acid (ND)



42 Perfluorotetradecanoic acid (M)

42 Perfluorotetradecanoic acid (M)

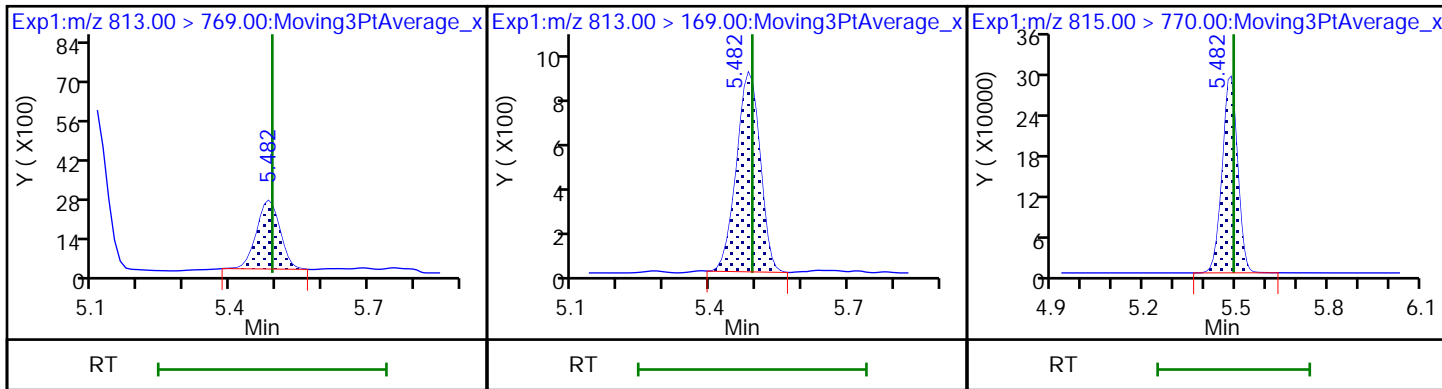
D 43 13C2 PFTeDA



45 Perfluorohexadecanoic acid

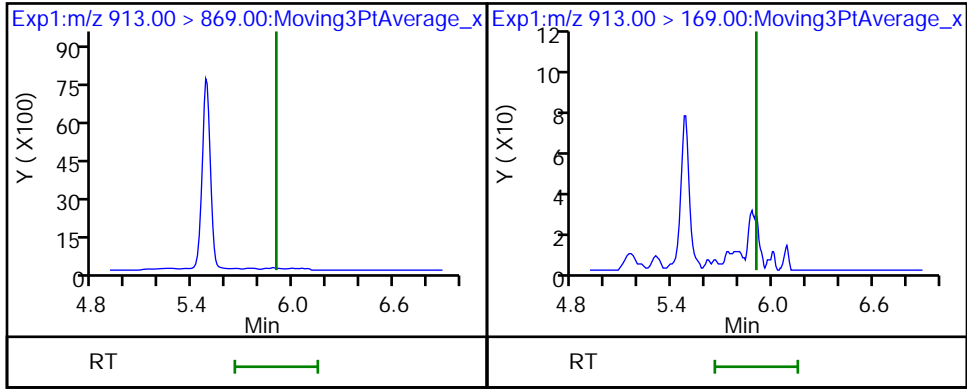
45 Perfluorohexadecanoic acid

D 44 13C2 PFHxDA



46 Perfluorooctadecanoic acid (ND)

46 Perfluorooctadecanoic acid (ND)



Eurofins TestAmerica, Burlington

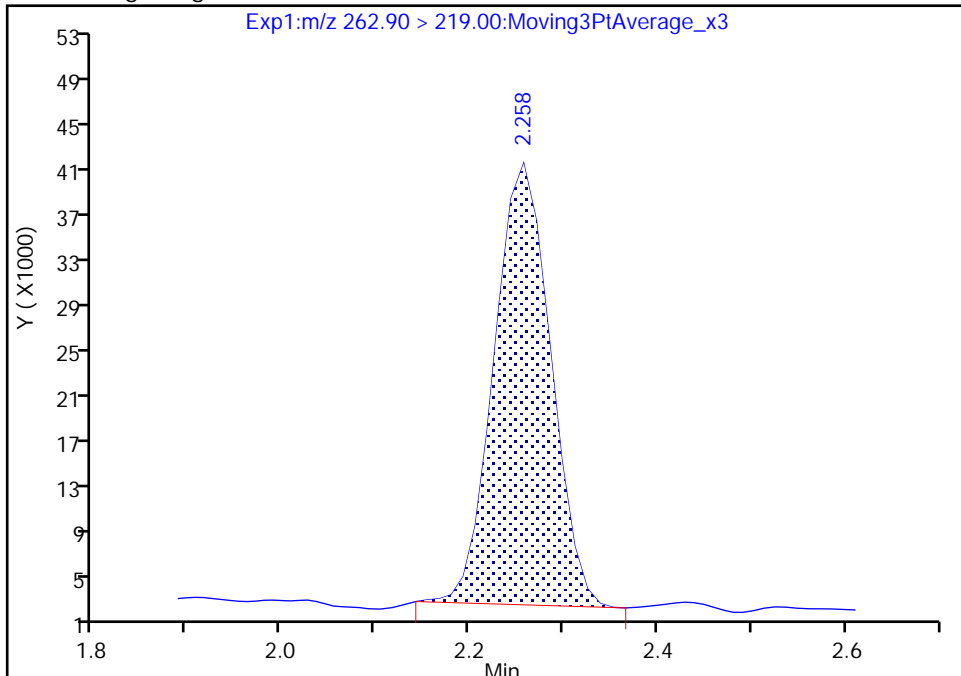
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B010.d  
Injection Date: 24-Dec-2019 15:09:48 Instrument ID: LC812  
Lims ID: 480-164221-C-3-A Lab Sample ID: 200-164221-3  
Client ID: CS RW 1 DER  
Operator ID: lc812tech ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

4 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

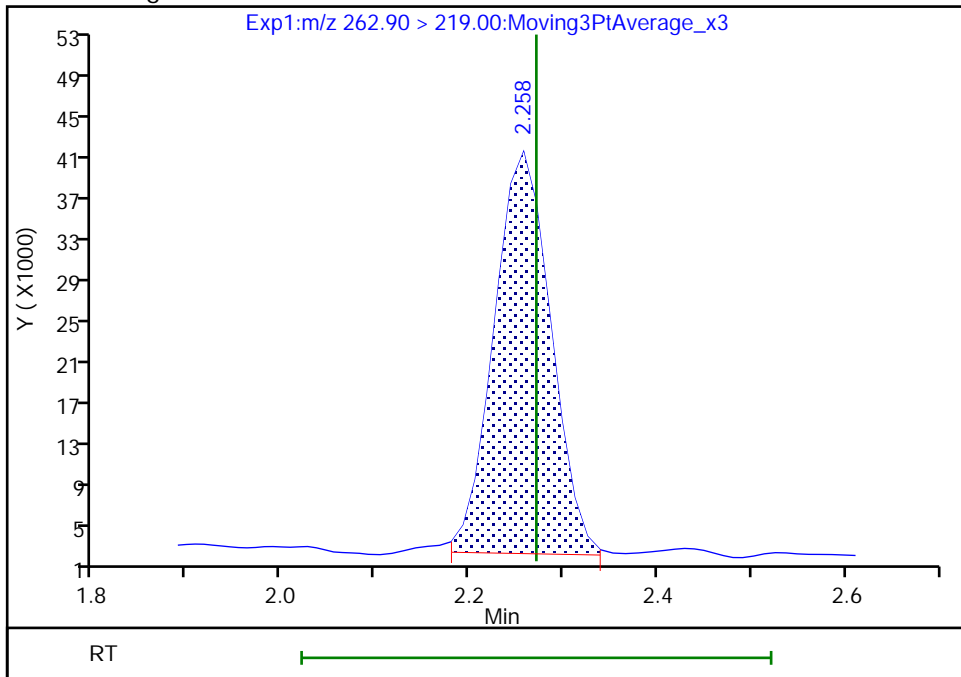
RT: 2.26  
Area: 162122  
Amount: 0.256573  
Amount Units: ng/ml

Processing Integration Results



RT: 2.26  
Area: 163902  
Amount: 0.259390  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagery, 27-Dec-2019 12:03:33  
Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

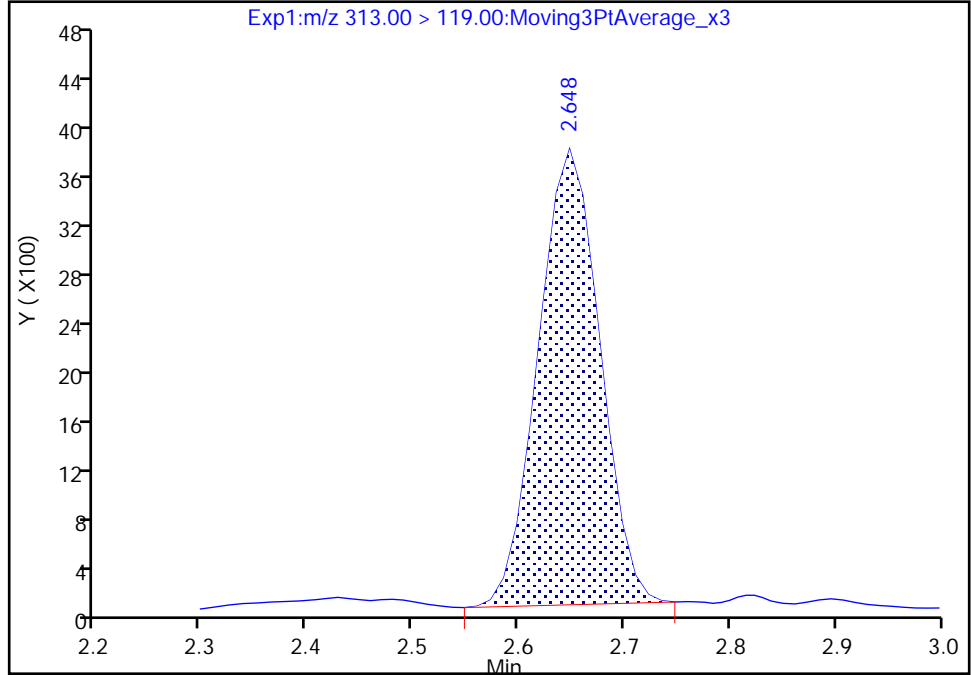
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B010.d  
Injection Date: 24-Dec-2019 15:09:48 Instrument ID: LC812  
Lims ID: 480-164221-C-3-A Lab Sample ID: 200-164221-3  
Client ID: CS RW 1 DER  
Operator ID: lc812tech ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

6 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 2

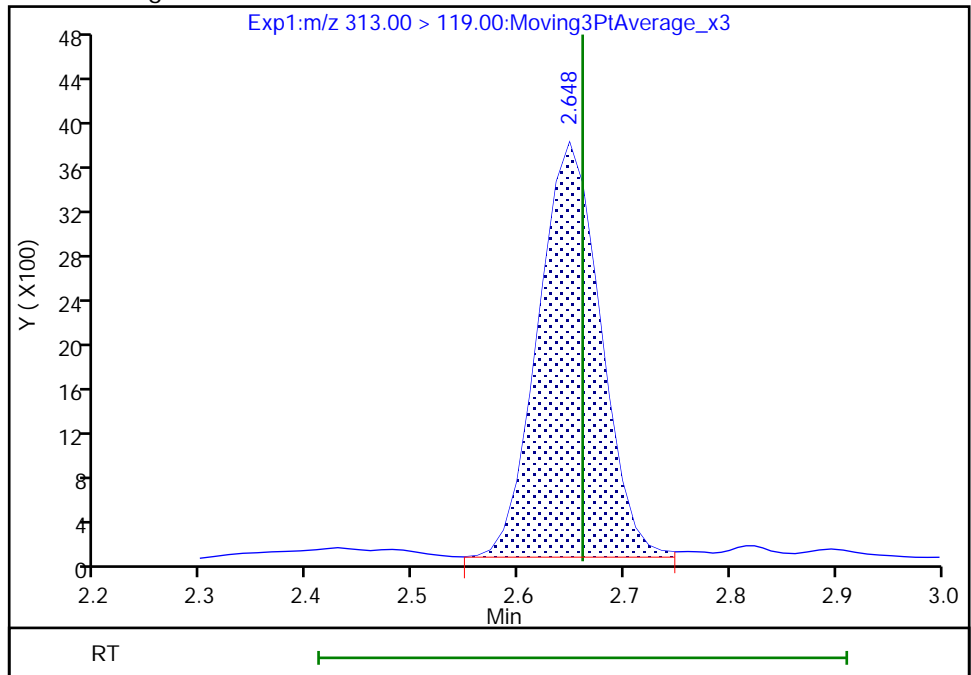
RT: 2.65  
Area: 15102  
Amount: 0.315045  
Amount Units: ng/ml

Processing Integration Results



RT: 2.65  
Area: 15400  
Amount: 0.315045  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 12:02:47

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

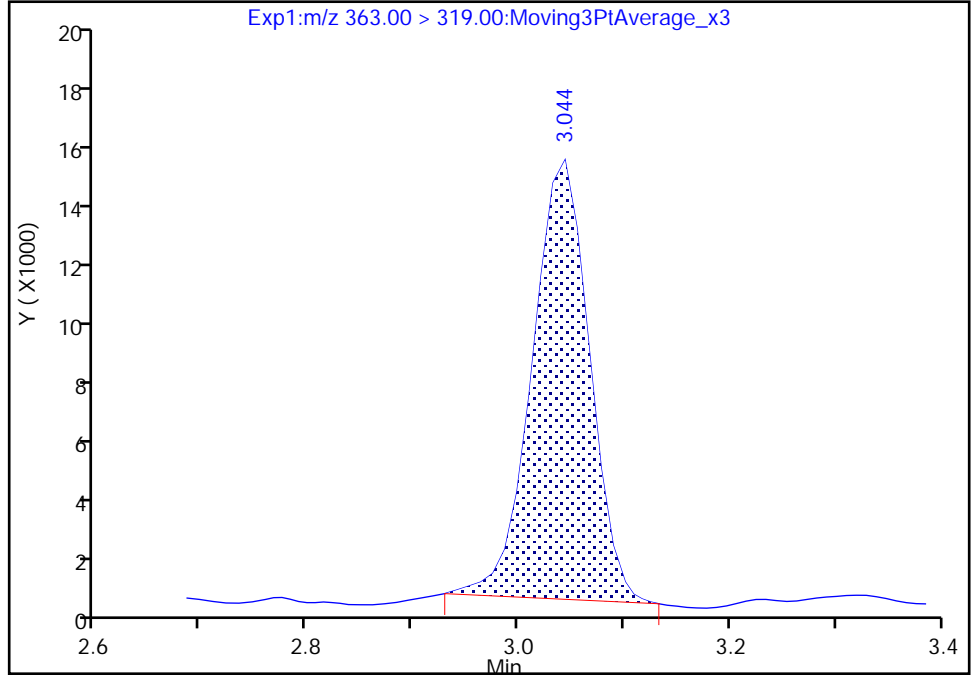
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B010.d  
Injection Date: 24-Dec-2019 15:09:48 Instrument ID: LC812  
Lims ID: 480-164221-C-3-A Lab Sample ID: 200-164221-3  
Client ID: CS RW 1 DER  
Operator ID: lc812tech ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

10 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

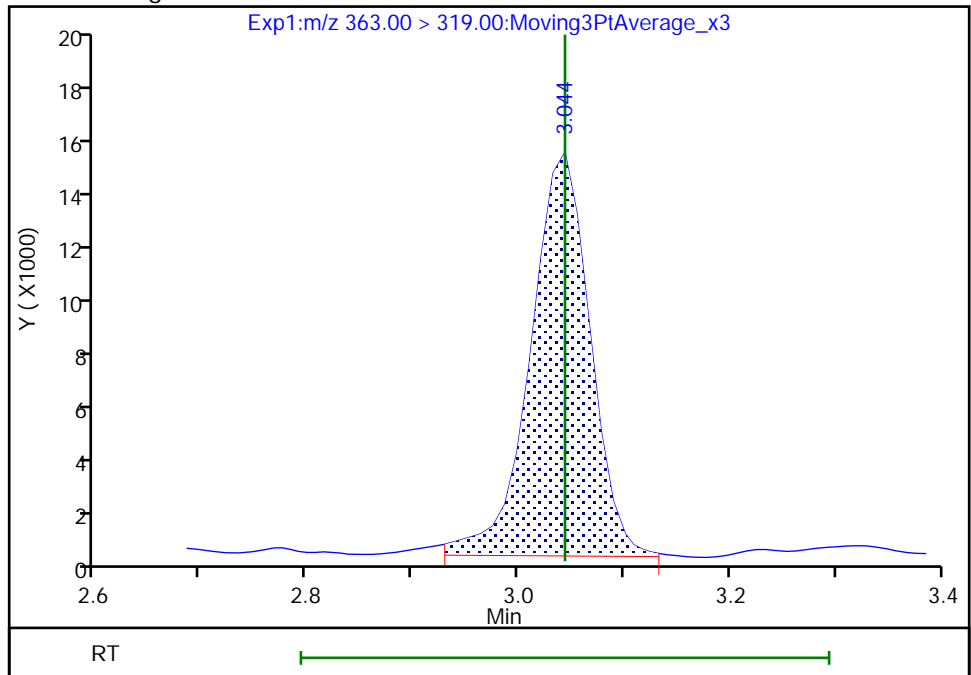
RT: 3.04  
Area: 56005  
Amount: 0.086590  
Amount Units: ng/ml

Processing Integration Results



RT: 3.04  
Area: 59197  
Amount: 0.091525  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 11:57:07

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

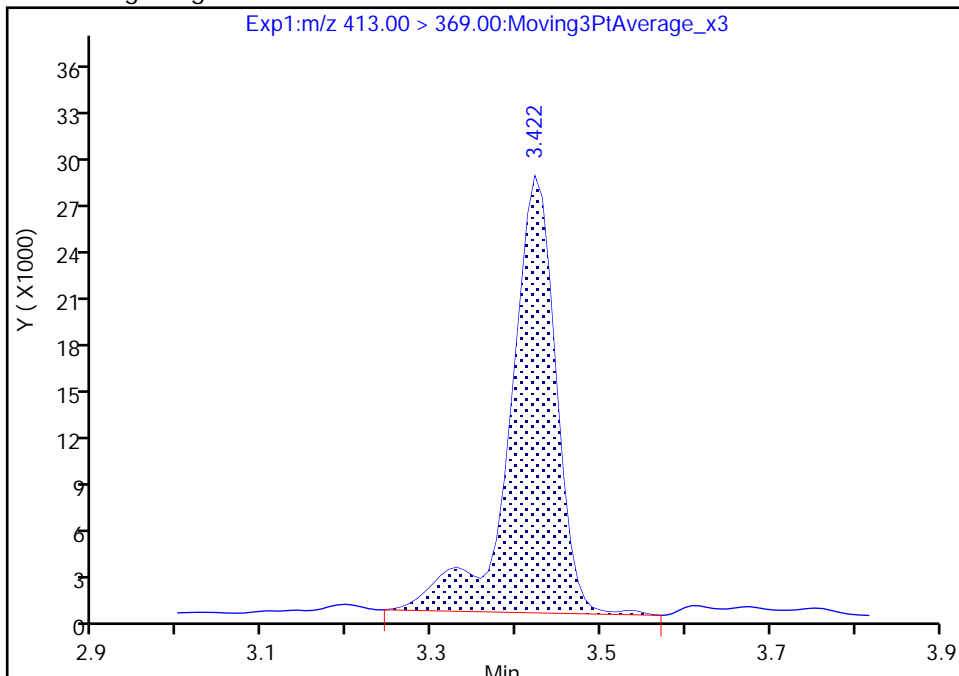
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B010.d  
Injection Date: 24-Dec-2019 15:09:48 Instrument ID: LC812  
Lims ID: 480-164221-C-3-A Lab Sample ID: 200-164221-3  
Client ID: CS RW 1 DER  
Operator ID: lc812tech ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

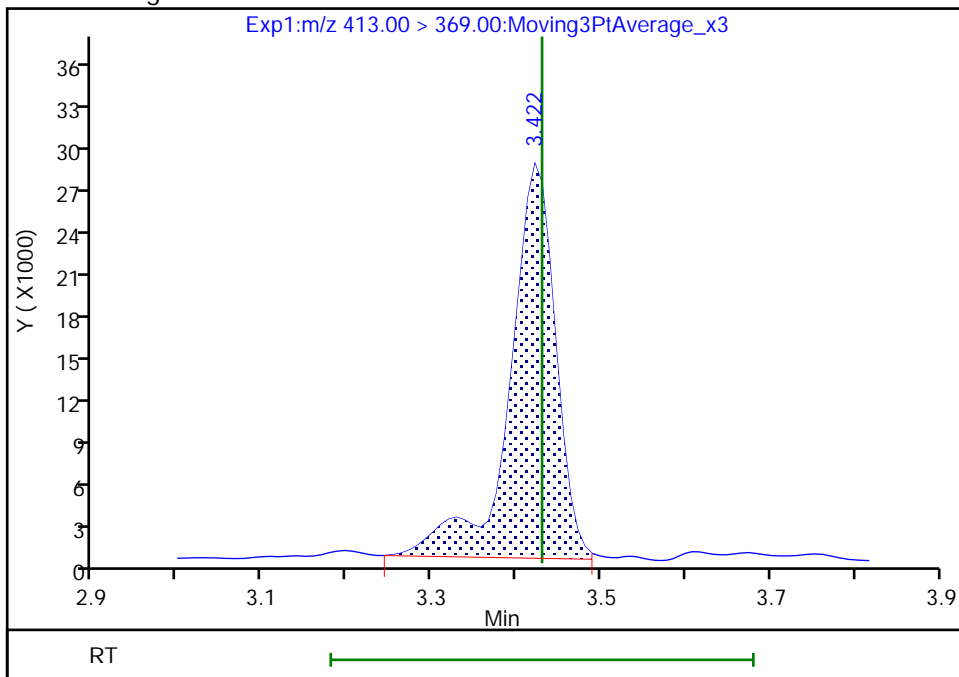
RT: 3.42  
Area: 107082  
Amount: 0.152745  
Amount Units: ng/ml

Processing Integration Results



RT: 3.42  
Area: 106229  
Amount: 0.151528  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 11:55:58

Audit Action: Manually Integrated

Audit Reason: Split Peak



Eurofins TestAmerica, Burlington

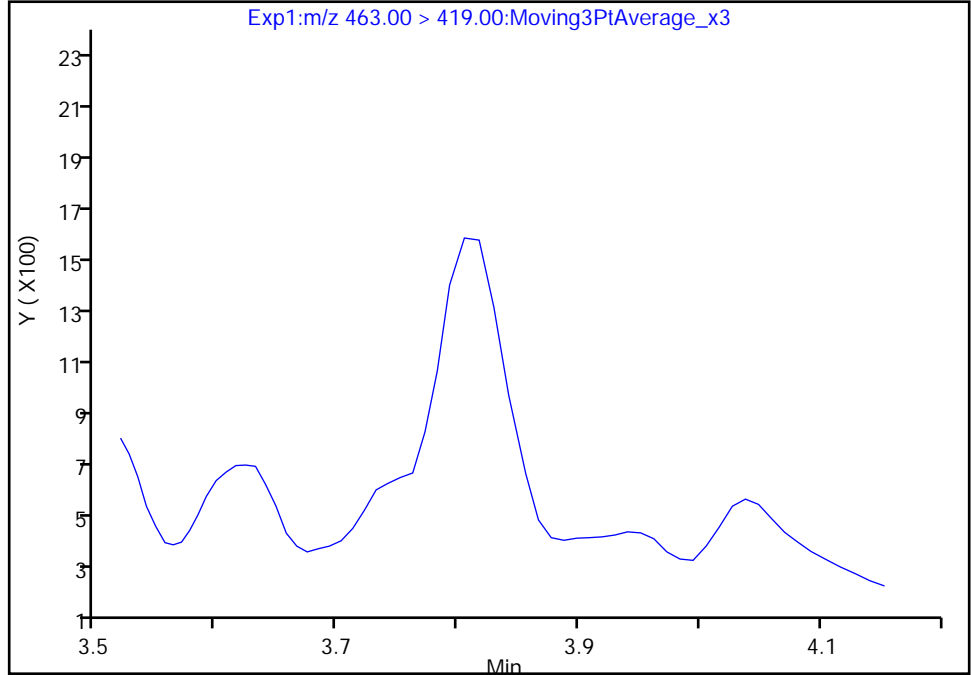
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B010.d  
Injection Date: 24-Dec-2019 15:09:48 Instrument ID: LC812  
Lims ID: 480-164221-C-3-A Lab Sample ID: 200-164221-3  
Client ID: CS RW 1 DER  
Operator ID: lc812tech ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

20 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

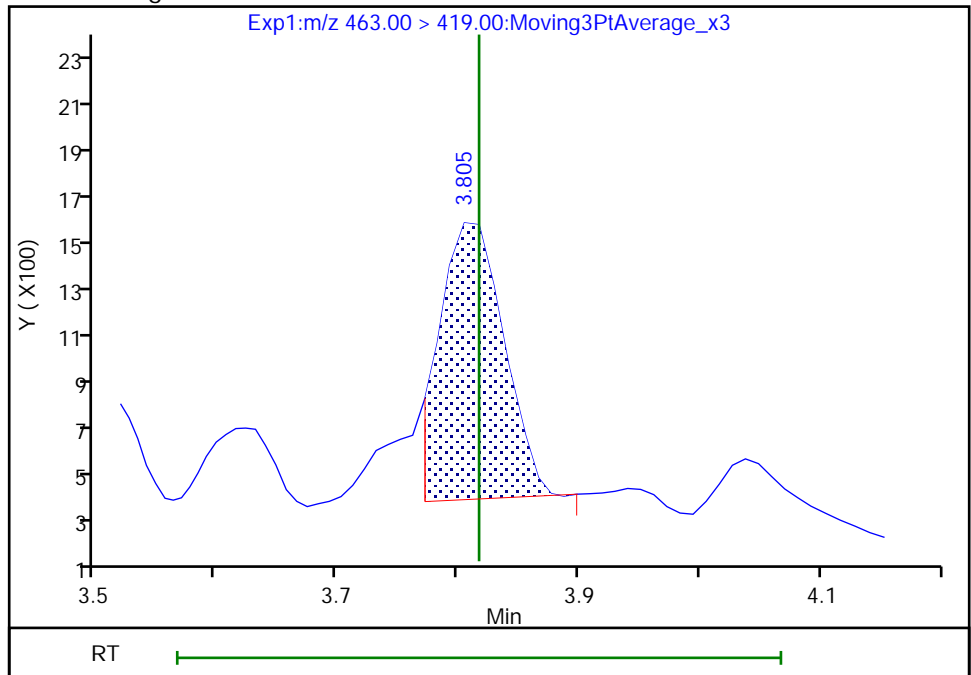
Not Detected  
Expected RT: 3.82

Processing Integration Results



Manual Integration Results

RT: 3.81  
Area: 4226  
Amount: 0.008075  
Amount Units: ng/ml



Reviewer: lautenschlagery, 27-Dec-2019 11:32:25

Audit Action: Manually Integrated

Audit Reason: Split Peak

Euofins TestAmerica, Burlington

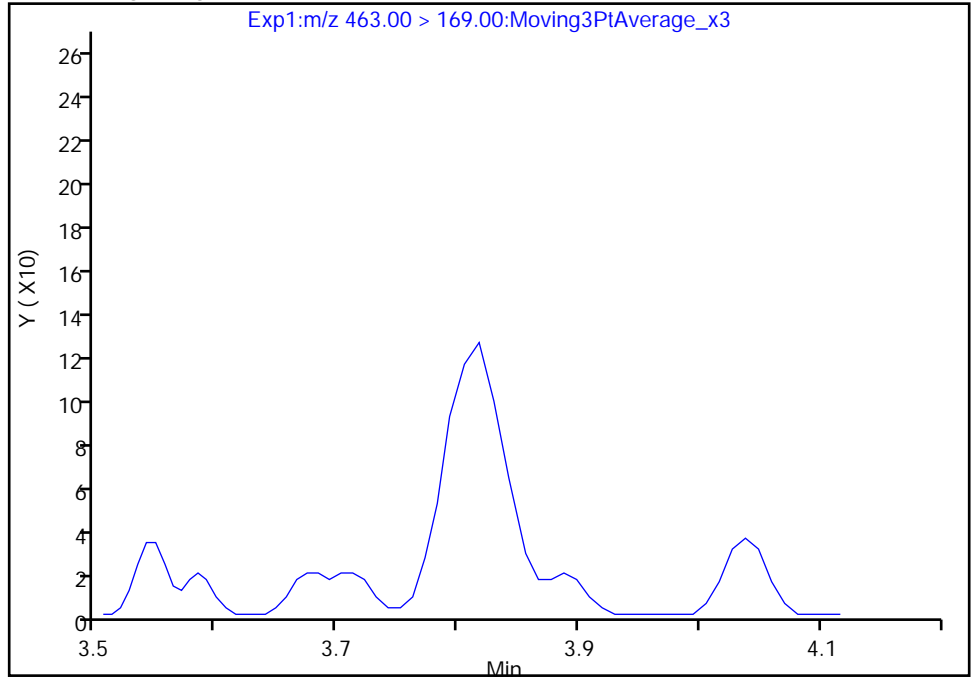
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B010.d  
Injection Date: 24-Dec-2019 15:09:48 Instrument ID: LC812  
Lims ID: 480-164221-C-3-A Lab Sample ID: 200-164221-3  
Client ID: CS RW 1 DER  
Operator ID: lc812tech ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

20 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

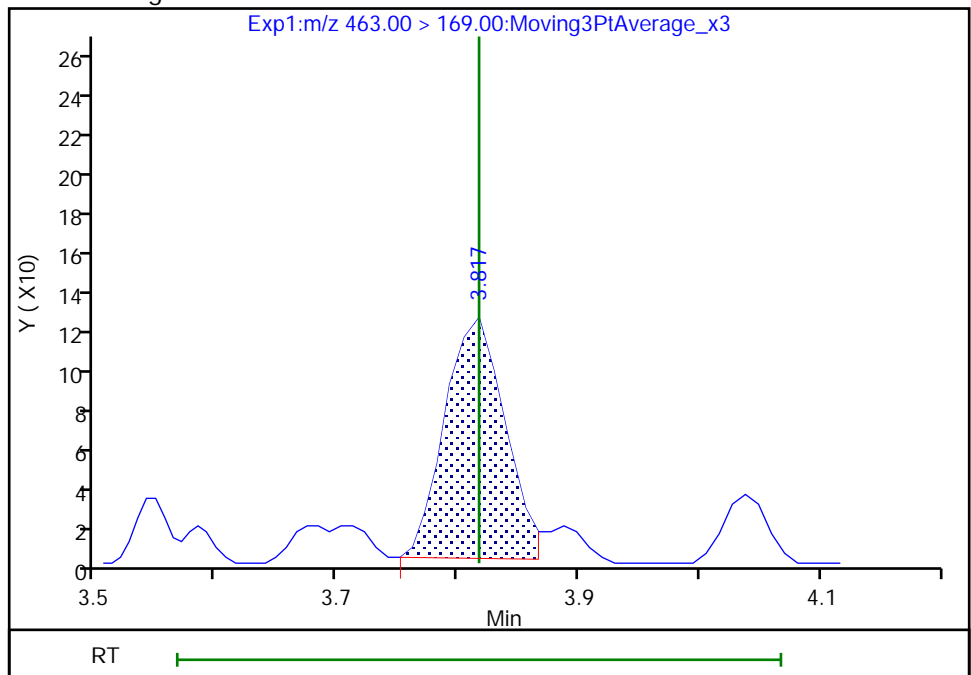
Not Detected  
Expected RT: 3.82

Processing Integration Results



Manual Integration Results

RT: 3.82  
Area: 420  
Amount: 0.008075  
Amount Units: ng/ml



Reviewer: lautenschlagerng, 27-Dec-2019 11:32:33

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

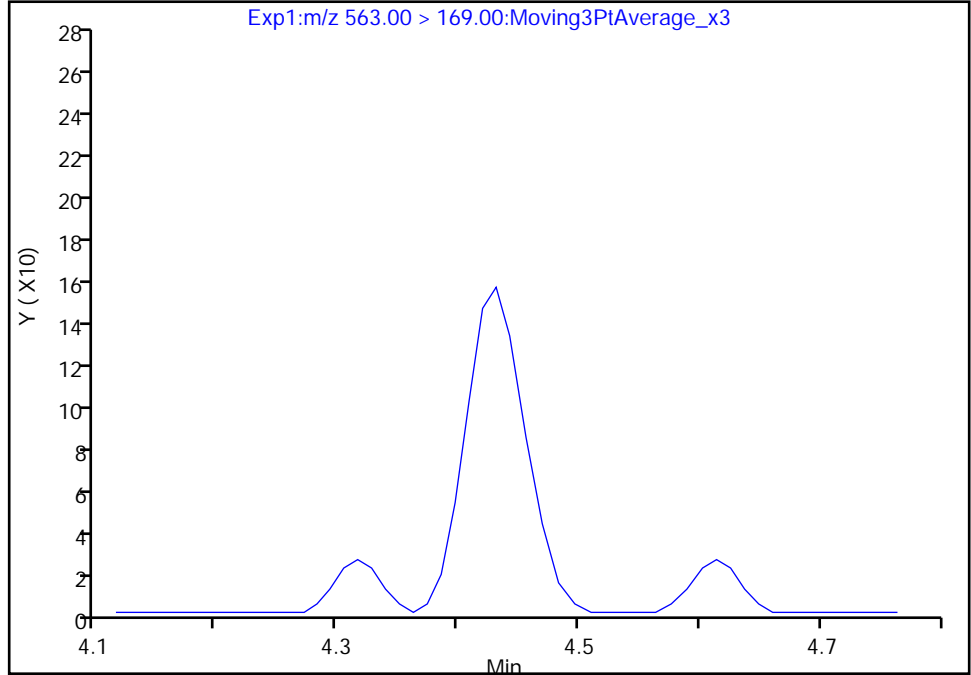
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B010.d  
Injection Date: 24-Dec-2019 15:09:48 Instrument ID: LC812  
Lims ID: 480-164221-C-3-A Lab Sample ID: 200-164221-3  
Client ID: CS RW 1 DER  
Operator ID: lc812tech ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 2

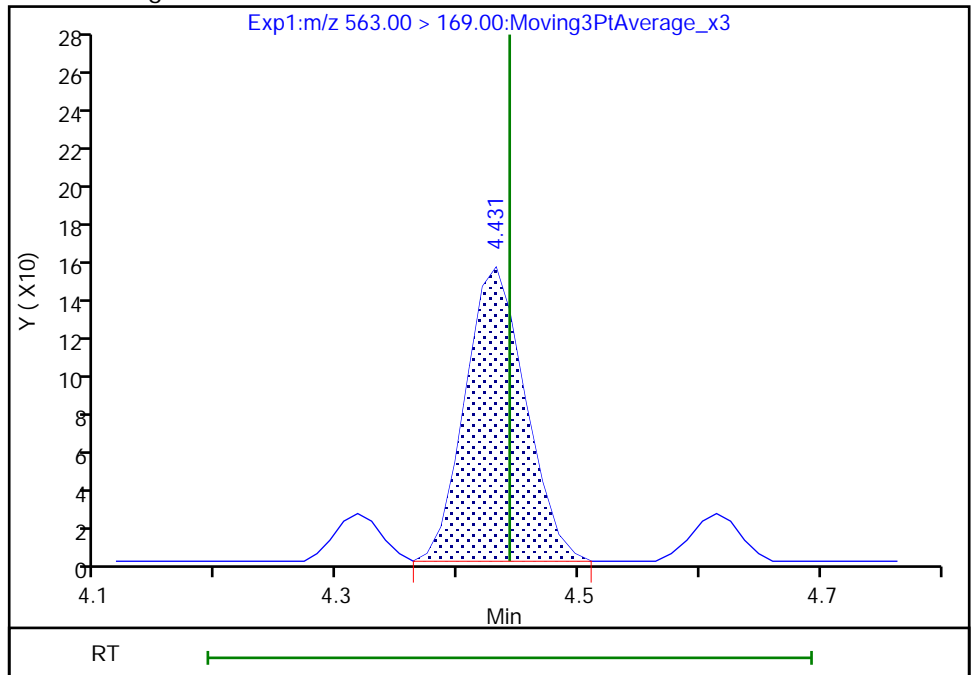
Not Detected  
Expected RT: 4.44

Processing Integration Results



Manual Integration Results

RT: 4.43  
Area: 532  
Amount: 0.006722  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 11:29:49

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

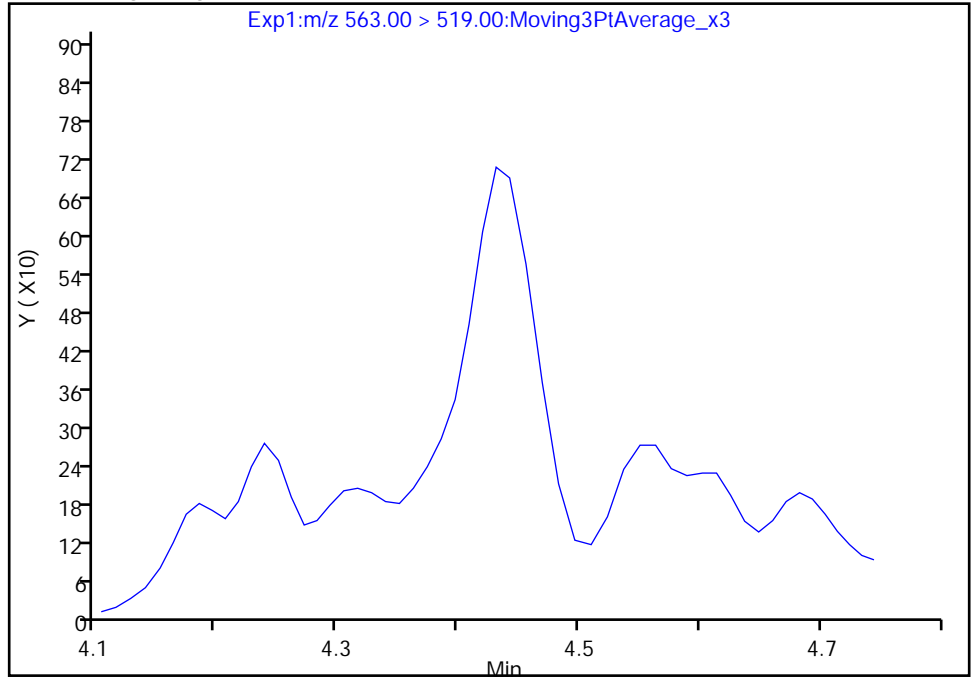
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B010.d  
Injection Date: 24-Dec-2019 15:09:48 Instrument ID: LC812  
Lims ID: 480-164221-C-3-A Lab Sample ID: 200-164221-3  
Client ID: CS RW 1 DER  
Operator ID: lc812tech ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 (4.60 mm) Detector: EXP1

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 1

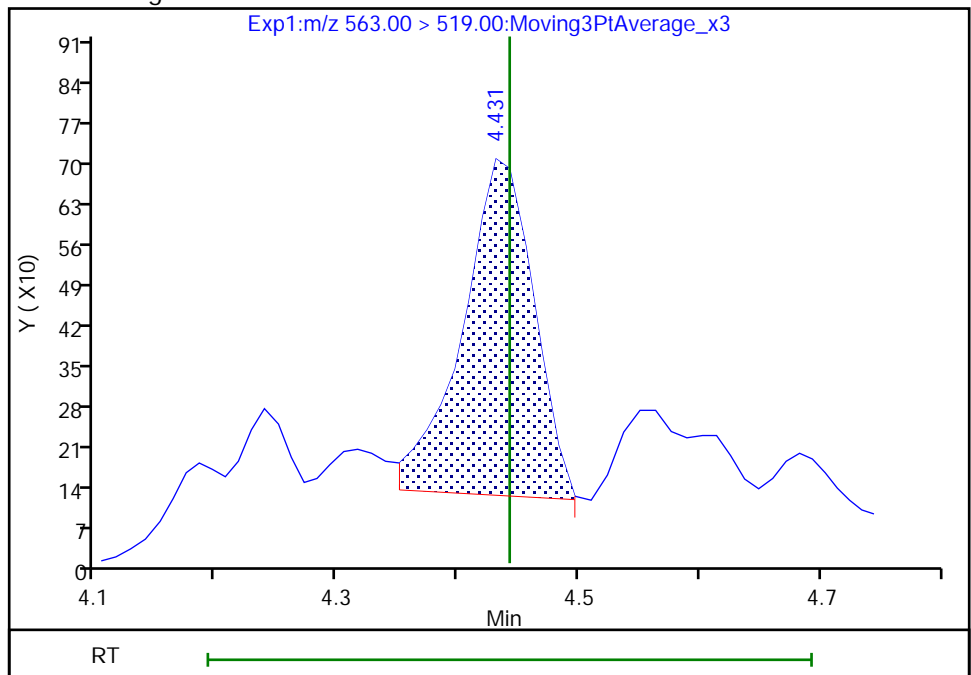
Not Detected  
Expected RT: 4.44

Processing Integration Results



Manual Integration Results

RT: 4.43  
Area: 2407  
Amount: 0.006722  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 11:30:01

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

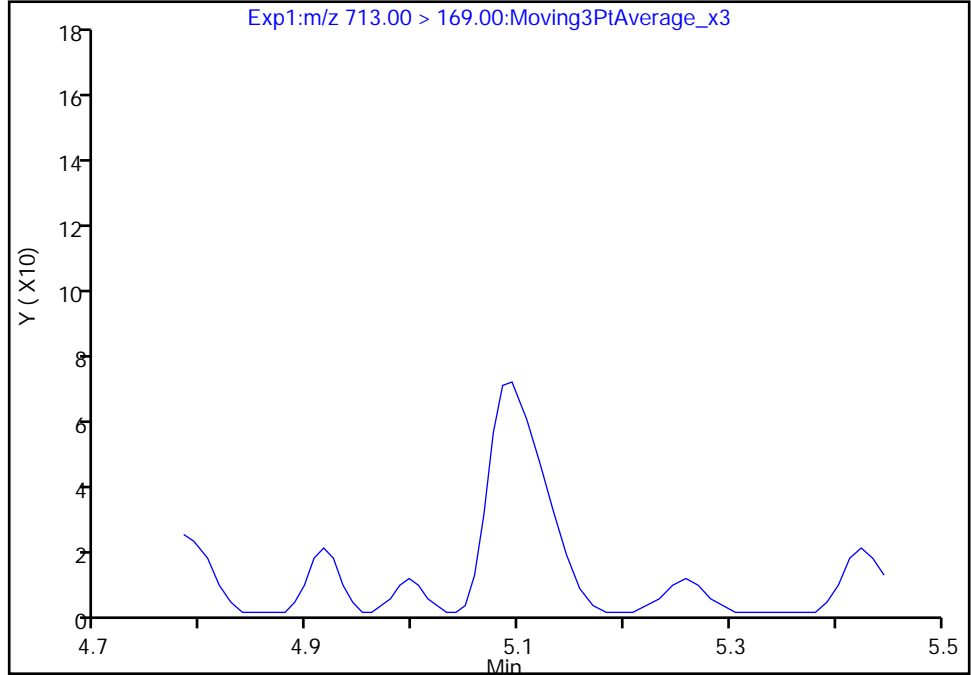
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B010.d  
Injection Date: 24-Dec-2019 15:09:48 Instrument ID: LC812  
Lims ID: 480-164221-C-3-A Lab Sample ID: 200-164221-3  
Client ID: CS RW 1 DER  
Operator ID: lc812tech ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 1

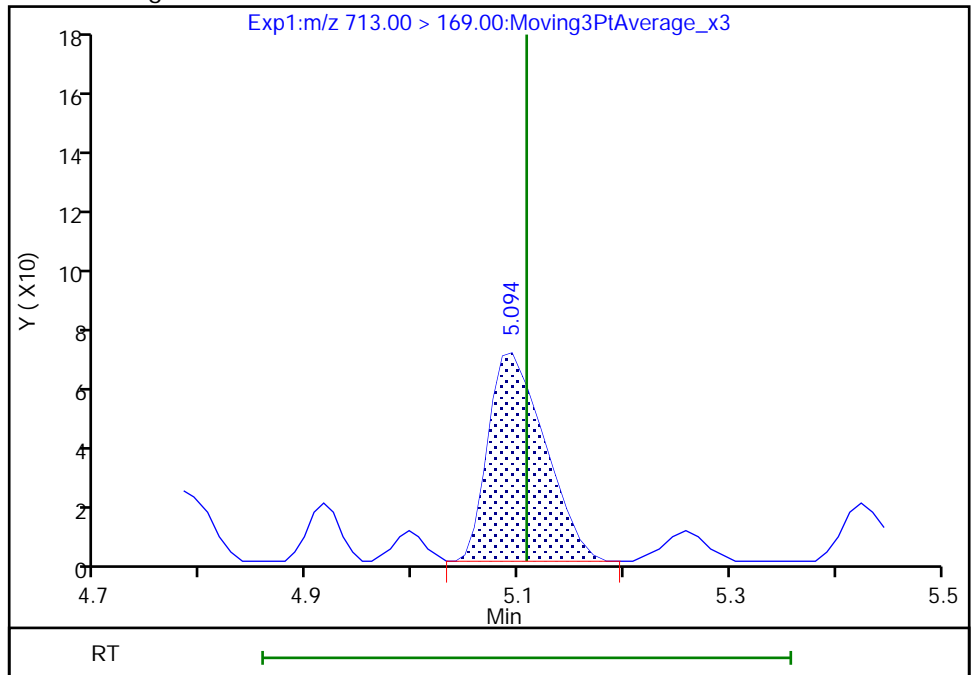
Not Detected  
Expected RT: 5.11

Processing Integration Results



Manual Integration Results

RT: 5.09  
Area: 253  
Amount: 0.003406  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 11:27:41  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

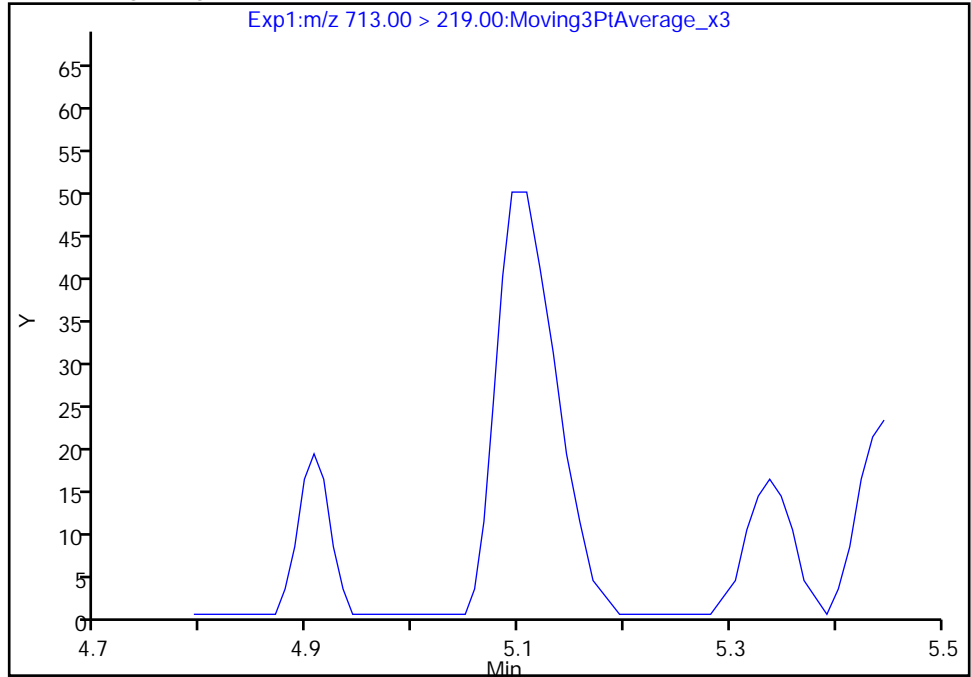
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B010.d  
Injection Date: 24-Dec-2019 15:09:48 Instrument ID: LC812  
Lims ID: 480-164221-C-3-A Lab Sample ID: 200-164221-3  
Client ID: CS RW 1 DER  
Operator ID: lc812tech ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 2

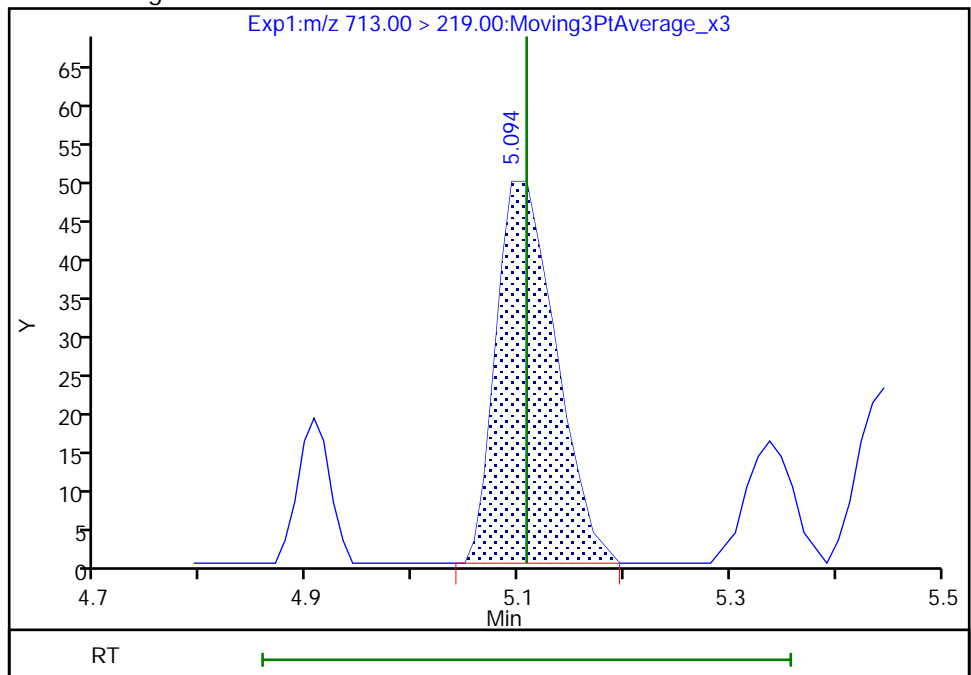
Not Detected  
Expected RT: 5.11

Processing Integration Results



Manual Integration Results

RT: 5.09  
Area: 197  
Amount: 0.003406  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 11:27:45

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

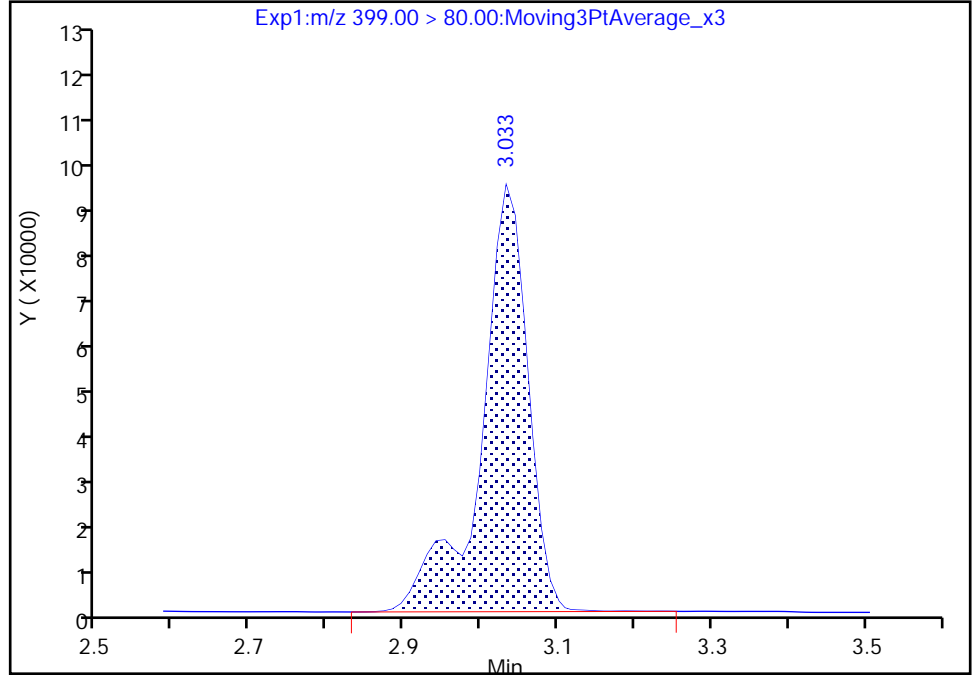
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B010.d  
Injection Date: 24-Dec-2019 15:09:48 Instrument ID: LC812  
Lims ID: 480-164221-C-3-A Lab Sample ID: 200-164221-3  
Client ID: CS RW 1 DER  
Operator ID: lc812tech ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

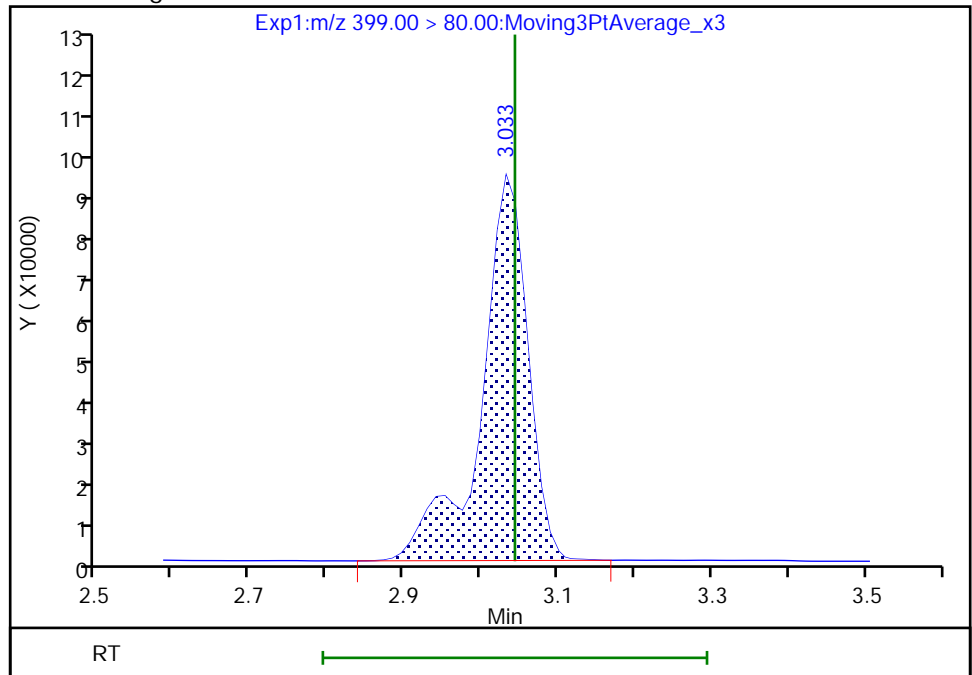
RT: 3.03  
Area: 395040  
Amount: 0.649726  
Amount Units: ng/ml

Processing Integration Results



RT: 3.03  
Area: 394468  
Amount: 0.648786  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagery, 27-Dec-2019 12:02:15  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

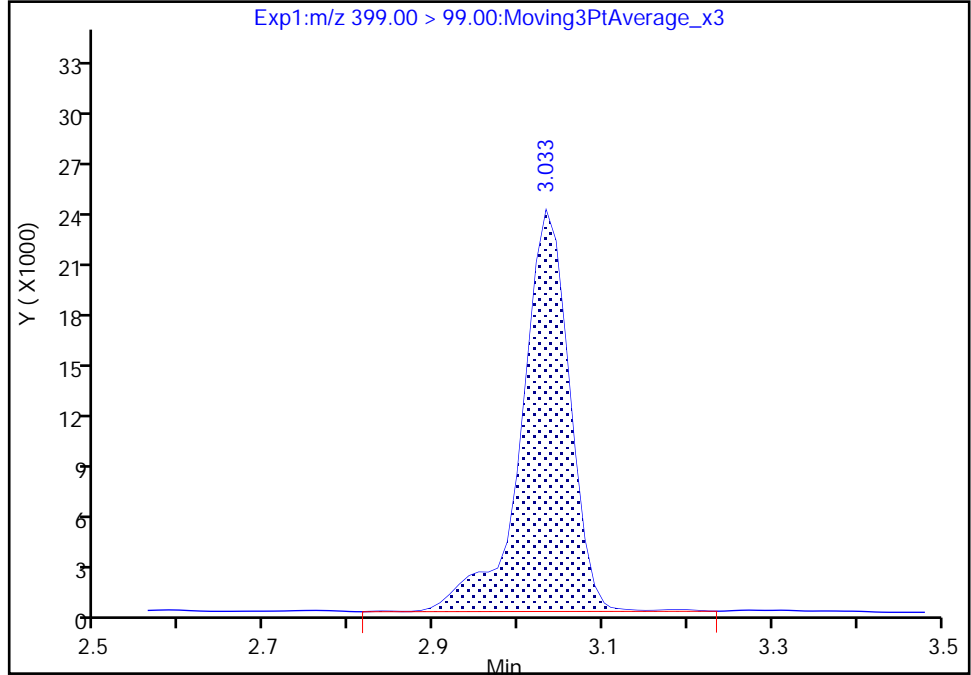
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B010.d  
Injection Date: 24-Dec-2019 15:09:48 Instrument ID: LC812  
Lims ID: 480-164221-C-3-A Lab Sample ID: 200-164221-3  
Client ID: CS RW 1 DER  
Operator ID: lc812tech ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

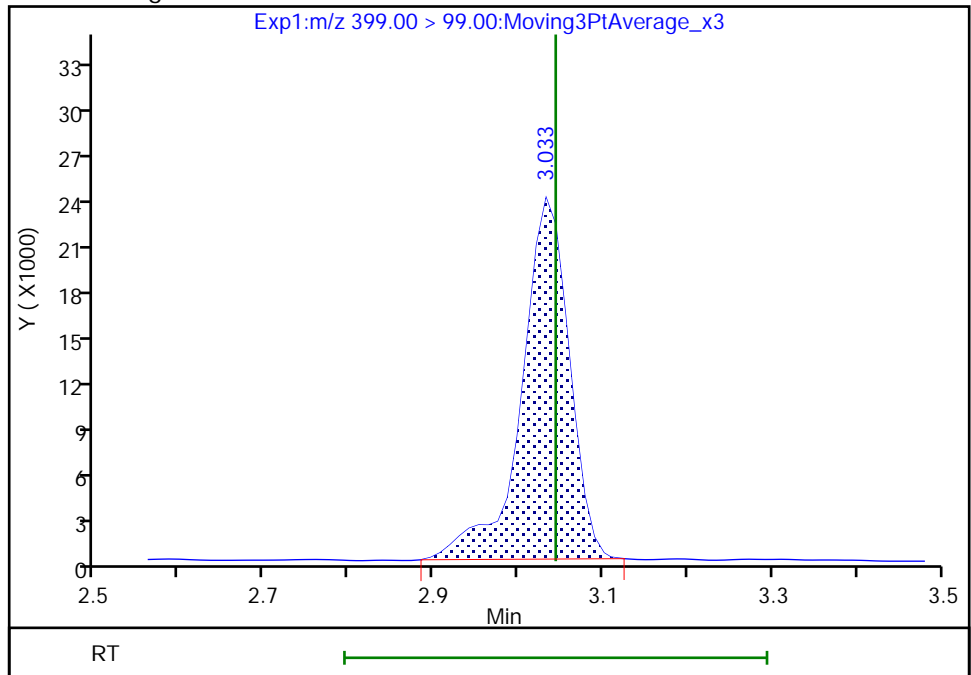
RT: 3.03  
Area: 94897  
Amount: 0.649726  
Amount Units: ng/ml

Processing Integration Results



RT: 3.03  
Area: 93257  
Amount: 0.648786  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 12:02:21

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Euofins TestAmerica, Burlington

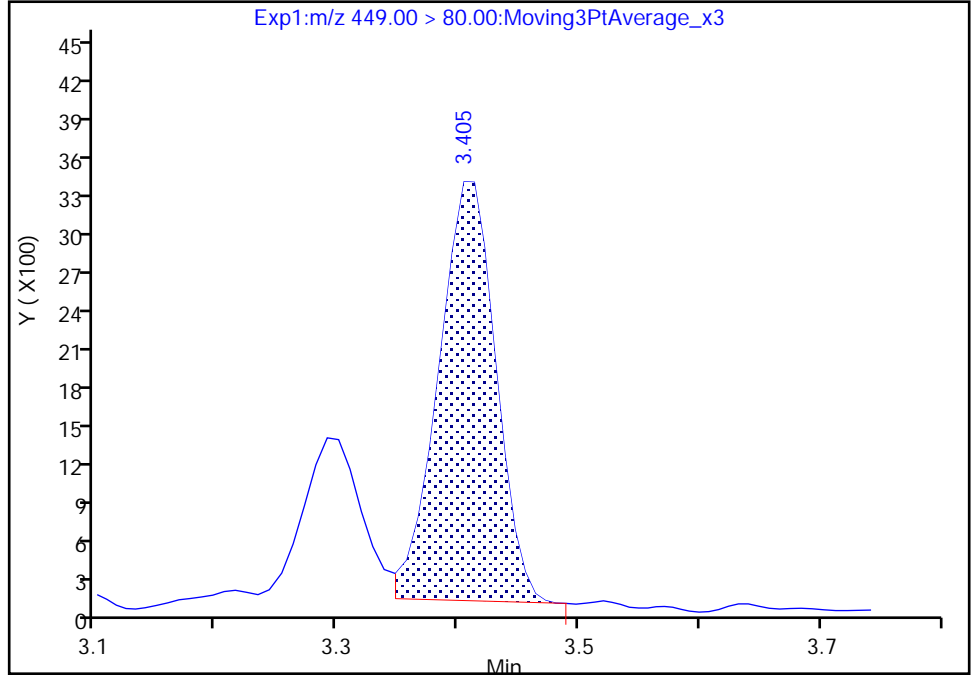
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B010.d  
Injection Date: 24-Dec-2019 15:09:48 Instrument ID: LC812  
Lims ID: 480-164221-C-3-A Lab Sample ID: 200-164221-3  
Client ID: CS RW 1 DER  
Operator ID: lc812tech ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

16 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 1

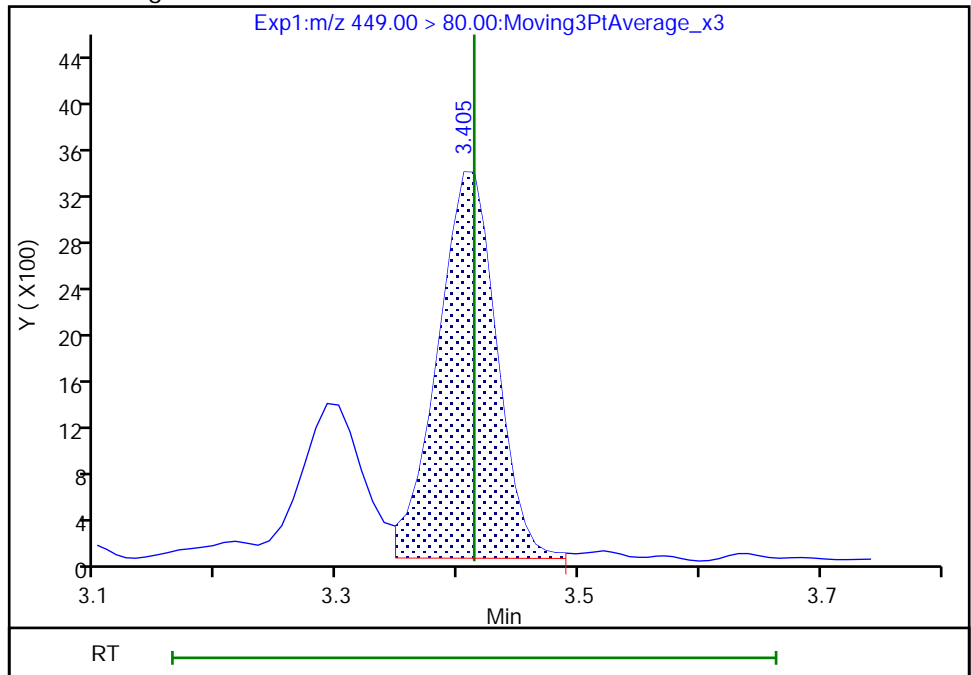
RT: 3.40  
Area: 10729  
Amount: 0.020907  
Amount Units: ng/ml

Processing Integration Results



RT: 3.40  
Area: 11258  
Amount: 0.021937  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 11:55:22

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

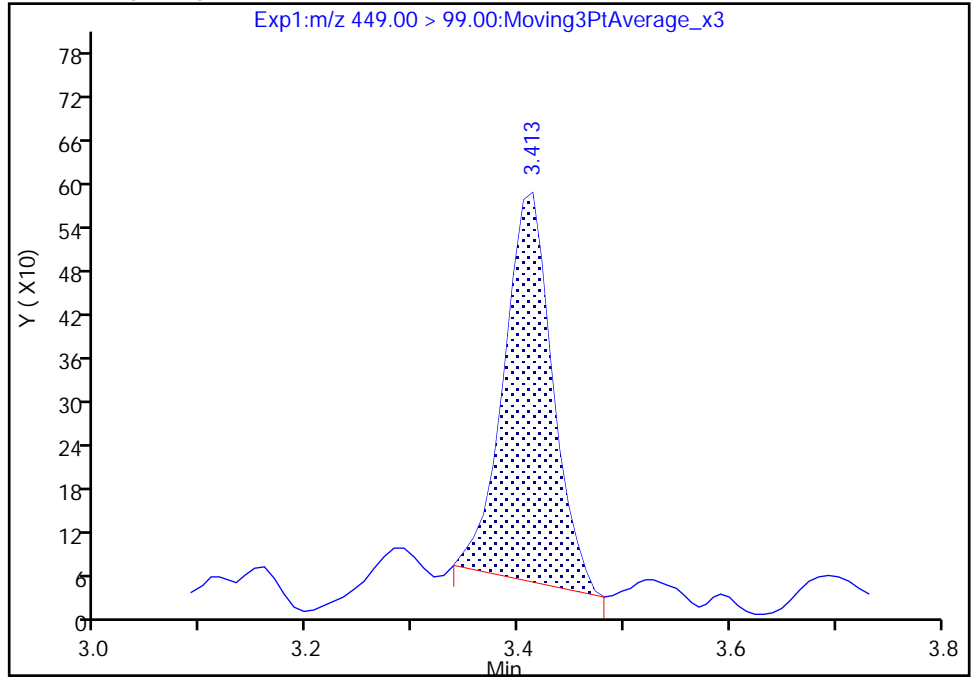
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B010.d  
Injection Date: 24-Dec-2019 15:09:48 Instrument ID: LC812  
Lims ID: 480-164221-C-3-A Lab Sample ID: 200-164221-3  
Client ID: CS RW 1 DER  
Operator ID: lc812tech ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

16 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 2

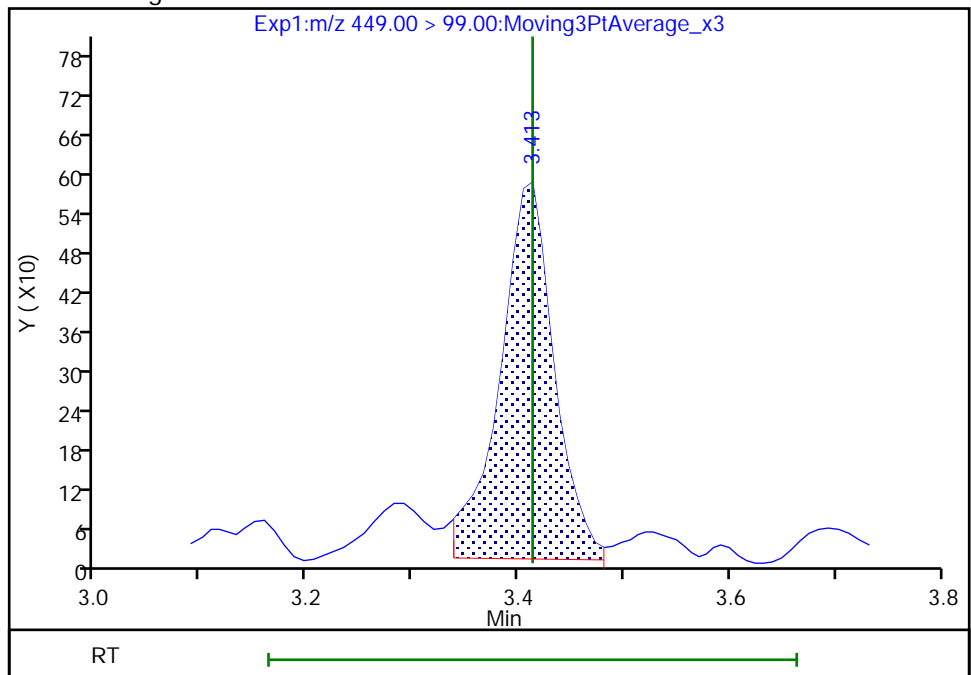
RT: 3.41  
Area: 1718  
Amount: 0.020907  
Amount Units: ng/ml

Processing Integration Results



RT: 3.41  
Area: 2055  
Amount: 0.021937  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagern, 27-Dec-2019 11:55:38

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

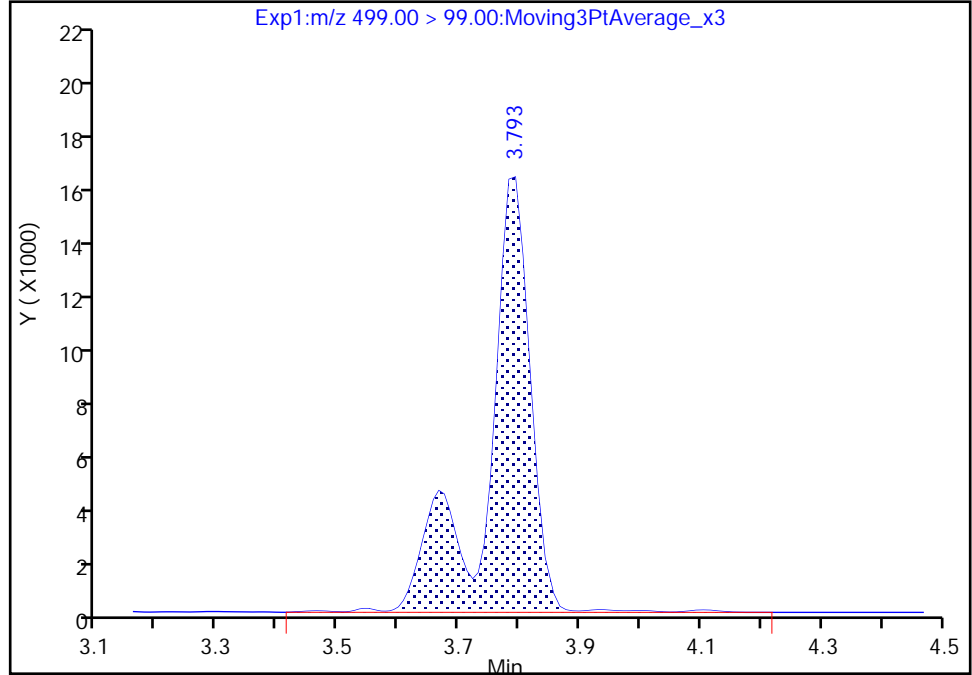
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B010.d  
Injection Date: 24-Dec-2019 15:09:48 Instrument ID: LC812  
Lims ID: 480-164221-C-3-A Lab Sample ID: 200-164221-3  
Client ID: CS RW 1 DER  
Operator ID: lc812tech ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

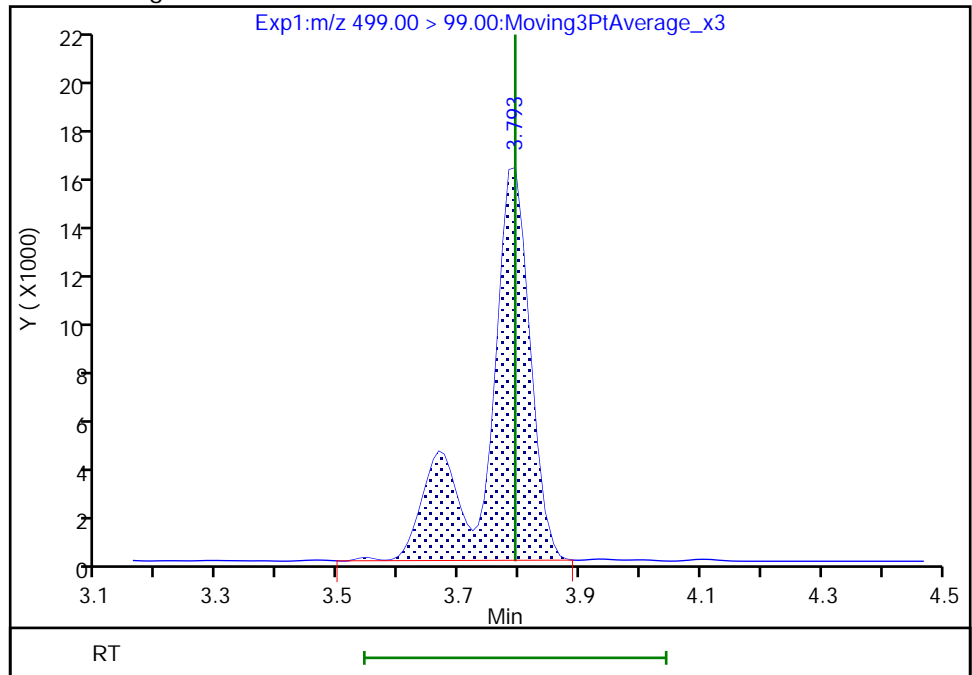
RT: 3.79  
Area: 81484  
Amount: 1.182463  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 79878  
Amount: 1.174121  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 11:33:10

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

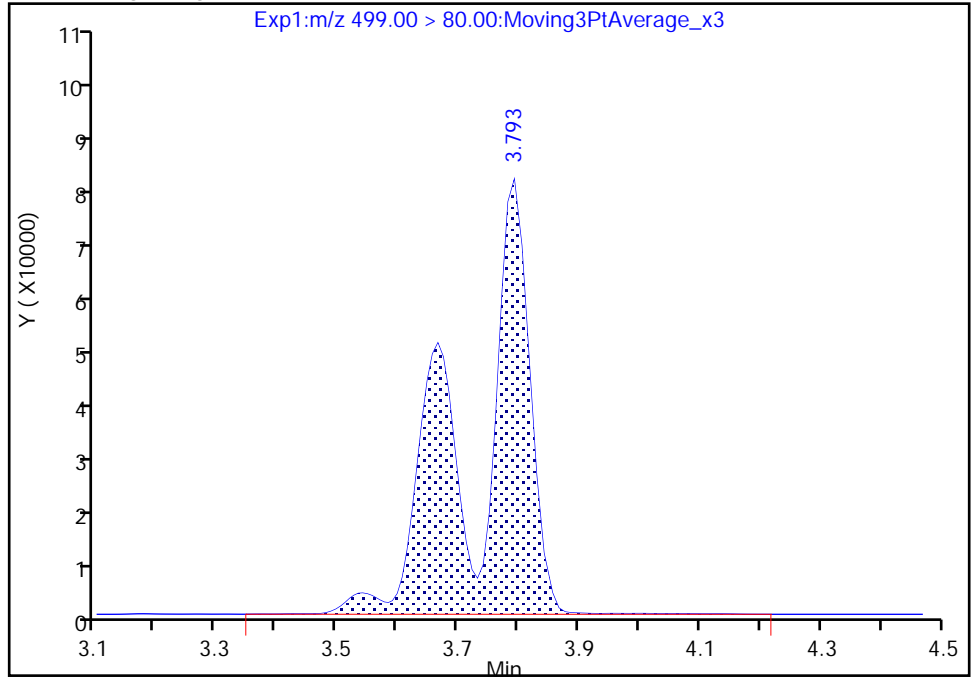
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B010.d  
Injection Date: 24-Dec-2019 15:09:48 Instrument ID: LC812  
Lims ID: 480-164221-C-3-A Lab Sample ID: 200-164221-3  
Client ID: CS RW 1 DER  
Operator ID: lc812tech ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

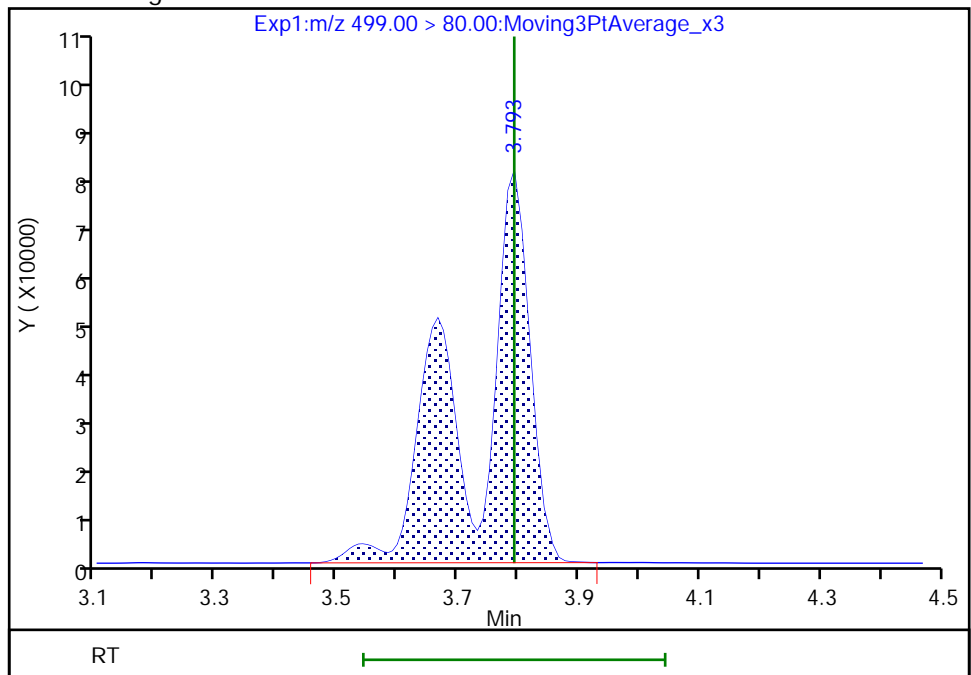
RT: 3.79  
Area: 534831  
Amount: 1.182463  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 531058  
Amount: 1.174121  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 11:54:49

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

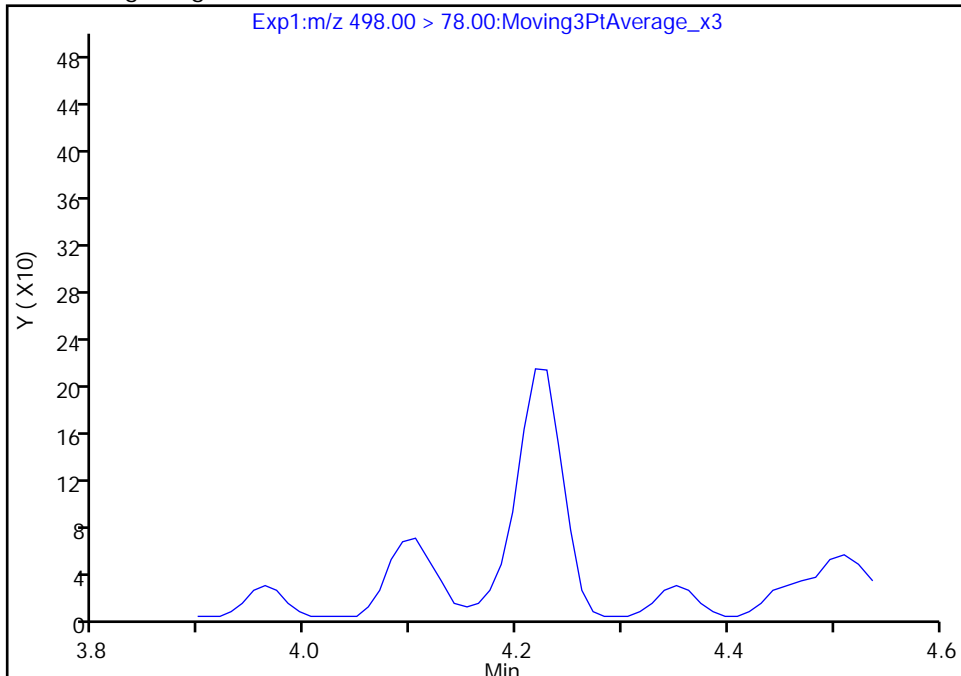
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B010.d  
Injection Date: 24-Dec-2019 15:09:48 Instrument ID: LC812  
Lims ID: 480-164221-C-3-A Lab Sample ID: 200-164221-3  
Client ID: CS RW 1 DER  
Operator ID: lc812tech ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

22 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

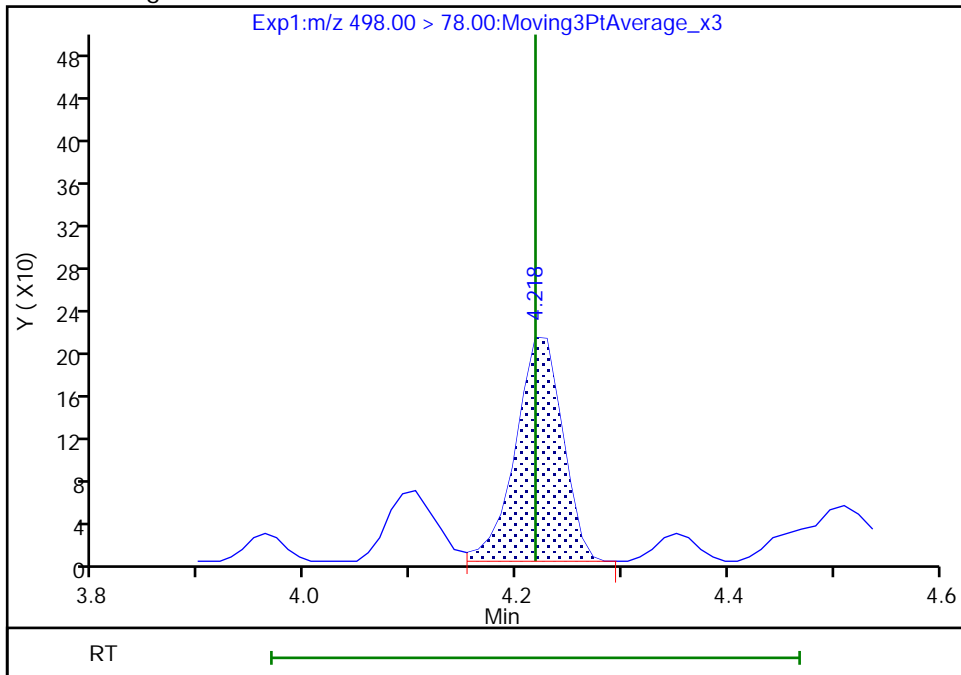
Not Detected  
Expected RT: 4.22

Processing Integration Results



Manual Integration Results

RT: 4.22  
Area: 645  
Amount: 0.001085  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 11:31:41  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

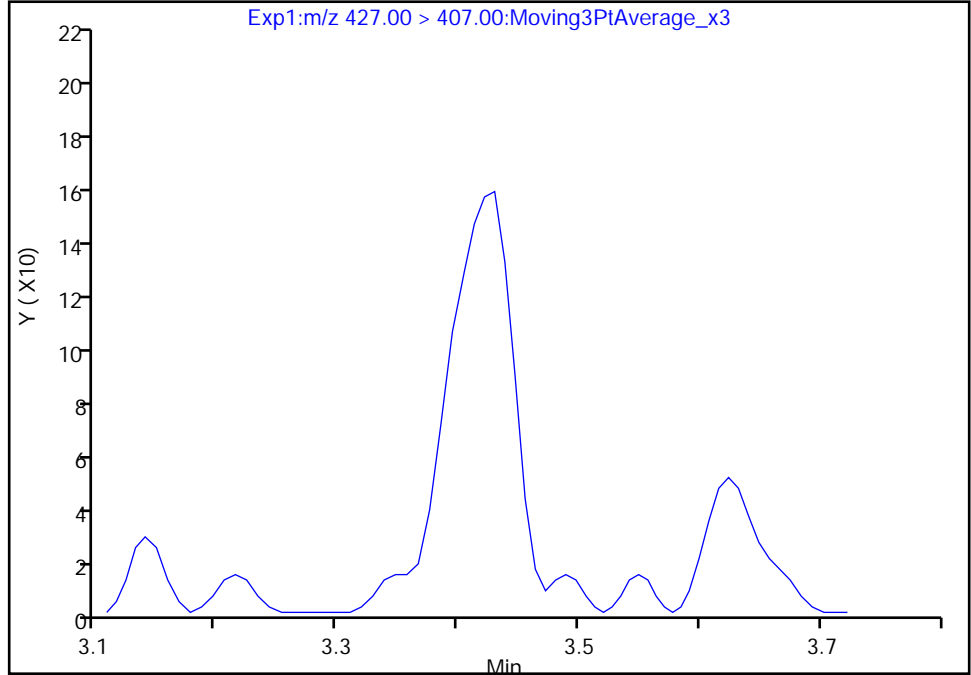
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B010.d  
Injection Date: 24-Dec-2019 15:09:48 Instrument ID: LC812  
Lims ID: 480-164221-C-3-A Lab Sample ID: 200-164221-3  
Client ID: CS RW 1 DER  
Operator ID: lc812tech ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

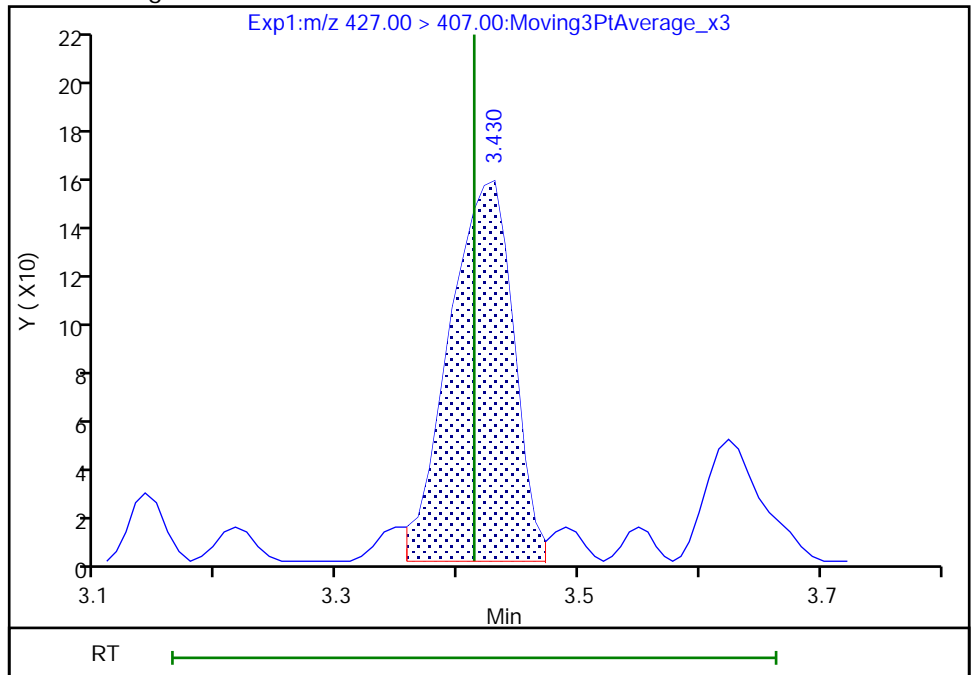
Not Detected  
Expected RT: 3.41

Processing Integration Results



Manual Integration Results

RT: 3.43  
Area: 574  
Amount: 0.008947  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 11:56:37

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

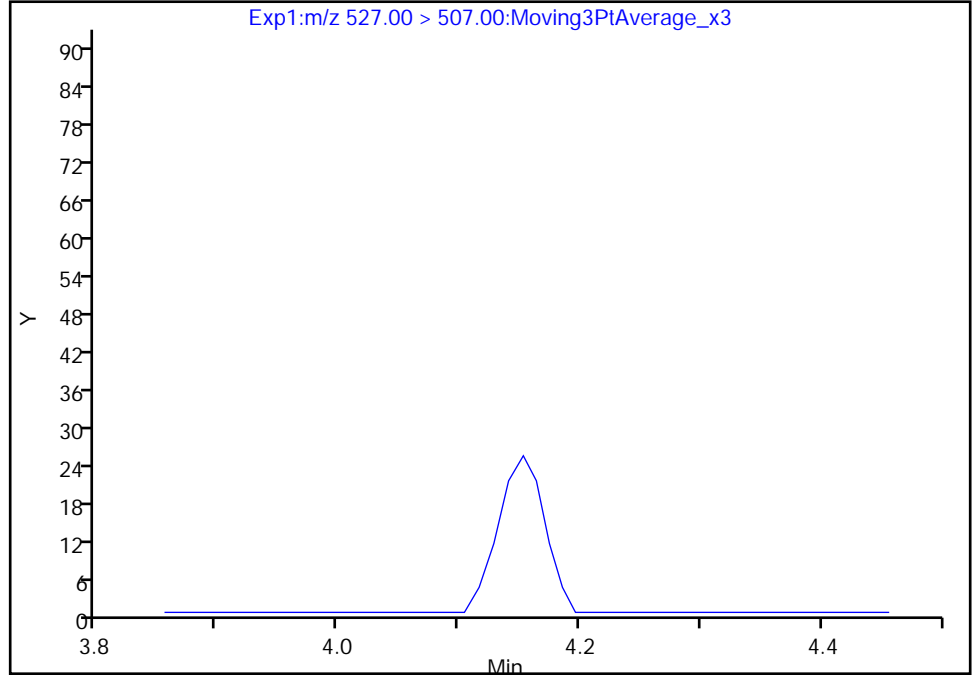
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B010.d  
Injection Date: 24-Dec-2019 15:09:48 Instrument ID: LC812  
Lims ID: 480-164221-C-3-A Lab Sample ID: 200-164221-3  
Client ID: CS RW 1 DER  
Operator ID: lc812tech ALS Bottle#: 10 Worklist Smp#: 10  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

25 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:, CAS: 39108-34-4

Signal: 1

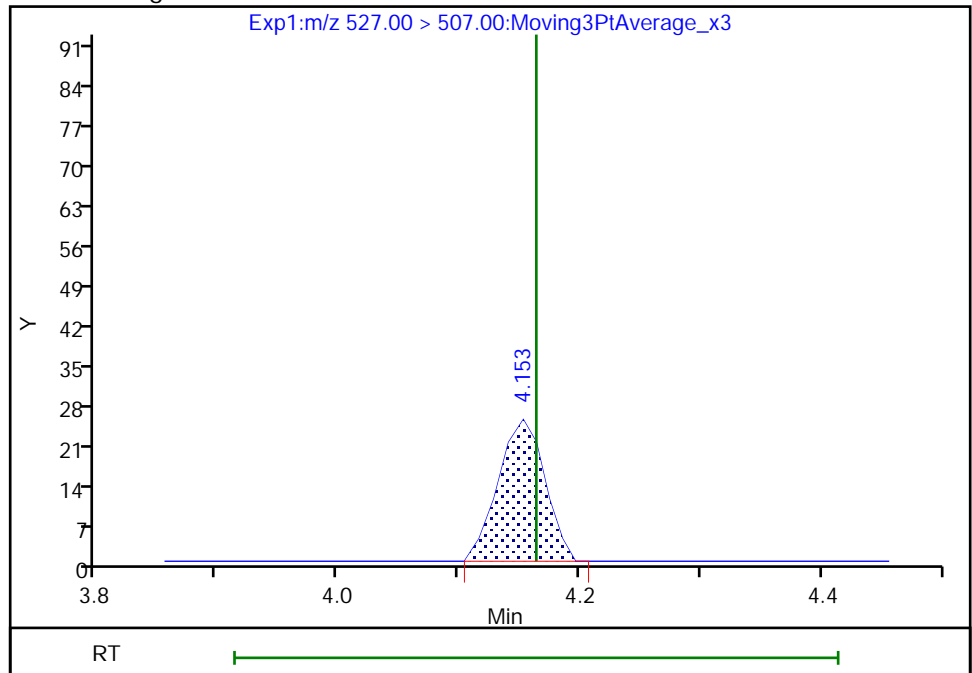
Not Detected  
Expected RT: 4.16

Processing Integration Results



Manual Integration Results

RT: 4.15  
Area: 66  
Amount: 0.001429  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 11:31:02

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS SW 04 DER Lab Sample ID: 480-164221-4  
 Matrix: Water Lab File ID: SC122319B013.d  
 Analysis Method: 537 (modified) Date Collected: 12/12/2019 11:31  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 290.9(mL) Date Analyzed: 12/24/2019 15:34  
 Con. Extract Vol.: 10(mL) Dilution Factor: 1  
 Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	ND		1.7	0.86
2706-90-3	Perfluoropentanoic acid (PFPeA)	0.64	J	1.7	0.54
307-24-4	Perfluorohexanoic acid (PFHxA)	ND		1.7	0.65
375-85-9	Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.78
335-67-1	Perfluorooctanoic acid (PFOA)	1.7		1.7	0.70
375-95-1	Perfluorononanoic acid (PFNA)	0.35	J	1.7	0.23
335-76-2	Perfluorodecanoic acid (PFDA)	ND		1.7	0.66
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.67
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		1.7	0.51
72629-94-8	Perfluorotridecanoic acid (PFTriA)	ND		1.7	0.52
376-06-7	Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.79
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.57	J	1.7	0.42
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	0.82	J	1.7	0.69
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.82
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	1.1	J	1.7	0.52
335-77-3	Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.77
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND		8.6	8.6
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		17	1.5
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		17	1.3
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	4.7
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	2.5



FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS SW 04 DER Lab Sample ID: 480-164221-4  
 Matrix: Water Lab File ID: SC122319B013.d  
 Analysis Method: 537 (modified) Date Collected: 12/12/2019 11:31  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 290.9(mL) Date Analyzed: 12/24/2019 15:34  
 Con. Extract Vol.: 10(mL) Dilution Factor: 1  
 Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	102		50-150
STL01892	13C4 PFHpA	105		50-150
STL00990	13C4 PFOA	100		50-150
STL00991	13C4 PFOS	95		50-150
STL00995	13C5 PFNA	100		50-150
STL00992	13C4 PFBA	82		25-150
STL00993	13C2 PFHxA	99		50-150
STL00996	13C2 PFDA	94		50-150
STL00997	13C2 PFUnA	89		50-150
STL00998	13C2 PFDoA	84		50-150
STL01056	13C8 FOSA	83		25-150
STL01893	13C5 PFPeA	104		25-150
STL02116	13C2 PFTeDA	79		50-150
STL02118	d3-NMeFOSAA	84		50-150
STL02117	d5-NEtFOSAA	89		50-150
STL02279	M2-6:2 FTS	77		25-150
STL02280	M2-8:2 FTS	95		25-150
STL02337	13C3 PFBS	99		50-150

Eurofins TestAmerica, Burlington  
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B013.d  
 Lims ID: 480-164221-C-4-A  
 Client ID: CS SW 04 DER  
 Sample Type: Client  
 Inject. Date: 24-Dec-2019 15:34:25 ALS Bottle#: 13 Worklist Smp#: 13  
 Injection Vol: 20.0 ul Dil. Factor: 1.0000  
 Sample Info: 480-164221-C-4-A  
 Misc. Info.: 200-0039355-013 Plate: 1 Rack: 2  
 Operator ID: lc812tech Instrument ID: LC812  
 Method: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\PFC\_LC812.m  
 Limit Group: LC\_PFC\_ICAL  
 Last Update: 30-Dec-2019 15:06:05 Calib Date: 06-Dec-2019 15:13:26  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Column 1 : C-18 ( 4.60 mm) Det: EXP1  
 Process Host: CTX0330

First Level Reviewer: lautenschlagery Date: 27-Dec-2019 13:17:33  
 Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	1.898	1.908	-0.010	0.555	1485544	2.05	82.1	3007	
2 Perfluorobutanoic acid	212.90 > 169.00	1.898	1.908	-0.010	1.000	14652	0.0248		3.3	
D 3 13C5 PFPeA	267.90 > 223.00	2.244	2.257	-0.013	0.656	1436561	2.60	104	4332	
4 Perfluoropentanoic acid	262.90 > 219.00	2.244	2.271	-0.027	1.000	12073	0.0186		0.6	M
D 47 13C3 PFBS	301.90 > 80.00	2.271	2.285	-0.014	0.664	1522130	2.31	99.2	226607	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	2.285	2.285	0.0	1.006	11697	0.0164	Target=2.03	16.6	
	298.90 > 99.00	2.271	2.285	-0.014	1.000	6004		1.95(1.01-3.04)	4.6	
D 60 M2-4:2 FTS	329.00 > 81.00	2.598	2.611	-0.013	0.759	126118	2.05	87.8	82.6	
61 1H,1H,2H,2H-perfluorohexanesulfoni	327.00 > 307.00	2.598	2.611	-0.013	1.000	401	0.004286		10.8	M
D 7 13C2 PFHxA	315.00 > 270.00	2.648	2.648	0.0	0.774	1518942	2.46	98.5	7835	
6 Perfluorohexanoic acid	313.00 > 269.00	2.648	2.661	-0.013	1.000	8473	0.0137	Target=13.76	2.5	
	313.00 > 119.00	2.636	2.661	-0.025	0.995	699		12.12(6.88-20.64)	2.9	M
70 Perfluoropentanesulfonic acid	349.00 > 80.00	2.648	2.661	-0.013	0.873	2312	0.003754	Target=3.50	5.8	
	349.00 > 99.00	2.648	2.661	-0.013	0.873	703		3.29(1.75-5.25)	0.9	M
D 64 13C3 HFPO-DA	332.10 > 287.00	2.768	2.768	0.0	0.809	84460	3.14	125	1788	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
67 Perfluoro(2-propoxypropanoic) acid										M
329.10 > 285.00	2.748	2.776	-0.028	0.993	2108	0.0174		0.7		M
D 11 18O2 PFHxS										
403.00 > 84.00	3.032	3.044	-0.012	0.886	1254269	2.41		102	4768	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.032	3.044	-0.012	1.000	14264	0.0238	Target=3.90	22.6		M
399.00 > 99.00	3.032	3.044	-0.012	1.000	2912		4.90(1.95-5.85)	6.4		M
D 9 13C4 PFHpA										
367.00 > 322.00	3.032	3.044	-0.012	0.886	1536940	2.63		105	5517	
10 Perfluoroheptanoic acid										Ma
363.00 > 319.00	3.032	3.044	-0.012	1.000	8696	0.0134	Target=3.95	2.7		a
363.00 > 169.00	3.044	3.044	0.0	1.004	2838		3.06(1.97-5.92)	10.5		
77 DONA										M
377.00 > 251.00	3.078	3.089	-0.011	0.812	4928	0.003560	Target=2.49	13.8		
377.00 > 85.00	3.067	3.089	-0.022	0.809	1945		2.53(1.24-3.73)	4.2		M
13 1H,1H,2H,2H-perfluorooctanesulfoni										M
427.00 > 407.00	3.395	3.413	-0.018	0.997	640	0.009797		10.5		M
D 12 M2-6:2 FTS										
429.00 > 81.00	3.405	3.413	-0.008	0.995	164412	1.84		77.3	500	
15 Perfluorooctanoic acid										M
413.00 > 369.00	3.422	3.430	-0.008	1.000	33428	0.0486	Target=2.40	12.4		M
413.00 > 169.00	3.422	3.430	-0.008	1.000	13582		2.46(1.20-3.60)	67.7		
D 14 13C4 PFOA										
417.00 > 372.00	3.422	3.430	-0.008	1.000	1548964	2.50		99.8	4953	
* 62 13C2 PFOA										
415.00 > 370.00	3.422	3.430	-0.008		1707378	2.50			4235	
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.793	0.0	1.108	936501	2.27		94.8	3970	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.793	3.793	0.0	1.000	13212	0.0312	Target=5.74	28.7		M
499.00 > 99.00	3.793	3.793	0.0	1.000	2347		5.63(2.87-8.61)	6.9		M
D 19 13C5 PFNA										
468.00 > 423.00	3.805	3.817	-0.012	1.112	1422069	2.49		99.7	6422	
20 Perfluorononanoic acid										RM
463.00 > 419.00	3.817	3.817	0.0	1.003	5600	0.0100	Target=7.01	2.6		RM
463.00 > 169.00	3.817	3.817	0.0	1.003	527		10.63(3.50-10.51)	8.3		M
69 9-Chlorohexadecafluoro-3-oxanonane										M
531.00 > 351.00	3.973	3.984	-0.011	1.047	1294	0.002678		13.9		M
68 Perfluorononanesulfonic acid										M
549.00 > 80.00	4.116	4.129	-0.013	1.085	1036	0.003200	Target=3.14	7.8		M
549.00 > 99.00	4.104	4.129	-0.025	1.082	514		2.02(1.57-4.71)	2.5		M
D 23 13C2 PFDA										
515.00 > 470.00	4.153	4.164	-0.011	1.214	1319483	2.35		93.9	6803	
24 Perfluorodecanoic acid										RM
513.00 > 469.00	4.153	4.164	-0.011	1.000	4068	0.007967	Target=7.28	4.2		RM
513.00 > 169.00	4.153	4.164	-0.011	1.000	305		13.34(3.64-10.91)	3.4		M
25 1H,1H,2H,2H-perfluorodecanesulfoni										M
527.00 > 507.00	4.164	4.164	0.0	1.000				1.5	01/10/2020	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 26 M2-8:2 FTS										
529.00 > 81.00	4.164	4.175	-0.011	1.217	242849	2.28		95.1	1257	
D 21 13C8 FOSA										
506.00 > 78.00	4.207	4.218	-0.011	1.230	1526398	2.08		83.0	5546	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.207	4.218	-0.011	1.000	2446	0.004026		29.8		M
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.305	4.305	0.0	1.258	113095	2.09		83.6	1639	
28 N-methylperfluorooctanesulfonamido										
570.00 > 419.00	4.317	4.317	0.0	1.003	136	0.003460		2.2		M
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.420	4.409	0.011	1.165	607	0.002153	Target=2.76	5.2		RM
599.00 > 99.00	4.397	4.409	-0.012	1.159	131		4.63(1.38-4.14)	1.6		M
D 30 13C2 PFUnA										
565.00 > 520.00	4.431	4.443	-0.012	1.295	1063604	2.23		89.0	7380	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.431	4.443	-0.012	1.000	2881	0.007987	Target=5.78	4.5		M
563.00 > 169.00	4.431	4.443	-0.012	1.000	851		3.39(2.89-8.67)	10.2		M
33 N-ethylperfluorooctanesulfonamidoa										
584.00 > 419.00	4.442	4.456	-0.014	1.000	74	0.001668		1.9		M
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.442	4.456	-0.014	1.298	133997	2.23		89.3	1164	
66 11-Chloroeicosafuoro-3-oxaundecan										
631.00 > 451.00	4.537	4.551	-0.014	1.196	865	0.001898		15.4		M
37 Perfluorododecanoic acid										
613.00 > 569.00	4.671	4.683	-0.012	1.000	2139	0.005258	Target=5.13	0.6		M
613.00 > 169.00	4.683	4.683	0.0	1.002	559		3.83(2.56-7.69)	7.0		M
D 36 13C2 PFDaA										
615.00 > 570.00	4.671	4.683	-0.012	1.365	1100677	2.10		84.0	6913	
74 1H,1H,2H,2H-perfluorododecanesulfo										
627.00 > 607.00	4.693	4.704	-0.011	1.127	211	0.007101		7.8		M
75 Perfluorododecanesulfonic acid (PF										
699.00 > 80.00	4.870	4.870	0.0	1.284	1216	0.0113	Target=0.45	2.2		RM
699.00 > 99.00	4.849	4.870	-0.021	1.279	647		1.88(0.22-0.67)	15.8		M
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.897	4.906	-0.009	1.048	1441	0.003729	Target=3.82	0.8		RM
663.00 > 169.00	4.897	4.906	-0.009	1.048	246		5.86(1.91-5.74)	5.5		M
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.094	5.108	-0.014	1.000	412	0.005936	Target=1.05	7.5		M
713.00 > 219.00	5.094	5.108	-0.014	1.000	508		0.81(0.52-1.57)	12.2		M
D 43 13C2 PFTeDA										
715.00 > 670.00	5.094	5.108	-0.014	1.489	863802	1.97		78.6	7051	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.482	5.491	-0.009	1.000	5303	0.001283	Target=3.20	2.7		
813.00 > 169.00	5.482	5.491	-0.009	1.000	1950		2.72(1.60-4.80)	70.7		
D 44 13C2 PFHxDA										
815.00 > 770.00	5.482	5.491	-0.009	1.602	488439	1.21		48.3	4202	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
46 Perfluorooctadecanoic acid										M
913.00 > 869.00	5.879	5.899	-0.020	1.072	660	0.004677	Target=2.86		0.6	M
913.00 > 169.00	5.879	5.899	-0.020	1.072	305		2.16(1.43-4.29)		12.3	M

**QC Flag Legend**

Processing Flags

R - Failed Signal Ratio Test

Review Flags

M - Manually Integrated

a - User Assigned ID

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B013.d

Injection Date: 24-Dec-2019 15:34:25

Instrument ID: LC812

Lims ID: 480-164221-C-4-A

Lab Sample ID: 200-164221-4

Client ID: CS SW 04 DER

Operator ID: lc812tech

ALS Bottle#: 13

Worklist Smp#: 13

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

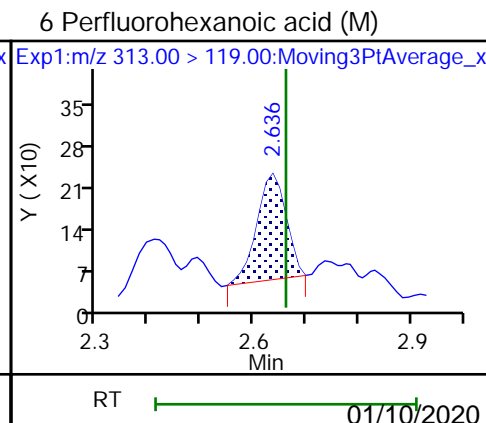
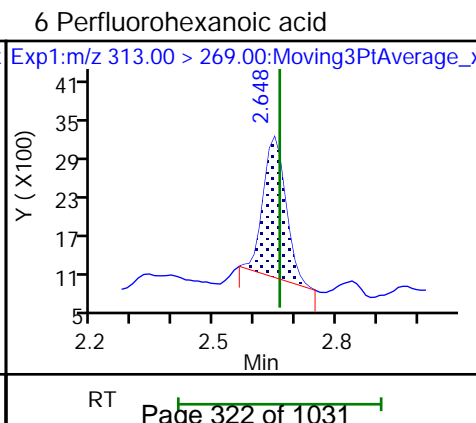
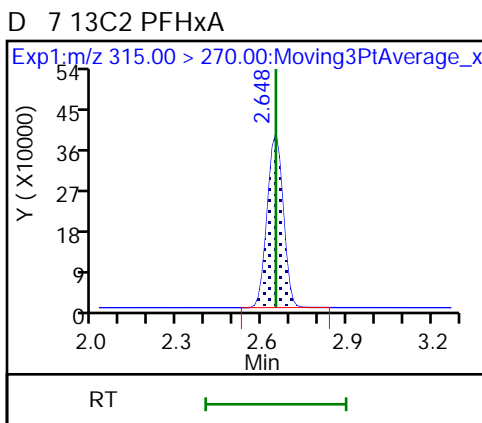
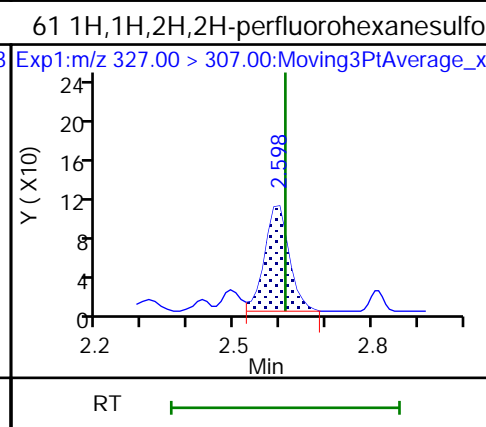
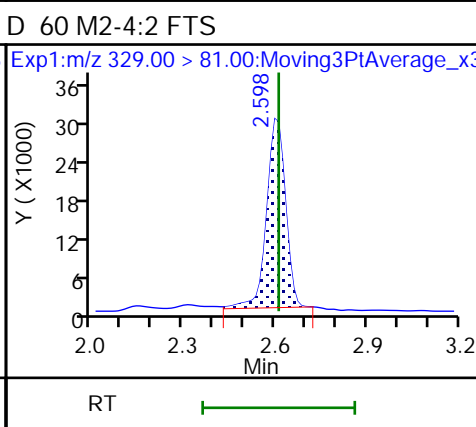
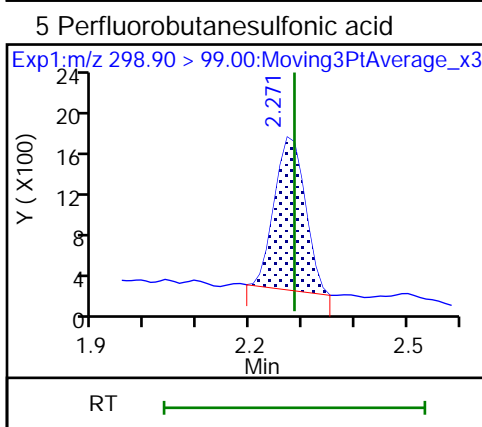
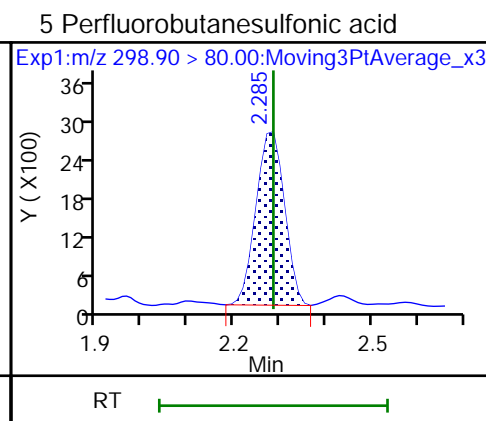
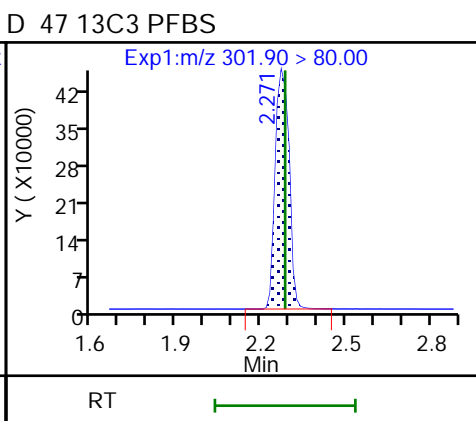
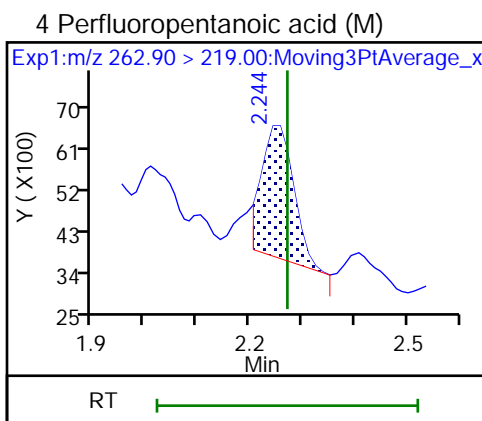
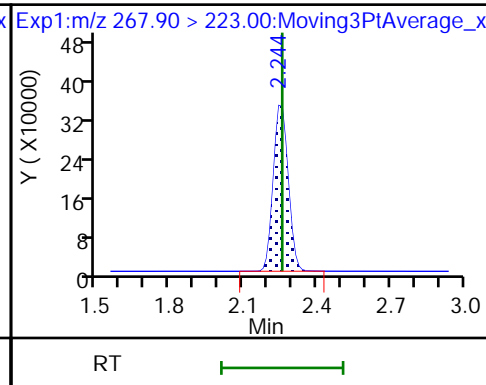
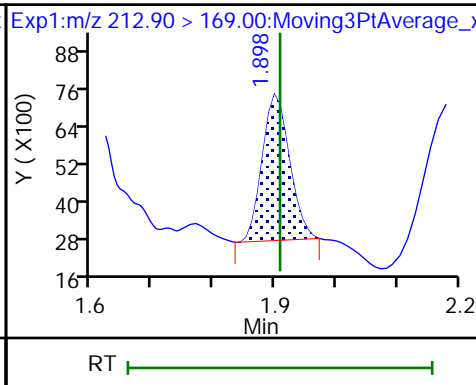
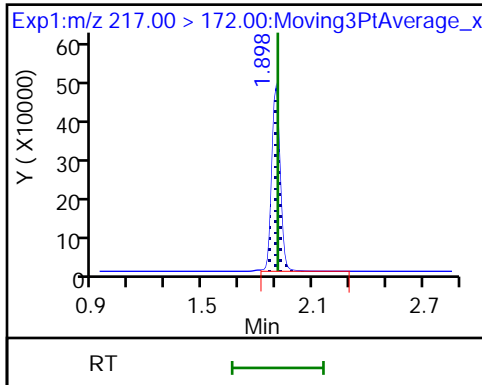
Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

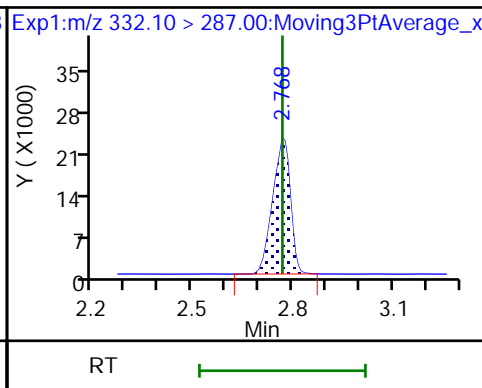
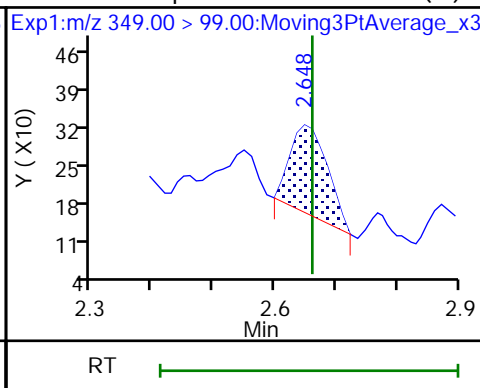
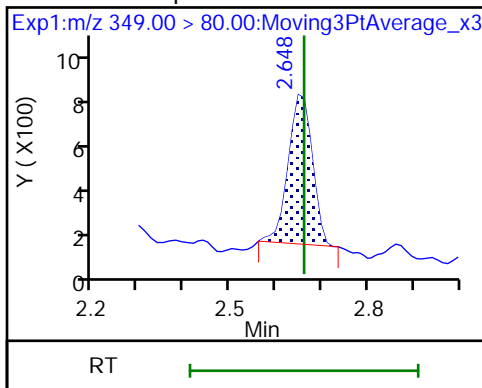
D 3 13C5 PFPeA



70 Perfluoropentanesulfonic acid

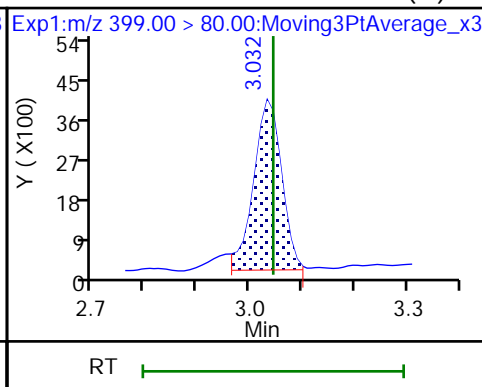
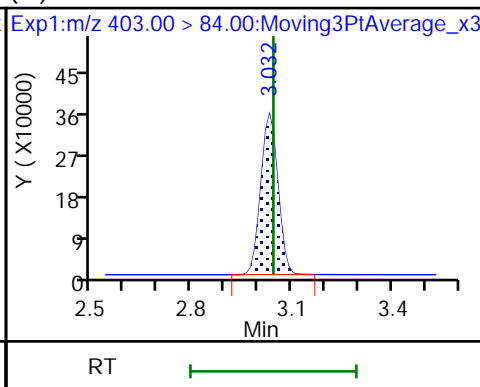
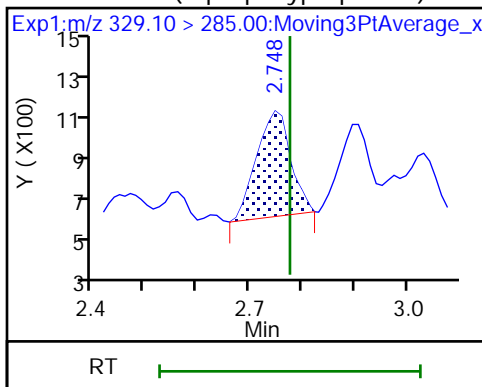
70 Perfluoropentanesulfonic acid (M)

D 64 13C3 HFPO-DA



67 Perfluoro(2-propoxypropanoic acid (M) 1 18O2 PFHxS

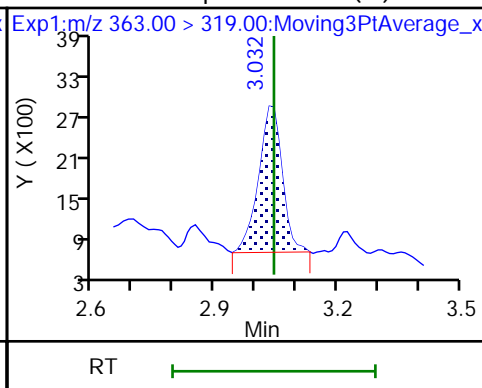
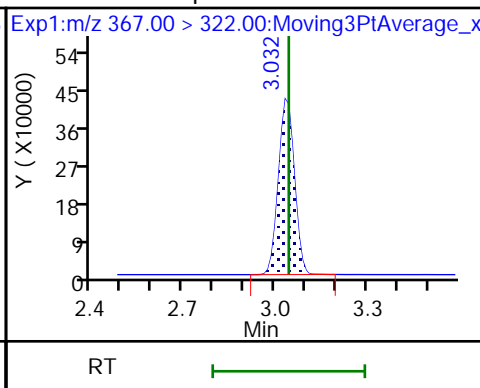
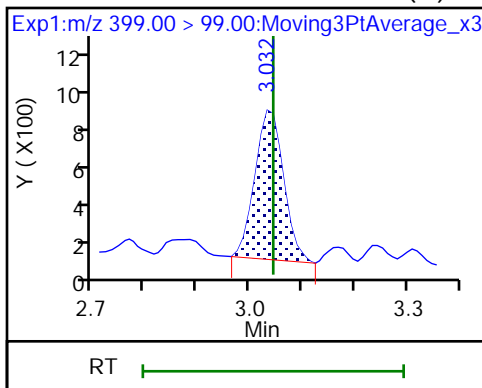
8 Perfluorohexanesulfonic acid (M)



8 Perfluorohexanesulfonic acid (M)

D 9 13C4 PFHpA

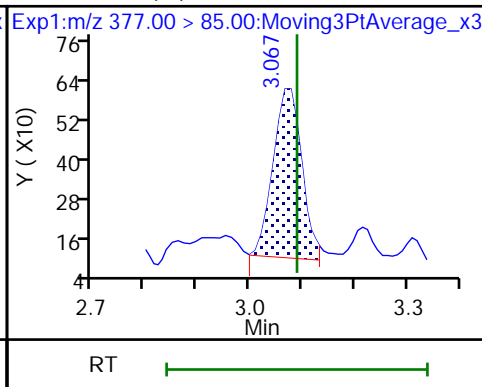
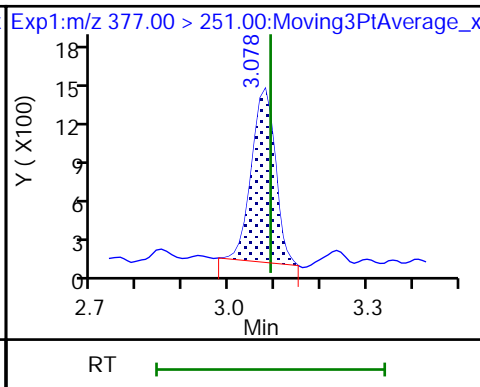
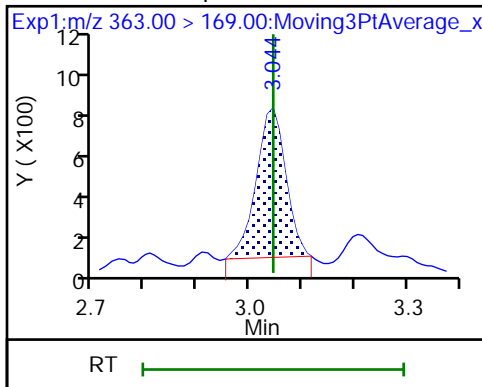
10 Perfluoroheptanoic acid (M)



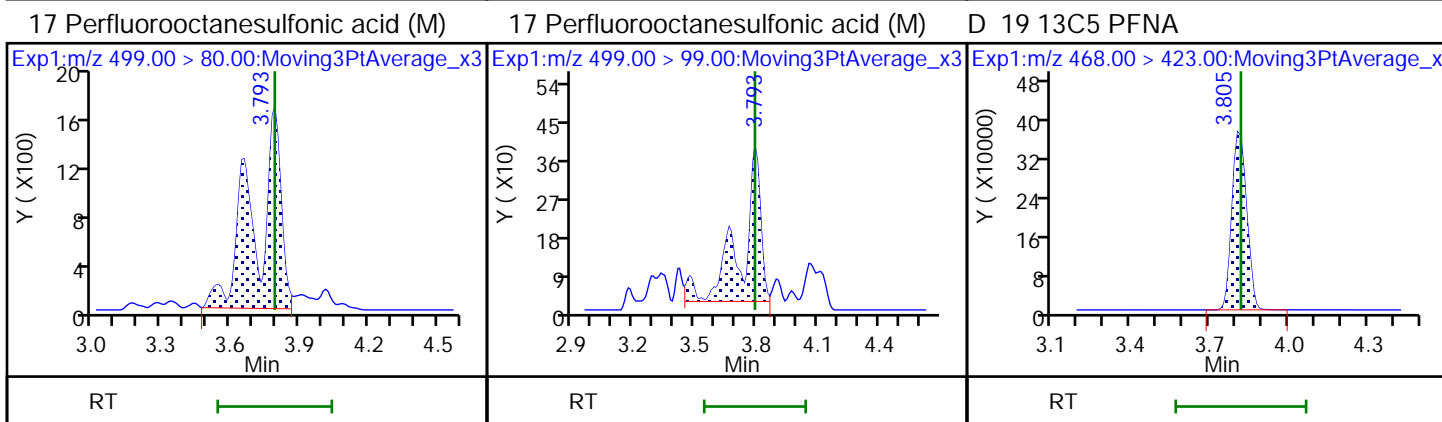
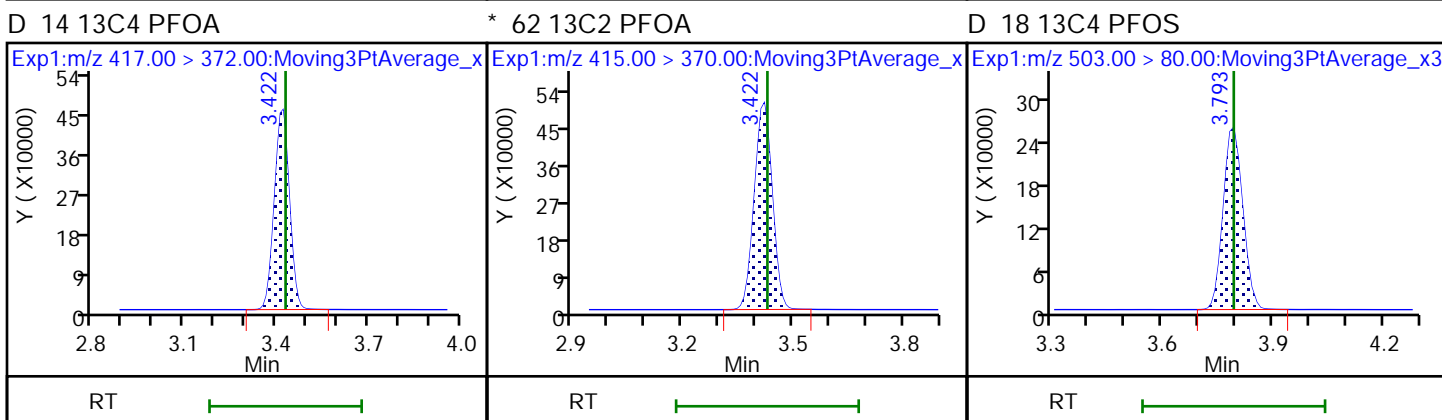
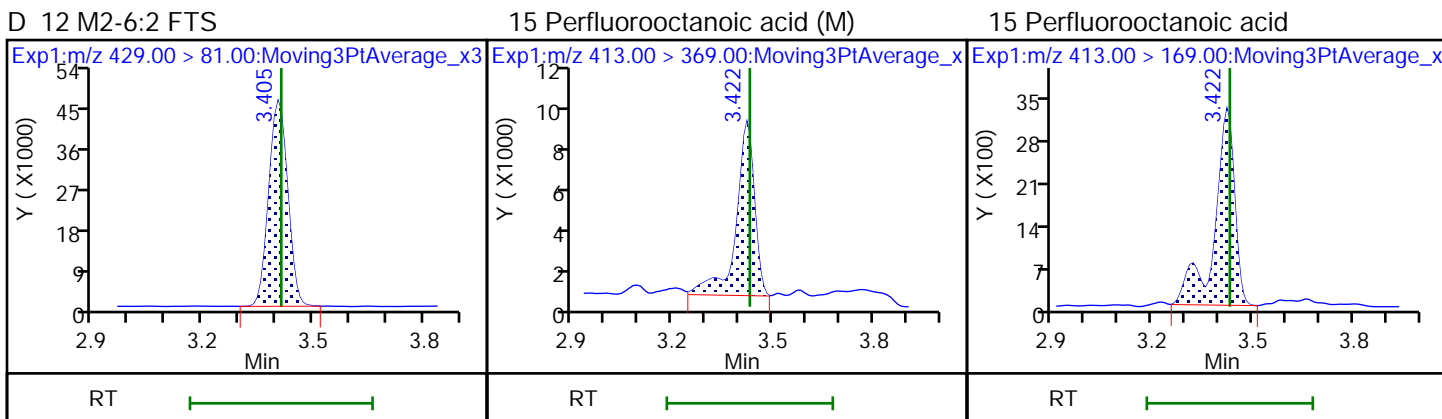
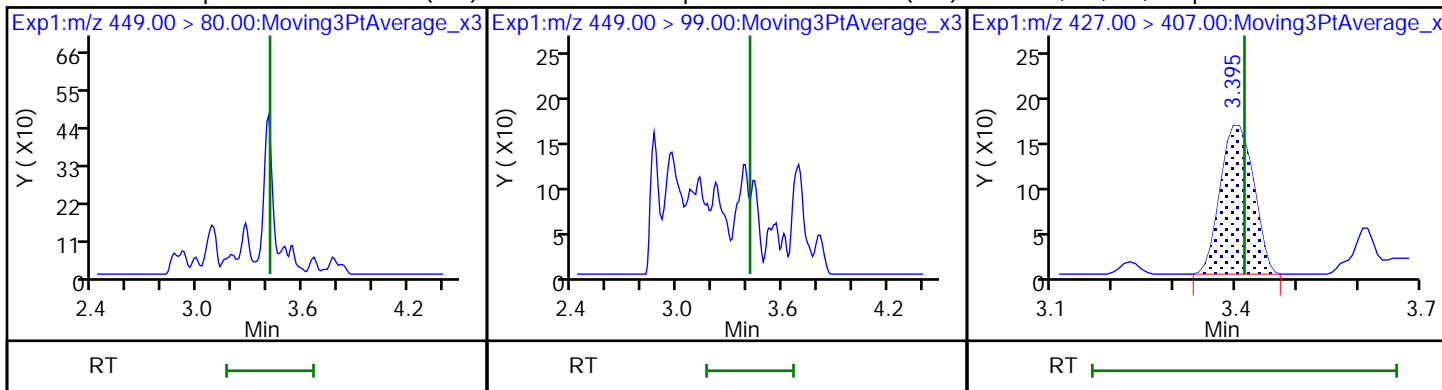
10 Perfluoroheptanoic acid

77 DONA

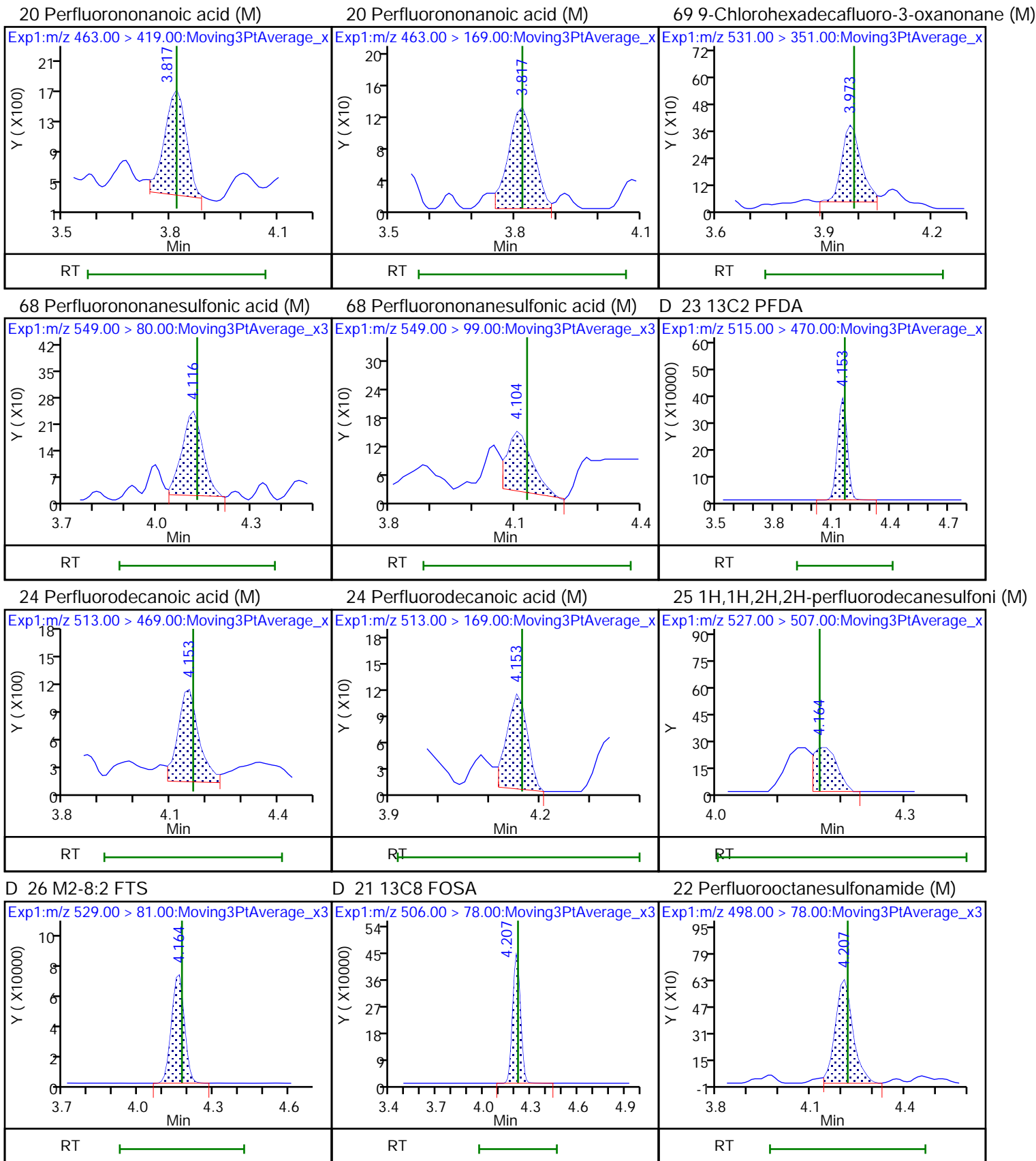
77 DONA (M)



16 Perfluoroheptanesulfonic acid (ND) 16 Perfluoroheptanesulfonic acid (ND) 13 1H,1H,2H,2H-perfluorooctanesulfoni (M)

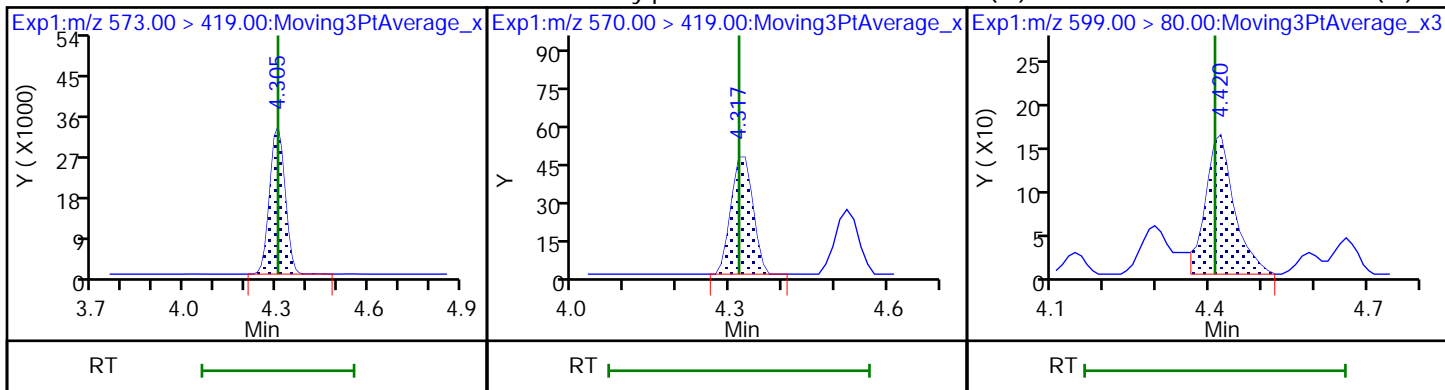






D 27 d3-NMeFOSAA

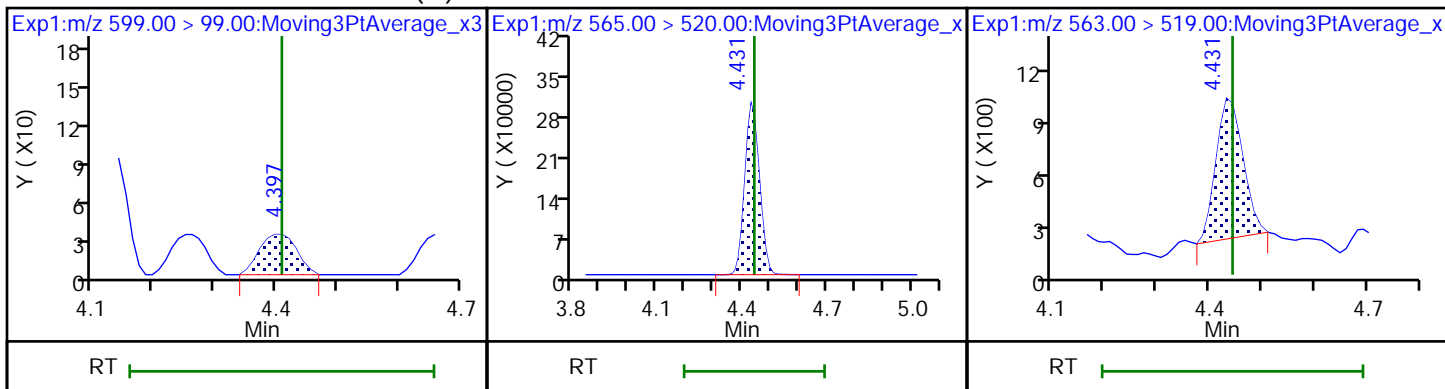
28 N-methylperfluorooctanesulfonamido (M) Perfluorodecanesulfonic acid (M)



29 Perfluorodecanesulfonic acid (M)

D 30 13C2 PFUoA

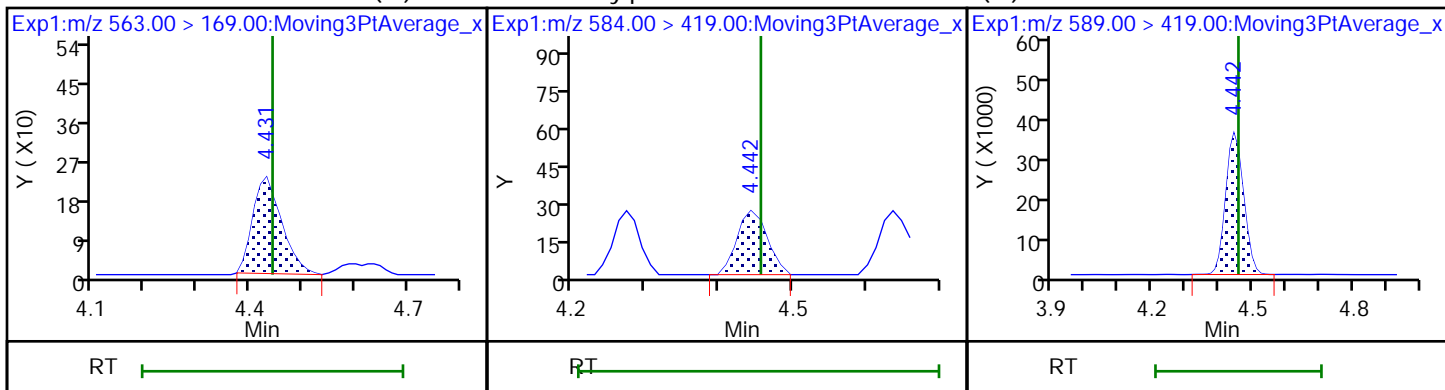
31 Perfluoroundecanoic acid



31 Perfluoroundecanoic acid (M)

33 N-ethylperfluorooctanesulfonamido (M)

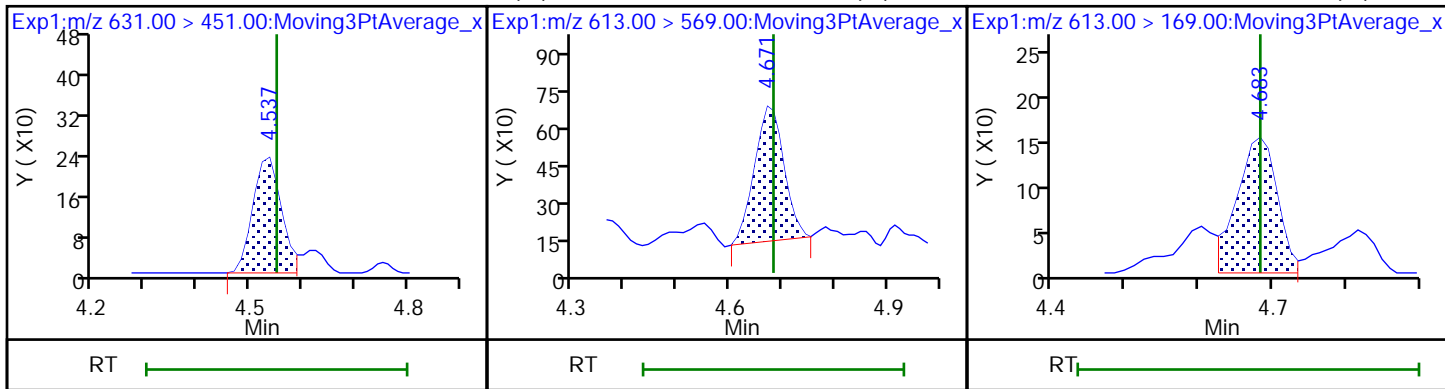
D 32 d5-NEtFOSAA



66 11-Chloroeicosafuoro-3-oxaundecanoic acid (M)

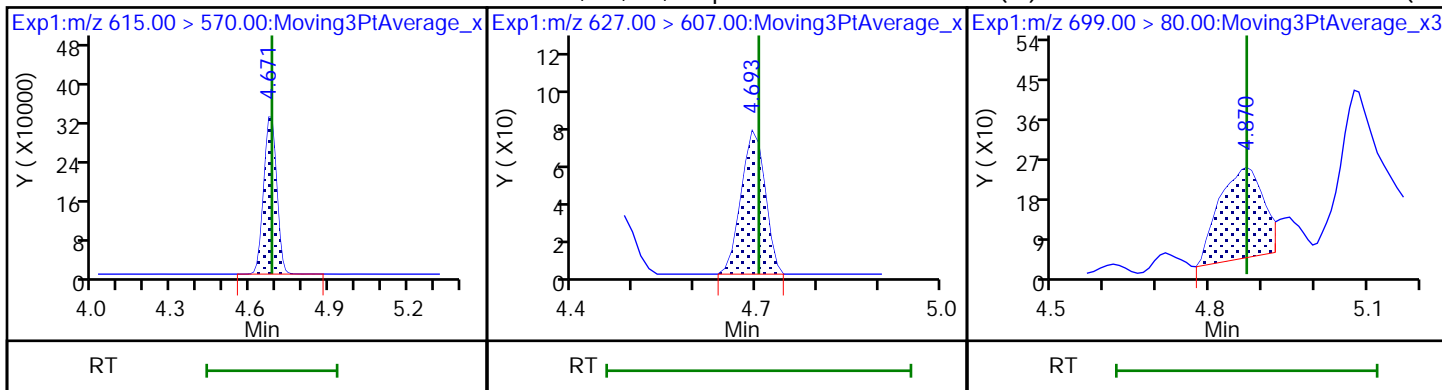
37 Perfluorododecanoic acid (M)

37 Perfluorododecanoic acid (M)



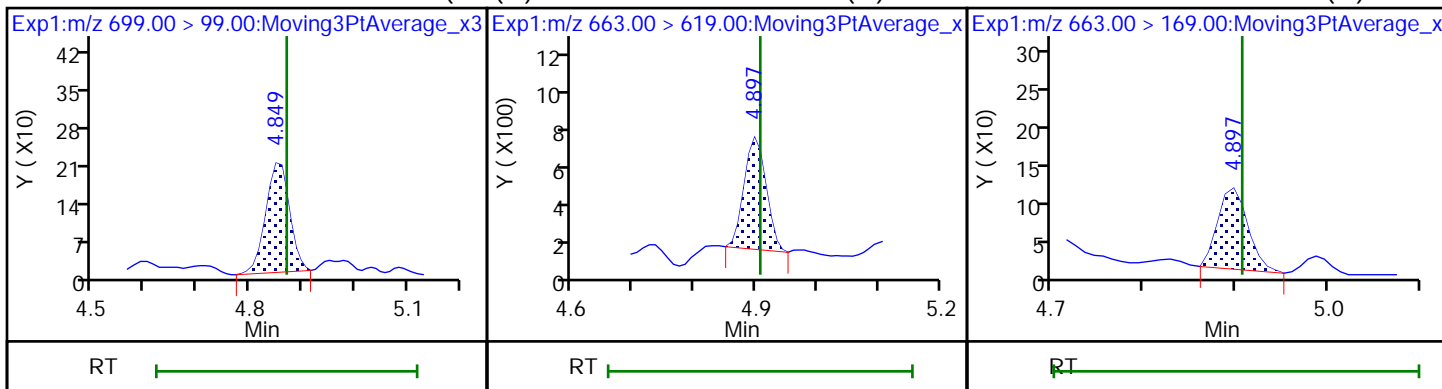
D 36 13C2 PFDaA

74 1H,1H,2H,2H-perfluorododecanesulfo(75)P Perfluorododecanesulfonic acid (PF (M)



75 Perfluorododecanesulfonic acid (PF (M) Perfluorotridecanoic acid (M)

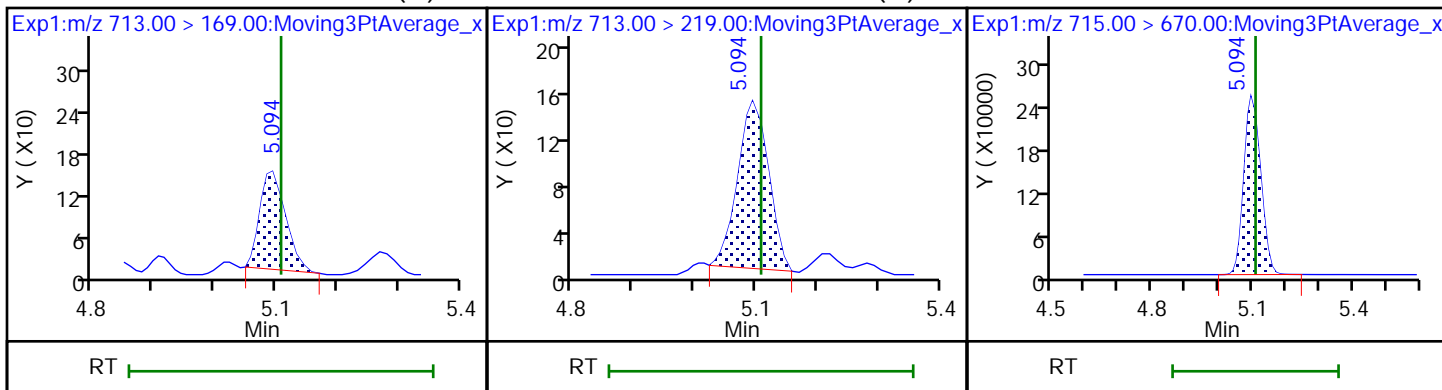
41 Perfluorotridecanoic acid (M)



42 Perfluorotetradecanoic acid (M)

42 Perfluorotetradecanoic acid (M)

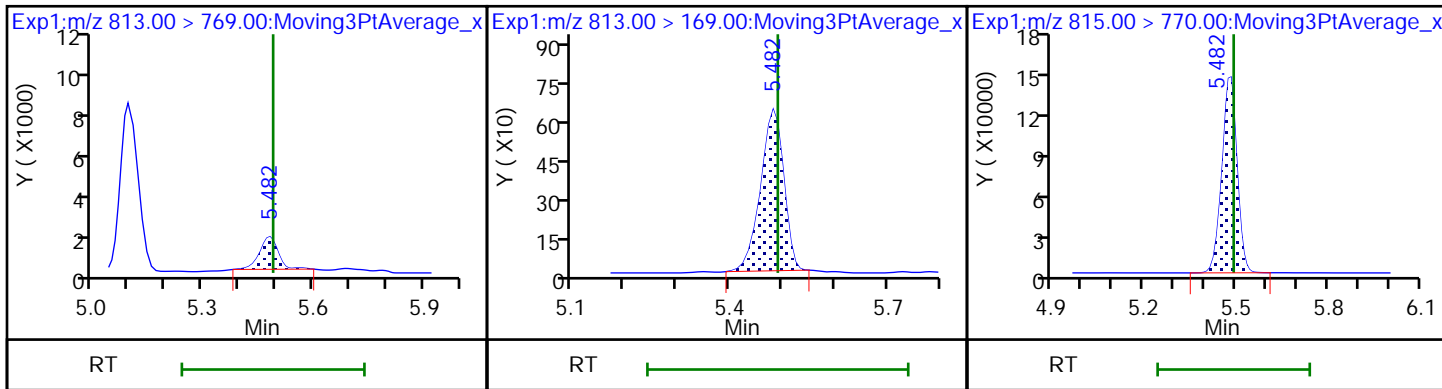
D 43 13C2 PFTeDA



45 Perfluorohexadecanoic acid

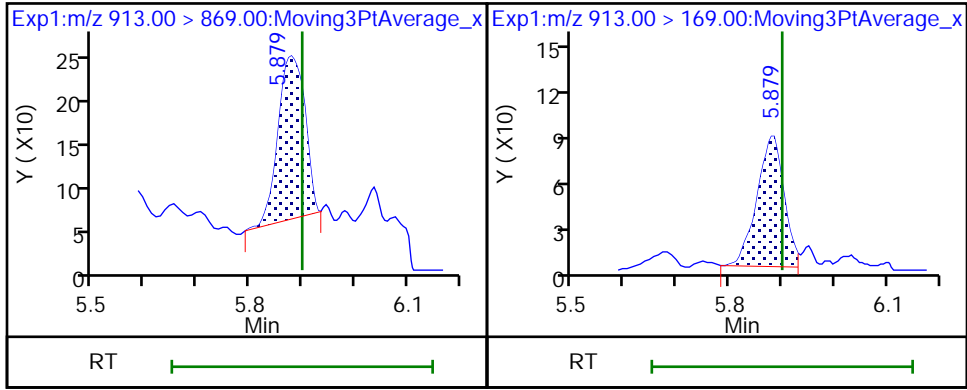
45 Perfluorohexadecanoic acid

D 44 13C2 PFHxDA



46 Perfluorooctadecanoic acid (M)

46 Perfluorooctadecanoic acid (M)



Eurofins TestAmerica, Burlington

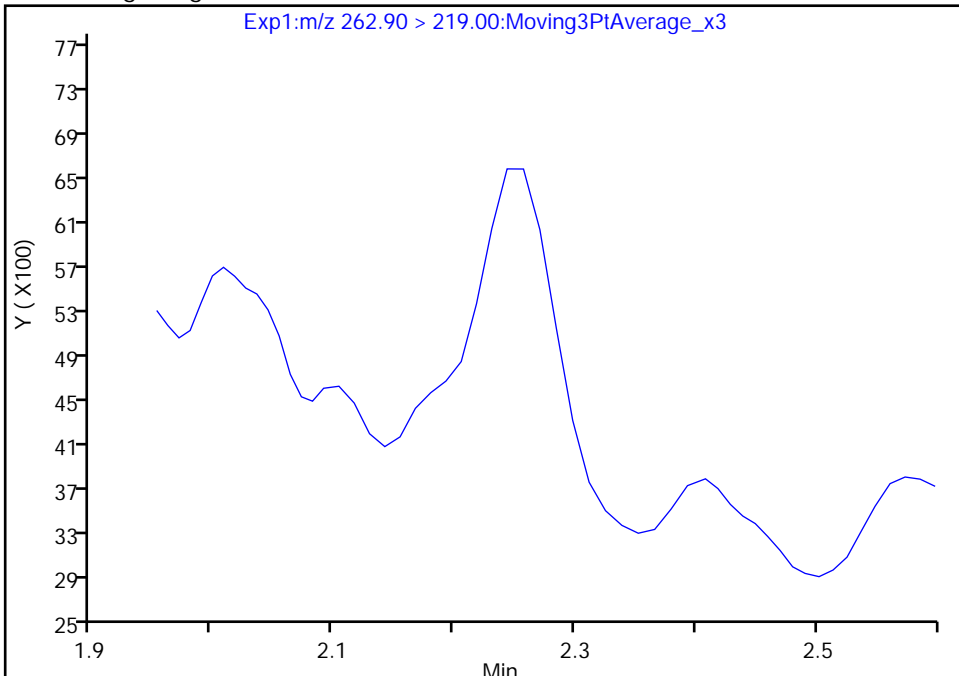
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Injection Date: 24-Dec-2019 15:34:25 Instrument ID: LC812  
Lims ID: 480-164221-C-4-A Lab Sample ID: 200-164221-4  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

4 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

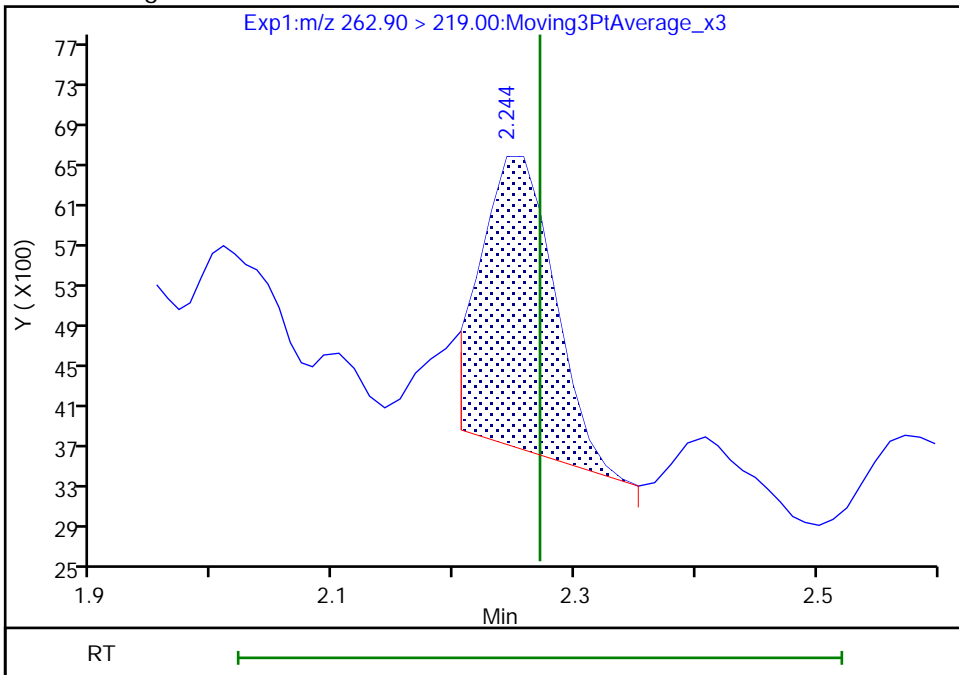
Not Detected  
Expected RT: 2.27

Processing Integration Results



Manual Integration Results

RT: 2.24  
Area: 12073  
Amount: 0.018554  
Amount Units: ng/ml



Reviewer: lautenschlagery, 27-Dec-2019 12:50:43  
Audit Action: Manually Integrated

Audit Reason: Split Peak

Euofins TestAmerica, Burlington

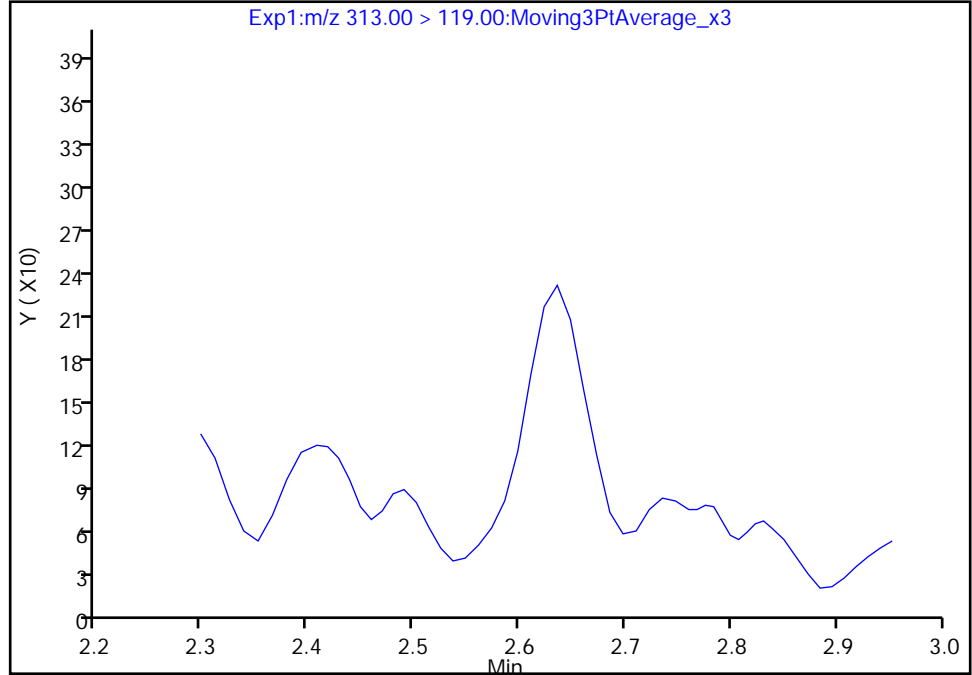
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Injection Date: 24-Dec-2019 15:34:25 Instrument ID: LC812  
Lims ID: 480-164221-C-4-A Lab Sample ID: 200-164221-4  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

6 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 2

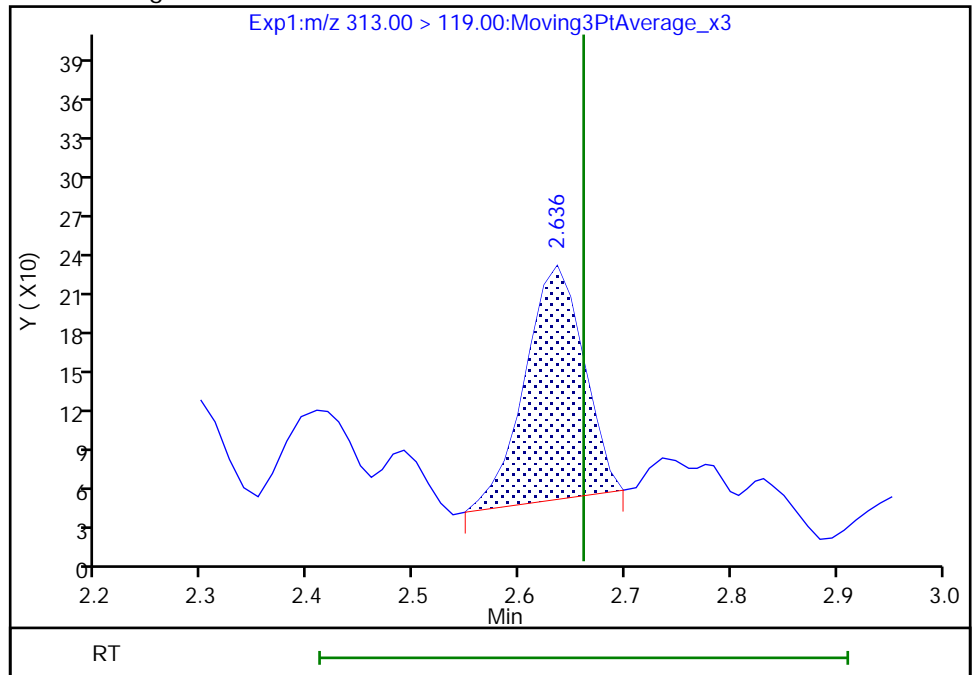
Not Detected  
Expected RT: 2.66

Processing Integration Results



Manual Integration Results

RT: 2.64  
Area: 699  
Amount: 0.013659  
Amount Units: ng/ml



Reviewer: lautenschlagery, 27-Dec-2019 12:51:12

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

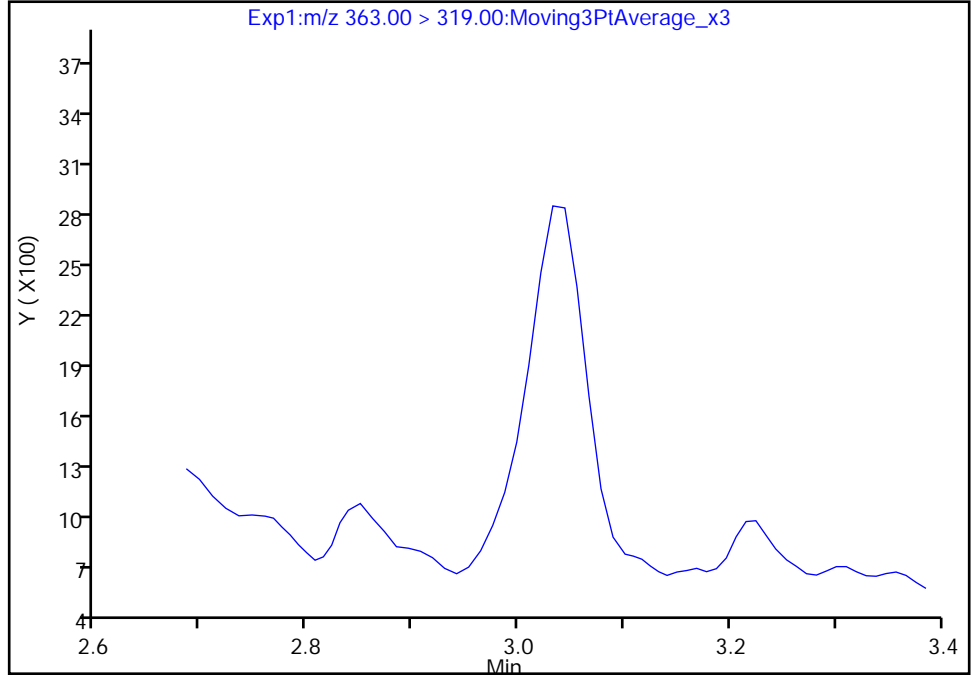
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B013.d  
Injection Date: 24-Dec-2019 15:34:25 Instrument ID: LC812  
Lims ID: 480-164221-C-4-A Lab Sample ID: 200-164221-4  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

10 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

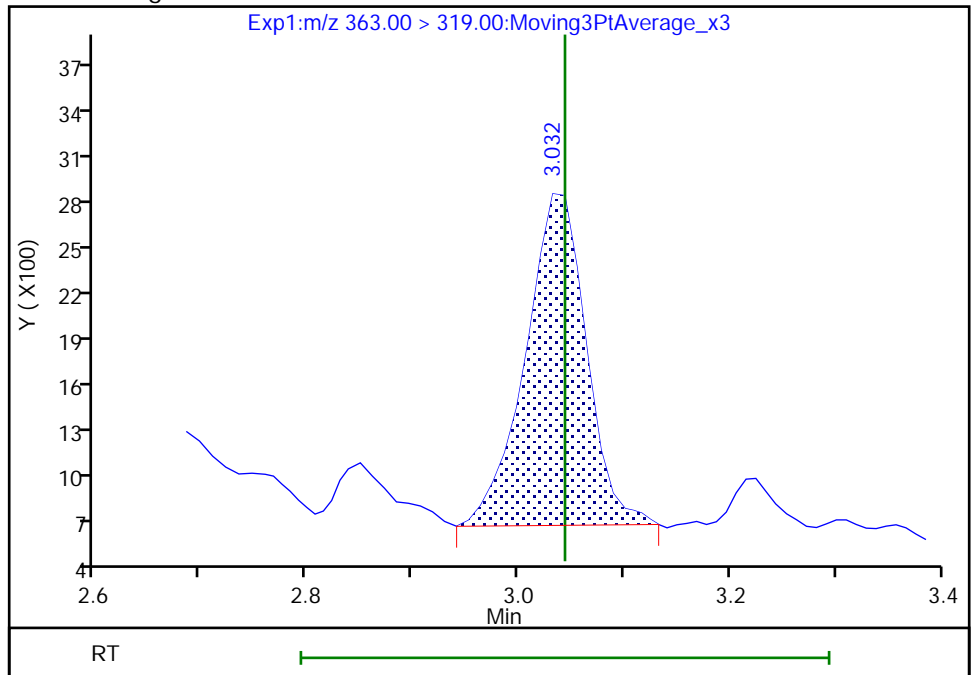
Not Detected  
Expected RT: 3.04

Processing Integration Results



Manual Integration Results

RT: 3.03  
Area: 8696  
Amount: 0.013379  
Amount Units: ng/ml



Reviewer: lautenschlagery, 27-Dec-2019 12:52:47

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

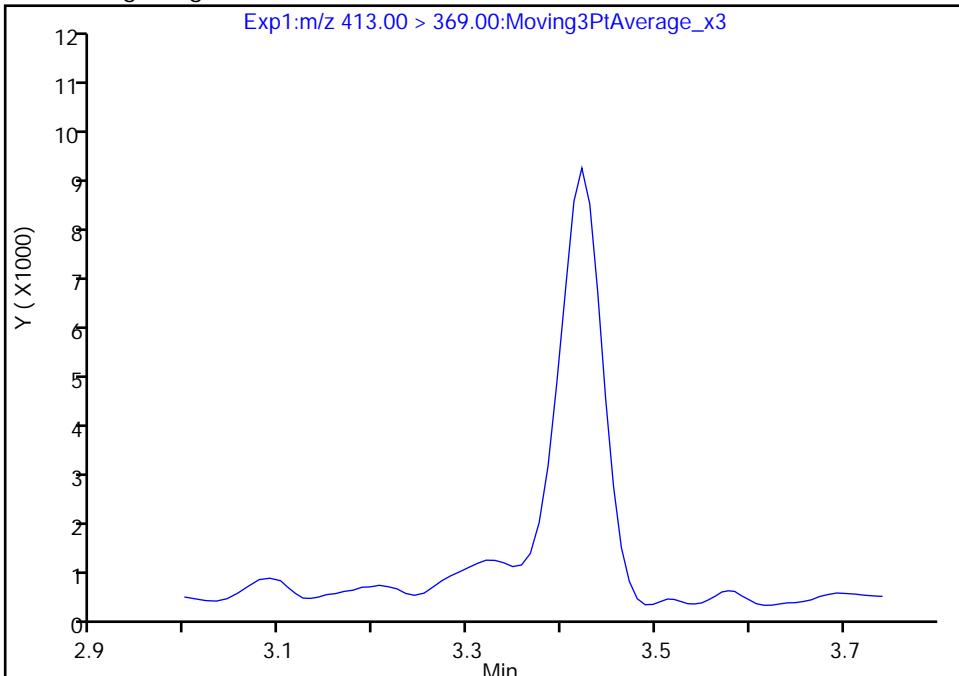
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B013.d  
Injection Date: 24-Dec-2019 15:34:25 Instrument ID: LC812  
Lims ID: 480-164221-C-4-A Lab Sample ID: 200-164221-4  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

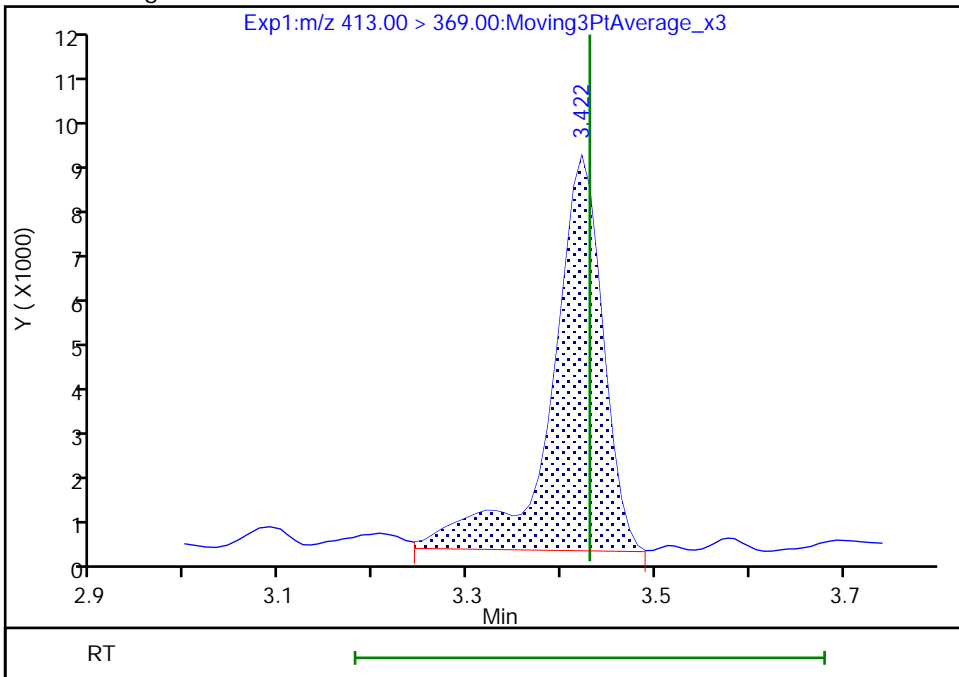
Not Detected  
Expected RT: 3.43

Processing Integration Results



Manual Integration Results

RT: 3.42  
Area: 33428  
Amount: 0.048626  
Amount Units: ng/ml



Reviewer: lautenschlagery, 27-Dec-2019 12:54:40  
Audit Action: Manually Integrated

Audit Reason: Baseline



Eurofins TestAmerica, Burlington

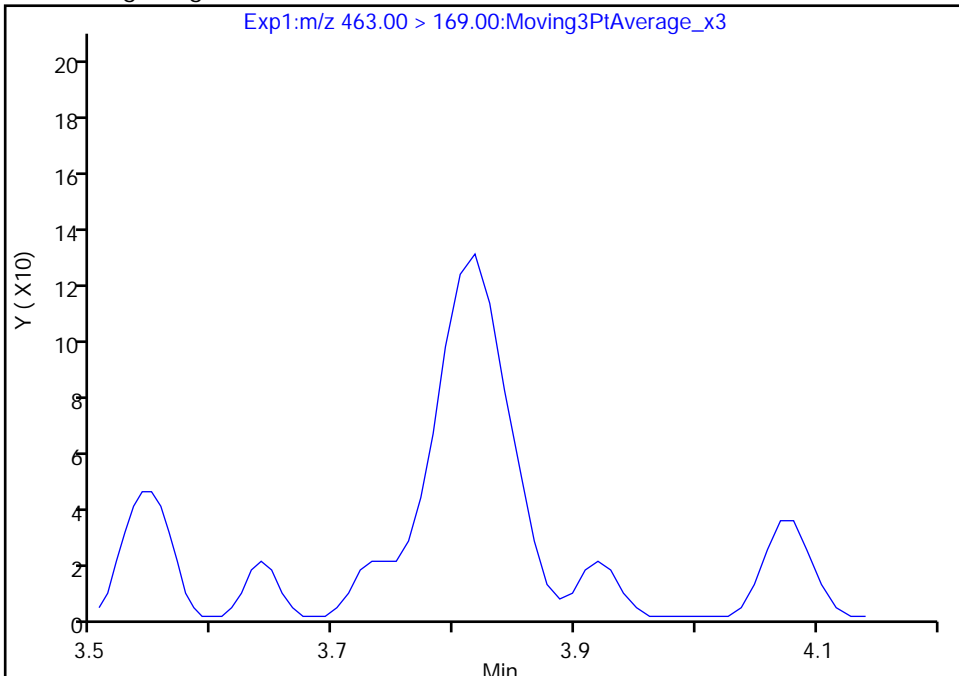
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B013.d  
Injection Date: 24-Dec-2019 15:34:25 Instrument ID: LC812  
Lims ID: 480-164221-C-4-A Lab Sample ID: 200-164221-4  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

20 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

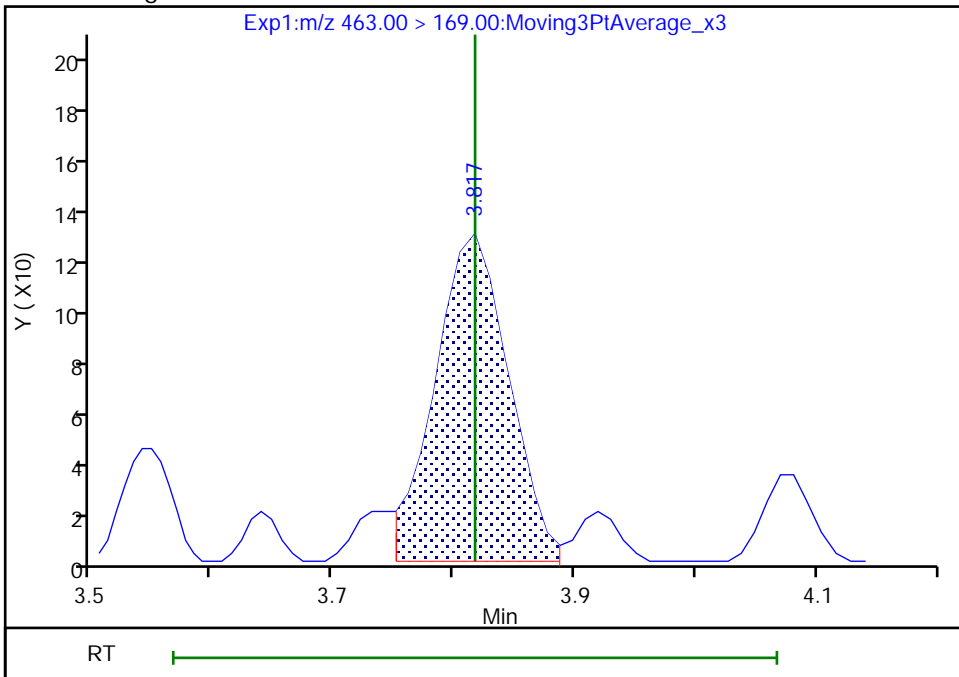
Not Detected  
Expected RT: 3.82

Processing Integration Results



Manual Integration Results

RT: 3.82  
Area: 527  
Amount: 0.010040  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 12:58:26  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

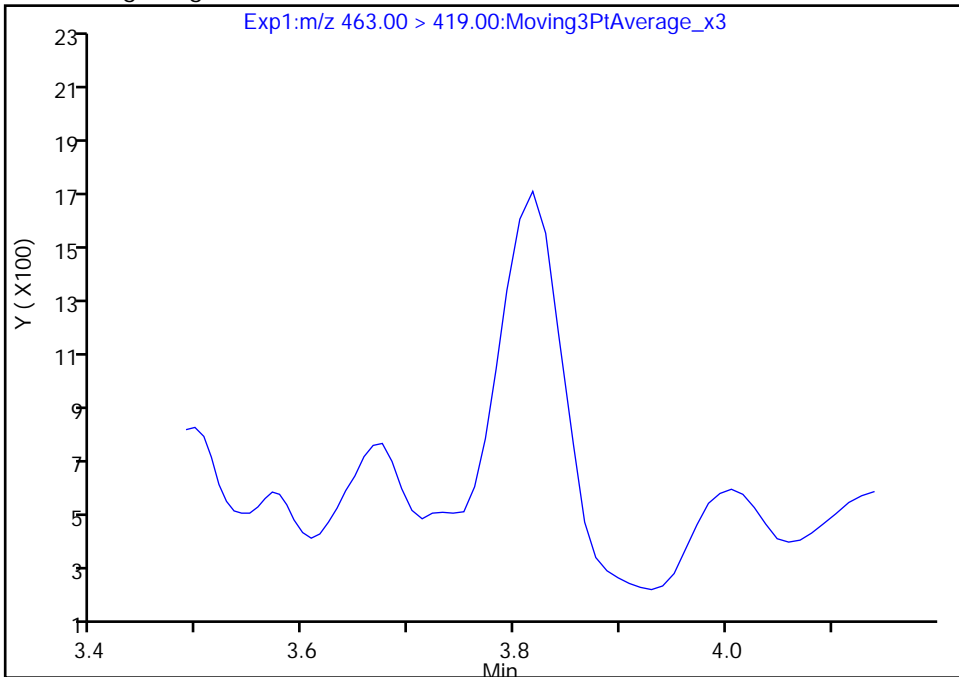
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B013.d  
Injection Date: 24-Dec-2019 15:34:25 Instrument ID: LC812  
Lims ID: 480-164221-C-4-A Lab Sample ID: 200-164221-4  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

20 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

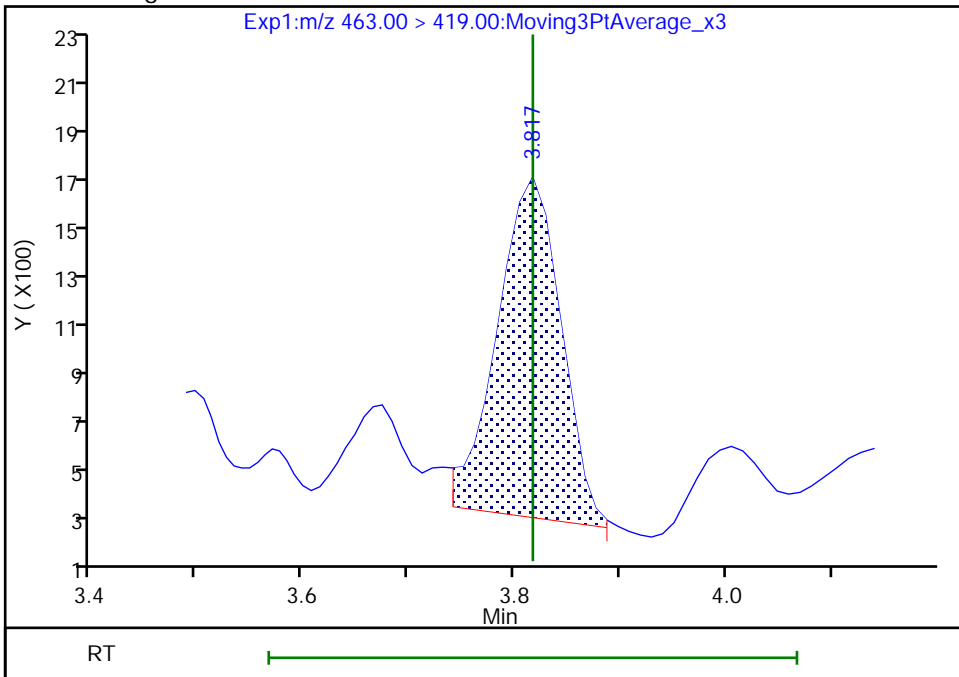
Not Detected  
Expected RT: 3.82

Processing Integration Results



RT: 3.82  
Area: 5600  
Amount: 0.010040  
Amount Units: ng/ml

Manual Integration Results



Eurofins TestAmerica, Burlington

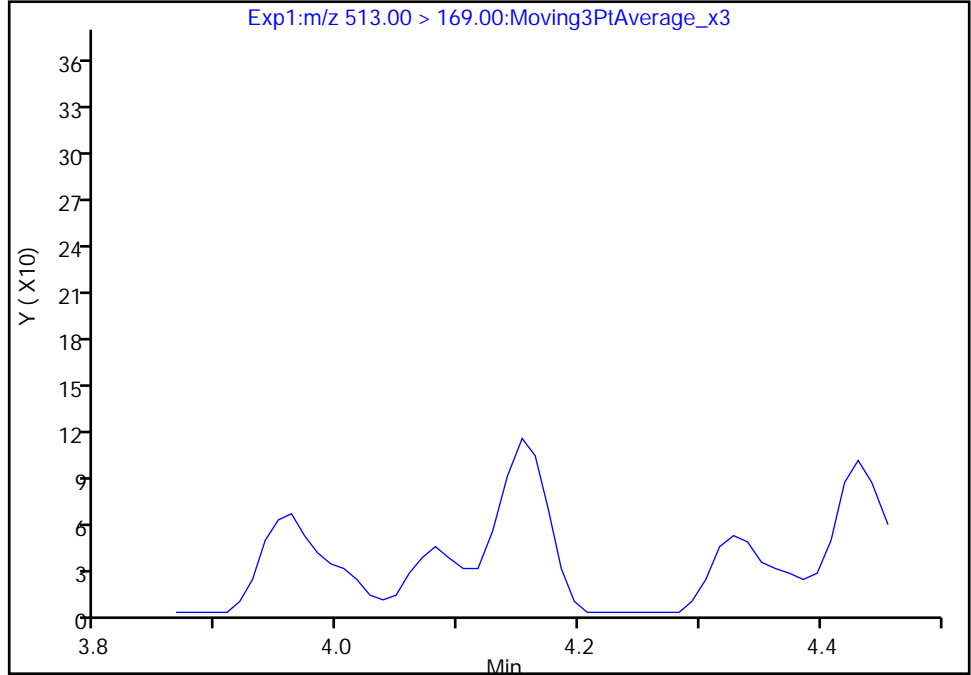
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B013.d  
Injection Date: 24-Dec-2019 15:34:25 Instrument ID: LC812  
Lims ID: 480-164221-C-4-A Lab Sample ID: 200-164221-4  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

24 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 2

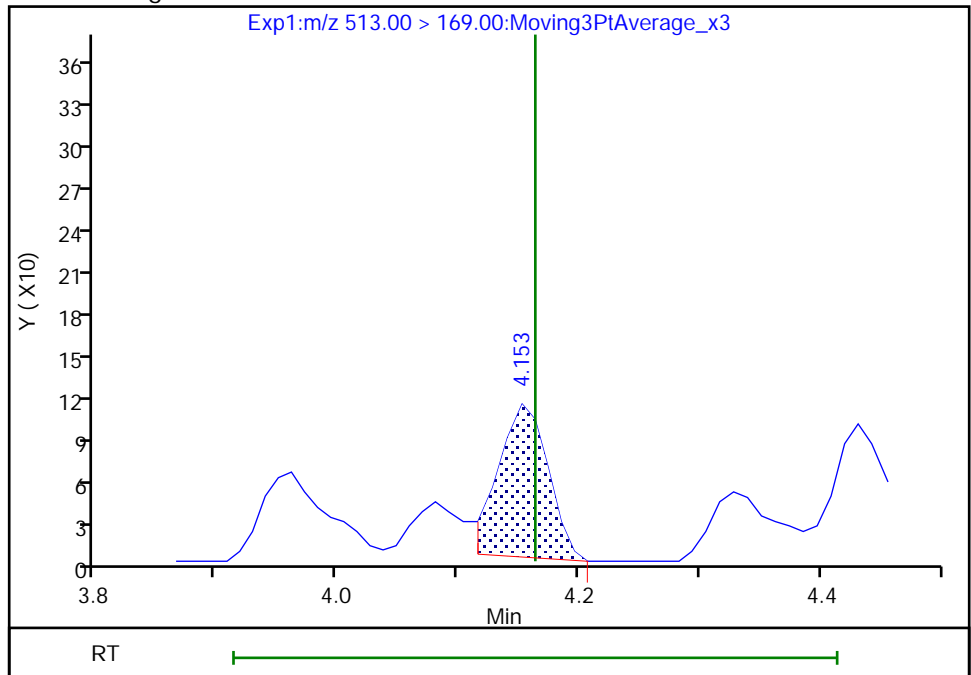
Not Detected  
Expected RT: 4.16

Processing Integration Results



Manual Integration Results

RT: 4.15  
Area: 305  
Amount: 0.007967  
Amount Units: ng/ml



Reviewer: lautenschlagery, 27-Dec-2019 13:02:14

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

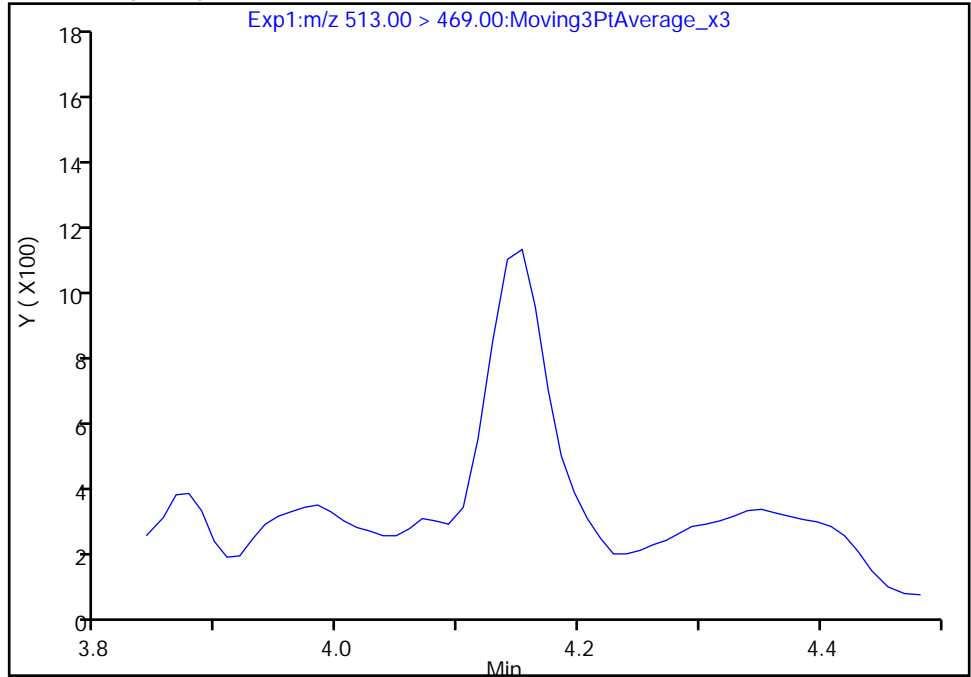
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B013.d  
Injection Date: 24-Dec-2019 15:34:25 Instrument ID: LC812  
Lims ID: 480-164221-C-4-A Lab Sample ID: 200-164221-4  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 (4.60 mm) Detector: EXP1

24 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 1

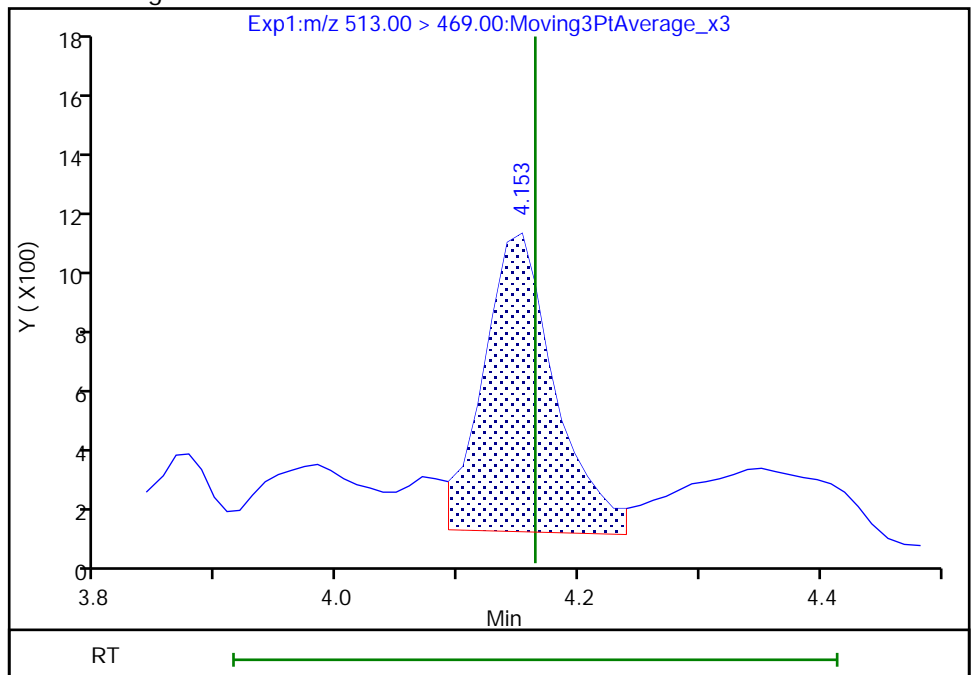
Not Detected  
Expected RT: 4.16

Processing Integration Results



Manual Integration Results

RT: 4.15  
Area: 4068  
Amount: 0.007967  
Amount Units: ng/ml



Euofins TestAmerica, Burlington

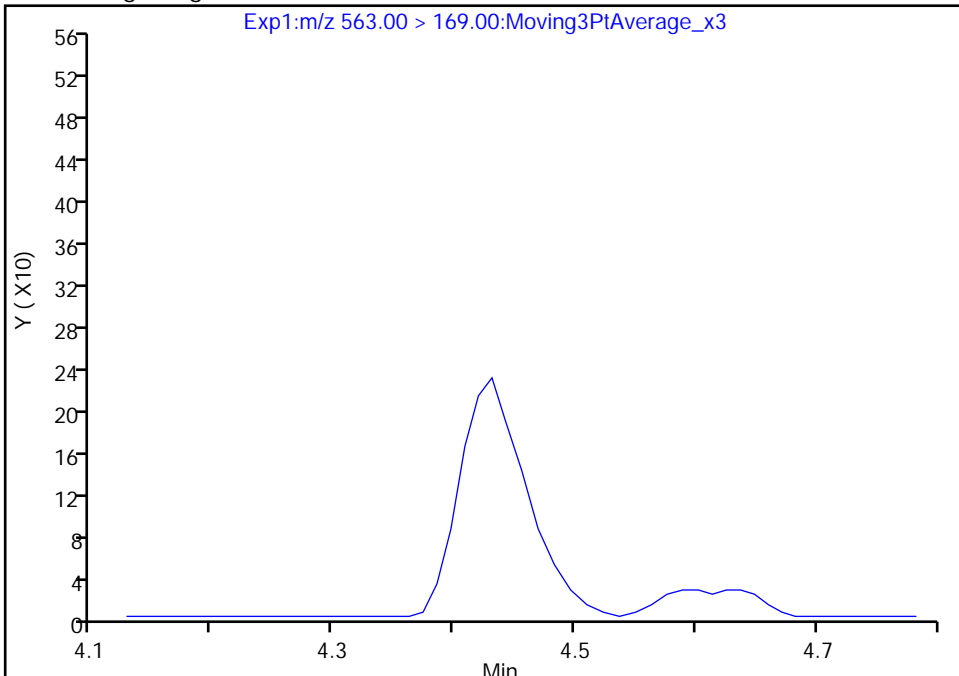
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B013.d  
Injection Date: 24-Dec-2019 15:34:25 Instrument ID: LC812  
Lims ID: 480-164221-C-4-A Lab Sample ID: 200-164221-4  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 2

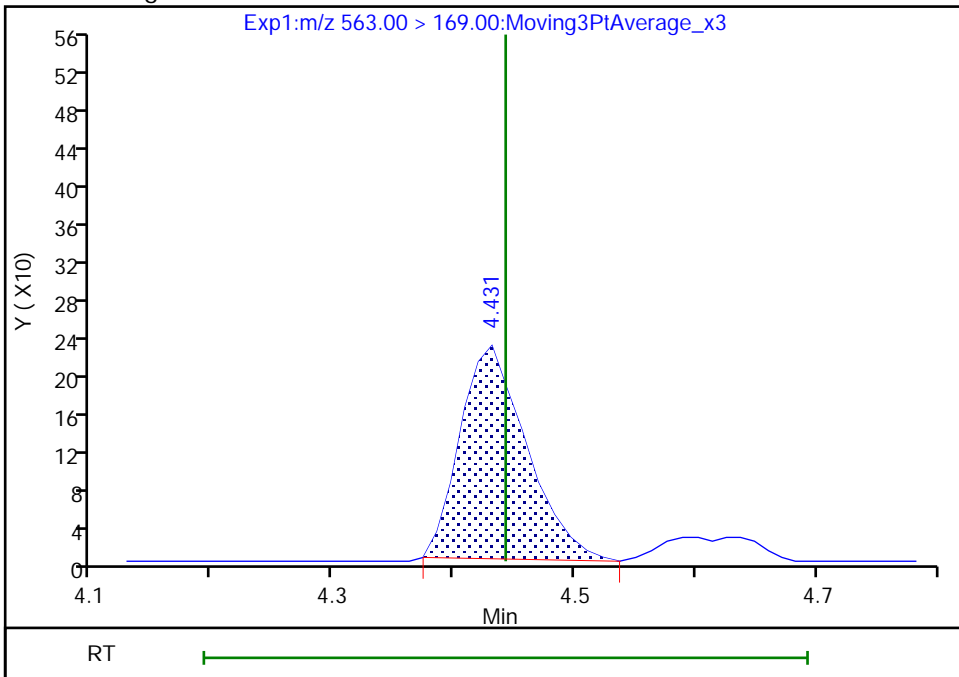
Not Detected  
Expected RT: 4.44

Processing Integration Results



Manual Integration Results

RT: 4.43  
Area: 851  
Amount: 0.007987  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 13:06:38  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

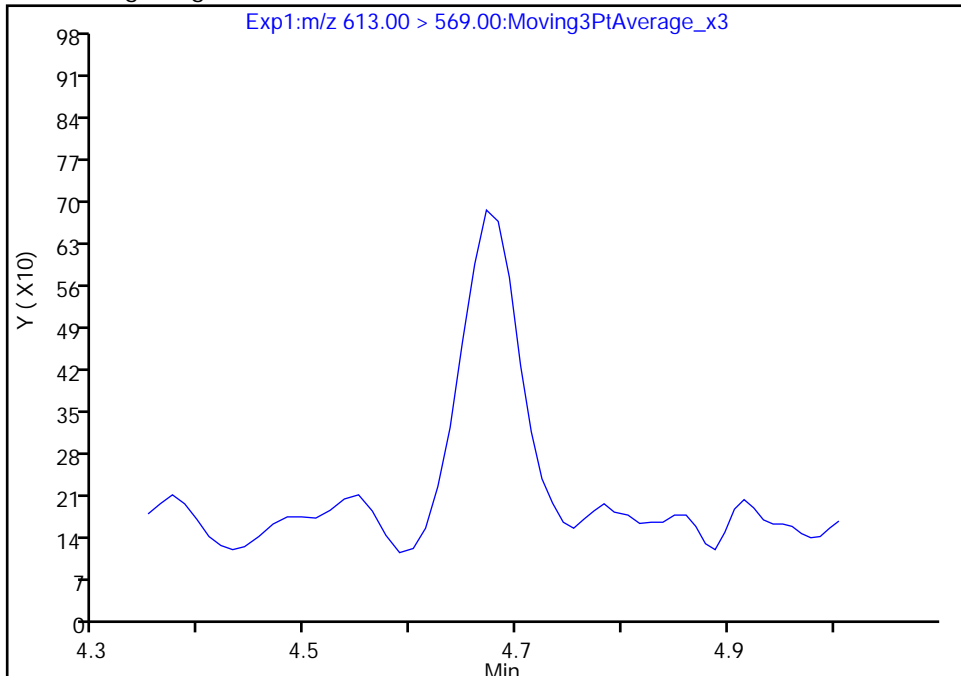
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B013.d  
Injection Date: 24-Dec-2019 15:34:25 Instrument ID: LC812  
Lims ID: 480-164221-C-4-A Lab Sample ID: 200-164221-4  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

37 Perfluorododecanoic acid, CAS: 307-55-1

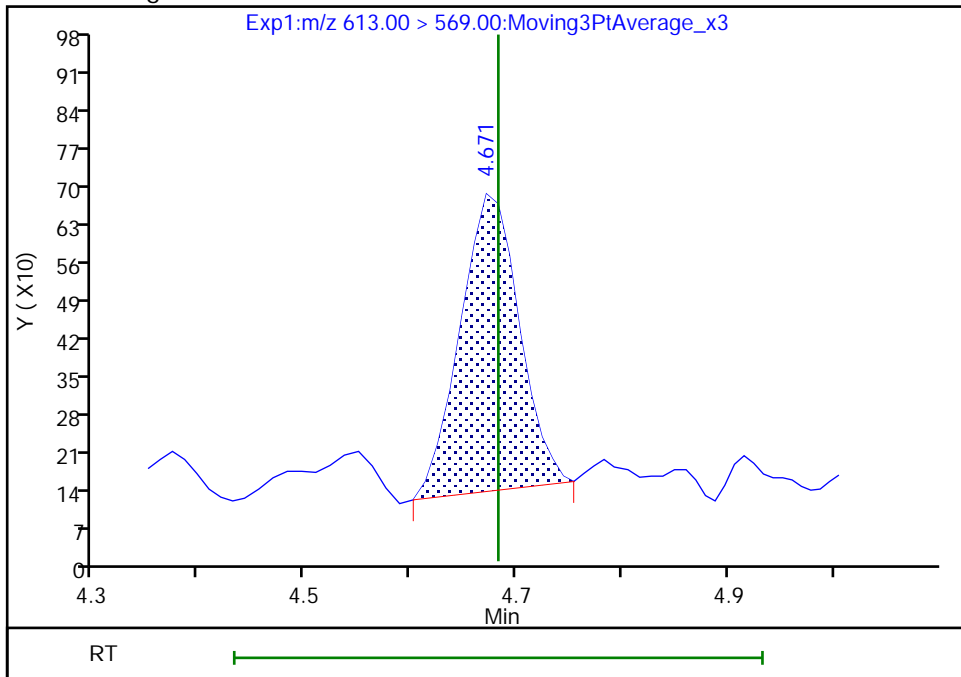
Signal: 1

Not Detected  
Expected RT: 4.68

Processing Integration Results



Manual Integration Results



RT: 4.67  
Area: 2139  
Amount: 0.005258  
Amount Units: ng/ml

Reviewer: lautenschlagery, 27-Dec-2019 13:07:10  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

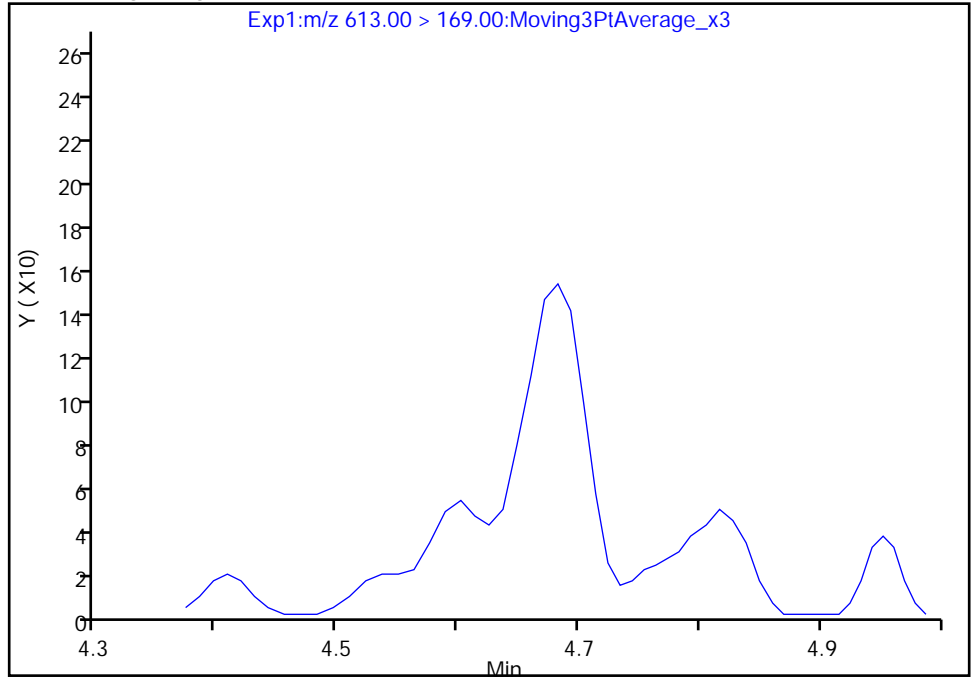
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B013.d  
Injection Date: 24-Dec-2019 15:34:25 Instrument ID: LC812  
Lims ID: 480-164221-C-4-A Lab Sample ID: 200-164221-4  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

37 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 2

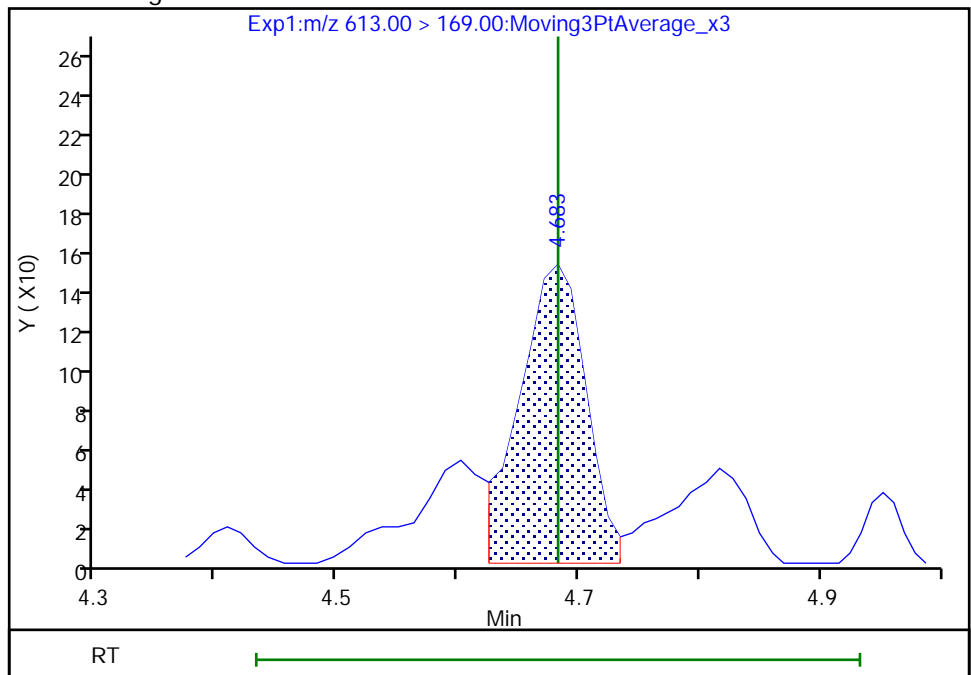
Not Detected  
Expected RT: 4.68

Processing Integration Results



Manual Integration Results

RT: 4.68  
Area: 559  
Amount: 0.005258  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

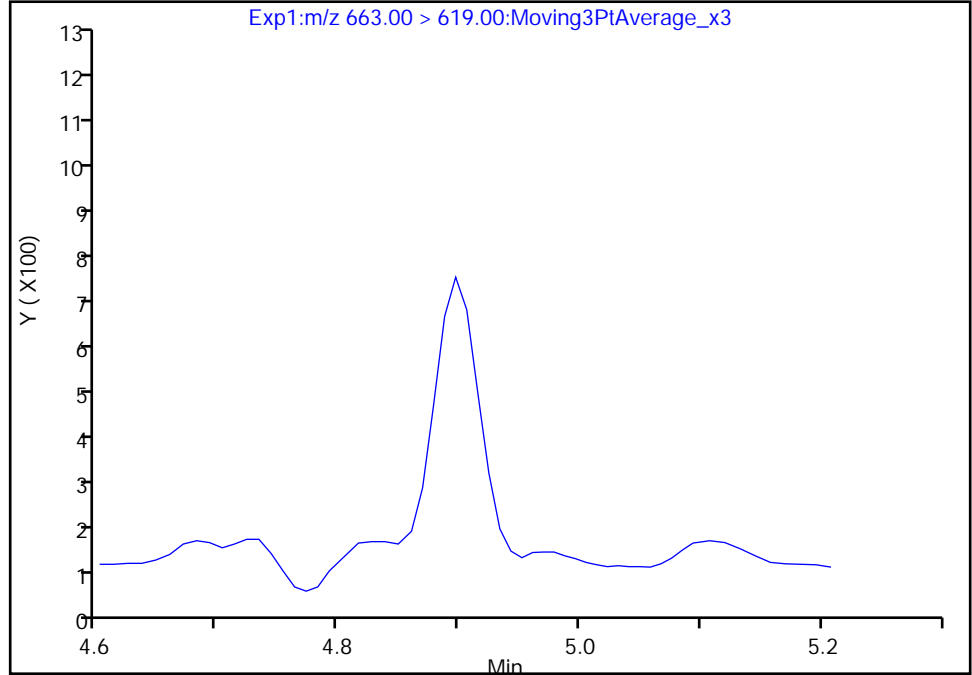
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B013.d  
Injection Date: 24-Dec-2019 15:34:25 Instrument ID: LC812  
Lims ID: 480-164221-C-4-A Lab Sample ID: 200-164221-4  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

41 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 1

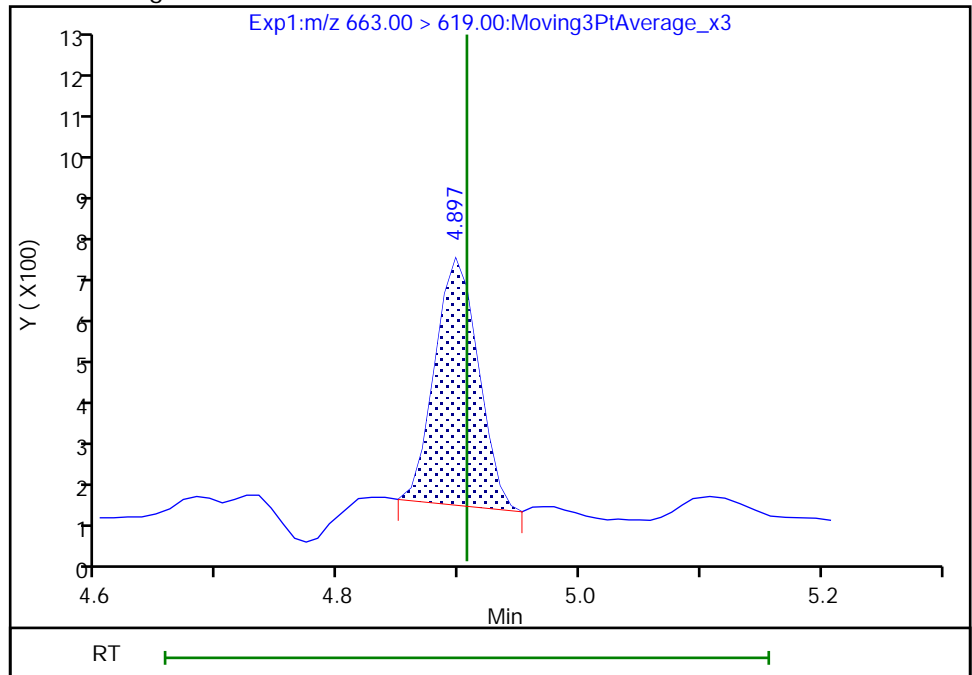
Not Detected  
Expected RT: 4.91

Processing Integration Results



Manual Integration Results

RT: 4.90  
Area: 1441  
Amount: 0.003729  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 13:08:07

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Eurofins TestAmerica, Burlington

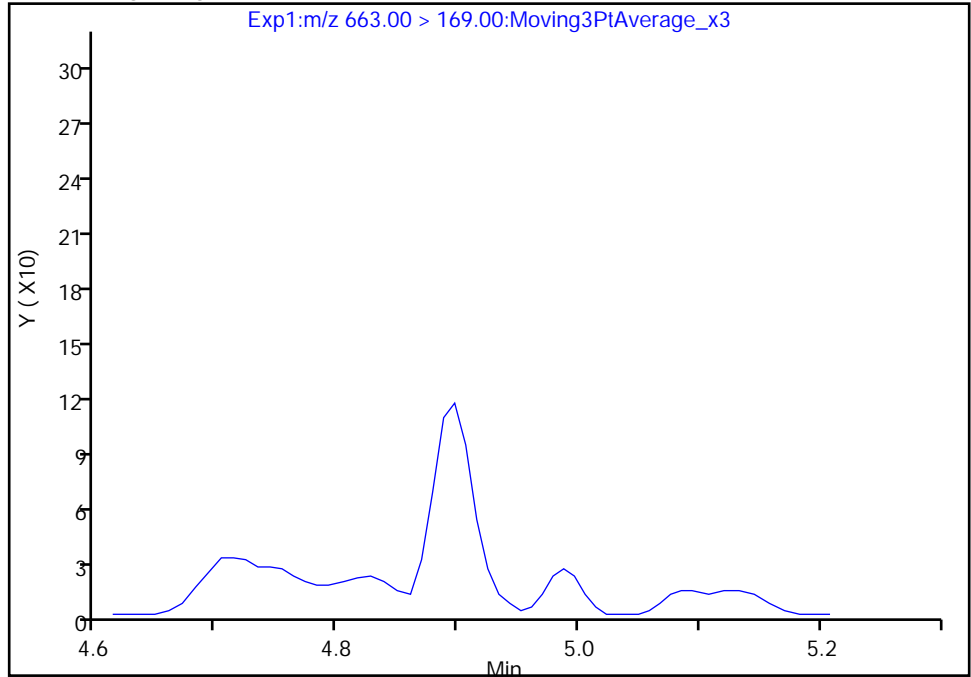
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B013.d  
Injection Date: 24-Dec-2019 15:34:25 Instrument ID: LC812  
Lims ID: 480-164221-C-4-A Lab Sample ID: 200-164221-4  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

41 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 2

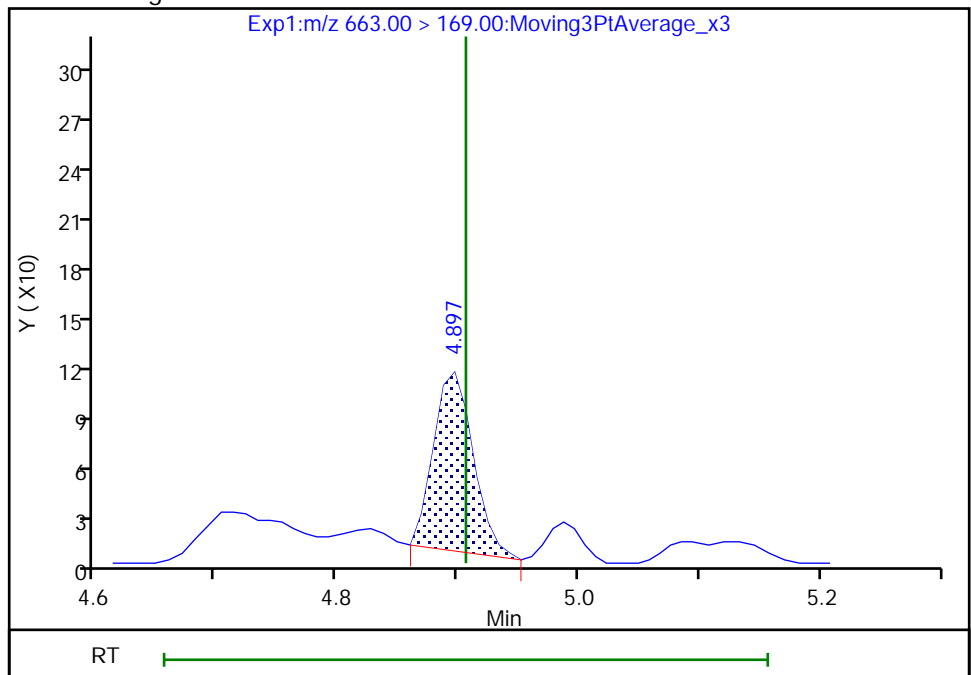
Not Detected  
Expected RT: 4.91

Processing Integration Results



Manual Integration Results

RT: 4.90  
Area: 246  
Amount: 0.003729  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 13:08:13

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

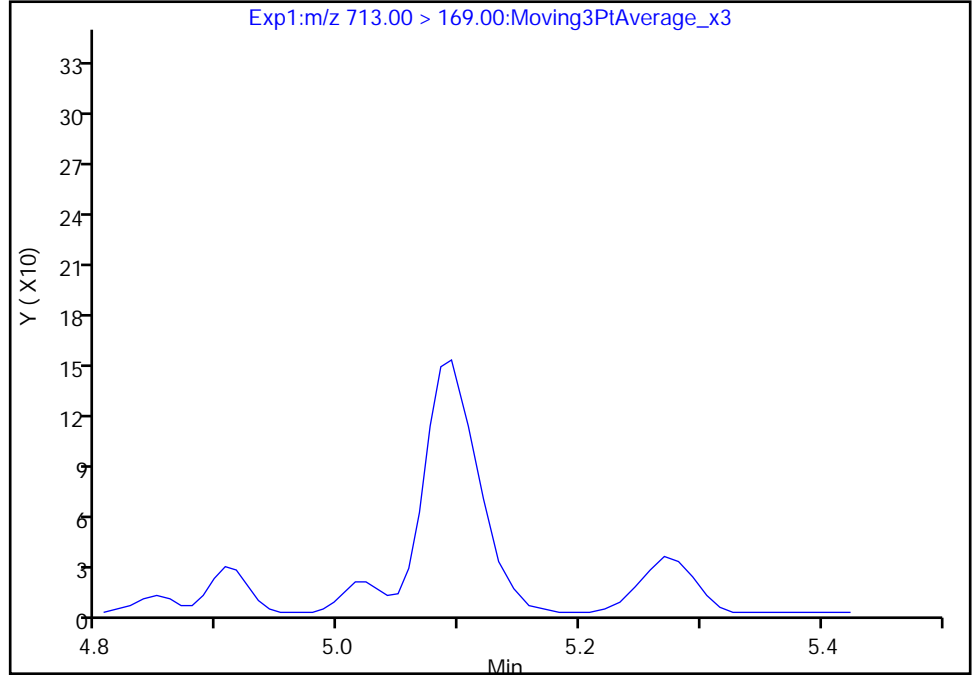
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B013.d  
Injection Date: 24-Dec-2019 15:34:25 Instrument ID: LC812  
Lims ID: 480-164221-C-4-A Lab Sample ID: 200-164221-4  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 1

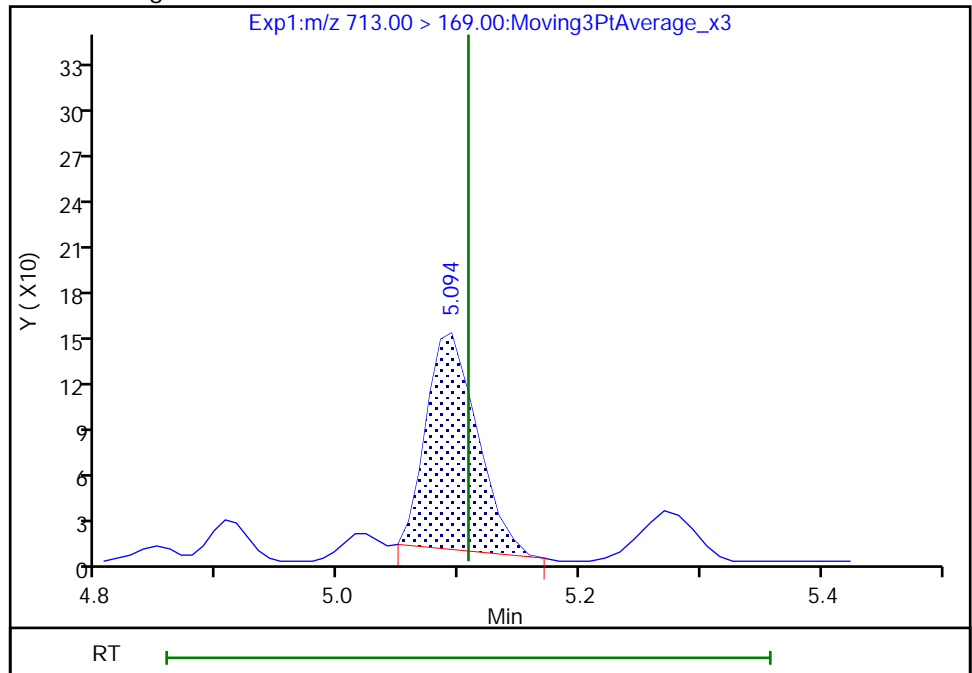
Not Detected  
Expected RT: 5.11

Processing Integration Results



Manual Integration Results

RT: 5.09  
Area: 412  
Amount: 0.005936  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 13:09:42  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

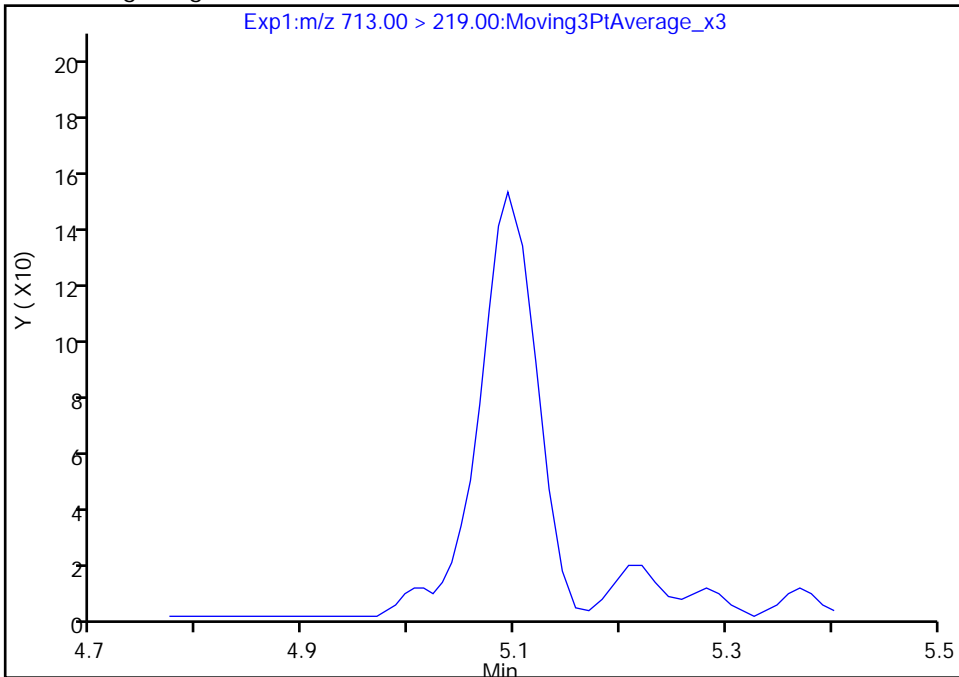
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B013.d  
Injection Date: 24-Dec-2019 15:34:25 Instrument ID: LC812  
Lims ID: 480-164221-C-4-A Lab Sample ID: 200-164221-4  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 2

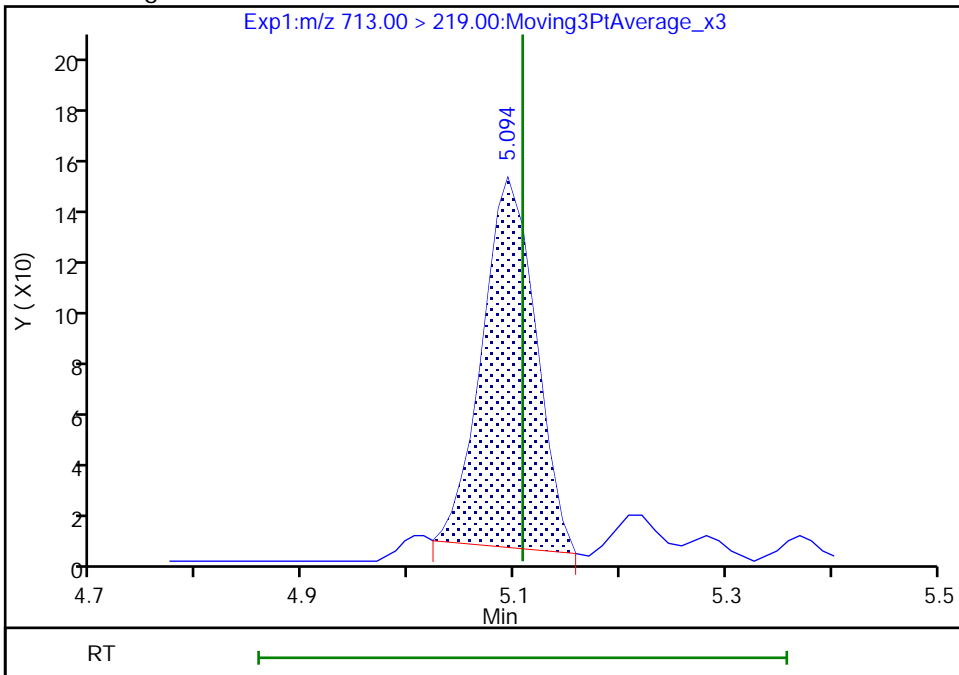
Not Detected  
Expected RT: 5.11

Processing Integration Results



Manual Integration Results

RT: 5.09  
Area: 508  
Amount: 0.005936  
Amount Units: ng/ml



Euofins TestAmerica, Burlington

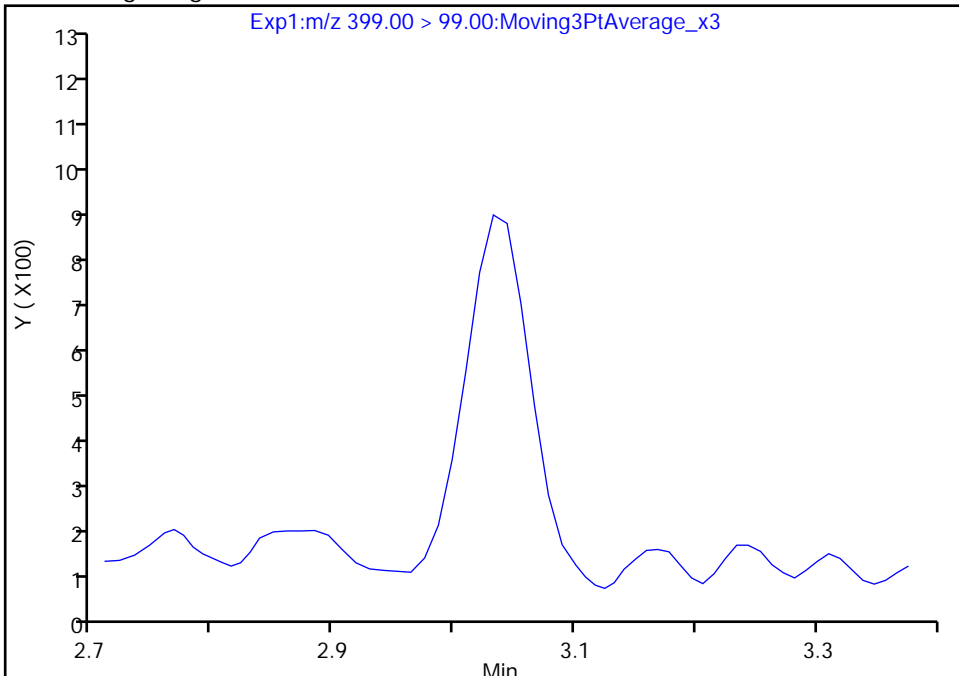
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B013.d  
Injection Date: 24-Dec-2019 15:34:25 Instrument ID: LC812  
Lims ID: 480-164221-C-4-A Lab Sample ID: 200-164221-4  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

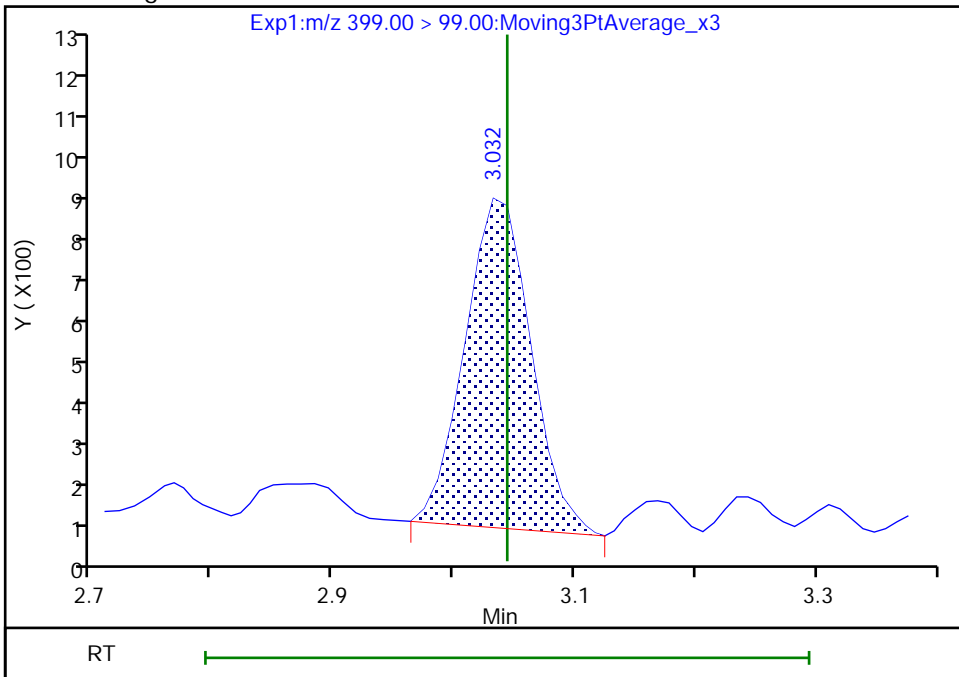
Not Detected  
Expected RT: 3.04

Processing Integration Results



Manual Integration Results

RT: 3.03  
Area: 2912  
Amount: 0.023764  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 12:51:44  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

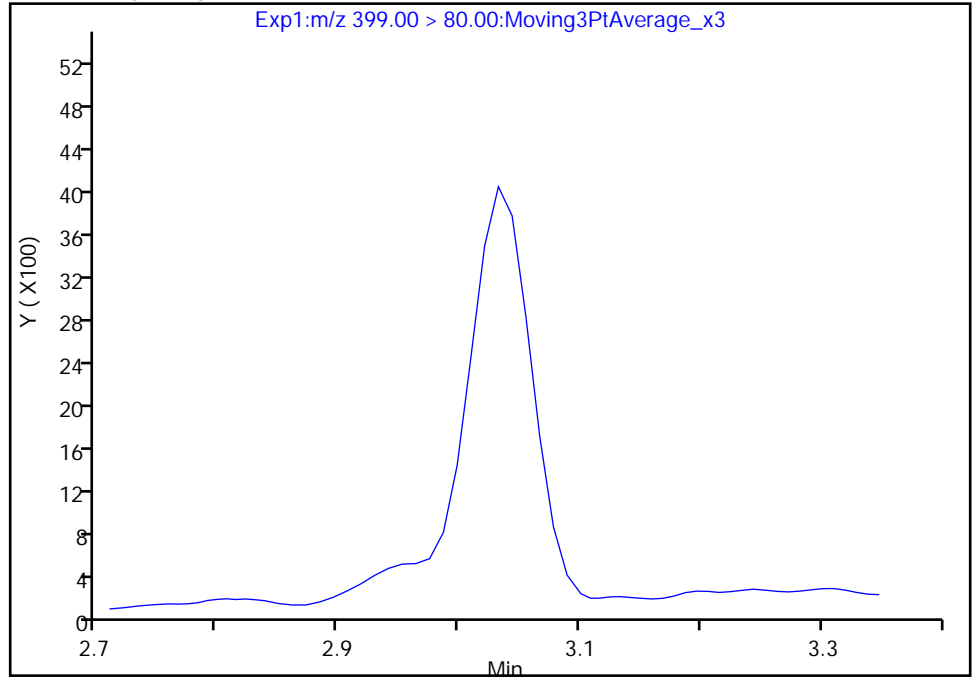
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B013.d  
Injection Date: 24-Dec-2019 15:34:25 Instrument ID: LC812  
Lims ID: 480-164221-C-4-A Lab Sample ID: 200-164221-4  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

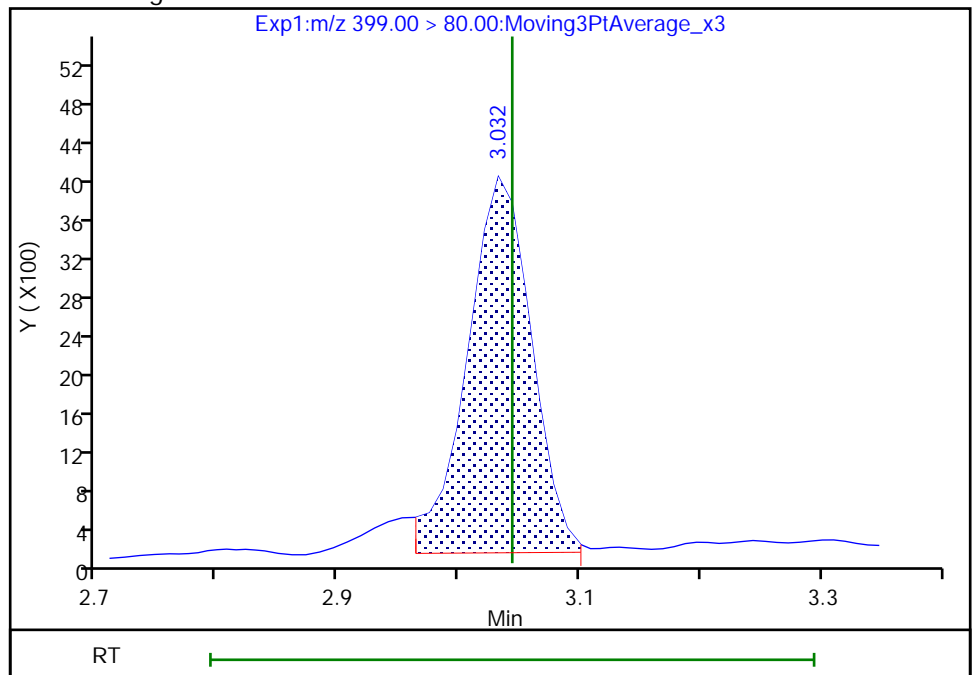
Not Detected  
Expected RT: 3.04

Processing Integration Results



Manual Integration Results

RT: 3.03  
Area: 14264  
Amount: 0.023764  
Amount Units: ng/ml



Reviewer: lautenschlagerng, 27-Dec-2019 12:52:06

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

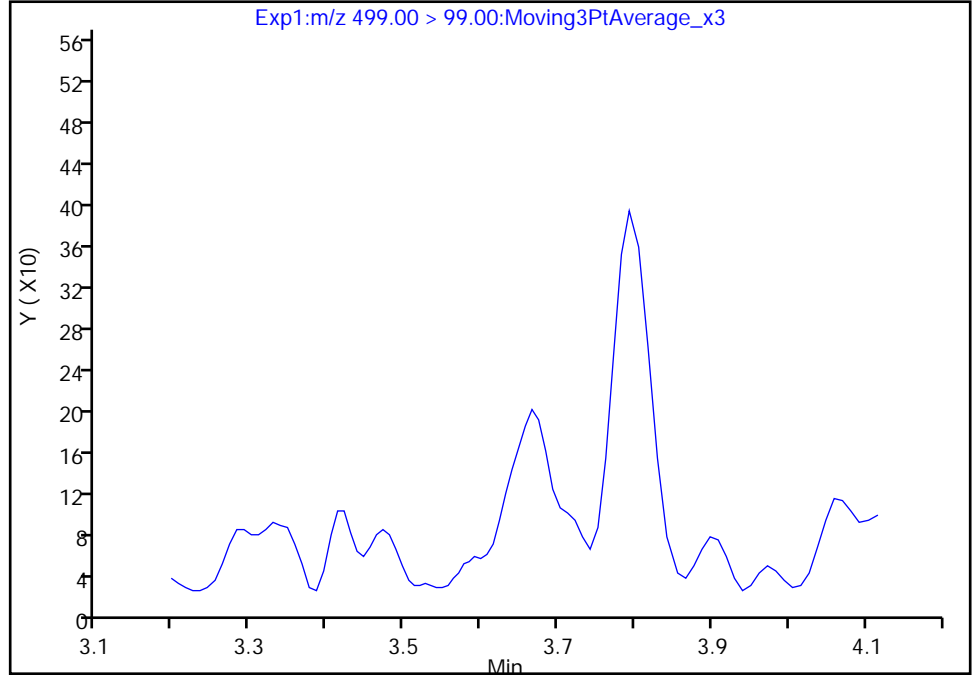
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B013.d  
Injection Date: 24-Dec-2019 15:34:25 Instrument ID: LC812  
Lims ID: 480-164221-C-4-A Lab Sample ID: 200-164221-4  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

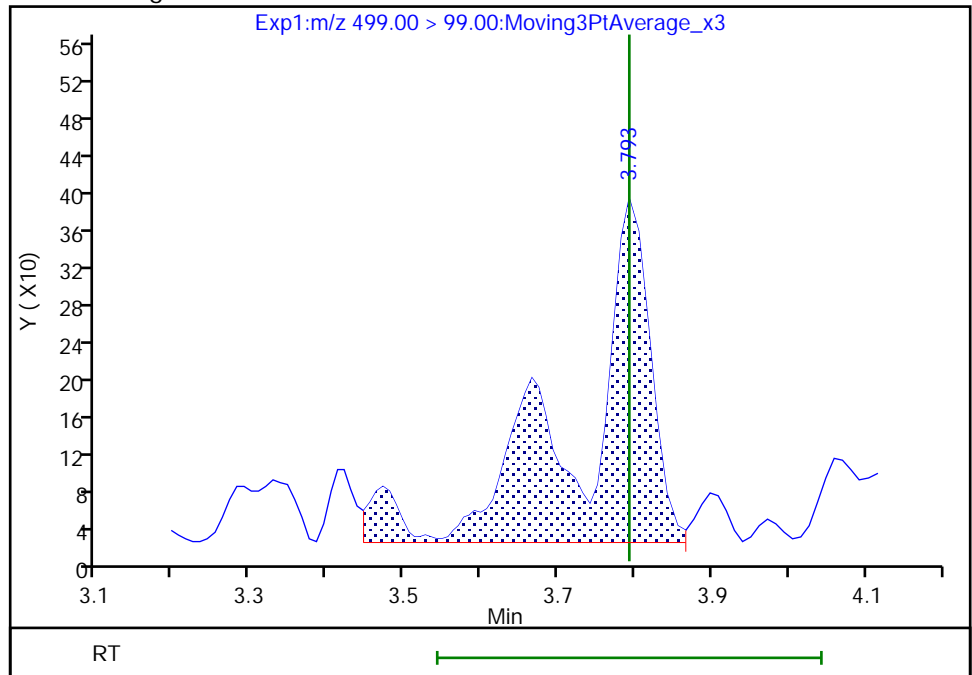
Not Detected  
Expected RT: 3.79

Processing Integration Results



RT: 3.79  
Area: 2347  
Amount: 0.031234  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 12:56:06  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

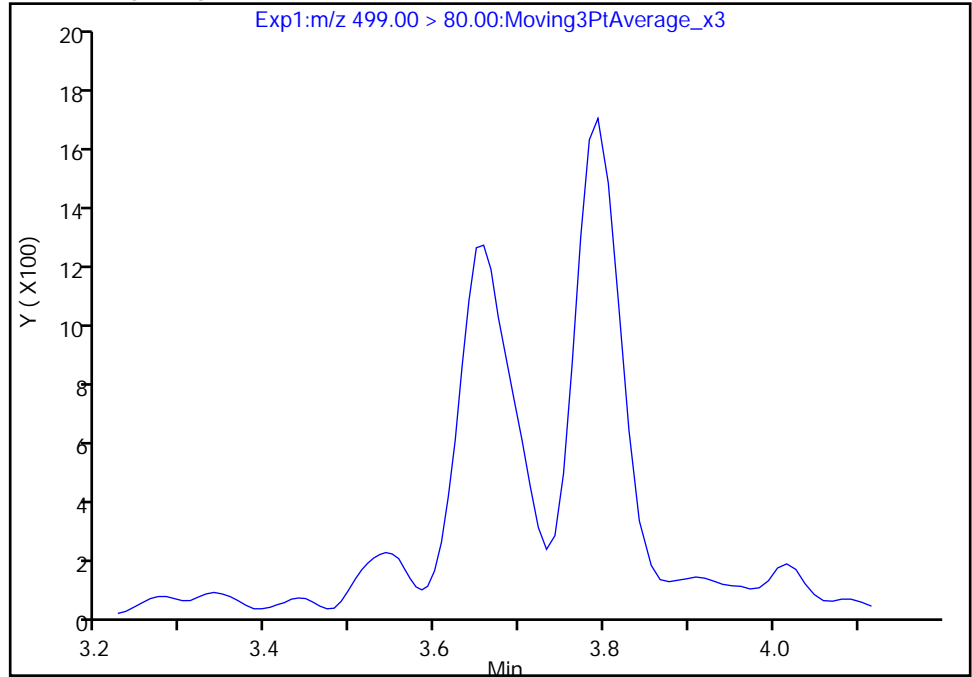
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B013.d  
Injection Date: 24-Dec-2019 15:34:25 Instrument ID: LC812  
Lims ID: 480-164221-C-4-A Lab Sample ID: 200-164221-4  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

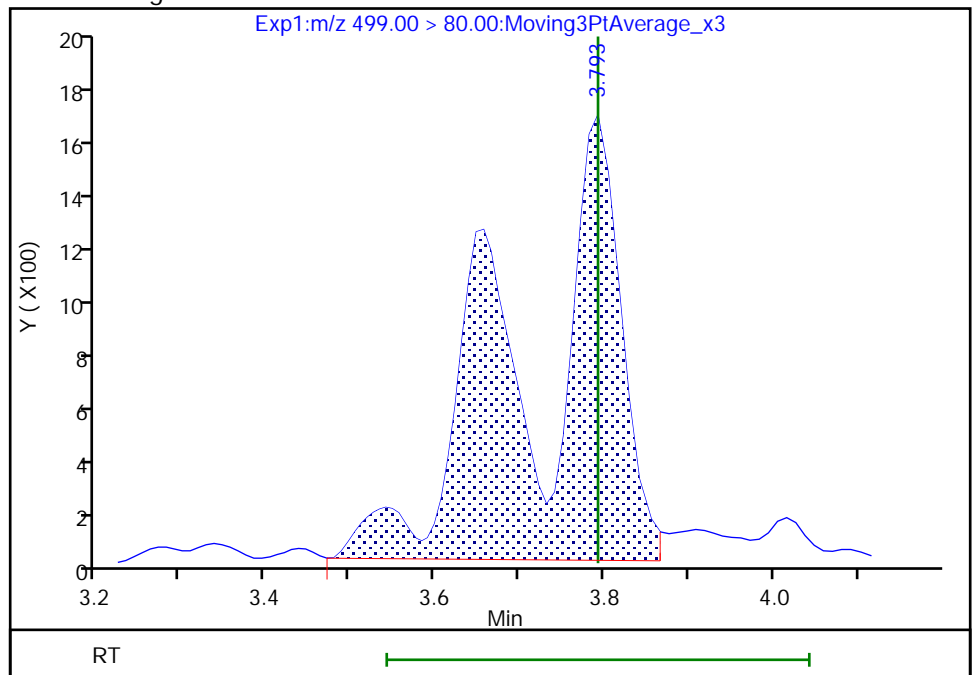
Not Detected  
Expected RT: 3.79

Processing Integration Results



Manual Integration Results

RT: 3.79  
Area: 13212  
Amount: 0.031234  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 12:56:19

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

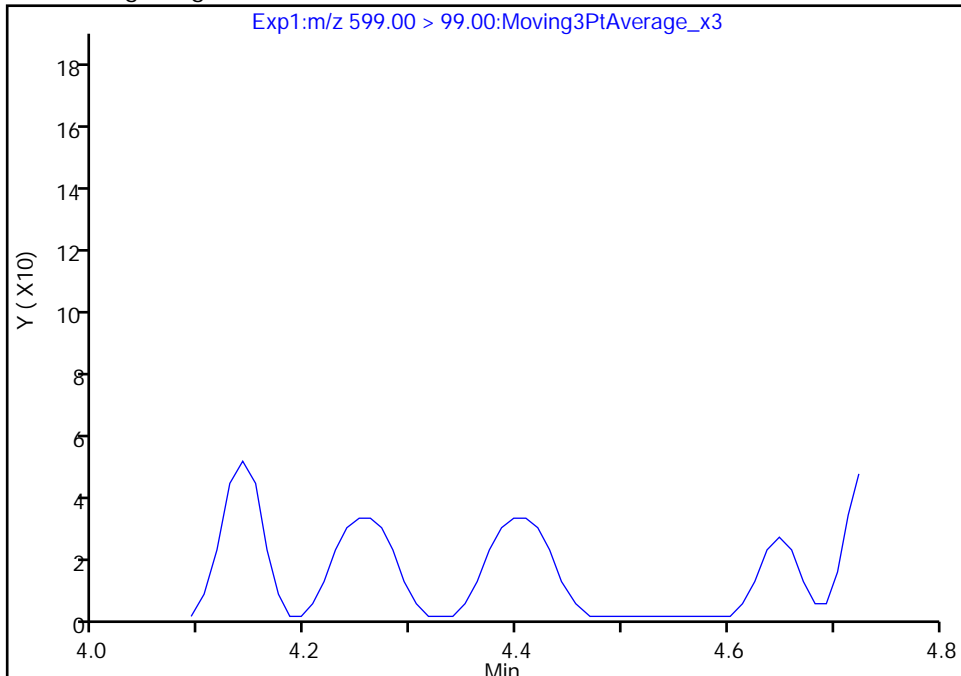
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B013.d  
Injection Date: 24-Dec-2019 15:34:25 Instrument ID: LC812  
Lims ID: 480-164221-C-4-A Lab Sample ID: 200-164221-4  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

29 Perfluorodecanesulfonic acid, CAS: 335-77-3

Signal: 2

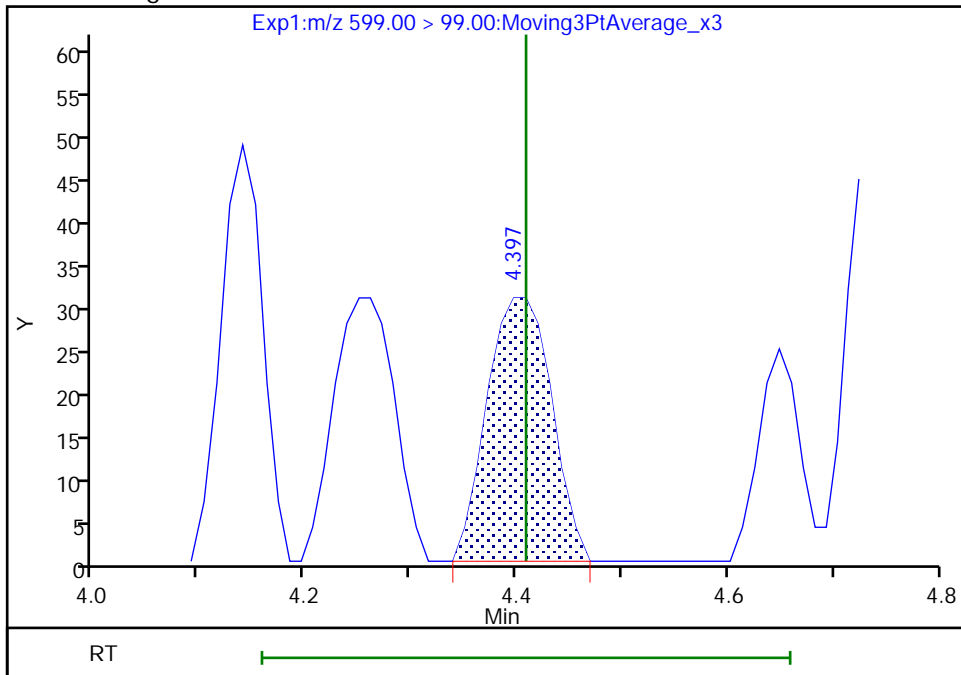
Not Detected  
Expected RT: 4.41

Processing Integration Results



Manual Integration Results

RT: 4.40  
Area: 131  
Amount: 0.002153  
Amount Units: ng/ml





Eurofins TestAmerica, Burlington

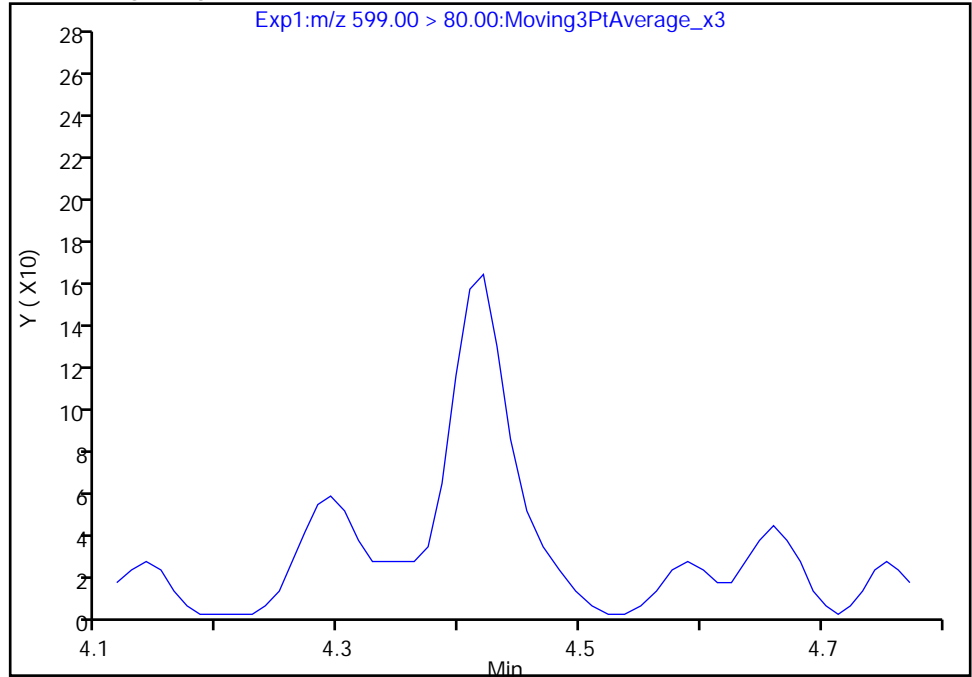
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B013.d  
Injection Date: 24-Dec-2019 15:34:25 Instrument ID: LC812  
Lims ID: 480-164221-C-4-A Lab Sample ID: 200-164221-4  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

29 Perfluorodecanesulfonic acid, CAS: 335-77-3

Signal: 1

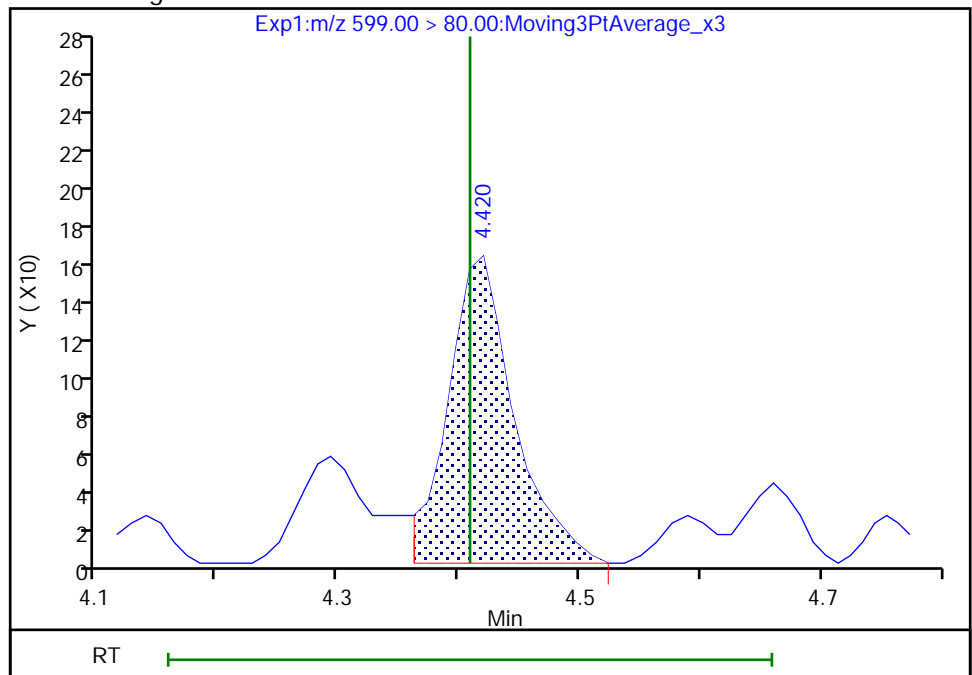
Not Detected  
Expected RT: 4.41

Processing Integration Results



Manual Integration Results

RT: 4.42  
Area: 607  
Amount: 0.002153  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

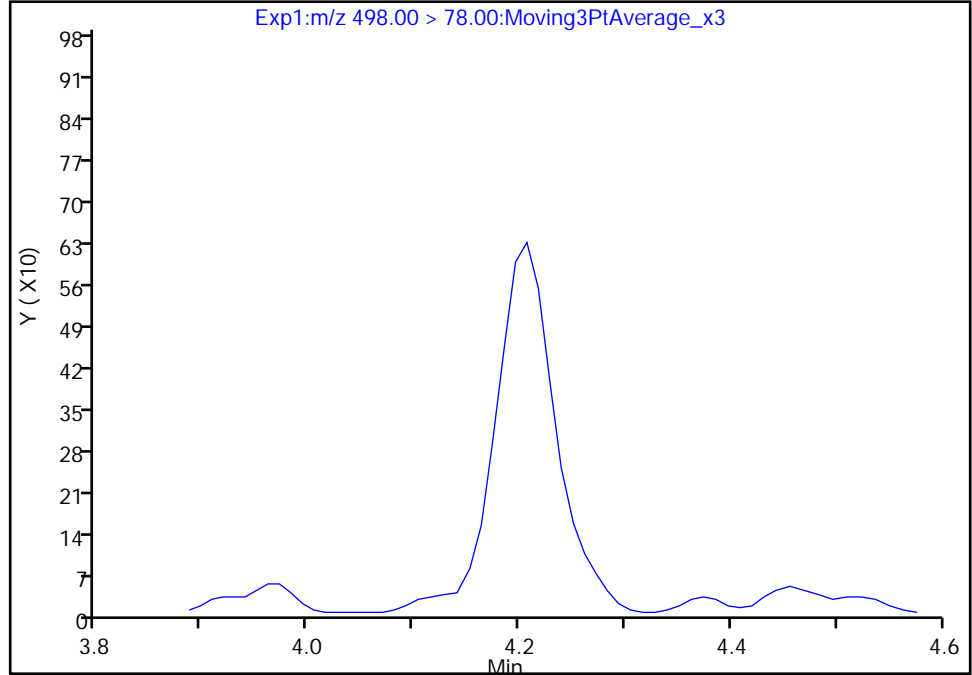
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B013.d  
Injection Date: 24-Dec-2019 15:34:25 Instrument ID: LC812  
Lims ID: 480-164221-C-4-A Lab Sample ID: 200-164221-4  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

22 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

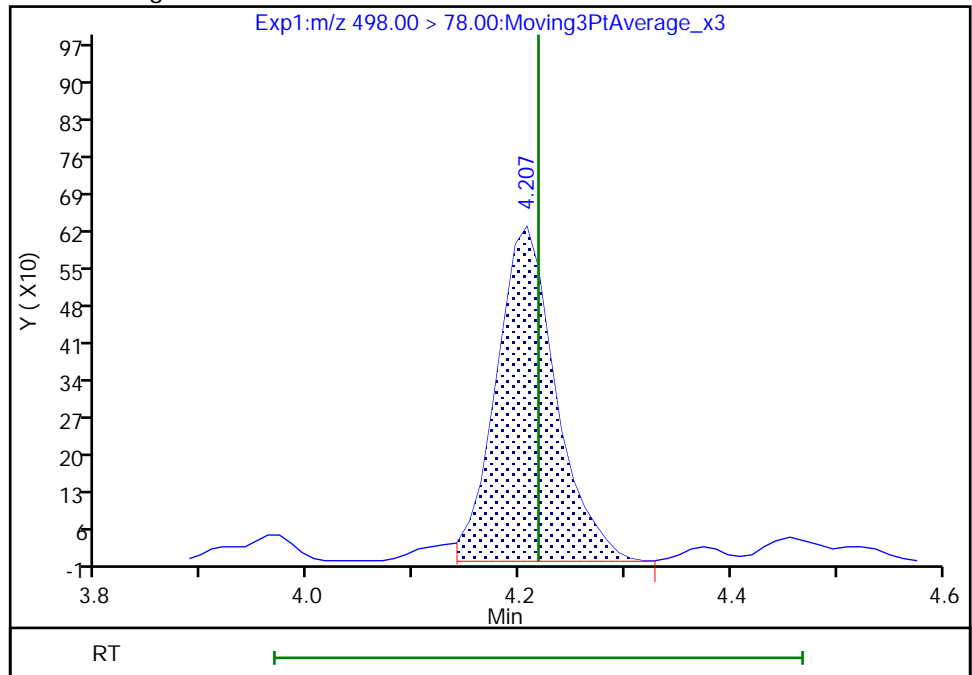
Not Detected  
Expected RT: 4.22

Processing Integration Results



Manual Integration Results

RT: 4.21  
Area: 2446  
Amount: 0.004026  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 13:00:51

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

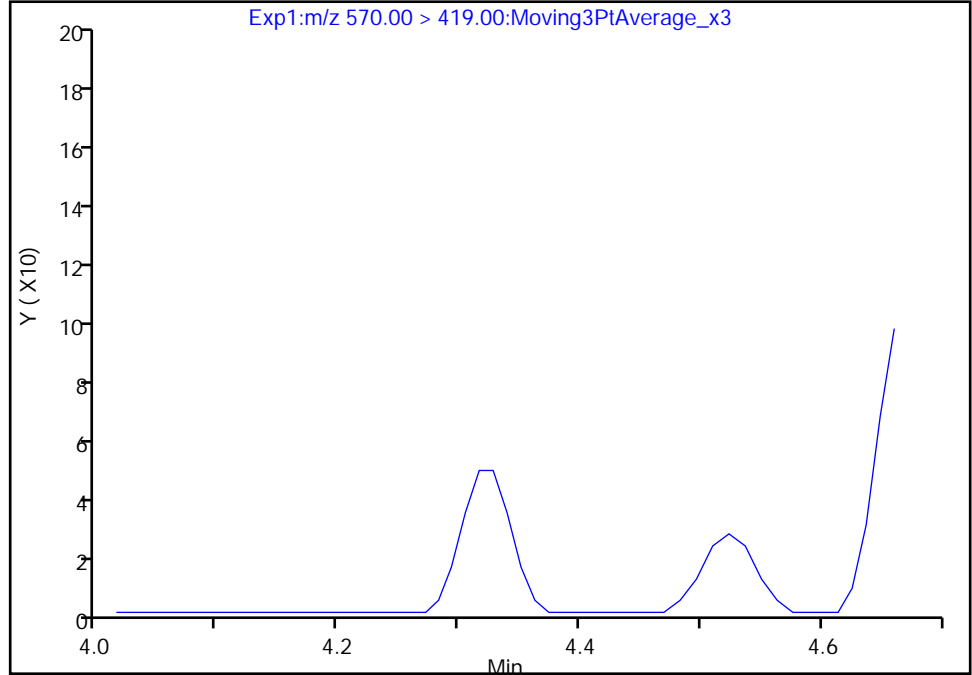
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B013.d  
Injection Date: 24-Dec-2019 15:34:25 Instrument ID: LC812  
Lims ID: 480-164221-C-4-A Lab Sample ID: 200-164221-4  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

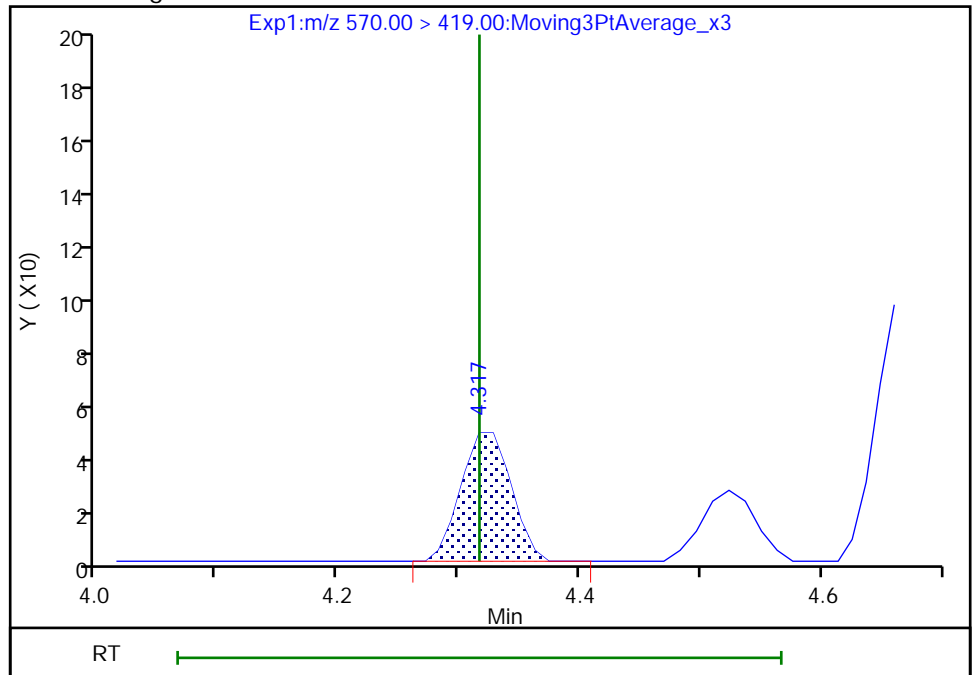
Not Detected  
Expected RT: 4.32

Processing Integration Results



Manual Integration Results

RT: 4.32  
Area: 136  
Amount: 0.003460  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 13:05:21  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

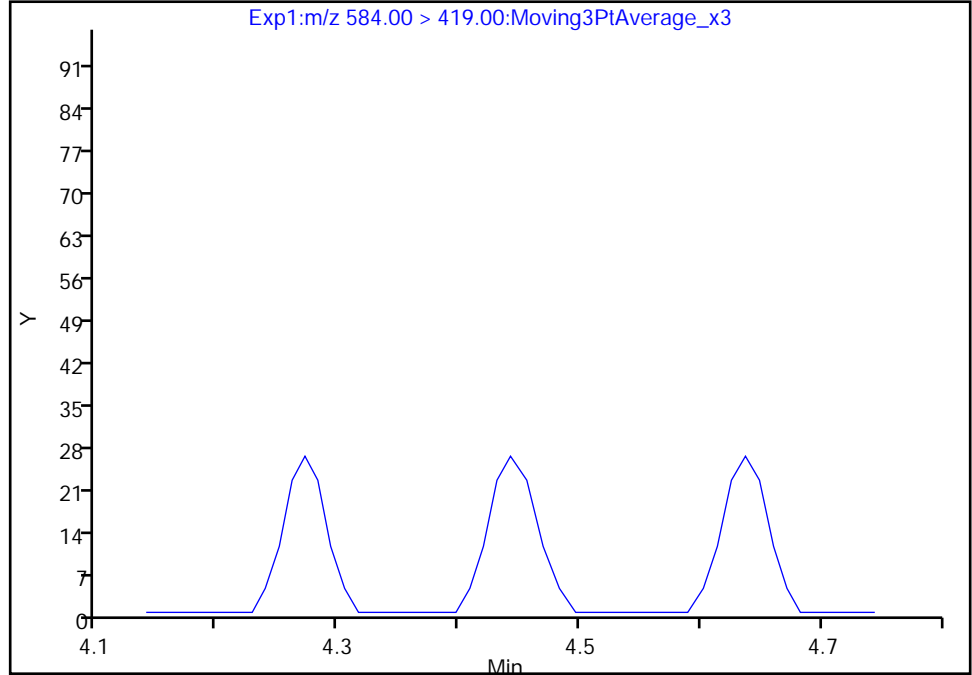
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B013.d  
Injection Date: 24-Dec-2019 15:34:25 Instrument ID: LC812  
Lims ID: 480-164221-C-4-A Lab Sample ID: 200-164221-4  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

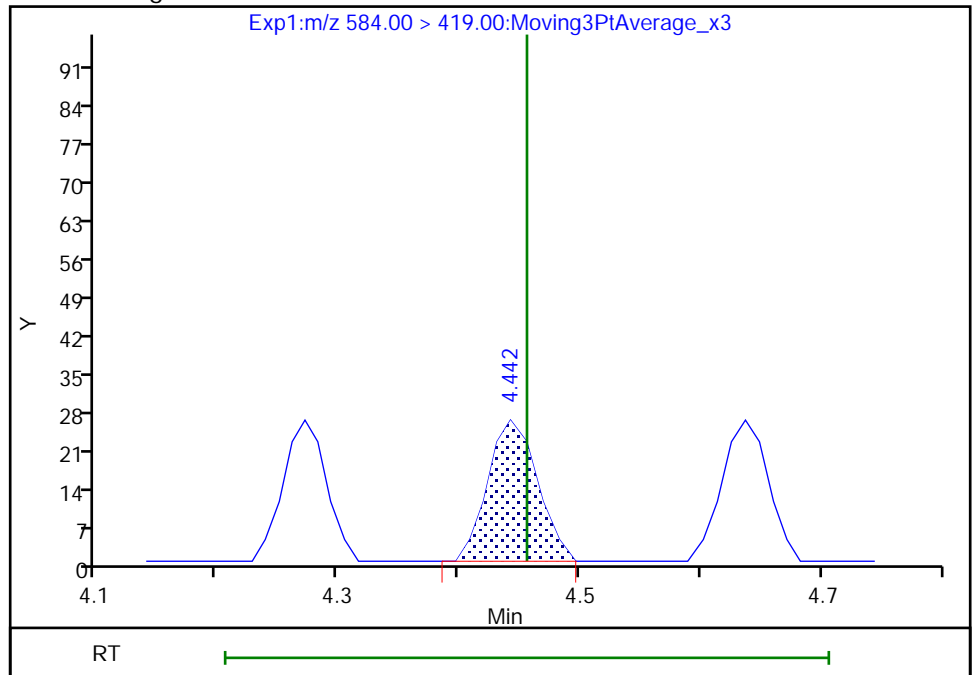
Not Detected  
Expected RT: 4.46

Processing Integration Results



Manual Integration Results

RT: 4.44  
Area: 74  
Amount: 0.001668  
Amount Units: ng/ml



Euofins TestAmerica, Burlington

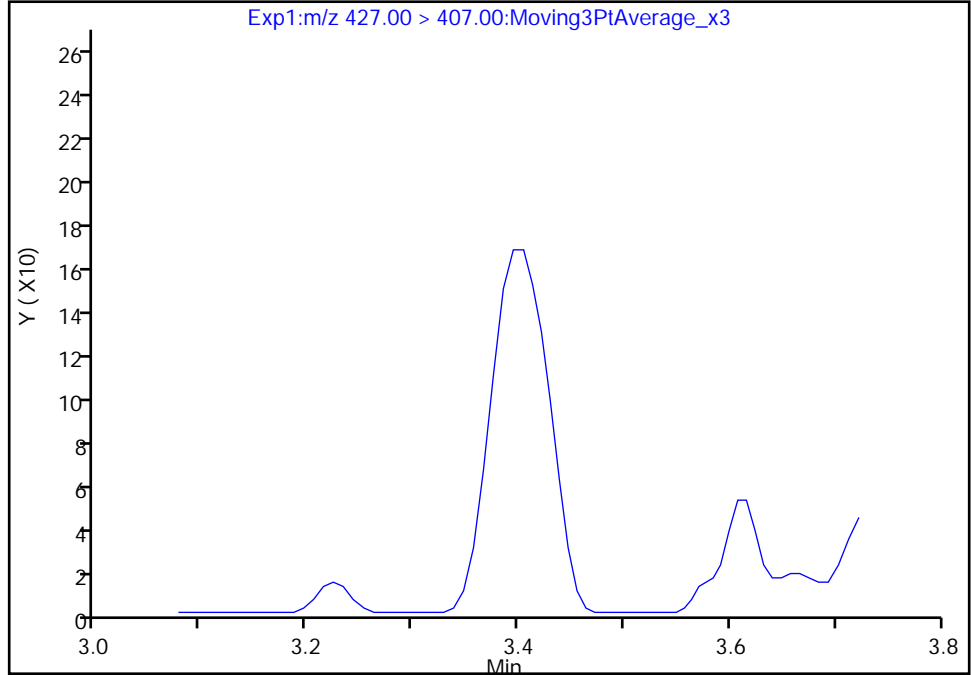
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B013.d  
Injection Date: 24-Dec-2019 15:34:25 Instrument ID: LC812  
Lims ID: 480-164221-C-4-A Lab Sample ID: 200-164221-4  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

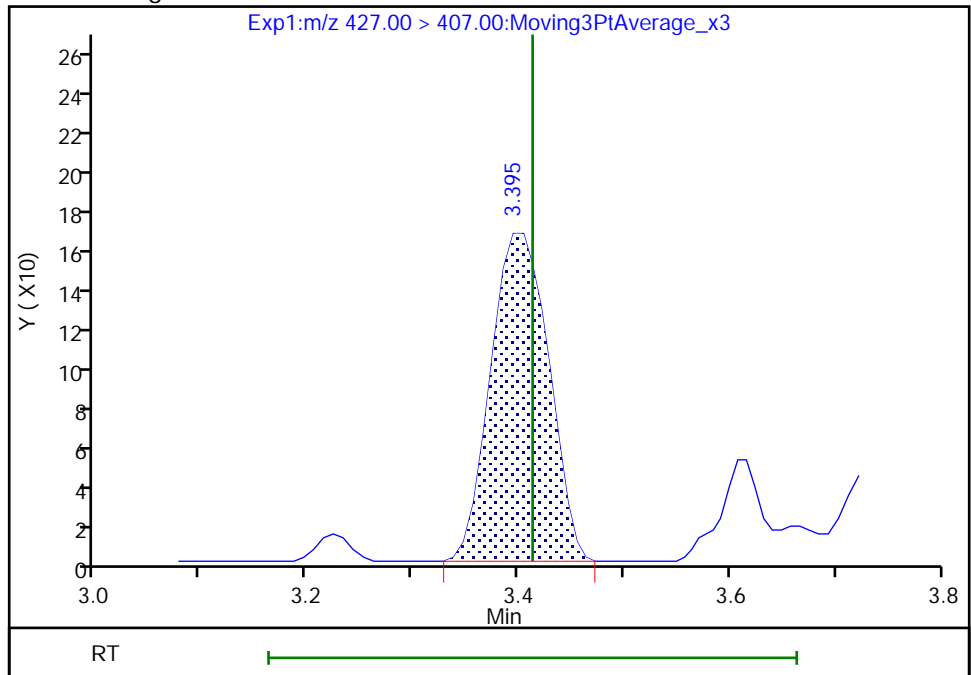
Not Detected  
Expected RT: 3.41

Processing Integration Results



Manual Integration Results

RT: 3.39  
Area: 640  
Amount: 0.009797  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 12:53:09

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

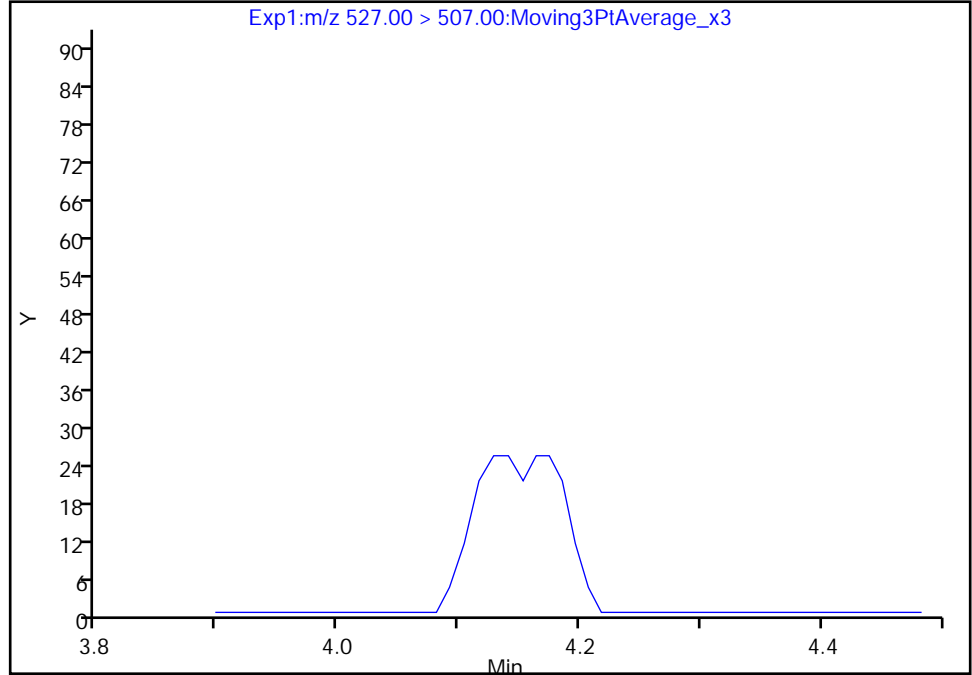
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B013.d  
Injection Date: 24-Dec-2019 15:34:25 Instrument ID: LC812  
Lims ID: 480-164221-C-4-A Lab Sample ID: 200-164221-4  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

25 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:, CAS: 39108-34-4

Signal: 1

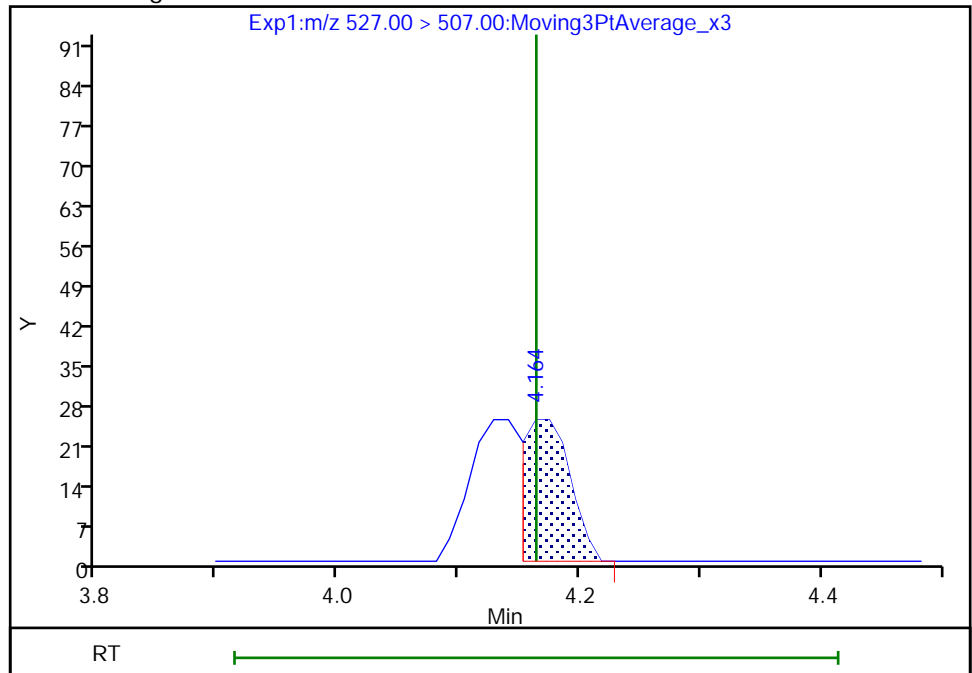
Not Detected  
Expected RT: 4.16

Processing Integration Results



Manual Integration Results

RT: 4.16  
Area: 62  
Amount: 0.001325  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 13:04:48  
Audit Action: Manually Integrated

Audit Reason: Split Peak

FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: FIELD DUP Lab Sample ID: 480-164221-5  
 Matrix: Water Lab File ID: SC122319B016.d  
 Analysis Method: 537 (modified) Date Collected: 12/12/2019 00:00  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 303.2 (mL) Date Analyzed: 12/24/2019 15:59  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 20 (uL) GC Column: C-18 ID: 4.6 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	1.0	J	1.6	0.82
2706-90-3	Perfluoropentanoic acid (PFPeA)	ND		1.6	0.52
307-24-4	Perfluorohexanoic acid (PFHxA)	ND		1.6	0.63
375-85-9	Perfluoroheptanoic acid (PFHpA)	ND		1.6	0.75
335-67-1	Perfluorooctanoic acid (PFOA)	1.7		1.6	0.67
375-95-1	Perfluorononanoic acid (PFNA)	0.31	J	1.6	0.22
335-76-2	Perfluorodecanoic acid (PFDA)	ND		1.6	0.63
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		1.6	0.64
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		1.6	0.49
72629-94-8	Perfluorotridecanoic acid (PFTriA)	ND		1.6	0.49
376-06-7	Perfluorotetradecanoic acid (PFTeA)	ND		1.6	0.76
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.50	J	1.6	0.40
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	ND		1.6	0.66
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.6	0.78
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	ND		1.6	0.50
335-77-3	Perfluorodecanesulfonic acid (PFDS)	ND		1.6	0.74
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND		8.2	8.2
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		16	1.4
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		16	1.2
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		16	4.5
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		16	2.4

FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: FIELD DUP Lab Sample ID: 480-164221-5  
 Matrix: Water Lab File ID: SC122319B016.d  
 Analysis Method: 537 (modified) Date Collected: 12/12/2019 00:00  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 303.2 (mL) Date Analyzed: 12/24/2019 15:59  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 20 (uL) GC Column: C-18 ID: 4.6 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	105		50-150
STL01892	13C4 PFHpA	102		50-150
STL00990	13C4 PFOA	94		50-150
STL00991	13C4 PFOS	95		50-150
STL00995	13C5 PFNA	88		50-150
STL00992	13C4 PFBA	80		25-150
STL00993	13C2 PFHxA	95		50-150
STL00996	13C2 PFDA	90		50-150
STL00997	13C2 PFUnA	88		50-150
STL00998	13C2 PFDoA	75		50-150
STL01056	13C8 FOSA	81		25-150
STL01893	13C5 PFPeA	93		25-150
STL02116	13C2 PFTeDA	71		50-150
STL02118	d3-NMeFOSAA	79		50-150
STL02117	d5-NEtFOSAA	78		50-150
STL02279	M2-6:2 FTS	82		25-150
STL02280	M2-8:2 FTS	93		25-150
STL02337	13C3 PFBS	96		50-150



Eurofins TestAmerica, Burlington  
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B016.d  
 Lims ID: 480-164221-C-5-A  
 Client ID: FIELD DUP  
 Sample Type: Client  
 Inject. Date: 24-Dec-2019 15:59:01 ALS Bottle#: 16 Worklist Smp#: 16  
 Injection Vol: 20.0 ul Dil. Factor: 1.0000  
 Sample Info: 480-164221-C-5-A  
 Misc. Info.: 200-0039355-016 Plate: 1 Rack: 2  
 Operator ID: lc812tech Instrument ID: LC812  
 Method: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\PFC\_LC812.m  
 Limit Group: LC\_PFC\_ICAL  
 Last Update: 30-Dec-2019 15:06:05 Calib Date: 06-Dec-2019 15:13:26  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Column 1 : C-18 ( 4.60 mm) Det: EXP1  
 Process Host: CTX0330

First Level Reviewer: lautenschlagery Date: 27-Dec-2019 13:43:04  
 Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	1.908	1.908	0.0	0.556	1373438	2.01	80.4	2842	
2 Perfluorobutanoic acid										M
212.90 > 169.00	1.908	1.908	0.0	1.000	16841	0.0308		3.6		M
D 3 13C5 PFPeA	267.90 > 223.00	2.258	2.257	0.001	0.658	1214615	2.33	93.0	3686	
4 Perfluoropentanoic acid										M
262.90 > 219.00	2.258	2.271	-0.013	1.000	8369	0.0152		0.4		M
D 47 13C3 PFBS	301.90 > 80.00	2.271	2.285	-0.014	0.662	1387236	2.23	95.8	234293	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.285	2.285	0.0	1.006	9863	0.0152	Target=2.03	14.7		
298.90 > 99.00	2.285	2.285	0.0	1.006	5759		1.71(1.01-3.04)	4.3		
D 7 13C2 PFHxA	315.00 > 270.00	2.648	2.648	0.0	0.772	1385166	2.38	95.2	4195	
6 Perfluorohexanoic acid										M
313.00 > 269.00	2.648	2.661	-0.013	1.000	10517	0.0186	Target=13.76	2.8		M
313.00 > 119.00	2.661	2.661	0.0	1.005	993		10.59(6.88-20.64)	3.4		M
D 11 18O2 PFHxS	403.00 > 84.00	3.044	3.044	0.0	0.887	1215690	2.47	105	8251	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.044	3.044	0.0	1.000	10605	0.0182	Target=3.90	16.0		M
399.00 > 99.00	3.033	3.044	-0.011	0.996	2635		4.02(1.95-5.85)	6.7		M
D 9 13C4 PFHpA	367.00 > 322.00	3.044	3.044	0.0	0.887	1400771	2.54	102	7945	
10 Perfluoroheptanoic acid										M
363.00 > 319.00	3.044	3.044	0.0	1.000	8988	0.0152	Target=3.95	2.7		M
363.00 > 169.00	3.044	3.044	0.0	1.000	2610		3.44(1.97-5.92)	10.1		M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
16 Perfluoroheptanesulfonic acid										M
449.00 > 80.00	3.413	3.413	0.0	0.900	1462	0.003232	Target=6.46	14.2		
449.00 > 99.00	3.430	3.413	0.017	0.904	322		4.54(3.23-9.69)	1.6		M
13 1H,1H,2H,2H-perfluorooctanesulfoni										M
427.00 > 407.00	3.413	3.413	0.0	1.000	682	0.0105		13.6		M
D 12 M2-6:2 FTS										
429.00 > 81.00	3.413	3.413	0.0	0.995	164064	1.94		81.8	510	
15 Perfluorooctanoic acid										M
413.00 > 369.00	3.422	3.430	-0.008	0.998	31098	0.0508	Target=2.40	10.9		M
413.00 > 169.00	3.430	3.430	0.0	1.000	14514		2.14(1.20-3.60)	58.7		
D 14 13C4 PFOA										
417.00 > 372.00	3.430	3.430	0.0	1.000	1379609	2.36		94.2	5563	
* 62 13C2 PFOA										
415.00 > 370.00	3.430	3.430	0.0		1611745	2.50			6466	
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.793	0.0	1.106	882708	2.26		94.6	2980	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.793	3.793	0.0	1.000	5283	0.0133	Target=5.74	9.8		M
499.00 > 99.00	3.793	3.793	0.0	1.000	866		6.10(2.87-8.61)	3.3		M
D 19 13C5 PFNA										
468.00 > 423.00	3.817	3.817	0.0	1.113	1184293	2.20		87.9	5232	
20 Perfluorononanoic acid										M
463.00 > 419.00	3.817	3.817	0.0	1.000	4311	0.009281	Target=7.01	2.2		M
463.00 > 169.00	3.830	3.817	0.013	1.003	641		6.73(3.50-10.51)	10.1		M
D 23 13C2 PFDA										
515.00 > 470.00	4.164	4.164	0.0	1.214	1195834	2.25		90.1	5894	
24 Perfluorodecanoic acid										M
513.00 > 469.00	4.164	4.164	0.0	1.000	2597	0.005612	Target=7.28	2.6		M
513.00 > 169.00	4.164	4.164	0.0	1.000	498		5.21(3.64-10.91)	5.0		M
25 1H,1H,2H,2H-perfluorodecanesulfoni										M
527.00 > 507.00	4.153	4.164	-0.011	0.997	132	0.003064		3.2		M
D 26 M2-8:2 FTS										
529.00 > 81.00	4.164	4.175	-0.011	1.214	223496	2.22		92.7	631	
D 21 13C8 FOSA										
506.00 > 78.00	4.218	4.218	0.0	1.230	1407265	2.03		81.1	7160	
22 Perfluorooctanesulfonamide										M
498.00 > 78.00	4.218	4.218	0.0	1.000	2232	0.003985		38.8		M
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.317	4.305	0.012	1.258	101302	1.98		79.3	1433	
28 N-methylperfluorooctanesulfonamido										M
570.00 > 419.00	4.317	4.317	0.0	1.000	136	0.003862		3.4		M
29 Perfluorodecanesulfonic acid										RM
599.00 > 80.00	4.409	4.409	0.0	1.162	911	0.003428	Target=2.76	6.1		RM
599.00 > 99.00	4.409	4.409	0.0	1.162	759		1.20(1.38-4.14)	12.6		M
D 30 13C2 PFUnA										
565.00 > 520.00	4.443	4.443	0.0	1.295	988126	2.19		87.6	5582	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
31 Perfluoroundecanoic acid										M
563.00 > 519.00	4.443	4.443	0.0	1.000	2495	0.007445	Target=5.78		4.5	
563.00 > 169.00	4.443	4.443	0.0	1.000	484		5.15(2.89-8.67)		6.2	M
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.456	4.456	0.0	1.299	110724	1.95		78.2	705	
37 Perfluorododecanoic acid										RM
613.00 > 569.00	4.693	4.683	0.010	1.002	1536	0.004459	Target=5.13		0.4	RM
613.00 > 169.00	4.693	4.683	0.010	1.002	168		9.14(2.56-7.69)		2.6	M
D 36 13C2 PFDaA										
615.00 > 570.00	4.683	4.683	0.0	1.365	932012	1.88		75.3	5933	
41 Perfluorotridecanoic acid										M
663.00 > 619.00	4.897	4.906	-0.009	1.046	1178	0.003600	Target=3.82		0.6	M
663.00 > 169.00	4.897	4.906	-0.009	1.046	479		2.46(1.91-5.74)		5.9	M
42 Perfluorotetradecanoic acid										M
713.00 > 169.00	5.108	5.108	0.0	1.000	333	0.005602	Target=1.05		7.3	M
713.00 > 219.00	5.094	5.108	-0.014	0.997	358		0.93(0.52-1.57)		9.7	M
D 43 13C2 PFTeDA										
715.00 > 670.00	5.108	5.108	0.0	1.489	739714	1.78		71.3	7549	

**QC Flag Legend**

Processing Flags

R - Failed Signal Ratio Test

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B016.d

Injection Date: 24-Dec-2019 15:59:01

Instrument ID: LC812

Lims ID: 480-164221-C-5-A

Lab Sample ID: 200-164221-5

Client ID: FIELD DUP

Operator ID: lc812tech

ALS Bottle#: 16

Worklist Smp#: 16

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

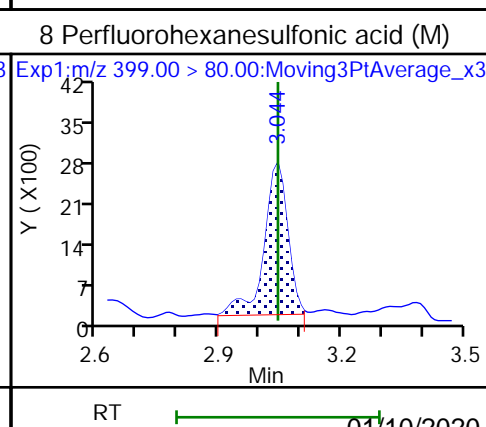
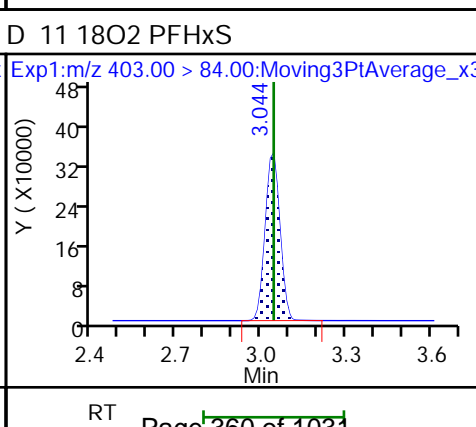
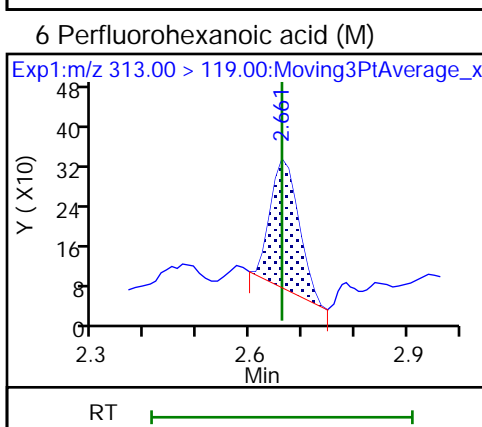
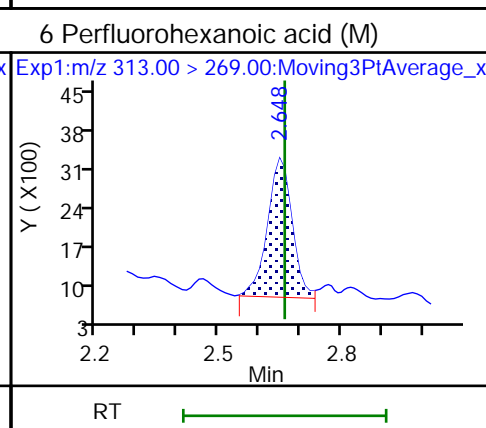
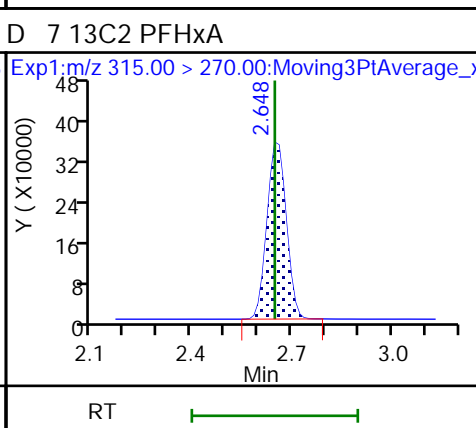
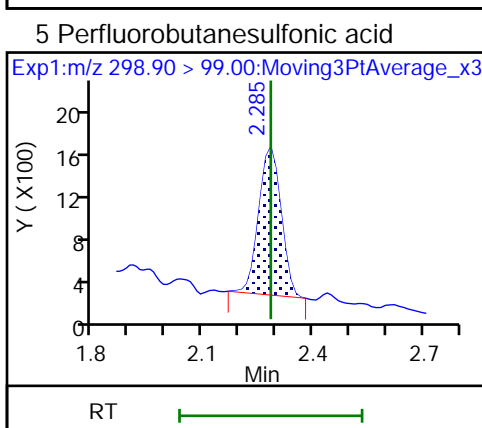
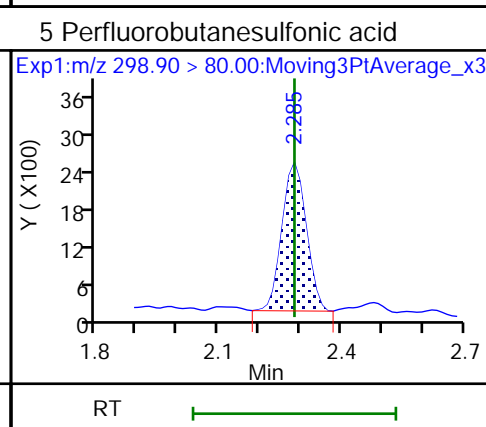
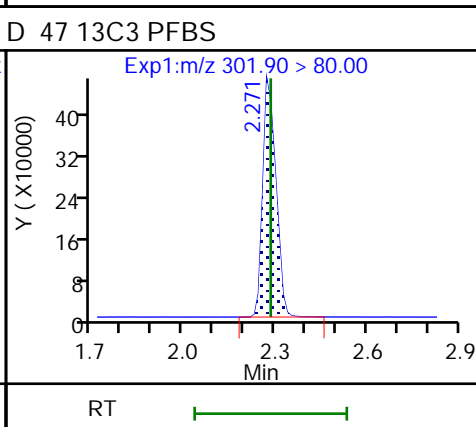
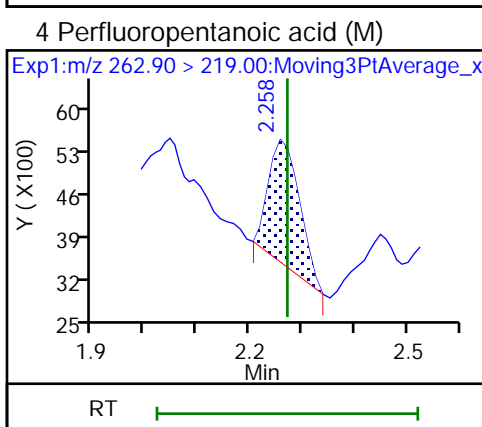
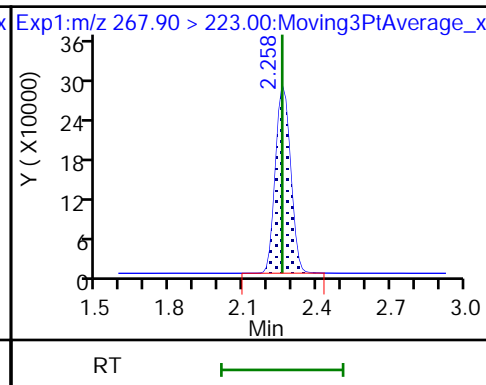
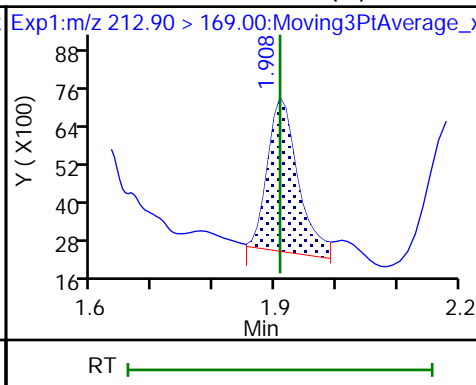
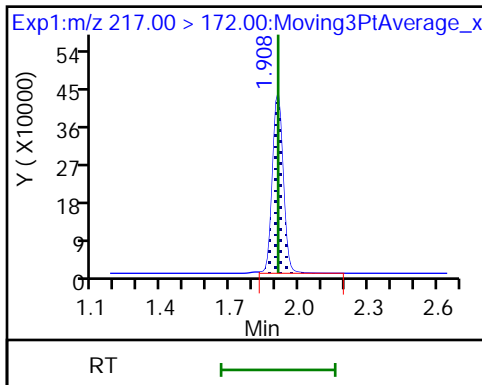
Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid (M)

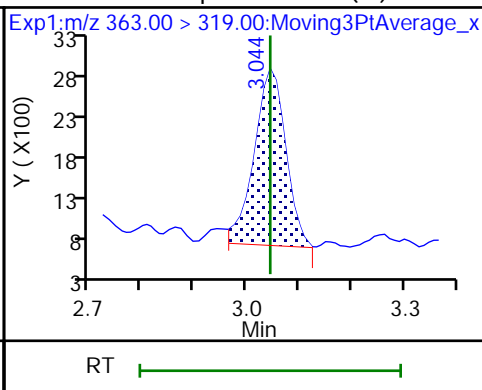
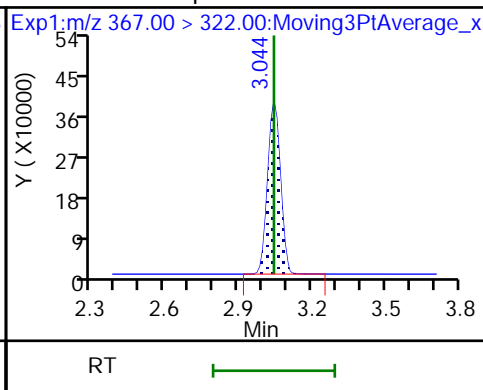
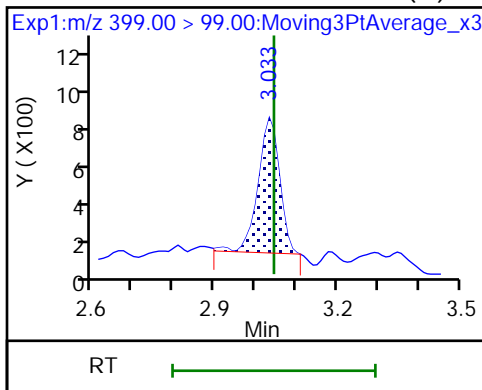
D 3 13C5 PFPeA



8 Perfluorohexanesulfonic acid (M)

D 9 13C4 PFHpA

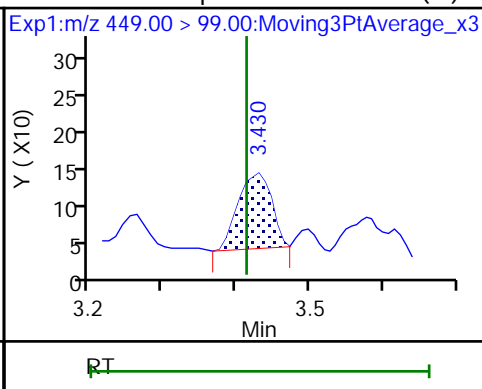
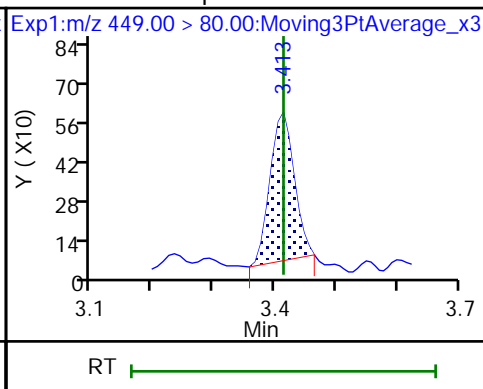
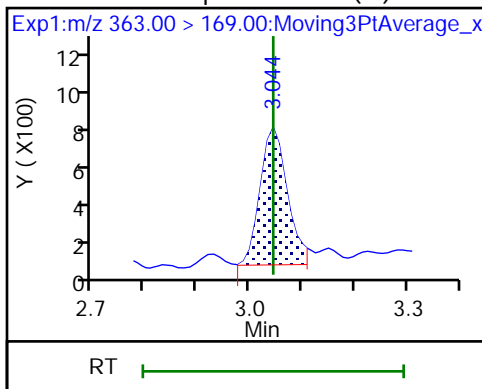
10 Perfluoroheptanoic acid (M)



10 Perfluoroheptanoic acid (M)

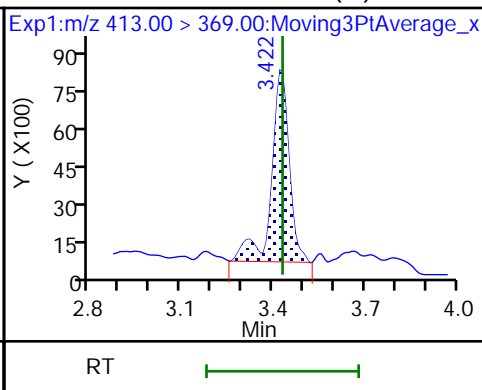
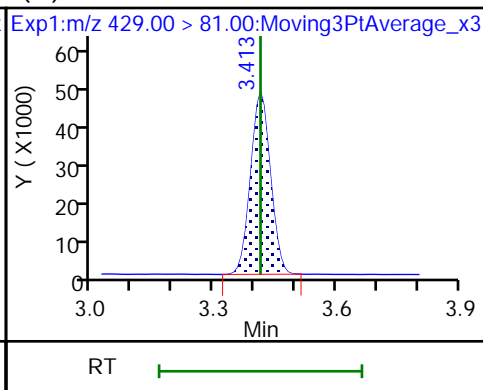
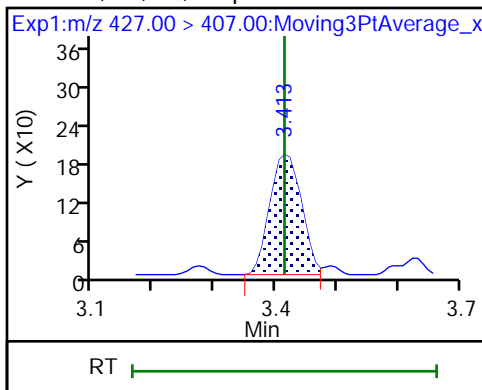
16 Perfluoroheptanesulfonic acid

16 Perfluoroheptanesulfonic acid (M)



13 1H,1H,2H,2H-perfluorooctanesulfonate (M) M2-6:2 FTS

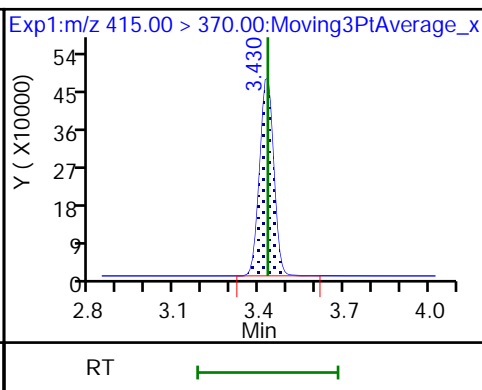
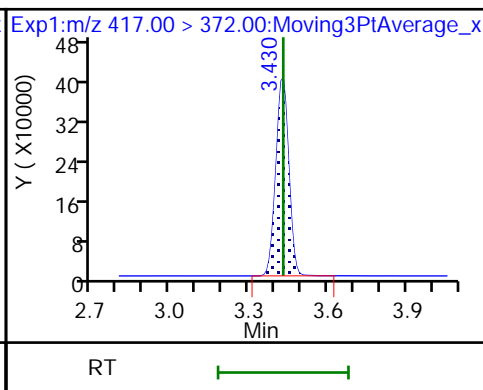
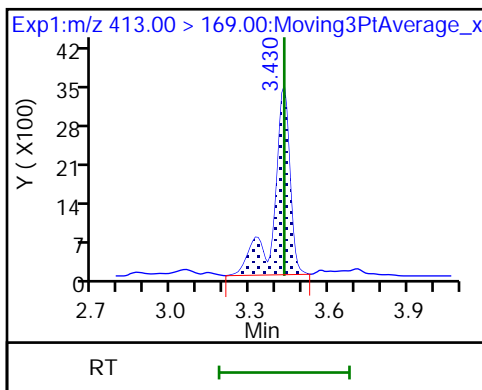
15 Perfluorooctanoic acid (M)



15 Perfluorooctanoic acid

D 14 13C4 PFOA

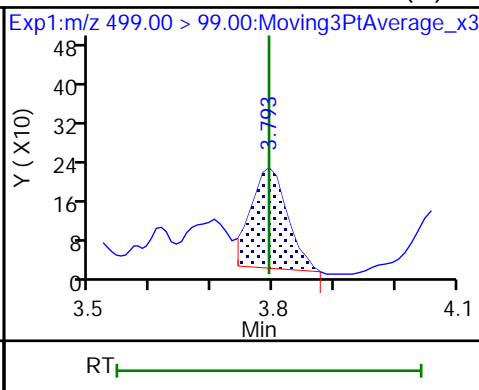
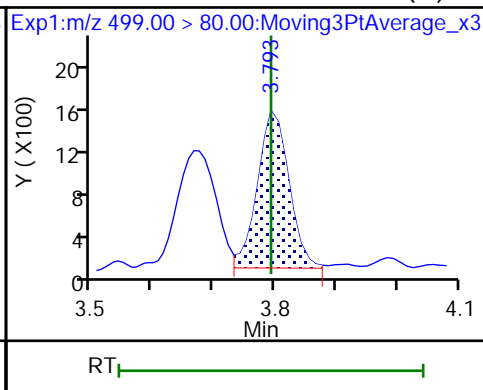
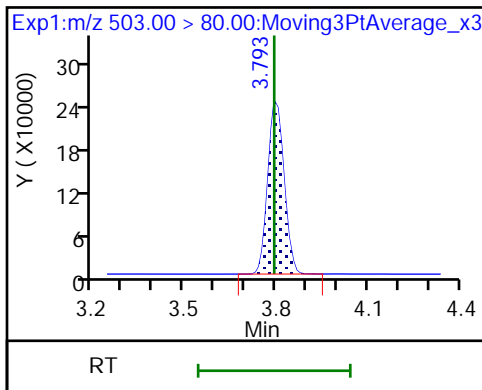
\* 62 13C2 PFOA



D 18 13C4 PFOS

17 Perfluorooctanesulfonic acid (M)

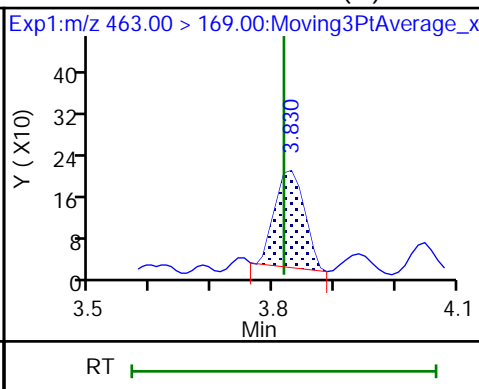
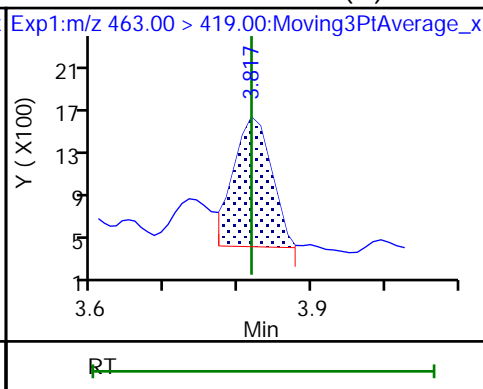
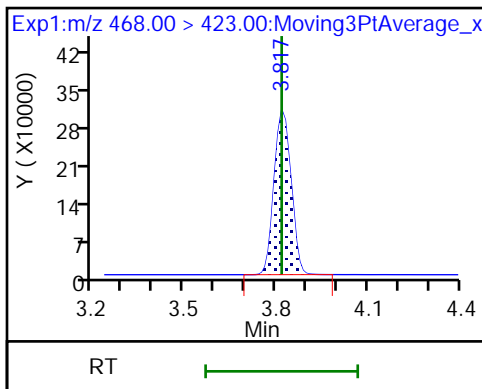
17 Perfluorooctanesulfonic acid (M)



D 19 13C5 PFNA

20 Perfluorononanoic acid (M)

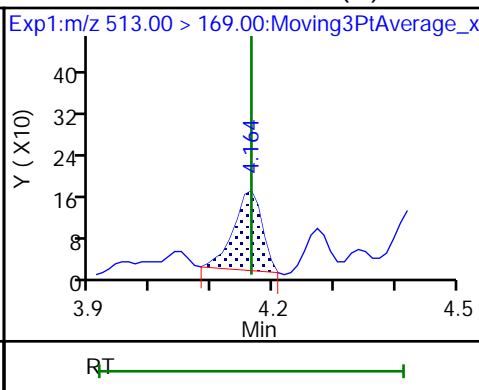
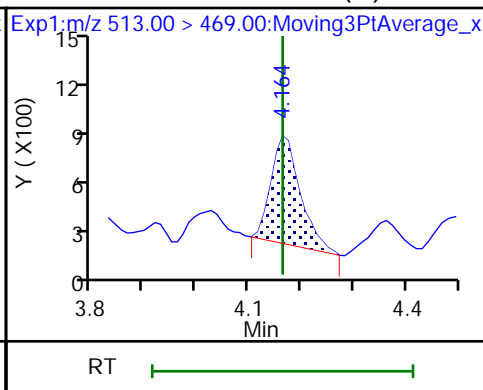
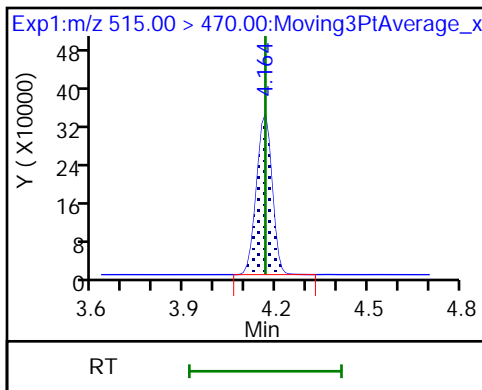
20 Perfluorononanoic acid (M)



D 23 13C2 PFDA

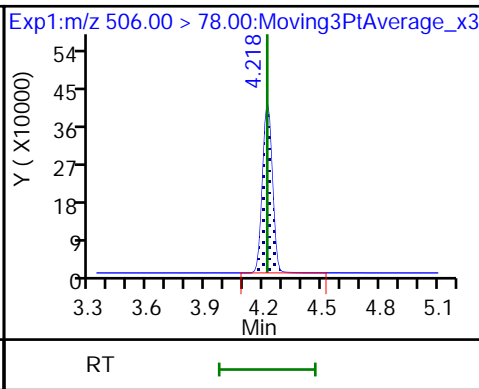
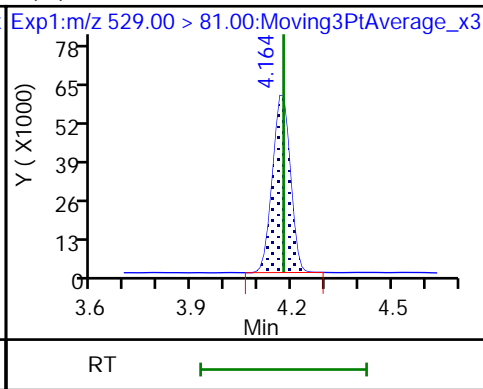
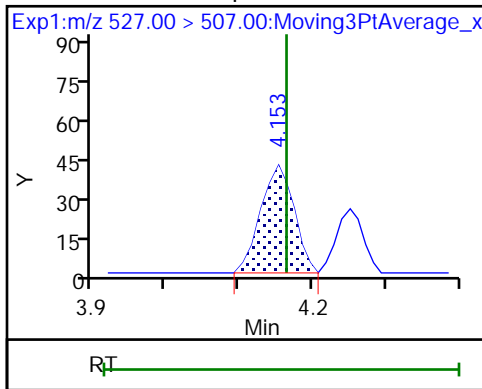
24 Perfluorodecanoic acid (M)

24 Perfluorodecanoic acid (M)



25 1H,1H,2H,2H-perfluorodecanesulfonic acid (M) M2-8:2 FTS

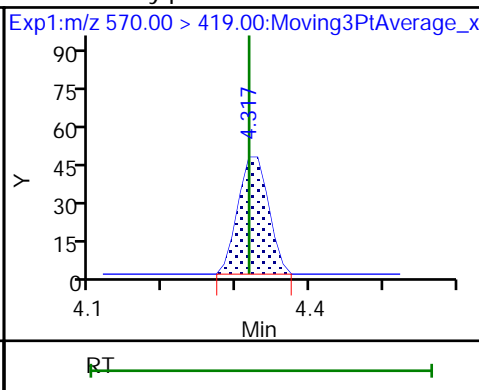
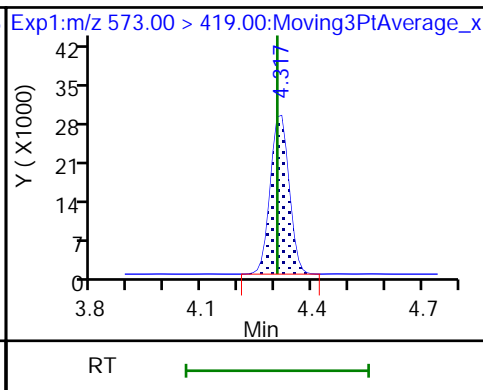
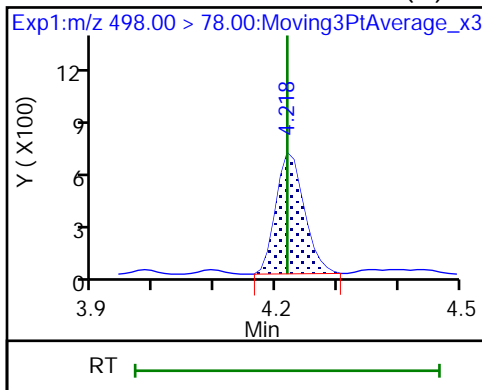
D 21 13C8 FOSA



22 Perfluorooctanesulfonamide (M)

D 27 d3-NMeFOSAA

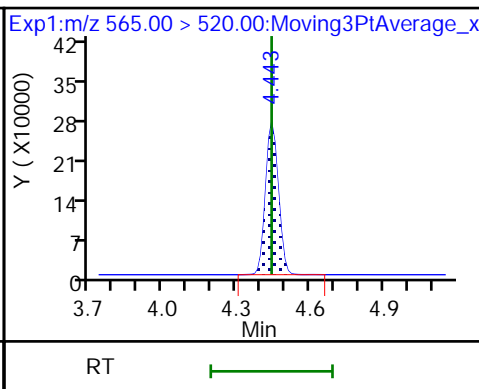
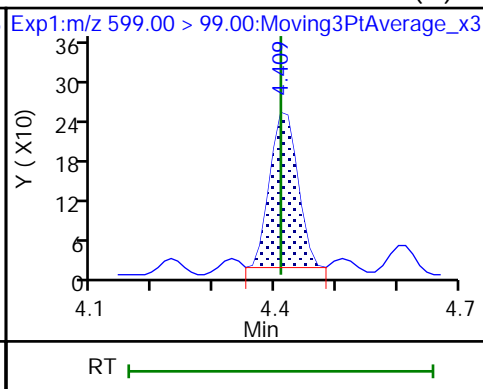
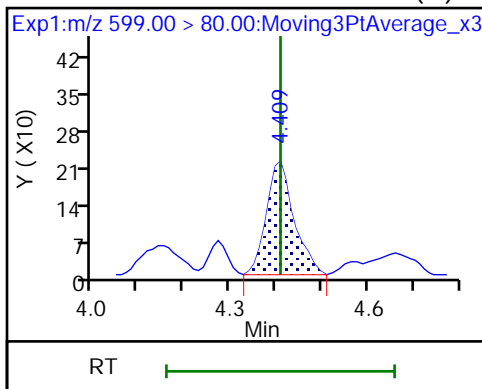
28 N-methylperfluorooctanesulfonamido (M)



29 Perfluorodecanesulfonic acid (M)

29 Perfluorodecanesulfonic acid (M)

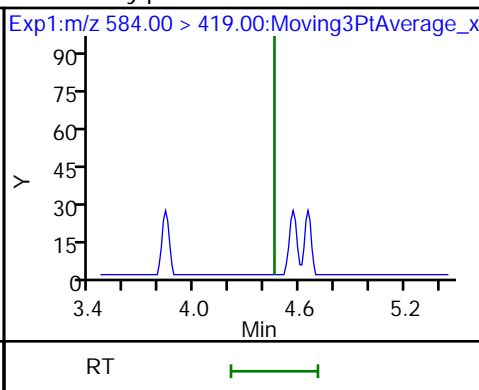
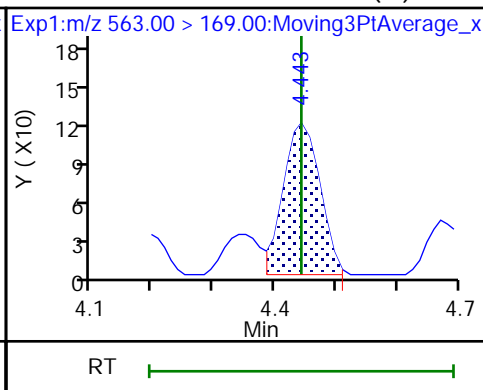
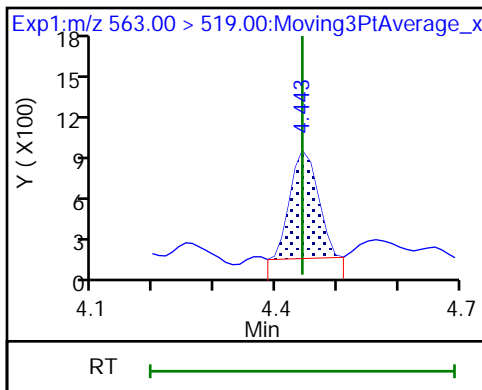
D 30 13C2 PFUoA



31 Perfluoroundecanoic acid

31 Perfluoroundecanoic acid (M)

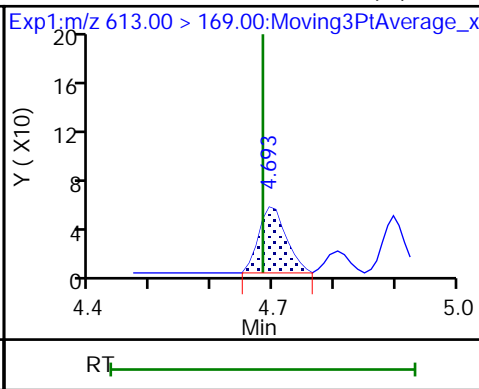
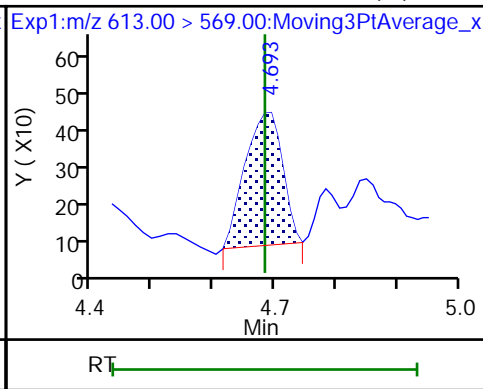
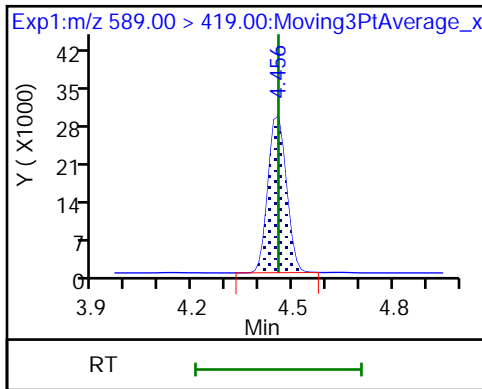
33 N-ethylperfluorooctanesulfonamidoa (ND)



D 32 d5-NEtFOSAA

37 Perfluorododecanoic acid (M)

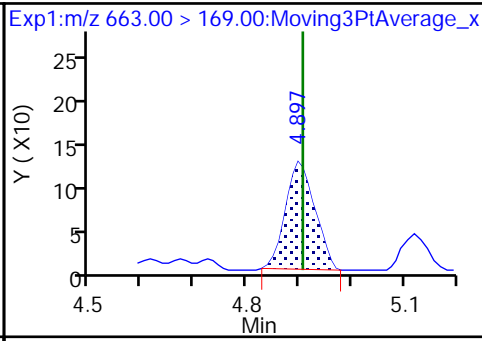
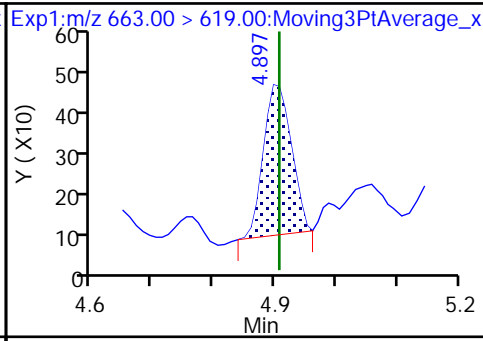
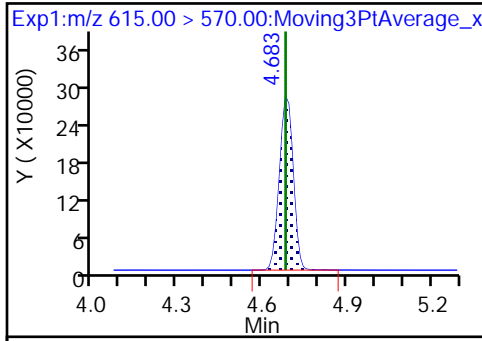
37 Perfluorododecanoic acid (M)



D 36 13C2 PFDaA

41 Perfluorotridecanoic acid (M)

41 Perfluorotridecanoic acid (M)



RT

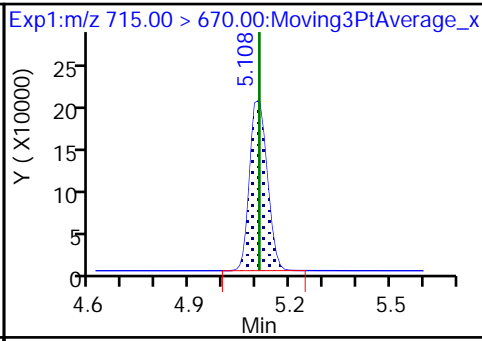
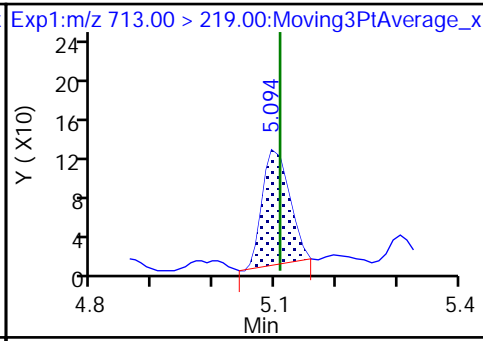
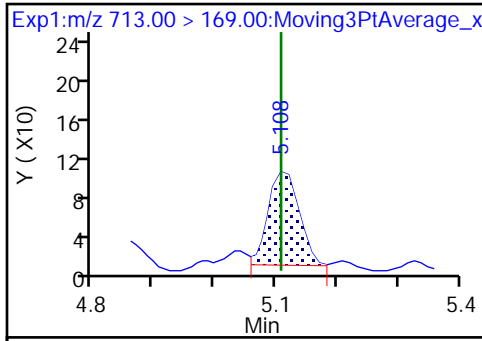
RT

RT

42 Perfluorotetradecanoic acid (M)

42 Perfluorotetradecanoic acid (M)

D 43 13C2 PFTeDA



RT

RT

RT



Eurofins TestAmerica, Burlington

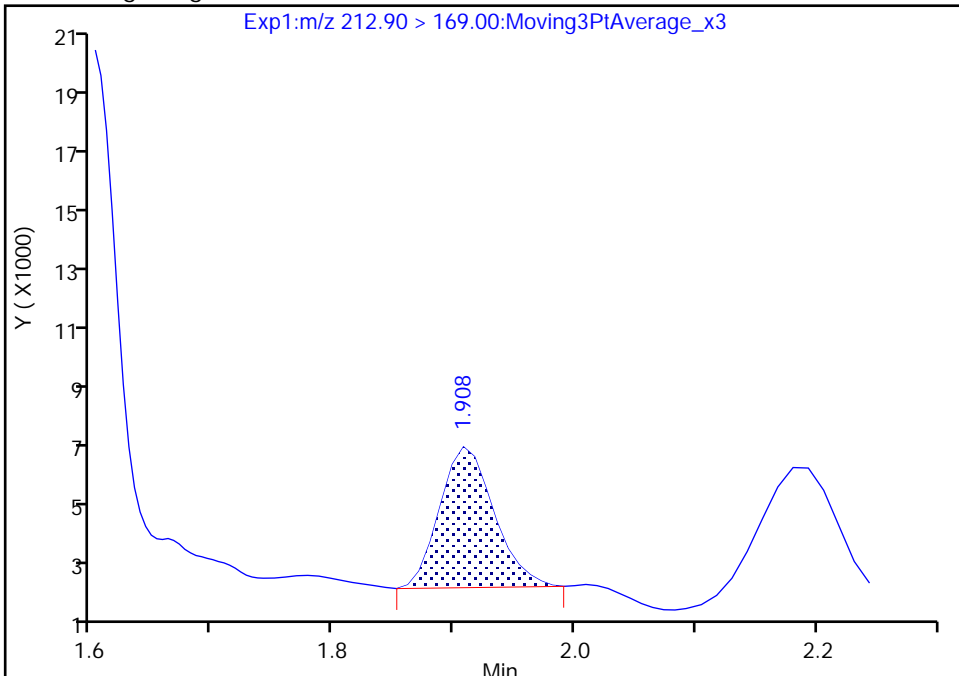
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B016.d  
Injection Date: 24-Dec-2019 15:59:01 Instrument ID: LC812  
Lims ID: 480-164221-C-5-A Lab Sample ID: 200-164221-5  
Client ID: FIELD DUP  
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

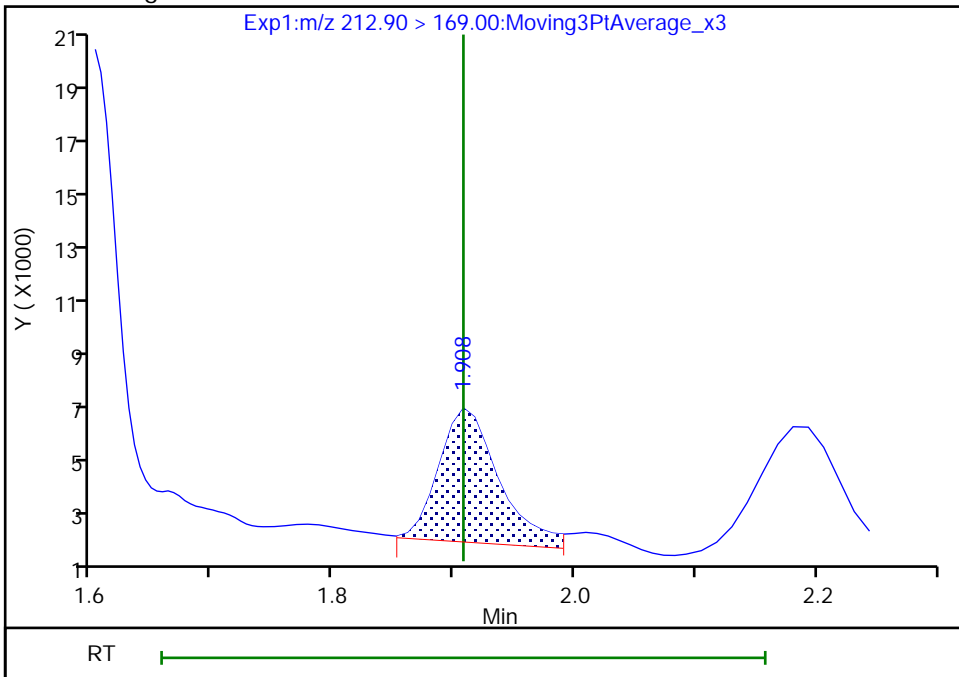
RT: 1.91  
Area: 14444  
Amount: 0.026426  
Amount Units: ng/ml

Processing Integration Results



RT: 1.91  
Area: 16841  
Amount: 0.030812  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 13:42:57  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

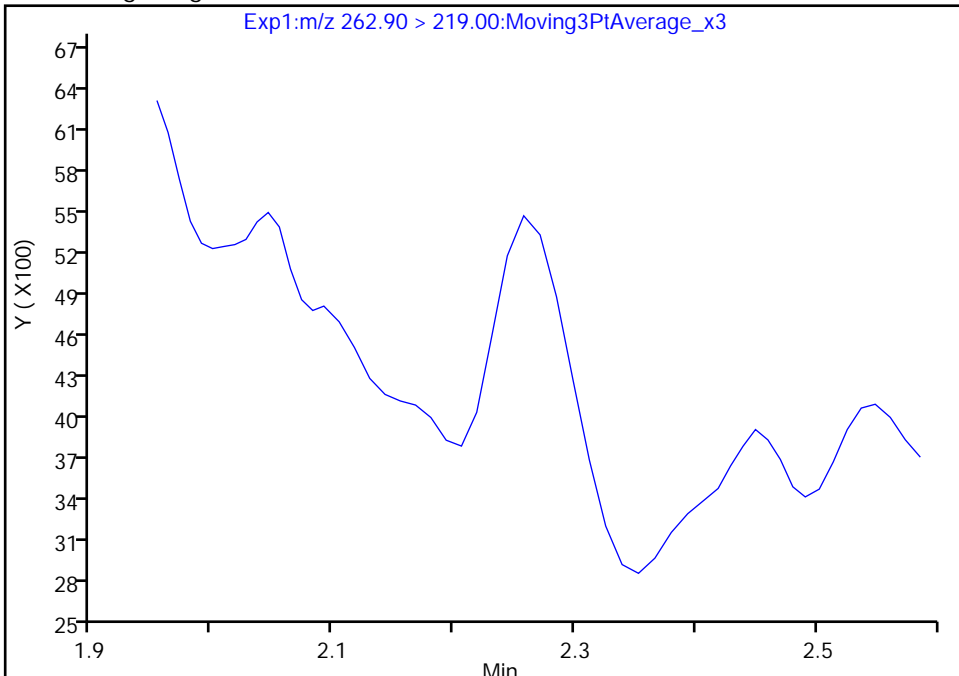
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B016.d  
Injection Date: 24-Dec-2019 15:59:01 Instrument ID: LC812  
Lims ID: 480-164221-C-5-A Lab Sample ID: 200-164221-5  
Client ID: FIELD DUP  
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

4 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

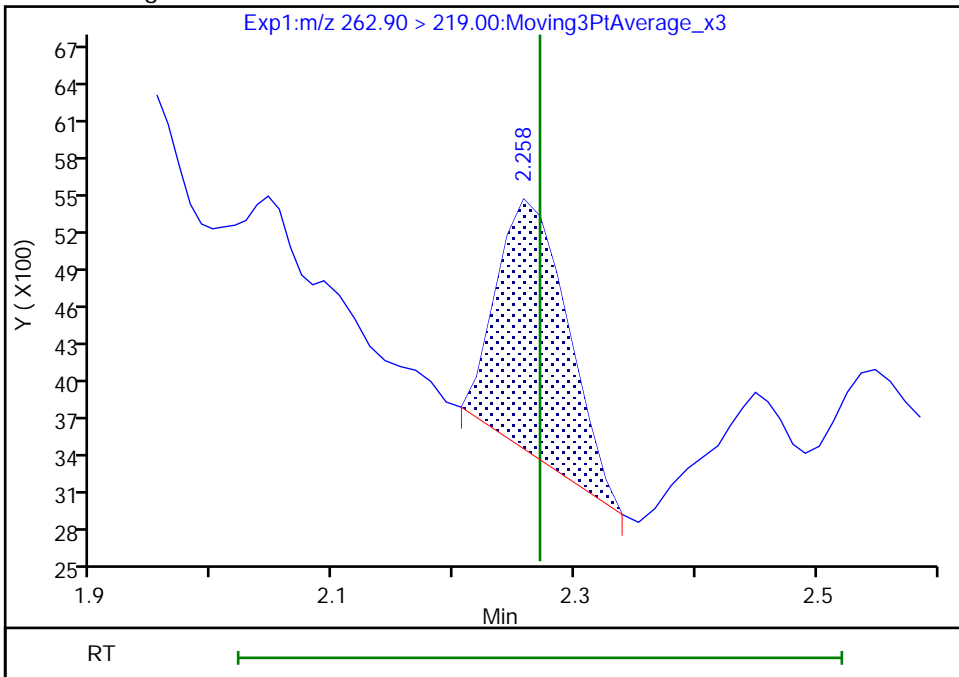
Not Detected  
Expected RT: 2.27

Processing Integration Results



RT: 2.26  
Area: 8369  
Amount: 0.015212  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagery, 27-Dec-2019 13:42:31  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

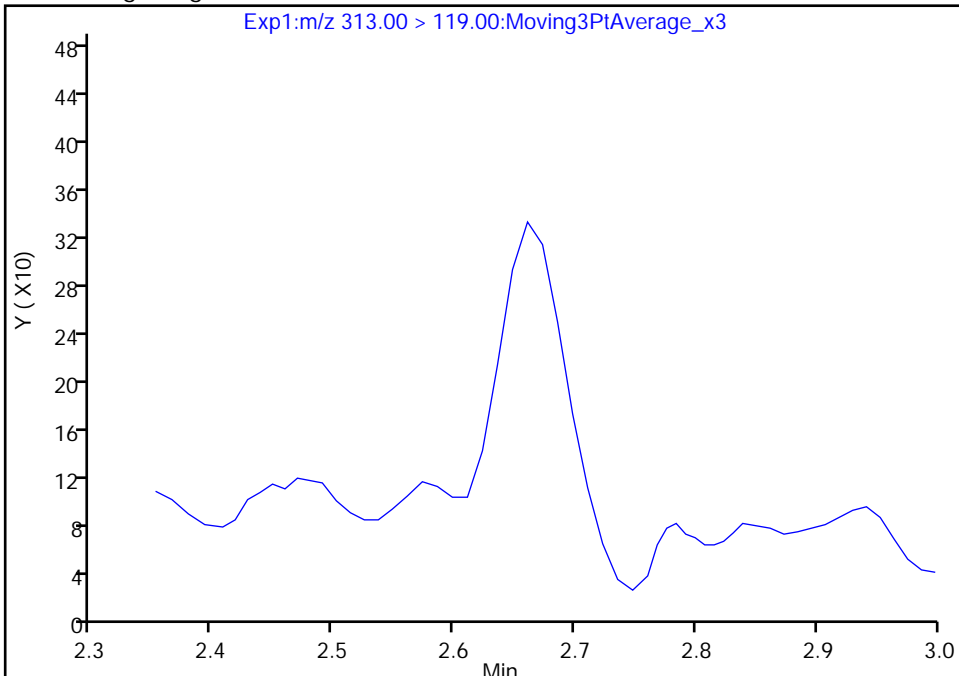
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B016.d  
Injection Date: 24-Dec-2019 15:59:01 Instrument ID: LC812  
Lims ID: 480-164221-C-5-A Lab Sample ID: 200-164221-5  
Client ID: FIELD DUP  
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

6 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 2

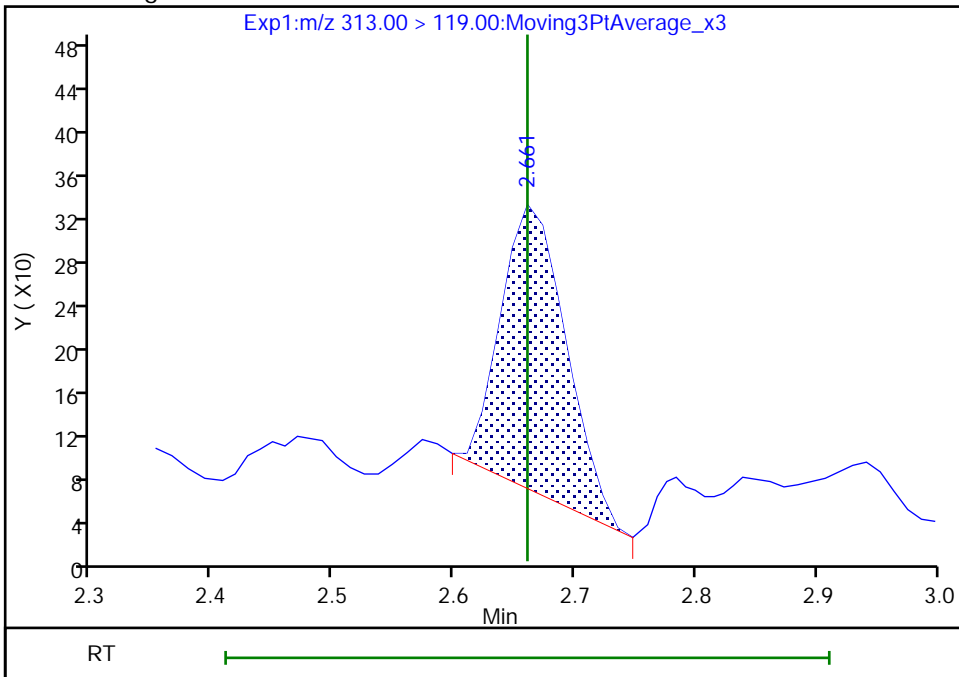
Not Detected  
Expected RT: 2.66

Processing Integration Results



Manual Integration Results

RT: 2.66  
Area: 993  
Amount: 0.018591  
Amount Units: ng/ml



Reviewer: lautenschlagery, 27-Dec-2019 13:41:19  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

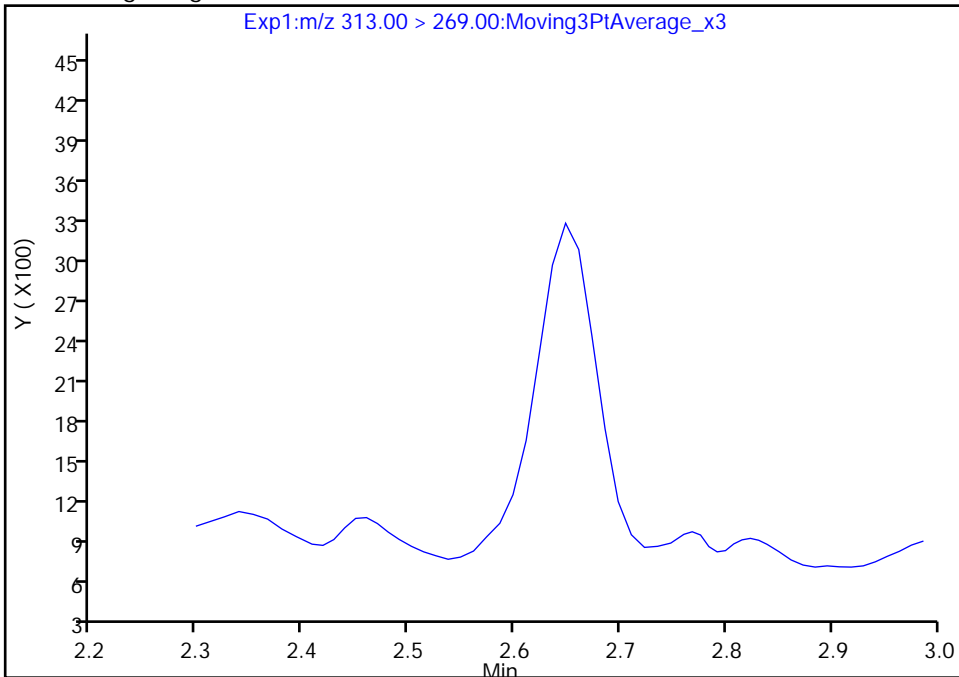
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Injection Date: 24-Dec-2019 15:59:01 Instrument ID: LC812  
Lims ID: 480-164221-C-5-A Lab Sample ID: 200-164221-5  
Client ID: FIELD DUP  
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

6 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

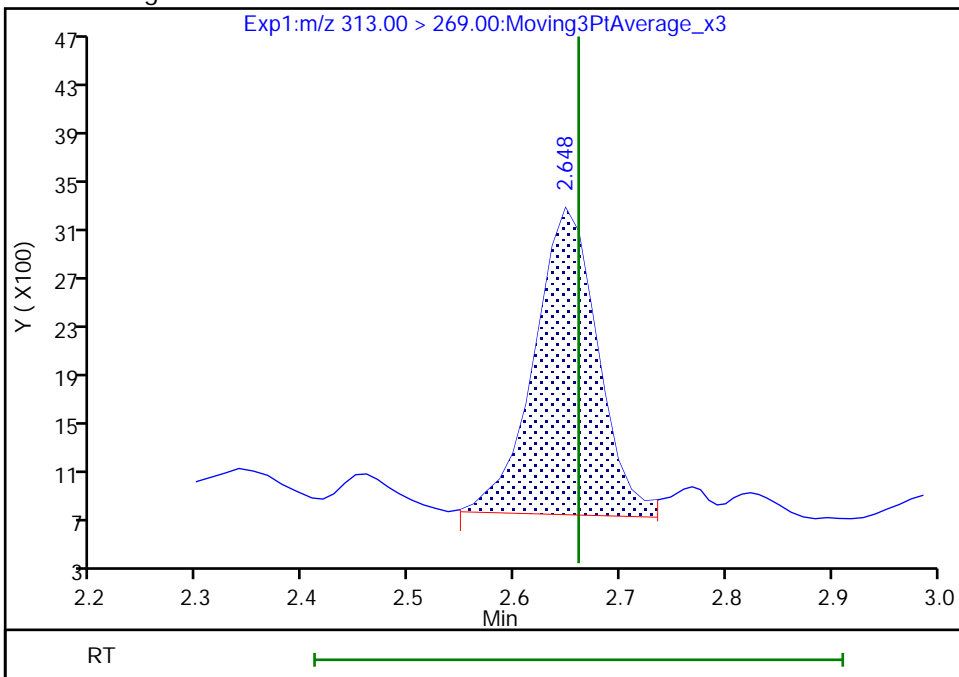
Not Detected  
Expected RT: 2.66

Processing Integration Results



Manual Integration Results

RT: 2.65  
Area: 10517  
Amount: 0.018591  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 13:41:48

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

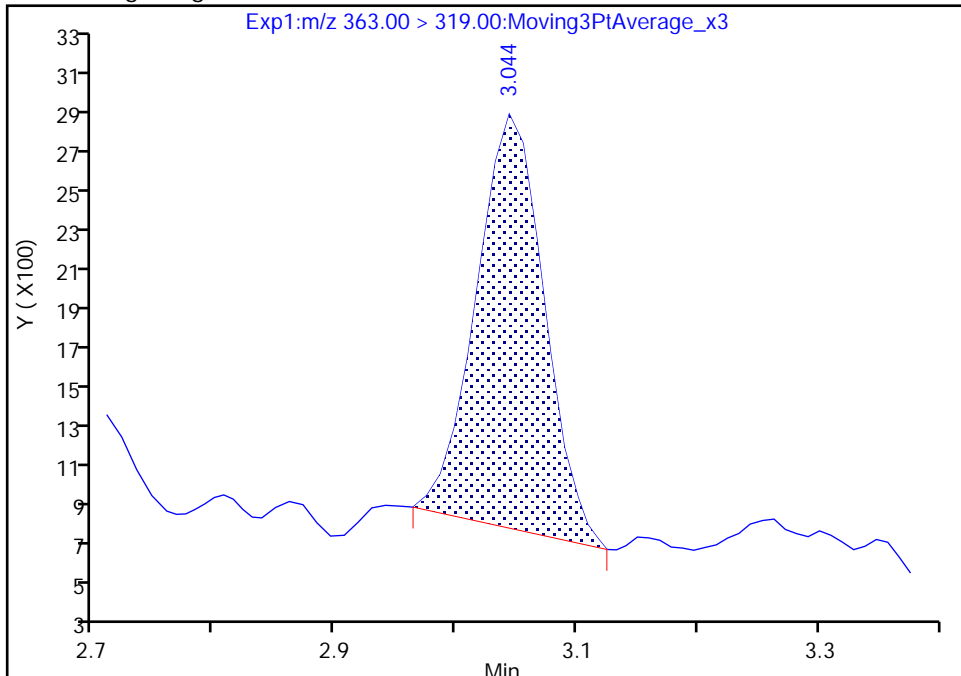
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B016.d  
Injection Date: 24-Dec-2019 15:59:01 Instrument ID: LC812  
Lims ID: 480-164221-C-5-A Lab Sample ID: 200-164221-5  
Client ID: FIELD DUP  
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

10 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

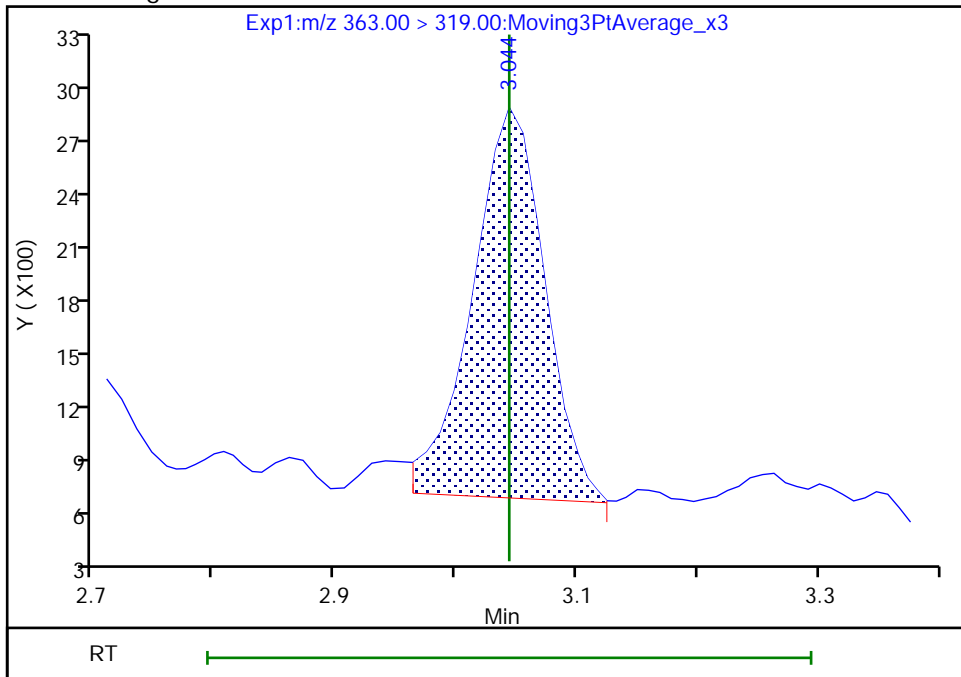
RT: 3.04  
Area: 8116  
Amount: 0.013700  
Amount Units: ng/ml

Processing Integration Results



RT: 3.04  
Area: 8988  
Amount: 0.015172  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagery, 27-Dec-2019 13:39:03

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

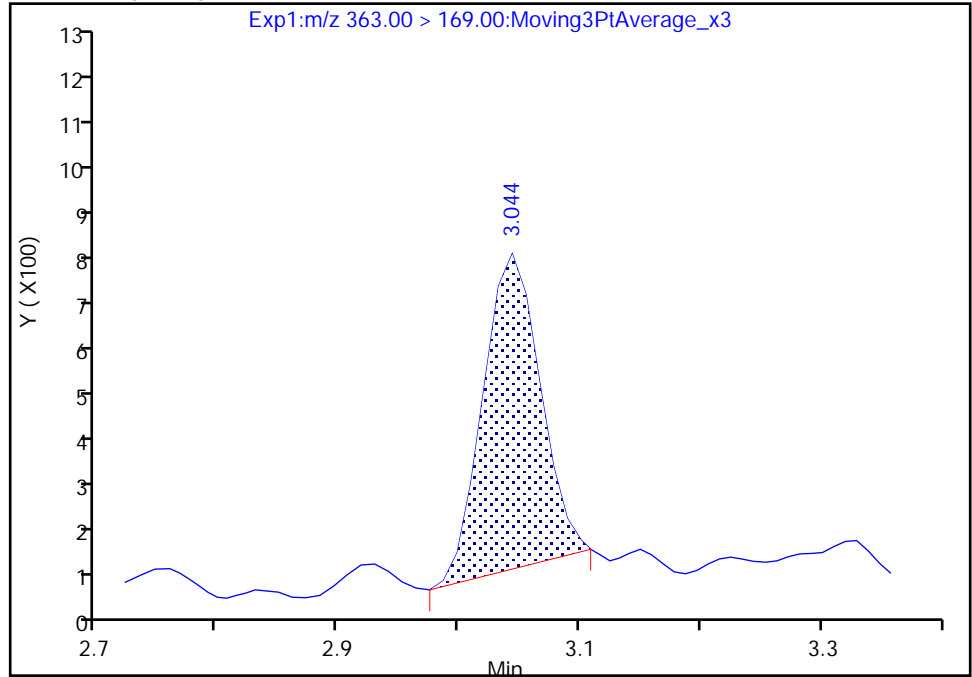
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B016.d  
Injection Date: 24-Dec-2019 15:59:01 Instrument ID: LC812  
Lims ID: 480-164221-C-5-A Lab Sample ID: 200-164221-5  
Client ID: FIELD DUP  
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

10 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 2

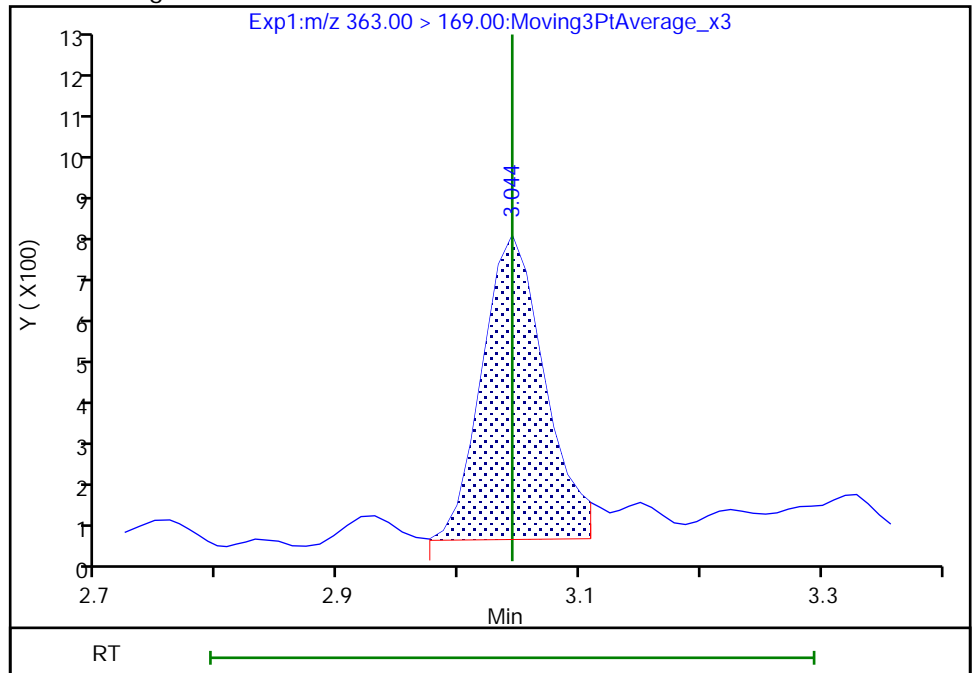
RT: 3.04  
Area: 2250  
Amount: 0.013700  
Amount Units: ng/ml

Processing Integration Results



RT: 3.04  
Area: 2610  
Amount: 0.015172  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 13:39:13

Audit Action: Manually Integrated

Audit Reason: Baseline

Euofins TestAmerica, Burlington

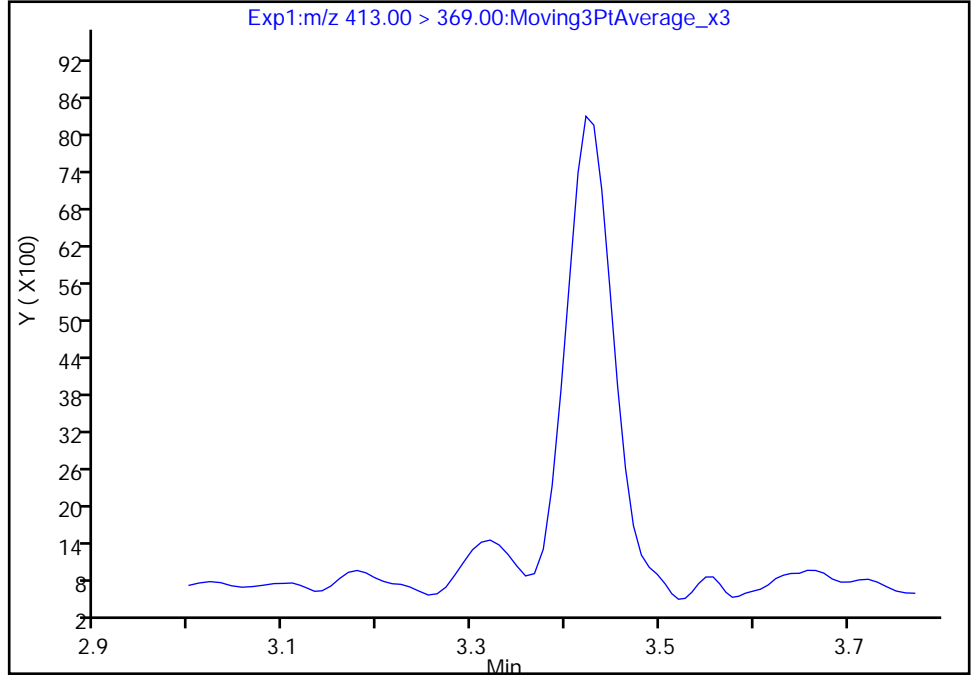
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B016.d  
Injection Date: 24-Dec-2019 15:59:01 Instrument ID: LC812  
Lims ID: 480-164221-C-5-A Lab Sample ID: 200-164221-5  
Client ID: FIELD DUP  
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

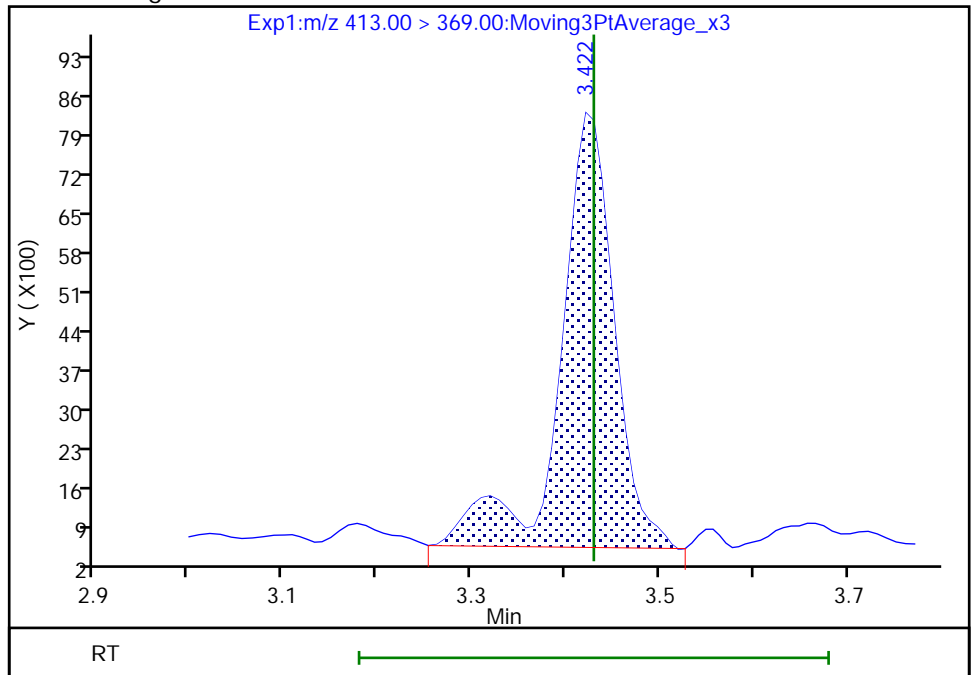
Not Detected  
Expected RT: 3.43

Processing Integration Results



Manual Integration Results

RT: 3.42  
Area: 31098  
Amount: 0.050790  
Amount Units: ng/ml



Reviewer: lautenschlagery, 27-Dec-2019 13:37:55

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

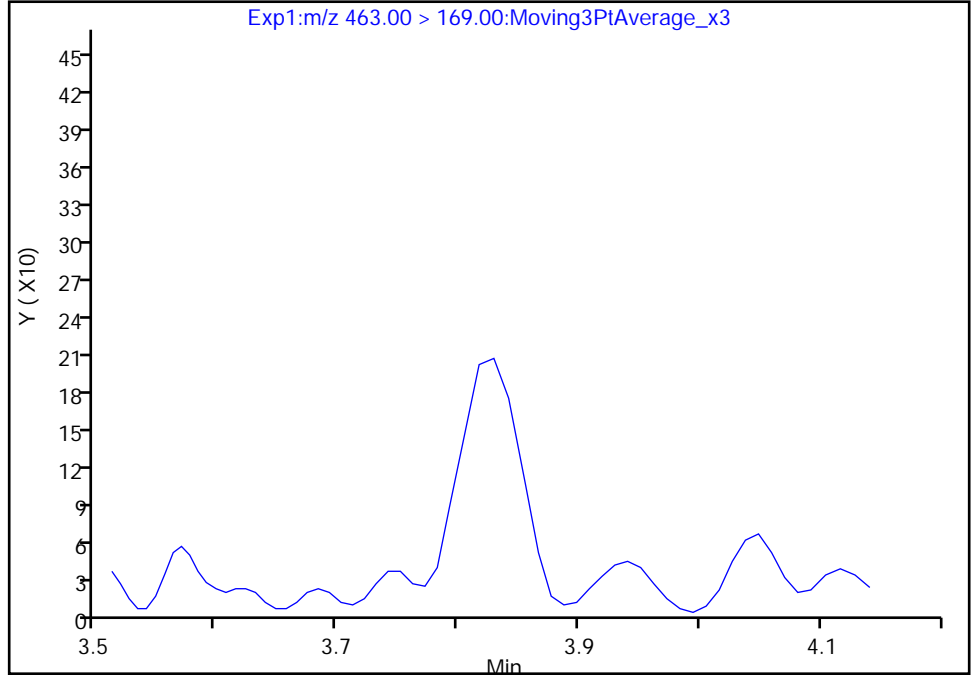
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B016.d  
Injection Date: 24-Dec-2019 15:59:01 Instrument ID: LC812  
Lims ID: 480-164221-C-5-A Lab Sample ID: 200-164221-5  
Client ID: FIELD DUP  
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

20 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

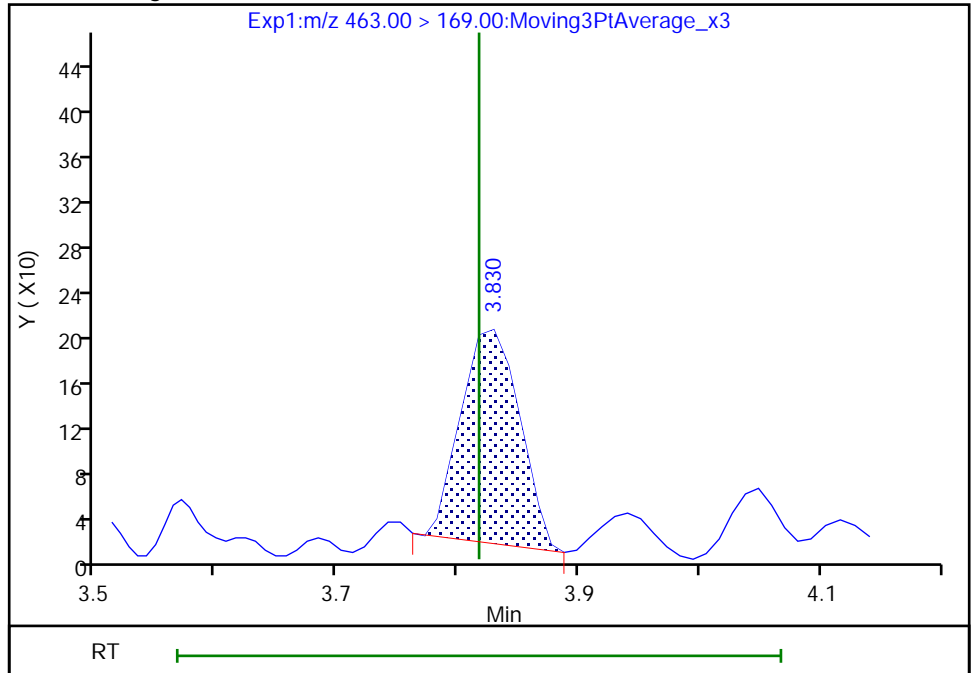
Not Detected  
Expected RT: 3.82

Processing Integration Results



Manual Integration Results

RT: 3.83  
Area: 641  
Amount: 0.009281  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 13:31:18

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Eurofins TestAmerica, Burlington

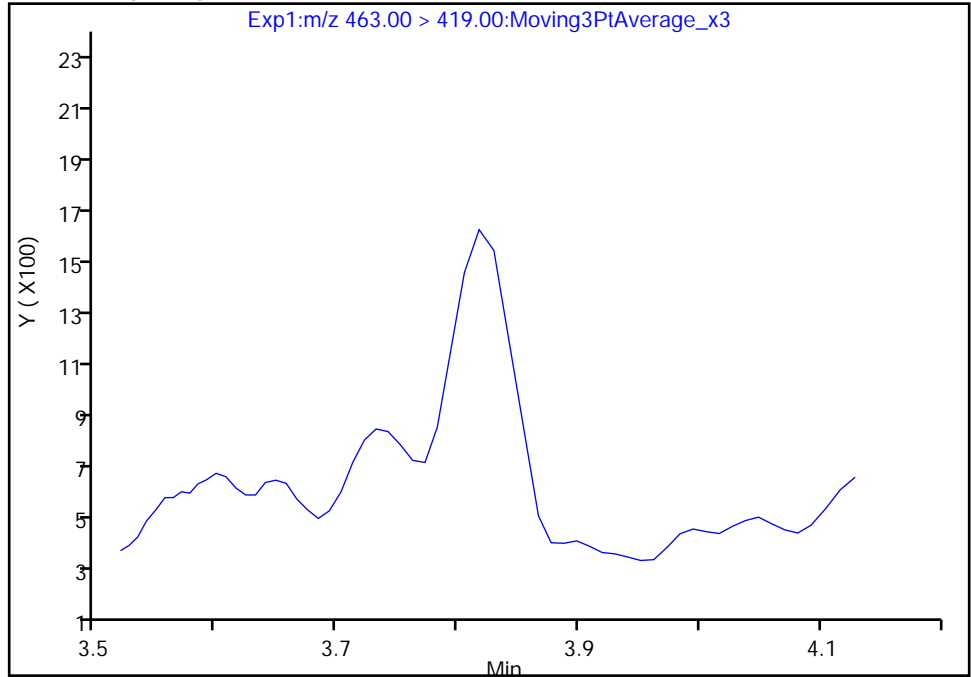
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B016.d  
Injection Date: 24-Dec-2019 15:59:01 Instrument ID: LC812  
Lims ID: 480-164221-C-5-A Lab Sample ID: 200-164221-5  
Client ID: FIELD DUP  
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 (4.60 mm) Detector: EXP1

20 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

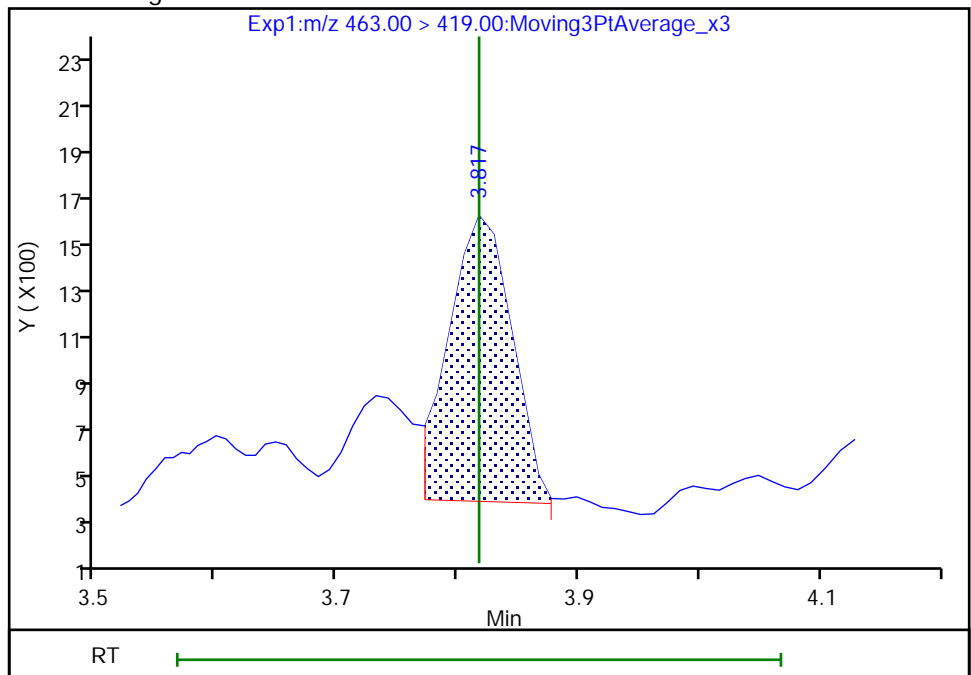
Not Detected  
Expected RT: 3.82

Processing Integration Results



Manual Integration Results

RT: 3.82  
Area: 4311  
Amount: 0.009281  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

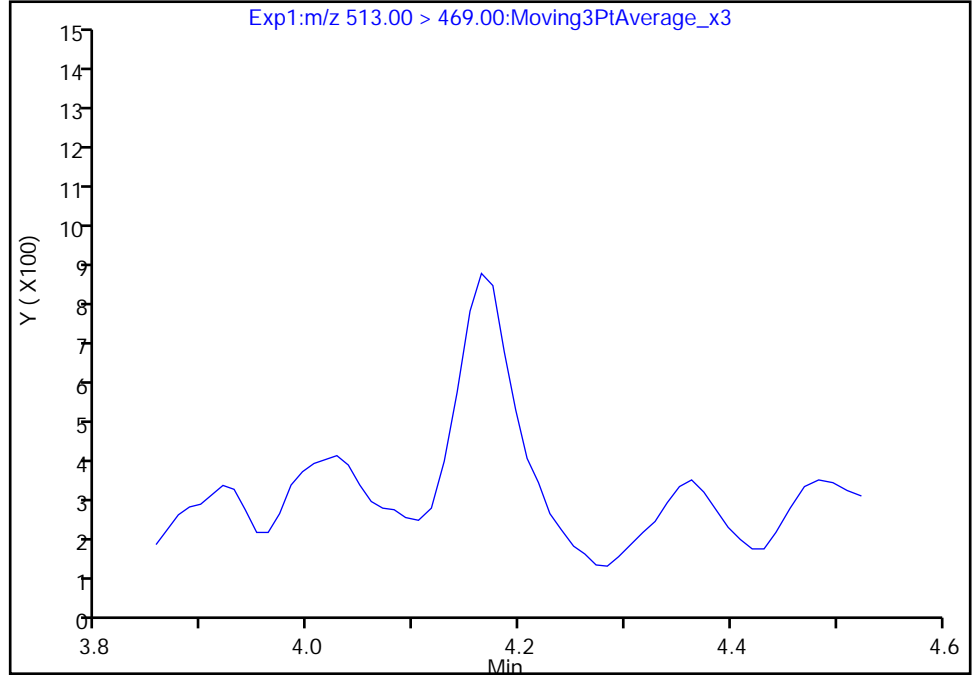
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B016.d  
Injection Date: 24-Dec-2019 15:59:01 Instrument ID: LC812  
Lims ID: 480-164221-C-5-A Lab Sample ID: 200-164221-5  
Client ID: FIELD DUP  
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

24 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 1

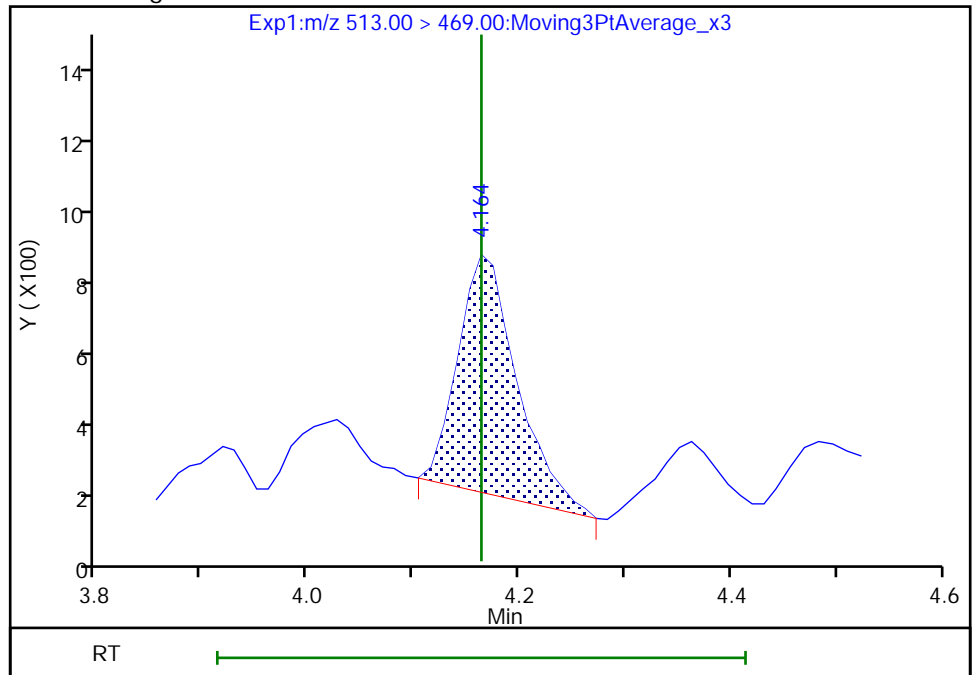
Not Detected  
Expected RT: 4.16

Processing Integration Results



Manual Integration Results

RT: 4.16  
Area: 2597  
Amount: 0.005612  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 13:30:35

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

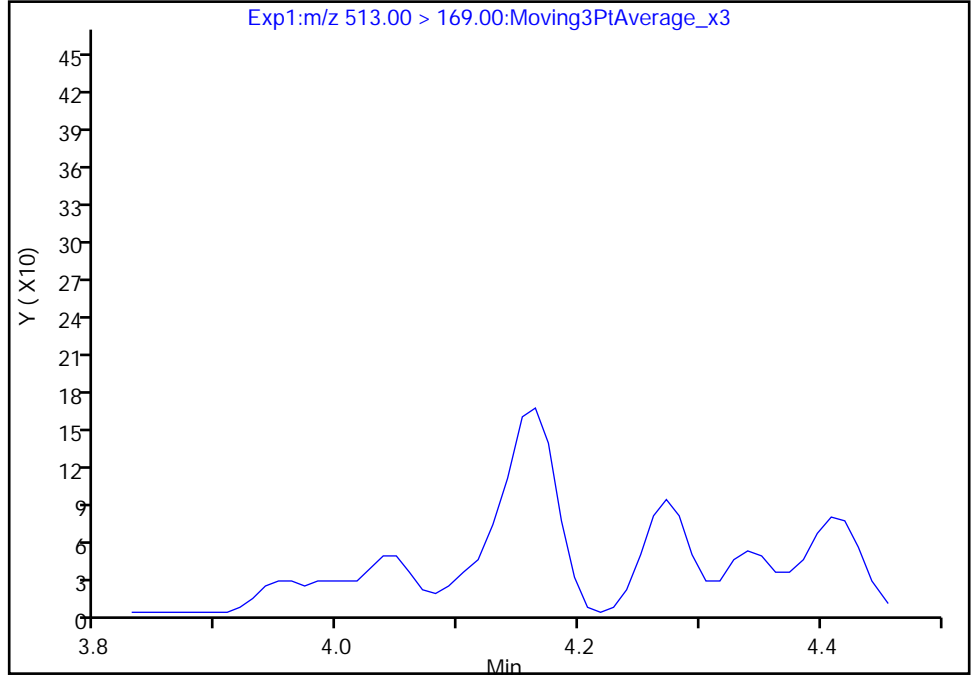
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B016.d  
Injection Date: 24-Dec-2019 15:59:01 Instrument ID: LC812  
Lims ID: 480-164221-C-5-A Lab Sample ID: 200-164221-5  
Client ID: FIELD DUP  
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

24 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 2

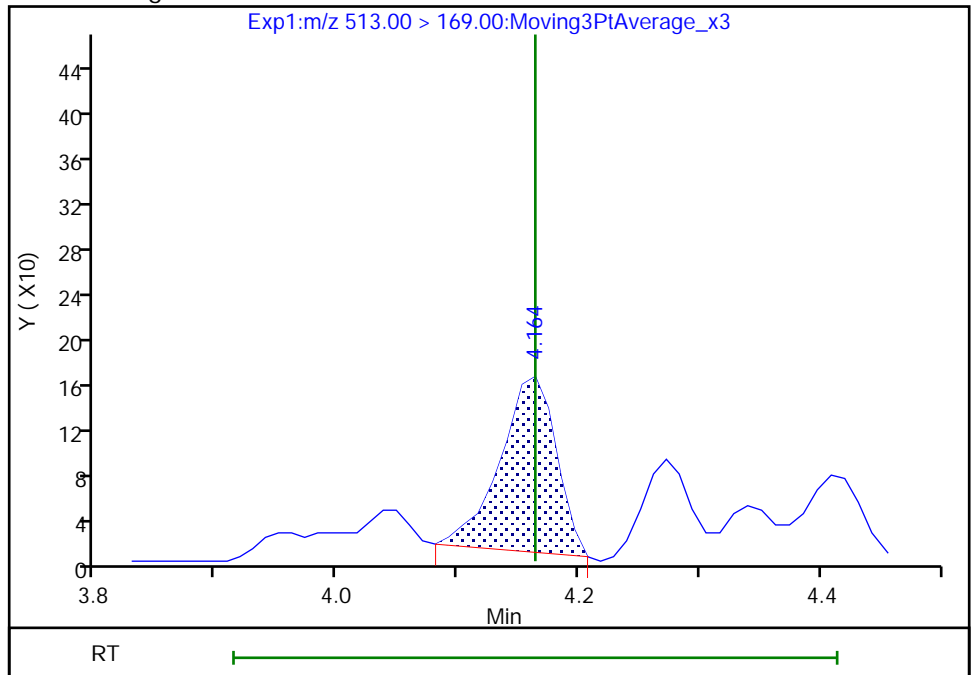
Not Detected  
Expected RT: 4.16

Processing Integration Results



Manual Integration Results

RT: 4.16  
Area: 498  
Amount: 0.005612  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

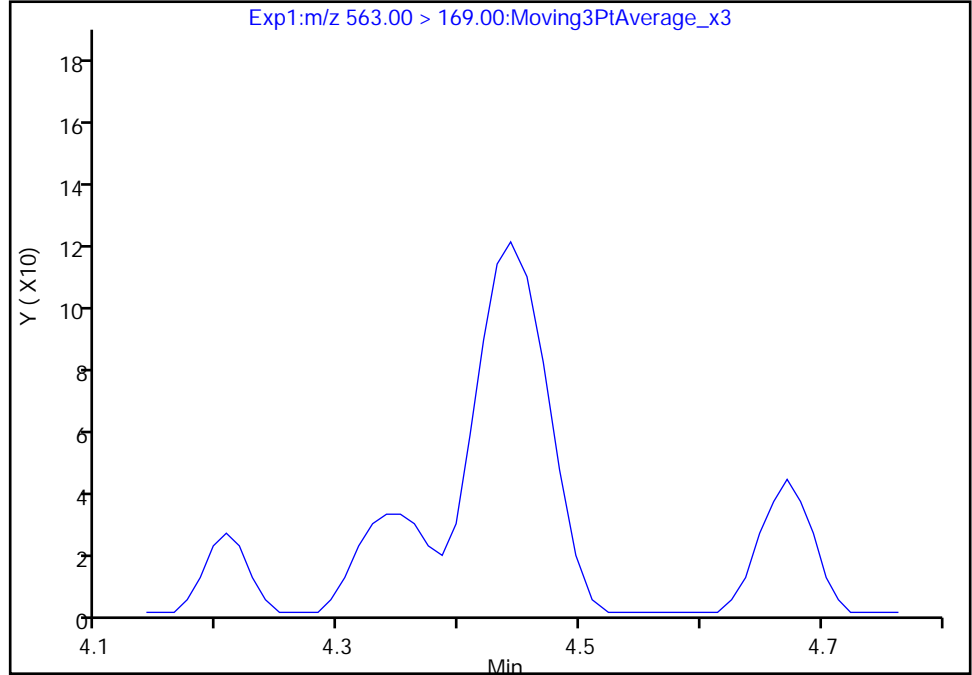
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B016.d  
Injection Date: 24-Dec-2019 15:59:01 Instrument ID: LC812  
Lims ID: 480-164221-C-5-A Lab Sample ID: 200-164221-5  
Client ID: FIELD DUP  
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 2

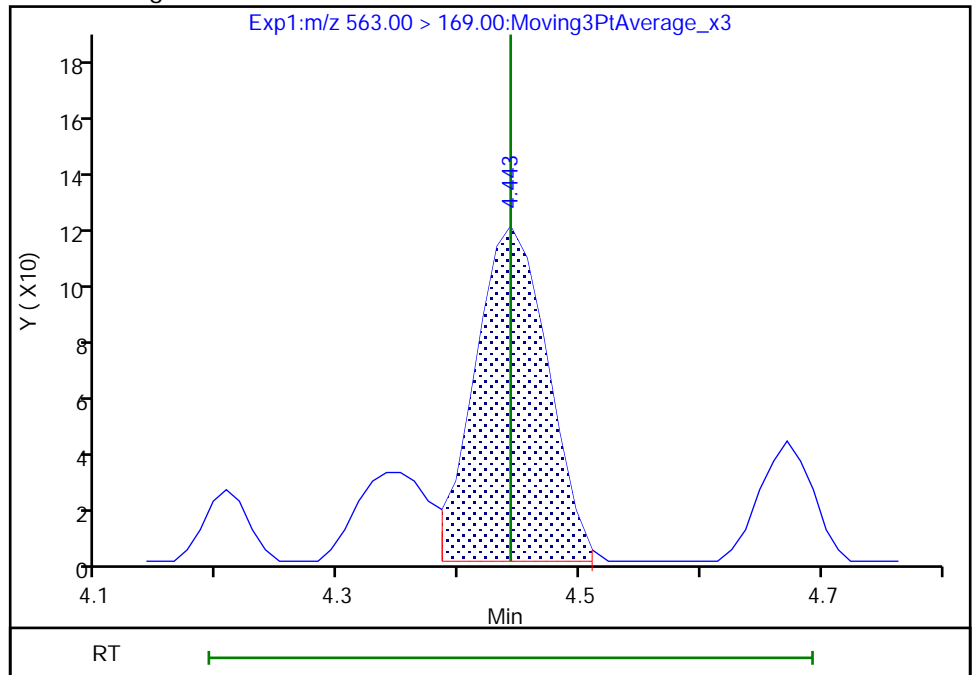
Not Detected  
Expected RT: 4.44

Processing Integration Results



Manual Integration Results

RT: 4.44  
Area: 484  
Amount: 0.007445  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 13:29:06

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

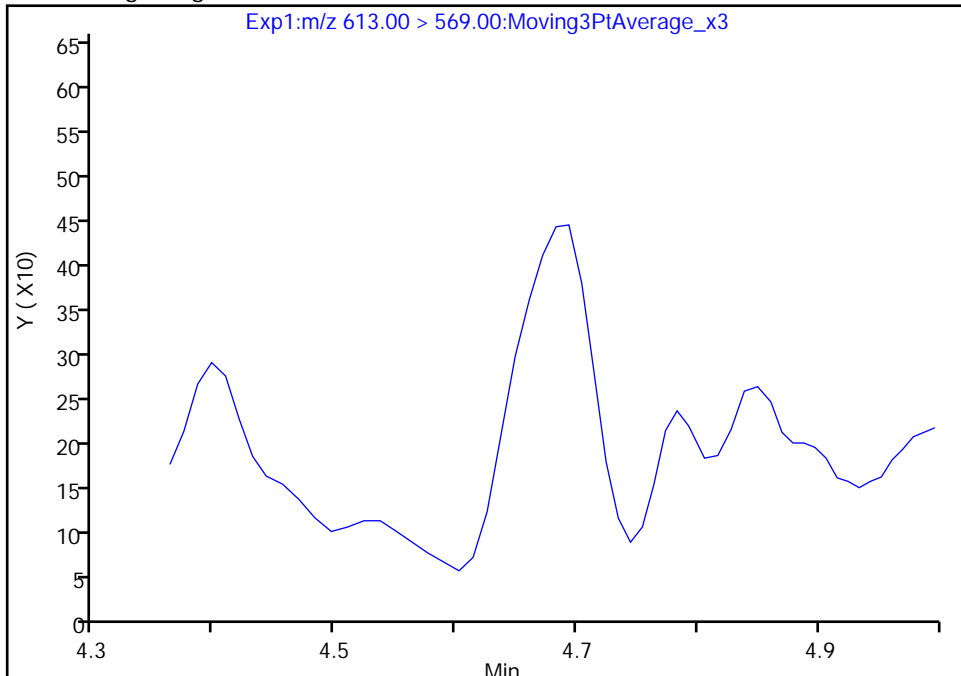
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B016.d  
Injection Date: 24-Dec-2019 15:59:01 Instrument ID: LC812  
Lims ID: 480-164221-C-5-A Lab Sample ID: 200-164221-5  
Client ID: FIELD DUP  
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

37 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 1

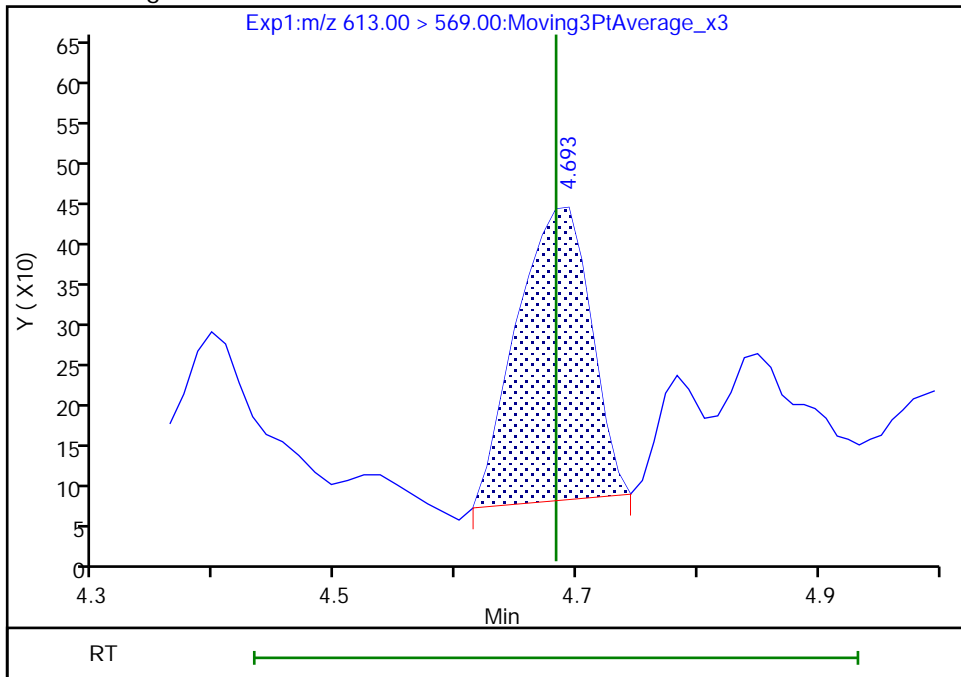
Not Detected  
Expected RT: 4.68

Processing Integration Results



Manual Integration Results

RT: 4.69  
Area: 1536  
Amount: 0.004459  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 13:28:05  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

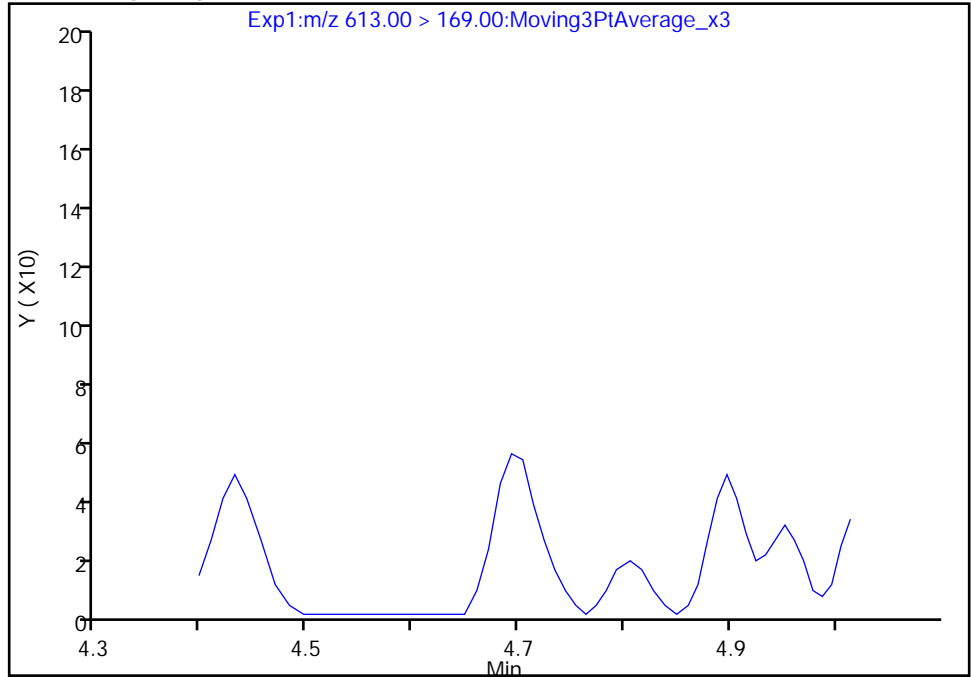
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B016.d  
Injection Date: 24-Dec-2019 15:59:01 Instrument ID: LC812  
Lims ID: 480-164221-C-5-A Lab Sample ID: 200-164221-5  
Client ID: FIELD DUP  
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

37 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 2

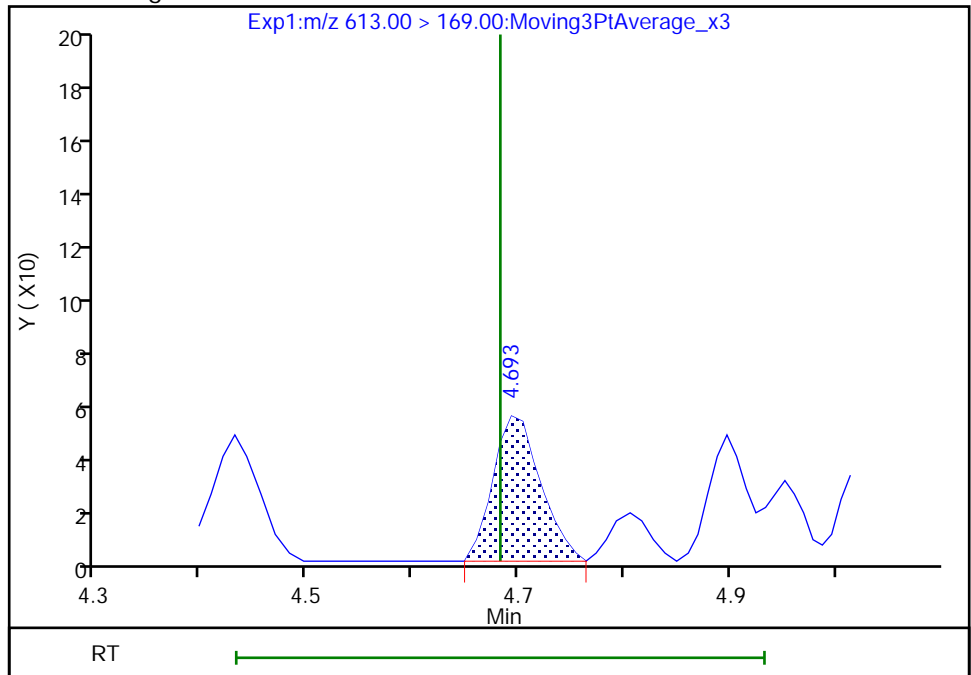
Not Detected  
Expected RT: 4.68

Processing Integration Results



Manual Integration Results

RT: 4.69  
Area: 168  
Amount: 0.004459  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 13:28:11

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

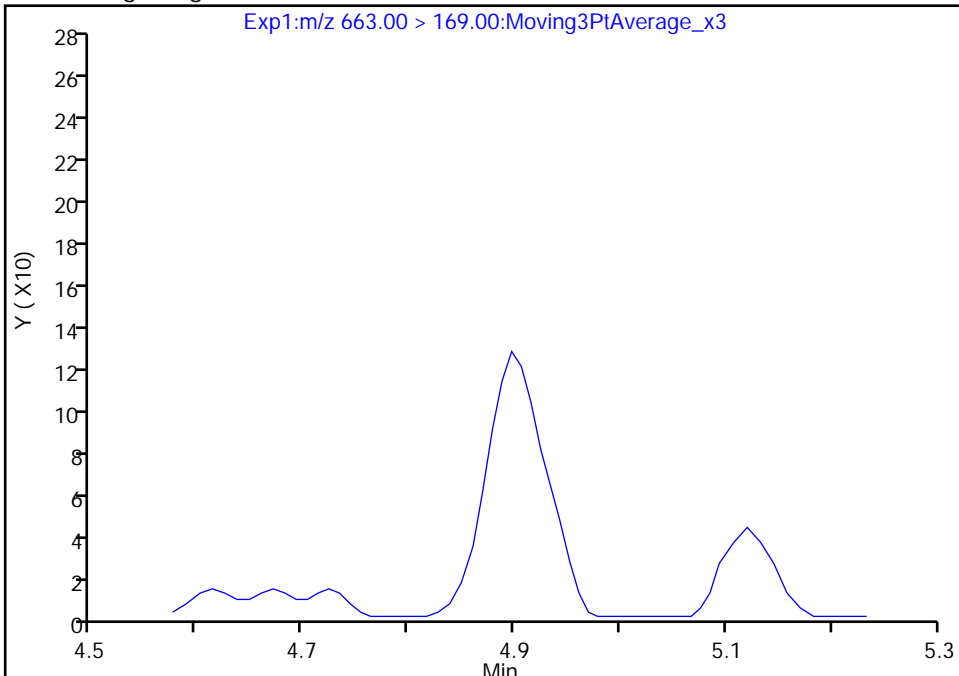
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B016.d  
Injection Date: 24-Dec-2019 15:59:01 Instrument ID: LC812  
Lims ID: 480-164221-C-5-A Lab Sample ID: 200-164221-5  
Client ID: FIELD DUP  
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

41 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 2

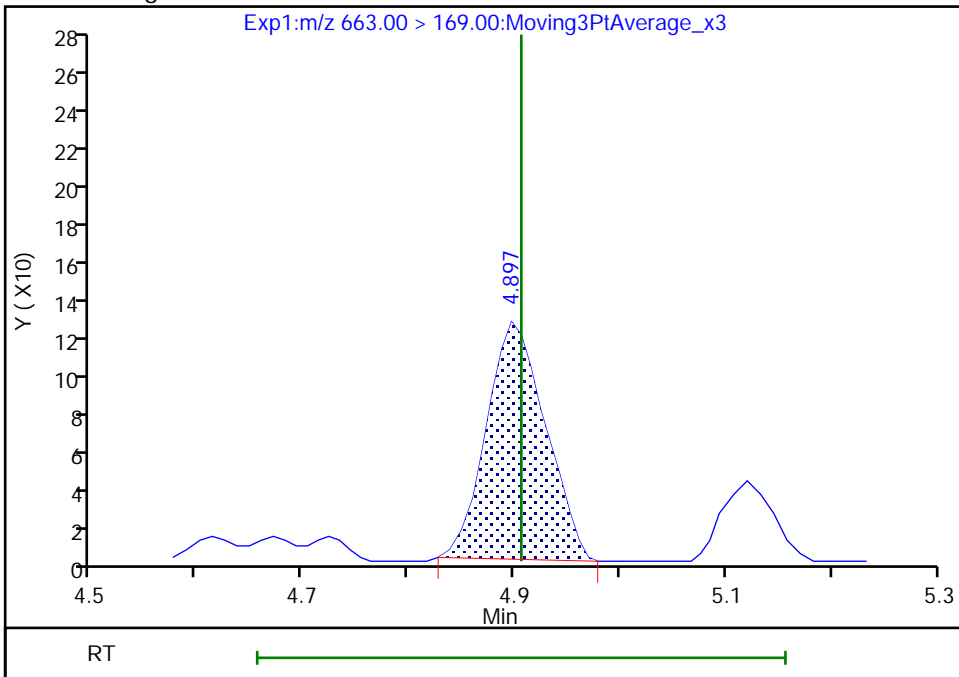
Not Detected  
Expected RT: 4.91

Processing Integration Results



Manual Integration Results

RT: 4.90  
Area: 479  
Amount: 0.003600  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 13:27:38  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

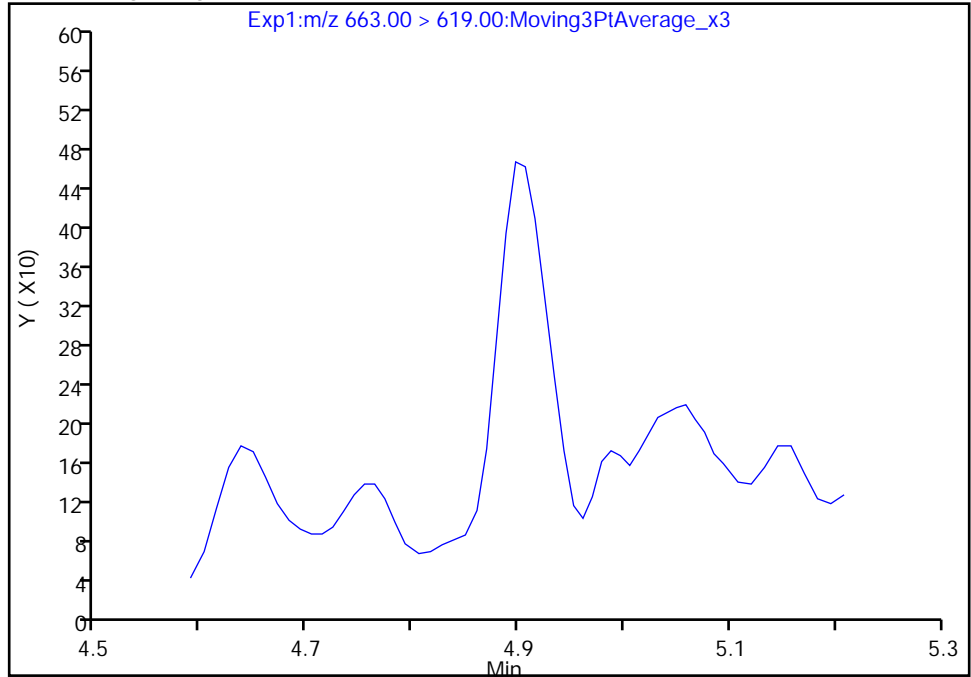
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B016.d  
Injection Date: 24-Dec-2019 15:59:01 Instrument ID: LC812  
Lims ID: 480-164221-C-5-A Lab Sample ID: 200-164221-5  
Client ID: FIELD DUP  
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 (4.60 mm) Detector: EXP1

41 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 1

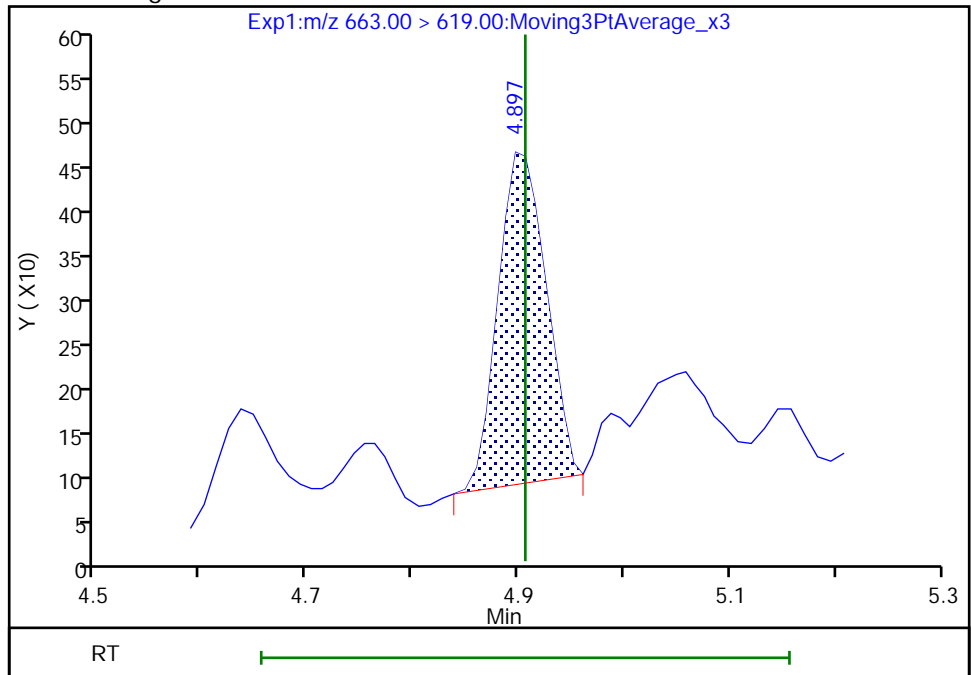
Not Detected  
Expected RT: 4.91

Processing Integration Results



Manual Integration Results

RT: 4.90  
Area: 1178  
Amount: 0.003600  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 13:27:46

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Euofins TestAmerica, Burlington

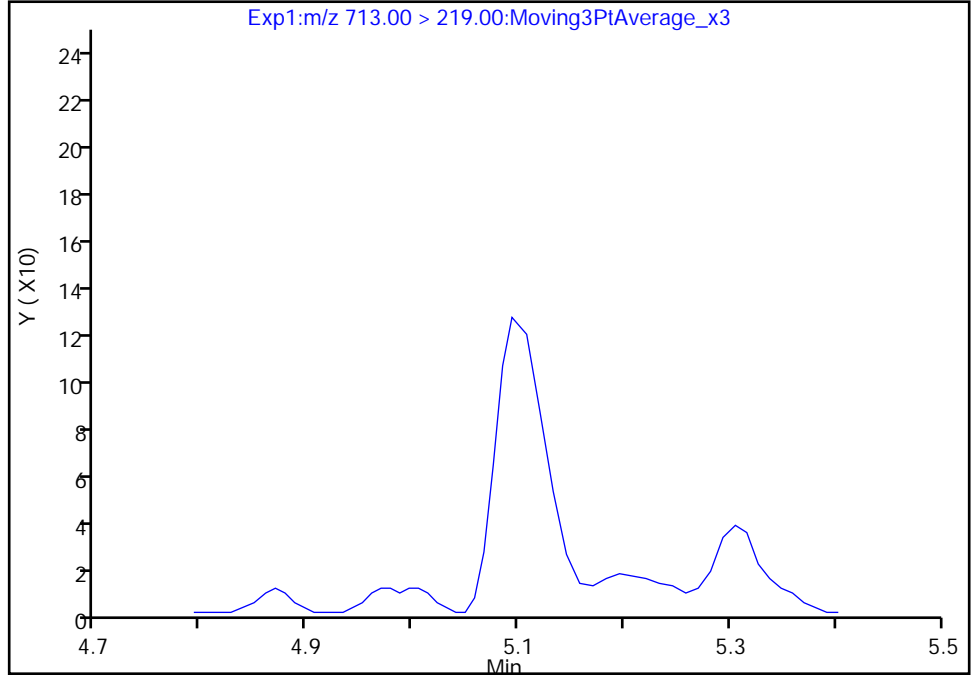
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B016.d  
Injection Date: 24-Dec-2019 15:59:01 Instrument ID: LC812  
Lims ID: 480-164221-C-5-A Lab Sample ID: 200-164221-5  
Client ID: FIELD DUP  
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 2

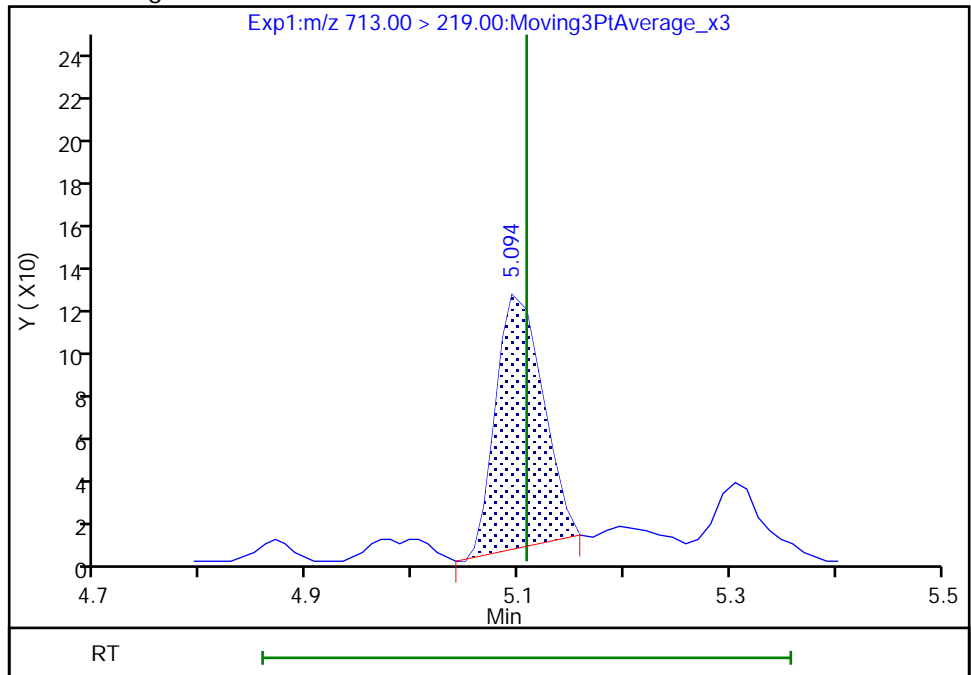
Not Detected  
Expected RT: 5.11

Processing Integration Results



Manual Integration Results

RT: 5.09  
Area: 358  
Amount: 0.005602  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 13:26:56

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

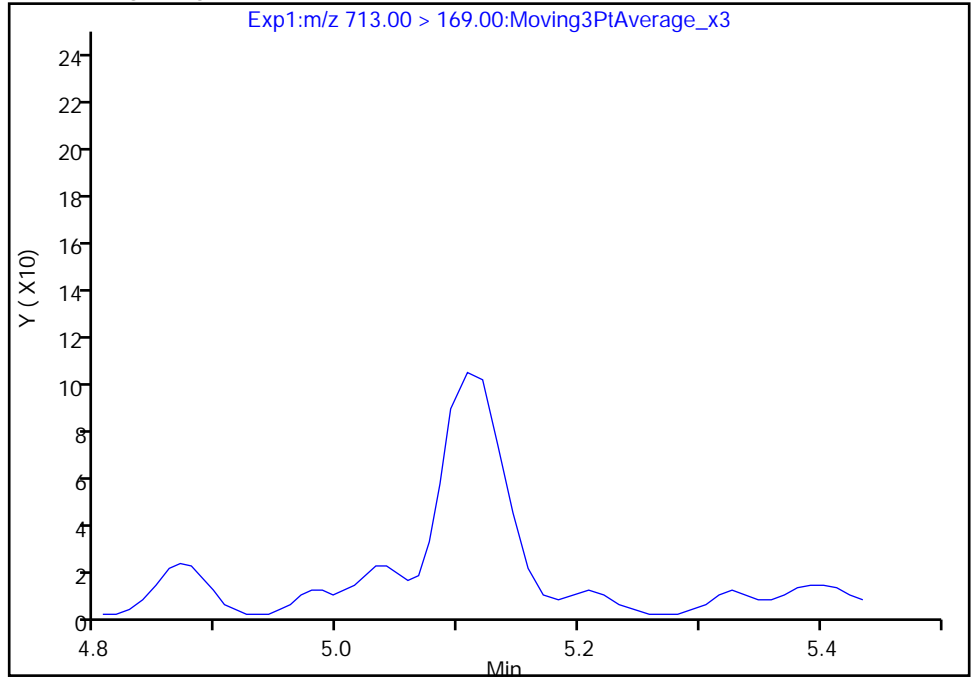
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B016.d  
Injection Date: 24-Dec-2019 15:59:01 Instrument ID: LC812  
Lims ID: 480-164221-C-5-A Lab Sample ID: 200-164221-5  
Client ID: FIELD DUP  
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 1

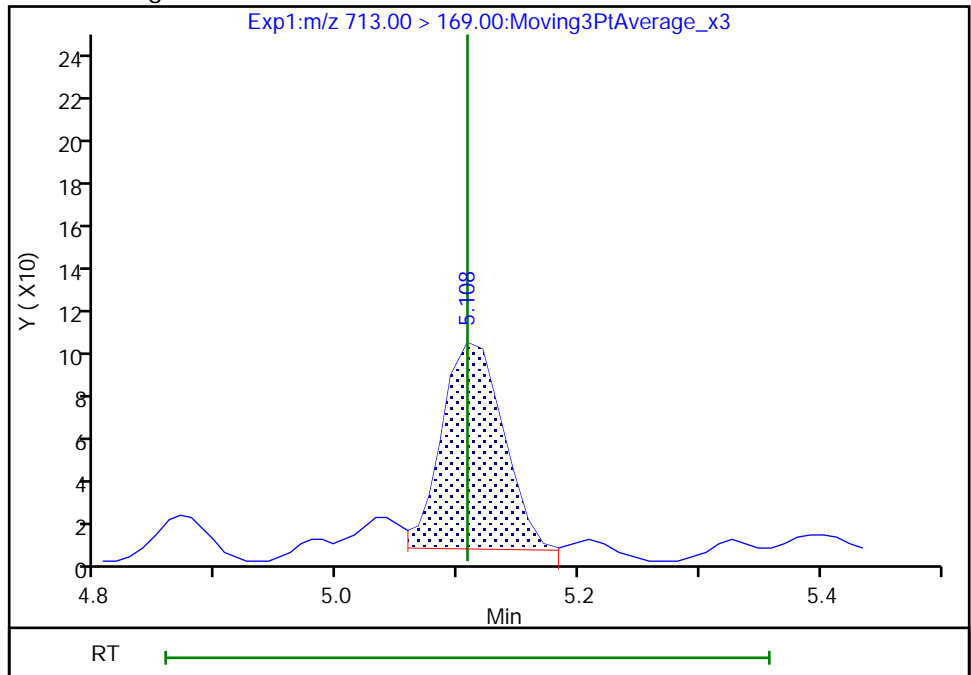
Not Detected  
Expected RT: 5.11

Processing Integration Results



Manual Integration Results

RT: 5.11  
Area: 333  
Amount: 0.005602  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 13:27:15

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

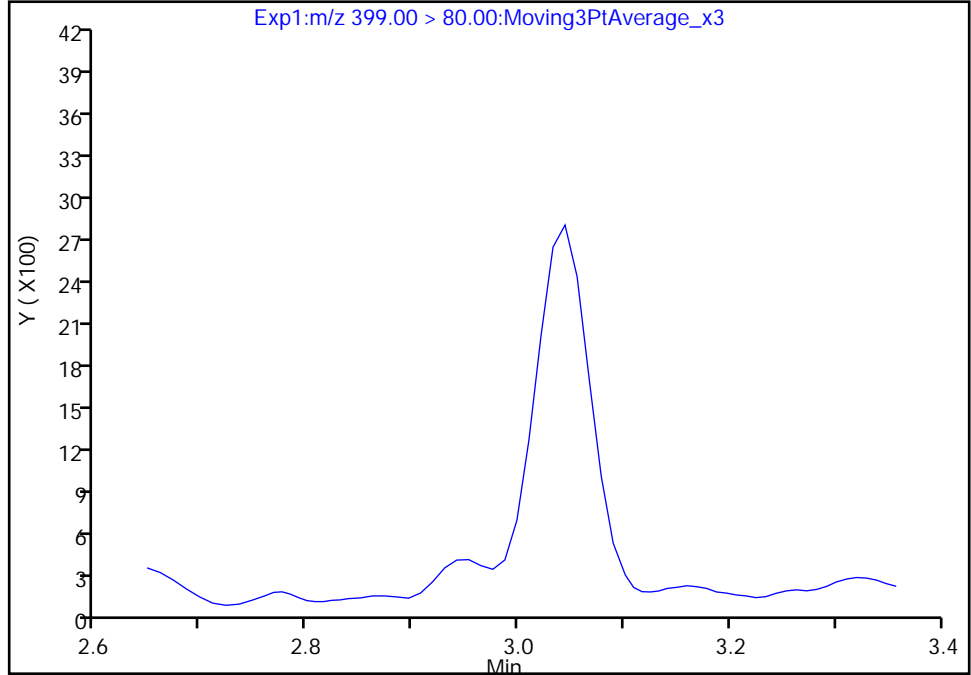
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B016.d  
Injection Date: 24-Dec-2019 15:59:01 Instrument ID: LC812  
Lims ID: 480-164221-C-5-A Lab Sample ID: 200-164221-5  
Client ID: FIELD DUP  
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

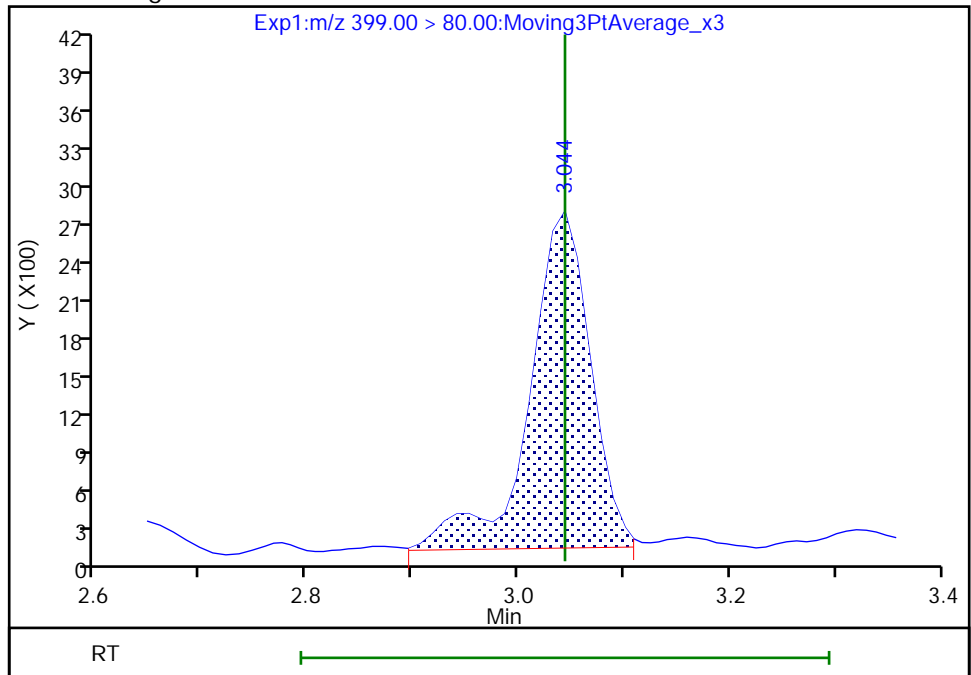
Not Detected  
Expected RT: 3.04

Processing Integration Results



Manual Integration Results

RT: 3.04  
Area: 10605  
Amount: 0.018229  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 13:40:46

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

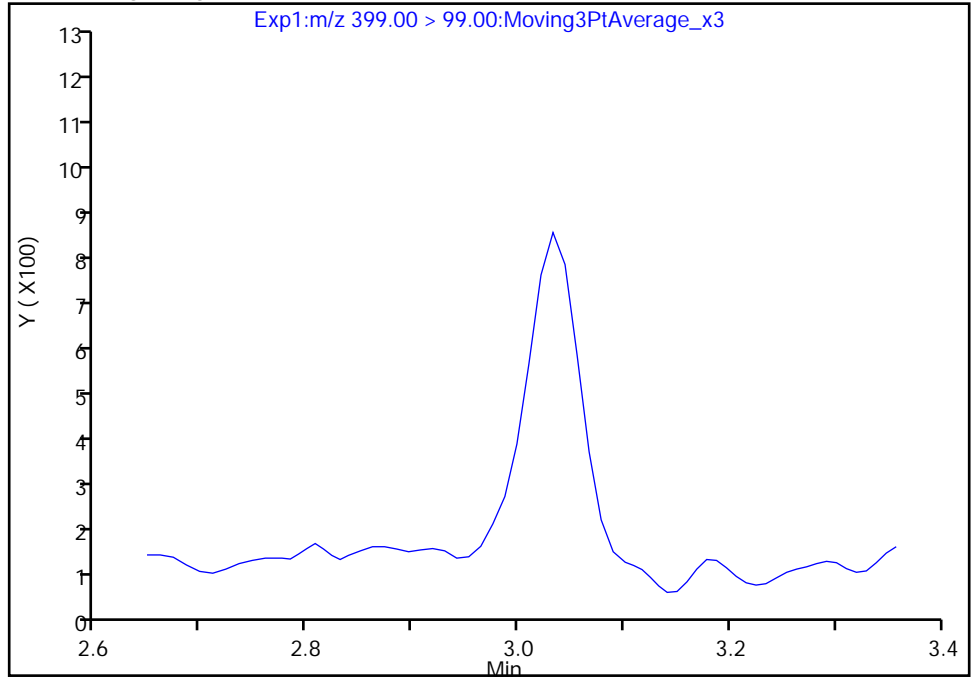
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B016.d  
Injection Date: 24-Dec-2019 15:59:01 Instrument ID: LC812  
Lims ID: 480-164221-C-5-A Lab Sample ID: 200-164221-5  
Client ID: FIELD DUP  
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

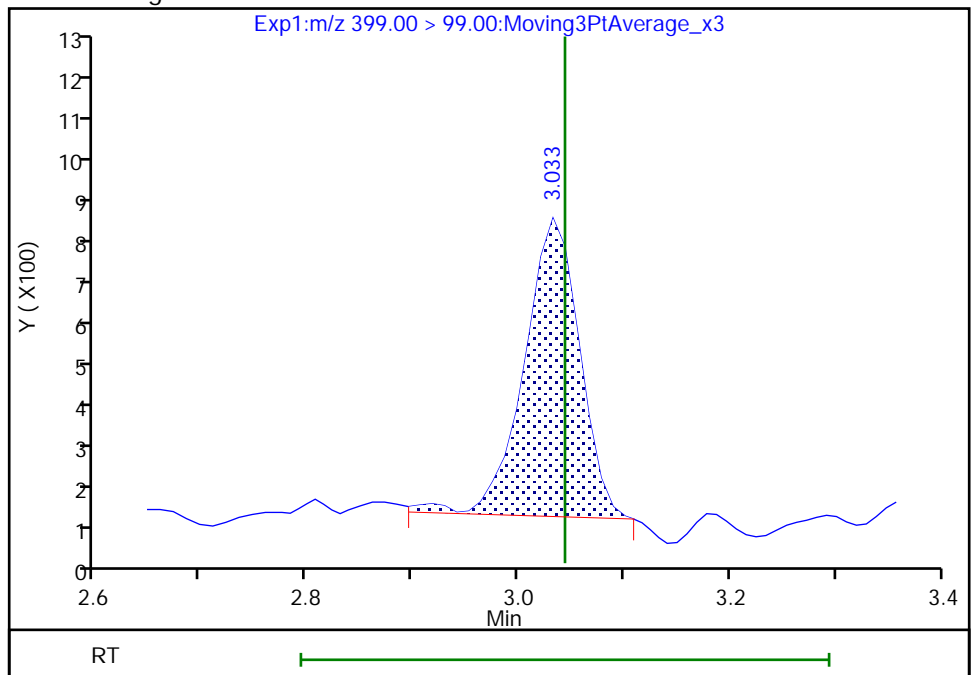
Not Detected  
Expected RT: 3.04

Processing Integration Results



Manual Integration Results

RT: 3.03  
Area: 2635  
Amount: 0.018229  
Amount Units: ng/ml



Euofins TestAmerica, Burlington

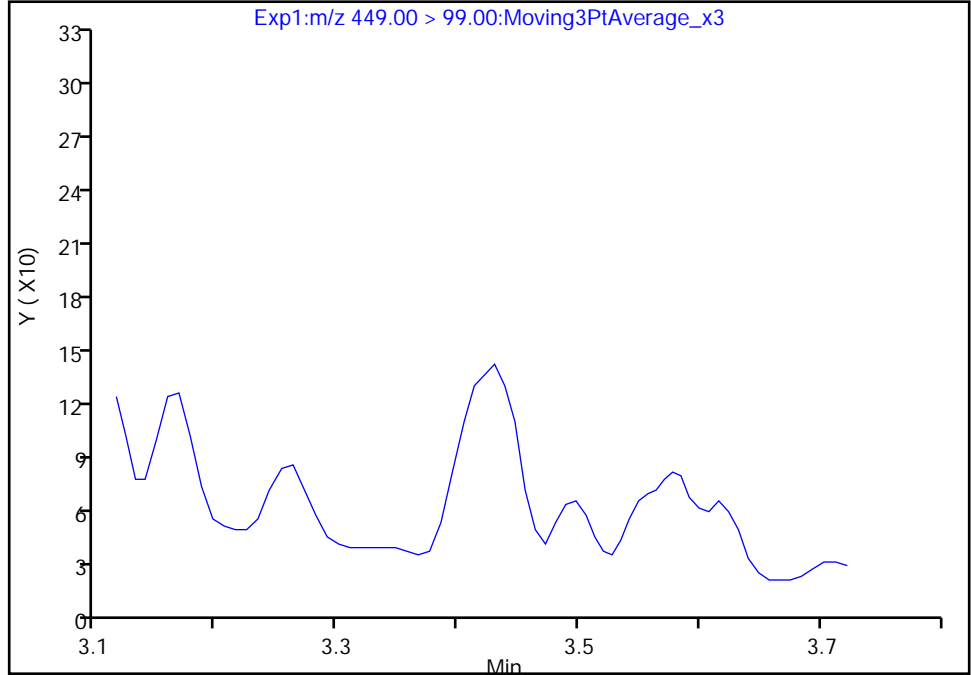
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B016.d  
Injection Date: 24-Dec-2019 15:59:01 Instrument ID: LC812  
Lims ID: 480-164221-C-5-A Lab Sample ID: 200-164221-5  
Client ID: FIELD DUP  
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

16 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 2

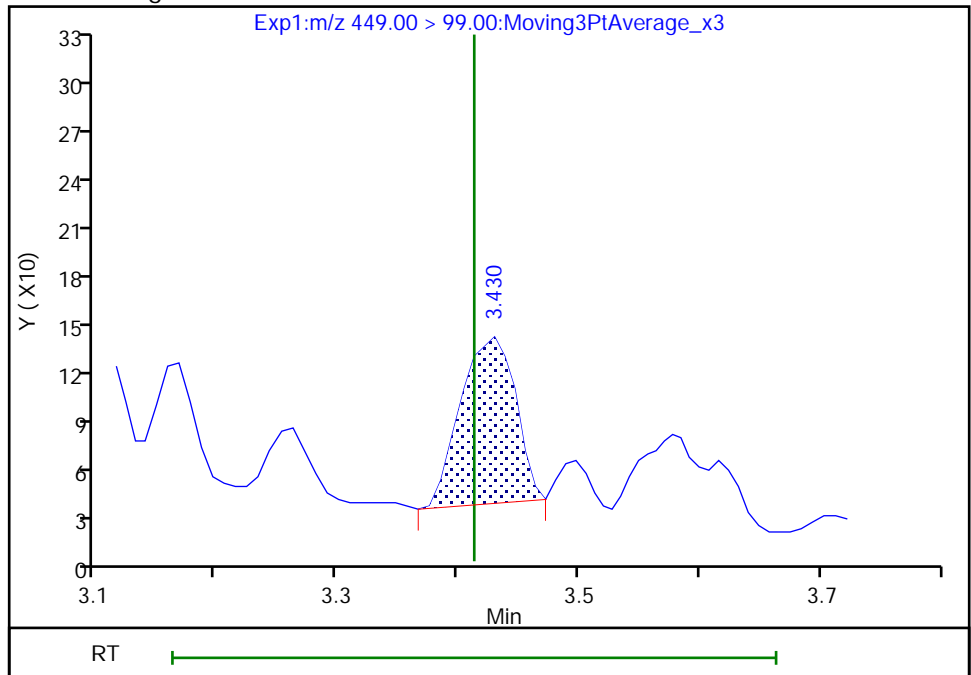
Not Detected  
Expected RT: 3.41

Processing Integration Results



Manual Integration Results

RT: 3.43  
Area: 322  
Amount: 0.003232  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

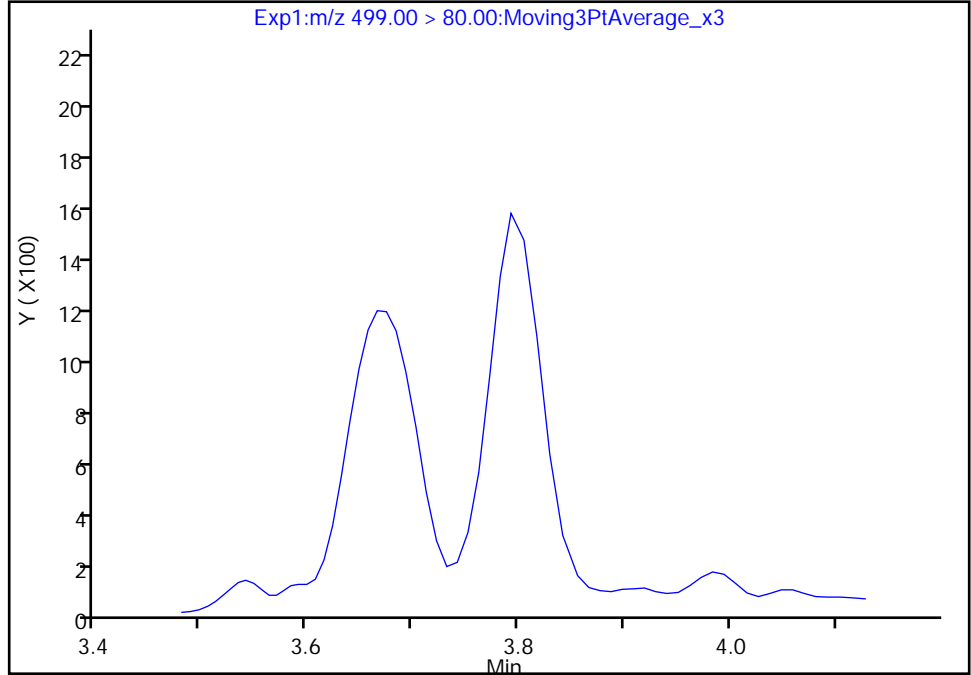
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B016.d  
Injection Date: 24-Dec-2019 15:59:01 Instrument ID: LC812  
Lims ID: 480-164221-C-5-A Lab Sample ID: 200-164221-5  
Client ID: FIELD DUP  
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

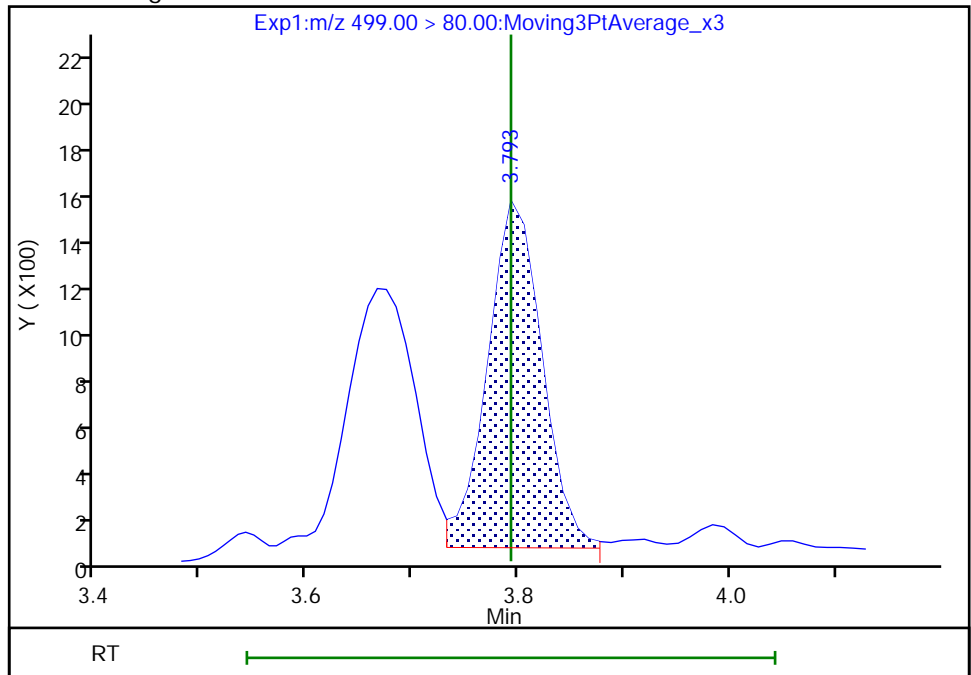
Not Detected  
Expected RT: 3.79

Processing Integration Results



Manual Integration Results

RT: 3.79  
Area: 5283  
Amount: 0.013250  
Amount Units: ng/ml



Euofins TestAmerica, Burlington

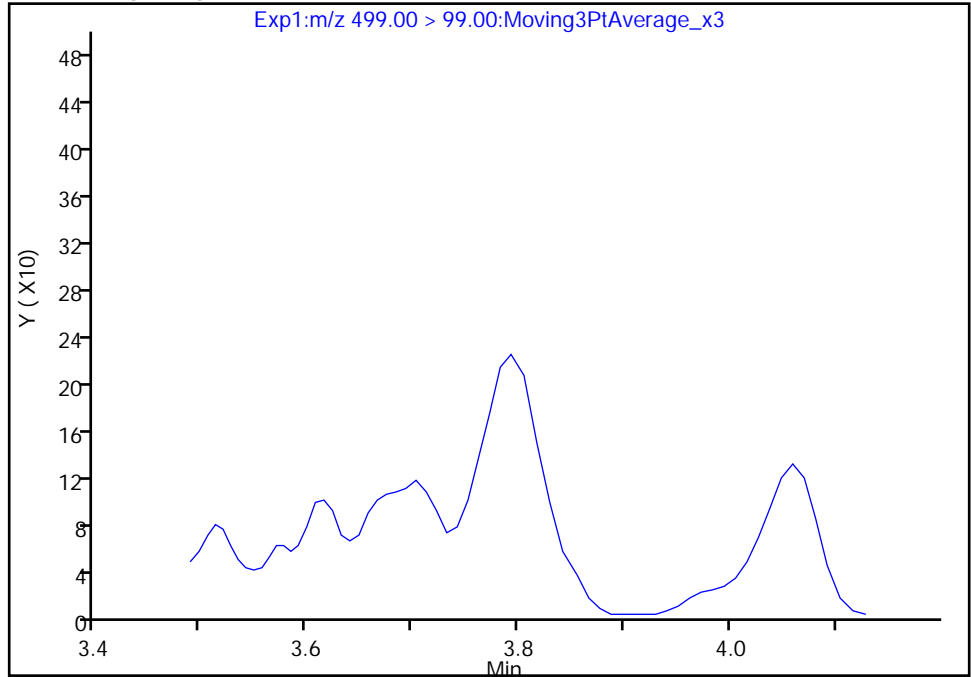
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B016.d  
Injection Date: 24-Dec-2019 15:59:01 Instrument ID: LC812  
Lims ID: 480-164221-C-5-A Lab Sample ID: 200-164221-5  
Client ID: FIELD DUP  
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

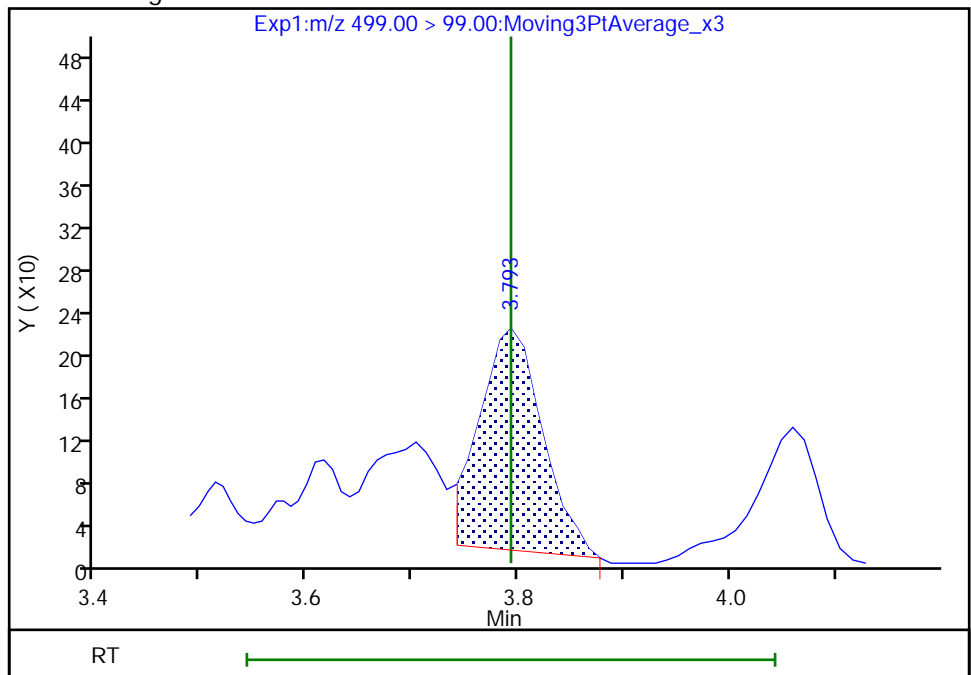
Not Detected  
Expected RT: 3.79

Processing Integration Results



Manual Integration Results

RT: 3.79  
Area: 866  
Amount: 0.013250  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

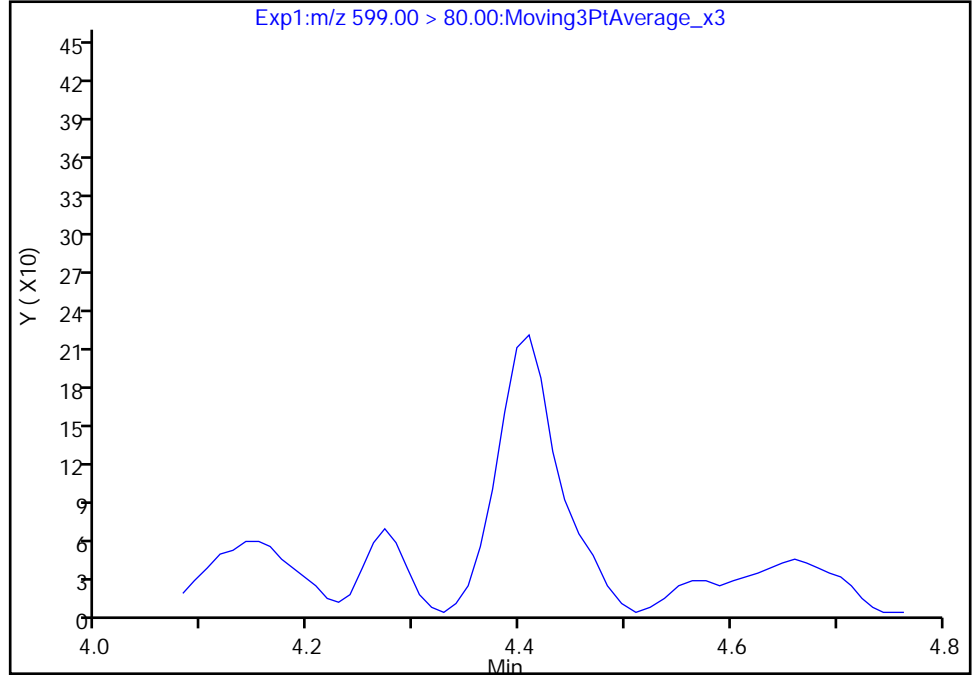
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B016.d  
Injection Date: 24-Dec-2019 15:59:01 Instrument ID: LC812  
Lims ID: 480-164221-C-5-A Lab Sample ID: 200-164221-5  
Client ID: FIELD DUP  
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

29 Perfluorodecanesulfonic acid, CAS: 335-77-3

Signal: 1

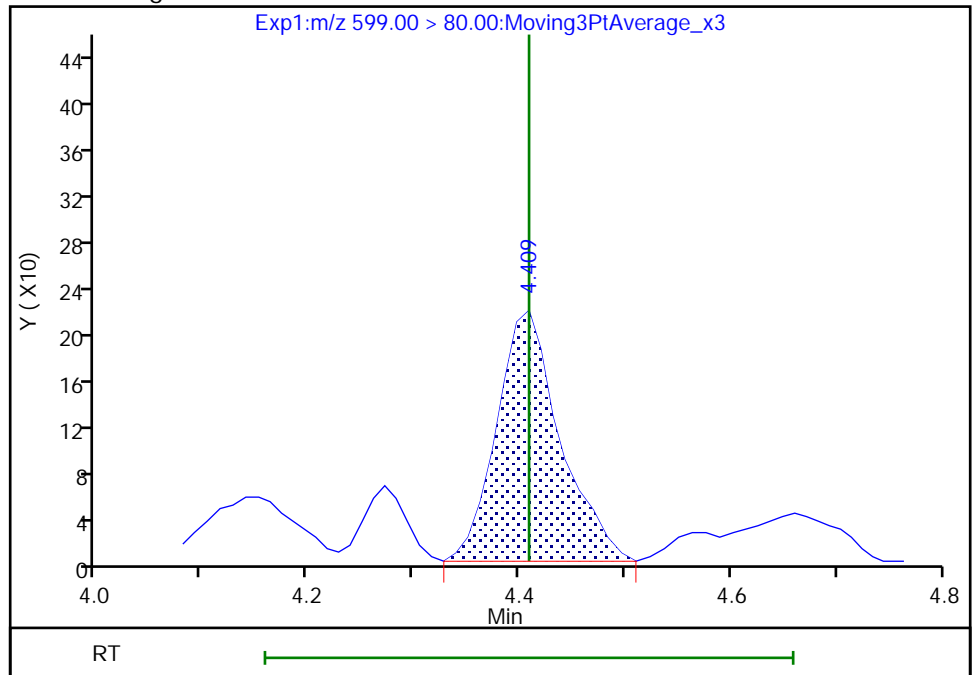
Not Detected  
Expected RT: 4.41

Processing Integration Results



Manual Integration Results

RT: 4.41  
Area: 911  
Amount: 0.003428  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 13:29:32

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Eurofins TestAmerica, Burlington

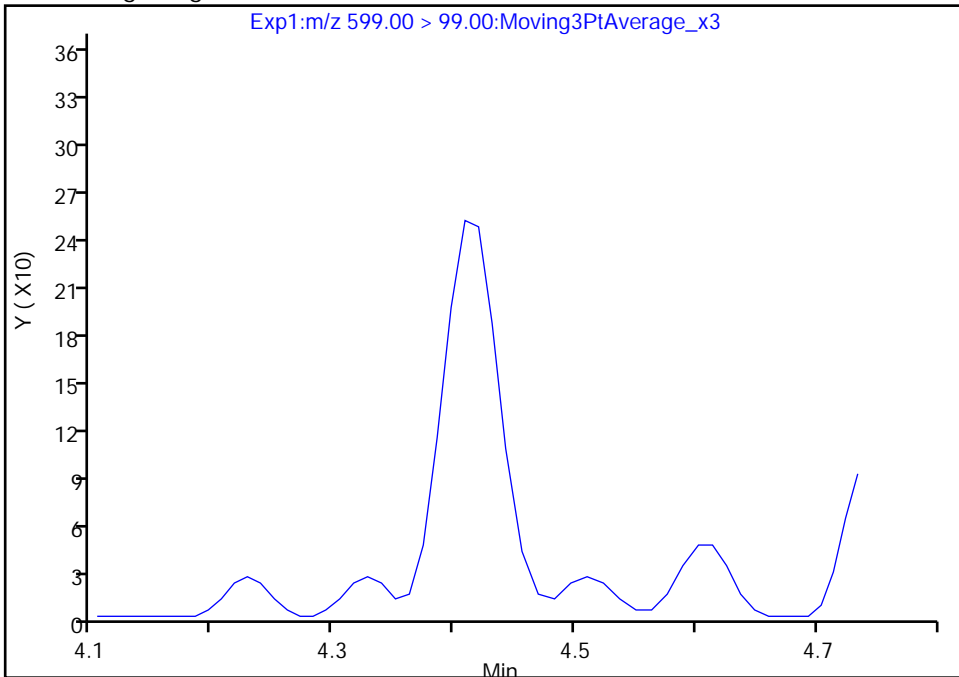
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B016.d  
Injection Date: 24-Dec-2019 15:59:01 Instrument ID: LC812  
Lims ID: 480-164221-C-5-A Lab Sample ID: 200-164221-5  
Client ID: FIELD DUP  
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

29 Perfluorodecanesulfonic acid, CAS: 335-77-3

Signal: 2

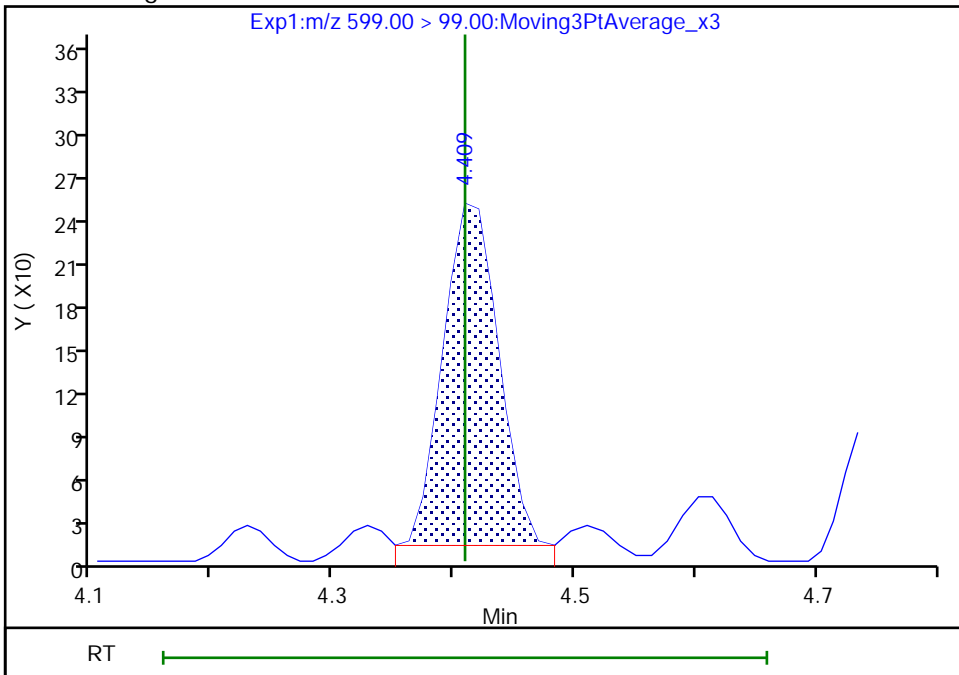
Not Detected  
Expected RT: 4.41

Processing Integration Results



Manual Integration Results

RT: 4.41  
Area: 759  
Amount: 0.003428  
Amount Units: ng/ml



Euofins TestAmerica, Burlington

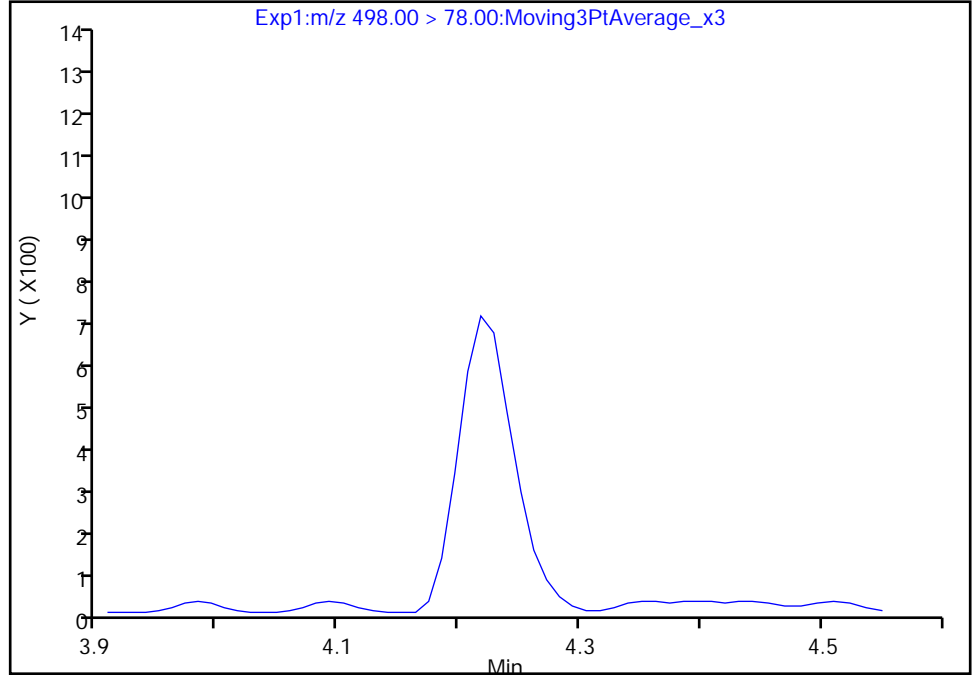
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B016.d  
Injection Date: 24-Dec-2019 15:59:01 Instrument ID: LC812  
Lims ID: 480-164221-C-5-A Lab Sample ID: 200-164221-5  
Client ID: FIELD DUP  
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

22 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

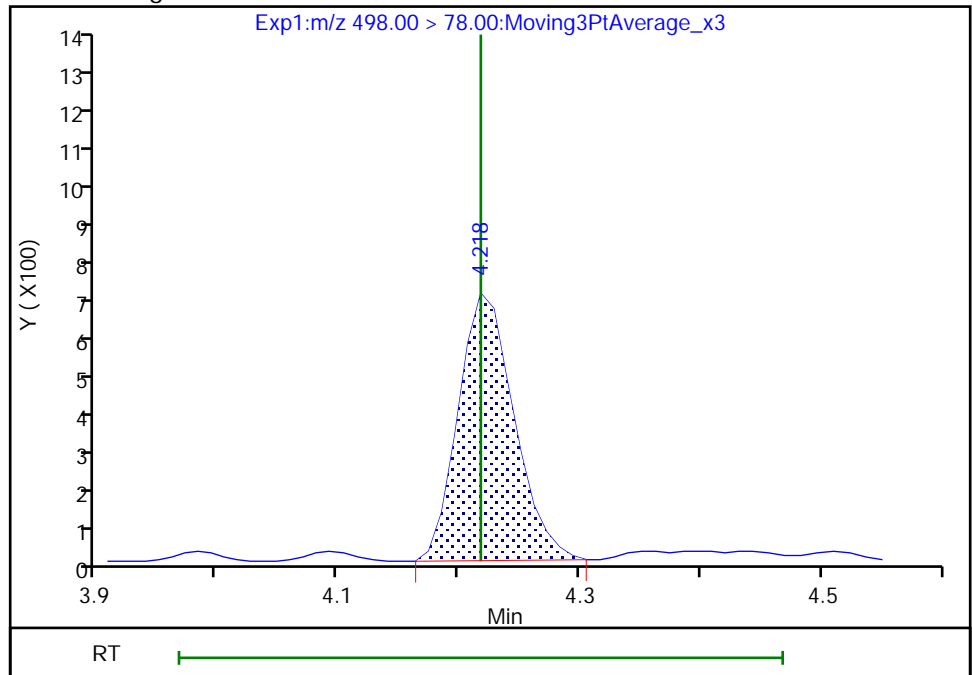
Not Detected  
Expected RT: 4.22

Processing Integration Results



Manual Integration Results

RT: 4.22  
Area: 2232  
Amount: 0.003985  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 13:30:54  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

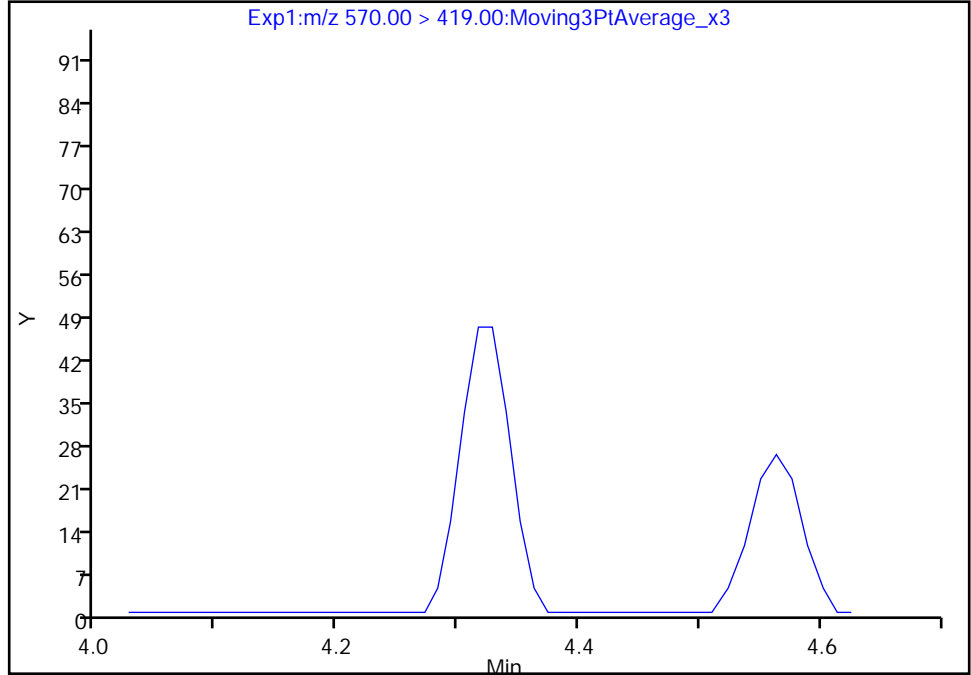
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B016.d  
Injection Date: 24-Dec-2019 15:59:01 Instrument ID: LC812  
Lims ID: 480-164221-C-5-A Lab Sample ID: 200-164221-5  
Client ID: FIELD DUP  
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

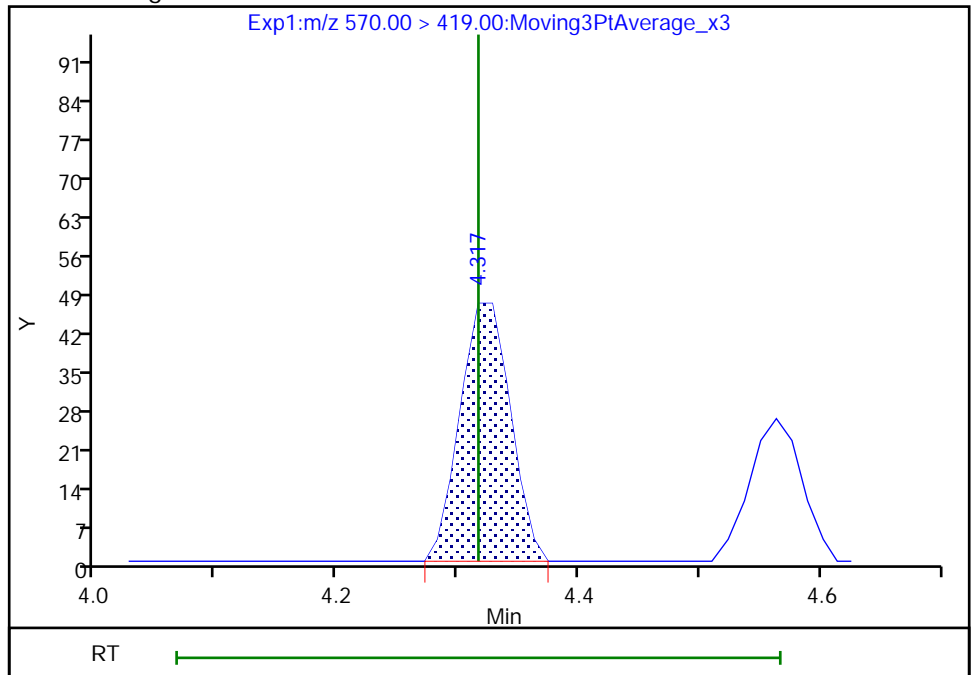
Not Detected  
Expected RT: 4.32

Processing Integration Results



Manual Integration Results

RT: 4.32  
Area: 136  
Amount: 0.003862  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 13:30:04  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Euofins TestAmerica, Burlington

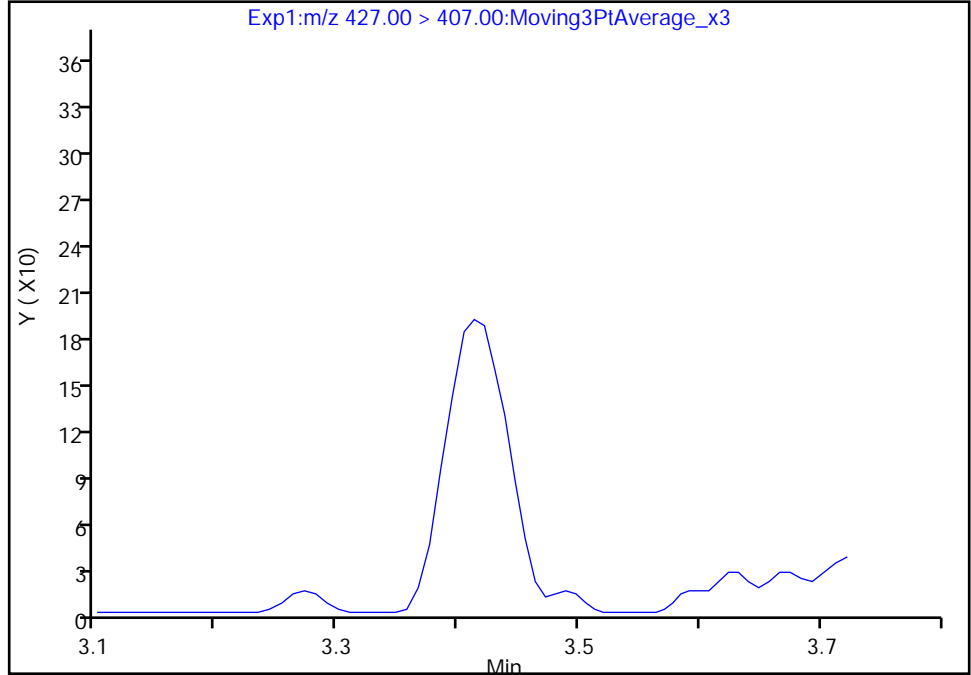
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B016.d  
Injection Date: 24-Dec-2019 15:59:01 Instrument ID: LC812  
Lims ID: 480-164221-C-5-A Lab Sample ID: 200-164221-5  
Client ID: FIELD DUP  
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

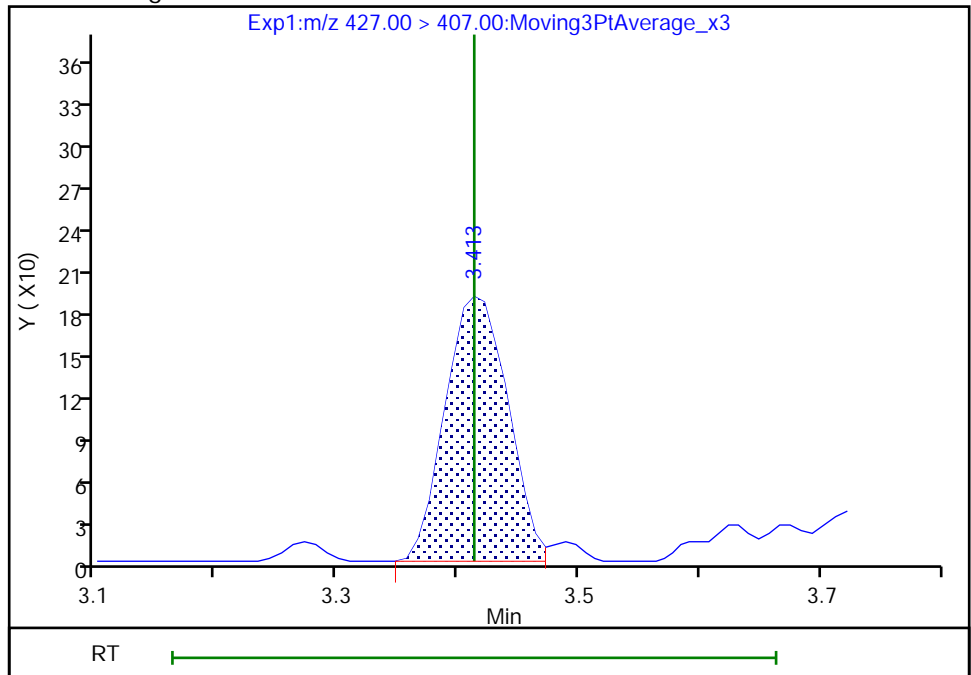
Not Detected  
Expected RT: 3.41

Processing Integration Results



Manual Integration Results

RT: 3.41  
Area: 682  
Amount: 0.010462  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 13:38:29

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

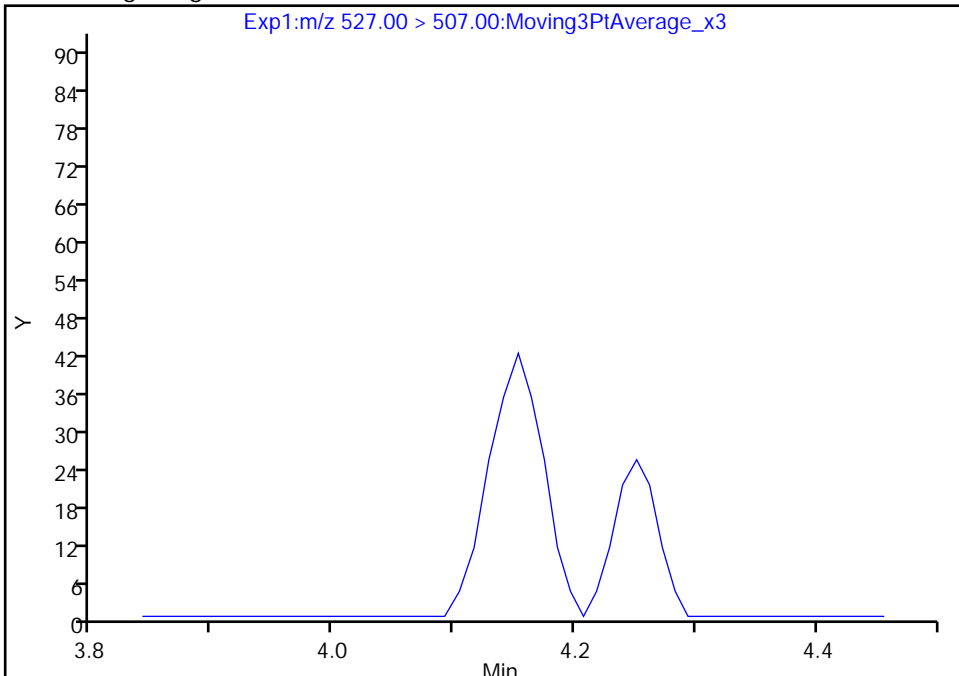
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B016.d  
Injection Date: 24-Dec-2019 15:59:01 Instrument ID: LC812  
Lims ID: 480-164221-C-5-A Lab Sample ID: 200-164221-5  
Client ID: FIELD DUP  
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

25 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:, CAS: 39108-34-4

Signal: 1

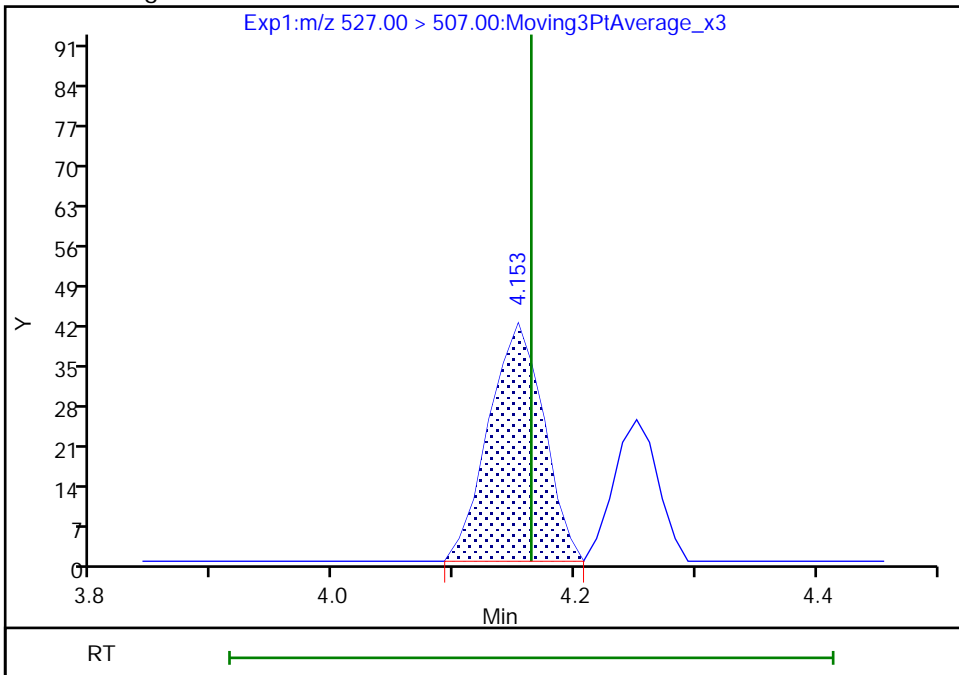
Not Detected  
Expected RT: 4.16

Processing Integration Results



Manual Integration Results

RT: 4.15  
Area: 132  
Amount: 0.003064  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 13:30:17  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AOI 3 GW 2 DER Lab Sample ID: 480-164221-6  
 Matrix: Water Lab File ID: SC122319B017.d  
 Analysis Method: 537 (modified) Date Collected: 12/10/2019 13:40  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 262.6(mL) Date Analyzed: 12/24/2019 16:07  
 Con. Extract Vol.: 10(mL) Dilution Factor: 1  
 Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	4.0		1.9	0.95
2706-90-3	Perfluoropentanoic acid (PFPeA)	4.7		1.9	0.60
307-24-4	Perfluorohexanoic acid (PFHxA)	4.0		1.9	0.72
375-85-9	Perfluoroheptanoic acid (PFHpA)	2.4		1.9	0.87
335-67-1	Perfluorooctanoic acid (PFOA)	12		1.9	0.77
375-95-1	Perfluorononanoic acid (PFNA)	0.69	J	1.9	0.26
335-76-2	Perfluorodecanoic acid (PFDA)	ND		1.9	0.73
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		1.9	0.74
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		1.9	0.56
72629-94-8	Perfluorotridecanoic acid (PFTriA)	ND		1.9	0.57
376-06-7	Perfluorotetradecanoic acid (PFTeA)	ND		1.9	0.88
375-73-5	Perfluorobutanesulfonic acid (PFBS)	1.7	J	1.9	0.47
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	0.90	J	1.9	0.76
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.9	0.90
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	4.5	I	1.9	0.58
335-77-3	Perfluorodecanesulfonic acid (PFDS)	ND		1.9	0.86
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND		9.5	9.5
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		19	1.6
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		19	1.4
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		19	5.2
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		19	2.8

FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AOI 3 GW 2 DER Lab Sample ID: 480-164221-6  
 Matrix: Water Lab File ID: SC122319B017.d  
 Analysis Method: 537 (modified) Date Collected: 12/10/2019 13:40  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 262.6(mL) Date Analyzed: 12/24/2019 16:07  
 Con. Extract Vol.: 10(mL) Dilution Factor: 1  
 Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	105		50-150
STL01892	13C4 PFHpA	99		50-150
STL00990	13C4 PFOA	98		50-150
STL00991	13C4 PFOS	97		50-150
STL00995	13C5 PFNA	91		50-150
STL00992	13C4 PFBA	82		25-150
STL00993	13C2 PFHxA	94		50-150
STL00996	13C2 PFDA	89		50-150
STL00997	13C2 PFUnA	91		50-150
STL00998	13C2 PFDoA	78		50-150
STL01056	13C8 FOSA	87		25-150
STL01893	13C5 PFPeA	104		25-150
STL02116	13C2 PFTeDA	73		50-150
STL02118	d3-NMeFOSAA	73		50-150
STL02117	d5-NEtFOSAA	74		50-150
STL02279	M2-6:2 FTS	76		25-150
STL02280	M2-8:2 FTS	94		25-150
STL02337	13C3 PFBS	102		50-150

Eurofins TestAmerica, Burlington  
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B017.d  
 Lims ID: 480-164221-C-6-A  
 Client ID: AOI 3 GW 2 DER  
 Sample Type: Client  
 Inject. Date: 24-Dec-2019 16:07:13 ALS Bottle#: 17 Worklist Smp#: 17  
 Injection Vol: 20.0 ul Dil. Factor: 1.0000  
 Sample Info: 480-164221-C-6-A  
 Misc. Info.: 200-0039355-017 Plate: 1 Rack: 2  
 Operator ID: lc812tech Instrument ID: LC812  
 Method: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\PFC\_LC812.m  
 Limit Group: LC\_PFC\_ICAL  
 Last Update: 31-Dec-2019 09:15:07 Calib Date: 06-Dec-2019 15:13:26  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Column 1 : C-18 ( 4.60 mm) Det: EXP1  
 Process Host: CTX0330

First Level Reviewer: lautenschlagery Date: 31-Dec-2019 09:15:07  
 Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	1.898	1.908	-0.010	0.555	1561075	2.04	81.7	2513	
2 Perfluorobutanoic acid	212.90 > 169.00	1.907	1.908	-0.001	1.005	65583	0.1056		20.7	
D 3 13C5 PFPeA	267.90 > 223.00	2.257	2.257	0.0	0.660	1514462	2.59	104	5497	
4 Perfluoropentanoic acid	262.90 > 219.00	2.257	2.271	-0.014	1.000	84517	0.1232		8.0	M
D 47 13C3 PFBS	301.90 > 80.00	2.271	2.285	-0.014	0.664	1652819	2.37	102	267354	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	2.284	2.285	-0.001	1.006	35252	0.0456	Target=2.03	50.3	
	298.90 > 99.00	2.284	2.285	-0.001	1.006	17269		2.04(1.01-3.04)	21.5	
D 7 13C2 PFHxA	315.00 > 270.00	2.648	2.648	0.0	0.774	1524515	2.34	93.5	4758	
6 Perfluorohexanoic acid	313.00 > 269.00	2.648	2.661	-0.013	1.000	64862	0.1042	Target=13.76	23.3	
	313.00 > 119.00	2.648	2.661	-0.013	1.000	5639		11.50(6.88-20.64)	24.3	
D 11 18O2 PFHxS	403.00 > 84.00	3.032	3.044	-0.012	0.886	1364209	2.48	105	7039	
8 Perfluorohexanesulfonic acid	399.00 > 80.00	3.032	3.044	-0.012	1.000	15412	0.0236	Target=3.90	24.2	M
	399.00 > 99.00	3.032	3.044	-0.012	1.000	4207		3.66(1.95-5.85)	14.3	M
D 9 13C4 PFHpA	367.00 > 322.00	3.044	3.044	0.0	0.890	1531622	2.48	99.1	5104	
10 Perfluoroheptanoic acid	363.00 > 319.00	3.044	3.044	0.0	1.000	41047	0.0634	Target=3.95	18.6	M
	363.00 > 169.00	3.044	3.044	0.0	1.000	13021		3.15(1.97-5.92)	52.2	M



Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
16 Perfluoroheptanesulfonic acid										M
449.00 > 80.00	3.413	3.413	0.0	0.900	2041	0.003932	Target=6.46	7.3		M
449.00 > 99.00	3.413	3.413	0.0	0.900	493		4.14(3.23-9.69)	4.2		M
13 1H,1H,2H,2H-perfluorooctanesulfoni										M
427.00 > 407.00	3.413	3.413	0.0	1.000	1111	0.0165		16.9		M
D 12 M2-6:2 FTS										
429.00 > 81.00	3.413	3.413	0.0	0.998	169765	1.79		75.5	458	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.422	3.430	-0.008	1.000	223599	0.3120	Target=2.40	81.2		
413.00 > 169.00	3.422	3.430	-0.008	1.000	107333		2.08(1.20-3.60)	474		
D 14 13C4 PFOA										
417.00 > 372.00	3.422	3.430	-0.008	1.000	1614550	2.46		98.5	5188	
* 62 13C2 PFOA										
415.00 > 370.00	3.422	3.430	-0.008		1804843	2.50			5008	
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.793	0.0	1.108	1012764	2.32		97.0	3917	
17 Perfluorooctanesulfonic acid										RM
499.00 > 80.00	3.666	3.793	-0.127	0.967	53692	0.1174	Target=5.74	102		RM
499.00 > 99.00	3.793	3.793	0.0	1.000	5522		9.72(2.87-8.61)	26.4		M
D 19 13C5 PFNA										
468.00 > 423.00	3.817	3.817	0.0	1.116	1371812	2.27		91.0	4031	
20 Perfluorononanoic acid										M
463.00 > 419.00	3.817	3.817	0.0	1.000	9712	0.0181	Target=7.01	4.2		M
463.00 > 169.00	3.817	3.817	0.0	1.000	1236		7.86(3.50-10.51)	10.4		M
D 23 13C2 PFDA										
515.00 > 470.00	4.164	4.164	0.0	1.217	1324872	2.23		89.2	5974	
24 Perfluorodecanoic acid										RM
513.00 > 469.00	4.164	4.164	0.0	1.000	1668	0.003253	Target=7.28	1.6		RM
513.00 > 169.00	4.153	4.164	-0.011	0.997	849		1.96(3.64-10.91)	8.6		M
25 1H,1H,2H,2H-perfluorodecanesulfoni										M
527.00 > 507.00	4.164	4.164	0.0	1.000	130	0.002651		3.2		M
D 26 M2-8:2 FTS										
529.00 > 81.00	4.164	4.175	-0.011	1.217	254435	2.26		94.2	1835	
D 21 13C8 FOSA										
506.00 > 78.00	4.218	4.218	0.0	1.233	1682031	2.16		86.6	4953	
22 Perfluorooctanesulfonamide										M
498.00 > 78.00	4.207	4.218	-0.011	0.997	1301	0.001943		14.5		M
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.305	4.305	0.0	1.258	103780	1.81		72.5	1051	
D 30 13C2 PFUnA										
565.00 > 520.00	4.442	4.443	-0.001	1.298	1146380	2.27		90.8	6689	
31 Perfluoroundecanoic acid										RM
563.00 > 519.00	4.442	4.443	-0.001	1.000	2249	0.005784	Target=5.78	3.4		RM
563.00 > 169.00	4.442	4.443	-0.001	1.000	863		2.61(2.89-8.67)	9.7		M
33 N-ethylperfluorooctanesulfonamidoa										M
584.00 > 419.00	4.469	4.456	0.013	1.003	79	0.002034				M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.456	4.456	0.0	1.302	117285	1.85		73.9	1146	
37 Perfluorododecanoic acid										M
613.00 > 569.00	4.683	4.683	-0.001	1.000	1469	0.003697	Target=5.13		0.5	M
613.00 > 169.00	4.683	4.683	-0.001	1.000	300		4.90(2.56-7.69)		5.8	M
D 36 13C2 PFDaA										
615.00 > 570.00	4.683	4.683	-0.001	1.369	1074992	1.94		77.6	3872	
41 Perfluorotridecanoic acid										RM
663.00 > 619.00	4.915	4.906	0.009	1.050	514	0.001362	Target=3.82		0.2	RM
663.00 > 169.00	4.906	4.906	0.0	1.048	331		1.55(1.91-5.74)		5.8	M
42 Perfluorotetradecanoic acid										RM
713.00 > 169.00	5.120	5.108	0.012	1.002	641	0.009384	Target=1.05		10.0	RM
713.00 > 219.00	5.094	5.108	-0.014	0.997	365		1.76(0.52-1.57)		7.5	M
D 43 13C2 PFTeDA										
715.00 > 670.00	5.107	5.108	-0.001	1.493	850076	1.83		73.2	6501	

**QC Flag Legend**

Processing Flags

R - Failed Signal Ratio Test

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B017.d

Injection Date: 24-Dec-2019 16:07:13

Instrument ID: LC812

Lims ID: 480-164221-C-6-A

Lab Sample ID: 200-164221-6

Client ID: AOI 3 GW 2 DER

Operator ID: lc812tech

ALS Bottle#: 17

Worklist Smp#: 17

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

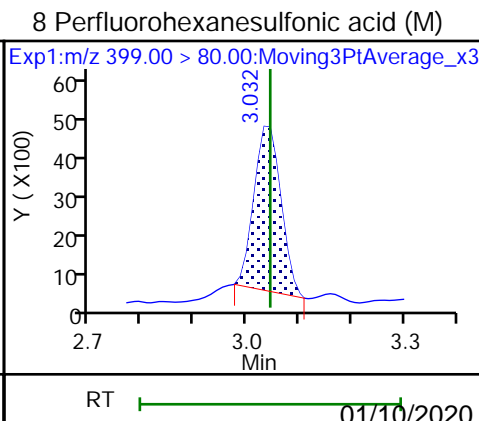
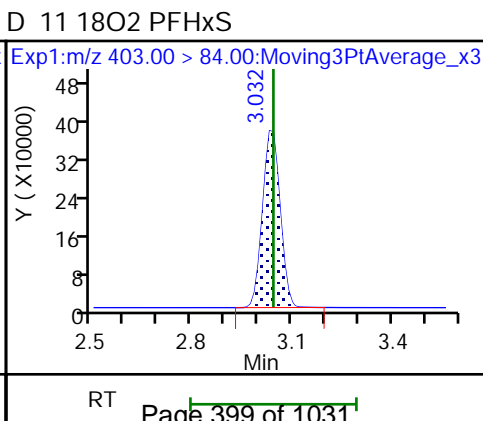
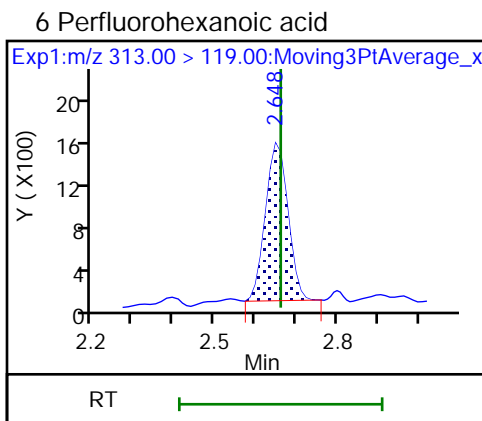
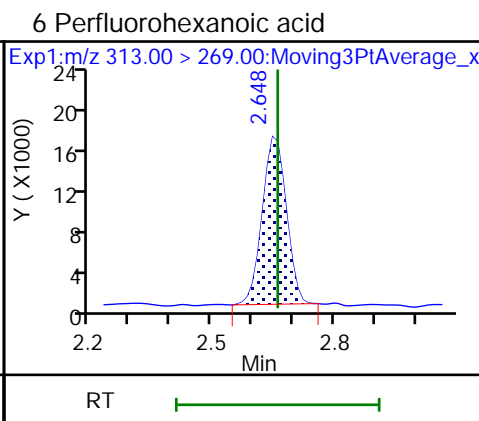
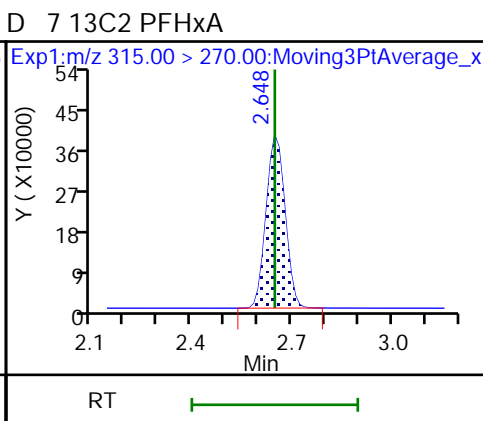
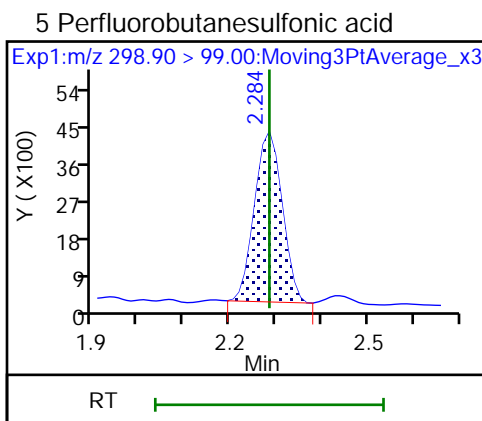
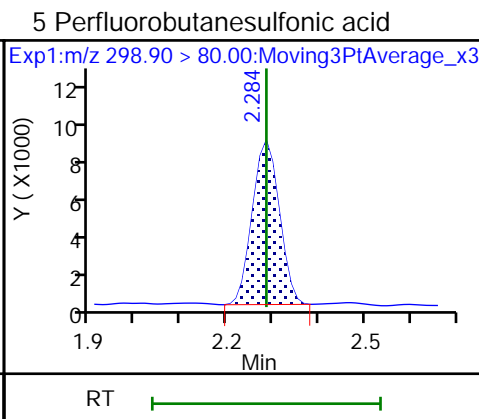
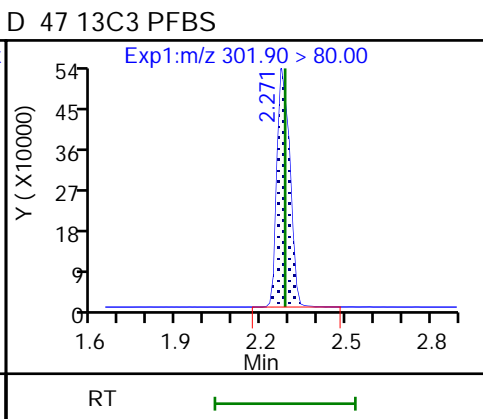
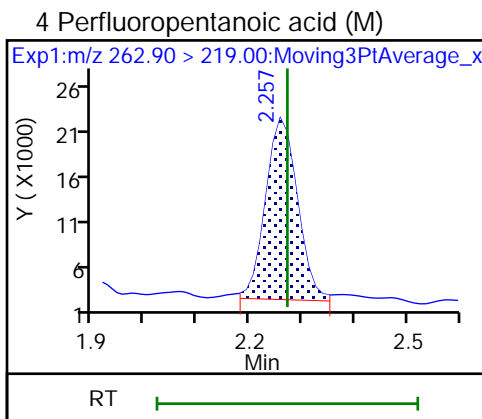
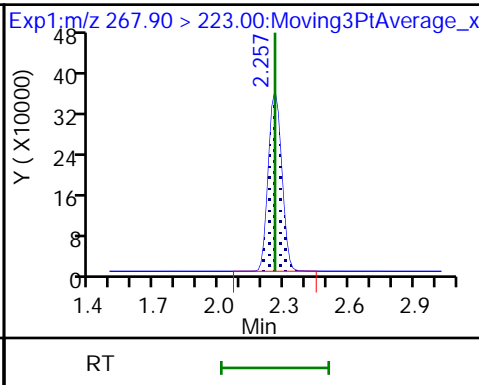
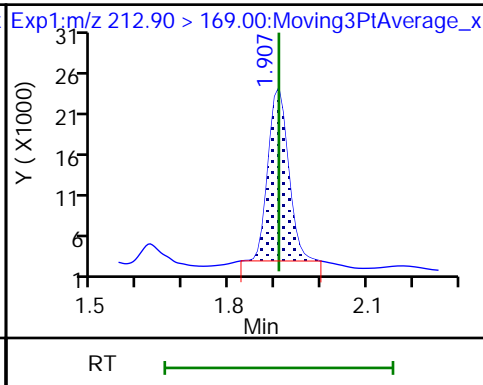
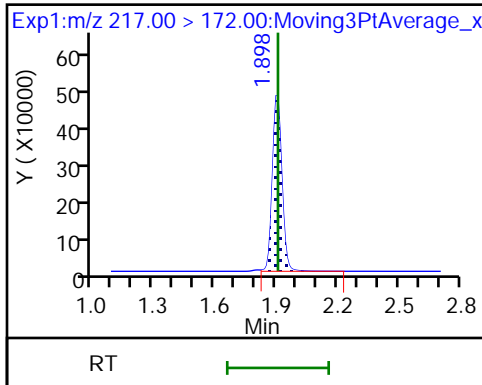
Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

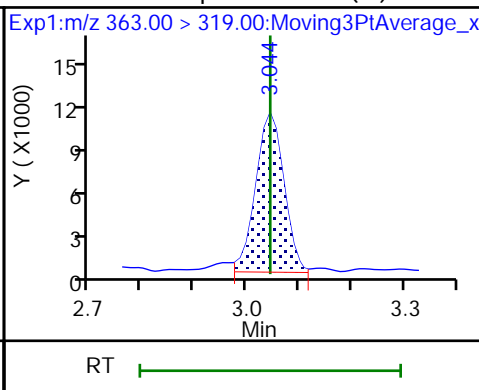
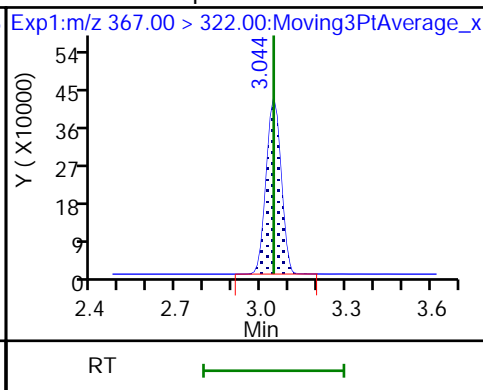
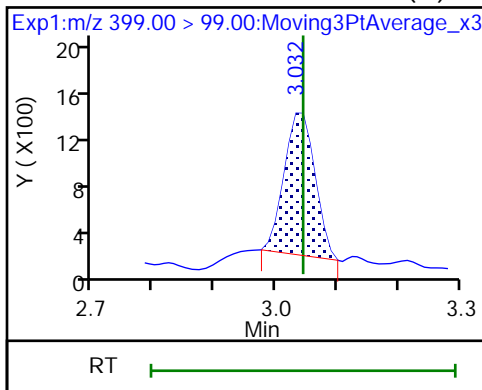
D 3 13C5 PFPeA



8 Perfluorohexanesulfonic acid (M)

D 9 13C4 PFHpA

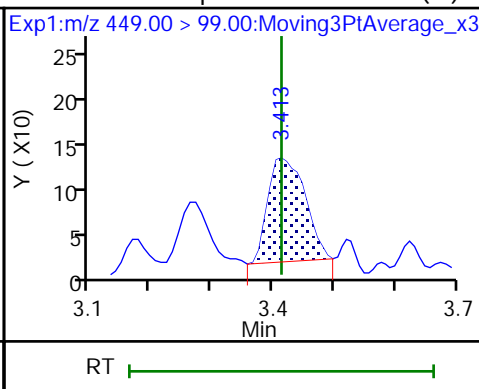
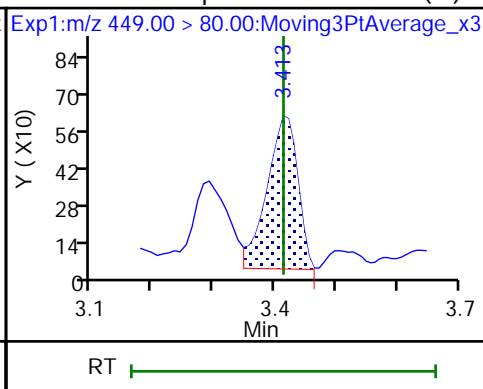
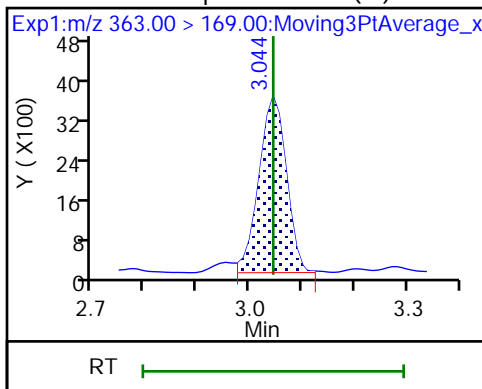
10 Perfluoroheptanoic acid (M)



10 Perfluoroheptanoic acid (M)

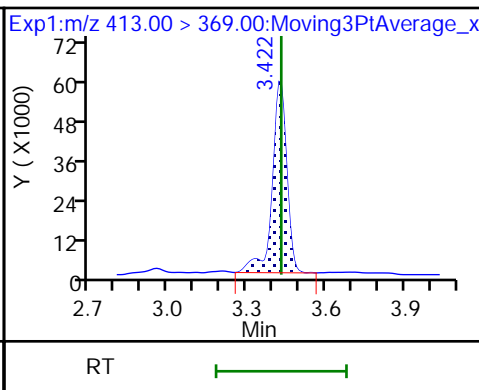
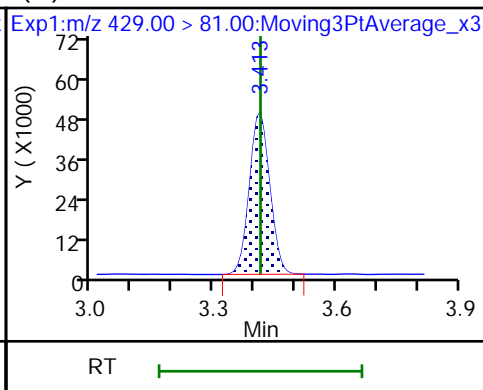
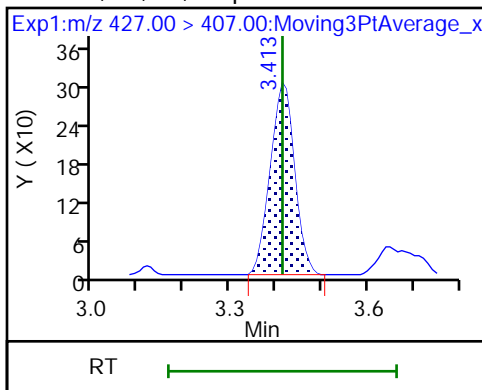
16 Perfluoroheptanesulfonic acid (M)

16 Perfluoroheptanesulfonic acid (M)



13 1H,1H,2H,2H-perfluorooctanesulfonate (M) M2-6:2 FTS

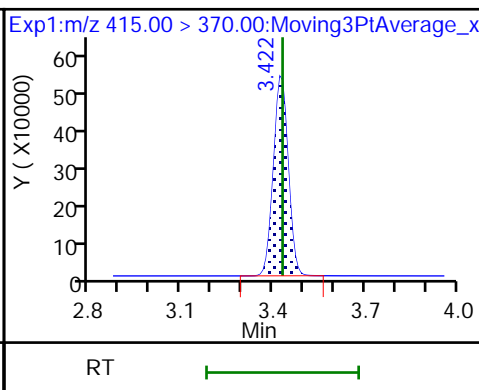
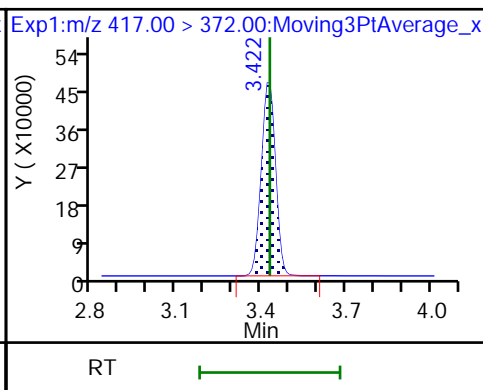
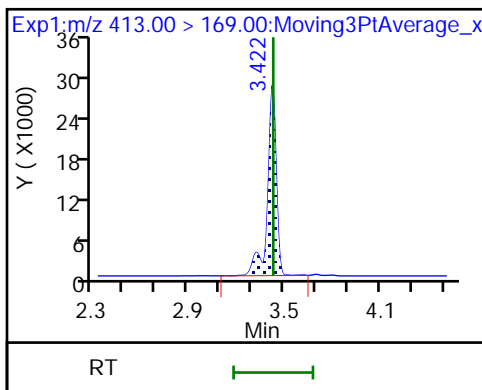
15 Perfluorooctanoic acid



15 Perfluorooctanoic acid

D 14 13C4 PFOA

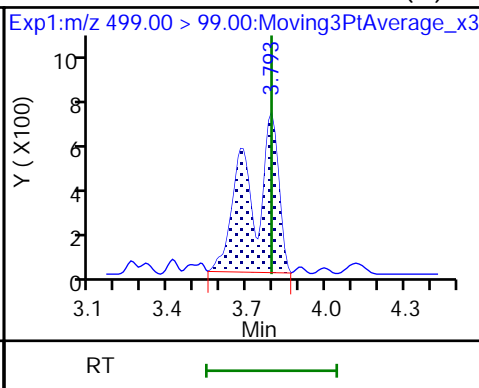
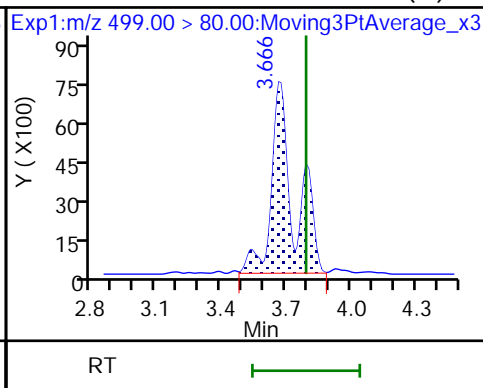
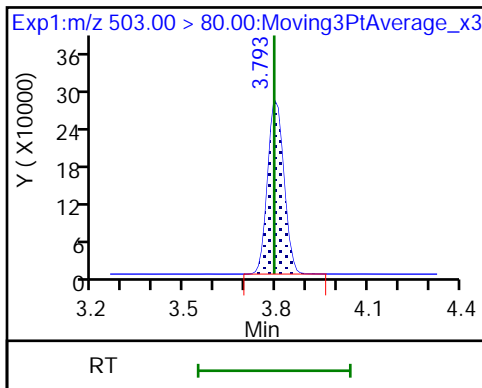
\* 62 13C2 PFOA



D 18 13C4 PFOS

17 Perfluorooctanesulfonic acid (M)

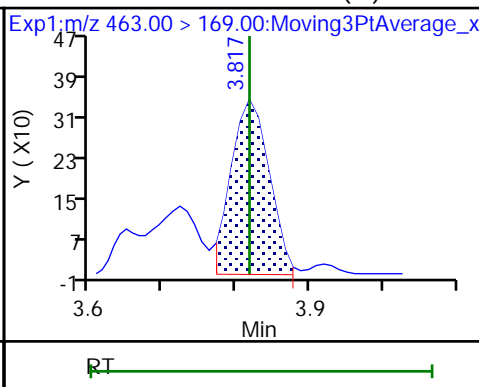
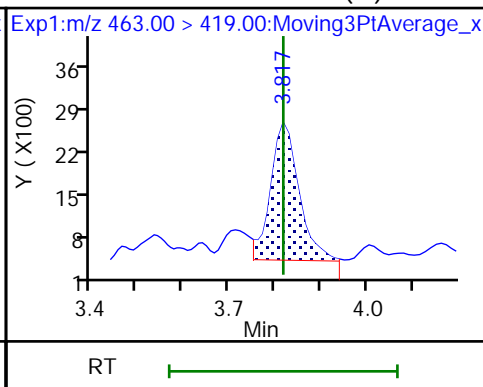
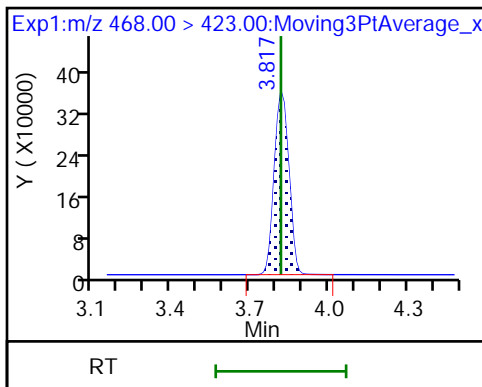
17 Perfluorooctanesulfonic acid (M)



D 19 13C5 PFNA

20 Perfluorononanoic acid (M)

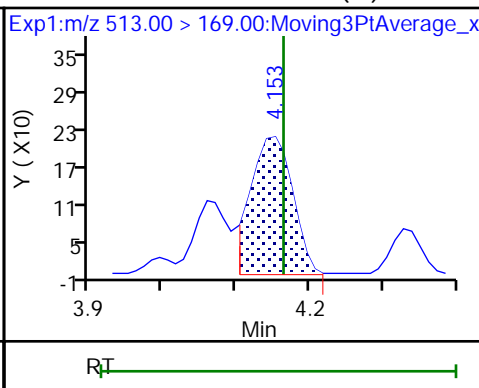
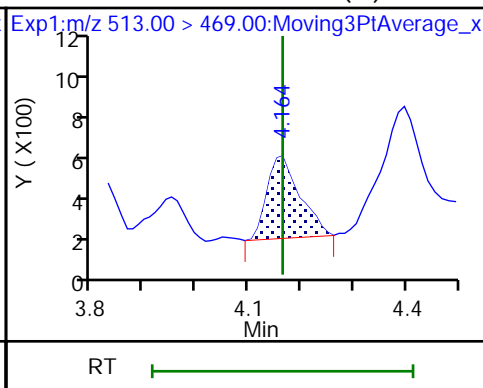
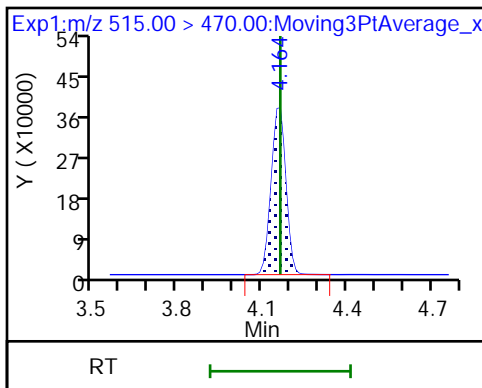
20 Perfluorononanoic acid (M)



D 23 13C2 PFDA

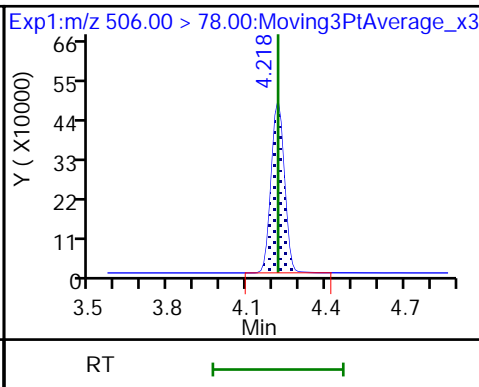
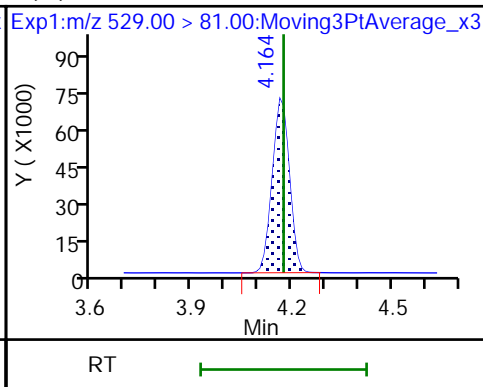
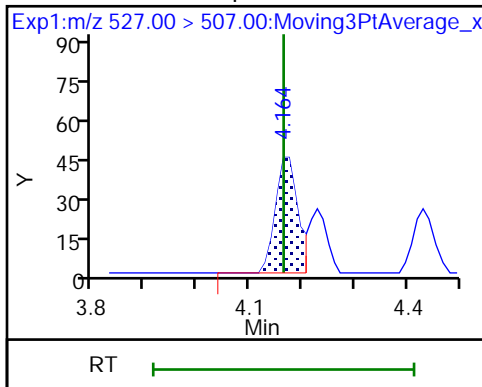
24 Perfluorodecanoic acid (M)

24 Perfluorodecanoic acid (M)



25 1H,1H,2H,2H-perfluorodecanesulfonic acid (M) M2-8:2 FTS

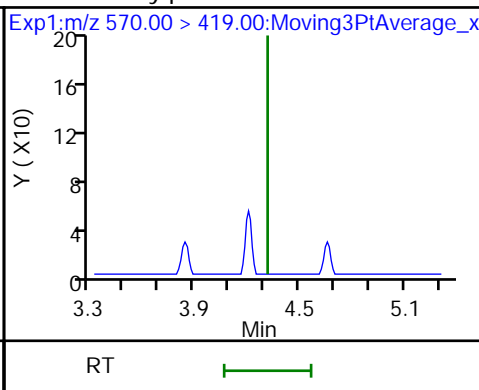
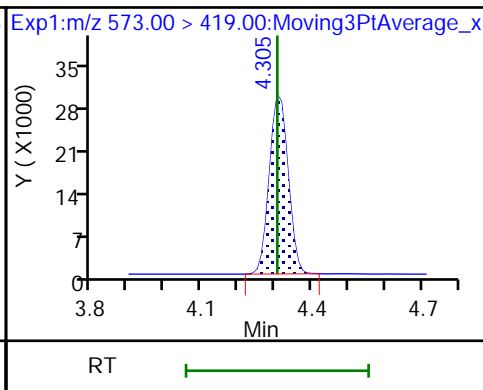
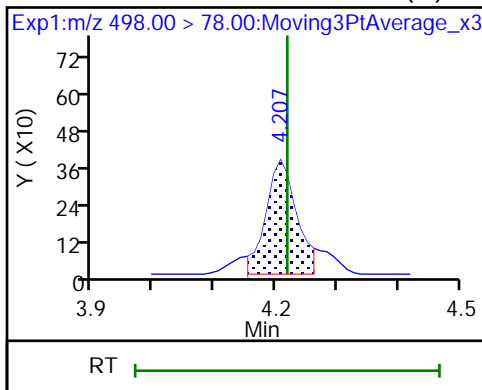
D 21 13C8 FOSA



22 Perfluorooctanesulfonamide (M)

D 27 d3-NMeFOSAA

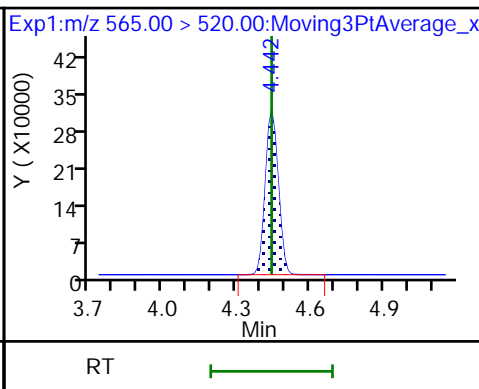
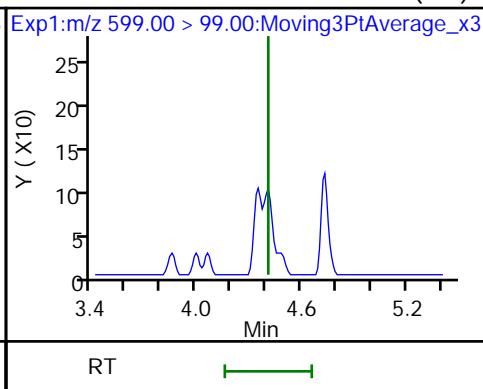
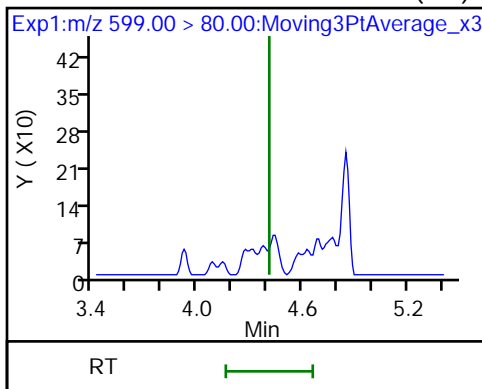
28 N-methylperfluorooctanesulfonamido (ND)



29 Perfluorodecanesulfonic acid (ND)

29 Perfluorodecanesulfonic acid (ND)

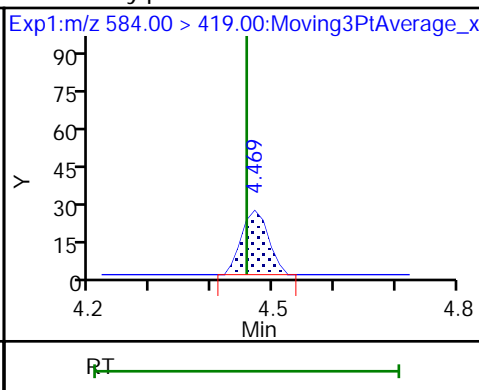
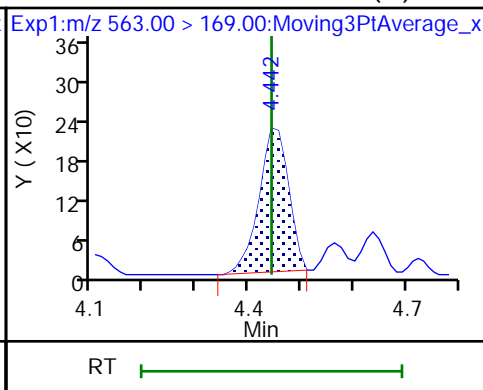
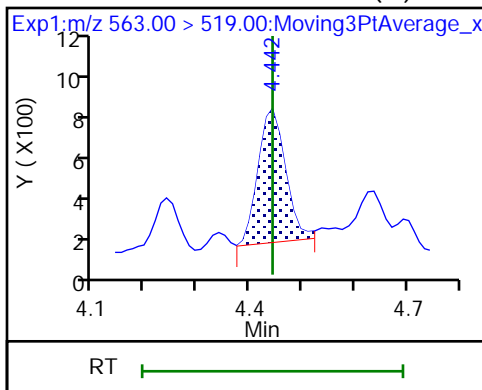
D 30 13C2 PFUoA



31 Perfluoroundecanoic acid (M)

31 Perfluoroundecanoic acid (M)

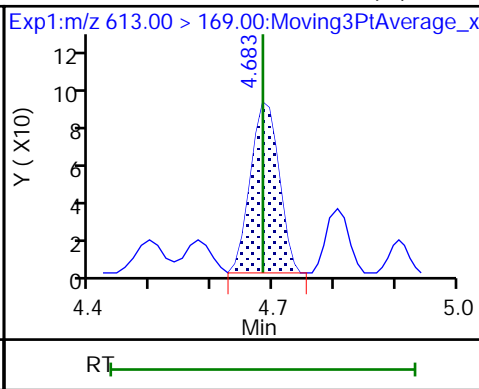
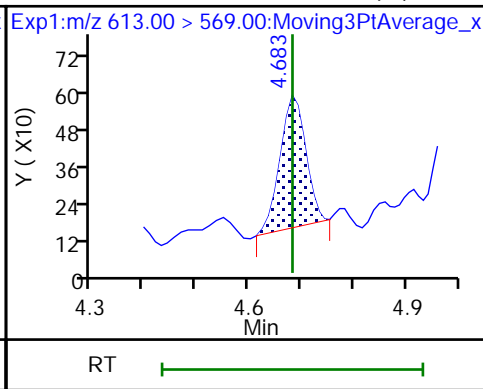
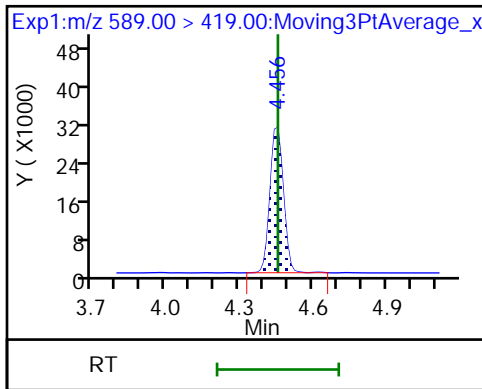
33 N-ethylperfluorooctanesulfonamidoa (M)



D 32 d5-NEtFOSAA

37 Perfluorododecanoic acid (M)

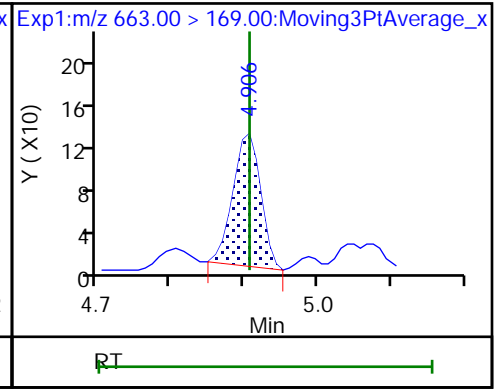
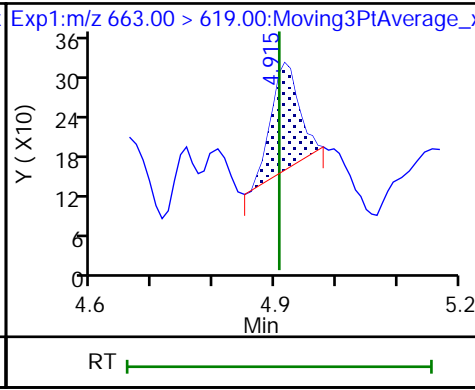
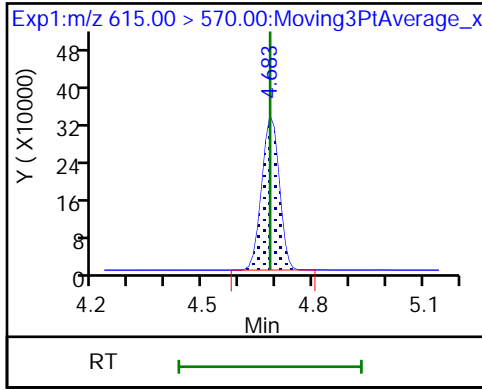
37 Perfluorododecanoic acid (M)



D 36 13C2 PFDaA

41 Perfluorotridecanoic acid (M)

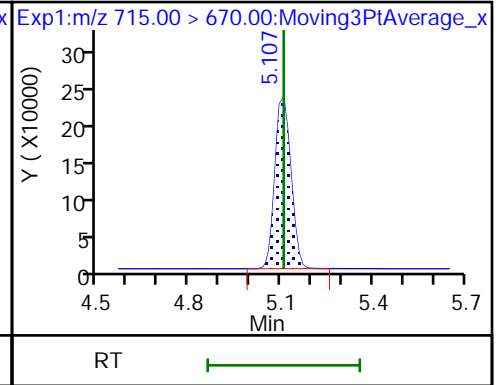
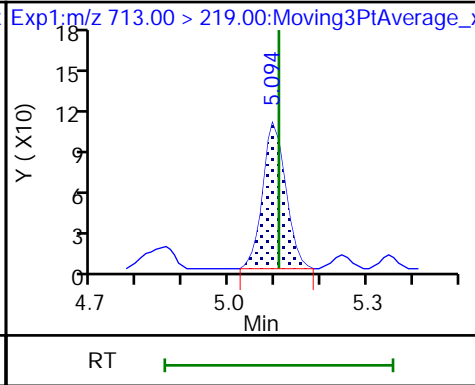
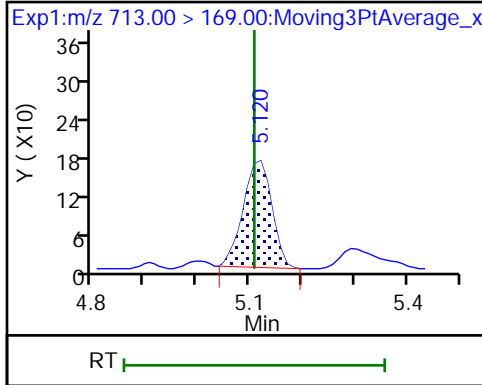
41 Perfluorotridecanoic acid (M)



42 Perfluorotetradecanoic acid (M)

42 Perfluorotetradecanoic acid (M)

D 43 13C2 PFTeDA



Euofins TestAmerica, Burlington

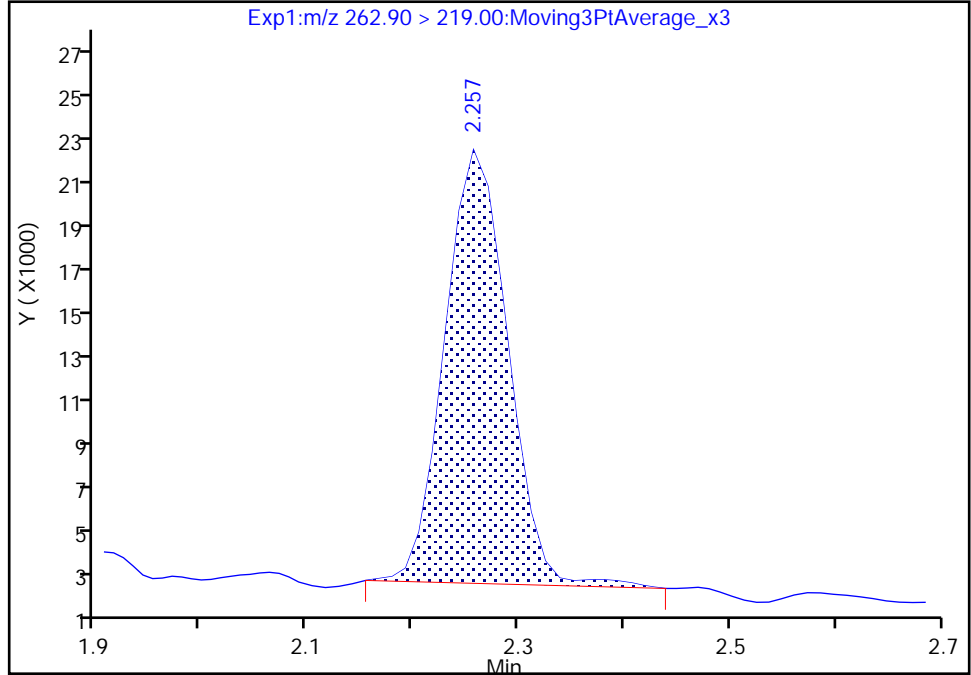
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B017.d  
Injection Date: 24-Dec-2019 16:07:13 Instrument ID: LC812  
Lims ID: 480-164221-C-6-A Lab Sample ID: 200-164221-6  
Client ID: AOI 3 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

4 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

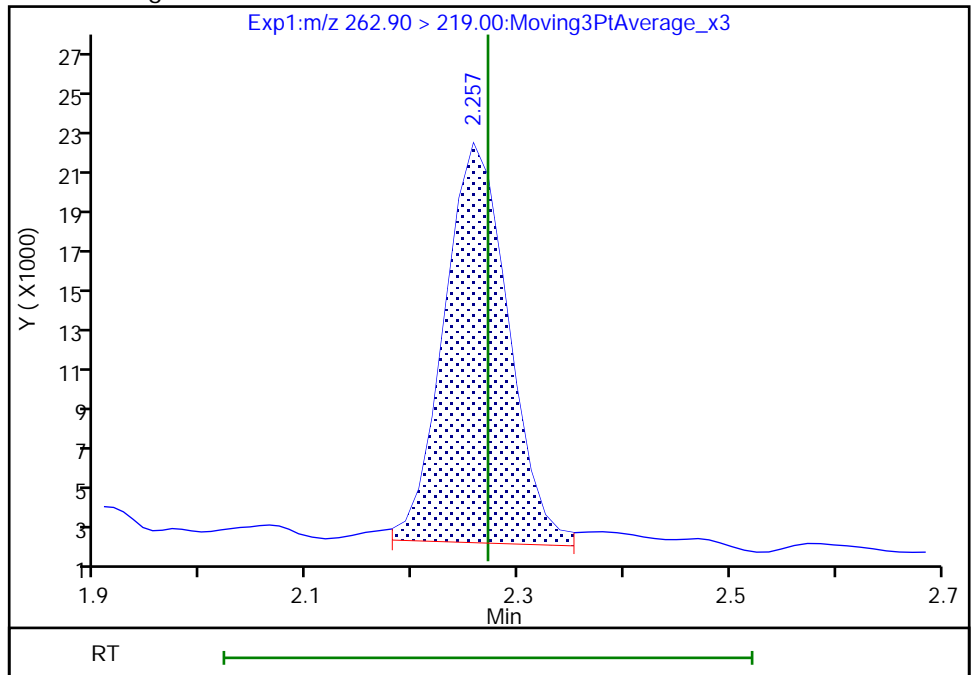
RT: 2.26  
Area: 81725  
Amount: 0.119136  
Amount Units: ng/ml

Processing Integration Results



RT: 2.26  
Area: 84517  
Amount: 0.123206  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagery, 27-Dec-2019 13:47:21

Audit Action: Manually Integrated

Audit Reason: Split Peak



Eurofins TestAmerica, Burlington

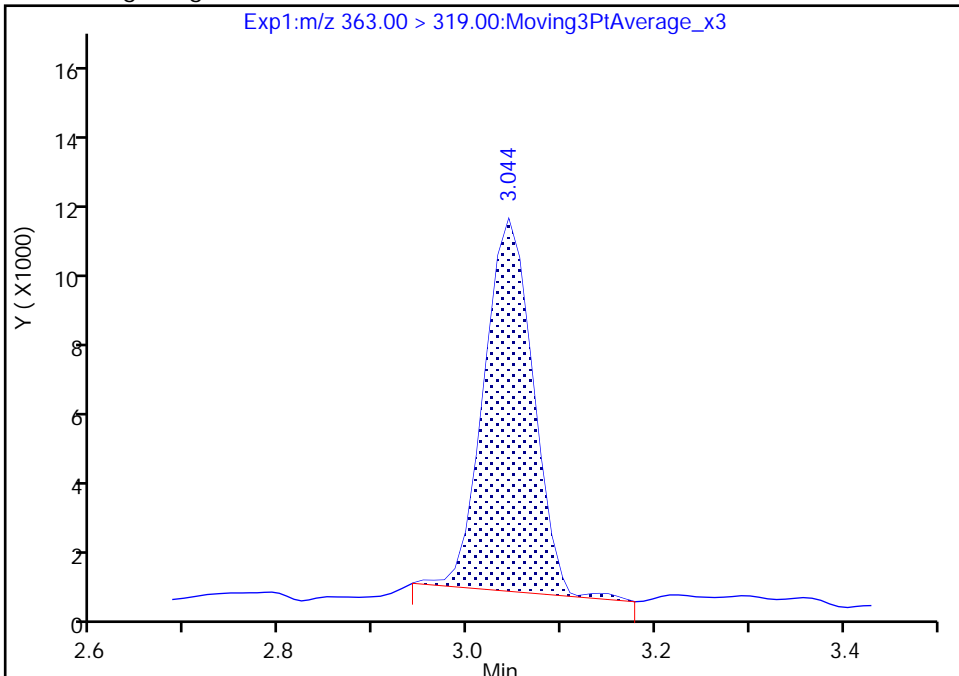
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B017.d  
Injection Date: 24-Dec-2019 16:07:13 Instrument ID: LC812  
Lims ID: 480-164221-C-6-A Lab Sample ID: 200-164221-6  
Client ID: AOI 3 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

10 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

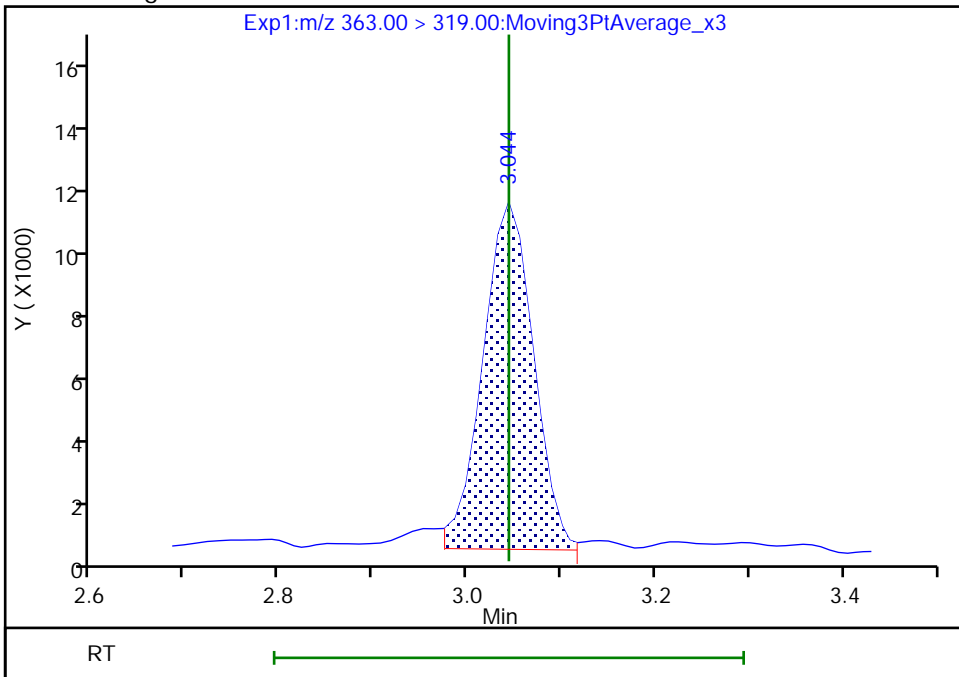
RT: 3.04  
Area: 38786  
Amount: 0.059880  
Amount Units: ng/ml

Processing Integration Results



RT: 3.04  
Area: 41047  
Amount: 0.063371  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 13:49:47  
Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

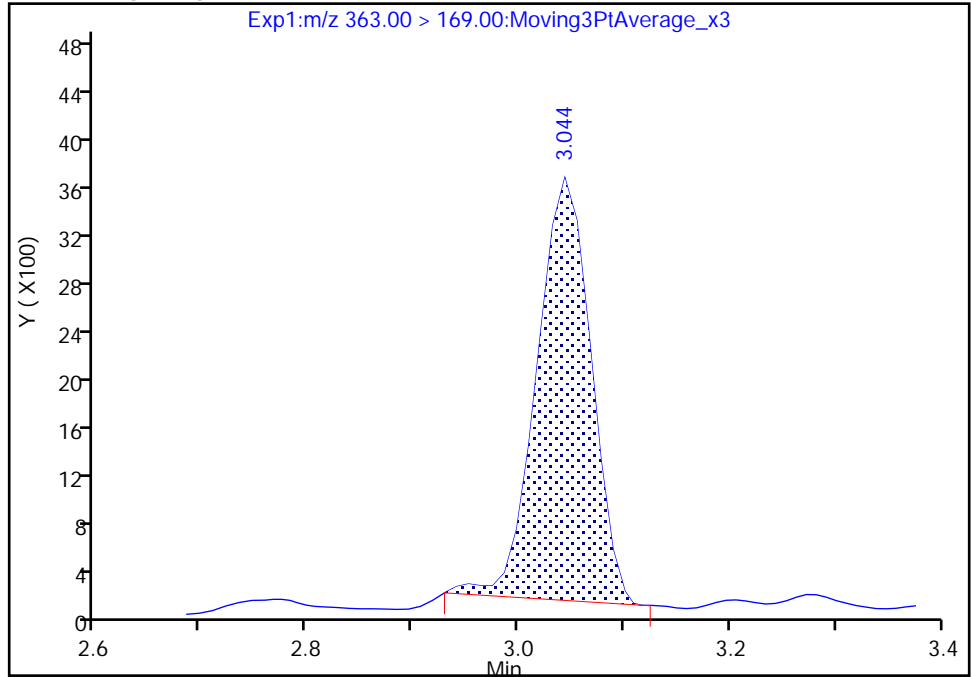
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B017.d  
Injection Date: 24-Dec-2019 16:07:13 Instrument ID: LC812  
Lims ID: 480-164221-C-6-A Lab Sample ID: 200-164221-6  
Client ID: AOI 3 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

10 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 2

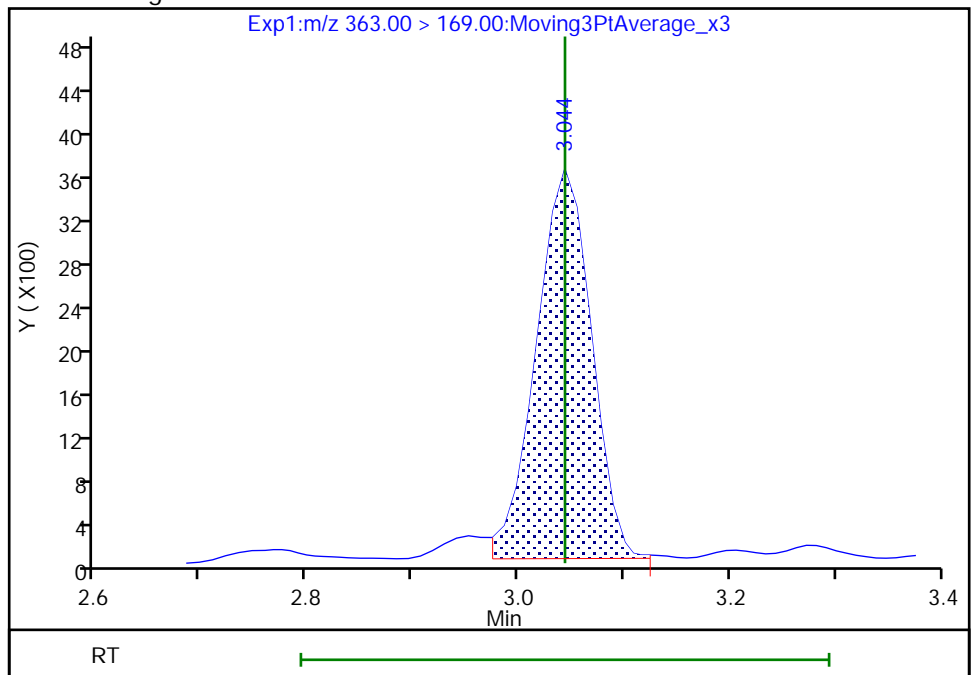
RT: 3.04  
Area: 12577  
Amount: 0.059880  
Amount Units: ng/ml

Processing Integration Results



RT: 3.04  
Area: 13021  
Amount: 0.063371  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 13:50:25

Audit Action: Manually Integrated

Audit Reason: Baseline

Euofins TestAmerica, Burlington

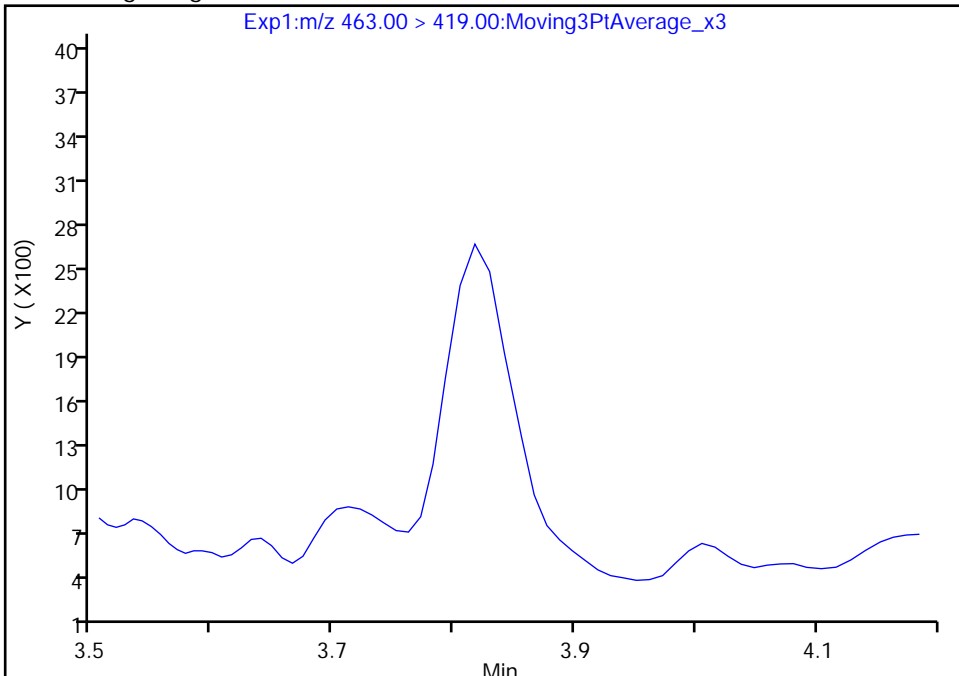
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B017.d  
Injection Date: 24-Dec-2019 16:07:13 Instrument ID: LC812  
Lims ID: 480-164221-C-6-A Lab Sample ID: 200-164221-6  
Client ID: AOI 3 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

20 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

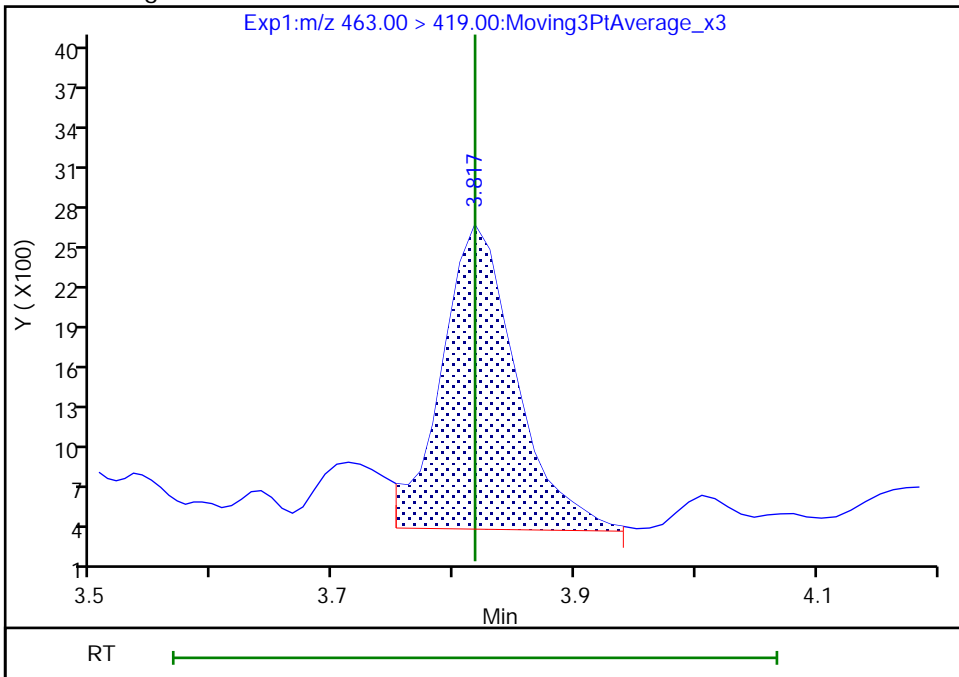
Not Detected  
Expected RT: 3.82

Processing Integration Results



Manual Integration Results

RT: 3.82  
Area: 9712  
Amount: 0.018050  
Amount Units: ng/ml



Reviewer: lautenschlagery, 27-Dec-2019 13:54:11  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

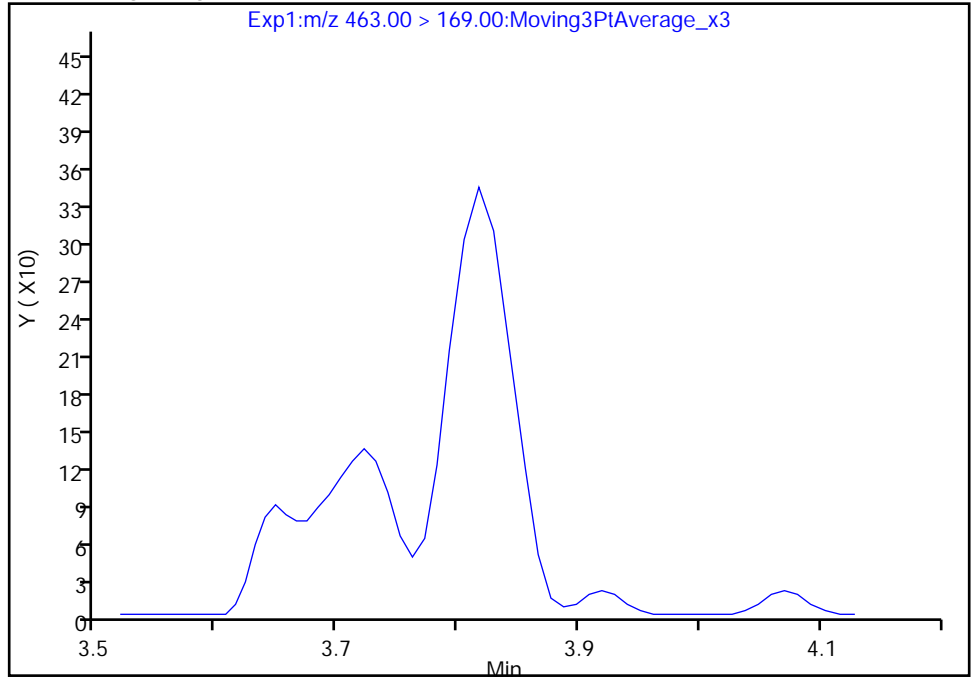
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B017.d  
Injection Date: 24-Dec-2019 16:07:13 Instrument ID: LC812  
Lims ID: 480-164221-C-6-A Lab Sample ID: 200-164221-6  
Client ID: AOI 3 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

20 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

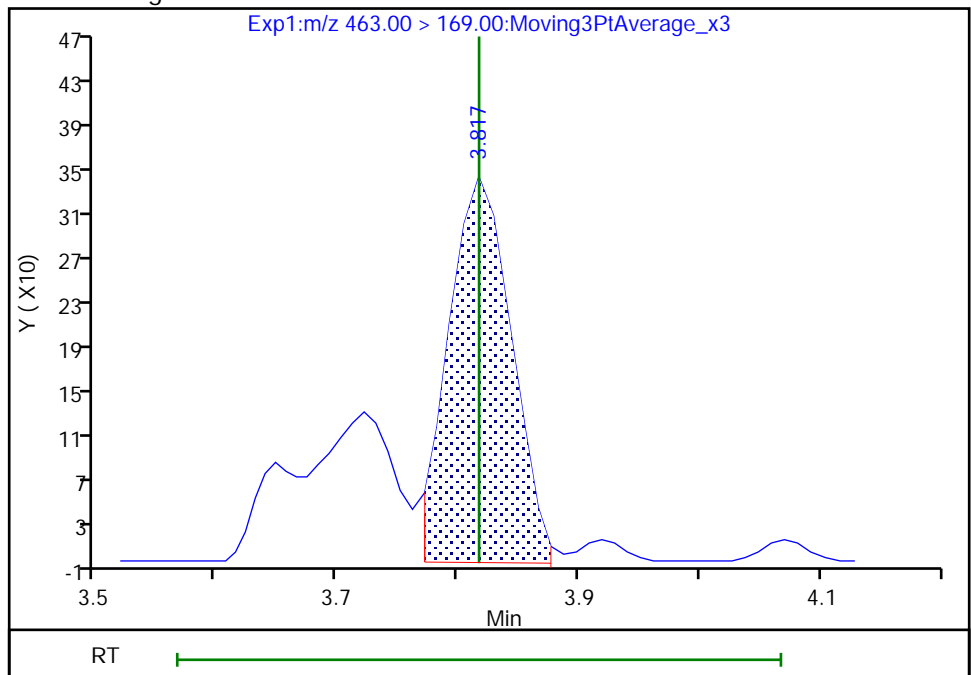
Not Detected  
Expected RT: 3.82

Processing Integration Results



Manual Integration Results

RT: 3.82  
Area: 1236  
Amount: 0.018050  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 13:54:17

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

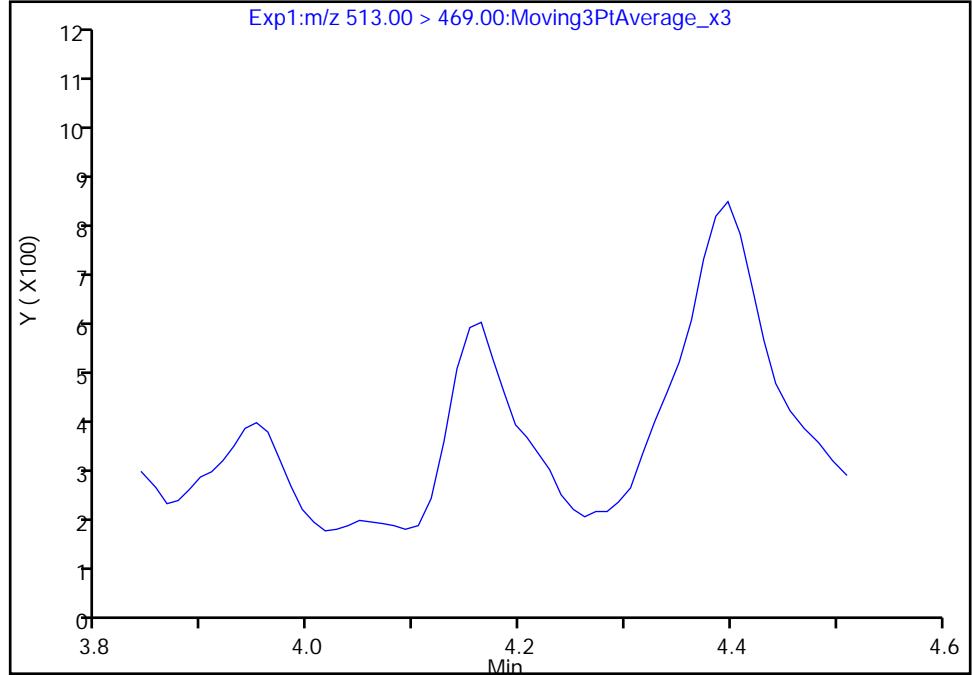
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B017.d  
Injection Date: 24-Dec-2019 16:07:13 Instrument ID: LC812  
Lims ID: 480-164221-C-6-A Lab Sample ID: 200-164221-6  
Client ID: AOI 3 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

24 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 1

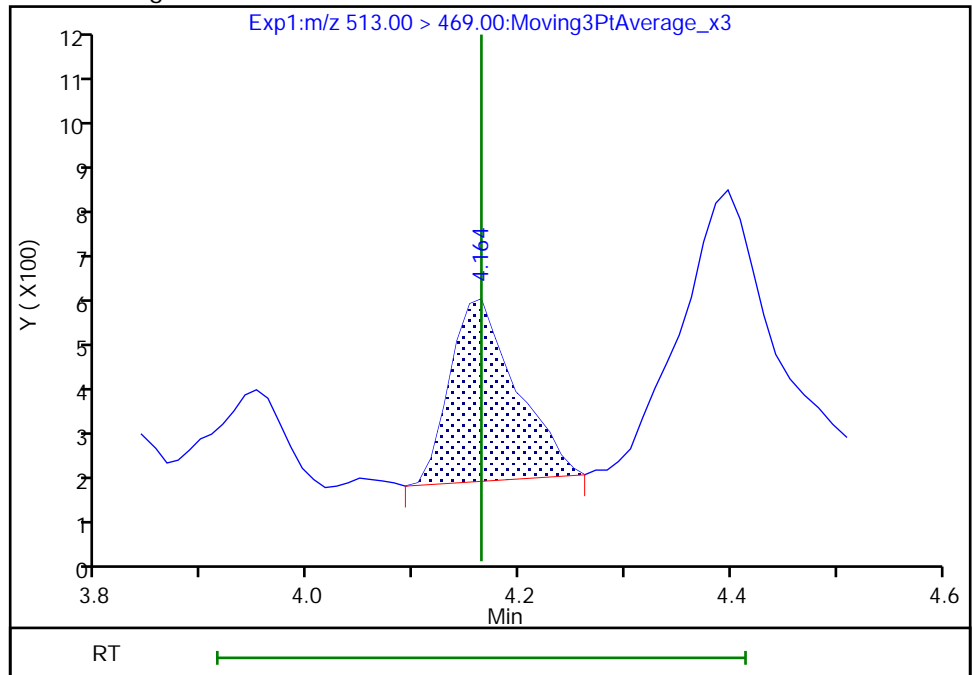
Not Detected  
Expected RT: 4.16

Processing Integration Results



Manual Integration Results

RT: 4.16  
Area: 1668  
Amount: 0.003253  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 13:55:20

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

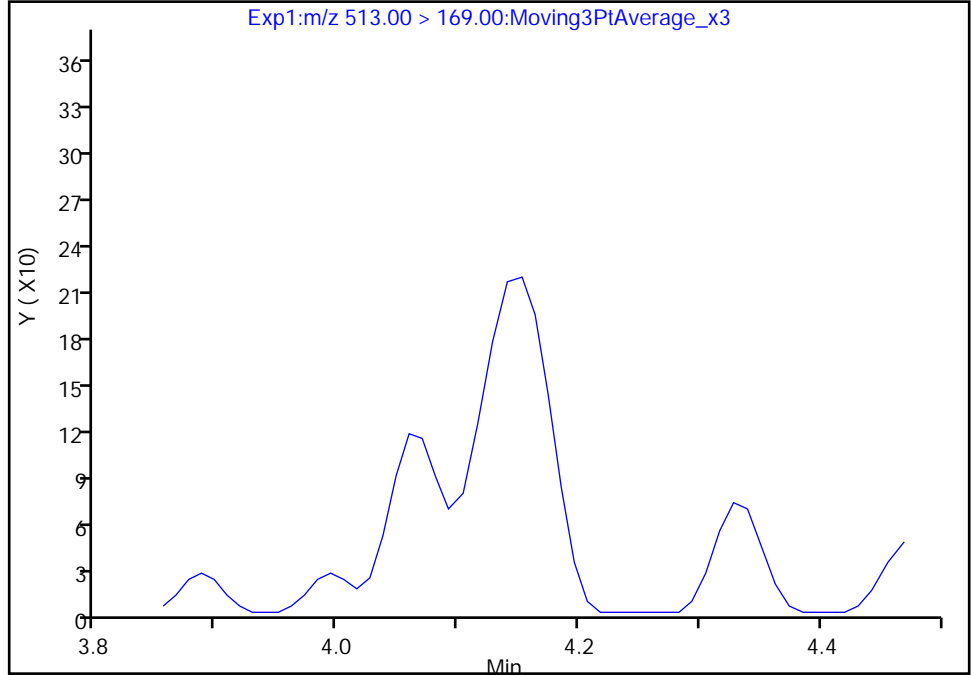
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B017.d  
Injection Date: 24-Dec-2019 16:07:13 Instrument ID: LC812  
Lims ID: 480-164221-C-6-A Lab Sample ID: 200-164221-6  
Client ID: AOI 3 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

24 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 2

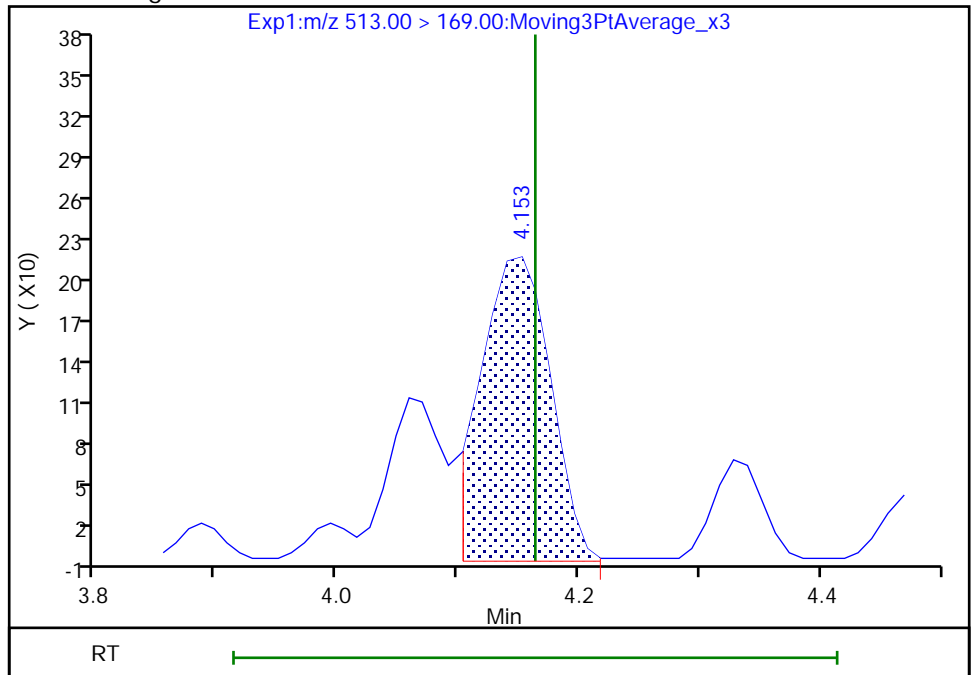
Not Detected  
Expected RT: 4.16

Processing Integration Results



Manual Integration Results

RT: 4.15  
Area: 849  
Amount: 0.003253  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

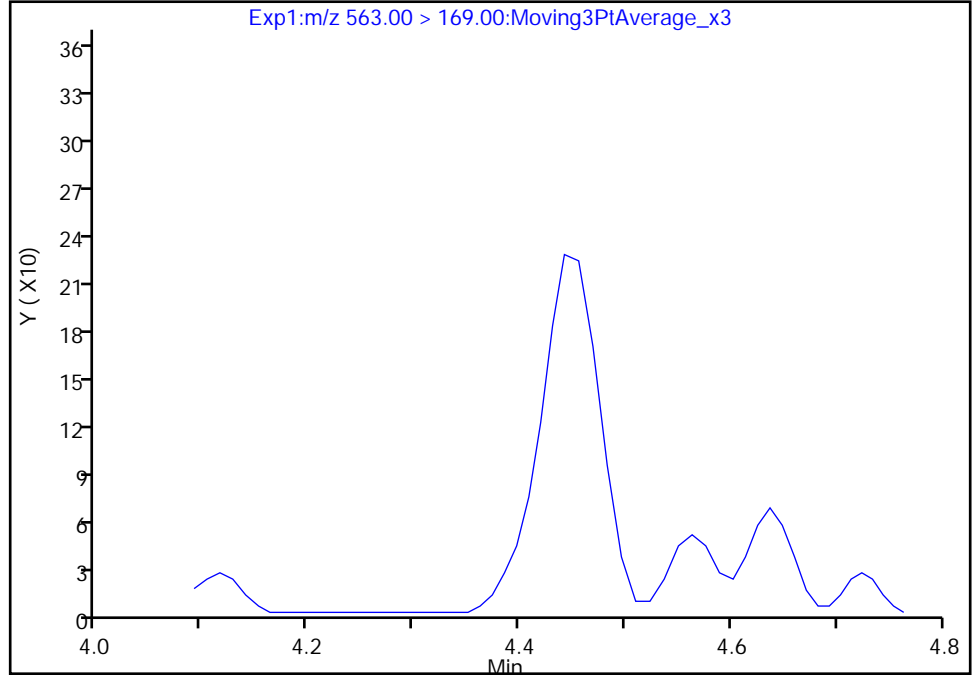
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B017.d  
Injection Date: 24-Dec-2019 16:07:13 Instrument ID: LC812  
Lims ID: 480-164221-C-6-A Lab Sample ID: 200-164221-6  
Client ID: AOI 3 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 2

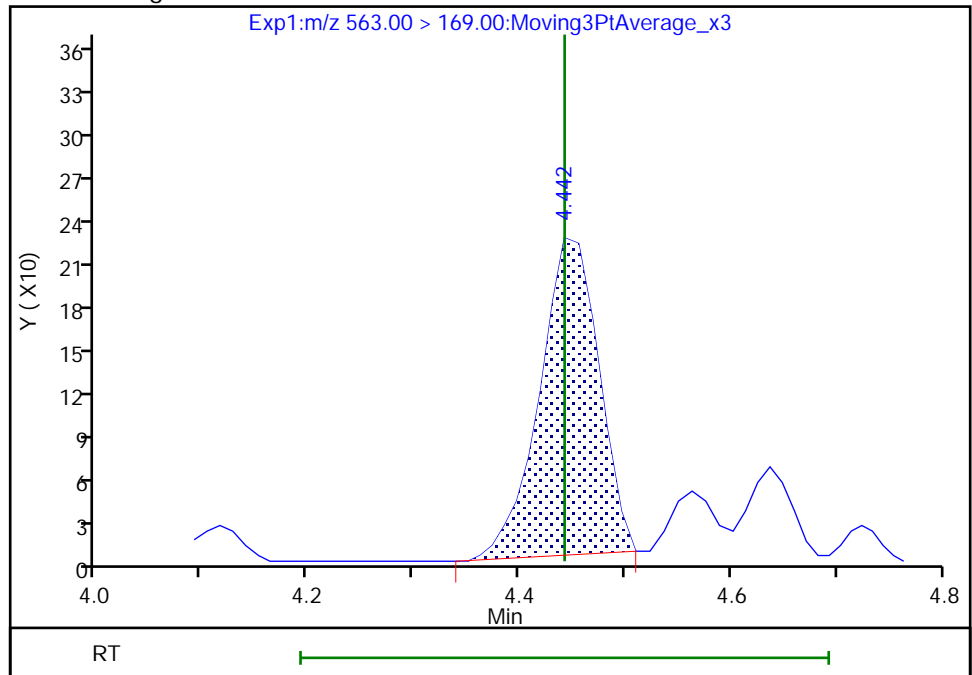
Not Detected  
Expected RT: 4.44

Processing Integration Results



Manual Integration Results

RT: 4.44  
Area: 863  
Amount: 0.005784  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 13:57:44  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

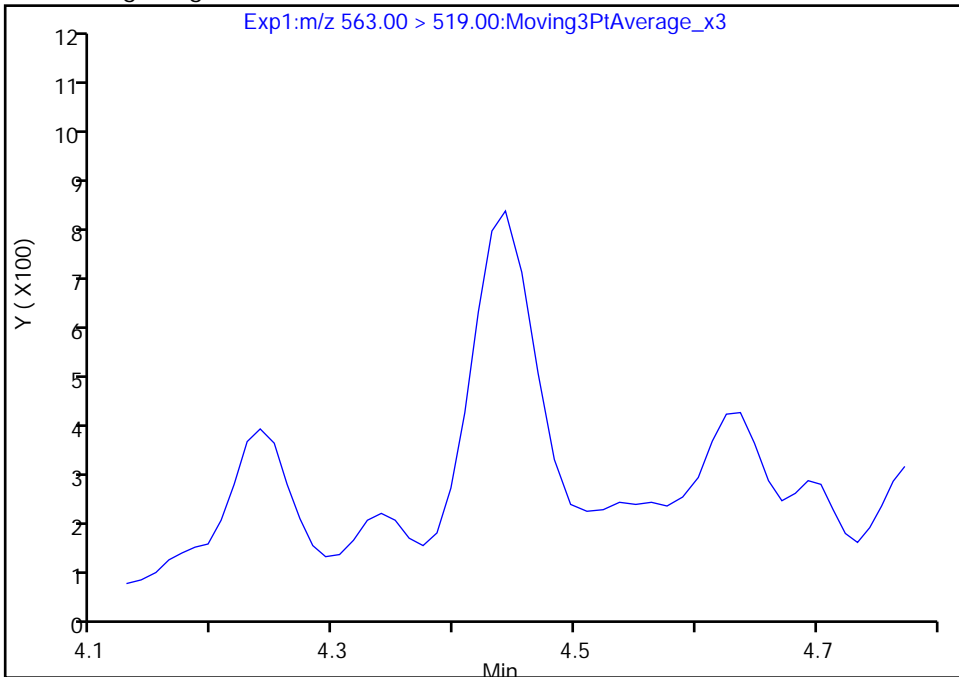
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B017.d  
Injection Date: 24-Dec-2019 16:07:13 Instrument ID: LC812  
Lims ID: 480-164221-C-6-A Lab Sample ID: 200-164221-6  
Client ID: AOI 3 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 1

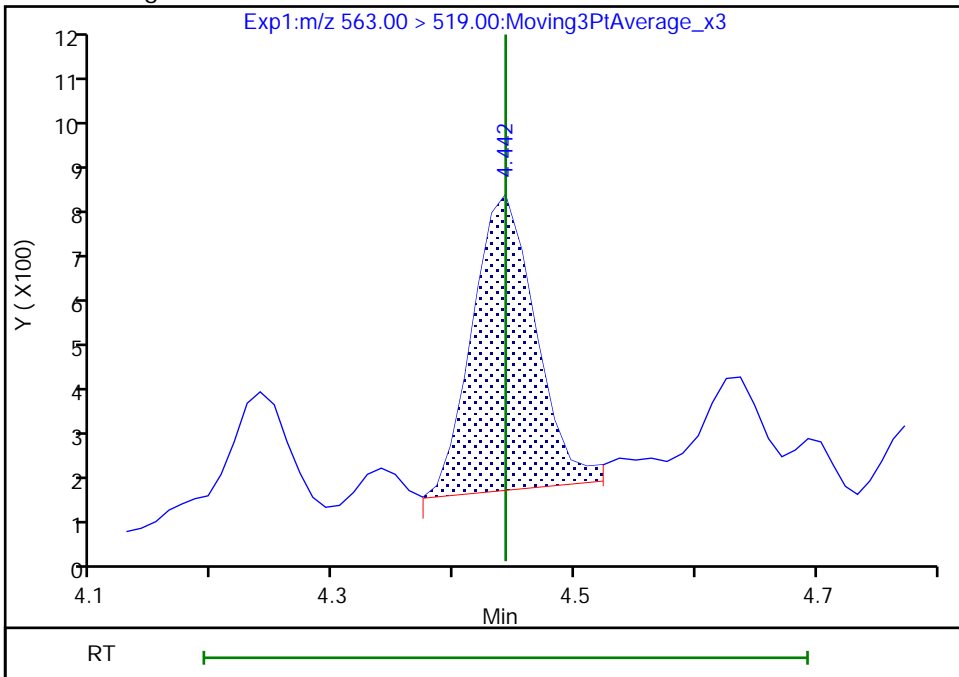
Not Detected  
Expected RT: 4.44

Processing Integration Results



Manual Integration Results

RT: 4.44  
Area: 2249  
Amount: 0.005784  
Amount Units: ng/ml





Euofins TestAmerica, Burlington

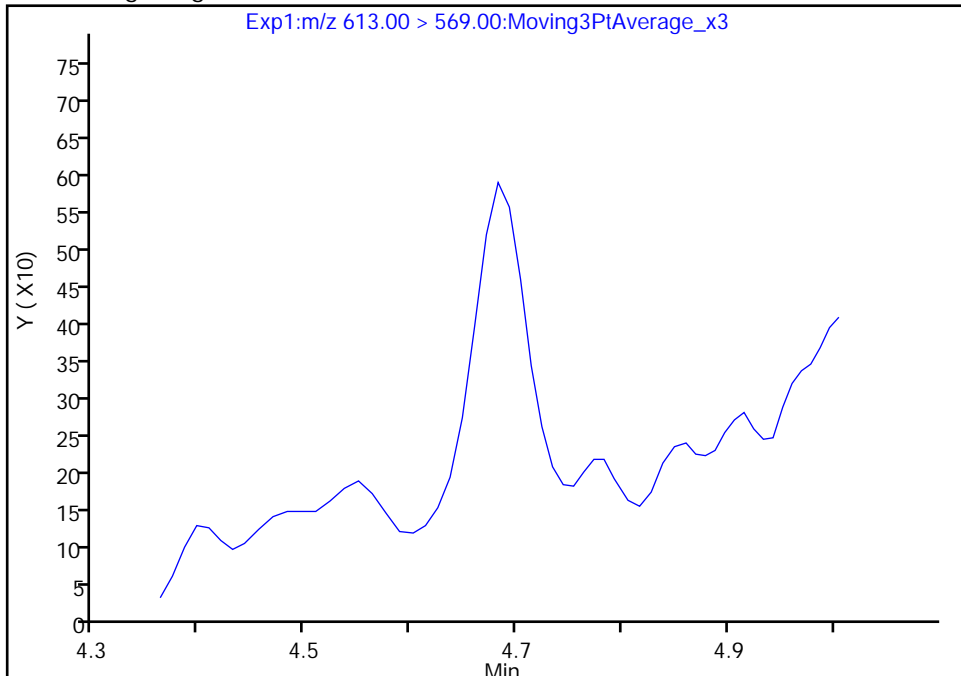
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B017.d  
Injection Date: 24-Dec-2019 16:07:13 Instrument ID: LC812  
Lims ID: 480-164221-C-6-A Lab Sample ID: 200-164221-6  
Client ID: AOI 3 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

37 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 1

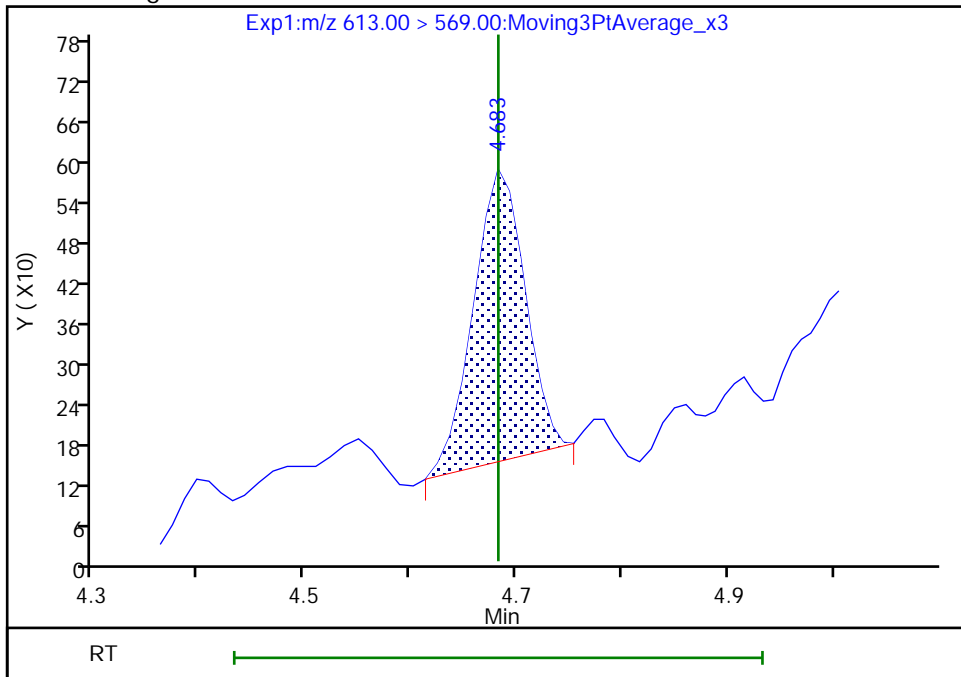
Not Detected  
Expected RT: 4.68

Processing Integration Results



Manual Integration Results

RT: 4.68  
Area: 1469  
Amount: 0.003697  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 13:58:59  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

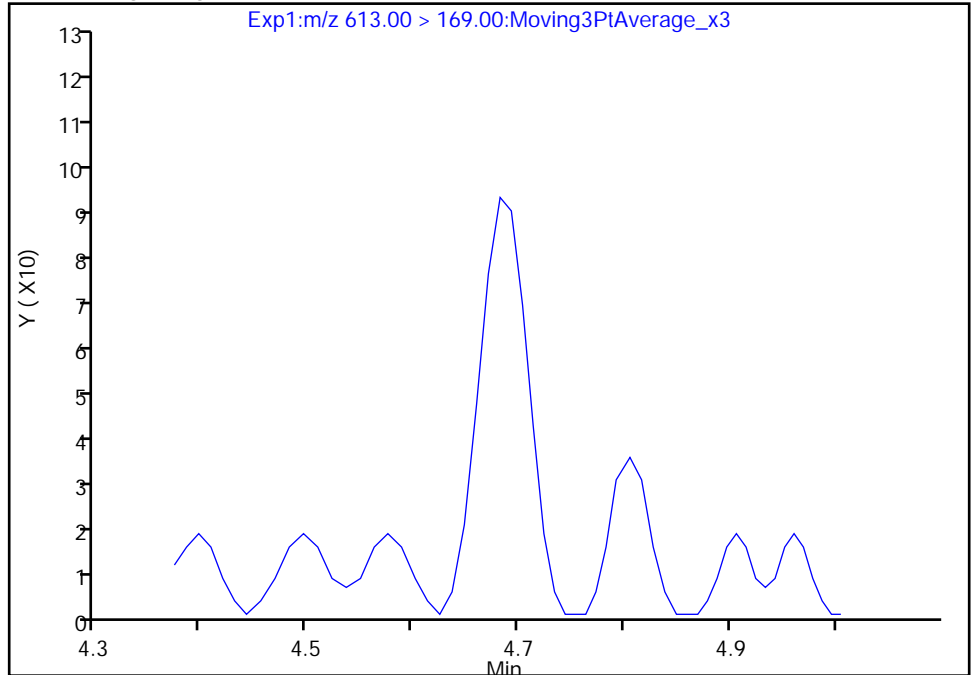
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B017.d  
Injection Date: 24-Dec-2019 16:07:13 Instrument ID: LC812  
Lims ID: 480-164221-C-6-A Lab Sample ID: 200-164221-6  
Client ID: AOI 3 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

37 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 2

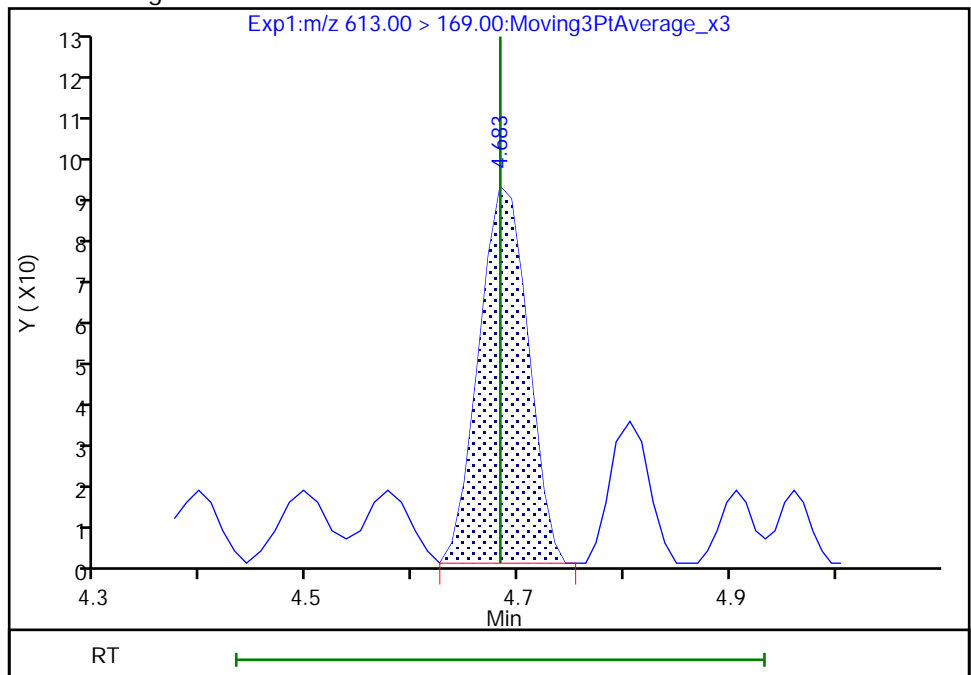
Not Detected  
Expected RT: 4.68

Processing Integration Results



Manual Integration Results

RT: 4.68  
Area: 300  
Amount: 0.003697  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

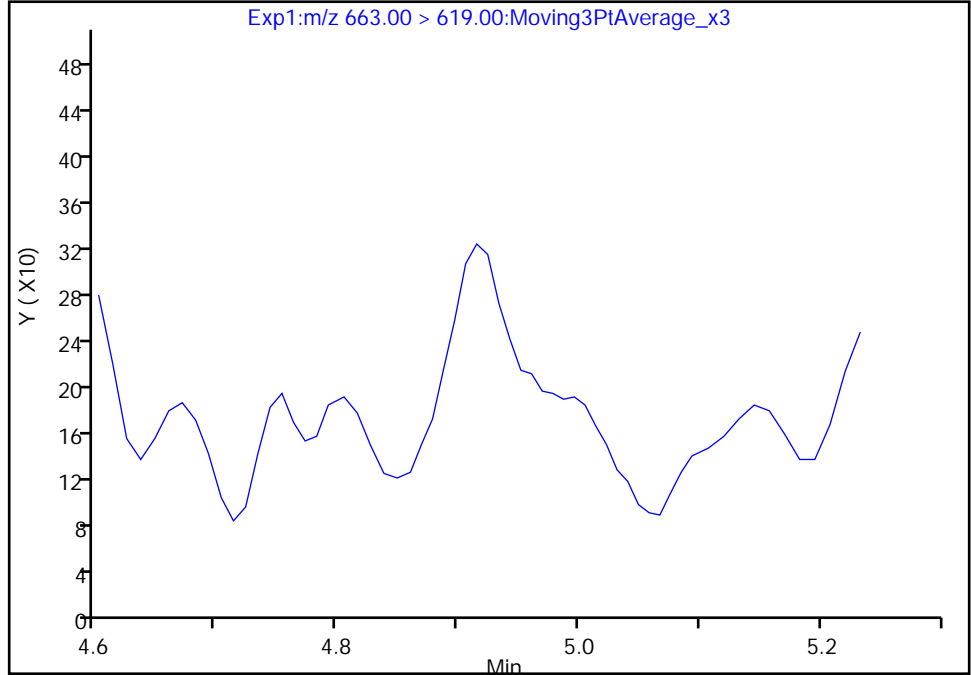
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B017.d  
Injection Date: 24-Dec-2019 16:07:13 Instrument ID: LC812  
Lims ID: 480-164221-C-6-A Lab Sample ID: 200-164221-6  
Client ID: AOI 3 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

41 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 1

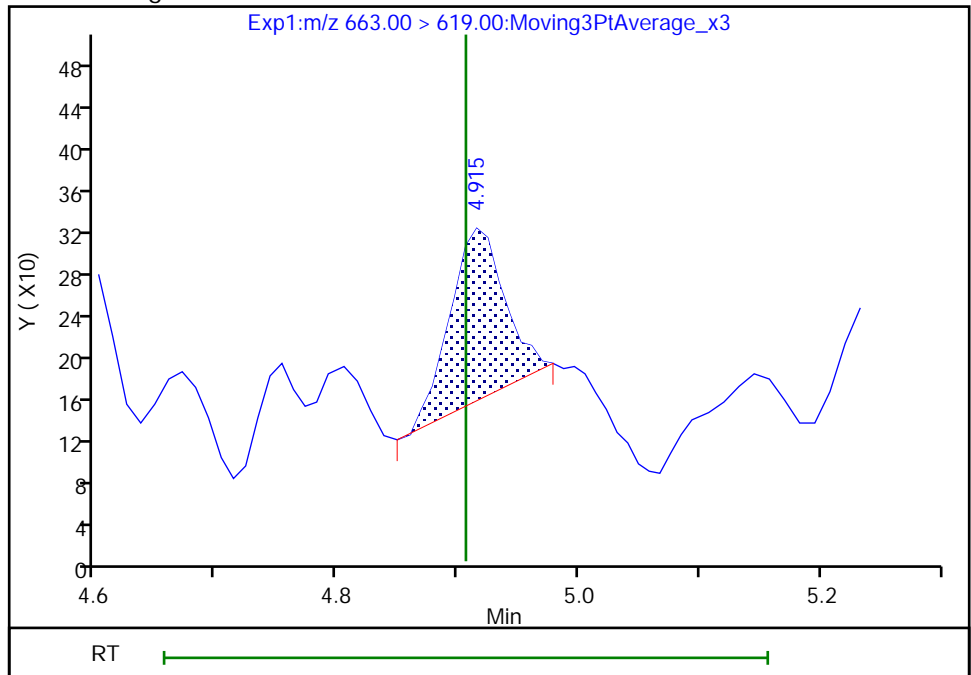
Not Detected  
Expected RT: 4.91

Processing Integration Results



RT: 4.92  
Area: 514  
Amount: 0.001362  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagery, 27-Dec-2019 13:59:23

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

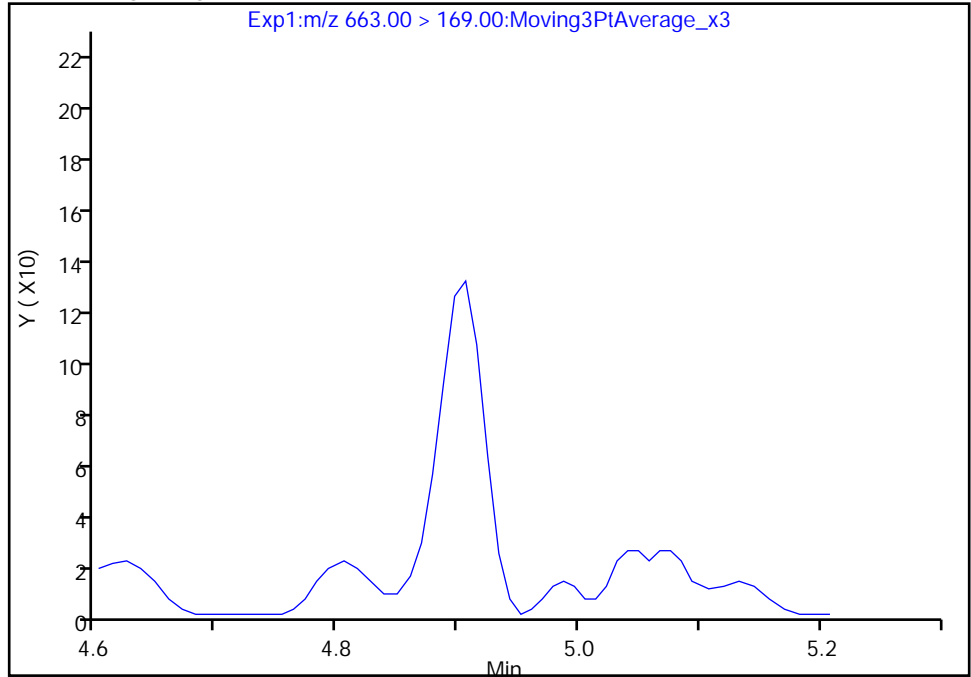
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B017.d  
Injection Date: 24-Dec-2019 16:07:13 Instrument ID: LC812  
Lims ID: 480-164221-C-6-A Lab Sample ID: 200-164221-6  
Client ID: AOI 3 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 (4.60 mm) Detector: EXP1

41 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 2

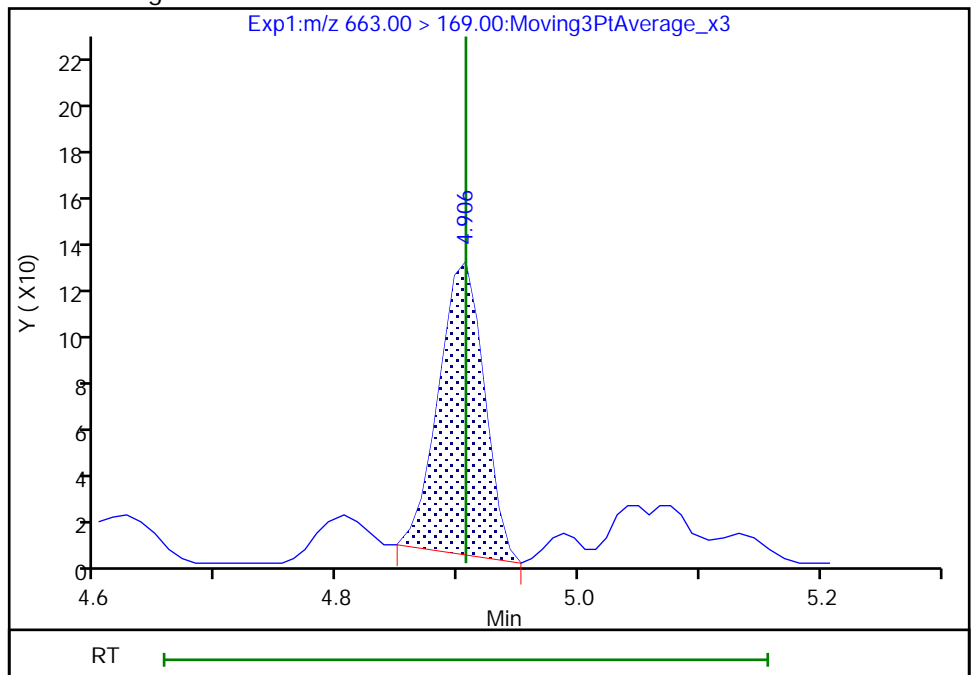
Not Detected  
Expected RT: 4.91

Processing Integration Results



Manual Integration Results

RT: 4.91  
Area: 331  
Amount: 0.001362  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 13:59:30

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Euofins TestAmerica, Burlington

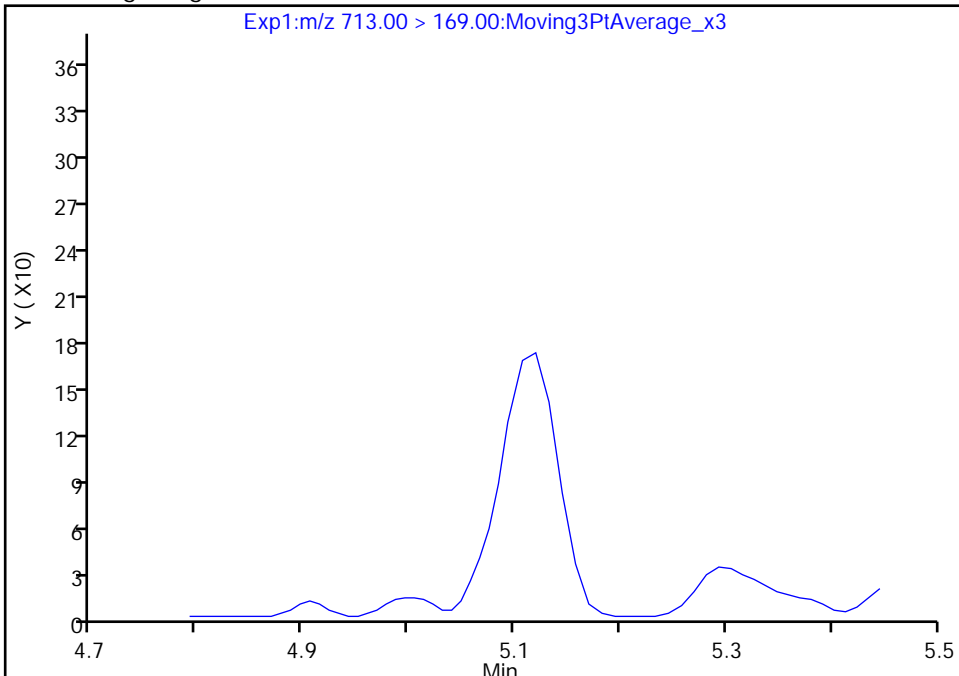
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B017.d  
Injection Date: 24-Dec-2019 16:07:13 Instrument ID: LC812  
Lims ID: 480-164221-C-6-A Lab Sample ID: 200-164221-6  
Client ID: AOI 3 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 1

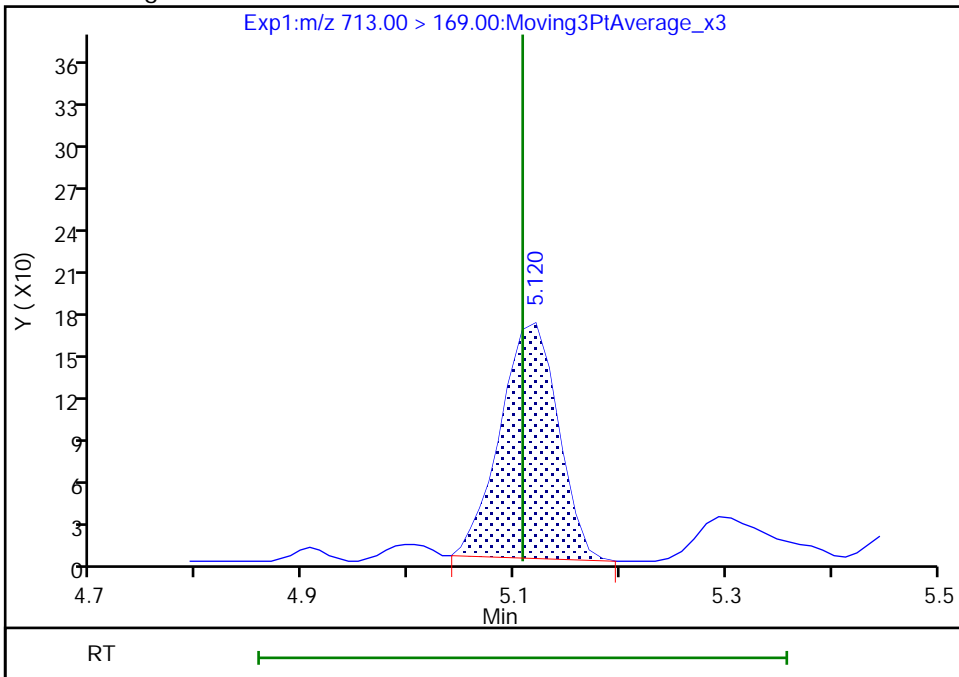
Not Detected  
Expected RT: 5.11

Processing Integration Results



Manual Integration Results

RT: 5.12  
Area: 641  
Amount: 0.009384  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 13:59:43  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Euofins TestAmerica, Burlington

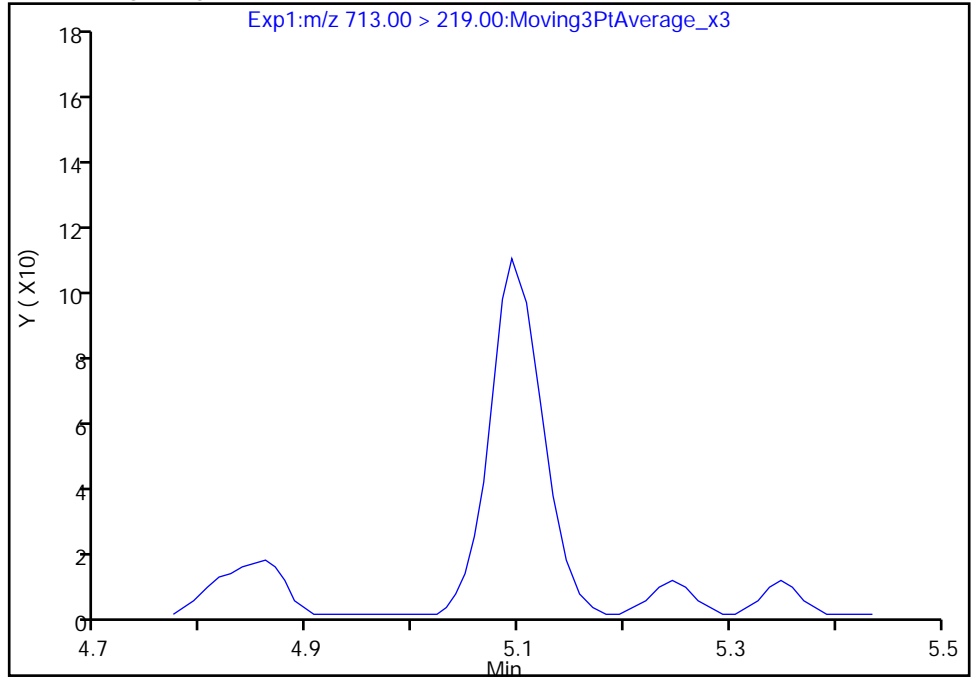
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B017.d  
Injection Date: 24-Dec-2019 16:07:13 Instrument ID: LC812  
Lims ID: 480-164221-C-6-A Lab Sample ID: 200-164221-6  
Client ID: AOI 3 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 2

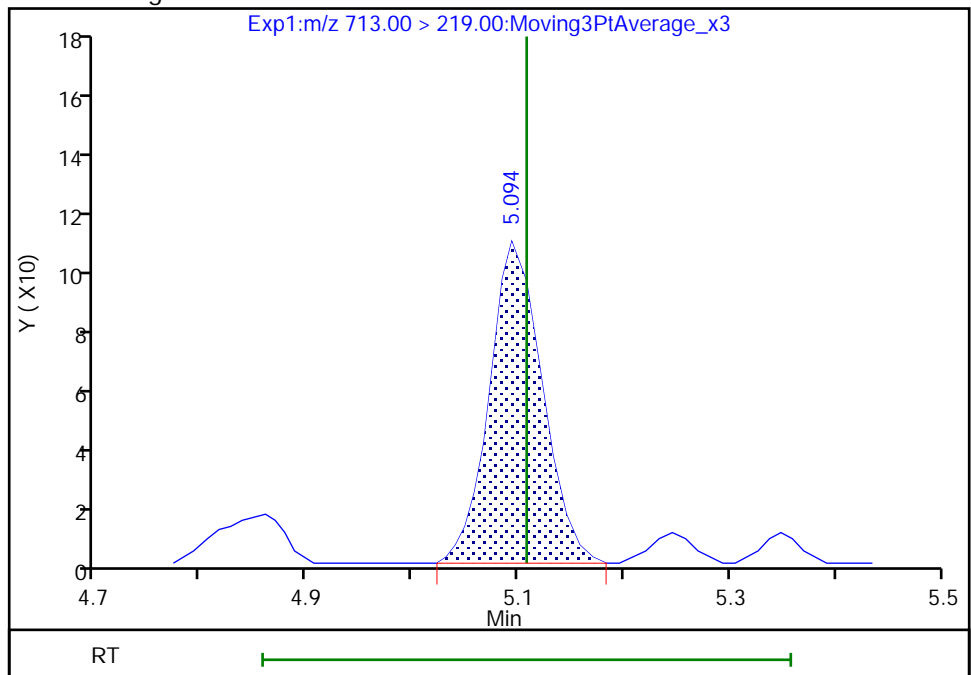
Not Detected  
Expected RT: 5.11

Processing Integration Results



Manual Integration Results

RT: 5.09  
Area: 365  
Amount: 0.009384  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 13:59:50

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

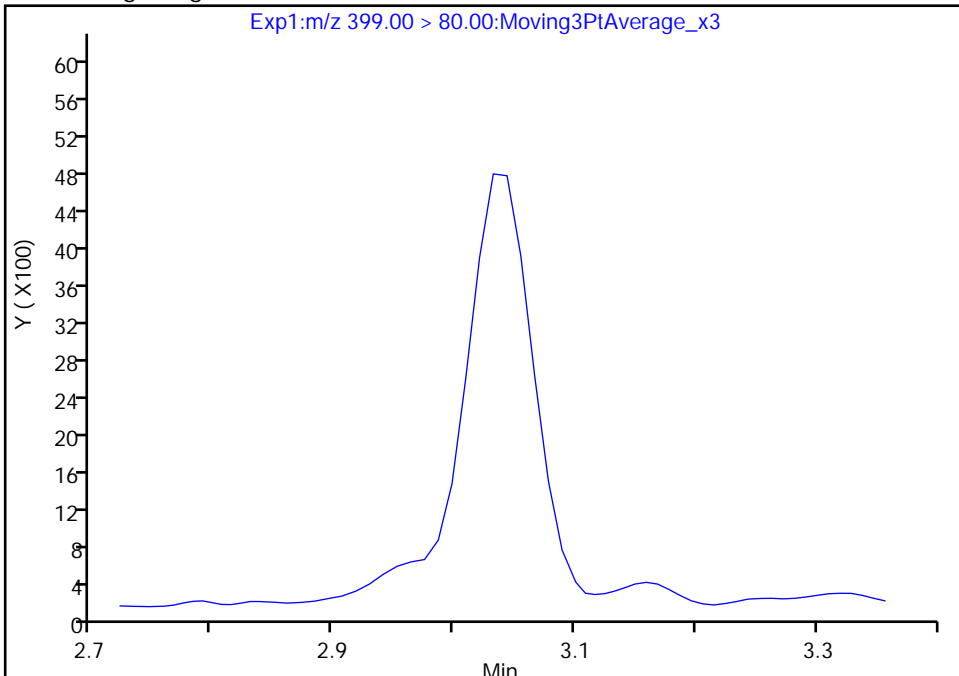
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B017.d  
Injection Date: 24-Dec-2019 16:07:13 Instrument ID: LC812  
Lims ID: 480-164221-C-6-A Lab Sample ID: 200-164221-6  
Client ID: AOI 3 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

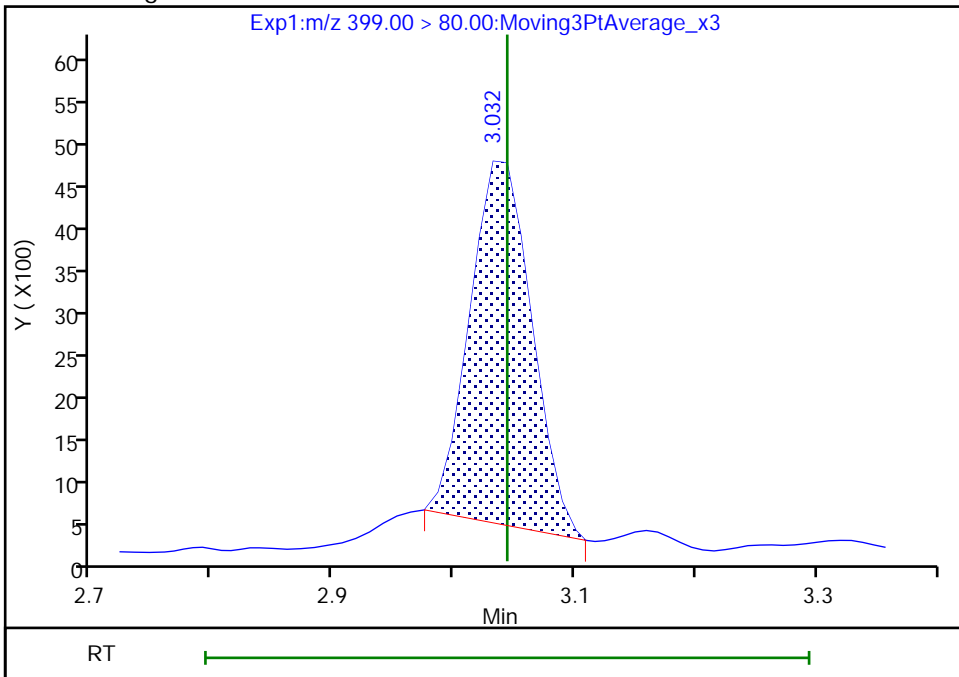
Not Detected  
Expected RT: 3.04

Processing Integration Results



Manual Integration Results

RT: 3.03  
Area: 15412  
Amount: 0.023608  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 13:48:11  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

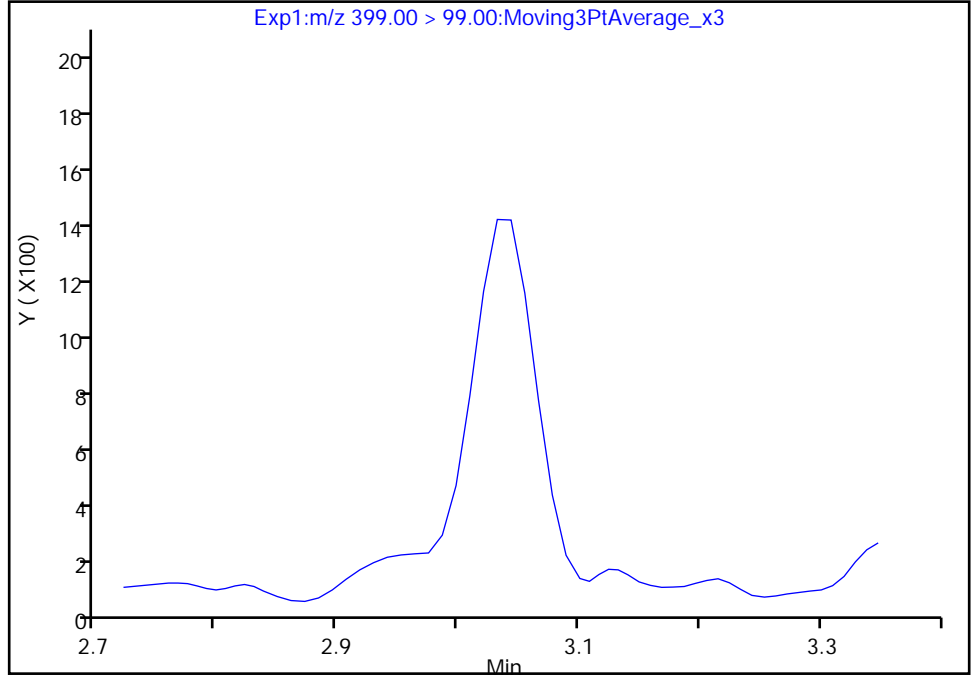
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B017.d  
Injection Date: 24-Dec-2019 16:07:13 Instrument ID: LC812  
Lims ID: 480-164221-C-6-A Lab Sample ID: 200-164221-6  
Client ID: AOI 3 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

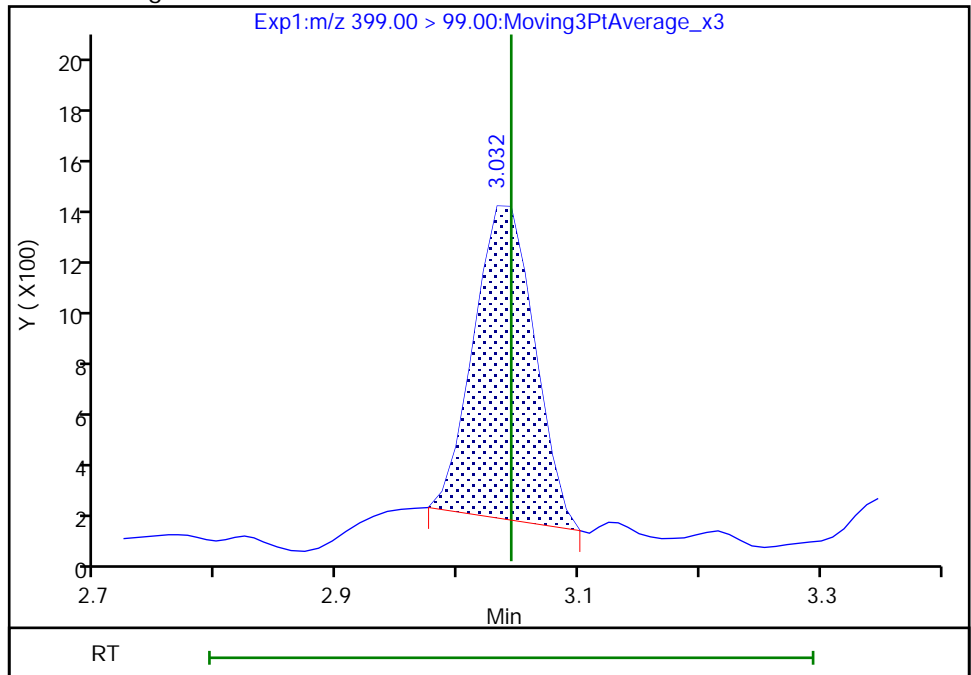
Not Detected  
Expected RT: 3.04

Processing Integration Results



Manual Integration Results

RT: 3.03  
Area: 4207  
Amount: 0.023608  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 13:48:17

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Euofins TestAmerica, Burlington

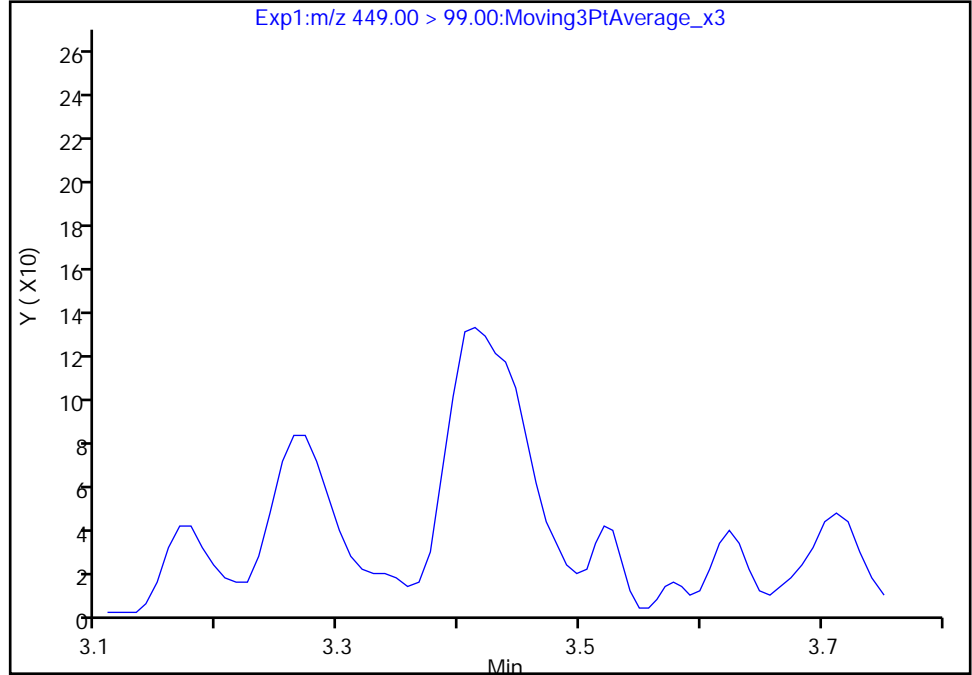
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B017.d  
Injection Date: 24-Dec-2019 16:07:13 Instrument ID: LC812  
Lims ID: 480-164221-C-6-A Lab Sample ID: 200-164221-6  
Client ID: AOI 3 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

16 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 2

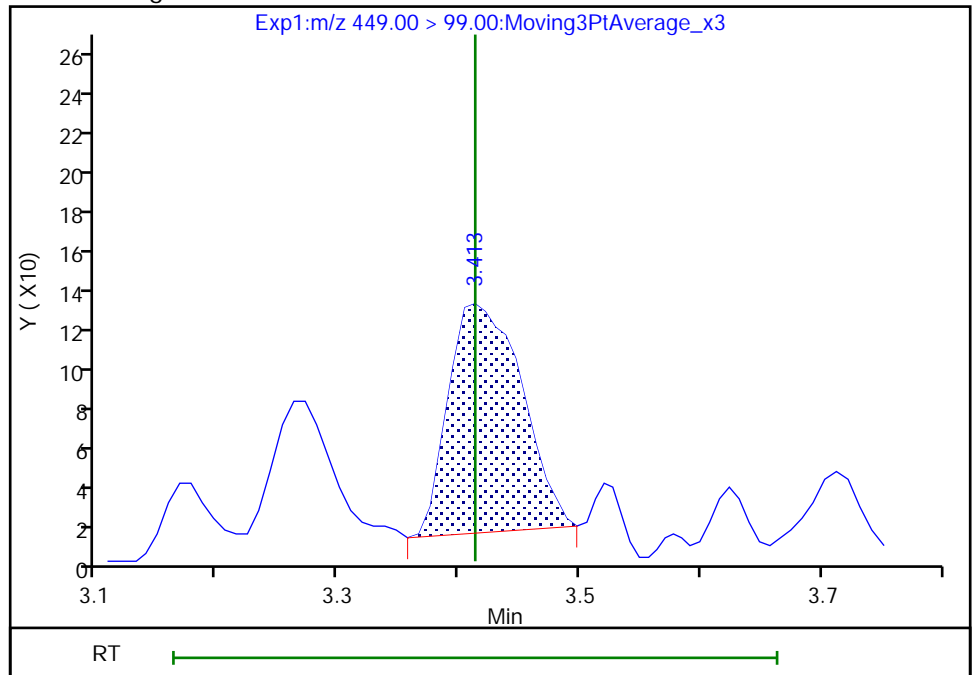
Not Detected  
Expected RT: 3.41

Processing Integration Results



Manual Integration Results

RT: 3.41  
Area: 493  
Amount: 0.003932  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 13:51:19

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

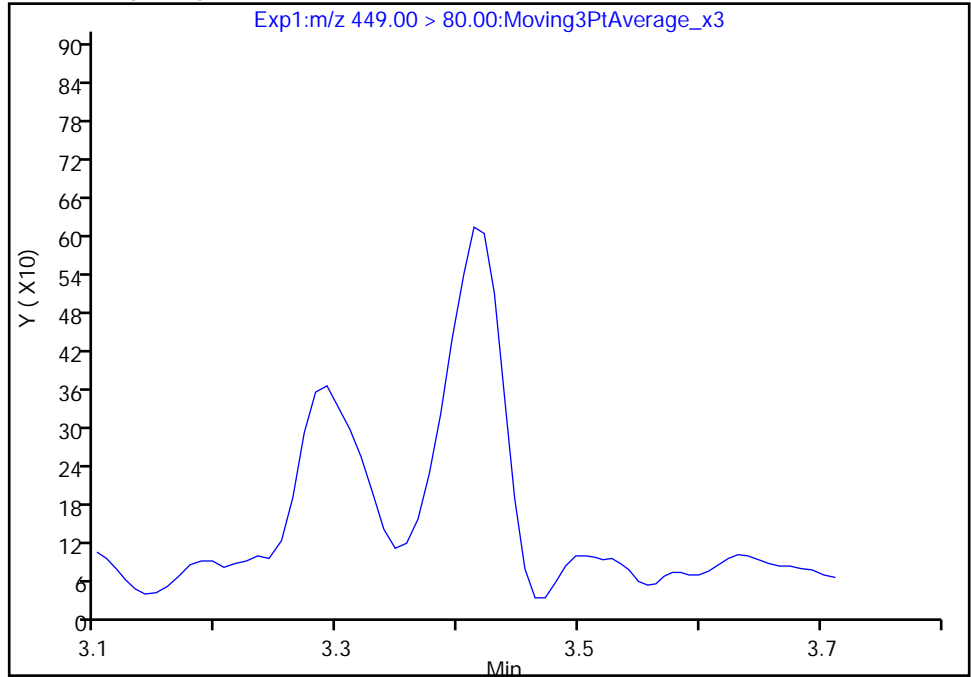
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B017.d  
Injection Date: 24-Dec-2019 16:07:13 Instrument ID: LC812  
Lims ID: 480-164221-C-6-A Lab Sample ID: 200-164221-6  
Client ID: AOI 3 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

16 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 1

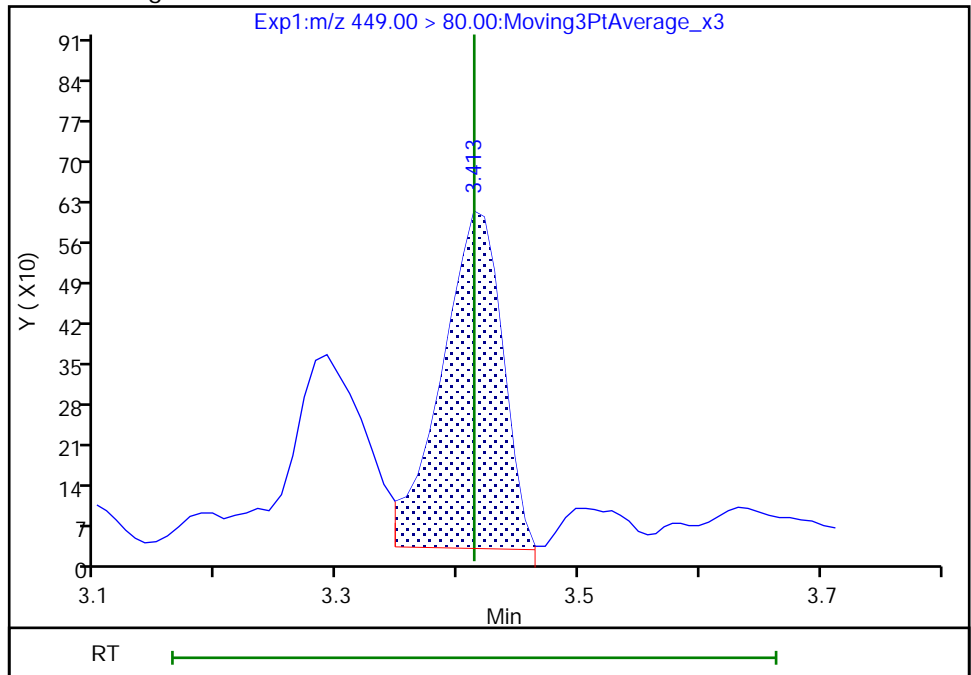
Not Detected  
Expected RT: 3.41

Processing Integration Results



RT: 3.41  
Area: 2041  
Amount: 0.003932  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagern, 27-Dec-2019 13:51:48

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

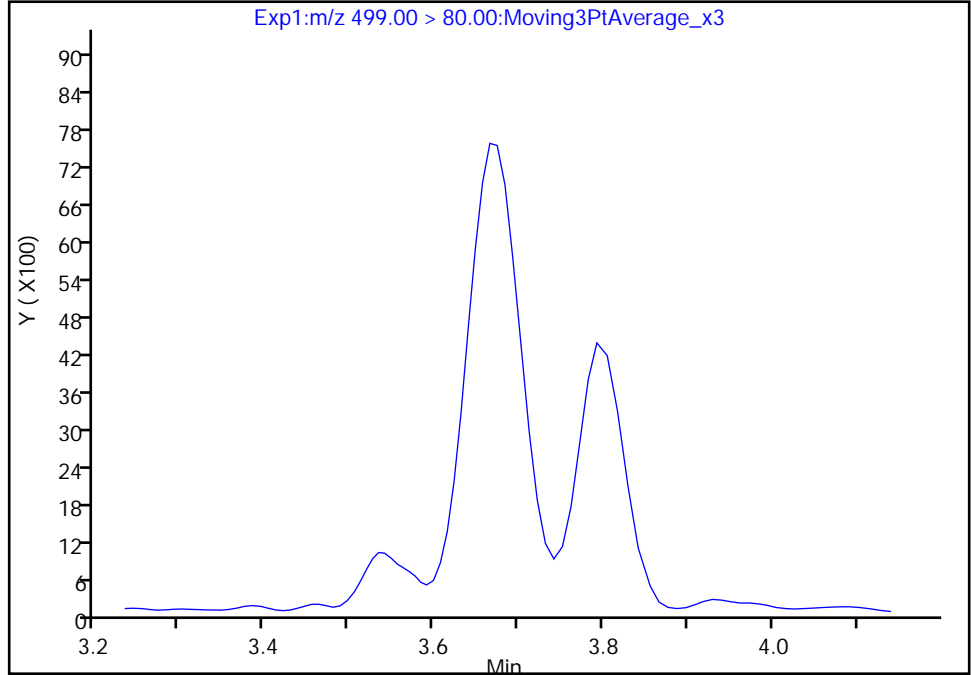
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B017.d  
Injection Date: 24-Dec-2019 16:07:13 Instrument ID: LC812  
Lims ID: 480-164221-C-6-A Lab Sample ID: 200-164221-6  
Client ID: AOI 3 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

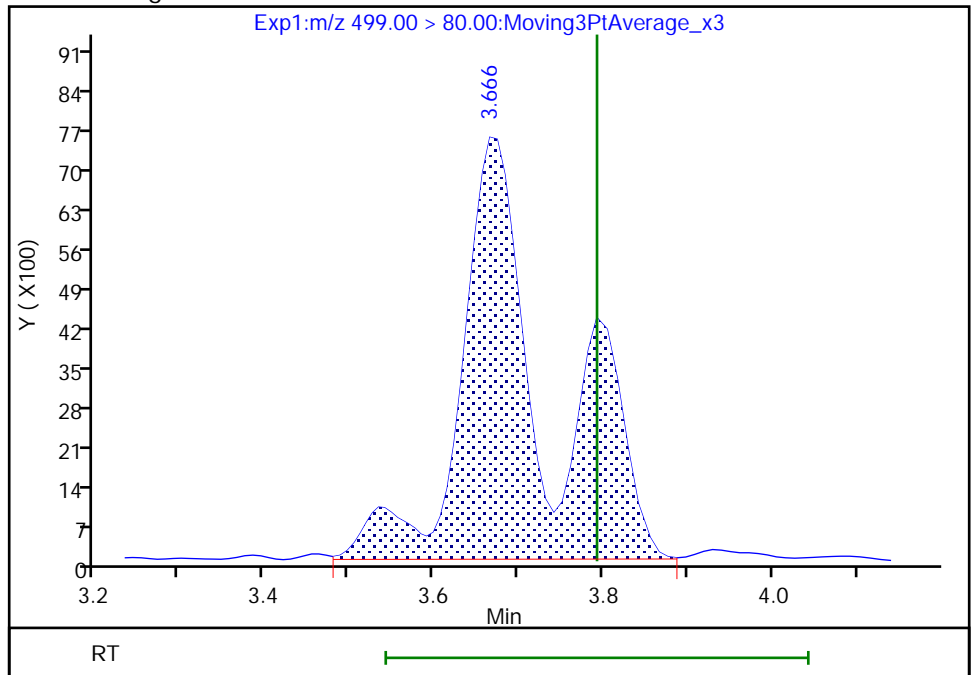
Not Detected  
Expected RT: 3.79

Processing Integration Results



Manual Integration Results

RT: 3.67  
Area: 53692  
Amount: 0.117372  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 31-Dec-2019 09:13:54

Audit Action: Manually Integrated

Audit Reason: Baseline

Euofins TestAmerica, Burlington

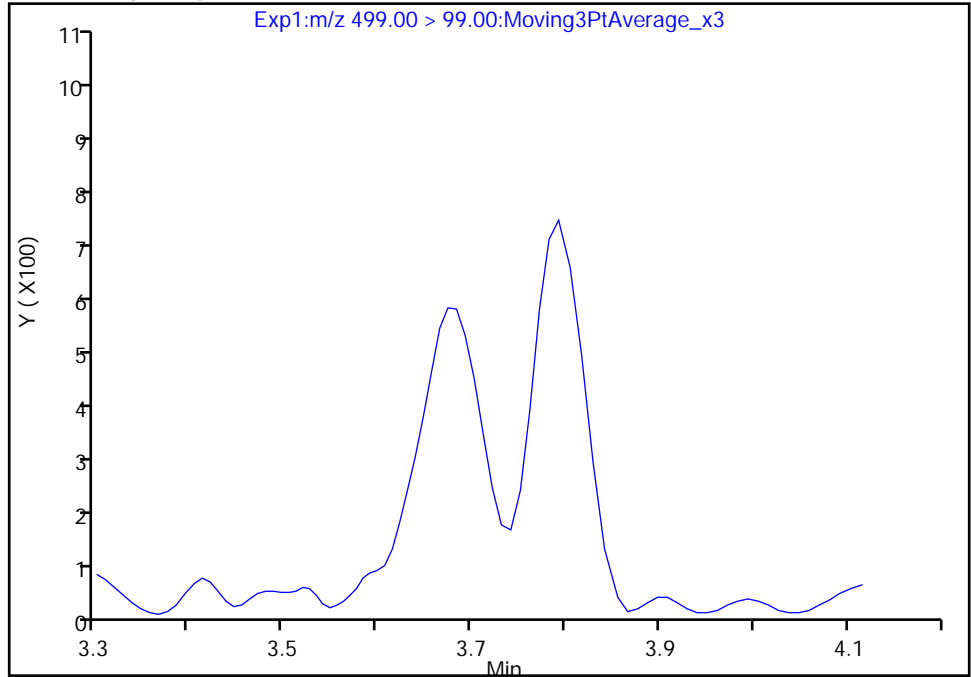
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B017.d  
Injection Date: 24-Dec-2019 16:07:13 Instrument ID: LC812  
Lims ID: 480-164221-C-6-A Lab Sample ID: 200-164221-6  
Client ID: AOI 3 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

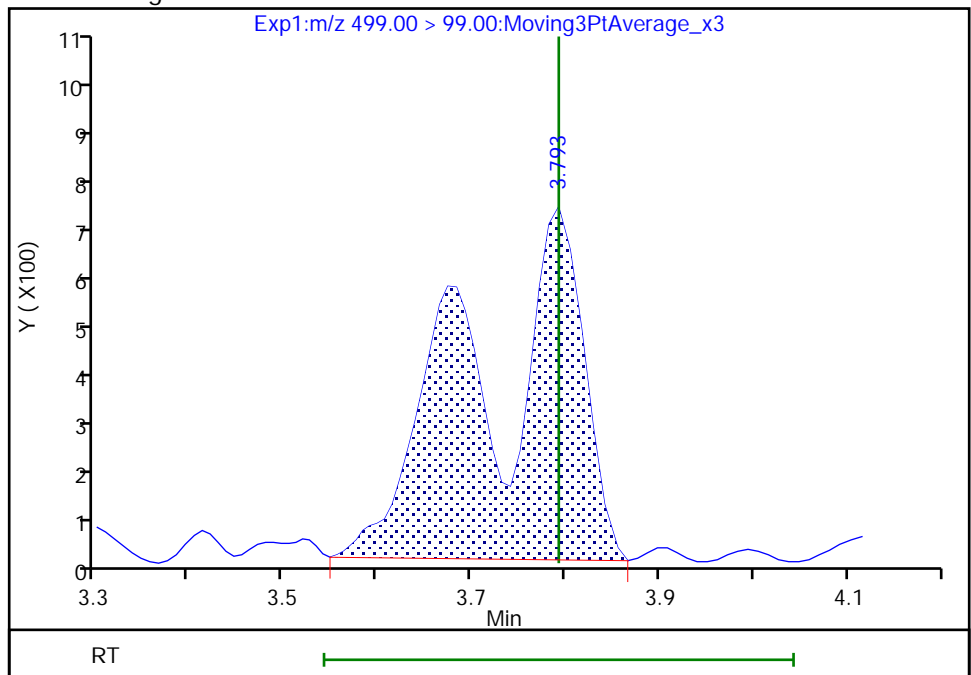
Not Detected  
Expected RT: 3.79

Processing Integration Results



Manual Integration Results

RT: 3.79  
Area: 5522  
Amount: 0.117372  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

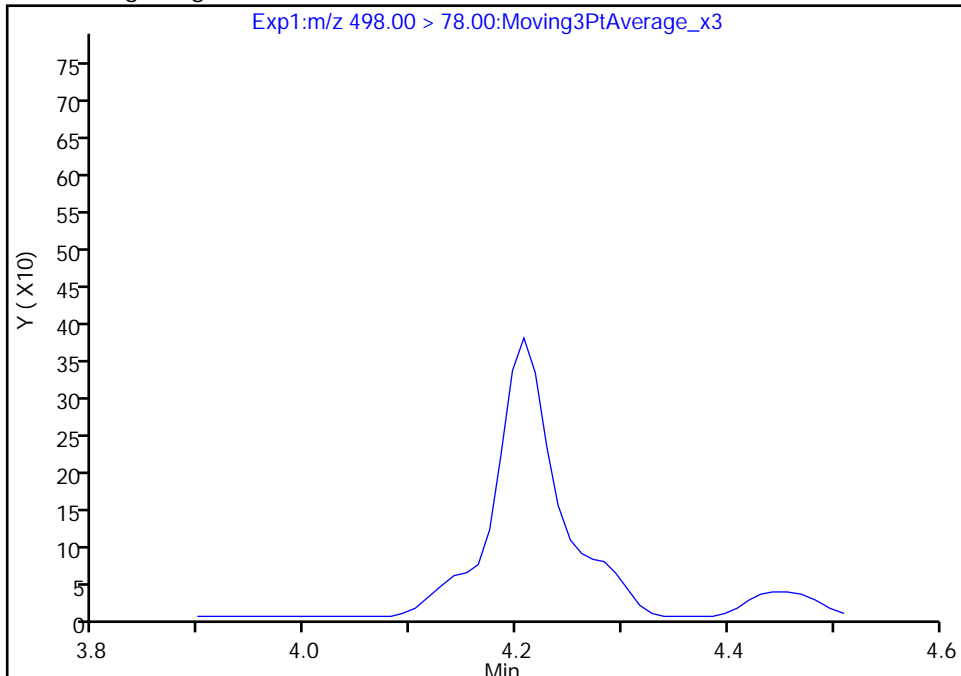
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B017.d  
Injection Date: 24-Dec-2019 16:07:13 Instrument ID: LC812  
Lims ID: 480-164221-C-6-A Lab Sample ID: 200-164221-6  
Client ID: AOI 3 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

22 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

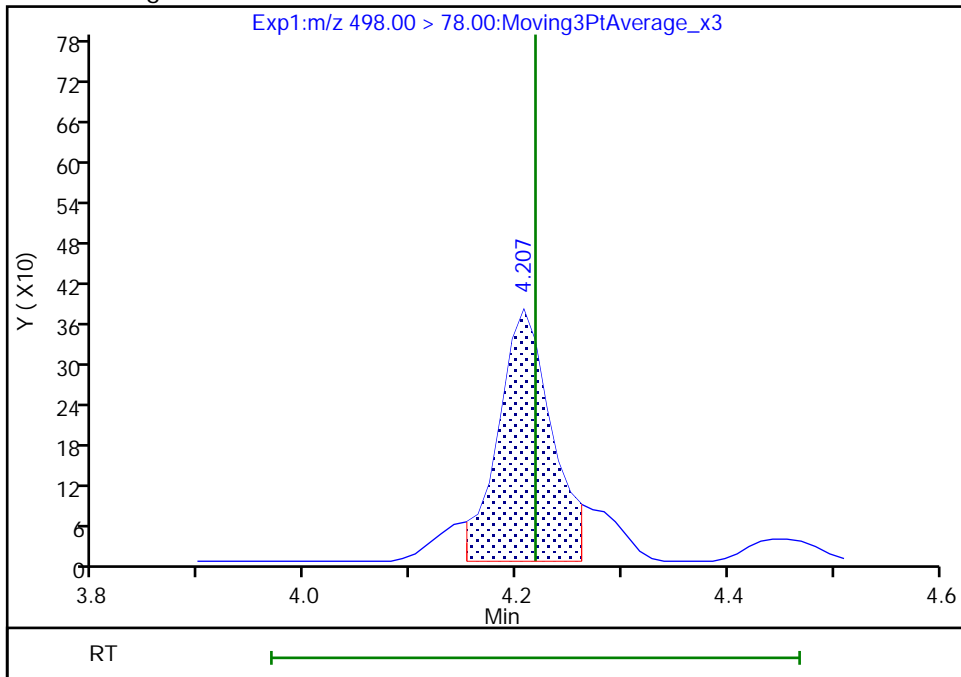
Not Detected  
Expected RT: 4.22

Processing Integration Results



Manual Integration Results

RT: 4.21  
Area: 1301  
Amount: 0.001943  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 13:54:56  
Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

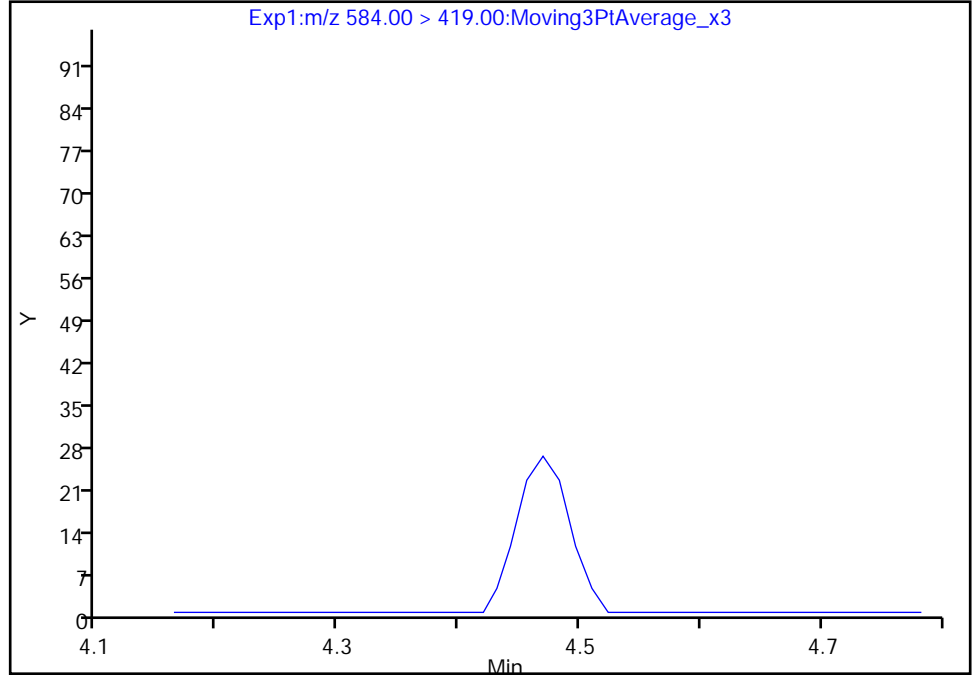
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B017.d  
Injection Date: 24-Dec-2019 16:07:13 Instrument ID: LC812  
Lims ID: 480-164221-C-6-A Lab Sample ID: 200-164221-6  
Client ID: AOI 3 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

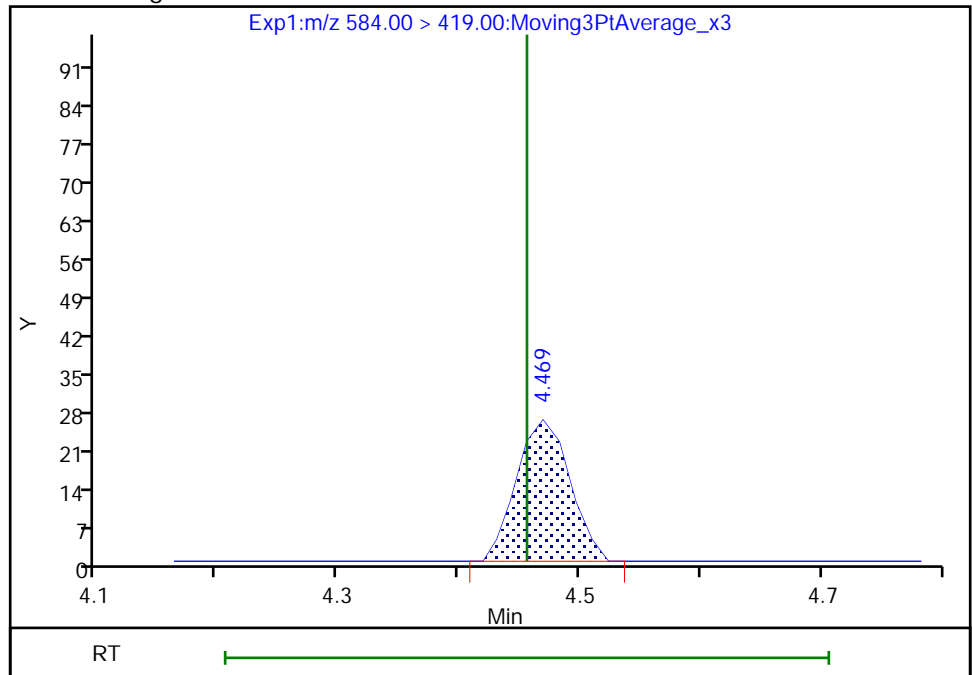
Not Detected  
Expected RT: 4.46

Processing Integration Results



Manual Integration Results

RT: 4.47  
Area: 79  
Amount: 0.002034  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 13:58:37  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

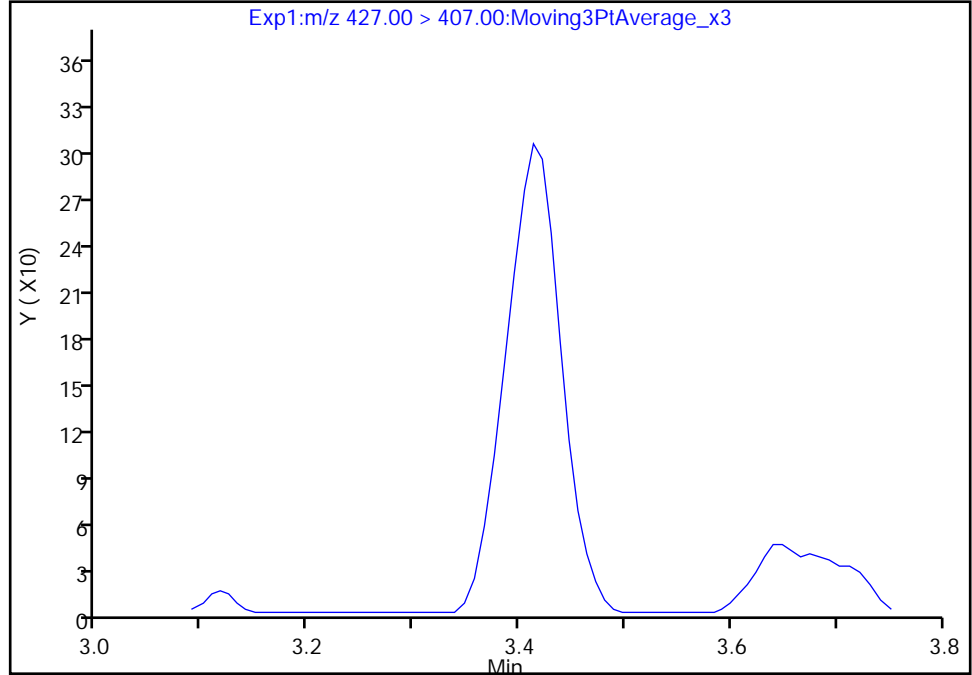
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B017.d  
Injection Date: 24-Dec-2019 16:07:13 Instrument ID: LC812  
Lims ID: 480-164221-C-6-A Lab Sample ID: 200-164221-6  
Client ID: AOI 3 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

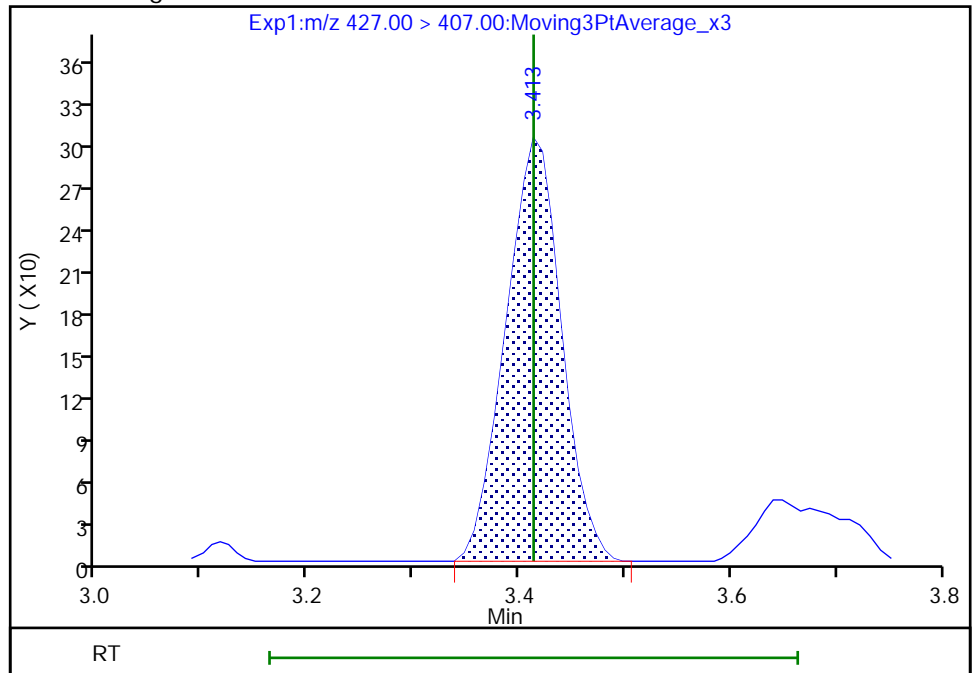
Signal: 1

Not Detected  
Expected RT: 3.41

Processing Integration Results



Manual Integration Results



RT: 3.41  
Area: 1111  
Amount: 0.016470  
Amount Units: ng/ml

Eurofins TestAmerica, Burlington

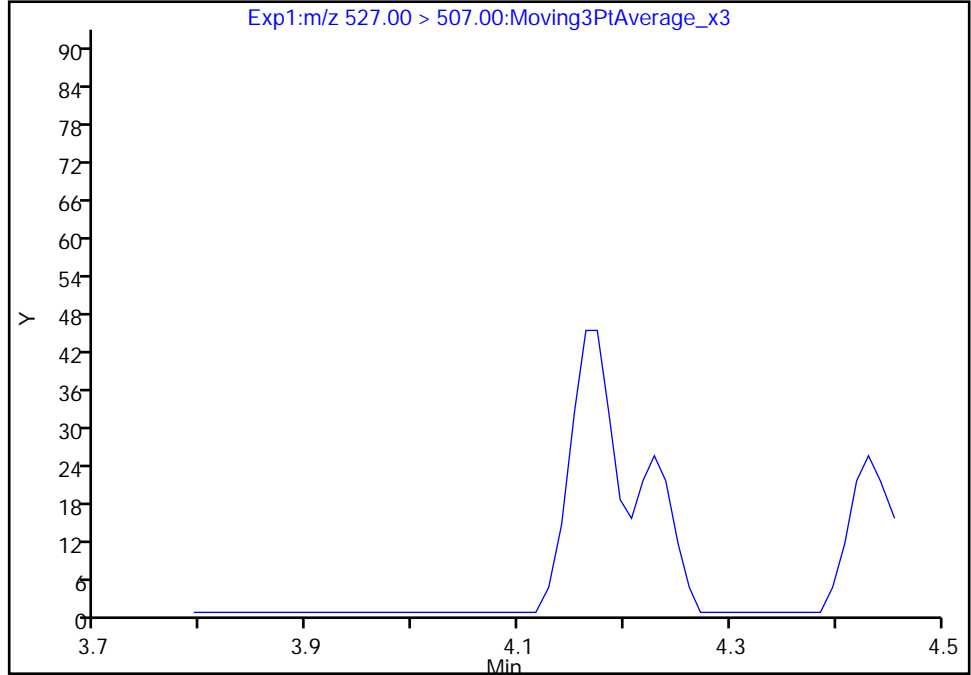
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B017.d  
Injection Date: 24-Dec-2019 16:07:13 Instrument ID: LC812  
Lims ID: 480-164221-C-6-A Lab Sample ID: 200-164221-6  
Client ID: AOI 3 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

25 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:, CAS: 39108-34-4

Signal: 1

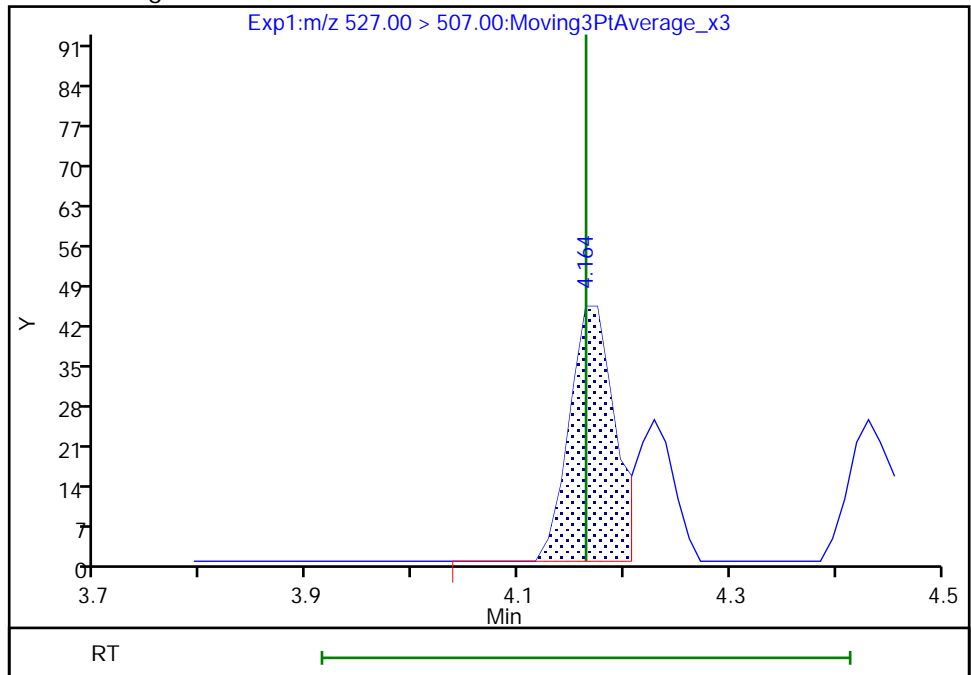
Not Detected  
Expected RT: 4.16

Processing Integration Results



Manual Integration Results

RT: 4.16  
Area: 130  
Amount: 0.002651  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 13:57:09  
Audit Action: Manually Integrated

Audit Reason: Split Peak



FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AOI 1 GW 2 DER Lab Sample ID: 480-164221-7  
 Matrix: Water Lab File ID: SC122319B018.d  
 Analysis Method: 537 (modified) Date Collected: 12/11/2019 12:25  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 272.8 (mL) Date Analyzed: 12/24/2019 16:15  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 20 (uL) GC Column: C-18 ID: 4.6 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	4.0		1.8	0.92
2706-90-3	Perfluoropentanoic acid (PFPeA)	1.2	J	1.8	0.58
307-24-4	Perfluorohexanoic acid (PFHxA)	1.1	J	1.8	0.70
375-85-9	Perfluoroheptanoic acid (PFHpA)	1.1	J	1.8	0.83
335-67-1	Perfluorooctanoic acid (PFOA)	6.9		1.8	0.74
375-95-1	Perfluorononanoic acid (PFNA)	1.6	J	1.8	0.25
335-76-2	Perfluorodecanoic acid (PFDA)	ND		1.8	0.71
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.71
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		1.8	0.54
72629-94-8	Perfluorotridecanoic acid (PFTriA)	ND		1.8	0.55
376-06-7	Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.84
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.75	J	1.8	0.45
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	2.0		1.8	0.73
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.87
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	4.4		1.8	0.56
335-77-3	Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.82
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND		9.2	9.2
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		18	1.6
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		18	1.4
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		18	5.0
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		18	2.7

FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AOI 1 GW 2 DER Lab Sample ID: 480-164221-7  
 Matrix: Water Lab File ID: SC122319B018.d  
 Analysis Method: 537 (modified) Date Collected: 12/11/2019 12:25  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 272.8 (mL) Date Analyzed: 12/24/2019 16:15  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 20 (uL) GC Column: C-18 ID: 4.6 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	103		50-150
STL01892	13C4 PFHpA	102		50-150
STL00990	13C4 PFOA	103		50-150
STL00991	13C4 PFOS	96		50-150
STL00995	13C5 PFNA	93		50-150
STL00992	13C4 PFBA	87		25-150
STL00993	13C2 PFHxA	95		50-150
STL00996	13C2 PFDA	90		50-150
STL00997	13C2 PFUnA	92		50-150
STL00998	13C2 PFDoA	78		50-150
STL01056	13C8 FOSA	74		25-150
STL01893	13C5 PFPeA	109		25-150
STL02116	13C2 PFTeDA	82		50-150
STL02118	d3-NMeFOSAA	80		50-150
STL02117	d5-NEtFOSAA	83		50-150
STL02279	M2-6:2 FTS	76		25-150
STL02280	M2-8:2 FTS	93		25-150
STL02337	13C3 PFBS	98		50-150

Eurofins TestAmerica, Burlington  
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B018.d  
 Lims ID: 480-164221-C-7-A  
 Client ID: AOI 1 GW 2 DER  
 Sample Type: Client  
 Inject. Date: 24-Dec-2019 16:15:24 ALS Bottle#: 18 Worklist Smp#: 18  
 Injection Vol: 20.0 ul Dil. Factor: 1.0000  
 Sample Info: 480-164221-C-7-A  
 Misc. Info.: 200-0039355-018 Plate: 1 Rack: 2  
 Operator ID: lc812tech Instrument ID: LC812  
 Method: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\PFC\_LC812.m  
 Limit Group: LC\_PFC\_ICAL  
 Last Update: 30-Dec-2019 15:06:05 Calib Date: 06-Dec-2019 15:13:26  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Column 1 : C-18 ( 4.60 mm) Det: EXP1  
 Process Host: CTX0330

First Level Reviewer: lautenschlagery Date: 27-Dec-2019 14:15:17  
 Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	1.907	1.908	-0.001	0.557	1537743	2.19	87.5	2595	
2 Perfluorobutanoic acid										M
212.90 > 169.00	1.907	1.908	-0.001	1.000	67159	0.1097		16.1		M
D 3 13C5 PFPeA	267.90 > 223.00	2.257	2.257	0.0	0.660	1463860	2.72	109	3626	
4 Perfluoropentanoic acid										M
262.90 > 219.00	2.257	2.271	-0.014	1.000	22316	0.0337		1.0		M
D 47 13C3 PFBS	301.90 > 80.00	2.271	2.285	-0.014	0.664	1455205	2.27	97.6	234391	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.284	2.285	-0.001	1.006	13989	0.0206	Target=2.03	13.0		
298.90 > 99.00	2.284	2.285	-0.001	1.006	5981		2.34(1.01-3.04)	5.5		
D 7 13C2 PFHxA	315.00 > 270.00	2.648	2.648	0.0	0.774	1420440	2.37	94.8	4816	
6 Perfluorohexanoic acid										M
313.00 > 269.00	2.648	2.661	-0.013	1.000	17782	0.0307	Target=13.76	4.4		M
313.00 > 119.00	2.648	2.661	-0.013	1.000	1452		12.25(6.88-20.64)	4.5		
D 11 18O2 PFHxS	403.00 > 84.00	3.044	3.044	0.0	0.890	1236851	2.44	103	4915	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.044	3.044	0.0	1.000	32139	0.0543	Target=3.90	43.2		M
399.00 > 99.00	3.044	3.044	0.0	1.000	7384		4.35(1.95-5.85)	15.3		M
D 9 13C4 PFHpA	367.00 > 322.00	3.044	3.044	0.0	0.890	1442739	2.54	102	6131	
10 Perfluoroheptanoic acid										M
363.00 > 319.00	3.044	3.044	0.0	1.000	18898	0.0310	Target=3.95	5.5		
363.00 > 169.00	3.044	3.044	0.0	1.000	5638		3.35(1.97-5.92)	19.6		M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 1H,1H,2H,2H-perfluorooctanesulfoni										M
427.00 > 407.00	3.405	3.413	-0.008	0.998	606	0.009692			13.5	M
D 12 M2-6:2 FTS										
429.00 > 81.00	3.413	3.413	0.0	0.998	157351	1.81		76.2	581	
15 Perfluorooctanoic acid										M
413.00 > 369.00	3.422	3.430	-0.008	1.000	128996	0.1877	Target=2.40		45.2	M
413.00 > 169.00	3.430	3.430	0.0	1.002	53929		2.39(1.20-3.60)		304	M
D 14 13C4 PFOA										
417.00 > 372.00	3.422	3.430	-0.008	1.000	1548174	2.57		103	4875	
* 62 13C2 PFOA										
415.00 > 370.00	3.422	3.430	-0.008		1659538	2.50			4483	
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.793	0.0	1.108	925229	2.30		96.3	4533	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.793	3.793	0.0	1.000	49611	0.1187	Target=5.74		163	M
499.00 > 99.00	3.793	3.793	0.0	1.000	7095		6.99(2.87-8.61)		35.1	M
D 19 13C5 PFNA										
468.00 > 423.00	3.817	3.817	0.0	1.116	1295249	2.34		93.4	4508	
20 Perfluorononanoic acid										M
463.00 > 419.00	3.817	3.817	0.0	1.000	22470	0.0442	Target=7.01		10.4	M
463.00 > 169.00	3.817	3.817	0.0	1.000	3029		7.42(3.50-10.51)		45.7	
D 23 13C2 PFDA										
515.00 > 470.00	4.164	4.164	0.0	1.217	1230634	2.25		90.1	5553	
24 Perfluorodecanoic acid										M
513.00 > 469.00	4.153	4.164	-0.011	0.997	5645	0.0119	Target=7.28		6.1	M
513.00 > 169.00	4.164	4.164	0.0	1.000	937		6.02(3.64-10.91)		9.4	M
25 1H,1H,2H,2H-perfluorodecanesulfoni										M
527.00 > 507.00	4.164	4.164	0.0	1.000	191	0.004282			4.3	M
D 26 M2-8:2 FTS										
529.00 > 81.00	4.164	4.175	-0.011	1.217	231431	2.23		93.2	882	
D 21 13C8 FOSA										
506.00 > 78.00	4.218	4.218	0.0	1.233	1325522	1.85		74.2	3583	
22 Perfluorooctanesulfonamide										M
498.00 > 78.00	4.218	4.218	0.0	1.000	565	0.001071			7.1	M
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.305	4.305	0.0	1.258	105647	2.01		80.3	1146	
D 30 13C2 PFUnA										
565.00 > 520.00	4.442	4.443	-0.001	1.298	1063850	2.29		91.6	6436	
31 Perfluoroundecanoic acid										M
563.00 > 519.00	4.442	4.443	-0.001	1.000	2994	0.008298	Target=5.78		4.7	
563.00 > 169.00	4.442	4.443	-0.001	1.000	405		7.39(2.89-8.67)		6.0	M
33 N-ethylperfluorooctanesulfonamidoa										M
584.00 > 419.00	4.456	4.456	0.0	1.003	72	0.001799			1.0	M
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.442	4.456	-0.014	1.298	120888	2.07		82.9	1328	
D 36 13C2 PFDoA										
615.00 > 570.00	4.683	4.683	0.0	1.369	987735	1.94		77.5	3737	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
42 Perfluorotetradecanoic acid										M
713.00 > 169.00	5.094	5.108	-0.014	0.997	349	0.004970	Target=1.05		6.5	M
713.00 > 219.00	5.094	5.108	-0.014	0.997	257		1.36(0.52-1.57)		4.5	M
D 43 13C2 PFTeDA										
715.00 > 670.00	5.107	5.108	-0.001	1.493	873876	2.05		81.9	5873	

**QC Flag Legend**

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B018.d

Injection Date: 24-Dec-2019 16:15:24

Instrument ID: LC812

Lims ID: 480-164221-C-7-A

Lab Sample ID: 200-164221-7

Client ID: AOI 1 GW 2 DER

Operator ID: lc812tech

ALS Bottle#: 18

Worklist Smp#: 18

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

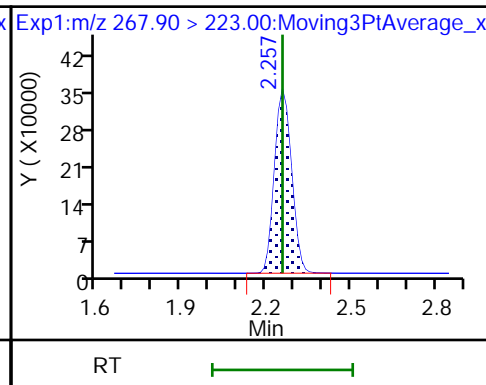
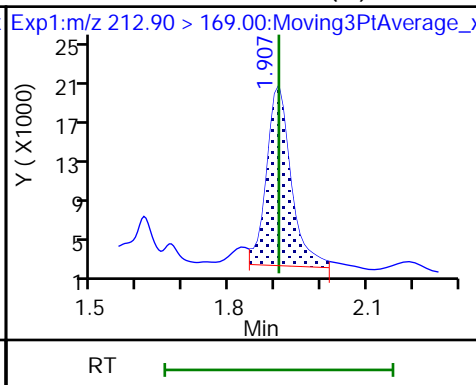
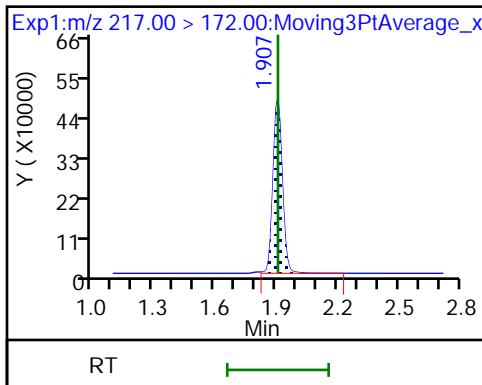
Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid (M)

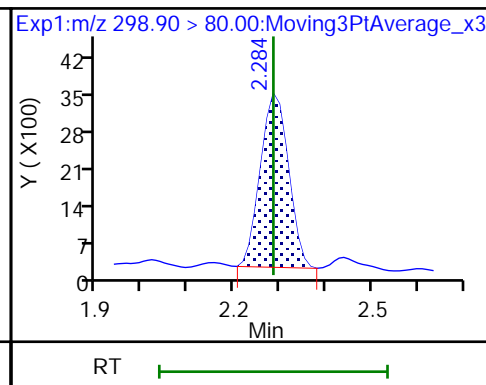
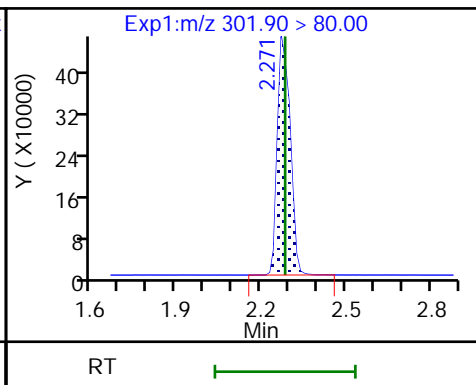
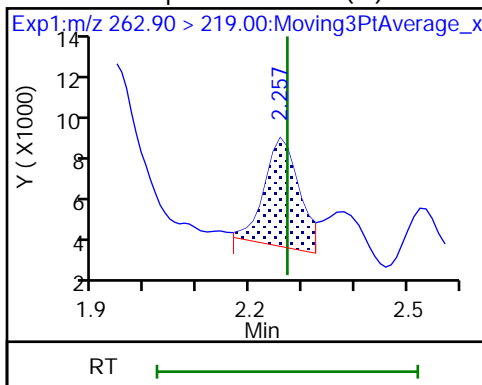
D 3 13C5 PFPeA



4 Perfluoropentanoic acid (M)

D 47 13C3 PFBS

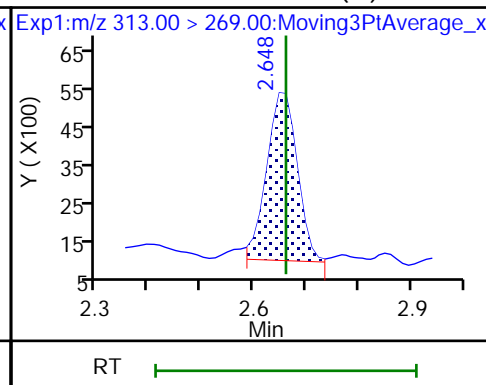
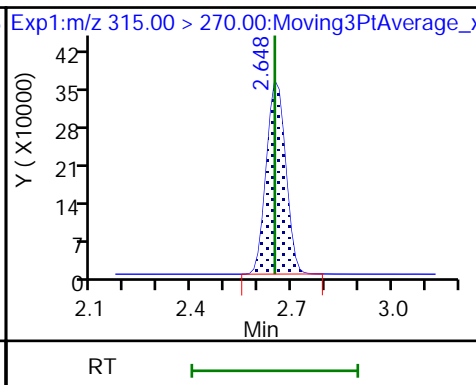
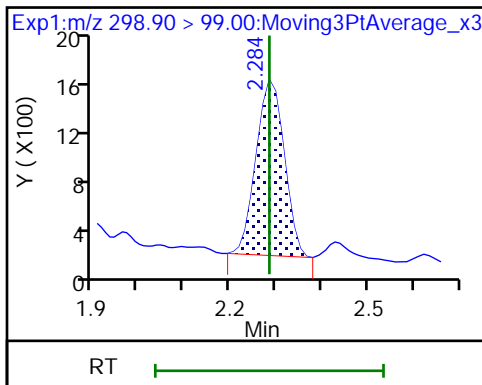
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 7 13C2 PFHxA

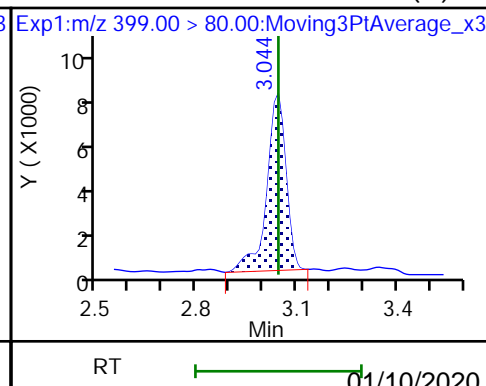
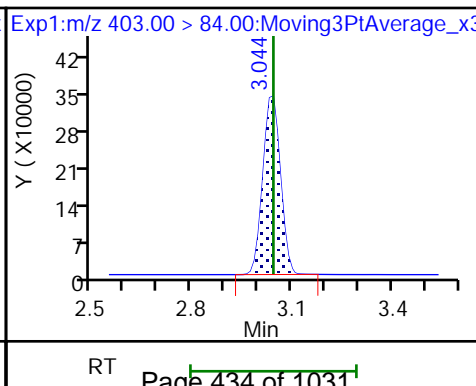
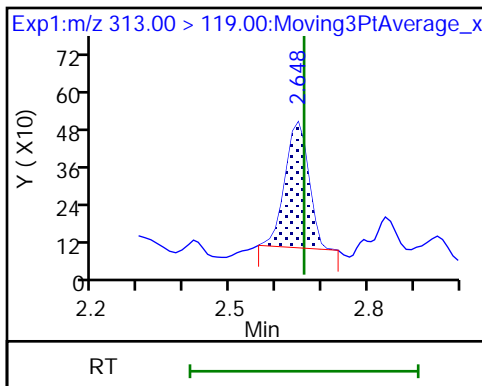
6 Perfluorohexanoic acid (M)



6 Perfluorohexanoic acid

D 11 18O2 PFHxS

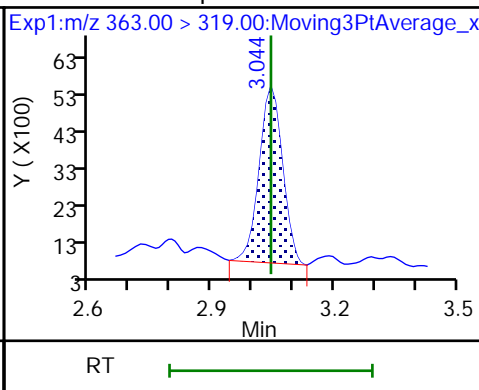
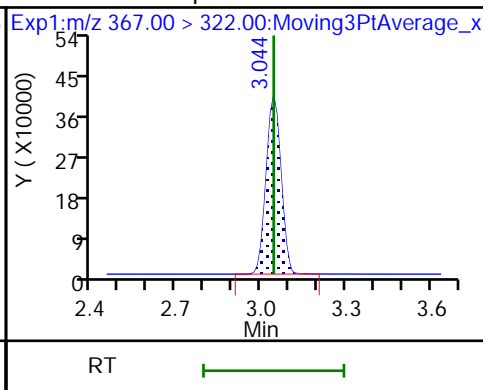
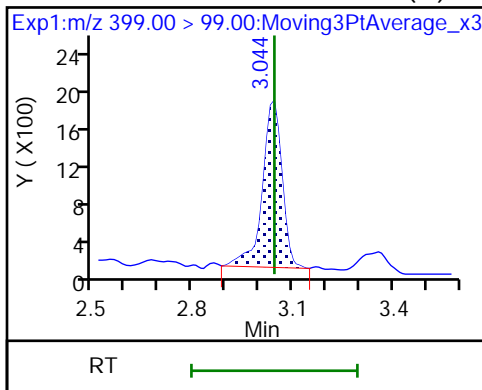
8 Perfluorohexanesulfonic acid (M)



8 Perfluorohexanesulfonic acid (M)

D 9 13C4 PFHpA

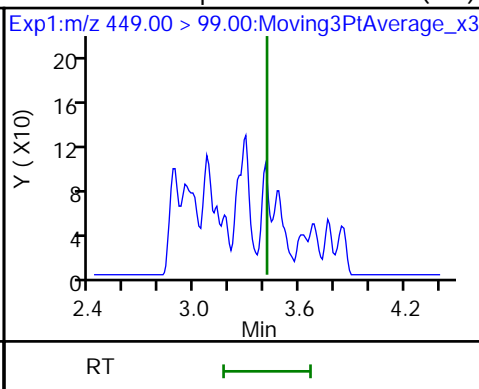
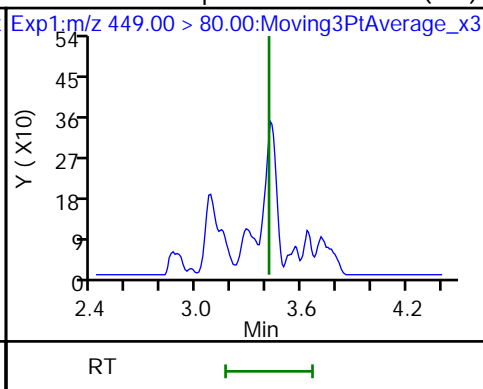
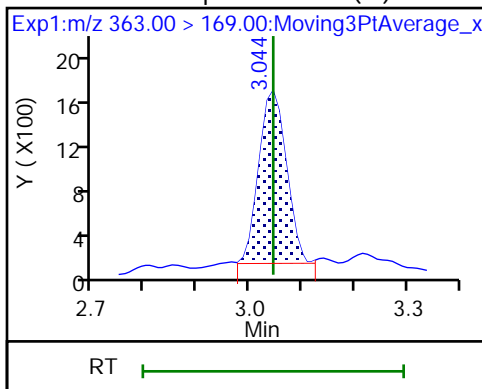
10 Perfluoroheptanoic acid



10 Perfluoroheptanoic acid (M)

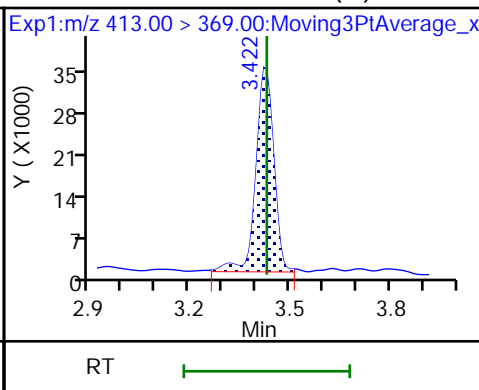
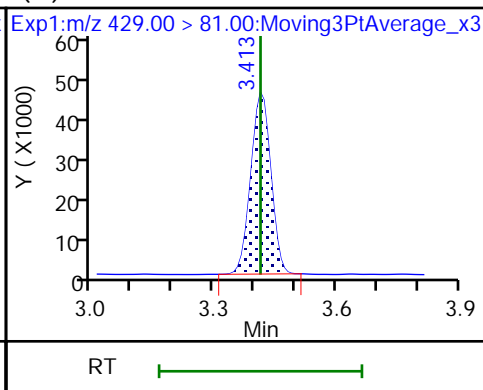
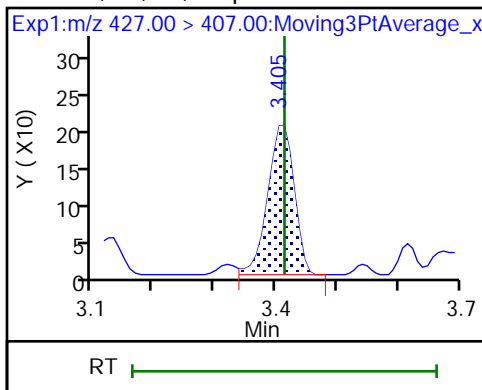
16 Perfluoroheptanesulfonic acid (ND)

16 Perfluoroheptanesulfonic acid (ND)



13 1H,1H,2H,2H-perfluorooctanesulfonate (M) M2-6:2 FTS

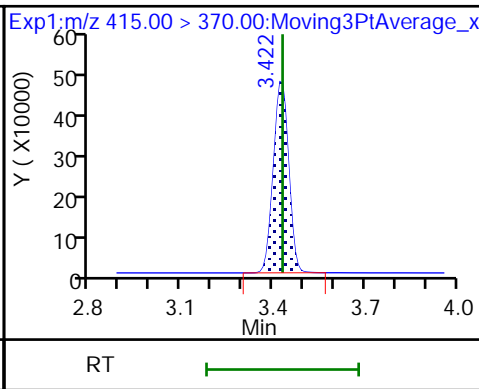
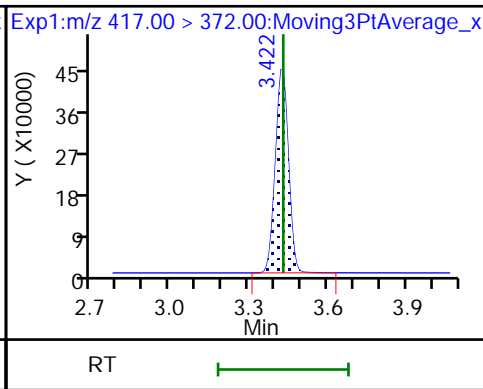
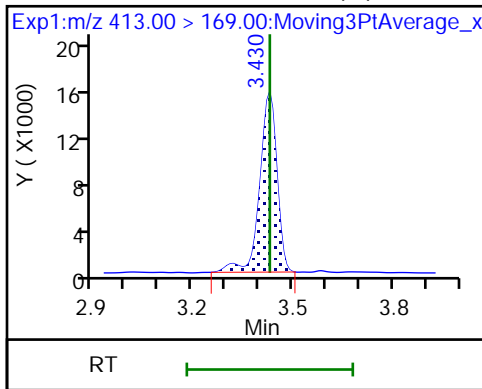
15 Perfluorooctanoic acid (M)



15 Perfluorooctanoic acid (M)

D 14 13C4 PFOA

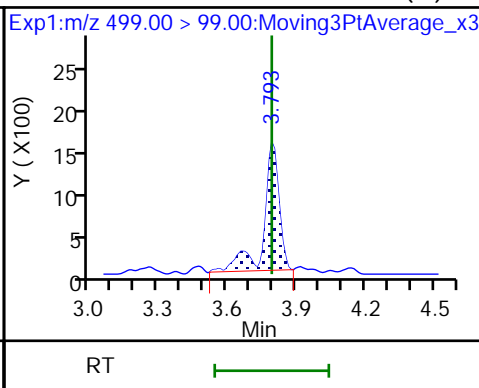
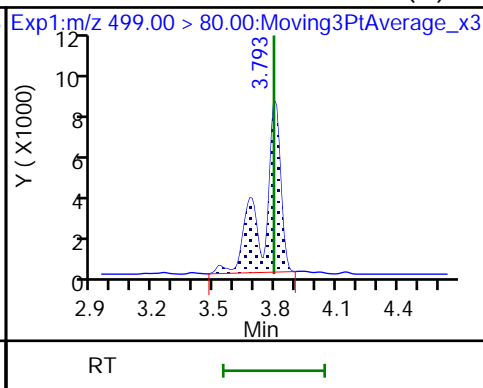
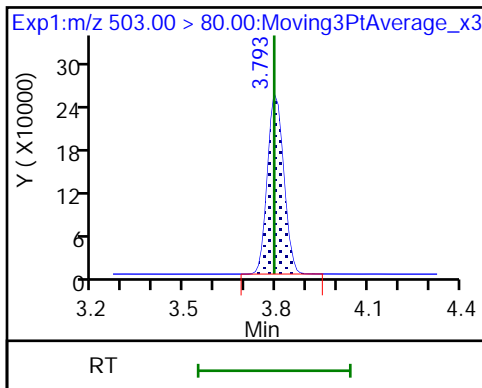
\* 62 13C2 PFOA



D 18 13C4 PFOS

17 Perfluorooctanesulfonic acid (M)

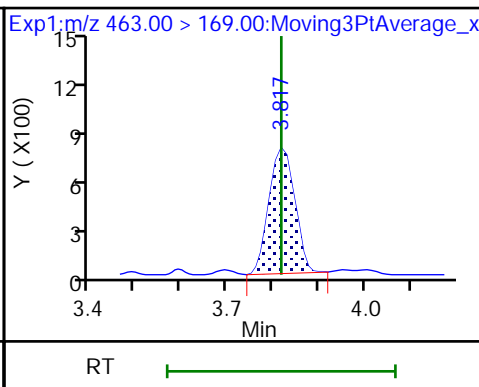
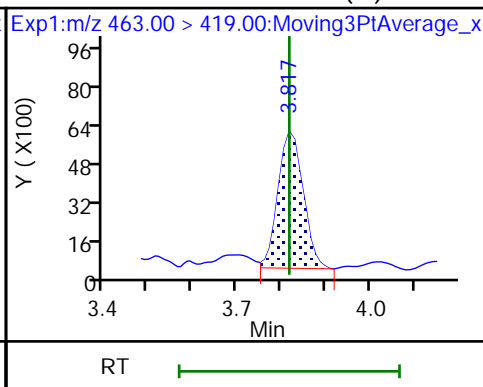
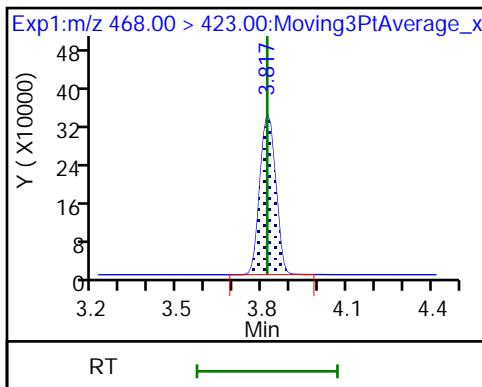
17 Perfluorooctanesulfonic acid (M)



D 19 13C5 PFNA

20 Perfluorononanoic acid (M)

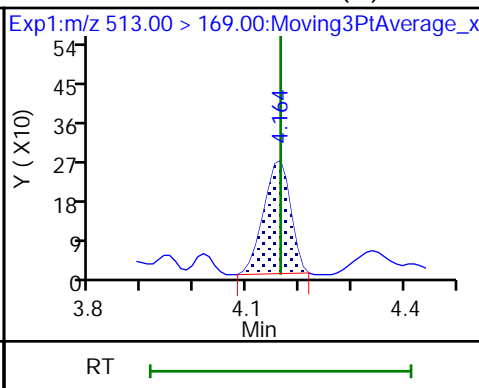
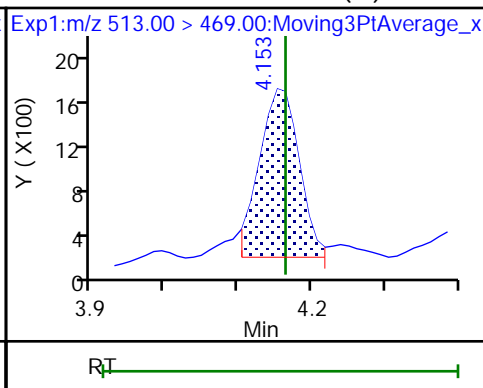
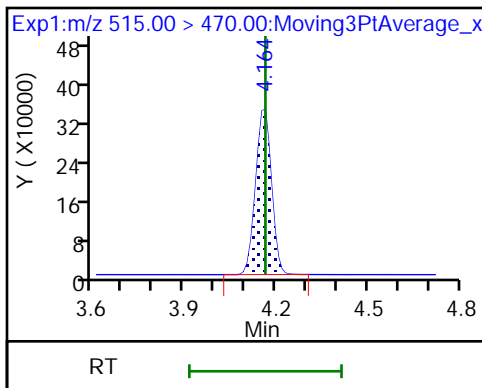
20 Perfluorononanoic acid



D 23 13C2 PFDA

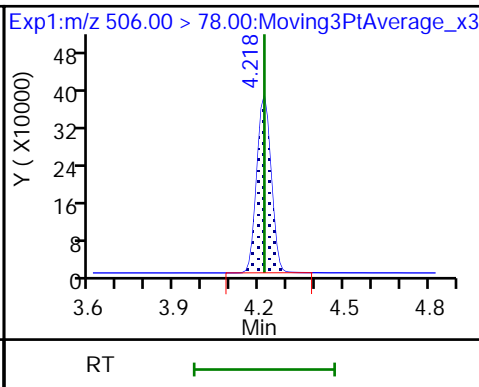
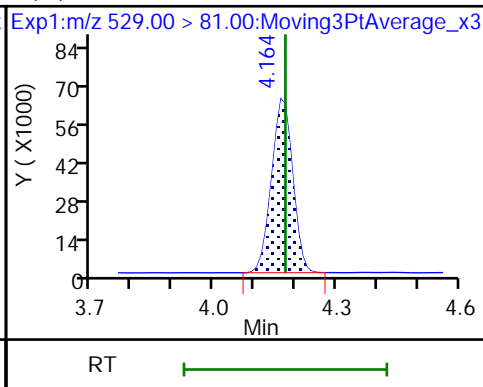
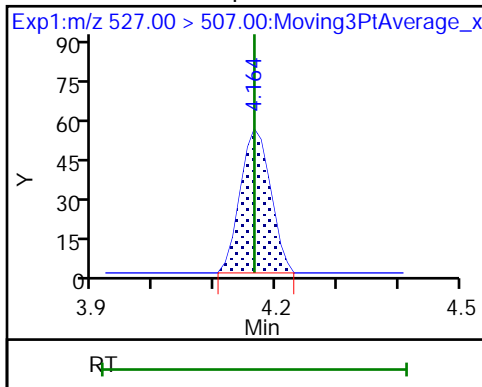
24 Perfluorodecanoic acid (M)

24 Perfluorodecanoic acid (M)



25 1H,1H,2H,2H-perfluorodecanesulfonic acid (M) M2-8:2 FTS

D 21 13C8 FOSA

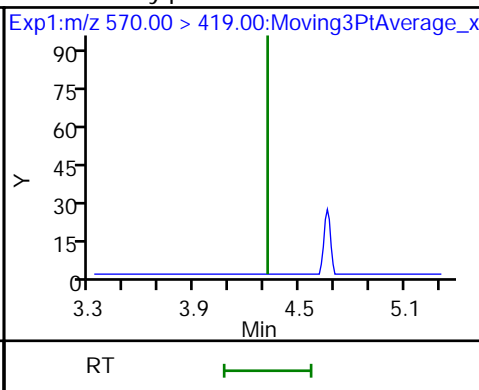
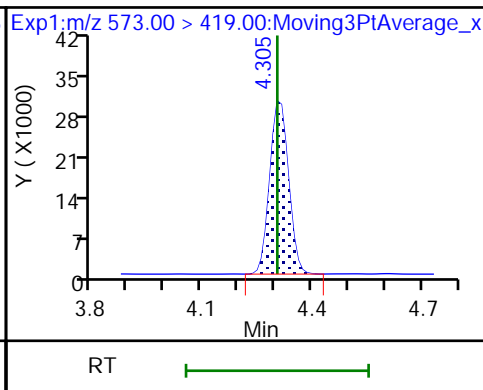
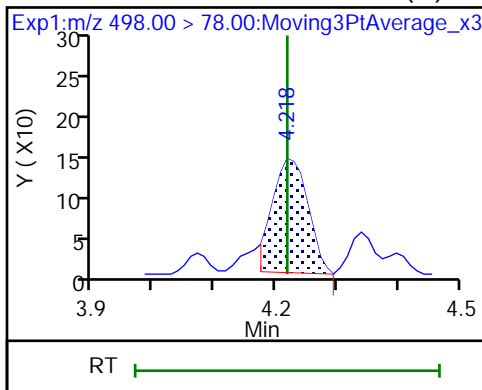




22 Perfluorooctanesulfonamide (M)

D 27 d3-NMeFOSAA

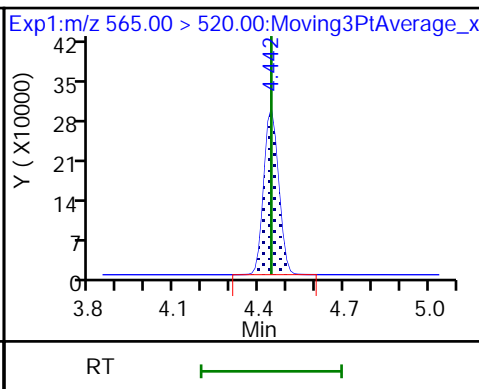
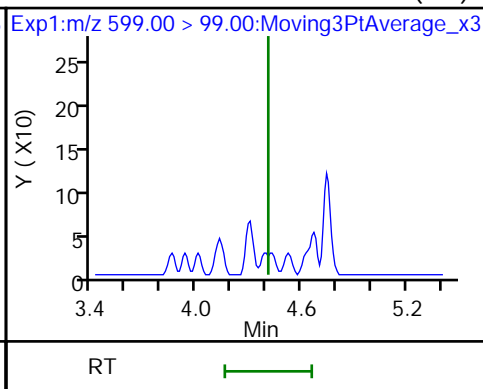
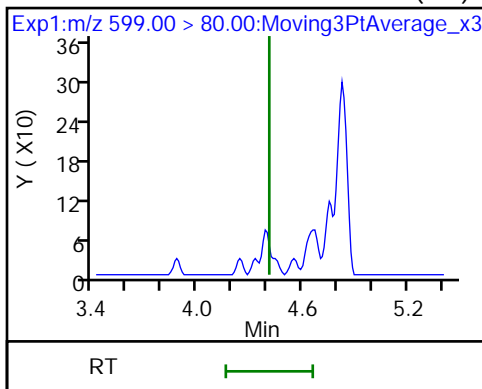
28 N-methylperfluorooctanesulfonamido (ND)



29 Perfluorodecanesulfonic acid (ND)

29 Perfluorodecanesulfonic acid (ND)

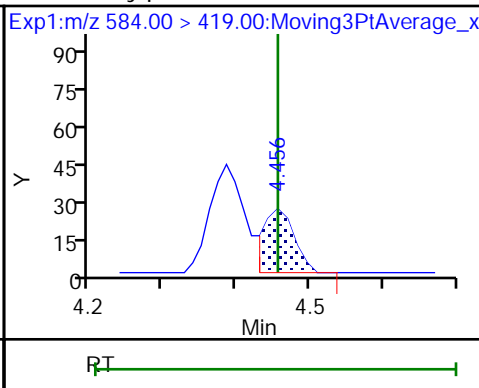
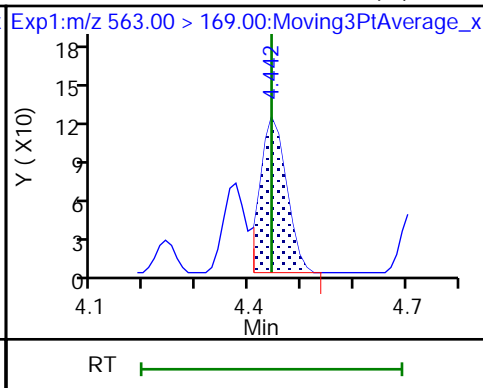
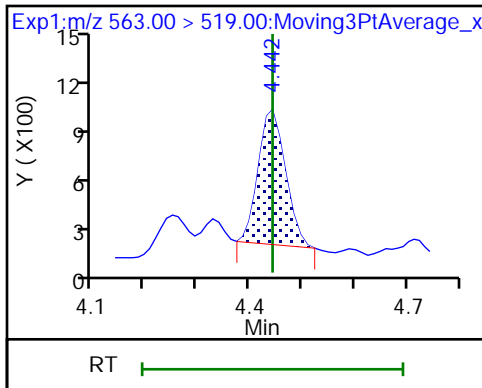
D 30 13C2 PFUa



31 Perfluoroundecanoic acid

31 Perfluoroundecanoic acid (M)

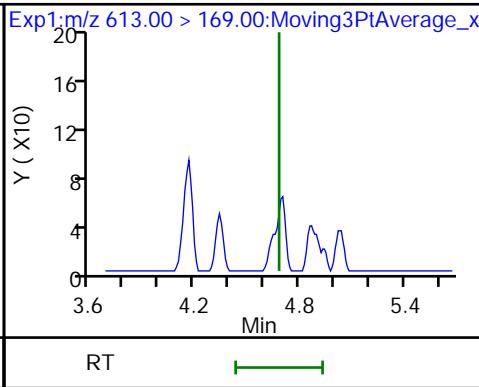
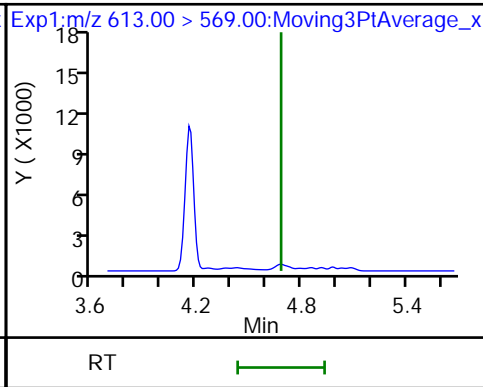
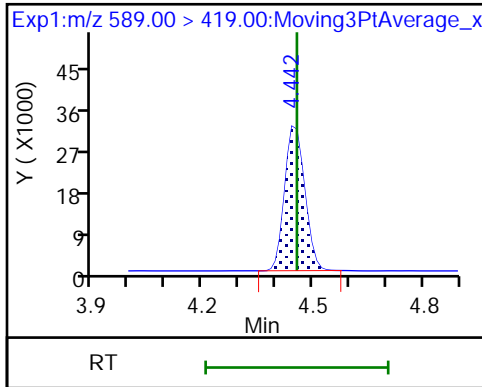
33 N-ethylperfluorooctanesulfonamidoa (M)



D 32 d5-NEtFOSAA

37 Perfluorododecanoic acid (ND)

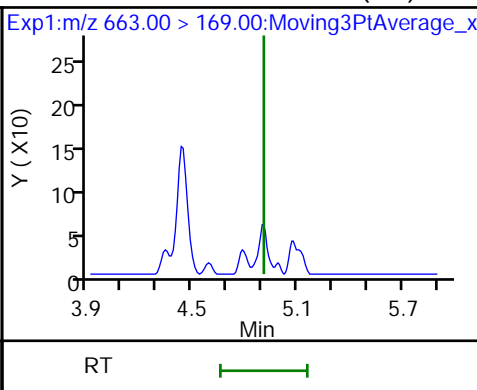
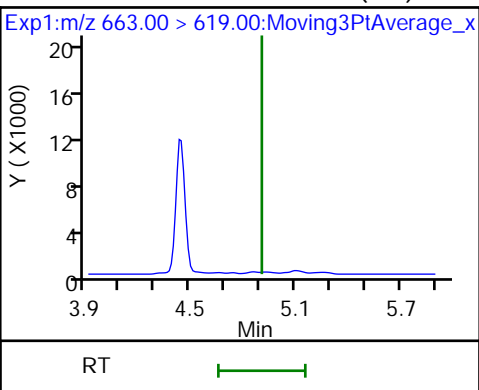
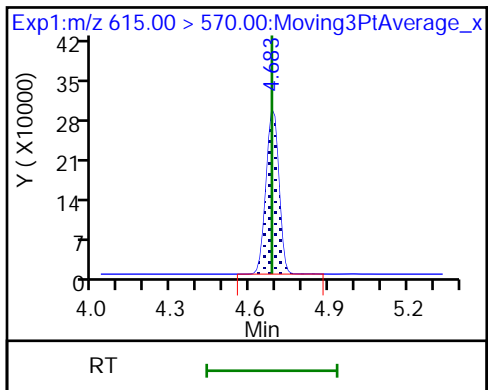
37 Perfluorododecanoic acid (ND)



D 36 13C2 PFDoA

41 Perfluorotridecanoic acid (ND)

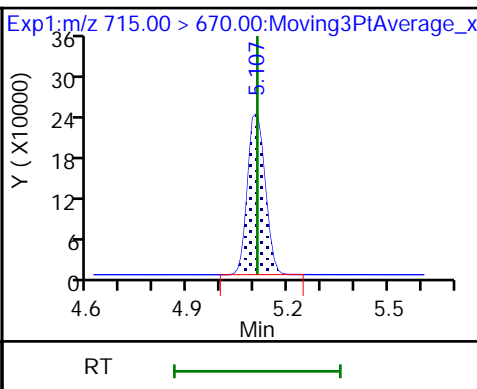
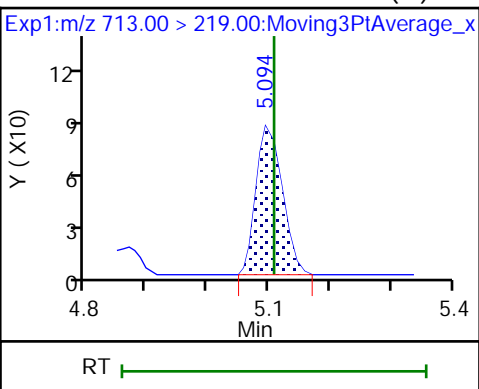
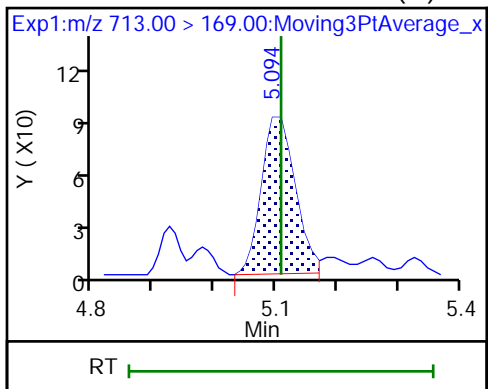
41 Perfluorotridecanoic acid (ND)



42 Perfluorotetradecanoic acid (M)

42 Perfluorotetradecanoic acid (M)

D 43 13C2 PFTeDA



Eurofins TestAmerica, Burlington

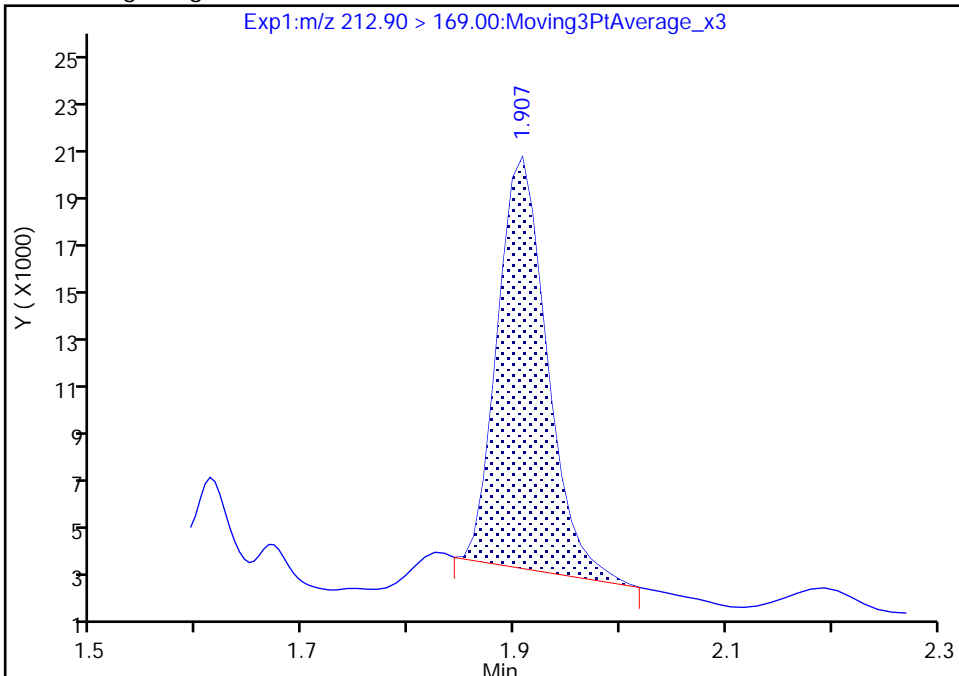
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B018.d  
Injection Date: 24-Dec-2019 16:15:24 Instrument ID: LC812  
Lims ID: 480-164221-C-7-A Lab Sample ID: 200-164221-7  
Client ID: AOI 1 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

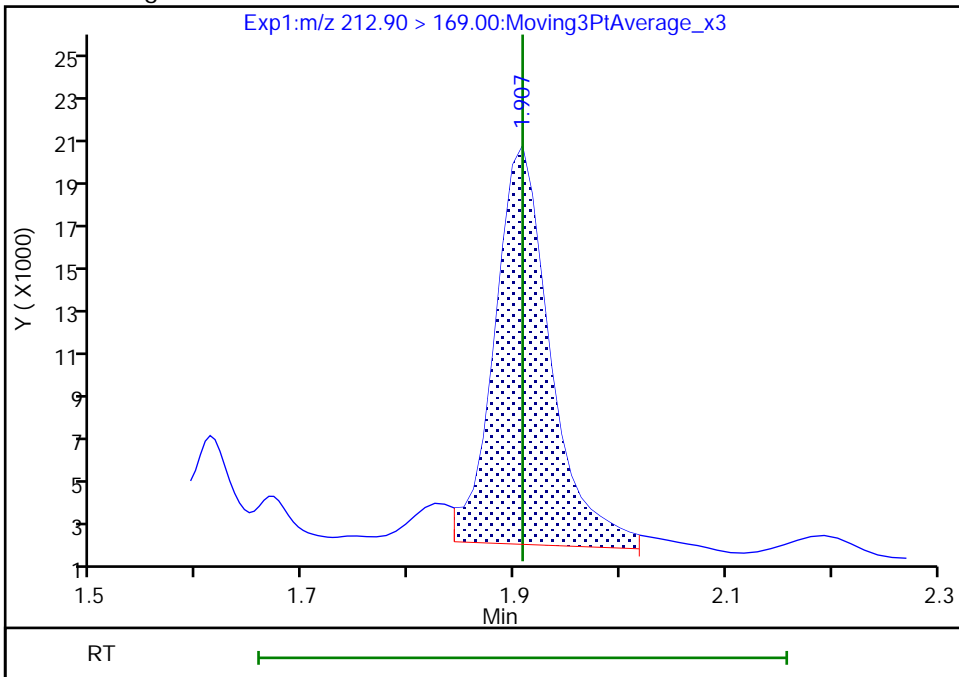
RT: 1.91  
Area: 55697  
Amount: 0.091013  
Amount Units: ng/ml

Processing Integration Results



RT: 1.91  
Area: 67159  
Amount: 0.109743  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 14:15:05  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

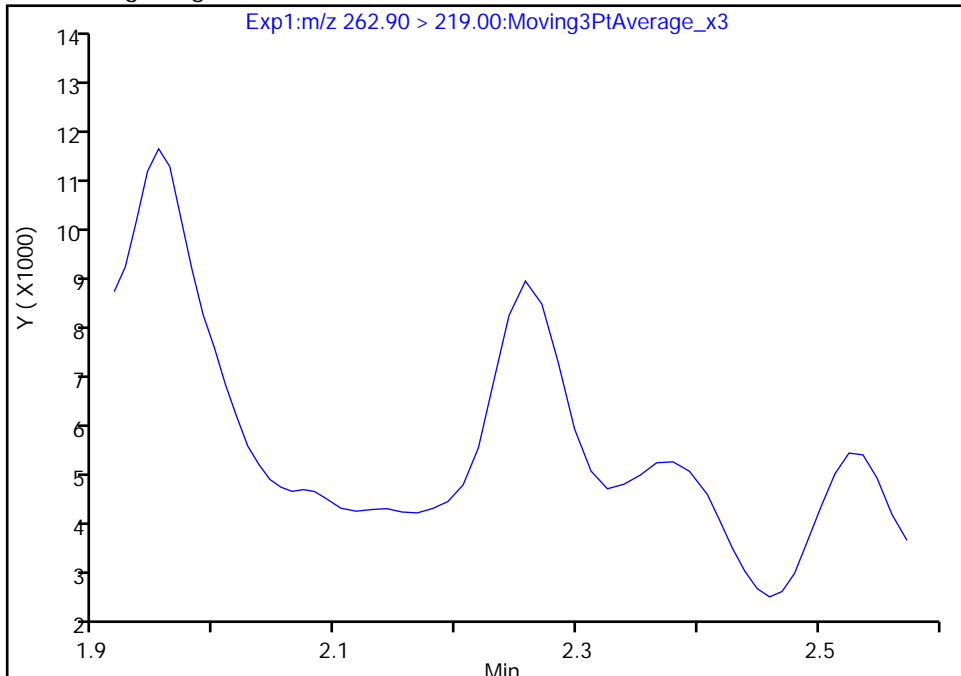
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B018.d  
Injection Date: 24-Dec-2019 16:15:24 Instrument ID: LC812  
Lims ID: 480-164221-C-7-A Lab Sample ID: 200-164221-7  
Client ID: AOI 1 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

4 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

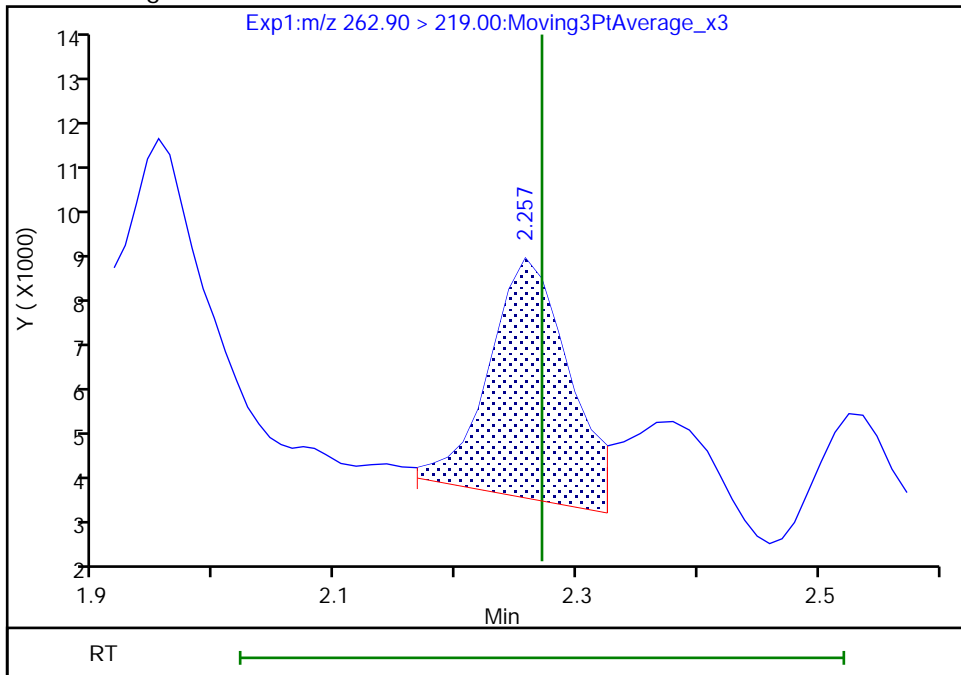
Not Detected  
Expected RT: 2.27

Processing Integration Results



Manual Integration Results

RT: 2.26  
Area: 22316  
Amount: 0.033656  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 14:14:35  
Audit Action: Manually Integrated

Audit Reason: Baseline

Euofins TestAmerica, Burlington

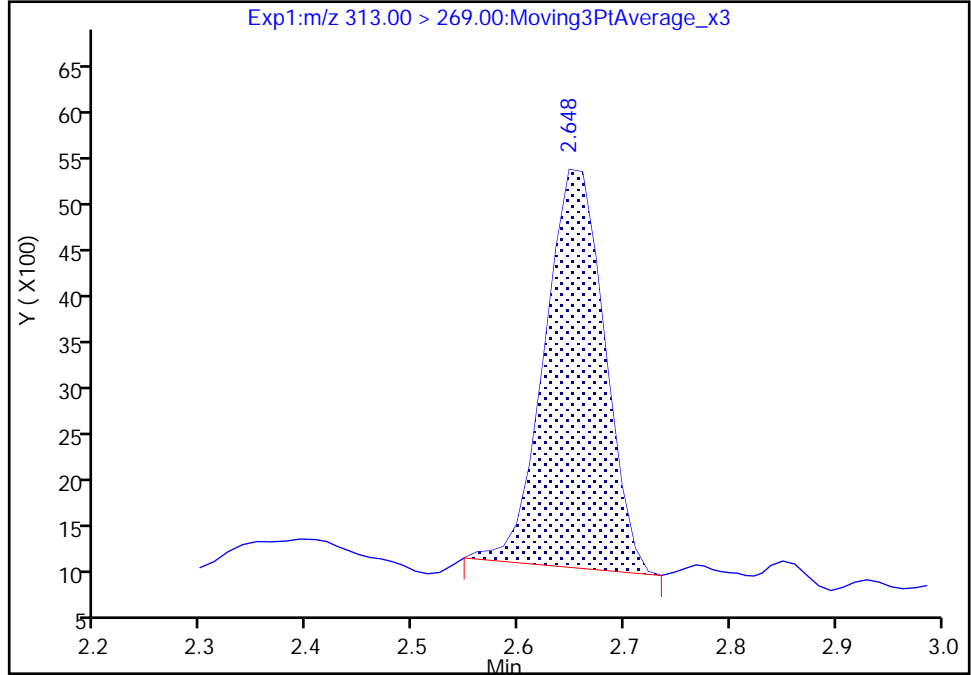
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B018.d  
Injection Date: 24-Dec-2019 16:15:24 Instrument ID: LC812  
Lims ID: 480-164221-C-7-A Lab Sample ID: 200-164221-7  
Client ID: AOI 1 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

6 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

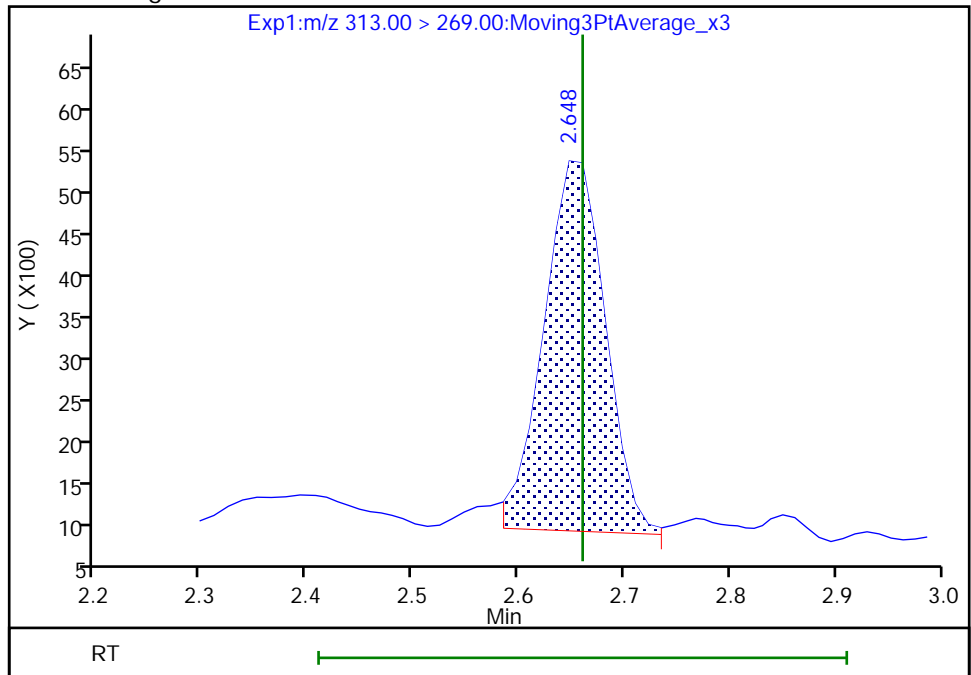
RT: 2.65  
Area: 16930  
Amount: 0.029185  
Amount Units: ng/ml

Processing Integration Results



RT: 2.65  
Area: 17782  
Amount: 0.030653  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 14:13:49

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

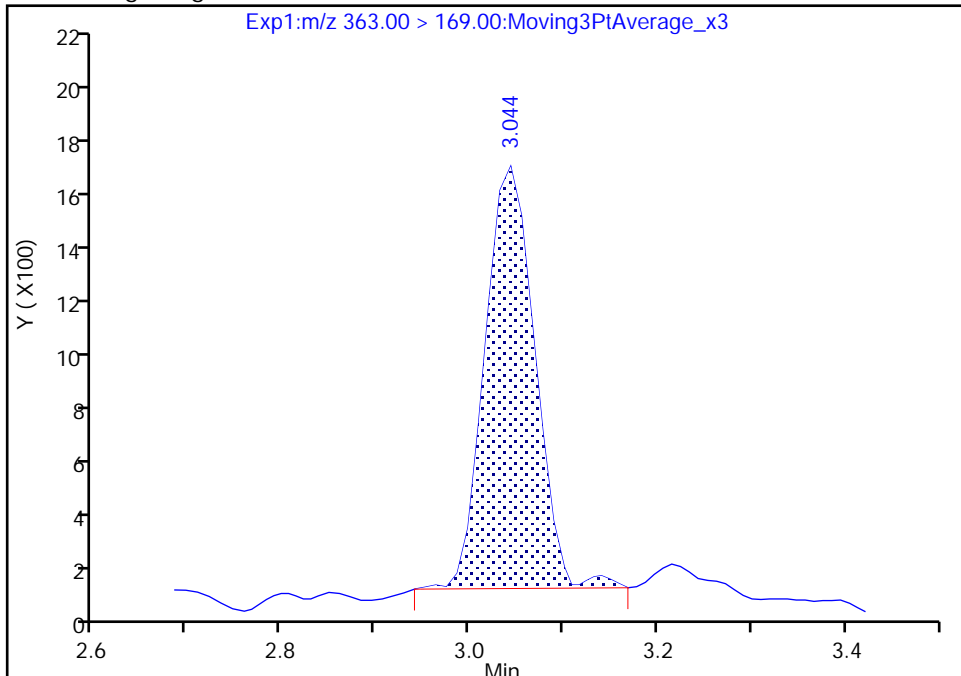
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B018.d  
Injection Date: 24-Dec-2019 16:15:24 Instrument ID: LC812  
Lims ID: 480-164221-C-7-A Lab Sample ID: 200-164221-7  
Client ID: AOI 1 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

10 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 2

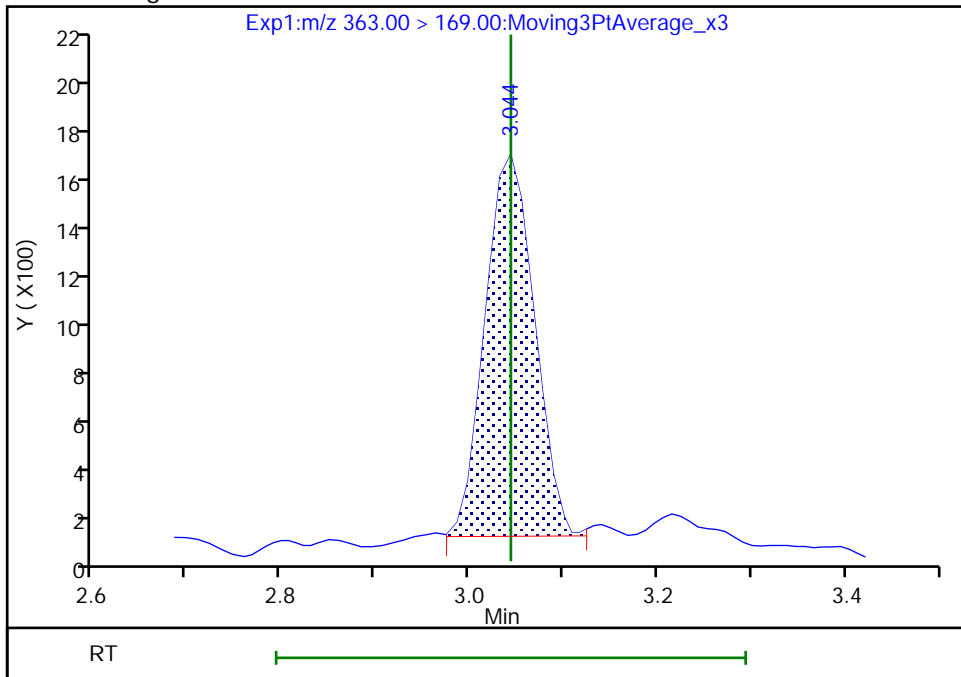
RT: 3.04  
Area: 5722  
Amount: 0.030973  
Amount Units: ng/ml

Processing Integration Results



RT: 3.04  
Area: 5638  
Amount: 0.030973  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagery, 27-Dec-2019 14:11:36  
Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

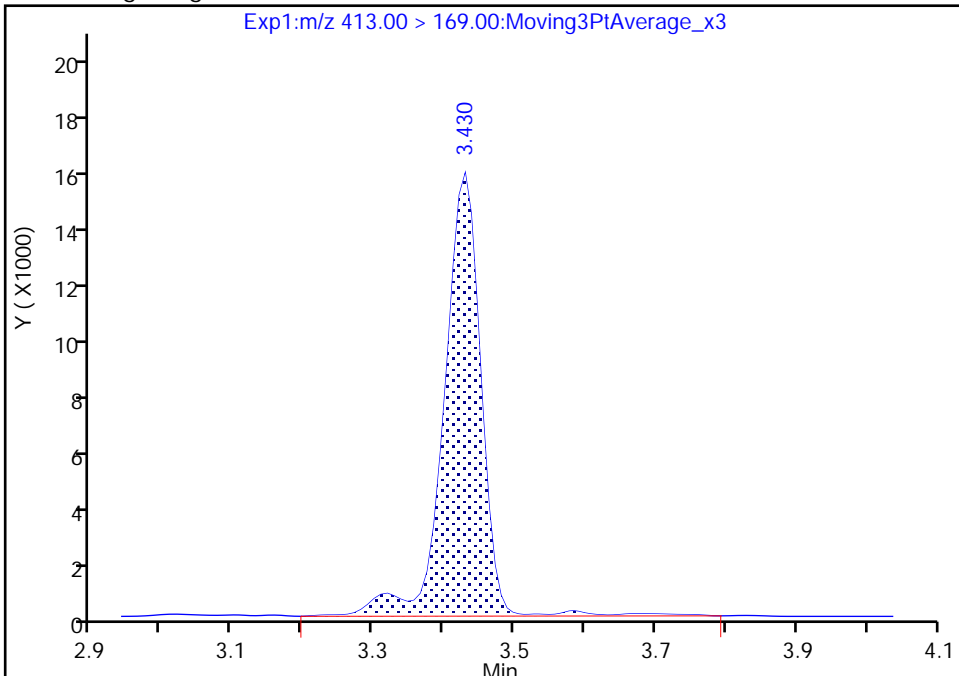
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B018.d  
Injection Date: 24-Dec-2019 16:15:24 Instrument ID: LC812  
Lims ID: 480-164221-C-7-A Lab Sample ID: 200-164221-7  
Client ID: AOI 1 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

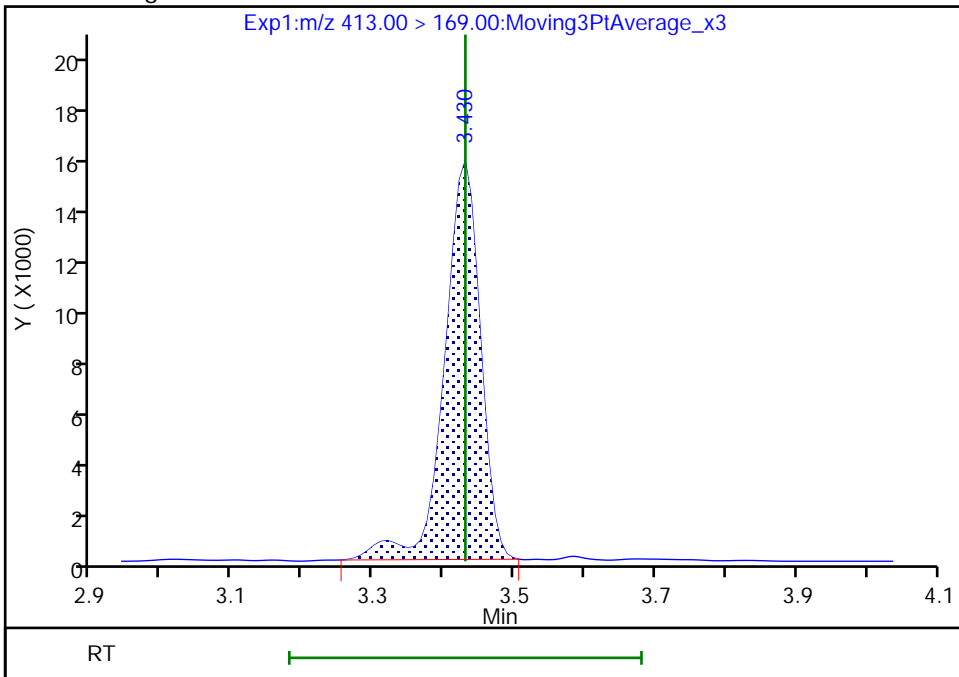
RT: 3.43  
Area: 55920  
Amount: 0.187540  
Amount Units: ng/ml

Processing Integration Results



RT: 3.43  
Area: 53929  
Amount: 0.187741  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagern, 27-Dec-2019 14:09:56  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

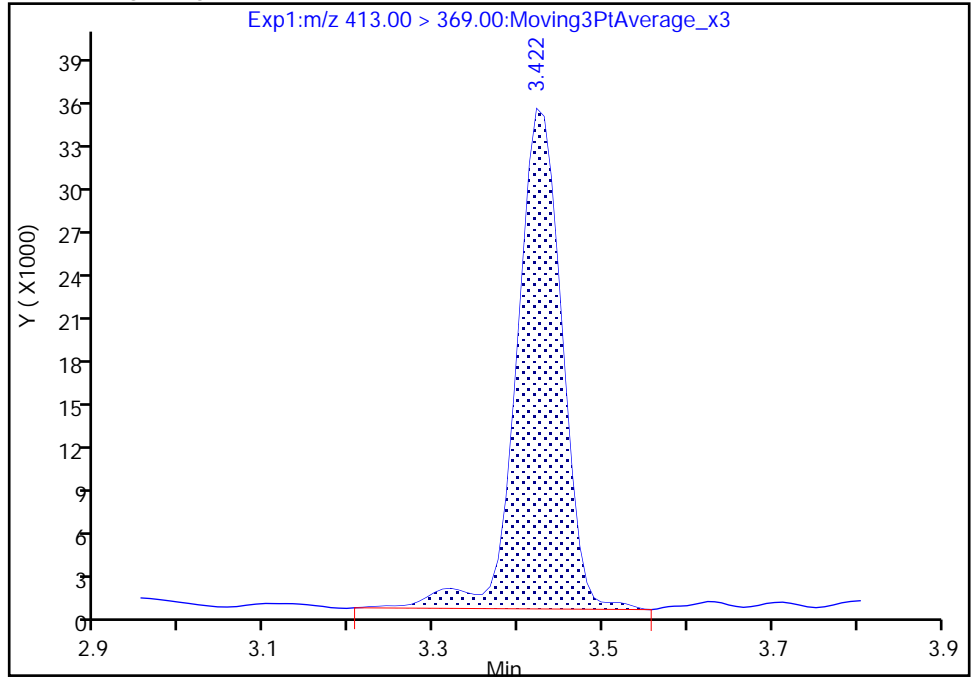
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B018.d  
Injection Date: 24-Dec-2019 16:15:24 Instrument ID: LC812  
Lims ID: 480-164221-C-7-A Lab Sample ID: 200-164221-7  
Client ID: AOI 1 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

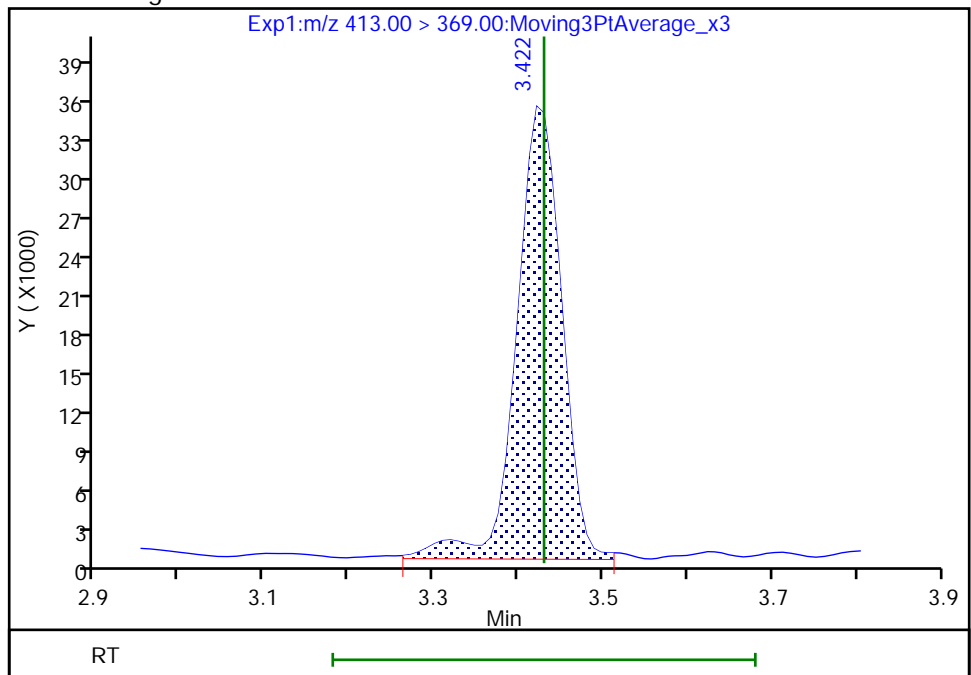
RT: 3.42  
Area: 128858  
Amount: 0.187540  
Amount Units: ng/ml

Processing Integration Results



RT: 3.42  
Area: 128996  
Amount: 0.187741  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 14:10:16

Audit Action: Manually Integrated

Audit Reason: Baseline



Euofins TestAmerica, Burlington

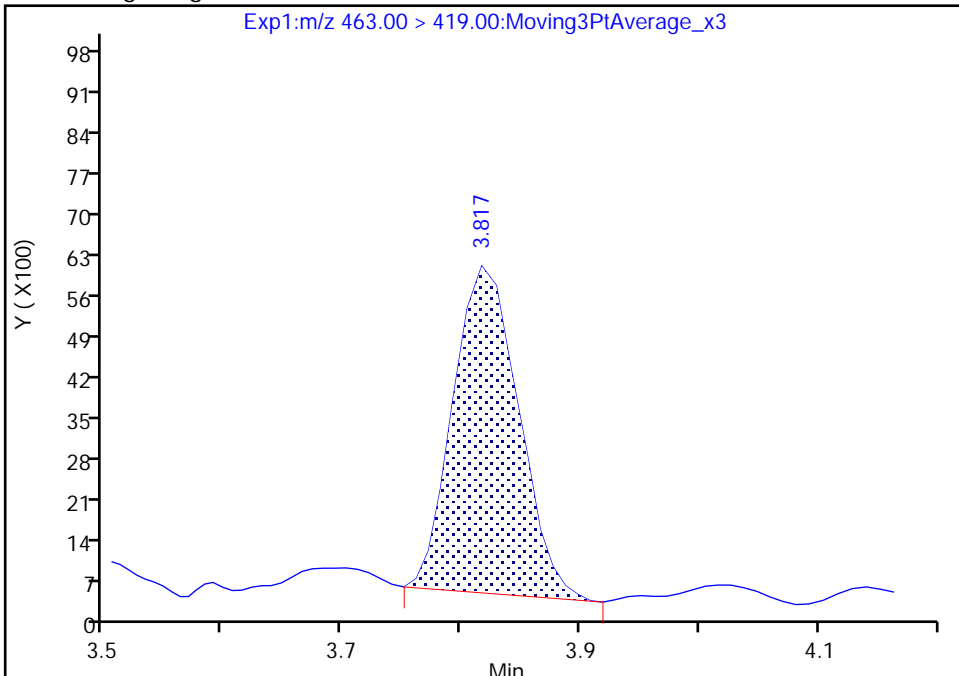
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B018.d  
Injection Date: 24-Dec-2019 16:15:24 Instrument ID: LC812  
Lims ID: 480-164221-C-7-A Lab Sample ID: 200-164221-7  
Client ID: AOI 1 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

20 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

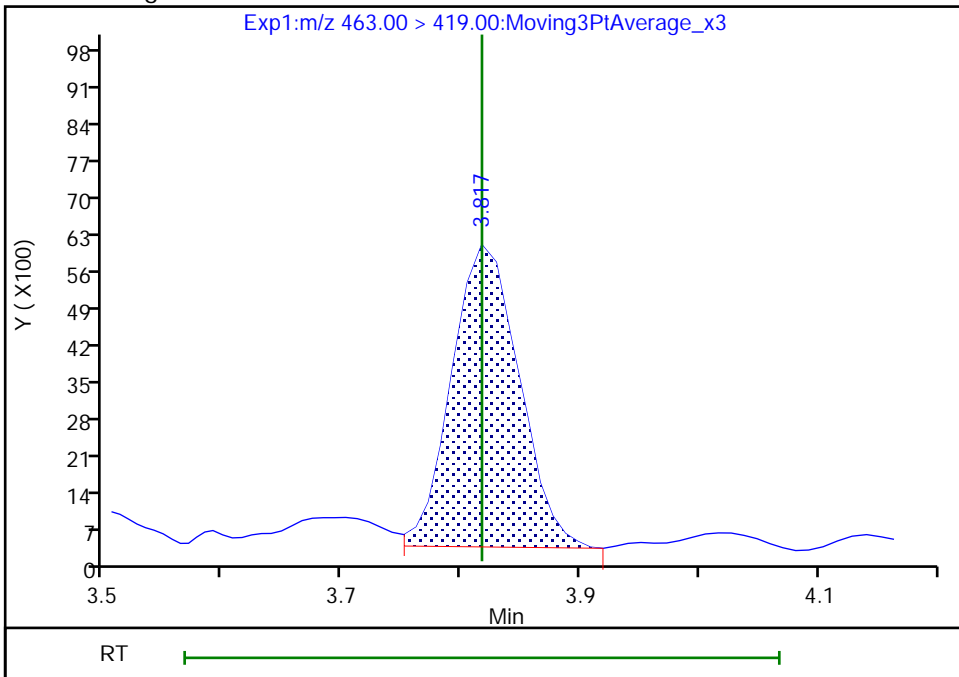
RT: 3.82  
Area: 21398  
Amount: 0.042121  
Amount Units: ng/ml

Processing Integration Results



RT: 3.82  
Area: 22470  
Amount: 0.044231  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagern, 27-Dec-2019 14:08:20  
Audit Action: Manually Integrated

Audit Reason: Baseline

Euofins TestAmerica, Burlington

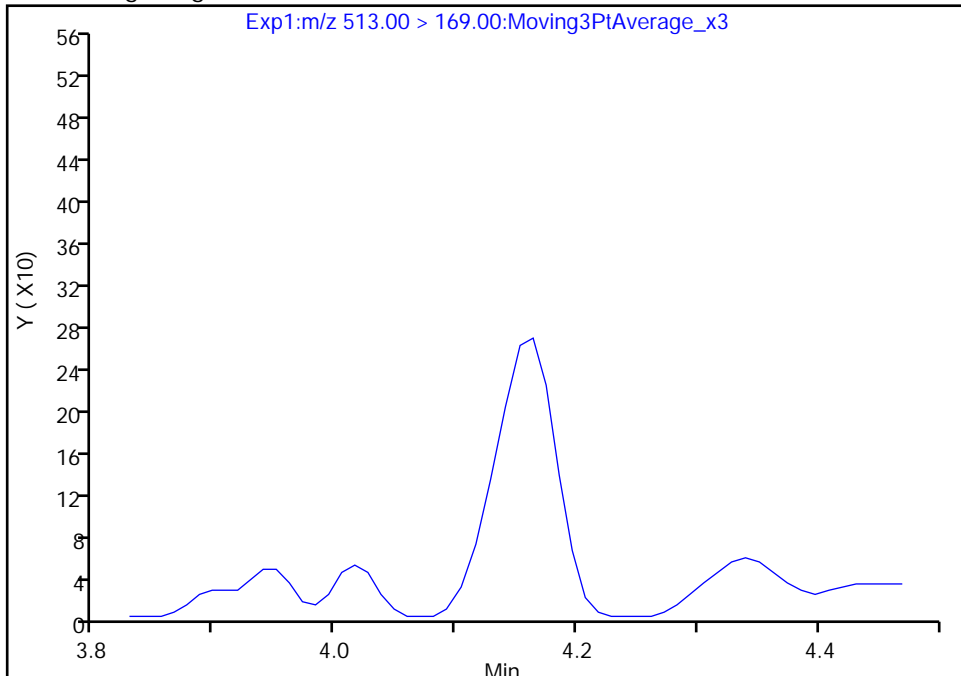
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B018.d  
Injection Date: 24-Dec-2019 16:15:24 Instrument ID: LC812  
Lims ID: 480-164221-C-7-A Lab Sample ID: 200-164221-7  
Client ID: AOI 1 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

24 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 2

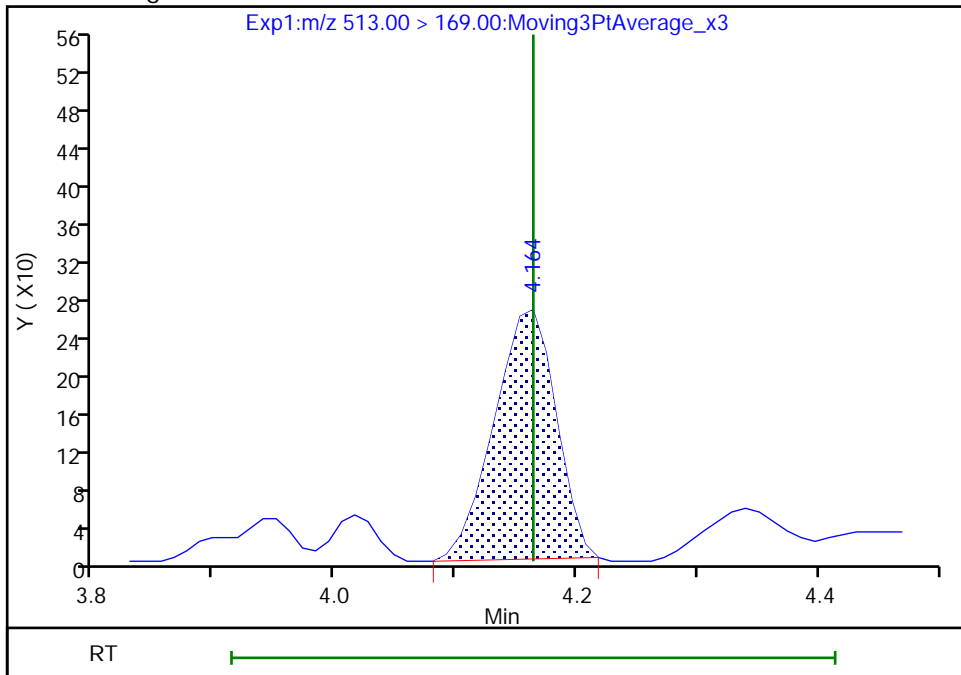
Not Detected  
Expected RT: 4.16

Processing Integration Results



Manual Integration Results

RT: 4.16  
Area: 937  
Amount: 0.011853  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 14:06:20  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

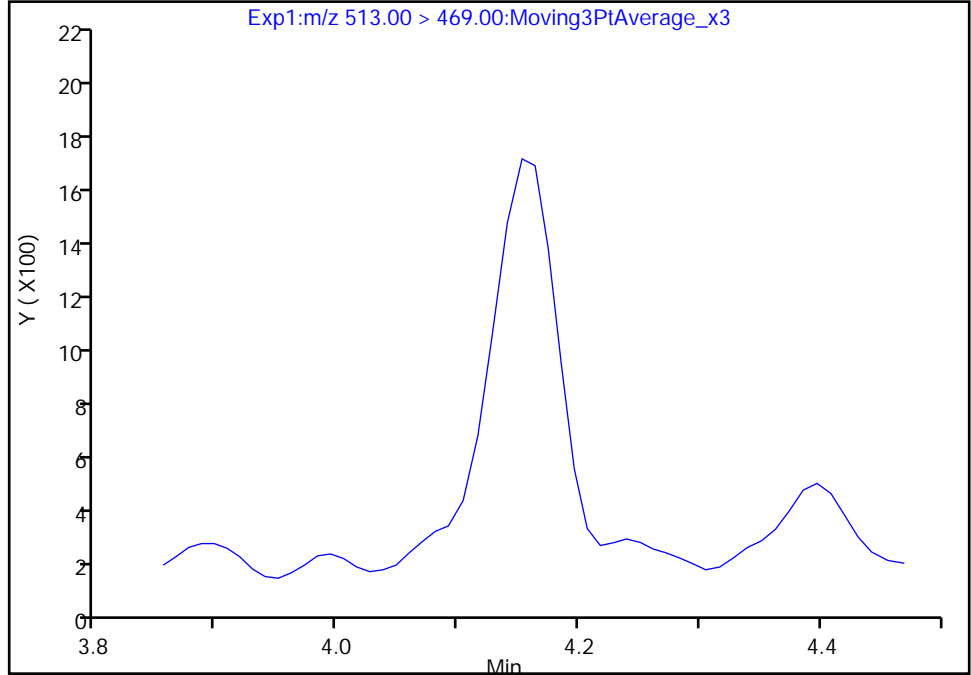
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B018.d  
Injection Date: 24-Dec-2019 16:15:24 Instrument ID: LC812  
Lims ID: 480-164221-C-7-A Lab Sample ID: 200-164221-7  
Client ID: AOI 1 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

24 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 1

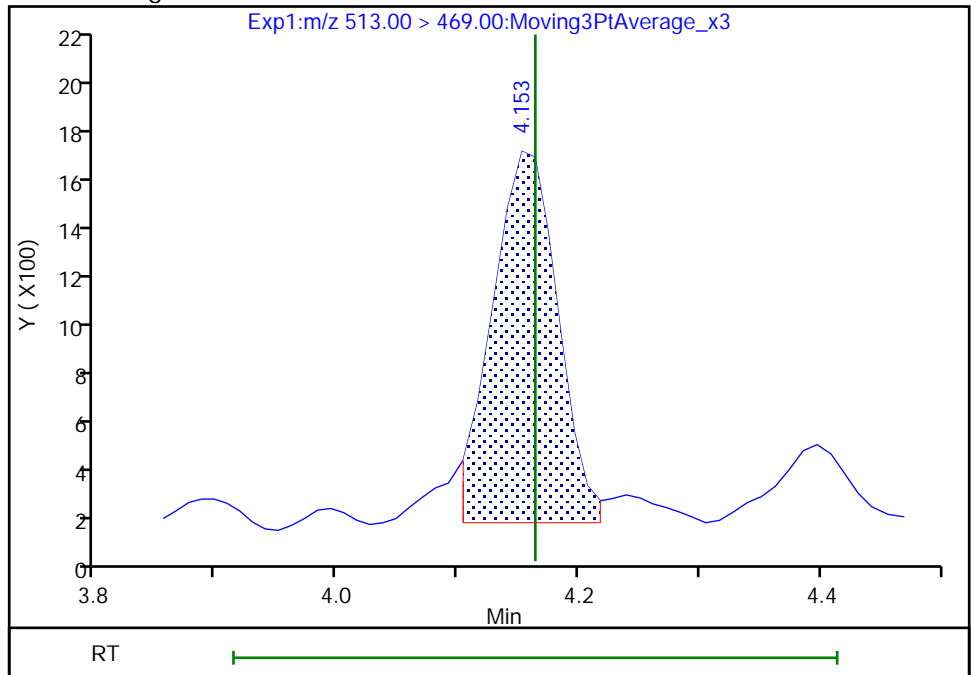
Not Detected  
Expected RT: 4.16

Processing Integration Results



Manual Integration Results

RT: 4.15  
Area: 5645  
Amount: 0.011853  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

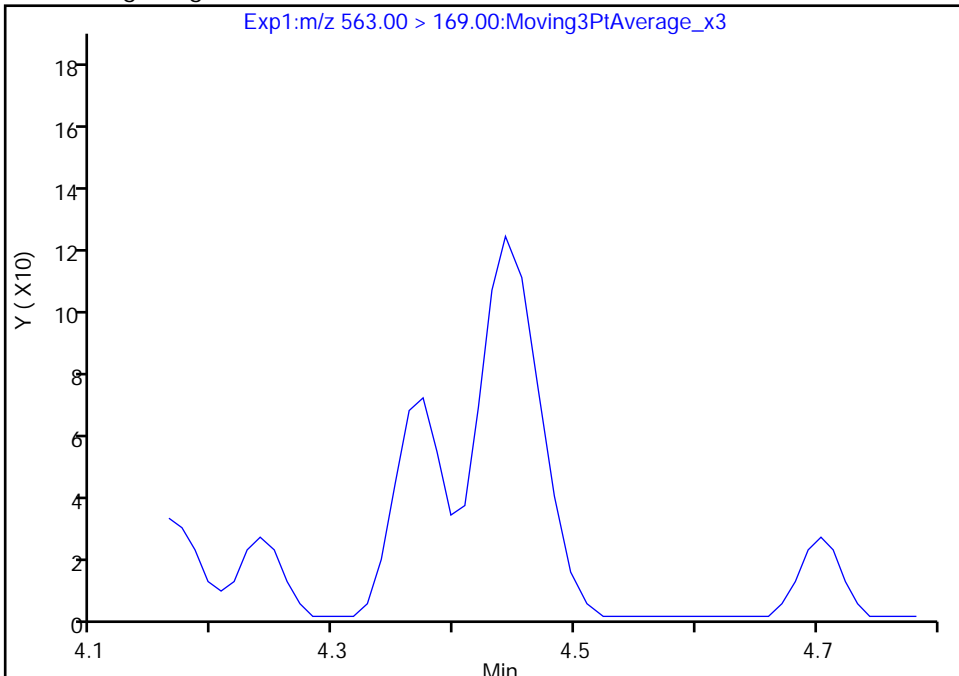
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B018.d  
Injection Date: 24-Dec-2019 16:15:24 Instrument ID: LC812  
Lims ID: 480-164221-C-7-A Lab Sample ID: 200-164221-7  
Client ID: AOI 1 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 2

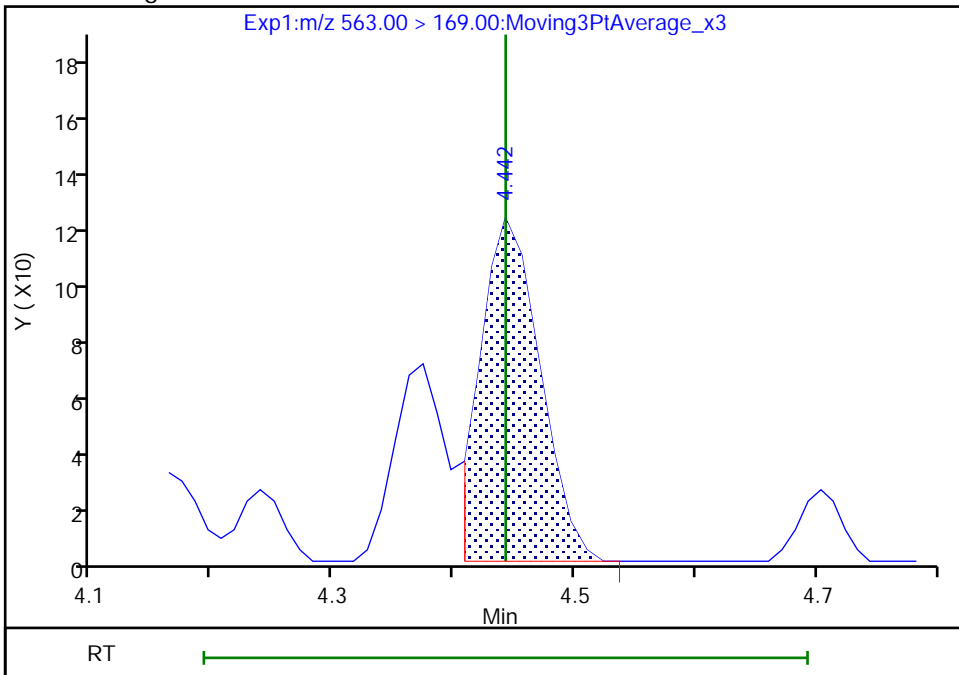
Not Detected  
Expected RT: 4.44

Processing Integration Results



Manual Integration Results

RT: 4.44  
Area: 405  
Amount: 0.008298  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

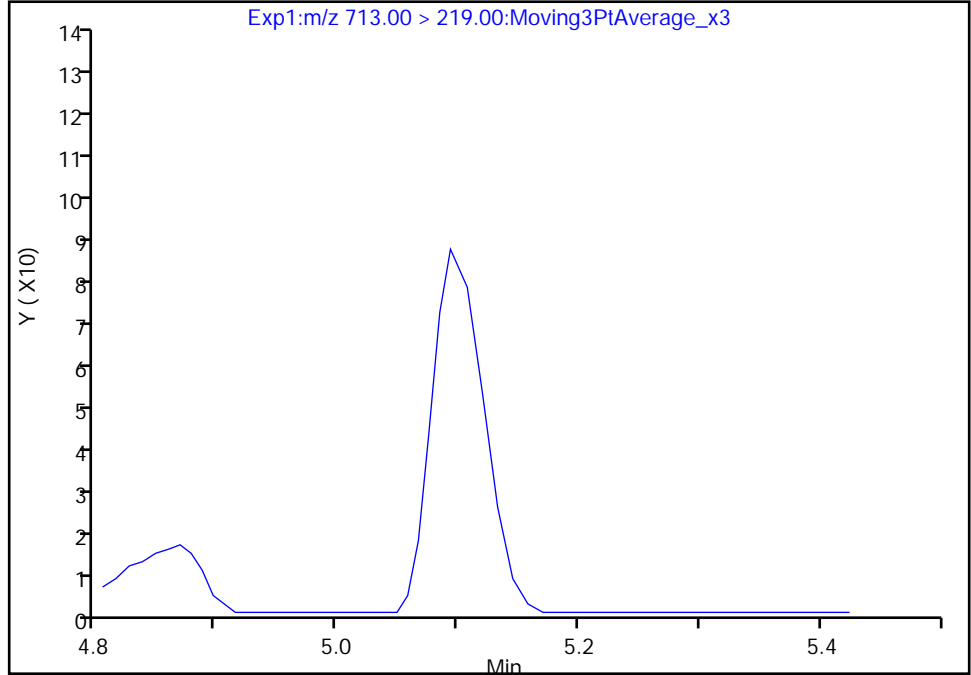
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B018.d  
Injection Date: 24-Dec-2019 16:15:24 Instrument ID: LC812  
Lims ID: 480-164221-C-7-A Lab Sample ID: 200-164221-7  
Client ID: AOI 1 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 2

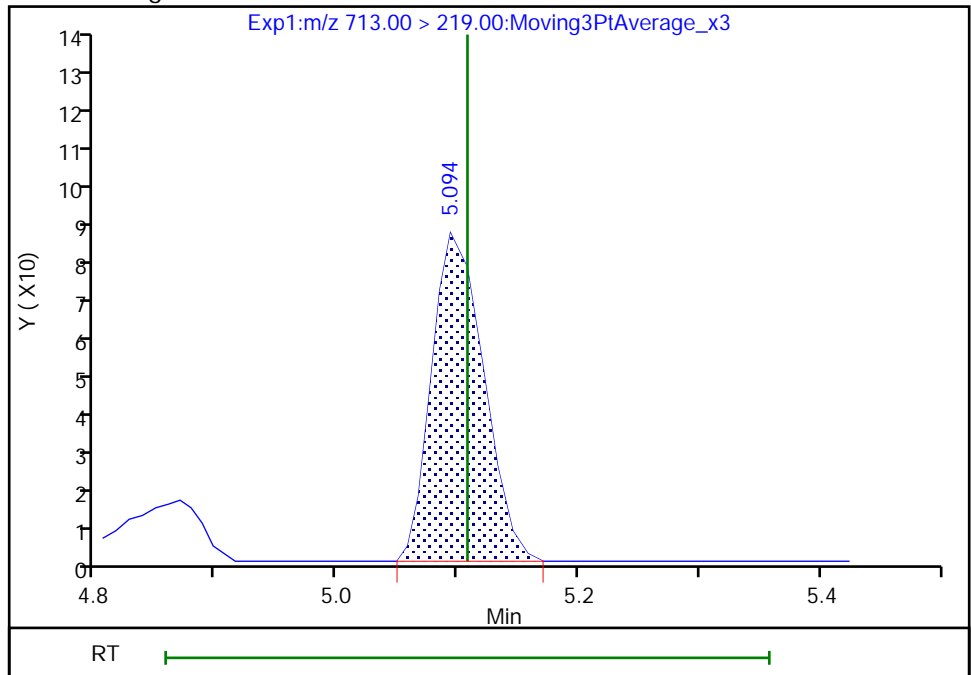
Not Detected  
Expected RT: 5.11

Processing Integration Results



Manual Integration Results

RT: 5.09  
Area: 257  
Amount: 0.004970  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 14:00:31

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

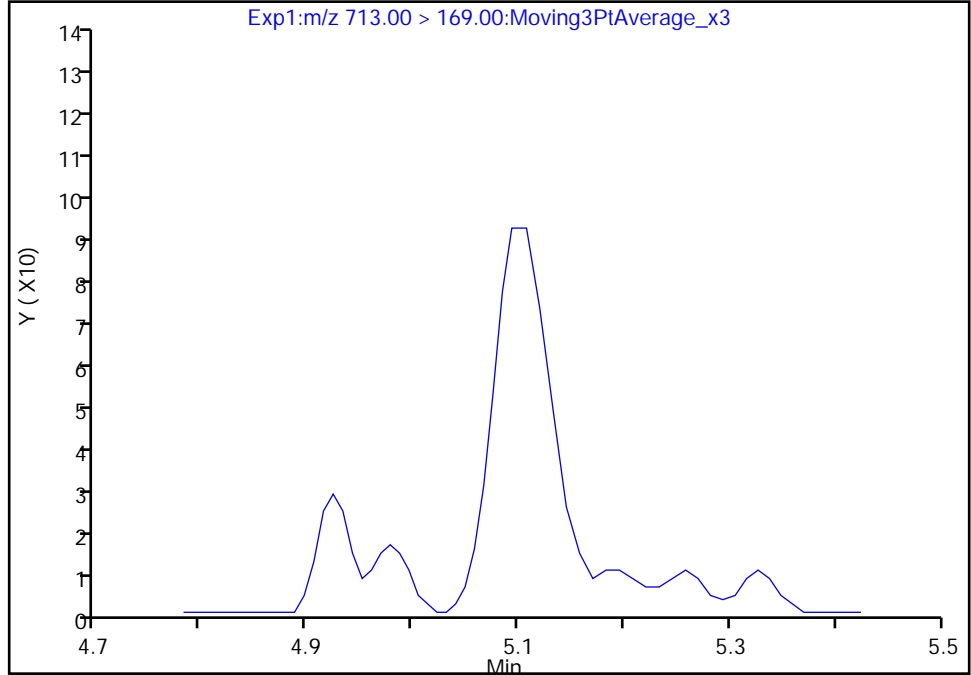
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B018.d  
Injection Date: 24-Dec-2019 16:15:24 Instrument ID: LC812  
Lims ID: 480-164221-C-7-A Lab Sample ID: 200-164221-7  
Client ID: AOI 1 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 1

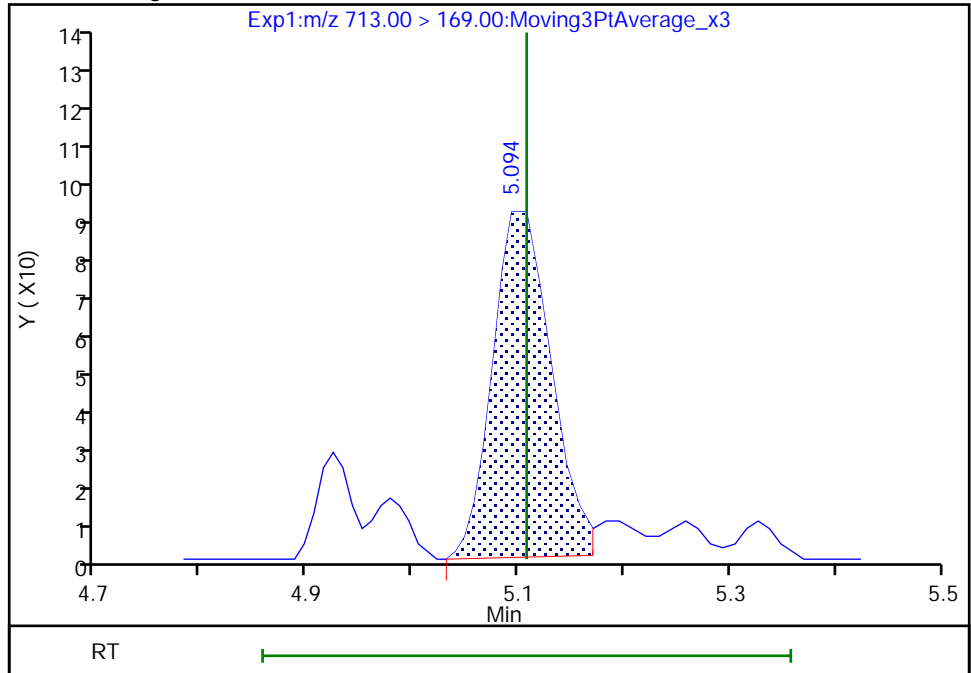
Not Detected  
Expected RT: 5.11

Processing Integration Results



Manual Integration Results

RT: 5.09  
Area: 349  
Amount: 0.004970  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 14:01:08

Audit Action: Manually Integrated

Audit Reason: Baseline

Euofins TestAmerica, Burlington

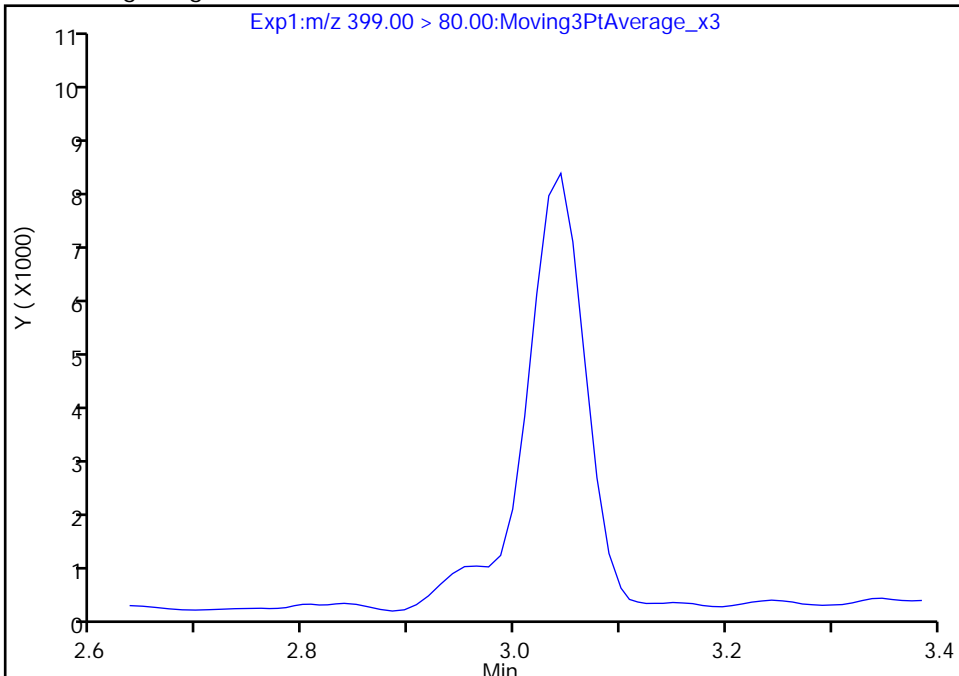
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B018.d  
Injection Date: 24-Dec-2019 16:15:24 Instrument ID: LC812  
Lims ID: 480-164221-C-7-A Lab Sample ID: 200-164221-7  
Client ID: AOI 1 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

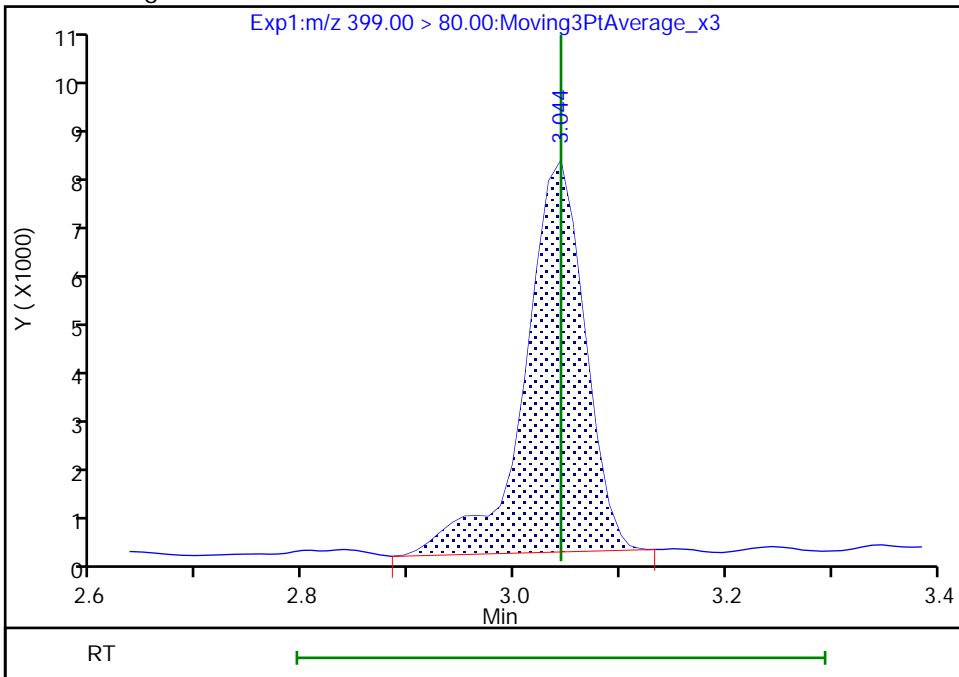
Not Detected  
Expected RT: 3.04

Processing Integration Results



Manual Integration Results

RT: 3.04  
Area: 32139  
Amount: 0.054299  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 14:12:54  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

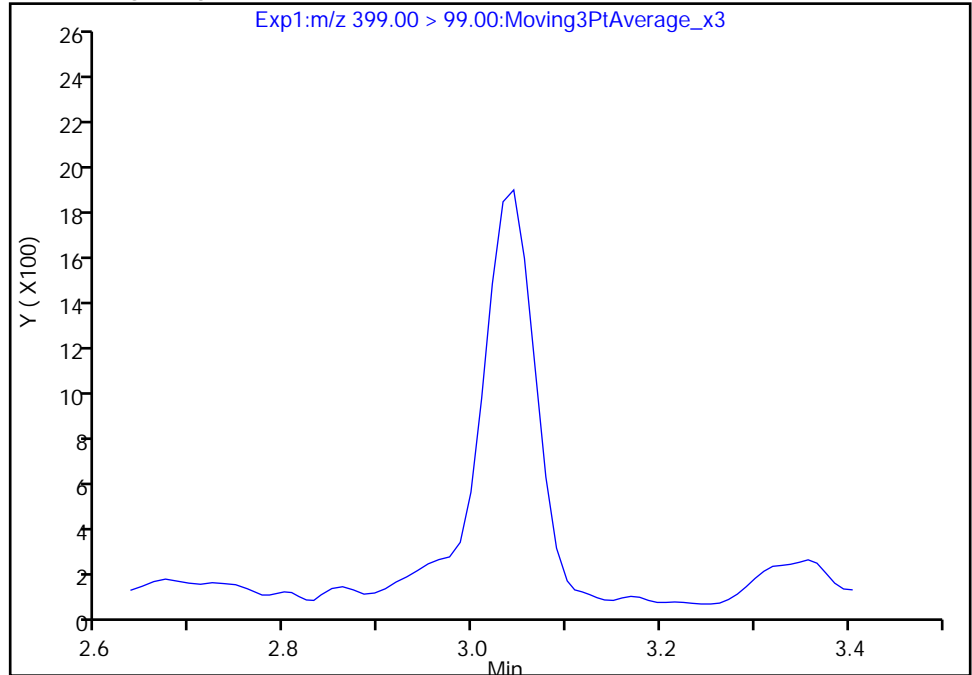
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B018.d  
Injection Date: 24-Dec-2019 16:15:24 Instrument ID: LC812  
Lims ID: 480-164221-C-7-A Lab Sample ID: 200-164221-7  
Client ID: AOI 1 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

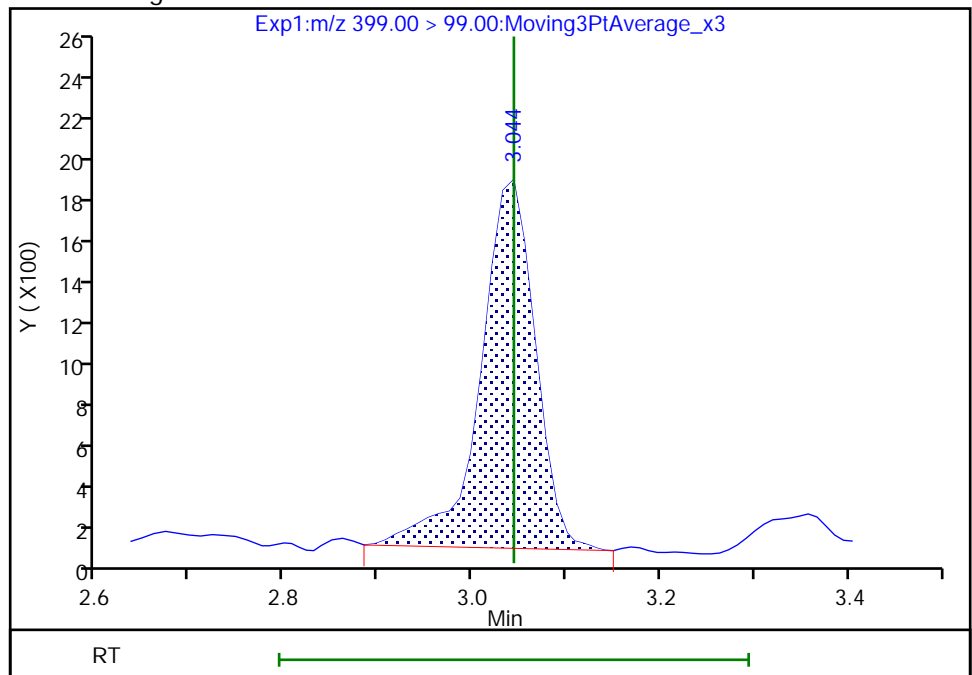
Not Detected  
Expected RT: 3.04

Processing Integration Results



Manual Integration Results

RT: 3.04  
Area: 7384  
Amount: 0.054299  
Amount Units: ng/ml



Reviewer: lautenschlagerng, 27-Dec-2019 14:13:04

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Eurofins TestAmerica, Burlington

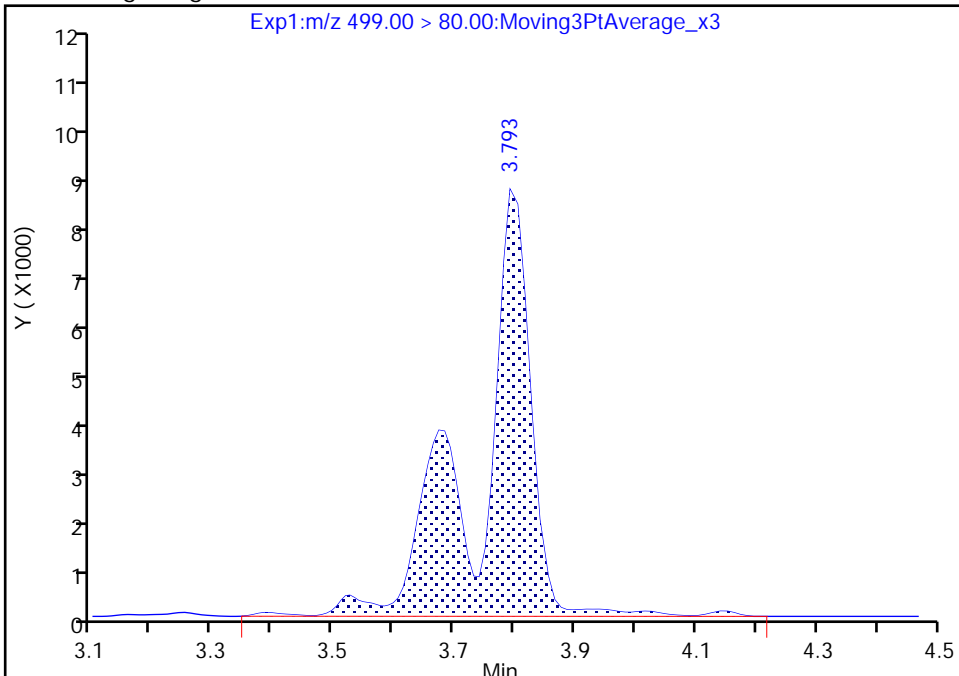
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B018.d  
Injection Date: 24-Dec-2019 16:15:24 Instrument ID: LC812  
Lims ID: 480-164221-C-7-A Lab Sample ID: 200-164221-7  
Client ID: AOI 1 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

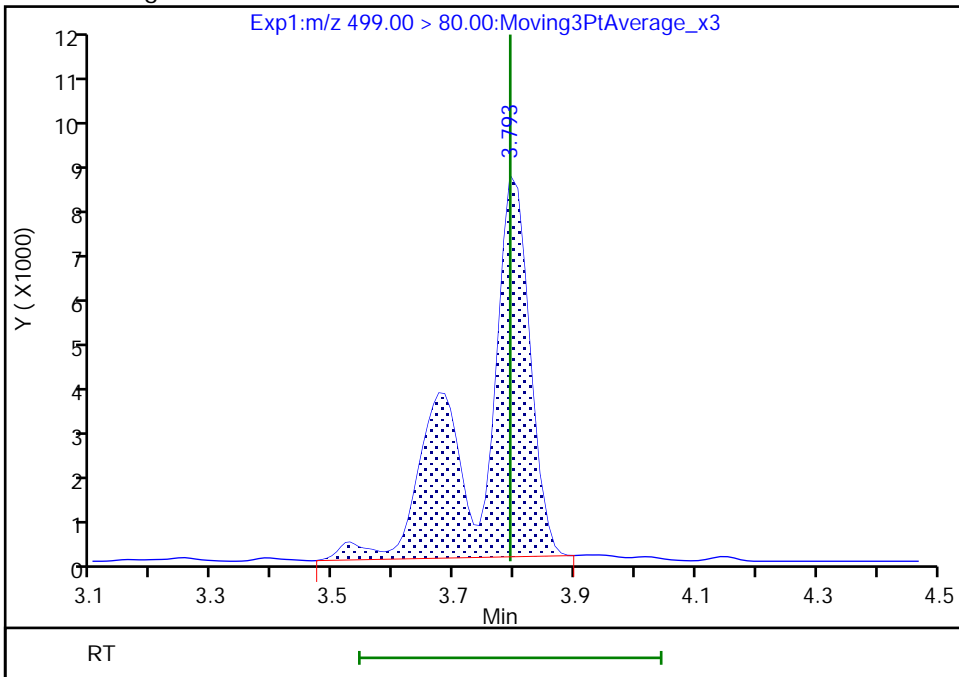
RT: 3.79  
Area: 52948  
Amount: 0.126696  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 49611  
Amount: 0.118711  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 14:08:54

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

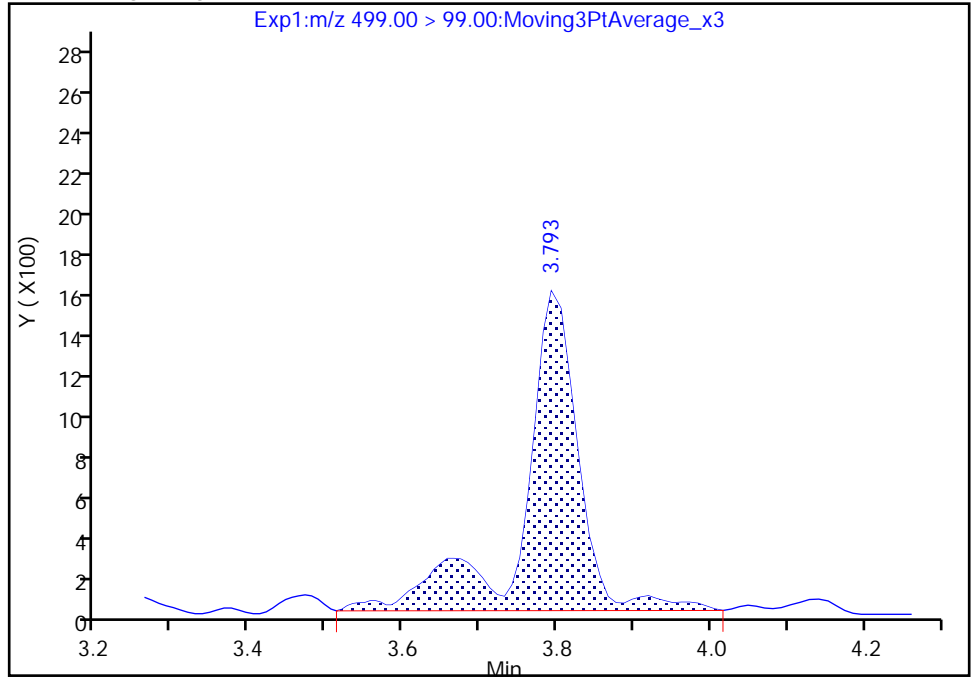
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B018.d  
Injection Date: 24-Dec-2019 16:15:24 Instrument ID: LC812  
Lims ID: 480-164221-C-7-A Lab Sample ID: 200-164221-7  
Client ID: AOI 1 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

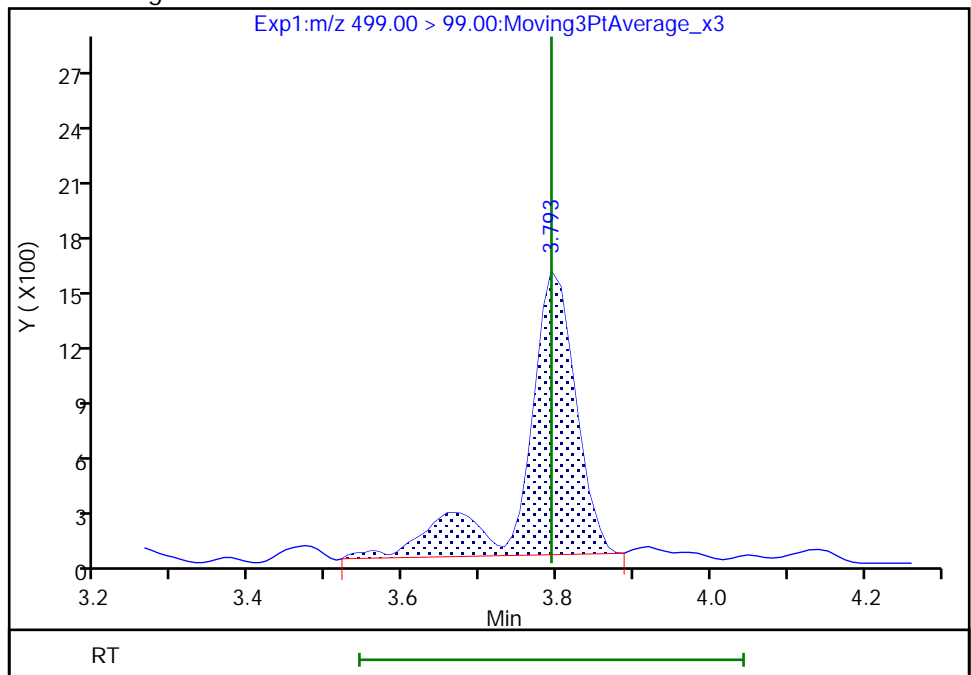
RT: 3.79  
Area: 7882  
Amount: 0.126696  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 7095  
Amount: 0.118711  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagern, 27-Dec-2019 14:09:06

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

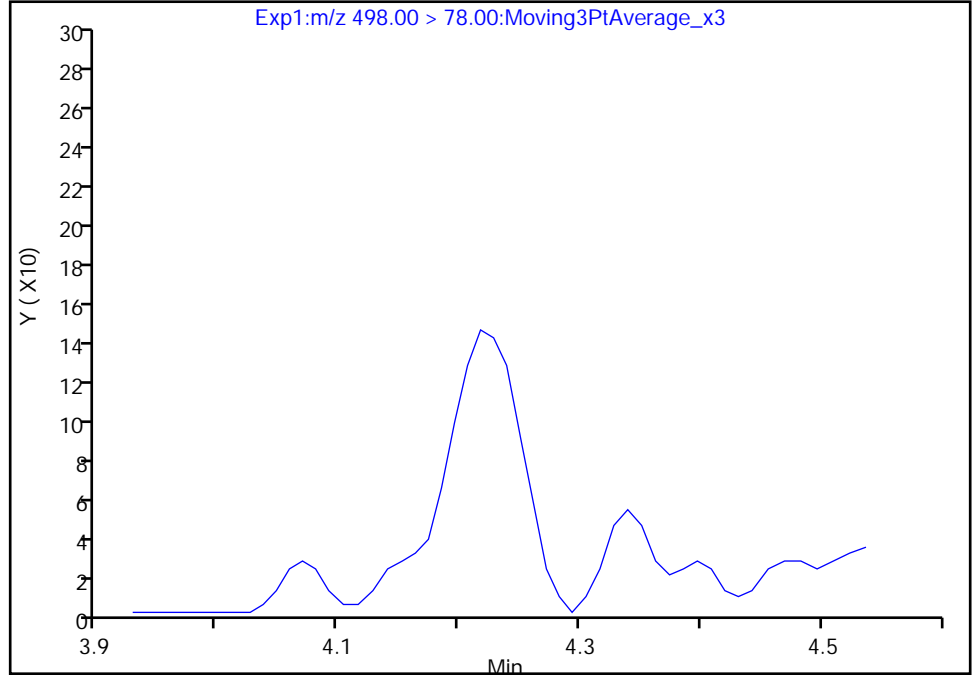
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B018.d  
Injection Date: 24-Dec-2019 16:15:24 Instrument ID: LC812  
Lims ID: 480-164221-C-7-A Lab Sample ID: 200-164221-7  
Client ID: AOI 1 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

22 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

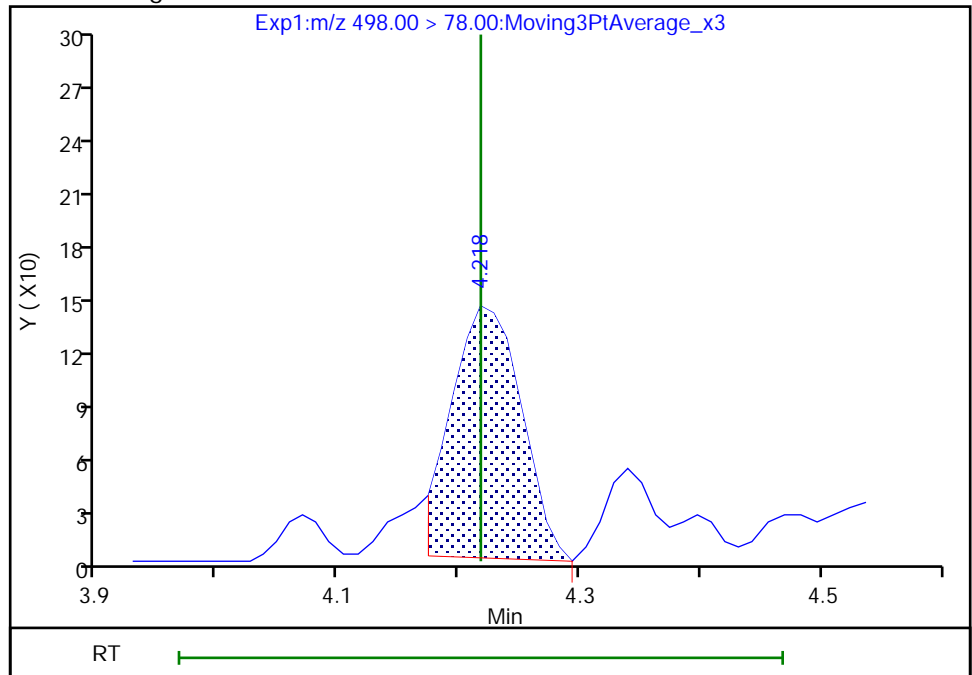
Not Detected  
Expected RT: 4.22

Processing Integration Results



Manual Integration Results

RT: 4.22  
Area: 565  
Amount: 0.001071  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 14:07:36

Audit Action: Manually Integrated

Audit Reason: Split Peak

Euofins TestAmerica, Burlington

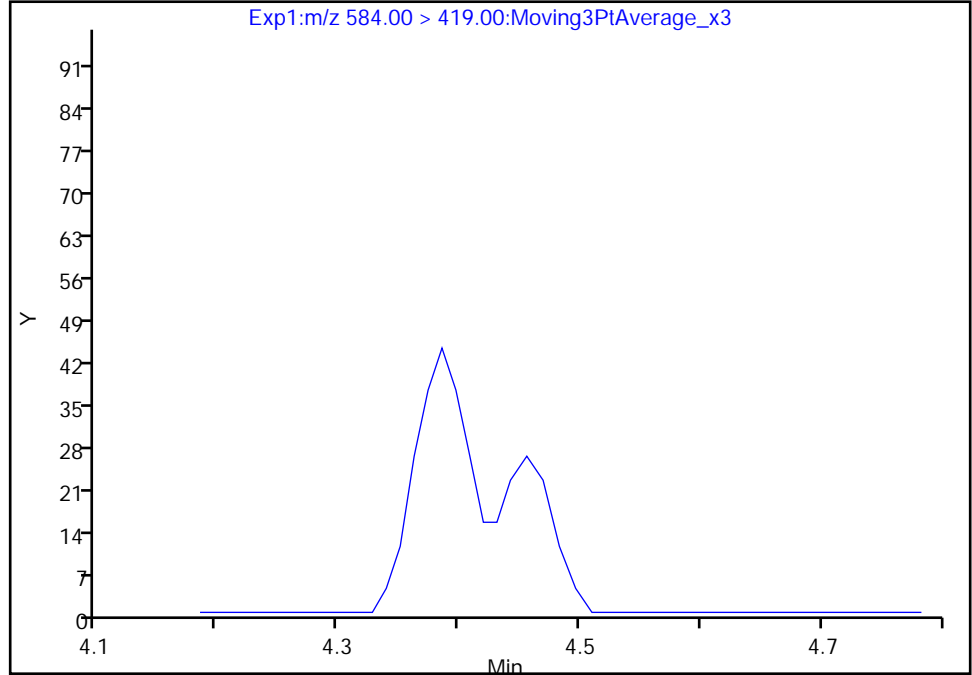
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Injection Date: 24-Dec-2019 16:15:24 Instrument ID: LC812  
Lims ID: 480-164221-C-7-A Lab Sample ID: 200-164221-7  
Client ID: AOI 1 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

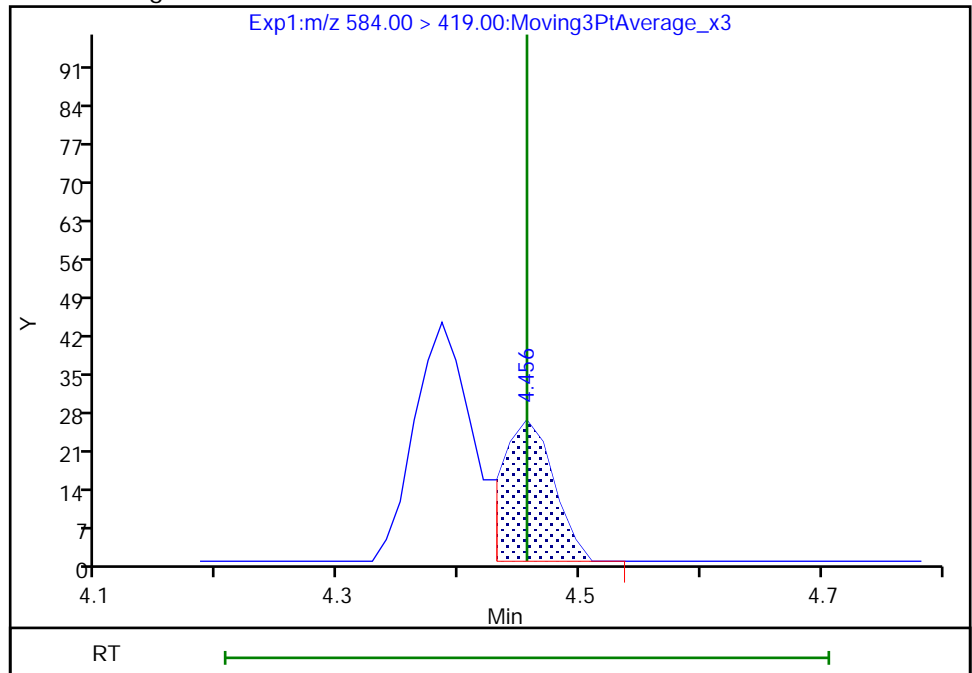
Not Detected  
Expected RT: 4.46

Processing Integration Results



Manual Integration Results

RT: 4.46  
Area: 72  
Amount: 0.001799  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 14:04:43  
Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

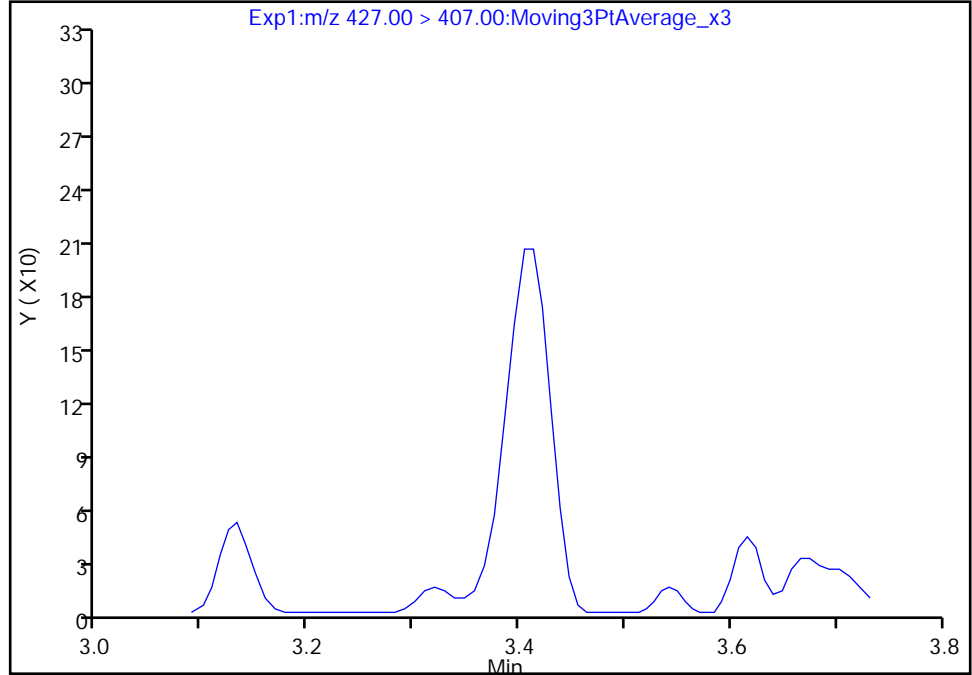
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B018.d  
Injection Date: 24-Dec-2019 16:15:24 Instrument ID: LC812  
Lims ID: 480-164221-C-7-A Lab Sample ID: 200-164221-7  
Client ID: AOI 1 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

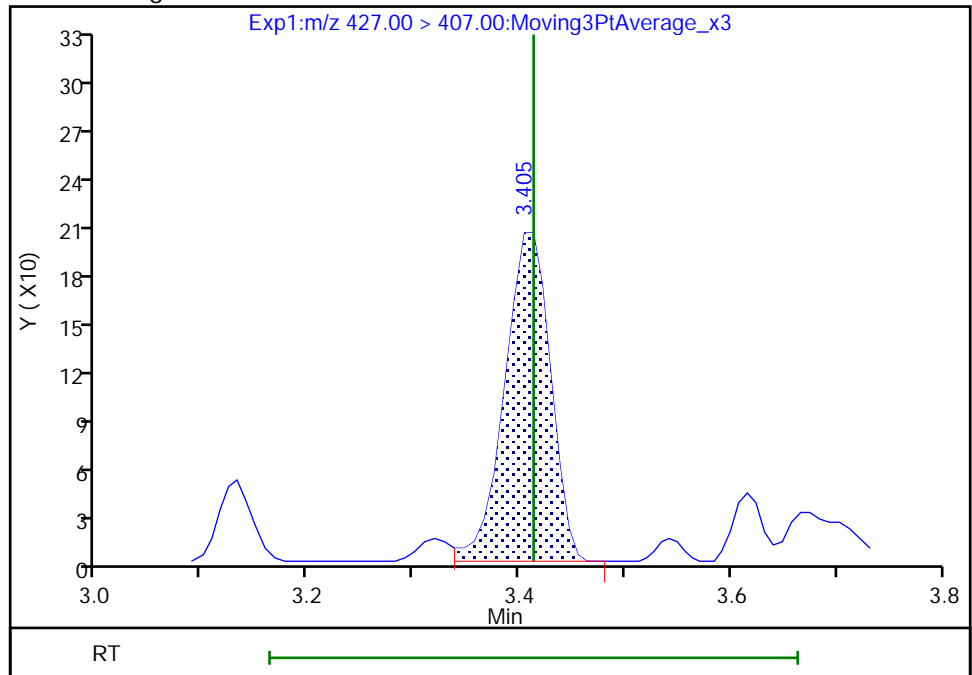
Not Detected  
Expected RT: 3.41

Processing Integration Results



Manual Integration Results

RT: 3.40  
Area: 606  
Amount: 0.009692  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 14:11:08  
Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

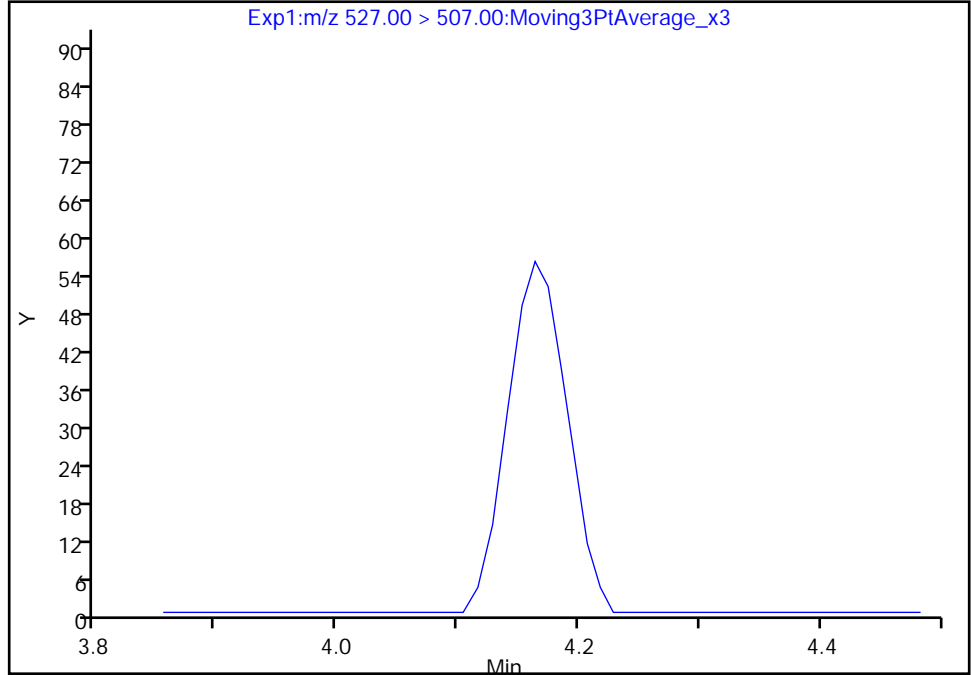
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Injection Date: 24-Dec-2019 16:15:24 Instrument ID: LC812  
Lims ID: 480-164221-C-7-A Lab Sample ID: 200-164221-7  
Client ID: AOI 1 GW 2 DER  
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

25 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:, CAS: 39108-34-4

Signal: 1

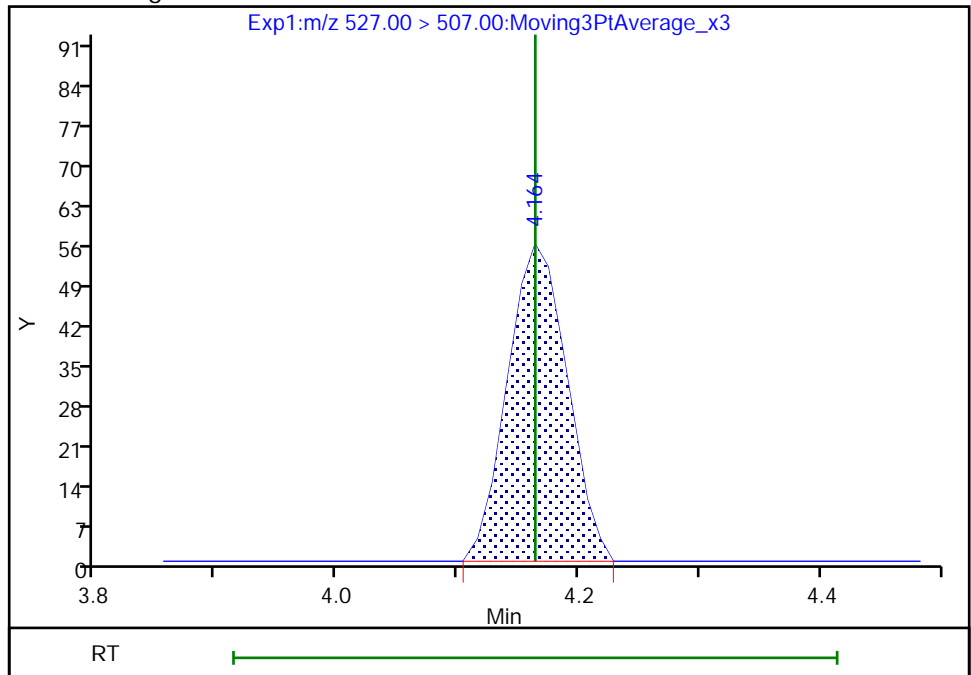
Not Detected  
Expected RT: 4.16

Processing Integration Results



Manual Integration Results

RT: 4.16  
Area: 191  
Amount: 0.004282  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 14:06:07

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS SW 01 DER Lab Sample ID: 480-164221-8  
 Matrix: Water Lab File ID: SC122319B019.d  
 Analysis Method: 537 (modified) Date Collected: 12/12/2019 09:00  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 295.4 (mL) Date Analyzed: 12/24/2019 16:23  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 20 (uL) GC Column: C-18 ID: 4.6 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	ND		1.7	0.85
2706-90-3	Perfluoropentanoic acid (PFPeA)	ND		1.7	0.53
307-24-4	Perfluorohexanoic acid (PFHxA)	ND		1.7	0.64
375-85-9	Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.77
335-67-1	Perfluorooctanoic acid (PFOA)	0.81	J	1.7	0.69
375-95-1	Perfluorononanoic acid (PFNA)	ND		1.7	0.23
335-76-2	Perfluorodecanoic acid (PFDA)	ND		1.7	0.65
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.66
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		1.7	0.50
72629-94-8	Perfluorotridecanoic acid (PFTriA)	ND		1.7	0.51
376-06-7	Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.78
375-73-5	Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.41
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	1.3	J	1.7	0.68
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.80
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	1.5	J	1.7	0.52
335-77-3	Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.76
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND		8.5	8.5
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		17	1.4
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		17	1.3
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	4.7
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	2.5

FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS SW 01 DER Lab Sample ID: 480-164221-8  
 Matrix: Water Lab File ID: SC122319B019.d  
 Analysis Method: 537 (modified) Date Collected: 12/12/2019 09:00  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 295.4 (mL) Date Analyzed: 12/24/2019 16:23  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 20 (uL) GC Column: C-18 ID: 4.6 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	108		50-150
STL01892	13C4 PFHpA	112		50-150
STL00990	13C4 PFOA	103		50-150
STL00991	13C4 PFOS	101		50-150
STL00995	13C5 PFNA	103		50-150
STL00992	13C4 PFBA	85		25-150
STL00993	13C2 PFHxA	94		50-150
STL00996	13C2 PFDA	95		50-150
STL00997	13C2 PFUnA	100		50-150
STL00998	13C2 PFDoA	90		50-150
STL01056	13C8 FOSA	44		25-150
STL01893	13C5 PFPeA	105		25-150
STL02116	13C2 PFTeDA	77		50-150
STL02118	d3-NMeFOSAA	87		50-150
STL02117	d5-NEtFOSAA	84		50-150
STL02279	M2-6:2 FTS	78		25-150
STL02280	M2-8:2 FTS	106		25-150
STL02337	13C3 PFBS	102		50-150



Eurofins TestAmerica, Burlington  
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B019.d  
 Lims ID: 480-164221-C-8-A  
 Client ID: CS SW 01 DER  
 Sample Type: Client  
 Inject. Date: 24-Dec-2019 16:23:35 ALS Bottle#: 19 Worklist Smp#: 19  
 Injection Vol: 20.0 ul Dil. Factor: 1.0000  
 Sample Info: 480-164221-C-8-A  
 Misc. Info.: 200-0039355-019 Plate: 1 Rack: 2  
 Operator ID: lc812tech Instrument ID: LC812  
 Method: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\PFC\_LC812.m  
 Limit Group: LC\_PFC\_ICAL  
 Last Update: 30-Dec-2019 15:06:05 Calib Date: 06-Dec-2019 15:13:26  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Column 1 : C-18 ( 4.60 mm) Det: EXP1  
 Process Host: CTX0330

First Level Reviewer: lautenschlagery Date: 27-Dec-2019 14:43:54  
 Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	1.898	1.908	-0.010	0.555	1434466	2.13	85.1	3298	
2 Perfluorobutanoic acid										M
212.90 > 169.00	1.898	1.908	-0.010	1.000	12875	0.0226		2.7		M
D 3 13C5 PFPeA	267.90 > 223.00	2.258	2.257	0.001	0.660	1359697	2.64	105	4498	
4 Perfluoropentanoic acid										M
262.90 > 219.00	2.244	2.271	-0.027	0.994	8473	0.0138		0.3		M
D 47 13C3 PFBS	301.90 > 80.00	2.271	2.285	-0.014	0.664	1453280	2.36	102	214012	
5 Perfluorobutanesulfonic acid										M
298.90 > 80.00	2.285	2.285	0.0	1.006	7353	0.0108	Target=2.03	6.1		
298.90 > 99.00	2.285	2.285	0.0	1.006	4669		1.57(1.01-3.04)	3.0		M
D 7 13C2 PFHxA	315.00 > 270.00	2.648	2.648	0.0	0.774	1356367	2.36	94.3	4202	
6 Perfluorohexanoic acid										M
313.00 > 269.00	2.648	2.661	-0.013	1.000	6128	0.0111	Target=13.76	1.5		M
313.00 > 119.00	2.648	2.661	-0.013	1.000	604		10.15(6.88-20.64)	1.8		M
D 11 18O2 PFHxS	403.00 > 84.00	3.033	3.044	-0.011	0.886	1238438	2.55	108	4510	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.033	3.044	-0.011	1.000	21912	0.0370	Target=3.90	35.1		M
399.00 > 99.00	3.033	3.044	-0.011	1.000	5140		4.26(1.95-5.85)	12.7		M
D 9 13C4 PFHpA	367.00 > 322.00	3.033	3.044	-0.011	0.886	1527100	2.80	112	5383	
10 Perfluoroheptanoic acid										Ma
363.00 > 319.00	3.033	3.044	-0.011	1.000	5177	0.008016	Target=3.95	1.6		a
363.00 > 169.00	3.033	3.044	-0.011	1.000	1893		2.73(1.97-5.92)	5.9		

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 1H,1H,2H,2H-perfluorooctanesulfonyl										M
427.00 > 407.00	3.405	3.413	-0.008	1.000	641	0.0104			13.1	M
D 12 M2-6:2 FTS										
429.00 > 81.00	3.405	3.413	-0.008	0.995	154853	1.86		78.1	373	
15 Perfluorooctanoic acid										M
413.00 > 369.00	3.422	3.430	-0.008	1.000	15741	0.0238	Target=2.40		5.6	M
413.00 > 169.00	3.422	3.430	-0.008	1.000	7204		2.19(1.20-3.60)		26.5	M
D 14 13C4 PFOA										
417.00 > 372.00	3.422	3.430	-0.008	1.000	1487625	2.57		103	5206	
* 62 13C2 PFOA										
415.00 > 370.00	3.422	3.430	-0.008		1592089	2.50			4259	
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.793	0.0	1.108	932744	2.42		101	3286	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.793	3.793	0.0	1.000	19077	0.0453	Target=5.74		9.7	M
499.00 > 99.00	3.783	3.793	-0.010	0.997	3020		6.32(2.87-8.61)		12.2	M
D 19 13C5 PFNA										
468.00 > 423.00	3.817	3.817	0.0	1.116	1369281	2.57		103	5872	
20 Perfluorononanoic acid										M
463.00 > 419.00	3.817	3.817	0.0	1.000	1687	0.003141	Target=7.01		0.9	M
463.00 > 169.00	3.817	3.817	0.0	1.000	203		8.31(3.50-10.51)		2.9	M
D 23 13C2 PFDA										
515.00 > 470.00	4.153	4.164	-0.011	1.214	1249606	2.38		95.3	9179	
24 Perfluorodecanoic acid										M
513.00 > 469.00	4.141	4.164	-0.023	0.997	1831	0.003786	Target=7.28		1.3	M
513.00 > 169.00	4.164	4.164	0.0	1.003	460		3.98(3.64-10.91)		6.6	M
25 1H,1H,2H,2H-perfluorodecanesulfonyl										M
527.00 > 507.00	4.164	4.164	0.0	1.000	64	0.001312			1.9	M
D 26 M2-8:2 FTS										
529.00 > 81.00	4.164	4.175	-0.011	1.217	253080	2.54		106	777	
D 21 13C8 FOSA										
506.00 > 78.00	4.207	4.218	-0.011	1.230	751423	1.10		43.8	2936	
22 Perfluorooctanesulfonamide										M
498.00 > 78.00	4.207	4.218	-0.011	1.000	204	0.000682			3.9	M
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.305	4.305	0.0	1.258	109803	2.17		87.0	1881	
28 N-methylperfluorooctanesulfonamide										M
570.00 > 419.00	4.283	4.317	-0.034	0.995	65	0.001703			1.9	M
D 30 13C2 PFUnA										
565.00 > 520.00	4.431	4.443	-0.012	1.295	1110218	2.49		99.6	11399	
31 Perfluoroundecanoic acid										RM
563.00 > 519.00	4.431	4.443	-0.012	1.000	3533	0.009383	Target=5.78		4.2	RM
563.00 > 169.00	4.443	4.443	0.0	1.003	408		8.66(2.89-8.67)		4.2	M
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.443	4.456	-0.013	1.298	117702	2.10		84.1	1108	
D 36 13C2 PFDoA										
615.00 > 570.00	4.683	4.683	0.0	1.369	1097469	2.24		89.8	4543	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
42 Perfluorotetradecanoic acid										RM
713.00 > 169.00	5.108	5.108	0.0	1.003	502	0.007907	Target=1.05		9.4	RM
713.00 > 219.00	5.085	5.108	-0.023	0.998	294		1.71(0.52-1.57)		7.6	M
D 43 13C2 PFTeDA										
715.00 > 670.00	5.094	5.108	-0.014	1.489	790078	1.93		77.1	6911	

**QC Flag Legend**

Processing Flags

R - Failed Signal Ratio Test

Review Flags

M - Manually Integrated

a - User Assigned ID

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B019.d

Injection Date: 24-Dec-2019 16:23:35

Instrument ID: LC812

Lims ID: 480-164221-C-8-A

Lab Sample ID: 200-164221-8

Client ID: CS SW 01 DER

Operator ID: lc812tech

ALS Bottle#: 19

Worklist Smp#: 19

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

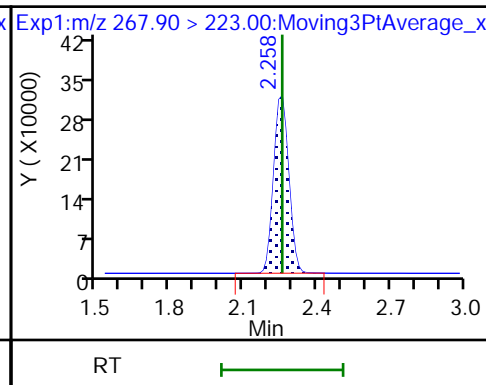
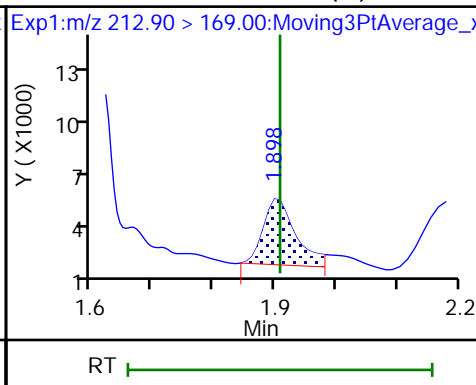
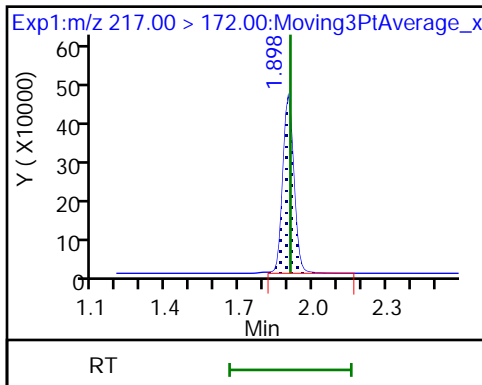
Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid (M)

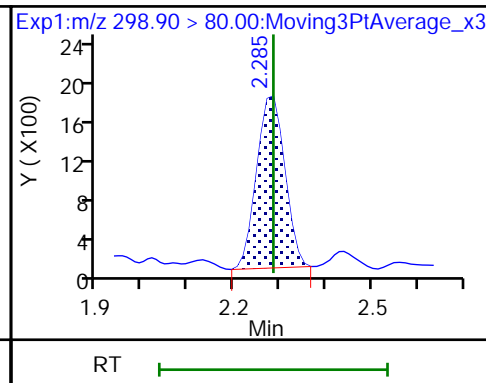
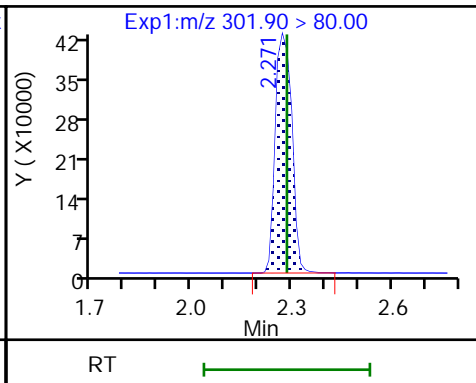
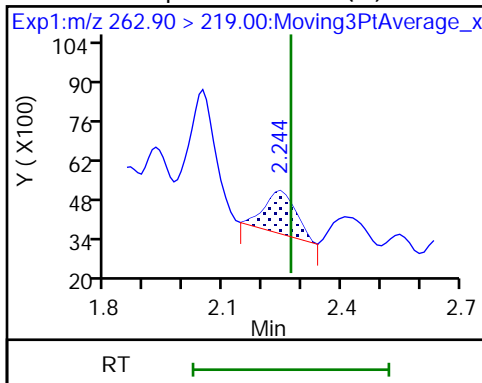
D 3 13C5 PFPeA



4 Perfluoropentanoic acid (M)

D 47 13C3 PFBS

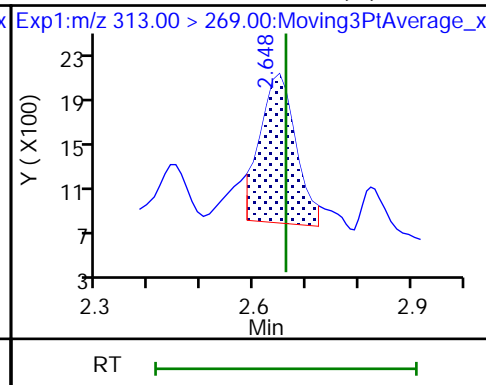
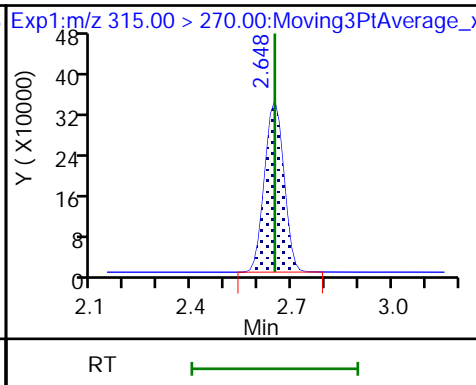
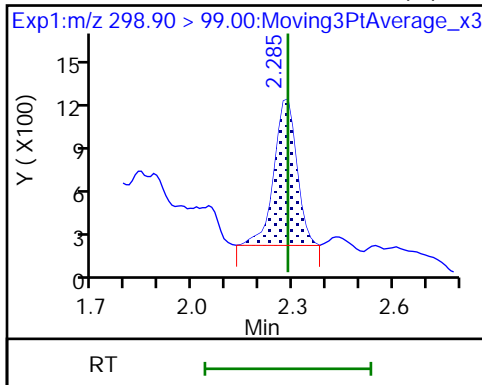
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid (M)

D 7 13C2 PFHxA

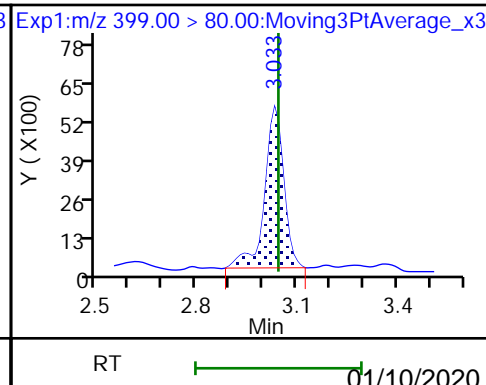
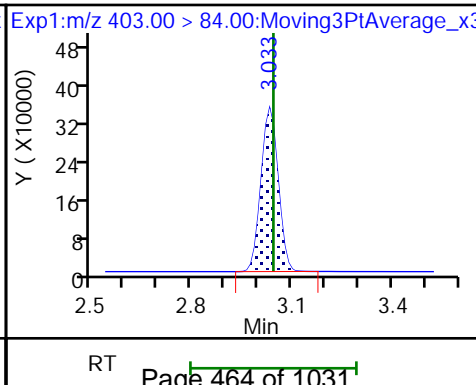
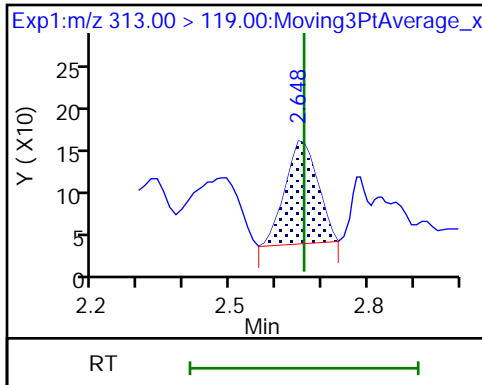
6 Perfluorohexanoic acid (M)



6 Perfluorohexanoic acid (M)

D 11 18O2 PFHxS

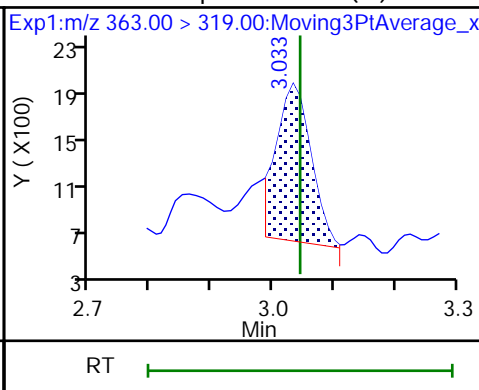
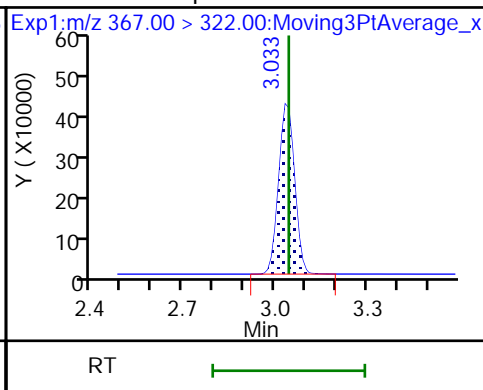
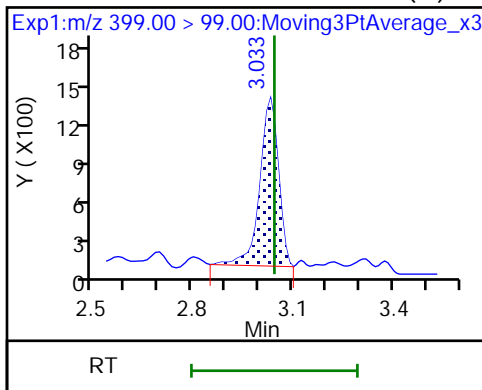
8 Perfluorohexanesulfonic acid (M)



8 Perfluorohexanesulfonic acid (M)

D 9 13C4 PFHpA

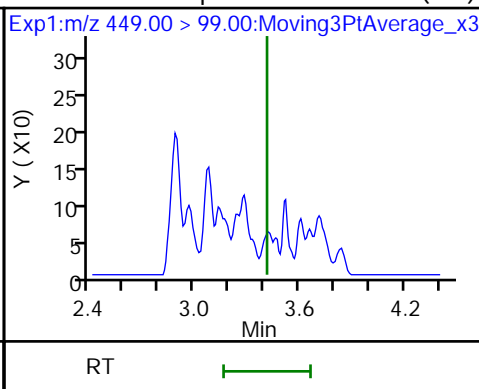
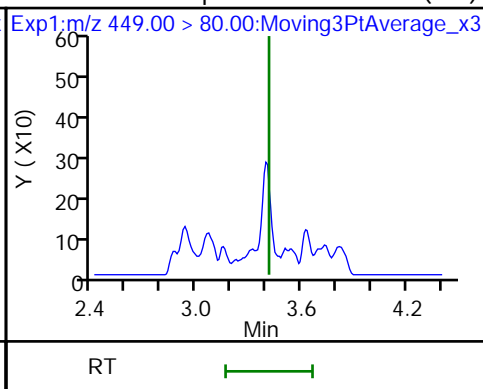
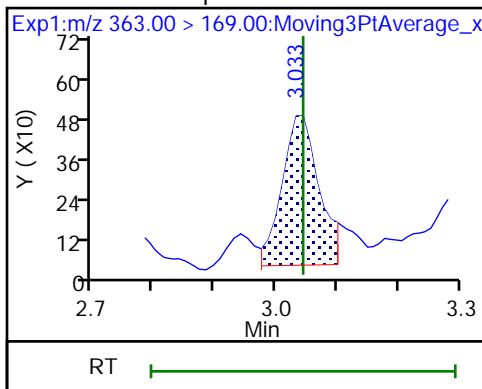
10 Perfluoroheptanoic acid (M)



10 Perfluoroheptanoic acid

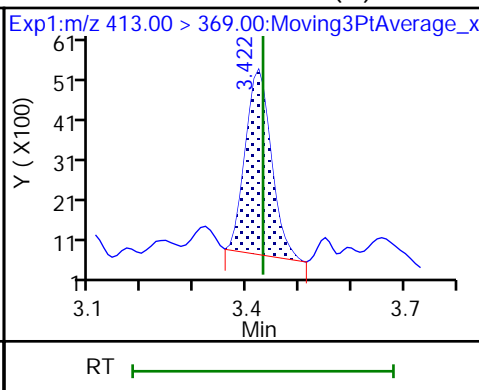
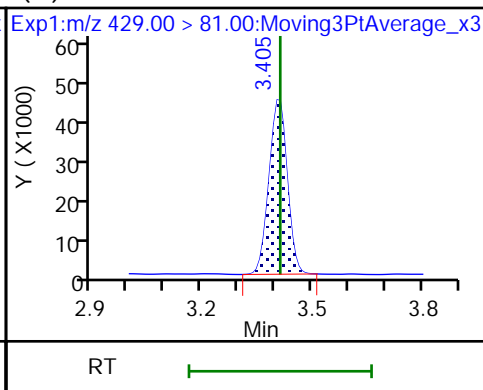
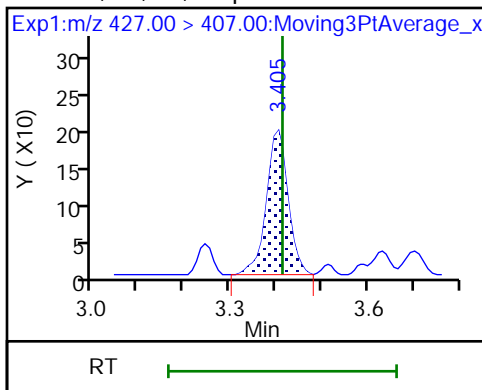
16 Perfluoroheptanesulfonic acid (ND)

16 Perfluoroheptanesulfonic acid (ND)



13 1H,1H,2H,2H-perfluorooctanesulfonate (M) M2-6:2 FTS

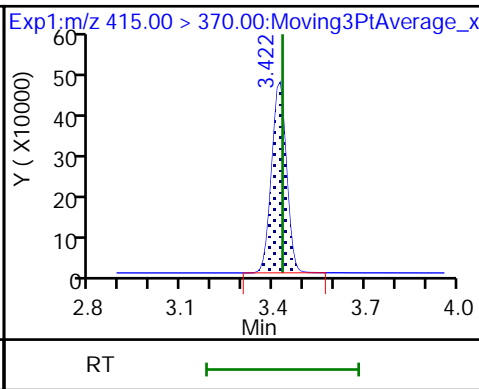
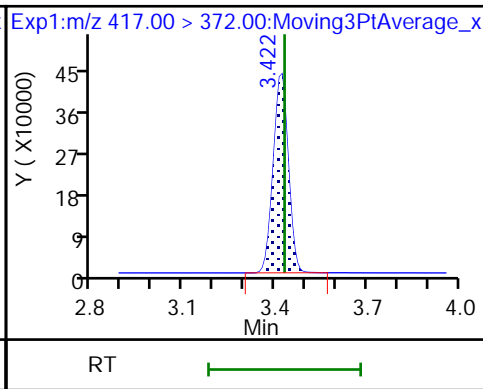
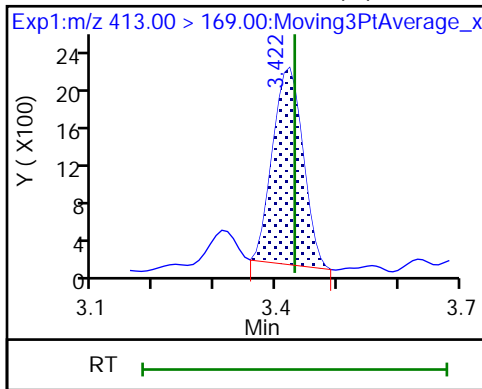
15 Perfluorooctanoic acid (M)



15 Perfluorooctanoic acid (M)

D 14 13C4 PFOA

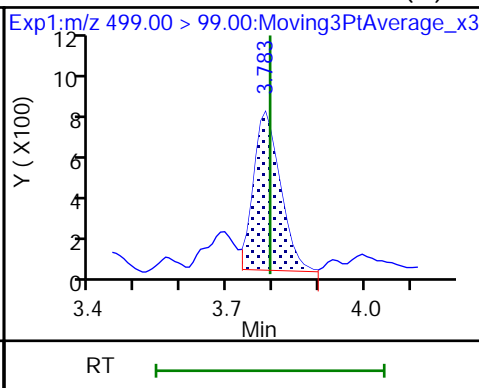
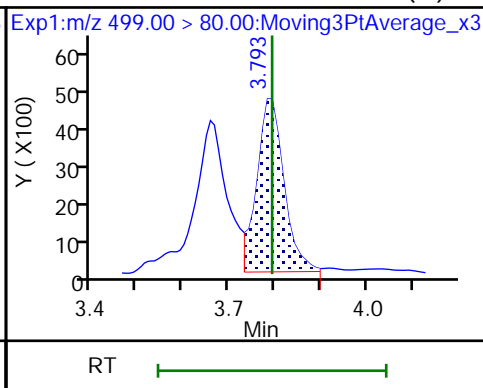
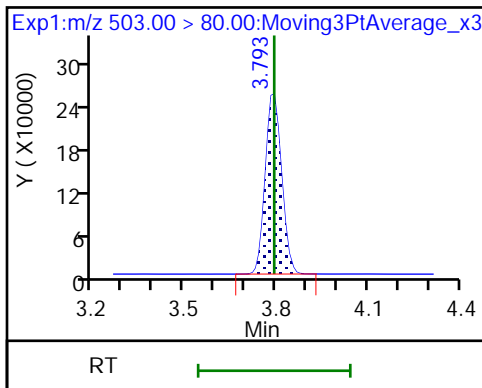
\* 62 13C2 PFOA



D 18 13C4 PFOS

17 Perfluorooctanesulfonic acid (M)

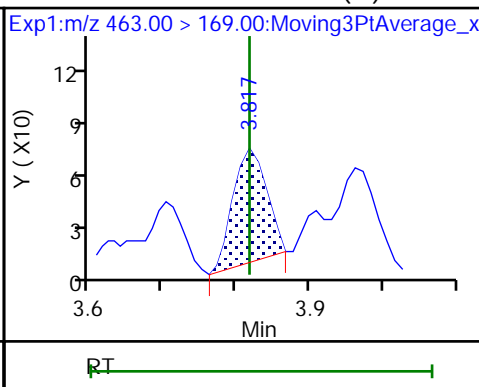
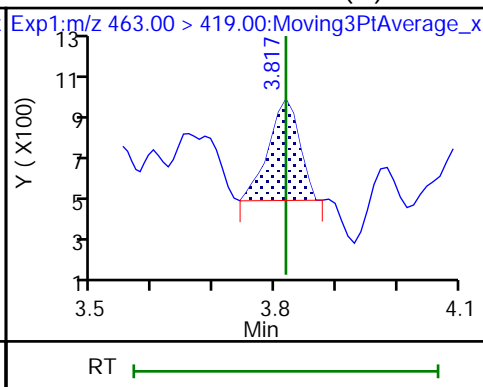
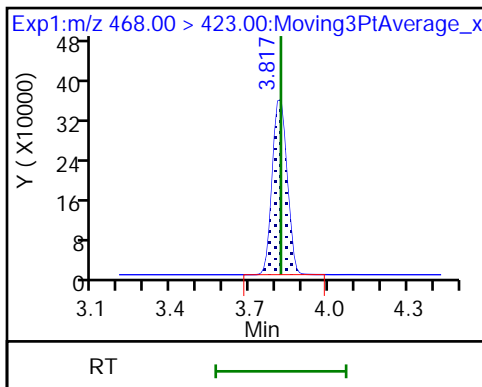
17 Perfluorooctanesulfonic acid (M)



D 19 13C5 PFNA

20 Perfluorononanoic acid (M)

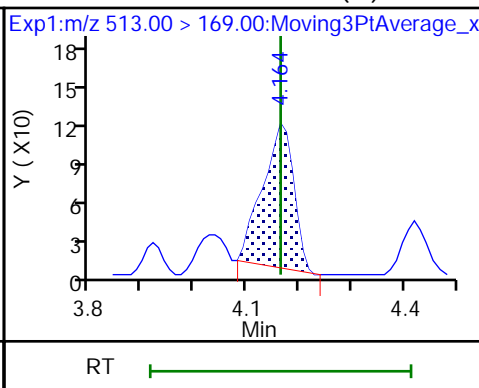
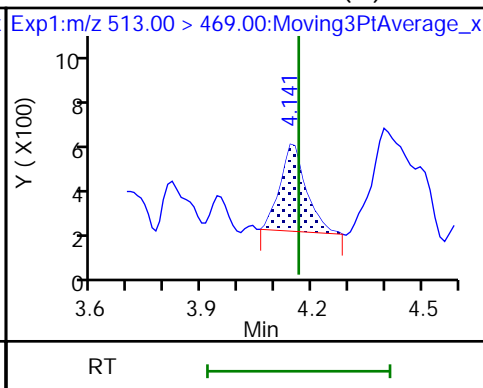
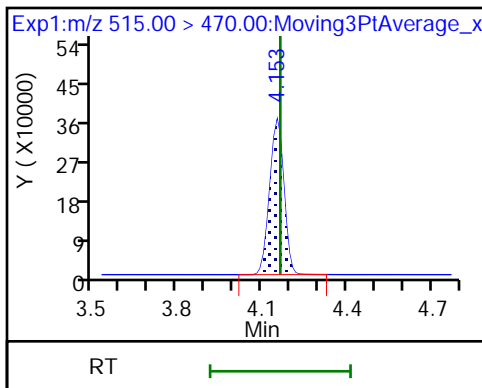
20 Perfluorononanoic acid (M)



D 23 13C2 PFDA

24 Perfluorodecanoic acid (M)

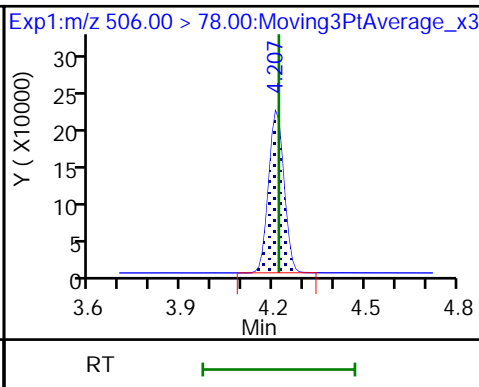
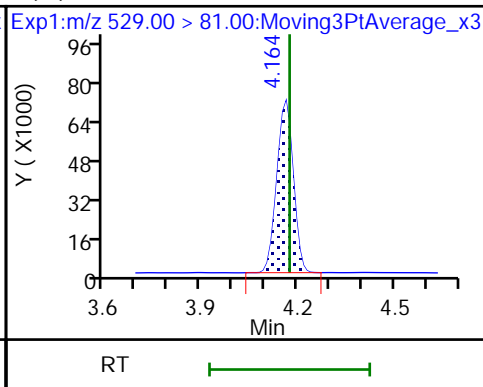
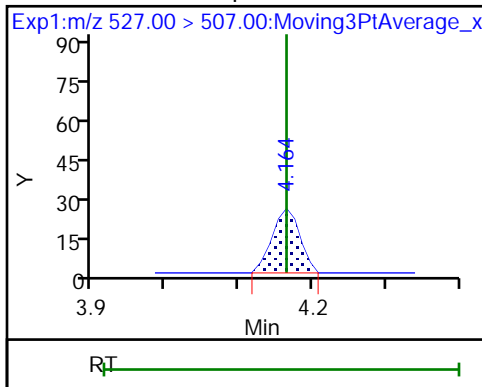
24 Perfluorodecanoic acid (M)



25 1H,1H,2H,2H-perfluorodecanesulfonic acid (M)

M2-8:2 FTS

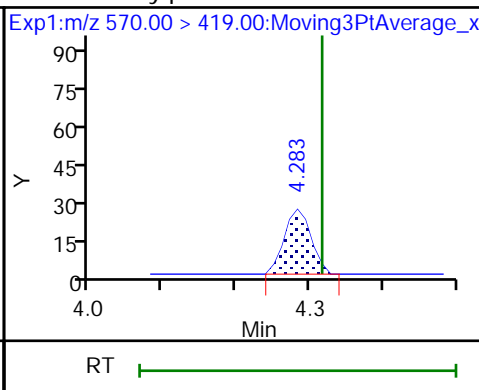
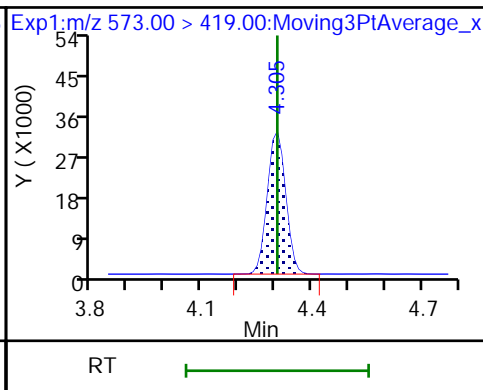
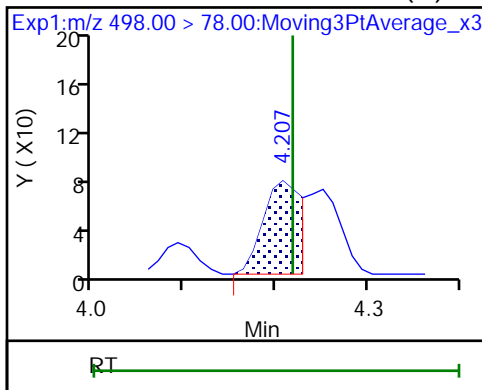
D 21 13C8 FOSA



22 Perfluorooctanesulfonamide (M)

D 27 d3-NMeFOSAA

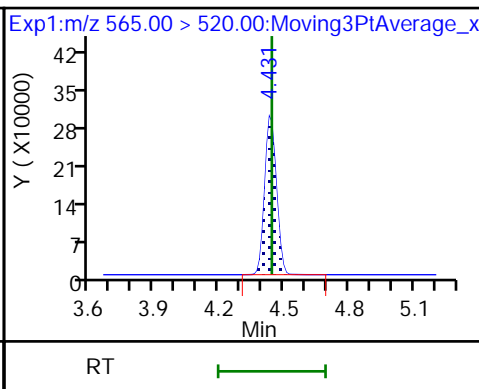
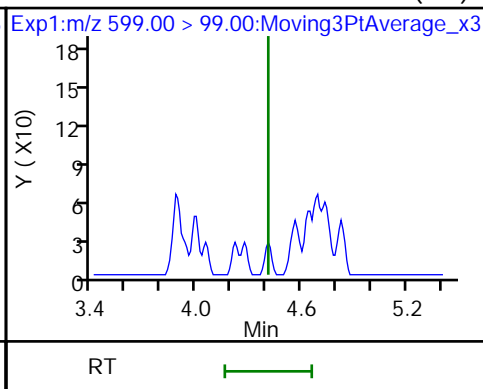
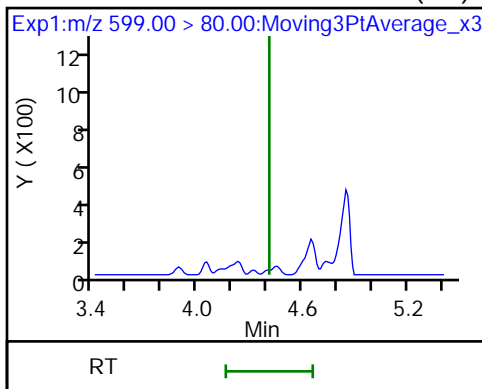
28 N-methylperfluorooctanesulfonamido (M)



29 Perfluorodecanesulfonic acid (ND)

29 Perfluorodecanesulfonic acid (ND)

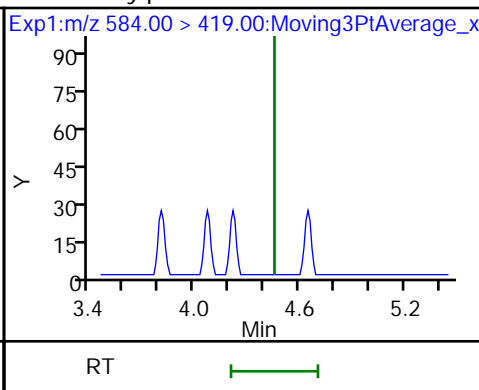
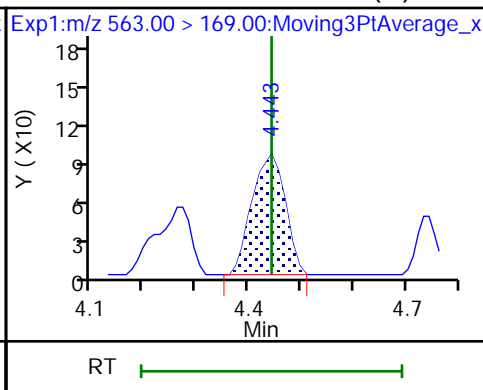
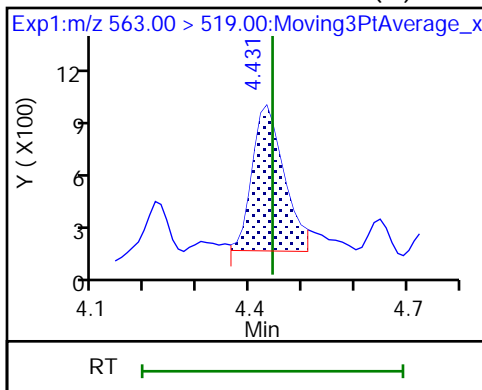
D 30 13C2 PFUnA



31 Perfluoroundecanoic acid (M)

31 Perfluoroundecanoic acid (M)

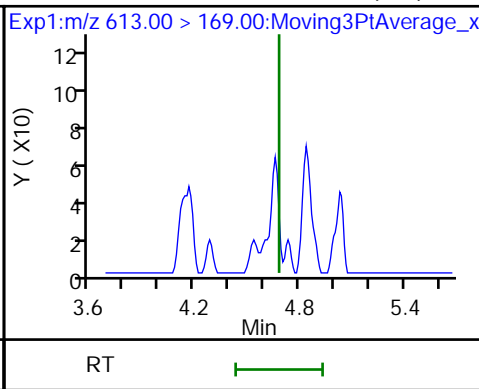
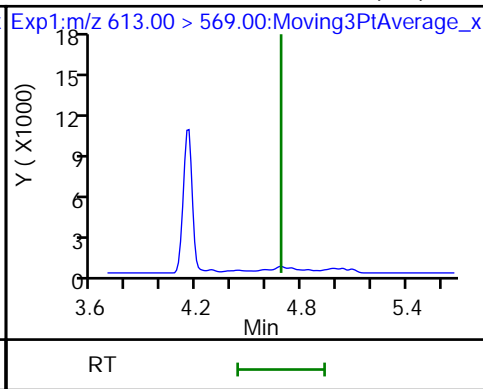
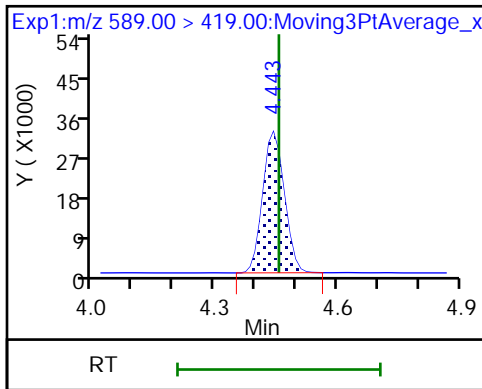
33 N-ethylperfluorooctanesulfonamidoa (ND)



D 32 d5-NEtFOSAA

37 Perfluorododecanoic acid (ND)

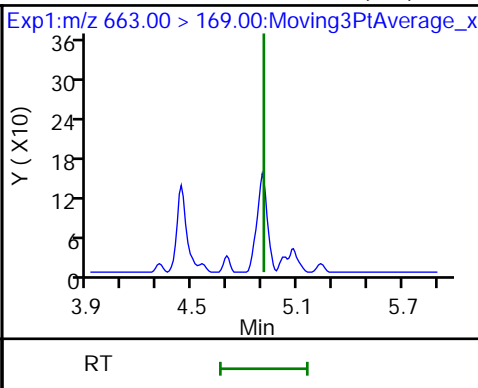
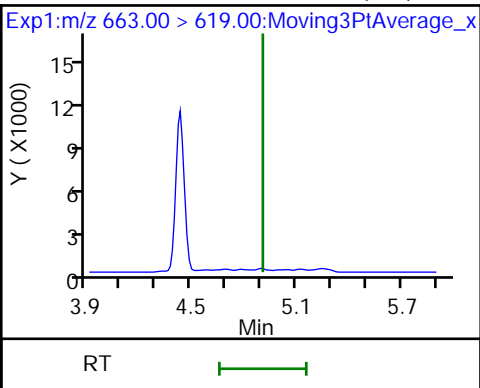
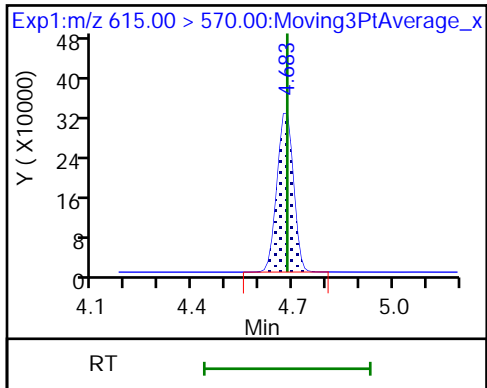
37 Perfluorododecanoic acid (ND)



D 36 13C2 PFDoA

41 Perfluorotridecanoic acid (ND)

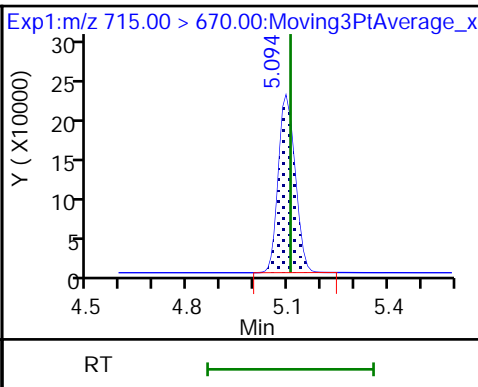
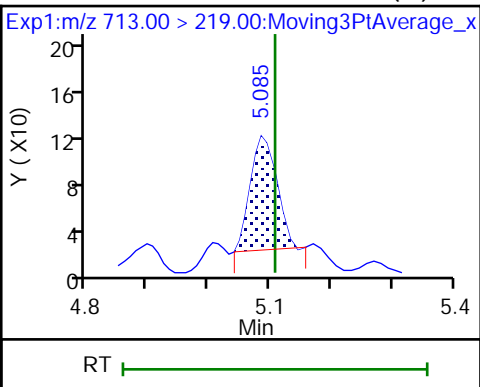
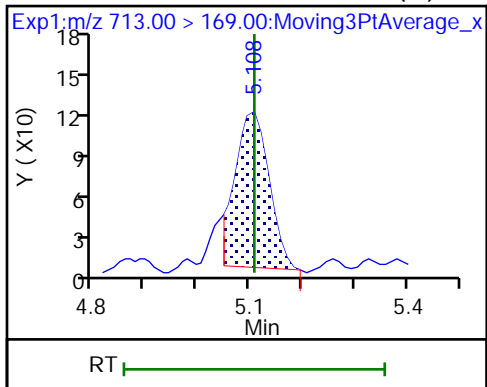
41 Perfluorotridecanoic acid (ND)



42 Perfluorotetradecanoic acid (M)

42 Perfluorotetradecanoic acid (M)

D 43 13C2 PFTeDA





Eurofins TestAmerica, Burlington

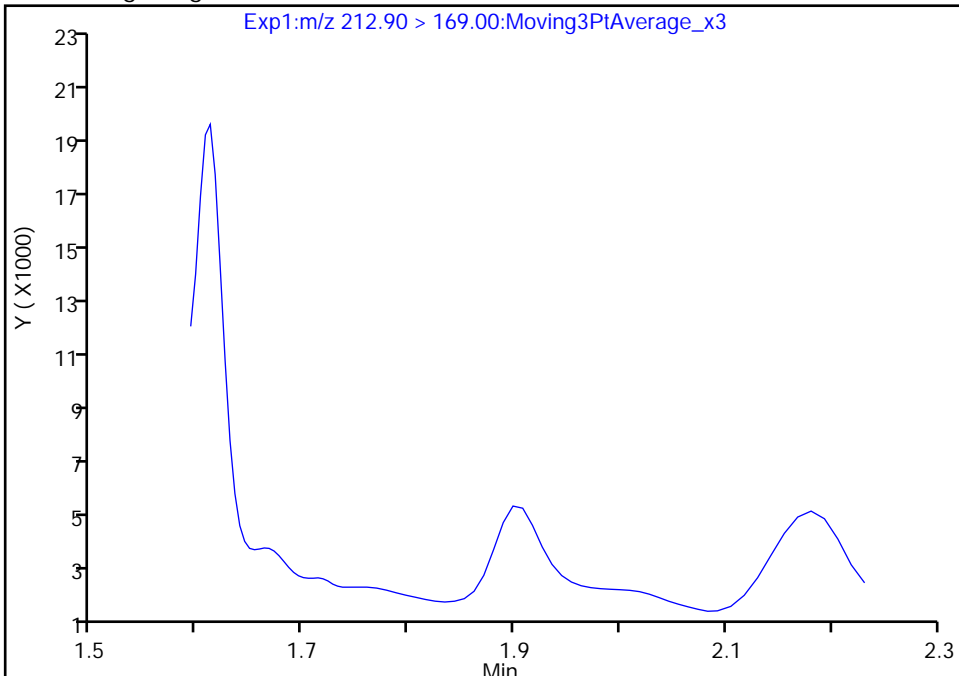
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Injection Date: 24-Dec-2019 16:23:35 Instrument ID: LC812  
Lims ID: 480-164221-C-8-A Lab Sample ID: 200-164221-8  
Client ID: CS SW 01 DER  
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

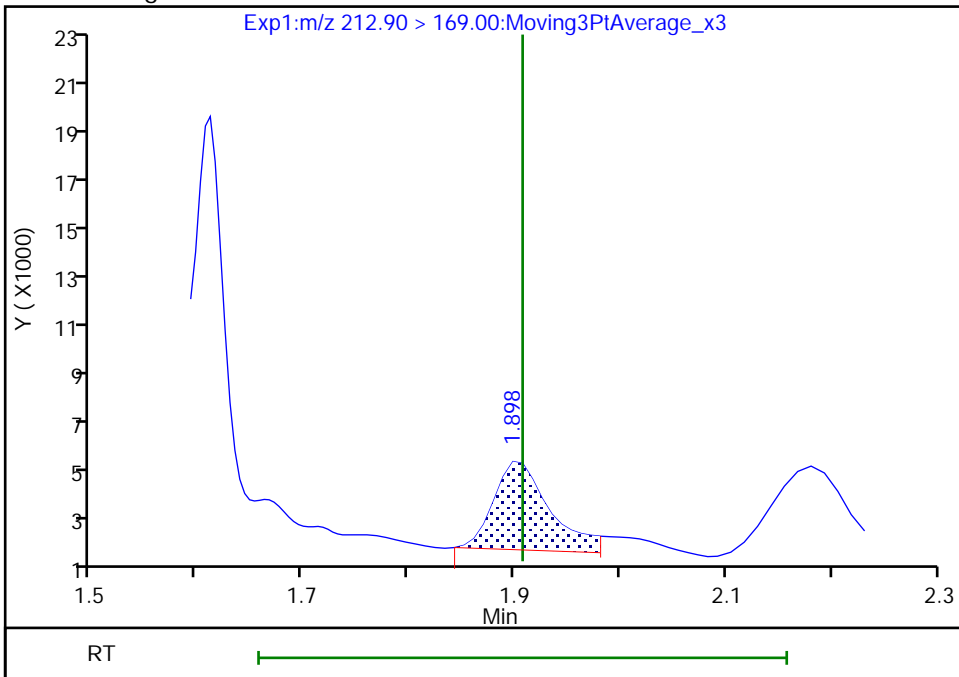
Not Detected  
Expected RT: 1.91

Processing Integration Results



Manual Integration Results

RT: 1.90  
Area: 12875  
Amount: 0.022553  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 14:33:38  
Audit Action: Manually Integrated

Audit Reason: Split Peak

Euofins TestAmerica, Burlington

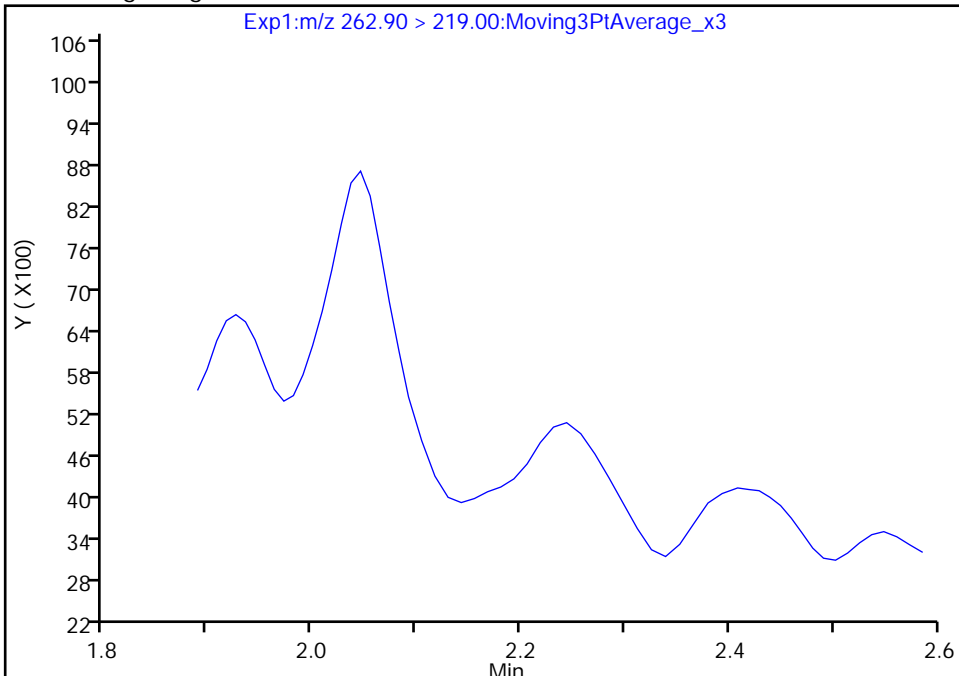
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Injection Date: 24-Dec-2019 16:23:35 Instrument ID: LC812  
Lims ID: 480-164221-C-8-A Lab Sample ID: 200-164221-8  
Client ID: CS SW 01 DER  
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

4 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

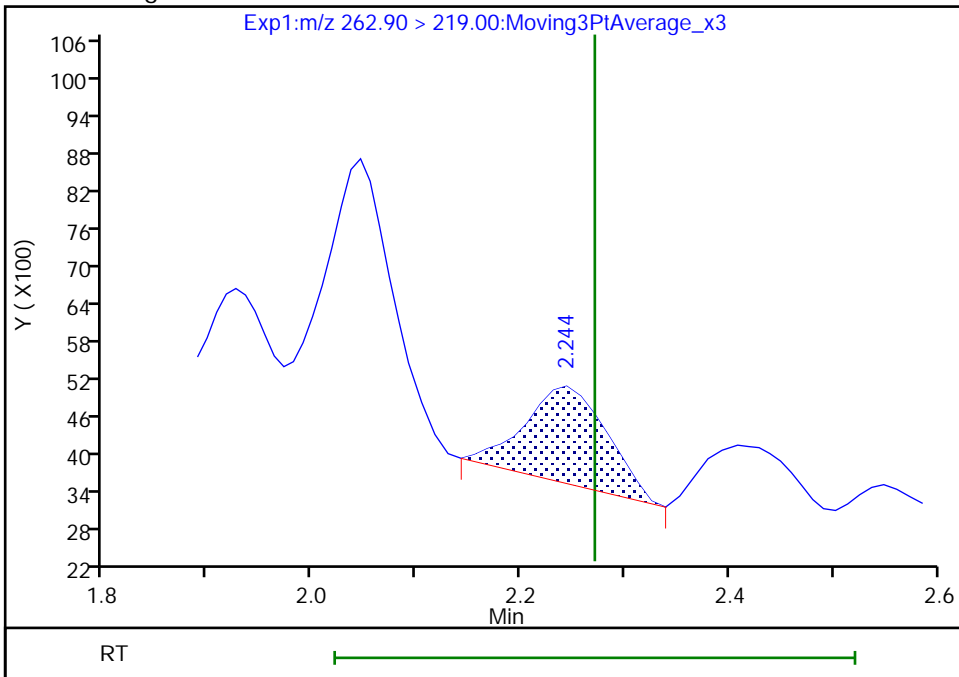
Not Detected  
Expected RT: 2.27

Processing Integration Results



Manual Integration Results

RT: 2.24  
Area: 8473  
Amount: 0.013758  
Amount Units: ng/ml



Reviewer: lautenschlagery, 27-Dec-2019 14:34:01  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

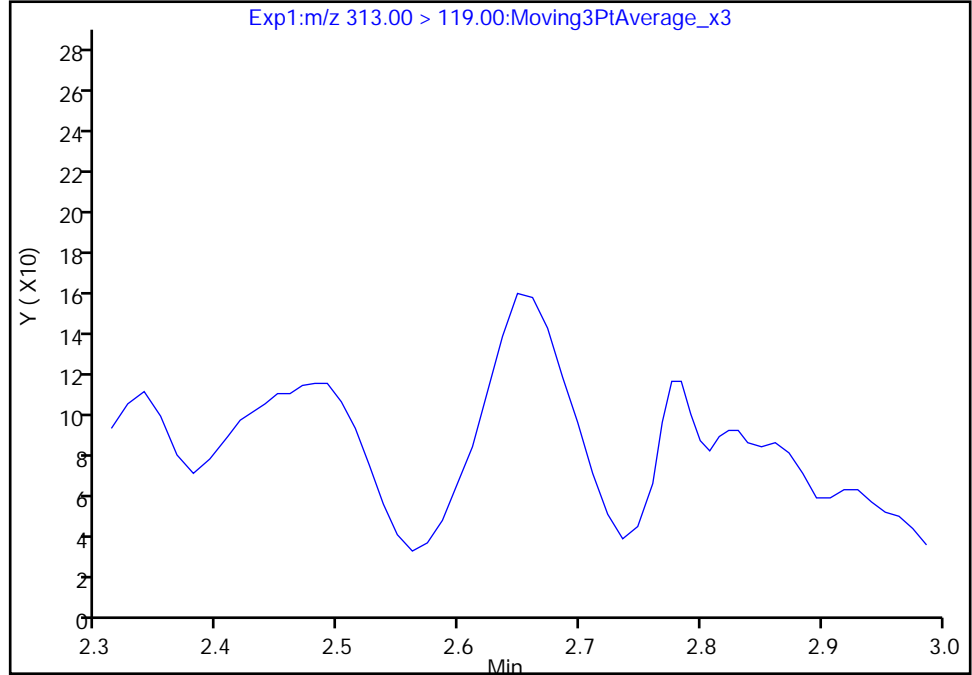
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Injection Date: 24-Dec-2019 16:23:35 Instrument ID: LC812  
Lims ID: 480-164221-C-8-A Lab Sample ID: 200-164221-8  
Client ID: CS SW 01 DER  
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

6 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 2

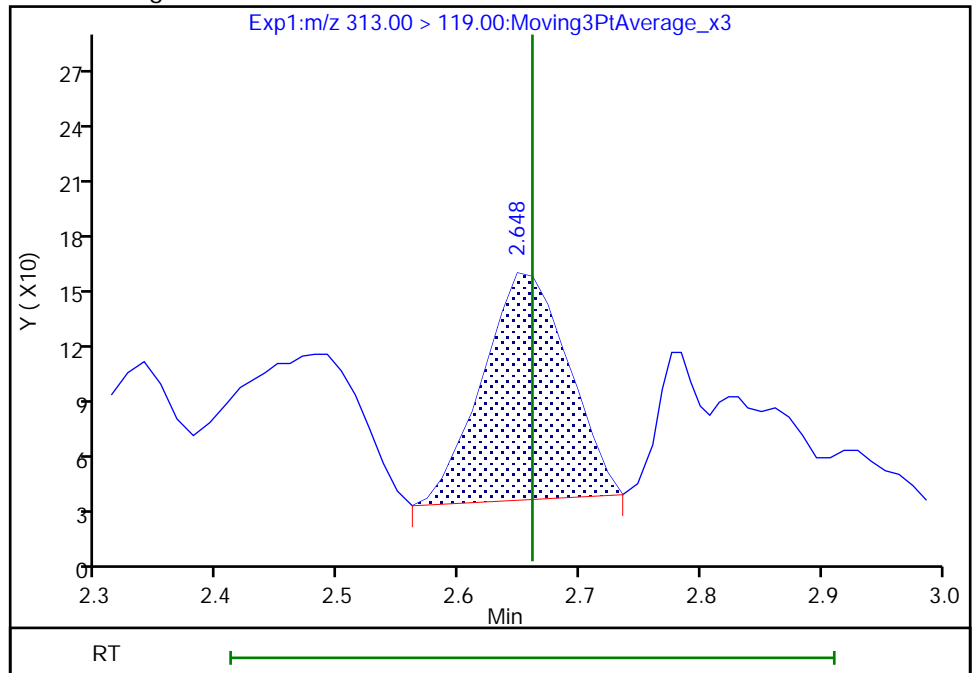
Not Detected  
Expected RT: 2.66

Processing Integration Results



Manual Integration Results

RT: 2.65  
Area: 604  
Amount: 0.011063  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 14:34:58

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Euofins TestAmerica, Burlington

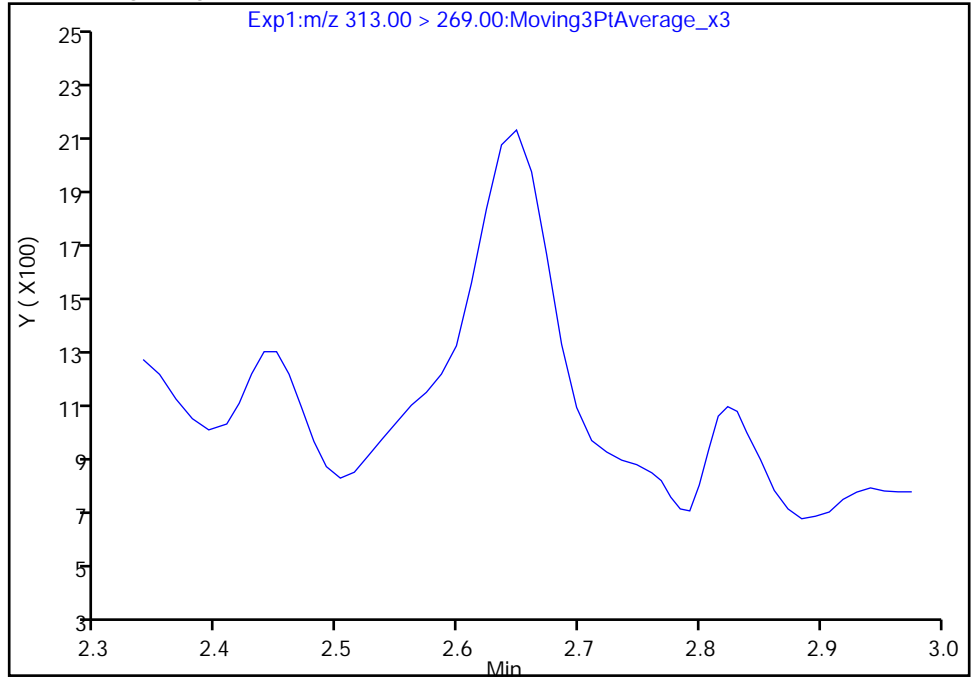
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Injection Date: 24-Dec-2019 16:23:35 Instrument ID: LC812  
Lims ID: 480-164221-C-8-A Lab Sample ID: 200-164221-8  
Client ID: CS SW 01 DER  
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 (4.60 mm) Detector: EXP1

6 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

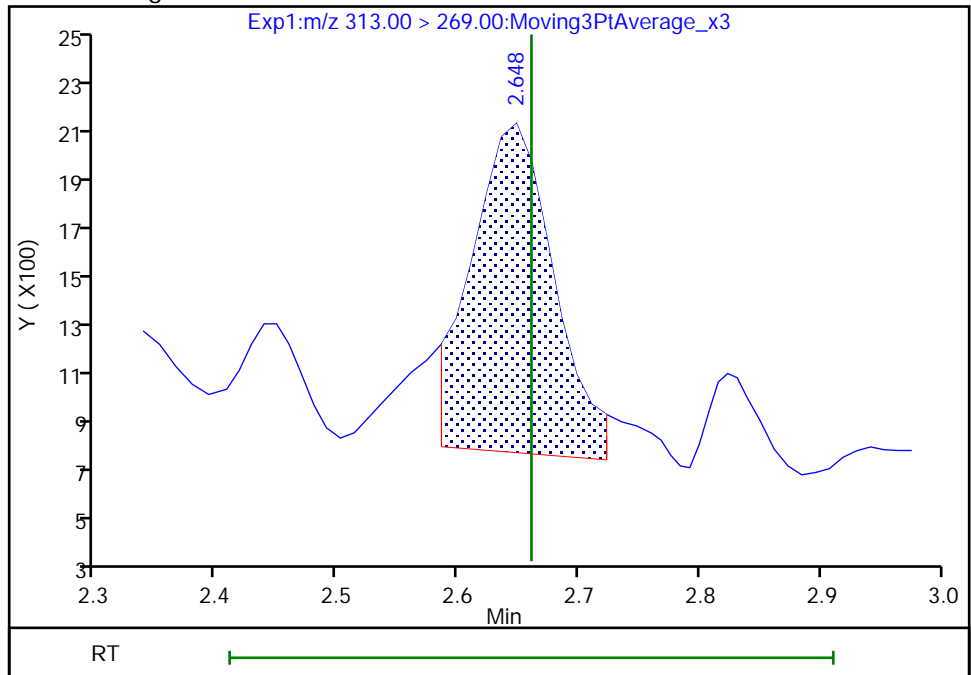
Not Detected  
Expected RT: 2.66

Processing Integration Results



Manual Integration Results

RT: 2.65  
Area: 6128  
Amount: 0.011063  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 14:35:20

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

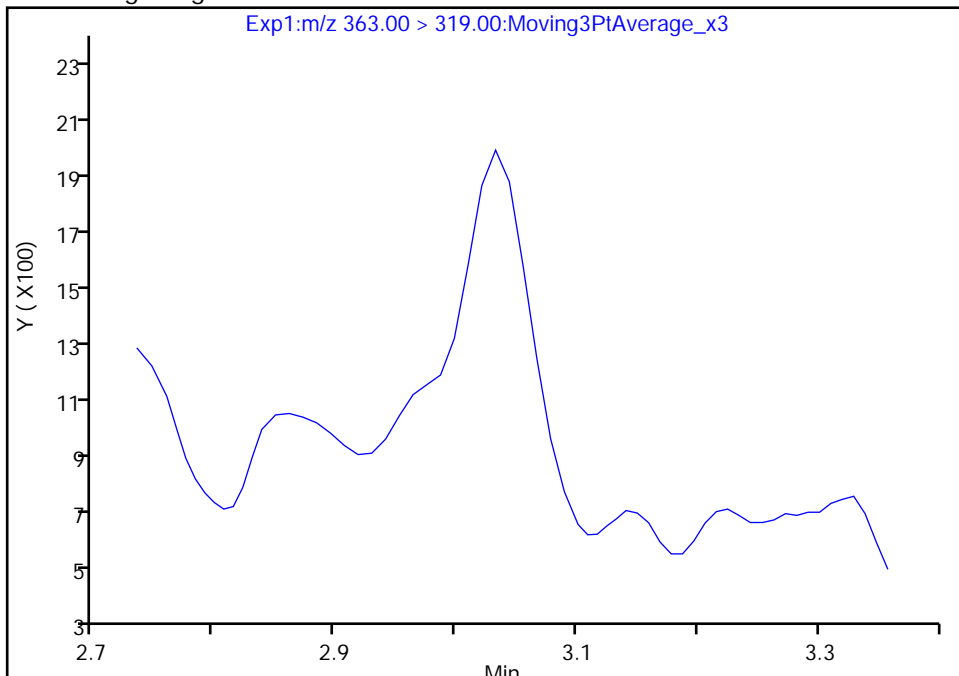
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Injection Date: 24-Dec-2019 16:23:35 Instrument ID: LC812  
Lims ID: 480-164221-C-8-A Lab Sample ID: 200-164221-8  
Client ID: CS SW 01 DER  
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

10 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

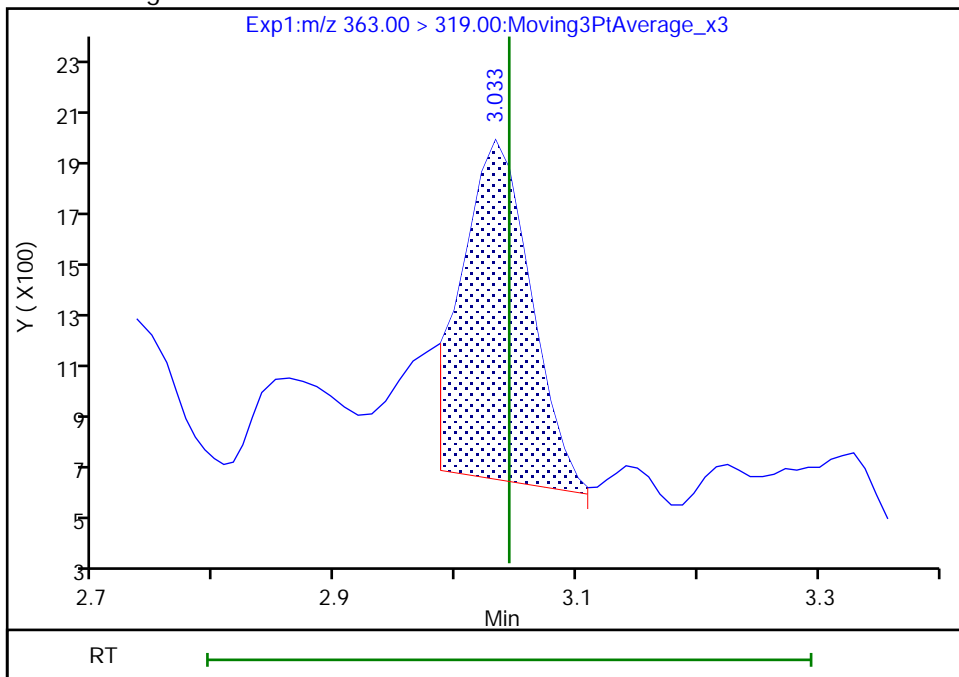
Not Detected  
Expected RT: 3.04

Processing Integration Results



RT: 3.03  
Area: 5177  
Amount: 0.008016  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 14:37:23

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline

Eurofins TestAmerica, Burlington

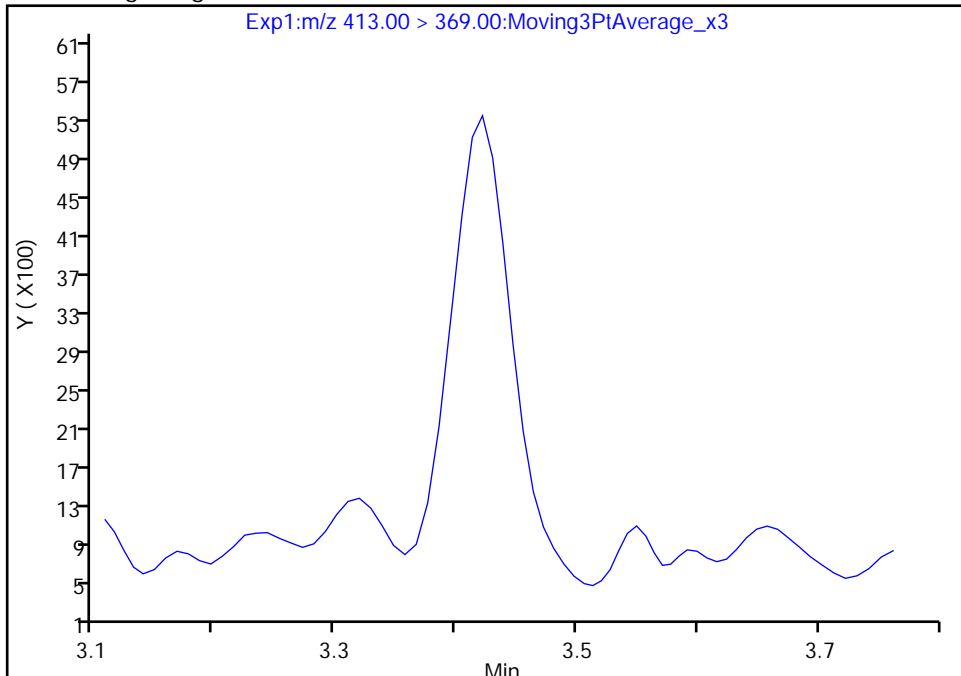
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B019.d  
Injection Date: 24-Dec-2019 16:23:35 Instrument ID: LC812  
Lims ID: 480-164221-C-8-A Lab Sample ID: 200-164221-8  
Client ID: CS SW 01 DER  
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

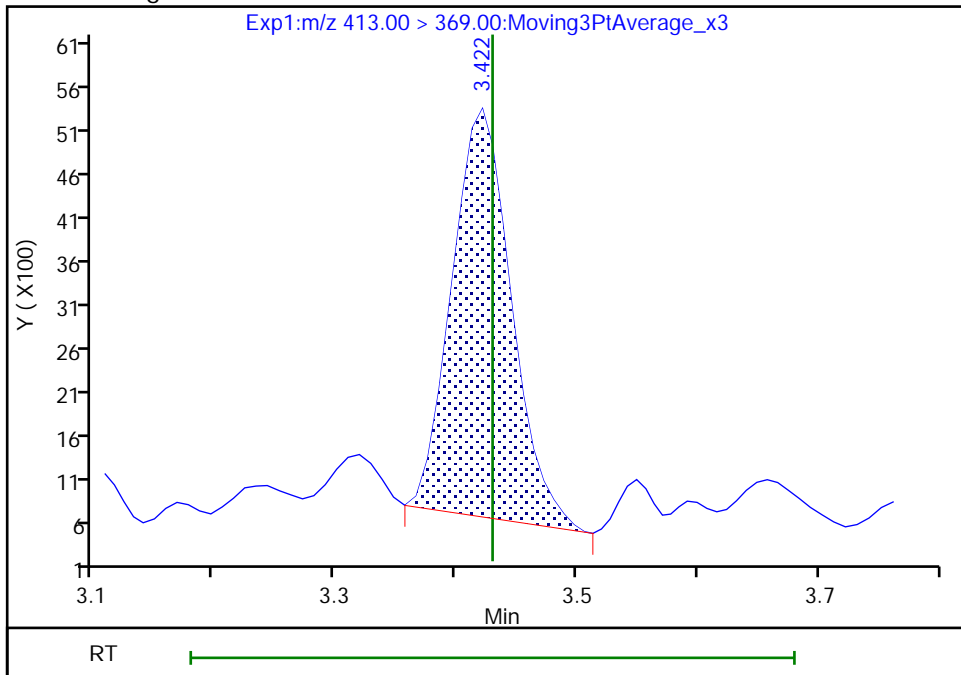
Not Detected  
Expected RT: 3.43

Processing Integration Results



RT: 3.42  
Area: 15741  
Amount: 0.023842  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 14:38:00  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

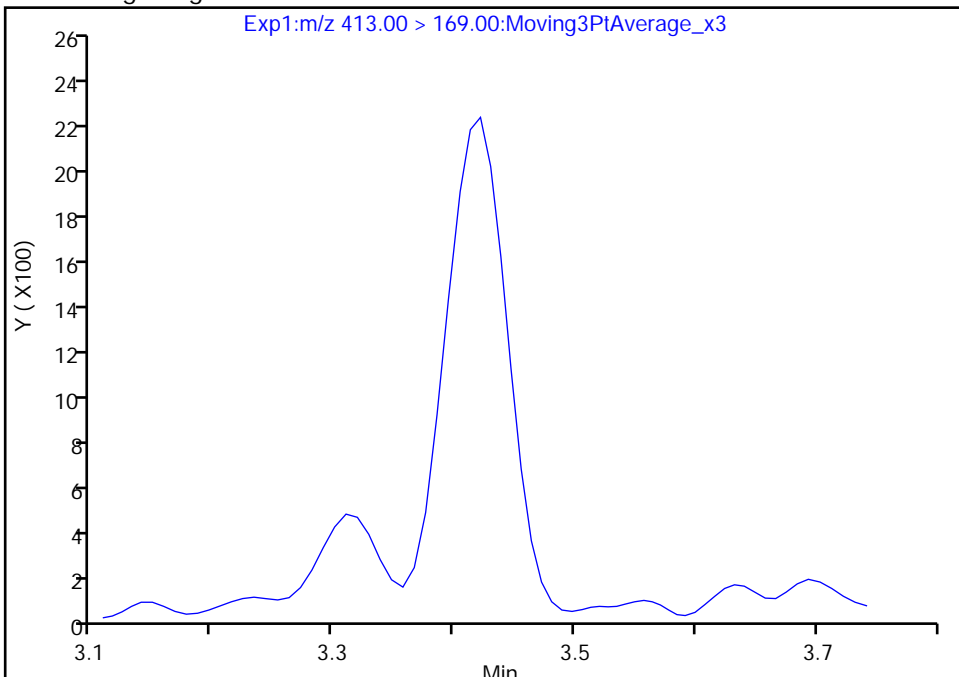
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B019.d  
Injection Date: 24-Dec-2019 16:23:35 Instrument ID: LC812  
Lims ID: 480-164221-C-8-A Lab Sample ID: 200-164221-8  
Client ID: CS SW 01 DER  
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

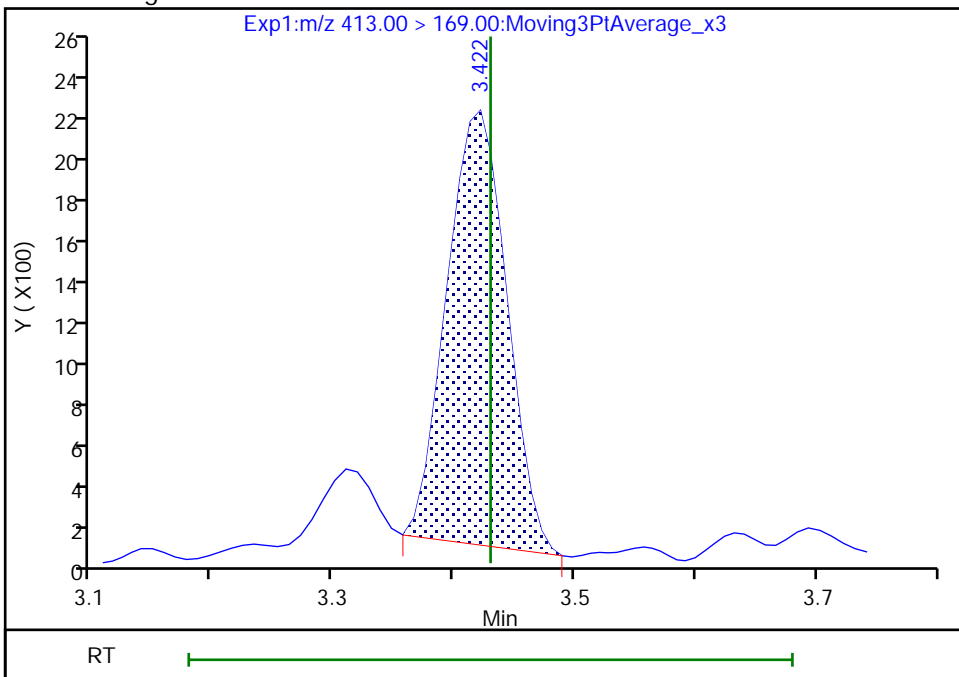
Not Detected  
Expected RT: 3.43

Processing Integration Results



Manual Integration Results

RT: 3.42  
Area: 7204  
Amount: 0.023842  
Amount Units: ng/ml



Euofins TestAmerica, Burlington

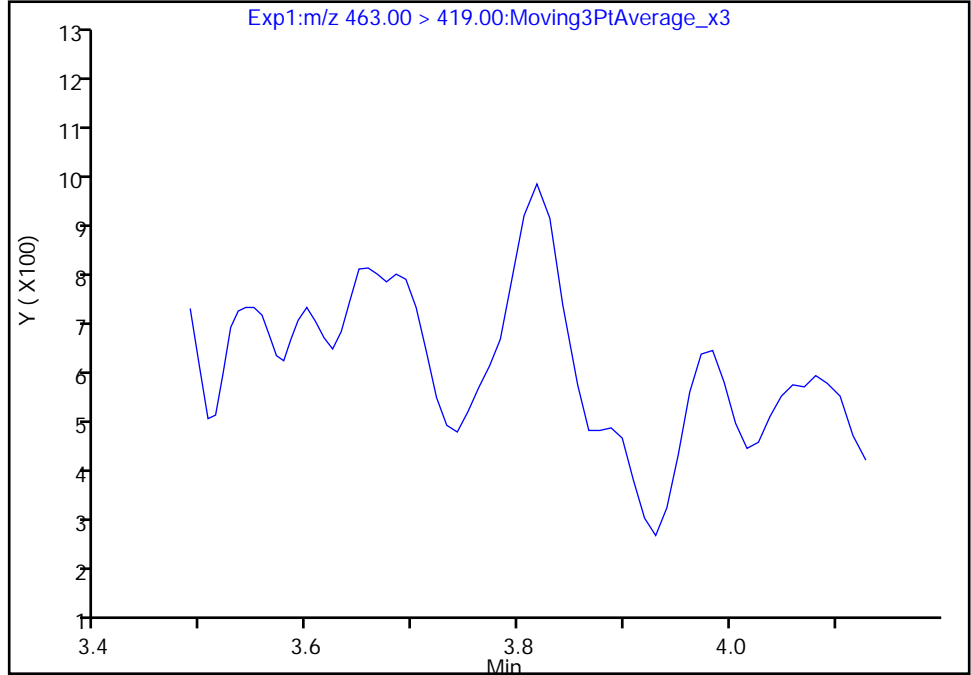
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Injection Date: 24-Dec-2019 16:23:35 Instrument ID: LC812  
Lims ID: 480-164221-C-8-A Lab Sample ID: 200-164221-8  
Client ID: CS SW 01 DER  
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

20 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

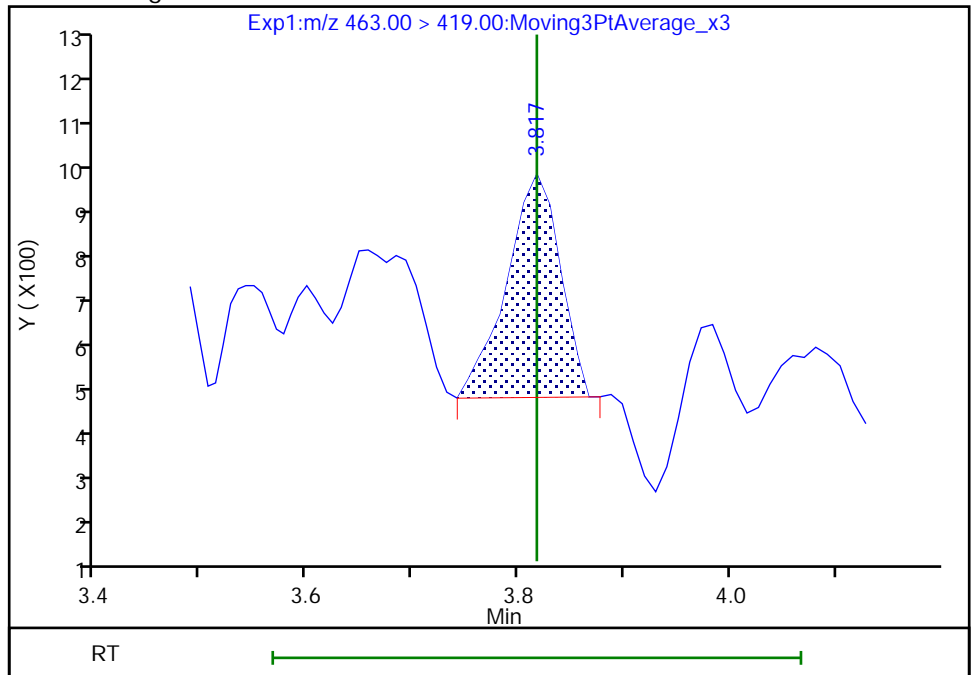
Not Detected  
Expected RT: 3.82

Processing Integration Results



Manual Integration Results

RT: 3.82  
Area: 1687  
Amount: 0.003141  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 14:39:35  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Eurofins TestAmerica, Burlington

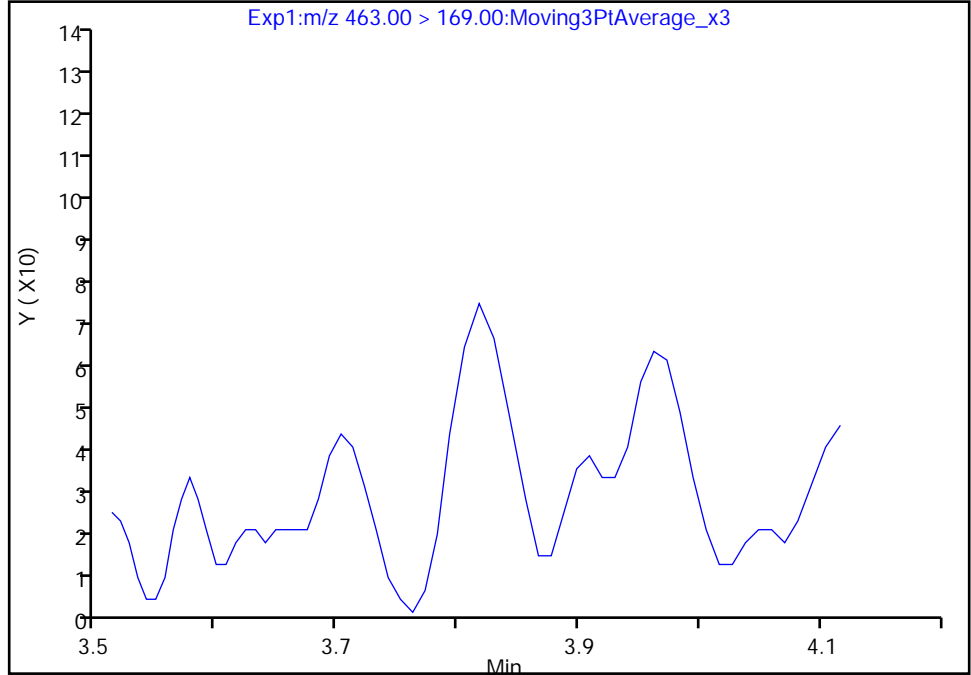
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B019.d  
Injection Date: 24-Dec-2019 16:23:35 Instrument ID: LC812  
Lims ID: 480-164221-C-8-A Lab Sample ID: 200-164221-8  
Client ID: CS SW 01 DER  
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

20 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

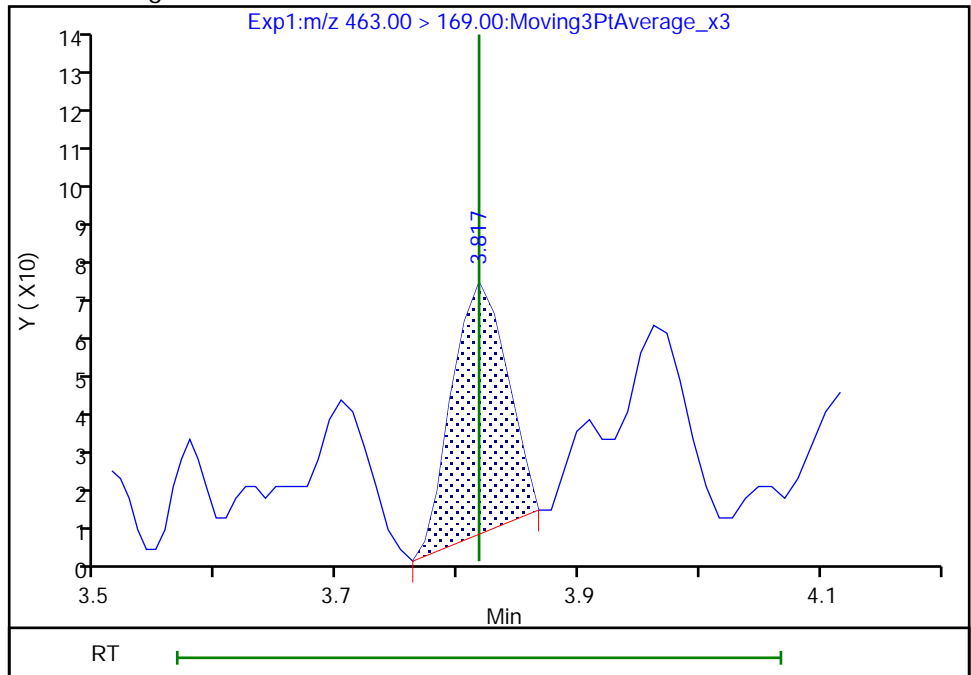
Not Detected  
Expected RT: 3.82

Processing Integration Results



Manual Integration Results

RT: 3.82  
Area: 203  
Amount: 0.003141  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 14:39:40

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Euofins TestAmerica, Burlington

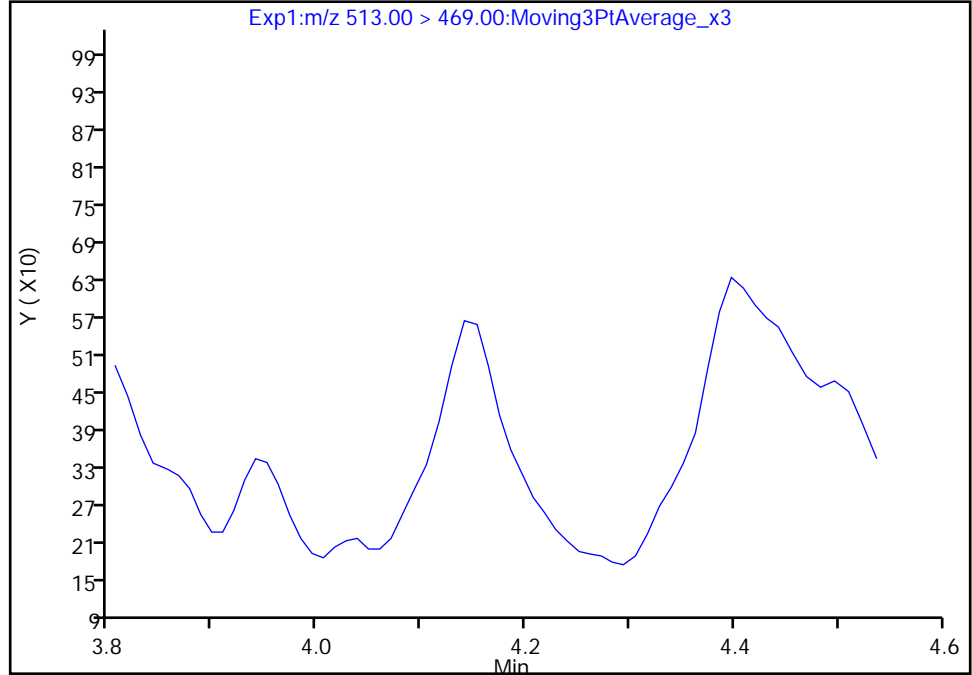
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B019.d  
Injection Date: 24-Dec-2019 16:23:35 Instrument ID: LC812  
Lims ID: 480-164221-C-8-A Lab Sample ID: 200-164221-8  
Client ID: CS SW 01 DER  
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

24 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 1

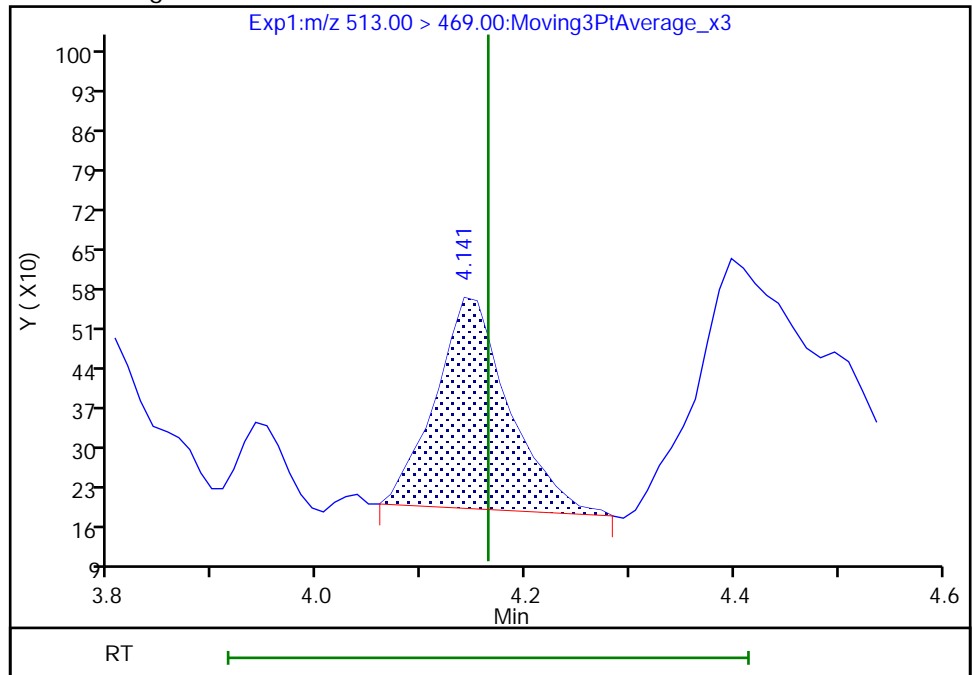
Not Detected  
Expected RT: 4.16

Processing Integration Results



Manual Integration Results

RT: 4.14  
Area: 1831  
Amount: 0.003786  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 14:40:57

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

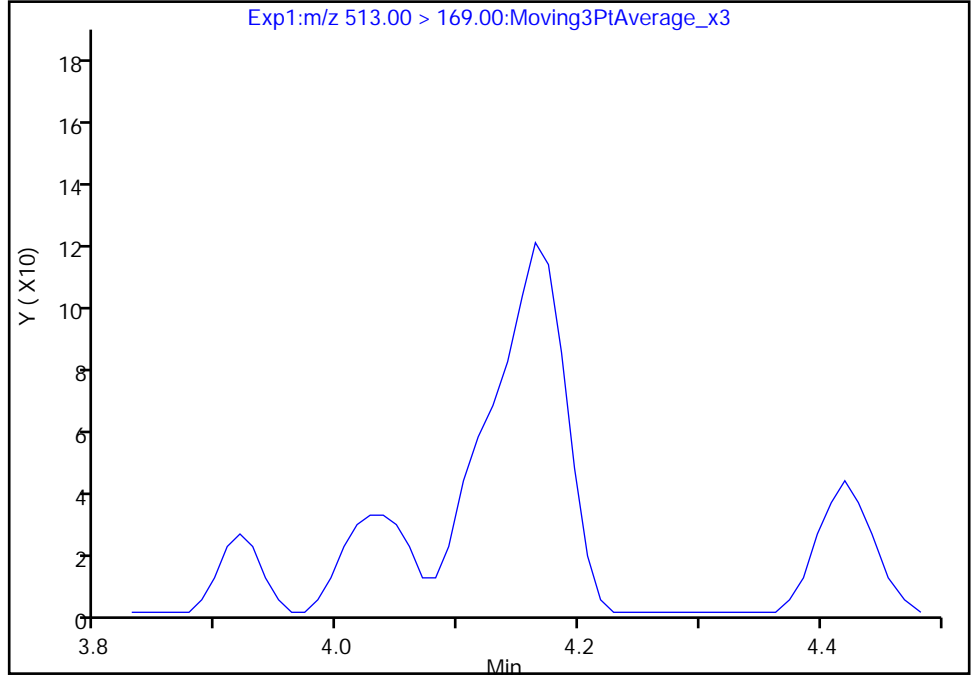
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B019.d  
Injection Date: 24-Dec-2019 16:23:35 Instrument ID: LC812  
Lims ID: 480-164221-C-8-A Lab Sample ID: 200-164221-8  
Client ID: CS SW 01 DER  
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

24 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 2

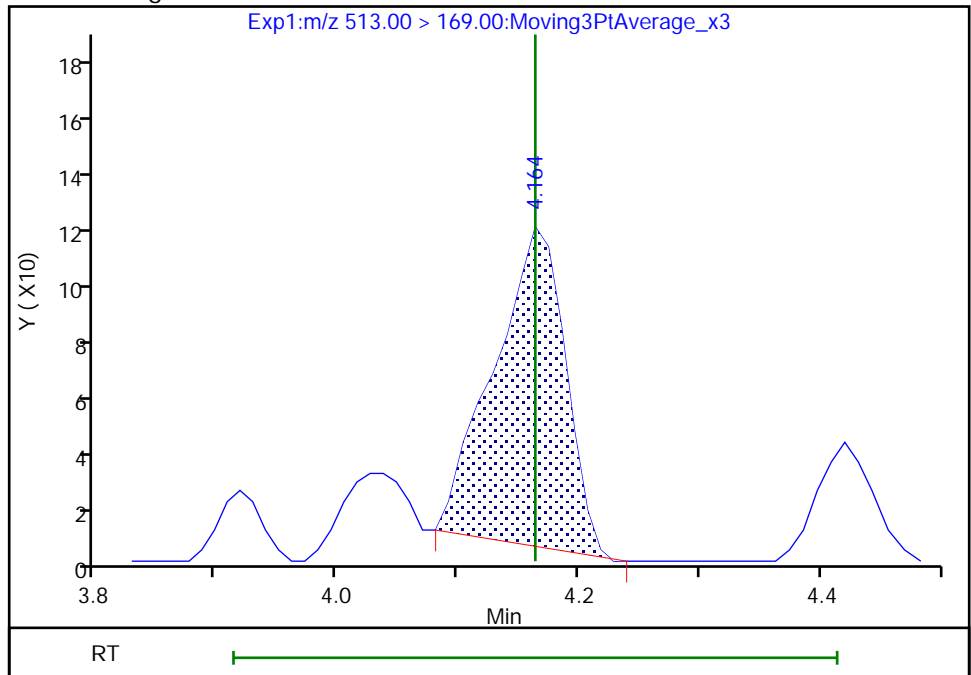
Not Detected  
Expected RT: 4.16

Processing Integration Results



Manual Integration Results

RT: 4.16  
Area: 460  
Amount: 0.003786  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

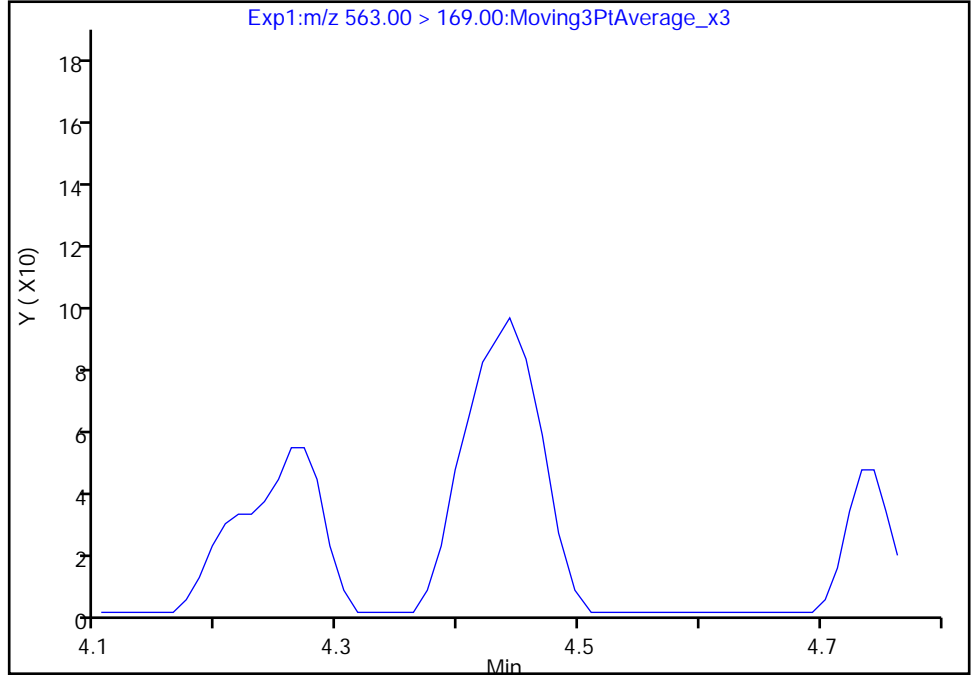
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B019.d  
Injection Date: 24-Dec-2019 16:23:35 Instrument ID: LC812  
Lims ID: 480-164221-C-8-A Lab Sample ID: 200-164221-8  
Client ID: CS SW 01 DER  
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 2

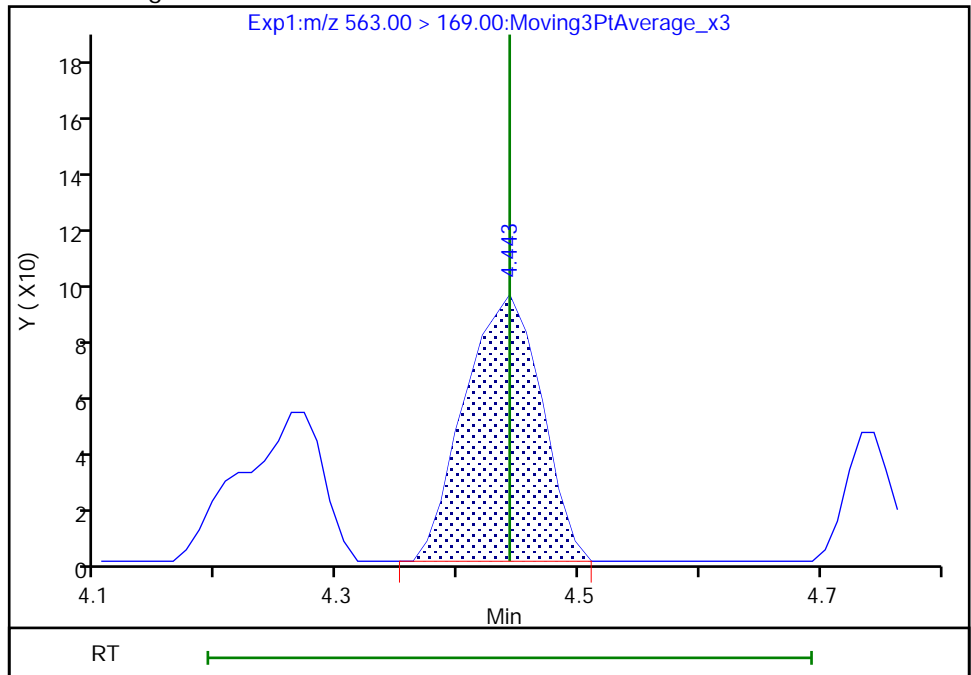
Not Detected  
Expected RT: 4.44

Processing Integration Results



Manual Integration Results

RT: 4.44  
Area: 408  
Amount: 0.009383  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 14:41:47

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

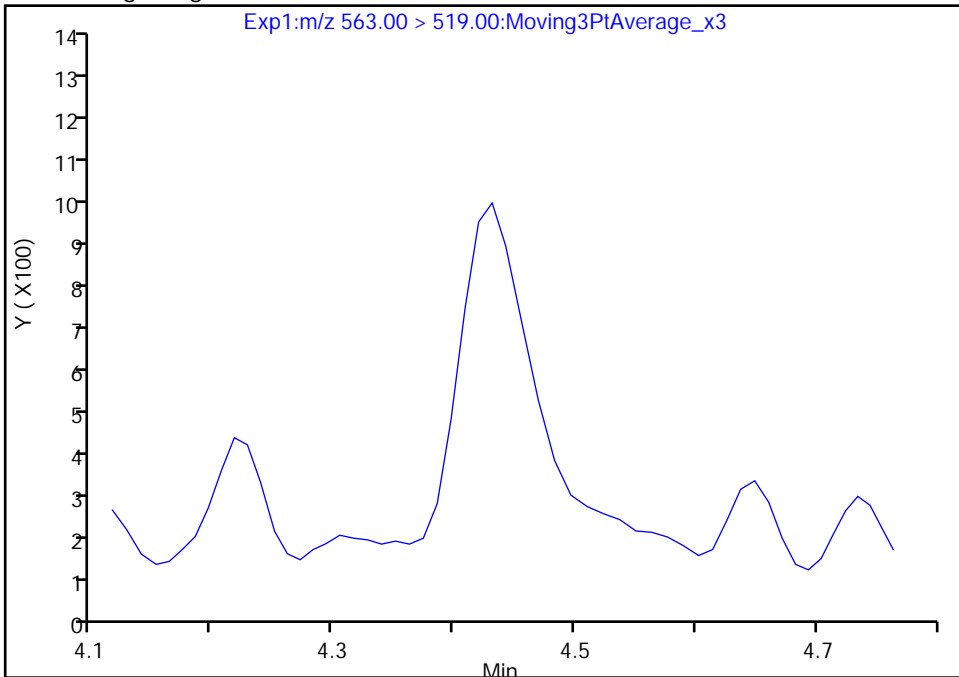
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B019.d  
Injection Date: 24-Dec-2019 16:23:35 Instrument ID: LC812  
Lims ID: 480-164221-C-8-A Lab Sample ID: 200-164221-8  
Client ID: CS SW 01 DER  
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 (4.60 mm) Detector: EXP1

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 1

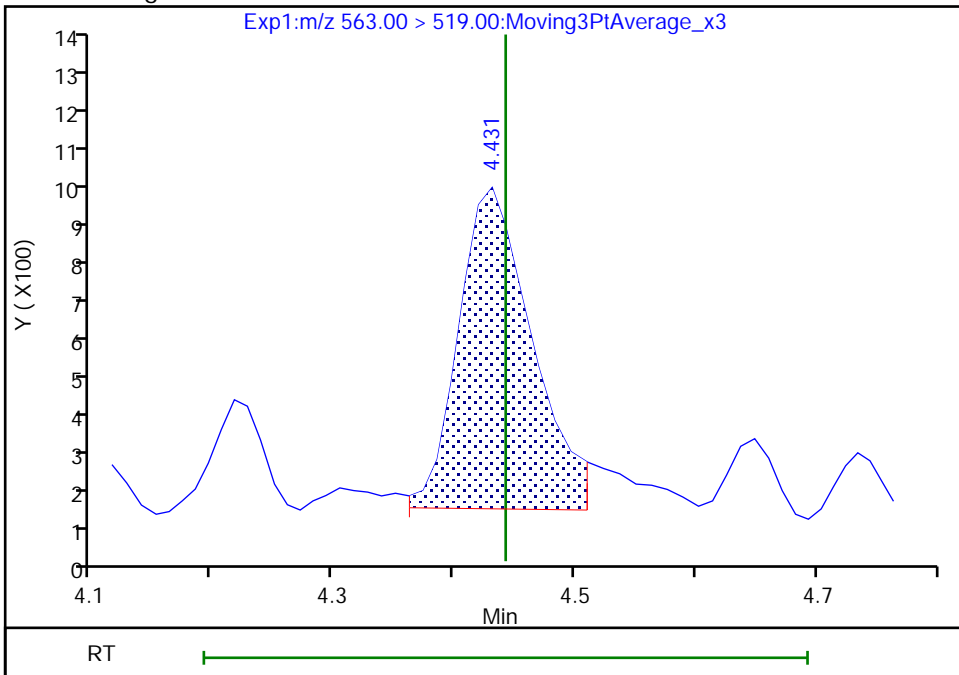
Not Detected  
Expected RT: 4.44

Processing Integration Results



Manual Integration Results

RT: 4.43  
Area: 3533  
Amount: 0.009383  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

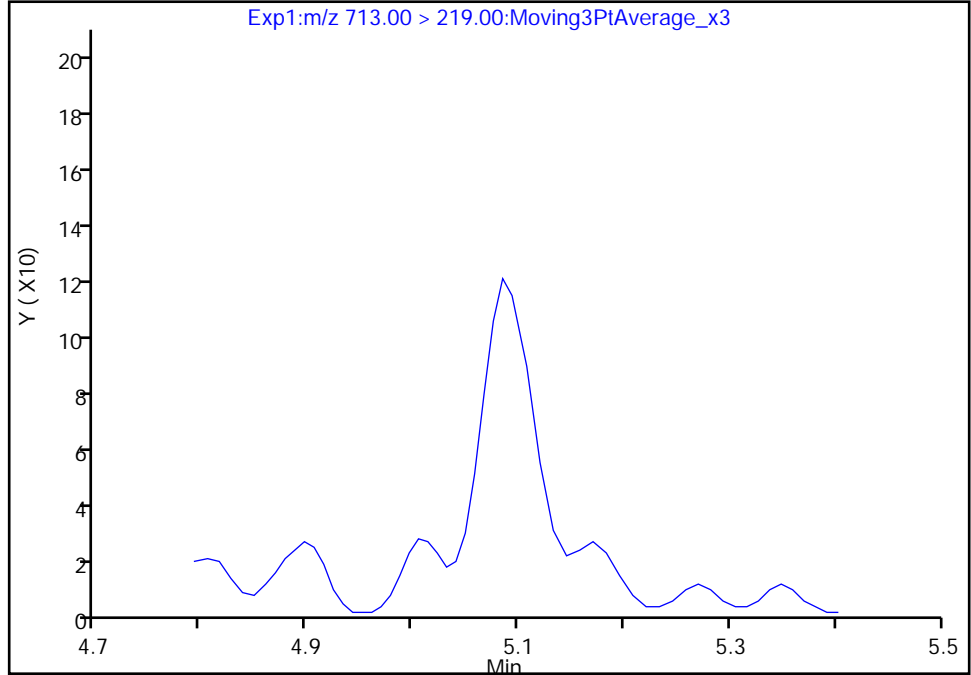
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B019.d  
Injection Date: 24-Dec-2019 16:23:35 Instrument ID: LC812  
Lims ID: 480-164221-C-8-A Lab Sample ID: 200-164221-8  
Client ID: CS SW 01 DER  
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 2

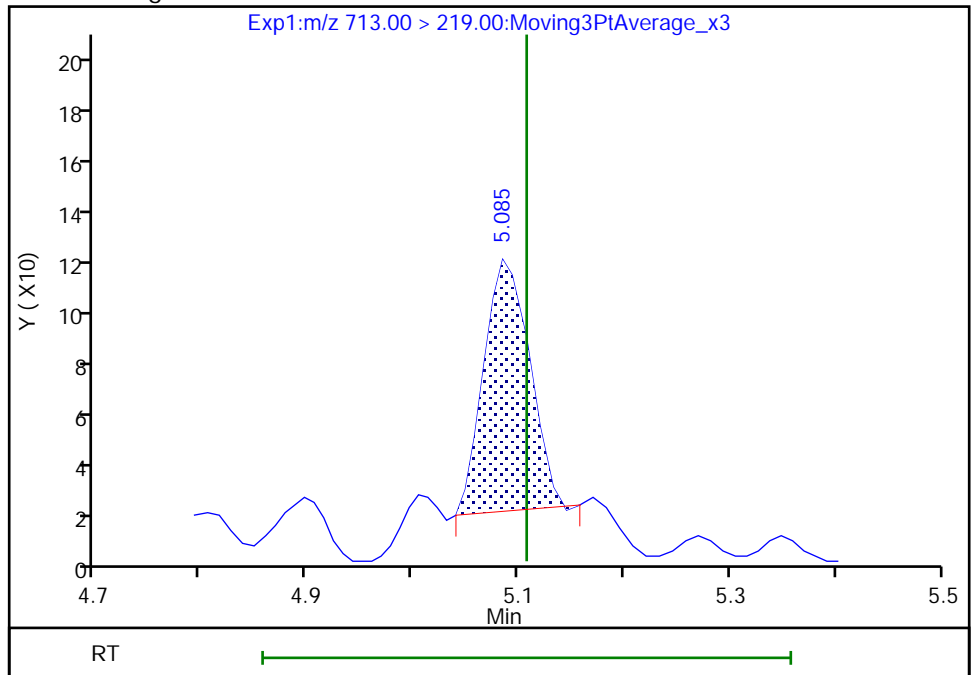
Not Detected  
Expected RT: 5.11

Processing Integration Results



Manual Integration Results

RT: 5.08  
Area: 294  
Amount: 0.007907  
Amount Units: ng/ml



Reviewer: lautenschlagerng, 27-Dec-2019 14:43:14  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

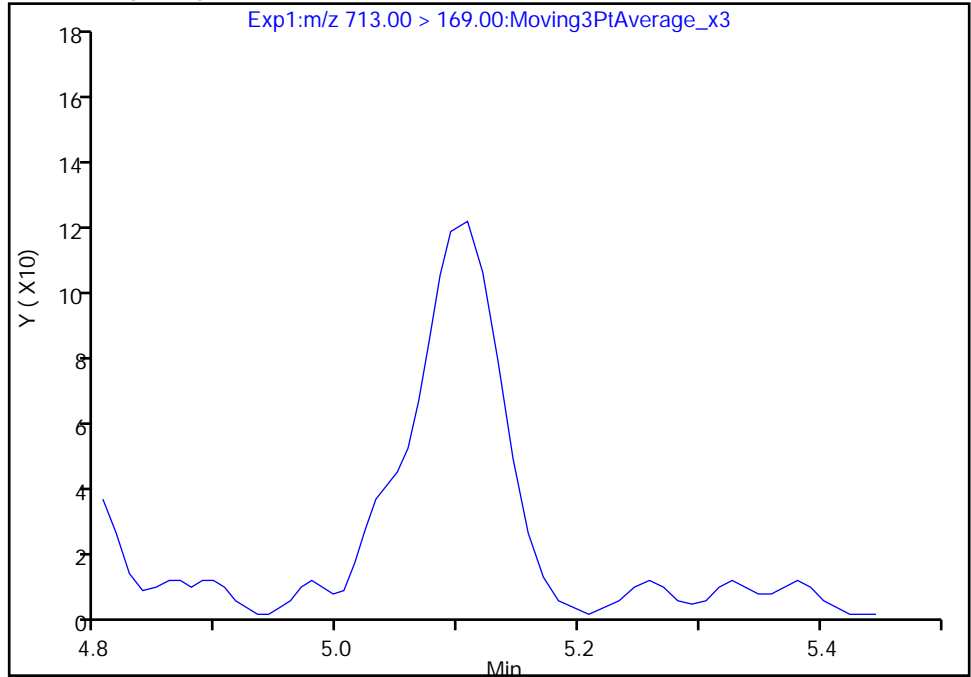
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B019.d  
Injection Date: 24-Dec-2019 16:23:35 Instrument ID: LC812  
Lims ID: 480-164221-C-8-A Lab Sample ID: 200-164221-8  
Client ID: CS SW 01 DER  
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 1

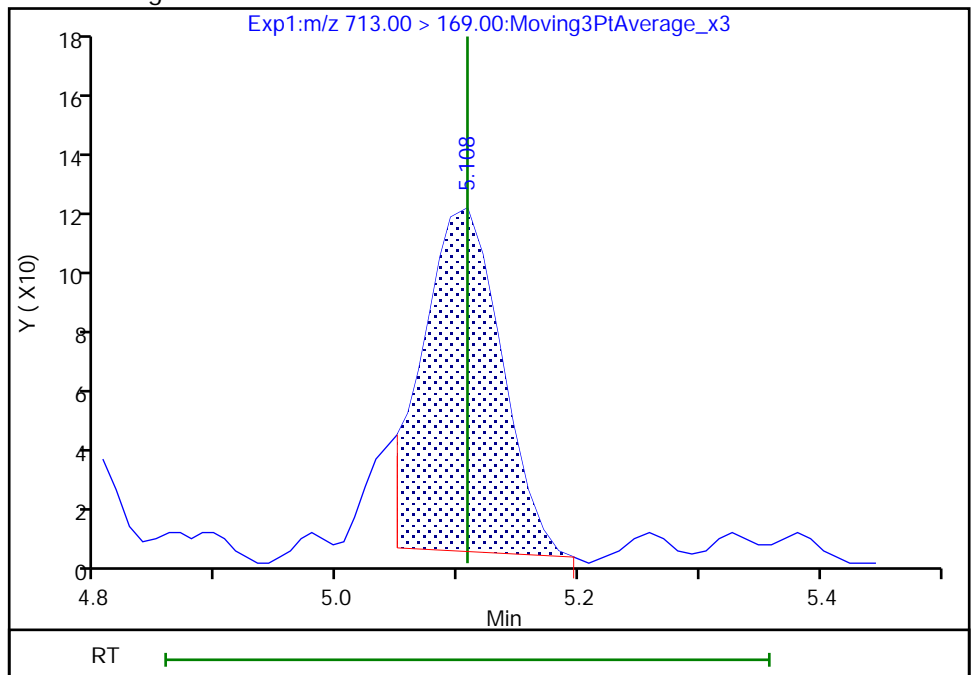
Not Detected  
Expected RT: 5.11

Processing Integration Results



Manual Integration Results

RT: 5.11  
Area: 502  
Amount: 0.007907  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 14:43:31

Audit Action: Manually Integrated

Audit Reason: Split Peak

Euofins TestAmerica, Burlington

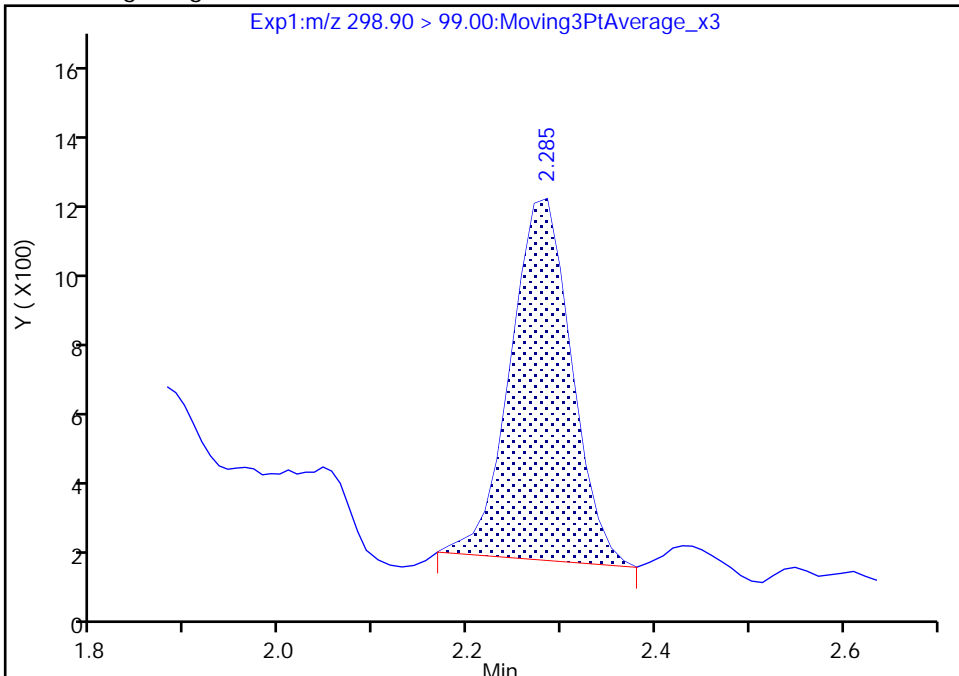
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B019.d  
Injection Date: 24-Dec-2019 16:23:35 Instrument ID: LC812  
Lims ID: 480-164221-C-8-A Lab Sample ID: 200-164221-8  
Client ID: CS SW 01 DER  
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

5 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 2

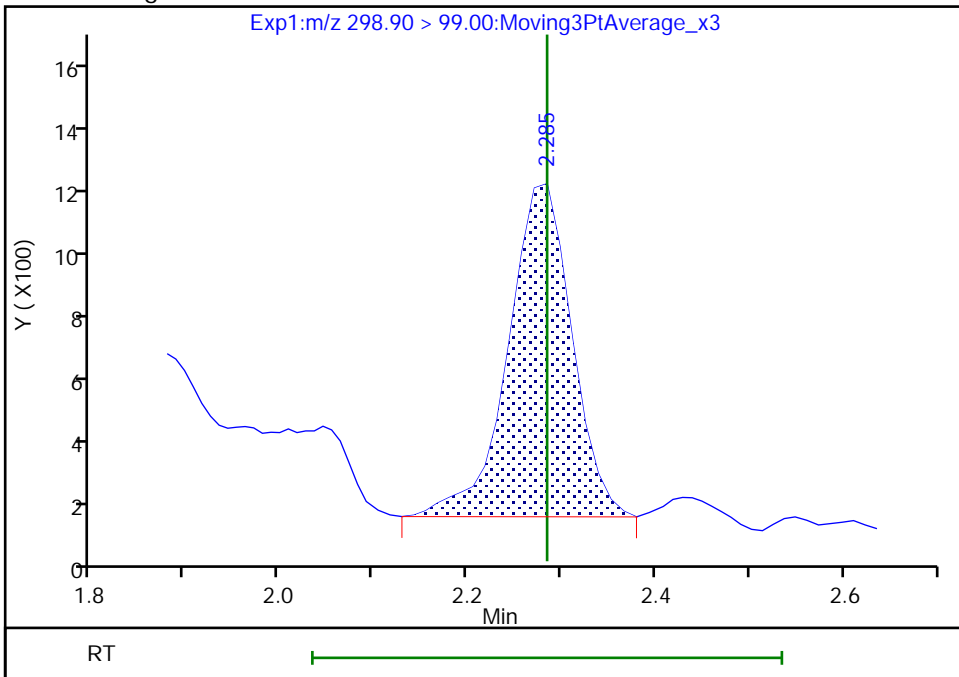
RT: 2.28  
Area: 4382  
Amount: 0.010823  
Amount Units: ng/ml

Processing Integration Results



RT: 2.28  
Area: 4669  
Amount: 0.010823  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 14:34:33  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Eurofins TestAmerica, Burlington

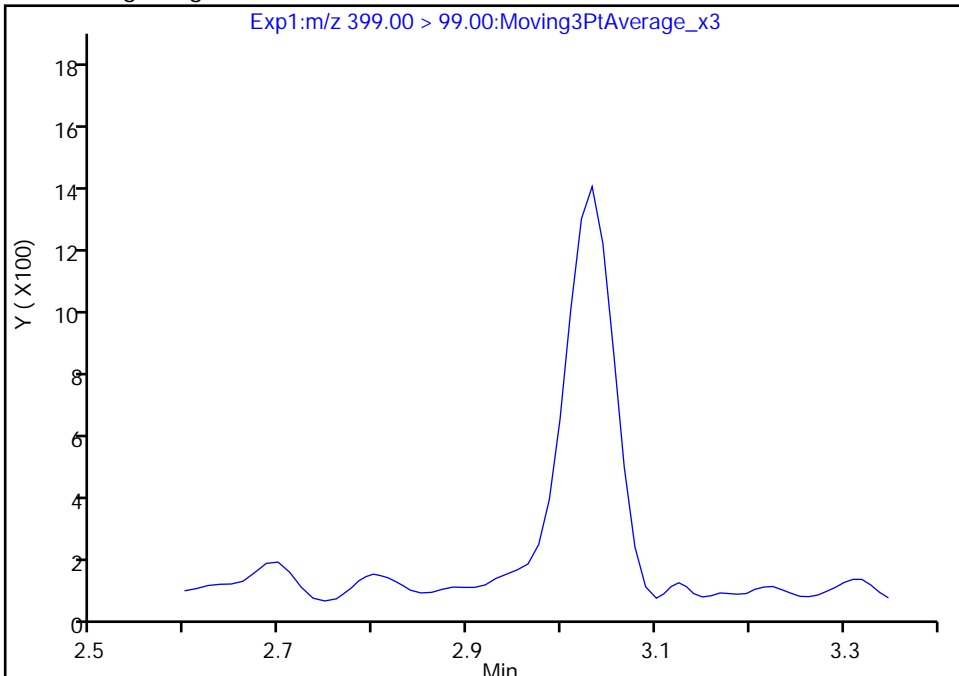
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B019.d  
Injection Date: 24-Dec-2019 16:23:35 Instrument ID: LC812  
Lims ID: 480-164221-C-8-A Lab Sample ID: 200-164221-8  
Client ID: CS SW 01 DER  
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

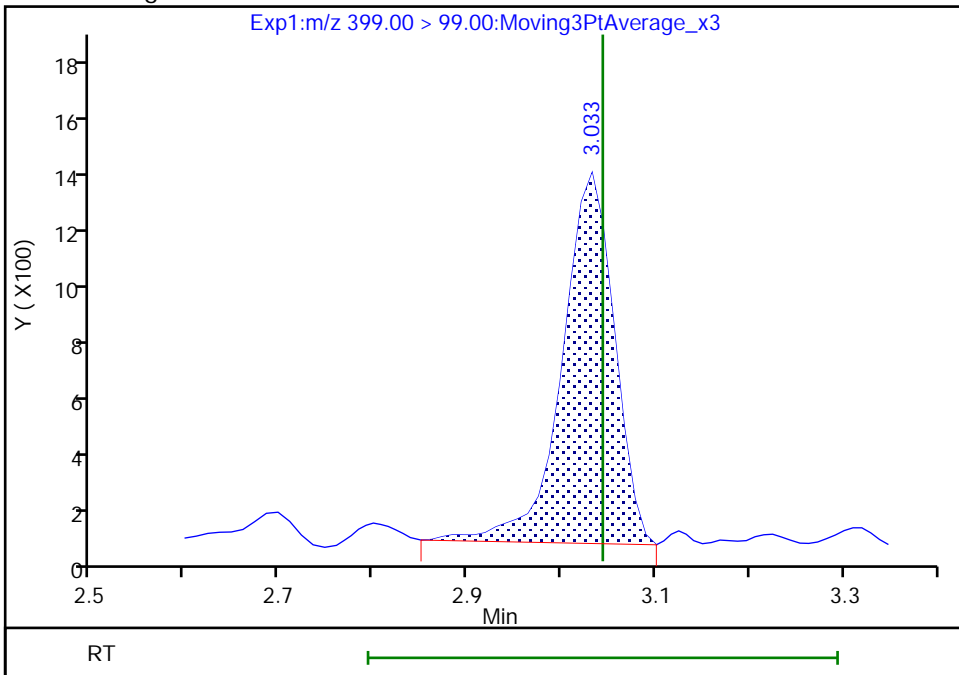
Not Detected  
Expected RT: 3.04

Processing Integration Results



RT: 3.03  
Area: 5140  
Amount: 0.036973  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagery, 27-Dec-2019 14:36:02  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

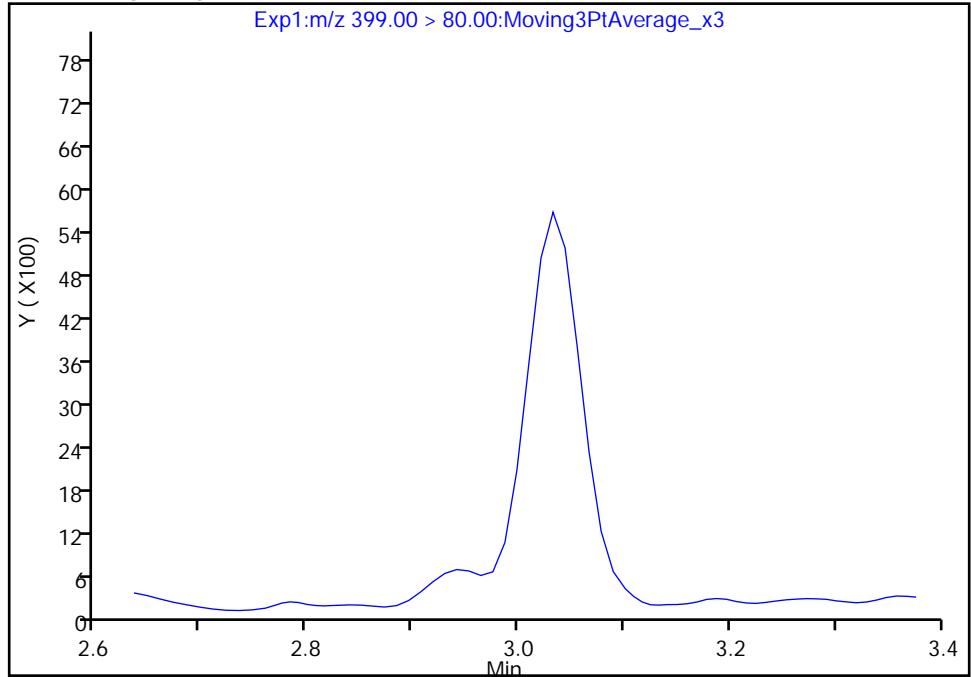
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B019.d  
Injection Date: 24-Dec-2019 16:23:35 Instrument ID: LC812  
Lims ID: 480-164221-C-8-A Lab Sample ID: 200-164221-8  
Client ID: CS SW 01 DER  
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

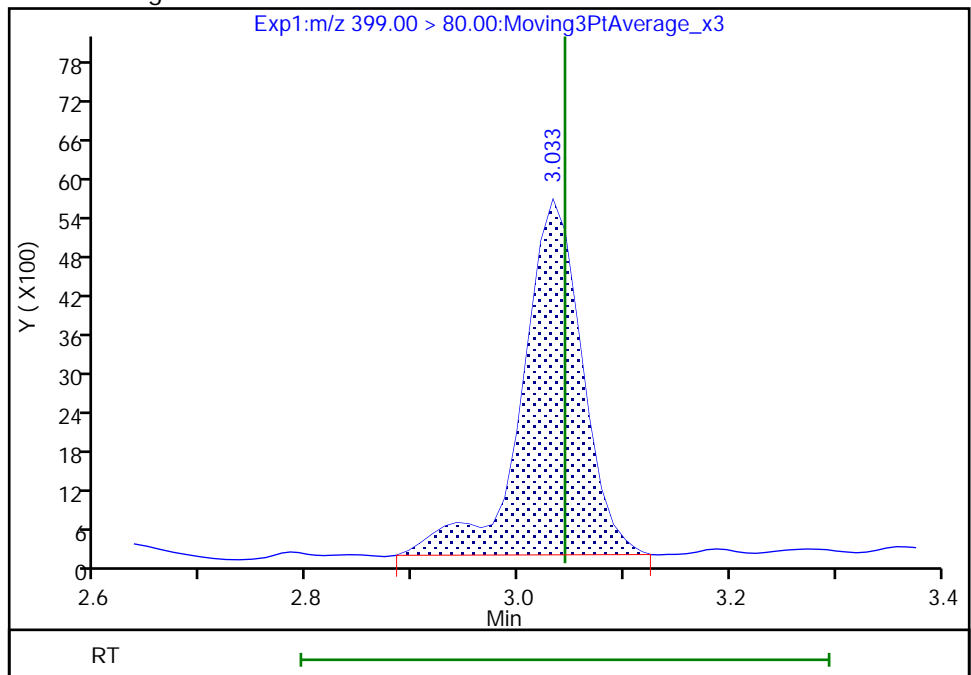
Not Detected  
Expected RT: 3.04

Processing Integration Results



Manual Integration Results

RT: 3.03  
Area: 21912  
Amount: 0.036973  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 14:36:13

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

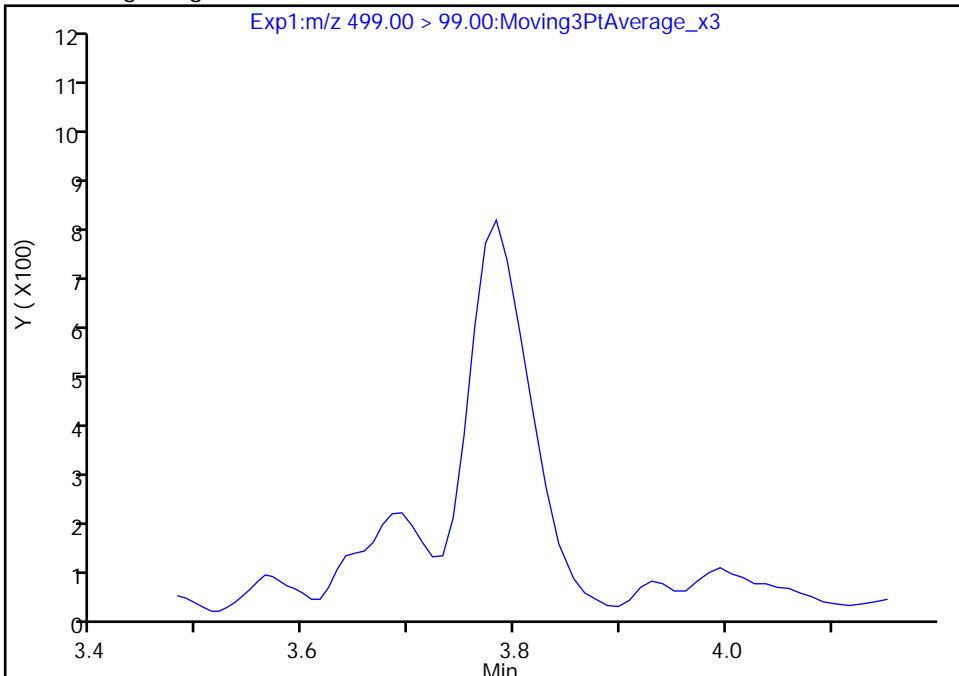
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B019.d  
Injection Date: 24-Dec-2019 16:23:35 Instrument ID: LC812  
Lims ID: 480-164221-C-8-A Lab Sample ID: 200-164221-8  
Client ID: CS SW 01 DER  
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

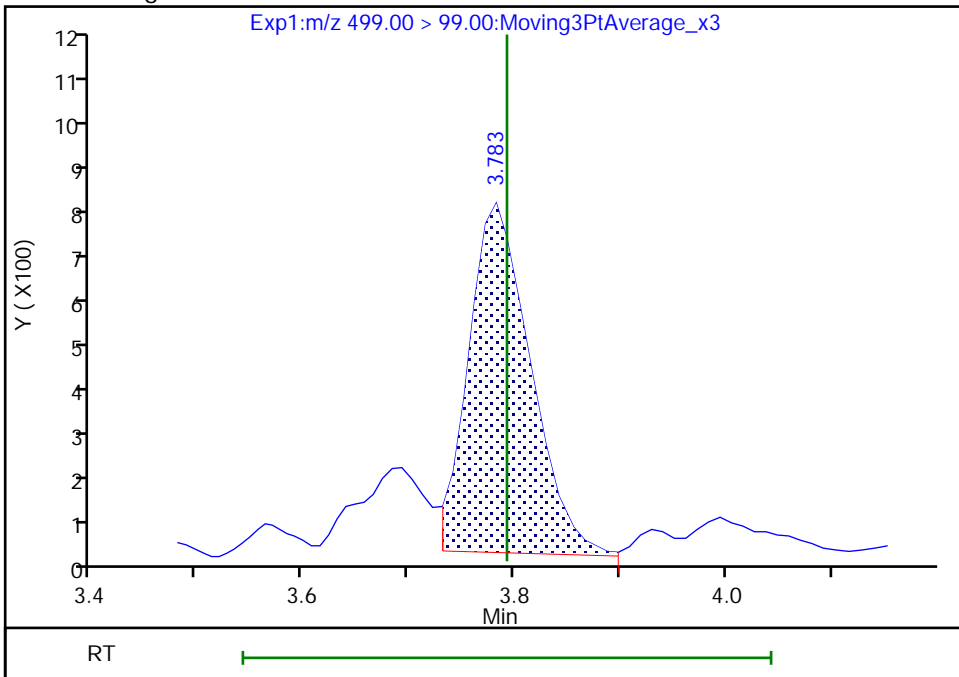
Not Detected  
Expected RT: 3.79

Processing Integration Results



RT: 3.78  
Area: 3020  
Amount: 0.045280  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagery, 27-Dec-2019 14:39:03  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

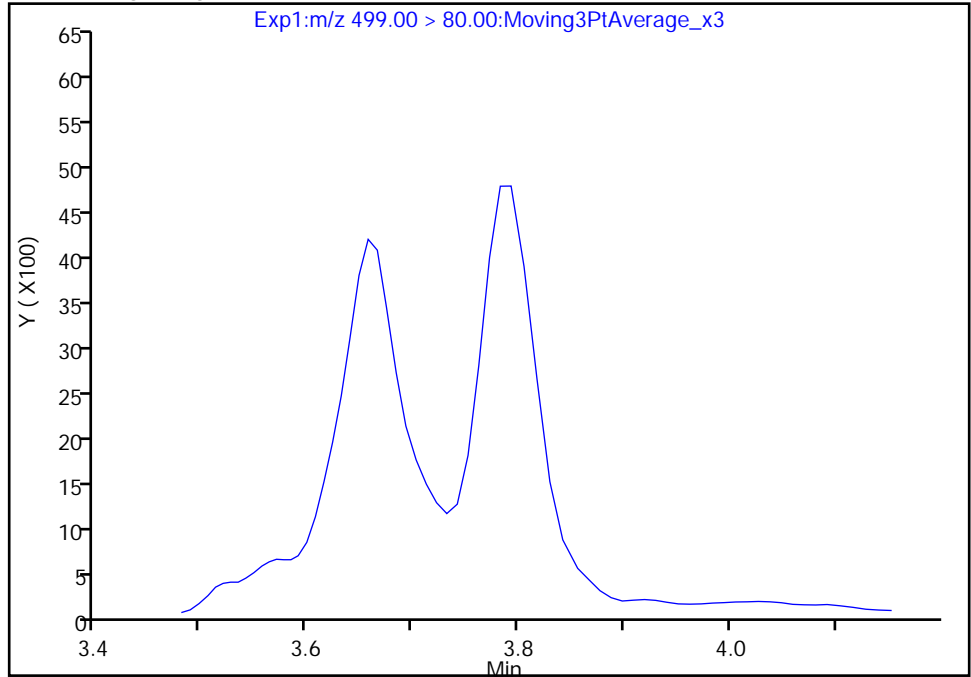
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B019.d  
Injection Date: 24-Dec-2019 16:23:35 Instrument ID: LC812  
Lims ID: 480-164221-C-8-A Lab Sample ID: 200-164221-8  
Client ID: CS SW 01 DER  
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

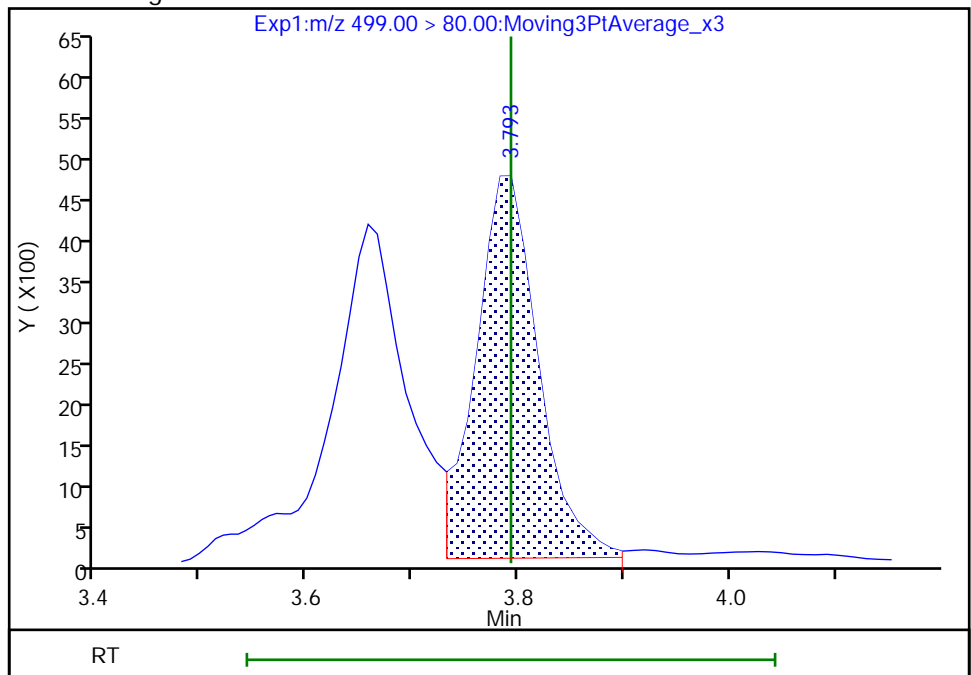
Not Detected  
Expected RT: 3.79

Processing Integration Results



Manual Integration Results

RT: 3.79  
Area: 19077  
Amount: 0.045280  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 14:39:13

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

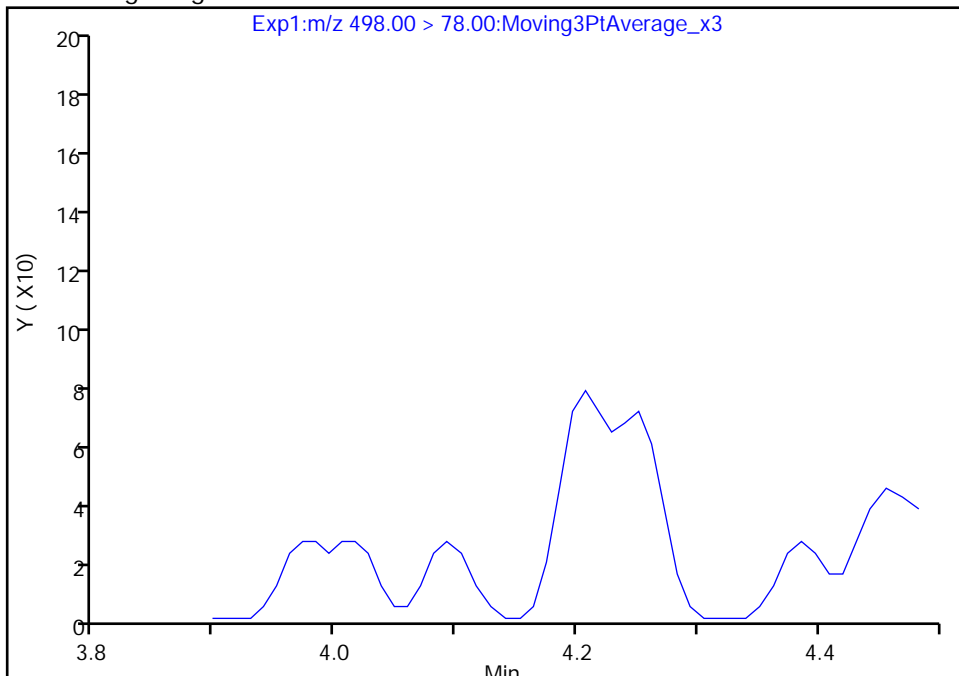
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B019.d  
Injection Date: 24-Dec-2019 16:23:35 Instrument ID: LC812  
Lims ID: 480-164221-C-8-A Lab Sample ID: 200-164221-8  
Client ID: CS SW 01 DER  
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

22 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

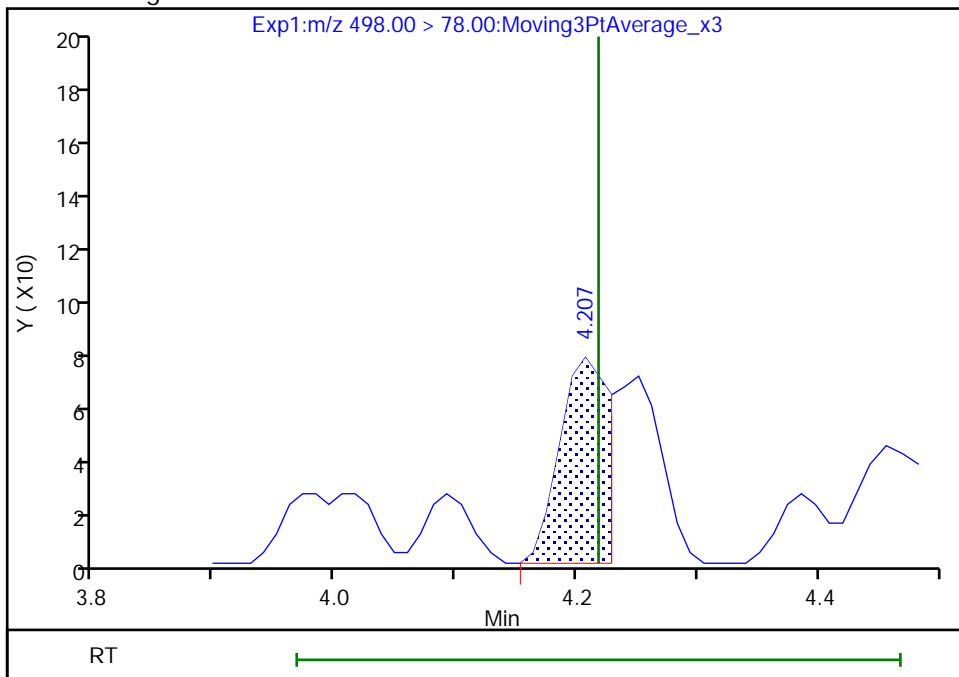
Not Detected  
Expected RT: 4.22

Processing Integration Results



Manual Integration Results

RT: 4.21  
Area: 204  
Amount: 0.000682  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 14:40:36

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

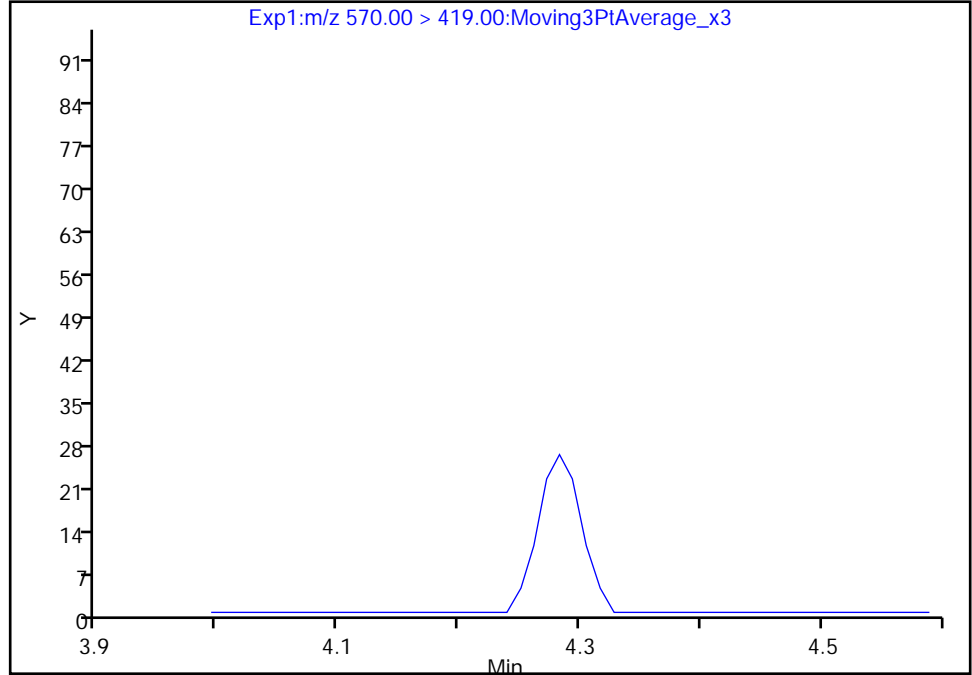
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B019.d  
Injection Date: 24-Dec-2019 16:23:35 Instrument ID: LC812  
Lims ID: 480-164221-C-8-A Lab Sample ID: 200-164221-8  
Client ID: CS SW 01 DER  
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

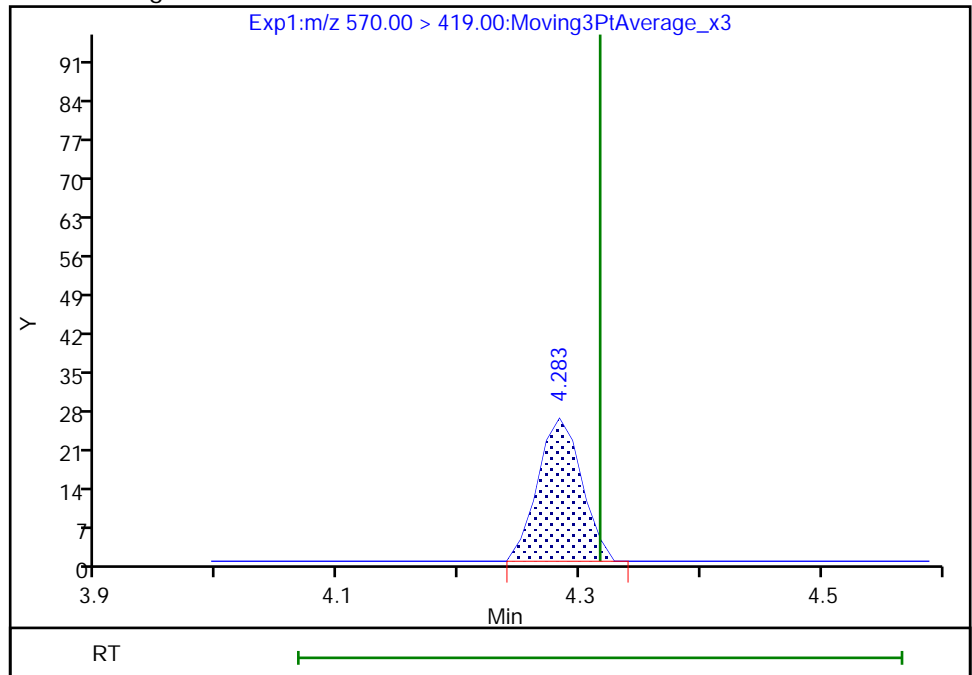
Not Detected  
Expected RT: 4.32

Processing Integration Results



Manual Integration Results

RT: 4.28  
Area: 65  
Amount: 0.001703  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 14:41:30  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

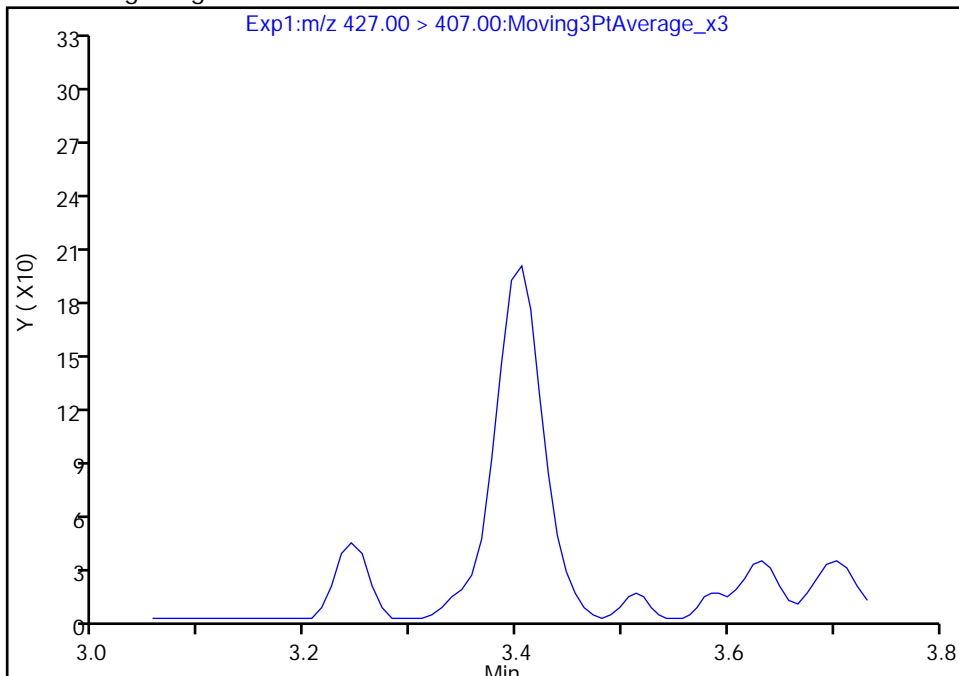
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B019.d  
Injection Date: 24-Dec-2019 16:23:35 Instrument ID: LC812  
Lims ID: 480-164221-C-8-A Lab Sample ID: 200-164221-8  
Client ID: CS SW 01 DER  
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

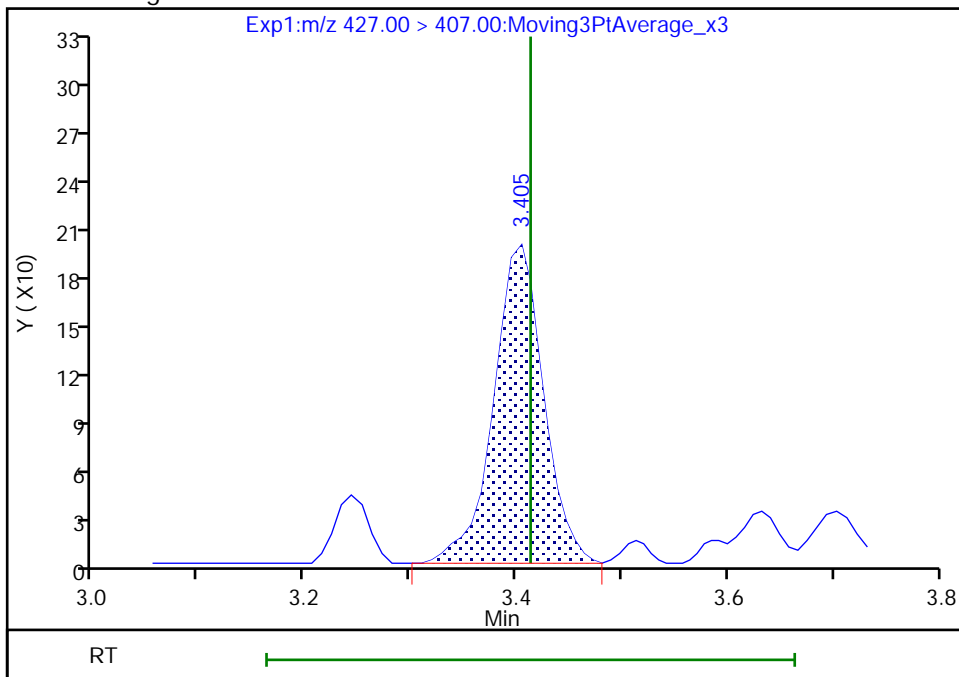
Not Detected  
Expected RT: 3.41

Processing Integration Results



Manual Integration Results

RT: 3.40  
Area: 641  
Amount: 0.010418  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 14:37:42  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

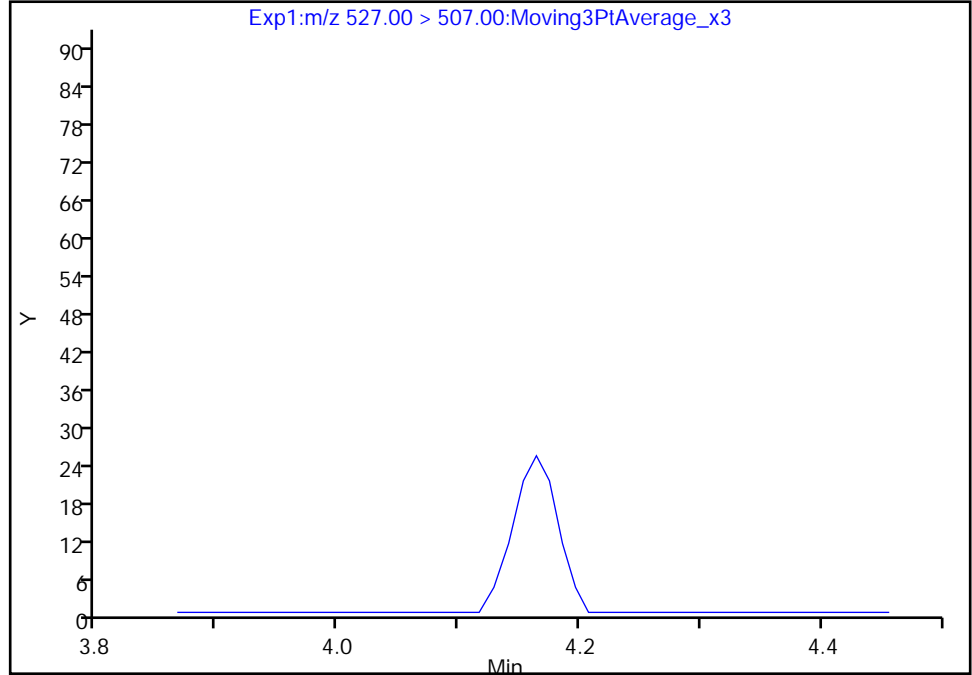
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B019.d  
Injection Date: 24-Dec-2019 16:23:35 Instrument ID: LC812  
Lims ID: 480-164221-C-8-A Lab Sample ID: 200-164221-8  
Client ID: CS SW 01 DER  
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

25 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:, CAS: 39108-34-4

Signal: 1

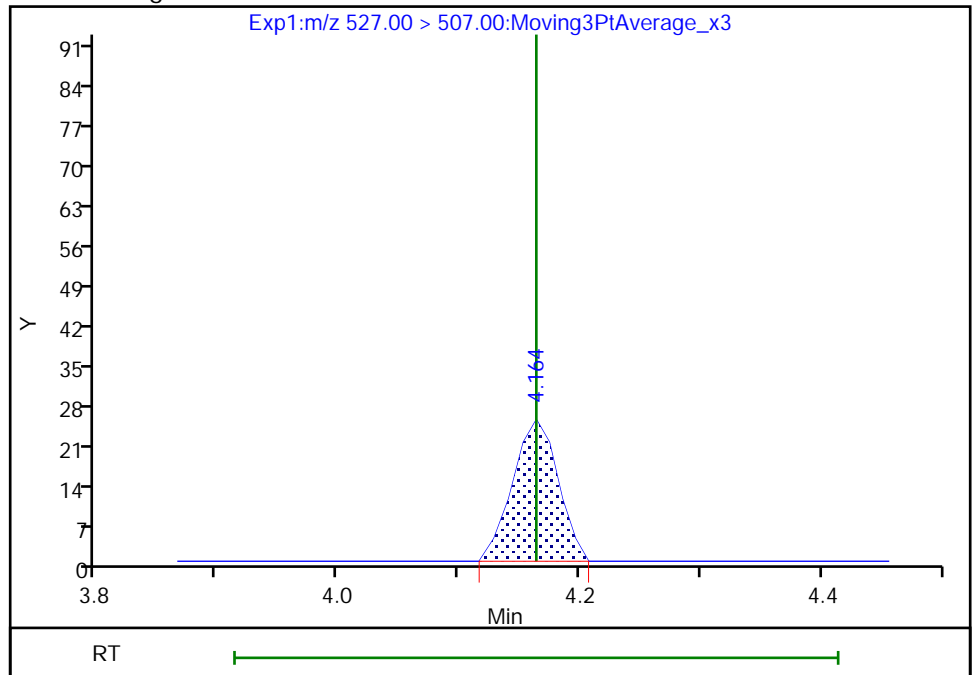
Not Detected  
Expected RT: 4.16

Processing Integration Results



Manual Integration Results

RT: 4.16  
Area: 64  
Amount: 0.001312  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 14:41:19  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS SW 05 DER Lab Sample ID: 480-164221-10  
 Matrix: Water Lab File ID: SC122319B021.d  
 Analysis Method: 537 (modified) Date Collected: 12/11/2019 15:25  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 289.1(mL) Date Analyzed: 12/24/2019 16:39  
 Con. Extract Vol.: 10(mL) Dilution Factor: 1  
 Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	1.4	J	1.7	0.86
2706-90-3	Perfluoropentanoic acid (PFPeA)	0.79	J	1.7	0.54
307-24-4	Perfluorohexanoic acid (PFHxA)	0.72	J	1.7	0.66
375-85-9	Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.79
335-67-1	Perfluorooctanoic acid (PFOA)	1.9		1.7	0.70
375-95-1	Perfluorononanoic acid (PFNA)	0.55	J	1.7	0.23
335-76-2	Perfluorodecanoic acid (PFDA)	ND		1.7	0.67
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.67
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		1.7	0.51
72629-94-8	Perfluorotridecanoic acid (PFTriA)	ND		1.7	0.52
376-06-7	Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.80
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.78	J	1.7	0.42
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	1.4	J	1.7	0.69
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.82
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	1.6	J	1.7	0.53
335-77-3	Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.78
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND		8.6	8.6
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		17	1.5
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		17	1.3
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	4.8
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	2.5

FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS SW 05 DER Lab Sample ID: 480-164221-10  
 Matrix: Water Lab File ID: SC122319B021.d  
 Analysis Method: 537 (modified) Date Collected: 12/11/2019 15:25  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 289.1(mL) Date Analyzed: 12/24/2019 16:39  
 Con. Extract Vol.: 10(mL) Dilution Factor: 1  
 Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	104		50-150
STL01892	13C4 PFHpA	107		50-150
STL00990	13C4 PFOA	101		50-150
STL00991	13C4 PFOS	101		50-150
STL00995	13C5 PFNA	95		50-150
STL00992	13C4 PFBA	85		25-150
STL00993	13C2 PFHxA	97		50-150
STL00996	13C2 PFDA	96		50-150
STL00997	13C2 PFUnA	92		50-150
STL00998	13C2 PFDoA	78		50-150
STL01056	13C8 FOSA	83		25-150
STL01893	13C5 PFPeA	106		25-150
STL02116	13C2 PFTeDA	79		50-150
STL02118	d3-NMeFOSAA	82		50-150
STL02117	d5-NEtFOSAA	87		50-150
STL02279	M2-6:2 FTS	79		25-150
STL02280	M2-8:2 FTS	105		25-150
STL02337	13C3 PFBS	104		50-150

Eurofins TestAmerica, Burlington  
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B021.d  
 Lims ID: 480-164221-C-10-A  
 Client ID: CS SW 05 DER  
 Sample Type: Client  
 Inject. Date: 24-Dec-2019 16:39:57 ALS Bottle#: 21 Worklist Smp#: 21  
 Injection Vol: 20.0 ul Dil. Factor: 1.0000  
 Sample Info: 480-164221-C-10-A  
 Misc. Info.: 200-0039355-021 Plate: 1 Rack: 2  
 Operator ID: lc812tech Instrument ID: LC812  
 Method: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\PFC\_LC812.m  
 Limit Group: LC\_PFC\_ICAL  
 Last Update: 31-Dec-2019 08:24:59 Calib Date: 06-Dec-2019 15:13:26  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Column 1 : C-18 ( 4.60 mm) Det: EXP1  
 Process Host: CTX0330

First Level Reviewer: lautenschlagery Date: 27-Dec-2019 14:59:37  
 Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	1.898	1.908	-0.010	0.555	1460609	2.13	85.0	2655	
2 Perfluorobutanoic acid										M
212.90 > 169.00	1.898	1.908	-0.010	1.000	23937	0.0412		5.1		M
D 3 13C5 PFPeA	267.90 > 223.00	2.257	2.257	0.0	0.660	1386517	2.64	106	4146	
4 Perfluoropentanoic acid										M
262.90 > 219.00	2.257	2.271	-0.014	1.000	14315	0.0228		0.8		M
D 47 13C3 PFBS	301.90 > 80.00	2.271	2.285	-0.014	0.664	1514253	2.42	104	518825	
5 Perfluorobutanesulfonic acid										M
298.90 > 80.00	2.285	2.285	0.0	1.006	15945	0.0225	Target=2.03	18.3		M
298.90 > 99.00	2.271	2.285	-0.014	1.000	6599		2.42(1.01-3.04)	4.8		
D 7 13C2 PFHxA	315.00 > 270.00	2.648	2.648	0.0	0.774	1419573	2.42	96.9	5633	
6 Perfluorohexanoic acid										M
313.00 > 269.00	2.648	2.661	-0.013	1.000	12020	0.0207	Target=13.76	3.4		
313.00 > 119.00	2.648	2.661	-0.013	1.000	1541		7.80(6.88-20.64)	5.6		M
D 11 18O2 PFHxS	403.00 > 84.00	3.033	3.044	-0.011	0.886	1221695	2.47	104	10007	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.033	3.044	-0.011	1.000	23313	0.0399	Target=3.90	36.9		
399.00 > 99.00	3.033	3.044	-0.011	1.000	4051		5.75(1.95-5.85)	10.2		M
D 9 13C4 PFHpA	367.00 > 322.00	3.044	3.044	0.0	0.890	1491813	2.69	107	5332	
10 Perfluoroheptanoic acid										M
363.00 > 319.00	3.044	3.044	0.0	1.000	11630	0.0184	Target=3.95	3.8		
363.00 > 169.00	3.044	3.044	0.0	1.000	4580		2.54(1.97-5.92)	19.3		M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
16 Perfluoroheptanesulfonic acid										M
449.00 > 80.00	3.413	3.413	0.0	0.900	4401	0.009029	Target=6.46	28.5		
449.00 > 99.00	3.405	3.413	-0.008	0.898	490		8.98(3.23-9.69)	2.4		M
13 1H,1H,2H,2H-perfluorooctanesulfoni										M
427.00 > 407.00	3.413	3.413	0.0	1.002	1031	0.0163		33.6		M
D 12 M2-6:2 FTS										
429.00 > 81.00	3.405	3.413	-0.008	0.995	158991	1.87		78.7	423	
15 Perfluorooctanoic acid										M
413.00 > 369.00	3.422	3.430	-0.008	1.000	35607	0.0537	Target=2.40	13.1		M
413.00 > 169.00	3.422	3.430	-0.008	1.000	18113		1.97(1.20-3.60)	88.9		
D 14 13C4 PFOA										
417.00 > 372.00	3.422	3.430	-0.008	1.000	1494059	2.53		101	3656	
* 62 13C2 PFOA										
415.00 > 370.00	3.422	3.430	-0.008		1622199	2.50			4814	
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.793	0.0	1.108	951066	2.42		101	4157	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.793	3.793	0.0	1.000	19730	0.0459	Target=5.74	49.4		M
499.00 > 99.00	3.783	3.793	-0.010	0.997	3388		5.82(2.87-8.61)	14.5		M
D 19 13C5 PFNA										
468.00 > 423.00	3.817	3.817	0.0	1.116	1290477	2.38		95.2	4636	
20 Perfluorononanoic acid										M
463.00 > 419.00	3.817	3.817	0.0	1.000	8102	0.0160	Target=7.01	3.9		M
463.00 > 169.00	3.817	3.817	0.0	1.000	842		9.62(3.50-10.51)	17.8		M
D 23 13C2 PFDA										
515.00 > 470.00	4.153	4.164	-0.011	1.214	1281682	2.40		96.0	6800	
24 Perfluorodecanoic acid										M
513.00 > 469.00	4.164	4.164	0.0	1.003	4039	0.008143	Target=7.28	4.9		
513.00 > 169.00	4.129	4.164	-0.035	0.994	460		8.78(3.64-10.91)	4.6		M
25 1H,1H,2H,2H-perfluorodecanesulfoni										M
527.00 > 507.00	4.164	4.164	0.0	1.000	317	0.006480		7.2		M
D 26 M2-8:2 FTS										
529.00 > 81.00	4.164	4.175	-0.011	1.217	253827	2.50		105	888	
D 21 13C8 FOSA										
506.00 > 78.00	4.207	4.218	-0.011	1.230	1449180	2.07		83.0	4315	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.207	4.218	-0.011	1.000	3950	0.006848			43.2	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.305	4.305	0.0	1.258	106068	2.06		82.5	1551	
29 Perfluorodecanesulfonic acid										M
599.00 > 80.00	4.409	4.409	0.0	1.162	2573	0.008986	Target=2.76	18.6		
599.00 > 99.00	4.397	4.409	-0.012	1.159	899		2.86(1.38-4.14)	10.7		M
D 30 13C2 PFUnA										
565.00 > 520.00	4.431	4.443	-0.012	1.295	1046552	2.30		92.2	6653	
31 Perfluoroundecanoic acid										M
563.00 > 519.00	4.431	4.443	-0.012	1.000	4775	0.0135	Target=5.78	7.0		M
563.00 > 169.00	4.443	4.443	0.0	1.003	1088		4.39(2.89-8.67)	16.7		M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
33 N-ethylperfluorooctanesulfonamidoa										M
584.00 > 419.00	4.456	4.456	0.0	1.003	309	0.007536			4.9	M
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.443	4.456	-0.013	1.298	123850	2.17		86.9	949	
37 Perfluorododecanoic acid										M
613.00 > 569.00	4.683	4.683	0.0	1.000	4111	0.0114	Target=5.13		1.7	M
613.00 > 169.00	4.683	4.683	0.0	1.000	1017		4.04(2.56-7.69)		21.5	M
D 36 13C2 PFDaA										
615.00 > 570.00	4.683	4.683	0.0	1.369	971959	1.95		78.0	6252	
41 Perfluorotridecanoic acid										M
663.00 > 619.00	4.897	4.906	-0.009	1.046	3130	0.009171	Target=3.82		1.6	M
663.00 > 169.00	4.897	4.906	-0.009	1.046	1116		2.80(1.91-5.74)		15.3	M
42 Perfluorotetradecanoic acid										M
713.00 > 169.00	5.108	5.108	0.0	1.003	1088	0.0165	Target=1.05		20.3	M
713.00 > 219.00	5.085	5.108	-0.023	0.998	892		1.22(0.52-1.57)		15.4	M
D 43 13C2 PFTeDA										
715.00 > 670.00	5.094	5.108	-0.014	1.489	821016	1.97		78.7	6482	

**QC Flag Legend**

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B021.d

Injection Date: 24-Dec-2019 16:39:57

Instrument ID: LC812

Lims ID: 480-164221-C-10-A

Lab Sample ID: 200-164221-10

Client ID: CS SW 05 DER

Operator ID: lc812tech

ALS Bottle#: 21

Worklist Smp#: 21

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

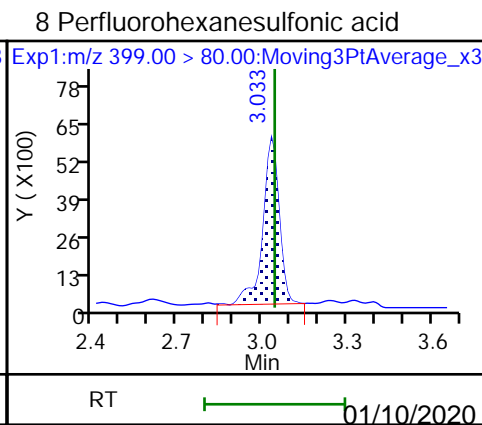
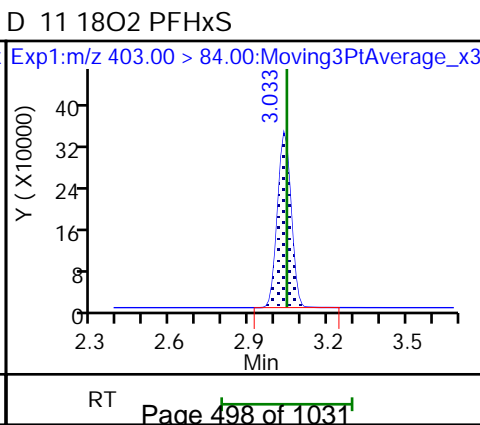
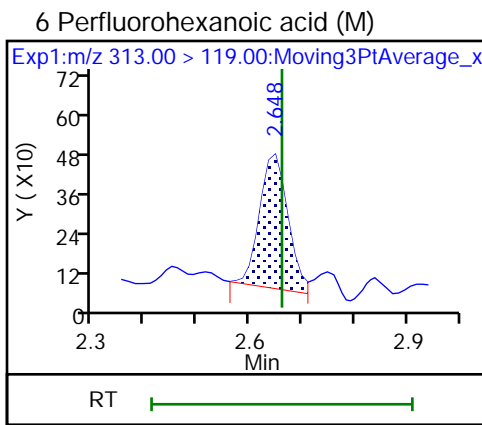
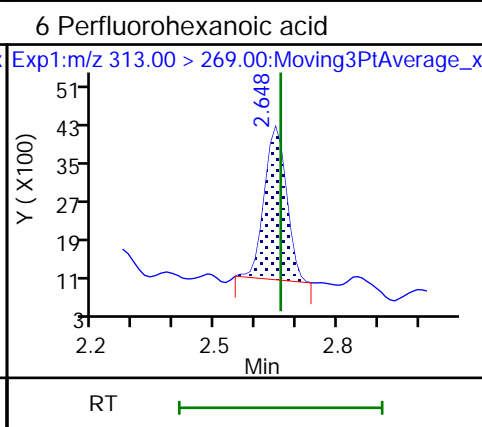
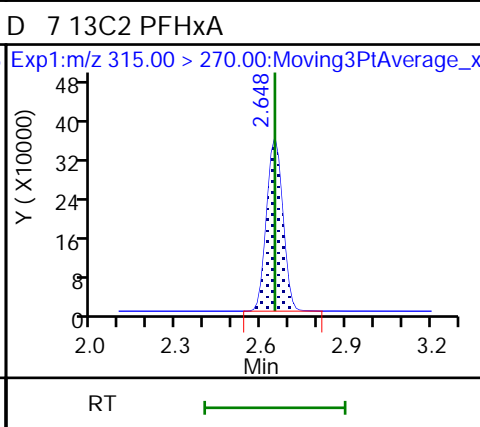
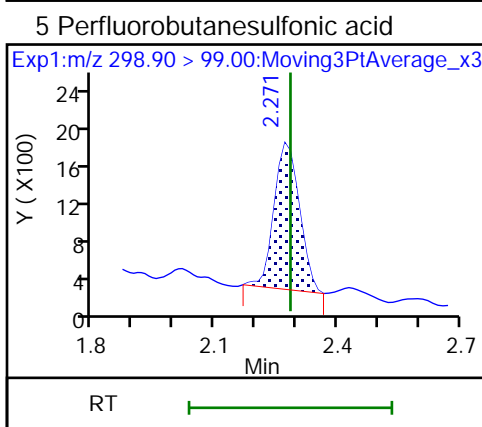
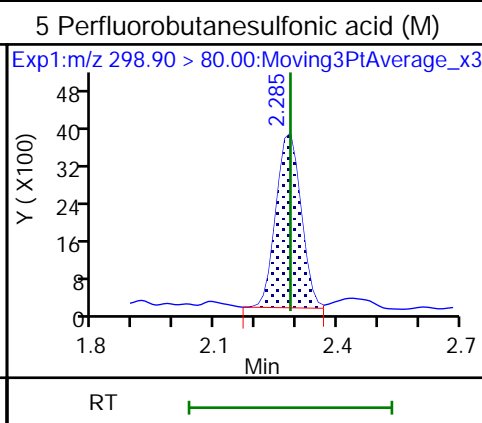
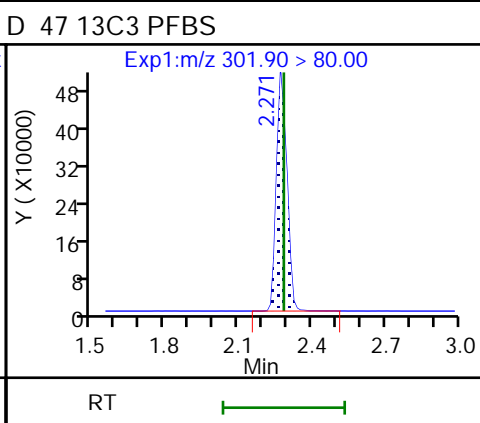
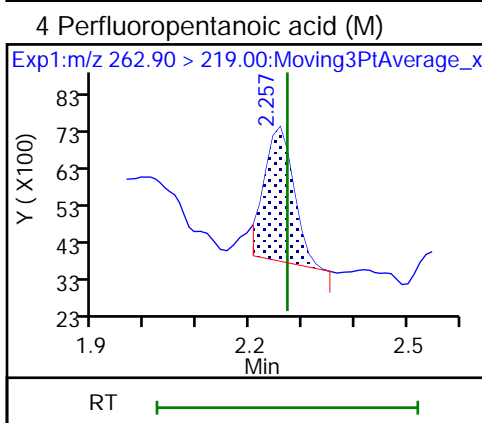
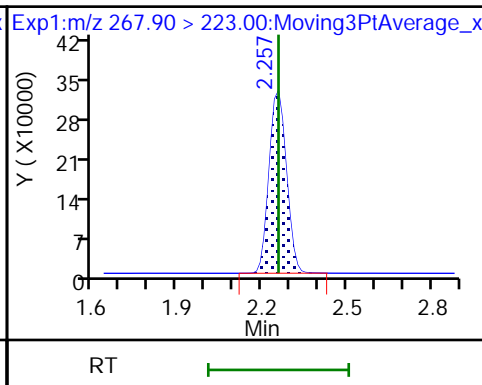
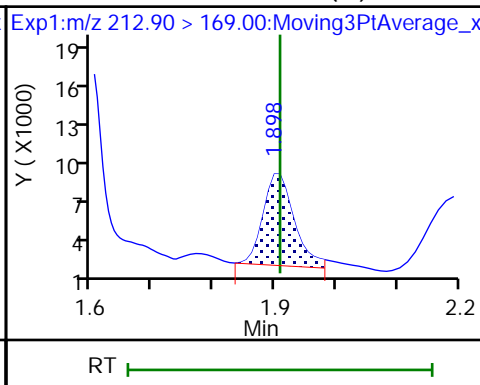
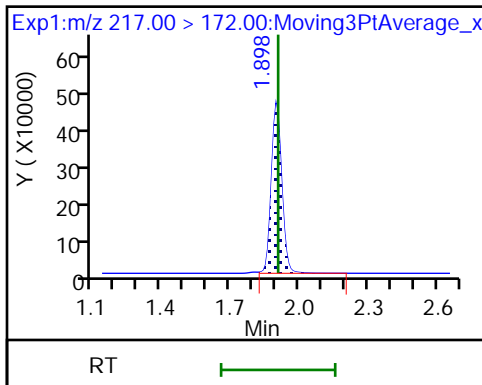
Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

D 1 13C4 PFBA

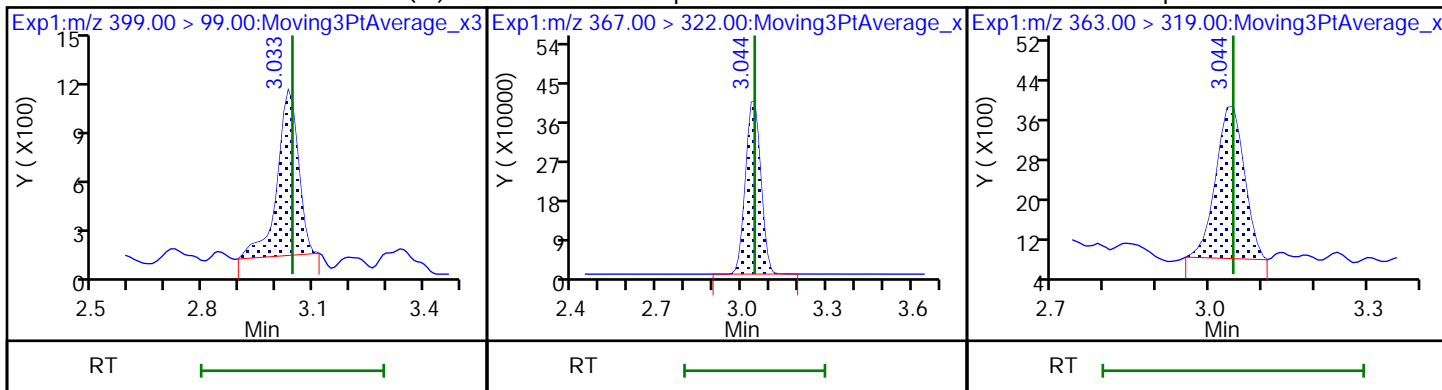
2 Perfluorobutanoic acid (M)

D 3 13C5 PFPeA



8 Perfluorohexanesulfonic acid (M) D 9 13C4 PFHpA

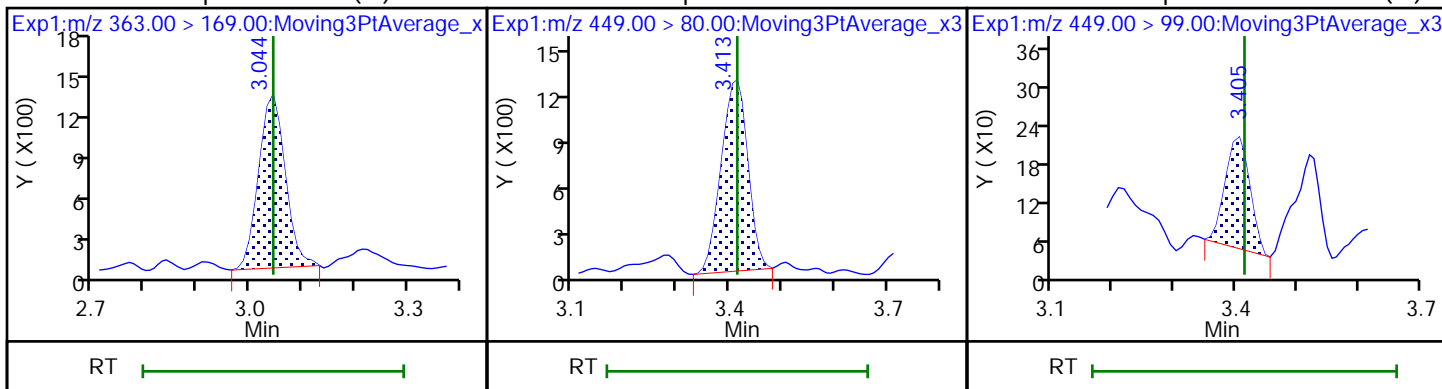
10 Perfluoroheptanoic acid



10 Perfluoroheptanoic acid (M)

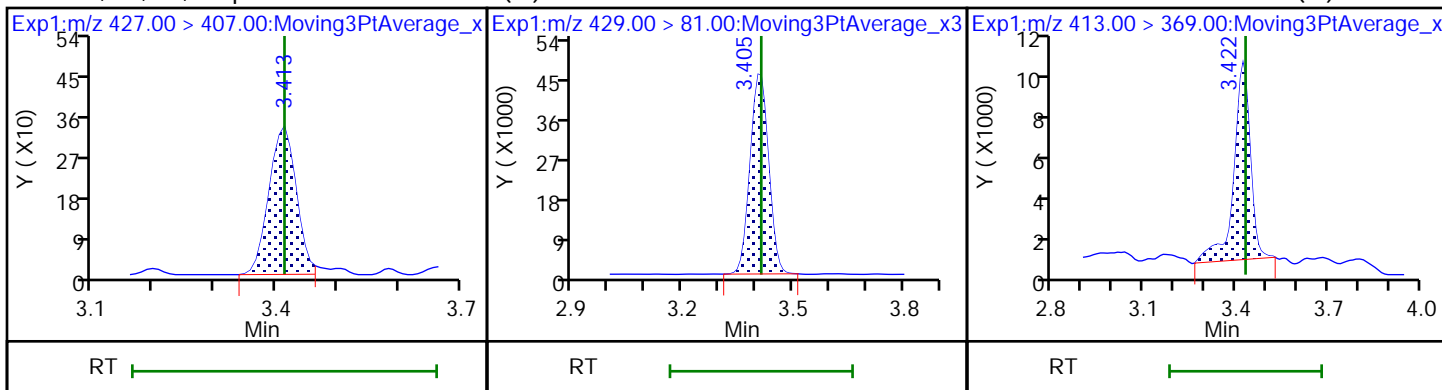
16 Perfluoroheptanesulfonic acid

16 Perfluoroheptanesulfonic acid (M)



13 1H,1H,2H,2H-perfluorooctanesulfonate (M) M2-6:2 FTS

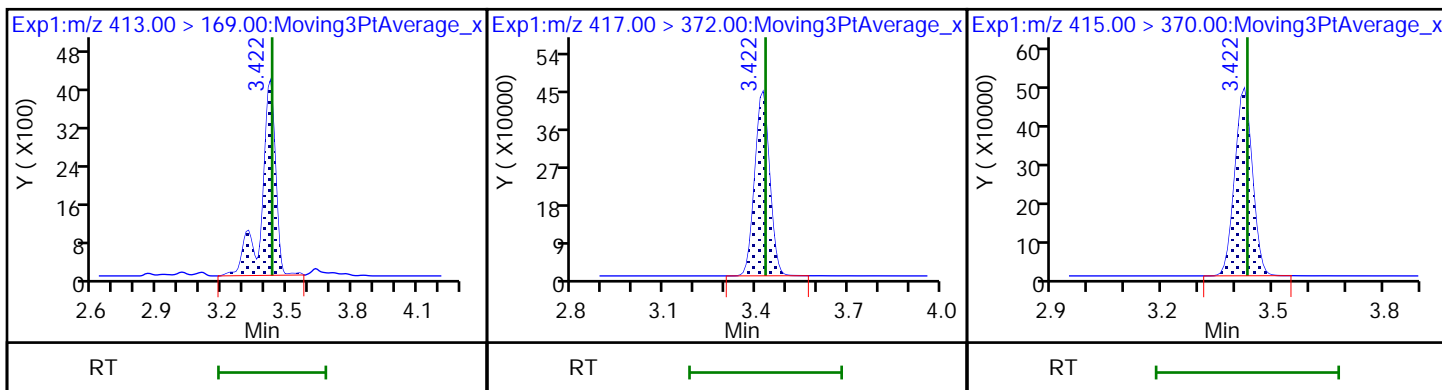
15 Perfluorooctanoic acid (M)



15 Perfluorooctanoic acid

D 14 13C4 PFOA

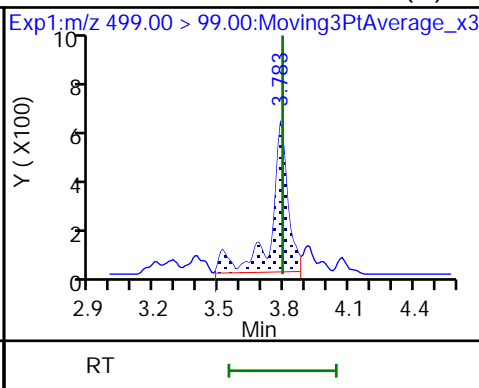
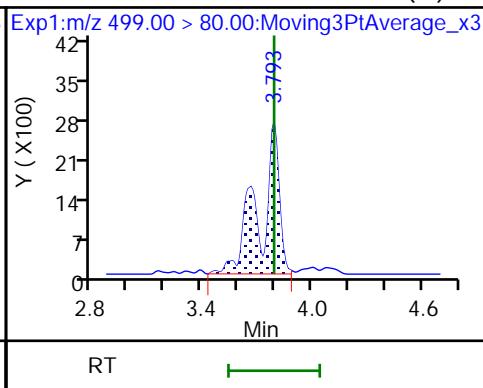
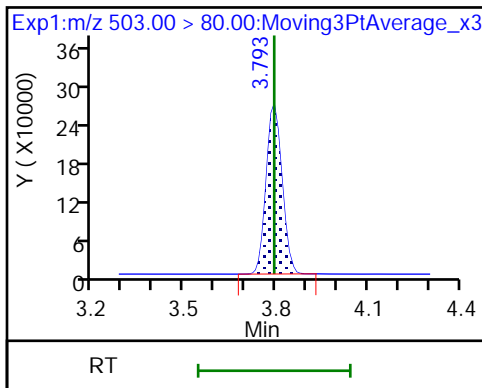
\* 62 13C2 PFOA



D 18 13C4 PFOS

17 Perfluorooctanesulfonic acid (M)

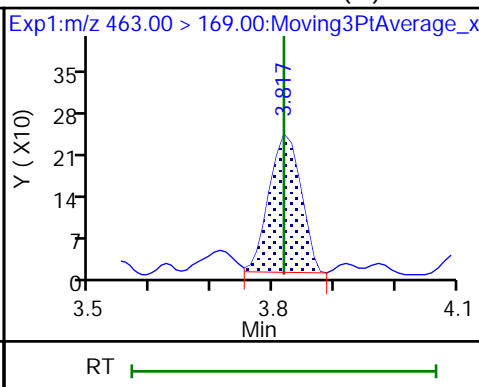
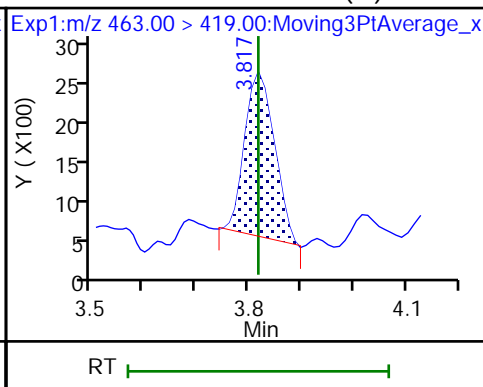
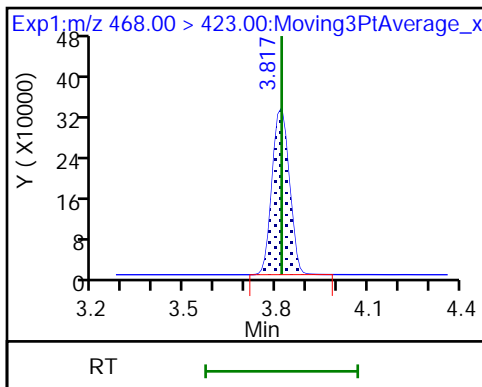
17 Perfluorooctanesulfonic acid (M)



D 19 13C5 PFNA

20 Perfluorononanoic acid (M)

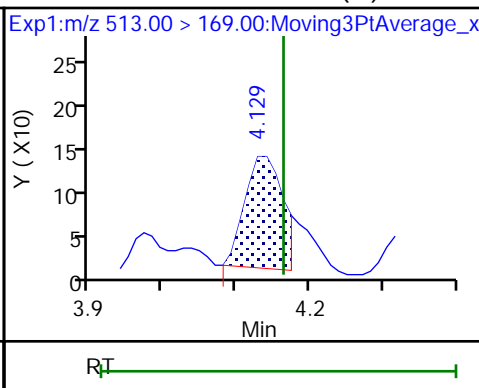
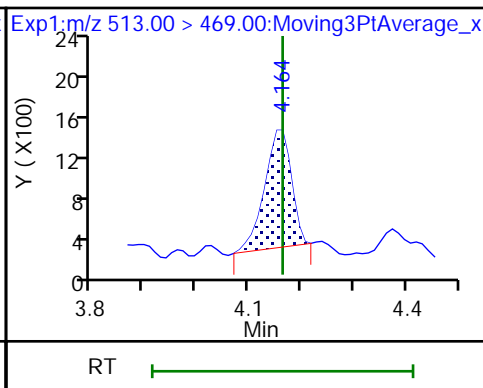
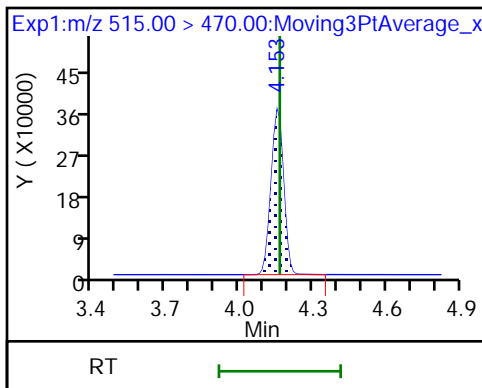
20 Perfluorononanoic acid (M)



D 23 13C2 PFDA

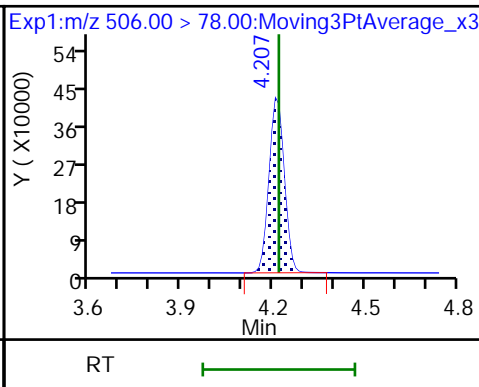
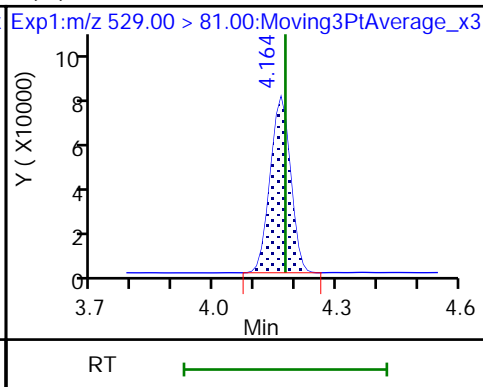
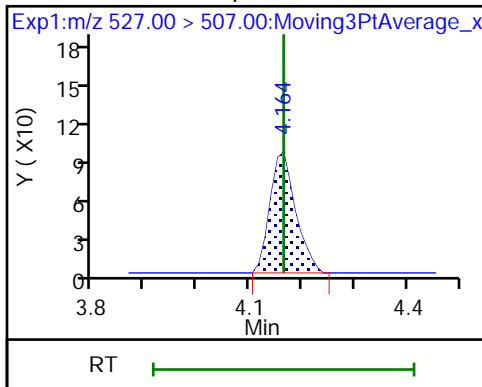
24 Perfluorodecanoic acid

24 Perfluorodecanoic acid (M)

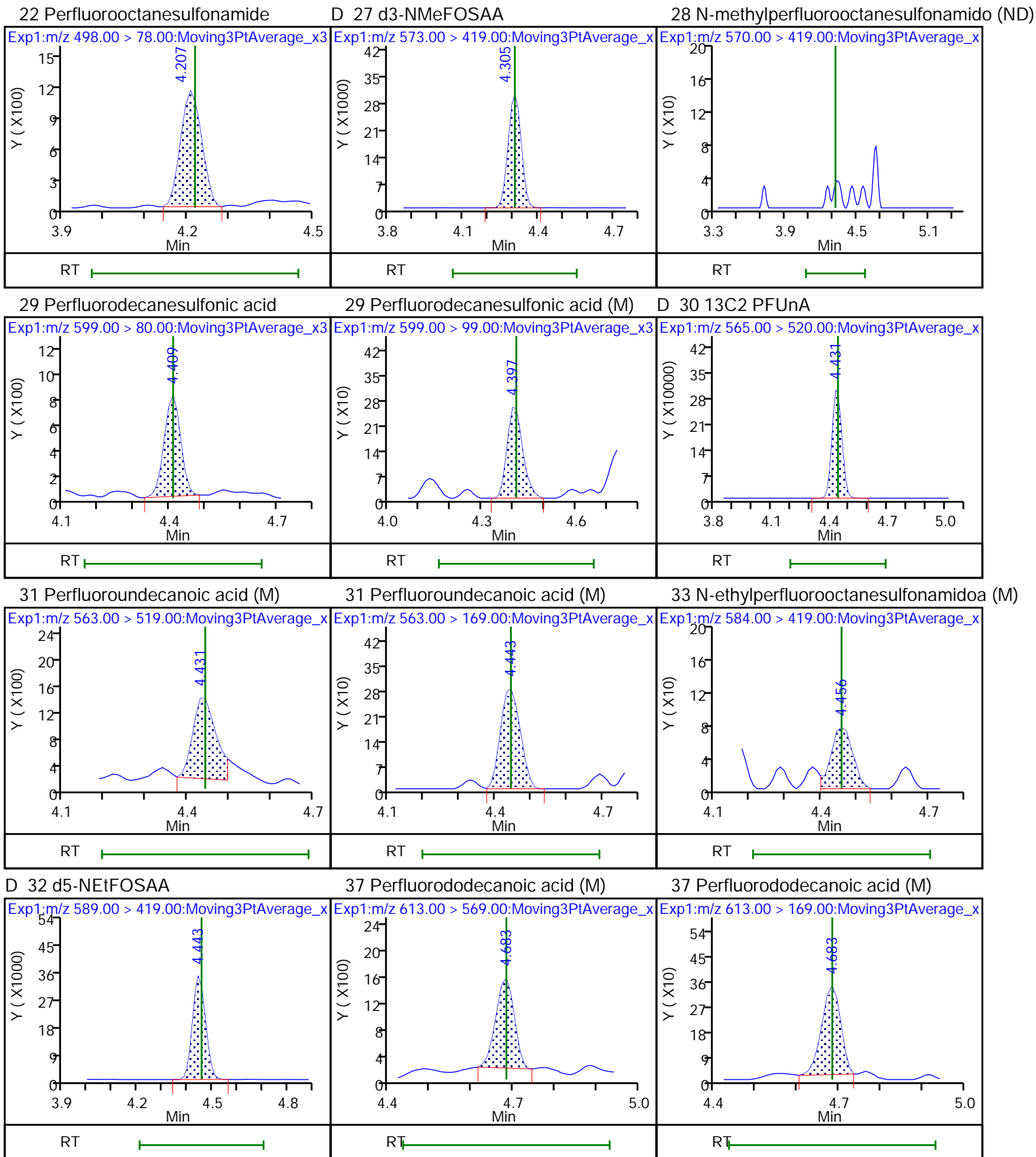


25 1H,1H,2H,2H-perfluorodecanesulfonic acid (M) M2-8:2 FTS

D 21 13C8 FOSA



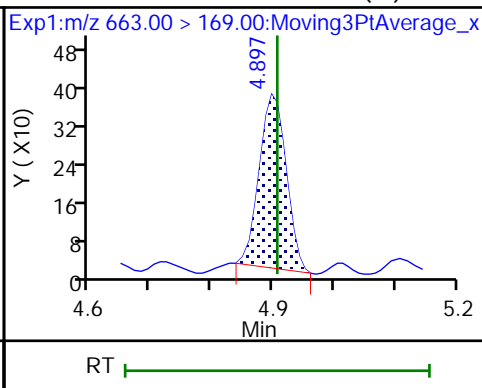
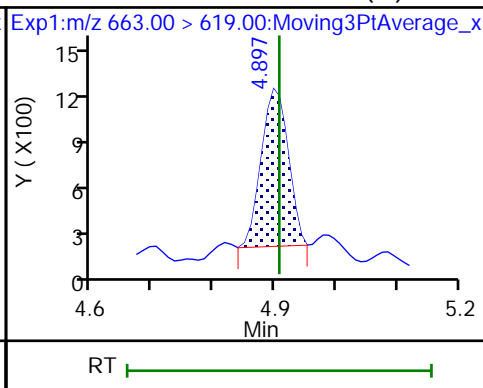
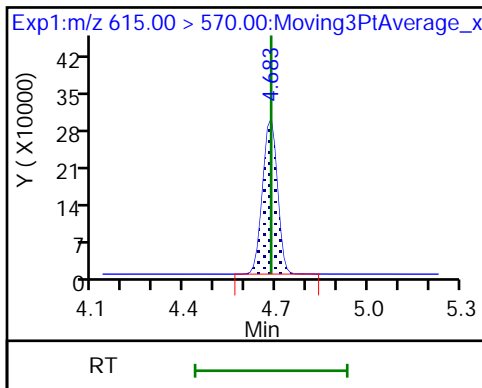




D 36 13C2 PFDaA

41 Perfluorotridecanoic acid (M)

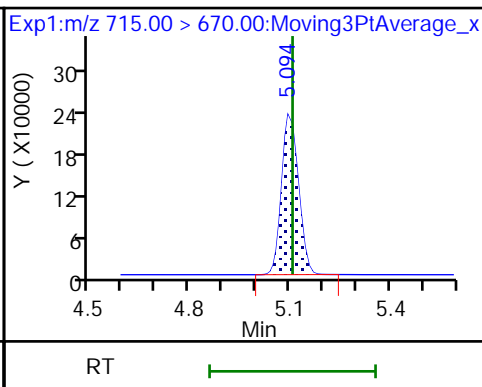
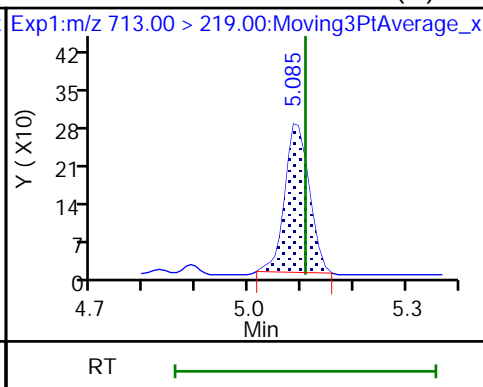
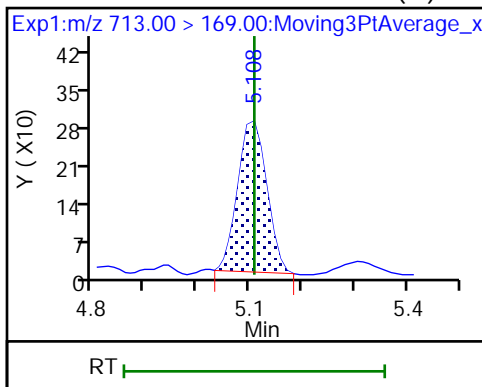
41 Perfluorotridecanoic acid (M)



42 Perfluorotetradecanoic acid (M)

42 Perfluorotetradecanoic acid (M)

D 43 13C2 PFTeDA



Eurofins TestAmerica, Burlington

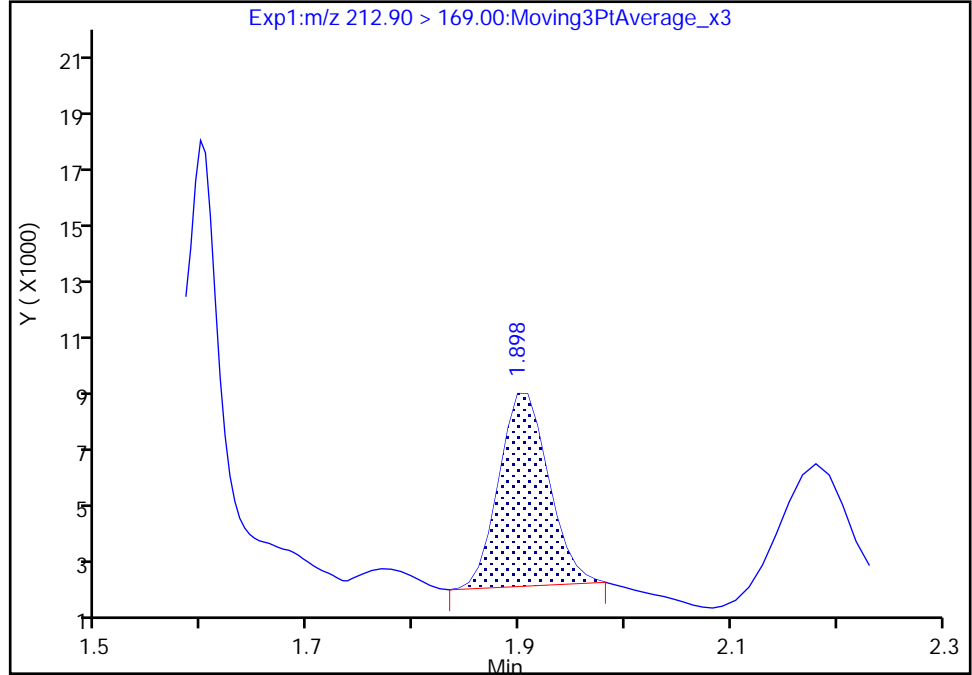
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Injection Date: 24-Dec-2019 16:39:57 Instrument ID: LC812  
Lims ID: 480-164221-C-10-A Lab Sample ID: 200-164221-10  
Client ID: CS SW 05 DER  
Operator ID: lc812tech ALS Bottle#: 21 Worklist Smp#: 21  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

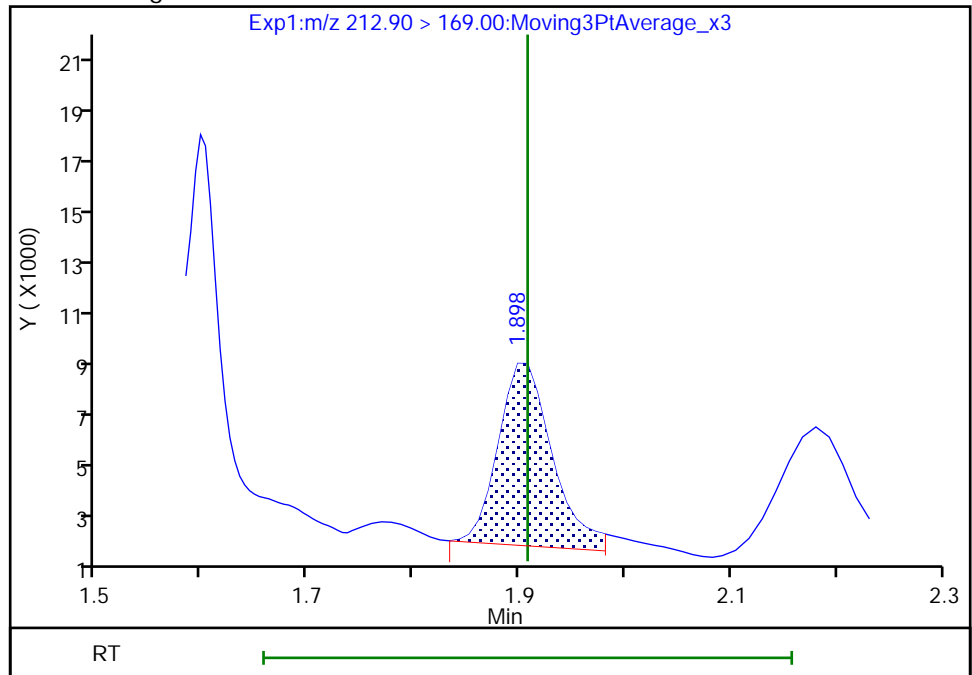
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Area: 21168  
Amount: 0.036417  
Amount Units: ng/ml

Processing Integration Results



RT: 1.90  
Area: 23937  
Amount: 0.041181  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 14:48:00

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

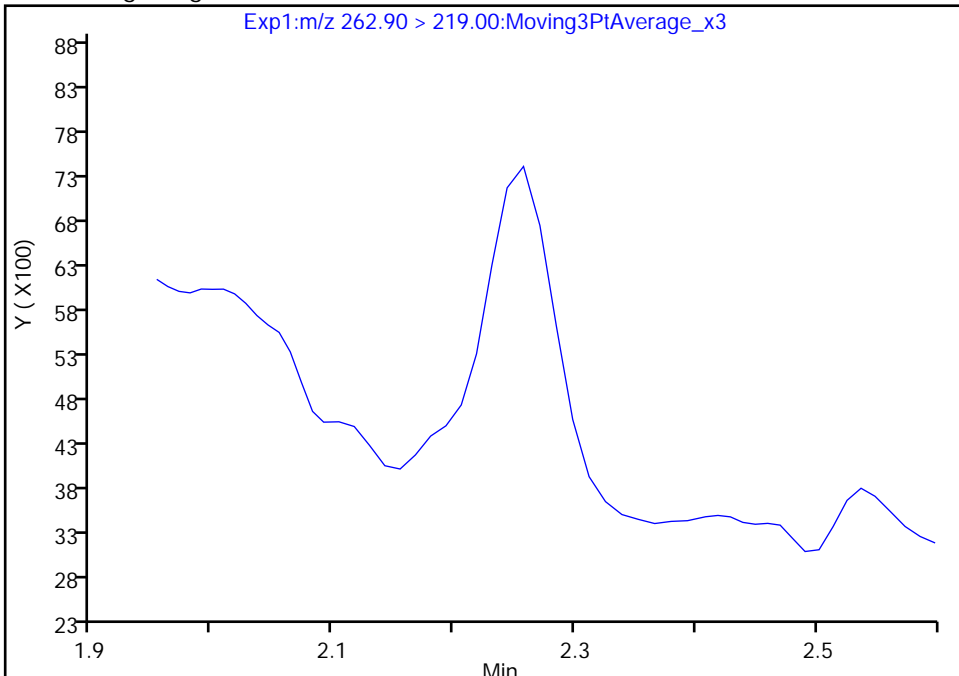
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Injection Date: 24-Dec-2019 16:39:57 Instrument ID: LC812  
Lims ID: 480-164221-C-10-A Lab Sample ID: 200-164221-10  
Client ID: CS SW 05 DER  
Operator ID: lc812tech ALS Bottle#: 21 Worklist Smp#: 21  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

4 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

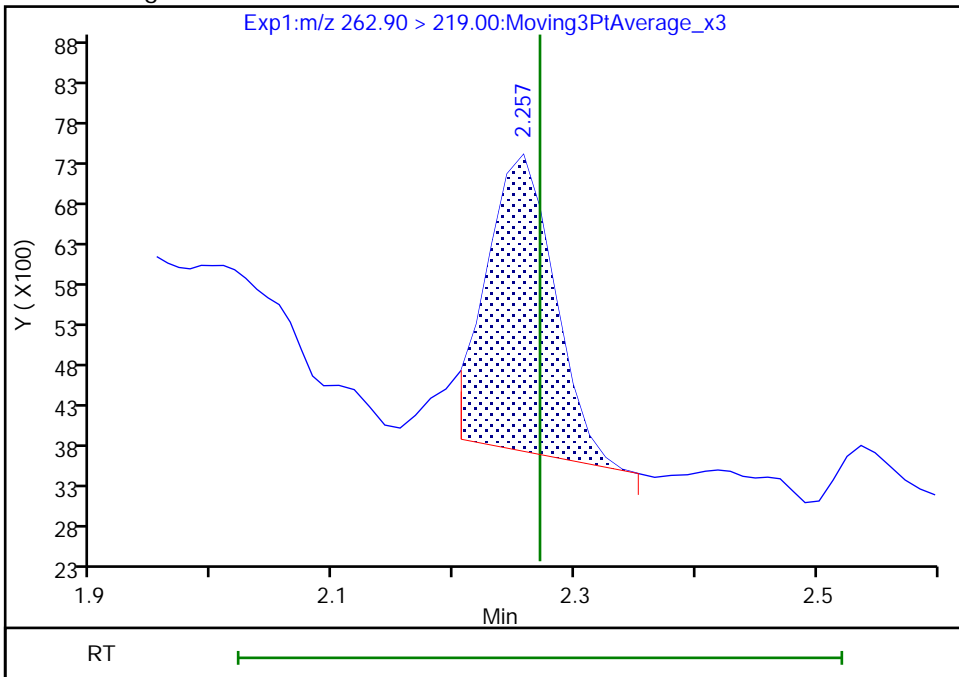
Not Detected  
Expected RT: 2.27

Processing Integration Results



Manual Integration Results

RT: 2.26  
Area: 14315  
Amount: 0.022794  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 14:48:43

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

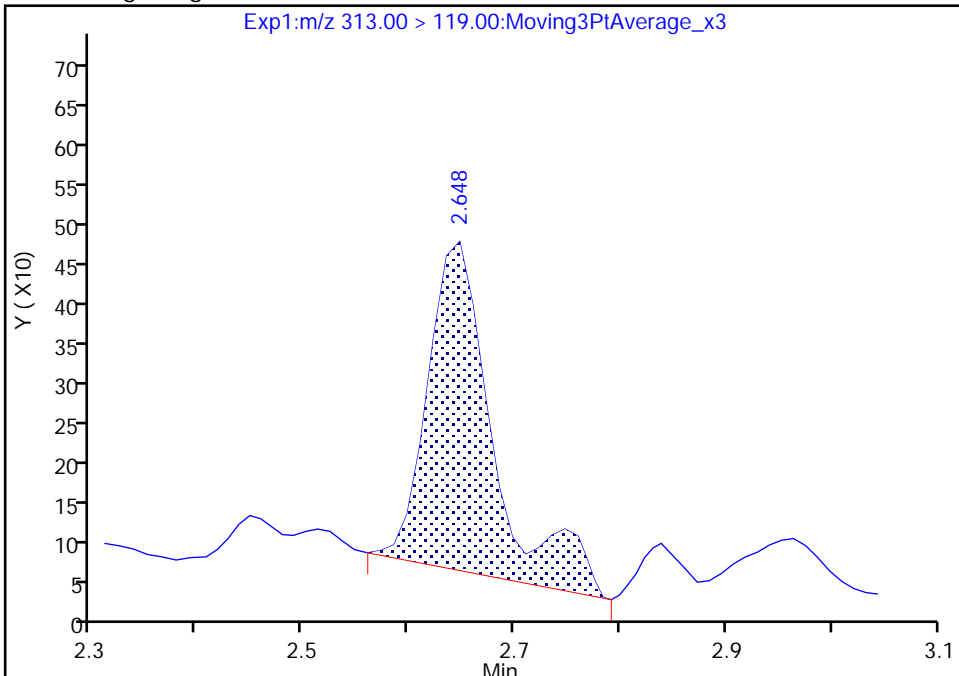
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B021.d  
Injection Date: 24-Dec-2019 16:39:57 Instrument ID: LC812  
Lims ID: 480-164221-C-10-A Lab Sample ID: 200-164221-10  
Client ID: CS SW 05 DER  
Operator ID: lc812tech ALS Bottle#: 21 Worklist Smp#: 21  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

6 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 2

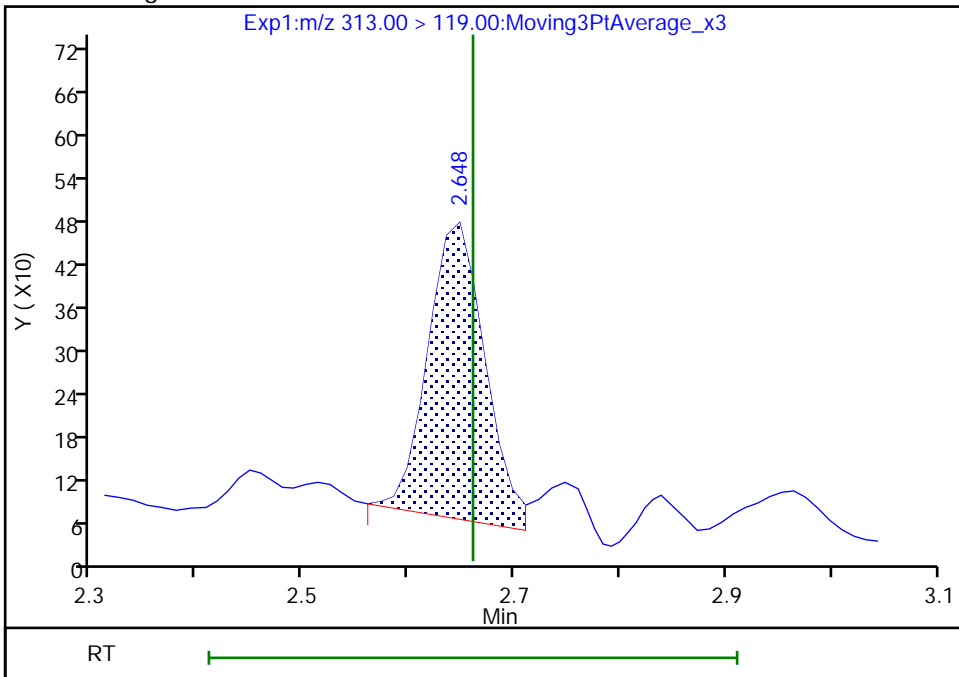
RT: 2.65  
Area: 1779  
Amount: 0.020733  
Amount Units: ng/ml

Processing Integration Results



RT: 2.65  
Area: 1541  
Amount: 0.020733  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 14:49:43

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

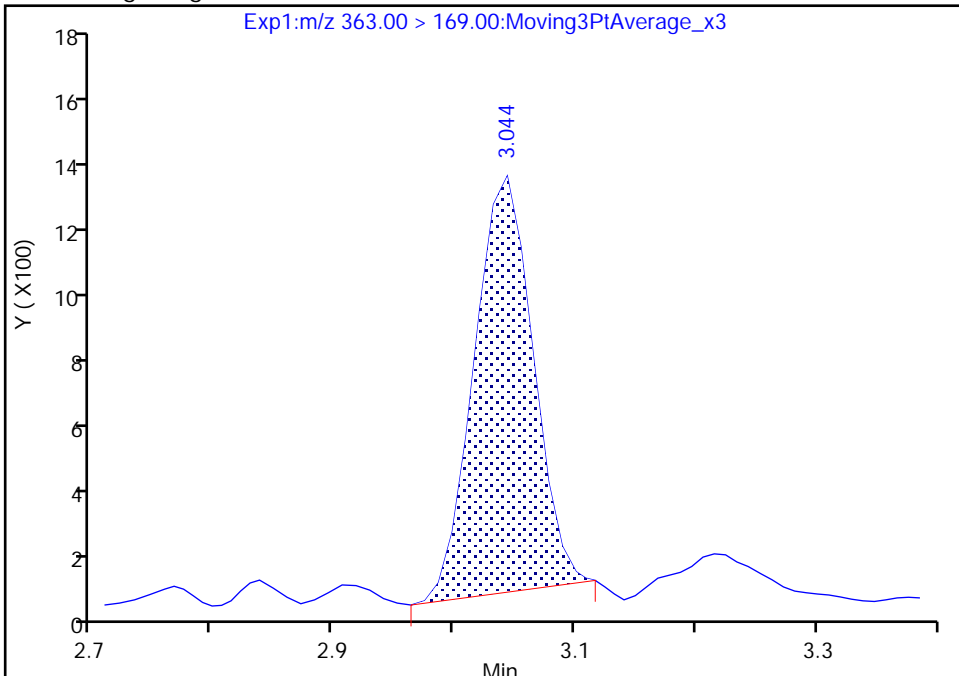
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B021.d  
Injection Date: 24-Dec-2019 16:39:57 Instrument ID: LC812  
Lims ID: 480-164221-C-10-A Lab Sample ID: 200-164221-10  
Client ID: CS SW 05 DER  
Operator ID: lc812tech ALS Bottle#: 21 Worklist Smp#: 21  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

10 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 2

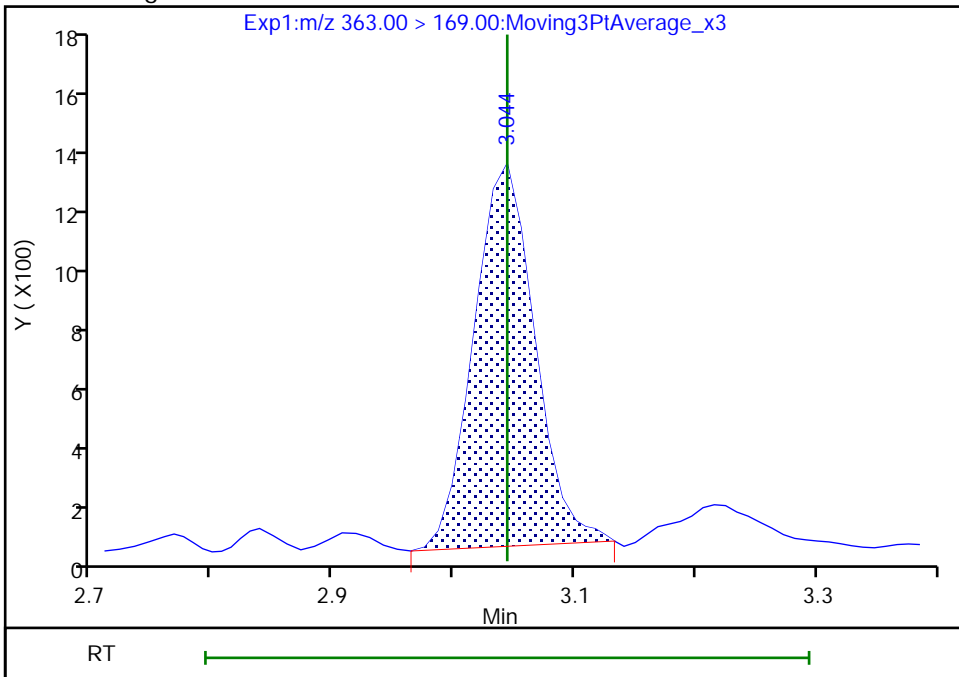
RT: 3.04  
Area: 4351  
Amount: 0.018434  
Amount Units: ng/ml

Processing Integration Results



RT: 3.04  
Area: 4580  
Amount: 0.018434  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 14:50:25  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

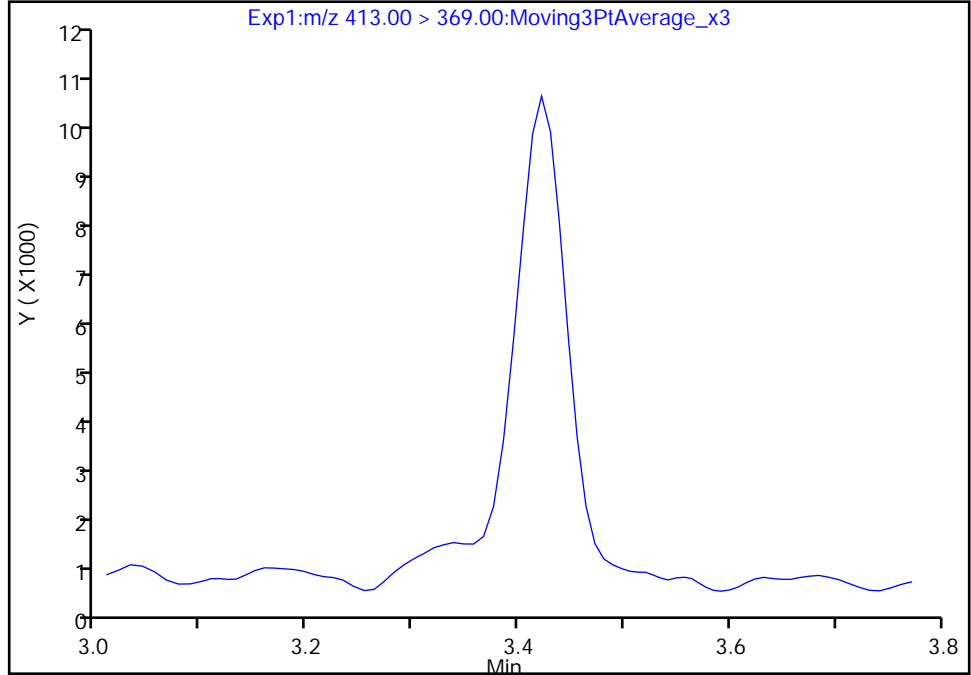
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B021.d  
Injection Date: 24-Dec-2019 16:39:57 Instrument ID: LC812  
Lims ID: 480-164221-C-10-A Lab Sample ID: 200-164221-10  
Client ID: CS SW 05 DER  
Operator ID: lc812tech ALS Bottle#: 21 Worklist Smp#: 21  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

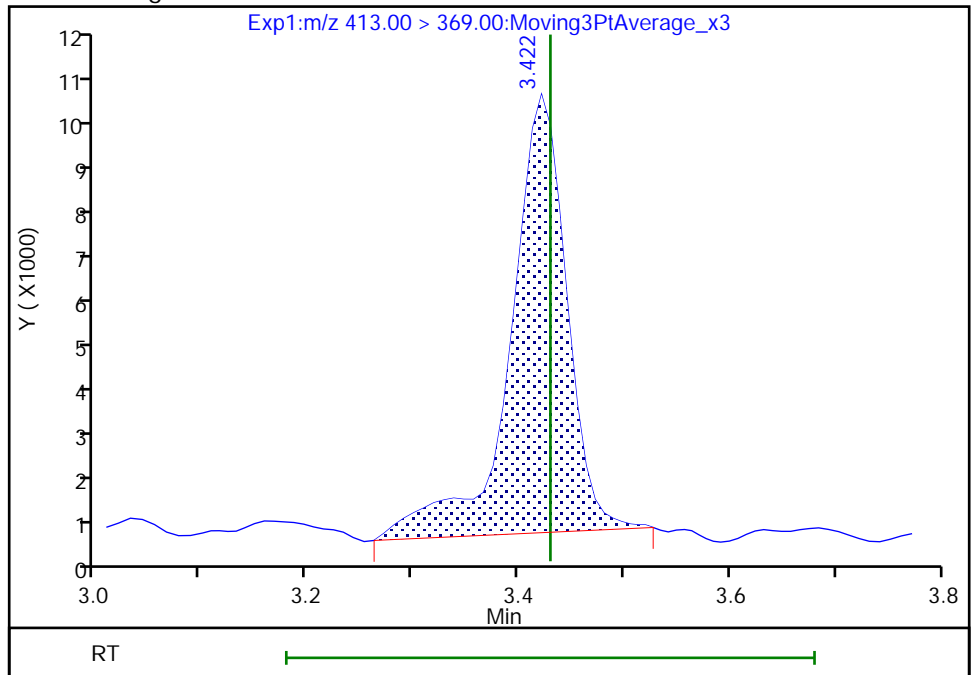
Not Detected  
Expected RT: 3.43

Processing Integration Results



Manual Integration Results

RT: 3.42  
Area: 35607  
Amount: 0.053700  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 14:51:48

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Euofins TestAmerica, Burlington

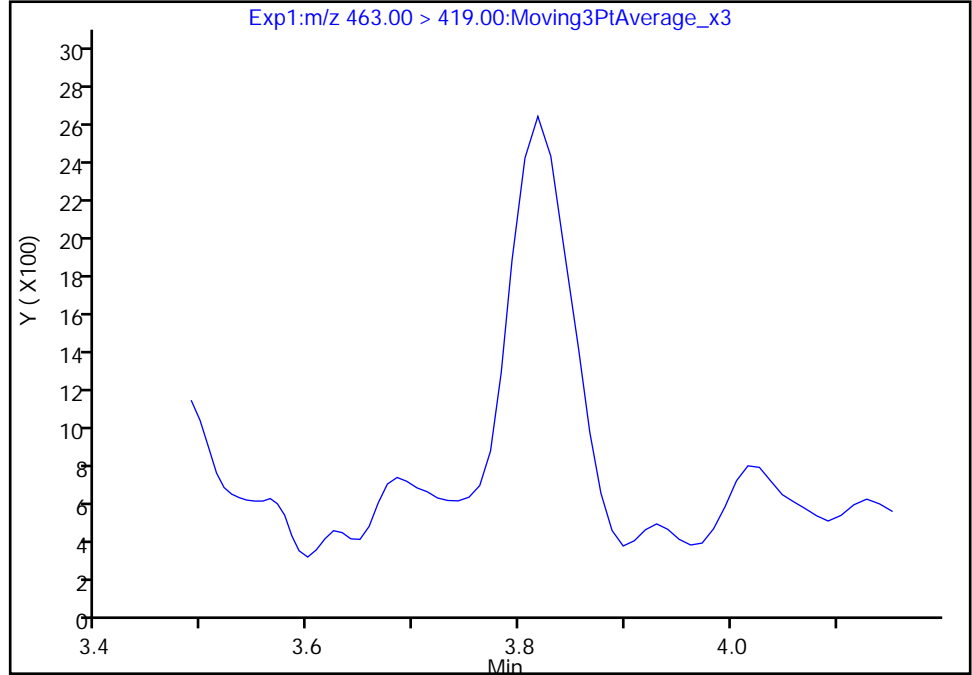
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B021.d  
Injection Date: 24-Dec-2019 16:39:57 Instrument ID: LC812  
Lims ID: 480-164221-C-10-A Lab Sample ID: 200-164221-10  
Client ID: CS SW 05 DER  
Operator ID: lc812tech ALS Bottle#: 21 Worklist Smp#: 21  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

20 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

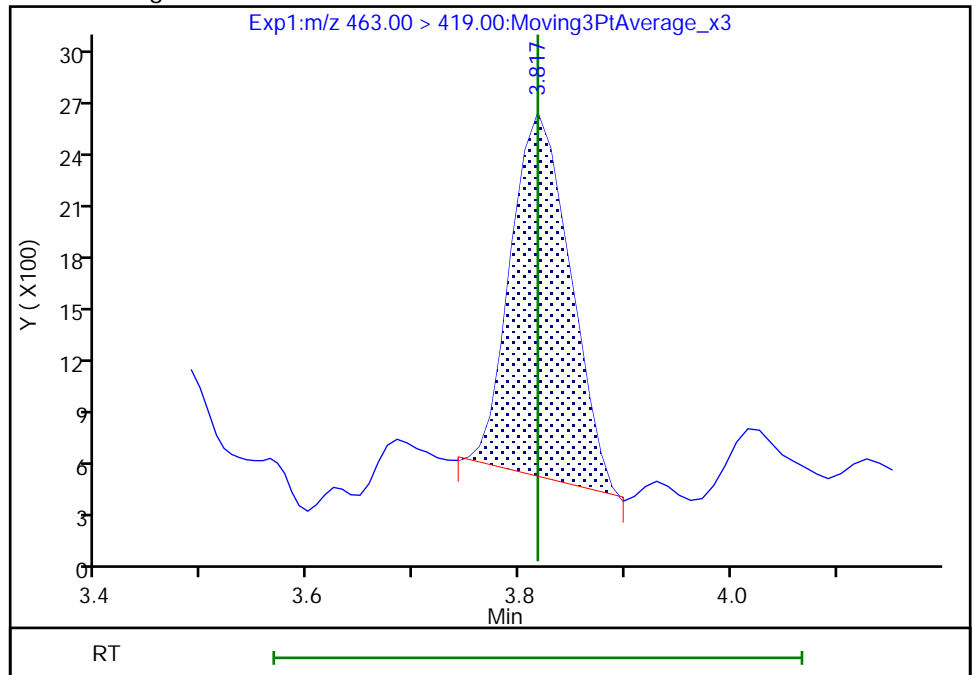
Not Detected  
Expected RT: 3.82

Processing Integration Results



Manual Integration Results

RT: 3.82  
Area: 8102  
Amount: 0.016007  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 14:54:44

Audit Action: Manually Integrated

Audit Reason: Baseline



Eurofins TestAmerica, Burlington

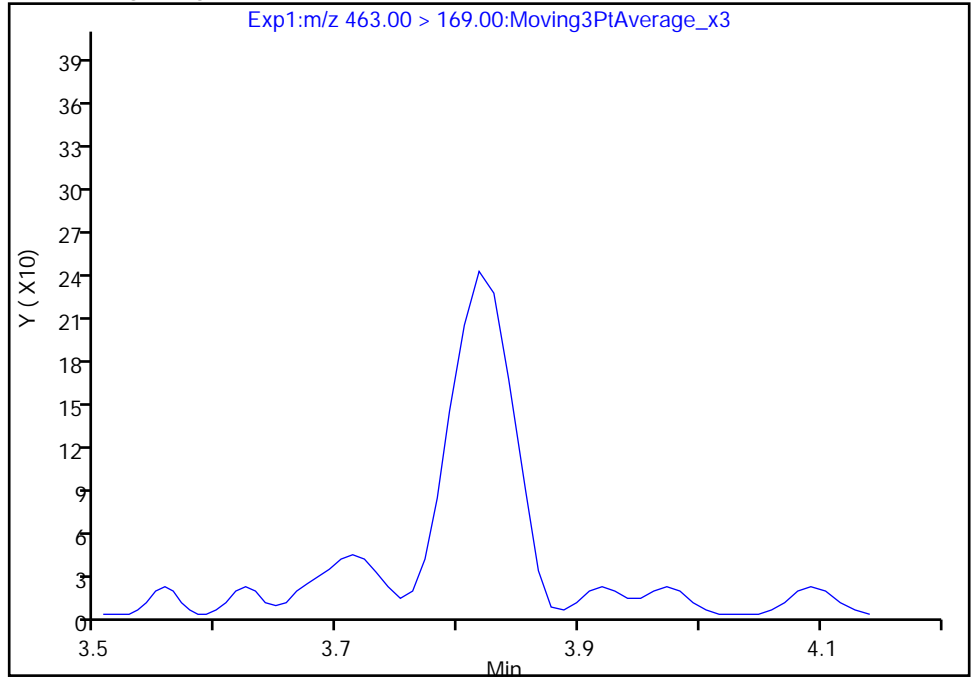
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B021.d  
Injection Date: 24-Dec-2019 16:39:57 Instrument ID: LC812  
Lims ID: 480-164221-C-10-A Lab Sample ID: 200-164221-10  
Client ID: CS SW 05 DER  
Operator ID: lc812tech ALS Bottle#: 21 Worklist Smp#: 21  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

20 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

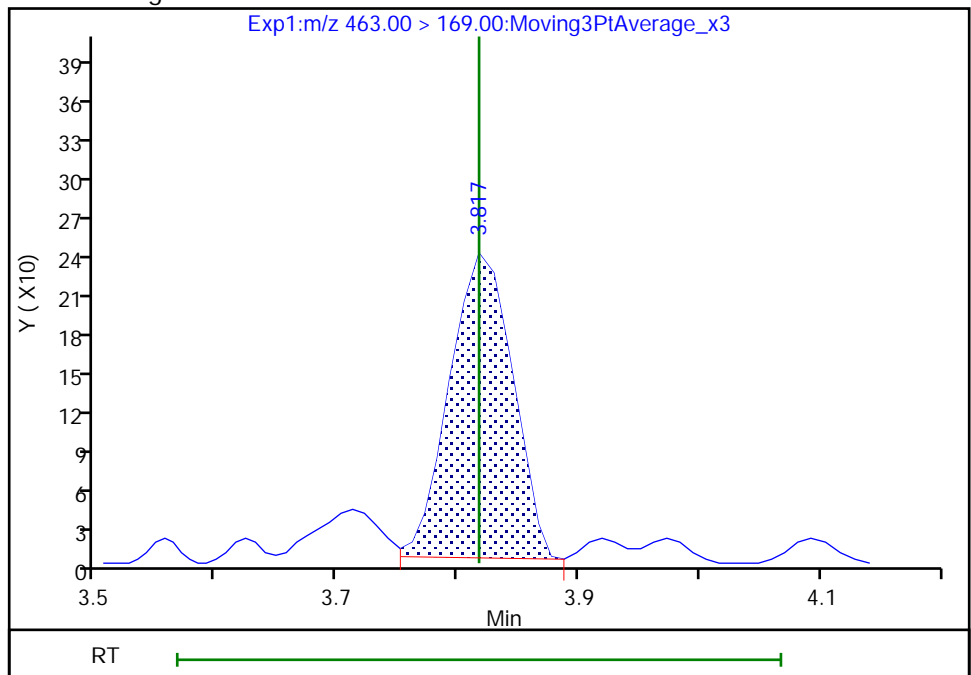
Not Detected  
Expected RT: 3.82

Processing Integration Results



Manual Integration Results

RT: 3.82  
Area: 842  
Amount: 0.016007  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 14:55:05

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

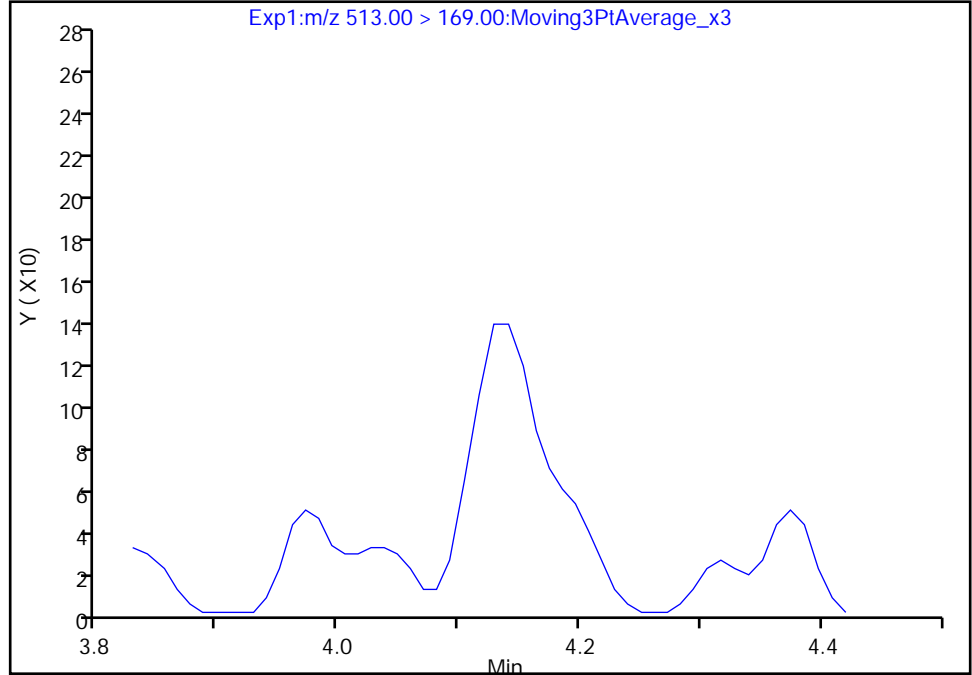
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B021.d  
Injection Date: 24-Dec-2019 16:39:57 Instrument ID: LC812  
Lims ID: 480-164221-C-10-A Lab Sample ID: 200-164221-10  
Client ID: CS SW 05 DER  
Operator ID: lc812tech ALS Bottle#: 21 Worklist Smp#: 21  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

24 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 2

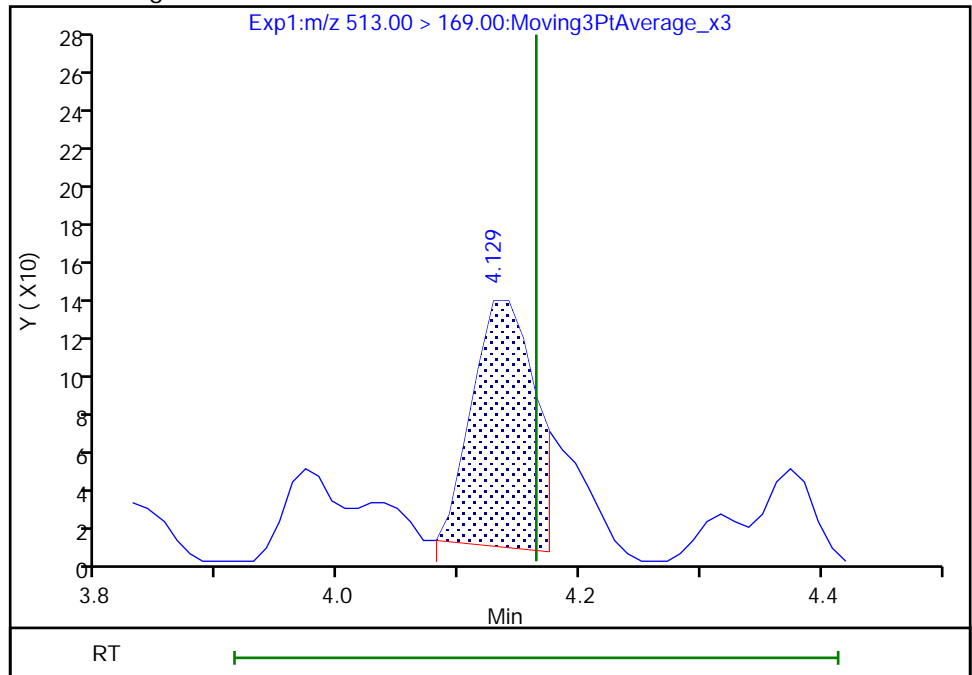
Not Detected  
Expected RT: 4.16

Processing Integration Results



Manual Integration Results

RT: 4.13  
Area: 460  
Amount: 0.008143  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 14:55:53

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

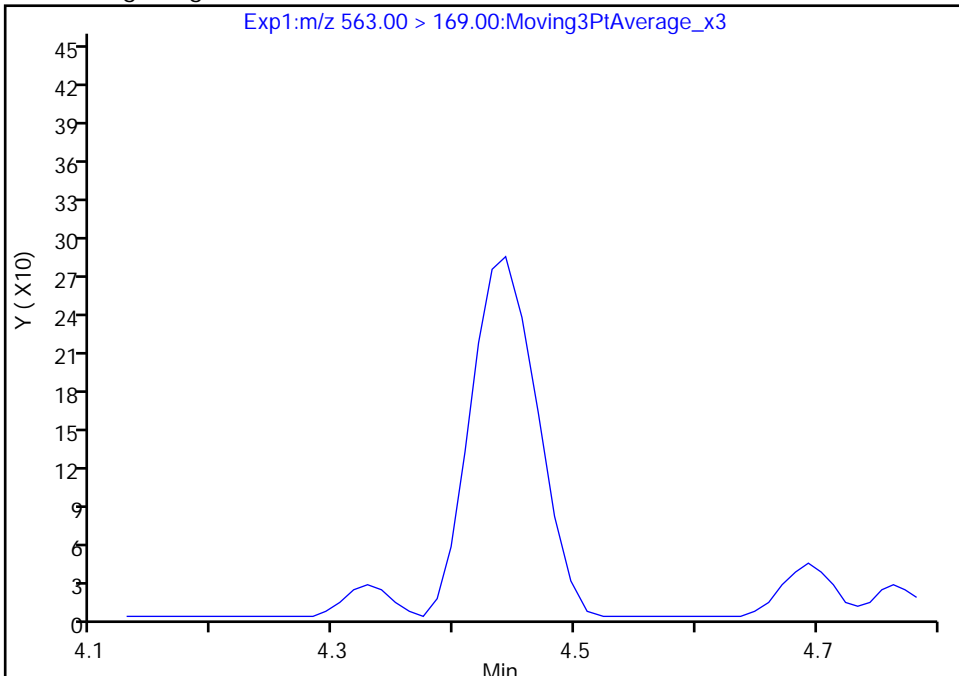
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B021.d  
Injection Date: 24-Dec-2019 16:39:57 Instrument ID: LC812  
Lims ID: 480-164221-C-10-A Lab Sample ID: 200-164221-10  
Client ID: CS SW 05 DER  
Operator ID: lc812tech ALS Bottle#: 21 Worklist Smp#: 21  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 2

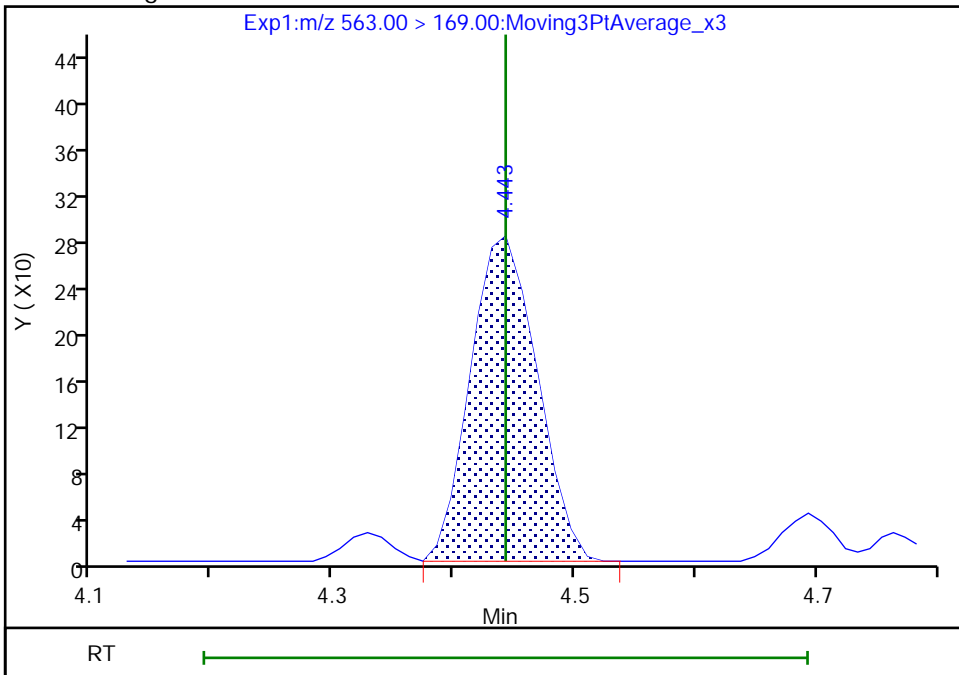
Not Detected  
Expected RT: 4.44

Processing Integration Results



Manual Integration Results

RT: 4.44  
Area: 1088  
Amount: 0.013453  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 14:57:02  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

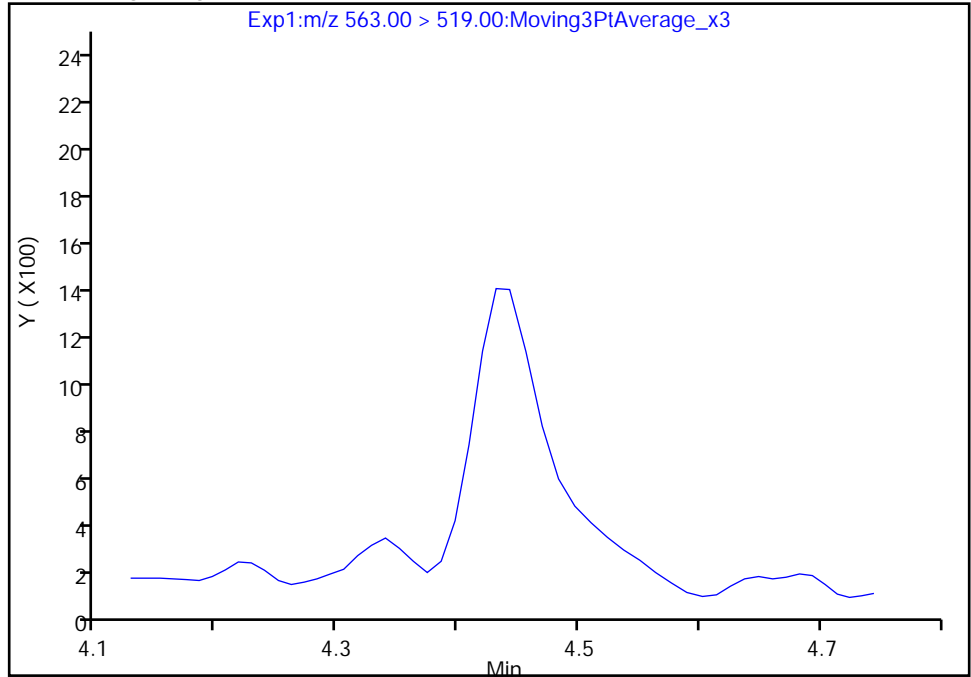
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B021.d  
Injection Date: 24-Dec-2019 16:39:57 Instrument ID: LC812  
Lims ID: 480-164221-C-10-A Lab Sample ID: 200-164221-10  
Client ID: CS SW 05 DER  
Operator ID: lc812tech ALS Bottle#: 21 Worklist Smp#: 21  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 1

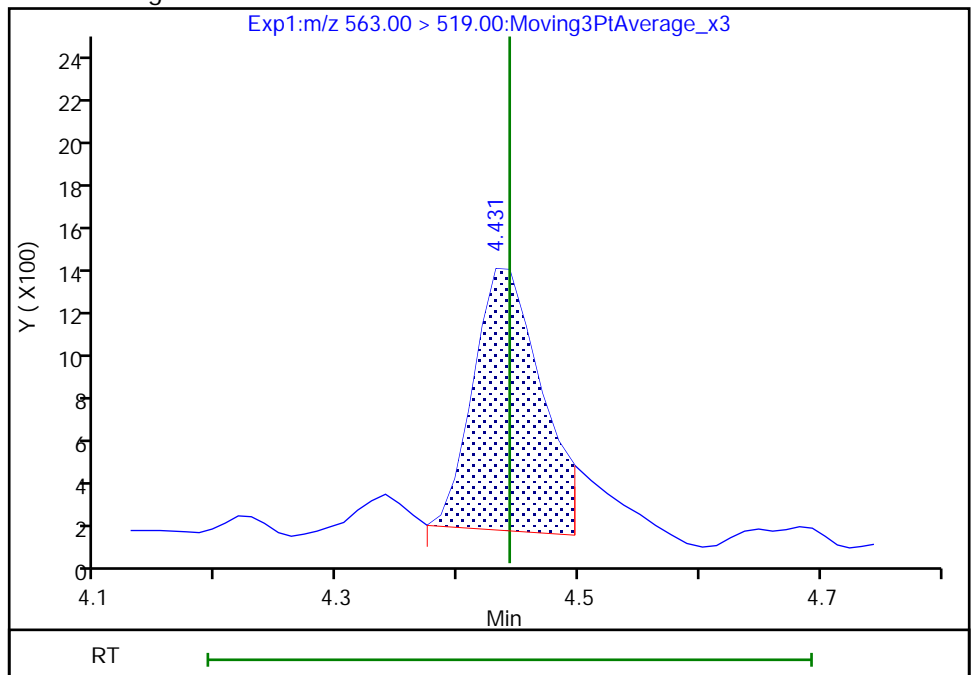
Not Detected  
Expected RT: 4.44

Processing Integration Results



Manual Integration Results

RT: 4.43  
Area: 4775  
Amount: 0.013453  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

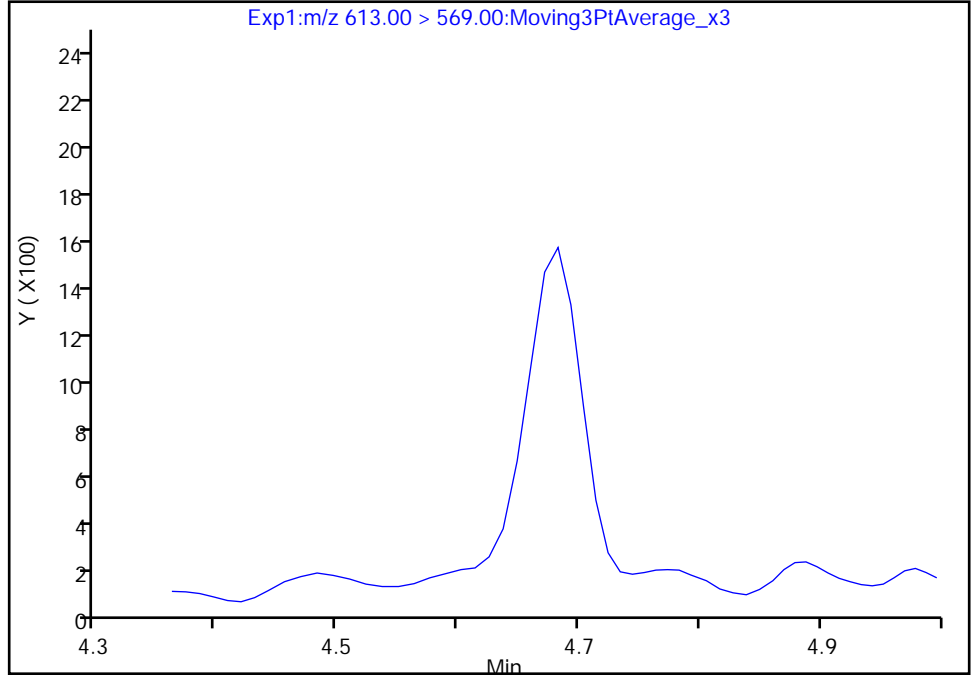
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B021.d  
Injection Date: 24-Dec-2019 16:39:57 Instrument ID: LC812  
Lims ID: 480-164221-C-10-A Lab Sample ID: 200-164221-10  
Client ID: CS SW 05 DER  
Operator ID: lc812tech ALS Bottle#: 21 Worklist Smp#: 21  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

37 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 1

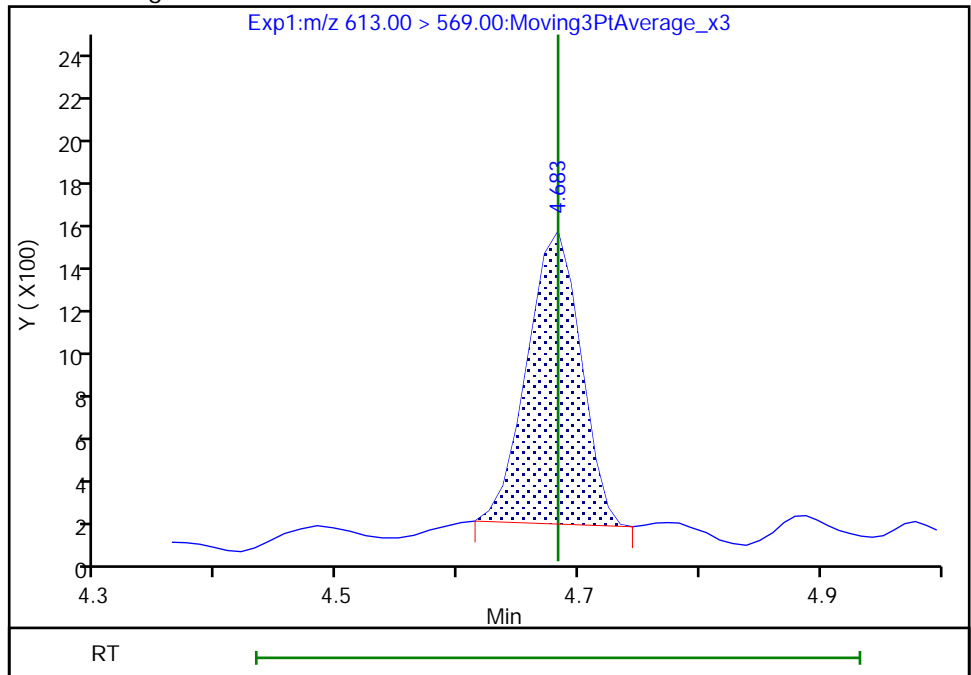
Not Detected  
Expected RT: 4.68

Processing Integration Results



Manual Integration Results

RT: 4.68  
Area: 4111  
Amount: 0.011443  
Amount Units: ng/ml



Reviewer: lautenschlagery, 27-Dec-2019 14:58:11  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

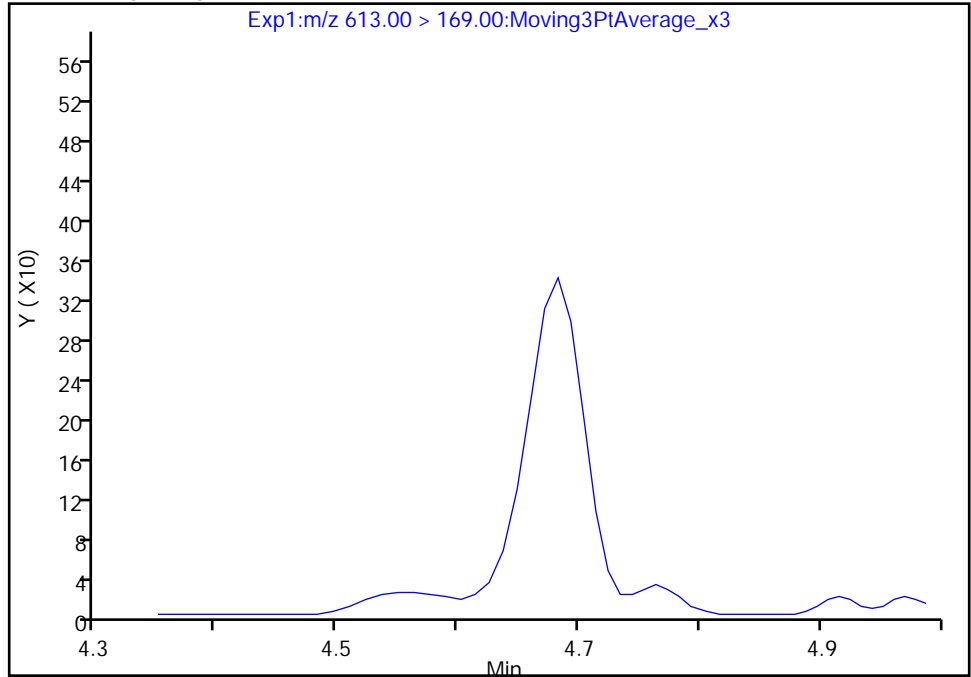
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B021.d  
Injection Date: 24-Dec-2019 16:39:57 Instrument ID: LC812  
Lims ID: 480-164221-C-10-A Lab Sample ID: 200-164221-10  
Client ID: CS SW 05 DER  
Operator ID: lc812tech ALS Bottle#: 21 Worklist Smp#: 21  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

37 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 2

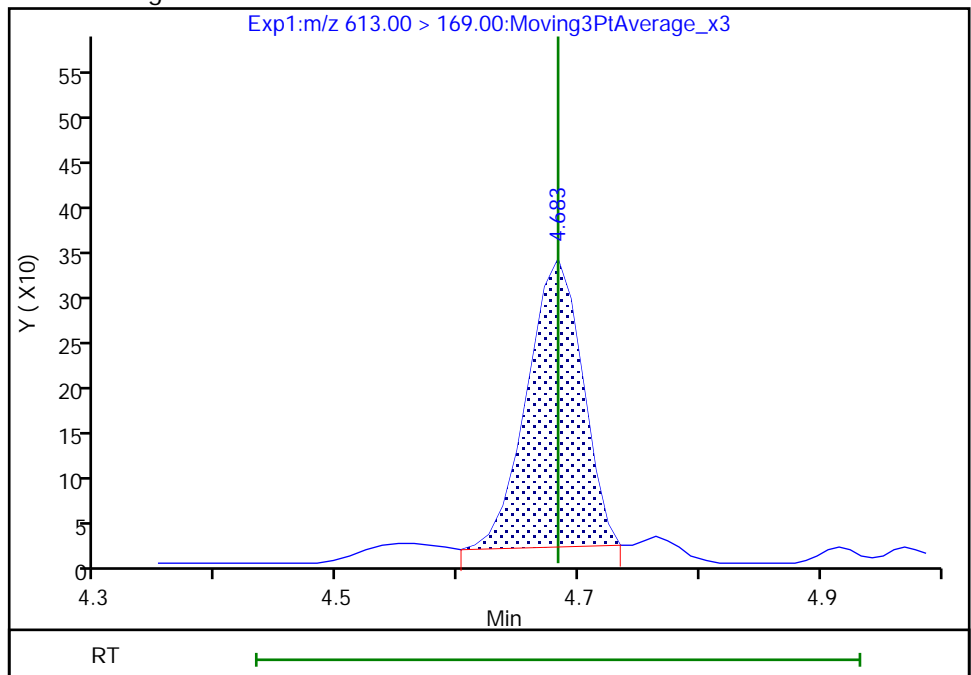
Not Detected  
Expected RT: 4.68

Processing Integration Results



Manual Integration Results

RT: 4.68  
Area: 1017  
Amount: 0.011443  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 14:58:17

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

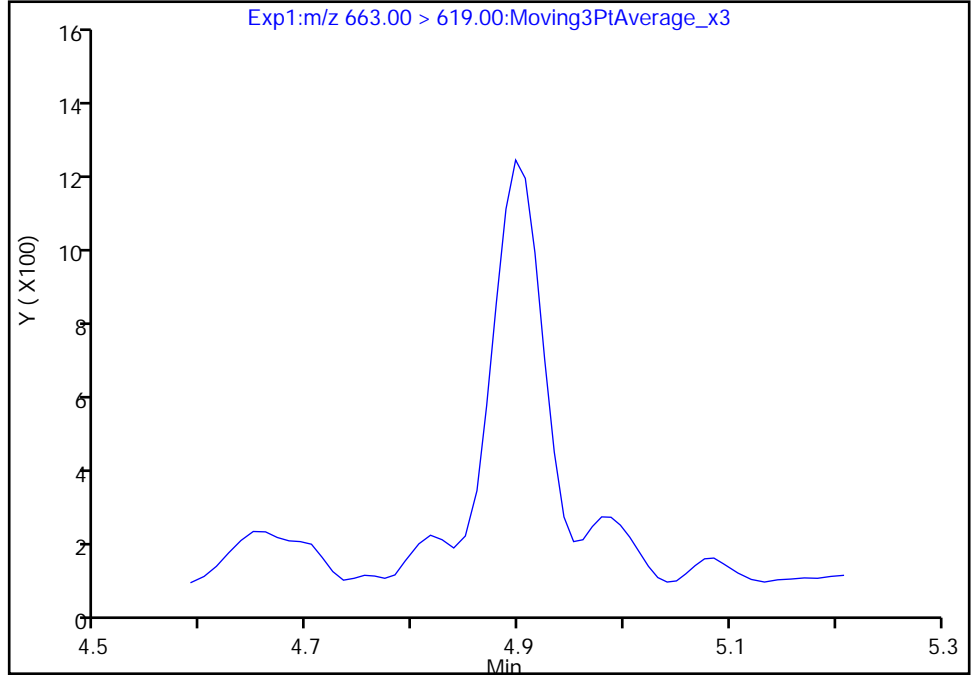
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B021.d  
Injection Date: 24-Dec-2019 16:39:57 Instrument ID: LC812  
Lims ID: 480-164221-C-10-A Lab Sample ID: 200-164221-10  
Client ID: CS SW 05 DER  
Operator ID: lc812tech ALS Bottle#: 21 Worklist Smp#: 21  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

41 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 1

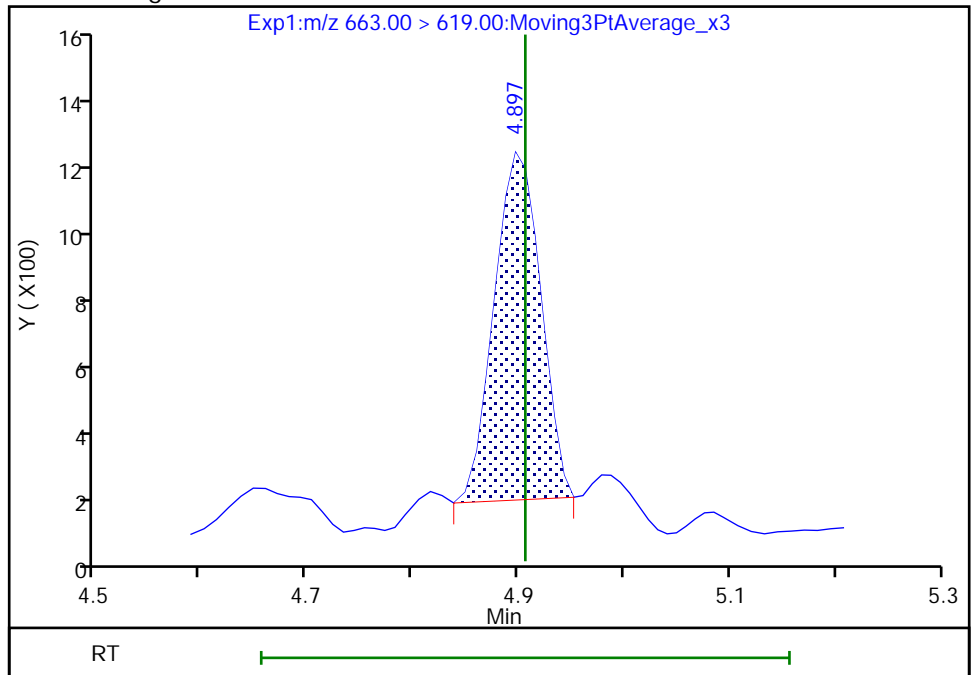
Not Detected  
Expected RT: 4.91

Processing Integration Results



Manual Integration Results

RT: 4.90  
Area: 3130  
Amount: 0.009171  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 14:58:30

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

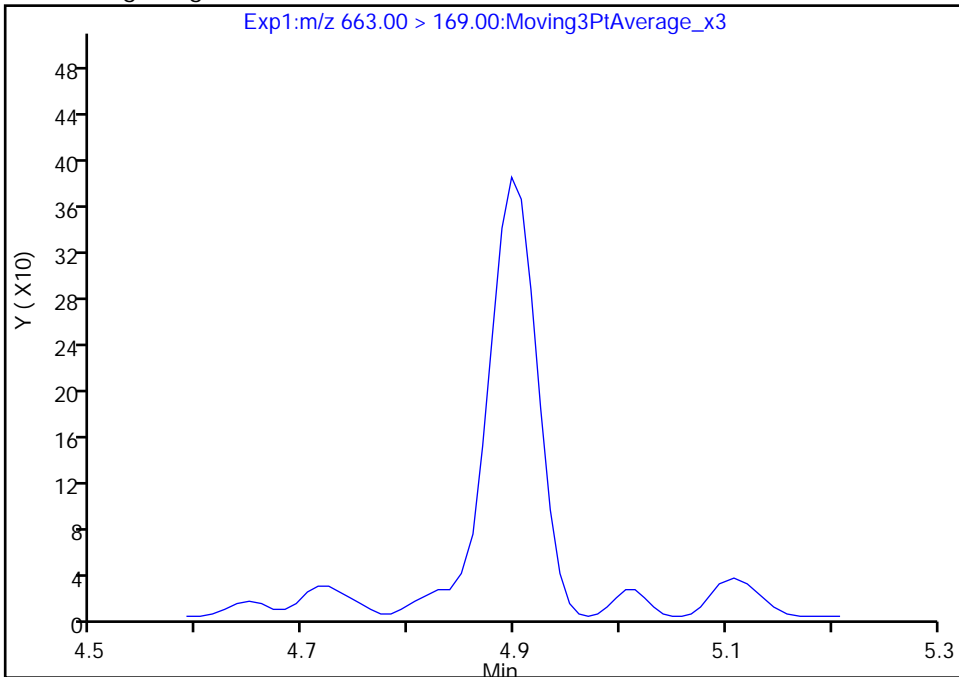
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B021.d  
Injection Date: 24-Dec-2019 16:39:57 Instrument ID: LC812  
Lims ID: 480-164221-C-10-A Lab Sample ID: 200-164221-10  
Client ID: CS SW 05 DER  
Operator ID: lc812tech ALS Bottle#: 21 Worklist Smp#: 21  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

41 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 2

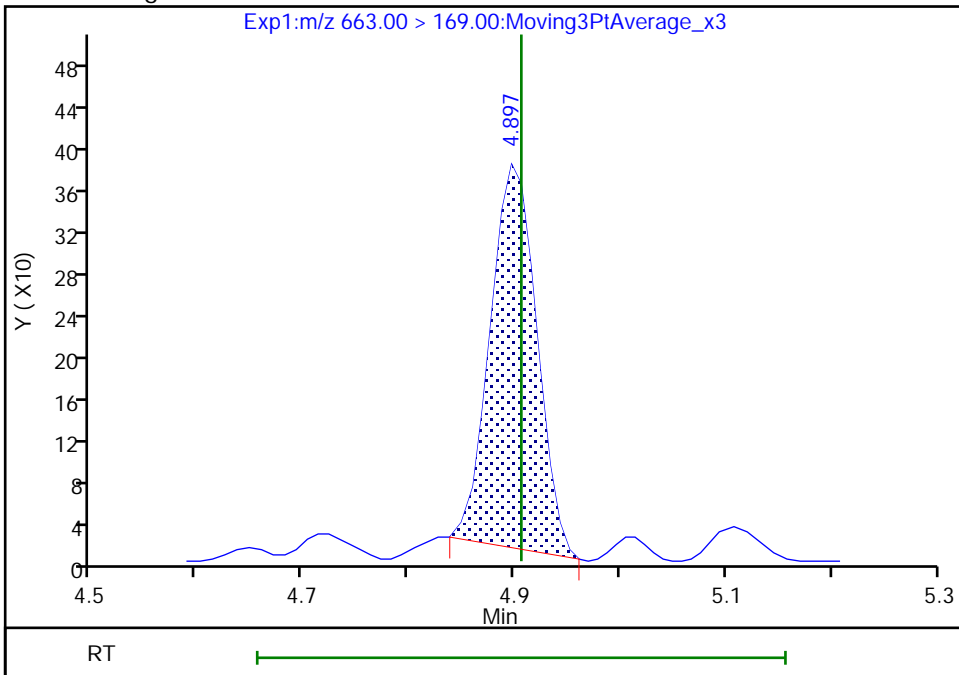
Not Detected  
Expected RT: 4.91

Processing Integration Results



Manual Integration Results

RT: 4.90  
Area: 1116  
Amount: 0.009171  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 14:58:36

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Eurofins TestAmerica, Burlington

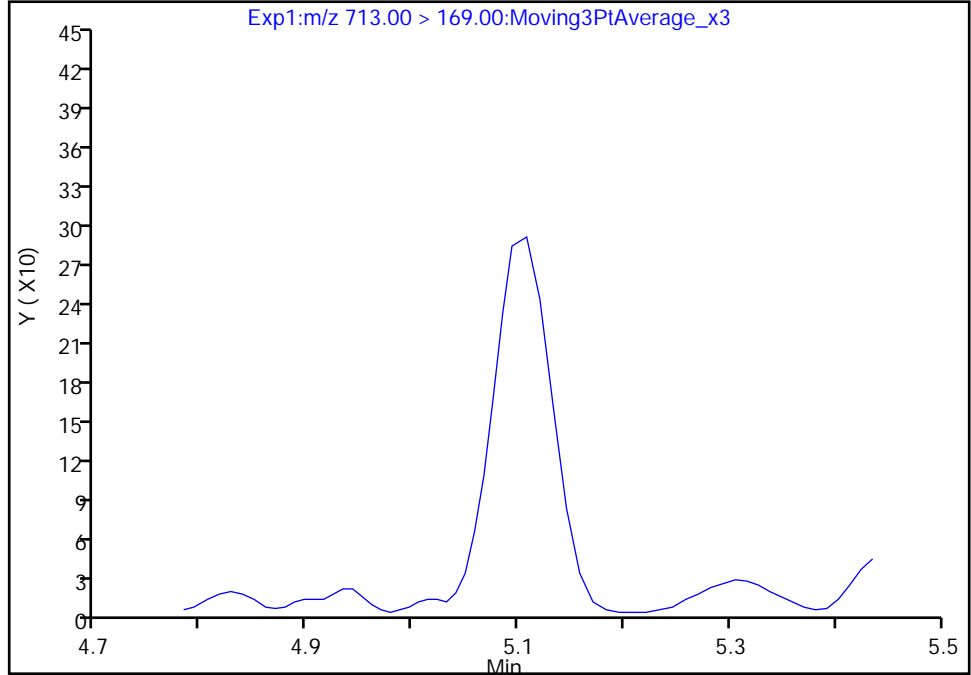
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B021.d  
Injection Date: 24-Dec-2019 16:39:57 Instrument ID: LC812  
Lims ID: 480-164221-C-10-A Lab Sample ID: 200-164221-10  
Client ID: CS SW 05 DER  
Operator ID: lc812tech ALS Bottle#: 21 Worklist Smp#: 21  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

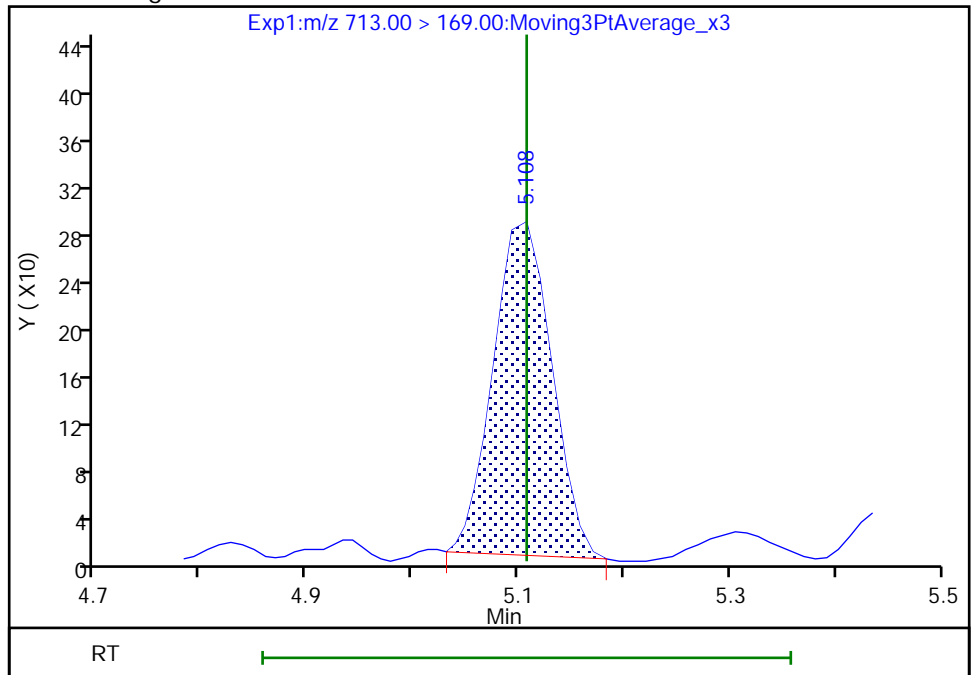
Signal: 1

Not Detected  
Expected RT: 5.11

Processing Integration Results



Manual Integration Results



RT: 5.11  
Area: 1088  
Amount: 0.016492  
Amount Units: ng/ml

Reviewer: lautenschlagery, 27-Dec-2019 14:59:11  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Euofins TestAmerica, Burlington

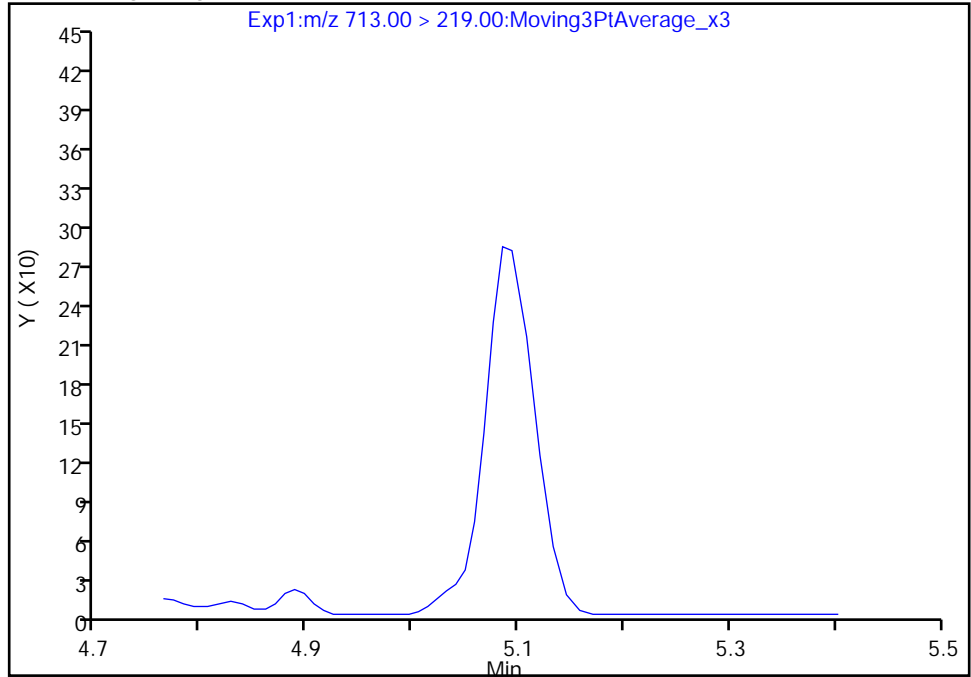
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B021.d  
Injection Date: 24-Dec-2019 16:39:57 Instrument ID: LC812  
Lims ID: 480-164221-C-10-A Lab Sample ID: 200-164221-10  
Client ID: CS SW 05 DER  
Operator ID: lc812tech ALS Bottle#: 21 Worklist Smp#: 21  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 2

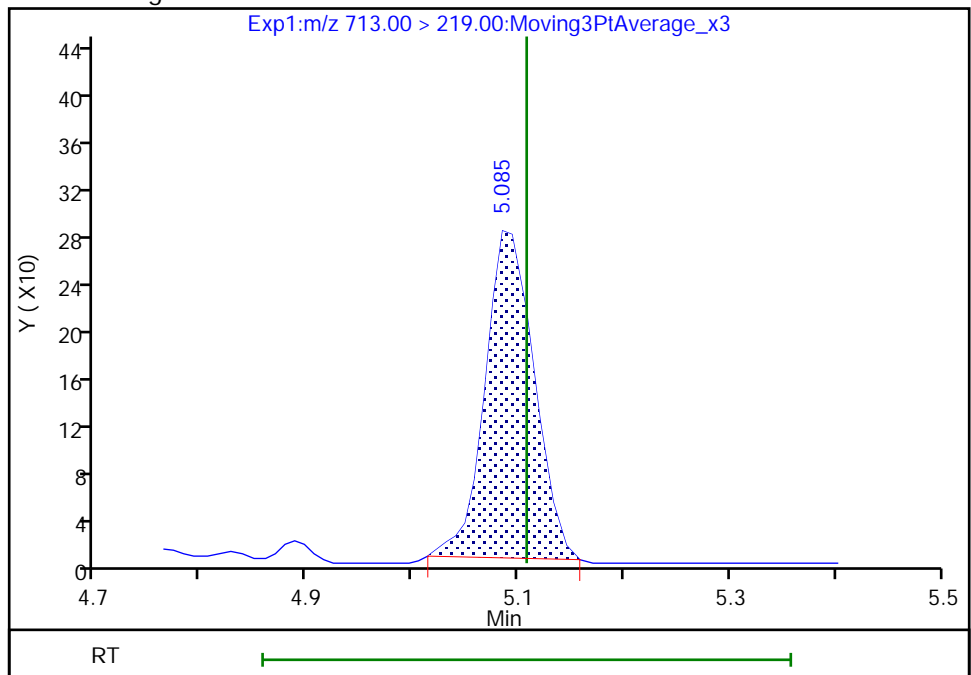
Not Detected  
Expected RT: 5.11

Processing Integration Results



Manual Integration Results

RT: 5.08  
Area: 892  
Amount: 0.016492  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 14:59:17

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

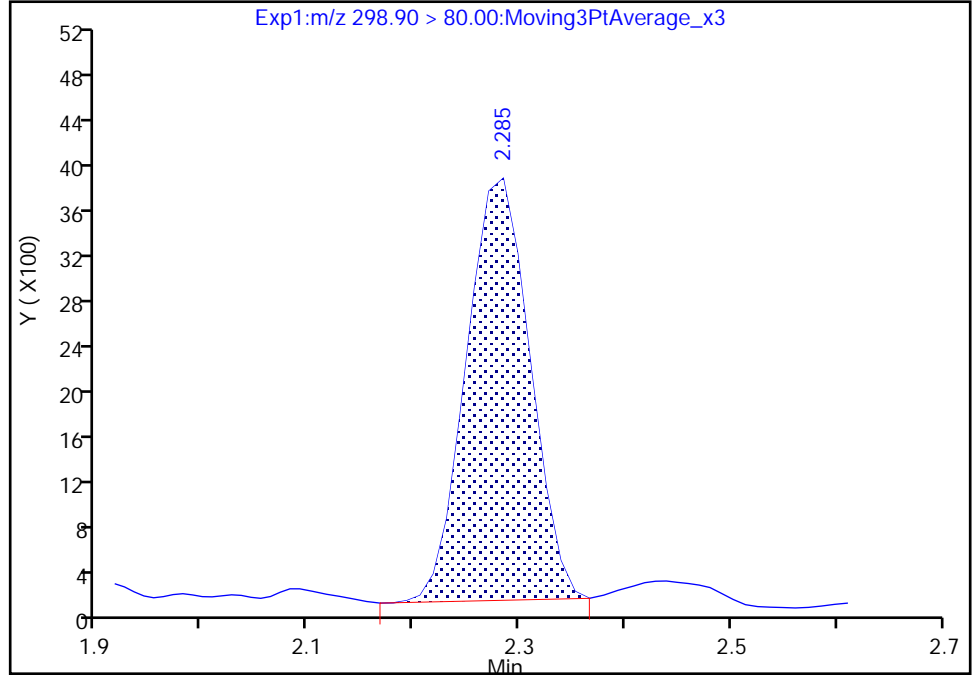
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B021.d  
Injection Date: 24-Dec-2019 16:39:57 Instrument ID: LC812  
Lims ID: 480-164221-C-10-A Lab Sample ID: 200-164221-10  
Client ID: CS SW 05 DER  
Operator ID: lc812tech ALS Bottle#: 21 Worklist Smp#: 21  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

5 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

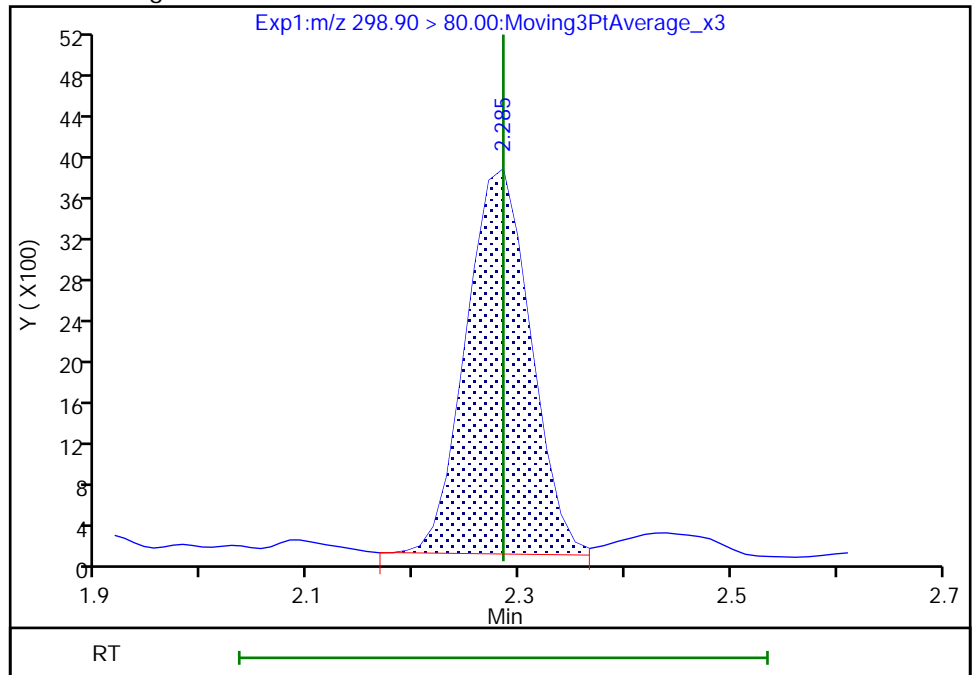
RT: 2.28  
Area: 15589  
Amount: 0.022022  
Amount Units: ng/ml

Processing Integration Results



RT: 2.28  
Area: 15945  
Amount: 0.022525  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 14:49:11

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

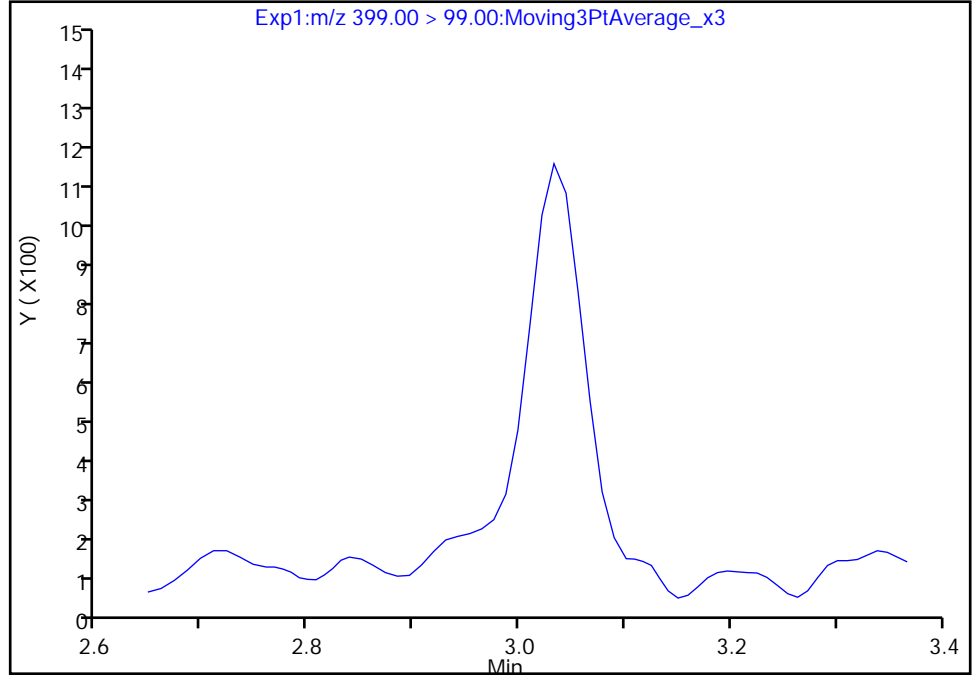
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B021.d  
Injection Date: 24-Dec-2019 16:39:57 Instrument ID: LC812  
Lims ID: 480-164221-C-10-A Lab Sample ID: 200-164221-10  
Client ID: CS SW 05 DER  
Operator ID: lc812tech ALS Bottle#: 21 Worklist Smp#: 21  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

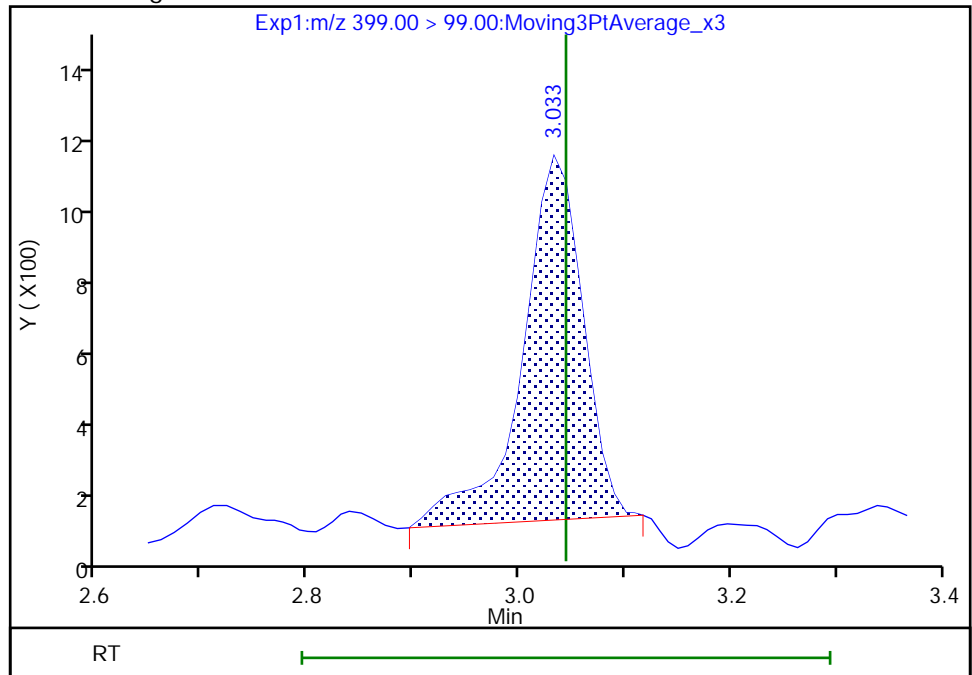
Not Detected  
Expected RT: 3.04

Processing Integration Results



Manual Integration Results

RT: 3.03  
Area: 4051  
Amount: 0.039876  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 14:50:04

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Euofins TestAmerica, Burlington

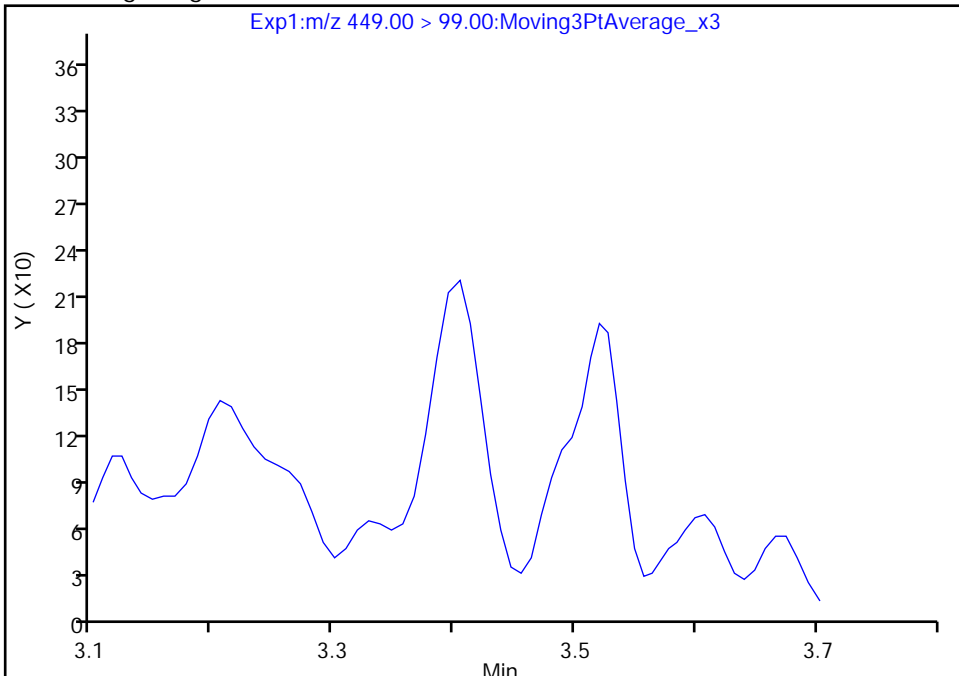
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B021.d  
Injection Date: 24-Dec-2019 16:39:57 Instrument ID: LC812  
Lims ID: 480-164221-C-10-A Lab Sample ID: 200-164221-10  
Client ID: CS SW 05 DER  
Operator ID: lc812tech ALS Bottle#: 21 Worklist Smp#: 21  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

16 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 2

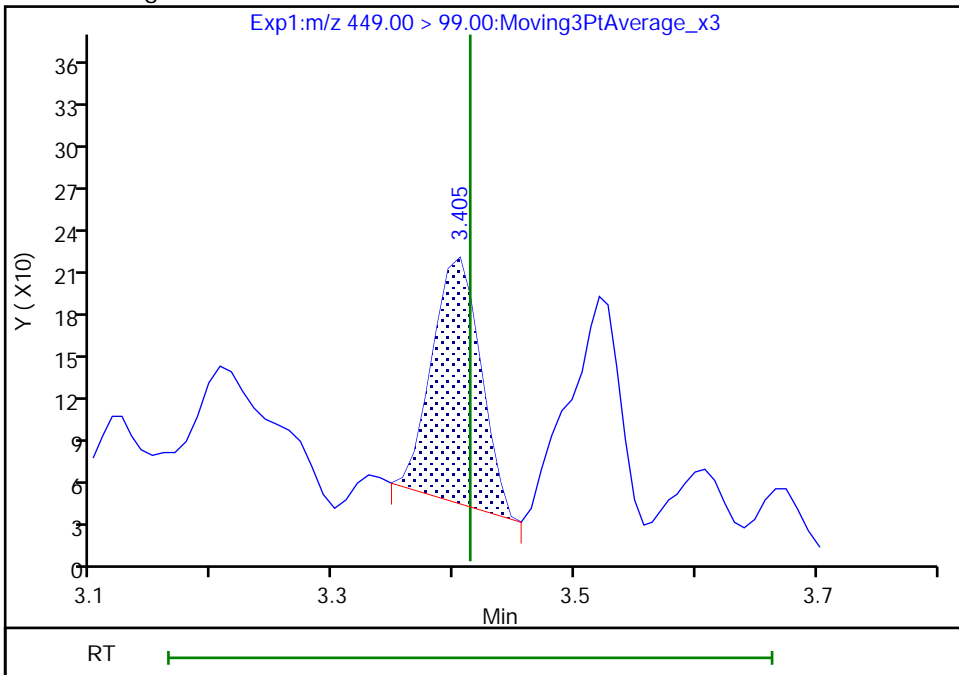
Not Detected  
Expected RT: 3.41

Processing Integration Results



Manual Integration Results

RT: 3.40  
Area: 490  
Amount: 0.009029  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

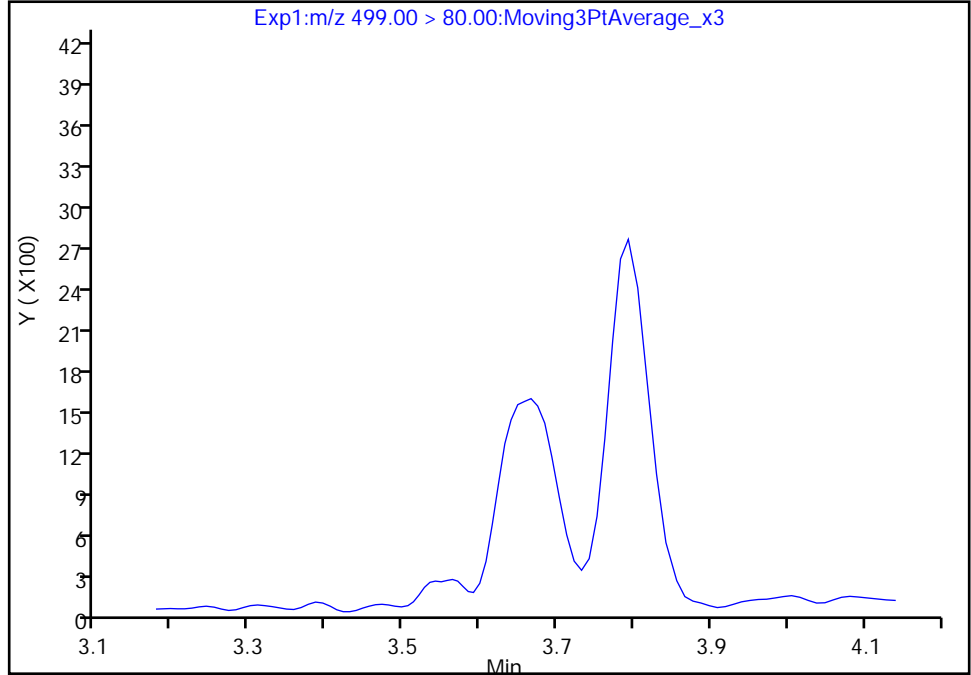
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B021.d  
Injection Date: 24-Dec-2019 16:39:57 Instrument ID: LC812  
Lims ID: 480-164221-C-10-A Lab Sample ID: 200-164221-10  
Client ID: CS SW 05 DER  
Operator ID: lc812tech ALS Bottle#: 21 Worklist Smp#: 21  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

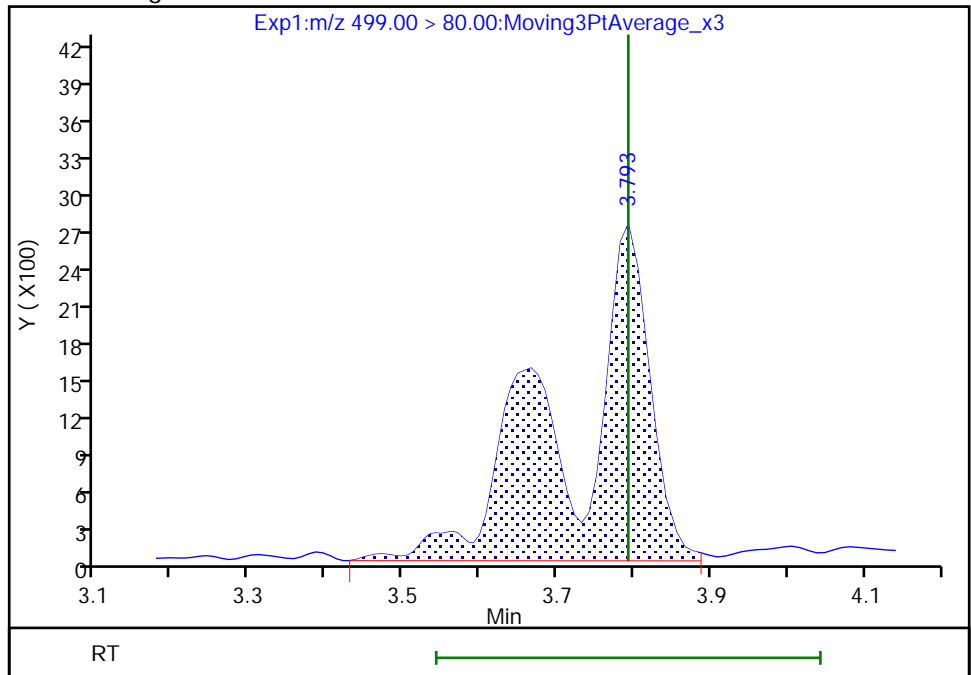
Not Detected  
Expected RT: 3.79

Processing Integration Results



Manual Integration Results

RT: 3.79  
Area: 19730  
Amount: 0.045928  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 14:53:00

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

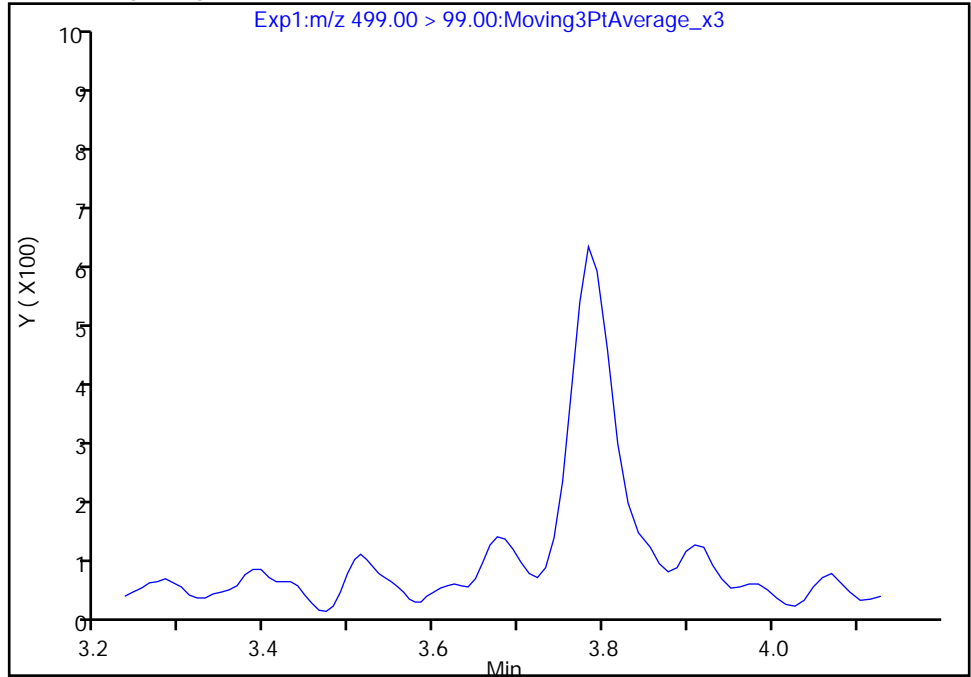
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B021.d  
Injection Date: 24-Dec-2019 16:39:57 Instrument ID: LC812  
Lims ID: 480-164221-C-10-A Lab Sample ID: 200-164221-10  
Client ID: CS SW 05 DER  
Operator ID: lc812tech ALS Bottle#: 21 Worklist Smp#: 21  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

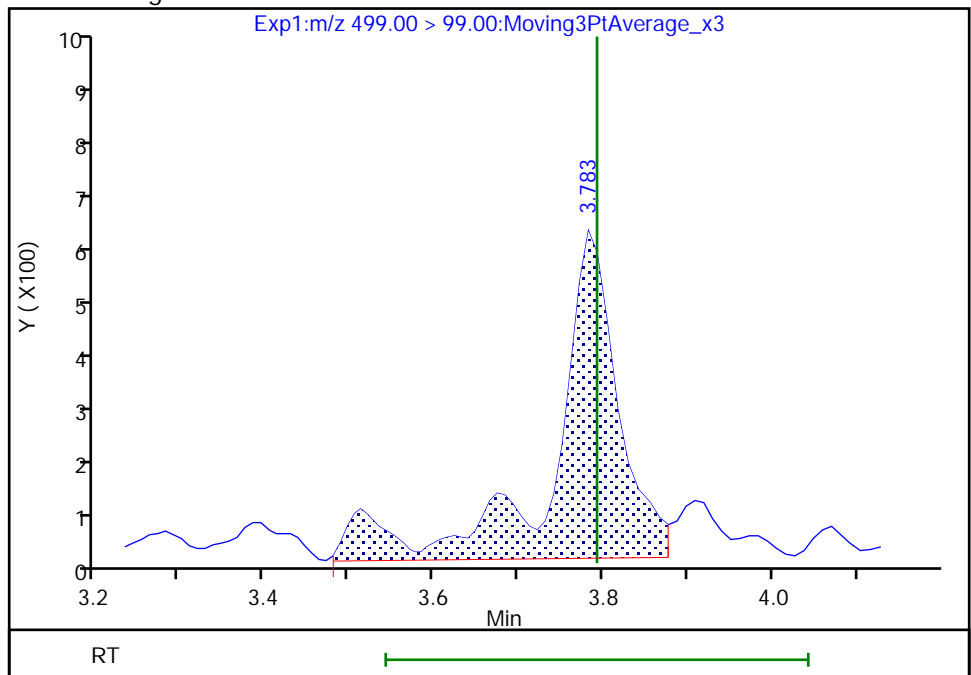
Not Detected  
Expected RT: 3.79

Processing Integration Results



Manual Integration Results

RT: 3.78  
Area: 3388  
Amount: 0.045928  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 14:53:13

Audit Action: Manually Integrated

Audit Reason: Baseline

Euofins TestAmerica, Burlington

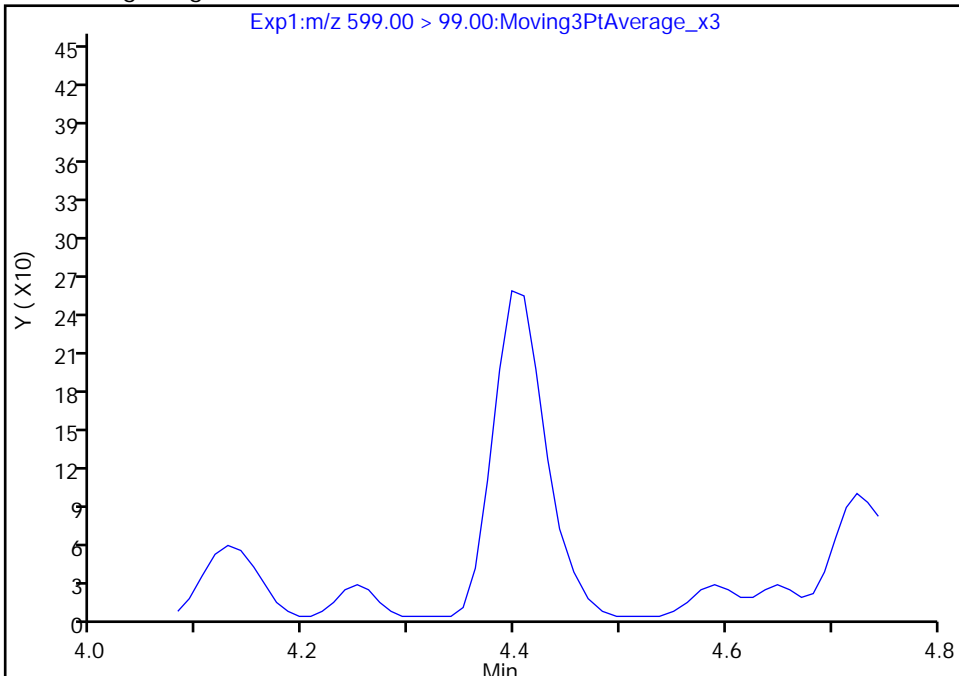
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B021.d  
Injection Date: 24-Dec-2019 16:39:57 Instrument ID: LC812  
Lims ID: 480-164221-C-10-A Lab Sample ID: 200-164221-10  
Client ID: CS SW 05 DER  
Operator ID: lc812tech ALS Bottle#: 21 Worklist Smp#: 21  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

29 Perfluorodecanesulfonic acid, CAS: 335-77-3

Signal: 2

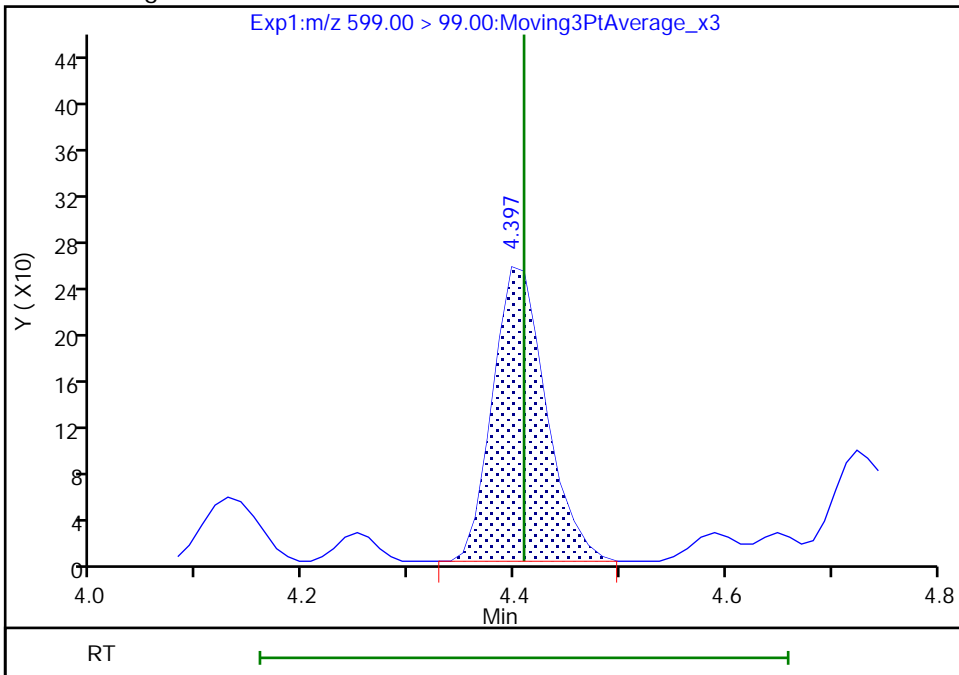
Not Detected  
Expected RT: 4.41

Processing Integration Results



Manual Integration Results

RT: 4.40  
Area: 899  
Amount: 0.008986  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 14:56:40  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Eurofins TestAmerica, Burlington

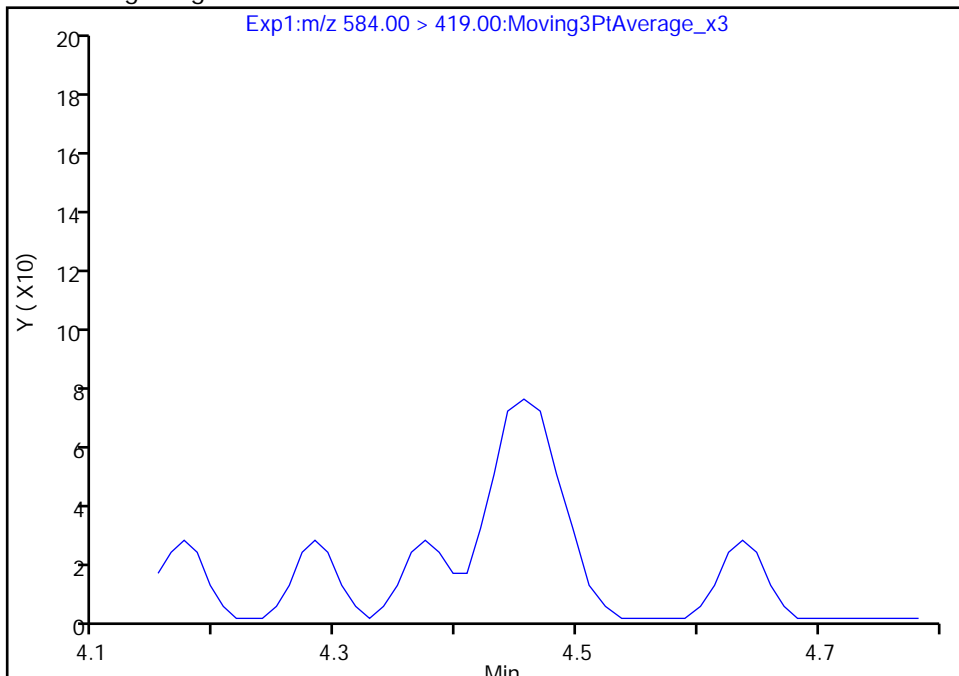
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B021.d  
Injection Date: 24-Dec-2019 16:39:57 Instrument ID: LC812  
Lims ID: 480-164221-C-10-A Lab Sample ID: 200-164221-10  
Client ID: CS SW 05 DER  
Operator ID: lc812tech ALS Bottle#: 21 Worklist Smp#: 21  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

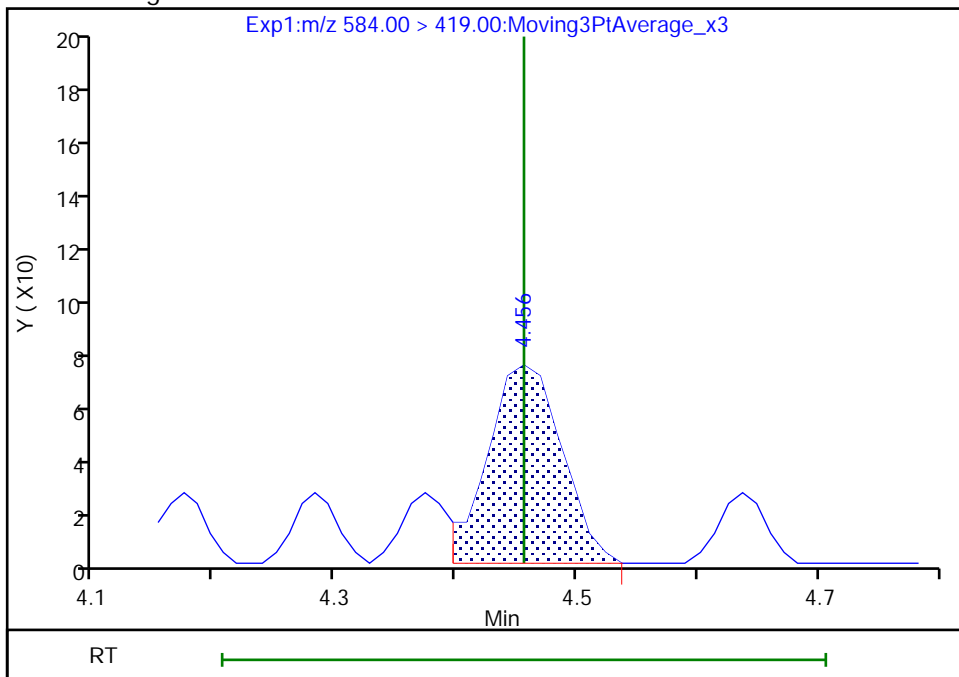
Not Detected  
Expected RT: 4.46

Processing Integration Results



Manual Integration Results

RT: 4.46  
Area: 309  
Amount: 0.007536  
Amount Units: ng/ml



Euofins TestAmerica, Burlington

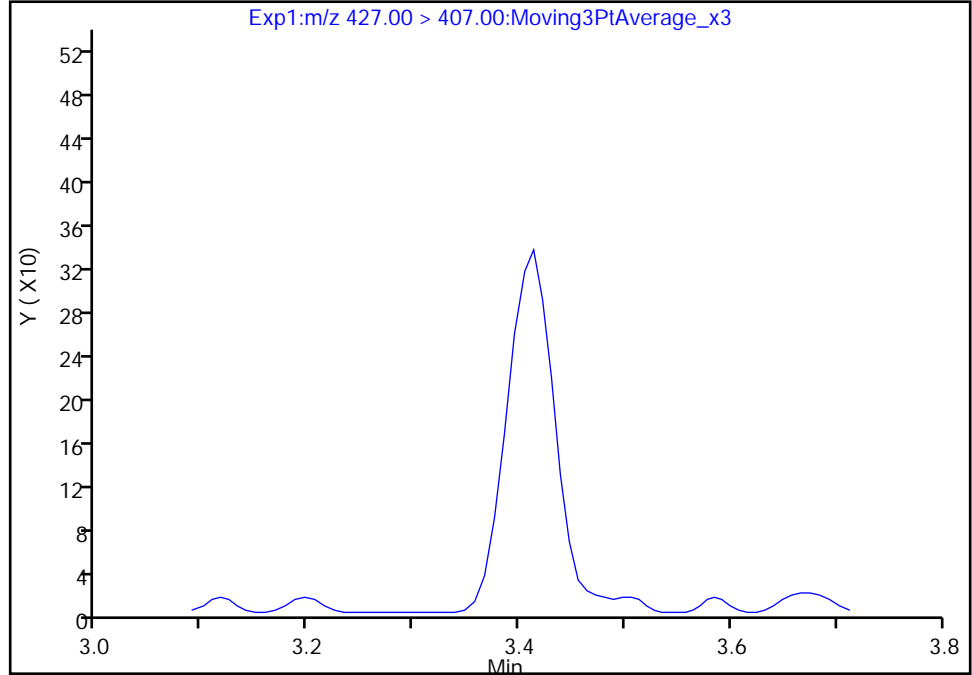
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B021.d  
Injection Date: 24-Dec-2019 16:39:57 Instrument ID: LC812  
Lims ID: 480-164221-C-10-A Lab Sample ID: 200-164221-10  
Client ID: CS SW 05 DER  
Operator ID: lc812tech ALS Bottle#: 21 Worklist Smp#: 21  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

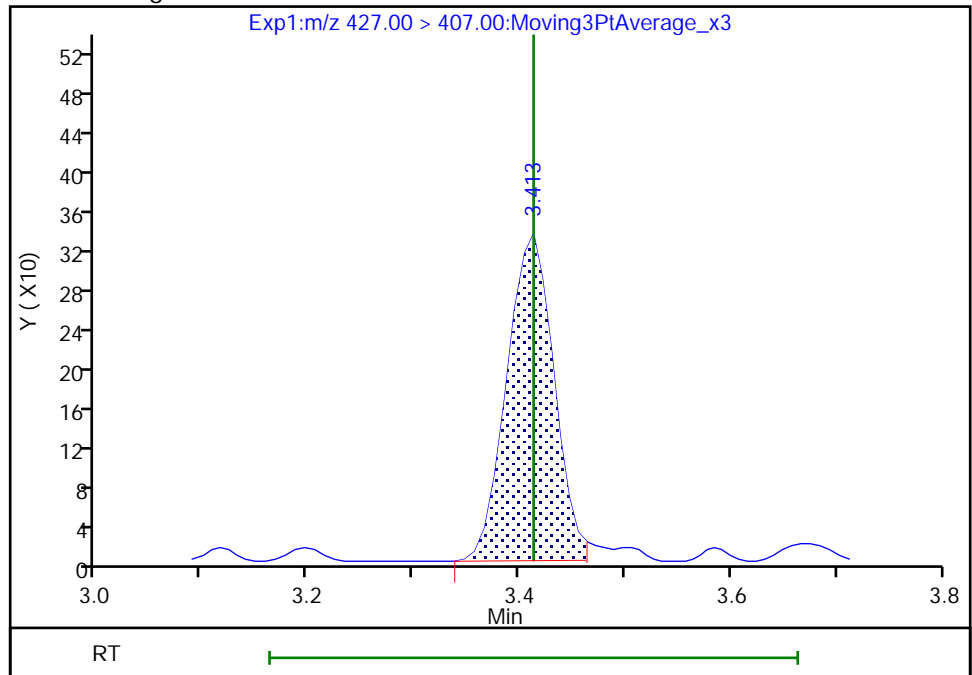
Signal: 1

Not Detected  
Expected RT: 3.41

Processing Integration Results



Manual Integration Results



RT: 3.41  
Area: 1031  
Amount: 0.016320  
Amount Units: ng/ml

Eurofins TestAmerica, Burlington

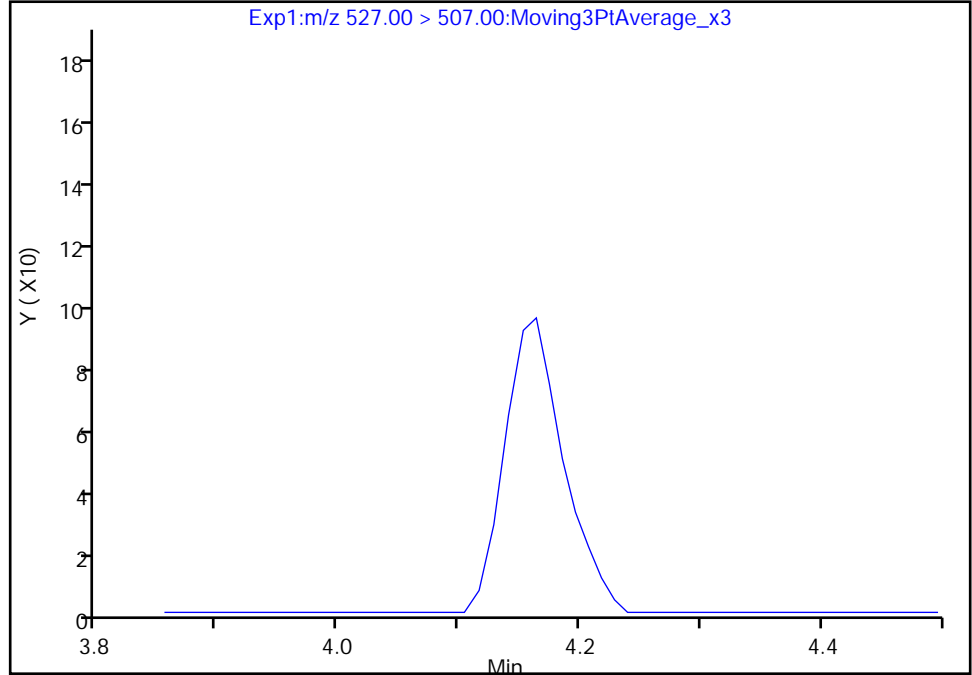
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B021.d  
Injection Date: 24-Dec-2019 16:39:57 Instrument ID: LC812  
Lims ID: 480-164221-C-10-A Lab Sample ID: 200-164221-10  
Client ID: CS SW 05 DER  
Operator ID: lc812tech ALS Bottle#: 21 Worklist Smp#: 21  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

25 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:, CAS: 39108-34-4

Signal: 1

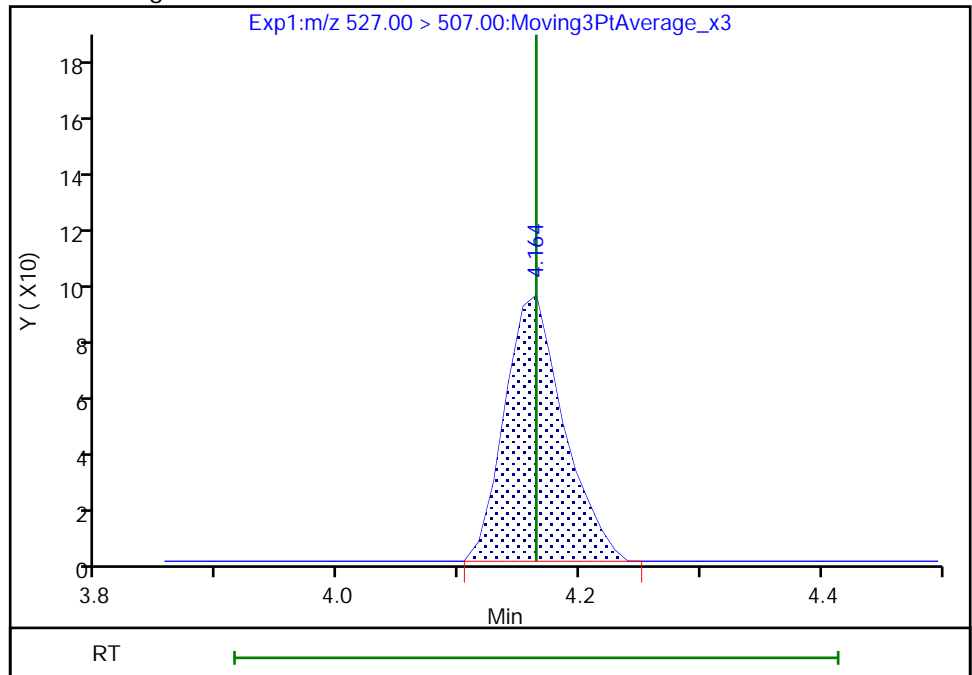
Not Detected  
Expected RT: 4.16

Processing Integration Results



Manual Integration Results

RT: 4.16  
Area: 317  
Amount: 0.006480  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 14:56:17

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS SW 03 DER Lab Sample ID: 480-164221-11  
 Matrix: Water Lab File ID: SC122319B022.d  
 Analysis Method: 537 (modified) Date Collected: 12/12/2019 10:35  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 280 (mL) Date Analyzed: 12/24/2019 16:48  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 20 (uL) GC Column: C-18 ID: 4.6 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	0.94	J	1.8	0.89
2706-90-3	Perfluoropentanoic acid (PFPeA)	ND		1.8	0.56
307-24-4	Perfluorohexanoic acid (PFHxA)	ND		1.8	0.68
375-85-9	Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.81
335-67-1	Perfluorooctanoic acid (PFOA)	0.92	J	1.8	0.72
375-95-1	Perfluorononanoic acid (PFNA)	ND		1.8	0.24
335-76-2	Perfluorodecanoic acid (PFDA)	ND		1.8	0.69
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.70
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		1.8	0.53
72629-94-8	Perfluorotridecanoic acid (PFTriA)	ND		1.8	0.54
376-06-7	Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.82
375-73-5	Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.44
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	ND		1.8	0.71
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.85
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	ND		1.8	0.54
335-77-3	Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.80
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND		8.9	8.9
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		18	1.5
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		18	1.3
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		18	4.9
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		18	2.6

FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS SW 03 DER Lab Sample ID: 480-164221-11  
 Matrix: Water Lab File ID: SC122319B022.d  
 Analysis Method: 537 (modified) Date Collected: 12/12/2019 10:35  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 280 (mL) Date Analyzed: 12/24/2019 16:48  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 20 (uL) GC Column: C-18 ID: 4.6 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	110		50-150
STL01892	13C4 PFHpA	104		50-150
STL00990	13C4 PFOA	102		50-150
STL00991	13C4 PFOS	99		50-150
STL00995	13C5 PFNA	94		50-150
STL00992	13C4 PFBA	82		25-150
STL00993	13C2 PFHxA	97		50-150
STL00996	13C2 PFDA	96		50-150
STL00997	13C2 PFUnA	99		50-150
STL00998	13C2 PFDoA	81		50-150
STL01056	13C8 FOSA	87		25-150
STL01893	13C5 PFPeA	99		25-150
STL02116	13C2 PFTeDA	79		50-150
STL02118	d3-NMeFOSAA	72		50-150
STL02117	d5-NEtFOSAA	94		50-150
STL02279	M2-6:2 FTS	83		25-150
STL02280	M2-8:2 FTS	94		25-150
STL02337	13C3 PFBS	97		50-150

Eurofins TestAmerica, Burlington  
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B022.d  
 Lims ID: 480-164221-C-11-A  
 Client ID: CS SW 03 DER  
 Sample Type: Client  
 Inject. Date: 24-Dec-2019 16:48:08 ALS Bottle#: 22 Worklist Smp#: 22  
 Injection Vol: 20.0 ul Dil. Factor: 1.0000  
 Sample Info: 480-164221-C-11-A  
 Misc. Info.: 200-0039355-022 Plate: 1 Rack: 2  
 Operator ID: lc812tech Instrument ID: LC812  
 Method: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\PFC\_LC812.m  
 Limit Group: LC\_PFC\_ICAL  
 Last Update: 31-Dec-2019 08:24:59 Calib Date: 06-Dec-2019 15:13:26  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Column 1 : C-18 ( 4.60 mm) Det: EXP1  
 Process Host: CTX0330

First Level Reviewer: lautenschlagery Date: 27-Dec-2019 15:08:47  
 Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	1.898	1.908	-0.010	0.555	1343663	2.05	82.0	3456	
2 Perfluorobutanoic acid										M
212.90 > 169.00	1.907	1.908	-0.001	1.005	14021	0.0262		3.5		M
D 3 13C5 PFPeA	267.90 > 223.00	2.257	2.257	0.0	0.660	1242572	2.48	99.2	3852	
4 Perfluoropentanoic acid										M
262.90 > 219.00	2.257	2.271	-0.014	1.000	8602	0.0153		0.5		M
D 47 13C3 PFBS	301.90 > 80.00	2.271	2.285	-0.014	0.664	1345431	2.25	96.8	422990	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.284	2.285	-0.001	1.006	4821	0.007665	Target=2.03	8.0		
298.90 > 99.00	2.284	2.285	-0.001	1.006	3392		1.42(1.01-3.04)	2.3		
D 7 13C2 PFHxA	315.00 > 270.00	2.648	2.648	0.0	0.774	1353274	2.42	96.9	5544	
D 11 18O2 PFHxS	403.00 > 84.00	3.032	3.044	-0.012	0.886	1225912	2.60	110	6485	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.032	3.044	-0.012	1.000	5795	0.009878	Target=3.90	10.4		M
399.00 > 99.00	3.044	3.044	0.0	1.004	1996		2.90(1.95-5.85)	4.6		M
D 9 13C4 PFHpA	367.00 > 322.00	3.044	3.044	0.0	0.890	1370639	2.59	104	5757	
10 Perfluoroheptanoic acid										M
363.00 > 319.00	3.055	3.044	0.011	1.004	4176	0.007204	Target=3.95	0.9		M
363.00 > 169.00	3.032	3.044	-0.012	0.996	975		4.28(1.97-5.92)	3.9		M
13 1H,1H,2H,2H-perfluorooctanesulfoni										M
427.00 > 407.00	3.405	3.413	-0.008	0.998	731	0.0115		16.2		M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 M2-6:2 FTS										
429.00 > 81.00	3.413	3.413	0.0	0.998	159655	1.97		82.9	400	
15 Perfluorooctanoic acid										M
413.00 > 369.00	3.422	3.430	-0.008	1.000	16334	0.0257	Target=2.40		5.5	M
413.00 > 169.00	3.422	3.430	-0.008	1.000	5080		3.22(1.20-3.60)		22.5	M
D 14 13C4 PFOA										
417.00 > 372.00	3.422	3.430	-0.008	1.000	1434592	2.55		102	6657	
* 62 13C2 PFOA										
415.00 > 370.00	3.422	3.430	-0.008		1546571	2.50			4868	
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.793	0.0	1.108	885014	2.36		98.9	3646	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.793	3.793	0.0	1.000	2460	0.006154	Target=5.74		6.0	M
499.00 > 99.00	3.793	3.793	0.0	1.000	836		2.94(2.87-8.61)		3.5	M
D 19 13C5 PFNA										
468.00 > 423.00	3.817	3.817	0.0	1.116	1220488	2.36		94.5	6547	
D 23 13C2 PFDA										
515.00 > 470.00	4.153	4.164	-0.011	1.214	1225458	2.41		96.2	6326	
24 Perfluorodecanoic acid										M
513.00 > 469.00	4.153	4.164	-0.011	1.000	1712	0.003610	Target=7.28		2.0	M
513.00 > 169.00	4.164	4.164	0.0	1.003	273		6.27(3.64-10.91)		2.4	M
D 26 M2-8:2 FTS										
529.00 > 81.00	4.164	4.175	-0.011	1.217	218492	2.26		94.4	689	
D 21 13C8 FOSA										
506.00 > 78.00	4.218	4.218	0.0	1.233	1444485	2.17		86.7	5659	
22 Perfluorooctanesulfonamide										M
498.00 > 78.00	4.207	4.218	-0.011	0.997	1477	0.002569			14.6	M
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.305	4.305	0.0	1.258	88744	1.81		72.4	912	
D 30 13C2 PFUnA										
565.00 > 520.00	4.443	4.443	0.0	1.298	1075778	2.48		99.4	3270	
31 Perfluoroundecanoic acid										M
563.00 > 519.00	4.443	4.443	0.0	1.000	3242	0.008886	Target=5.78		5.3	M
563.00 > 169.00	4.443	4.443	0.0	1.000	656		4.94(2.89-8.67)		9.8	M
33 N-ethylperfluorooctanesulfonamidoa										M
584.00 > 419.00	4.456	4.456	0.0	1.003	157	0.003700			3.0	M
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.443	4.456	-0.013	1.298	128177	2.36		94.3	1943	
37 Perfluorododecanoic acid										M
613.00 > 569.00	4.672	4.683	-0.011	0.998	942	0.002664	Target=5.13		0.3	M
613.00 > 169.00	4.683	4.683	0.0	1.000	217		4.34(2.56-7.69)		5.1	M
D 36 13C2 PFDaA										
615.00 > 570.00	4.683	4.683	0.0	1.369	956583	2.01		80.6	7796	
41 Perfluorotridecanoic acid										M
663.00 > 619.00	4.906	4.906	0.0	1.048	1141	0.003397	Target=3.82		0.6	M
663.00 > 169.00	4.897	4.906	-0.009	1.046	488		2.34(1.91-5.74)		8.0	M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
42 Perfluorotetradecanoic acid										M
713.00 > 169.00	5.108	5.108	0.0	1.003	509	0.008031	Target=1.05		7.6	M
713.00 > 219.00	5.085	5.108	-0.023	0.998	500		1.02(0.52-1.57)		8.8	M
D 43 13C2 PFTeDA										
715.00 > 670.00	5.094	5.108	-0.014	1.489	788762	1.98		79.3	6624	

**QC Flag Legend**

Review Flags

M - Manually Integrated



Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B022.d

Injection Date: 24-Dec-2019 16:48:08

Instrument ID: LC812

Lims ID: 480-164221-C-11-A

Lab Sample ID: 200-164221-11

Client ID: CS SW 03 DER

Operator ID: lc812tech

ALS Bottle#: 22

Worklist Smp#: 22

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

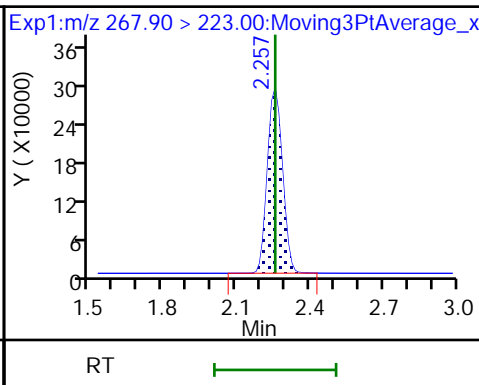
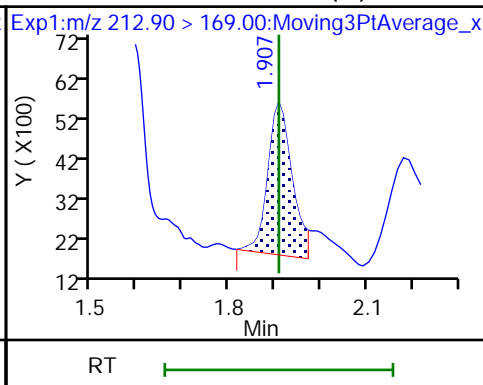
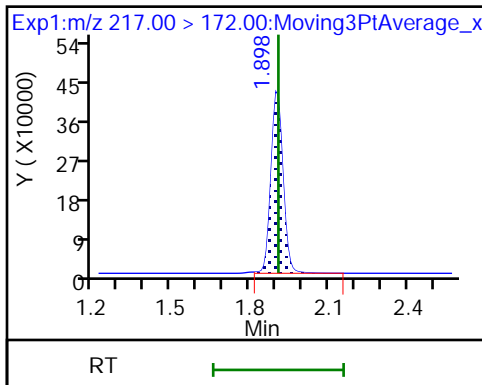
Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid (M)

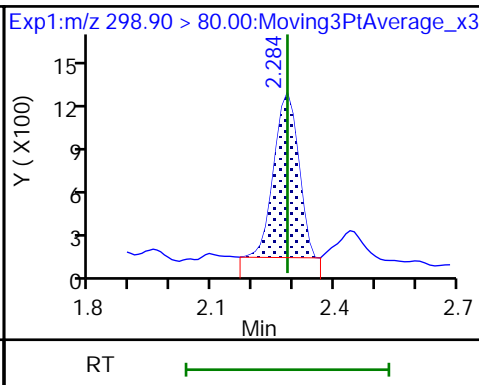
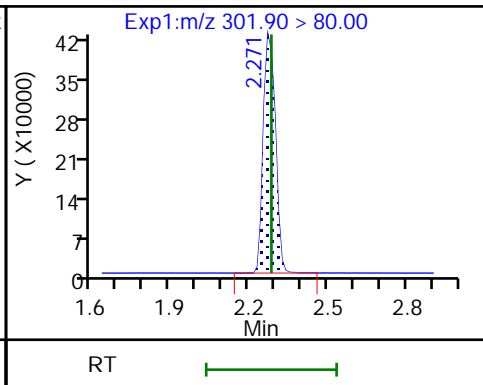
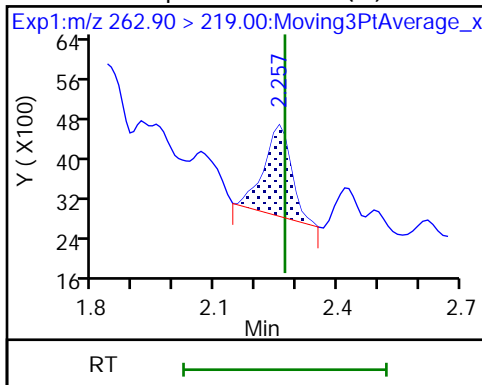
D 3 13C5 PFPeA



4 Perfluoropentanoic acid (M)

D 47 13C3 PFBS

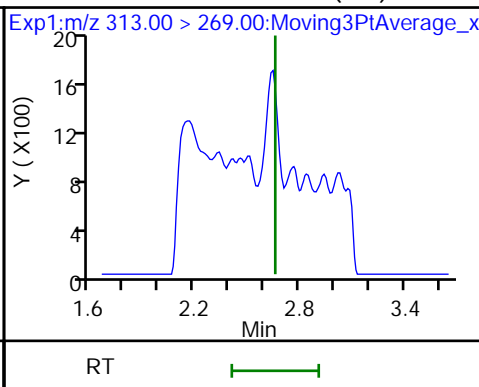
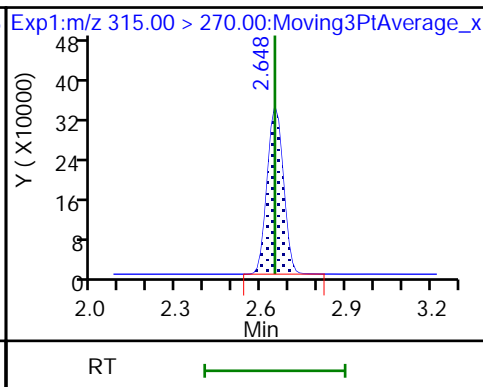
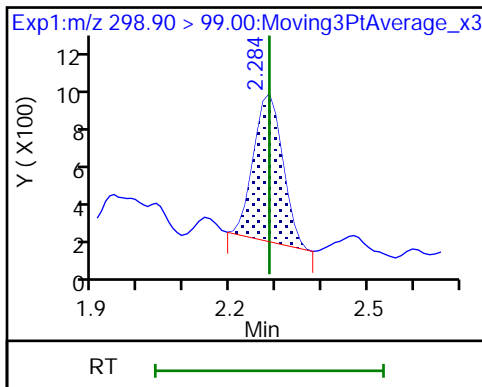
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 7 13C2 PFHxA

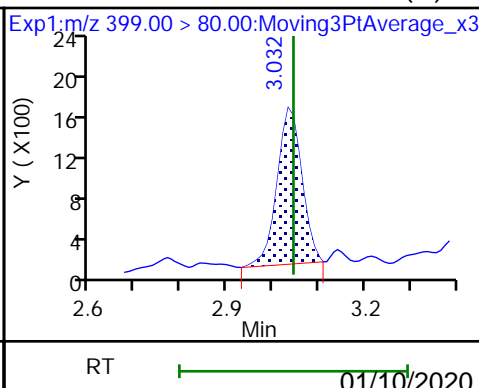
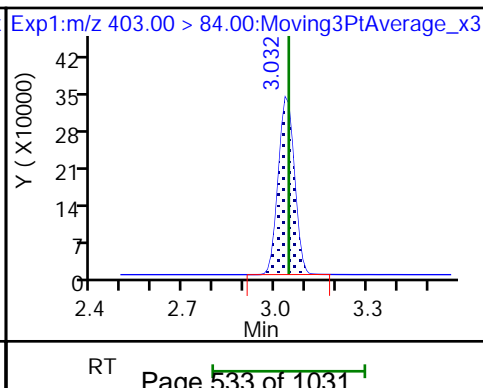
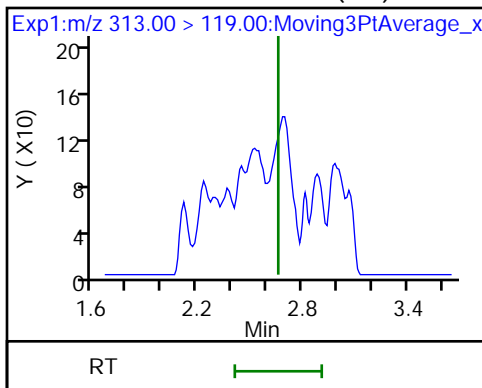
6 Perfluorohexanoic acid (ND)



6 Perfluorohexanoic acid (ND)

D 11 18O2 PFHxS

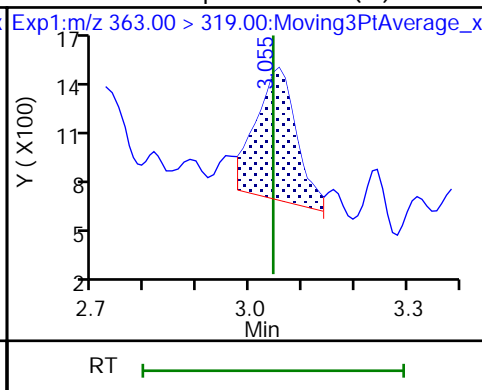
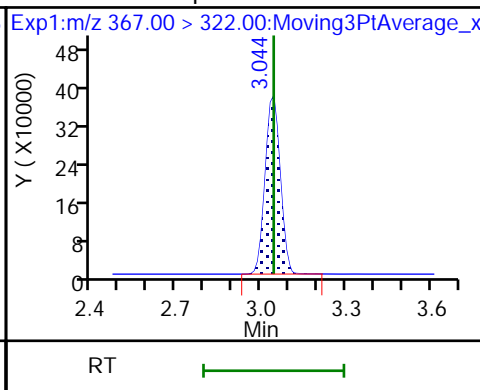
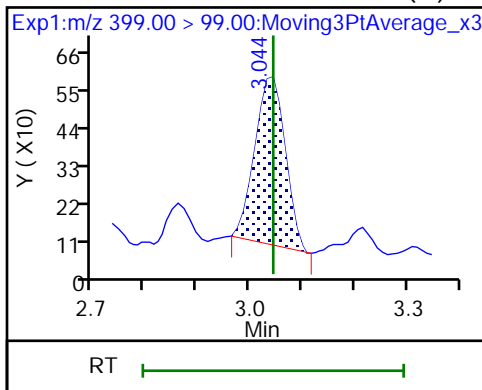
8 Perfluorohexanesulfonic acid (M)



8 Perfluorohexanesulfonic acid (M)

D 9 13C4 PFHpA

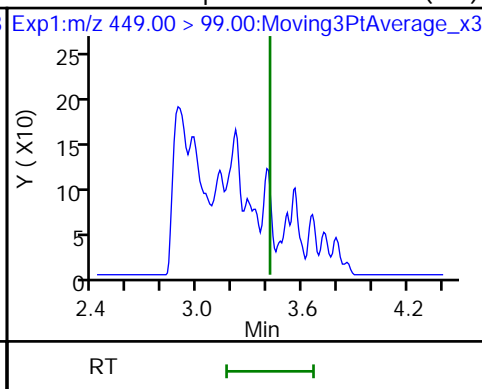
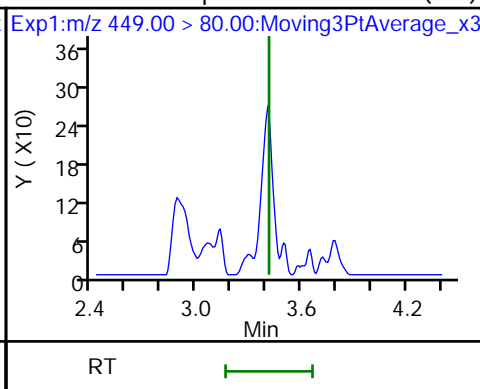
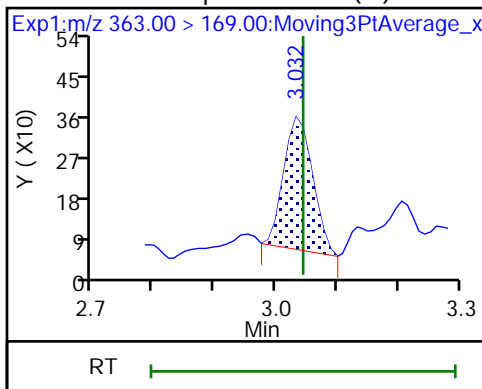
10 Perfluoroheptanoic acid (M)



10 Perfluoroheptanoic acid (M)

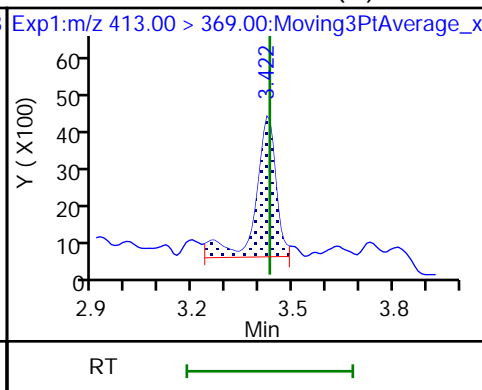
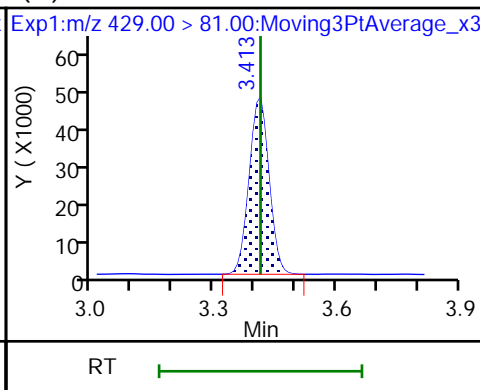
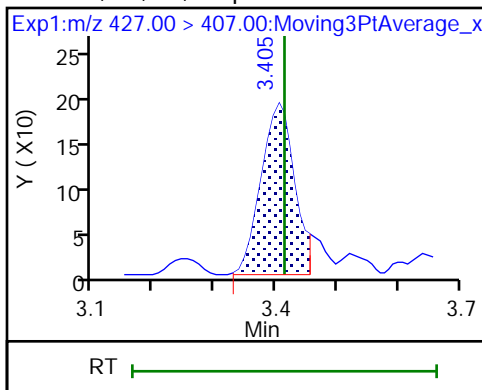
16 Perfluoroheptanesulfonic acid (ND)

16 Perfluoroheptanesulfonic acid (ND)



13 1H,1H,2H,2H-perfluorooctanesulfonate (M) M2-6:2 FTS

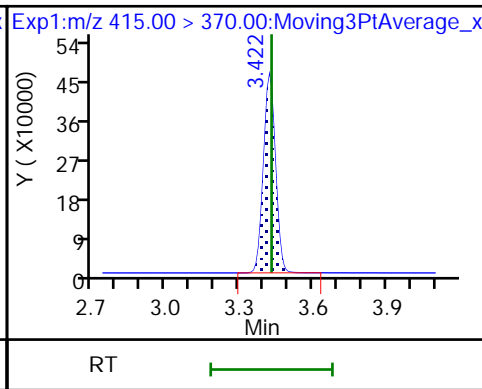
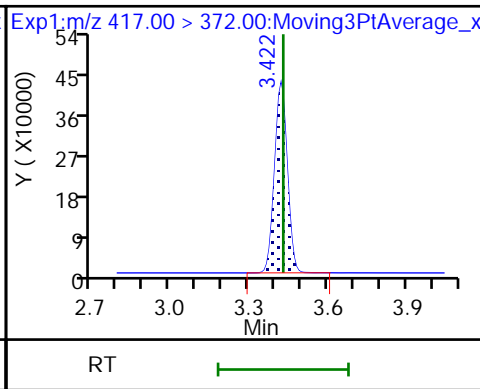
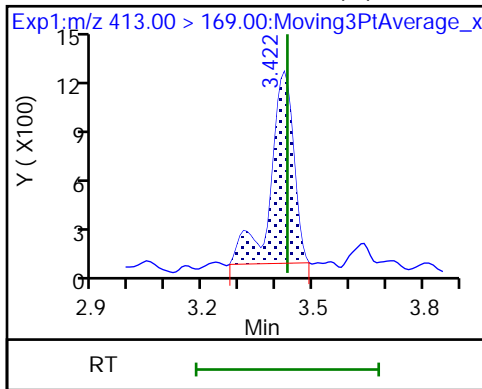
15 Perfluorooctanoic acid (M)



15 Perfluorooctanoic acid (M)

D 14 13C4 PFOA

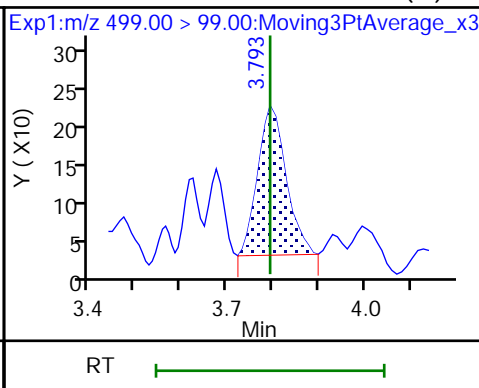
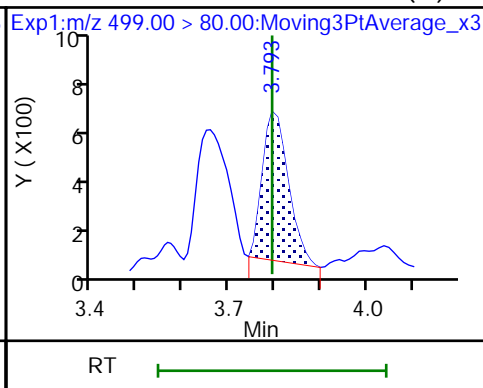
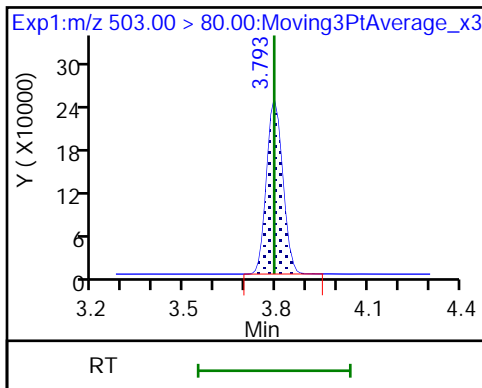
\* 62 13C2 PFOA



D 18 13C4 PFOS

17 Perfluorooctanesulfonic acid (M)

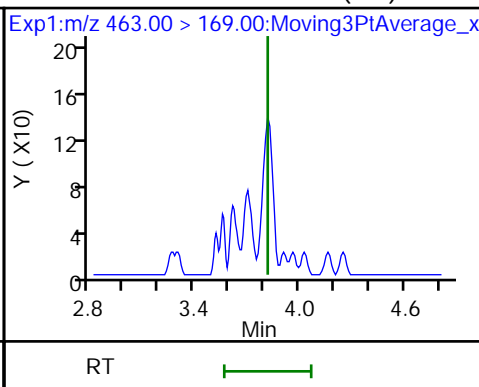
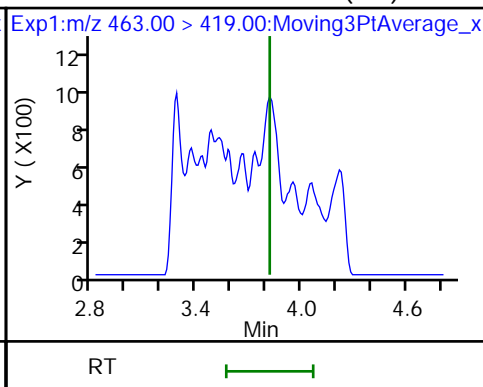
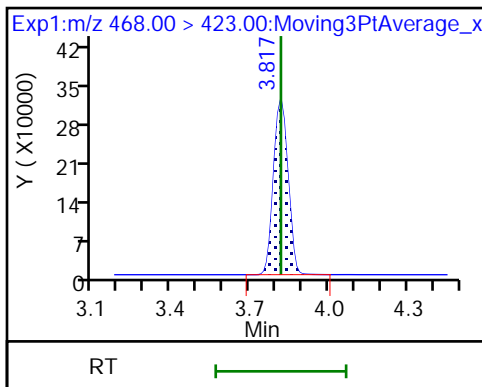
17 Perfluorooctanesulfonic acid (M)



D 19 13C5 PFNA

20 Perfluorononanoic acid (ND)

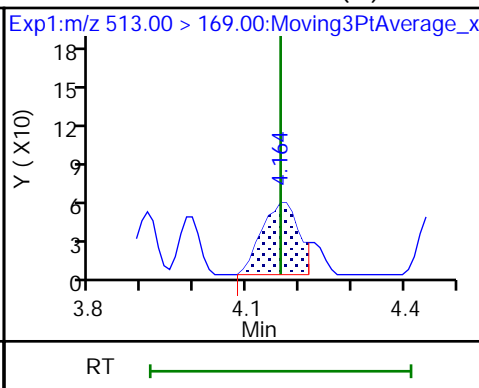
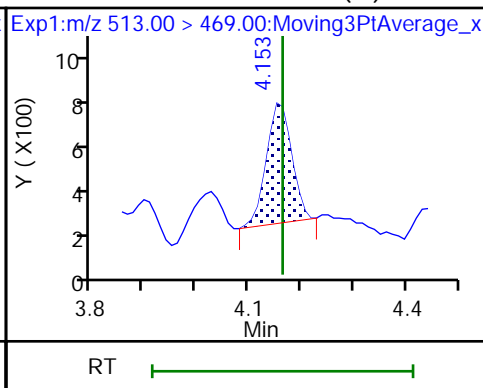
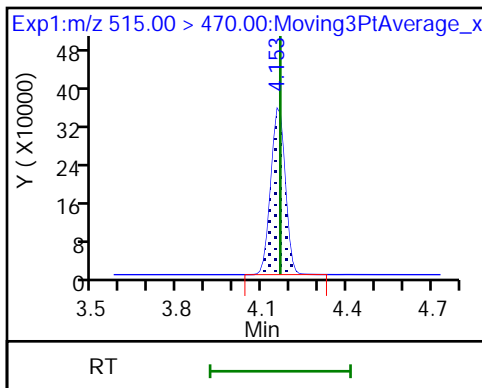
20 Perfluorononanoic acid (ND)



D 23 13C2 PFDA

24 Perfluorodecanoic acid (M)

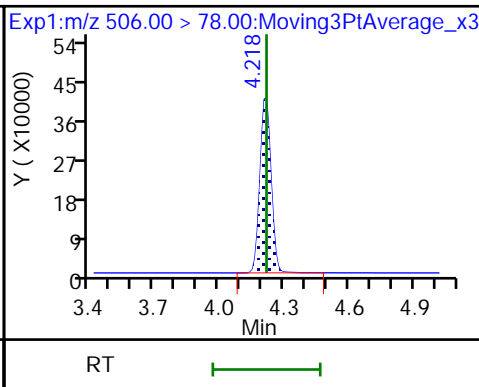
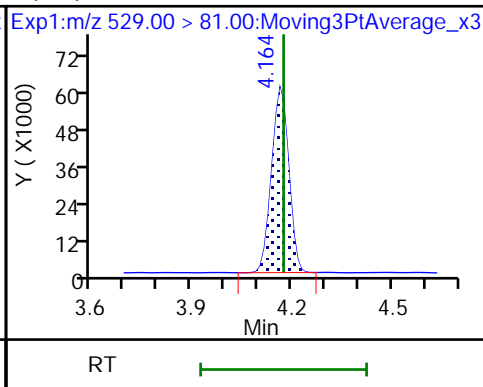
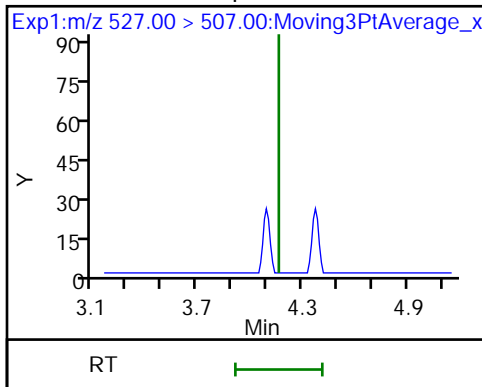
24 Perfluorodecanoic acid (M)



25 1H,1H,2H,2H-perfluorodecanesulfonic acid (M)

25 1H,1H,2H,2H-perfluorodecanesulfonic acid (M)

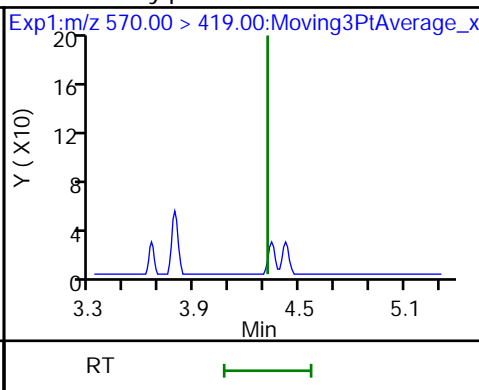
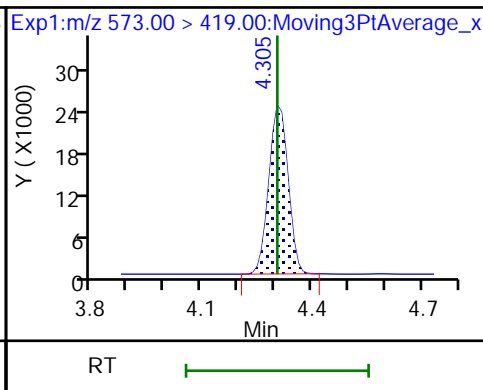
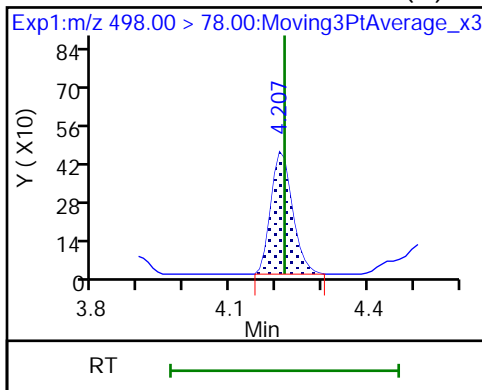
D 21 13C8 FOSA



22 Perfluorooctanesulfonamide (M)

D 27 d3-NMeFOSAA

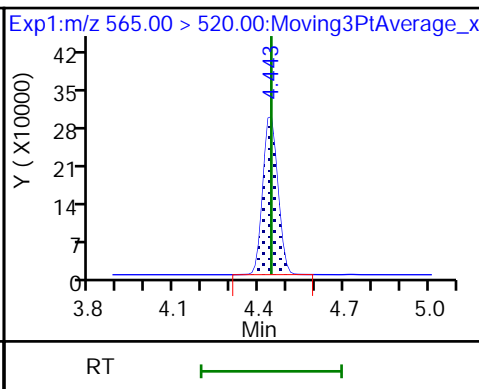
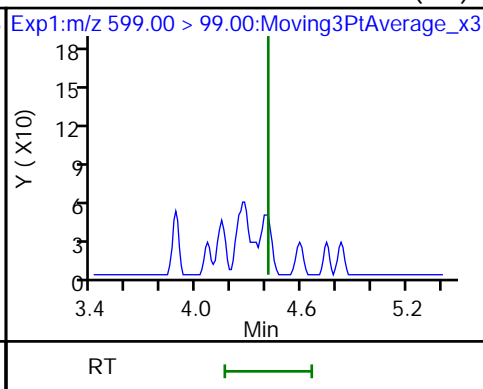
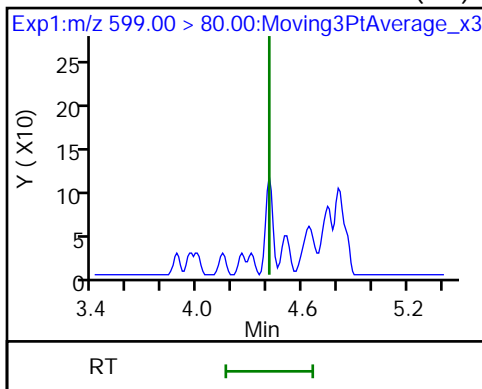
28 N-methylperfluorooctanesulfonamido (ND)



29 Perfluorodecanesulfonic acid (ND)

29 Perfluorodecanesulfonic acid (ND)

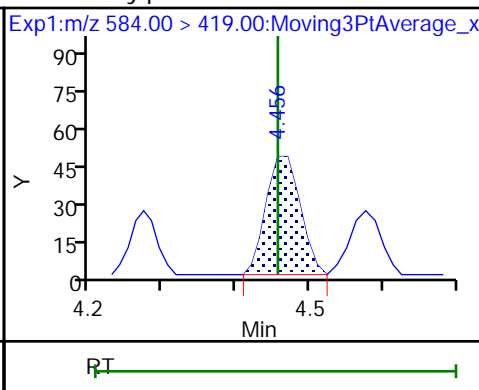
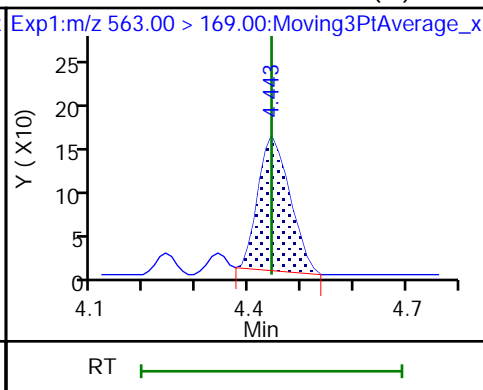
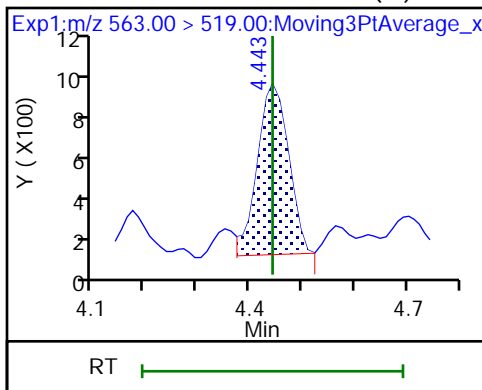
D 30 13C2 PFUoA



31 Perfluoroundecanoic acid (M)

31 Perfluoroundecanoic acid (M)

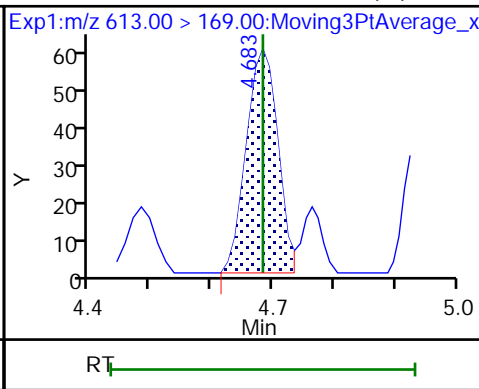
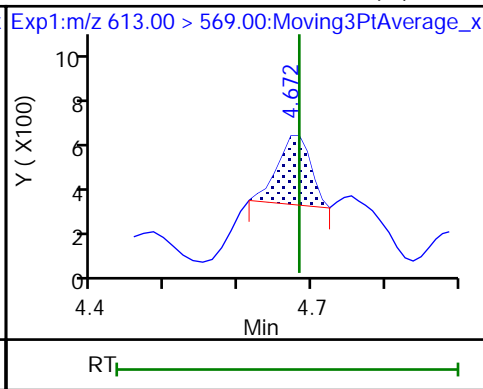
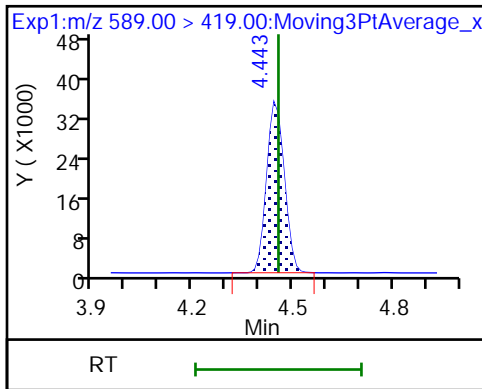
33 N-ethylperfluorooctanesulfonamidoa (M)



D 32 d5-NEtFOSAA

37 Perfluorododecanoic acid (M)

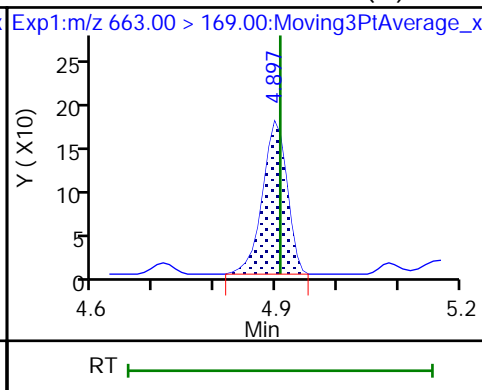
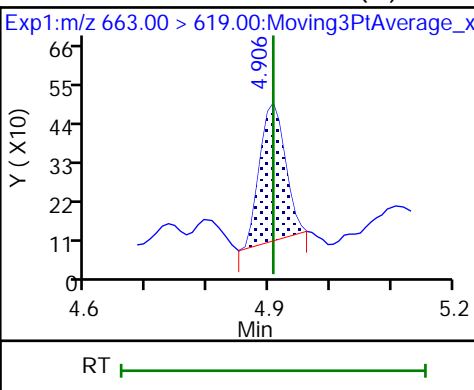
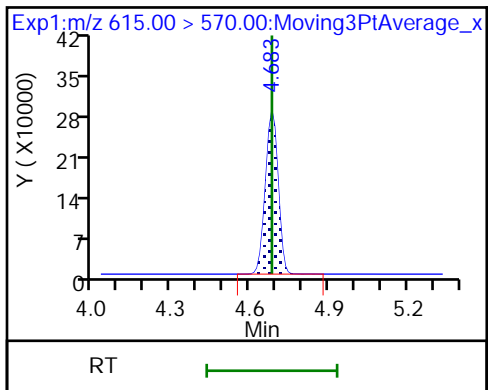
37 Perfluorododecanoic acid (M)



D 36 13C2 PFDaA

41 Perfluorotridecanoic acid (M)

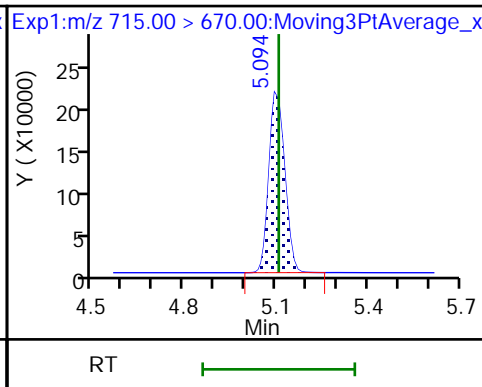
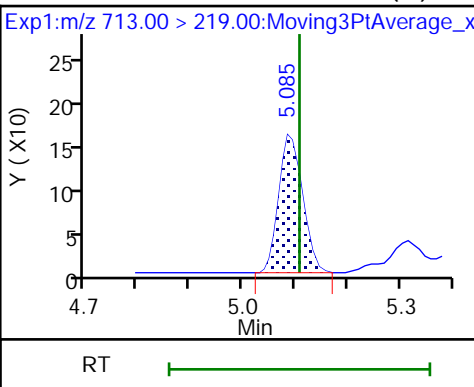
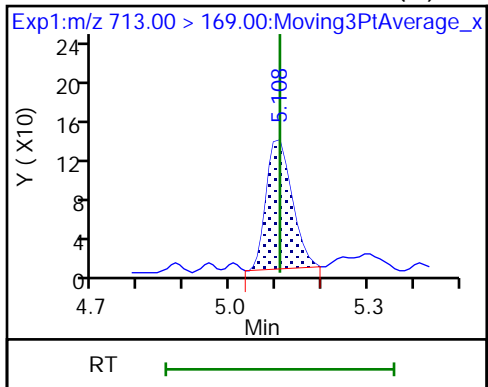
41 Perfluorotridecanoic acid (M)



42 Perfluorotetradecanoic acid (M)

42 Perfluorotetradecanoic acid (M)

D 43 13C2 PFTeDA



Eurofins TestAmerica, Burlington

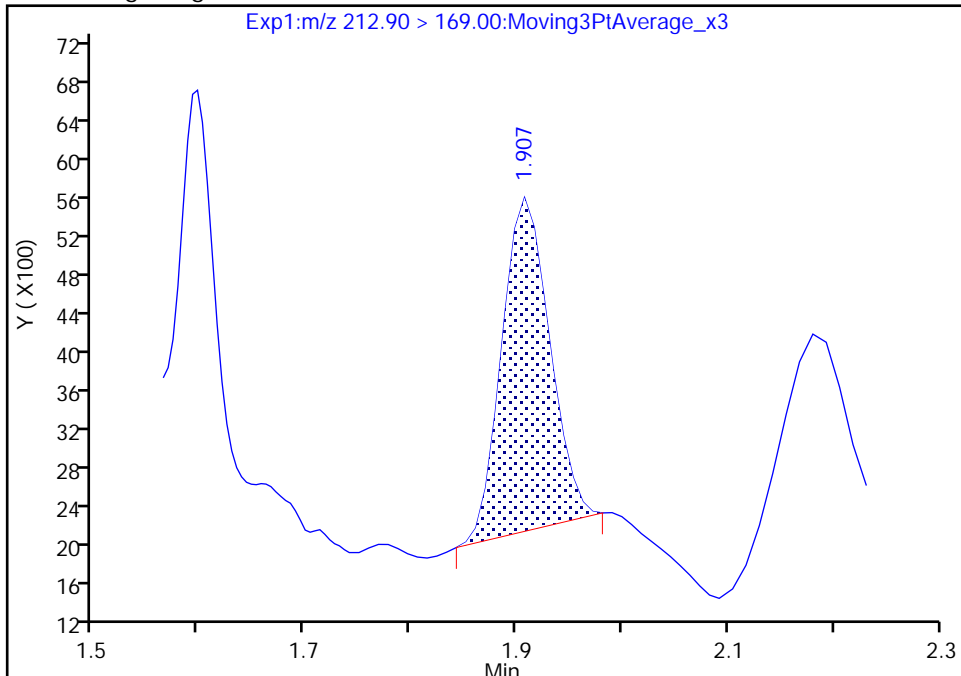
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B022.d  
Injection Date: 24-Dec-2019 16:48:08 Instrument ID: LC812  
Lims ID: 480-164221-C-11-A Lab Sample ID: 200-164221-11  
Client ID: CS SW 03 DER  
Operator ID: lc812tech ALS Bottle#: 22 Worklist Smp#: 22  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

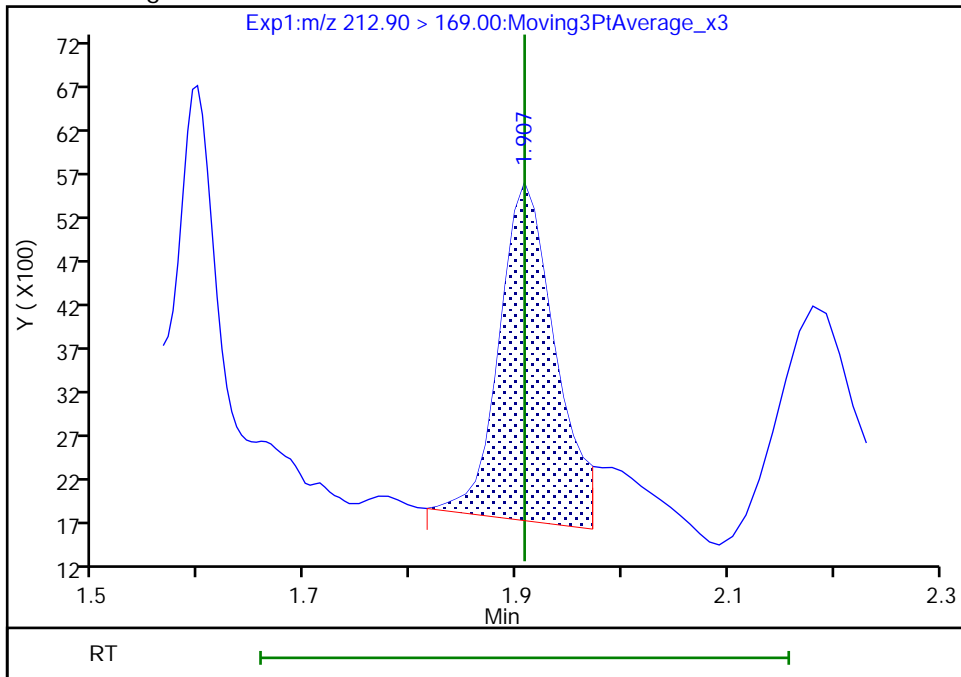
RT: 1.91  
Area: 10739  
Amount: 0.020083  
Amount Units: ng/ml

Processing Integration Results



RT: 1.91  
Area: 14021  
Amount: 0.026221  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 15:08:41  
Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

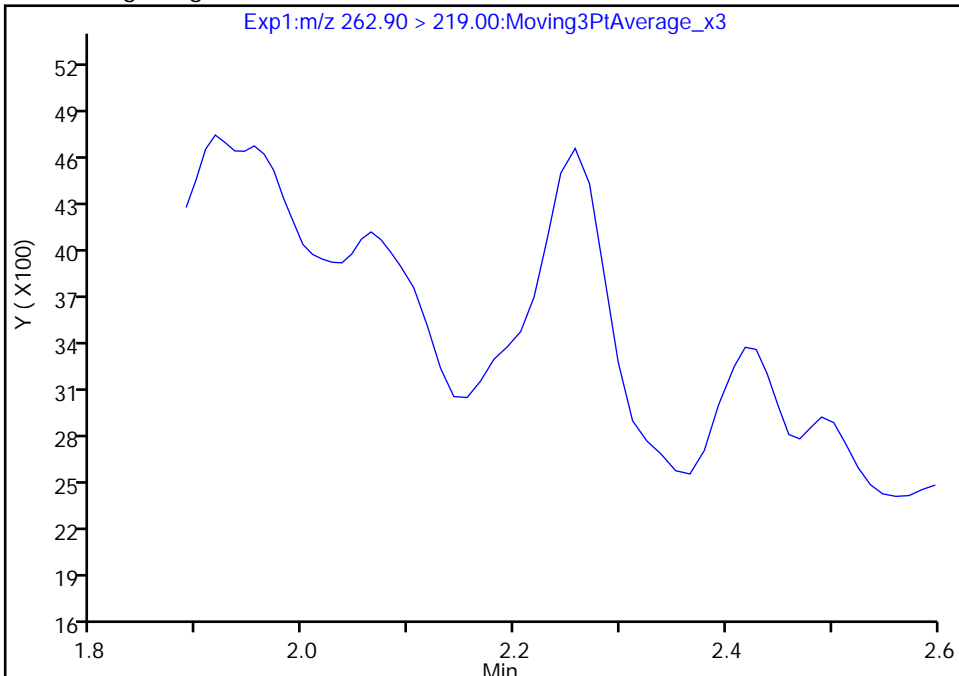
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B022.d  
Injection Date: 24-Dec-2019 16:48:08 Instrument ID: LC812  
Lims ID: 480-164221-C-11-A Lab Sample ID: 200-164221-11  
Client ID: CS SW 03 DER  
Operator ID: lc812tech ALS Bottle#: 22 Worklist Smp#: 22  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

4 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

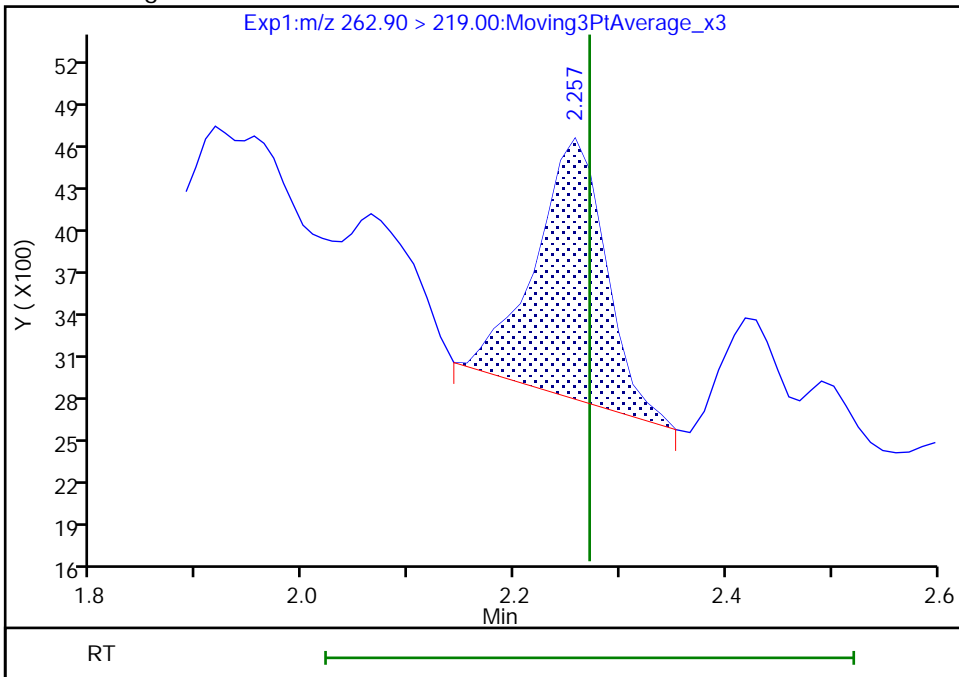
Not Detected  
Expected RT: 2.27

Processing Integration Results



Manual Integration Results

RT: 2.26  
Area: 8602  
Amount: 0.015284  
Amount Units: ng/ml



Reviewer: lautenschlagery, 27-Dec-2019 15:07:59  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Euofins TestAmerica, Burlington

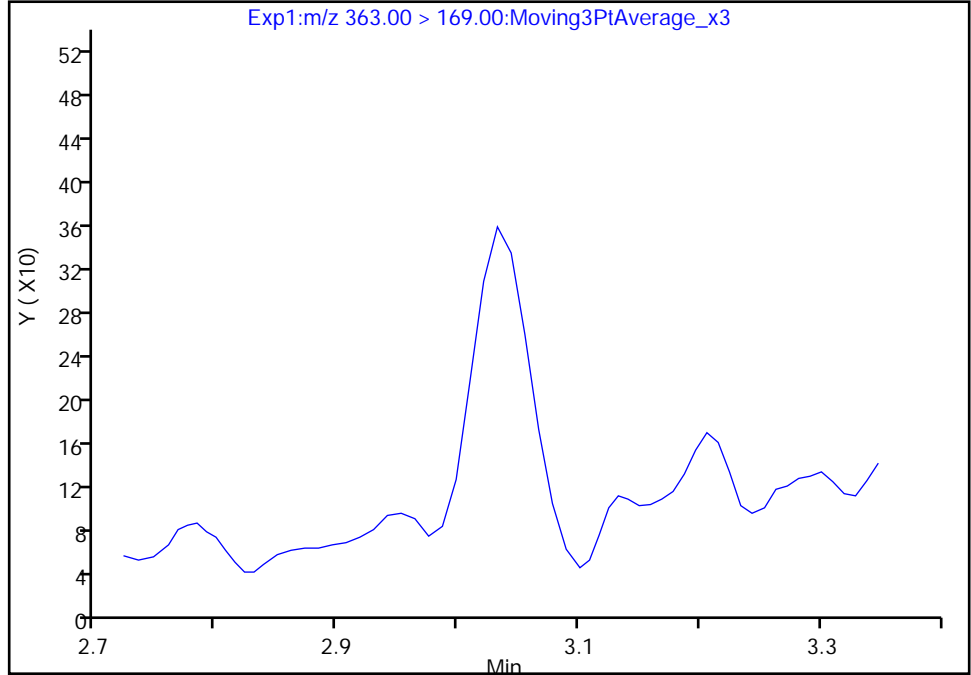
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B022.d  
Injection Date: 24-Dec-2019 16:48:08 Instrument ID: LC812  
Lims ID: 480-164221-C-11-A Lab Sample ID: 200-164221-11  
Client ID: CS SW 03 DER  
Operator ID: lc812tech ALS Bottle#: 22 Worklist Smp#: 22  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

10 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 2

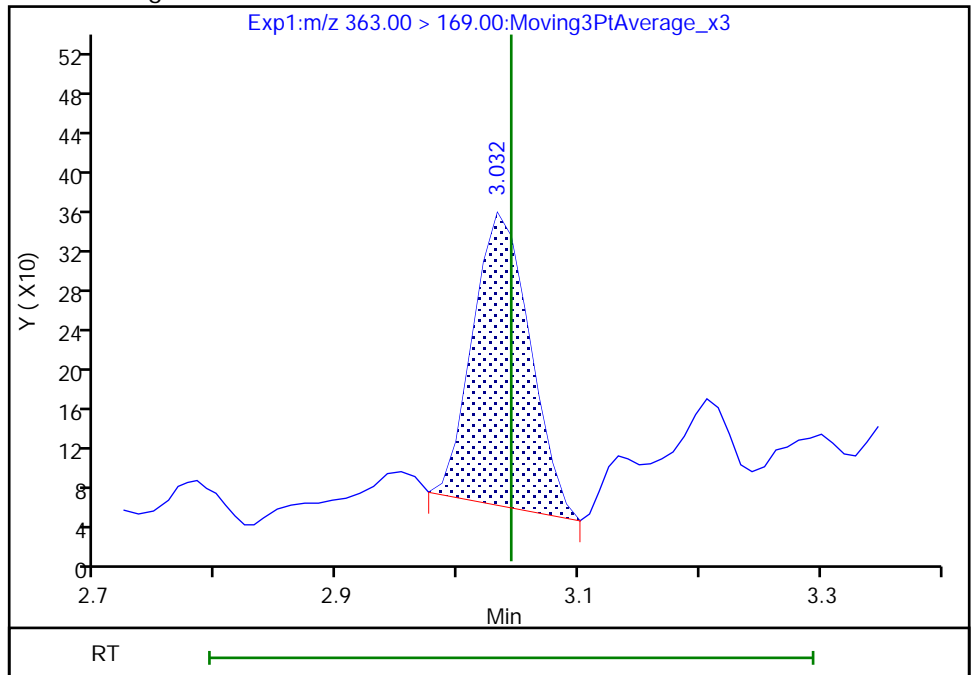
Not Detected  
Expected RT: 3.04

Processing Integration Results



Manual Integration Results

RT: 3.03  
Area: 975  
Amount: 0.007204  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 15:06:22

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Eurofins TestAmerica, Burlington

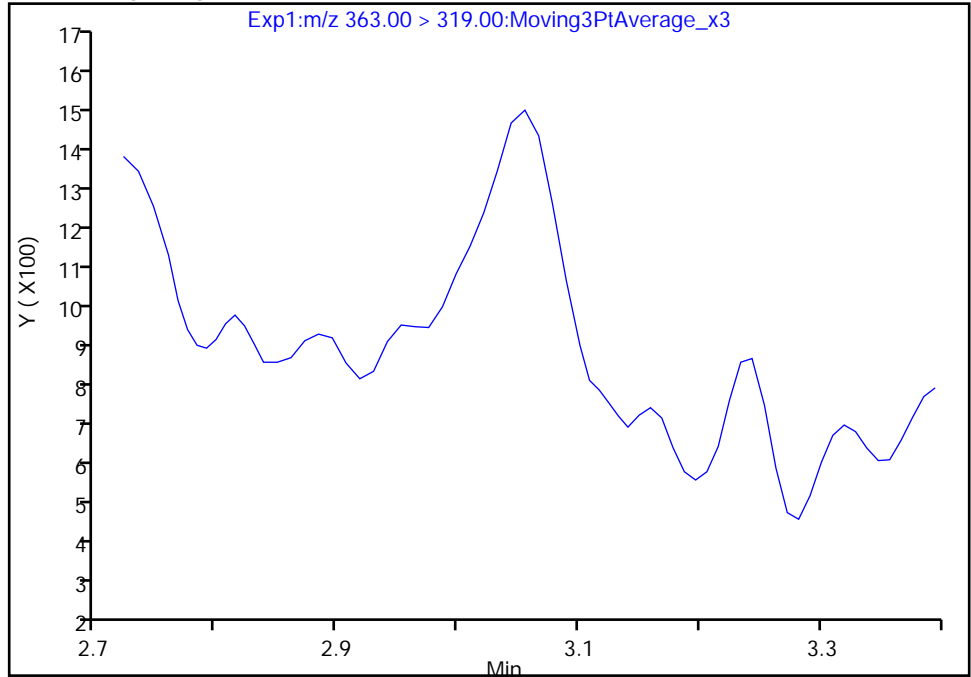
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B022.d  
Injection Date: 24-Dec-2019 16:48:08 Instrument ID: LC812  
Lims ID: 480-164221-C-11-A Lab Sample ID: 200-164221-11  
Client ID: CS SW 03 DER  
Operator ID: lc812tech ALS Bottle#: 22 Worklist Smp#: 22  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 (4.60 mm) Detector: EXP1

10 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

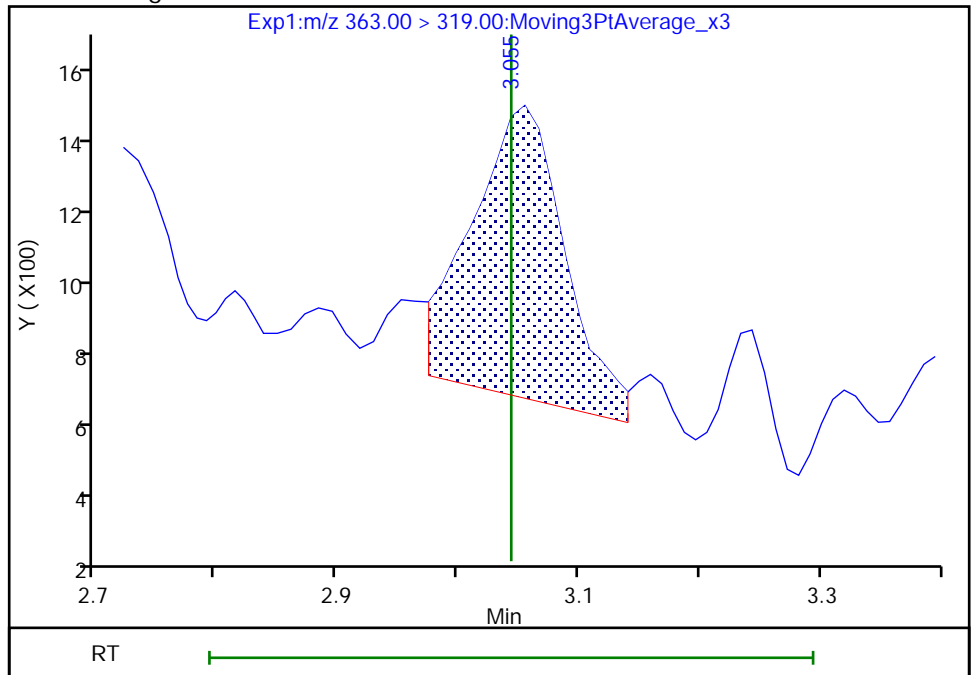
Not Detected  
Expected RT: 3.04

Processing Integration Results



RT: 3.06  
Area: 4176  
Amount: 0.007204  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 15:06:59

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

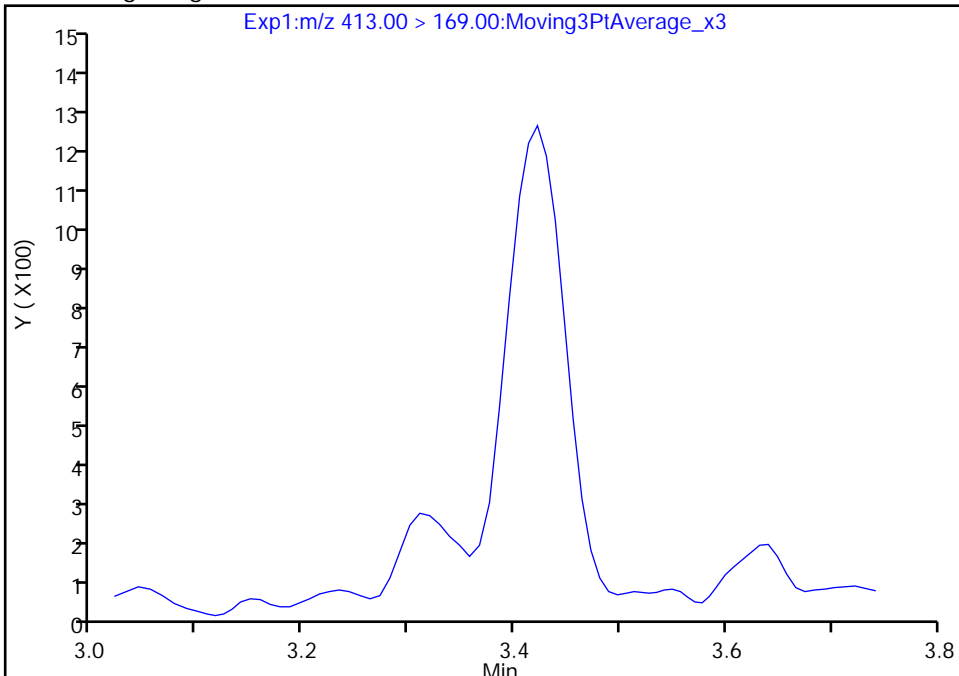
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B022.d  
Injection Date: 24-Dec-2019 16:48:08 Instrument ID: LC812  
Lims ID: 480-164221-C-11-A Lab Sample ID: 200-164221-11  
Client ID: CS SW 03 DER  
Operator ID: lc812tech ALS Bottle#: 22 Worklist Smp#: 22  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

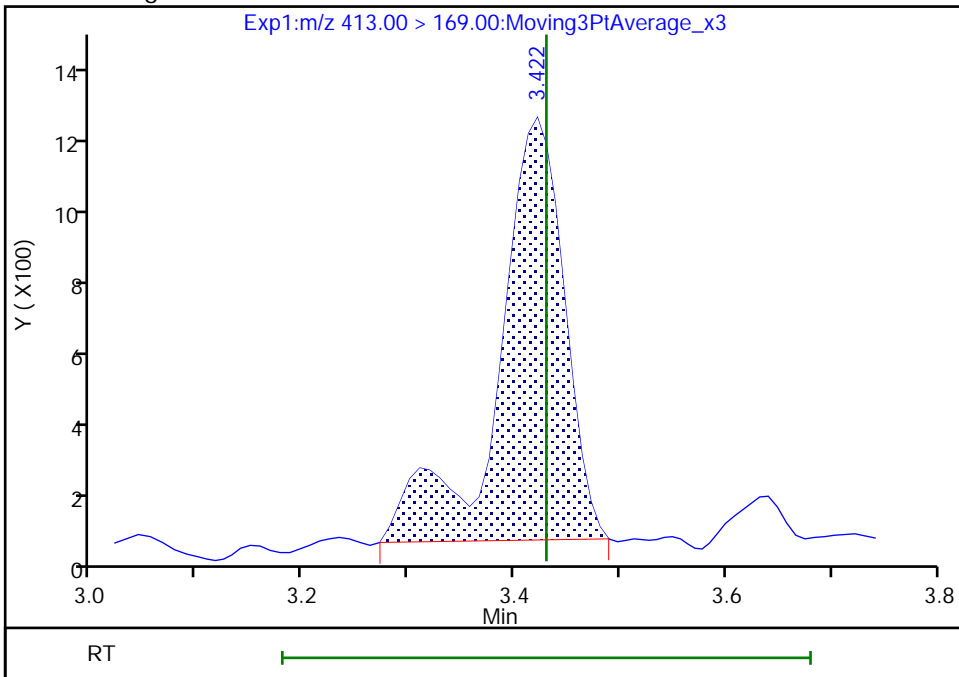
Signal: 2

Not Detected  
Expected RT: 3.43

Processing Integration Results



Manual Integration Results



RT: 3.42  
Area: 5080  
Amount: 0.025655  
Amount Units: ng/ml

Eurofins TestAmerica, Burlington

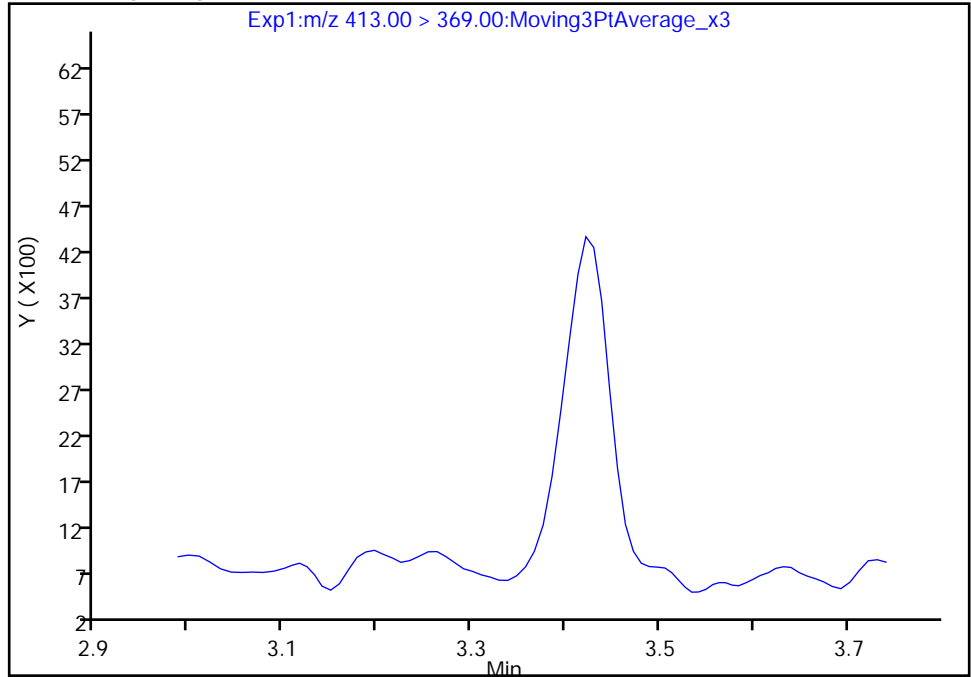
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B022.d  
Injection Date: 24-Dec-2019 16:48:08 Instrument ID: LC812  
Lims ID: 480-164221-C-11-A Lab Sample ID: 200-164221-11  
Client ID: CS SW 03 DER  
Operator ID: lc812tech ALS Bottle#: 22 Worklist Smp#: 22  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

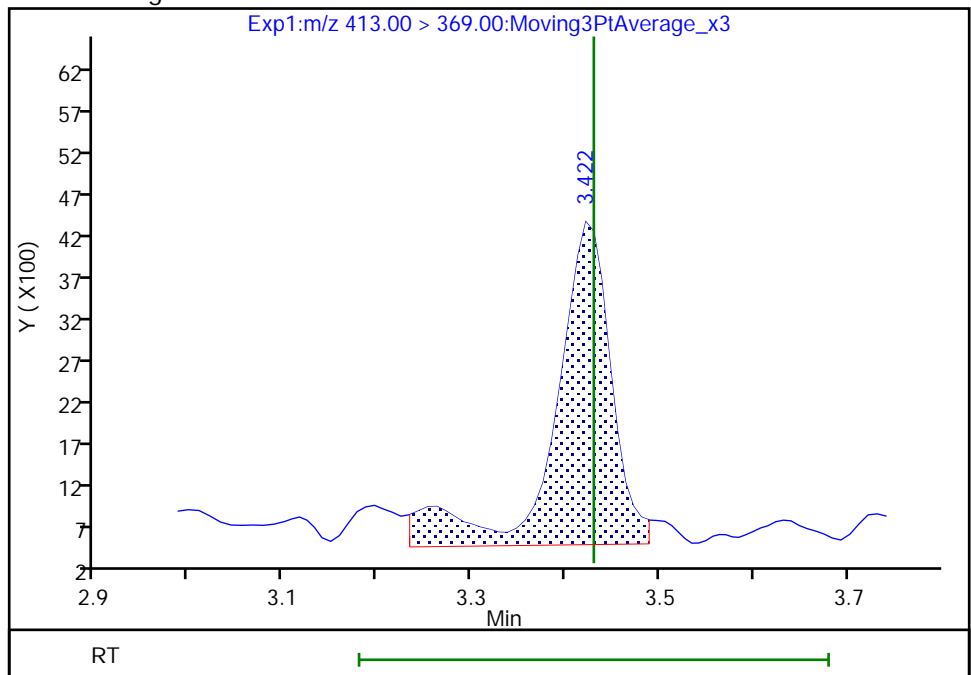
Not Detected  
Expected RT: 3.43

Processing Integration Results



Manual Integration Results

RT: 3.42  
Area: 16334  
Amount: 0.025655  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

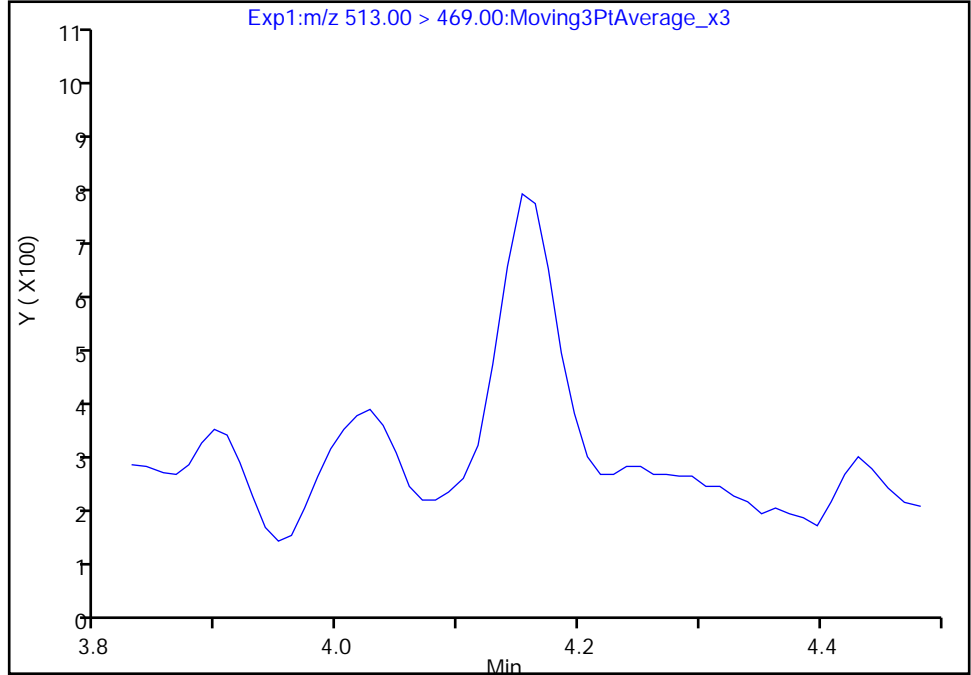
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B022.d  
Injection Date: 24-Dec-2019 16:48:08 Instrument ID: LC812  
Lims ID: 480-164221-C-11-A Lab Sample ID: 200-164221-11  
Client ID: CS SW 03 DER  
Operator ID: lc812tech ALS Bottle#: 22 Worklist Smp#: 22  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

24 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 1

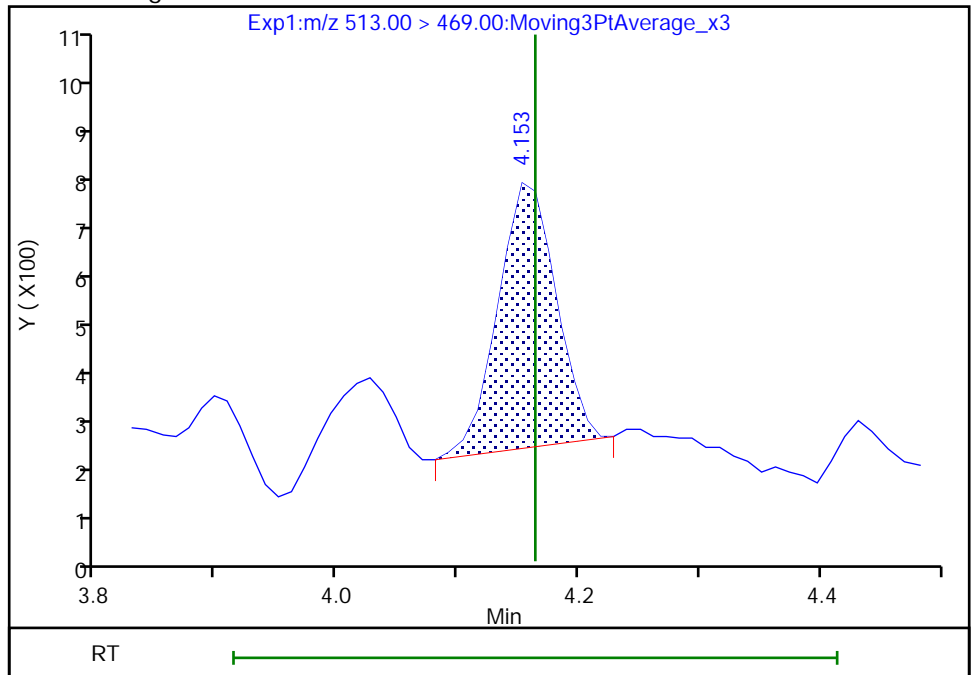
Not Detected  
Expected RT: 4.16

Processing Integration Results



Manual Integration Results

RT: 4.15  
Area: 1712  
Amount: 0.003610  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 15:02:55  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

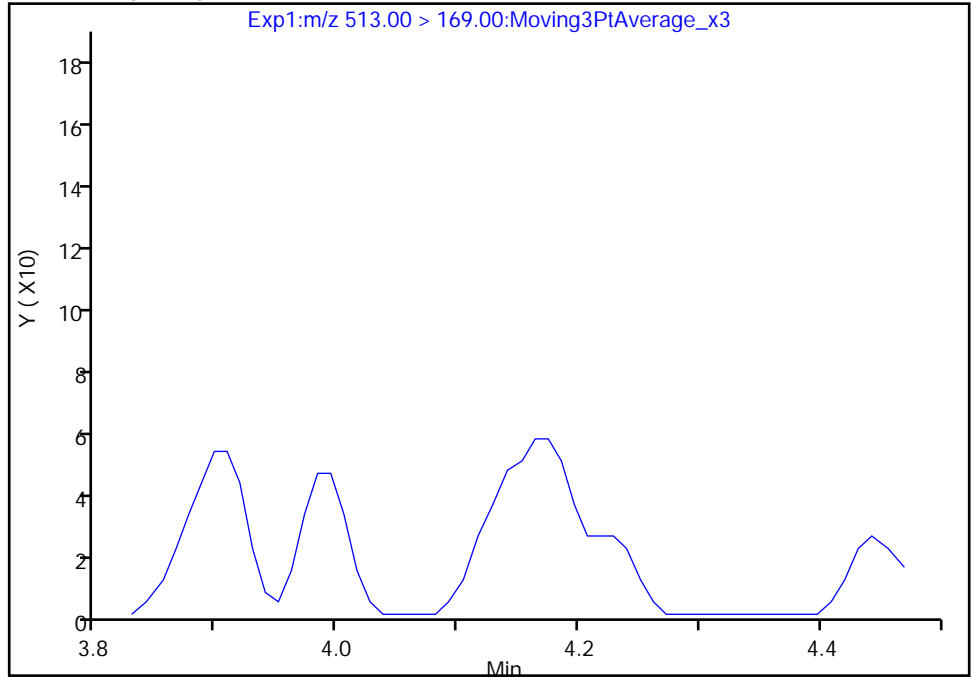
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B022.d  
Injection Date: 24-Dec-2019 16:48:08 Instrument ID: LC812  
Lims ID: 480-164221-C-11-A Lab Sample ID: 200-164221-11  
Client ID: CS SW 03 DER  
Operator ID: lc812tech ALS Bottle#: 22 Worklist Smp#: 22  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

24 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 2

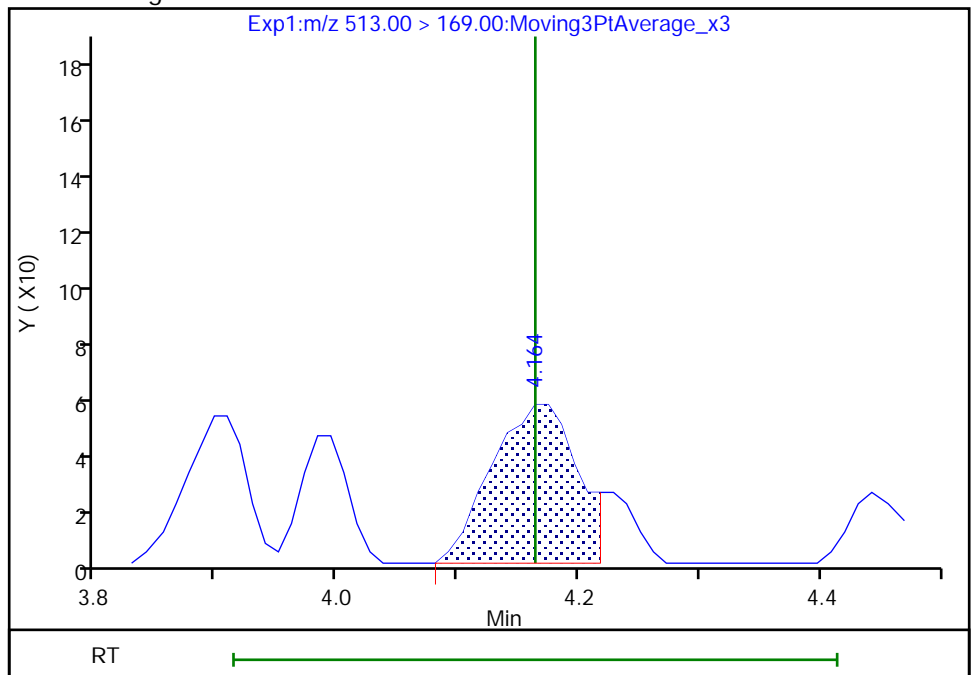
Not Detected  
Expected RT: 4.16

Processing Integration Results



Manual Integration Results

RT: 4.16  
Area: 273  
Amount: 0.003610  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 15:03:15

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

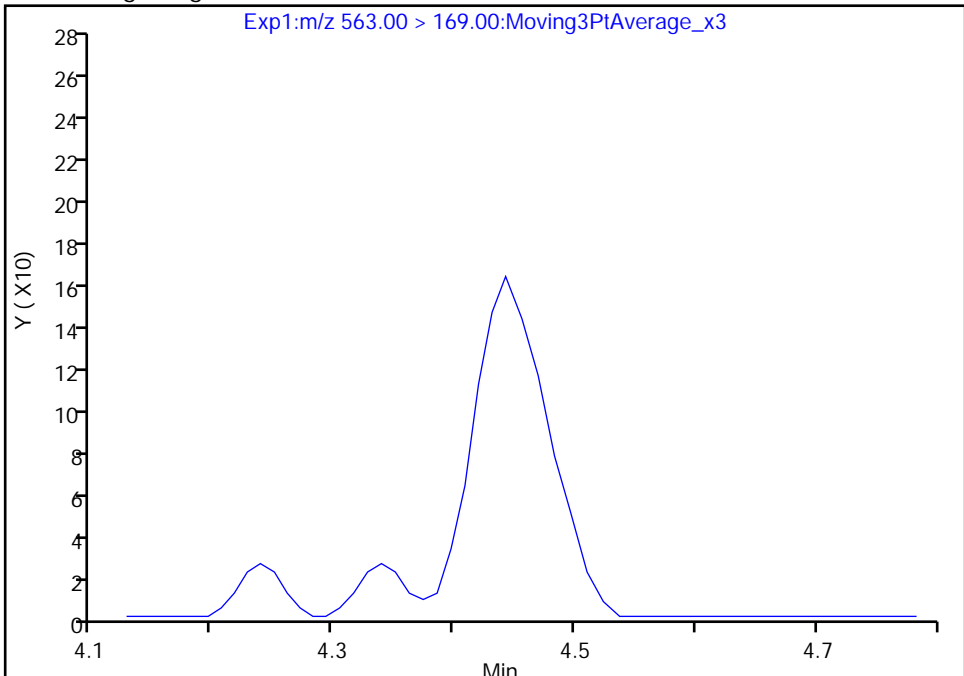
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B022.d  
Injection Date: 24-Dec-2019 16:48:08 Instrument ID: LC812  
Lims ID: 480-164221-C-11-A Lab Sample ID: 200-164221-11  
Client ID: CS SW 03 DER  
Operator ID: lc812tech ALS Bottle#: 22 Worklist Smp#: 22  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 2

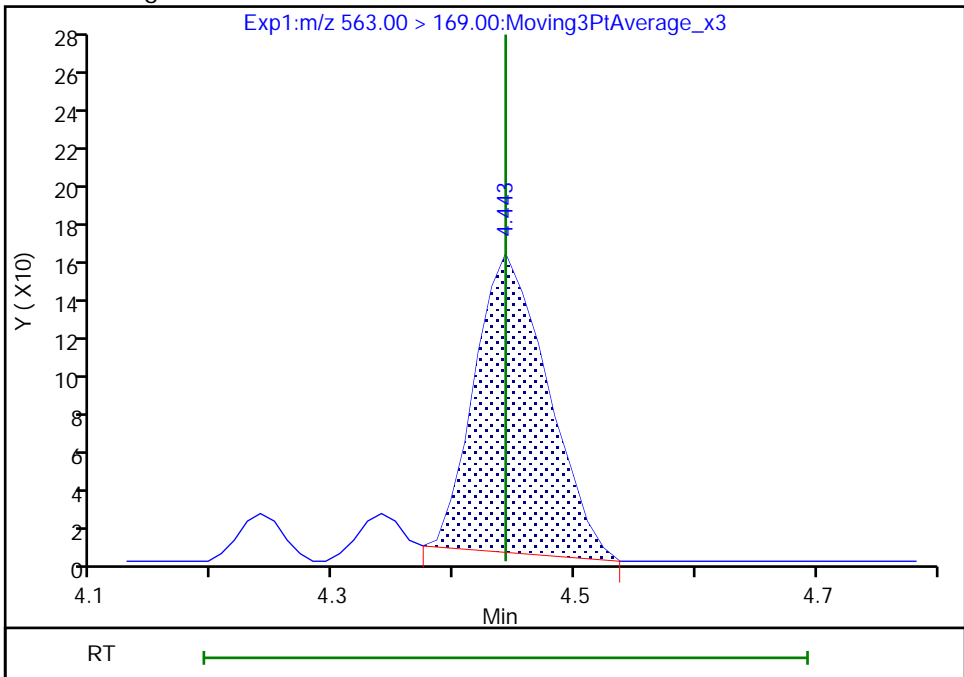
Not Detected  
Expected RT: 4.44

Processing Integration Results



Manual Integration Results

RT: 4.44  
Area: 656  
Amount: 0.008886  
Amount Units: ng/ml



Reviewer: lautenschlagery, 27-Dec-2019 15:01:53  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

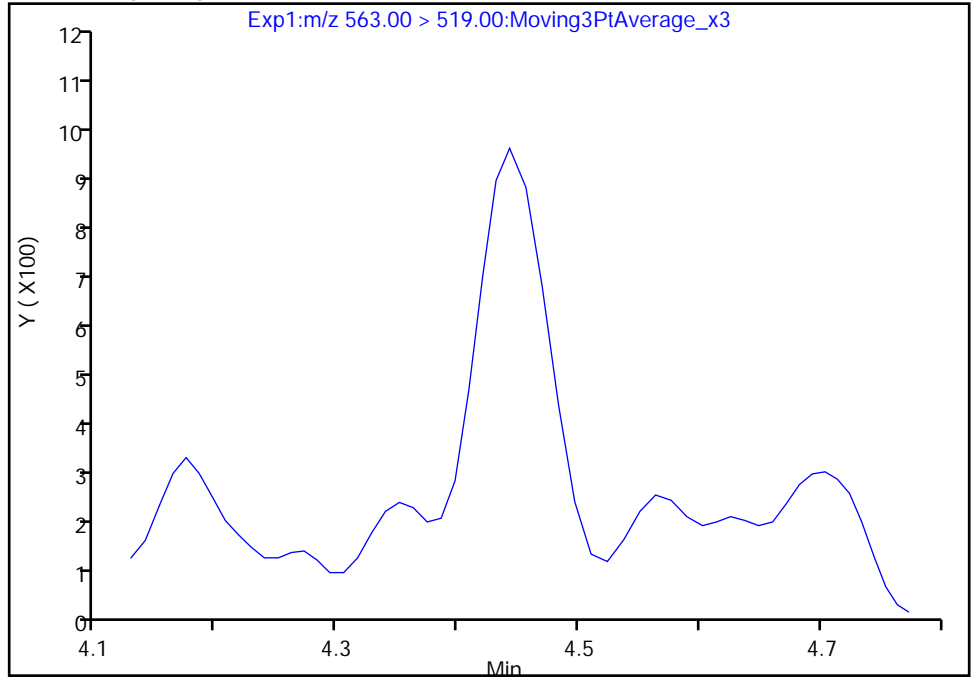
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B022.d  
Injection Date: 24-Dec-2019 16:48:08 Instrument ID: LC812  
Lims ID: 480-164221-C-11-A Lab Sample ID: 200-164221-11  
Client ID: CS SW 03 DER  
Operator ID: lc812tech ALS Bottle#: 22 Worklist Smp#: 22  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 1

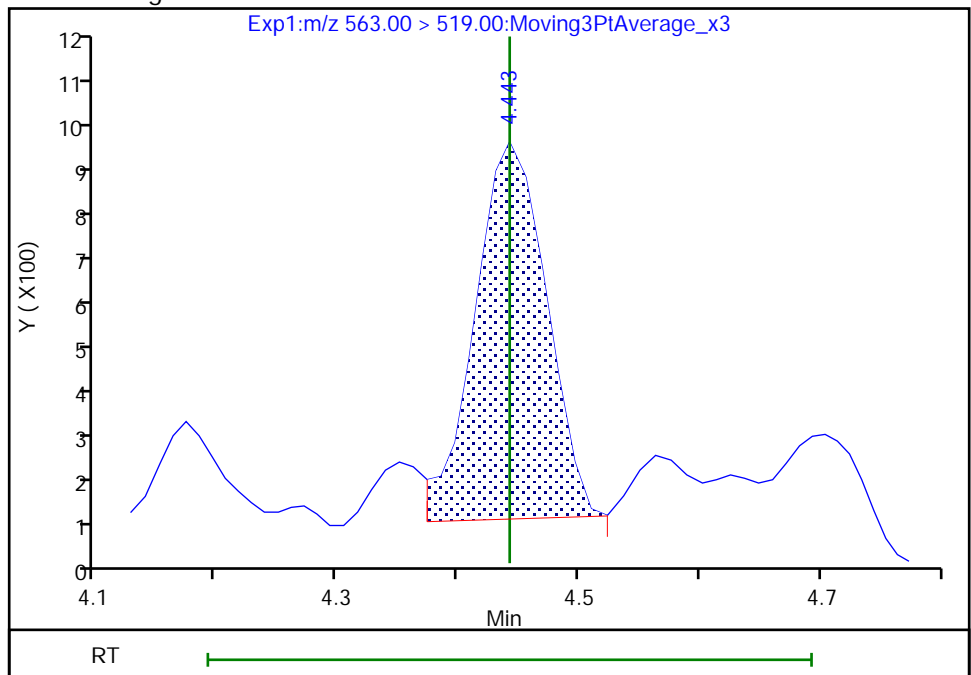
Not Detected  
Expected RT: 4.44

Processing Integration Results



Manual Integration Results

RT: 4.44  
Area: 3242  
Amount: 0.008886  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

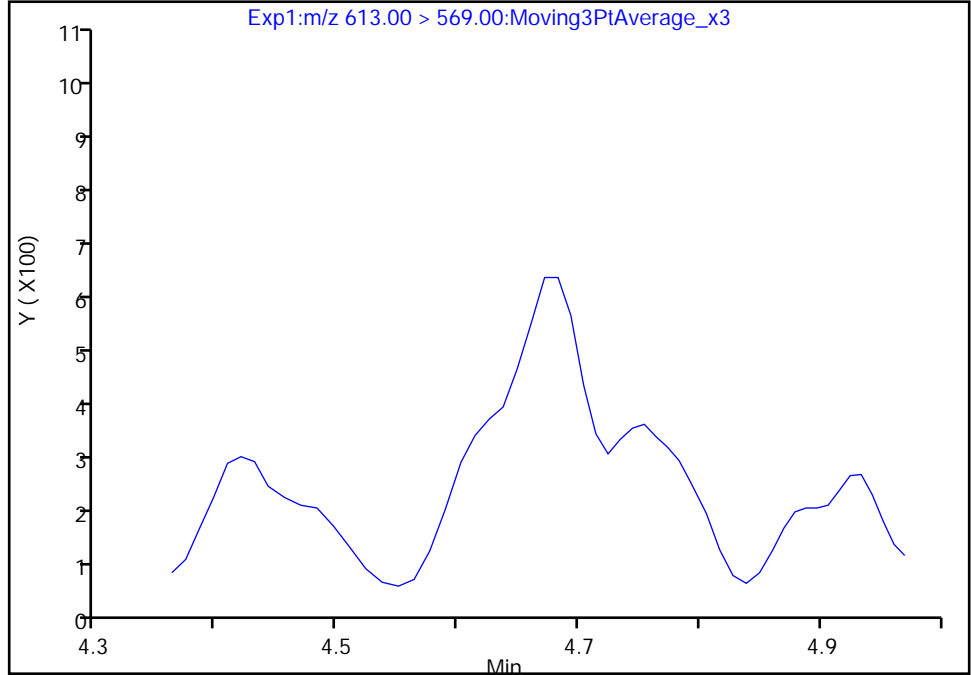
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Injection Date: 24-Dec-2019 16:48:08 Instrument ID: LC812  
Lims ID: 480-164221-C-11-A Lab Sample ID: 200-164221-11  
Client ID: CS SW 03 DER  
Operator ID: lc812tech ALS Bottle#: 22 Worklist Smp#: 22  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

37 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 1

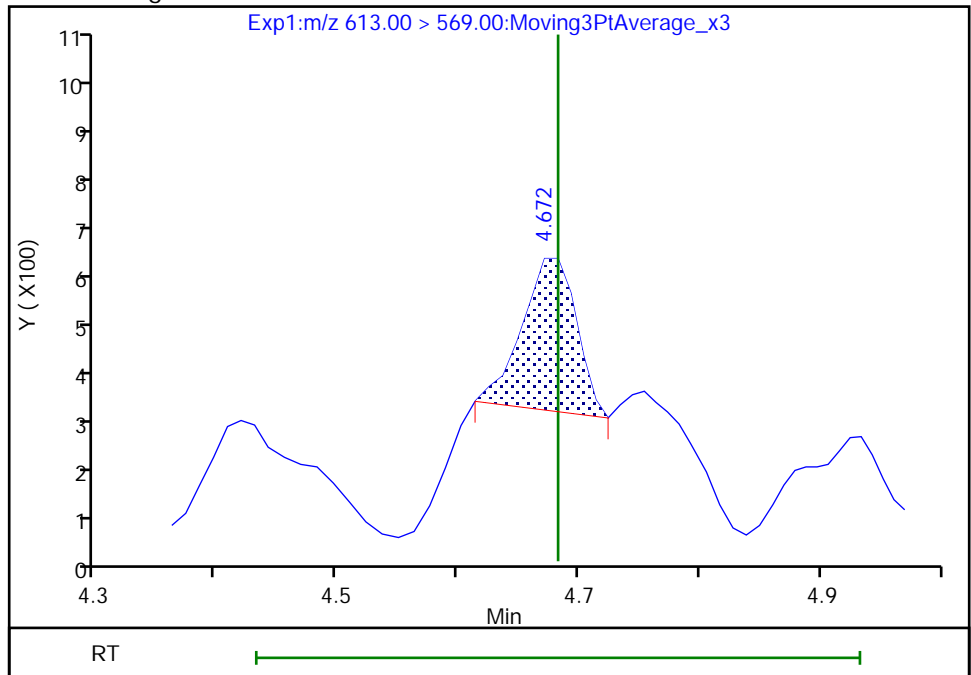
Not Detected  
Expected RT: 4.68

Processing Integration Results



Manual Integration Results

RT: 4.67  
Area: 942  
Amount: 0.002664  
Amount Units: ng/ml



Reviewer: lautenschlagery, 27-Dec-2019 15:00:46  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Eurofins TestAmerica, Burlington

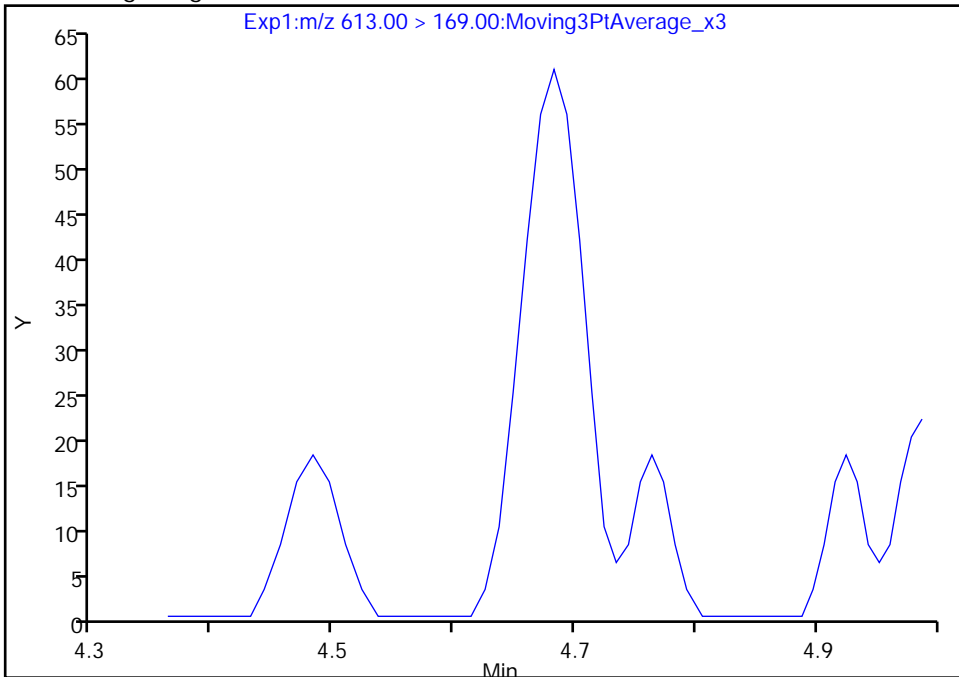
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B022.d  
Injection Date: 24-Dec-2019 16:48:08 Instrument ID: LC812  
Lims ID: 480-164221-C-11-A Lab Sample ID: 200-164221-11  
Client ID: CS SW 03 DER  
Operator ID: lc812tech ALS Bottle#: 22 Worklist Smp#: 22  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

37 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 2

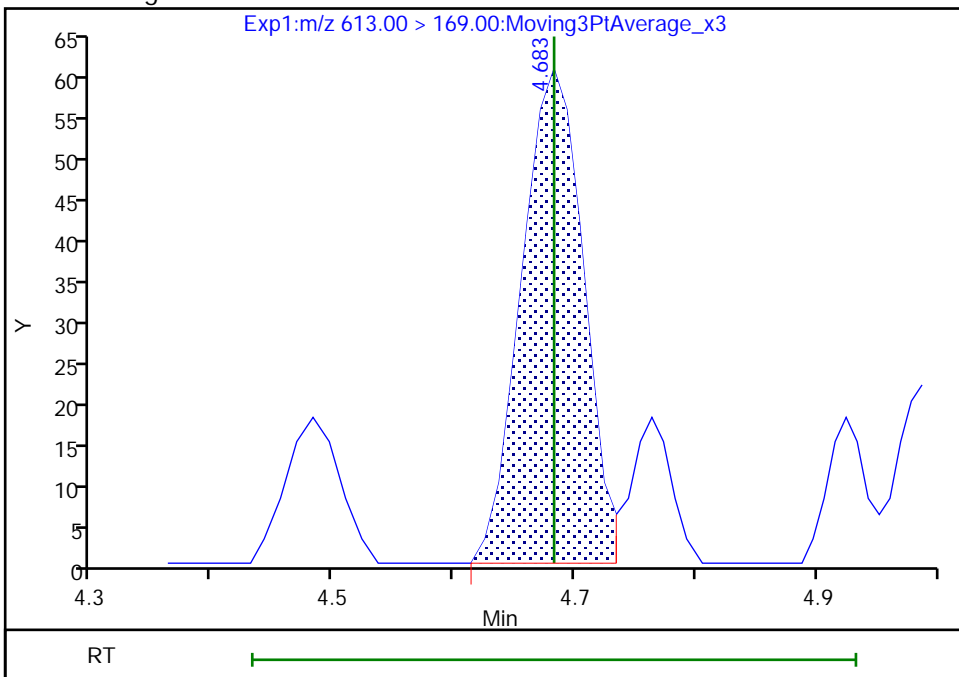
Not Detected  
Expected RT: 4.68

Processing Integration Results



Manual Integration Results

RT: 4.68  
Area: 217  
Amount: 0.002664  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

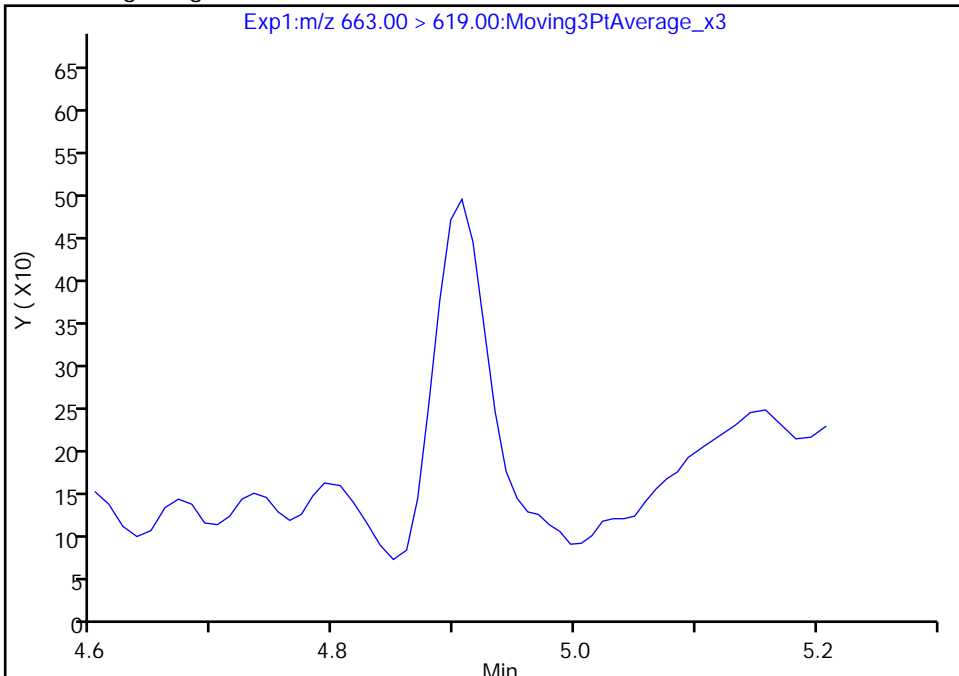
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B022.d  
Injection Date: 24-Dec-2019 16:48:08 Instrument ID: LC812  
Lims ID: 480-164221-C-11-A Lab Sample ID: 200-164221-11  
Client ID: CS SW 03 DER  
Operator ID: lc812tech ALS Bottle#: 22 Worklist Smp#: 22  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

41 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 1

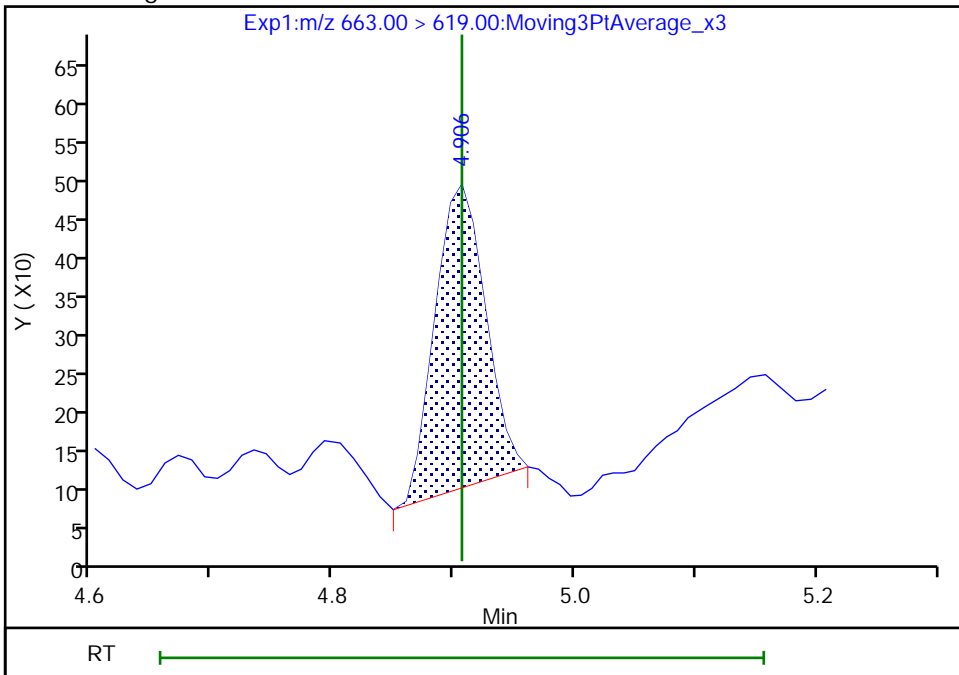
Not Detected  
Expected RT: 4.91

Processing Integration Results



Manual Integration Results

RT: 4.91  
Area: 1141  
Amount: 0.003397  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 15:00:24

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

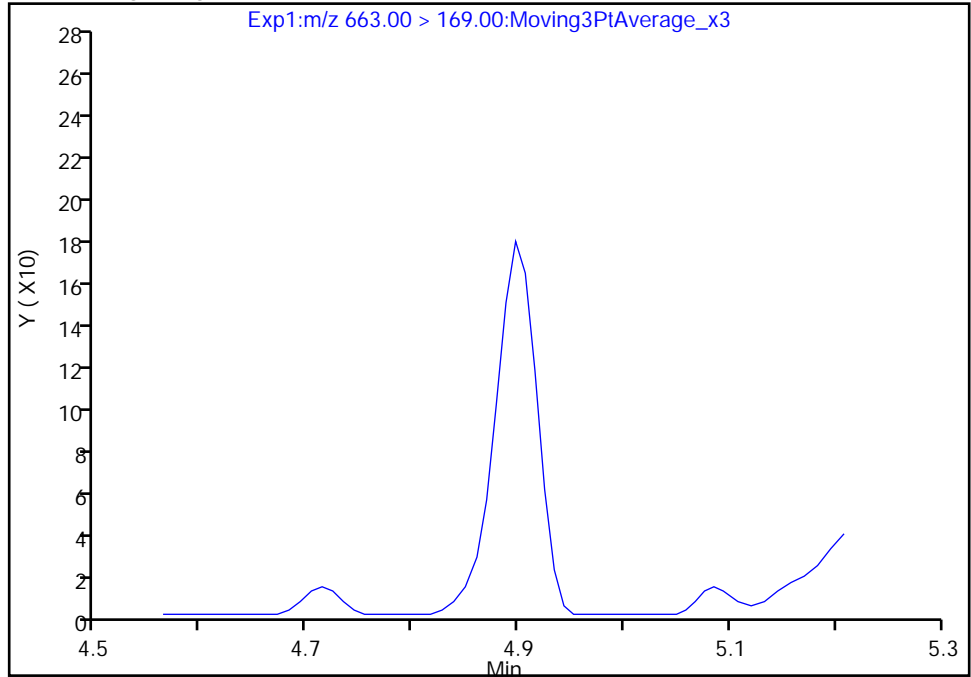
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B022.d  
Injection Date: 24-Dec-2019 16:48:08 Instrument ID: LC812  
Lims ID: 480-164221-C-11-A Lab Sample ID: 200-164221-11  
Client ID: CS SW 03 DER  
Operator ID: lc812tech ALS Bottle#: 22 Worklist Smp#: 22  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

41 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 2

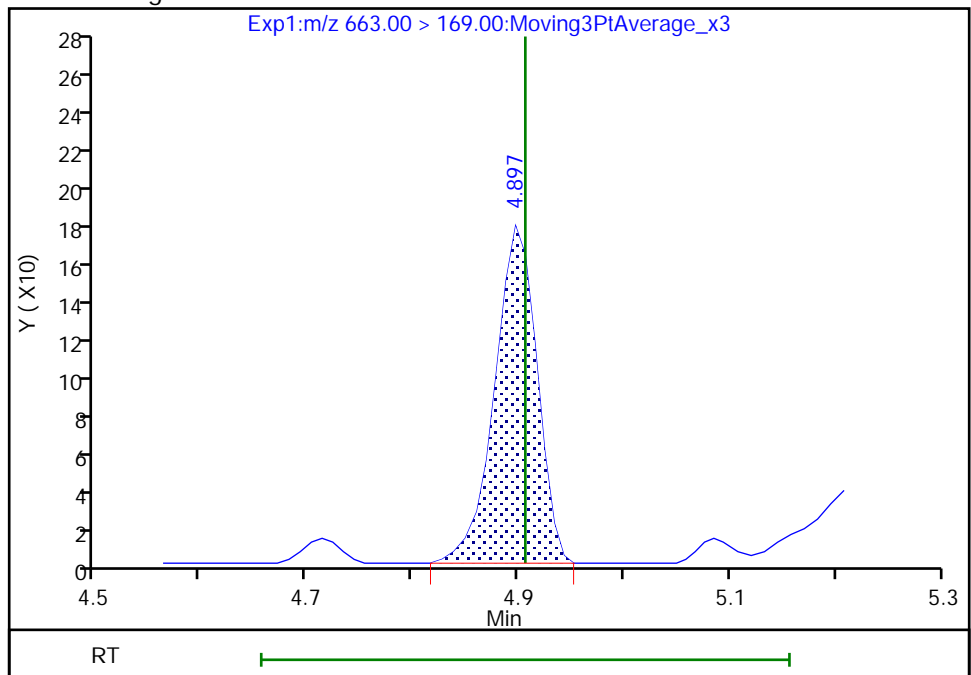
Not Detected  
Expected RT: 4.91

Processing Integration Results



Manual Integration Results

RT: 4.90  
Area: 488  
Amount: 0.003397  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 15:00:29

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

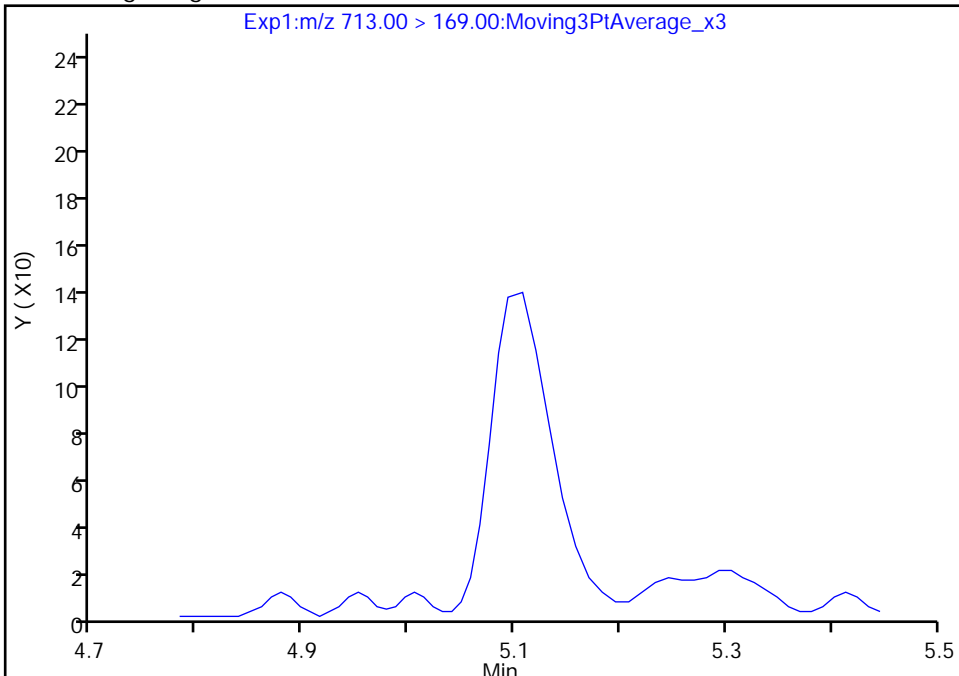
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B022.d  
Injection Date: 24-Dec-2019 16:48:08 Instrument ID: LC812  
Lims ID: 480-164221-C-11-A Lab Sample ID: 200-164221-11  
Client ID: CS SW 03 DER  
Operator ID: lc812tech ALS Bottle#: 22 Worklist Smp#: 22  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

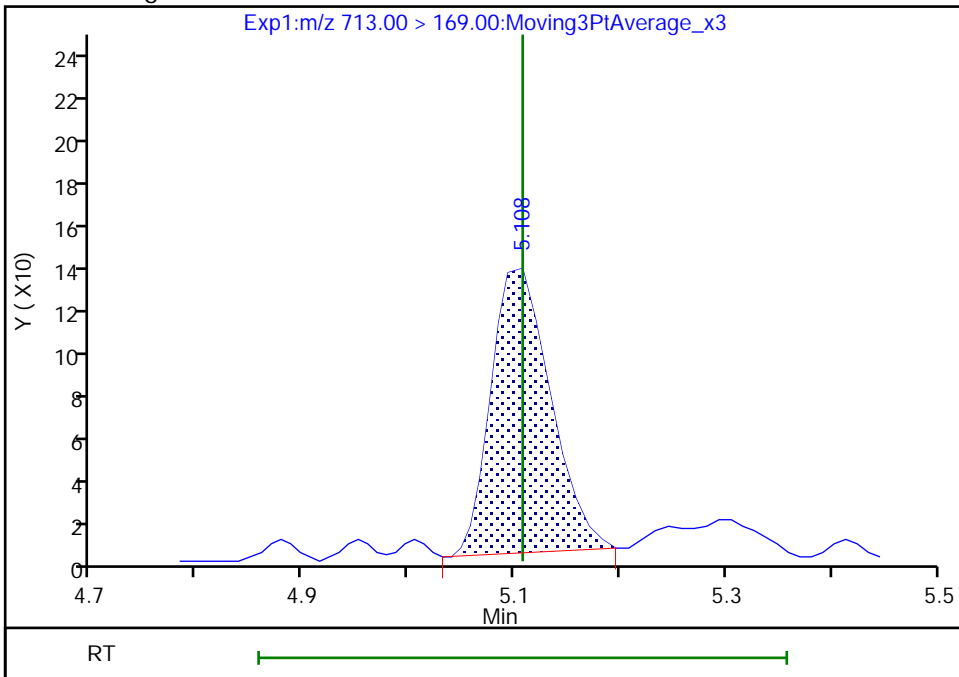
Signal: 1

Not Detected  
Expected RT: 5.11

Processing Integration Results



Manual Integration Results



RT: 5.11  
Area: 509  
Amount: 0.008031  
Amount Units: ng/ml

Reviewer: lautenschlagern, 27-Dec-2019 14:59:59  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

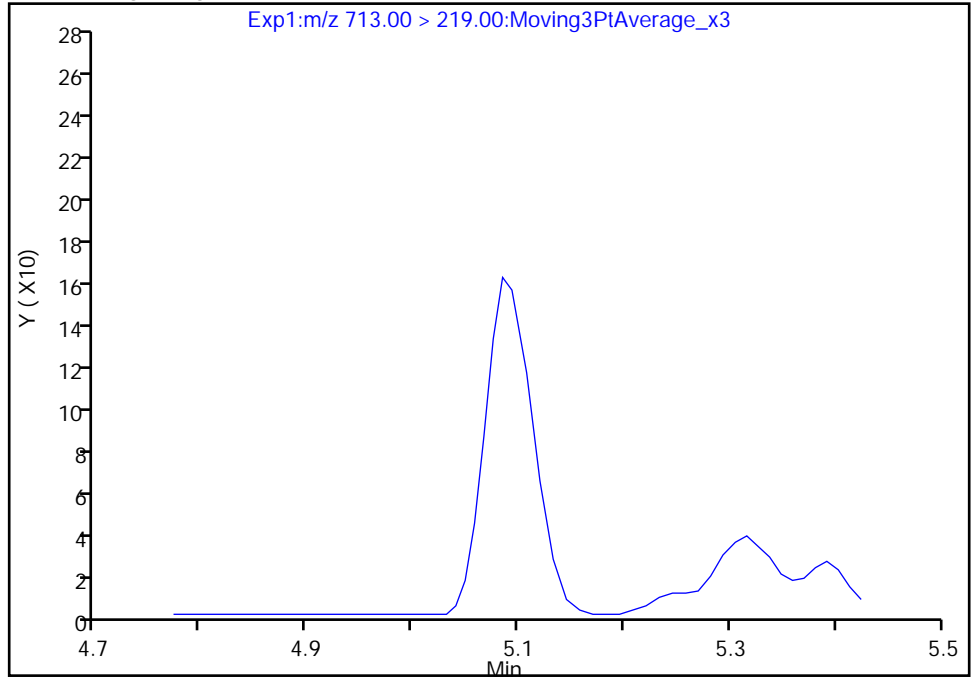
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B022.d  
Injection Date: 24-Dec-2019 16:48:08 Instrument ID: LC812  
Lims ID: 480-164221-C-11-A Lab Sample ID: 200-164221-11  
Client ID: CS SW 03 DER  
Operator ID: lc812tech ALS Bottle#: 22 Worklist Smp#: 22  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 2

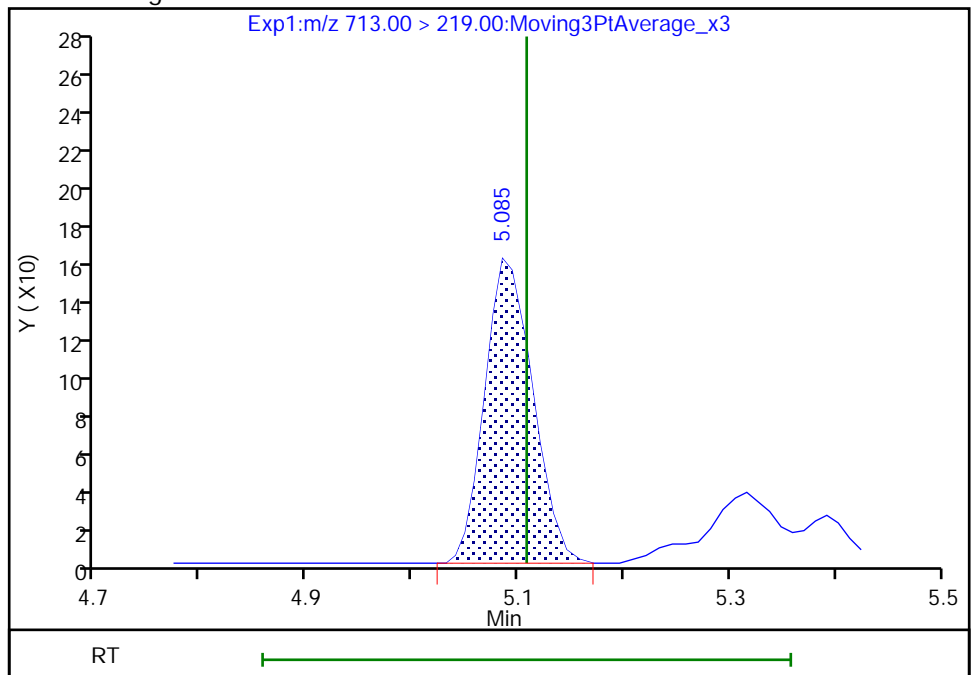
Not Detected  
Expected RT: 5.11

Processing Integration Results



RT: 5.08  
Area: 500  
Amount: 0.008031  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 15:00:12

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

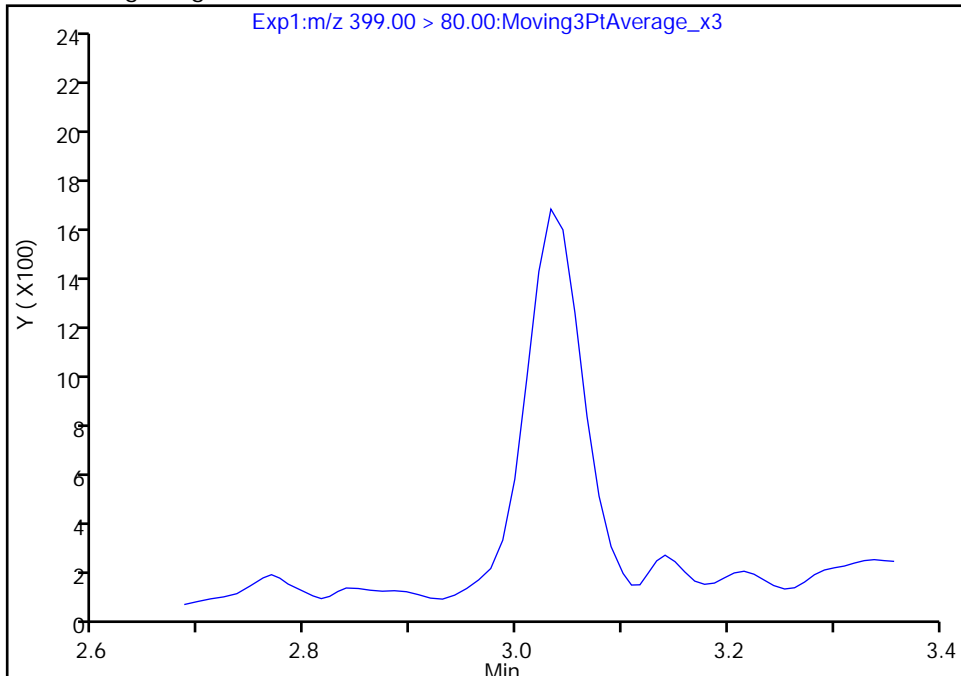
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B022.d  
Injection Date: 24-Dec-2019 16:48:08 Instrument ID: LC812  
Lims ID: 480-164221-C-11-A Lab Sample ID: 200-164221-11  
Client ID: CS SW 03 DER  
Operator ID: lc812tech ALS Bottle#: 22 Worklist Smp#: 22  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

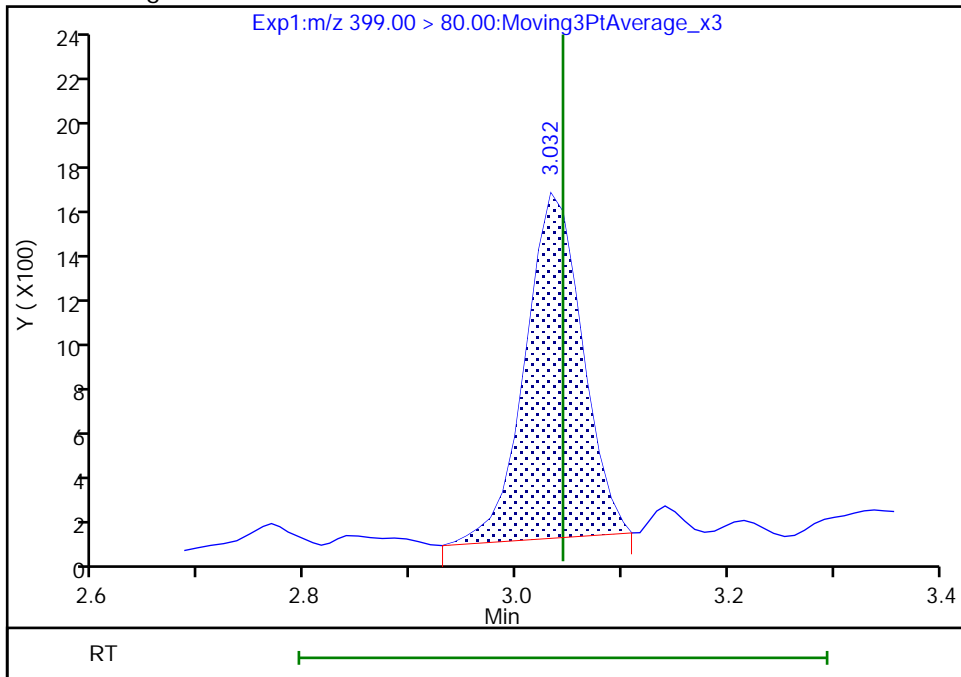
Not Detected  
Expected RT: 3.04

Processing Integration Results



Manual Integration Results

RT: 3.03  
Area: 5795  
Amount: 0.009878  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 15:07:30  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

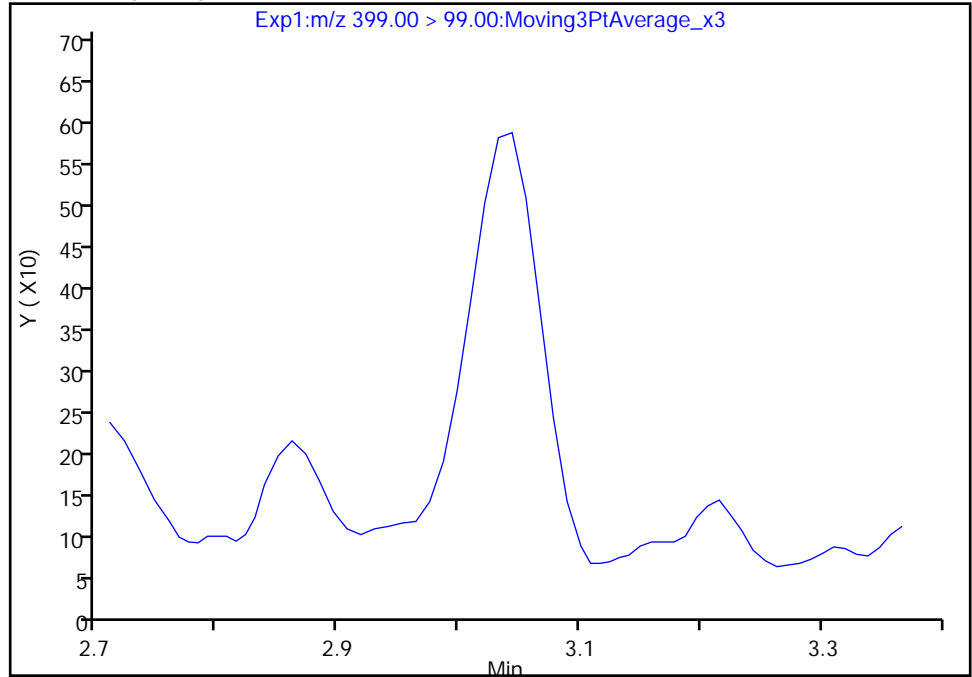
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B022.d  
Injection Date: 24-Dec-2019 16:48:08 Instrument ID: LC812  
Lims ID: 480-164221-C-11-A Lab Sample ID: 200-164221-11  
Client ID: CS SW 03 DER  
Operator ID: lc812tech ALS Bottle#: 22 Worklist Smp#: 22  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

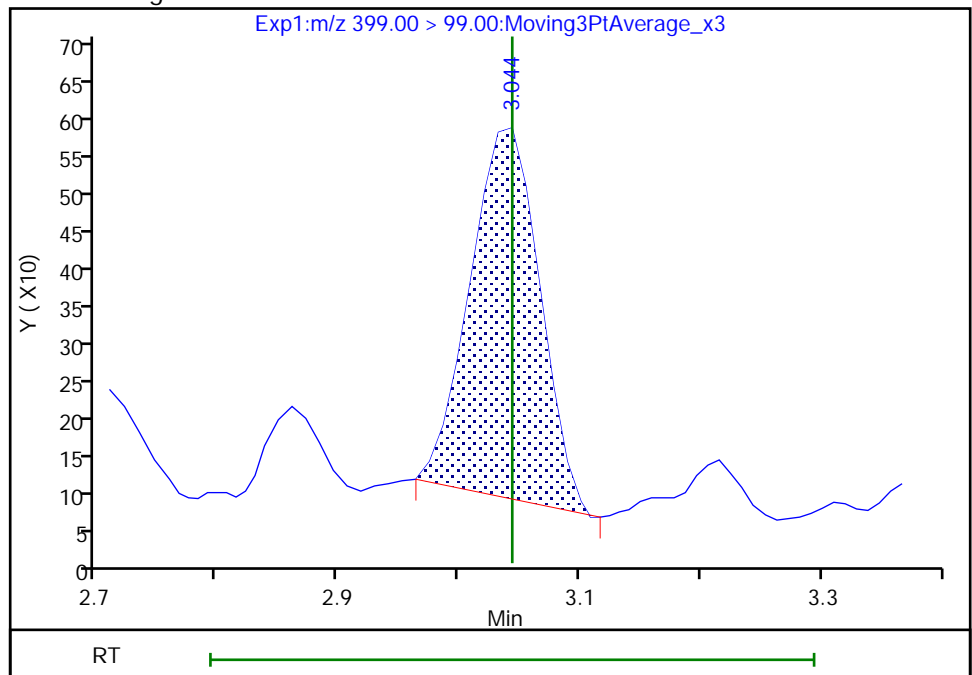
Not Detected  
Expected RT: 3.04

Processing Integration Results



Manual Integration Results

RT: 3.04  
Area: 1996  
Amount: 0.009878  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 15:07:34

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

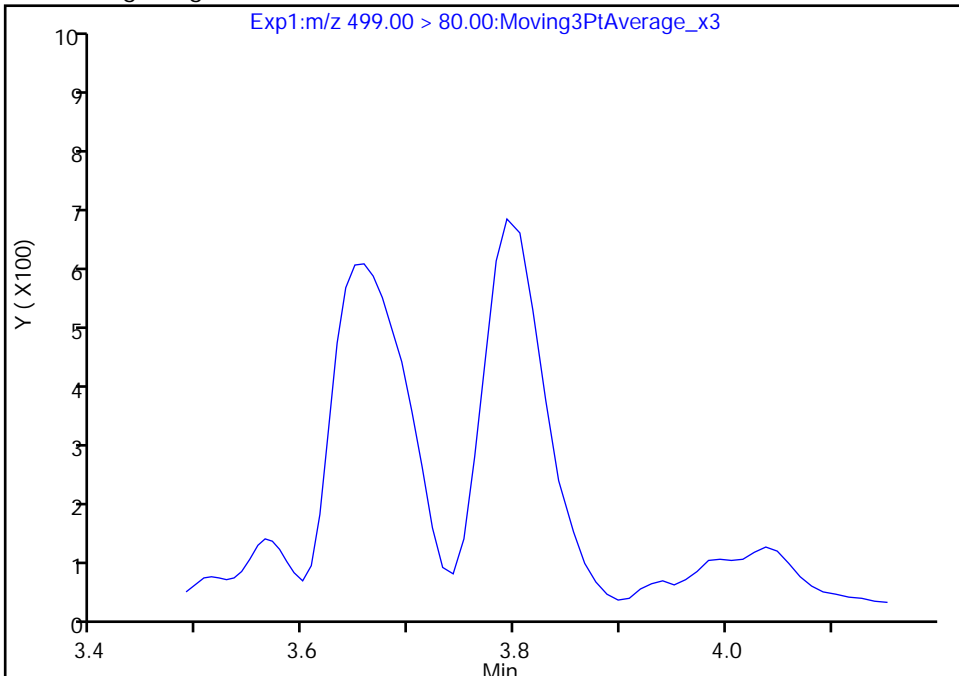
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B022.d  
Injection Date: 24-Dec-2019 16:48:08 Instrument ID: LC812  
Lims ID: 480-164221-C-11-A Lab Sample ID: 200-164221-11  
Client ID: CS SW 03 DER  
Operator ID: lc812tech ALS Bottle#: 22 Worklist Smp#: 22  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

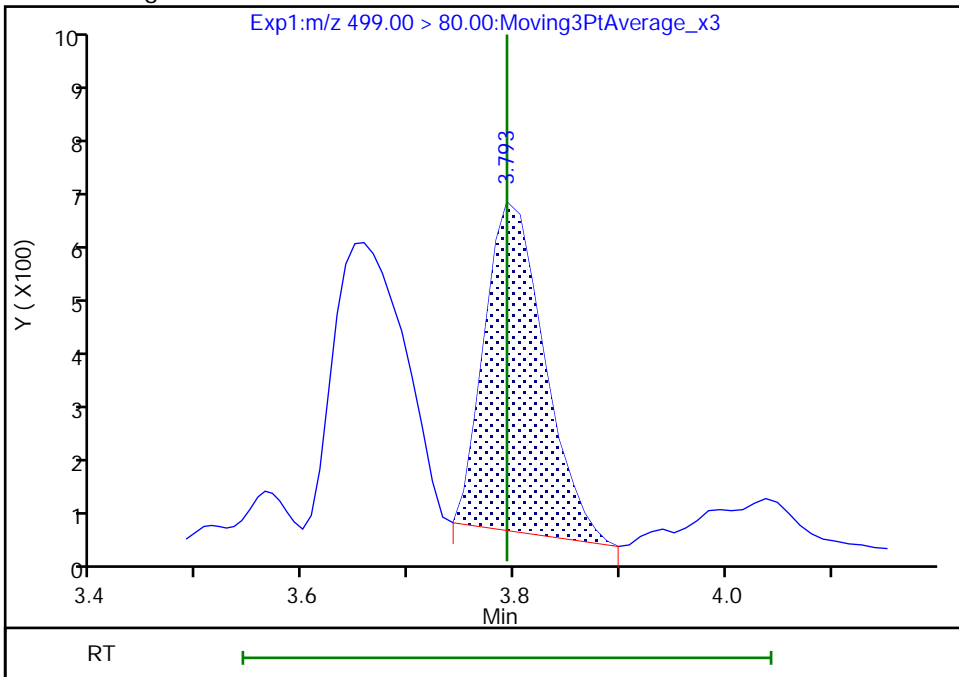
Not Detected  
Expected RT: 3.79

Processing Integration Results



Manual Integration Results

RT: 3.79  
Area: 2460  
Amount: 0.006154  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 15:04:00  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Eurofins TestAmerica, Burlington

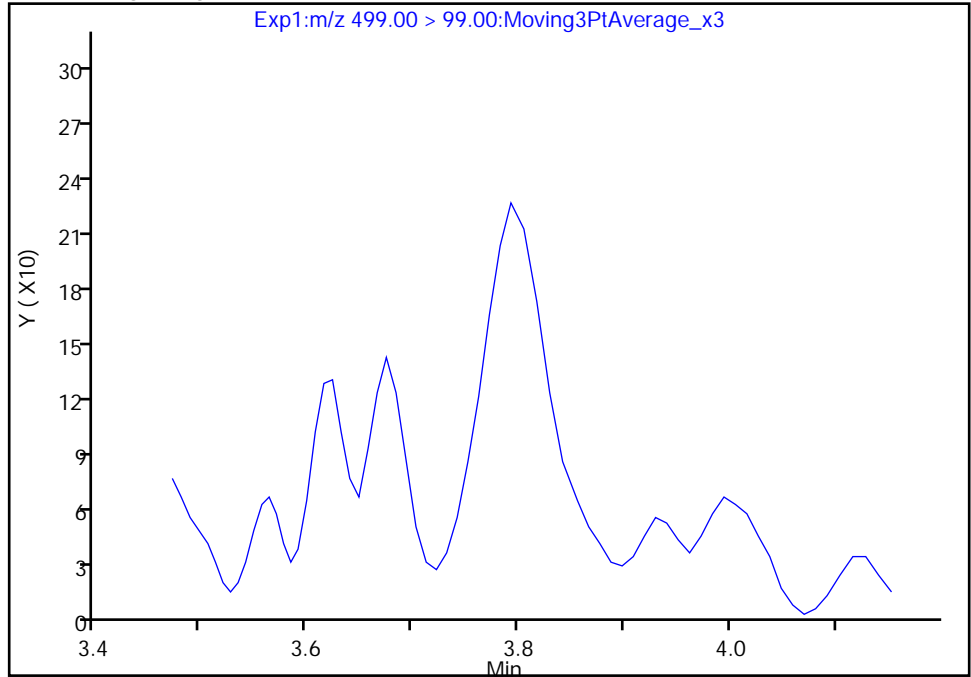
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B022.d  
Injection Date: 24-Dec-2019 16:48:08 Instrument ID: LC812  
Lims ID: 480-164221-C-11-A Lab Sample ID: 200-164221-11  
Client ID: CS SW 03 DER  
Operator ID: lc812tech ALS Bottle#: 22 Worklist Smp#: 22  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 (4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

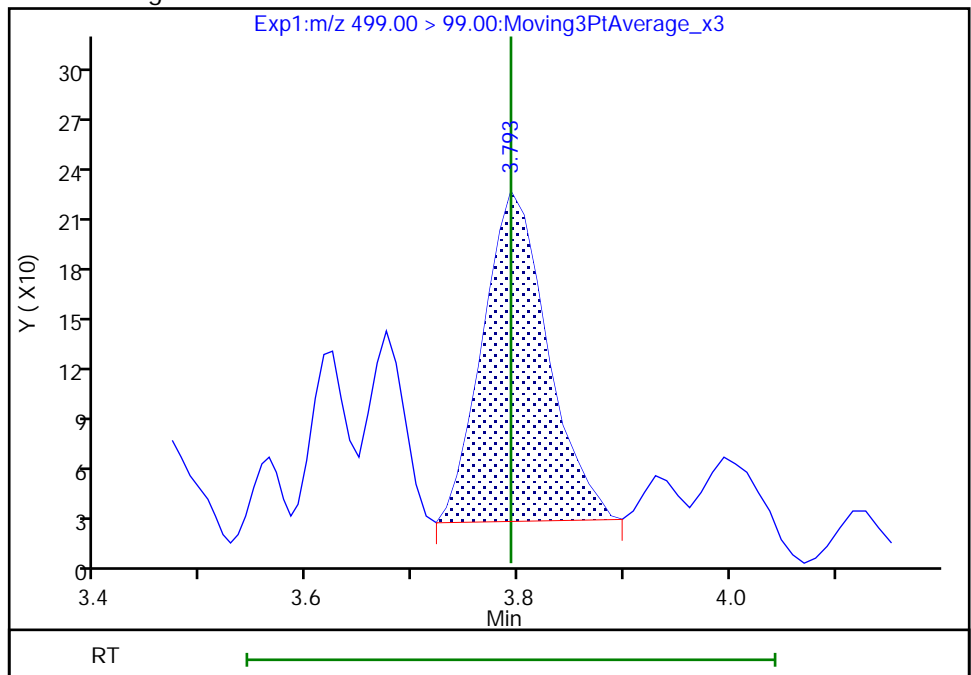
Not Detected  
Expected RT: 3.79

Processing Integration Results



Manual Integration Results

RT: 3.79  
Area: 836  
Amount: 0.006154  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

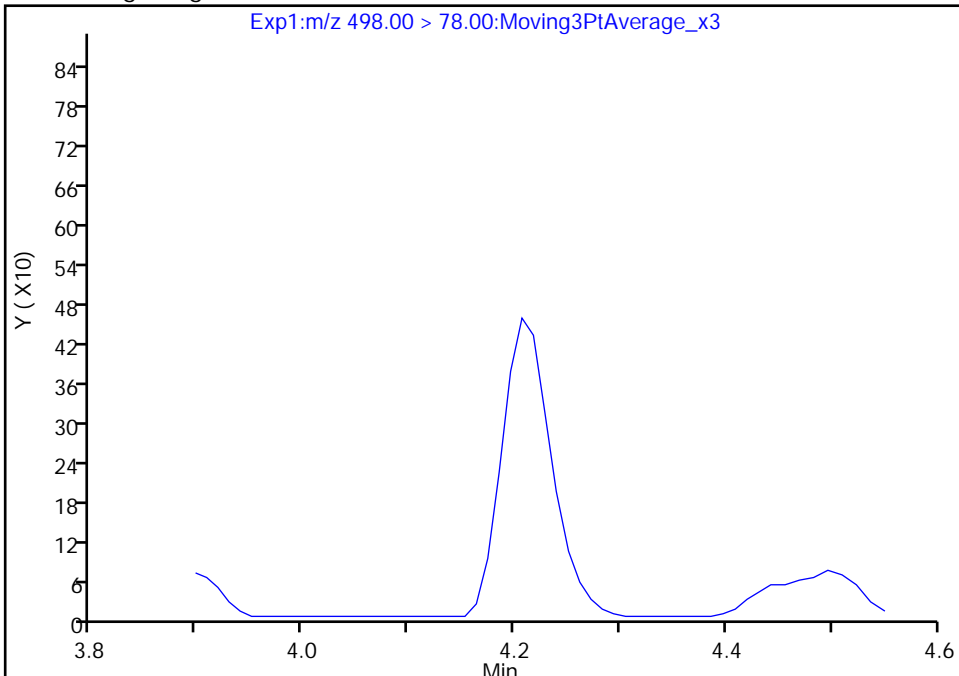
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B022.d  
Injection Date: 24-Dec-2019 16:48:08 Instrument ID: LC812  
Lims ID: 480-164221-C-11-A Lab Sample ID: 200-164221-11  
Client ID: CS SW 03 DER  
Operator ID: lc812tech ALS Bottle#: 22 Worklist Smp#: 22  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

22 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

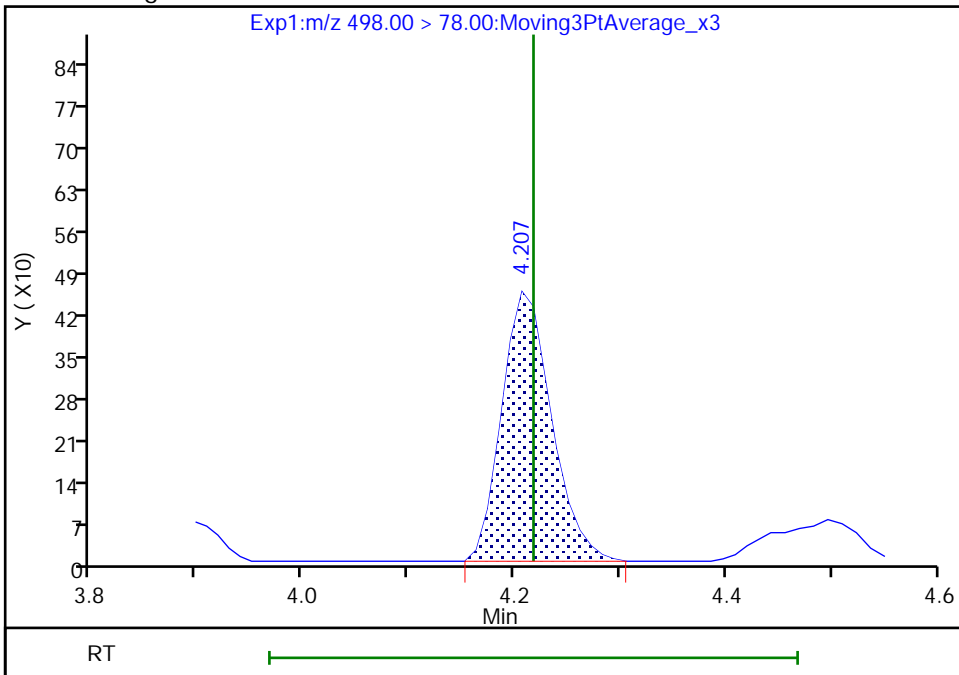
Not Detected  
Expected RT: 4.22

Processing Integration Results



Manual Integration Results

RT: 4.21  
Area: 1477  
Amount: 0.002569  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 15:03:34  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

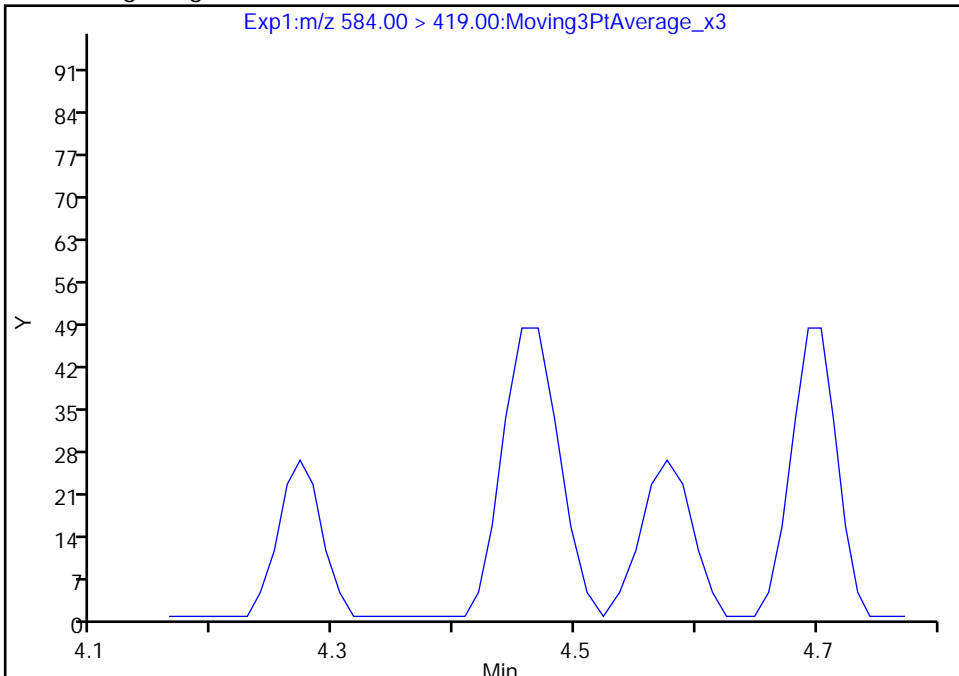
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B022.d  
Injection Date: 24-Dec-2019 16:48:08 Instrument ID: LC812  
Lims ID: 480-164221-C-11-A Lab Sample ID: 200-164221-11  
Client ID: CS SW 03 DER  
Operator ID: lc812tech ALS Bottle#: 22 Worklist Smp#: 22  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

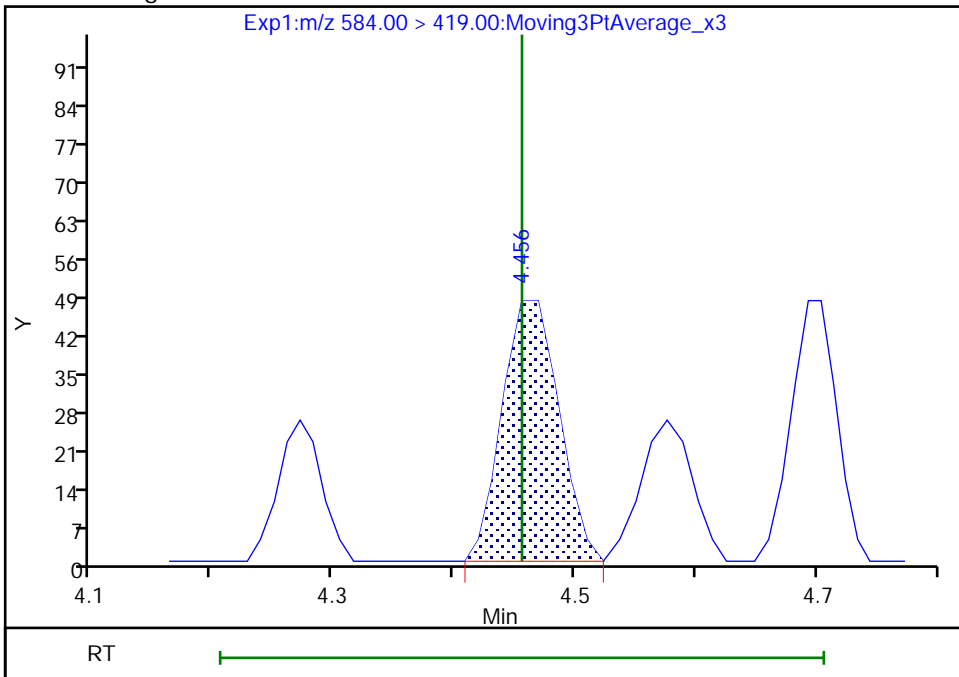
Signal: 1

Not Detected  
Expected RT: 4.46

Processing Integration Results



Manual Integration Results



RT: 4.46  
Area: 157  
Amount: 0.003700  
Amount Units: ng/ml

Euofins TestAmerica, Burlington

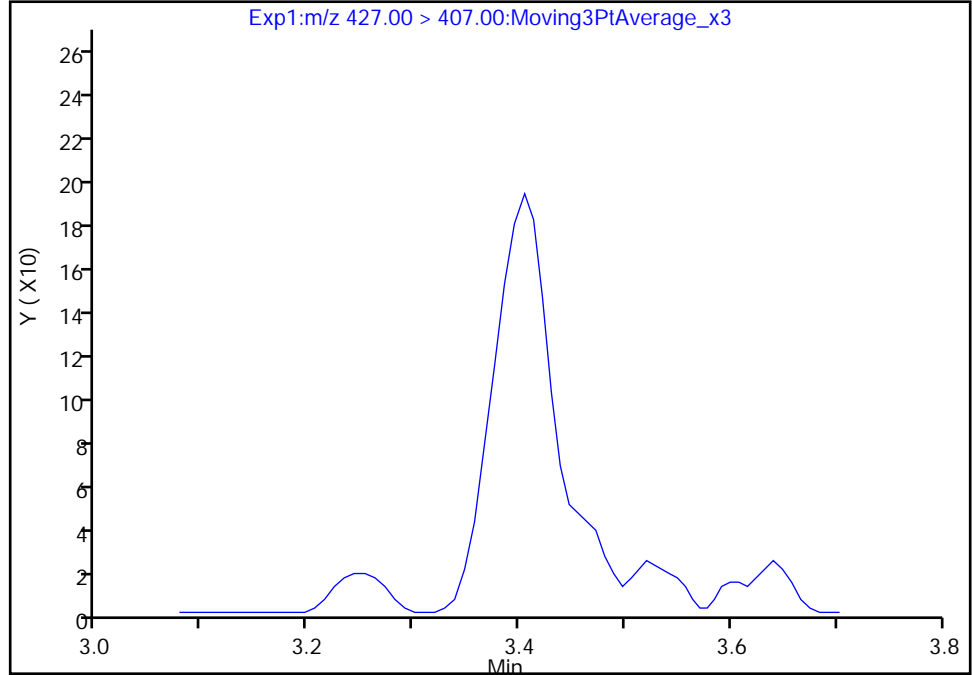
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B022.d  
Injection Date: 24-Dec-2019 16:48:08 Instrument ID: LC812  
Lims ID: 480-164221-C-11-A Lab Sample ID: 200-164221-11  
Client ID: CS SW 03 DER  
Operator ID: lc812tech ALS Bottle#: 22 Worklist Smp#: 22  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

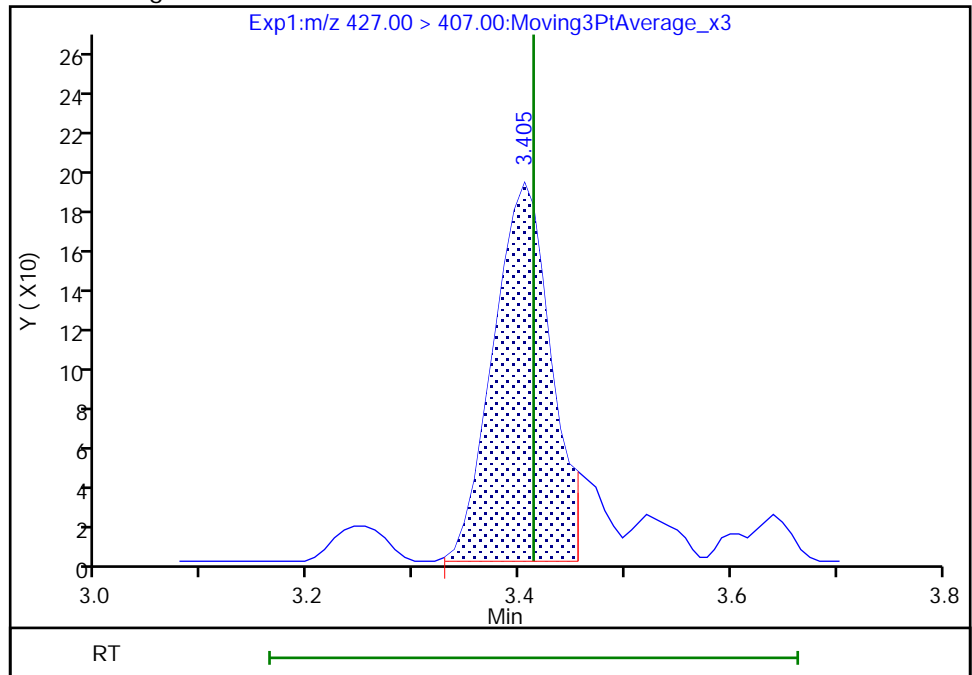
Not Detected  
Expected RT: 3.41

Processing Integration Results



Manual Integration Results

RT: 3.40  
Area: 731  
Amount: 0.011523  
Amount Units: ng/ml



FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS SW 02 DER Lab Sample ID: 480-164221-12  
 Matrix: Water Lab File ID: SC122319B023.d  
 Analysis Method: 537 (modified) Date Collected: 12/12/2019 09:50  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 289.5 (mL) Date Analyzed: 12/24/2019 16:56  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 20 (uL) GC Column: C-18 ID: 4.6 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	ND		1.7	0.86
2706-90-3	Perfluoropentanoic acid (PFPeA)	ND		1.7	0.54
307-24-4	Perfluorohexanoic acid (PFHxA)	ND		1.7	0.66
375-85-9	Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.79
335-67-1	Perfluorooctanoic acid (PFOA)	1.1	J	1.7	0.70
375-95-1	Perfluorononanoic acid (PFNA)	ND		1.7	0.23
335-76-2	Perfluorodecanoic acid (PFDA)	ND		1.7	0.66
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		1.7	0.67
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		1.7	0.51
72629-94-8	Perfluorotridecanoic acid (PFTriA)	ND		1.7	0.52
376-06-7	Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.79
375-73-5	Perfluorobutanesulfonic acid (PFBS)	ND		1.7	0.42
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	ND		1.7	0.69
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.82
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	ND		1.7	0.53
335-77-3	Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.78
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND		8.6	8.6
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		17	1.5
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		17	1.3
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	4.7
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	2.5

FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS SW 02 DER Lab Sample ID: 480-164221-12  
 Matrix: Water Lab File ID: SC122319B023.d  
 Analysis Method: 537 (modified) Date Collected: 12/12/2019 09:50  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 289.5 (mL) Date Analyzed: 12/24/2019 16:56  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 20 (uL) GC Column: C-18 ID: 4.6 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	106		50-150
STL01892	13C4 PFHpA	108		50-150
STL00990	13C4 PFOA	105		50-150
STL00991	13C4 PFOS	103		50-150
STL00995	13C5 PFNA	96		50-150
STL00992	13C4 PFBA	86		25-150
STL00993	13C2 PFHxA	101		50-150
STL00996	13C2 PFDA	99		50-150
STL00997	13C2 PFUnA	96		50-150
STL00998	13C2 PFDoA	80		50-150
STL01056	13C8 FOSA	86		25-150
STL01893	13C5 PFPeA	104		25-150
STL02116	13C2 PFTeDA	85		50-150
STL02118	d3-NMeFOSAA	77		50-150
STL02117	d5-NEtFOSAA	89		50-150
STL02279	M2-6:2 FTS	81		25-150
STL02280	M2-8:2 FTS	112		25-150
STL02337	13C3 PFBS	103		50-150

Eurofins TestAmerica, Burlington  
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B023.d  
 Lims ID: 480-164221-C-12-A  
 Client ID: CS SW 02 DER  
 Sample Type: Client  
 Inject. Date: 24-Dec-2019 16:56:20 ALS Bottle#: 23 Worklist Smp#: 23  
 Injection Vol: 20.0 ul Dil. Factor: 1.0000  
 Sample Info: 480-164221-C-12-A  
 Misc. Info.: 200-0039355-023 Plate: 1 Rack: 2  
 Operator ID: lc812tech Instrument ID: LC812  
 Method: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\PFC\_LC812.m  
 Limit Group: LC\_PFC\_ICAL  
 Last Update: 31-Dec-2019 08:24:59 Calib Date: 06-Dec-2019 15:13:26  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Column 1 : C-18 ( 4.60 mm) Det: EXP1  
 Process Host: CTX0330

First Level Reviewer: lautenschlagery Date: 27-Dec-2019 15:17:32  
 Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	1.898	1.908	-0.010	0.555	1427360	2.15	86.1	3272	
2 Perfluorobutanoic acid										M
212.90 > 169.00	1.908	1.908	0.0	1.005	11926	0.0210		3.3		M
D 3 13C5 PFPeA	267.90 > 223.00	2.257	2.257	0.0	0.660	1321454	2.61	104	5264	
4 Perfluoropentanoic acid										M
262.90 > 219.00	2.244	2.271	-0.027	0.994	6446	0.0108		0.5		M
D 47 13C3 PFBS	301.90 > 80.00	2.271	2.285	-0.014	0.664	1445964	2.39	103	238808	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.285	2.285	0.0	1.006	3963	0.005863	Target=2.03	7.3		
298.90 > 99.00	2.271	2.285	-0.014	1.000	2291		1.73(1.01-3.04)	2.1		
D 7 13C2 PFHxA	315.00 > 270.00	2.648	2.648	0.0	0.774	1431893	2.53	101	4574	
6 Perfluorohexanoic acid										M
313.00 > 269.00	2.648	2.661	-0.013	1.000	3392	0.005800	Target=13.76	1.0		M
313.00 > 119.00	2.636	2.661	-0.025	0.995	454		7.47(6.88-20.64)	2.2		M
D 11 18O2 PFHxS	403.00 > 84.00	3.032	3.044	-0.012	0.886	1202167	2.52	106	6720	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.032	3.044	-0.012	1.000	5385	0.009360	Target=3.90	10.8		M
399.00 > 99.00	3.032	3.044	-0.012	1.000	1904		2.83(1.95-5.85)	4.4		M
D 9 13C4 PFHpA	367.00 > 322.00	3.044	3.044	0.0	0.890	1442751	2.69	108	5428	
10 Perfluoroheptanoic acid										M
363.00 > 319.00	3.044	3.044	0.0	1.000	3865	0.006335	Target=3.95	1.2		M
363.00 > 169.00	3.044	3.044	0.0	1.000	987		3.92(1.97-5.92)	3.8		M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 12 M2-6:2 FTS										
429.00 > 81.00	3.413	3.413	0.0	0.998	157030	1.91		80.5	542	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.422	3.430	-0.008	1.000	21089	0.0317	Target=2.40		8.1	Ma
413.00 > 169.00	3.422	3.430	-0.008	1.000	10217		2.06(1.20-3.60)		58.9	a
D 14 13C4 PFOA										
417.00 > 372.00	3.422	3.430	-0.008	1.000	1499461	2.63		105	4542	
* 62 13C2 PFOA										
415.00 > 370.00	3.422	3.430	-0.008		1565764	2.50			3420	
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.793	0.0	1.108	935852	2.47		103	6657	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.805	3.793	0.012	1.003	3370	0.007972	Target=5.74		6.8	M
499.00 > 99.00	3.793	3.793	0.0	1.000	580		5.81(2.87-8.61)		3.3	M
D 19 13C5 PFNA										
468.00 > 423.00	3.817	3.817	0.0	1.116	1258034	2.40		96.2	6686	
D 23 13C2 PFDA										
515.00 > 470.00	4.153	4.164	-0.011	1.214	1273297	2.47		98.8	6960	
25 1H,1H,2H,2H-perfluorodecanesulfoni										
527.00 > 507.00	4.185	4.164	0.021	1.005	185	0.003649				M
D 26 M2-8:2 FTS										
529.00 > 81.00	4.164	4.175	-0.011	1.217	263053	2.69		112	893	
D 21 13C8 FOSA										
506.00 > 78.00	4.218	4.218	0.0	1.233	1449241	2.15		86.0	4024	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.207	4.218	-0.011	0.997	652	0.001130			6.4	M
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.305	4.305	0.0	1.258	95622	1.93		77.0	1013	
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.397	4.409	-0.012	1.159	307	0.001090	Target=2.76		2.0	M
599.00 > 99.00	4.420	4.409	0.011	1.165	210		1.46(1.38-4.14)		2.9	M
D 30 13C2 PFUnA										
565.00 > 520.00	4.442	4.443	-0.001	1.298	1052243	2.40		96.0	7223	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.431	4.443	-0.012	0.997	2483	0.006958	Target=5.78		4.6	M
563.00 > 169.00	4.442	4.443	-0.001	1.000	362		6.86(2.89-8.67)		7.1	M
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.442	4.456	-0.014	1.298	122507	2.23		89.0	1170	
D 36 13C2 PFDoA										
615.00 > 570.00	4.683	4.683	0.0	1.369	959070	1.99		79.8	4845	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.915	4.906	0.009	1.050	528	0.001568	Target=3.82		0.3	M
663.00 > 169.00	4.915	4.906	0.009	1.050	256		2.06(1.91-5.74)		8.3	M
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.085	5.108	-0.023	0.996	334	0.004843	Target=1.05		5.8	M
713.00 > 219.00	5.094	5.108	-0.014	0.997	250		1.34(0.52-1.57)		7.1	M



Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
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D 43 13C2 PFTeDA

715.00 > 670.00 5.107 5.108 -0.001 1.493 858336 2.13 85.2 4782

### QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B023.d

Injection Date: 24-Dec-2019 16:56:20

Instrument ID: LC812

Lims ID: 480-164221-C-12-A

Lab Sample ID: 200-164221-12

Client ID: CS SW 02 DER

Operator ID: lc812tech

ALS Bottle#: 23

Worklist Smp#: 23

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

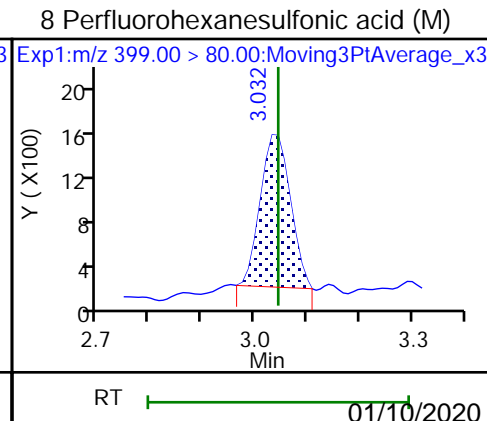
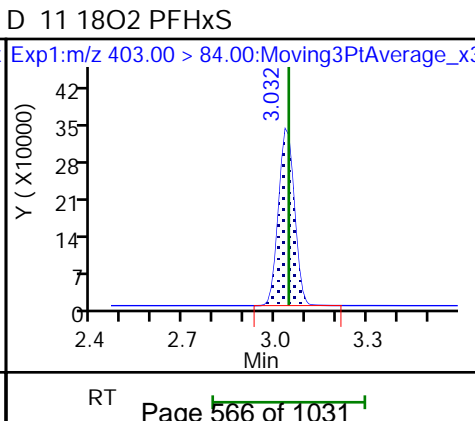
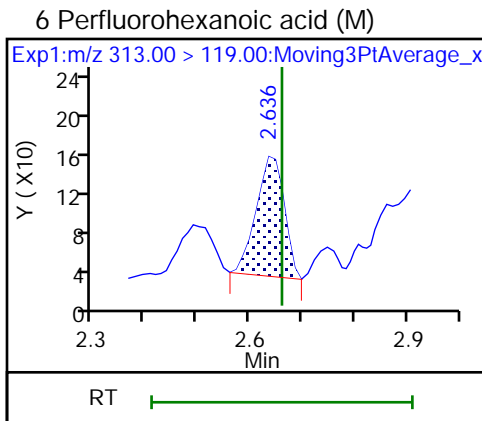
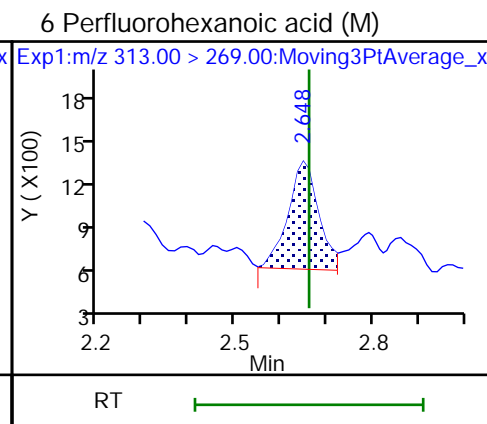
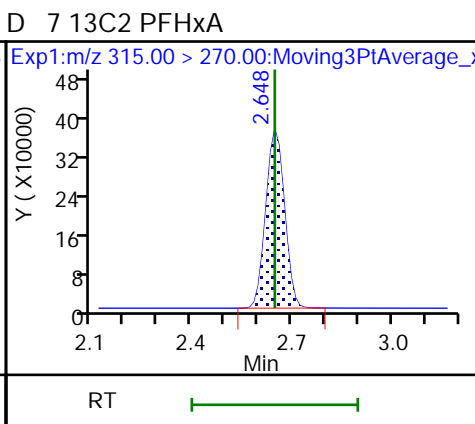
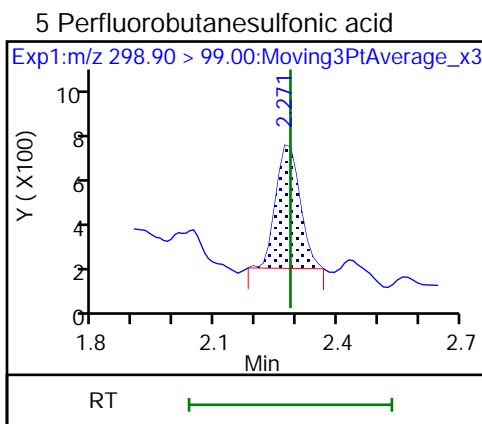
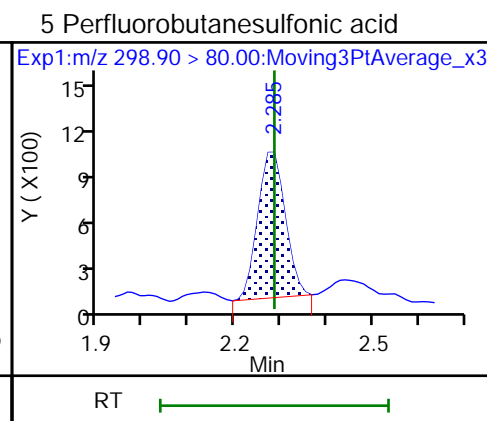
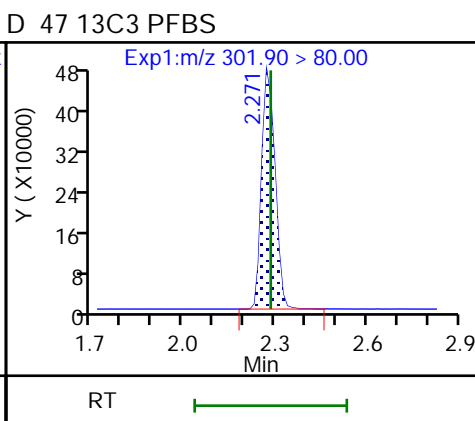
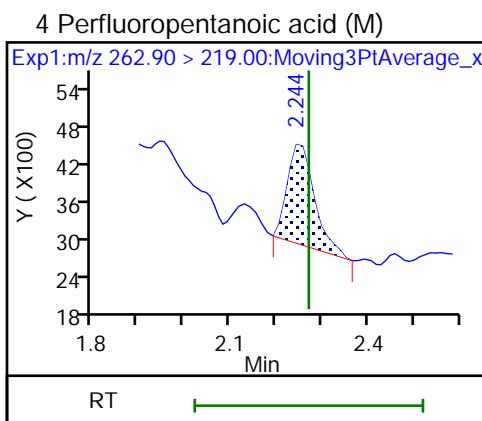
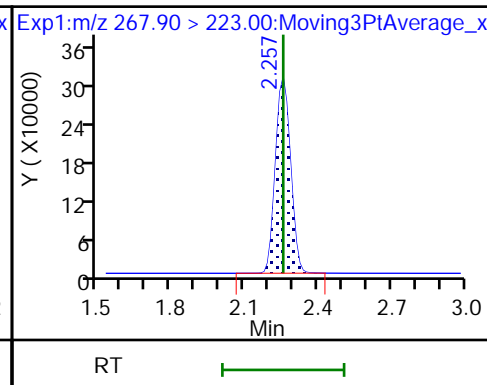
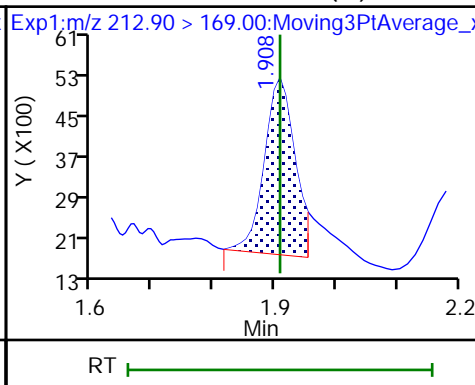
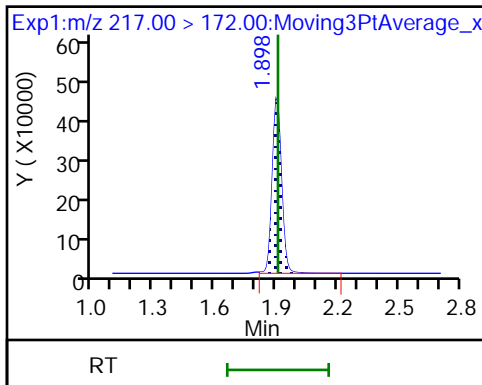
Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid (M)

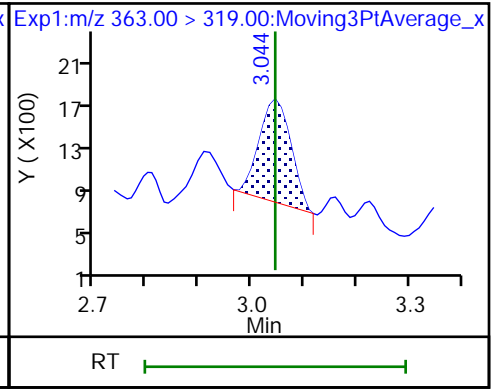
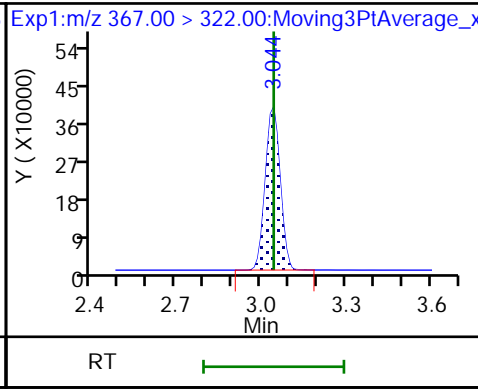
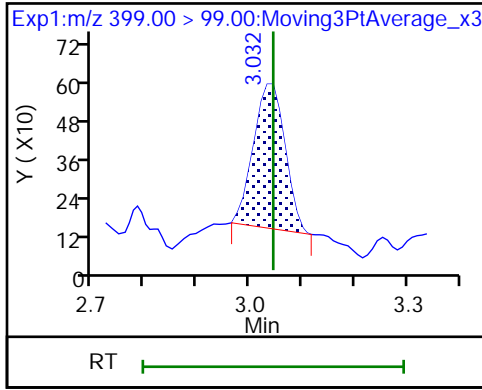
D 3 13C5 PFPeA



8 Perfluorohexanesulfonic acid (M)

D 9 13C4 PFHpA

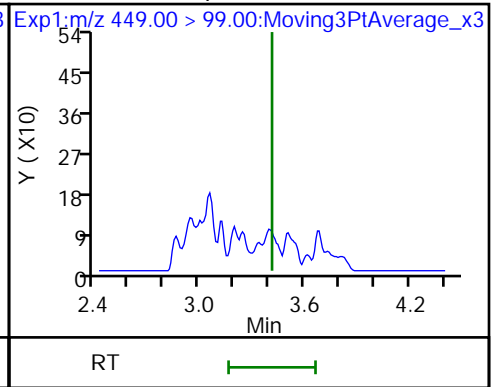
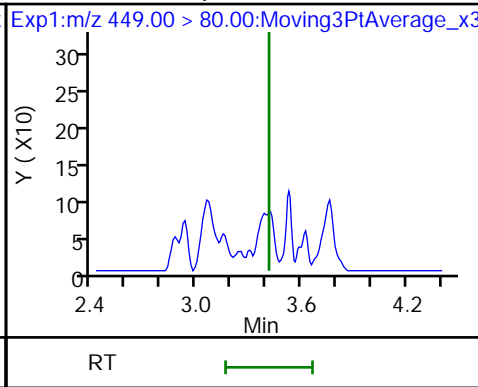
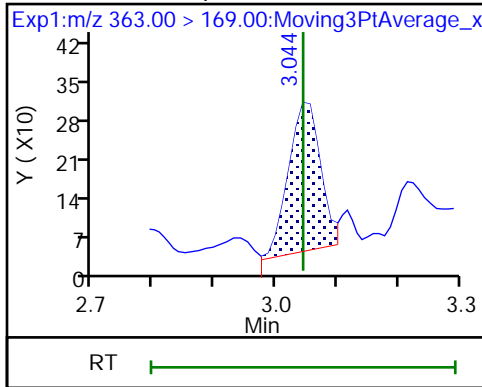
10 Perfluoroheptanoic acid (M)



10 Perfluoroheptanoic acid (M)

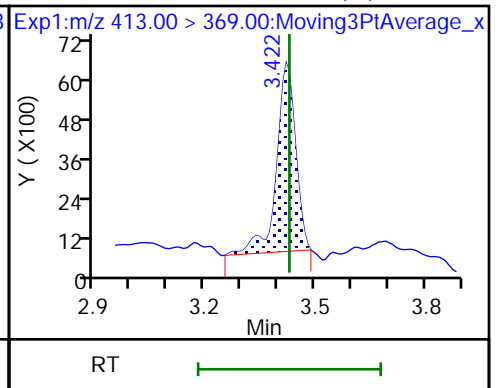
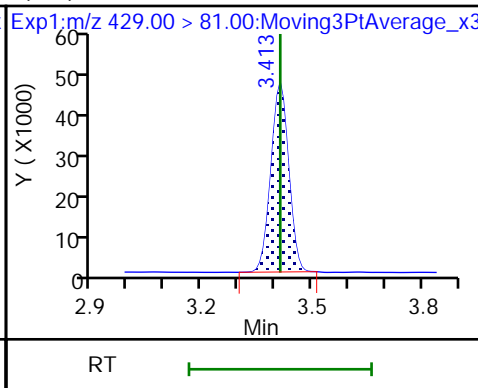
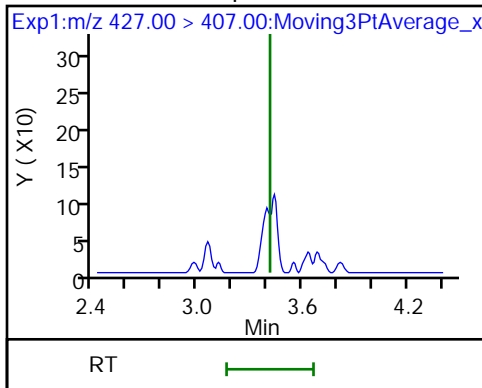
16 Perfluoroheptanesulfonic acid (ND)

16 Perfluoroheptanesulfonic acid (ND)



13 1H,1H,2H,2H-perfluorooctanesulfonate (ND) M2-6:2 FTS

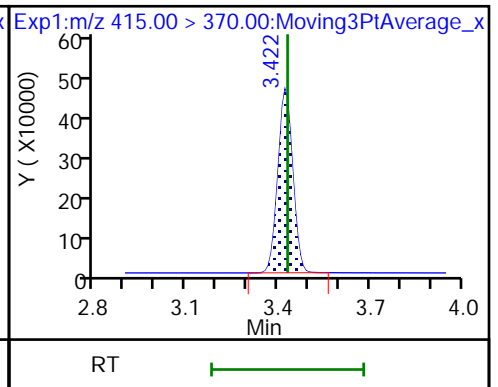
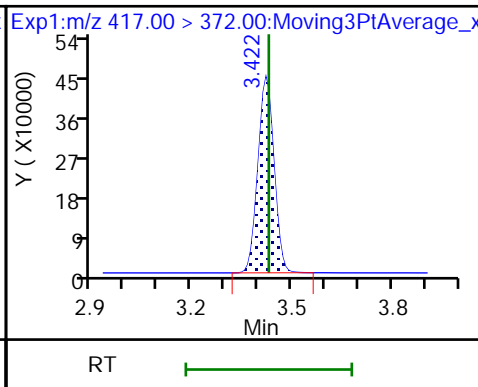
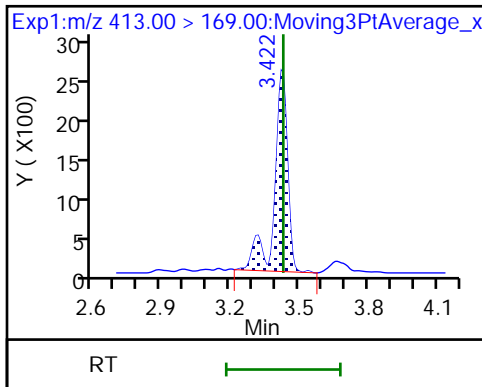
15 Perfluorooctanoic acid (M)



15 Perfluorooctanoic acid

D 14 13C4 PFOA

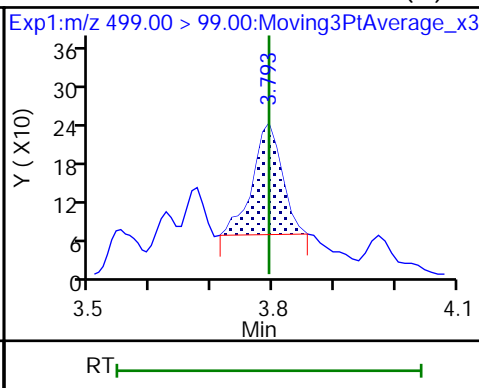
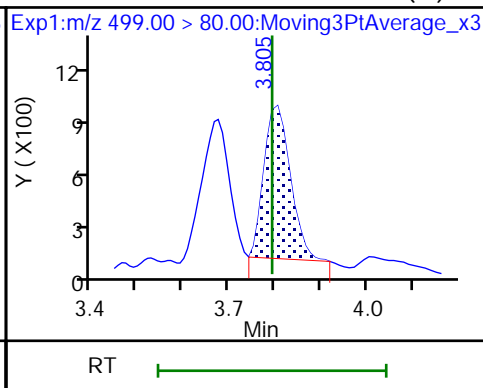
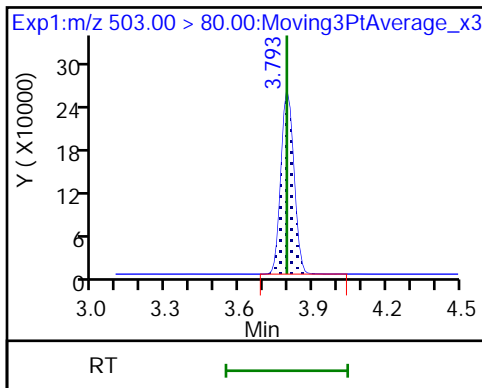
\* 62 13C2 PFOA



D 18 13C4 PFOS

17 Perfluorooctanesulfonic acid (M)

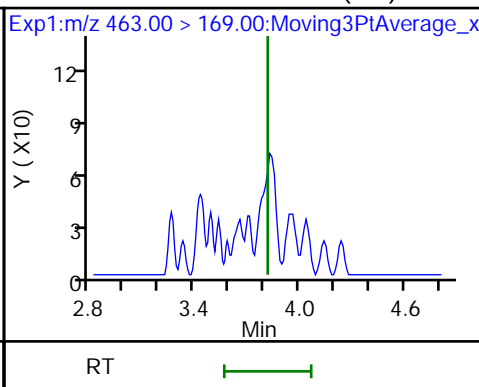
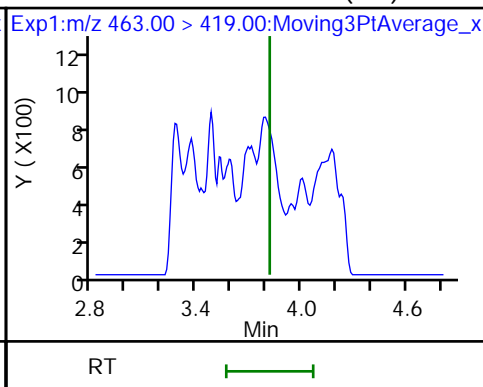
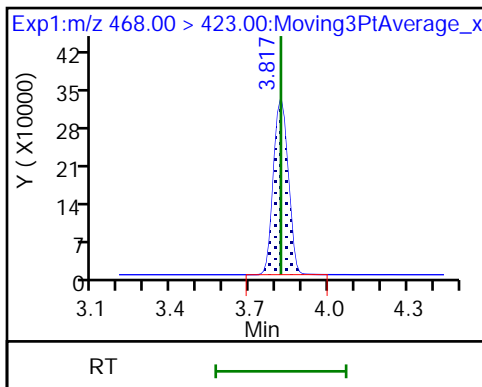
17 Perfluorooctanesulfonic acid (M)



D 19 13C5 PFNA

20 Perfluorononanoic acid (ND)

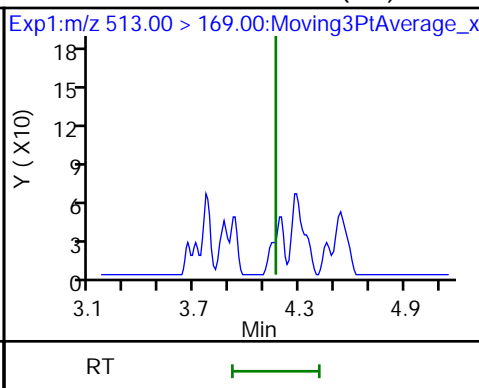
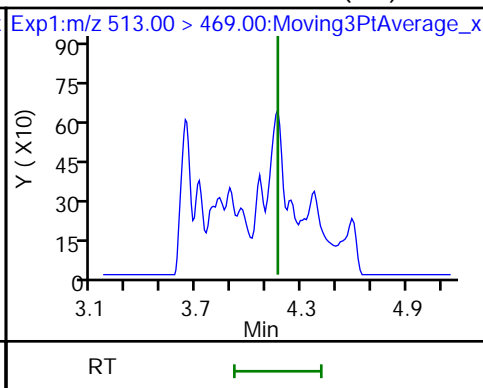
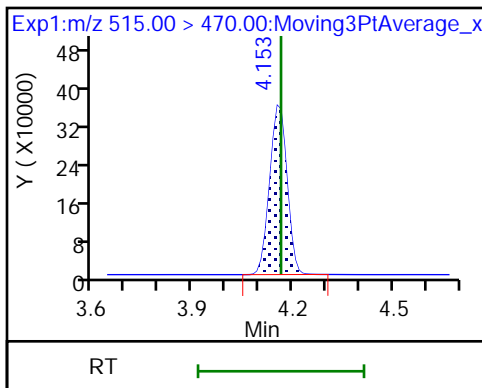
20 Perfluorononanoic acid (ND)



D 23 13C2 PFDA

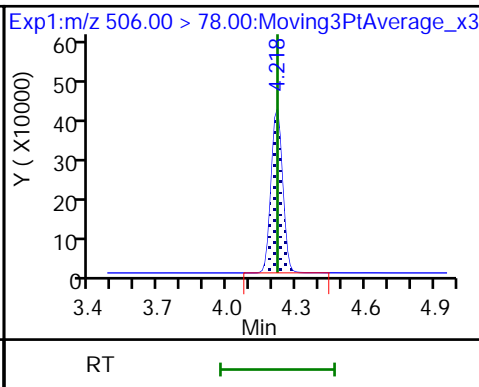
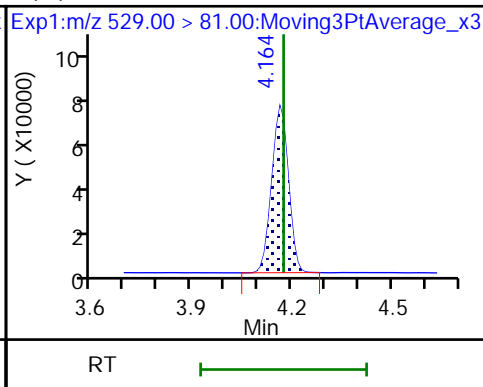
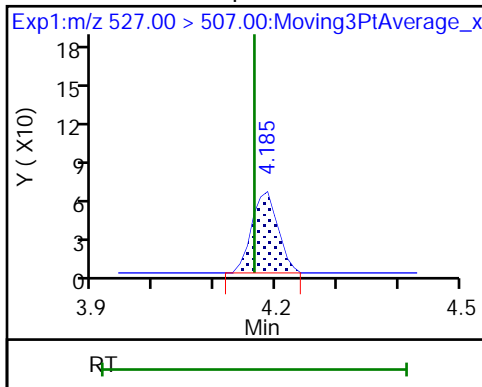
24 Perfluorodecanoic acid (ND)

24 Perfluorodecanoic acid (ND)



25 1H,1H,2H,2H-perfluorodecanesulfonic acid (M) M2-8:2 FTS

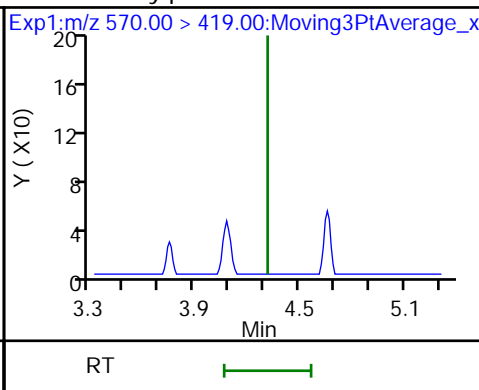
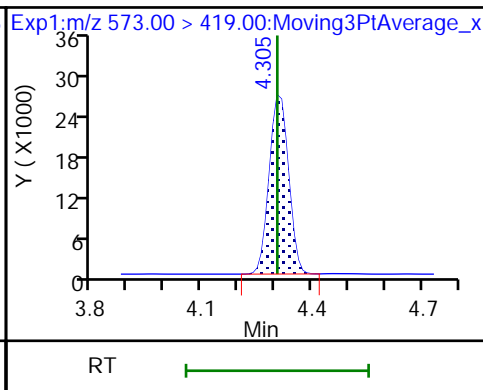
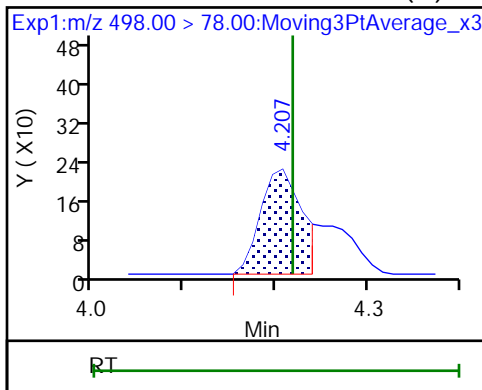
D 21 13C8 FOSA



22 Perfluorooctanesulfonamide (M)

D 27 d3-NMeFOSAA

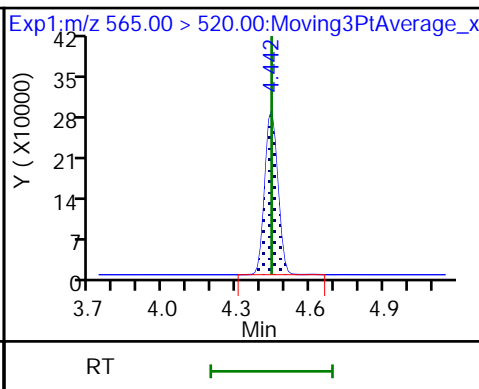
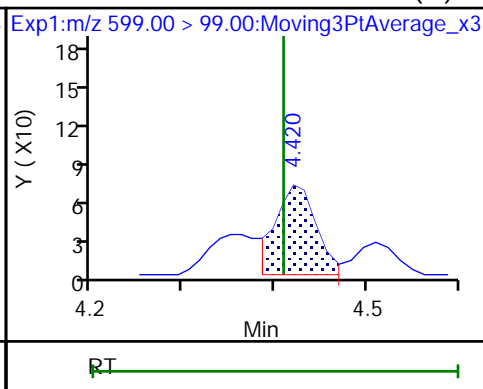
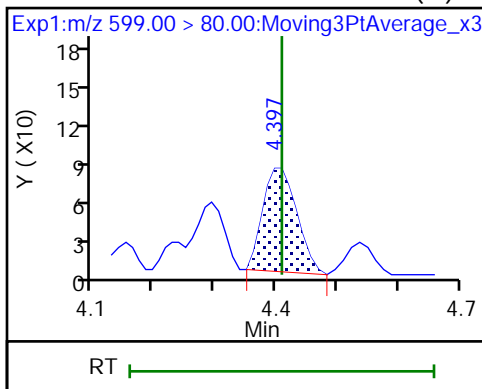
28 N-methylperfluorooctanesulfonamido (ND)



29 Perfluorodecanesulfonic acid (M)

29 Perfluorodecanesulfonic acid (M)

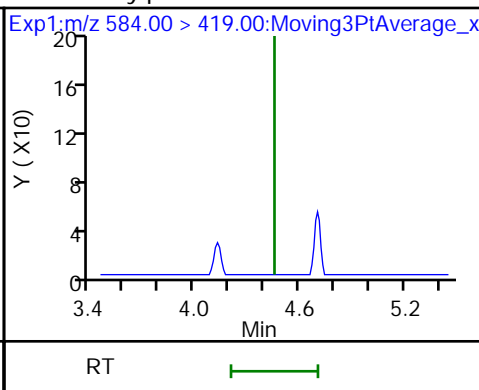
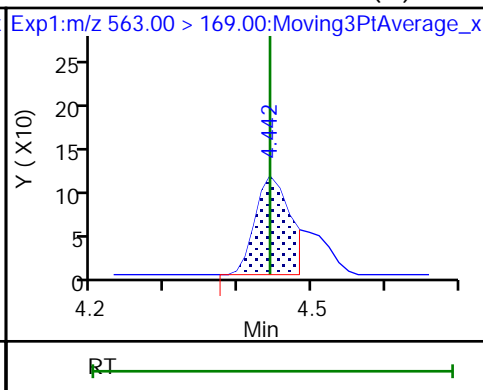
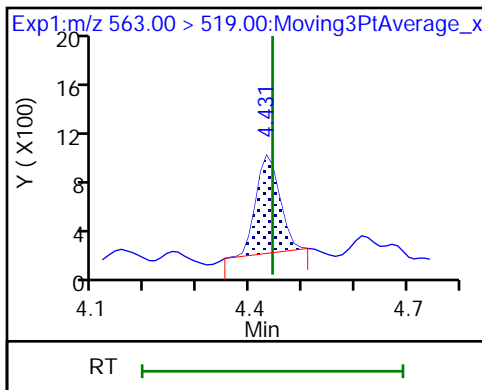
D 30 13C2 PFUnA



31 Perfluoroundecanoic acid

31 Perfluoroundecanoic acid (M)

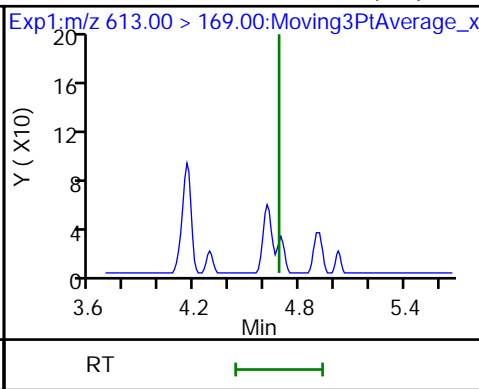
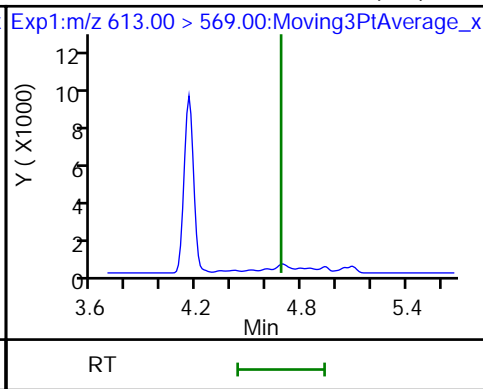
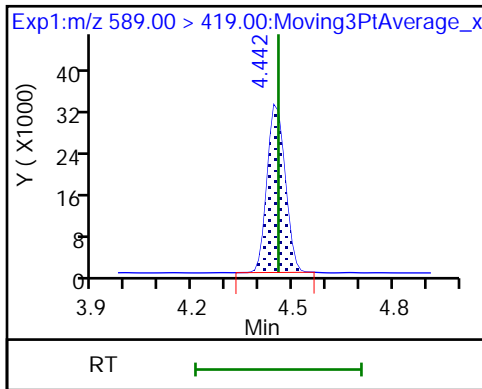
33 N-ethylperfluorooctanesulfonamidoa (ND)



D 32 d5-NEtFOSAA

37 Perfluorododecanoic acid (ND)

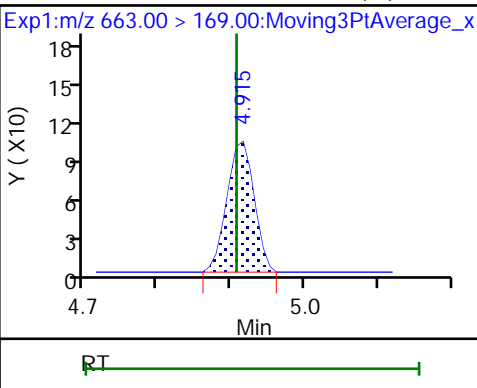
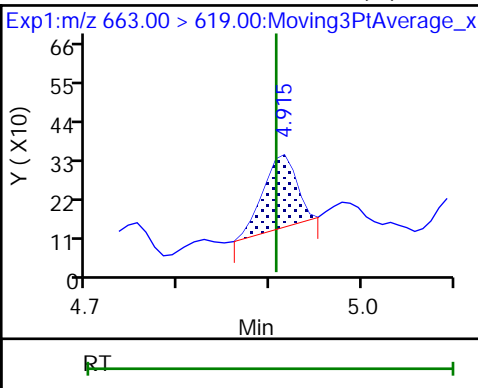
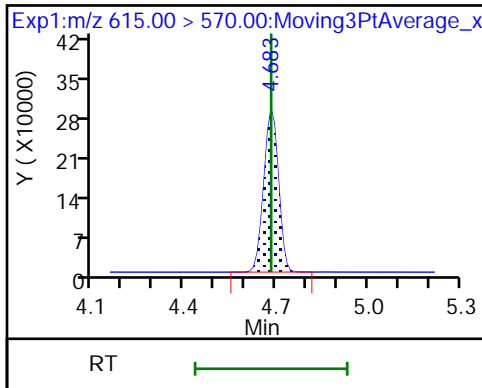
37 Perfluorododecanoic acid (ND)



D 36 13C2 PFDaA

41 Perfluorotridecanoic acid (M)

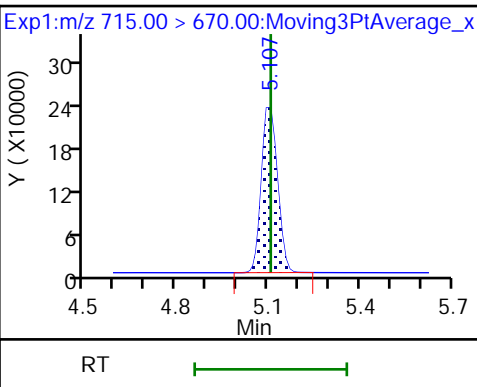
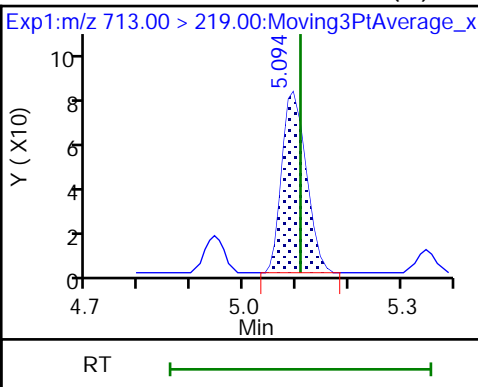
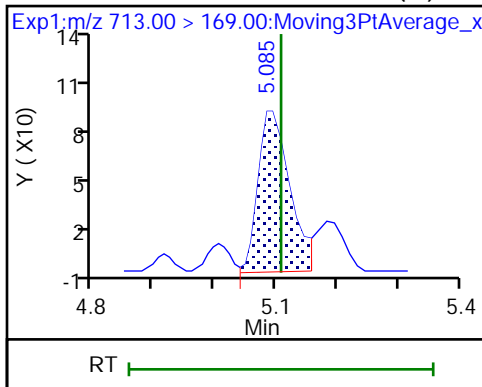
41 Perfluorotridecanoic acid (M)



42 Perfluorotetradecanoic acid (M)

42 Perfluorotetradecanoic acid (M)

D 43 13C2 PFTeDA



Eurofins TestAmerica, Burlington

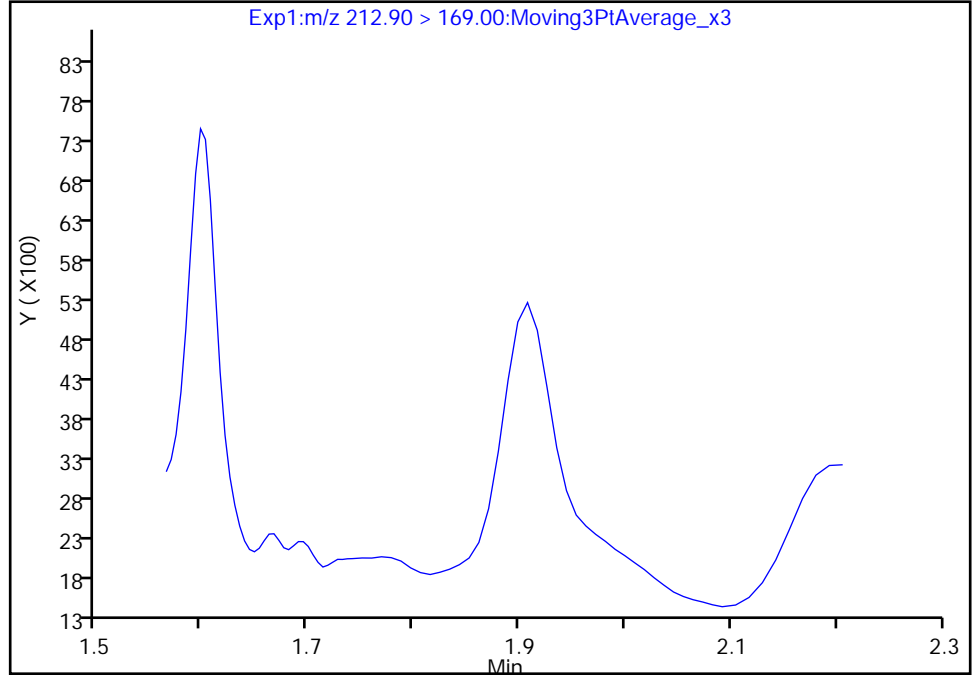
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B023.d  
Injection Date: 24-Dec-2019 16:56:20 Instrument ID: LC812  
Lims ID: 480-164221-C-12-A Lab Sample ID: 200-164221-12  
Client ID: CS SW 02 DER  
Operator ID: lc812tech ALS Bottle#: 23 Worklist Smp#: 23  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

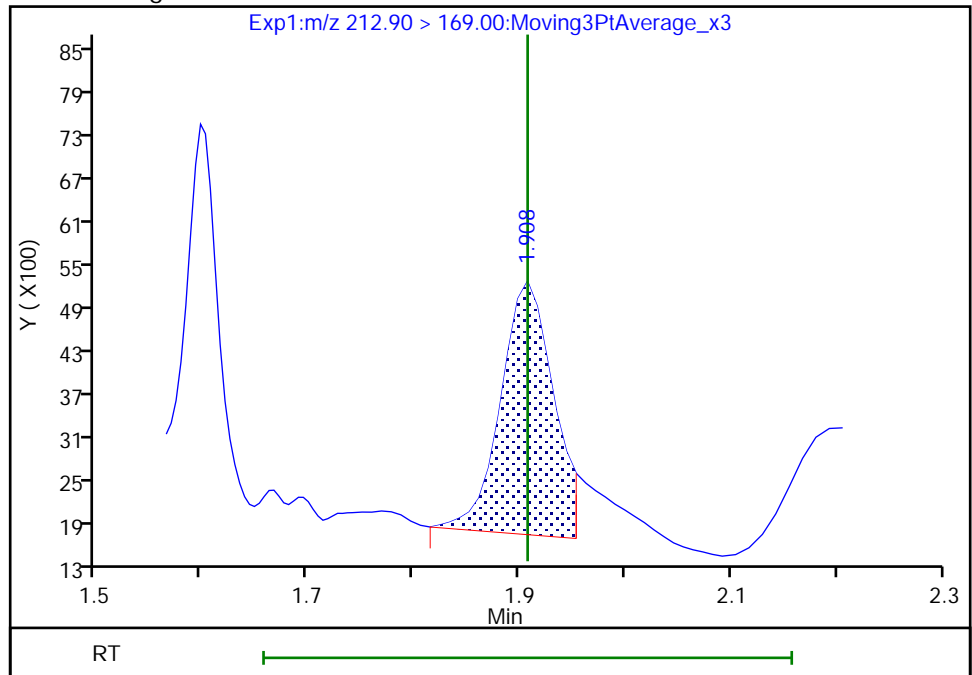
Not Detected  
Expected RT: 1.91

Processing Integration Results



Manual Integration Results

RT: 1.91  
Area: 11926  
Amount: 0.020995  
Amount Units: ng/ml



Reviewer: lautenschlagery, 27-Dec-2019 15:09:28

Audit Action: Manually Integrated

Audit Reason: Split Peak

Euofins TestAmerica, Burlington

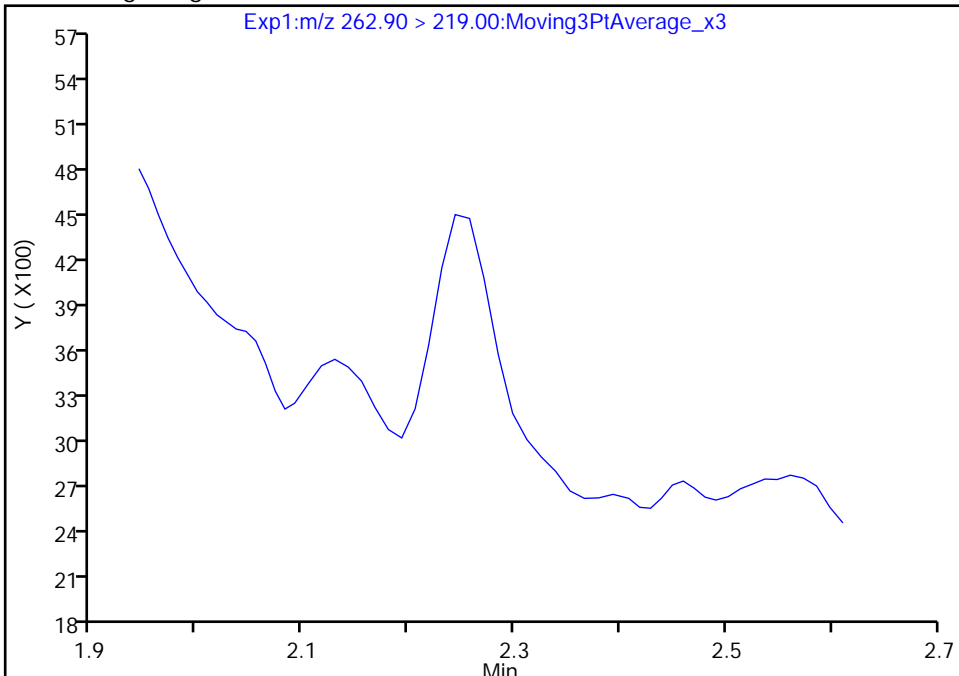
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B023.d  
Injection Date: 24-Dec-2019 16:56:20 Instrument ID: LC812  
Lims ID: 480-164221-C-12-A Lab Sample ID: 200-164221-12  
Client ID: CS SW 02 DER  
Operator ID: lc812tech ALS Bottle#: 23 Worklist Smp#: 23  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

4 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

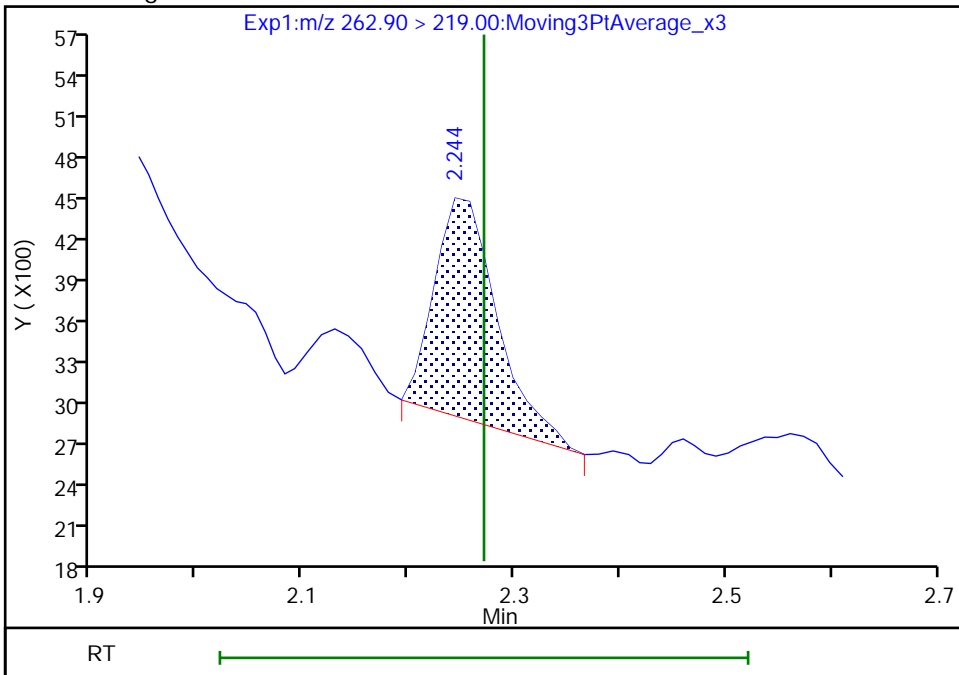
Not Detected  
Expected RT: 2.27

Processing Integration Results



Manual Integration Results

RT: 2.24  
Area: 6446  
Amount: 0.010769  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 15:09:41  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Euofins TestAmerica, Burlington

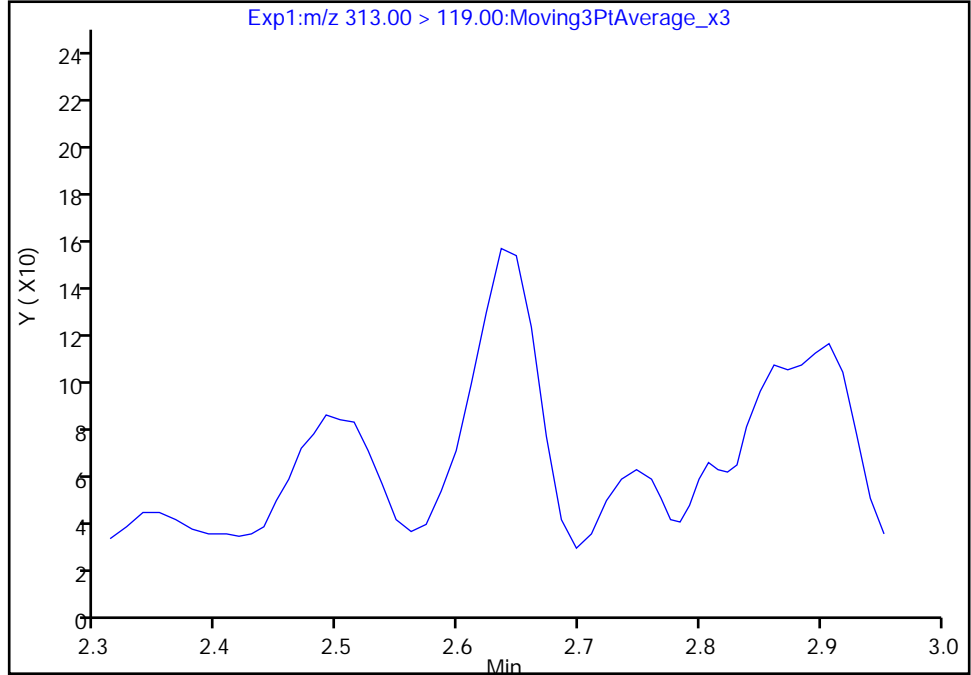
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B023.d  
Injection Date: 24-Dec-2019 16:56:20 Instrument ID: LC812  
Lims ID: 480-164221-C-12-A Lab Sample ID: 200-164221-12  
Client ID: CS SW 02 DER  
Operator ID: lc812tech ALS Bottle#: 23 Worklist Smp#: 23  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

6 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 2

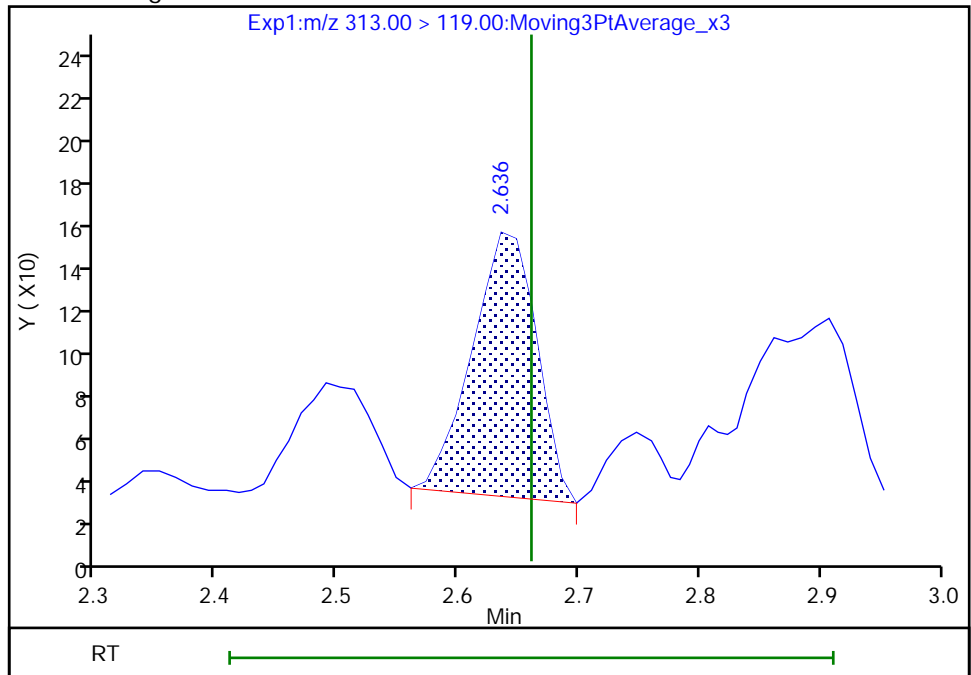
Not Detected  
Expected RT: 2.66

Processing Integration Results



Manual Integration Results

RT: 2.64  
Area: 454  
Amount: 0.005800  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 15:10:09

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

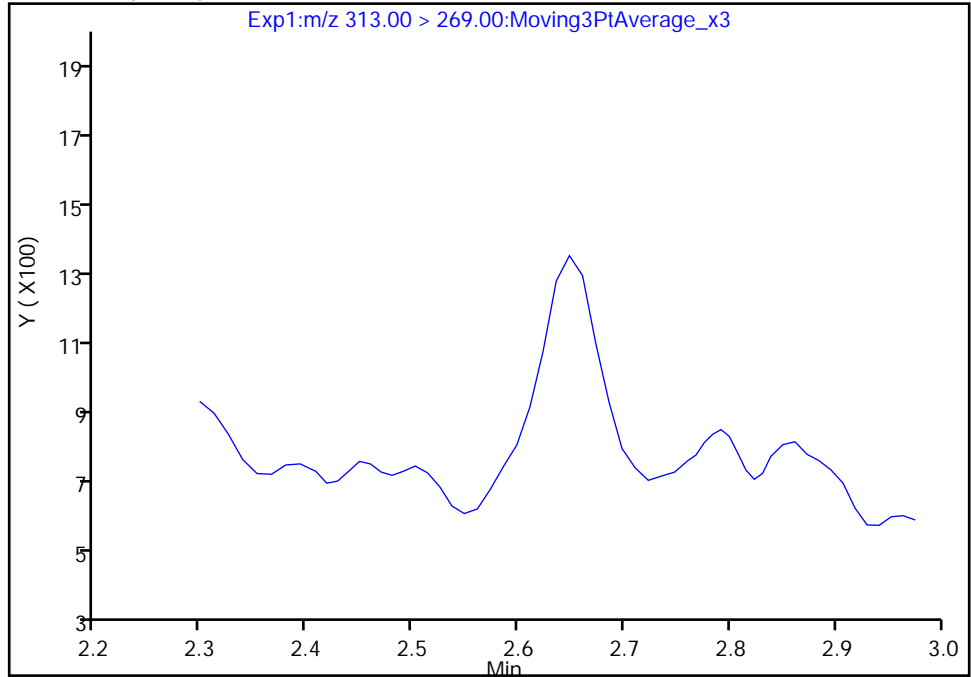
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B023.d  
Injection Date: 24-Dec-2019 16:56:20 Instrument ID: LC812  
Lims ID: 480-164221-C-12-A Lab Sample ID: 200-164221-12  
Client ID: CS SW 02 DER  
Operator ID: lc812tech ALS Bottle#: 23 Worklist Smp#: 23  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

6 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

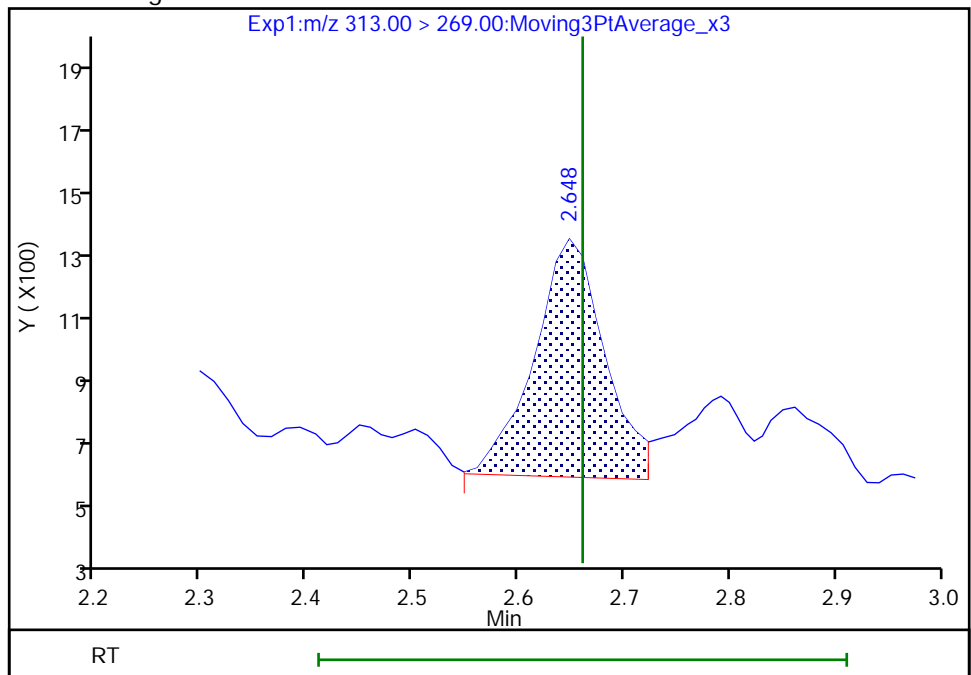
Not Detected  
Expected RT: 2.66

Processing Integration Results



Manual Integration Results

RT: 2.65  
Area: 3392  
Amount: 0.005800  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 15:10:26

Audit Action: Manually Integrated

Audit Reason: Baseline

Euofins TestAmerica, Burlington

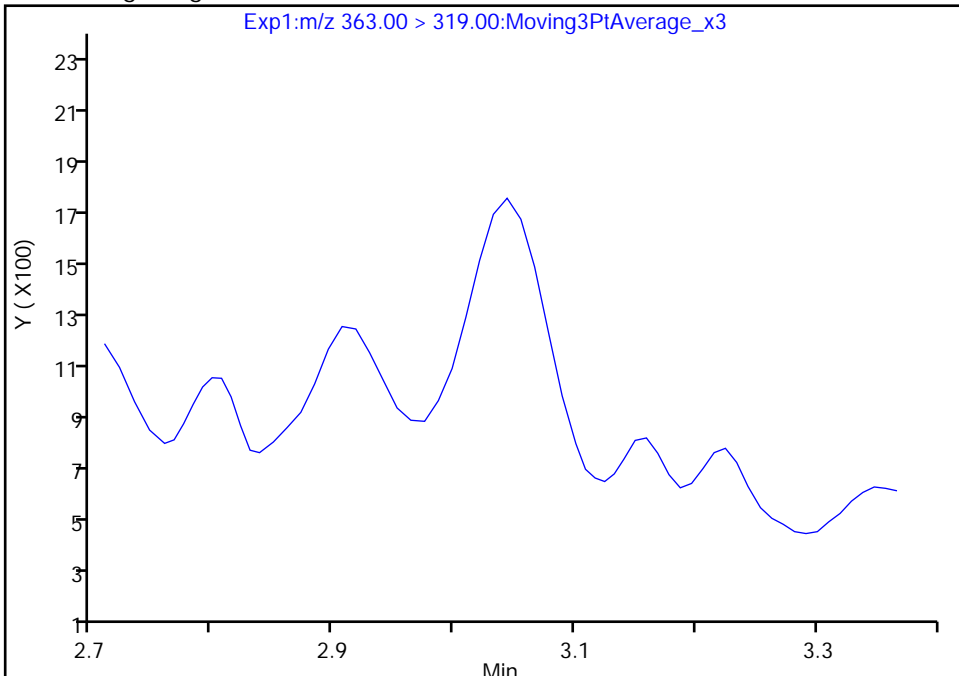
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B023.d  
Injection Date: 24-Dec-2019 16:56:20 Instrument ID: LC812  
Lims ID: 480-164221-C-12-A Lab Sample ID: 200-164221-12  
Client ID: CS SW 02 DER  
Operator ID: lc812tech ALS Bottle#: 23 Worklist Smp#: 23  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

10 Perfluoroheptanoic acid, CAS: 375-85-9

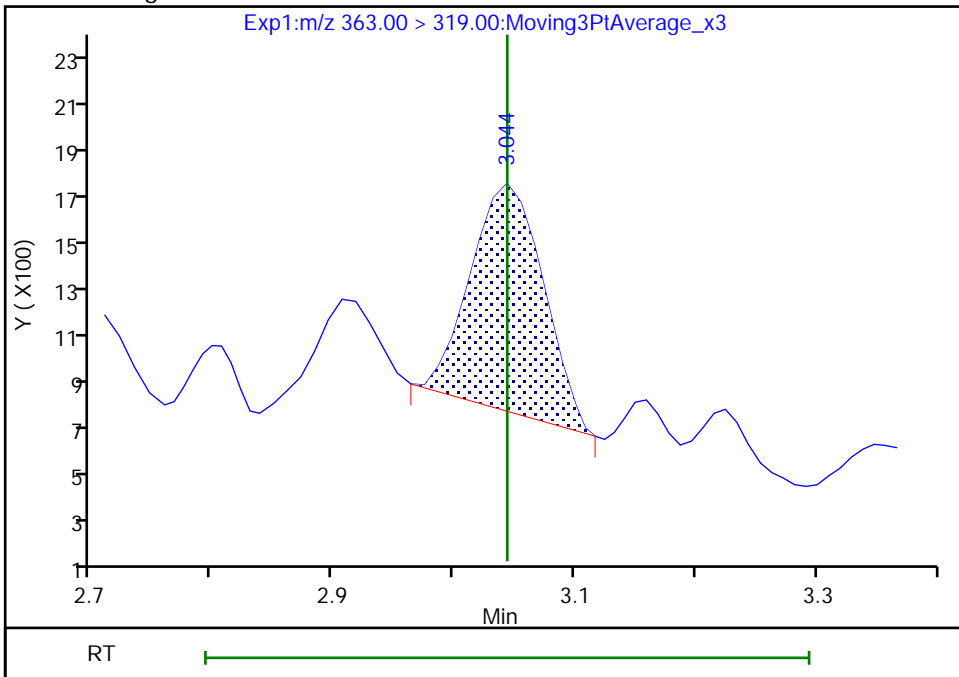
Signal: 1

Not Detected  
Expected RT: 3.04

Processing Integration Results



Manual Integration Results



RT: 3.04  
Area: 3865  
Amount: 0.006335  
Amount Units: ng/ml

Eurofins TestAmerica, Burlington

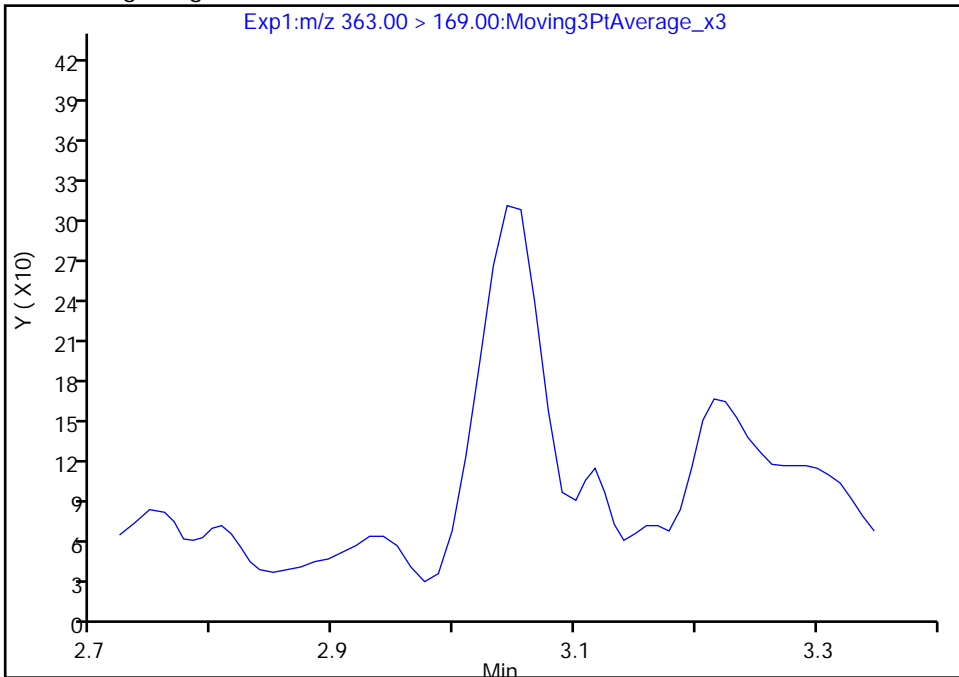
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B023.d  
Injection Date: 24-Dec-2019 16:56:20 Instrument ID: LC812  
Lims ID: 480-164221-C-12-A Lab Sample ID: 200-164221-12  
Client ID: CS SW 02 DER  
Operator ID: lc812tech ALS Bottle#: 23 Worklist Smp#: 23  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

10 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 2

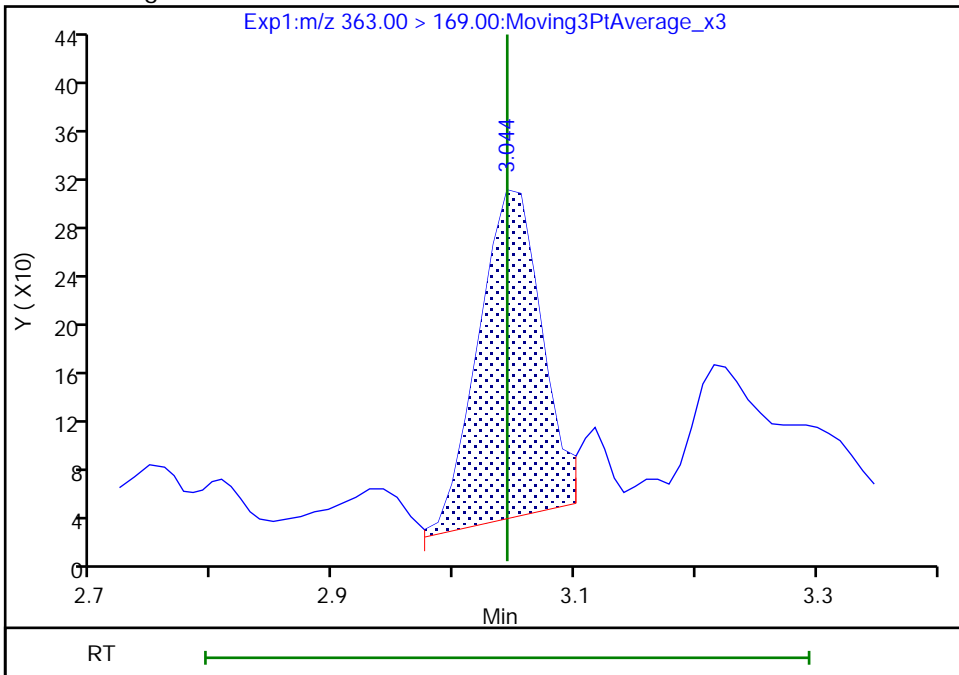
Not Detected  
Expected RT: 3.04

Processing Integration Results



Manual Integration Results

RT: 3.04  
Area: 987  
Amount: 0.006335  
Amount Units: ng/ml



Euofins TestAmerica, Burlington

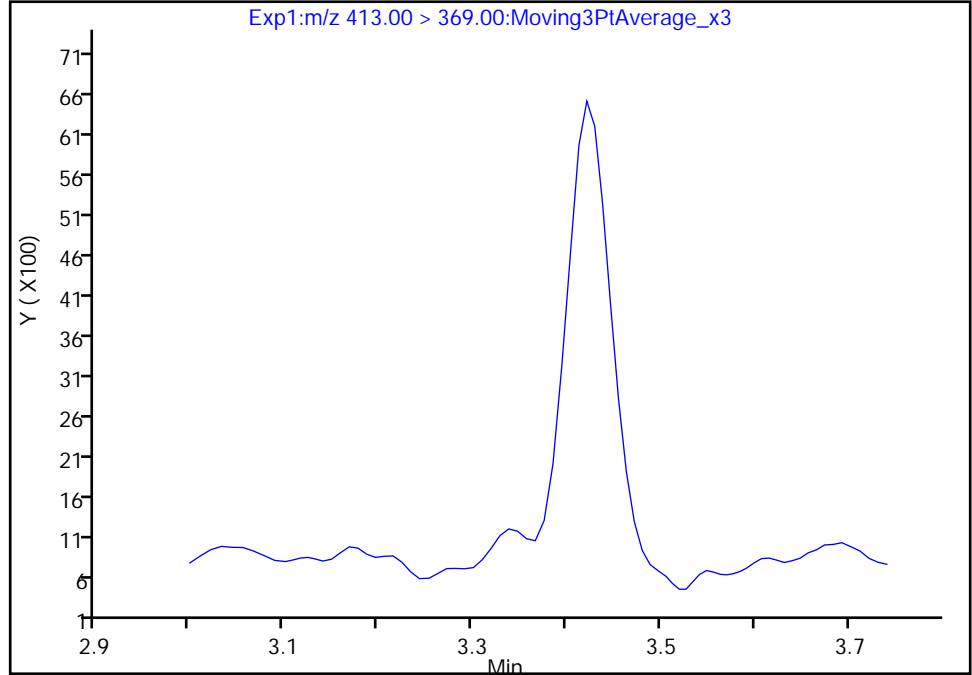
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B023.d  
Injection Date: 24-Dec-2019 16:56:20 Instrument ID: LC812  
Lims ID: 480-164221-C-12-A Lab Sample ID: 200-164221-12  
Client ID: CS SW 02 DER  
Operator ID: lc812tech ALS Bottle#: 23 Worklist Smp#: 23  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

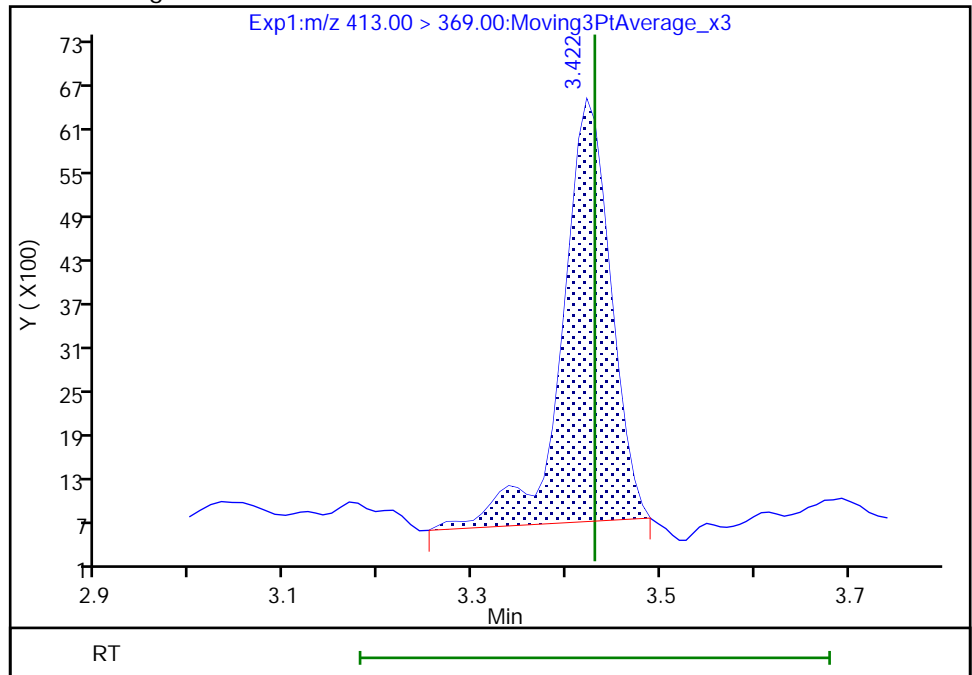
Not Detected  
Expected RT: 3.43

Processing Integration Results



Manual Integration Results

RT: 3.42  
Area: 21089  
Amount: 0.031690  
Amount Units: ng/ml



Reviewer: lautenschlagery, 27-Dec-2019 15:12:45

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

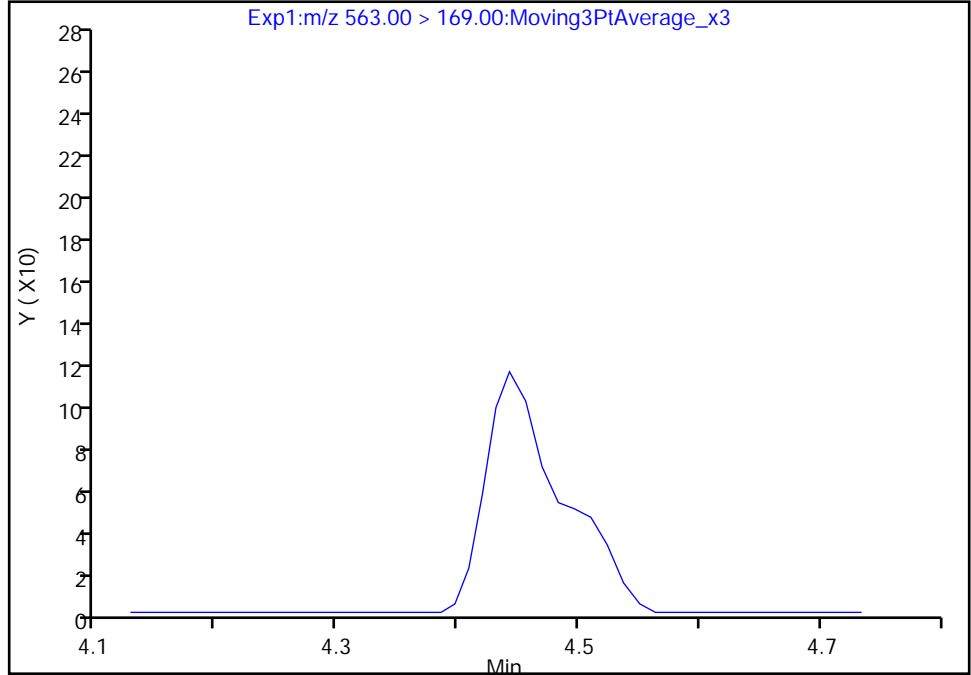
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B023.d  
Injection Date: 24-Dec-2019 16:56:20 Instrument ID: LC812  
Lims ID: 480-164221-C-12-A Lab Sample ID: 200-164221-12  
Client ID: CS SW 02 DER  
Operator ID: lc812tech ALS Bottle#: 23 Worklist Smp#: 23  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 2

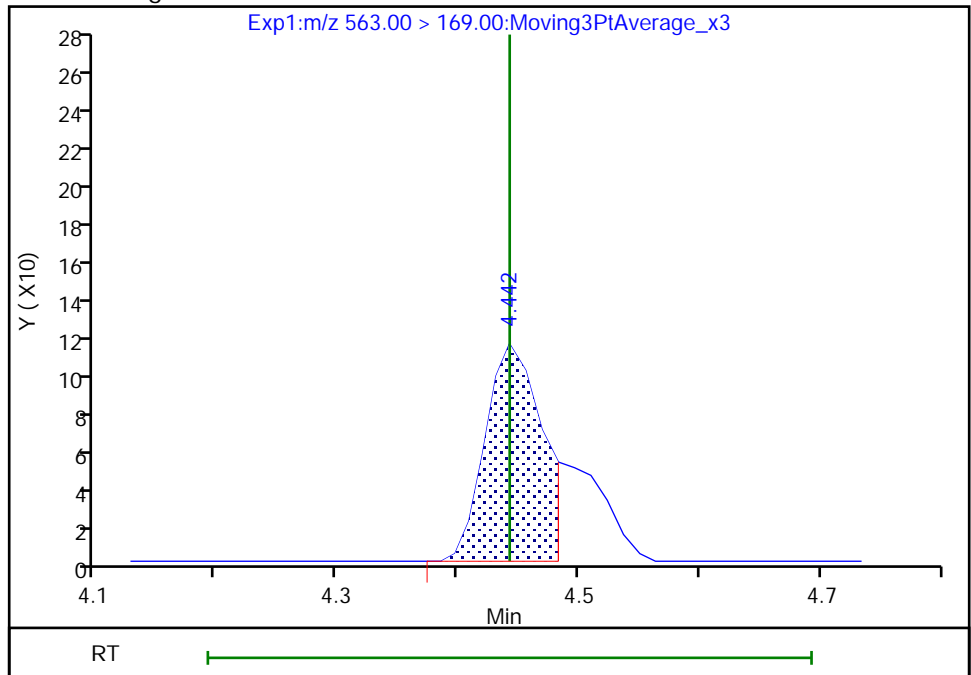
Not Detected  
Expected RT: 4.44

Processing Integration Results



RT: 4.44  
Area: 362  
Amount: 0.006958  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagery, 27-Dec-2019 15:15:59

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

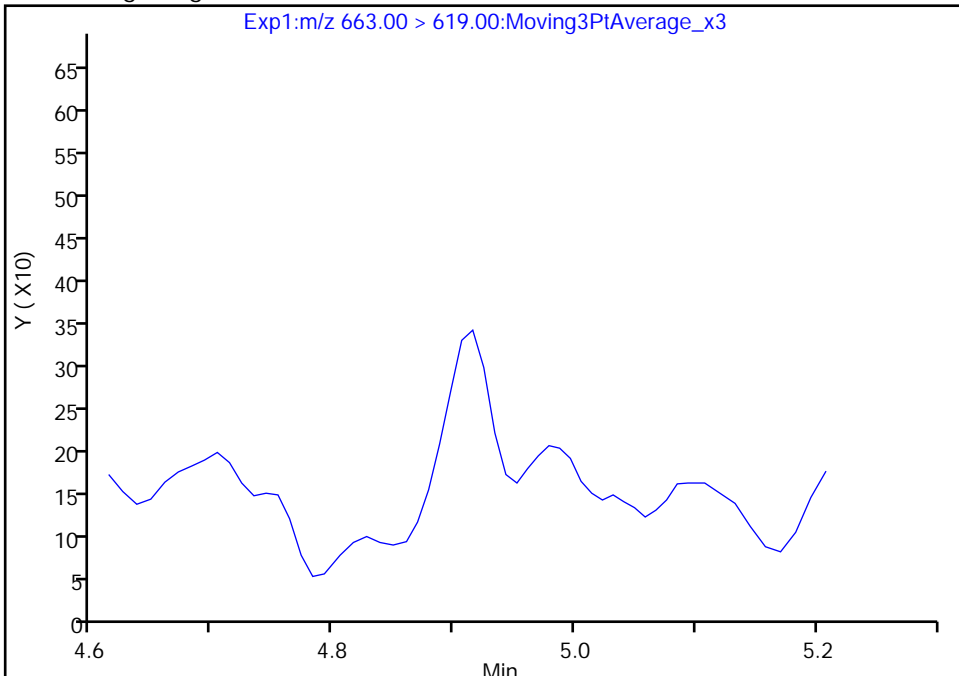
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B023.d  
Injection Date: 24-Dec-2019 16:56:20 Instrument ID: LC812  
Lims ID: 480-164221-C-12-A Lab Sample ID: 200-164221-12  
Client ID: CS SW 02 DER  
Operator ID: lc812tech ALS Bottle#: 23 Worklist Smp#: 23  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

41 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 1

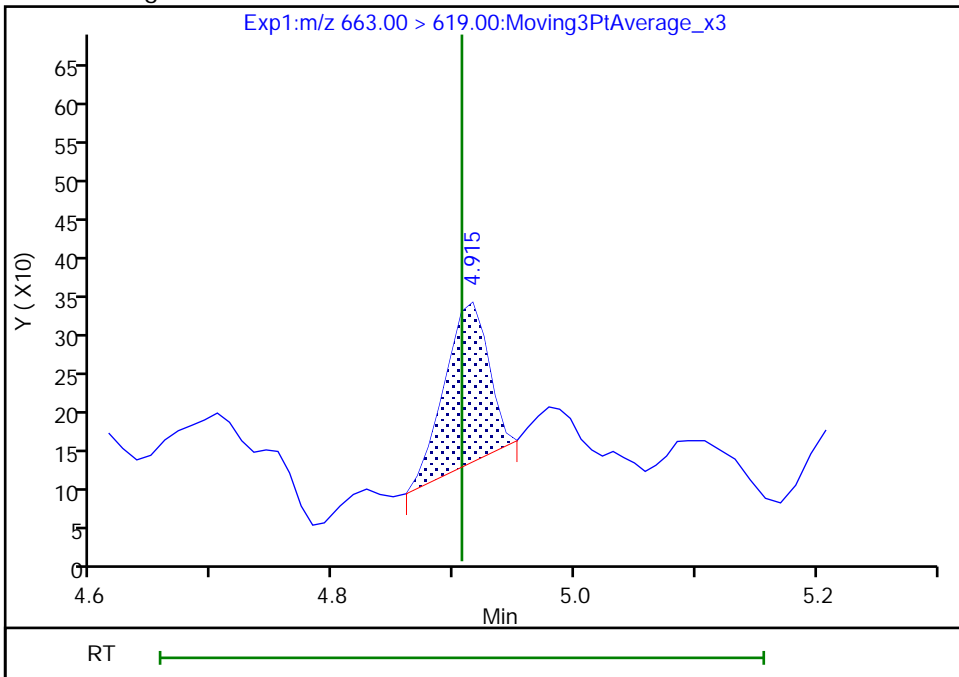
Not Detected  
Expected RT: 4.91

Processing Integration Results



Manual Integration Results

RT: 4.92  
Area: 528  
Amount: 0.001568  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 15:17:20  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

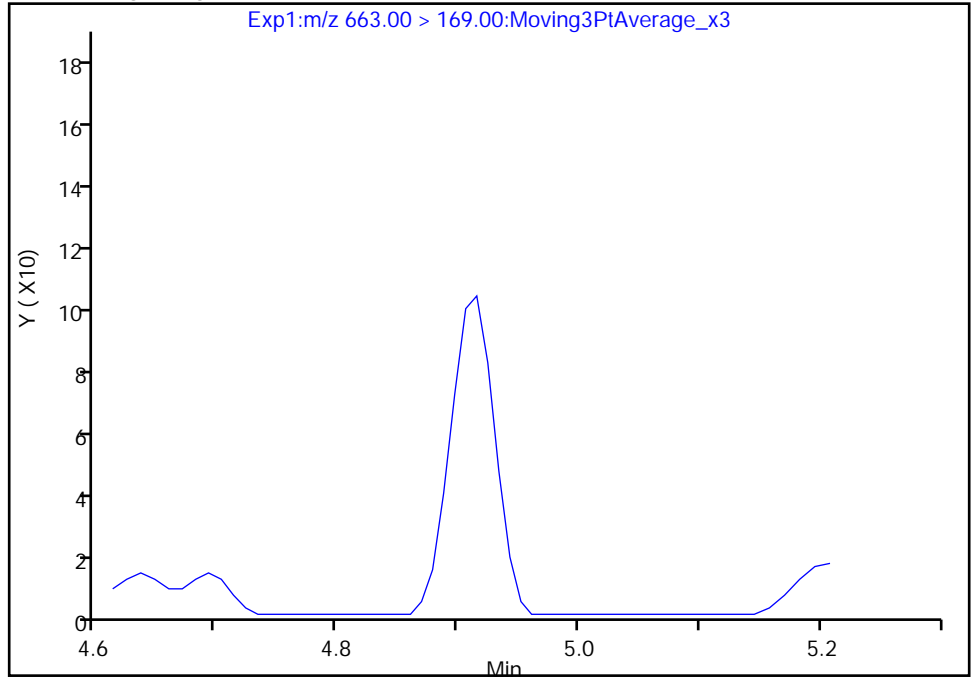
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B023.d  
Injection Date: 24-Dec-2019 16:56:20 Instrument ID: LC812  
Lims ID: 480-164221-C-12-A Lab Sample ID: 200-164221-12  
Client ID: CS SW 02 DER  
Operator ID: lc812tech ALS Bottle#: 23 Worklist Smp#: 23  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

41 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 2

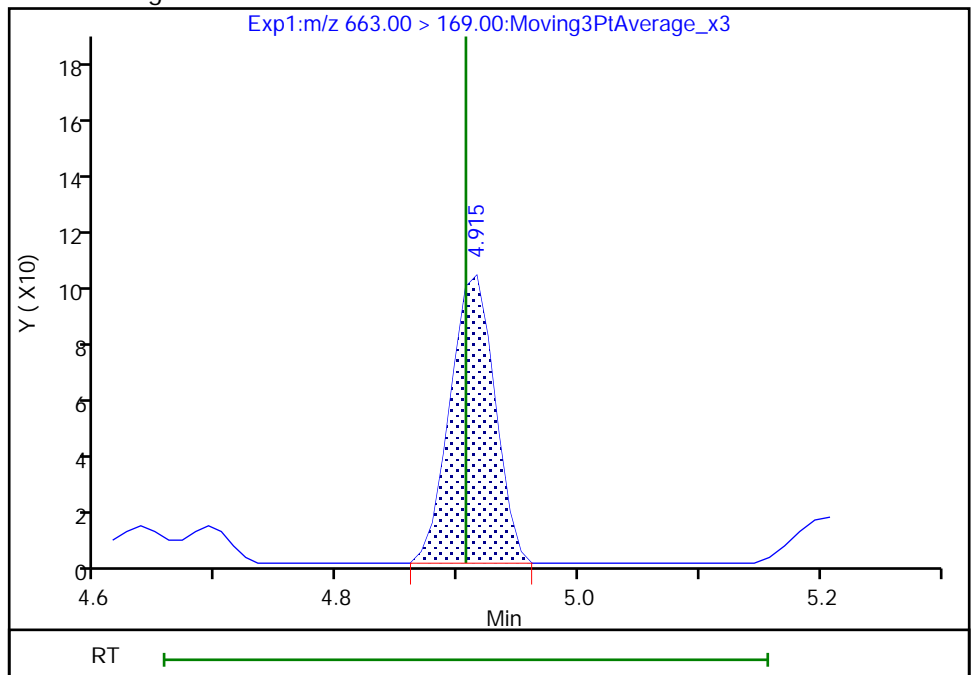
Not Detected  
Expected RT: 4.91

Processing Integration Results



Manual Integration Results

RT: 4.92  
Area: 256  
Amount: 0.001568  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 15:17:23

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Euofins TestAmerica, Burlington

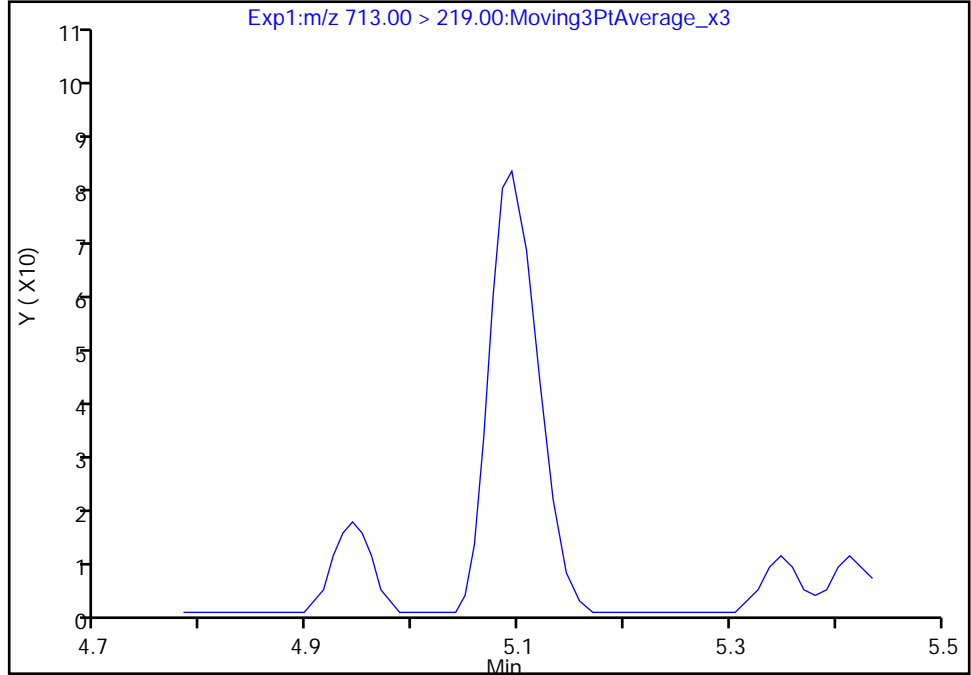
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B023.d  
Injection Date: 24-Dec-2019 16:56:20 Instrument ID: LC812  
Lims ID: 480-164221-C-12-A Lab Sample ID: 200-164221-12  
Client ID: CS SW 02 DER  
Operator ID: lc812tech ALS Bottle#: 23 Worklist Smp#: 23  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 2

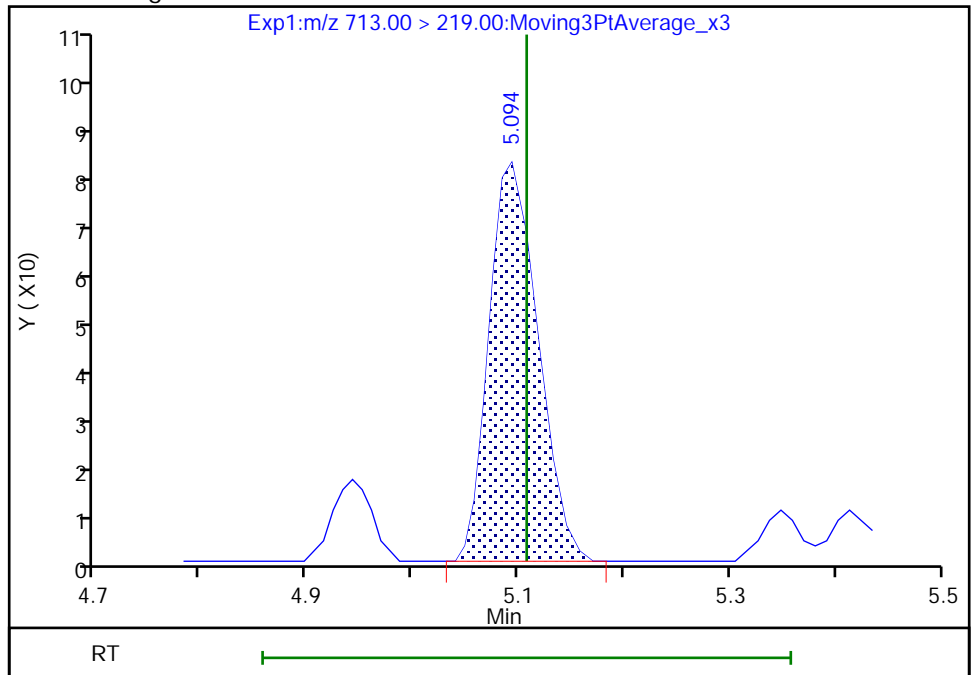
Not Detected  
Expected RT: 5.11

Processing Integration Results



Manual Integration Results

RT: 5.09  
Area: 250  
Amount: 0.004843  
Amount Units: ng/ml



Reviewer: lautenschlagery, 27-Dec-2019 15:16:48  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

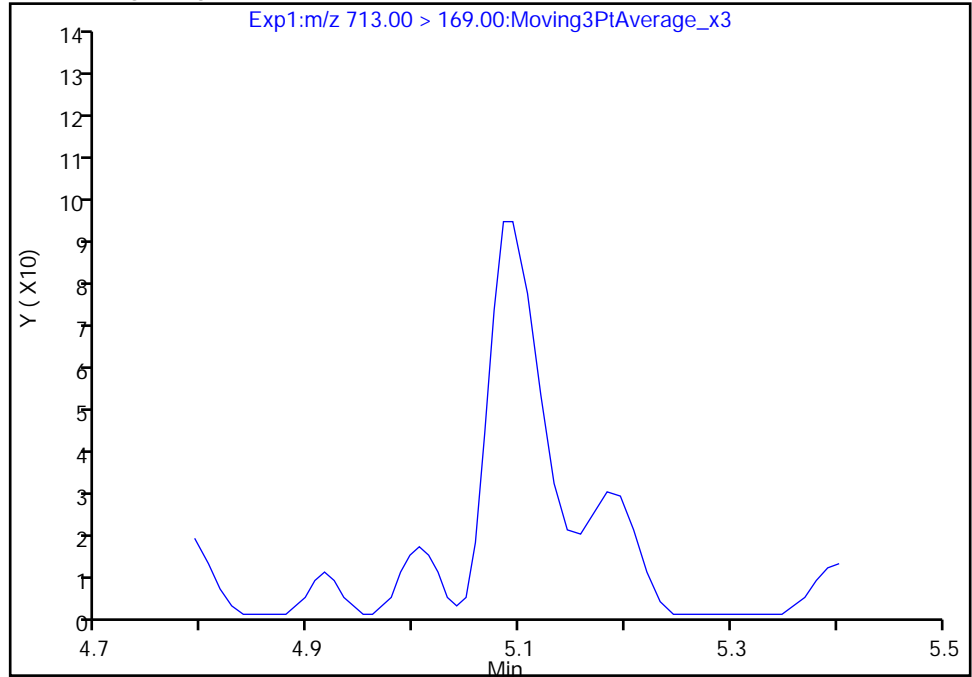
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B023.d  
Injection Date: 24-Dec-2019 16:56:20 Instrument ID: LC812  
Lims ID: 480-164221-C-12-A Lab Sample ID: 200-164221-12  
Client ID: CS SW 02 DER  
Operator ID: lc812tech ALS Bottle#: 23 Worklist Smp#: 23  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 1

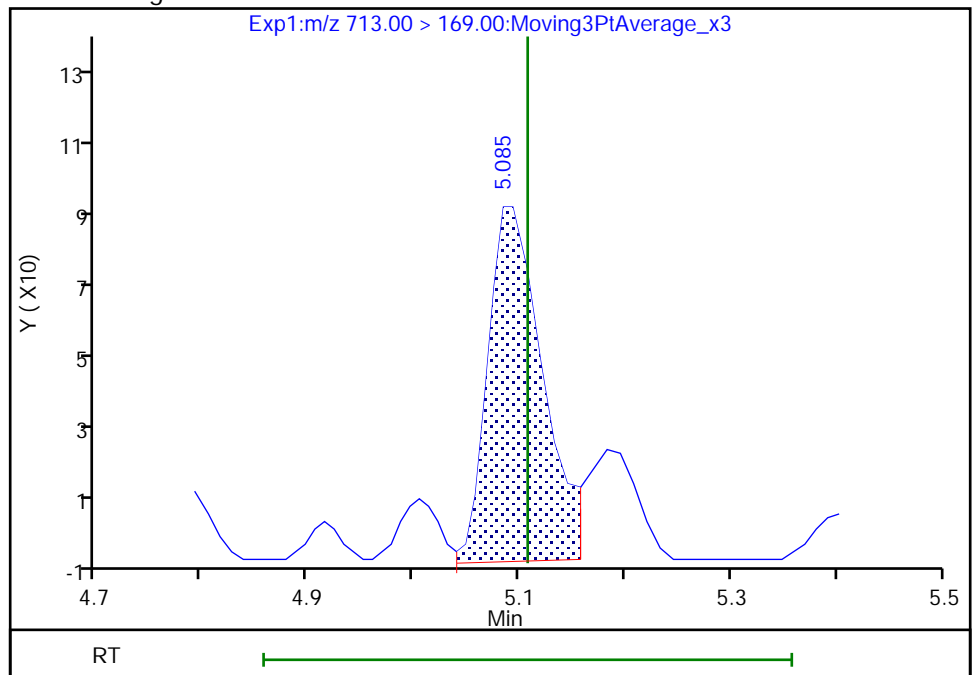
Not Detected  
Expected RT: 5.11

Processing Integration Results



Manual Integration Results

RT: 5.08  
Area: 334  
Amount: 0.004843  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 15:16:58

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

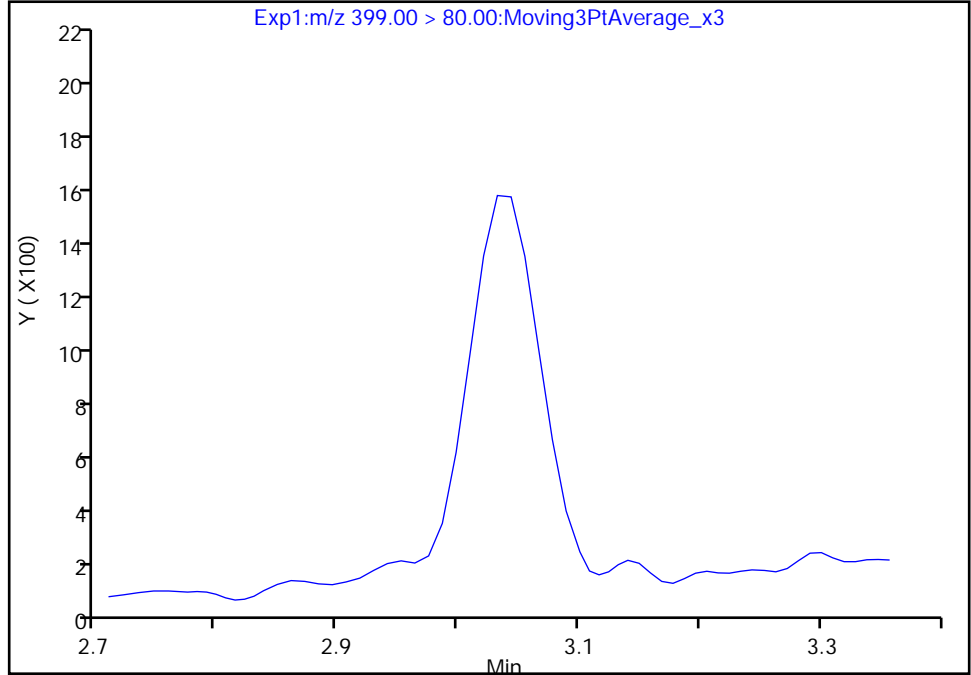
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B023.d  
Injection Date: 24-Dec-2019 16:56:20 Instrument ID: LC812  
Lims ID: 480-164221-C-12-A Lab Sample ID: 200-164221-12  
Client ID: CS SW 02 DER  
Operator ID: lc812tech ALS Bottle#: 23 Worklist Smp#: 23  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

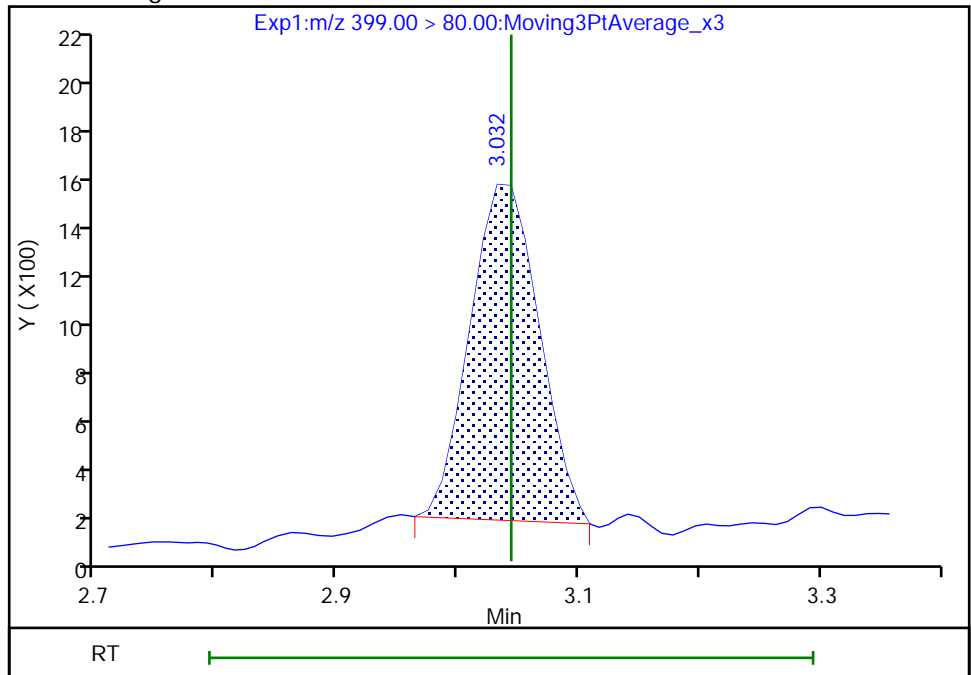
Not Detected  
Expected RT: 3.04

Processing Integration Results



Manual Integration Results

RT: 3.03  
Area: 5385  
Amount: 0.009360  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 15:10:45

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Euofins TestAmerica, Burlington

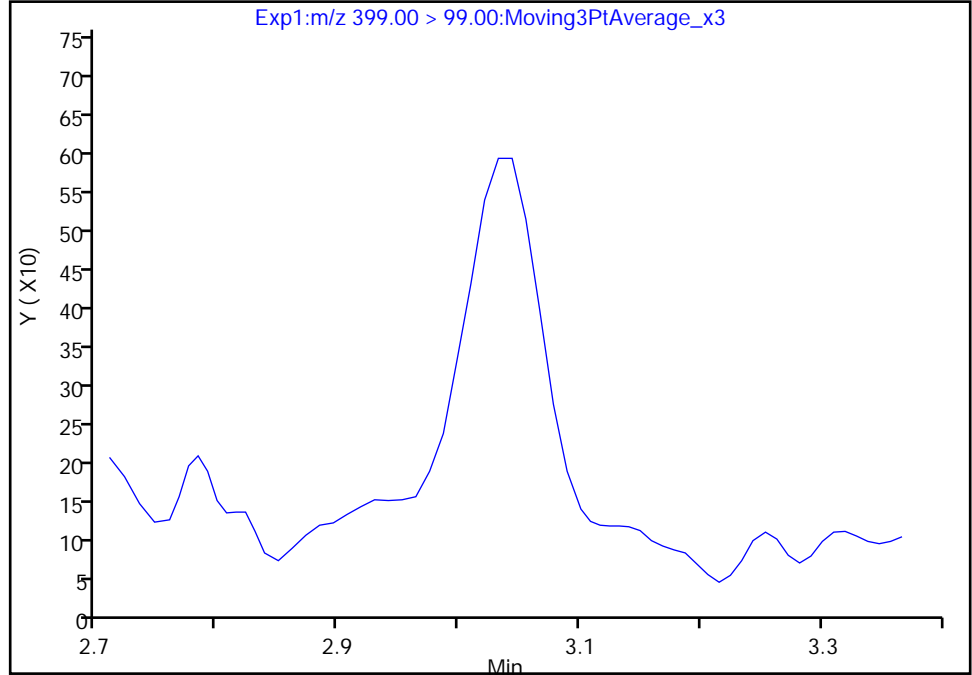
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B023.d  
Injection Date: 24-Dec-2019 16:56:20 Instrument ID: LC812  
Lims ID: 480-164221-C-12-A Lab Sample ID: 200-164221-12  
Client ID: CS SW 02 DER  
Operator ID: lc812tech ALS Bottle#: 23 Worklist Smp#: 23  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

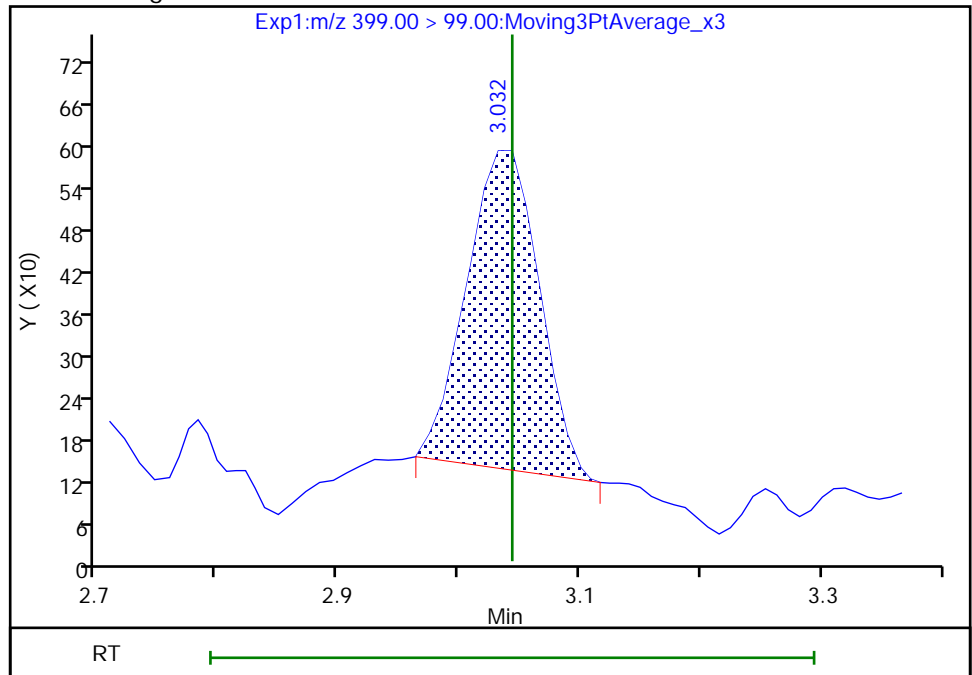
Not Detected  
Expected RT: 3.04

Processing Integration Results



Manual Integration Results

RT: 3.03  
Area: 1904  
Amount: 0.009360  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 15:10:52

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

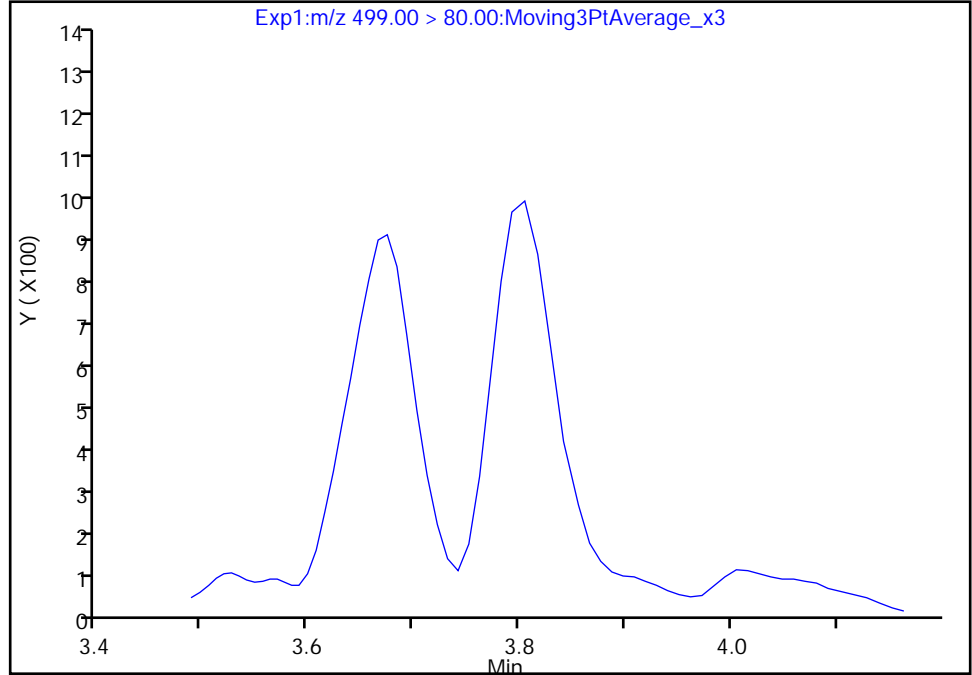
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B023.d  
Injection Date: 24-Dec-2019 16:56:20 Instrument ID: LC812  
Lims ID: 480-164221-C-12-A Lab Sample ID: 200-164221-12  
Client ID: CS SW 02 DER  
Operator ID: lc812tech ALS Bottle#: 23 Worklist Smp#: 23  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

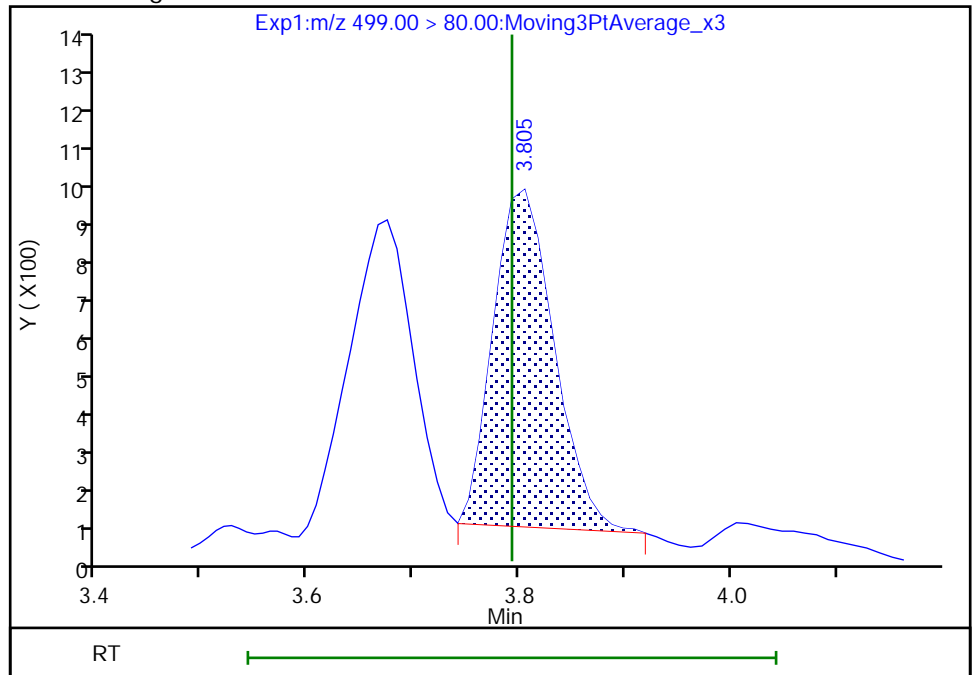
Not Detected  
Expected RT: 3.79

Processing Integration Results



Manual Integration Results

RT: 3.80  
Area: 3370  
Amount: 0.007972  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

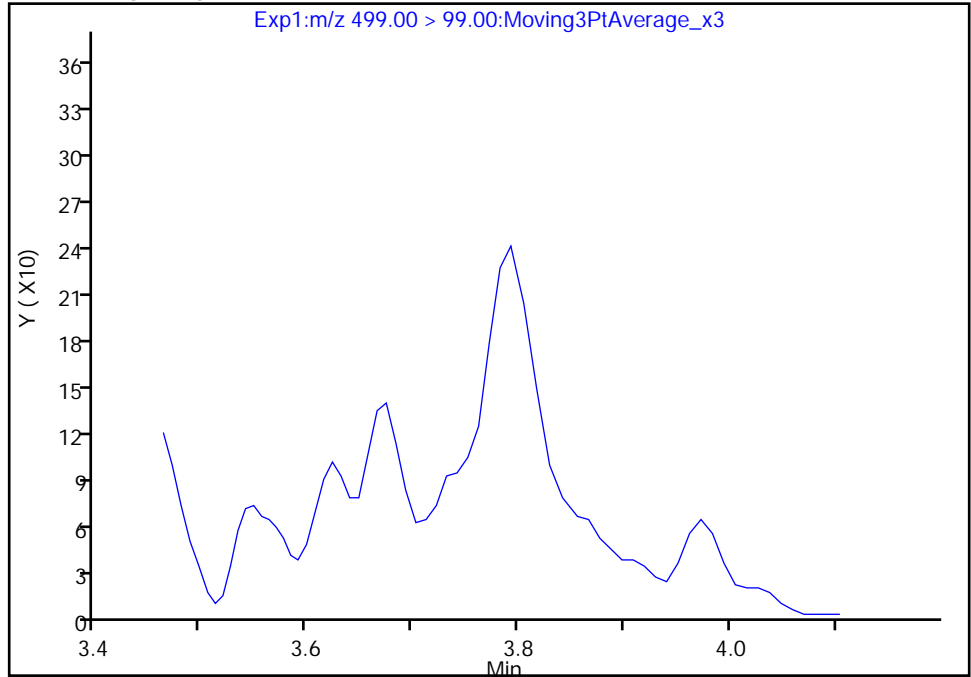
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B023.d  
Injection Date: 24-Dec-2019 16:56:20 Instrument ID: LC812  
Lims ID: 480-164221-C-12-A Lab Sample ID: 200-164221-12  
Client ID: CS SW 02 DER  
Operator ID: lc812tech ALS Bottle#: 23 Worklist Smp#: 23  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 (4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

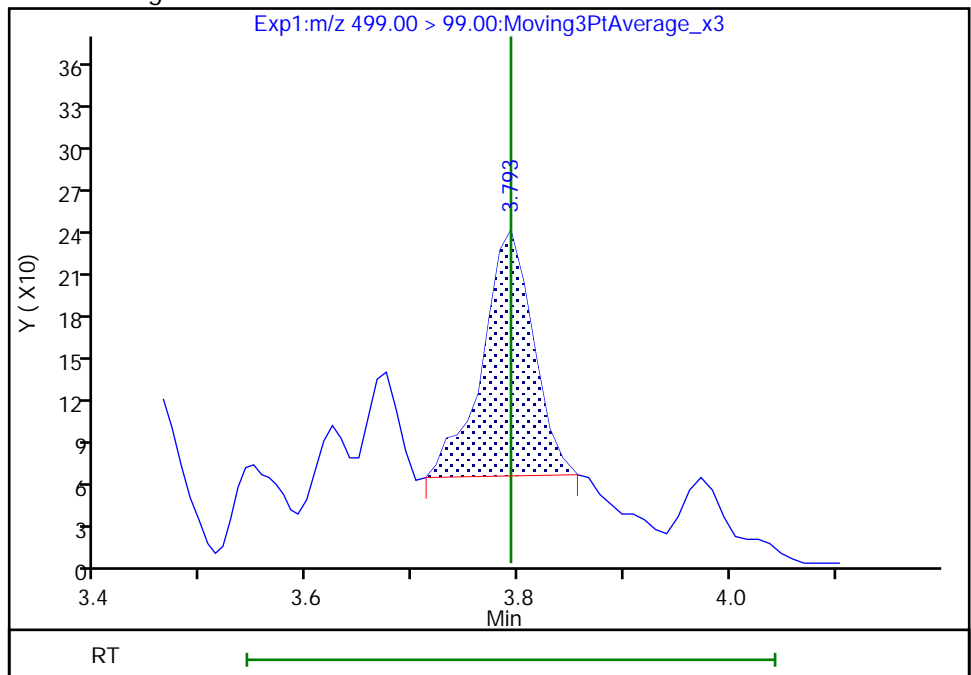
Not Detected  
Expected RT: 3.79

Processing Integration Results



Manual Integration Results

RT: 3.79  
Area: 580  
Amount: 0.007972  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 15:13:29

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Euofins TestAmerica, Burlington

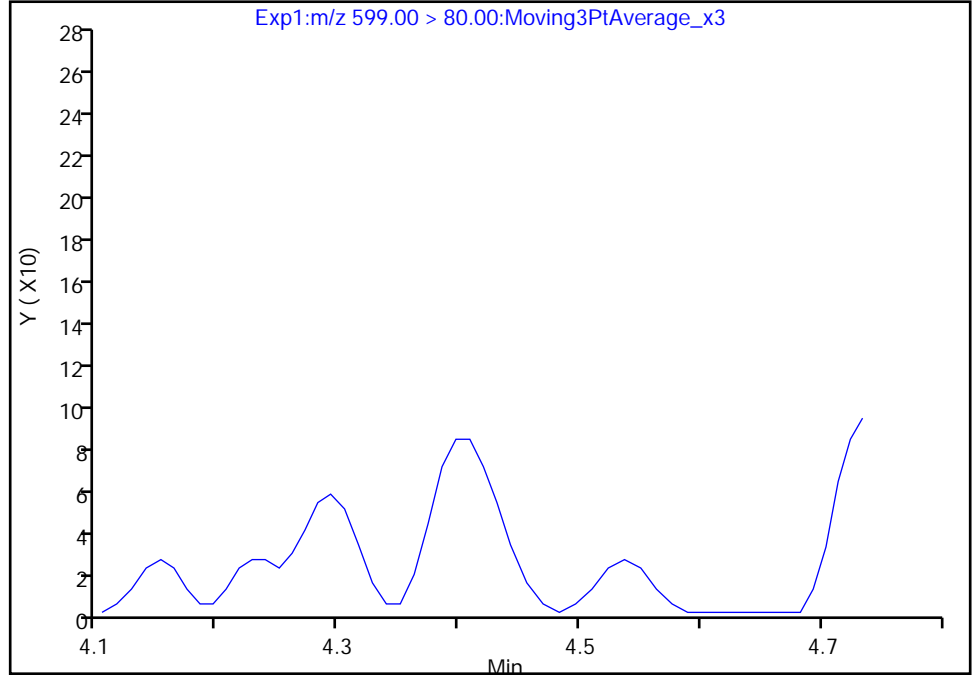
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Injection Date: 24-Dec-2019 16:56:20 Instrument ID: LC812  
Lims ID: 480-164221-C-12-A Lab Sample ID: 200-164221-12  
Client ID: CS SW 02 DER  
Operator ID: lc812tech ALS Bottle#: 23 Worklist Smp#: 23  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

29 Perfluorodecanesulfonic acid, CAS: 335-77-3

Signal: 1

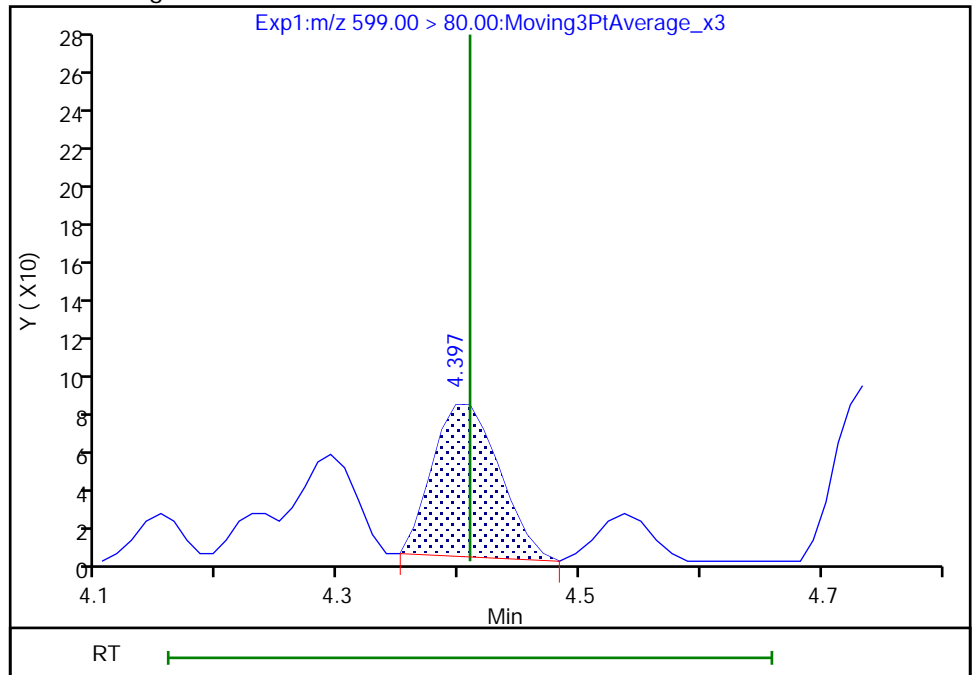
Not Detected  
Expected RT: 4.41

Processing Integration Results



Manual Integration Results

RT: 4.40  
Area: 307  
Amount: 0.001090  
Amount Units: ng/ml



Reviewer: lautenschlagery, 27-Dec-2019 15:14:48

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

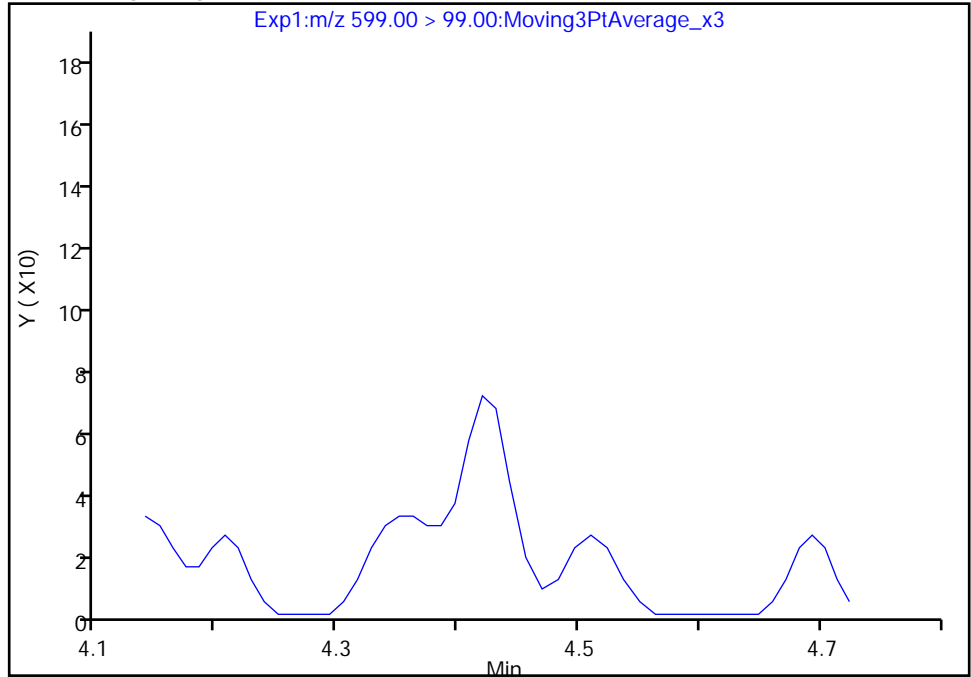
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B023.d  
Injection Date: 24-Dec-2019 16:56:20 Instrument ID: LC812  
Lims ID: 480-164221-C-12-A Lab Sample ID: 200-164221-12  
Client ID: CS SW 02 DER  
Operator ID: lc812tech ALS Bottle#: 23 Worklist Smp#: 23  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

29 Perfluorodecanesulfonic acid, CAS: 335-77-3

Signal: 2

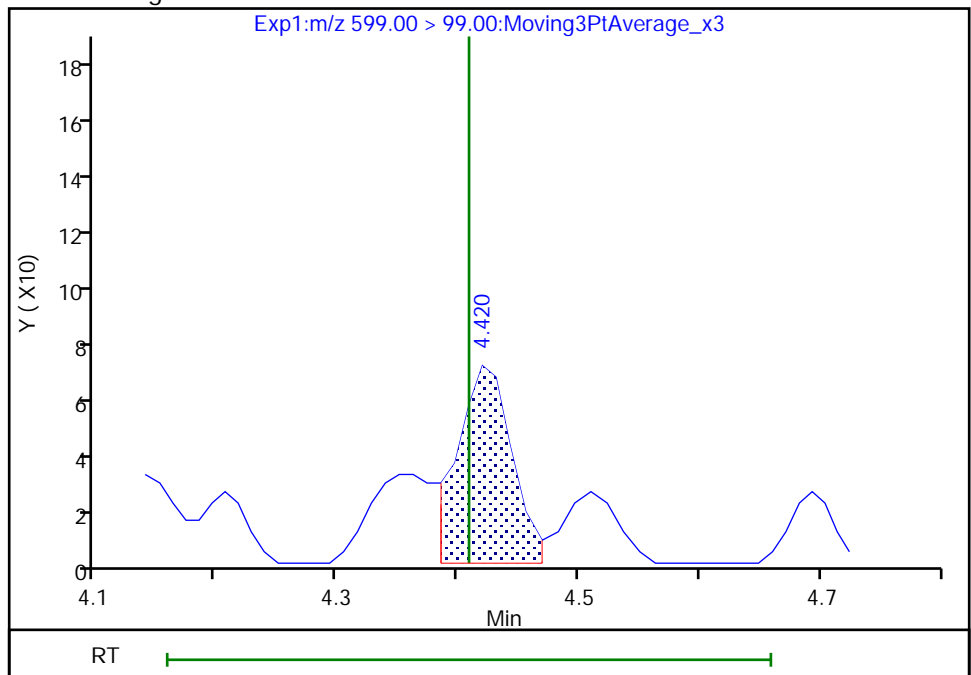
Not Detected  
Expected RT: 4.41

Processing Integration Results



Manual Integration Results

RT: 4.42  
Area: 210  
Amount: 0.001090  
Amount Units: ng/ml





Euofins TestAmerica, Burlington

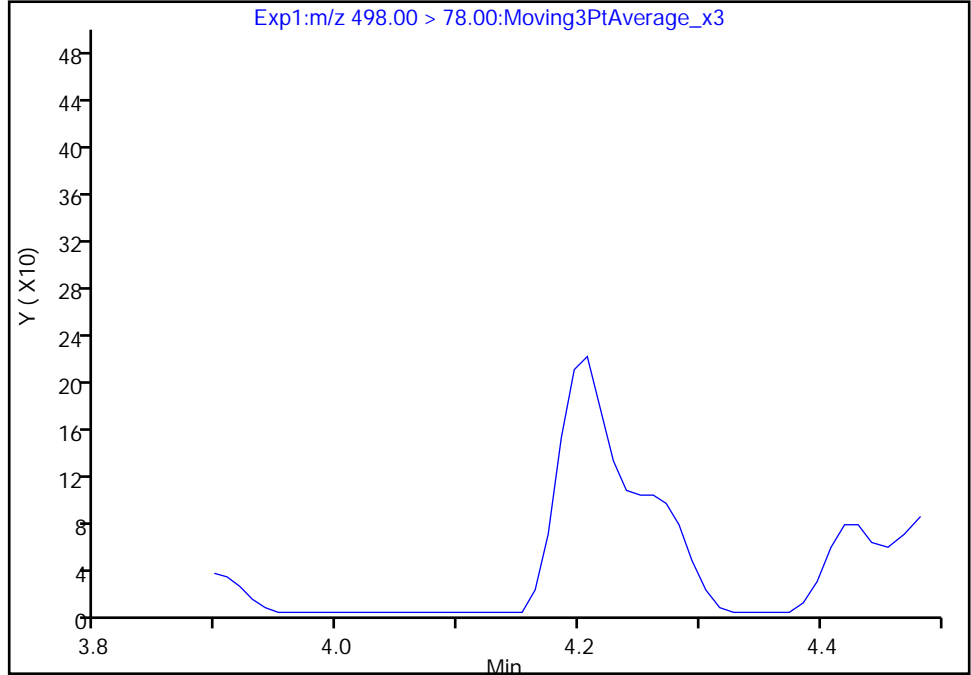
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Injection Date: 24-Dec-2019 16:56:20 Instrument ID: LC812  
Lims ID: 480-164221-C-12-A Lab Sample ID: 200-164221-12  
Client ID: CS SW 02 DER  
Operator ID: lc812tech ALS Bottle#: 23 Worklist Smp#: 23  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

22 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

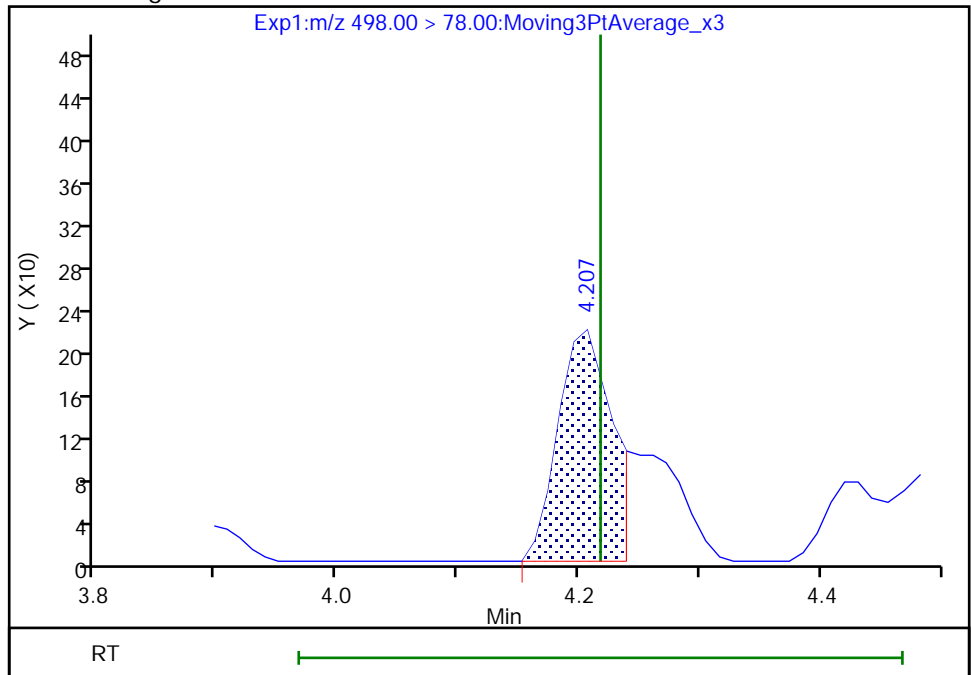
Not Detected  
Expected RT: 4.22

Processing Integration Results



Manual Integration Results

RT: 4.21  
Area: 652  
Amount: 0.001130  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 15:14:11

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

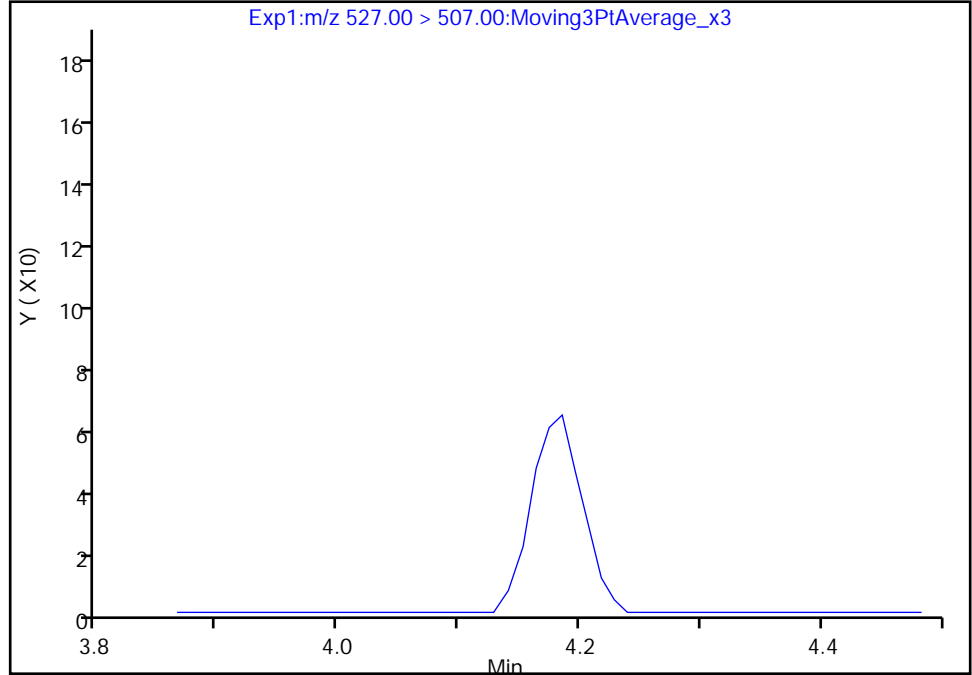
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Injection Date: 24-Dec-2019 16:56:20 Instrument ID: LC812  
Lims ID: 480-164221-C-12-A Lab Sample ID: 200-164221-12  
Client ID: CS SW 02 DER  
Operator ID: lc812tech ALS Bottle#: 23 Worklist Smp#: 23  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

25 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:, CAS: 39108-34-4

Signal: 1

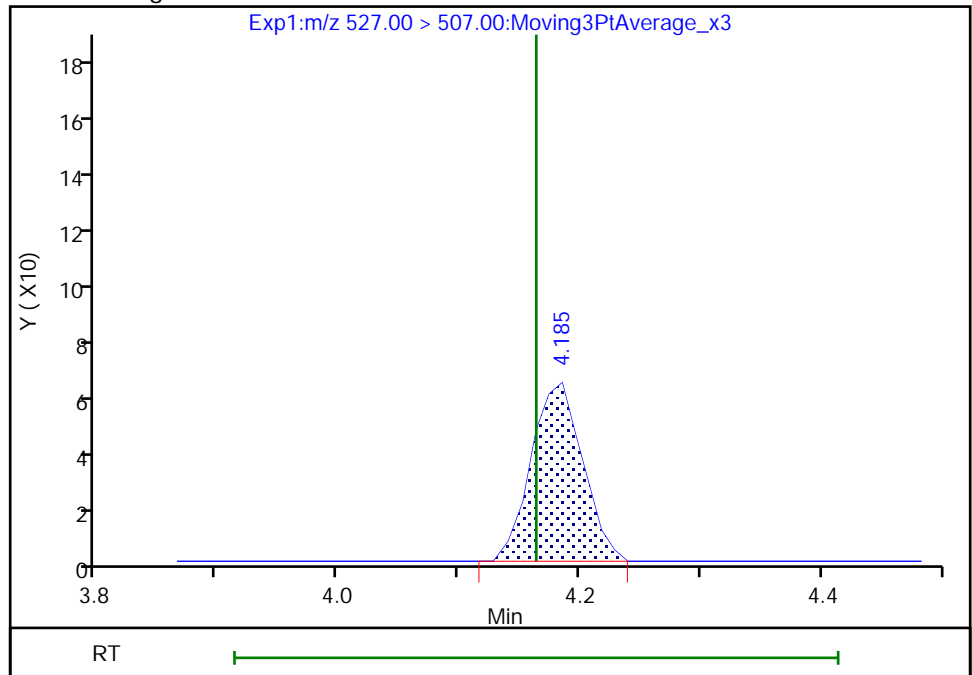
Not Detected  
Expected RT: 4.16

Processing Integration Results



Manual Integration Results

RT: 4.19  
Area: 185  
Amount: 0.003649  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 15:14:33

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AOI 1 GW1 DER Lab Sample ID: 480-164221-13  
 Matrix: Water Lab File ID: SC122319B024.d  
 Analysis Method: 537 (modified) Date Collected: 12/11/2019 11:35  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 297.1 (mL) Date Analyzed: 12/24/2019 17:04  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 20 (uL) GC Column: C-18 ID: 4.6 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	12		1.7	0.84
2706-90-3	Perfluoropentanoic acid (PFPeA)	9.0		1.7	0.53
307-24-4	Perfluorohexanoic acid (PFHxA)	12		1.7	0.64
375-85-9	Perfluoroheptanoic acid (PFHpA)	6.6		1.7	0.77
335-67-1	Perfluorooctanoic acid (PFOA)	35		1.7	0.68
375-95-1	Perfluorononanoic acid (PFNA)	9.1		1.7	0.23
335-76-2	Perfluorodecanoic acid (PFDA)	2.3		1.7	0.65
2058-94-8	Perfluoroundecanoic acid (PFUnA)	0.96	J	1.7	0.66
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		1.7	0.50
72629-94-8	Perfluorotridecanoic acid (PFTriA)	ND		1.7	0.50
376-06-7	Perfluorotetradecanoic acid (PFTeA)	ND		1.7	0.77
375-73-5	Perfluorobutanesulfonic acid (PFBS)	3.7		1.7	0.41
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	17		1.7	0.67
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.80
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	28		1.7	0.51
335-77-3	Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.76
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND		8.4	8.4
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		17	1.4
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		17	1.3
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	4.6
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	2.4

FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AOI 1 GW1 DER Lab Sample ID: 480-164221-13  
 Matrix: Water Lab File ID: SC122319B024.d  
 Analysis Method: 537 (modified) Date Collected: 12/11/2019 11:35  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 297.1(mL) Date Analyzed: 12/24/2019 17:04  
 Con. Extract Vol.: 10(mL) Dilution Factor: 1  
 Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	88		50-150
STL01892	13C4 PFHpA	90		50-150
STL00990	13C4 PFOA	85		50-150
STL00991	13C4 PFOS	57		50-150
STL00995	13C5 PFNA	60		50-150
STL00992	13C4 PFBA	72		25-150
STL00993	13C2 PFHxA	88		50-150
STL00996	13C2 PFDA	52		50-150
STL00997	13C2 PFUnA	48	*	50-150
STL00998	13C2 PFDoA	48	*	50-150
STL01056	13C8 FOSA	47		25-150
STL01893	13C5 PFPeA	85		25-150
STL02116	13C2 PFTeDA	45	*	50-150
STL02118	d3-NMeFOSAA	41	*	50-150
STL02117	d5-NEtFOSAA	49	*	50-150
STL02279	M2-6:2 FTS	65		25-150
STL02280	M2-8:2 FTS	57		25-150
STL02337	13C3 PFBS	85		50-150

Eurofins TestAmerica, Burlington  
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B024.d  
 Lims ID: 480-164221-C-13-A  
 Client ID: AOI 1 GW1 DER  
 Sample Type: Client  
 Inject. Date: 24-Dec-2019 17:04:30 ALS Bottle#: 24 Worklist Smp#: 24  
 Injection Vol: 20.0 ul Dil. Factor: 1.0000  
 Sample Info: 480-164221-C-13-A  
 Misc. Info.: 200-0039355-024 Plate: 1 Rack: 2  
 Operator ID: lc812tech Instrument ID: LC812  
 Method: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\PFC\_LC812.m  
 Limit Group: LC\_PFC\_ICAL  
 Last Update: 31-Dec-2019 08:24:59 Calib Date: 06-Dec-2019 15:13:26  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Column 1 : C-18 ( 4.60 mm) Det: EXP1  
 Process Host: CTX0330

First Level Reviewer: lautenschlagery Date: 27-Dec-2019 15:24:14  
 Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	1.908	1.908	0.0	0.558	1332586	1.81	72.4	2758	
2 Perfluorobutanoic acid	212.90 > 169.00	1.908	1.908	0.0	1.000	186350	0.3514		47.7	
D 3 13C5 PFPeA	267.90 > 223.00	2.258	2.257	0.001	0.660	1191603	2.12	84.7	3850	
4 Perfluoropentanoic acid	262.90 > 219.00	2.258	2.271	-0.013	1.000	144637	0.2680		6.3	M
D 47 13C3 PFBS	301.90 > 80.00	2.271	2.285	-0.014	0.664	1333681	1.99	85.5	140323	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	2.285	2.285	0.0	1.006	68455	0.1098	Target=2.03	14.3	
	298.90 > 99.00	2.285	2.285	0.0	1.006	35887		1.91(1.01-3.04)	20.7	
D 7 13C2 PFHxA	315.00 > 270.00	2.648	2.648	0.0	0.774	1373996	2.19	87.6	7212	
6 Perfluorohexanoic acid	313.00 > 269.00	2.661	2.661	0.0	1.005	208064	0.3708	Target=13.76	34.6	
	313.00 > 119.00	2.661	2.661	0.0	1.005	15612		13.33(6.88-20.64)	36.9	
D 11 18O2 PFHxS	403.00 > 84.00	3.044	3.044	0.0	0.890	1104893	2.08	88.1	6139	
8 Perfluorohexanesulfonic acid	399.00 > 80.00	3.044	3.044	0.0	1.000	270963	0.5125	Target=3.90	170	M
	399.00 > 99.00	3.044	3.044	0.0	1.000	56013		4.84(1.95-5.85)	104	M
D 9 13C4 PFHpA	367.00 > 322.00	3.044	3.044	0.0	0.890	1338340	2.25	90.0	5451	
10 Perfluoroheptanoic acid	363.00 > 319.00	3.044	3.044	0.0	1.000	111417	0.1969	Target=3.95	28.0	
	363.00 > 169.00	3.044	3.044	0.0	1.000	36176		3.08(1.97-5.92)	118	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
16 Perfluoroheptanesulfonic acid										M
449.00 > 80.00	3.414	3.413	0.001	0.900	3765	0.0129	Target=6.46	4.9		
449.00 > 99.00	3.422	3.413	0.009	0.902	570		6.61(3.23-9.69)	2.5		M
13 1H,1H,2H,2H-perfluorooctanesulfoni										M
427.00 > 407.00	3.414	3.413	0.001	1.000	804	0.0145		15.9		M
D 12 M2-6:2 FTS										
429.00 > 81.00	3.414	3.413	0.001	0.998	139498	1.53		64.5	174	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.430	3.430	0.0	1.002	627289	1.05	Target=2.40	137		
413.00 > 169.00	3.430	3.430	0.0	1.002	325813		1.93(1.20-3.60)	1870		
D 14 13C4 PFOA										
417.00 > 372.00	3.422	3.430	-0.008	1.000	1348213	2.14		85.4	4387	
* 62 13C2 PFOA										
415.00 > 370.00	3.422	3.430	-0.008		1736929	2.50		7679		
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.793	0.0	1.108	568267	1.35		56.5	841	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.805	3.793	0.012	1.003	217158	0.8460	Target=5.74	189		M
499.00 > 99.00	3.793	3.793	0.0	1.000	33601		6.46(2.87-8.61)	164		M
D 19 13C5 PFNA										
468.00 > 423.00	3.818	3.817	0.001	1.116	866071	1.49		59.7	3684	
20 Perfluorononanoic acid										M
463.00 > 419.00	3.818	3.817	0.001	1.000	91697	0.2699	Target=7.01	34.2		M
463.00 > 169.00	3.818	3.817	0.001	1.000	12451		7.36(3.50-10.51)	111		
D 23 13C2 PFDA										
515.00 > 470.00	4.164	4.164	0.0	1.217	739243	1.29		51.7	4295	
24 Perfluorodecanoic acid										
513.00 > 469.00	4.164	4.164	0.0	1.000	19892	0.0695	Target=7.28	15.2		
513.00 > 169.00	4.164	4.164	0.0	1.000	3169		6.28(3.64-10.91)	28.3		
D 26 M2-8:2 FTS										
529.00 > 81.00	4.175	4.175	0.0	1.220	148602	1.37		57.2	392	
D 21 13C8 FOSA										
506.00 > 78.00	4.218	4.218	0.0	1.233	873994	1.17		46.7	2924	
22 Perfluorooctanesulfonamide										M
498.00 > 78.00	4.218	4.218	0.0	1.000	596	0.001713		9.0		M
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.317	4.305	0.012	1.262	56022	1.02		40.7	674	
D 30 13C2 PFUnA										
565.00 > 520.00	4.443	4.443	0.0	1.298	585522	1.20		48.2	4614	
31 Perfluoroundecanoic acid										M
563.00 > 519.00	4.443	4.443	0.0	1.000	5686	0.0286	Target=5.78	7.3		
563.00 > 169.00	4.432	4.443	-0.011	0.997	1034		5.50(2.89-8.67)	13.2		M
33 N-ethylperfluorooctanesulfonamidoa										M
584.00 > 419.00	4.483	4.456	0.027	1.006	80	0.003217		1.4		M
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.456	4.456	0.0	1.302	75106	1.23		49.2	728	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 36 13C2 PFDaA										
615.00 > 570.00	4.683	4.683	0.0	1.368	637485	1.20		47.8	4787	
42 Perfluorotetradecanoic acid										M
713.00 > 169.00	5.108	5.108	0.0	1.000	175	0.004323	Target=1.05		3.3	M
713.00 > 219.00	5.094	5.108	-0.014	0.997	260		0.67(0.52-1.57)		6.3	M
D 43 13C2 PFTeDA										
715.00 > 670.00	5.108	5.108	0.0	1.493	503725	1.13		45.1	6048	

**QC Flag Legend**

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B024.d

Injection Date: 24-Dec-2019 17:04:30

Instrument ID: LC812

Lims ID: 480-164221-C-13-A

Lab Sample ID: 200-164221-13

Client ID: AOI 1 GW1 DER

Operator ID: lc812tech

ALS Bottle#: 24

Worklist Smp#: 24

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

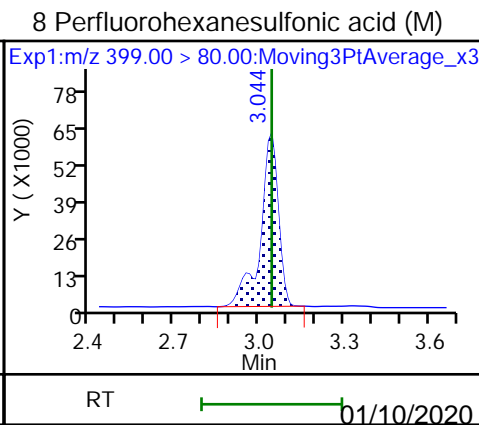
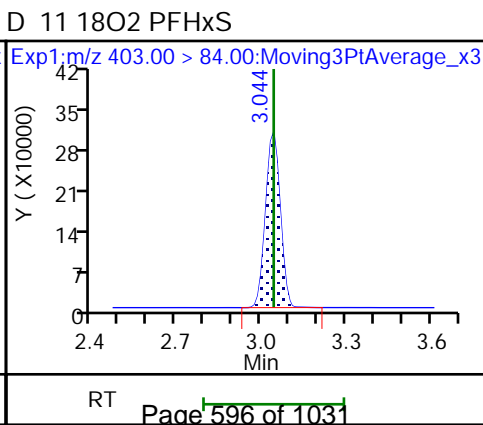
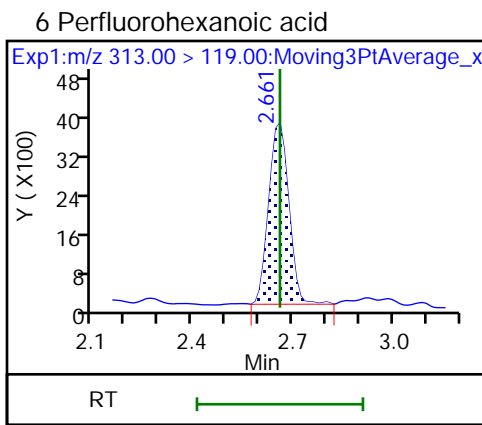
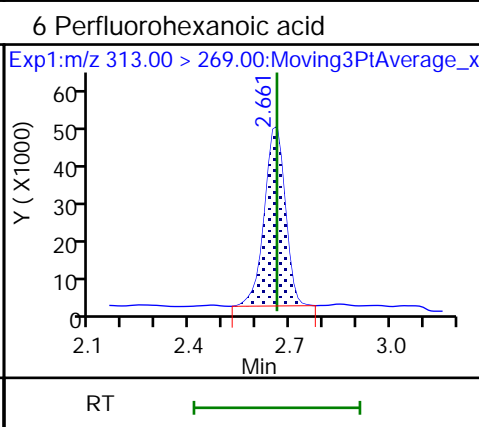
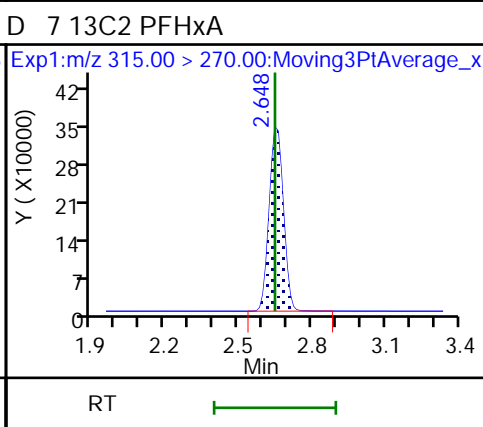
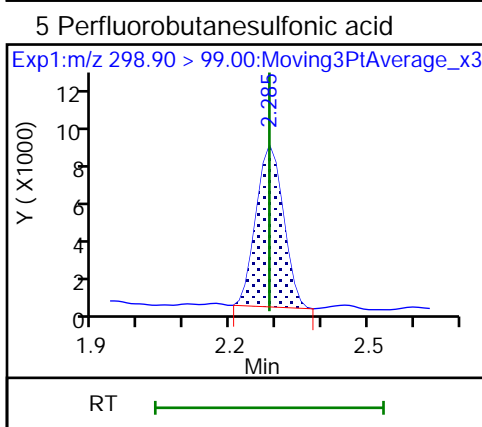
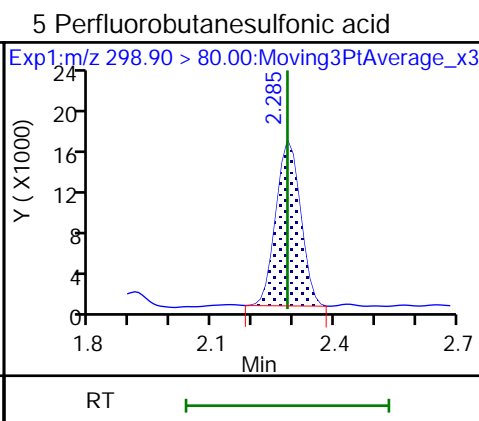
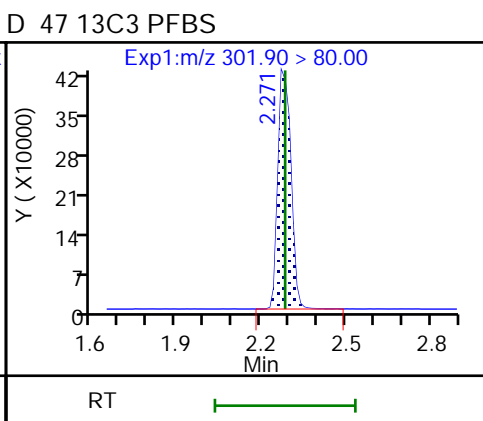
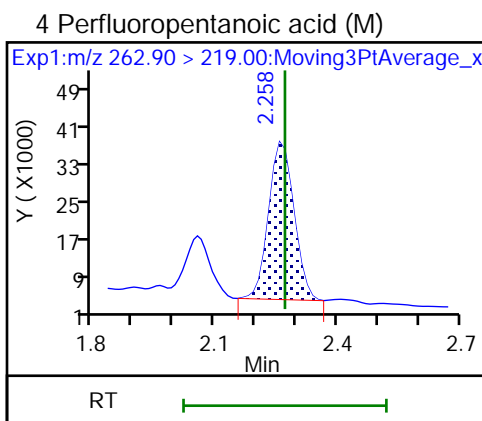
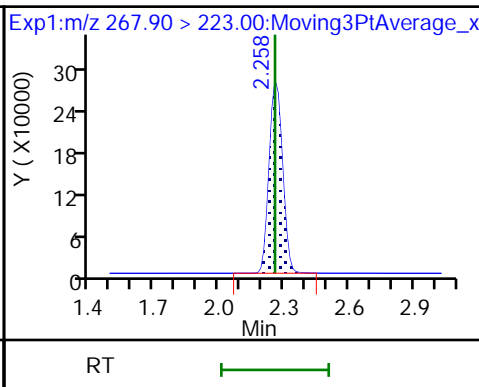
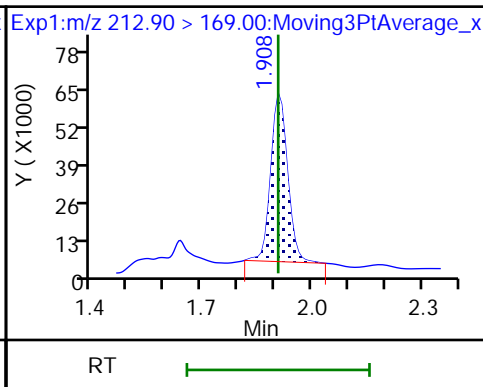
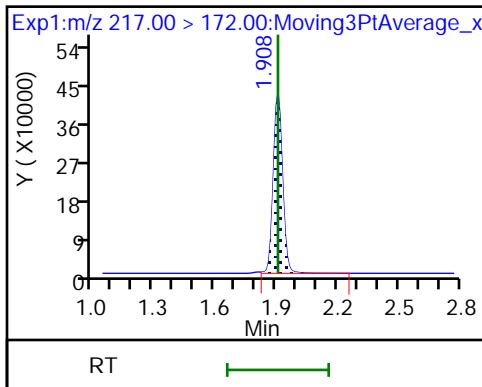
Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

D 3 13C5 PFPeA

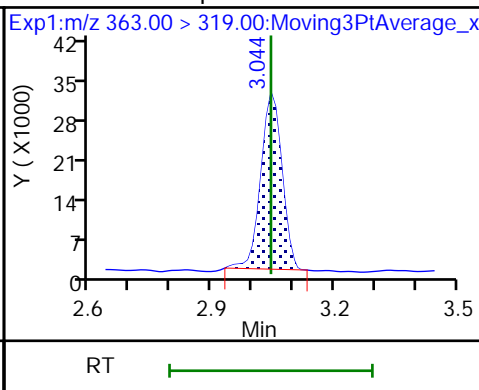
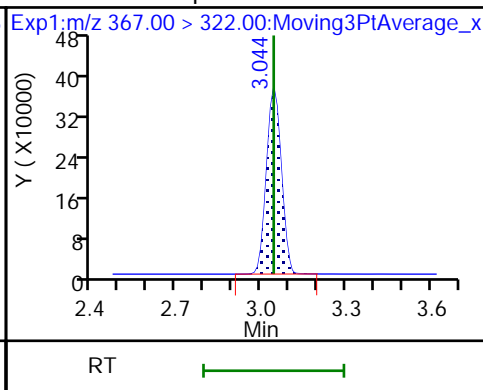
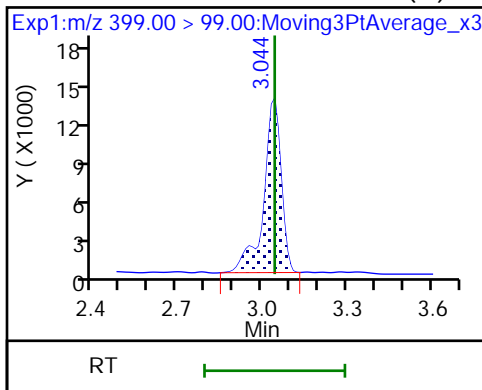




8 Perfluorohexanesulfonic acid (M)

D 9 13C4 PFHpA

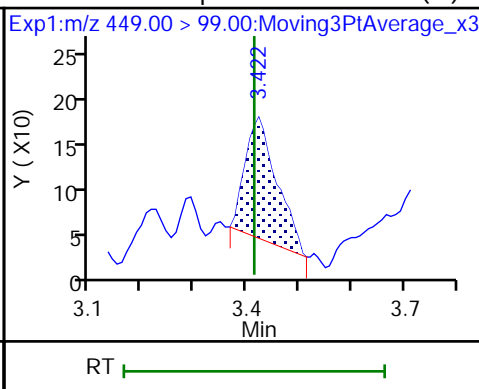
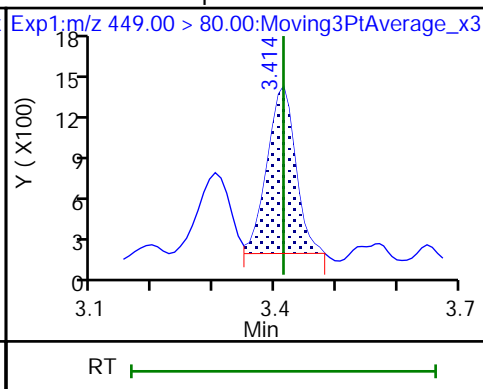
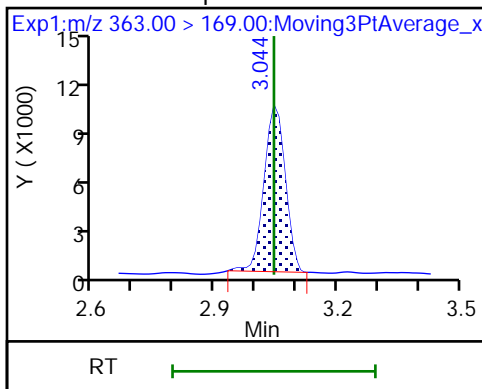
10 Perfluoroheptanoic acid



10 Perfluoroheptanoic acid

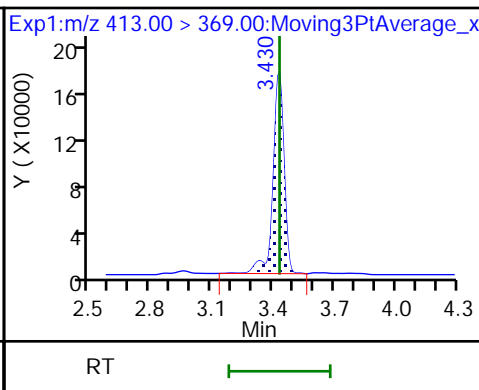
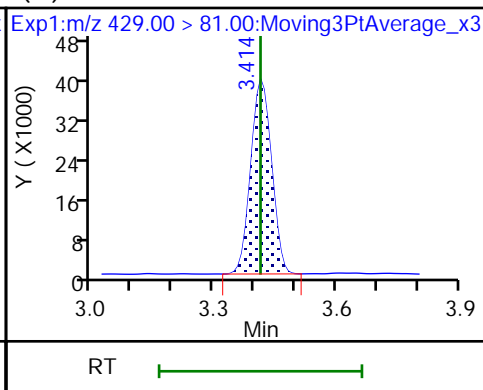
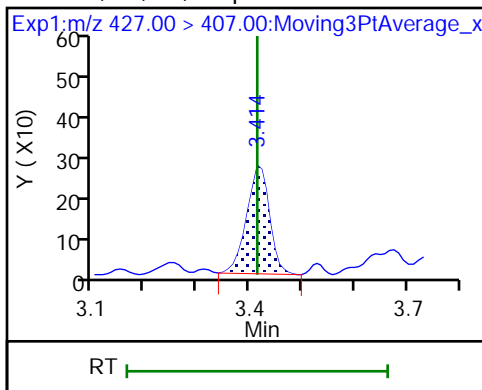
16 Perfluoroheptanesulfonic acid

16 Perfluoroheptanesulfonic acid (M)



13 1H,1H,2H,2H-perfluorooctanesulfonate (M) M2-6:2 FTS

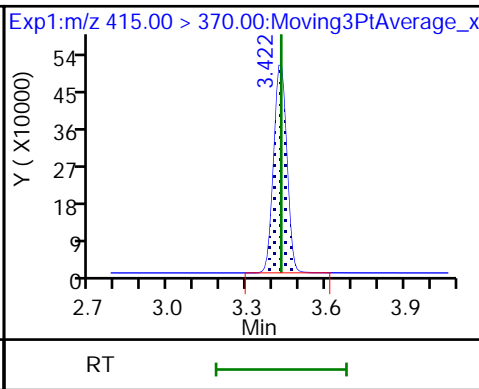
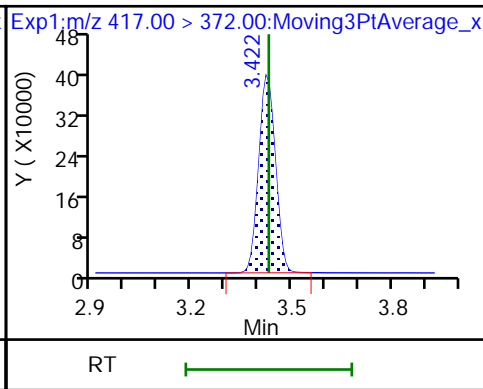
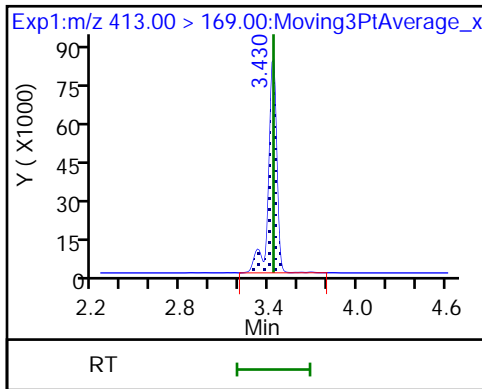
15 Perfluorooctanoic acid



15 Perfluorooctanoic acid

D 14 13C4 PFOA

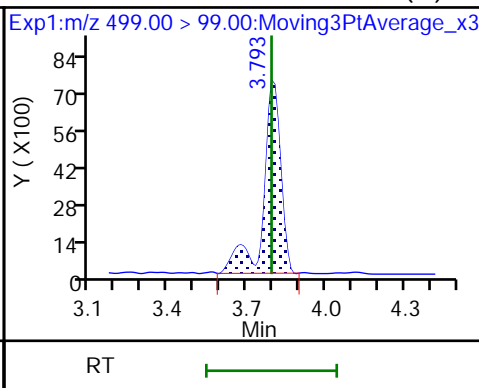
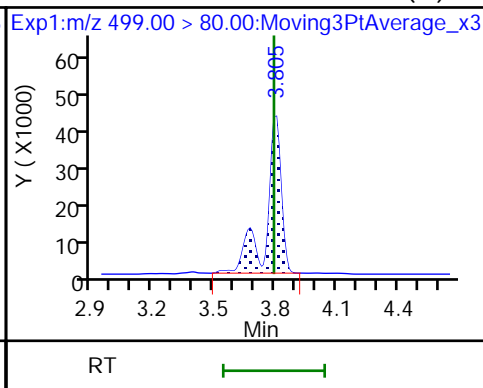
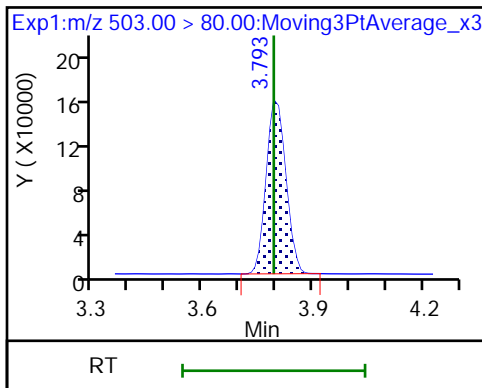
\* 62 13C2 PFOA



D 18 13C4 PFOS

17 Perfluorooctanesulfonic acid (M)

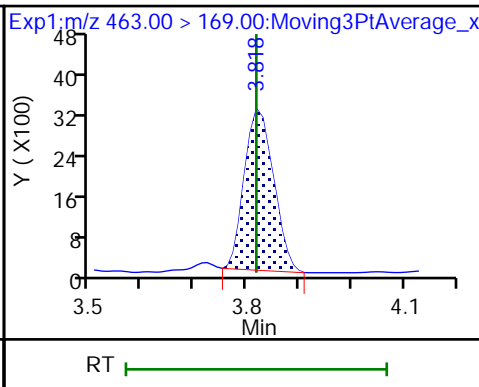
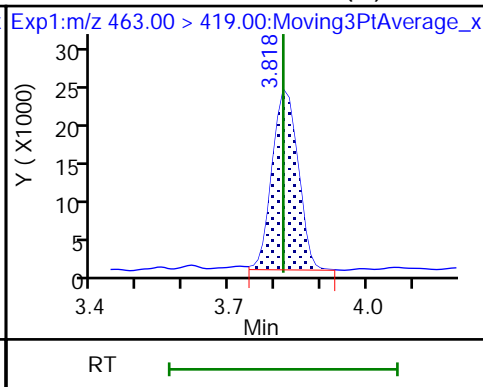
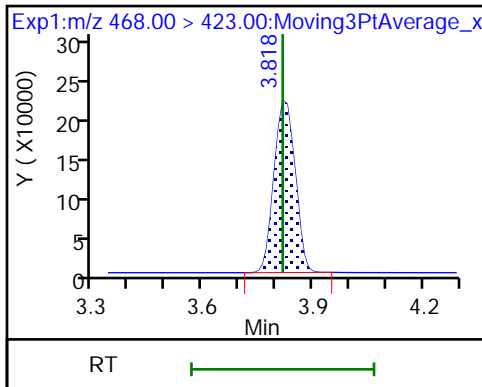
17 Perfluorooctanesulfonic acid (M)



D 19 13C5 PFNA

20 Perfluorononanoic acid (M)

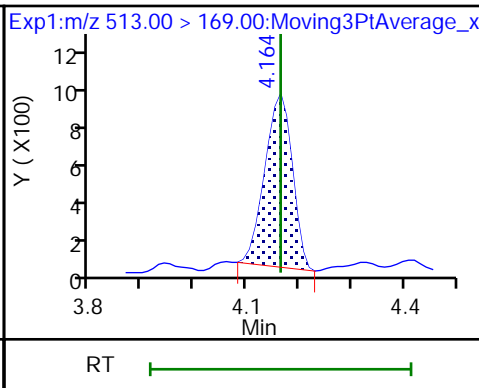
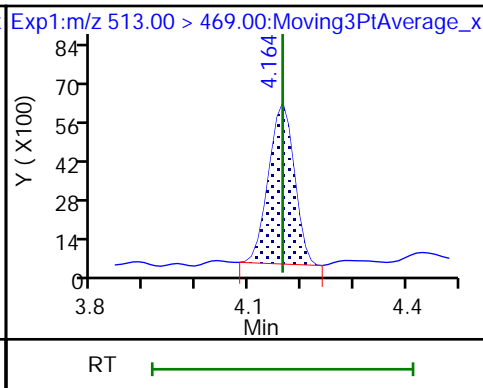
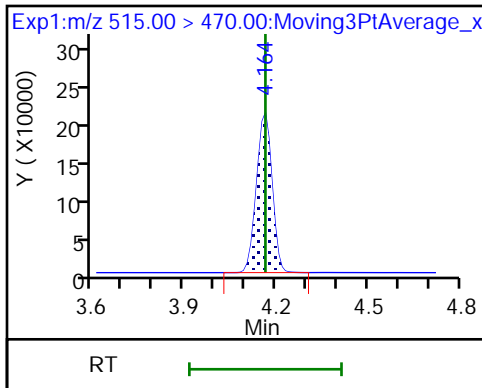
20 Perfluorononanoic acid



D 23 13C2 PFDA

24 Perfluorodecanoic acid

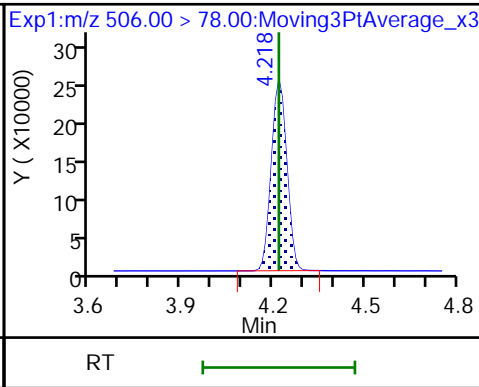
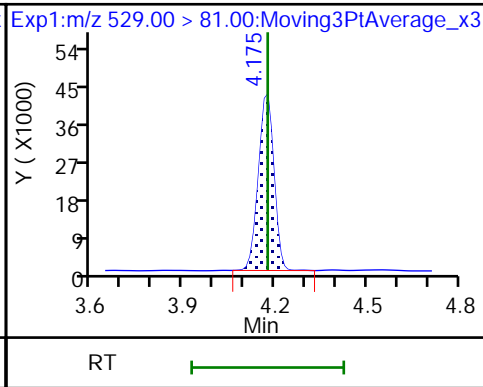
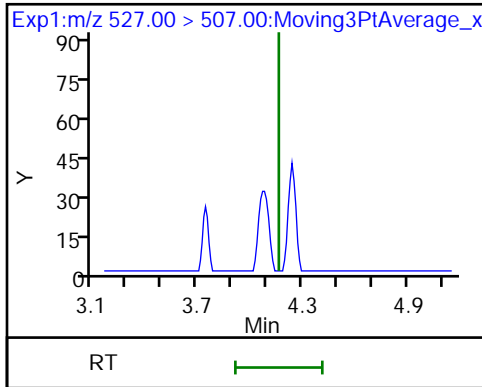
24 Perfluorodecanoic acid



25 1H,1H,2H,2H-perfluorodecanesulfonic acid (M)

26 M2-8:2 FTS

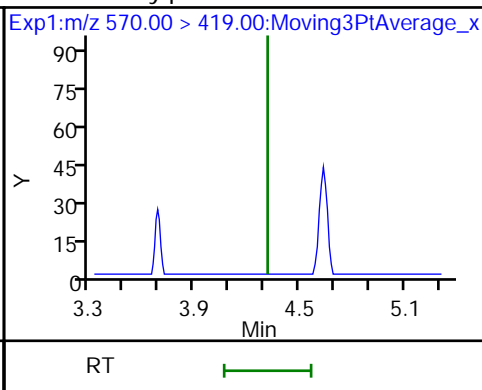
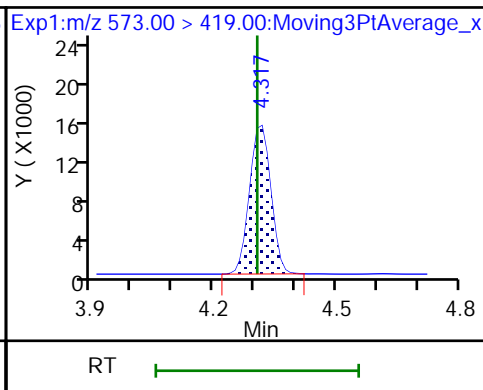
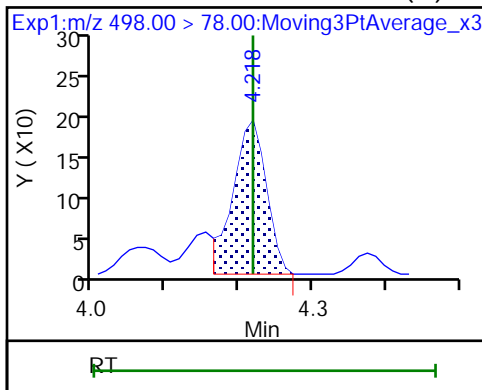
D 21 13C8 FOSA



22 Perfluorooctanesulfonamide (M)

D 27 d3-NMeFOSAA

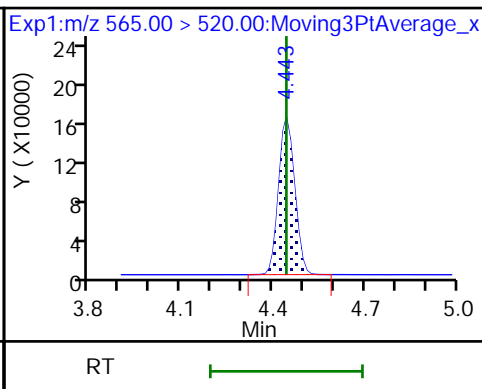
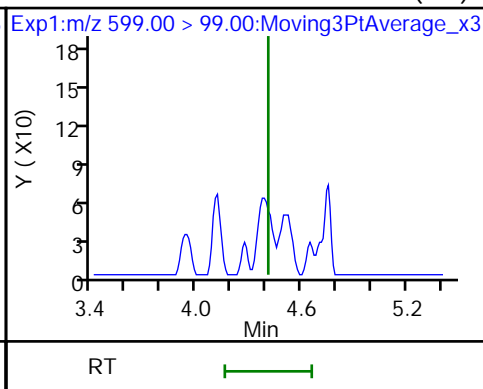
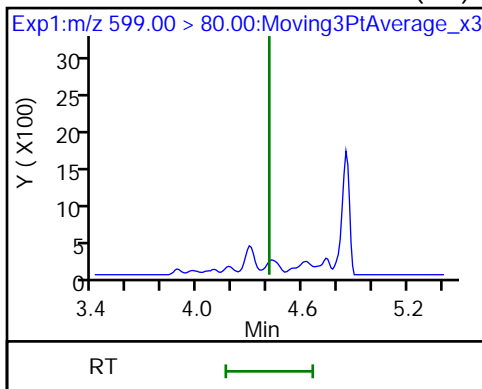
28 N-methylperfluorooctanesulfonamido (ND)



29 Perfluorodecanesulfonic acid (ND)

29 Perfluorodecanesulfonic acid (ND)

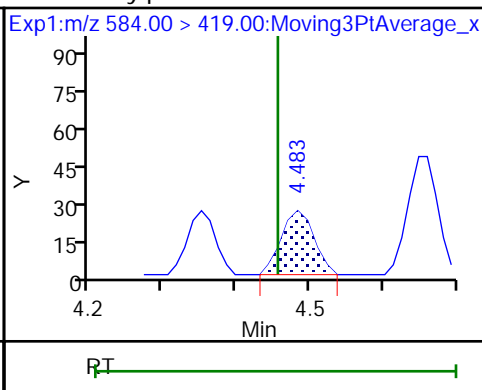
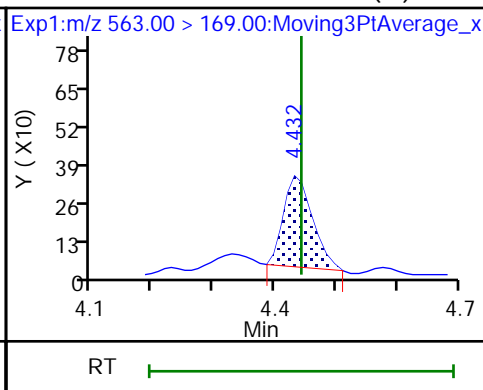
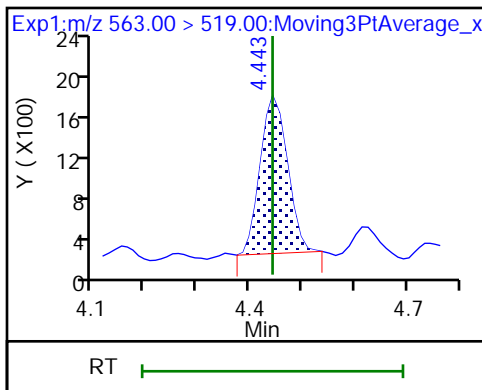
D 30 13C2 PFUnA



31 Perfluoroundecanoic acid

31 Perfluoroundecanoic acid (M)

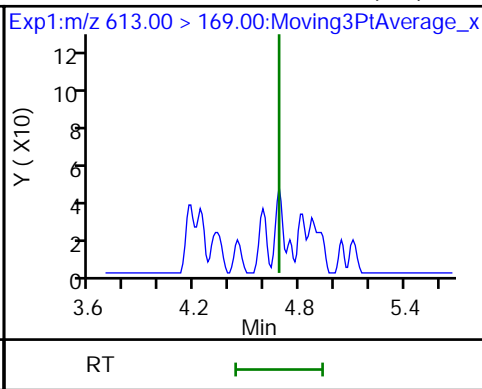
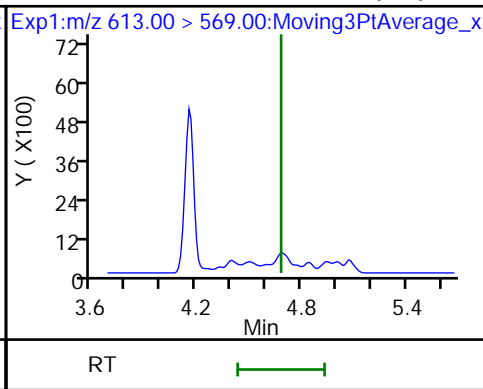
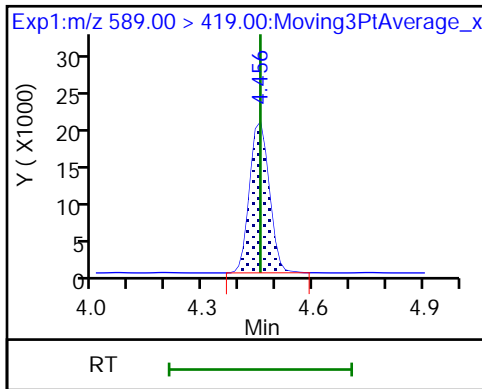
33 N-ethylperfluorooctanesulfonamidoa (M)



D 32 d5-NEtFOSAA

37 Perfluorododecanoic acid (ND)

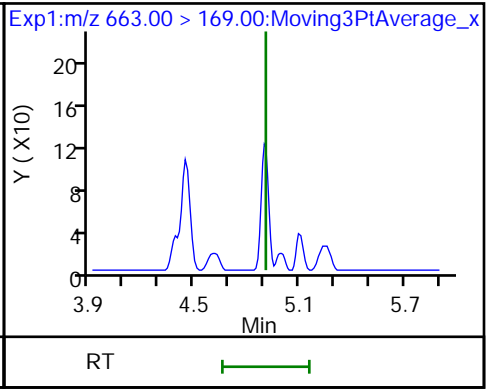
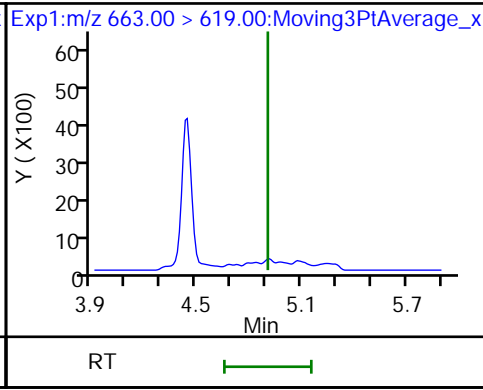
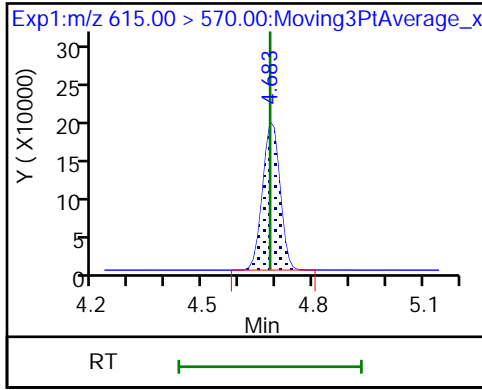
37 Perfluorododecanoic acid (ND)



D 36 13C2 PFDoA

41 Perfluorotridecanoic acid (ND)

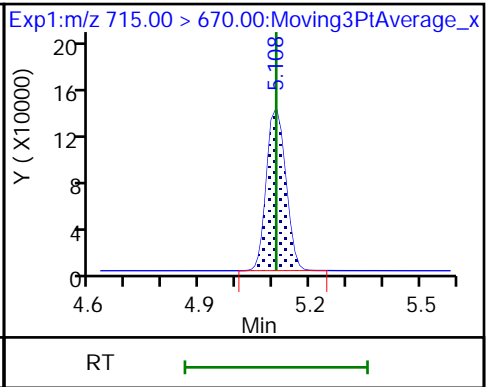
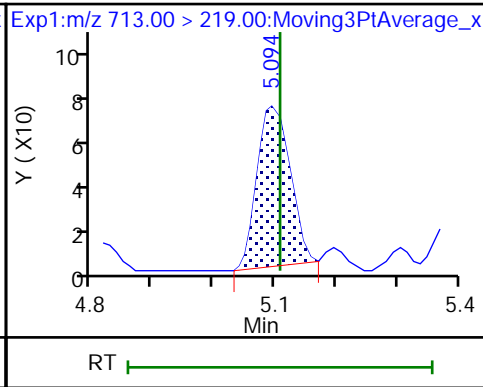
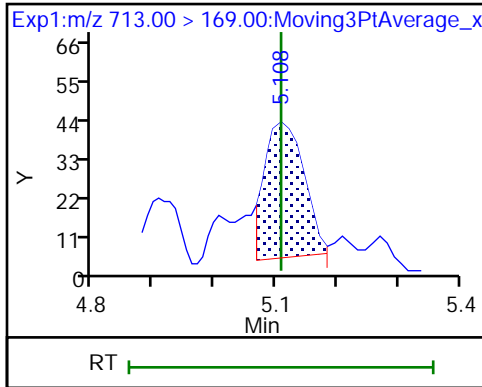
41 Perfluorotridecanoic acid (ND)



42 Perfluorotetradecanoic acid (M)

42 Perfluorotetradecanoic acid (M)

D 43 13C2 PFTeDA



Euofins TestAmerica, Burlington

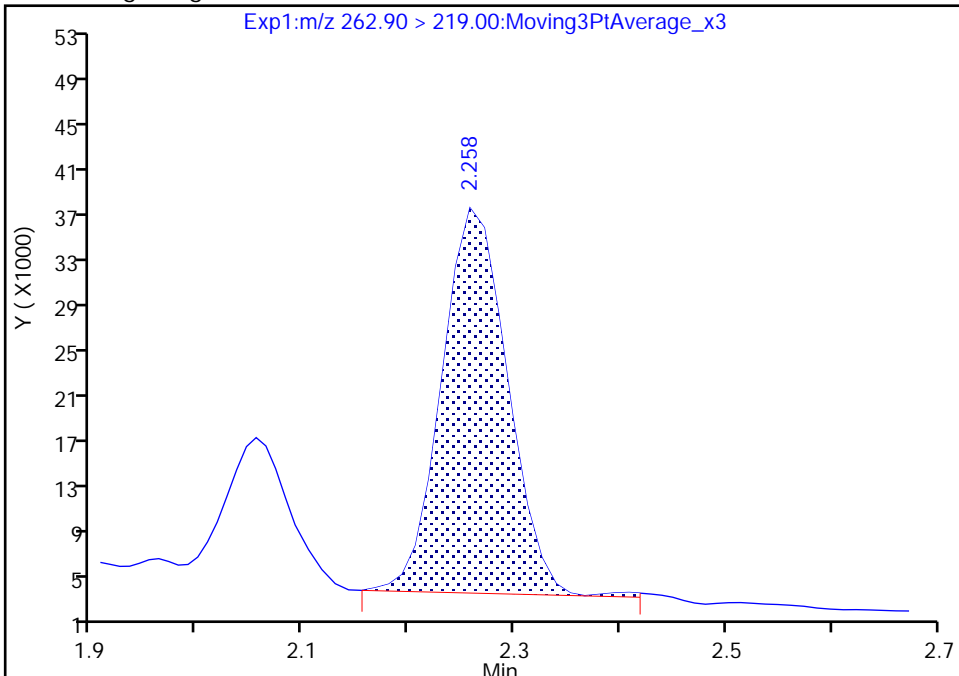
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B024.d  
Injection Date: 24-Dec-2019 17:04:30 Instrument ID: LC812  
Lims ID: 480-164221-C-13-A Lab Sample ID: 200-164221-13  
Client ID: AOI 1 GW1 DER  
Operator ID: lc812tech ALS Bottle#: 24 Worklist Smp#: 24  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

4 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

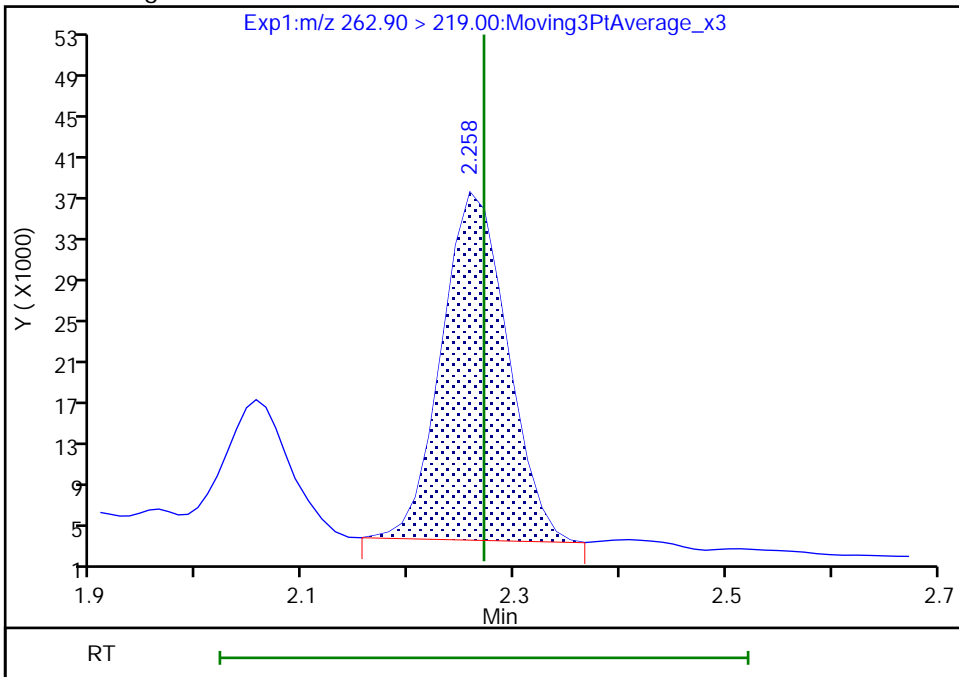
RT: 2.26  
Area: 145453  
Amount: 0.269487  
Amount Units: ng/ml

Processing Integration Results



RT: 2.26  
Area: 144637  
Amount: 0.267975  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 15:24:04  
Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

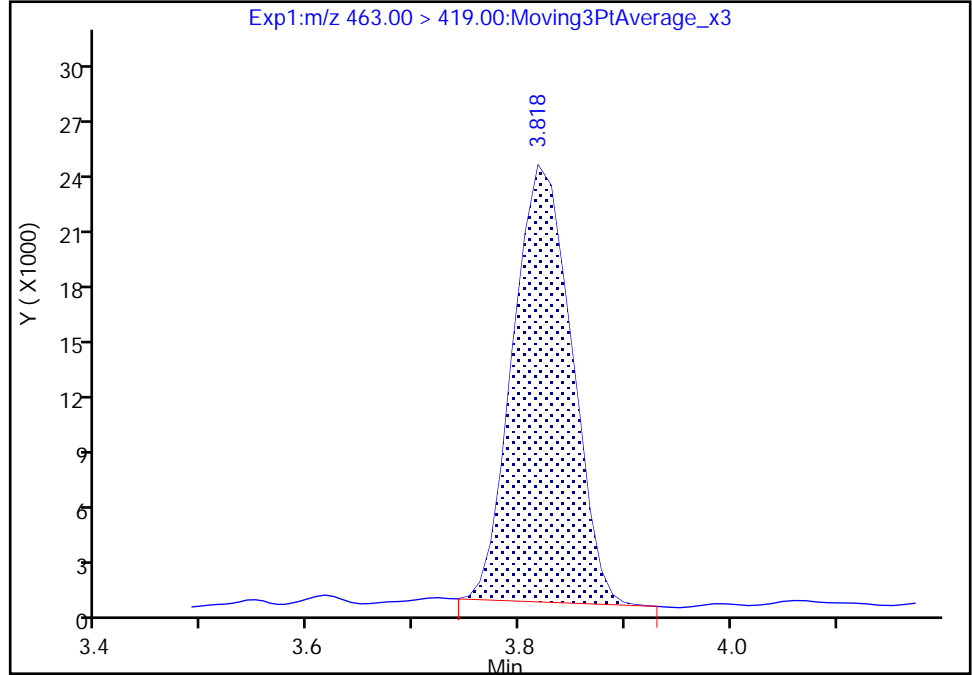
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B024.d  
Injection Date: 24-Dec-2019 17:04:30 Instrument ID: LC812  
Lims ID: 480-164221-C-13-A Lab Sample ID: 200-164221-13  
Client ID: AOI 1 GW1 DER  
Operator ID: lc812tech ALS Bottle#: 24 Worklist Smp#: 24  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

20 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

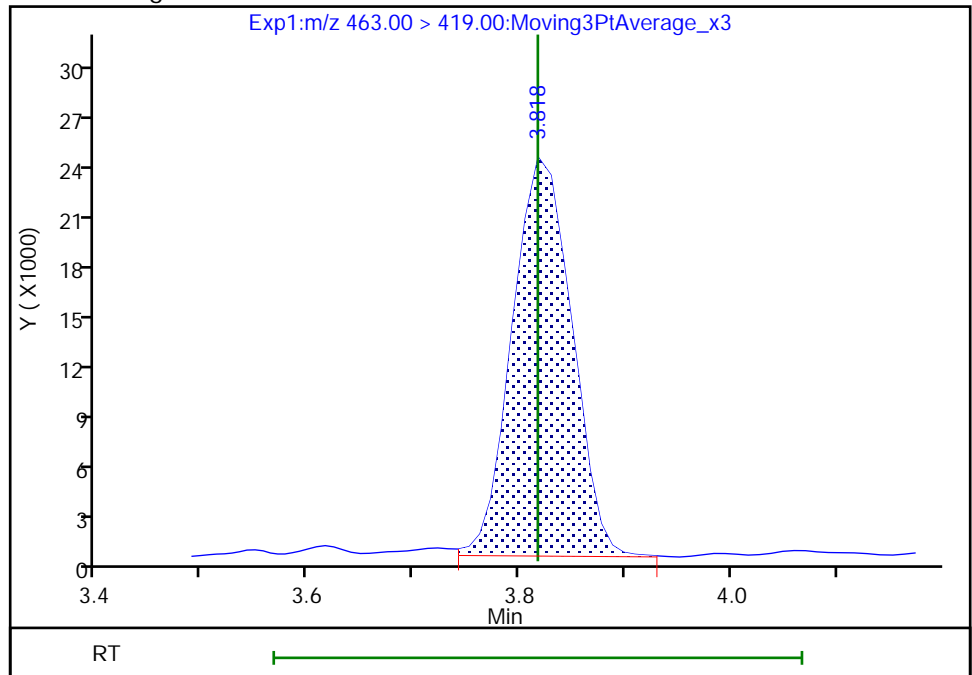
RT: 3.82  
Area: 89208  
Amount: 0.262618  
Amount Units: ng/ml

Processing Integration Results



RT: 3.82  
Area: 91697  
Amount: 0.269945  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 15:21:05  
Audit Action: Manually Integrated

Audit Reason: Baseline

Euofins TestAmerica, Burlington

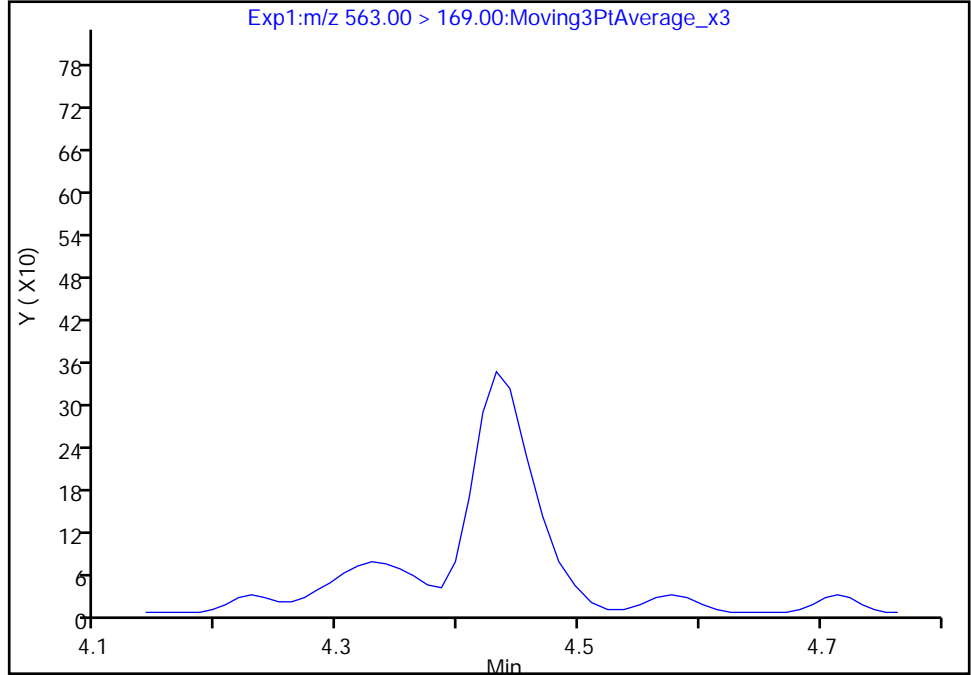
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B024.d  
Injection Date: 24-Dec-2019 17:04:30 Instrument ID: LC812  
Lims ID: 480-164221-C-13-A Lab Sample ID: 200-164221-13  
Client ID: AOI 1 GW1 DER  
Operator ID: lc812tech ALS Bottle#: 24 Worklist Smp#: 24  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 2

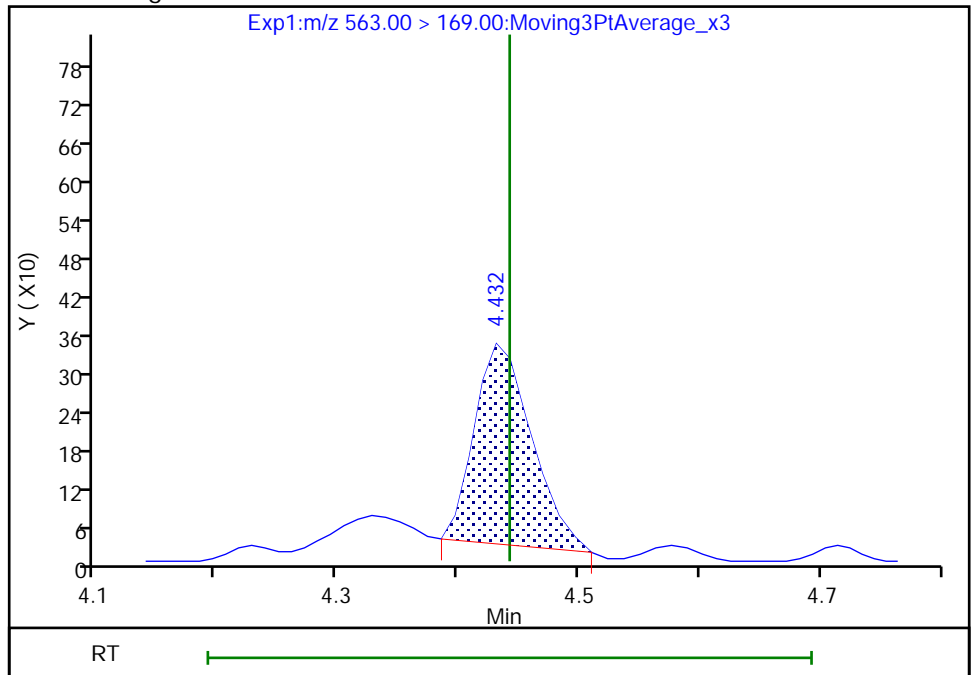
Not Detected  
Expected RT: 4.44

Processing Integration Results



Manual Integration Results

RT: 4.43  
Area: 1034  
Amount: 0.028633  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 15:19:46

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Euofins TestAmerica, Burlington

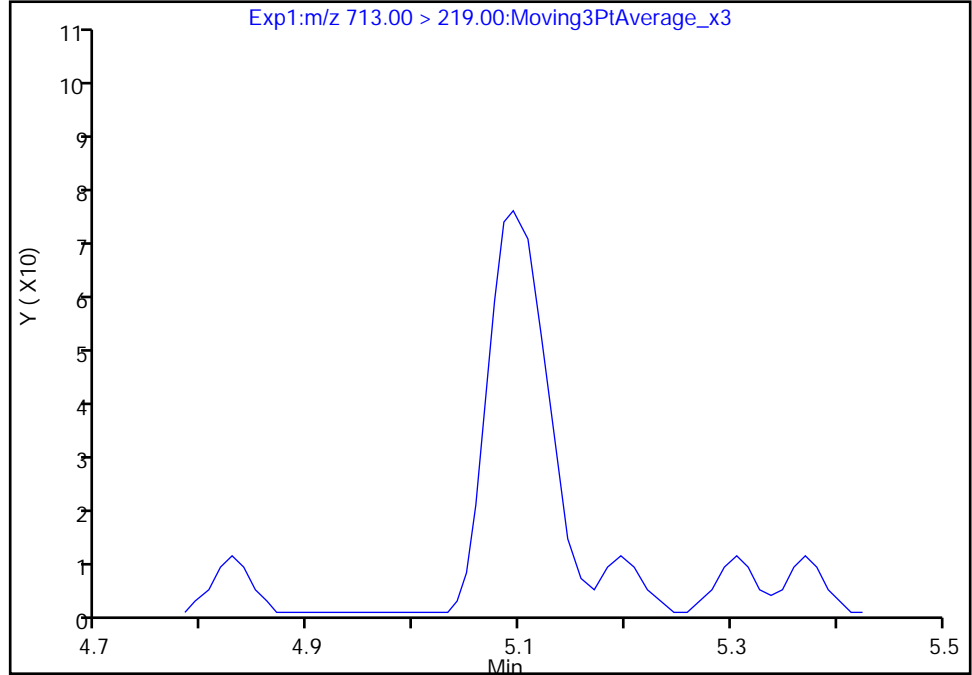
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B024.d  
Injection Date: 24-Dec-2019 17:04:30 Instrument ID: LC812  
Lims ID: 480-164221-C-13-A Lab Sample ID: 200-164221-13  
Client ID: AOI 1 GW1 DER  
Operator ID: lc812tech ALS Bottle#: 24 Worklist Smp#: 24  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 2

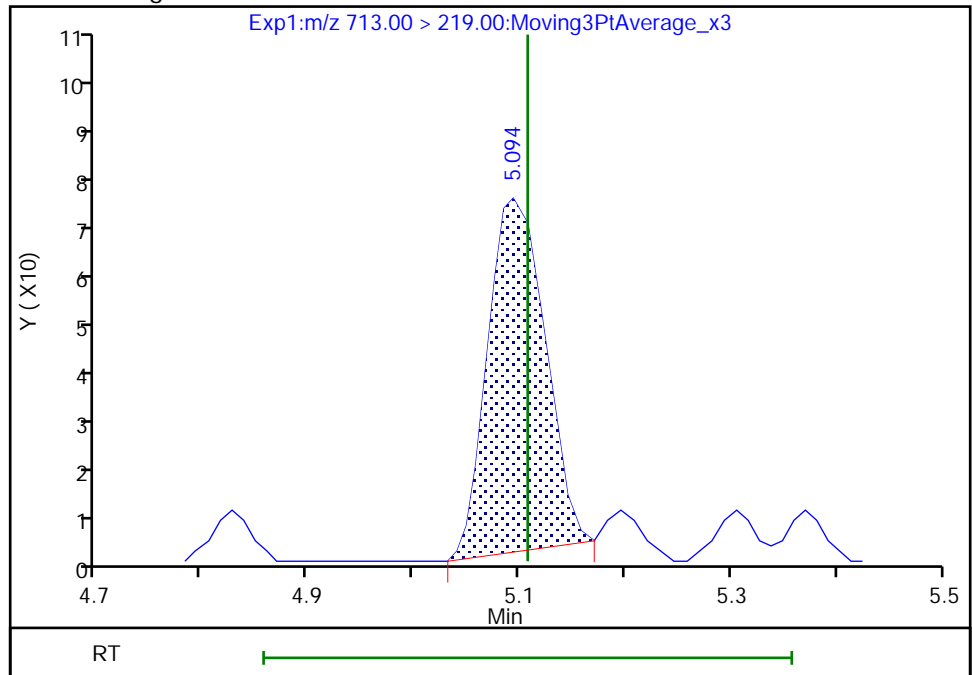
Not Detected  
Expected RT: 5.11

Processing Integration Results



Manual Integration Results

RT: 5.09  
Area: 260  
Amount: 0.004323  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 15:18:22

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Eurofins TestAmerica, Burlington

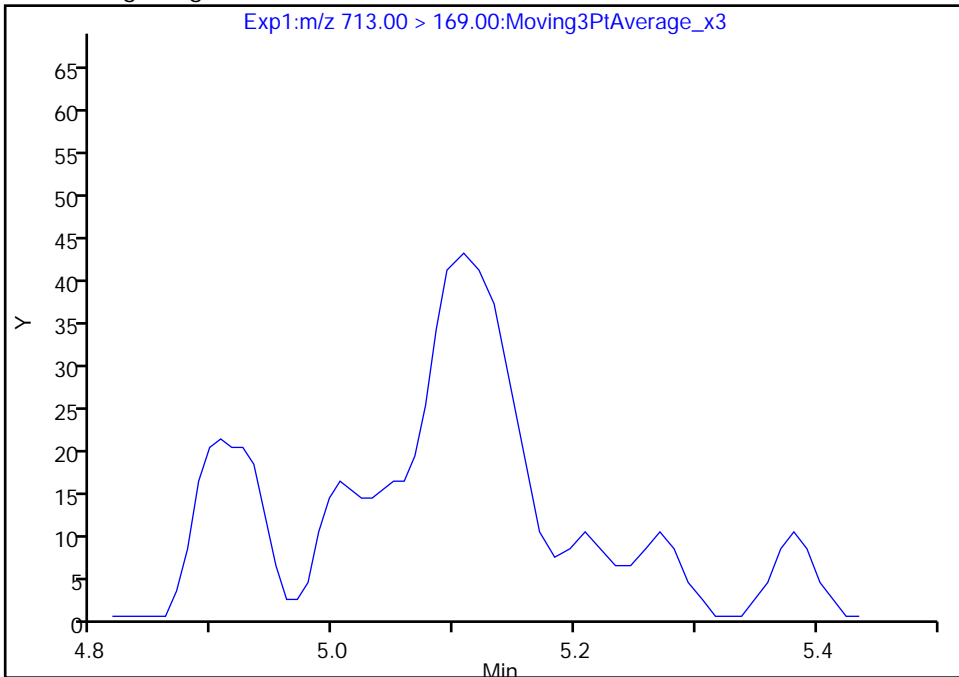
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B024.d  
Injection Date: 24-Dec-2019 17:04:30 Instrument ID: LC812  
Lims ID: 480-164221-C-13-A Lab Sample ID: 200-164221-13  
Client ID: AOI 1 GW1 DER  
Operator ID: lc812tech ALS Bottle#: 24 Worklist Smp#: 24  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 (4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 1

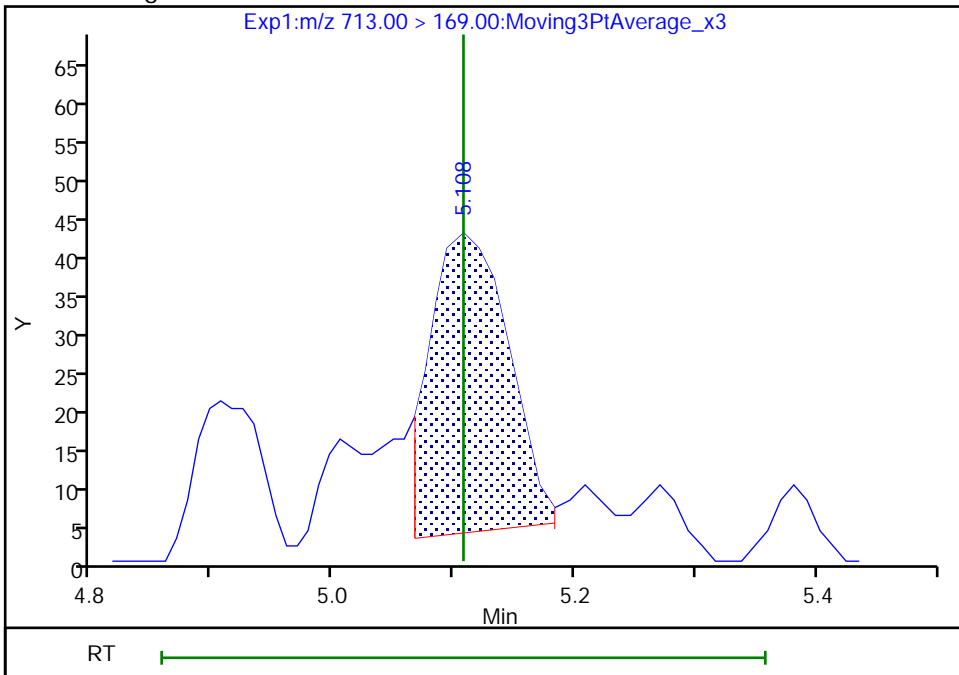
Not Detected  
Expected RT: 5.11

Processing Integration Results



Manual Integration Results

RT: 5.11  
Area: 175  
Amount: 0.004323  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

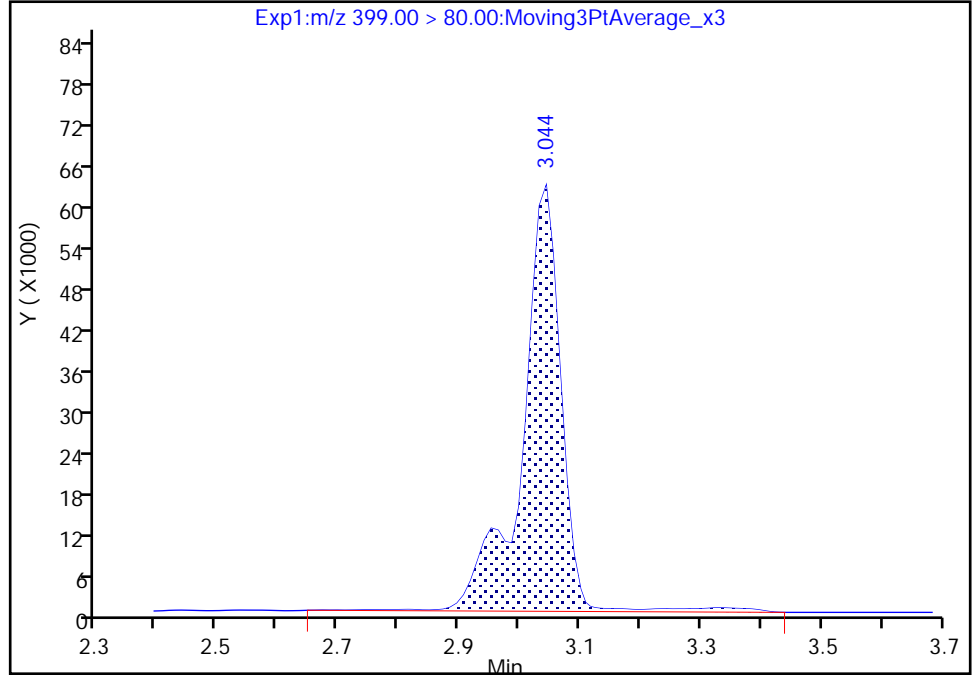
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B024.d  
Injection Date: 24-Dec-2019 17:04:30 Instrument ID: LC812  
Lims ID: 480-164221-C-13-A Lab Sample ID: 200-164221-13  
Client ID: AOI 1 GW1 DER  
Operator ID: lc812tech ALS Bottle#: 24 Worklist Smp#: 24  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

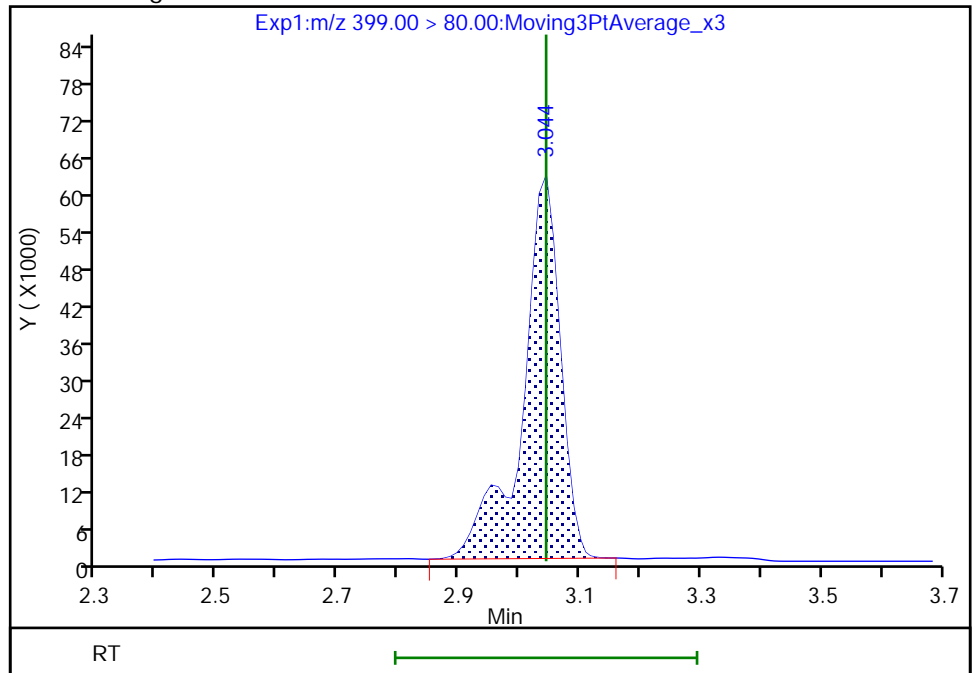
RT: 3.04  
Area: 283433  
Amount: 0.536053  
Amount Units: ng/ml

Processing Integration Results



RT: 3.04  
Area: 270963  
Amount: 0.512469  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 15:23:27

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

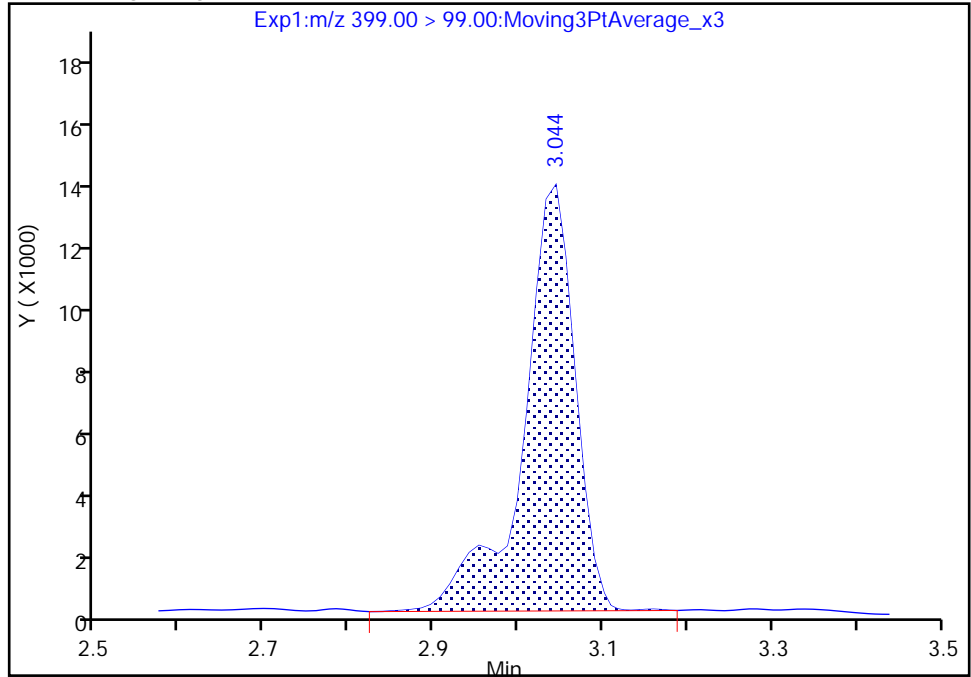
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B024.d  
Injection Date: 24-Dec-2019 17:04:30 Instrument ID: LC812  
Lims ID: 480-164221-C-13-A Lab Sample ID: 200-164221-13  
Client ID: AOI 1 GW1 DER  
Operator ID: lc812tech ALS Bottle#: 24 Worklist Smp#: 24  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

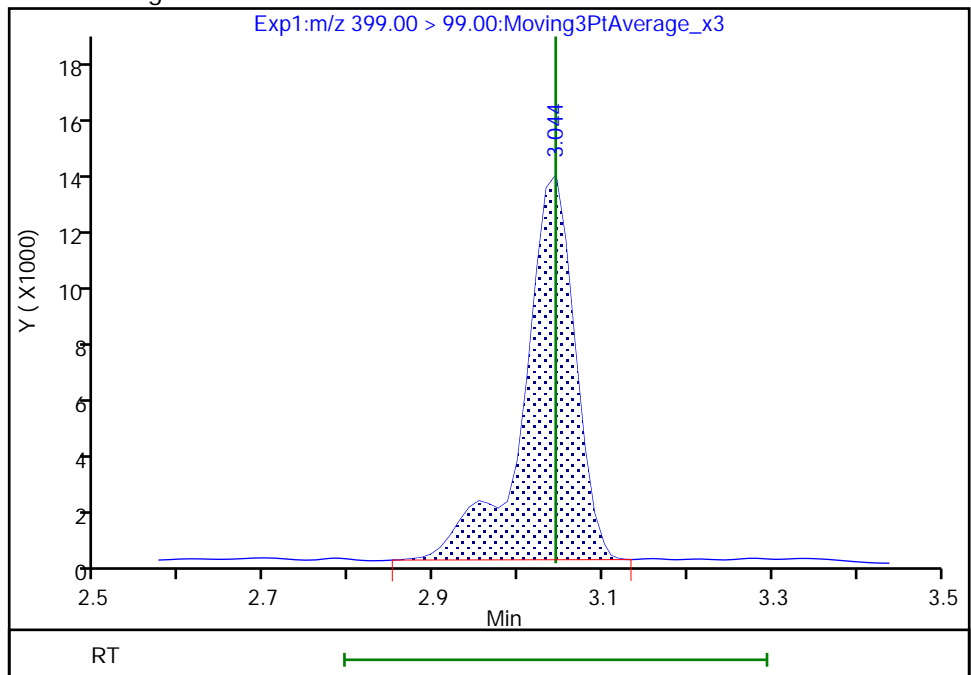
RT: 3.04  
Area: 56358  
Amount: 0.536053  
Amount Units: ng/ml

Processing Integration Results



RT: 3.04  
Area: 56013  
Amount: 0.512469  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagern, 27-Dec-2019 15:23:34

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Euofins TestAmerica, Burlington

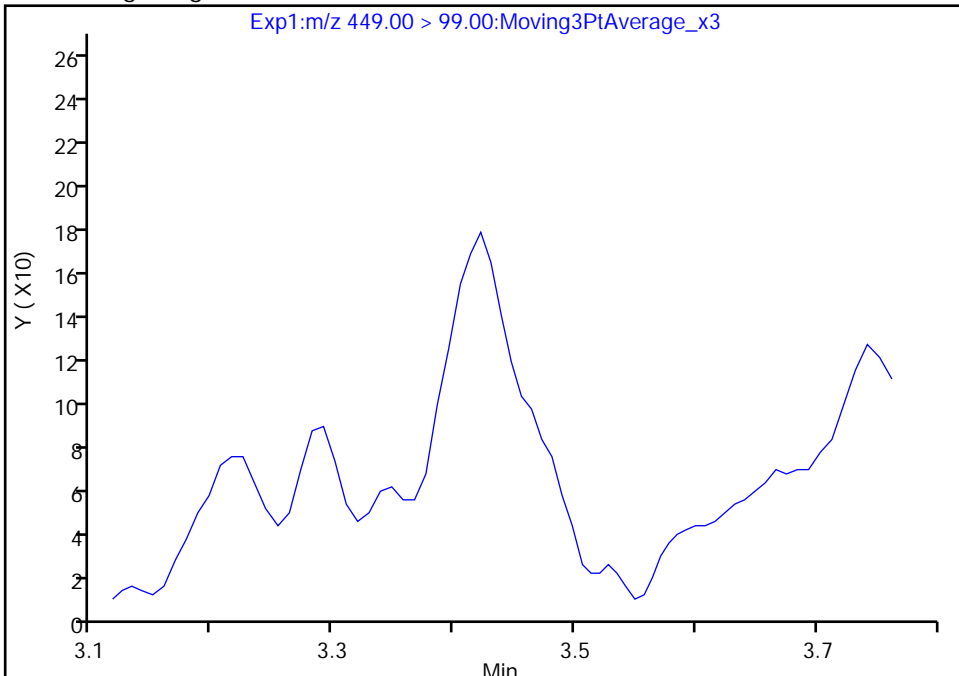
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B024.d  
Injection Date: 24-Dec-2019 17:04:30 Instrument ID: LC812  
Lims ID: 480-164221-C-13-A Lab Sample ID: 200-164221-13  
Client ID: AOI 1 GW1 DER  
Operator ID: lc812tech ALS Bottle#: 24 Worklist Smp#: 24  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

16 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 2

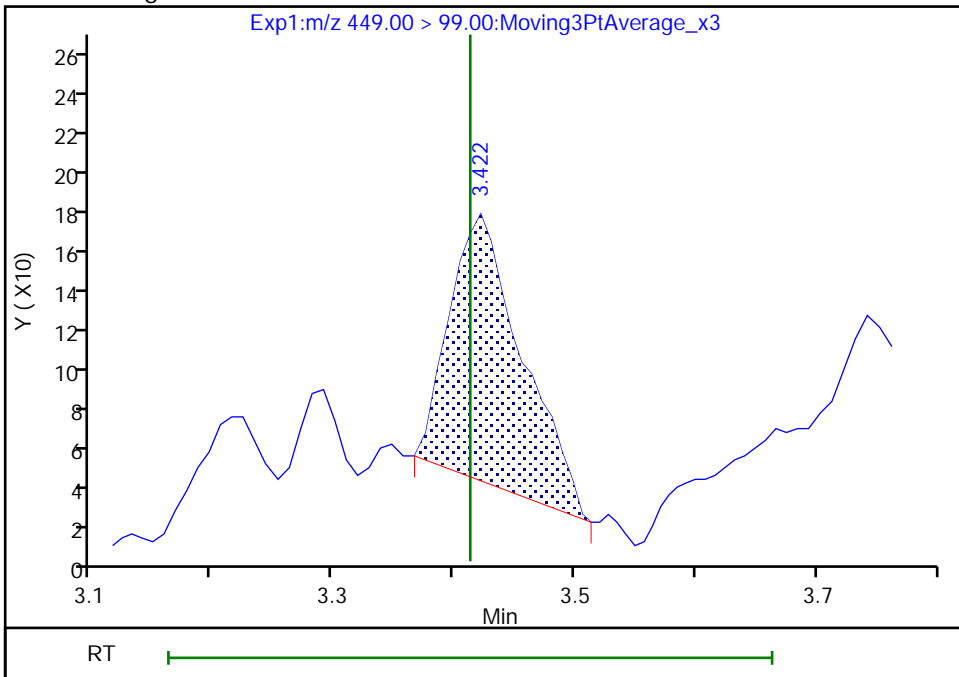
Not Detected  
Expected RT: 3.41

Processing Integration Results



Manual Integration Results

RT: 3.42  
Area: 570  
Amount: 0.012928  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 15:22:00  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

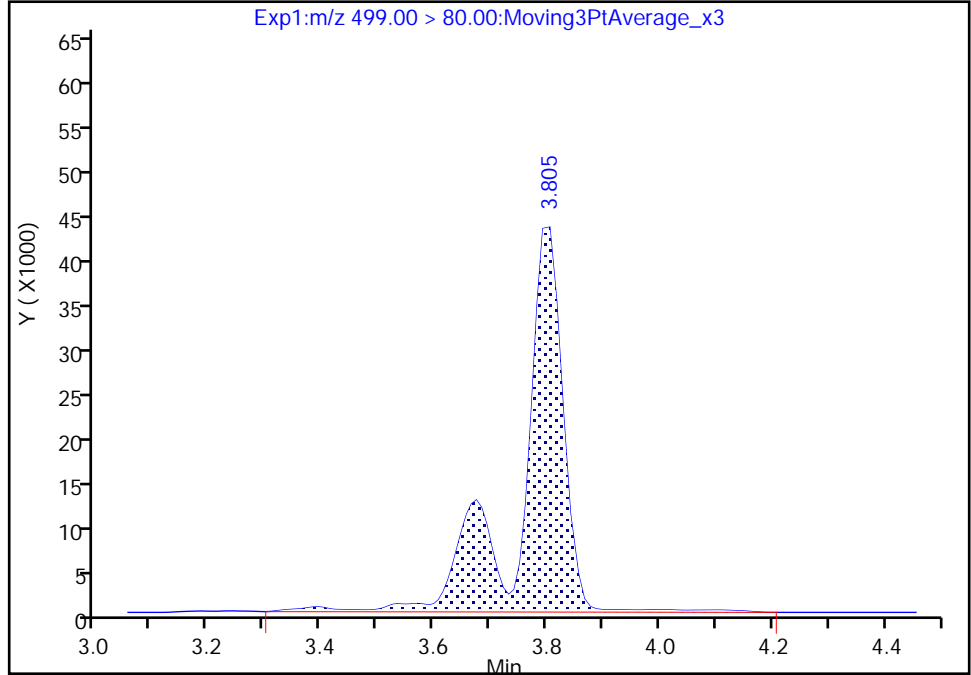
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B024.d  
Injection Date: 24-Dec-2019 17:04:30 Instrument ID: LC812  
Lims ID: 480-164221-C-13-A Lab Sample ID: 200-164221-13  
Client ID: AOI 1 GW1 DER  
Operator ID: lc812tech ALS Bottle#: 24 Worklist Smp#: 24  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

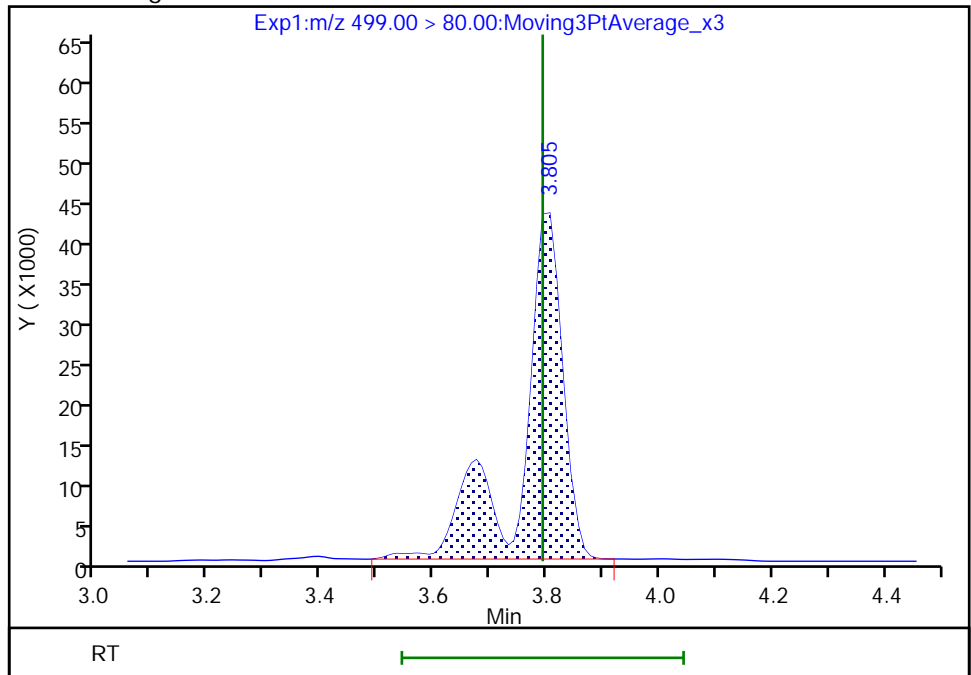
RT: 3.81  
Area: 229395  
Amount: 0.893703  
Amount Units: ng/ml

Processing Integration Results



RT: 3.81  
Area: 217158  
Amount: 0.846029  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagery, 27-Dec-2019 15:21:35  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

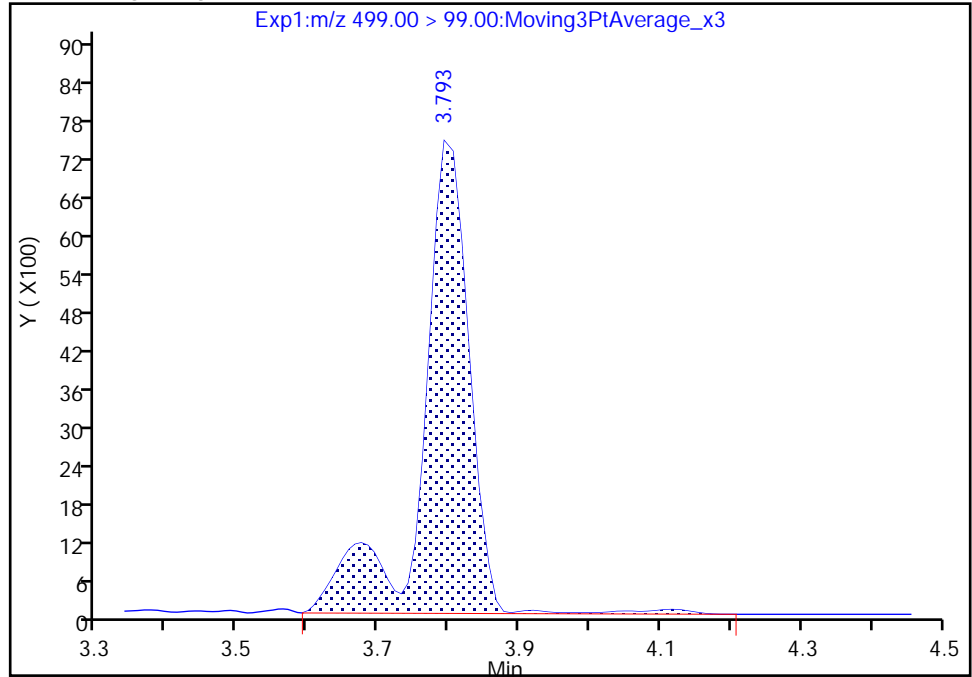
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B024.d  
Injection Date: 24-Dec-2019 17:04:30 Instrument ID: LC812  
Lims ID: 480-164221-C-13-A Lab Sample ID: 200-164221-13  
Client ID: AOI 1 GW1 DER  
Operator ID: lc812tech ALS Bottle#: 24 Worklist Smp#: 24  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

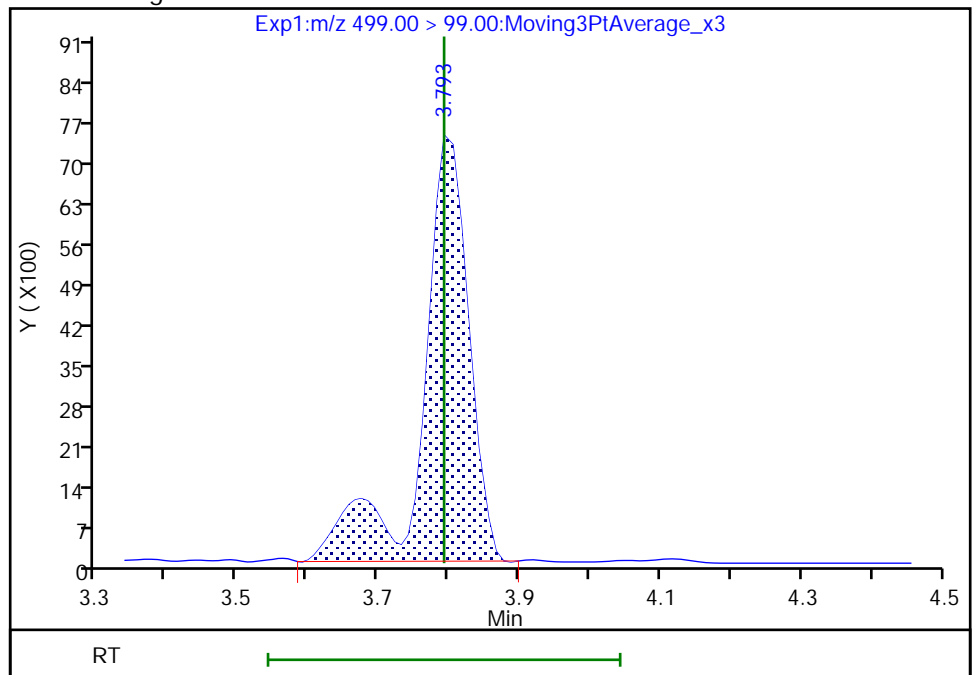
RT: 3.79  
Area: 34480  
Amount: 0.893703  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 33601  
Amount: 0.846029  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 15:21:41

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

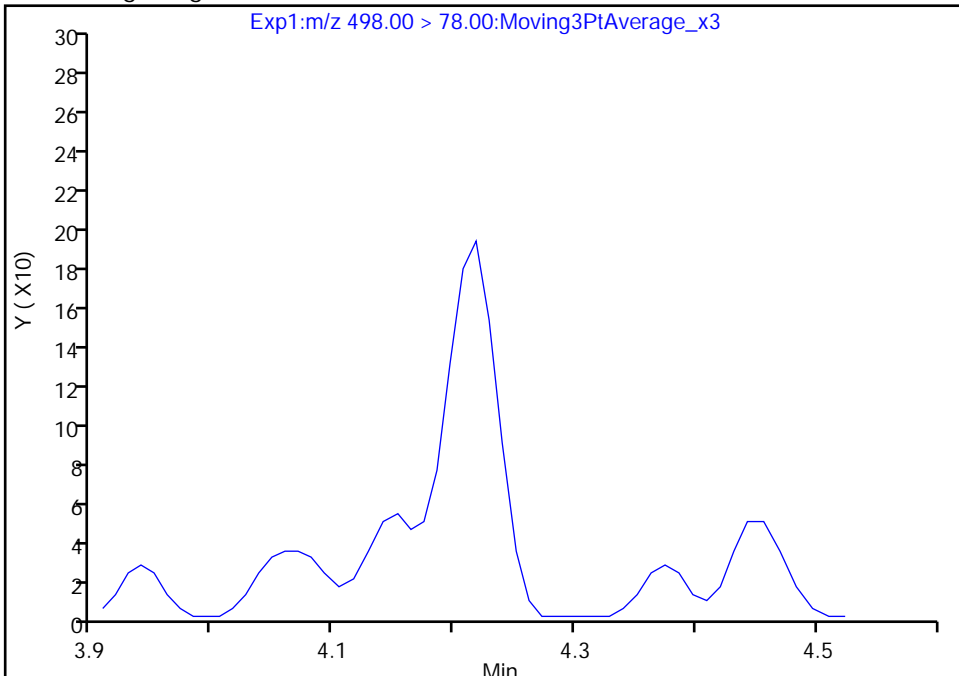
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B024.d  
Injection Date: 24-Dec-2019 17:04:30 Instrument ID: LC812  
Lims ID: 480-164221-C-13-A Lab Sample ID: 200-164221-13  
Client ID: AOI 1 GW1 DER  
Operator ID: lc812tech ALS Bottle#: 24 Worklist Smp#: 24  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

22 Perfluorooctanesulfonamide, CAS: 754-91-6

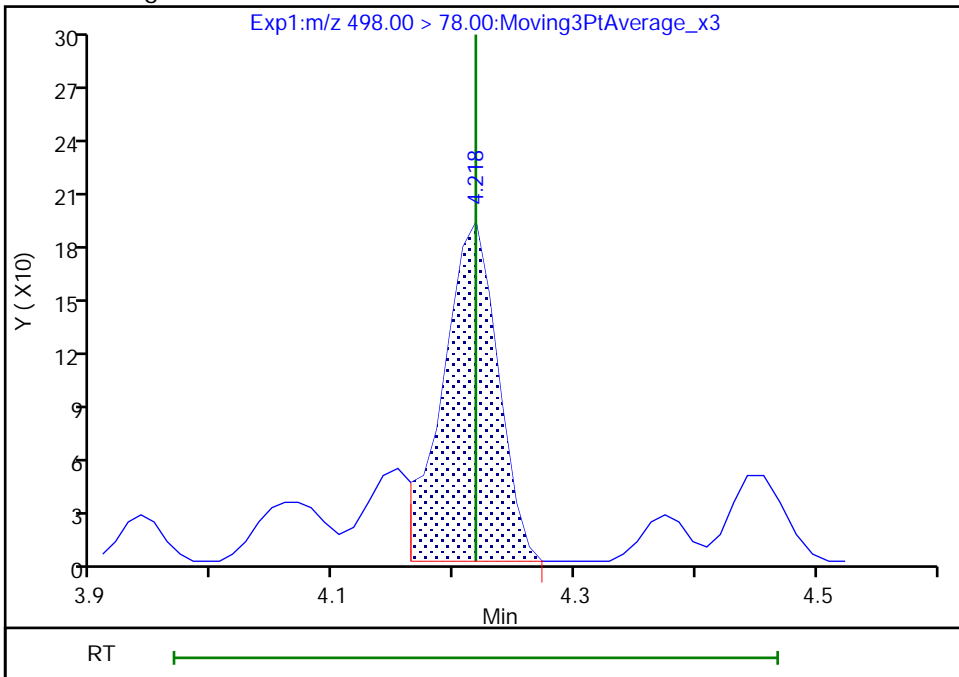
Signal: 1

Not Detected  
Expected RT: 4.22

Processing Integration Results



Manual Integration Results



RT: 4.22  
Area: 596  
Amount: 0.001713  
Amount Units: ng/ml

Eurofins TestAmerica, Burlington

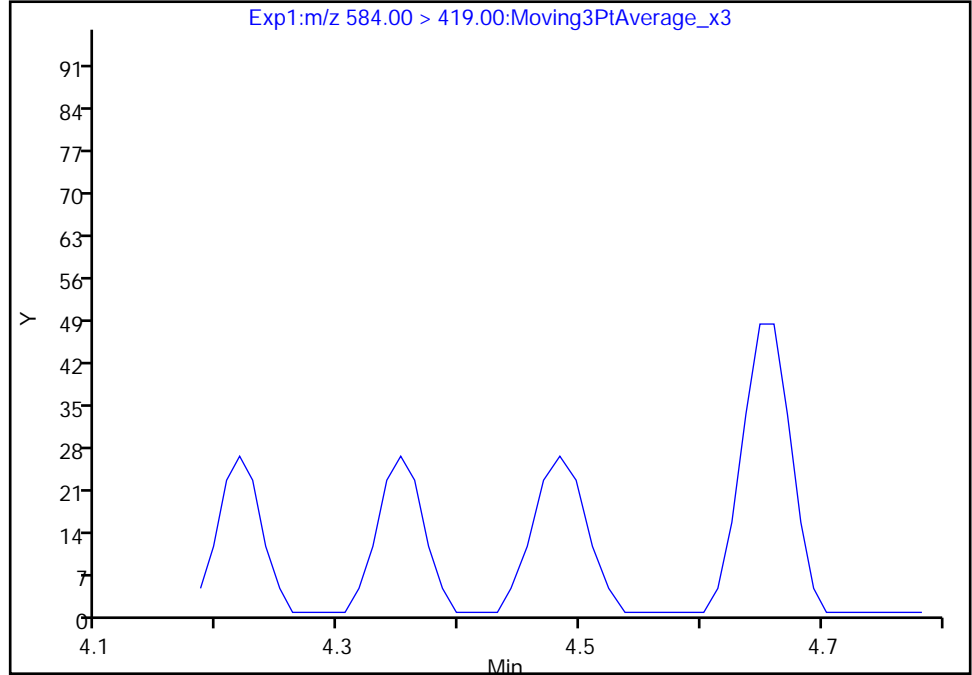
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B024.d  
Injection Date: 24-Dec-2019 17:04:30 Instrument ID: LC812  
Lims ID: 480-164221-C-13-A Lab Sample ID: 200-164221-13  
Client ID: AOI 1 GW1 DER  
Operator ID: lc812tech ALS Bottle#: 24 Worklist Smp#: 24  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

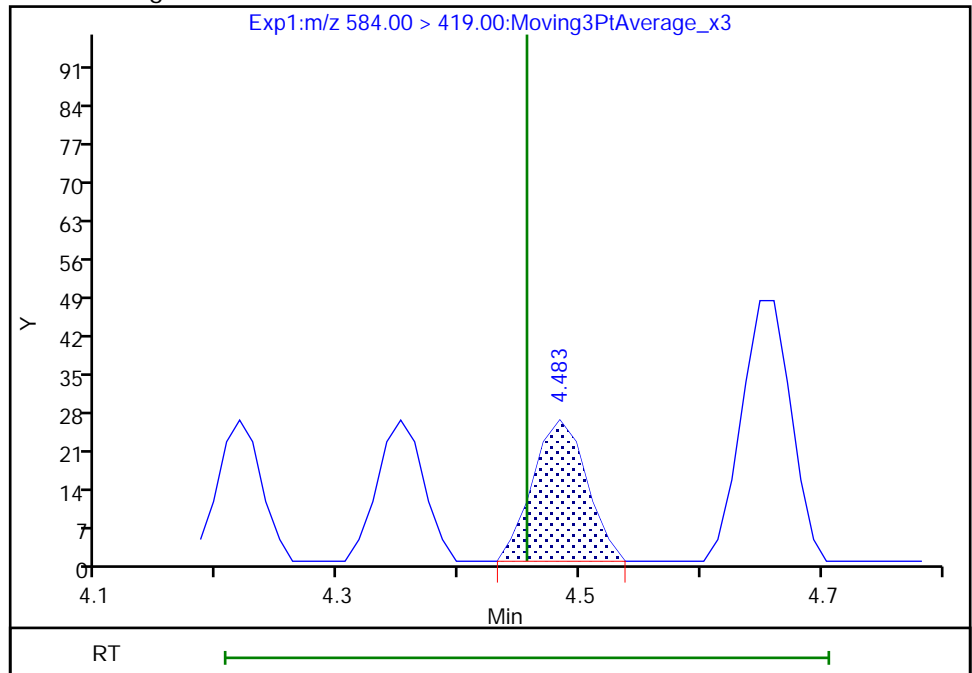
Not Detected  
Expected RT: 4.46

Processing Integration Results



Manual Integration Results

RT: 4.48  
Area: 80  
Amount: 0.003217  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 15:19:27

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Eurofins TestAmerica, Burlington

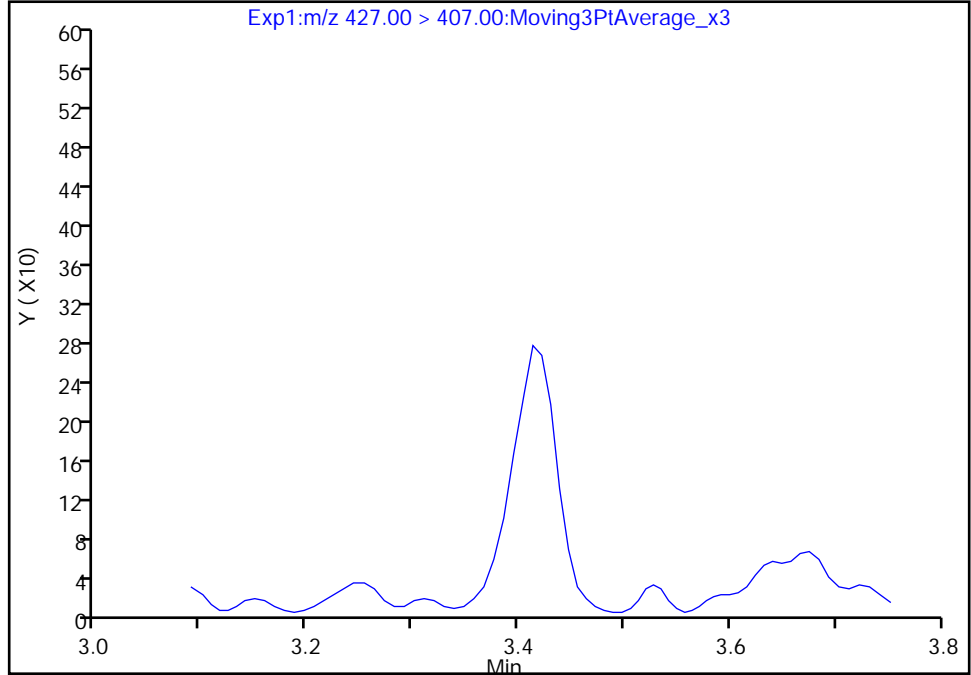
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B024.d  
Injection Date: 24-Dec-2019 17:04:30 Instrument ID: LC812  
Lims ID: 480-164221-C-13-A Lab Sample ID: 200-164221-13  
Client ID: AOI 1 GW1 DER  
Operator ID: lc812tech ALS Bottle#: 24 Worklist Smp#: 24  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

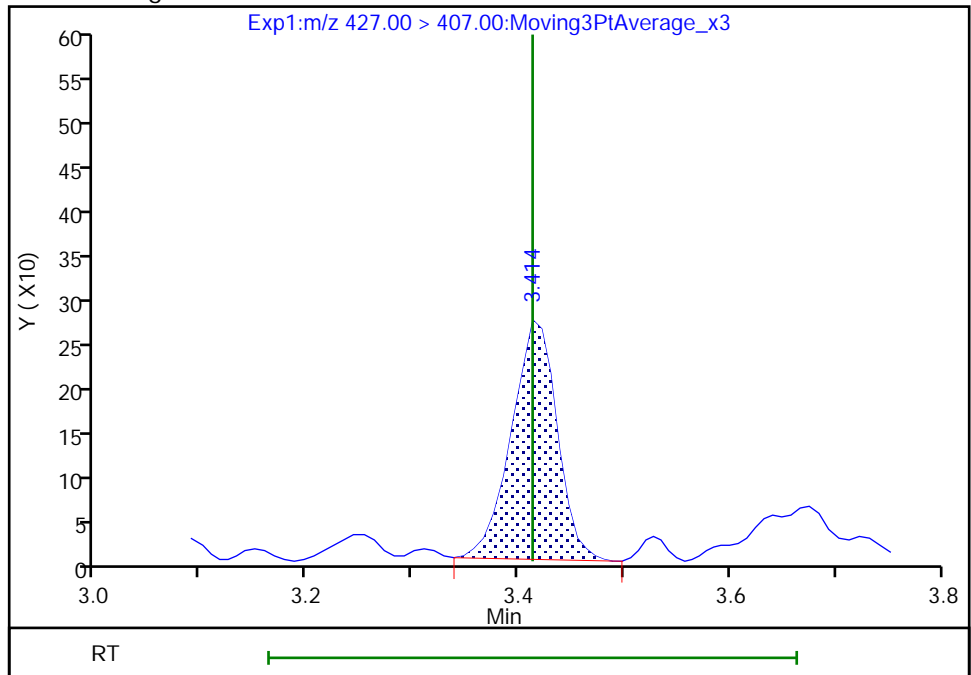
Not Detected  
Expected RT: 3.41

Processing Integration Results



Manual Integration Results

RT: 3.41  
Area: 804  
Amount: 0.014505  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 15:23:01  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AOI 3 GW1 DER Lab Sample ID: 480-164221-14  
 Matrix: Water Lab File ID: SC122319B025.d  
 Analysis Method: 537 (modified) Date Collected: 12/10/2019 15:05  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 271.7 (mL) Date Analyzed: 12/24/2019 17:12  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 20 (uL) GC Column: C-18 ID: 4.6 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	28		1.8	0.92
2706-90-3	Perfluoropentanoic acid (PFPeA)	34		1.8	0.58
307-24-4	Perfluorohexanoic acid (PFHxA)	34		1.8	0.70
375-85-9	Perfluoroheptanoic acid (PFHpA)	14		1.8	0.84
335-67-1	Perfluorooctanoic acid (PFOA)	65		1.8	0.75
375-95-1	Perfluorononanoic acid (PFNA)	7.2		1.8	0.25
335-76-2	Perfluorodecanoic acid (PFDA)	1.1	J	1.8	0.71
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		1.8	0.72
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		1.8	0.54
72629-94-8	Perfluorotridecanoic acid (PFTriA)	ND		1.8	0.55
376-06-7	Perfluorotetradecanoic acid (PFTeA)	ND		1.8	0.85
375-73-5	Perfluorobutanesulfonic acid (PFBS)	5.0		1.8	0.45
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	8.2		1.8	0.74
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.87
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	17		1.8	0.56
335-77-3	Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.83
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND		9.2	9.2
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		18	1.6
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		18	1.4
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		18	5.1
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		18	2.7

FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AOI 3 GW1 DER Lab Sample ID: 480-164221-14  
 Matrix: Water Lab File ID: SC122319B025.d  
 Analysis Method: 537 (modified) Date Collected: 12/10/2019 15:05  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 271.7(mL) Date Analyzed: 12/24/2019 17:12  
 Con. Extract Vol.: 10(mL) Dilution Factor: 1  
 Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	98		50-150
STL01892	13C4 PFHpA	99		50-150
STL00990	13C4 PFOA	96		50-150
STL00991	13C4 PFOS	87		50-150
STL00995	13C5 PFNA	92		50-150
STL00992	13C4 PFBA	62		25-150
STL00993	13C2 PFHxA	93		50-150
STL00996	13C2 PFDA	82		50-150
STL00997	13C2 PFUnA	84		50-150
STL00998	13C2 PFDoA	72		50-150
STL01056	13C8 FOSA	47		25-150
STL01893	13C5 PFPeA	96		25-150
STL02116	13C2 PFTeDA	65		50-150
STL02118	d3-NMeFOSAA	67		50-150
STL02117	d5-NEtFOSAA	75		50-150
STL02279	M2-6:2 FTS	90		25-150
STL02280	M2-8:2 FTS	95		25-150
STL02337	13C3 PFBS	92		50-150

Eurofins TestAmerica, Burlington  
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B025.d  
 Lims ID: 480-164221-C-14-A  
 Client ID: AOI 3 GW1 DER  
 Sample Type: Client  
 Inject. Date: 24-Dec-2019 17:12:42 ALS Bottle#: 25 Worklist Smp#: 25  
 Injection Vol: 20.0 ul Dil. Factor: 1.0000  
 Sample Info: 480-164221-C-14-A  
 Misc. Info.: 200-0039355-025 Plate: 1 Rack: 2  
 Operator ID: lc812tech Instrument ID: LC812  
 Method: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\PFC\_LC812.m  
 Limit Group: LC\_PFC\_ICAL  
 Last Update: 31-Dec-2019 08:24:59 Calib Date: 06-Dec-2019 15:13:26  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Column 1 : C-18 ( 4.60 mm) Det: EXP1  
 Process Host: CTX0330

First Level Reviewer: lautenschlagery Date: 27-Dec-2019 15:32:13  
 Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	1.898	1.908	-0.010	0.555	1050310	1.56	62.4	6759	
2 Perfluorobutanoic acid										M
212.90 > 169.00	1.898	1.908	-0.010	1.000	317197	0.7589		51.2		M
D 3 13C5 PFPeA	267.90 > 223.00	2.257	2.257	0.0	0.660	1242268	2.41	96.5	958	
4 Perfluoropentanoic acid	262.90 > 219.00	2.257	2.271	-0.014	1.000	518196	0.9209		6.8	
D 47 13C3 PFBS	301.90 > 80.00	2.271	2.285	-0.014	0.664	1317351	2.14	92.2	52102	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	2.271	2.285	-0.014	1.000	83254	0.1352	Target=2.03	8.5	
298.90 > 99.00	2.271	2.285	-0.014	1.000	42618		1.95(1.01-3.04)	8.2		
D 7 13C2 PFHxA	315.00 > 270.00	2.648	2.648	0.0	0.774	1329173	2.31	92.6	4759	
6 Perfluorohexanoic acid	313.00 > 269.00	2.648	2.661	-0.013	1.000	499486	0.9202	Target=13.76	18.5	
313.00 > 119.00	2.648	2.661	-0.013	1.000	41422		12.06(6.88-20.64)	54.6		
D 11 18O2 PFHxS	403.00 > 84.00	3.033	3.044	-0.011	0.886	1129543	2.33	98.4	5779	
8 Perfluorohexanesulfonic acid	399.00 > 80.00	3.033	3.044	-0.011	1.000	120793	0.2235	Target=3.90	27.4	M
399.00 > 99.00	3.033	3.044	-0.011	1.000	26702		4.52(1.95-5.85)	24.9		M
D 9 13C4 PFHpA	367.00 > 322.00	3.033	3.044	-0.011	0.886	1350503	2.48	99.2	4925	
10 Perfluoroheptanoic acid	363.00 > 319.00	3.033	3.044	-0.011	1.000	223839	0.3919	Target=3.95	15.5	M
363.00 > 169.00	3.033	3.044	-0.011	1.000	76973		2.91(1.97-5.92)	133		

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
16 Perfluoroheptanesulfonic acid										M
449.00 > 80.00	3.405	3.413	-0.008	0.898	4811	0.0117	Target=6.46	2.5		
449.00 > 99.00	3.395	3.413	-0.018	0.895	776		6.20(3.23-9.69)	1.1		M
13 1H,1H,2H,2H-perfluorooctanesulfoni										M
427.00 > 407.00	3.405	3.413	-0.008	1.000	811	0.0114		9.7		M
D 12 M2-6:2 FTS										
429.00 > 81.00	3.405	3.413	-0.008	0.995	178282	2.14		90.0	110	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.422	3.430	-0.008	1.000	1083482	1.77	Target=2.40	89.9		
413.00 > 169.00	3.422	3.430	-0.008	1.000	494801		2.19(1.20-3.60)	1170		
D 14 13C4 PFOA										
417.00 > 372.00	3.422	3.430	-0.008	1.000	1382726	2.39		95.7	5116	
* 62 13C2 PFOA										
415.00 > 370.00	3.422	3.430	-0.008		1590148	2.50		4953		
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.793	0.0	1.108	799572	2.08		86.9	485	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.793	3.793	0.0	1.000	164105	0.4544	Target=5.74	63.5		M
499.00 > 99.00	3.793	3.793	0.0	1.000	22733		7.22(2.87-8.61)	43.4		M
D 19 13C5 PFNA										
468.00 > 423.00	3.805	3.817	-0.012	1.112	1216782	2.29		91.6	4459	
20 Perfluorononanoic acid										M
463.00 > 419.00	3.817	3.817	0.0	1.003	93747	0.1964	Target=7.01	18.4		M
463.00 > 169.00	3.805	3.817	-0.012	1.000	14216		6.59(3.50-10.51)	70.7		
D 23 13C2 PFDA										
515.00 > 470.00	4.153	4.164	-0.011	1.214	1077954	2.06		82.3	5806	
24 Perfluorodecanoic acid										M
513.00 > 469.00	4.153	4.164	-0.011	1.000	11905	0.0285	Target=7.28	4.9		M
513.00 > 169.00	4.153	4.164	-0.011	1.000	2587		4.60(3.64-10.91)	16.9		
25 1H,1H,2H,2H-perfluorodecanesulfoni										M
527.00 > 507.00	4.196	4.164	0.032	1.008	62	0.001424				M
D 26 M2-8:2 FTS										
529.00 > 81.00	4.164	4.175	-0.011	1.217	225841	2.27		94.9	273	
D 21 13C8 FOSA										
506.00 > 78.00	4.207	4.218	-0.011	1.230	812341	1.19		47.4	2267	
22 Perfluorooctanesulfonamide										M
498.00 > 78.00	4.218	4.218	0.0	1.003	655	0.002026		7.2		M
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.305	4.305	0.0	1.258	84420	1.67		67.0	953	
D 30 13C2 PFUnA										
565.00 > 520.00	4.431	4.443	-0.012	1.295	939839	2.11		84.4	8669	
31 Perfluoroundecanoic acid										M
563.00 > 519.00	4.431	4.443	-0.012	1.000	3591	0.0113	Target=5.78	3.3		
563.00 > 169.00	4.443	4.443	0.0	1.003	925		3.88(2.89-8.67)	10.2		M
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.443	4.456	-0.013	1.298	104326	1.87		74.6	911	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 36 13C2 PFDaA										
615.00 > 570.00	4.683	4.683	0.0	1.369	878187	1.80		71.9	3832	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.085	5.108	-0.023	0.998	366	0.006858	Target=1.05		8.9	RM
713.00 > 219.00	5.094	5.108	-0.014	1.000	183		2.00(0.52-1.57)		3.5	M
D 43 13C2 PFTeDA										
715.00 > 670.00	5.094	5.108	-0.014	1.489	664179	1.62		64.9	5776	

**QC Flag Legend**

Processing Flags

R - Failed Signal Ratio Test

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B025.d

Injection Date: 24-Dec-2019 17:12:42

Instrument ID: LC812

Lims ID: 480-164221-C-14-A

Lab Sample ID: 200-164221-14

Client ID: AOI 3 GW1 DER

Operator ID: lc812tech

ALS Bottle#: 25

Worklist Smp#: 25

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

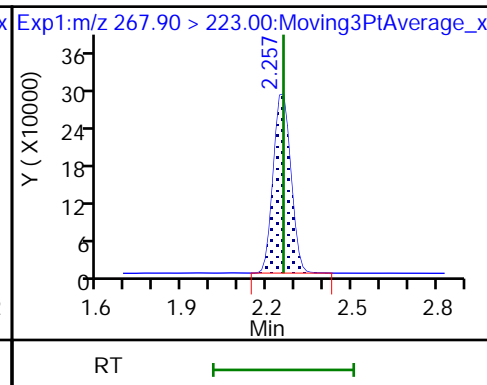
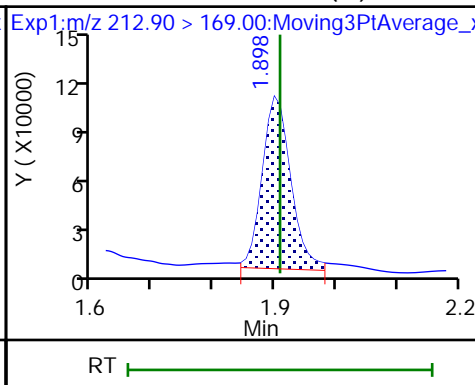
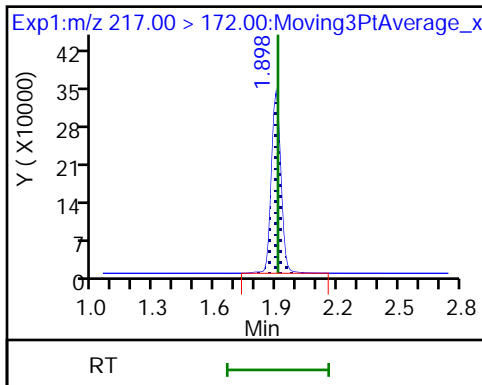
Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid (M)

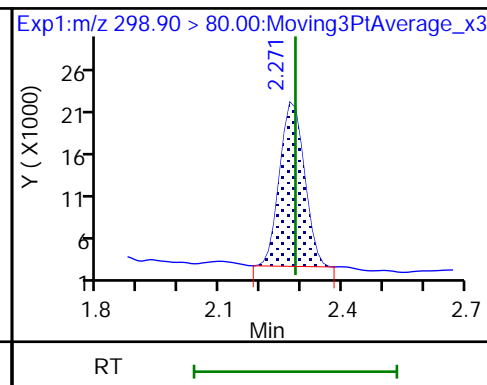
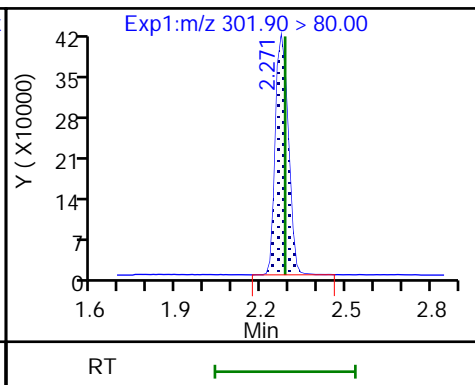
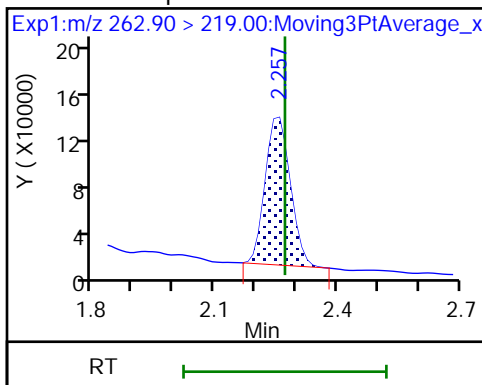
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 47 13C3 PFBS

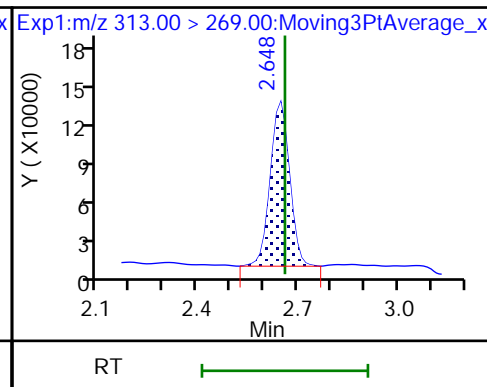
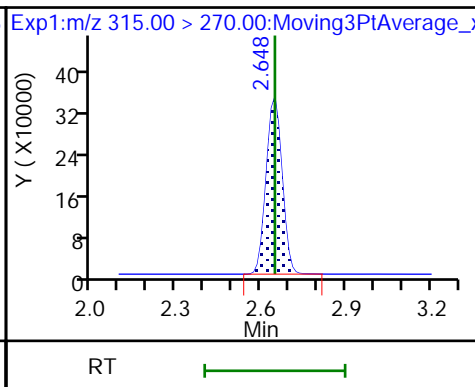
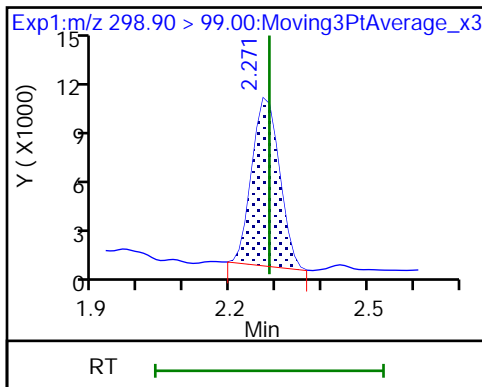
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 7 13C2 PFHxA

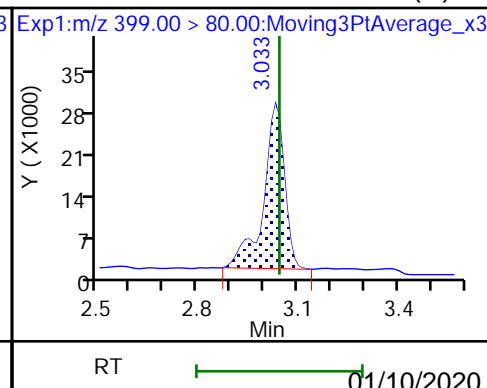
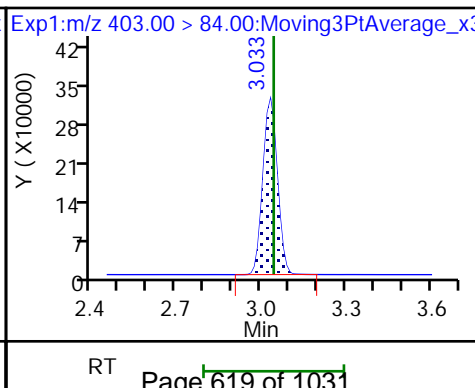
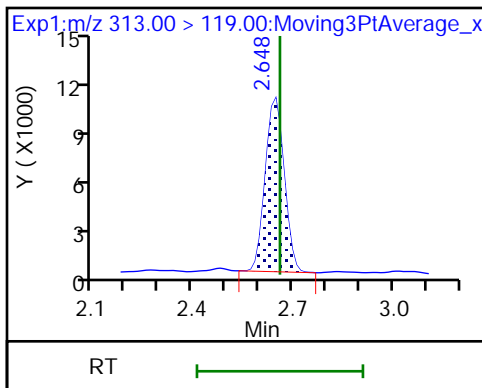
6 Perfluorohexanoic acid



6 Perfluorohexanoic acid

D 11 18O2 PFHxS

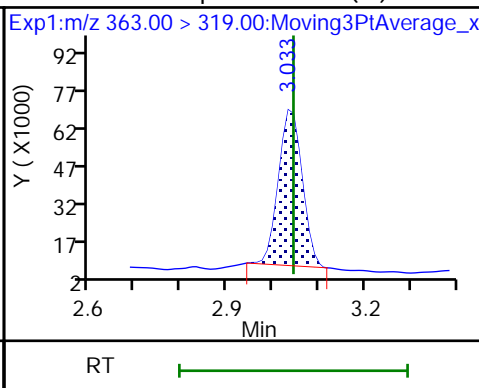
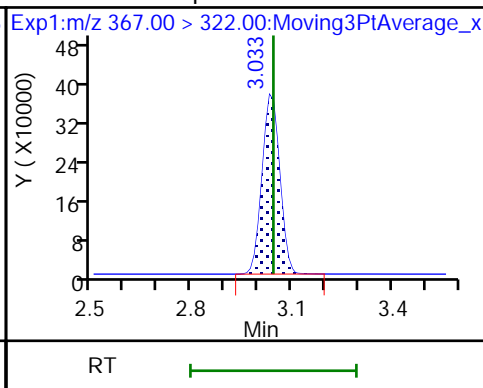
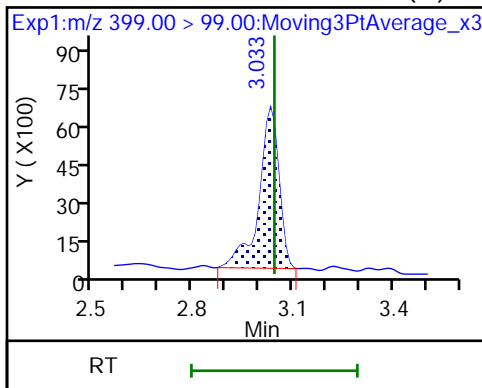
8 Perfluorohexanesulfonic acid (M)



8 Perfluorohexanesulfonic acid (M)

D 9 13C4 PFHpA

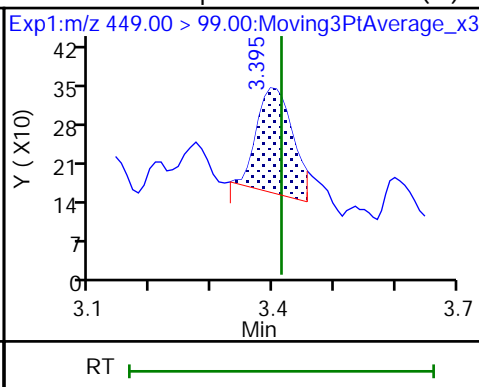
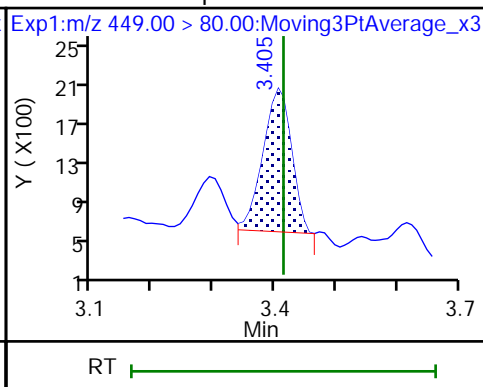
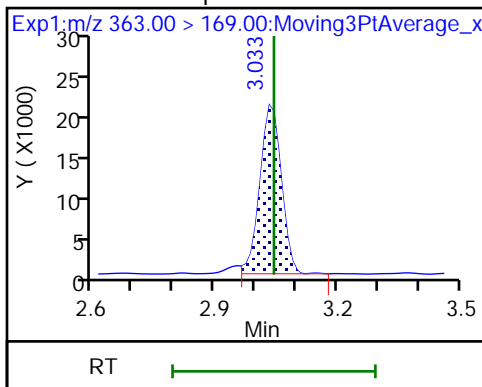
10 Perfluoroheptanoic acid (M)



10 Perfluoroheptanoic acid

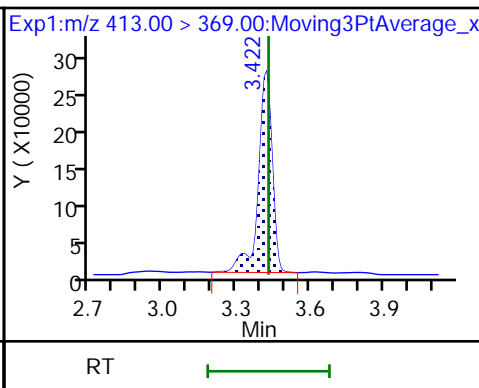
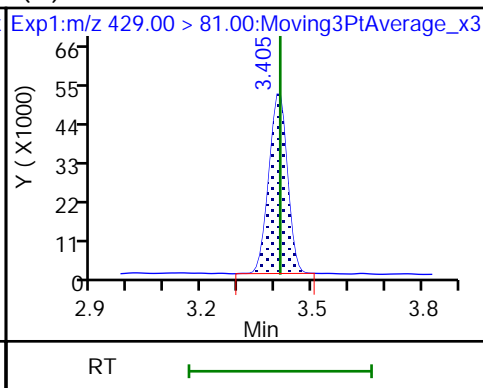
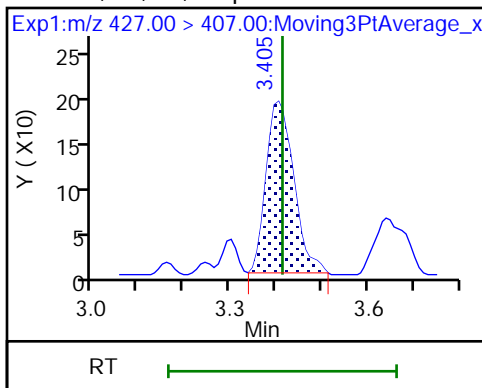
16 Perfluoroheptanesulfonic acid

16 Perfluoroheptanesulfonic acid (M)



13 1H,1H,2H,2H-perfluorooctanesulfonate (M) M2-6:2 FTS

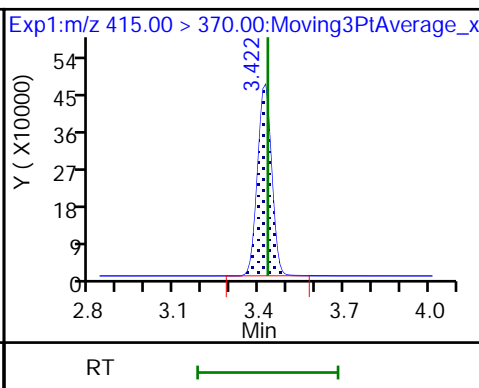
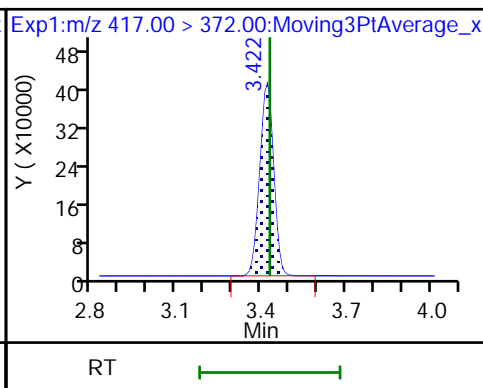
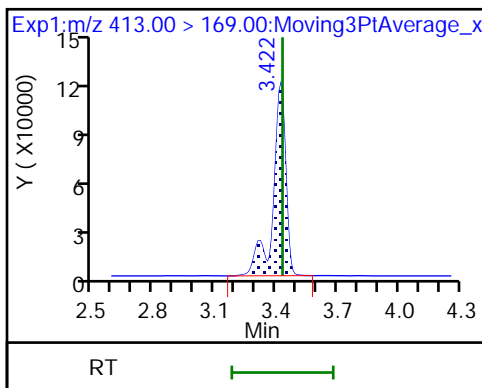
15 Perfluorooctanoic acid



15 Perfluorooctanoic acid

D 14 13C4 PFOA

\* 62 13C2 PFOA

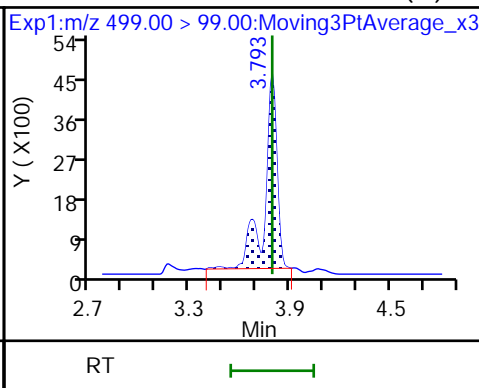
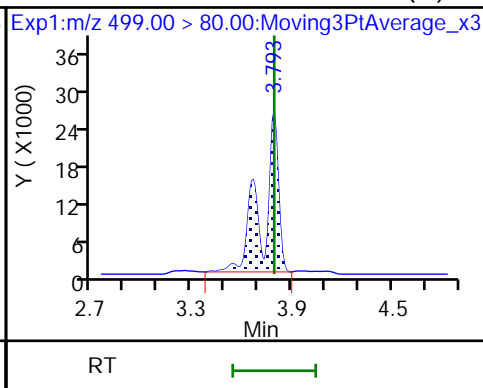
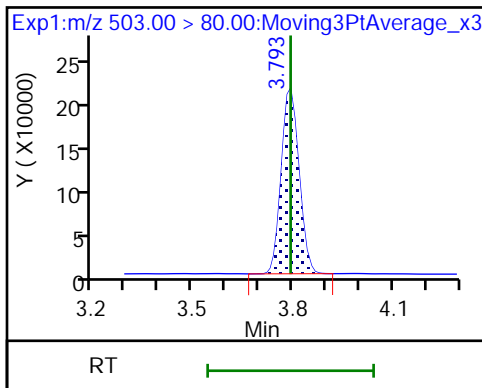




D 18 13C4 PFOS

17 Perfluorooctanesulfonic acid (M)

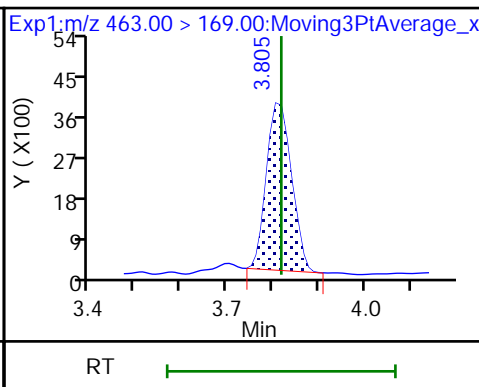
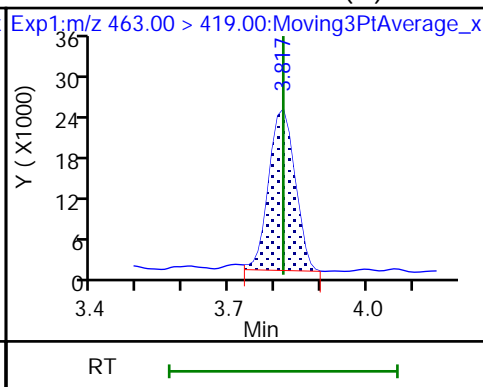
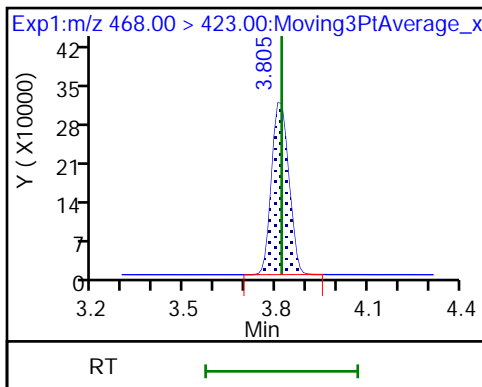
17 Perfluorooctanesulfonic acid (M)



D 19 13C5 PFNA

20 Perfluorononanoic acid (M)

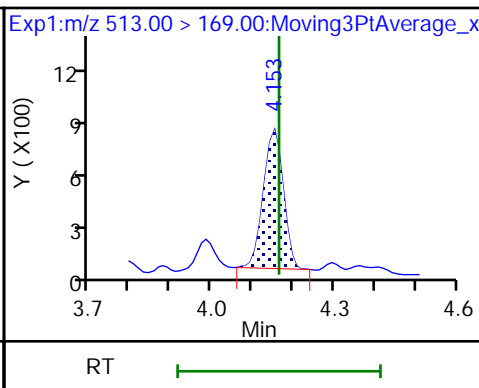
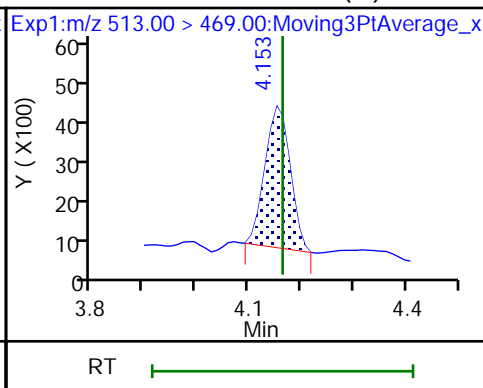
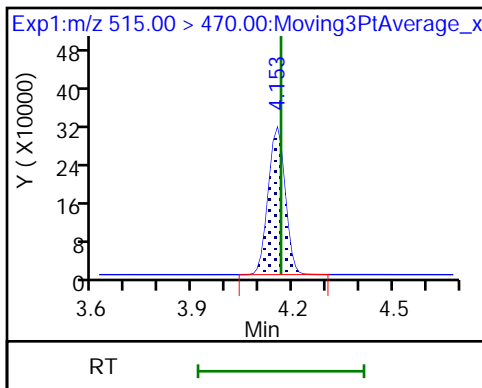
20 Perfluorononanoic acid



D 23 13C2 PFDA

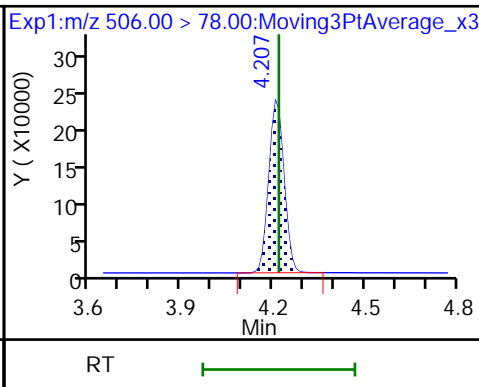
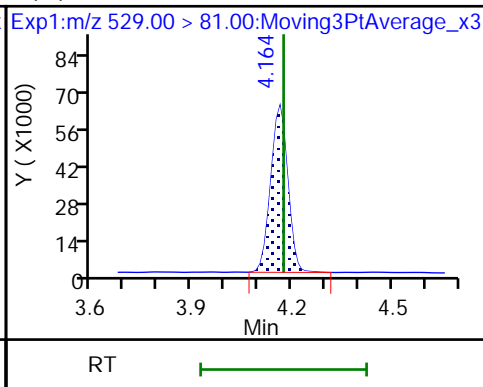
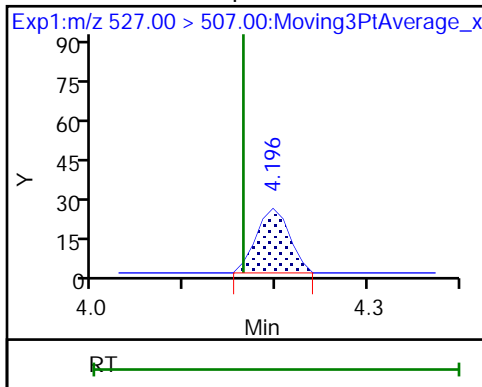
24 Perfluorodecanoic acid (M)

24 Perfluorodecanoic acid



25 1H,1H,2H,2H-perfluorodecanesulfonic acid (M) M2-8:2 FTS

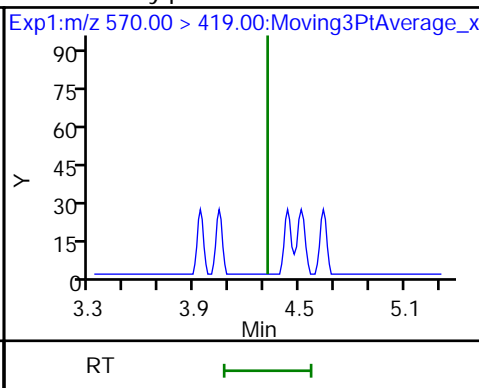
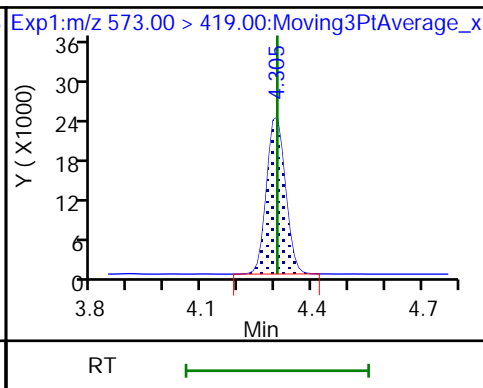
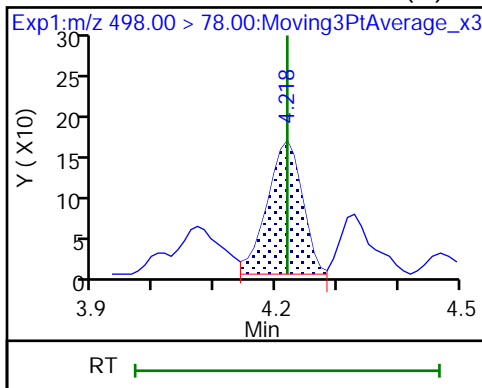
D 21 13C8 FOSA



22 Perfluorooctanesulfonamide (M)

D 27 d3-NMeFOSAA

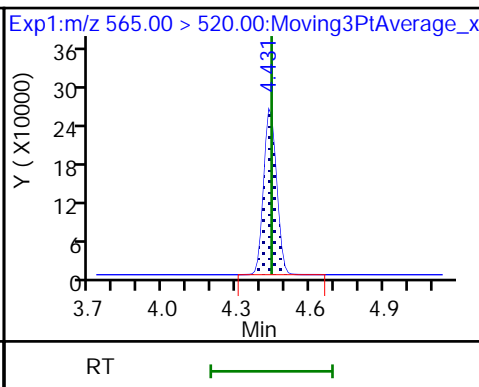
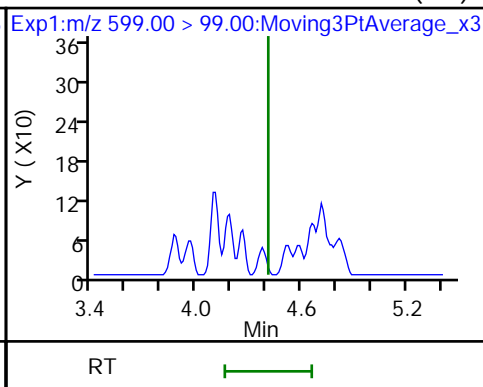
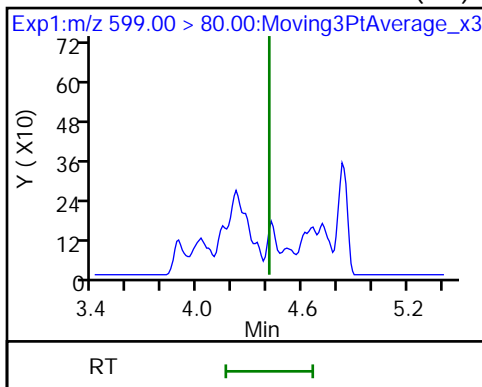
28 N-methylperfluorooctanesulfonamido (ND)



29 Perfluorodecanesulfonic acid (ND)

29 Perfluorodecanesulfonic acid (ND)

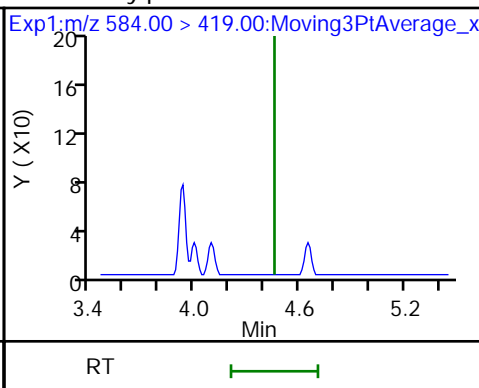
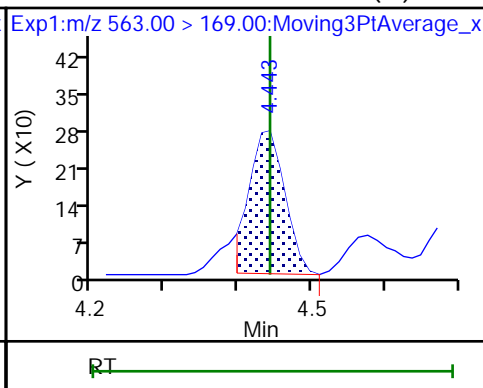
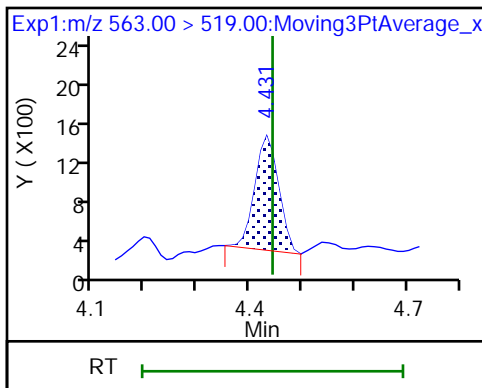
D 30 13C2 PFUa



31 Perfluoroundecanoic acid

31 Perfluoroundecanoic acid (M)

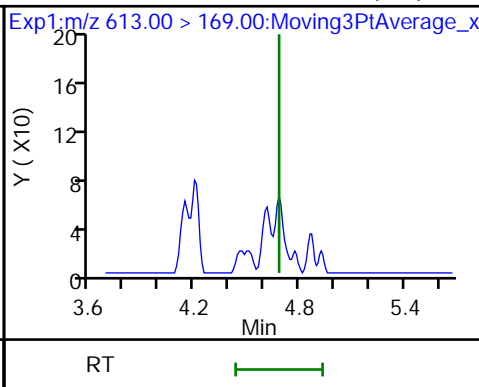
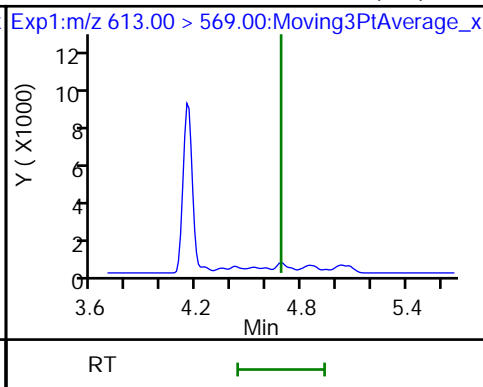
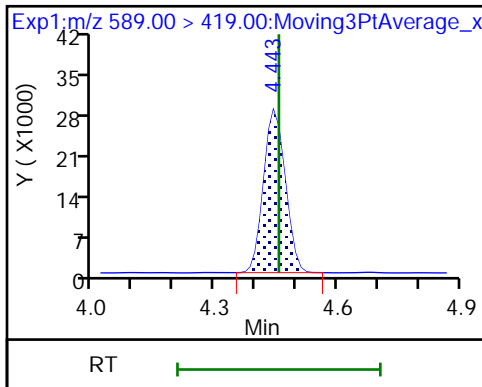
33 N-ethylperfluorooctanesulfonamidoa (ND)



D 32 d5-NEtFOSAA

37 Perfluorododecanoic acid (ND)

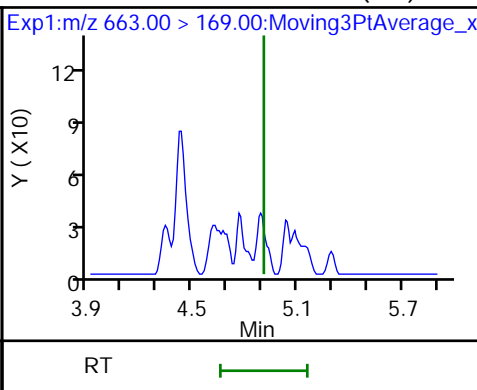
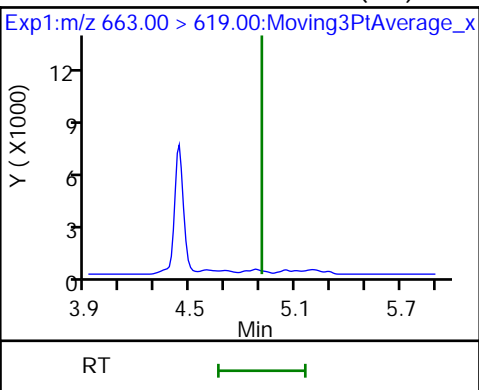
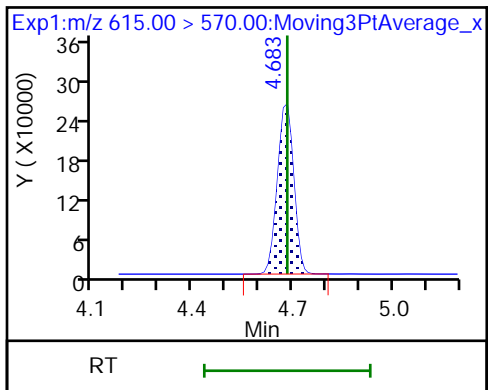
37 Perfluorododecanoic acid (ND)



D 36 13C2 PFDaA

41 Perfluorotridecanoic acid (ND)

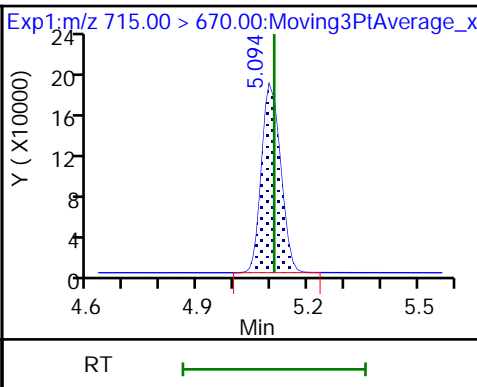
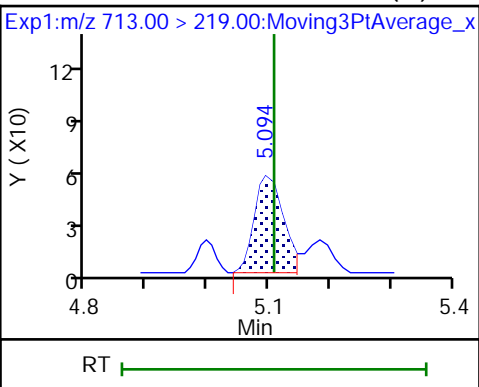
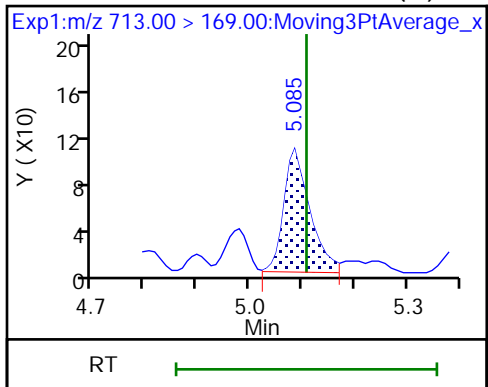
41 Perfluorotridecanoic acid (ND)



42 Perfluorotetradecanoic acid (M)

42 Perfluorotetradecanoic acid (M)

D 43 13C2 PFTeDA



Eurofins TestAmerica, Burlington

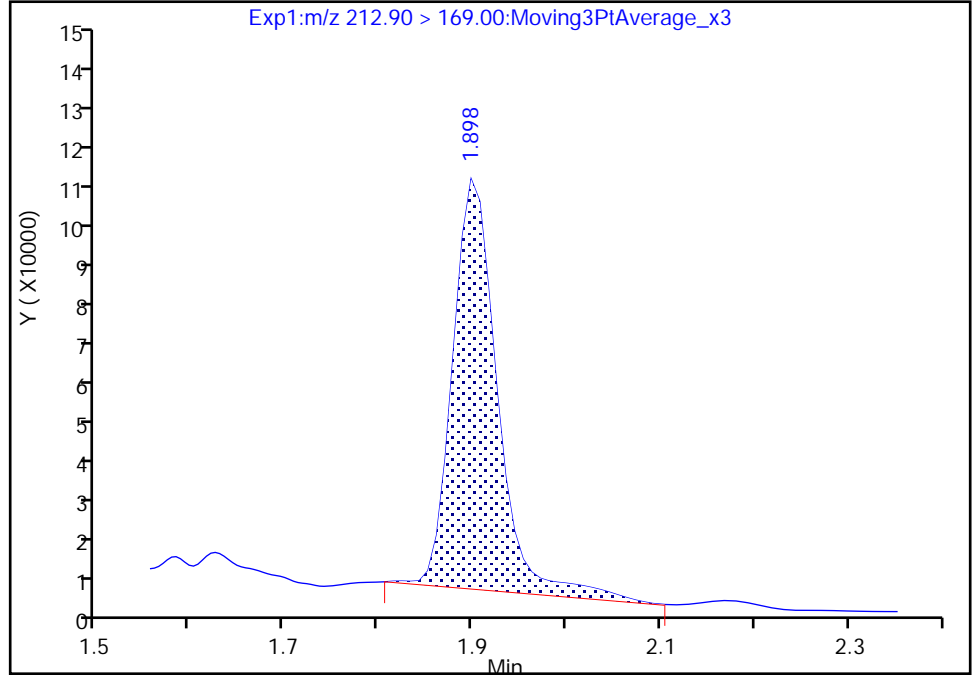
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B025.d  
Injection Date: 24-Dec-2019 17:12:42 Instrument ID: LC812  
Lims ID: 480-164221-C-14-A Lab Sample ID: 200-164221-14  
Client ID: AOI 3 GW1 DER  
Operator ID: lc812tech ALS Bottle#: 25 Worklist Smp#: 25  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

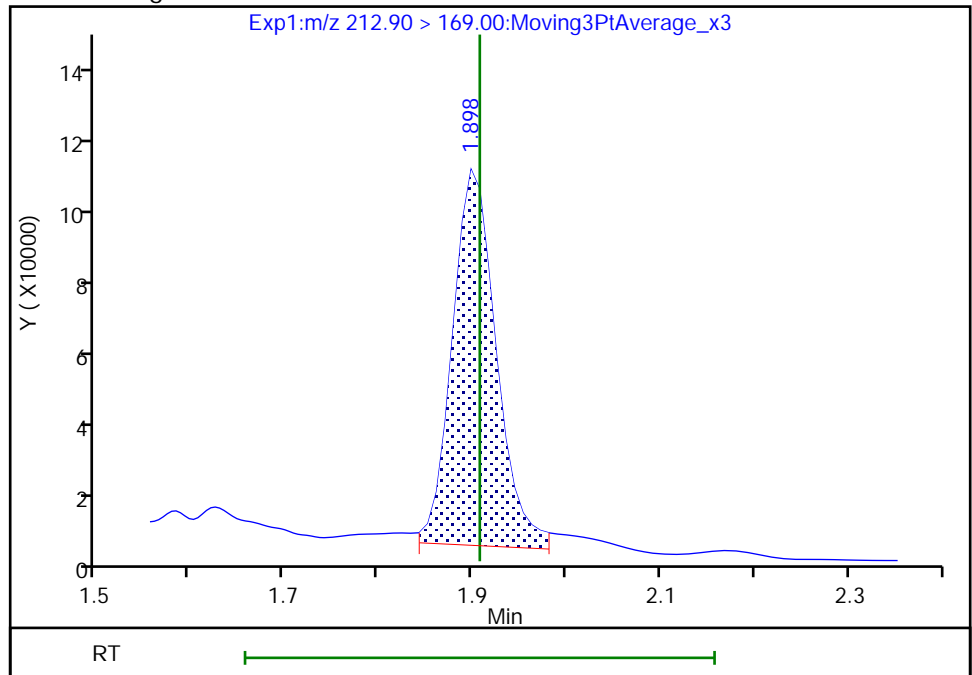
RT: 1.90  
Area: 322038  
Amount: 0.770452  
Amount Units: ng/ml

Processing Integration Results



RT: 1.90  
Area: 317197  
Amount: 0.758870  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 15:25:41

Audit Action: Manually Integrated

Audit Reason: Baseline

Euofins TestAmerica, Burlington

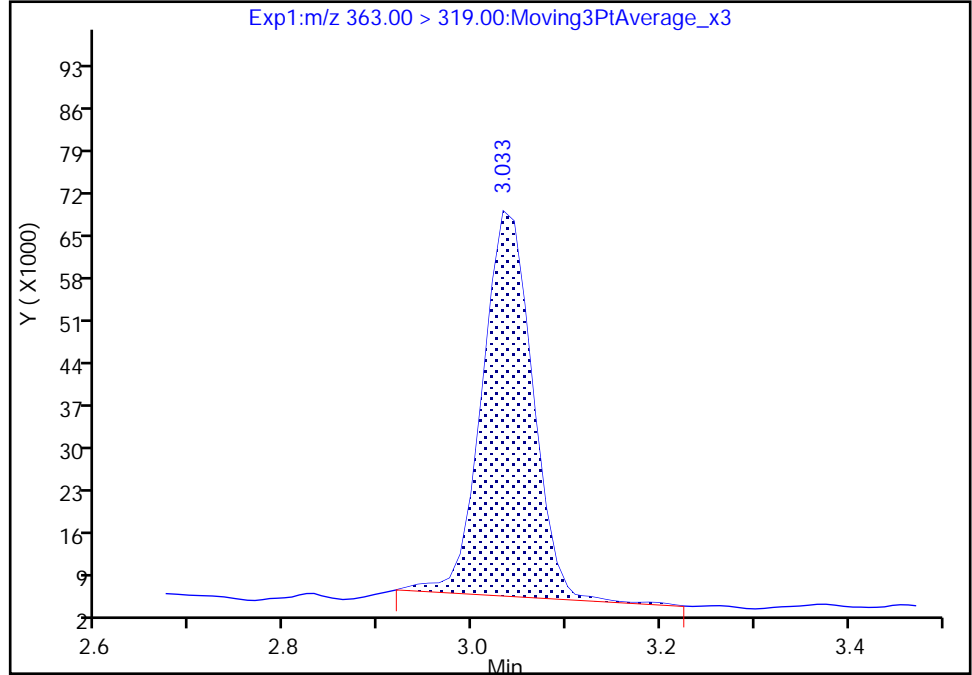
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B025.d  
Injection Date: 24-Dec-2019 17:12:42 Instrument ID: LC812  
Lims ID: 480-164221-C-14-A Lab Sample ID: 200-164221-14  
Client ID: AOI 3 GW1 DER  
Operator ID: lc812tech ALS Bottle#: 25 Worklist Smp#: 25  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

10 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

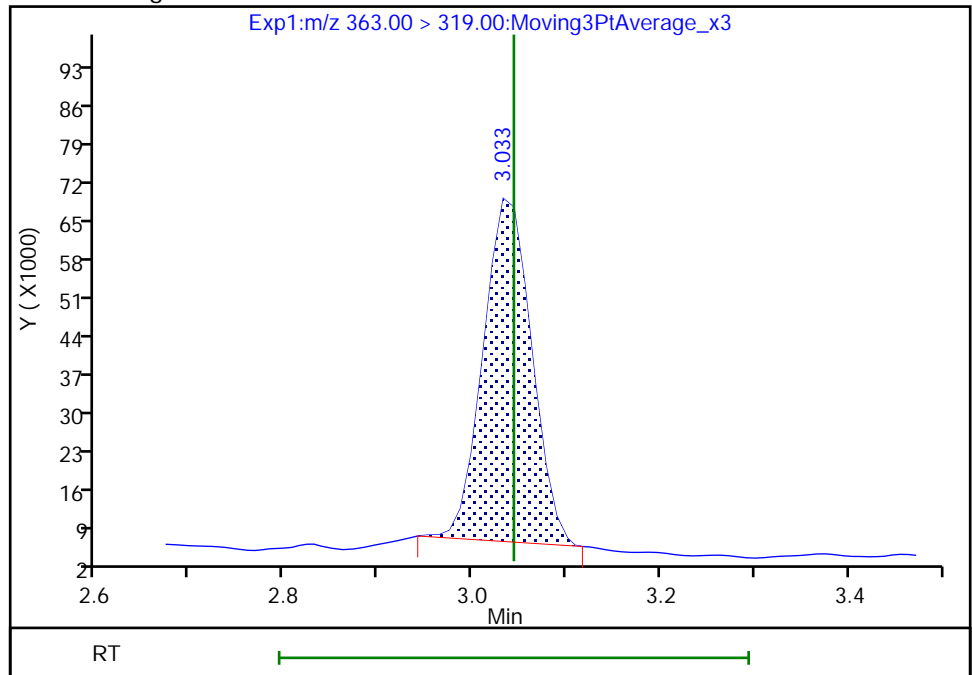
RT: 3.03  
Area: 236437  
Amount: 0.413981  
Amount Units: ng/ml

Processing Integration Results



RT: 3.03  
Area: 223839  
Amount: 0.391923  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 15:26:47

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

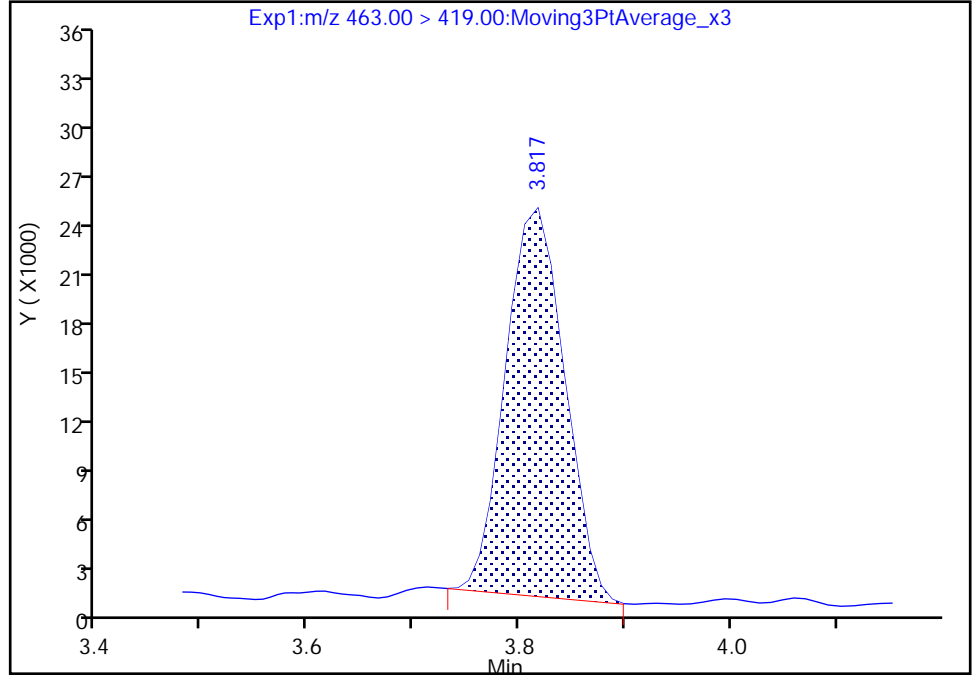
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B025.d  
Injection Date: 24-Dec-2019 17:12:42 Instrument ID: LC812  
Lims ID: 480-164221-C-14-A Lab Sample ID: 200-164221-14  
Client ID: AOI 3 GW1 DER  
Operator ID: lc812tech ALS Bottle#: 25 Worklist Smp#: 25  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

20 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

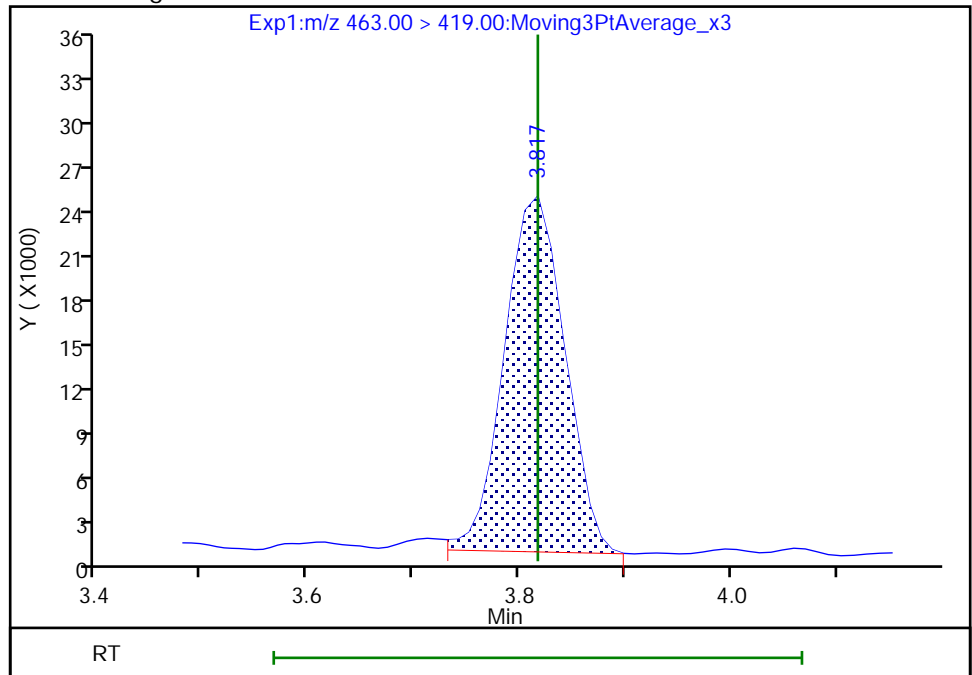
RT: 3.82  
Area: 90395  
Amount: 0.189411  
Amount Units: ng/ml

Processing Integration Results



RT: 3.82  
Area: 93747  
Amount: 0.196435  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 15:29:02

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

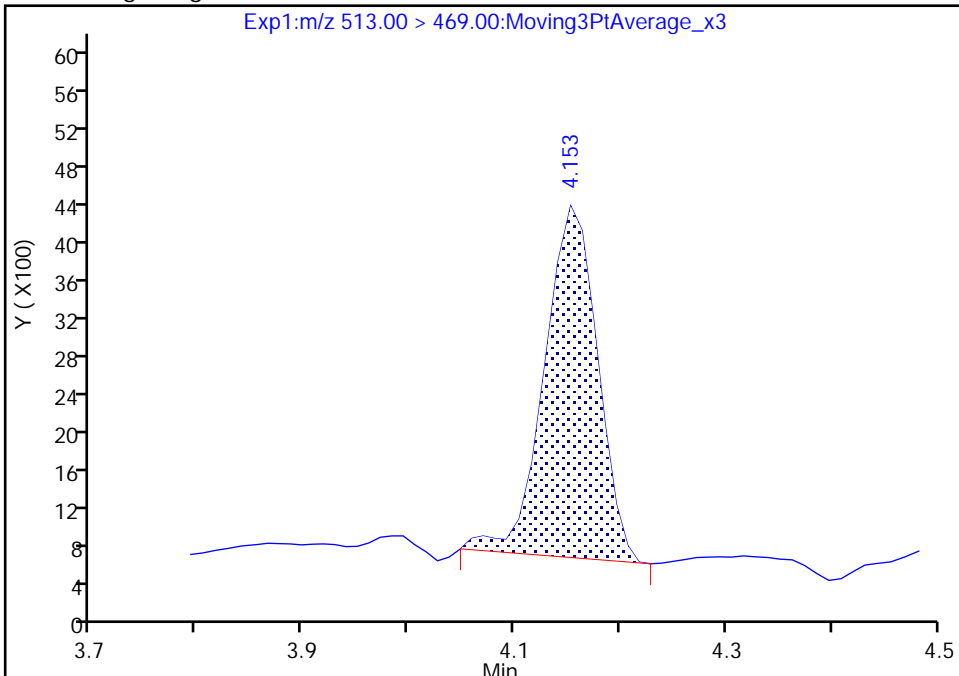
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B025.d  
Injection Date: 24-Dec-2019 17:12:42 Instrument ID: LC812  
Lims ID: 480-164221-C-14-A Lab Sample ID: 200-164221-14  
Client ID: AOI 3 GW1 DER  
Operator ID: lc812tech ALS Bottle#: 25 Worklist Smp#: 25  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

24 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 1

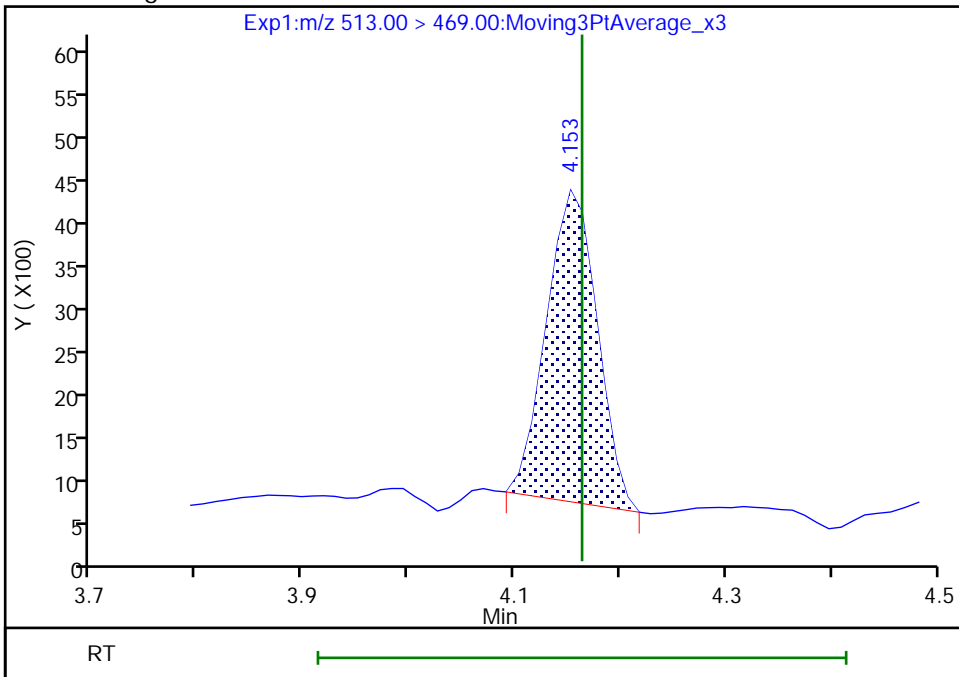
RT: 4.15  
Area: 12742  
Amount: 0.030545  
Amount Units: ng/ml

Processing Integration Results



RT: 4.15  
Area: 11905  
Amount: 0.028538  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 15:30:04  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

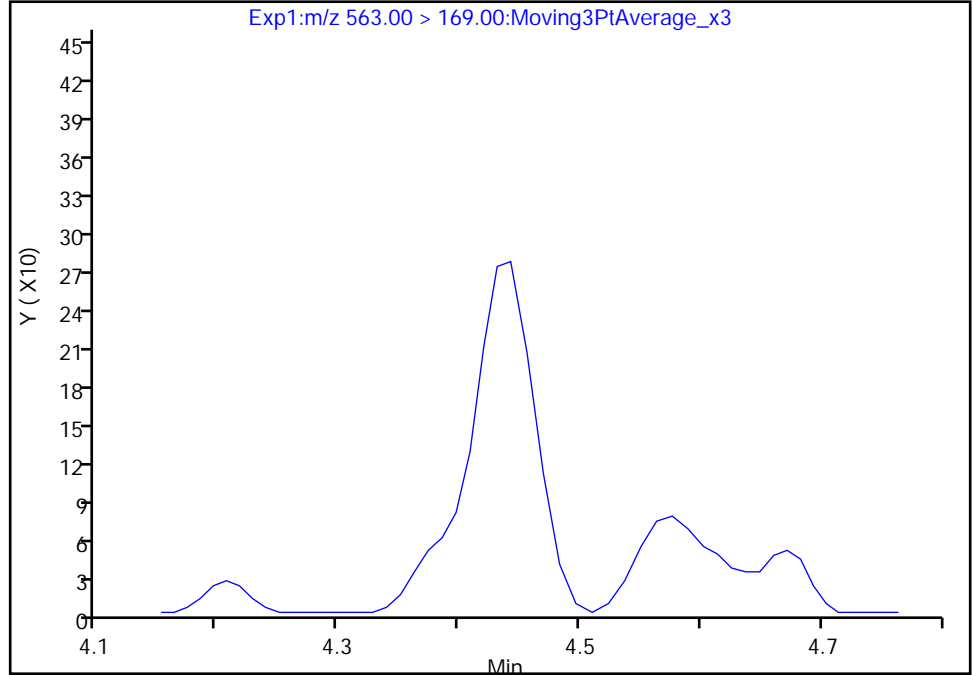
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B025.d  
Injection Date: 24-Dec-2019 17:12:42 Instrument ID: LC812  
Lims ID: 480-164221-C-14-A Lab Sample ID: 200-164221-14  
Client ID: AOI 3 GW1 DER  
Operator ID: lc812tech ALS Bottle#: 25 Worklist Smp#: 25  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 2

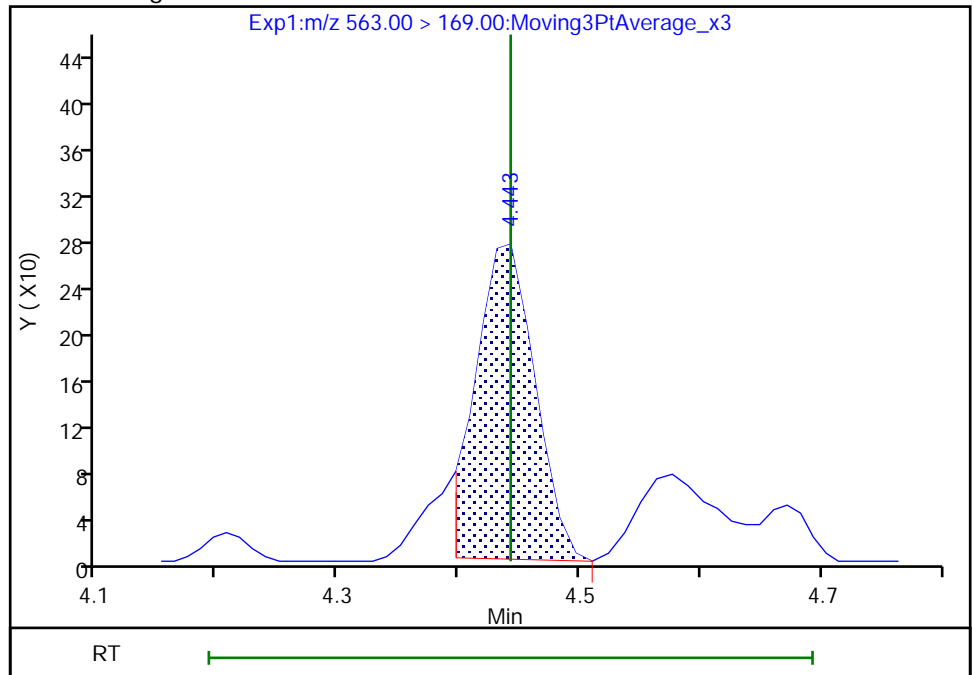
Not Detected  
Expected RT: 4.44

Processing Integration Results



Manual Integration Results

RT: 4.44  
Area: 925  
Amount: 0.011266  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 15:30:53

Audit Action: Manually Integrated

Audit Reason: Split Peak



Eurofins TestAmerica, Burlington

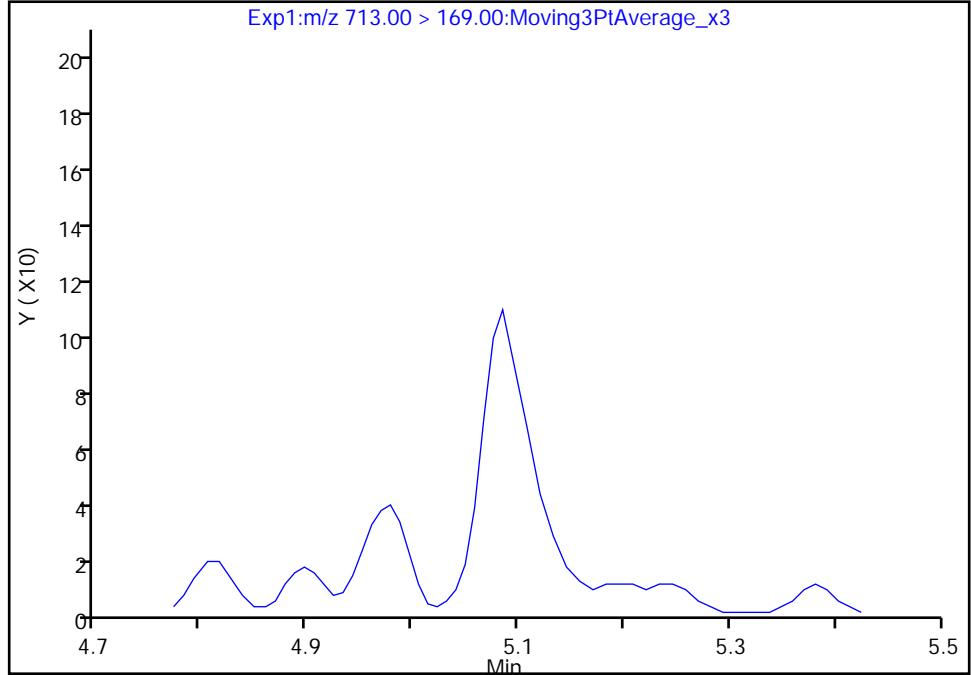
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B025.d  
Injection Date: 24-Dec-2019 17:12:42 Instrument ID: LC812  
Lims ID: 480-164221-C-14-A Lab Sample ID: 200-164221-14  
Client ID: AOI 3 GW1 DER  
Operator ID: lc812tech ALS Bottle#: 25 Worklist Smp#: 25  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 1

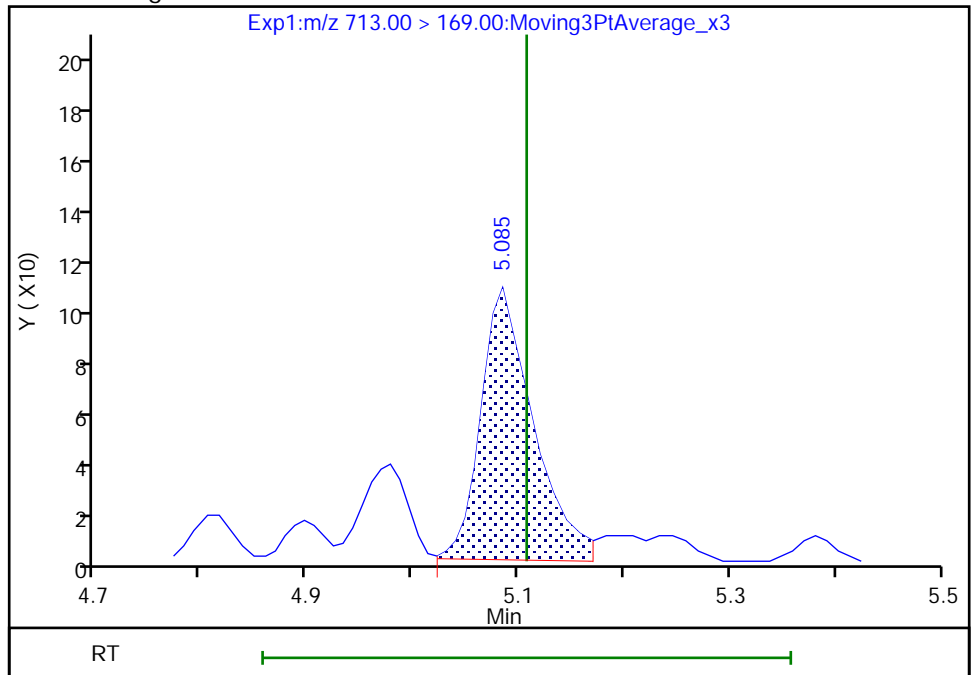
Not Detected  
Expected RT: 5.11

Processing Integration Results



Manual Integration Results

RT: 5.08  
Area: 366  
Amount: 0.006858  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 15:31:54

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

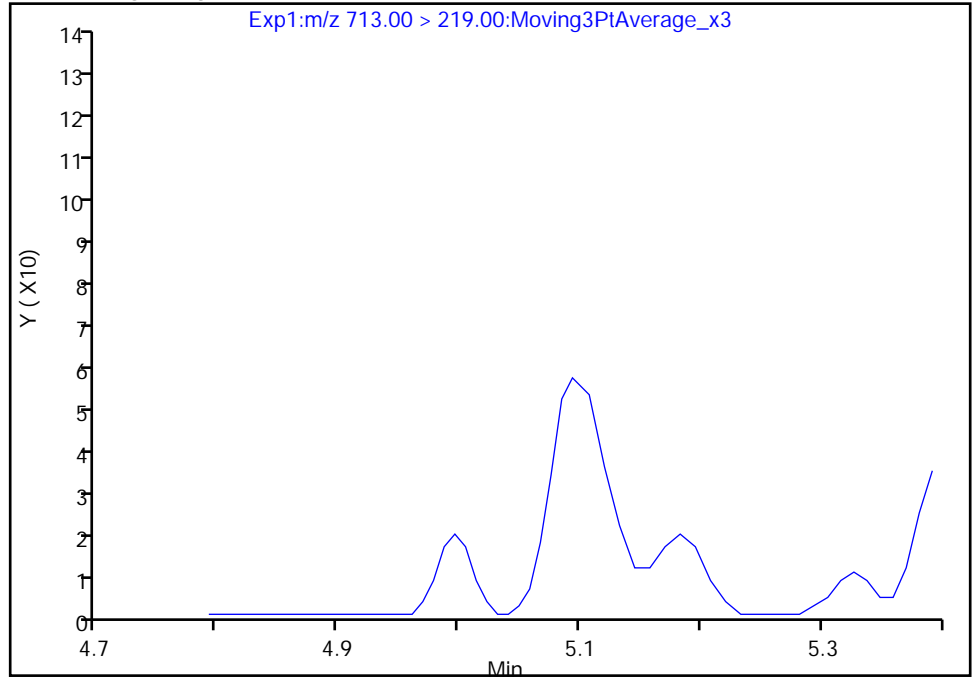
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B025.d  
Injection Date: 24-Dec-2019 17:12:42 Instrument ID: LC812  
Lims ID: 480-164221-C-14-A Lab Sample ID: 200-164221-14  
Client ID: AOI 3 GW1 DER  
Operator ID: lc812tech ALS Bottle#: 25 Worklist Smp#: 25  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 2

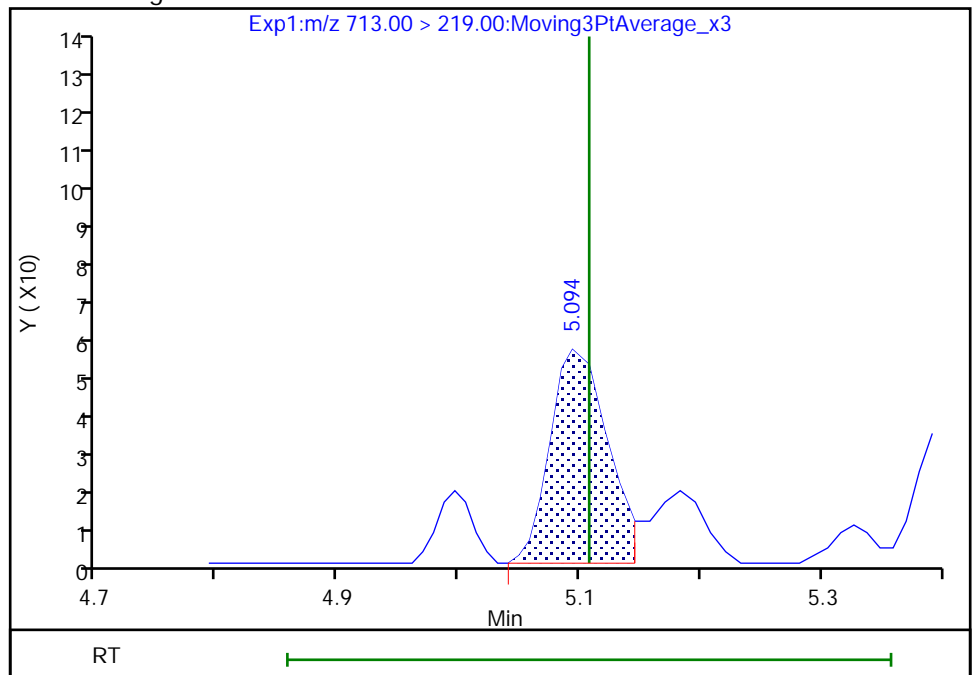
Not Detected  
Expected RT: 5.11

Processing Integration Results



Manual Integration Results

RT: 5.09  
Area: 183  
Amount: 0.006858  
Amount Units: ng/ml



Euofins TestAmerica, Burlington

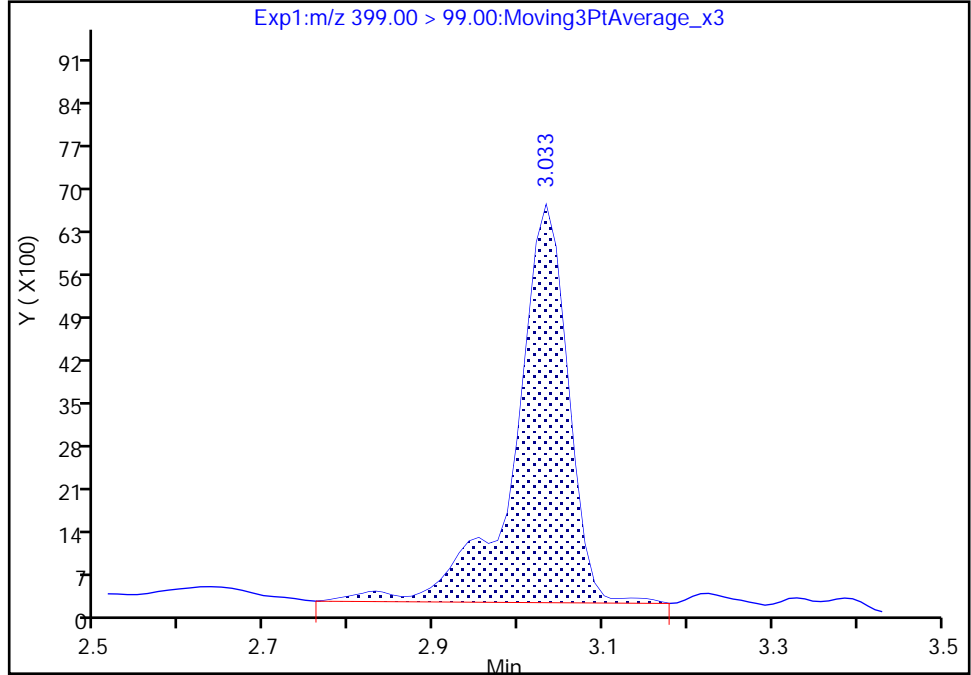
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B025.d  
Injection Date: 24-Dec-2019 17:12:42 Instrument ID: LC812  
Lims ID: 480-164221-C-14-A Lab Sample ID: 200-164221-14  
Client ID: AOI 3 GW1 DER  
Operator ID: lc812tech ALS Bottle#: 25 Worklist Smp#: 25  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

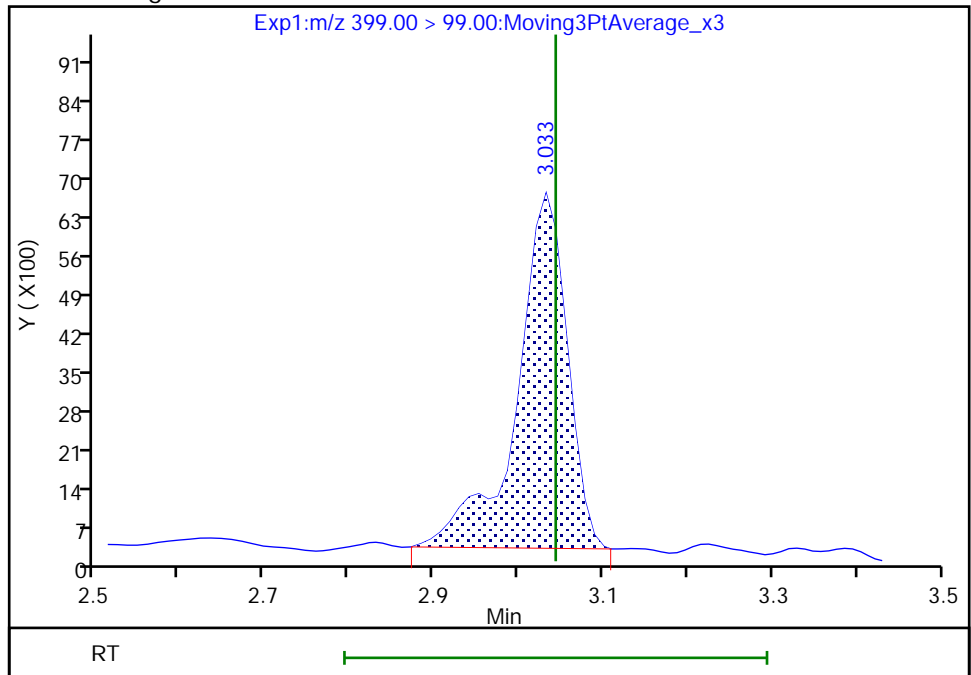
RT: 3.03  
Area: 28684  
Amount: 0.227385  
Amount Units: ng/ml

Processing Integration Results



RT: 3.03  
Area: 26702  
Amount: 0.223469  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 15:26:18

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

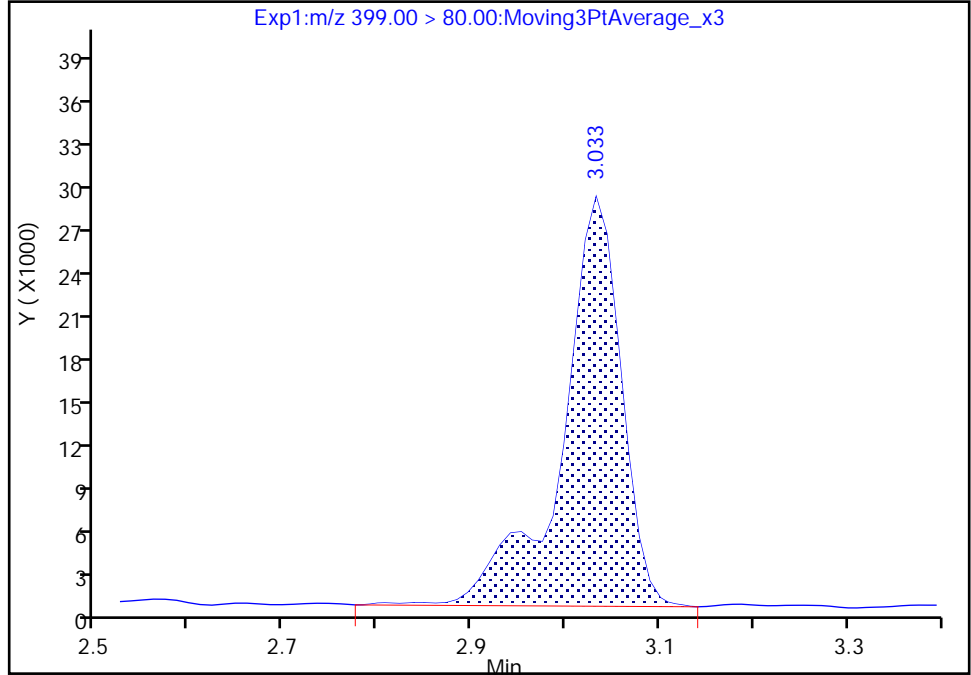
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B025.d  
Injection Date: 24-Dec-2019 17:12:42 Instrument ID: LC812  
Lims ID: 480-164221-C-14-A Lab Sample ID: 200-164221-14  
Client ID: AOI 3 GW1 DER  
Operator ID: lc812tech ALS Bottle#: 25 Worklist Smp#: 25  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

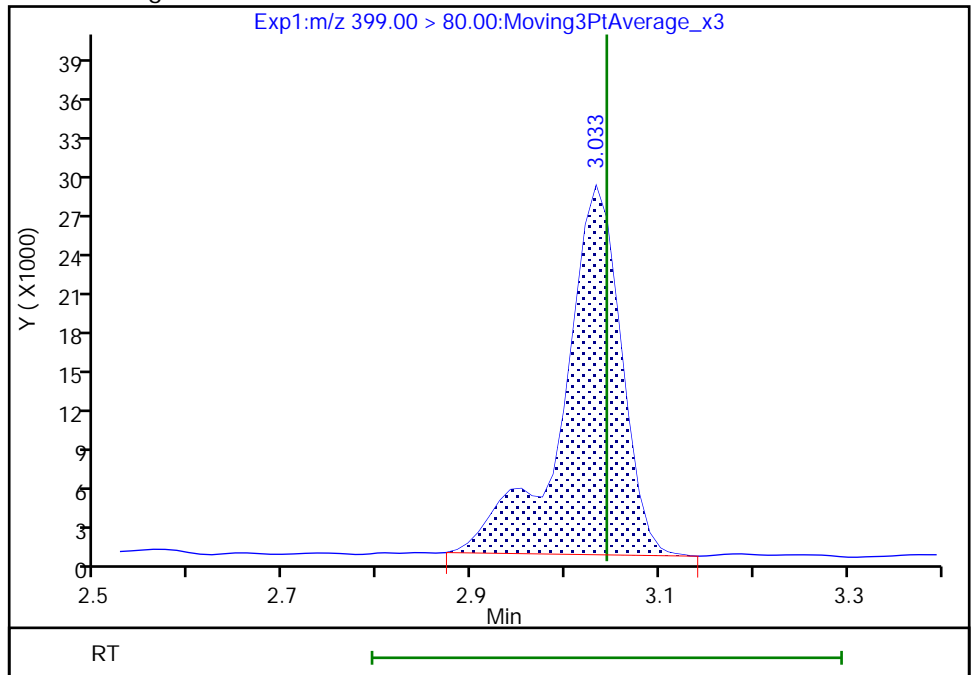
RT: 3.03  
Area: 122910  
Amount: 0.227385  
Amount Units: ng/ml

Processing Integration Results



RT: 3.03  
Area: 120793  
Amount: 0.223469  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagern, 27-Dec-2019 15:26:33

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Euofins TestAmerica, Burlington

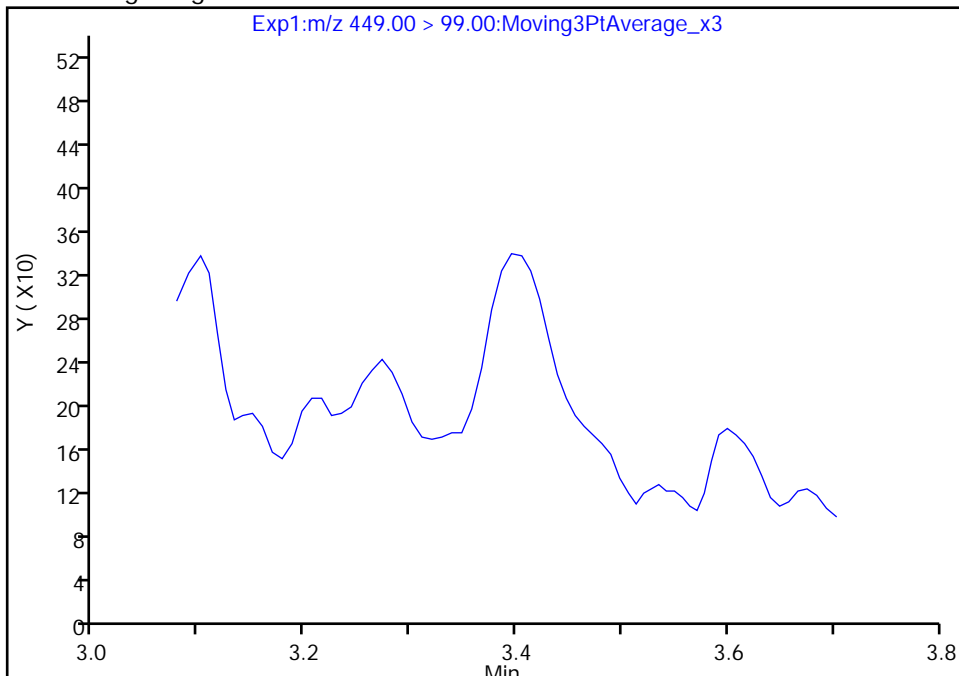
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B025.d  
Injection Date: 24-Dec-2019 17:12:42 Instrument ID: LC812  
Lims ID: 480-164221-C-14-A Lab Sample ID: 200-164221-14  
Client ID: AOI 3 GW1 DER  
Operator ID: lc812tech ALS Bottle#: 25 Worklist Smp#: 25  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

16 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 2

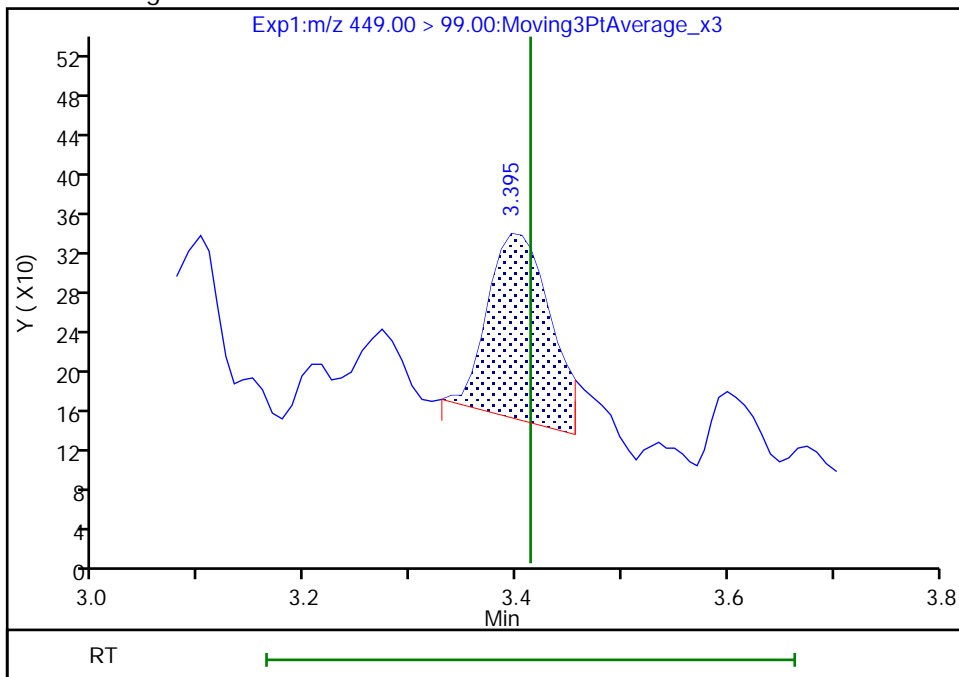
Not Detected  
Expected RT: 3.41

Processing Integration Results



RT: 3.40  
Area: 776  
Amount: 0.011741  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 15:27:50  
Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

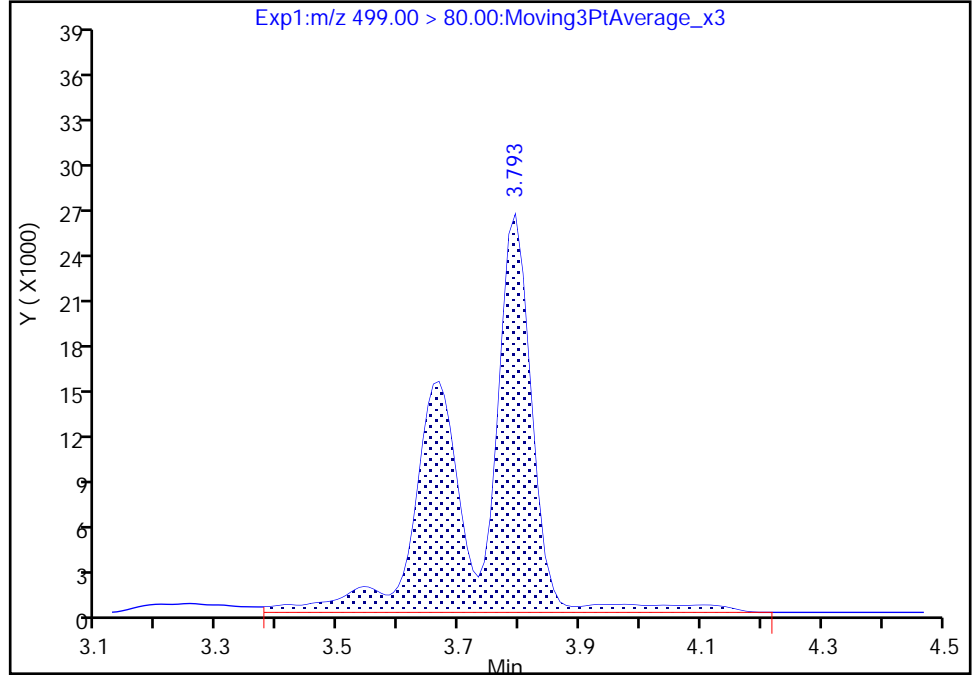
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B025.d  
Injection Date: 24-Dec-2019 17:12:42 Instrument ID: LC812  
Lims ID: 480-164221-C-14-A Lab Sample ID: 200-164221-14  
Client ID: AOI 3 GW1 DER  
Operator ID: lc812tech ALS Bottle#: 25 Worklist Smp#: 25  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

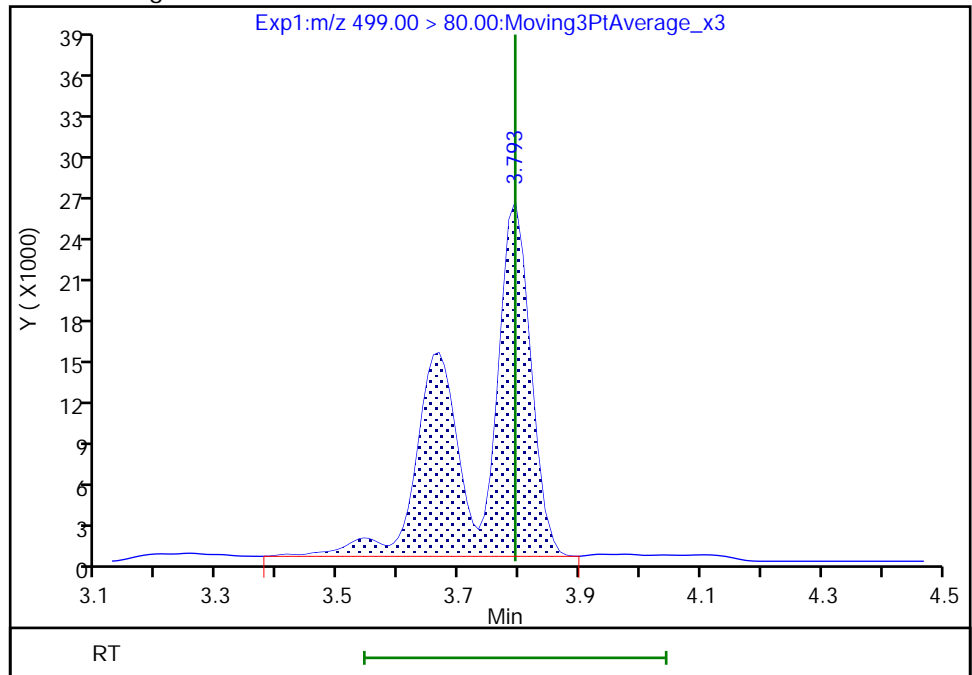
RT: 3.79  
Area: 182253  
Amount: 0.504637  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 164105  
Amount: 0.454387  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 15:28:14  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

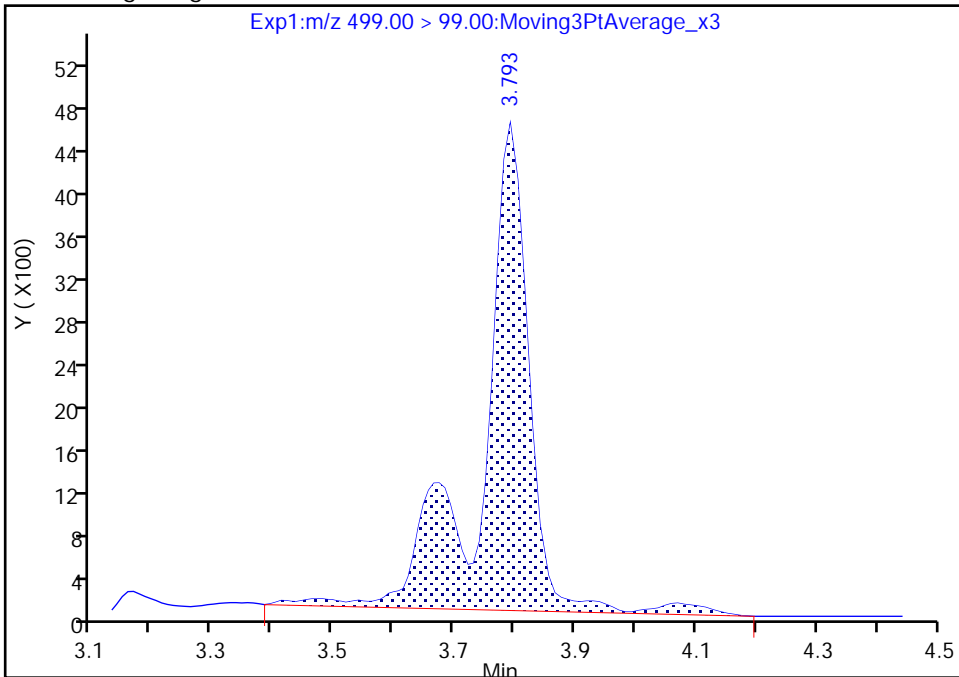
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B025.d  
Injection Date: 24-Dec-2019 17:12:42 Instrument ID: LC812  
Lims ID: 480-164221-C-14-A Lab Sample ID: 200-164221-14  
Client ID: AOI 3 GW1 DER  
Operator ID: lc812tech ALS Bottle#: 25 Worklist Smp#: 25  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

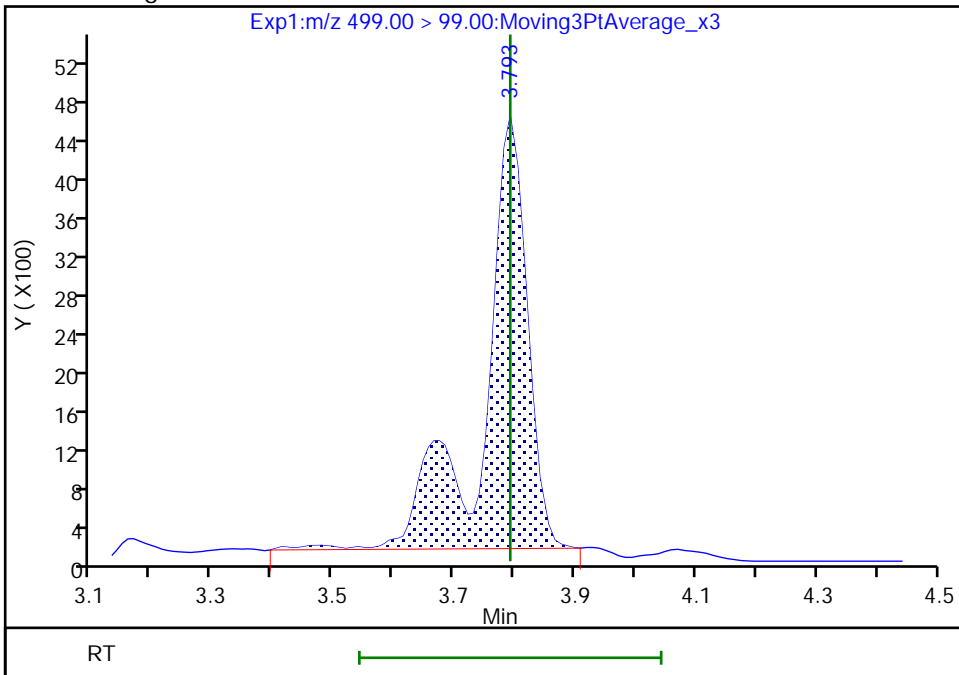
RT: 3.79  
Area: 25331  
Amount: 0.504637  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 22733  
Amount: 0.454387  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 15:28:25

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

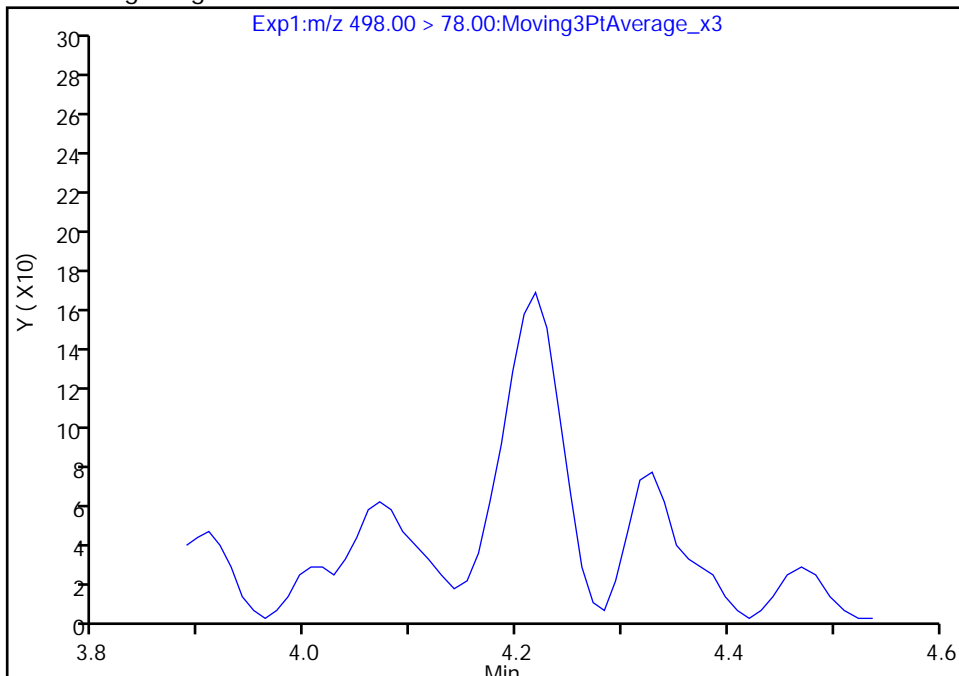
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B025.d  
Injection Date: 24-Dec-2019 17:12:42 Instrument ID: LC812  
Lims ID: 480-164221-C-14-A Lab Sample ID: 200-164221-14  
Client ID: AOI 3 GW1 DER  
Operator ID: lc812tech ALS Bottle#: 25 Worklist Smp#: 25  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

22 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

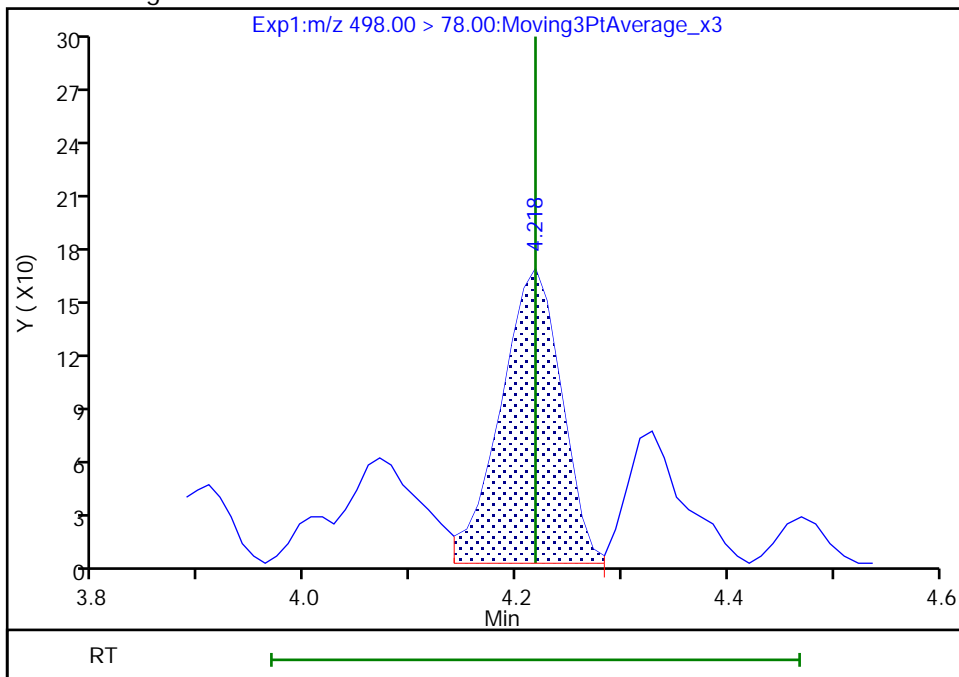
Not Detected  
Expected RT: 4.22

Processing Integration Results



Manual Integration Results

RT: 4.22  
Area: 655  
Amount: 0.002026  
Amount Units: ng/ml



Reviewer: lautenschlagery, 27-Dec-2019 15:29:40

Audit Action: Manually Integrated

Audit Reason: Baseline



Eurofins TestAmerica, Burlington

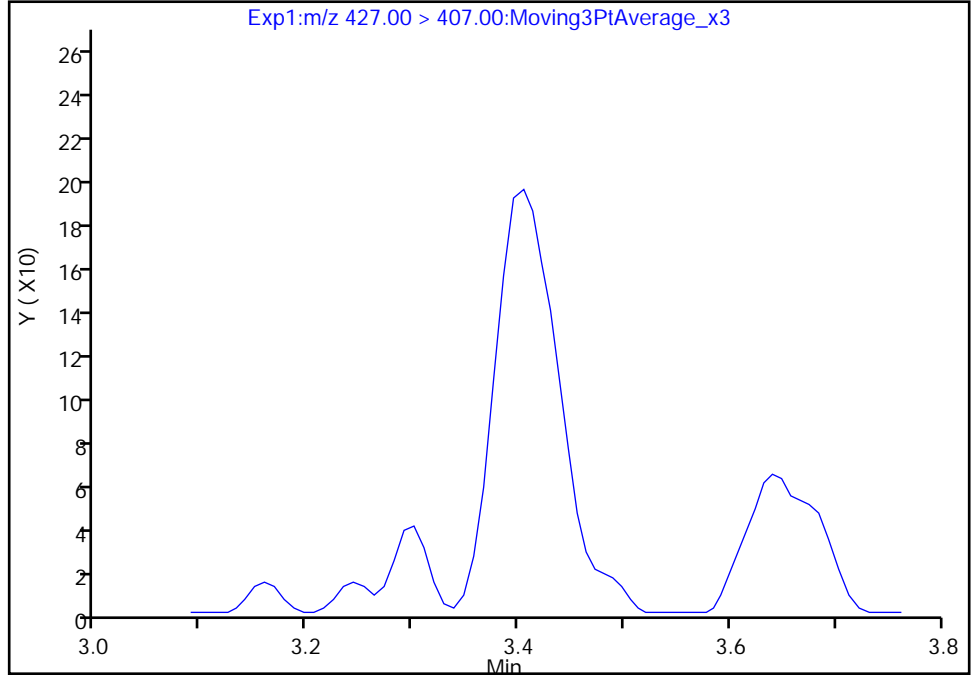
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B025.d  
Injection Date: 24-Dec-2019 17:12:42 Instrument ID: LC812  
Lims ID: 480-164221-C-14-A Lab Sample ID: 200-164221-14  
Client ID: AOI 3 GW1 DER  
Operator ID: lc812tech ALS Bottle#: 25 Worklist Smp#: 25  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

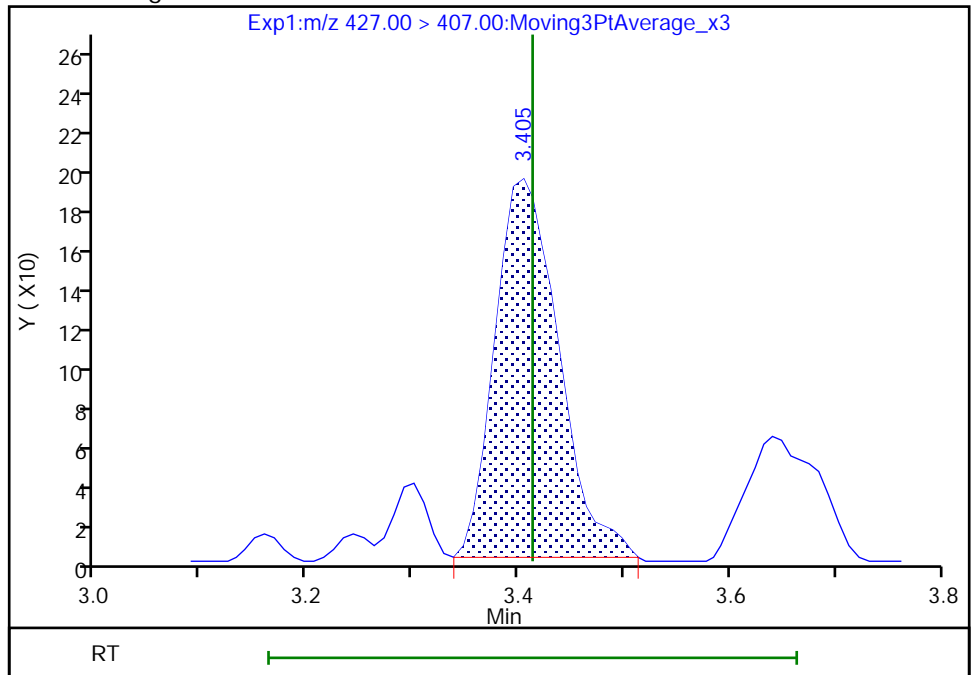
Not Detected  
Expected RT: 3.41

Processing Integration Results



Manual Integration Results

RT: 3.40  
Area: 811  
Amount: 0.011448  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 15:27:06  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

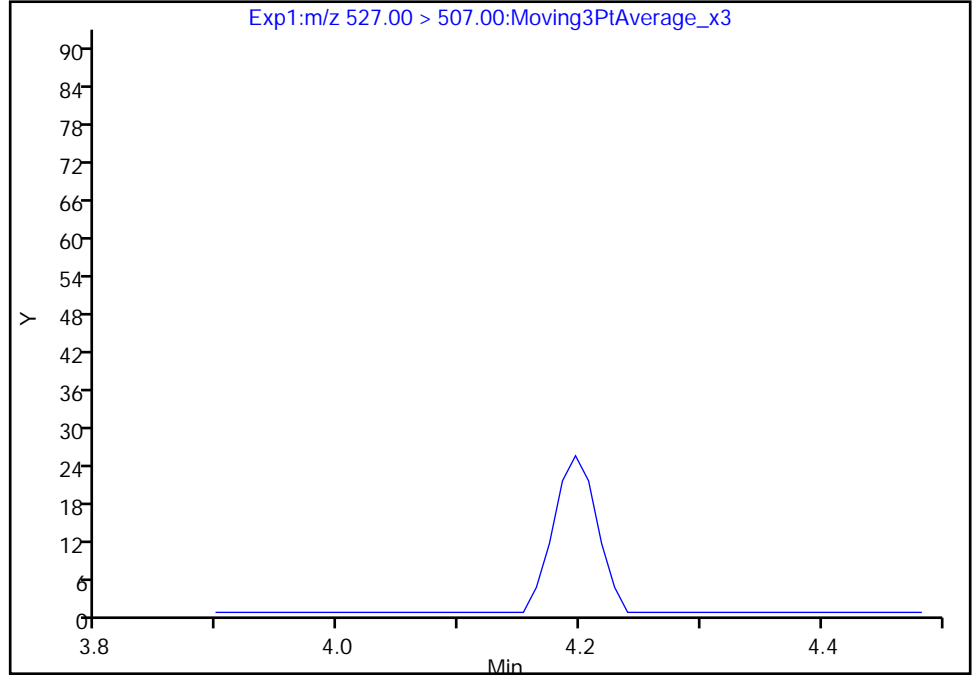
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B025.d  
Injection Date: 24-Dec-2019 17:12:42 Instrument ID: LC812  
Lims ID: 480-164221-C-14-A Lab Sample ID: 200-164221-14  
Client ID: AOI 3 GW1 DER  
Operator ID: lc812tech ALS Bottle#: 25 Worklist Smp#: 25  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

25 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:, CAS: 39108-34-4

Signal: 1

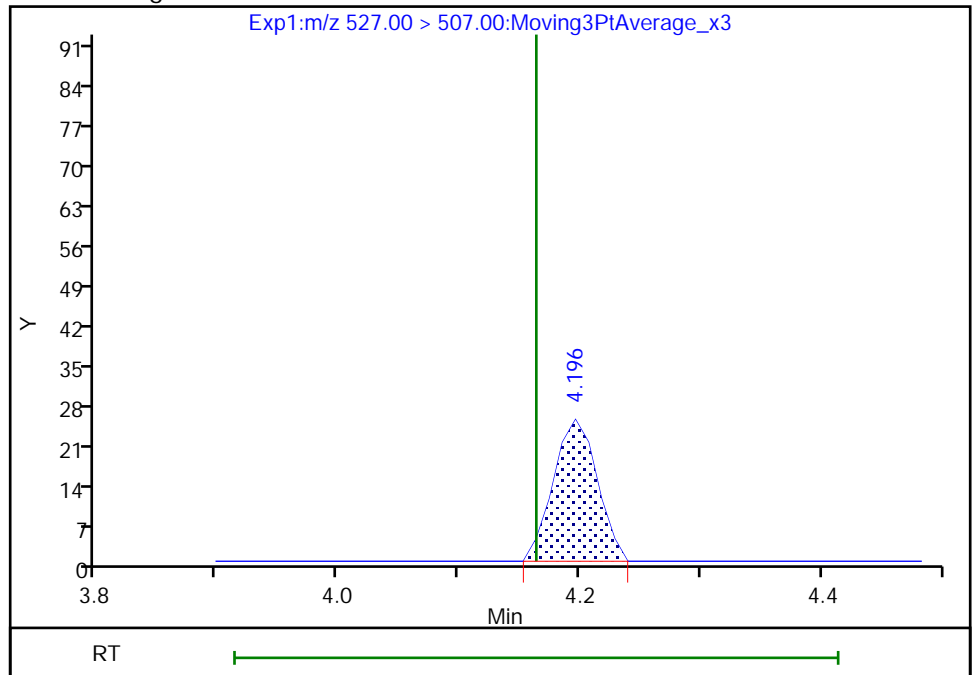
Not Detected  
Expected RT: 4.16

Processing Integration Results



Manual Integration Results

RT: 4.20  
Area: 62  
Amount: 0.001424  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 15:30:21  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AOI 1 GW3 DER Lab Sample ID: 480-164221-15  
 Matrix: Water Lab File ID: SC122319B026.d  
 Analysis Method: 537 (modified) Date Collected: 12/11/2019 09:45  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 259(mL) Date Analyzed: 12/24/2019 17:20  
 Con. Extract Vol.: 10(mL) Dilution Factor: 1  
 Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	45		1.9	0.97
2706-90-3	Perfluoropentanoic acid (PFPeA)	11		1.9	0.61
307-24-4	Perfluorohexanoic acid (PFHxA)	8.8		1.9	0.73
375-85-9	Perfluoroheptanoic acid (PFHpA)	5.8		1.9	0.88
335-67-1	Perfluorooctanoic acid (PFOA)	33		1.9	0.78
375-95-1	Perfluorononanoic acid (PFNA)	4.2		1.9	0.26
335-76-2	Perfluorodecanoic acid (PFDA)	0.80	J	1.9	0.74
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		1.9	0.75
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		1.9	0.57
72629-94-8	Perfluorotridecanoic acid (PFTriA)	ND		1.9	0.58
376-06-7	Perfluorotetradecanoic acid (PFTeA)	ND		1.9	0.89
375-73-5	Perfluorobutanesulfonic acid (PFBS)	3.4		1.9	0.47
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	5.2		1.9	0.77
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.9	0.92
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	7.8		1.9	0.59
335-77-3	Perfluorodecanesulfonic acid (PFDS)	ND		1.9	0.87
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND		9.7	9.7
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		19	1.6
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		19	1.4
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		19	5.3
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		19	2.8

FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: AOI 1 GW3 DER Lab Sample ID: 480-164221-15  
 Matrix: Water Lab File ID: SC122319B026.d  
 Analysis Method: 537 (modified) Date Collected: 12/11/2019 09:45  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 259(mL) Date Analyzed: 12/24/2019 17:20  
 Con. Extract Vol.: 10(mL) Dilution Factor: 1  
 Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	97		50-150
STL01892	13C4 PFHpA	105		50-150
STL00990	13C4 PFOA	96		50-150
STL00991	13C4 PFOS	89		50-150
STL00995	13C5 PFNA	90		50-150
STL00992	13C4 PFBA	88		25-150
STL00993	13C2 PFHxA	98		50-150
STL00996	13C2 PFDA	84		50-150
STL00997	13C2 PFUnA	83		50-150
STL00998	13C2 PFDoA	76		50-150
STL01056	13C8 FOSA	75		25-150
STL01893	13C5 PFPeA	104		25-150
STL02116	13C2 PFTeDA	74		50-150
STL02118	d3-NMeFOSAA	77		50-150
STL02117	d5-NEtFOSAA	74		50-150
STL02279	M2-6:2 FTS	80		25-150
STL02280	M2-8:2 FTS	83		25-150
STL02337	13C3 PFBS	109		50-150

Eurofins TestAmerica, Burlington  
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B026.d  
 Lims ID: 480-164221-C-15-A  
 Client ID: AOI 1 GW3 DER  
 Sample Type: Client  
 Inject. Date: 24-Dec-2019 17:20:53 ALS Bottle#: 26 Worklist Smp#: 26  
 Injection Vol: 20.0 ul Dil. Factor: 1.0000  
 Sample Info: 480-164221-C-15-A  
 Misc. Info.: 200-0039355-026 Plate: 1 Rack: 2  
 Operator ID: lc812tech Instrument ID: LC812  
 Method: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\PFC\_LC812.m  
 Limit Group: LC\_PFC\_ICAL  
 Last Update: 31-Dec-2019 08:24:59 Calib Date: 06-Dec-2019 15:13:26  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Column 1 : C-18 ( 4.60 mm) Det: EXP1  
 Process Host: CTX0330

First Level Reviewer: lautenschlagery Date: 27-Dec-2019 15:38:35  
 Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										
217.00 > 172.00	1.908	1.908	0.0	0.558	1498527	2.20		87.9	2379	
2 Perfluorobutanoic acid										
212.90 > 169.00	1.908	1.908	0.0	1.000	689279	1.16			169	
D 3 13C5 PFPeA										
267.90 > 223.00	2.258	2.257	0.001	0.660	1349732	2.59		104	2865	
4 Perfluoropentanoic acid										
262.90 > 219.00	2.258	2.271	-0.013	1.000	178781	0.2924			5.1	
D 47 13C3 PFBS										
301.90 > 80.00	2.271	2.285	-0.014	0.664	1571718	2.53		109	167056	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.285	2.285	0.0	1.006	64734	0.0881	Target=2.03		66.0	
298.90 > 99.00	2.285	2.285	0.0	1.006	32147		2.01(1.01-3.04)		11.8	
D 7 13C2 PFHxA										
315.00 > 270.00	2.648	2.648	0.0	0.774	1427396	2.45		98.2	5146	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.648	2.661	-0.013	1.000	133165	0.2284	Target=13.76		25.7	
313.00 > 119.00	2.648	2.661	-0.013	1.000	11259		11.83(6.88-20.64)		34.2	
D 11 18O2 PFHxS										
403.00 > 84.00	3.044	3.044	0.0	0.890	1123891	2.29		96.7	5702	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.044	3.044	0.0	1.000	71963	0.1338	Target=3.90		110	M
399.00 > 99.00	3.033	3.044	-0.011	0.996	15348		4.69(1.95-5.85)		29.7	M
D 9 13C4 PFHpA										
367.00 > 322.00	3.044	3.044	0.0	0.890	1445471	2.62		105	6957	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.044	3.044	0.0	1.000	92252	0.1509	Target=3.95		26.6	
363.00 > 169.00	3.044	3.044	0.0	1.000	27858		3.31(1.97-5.92)		81.8	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
13 1H,1H,2H,2H-perfluorooctanesulfoni										M
427.00 > 407.00	3.413	3.413	0.0	1.000	635	0.0100		11.4		M
D 12 M2-6:2 FTS										
429.00 > 81.00	3.413	3.413	0.0	0.998	159555	1.89		79.6	588	
15 Perfluorooctanoic acid										M
413.00 > 369.00	3.430	3.430	0.0	1.002	528772	0.8510	Target=2.40	151		M
413.00 > 169.00	3.422	3.430	-0.008	1.000	257425		2.05(1.20-3.60)	883		M
D 14 13C4 PFOA										
417.00 > 372.00	3.422	3.430	-0.008	1.000	1400120	2.39		95.7	4124	
* 62 13C2 PFOA										
415.00 > 370.00	3.422	3.430	-0.008		1609521	2.50			6453	
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.793	0.0	1.108	831193	2.13		89.2	3244	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.793	3.793	0.0	1.000	75867	0.2021	Target=5.74	206		M
499.00 > 99.00	3.793	3.793	0.0	1.000	9936		7.64(2.87-8.61)	43.2		M
D 19 13C5 PFNA										
468.00 > 423.00	3.817	3.817	0.0	1.116	1204614	2.24		89.6	5880	
20 Perfluorononanoic acid										
463.00 > 419.00	3.817	3.817	0.0	1.000	50828	0.1076	Target=7.01	23.3		
463.00 > 169.00	3.817	3.817	0.0	1.000	8451		6.01(3.50-10.51)	52.1		
D 23 13C2 PFDA										
515.00 > 470.00	4.164	4.164	0.0	1.217	1111886	2.10		83.9	4382	
24 Perfluorodecanoic acid										M
513.00 > 469.00	4.164	4.164	0.0	1.000	8902	0.0207	Target=7.28	8.5		M
513.00 > 169.00	4.164	4.164	0.0	1.000	1006		8.85(3.64-10.91)	8.4		M
D 26 M2-8:2 FTS										
529.00 > 81.00	4.164	4.175	-0.011	1.217	199607	1.99		82.9	887	
D 21 13C8 FOSA										
506.00 > 78.00	4.218	4.218	0.0	1.233	1306843	1.89		75.4	4499	
22 Perfluorooctanesulfonamide										M
498.00 > 78.00	4.229	4.218	0.011	1.003	549	0.001055		9.3		M
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.305	4.305	0.0	1.258	98551	1.93		77.2	959	
28 N-methylperfluorooctanesulfonamido										M
570.00 > 419.00	4.305	4.317	-0.012	1.000	200	0.005839		2.6		M
D 30 13C2 PFUnA										
565.00 > 520.00	4.443	4.443	0.0	1.298	931001	2.07		82.6	6170	
31 Perfluoroundecanoic acid										M
563.00 > 519.00	4.443	4.443	0.0	1.000	4782	0.0151	Target=5.78	5.7		M
563.00 > 169.00	4.431	4.443	-0.012	0.997	616		7.76(2.89-8.67)	6.3		M
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.456	4.456	0.0	1.302	104761	1.85		74.1	932	
37 Perfluorododecanoic acid										M
613.00 > 569.00	4.693	4.683	0.010	1.002	1261	0.003652	Target=5.13	0.5		M
613.00 > 169.00	4.693	4.683	0.010	1.002	211		5.98(2.56-7.69)	3.1		M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 36 13C2 PFDaA										
615.00 > 570.00	4.683	4.683	0.0	1.369	934090	1.89		75.6	4845	
42 Perfluorotetradecanoic acid										M
713.00 > 169.00	5.118	5.108	0.010	1.002	257	0.004190	Target=1.05		5.5	M
713.00 > 219.00	5.092	5.108	-0.016	0.997	252		1.02(0.52-1.57)		8.2	M
D 43 13C2 PFTeDA										
715.00 > 670.00	5.106	5.108	-0.002	1.492	763313	1.84		73.7	6747	

**QC Flag Legend**

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B026.d

Injection Date: 24-Dec-2019 17:20:53

Instrument ID: LC812

Lims ID: 480-164221-C-15-A

Lab Sample ID: 200-164221-15

Client ID: AOI 1 GW3 DER

Operator ID: lc812tech

ALS Bottle#: 26

Worklist Smp#: 26

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

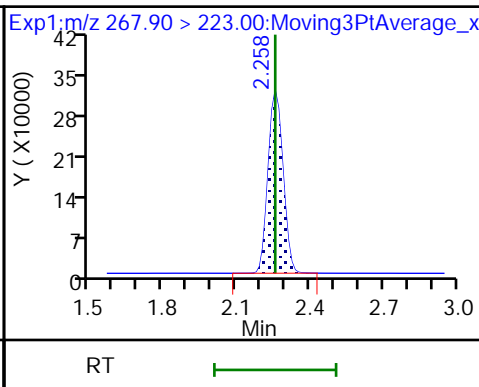
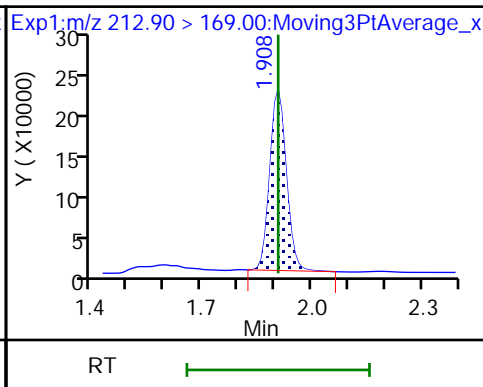
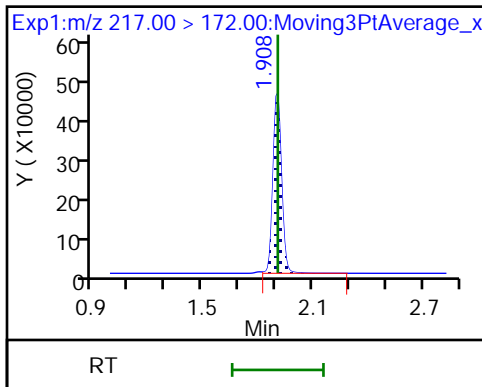
Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

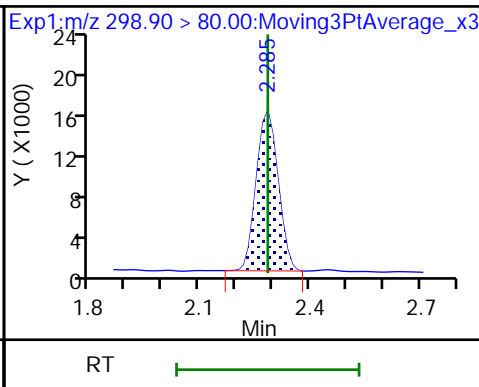
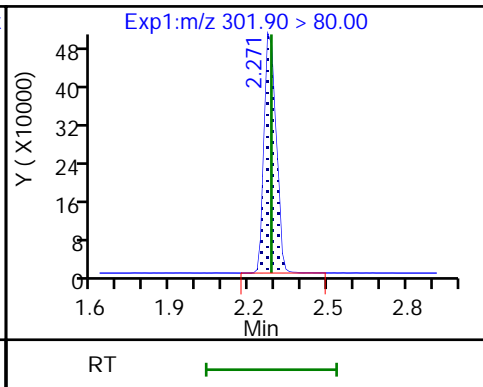
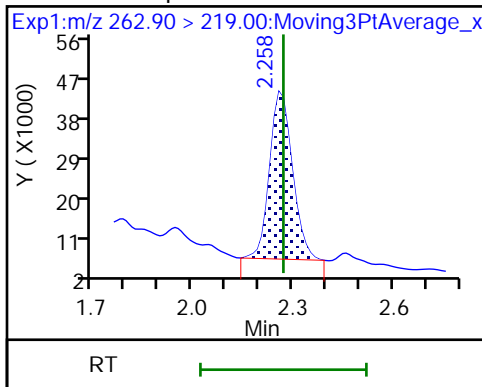
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 47 13C3 PFBS

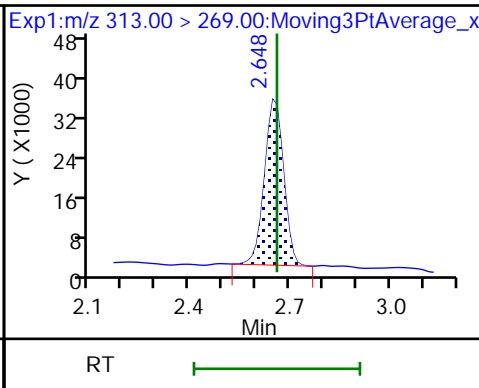
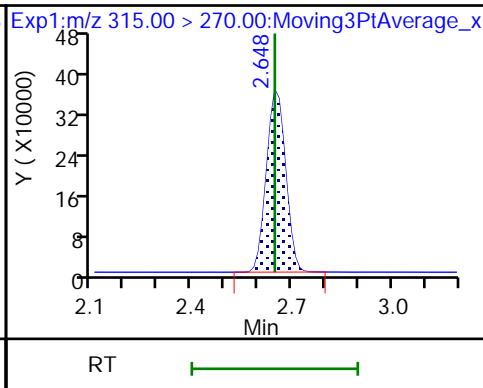
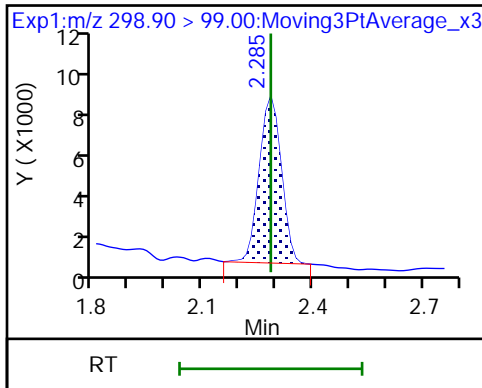
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 7 13C2 PFHxA

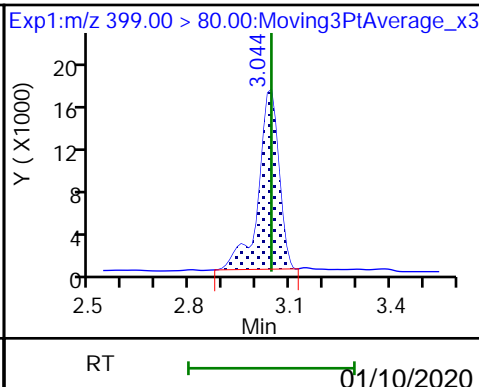
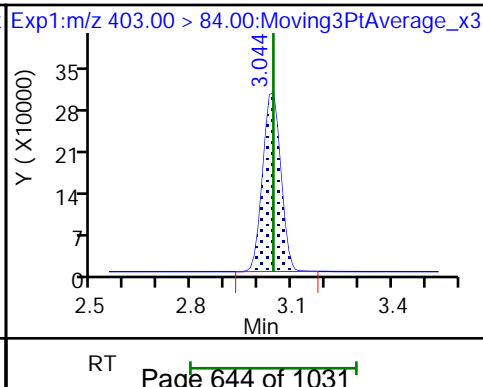
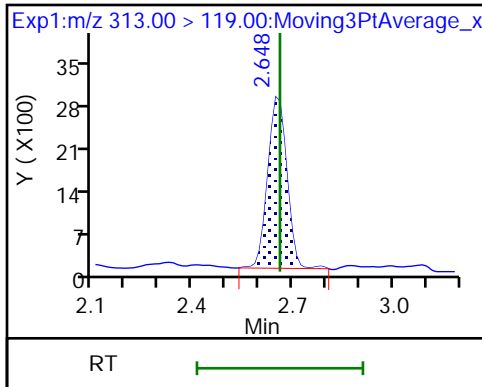
6 Perfluorohexanoic acid



6 Perfluorohexanoic acid

D 11 18O2 PFHxS

8 Perfluorohexanesulfonic acid (M)

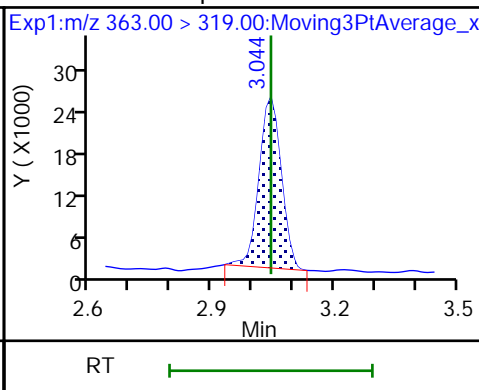
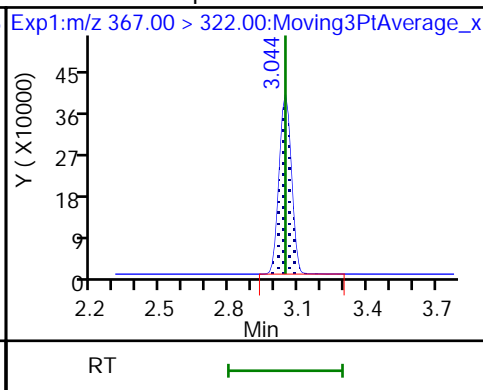
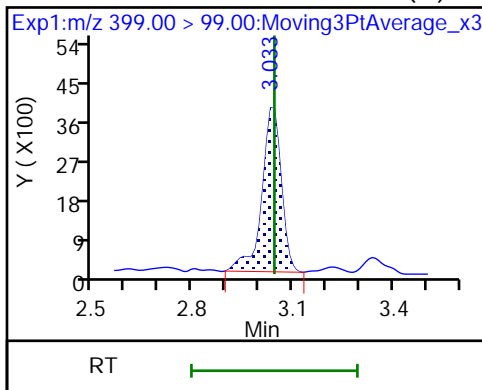




8 Perfluorohexanesulfonic acid (M)

D 9 13C4 PFHpA

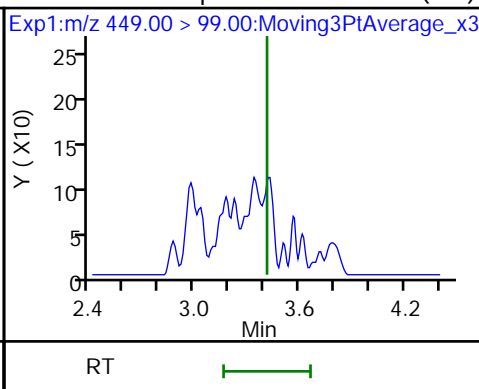
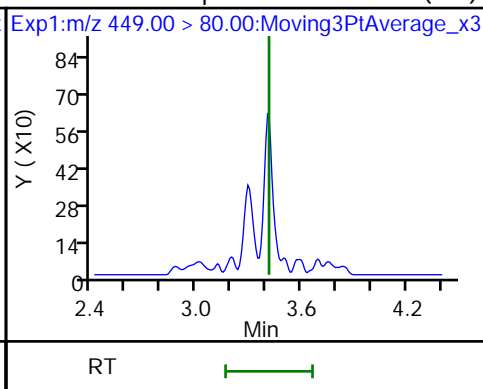
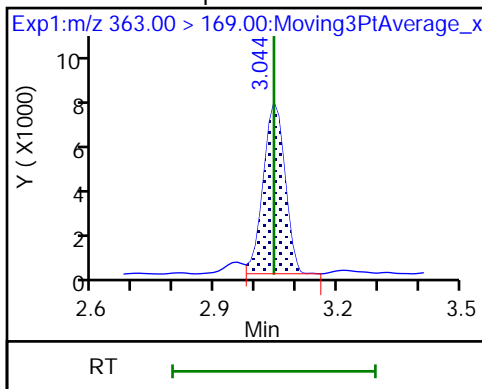
10 Perfluoroheptanoic acid



10 Perfluoroheptanoic acid

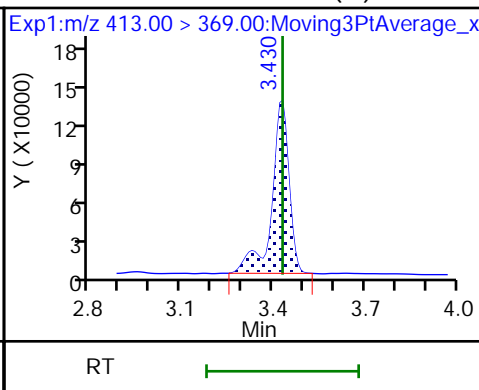
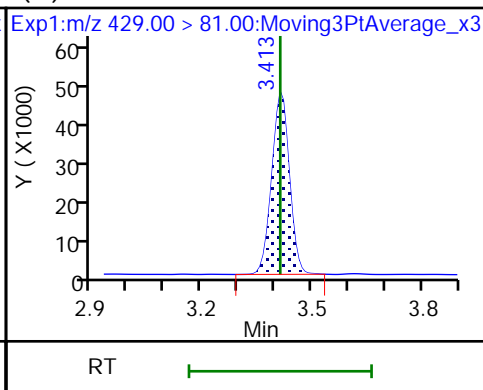
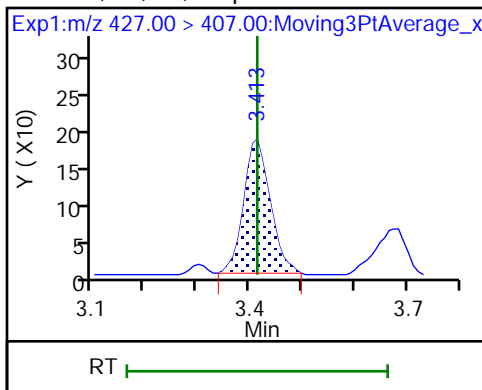
16 Perfluoroheptanesulfonic acid (ND)

16 Perfluoroheptanesulfonic acid (ND)



13 1H,1H,2H,2H-perfluorooctanesulfonate (M) M2-6:2 FTS

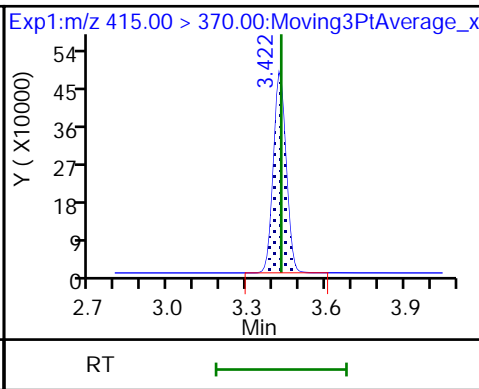
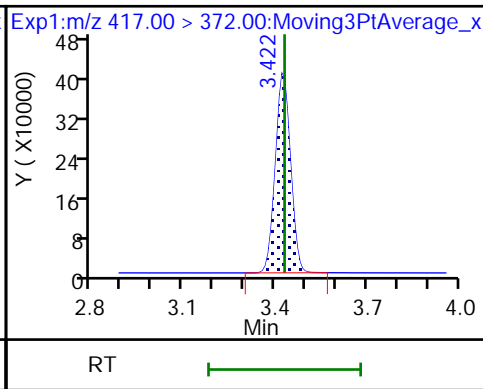
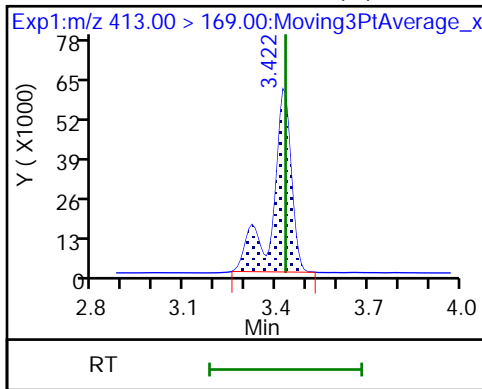
15 Perfluorooctanoic acid (M)



15 Perfluorooctanoic acid (M)

D 14 13C4 PFOA

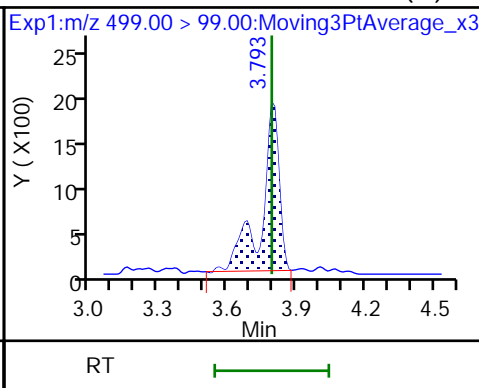
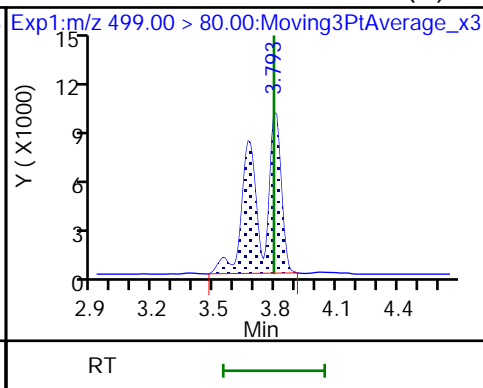
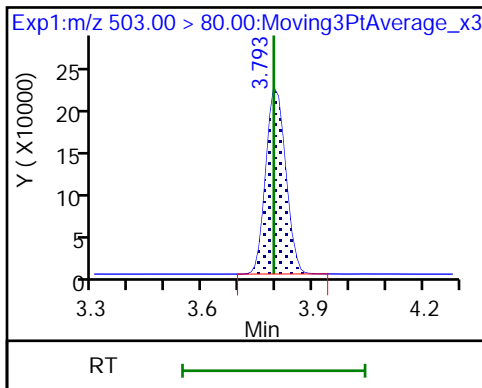
\* 62 13C2 PFOA



D 18 13C4 PFOS

17 Perfluorooctanesulfonic acid (M)

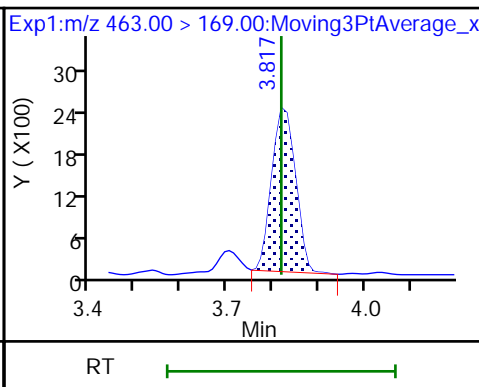
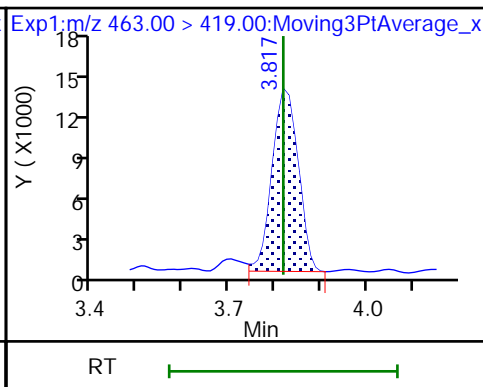
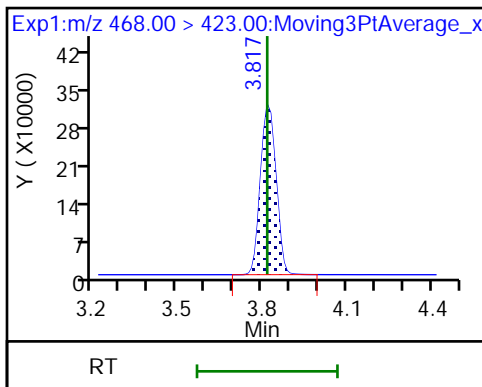
17 Perfluorooctanesulfonic acid (M)



D 19 13C5 PFNA

20 Perfluorononanoic acid

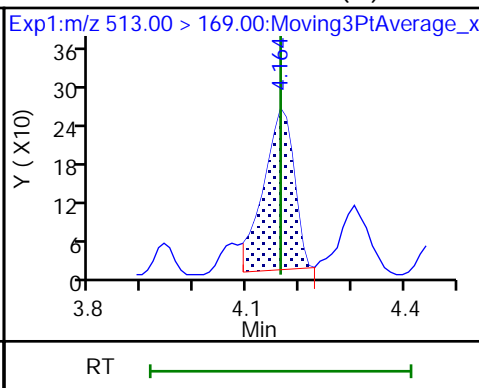
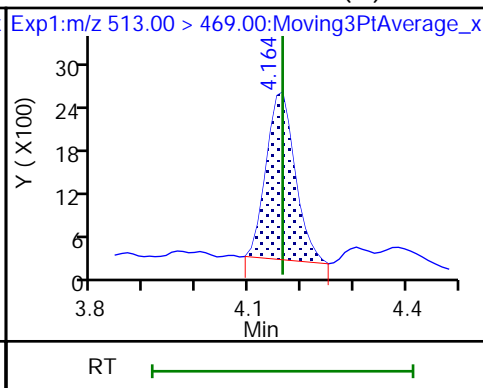
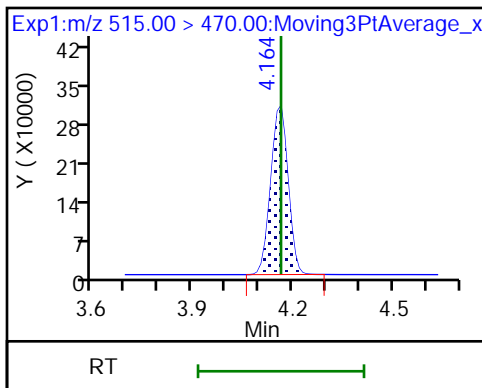
20 Perfluorononanoic acid



D 23 13C2 PFDA

24 Perfluorodecanoic acid (M)

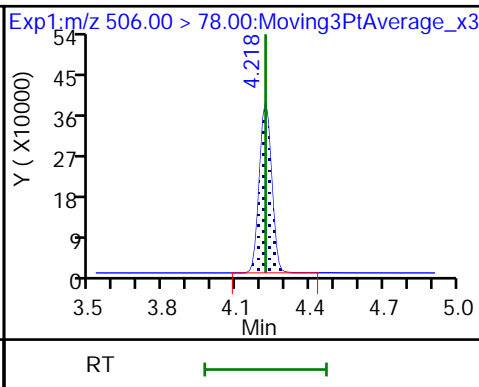
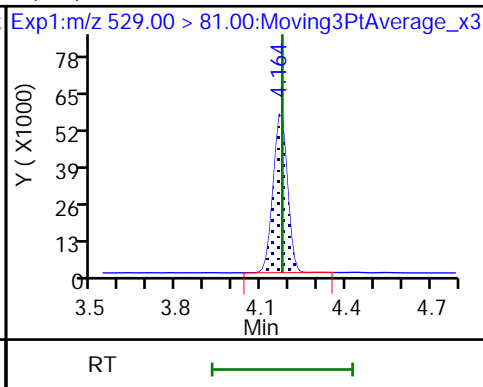
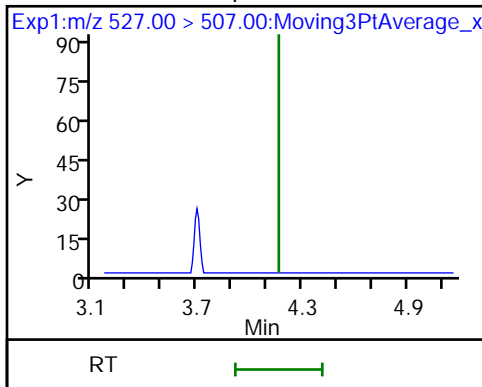
24 Perfluorodecanoic acid (M)



25 1H,1H,2H,2H-perfluorodecanesulfonic acid (M)

25 1H,1H,2H,2H-perfluorodecanesulfonic acid (M)

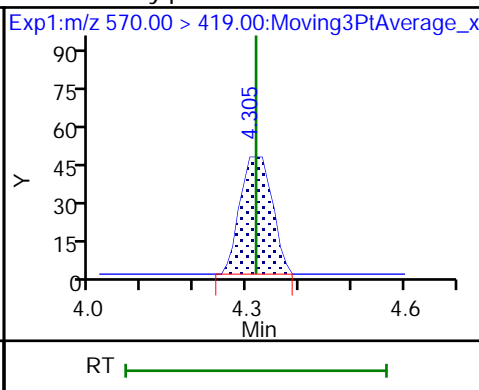
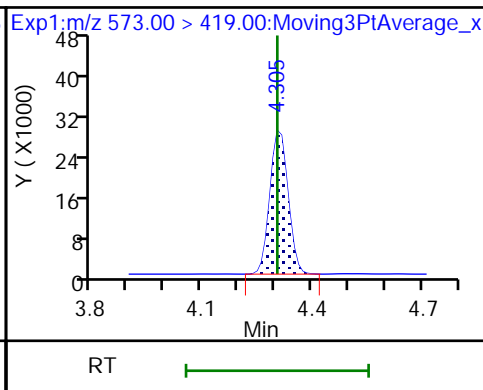
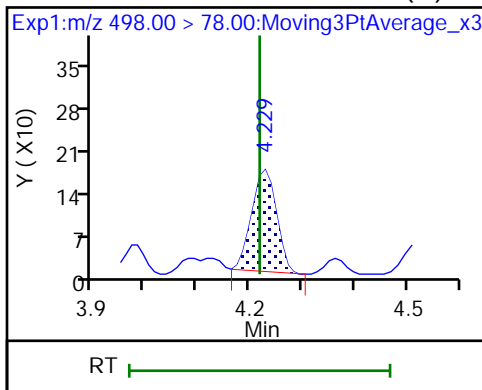
D 21 13C8 FOSA



22 Perfluorooctanesulfonamide (M)

D 27 d3-NMeFOSAA

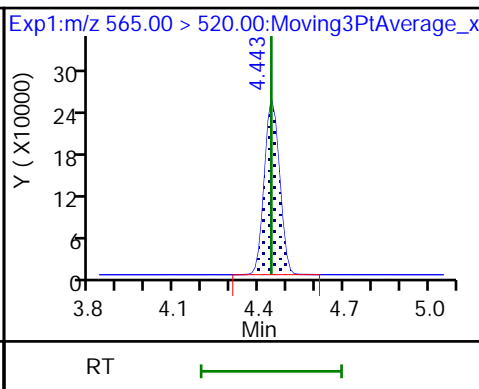
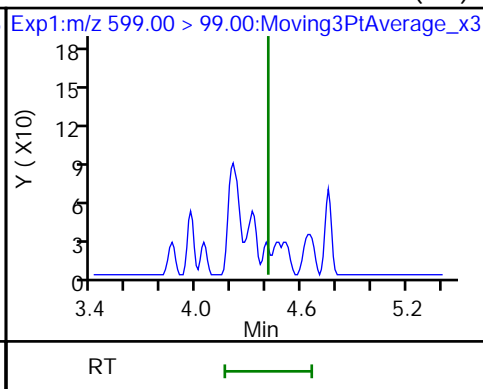
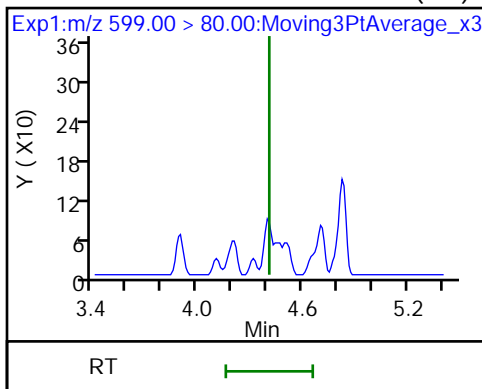
28 N-methylperfluorooctanesulfonamido (M)



29 Perfluorodecanesulfonic acid (ND)

29 Perfluorodecanesulfonic acid (ND)

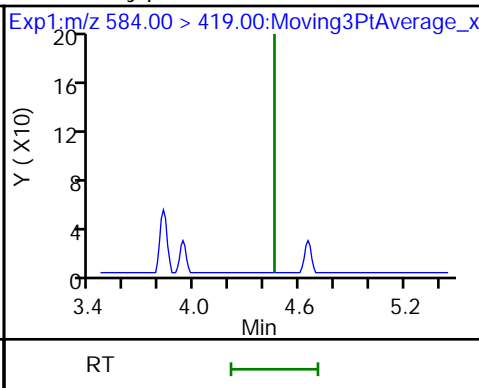
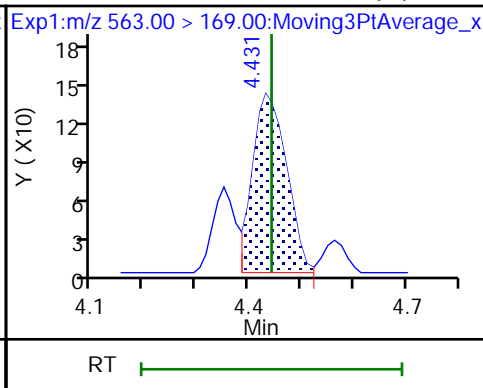
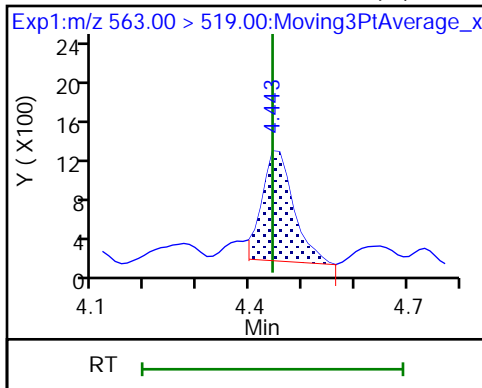
D 30 13C2 PFUoA



31 Perfluoroundecanoic acid (M)

31 Perfluoroundecanoic acid (M)

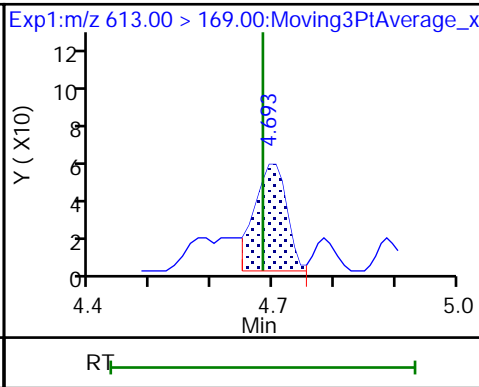
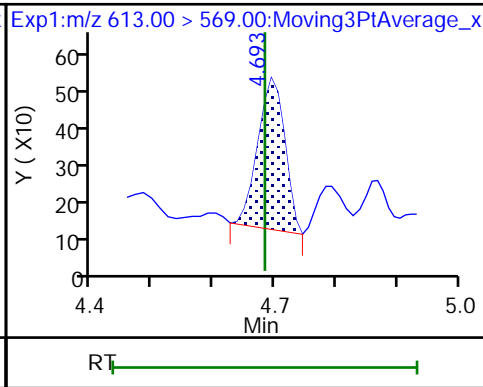
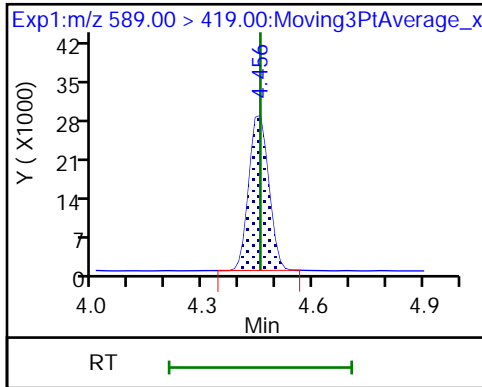
33 N-ethylperfluorooctanesulfonamidoa (ND)



D 32 d5-NEtFOSAA

37 Perfluorododecanoic acid (M)

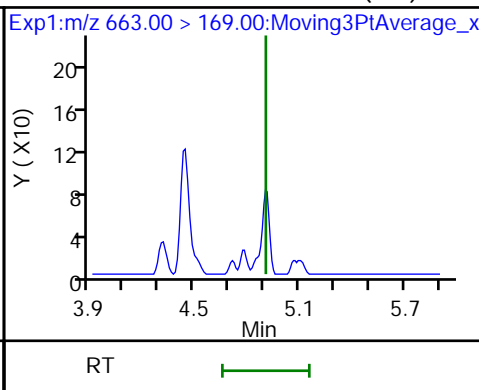
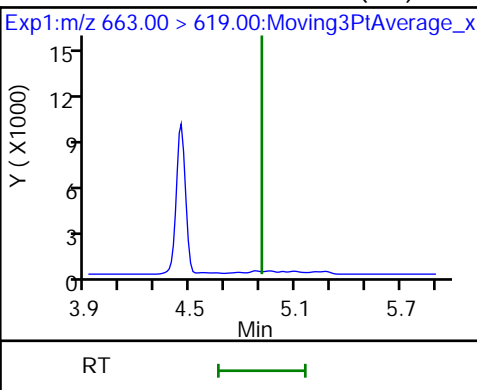
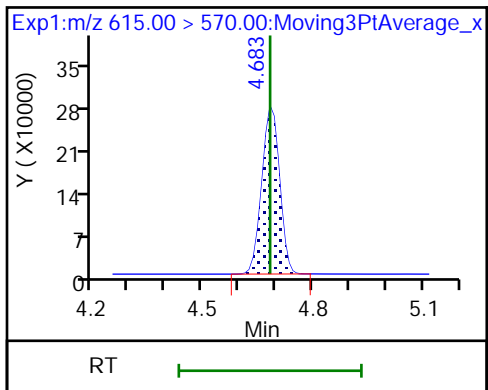
37 Perfluorododecanoic acid (M)



D 36 13C2 PFDaA

41 Perfluorotridecanoic acid (ND)

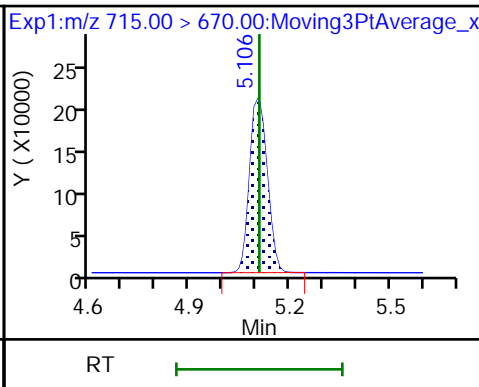
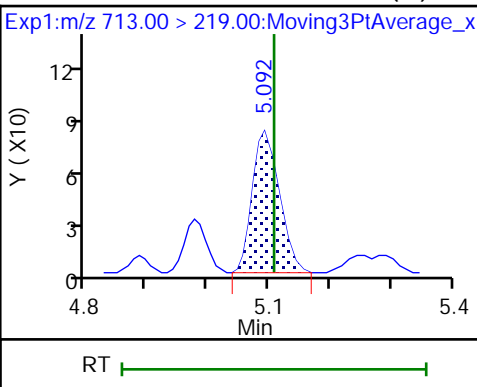
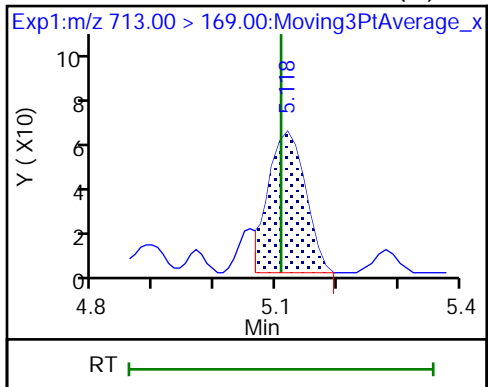
41 Perfluorotridecanoic acid (ND)



42 Perfluorotetradecanoic acid (M)

42 Perfluorotetradecanoic acid (M)

D 43 13C2 PFTeDA



Eurofins TestAmerica, Burlington

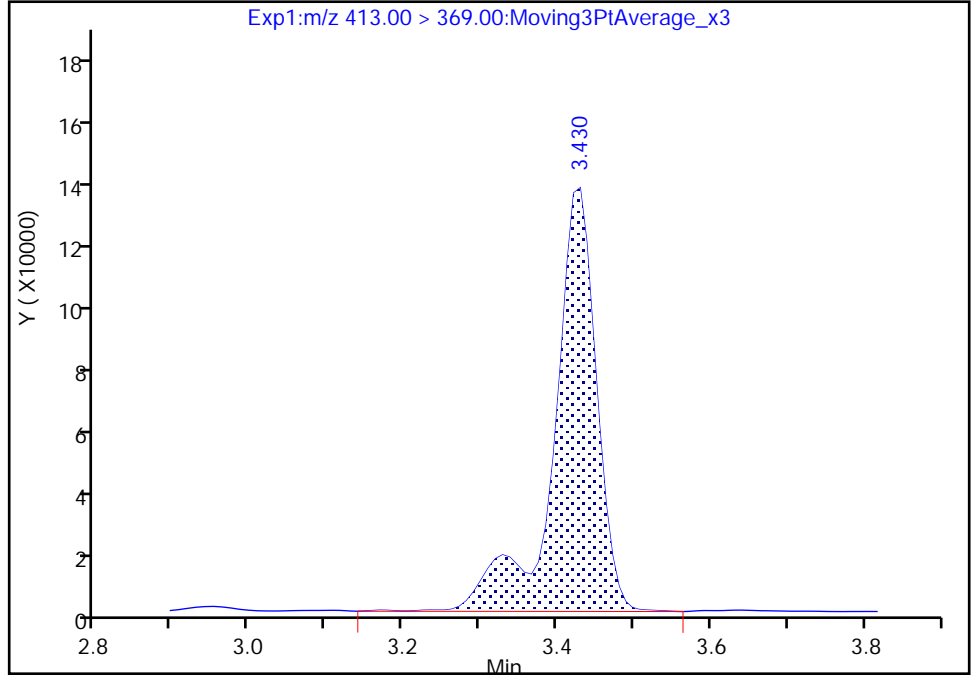
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B026.d  
Injection Date: 24-Dec-2019 17:20:53 Instrument ID: LC812  
Lims ID: 480-164221-C-15-A Lab Sample ID: 200-164221-15  
Client ID: AOI 1 GW3 DER  
Operator ID: lc812tech ALS Bottle#: 26 Worklist Smp#: 26  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

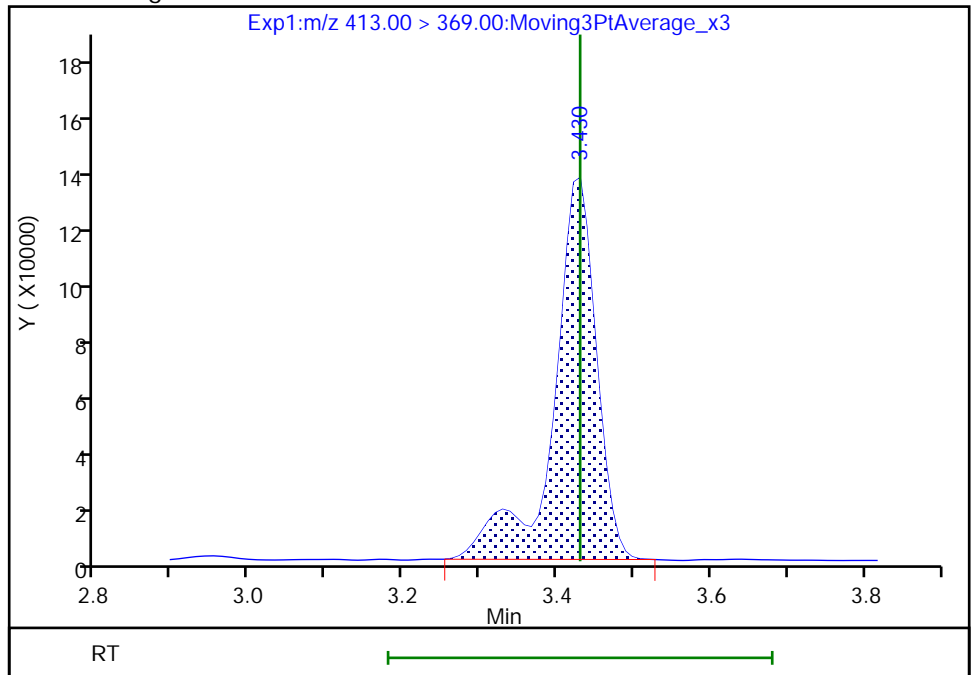
RT: 3.43  
Area: 536550  
Amount: 0.863471  
Amount Units: ng/ml

Processing Integration Results



RT: 3.43  
Area: 528772  
Amount: 0.850954  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 15:37:31  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

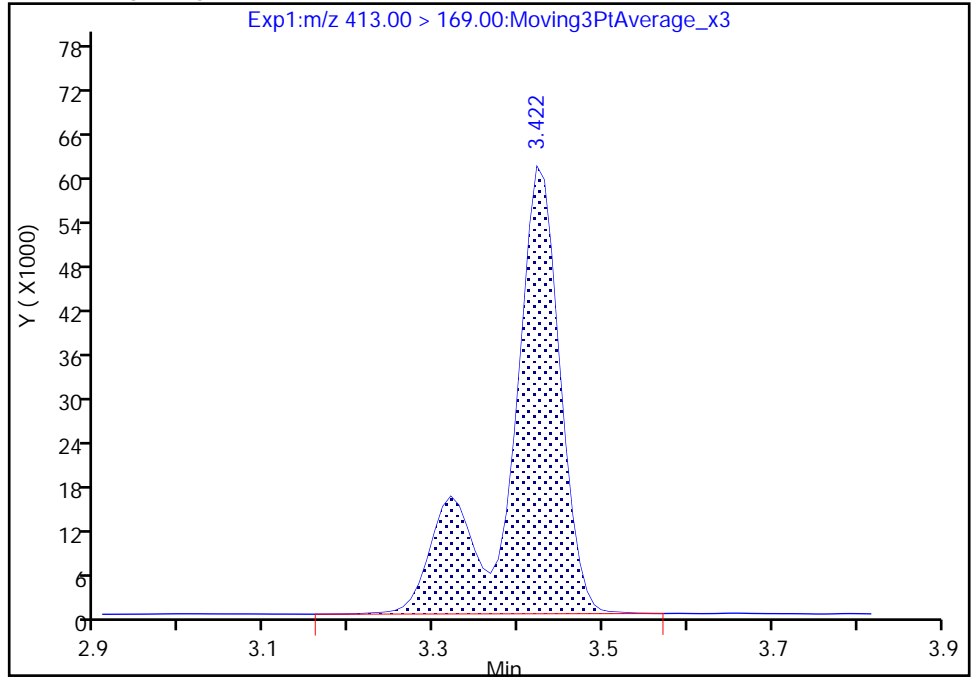
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B026.d  
Injection Date: 24-Dec-2019 17:20:53 Instrument ID: LC812  
Lims ID: 480-164221-C-15-A Lab Sample ID: 200-164221-15  
Client ID: AOI 1 GW3 DER  
Operator ID: lc812tech ALS Bottle#: 26 Worklist Smp#: 26  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

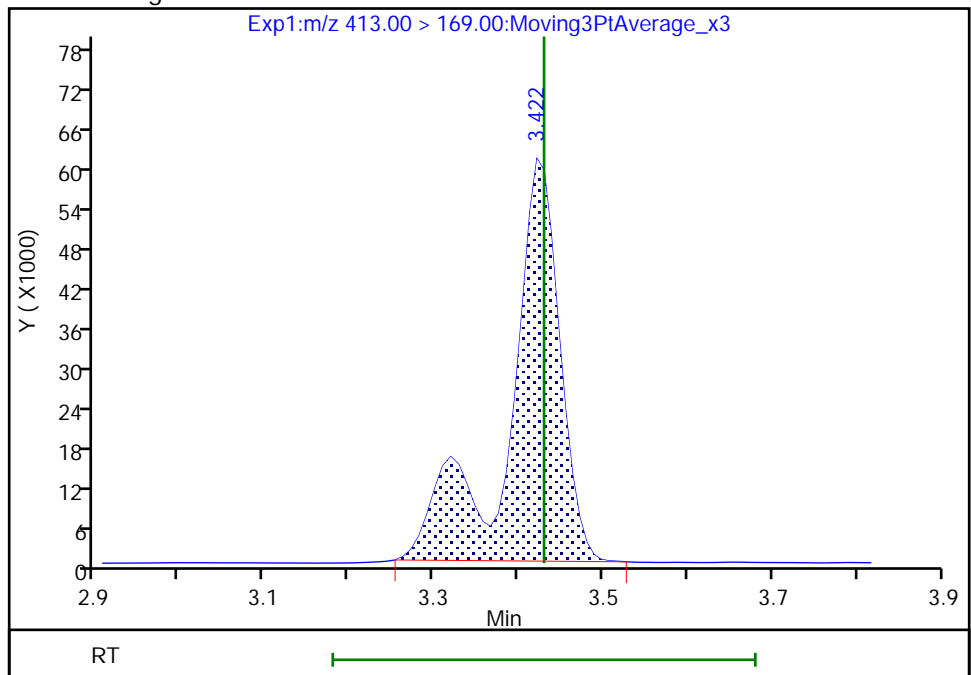
RT: 3.42  
Area: 262689  
Amount: 0.863471  
Amount Units: ng/ml

Processing Integration Results



RT: 3.42  
Area: 257425  
Amount: 0.850954  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 15:37:36

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Euofins TestAmerica, Burlington

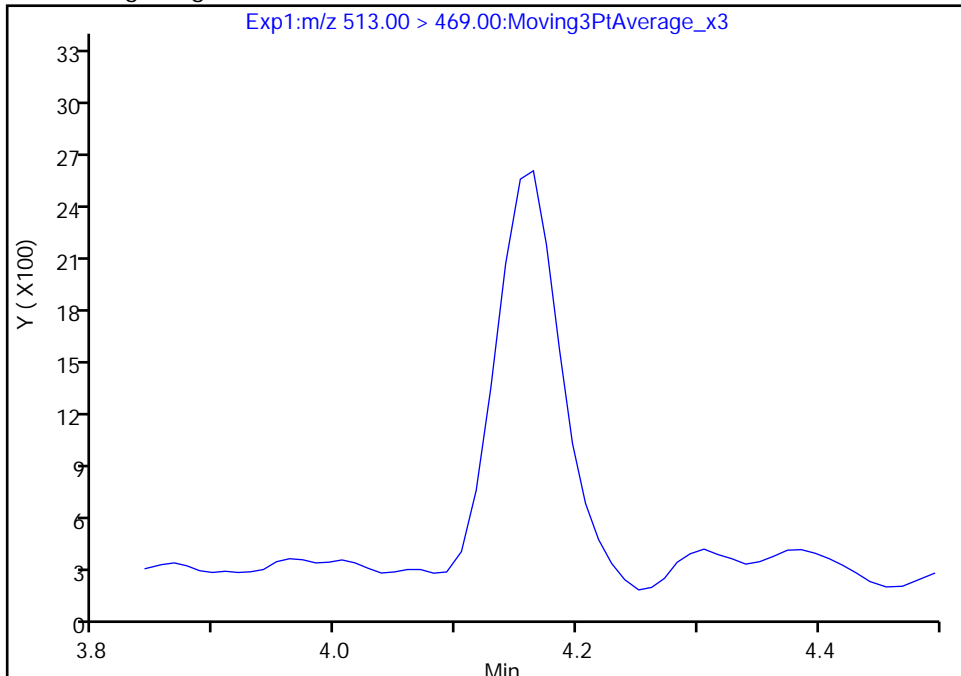
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B026.d  
Injection Date: 24-Dec-2019 17:20:53 Instrument ID: LC812  
Lims ID: 480-164221-C-15-A Lab Sample ID: 200-164221-15  
Client ID: AOI 1 GW3 DER  
Operator ID: lc812tech ALS Bottle#: 26 Worklist Smp#: 26  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

24 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 1

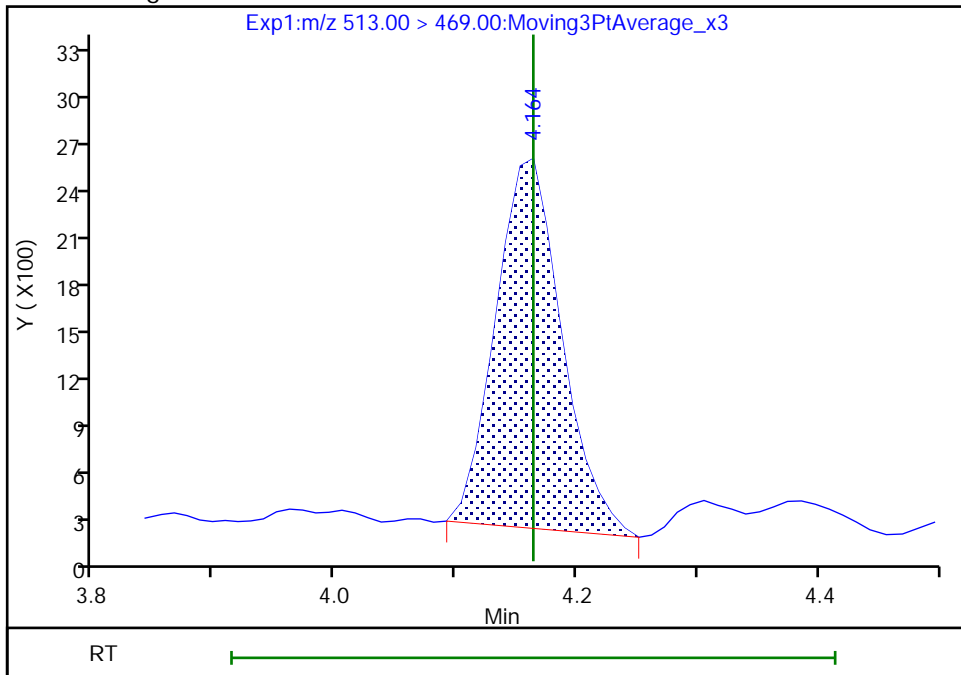
Not Detected  
Expected RT: 4.16

Processing Integration Results



Manual Integration Results

RT: 4.16  
Area: 8902  
Amount: 0.020688  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

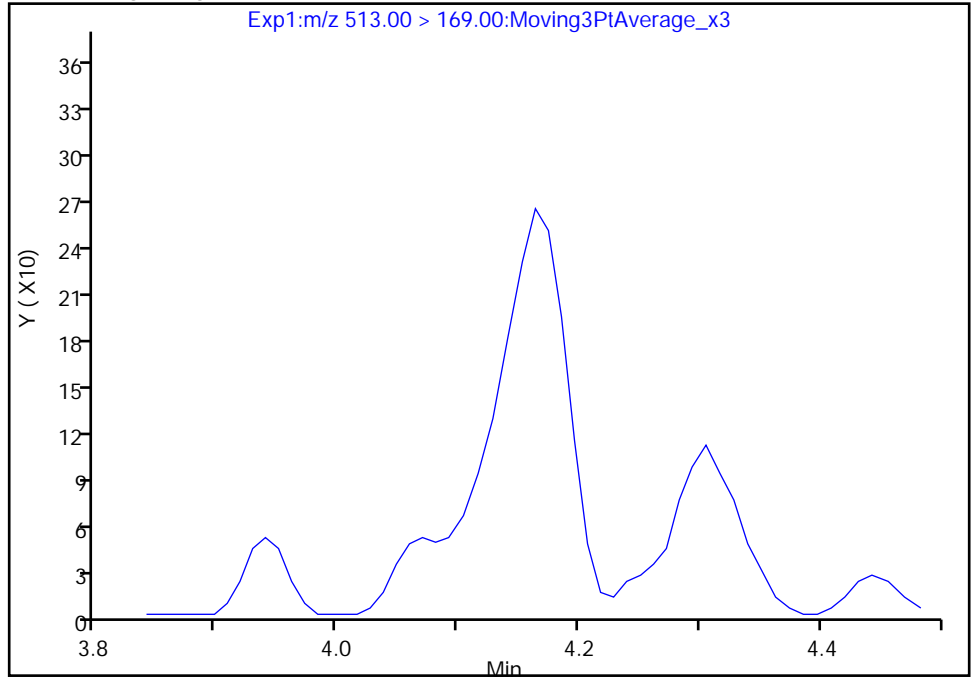
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B026.d  
Injection Date: 24-Dec-2019 17:20:53 Instrument ID: LC812  
Lims ID: 480-164221-C-15-A Lab Sample ID: 200-164221-15  
Client ID: AOI 1 GW3 DER  
Operator ID: lc812tech ALS Bottle#: 26 Worklist Smp#: 26  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

24 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 2

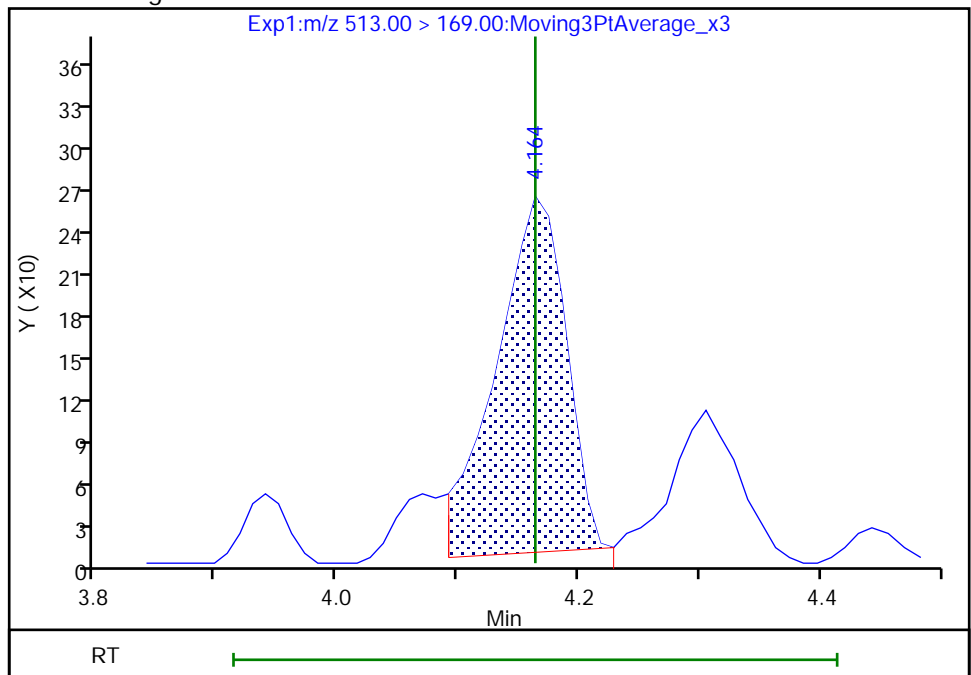
Not Detected  
Expected RT: 4.16

Processing Integration Results



Manual Integration Results

RT: 4.16  
Area: 1006  
Amount: 0.020688  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 15:36:12

Audit Action: Manually Integrated

Audit Reason: Baseline



Eurofins TestAmerica, Burlington

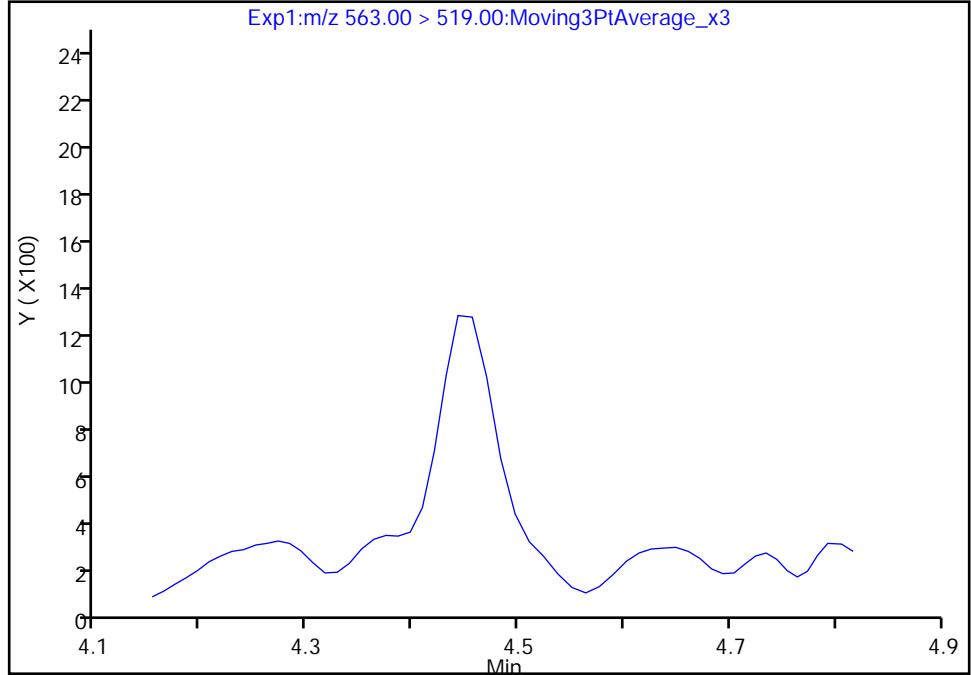
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B026.d  
Injection Date: 24-Dec-2019 17:20:53 Instrument ID: LC812  
Lims ID: 480-164221-C-15-A Lab Sample ID: 200-164221-15  
Client ID: AOI 1 GW3 DER  
Operator ID: lc812tech ALS Bottle#: 26 Worklist Smp#: 26  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 1

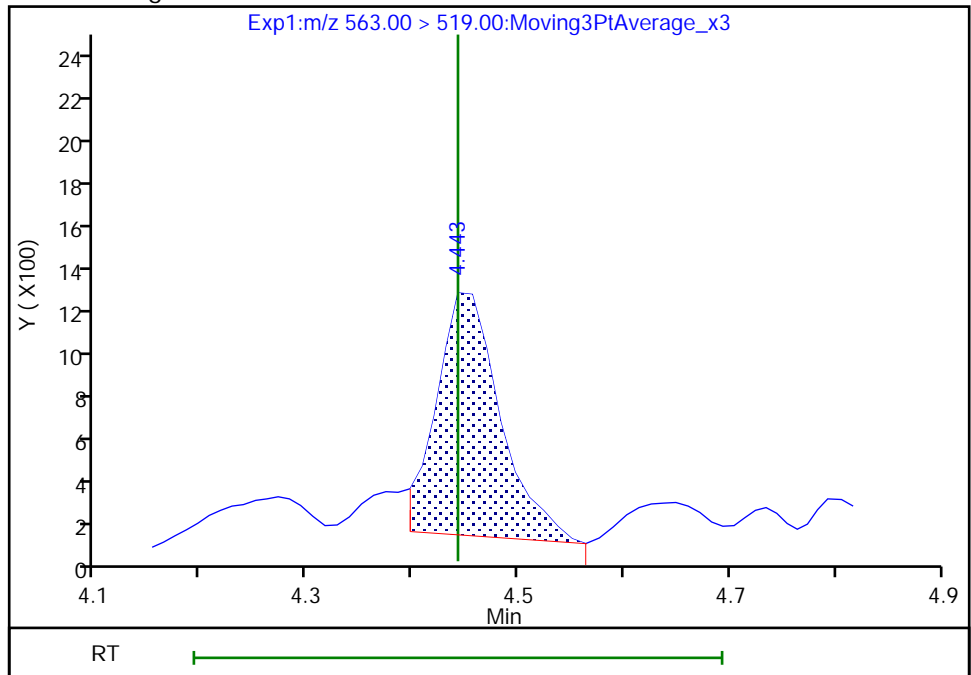
Not Detected  
Expected RT: 4.44

Processing Integration Results



Manual Integration Results

RT: 4.44  
Area: 4782  
Amount: 0.015145  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 15:34:58

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

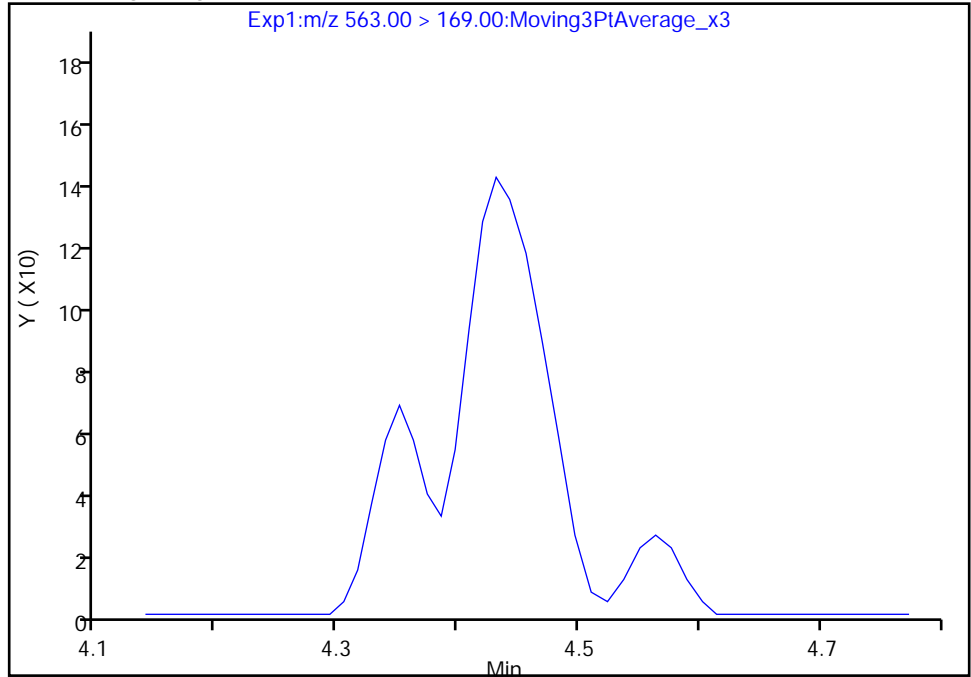
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B026.d  
Injection Date: 24-Dec-2019 17:20:53 Instrument ID: LC812  
Lims ID: 480-164221-C-15-A Lab Sample ID: 200-164221-15  
Client ID: AOI 1 GW3 DER  
Operator ID: lc812tech ALS Bottle#: 26 Worklist Smp#: 26  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 2

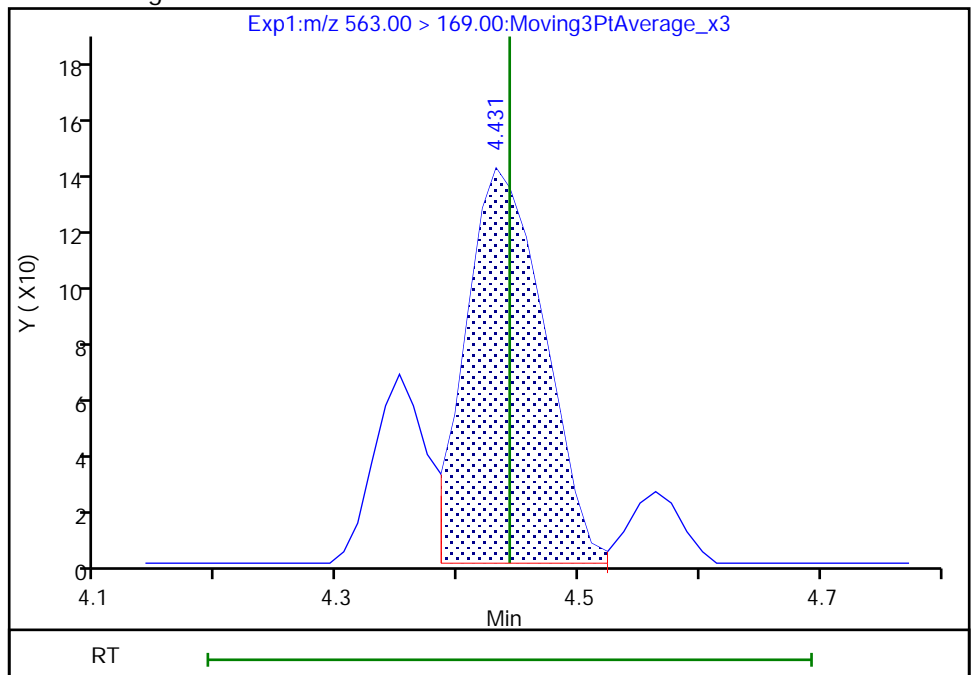
Not Detected  
Expected RT: 4.44

Processing Integration Results



Manual Integration Results

RT: 4.43  
Area: 616  
Amount: 0.015145  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

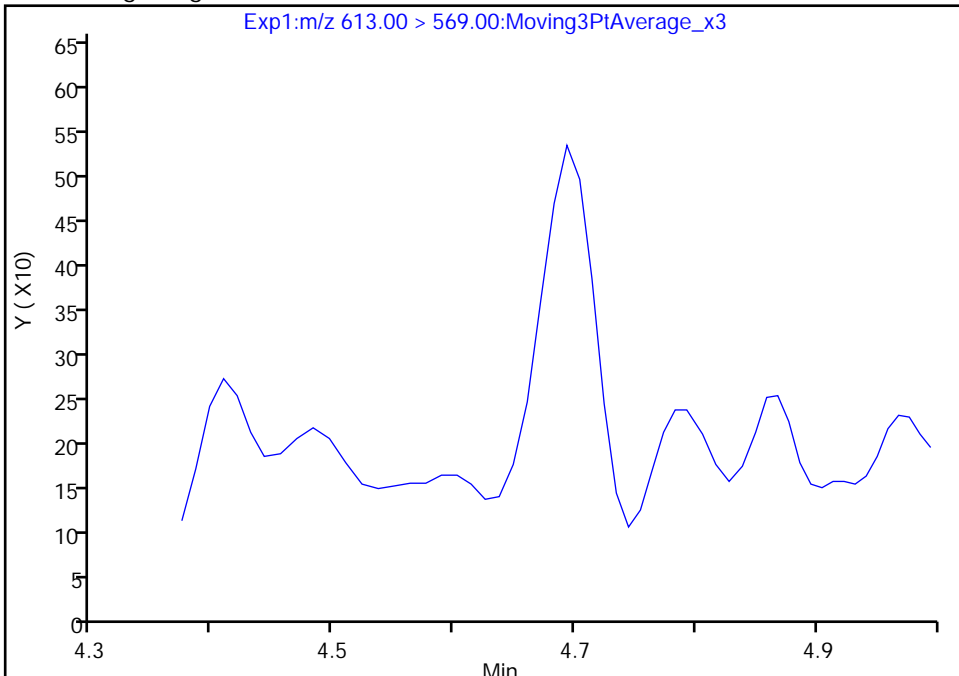
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B026.d  
Injection Date: 24-Dec-2019 17:20:53 Instrument ID: LC812  
Lims ID: 480-164221-C-15-A Lab Sample ID: 200-164221-15  
Client ID: AOI 1 GW3 DER  
Operator ID: lc812tech ALS Bottle#: 26 Worklist Smp#: 26  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

37 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 1

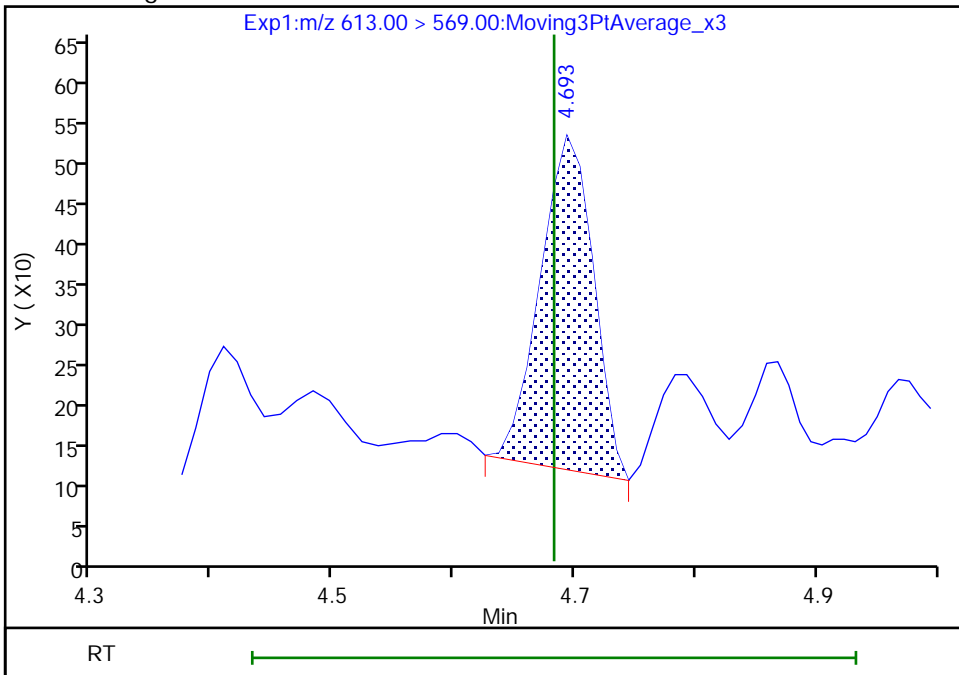
Not Detected  
Expected RT: 4.68

Processing Integration Results



Manual Integration Results

RT: 4.69  
Area: 1261  
Amount: 0.003652  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 15:33:42  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

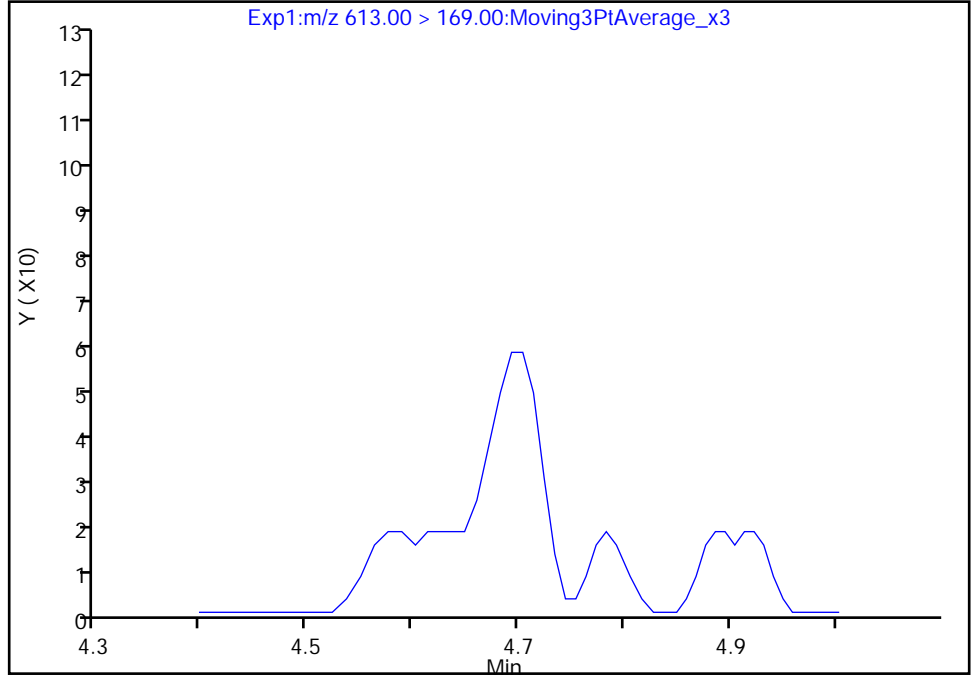
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B026.d  
Injection Date: 24-Dec-2019 17:20:53 Instrument ID: LC812  
Lims ID: 480-164221-C-15-A Lab Sample ID: 200-164221-15  
Client ID: AOI 1 GW3 DER  
Operator ID: lc812tech ALS Bottle#: 26 Worklist Smp#: 26  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

37 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 2

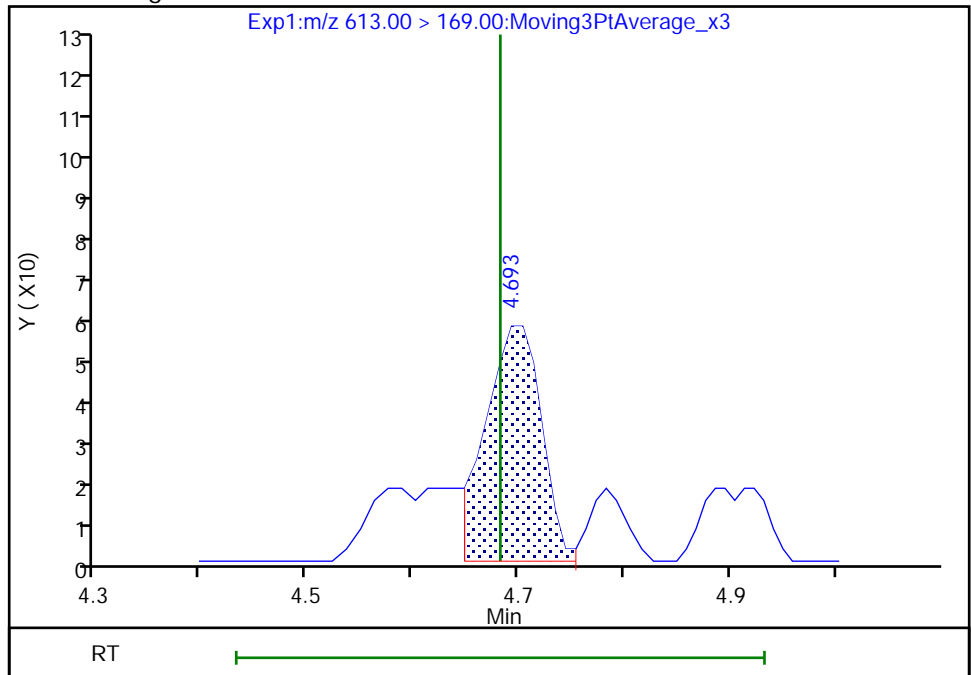
Not Detected  
Expected RT: 4.68

Processing Integration Results



Manual Integration Results

RT: 4.69  
Area: 211  
Amount: 0.003652  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 15:34:02

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

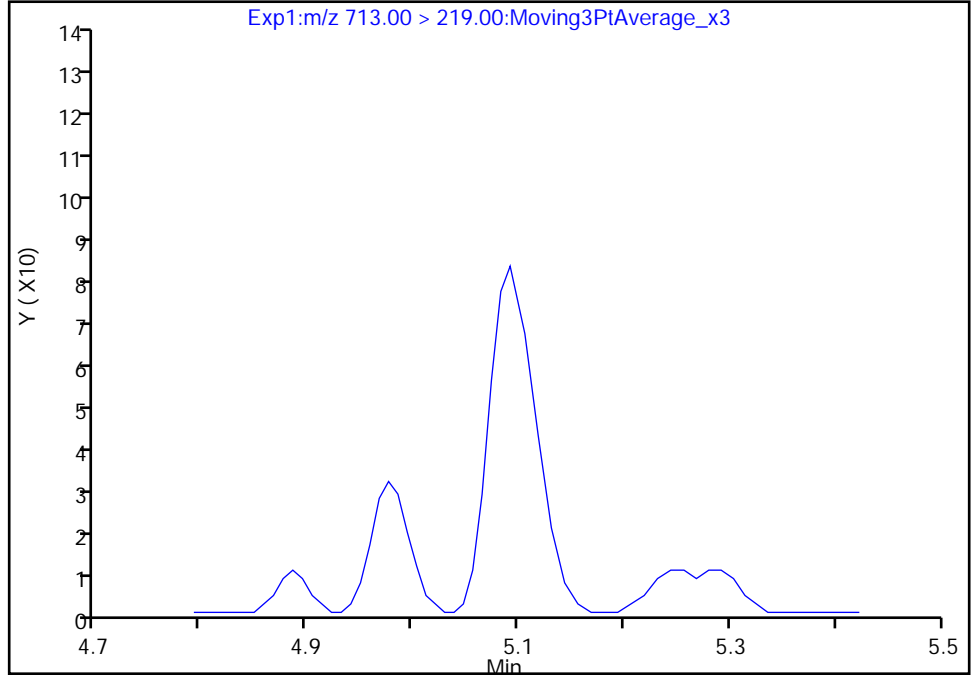
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B026.d  
Injection Date: 24-Dec-2019 17:20:53 Instrument ID: LC812  
Lims ID: 480-164221-C-15-A Lab Sample ID: 200-164221-15  
Client ID: AOI 1 GW3 DER  
Operator ID: lc812tech ALS Bottle#: 26 Worklist Smp#: 26  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 2

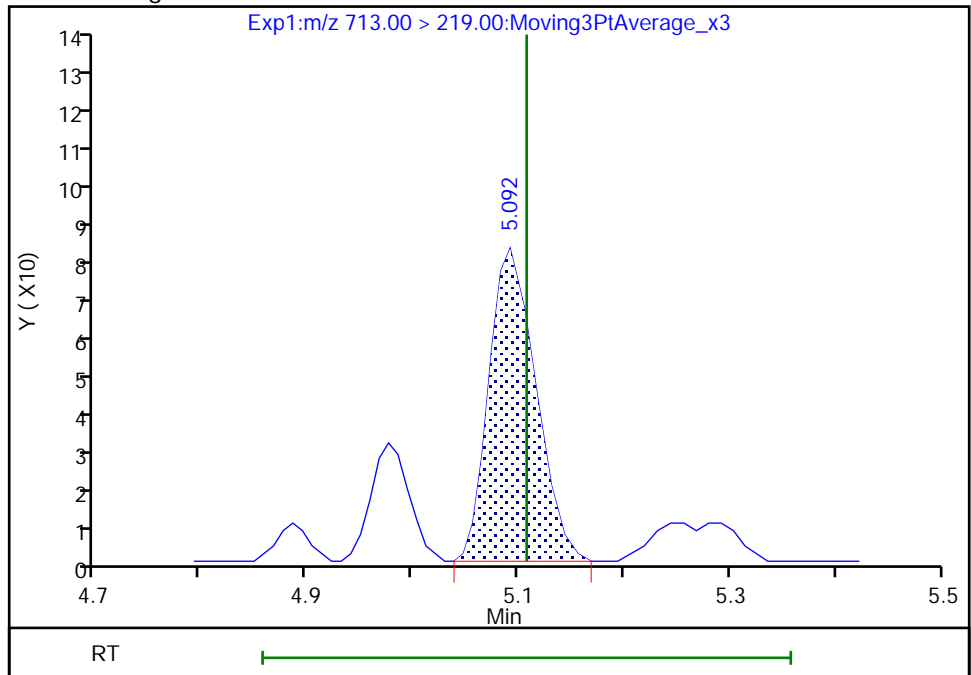
Not Detected  
Expected RT: 5.11

Processing Integration Results



Manual Integration Results

RT: 5.09  
Area: 252  
Amount: 0.004190  
Amount Units: ng/ml



Reviewer: lautenschlagerng, 27-Dec-2019 15:32:54  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

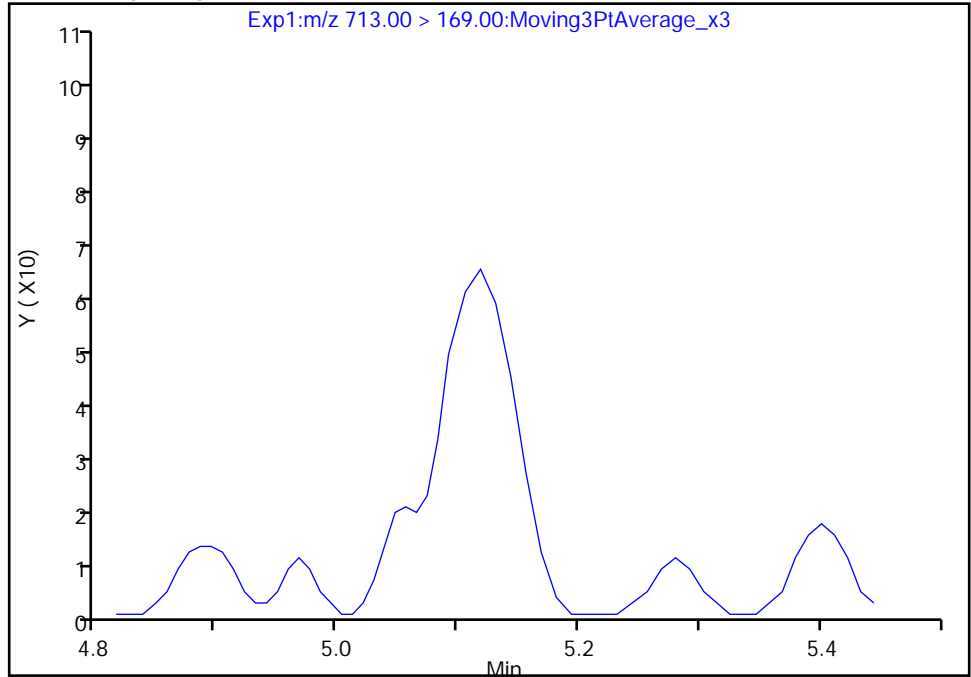
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B026.d  
Injection Date: 24-Dec-2019 17:20:53 Instrument ID: LC812  
Lims ID: 480-164221-C-15-A Lab Sample ID: 200-164221-15  
Client ID: AOI 1 GW3 DER  
Operator ID: lc812tech ALS Bottle#: 26 Worklist Smp#: 26  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 (4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 1

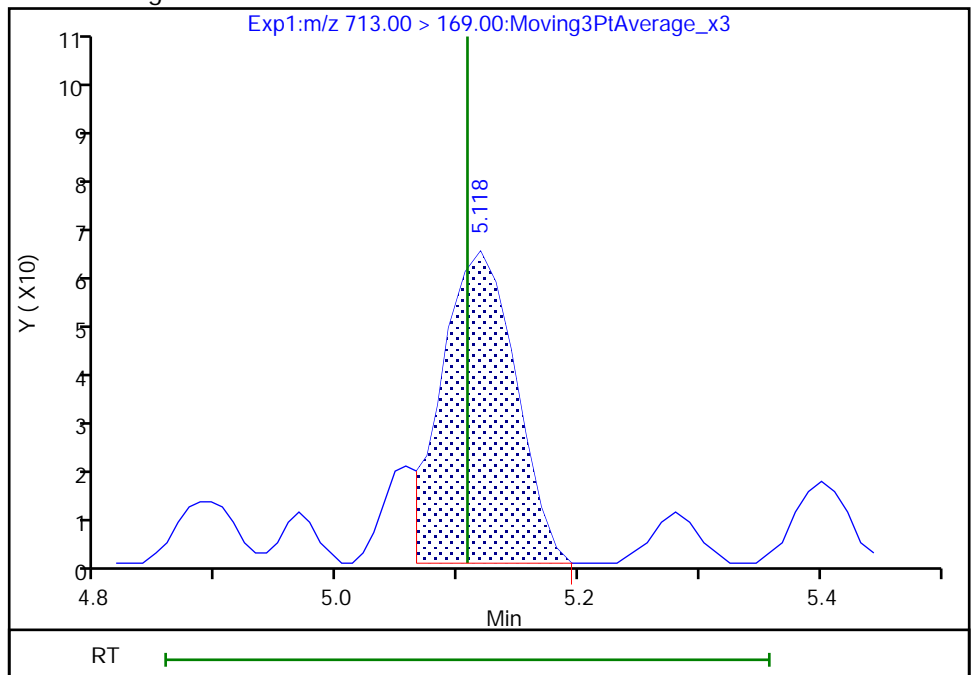
Not Detected  
Expected RT: 5.11

Processing Integration Results



Manual Integration Results

RT: 5.12  
Area: 257  
Amount: 0.004190  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 15:33:01

Audit Action: Manually Integrated

Audit Reason: Split Peak

Euofins TestAmerica, Burlington

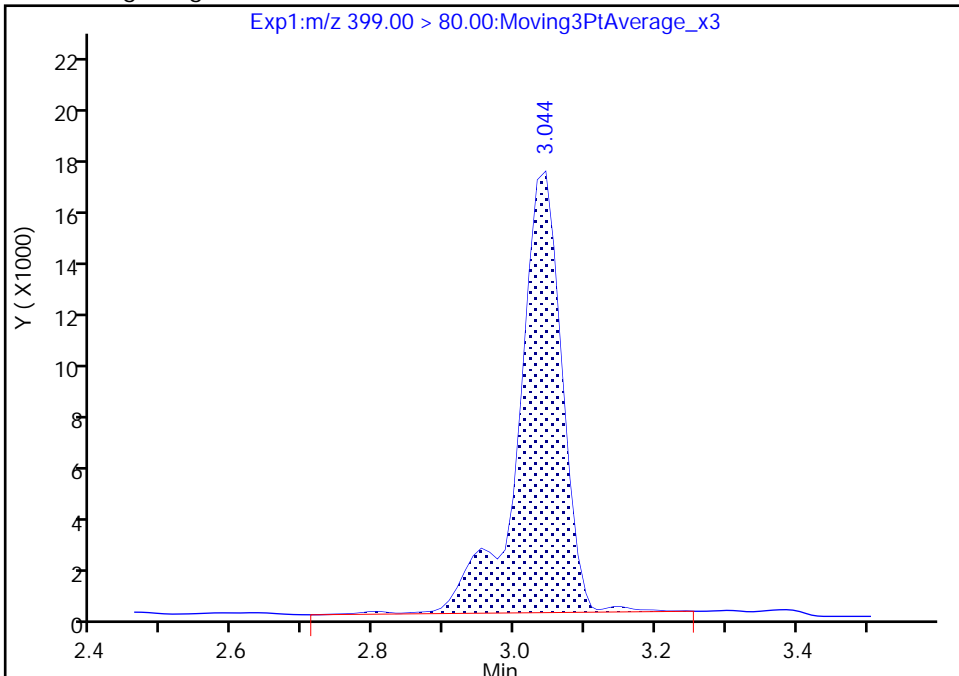
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B026.d  
Injection Date: 24-Dec-2019 17:20:53 Instrument ID: LC812  
Lims ID: 480-164221-C-15-A Lab Sample ID: 200-164221-15  
Client ID: AOI 1 GW3 DER  
Operator ID: lc812tech ALS Bottle#: 26 Worklist Smp#: 26  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

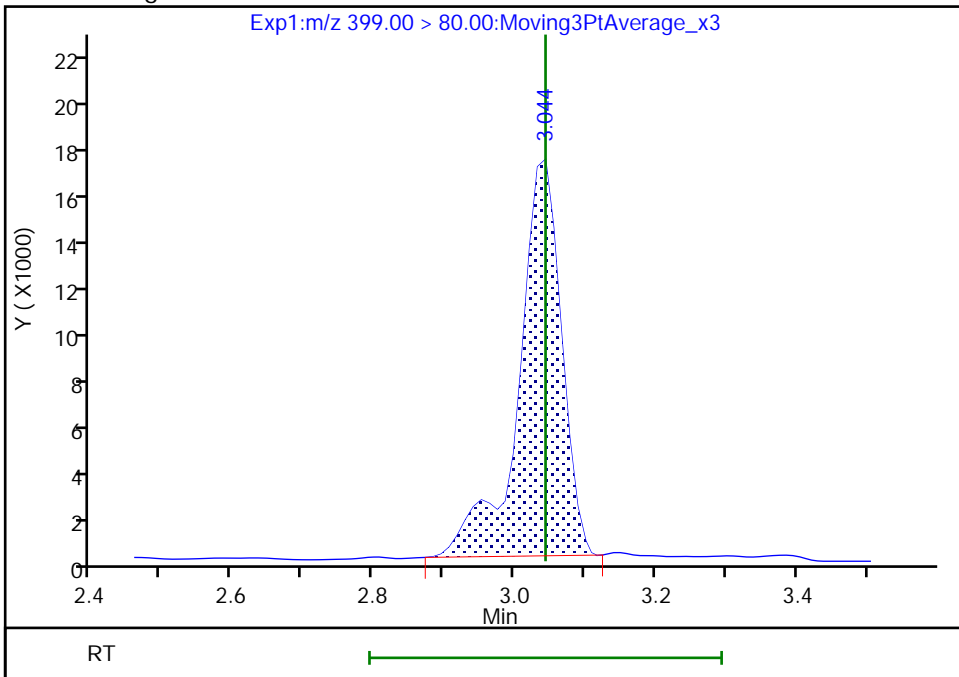
RT: 3.04  
Area: 74143  
Amount: 0.137855  
Amount Units: ng/ml

Processing Integration Results



RT: 3.04  
Area: 71963  
Amount: 0.133802  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagery, 27-Dec-2019 15:38:14  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

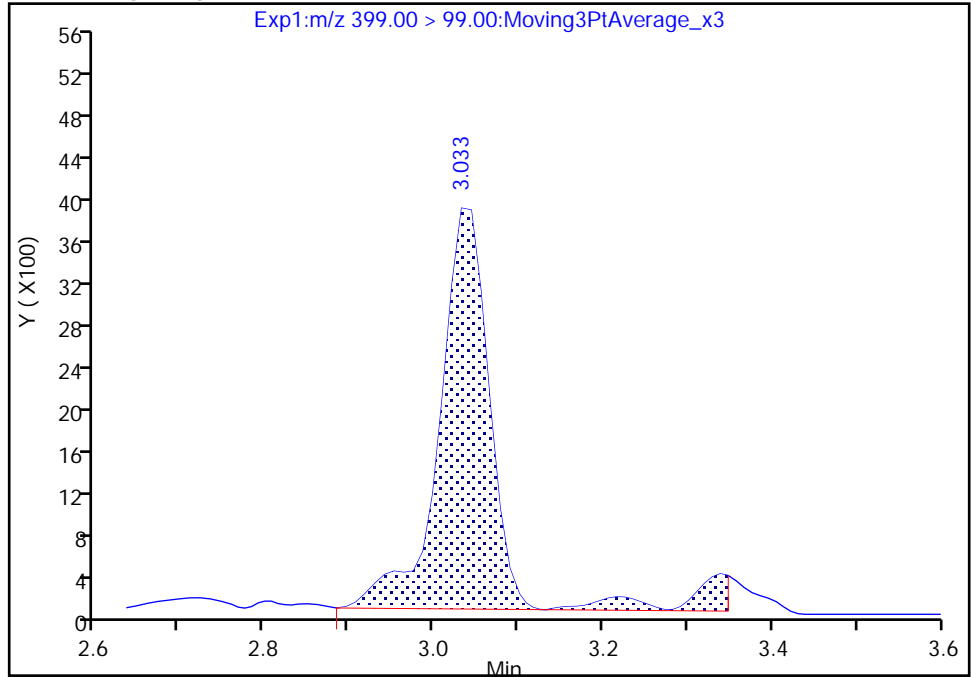
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B026.d  
Injection Date: 24-Dec-2019 17:20:53 Instrument ID: LC812  
Lims ID: 480-164221-C-15-A Lab Sample ID: 200-164221-15  
Client ID: AOI 1 GW3 DER  
Operator ID: lc812tech ALS Bottle#: 26 Worklist Smp#: 26  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

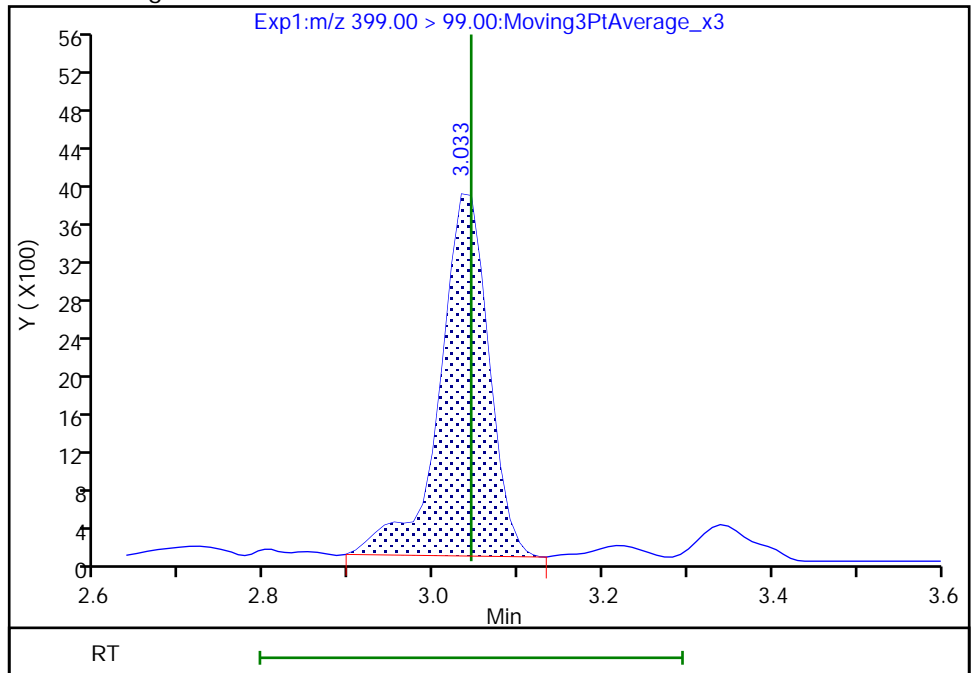
RT: 3.03  
Area: 16761  
Amount: 0.137855  
Amount Units: ng/ml

Processing Integration Results



RT: 3.03  
Area: 15348  
Amount: 0.133802  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 15:38:19

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Eurofins TestAmerica, Burlington

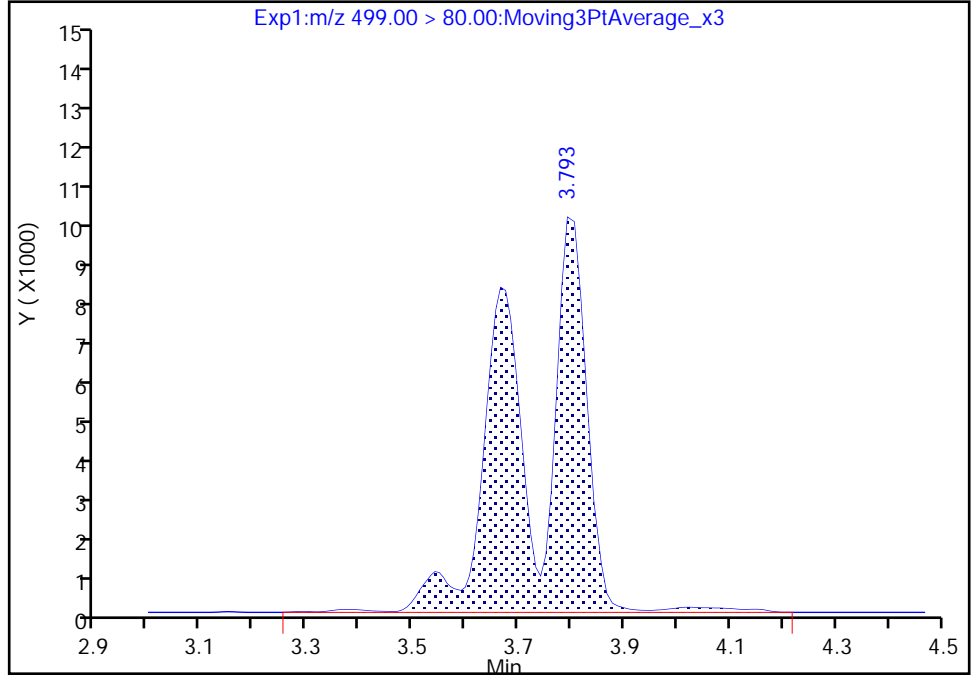
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B026.d  
Injection Date: 24-Dec-2019 17:20:53 Instrument ID: LC812  
Lims ID: 480-164221-C-15-A Lab Sample ID: 200-164221-15  
Client ID: AOI 1 GW3 DER  
Operator ID: lc812tech ALS Bottle#: 26 Worklist Smp#: 26  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

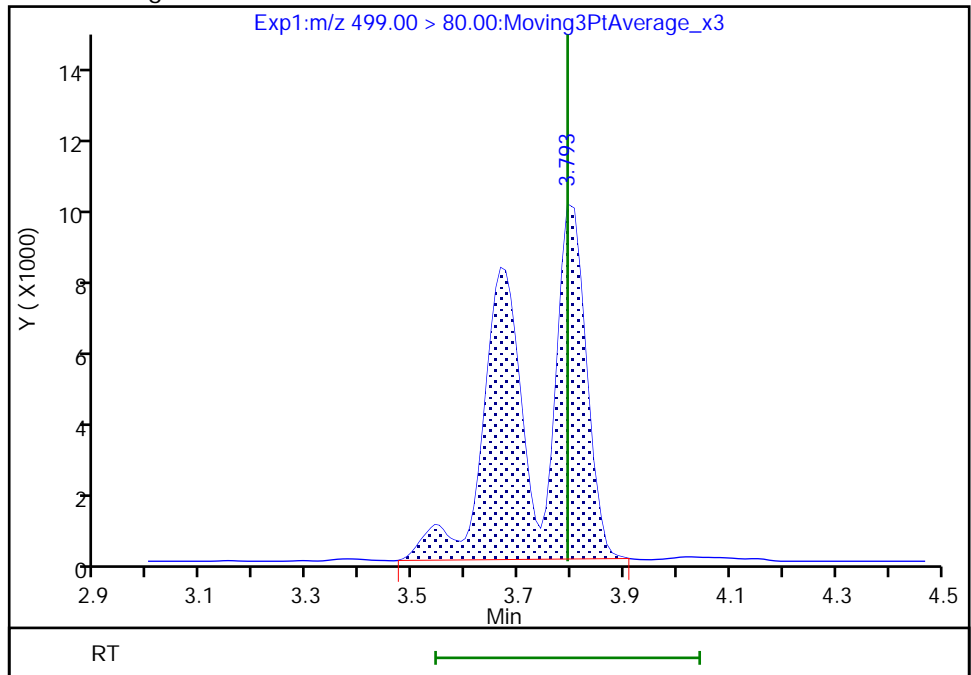
RT: 3.79  
Area: 78698  
Amount: 0.209616  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 75867  
Amount: 0.202075  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 15:37:00  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

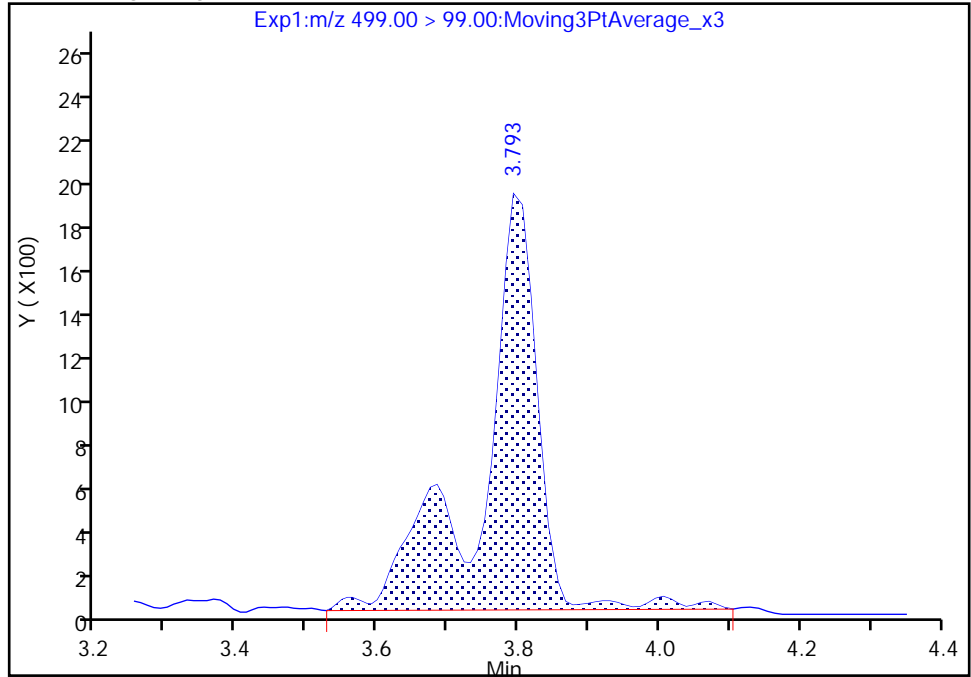
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B026.d  
Injection Date: 24-Dec-2019 17:20:53 Instrument ID: LC812  
Lims ID: 480-164221-C-15-A Lab Sample ID: 200-164221-15  
Client ID: AOI 1 GW3 DER  
Operator ID: lc812tech ALS Bottle#: 26 Worklist Smp#: 26  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

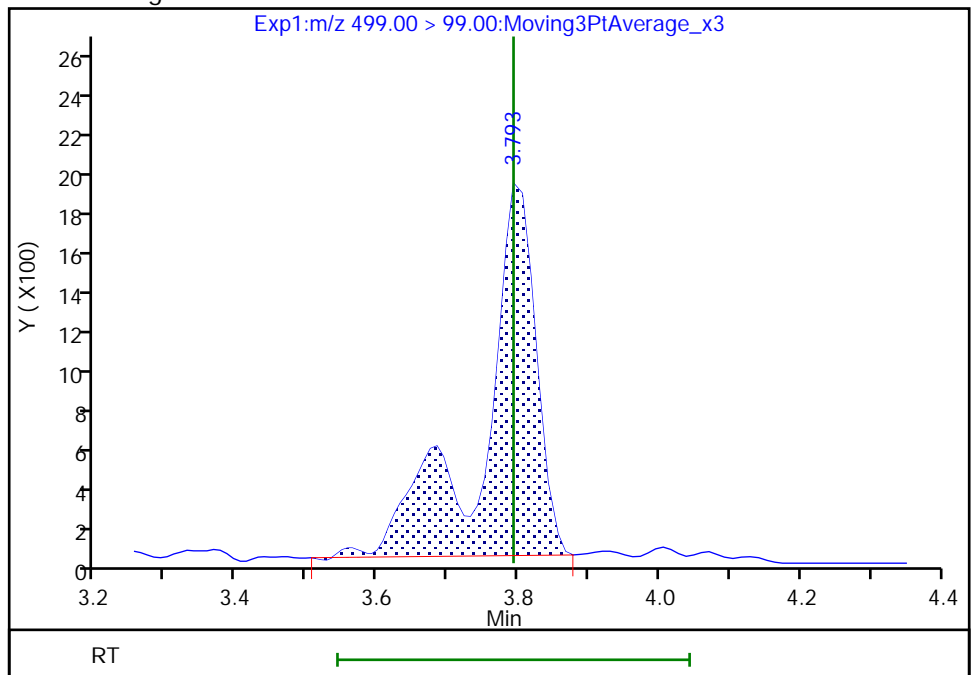
RT: 3.79  
Area: 10664  
Amount: 0.209616  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 9936  
Amount: 0.202075  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerng, 27-Dec-2019 15:37:09

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

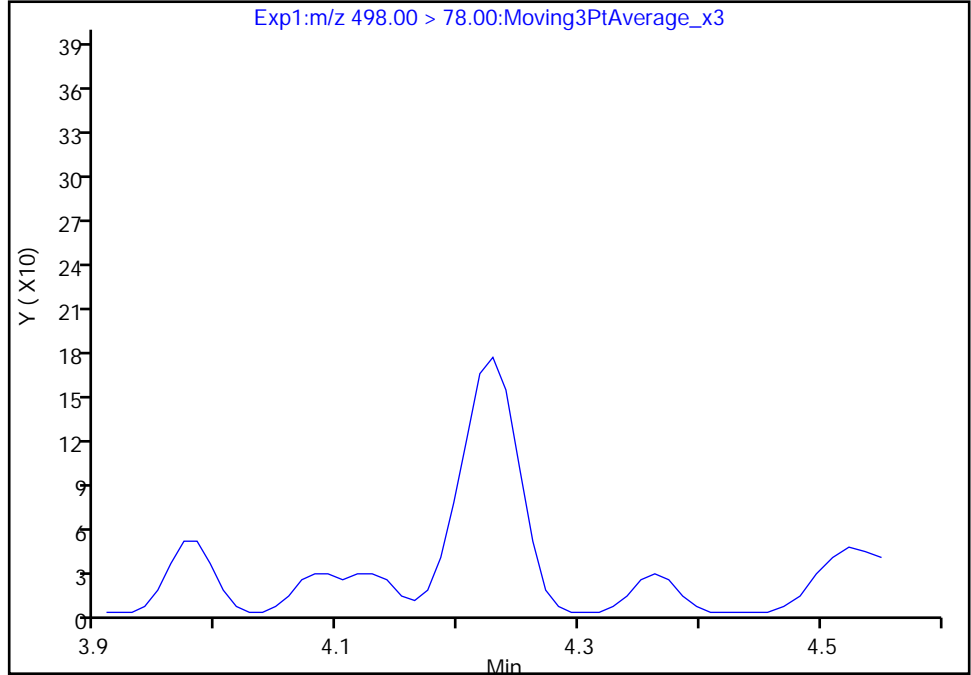
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B026.d  
Injection Date: 24-Dec-2019 17:20:53 Instrument ID: LC812  
Lims ID: 480-164221-C-15-A Lab Sample ID: 200-164221-15  
Client ID: AOI 1 GW3 DER  
Operator ID: lc812tech ALS Bottle#: 26 Worklist Smp#: 26  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

22 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

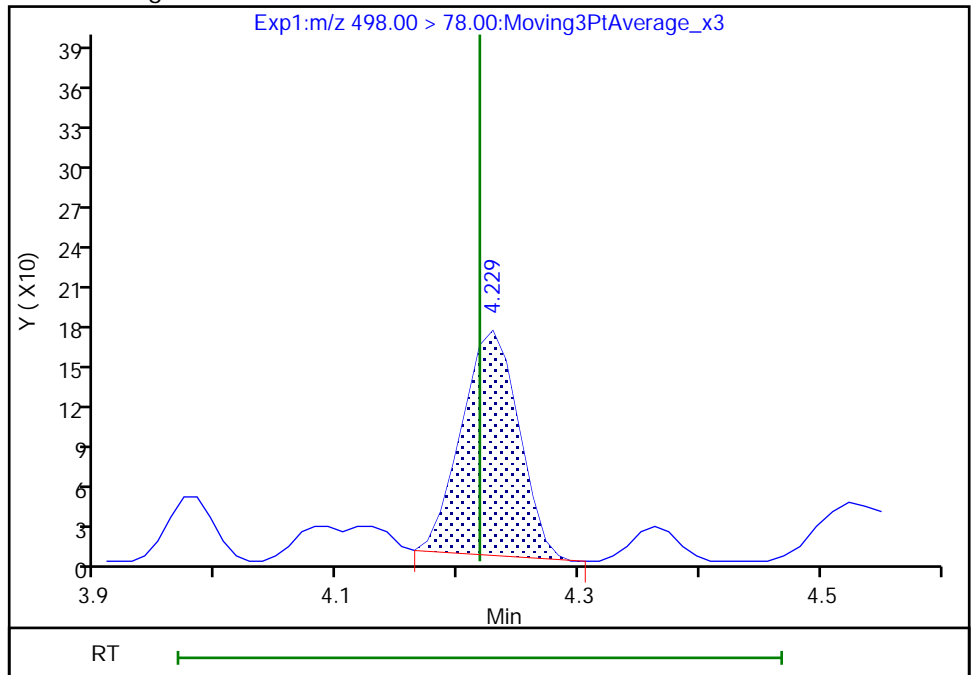
Not Detected  
Expected RT: 4.22

Processing Integration Results



Manual Integration Results

RT: 4.23  
Area: 549  
Amount: 0.001055  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

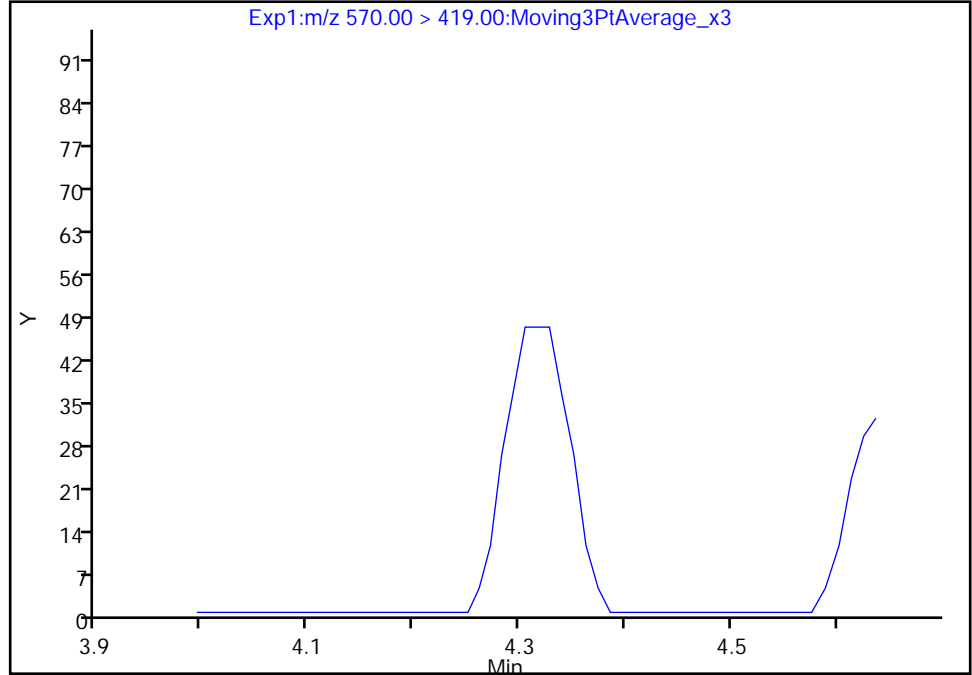
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B026.d  
Injection Date: 24-Dec-2019 17:20:53 Instrument ID: LC812  
Lims ID: 480-164221-C-15-A Lab Sample ID: 200-164221-15  
Client ID: AOI 1 GW3 DER  
Operator ID: lc812tech ALS Bottle#: 26 Worklist Smp#: 26  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

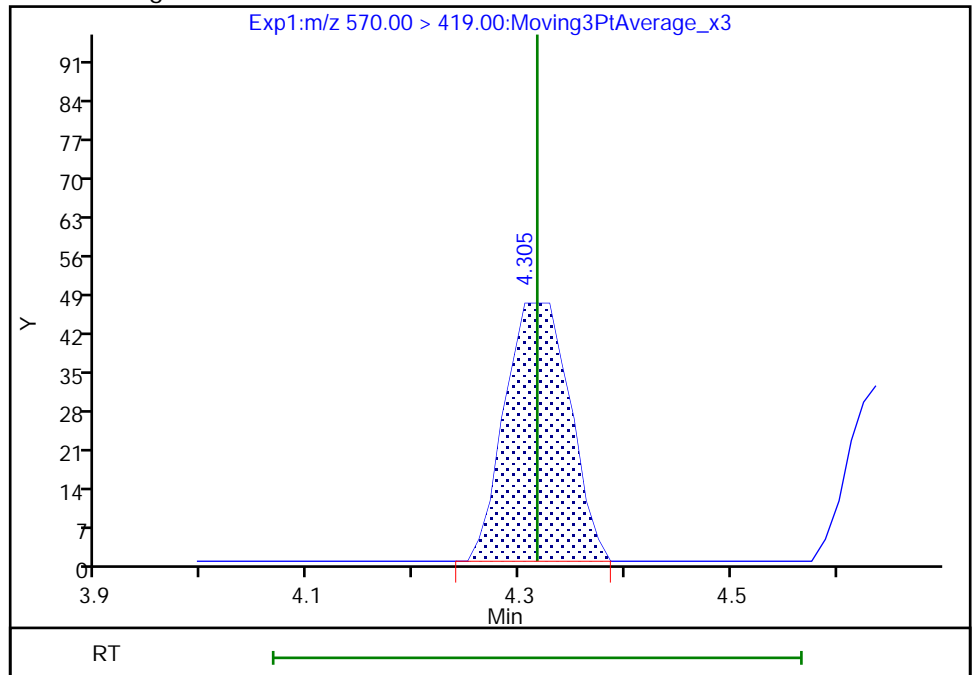
Not Detected  
Expected RT: 4.32

Processing Integration Results



Manual Integration Results

RT: 4.31  
Area: 200  
Amount: 0.005839  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 15:35:30  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

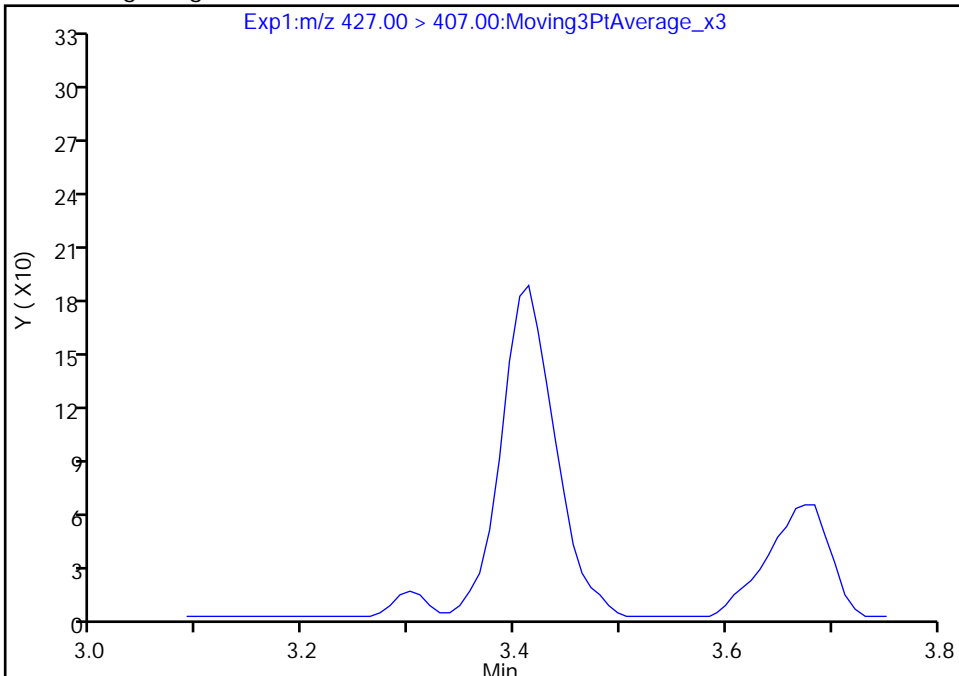
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B026.d  
Injection Date: 24-Dec-2019 17:20:53 Instrument ID: LC812  
Lims ID: 480-164221-C-15-A Lab Sample ID: 200-164221-15  
Client ID: AOI 1 GW3 DER  
Operator ID: lc812tech ALS Bottle#: 26 Worklist Smp#: 26  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

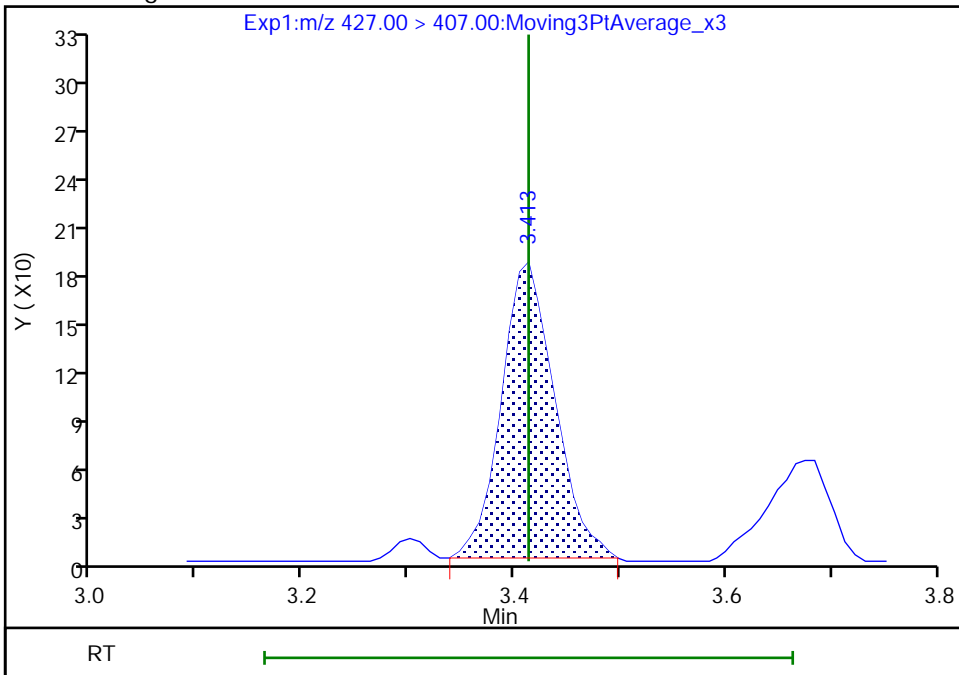
Signal: 1

Not Detected  
Expected RT: 3.41

Processing Integration Results



Manual Integration Results



RT: 3.41  
Area: 635  
Amount: 0.010016  
Amount Units: ng/ml

Reviewer: lautenschlagerg, 27-Dec-2019 15:37:48  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

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

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1 Analy Batch No.: 150448

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

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

Calibration Start Date: 12/06/2019 14:32 Calibration End Date: 12/06/2019 15:13 Calibration ID: 42812

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 200-150448/5	SC120619ICAL005.d
Level 2	IC 200-150448/6	SC120619ICAL006.d
Level 3	IC 200-150448/7	SC120619ICAL007.d
Level 4	ICIS 200-150448/8	SC120619ICAL008.d
Level 5	IC 200-150448/9	SC120619ICAL009.d
Level 6	IC 200-150448/10	SC120619ICAL010.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Perfluorobutanoic acid (PFBA)	1.0960 0.9257	1.0705	0.9775	0.9346	0.9651	AveID		0.9949			7.2		35.0				
Perfluoropentanoic acid (PFPeA)	1.2561 1.0450	1.3353	1.1056	1.0632	0.9891	AveID		1.1324			11.9		35.0				
Perfluorobutanesulfonic acid (PFBS)	1.2079 1.0822	1.1812	1.0531	1.0002	0.9966	AveID		1.0869			8.3		35.0				
1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2)	1.8576 1.8183	1.6453	1.7210	1.8007	1.5507	AveID		1.7323			6.8		50.0				
Perfluorohexanoic acid (PFHxA)	1.0291 1.0127	1.0516	1.0230	1.0224	0.9872	AveID		1.0210			2.1		35.0				
Perfluoropentanesulfonic acid	1.2446 1.1637	1.0648	1.0803	1.2316	1.1824	AveID		1.1612			6.5		50.0				
HFPO-DA	4.6989 3.8054	2.9546	3.2254	3.1610	3.6992	AveID		3.5907			17.7		35.0				
Perfluorohexanesulfonic acid (PFHxS)	1.2889 1.0191	1.1692	1.1896	1.0446	1.0792	AveID		1.1318			9.1		35.0				
Perfluoroheptanoic acid (PFHpA)	1.0745 0.9996	1.1637	0.9583	1.0918	1.0556	AveID		1.0573			6.8		35.0				
DONA	3.9507 3.6082	3.5062	3.4924	3.1638	3.4749	AveID		3.5327			7.2		50.0				
Perfluoroheptanesulfonic Acid (PFHpS)	1.3552 1.2577	1.1604	1.1683	1.1763	1.2312	AveID		1.2249			6.1		50.0				
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	++++ 0.8997	1.2131	0.8752	0.8530	0.8776	AveID		0.9437			16.1		35.0				
Perfluorooctanoic acid (PFOA)	1.1696 0.9280	1.3401	1.1216	0.9970	1.1008	AveID		1.1095			12.9		35.0				
Perfluorooctanesulfonic acid (PFOS)	1.2303 1.0141	1.1220	0.9898	0.9757	1.1452	AveID		1.0795			9.4		35.0				
Perfluorononanoic acid (PFNA)	1.1180 0.8659	1.0892	0.8453	0.9648	1.0000	AveID		0.9805			11.4		35.0				

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

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

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1 Analy Batch No.: 150448

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

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

Calibration Start Date: 12/06/2019 14:32 Calibration End Date: 12/06/2019 15:13 Calibration ID: 42812

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	1.3508 1.1595	1.3111	1.1496	1.1146	1.3132	AveID		1.2332			8.3		50.0				
Perfluorononanesulfonic acid	0.8686 0.7796	0.8208	0.8810	0.7746	0.8323	AveID		0.8262			5.3		50.0				
Perfluorodecanoic acid (PFDA)	0.9946 0.9511	0.9435	1.1436	0.9439	0.8282	AveID		0.9675			10.6		35.0				
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	0.4644 0.4613	0.4655	0.4634	0.4645	0.4504	AveID		0.4616			1.2		35.0				
Perfluorooctanesulfonamide (PFOSA)	0.9568 0.9922	0.9909	0.9660	1.0108	1.0541	AveID		0.9951			3.5		35.0				
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.8909 0.8396	0.8934	0.9401	0.8028	0.8469	AveID		0.8689			5.6		35.0				
Perfluorodecanesulfonic acid (PFDS)	0.7568 0.7033	0.7230	0.6768	0.6433	0.8141	AveID		0.7196			8.4		50.0				
Perfluoroundecanoic acid (PFUnA)	0.8962 0.8562	0.9190	0.8523	0.8134	0.7503	AveID		0.8479			7.1		35.0				
N-ethylperfluorooctanesulfonamidoacetic acid (NETFOSAA)	1.0015 0.7766	0.9226	0.7790	0.7111	0.7754	AveID		0.8277			13.3		35.0				
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid	1.2524 1.2019	1.1900	1.0559	1.0658	1.2107	AveID		1.1628			7.0		50.0				
Perfluorododecanoic acid (PFDoA)	0.9334 0.8901	0.9435	0.8922	0.9117	0.9734	AveID		0.9240			3.5		35.0				
10:2 FTS	0.2774 0.2768	0.2997	0.3040	0.2696	0.3308	AveID		0.2931			7.9		50.0				
Perfluorododecanesulfonic acid (PFDoS)	0.2800 0.2703	0.3062	0.2727	0.2337	0.2784	AveID		0.2736			8.5		50.0				
Perfluorotridecanoic acid (PFTriA)	0.8292 0.8714	0.9480	0.8821	0.8714	0.8649	AveID		0.8778			4.4		50.0				
Perfluorotetradecanoic acid (PFTeA)	0.2083 0.2004	0.2017	0.2001	0.1996	0.1953	AveID		0.2009			2.1		35.0				
Perfluoro-n-hexadecanoic acid (PFHxDA)	1.3616 0.8853	1.1530	0.9316	0.9646	0.8764	LlID	0.0260	0.8835						1.0000		0.9900	
Perfluoro-n-octadecanoic acid (PFODA)	0.7202 0.7195	0.7580	0.6895	0.7244	0.7219	AveID		0.7223			3.0		50.0				
13C4 PFBA	1.0516 1.0607	0.9228	1.0067	1.2332	1.0805	Ave		1.0592			9.6		30.0				
13C5 PFPeA	0.8429 0.7899	0.6916	0.7768	0.9003	0.8578	Ave		0.8099			9.1		30.0				
13C3 PFBS	1.0008 0.9038	0.7869	0.9151	1.1309	1.0592	Ave		0.9661			12.7		30.0				

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

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

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1 Analy Batch No.: 150448

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

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

Calibration Start Date: 12/06/2019 14:32 Calibration End Date: 12/06/2019 15:13 Calibration ID: 42812

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R <sup>2</sup> OR COD	#	MIN R <sup>2</sup> OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
M2-4:2 FTS	0.0904 0.0844	0.0876	0.0875	0.0952	0.0956	Ave		0.0901			5.0		30.0				
13C2 PFHxA	0.9651 0.8679	0.7962	0.8466	0.9937	0.9492	Ave		0.9031			8.6		30.0				
13C3 HFPO-DA	0.0421 0.0387	0.0374	0.0400	0.0415	0.0368	Ave		0.0394			5.4		30.0				
18O2 PFHxS	0.7874 0.7852	0.7258	0.7264	0.8052	0.7480	Ave		0.7630			4.5		30.0				
13C4 PFHpA	0.8635 0.8585	0.7335	0.8515	0.9786	0.8517	Ave		0.8562			9.1		30.0				
M2-6:2 FTS	0.1327 0.1232	0.1185	0.1313	0.1499	0.1308	Ave		0.1311			8.2		30.0				
13C4 PFOA	0.9310 0.9015	0.7730	0.8452	1.0937	0.9074	Ave		0.9086			11.8		30.0				
13C4 PFOS	0.5765 0.5973	0.5644	0.5939	0.7109	0.5889	Ave		0.6053			8.8		30.0				
13C5 PFNA	0.8279 0.8241	0.7198	0.8716	0.9525	0.8168	Ave		0.8355			9.1		30.0				
13C2 PFDA	0.8651 0.7895	0.7286	0.7450	0.9495	0.8620	Ave		0.8233			10.2		30.0				
M2-8:2 FTS	0.1673 0.1524	0.1369	0.1468	0.1814	0.1523	Ave		0.1562			10.1		30.0				
13C8 FOSA	1.1861 1.0779	0.9687	1.0894	1.1400	0.9982	Ave		1.0767			7.7		30.0				
d3-NMeFOSAA	0.0843 0.0844	0.0688	0.0682	0.0899	0.0801	Ave		0.0793			11.3		30.0				
13C2 PFUnA	0.6838 0.6686	0.6307	0.6452	0.8307	0.7403	Ave		0.6999			10.6		30.0				
d5-NEtFOSAA	0.0855 0.0957	0.0822	0.0820	0.0991	0.0828	Ave		0.0879			8.6		30.0				
13C2 PFDoA	0.7746 0.7644	0.6738	0.7165	0.9079	0.7690	Ave		0.7677			10.3		30.0				
13C2 PFTeDA	0.6613 0.6174	0.6236	0.6185	0.7119	0.6270	Ave		0.6433			5.8		30.0				
13C2 PFHxDA	0.5894 0.5899	0.5418	0.5656	0.6473	0.6171	Ave		0.5918			6.3		30.0				

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



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

Lab Name: Eurofins TestAmerica, Burlington      Job No.: 480-164221-1      Analy Batch No.: 150448

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

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

Calibration Start Date: 12/06/2019 14:32      Calibration End Date: 12/06/2019 15:13      Calibration ID: 42812

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 200-150448/5	SC120619ICAL005.d
Level 2	IC 200-150448/6	SC120619ICAL006.d
Level 3	IC 200-150448/7	SC120619ICAL007.d
Level 4	ICIS 200-150448/8	SC120619ICAL008.d
Level 5	IC 200-150448/9	SC120619ICAL009.d
Level 6	IC 200-150448/10	SC120619ICAL010.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Perfluorobutanoic acid (PFBA)		AveID	40348 7890334	94789	371453	853862	2112806	0.0500 10.0	0.100	0.500	1.00	2.50
Perfluoropentanoic acid (PFPeA)		AveID	37066 6633075	88619	324223	709122	1718895	0.0500 10.0	0.100	0.500	1.00	2.50
Perfluorobutanesulfonic acid (PFBS)		AveID	37409 6947766	78841	321599	740774	1890516	0.0442 8.84	0.0884	0.442	0.884	2.21
1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2)		AveID	5490 1151408	12920	53095	118620	280609	0.0467 9.34	0.0934	0.467	0.934	2.34
Perfluorohexanoic acid (PFHxA)		AveID	34768 7062831	80343	326930	752654	1898558	0.0500 10.0	0.100	0.500	1.00	2.50
Perfluoropentanesulfonic acid		AveID	32180 6887561	69556	277882	689064	1680717	0.0469 9.38	0.0938	0.469	0.938	2.35
HFPO-DA		AveID	6928 1184172	10610	48707	97144	276154	0.0500 10.0	0.100	0.500	1.00	2.50
Perfluorohexanesulfonic acid (PFHxS)		AveID	32330 5851407	74095	296847	566993	1488287	0.0455 9.10	0.0910	0.455	0.910	2.28
Perfluoroheptanoic acid (PFHpA)		AveID	32481 6895339	81910	308041	791498	1821610	0.0500 10.0	0.100	0.500	1.00	2.50
DONA		AveID	75113 16313820	178870	737546	1569524	3905340	0.0471 9.42	0.0942	0.471	0.942	2.36
Perfluoroheptanesulfonic Acid (PFHpS)		AveID	26039 5747086	59825	249352	589740	1398368	0.0476 9.52	0.0952	0.476	0.952	2.38
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)		AveID	++++ 844224	13075	41121	89798	220498	++++ 9.48	0.0948	0.474	0.948	2.37
Perfluorooctanoic acid (PFOA)		AveID	38119 6722811	99406	357855	807792	2023589	0.0500 10.0	0.100	0.500	1.00	2.50
Perfluorooctanesulfonic acid (PFOS)		AveID	23044 4517143	56390	205923	476832	1267930	0.0464 9.28	0.0928	0.464	0.928	2.32
Perfluorononanoic acid (PFNA)		AveID	32404 5734465	75235	278151	680723	1654904	0.0500 10.0	0.100	0.500	1.00	2.50
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid		AveID	25410 5186817	66176	240209	547070	1460233	0.0466 9.32	0.0932	0.466	0.932	2.33

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

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1 Analy Batch No.: 150448

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

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

Calibration Start Date: 12/06/2019 14:32 Calibration End Date: 12/06/2019 15:13 Calibration ID: 42812

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Perfluorononanesulfonic acid		AveID	16830 3592295	42675	189612	391621	953306	0.0480 9.60	0.0960	0.480	0.960	2.40
Perfluorodecanoic acid (PFDA)		AveID	30123 6034539	65957	321619	663877	1446289	0.0500 10.0	0.100	0.500	1.00	2.50
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)		AveID	2605 541123	5860	24605	59800	133169	0.0479 9.58	0.0958	0.479	0.958	2.40
Perfluorooctanesulfonamide (PFOSA)		AveID	39729 8593529	92102	397290	853601	2131820	0.0500 10.0	0.100	0.500	1.00	2.50
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)		AveID	2630 569245	5895	24203	53457	137453	0.0500 10.0	0.100	0.500	1.00	2.50
Perfluorodecanesulfonic acid (PFDS)		AveID	14725 3254326	37746	146267	326562	936371	0.0482 9.64	0.0964	0.482	0.964	2.41
Perfluoroundecanoic acid (PFUnA)		AveID	21454 4599988	55613	207593	500548	1125345	0.0500 10.0	0.100	0.500	1.00	2.50
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)		AveID	2999 597510	7276	24100	52214	130088	0.0500 10.0	0.100	0.500	1.00	2.50
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid		AveID	23812 5434304	60708	222991	528727	1360675	0.0471 9.42	0.0942	0.471	0.942	2.36
Perfluorododecanoic acid (PFDoA)		AveID	25311 5467302	60997	241313	613140	1516559	0.0500 10.0	0.100	0.500	1.00	2.50
10:2 FTS		AveID	1566 326752	3796	16244	34922	98405	0.0482 9.64	0.0964	0.482	0.964	2.41
Perfluorododecanesulfonic acid (PFDoS)		AveID	5470 1255696	16050	59189	119154	321545	0.0484 9.68	0.0968	0.484	0.968	2.42
Perfluorotridecanoic acid (PFTriA)		AveID	22484 5352503	61289	238583	586051	1347519	0.0500 10.0	0.100	0.500	1.00	2.50
Perfluorotetradecanoic acid (PFTeA)		AveID	4822 994106	12067	46717	105288	248067	0.0500 10.0	0.100	0.500	1.00	2.50
Perfluoro-n-hexadecanoic acid (PFHxDA)		L1ID	28092 4196835	59942	198924	462509	1095661	0.0500 10.0	0.100	0.500	1.00	2.50
Perfluoro-n-octadecanoic acid (PFODA)		AveID	14860 3410532	39404	147233	347376	902508	0.0500 10.0	0.100	0.500	1.00	2.50
13C4 PFBA	13PF OA	Ave	1840623 2130869	2213648	1900105	2283983	2189157	2.50 2.50	2.50	2.50	2.50	2.50
13C5 PFPeA	13PF OA	Ave	1475414 1586923	1659165	1466250	1667452	1737813	2.50 2.50	2.50	2.50	2.50	2.50
13C3 PFBS	13PF OA	Ave	1629085 1688504	1755454	1606325	1947850	1995622	2.33 2.33	2.33	2.33	2.33	2.33
M2-4:2 FTS	13PF OA	Ave	147772 158307	196322	154256	164686	180955	2.34 2.34	2.34	2.34	2.34	2.34
13C2 PFHxA	13PF OA	Ave	1689295 1743644	1910081	1597923	1840340	1923126	2.50 2.50	2.50	2.50	2.50	2.50

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

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1 Analy Batch No.: 150448

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

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

Calibration Start Date: 12/06/2019 14:32 Calibration End Date: 12/06/2019 15:13 Calibration ID: 42812

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
13C3 HFPO-DA	13PF OA	Ave	73720 77795	89774	75506	76831	74652	2.50 2.50	2.50	2.50	2.50	2.50
18O2 PFHxS	13PF OA	Ave	1303825 1492254	1647017	1297059	1410640	1433559	2.37 2.37	2.37	2.37	2.37	2.37
13C4 PFHpA	13PF OA	Ave	1511445 1724606	1759637	1607290	1812297	1725602	2.50 2.50	2.50	2.50	2.50	2.50
M2-6:2 FTS	13PF OA	Ave	220629 235092	270015	235426	263741	251791	2.38 2.38	2.38	2.38	2.38	2.38
13C4 PFOA	13PF OA	Ave	1629567 1811057	1854400	1595271	2025515	1838372	2.50 2.50	2.50	2.50	2.50	2.50
13C4 PFOS	13PF OA	Ave	964747 1147139	1294332	1071615	1258638	1140581	2.39 2.39	2.39	2.39	2.39	2.39
13C5 PFNA	13PF OA	Ave	1449198 1655656	1726802	1645205	1763969	1654835	2.50 2.50	2.50	2.50	2.50	2.50
13C2 PFDA	13PF OA	Ave	1514292 1586129	1747754	1406212	1758412	1746295	2.50 2.50	2.50	2.50	2.50	2.50
M2-8:2 FTS	13PF OA	Ave	280460 293276	314709	265467	321836	295643	2.40 2.40	2.40	2.40	2.40	2.40
13C8 FOSA	13PF OA	Ave	2076068 2165350	2323804	2056323	2111278	2022406	2.50 2.50	2.50	2.50	2.50	2.50
d3-NMeFOSAA	13PF OA	Ave	147602 169500	164960	128732	166463	162301	2.50 2.50	2.50	2.50	2.50	2.50
13C2 PFUnA	13PF OA	Ave	1196944 1343214	1512870	1217793	1538525	1499824	2.50 2.50	2.50	2.50	2.50	2.50
d5-NEtFOSAA	13PF OA	Ave	149723 192338	197154	154687	183569	167771	2.50 2.50	2.50	2.50	2.50	2.50
13C2 PFDoA	13PF OA	Ave	1355832 1535578	1616292	1352357	1681386	1557975	2.50 2.50	2.50	2.50	2.50	2.50
13C2 PFTeDA	13PF OA	Ave	1157550 1240396	1495867	1167458	1318503	1270243	2.50 2.50	2.50	2.50	2.50	2.50
13C2 PFHxDA	13PF OA	Ave	1031605 1185102	1299647	1067641	1198766	1250255	2.50 2.50	2.50	2.50	2.50	2.50

Curve Type Legend:

Ave = Average ISTD
AveID = Average isotope dilution
L1ID = Linear 1/conc IsoDil

Eurofins TestAmerica, Burlington  
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL005.d  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 1  
 Inject. Date: 06-Dec-2019 14:32:25 ALS Bottle#: 2 Worklist Smp#: 5  
 Injection Vol: 20.0 ul Dil. Factor: 1.0000  
 Sample Info: IC 1  
 Misc. Info.: 200-0039114-005 Plate: 1 Rack: 1  
 Operator ID: lc812tech Instrument ID: LC812  
 Sublist: chrom-PFC\_LC812\*sub3  
 Method: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\PFC\_LC812.m  
 Limit Group: LC\_PFC\_ICAL  
 Last Update: 09-Dec-2019 12:10:00 Calib Date: 06-Dec-2019 15:13:26  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Column 1 : C-18 ( 4.60 mm) Det: EXP1  
 Process Host: CTX0316

First Level Reviewer: chirgwinb Date: 09-Dec-2019 10:00:20

Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										
212.90 > 169.00	1.926	1.917	0.009	1.005	40348	0.0551		110	12.0	M
D 1 13C4 PFBA										
217.00 > 172.00	1.917	1.917	0.0	0.559	1840623	2.48		99.3	23720	
4 Perfluoropentanoic acid										
262.90 > 219.00	2.271	2.271	0.0	1.000	37066	0.0555		111	4.7	M
D 3 13C5 PFPeA										
267.90 > 223.00	2.271	2.271	0.0	0.662	1475414	2.60		104	5884	
D 47 13C3 PFBS										
301.90 > 80.00	2.312	2.298	0.014	0.674	1629085	2.41		104	187985	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.298	2.298	0.0	0.994	37409	0.0491	Target=2.03	111	146	
298.90 > 99.00	2.298	2.298	0.0	0.994	15965		2.34(1.01-3.04)	111	29.8	
61 1H,1H,2H,2H-perfluorohexanesulfoni										
327.00 > 307.00	2.623	2.623	0.0	1.000	5490	0.0501		107	233	
D 60 M2-4:2 FTS										
329.00 > 81.00	2.623	2.623	0.0	0.765	147772	2.34		100	352	
70 Perfluoropentanesulfonic acid										
349.00 > 80.00	2.673	2.660	0.013	0.878	32180	0.0503	Target=3.08	107	229	
349.00 > 99.00	2.673	2.660	0.013	0.878	9465		3.40(1.54-4.62)	107	65.4	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.661	2.660	0.001	1.000	34768	0.0504	Target=12.44	101	14.3	
313.00 > 119.00	2.673	2.660	0.013	1.005	2947		11.80(6.22-18.67)	101	7.9	
D 7 13C2 PFHxA										
315.00 > 270.00	2.661	2.660	0.001	0.776	1689295	2.67		107	5301	
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.776	2.776	0.0	1.003	6928	0.0654		131	3.4	M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 64 13C3 HFPO-DA										
332.10 > 287.00	2.768	2.776	-0.008	0.807	73720	2.67		107	885	
D 9 13C4 PFHpA										
367.00 > 322.00	3.055	3.044	0.011	0.891	1511445	2.52		101	4052	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.044	3.044	0.0	1.000	32330	0.0518	Target=4.13	114	112	M
399.00 > 99.00	3.044	3.044	0.0	1.000	7688		4.21(2.07-6.20)	114	25.4	M
D 11 18O2 PFHxS										
403.00 > 84.00	3.044	3.044	0.0	0.887	1303825	2.44		103	6651	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.055	3.055	0.0	1.000	32481	0.0508	Target=3.48	102	18.7	
363.00 > 169.00	3.055	3.055	0.0	1.000	11108		2.92(1.74-5.22)	102	51.1	
77 DONA										
377.00 > 251.00	3.090	3.089	0.001	0.815	75113	0.0527	Target=2.44	112	430	
377.00 > 85.00	3.090	3.089	0.001	0.815	30027		2.50(1.22-3.67)	112	142	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.413	3.413	0.0	0.998	14347	0.1637		345	253	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.413	3.413	0.0	0.900	26039	0.0527	Target=6.34	111	266	
449.00 > 99.00	3.422	3.413	0.009	0.902	4313		6.04(3.17-9.51)	111	65.2	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.422	3.413	0.009	0.998	220629	2.40		101	1088	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.430	3.430	0.0	1.000	38119	0.0527	Target=2.38	105	17.7	M
413.00 > 169.00	3.430	3.430	0.0	1.000	16212		2.35(1.19-3.57)	105	125	M
D 14 13C4 PFOA										
417.00 > 372.00	3.430	3.430	0.0	1.000	1629567	2.56		102	4031	
* 62 13C2 PFOA										
415.00 > 370.00	3.430	3.430	0.0		1750381	2.50			6726	
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.793	0.0	1.106	964747	2.28		95.2	4661	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.793	3.793	0.0	1.000	23044	0.0529	Target=5.71	114	150	M
499.00 > 99.00	3.793	3.793	0.0	1.000	4212		5.47(2.86-8.57)	114	42.2	M
D 19 13C5 PFNA										
468.00 > 423.00	3.817	3.817	0.0	1.113	1449198	2.48		99.1	7048	
20 Perfluorononanoic acid										
463.00 > 419.00	3.817	3.817	0.0	1.000	32404	0.0570	Target=6.87	114	16.5	
463.00 > 169.00	3.817	3.817	0.0	1.000	4452		7.28(3.43-10.30)	114	62.4	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.984	3.984	0.0	1.050	25410	0.0510		110	169	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.129	4.129	0.0	1.089	16830	0.0505	Target=2.92	105	178	
549.00 > 99.00	4.116	4.129	-0.013	1.085	6693		2.51(1.46-4.38)	105	60.7	
D 23 13C2 PFDA										
515.00 > 470.00	4.153	4.153	0.0	1.211	1514292	2.63		105	3330	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
24 Perfluorodecanoic acid										
513.00 > 469.00	4.153	4.153	0.0	1.000	30123	0.0514	Target=7.21	103	37.2	
513.00 > 169.00	4.153	4.153	0.0	1.000	3763		8.01(3.60-10.81)	103	46.5	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.164	4.164	0.0	1.214	280460	2.56		107	1237	
25 1H,1H,2H,2H-perfluorodecanesulfoni										
527.00 > 507.00	4.175	4.164	0.011	1.003	2605	0.0482		101	58.5	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.251	4.239	0.012	1.000	39729	0.0481		96.2	401	
D 21 13C8 FOSA										
506.00 > 78.00	4.251	4.239	0.012	1.239	2076068	2.75		110	4848	
28 N-methylperfluorooctanesulfonamido										
570.00 > 419.00	4.317	4.305	0.012	1.003	2630	0.0513		103	14.7	M
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.305	4.305	0.0	1.255	147602	2.66		106	2274	
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.409	4.409	0.0	1.162	14725	0.0507	Target=2.78	105	121	
599.00 > 99.00	4.409	4.409	0.0	1.162	5487		2.68(1.39-4.17)	105	68.2	
D 30 13C2 PFUnA										
565.00 > 520.00	4.431	4.431	0.0	1.292	1196944	2.44		97.7	5607	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.431	4.431	0.0	1.000	21454	0.0528	Target=5.47	106	26.0	
563.00 > 169.00	4.431	4.431	0.0	1.000	4403		4.87(2.73-8.20)	106	67.7	
33 N-ethylperfluorooctanesulfonamidoa										
584.00 > 419.00	4.456	4.442	0.014	1.003	2999	0.0605		121	47.3	M
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.443	4.442	0.001	1.295	149723	2.43		97.3	1722	
66 11-Chloroeicosafuoro-3-oxaundecan										
631.00 > 451.00	4.537	4.523	0.014	1.196	23812	0.0507		108	201	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.672	4.671	0.001	1.000	25311	0.0505	Target=4.84	101	5.9	
613.00 > 169.00	4.672	4.671	0.001	1.000	5725		4.42(2.42-7.26)	101	114	
D 36 13C2 PFDaA										
615.00 > 570.00	4.672	4.671	0.001	1.362	1355832	2.52		101	7580	
74 1H,1H,2H,2H-perfluorododecanesulfo										
627.00 > 607.00	4.683	4.683	0.0	1.125	1566	0.0456		94.7	36.1	
75 Perfluorododecanesulfonic acid (PF										
699.00 > 80.00	4.839	4.838	0.001	1.276	5470	0.0495	Target=0.47	102	14.7	M
699.00 > 99.00	4.839	4.838	0.001	1.276	13742		0.40(0.23-0.70)	102	247	M
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.877	4.879	-0.002	1.044	22484	0.0472	Target=3.74	94.5	6.2	
663.00 > 169.00	4.877	4.879	-0.002	1.044	6304		3.57(1.87-5.62)	94.5	68.7	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.065	5.058	0.007	1.477	1157550	2.57		103	9121	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.065	5.067	-0.002	1.000	4822	0.0518	Target=1.01	104	65.1	
713.00 > 219.00	5.056	5.067	-0.011	0.998	5478		0.88(0.50-1.51)	104	75.7	

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 44 13C2 PFHxDA										
815.00 > 770.00	5.401	5.403	-0.001	1.574	1031605	2.49		99.6	4906	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.401	5.413	-0.012	1.000	28092	0.0476	Target=3.04	95.2	8.4	
813.00 > 169.00	5.401	5.413	-0.012	1.000	9795		2.87(1.52-4.56)	95.2	119	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.737	5.747	-0.010	1.062	14860	0.0499	Target=2.88	99.7	8.1	
913.00 > 169.00	5.737	5.747	-0.010	1.062	5140		2.89(1.44-4.32)	99.7	97.9	

**QC Flag Legend**

Review Flags

M - Manually Integrated

**Reagents:**

PFAS32NCIC1\_00003

Amount Added: 100.00

Units: uL

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL005.d

Injection Date: 06-Dec-2019 14:32:25

Instrument ID: LC812

Lims ID: IC

Client ID:

Operator ID: lc812tech

ALS Bottle#: 2

Worklist Smp#: 5

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

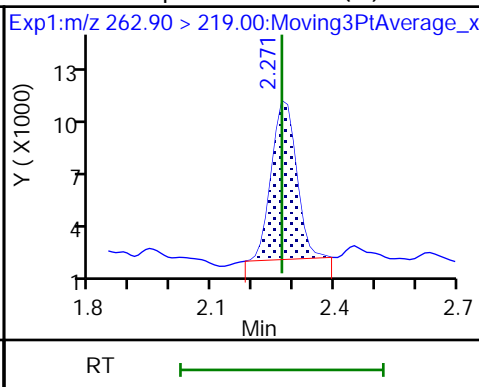
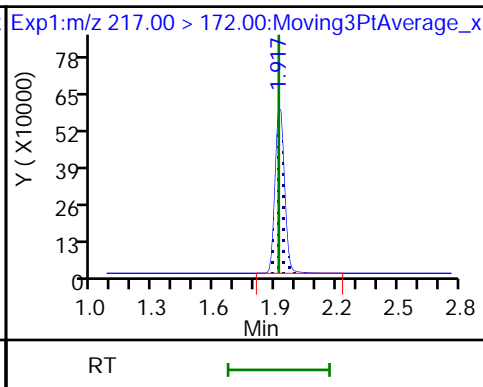
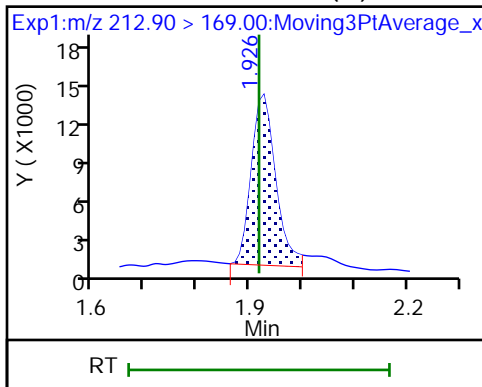
Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

2 Perfluorobutanoic acid (M)

D 1 13C4 PFBA

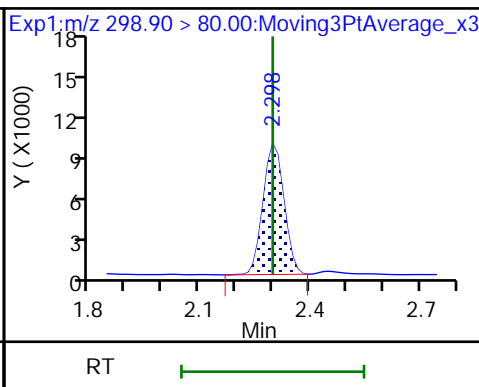
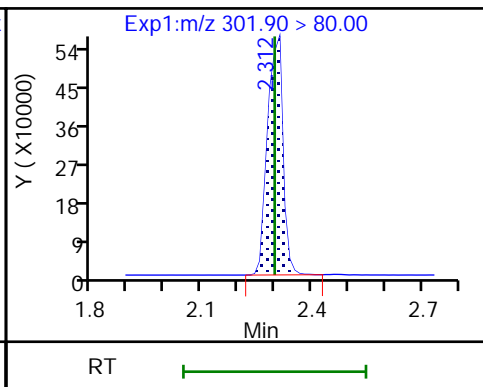
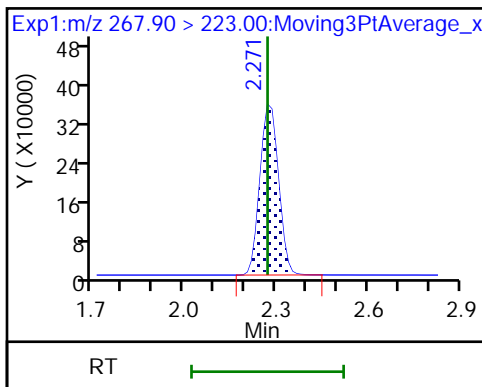
4 Perfluoropentanoic acid (M)



D 3 13C5 PFPeA

D 47 13C3 PFBS

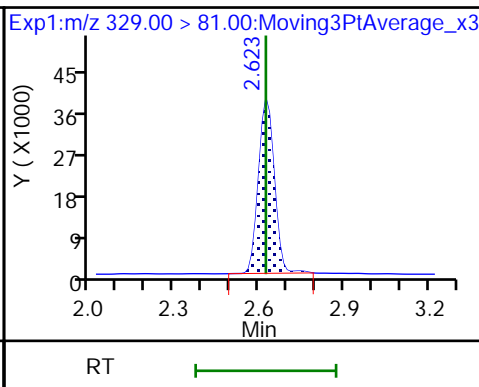
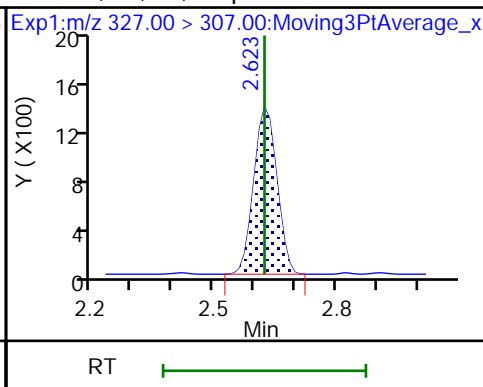
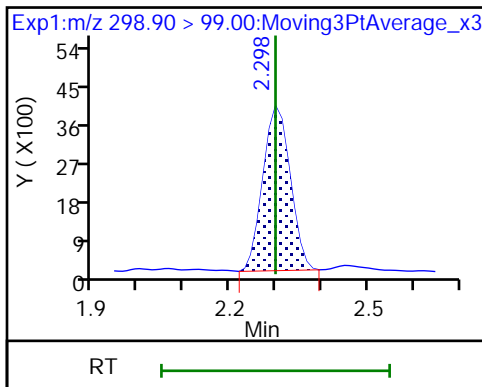
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

61 1H,1H,2H,2H-perfluorohexanesulfonate

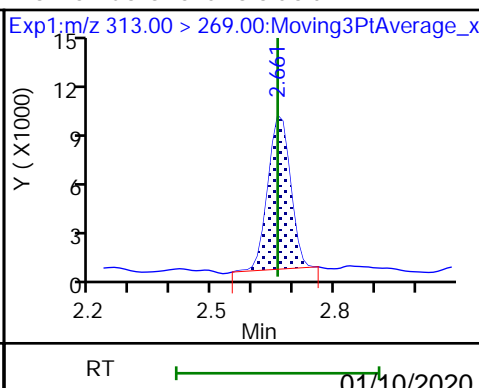
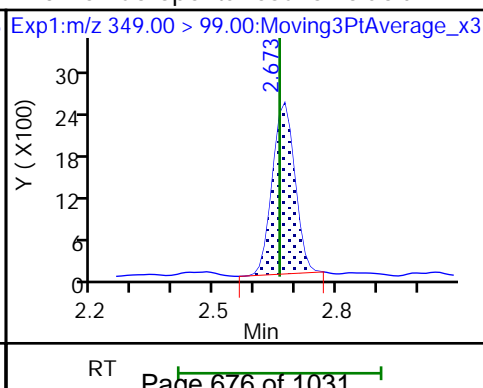
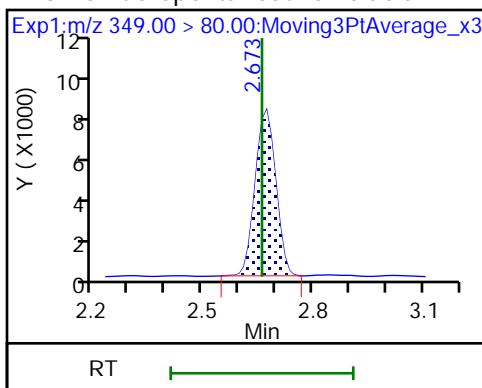
D 60 M2-4:2 FTS



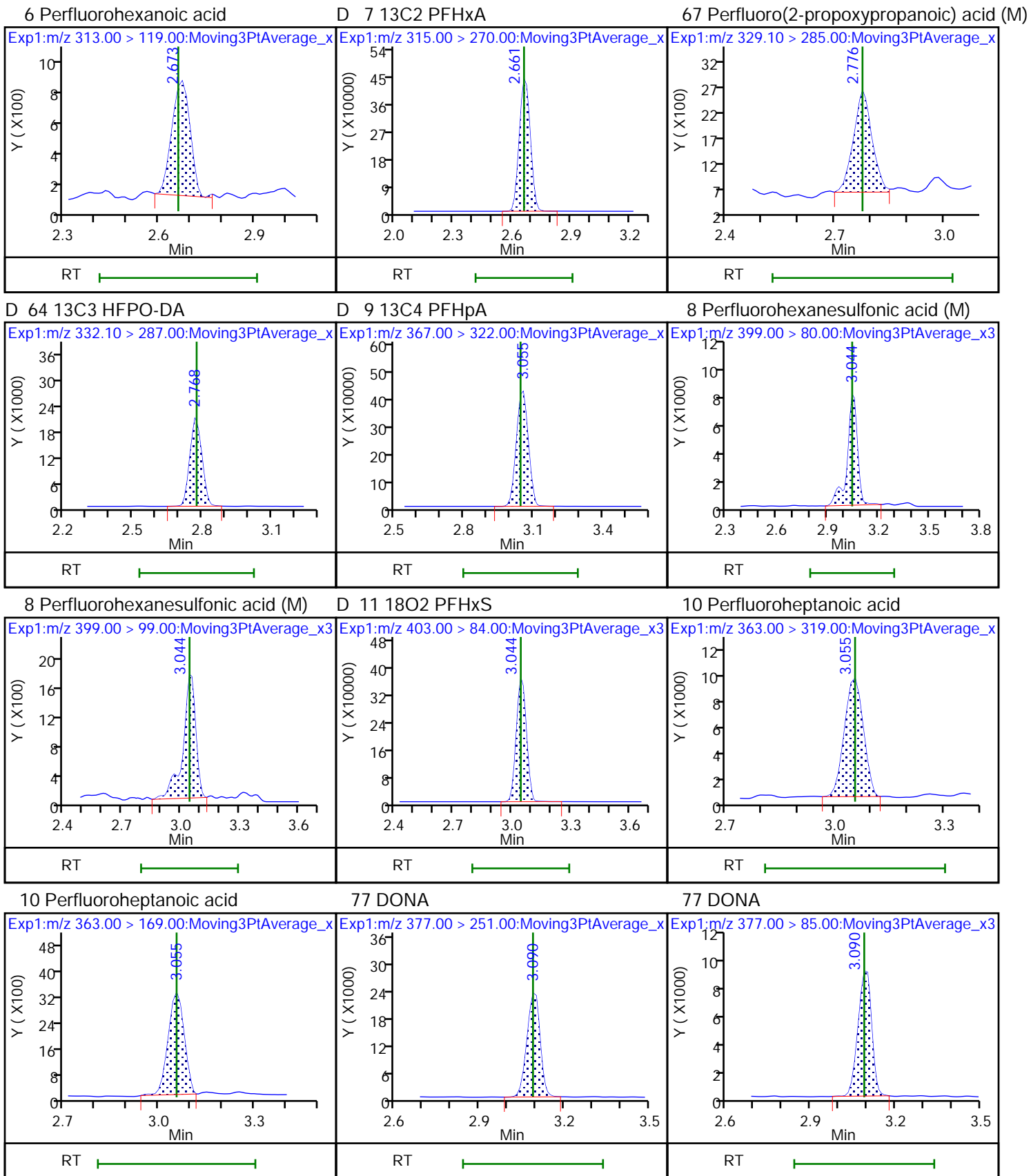
70 Perfluoropentanesulfonic acid

70 Perfluoropentanesulfonic acid

6 Perfluorohexanoic acid

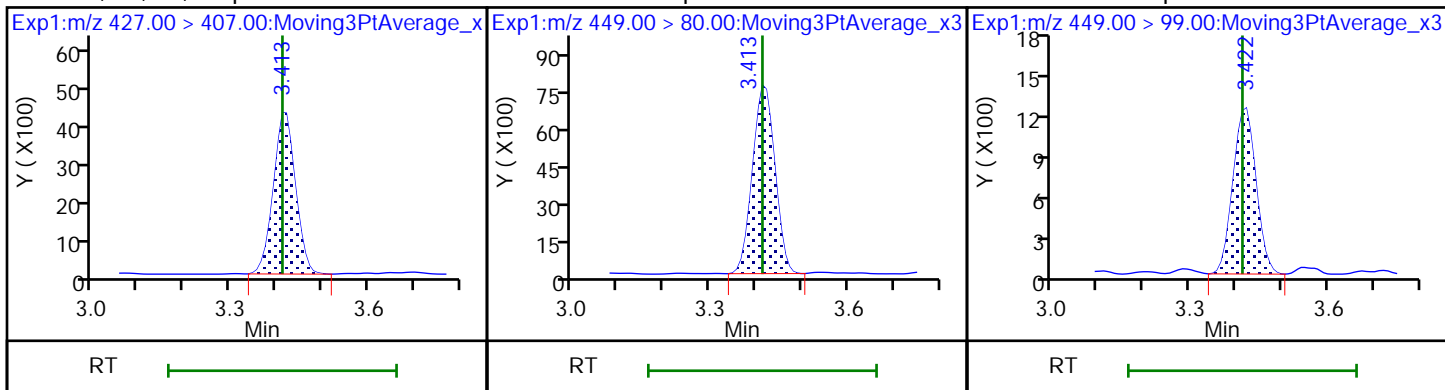






13 1H,1H,2H,2H-perfluorooctanesulfonyl 16 Perfluoroheptanesulfonic acid

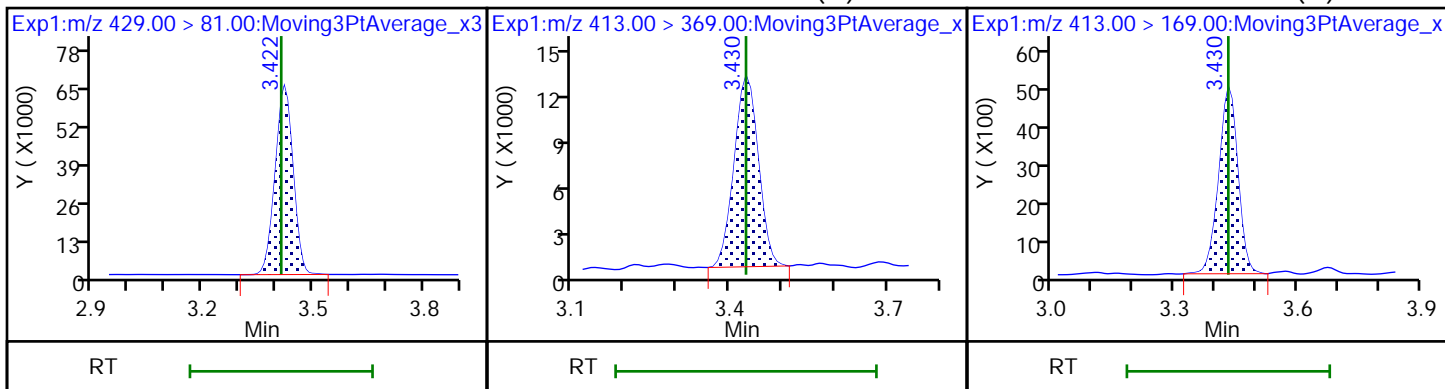
16 Perfluoroheptanesulfonic acid



D 12 M2-6:2 FTS

15 Perfluorooctanoic acid (M)

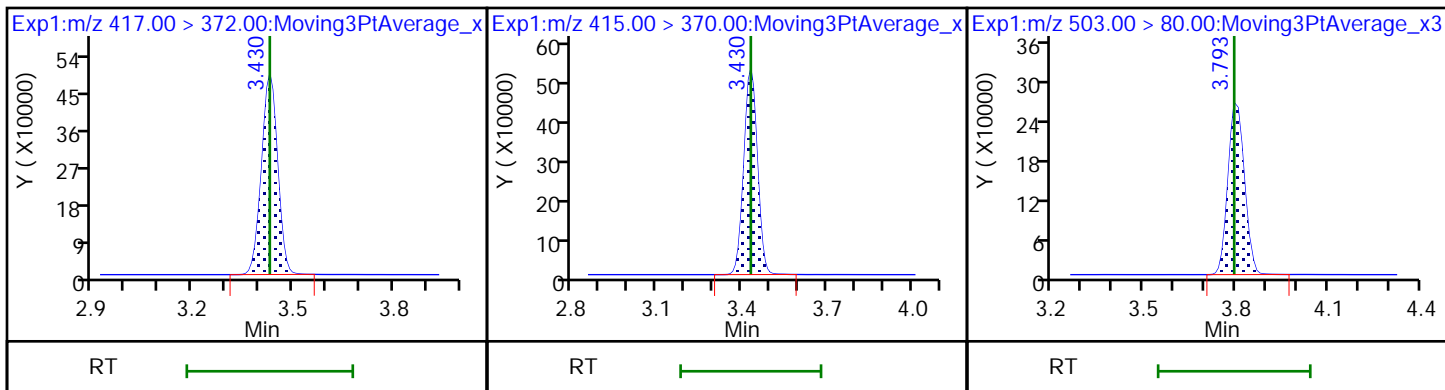
15 Perfluorooctanoic acid (M)



D 14 13C4 PFOA

\* 62 13C2 PFOA

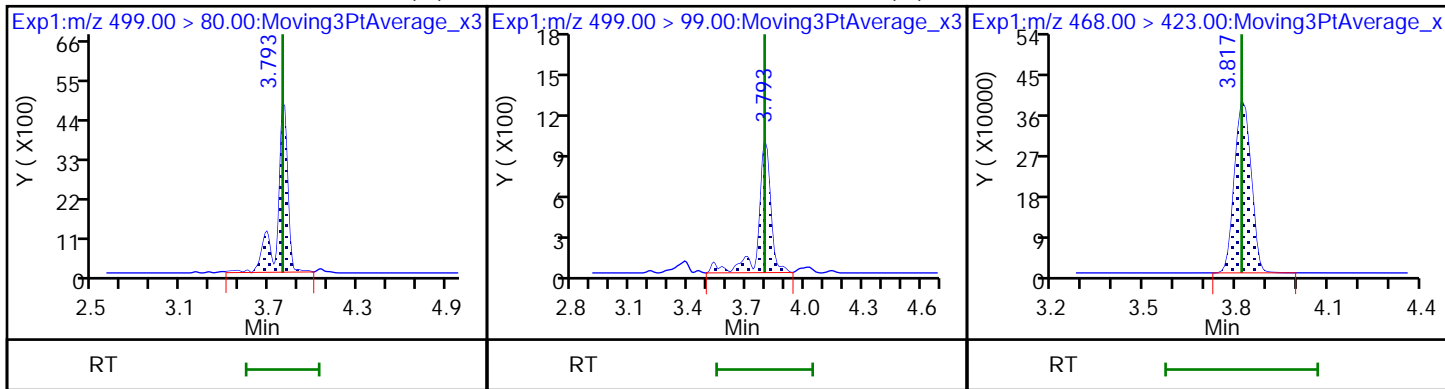
D 18 13C4 PFOS

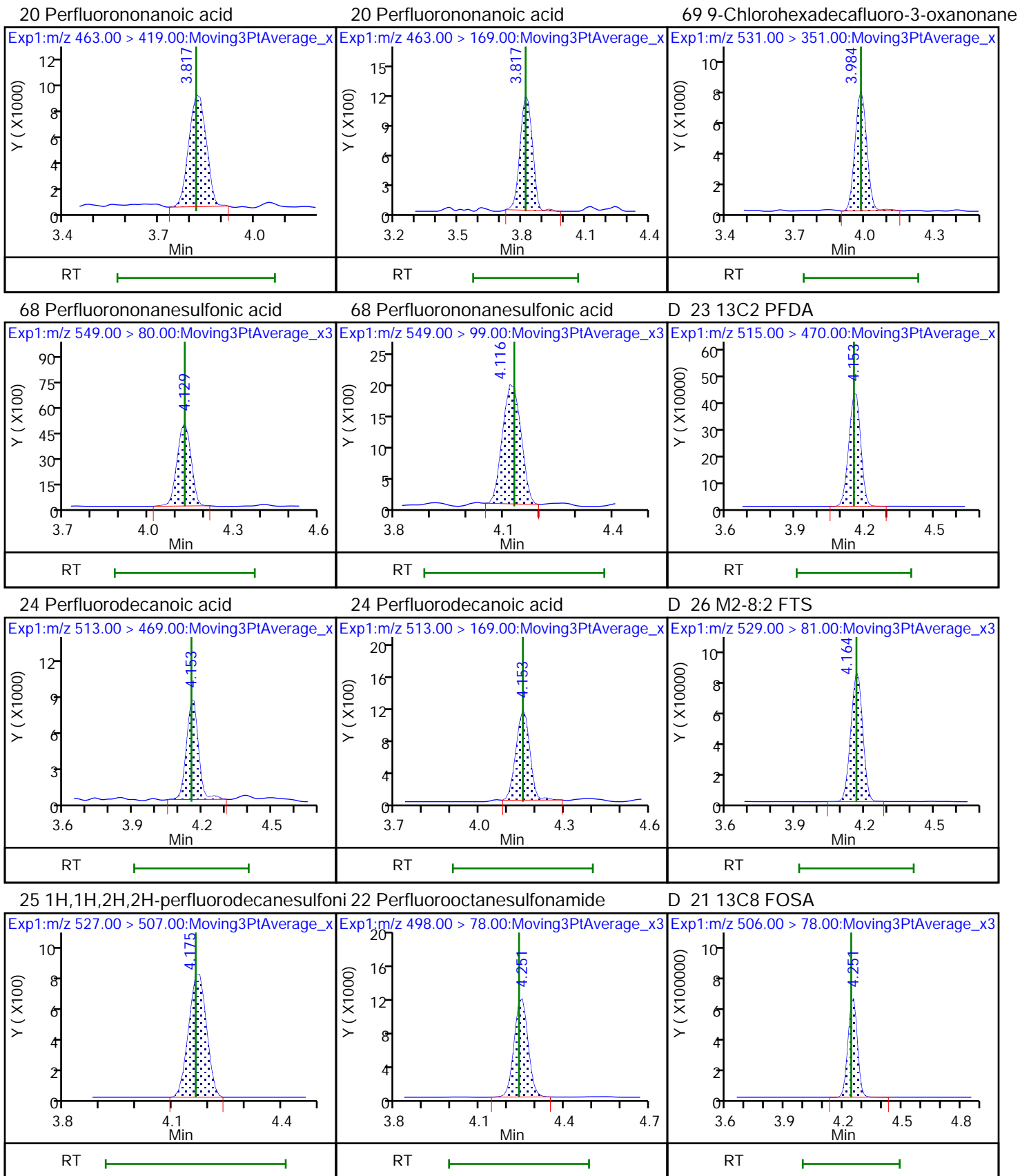


17 Perfluorooctanesulfonic acid (M)

17 Perfluorooctanesulfonic acid (M)

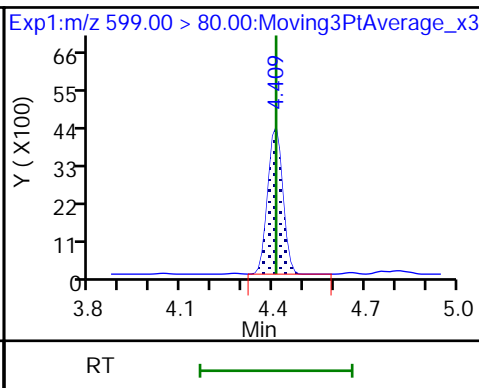
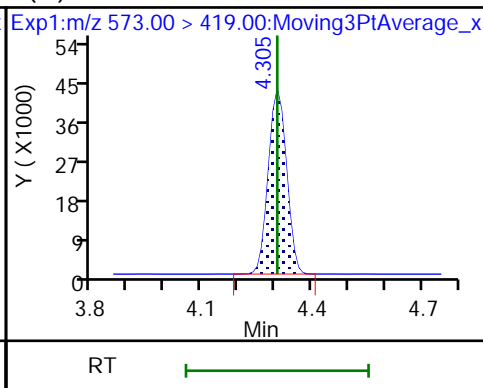
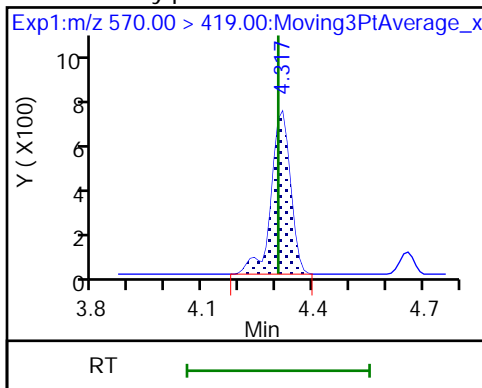
D 19 13C5 PFNA





28 N-methylperfluorooctanesulfonamidooxime d3-NMeFOSAA

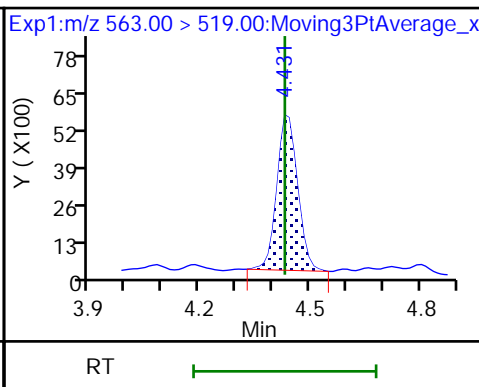
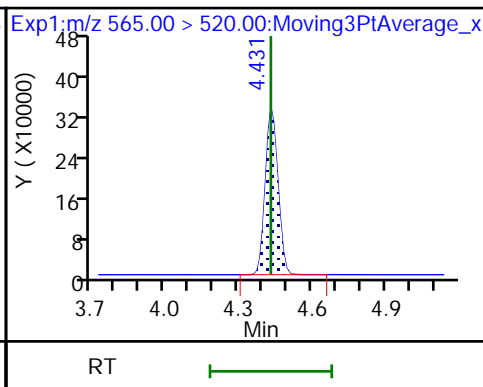
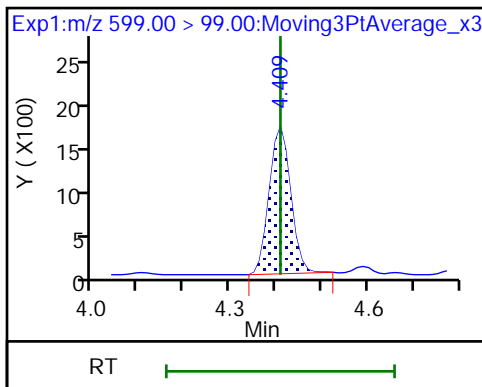
29 Perfluorodecanesulfonic acid



29 Perfluorodecanesulfonic acid

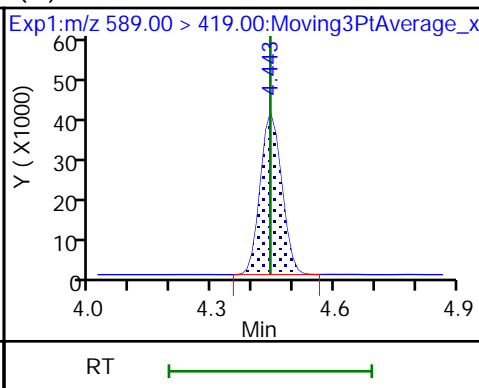
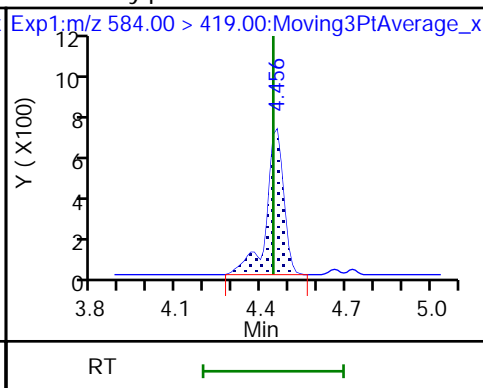
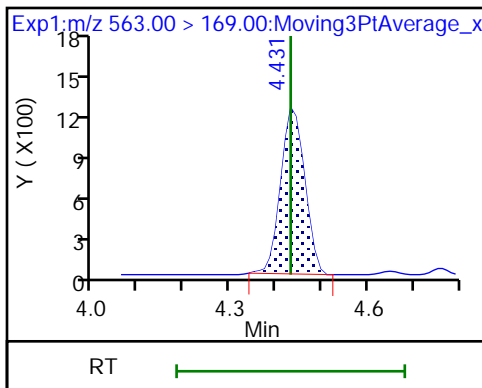
D 30 13C2 PFUoA

31 Perfluoroundecanoic acid



31 Perfluoroundecanoic acid

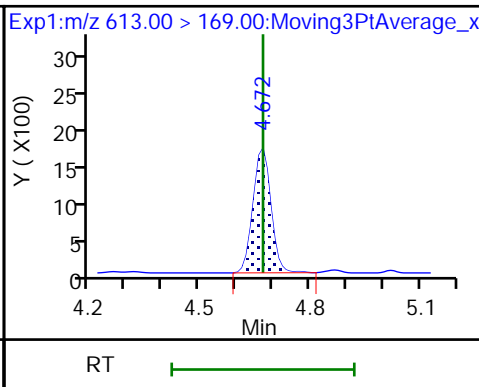
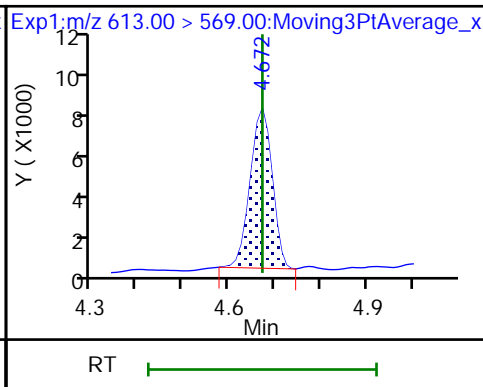
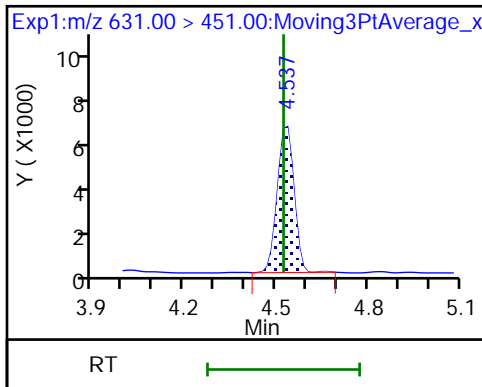
33 N-ethylperfluorooctanesulfonamidooxime d5-NEtFOSAA



66 11-Chloroeicosafuoro-3-oxaundecan

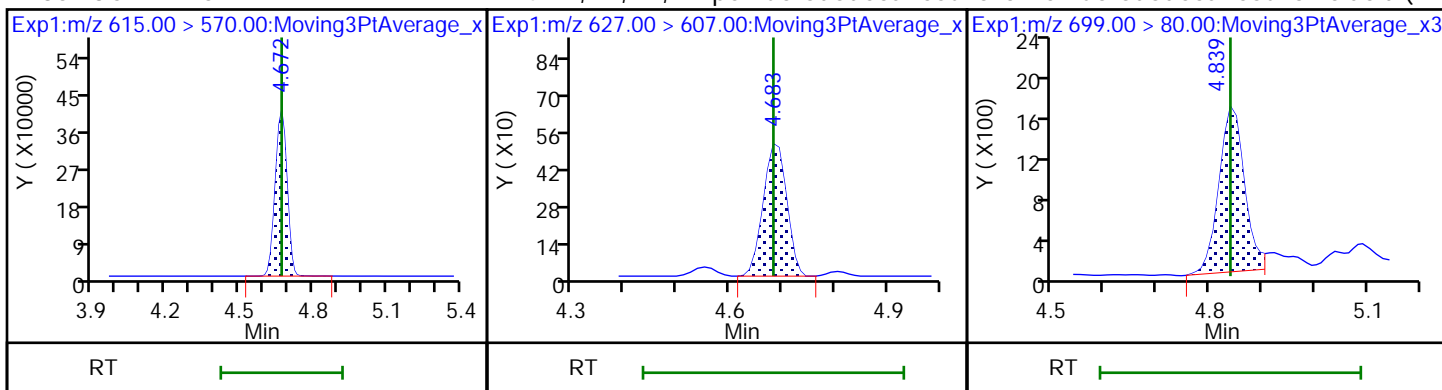
37 Perfluorododecanoic acid

37 Perfluorododecanoic acid



D 36 13C2 PFDaA

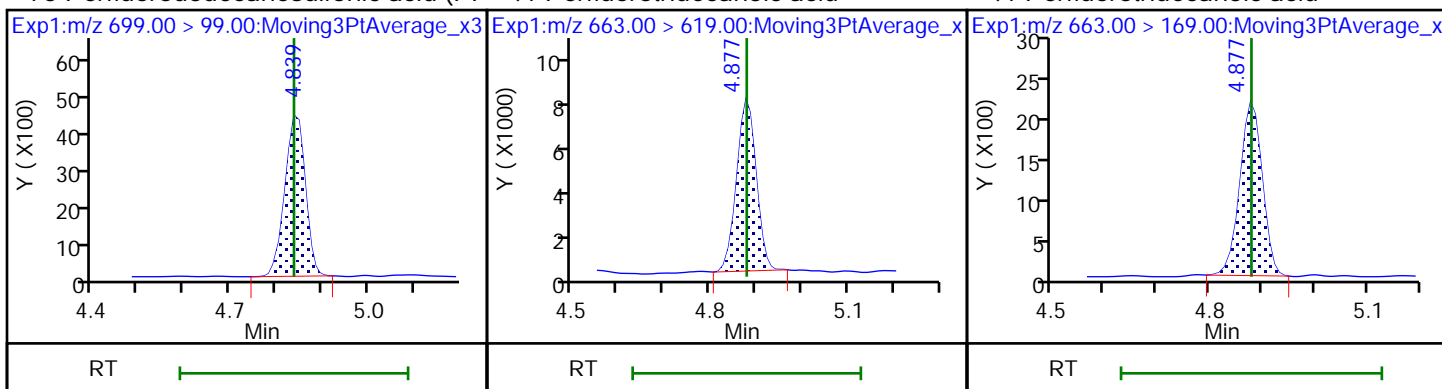
74 1H,1H,2H,2H-perfluorododecanesulfo75 Perfluorododecanesulfonic acid (PF (M)



75 Perfluorododecanesulfonic acid (PF

41 Perfluorotridecanoic acid

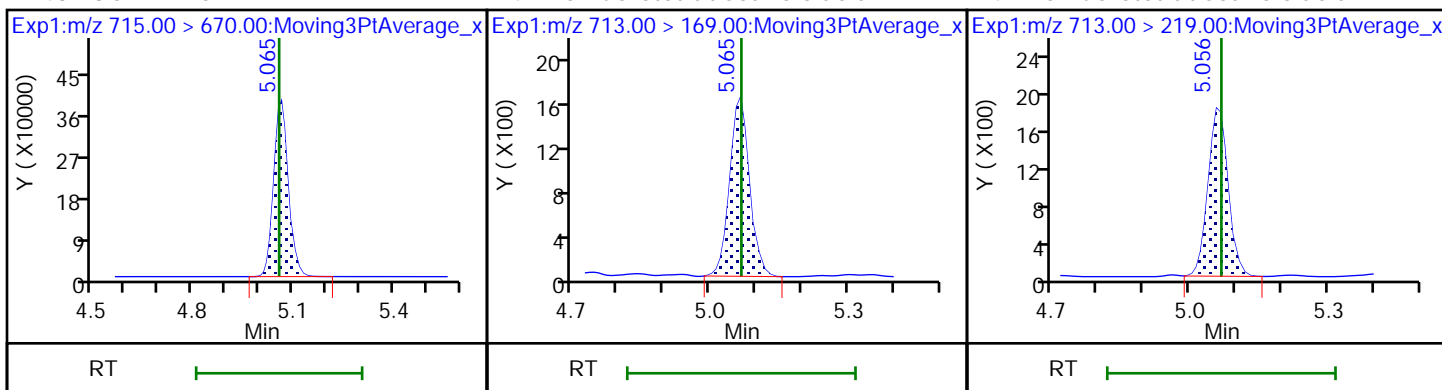
41 Perfluorotridecanoic acid



D 43 13C2 PFTeDA

42 Perfluorotetradecanoic acid

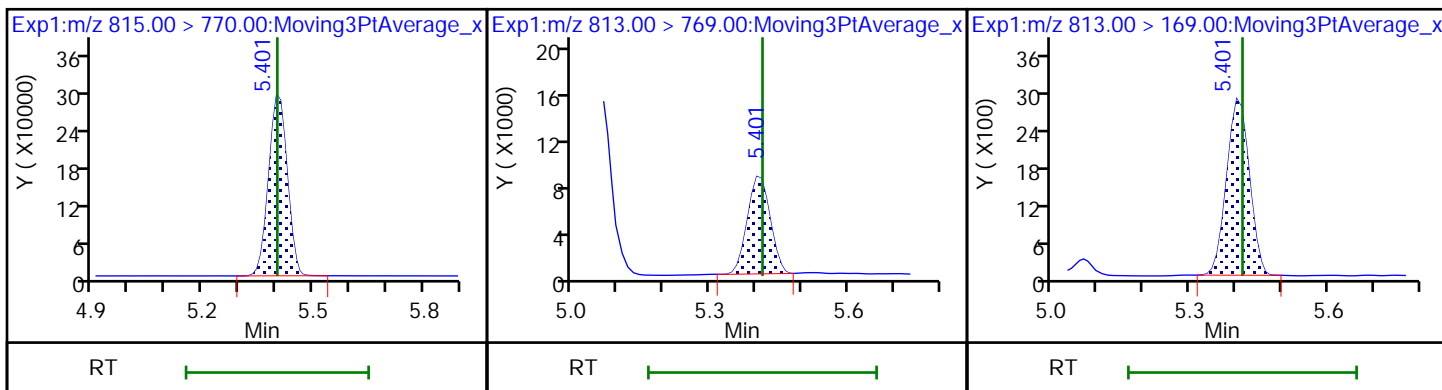
42 Perfluorotetradecanoic acid



D 44 13C2 PFHxDA

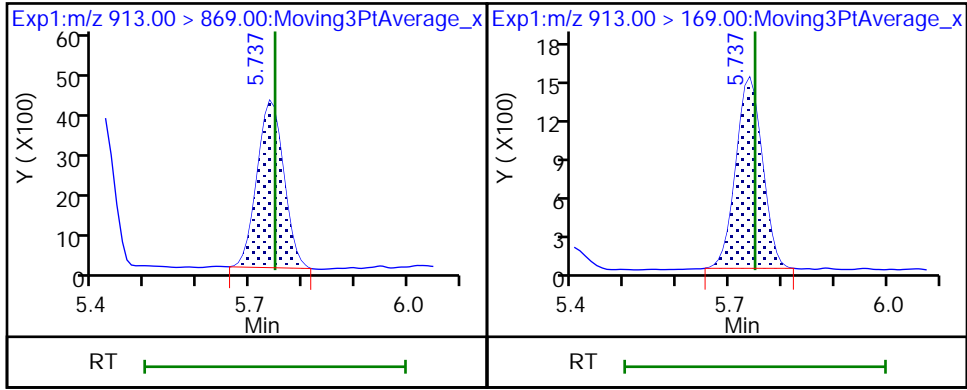
45 Perfluorohexadecanoic acid

45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid

46 Perfluorooctadecanoic acid



Euofins TestAmerica, Burlington

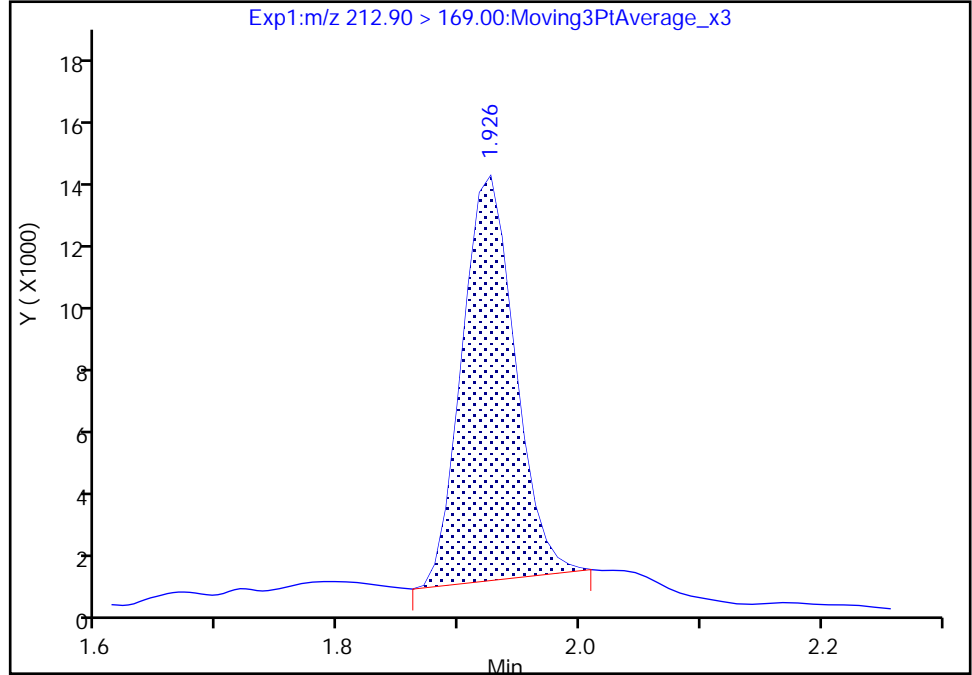
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Injection Date: 06-Dec-2019 14:32:25 Instrument ID: LC812  
Lims ID: IC  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

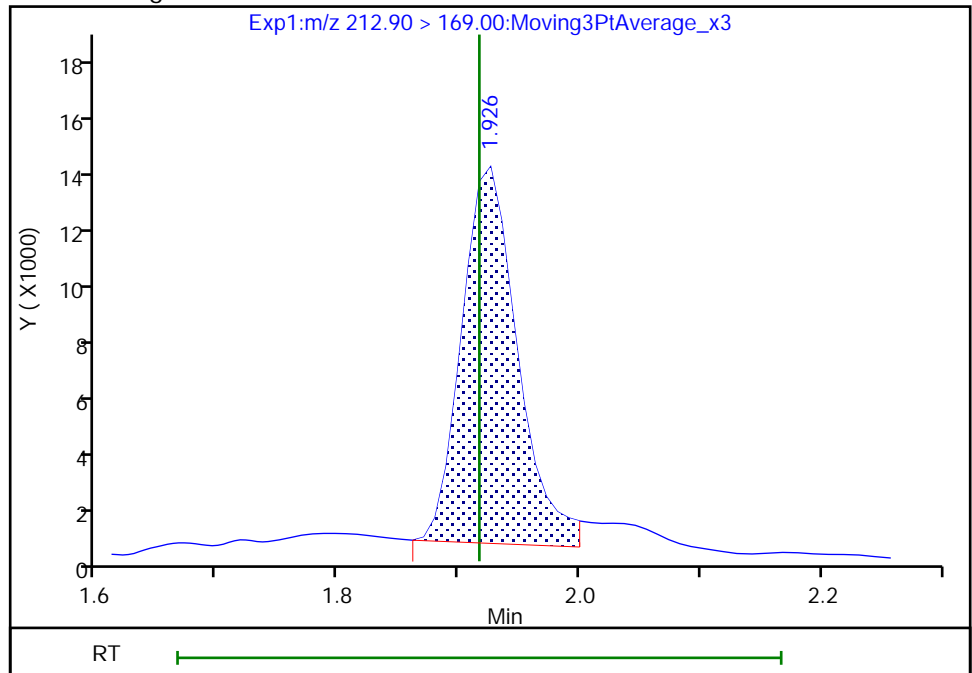
RT: 1.93  
Area: 37141  
Amount: 0.051080  
Amount Units: ng/ml

Processing Integration Results



RT: 1.93  
Area: 40348  
Amount: 0.055082  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 06-Dec-2019 15:26:34  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Euofins TestAmerica, Burlington

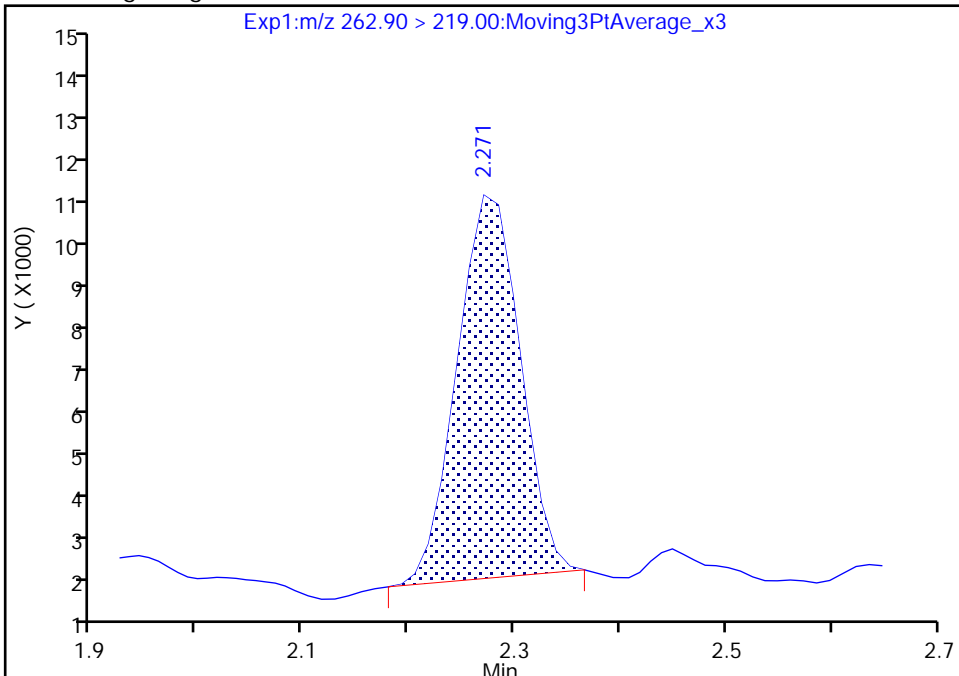
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Injection Date: 06-Dec-2019 14:32:25 Instrument ID: LC812  
Lims ID: IC  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

4 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

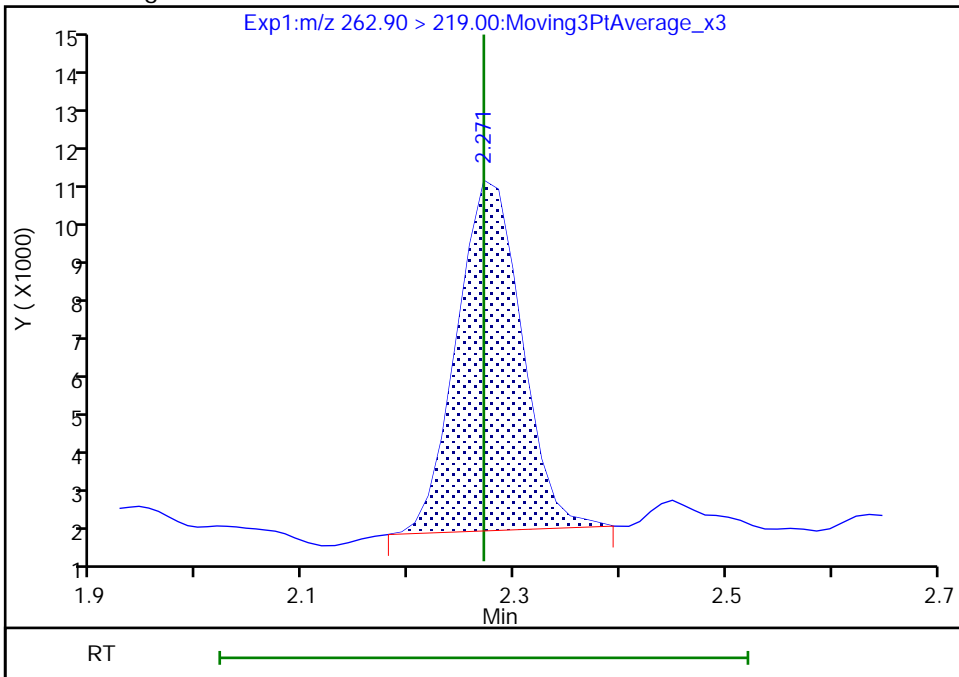
RT: 2.27  
Area: 35792  
Amount: 0.051428  
Amount Units: ng/ml

Processing Integration Results



RT: 2.27  
Area: 37066  
Amount: 0.055464  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 06-Dec-2019 15:26:44  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Eurofins TestAmerica, Burlington

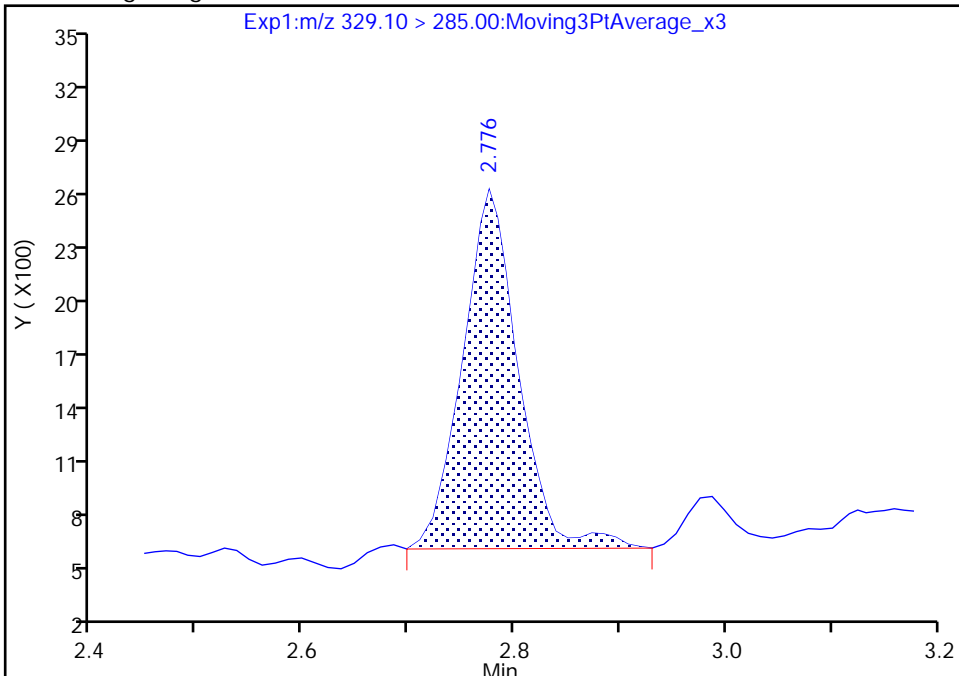
Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL005.d  
Injection Date: 06-Dec-2019 14:32:25 Instrument ID: LC812  
Lims ID: IC  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

67 Perfluoro(2-propoxypropanoic) acid, CAS: 13252-13-6

Signal: 1

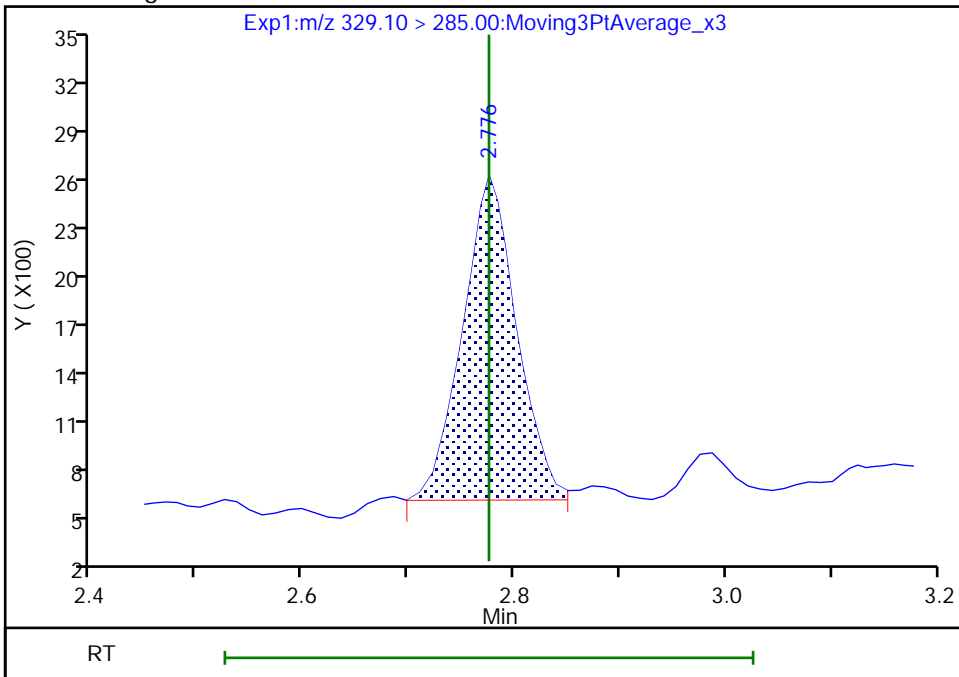
RT: 2.78  
Area: 7156  
Amount: 0.068386  
Amount Units: ng/ml

Processing Integration Results



RT: 2.78  
Area: 6928  
Amount: 0.065430  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 06-Dec-2019 15:27:06  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

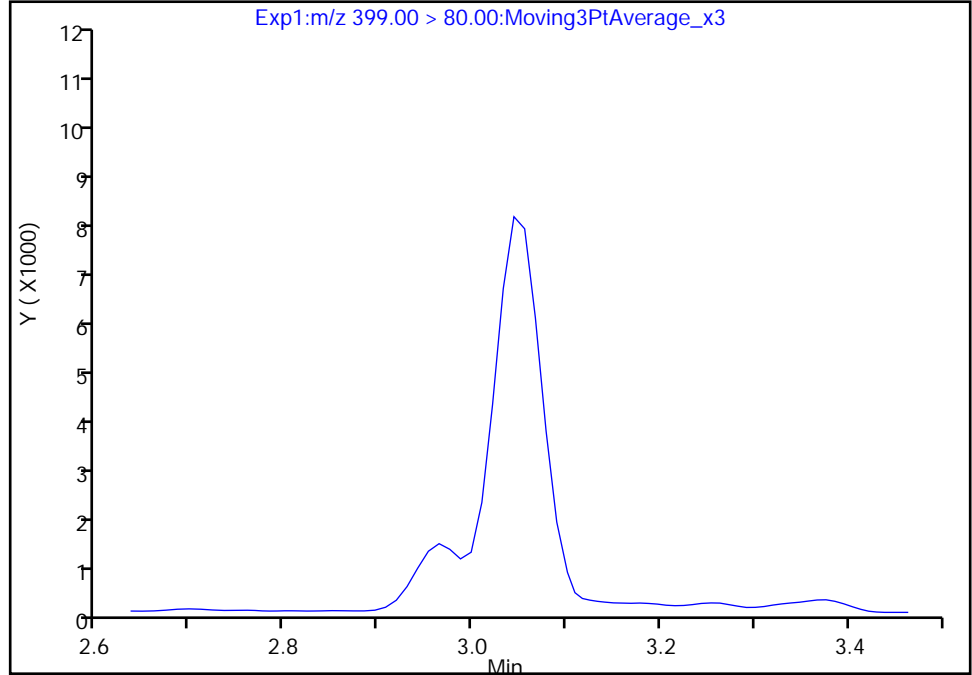
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Injection Date: 06-Dec-2019 14:32:25 Instrument ID: LC812  
Lims ID: IC  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

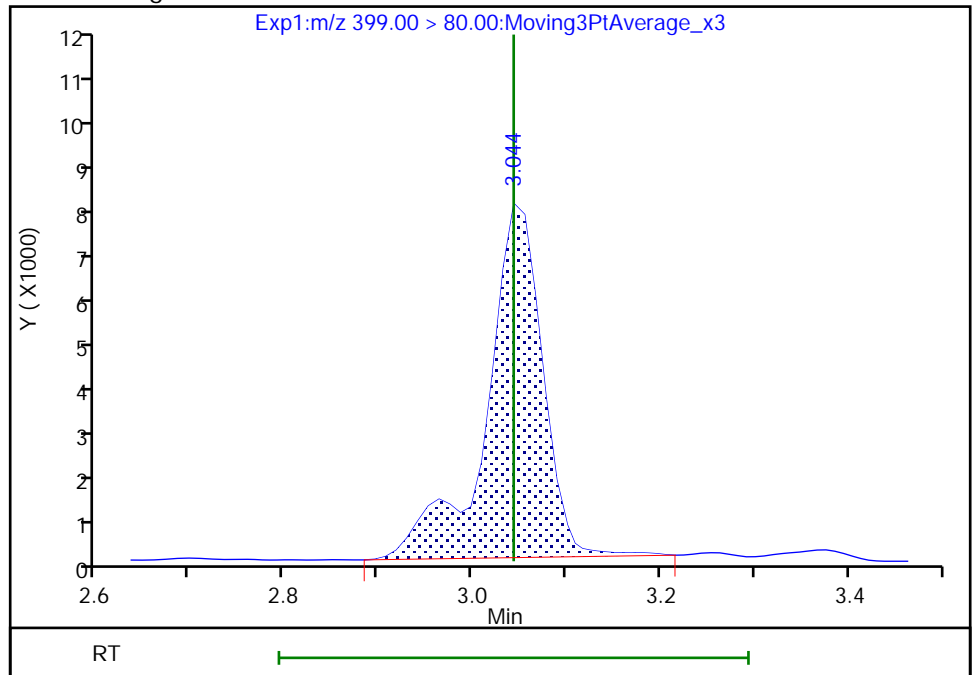
Not Detected  
Expected RT: 3.04

Processing Integration Results



Manual Integration Results

RT: 3.04  
Area: 32330  
Amount: 0.051816  
Amount Units: ng/ml



Reviewer: chirgwinb, 06-Dec-2019 15:25:28  
Audit Action: Manually Integrated

Audit Reason: Missed Peak

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL005.d

Injection Date: 06-Dec-2019 14:32:25

Instrument ID: LC812

Lims ID: IC

Client ID:

Operator ID: lc812tech

ALS Bottle#: 2

Worklist Smp#: 5

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

Column: C-18 (4.60 mm)

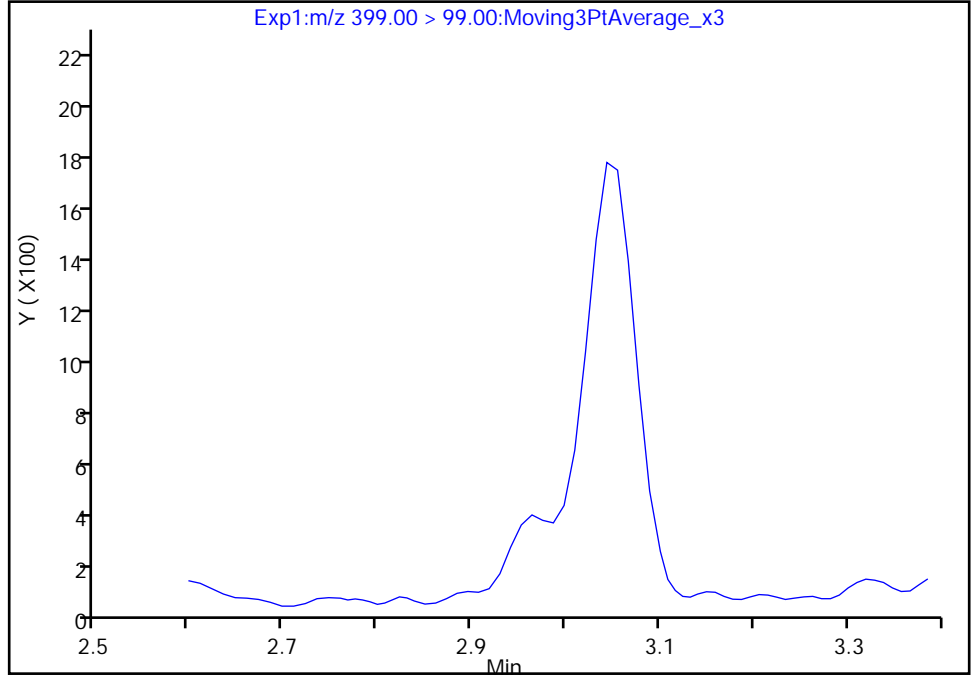
Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

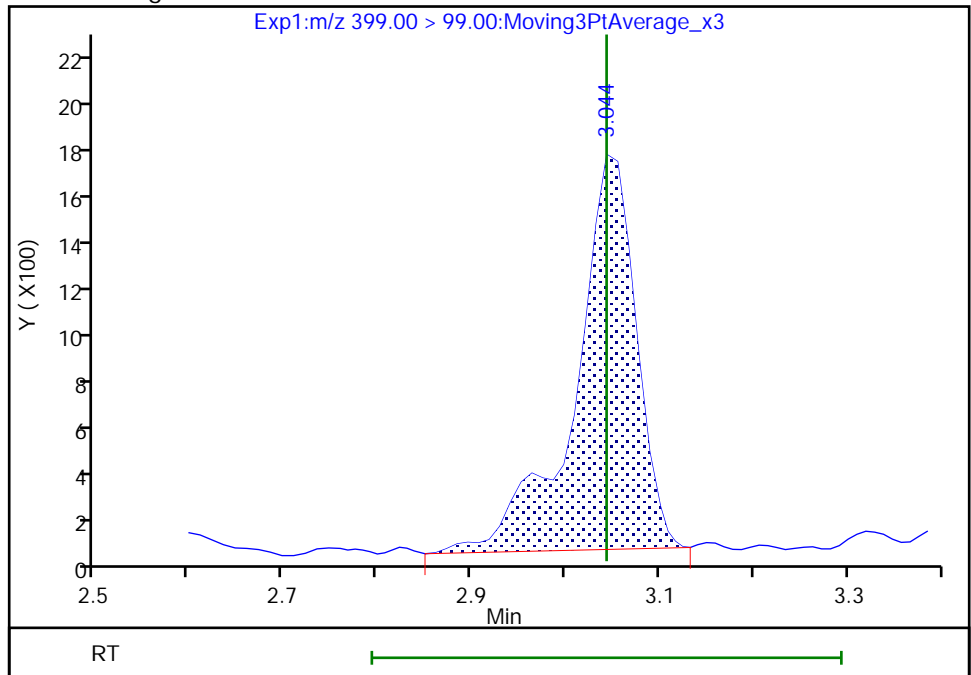
Not Detected  
Expected RT: 3.04

Processing Integration Results



Manual Integration Results

RT: 3.04  
Area: 7688  
Amount: 0.051816  
Amount Units: ng/ml



Reviewer: chirgwinb, 06-Dec-2019 15:25:34

Audit Action: Manually Integrated

Audit Reason: Missed Peak

Eurofins TestAmerica, Burlington

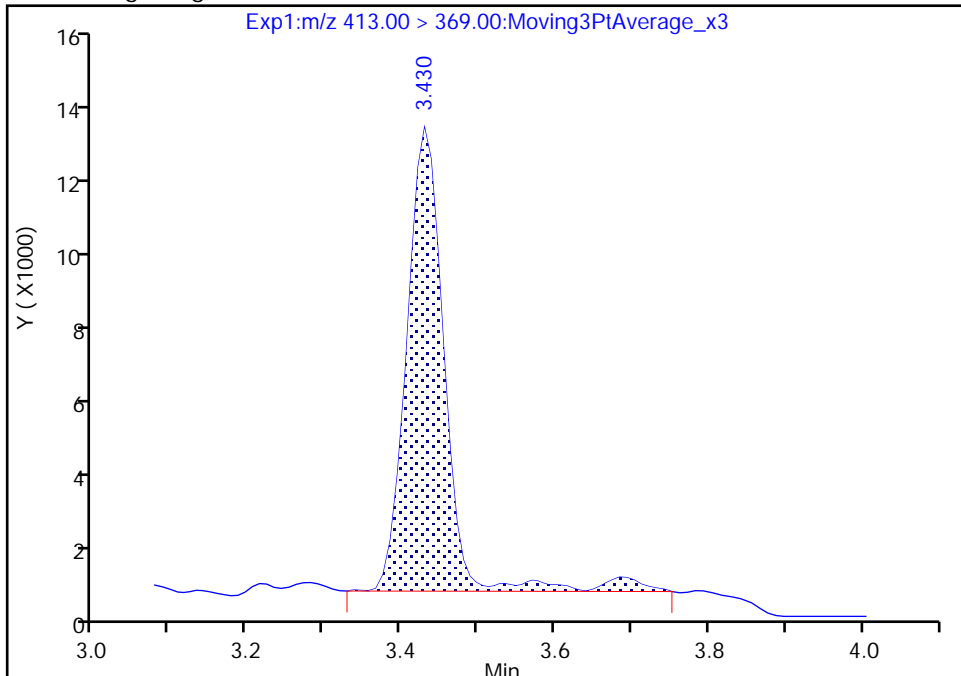
Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL005.d  
Injection Date: 06-Dec-2019 14:32:25 Instrument ID: LC812  
Lims ID: IC  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

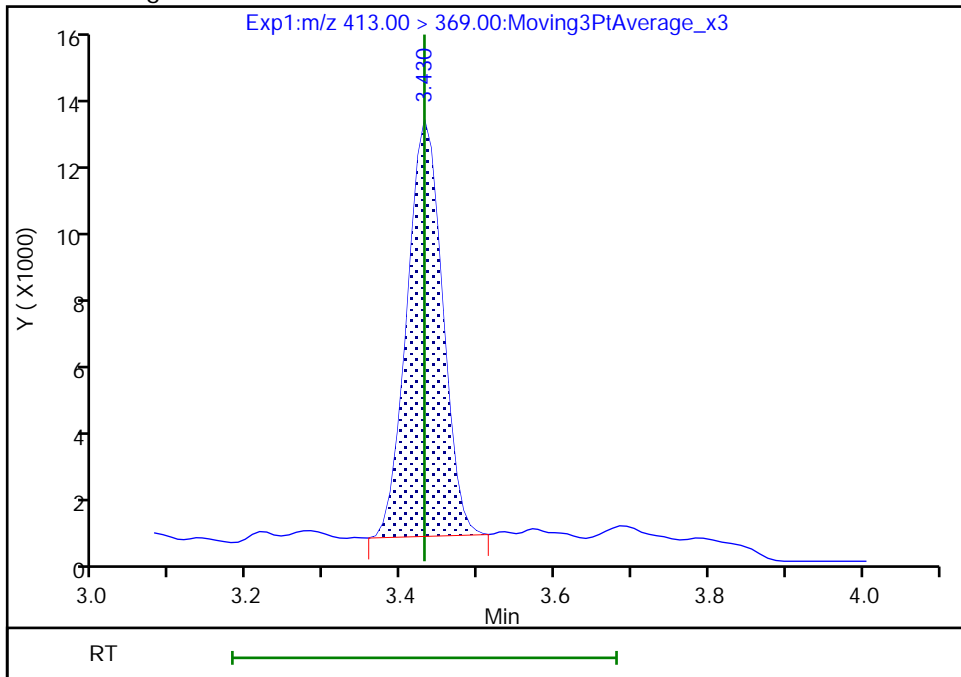
RT: 3.43  
Area: 41178  
Amount: 0.053229  
Amount Units: ng/ml

Processing Integration Results



RT: 3.43  
Area: 38119  
Amount: 0.052707  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 06-Dec-2019 15:27:29  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL005.d

Injection Date: 06-Dec-2019 14:32:25

Instrument ID: LC812

Lims ID: IC

Client ID:

Operator ID: lc812tech

ALS Bottle#: 2

Worklist Smp#: 5

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

Column: C-18 (4.60 mm)

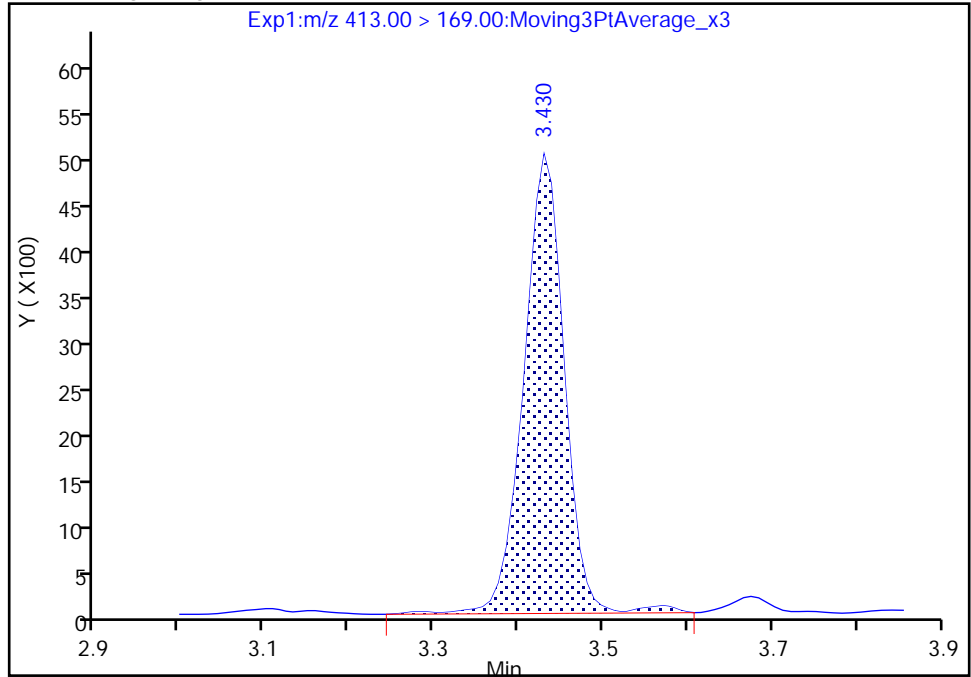
Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

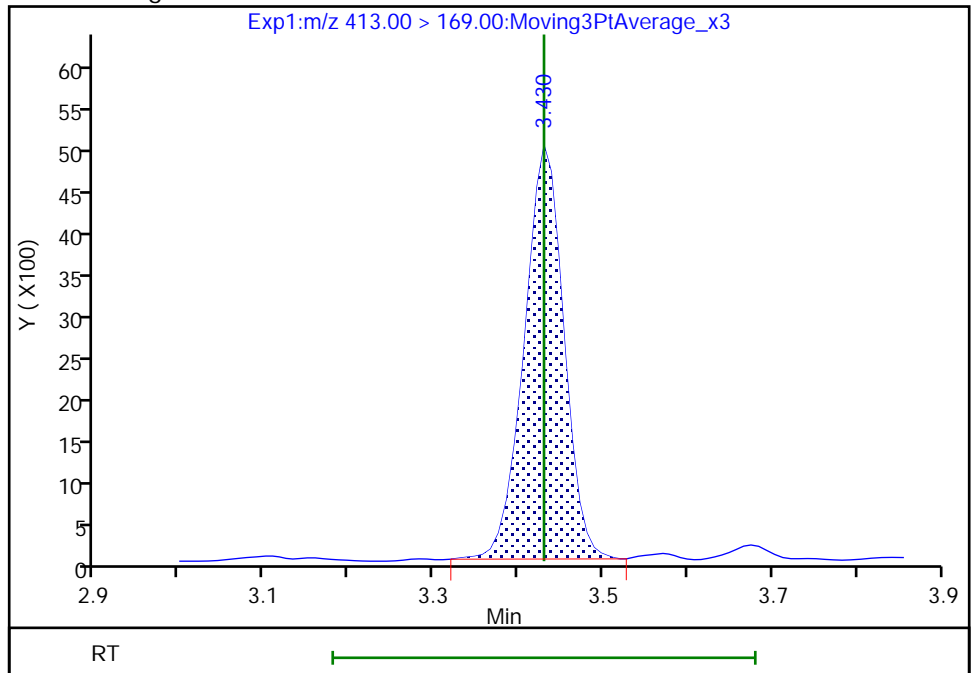
RT: 3.43  
Area: 16712  
Amount: 0.053229  
Amount Units: ng/ml

Processing Integration Results



RT: 3.43  
Area: 16212  
Amount: 0.052707  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 06-Dec-2019 15:27:34

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

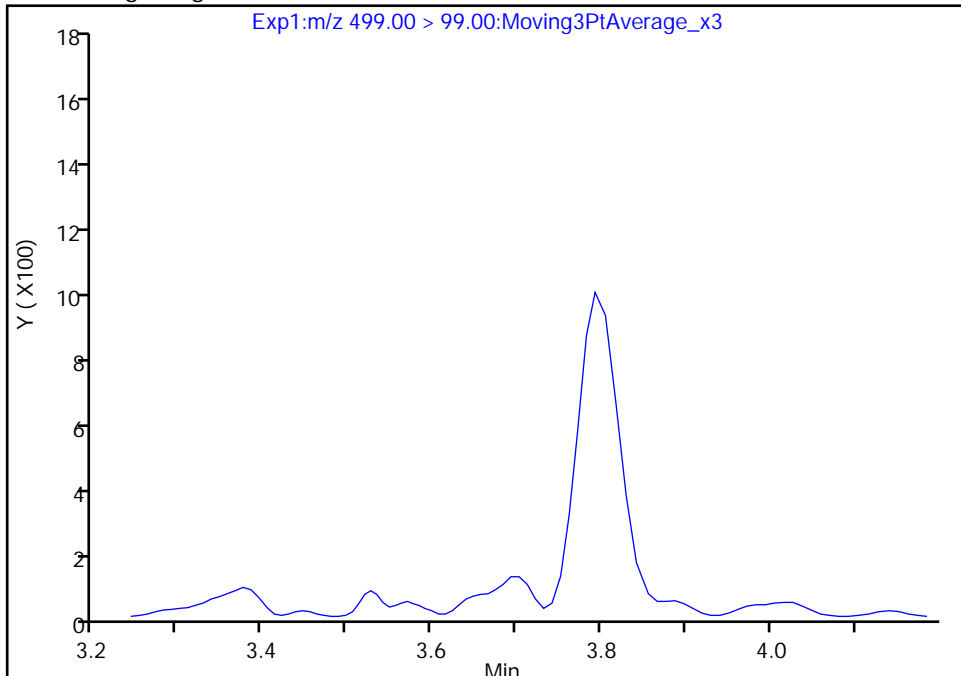
Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL005.d  
Injection Date: 06-Dec-2019 14:32:25 Instrument ID: LC812  
Lims ID: IC  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

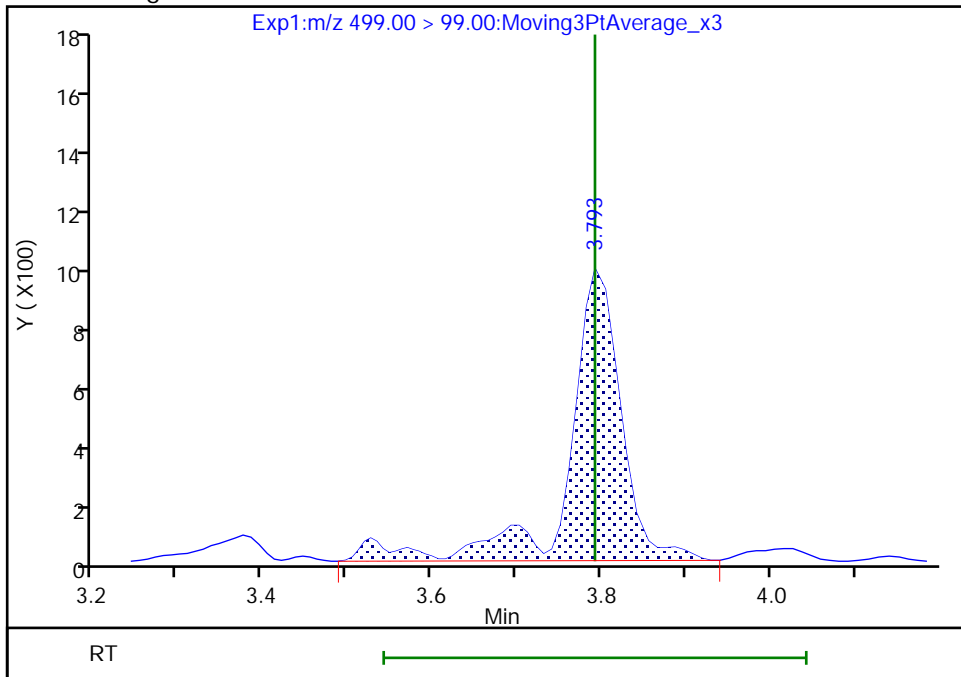
Not Detected  
Expected RT: 3.79

Processing Integration Results



Manual Integration Results

RT: 3.79  
Area: 4212  
Amount: 0.052882  
Amount Units: ng/ml



Reviewer: chirgwinb, 06-Dec-2019 15:25:57  
Audit Action: Manually Integrated

Audit Reason: Missed Peak

Euofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL005.d

Injection Date: 06-Dec-2019 14:32:25

Instrument ID: LC812

Lims ID: IC

Client ID:

Operator ID: lc812tech

ALS Bottle#: 2

Worklist Smp#: 5

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

Column: C-18 (4.60 mm)

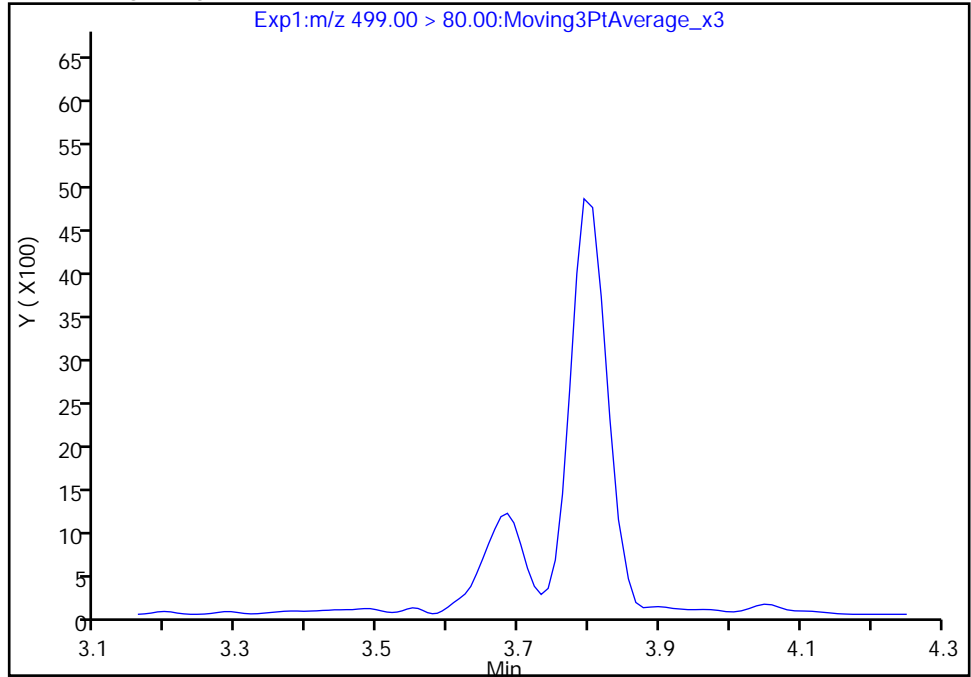
Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

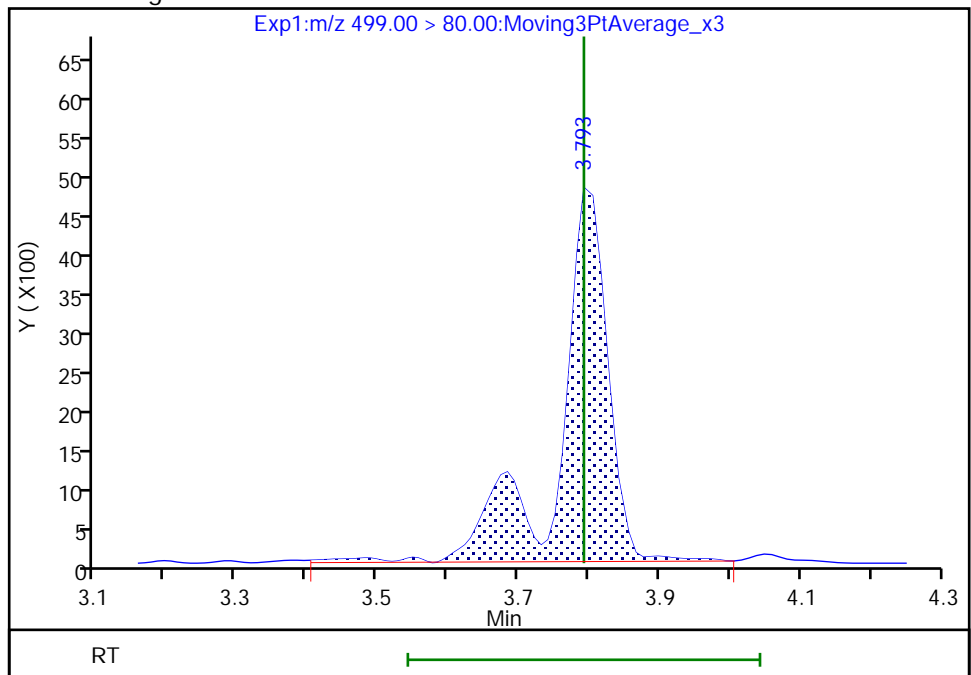
Not Detected  
Expected RT: 3.79

Processing Integration Results



Manual Integration Results

RT: 3.79  
Area: 23044  
Amount: 0.052882  
Amount Units: ng/ml



Reviewer: chirgwinb, 06-Dec-2019 15:26:04

Audit Action: Manually Integrated

Audit Reason: Missed Peak

Eurofins TestAmerica, Burlington

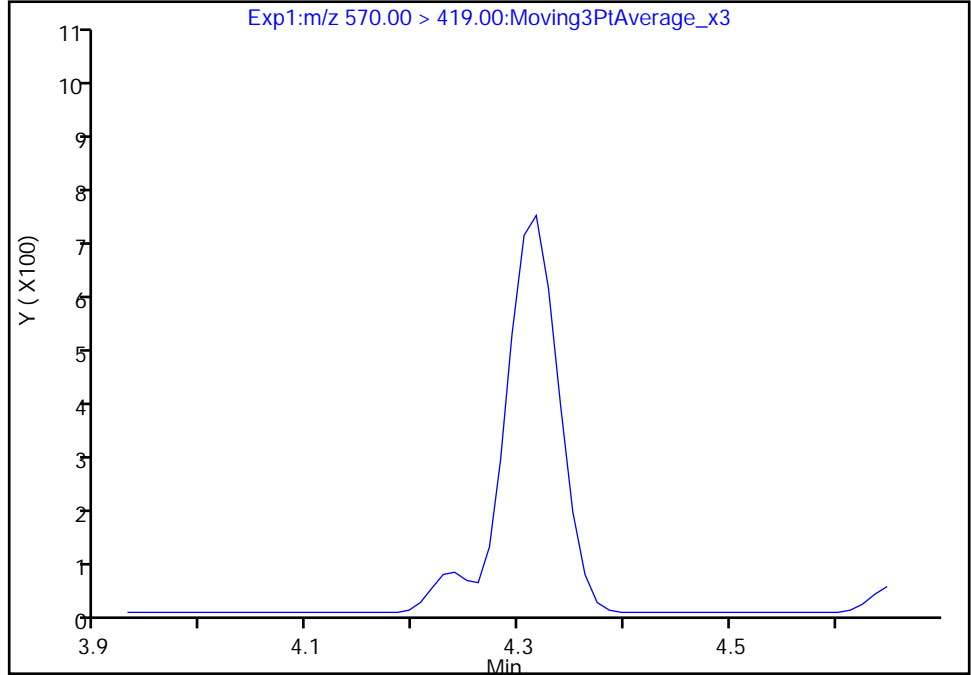
Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL005.d  
Injection Date: 06-Dec-2019 14:32:25 Instrument ID: LC812  
Lims ID: IC  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

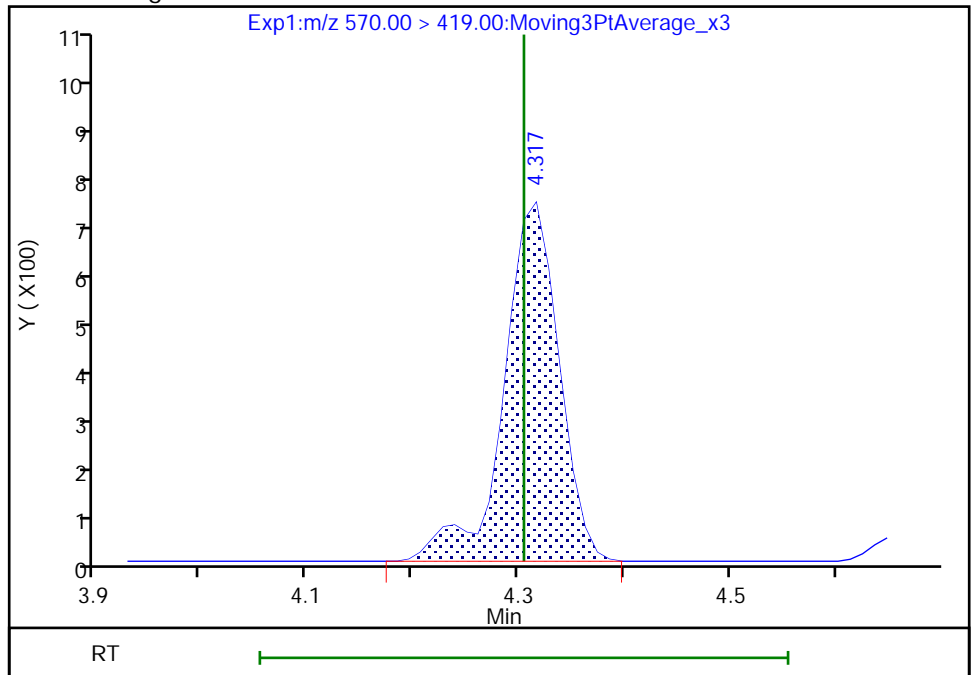
Not Detected  
Expected RT: 4.31

Processing Integration Results



Manual Integration Results

RT: 4.32  
Area: 2630  
Amount: 0.051264  
Amount Units: ng/ml



Reviewer: chirgwinb, 06-Dec-2019 15:26:17  
Audit Action: Manually Integrated

Audit Reason: Missed Peak



Eurofins TestAmerica, Burlington

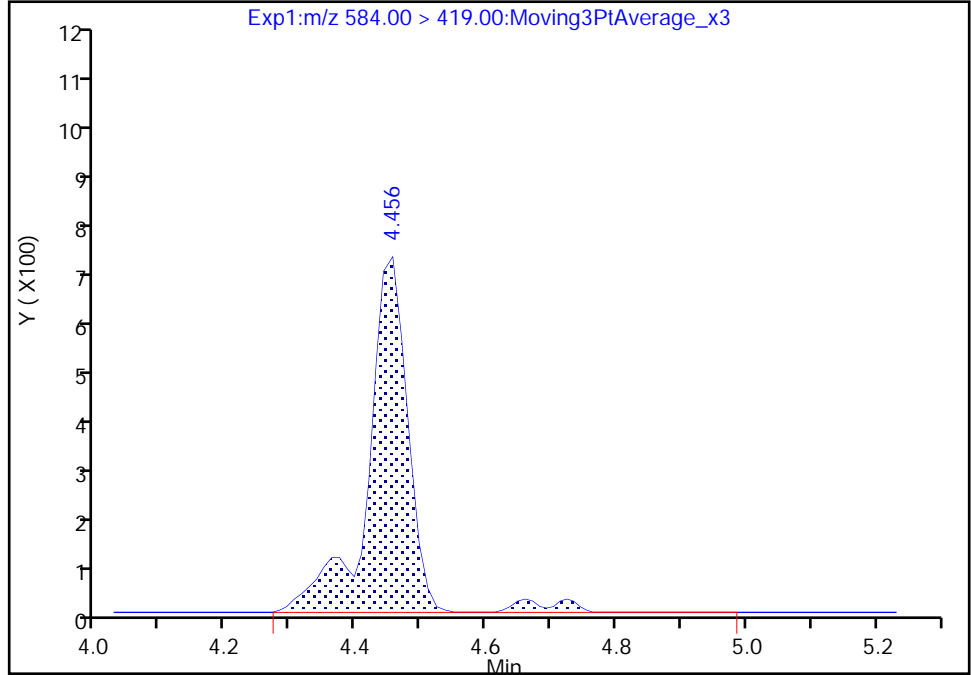
Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL005.d  
Injection Date: 06-Dec-2019 14:32:25 Instrument ID: LC812  
Lims ID: IC  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

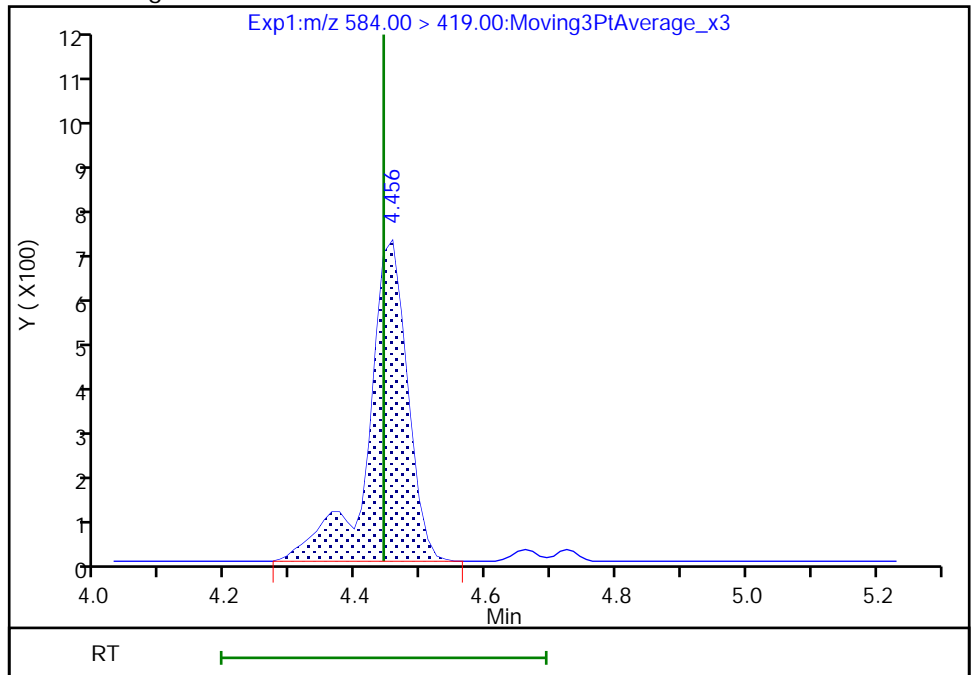
RT: 4.46  
Area: 3128  
Amount: 0.060203  
Amount Units: ng/ml

Processing Integration Results



RT: 4.46  
Area: 2999  
Amount: 0.060499  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 06-Dec-2019 15:28:02  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

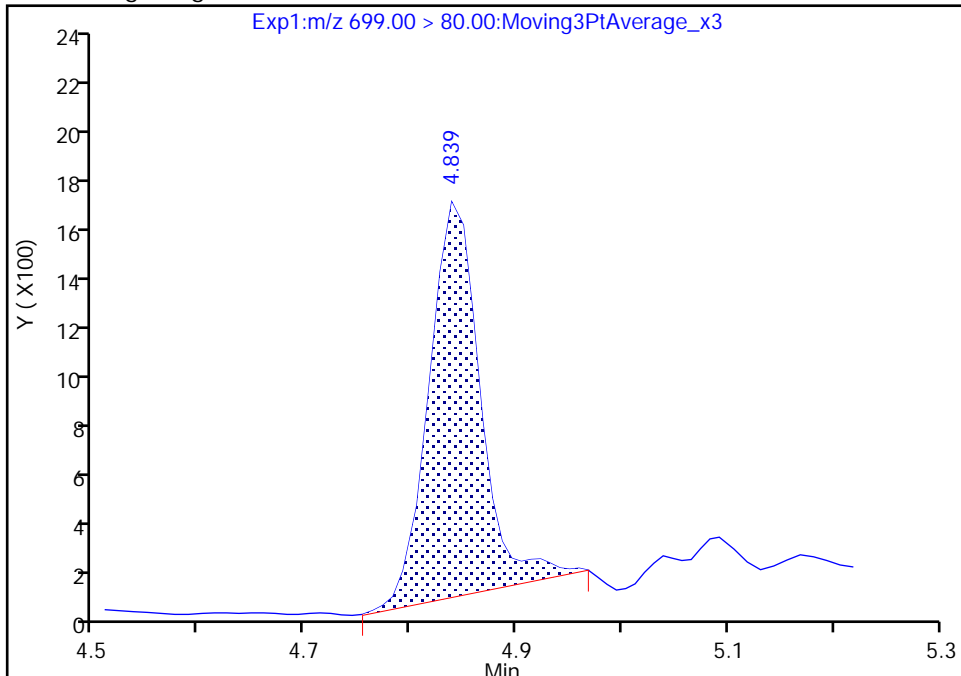
Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL005.d  
Injection Date: 06-Dec-2019 14:32:25 Instrument ID: LC812  
Lims ID: IC  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

75 Perfluorododecanesulfonic acid (PFDoS), CAS: 79780-39-5

Signal: 1

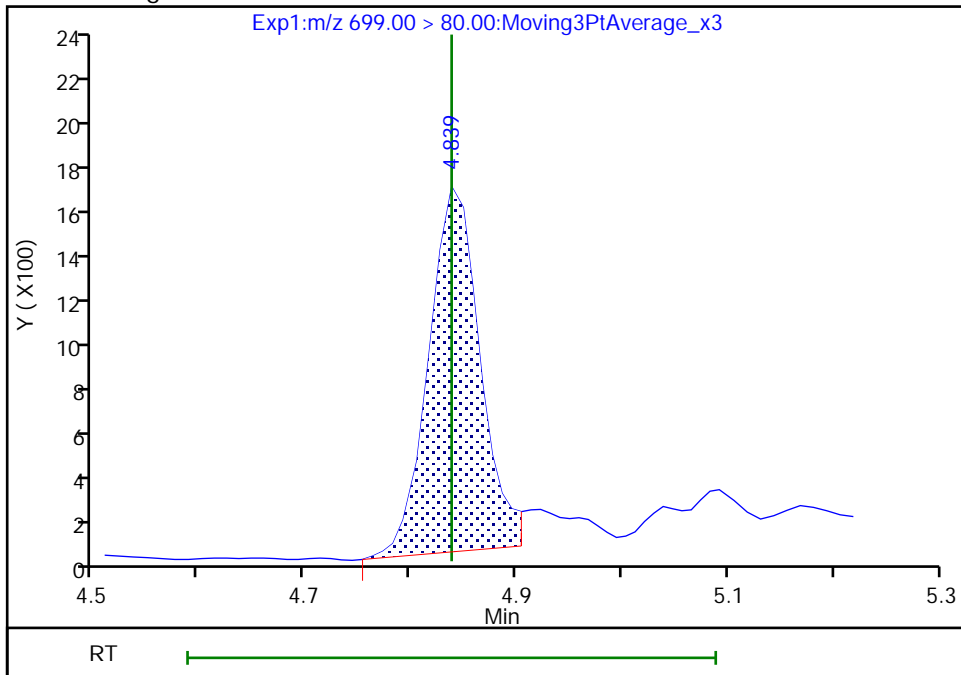
RT: 4.84  
Area: 5387  
Amount: 0.049445  
Amount Units: ng/ml

Processing Integration Results



RT: 4.84  
Area: 5470  
Amount: 0.049537  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 06-Dec-2019 15:28:21  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington  
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL006.d  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 2  
 Inject. Date: 06-Dec-2019 14:40:38 ALS Bottle#: 3 Worklist Smp#: 6  
 Injection Vol: 20.0 ul Dil. Factor: 1.0000  
 Sample Info: IC 2  
 Misc. Info.: 200-0039114-006 Plate: 1 Rack: 1  
 Operator ID: lc812tech Instrument ID: LC812  
 Sublist: chrom-PFC\_LC812\*sub3  
 Method: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\PFC\_LC812.m  
 Limit Group: LC\_PFC\_ICAL  
 Last Update: 09-Dec-2019 12:10:07 Calib Date: 06-Dec-2019 15:13:26  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Column 1 : C-18 ( 4.60 mm) Det: EXP1  
 Process Host: CTX0316

First Level Reviewer: chirgwinb Date: 06-Dec-2019 15:30:25

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	1.926	1.917	0.009	1.005	94789	0.1076		108	27.7	M
D 1 13C4 PFBA										
217.00 > 172.00	1.917	1.917	0.0	0.560	2213648	2.18		87.1	31388	
4 Perfluoropentanoic acid										
262.90 > 219.00	2.271	2.271	0.0	1.000	88619	0.1179		118	11.2	
D 3 13C5 PFPeA										
267.90 > 223.00	2.271	2.271	0.0	0.664	1659165	2.13		85.4	6735	
D 47 13C3 PFBS										
301.90 > 80.00	2.298	2.298	0.0	0.672	1755454	1.89		81.4	655251	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.298	2.298	0.0	1.000	78841	0.0961	Target=2.03	109	263	
298.90 > 99.00	2.298	2.298	0.0	1.000	40090		1.97(1.01-3.04)	109	73.6	
61 1H,1H,2H,2H-perfluorohexanesulfoni										
327.00 > 307.00	2.623	2.623	0.0	1.000	12920	0.0887		95.0	220	
D 60 M2-4:2 FTS										
329.00 > 81.00	2.623	2.623	0.0	0.767	196322	2.27		97.2	408	
70 Perfluoropentanesulfonic acid										
349.00 > 80.00	2.673	2.660	0.013	0.878	69556	0.0860	Target=3.08	91.7	418	
349.00 > 99.00	2.673	2.660	0.013	0.878	24363		2.85(1.54-4.62)	91.7	157	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.661	2.660	0.001	1.000	80343	0.1030	Target=12.44	103	32.1	
313.00 > 119.00	2.661	2.660	0.001	1.000	6630		12.12(6.22-18.67)	103	16.9	
D 7 13C2 PFHxA										
315.00 > 270.00	2.661	2.660	0.001	0.778	1910081	2.20		88.2	5217	
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.776	2.776	0.0	1.000	10610	0.0823		82.3	6.2	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 64 13C3 HFPO-DA										
332.10 > 287.00	2.776	2.776	0.0	0.811	89774	2.37		94.9	1338	
D 9 13C4 PFHpA										
367.00 > 322.00	3.044	3.044	0.0	0.890	1759637	2.14		85.7	3696	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.044	3.044	0.0	1.000	74095	0.0940	Target=4.13	103	162	
399.00 > 99.00	3.044	3.044	0.0	1.000	17245		4.30(2.07-6.20)	103	64.9	
D 11 18O2 PFHxS										
403.00 > 84.00	3.044	3.044	0.0	0.890	1647017	2.25		95.1	3102	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.055	3.055	0.0	1.004	81910	0.1101	Target=3.48	110	48.7	
363.00 > 169.00	3.044	3.055	-0.011	1.000	21193		3.86(1.74-5.22)	110	95.9	
77 DONA										
377.00 > 251.00	3.089	3.089	0.0	0.815	178870	0.0935	Target=2.44	99.3	861	
377.00 > 85.00	3.089	3.089	0.0	0.815	77167		2.32(1.22-3.67)	99.3	357	
13 1H,1H,2H,2H-perfluorooctanesulfonyl										
427.00 > 407.00	3.413	3.413	0.0	1.000	13075	0.1219		129	134	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.413	3.413	0.0	0.900	59825	0.0902	Target=6.34	94.7	605	
449.00 > 99.00	3.413	3.413	0.0	0.900	9362		6.39(3.17-9.51)	94.7	119	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.413	3.413	0.0	0.998	270015	2.15		90.4	1020	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.430	3.430	0.0	1.000	99406	0.1208	Target=2.38	121	44.4	M
413.00 > 169.00	3.430	3.430	0.0	1.000	40820		2.44(1.19-3.57)	121	243	M
D 14 13C4 PFOA										
417.00 > 372.00	3.430	3.430	0.0	1.002	1854400	2.13		85.1	4171	M
* 62 13C2 PFOA										
415.00 > 370.00	3.422	3.430	-0.008		2398887	2.50			6775	
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.793	0.0	1.108	1294332	2.23		93.2	4658	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.793	3.793	0.0	1.000	56390	0.0965	Target=5.71	104	304	M
499.00 > 99.00	3.793	3.793	0.0	1.000	9211		6.12(2.86-8.57)	104	99.8	M
D 19 13C5 PFNA										
468.00 > 423.00	3.817	3.817	0.0	1.116	1726802	2.15		86.2	6758	
20 Perfluorononanoic acid										
463.00 > 419.00	3.817	3.817	0.0	1.000	75235	0.1111	Target=6.87	111	41.2	
463.00 > 169.00	3.817	3.817	0.0	1.000	10730		7.01(3.43-10.30)	111	152	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.984	3.984	0.0	1.050	66176	0.0991		106	400	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.129	4.129	0.0	1.089	42675	0.0954	Target=2.92	99.4	686	
549.00 > 99.00	4.129	4.129	0.0	1.089	13150		3.25(1.46-4.38)	99.4	112	
D 23 13C2 PFDA										
515.00 > 470.00	4.153	4.153	0.0	1.214	1747754	2.21		88.5	4366	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
24 Perfluorodecanoic acid										
513.00 > 469.00	4.153	4.153	0.0	1.000	65957	0.0975	Target=7.21	97.5	75.5	
513.00 > 169.00	4.153	4.153	0.0	1.000	9824		6.71(3.60-10.81)	97.5	131	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.164	4.164	0.0	1.217	314709	2.10		87.7	1433	
25 1H,1H,2H,2H-perfluorodecanesulfoni										
527.00 > 507.00	4.164	4.164	0.0	1.000	5860	0.0966		101	131	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.239	4.239	0.0	1.000	92102	0.0996		99.6	1105	
D 21 13C8 FOSA										
506.00 > 78.00	4.239	4.239	0.0	1.239	2323804	2.25		90.0	5837	
28 N-methylperfluorooctanesulfonamido										
570.00 > 419.00	4.305	4.305	0.0	1.000	5895	0.1028		103	26.5	M
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.305	4.305	0.0	1.258	164960	2.17		86.7	1241	
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.409	4.409	0.0	1.162	37746	0.0969	Target=2.78	100	200	
599.00 > 99.00	4.397	4.409	-0.012	1.159	13429		2.81(1.39-4.17)	100	139	
D 30 13C2 PFUnA										
565.00 > 520.00	4.431	4.431	0.0	1.295	1512870	2.25		90.1	4725	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.431	4.431	0.0	1.000	55613	0.1084	Target=5.47	108	73.1	
563.00 > 169.00	4.431	4.431	0.0	1.000	9786		5.68(2.73-8.20)	108	205	
33 N-ethylperfluorooctanesulfonamidoa										
584.00 > 419.00	4.443	4.442	0.001	1.000	7276	0.1115		111	125	M
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.443	4.442	0.001	1.298	197154	2.34		93.5	1372	
66 11-Chloroeicosafuoro-3-oxaundecan										
631.00 > 451.00	4.524	4.523	0.001	1.193	60708	0.0964		102	665	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.672	4.671	0.001	1.000	60997	0.1021	Target=4.84	102	10.7	
613.00 > 169.00	4.672	4.671	0.001	1.000	13160		4.64(2.42-7.26)	102	156	
D 36 13C2 PFDaA										
615.00 > 570.00	4.672	4.671	0.001	1.365	1616292	2.19		87.8	7420	
74 1H,1H,2H,2H-perfluorododecanesulfo										
627.00 > 607.00	4.693	4.683	0.010	1.127	3796	0.0986		102	69.1	
75 Perfluorododecanesulfonic acid (PF										
699.00 > 80.00	4.839	4.838	0.001	1.276	16050	0.1083	Target=0.47	112	35.9	M
699.00 > 99.00	4.839	4.838	0.001	1.276	32692		0.49(0.23-0.70)	112	688	M
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.879	4.879	0.0	1.044	61289	0.1080	Target=3.74	108	15.8	
663.00 > 169.00	4.879	4.879	0.0	1.044	17346		3.53(1.87-5.62)	108	177	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.058	5.058	0.0	1.478	1495867	2.42		96.9	12547	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.058	5.067	-0.009	1.000	12067	0.1004	Target=1.01	100	120	
713.00 > 219.00	5.058	5.067	-0.009	1.000	12356		0.98(0.50-1.51)	100	131	

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 44 13C2 PFHxDA										
815.00 > 770.00	5.403	5.403	0.001	1.579	1299647	2.29		91.5	5740	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.403	5.413	-0.010	1.000	59942	0.1011	Target=3.04	101	15.5	
813.00 > 169.00	5.403	5.413	-0.010	1.000	18352		3.27(1.52-4.56)	101	212	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.739	5.747	-0.008	1.062	39404	0.1049	Target=2.88	105	17.6	
913.00 > 169.00	5.739	5.747	-0.008	1.062	13322		2.96(1.44-4.32)	105	207	

**QC Flag Legend**

Review Flags

M - Manually Integrated

**Reagents:**

PFAS32NCIC2\_00003

Amount Added: 100.00

Units: uL

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL006.d

Injection Date: 06-Dec-2019 14:40:38

Instrument ID: LC812

Lims ID: IC

Client ID:

Operator ID: lc812tech

ALS Bottle#: 3

Worklist Smp#: 6

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

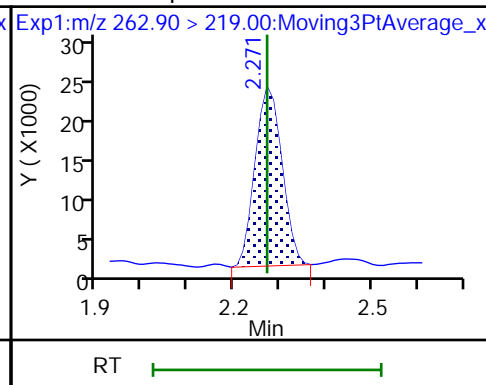
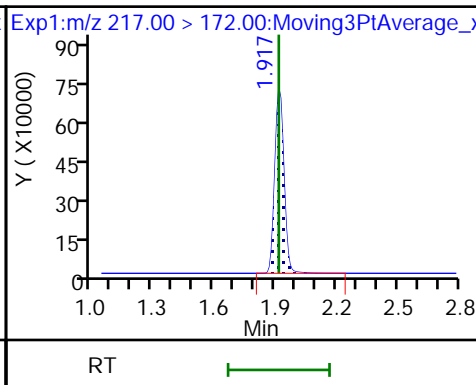
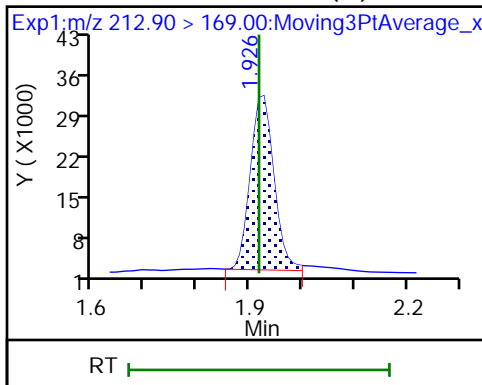
Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

2 Perfluorobutanoic acid (M)

D 1 13C4 PFBA

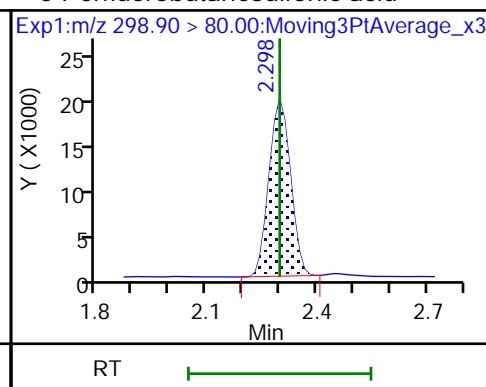
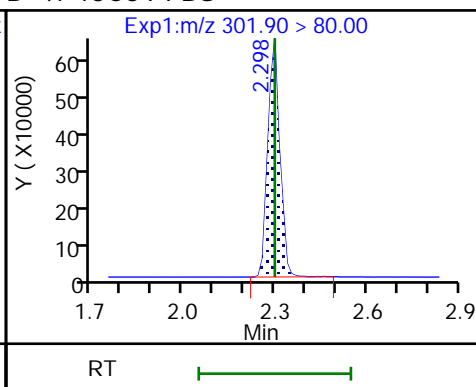
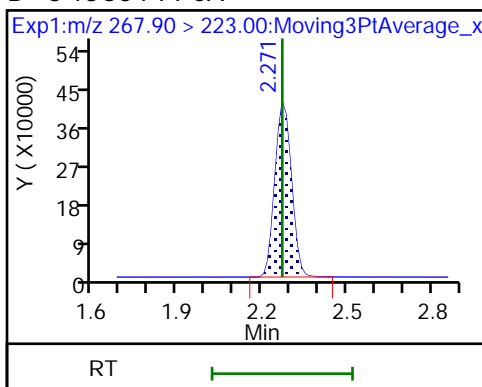
4 Perfluoropentanoic acid



D 3 13C5 PFPeA

D 47 13C3 PFBS

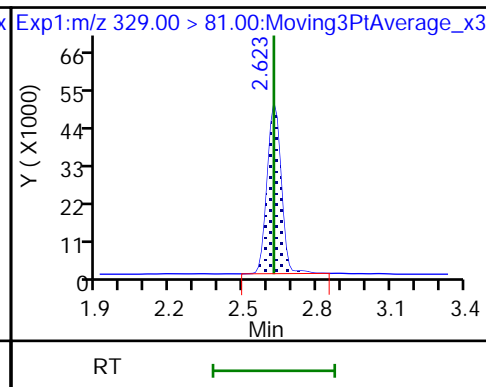
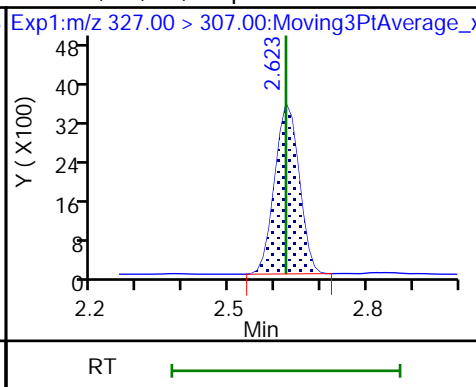
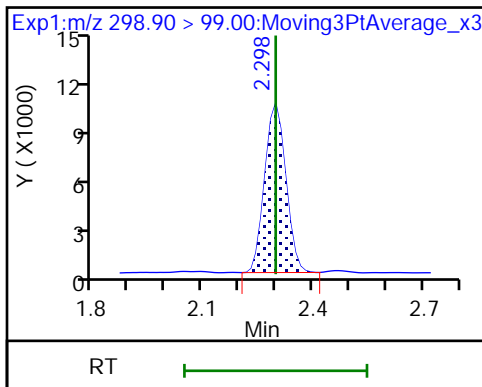
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

61 1H,1H,2H,2H-perfluorohexanesulfonate

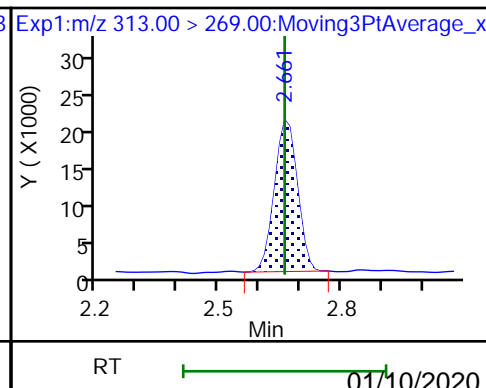
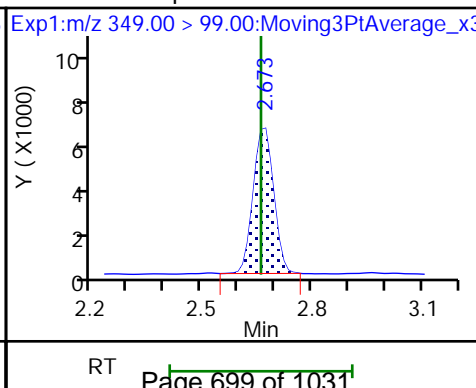
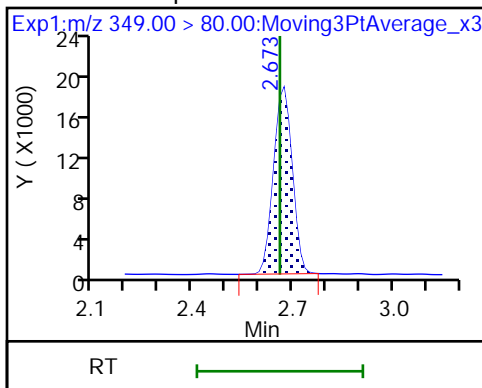
D 60 M2-4:2 FTS

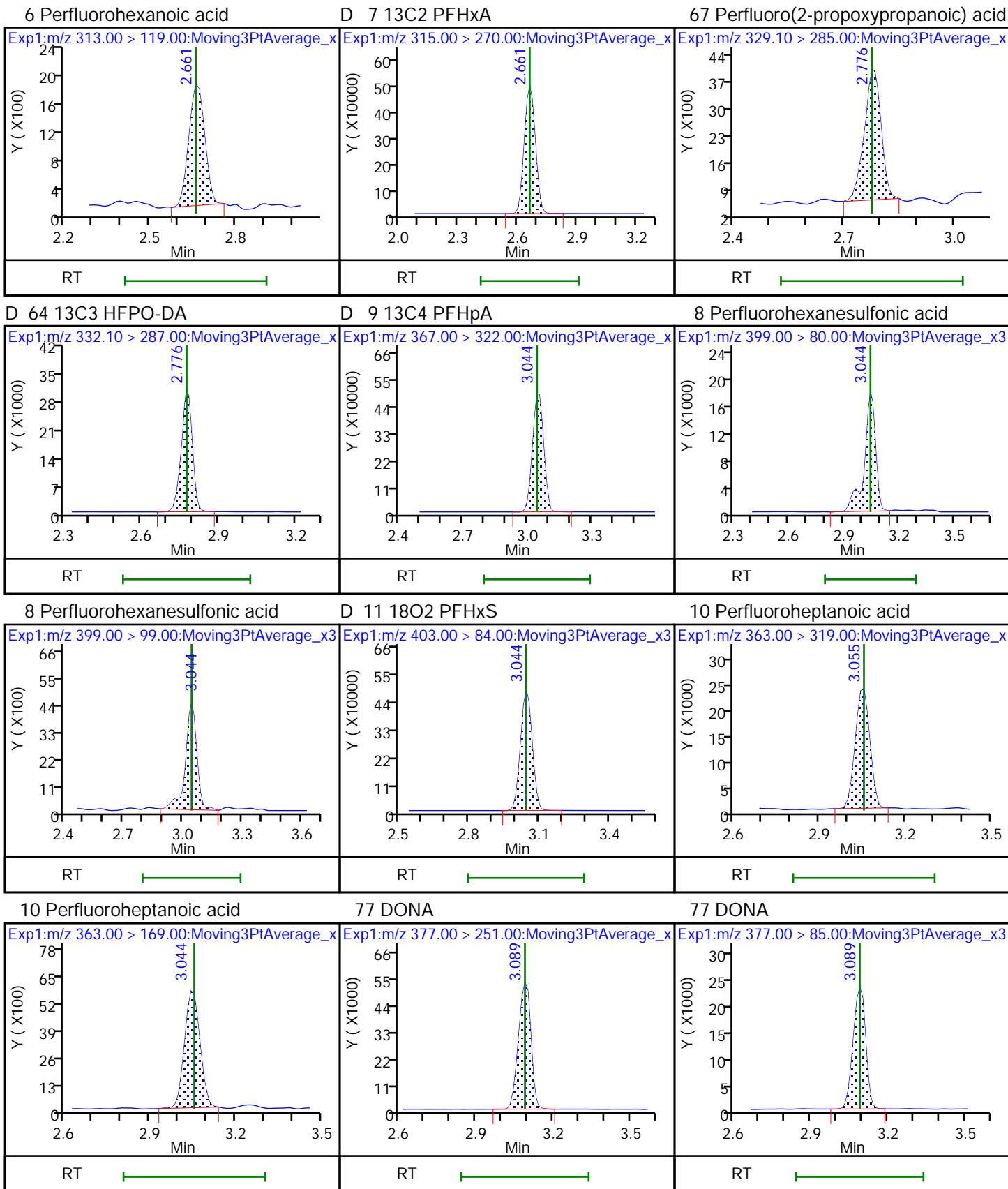


70 Perfluoropentanesulfonic acid

70 Perfluoropentanesulfonic acid

6 Perfluorohexanoic acid

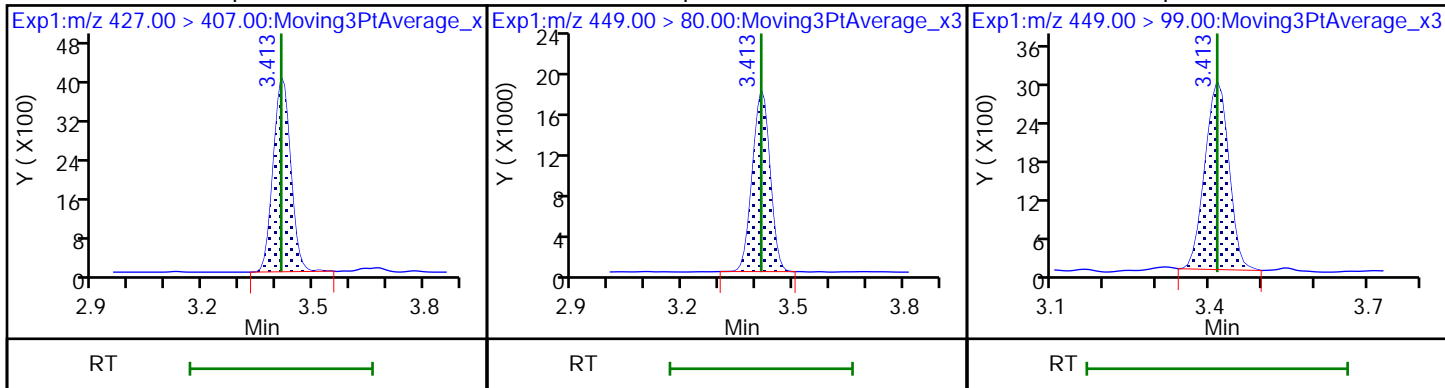






13 1H,1H,2H,2H-perfluorooctanesulfonyl 16 Perfluoroheptanesulfonic acid

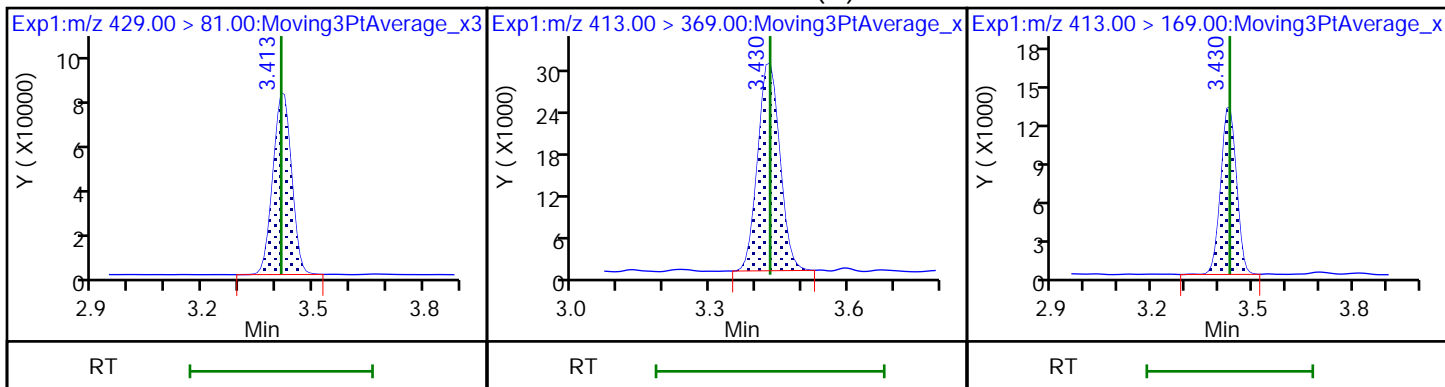
16 Perfluoroheptanesulfonic acid



D 12 M2-6:2 FTS

15 Perfluorooctanoic acid (M)

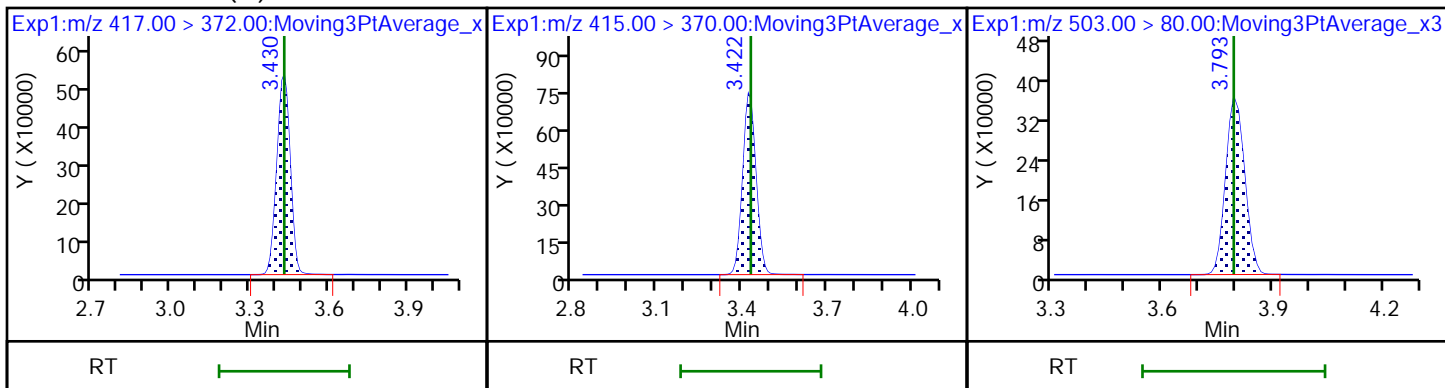
15 Perfluorooctanoic acid



D 14 13C4 PFOA (M)

\* 62 13C2 PFOA

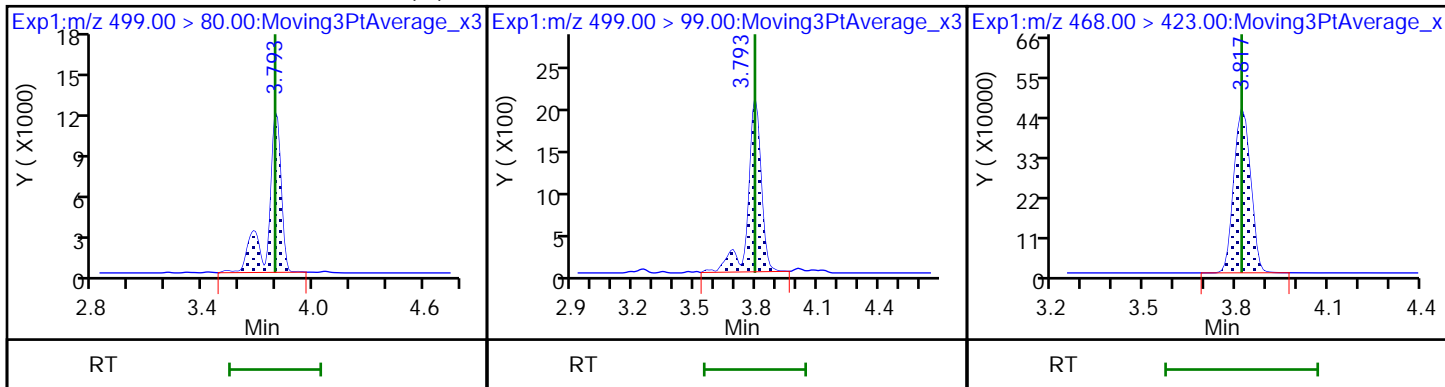
D 18 13C4 PFOS

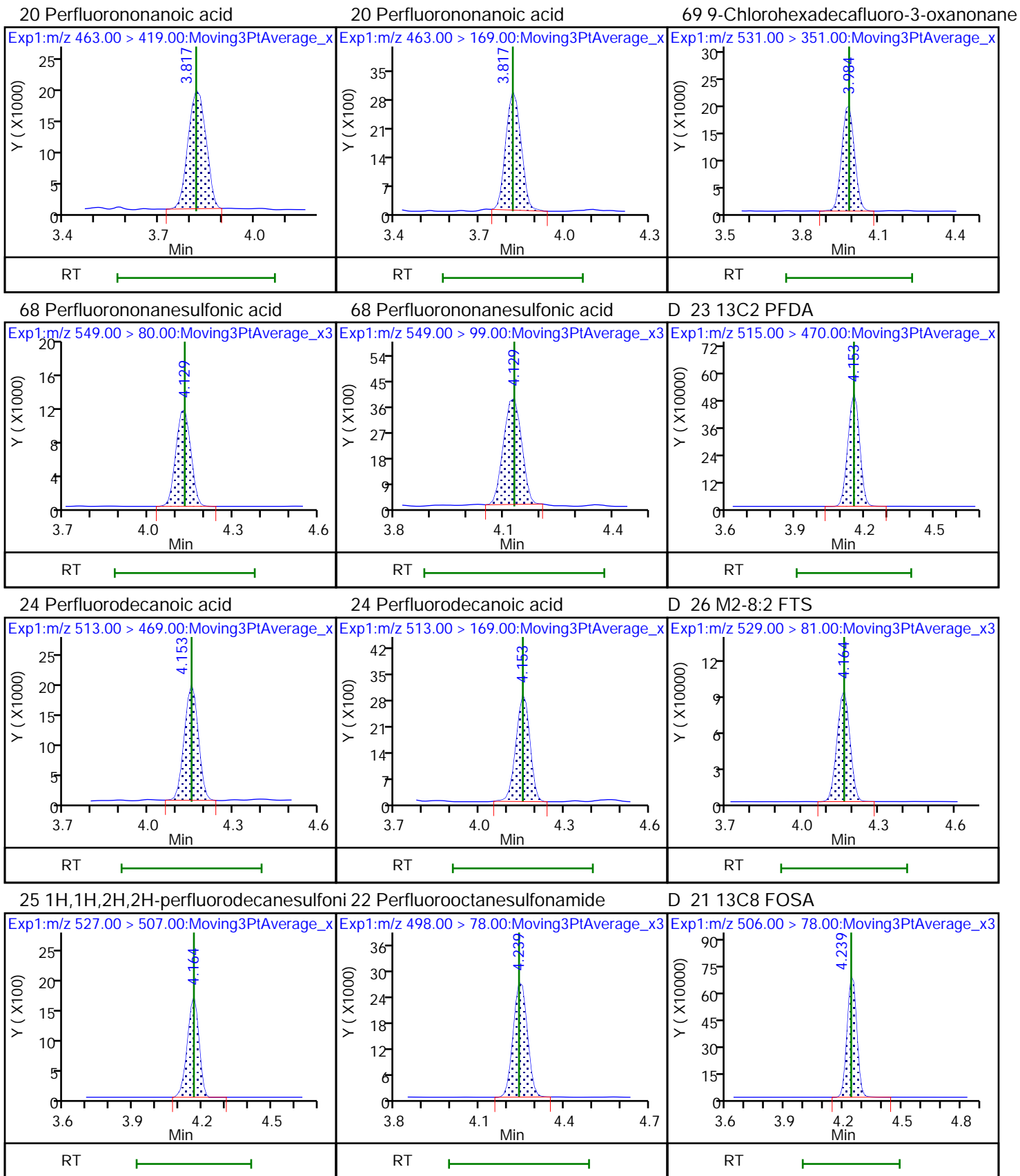


17 Perfluorooctanesulfonic acid (M)

17 Perfluorooctanesulfonic acid

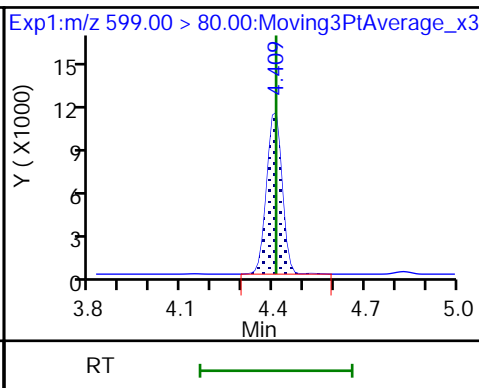
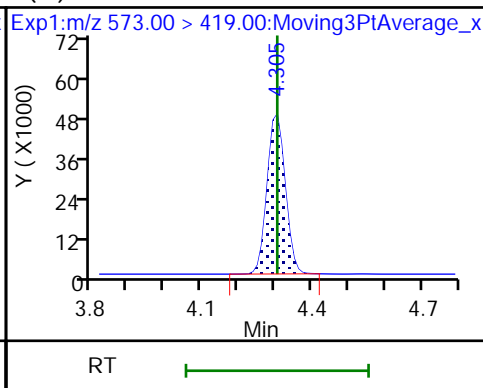
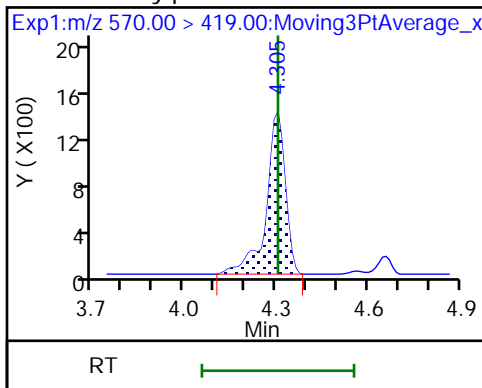
D 19 13C5 PFNA





28 N-methylperfluorooctanesulfonamidooxime d3-NMeFOSAA

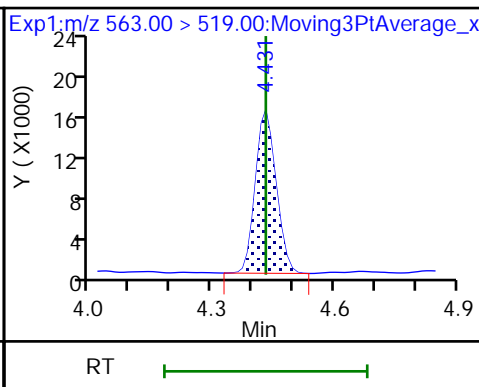
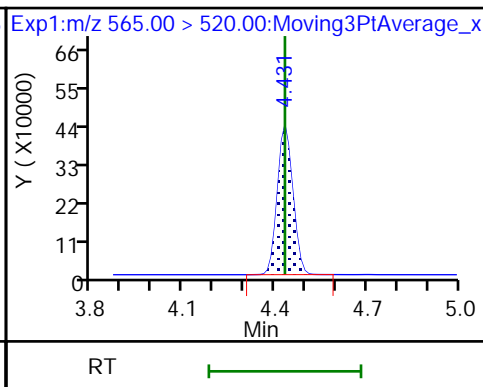
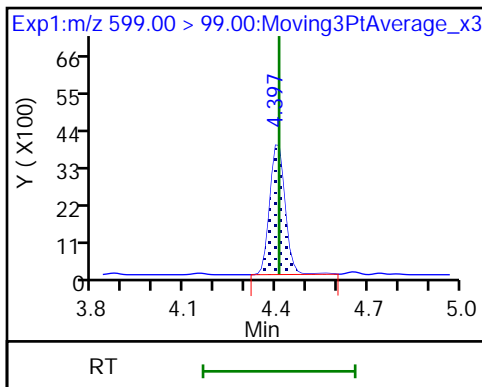
29 Perfluorodecanesulfonic acid



29 Perfluorodecanesulfonic acid

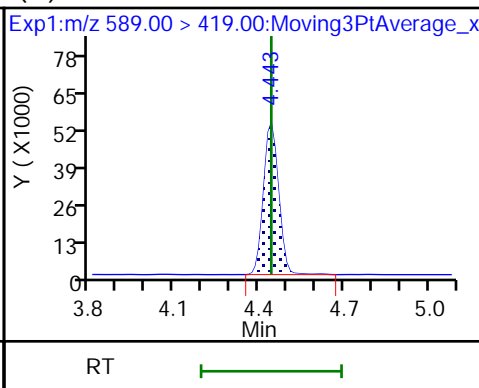
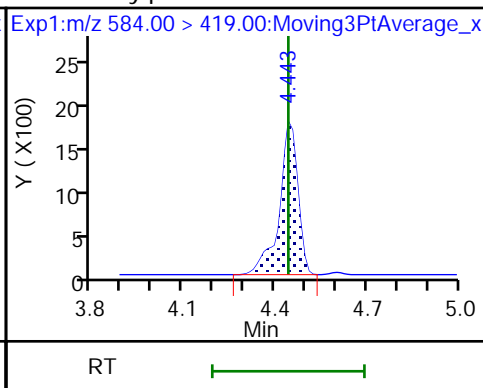
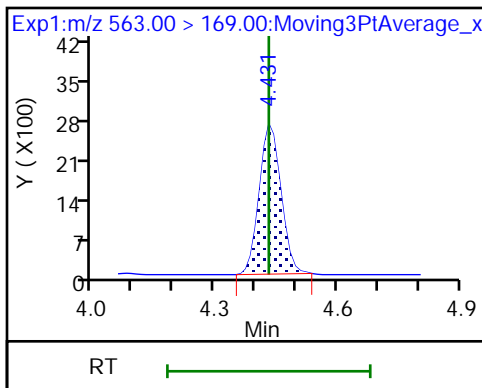
D 30 13C2 PFUoA

31 Perfluoroundecanoic acid



31 Perfluoroundecanoic acid

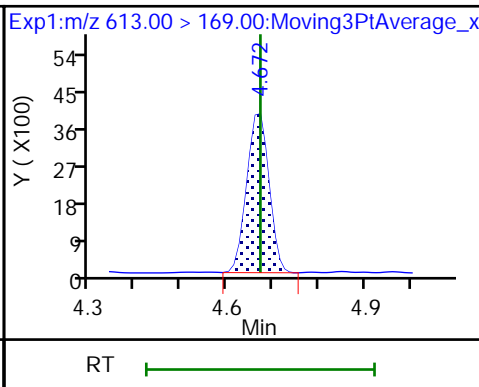
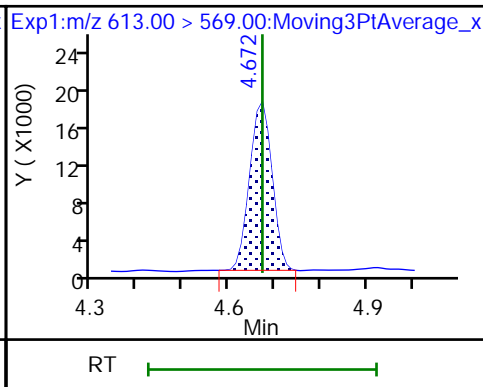
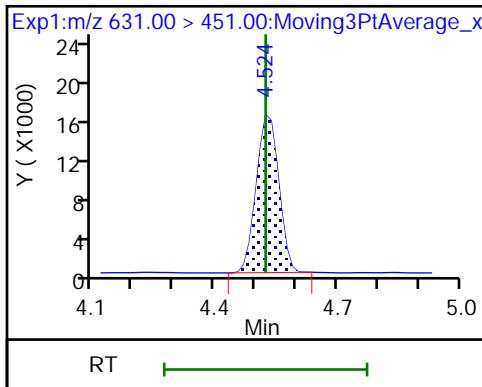
33 N-ethylperfluorooctanesulfonamidooxime d5-NEtFOSAA



66 11-Chloroeicosafluoro-3-oxaundecanoic acid

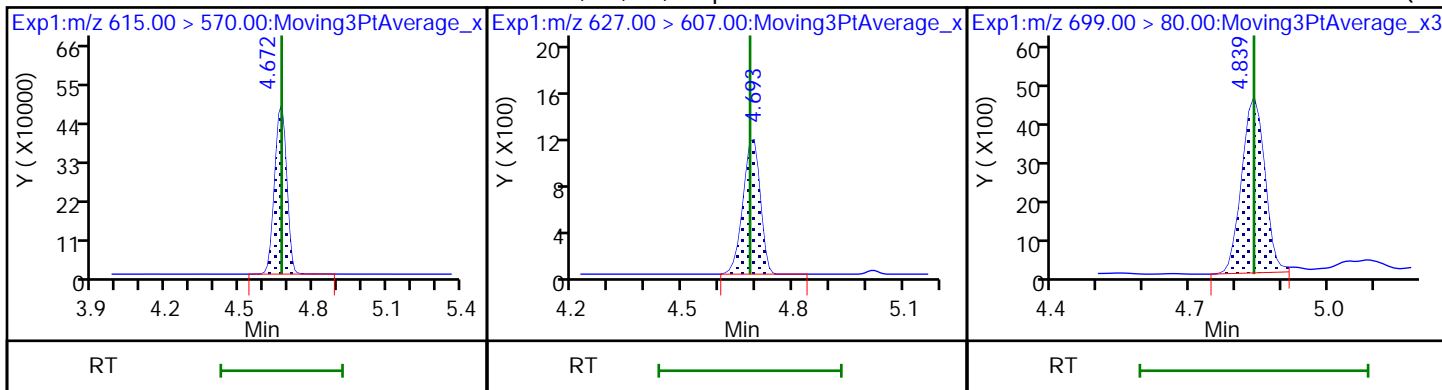
37 Perfluorododecanoic acid

37 Perfluorododecanoic acid



D 36 13C2 PFDaA

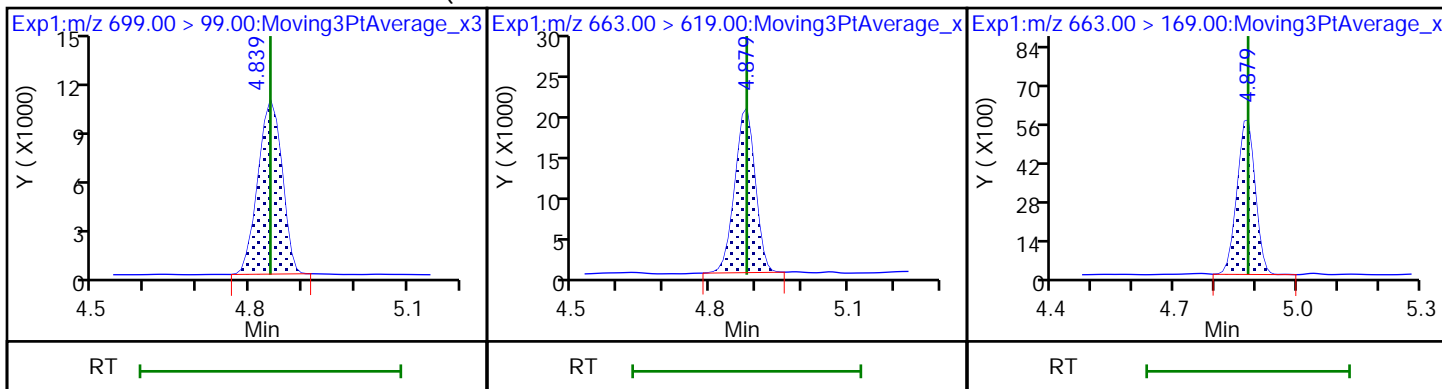
74 1H,1H,2H,2H-perfluorododecanesulfo75 Perfluorododecanesulfonic acid (PF (M)



75 Perfluorododecanesulfonic acid (PF

41 Perfluorotridecanoic acid

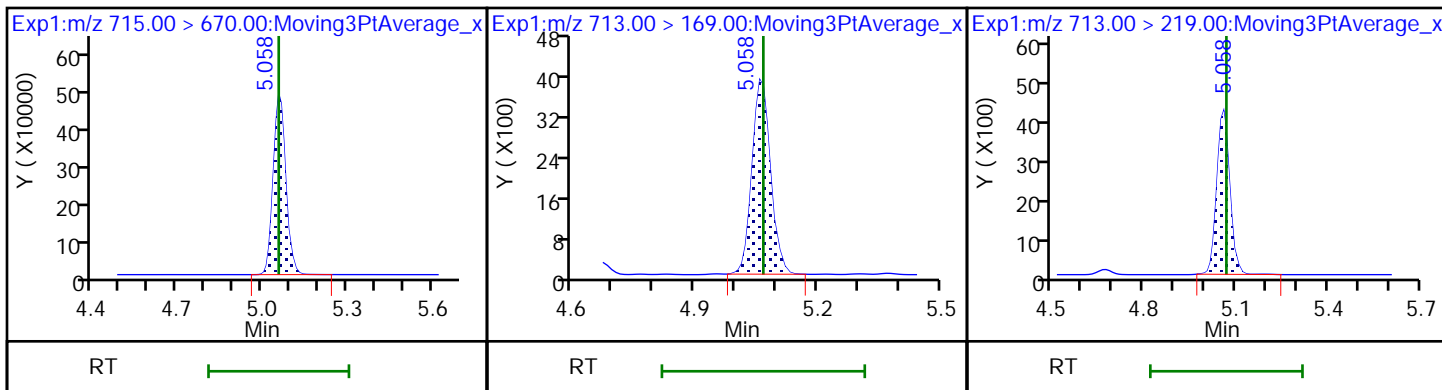
41 Perfluorotridecanoic acid



D 43 13C2 PFTeDA

42 Perfluorotetradecanoic acid

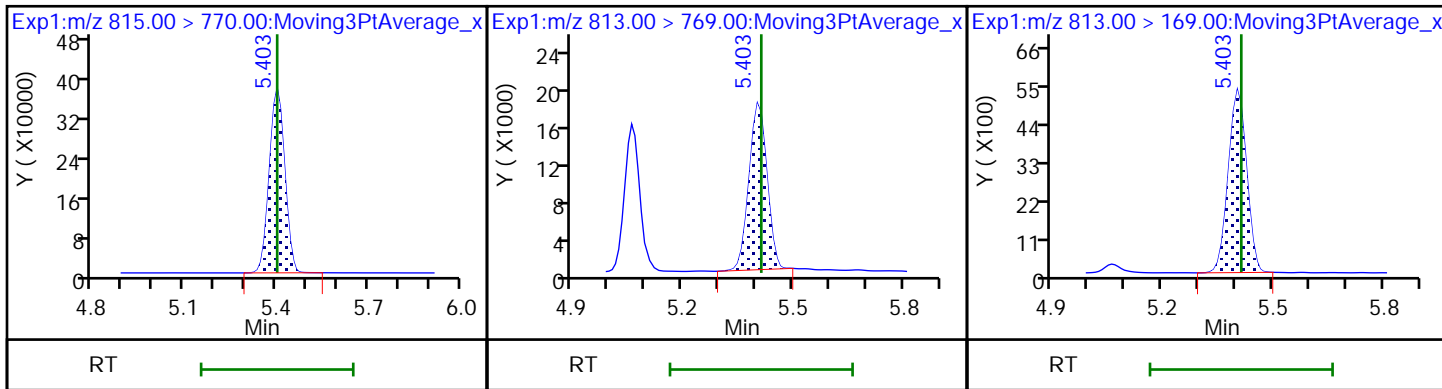
42 Perfluorotetradecanoic acid



D 44 13C2 PFHxDA

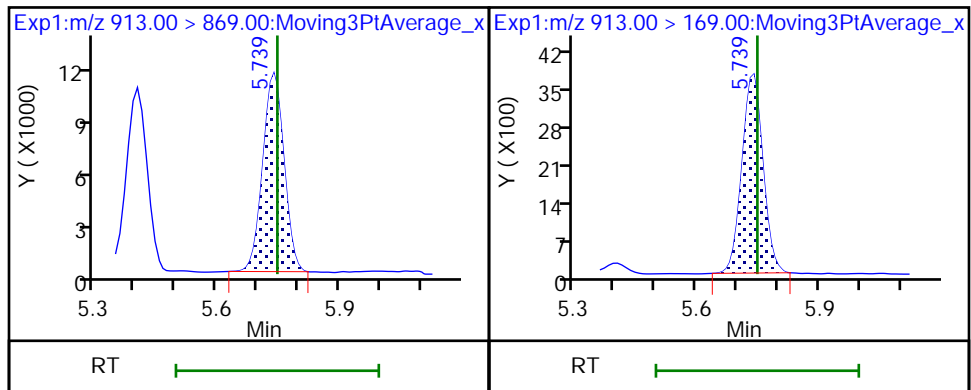
45 Perfluorohexadecanoic acid

45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid

46 Perfluorooctadecanoic acid



Euofins TestAmerica, Burlington

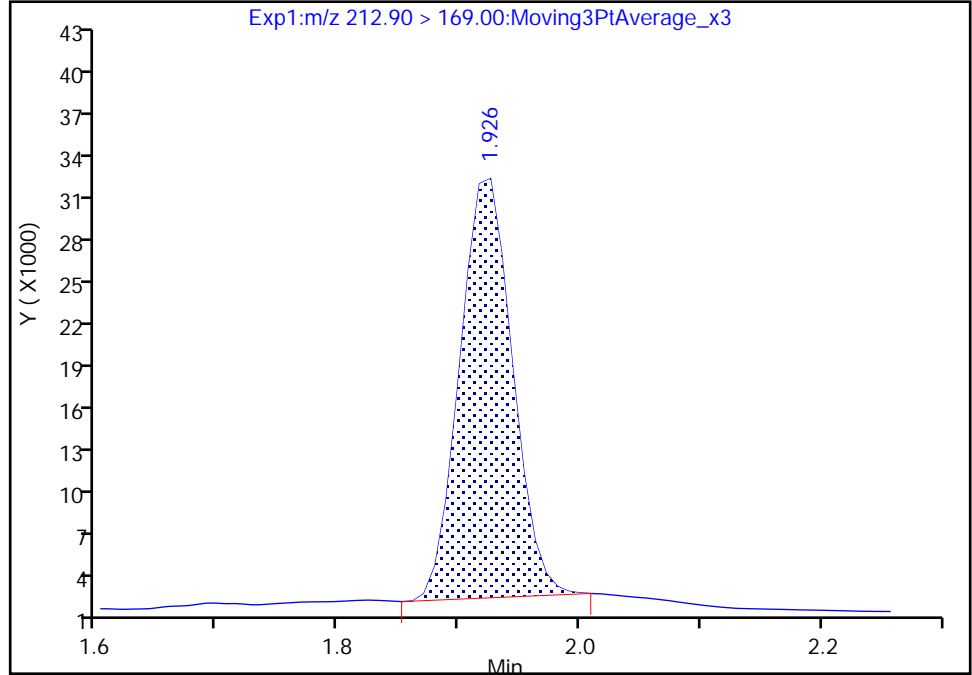
Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL006.d  
Injection Date: 06-Dec-2019 14:40:38 Instrument ID: LC812  
Lims ID: IC  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 6  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

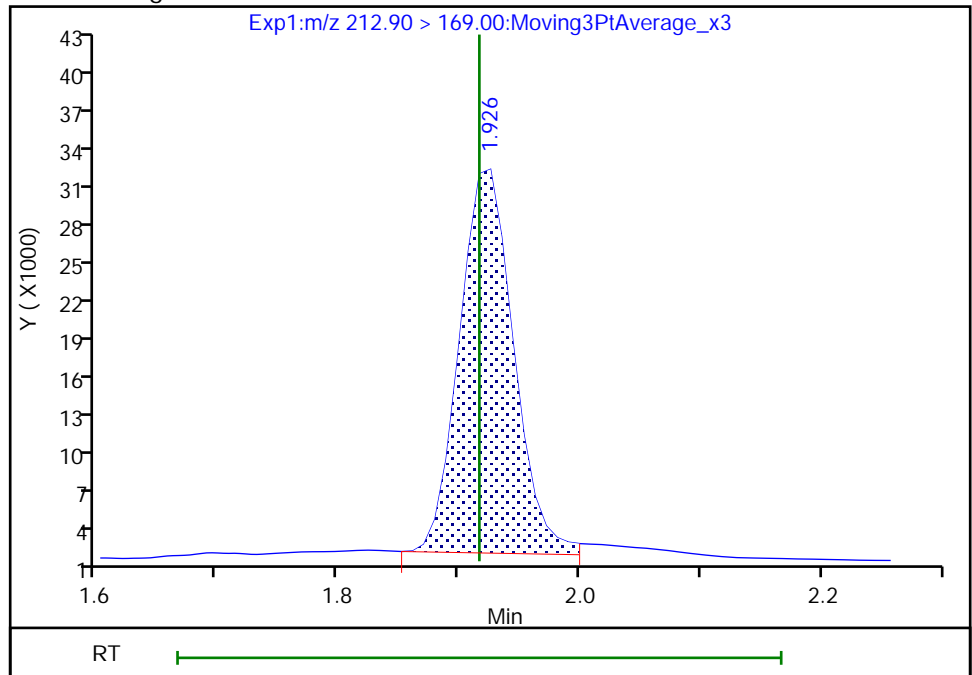
RT: 1.93  
Area: 91242  
Amount: 0.102089  
Amount Units: ng/ml

Processing Integration Results



RT: 1.93  
Area: 94789  
Amount: 0.107598  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 06-Dec-2019 15:28:59  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Euofins TestAmerica, Burlington

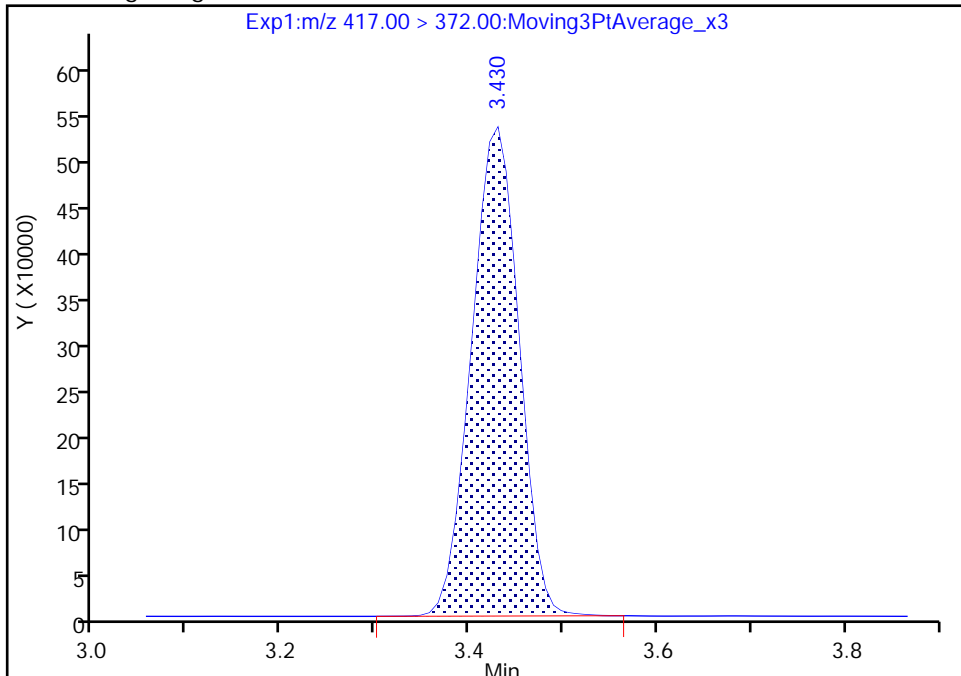
Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL006.d  
Injection Date: 06-Dec-2019 14:40:38 Instrument ID: LC812  
Lims ID: IC  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 6  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

D 14 13C4 PFOA, CAS: STL00990

Signal: 1

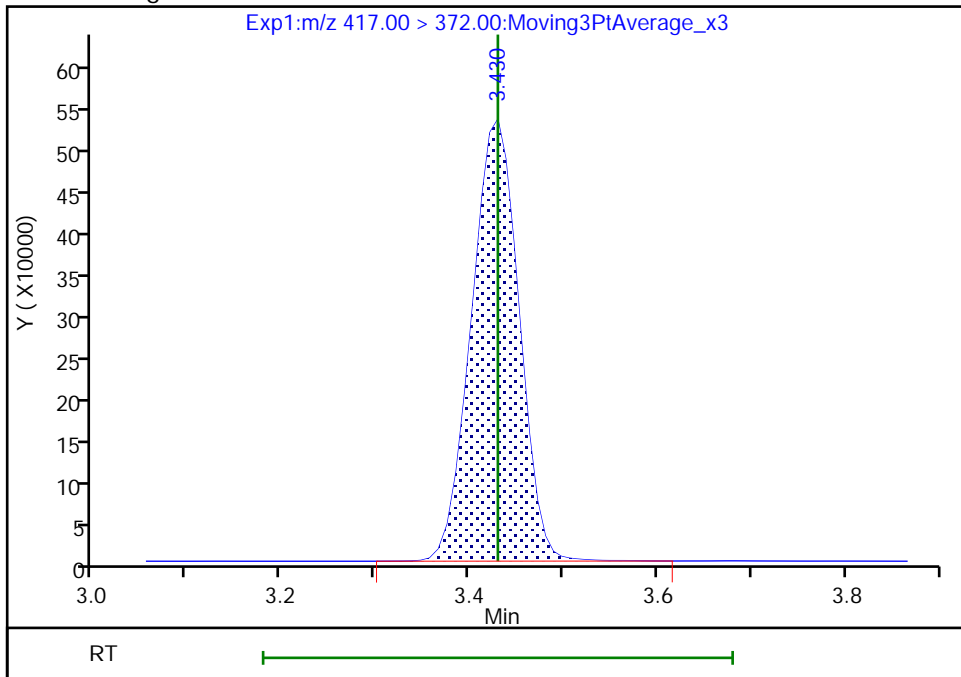
RT: 3.43  
Area: 1850104  
Amount: 2.122679  
Amount Units: ng/ml

Processing Integration Results



RT: 3.43  
Area: 1854400  
Amount: 2.126909  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 06-Dec-2019 15:45:53  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

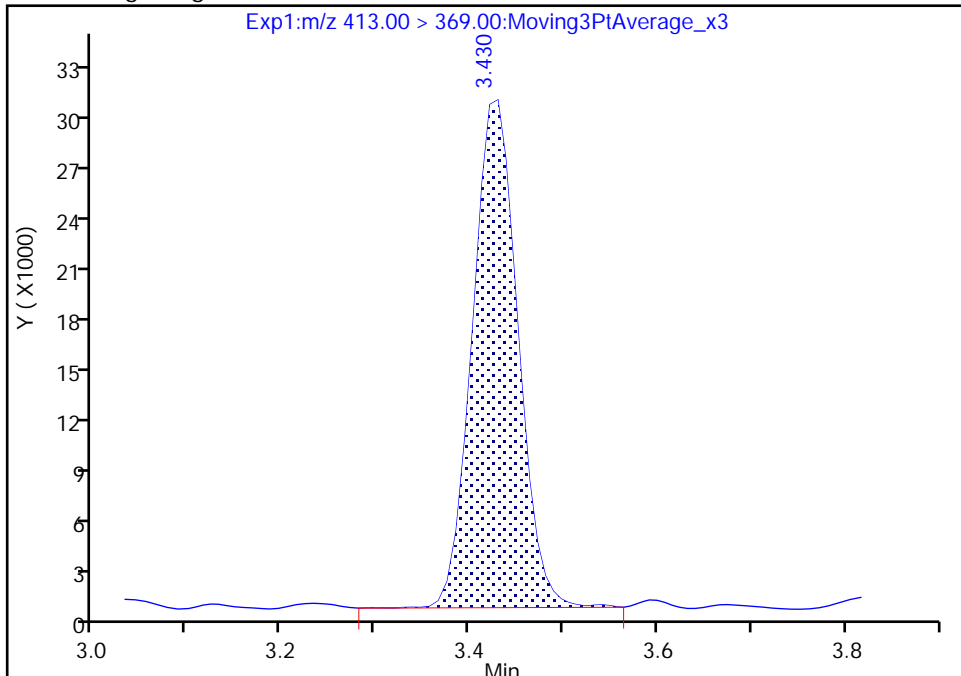
Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL006.d  
Injection Date: 06-Dec-2019 14:40:38 Instrument ID: LC812  
Lims ID: IC  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 6  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

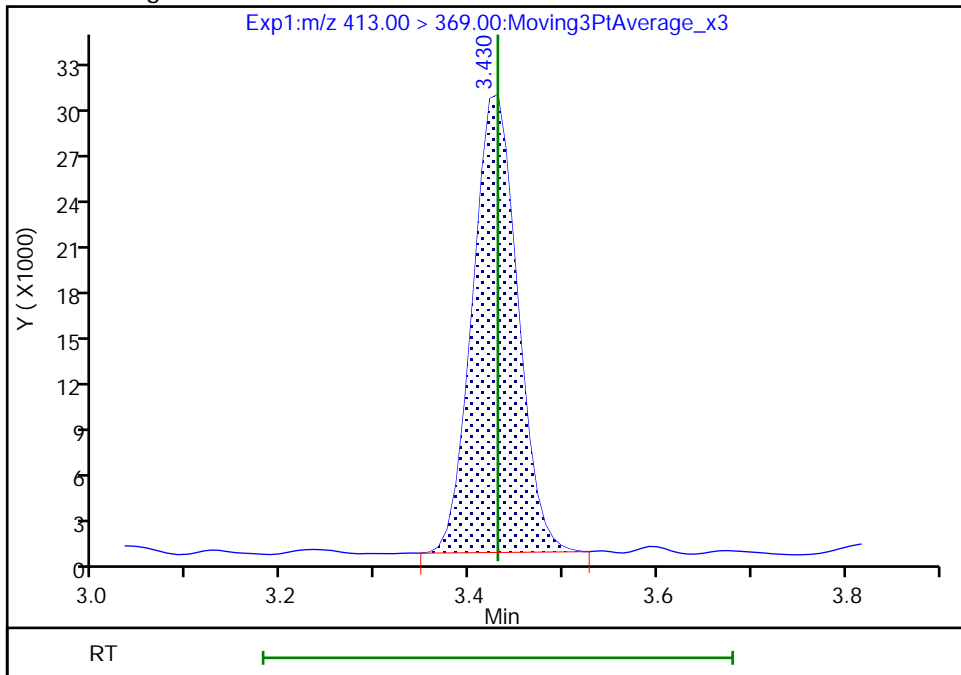
RT: 3.43  
Area: 100322  
Amount: 0.121688  
Amount Units: ng/ml

Processing Integration Results



RT: 3.43  
Area: 99406  
Amount: 0.120785  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 06-Dec-2019 15:41:54  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Euofins TestAmerica, Burlington

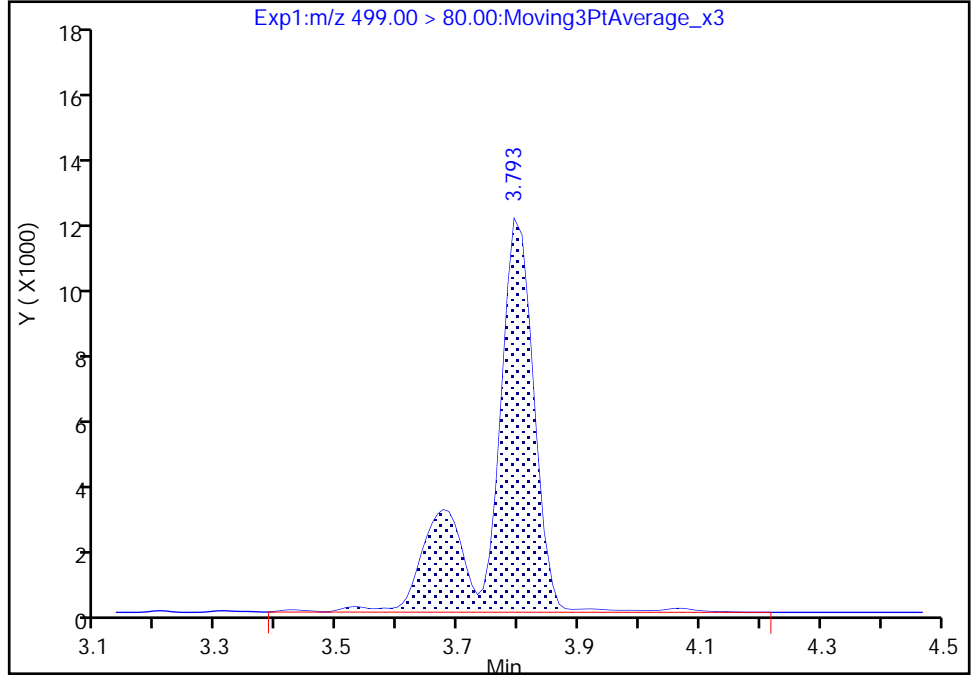
Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL006.d  
Injection Date: 06-Dec-2019 14:40:38 Instrument ID: LC812  
Lims ID: IC  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 6  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

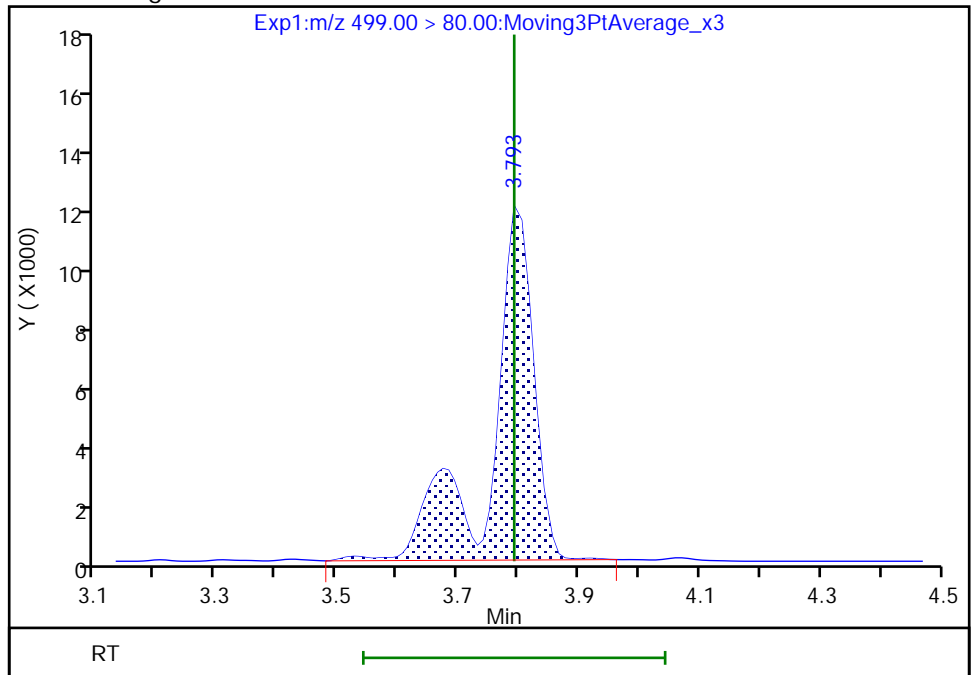
RT: 3.79  
Area: 57940  
Amount: 0.098146  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 56390  
Amount: 0.096454  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 06-Dec-2019 15:29:25  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

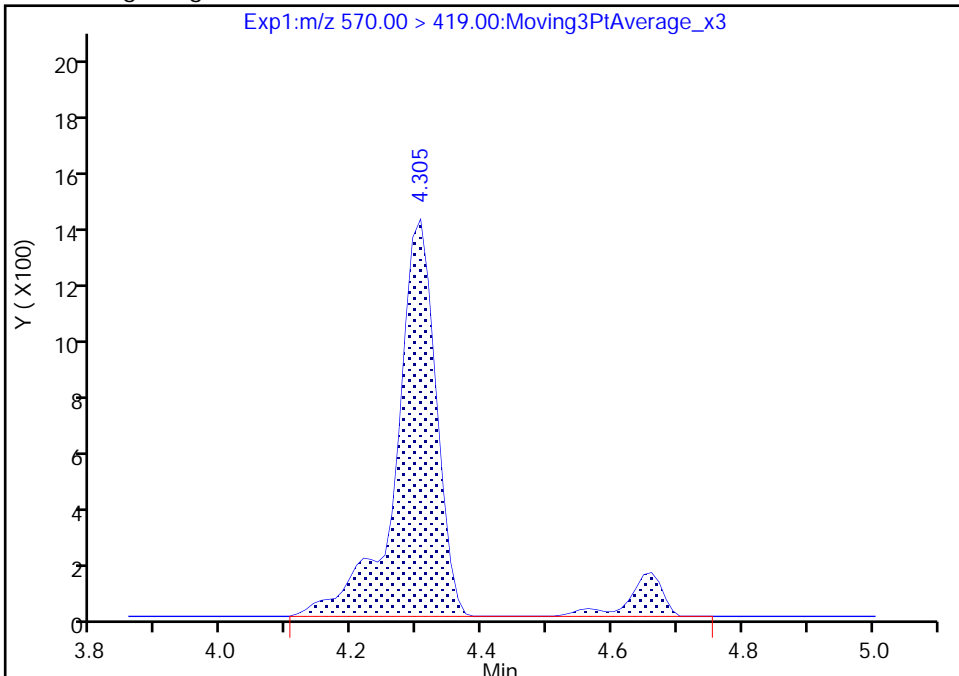
Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL006.d  
Injection Date: 06-Dec-2019 14:40:38 Instrument ID: LC812  
Lims ID: IC  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 6  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

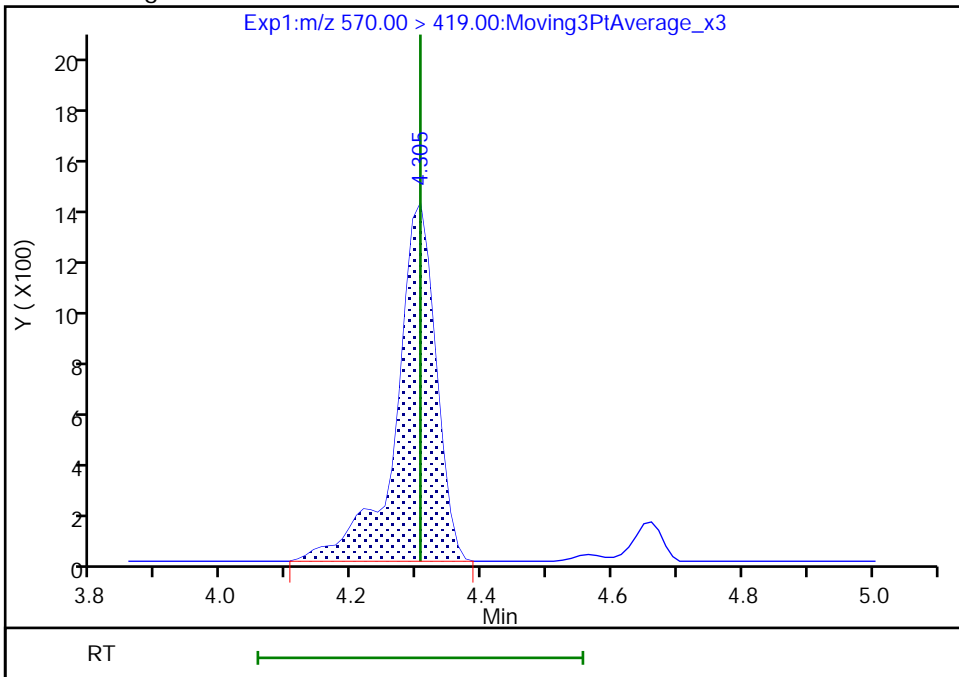
RT: 4.31  
Area: 6440  
Amount: 0.108150  
Amount Units: ng/ml

Processing Integration Results



RT: 4.31  
Area: 5895  
Amount: 0.102814  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 06-Dec-2019 15:29:41  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

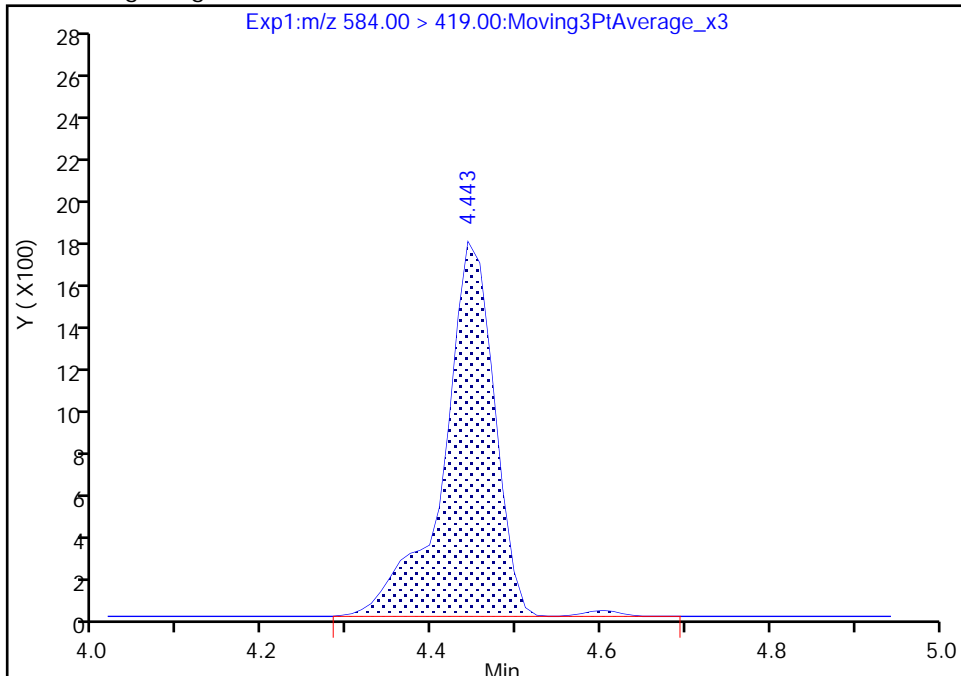
Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL006.d  
Injection Date: 06-Dec-2019 14:40:38 Instrument ID: LC812  
Lims ID: IC  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 6  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

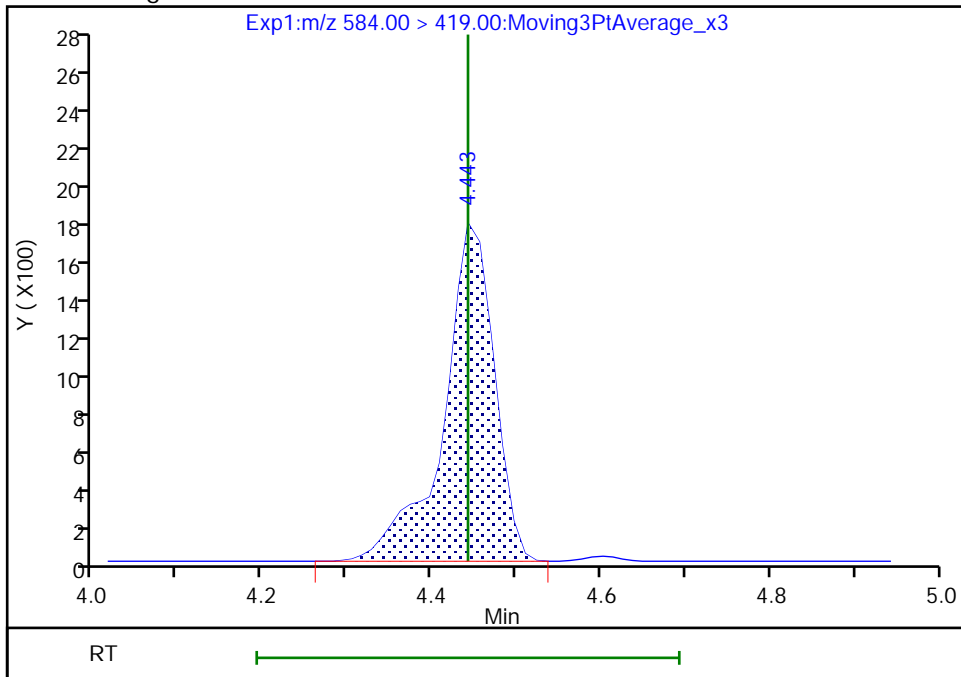
RT: 4.44  
Area: 7349  
Amount: 0.108764  
Amount Units: ng/ml

Processing Integration Results



RT: 4.44  
Area: 7276  
Amount: 0.111468  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 06-Dec-2019 15:29:49  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

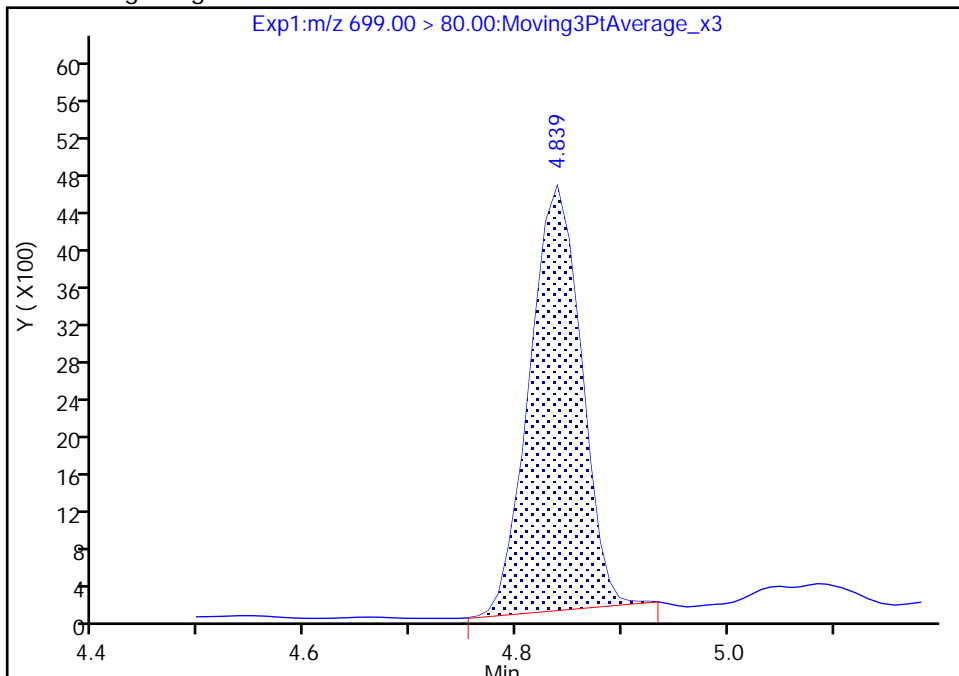
Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL006.d  
Injection Date: 06-Dec-2019 14:40:38 Instrument ID: LC812  
Lims ID: IC  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 6  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

75 Perfluorododecanesulfonic acid (PFDoS), CAS: 79780-39-5

Signal: 1

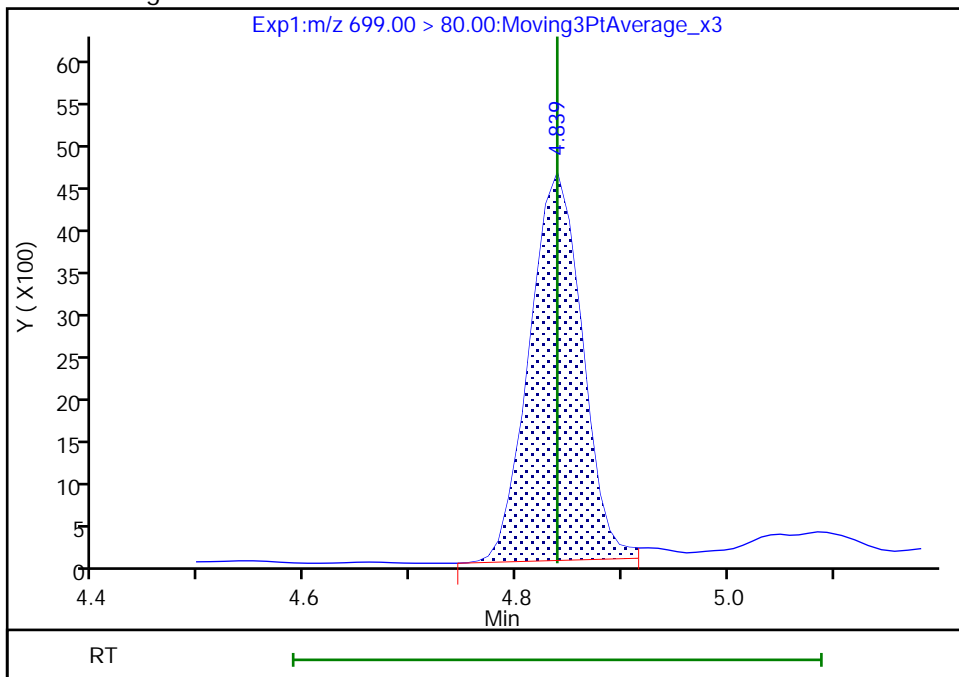
RT: 4.84  
Area: 15591  
Amount: 0.106245  
Amount Units: ng/ml

Processing Integration Results



RT: 4.84  
Area: 16050  
Amount: 0.108340  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 06-Dec-2019 15:30:06  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington  
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL007.d  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 3  
 Inject. Date: 06-Dec-2019 14:48:50 ALS Bottle#: 4 Worklist Smp#: 7  
 Injection Vol: 20.0 ul Dil. Factor: 1.0000  
 Sample Info: IC 3  
 Misc. Info.: 200-0039114-007 Plate: 1 Rack: 1  
 Operator ID: lc812tech Instrument ID: LC812  
 Sublist: chrom-PFC\_LC812\*sub3  
 Method: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\PFC\_LC812.m  
 Limit Group: LC\_PFC\_ICAL  
 Last Update: 09-Dec-2019 12:10:11 Calib Date: 06-Dec-2019 15:13:26  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Column 1 : C-18 ( 4.60 mm) Det: EXP1  
 Process Host: CTX0316

First Level Reviewer: chirgwinb Date: 06-Dec-2019 15:31:58

Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										
212.90 > 169.00	1.926	1.917	0.009	1.000	371453	0.4912		98.2	126	M
D 1 13C4 PFBA										
217.00 > 172.00	1.926	1.917	0.009	0.561	1900105	2.38		95.0	26867	
4 Perfluoropentanoic acid										
262.90 > 219.00	2.284	2.271	0.013	1.006	324223	0.4882		97.6	40.6	
D 3 13C5 PFPeA										
267.90 > 223.00	2.271	2.271	0.0	0.662	1466250	2.40		95.9	5878	
D 47 13C3 PFBS										
301.90 > 80.00	2.298	2.298	0.0	0.670	1606325	2.20		94.7	642297	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.298	2.298	0.0	1.000	321599	0.4283	Target=2.03	96.9	935	
298.90 > 99.00	2.298	2.298	0.0	1.000	167036		1.93(1.01-3.04)	96.9	321	
61 1H,1H,2H,2H-perfluorohexanesulfoni										
327.00 > 307.00	2.623	2.623	0.0	1.000	53095	0.4640		99.3	1097	
D 60 M2-4:2 FTS										
329.00 > 81.00	2.623	2.623	0.0	0.765	154256	2.27		97.1	320	
70 Perfluoropentanesulfonic acid										
349.00 > 80.00	2.673	2.660	0.013	0.875	277882	0.4363	Target=3.08	93.0	1490	
349.00 > 99.00	2.673	2.660	0.013	0.875	98725		2.81(1.54-4.62)	93.0	611	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.660	2.660	0.0	1.000	326930	0.5010	Target=12.44	100	133	
313.00 > 119.00	2.660	2.660	0.0	1.000	26887		12.16(6.22-18.67)	100	71.7	
D 7 13C2 PFHxA										
315.00 > 270.00	2.660	2.660	0.0	0.776	1597923	2.34		93.7	3546	
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.784	2.776	0.008	1.000	48707	0.4491		89.8	27.8	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 64 13C3 HFPO-DA										
332.10 > 287.00	2.784	2.776	0.008	0.812	75506	2.54		101	1580	
D 9 13C4 PFHpA										
367.00 > 322.00	3.055	3.044	0.011	0.891	1607290	2.49		99.5	4675	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.044	3.044	0.0	0.996	296847	0.4782	Target=4.13	105	1014	
399.00 > 99.00	3.044	3.044	0.0	0.996	68650		4.32(2.07-6.20)	105	263	
D 11 18O2 PFHxS										
403.00 > 84.00	3.055	3.044	0.011	0.891	1297059	2.25		95.2	5862	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.055	3.055	0.0	1.000	308041	0.4532	Target=3.48	90.6	180	
363.00 > 169.00	3.055	3.055	0.0	1.000	94903		3.25(1.74-5.22)	90.6	374	
77 DONA										
377.00 > 251.00	3.089	3.089	0.0	0.812	737546	0.4656	Target=2.44	98.9	2445	
377.00 > 85.00	3.089	3.089	0.0	0.812	302105		2.44(1.22-3.67)	98.9	993	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.421	3.413	0.008	1.000	41121	0.4396		92.7	551	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.413	3.413	0.0	0.897	249352	0.4540	Target=6.34	95.4	1898	
449.00 > 99.00	3.421	3.413	0.008	0.899	41705		5.98(3.17-9.51)	95.4	561	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.421	3.413	0.008	0.998	235426	2.38		100	909	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.438	3.430	0.008	1.002	357855	0.5054	Target=2.38	101	150	M
413.00 > 169.00	3.430	3.430	0.0	1.000	147739		2.42(1.19-3.57)	101	792	M
D 14 13C4 PFOA										
417.00 > 372.00	3.430	3.430	0.0	1.000	1595271	2.33		93.0	3135	
* 62 13C2 PFOA										
415.00 > 370.00	3.430	3.430	0.0		1887522	2.50			3245	
D 18 13C4 PFOS										
503.00 > 80.00	3.805	3.793	0.012	1.109	1071615	2.34		98.1	4702	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.805	3.793	0.012	1.000	205923	0.4254	Target=5.71	91.7	1261	M
499.00 > 99.00	3.805	3.793	0.012	1.000	37265		5.53(2.86-8.57)	91.7	301	M
D 19 13C5 PFNA										
468.00 > 423.00	3.829	3.817	0.012	1.116	1645205	2.61		104	7458	
20 Perfluorononanoic acid										
463.00 > 419.00	3.829	3.817	0.012	1.000	278151	0.4311	Target=6.87	86.2	136	
463.00 > 169.00	3.829	3.817	0.012	1.000	41376		6.72(3.43-10.30)	86.2	651	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.983	3.984	-0.001	1.047	240209	0.4344		93.2	1271	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.128	4.129	-0.001	1.085	189612	0.5119	Target=2.92	107	1779	
549.00 > 99.00	4.128	4.129	-0.001	1.085	63592		2.98(1.46-4.38)	107	434	
D 23 13C2 PFDA										
515.00 > 470.00	4.164	4.153	0.011	1.214	1406212	2.26		90.5	3571	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
24 Perfluorodecanoic acid										
513.00 > 469.00	4.164	4.153	0.011	1.000	321619	0.5910	Target=7.21	118	378	
513.00 > 169.00	4.164	4.153	0.011	1.000	41741		7.71(3.60-10.81)	118	329	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.174	4.164	0.010	1.217	265467	2.25		94.0	1068	
25 1H,1H,2H,2H-perfluorodecanesulfoni										
527.00 > 507.00	4.164	4.164	0.0	0.997	24605	0.4809		100	497	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.251	4.239	0.012	1.000	397290	0.4854		97.1	3216	
D 21 13C8 FOSA										
506.00 > 78.00	4.251	4.239	0.012	1.239	2056323	2.53		101	4685	
28 N-methylperfluorooctanesulfonamido										
570.00 > 419.00	4.317	4.305	0.012	1.003	24203	0.5409		108	207	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.305	4.305	0.0	1.255	128732	2.15		86.0	1155	
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.409	4.409	0.0	1.159	146267	0.4534	Target=2.78	94.1	1239	
599.00 > 99.00	4.409	4.409	0.0	1.159	58238		2.51(1.39-4.17)	94.1	752	
D 30 13C2 PFUnA										
565.00 > 520.00	4.431	4.431	0.0	1.292	1217793	2.30		92.2	3484	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.431	4.431	0.0	1.000	207593	0.5026	Target=5.47	101	245	
563.00 > 169.00	4.431	4.431	0.0	1.000	38439		5.40(2.73-8.20)	101	754	
33 N-ethylperfluorooctanesulfonamidoa										
584.00 > 419.00	4.456	4.442	0.014	1.003	24100	0.4706		94.1	244	M
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.442	4.442	0.0	1.295	154687	2.33		93.2	1229	
66 11-Chloroeicosafuoro-3-oxaundecan										
631.00 > 451.00	4.537	4.523	0.014	1.192	222991	0.4277		90.8	1659	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.671	4.671	0.0	1.000	241313	0.4828	Target=4.84	96.6	56.3	
613.00 > 169.00	4.671	4.671	0.0	1.000	52998		4.55(2.42-7.26)	96.6	676	
D 36 13C2 PFDaA										
615.00 > 570.00	4.671	4.671	0.0	1.362	1352357	2.33		93.3	6505	
74 1H,1H,2H,2H-perfluorododecanesulfo										
627.00 > 607.00	4.693	4.683	0.010	1.124	16244	0.5001		104	518	
75 Perfluorododecanesulfonic acid (PF										
699.00 > 80.00	4.849	4.838	0.011	1.275	59189	0.4826	Target=0.47	99.7	167	
699.00 > 99.00	4.838	4.838	0.0	1.272	120754		0.49(0.23-0.70)	99.7	1703	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.879	4.879	0.0	1.044	238583	0.5024	Target=3.74	100	64.3	
663.00 > 169.00	4.879	4.879	0.0	1.044	59970		3.98(1.87-5.62)	100	762	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.067	5.058	0.009	1.477	1167458	2.40		96.1	9253	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.067	5.067	0.0	1.000	46717	0.4980	Target=1.01	99.6	647	
713.00 > 219.00	5.058	5.067	-0.009	0.998	41390		1.13(0.50-1.51)	99.6	574	

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 44 13C2 PFHxDA										
815.00 > 770.00	5.413	5.403	0.011	1.578	1067641	2.39		95.6	4187	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.413	5.413	0.0	1.000	198924	0.4978	Target=3.04	99.6	52.4	
813.00 > 169.00	5.413	5.413	0.0	1.000	67315		2.96(1.52-4.56)	99.6	711	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.747	5.747	0.0	1.062	147233	0.4773	Target=2.88	95.5	65.6	
913.00 > 169.00	5.747	5.747	0.0	1.062	50854		2.90(1.44-4.32)	95.5	641	

**QC Flag Legend**

Review Flags

M - Manually Integrated

**Reagents:**

PFAS32NCIC3\_00003

Amount Added: 100.00

Units: uL



Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL007.d

Injection Date: 06-Dec-2019 14:48:50

Instrument ID: LC812

Lims ID: IC

Client ID:

Operator ID: lc812tech

ALS Bottle#: 4

Worklist Smp#: 7

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

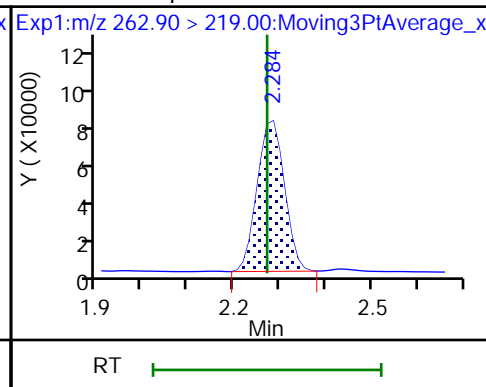
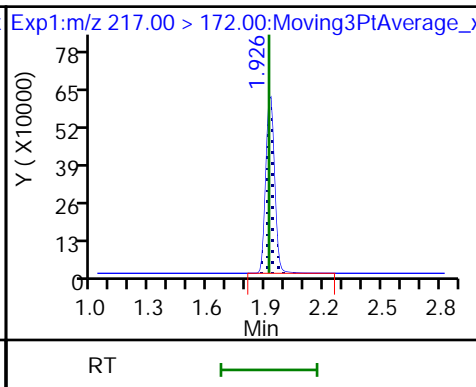
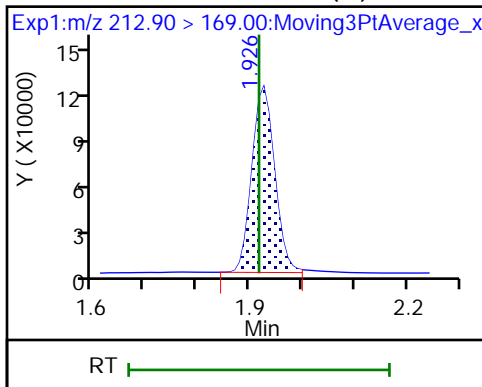
Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

2 Perfluorobutanoic acid (M)

D 1 13C4 PFBA

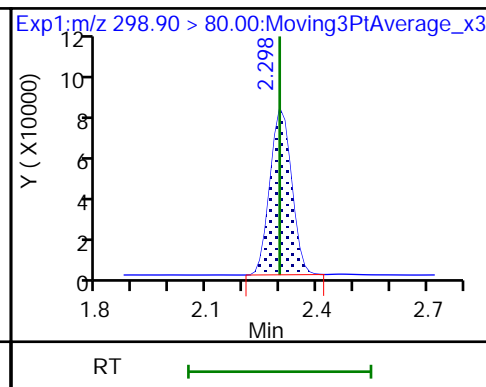
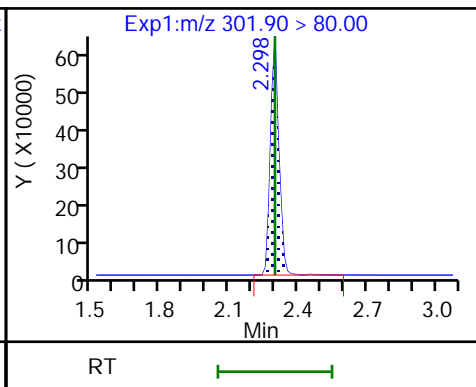
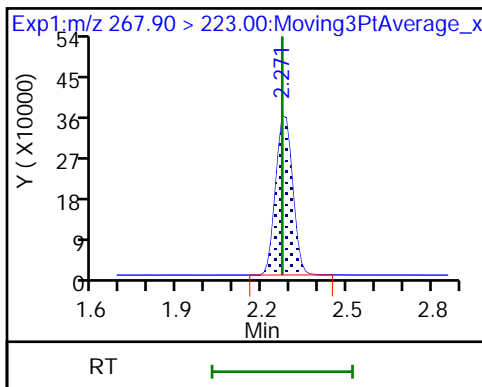
4 Perfluoropentanoic acid



D 3 13C5 PFPeA

D 47 13C3 PFBS

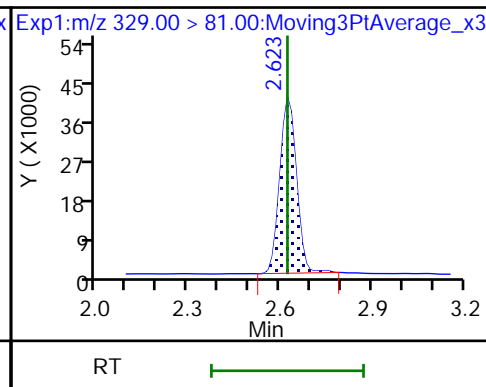
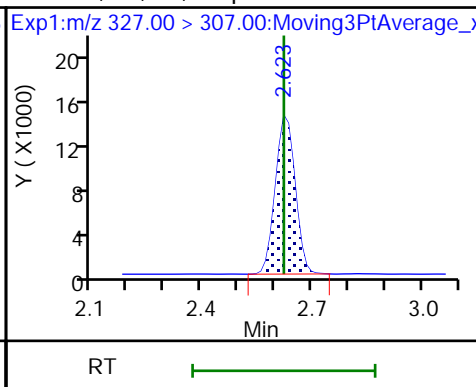
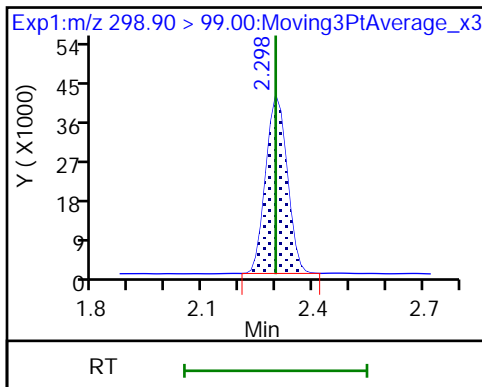
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

61 1H,1H,2H,2H-perfluorohexanesulfonate

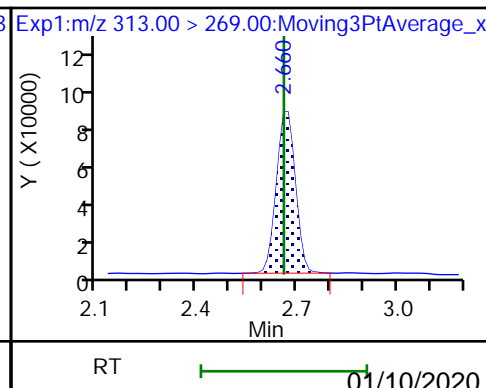
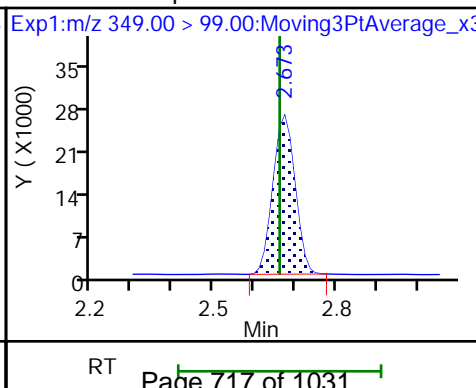
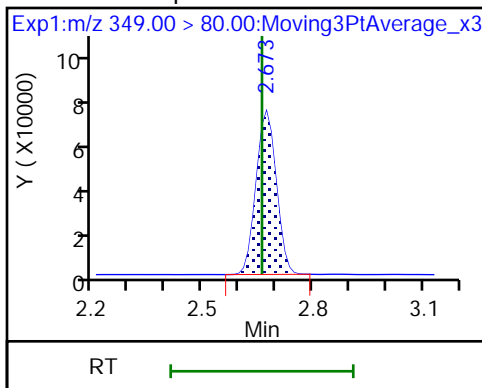
D 60 M2-4:2 FTS

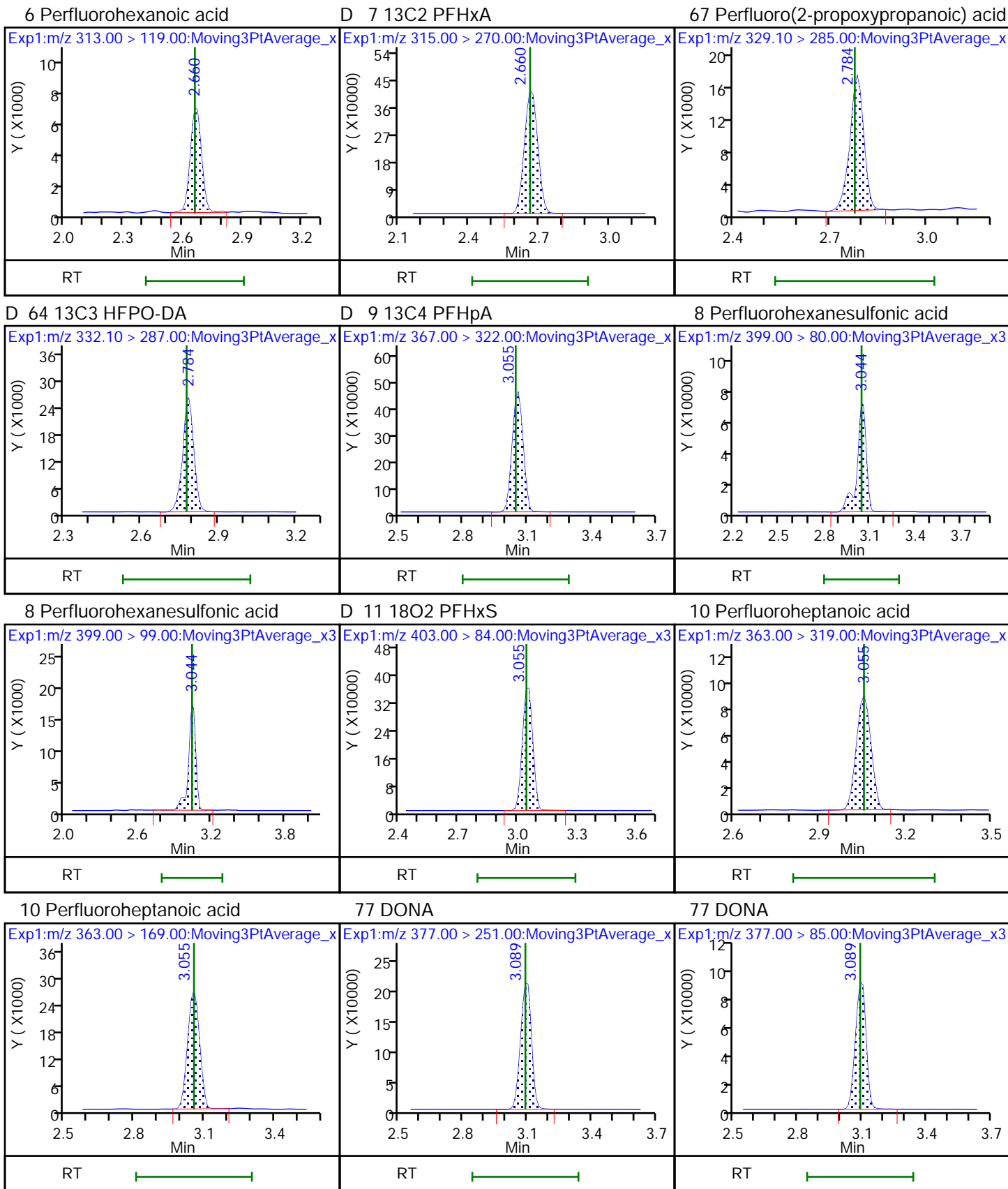


70 Perfluoropentanesulfonic acid

70 Perfluoropentanesulfonic acid

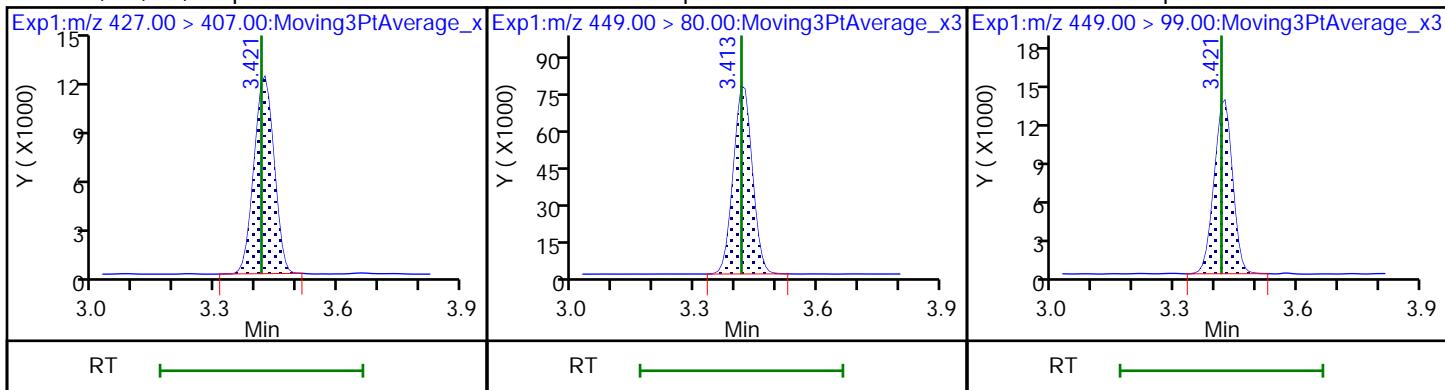
6 Perfluorohexanoic acid





13 1H,1H,2H,2H-perfluorooctanesulfonyl 16 Perfluoroheptanesulfonic acid

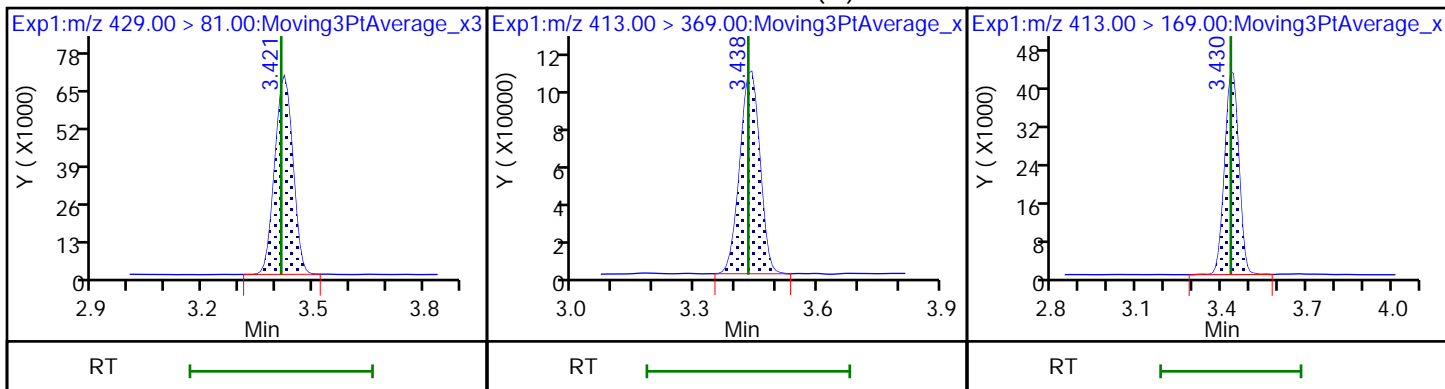
16 Perfluoroheptanesulfonic acid



D 12 M2-6:2 FTS

15 Perfluorooctanoic acid (M)

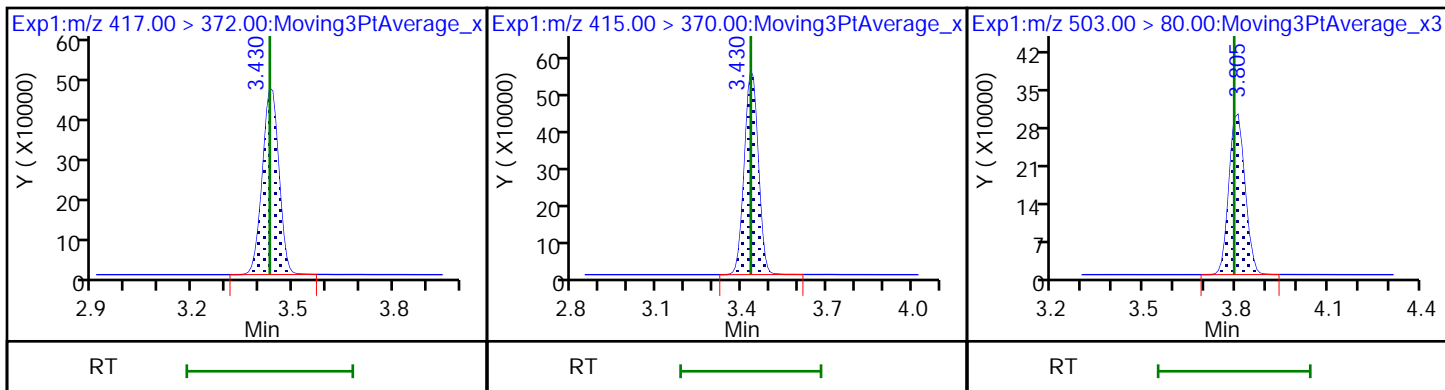
15 Perfluorooctanoic acid



D 14 13C4 PFOA

\* 62 13C2 PFOA

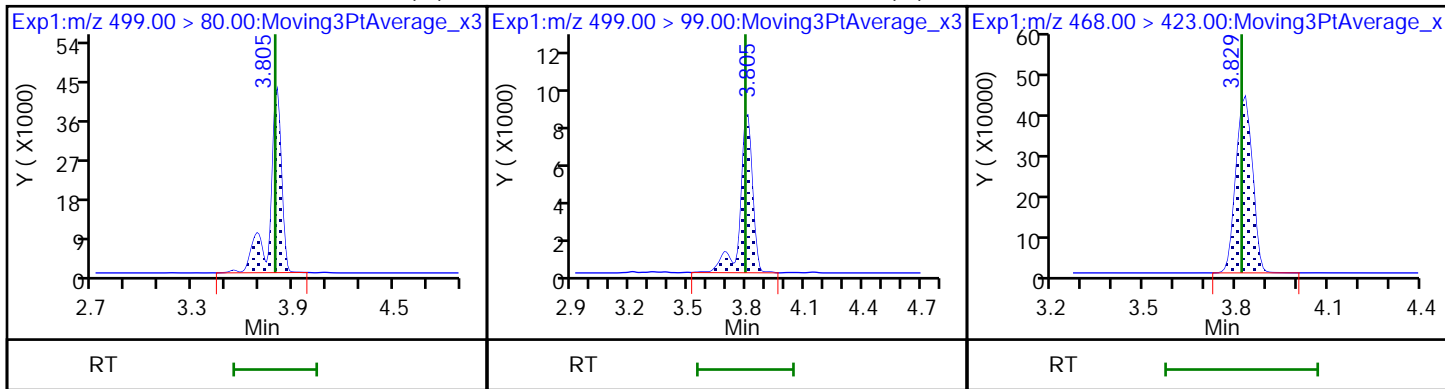
D 18 13C4 PFOS

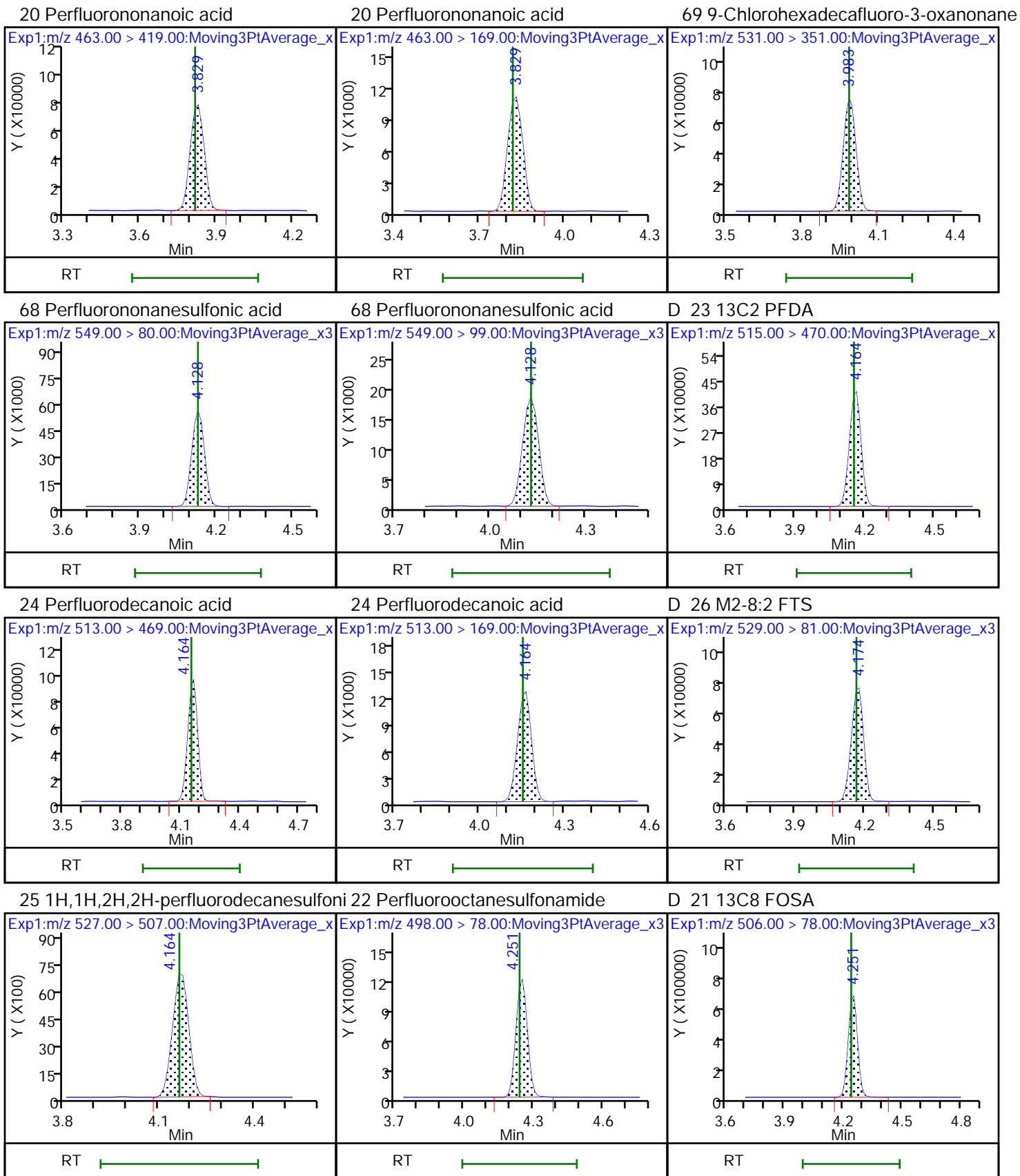


17 Perfluorooctanesulfonic acid (M)

17 Perfluorooctanesulfonic acid (M)

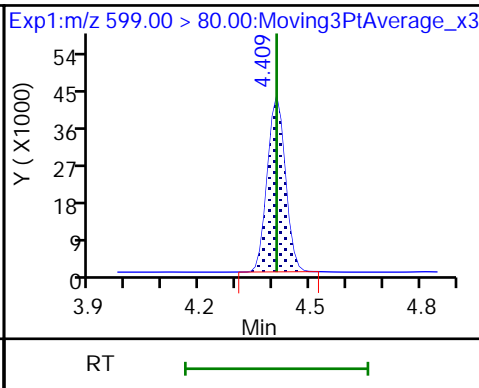
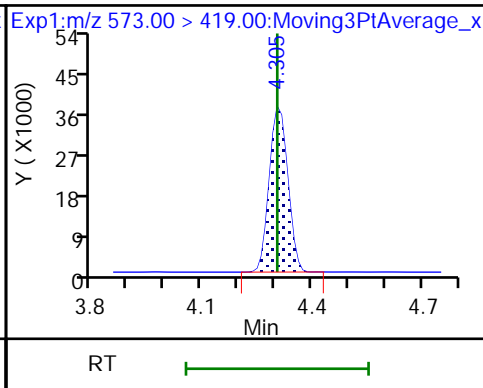
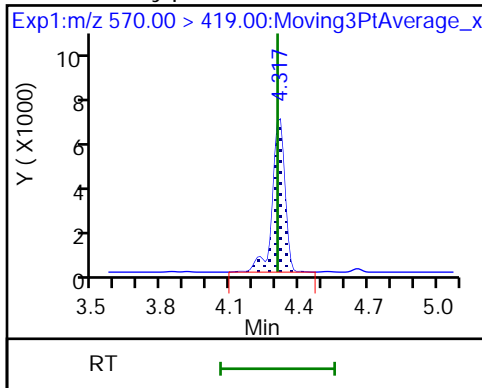
D 19 13C5 PFNA





28 N-methylperfluorooctanesulfonamid D 27 d3-NMeFOSAA

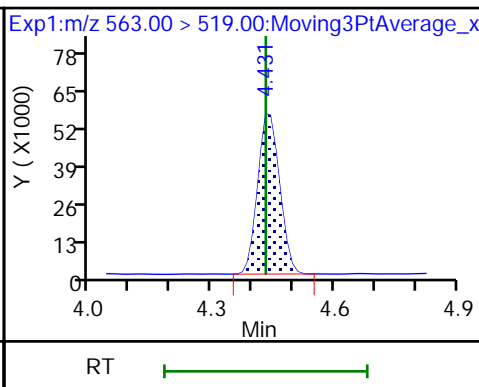
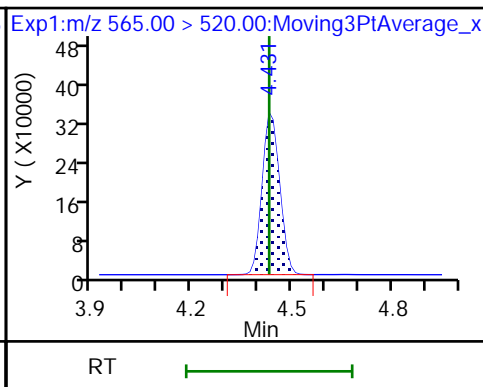
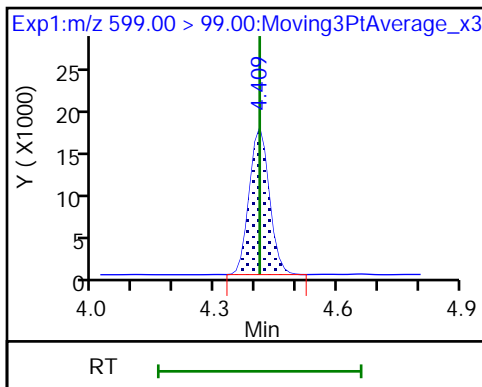
29 Perfluorodecanesulfonic acid



29 Perfluorodecanesulfonic acid

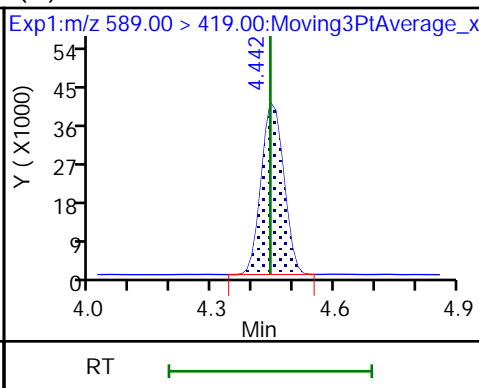
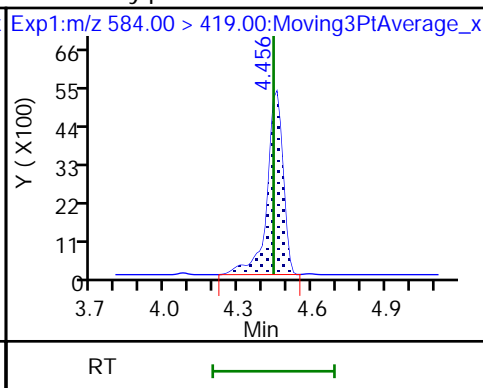
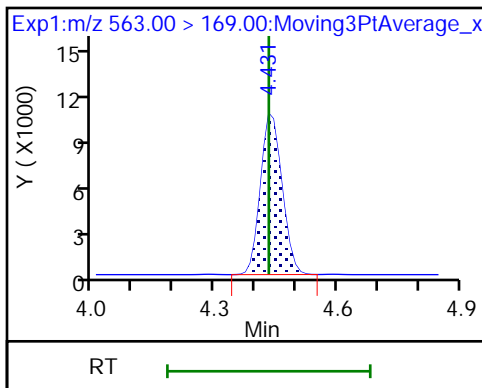
D 30 13C2 PFUoA

31 Perfluoroundecanoic acid



31 Perfluoroundecanoic acid

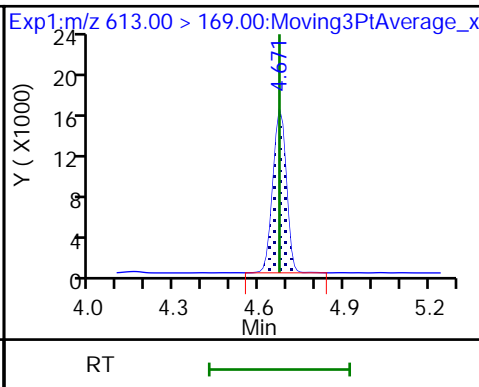
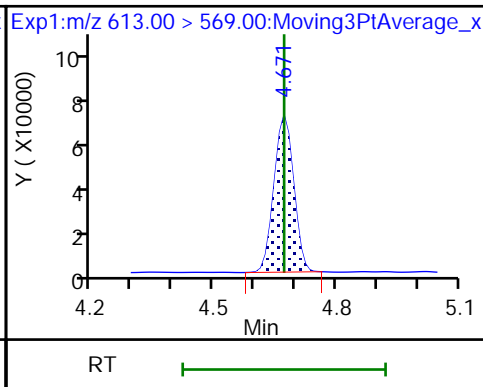
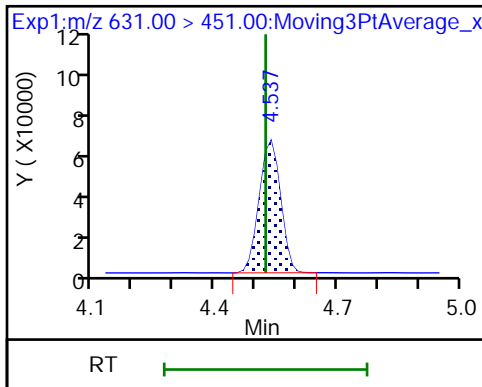
33 N-ethylperfluorooctanesulfonamid D 32 d5-NEtFOSAA



66 11-Chloroeicosafuoro-3-oxaundecan

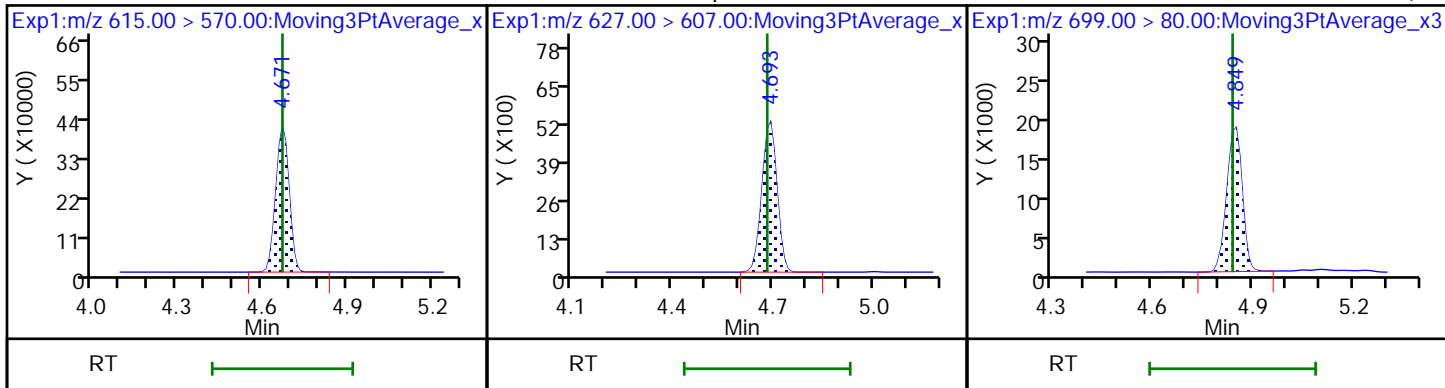
37 Perfluorododecanoic acid

37 Perfluorododecanoic acid



D 36 13C2 PFD0A

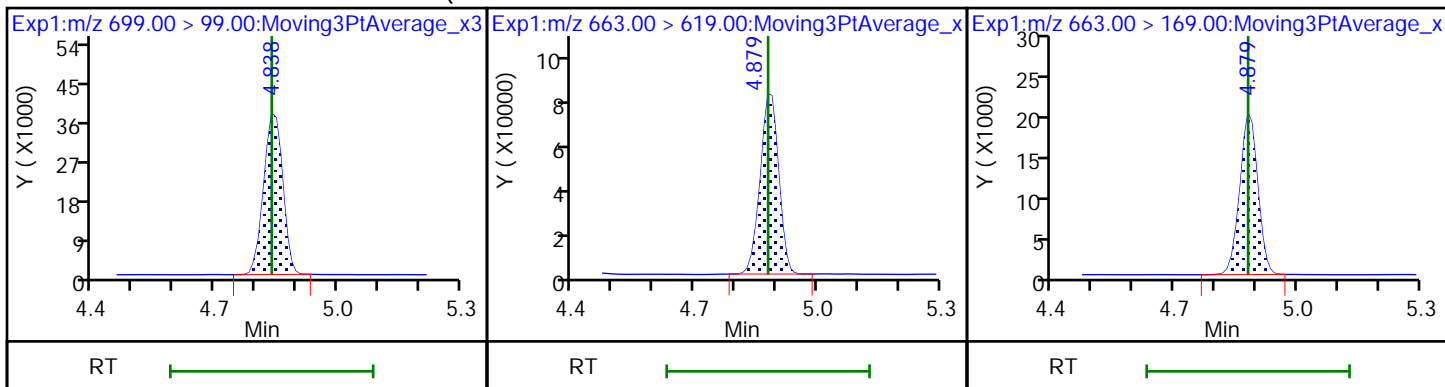
74 1H,1H,2H,2H-perfluorododecanesulfo75 Perfluorododecanesulfonic acid (PF



75 Perfluorododecanesulfonic acid (PF

41 Perfluorotridecanoic acid

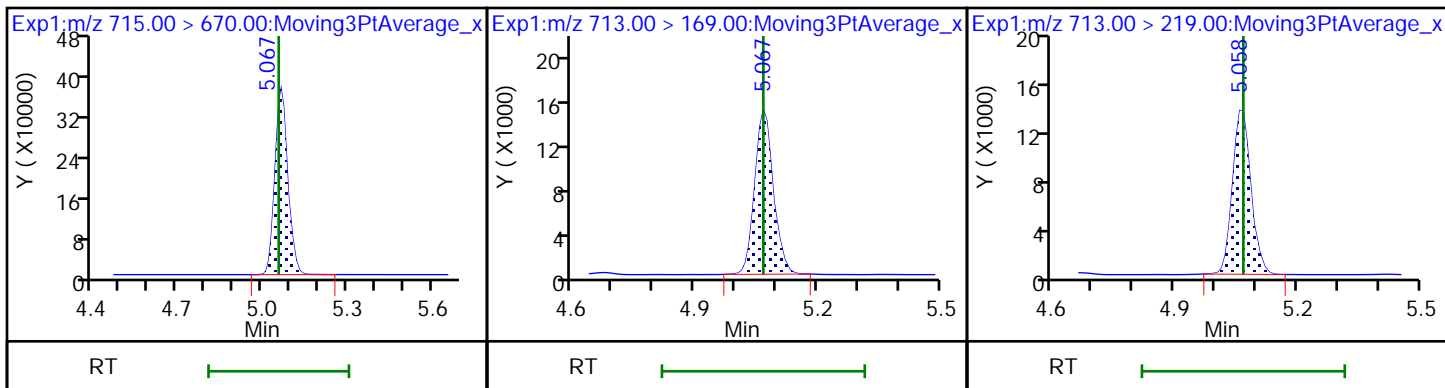
41 Perfluorotridecanoic acid



D 43 13C2 PFTeDA

42 Perfluorotetradecanoic acid

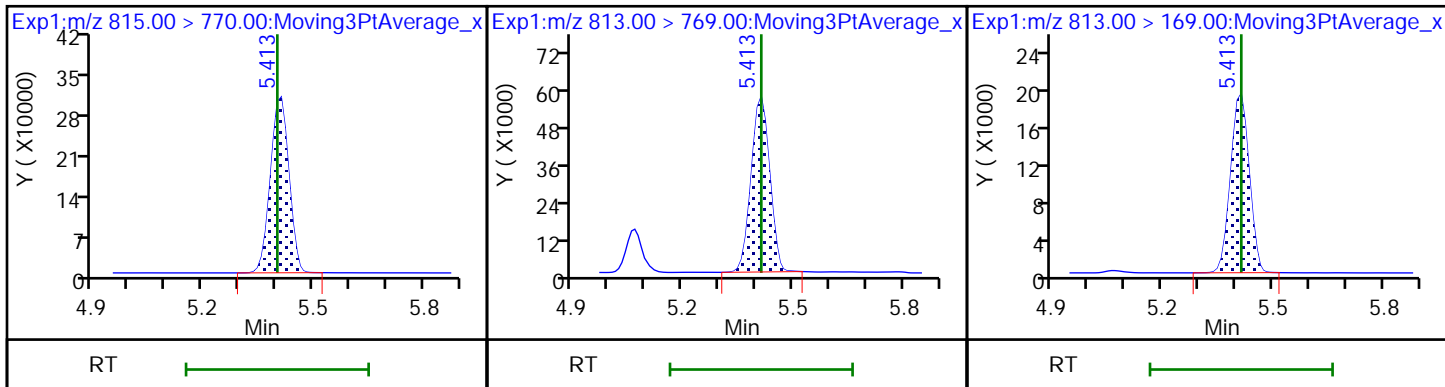
42 Perfluorotetradecanoic acid



D 44 13C2 PFHxDA

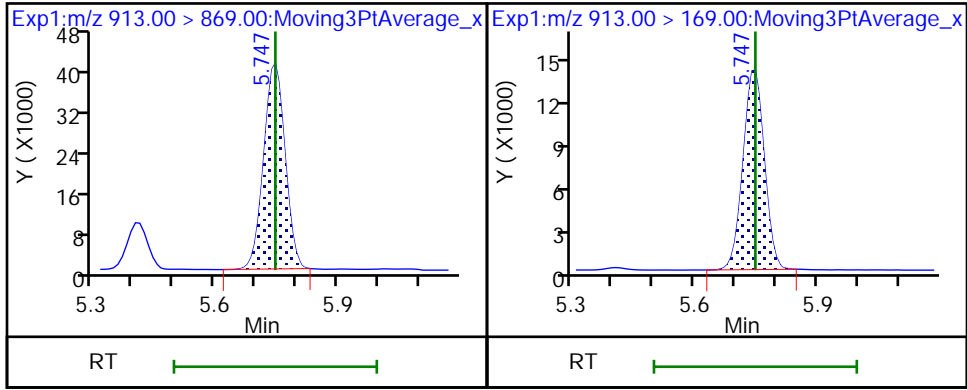
45 Perfluorohexadecanoic acid

45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid

46 Perfluorooctadecanoic acid



Euofins TestAmerica, Burlington

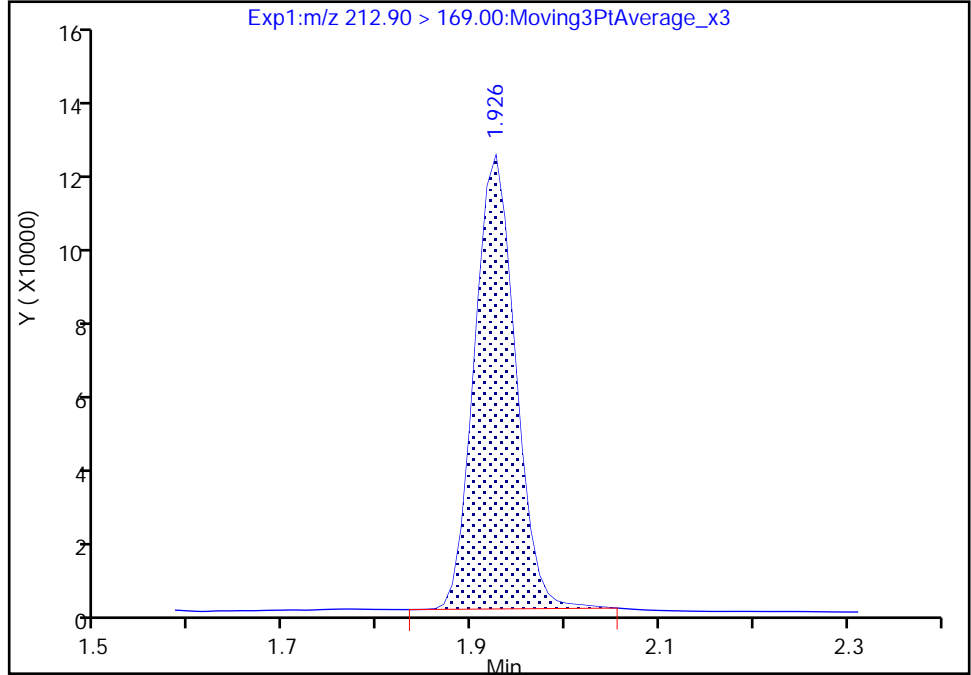
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Lims ID: IC  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 4 Worklist Smp#: 7  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

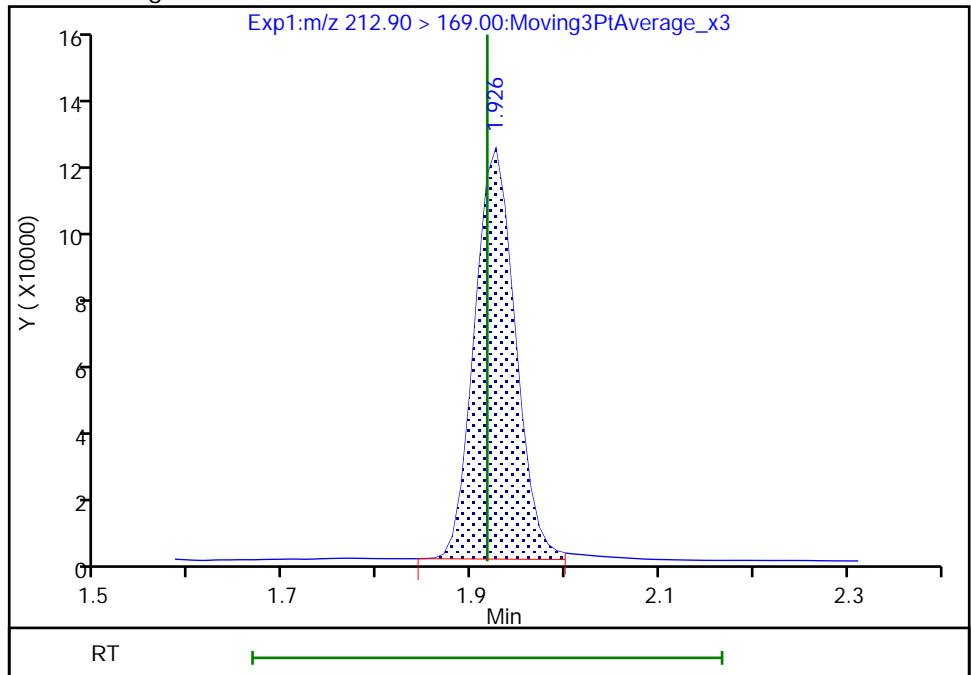
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Amount: 0.478895  
Amount Units: ng/ml

Processing Integration Results



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Area: 371453  
Amount: 0.491227  
Amount Units: ng/ml

Manual Integration Results





Eurofins TestAmerica, Burlington

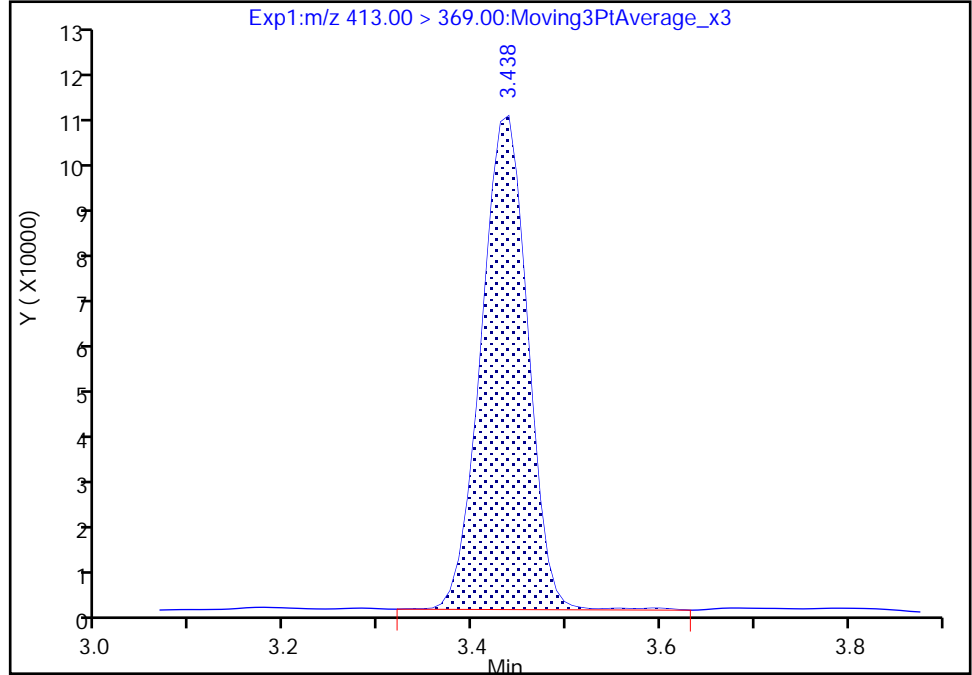
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Client ID:  
Operator ID: lc812tech ALS Bottle#: 4 Worklist Smp#: 7  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

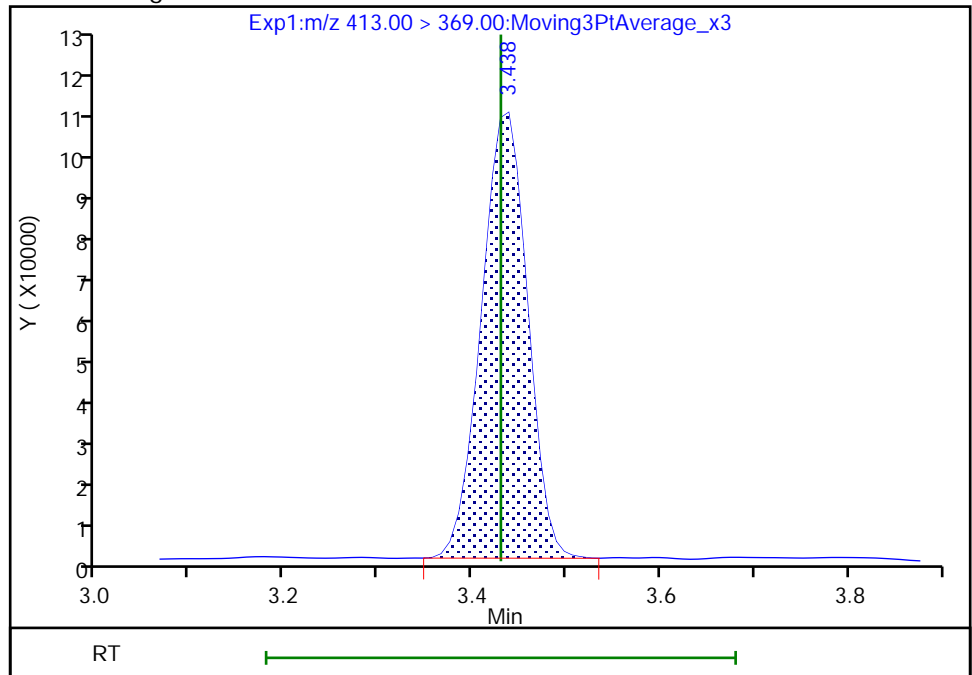
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Amount: 0.508633  
Amount Units: ng/ml

Processing Integration Results



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Amount Units: ng/ml

Manual Integration Results



Eurofins TestAmerica, Burlington

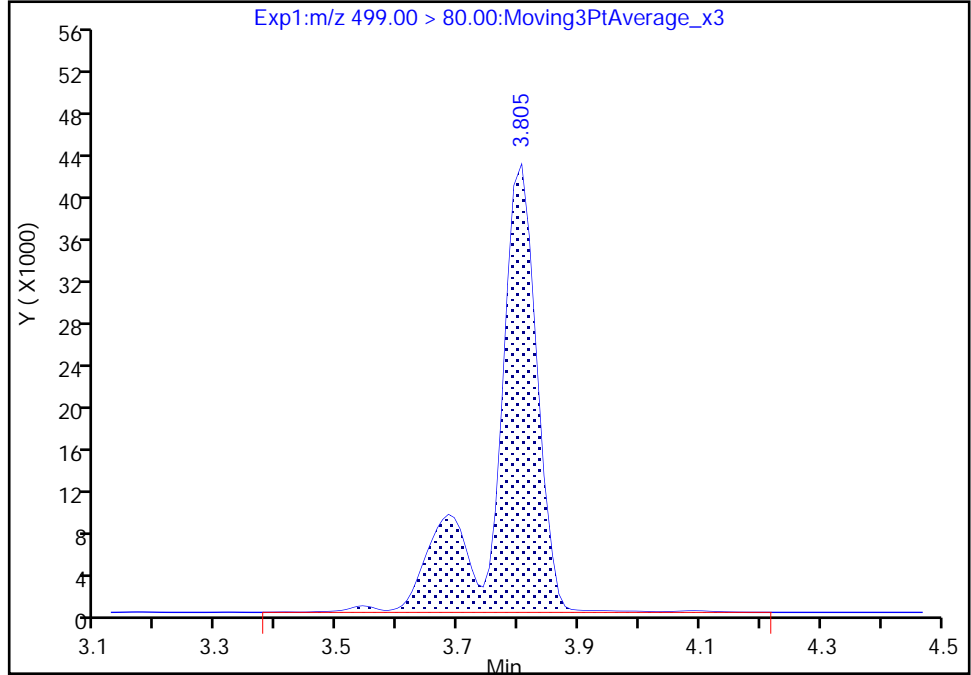
Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL007.d  
Injection Date: 06-Dec-2019 14:48:50 Instrument ID: LC812  
Lims ID: IC  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 4 Worklist Smp#: 7  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

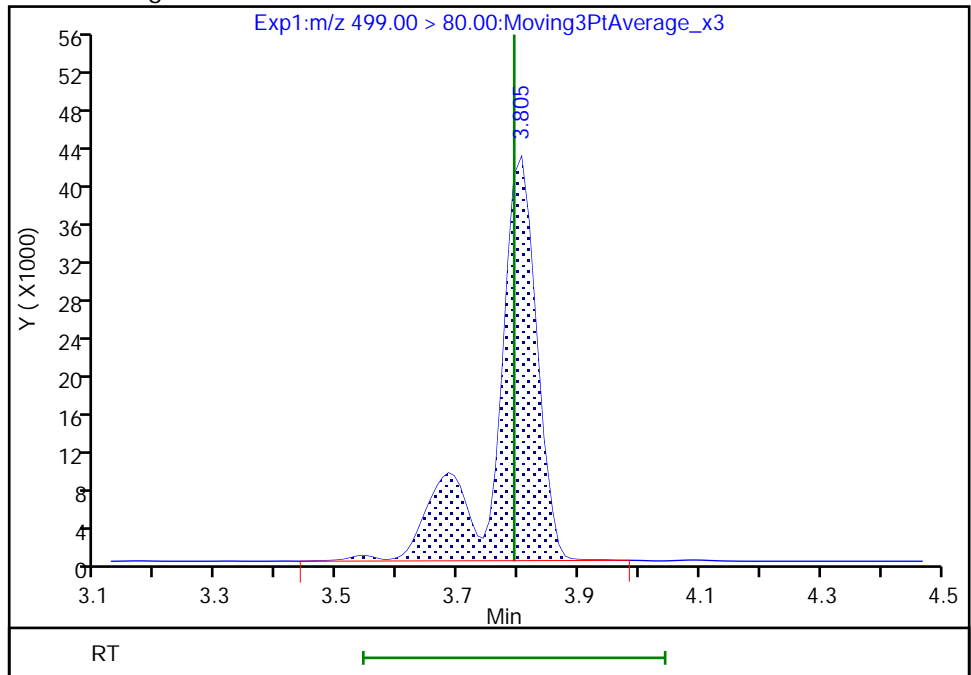
RT: 3.80  
Area: 208336  
Amount: 0.429289  
Amount Units: ng/ml

Processing Integration Results



RT: 3.80  
Area: 205923  
Amount: 0.425430  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 06-Dec-2019 15:31:14  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL007.d

Injection Date: 06-Dec-2019 14:48:50

Instrument ID: LC812

Lims ID: IC

Client ID:

Operator ID: lc812tech

ALS Bottle#: 4

Worklist Smp#: 7

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

Column: C-18 (4.60 mm)

Detector

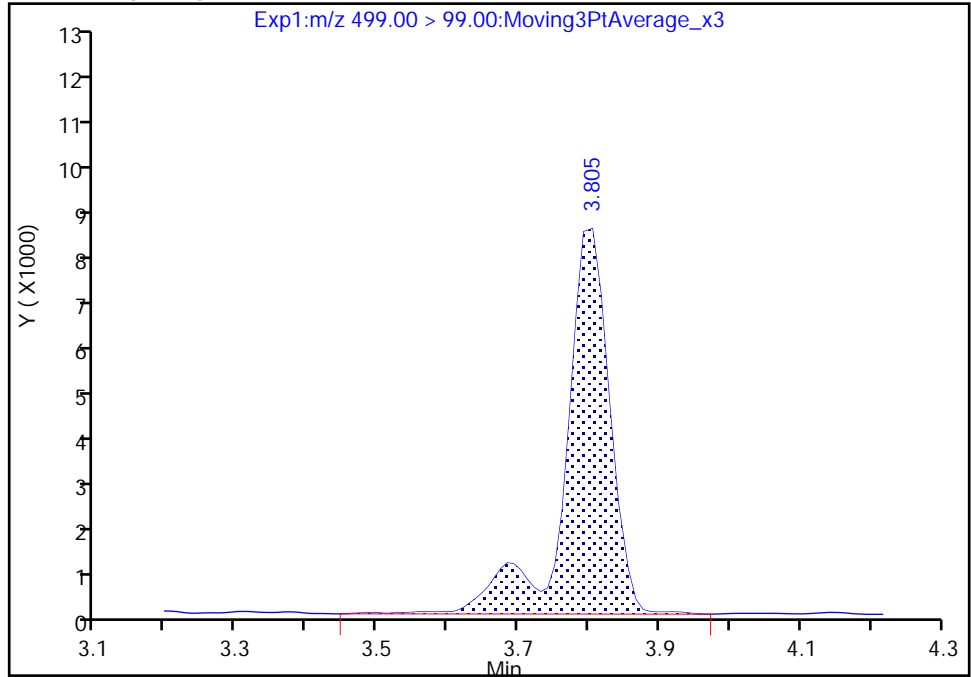
EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

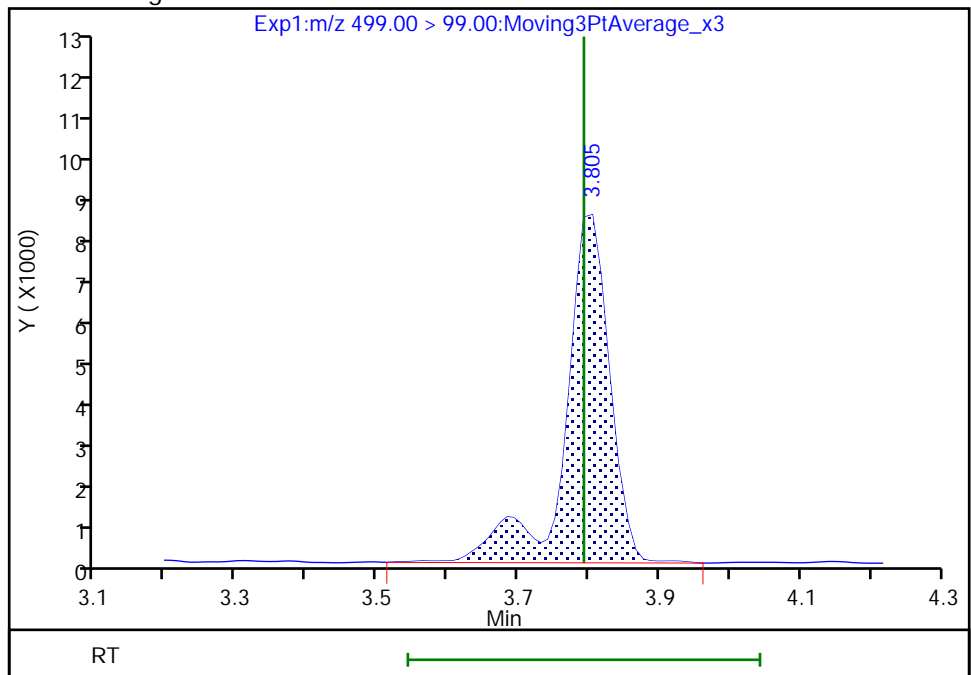
RT: 3.80  
Area: 37451  
Amount: 0.429289  
Amount Units: ng/ml

Processing Integration Results



RT: 3.80  
Area: 37265  
Amount: 0.425430  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 06-Dec-2019 15:31:20

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

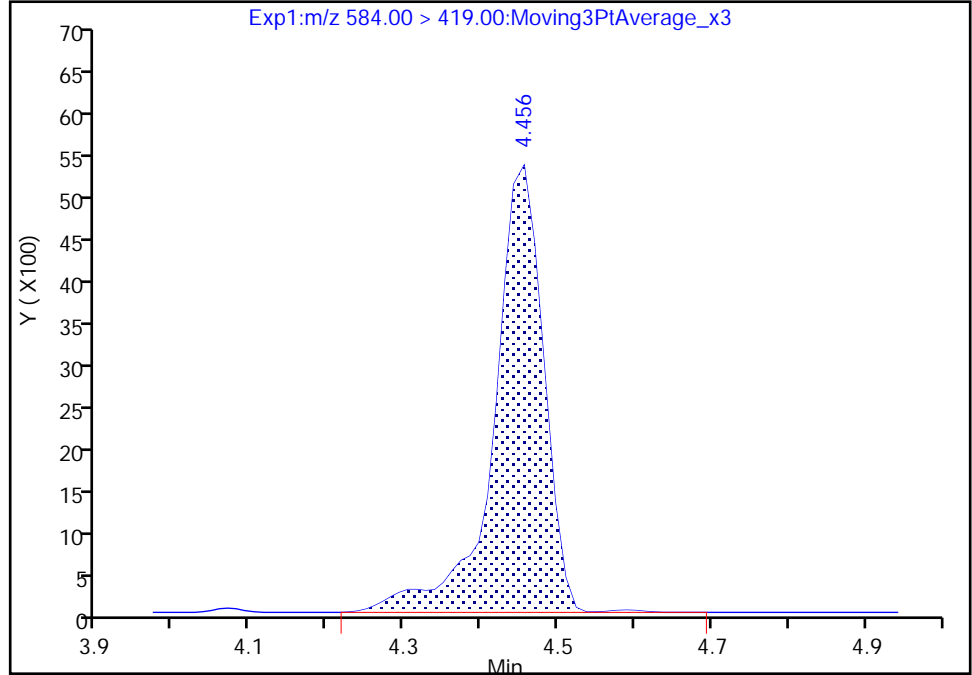
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Injection Date: 06-Dec-2019 14:48:50 Instrument ID: LC812  
Lims ID: IC  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 4 Worklist Smp#: 7  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

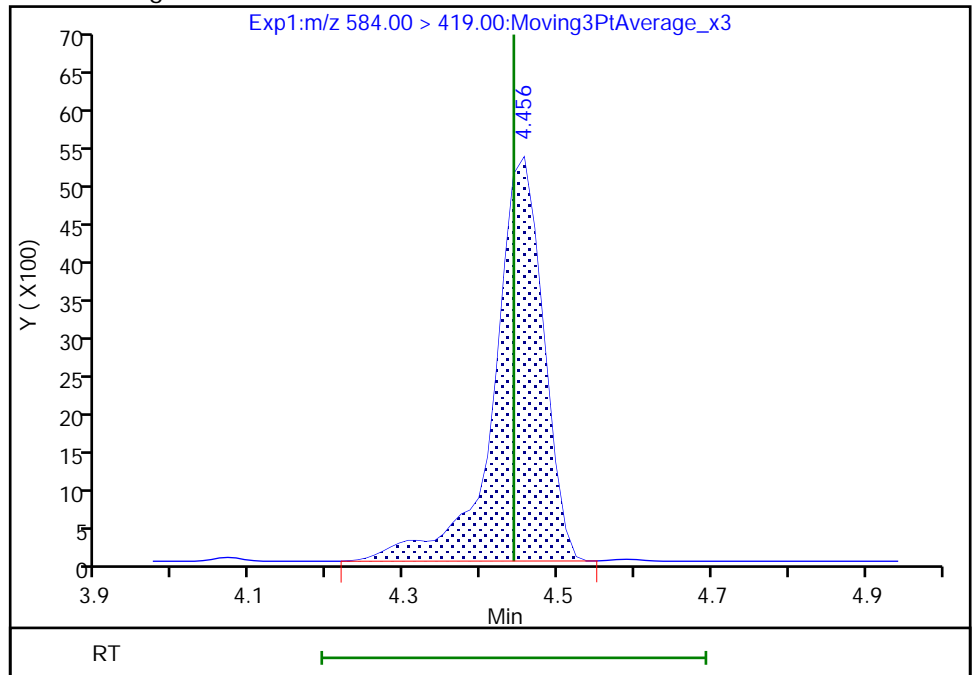
RT: 4.46  
Area: 24214  
Amount: 0.457985  
Amount Units: ng/ml

Processing Integration Results



RT: 4.46  
Area: 24100  
Amount: 0.470571  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 06-Dec-2019 15:31:38  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington  
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL008.d  
 Lims ID: ICIS  
 Client ID:  
 Sample Type: ICIS Calib Level: 4  
 Inject. Date: 06-Dec-2019 14:57:04 ALS Bottle#: 5 Worklist Smp#: 8  
 Injection Vol: 20.0 ul Dil. Factor: 1.0000  
 Sample Info: ICIS  
 Misc. Info.: 200-0039114-008 Plate: 1 Rack: 1  
 Operator ID: lc812tech Instrument ID: LC812  
 Sublist: chrom-PFC\_LC812\*sub3  
 Method: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\PFC\_LC812.m  
 Limit Group: LC\_PFC\_ICAL  
 Last Update: 09-Dec-2019 12:11:25 Calib Date: 06-Dec-2019 15:13:26  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Column 1 : C-18 ( 4.60 mm) Det: EXP1  
 Process Host: CTX0316

Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										
212.90 > 169.00	1.917	1.917	0.0	1.000	853862	0.9394		93.9	261	
D 1 13C4 PFBA										
217.00 > 172.00	1.917	1.917	0.0	0.559	2283983	2.91		116	24649	
4 Perfluoropentanoic acid										
262.90 > 219.00	2.271	2.271	0.0	1.000	709122	0.9389		93.9	85.4	
D 3 13C5 PFPeA										
267.90 > 223.00	2.271	2.271	0.0	0.662	1667452	2.78		111	6260	
D 47 13C3 PFBS										
301.90 > 80.00	2.298	2.298	0.0	0.670	1947850	2.72		117	366258	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.298	2.298	0.0	1.000	740774	0.8135	Target=2.03	92.0	3280	
298.90 > 99.00	2.298	2.298	0.0	1.000	365500		2.03(1.01-3.04)	92.0	610	
61 1H,1H,2H,2H-perfluorohexanesulfoni										
327.00 > 307.00	2.623	2.623	0.0	1.000	118620	0.9709		104	1778	
D 60 M2-4:2 FTS										
329.00 > 81.00	2.623	2.623	0.0	0.765	164686	2.47		106	258	
70 Perfluoropentanesulfonic acid										
349.00 > 80.00	2.660	2.660	0.0	0.874	689064	0.99	Target=3.08	106	2568	
349.00 > 99.00	2.660	2.660	0.0	0.874	196789		3.50(1.54-4.62)	106	1014	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.660	2.660	0.0	1.000	752654	1.00	Target=12.44	100	297	
313.00 > 119.00	2.660	2.660	0.0	1.000	54699		13.76(6.22-18.67)	100	129	
D 7 13C2 PFHxA										
315.00 > 270.00	2.660	2.660	0.0	0.776	1840340	2.75		110	5320	
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.776	2.776	0.0	1.000	97144	0.8803		88.0	53.7	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 64 13C3 HFPO-DA										
332.10 > 287.00	2.776	2.776	0.0	0.809	76831	2.63		105	978	
D 9 13C4 PFHpA										
367.00 > 322.00	3.044	3.044	0.0	0.887	1812297	2.86		114	5217	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.044	3.044	0.0	1.000	566993	0.8399	Target=4.13	92.3	1394	
399.00 > 99.00	3.044	3.044	0.0	1.000	145443		3.90(2.07-6.20)	92.3	524	
D 11 18O2 PFHxS										
403.00 > 84.00	3.044	3.044	0.0	0.887	1410640	2.50		106	5892	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.055	3.055	0.0	1.004	791498	1.03	Target=3.48	103	419	
363.00 > 169.00	3.044	3.055	-0.011	1.000	200519		3.95(1.74-5.22)	103	859	
77 DONA										
377.00 > 251.00	3.089	3.089	0.0	0.815	1569524	0.8436	Target=2.44	89.6	4598	
377.00 > 85.00	3.089	3.089	0.0	0.815	630841		2.49(1.22-3.67)	89.6	1961	
13 1H,1H,2H,2H-perfluorooctanesulfonyl										
427.00 > 407.00	3.413	3.413	0.0	1.000	89798	0.8569		90.4	925	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.413	3.413	0.0	0.900	589740	0.9143	Target=6.34	96.0	3239	
449.00 > 99.00	3.413	3.413	0.0	0.900	91274		6.46(3.17-9.51)	96.0	1108	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.413	3.413	0.0	0.995	263741	2.72		114	1178	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.430	3.430	0.0	1.000	807792	0.8986	Target=2.38	89.9	329	
413.00 > 169.00	3.430	3.430	0.0	1.000	337043		2.40(1.19-3.57)	89.9	1299	
D 14 13C4 PFOA										
417.00 > 372.00	3.430	3.430	0.0	1.000	2025515	3.01		120	2971	
* 62 13C2 PFOA										
415.00 > 370.00	3.430	3.430	0.0		1852009	2.50			4550	
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.793	0.0	1.106	1258638	2.81		117	5999	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.793	3.793	0.0	1.000	476832	0.8387	Target=5.71	90.4	1858	M
499.00 > 99.00	3.793	3.793	0.0	1.000	83061		5.74(2.86-8.57)	90.4	1128	M
D 19 13C5 PFNA										
468.00 > 423.00	3.817	3.817	0.0	1.113	1763969	2.85		114	6346	
20 Perfluorononanoic acid										
463.00 > 419.00	3.817	3.817	0.0	1.000	680723	0.9839	Target=6.87	98.4	348	
463.00 > 169.00	3.817	3.817	0.0	1.000	97132		7.01(3.43-10.30)	98.4	1543	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.984	3.984	0.0	1.050	547070	0.8424		90.4	3709	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.129	4.129	0.0	1.089	391621	0.9001	Target=2.92	93.8	2539	
549.00 > 99.00	4.129	4.129	0.0	1.089	124593		3.14(1.46-4.38)	93.8	833	
D 23 13C2 PFDA										
515.00 > 470.00	4.153	4.153	0.0	1.211	1758412	2.88		115	3030	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
24 Perfluorodecanoic acid										
513.00 > 469.00	4.153	4.153	0.0	1.000	663877	0.9756	Target=7.21	97.6	637	
513.00 > 169.00	4.153	4.153	0.0	1.000	91244		7.28(3.60-10.81)	97.6	1318	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.164	4.164	0.0	1.214	321836	2.78		116	1234	
25 1H,1H,2H,2H-perfluorodecanesulfoni										
527.00 > 507.00	4.164	4.164	0.0	1.000	59800	0.9641		101	594	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.239	4.239	0.0	1.000	853601	1.02		102	3758	
D 21 13C8 FOSA										
506.00 > 78.00	4.239	4.239	0.0	1.236	2111278	2.65		106	6901	
28 N-methylperfluorooctanesulfonamido										
570.00 > 419.00	4.305	4.305	0.0	1.000	53457	0.9239		92.4	559	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.305	4.305	0.0	1.255	166463	2.83		113	692	
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.409	4.409	0.0	1.162	326562	0.8618	Target=2.78	89.4	2605	
599.00 > 99.00	4.409	4.409	0.0	1.162	118333		2.76(1.39-4.17)	89.4	1203	
D 30 13C2 PFUnA										
565.00 > 520.00	4.431	4.431	0.0	1.292	1538525	2.97		119	7240	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.431	4.431	0.0	1.000	500548	0.9593	Target=5.47	95.9	519	
563.00 > 169.00	4.431	4.431	0.0	1.000	86585		5.78(2.73-8.20)	95.9	1037	
33 N-ethylperfluorooctanesulfonamidoa										
584.00 > 419.00	4.442	4.442	0.0	1.000	52214	0.8591		85.9	718	M
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.442	4.442	0.0	1.295	183569	2.82		113	2018	
66 11-Chloroeicosafuoro-3-oxaundecan										
631.00 > 451.00	4.523	4.523	0.0	1.193	528727	0.8634		91.7	3651	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.671	4.671	0.0	1.000	613140	0.9866	Target=4.84	98.7	119	
613.00 > 169.00	4.671	4.671	0.0	1.000	119598		5.13(2.42-7.26)	98.7	1108	
D 36 13C2 PFDaA										
615.00 > 570.00	4.671	4.671	0.0	1.362	1681386	2.96		118	6465	
74 1H,1H,2H,2H-perfluorododecanesulfo										
627.00 > 607.00	4.683	4.683	0.0	1.125	34922	0.8868		92.0	1038	
75 Perfluorododecanesulfonic acid (PF										
699.00 > 80.00	4.838	4.838	0.0	1.276	119154	0.8271	Target=0.47	85.4	329	
699.00 > 99.00	4.838	4.838	0.0	1.276	267290		0.45(0.23-0.70)	85.4	2497	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.879	4.879	0.0	1.044	586051	0.99	Target=3.74	99.3	159	
663.00 > 169.00	4.879	4.879	0.0	1.044	153266		3.82(1.87-5.62)	99.3	1644	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.058	5.058	0.0	1.475	1318503	2.77		111	7884	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.067	5.067	0.0	1.002	105288	0.99	Target=1.01	99.4	1345	
713.00 > 219.00	5.058	5.067	-0.009	1.000	100656		1.05(0.50-1.51)	99.4	1598	

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 44 13C2 PFHxDA										
815.00 > 770.00	5.403	5.403	0.0	1.575	1198766	2.73		109	5417	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.413	5.413	0.0	1.002	462509	1.06	Target=3.04	106	112	
813.00 > 169.00	5.403	5.413	-0.011	1.000	144634		3.20(1.52-4.56)	106	1292	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.747	5.747	0.0	1.064	347376	1.00	Target=2.88	100	127	
913.00 > 169.00	5.739	5.747	-0.008	1.062	121556		2.86(1.44-4.32)	100	1048	

**QC Flag Legend**

Review Flags

M - Manually Integrated

**Reagents:**

PFAS32NCIC4\_00004

Amount Added: 100.00

Units: uL



Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL008.d

Injection Date: 06-Dec-2019 14:57:04

Instrument ID: LC812

Lims ID: ICIS

Client ID:

Operator ID: lc812tech

ALS Bottle#: 5

Worklist Smp#: 8

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

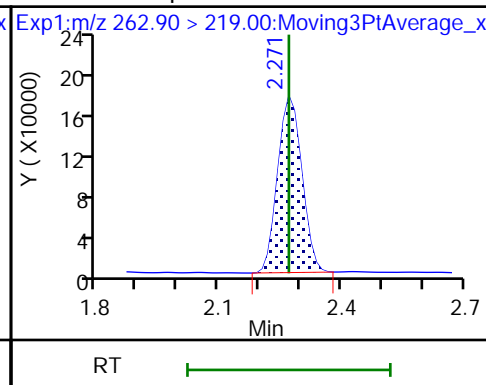
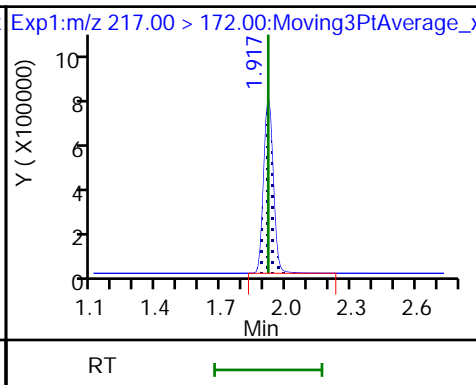
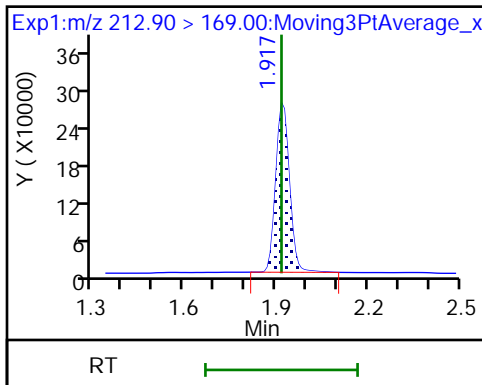
Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

2 Perfluorobutanoic acid

D 1 13C4 PFBA

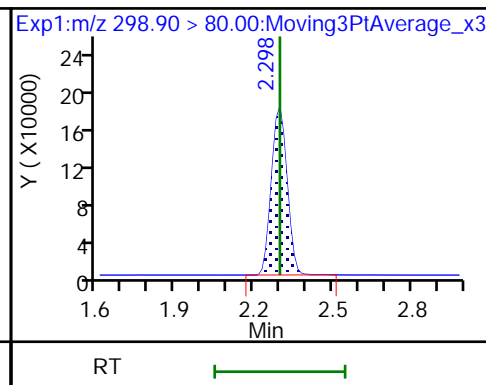
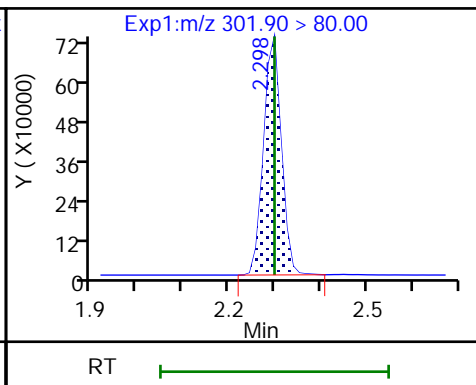
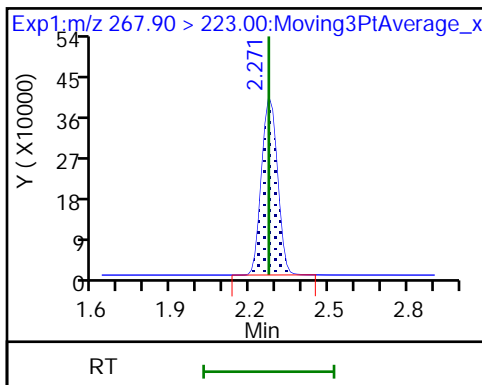
4 Perfluoropentanoic acid



D 3 13C5 PFPeA

D 47 13C3 PFBS

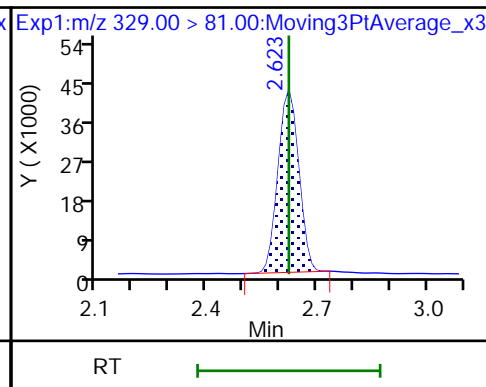
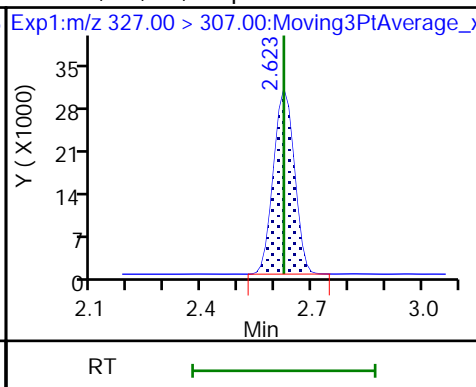
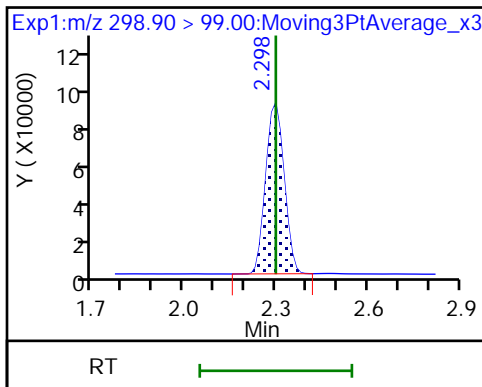
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

61 1H,1H,2H,2H-perfluorohexanesulfonate

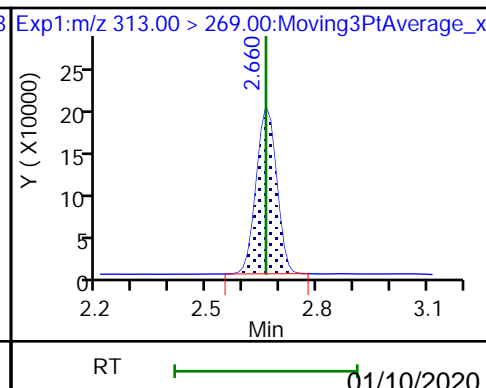
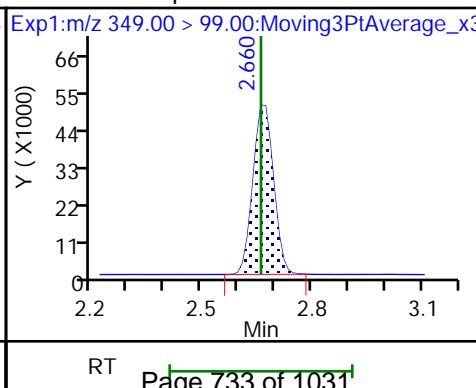
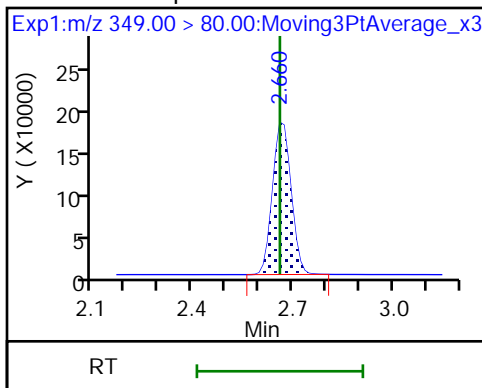
D 60 M2-4:2 FTS

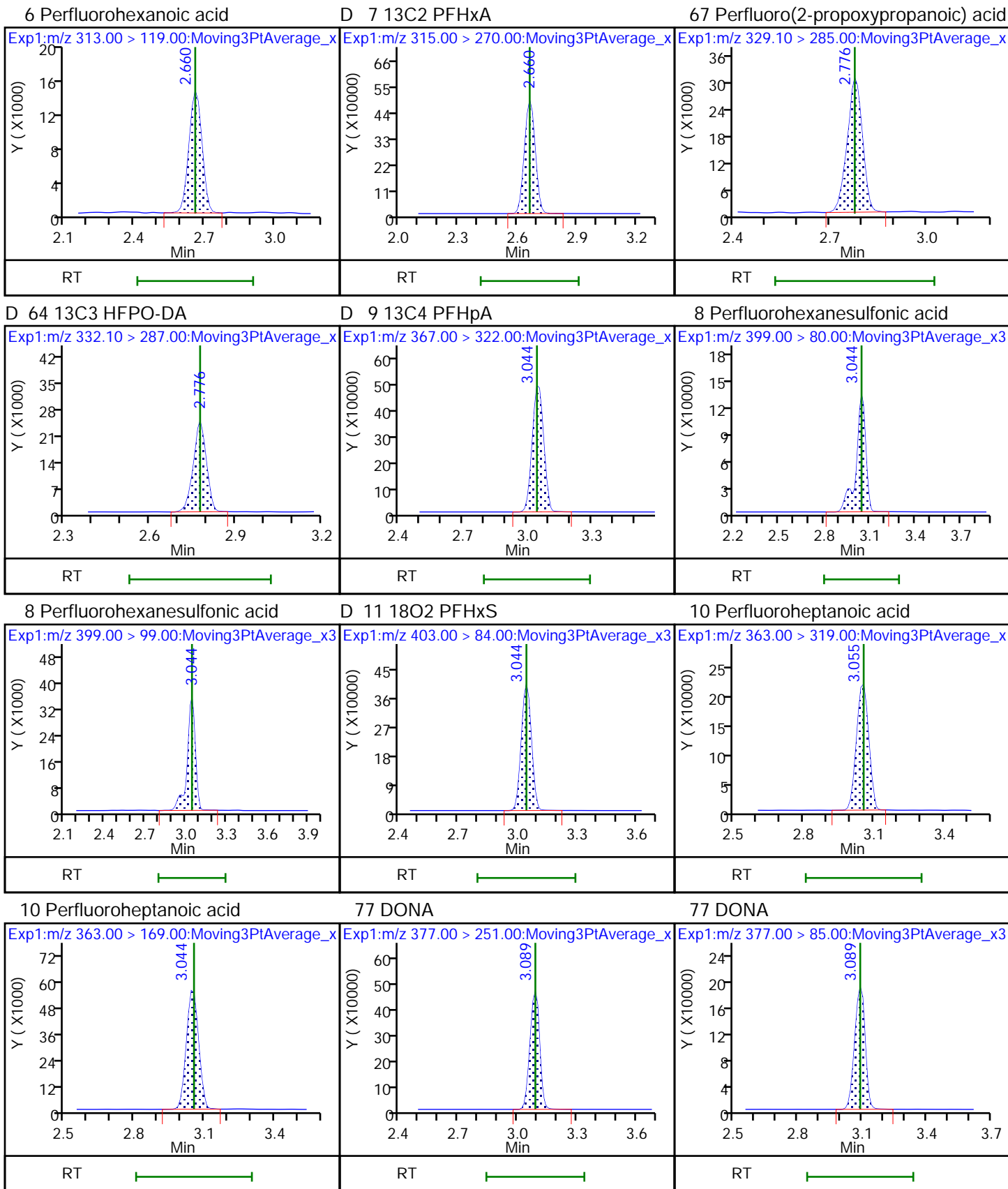


70 Perfluoropentanesulfonic acid

70 Perfluoropentanesulfonic acid

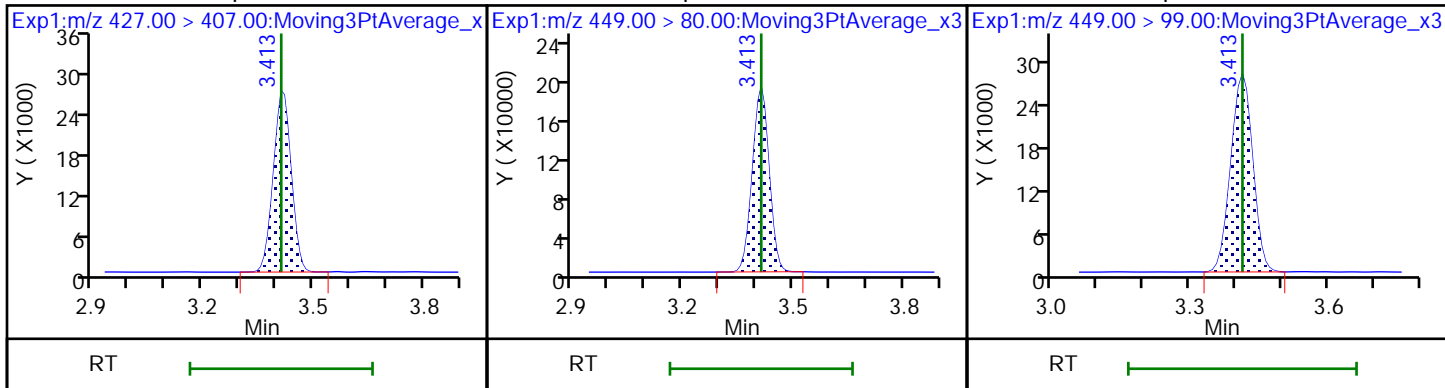
6 Perfluorohexanoic acid





13 1H,1H,2H,2H-perfluorooctanesulfonyl 16 Perfluoroheptanesulfonic acid

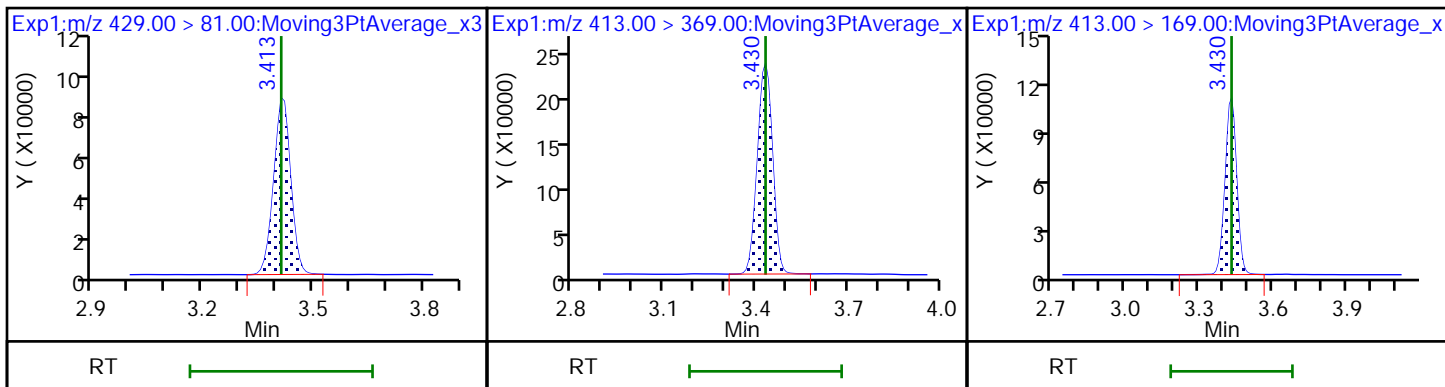
16 Perfluoroheptanesulfonic acid



D 12 M2-6:2 FTS

15 Perfluorooctanoic acid

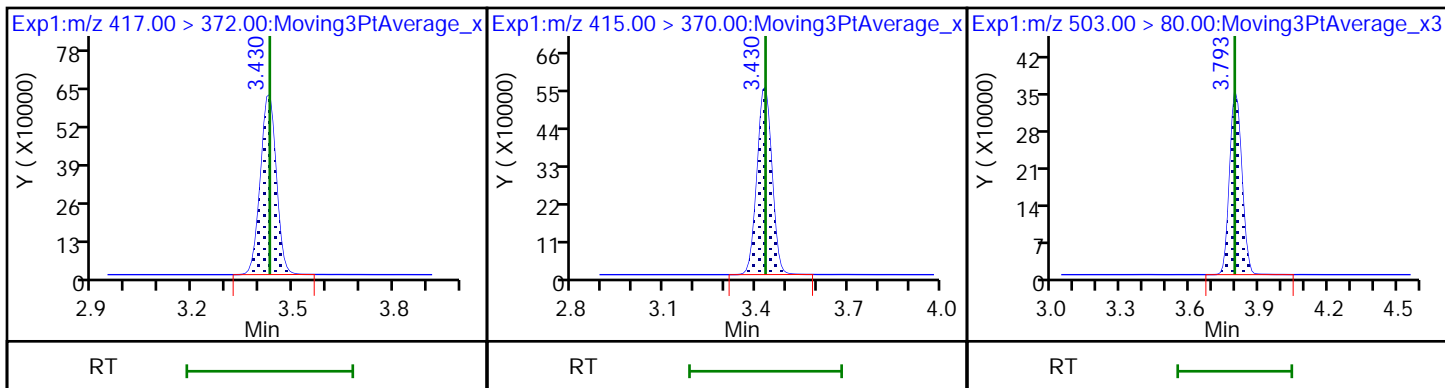
15 Perfluorooctanoic acid



D 14 13C4 PFOA

\* 62 13C2 PFOA

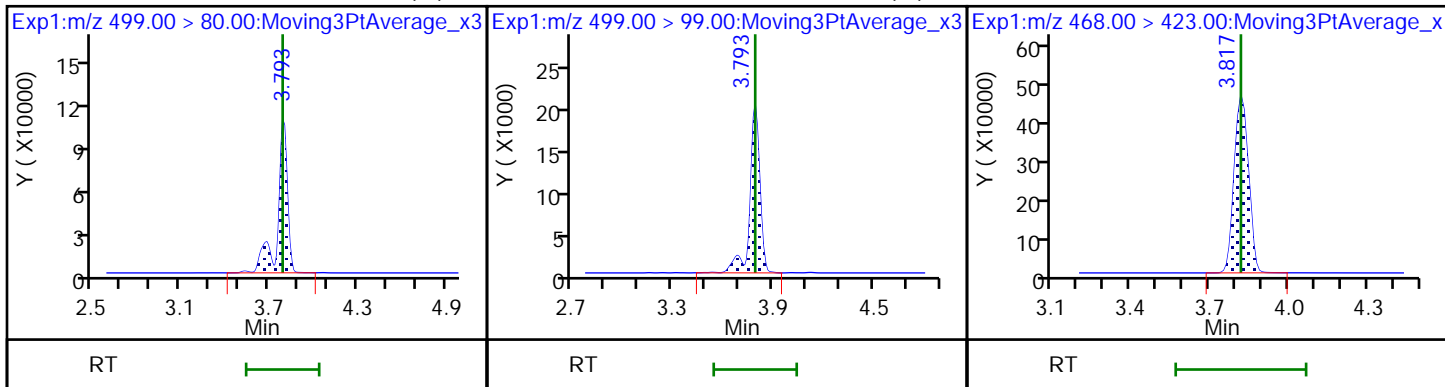
D 18 13C4 PFOS

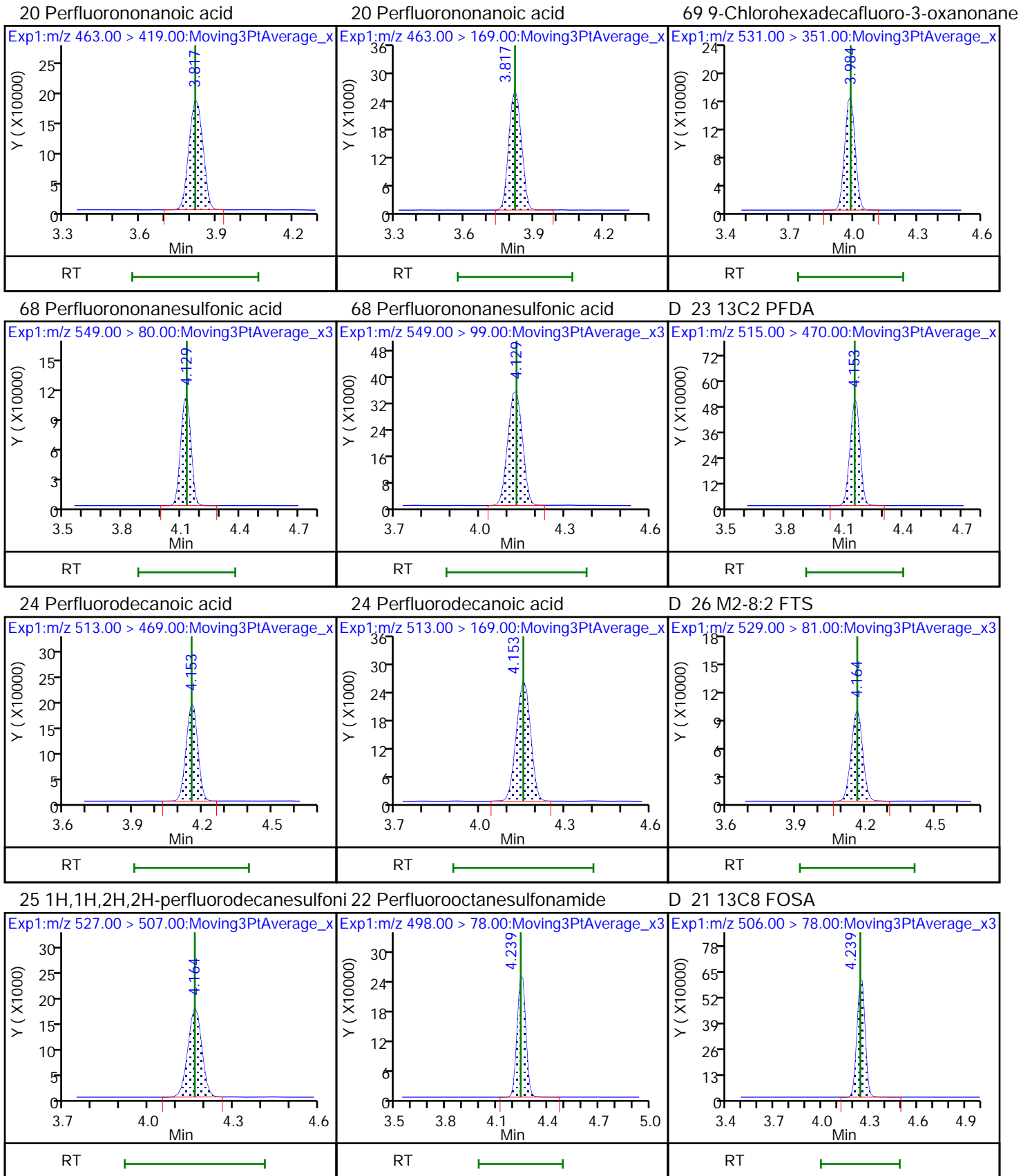


17 Perfluorooctanesulfonic acid (M)

17 Perfluorooctanesulfonic acid (M)

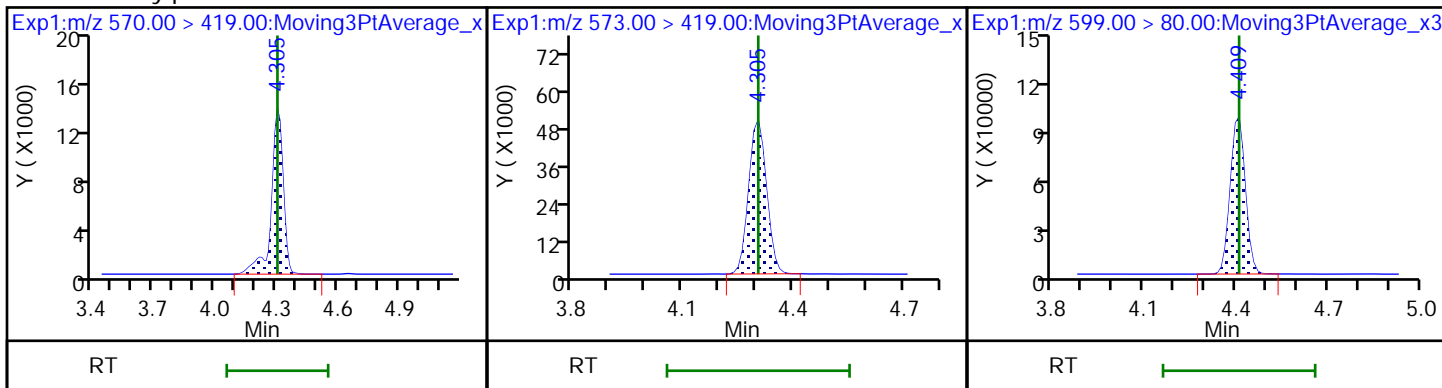
D 19 13C5 PFNA





28 N-methylperfluorooctanesulfonamid D 27 d3-NMeFOSAA

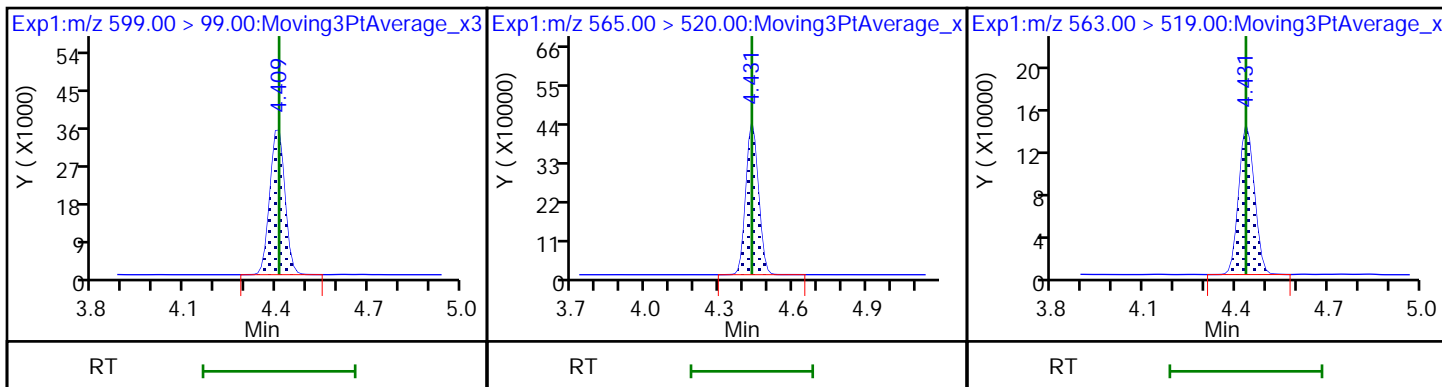
29 Perfluorodecanesulfonic acid



29 Perfluorodecanesulfonic acid

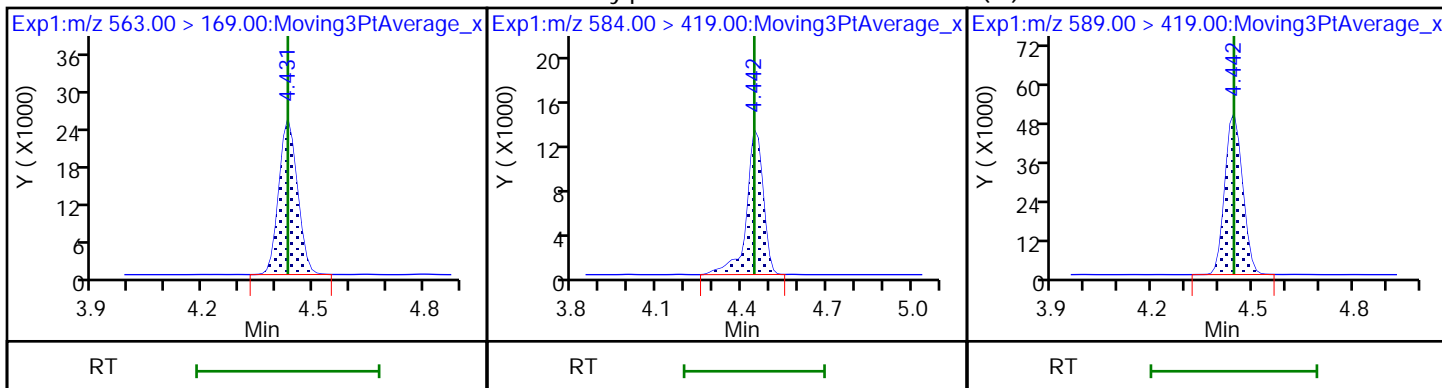
D 30 13C2 PFUnA

31 Perfluoroundecanoic acid



31 Perfluoroundecanoic acid

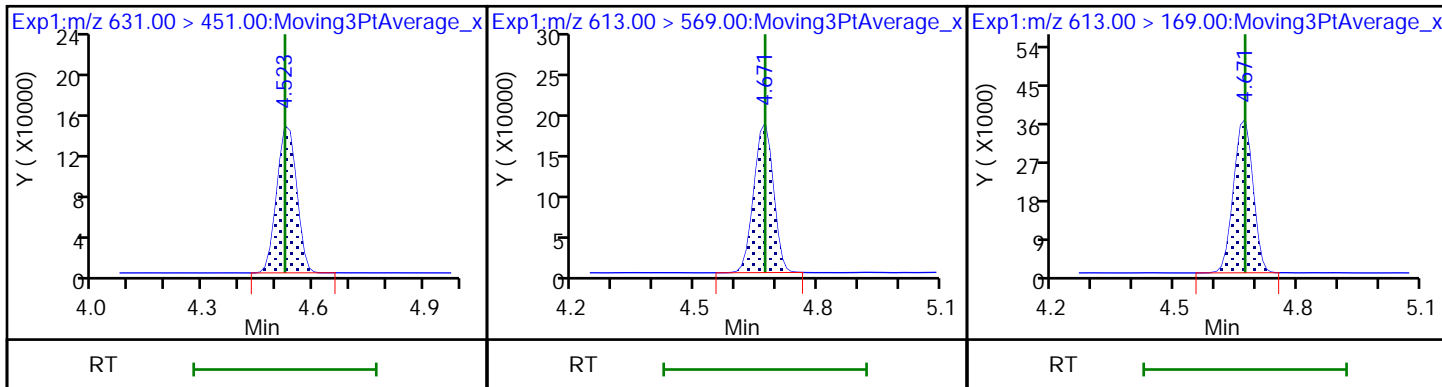
33 N-ethylperfluorooctanesulfonamid D 32 d5-NEtFOSAA



66 11-Chloroeicosafuoro-3-oxaundecan

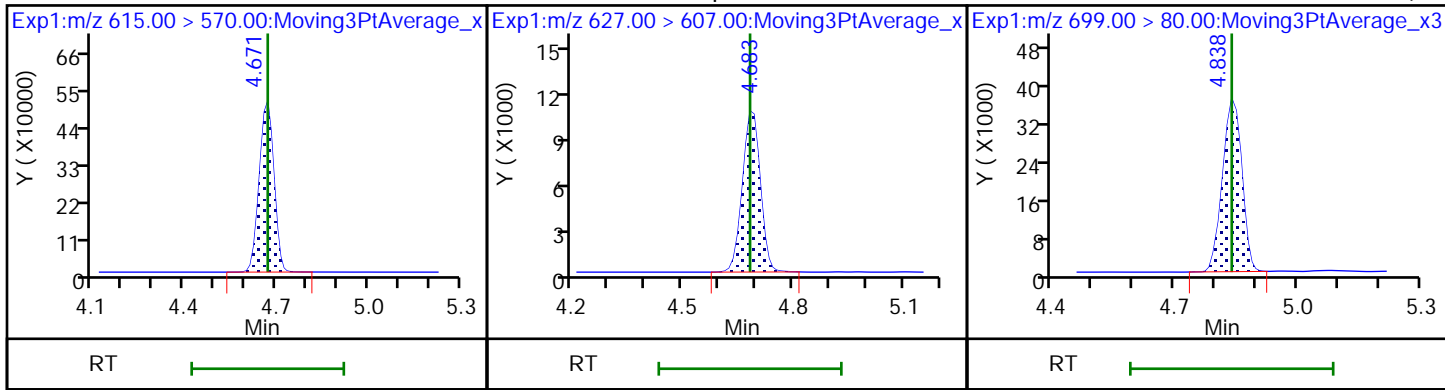
37 Perfluorododecanoic acid

37 Perfluorododecanoic acid



D 36 13C2 PFDoA

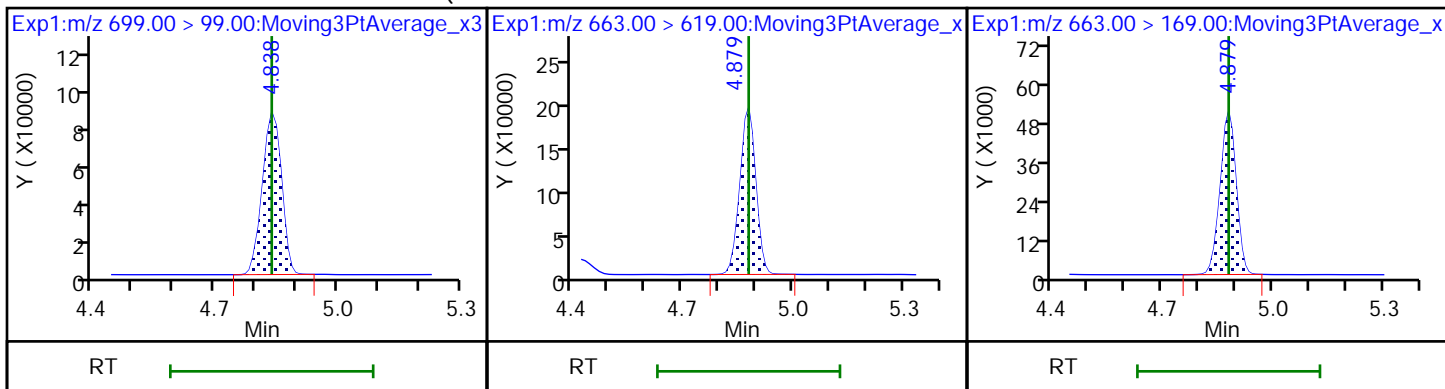
74 1H,1H,2H,2H-perfluorododecanesulfo75 Perfluorododecanesulfonic acid (PF



75 Perfluorododecanesulfonic acid (PF

41 Perfluorotridecanoic acid

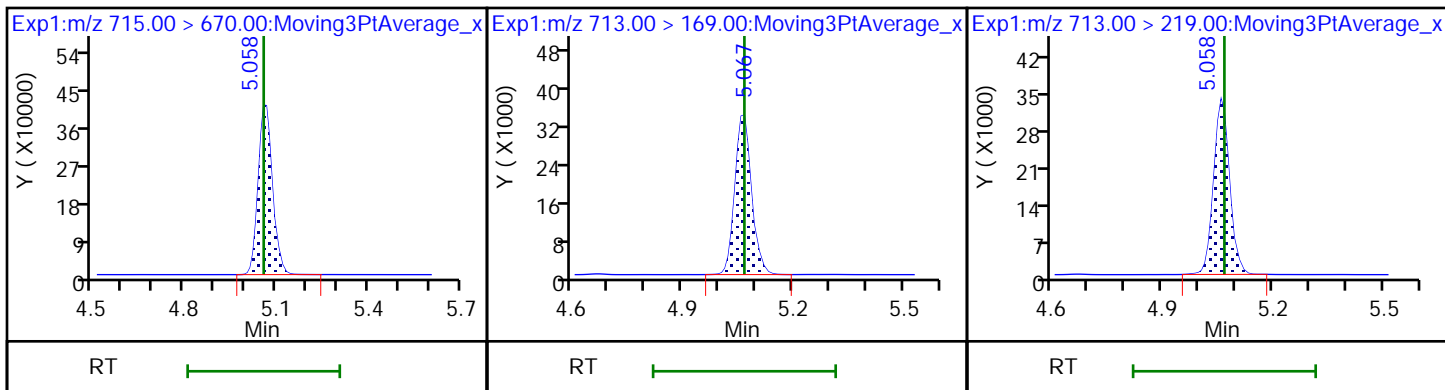
41 Perfluorotridecanoic acid



D 43 13C2 PFTeDA

42 Perfluorotetradecanoic acid

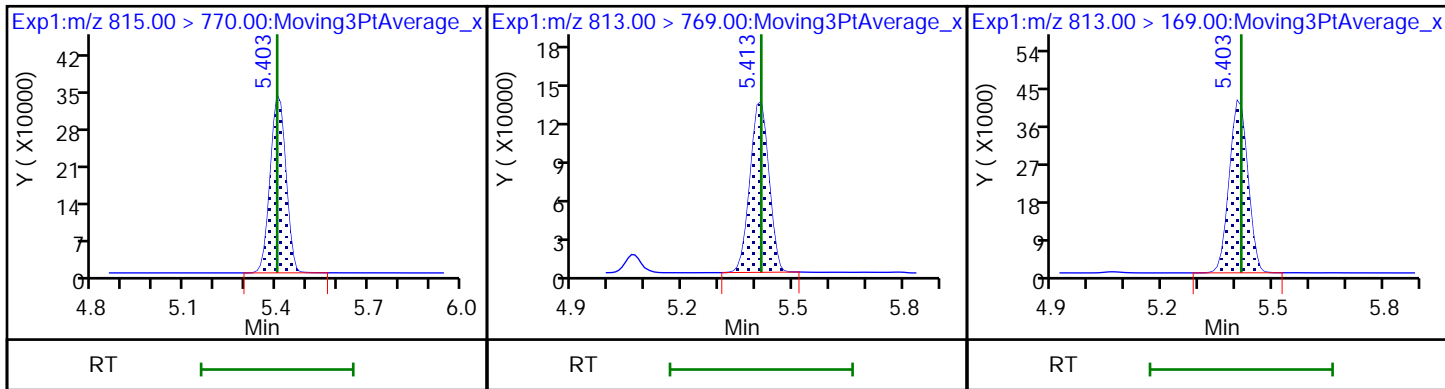
42 Perfluorotetradecanoic acid



D 44 13C2 PFHxDA

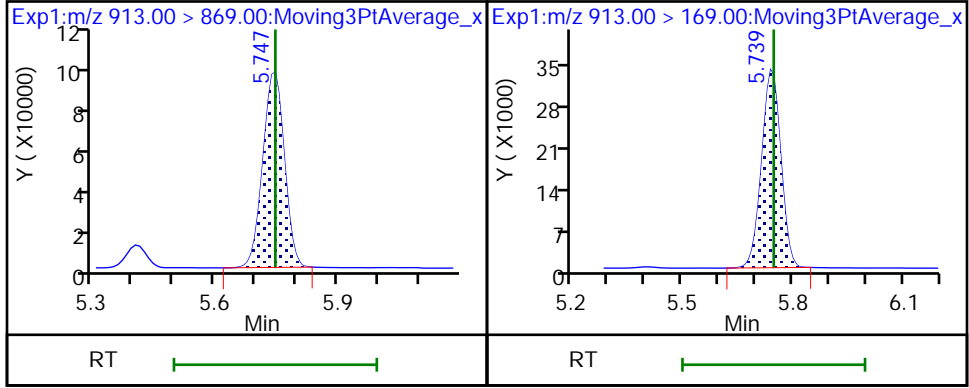
45 Perfluorohexadecanoic acid

45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid

46 Perfluorooctadecanoic acid



Eurofins TestAmerica, Burlington

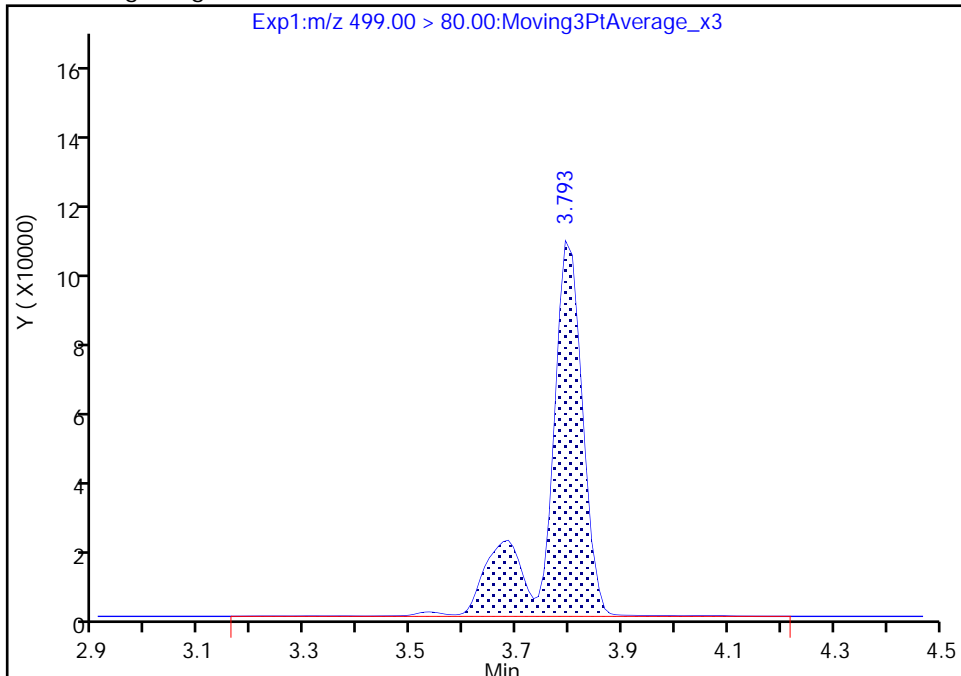
Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL008.d  
Injection Date: 06-Dec-2019 14:57:04 Instrument ID: LC812  
Lims ID: ICIS  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 5 Worklist Smp#: 8  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

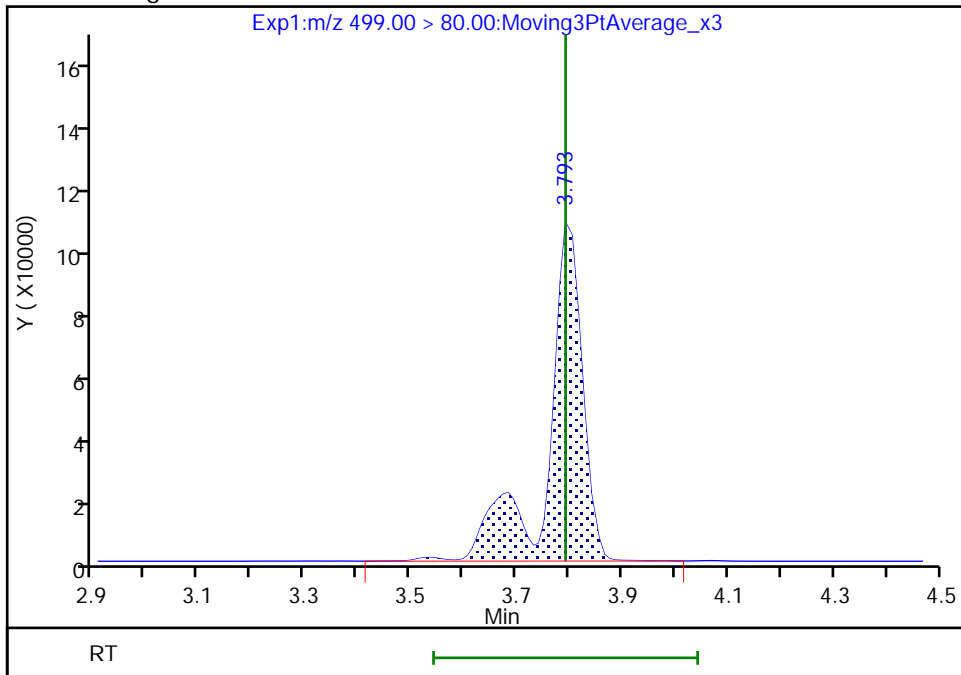
RT: 3.79  
Area: 480092  
Amount: 0.871924  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 476832  
Amount: 0.838738  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 06-Dec-2019 15:24:06  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Eurofins TestAmerica, Burlington

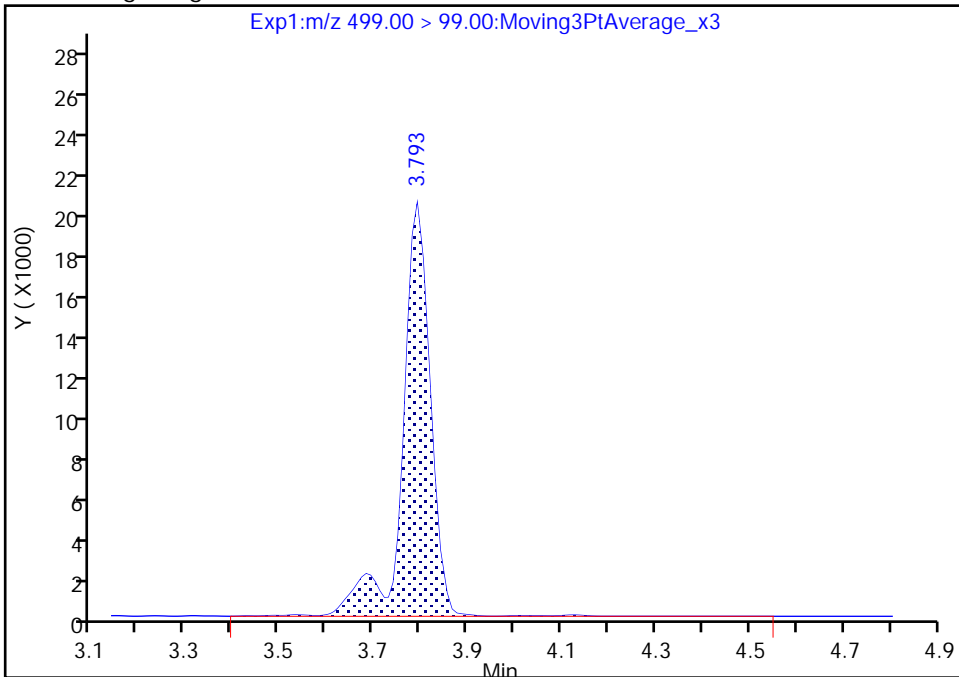
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Injection Date: 06-Dec-2019 14:57:04 Instrument ID: LC812  
Lims ID: ICIS  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 5 Worklist Smp#: 8  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 (4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

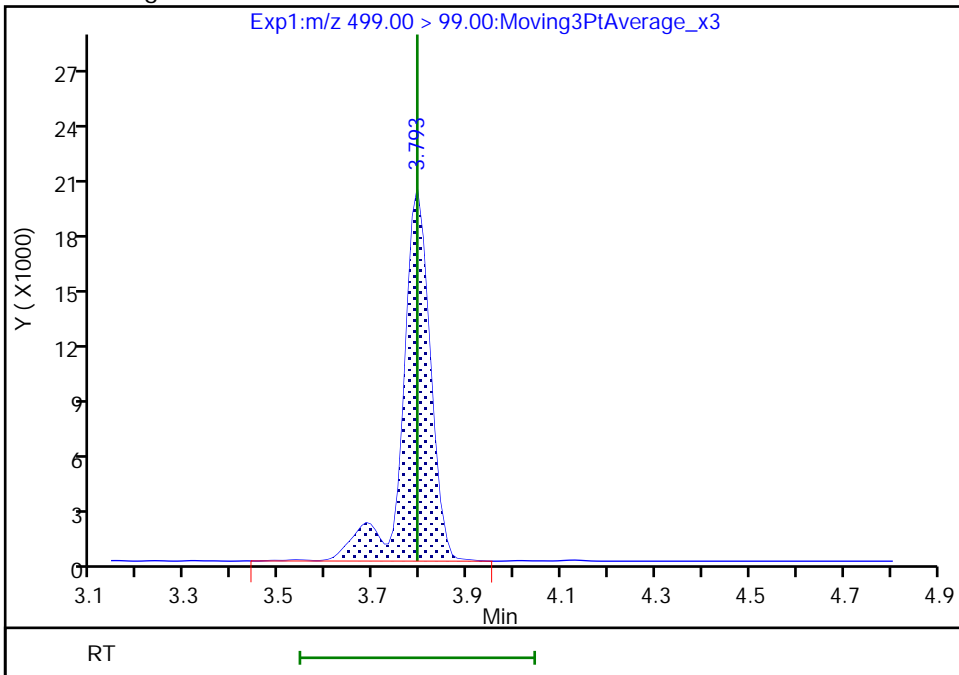
RT: 3.79  
Area: 83612  
Amount: 0.871924  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 83061  
Amount: 0.838738  
Amount Units: ng/ml

Manual Integration Results



Eurofins TestAmerica, Burlington

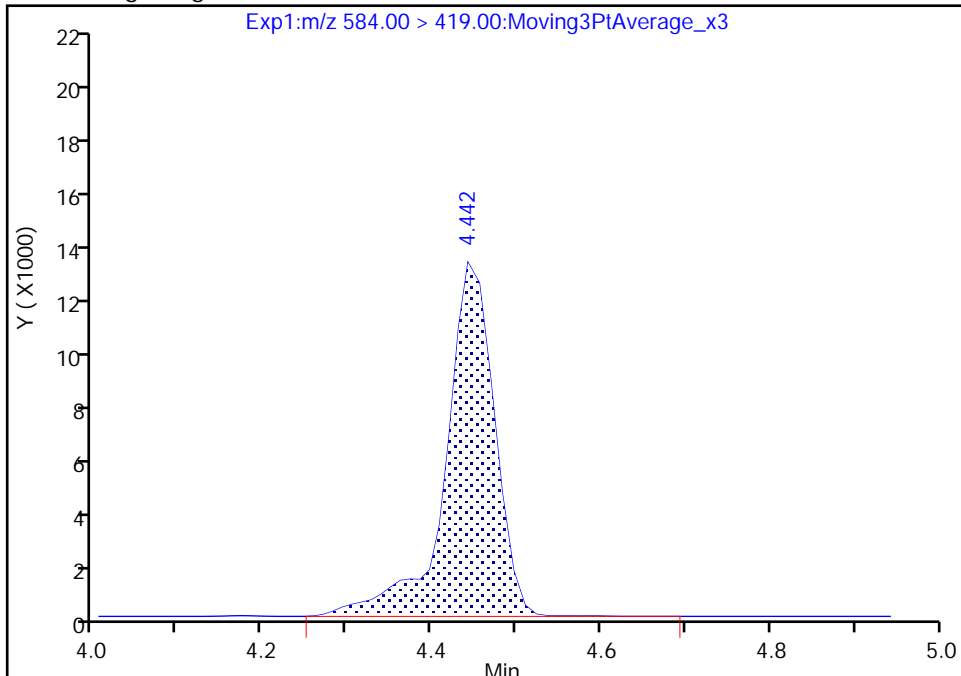
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Injection Date: 06-Dec-2019 14:57:04 Instrument ID: LC812  
Lims ID: ICIS  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 5 Worklist Smp#: 8  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

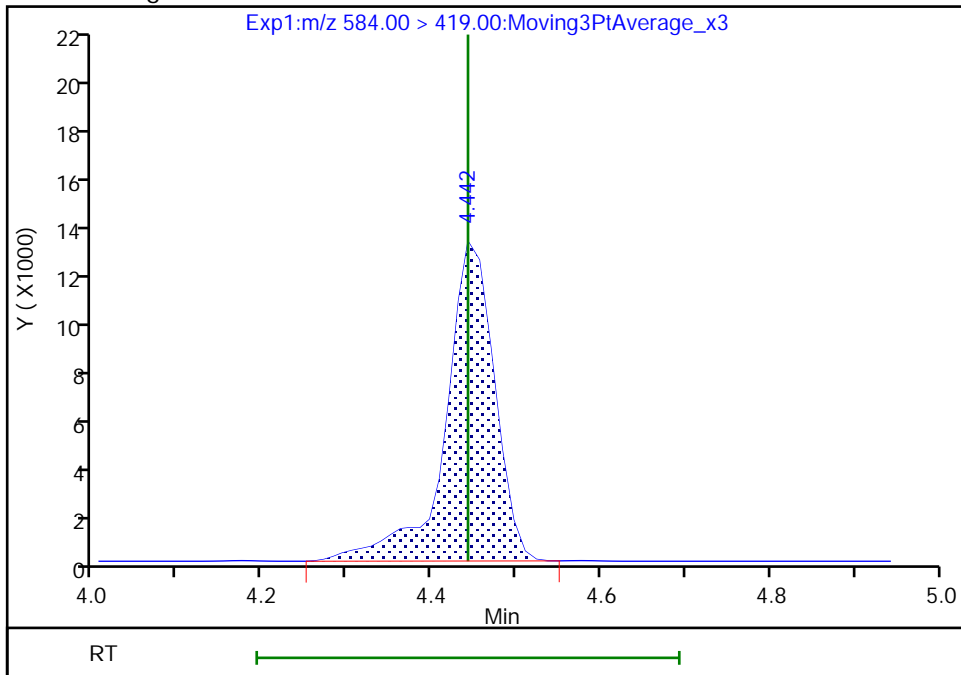
RT: 4.44  
Area: 52420  
Amount: 0.822215  
Amount Units: ng/ml

Processing Integration Results



RT: 4.44  
Area: 52214  
Amount: 0.859111  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 06-Dec-2019 15:24:39  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington  
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL009.d  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 5  
 Inject. Date: 06-Dec-2019 15:05:16 ALS Bottle#: 6 Worklist Smp#: 9  
 Injection Vol: 20.0 ul Dil. Factor: 1.0000  
 Sample Info: IC 5  
 Misc. Info.: 200-0039114-009 Plate: 1 Rack: 1  
 Operator ID: lc812tech Instrument ID: LC812  
 Sublist: chrom-PFC\_LC812\*sub3  
 Method: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\PFC\_LC812.m  
 Limit Group: LC\_PFC\_ICAL  
 Last Update: 09-Dec-2019 12:10:14 Calib Date: 06-Dec-2019 15:13:26  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Column 1 : C-18 ( 4.60 mm) Det: EXP1  
 Process Host: CTX0316

First Level Reviewer: chirgwinb Date: 06-Dec-2019 15:34:08

Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										
212.90 > 169.00	1.917	1.917	0.0	1.000	2112806	2.43		97.0	683	
D 1 13C4 PFBA										
217.00 > 172.00	1.917	1.917	0.0	0.560	2189157	2.55		102	28716	
4 Perfluoropentanoic acid										
262.90 > 219.00	2.271	2.271	0.0	1.000	1718895	2.18		87.3	201	
D 3 13C5 PFPeA										
267.90 > 223.00	2.271	2.271	0.0	0.664	1737813	2.65		106	6005	
D 47 13C3 PFBS										
301.90 > 80.00	2.284	2.298	-0.014	0.668	1995622	2.55		110	671259	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.298	2.298	0.0	1.006	1890516	2.03	Target=2.03	91.7	5328	
298.90 > 99.00	2.298	2.298	0.0	1.006	949407		1.99(1.01-3.04)	91.7	1596	
61 1H,1H,2H,2H-perfluorohexanesulfoni										
327.00 > 307.00	2.623	2.623	0.0	1.000	280609	2.09		89.5	2788	
D 60 M2-4:2 FTS										
329.00 > 81.00	2.623	2.623	0.0	0.767	180955	2.48		106	343	
70 Perfluoropentanesulfonic acid										
349.00 > 80.00	2.660	2.660	0.0	0.874	1680717	2.39	Target=3.08	102	3743	
349.00 > 99.00	2.660	2.660	0.0	0.874	611352		2.75(1.54-4.62)	102	2537	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.660	2.660	0.0	1.000	1898558	2.42	Target=12.44	96.7	736	
313.00 > 119.00	2.660	2.660	0.0	1.000	158746		11.96(6.22-18.67)	96.7	447	
D 7 13C2 PFHxA										
315.00 > 270.00	2.660	2.660	0.0	0.778	1923126	2.63		105	7207	
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.776	2.776	0.0	1.000	276154	2.58		103	157	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 64 13C3 HFPO-DA										
332.10 > 287.00	2.776	2.776	0.0	0.811	74652	2.34		93.4	1118	
D 9 13C4 PFHpA										
367.00 > 322.00	3.044	3.044	0.0	0.890	1725602	2.49		99.5	4699	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.044	3.044	0.0	1.000	1488287	2.17	Target=4.13	95.4	3419	
399.00 > 99.00	3.044	3.044	0.0	1.000	373147		3.99(2.07-6.20)	95.4	835	
D 11 18O2 PFHxS										
403.00 > 84.00	3.044	3.044	0.0	0.890	1433559	2.32		98.0	3811	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.044	3.055	-0.011	1.000	1821610	2.50	Target=3.48	99.8	845	
363.00 > 169.00	3.044	3.055	-0.011	1.000	521681		3.49(1.74-5.22)	99.8	1473	
77 DONA										
377.00 > 251.00	3.089	3.089	0.0	0.815	3905340	2.32	Target=2.44	98.4	5466	
377.00 > 85.00	3.089	3.089	0.0	0.815	1667666		2.34(1.22-3.67)	98.4	3913	
13 1H,1H,2H,2H-perfluorooctanesulfonyl										
427.00 > 407.00	3.413	3.413	0.0	1.000	220498	2.20		93.0	1101	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.413	3.413	0.0	0.900	1398368	2.39	Target=6.34	101	5612	
449.00 > 99.00	3.413	3.413	0.0	0.900	223153		6.27(3.17-9.51)	101	1704	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.413	3.413	0.0	0.998	251791	2.37		99.8	797	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.430	3.430	0.0	1.002	2023589	2.48	Target=2.38	99.2	712	M
413.00 > 169.00	3.430	3.430	0.0	1.002	798222		2.54(1.19-3.57)	99.2	2894	M
D 14 13C4 PFOA										
417.00 > 372.00	3.421	3.430	-0.009	1.000	1838372	2.50		99.9	4848	
* 62 13C2 PFOA										
415.00 > 370.00	3.421	3.430	-0.009		2025981	2.50			2866	
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.793	0.0	1.108	1140581	2.33		97.3	2867	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.793	3.793	0.0	1.000	1267930	2.46	Target=5.71	106	4988	M
499.00 > 99.00	3.793	3.793	0.0	1.000	224944		5.64(2.86-8.57)	106	3336	M
D 19 13C5 PFNA										
468.00 > 423.00	3.817	3.817	0.0	1.116	1654835	2.44		97.8	4498	
20 Perfluorononanoic acid										
463.00 > 419.00	3.817	3.817	0.0	1.000	1654904	2.55	Target=6.87	102	736	
463.00 > 169.00	3.817	3.817	0.0	1.000	249138		6.64(3.43-10.30)	102	5108	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.983	3.984	-0.001	1.050	1460233	2.48		106	5796	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.116	4.129	-0.013	1.085	953306	2.42	Target=2.92	101	6297	
549.00 > 99.00	4.116	4.129	-0.013	1.085	323367		2.95(1.46-4.38)	101	2191	
D 23 13C2 PFDA										
515.00 > 470.00	4.153	4.153	0.0	1.214	1746295	2.62		105	3138	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
24 Perfluorodecanoic acid										
513.00 > 469.00	4.153	4.153	0.0	1.000	1446289	2.14	Target=7.21	85.6	1122	
513.00 > 169.00	4.153	4.153	0.0	1.000	233335		6.20(3.60-10.81)	85.6	2020	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.164	4.164	0.0	1.217	295643	2.34		97.5	823	
25 1H,1H,2H,2H-perfluorodecanesulfoni										
527.00 > 507.00	4.164	4.164	0.0	1.000	133169	2.34		97.6	2698	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.239	4.239	0.0	1.000	2131820	2.65		106	2771	
D 21 13C8 FOSA										
506.00 > 78.00	4.239	4.239	0.0	1.239	2022406	2.32		92.7	3204	
28 N-methylperfluorooctanesulfonamido										
570.00 > 419.00	4.305	4.305	0.0	1.000	137453	2.44		97.5	1392	M
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.305	4.305	0.0	1.258	162301	2.53		101	630	
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.397	4.409	-0.012	1.159	936371	2.73	Target=2.78	113	4683	
599.00 > 99.00	4.397	4.409	-0.012	1.159	315108		2.97(1.39-4.17)	113	4342	
D 30 13C2 PFUnA										
565.00 > 520.00	4.431	4.431	0.0	1.295	1499824	2.64		106	6066	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.431	4.431	0.0	1.000	1125345	2.21	Target=5.47	88.5	1431	
563.00 > 169.00	4.431	4.431	0.0	1.000	208469		5.40(2.73-8.20)	88.5	2496	
33 N-ethylperfluorooctanesulfonamidoa										
584.00 > 419.00	4.442	4.442	0.0	1.000	130088	2.34		93.7	1195	M
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.442	4.442	0.0	1.298	167771	2.36		94.2	1406	
66 11-Chloroeicosafuoro-3-oxaundecan										
631.00 > 451.00	4.523	4.523	0.0	1.193	1360675	2.45		104	5247	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.660	4.671	-0.011	1.000	1516559	2.63	Target=4.84	105	297	
613.00 > 169.00	4.671	4.671	0.0	1.002	282472		5.37(2.42-7.26)	105	2582	
D 36 13C2 PFDaA										
615.00 > 570.00	4.660	4.671	-0.011	1.362	1557975	2.50		100	6330	
74 1H,1H,2H,2H-perfluorododecanesulfo										
627.00 > 607.00	4.682	4.683	-0.001	1.125	98405	2.72		113	2734	
75 Perfluorododecanesulfonic acid (PF										
699.00 > 80.00	4.838	4.838	0.0	1.276	321545	2.46	Target=0.47	102	757	
699.00 > 99.00	4.838	4.838	0.0	1.276	661426		0.49(0.23-0.70)	102	5067	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.879	4.879	0.0	1.047	1347519	2.46	Target=3.74	98.5	250	
663.00 > 169.00	4.879	4.879	0.0	1.047	361235		3.73(1.87-5.62)	98.5	2012	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.058	5.058	0.0	1.478	1270243	2.44		97.5	8654	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.058	5.067	-0.009	1.000	248067	2.43	Target=1.01	97.2	1936	
713.00 > 219.00	5.058	5.067	-0.009	1.000	247989		1.00(0.50-1.51)	97.2	3561	

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 44 13C2 PFHxDA										
815.00 > 770.00	5.402	5.403	0.0	1.579	1250255	2.61		104	5643	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.402	5.413	-0.011	1.000	1095661	2.45	Target=3.04	98.0	238	
813.00 > 169.00	5.402	5.413	-0.011	1.000	368445		2.97(1.52-4.56)	98.0	2766	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.739	5.747	-0.008	1.062	902508	2.50	Target=2.88	99.9	319	
913.00 > 169.00	5.739	5.747	-0.008	1.062	307397		2.94(1.44-4.32)	99.9	2102	

**QC Flag Legend**

Review Flags

M - Manually Integrated

**Reagents:**

PFAS32NCIC5\_00004

Amount Added: 100.00

Units: uL

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL009.d

Injection Date: 06-Dec-2019 15:05:16

Instrument ID: LC812

Lims ID: IC

Client ID:

Operator ID: lc812tech

ALS Bottle#: 6

Worklist Smp#: 9

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

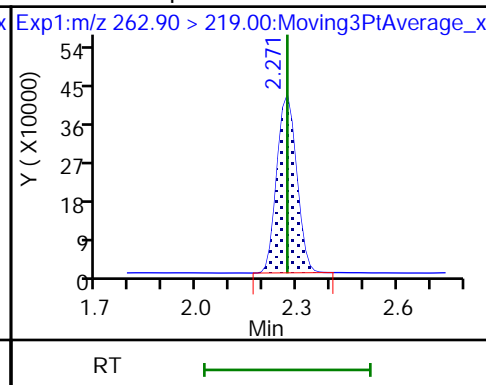
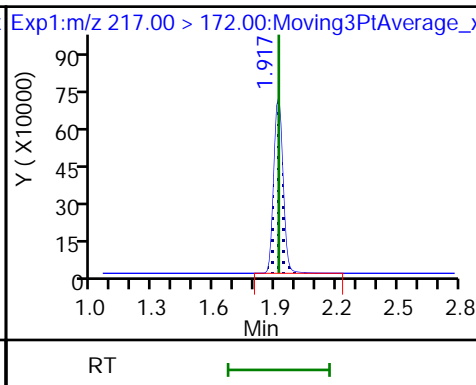
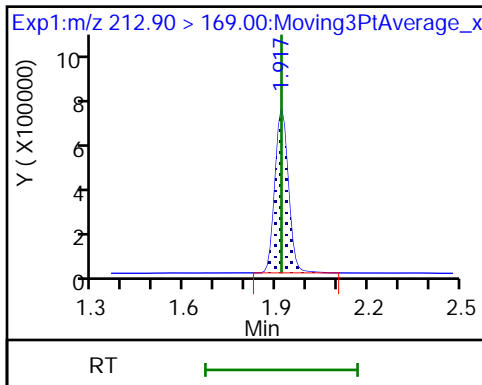
Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

2 Perfluorobutanoic acid

D 1 13C4 PFBA

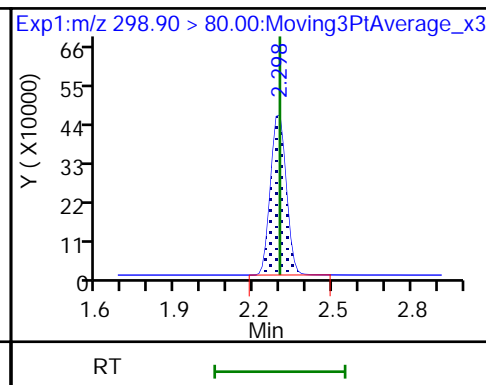
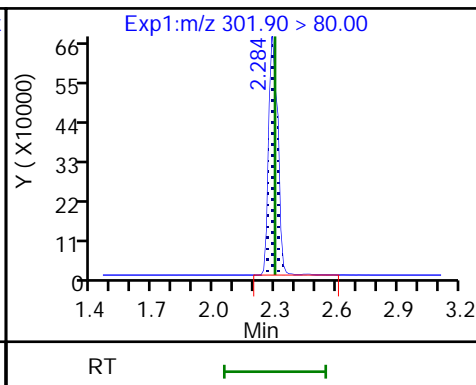
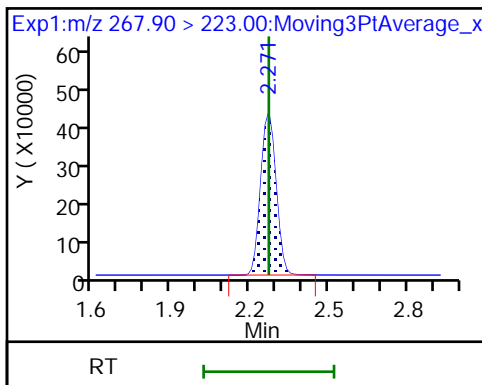
4 Perfluoropentanoic acid



D 3 13C5 PFPeA

D 47 13C3 PFBS

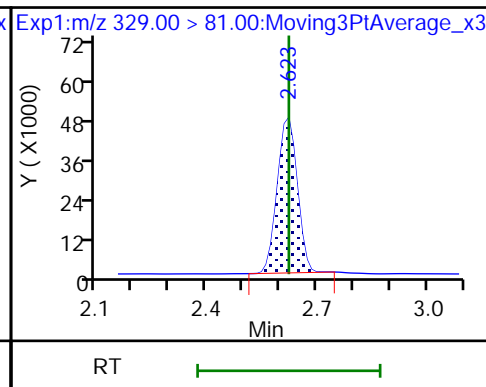
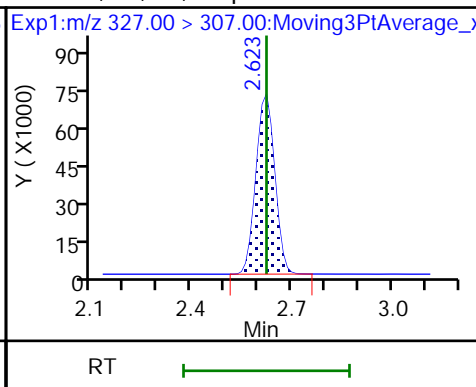
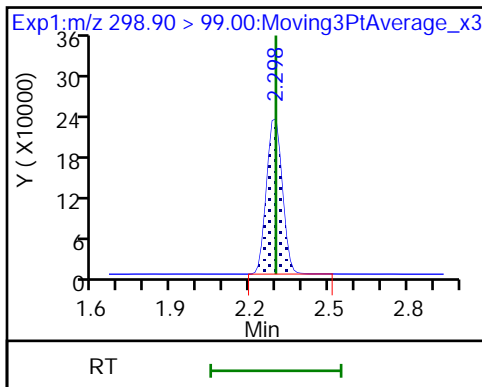
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

61 1H,1H,2H,2H-perfluorohexanesulfonate

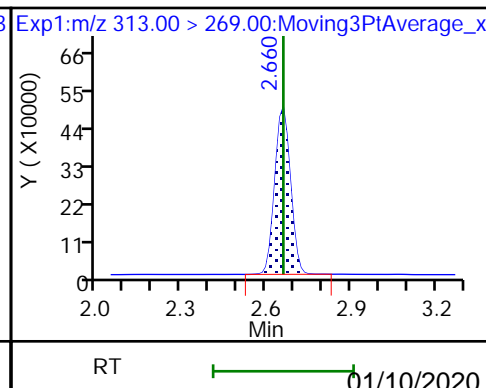
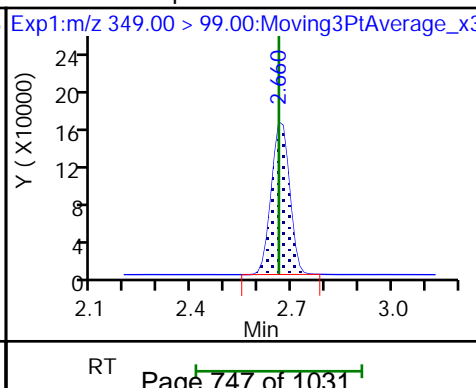
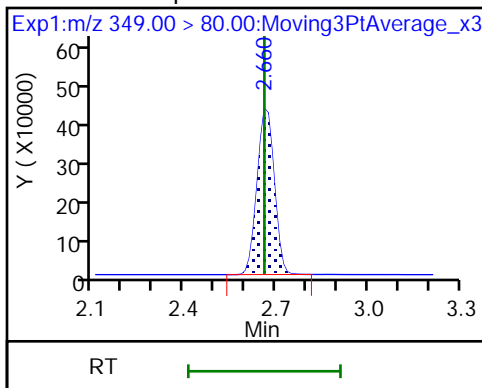
D 60 M2-4:2 FTS

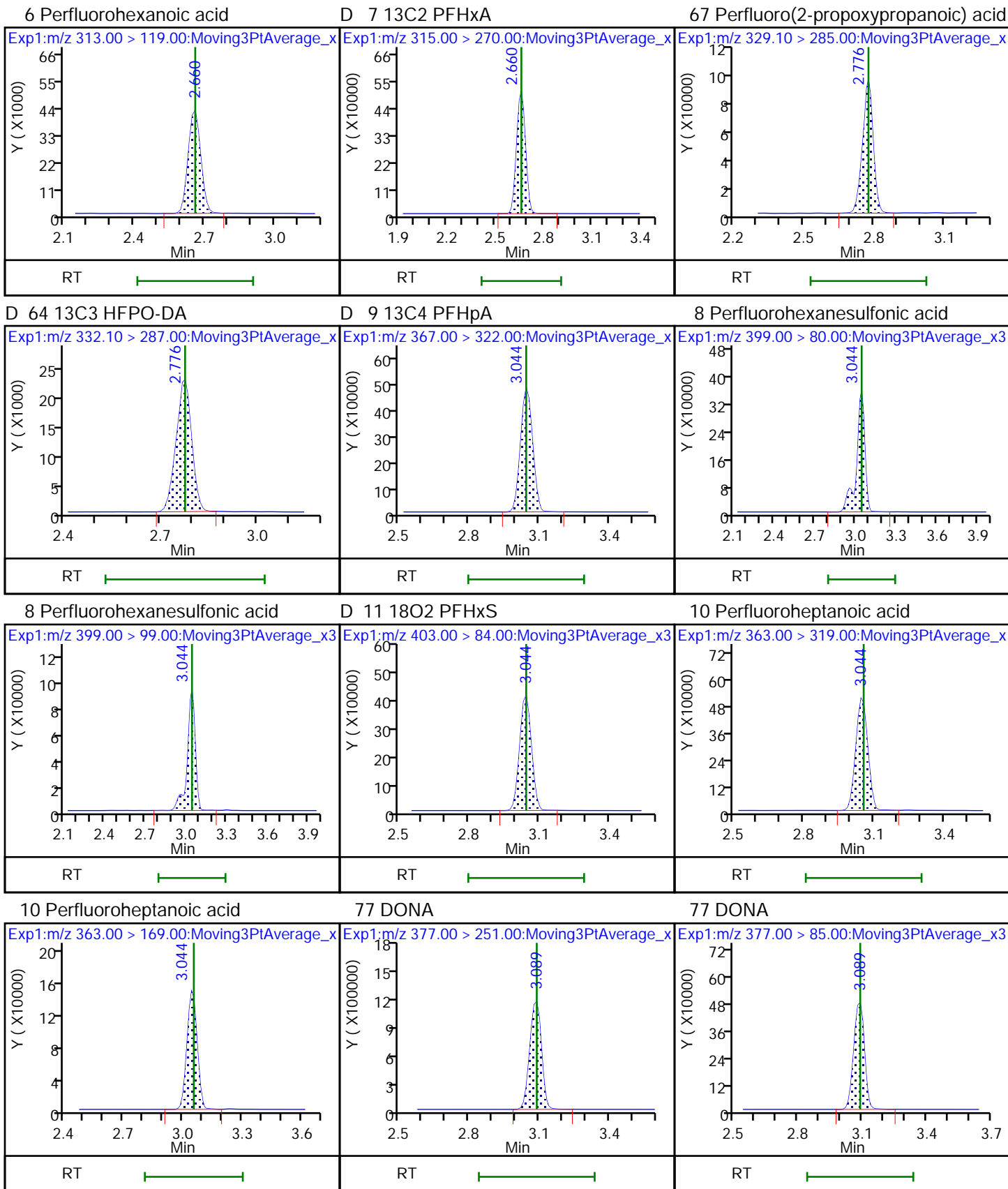


70 Perfluoropentanesulfonic acid

70 Perfluoropentanesulfonic acid

6 Perfluorohexanoic acid

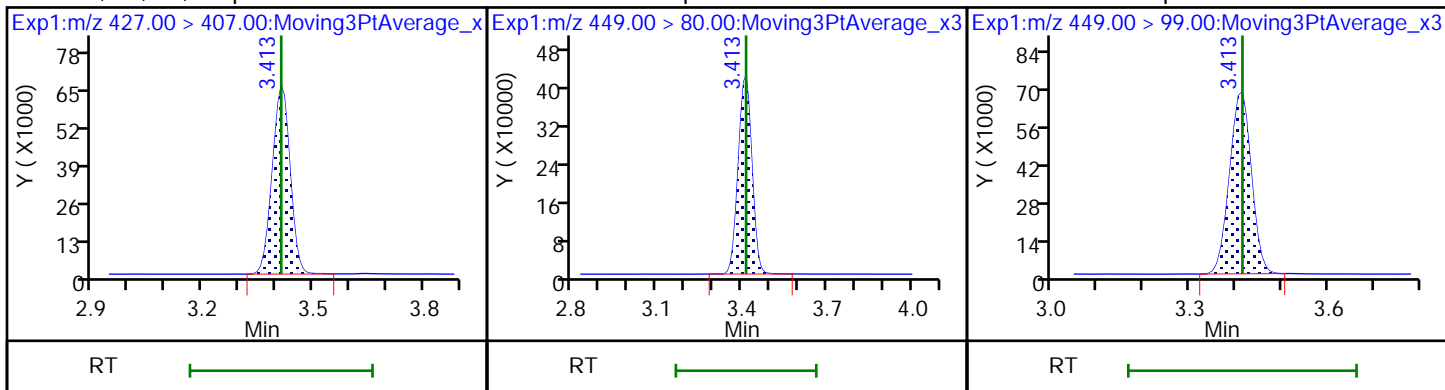






13 1H,1H,2H,2H-perfluorooctanesulfonyl 16 Perfluoroheptanesulfonic acid

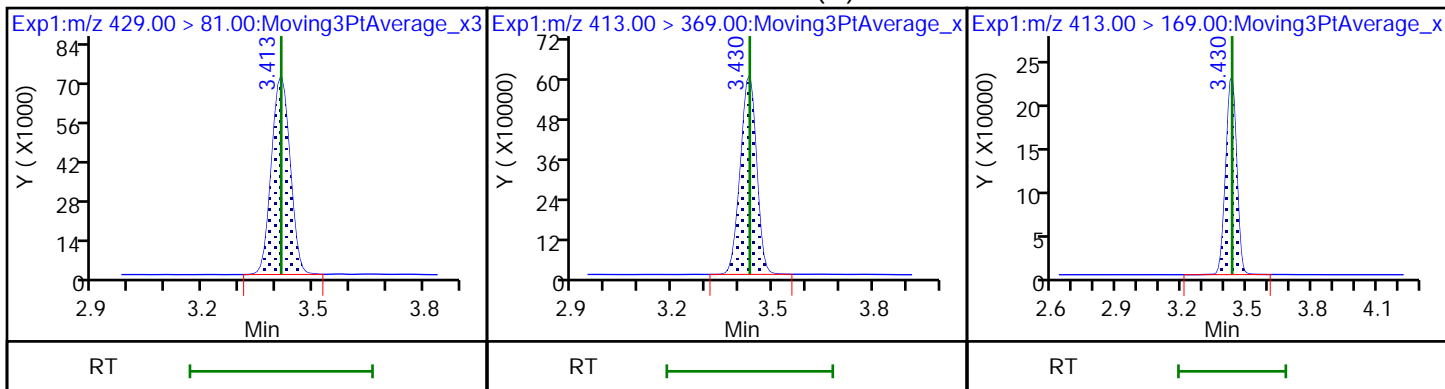
16 Perfluoroheptanesulfonic acid



D 12 M2-6:2 FTS

15 Perfluorooctanoic acid (M)

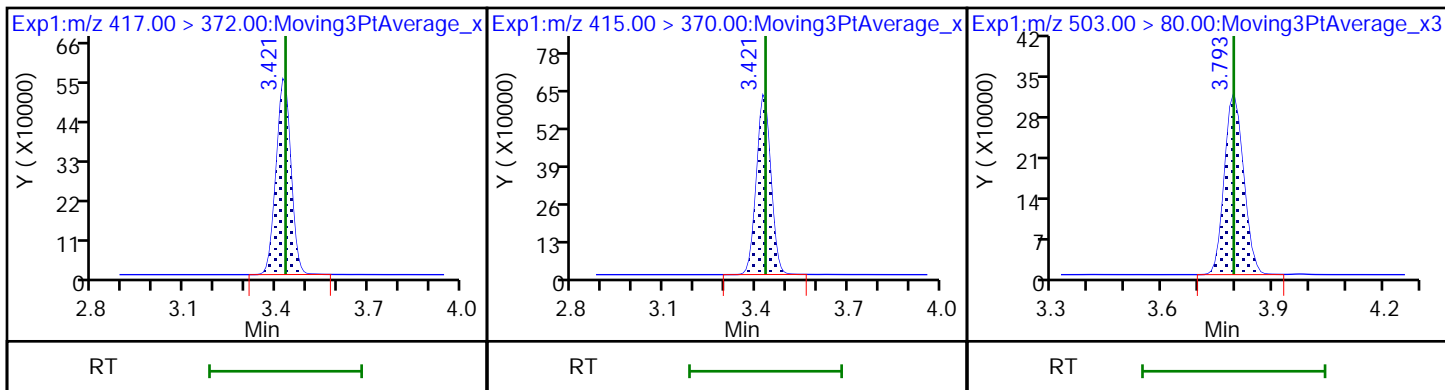
15 Perfluorooctanoic acid



D 14 13C4 PFOA

\* 62 13C2 PFOA

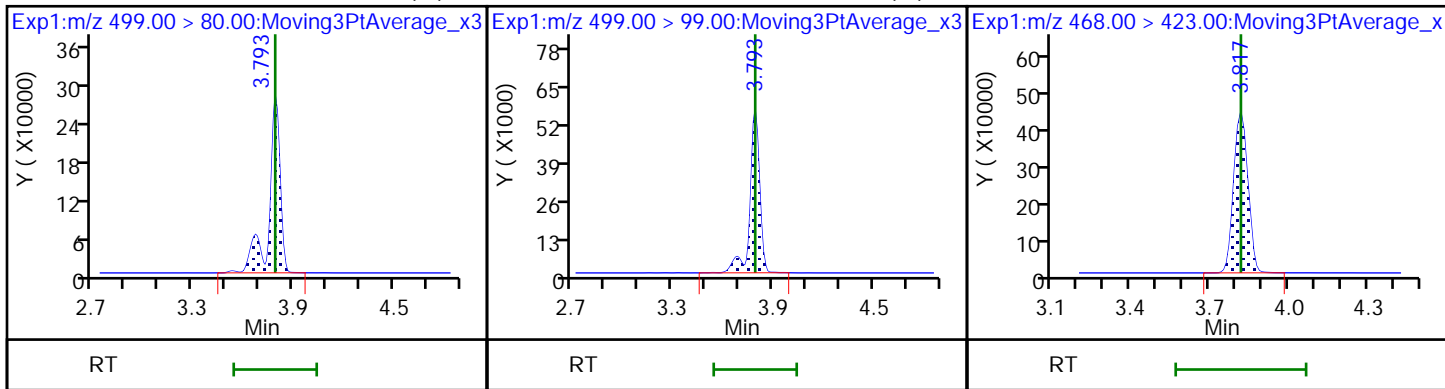
D 18 13C4 PFOS

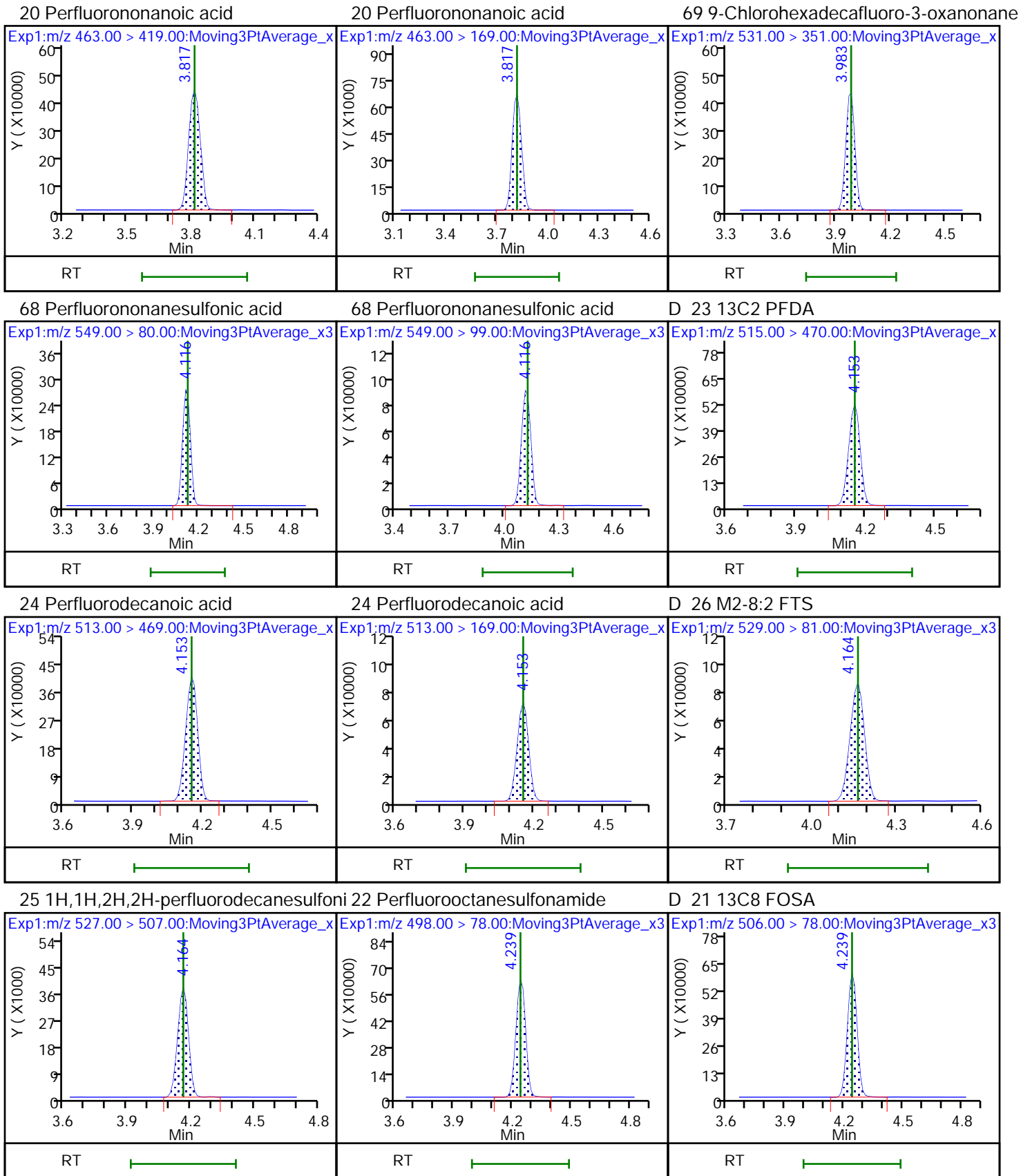


17 Perfluorooctanesulfonic acid (M)

17 Perfluorooctanesulfonic acid (M)

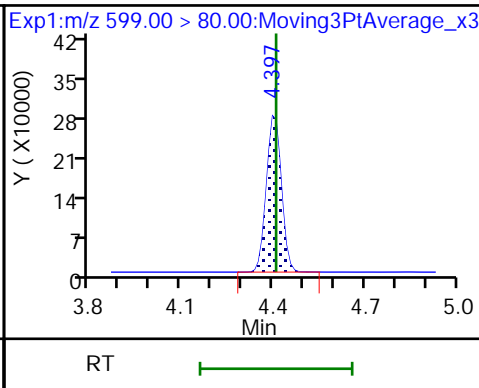
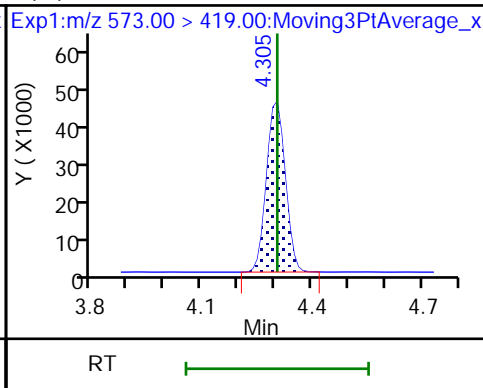
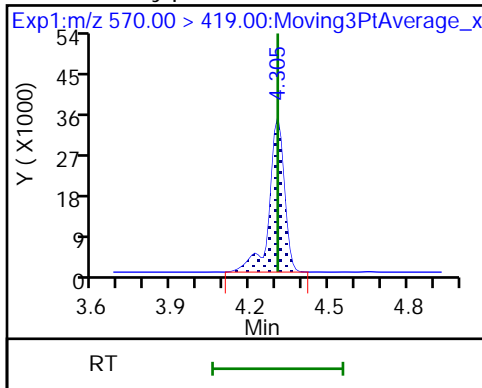
D 19 13C5 PFNA





28 N-methylperfluorooctanesulfonamide (M) d3-NMeFOSAA

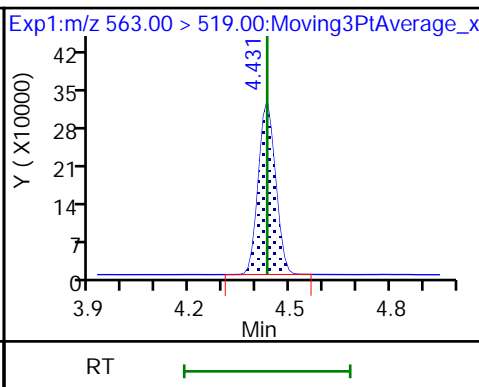
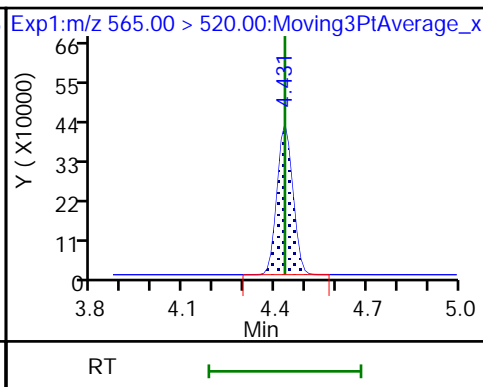
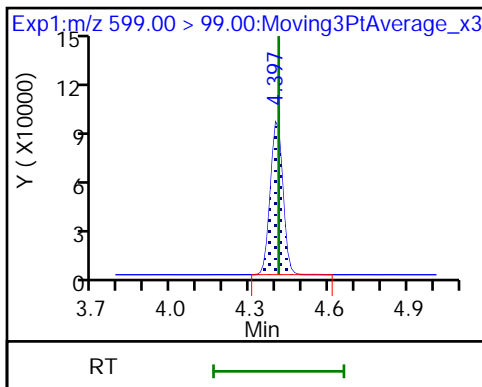
29 Perfluorodecanesulfonic acid



29 Perfluorodecanesulfonic acid

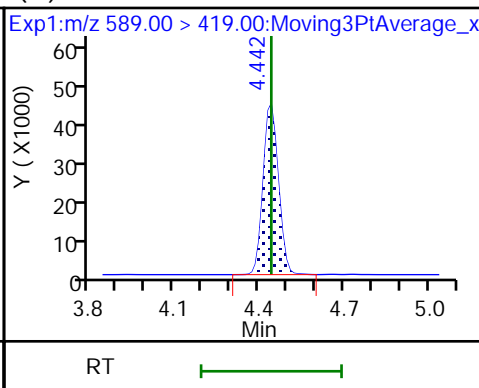
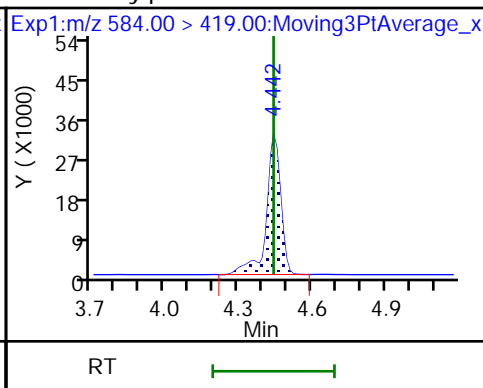
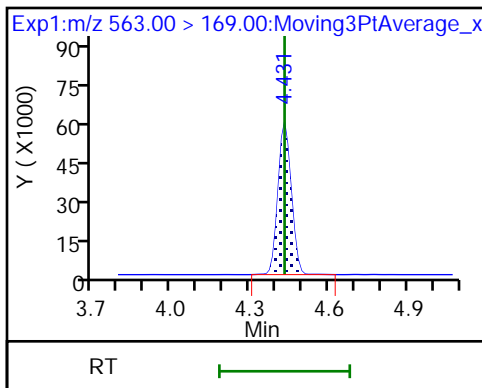
D 30 13C2 PFUnA

31 Perfluoroundecanoic acid



31 Perfluoroundecanoic acid

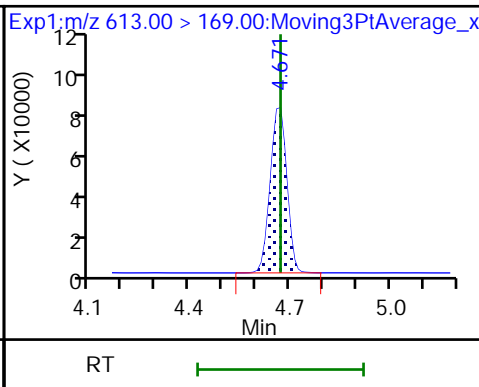
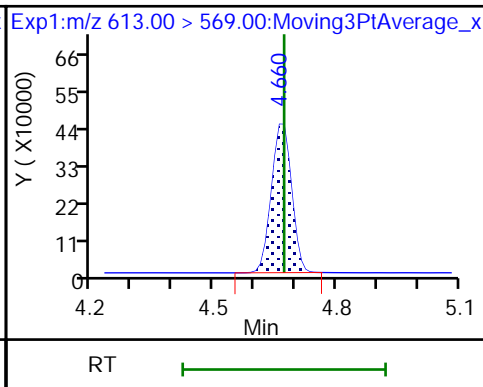
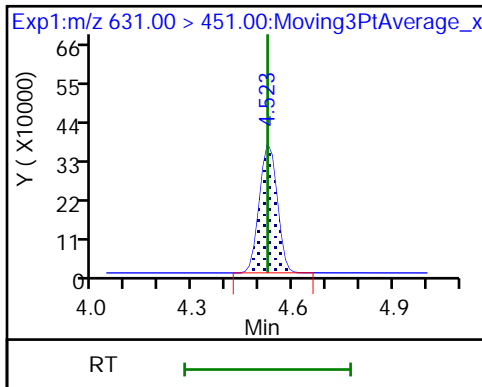
33 N-ethylperfluorooctanesulfonamide (M) d5-NEtFOSAA



66 11-Chloroeicosafluoro-3-oxaundecan

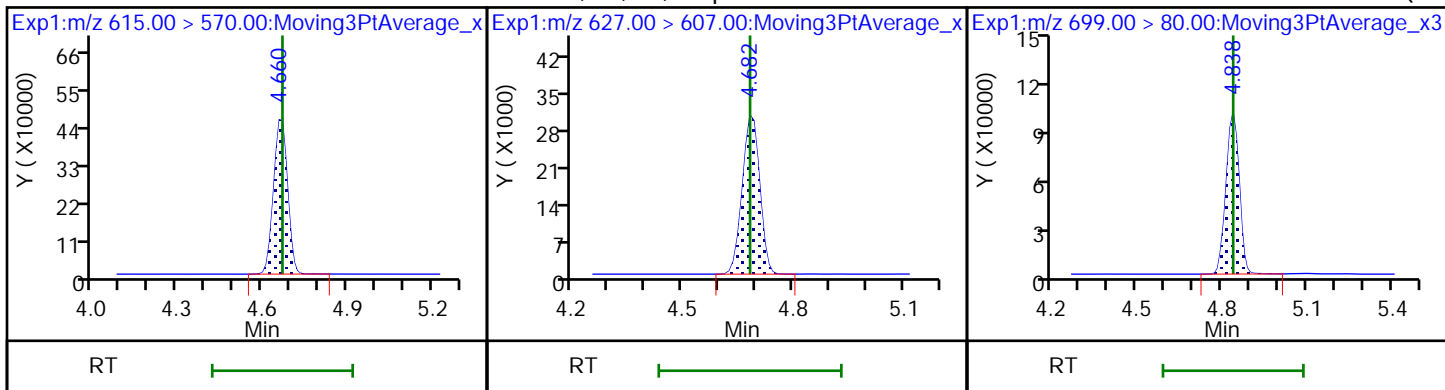
37 Perfluorododecanoic acid

37 Perfluorododecanoic acid



D 36 13C2 PFDaA

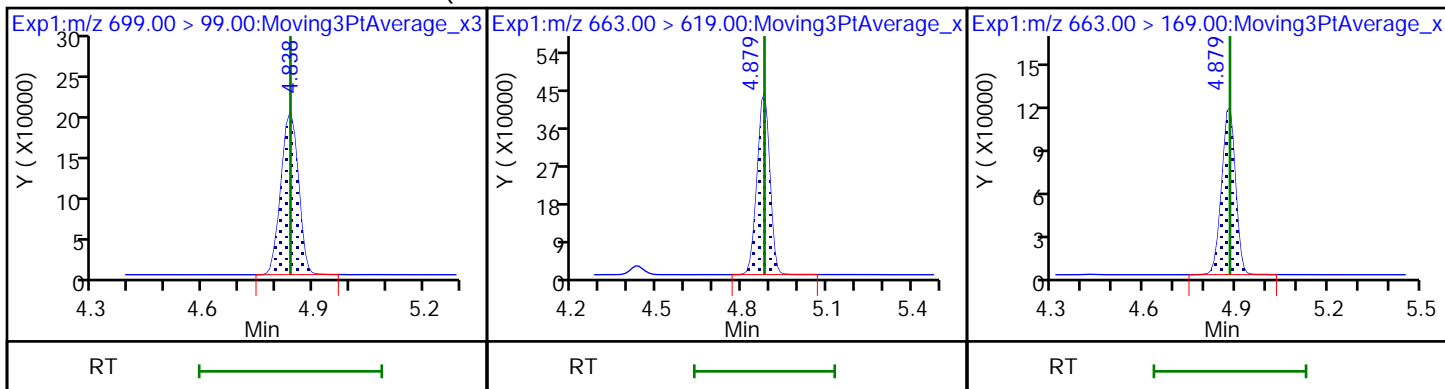
74 1H,1H,2H,2H-perfluorododecanesulfo75 Perfluorododecanesulfonic acid (PF



75 Perfluorododecanesulfonic acid (PF

41 Perfluorotridecanoic acid

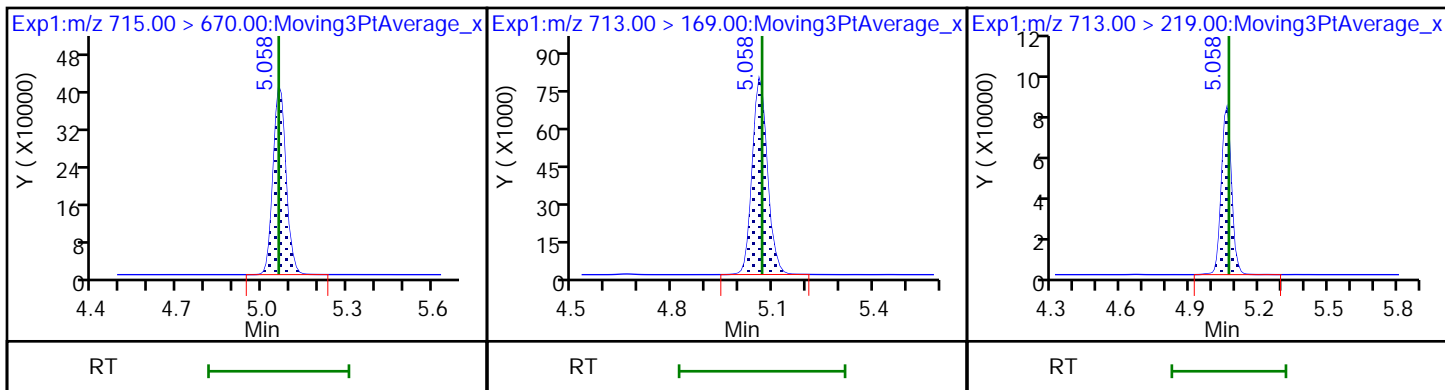
41 Perfluorotridecanoic acid



D 43 13C2 PFTeDA

42 Perfluorotetradecanoic acid

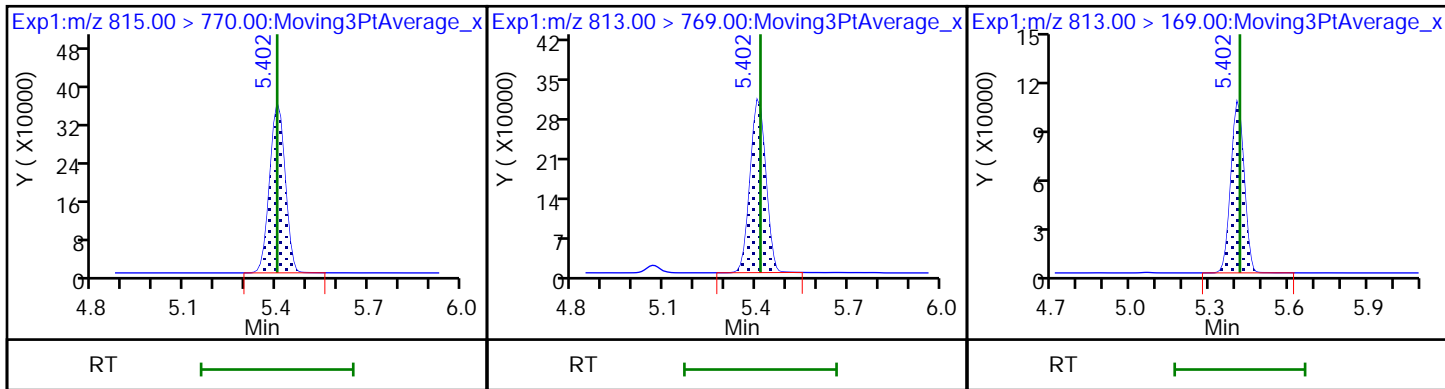
42 Perfluorotetradecanoic acid



D 44 13C2 PFHxDA

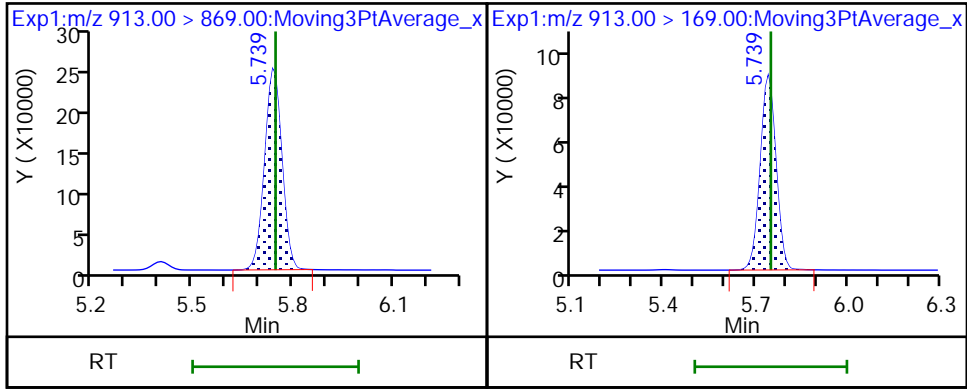
45 Perfluorohexadecanoic acid

45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid

46 Perfluorooctadecanoic acid



Eurofins TestAmerica, Burlington

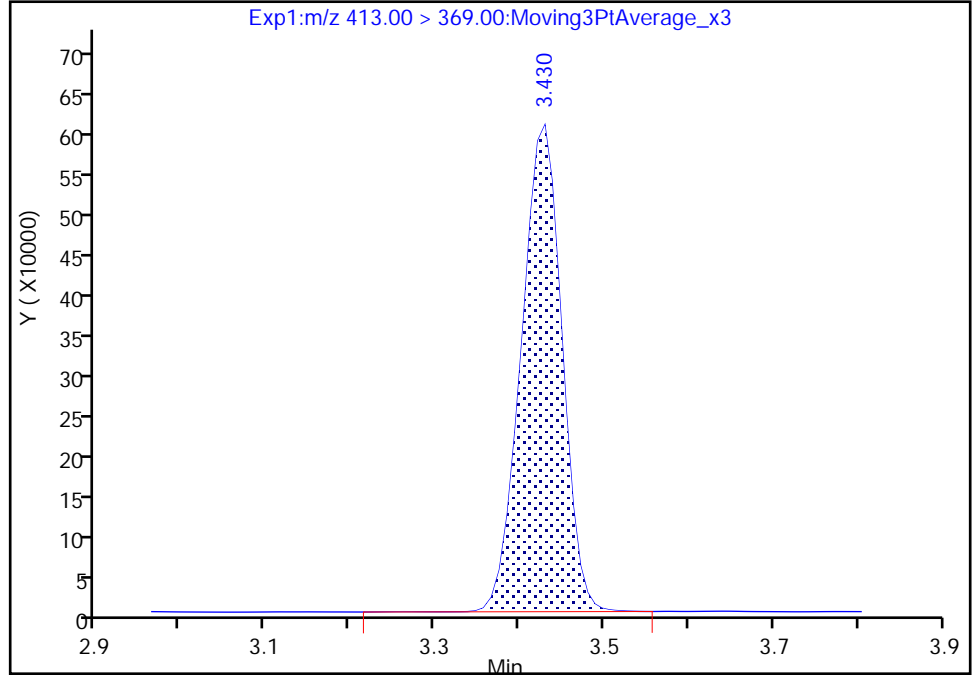
Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL009.d  
Injection Date: 06-Dec-2019 15:05:16 Instrument ID: LC812  
Lims ID: IC  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 6 Worklist Smp#: 9  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

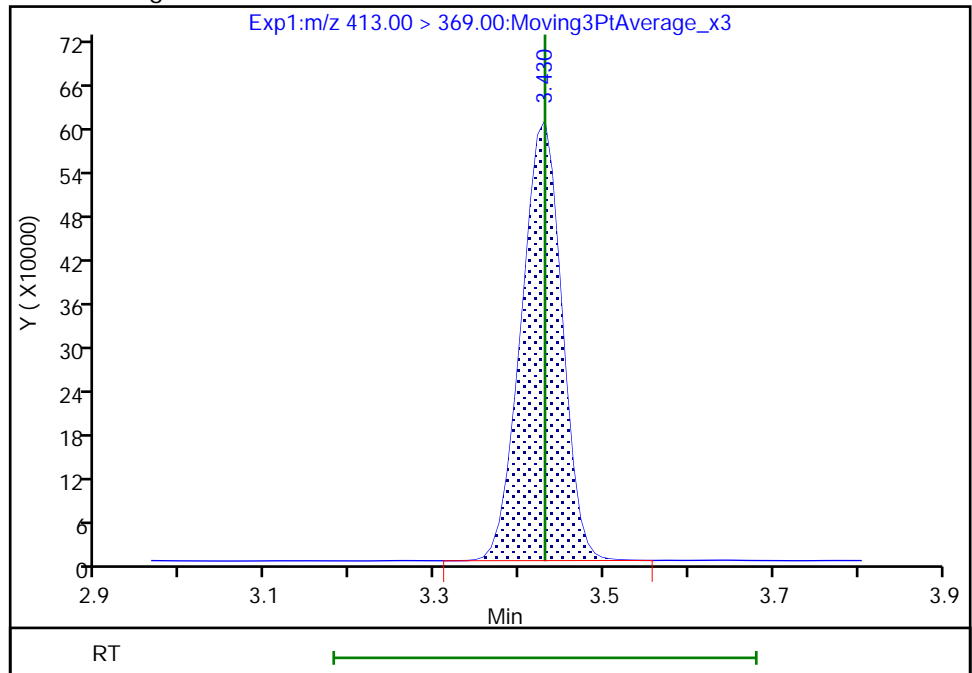
RT: 3.43  
Area: 2025401  
Amount: 2.480565  
Amount Units: ng/ml

Processing Integration Results



RT: 3.43  
Area: 2023589  
Amount: 2.480230  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 06-Dec-2019 15:44:28  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

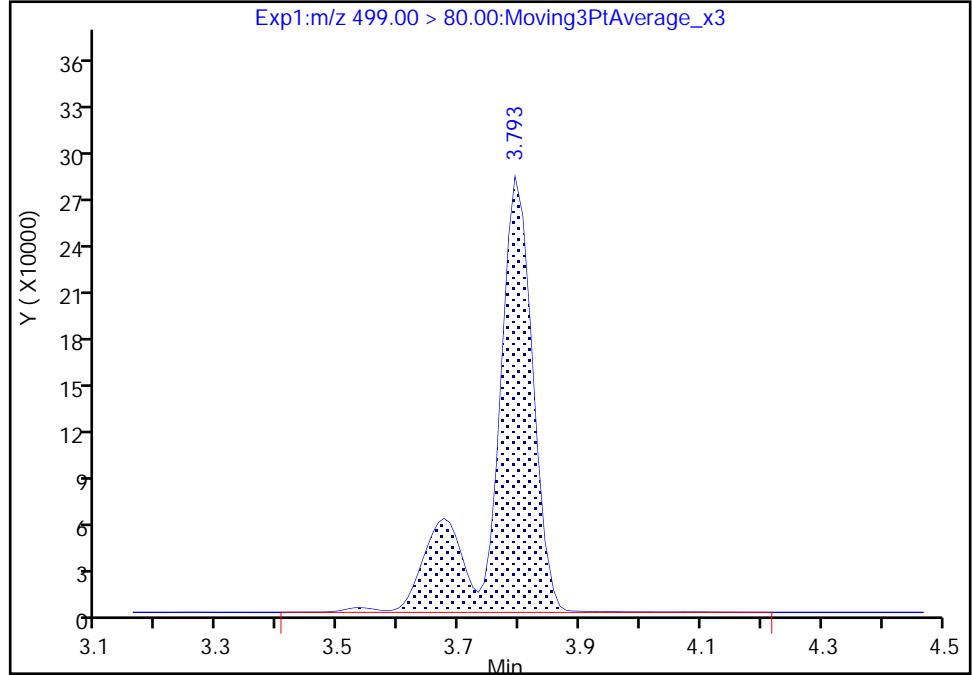
Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL009.d  
Injection Date: 06-Dec-2019 15:05:16 Instrument ID: LC812  
Lims ID: IC  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 6 Worklist Smp#: 9  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

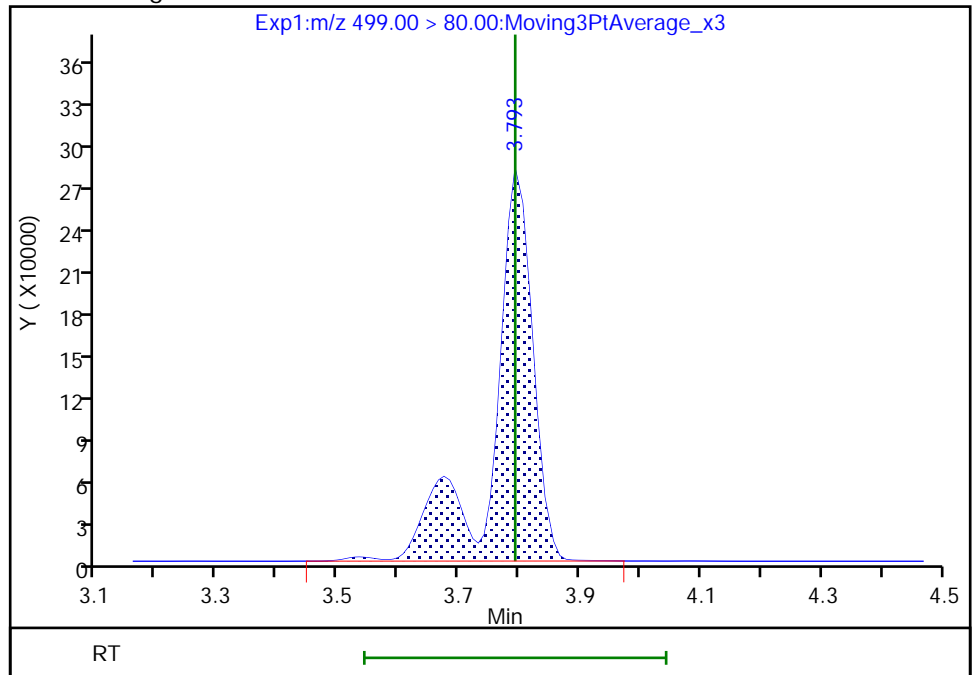
RT: 3.79  
Area: 1273354  
Amount: 2.439865  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 1267930  
Amount: 2.461110  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 06-Dec-2019 15:33:04  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL009.d

Injection Date: 06-Dec-2019 15:05:16

Instrument ID: LC812

Lims ID: IC

Client ID:

Operator ID: lc812tech

ALS Bottle#: 6

Worklist Smp#: 9

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

Column: C-18 (4.60 mm)

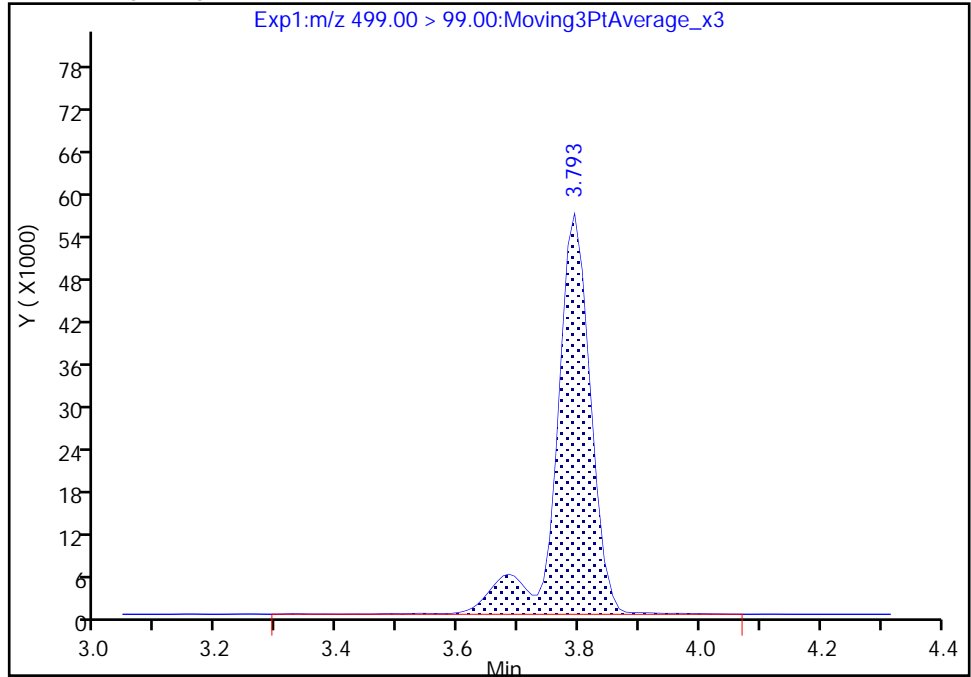
Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

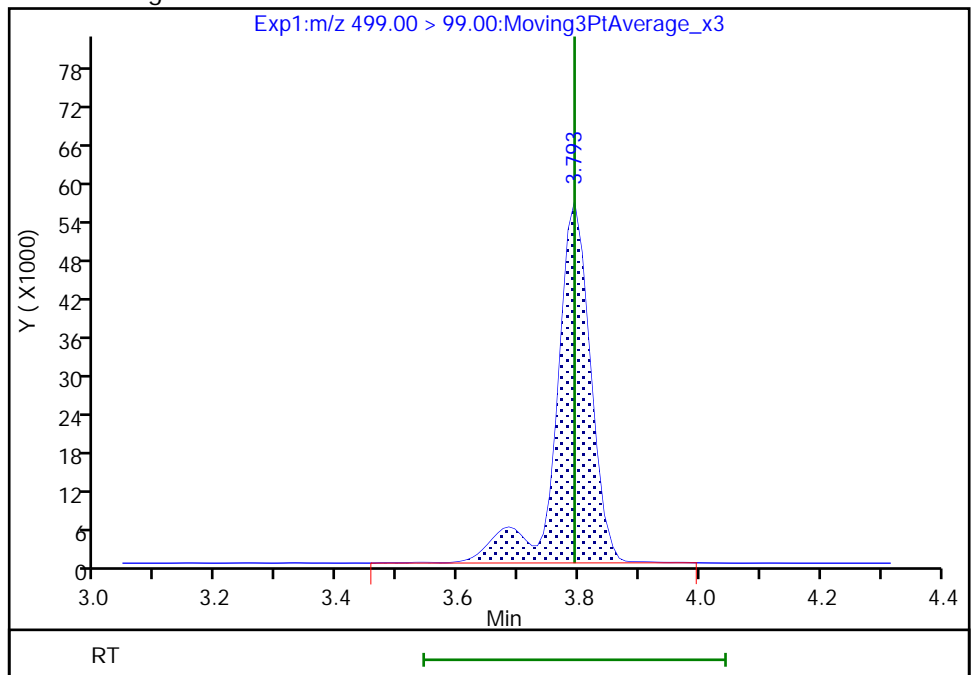
RT: 3.79  
Area: 226342  
Amount: 2.439865  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 224944  
Amount: 2.461110  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 06-Dec-2019 15:33:23

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Eurofins TestAmerica, Burlington

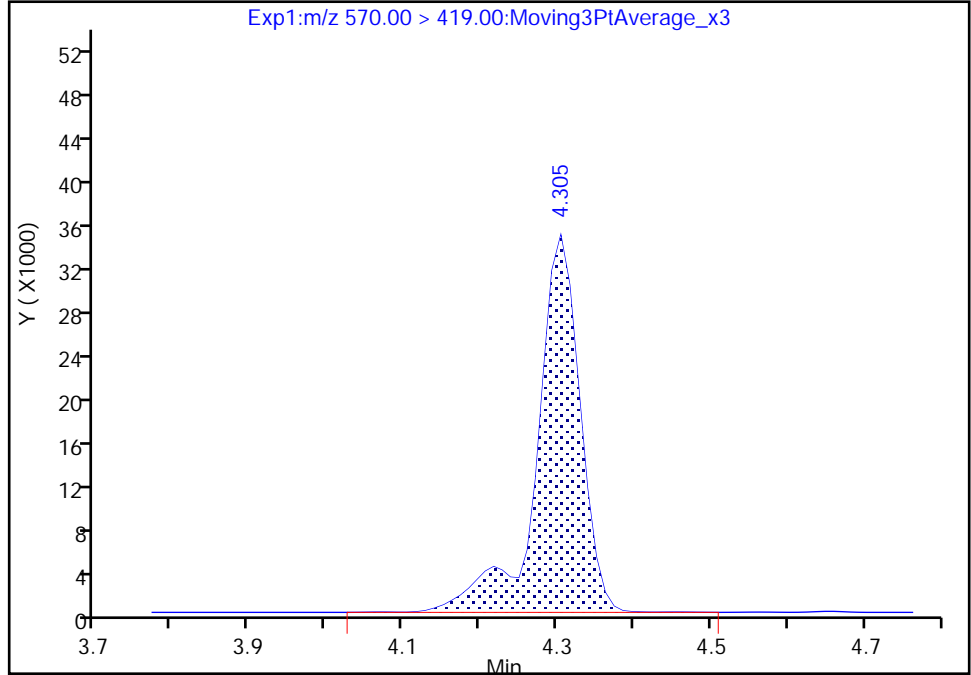
Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL009.d  
Injection Date: 06-Dec-2019 15:05:16 Instrument ID: LC812  
Lims ID: IC  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 6 Worklist Smp#: 9  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

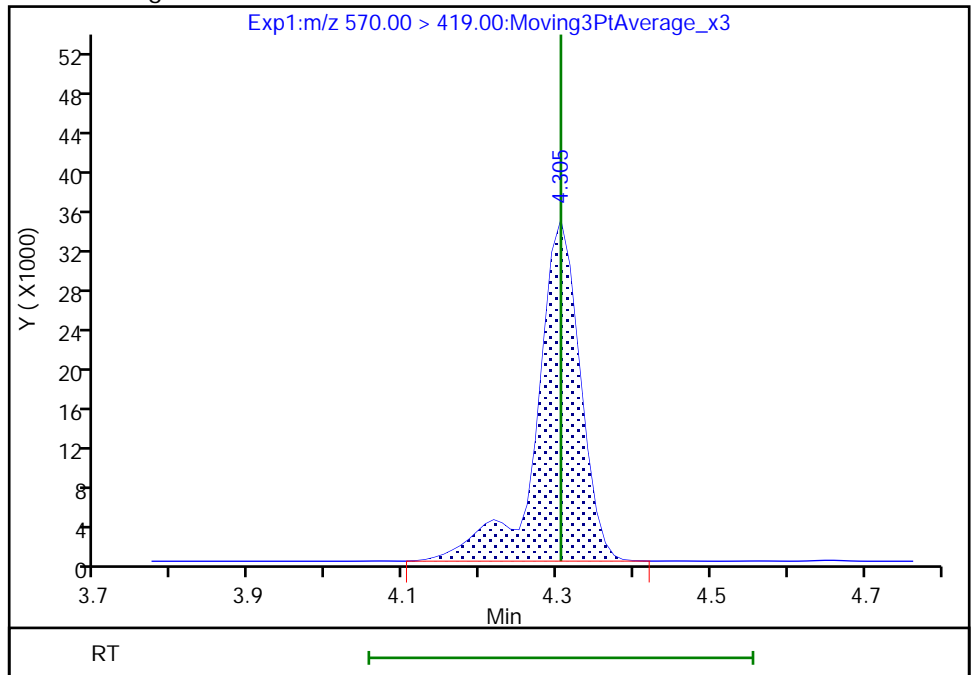
RT: 4.30  
Area: 137820  
Amount: 2.425426  
Amount Units: ng/ml

Processing Integration Results



RT: 4.30  
Area: 137453  
Amount: 2.436569  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 06-Dec-2019 15:33:43  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

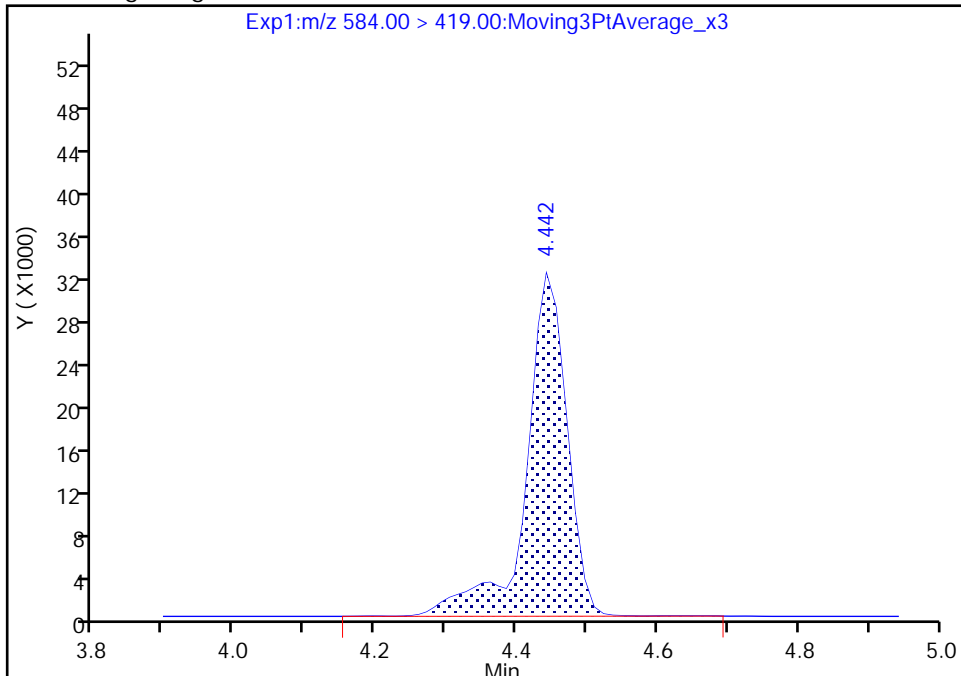
Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL009.d  
Injection Date: 06-Dec-2019 15:05:16 Instrument ID: LC812  
Lims ID: IC  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 6 Worklist Smp#: 9  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

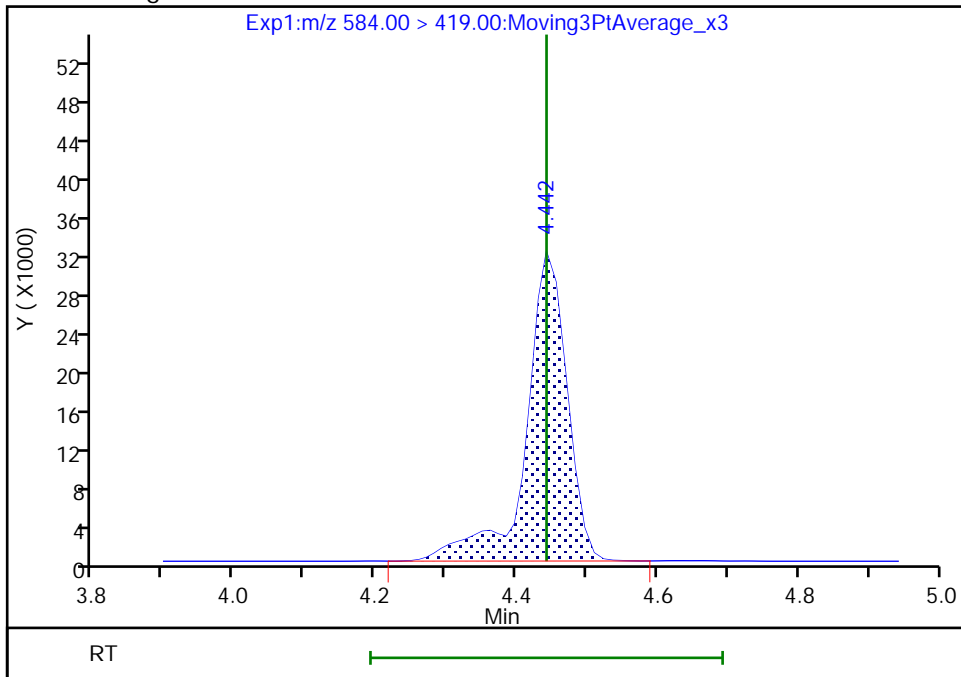
RT: 4.44  
Area: 130497  
Amount: 2.319349  
Amount Units: ng/ml

Processing Integration Results



RT: 4.44  
Area: 130088  
Amount: 2.341973  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 06-Dec-2019 15:33:50  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington  
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Lims ID: IC  
 Client ID:  
 Sample Type: IC Calib Level: 6  
 Inject. Date: 06-Dec-2019 15:13:26 ALS Bottle#: 7 Worklist Smp#: 10  
 Injection Vol: 20.0 ul Dil. Factor: 1.0000  
 Sample Info: IC 6  
 Misc. Info.: 200-0039114-010 Plate: 1 Rack: 1  
 Operator ID: lc812tech Instrument ID: LC812  
 Sublist: chrom-PFC\_LC812\*sub3  
 Method: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\PFC\_LC812.m  
 Limit Group: LC\_PFC\_ICAL  
 Last Update: 09-Dec-2019 12:10:18 Calib Date: 06-Dec-2019 15:13:26  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Column 1 : C-18 ( 4.60 mm) Det: EXP1  
 Process Host: CTX0316

First Level Reviewer: chirgwinb Date: 06-Dec-2019 15:40:18

Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										
212.90 > 169.00	1.926	1.917	0.009	1.005	7890334	9.30		93.0	2523	
D 1 13C4 PFBA										
217.00 > 172.00	1.917	1.917	0.0	0.559	2130869	2.50		100	27792	
4 Perfluoropentanoic acid										
262.90 > 219.00	2.271	2.271	0.0	1.000	6633075	9.23		92.3	736	
D 3 13C5 PFPeA										
267.90 > 223.00	2.271	2.271	0.0	0.662	1586923	2.44		97.5	6093	
D 47 13C3 PFBS										
301.90 > 80.00	2.298	2.298	0.0	0.670	1688504	2.17		93.5	293230	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.298	2.298	0.0	1.000	6947766	8.80	Target=2.03	99.6	18395	
298.90 > 99.00	2.298	2.298	0.0	1.000	3618159		1.92(1.01-3.04)	99.6	5463	
61 1H,1H,2H,2H-perfluorohexanesulfoni										
327.00 > 307.00	2.623	2.623	0.0	1.000	1151408	9.80		105	7852	
D 60 M2-4:2 FTS										
329.00 > 81.00	2.623	2.623	0.0	0.765	158307	2.19		93.6	254	
70 Perfluoropentanesulfonic acid										
349.00 > 80.00	2.673	2.660	0.013	0.878	6887561	9.40	Target=3.08	100	16915	
349.00 > 99.00	2.673	2.660	0.013	0.878	2182021		3.16(1.54-4.62)	100	4289	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.661	2.660	0.0	1.000	7062831	9.92	Target=12.44	99.2	2888	
313.00 > 119.00	2.661	2.660	0.0	1.000	548893		12.87(6.22-18.67)	99.2	1115	
D 7 13C2 PFHxA										
315.00 > 270.00	2.661	2.660	0.0	0.776	1743644	2.40		96.1	7481	
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.784	2.776	0.008	1.000	1184172	10.6		106	595	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 64 13C3 HFPO-DA										
332.10 > 287.00	2.784	2.776	0.008	0.812	77795	2.46		98.2	1297	
D 9 13C4 PFHpA										
367.00 > 322.00	3.055	3.044	0.011	0.891	1724606	2.51		100	3967	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.044	3.044	0.0	1.000	5851407	8.19	Target=4.13	90.0	14589	
399.00 > 99.00	3.044	3.044	0.0	1.000	1431809		4.09(2.07-6.20)	90.0	3725	
D 11 18O2 PFHxS										
403.00 > 84.00	3.044	3.044	0.0	0.887	1492254	2.43		103	6548	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.055	3.055	0.0	1.000	6895339	9.45	Target=3.48	94.5	2548	
363.00 > 169.00	3.055	3.055	0.0	1.000	2019462		3.41(1.74-5.22)	94.5	3645	
77 DONA										
377.00 > 251.00	3.089	3.089	0.0	0.815	16313820	9.62	Target=2.44	102	12004	
377.00 > 85.00	3.089	3.089	0.0	0.815	6345729		2.57(1.22-3.67)	102	10875	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.413	3.413	0.0	0.998	844224	9.04		95.3	1995	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.413	3.413	0.0	0.900	5747086	9.78	Target=6.34	103	4909	
449.00 > 99.00	3.413	3.413	0.0	0.900	831804		6.91(3.17-9.51)	103	8110	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.422	3.413	0.009	0.998	235092	2.23		94.0	871	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.430	3.430	0.0	1.000	6722811	8.36	Target=2.38	83.6	1756	M
413.00 > 169.00	3.430	3.430	0.0	1.000	3149742		2.13(1.19-3.57)	83.6	5812	M
D 14 13C4 PFOA										
417.00 > 372.00	3.430	3.430	0.0	1.000	1811057	2.48		99.2	4145	
* 62 13C2 PFOA										
415.00 > 370.00	3.430	3.430	0.0		2008946	2.50			3313	
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.793	0.0	1.106	1147139	2.36		98.7	2381	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.805	3.793	0.012	1.003	4517143	8.72	Target=5.71	93.9	6275	M
499.00 > 99.00	3.793	3.793	0.0	1.000	783280		5.77(2.86-8.57)	93.9	4179	M
D 19 13C5 PFNA										
468.00 > 423.00	3.817	3.817	0.0	1.113	1655656	2.47		98.6	5056	
20 Perfluorononanoic acid										
463.00 > 419.00	3.817	3.817	0.0	1.000	5734465	8.83	Target=6.87	88.3	1923	
463.00 > 169.00	3.817	3.817	0.0	1.000	878719		6.53(3.43-10.30)	88.3	8097	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.983	3.984	-0.001	1.050	5186817	8.76		94.0	8459	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.128	4.129	-0.001	1.089	3592295	9.06	Target=2.92	94.4	10100	
549.00 > 99.00	4.128	4.129	-0.001	1.089	1333277		2.69(1.46-4.38)	94.4	4185	
D 23 13C2 PFDA										
515.00 > 470.00	4.164	4.153	0.011	1.214	1586129	2.40		95.9	3242	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
24 Perfluorodecanoic acid										
513.00 > 469.00	4.164	4.153	0.011	1.000	6034539	9.83	Target=7.21	98.3	3993	
513.00 > 169.00	4.164	4.153	0.011	1.000	820463		7.36(3.60-10.81)	98.3	2891	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.164	4.164	0.0	1.214	293276	2.34		97.6	1002	
25 1H,1H,2H,2H-perfluorodecanesulfoni										
527.00 > 507.00	4.164	4.164	0.0	1.000	541123	9.57		99.9	2923	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.251	4.239	0.012	1.000	8593529	9.97		99.7	7077	
D 21 13C8 FOSA										
506.00 > 78.00	4.251	4.239	0.012	1.239	2165350	2.50		100	5619	
28 N-methylperfluorooctanesulfonamido										
570.00 > 419.00	4.305	4.305	0.0	1.000	569245	9.66		96.6	4401	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.305	4.305	0.0	1.255	169500	2.66		106	328	
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.409	4.409	0.0	1.162	3254326	9.42	Target=2.78	97.7	5415	
599.00 > 99.00	4.409	4.409	0.0	1.162	1114122		2.92(1.39-4.17)	97.7	2411	
D 30 13C2 PFUnA										
565.00 > 520.00	4.431	4.431	0.0	1.292	1343214	2.39		95.5	4686	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.431	4.431	0.0	1.000	4599988	10.1	Target=5.47	101	1972	
563.00 > 169.00	4.431	4.431	0.0	1.000	811617		5.67(2.73-8.20)	101	2670	
33 N-ethylperfluorooctanesulfonamidoa										
584.00 > 419.00	4.456	4.442	0.014	1.003	597510	9.38		93.8	3385	M
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.442	4.442	0.0	1.295	192338	2.72		109	1973	
66 11-Chloroeicosafuoro-3-oxaundecan										
631.00 > 451.00	4.537	4.523	0.014	1.196	5434304	9.74		103	6841	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.671	4.671	0.0	1.000	5467302	9.63	Target=4.84	96.3	876	
613.00 > 169.00	4.671	4.671	0.0	1.000	1110422		4.92(2.42-7.26)	96.3	9236	
D 36 13C2 PFDaA										
615.00 > 570.00	4.671	4.671	0.0	1.362	1535578	2.49		99.6	4830	
74 1H,1H,2H,2H-perfluorododecanesulfo										
627.00 > 607.00	4.693	4.683	0.010	1.127	326752	9.11		94.5	2654	
75 Perfluorododecanesulfonic acid (PF										
699.00 > 80.00	4.838	4.838	0.0	1.276	1255696	9.56	Target=0.47	98.8	3247	
699.00 > 99.00	4.838	4.838	0.0	1.276	2611913		0.48(0.23-0.70)	98.8	7979	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.879	4.879	0.0	1.044	5352503	9.93	Target=3.74	99.3	1073	
663.00 > 169.00	4.879	4.879	0.0	1.044	1396000		3.83(1.87-5.62)	99.3	5734	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.067	5.058	0.009	1.477	1240396	2.40		96.0	8410	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.067	5.067	0.0	1.000	994106	9.97	Target=1.01	99.7	5117	
713.00 > 219.00	5.058	5.067	-0.009	0.998	977124		1.02(0.50-1.51)	99.7	6665	

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 44 13C2 PFHxDA										
815.00 > 770.00	5.413	5.403	0.011	1.578	1185102	2.49		99.7	4726	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.413	5.413	0.0	1.000	4196835	10.0	Target=3.04	99.9	743	
813.00 > 169.00	5.413	5.413	0.0	1.000	1416681		2.96(1.52-4.56)	99.9	4744	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.747	5.747	0.0	1.062	3410532	9.96	Target=2.88	99.6	974	
913.00 > 169.00	5.747	5.747	0.0	1.062	1249080		2.73(1.44-4.32)	99.6	4629	

**QC Flag Legend**

Review Flags

M - Manually Integrated

**Reagents:**

PFAS32NCIC6\_00003

Amount Added: 100.00

Units: uL

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d

Injection Date: 06-Dec-2019 15:13:26

Instrument ID: LC812

Lims ID: IC

Client ID:

Operator ID: lc812tech

ALS Bottle#: 7

Worklist Smp#: 10

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

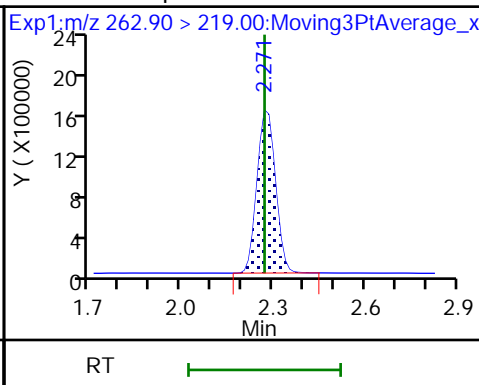
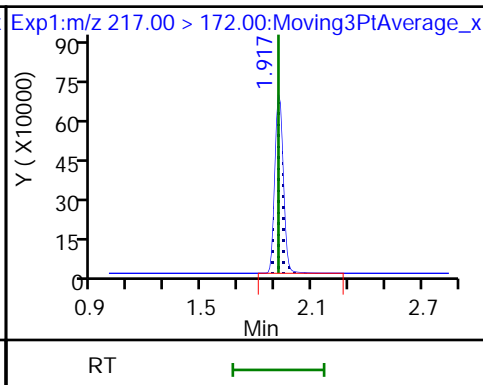
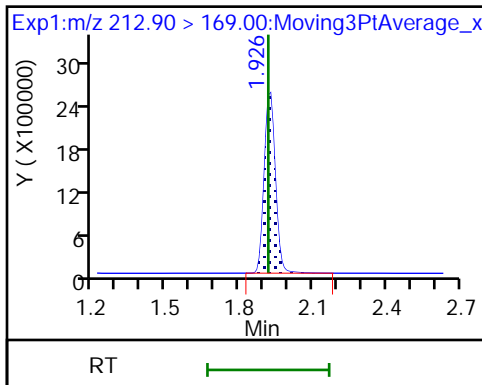
Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

2 Perfluorobutanoic acid

D 1 13C4 PFBA

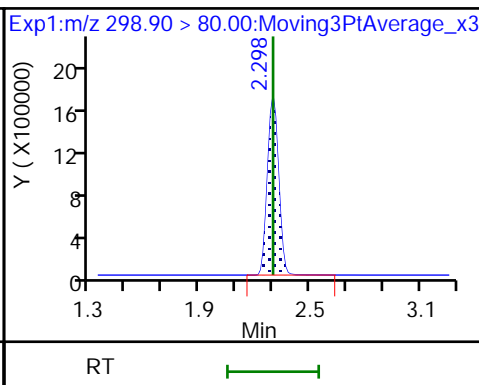
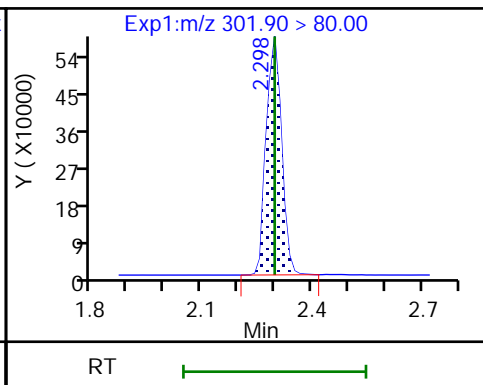
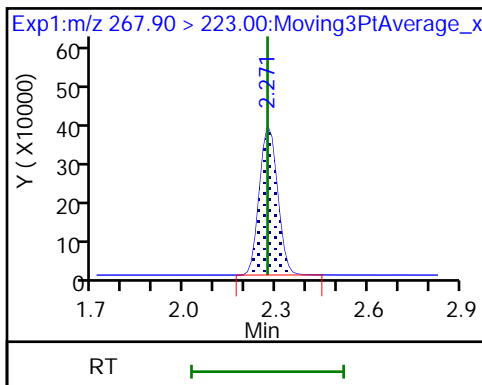
4 Perfluoropentanoic acid



D 3 13C5 PFPeA

D 47 13C3 PFBS

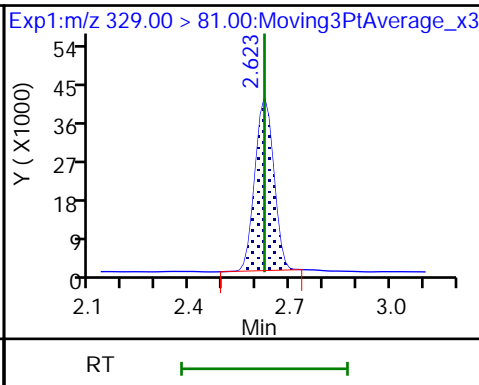
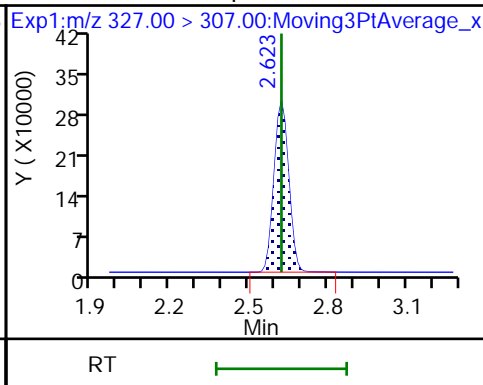
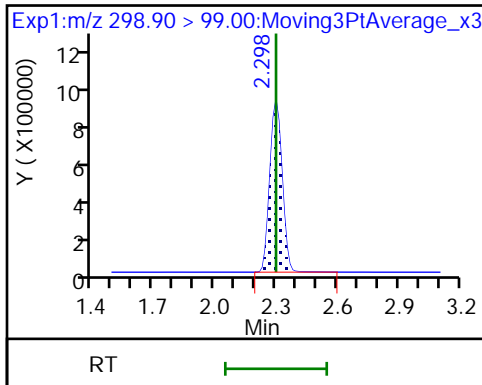
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

61 1H,1H,2H,2H-perfluorohexanesulfonate

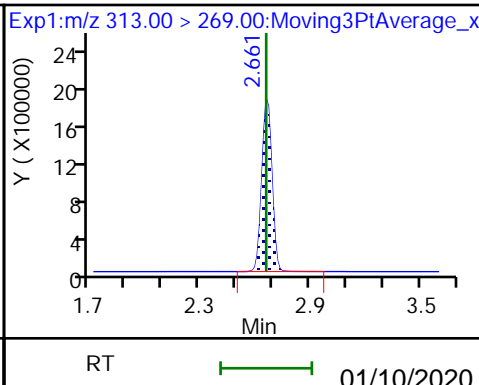
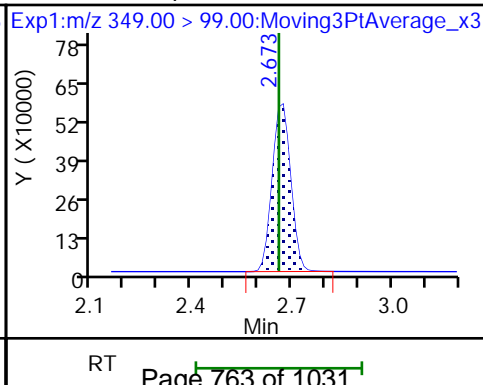
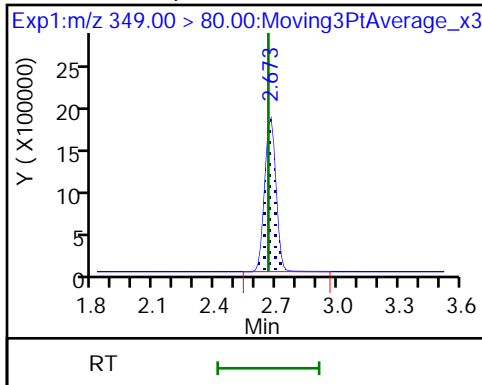
D 60 M2-4:2 FTS

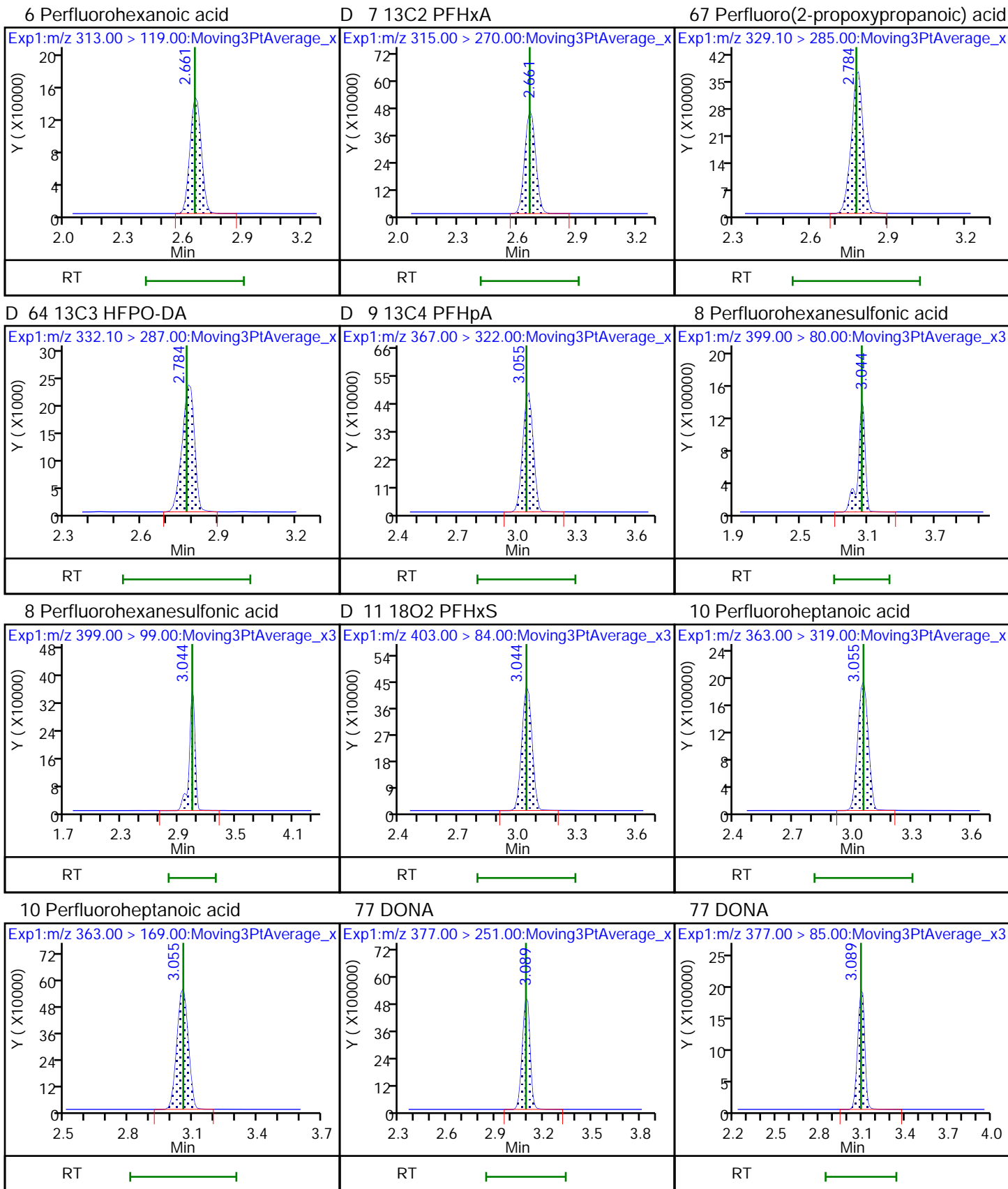


70 Perfluoropentanesulfonic acid

70 Perfluoropentanesulfonic acid

6 Perfluorohexanoic acid

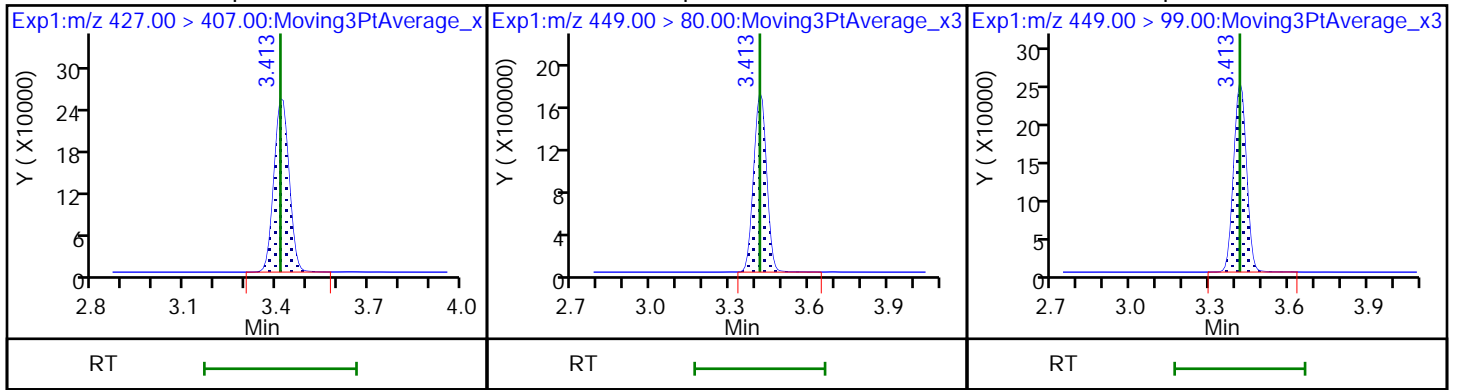






13 1H,1H,2H,2H-perfluorooctanesulfonyl 16 Perfluoroheptanesulfonic acid

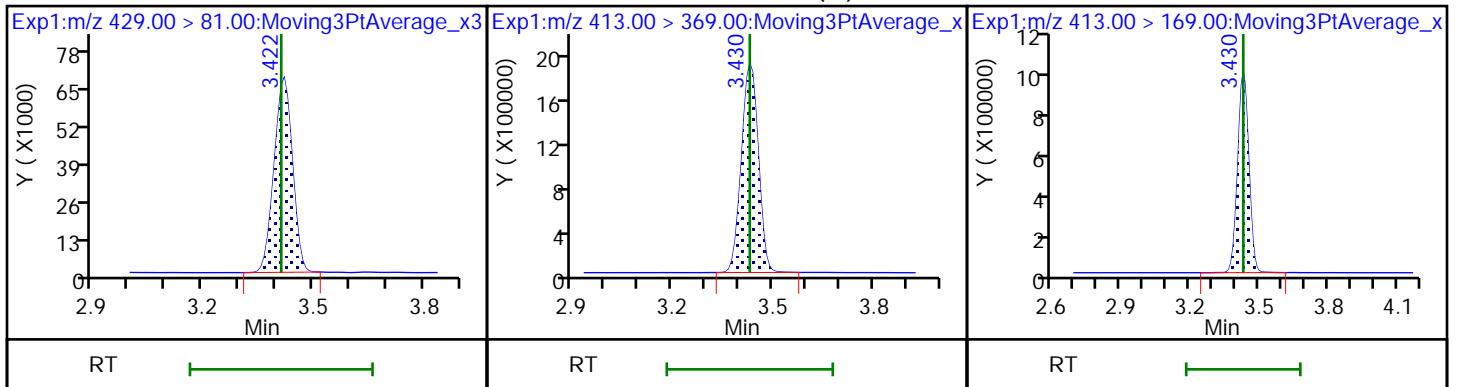
16 Perfluoroheptanesulfonic acid



D 12 M2-6:2 FTS

15 Perfluorooctanoic acid (M)

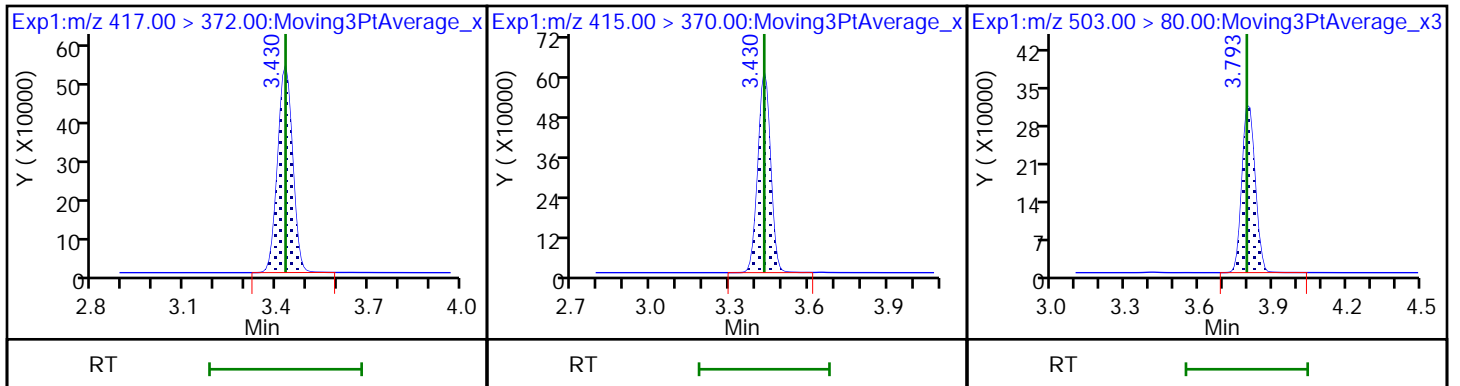
15 Perfluorooctanoic acid



D 14 13C4 PFOA

\* 62 13C2 PFOA

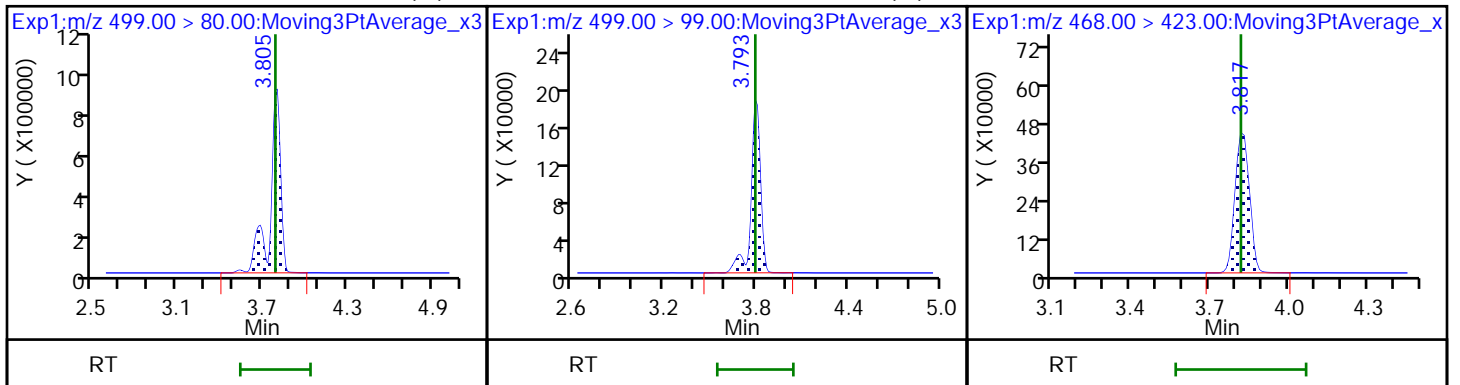
D 18 13C4 PFOS

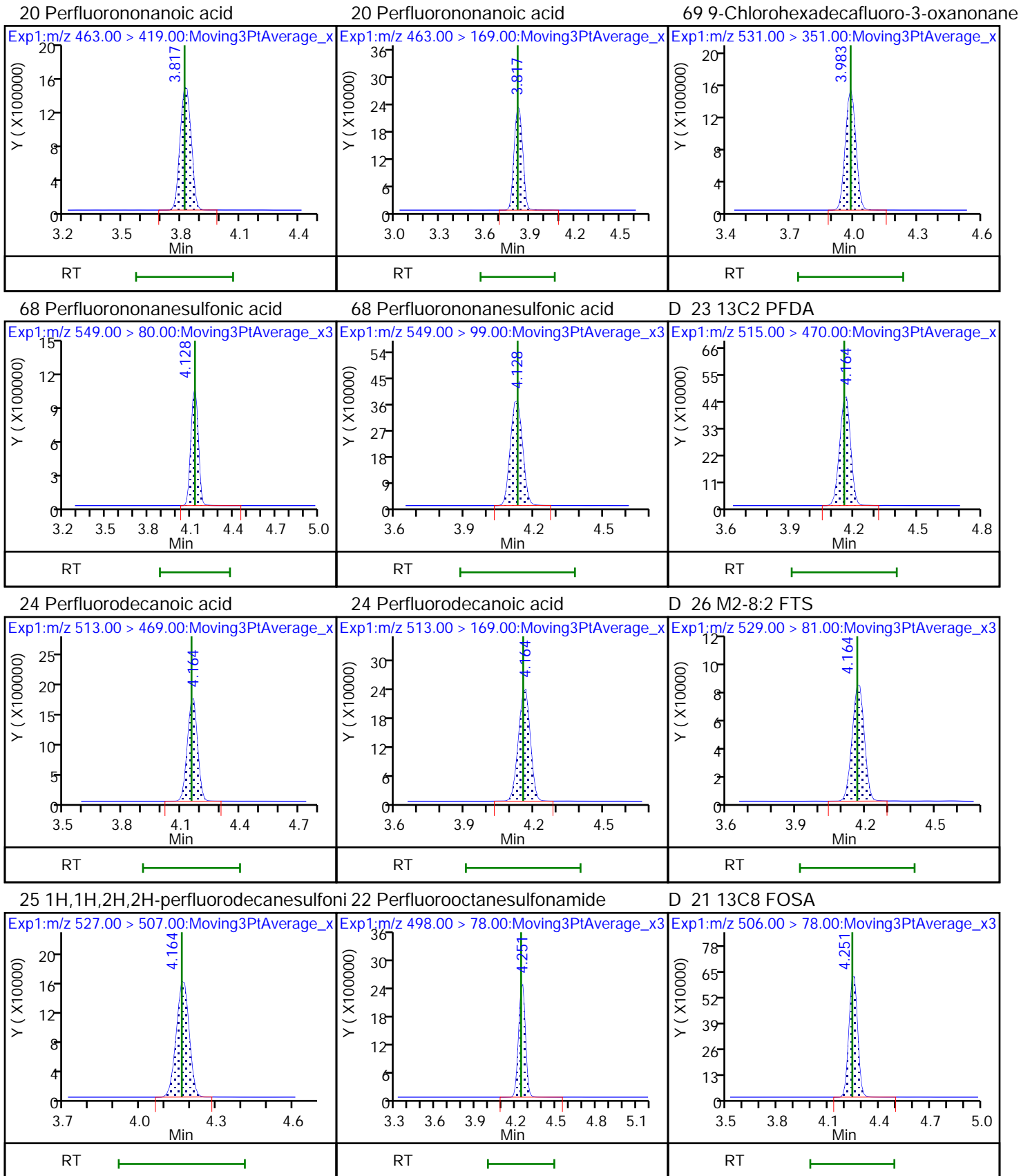


17 Perfluorooctanesulfonic acid (M)

17 Perfluorooctanesulfonic acid (M)

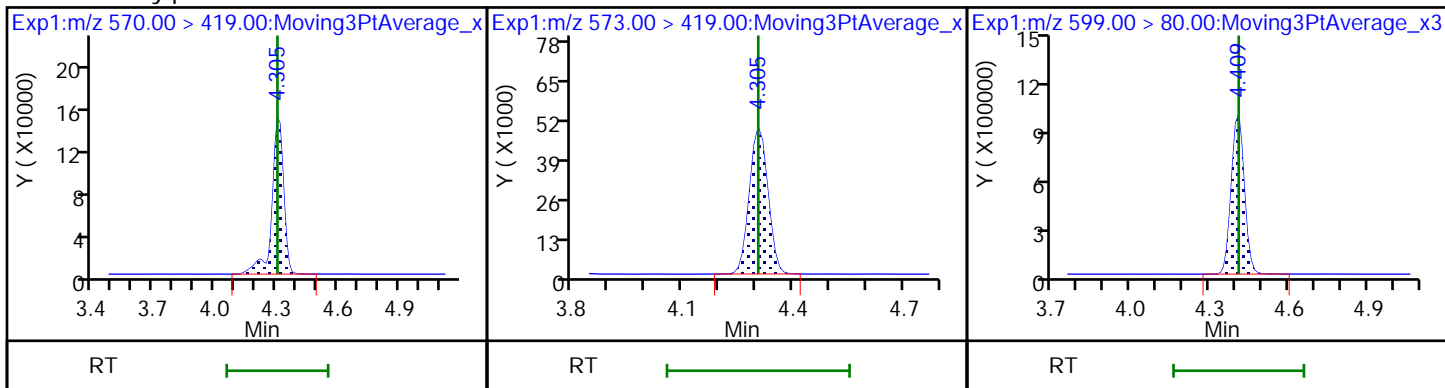
D 19 13C5 PFNA





28 N-methylperfluorooctanesulfonamid D 27 d3-NMeFOSAA

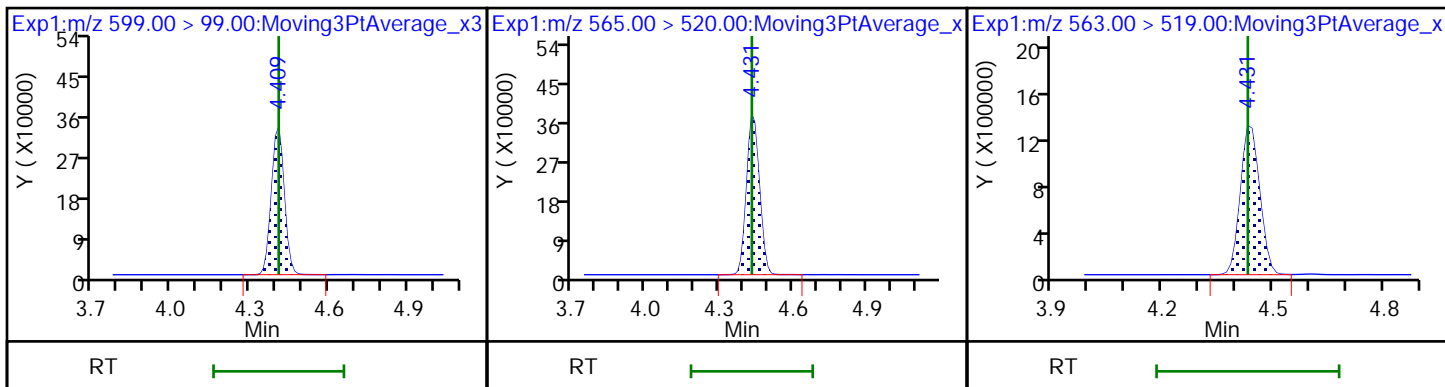
29 Perfluorodecanesulfonic acid



29 Perfluorodecanesulfonic acid

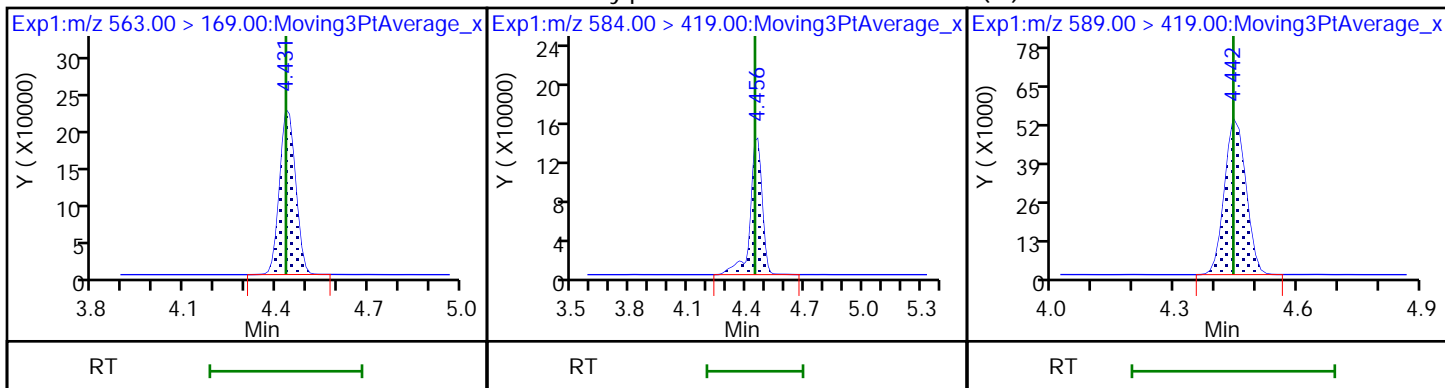
D 30 13C2 PFUnA

31 Perfluoroundecanoic acid



31 Perfluoroundecanoic acid

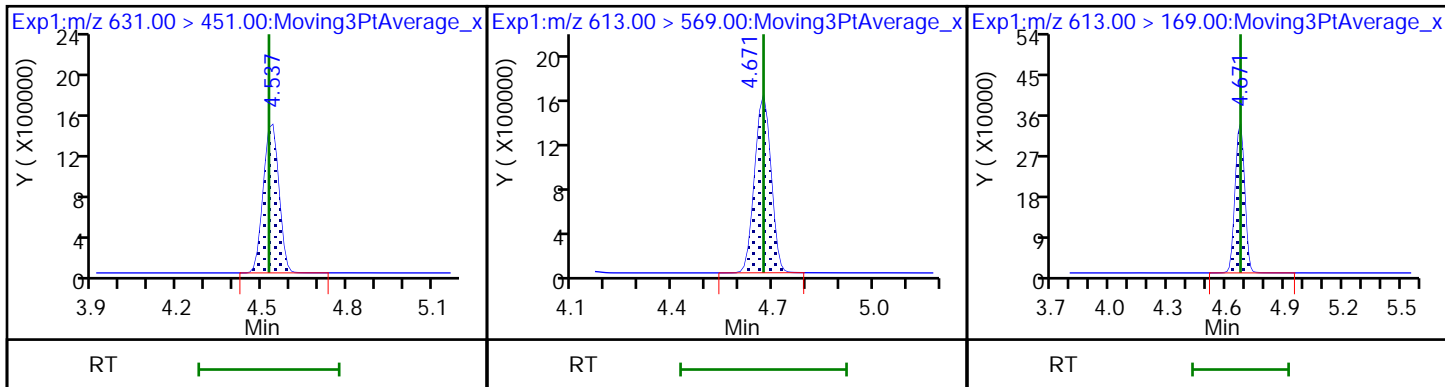
33 N-ethylperfluorooctanesulfonamid D 32 d5-NEtFOSAA



66 11-Chloroeicosafluoro-3-oxaundecan

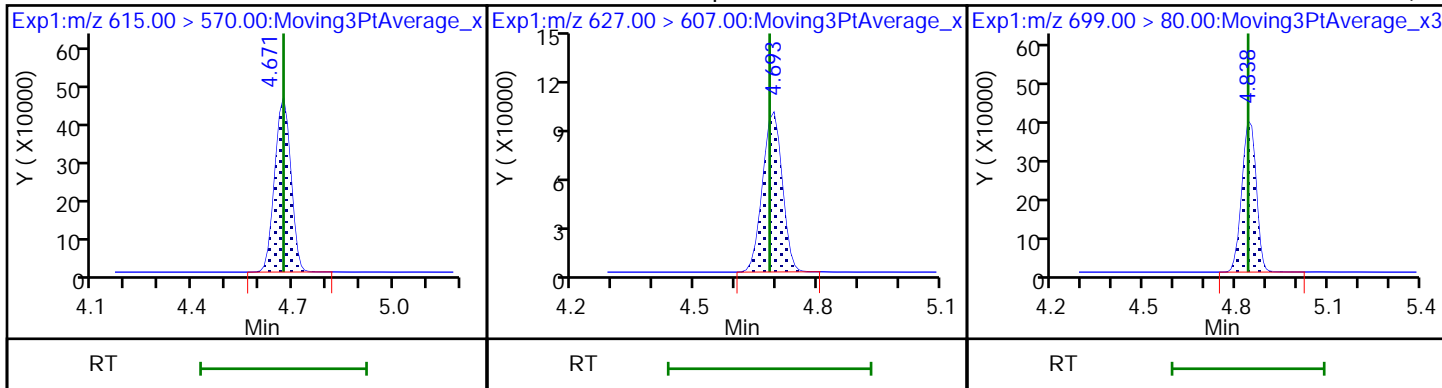
37 Perfluorododecanoic acid

37 Perfluorododecanoic acid



D 36 13C2 PFDaA

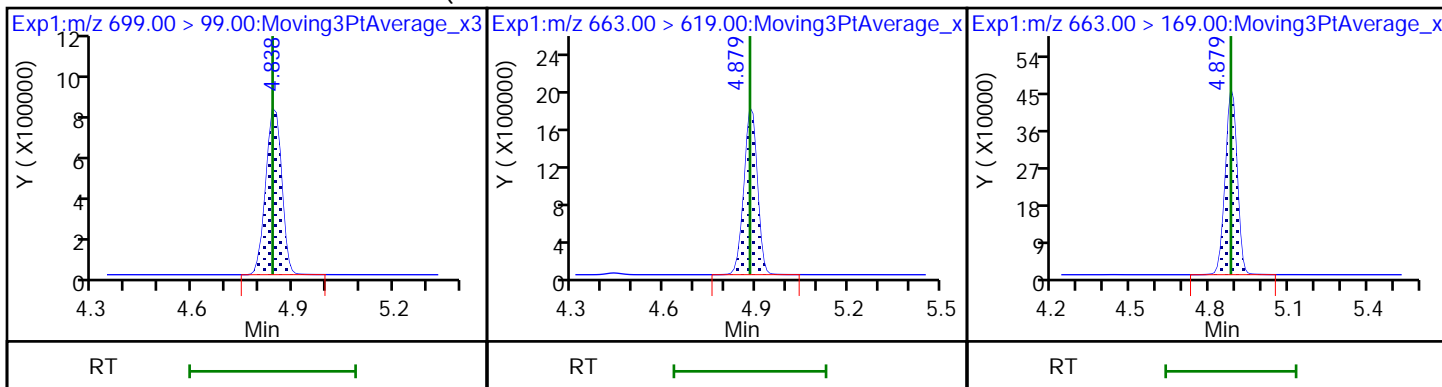
74 1H,1H,2H,2H-perfluorododecanesulfo75 Perfluorododecanesulfonic acid (PF



75 Perfluorododecanesulfonic acid (PF

41 Perfluorotridecanoic acid

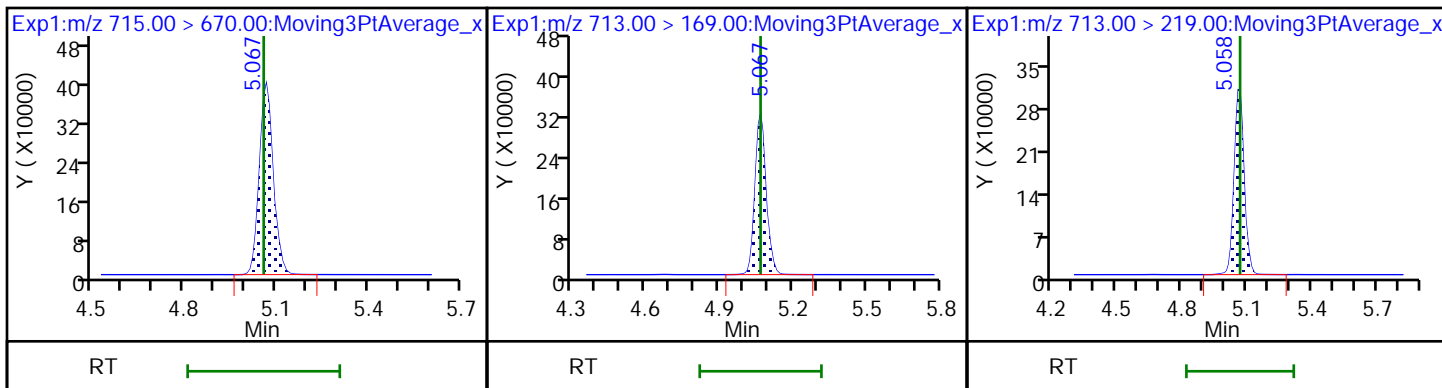
41 Perfluorotridecanoic acid



D 43 13C2 PFTeDA

42 Perfluorotetradecanoic acid

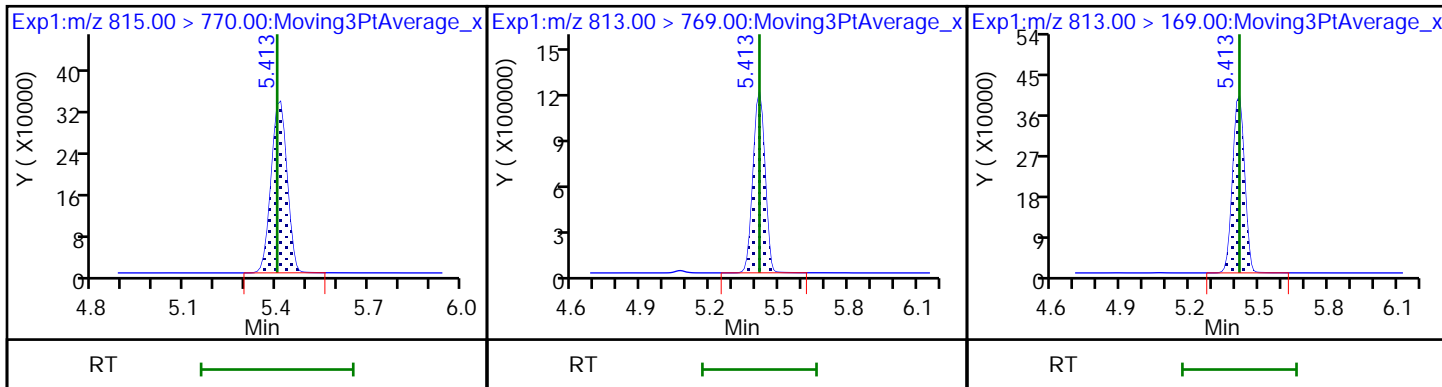
42 Perfluorotetradecanoic acid



D 44 13C2 PFHxDA

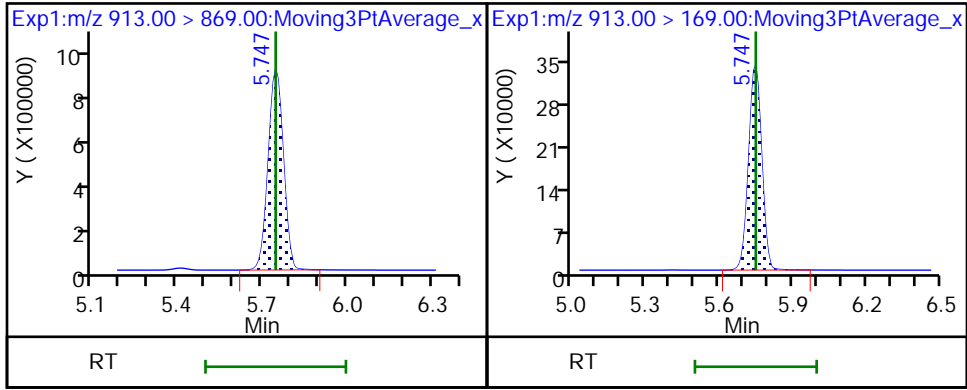
45 Perfluorohexadecanoic acid

45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid

46 Perfluorooctadecanoic acid



Eurofins TestAmerica, Burlington

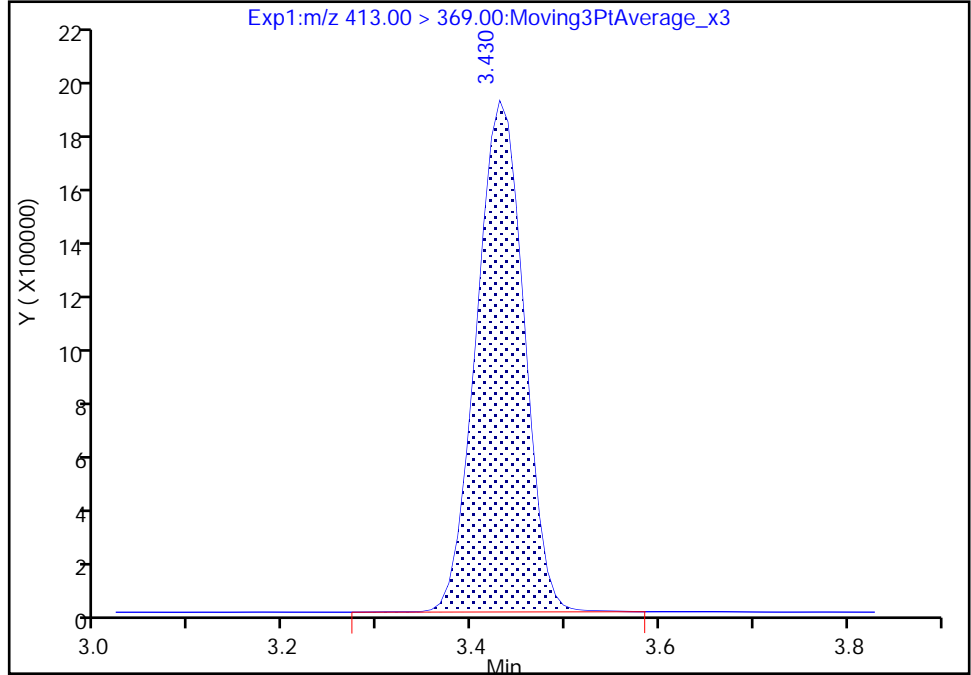
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Injection Date: 06-Dec-2019 15:13:26 Instrument ID: LC812  
Lims ID: IC  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 7 Worklist Smp#: 10  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

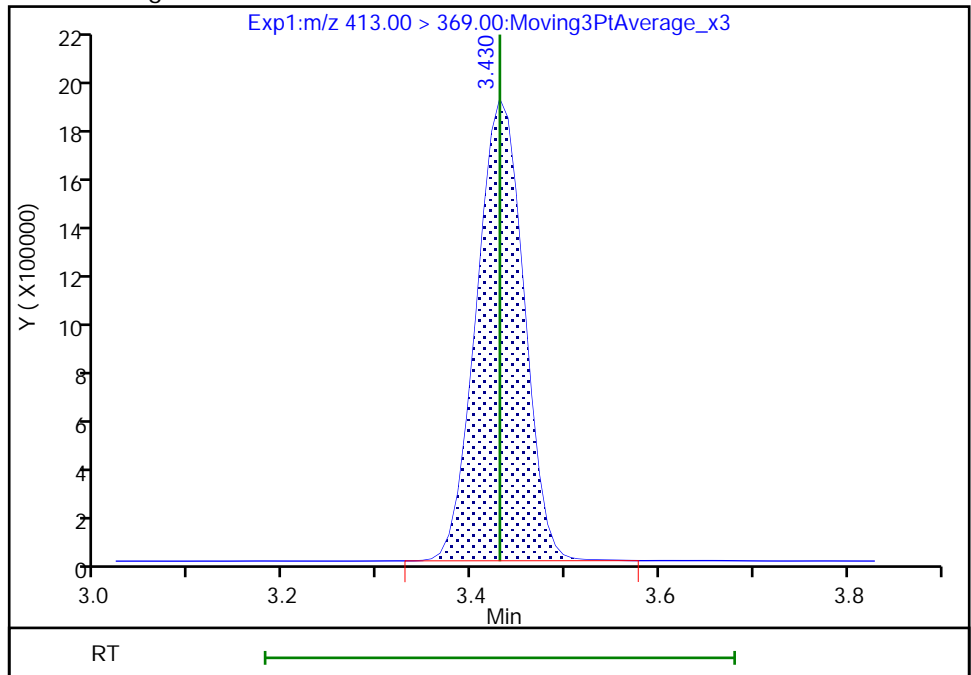
RT: 3.43  
Area: 6729799  
Amount: 8.367720  
Amount Units: ng/ml

Processing Integration Results



RT: 3.43  
Area: 6722811  
Amount: 8.364150  
Amount Units: ng/ml

Manual Integration Results



Eurofins TestAmerica, Burlington

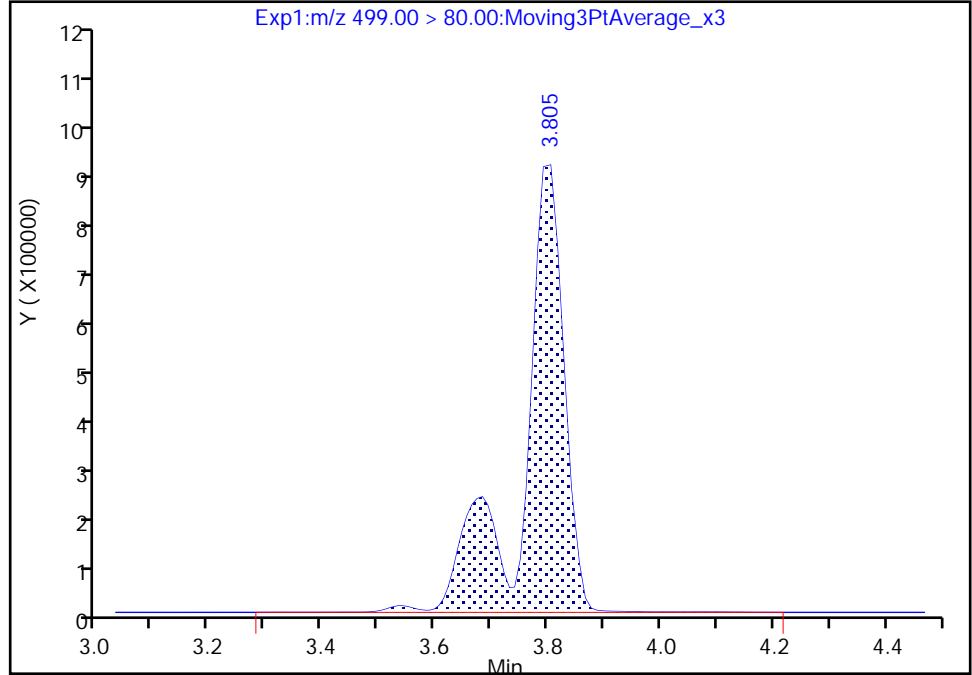
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Injection Date: 06-Dec-2019 15:13:26 Instrument ID: LC812  
Lims ID: IC  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 7 Worklist Smp#: 10  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

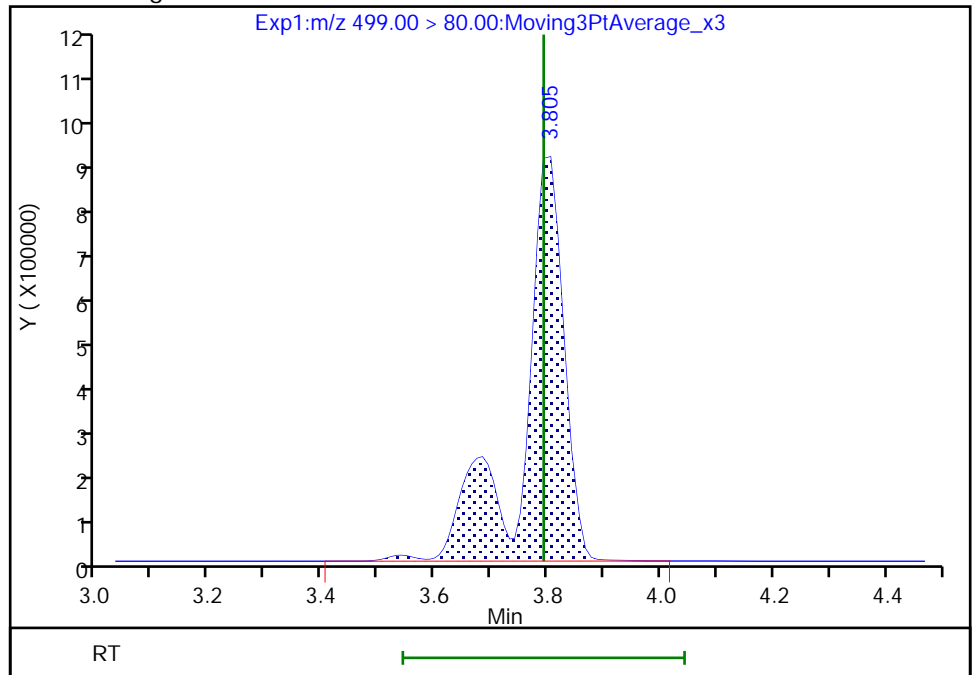
RT: 3.80  
Area: 4531952  
Amount: 8.741950  
Amount Units: ng/ml

Processing Integration Results



RT: 3.80  
Area: 4517143  
Amount: 8.717857  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 06-Dec-2019 15:34:55  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

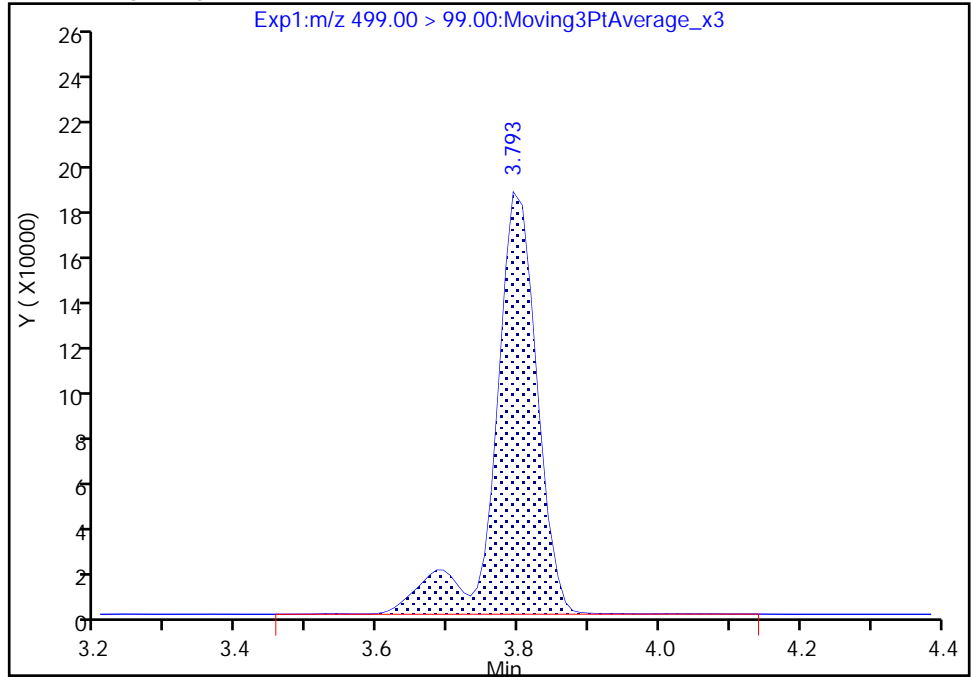
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Injection Date: 06-Dec-2019 15:13:26 Instrument ID: LC812  
Lims ID: IC  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 7 Worklist Smp#: 10  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

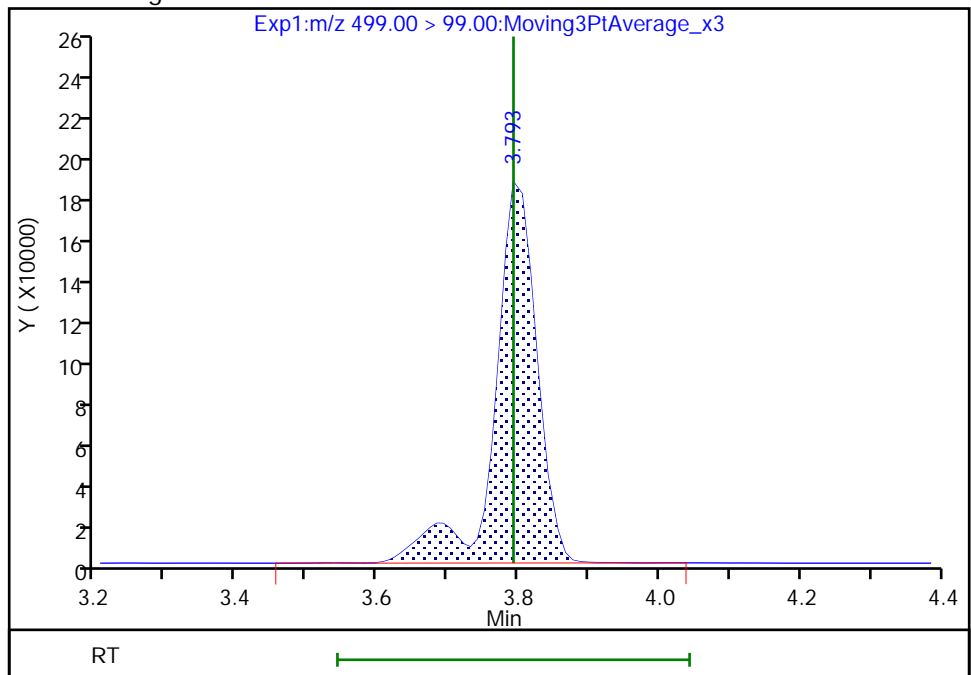
RT: 3.79  
Area: 785183  
Amount: 8.741950  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 783280  
Amount: 8.717857  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 06-Dec-2019 15:34:59

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Eurofins TestAmerica, Burlington

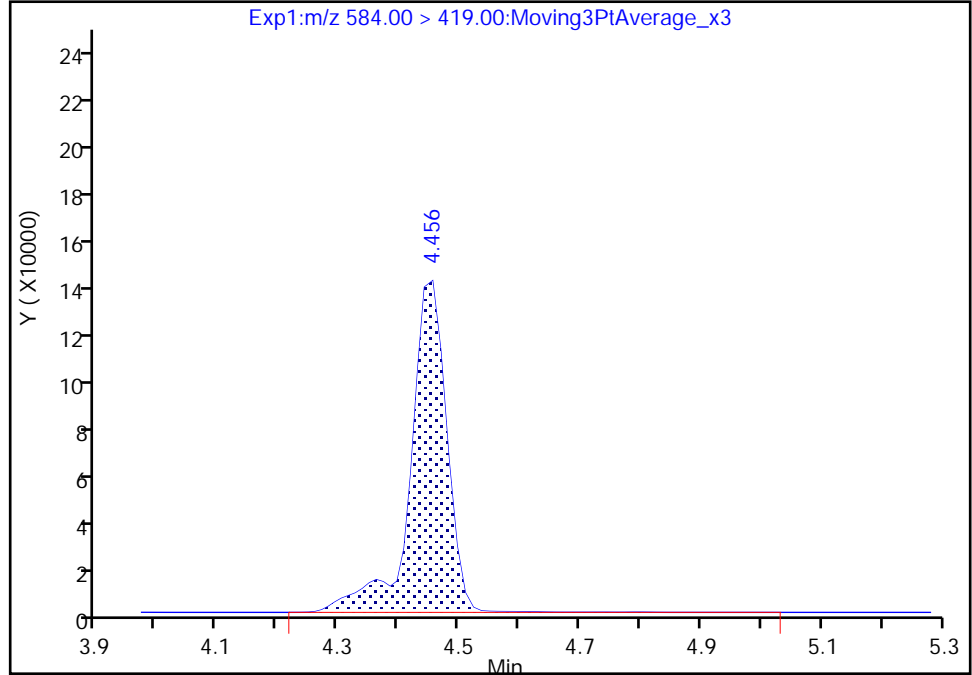
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Lims ID: IC  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 7 Worklist Smp#: 10  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

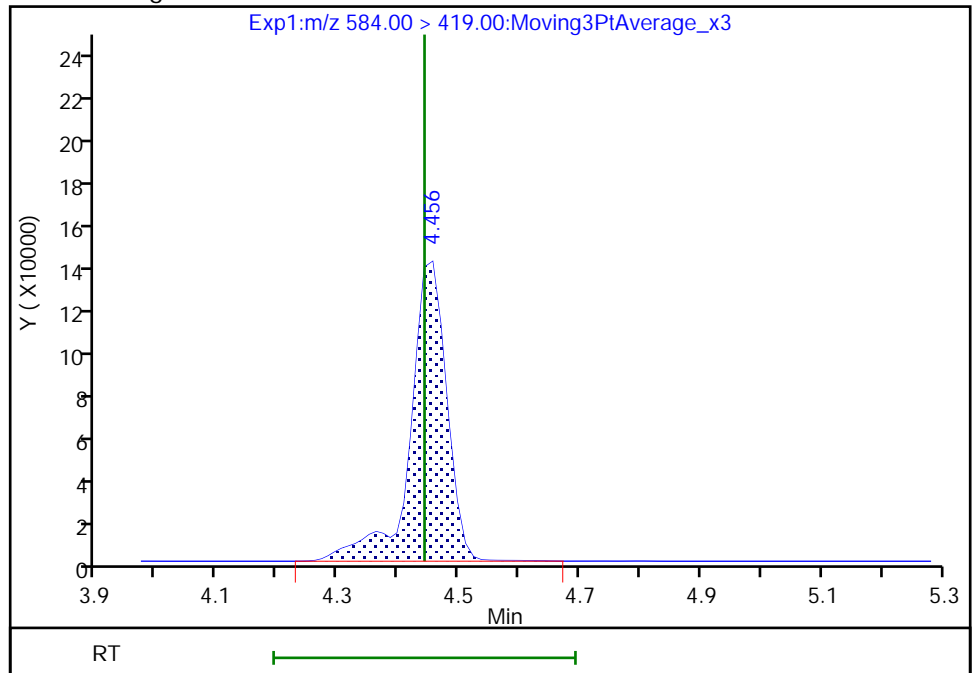
RT: 4.46  
Area: 598720  
Amount: 9.399022  
Amount Units: ng/ml

Processing Integration Results



RT: 4.46  
Area: 597510  
Amount: 9.382997  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 06-Dec-2019 15:35:16  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

FORM VII  
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 200-150448/12 Calibration Date: 12/06/2019 15:29  
 Instrument ID: LC812 Calib Start Date: 12/06/2019 14:32  
 GC Column: C-18 ID: 4.60 (mm) Calib End Date: 12/06/2019 15:13  
 Lab File ID: SC120619ICAL012.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.9949	1.063		1070	1000	6.8	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.132	1.233		1100	1010	8.9	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.087	1.246		911	1000	14.6	40.0
1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2)	AveID	1.732	1.630		941	1000	-5.9	50.0
Perfluorohexanoic acid (PFHxA)	AveID	1.021	1.027		1020	1010	0.6	40.0
Perfluoropentanesulfonic acid	AveID	1.161	1.325		1140	1000	14.1	50.0
HFPO-DA	AveID	3.591	3.683		1040	1010	2.6	40.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.132	1.207		1080	1010	6.6	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.057	0.9291		879	1000	-12.1	40.0
DONA	AveID	3.533	3.950		1120	1000	11.8	50.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	1.225	1.297		1060	1000	5.9	50.0
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	AveID	0.9437	1.002		1060	1000	6.2	40.0
Perfluorooctanoic acid (PFOA)	AveID	1.110	1.115		1010	1000	0.5	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.080	1.083		1010	1010	0.3	40.0
Perfluorononanoic acid (PFNA)	AveID	0.9805	1.061		1080	1000	8.2	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	1.233	1.199		973	1000	-2.7	50.0
Perfluorononanesulfonic acid	AveID	0.8262	0.9243		1130	1010	11.9	50.0
Perfluorodecanoic acid (PFDA)	AveID	0.9675	1.189		1230	1000	22.9	40.0
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	AveID	0.4616	0.5324		1160	1010	15.3	40.0
Perfluorooctanesulfonamide (PFOSA)	AveID	0.995	1.072		1080	1000	7.7	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	AveID	0.8689	0.8932		1030	1000	2.8	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.7196	0.8104		1140	1010	12.6	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.8479	0.8718		1030	1000	2.8	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.8277	0.8064		974	1000	-2.6	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.163	1.316		1130	1000	13.2	50.0
Perfluorododecanoic acid (PFDoA)	AveID	0.9240	0.9363		1010	1000	1.3	40.0
10:2 FTS	AveID	0.2931	0.3725		613	482	27.1	50.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.2736	0.3119		552	484	14.0	50.0
Perfluorotridecanoic acid (PFTriA)	AveID	0.8778	0.8518		970	1000	-3.0	50.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.2009	0.2159		1070	1000	7.5	40.0

FORM VII  
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: ICV 200-150448/12 Calibration Date: 12/06/2019 15:29  
 Instrument ID: LC812 Calib Start Date: 12/06/2019 14:32  
 GC Column: C-18 ID: 4.60 (mm) Calib End Date: 12/06/2019 15:13  
 Lab File ID: SC120619ICAL012.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluoro-n-hexadecanoic acid (PFHxDA)	L1ID		0.9903		531	500	6.2	40.0
Perfluoro-n-octadecanoic acid (PFODA)	AveID	0.7223	0.7032		487	500	-2.6	50.0
13C4 PFBA	Ave	1.059	1.011		2390	2500	-4.6	50.0
13C5 PFPeA	Ave	0.8099	0.7657		2360	2500	-5.5	50.0
13C3 PFBS	Ave	0.9661	0.9164		2210	2330	-5.1	50.0
M2-4:2 FTS	Ave	0.0901	0.0950		2460	2340	5.4	50.0
13C2 PFHxA	Ave	0.9031	0.9447		2620	2500	4.6	50.0
13C3 HFPO-DA	Ave	0.0394	0.0395		2500	2500	0.0	50.0
1802 PFHxS	Ave	0.7630	0.8059		2500	2370	5.6	50.0
13C4 PFHpA	Ave	0.8562	1.019		2980	2500	19.0	50.0
M2-6:2 FTS	Ave	0.1311	0.1276		2310	2380	-2.7	50.0
13C4 PFOA	Ave	0.9086	0.9360		2580	2500	3.0	50.0
13C4 PFOS	Ave	0.6053	0.5666		2240	2390	-6.4	50.0
13C5 PFNA	Ave	0.8355	0.8435		2520	2500	1.0	50.0
13C2 PFDA	Ave	0.8233	0.7934		2410	2500	-3.6	50.0
M2-8:2 FTS	Ave	0.1562	0.1514		2320	2400	-3.1	50.0
13C8 FOSA	Ave	1.077	0.9705		2250	2500	-9.9	50.0
d3-NMeFOSAA	Ave	0.0793	0.0761		2400	2500	-4.0	50.0
13C2 PFUnA	Ave	0.6999	0.7184		2570	2500	2.6	50.0
d5-NEtFOSAA	Ave	0.0879	0.0808		2300	2500	-8.1	50.0
13C2 PFDoA	Ave	0.7677	0.7699		2510	2500	0.3	50.0
13C2 PFTeDA	Ave	0.6433	0.6491		2520	2500	0.9	50.0
13C2 PFHxDA	Ave	0.5918	0.6119		2580	2500	3.4	50.0

Eurofins TestAmerica, Burlington  
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL012.d  
 Lims ID: ICV  
 Client ID:  
 Sample Type: ICV  
 Inject. Date: 06-Dec-2019 15:29:46 ALS Bottle#: 9 Worklist Smp#: 12  
 Injection Vol: 20.0 ul Dil. Factor: 1.0000  
 Sample Info: ICV  
 Misc. Info.: 200-0039114-012 Plate: 1 Rack: 1  
 Operator ID: lc812tech Instrument ID: LC812  
 Sublist:

Method: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\PFC\_LC812.m  
 Limit Group: LC\_PFC\_ICAL  
 Last Update: 06-Dec-2019 16:03:31 Calib Date: 06-Dec-2019 15:13:26  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Column 1 : C-18 ( 4.60 mm) Det: EXP1  
 Process Host: CTX0306

First Level Reviewer: chirgwinb Date: 06-Dec-2019 15:48:22

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutanoic acid										
212.90 > 169.00	1.926	1.917	0.009	1.005	942364	1.07			298	
D 1 13C4 PFBA										
217.00 > 172.00	1.917	1.917	0.0	0.559	2216541	2.39		95.4	29155	
4 Perfluoropentanoic acid										
262.90 > 219.00	2.271	2.271	0.0	1.000	836843	1.10			99.8	
D 3 13C5 PFPeA										
267.90 > 223.00	2.271	2.271	0.0	0.662	1679452	2.36		94.5	6411	
D 47 13C3 PFBS										
301.90 > 80.00	2.284	2.298	-0.014	0.666	1869124	2.21		94.9	298652	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.298	2.298	0.0	1.006	880998	0.9113	Target=2.03		2176	
298.90 > 99.00	2.298	2.298	0.0	1.006	440452		2.00(1.01-3.04)		823	
61 1H,1H,2H,2H-perfluorohexanesulfoni										
327.00 > 307.00	2.623	2.623	0.0	1.000	135766	0.9407			1923	
D 60 M2-4:2 FTS										
329.00 > 81.00	2.623	2.623	0.0	0.765	194540	2.46		105	338	
70 Perfluoropentanesulfonic acid										
349.00 > 80.00	2.673	2.660	0.013	0.878	936745	1.14	Target=3.50		2367	
349.00 > 99.00	2.673	2.660	0.013	0.878	277095		3.38(1.75-5.25)		1485	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.660	2.660	0.0	1.000	859644	1.02	Target=13.76		302	
313.00 > 119.00	2.660	2.660	0.0	1.000	73389		11.71(6.88-20.64)		187	
D 7 13C2 PFHxA										
315.00 > 270.00	2.660	2.660	0.0	0.776	2072079	2.62		105	6357	
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.776	2.776	0.0	1.000	128780	1.04			74.3	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 64 13C3 HFPO-DA										
332.10 > 287.00	2.776	2.776	0.0	0.809	86561	2.50		100	1338	
D 9 13C4 PFHpA										
367.00 > 322.00	3.055	3.044	0.011	0.891	2234861	2.98		119	7286	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.044	3.044	0.0	1.000	861739	1.08	Target=3.90		2224	
399.00 > 99.00	3.044	3.044	0.0	1.000	180070		4.79(1.95-5.85)		521	
D 11 18O2 PFHxS										
403.00 > 84.00	3.044	3.044	0.0	0.887	1672094	2.50		106	5976	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.055	3.055	0.0	1.000	830551	0.8788	Target=3.95		431	
363.00 > 169.00	3.055	3.055	0.0	1.000	231266		3.59(1.97-5.92)		786	
77 DONA										
377.00 > 251.00	3.089	3.089	0.0	0.815	1963596	1.12	Target=2.49		4521	
377.00 > 85.00	3.089	3.089	0.0	0.815	808232		2.43(1.24-3.73)		2758	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.421	3.413	0.008	1.000	112180	1.06			1428	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.413	3.413	0.0	0.900	644964	1.06	Target=6.46		1826	
449.00 > 99.00	3.413	3.413	0.0	0.900	102176		6.31(3.23-9.69)		1137	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.421	3.413	0.008	0.998	265813	2.31		97.3	630	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.430	3.430	0.0	1.000	915910	1.01	Target=2.40		376	
413.00 > 169.00	3.430	3.430	0.0	1.000	388266		2.36(1.20-3.60)		1376	
D 14 13C4 PFOA										
417.00 > 372.00	3.430	3.430	0.0	1.000	2052899	2.58		103	2694	
* 62 13C2 PFOA										
415.00 > 370.00	3.430	3.430	0.0		2193286	2.50			4898	
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.793	0.0	1.106	1188105	2.24		93.6	4076	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.793	3.793	0.0	1.000	543860	1.01	Target=5.74		1471	M
499.00 > 99.00	3.793	3.793	0.0	1.000	83759		6.49(2.87-8.61)		478	M
D 19 13C5 PFNA										
468.00 > 423.00	3.817	3.817	0.0	1.113	1850012	2.52		101	4100	
20 Perfluorononanoic acid										
463.00 > 419.00	3.817	3.817	0.0	1.000	785174	1.08	Target=7.01		356	
463.00 > 169.00	3.817	3.817	0.0	1.000	110564		7.10(3.50-10.51)		1300	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.983	3.984	-0.001	1.050	596177	0.9725			3206	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.128	4.129	-0.001	1.089	464067	1.13	Target=3.14		2292	
549.00 > 99.00	4.128	4.129	-0.001	1.089	167241		2.77(1.57-4.71)		968	
D 23 13C2 PFDA										
515.00 > 470.00	4.153	4.153	0.0	1.211	1740248	2.41		96.4	5510	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
24 Perfluorodecanoic acid										
513.00 > 469.00	4.153	4.153	0.0	1.000	827717	1.23	Target=7.28		662	
513.00 > 169.00	4.153	4.153	0.0	1.000	100854		8.21(3.64-10.91)		1124	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.164	4.164	0.0	1.214	318058	2.32		96.9	273	
25 1H,1H,2H,2H-perfluorodecanesulfoni										
527.00 > 507.00	4.164	4.164	0.0	1.000	71403	1.16			1125	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.239	4.239	0.0	1.000	912768	1.08			2934	
D 21 13C8 FOSA										
506.00 > 78.00	4.239	4.239	0.0	1.236	2128483	2.25		90.1	6303	
28 N-methylperfluorooctanesulfonamido										
570.00 > 419.00	4.305	4.305	0.0	1.000	59613	1.03			253	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.305	4.305	0.0	1.255	166852	2.40		96.0	791	
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.409	4.409	0.0	1.162	406871	1.14	Target=2.76		1207	
599.00 > 99.00	4.409	4.409	0.0	1.162	138042		2.95(1.38-4.14)		497	
D 30 13C2 PFUnA										
565.00 > 520.00	4.431	4.431	0.0	1.292	1575626	2.57		103	4537	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.431	4.431	0.0	1.000	549479	1.03	Target=5.78		626	
563.00 > 169.00	4.431	4.431	0.0	1.000	91971		5.97(2.89-8.67)		664	
33 N-ethylperfluorooctanesulfonamidoa										
584.00 > 419.00	4.442	4.442	0.0	1.000	57139	0.9742			848	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.442	4.442	0.0	1.295	177145	2.30		91.9	1355	
66 11-Chloroeicosafuoro-3-oxaundecan										
631.00 > 451.00	4.537	4.523	0.014	1.196	654090	1.13			3063	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.671	4.671	0.0	1.000	632369	1.01	Target=5.13		105	
613.00 > 169.00	4.671	4.671	0.0	1.000	125948		5.02(2.56-7.69)		968	
D 36 13C2 PFDaA										
615.00 > 570.00	4.671	4.671	0.0	1.362	1688527	2.51		100	6971	
74 1H,1H,2H,2H-perfluorododecanesulfo										
627.00 > 607.00	4.693	4.683	0.010	1.127	23845	0.6127			398	
75 Perfluorododecanesulfonic acid (PF										
699.00 > 80.00	4.838	4.838	0.0	1.276	75034	0.5518	Target=0.45		198	
699.00 > 99.00	4.838	4.838	0.0	1.276	156380		0.48(0.22-0.67)		1035	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.879	4.879	0.0	1.044	575289	0.9703	Target=3.82		137	
663.00 > 169.00	4.879	4.879	0.0	1.044	169939		3.39(1.91-5.74)		1392	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.067	5.058	0.009	1.477	1423709	2.52		101	10209	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.067	5.067	0.0	1.000	122930	1.07	Target=1.05		378	
713.00 > 219.00	5.067	5.067	0.0	1.000	126854		0.97(0.52-1.57)		382	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 44 13C2 PFHxDA										
815.00 > 770.00	5.413	5.403	0.011	1.578	1342046	2.58		103	6015	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.413	5.413	0.0	1.000	265814	0.5310	Target=3.20		69.9	
813.00 > 169.00	5.413	5.413	0.0	1.000	84558		3.14(1.60-4.80)		737	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.747	5.747	0.0	1.062	188753	0.4868	Target=2.86		73.9	
913.00 > 169.00	5.747	5.747	0.0	1.062	67332		2.80(1.43-4.29)		692	

**QC Flag Legend**

Review Flags

M - Manually Integrated

**Reagents:**

LCPFAS28NCICV\_00003

Amount Added: 100.00

Units: uL

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL012.d

Injection Date: 06-Dec-2019 15:29:46

Instrument ID: LC812

Lims ID: ICV

Client ID:

Operator ID: lc812tech

ALS Bottle#: 9

Worklist Smp#: 12

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

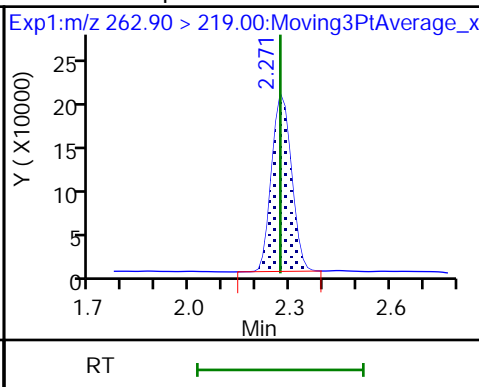
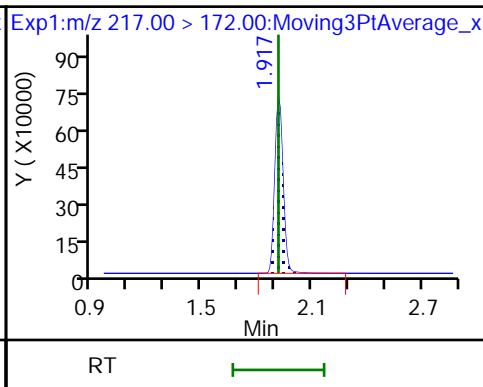
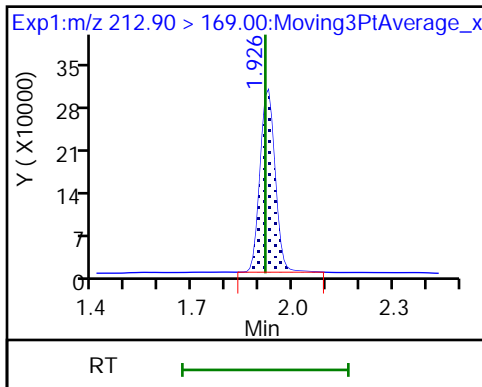
Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

2 Perfluorobutanoic acid

D 1 13C4 PFBA

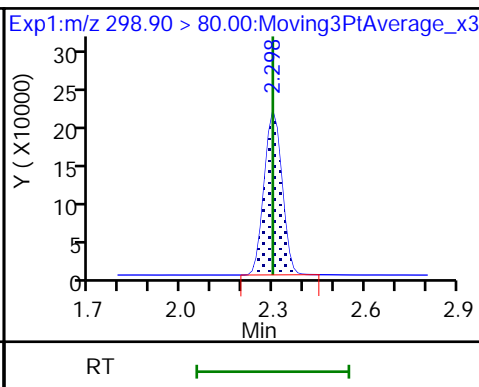
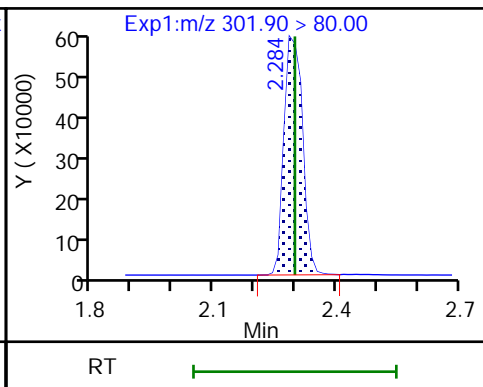
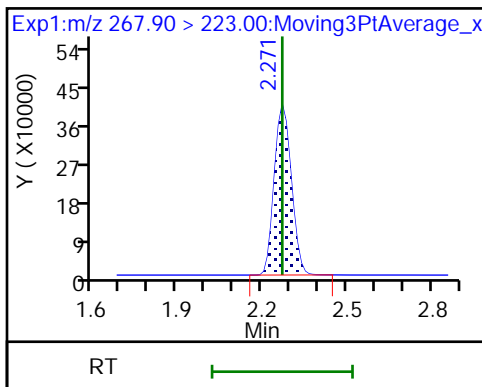
4 Perfluoropentanoic acid



D 3 13C5 PFPeA

D 47 13C3 PFBS

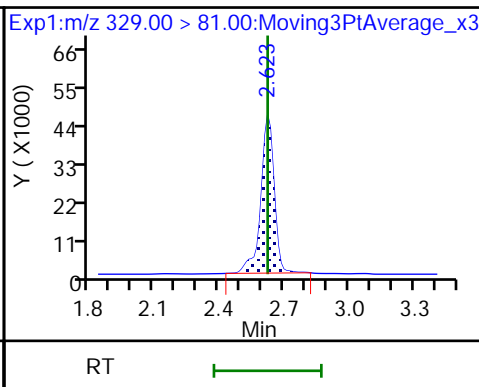
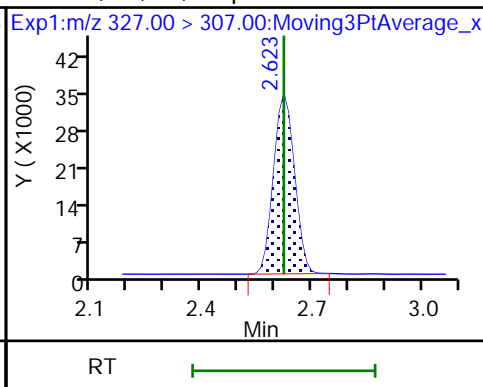
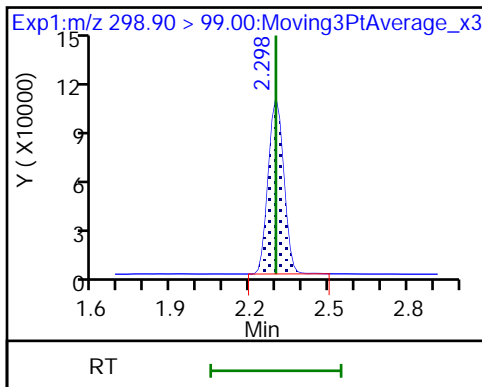
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

61 1H,1H,2H,2H-perfluorohexanesulfonate

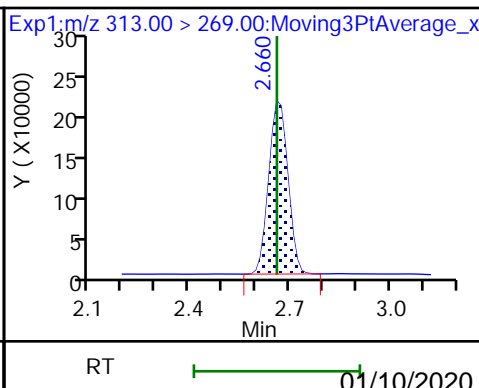
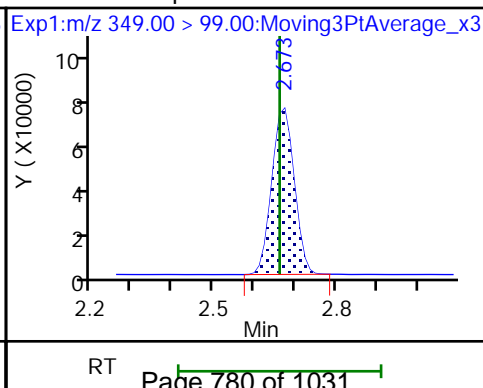
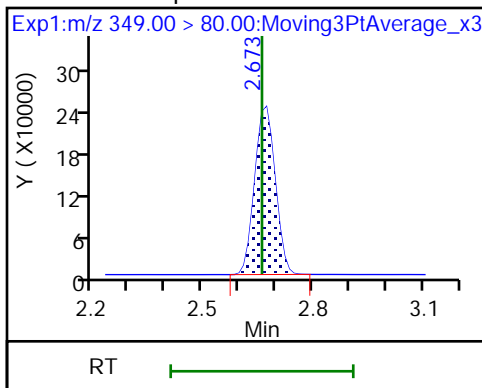
D 60 M2-4:2 FTS



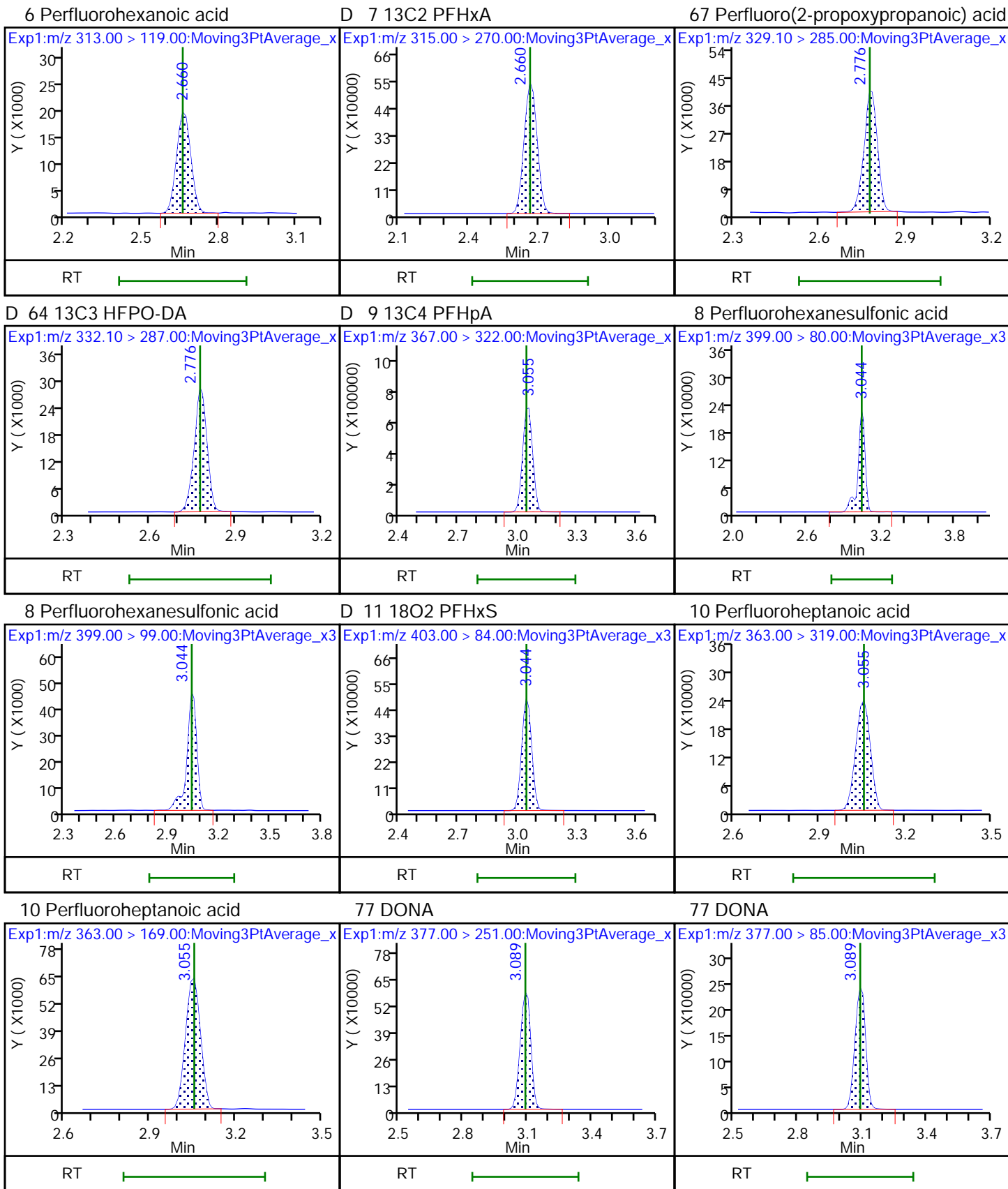
70 Perfluoropentanesulfonic acid

70 Perfluoropentanesulfonic acid

6 Perfluorohexanoic acid

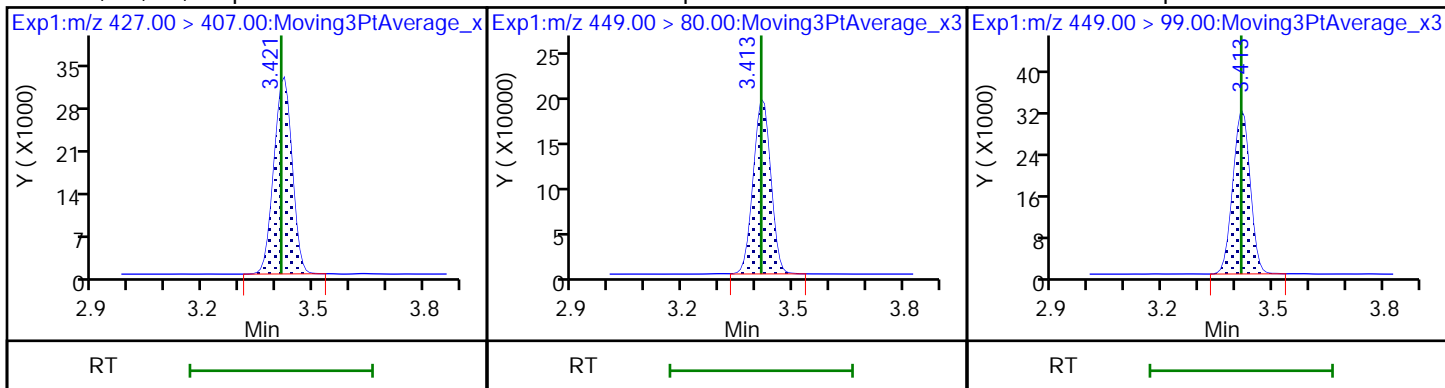






13 1H,1H,2H,2H-perfluorooctanesulfonyl 16 Perfluoroheptanesulfonic acid

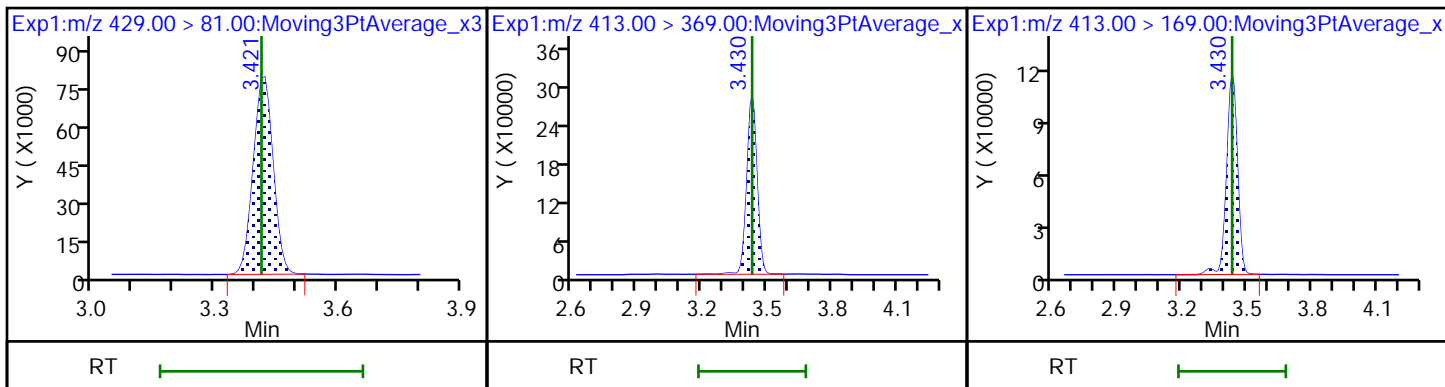
16 Perfluoroheptanesulfonic acid



D 12 M2-6:2 FTS

15 Perfluorooctanoic acid

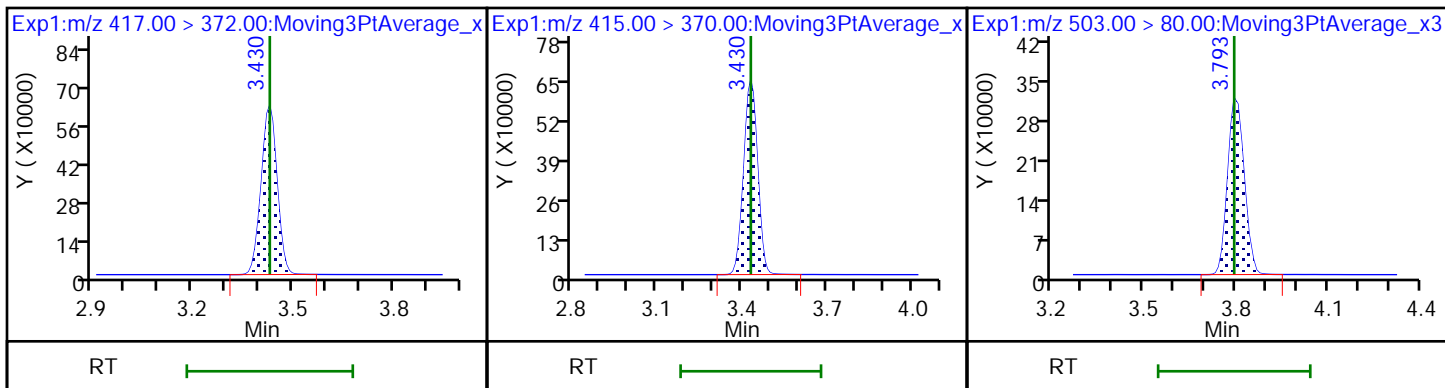
15 Perfluorooctanoic acid



D 14 13C4 PFOA

\* 62 13C2 PFOA

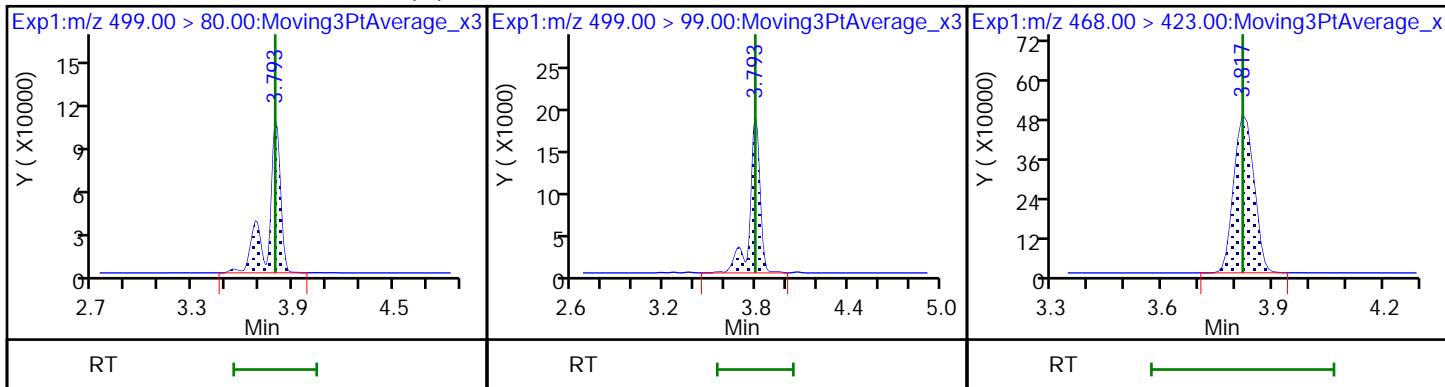
D 18 13C4 PFOS

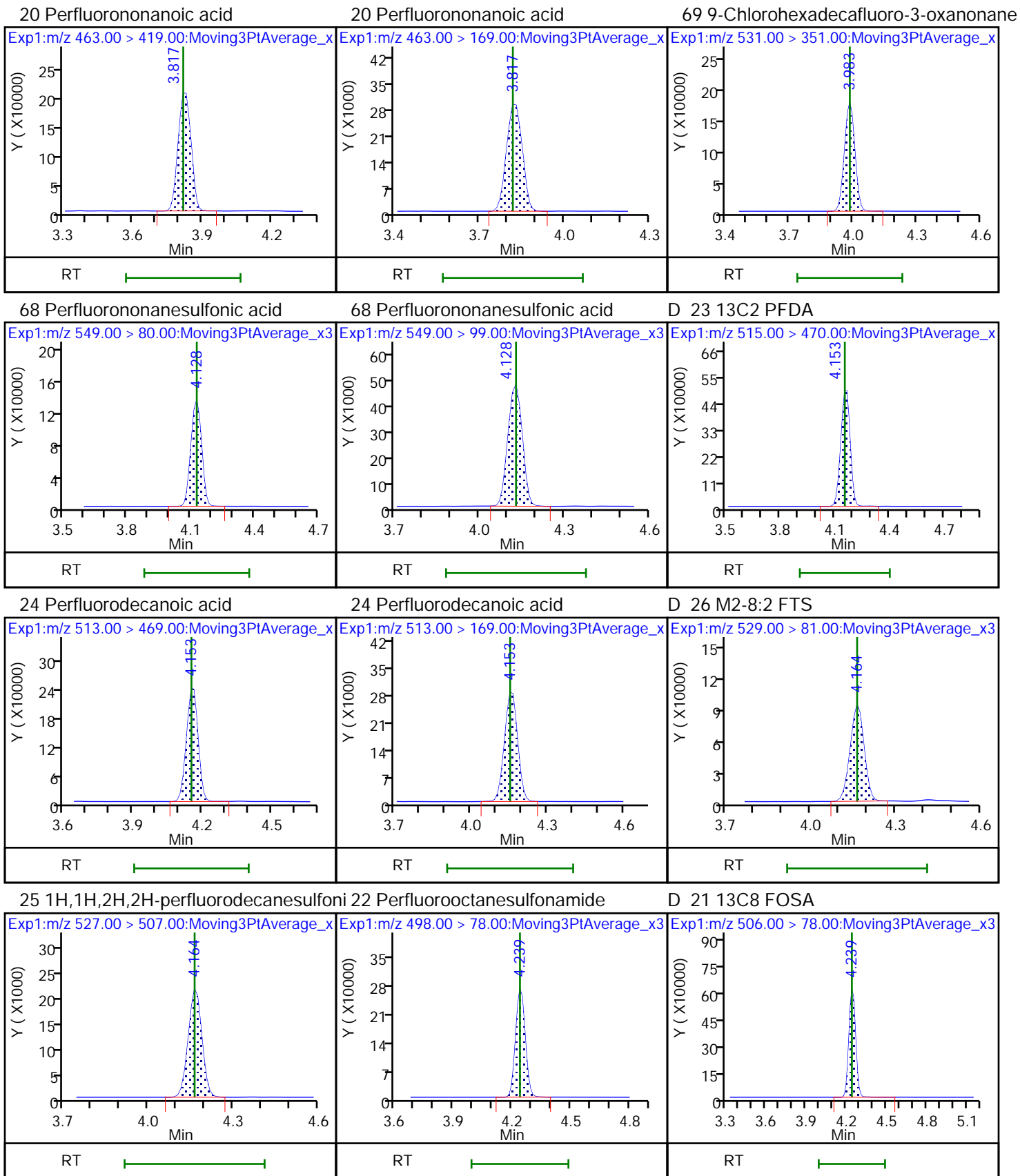


17 Perfluorooctanesulfonic acid (M)

17 Perfluorooctanesulfonic acid

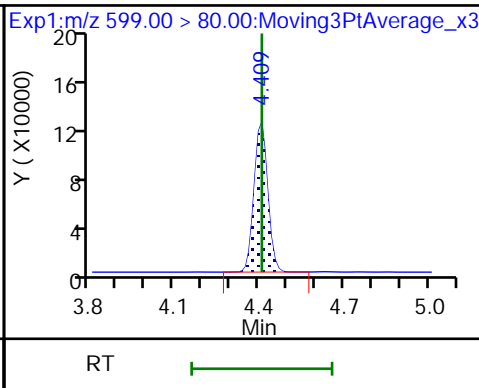
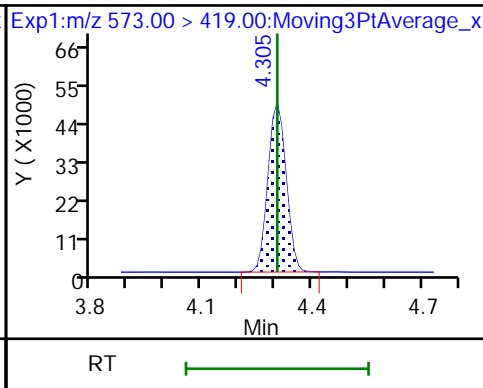
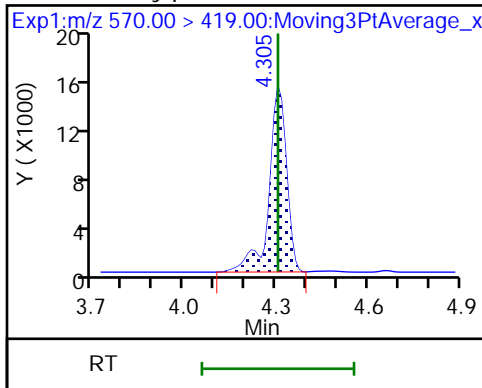
D 19 13C5 PFNA





28 N-methylperfluorooctanesulfonamidD 27 d3-NMeFOSAA

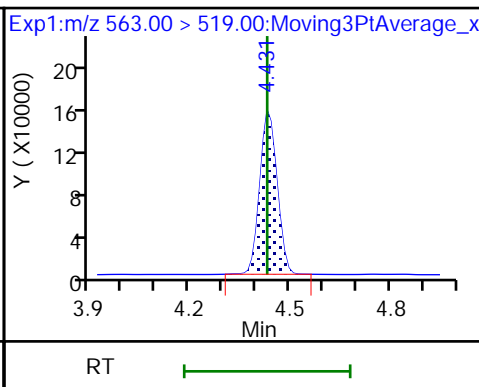
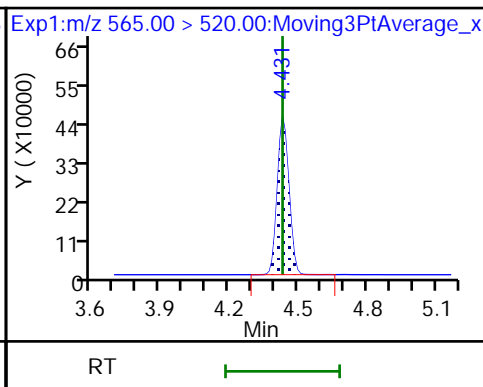
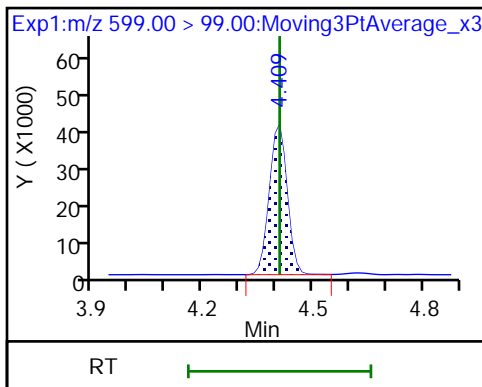
29 Perfluorodecanesulfonic acid



29 Perfluorodecanesulfonic acid

D 30 13C2 PFUoA

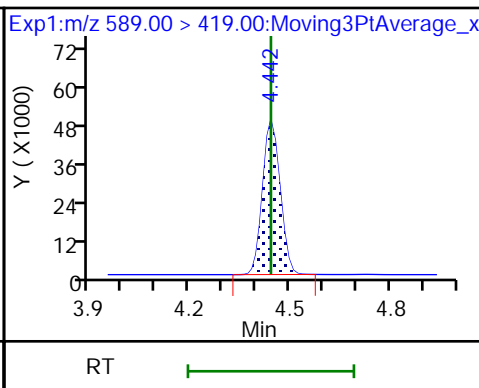
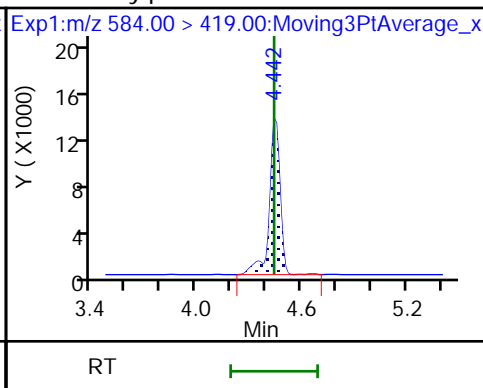
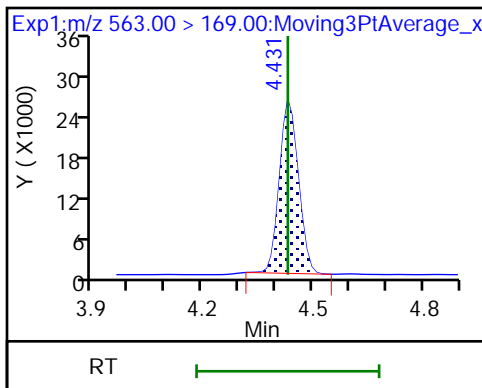
31 Perfluoroundecanoic acid



31 Perfluoroundecanoic acid

33 N-ethylperfluorooctanesulfonamidD

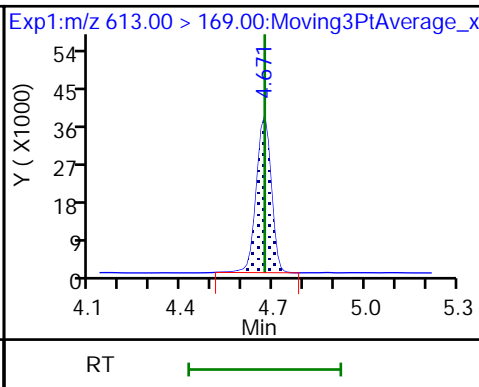
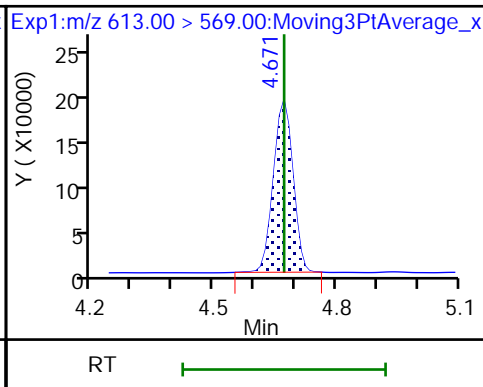
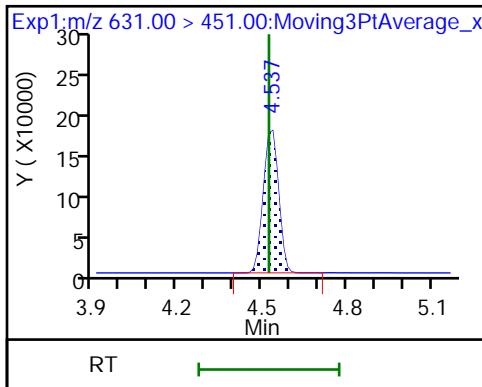
32 d5-NEtFOSAA



66 11-Chloroeicosafuoro-3-oxaundecan

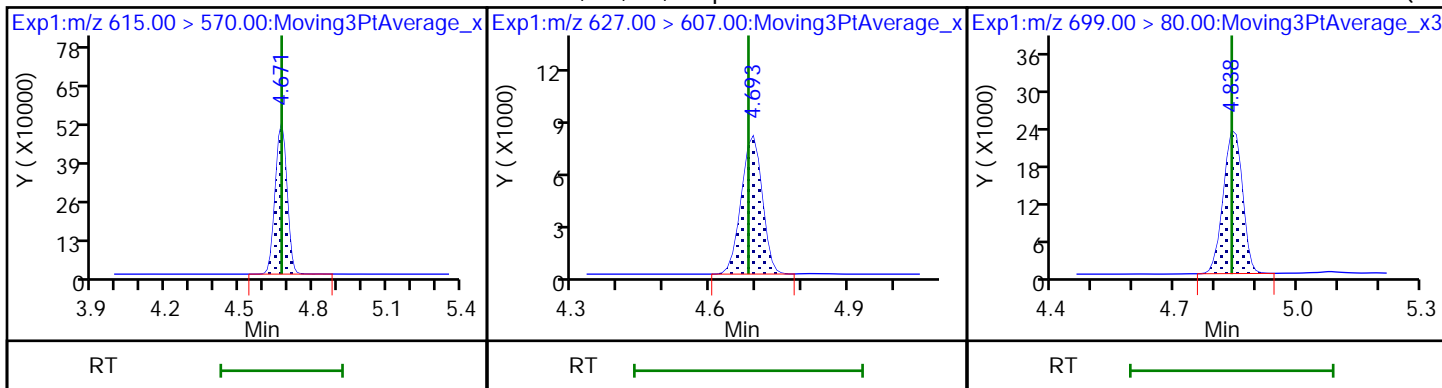
37 Perfluorododecanoic acid

37 Perfluorododecanoic acid



D 36 13C2 PFDaA

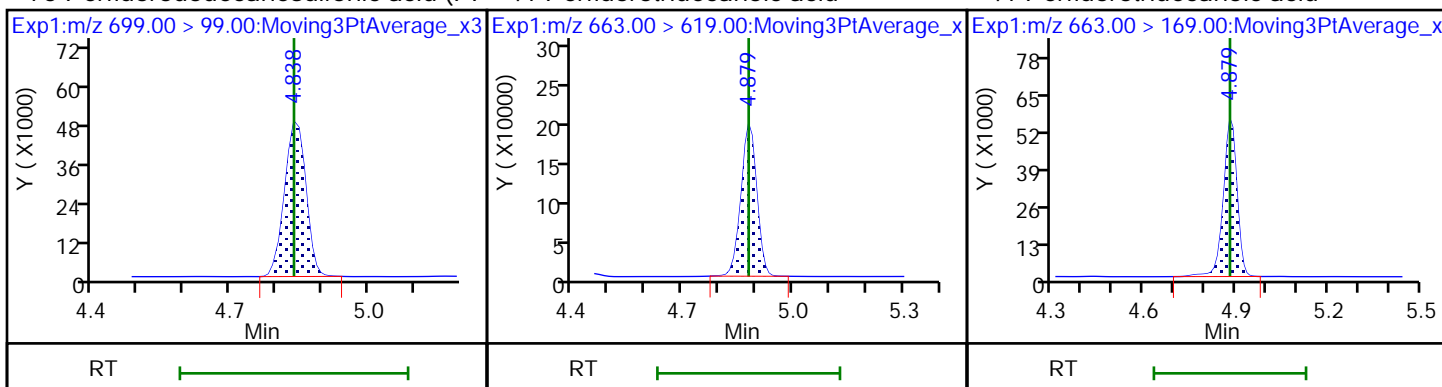
74 1H,1H,2H,2H-perfluorododecanesulfo75 Perfluorododecanesulfonic acid (PF



75 Perfluorododecanesulfonic acid (PF

41 Perfluorotridecanoic acid

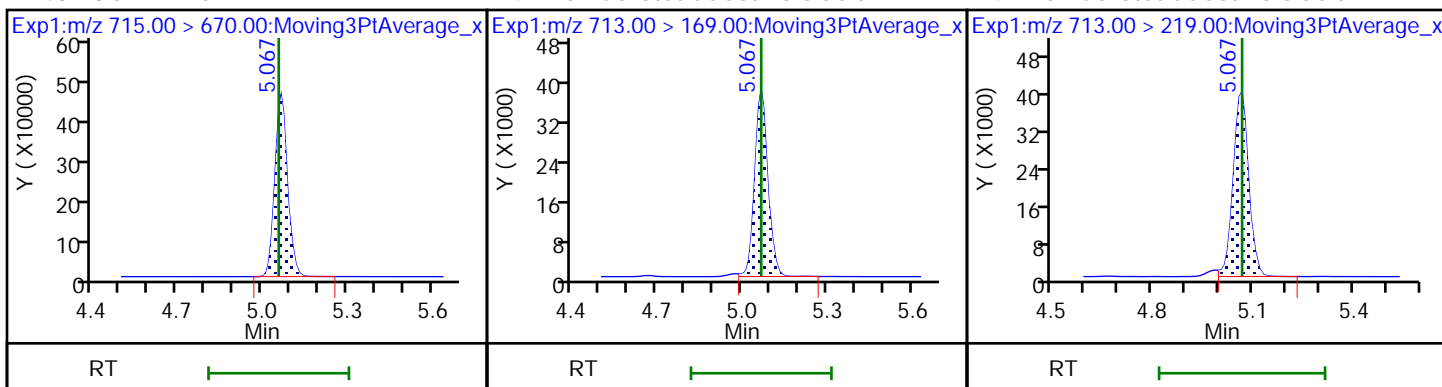
41 Perfluorotridecanoic acid



D 43 13C2 PFTeDA

42 Perfluorotetradecanoic acid

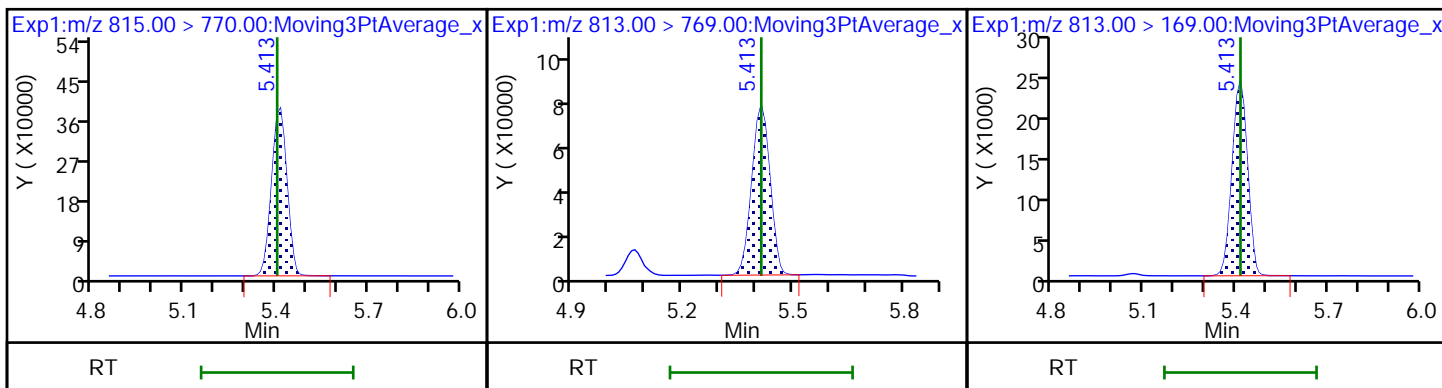
42 Perfluorotetradecanoic acid



D 44 13C2 PFHxDA

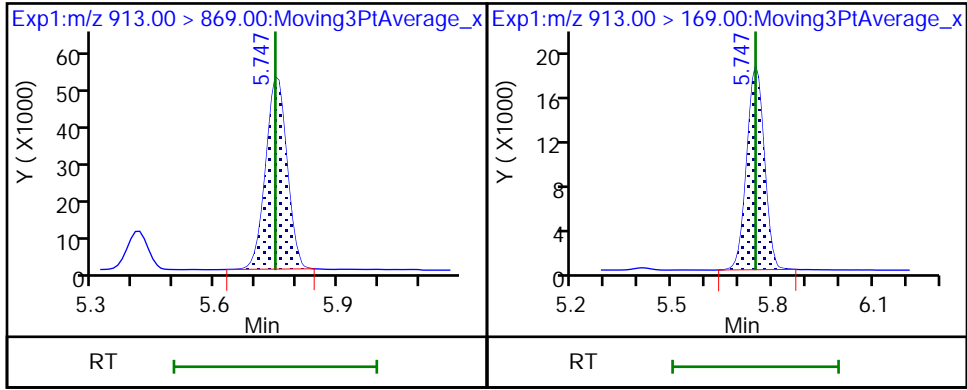
45 Perfluorohexadecanoic acid

45 Perfluorohexadecanoic acid



46 Perfluorooctadecanoic acid

46 Perfluorooctadecanoic acid



Eurofins TestAmerica, Burlington

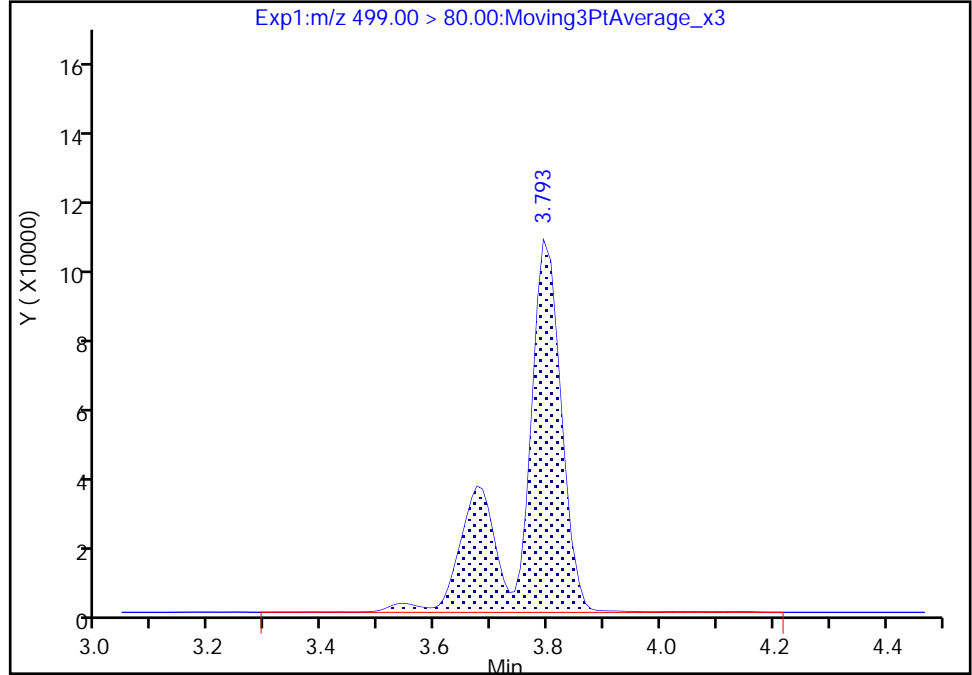
Data File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL012.d  
Injection Date: 06-Dec-2019 15:29:46 Instrument ID: LC812  
Lims ID: ICV  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 12  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

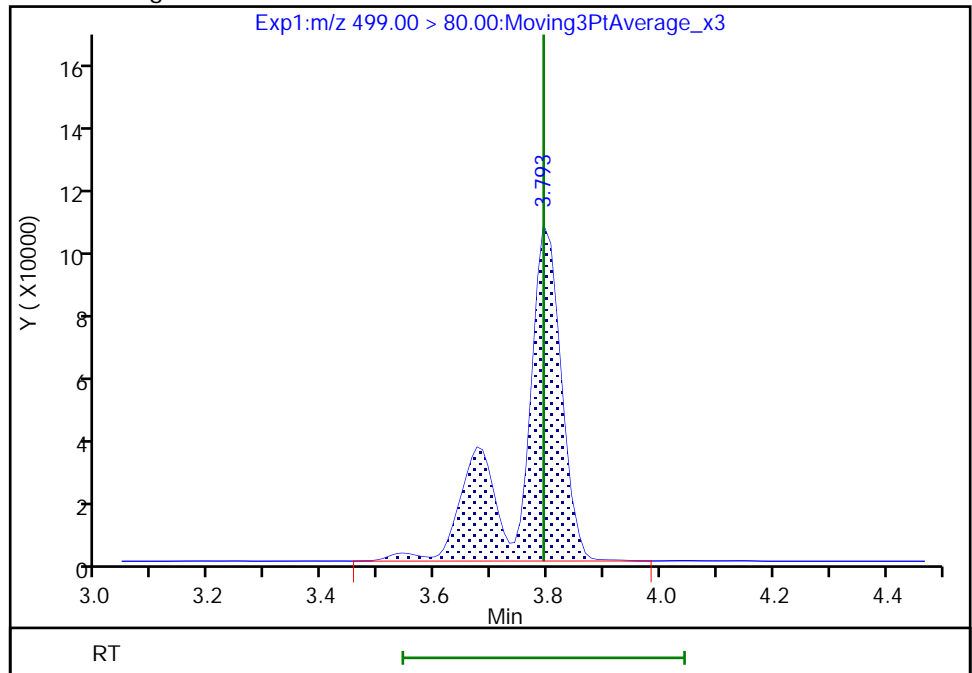
RT: 3.79  
Area: 547411  
Amount: 1.020048  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 543860  
Amount: 1.013431  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 06-Dec-2019 15:48:11  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

FORM VII  
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVL 200-150985/1 Calibration Date: 12/24/2019 13:56  
 Instrument ID: LC812 Calib Start Date: 12/06/2019 14:32  
 GC Column: C-18 ID: 4.60 (mm) Calib End Date: 12/06/2019 15:13  
 Lab File ID: SC122319B001.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.9949	1.199		60.3	50.0	20.5	50.0
Perfluoropentanoic acid (PFPeA)	AveID	1.132	1.336		59.0	50.0	18.0	50.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.087	1.385		56.3	44.2	27.4	50.0
1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2)	AveID	1.732	1.724		465	467	-0.5	50.0
Perfluorohexanoic acid (PFHxA)	AveID	1.021	1.249		61.2	50.0	22.4	50.0
Perfluoropentanesulfonic acid	AveID	1.161	1.369		55.3	46.9	17.9	50.0
HFPO-DA	AveID	3.591	2.727		38.0	50.0	-24.0	50.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.132	1.474		59.3	45.5	30.2	50.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.057	1.119		52.9	50.0	5.9	50.0
DONA	AveID	3.533	3.890		51.9	47.1	10.1	50.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	1.225	1.376		53.5	47.6	12.4	50.0
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	AveID	0.9437	0.7953		399	474	-15.7	50.0
Perfluorooctanoic acid (PFOA)	AveID	1.110	1.375		62.0	50.0	23.9	50.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.080	1.125		48.3	46.4	4.2	50.0
Perfluorononanoic acid (PFNA)	AveID	0.9805	1.131		57.7	50.0	15.3	50.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	1.233	1.135		42.9	46.6	-7.9	50.0
Perfluorononanesulfonic acid	AveID	0.8262	0.7385		42.9	48.0	-10.6	50.0
Perfluorodecanoic acid (PFDA)	AveID	0.9675	1.246		64.4	50.0	28.8	50.0
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	AveID	0.4616	0.4899		508	479	6.1	50.0
Perfluorooctanesulfonamide (PFOSA)	AveID	0.995	1.198		60.2	50.0	20.4	50.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	AveID	0.8689	0.7809		449	500	-10.1	50.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.7196	0.7956		53.3	48.2	10.6	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.8479	1.271		75.0	50.0	49.9	50.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.8277	0.7392		447	500	-10.7	50.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.163	1.098		44.5	47.1	-5.6	50.0
Perfluorododecanoic acid (PFDoA)	AveID	0.9240	0.9697		52.5	50.0	4.9	50.0
10:2 FTS	AveID	0.2931	0.2891		475	482	-1.4	50.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.2736	0.3374		59.7	48.4	23.3	50.0
Perfluorotridecanoic acid (PFTriA)	AveID	0.8778	0.9472		54.0	50.0	7.9	50.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.2009	0.2743		68.3	50.0	36.5	50.0



FORM VII  
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVL 200-150985/1 Calibration Date: 12/24/2019 13:56  
 Instrument ID: LC812 Calib Start Date: 12/06/2019 14:32  
 GC Column: C-18 ID: 4.60 (mm) Calib End Date: 12/06/2019 15:13  
 Lab File ID: SC122319B001.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluoro-n-hexadecanoic acid (PFHxDA)	L1ID		1.515		56.3	50.0	12.6	50.0
Perfluoro-n-octadecanoic acid (PFODA)	AveID	0.7223	0.7332		50.8	50.0	1.5	50.0
13C4 PFBA	Ave	1.059	1.089		2570	2500	2.8	50.0
13C5 PFPeA	Ave	0.8099	0.8430		2600	2500	4.1	50.0
13C3 PFBS	Ave	0.9661	0.9592		2310	2330	-0.7	50.0
M2-4:2 FTS	Ave	0.0901	0.0723		1870	2340	-19.8	50.0
13C2 PFHxA	Ave	0.9031	0.9075		2510	2500	0.5	50.0
13C3 HFPO-DA	Ave	0.0394	0.0715		4540	2500	81.4*	50.0
1802 PFHxS	Ave	0.7630	0.8144		2520	2370	6.7	50.0
13C4 PFHpA	Ave	0.8562	1.004		2930	2500	17.3	50.0
M2-6:2 FTS	Ave	0.1311	0.1143		2070	2380	-12.8	50.0
13C4 PFOA	Ave	0.9086	0.9137		2510	2500	0.6	50.0
13C4 PFOS	Ave	0.6053	0.6488		2560	2390	7.2	50.0
13C5 PFNA	Ave	0.8355	0.7878		2360	2500	-5.7	50.0
13C2 PFDA	Ave	0.8233	0.7944		2410	2500	-3.5	50.0
M2-8:2 FTS	Ave	0.1562	0.1369		2100	2400	-12.3	50.0
13C8 FOSA	Ave	1.077	0.9854		2290	2500	-8.5	50.0
d3-NMeFOSAA	Ave	0.0793	0.0764		2410	2500	-3.7	50.0
13C2 PFUnA	Ave	0.6999	0.6442		2300	2500	-8.0	50.0
d5-NEtFOSAA	Ave	0.0879	0.0806		2290	2500	-8.3	50.0
13C2 PFDoA	Ave	0.7677	0.7718		2510	2500	0.5	50.0
13C2 PFTeDA	Ave	0.6433	0.6058		2350	2500	-5.8	50.0
13C2 PFHxDA	Ave	0.5918	0.6339		2680	2500	7.1	50.0

Eurofins TestAmerica, Burlington  
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B001.d  
 Lims ID: CCVL  
 Client ID:  
 Sample Type: CCVL  
 Inject. Date: 24-Dec-2019 13:56:03 ALS Bottle#: 1 Worklist Smp#: 1  
 Injection Vol: 20.0 ul Dil. Factor: 1.0000  
 Sample Info: CCVL  
 Misc. Info.: 200-0039355-001 Plate: 1 Rack: 2  
 Operator ID: lc812tech Instrument ID: LC812  
 Sublist: chrom-PFC\_LC812\*sub3  
 Method: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\PFC\_LC812.m  
 Limit Group: LC\_PFC\_ICAL  
 Last Update: 30-Dec-2019 15:05:59 Calib Date: 06-Dec-2019 15:13:26  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Column 1 : C-18 ( 4.60 mm) Det: EXP1  
 Process Host: CTX0304

First Level Reviewer: chirgwinb Date: 24-Dec-2019 14:25:44

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	1.917	1.908	0.009	0.559	1704515	2.57	103	2691	
2 Perfluorobutanoic acid										M
212.90 > 169.00	1.917	1.908	0.009	1.000	40871	0.0603		121	13.3	M
D 3 13C5 PFPeA	267.90 > 223.00	2.271	2.257	0.014	0.662	1320019	2.60	104	5550	
4 Perfluoropentanoic acid										M
262.90 > 219.00	2.271	2.271	0.0	1.000	35263	0.0590		118	4.0	M
D 47 13C3 PFBS	301.90 > 80.00	2.285	2.285	0.0	0.666	1396881	2.31	99.3	479460	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.298	2.285	0.013	1.006	36778	0.0563	Target=2.03	127	146	
298.90 > 99.00	2.298	2.285	0.013	1.006	19133		1.92(1.01-3.04)		42.4	
D 60 M2-4:2 FTS	329.00 > 81.00	2.623	2.611	0.012	0.765	105707	1.87	80.2	270	
61 1H,1H,2H,2H-perfluorohexanesulfoni										
327.00 > 307.00	2.623	2.611	0.012	1.000	36454	0.4649		99.5	827	
D 7 13C2 PFHxA	315.00 > 270.00	2.661	2.648	0.013	0.776	1421090	2.51	100	6115	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.661	2.661	0.0	1.000	35507	0.0612	Target=13.76	122	19.8	
313.00 > 119.00	2.661	2.661	0.0	1.000	2789		12.73(6.88-20.64)		9.7	
70 Perfluoropentanesulfonic acid										
349.00 > 80.00	2.661	2.661	0.0	0.874	32754	0.0553	Target=3.50	118	331	
349.00 > 99.00	2.673	2.661	0.012	0.878	8938		3.66(1.75-5.25)		58.5	
D 64 13C3 HFPO-DA	332.10 > 287.00	2.784	2.768	0.016	0.812	112029	4.54	181	1533	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
67 Perfluoro(2-propoxypropanoic) acid										M
329.10 > 285.00	2.776	2.776	0.0	0.997	6111	0.0380		76.0	3.0	M
D 11 18O2 PFHxS										
403.00 > 84.00	3.044	3.044	0.0	0.887	1206417	2.52		107	4546	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.044	3.044	0.0	1.000	34214	0.0593	Target=3.90	130	115	M
399.00 > 99.00	3.044	3.044	0.0	1.000	8279		4.13(1.95-5.85)	42.7		M
D 9 13C4 PFHpA										
367.00 > 322.00	3.055	3.044	0.011	0.891	1572071	2.93		117	9409	
10 Perfluoroheptanoic acid										M
363.00 > 319.00	3.055	3.044	0.011	1.000	35190	0.0529	Target=3.95	106	27.2	M
363.00 > 169.00	3.044	3.044	0.0	0.996	11051		3.18(1.97-5.92)	49.3		
77 DONA										
377.00 > 251.00	3.090	3.089	0.001	0.812	74462	0.0519	Target=2.49	110	278	
377.00 > 85.00	3.090	3.089	0.001	0.812	29399		2.53(1.24-3.73)	133		
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.413	3.413	0.0	0.897	26625	0.0535	Target=6.46	112	384	
449.00 > 99.00	3.422	3.413	0.009	0.899	3350		7.95(3.23-9.69)	71.7		
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.422	3.413	0.009	1.000	26998	0.3994		84.3	616	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.422	3.413	0.009	0.998	170099	2.07		87.2	1474	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.430	3.430	0.0	1.000	39348	0.0620	Target=2.40	124	23.2	
413.00 > 169.00	3.430	3.430	0.0	1.000	16915		2.33(1.20-3.60)	125		
D 14 13C4 PFOA										
417.00 > 372.00	3.430	3.430	0.0	1.000	1430777	2.51		101	3055	
* 62 13C2 PFOA										
415.00 > 370.00	3.430	3.430	0.0		1565893	2.50		7055		
D 18 13C4 PFOS										
503.00 > 80.00	3.805	3.793	0.012	1.109	971296	2.56		107	4626	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.805	3.793	0.012	1.000	21208	0.0483	Target=5.74	104	116	M
499.00 > 99.00	3.793	3.793	0.0	0.997	3293		6.44(2.87-8.61)	39.0		M
D 19 13C5 PFNA										
468.00 > 423.00	3.830	3.817	0.013	1.116	1233596	2.36		94.3	5454	
20 Perfluorononanoic acid										M
463.00 > 419.00	3.830	3.817	0.013	1.000	27899	0.0577	Target=7.01	115	16.2	M
463.00 > 169.00	3.830	3.817	0.013	1.000	4650		6.00(3.50-10.51)	111		
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.995	3.984	0.011	1.050	21503	0.0429		92.1	326	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.129	4.129	0.0	1.085	14405	0.0429	Target=3.14	89.4	147	
549.00 > 99.00	4.129	4.129	0.0	1.085	6258		2.30(1.57-4.71)	51.1		
D 23 13C2 PFDA										
515.00 > 470.00	4.164	4.164	0.0	1.214	1243976	2.41		96.5	4656	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
24 Perfluorodecanoic acid										M
513.00 > 469.00	4.164	4.164	0.0	1.000	31006	0.0644	Target=7.28	129	55.0	
513.00 > 169.00	4.164	4.164	0.0	1.000	3922		7.91(3.64-10.91)		39.8	M
25 1H,1H,2H,2H-perfluorodecanesulfonyl										M
527.00 > 507.00	4.175	4.164	0.011	1.000	20125	0.5083		106	227	M
D 26 M2-8:2 FTS										
529.00 > 81.00	4.175	4.175	0.0	1.217	205411	2.10		87.7	1315	
D 21 13C8 FOSA										
506.00 > 78.00	4.218	4.218	0.0	1.230	1543016	2.29		91.5	3447	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.218	4.218	0.0	1.000	36965	0.0602		120	298	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.317	4.305	0.012	1.258	119597	2.41		96.3	1027	
28 N-methylperfluorooctanesulfonamide										
570.00 > 419.00	4.317	4.317	0.0	1.000	18679	0.4493		89.9		
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.420	4.409	0.011	1.162	15584	0.0533	Target=2.76	111	169	
599.00 > 99.00	4.420	4.409	0.011	1.162	5389		2.89(1.38-4.14)		76.0	
D 30 13C2 PFUnA										
565.00 > 520.00	4.443	4.443	0.0	1.295	1008798	2.30		92.0	4381	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.443	4.443	0.0	1.000	25650	0.0750	Target=5.78	150	40.9	
563.00 > 169.00	4.443	4.443	0.0	1.000	5469		4.69(2.89-8.67)		84.4	
33 N-ethylperfluorooctanesulfonamide										M
584.00 > 419.00	4.456	4.456	0.0	1.000	18660	0.4465		89.3	283	M
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.456	4.456	0.0	1.299	126223	2.29		91.7	1018	
66 11-Chloroeicosafluoro-3-oxaundecan										
631.00 > 451.00	4.551	4.551	0.0	1.196	21019	0.0445		94.4	330	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.693	4.683	0.010	1.000	23437	0.0525	Target=5.13	105	7.7	
613.00 > 169.00	4.693	4.683	0.010	1.000	5576		4.20(2.56-7.69)		89.8	
D 36 13C2 PFDaA										
615.00 > 570.00	4.693	4.683	0.010	1.368	1208478	2.51		101	5392	
74 1H,1H,2H,2H-perfluorododecanesulfonyl										
627.00 > 607.00	4.714	4.704	0.010	1.129	11949	0.4754		98.6	353	
75 Perfluorododecanesulfonic acid (PF)										
699.00 > 80.00	4.870	4.870	0.0	1.280	6636	0.0597	Target=0.45	123	19.5	
699.00 > 99.00	4.870	4.870	0.0	1.280	12393		0.54(0.22-0.67)		364	
41 Perfluorotridecanoic acid										M
663.00 > 619.00	4.906	4.906	0.0	1.045	22893	0.0540	Target=3.82	108	9.4	M
663.00 > 169.00	4.906	4.906	0.0	1.045	7532		3.04(1.91-5.74)		139	M
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.108	5.108	0.0	1.000	5204	0.0683	Target=1.05	137	71.2	
713.00 > 219.00	5.108	5.108	0.0	1.000	4766		1.09(0.52-1.57)		95.4	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.108	5.108	0.0	1.489	948671	2.35		94.2	6956	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.500	5.491	0.009	1.002	30083	0.0563	Target=3.20	113	16.9	
813.00 > 169.00	5.491	5.491	0.0	1.000	11292		2.66(1.60-4.80)		266	
D 44 13C2 PFHxDA										
815.00 > 770.00	5.491	5.491	0.0	1.601	992626	2.68		107	5833	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.899	5.899	0.0	1.074	14556	0.0508	Target=2.86	102	6.4	M
913.00 > 169.00	5.894	5.899	-0.005	1.073	5607		2.60(1.43-4.29)		165	M

**QC Flag Legend**

Review Flags

M - Manually Integrated

**Reagents:**

PFAS32NCLOQV\_00003

Amount Added: 100.00

Units: uL

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B001.d

Injection Date: 24-Dec-2019 13:56:03

Instrument ID: LC812

Lims ID: CCVL

Client ID:

Operator ID: lc812tech

ALS Bottle#: 1

Worklist Smp#: 1

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

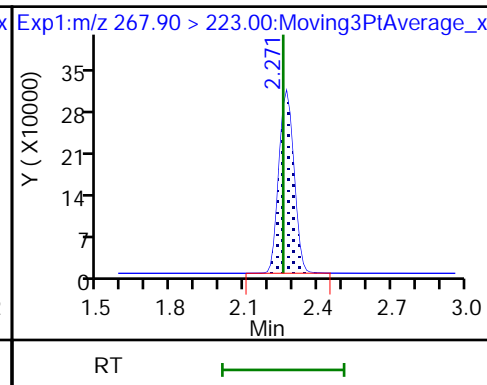
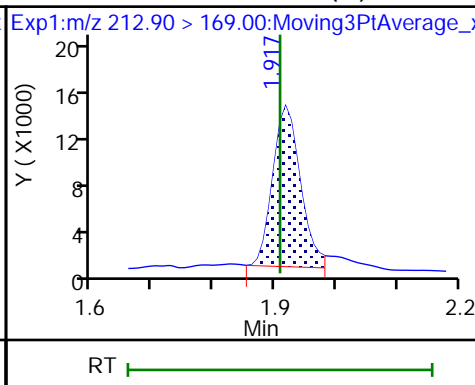
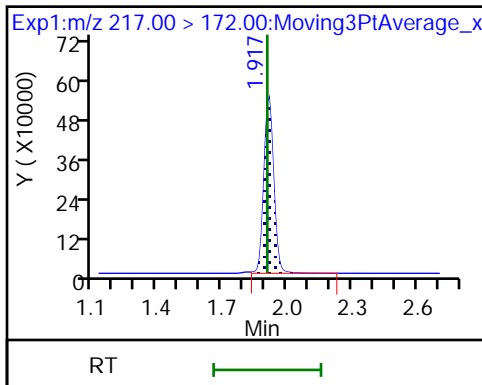
Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid (M)

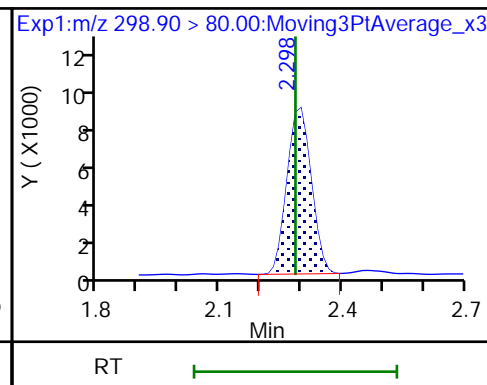
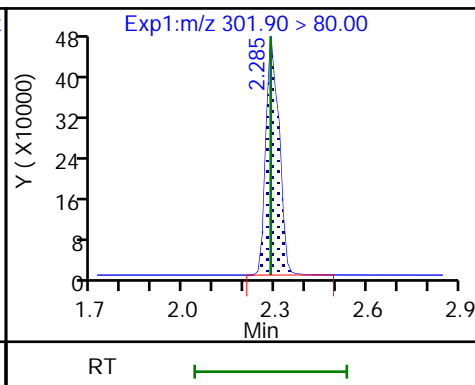
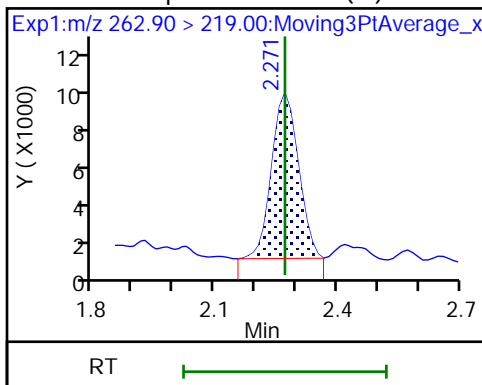
D 3 13C5 PFPeA



4 Perfluoropentanoic acid (M)

D 47 13C3 PFBS

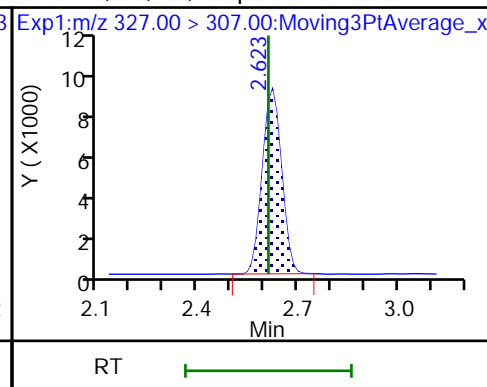
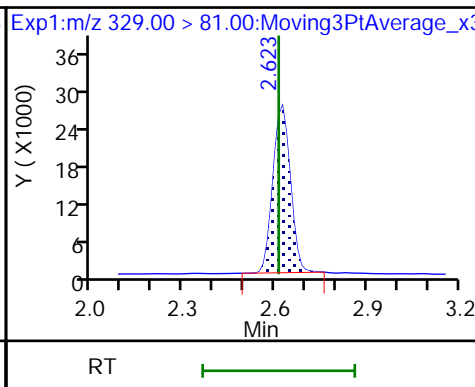
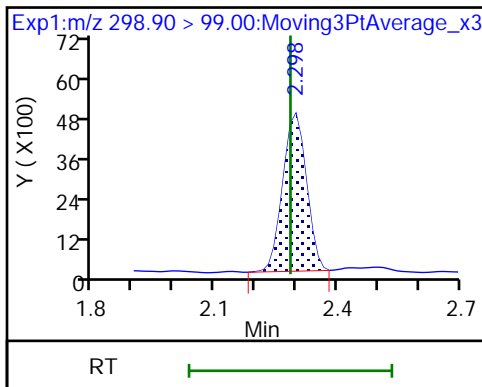
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 60 M2-4:2 FTS

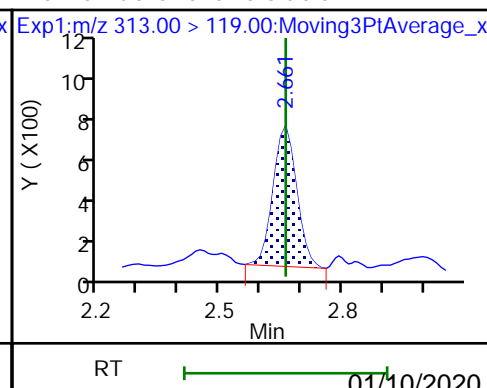
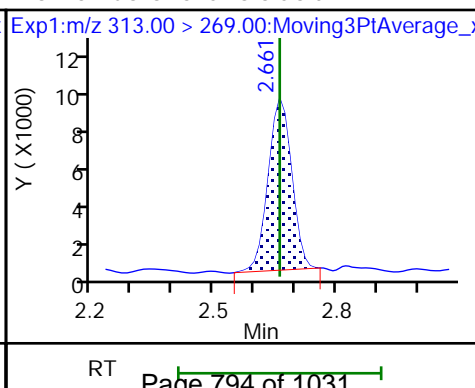
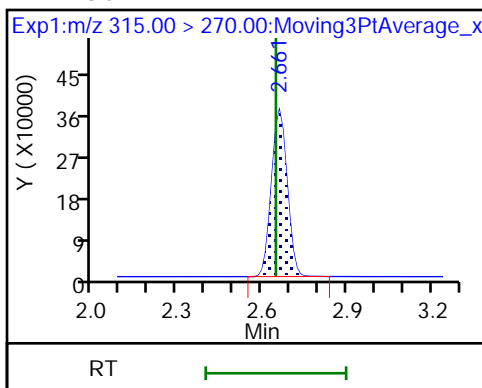
61 1H,1H,2H,2H-perfluorohexanesulfoni

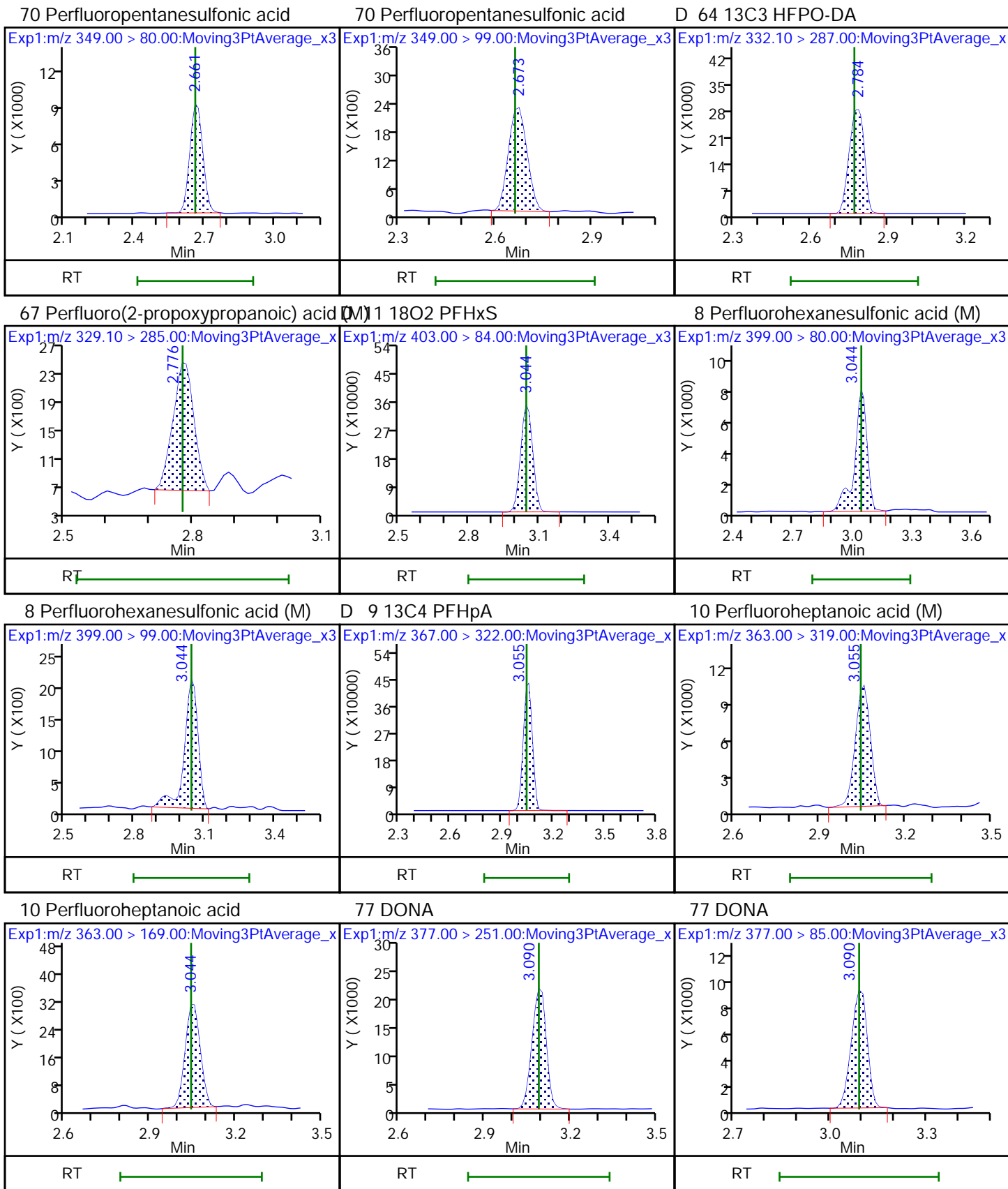


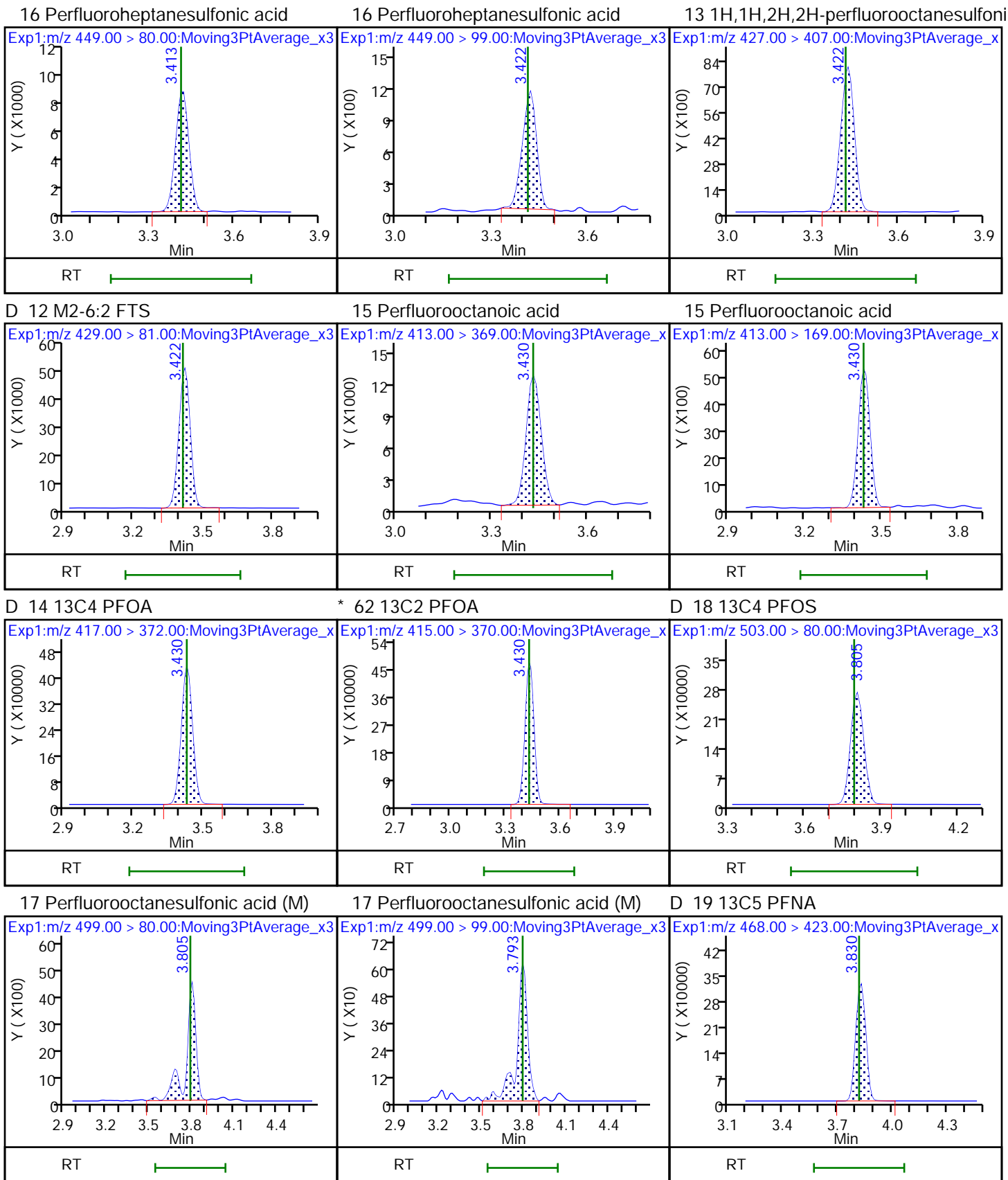
D 7 13C2 PFHxA

6 Perfluorohexanoic acid

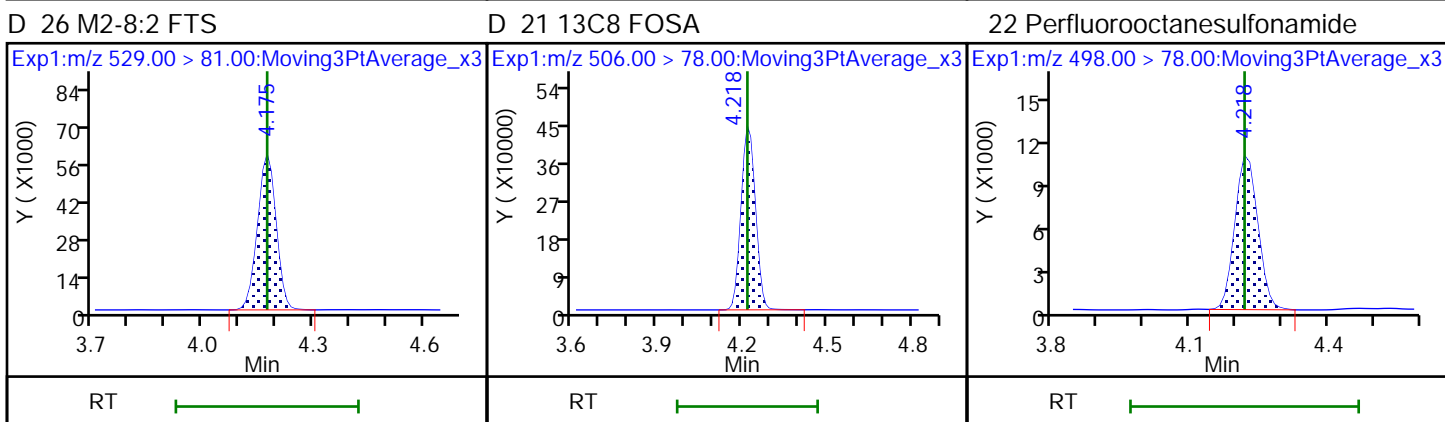
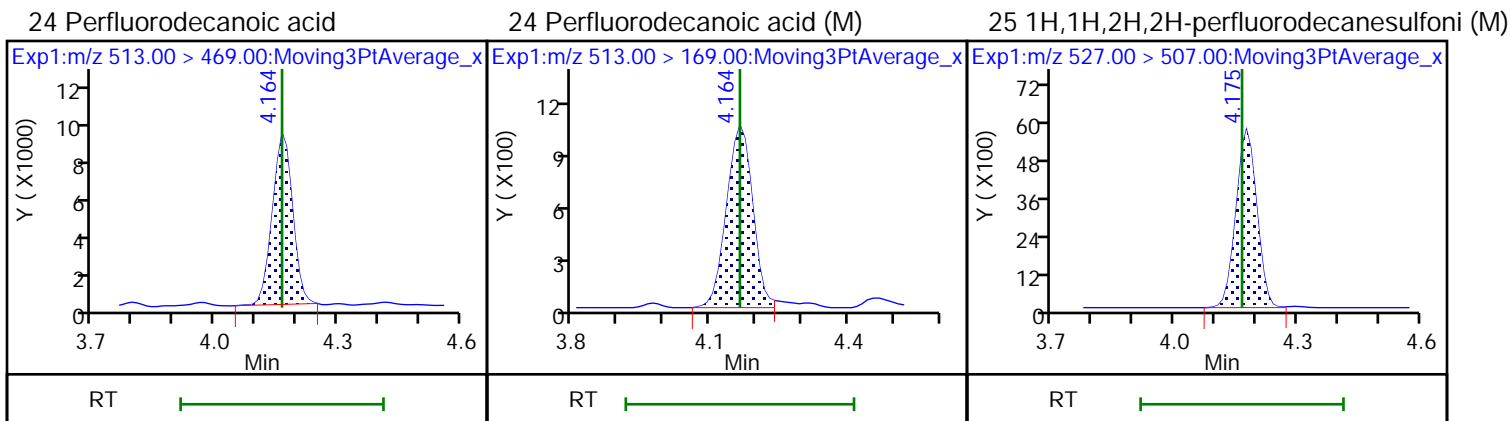
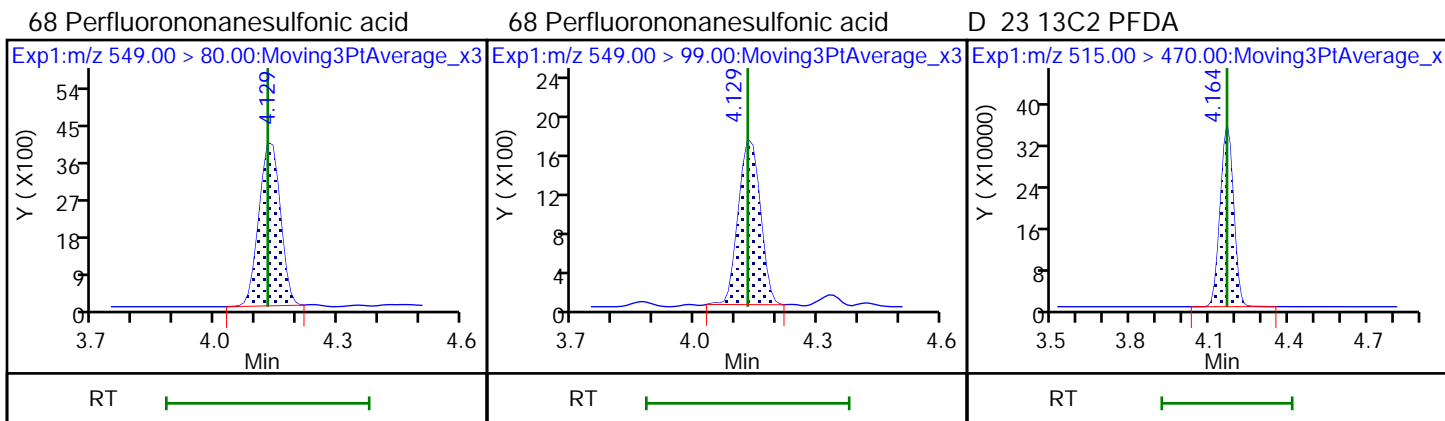
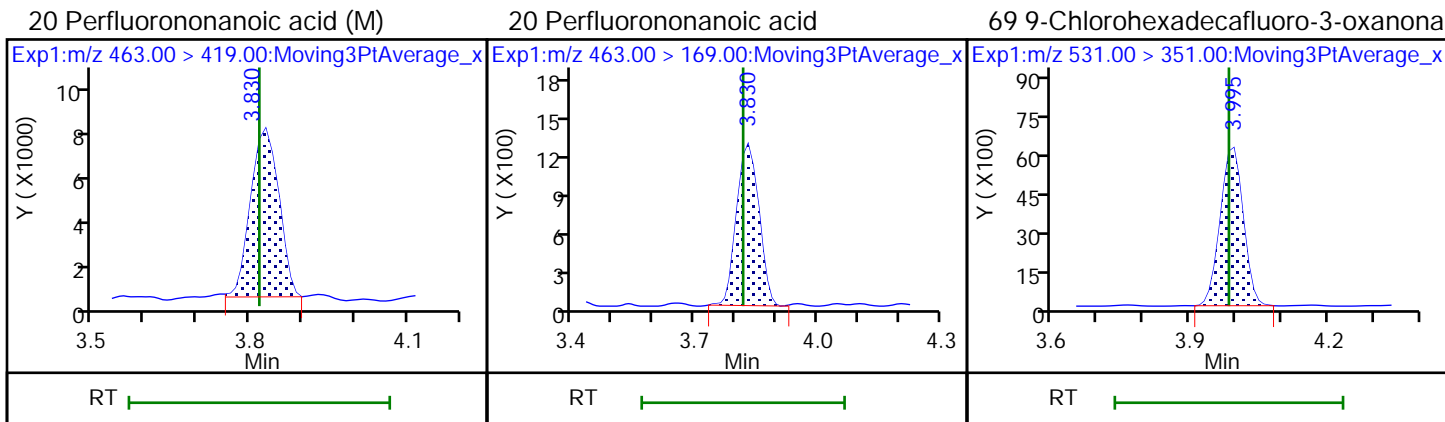
6 Perfluorohexanoic acid





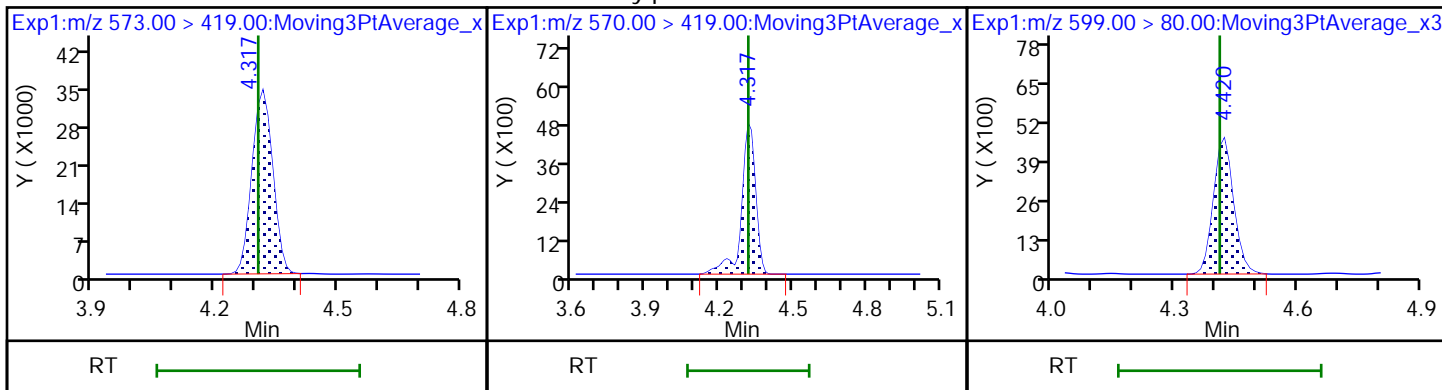






D 27 d3-NMeFOSAA

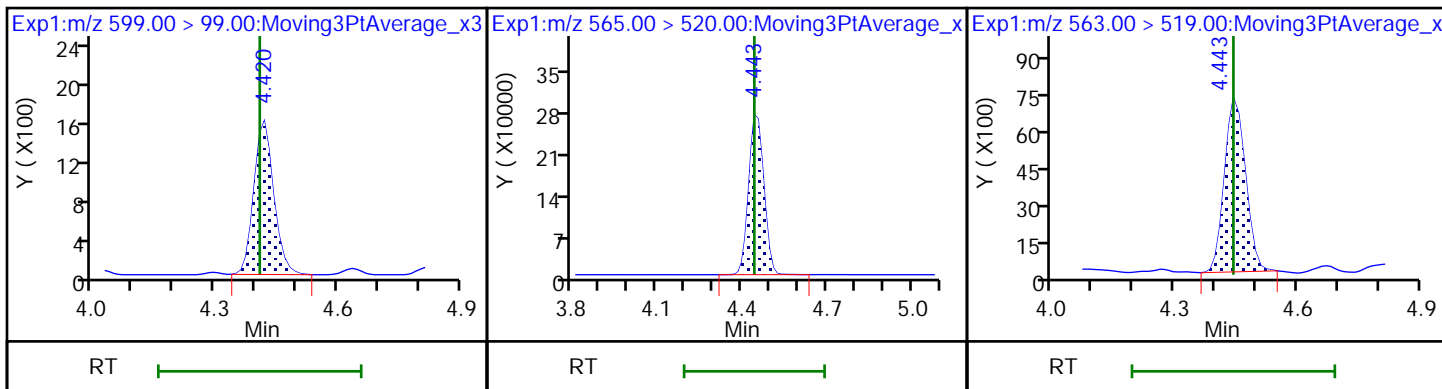
28 N-methylperfluorooctanesulfonamido 29 Perfluorodecanesulfonic acid



29 Perfluorodecanesulfonic acid

D 30 13C2 PFUoA

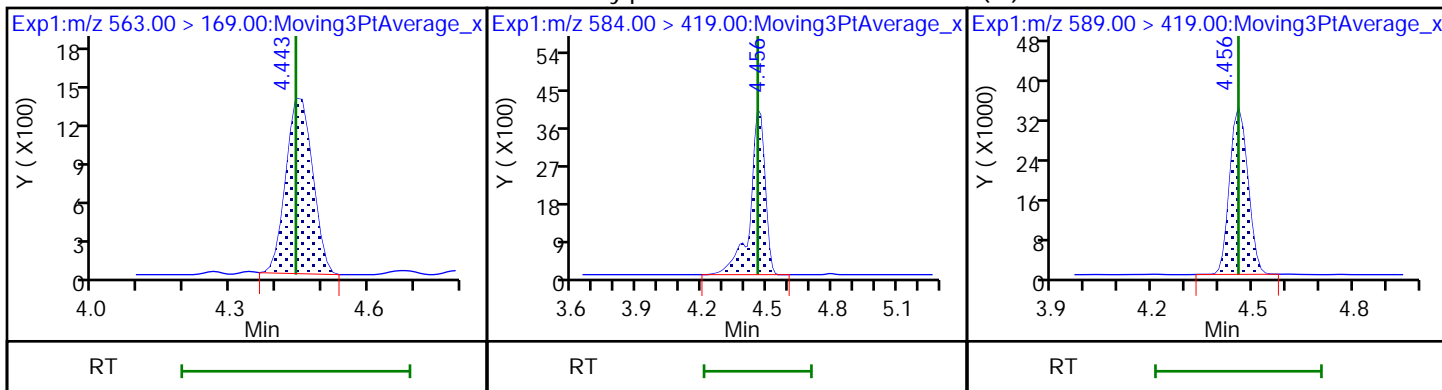
31 Perfluoroundecanoic acid



31 Perfluoroundecanoic acid

33 N-ethylperfluorooctanesulfonamido

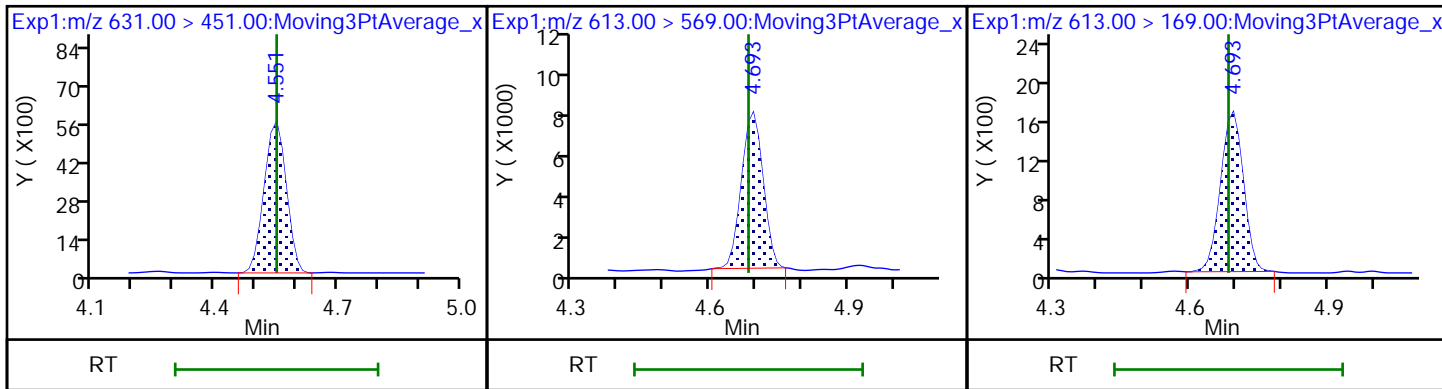
D 32 d5-NEtFOSAA



66 11-Chloroeicosafuoro-3-oxaundecan

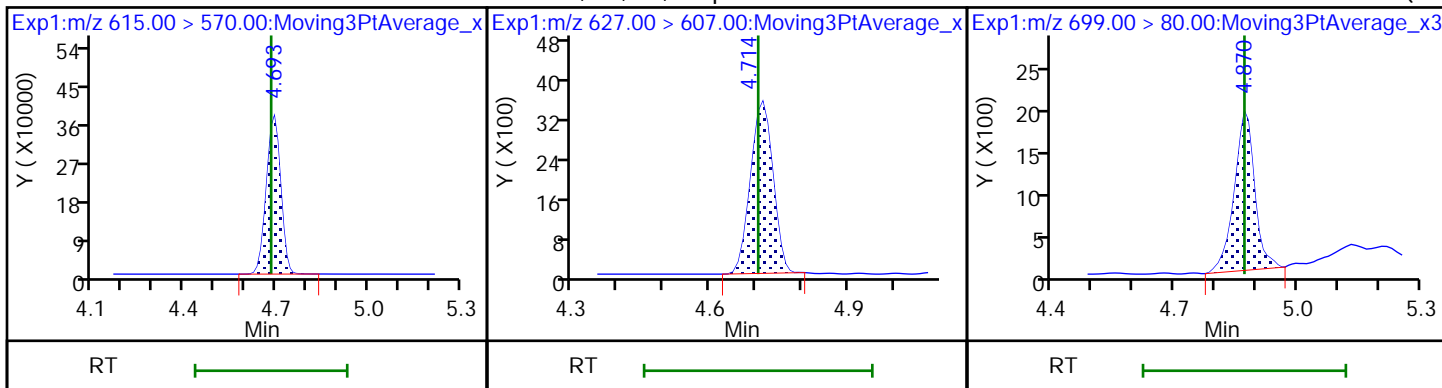
37 Perfluorododecanoic acid

37 Perfluorododecanoic acid



D 36 13C2 PFDaA

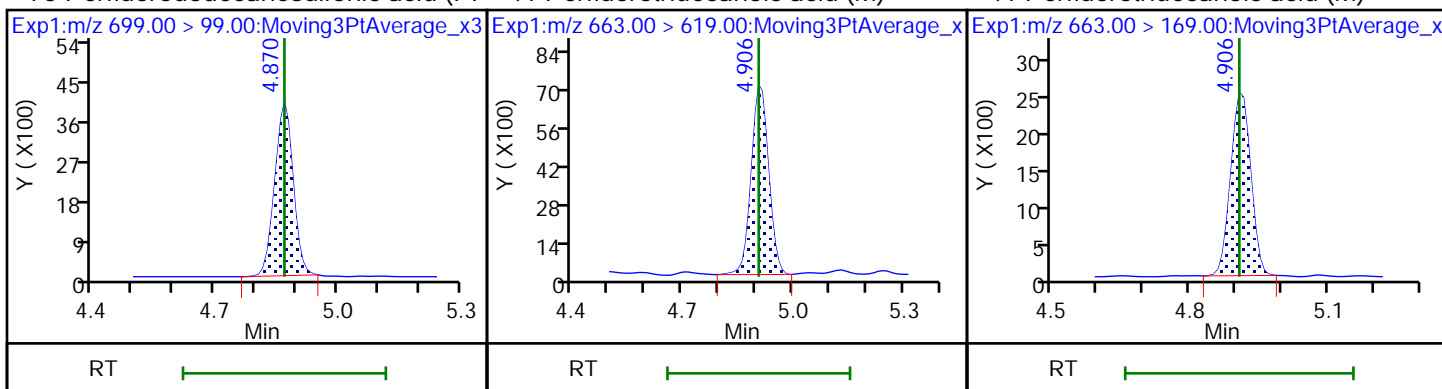
74 1H,1H,2H,2H-perfluorododecanesulfo75 Perfluorododecanesulfonic acid (PF



75 Perfluorododecanesulfonic acid (PF

41 Perfluorotridecanoic acid (M)

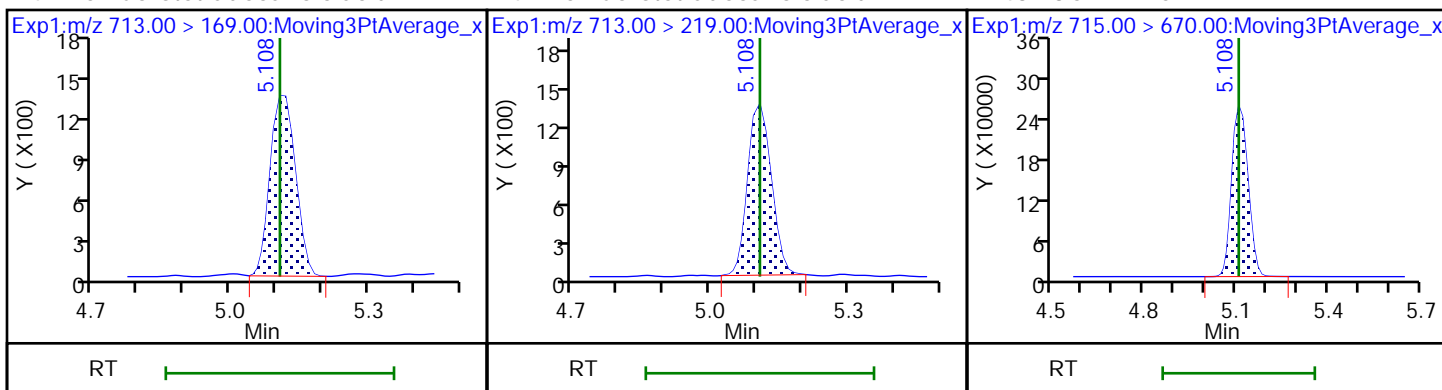
41 Perfluorotridecanoic acid (M)



42 Perfluorotetradecanoic acid

42 Perfluorotetradecanoic acid

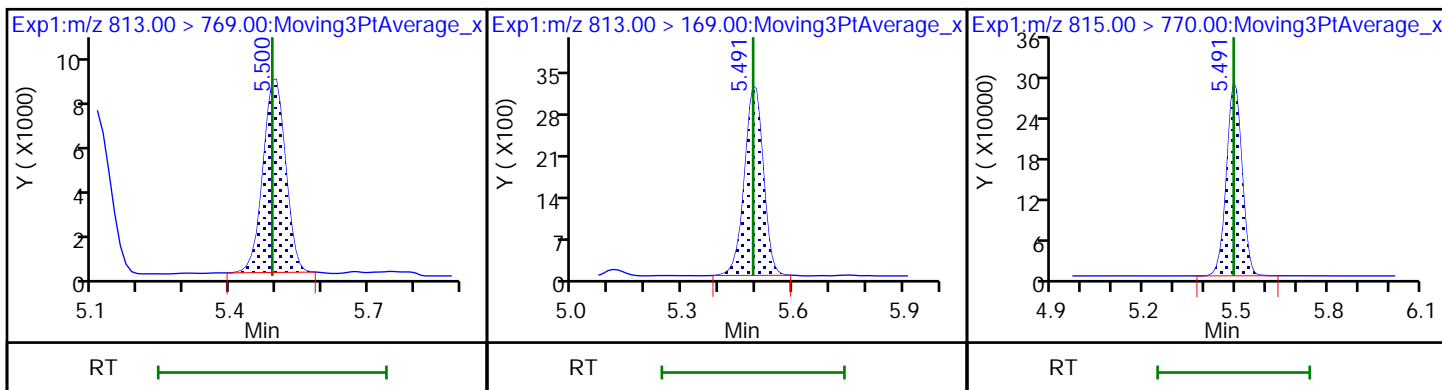
D 43 13C2 PFTeDA



45 Perfluorohexadecanoic acid

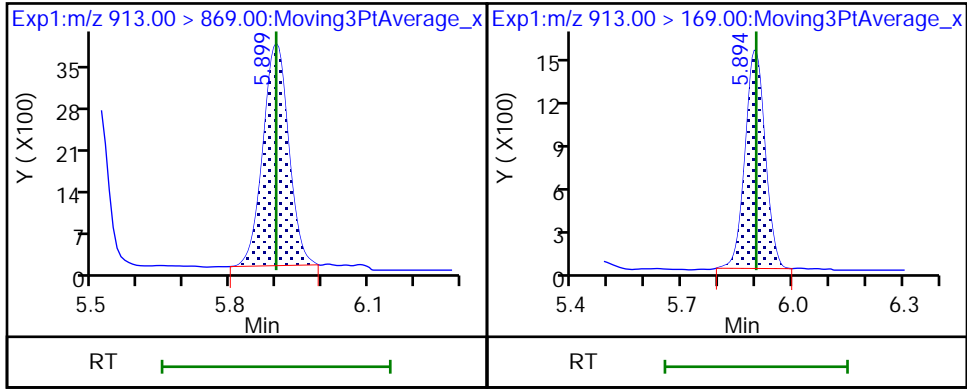
45 Perfluorohexadecanoic acid

D 44 13C2 PFHxDA



46 Perfluorooctadecanoic acid (M)

46 Perfluorooctadecanoic acid (M)



Euofins TestAmerica, Burlington

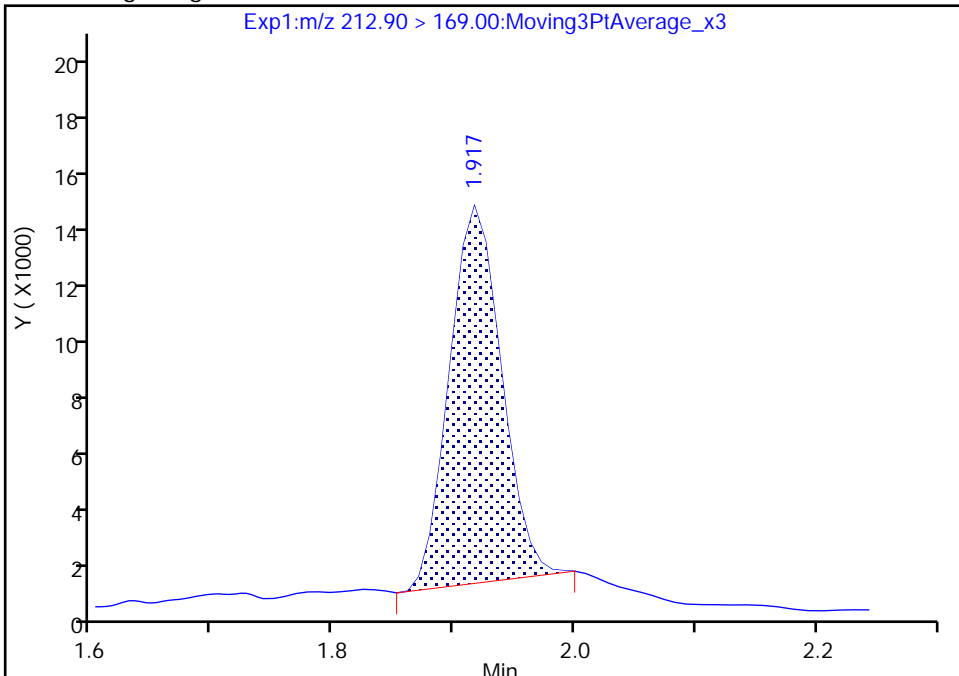
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B001.d  
Injection Date: 24-Dec-2019 13:56:03 Instrument ID: LC812  
Lims ID: CCVL  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 1 Worklist Smp#: 1  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

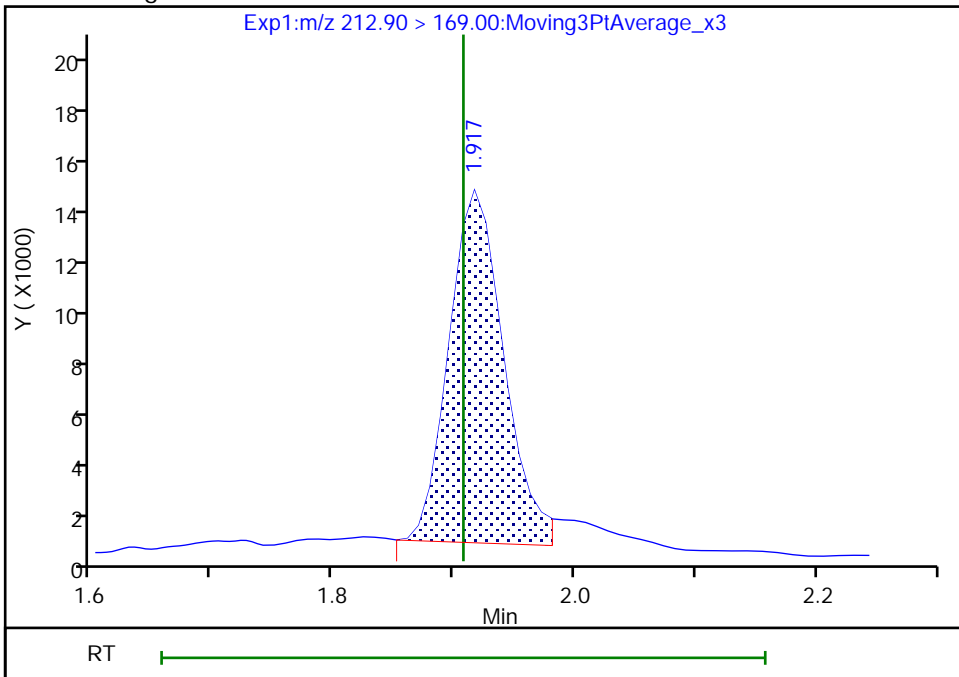
RT: 1.92  
Area: 37698  
Amount: 0.055574  
Amount Units: ng/ml

Processing Integration Results



RT: 1.92  
Area: 40871  
Amount: 0.060252  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 26-Dec-2019 10:02:25  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

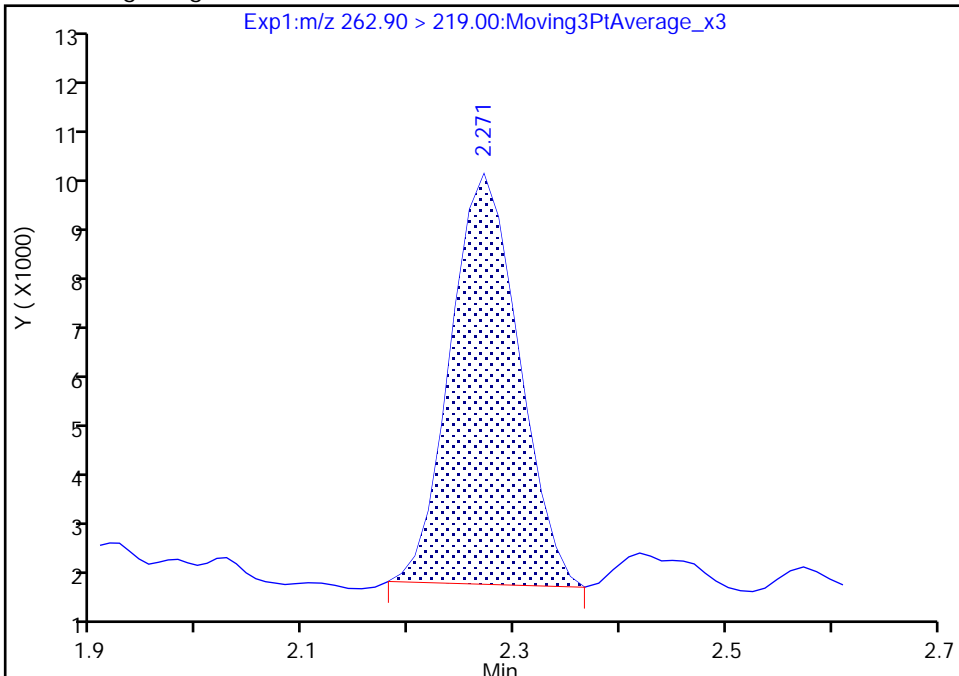
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B001.d  
Injection Date: 24-Dec-2019 13:56:03 Instrument ID: LC812  
Lims ID: CCVL  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 1 Worklist Smp#: 1  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

4 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

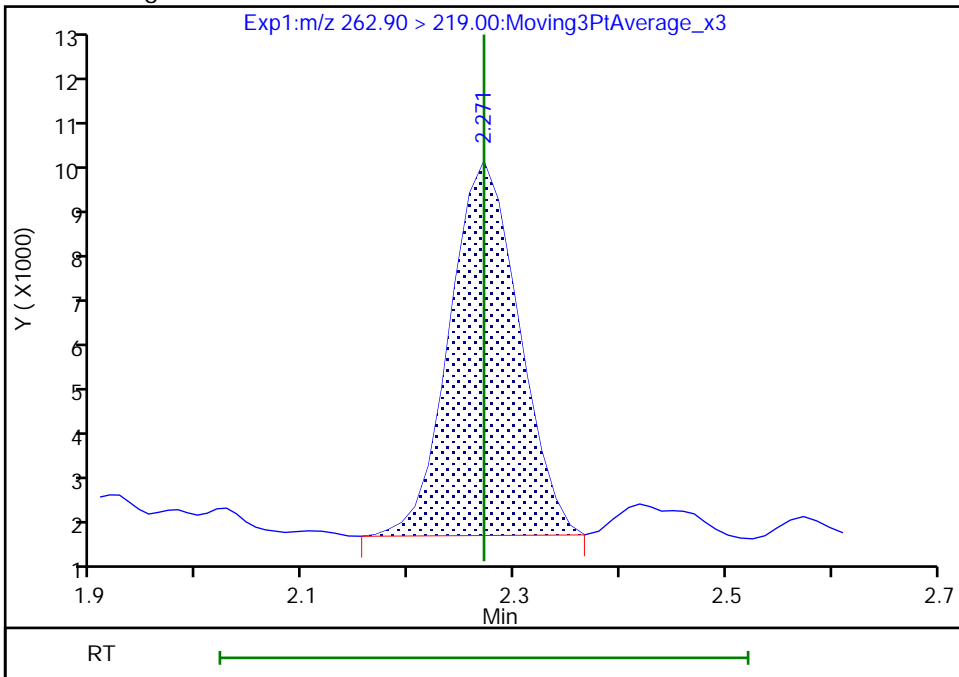
RT: 2.27  
Area: 34453  
Amount: 0.057623  
Amount Units: ng/ml

Processing Integration Results



RT: 2.27  
Area: 35263  
Amount: 0.058977  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 26-Dec-2019 10:02:37  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

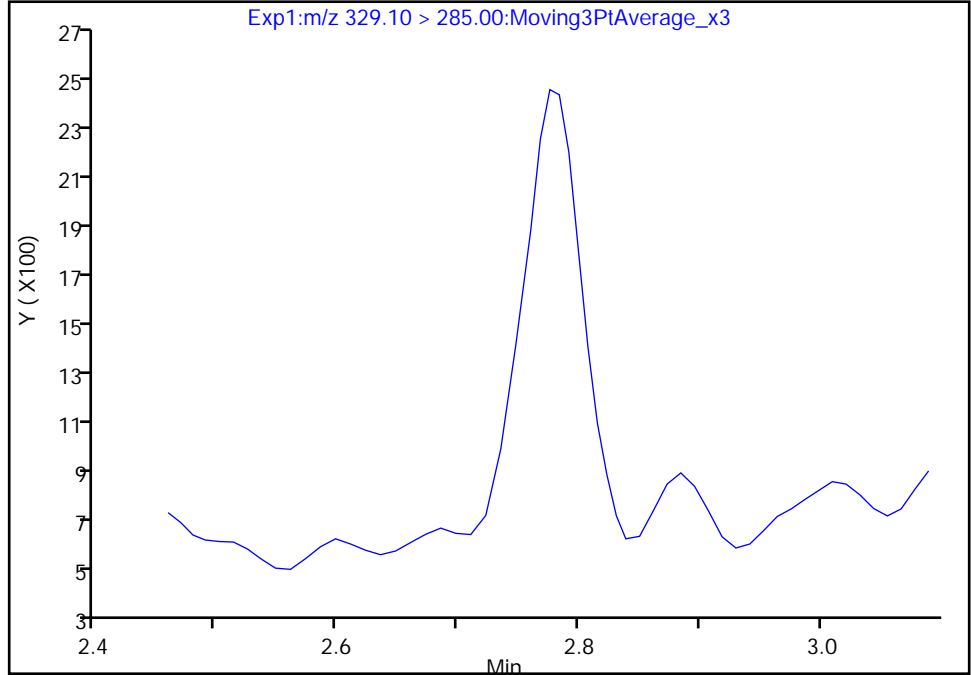
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B001.d  
Injection Date: 24-Dec-2019 13:56:03 Instrument ID: LC812  
Lims ID: CCVL  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 1 Worklist Smp#: 1  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

67 Perfluoro(2-propoxypropanoic) acid, CAS: 13252-13-6

Signal: 1

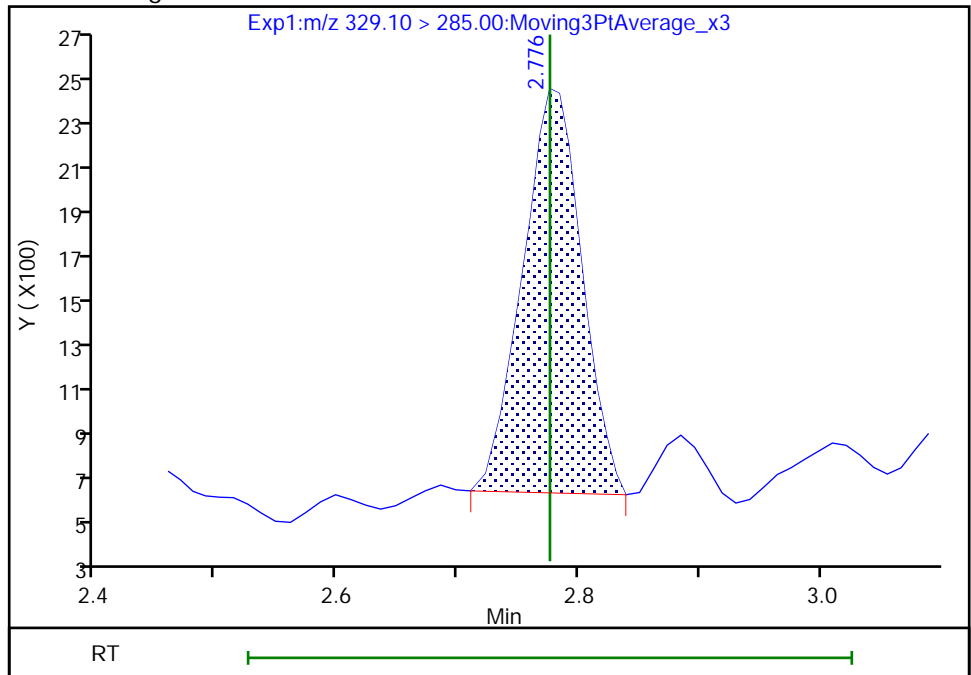
Not Detected  
Expected RT: 2.78

Processing Integration Results



Manual Integration Results

RT: 2.78  
Area: 6111  
Amount: 0.037978  
Amount Units: ng/ml



Reviewer: chirgwinb, 26-Dec-2019 10:02:55  
Audit Action: Manually Integrated

Audit Reason: Missed Peak

Eurofins TestAmerica, Burlington

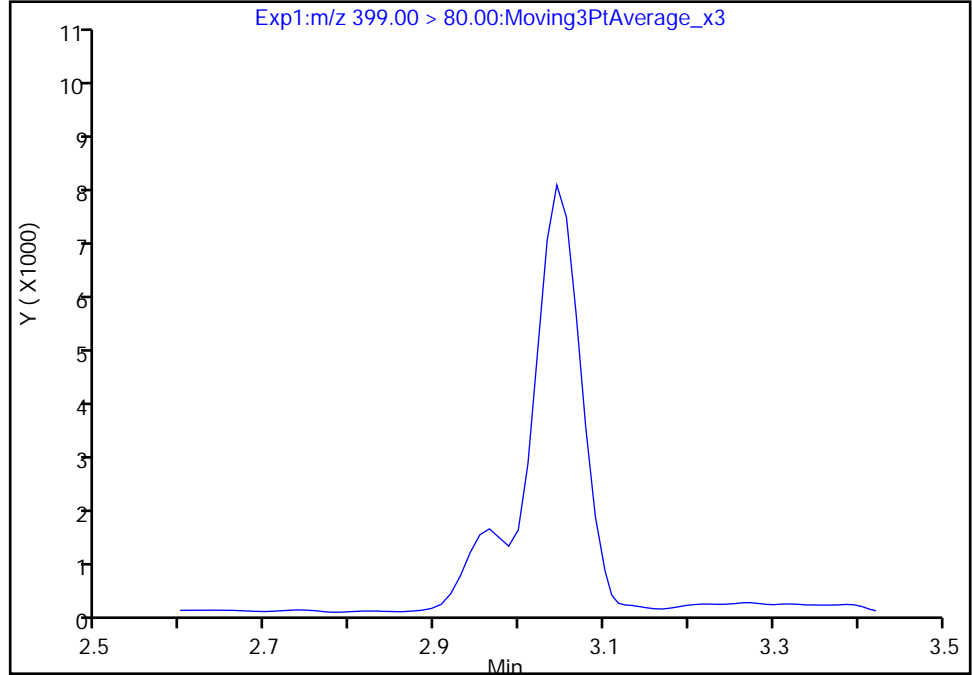
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B001.d  
Injection Date: 24-Dec-2019 13:56:03 Instrument ID: LC812  
Lims ID: CCVL  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 1 Worklist Smp#: 1  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

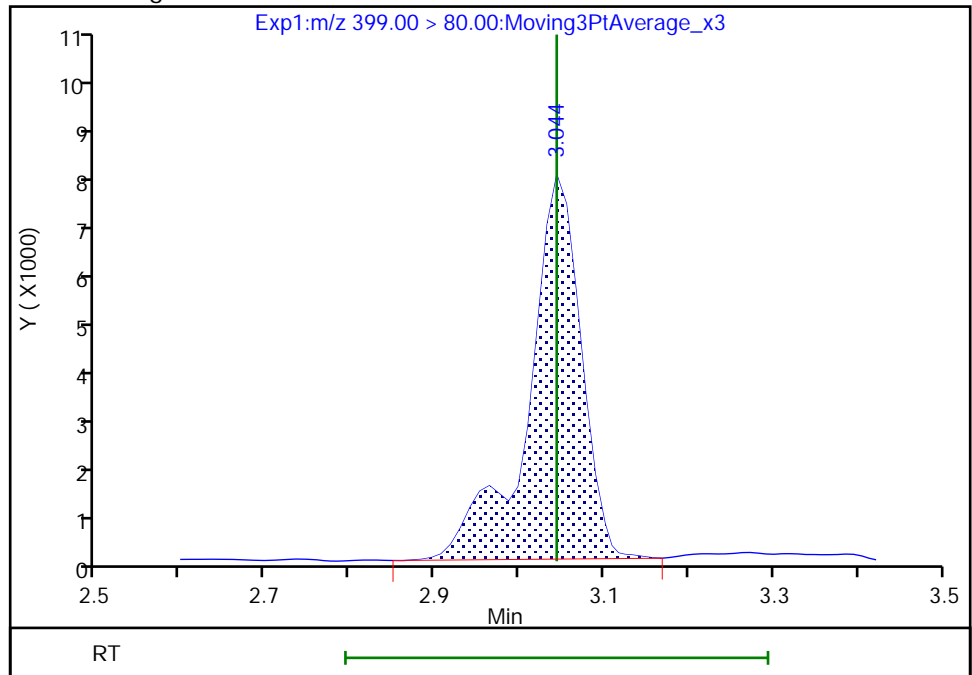
Not Detected  
Expected RT: 3.04

Processing Integration Results



Manual Integration Results

RT: 3.04  
Area: 34214  
Amount: 0.059263  
Amount Units: ng/ml



Reviewer: chirgwinb, 26-Dec-2019 10:03:11  
Audit Action: Manually Integrated

Audit Reason: Missed Peak



Eurofins TestAmerica, Burlington

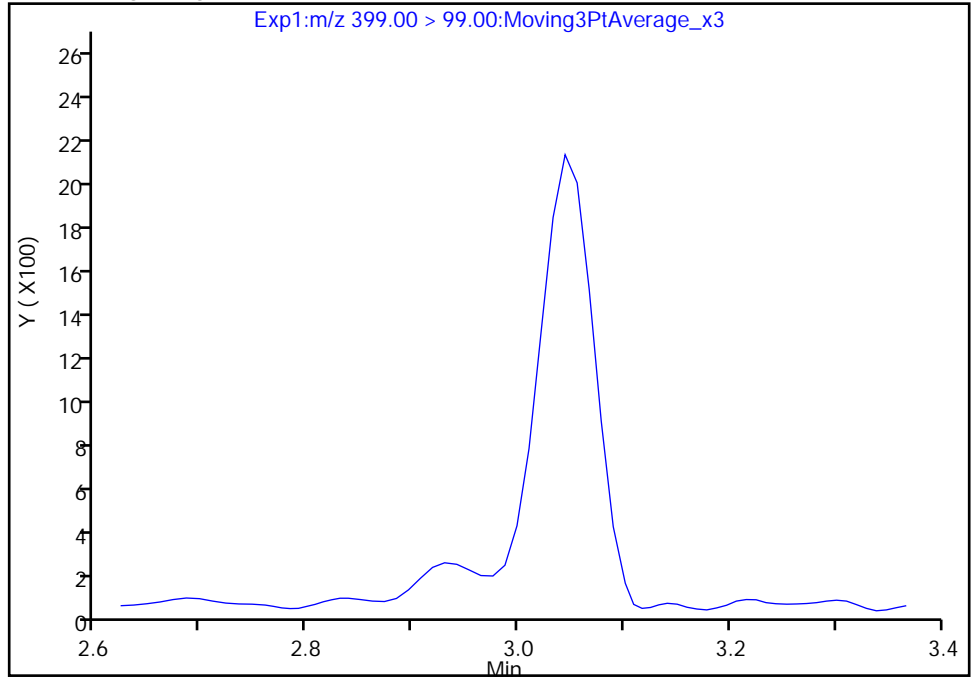
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B001.d  
Injection Date: 24-Dec-2019 13:56:03 Instrument ID: LC812  
Lims ID: CCVL  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 1 Worklist Smp#: 1  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 (4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

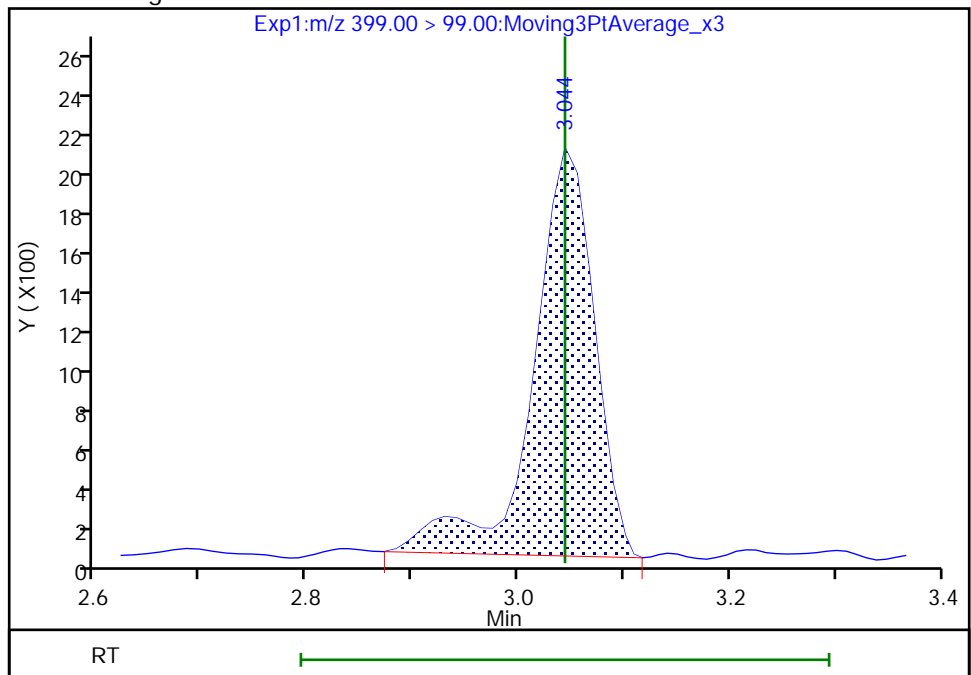
Not Detected  
Expected RT: 3.04

Processing Integration Results



Manual Integration Results

RT: 3.04  
Area: 8279  
Amount: 0.059263  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

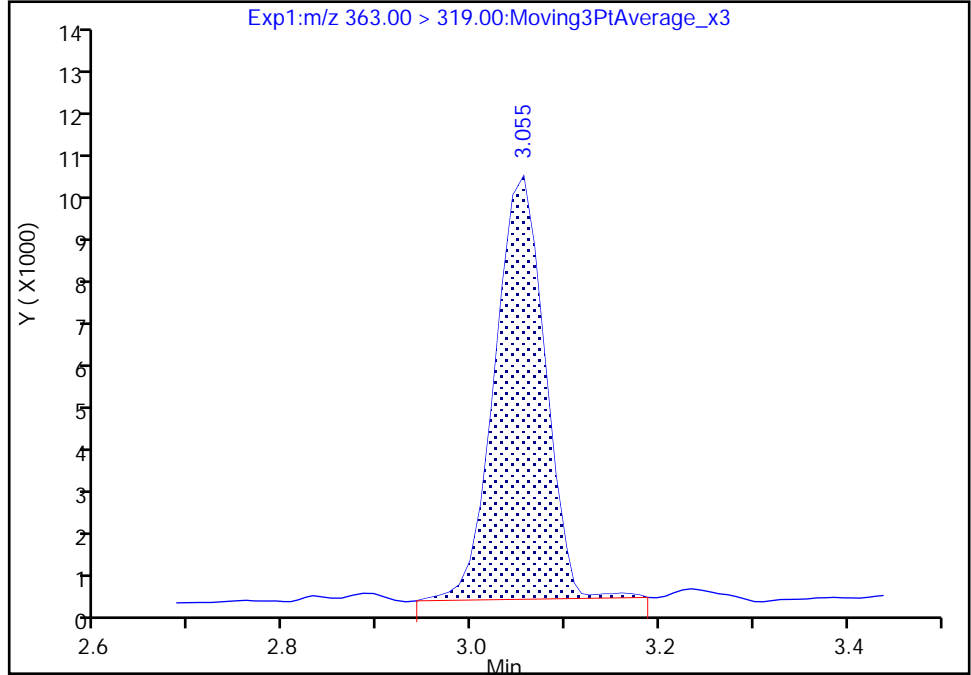
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B001.d  
Injection Date: 24-Dec-2019 13:56:03 Instrument ID: LC812  
Lims ID: CCVL  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 1 Worklist Smp#: 1  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

10 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

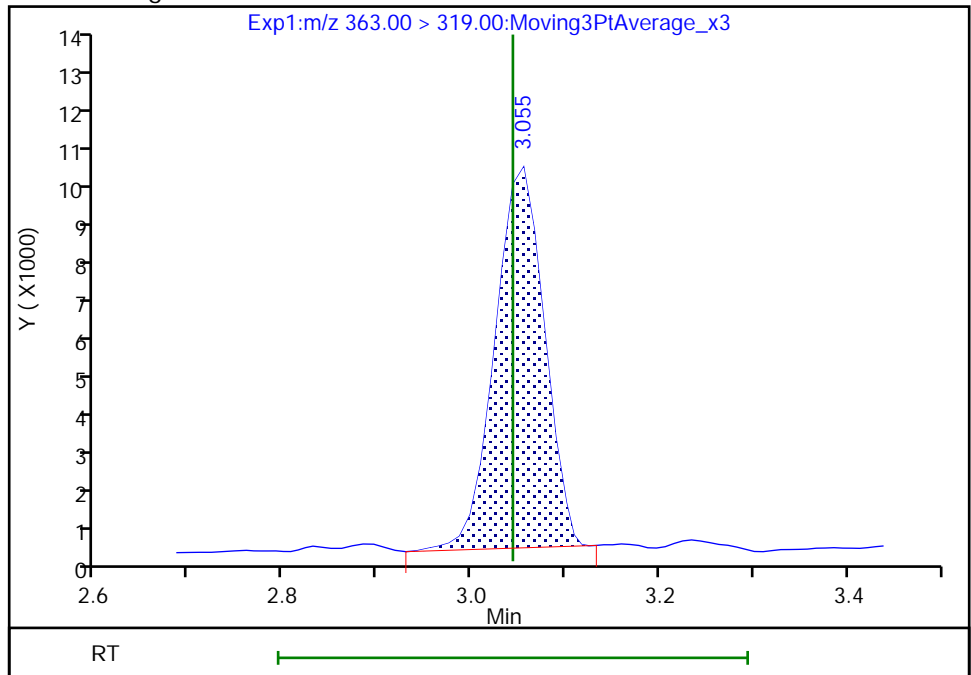
RT: 3.06  
Area: 35805  
Amount: 0.053856  
Amount Units: ng/ml

Processing Integration Results



RT: 3.06  
Area: 35190  
Amount: 0.052931  
Amount Units: ng/ml

Manual Integration Results



Eurofins TestAmerica, Burlington

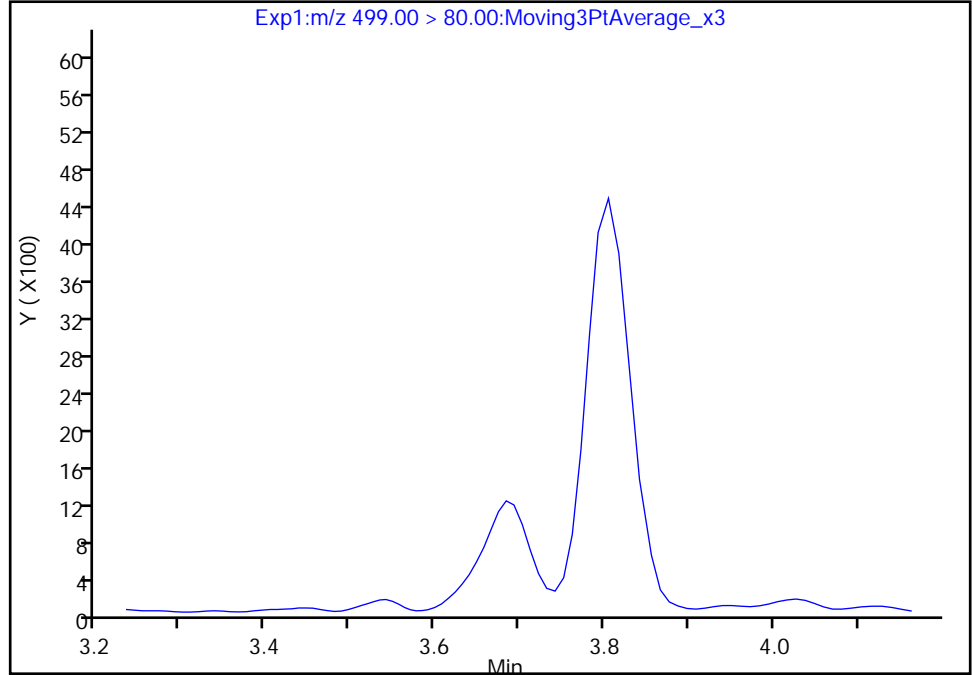
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B001.d  
Injection Date: 24-Dec-2019 13:56:03 Instrument ID: LC812  
Lims ID: CCVL  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 1 Worklist Smp#: 1  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

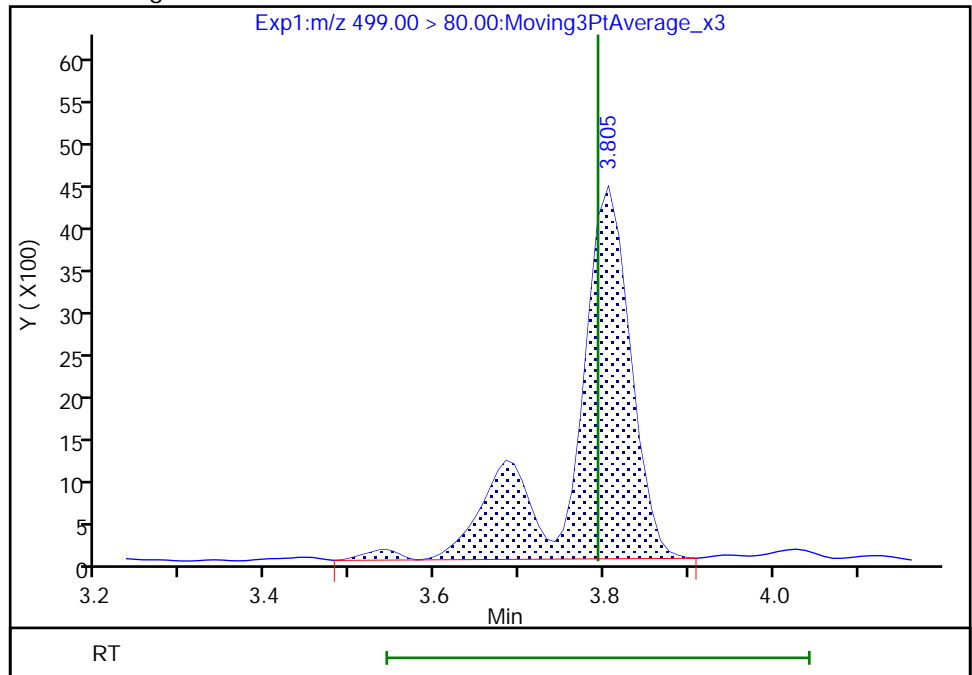
Not Detected  
Expected RT: 3.79

Processing Integration Results



Manual Integration Results

RT: 3.81  
Area: 21208  
Amount: 0.048340  
Amount Units: ng/ml



Reviewer: chirgwinb, 24-Dec-2019 14:25:30  
Audit Action: Manually Integrated

Audit Reason: Missed Peak

Eurofins TestAmerica, Burlington

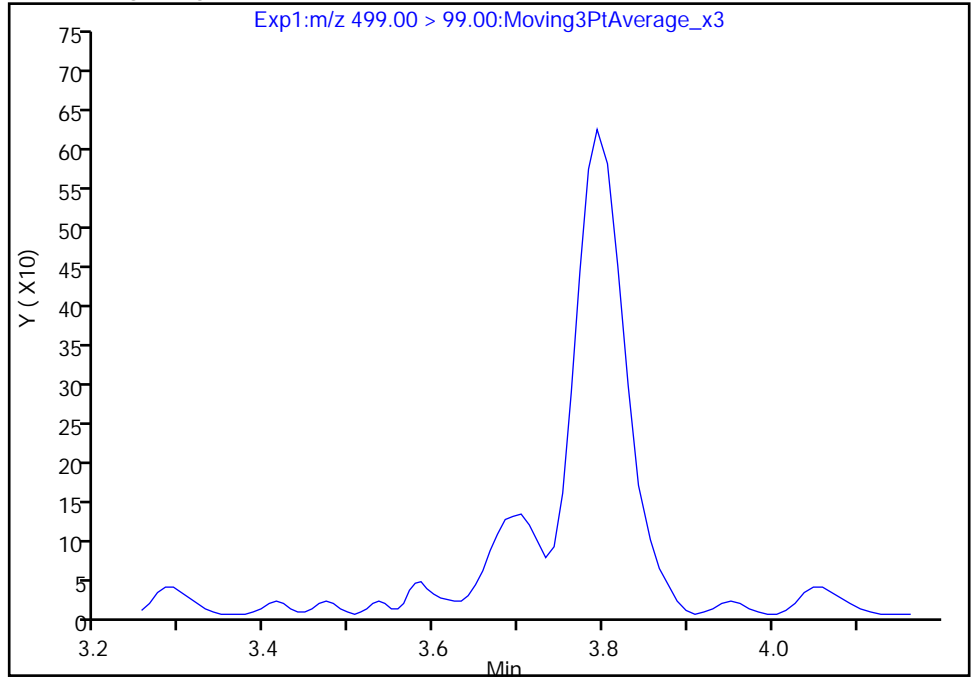
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B001.d  
Injection Date: 24-Dec-2019 13:56:03 Instrument ID: LC812  
Lims ID: CCVL  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 1 Worklist Smp#: 1  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

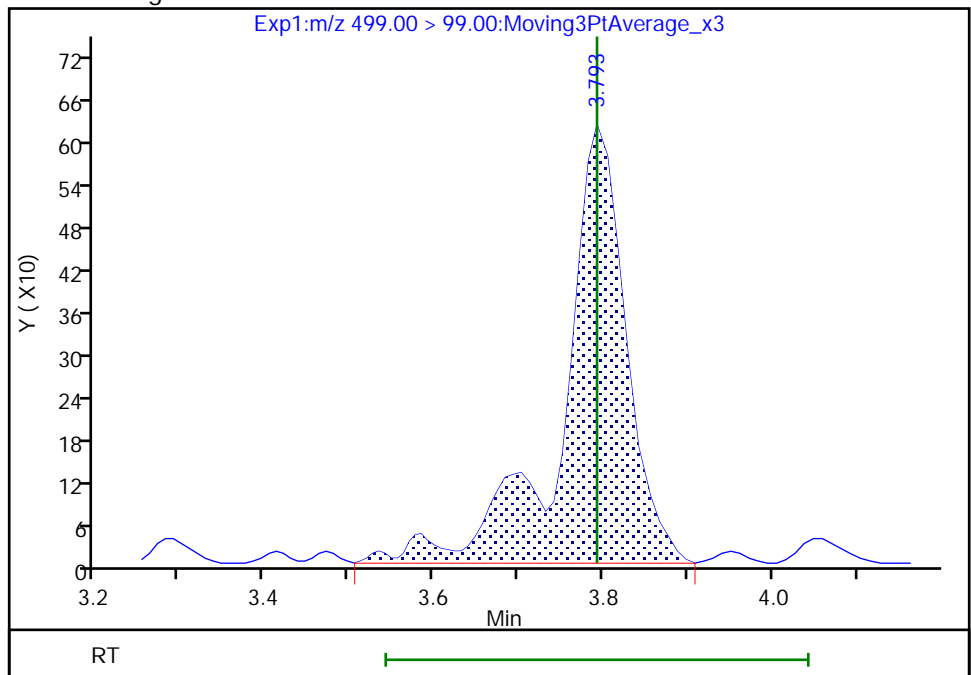
Not Detected  
Expected RT: 3.79

Processing Integration Results



Manual Integration Results

RT: 3.79  
Area: 3293  
Amount: 0.048340  
Amount Units: ng/ml



Reviewer: chirgwinb, 24-Dec-2019 14:25:35

Audit Action: Manually Integrated

Audit Reason: Missed Peak

Eurofins TestAmerica, Burlington

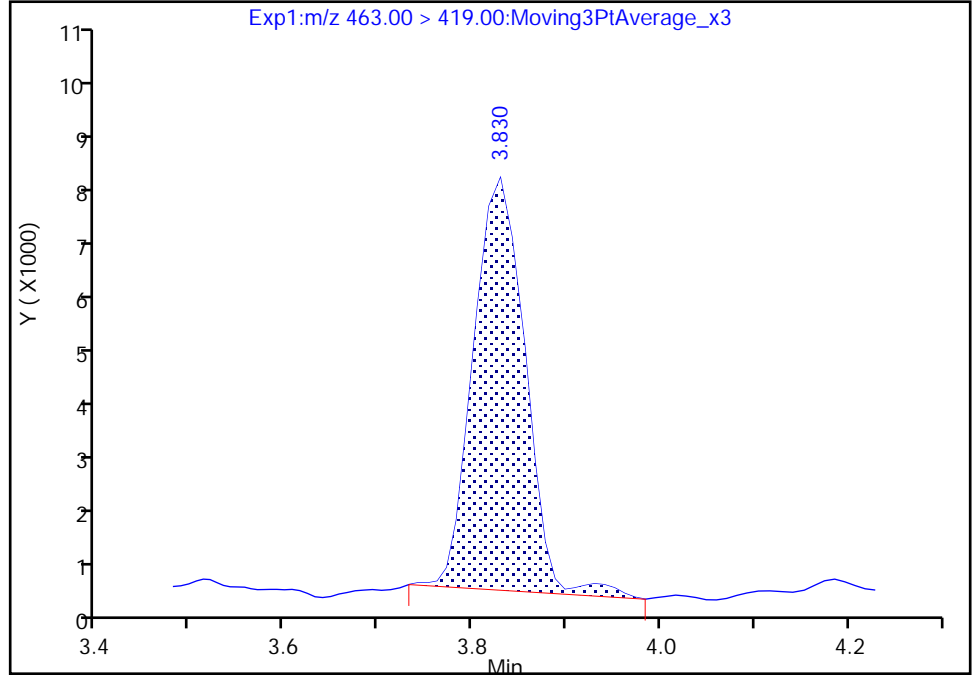
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B001.d  
Injection Date: 24-Dec-2019 13:56:03 Instrument ID: LC812  
Lims ID: CCVL  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 1 Worklist Smp#: 1  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

20 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

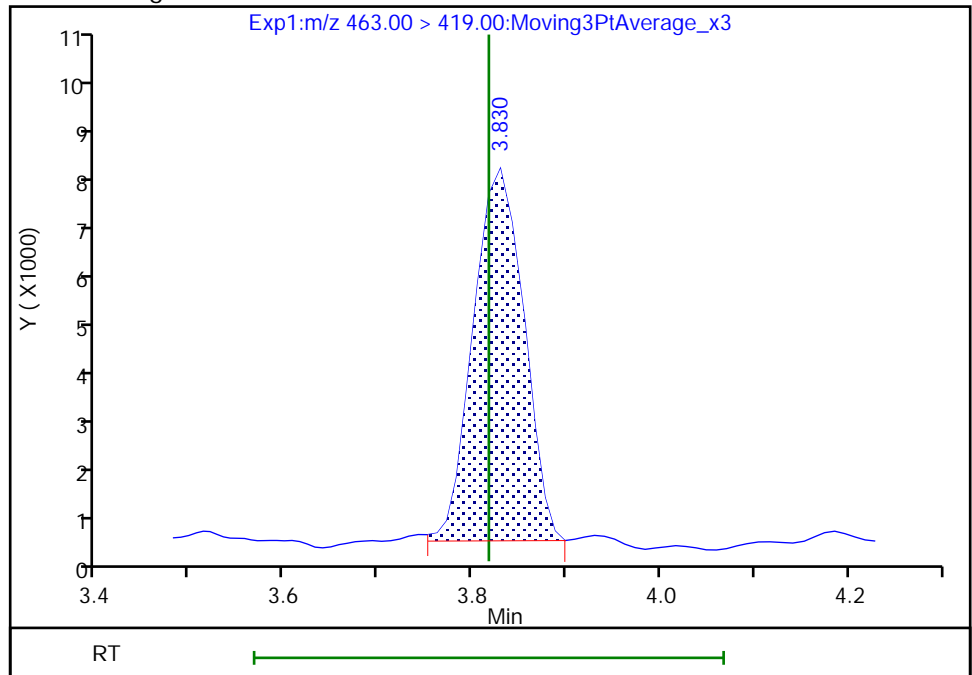
RT: 3.83  
Area: 28649  
Amount: 0.059212  
Amount Units: ng/ml

Processing Integration Results



RT: 3.83  
Area: 27899  
Amount: 0.057662  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 26-Dec-2019 10:04:26  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

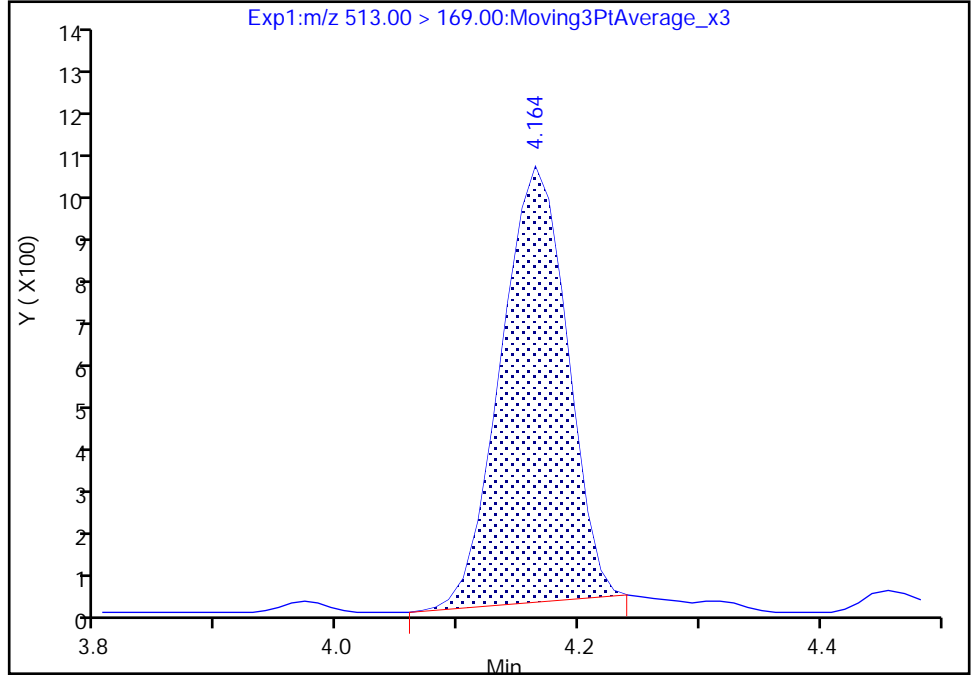
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B001.d  
Injection Date: 24-Dec-2019 13:56:03 Instrument ID: LC812  
Lims ID: CCVL  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 1 Worklist Smp#: 1  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

24 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 2

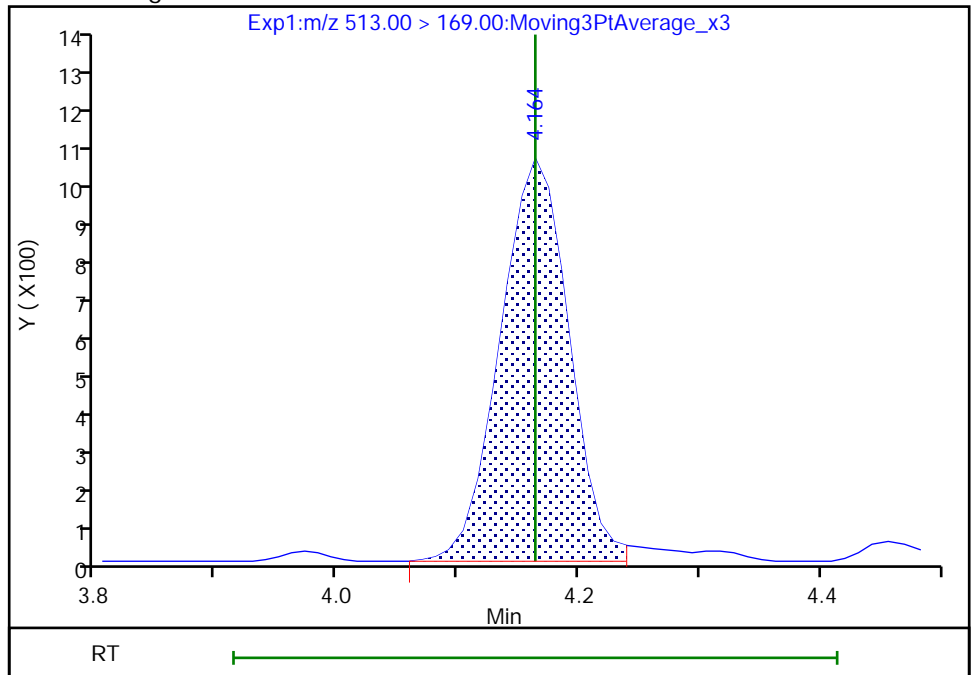
RT: 4.16  
Area: 3711  
Amount: 0.064407  
Amount Units: ng/ml

Processing Integration Results



RT: 4.16  
Area: 3922  
Amount: 0.064407  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 08:50:03

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

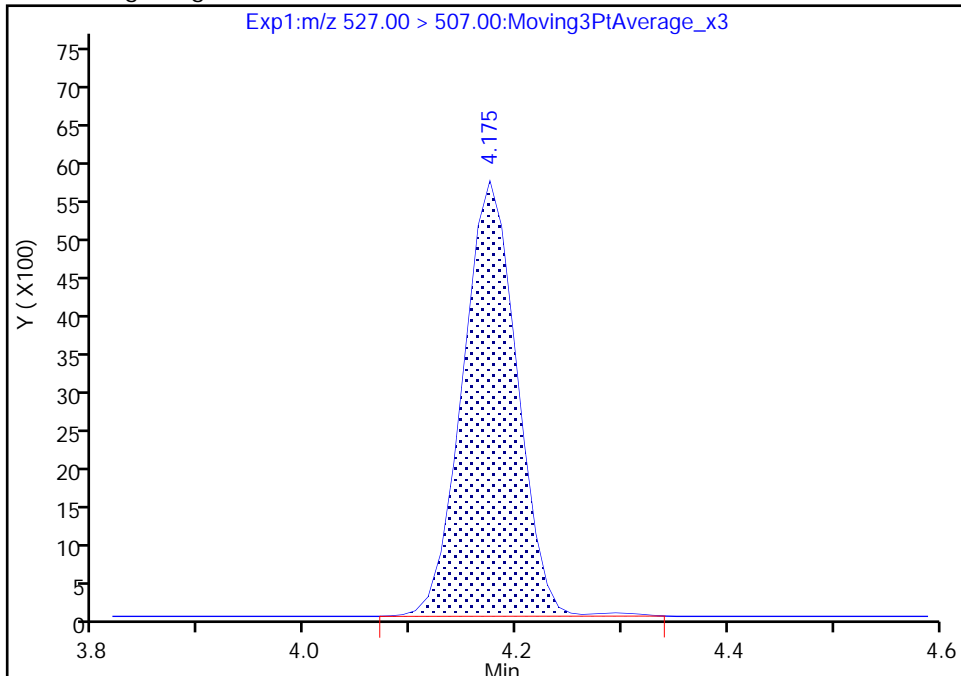
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B001.d  
Injection Date: 24-Dec-2019 13:56:03 Instrument ID: LC812  
Lims ID: CCVL  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 1 Worklist Smp#: 1  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

25 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:, CAS: 39108-34-4

Signal: 1

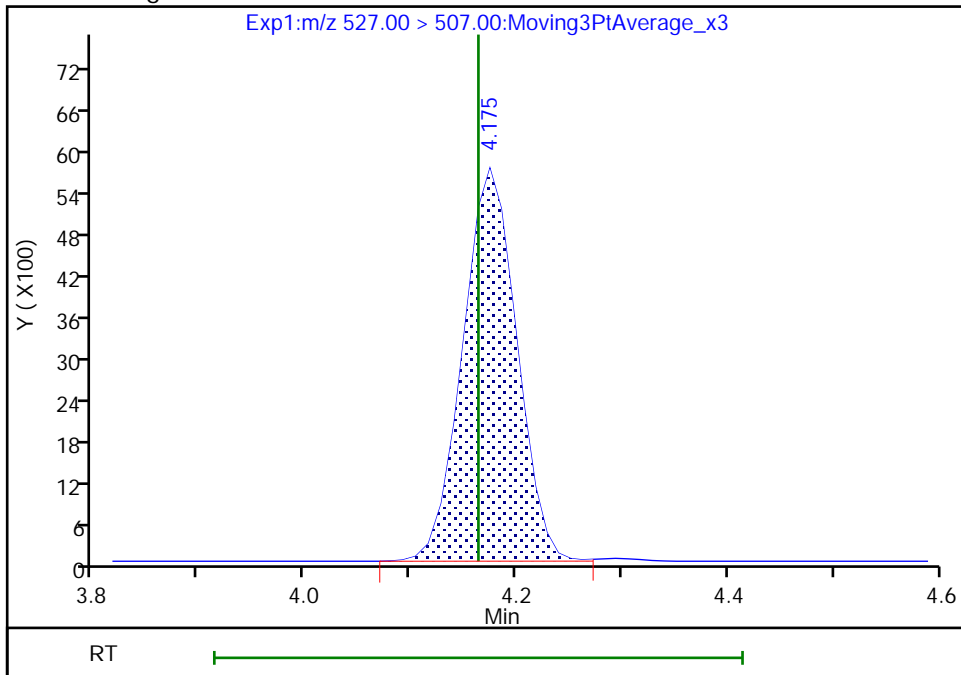
RT: 4.17  
Area: 20215  
Amount: 0.510613  
Amount Units: ng/ml

Processing Integration Results



RT: 4.17  
Area: 20125  
Amount: 0.508339  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 08:51:30  
Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

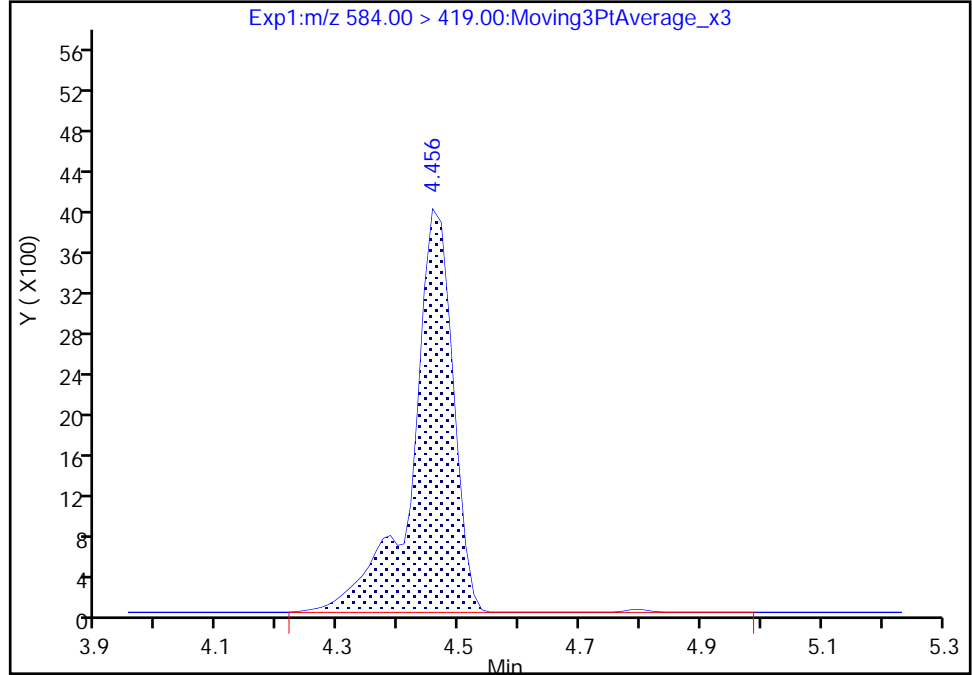
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B001.d  
Injection Date: 24-Dec-2019 13:56:03 Instrument ID: LC812  
Lims ID: CCVL  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 1 Worklist Smp#: 1  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

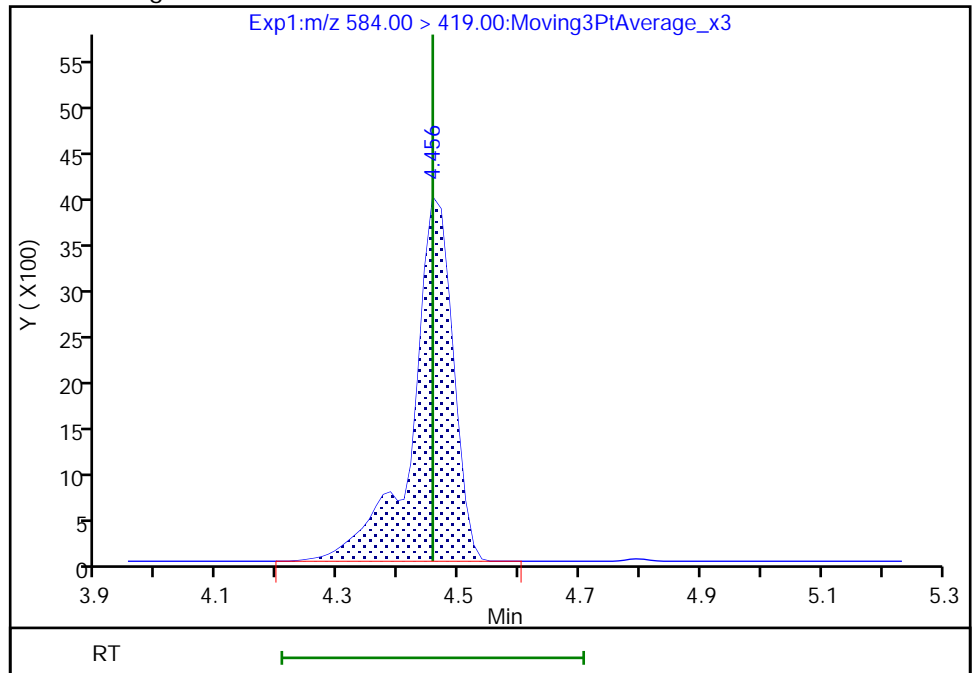
RT: 4.46  
Area: 18725  
Amount: 0.448069  
Amount Units: ng/ml

Processing Integration Results



RT: 4.46  
Area: 18660  
Amount: 0.446514  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 26-Dec-2019 10:04:40  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Eurofins TestAmerica, Burlington

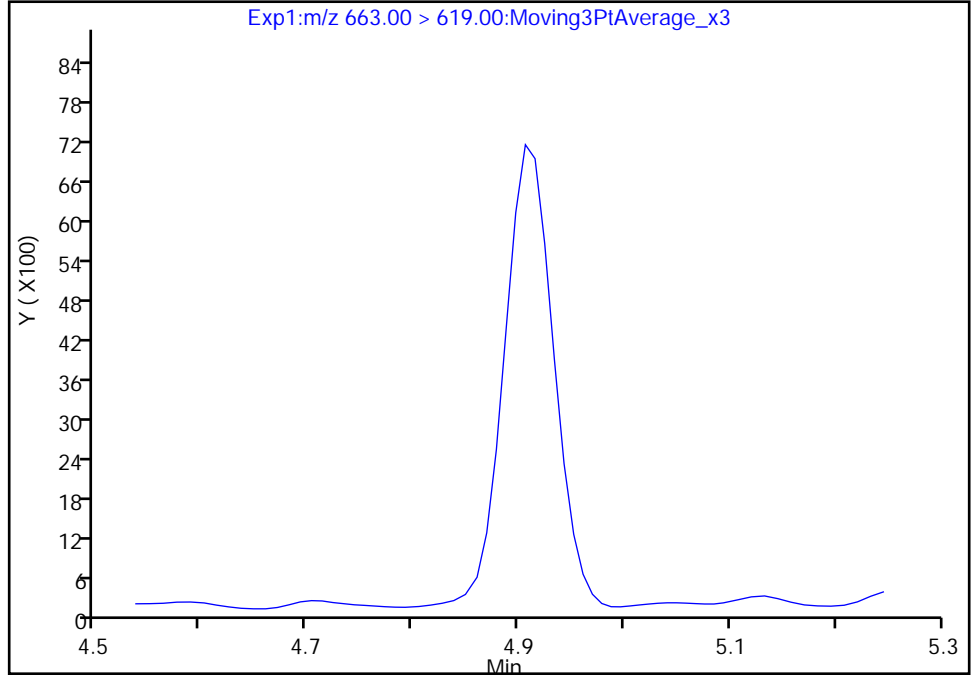
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B001.d  
Injection Date: 24-Dec-2019 13:56:03 Instrument ID: LC812  
Lims ID: CCVL  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 1 Worklist Smp#: 1  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

41 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 1

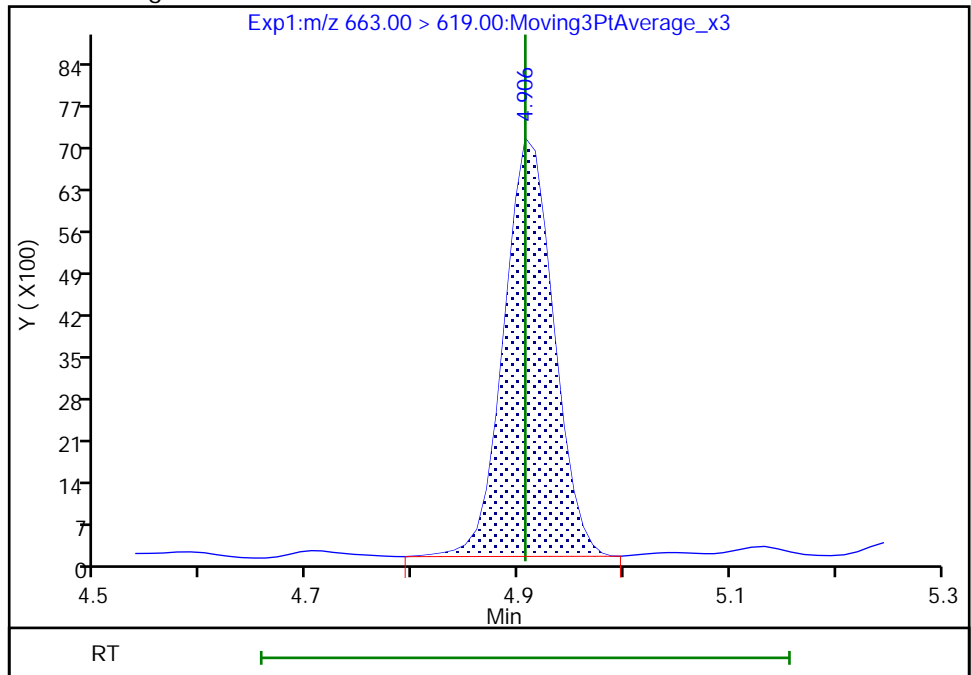
Not Detected  
Expected RT: 4.91

Processing Integration Results



Manual Integration Results

RT: 4.91  
Area: 22893  
Amount: 0.053950  
Amount Units: ng/ml



Reviewer: chirgwinb, 26-Dec-2019 10:03:38  
Audit Action: Manually Integrated

Audit Reason: Missed Peak

Eurofins TestAmerica, Burlington

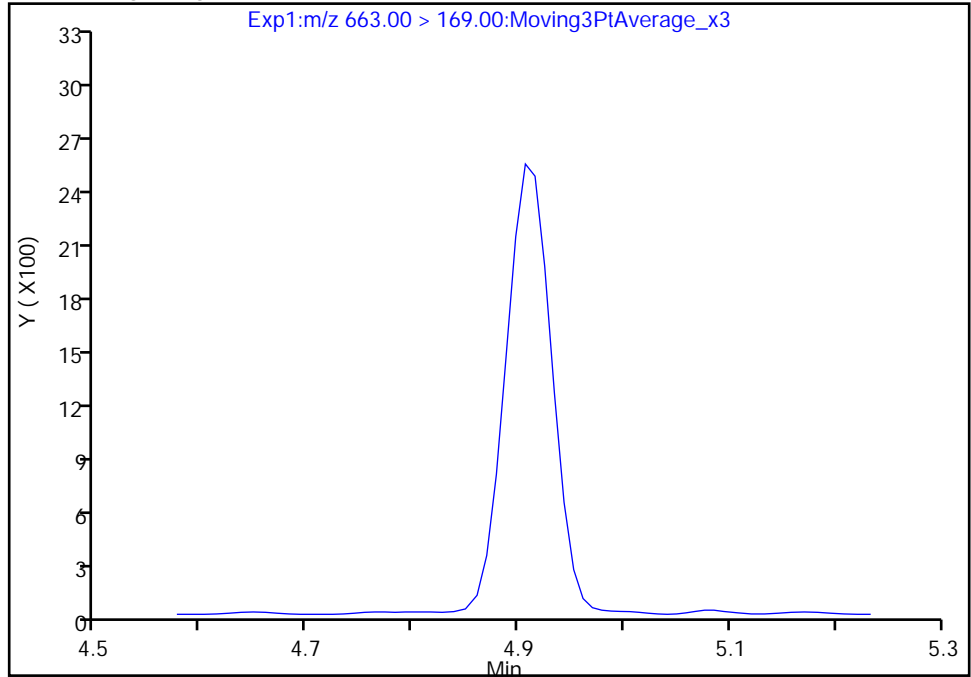
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B001.d  
Injection Date: 24-Dec-2019 13:56:03 Instrument ID: LC812  
Lims ID: CCVL  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 1 Worklist Smp#: 1  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 (4.60 mm) Detector: EXP1

41 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 2

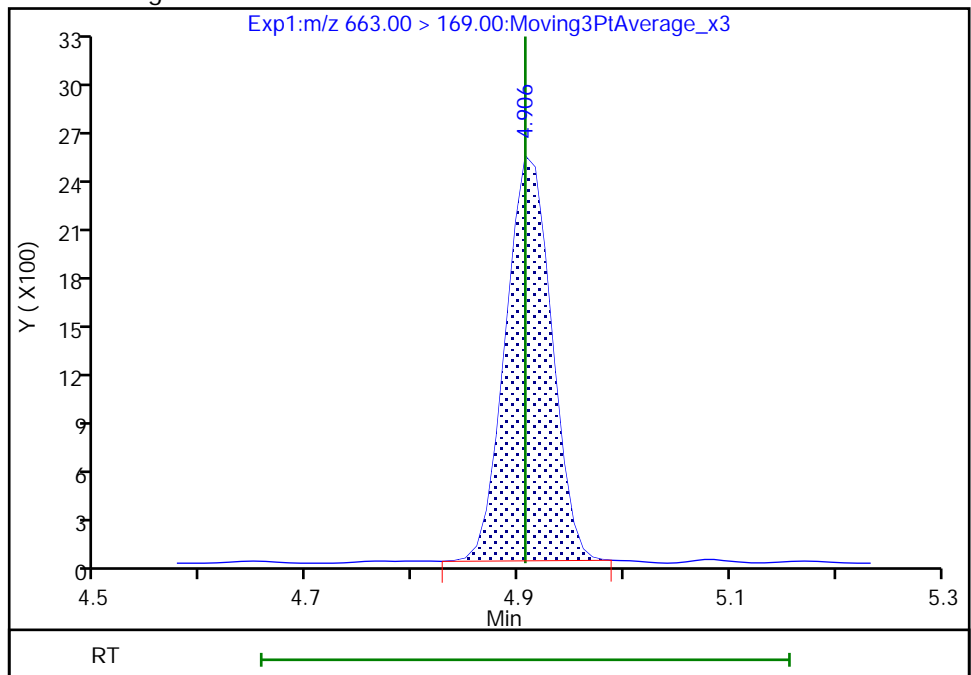
Not Detected  
Expected RT: 4.91

Processing Integration Results



Manual Integration Results

RT: 4.91  
Area: 7532  
Amount: 0.053950  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

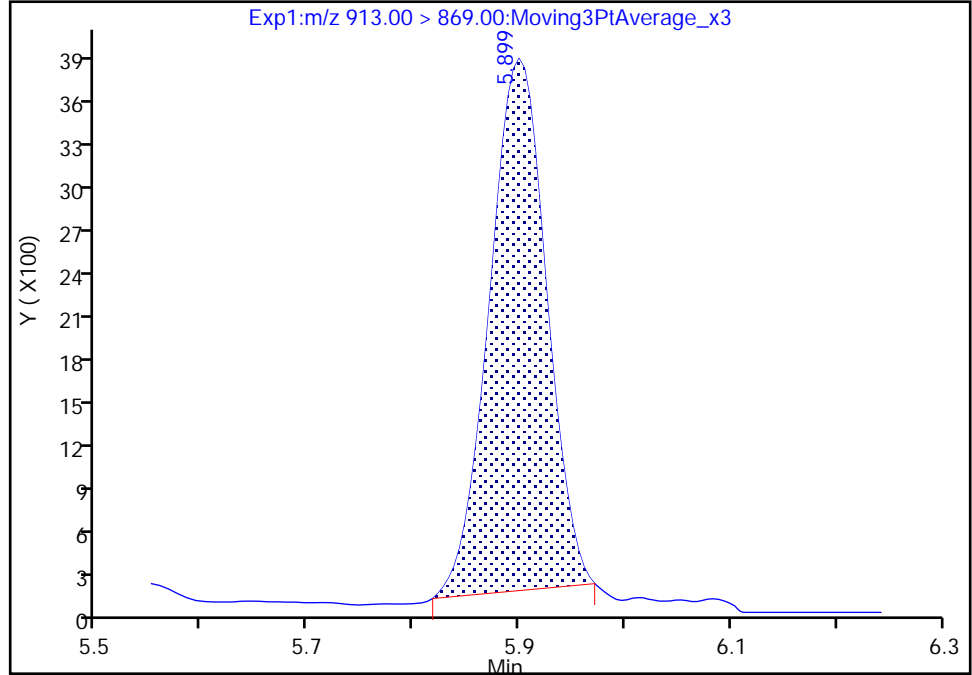
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B001.d  
Injection Date: 24-Dec-2019 13:56:03 Instrument ID: LC812  
Lims ID: CCVL  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 1 Worklist Smp#: 1  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

46 Perfluorooctadecanoic acid, CAS: 16517-11-6

Signal: 1

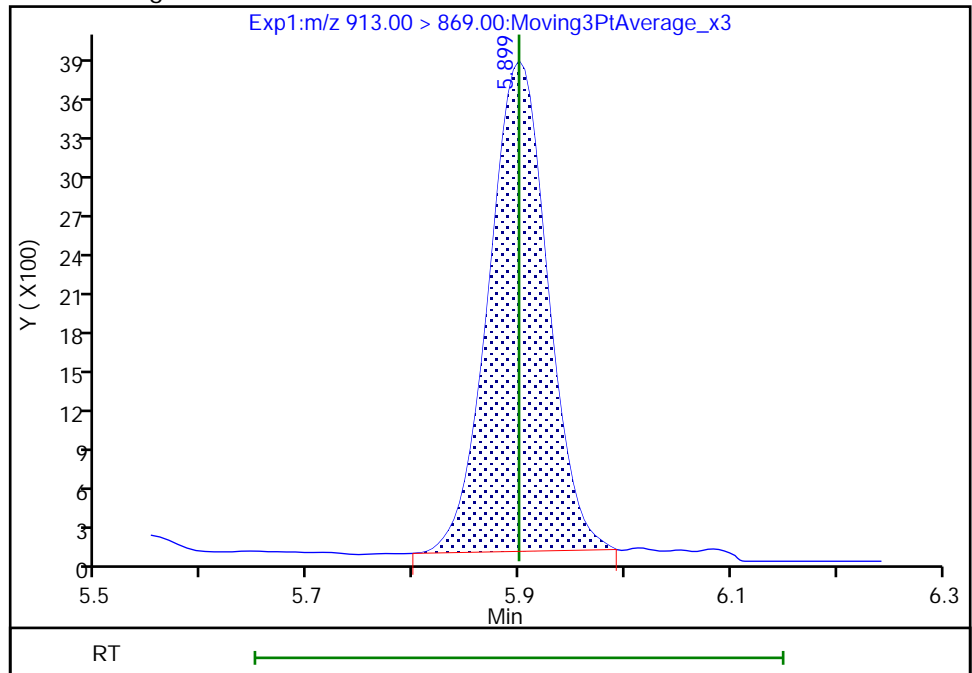
RT: 5.90  
Area: 13813  
Amount: 0.048168  
Amount Units: ng/ml

Processing Integration Results



RT: 5.90  
Area: 14556  
Amount: 0.050759  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 26-Dec-2019 10:04:58  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

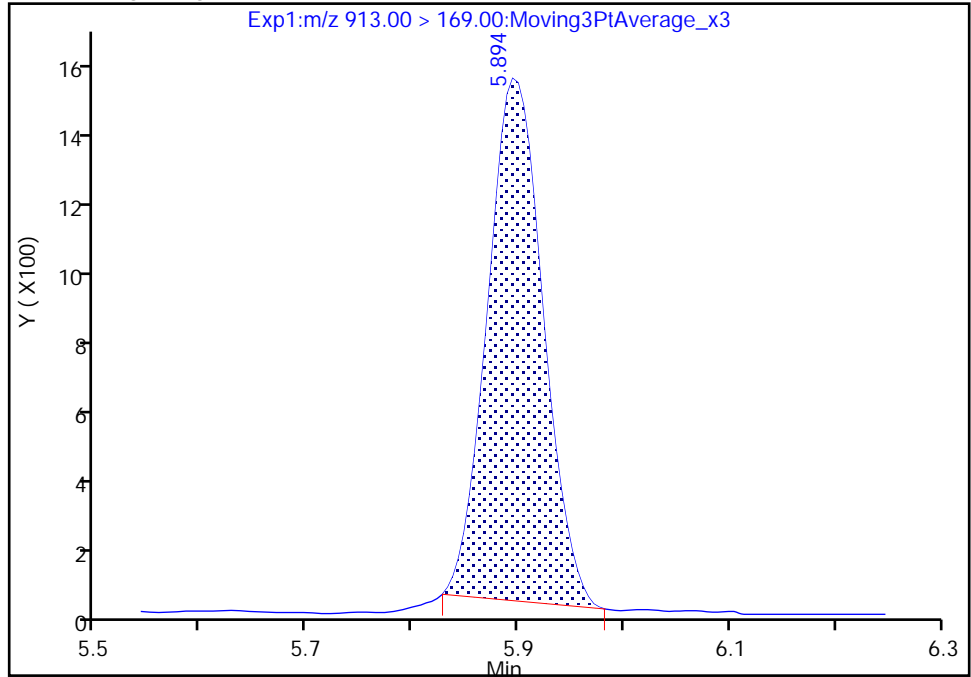
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B001.d  
Injection Date: 24-Dec-2019 13:56:03 Instrument ID: LC812  
Lims ID: CCVL  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 1 Worklist Smp#: 1  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

46 Perfluorooctadecanoic acid, CAS: 16517-11-6

Signal: 2

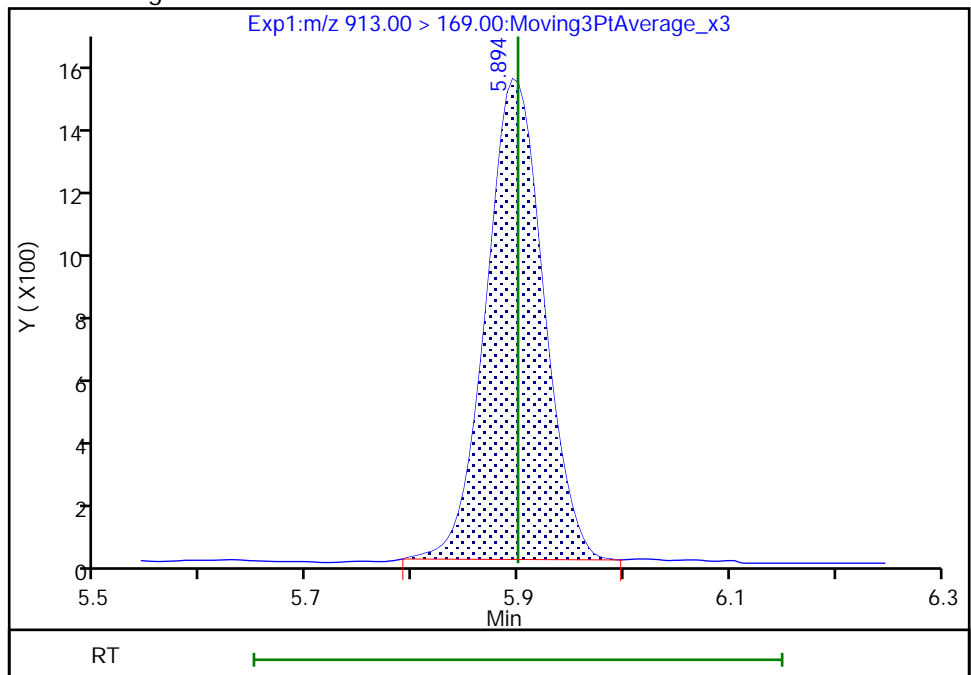
RT: 5.89  
Area: 5344  
Amount: 0.048168  
Amount Units: ng/ml

Processing Integration Results



RT: 5.89  
Area: 5607  
Amount: 0.050759  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 26-Dec-2019 10:05:03

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

FORM VII  
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 200-150985/2 Calibration Date: 12/24/2019 14:04  
 Instrument ID: LC812 Calib Start Date: 12/06/2019 14:32  
 GC Column: C-18 ID: 4.60 (mm) Calib End Date: 12/06/2019 15:13  
 Lab File ID: SC122319B002.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.9949	0.9305		935	1000	-6.5	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.132	1.041		919	1000	-8.1	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.087	1.076		875	884	-1.0	40.0
1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2)	AveID	1.732	1.609		867	934	-7.1	50.0
Perfluorohexanoic acid (PFHxA)	AveID	1.021	0.9226		904	1000	-9.6	40.0
Perfluoropentanesulfonic acid	AveID	1.161	1.145		925	938	-1.4	50.0
HFPO-DA	AveID	3.591	3.299		919	1000	-8.1	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.057	0.9919		938	1000	-6.2	40.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.132	1.072		862	910	-5.3	40.0
DONA	AveID	3.533	3.363		897	942	-4.8	50.0
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	AveID	0.9437	0.9296		934	948	-1.5	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	1.225	1.147		892	952	-6.3	50.0
Perfluorooctanoic acid (PFOA)	AveID	1.110	0.9901		892	1000	-10.8	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.080	1.012		870	928	-6.2	40.0
Perfluorononanoic acid (PFNA)	AveID	0.9805	0.9841		1000	1000	0.4	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	1.233	1.060		801	932	-14.0	50.0
Perfluorononanesulfonic acid	AveID	0.8262	0.7843		911	960	-5.1	50.0
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	AveID	0.4616	0.4392		911	958	-4.9	40.0
Perfluorodecanoic acid (PFDA)	AveID	0.9675	0.8948		925	1000	-7.5	40.0
Perfluorooctanesulfonamide (PFOSA)	AveID	0.995	0.9598		965	1000	-3.5	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	AveID	0.8689	0.9338		1070	1000	7.5	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.7196	0.7378		988	964	2.5	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.8479	0.8946		1060	1000	5.5	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.8277	0.8147		984	1000	-1.6	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.163	0.8692		704	942	-25.2	50.0
Perfluorododecanoic acid (PFDoA)	AveID	0.9240	0.9128		988	1000	-1.2	40.0
10:2 FTS	AveID	0.2931	0.2321		763	964	-20.8	50.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.2736	0.2315		819	968	-15.4	50.0
Perfluorotridecanoic acid (PFTriA)	AveID	0.8778	0.7785		887	1000	-11.3	50.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.2009	0.2264		1130	1000	12.7	40.0

FORM VII  
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCVIS 200-150985/2 Calibration Date: 12/24/2019 14:04  
 Instrument ID: LC812 Calib Start Date: 12/06/2019 14:32  
 GC Column: C-18 ID: 4.60 (mm) Calib End Date: 12/06/2019 15:13  
 Lab File ID: SC122319B002.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluoro-n-hexadecanoic acid (PFHxDA)	L1ID		0.8972		986	1000	-1.4	40.0
Perfluoro-n-octadecanoic acid (PFODA)	AveID	0.7223	0.5931		821	1000	-17.9	50.0
13C4 PFBA	Ave	1.059	1.161		2740	2500	9.6	50.0
13C5 PFPeA	Ave	0.8099	0.8749		2700	2500	8.0	50.0
13C3 PFBS	Ave	0.9661	1.030		2480	2330	6.6	50.0
M2-4:2 FTS	Ave	0.0901	0.0790		2050	2340	-12.3	50.0
13C2 PFHxA	Ave	0.9031	1.027		2840	2500	13.7	50.0
13C3 HFPO-DA	Ave	0.0394	0.0569		3600	2500	44.2	50.0
13C4 PFHpA	Ave	0.8562	0.9890		2890	2500	15.5	50.0
18O2 PFHxS	Ave	0.7630	0.8324		2580	2370	9.1	50.0
M2-6:2 FTS	Ave	0.1311	0.1145		2080	2380	-12.6	50.0
13C4 PFOA	Ave	0.9086	0.9776		2690	2500	7.6	50.0
13C4 PFOS	Ave	0.6053	0.6621		2610	2390	9.4	50.0
13C5 PFNA	Ave	0.8355	0.8485		2540	2500	1.6	50.0
13C2 PFDA	Ave	0.8233	0.8568		2600	2500	4.1	50.0
M2-8:2 FTS	Ave	0.1562	0.1750		2680	2400	12.0	50.0
13C8 FOSA	Ave	1.077	1.022		2370	2500	-5.0	50.0
d3-NMeFOSAA	Ave	0.0793	0.0739		2330	2500	-6.8	50.0
13C2 PFUnA	Ave	0.6999	0.7048		2520	2500	0.7	50.0
d5-NEtFOSAA	Ave	0.0879	0.0831		2360	2500	-5.5	50.0
13C2 PFDoA	Ave	0.7677	0.7819		2550	2500	1.8	50.0
13C2 PFTeDA	Ave	0.6433	0.6613		2570	2500	2.8	50.0
13C2 PFHxDA	Ave	0.5918	0.6847		2890	2500	15.7	50.0

Eurofins TestAmerica, Burlington  
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B002.d  
 Lims ID: CCVIS  
 Client ID:  
 Sample Type: CCVIS  
 Inject. Date: 24-Dec-2019 14:04:15 ALS Bottle#: 2 Worklist Smp#: 2  
 Injection Vol: 20.0 ul Dil. Factor: 1.0000  
 Sample Info: CCVIS  
 Misc. Info.: 200-0039355-002 Plate: 1 Rack: 2  
 Operator ID: lc812tech Instrument ID: LC812  
 Sublist: chrom-PFC\_LC812\*sub3  
 Method: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\PFC\_LC812.m  
 Limit Group: LC\_PFC\_ICAL  
 Last Update: 30-Dec-2019 15:06:05 Calib Date: 06-Dec-2019 15:13:26  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Column 1 : C-18 ( 4.60 mm) Det: EXP1  
 Process Host: CTX0304

First Level Reviewer: chirgwinb Date: 26-Dec-2019 10:24:35

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	1.908	1.908	0.0	0.556	1804637	2.74	110	2414	
2 Perfluorobutanoic acid										M
212.90 > 169.00	1.908	1.908	0.0	1.000	671682	0.9353		93.5	216	M
D 3 13C5 PFPeA	267.90 > 223.00	2.257	2.257	0.0	0.658	1359899	2.70	108	5410	
4 Perfluoropentanoic acid	262.90 > 219.00	2.271	2.271	0.0	1.006	566007	0.9189	91.9	68.5	
D 47 13C3 PFBS	301.90 > 80.00	2.285	2.285	0.0	0.666	1489054	2.48	107	495546	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	2.285	2.285	0.0	1.000	609003	0.8749	Target=2.03	99.0	2678
298.90 > 99.00	2.285	2.285	0.0	1.000	316129		1.93(1.01-3.04)		808	
D 60 M2-4:2 FTS	329.00 > 81.00	2.611	2.611	0.0	0.761	114702	2.05	87.7	378	
61 1H,1H,2H,2H-perfluorohexanesulfoni	327.00 > 307.00	2.611	2.611	0.0	1.000	73810	0.8674	92.9	2319	
D 7 13C2 PFHxA	315.00 > 270.00	2.648	2.648	0.0	0.772	1596236	2.84	114	7088	
6 Perfluorohexanoic acid	313.00 > 269.00	2.661	2.661	0.0	1.005	589052	0.9036	Target=13.76	90.4	306
313.00 > 119.00	2.661	2.661	0.0	1.005	52373		11.25(6.88-20.64)		225	
70 Perfluoropentanesulfonic acid	349.00 > 80.00	2.661	2.661	0.0	0.874	555743	0.9248	Target=3.50	98.6	2083
349.00 > 99.00	2.661	2.661	0.0	0.874	168527		3.30(1.75-5.25)		921	
D 64 13C3 HFPO-DA	332.10 > 287.00	2.768	2.768	0.0	0.807	88377	3.60	144	1958	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.776	2.776	0.0	1.003	116613	0.9187		91.9	56.9	
D 11 18O2 PFHxS										
403.00 > 84.00	3.044	3.044	0.0	0.887	1223876	2.58		109	8975	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.044	3.044	0.0	1.000	504699	0.8617	Target=3.90	94.7	1327	M
399.00 > 99.00	3.044	3.044	0.0	1.000	107484		4.70(1.95-5.85)		386	M
D 9 13C4 PFHpA										
367.00 > 322.00	3.044	3.044	0.0	0.887	1537262	2.89		116	5982	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.044	3.044	0.0	1.000	609907	0.9382	Target=3.95	93.8	468	
363.00 > 169.00	3.044	3.044	0.0	1.000	183086		3.33(1.97-5.92)		758	
77 DONA										
377.00 > 251.00	3.089	3.089	0.0	0.815	1303863	0.8967	Target=2.49	95.2	3610	
377.00 > 85.00	3.089	3.089	0.0	0.815	576408		2.26(1.24-3.73)		2162	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.413	3.413	0.0	0.900	449550	0.8917	Target=6.46	93.7	2989	
449.00 > 99.00	3.413	3.413	0.0	0.900	63597		7.07(3.23-9.69)		746	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.413	3.413	0.0	1.000	62748	0.9339		98.5	686	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.413	3.413	0.0	0.995	169101	2.08		87.4	779	
15 Perfluorooctanoic acid										M
413.00 > 369.00	3.430	3.430	0.0	1.000	601716	0.8923	Target=2.40	89.2	322	M
413.00 > 169.00	3.430	3.430	0.0	1.000	267283		2.25(1.20-3.60)		1158	M
D 14 13C4 PFOA										
417.00 > 372.00	3.430	3.430	0.0	1.000	1519411	2.69		108	3931	
* 62 13C2 PFOA										
415.00 > 370.00	3.430	3.430	0.0		1554295	2.50			3635	
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.793	0.0	1.106	983744	2.61		109	4156	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.793	3.793	0.0	1.000	386617	0.8701	Target=5.74	93.8	1814	M
499.00 > 99.00	3.793	3.793	0.0	1.000	62663		6.17(2.87-8.61)		543	M
D 19 13C5 PFNA										
468.00 > 423.00	3.817	3.817	0.0	1.113	1318823	2.54		102	7916	
20 Perfluorononanoic acid										
463.00 > 419.00	3.817	3.817	0.0	1.000	519113	1.00	Target=7.01	100	303	
463.00 > 169.00	3.817	3.817	0.0	1.000	86613		5.99(3.50-10.51)		1127	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.984	3.984	0.0	1.050	406616	0.8011		86.0	4508	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.129	4.129	0.0	1.089	309913	0.9113	Target=3.14	94.9	5717	
549.00 > 99.00	4.129	4.129	0.0	1.089	98207		3.16(1.57-4.71)		685	
D 23 13C2 PFDA										
515.00 > 470.00	4.164	4.164	0.0	1.214	1331788	2.60		104	3095	



Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
24 Perfluorodecanoic acid										
513.00 > 469.00	4.164	4.164	0.0	1.000	476675	0.9249	Target=7.28	92.5	872	
513.00 > 169.00	4.164	4.164	0.0	1.000	75238		6.34(3.64-10.91)		1518	
25 1H,1H,2H,2H-perfluorodecanesulfonyl										
527.00 > 507.00	4.164	4.164	0.0	0.997	45772	0.9115		95.1	543	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.175	4.175	0.0	1.217	260549	2.68		112	1360	
D 21 13C8 FOSA										
506.00 > 78.00	4.218	4.218	0.0	1.230	1589167	2.37		95.0	4676	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.218	4.218	0.0	1.000	610116	0.9645		96.5	1923	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.305	4.305	0.0	1.255	114884	2.33		93.2	1180	
28 N-methylperfluorooctanesulfonamide										
570.00 > 419.00	4.317	4.317	0.0	1.003	42912	1.07		107	382	M
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.409	4.409	0.0	1.162	292765	0.9885	Target=2.76	103	2418	
599.00 > 99.00	4.420	4.409	0.011	1.165	92045		3.18(1.38-4.14)		1528	
D 30 13C2 PFUnA										
565.00 > 520.00	4.443	4.443	0.0	1.295	1095477	2.52		101	5045	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.443	4.443	0.0	1.000	392017	1.06	Target=5.78	106	668	
563.00 > 169.00	4.443	4.443	0.0	1.000	70923		5.53(2.89-8.67)		1622	
33 N-ethylperfluorooctanesulfonamide										
584.00 > 419.00	4.456	4.456	0.0	1.000	42077	0.9842		98.4	713	M
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.456	4.456	0.0	1.299	129125	2.36		94.5	1886	
66 11-Chloroeicosafluoro-3-oxaundecan										
631.00 > 451.00	4.551	4.551	0.0	1.200	337027	0.7042		74.8	3379	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.683	4.683	0.0	1.000	443710	0.9878	Target=5.13	98.8	139	
613.00 > 169.00	4.683	4.683	0.0	1.000	97020		4.57(2.56-7.69)		1485	
D 36 13C2 PFDaA										
615.00 > 570.00	4.683	4.683	0.0	1.365	1215265	2.55		102	6033	
74 1H,1H,2H,2H-perfluorododecanesulfonyl										
627.00 > 607.00	4.704	4.704	0.0	1.127	24336	0.7633		79.2	537	
75 Perfluorododecanesulfonic acid (PF)										
699.00 > 80.00	4.870	4.870	0.0	1.284	92240	0.8192	Target=0.45	84.6	209	
699.00 > 99.00	4.870	4.870	0.0	1.284	196726		0.47(0.22-0.67)		3296	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.906	4.906	0.0	1.048	378453	0.8869	Target=3.82	88.7	156	
663.00 > 169.00	4.906	4.906	0.0	1.048	124648		3.04(1.91-5.74)		1649	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.108	5.108	0.0	1.000	93084	1.13	Target=1.05	113	1420	
713.00 > 219.00	5.094	5.108	-0.014	0.997	87207		1.07(0.52-1.57)		1328	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.108	5.108	0.0	1.489	1027838	2.57		103	9747	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.491	5.491	0.0	1.000	381936	0.9860	Target=3.20	98.6	177	
813.00 > 169.00	5.491	5.491	0.0	1.000	139607		2.74(1.60-4.80)		1960	
D 44 13C2 PFHxDA										
815.00 > 770.00	5.491	5.491	0.0	1.601	1064291	2.89		116	6912	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.899	5.899	0.0	1.074	252489	0.8212	Target=2.86	82.1	93.1	
913.00 > 169.00	5.894	5.899	-0.005	1.073	100538		2.51(1.43-4.29)		1623	

**QC Flag Legend**

Review Flags

M - Manually Integrated

**Reagents:**

PFAS32NCIC4\_00004

Amount Added: 100.00

Units: uL

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B002.d

Injection Date: 24-Dec-2019 14:04:15

Instrument ID: LC812

Lims ID: CCVIS

Client ID:

Operator ID: lc812tech

ALS Bottle#: 2

Worklist Smp#: 2

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

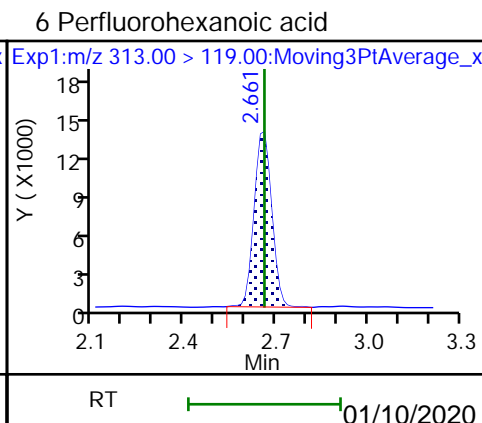
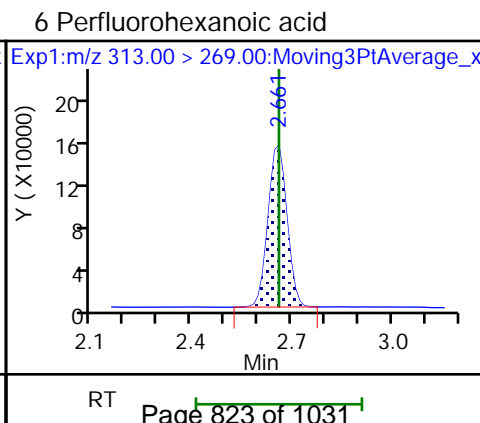
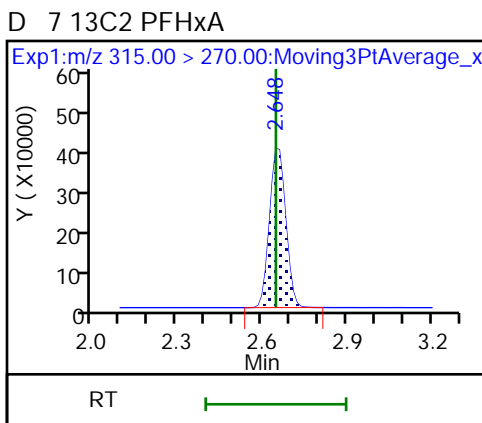
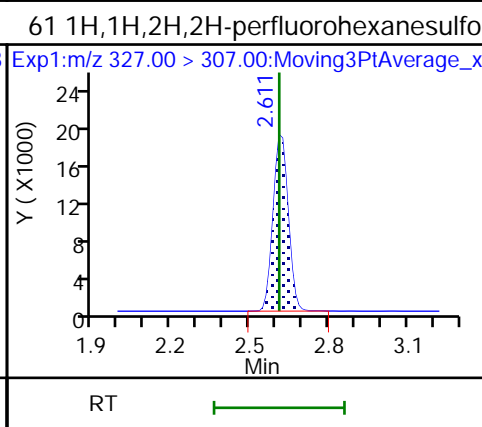
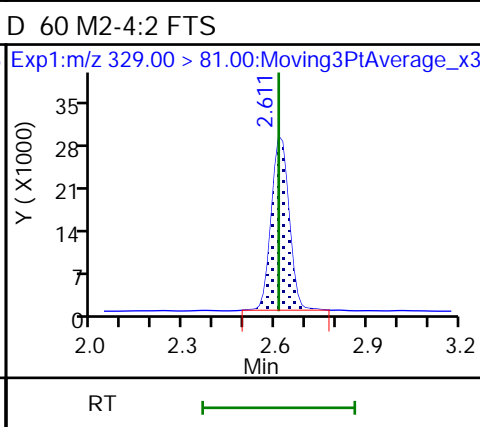
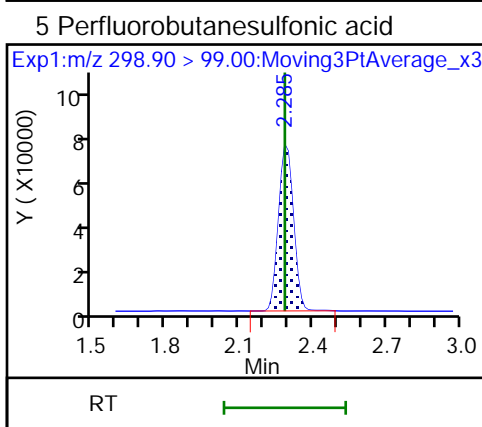
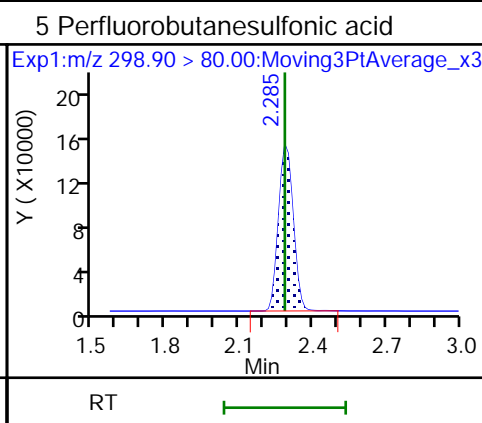
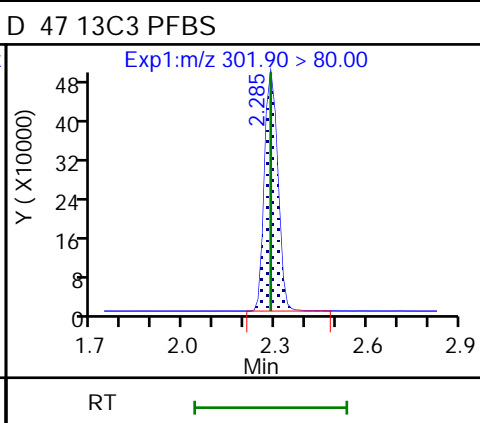
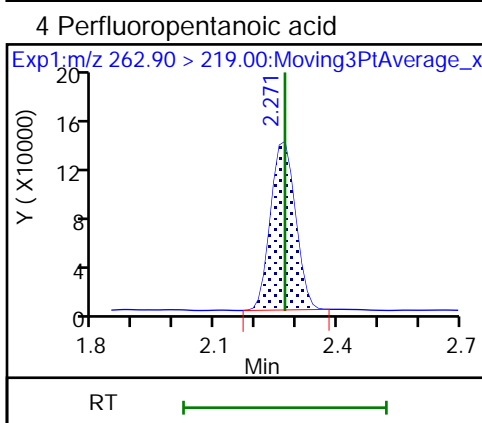
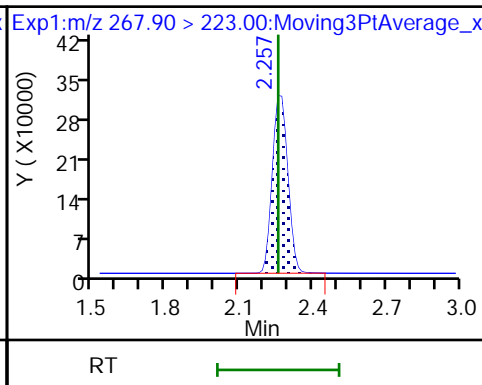
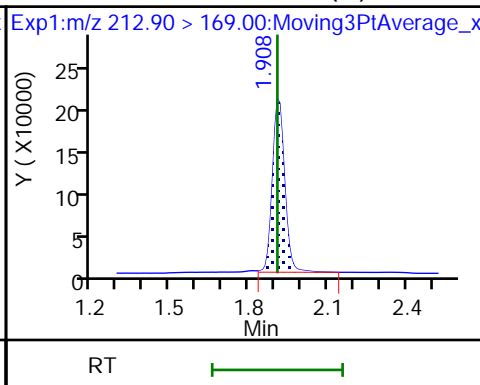
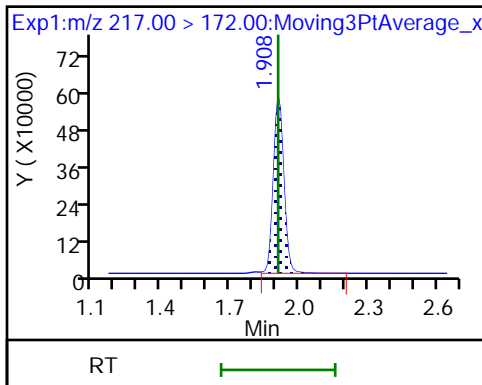
Method: PFC\_LC812

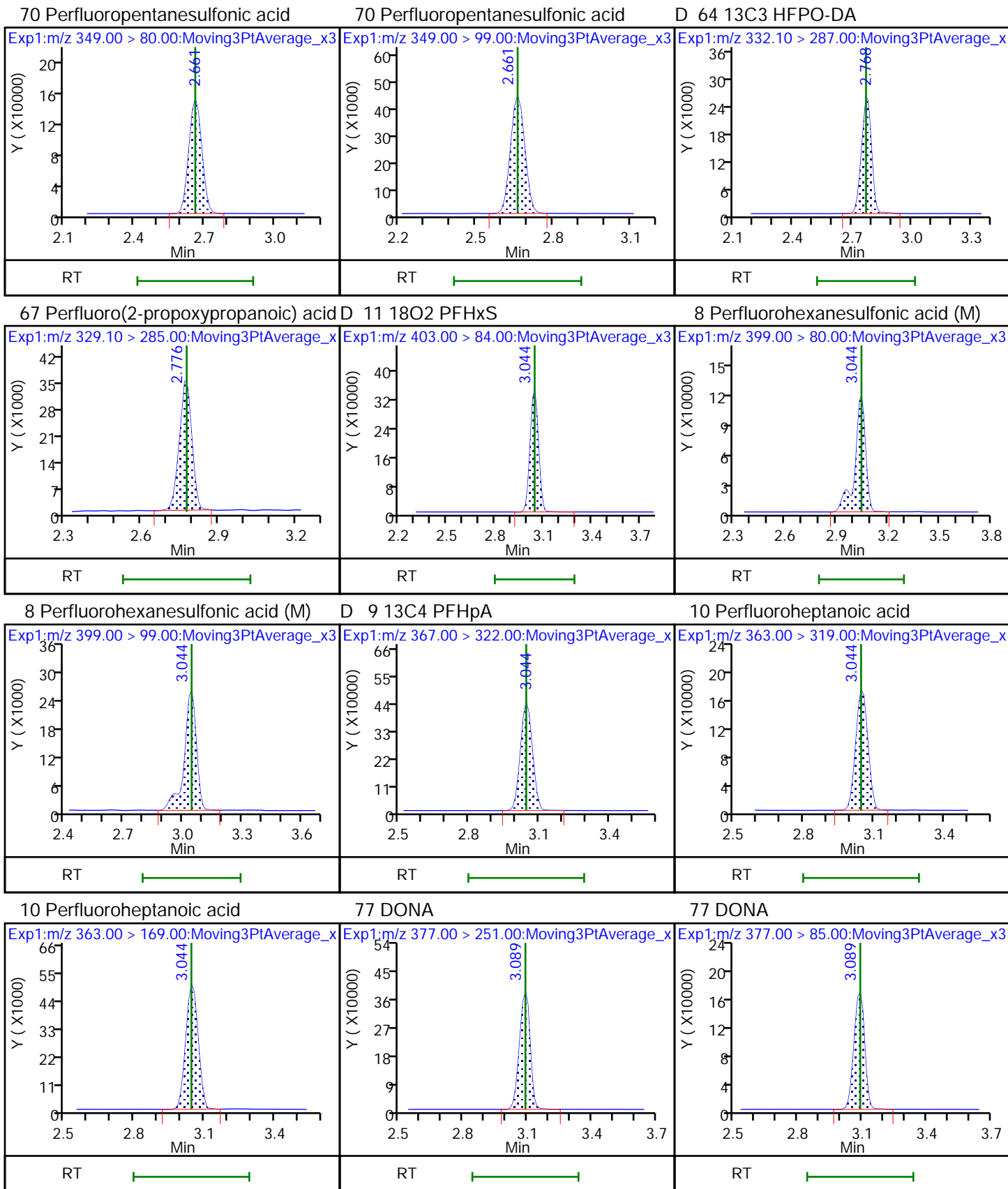
Limit Group: LC\_PFC\_ICAL

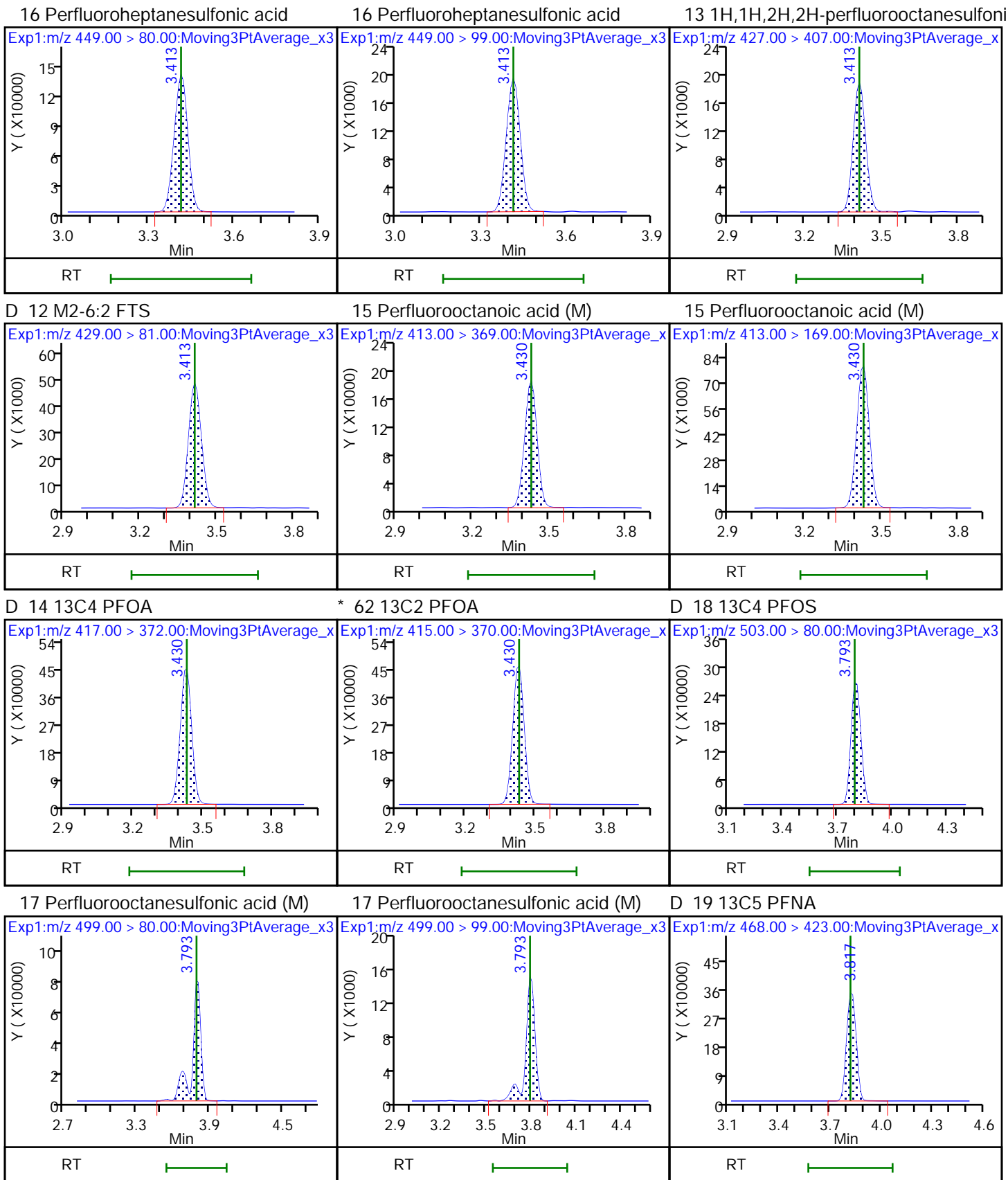
D 1 13C4 PFBA

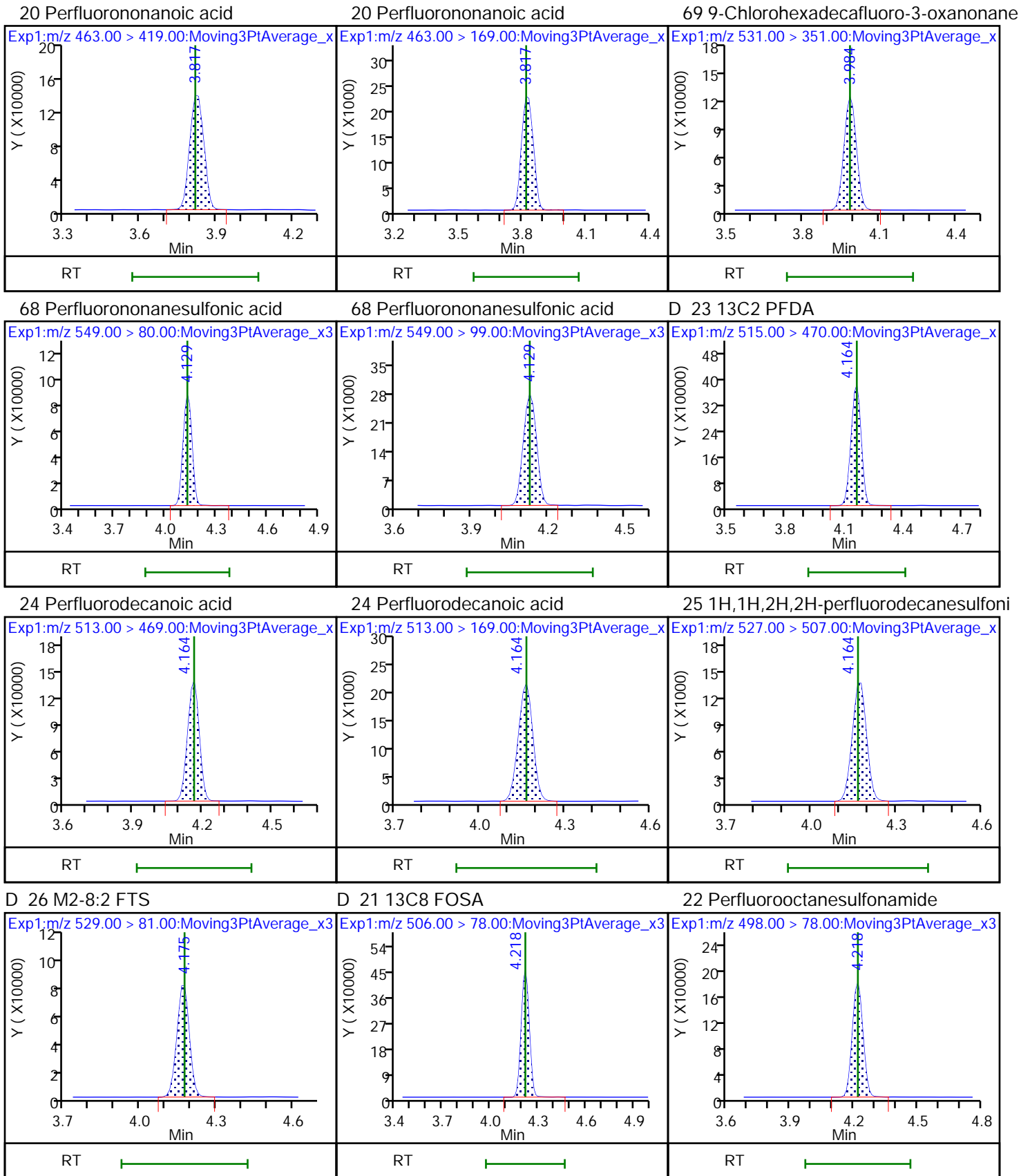
2 Perfluorobutanoic acid (M)

D 3 13C5 PFPeA



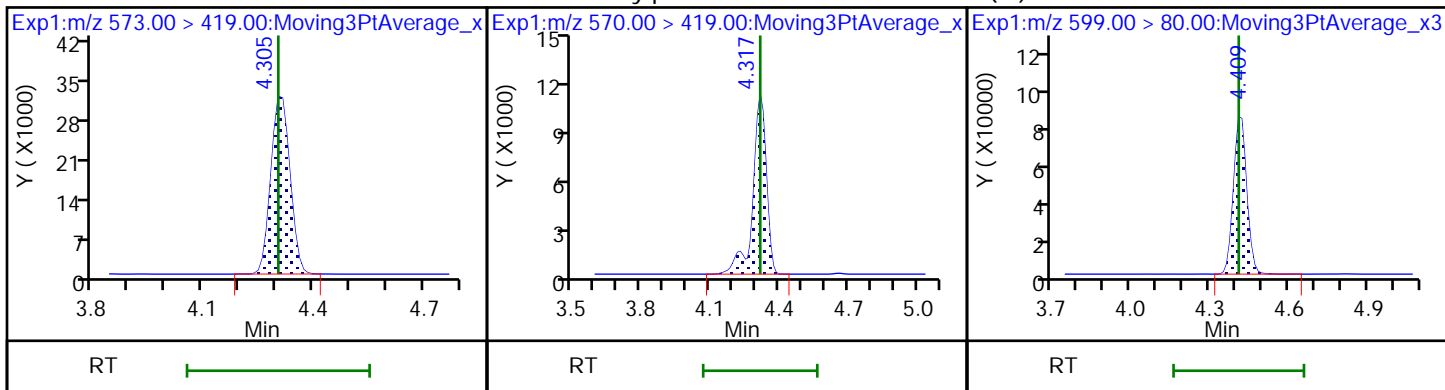






D 27 d3-NMeFOSAA

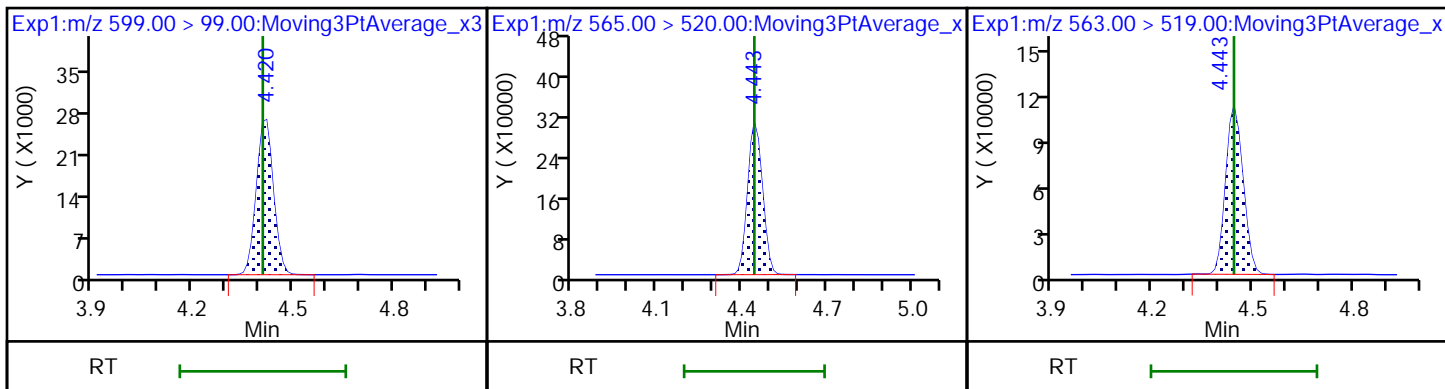
28 N-methylperfluorooctanesulfonamido (M) Perfluorodecanesulfonic acid



29 Perfluorodecanesulfonic acid

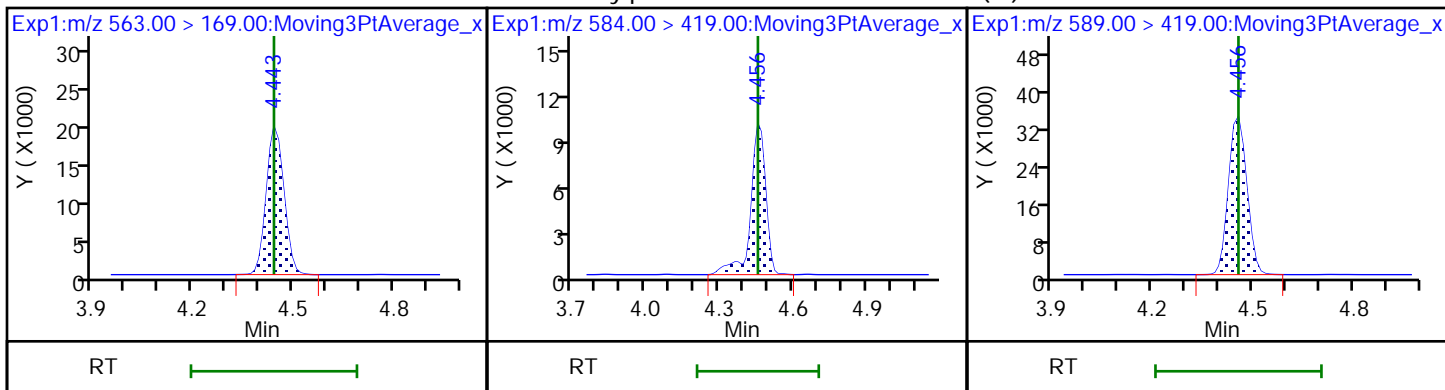
D 30 13C2 PFUoA

31 Perfluoroundecanoic acid



31 Perfluoroundecanoic acid

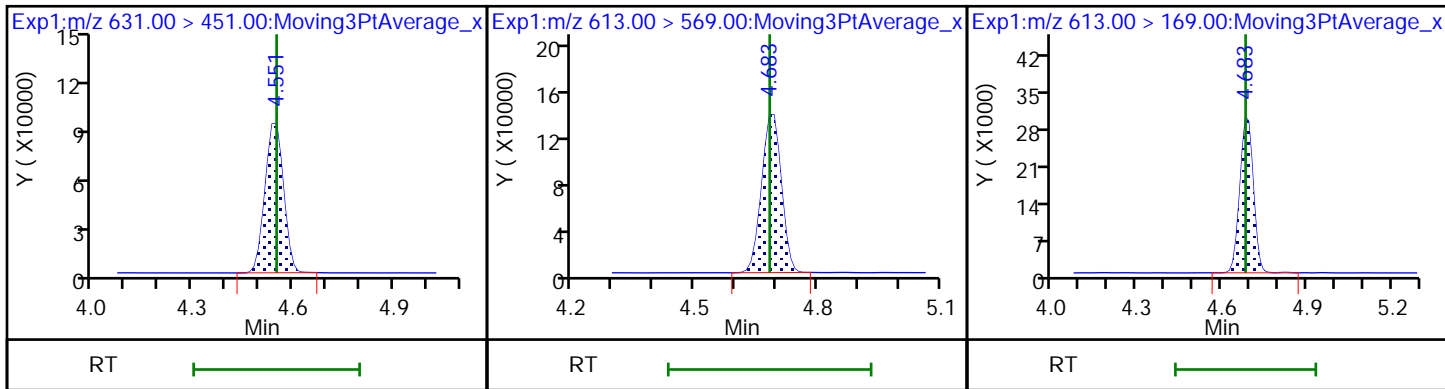
33 N-ethylperfluorooctanesulfonamido (M) d5-NEtFOSAA



66 11-Chloroeicosafuoro-3-oxaundecan

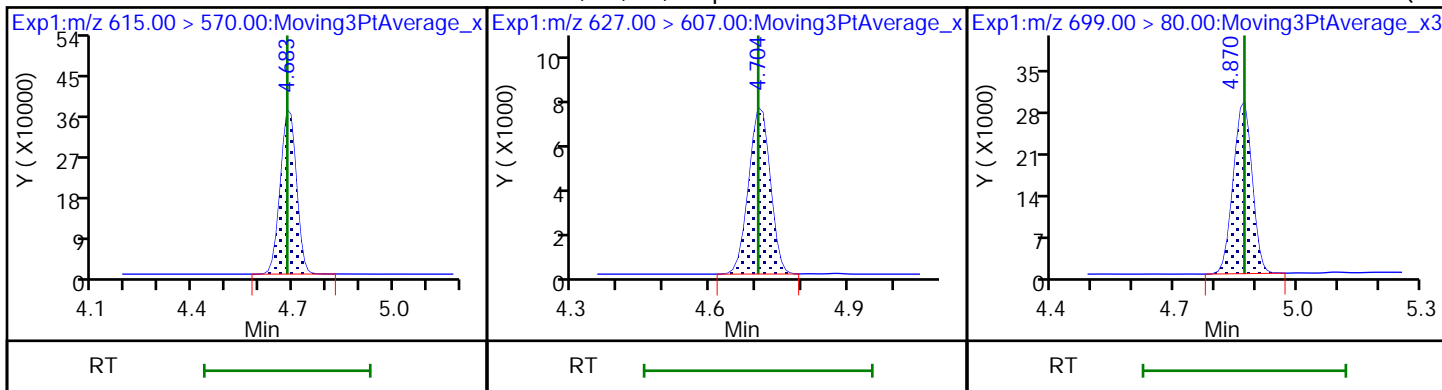
37 Perfluorododecanoic acid

37 Perfluorododecanoic acid



D 36 13C2 PFDaA

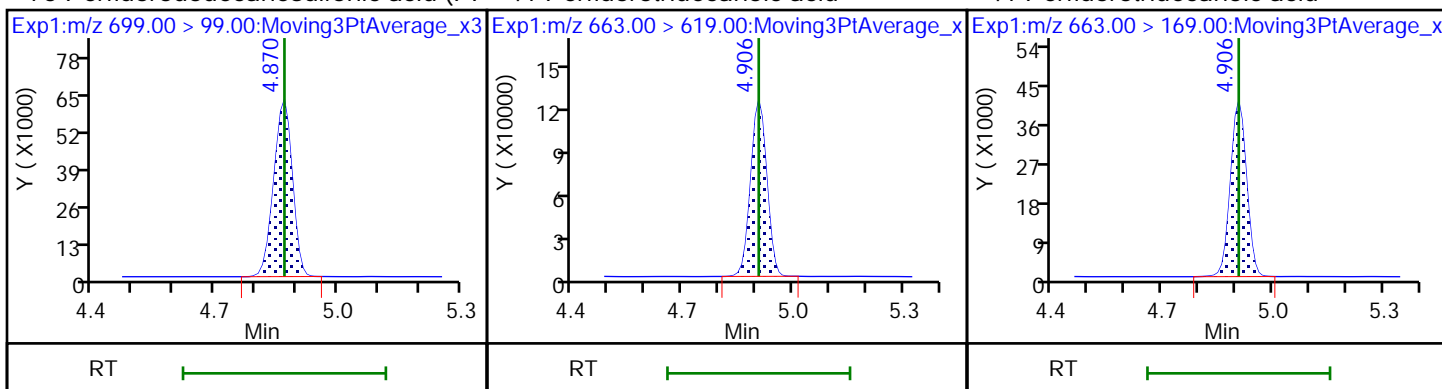
74 1H,1H,2H,2H-perfluorododecanesulfo75 Perfluorododecanesulfonic acid (PF



75 Perfluorododecanesulfonic acid (PF

41 Perfluorotridecanoic acid

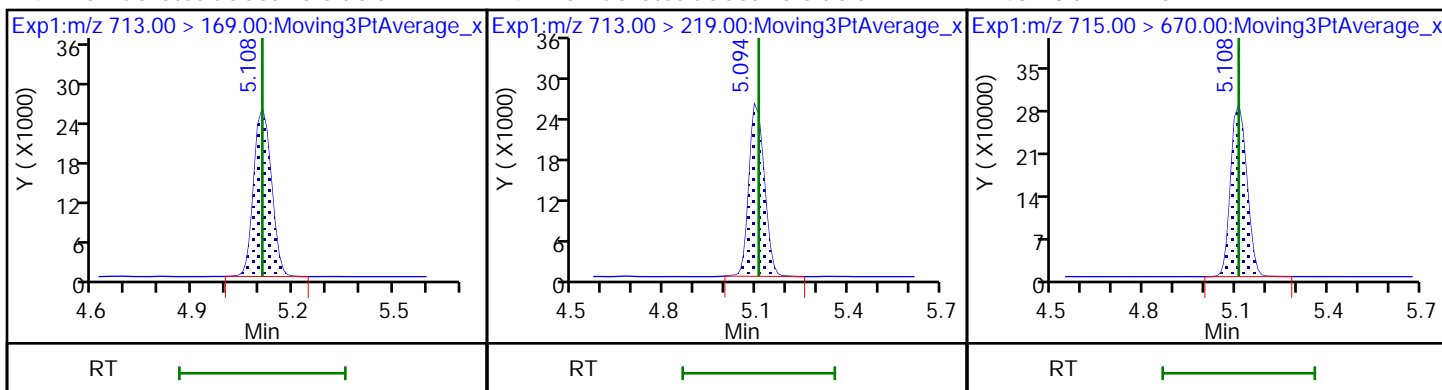
41 Perfluorotridecanoic acid



42 Perfluorotetradecanoic acid

42 Perfluorotetradecanoic acid

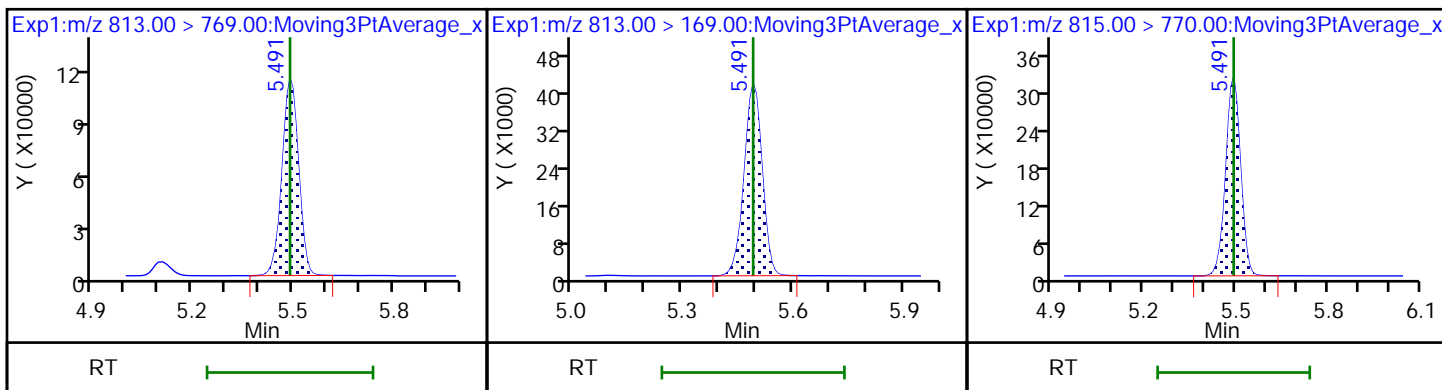
D 43 13C2 PFTeDA



45 Perfluorohexadecanoic acid

45 Perfluorohexadecanoic acid

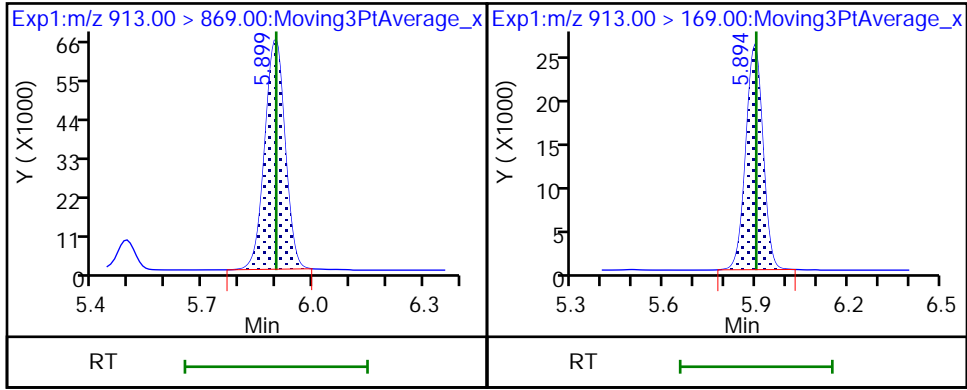
D 44 13C2 PFHxDA





46 Perfluorooctadecanoic acid

46 Perfluorooctadecanoic acid



Eurofins TestAmerica, Burlington

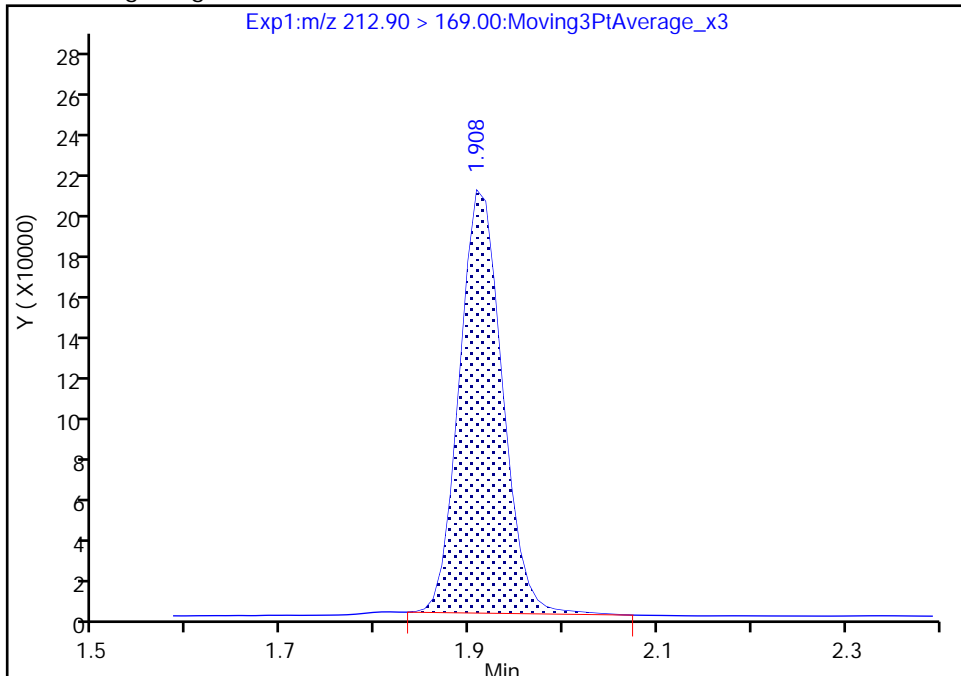
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Injection Date: 24-Dec-2019 14:04:15 Instrument ID: LC812  
Lims ID: CCVIS  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

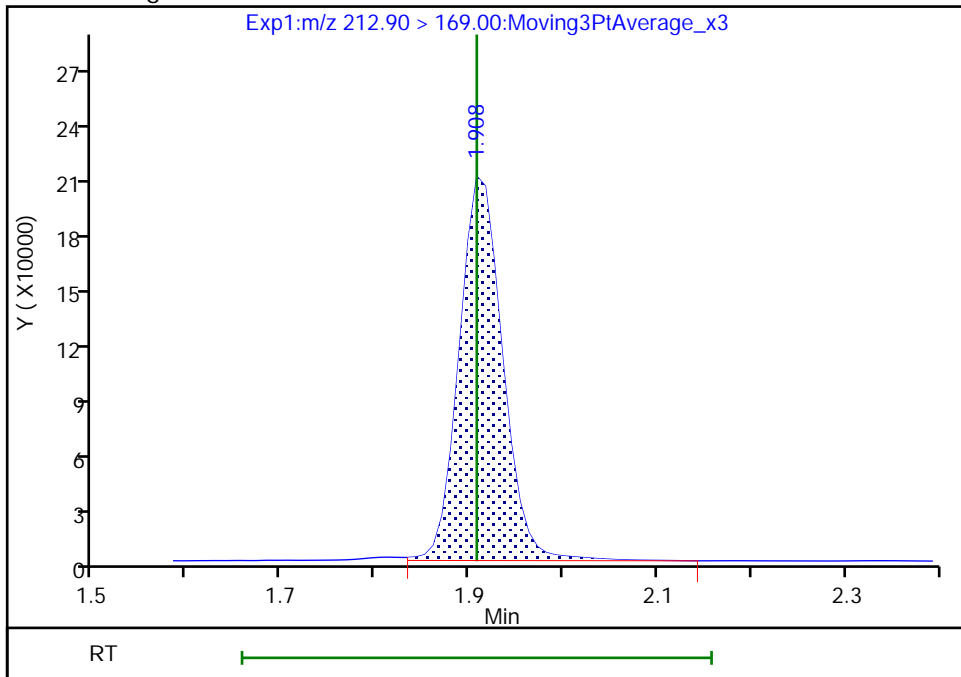
RT: 1.91  
Area: 656882  
Amount: 0.914647  
Amount Units: ng/ml

Processing Integration Results



RT: 1.91  
Area: 671682  
Amount: 0.935255  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 26-Dec-2019 10:24:21  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

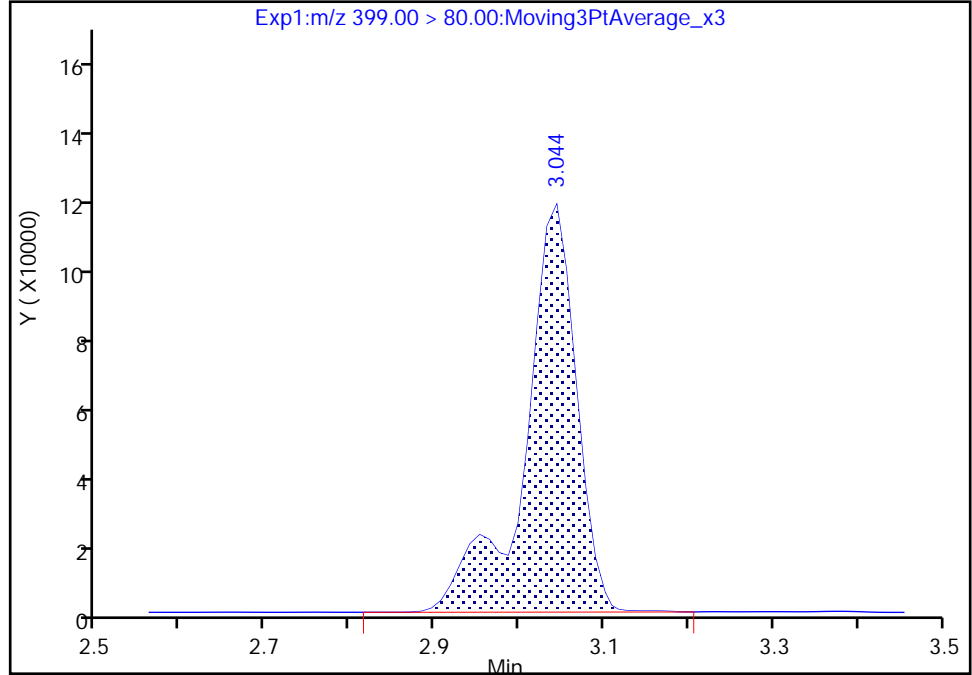
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Injection Date: 24-Dec-2019 14:04:15 Instrument ID: LC812  
Lims ID: CCVIS  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

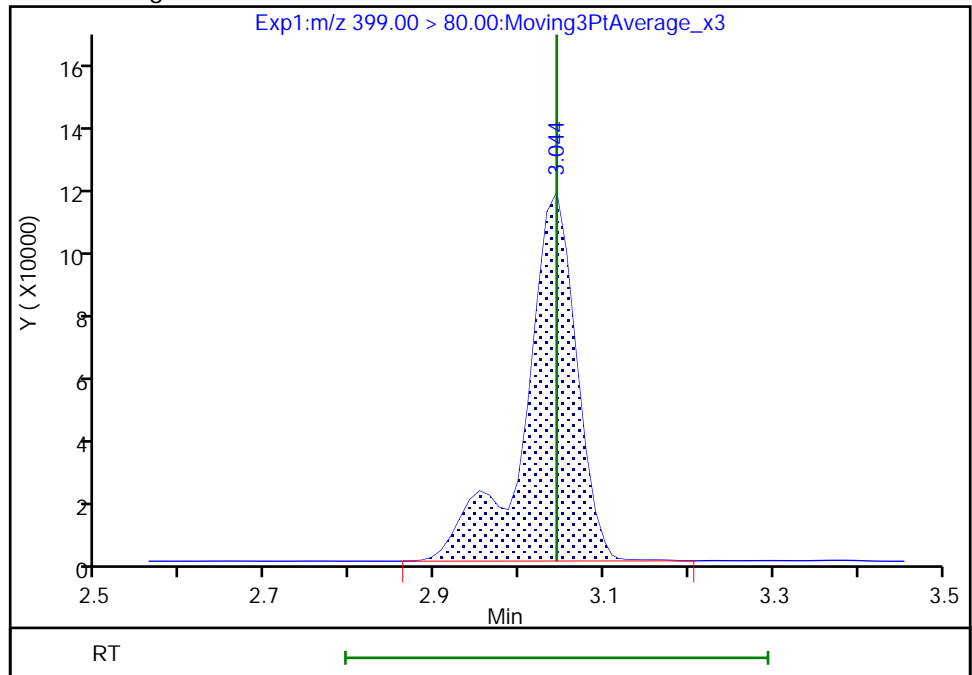
RT: 3.04  
Area: 504732  
Amount: 0.861790  
Amount Units: ng/ml

Processing Integration Results



RT: 3.04  
Area: 504699  
Amount: 0.861733  
Amount Units: ng/ml

Manual Integration Results



Eurofins TestAmerica, Burlington

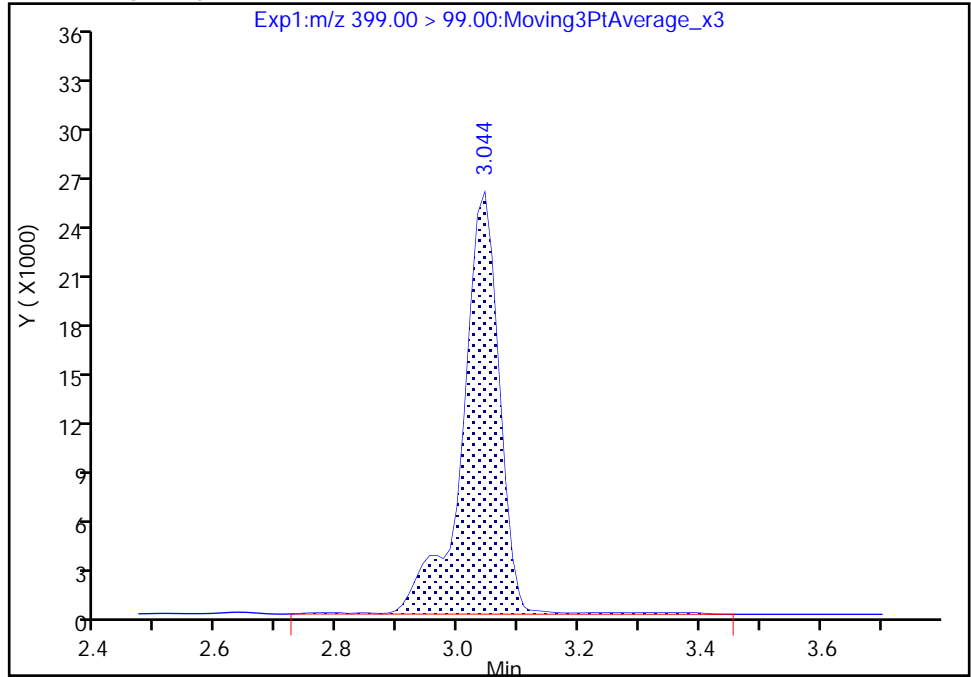
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Injection Date: 24-Dec-2019 14:04:15 Instrument ID: LC812  
Lims ID: CCVIS  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

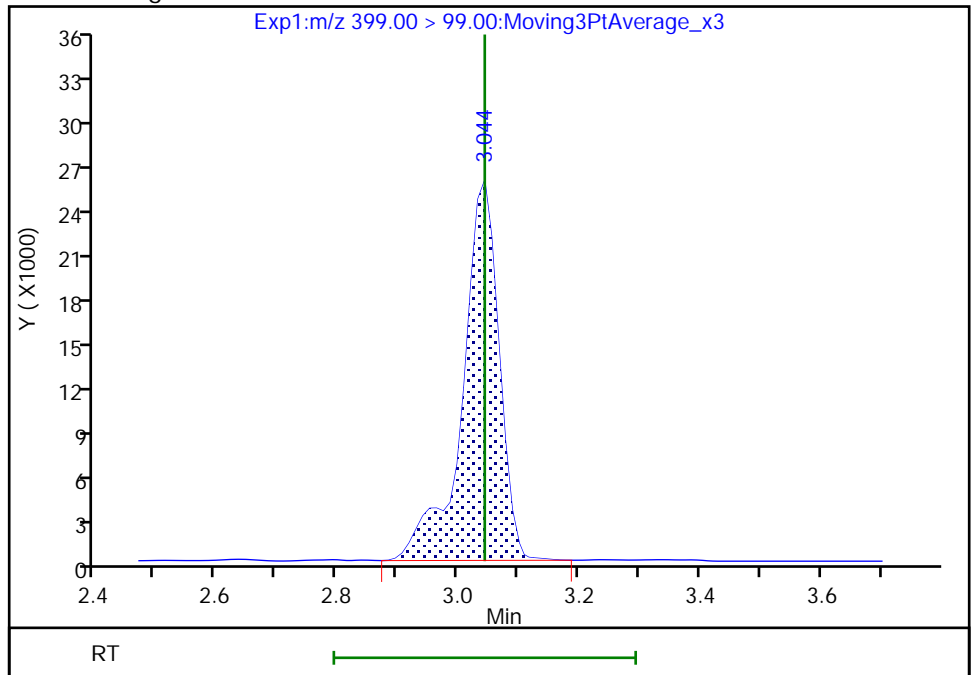
RT: 3.04  
Area: 109727  
Amount: 0.861790  
Amount Units: ng/ml

Processing Integration Results



RT: 3.04  
Area: 107484  
Amount: 0.861733  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 26-Dec-2019 10:24:00

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

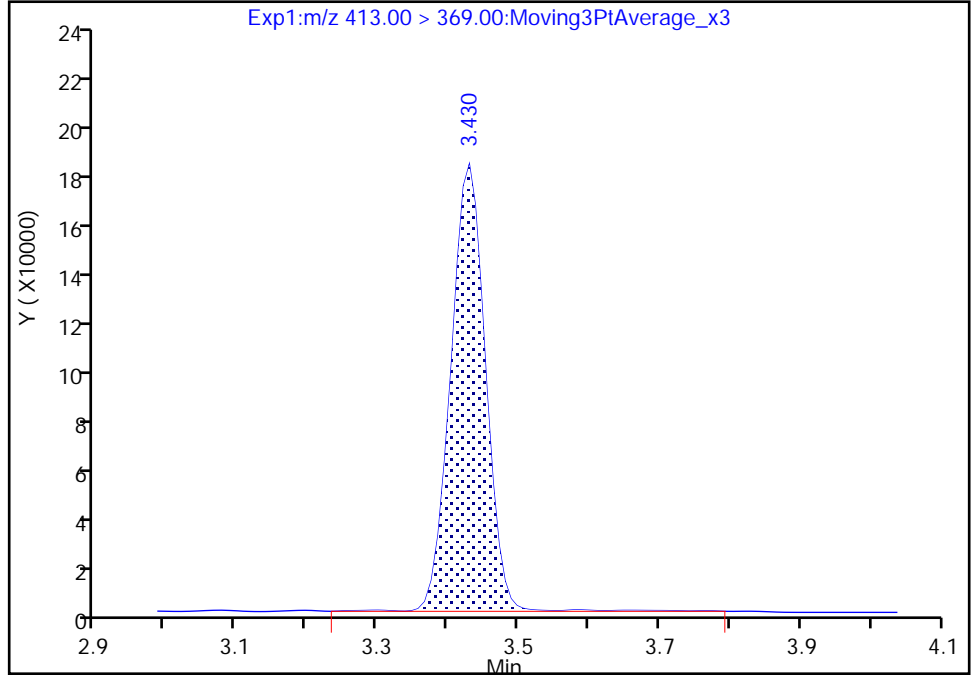
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Injection Date: 24-Dec-2019 14:04:15 Instrument ID: LC812  
Lims ID: CCVIS  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

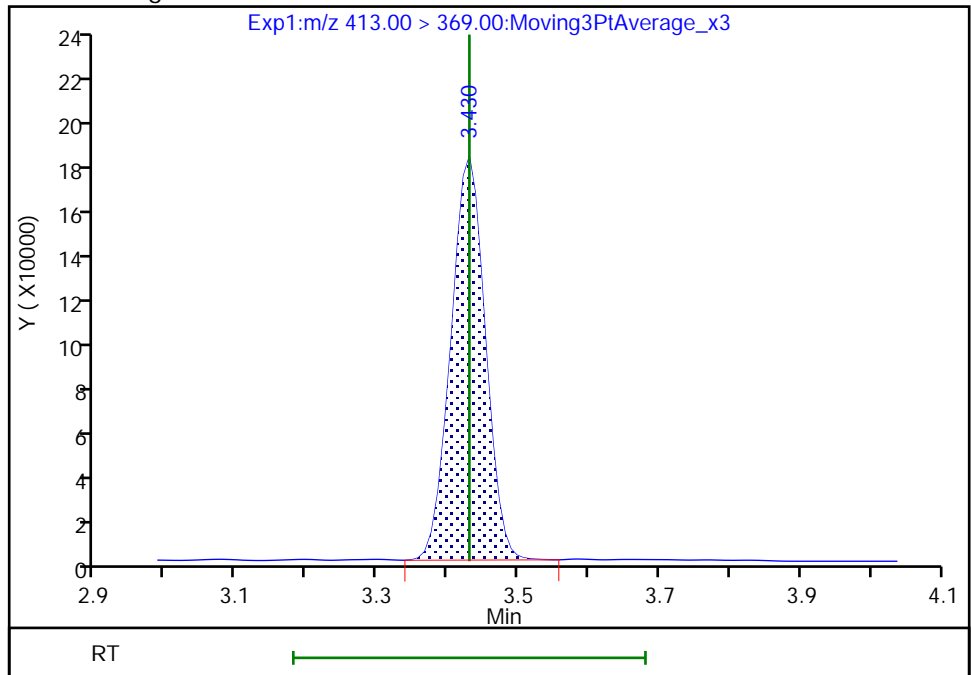
RT: 3.43  
Area: 608469  
Amount: 0.902332  
Amount Units: ng/ml

Processing Integration Results



RT: 3.43  
Area: 601716  
Amount: 0.892317  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 26-Dec-2019 10:23:38  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

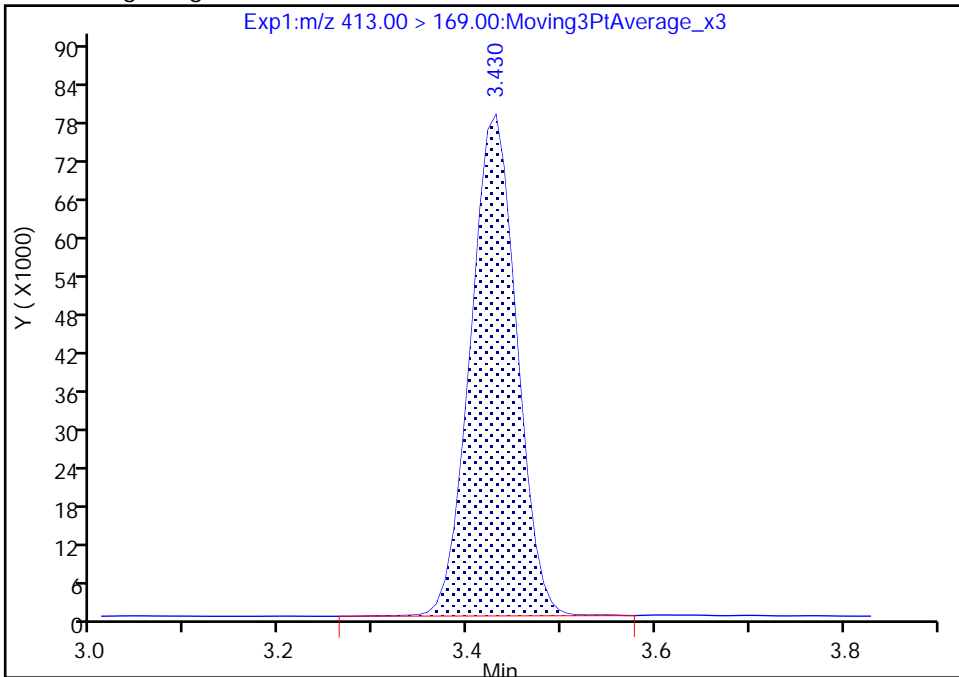
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Injection Date: 24-Dec-2019 14:04:15 Instrument ID: LC812  
Lims ID: CCVIS  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

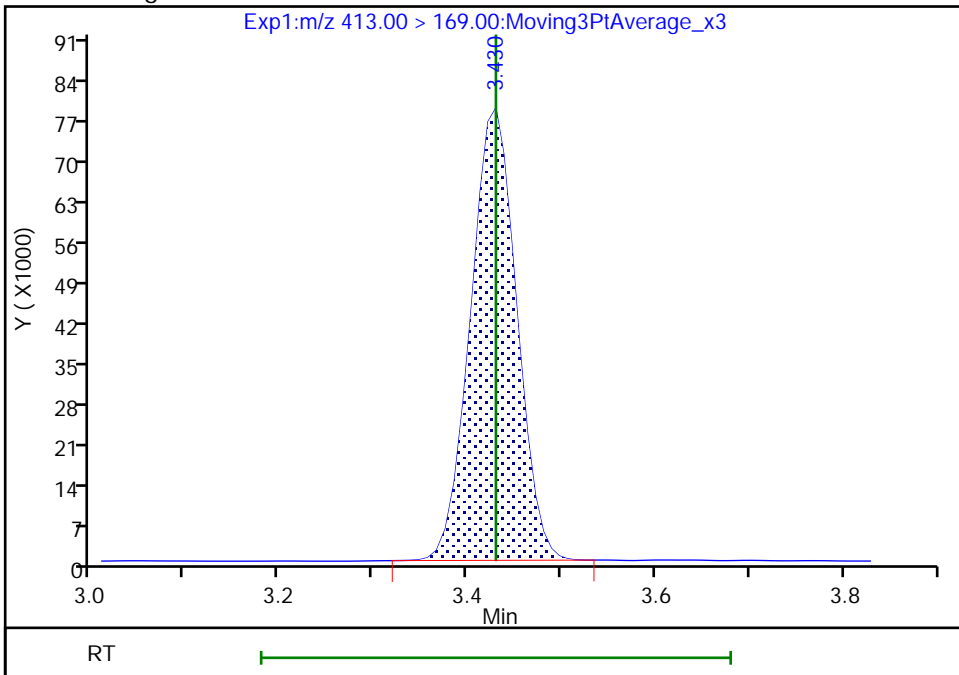
RT: 3.43  
Area: 268686  
Amount: 0.902332  
Amount Units: ng/ml

Processing Integration Results



RT: 3.43  
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Amount: 0.892317  
Amount Units: ng/ml

Manual Integration Results



Eurofins TestAmerica, Burlington

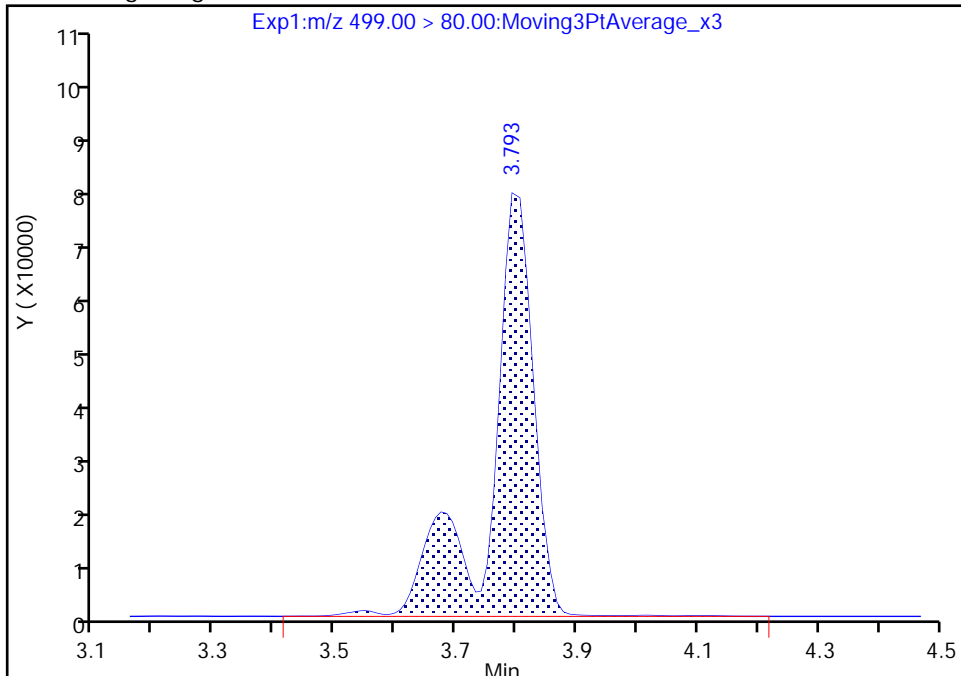
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Injection Date: 24-Dec-2019 14:04:15 Instrument ID: LC812  
Lims ID: CCVIS  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

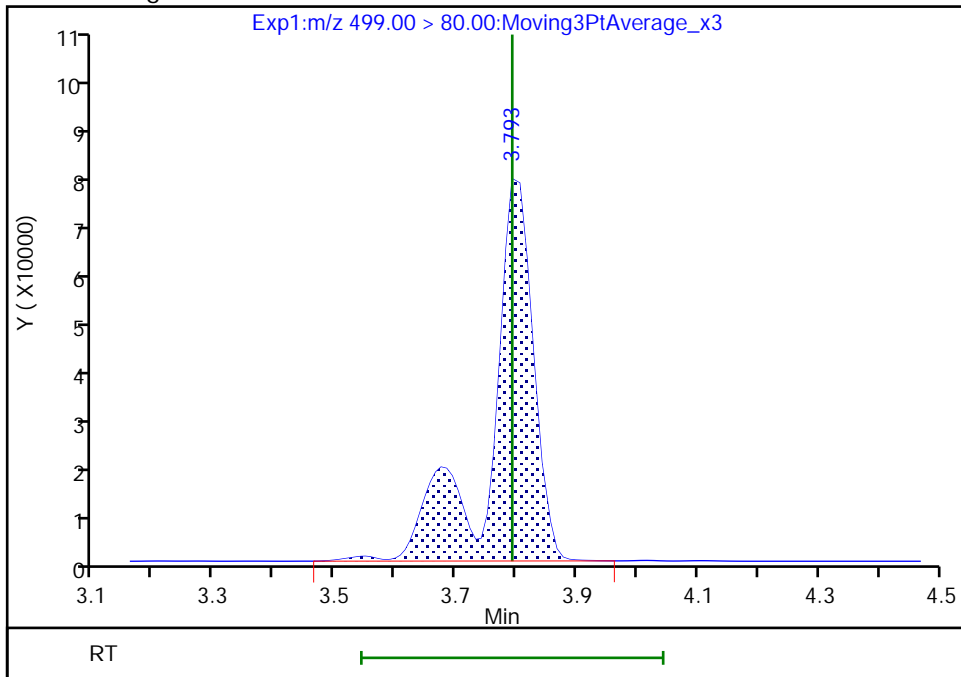
RT: 3.79  
Area: 389050  
Amount: 0.875559  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 386617  
Amount: 0.870083  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 26-Dec-2019 10:23:08  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

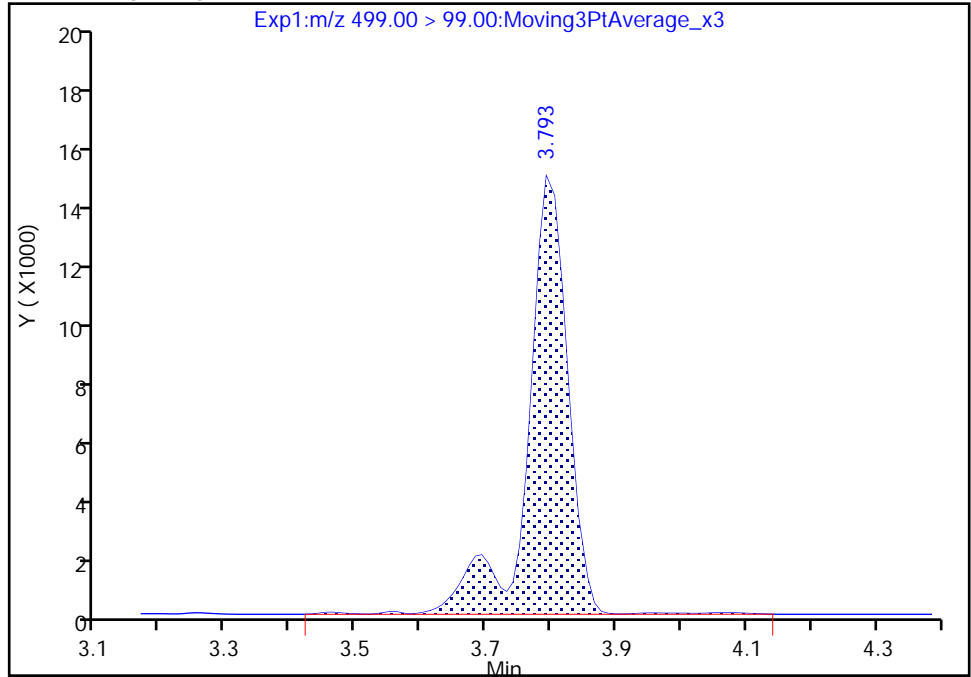
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Injection Date: 24-Dec-2019 14:04:15 Instrument ID: LC812  
Lims ID: CCVIS  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

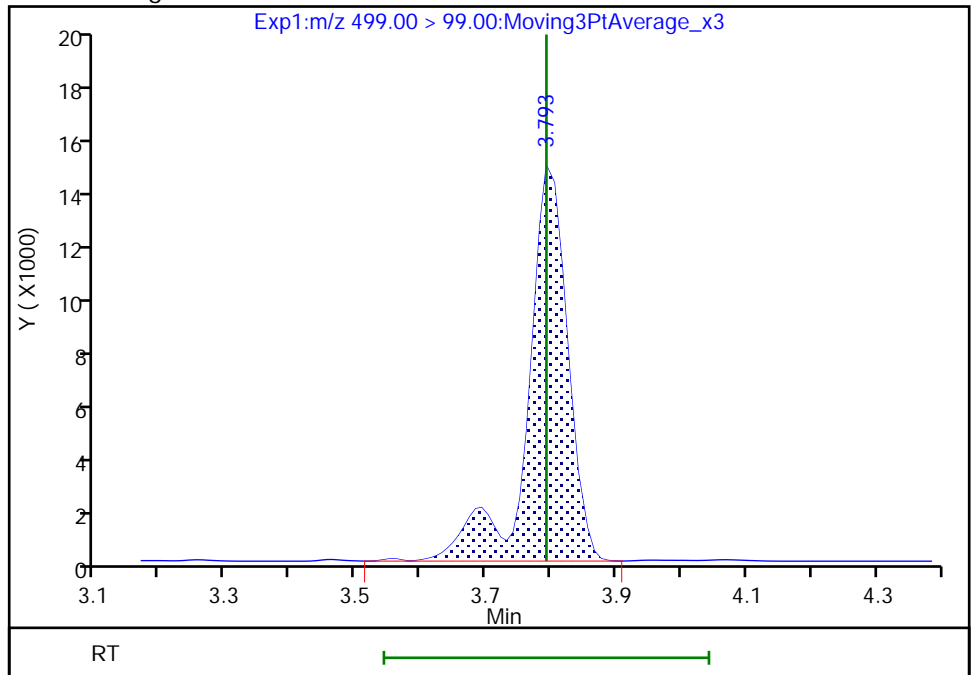
RT: 3.79  
Area: 63272  
Amount: 0.875559  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 62663  
Amount: 0.870083  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 26-Dec-2019 10:23:16

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Eurofins TestAmerica, Burlington

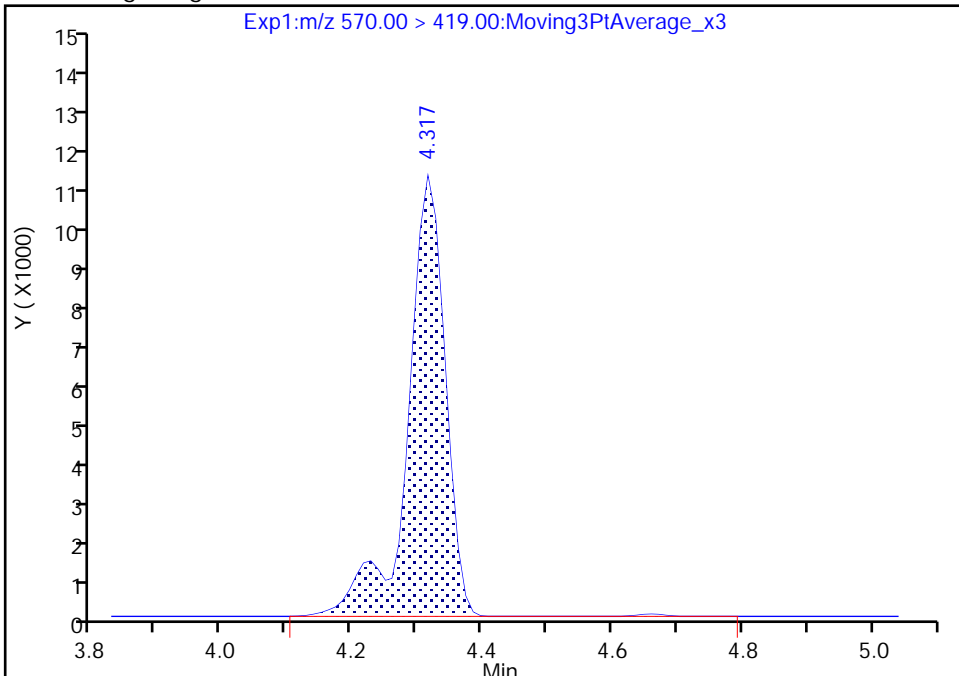
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Injection Date: 24-Dec-2019 14:04:15 Instrument ID: LC812  
Lims ID: CCVIS  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

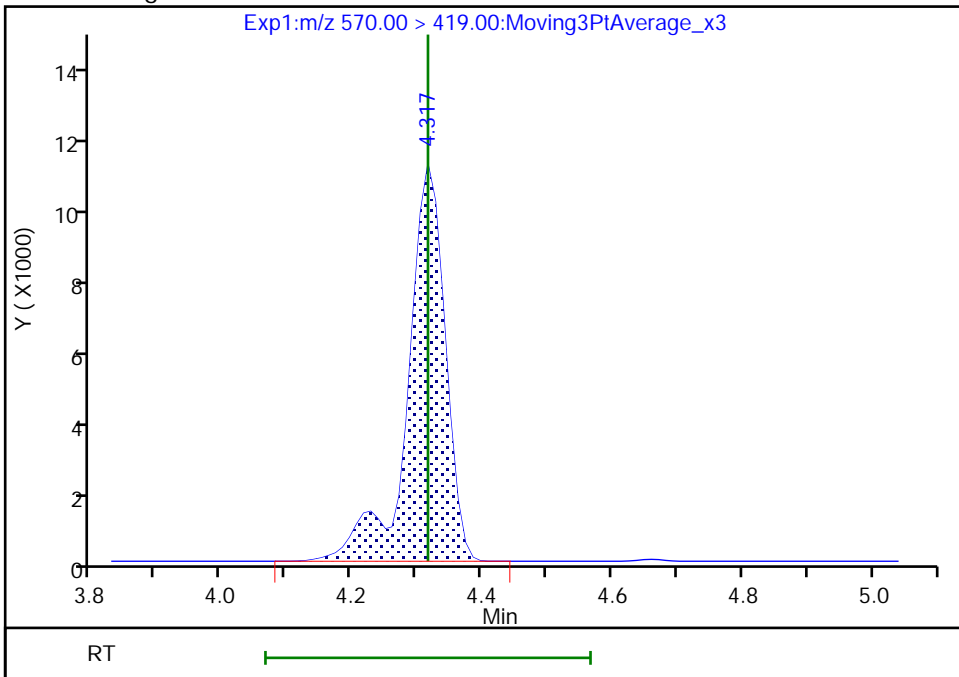
RT: 4.32  
Area: 43047  
Amount: 1.078026  
Amount Units: ng/ml

Processing Integration Results



RT: 4.32  
Area: 42912  
Amount: 1.074645  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 26-Dec-2019 10:06:01  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

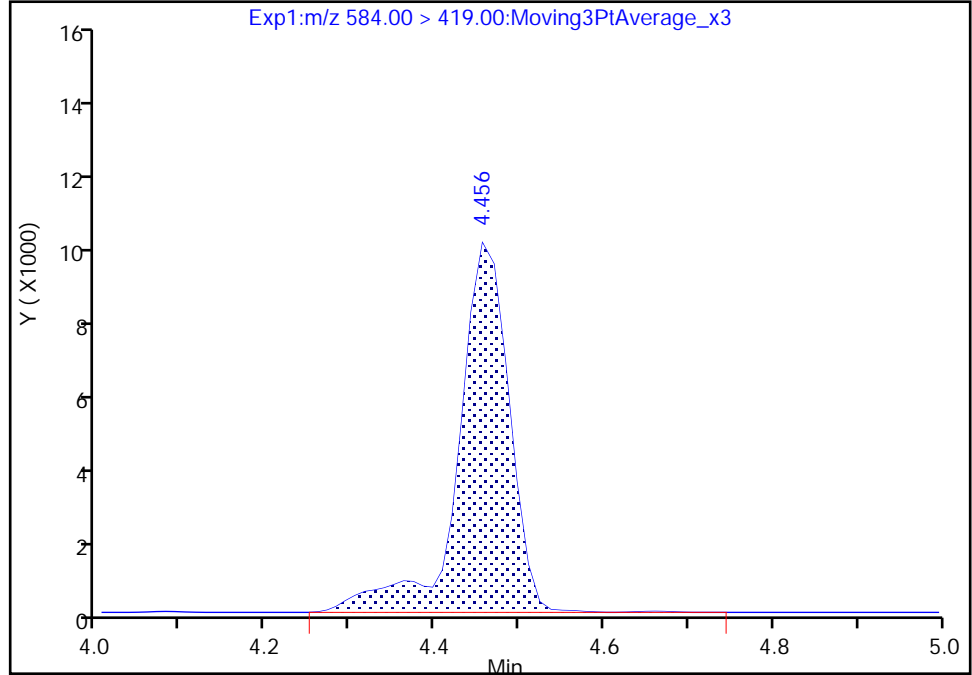
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Injection Date: 24-Dec-2019 14:04:15 Instrument ID: LC812  
Lims ID: CCVIS  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

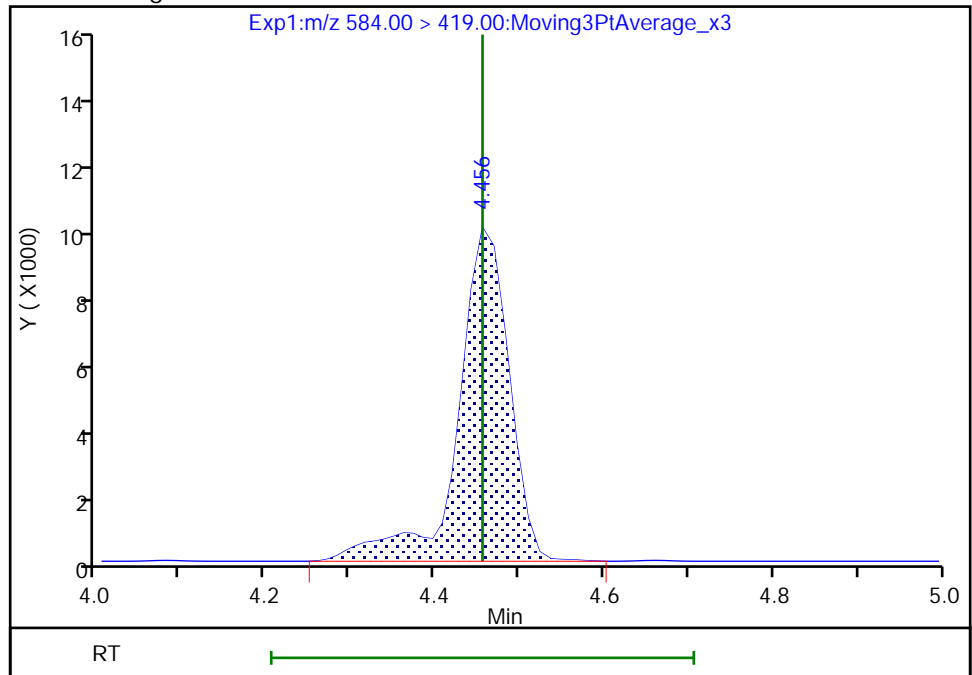
RT: 4.46  
Area: 42145  
Amount: 0.985819  
Amount Units: ng/ml

Processing Integration Results



RT: 4.46  
Area: 42077  
Amount: 0.984229  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 26-Dec-2019 10:05:52  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

FORM VII  
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 200-150985/20 Calibration Date: 12/24/2019 16:31  
 Instrument ID: LC812 Calib Start Date: 12/06/2019 14:32  
 GC Column: C-18 ID: 4.60 (mm) Calib End Date: 12/06/2019 15:13  
 Lab File ID: SC122319B020.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.9949	0.9668		2430	2500	-2.8	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.132	1.087		2400	2500	-4.0	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.087	0.997		2030	2210	-8.3	40.0
1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2)	AveID	1.732	1.806		2430	2340	4.3	50.0
Perfluorohexanoic acid (PFHxA)	AveID	1.021	1.006		2460	2500	-1.5	40.0
Perfluoropentanesulfonic acid	AveID	1.161	1.087		2200	2350	-6.4	50.0
HFPO-DA	AveID	3.591	3.032		2110	2500	-15.6	40.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.132	1.054		2120	2280	-6.8	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.057	0.9554		2260	2500	-9.6	40.0
DONA	AveID	3.533	3.353		2240	2360	-5.1	50.0
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	AveID	0.9437	0.8257		2070	2370	-12.5	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	1.225	1.226		2380	2380	0.1	50.0
Perfluorooctanoic acid (PFOA)	AveID	1.110	1.031		2320	2500	-7.1	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.080	1.034		2220	2320	-4.2	40.0
Perfluorononanoic acid (PFNA)	AveID	0.9805	1.046		2670	2500	6.7	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	1.233	1.065		2010	2330	-13.7	50.0
Perfluorononanesulfonic acid	AveID	0.8262	0.8330		2420	2400	0.8	50.0
Perfluorodecanoic acid (PFDA)	AveID	0.9675	1.051		2710	2500	8.6	40.0
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	AveID	0.4616	0.4440		2300	2400	-3.8	40.0
Perfluorooctanesulfonamide (PFOSA)	AveID	0.995	0.9759		2450	2500	-1.9	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	AveID	0.8689	0.9601		2760	2500	10.5	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.7196	0.7005		2350	2410	-2.7	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.8479	0.8293		2450	2500	-2.2	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.8277	0.7657		2310	2500	-7.5	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.163	1.065		2160	2360	-8.4	50.0
Perfluorododecanoic acid (PFDoA)	AveID	0.9240	1.045		2830	2500	13.1	40.0
10:2 FTS	AveID	0.2931	0.2597		2140	2410	-11.4	50.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.2736	0.2522		2230	2420	-7.8	50.0
Perfluorotridecanoic acid (PFTriA)	AveID	0.8778	0.8639		2460	2500	-1.6	50.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.2009	0.2363		2940	2500	17.6	40.0

FORM VII  
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 200-150985/20 Calibration Date: 12/24/2019 16:31  
 Instrument ID: LC812 Calib Start Date: 12/06/2019 14:32  
 GC Column: C-18 ID: 4.60 (mm) Calib End Date: 12/06/2019 15:13  
 Lab File ID: SC122319B020.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluoro-n-hexadecanoic acid (PFHxDA)	L1ID		0.8692		2430	2500	-2.8	40.0
Perfluoro-n-octadecanoic acid (PFODA)	AveID	0.7223	0.6258		2170	2500	-13.4	50.0
13C4 PFBA	Ave	1.059	1.105		2610	2500	4.3	50.0
13C5 PFPeA	Ave	0.8099	0.8464		2610	2500	4.5	50.0
13C3 PFBS	Ave	0.9661	1.006		2420	2330	4.2	50.0
M2-4:2 FTS	Ave	0.0901	0.0692		1790	2340	-23.2	50.0
13C2 PFHxA	Ave	0.9031	0.9601		2660	2500	6.3	50.0
13C3 HFPO-DA	Ave	0.0394	0.0563		3570	2500	42.8	50.0
1802 PFHxS	Ave	0.7630	0.8288		2570	2370	8.6	50.0
13C4 PFHpA	Ave	0.8562	0.9775		2850	2500	14.2	50.0
M2-6:2 FTS	Ave	0.1311	0.1092		1980	2380	-16.6	50.0
13C4 PFOA	Ave	0.9086	0.9736		2680	2500	7.2	50.0
13C4 PFOS	Ave	0.6053	0.6586		2600	2390	8.8	50.0
13C5 PFNA	Ave	0.8355	0.8337		2490	2500	-0.2	50.0
13C2 PFDA	Ave	0.8233	0.8149		2470	2500	-1.0	50.0
M2-8:2 FTS	Ave	0.1562	0.1628		2500	2400	4.3	50.0
13C8 FOSA	Ave	1.077	1.050		2440	2500	-2.5	50.0
d3-NMeFOSAA	Ave	0.0793	0.0691		2180	2500	-12.9	50.0
13C2 PFUnA	Ave	0.6999	0.6684		2390	2500	-4.5	50.0
d5-NEtFOSAA	Ave	0.0879	0.0944		2690	2500	7.5	50.0
13C2 PFDoA	Ave	0.7677	0.6859		2230	2500	-10.6	50.0
13C2 PFTeDA	Ave	0.6433	0.6750		2620	2500	4.9	50.0
13C2 PFHxDA	Ave	0.5918	0.7258		3070	2500	22.6	50.0

Eurofins TestAmerica, Burlington  
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B020.d  
 Lims ID: CCV L5  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 24-Dec-2019 16:31:47 ALS Bottle#: 20 Worklist Smp#: 20  
 Injection Vol: 20.0 ul Dil. Factor: 1.0000  
 Sample Info: CCV L5  
 Misc. Info.: 200-0039355-020 Plate: 1 Rack: 2  
 Operator ID: lc812tech Instrument ID: LC812  
 Sublist: chrom-PFC\_LC812\*sub3  
 Method: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\PFC\_LC812.m  
 Limit Group: LC\_PFC\_ICAL  
 Last Update: 31-Dec-2019 08:24:59 Calib Date: 06-Dec-2019 15:13:26  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Column 1 : C-18 ( 4.60 mm) Det: EXP1  
 Process Host: CTX0330

First Level Reviewer: chirgwinb Date: 26-Dec-2019 10:26:33

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	1.908	1.908	0.0	0.558	1842647	2.61	104	2215	
2 Perfluorobutanoic acid	212.90 > 169.00	1.908	1.908	0.0	1.000	1781504	2.43	97.2	612	
D 3 13C5 PFPeA	267.90 > 223.00	2.258	2.257	0.001	0.660	1411392	2.61	105	6108	
4 Perfluoropentanoic acid	262.90 > 219.00	2.258	2.271	-0.013	1.000	1534589	2.40	96.0	177	
D 47 13C3 PFBS	301.90 > 80.00	2.271	2.285	-0.014	0.664	1560812	2.42	104	485724	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	2.285	2.285	0.0	1.006	1479344	2.03	Target=2.03	91.7	4226
	298.90 > 99.00	2.285	2.285	0.0	1.006	816782		1.81(1.01-3.04)		1510
D 60 M2-4:2 FTS	329.00 > 81.00	2.611	2.611	0.0	0.763	107797	1.79	76.8	287	
61 1H,1H,2H,2H-perfluorohexanesulfoni	327.00 > 307.00	2.611	2.611	0.0	1.000	194688	2.43	104	2581	
D 7 13C2 PFHxA	315.00 > 270.00	2.648	2.648	0.0	0.774	1601095	2.66	106	5168	
6 Perfluorohexanoic acid	313.00 > 269.00	2.648	2.661	-0.013	1.000	1610579	2.46	Target=13.76	98.5	721
	313.00 > 119.00	2.648	2.661	-0.013	1.000	144758		11.13(6.88-20.64)		618
70 Perfluoropentanesulfonic acid	349.00 > 80.00	2.648	2.661	-0.013	0.873	1409444	2.20	Target=3.50	93.6	3964
	349.00 > 99.00	2.661	2.661	0.0	0.877	432799		3.26(1.75-5.25)		1651
D 64 13C3 HFPO-DA	332.10 > 287.00	2.768	2.768	0.0	0.809	93919	3.57	143	1563	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.768	2.776	-0.008	1.000	284761	2.11		84.4	134	
D 11 18O2 PFHxS										
403.00 > 84.00	3.033	3.044	-0.011	0.886	1307435	2.57		109	7764	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.033	3.044	-0.011	1.000	1326100	2.12	Target=3.90	93.2	3424	M
399.00 > 99.00	3.033	3.044	-0.011	1.000	319783		4.15(1.95-5.85)		1284	M
D 9 13C4 PFHpA										
367.00 > 322.00	3.044	3.044	0.0	0.890	1630036	2.85		114	8350	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.044	3.044	0.0	1.000	1557288	2.26	Target=3.95	90.4	1051	
363.00 > 169.00	3.044	3.044	0.0	1.000	474175		3.28(1.97-5.92)		1504	
77 DONA										
377.00 > 251.00	3.078	3.089	-0.011	0.812	3469257	2.24	Target=2.49	94.9	6485	
377.00 > 85.00	3.078	3.089	-0.011	0.812	1523764		2.28(1.24-3.73)		5112	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.405	3.413	-0.008	0.898	1282378	2.38	Target=6.46	100	4183	
449.00 > 99.00	3.405	3.413	-0.008	0.898	185034		6.93(3.23-9.69)		1788	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.405	3.413	-0.008	1.000	142589	2.07		87.5	1274	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.405	3.413	-0.008	0.995	173058	1.98		83.4	904	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.422	3.430	-0.008	1.000	1673824	2.32	Target=2.40	92.9	861	
413.00 > 169.00	3.422	3.430	-0.008	1.000	757673		2.21(1.20-3.60)		3246	
D 14 13C4 PFOA										
417.00 > 372.00	3.422	3.430	-0.008	1.000	1623604	2.68		107	4933	
* 62 13C2 PFOA										
415.00 > 370.00	3.422	3.430	-0.008		1667558	2.50			4157	
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.793	0.0	1.108	1049965	2.60		109	3716	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.793	3.793	0.0	1.000	1053990	2.22	Target=5.74	95.8	3613	M
499.00 > 99.00	3.793	3.793	0.0	1.000	163383		6.45(2.87-8.61)		1288	M
D 19 13C5 PFNA										
468.00 > 423.00	3.817	3.817	0.0	1.116	1390160	2.49		99.8	6151	
20 Perfluorononanoic acid										
463.00 > 419.00	3.817	3.817	0.0	1.000	1454382	2.67	Target=7.01	107	793	
463.00 > 169.00	3.817	3.817	0.0	1.000	218499		6.66(3.50-10.51)		2523	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.973	3.984	-0.011	1.047	1089725	2.01		86.3	5057	
68 Perfluorononanesulfonic acid										M
549.00 > 80.00	4.116	4.129	-0.013	1.085	878278	2.42	Target=3.14	101	4001	M
549.00 > 99.00	4.129	4.129	0.0	1.089	259916		3.38(1.57-4.71)		1897	M
D 23 13C2 PFDA										
515.00 > 470.00	4.153	4.164	-0.011	1.214	1358922	2.47		99.0	5721	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
24 Perfluorodecanoic acid										
513.00 > 469.00	4.153	4.164	-0.011	1.000	1427546	2.71	Target=7.28	109	1944	
513.00 > 169.00	4.153	4.164	-0.011	1.000	198280		7.20(3.64-10.91)		1581	
25 1H,1H,2H,2H-perfluorodecanesulfoni										
527.00 > 507.00	4.164	4.164	0.0	1.000	115506	2.30		96.2	954	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.164	4.175	-0.011	1.217	260135	2.50		104	1145	
D 21 13C8 FOSA										
506.00 > 78.00	4.207	4.218	-0.011	1.230	1751233	2.44		97.5	2774	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.207	4.218	-0.011	1.000	1708960	2.45		98.1	2767	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.305	4.305	0.0	1.258	115141	2.18		87.1	412	
28 N-methylperfluorooctanesulfonamido										
570.00 > 419.00	4.305	4.317	-0.012	1.000	110547	2.76		110	1959	
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.409	4.409	0.0	1.162	741618	2.35	Target=2.76	97.3	2716	
599.00 > 99.00	4.409	4.409	0.0	1.162	256277		2.89(1.38-4.14)		2700	
D 30 13C2 PFUnA										
565.00 > 520.00	4.431	4.443	-0.012	1.295	1114531	2.39		95.5	6530	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.431	4.443	-0.012	1.000	924230	2.45	Target=5.78	97.8	1278	
563.00 > 169.00	4.431	4.443	-0.012	1.000	183361		5.04(2.89-8.67)		2182	
33 N-ethylperfluorooctanesulfonamidoa										
584.00 > 419.00	4.456	4.456	0.0	1.003	120590	2.31		92.5	1562	M
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.443	4.456	-0.013	1.298	157486	2.69		107	1281	
66 11-Chloroeicosafuoro-3-oxaundecan										
631.00 > 451.00	4.537	4.551	-0.014	1.196	1101725	2.16		91.6	5914	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.683	4.683	0.0	1.000	1195696	2.83	Target=5.13	113	334	
613.00 > 169.00	4.683	4.683	0.0	1.000	283067		4.22(2.56-7.69)		5067	
D 36 13C2 PFDaA										
615.00 > 570.00	4.683	4.683	0.0	1.369	1143838	2.23		89.4	7907	
74 1H,1H,2H,2H-perfluorododecanesulfo										
627.00 > 607.00	4.704	4.704	0.0	1.130	67978	2.14		88.6	2046	
75 Perfluorododecanesulfonic acid (PF										
699.00 > 80.00	4.861	4.870	-0.009	1.282	268160	2.23	Target=0.45	92.2	461	
699.00 > 99.00	4.861	4.870	-0.009	1.282	554505		0.48(0.22-0.67)		3842	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.897	4.906	-0.009	1.046	988140	2.46	Target=3.82	98.4	299	
663.00 > 169.00	4.897	4.906	-0.009	1.046	337829		2.92(1.91-5.74)		3020	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.094	5.108	-0.014	1.000	265962	2.94	Target=1.05	118	3055	
713.00 > 219.00	5.094	5.108	-0.014	1.000	222231		1.20(0.52-1.57)		2860	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.094	5.108	-0.014	1.489	1125551	2.62		105	8355	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.482	5.491	-0.009	1.000	1052001	2.43	Target=3.20	97.2	429	
813.00 > 169.00	5.482	5.491	-0.009	1.000	399075		2.64(1.60-4.80)		4810	
D 44 13C2 PFHxDA										
815.00 > 770.00	5.482	5.491	-0.009	1.602	1210337	3.07		123	8176	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.889	5.899	-0.010	1.074	757423	2.17	Target=2.86	86.6	237	
913.00 > 169.00	5.884	5.899	-0.015	1.073	303076		2.50(1.43-4.29)		3213	

**QC Flag Legend**

Review Flags

M - Manually Integrated

**Reagents:**

PFAS32NCIC5\_00004

Amount Added: 100.00

Units: uL



Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B020.d

Injection Date: 24-Dec-2019 16:31:47

Instrument ID: LC812

Lims ID: CCV L5

Client ID:

Operator ID: lc812tech

ALS Bottle#: 20

Worklist Smp#: 20

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

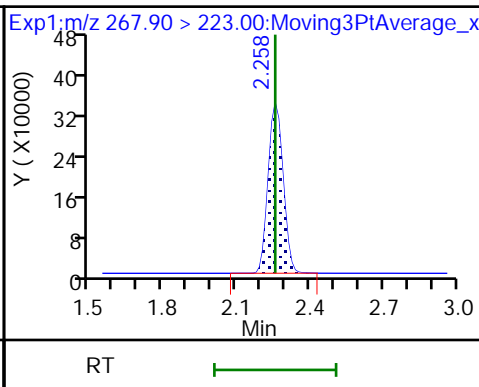
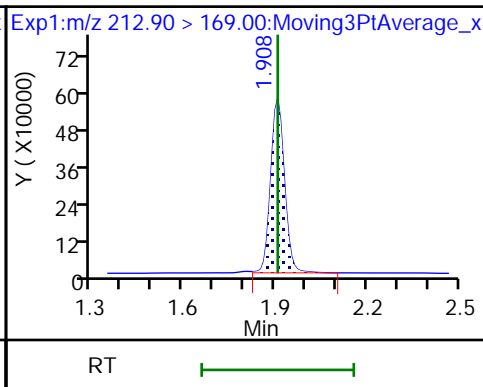
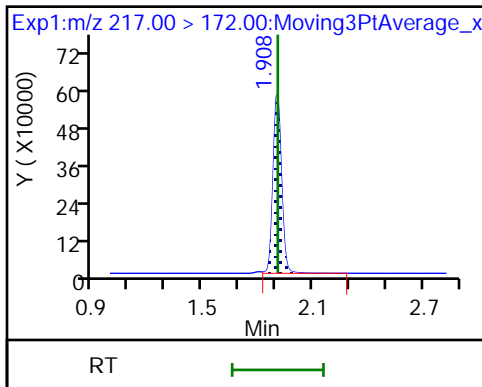
Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

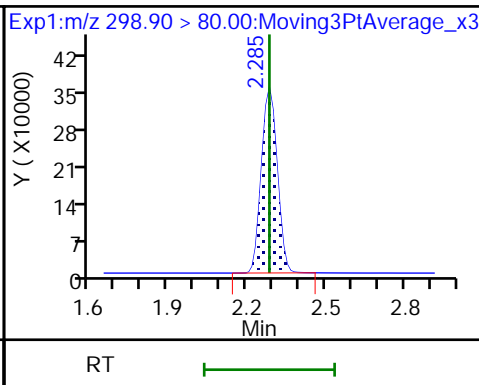
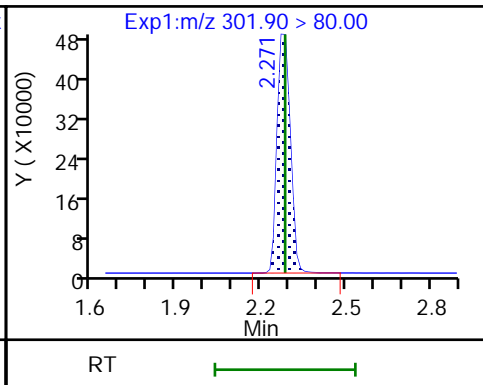
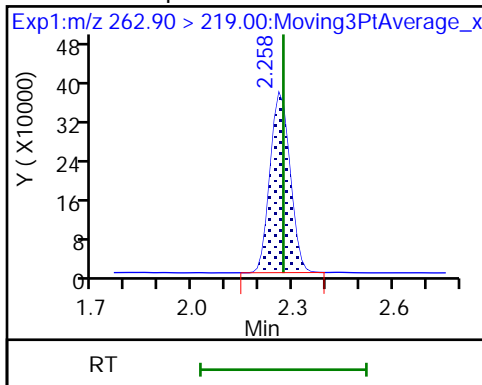
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 47 13C3 PFBS

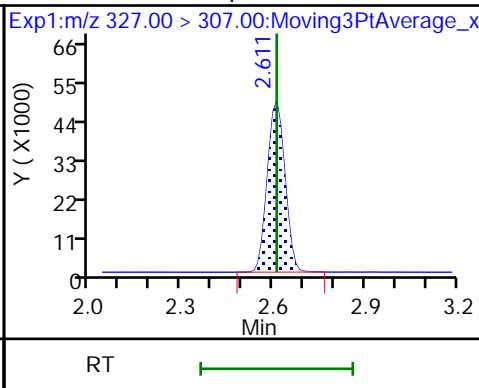
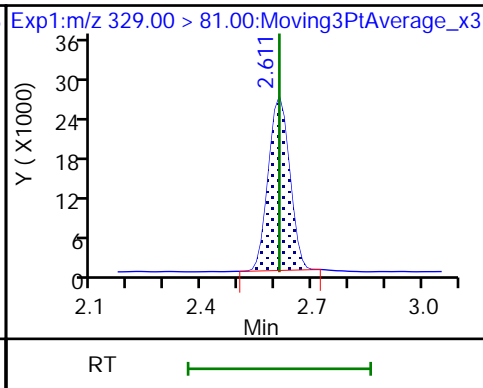
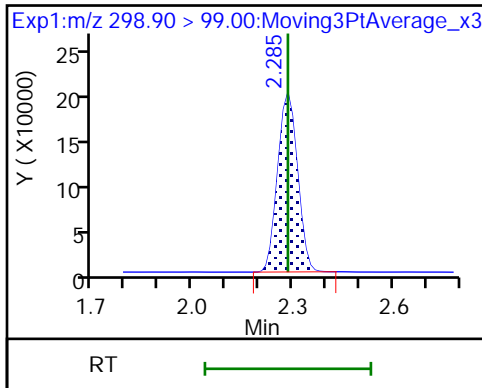
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 60 M2-4:2 FTS

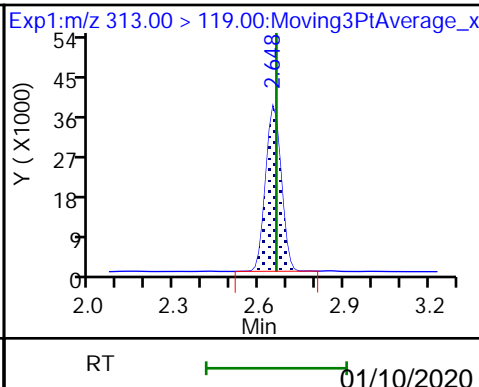
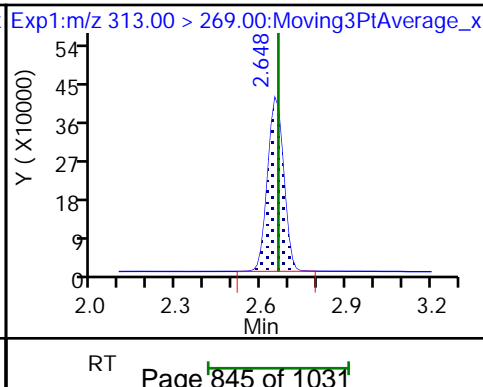
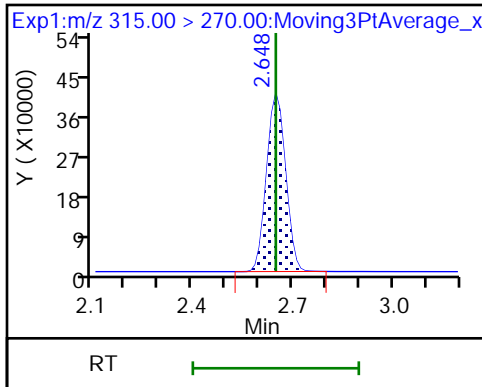
61 1H,1H,2H,2H-perfluorohexanesulfoni

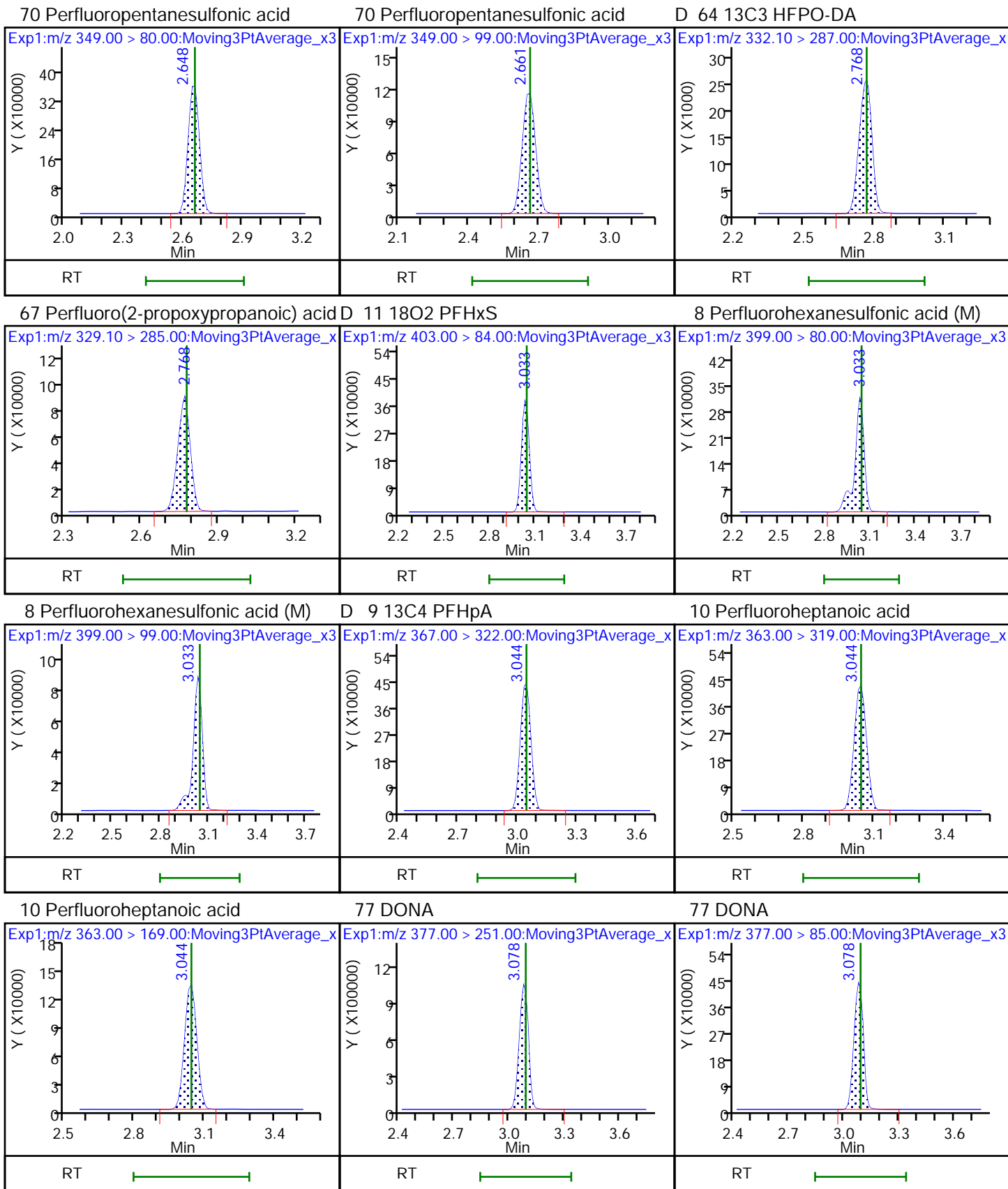


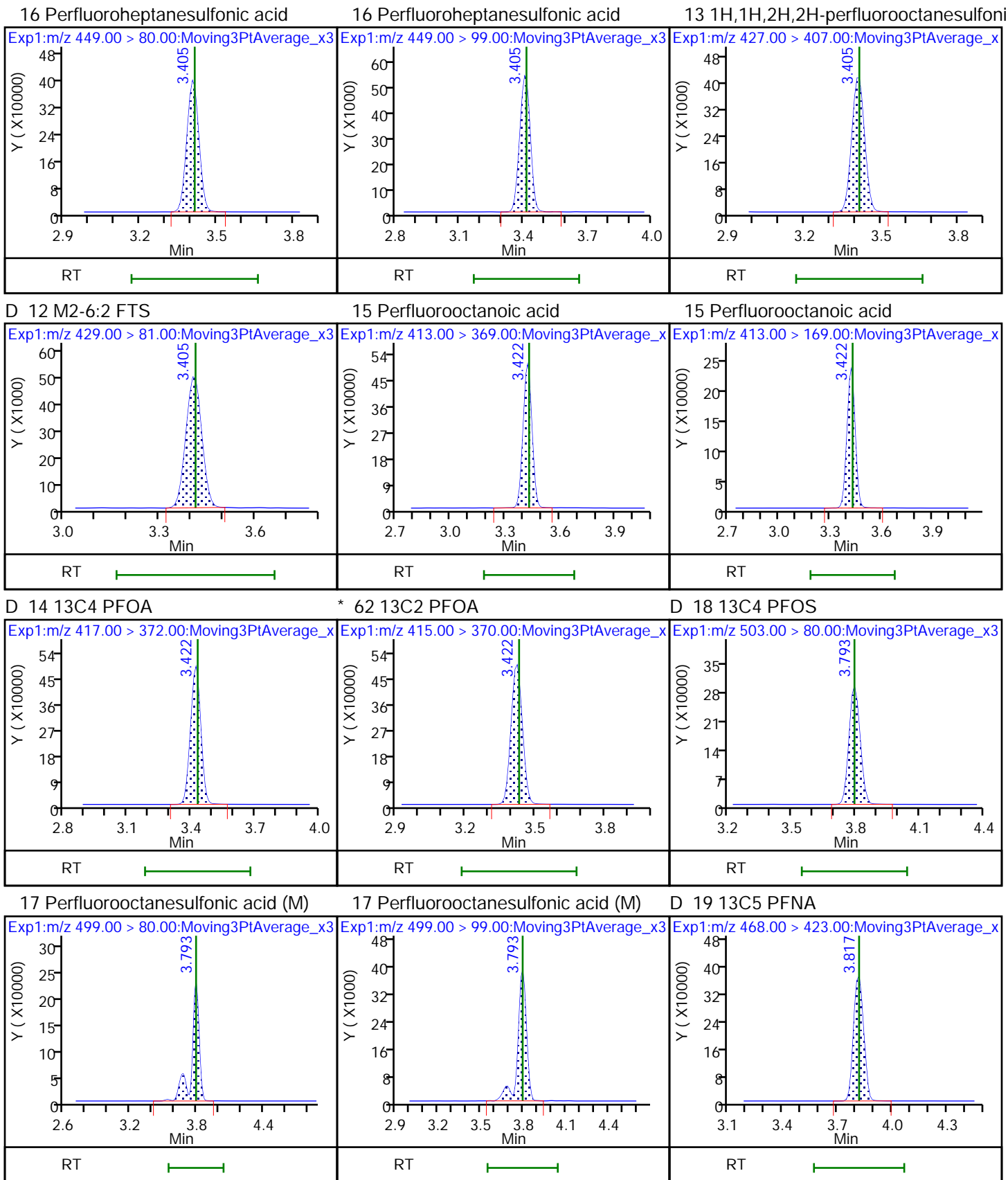
D 7 13C2 PFHxA

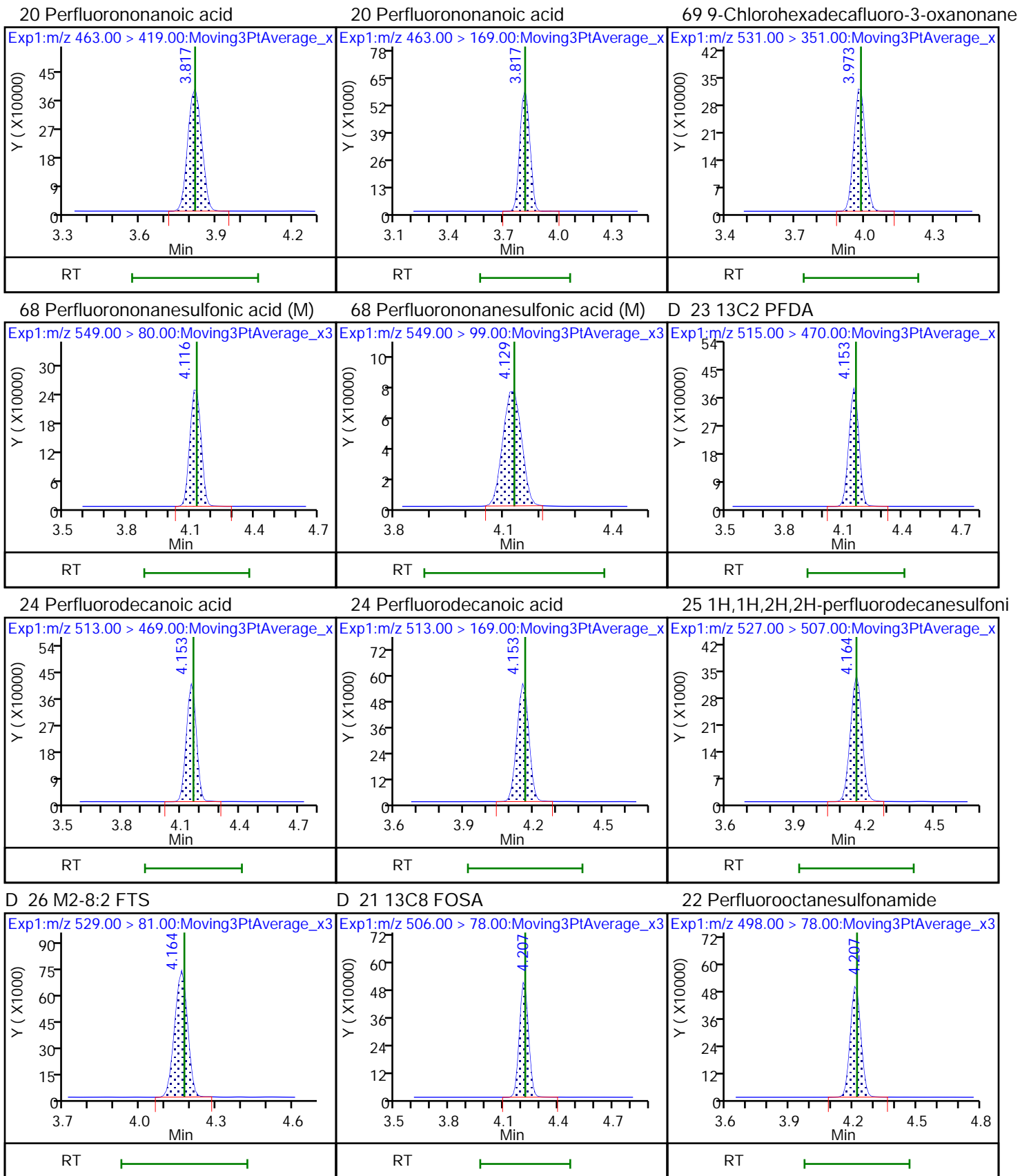
6 Perfluorohexanoic acid

6 Perfluorohexanoic acid



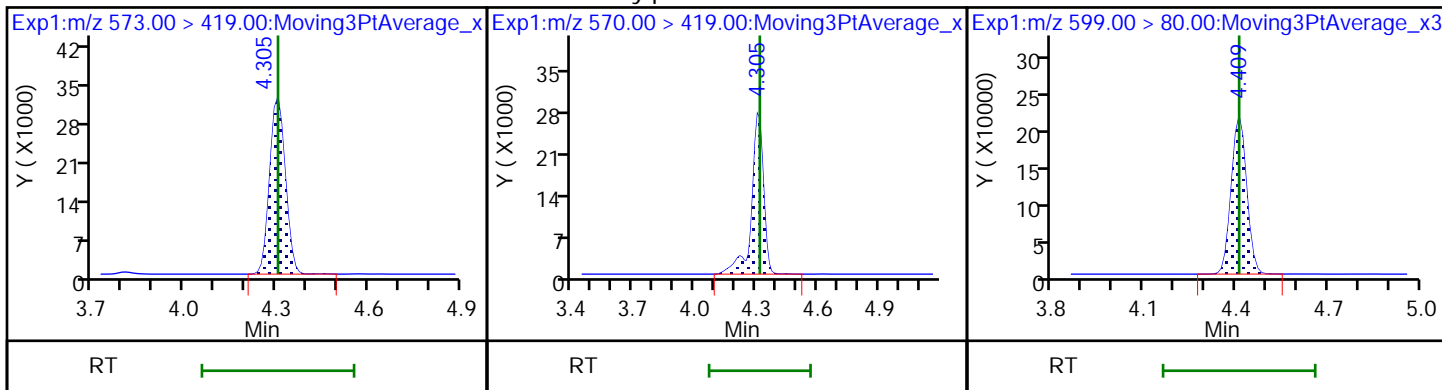






D 27 d3-NMeFOSAA

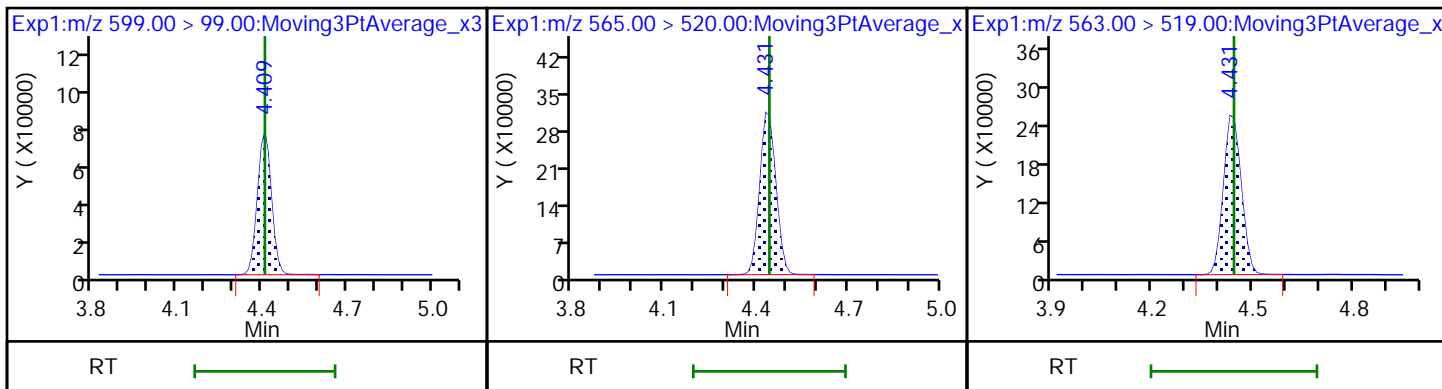
28 N-methylperfluorooctanesulfonamido 29 Perfluorodecanesulfonic acid



29 Perfluorodecanesulfonic acid

D 30 13C2 PFUoA

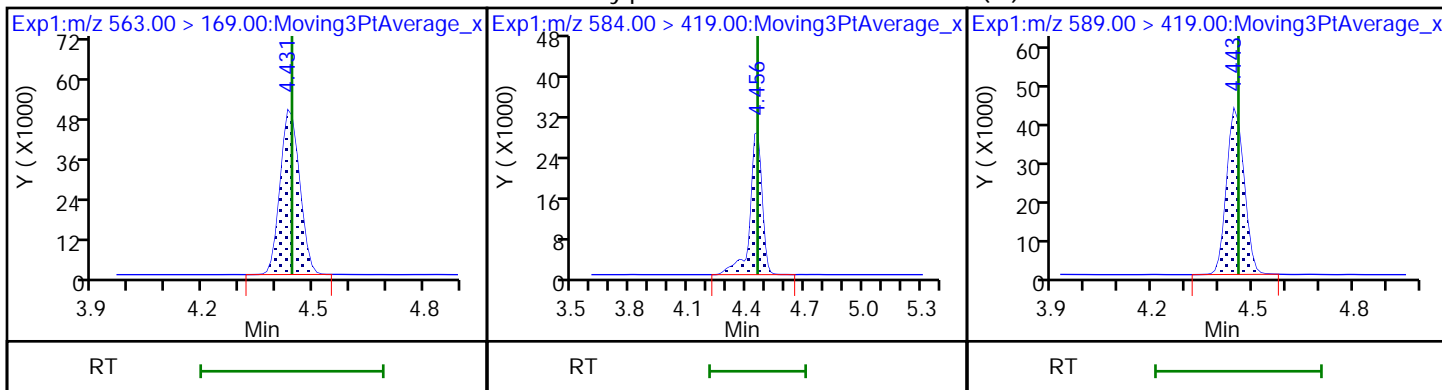
31 Perfluoroundecanoic acid



31 Perfluoroundecanoic acid

33 N-ethylperfluorooctanesulfonamido

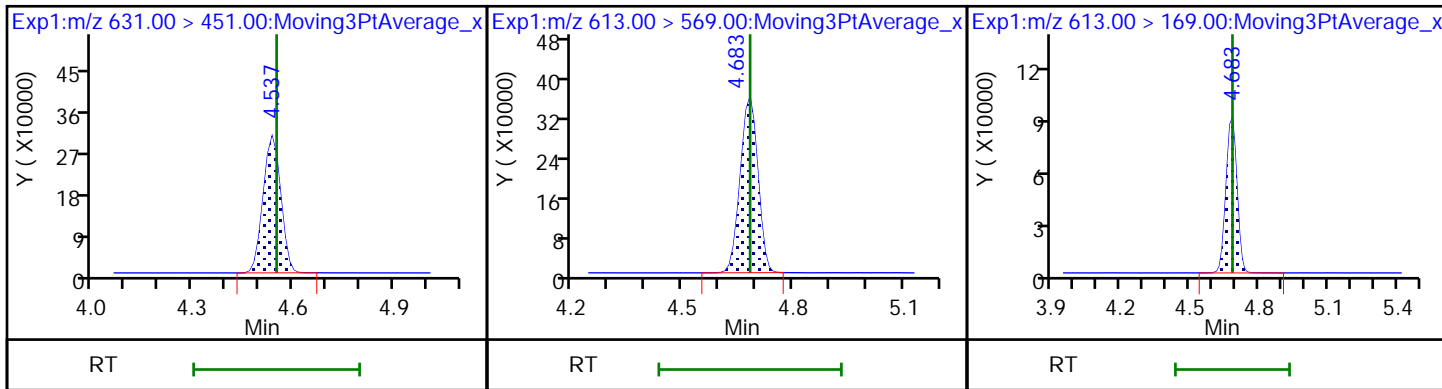
D 32 d5-NEtFOSAA



66 11-Chloroeicosafuoro-3-oxaundecan

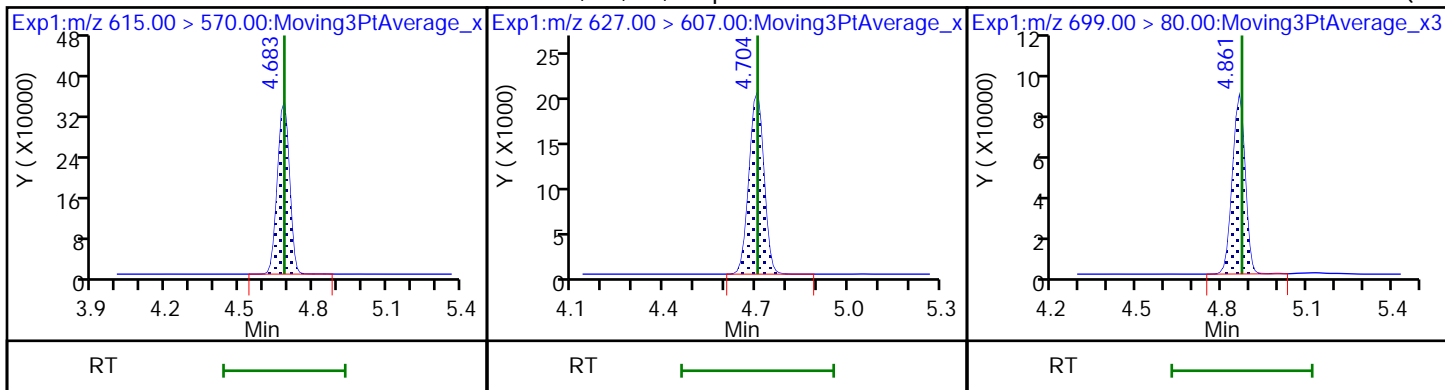
37 Perfluorododecanoic acid

37 Perfluorododecanoic acid



D 36 13C2 PFDaA

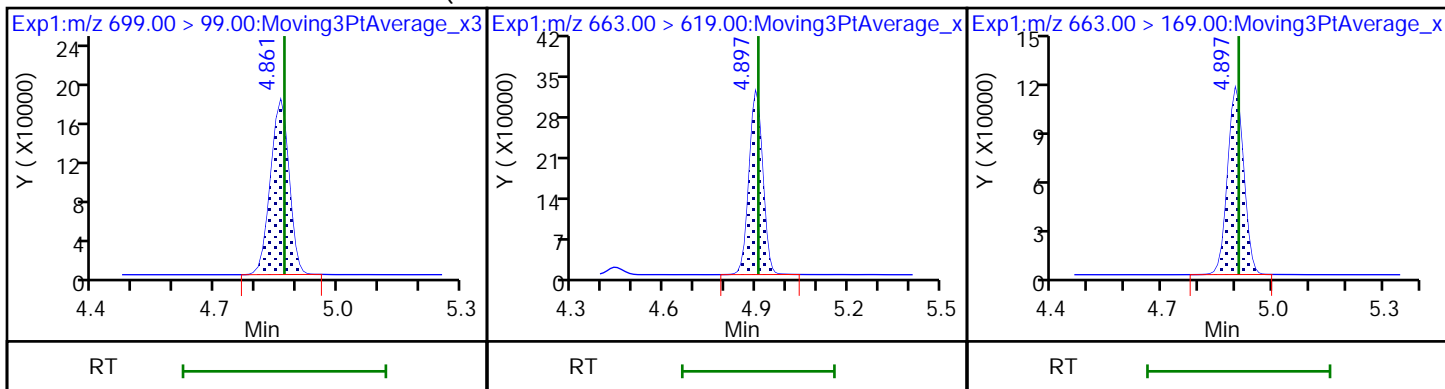
74 1H,1H,2H,2H-perfluorododecanesulfo75 Perfluorododecanesulfonic acid (PF



75 Perfluorododecanesulfonic acid (PF

41 Perfluorotridecanoic acid

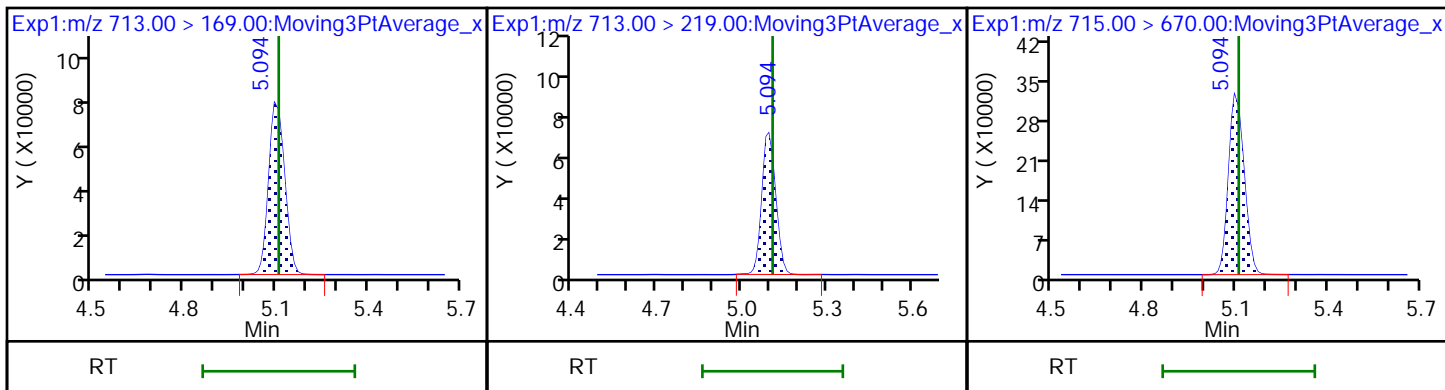
41 Perfluorotridecanoic acid



42 Perfluorotetradecanoic acid

42 Perfluorotetradecanoic acid

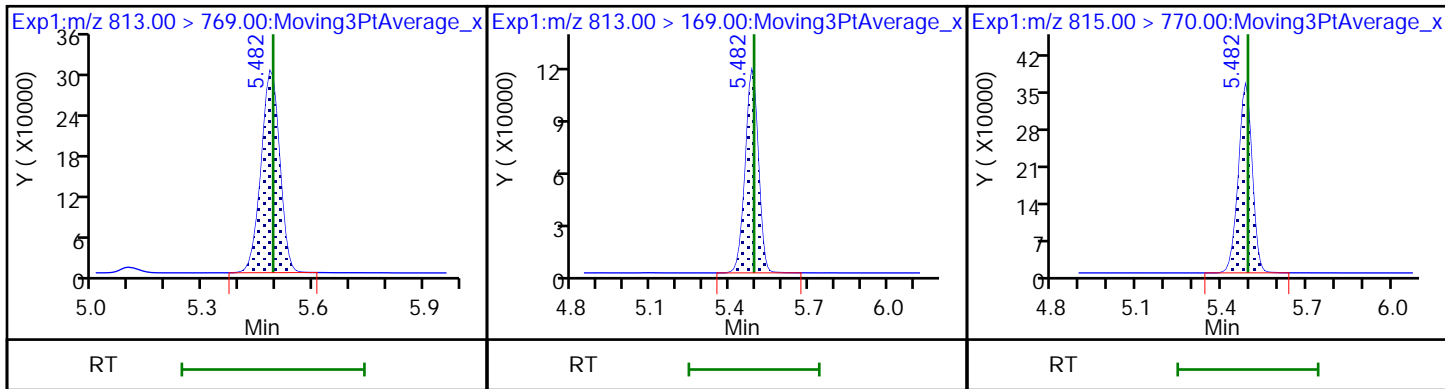
D 43 13C2 PFTeDA



45 Perfluorohexadecanoic acid

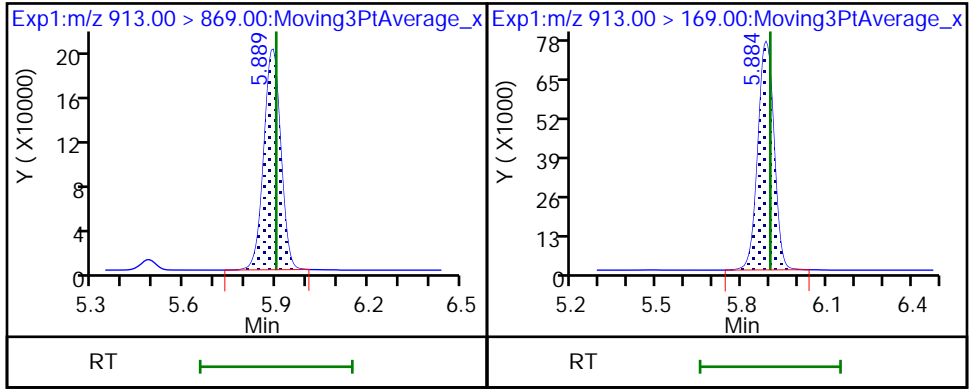
45 Perfluorohexadecanoic acid

D 44 13C2 PFHxDA



46 Perfluorooctadecanoic acid

46 Perfluorooctadecanoic acid



Eurofins TestAmerica, Burlington

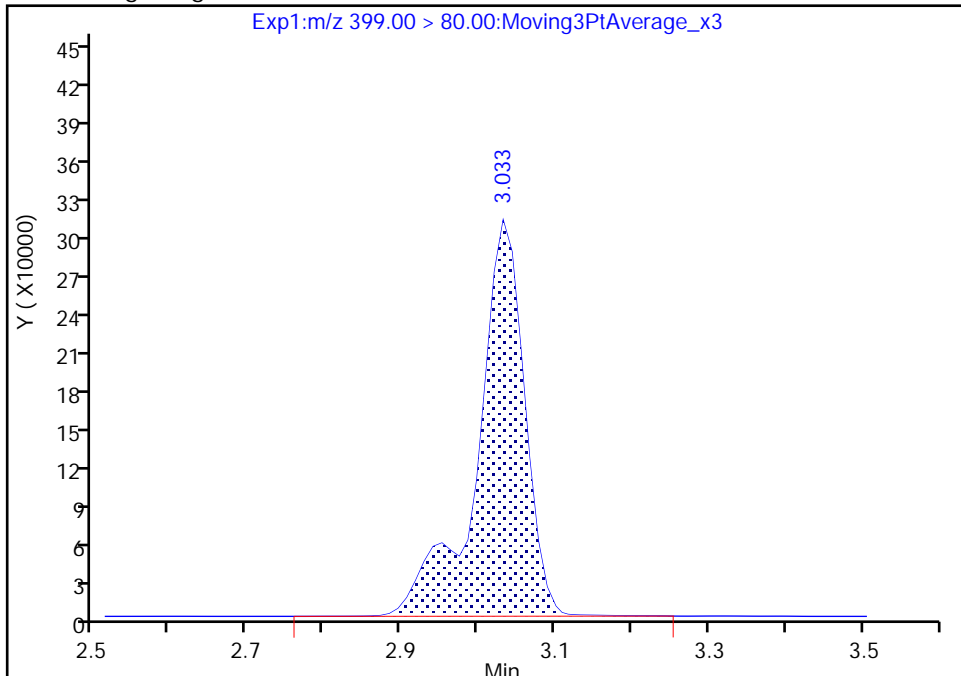
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B020.d  
Injection Date: 24-Dec-2019 16:31:47 Instrument ID: LC812  
Lims ID: CCV L5  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 20 Worklist Smp#: 20  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

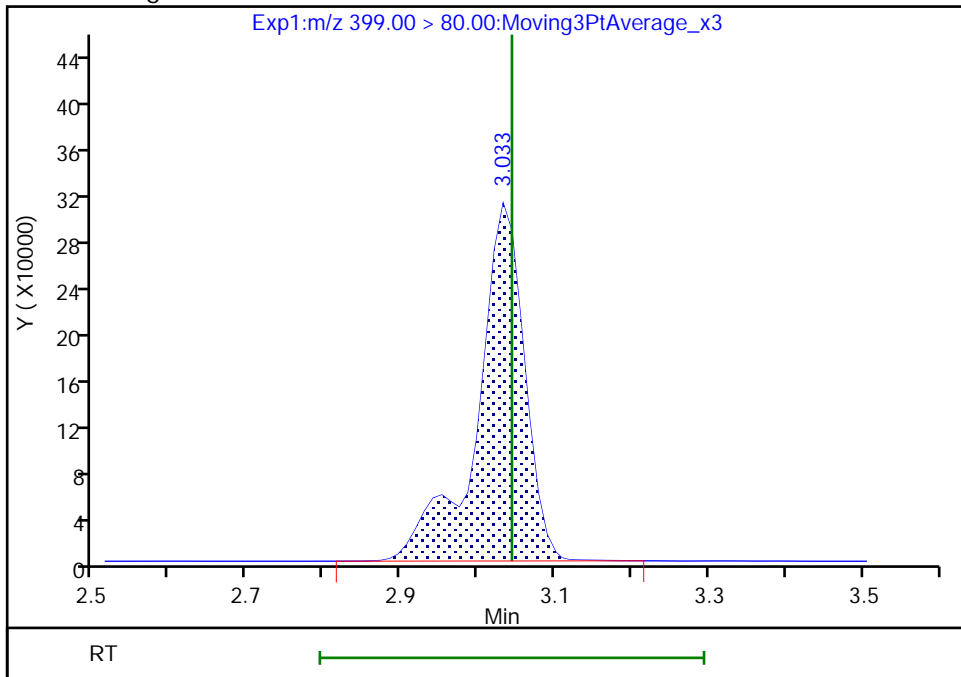
RT: 3.03  
Area: 1328933  
Amount: 2.124031  
Amount Units: ng/ml

Processing Integration Results



RT: 3.03  
Area: 1326100  
Amount: 2.119503  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 26-Dec-2019 10:25:06  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Eurofins TestAmerica, Burlington

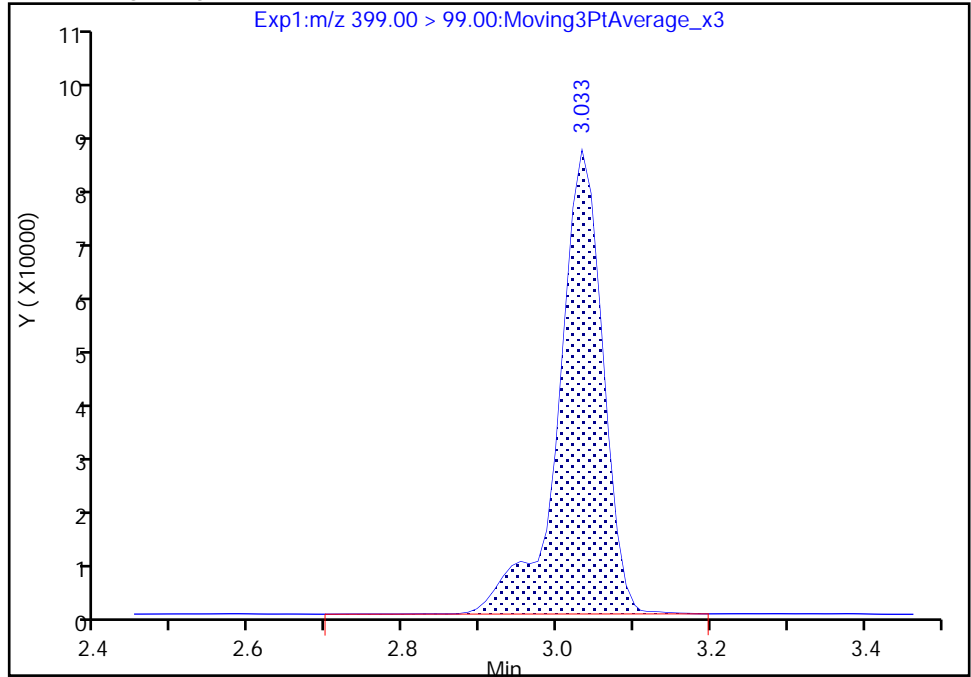
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B020.d  
Injection Date: 24-Dec-2019 16:31:47 Instrument ID: LC812  
Lims ID: CCV L5  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 20 Worklist Smp#: 20  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

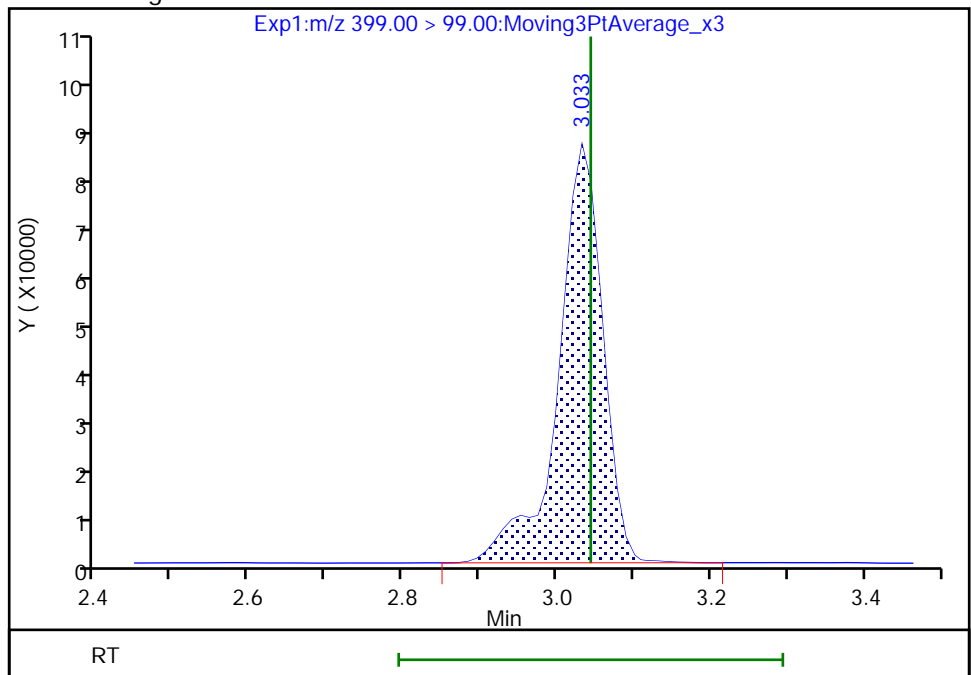
RT: 3.03  
Area: 320368  
Amount: 2.124031  
Amount Units: ng/ml

Processing Integration Results



RT: 3.03  
Area: 319783  
Amount: 2.119503  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 26-Dec-2019 10:25:12

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

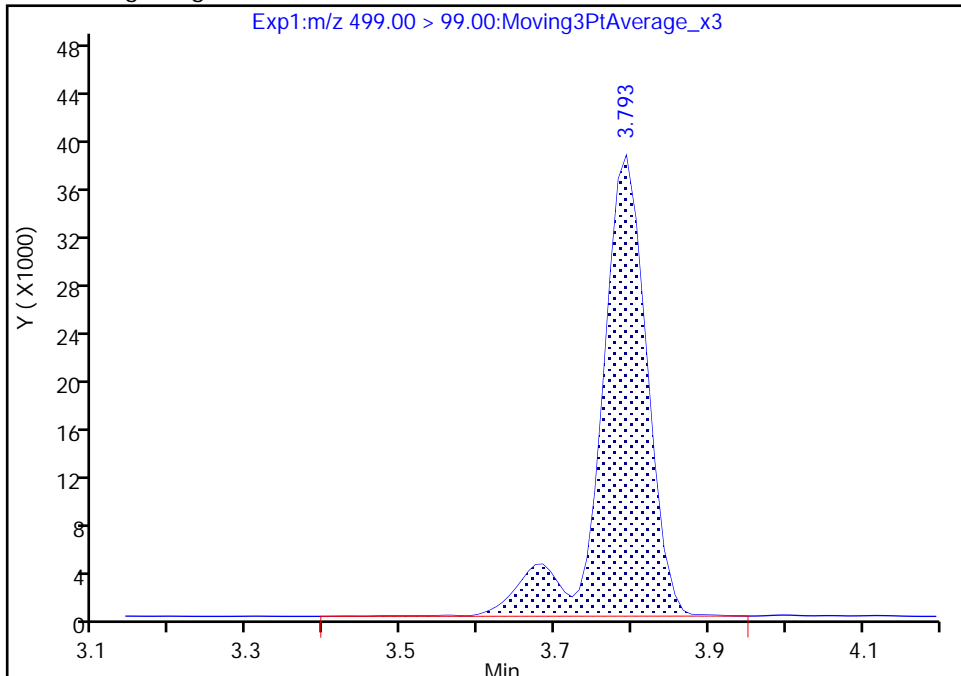
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B020.d  
Injection Date: 24-Dec-2019 16:31:47 Instrument ID: LC812  
Lims ID: CCV L5  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 20 Worklist Smp#: 20  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

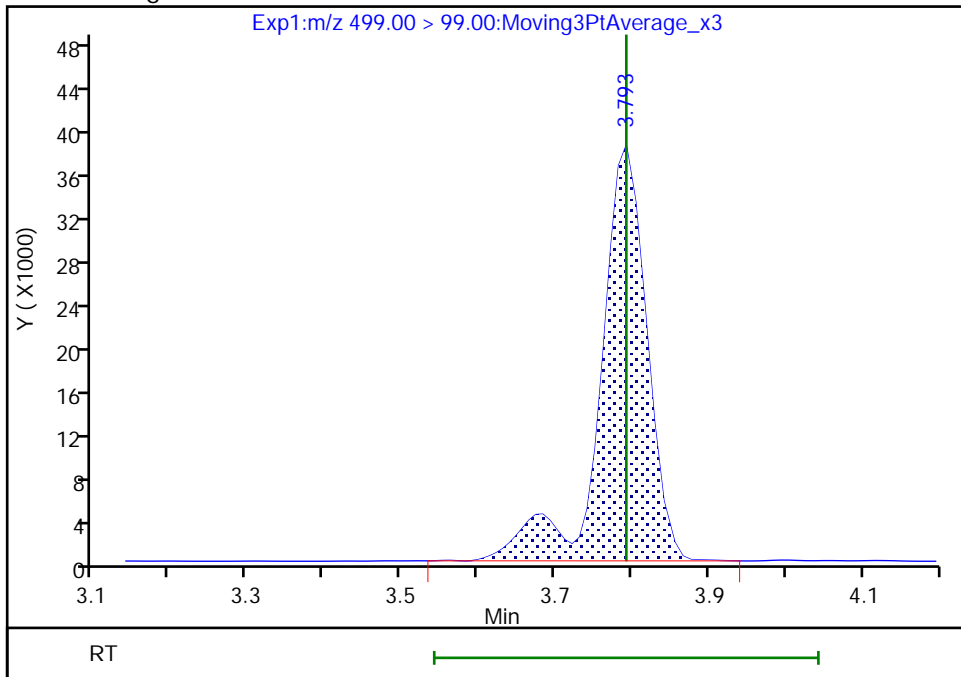
RT: 3.79  
Area: 164056  
Amount: 2.227828  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 163383  
Amount: 2.222407  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 26-Dec-2019 10:25:40  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

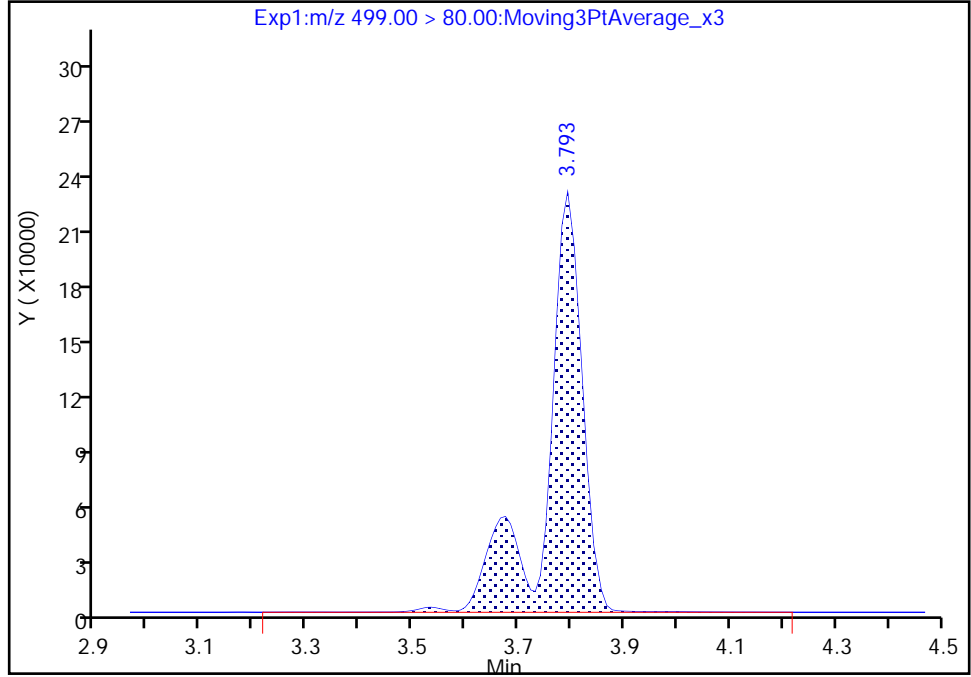
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B020.d  
Injection Date: 24-Dec-2019 16:31:47 Instrument ID: LC812  
Lims ID: CCV L5  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 20 Worklist Smp#: 20  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

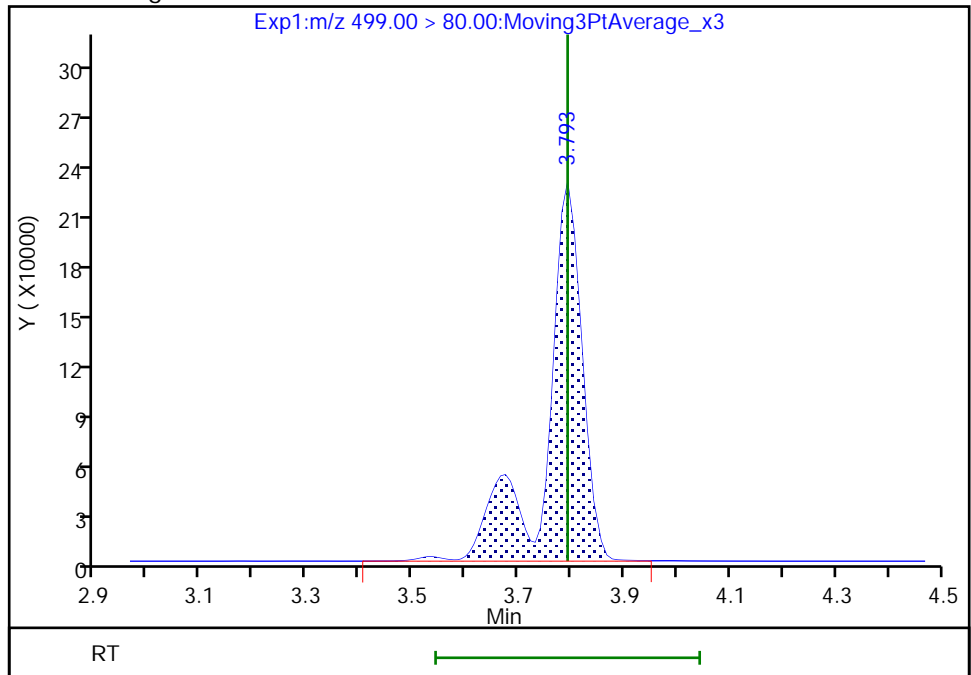
RT: 3.79  
Area: 1056561  
Amount: 2.227828  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 1053990  
Amount: 2.222407  
Amount Units: ng/ml

Manual Integration Results



Eurofins TestAmerica, Burlington

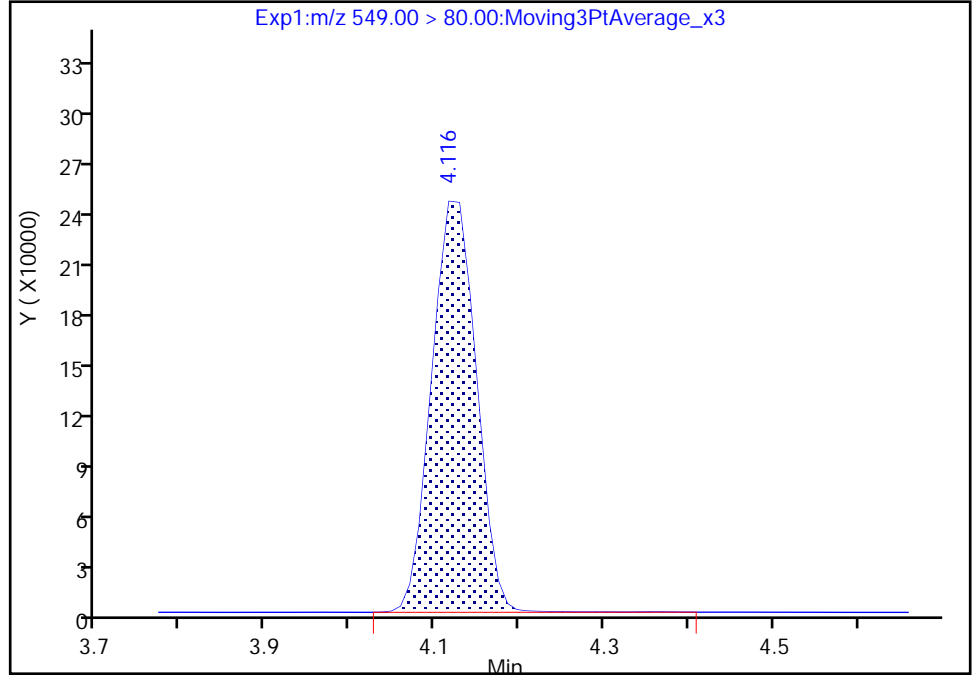
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B020.d  
Injection Date: 24-Dec-2019 16:31:47 Instrument ID: LC812  
Lims ID: CCV L5  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 20 Worklist Smp#: 20  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

68 Perfluoronanesulfonic acid, CAS: 68259-12-1

Signal: 1

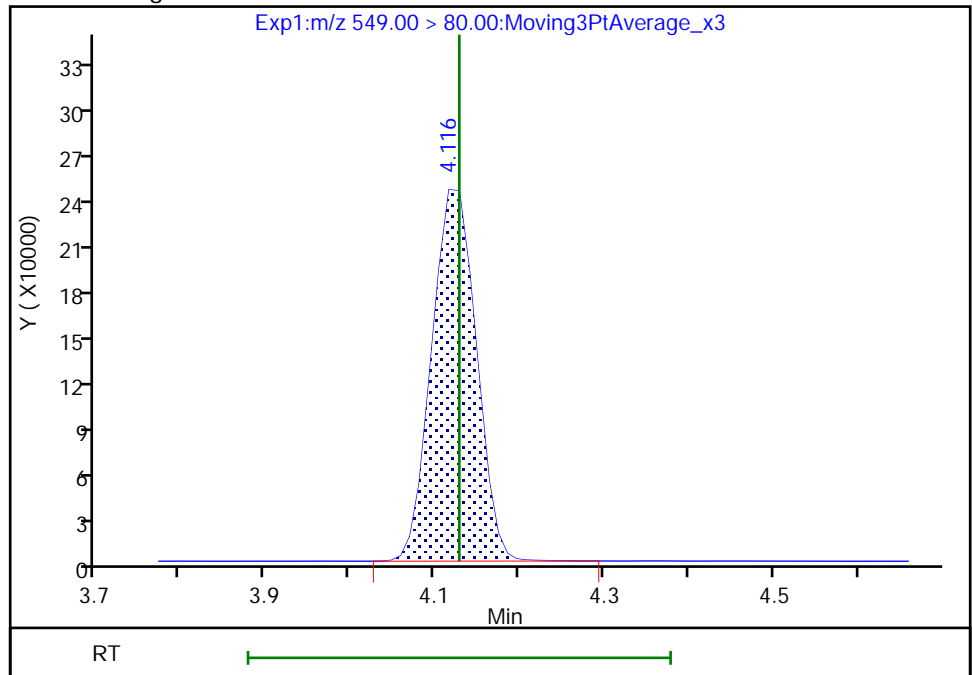
RT: 4.12  
Area: 879572  
Amount: 2.423393  
Amount Units: ng/ml

Processing Integration Results



RT: 4.12  
Area: 878278  
Amount: 2.419828  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerng, 27-Dec-2019 14:45:29  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

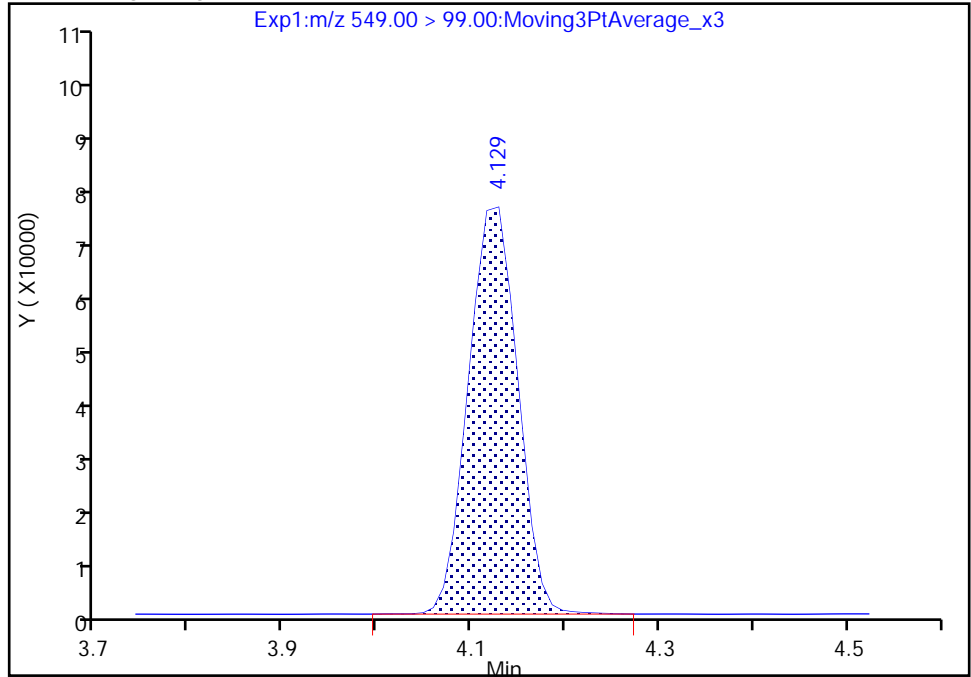
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B020.d  
Injection Date: 24-Dec-2019 16:31:47 Instrument ID: LC812  
Lims ID: CCV L5  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 20 Worklist Smp#: 20  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

68 Perfluoronanesulfonic acid, CAS: 68259-12-1

Signal: 2

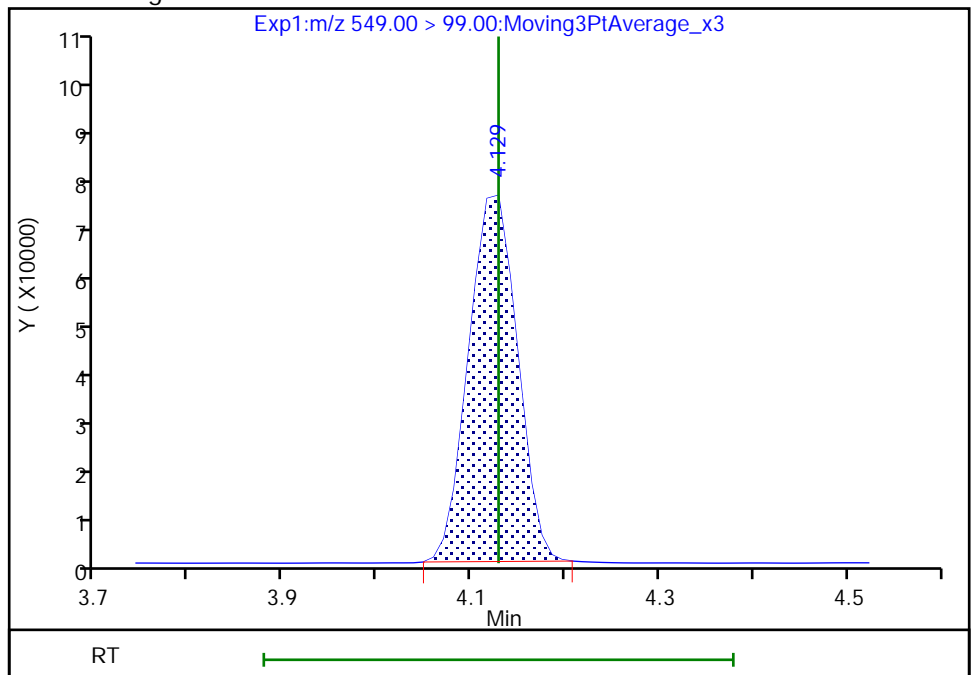
RT: 4.13  
Area: 263333  
Amount: 2.423393  
Amount Units: ng/ml

Processing Integration Results



RT: 4.13  
Area: 259916  
Amount: 2.419828  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 14:45:35

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

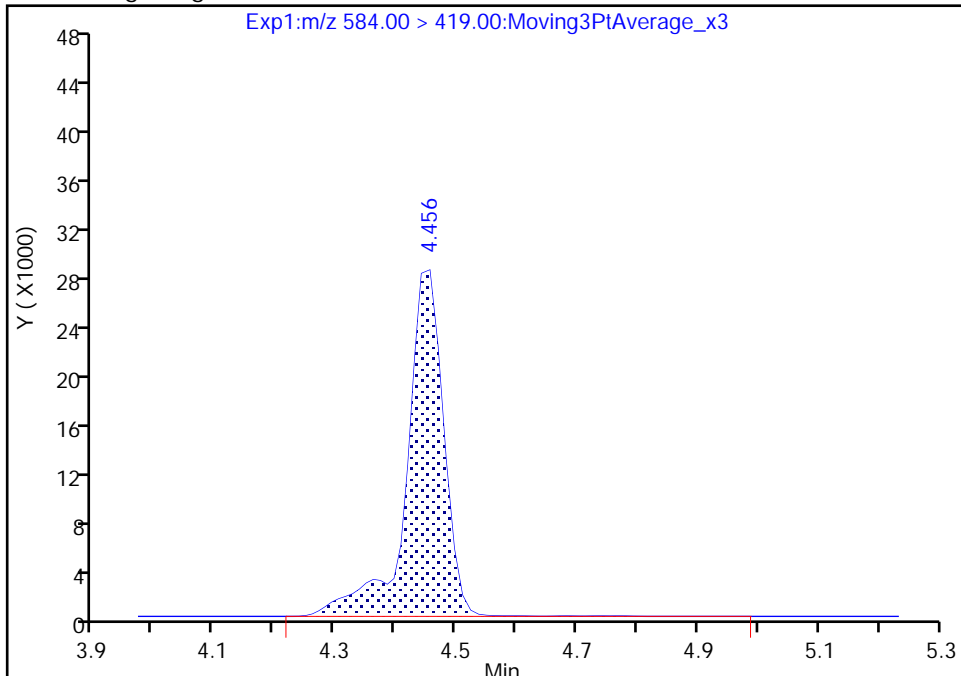
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B020.d  
Injection Date: 24-Dec-2019 16:31:47 Instrument ID: LC812  
Lims ID: CCV L5  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 20 Worklist Smp#: 20  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

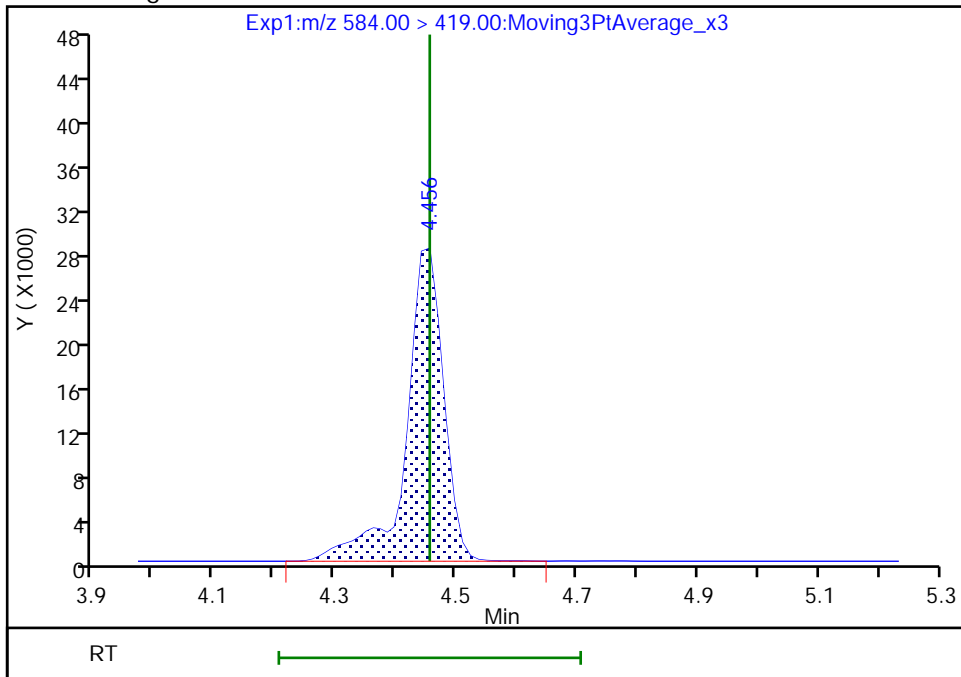
RT: 4.46  
Area: 120825  
Amount: 2.317268  
Amount Units: ng/ml

Processing Integration Results



RT: 4.46  
Area: 120590  
Amount: 2.312761  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 26-Dec-2019 10:26:18  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

FORM VII  
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 200-150985/35 Calibration Date: 12/24/2019 18:34  
 Instrument ID: LC812 Calib Start Date: 12/06/2019 14:32  
 GC Column: C-18 ID: 4.60 (mm) Calib End Date: 12/06/2019 15:13  
 Lab File ID: SC122319B035.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.9949	0.9830		988	1000	-1.2	40.0
Perfluoropentanoic acid (PFPeA)	AveID	1.132	1.026		906	1000	-9.4	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.087	0.9592		780	884	-11.7	40.0
1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2)	AveID	1.732	1.790		965	934	3.3	50.0
Perfluorohexanoic acid (PFHxA)	AveID	1.021	0.9374		918	1000	-8.2	40.0
Perfluoropentanesulfonic acid (PFPA)	AveID	1.161	1.098		887	938	-5.4	50.0
HFPO-DA	AveID	3.591	2.285		636	1000	-36.4	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	1.057	0.9801		927	1000	-7.3	40.0
Perfluorohexanesulfonic acid (PFHxS)	AveID	1.132	1.048		843	910	-7.4	40.0
DONA	AveID	3.533	3.329		888	942	-5.8	50.0
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	AveID	0.9437	0.8672		871	948	-8.1	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	1.225	1.200		933	952	-2.0	50.0
Perfluorooctanoic acid (PFOA)	AveID	1.110	1.033		931	1000	-6.9	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	1.080	1.077		926	928	-0.2	40.0
Perfluorononanoic acid (PFNA)	AveID	0.9805	0.9550		974	1000	-2.6	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	1.233	0.9869		746	932	-20.0	50.0
Perfluorononanesulfonic acid	AveID	0.8262	0.8133		945	960	-1.6	50.0
Perfluorodecanoic acid (PFDA)	AveID	0.9675	0.9772		1010	1000	1.0	40.0
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	AveID	0.4616	0.3683		764	958	-20.2	40.0
Perfluorooctanesulfonamide (PFOSA)	AveID	0.995	0.9604		965	1000	-3.5	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	AveID	0.8689	0.7986		919	1000	-8.1	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.7196	0.7702		1030	964	7.0	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.8479	0.9774		1150	1000	15.3	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	AveID	0.8277	0.7471		903	1000	-9.7	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.163	0.9500		770	942	-18.3	50.0
Perfluorododecanoic acid (PFDoA)	AveID	0.9240	0.8595		930	1000	-7.0	40.0
10:2 FTS	AveID	0.2931	0.3679		1210	964	25.5	50.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.2736	0.2273		804	968	-16.9	50.0
Perfluorotridecanoic acid (PFTriA)	AveID	0.8778	0.7318		834	1000	-16.6	50.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.2009	0.2341		1170	1000	16.6	40.0

FORM VII  
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Lab Sample ID: CCV 200-150985/35 Calibration Date: 12/24/2019 18:34  
 Instrument ID: LC812 Calib Start Date: 12/06/2019 14:32  
 GC Column: C-18 ID: 4.60 (mm) Calib End Date: 12/06/2019 15:13  
 Lab File ID: SC122319B035.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluoro-n-hexadecanoic acid (PFHxDA)	L1ID		0.9001		989	1000	-1.1	40.0
Perfluoro-n-octadecanoic acid (PFODA)	AveID	0.7223	0.6022		834	1000	-16.6	50.0
13C4 PFBA	Ave	1.059	1.093		2580	2500	3.2	50.0
13C5 PFPeA	Ave	0.8099	0.8536		2630	2500	5.4	50.0
13C3 PFBS	Ave	0.9661	1.043		2510	2330	8.0	50.0
M2-4:2 FTS	Ave	0.0901	0.0765		1980	2340	-15.1	50.0
13C2 PFHxA	Ave	0.9031	0.9824		2720	2500	8.8	50.0
13C3 HFPO-DA	Ave	0.0394	0.0716		4540	2500	81.5*	50.0
13C4 PFHpA	Ave	0.8562	0.9911		2890	2500	15.8	50.0
18O2 PFHxS	Ave	0.7630	0.8672		2690	2370	13.7	50.0
M2-6:2 FTS	Ave	0.1311	0.1158		2100	2380	-11.6	50.0
13C4 PFOA	Ave	0.9086	0.9408		2590	2500	3.5	50.0
13C4 PFOS	Ave	0.6053	0.6368		2510	2390	5.2	50.0
13C5 PFNA	Ave	0.8355	0.7844		2350	2500	-6.1	50.0
13C2 PFDA	Ave	0.8233	0.8404		2550	2500	2.1	50.0
M2-8:2 FTS	Ave	0.1562	0.2154		3300	2400	37.9	50.0
13C8 FOSA	Ave	1.077	1.028		2390	2500	-4.5	50.0
d3-NMeFOSAA	Ave	0.0793	0.0844		2660	2500	6.5	50.0
13C2 PFUnA	Ave	0.6999	0.7843		2800	2500	12.1	50.0
d5-NEtFOSAA	Ave	0.0879	0.1045		2970	2500	18.8	50.0
13C2 PFDoA	Ave	0.7677	0.8331		2710	2500	8.5	50.0
13C2 PFTeDA	Ave	0.6433	0.6757		2630	2500	5.0	50.0
13C2 PFHxDA	Ave	0.5918	0.5749		2430	2500	-2.9	50.0



Eurofins TestAmerica, Burlington  
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B035.d  
 Lims ID: CCV L4  
 Client ID:  
 Sample Type: CCV  
 Inject. Date: 24-Dec-2019 18:34:35 ALS Bottle#: 35 Worklist Smp#: 35  
 Injection Vol: 20.0 ul Dil. Factor: 1.0000  
 Sample Info: CCV L4  
 Misc. Info.: 200-0039355-035 Plate: 1 Rack: 2  
 Operator ID: lc812tech Instrument ID: LC812  
 Sublist: chrom-PFC\_LC812\*sub3  
 Method: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\PFC\_LC812.m  
 Limit Group: LC\_PFC\_ICAL  
 Last Update: 31-Dec-2019 08:25:31 Calib Date: 06-Dec-2019 15:13:26  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Column 1 : C-18 ( 4.60 mm) Det: EXP1  
 Process Host: CTX0330

First Level Reviewer: chirgwinb Date: 26-Dec-2019 10:28:29

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	1.908	1.908	0.0	0.558	1732512	2.58	103	2540	
2 Perfluorobutanoic acid										M
212.90 > 169.00	1.908	1.908	0.0	1.000	681192	0.9880		98.8	313	M
D 3 13C5 PFPeA	267.90 > 223.00	2.258	2.257	0.001	0.660	1352667	2.63	105	5332	
4 Perfluoropentanoic acid	262.90 > 219.00	2.271	2.271	0.0	1.006	554929	0.9057	90.6	61.7	
D 47 13C3 PFBS	301.90 > 80.00	2.271	2.285	-0.014	0.664	1537412	2.51	108	490970	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	2.285	2.285	0.0	1.006	560720	0.7802	Target=2.03	88.3	1468
298.90 > 99.00	2.285	2.285	0.0	1.006	286773		1.96(1.01-3.04)		384	
D 60 M2-4:2 FTS	329.00 > 81.00	2.611	2.611	0.0	0.763	113184	1.98	84.9	263	
61 1H,1H,2H,2H-perfluorohexanesulfoni	327.00 > 307.00	2.611	2.611	0.0	1.000	81045	0.9652	103	1219	
D 7 13C2 PFHxA	315.00 > 270.00	2.648	2.648	0.0	0.774	1556835	2.72	109	5095	
6 Perfluorohexanoic acid	313.00 > 269.00	2.661	2.661	0.0	1.005	583731	0.9181	Target=13.76	91.8	157
313.00 > 119.00	2.648	2.661	-0.013	1.000	56891		10.26(6.88-20.64)		207	
70 Perfluoropentanesulfonic acid	349.00 > 80.00	2.661	2.661	0.0	0.874	566220	0.8870	Target=3.50	94.6	2059
349.00 > 99.00	2.661	2.661	0.0	0.874	178862		3.17(1.75-5.25)		746	
D 64 13C3 HFPO-DA	332.10 > 287.00	2.776	2.768	0.008	0.811	113433	4.54	182	1682	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.776	2.776	0.0	1.000	103665	0.6363		63.6	47.8	
D 11 18O2 PFHxS										
403.00 > 84.00	3.044	3.044	0.0	0.890	1300030	2.69		114	3254	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.044	3.044	0.0	1.000	524231	0.8426	Target=3.90	92.6	1058	
399.00 > 99.00	3.044	3.044	0.0	1.000	125664		4.17(1.95-5.85)		469	
D 9 13C4 PFHpA										
367.00 > 322.00	3.044	3.044	0.0	0.890	1570590	2.89		116	6162	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.044	3.044	0.0	1.000	615726	0.9270	Target=3.95	92.7	323	
363.00 > 169.00	3.044	3.044	0.0	1.000	179041		3.44(1.97-5.92)		761	
77 DONA										
377.00 > 251.00	3.089	3.089	0.0	0.815	1265655	0.8876	Target=2.49	94.2	3051	
377.00 > 85.00	3.078	3.089	-0.011	0.812	571991		2.21(1.24-3.73)		1960	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.413	3.413	0.0	0.900	461081	0.9326	Target=6.46	98.0	765	
449.00 > 99.00	3.413	3.413	0.0	0.900	72828		6.33(3.23-9.69)		617	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.413	3.413	0.0	1.000	60349	0.8711		91.9	892	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.413	3.413	0.0	0.998	174349	2.10		88.4	955	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.422	3.430	-0.008	1.000	615795	0.9306	Target=2.40	93.1	282	
413.00 > 169.00	3.422	3.430	-0.008	1.000	273466		2.25(1.20-3.60)		1424	
D 14 13C4 PFOA										
417.00 > 372.00	3.422	3.430	-0.008	1.000	1490930	2.59		104	4852	
* 62 13C2 PFOA										
415.00 > 370.00	3.422	3.430	-0.008		1584684	2.50			5295	
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.793	0.0	1.108	964717	2.51		105	1359	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.793	3.793	0.0	1.000	403552	0.9261	Target=5.74	99.8	446	M
499.00 > 99.00	3.793	3.793	0.0	1.000	62300		6.48(2.87-8.61)		466	M
D 19 13C5 PFNA										
468.00 > 423.00	3.817	3.817	0.0	1.116	1242983	2.35		93.9	4829	
20 Perfluorononanoic acid										
463.00 > 419.00	3.817	3.817	0.0	1.000	474815	0.9739	Target=7.01	97.4	190	
463.00 > 169.00	3.817	3.817	0.0	1.000	84591		5.61(3.50-10.51)		836	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.984	3.984	0.0	1.050	371256	0.7459		80.0	2120	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.129	4.129	0.0	1.089	315137	0.9450	Target=3.14	98.4	191	M
549.00 > 99.00	4.129	4.129	0.0	1.089	100551		3.13(1.57-4.71)		343	
D 23 13C2 PFDA										
515.00 > 470.00	4.153	4.164	-0.011	1.214	1331709	2.55		102	9606	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
24 Perfluorodecanoic acid										
513.00 > 469.00	4.153	4.164	-0.011	1.000	520544	1.01	Target=7.28	101	257	
513.00 > 169.00	4.164	4.164	0.0	1.003	79409		6.56(3.64-10.91)		801	
25 1H,1H,2H,2H-perfluorodecanesulfonyl										
527.00 > 507.00	4.164	4.164	0.0	1.000	48166	0.7643		79.8	683	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.164	4.175	-0.011	1.217	326960	3.30		138	497	
D 21 13C8 FOSA										
506.00 > 78.00	4.218	4.218	0.0	1.233	1628714	2.39		95.5	3089	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.218	4.218	0.0	1.000	625654	0.9651		96.5	3273	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.305	4.305	0.0	1.258	133756	2.66		106	1139	
28 N-methylperfluorooctanesulfonamide										
570.00 > 419.00	4.317	4.317	0.0	1.003	42725	0.9190		91.9	306	
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.409	4.409	0.0	1.162	299712	1.03	Target=2.76	107	253	
599.00 > 99.00	4.409	4.409	0.0	1.162	91987		3.26(1.38-4.14)		520	
D 30 13C2 PFUnA										
565.00 > 520.00	4.431	4.443	-0.012	1.295	1242786	2.80		112	4660	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.431	4.443	-0.012	1.000	485859	1.15	Target=5.78	115	199	
563.00 > 169.00	4.443	4.443	0.0	1.003	77314		6.28(2.89-8.67)		511	
33 N-ethylperfluorooctanesulfonamide										
584.00 > 419.00	4.456	4.456	0.0	1.003	49464	0.9026		90.3	296	M
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.443	4.456	-0.013	1.298	165518	2.97		119	1495	
66 11-Chloroeicosafluoro-3-oxaundecan										
631.00 > 451.00	4.537	4.551	-0.014	1.196	361204	0.7696		81.7	3062	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.683	4.683	0.0	1.000	453855	0.9301	Target=5.13	93.0	81.6	
613.00 > 169.00	4.683	4.683	0.0	1.000	106422		4.26(2.56-7.69)		975	
D 36 13C2 PFDaA										
615.00 > 570.00	4.683	4.683	0.0	1.369	1320180	2.71		109	5855	
74 1H,1H,2H,2H-perfluorododecanesulfonyl										
627.00 > 607.00	4.704	4.704	0.0	1.130	48416	1.21		126	1482	
75 Perfluorododecanesulfonic acid (PF)										
699.00 > 80.00	4.861	4.870	-0.009	1.282	88808	0.8043	Target=0.45	83.1	96.4	
699.00 > 99.00	4.861	4.870	-0.009	1.282	198430		0.45(0.22-0.67)		1142	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.897	4.906	-0.009	1.046	386440	0.8336	Target=3.82	83.4	137	
663.00 > 169.00	4.897	4.906	-0.009	1.046	128133		3.02(1.91-5.74)		864	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.094	5.108	-0.014	1.000	100278	1.17	Target=1.05	117	1027	
713.00 > 219.00	5.085	5.108	-0.023	0.998	85010		1.18(0.52-1.57)		1065	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.094	5.108	-0.014	1.489	1070708	2.63		105	5827	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.474	5.491	-0.017	1.000	328010	0.9893	Target=3.20	98.9	262	
813.00 > 169.00	5.474	5.491	-0.017	1.000	123702		2.65(1.60-4.80)		1484	
D 44 13C2 PFHxDA										
815.00 > 770.00	5.474	5.491	-0.017	1.600	911090	2.43		97.1	5695	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.869	5.899	-0.030	1.072	219444	0.8337	Target=2.86	83.4	314	
913.00 > 169.00	5.864	5.899	-0.035	1.071	91445		2.40(1.43-4.29)		858	

**QC Flag Legend**

Review Flags

M - Manually Integrated

**Reagents:**

PFAS32NCIC4\_00004

Amount Added: 100.00

Units: uL

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B035.d

Injection Date: 24-Dec-2019 18:34:35

Instrument ID: LC812

Lims ID: CCV L4

Client ID:

Operator ID: lc812tech

ALS Bottle#: 35

Worklist Smp#: 35

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

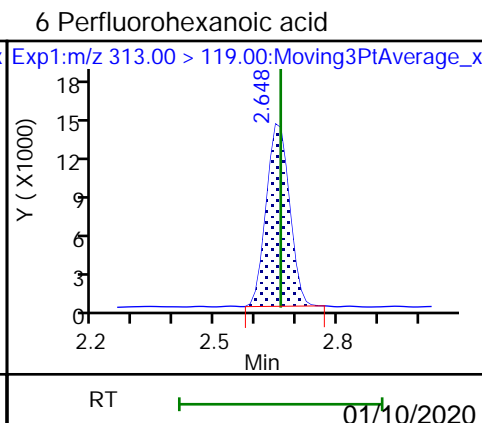
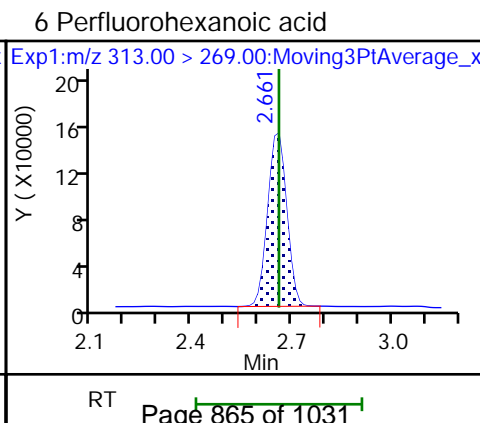
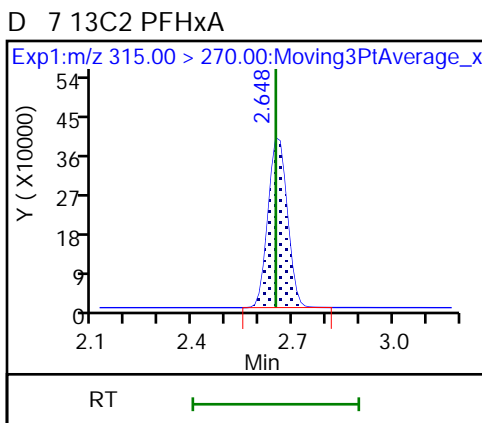
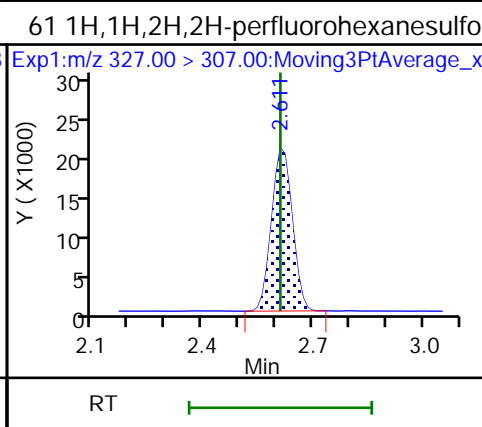
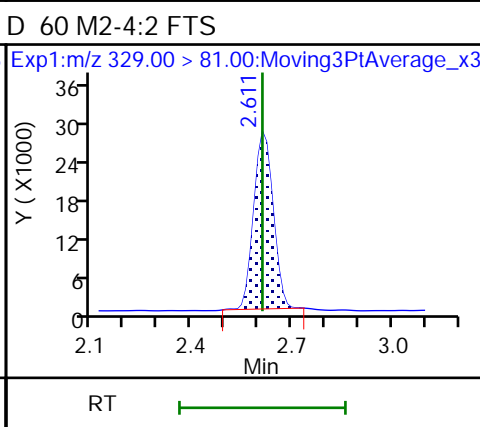
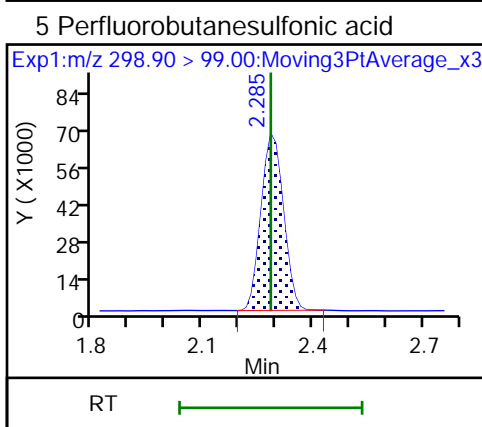
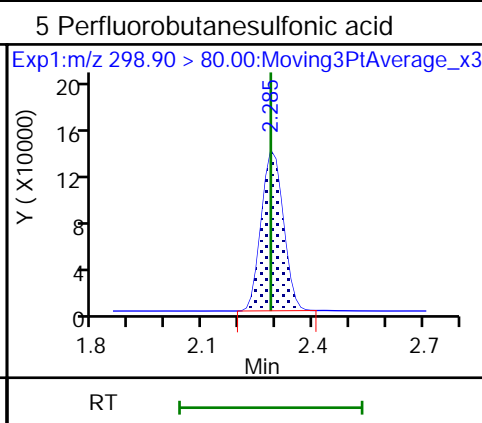
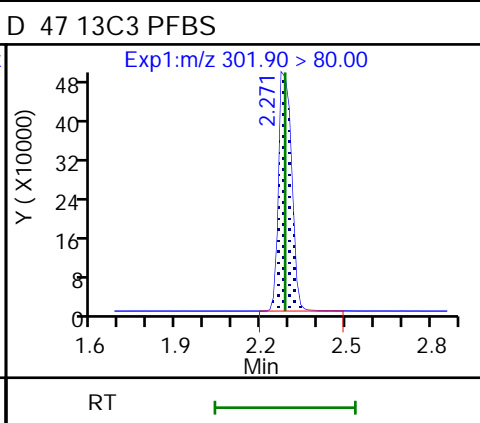
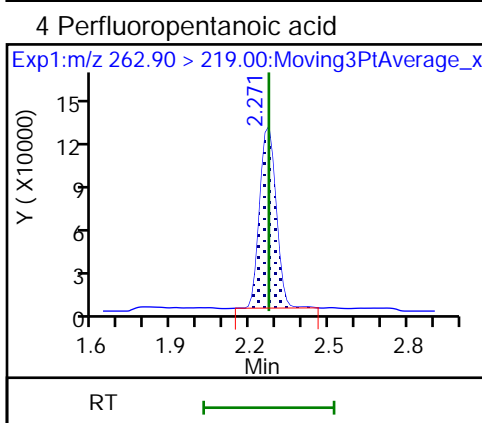
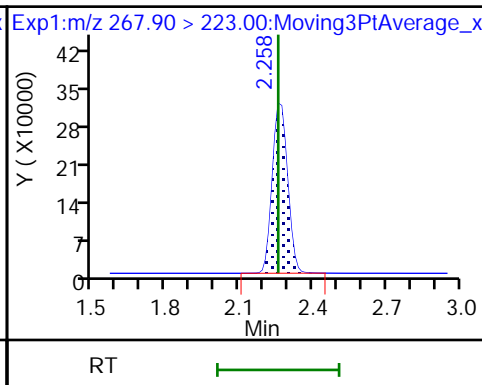
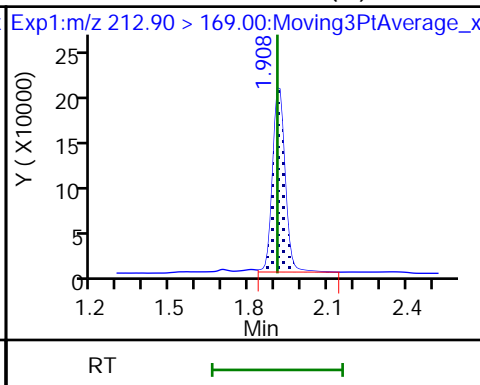
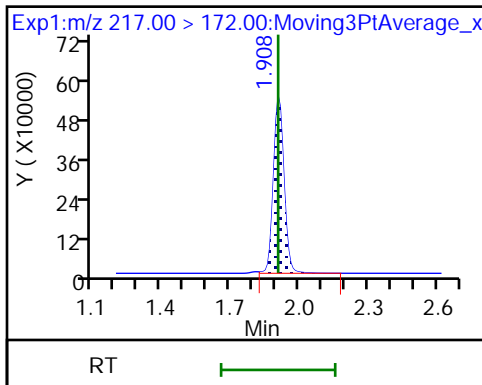
Method: PFC\_LC812

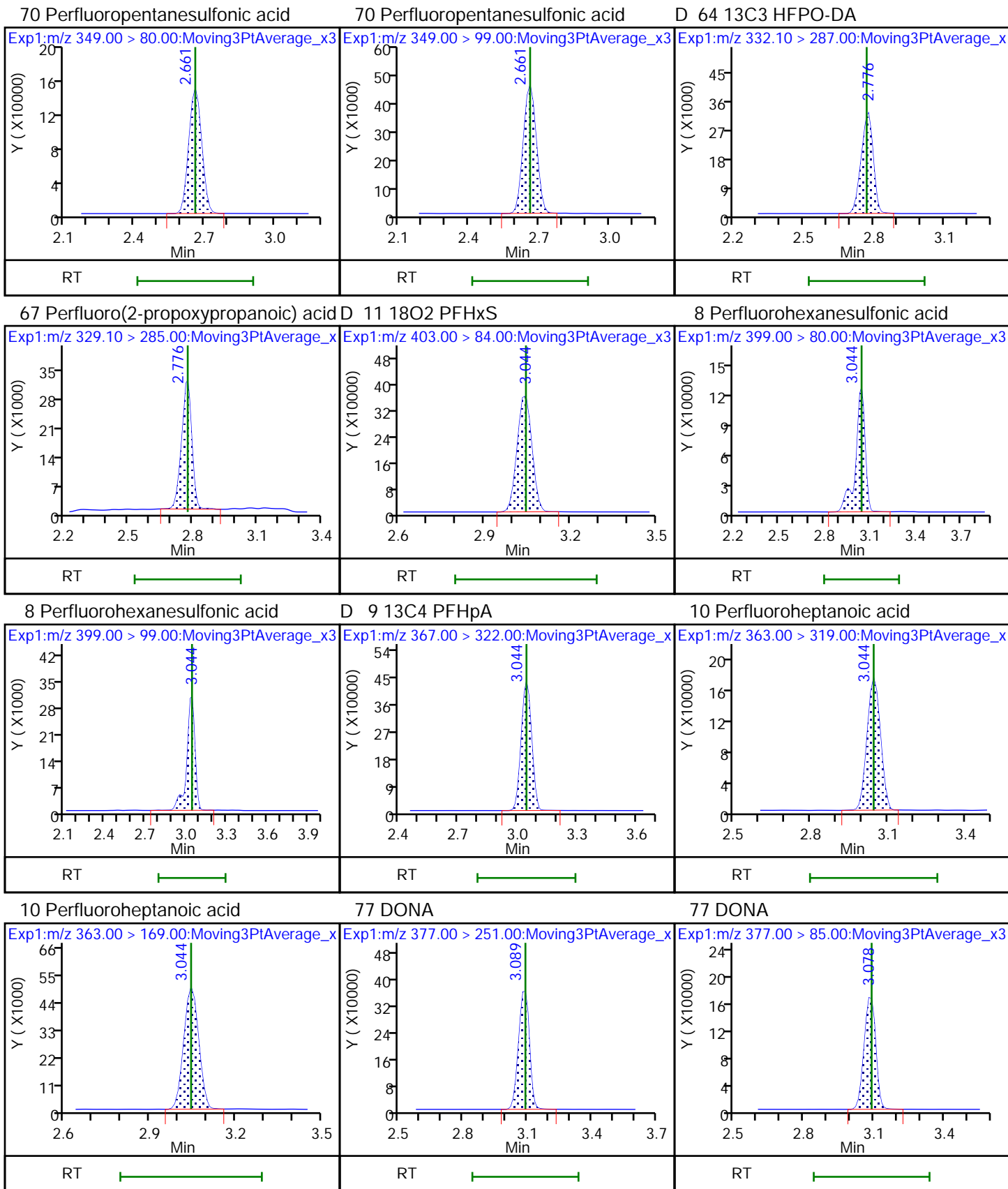
Limit Group: LC\_PFC\_ICAL

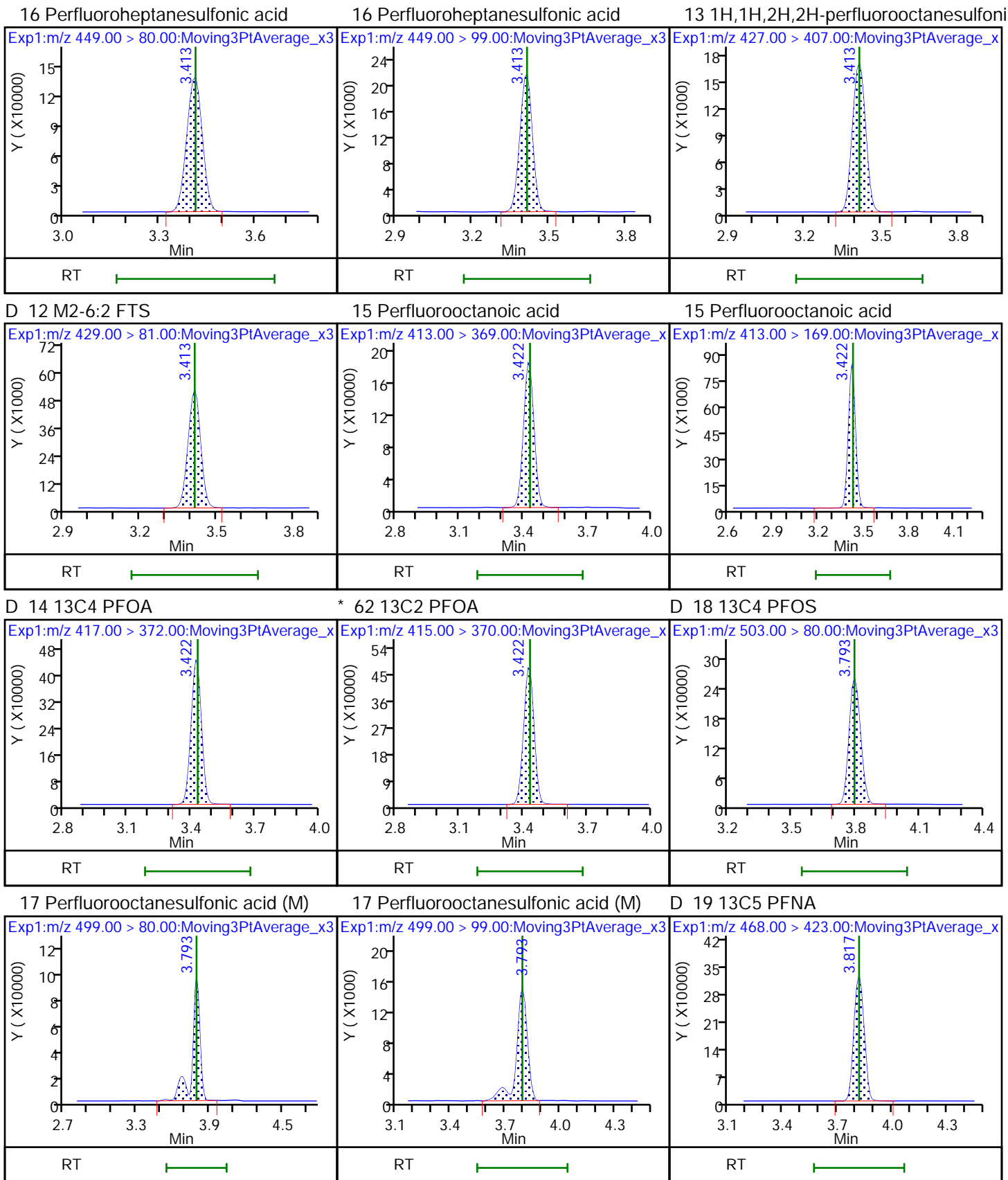
D 1 13C4 PFBA

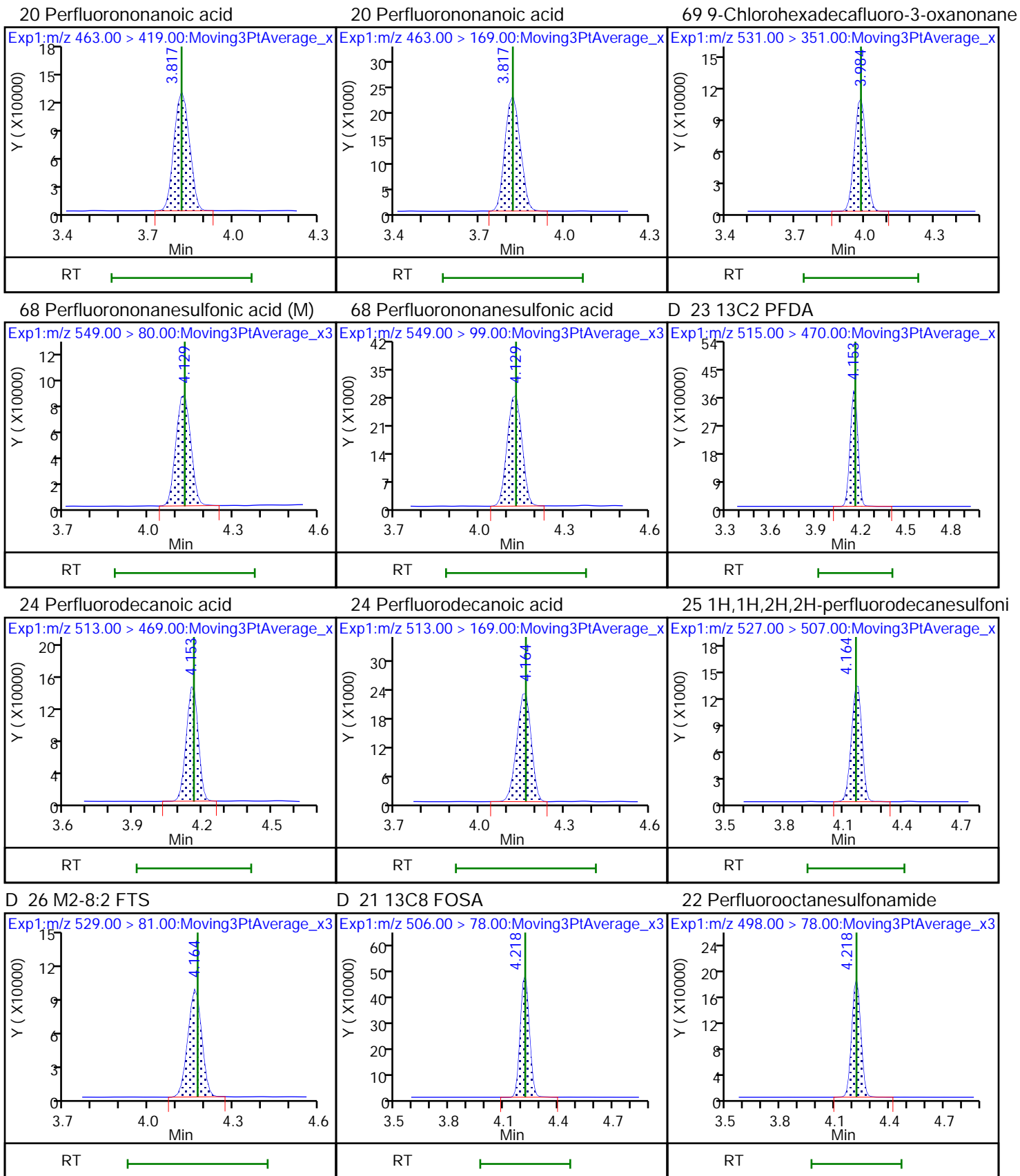
2 Perfluorobutanoic acid (M)

D 3 13C5 PFPeA





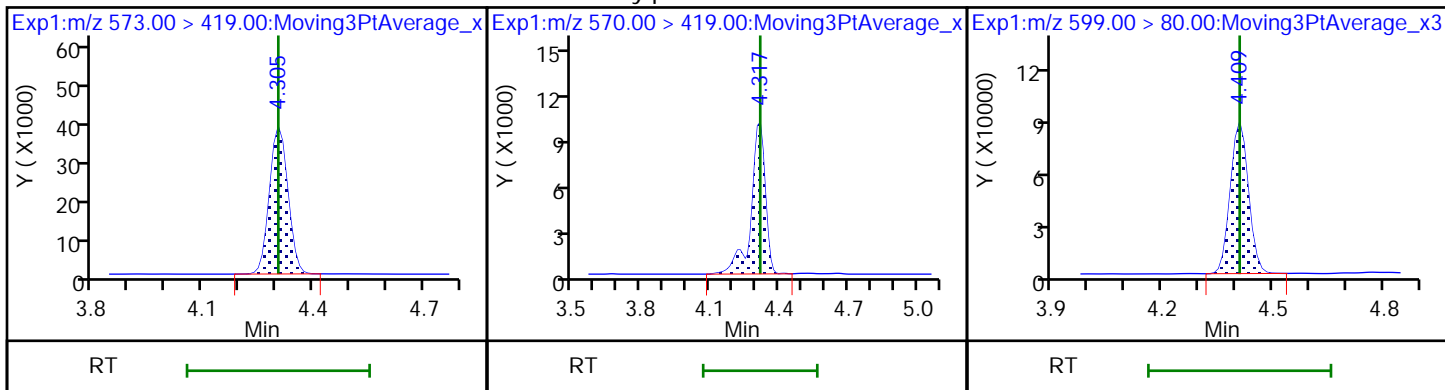






D 27 d3-NMeFOSAA

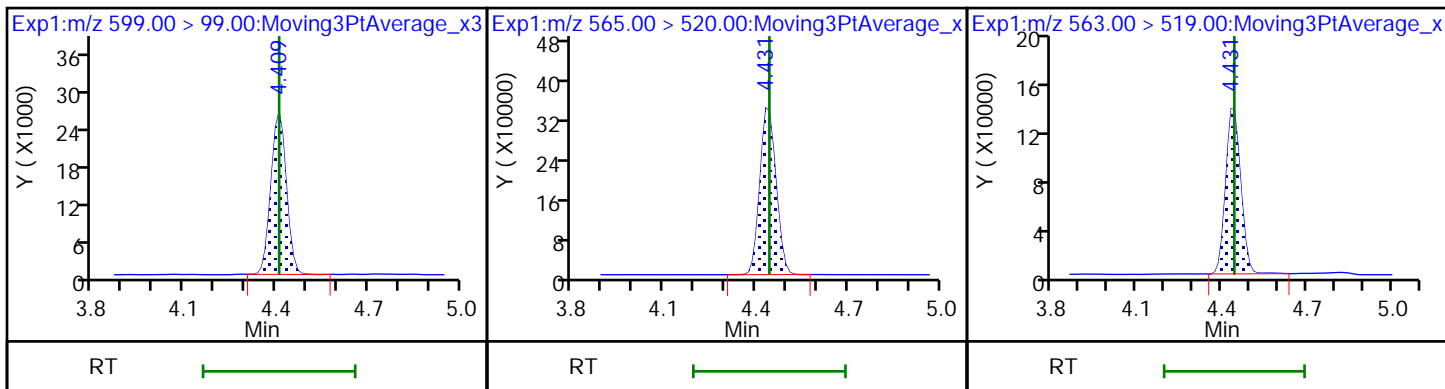
28 N-methylperfluorooctanesulfonamido 29 Perfluorodecanesulfonic acid



29 Perfluorodecanesulfonic acid

D 30 13C2 PFUoA

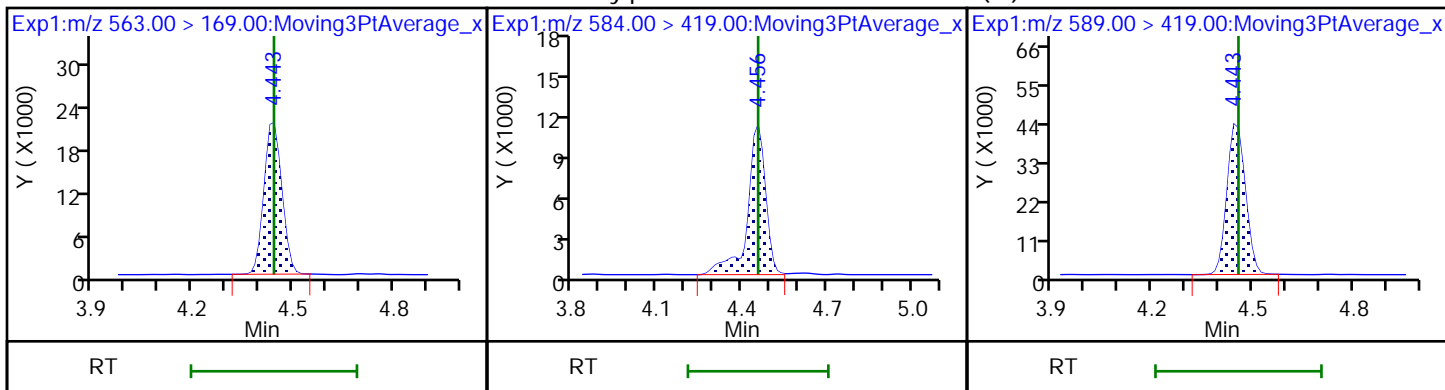
31 Perfluoroundecanoic acid



31 Perfluoroundecanoic acid

33 N-ethylperfluorooctanesulfonamido

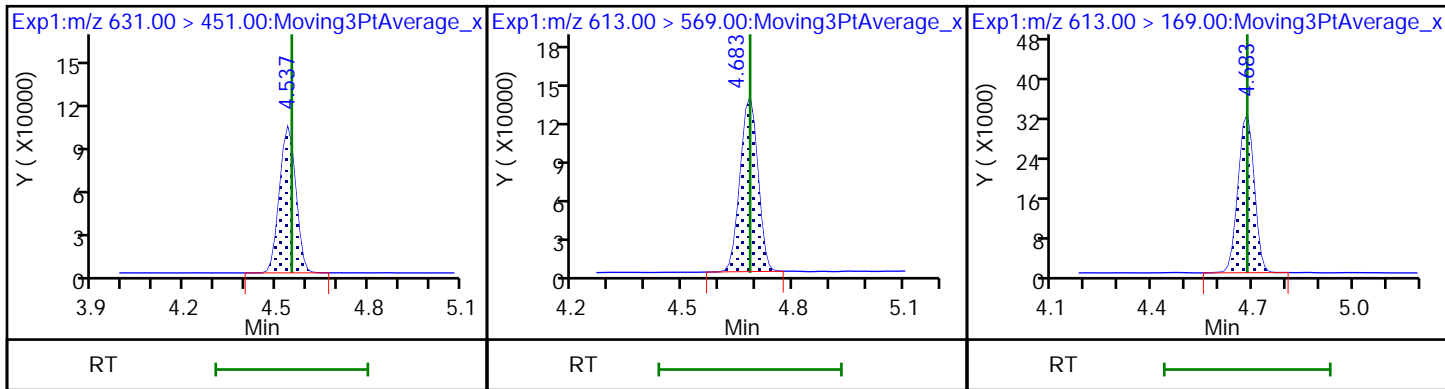
D 32 d5-NEtFOSAA



66 11-Chloroeicosafuoro-3-oxaundecan

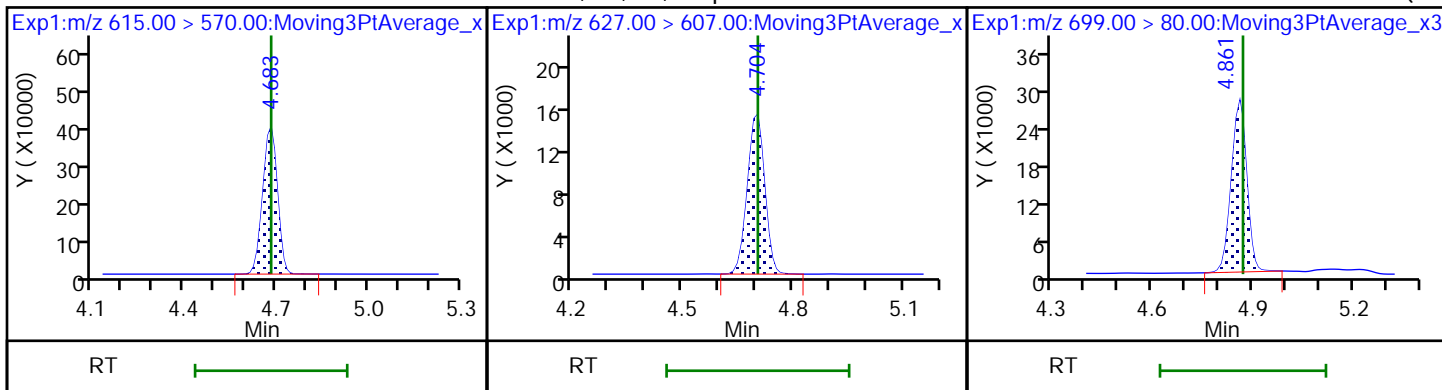
37 Perfluorododecanoic acid

37 Perfluorododecanoic acid



D 36 13C2 PFDaA

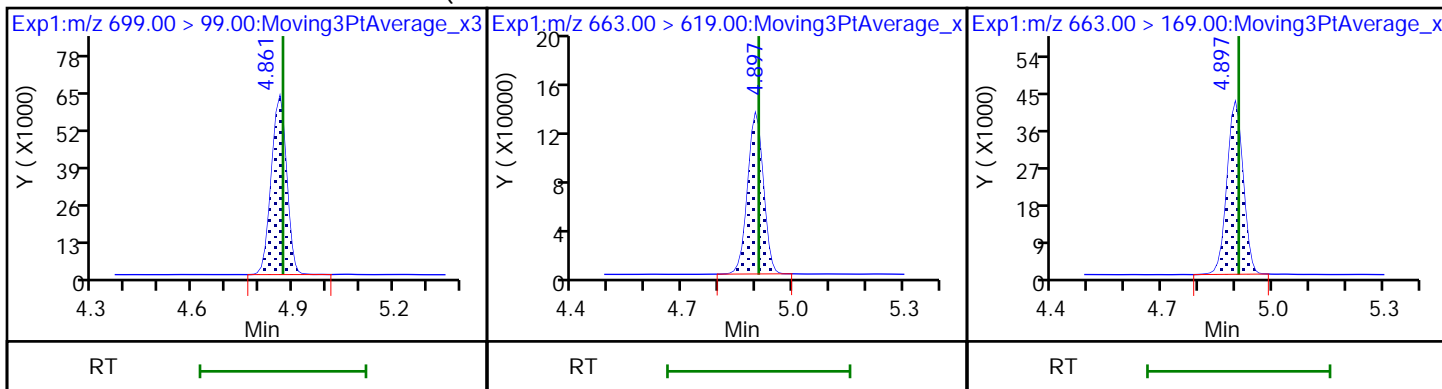
74 1H,1H,2H,2H-perfluorododecanesulfo75 Perfluorododecanesulfonic acid (PF



75 Perfluorododecanesulfonic acid (PF

41 Perfluorotridecanoic acid

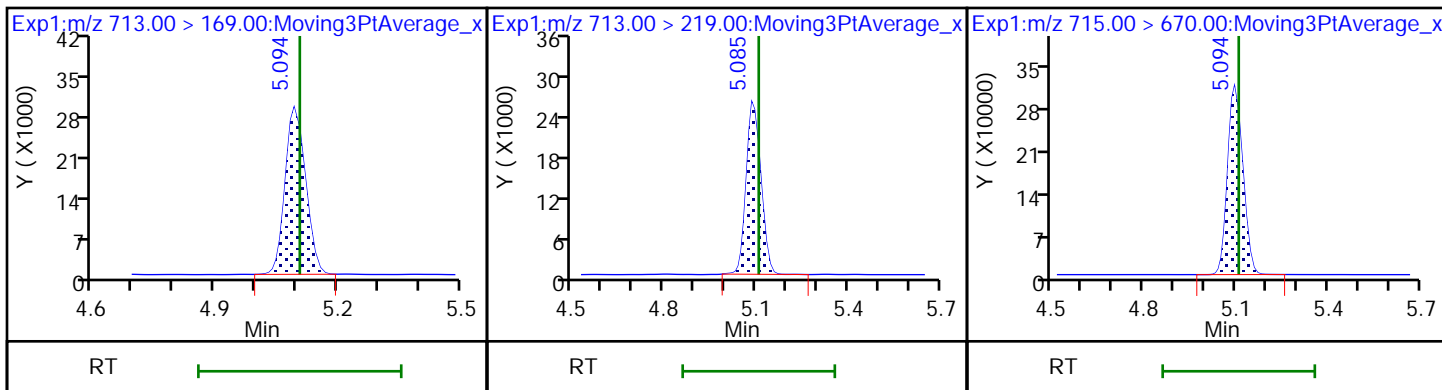
41 Perfluorotridecanoic acid



42 Perfluorotetradecanoic acid

42 Perfluorotetradecanoic acid

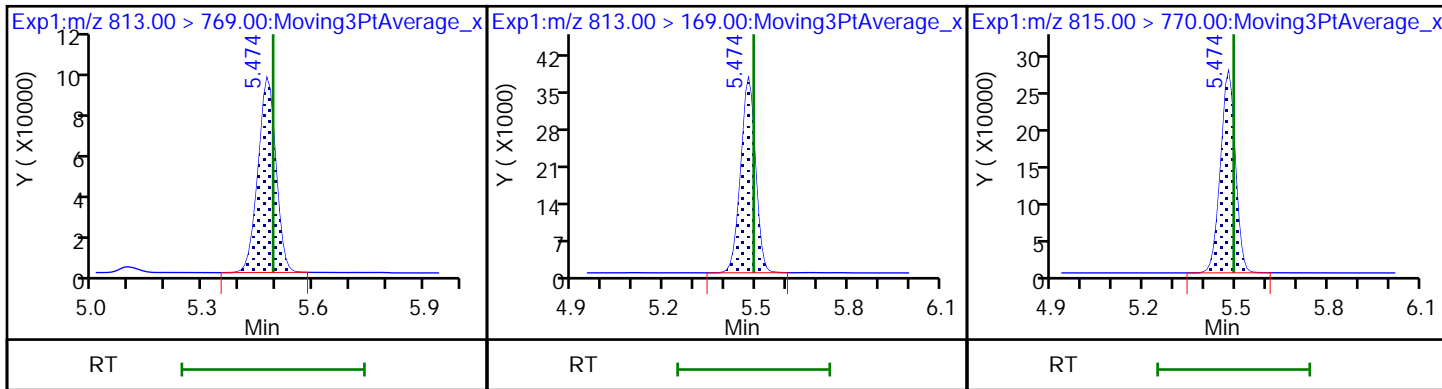
D 43 13C2 PFTeDA



45 Perfluorohexadecanoic acid

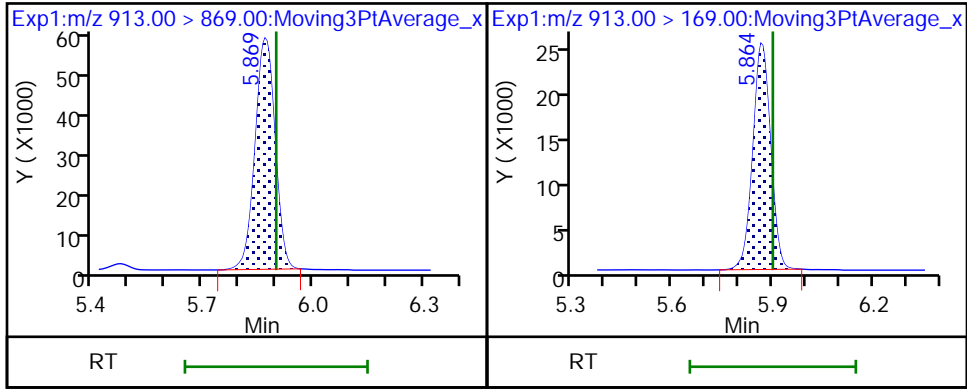
45 Perfluorohexadecanoic acid

D 44 13C2 PFHxDA



46 Perfluorooctadecanoic acid

46 Perfluorooctadecanoic acid



Euofins TestAmerica, Burlington

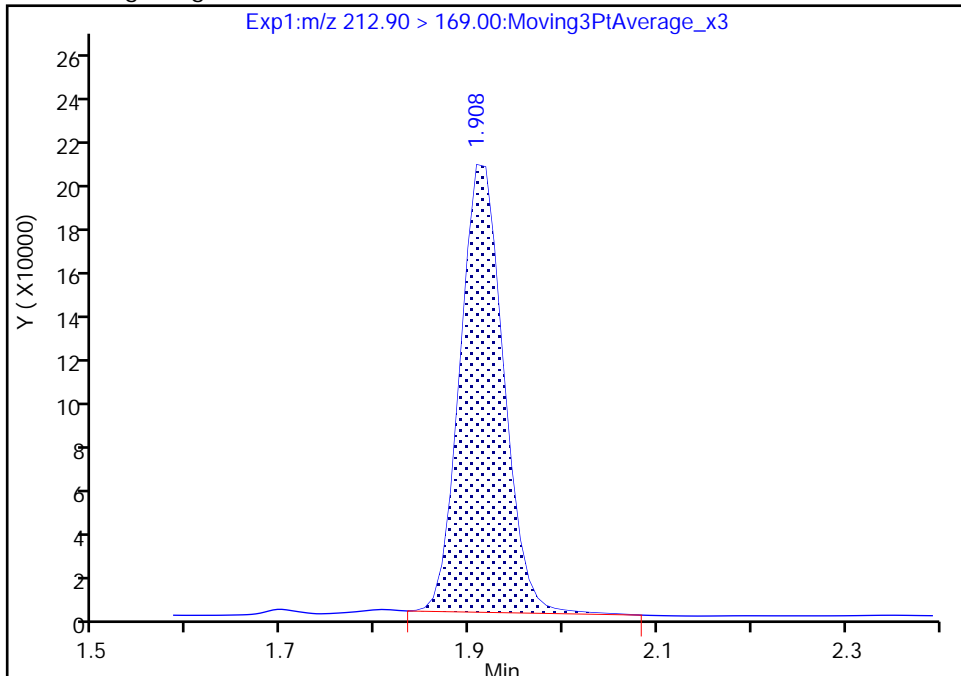
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Injection Date: 24-Dec-2019 18:34:35 Instrument ID: LC812  
Lims ID: CCV L4  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 35 Worklist Smp#: 35  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

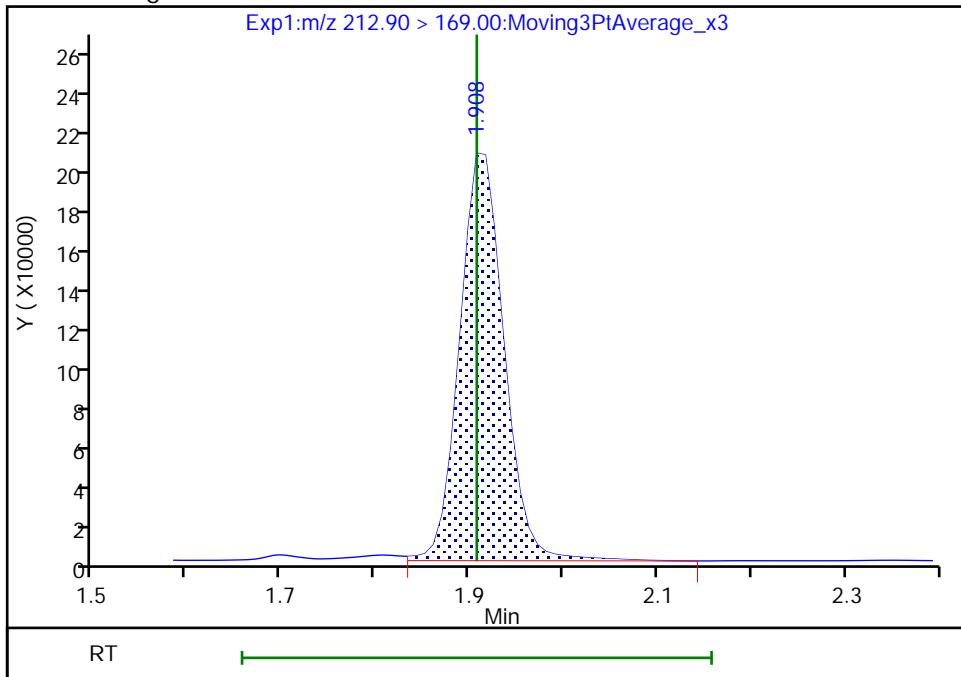
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Area: 661727  
Amount: 0.959751  
Amount Units: ng/ml

Processing Integration Results



RT: 1.91  
Area: 681192  
Amount: 0.987983  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 26-Dec-2019 10:27:17  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

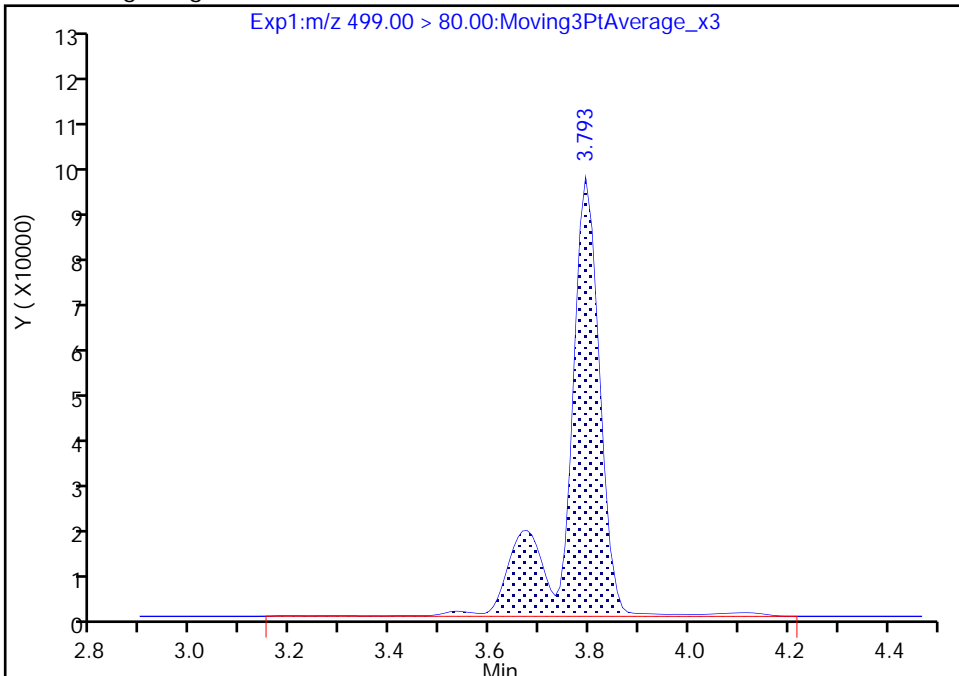
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Lims ID: CCV L4  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 35 Worklist Smp#: 35  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

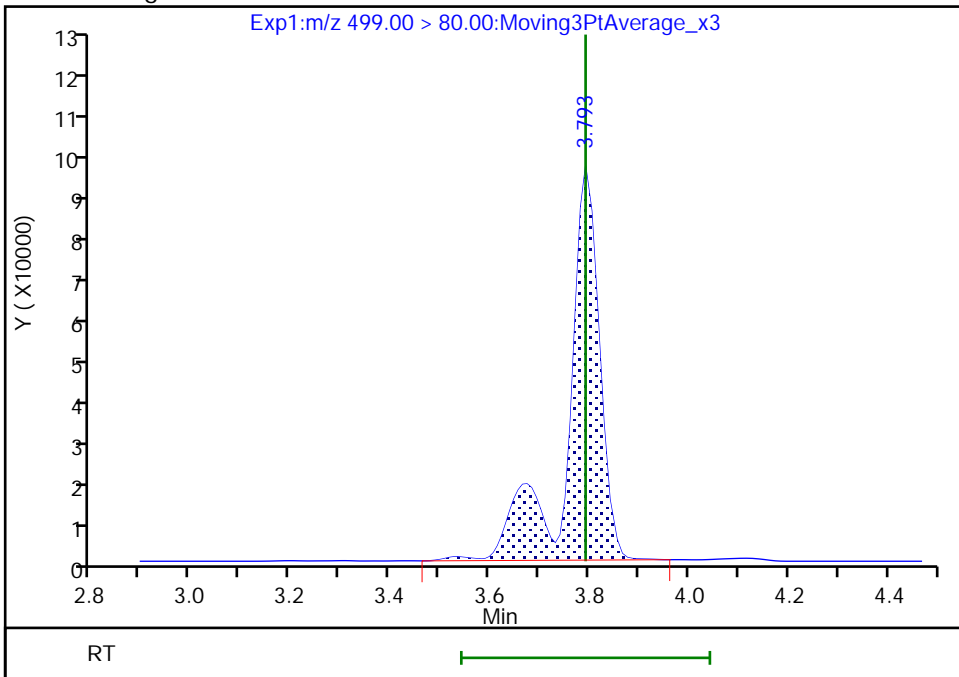
RT: 3.79  
Area: 416750  
Amount: 0.956396  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 403552  
Amount: 0.926108  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 26-Dec-2019 10:27:45  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

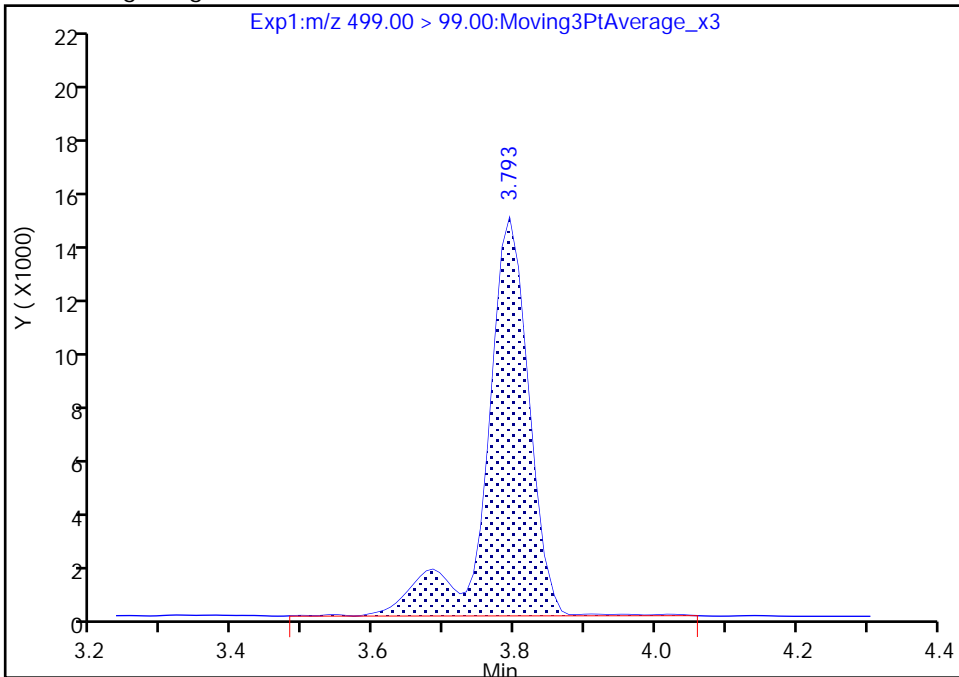
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Injection Date: 24-Dec-2019 18:34:35 Instrument ID: LC812  
Lims ID: CCV L4  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 35 Worklist Smp#: 35  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

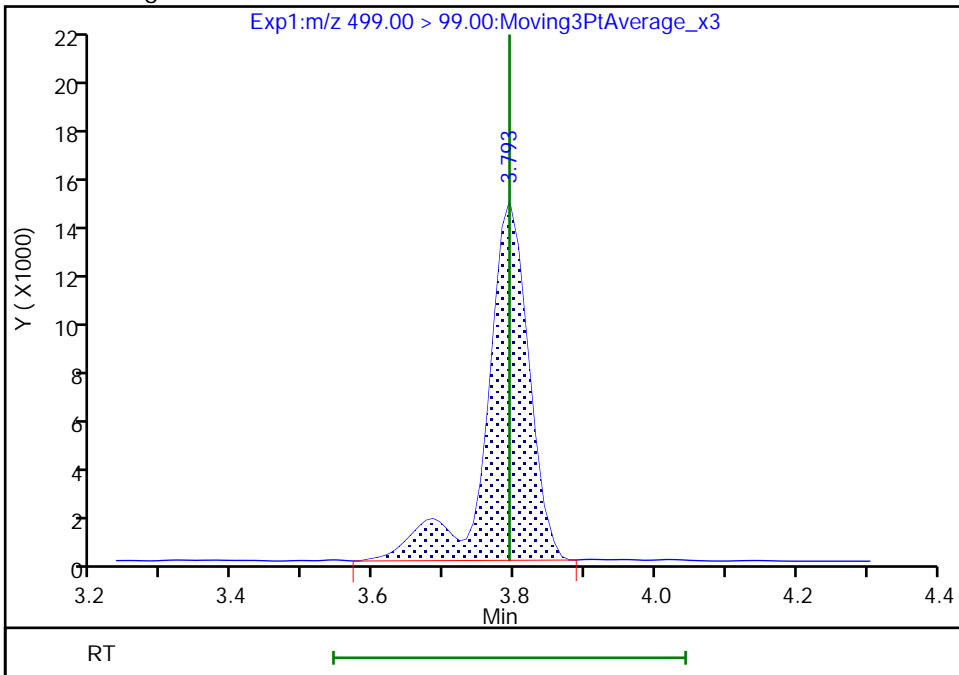
RT: 3.79  
Area: 63082  
Amount: 0.956396  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 62300  
Amount: 0.926108  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 26-Dec-2019 10:27:53

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

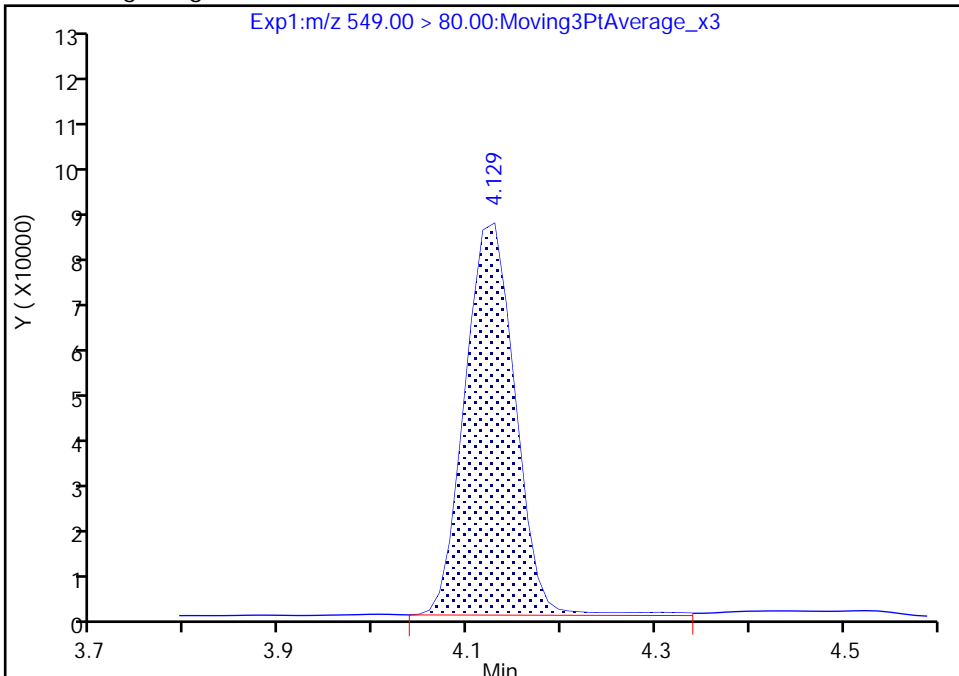
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B035.d  
Injection Date: 24-Dec-2019 18:34:35 Instrument ID: LC812  
Lims ID: CCV L4  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 35 Worklist Smp#: 35  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

68 Perfluoronanesulfonic acid, CAS: 68259-12-1

Signal: 1

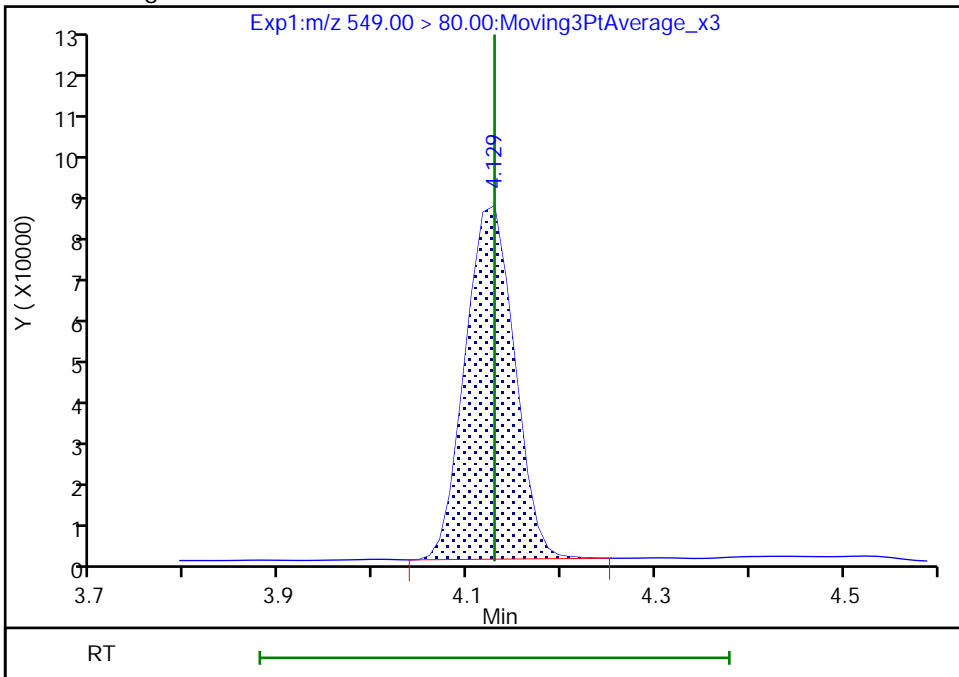
RT: 4.13  
Area: 321549  
Amount: 0.964217  
Amount Units: ng/ml

Processing Integration Results



RT: 4.13  
Area: 315137  
Amount: 0.944989  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagery, 27-Dec-2019 17:03:30  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

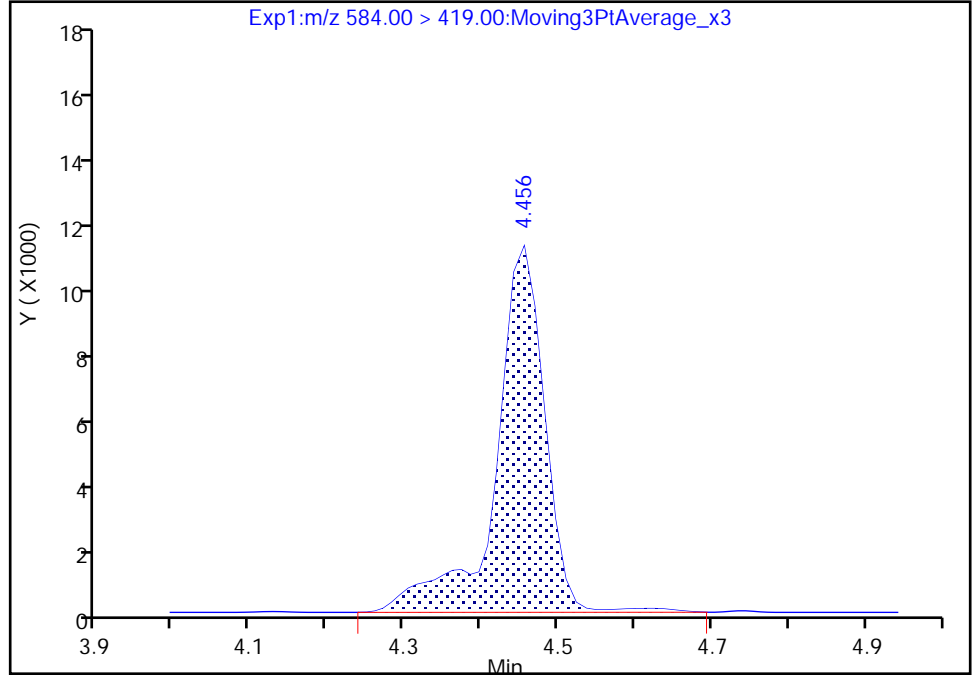
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Injection Date: 24-Dec-2019 18:34:35 Instrument ID: LC812  
Lims ID: CCV L4  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 35 Worklist Smp#: 35  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

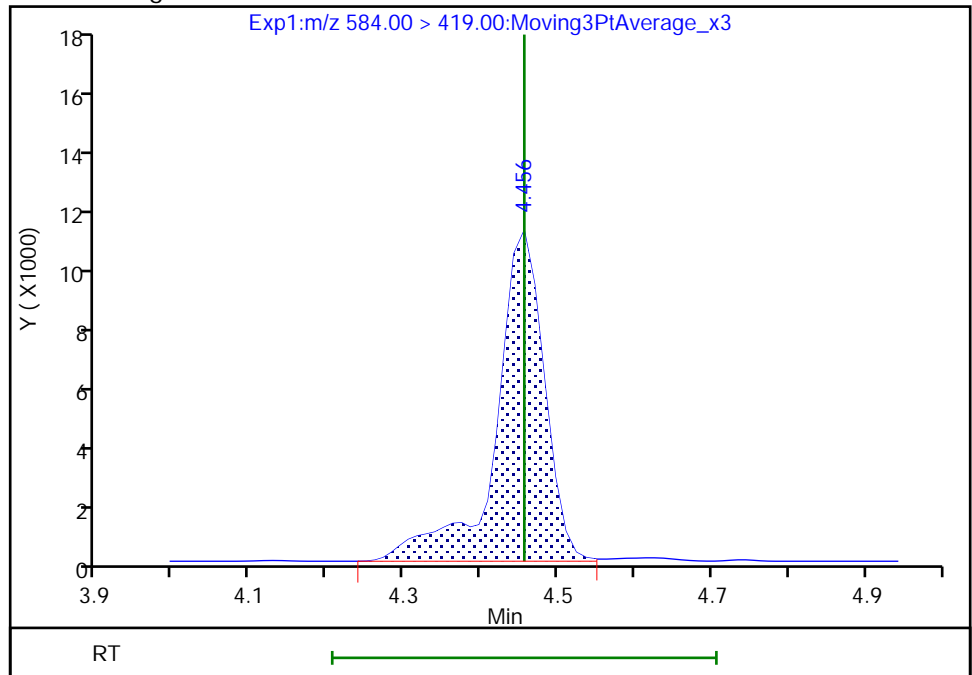
RT: 4.46  
Area: 50086  
Amount: 0.913971  
Amount Units: ng/ml

Processing Integration Results



RT: 4.46  
Area: 49464  
Amount: 0.902621  
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 26-Dec-2019 10:28:10  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 200-150841/1-A  
 Matrix: Water Lab File ID: SC122319B003.d  
 Analysis Method: 537 (modified) Date Collected: \_\_\_\_\_  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 250 (mL) Date Analyzed: 12/24/2019 14:12  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 20 (uL) GC Column: C-18 ID: 4.6 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	ND		2.0	1.0
2706-90-3	Perfluoropentanoic acid (PFPeA)	ND		2.0	0.63
307-24-4	Perfluorohexanoic acid (PFHxA)	ND		2.0	0.76
375-85-9	Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.91
335-67-1	Perfluorooctanoic acid (PFOA)	ND		2.0	0.81
375-95-1	Perfluorononanoic acid (PFNA)	ND		2.0	0.27
335-76-2	Perfluorodecanoic acid (PFDA)	ND		2.0	0.77
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.78
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		2.0	0.59
72629-94-8	Perfluorotridecanoic acid (PFTriA)	ND		2.0	0.60
376-06-7	Perfluorotetradecanoic acid (PFTeA)	ND		2.0	0.92
375-73-5	Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.49
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.80
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0	0.95
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.61
335-77-3	Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.90
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND		10	10
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		20	1.7
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		20	1.5
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		20	5.5
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		20	2.9

FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: MB 200-150841/1-A  
 Matrix: Water Lab File ID: SC122319B003.d  
 Analysis Method: 537 (modified) Date Collected: \_\_\_\_\_  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 250 (mL) Date Analyzed: 12/24/2019 14:12  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 20 (uL) GC Column: C-18 ID: 4.6 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	103		50-150
STL01892	13C4 PFHpA	101		50-150
STL00990	13C4 PFOA	108		50-150
STL00991	13C4 PFOS	104		50-150
STL00995	13C5 PFNA	109		50-150
STL00992	13C4 PFBA	90		25-150
STL00993	13C2 PFHxA	106		50-150
STL00996	13C2 PFDA	96		50-150
STL00997	13C2 PFUnA	92		50-150
STL00998	13C2 PFDoA	84		50-150
STL01056	13C8 FOSA	74		25-150
STL01893	13C5 PFPeA	111		25-150
STL02116	13C2 PFTeDA	79		50-150
STL02118	d3-NMeFOSAA	90		50-150
STL02117	d5-NEtFOSAA	92		50-150
STL02279	M2-6:2 FTS	81		25-150
STL02280	M2-8:2 FTS	108		25-150
STL02337	13C3 PFBS	106		50-150

Eurofins TestAmerica, Burlington  
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
 Lims ID: MB 200-150841/1-A  
 Client ID:  
 Sample Type: MB  
 Inject. Date: 24-Dec-2019 14:12:27 ALS Bottle#: 3 Worklist Smp#: 3  
 Injection Vol: 20.0 ul Dil. Factor: 1.0000  
 Sample Info: MB 200-150841/1-A  
 Misc. Info.: 200-0039355-003 Plate: 1 Rack: 2  
 Operator ID: lc812tech Instrument ID: LC812  
 Method: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\PFC\_LC812.m  
 Limit Group: LC\_PFC\_ICAL  
 Last Update: 30-Dec-2019 15:06:05 Calib Date: 06-Dec-2019 15:13:26  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Column 1 : C-18 ( 4.60 mm) Det: EXP1  
 Process Host: CTX0330

First Level Reviewer: lautenschlagery Date: 27-Dec-2019 09:26:35  
 Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	1.908	1.908	0.0	0.556	1740294	2.25	89.9	2905	
2 Perfluorobutanoic acid	212.90 > 169.00	1.908	1.908	0.0	1.000	12636	0.0182		3.7	
D 3 13C5 PFPeA	267.90 > 223.00	2.258	2.257	0.001	0.658	1635983	2.76	111	6143	
4 Perfluoropentanoic acid	262.90 > 219.00	2.258	2.271	-0.013	1.000	8570	0.0116		1.0	M
D 47 13C3 PFBS	301.90 > 80.00	2.271	2.285	-0.014	0.662	1741717	2.47	106	530491	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	2.285	2.285	0.0	1.006	9501	0.0117	Target=2.03	42.3	M
	298.90 > 99.00	2.285	2.285	0.0	1.006	5115	1.86(1.01-3.04)		9.5	
D 60 M2-4:2 FTS	329.00 > 81.00	2.611	2.611	0.0	0.761	126924	1.93	82.5	285	
61 1H,1H,2H,2H-perfluorohexanesulfoni	327.00 > 307.00	2.599	2.611	-0.012	0.995	464	0.004928		9.7	M
D 7 13C2 PFHxA	315.00 > 270.00	2.661	2.648	0.013	0.776	1744806	2.64	106	6874	
6 Perfluorohexanoic acid	313.00 > 269.00	2.661	2.661	0.0	1.000	5310	0.007452	Target=13.76	2.8	M
	313.00 > 119.00	2.661	2.661	0.0	1.000	685	7.75(6.88-20.64)		1.8	M
70 Perfluoropentanesulfonic acid	349.00 > 80.00	2.661	2.661	0.0	0.874	2432	0.003658	Target=3.50	17.2	M
	349.00 > 99.00	2.673	2.661	0.012	0.878	1144	2.13(1.75-5.25)		7.8	M
D 64 13C3 HFPO-DA	332.10 > 287.00	2.776	2.768	0.008	0.809	126335	4.38	175	1677	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 11 18O2 PFHxS										
403.00 > 84.00	3.044	3.044	0.0	0.887	1354169	2.43		103	7734	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.044	3.044	0.0	1.000	5901	0.009106	Target=3.90	19.8		M
399.00 > 99.00	3.044	3.044	0.0	1.000	1412		4.18(1.95-5.85)	7.0		M
D 9 13C4 PFHpA										
367.00 > 322.00	3.044	3.044	0.0	0.887	1586295	2.54		101	3713	
10 Perfluoroheptanoic acid										M
363.00 > 319.00	3.055	3.044	0.011	1.004	5639	0.008406	Target=3.95	2.5		M
363.00 > 169.00	3.044	3.044	0.0	1.000	1406		4.01(1.97-5.92)	5.6		M
77 DONA										M
377.00 > 251.00	3.090	3.089	0.001	0.815	6060	0.003718	Target=2.49	21.0		M
377.00 > 85.00	3.090	3.089	0.001	0.815	2103		2.88(1.24-3.73)	8.6		M
16 Perfluoroheptanesulfonic acid										M
449.00 > 80.00	3.413	3.413	0.0	0.900	1674	0.002962	Target=6.46	21.9		
449.00 > 99.00	3.413	3.413	0.0	0.900	455		3.68(3.23-9.69)	5.7		M
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.405	3.413	-0.008	0.995	1597	0.0218		49.8		
D 12 M2-6:2 FTS										
429.00 > 81.00	3.422	3.413	0.009	0.998	184277	1.92		81.0	1132	
15 Perfluorooctanoic acid										Ma
413.00 > 369.00	3.430	3.430	0.0	1.000	8151	0.0102	Target=2.40	3.5		a
413.00 > 169.00	3.430	3.430	0.0	1.000	3477		2.34(1.20-3.60)	23.7		M
D 14 13C4 PFOA										
417.00 > 372.00	3.430	3.430	0.0	1.000	1795526	2.70		108	5583	
* 62 13C2 PFOA										
415.00 > 370.00	3.430	3.430	0.0		1826742	2.50			4212	
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.793	0.0	1.106	1102723	2.49		104	7279	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.793	3.793	0.0	1.000	2157	0.004331	Target=5.74	14.4		M
499.00 > 99.00	3.793	3.793	0.0	1.000	657		3.28(2.87-8.61)	5.3		M
D 19 13C5 PFNA										
468.00 > 423.00	3.817	3.817	0.0	1.113	1669937	2.74		109	9520	
20 Perfluorononanoic acid										RM
463.00 > 419.00	3.830	3.817	0.013	1.003	4002	0.006110	Target=7.01	1.9		RM
463.00 > 169.00	3.830	3.817	0.013	1.003	277		14.45(3.50-10.51)	6.3		M
69 9-Chlorohexadecafluoro-3-oxanonane										M
531.00 > 351.00	3.984	3.984	0.0	1.050	2022	0.003554		24.1		M
68 Perfluorononanesulfonic acid										M
549.00 > 80.00	4.129	4.129	0.0	1.089	1210	0.003174	Target=3.14	16.4		
549.00 > 99.00	4.153	4.129	0.024	1.095	711		1.70(1.57-4.71)	4.7		M
D 23 13C2 PFDA										
515.00 > 470.00	4.164	4.164	0.0	1.214	1451161	2.41		96.5	5637	
24 Perfluorodecanoic acid										M
513.00 > 469.00	4.164	4.164	0.0	1.000	3674	0.006542	Target=7.28	5.1		M
513.00 > 169.00	4.164	4.164	0.0	1.000	436		8.43(3.64-10.91)	4.6		M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
25 1H,1H,2H,2H-perfluorodecanesulfoni										M
527.00 > 507.00	4.175	4.164	0.011	1.000	63	0.001112				M
D 26 M2-8:2 FTS										
529.00 > 81.00	4.175	4.175	0.0	1.217	293858	2.57		108	1493	
D 21 13C8 FOSA										
506.00 > 78.00	4.218	4.218	0.0	1.230	1456220	1.85		74.0	6482	
22 Perfluorooctanesulfonamide										M
498.00 > 78.00	4.218	4.218	0.0	1.000	3704	0.006390		34.4		M
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.317	4.305	0.012	1.258	129920	2.24		89.7	1056	
28 N-methylperfluorooctanesulfonamido										M
570.00 > 419.00	4.305	4.317	-0.012	0.997	200	0.004429		5.2		M
29 Perfluorodecanesulfonic acid										M
599.00 > 80.00	4.409	4.409	0.0	1.162	1401	0.004220	Target=2.76	16.6		M
599.00 > 99.00	4.398	4.409	-0.011	1.159	419		3.34(1.38-4.14)	7.9		M
D 30 13C2 PFUnA										
565.00 > 520.00	4.443	4.443	0.0	1.295	1173467	2.29		91.8	4131	
31 Perfluoroundecanoic acid										M
563.00 > 519.00	4.443	4.443	0.0	1.000	4666	0.0117	Target=5.78	7.2		M
563.00 > 169.00	4.456	4.443	0.013	1.003	1255		3.72(2.89-8.67)	22.8		M
33 N-ethylperfluorooctanesulfonamidoa										M
584.00 > 419.00	4.456	4.456	0.0	1.000	147	0.002996		2.0		M
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.456	4.456	0.0	1.299	148201	2.31		92.3	1010	
66 11-Chloroeicosafuoro-3-oxaundecan										
631.00 > 451.00	4.551	4.551	0.0	1.200	2098	0.003911		53.0		
37 Perfluorododecanoic acid										M
613.00 > 569.00	4.683	4.683	0.0	0.998	1627	0.003743	Target=5.13	0.5		M
613.00 > 169.00	4.693	4.683	0.010	1.000	411		3.96(2.56-7.69)	11.5		M
D 36 13C2 PFDaA										
615.00 > 570.00	4.693	4.683	0.010	1.368	1175977	2.10		83.9	6977	
75 Perfluorododecanesulfonic acid (PF										RM
699.00 > 80.00	4.868	4.870	-0.002	1.283	858	0.006798	Target=0.45	2.1		RM
699.00 > 99.00	4.868	4.870	-0.002	1.283	945		0.91(0.22-0.67)	20.4		M
41 Perfluorotridecanoic acid										RM
663.00 > 619.00	4.914	4.906	0.008	1.047	2381	0.005766	Target=3.82	1.1		RM
663.00 > 169.00	4.914	4.906	0.008	1.047	344		6.92(1.91-5.74)	6.1		M
42 Perfluorotetradecanoic acid										M
713.00 > 169.00	5.106	5.108	-0.002	1.000	778	0.0104	Target=1.05	12.3		M
713.00 > 219.00	5.106	5.108	-0.002	1.000	681		1.14(0.52-1.57)	14.7		M
D 43 13C2 PFTeDA										
715.00 > 670.00	5.106	5.108	-0.002	1.488	927345	1.97		78.9	7243	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.489	5.491	-0.002	1.000	10548	-0.000701	Target=3.20	5.6		
813.00 > 169.00	5.489	5.491	-0.002	1.000	4173		2.53(1.60-4.80)	105		
D 44 13C2 PFHxDA										
815.00 > 770.00	5.489	5.491	-0.002	1.600	1038615	2.40		96.1	6391	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
46 Perfluorooctadecanoic acid										M
913.00 > 869.00	5.893	5.899	-0.006	1.073	1130	0.003766	Target=2.86		0.6	M
913.00 > 169.00	5.888	5.899	-0.011	1.073	505		2.24(1.43-4.29)		15.1	M

**QC Flag Legend**

Processing Flags

R - Failed Signal Ratio Test

Review Flags

M - Manually Integrated

a - User Assigned ID

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d

Injection Date: 24-Dec-2019 14:12:27

Instrument ID: LC812

Lims ID: MB 200-150841/1-A

Client ID:

Operator ID: lc812tech

ALS Bottle#: 3

Worklist Smp#: 3

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

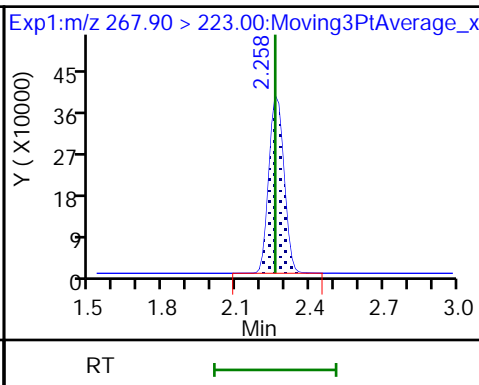
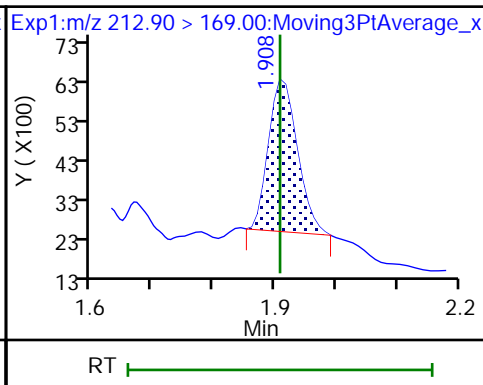
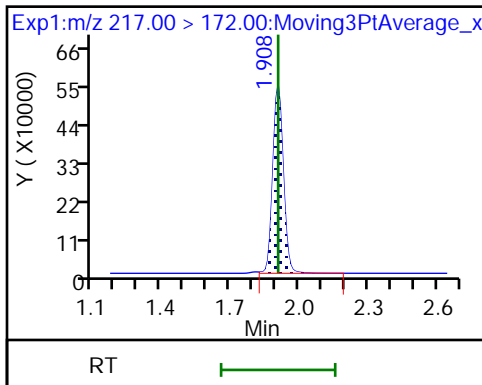
Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

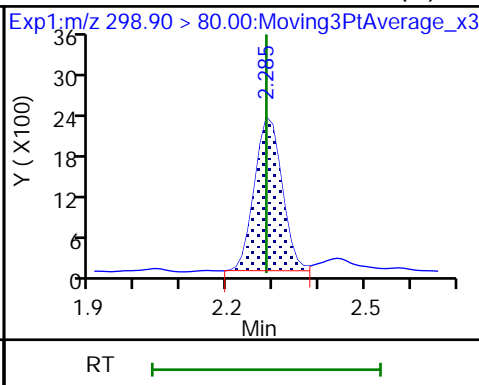
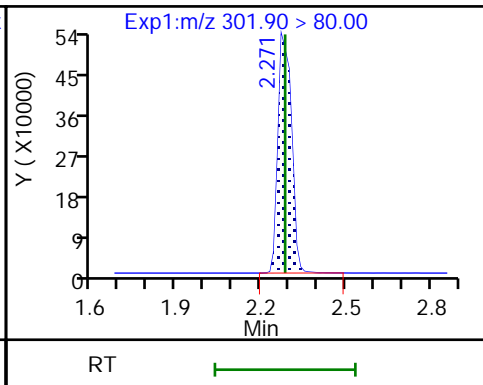
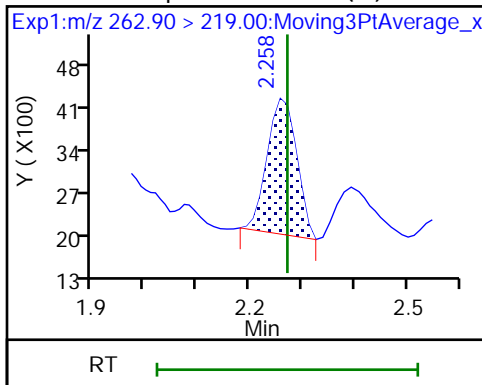
D 3 13C5 PFPeA



4 Perfluoropentanoic acid (M)

D 47 13C3 PFBS

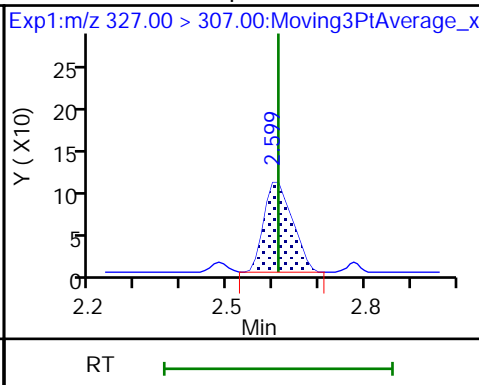
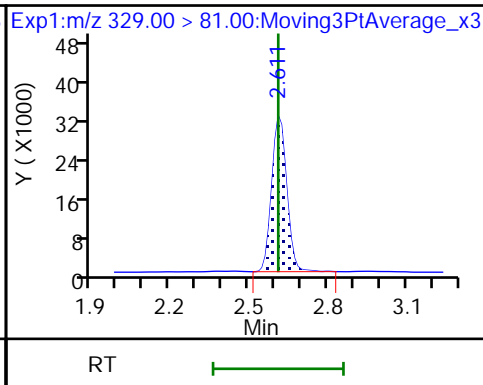
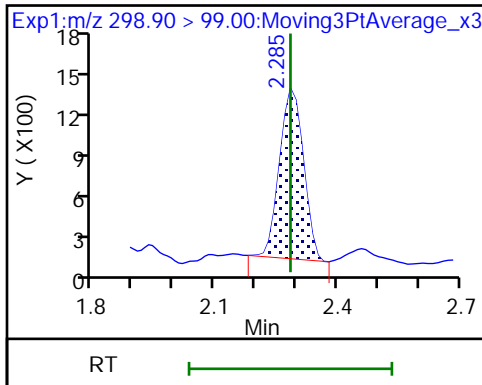
5 Perfluorobutanesulfonic acid (M)



5 Perfluorobutanesulfonic acid

D 60 M2-4:2 FTS

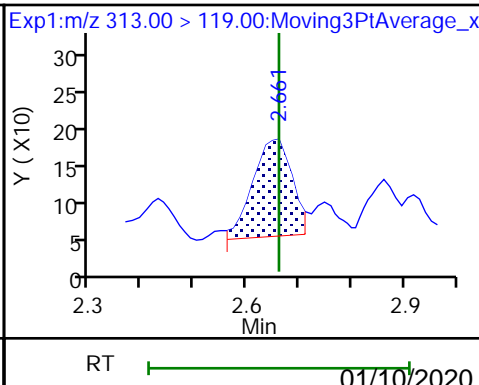
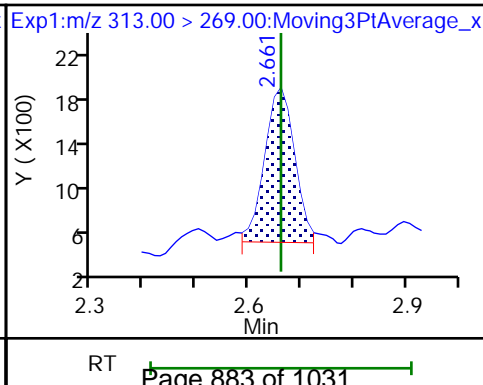
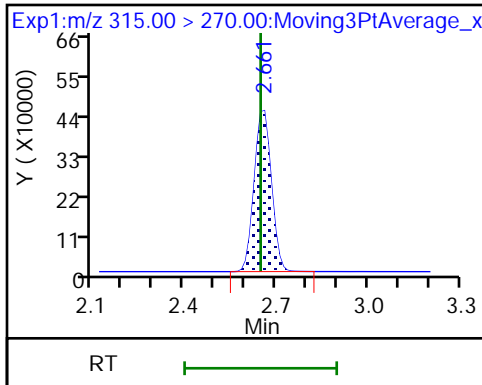
61 1H,1H,2H,2H-perfluorohexanesulfoni (M)



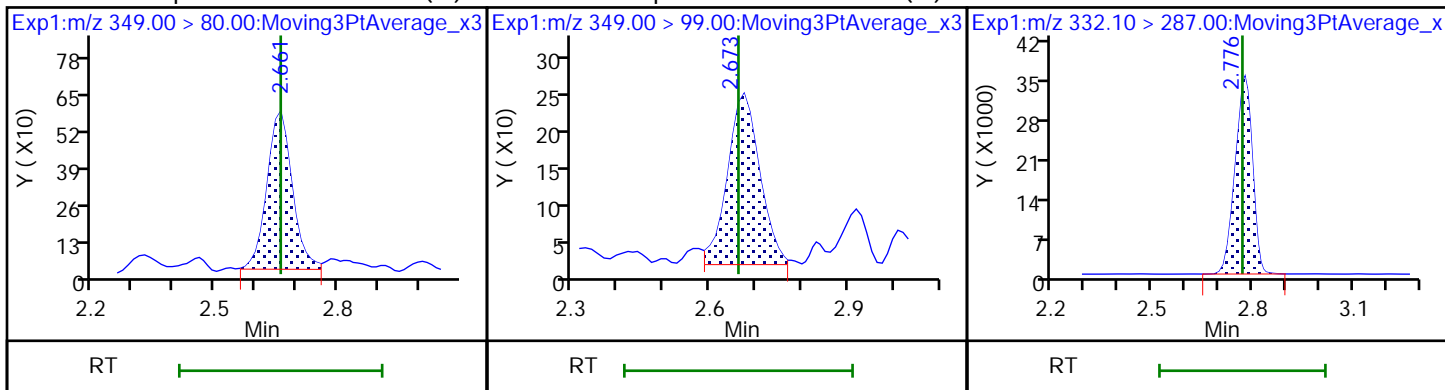
D 7 13C2 PFHxA

6 Perfluorohexanoic acid (M)

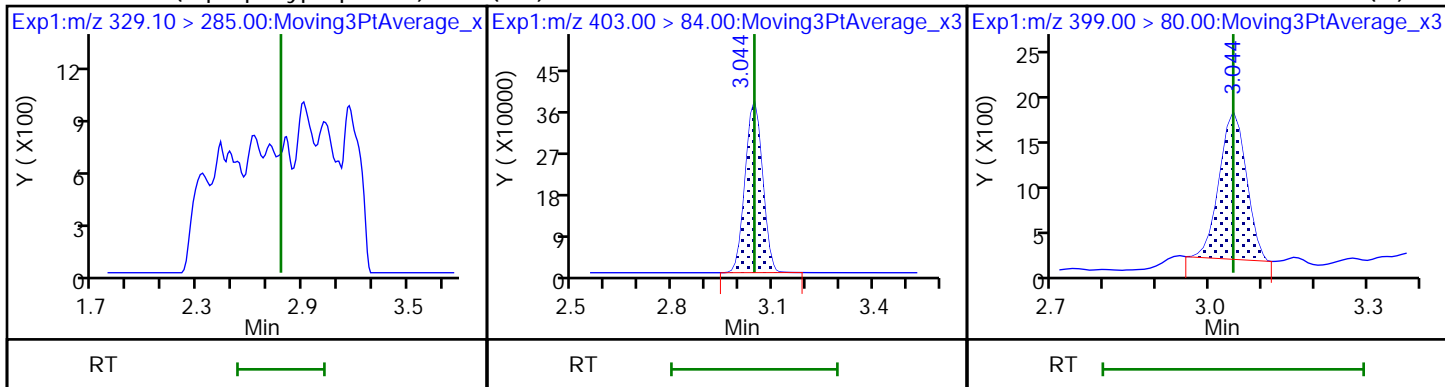
6 Perfluorohexanoic acid (M)



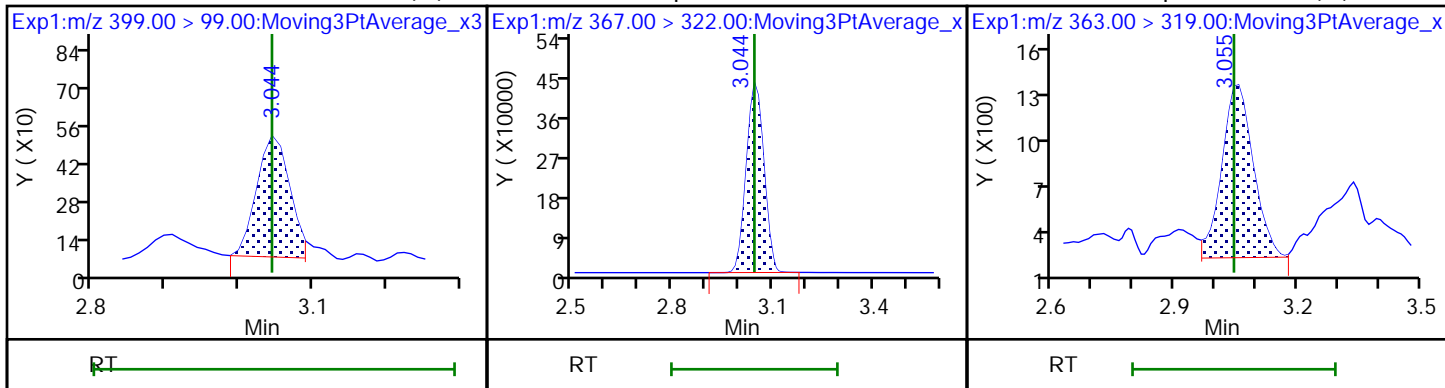
70 Perfluoropentanesulfonic acid (M) 70 Perfluoropentanesulfonic acid (M) D 64 13C3 HFPO-DA



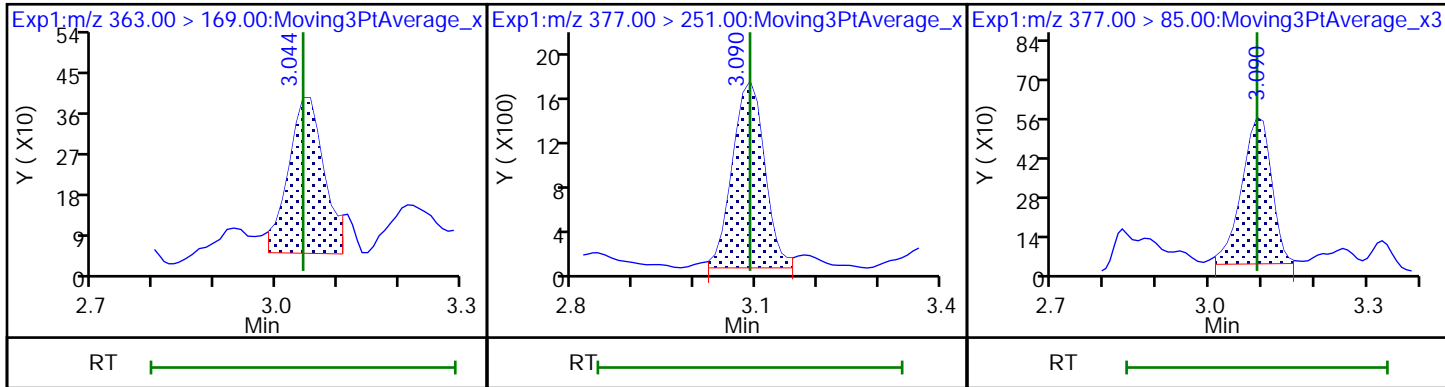
67 Perfluoro(2-propoxypropanoic acid (ND) 18O2 PFHxS 8 Perfluorohexanesulfonic acid (M)



8 Perfluorohexanesulfonic acid (M) D 9 13C4 PFHpA 10 Perfluoroheptanoic acid (M)

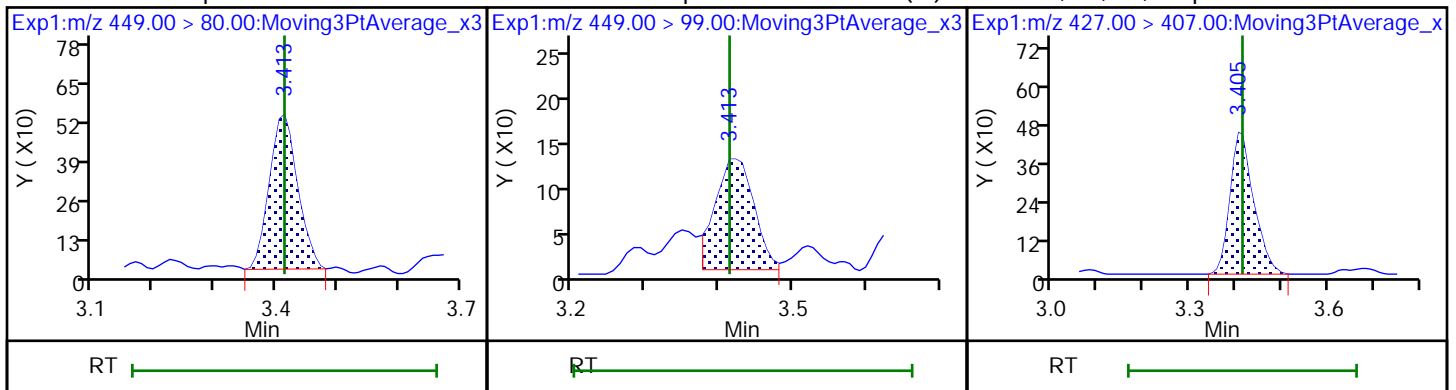


10 Perfluoroheptanoic acid (M) 77 DONA (M) 77 DONA (M)

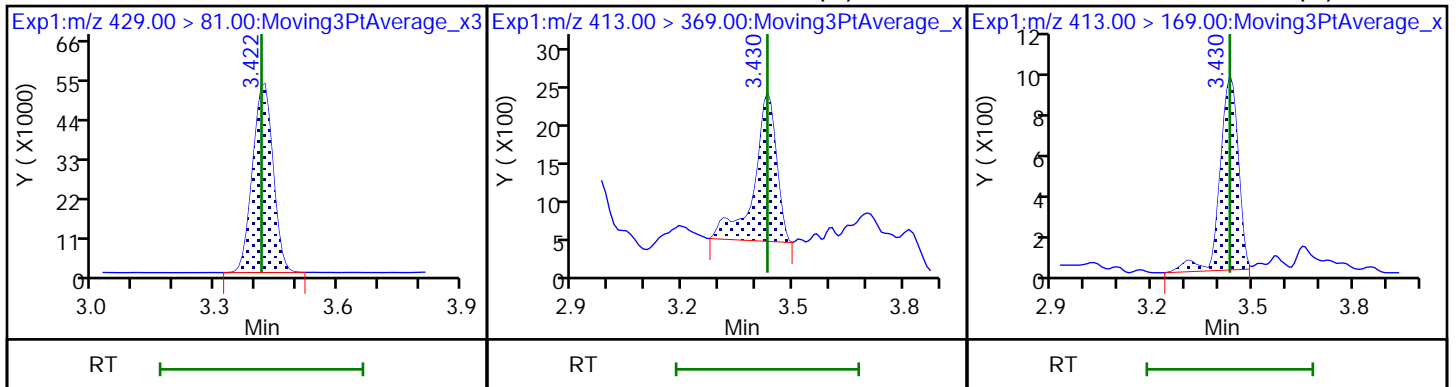




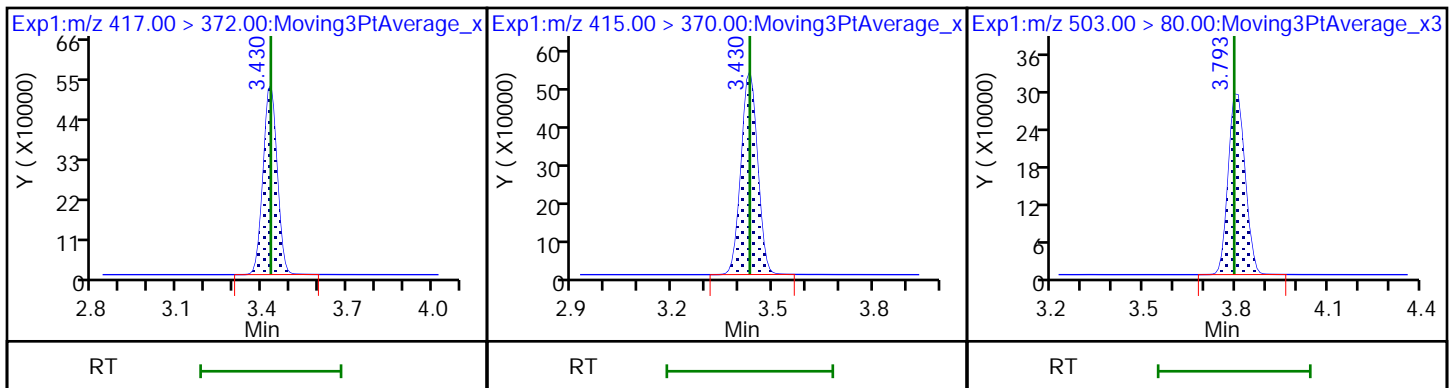
16 Perfluoroheptanesulfonic acid      16 Perfluoroheptanesulfonic acid (M)      13 1H,1H,2H,2H-perfluorooctanesulfoni



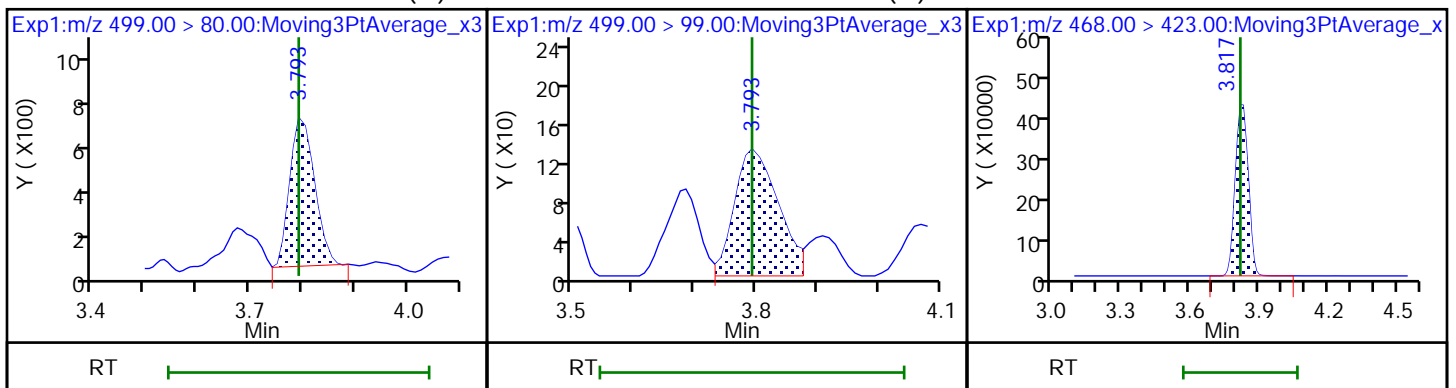
D 12 M2-6:2 FTS      15 Perfluorooctanoic acid (M)      15 Perfluorooctanoic acid (M)

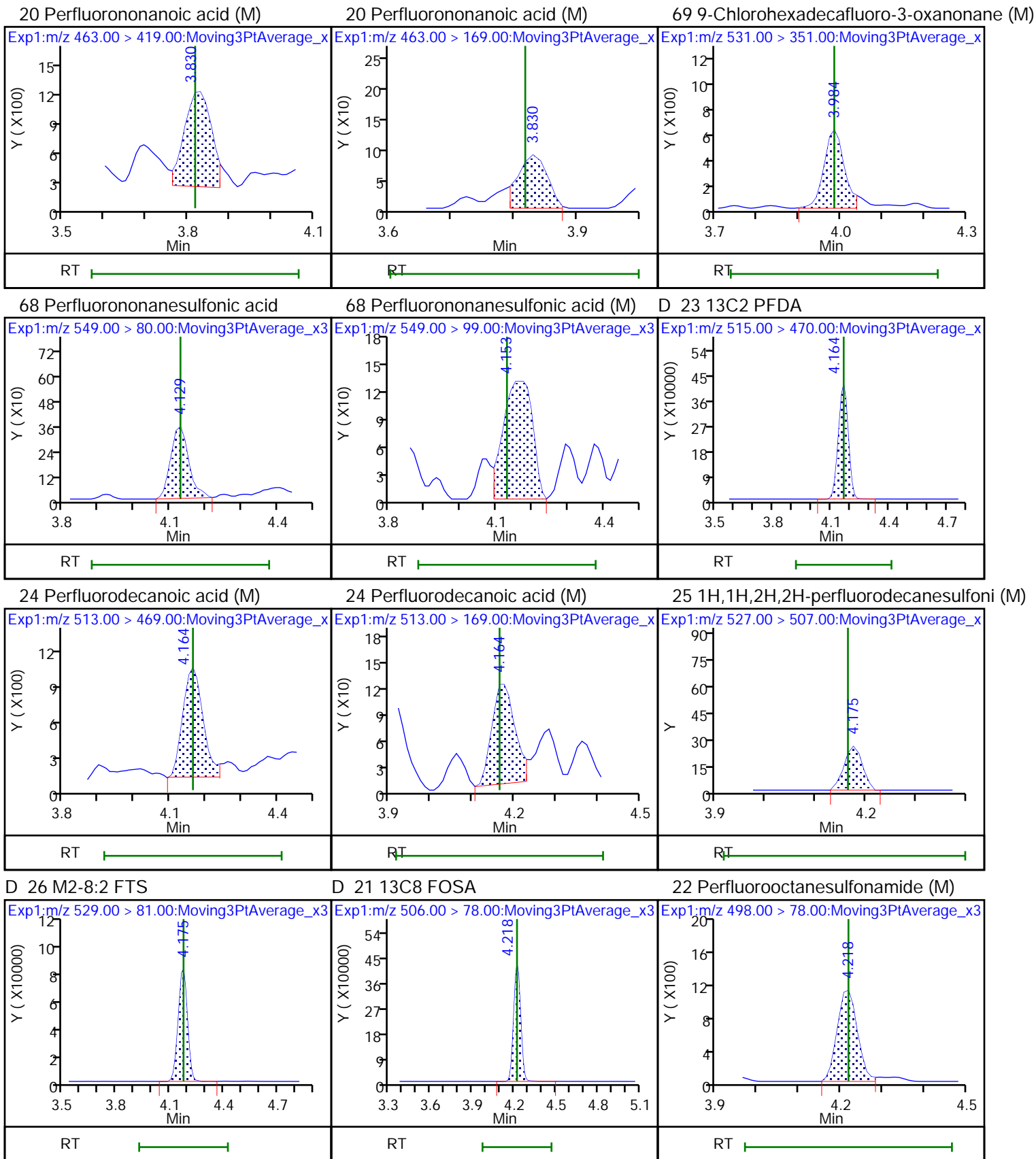


D 14 13C4 PFOA      \* 62 13C2 PFOA      D 18 13C4 PFOS



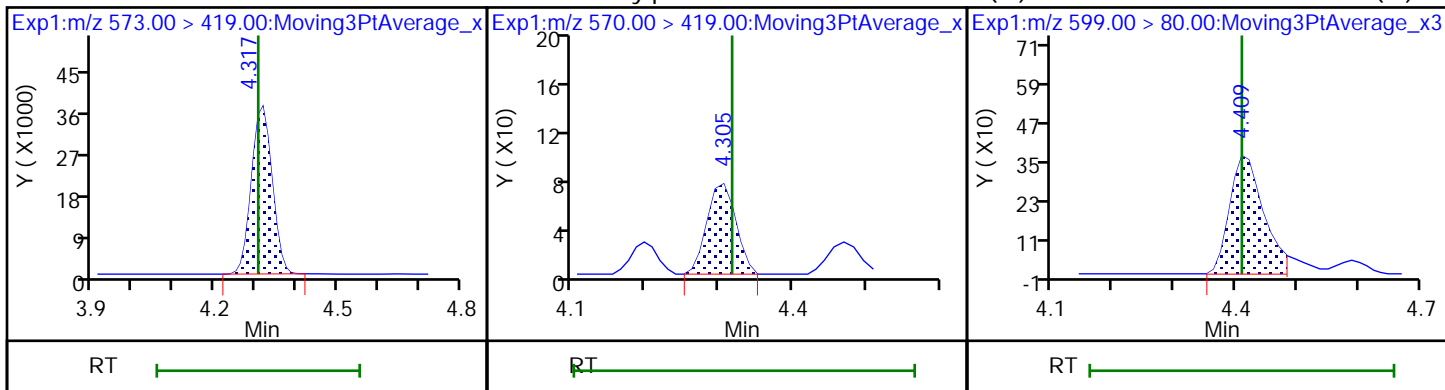
17 Perfluorooctanesulfonic acid (M)      17 Perfluorooctanesulfonic acid (M)      D 19 13C5 PFNA





D 27 d3-NMeFOSAA

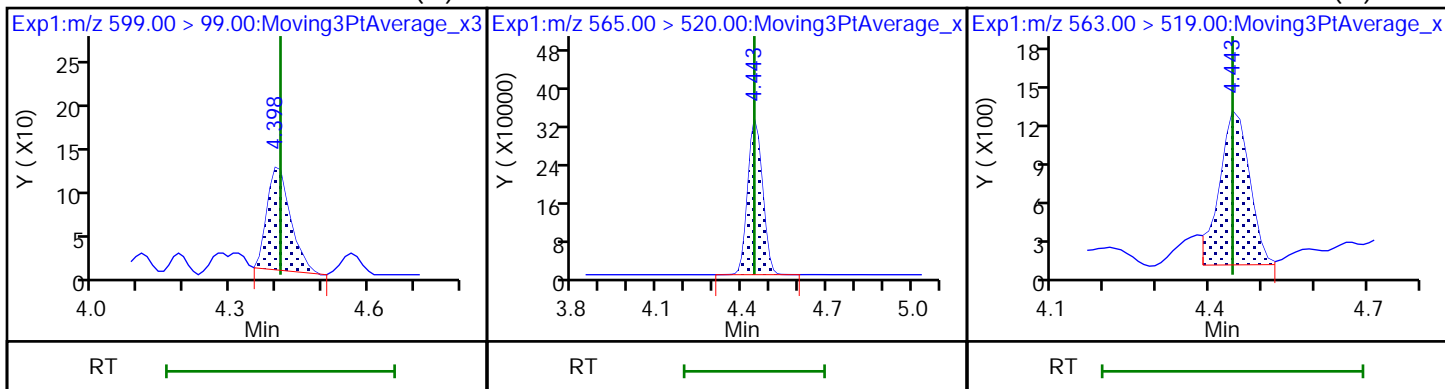
28 N-methylperfluorooctanesulfonamido (M) Perfluorodecanesulfonic acid (M)



29 Perfluorodecanesulfonic acid (M)

D 30 13C2 PFUoA

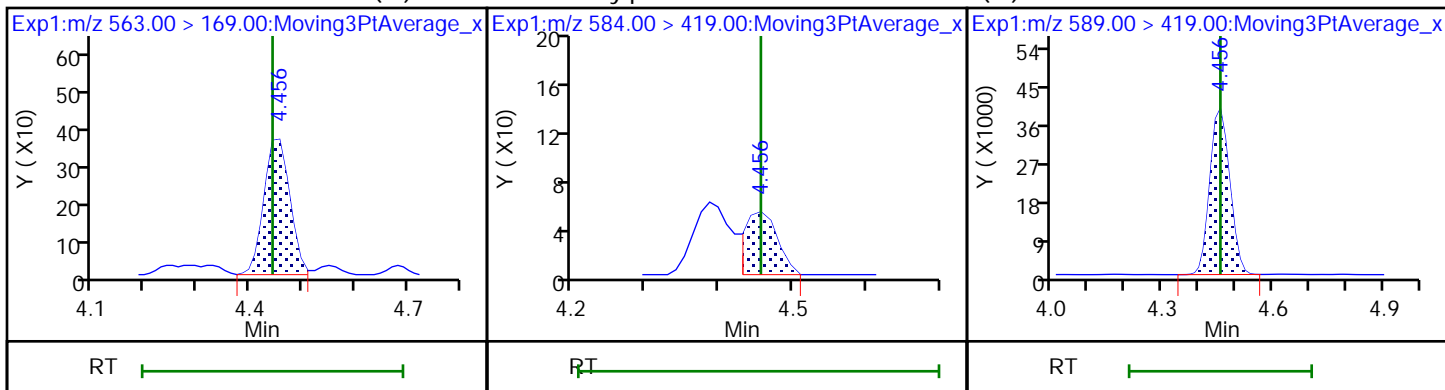
31 Perfluoroundecanoic acid (M)



31 Perfluoroundecanoic acid (M)

33 N-ethylperfluorooctanesulfonamido (M)

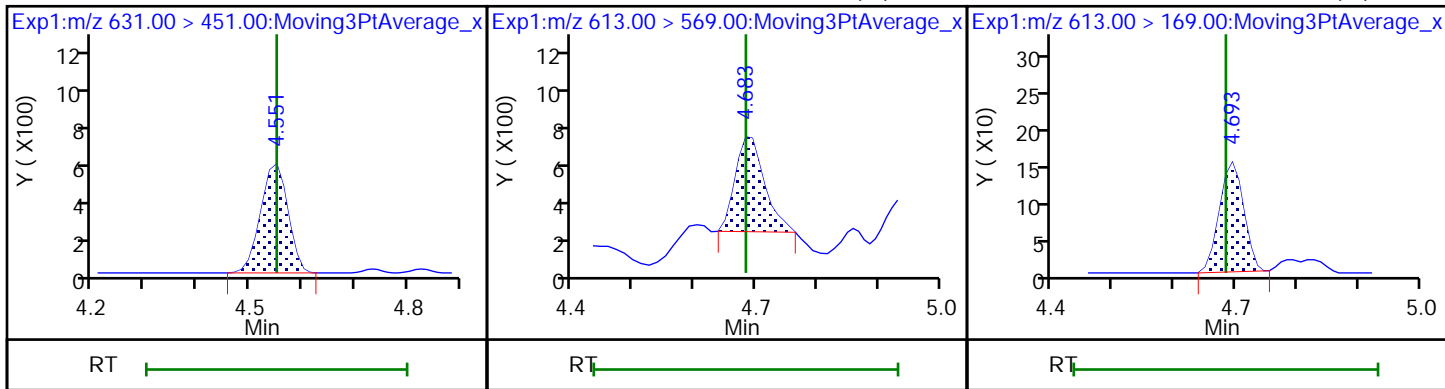
D 32 d5-NEtFOSAA



66 11-Chloroeicosafuoro-3-oxaundecan

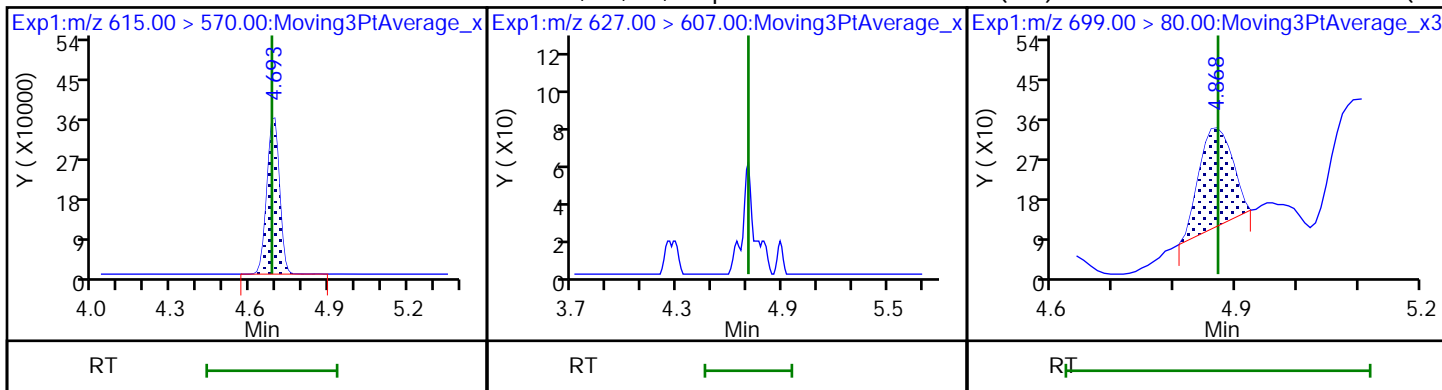
37 Perfluorododecanoic acid (M)

37 Perfluorododecanoic acid (M)



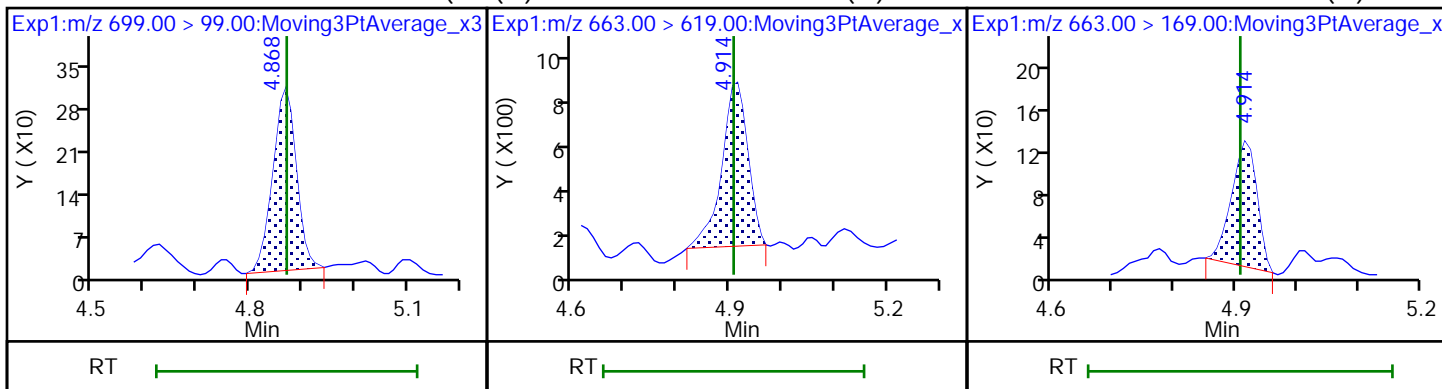
D 36 13C2 PFDaA

74 1H,1H,2H,2H-perfluorododecanesulfo(7S)D Perfluorododecanesulfonic acid (PF (M)



75 Perfluorododecanesulfonic acid (PF (M) Perfluorotridecanoic acid (M)

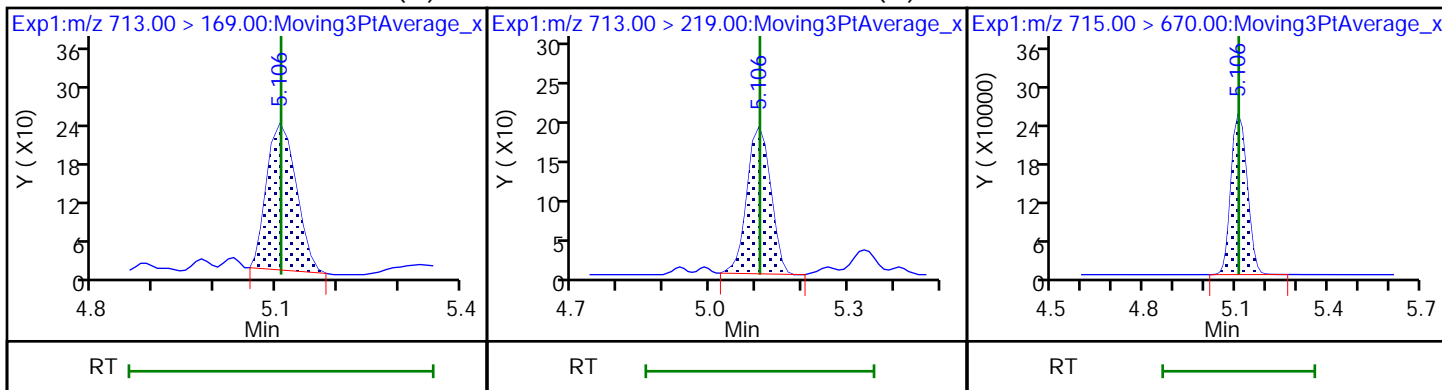
41 Perfluorotridecanoic acid (M)



42 Perfluorotetradecanoic acid (M)

42 Perfluorotetradecanoic acid (M)

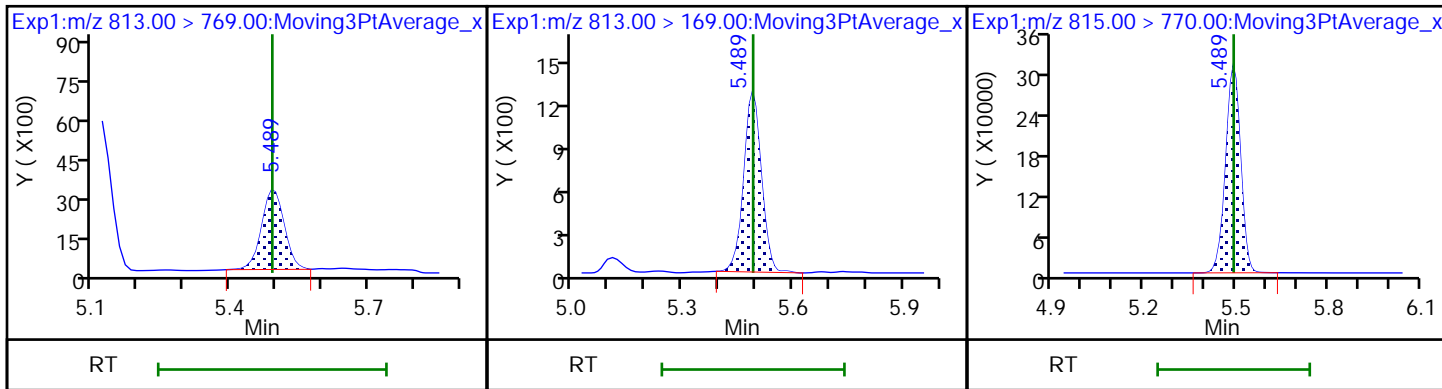
D 43 13C2 PFTeDA



45 Perfluorohexadecanoic acid

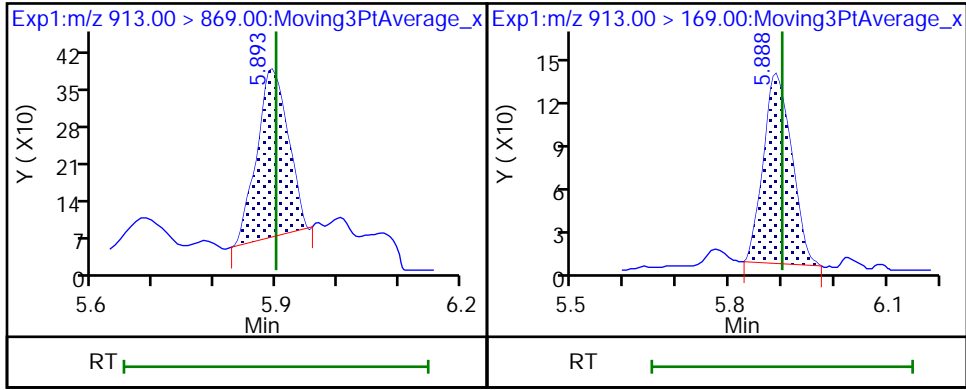
45 Perfluorohexadecanoic acid

D 44 13C2 PFHxDA



46 Perfluorooctadecanoic acid (M)

46 Perfluorooctadecanoic acid (M)



Eurofins TestAmerica, Burlington

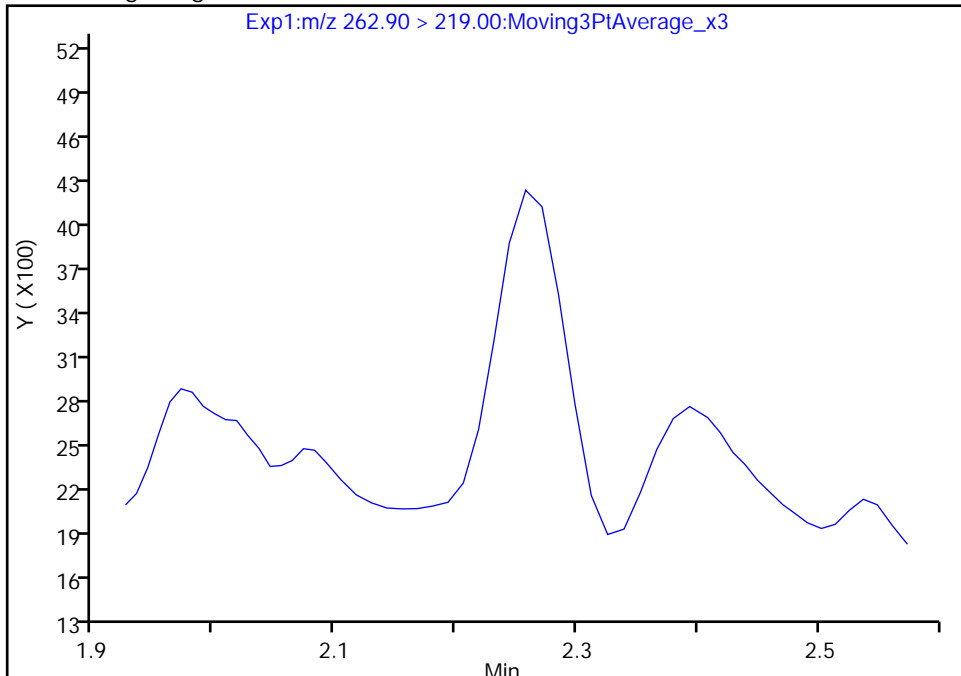
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
Injection Date: 24-Dec-2019 14:12:27 Instrument ID: LC812  
Lims ID: MB 200-150841/1-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

4 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

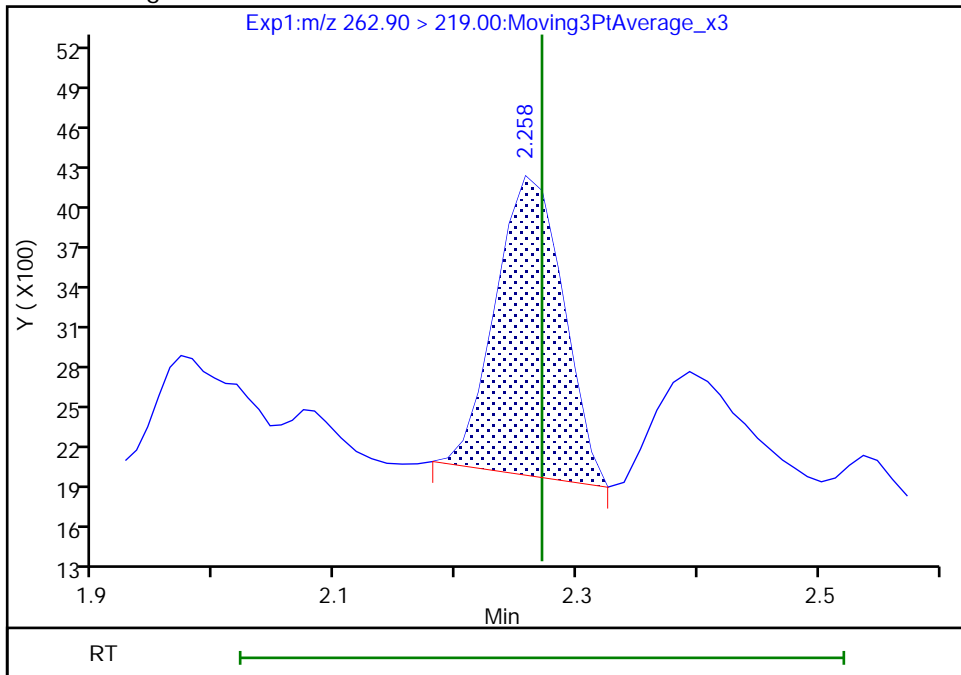
Not Detected  
Expected RT: 2.27

Processing Integration Results



Manual Integration Results

RT: 2.26  
Area: 8570  
Amount: 0.011565  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 09:00:36  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

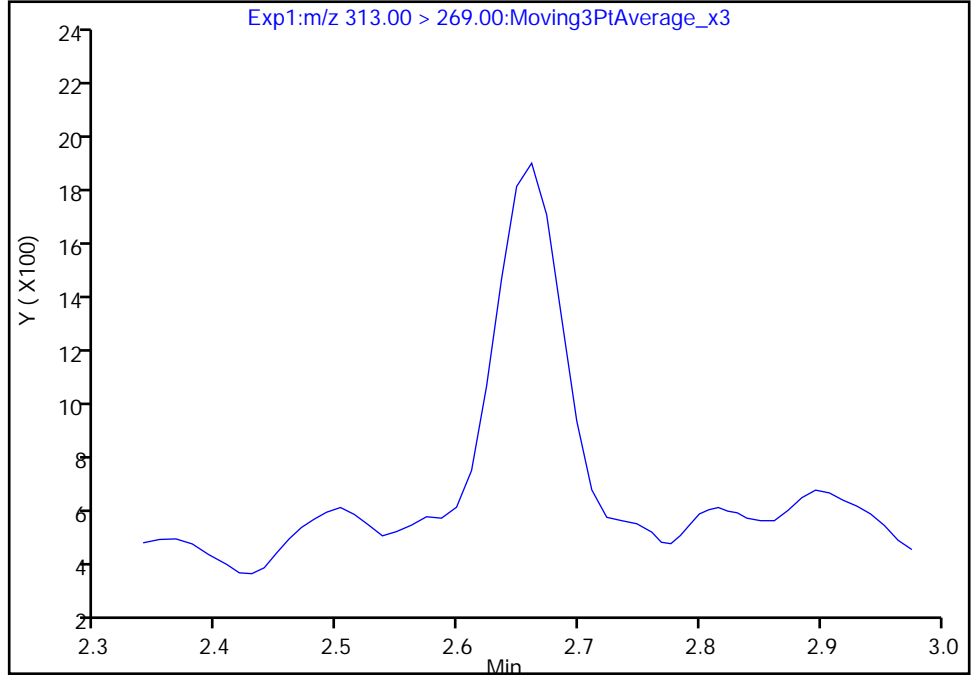
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
Injection Date: 24-Dec-2019 14:12:27 Instrument ID: LC812  
Lims ID: MB 200-150841/1-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

6 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

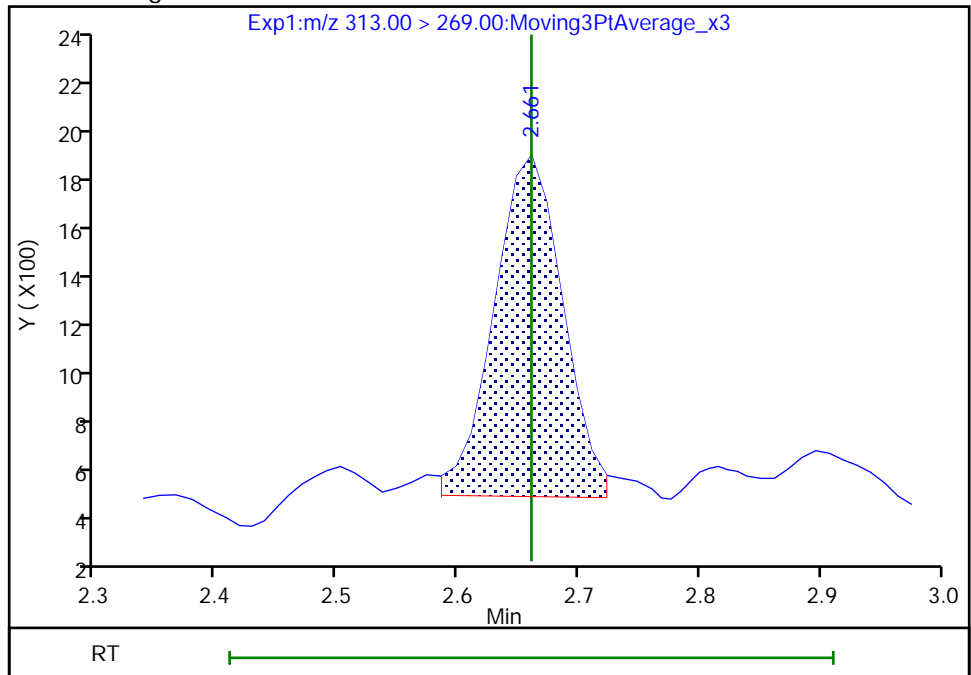
Not Detected  
Expected RT: 2.66

Processing Integration Results



Manual Integration Results

RT: 2.66  
Area: 5310  
Amount: 0.007452  
Amount Units: ng/ml



Reviewer: lautenschlagery, 27-Dec-2019 09:02:22

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

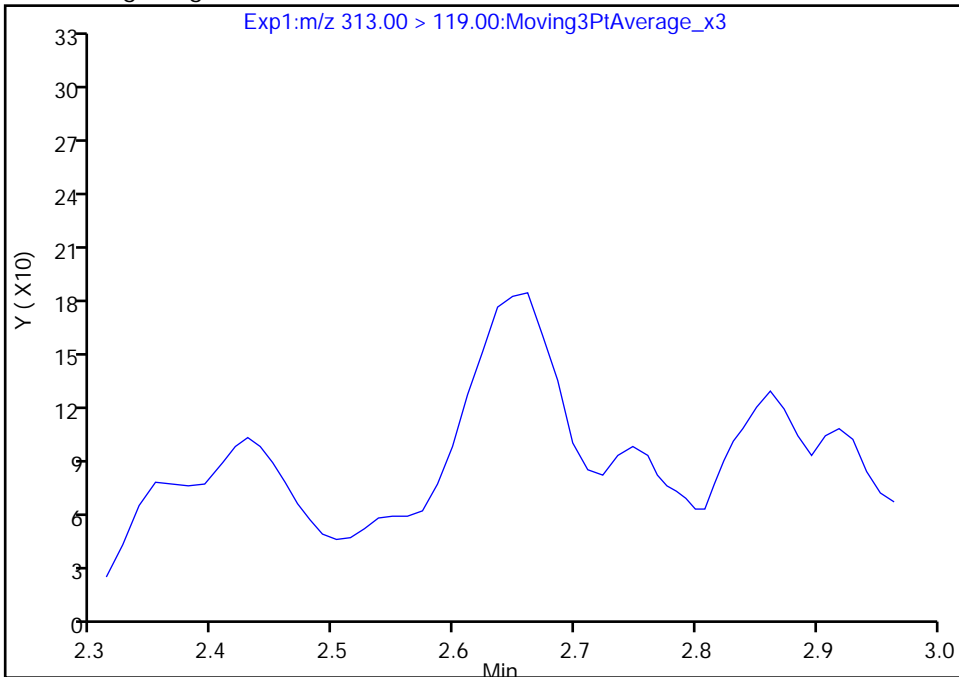
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
Injection Date: 24-Dec-2019 14:12:27 Instrument ID: LC812  
Lims ID: MB 200-150841/1-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

6 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 2

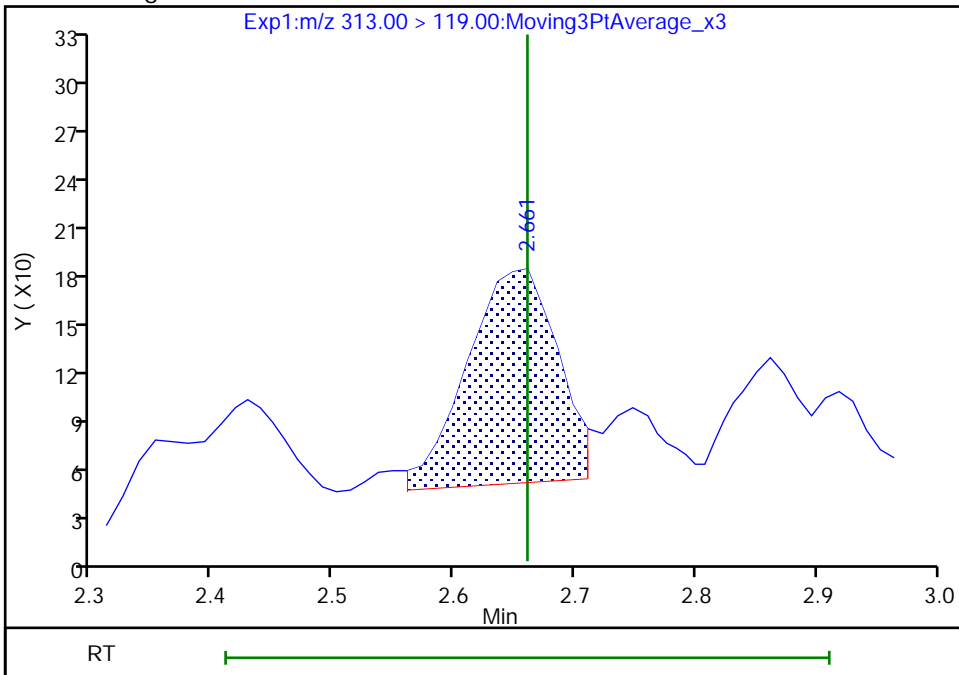
Not Detected  
Expected RT: 2.66

Processing Integration Results



Manual Integration Results

RT: 2.66  
Area: 685  
Amount: 0.007452  
Amount Units: ng/ml





Eurofins TestAmerica, Burlington

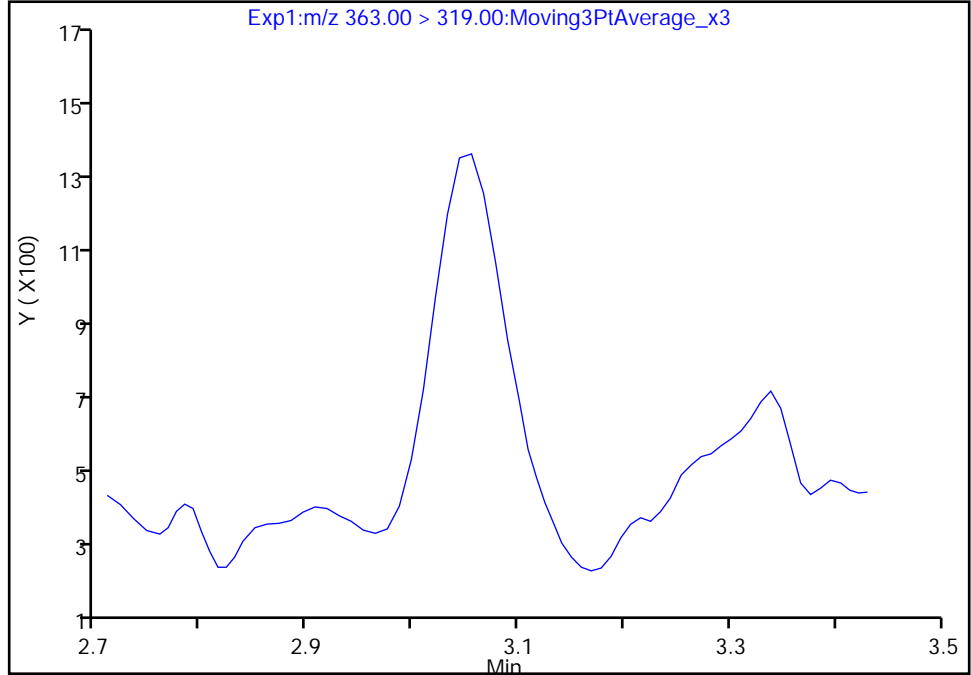
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
Injection Date: 24-Dec-2019 14:12:27 Instrument ID: LC812  
Lims ID: MB 200-150841/1-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

10 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

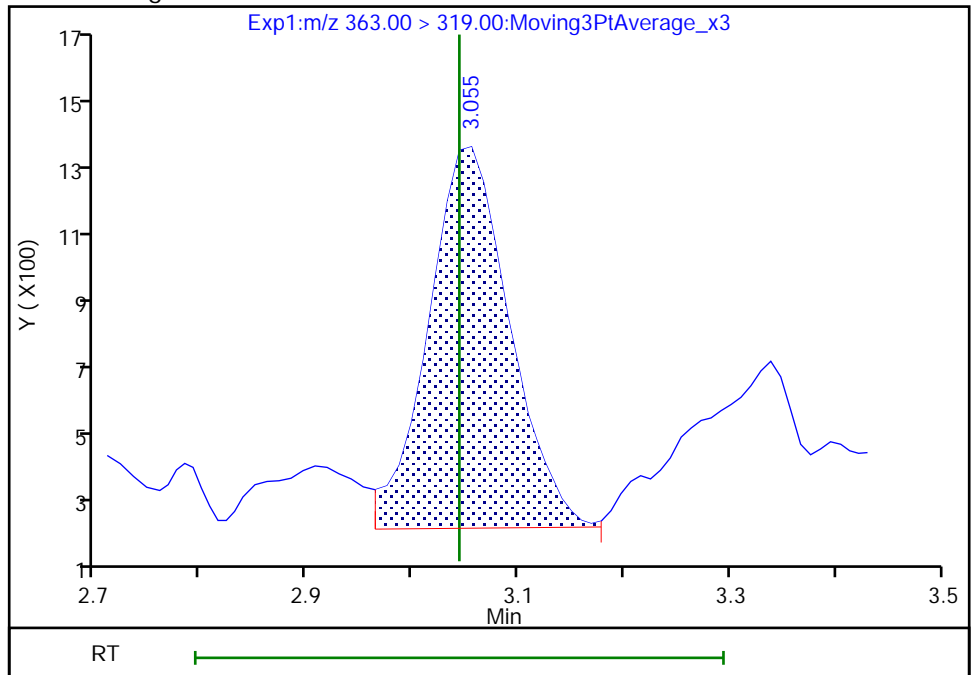
Not Detected  
Expected RT: 3.04

Processing Integration Results



Manual Integration Results

RT: 3.06  
Area: 5639  
Amount: 0.008406  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

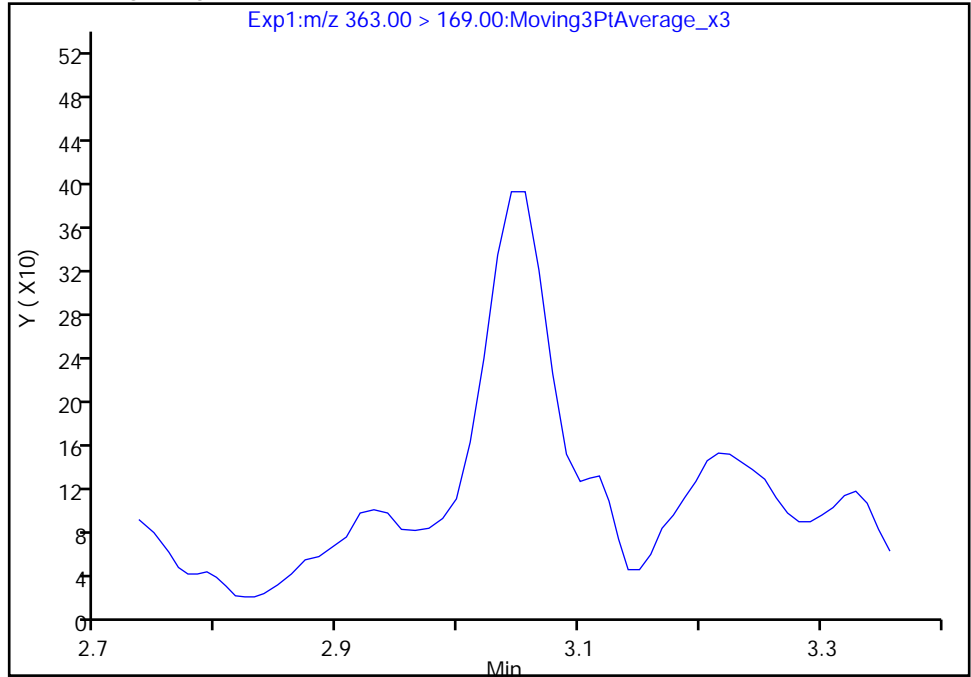
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
Injection Date: 24-Dec-2019 14:12:27 Instrument ID: LC812  
Lims ID: MB 200-150841/1-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

10 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 2

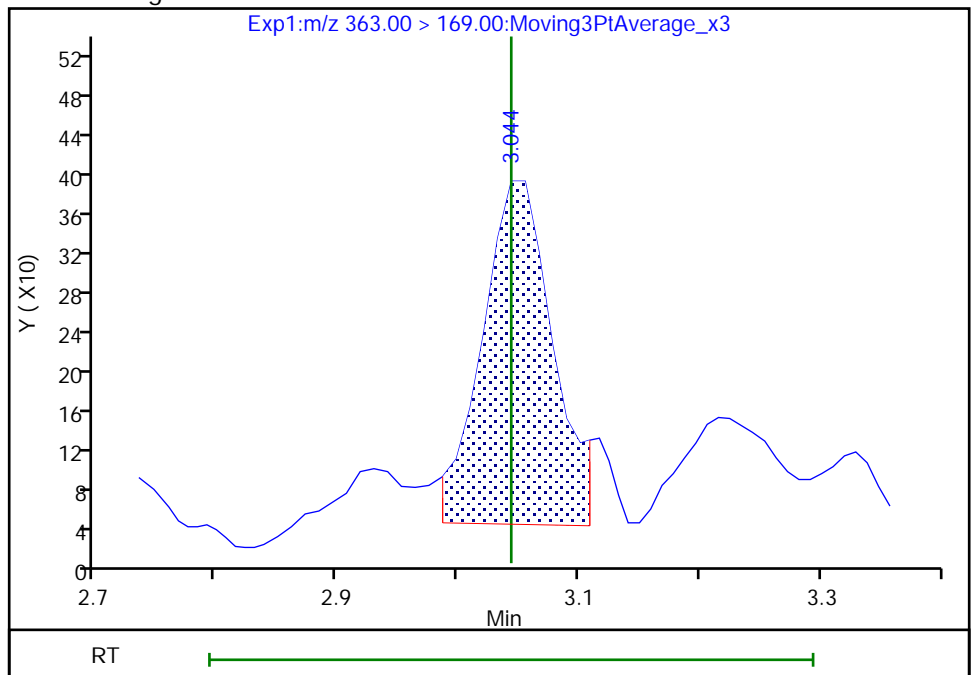
Not Detected  
Expected RT: 3.04

Processing Integration Results



Manual Integration Results

RT: 3.04  
Area: 1406  
Amount: 0.008406  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

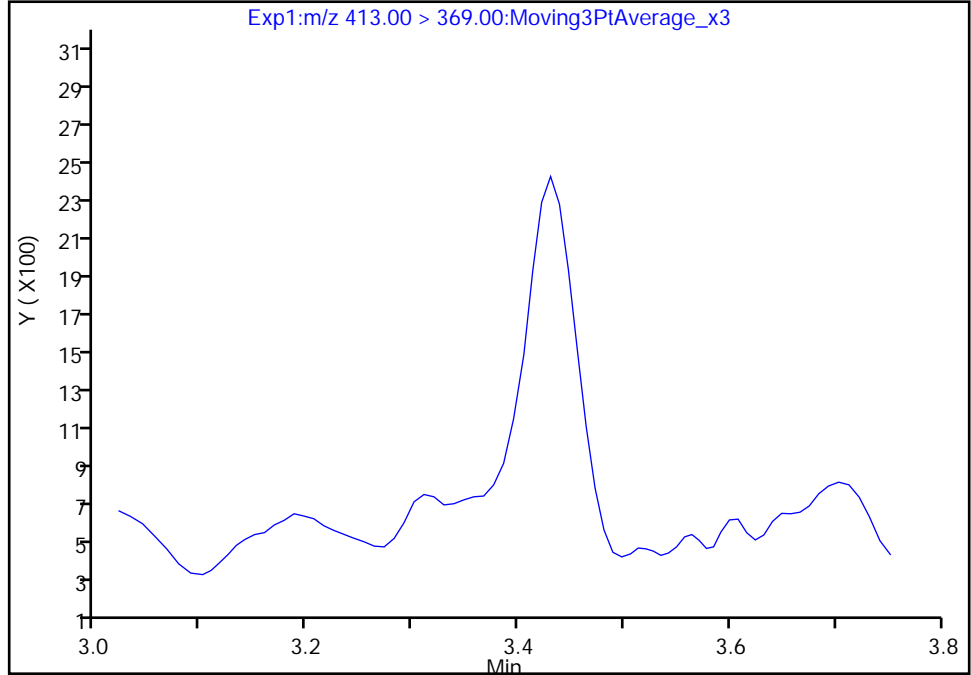
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
Injection Date: 24-Dec-2019 14:12:27 Instrument ID: LC812  
Lims ID: MB 200-150841/1-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

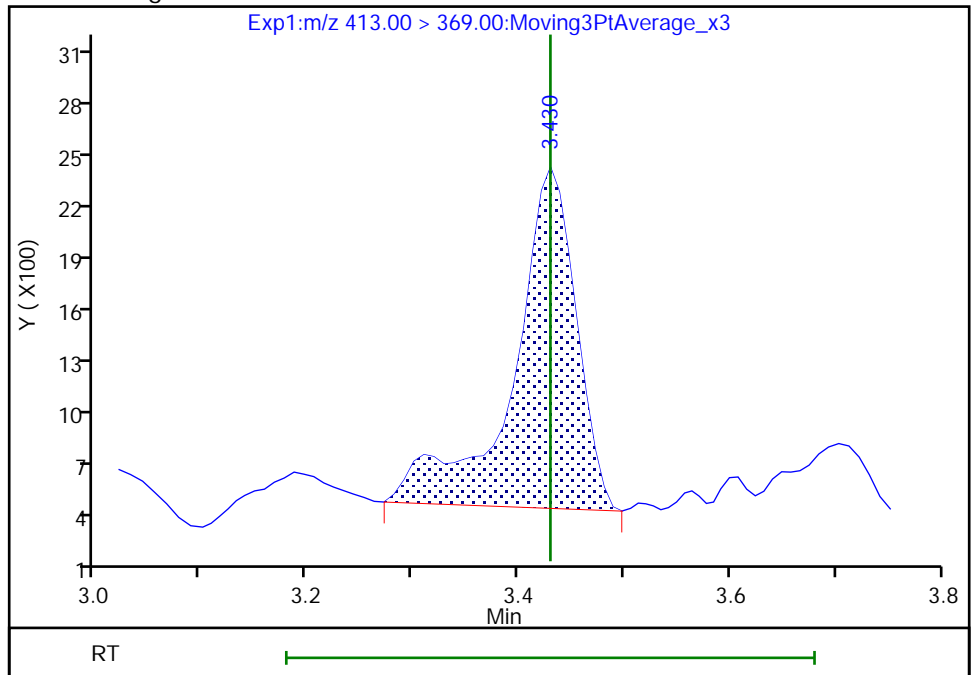
Not Detected  
Expected RT: 3.43

Processing Integration Results



Manual Integration Results

RT: 3.43  
Area: 8151  
Amount: 0.010229  
Amount Units: ng/ml



Reviewer: lautenschlagery, 27-Dec-2019 09:06:08

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

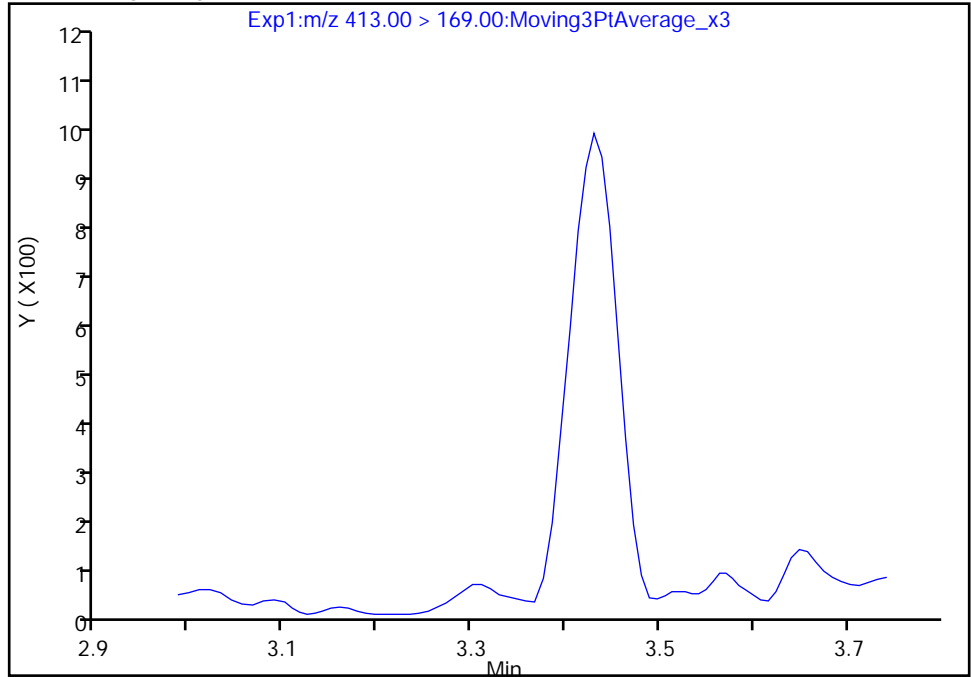
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
Injection Date: 24-Dec-2019 14:12:27 Instrument ID: LC812  
Lims ID: MB 200-150841/1-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

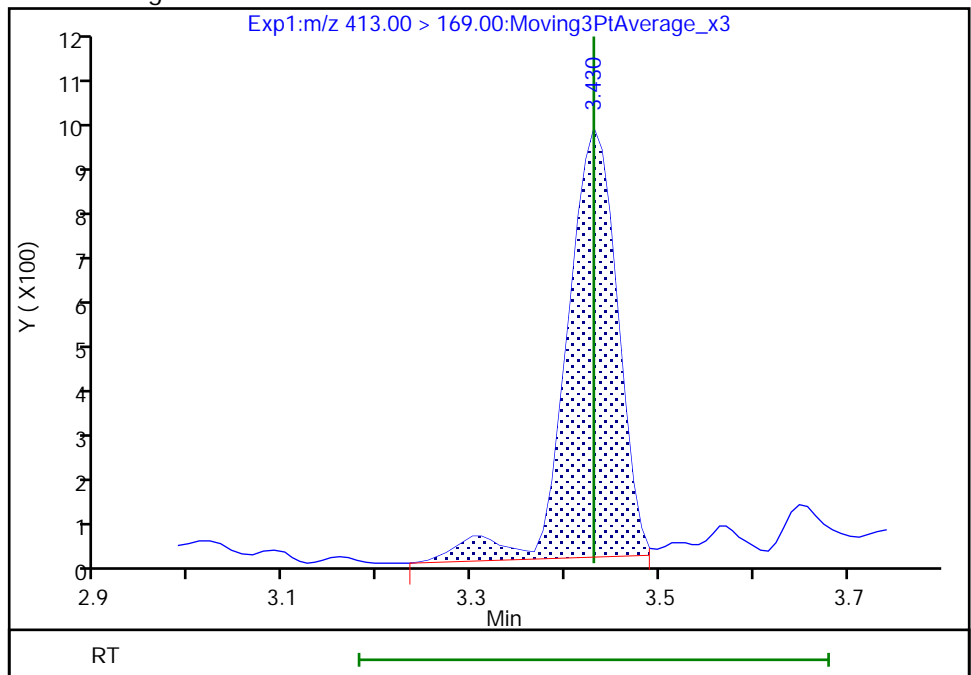
Not Detected  
Expected RT: 3.43

Processing Integration Results



Manual Integration Results

RT: 3.43  
Area: 3477  
Amount: 0.010229  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

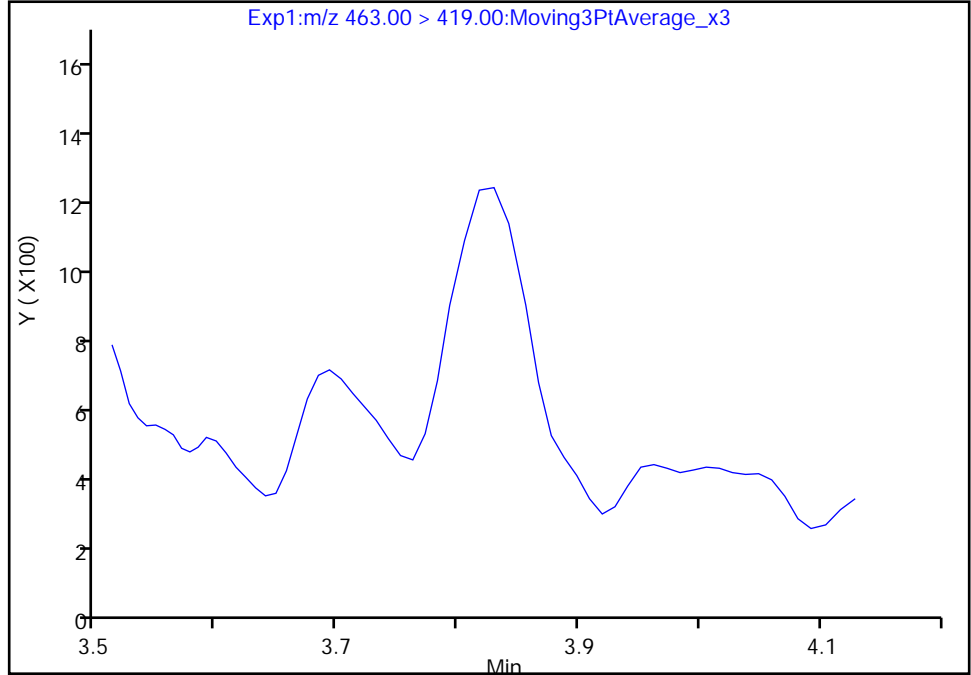
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
Injection Date: 24-Dec-2019 14:12:27 Instrument ID: LC812  
Lims ID: MB 200-150841/1-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

20 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

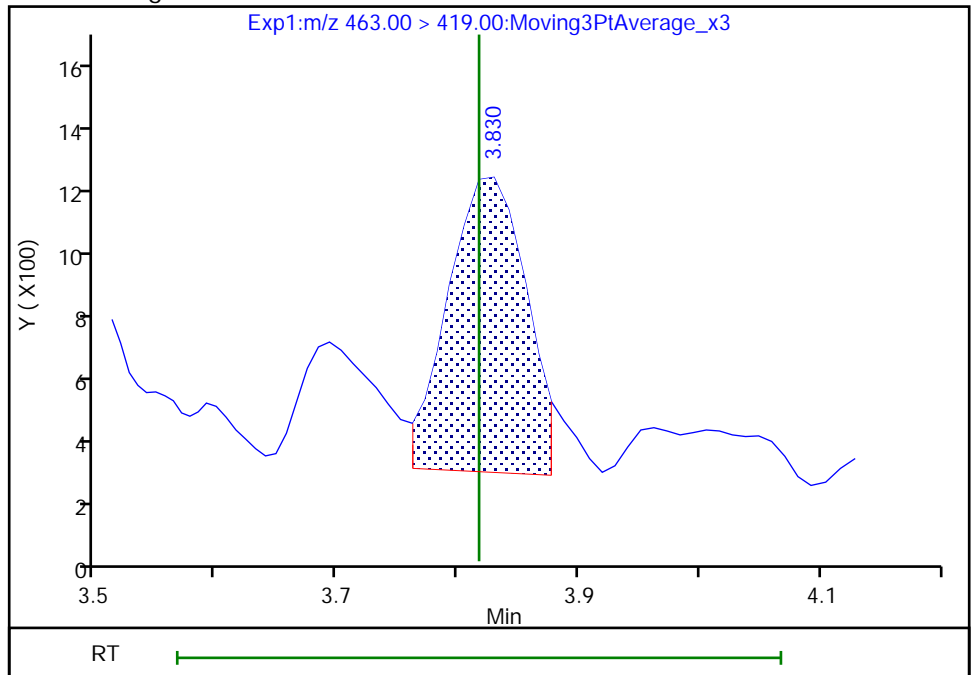
Not Detected  
Expected RT: 3.82

Processing Integration Results



Manual Integration Results

RT: 3.83  
Area: 4002  
Amount: 0.006110  
Amount Units: ng/ml



Reviewer: lautenschlagery, 27-Dec-2019 09:11:48

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

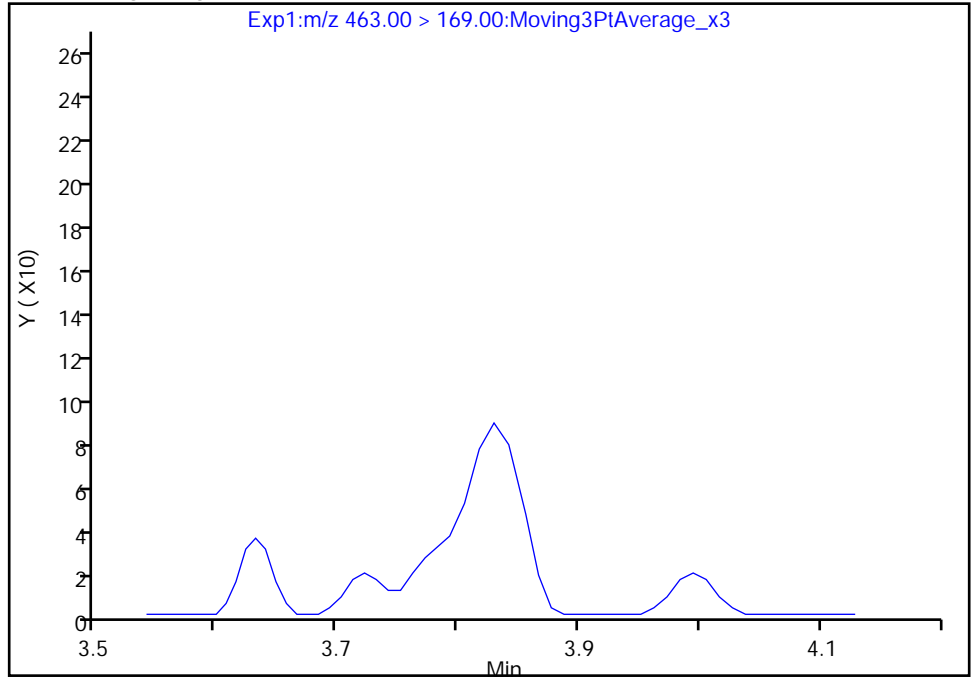
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
Injection Date: 24-Dec-2019 14:12:27 Instrument ID: LC812  
Lims ID: MB 200-150841/1-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

20 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

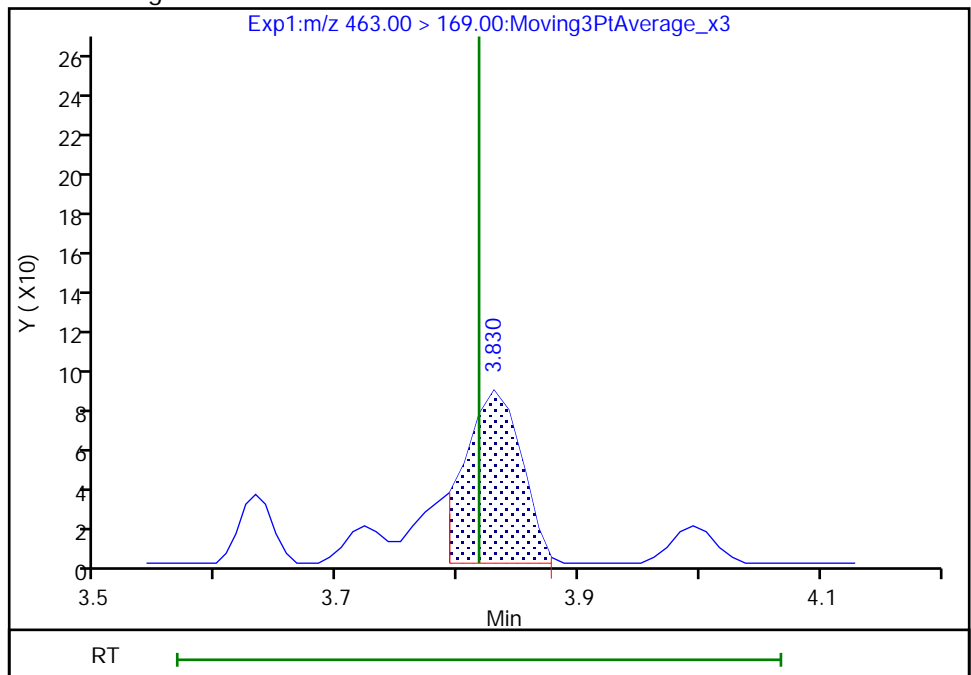
Not Detected  
Expected RT: 3.82

Processing Integration Results



Manual Integration Results

RT: 3.83  
Area: 277  
Amount: 0.006110  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 09:12:00

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

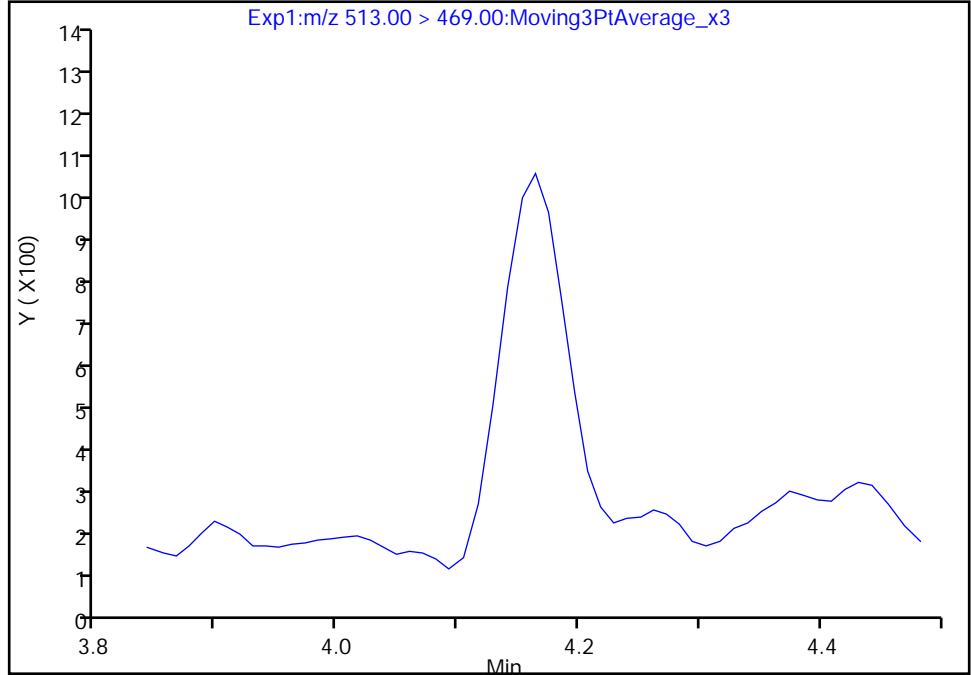
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
Injection Date: 24-Dec-2019 14:12:27 Instrument ID: LC812  
Lims ID: MB 200-150841/1-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

24 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 1

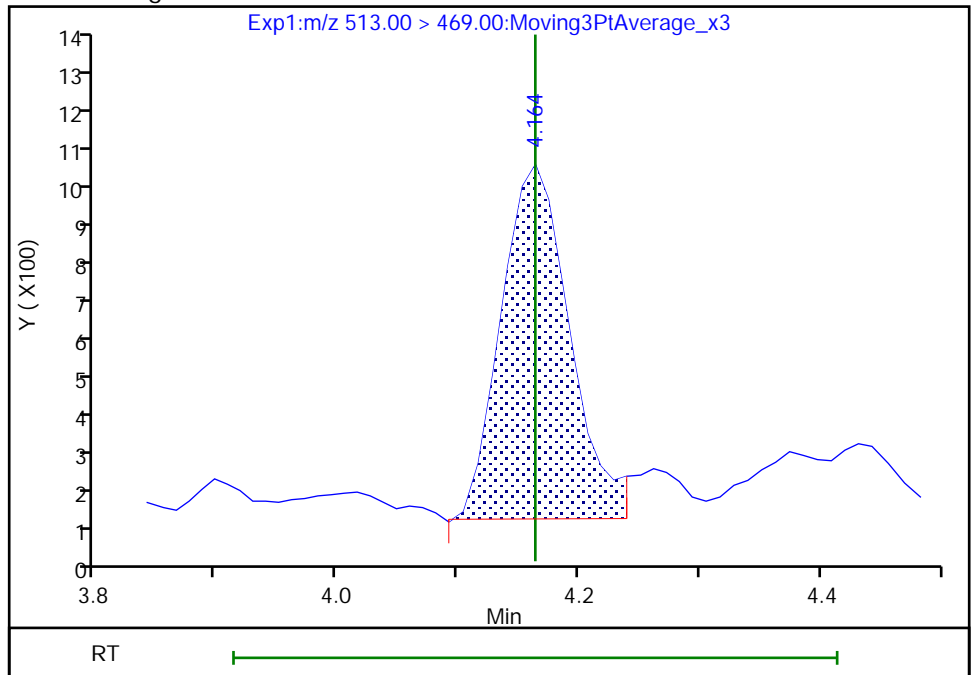
Not Detected  
Expected RT: 4.16

Processing Integration Results



Manual Integration Results

RT: 4.16  
Area: 3674  
Amount: 0.006542  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 09:14:27

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

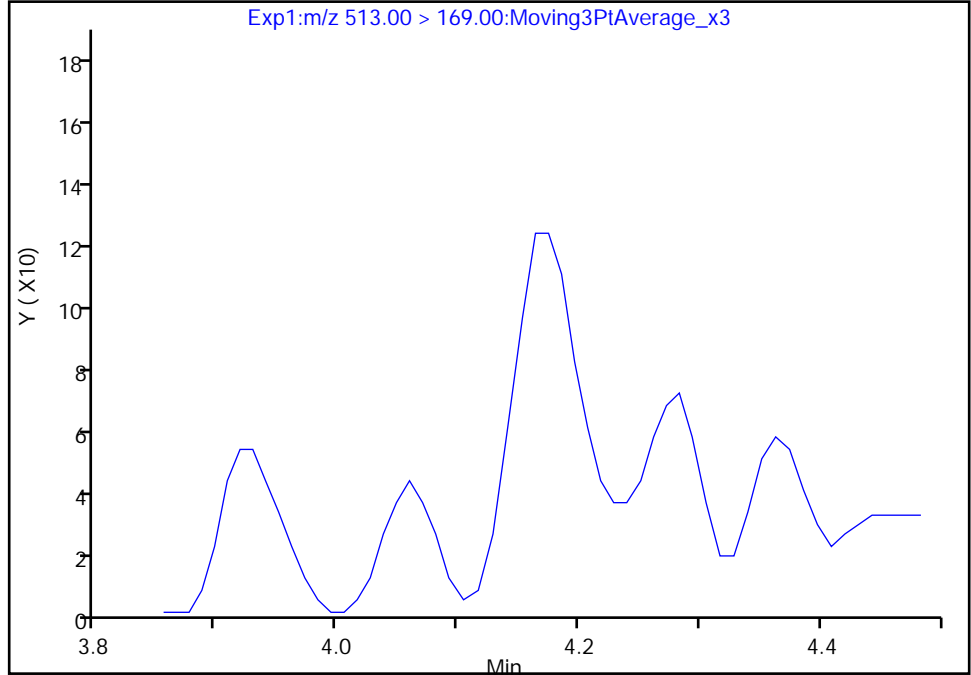
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
Injection Date: 24-Dec-2019 14:12:27 Instrument ID: LC812  
Lims ID: MB 200-150841/1-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

24 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 2

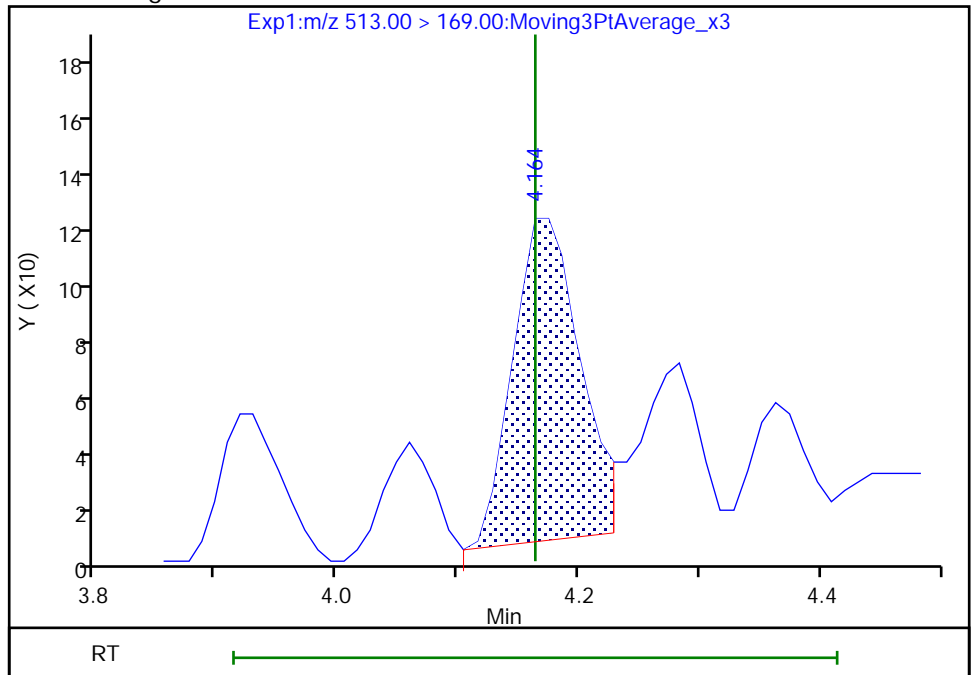
Not Detected  
Expected RT: 4.16

Processing Integration Results



Manual Integration Results

RT: 4.16  
Area: 436  
Amount: 0.006542  
Amount Units: ng/ml





Eurofins TestAmerica, Burlington

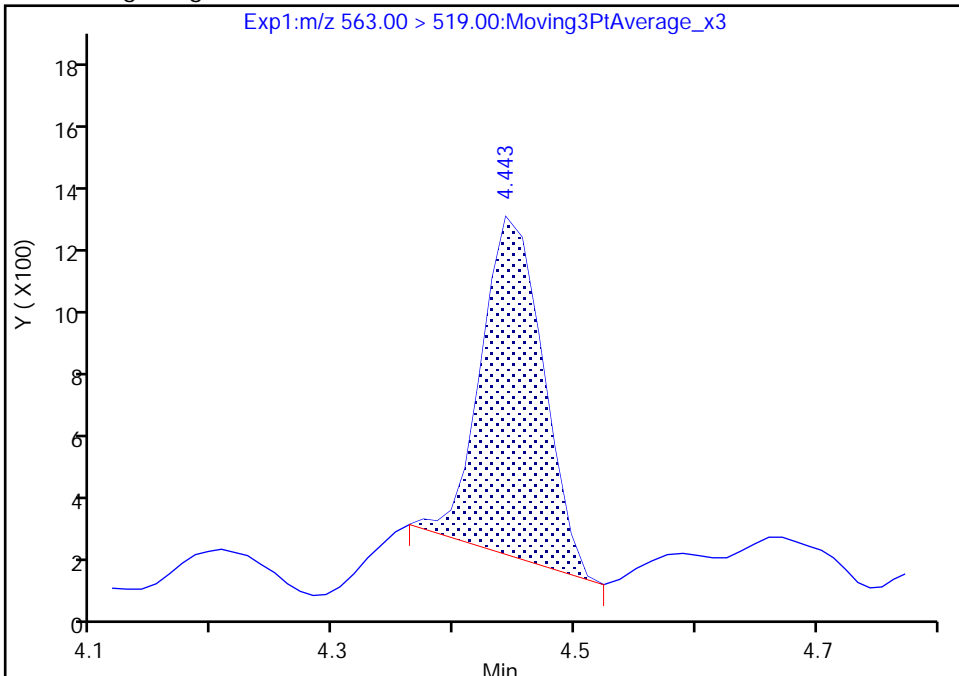
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
Injection Date: 24-Dec-2019 14:12:27 Instrument ID: LC812  
Lims ID: MB 200-150841/1-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 1

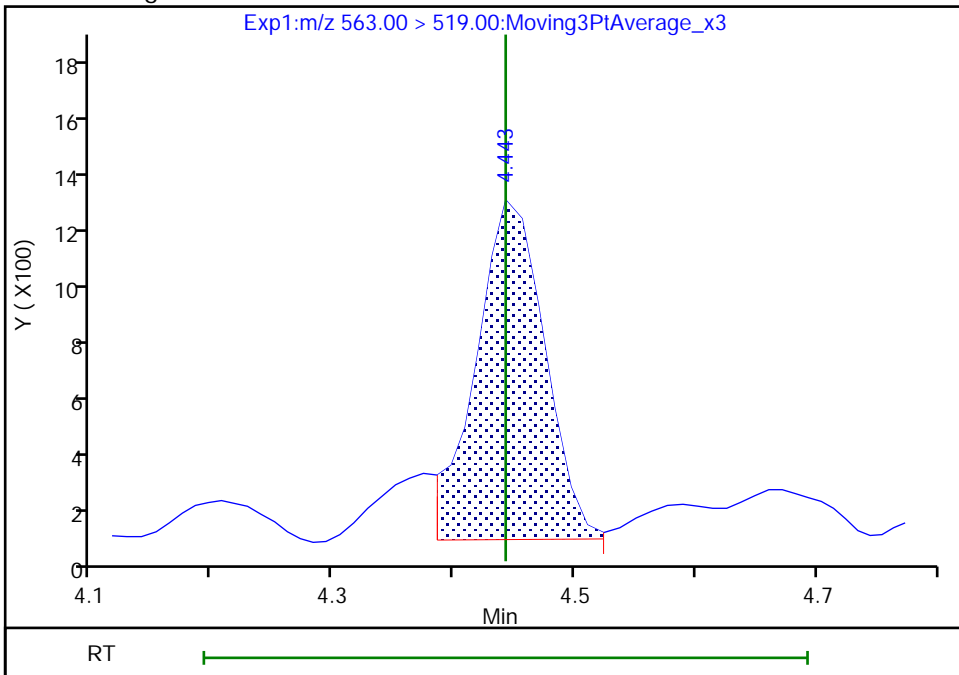
RT: 4.44  
Area: 3830  
Amount: 0.009623  
Amount Units: ng/ml

Processing Integration Results



RT: 4.44  
Area: 4666  
Amount: 0.011724  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagern, 27-Dec-2019 09:17:25

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

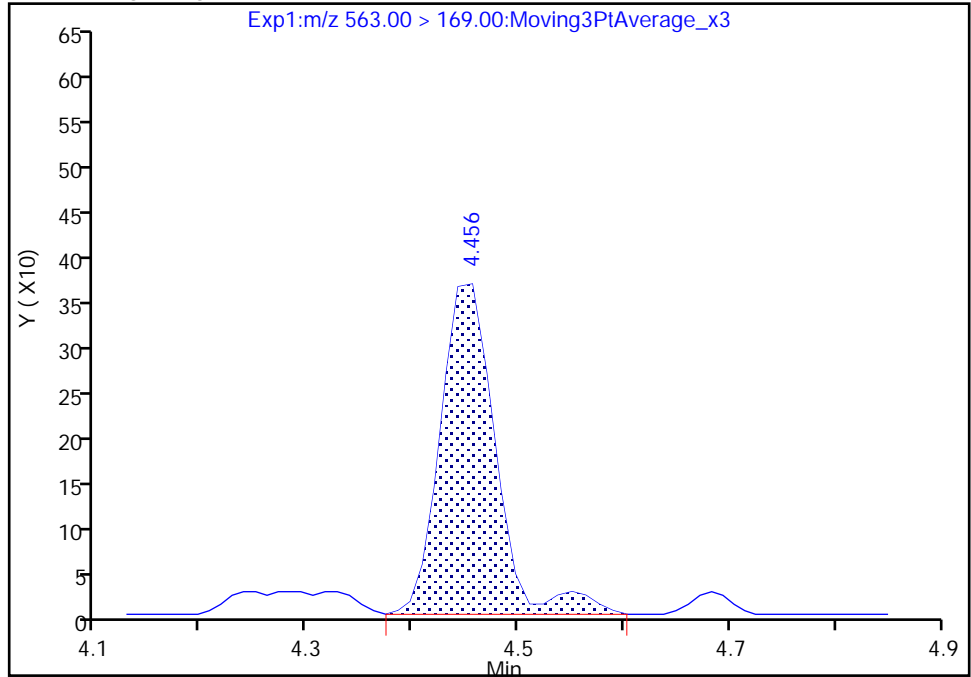
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
Injection Date: 24-Dec-2019 14:12:27 Instrument ID: LC812  
Lims ID: MB 200-150841/1-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 2

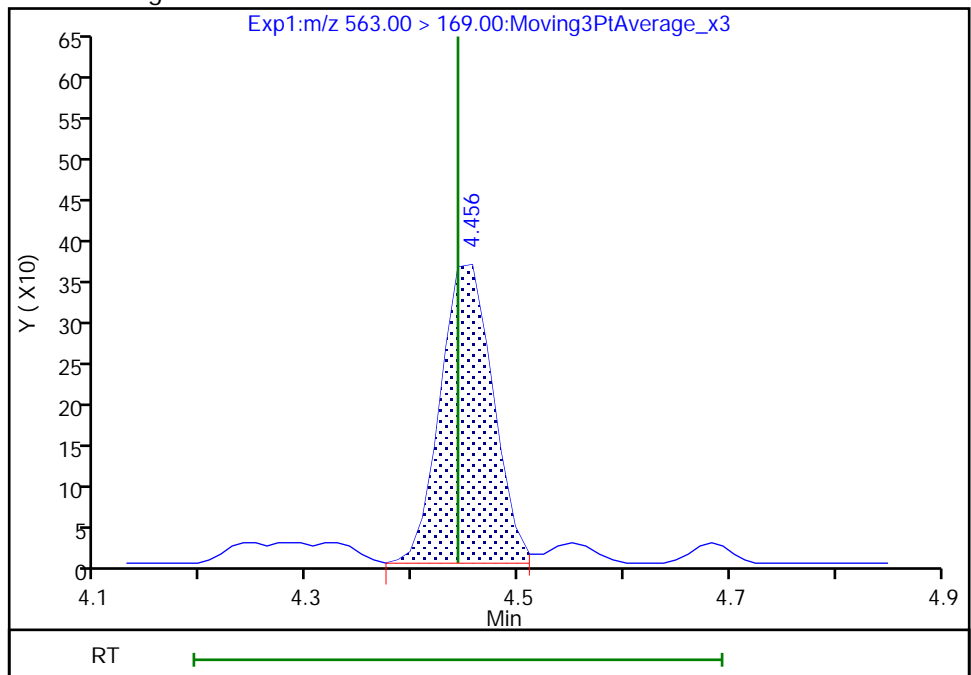
RT: 4.46  
Area: 1333  
Amount: 0.009623  
Amount Units: ng/ml

Processing Integration Results



RT: 4.46  
Area: 1255  
Amount: 0.011724  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 09:17:31

Audit Action: Manually Integrated

Audit Reason: Split Peak

Euofins TestAmerica, Burlington

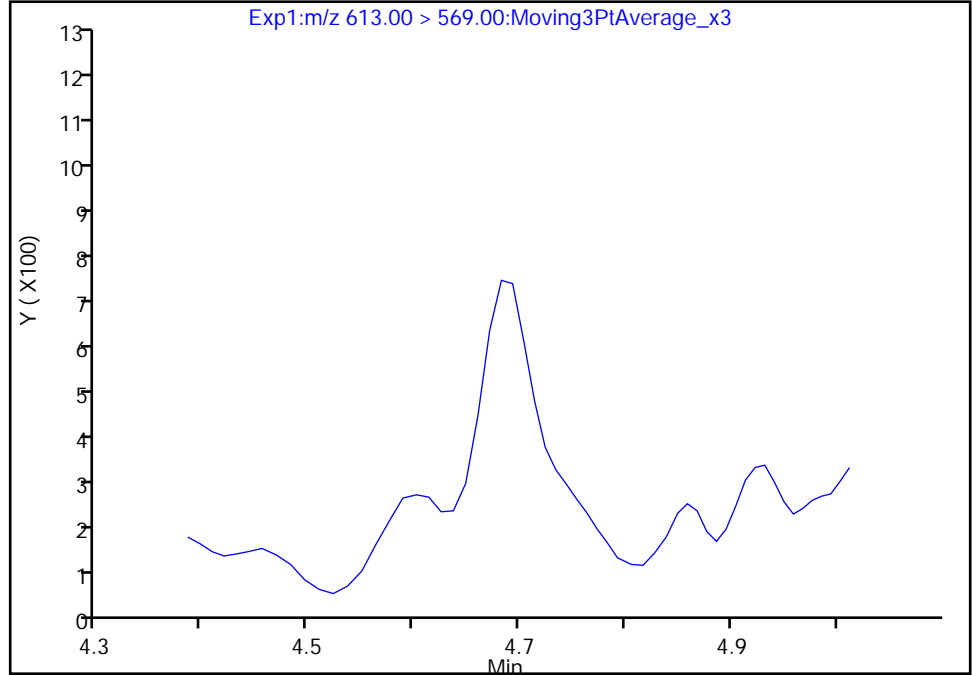
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
Injection Date: 24-Dec-2019 14:12:27 Instrument ID: LC812  
Lims ID: MB 200-150841/1-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

37 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 1

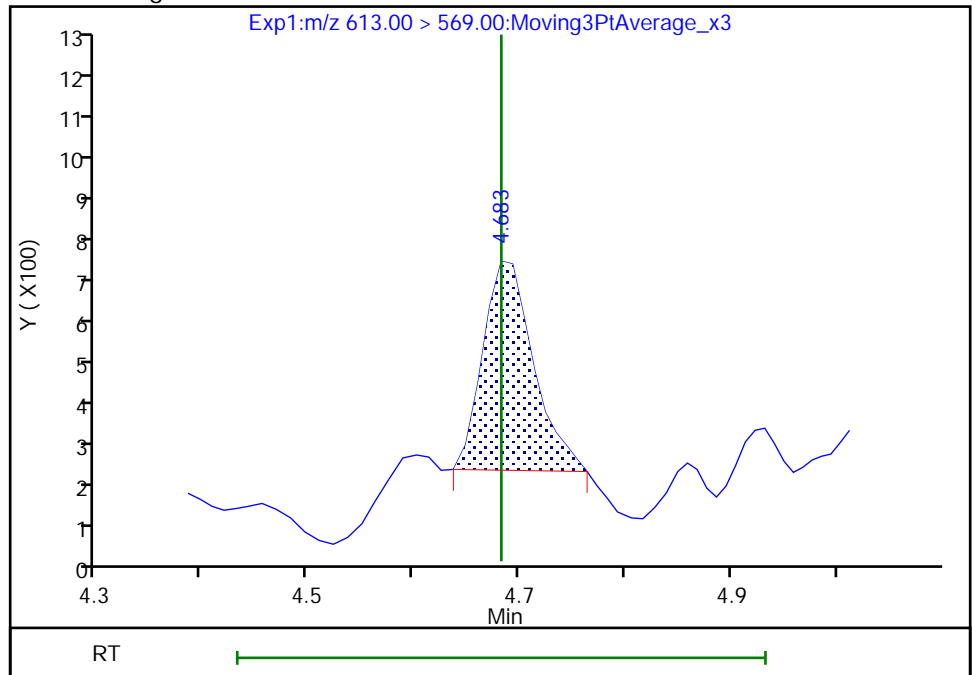
Not Detected  
Expected RT: 4.68

Processing Integration Results



RT: 4.68  
Area: 1627  
Amount: 0.003743  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 09:18:46

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

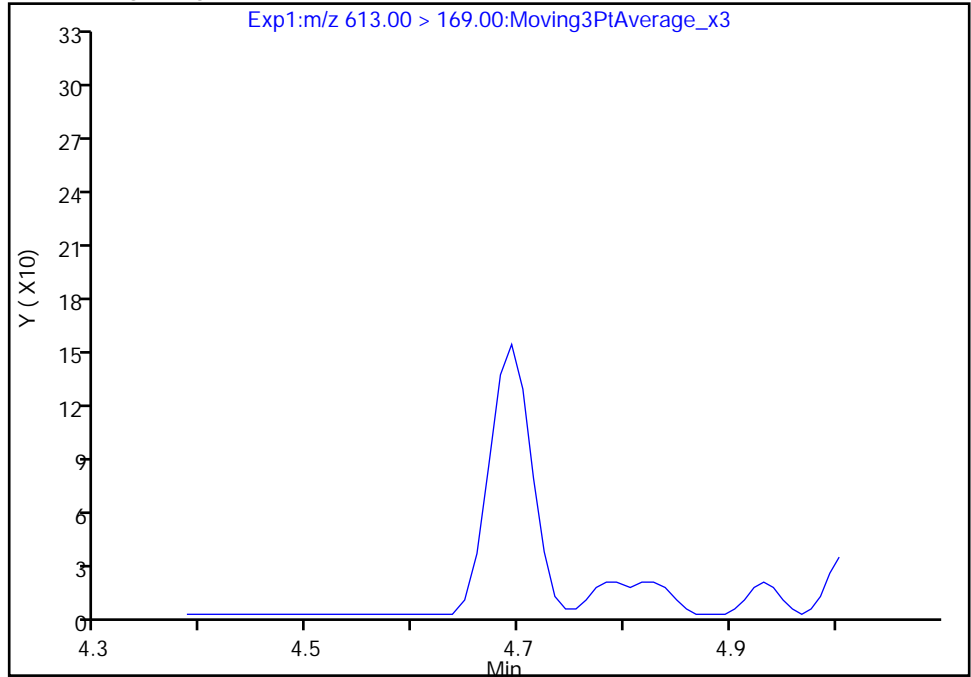
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
Injection Date: 24-Dec-2019 14:12:27 Instrument ID: LC812  
Lims ID: MB 200-150841/1-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

37 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 2

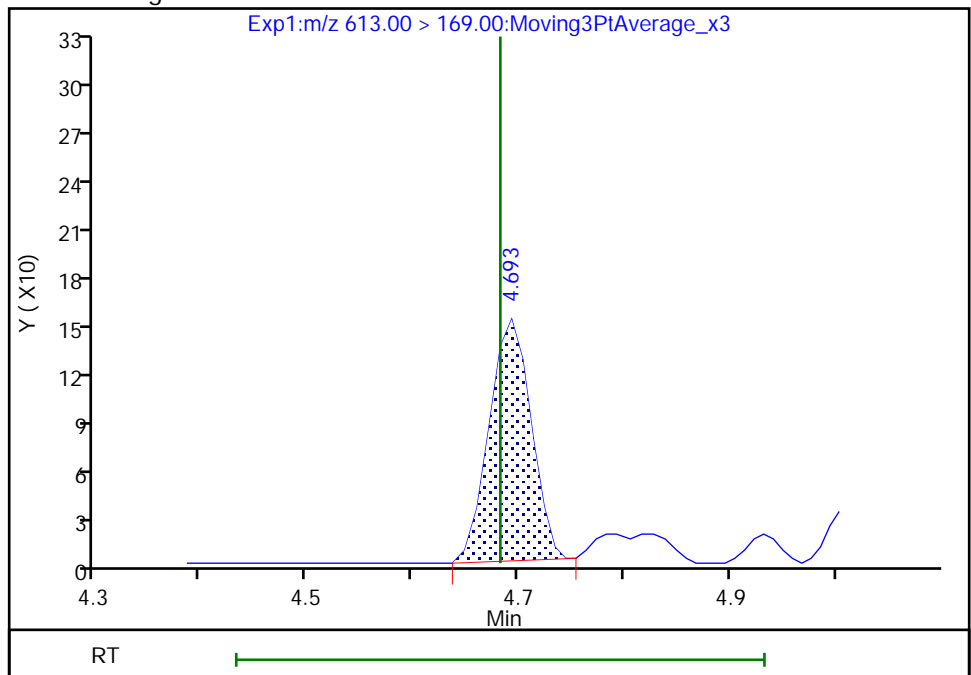
Not Detected  
Expected RT: 4.68

Processing Integration Results



Manual Integration Results

RT: 4.69  
Area: 411  
Amount: 0.003743  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 09:18:53

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

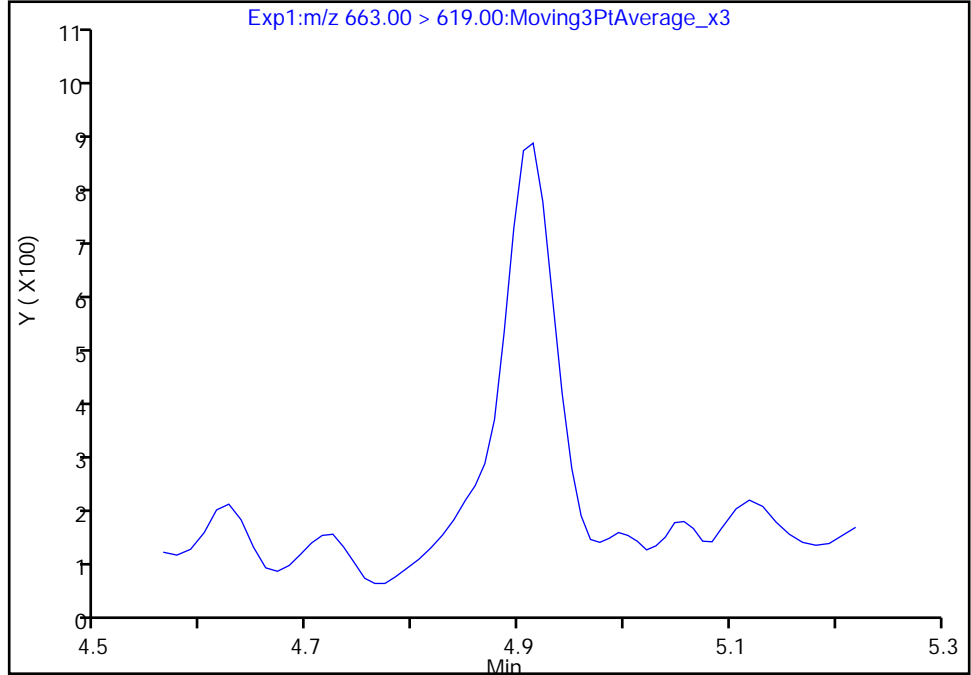
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
Injection Date: 24-Dec-2019 14:12:27 Instrument ID: LC812  
Lims ID: MB 200-150841/1-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

41 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 1

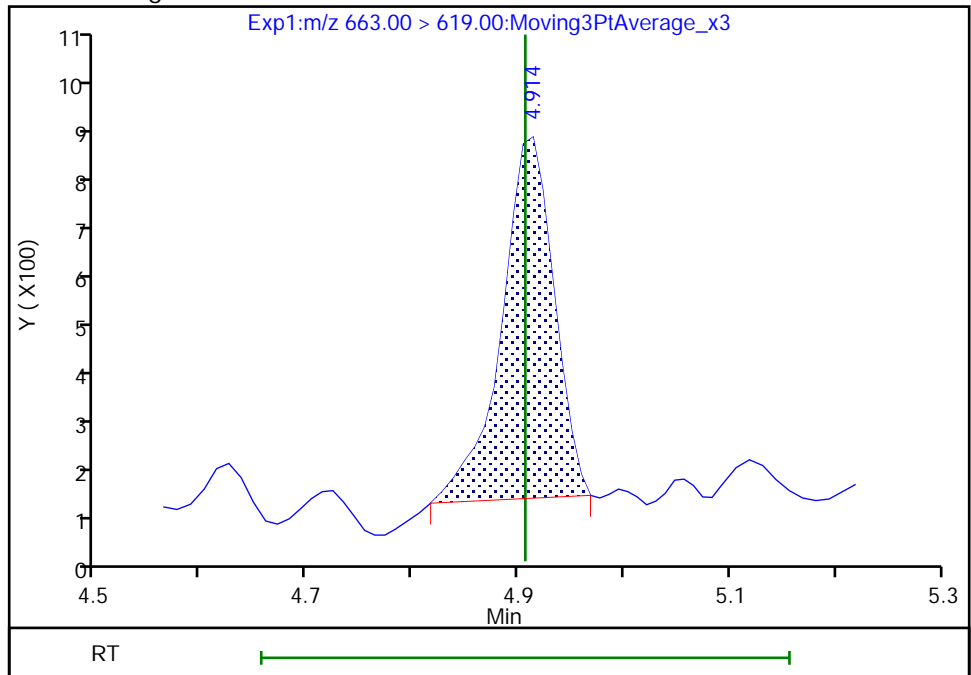
Not Detected  
Expected RT: 4.91

Processing Integration Results



Manual Integration Results

RT: 4.91  
Area: 2381  
Amount: 0.005766  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 09:19:14

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

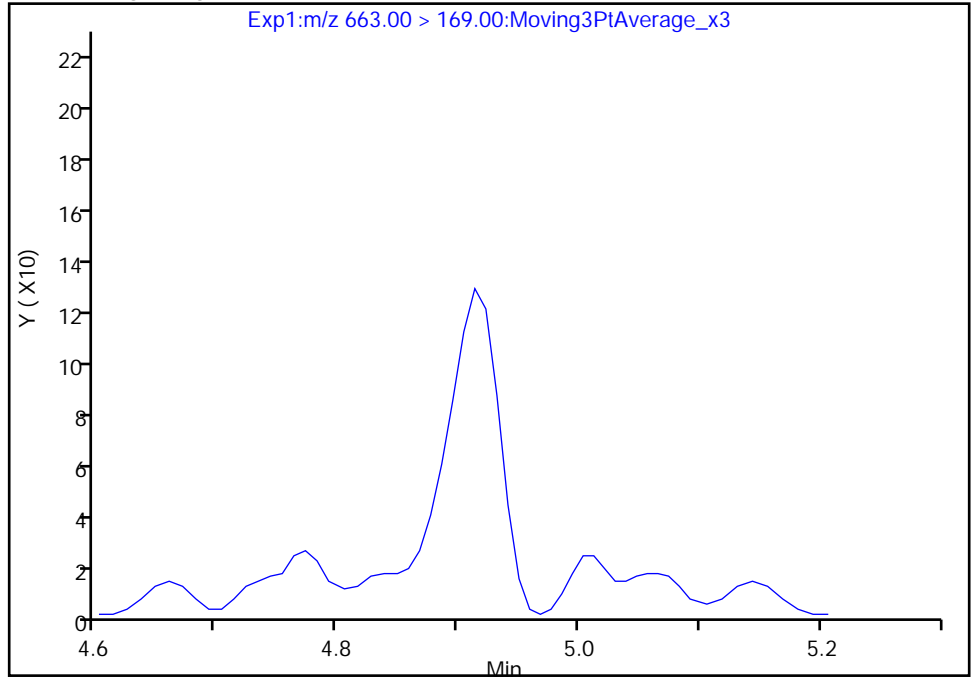
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
Injection Date: 24-Dec-2019 14:12:27 Instrument ID: LC812  
Lims ID: MB 200-150841/1-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

41 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 2

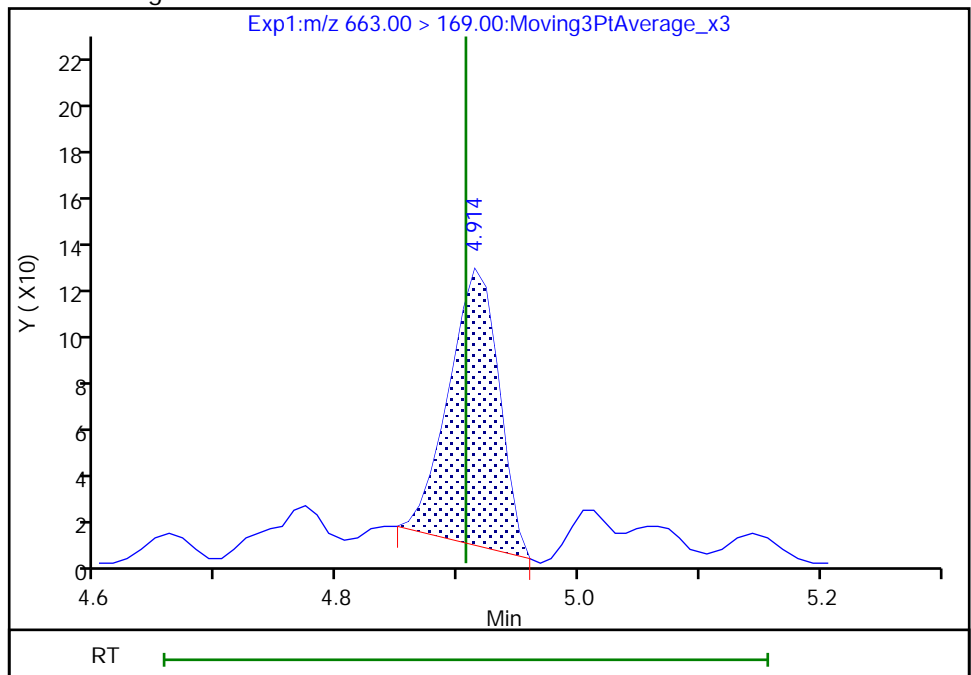
Not Detected  
Expected RT: 4.91

Processing Integration Results



Manual Integration Results

RT: 4.91  
Area: 344  
Amount: 0.005766  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 09:19:21

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

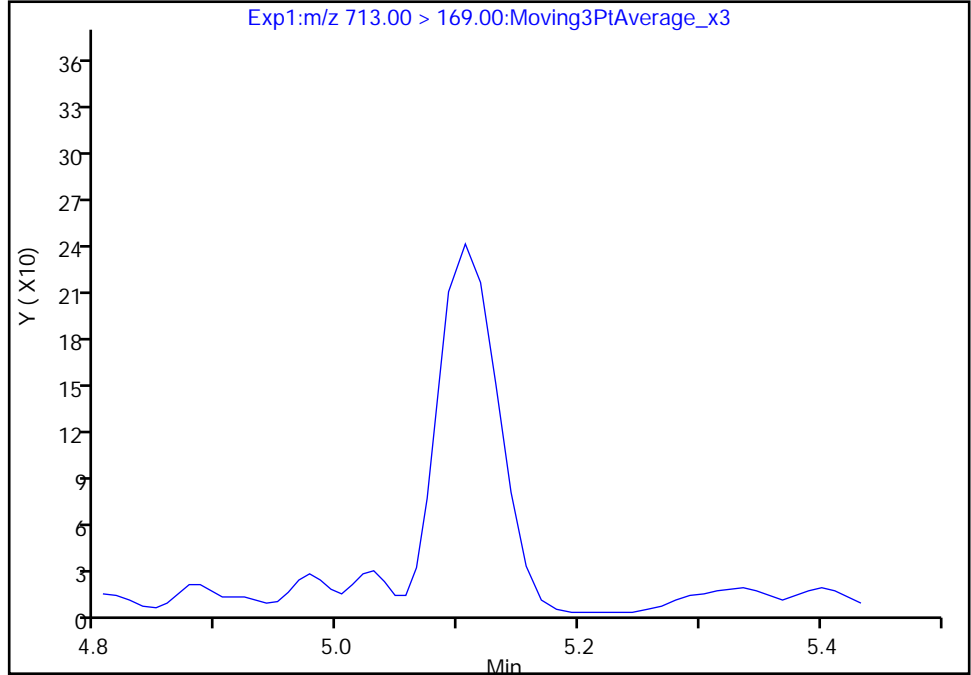
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
Injection Date: 24-Dec-2019 14:12:27 Instrument ID: LC812  
Lims ID: MB 200-150841/1-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 1

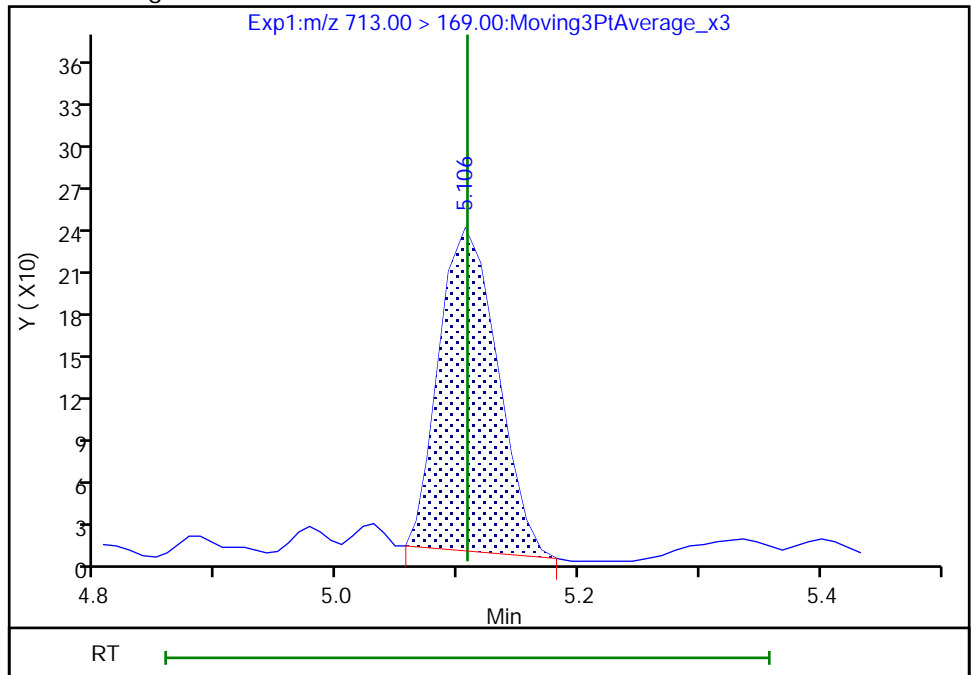
Not Detected  
Expected RT: 5.11

Processing Integration Results



Manual Integration Results

RT: 5.11  
Area: 778  
Amount: 0.010441  
Amount Units: ng/ml



Reviewer: lautenschlagery, 27-Dec-2019 09:19:38

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

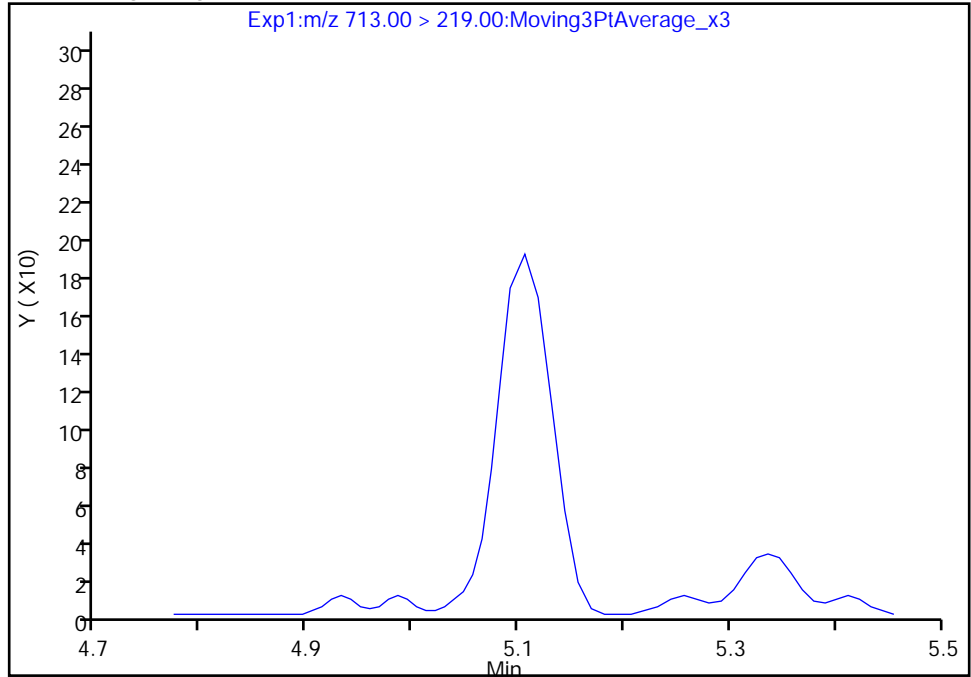
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
Injection Date: 24-Dec-2019 14:12:27 Instrument ID: LC812  
Lims ID: MB 200-150841/1-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 2

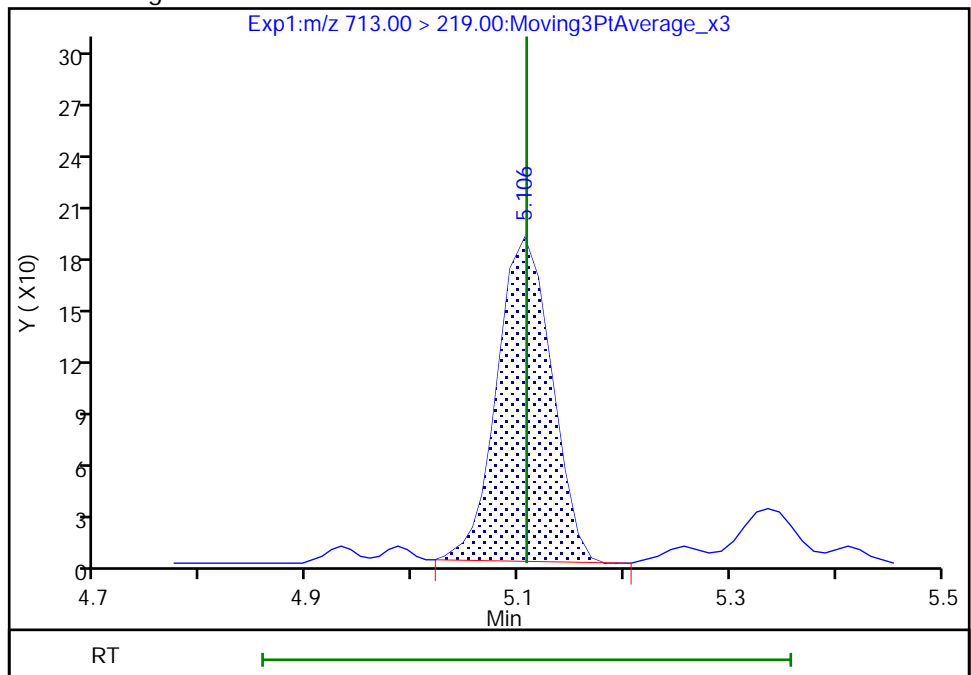
Not Detected  
Expected RT: 5.11

Processing Integration Results



Manual Integration Results

RT: 5.11  
Area: 681  
Amount: 0.010441  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 09:19:42

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Eurofins TestAmerica, Burlington

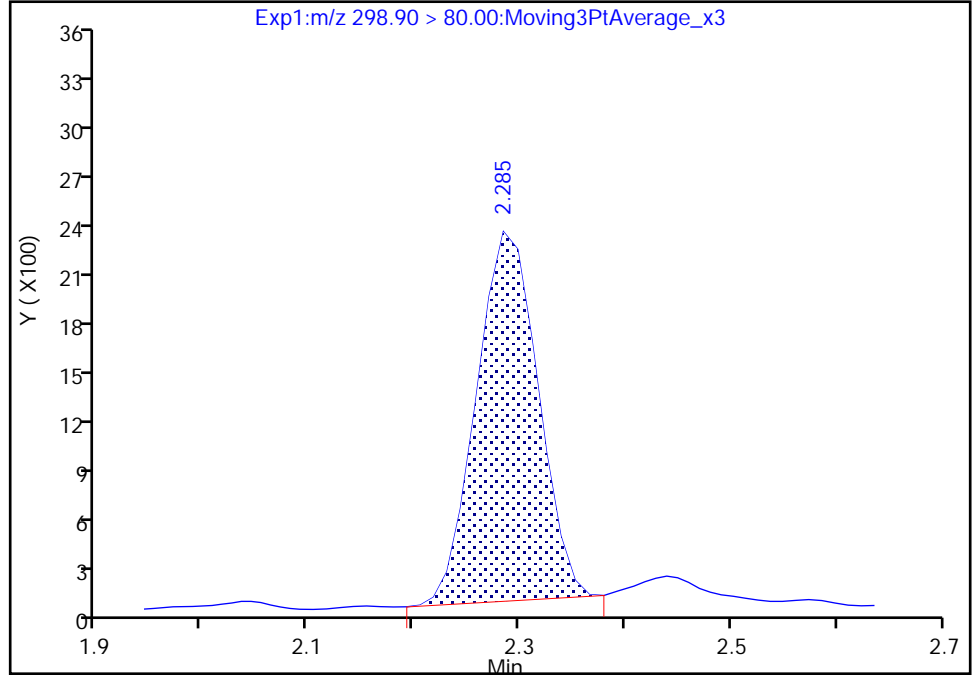
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
Injection Date: 24-Dec-2019 14:12:27 Instrument ID: LC812  
Lims ID: MB 200-150841/1-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

5 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

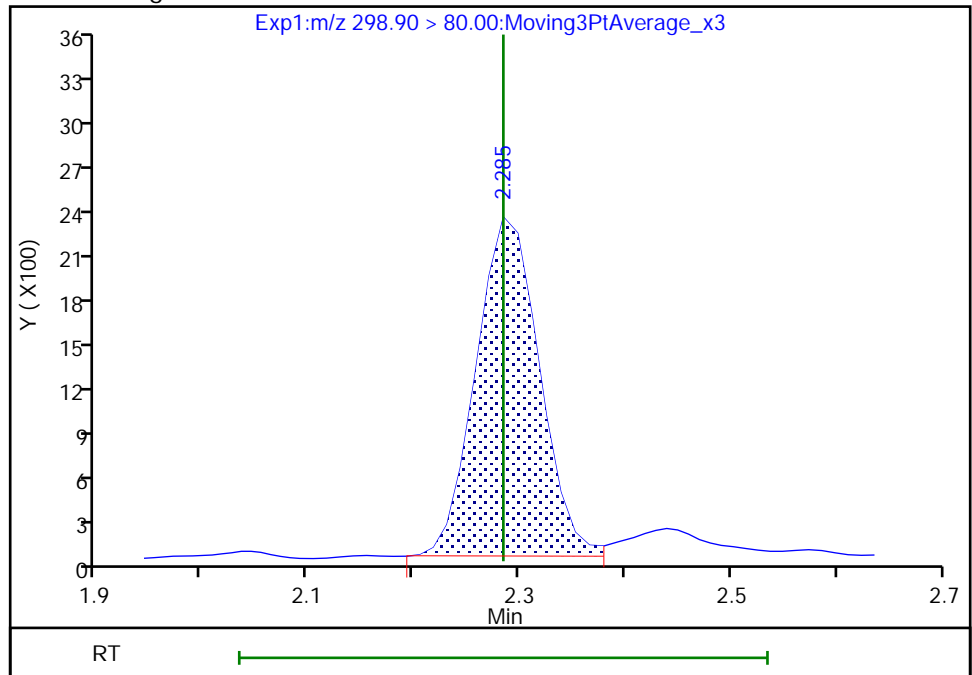
RT: 2.28  
Area: 9137  
Amount: 0.011222  
Amount Units: ng/ml

Processing Integration Results



RT: 2.28  
Area: 9501  
Amount: 0.011669  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagern, 27-Dec-2019 09:01:12

Audit Action: Manually Integrated

Audit Reason: Baseline

Euofins TestAmerica, Burlington

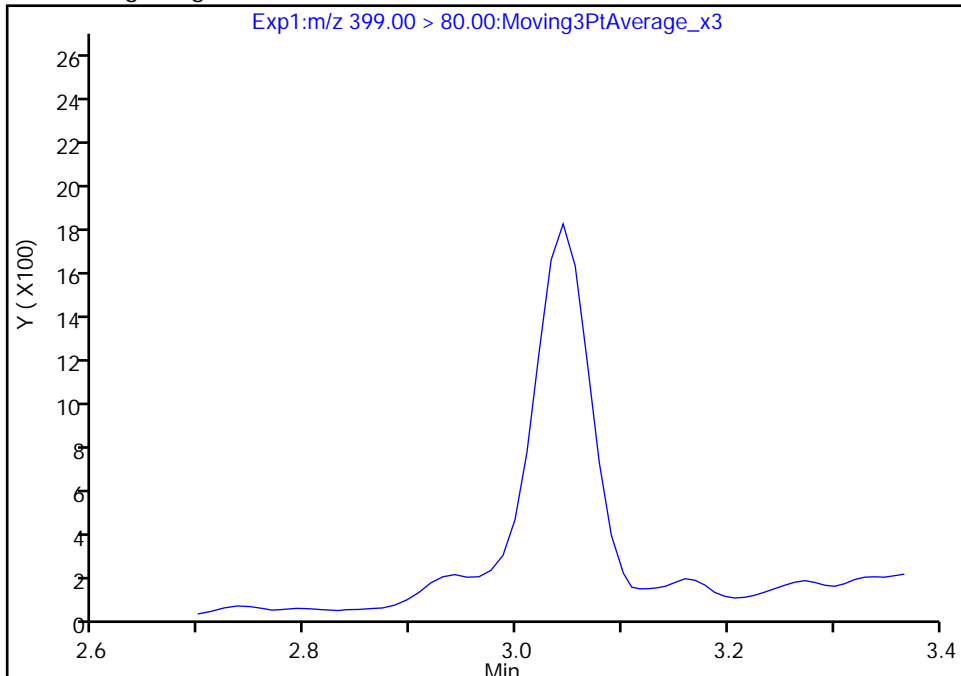
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
Injection Date: 24-Dec-2019 14:12:27 Instrument ID: LC812  
Lims ID: MB 200-150841/1-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

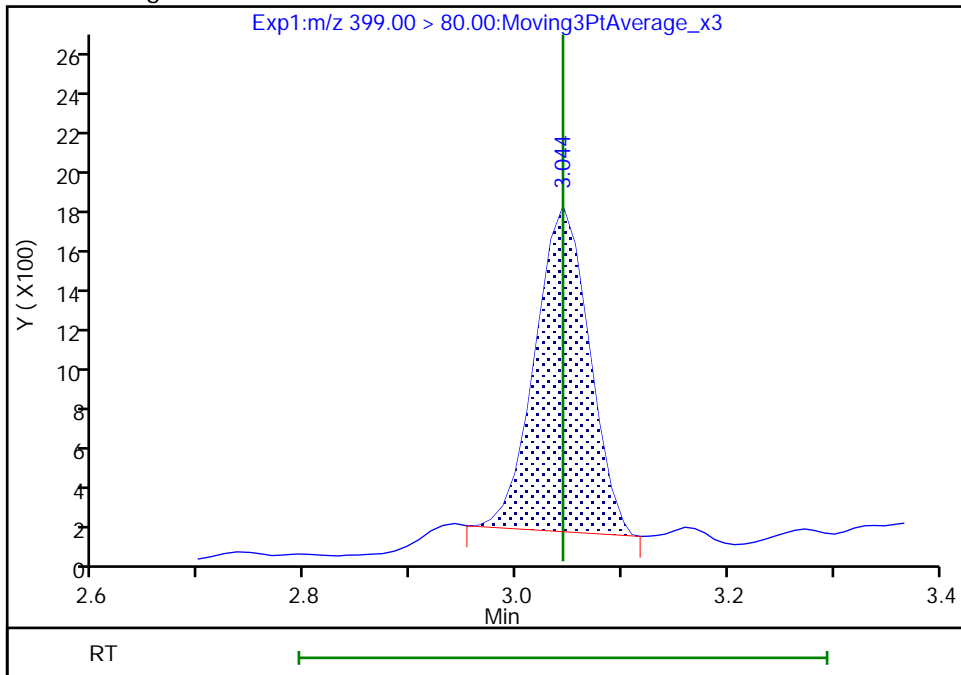
Not Detected  
Expected RT: 3.04

Processing Integration Results



Manual Integration Results

RT: 3.04  
Area: 5901  
Amount: 0.009106  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 09:03:54  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

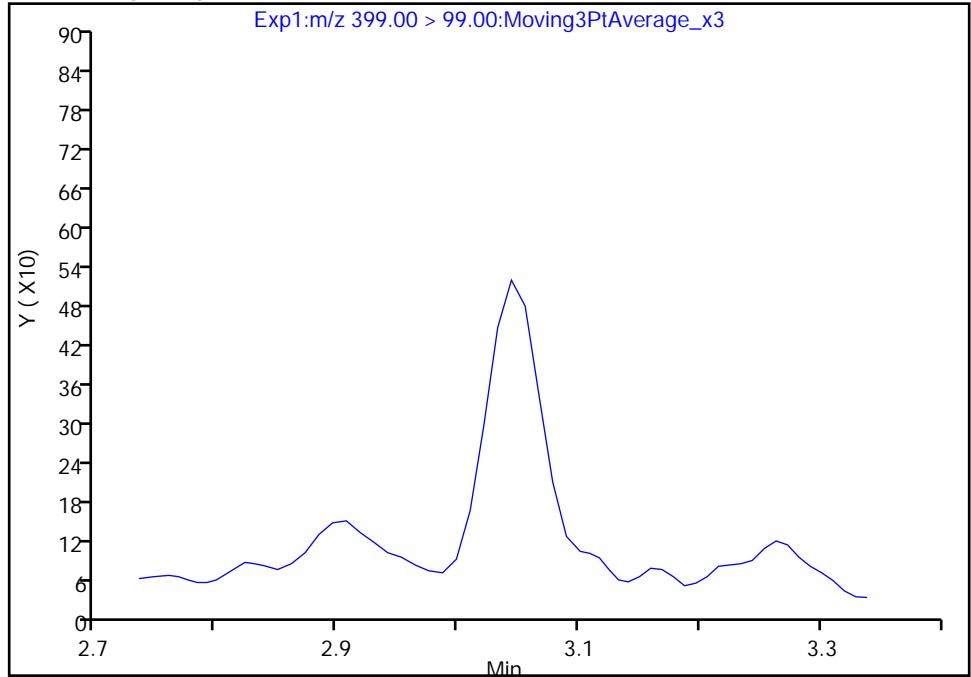
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
Injection Date: 24-Dec-2019 14:12:27 Instrument ID: LC812  
Lims ID: MB 200-150841/1-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

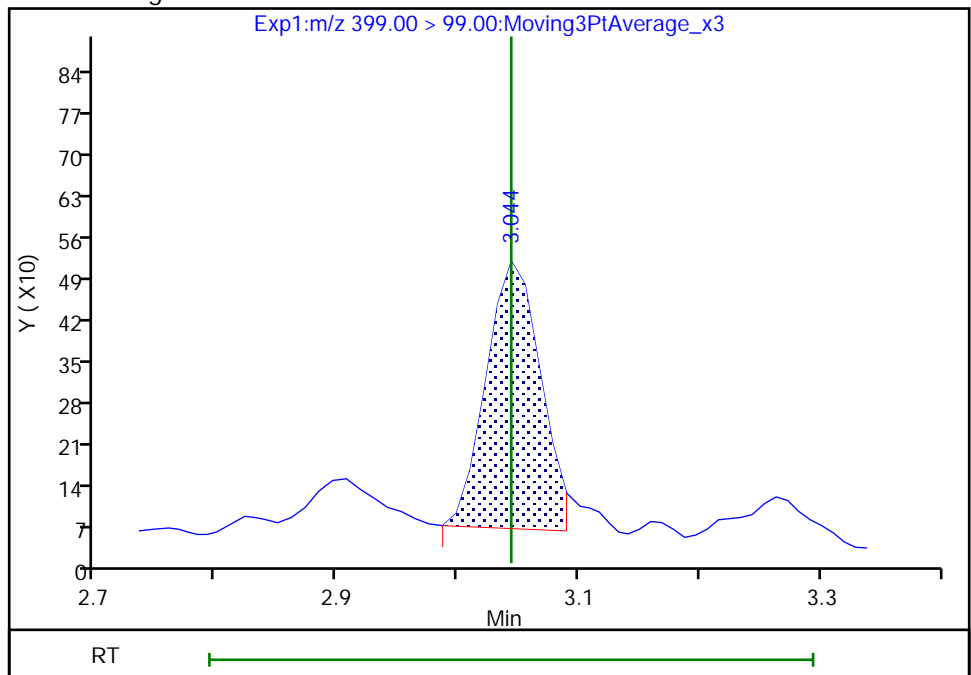
Not Detected  
Expected RT: 3.04

Processing Integration Results



Manual Integration Results

RT: 3.04  
Area: 1412  
Amount: 0.009106  
Amount Units: ng/ml



Euofins TestAmerica, Burlington

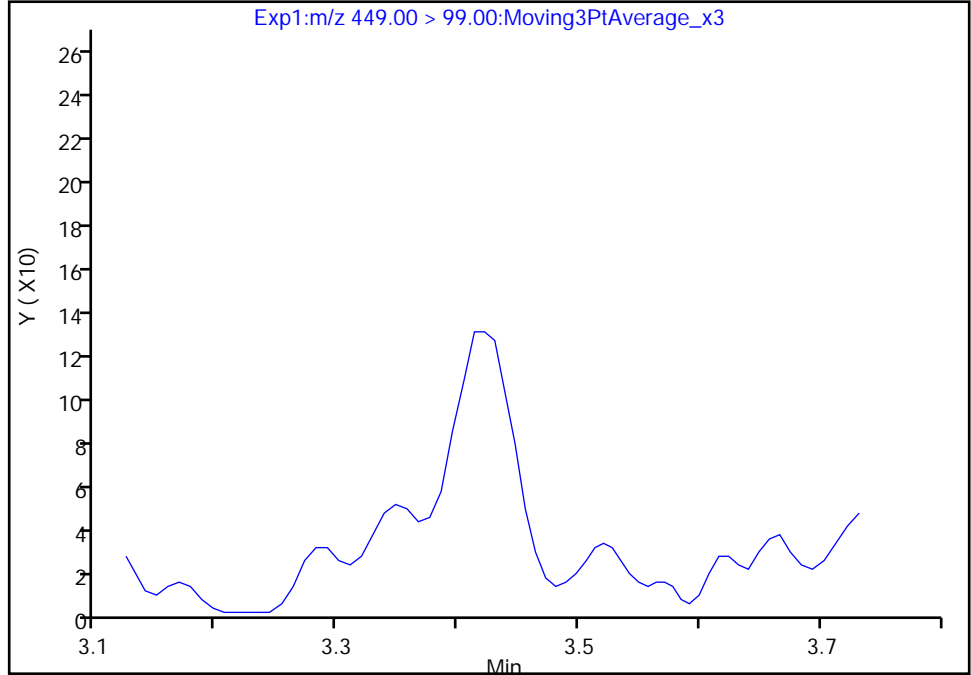
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
Injection Date: 24-Dec-2019 14:12:27 Instrument ID: LC812  
Lims ID: MB 200-150841/1-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

16 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 2

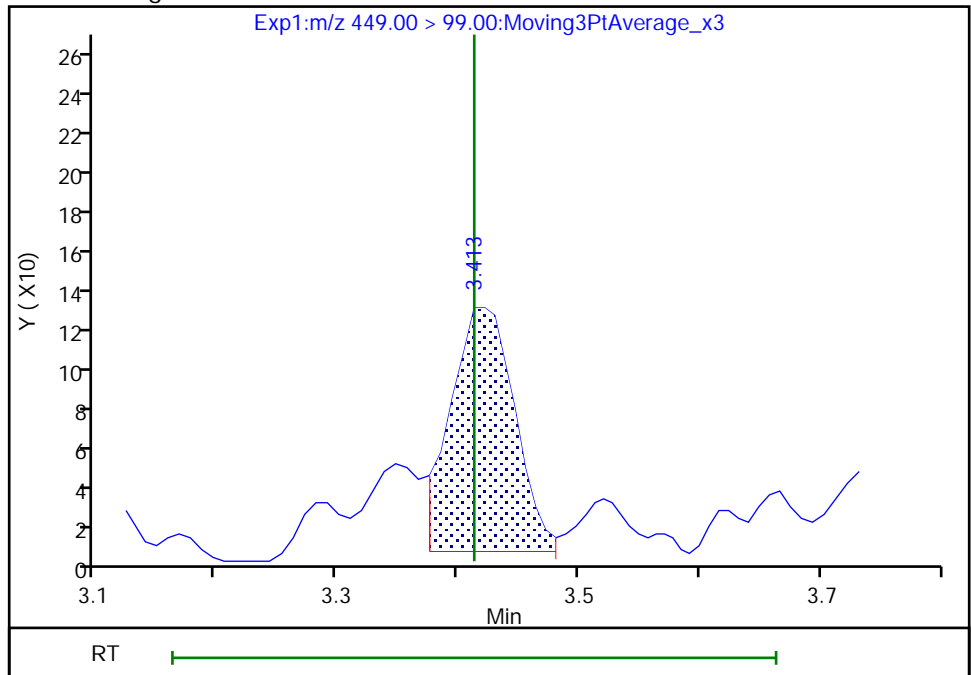
Not Detected  
Expected RT: 3.41

Processing Integration Results



Manual Integration Results

RT: 3.41  
Area: 455  
Amount: 0.002962  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 09:08:14

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

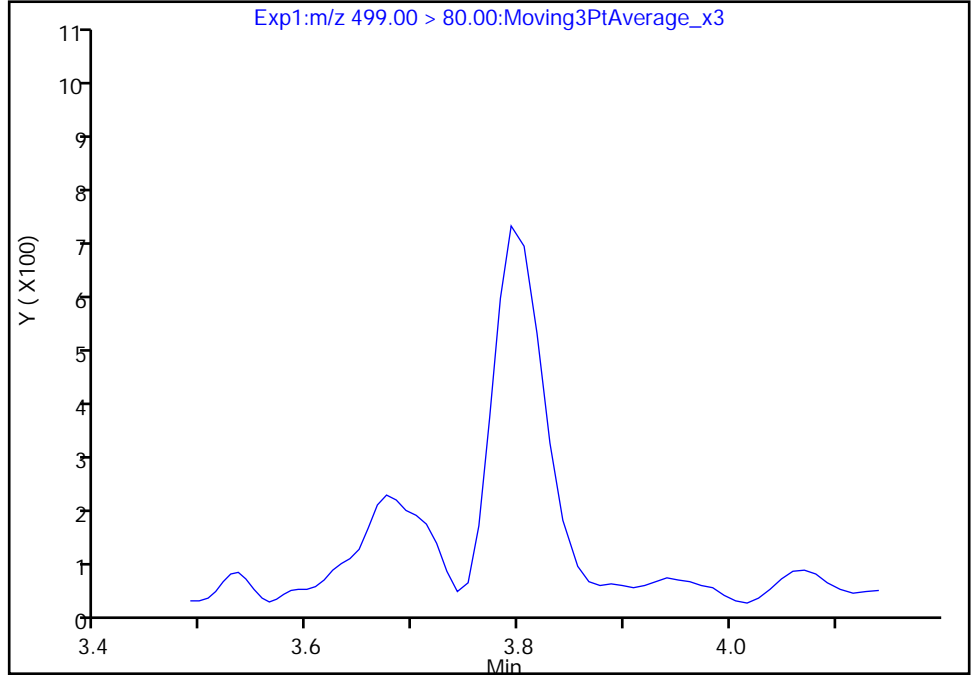
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
Injection Date: 24-Dec-2019 14:12:27 Instrument ID: LC812  
Lims ID: MB 200-150841/1-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

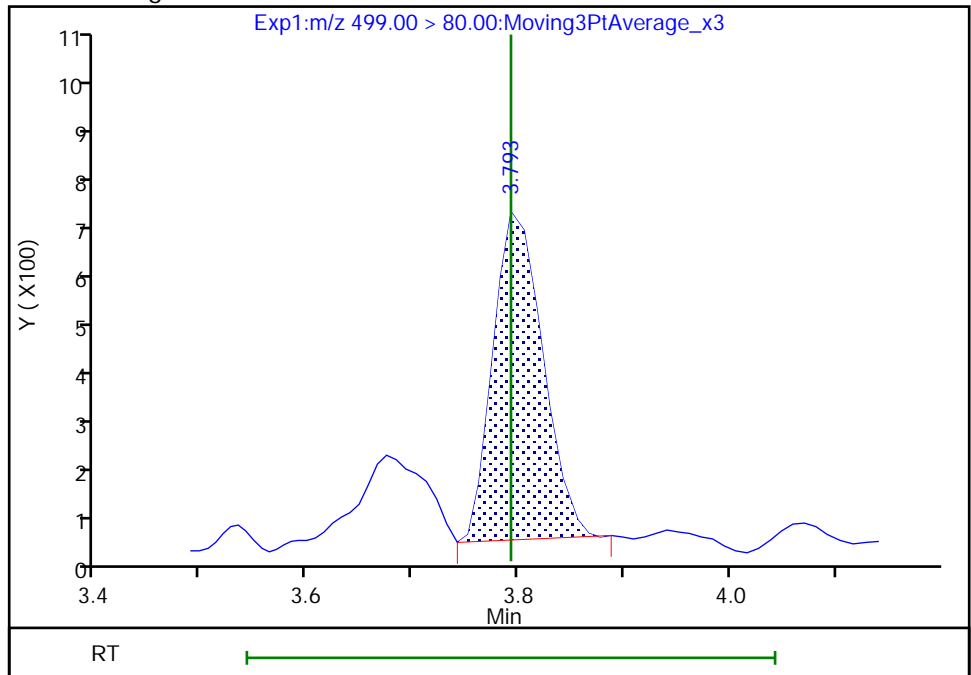
Not Detected  
Expected RT: 3.79

Processing Integration Results



Manual Integration Results

RT: 3.79  
Area: 2157  
Amount: 0.004331  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 09:09:17

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

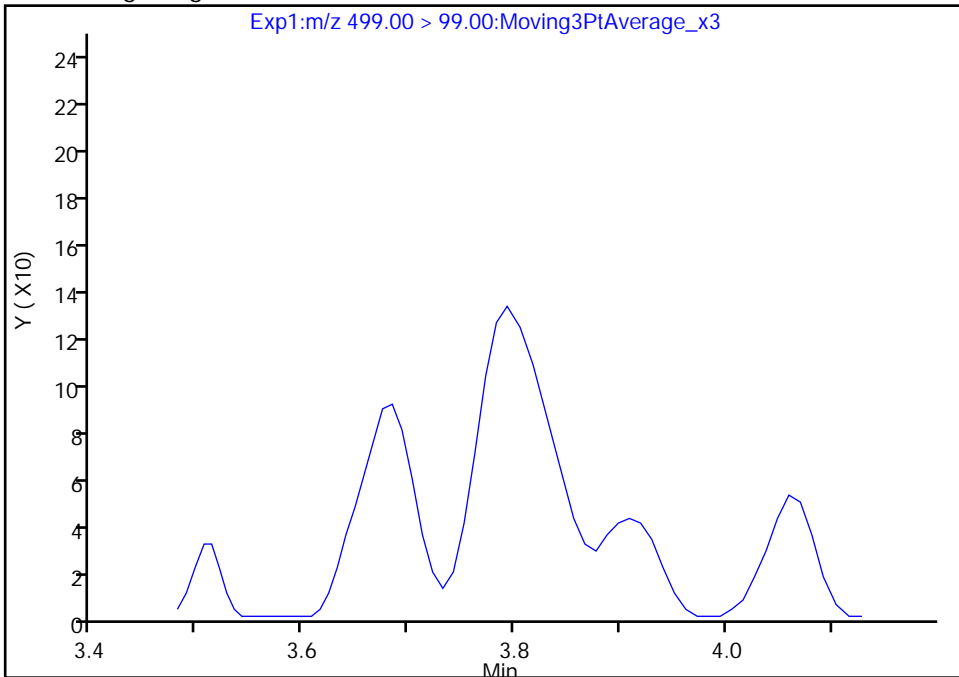
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
Injection Date: 24-Dec-2019 14:12:27 Instrument ID: LC812  
Lims ID: MB 200-150841/1-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

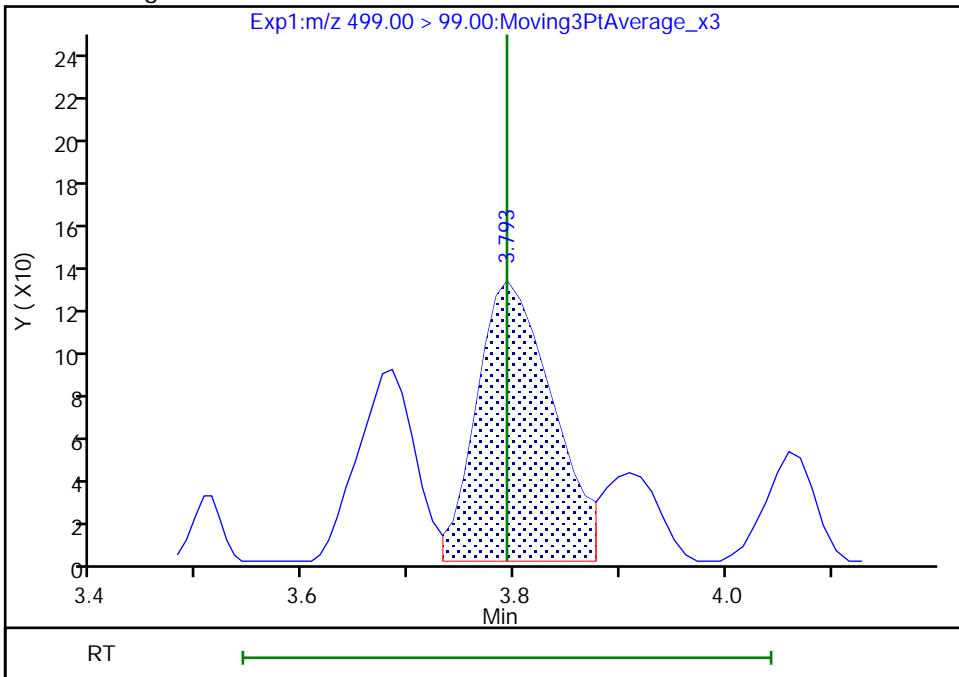
Not Detected  
Expected RT: 3.79

Processing Integration Results



Manual Integration Results

RT: 3.79  
Area: 657  
Amount: 0.004331  
Amount Units: ng/ml



Eurofins TestAmerica, Burlington

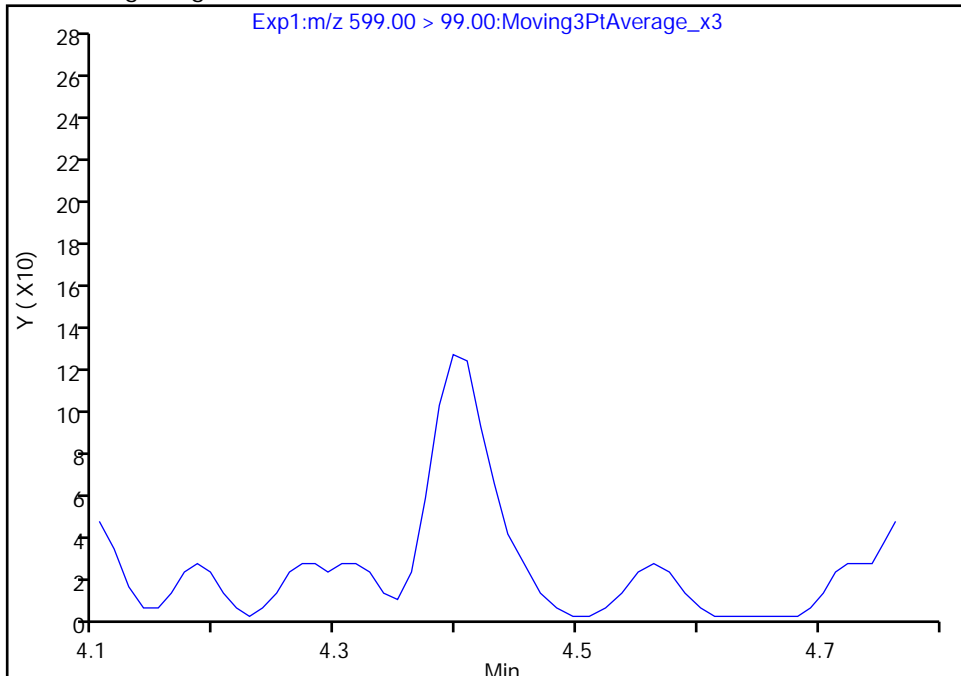
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
Injection Date: 24-Dec-2019 14:12:27 Instrument ID: LC812  
Lims ID: MB 200-150841/1-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

29 Perfluorodecanesulfonic acid, CAS: 335-77-3

Signal: 2

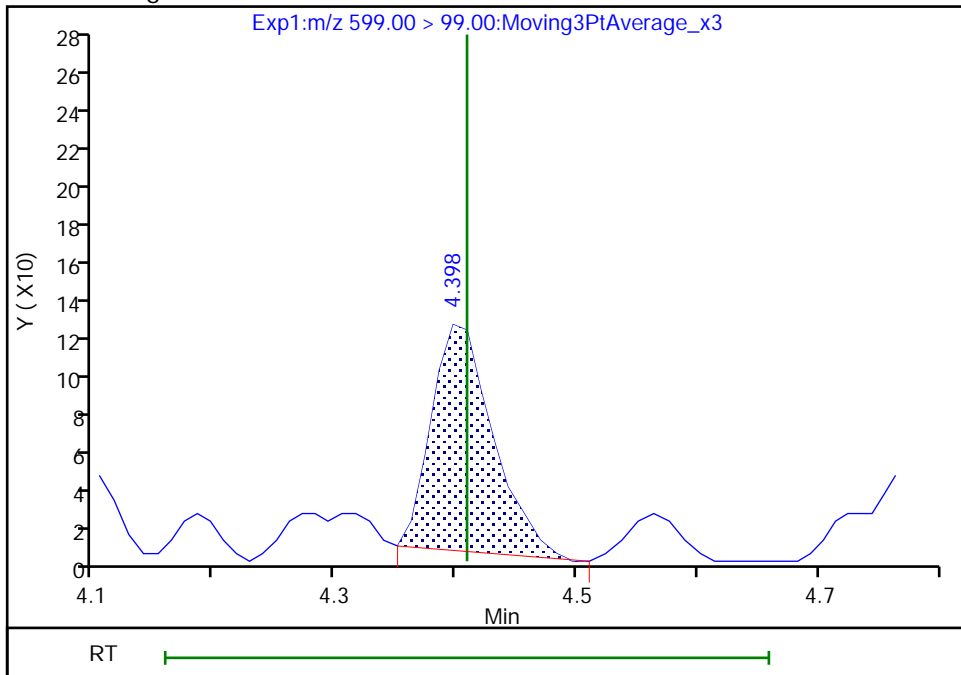
Not Detected  
Expected RT: 4.41

Processing Integration Results



Manual Integration Results

RT: 4.40  
Area: 419  
Amount: 0.004220  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 09:16:25  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

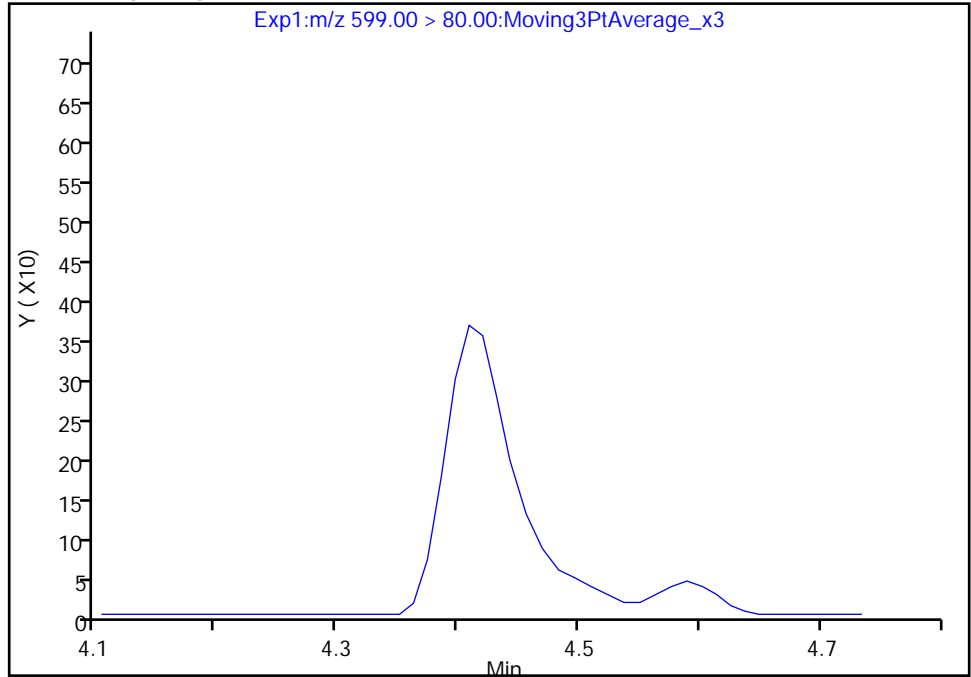
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
Injection Date: 24-Dec-2019 14:12:27 Instrument ID: LC812  
Lims ID: MB 200-150841/1-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

29 Perfluorodecanesulfonic acid, CAS: 335-77-3

Signal: 1

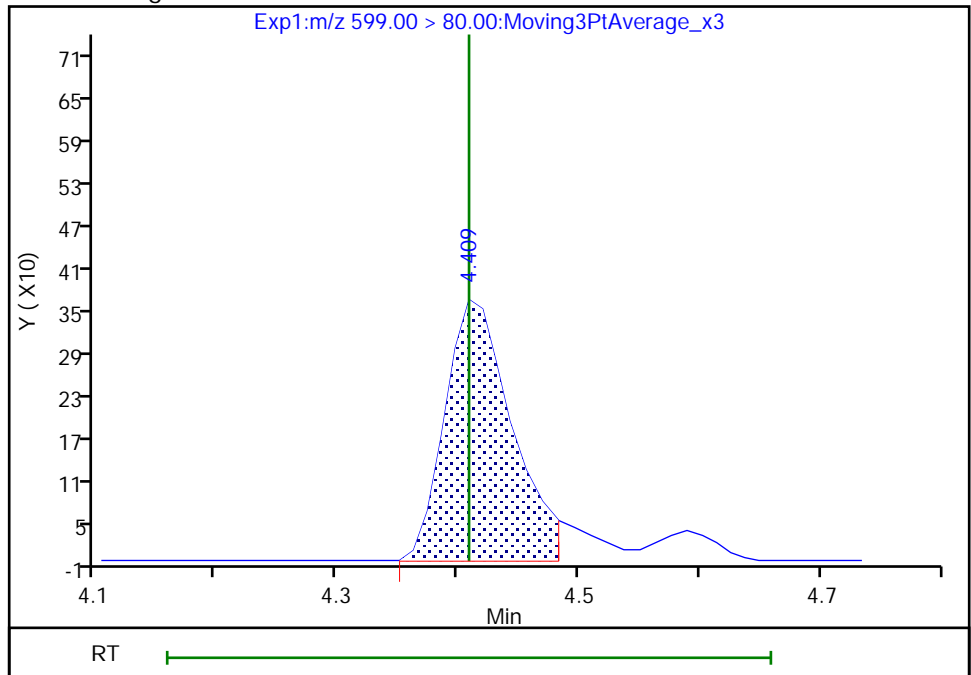
Not Detected  
Expected RT: 4.41

Processing Integration Results



Manual Integration Results

RT: 4.41  
Area: 1401  
Amount: 0.004220  
Amount Units: ng/ml



Reviewer: lautenschlagern, 27-Dec-2019 09:16:39

Audit Action: Manually Integrated

Audit Reason: Baseline



Eurofins TestAmerica, Burlington

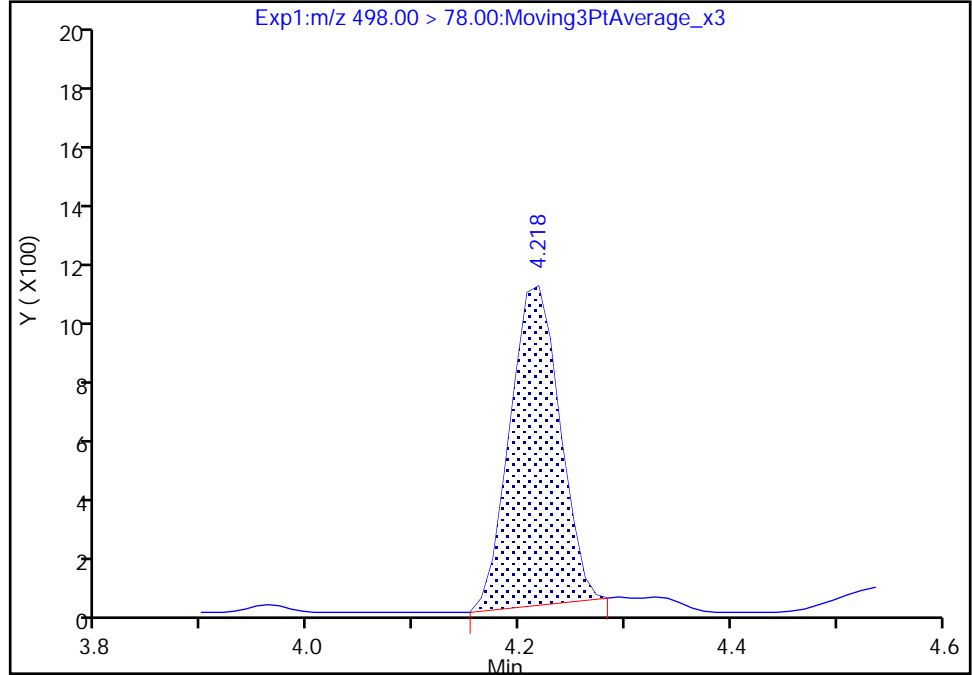
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
Injection Date: 24-Dec-2019 14:12:27 Instrument ID: LC812  
Lims ID: MB 200-150841/1-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

22 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

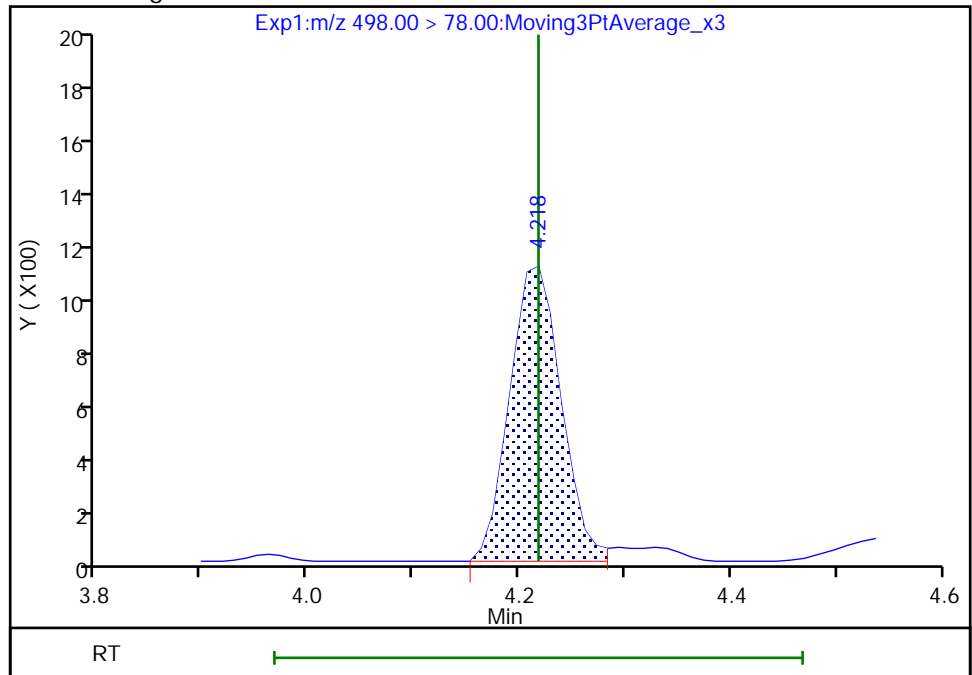
RT: 4.22  
Area: 3517  
Amount: 0.006067  
Amount Units: ng/ml

Processing Integration Results



RT: 4.22  
Area: 3704  
Amount: 0.006390  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagery, 27-Dec-2019 09:12:22

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

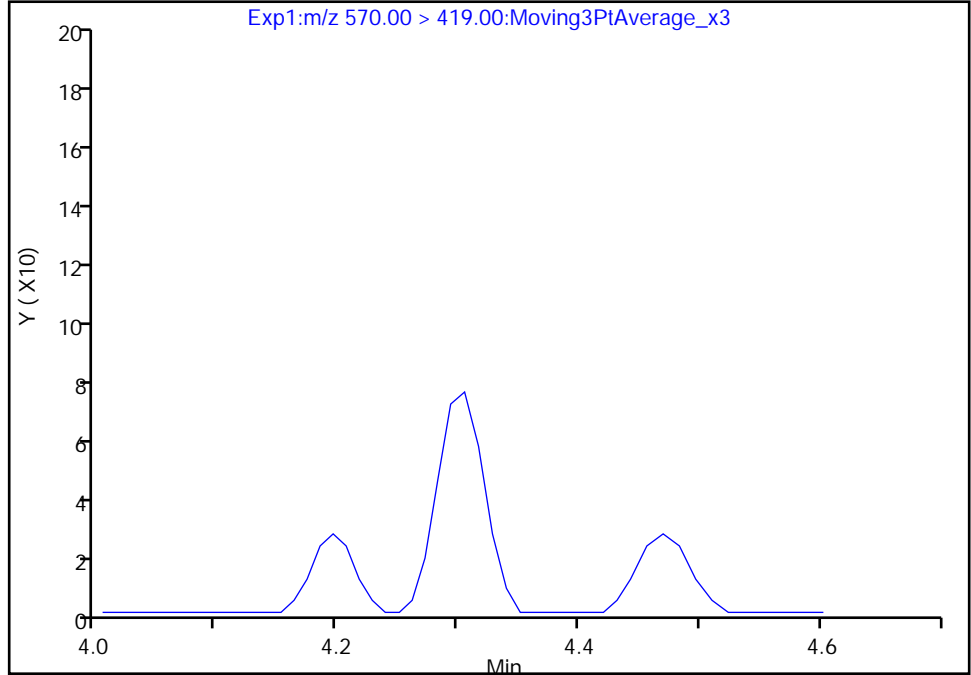
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
Injection Date: 24-Dec-2019 14:12:27 Instrument ID: LC812  
Lims ID: MB 200-150841/1-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

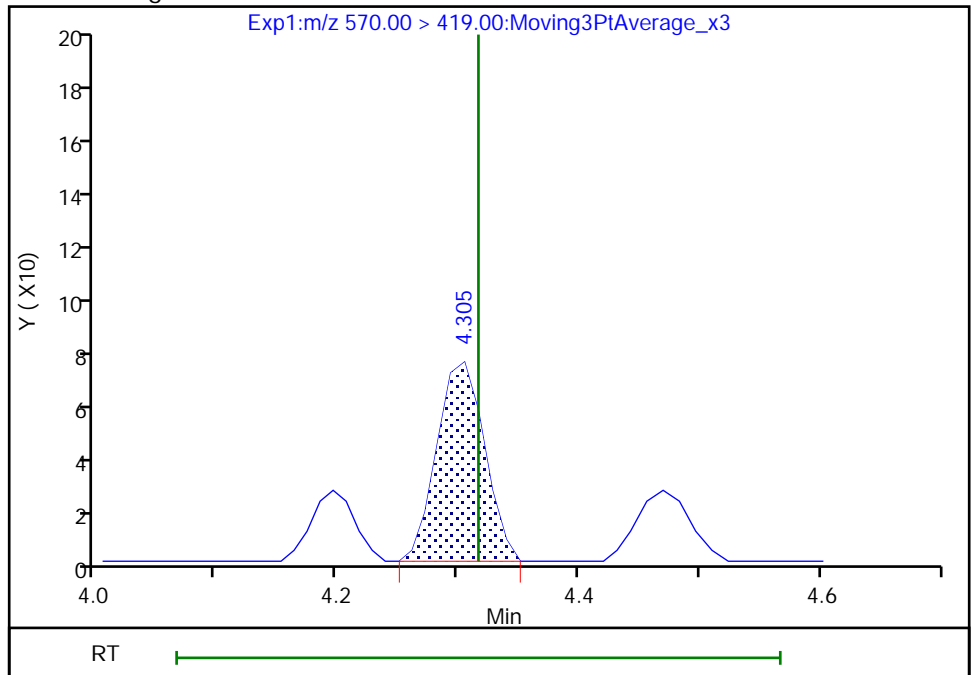
Not Detected  
Expected RT: 4.32

Processing Integration Results



Manual Integration Results

RT: 4.31  
Area: 200  
Amount: 0.004429  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 09:15:59

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

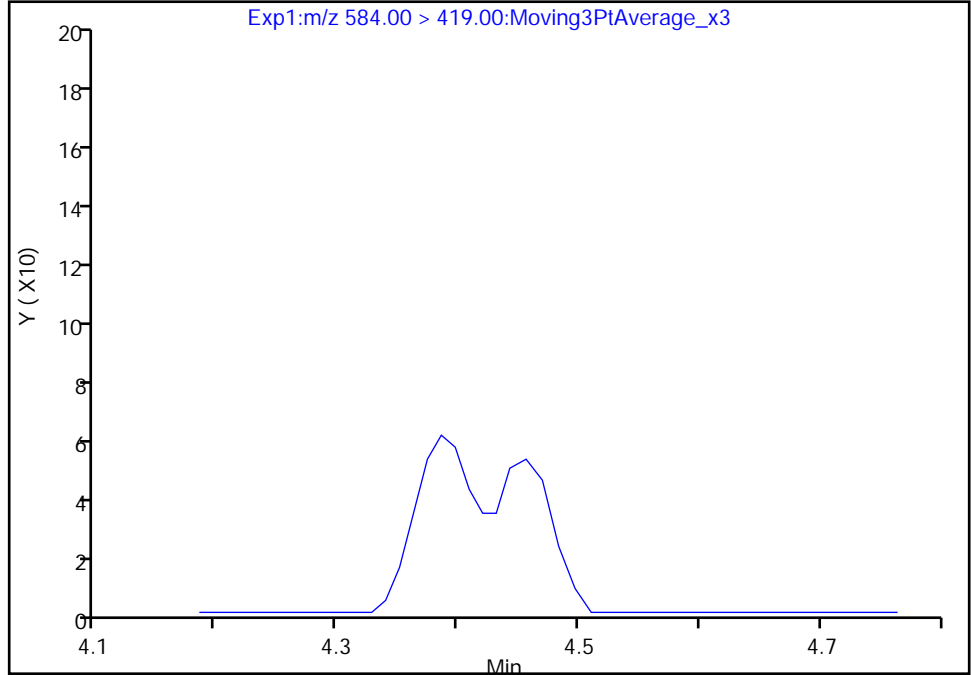
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
Injection Date: 24-Dec-2019 14:12:27 Instrument ID: LC812  
Lims ID: MB 200-150841/1-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

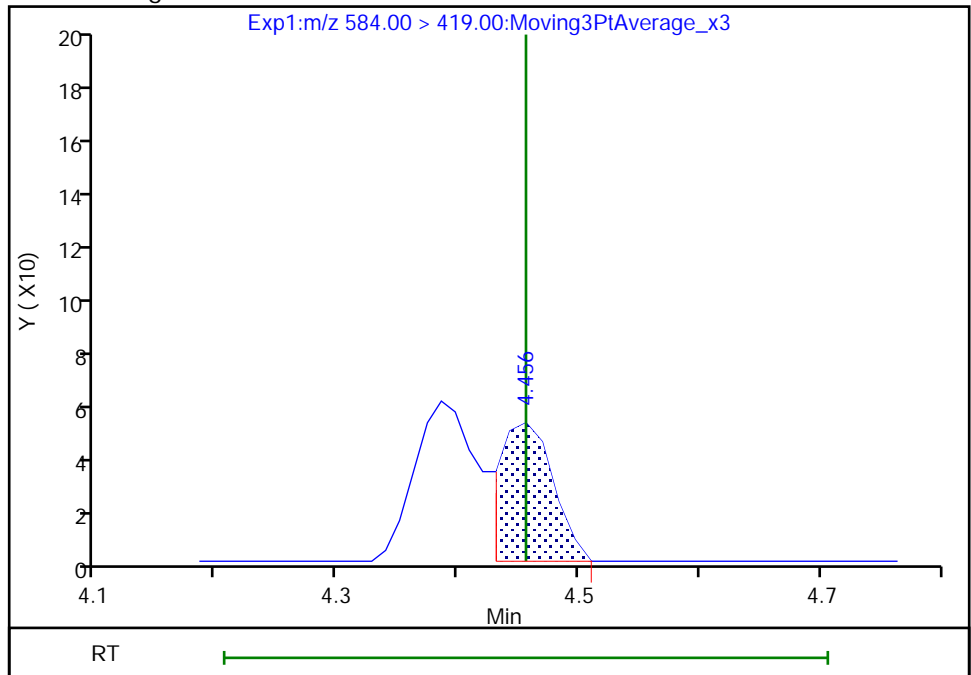
Not Detected  
Expected RT: 4.46

Processing Integration Results



Manual Integration Results

RT: 4.46  
Area: 147  
Amount: 0.002996  
Amount Units: ng/ml



Reviewer: lautenschlagery, 27-Dec-2019 09:18:20  
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

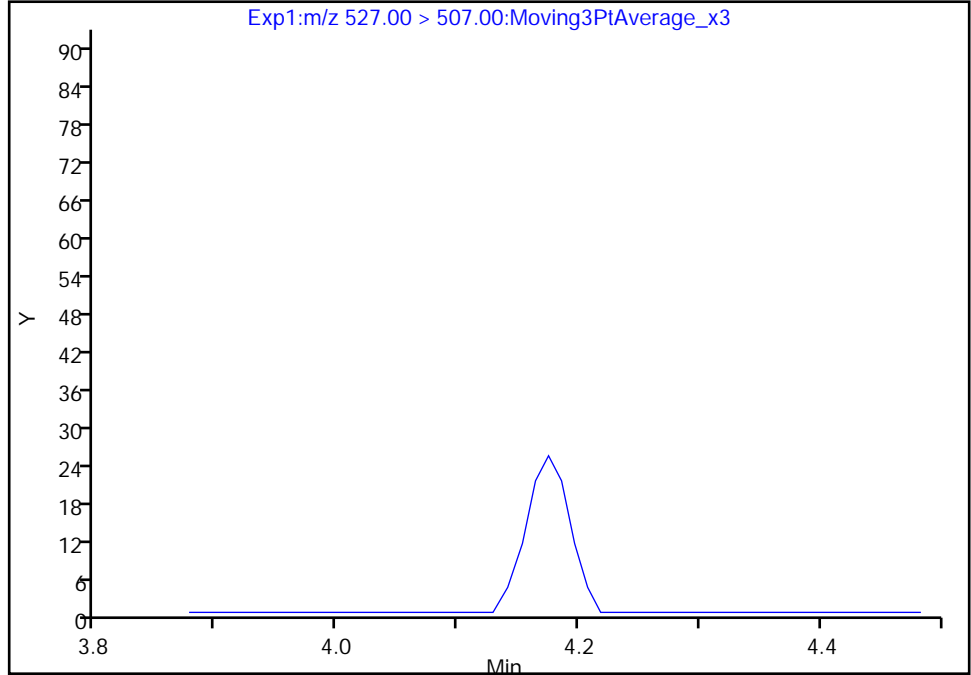
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B003.d  
Injection Date: 24-Dec-2019 14:12:27 Instrument ID: LC812  
Lims ID: MB 200-150841/1-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

25 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:, CAS: 39108-34-4

Signal: 1

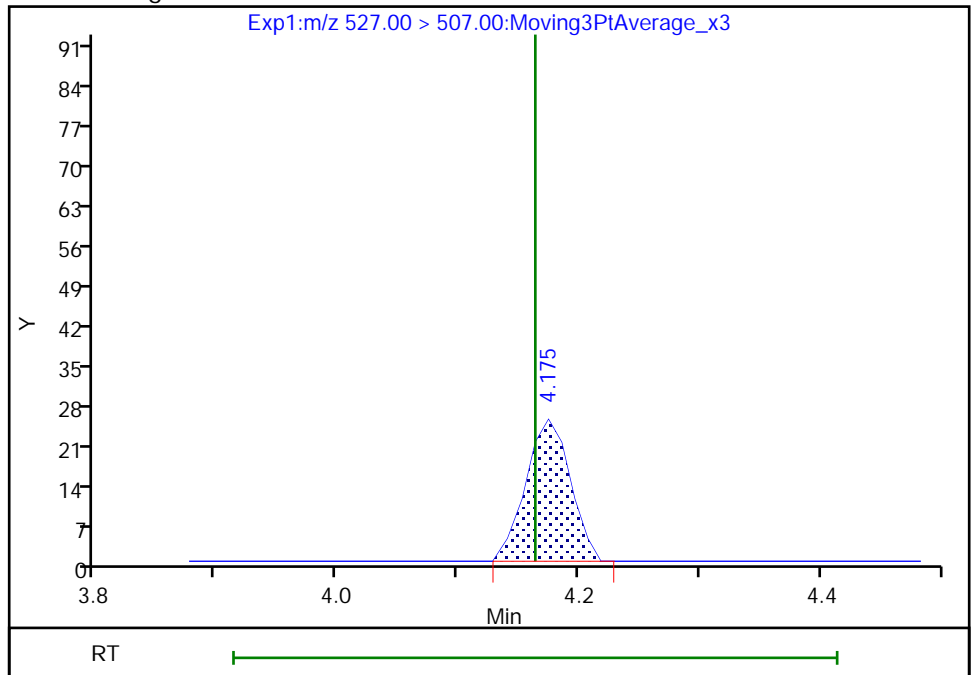
Not Detected  
Expected RT: 4.16

Processing Integration Results



Manual Integration Results

RT: 4.17  
Area: 63  
Amount: 0.001112  
Amount Units: ng/ml



Reviewer: lautenschlagerg, 27-Dec-2019 09:15:37

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-150841/2-A  
 Matrix: Water Lab File ID: SC122319B004.d  
 Analysis Method: 537 (modified) Date Collected: \_\_\_\_\_  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 250 (mL) Date Analyzed: 12/24/2019 14:20  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 20 (uL) GC Column: C-18 ID: 4.6 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	41.6		2.0	1.0
2706-90-3	Perfluoropentanoic acid (PFPeA)	35.7		2.0	0.63
307-24-4	Perfluorohexanoic acid (PFHxA)	38.1		2.0	0.76
375-85-9	Perfluoroheptanoic acid (PFHpA)	40.0		2.0	0.91
335-67-1	Perfluorooctanoic acid (PFOA)	36.4		2.0	0.81
375-95-1	Perfluorononanoic acid (PFNA)	38.8		2.0	0.27
335-76-2	Perfluorodecanoic acid (PFDA)	38.8		2.0	0.77
2058-94-8	Perfluoroundecanoic acid (PFUnA)	37.1		2.0	0.78
307-55-1	Perfluorododecanoic acid (PFDoA)	48.0		2.0	0.59
72629-94-8	Perfluorotridecanoic acid (PFTriA)	38.5		2.0	0.60
376-06-7	Perfluorotetradecanoic acid (PFTeA)	51.2		2.0	0.92
375-73-5	Perfluorobutanesulfonic acid (PFBS)	30.6		2.0	0.49
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	33.6		2.0	0.80
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	33.0		2.0	0.95
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	35.5		2.0	0.61
335-77-3	Perfluorodecanesulfonic acid (PFDS)	32.0		2.0	0.90
754-91-6	Perfluorooctanesulfonamide (PFOSA)	32.3		10	10
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.3		20	1.7
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.2		20	1.5
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	35.5		20	5.5
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	33.9		20	2.9

FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: \_\_\_\_\_ Lab Sample ID: LCS 200-150841/2-A  
 Matrix: Water Lab File ID: SC122319B004.d  
 Analysis Method: 537 (modified) Date Collected: \_\_\_\_\_  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 250 (mL) Date Analyzed: 12/24/2019 14:20  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 20 (uL) GC Column: C-18 ID: 4.6 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	100		50-150
STL01892	13C4 PFHpA	99		50-150
STL00990	13C4 PFOA	100		50-150
STL00991	13C4 PFOS	106		50-150
STL00995	13C5 PFNA	98		50-150
STL00992	13C4 PFBA	89		25-150
STL00993	13C2 PFHxA	103		50-150
STL00996	13C2 PFDA	95		50-150
STL00997	13C2 PFUnA	84		50-150
STL00998	13C2 PFDoA	66		50-150
STL01056	13C8 FOSA	69		25-150
STL01893	13C5 PFPeA	106		25-150
STL02116	13C2 PFTeDA	62		50-150
STL02118	d3-NMeFOSAA	90		50-150
STL02117	d5-NEtFOSAA	78		50-150
STL02279	M2-6:2 FTS	77		25-150
STL02280	M2-8:2 FTS	100		25-150
STL02337	13C3 PFBS	106		50-150

Eurofins TestAmerica, Burlington  
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B004.d  
 Lims ID: LCS 200-150841/2-A  
 Client ID:  
 Sample Type: LCS  
 Inject. Date: 24-Dec-2019 14:20:40 ALS Bottle#: 4 Worklist Smp#: 4  
 Injection Vol: 20.0 ul Dil. Factor: 1.0000  
 Sample Info: LCS 200-150841/2-A  
 Misc. Info.: 200-0039355-004 Plate: 1 Rack: 2  
 Operator ID: lc812tech Instrument ID: LC812  
 Method: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\PFC\_LC812.m  
 Limit Group: LC\_PFC\_ICAL  
 Last Update: 30-Dec-2019 15:06:05 Calib Date: 06-Dec-2019 15:13:26  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Column 1 : C-18 ( 4.60 mm) Det: EXP1  
 Process Host: CTX0330

First Level Reviewer: lautenschlagery Date: 27-Dec-2019 09:38:57  
 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	1.898	1.908	-0.010	0.555	1652602	2.23	89.1	2714	
2 Perfluorobutanoic acid	212.90 > 169.00	1.898	1.908	-0.010	1.000	684805	1.04	104	208	
D 3 13C5 PFPeA	267.90 > 223.00	2.257	2.257	0.0	0.660	1507002	2.66	106	4835	
4 Perfluoropentanoic acid	262.90 > 219.00	2.257	2.271	-0.014	1.000	608530	0.8915	89.1	68.6	
D 47 13C3 PFBS	301.90 > 80.00	2.271	2.285	-0.014	0.664	1662814	2.46	106	571763	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	2.285	2.285	0.0	1.006	594614	0.7649	Target=2.03	86.5	2232
	298.90 > 99.00	2.285	2.285	0.0	1.006	303175		1.96(1.01-3.04)		479
D 60 M2-4:2 FTS	329.00 > 81.00	2.611	2.611	0.0	0.763	110690	1.75	75.1	232	
61 1H,1H,2H,2H-perfluorohexanesulfoni	327.00 > 307.00	2.611	2.611	0.0	1.000	79459	0.9676	104	1062	
D 7 13C2 PFHxA	315.00 > 270.00	2.648	2.648	0.0	0.774	1625900	2.57	103	7006	
6 Perfluorohexanoic acid	313.00 > 269.00	2.648	2.661	-0.013	1.000	632495	0.9525	Target=13.76	95.3	305
	313.00 > 119.00	2.648	2.661	-0.013	1.000	52225		12.11(6.88-20.64)		226
70 Perfluoropentanesulfonic acid	349.00 > 80.00	2.661	2.661	0.0	0.877	585424	0.9404	Target=3.50	100	3514
	349.00 > 99.00	2.648	2.661	-0.013	0.873	185178		3.16(1.75-5.25)		1042
D 64 13C3 HFPO-DA	332.10 > 287.00	2.776	2.768	0.008	0.811	104023	3.77	151	1577	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.768	2.776	-0.008	0.997	101129	0.6769		67.7	45.8	
D 11 18O2 PFHxS										
403.00 > 84.00	3.033	3.044	-0.011	0.886	1267902	2.37		100	7756	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.033	3.044	-0.011	1.000	509633	0.8399	Target=3.90	92.3	1313	
399.00 > 99.00	3.033	3.044	-0.011	1.000	124793		4.08(1.95-5.85)		378	
D 9 13C4 PFHpA										
367.00 > 322.00	3.044	3.044	0.0	0.890	1488076	2.48		99.2	4853	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.044	3.044	0.0	1.000	629322	1.00	Target=3.95	100	371	
363.00 > 169.00	3.044	3.044	0.0	1.000	185497		3.39(1.97-5.92)		703	
77 DONA										
377.00 > 251.00	3.078	3.089	-0.011	0.812	1397833	0.8795	Target=2.49	93.4	3504	
377.00 > 85.00	3.078	3.089	-0.011	0.812	551073		2.54(1.24-3.73)		2029	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.405	3.413	-0.008	0.898	455212	0.8261	Target=6.46	86.8	3561	
449.00 > 99.00	3.405	3.413	-0.008	0.898	73549		6.19(3.23-9.69)		1177	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.413	3.413	0.0	1.000	59409	0.8864		93.5	747	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.413	3.413	0.0	0.998	168670	1.84		77.3	958	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.422	3.430	-0.008	1.000	644924	0.9096	Target=2.40	91.0	301	
413.00 > 169.00	3.422	3.430	-0.008	1.000	281736		2.29(1.20-3.60)		1709	
D 14 13C4 PFOA										
417.00 > 372.00	3.422	3.430	-0.008	1.000	1597630	2.51		100	3837	
* 62 13C2 PFOA										
415.00 > 370.00	3.422	3.430	-0.008		1751527	2.50			3638	
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.793	0.0	1.108	1075224	2.54		106	5349	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.793	3.793	0.0	1.000	431183	0.8878	Target=5.74	95.7	1613	M
499.00 > 99.00	3.793	3.793	0.0	1.000	66289		6.50(2.87-8.61)		779	M
D 19 13C5 PFNA										
468.00 > 423.00	3.817	3.817	0.0	1.116	1439249	2.46		98.4	5122	
20 Perfluorononanoic acid										
463.00 > 419.00	3.817	3.817	0.0	1.000	546952	0.9689	Target=7.01	96.9	288	
463.00 > 169.00	3.817	3.817	0.0	1.000	85853		6.37(3.50-10.51)		1342	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.984	3.984	0.0	1.050	419621	0.7564		81.2	2727	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.129	4.129	0.0	1.089	366473	0.9860	Target=3.14	103	2879	M
549.00 > 99.00	4.129	4.129	0.0	1.089	106649		3.44(1.57-4.71)		809	M
D 23 13C2 PFDA										
515.00 > 470.00	4.153	4.164	-0.011	1.214	1373126	2.38		95.2	4205	



Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
24 Perfluorodecanoic acid										
513.00 > 469.00	4.153	4.164	-0.011	1.000	515899	0.9709	Target=7.28	97.1	736	
513.00 > 169.00	4.153	4.164	-0.011	1.000	80235		6.43(3.64-10.91)		982	
25 1H,1H,2H,2H-perfluorodecanesulfonyl										
527.00 > 507.00	4.164	4.164	0.0	1.000	42933	0.8480		88.5	746	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.164	4.175	-0.011	1.217	262693	2.40		100	1520	
D 21 13C8 FOSA										
506.00 > 78.00	4.207	4.218	-0.011	1.230	1309850	1.74		69.5	3940	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.218	4.218	0.0	1.003	421615	0.8086		80.9	2186	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.305	4.305	0.0	1.258	125493	2.26		90.4	368	
28 N-methylperfluorooctanesulfonamide										
570.00 > 419.00	4.317	4.317	0.0	1.003	43994	1.01		101	324	
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.409	4.409	0.0	1.162	259379	0.8012	Target=2.76	83.1	1640	M
599.00 > 99.00	4.409	4.409	0.0	1.162	82470		3.15(1.38-4.14)		1036	M
D 30 13C2 PFUnA										
565.00 > 520.00	4.443	4.443	0.0	1.298	1032034	2.10		84.2	4400	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.443	4.443	0.0	1.000	324947	0.9284	Target=5.78	92.8	514	
563.00 > 169.00	4.443	4.443	0.0	1.000	65612		4.95(2.89-8.67)		1361	
33 N-ethylperfluorooctanesulfonamide										
584.00 > 419.00	4.456	4.456	0.0	1.003	40104	1.00		100	456	M
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.443	4.456	-0.013	1.298	120529	1.96		78.3	977	
66 11-Chloroeicosafluoro-3-oxaundecan										
631.00 > 451.00	4.537	4.551	-0.014	1.196	303636	0.5804		61.6	3306	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.683	4.683	0.0	1.000	391288	1.20	Target=5.13	120	113	
613.00 > 169.00	4.683	4.683	0.0	1.000	81534		4.80(2.56-7.69)		1177	
D 36 13C2 PFDaA										
615.00 > 570.00	4.683	4.683	0.0	1.369	881804	1.64		65.6	5831	
74 1H,1H,2H,2H-perfluorododecanesulfonyl										
627.00 > 607.00	4.704	4.704	0.0	1.130	19415	0.6040		62.7	363	
75 Perfluorododecanesulfonic acid (PF)										
699.00 > 80.00	4.861	4.870	-0.009	1.282	71314	0.5795	Target=0.45	59.9	174	
699.00 > 99.00	4.861	4.870	-0.009	1.282	151268		0.47(0.22-0.67)		2493	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.906	4.906	0.0	1.048	298059	0.9626	Target=3.82	96.3	111	
663.00 > 169.00	4.897	4.906	-0.009	1.046	90126		3.31(1.91-5.74)		916	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.094	5.108	-0.014	1.000	71816	1.28	Target=1.05	128	1156	
713.00 > 219.00	5.094	5.108	-0.014	1.000	63181		1.14(0.52-1.57)		1542	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.094	5.108	-0.014	1.489	697729	1.55		61.9	5173	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.483	5.491	-0.009	1.000	301684	0.9697	Target=3.20	97.0	181	
813.00 > 169.00	5.483	5.491	-0.009	1.000	113783		2.65(1.60-4.80)		1971	
D 44 13C2 PFHxDA										
815.00 > 770.00	5.483	5.491	-0.009	1.602	854362	2.06		82.4	6365	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.889	5.899	-0.010	1.074	208042	0.8429	Target=2.86	84.3	100	
913.00 > 169.00	5.884	5.899	-0.015	1.073	82298		2.53(1.43-4.29)		1377	

**QC Flag Legend**

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B004.d

Injection Date: 24-Dec-2019 14:20:40

Instrument ID: LC812

Lims ID: LCS 200-150841/2-A

Client ID:

Operator ID: lc812tech

ALS Bottle#: 4

Worklist Smp#: 4

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

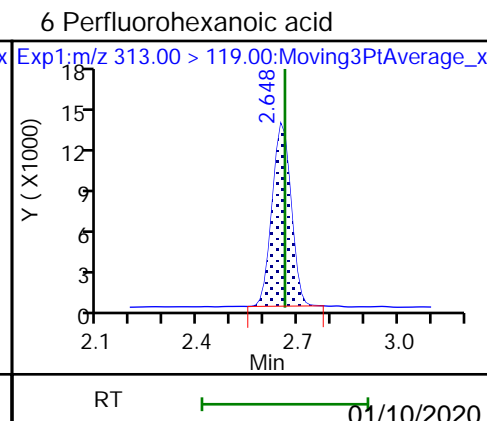
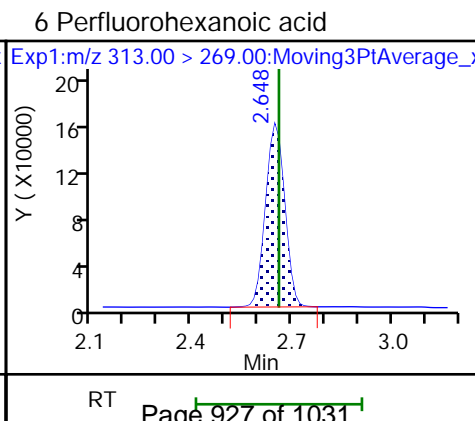
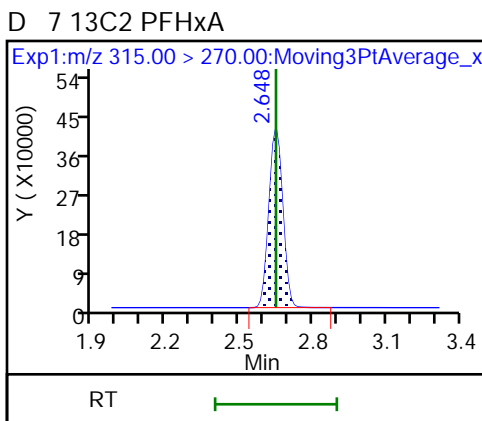
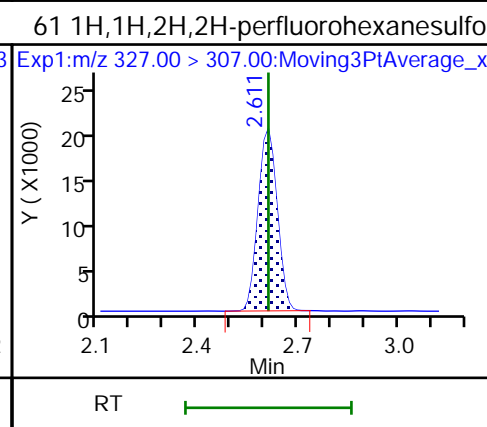
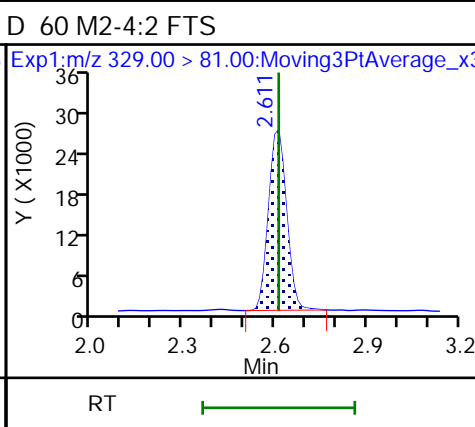
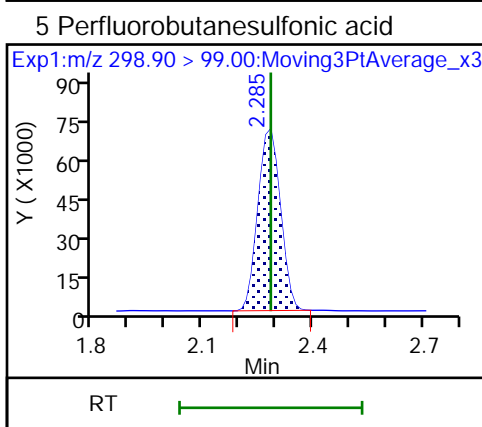
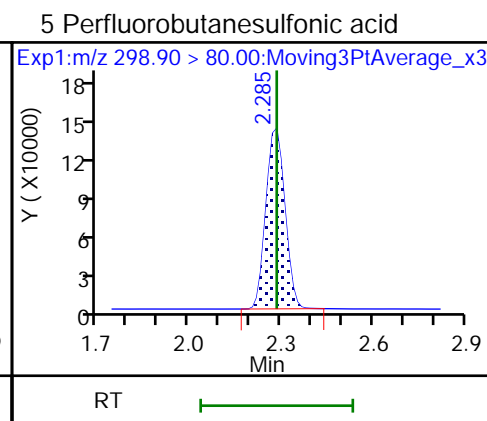
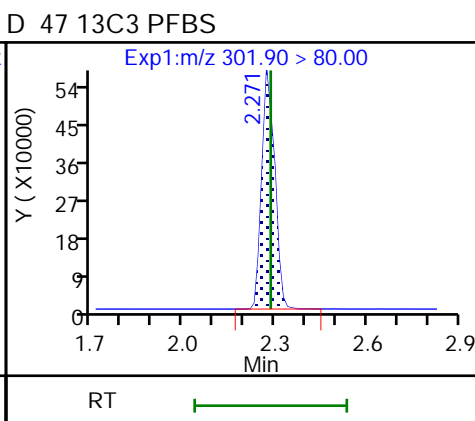
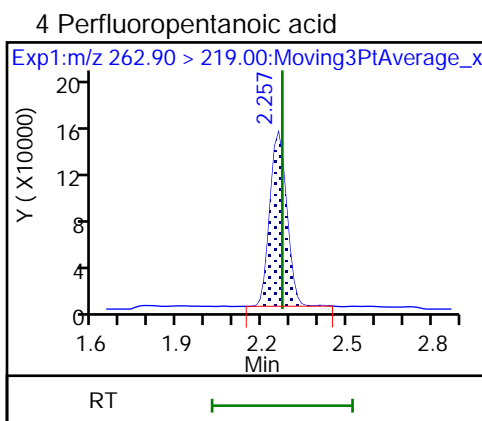
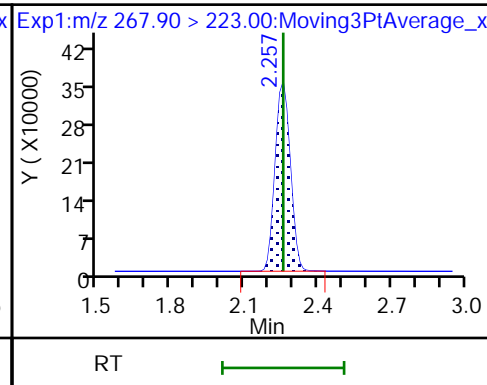
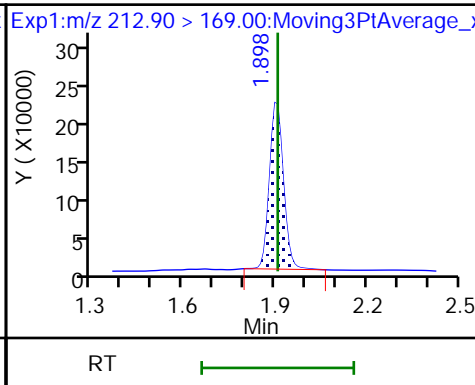
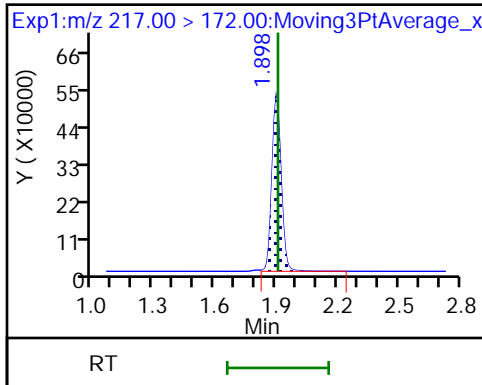
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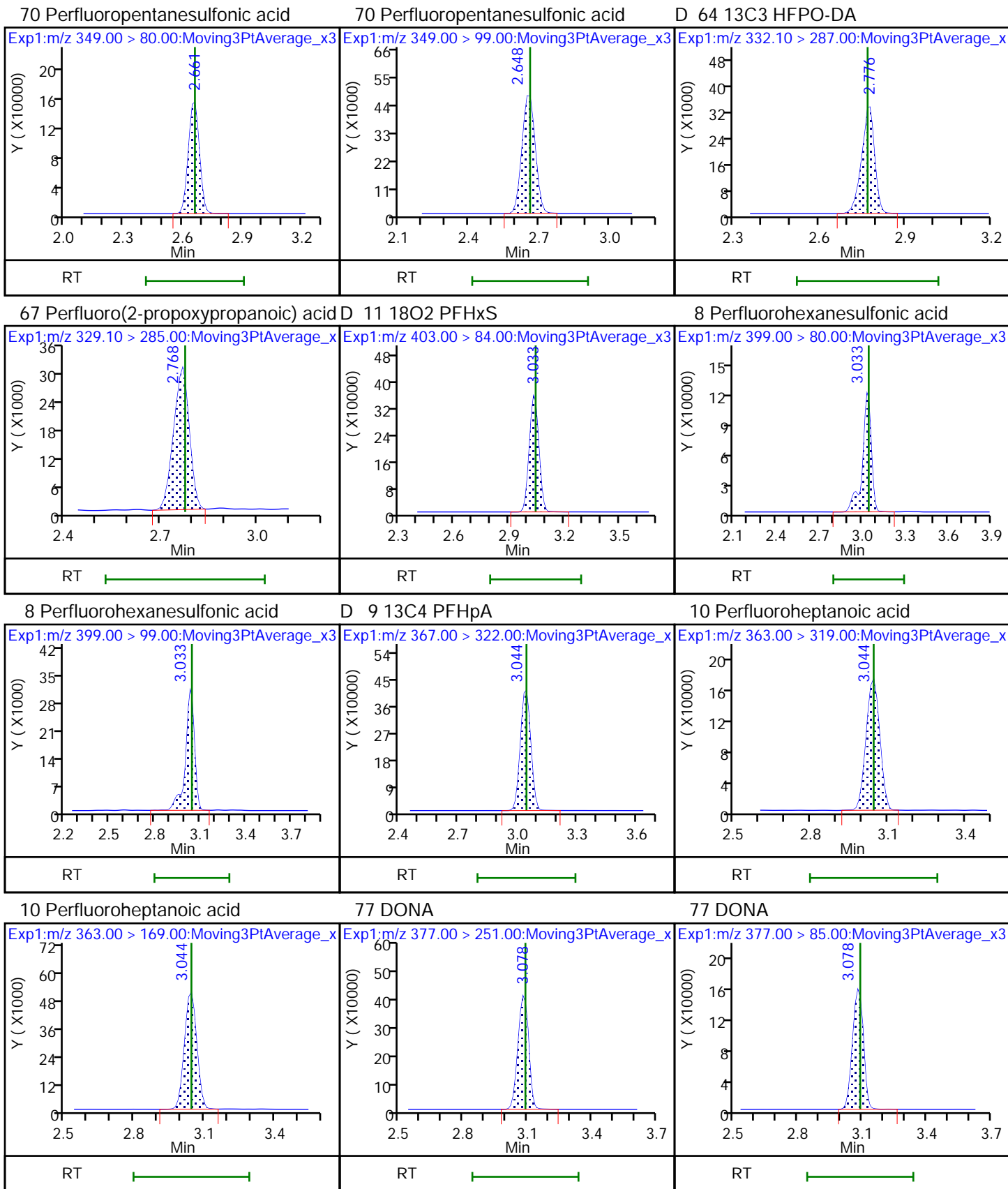
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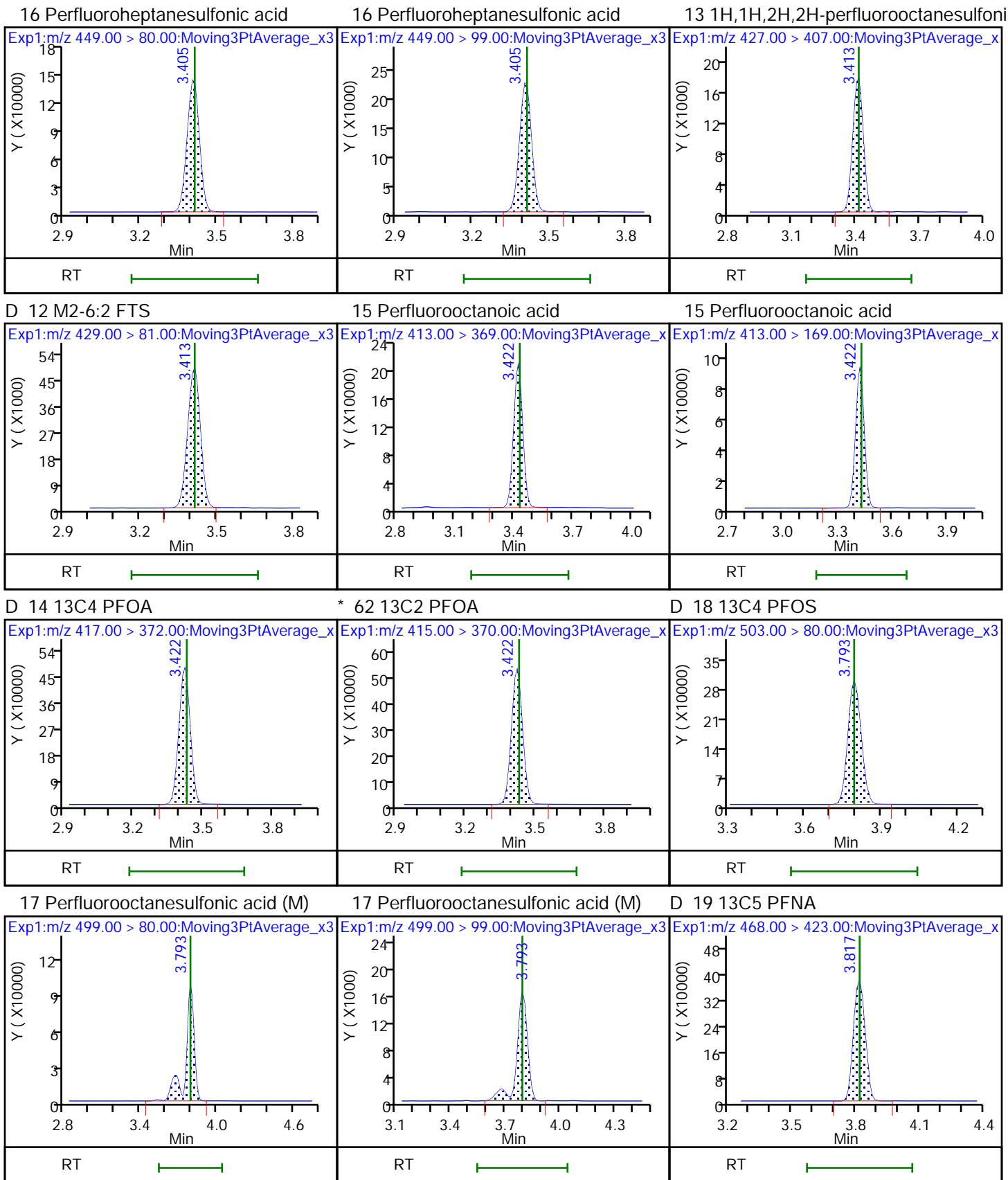
D 1 13C4 PFBA

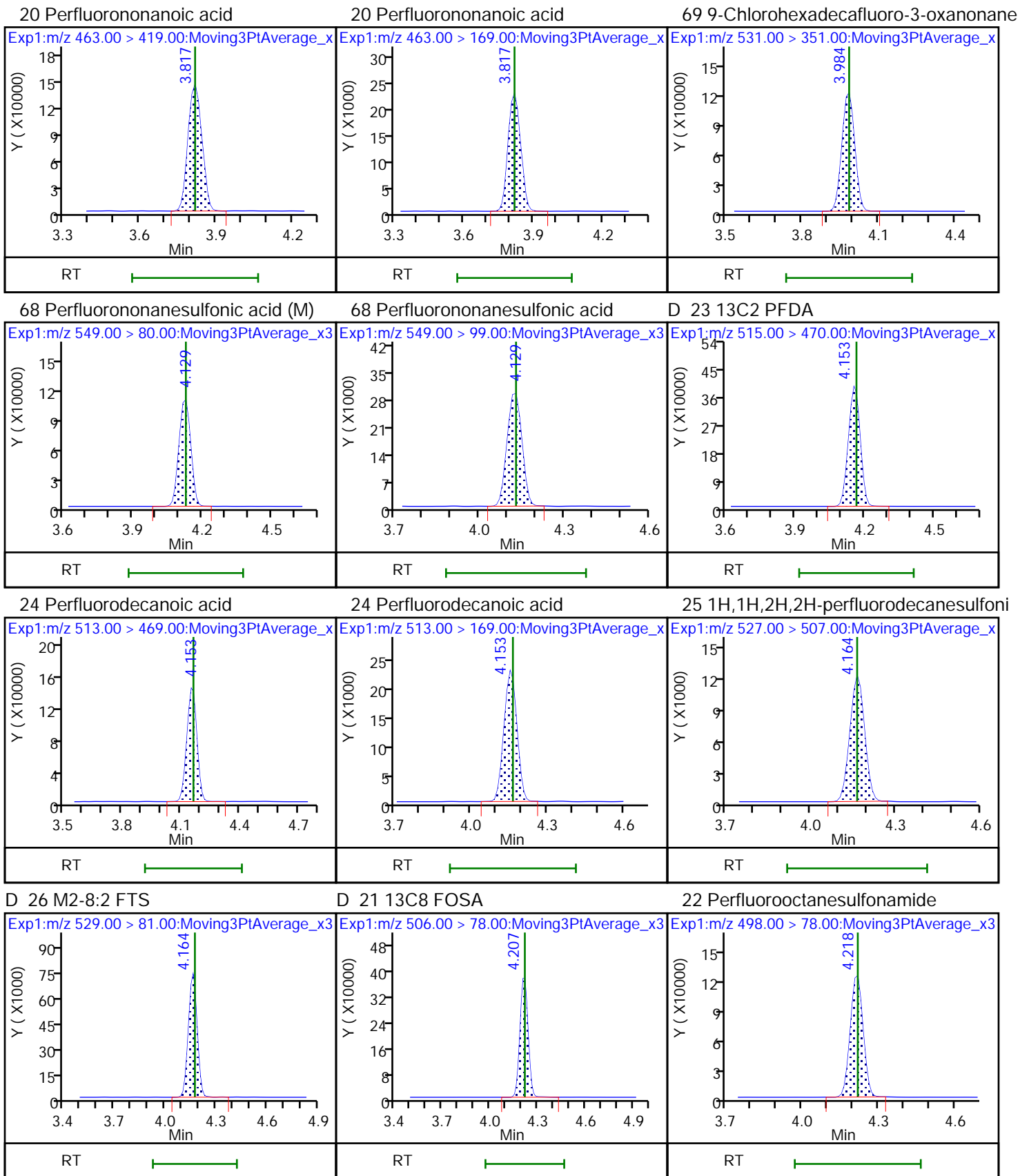
2 Perfluorobutanoic acid

D 3 13C5 PFPeA



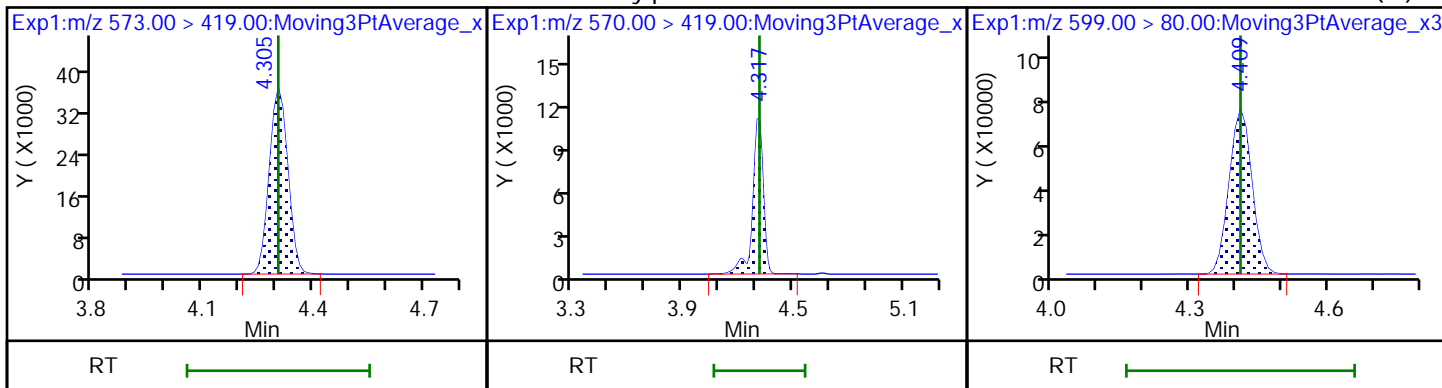






D 27 d3-NMeFOSAA

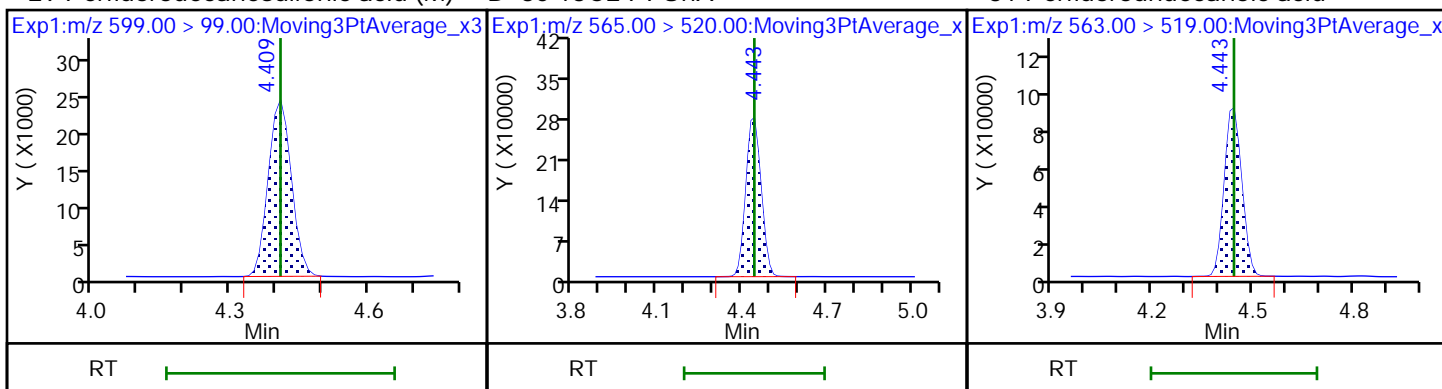
28 N-methylperfluorooctanesulfonamido 29 Perfluorodecanesulfonic acid (M)



29 Perfluorodecanesulfonic acid (M)

D 30 13C2 PFUoA

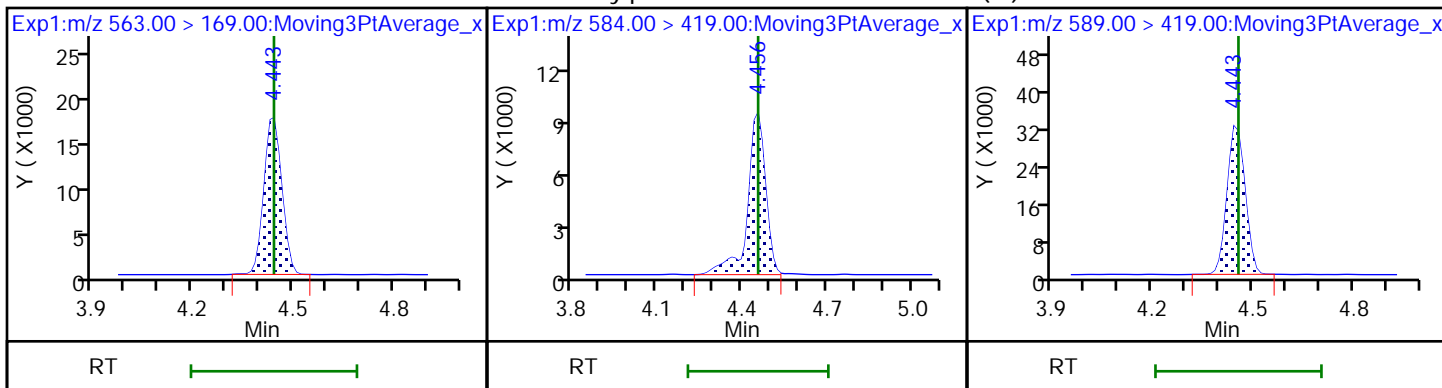
31 Perfluoroundecanoic acid



31 Perfluoroundecanoic acid

33 N-ethylperfluorooctanesulfonamido

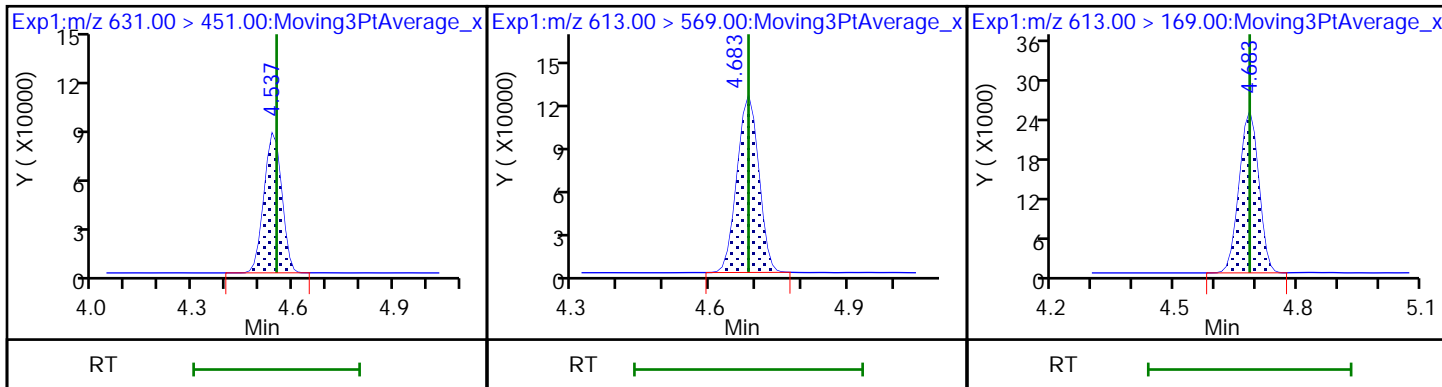
D 32 d5-NEtFOSAA



66 11-Chloroeicosafuoro-3-oxaundecan

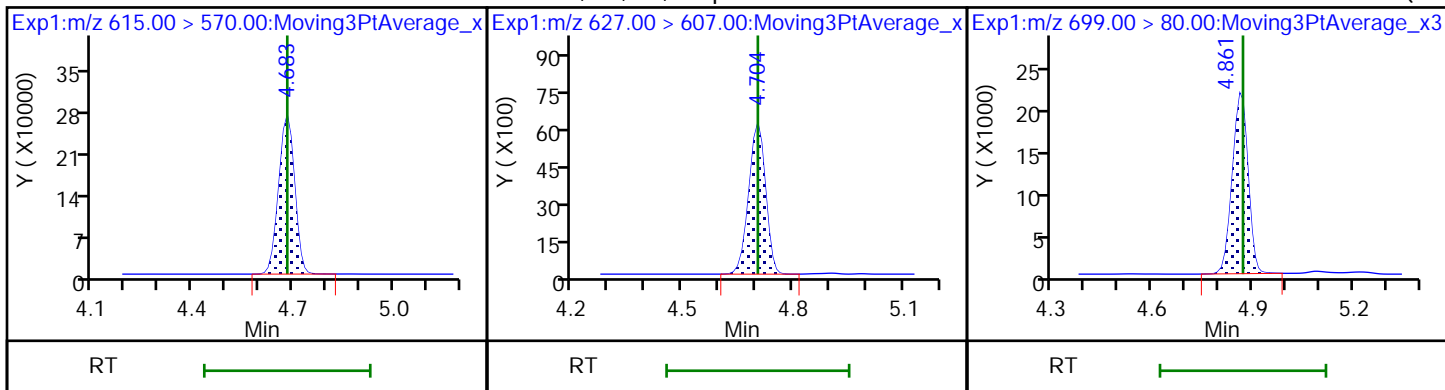
37 Perfluorododecanoic acid

37 Perfluorododecanoic acid



D 36 13C2 PFDaA

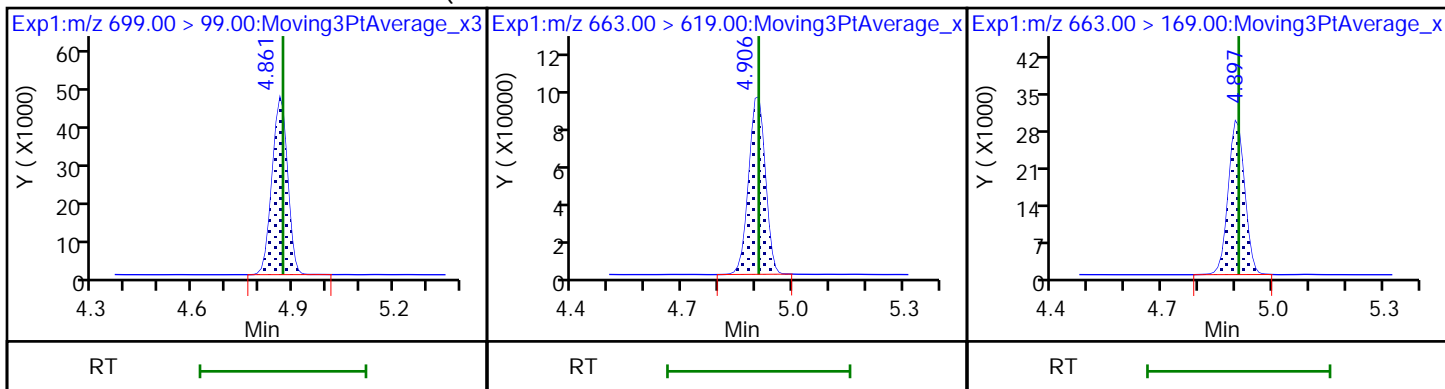
74 1H,1H,2H,2H-perfluorododecanesulfo75 Perfluorododecanesulfonic acid (PF



75 Perfluorododecanesulfonic acid (PF

41 Perfluorotridecanoic acid

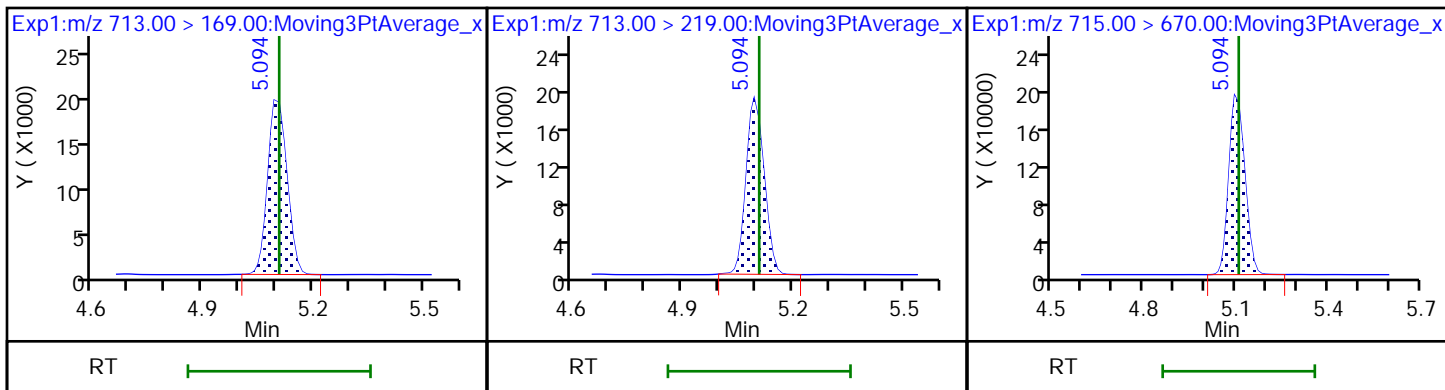
41 Perfluorotridecanoic acid



42 Perfluorotetradecanoic acid

42 Perfluorotetradecanoic acid

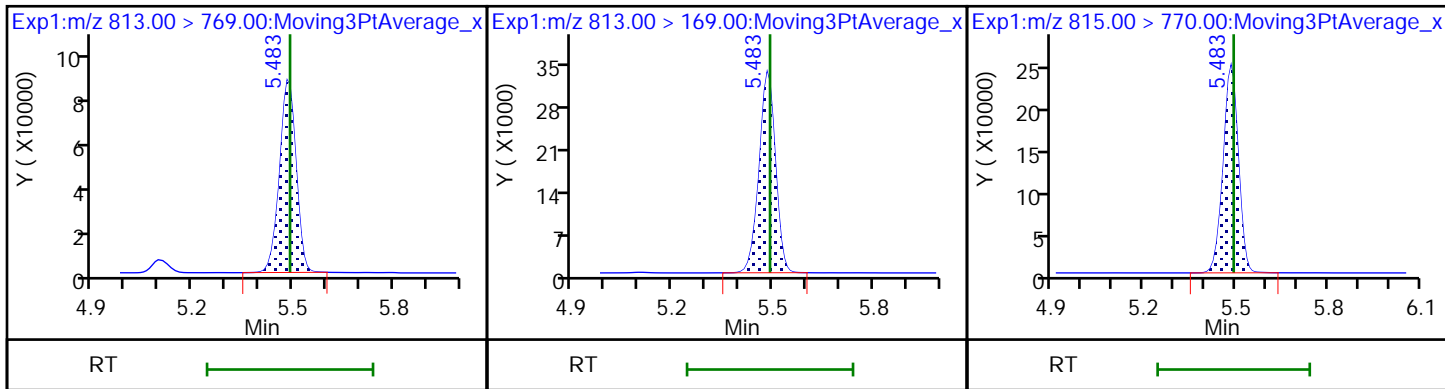
D 43 13C2 PFTeDA



45 Perfluorohexadecanoic acid

45 Perfluorohexadecanoic acid

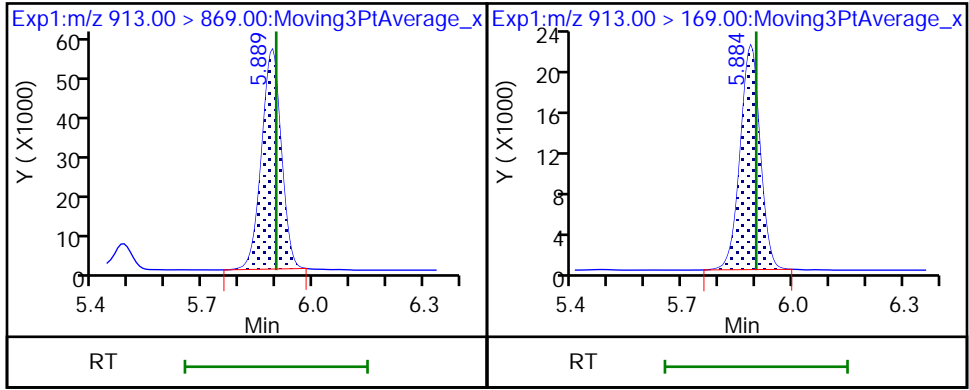
D 44 13C2 PFHxDA





46 Perfluorooctadecanoic acid

46 Perfluorooctadecanoic acid



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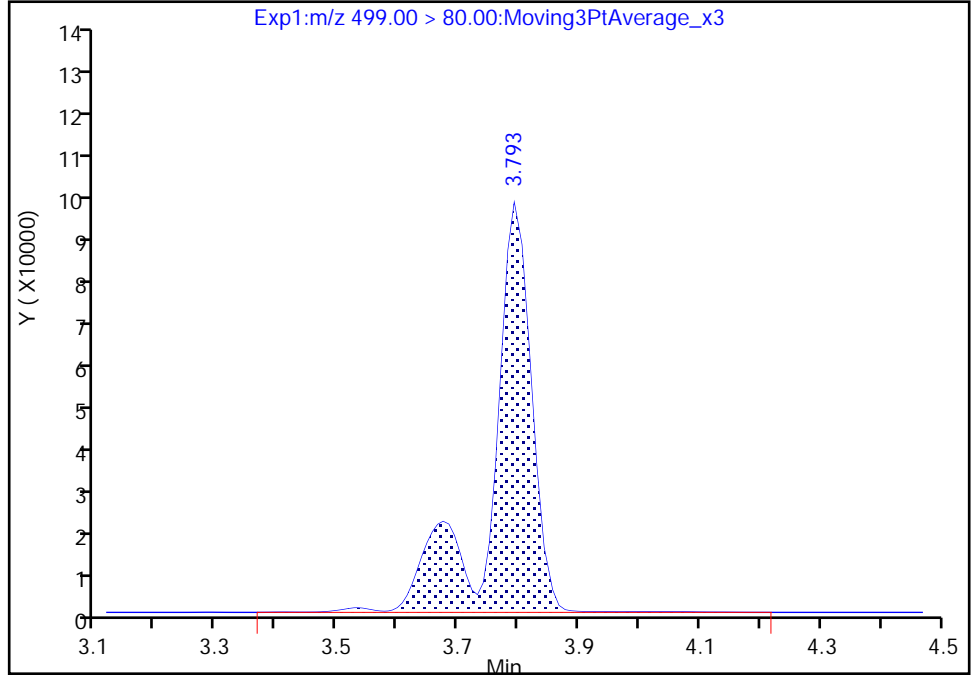
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B004.d  
Injection Date: 24-Dec-2019 14:20:40 Instrument ID: LC812  
Lims ID: LCS 200-150841/2-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 4 Worklist Smp#: 4  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

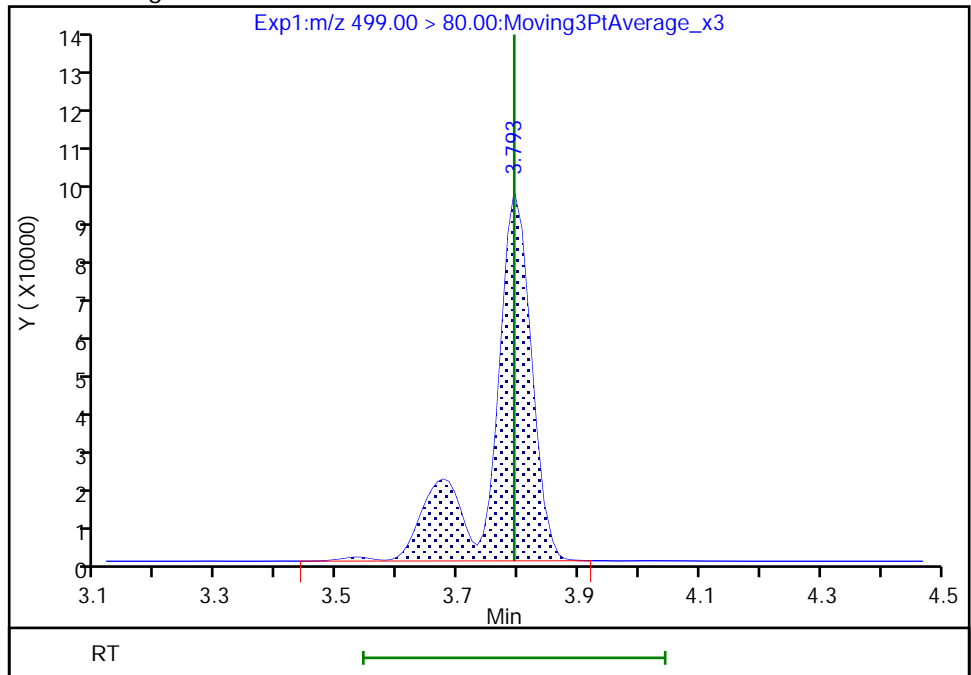
RT: 3.79  
Area: 434767  
Amount: 0.895199  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 431183  
Amount: 0.887819  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 09:37:39

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

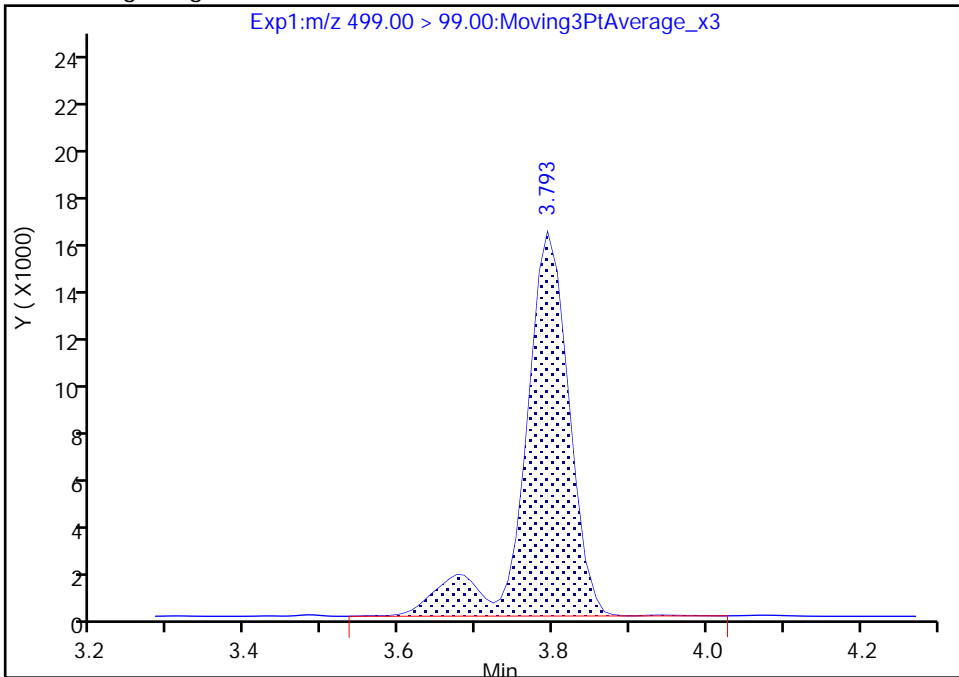
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B004.d  
Injection Date: 24-Dec-2019 14:20:40 Instrument ID: LC812  
Lims ID: LCS 200-150841/2-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 4 Worklist Smp#: 4  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

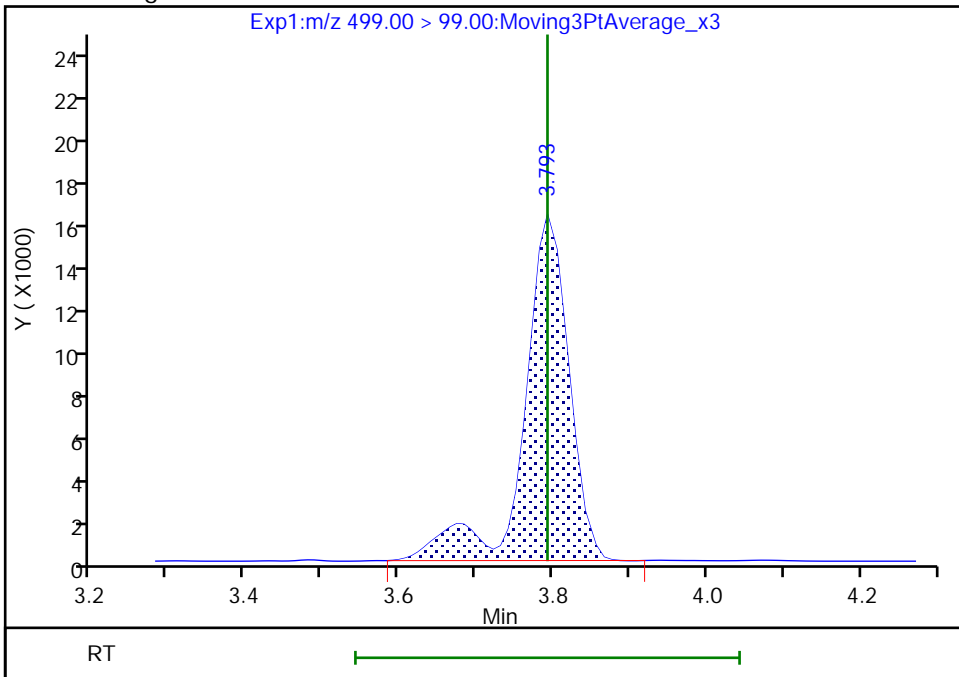
RT: 3.79  
Area: 66826  
Amount: 0.895199  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 66289  
Amount: 0.887819  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 09:37:44

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

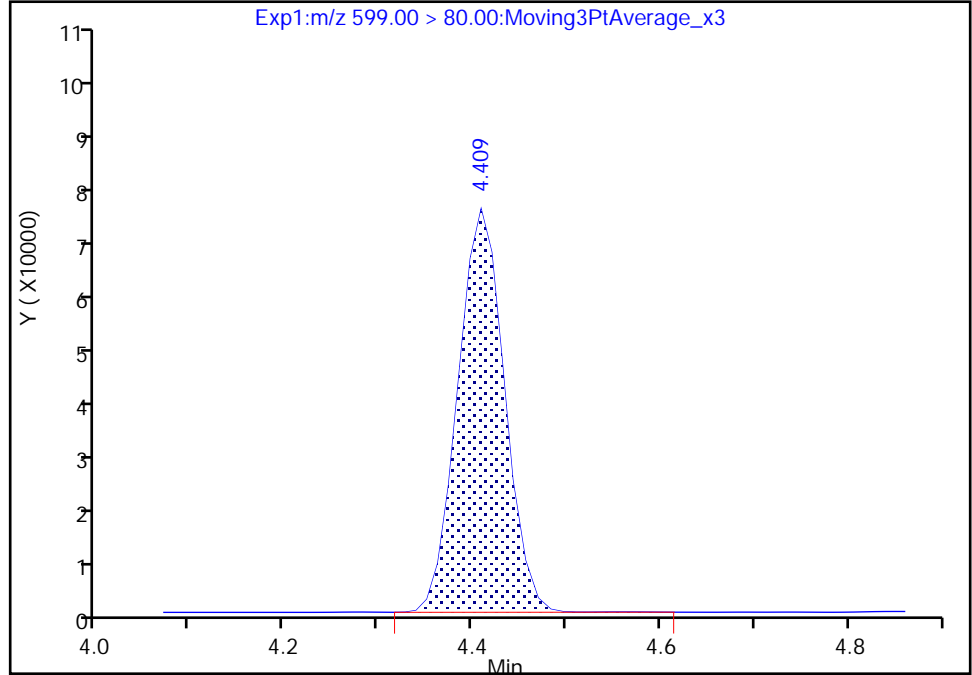
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B004.d  
Injection Date: 24-Dec-2019 14:20:40 Instrument ID: LC812  
Lims ID: LCS 200-150841/2-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 4 Worklist Smp#: 4  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

29 Perfluorodecanesulfonic acid, CAS: 335-77-3

Signal: 1

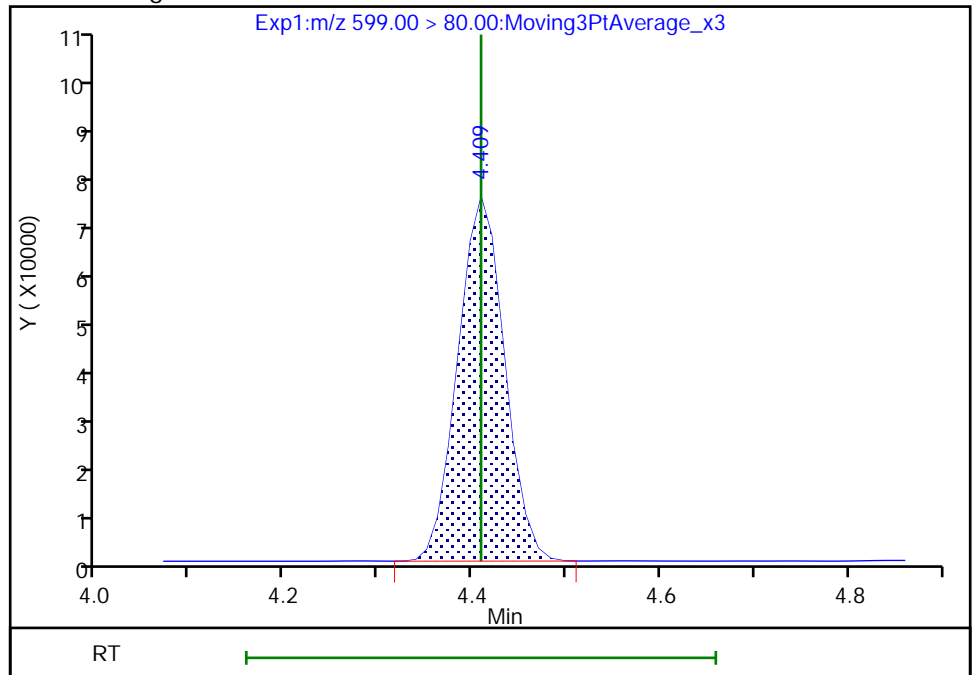
RT: 4.41  
Area: 259655  
Amount: 0.802097  
Amount Units: ng/ml

Processing Integration Results



RT: 4.41  
Area: 259379  
Amount: 0.801245  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 09:36:36

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

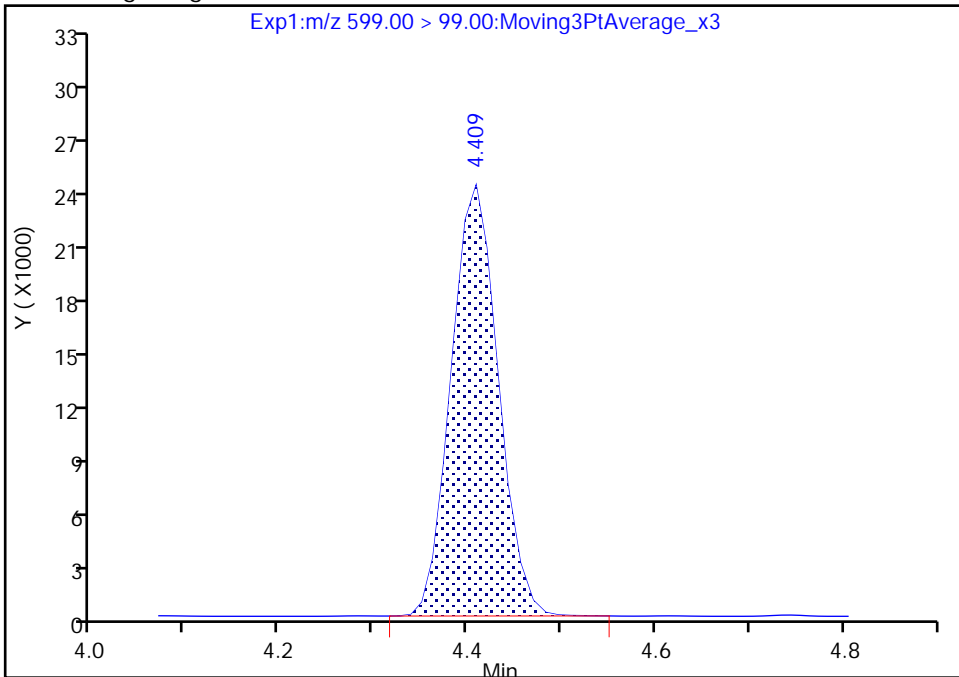
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B004.d  
Injection Date: 24-Dec-2019 14:20:40 Instrument ID: LC812  
Lims ID: LCS 200-150841/2-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 4 Worklist Smp#: 4  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

29 Perfluorodecanesulfonic acid, CAS: 335-77-3

Signal: 2

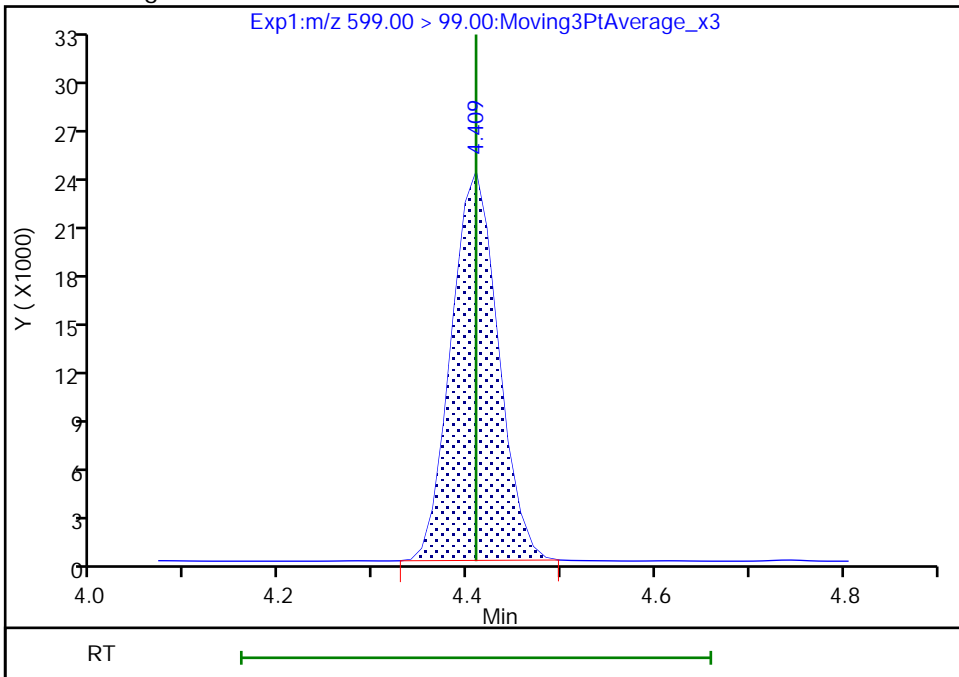
RT: 4.41  
Area: 82851  
Amount: 0.802097  
Amount Units: ng/ml

Processing Integration Results



RT: 4.41  
Area: 82470  
Amount: 0.801245  
Amount Units: ng/ml

Manual Integration Results



Eurofins TestAmerica, Burlington

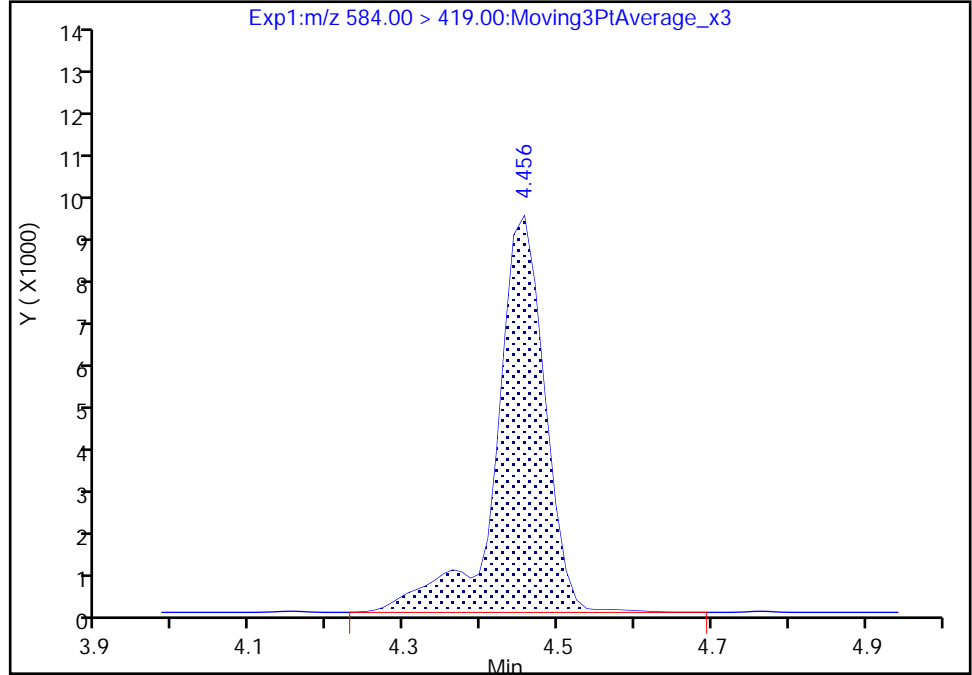
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B004.d  
Injection Date: 24-Dec-2019 14:20:40 Instrument ID: LC812  
Lims ID: LCS 200-150841/2-A  
Client ID:  
Operator ID: lc812tech ALS Bottle#: 4 Worklist Smp#: 4  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

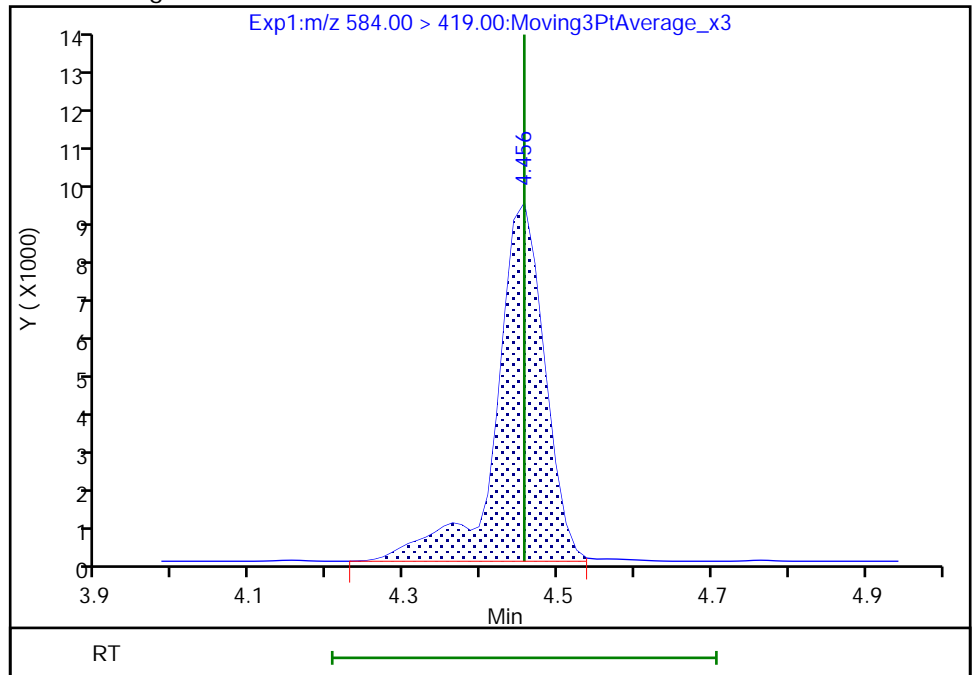
RT: 4.46  
Area: 40353  
Amount: 1.011220  
Amount Units: ng/ml

Processing Integration Results



RT: 4.46  
Area: 40104  
Amount: 1.004981  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 09:35:59

Audit Action: Manually Integrated

Audit Reason: Other

FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS RW 1 DER MS Lab Sample ID: 480-164221-3 MS  
 Matrix: Water Lab File ID: SC122319B011.d  
 Analysis Method: 537 (modified) Date Collected: 12/12/2019 12:10  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 265.1 (mL) Date Analyzed: 12/24/2019 15:18  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 20 (uL) GC Column: C-18 ID: 4.6 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	46.6		1.9	0.94
2706-90-3	Perfluoropentanoic acid (PFPeA)	43.3		1.9	0.59
307-24-4	Perfluorohexanoic acid (PFHxA)	49.7		1.9	0.72
375-85-9	Perfluoroheptanoic acid (PFHpA)	37.6		1.9	0.86
335-67-1	Perfluorooctanoic acid (PFOA)	41.5		1.9	0.76
375-95-1	Perfluorononanoic acid (PFNA)	38.9		1.9	0.25
335-76-2	Perfluorodecanoic acid (PFDA)	37.3		1.9	0.73
2058-94-8	Perfluoroundecanoic acid (PFUnA)	35.3		1.9	0.74
307-55-1	Perfluorododecanoic acid (PFDoA)	37.4		1.9	0.56
72629-94-8	Perfluorotridecanoic acid (PFTriA)	35.0		1.9	0.57
376-06-7	Perfluorotetradecanoic acid (PFTeA)	49.9		1.9	0.87
375-73-5	Perfluorobutanesulfonic acid (PFBS)	34.9		1.9	0.46
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	55.2		1.9	0.75
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	40.4		1.9	0.90
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	84.3		1.9	0.58
335-77-3	Perfluorodecanesulfonic acid (PFDS)	38.1		1.9	0.85
754-91-6	Perfluorooctanesulfonamide (PFOSA)	37.8		9.4	9.4
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	38.1		19	1.6
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	35.4		19	1.4
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	32.5		19	5.2
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	33.9		19	2.7

FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS RW 1 DER MS Lab Sample ID: 480-164221-3 MS  
 Matrix: Water Lab File ID: SC122319B011.d  
 Analysis Method: 537 (modified) Date Collected: 12/12/2019 12:10  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 265.1(mL) Date Analyzed: 12/24/2019 15:18  
 Con. Extract Vol.: 10(mL) Dilution Factor: 1  
 Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	116		50-150
STL01892	13C4 PFHpA	115		50-150
STL00990	13C4 PFOA	113		50-150
STL00991	13C4 PFOS	101		50-150
STL00995	13C5 PFNA	101		50-150
STL00992	13C4 PFBA	93		25-150
STL00993	13C2 PFHxA	104		50-150
STL00996	13C2 PFDA	97		50-150
STL00997	13C2 PFUnA	98		50-150
STL00998	13C2 PFDoA	90		50-150
STL01056	13C8 FOSA	94		25-150
STL01893	13C5 PFPeA	114		25-150
STL02116	13C2 PFTeDA	91		50-150
STL02118	d3-NMeFOSAA	83		50-150
STL02117	d5-NEtFOSAA	94		50-150
STL02279	M2-6:2 FTS	90		25-150
STL02280	M2-8:2 FTS	95		25-150
STL02337	13C3 PFBS	113		50-150



Eurofins TestAmerica, Burlington  
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B011.d  
 Lims ID: 480-164221-C-3-B MS  
 Client ID: CS RW 1 DER  
 Sample Type: MS  
 Inject. Date: 24-Dec-2019 15:18:00 ALS Bottle#: 11 Worklist Smp#: 11  
 Injection Vol: 20.0 ul Dil. Factor: 1.0000  
 Sample Info: 480-164221-C-3-B MS  
 Misc. Info.: 200-0039355-011 Plate: 1 Rack: 2  
 Operator ID: lc812tech Instrument ID: LC812  
 Method: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\PFC\_LC812.m  
 Limit Group: LC\_PFC\_ICAL  
 Last Update: 30-Dec-2019 15:06:05 Calib Date: 06-Dec-2019 15:13:26  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Column 1 : C-18 ( 4.60 mm) Det: EXP1  
 Process Host: CTX0330

First Level Reviewer: lautenschlagery Date: 27-Dec-2019 12:11:04  
 Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	1.907	1.908	-0.001	0.557	1687054	2.32	92.8	2727	
2 Perfluorobutanoic acid										M
212.90 > 169.00	1.907	1.908	-0.001	1.000	829795	1.24		124	260	M
D 3 13C5 PFPeA	267.90 > 223.00	2.257	2.257	0.0	0.660	1578400	2.84	114	5775	
4 Perfluoropentanoic acid	262.90 > 219.00	2.257	2.271	-0.014	1.000	821539	1.15	115	79.5	
D 47 13C3 PFBS	301.90 > 80.00	2.284	2.285	-0.001	0.668	1745560	2.63	113	288595	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	2.284	2.285	-0.001	1.000	754133	0.9242	Target=2.03	105	794
298.90 > 99.00	2.284	2.285	-0.001	1.000	392678		1.92(1.01-3.04)		576	
D 60 M2-4:2 FTS	329.00 > 81.00	2.611	2.611	0.0	0.763	119630	1.93	82.8	205	
61 1H,1H,2H,2H-perfluorohexanesulfoni	327.00 > 307.00	2.611	2.611	0.0	1.000	83372	0.9394	101	1631	
D 7 13C2 PFHxA	315.00 > 270.00	2.648	2.648	0.0	0.774	1607869	2.59	104	6146	
6 Perfluorohexanoic acid	313.00 > 269.00	2.648	2.661	-0.013	1.000	866000	1.32	Target=13.76	132	320
313.00 > 119.00	2.648	2.661	-0.013	1.000	76080		11.38(6.88-20.64)		274	
70 Perfluoropentanesulfonic acid	349.00 > 80.00	2.661	2.661	-0.001	0.874	688770	0.9774	Target=3.50	104	1327
349.00 > 99.00	2.661	2.661	-0.001	0.874	221362		3.11(1.75-5.25)		522	
D 64 13C3 HFPO-DA	332.10 > 287.00	2.768	2.768	0.0	0.809	94726	3.50	140	1523	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
67 Perfluoro(2-propoxypropanoic) acid										M
329.10 > 285.00	2.768	2.776	-0.008	1.000	117399	0.8629		86.3	55.2	M
D 11 18O2 PFHxS										
403.00 > 84.00	3.044	3.044	0.0	0.890	1435127	2.74		116	7208	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.044	3.044	0.0	1.000	1004992	1.46	Target=3.90	161	1208	M
399.00 > 99.00	3.044	3.044	0.0	1.000	245522		4.09(1.95-5.85)		750	M
D 9 13C4 PFHpA										
367.00 > 322.00	3.044	3.044	0.0	0.890	1683661	2.86		115	4836	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.044	3.044	0.0	1.000	709414	1.00	Target=3.95	99.6	346	
363.00 > 169.00	3.044	3.044	0.0	1.000	221173		3.21(1.97-5.92)		785	
77 DONA										
377.00 > 251.00	3.078	3.089	-0.011	0.812	1547483	1.04	Target=2.49	110	4149	
377.00 > 85.00	3.078	3.089	-0.011	0.812	632434		2.45(1.24-3.73)		1969	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.413	3.413	0.0	0.900	552289	1.07	Target=6.46	112	956	
449.00 > 99.00	3.413	3.413	0.0	0.900	85111		6.49(3.23-9.69)		781	
13 1H,1H,2H,2H-perfluorooctanesulfoni										M
427.00 > 407.00	3.413	3.413	0.0	1.000	66080	0.8623		91.0	654	M
D 12 M2-6:2 FTS										
429.00 > 81.00	3.413	3.413	0.0	0.998	192848	2.14		90.2	562	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.430	3.430	0.0	1.002	861064	1.10	Target=2.40	110	367	
413.00 > 169.00	3.422	3.430	-0.008	1.000	384246		2.24(1.20-3.60)		1584	
D 14 13C4 PFOA										
417.00 > 372.00	3.422	3.430	-0.008	1.000	1762777	2.83		113	4888	
* 62 13C2 PFOA										
415.00 > 370.00	3.422	3.430	-0.008		1716790	2.50			2745	
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.793	0.0	1.108	1007100	2.42		101	3554	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.793	3.793	0.0	1.000	1016834	2.24	Target=5.74	241	2263	M
499.00 > 99.00	3.793	3.793	0.0	1.000	158920		6.40(2.87-8.61)		1034	M
D 19 13C5 PFNA										
468.00 > 423.00	3.817	3.817	0.0	1.116	1442244	2.51		101	8672	
20 Perfluorononanoic acid										
463.00 > 419.00	3.817	3.817	0.0	1.000	583281	1.03	Target=7.01	103	311	
463.00 > 169.00	3.817	3.817	0.0	1.000	91542		6.37(3.50-10.51)		1267	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.984	3.984	0.0	1.050	418001	0.8044		86.3	3447	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.129	4.129	0.0	1.089	315350	0.9058	Target=3.14	94.4	1485	
549.00 > 99.00	4.129	4.129	0.0	1.089	104002		3.03(1.57-4.71)		531	
D 23 13C2 PFDA										
515.00 > 470.00	4.153	4.164	-0.011	1.214	1375077	2.43		97.3	7958	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
24 Perfluorodecanoic acid										
513.00 > 469.00	4.164	4.164	0.0	1.003	526474	0.9894	Target=7.28	98.9	712	
513.00 > 169.00	4.153	4.164	-0.011	1.000	80504		6.54(3.64-10.91)		1118	
25 1H,1H,2H,2H-perfluorodecanesulfonyl										
527.00 > 507.00	4.164	4.164	0.0	1.000	42308	0.8987		93.8	701	M
D 26 M2-8:2 FTS										
529.00 > 81.00	4.164	4.175	-0.011	1.217	244248	2.28		95.1	1276	
D 21 13C8 FOSA										
506.00 > 78.00	4.218	4.218	0.0	1.233	1739934	2.35		94.1	5438	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.218	4.218	0.0	1.000	693766	1.00		100	2379	
35 MeFOSA										
512.00 > 169.00	4.317	4.283	0.034		1305	NC			11.0	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.305	4.305	0.0	1.258	113219	2.08		83.2	830	
28 N-methylperfluorooctanesulfonamide										
570.00 > 419.00	4.317	4.317	0.0	1.003	39713	1.01		101	672	M
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.409	4.409	0.0	1.162	306166	1.01	Target=2.76	105	1944	
599.00 > 99.00	4.409	4.409	0.0	1.162	95038		3.22(1.38-4.14)		1202	
D 30 13C2 PFUnA										
565.00 > 520.00	4.443	4.443	0.0	1.298	1173295	2.44		97.6	6548	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.443	4.443	0.0	1.000	372125	0.9351	Target=5.78	93.5	595	
563.00 > 169.00	4.443	4.443	0.0	1.000	75675		4.92(2.89-8.67)		1225	
33 N-ethylperfluorooctanesulfonamide										
584.00 > 419.00	4.456	4.456	0.0	1.003	44072	0.9389		93.9	524	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.443	4.456	-0.013	1.298	141783	2.35		94.0	958	
66 11-Chloroeicosafuoro-3-oxaundecan										
631.00 > 451.00	4.537	4.551	-0.014	1.196	361011	0.7368		78.2	2882	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.683	4.683	0.0	1.000	436329	0.99	Target=5.13	99.0	138	
613.00 > 169.00	4.683	4.683	0.0	1.000	96233		4.53(2.56-7.69)		1739	
D 36 13C2 PFDa										
615.00 > 570.00	4.683	4.683	0.0	1.369	1192032	2.26		90.4	5305	
74 1H,1H,2H,2H-perfluorododecanesulfonyl										
627.00 > 607.00	4.704	4.704	0.0	1.130	26301	0.8800		91.3	815	
75 Perfluorododecanesulfonic acid (PF)										
699.00 > 80.00	4.861	4.870	-0.009	1.282	97235	0.8435	Target=0.45	87.1	259	
699.00 > 99.00	4.861	4.870	-0.009	1.282	229820		0.42(0.22-0.67)		2932	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.906	4.906	0.0	1.048	388040	0.9271	Target=3.82	92.7	131	
663.00 > 169.00	4.906	4.906	0.0	1.048	123379		3.15(1.91-5.74)		1228	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.108	5.108	0.0	1.000	107060	1.32	Target=1.05	132	1858	
713.00 > 219.00	5.094	5.108	-0.014	0.997	88942		1.20(0.52-1.57)		1453	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 43 13C2 PFTeDA										
715.00 > 670.00	5.108	5.108	0.0	1.493	1006214	2.28		91.1	7738	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.482	5.491	-0.009	1.000	398033	0.99	Target=3.20	99.1	184	
813.00 > 169.00	5.482	5.491	-0.009	1.000	149948		2.65(1.60-4.80)		2470	
D 44 13C2 PFHxDA										
815.00 > 770.00	5.482	5.491	-0.009	1.602	1103938	2.72		109	7518	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.889	5.899	-0.010	1.074	268112	0.8407	Target=2.86	84.1	102	
913.00 > 169.00	5.884	5.899	-0.015	1.073	107204		2.50(1.43-4.29)		1796	

**QC Flag Legend**

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B011.d

Injection Date: 24-Dec-2019 15:18:00

Instrument ID: LC812

Lims ID: 480-164221-C-3-B MS

Client ID: CS RW 1 DER

Operator ID: lc812tech

ALS Bottle#: 11

Worklist Smp#: 11

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

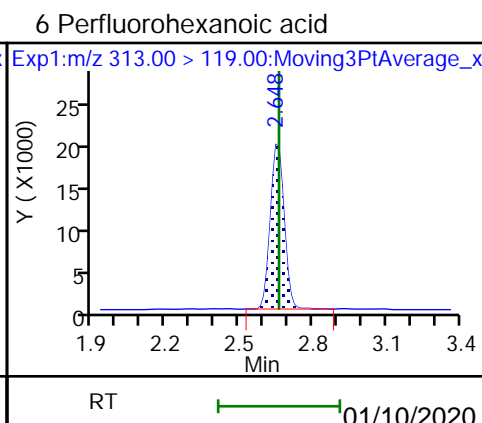
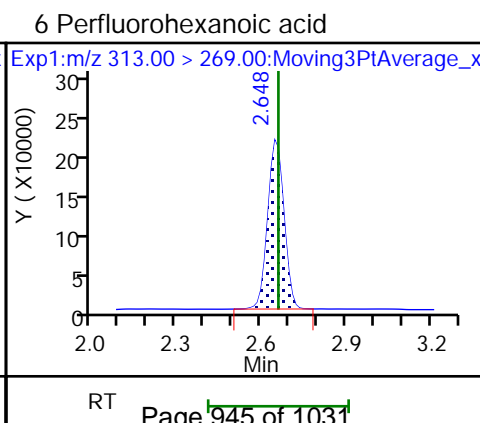
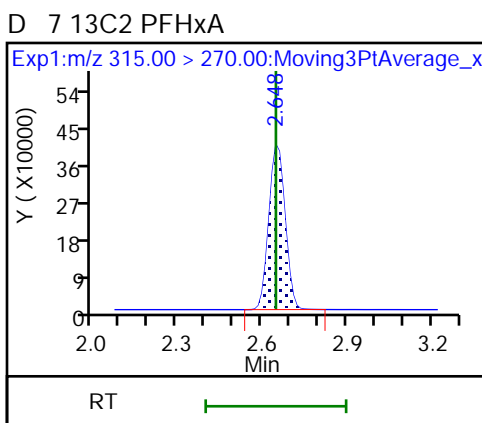
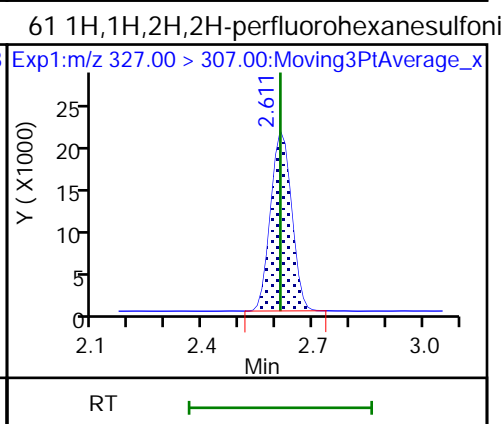
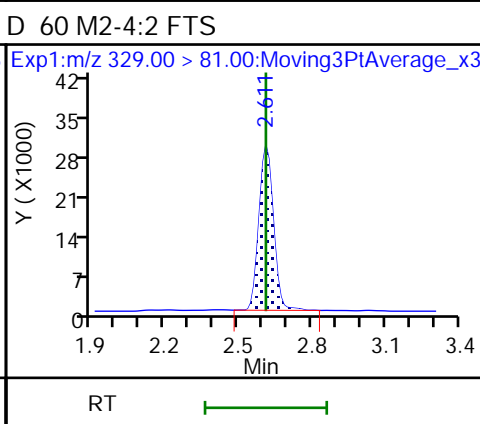
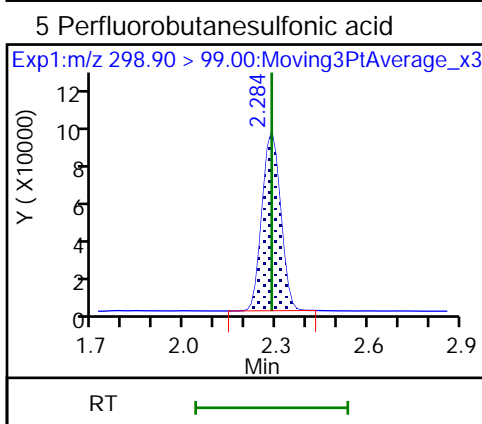
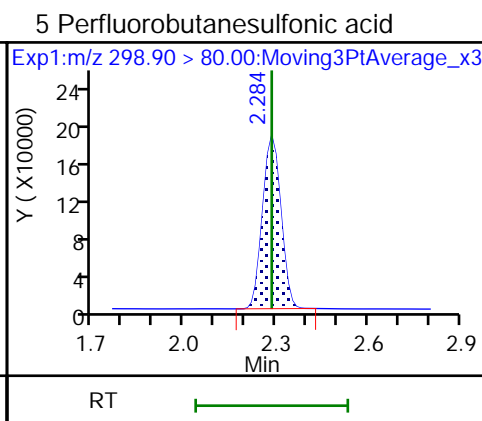
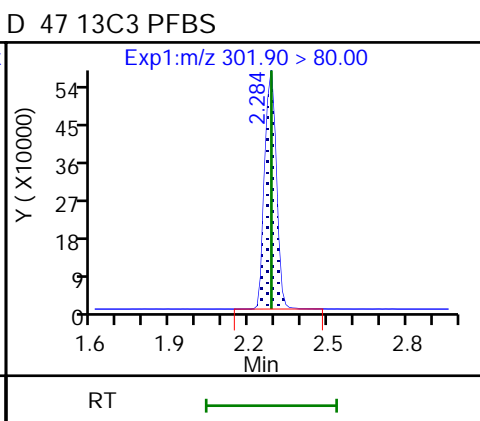
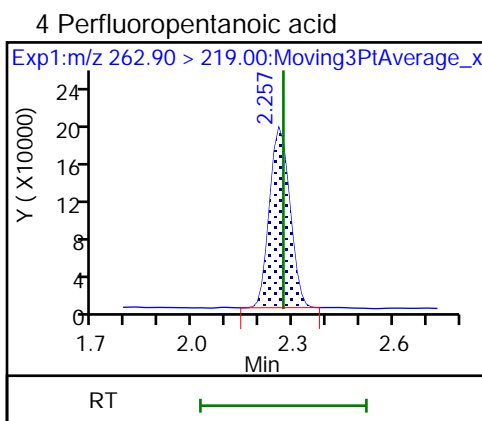
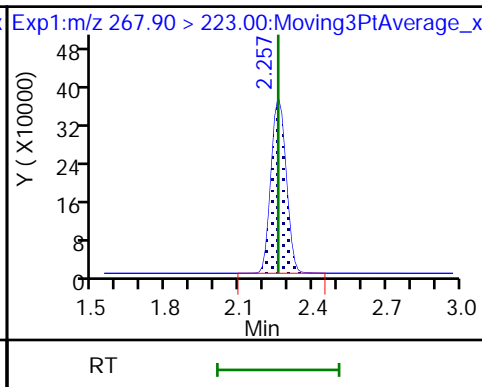
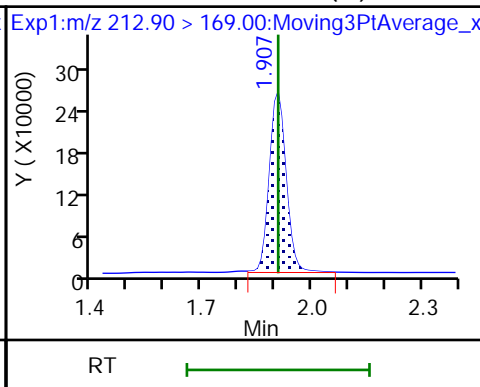
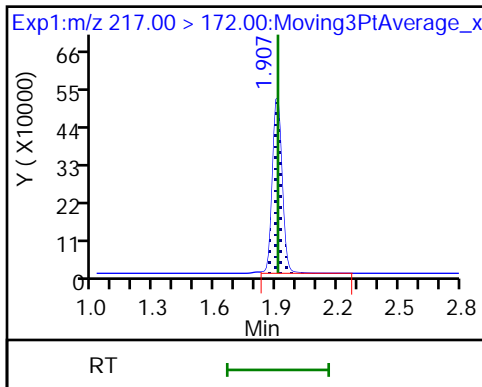
Method: PFC\_LC812

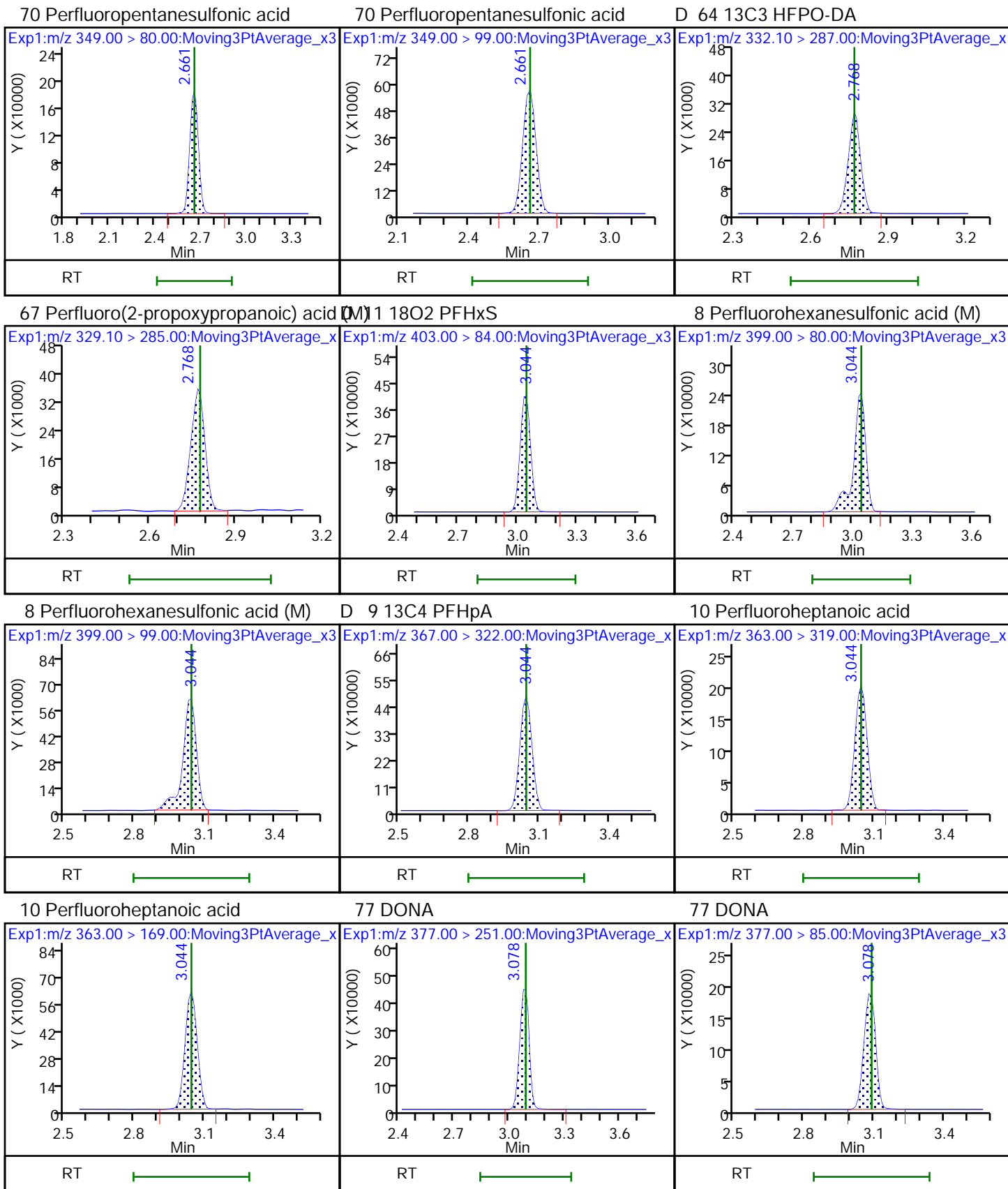
Limit Group: LC\_PFC\_ICAL

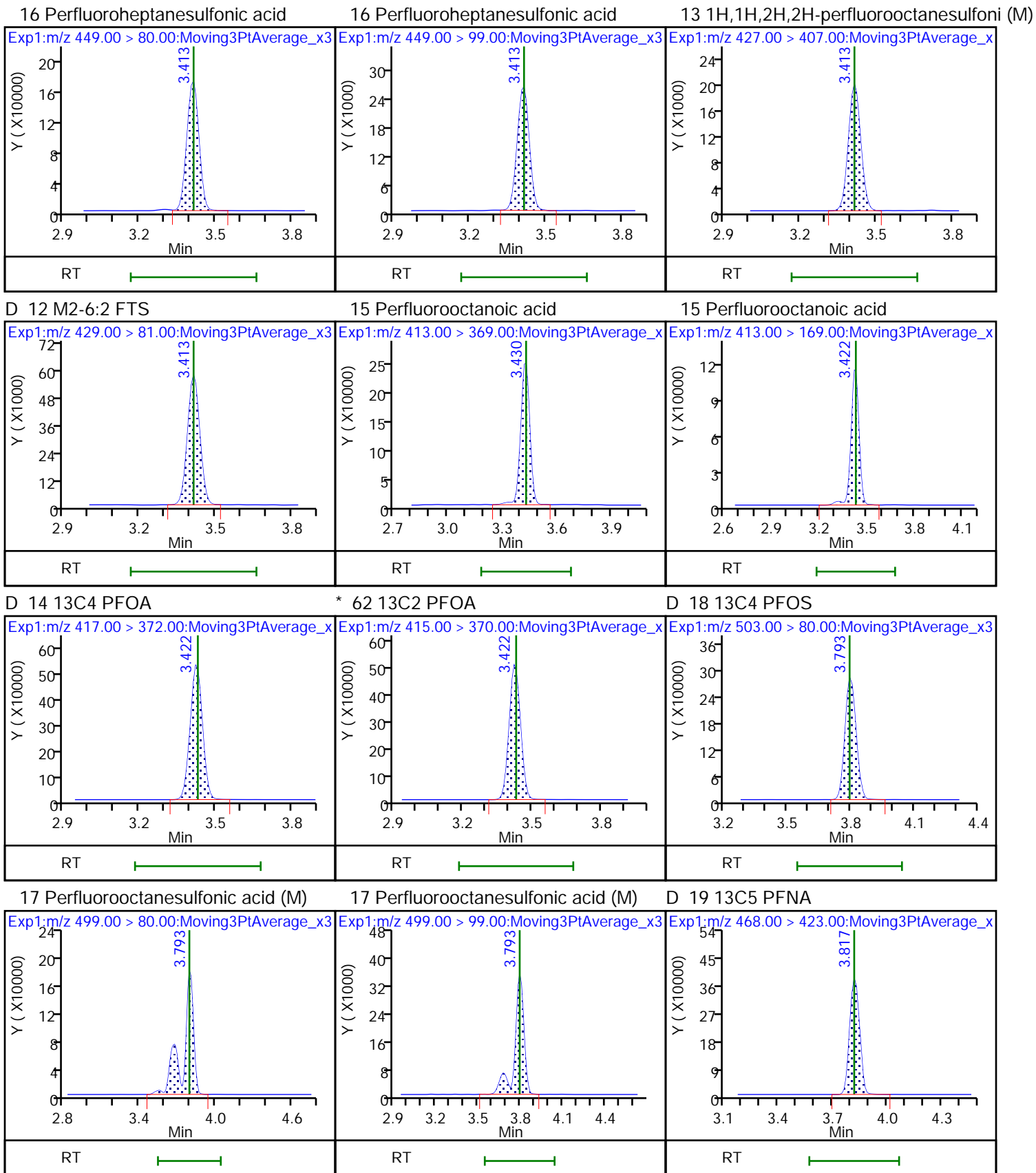
D 1 13C4 PFBA

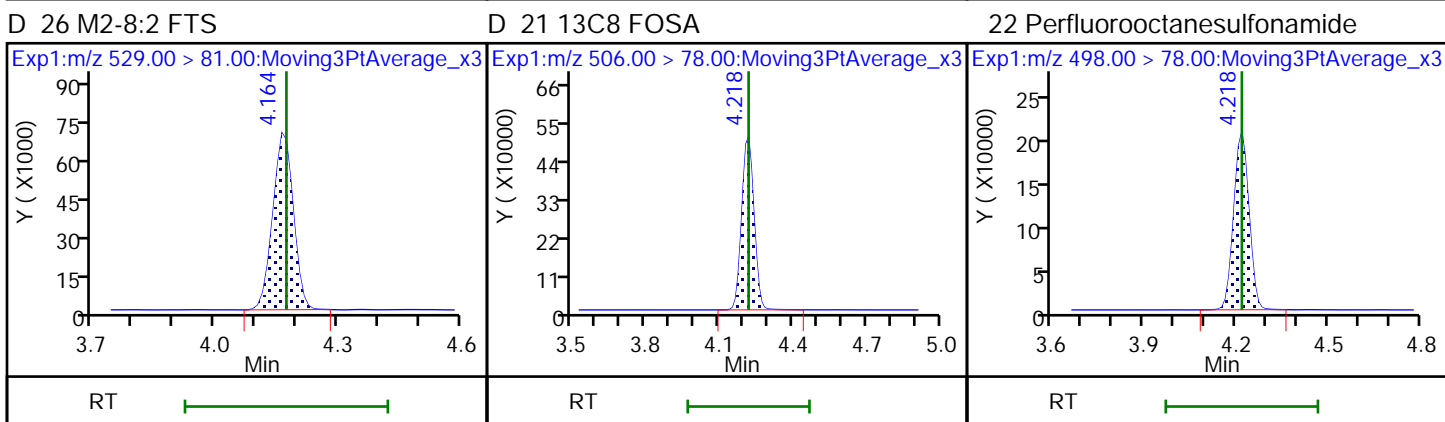
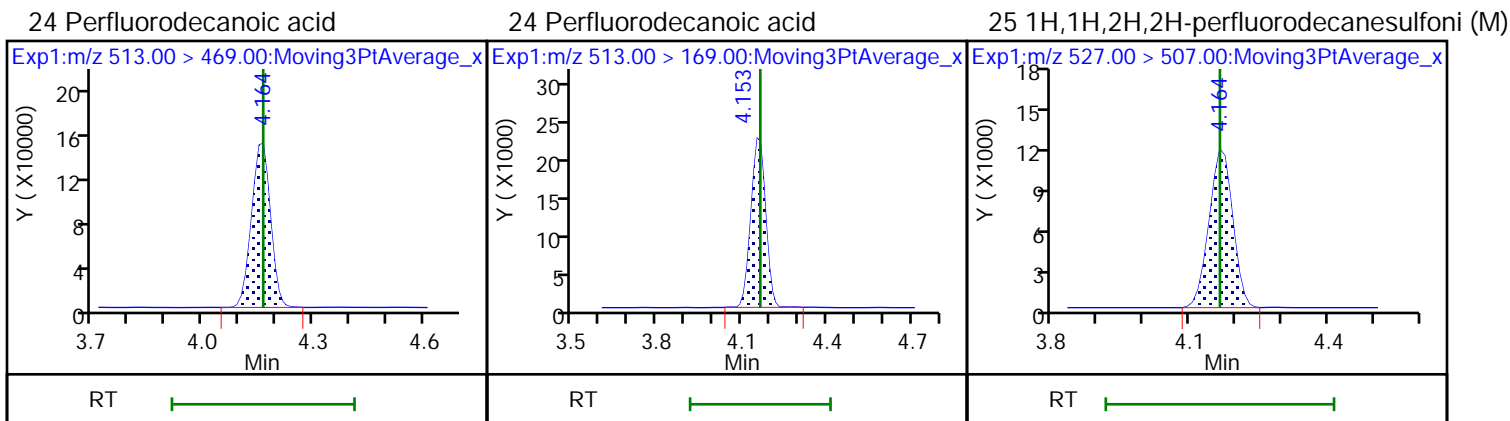
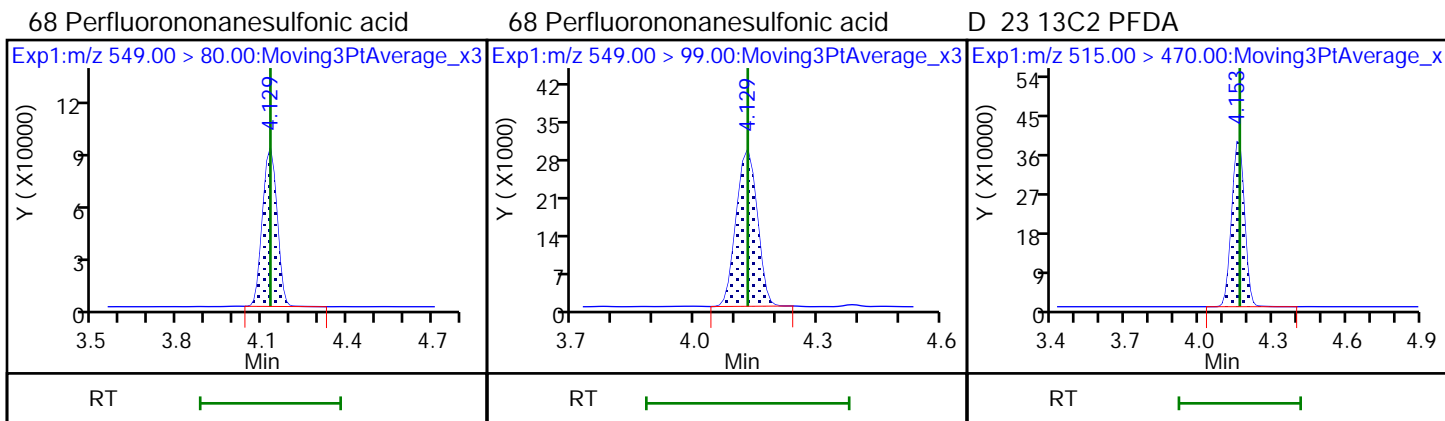
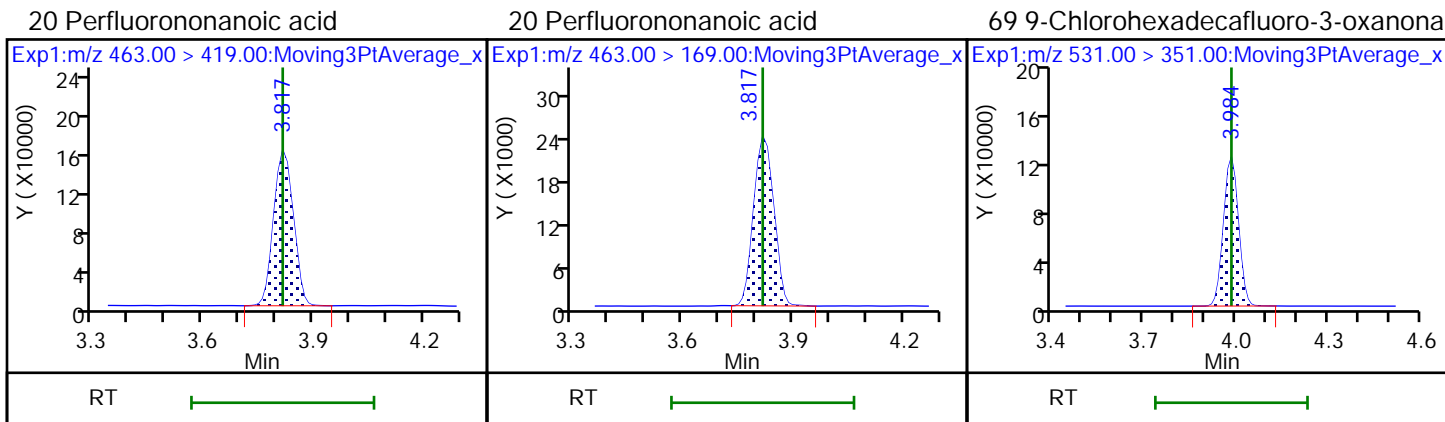
2 Perfluorobutanoic acid (M)

D 3 13C5 PFPeA





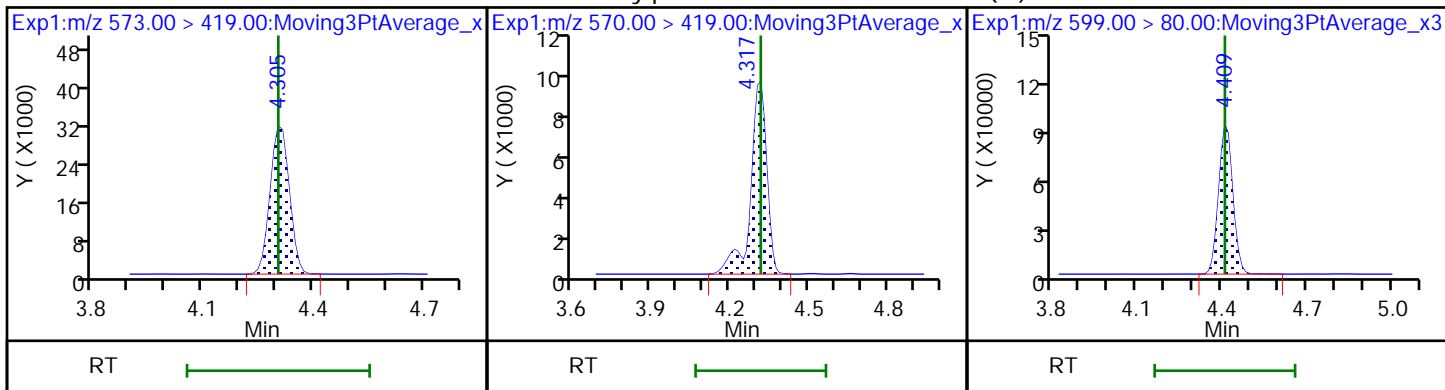






D 27 d3-NMeFOSAA

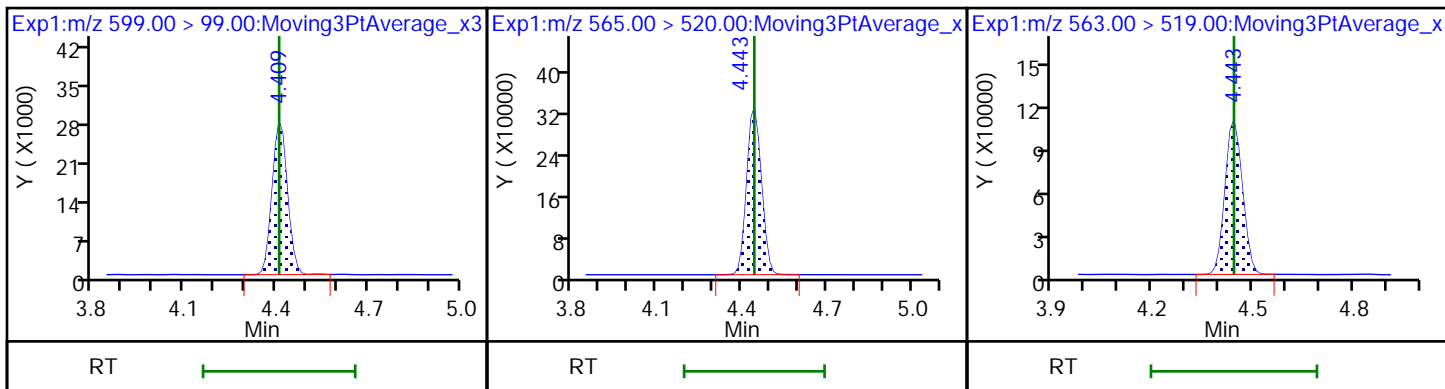
28 N-methylperfluorooctanesulfonamido (28) Perfluorodecanesulfonic acid



29 Perfluorodecanesulfonic acid

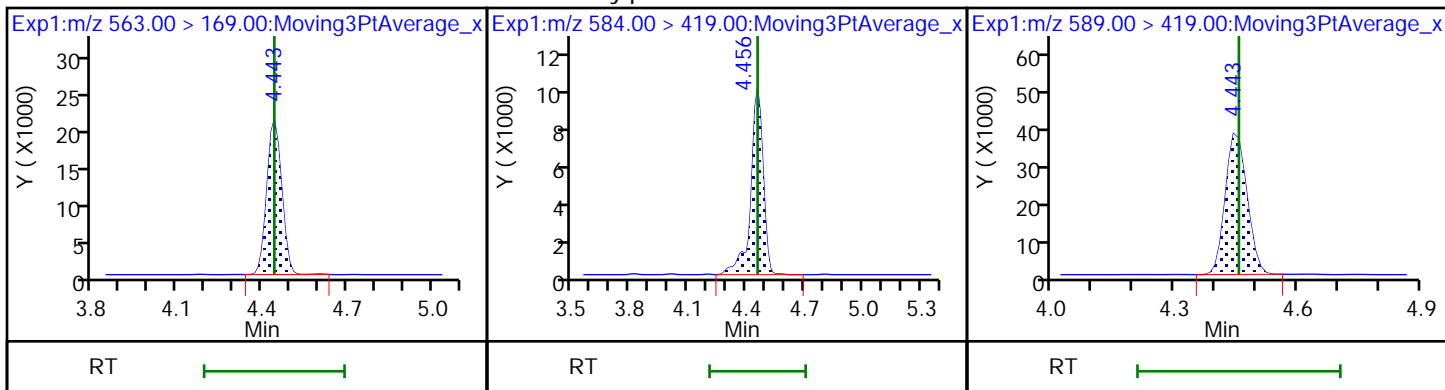
D 30 13C2 PFUoA

31 Perfluoroundecanoic acid



31 Perfluoroundecanoic acid

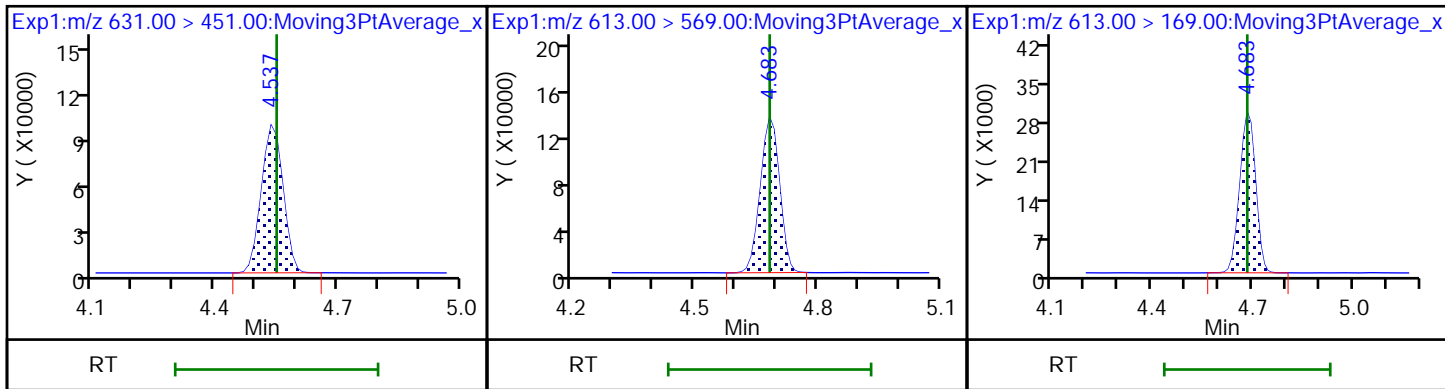
33 N-ethylperfluorooctanesulfonamido (33) D 32 d5-NEtFOSAA



66 11-Chloroeicosafuoro-3-oxaundecan

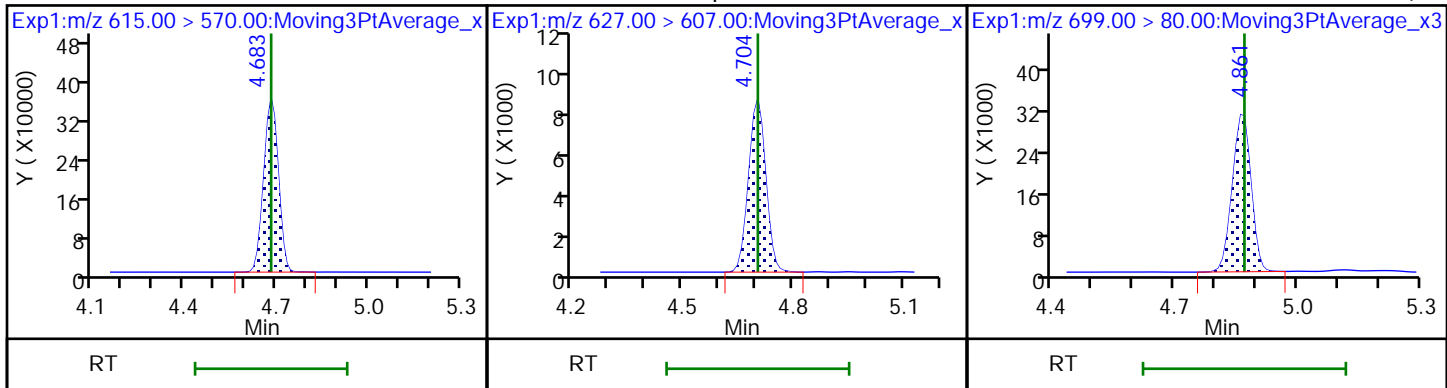
37 Perfluorododecanoic acid

37 Perfluorododecanoic acid



D 36 13C2 PFDaA

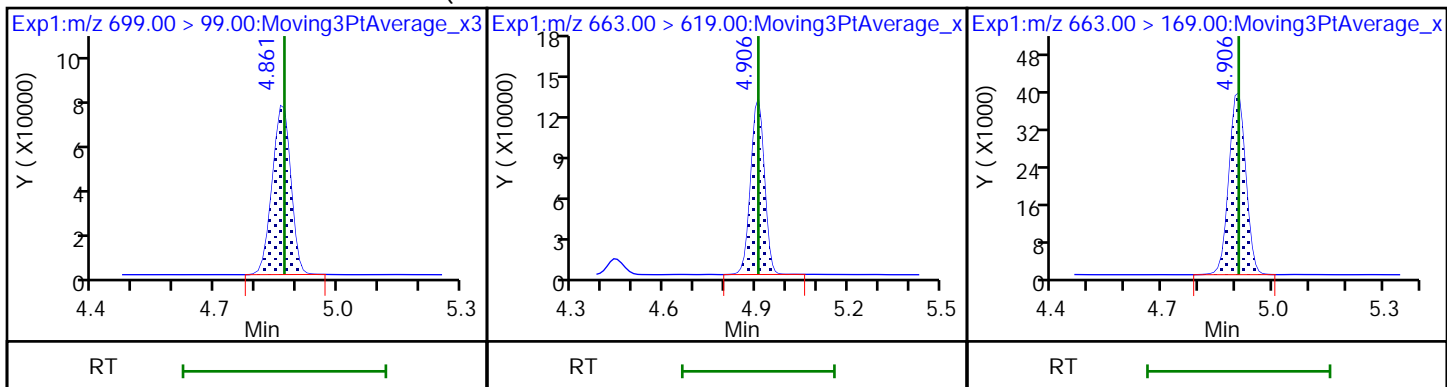
74 1H,1H,2H,2H-perfluorododecanesulfo75 Perfluorododecanesulfonic acid (PF



75 Perfluorododecanesulfonic acid (PF

41 Perfluorotridecanoic acid

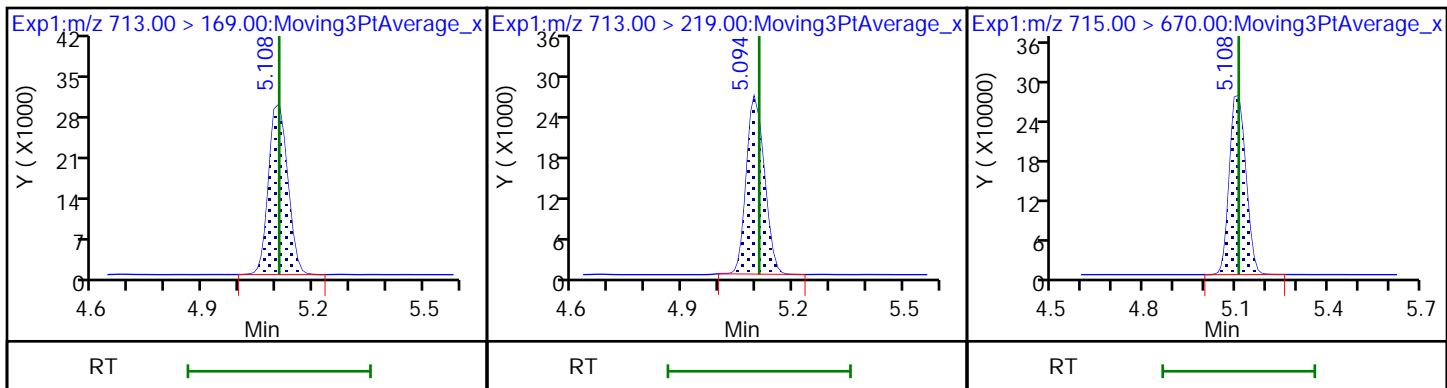
41 Perfluorotridecanoic acid



42 Perfluorotetradecanoic acid

42 Perfluorotetradecanoic acid

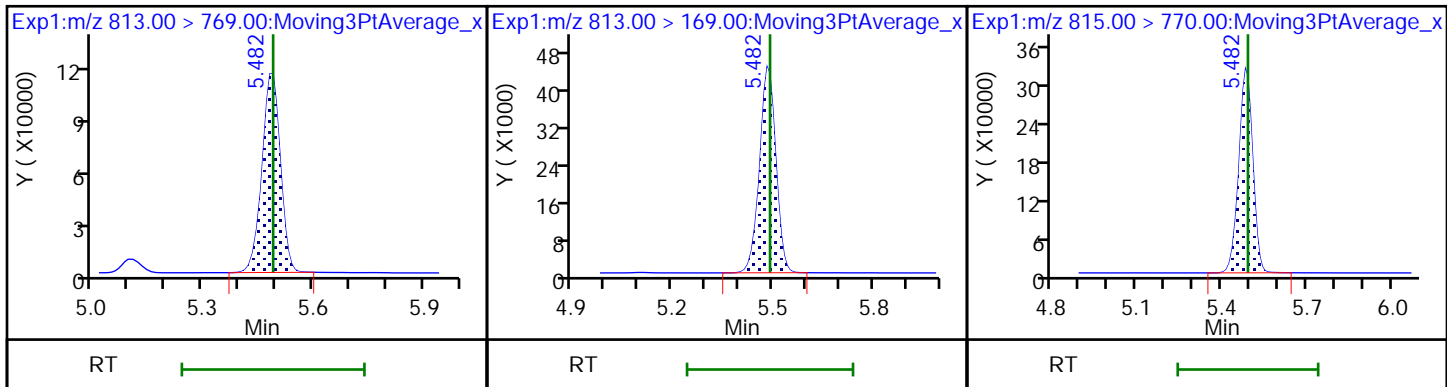
D 43 13C2 PFTeDA



45 Perfluorohexadecanoic acid

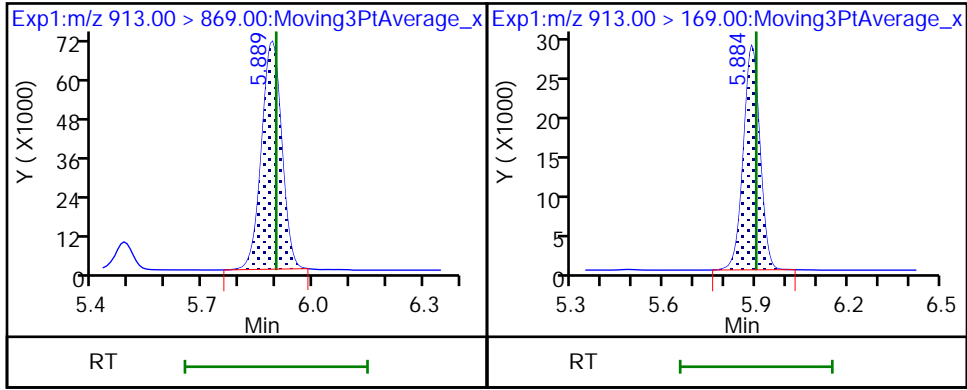
45 Perfluorohexadecanoic acid

D 44 13C2 PFHxDA



46 Perfluorooctadecanoic acid

46 Perfluorooctadecanoic acid



Eurofins TestAmerica, Burlington

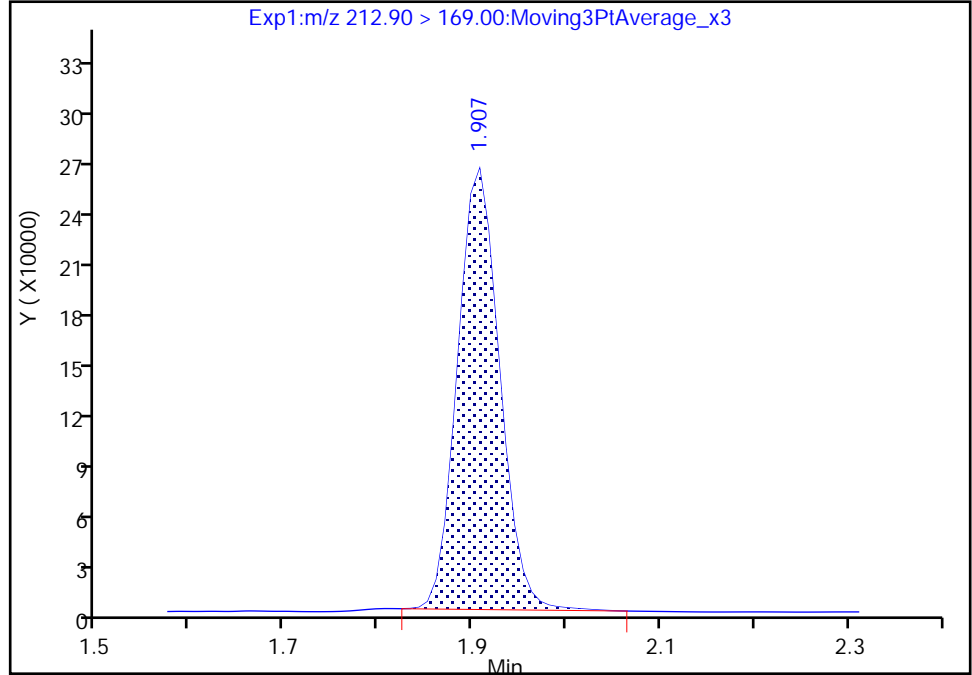
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Injection Date: 24-Dec-2019 15:18:00 Instrument ID: LC812  
Lims ID: 480-164221-C-3-B MS  
Client ID: CS RW 1 DER  
Operator ID: lc812tech ALS Bottle#: 11 Worklist Smp#: 11  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

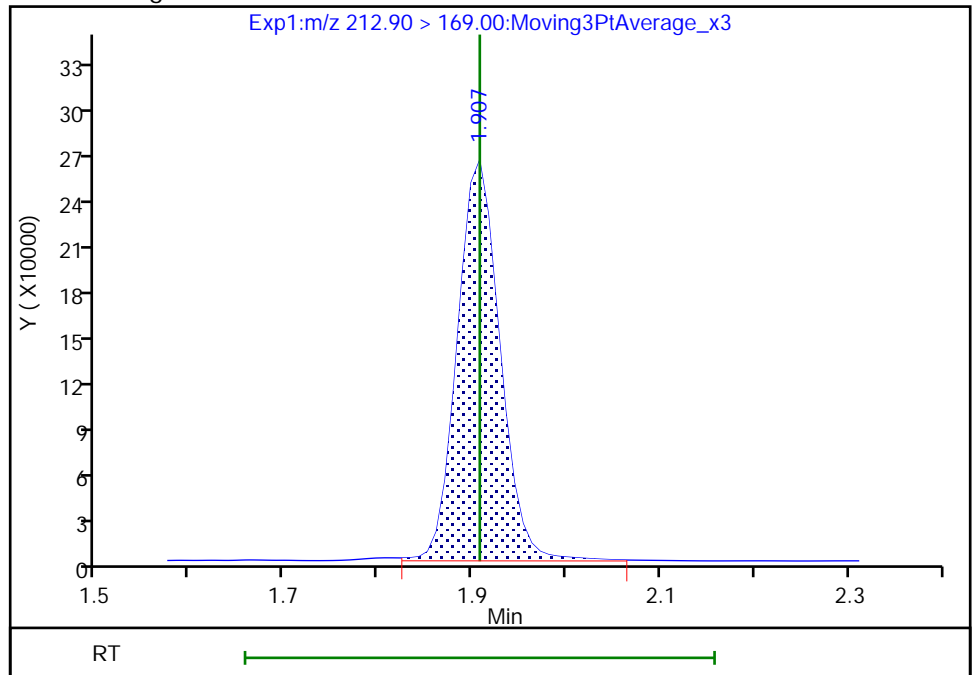
RT: 1.91  
Area: 811904  
Amount: 1.209293  
Amount Units: ng/ml

Processing Integration Results



RT: 1.91  
Area: 829795  
Amount: 1.235941  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 12:05:40

Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

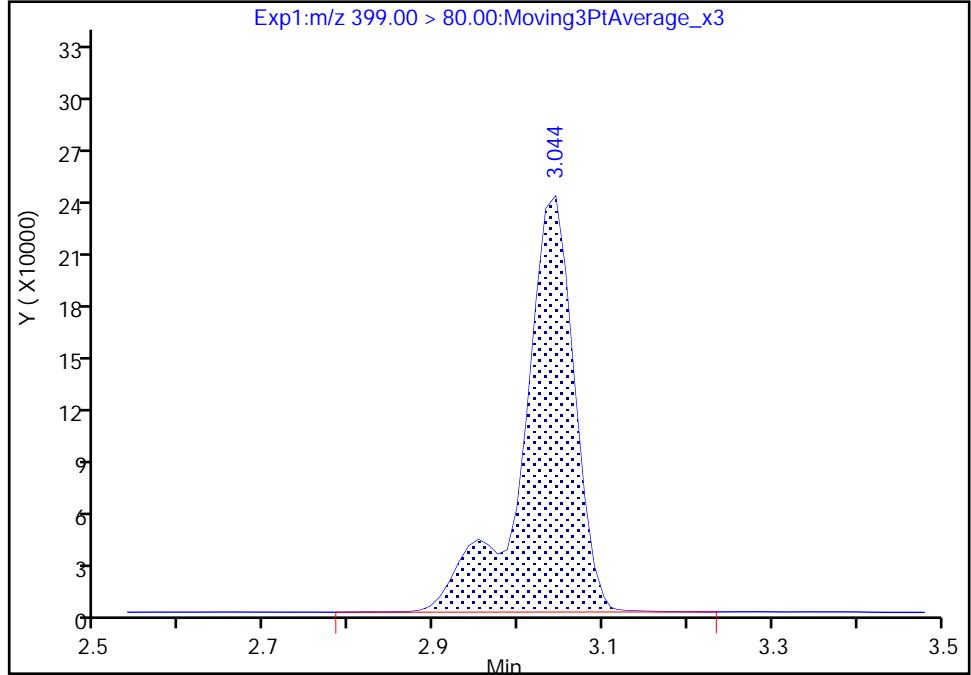
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Injection Date: 24-Dec-2019 15:18:00 Instrument ID: LC812  
Lims ID: 480-164221-C-3-B MS  
Client ID: CS RW 1 DER  
Operator ID: lc812tech ALS Bottle#: 11 Worklist Smp#: 11  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

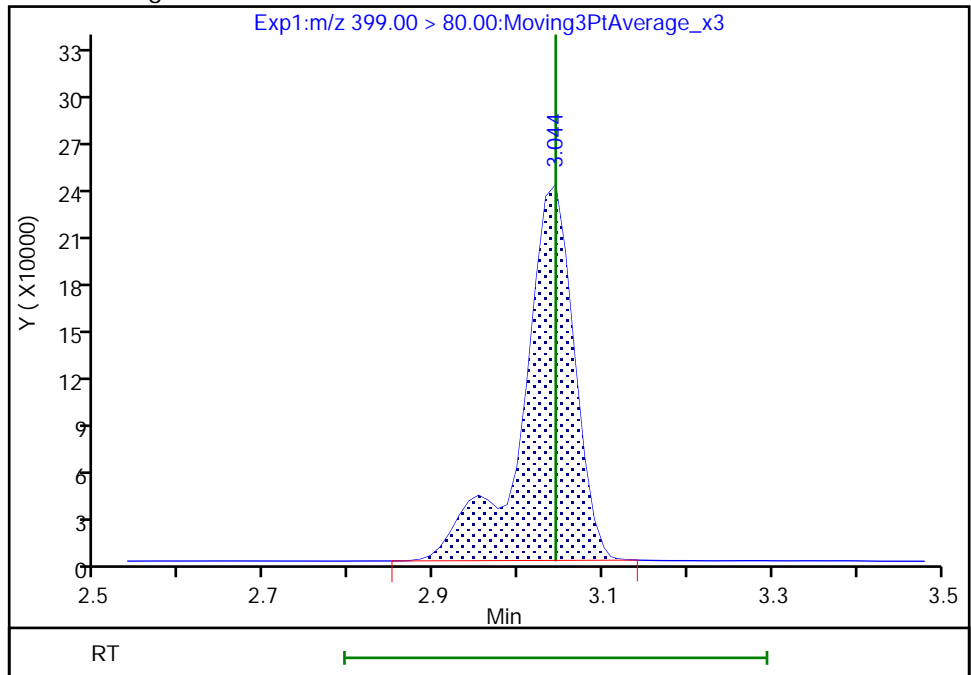
RT: 3.04  
Area: 1010870  
Amount: 1.471915  
Amount Units: ng/ml

Processing Integration Results



RT: 3.04  
Area: 1004992  
Amount: 1.463356  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 12:06:13  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

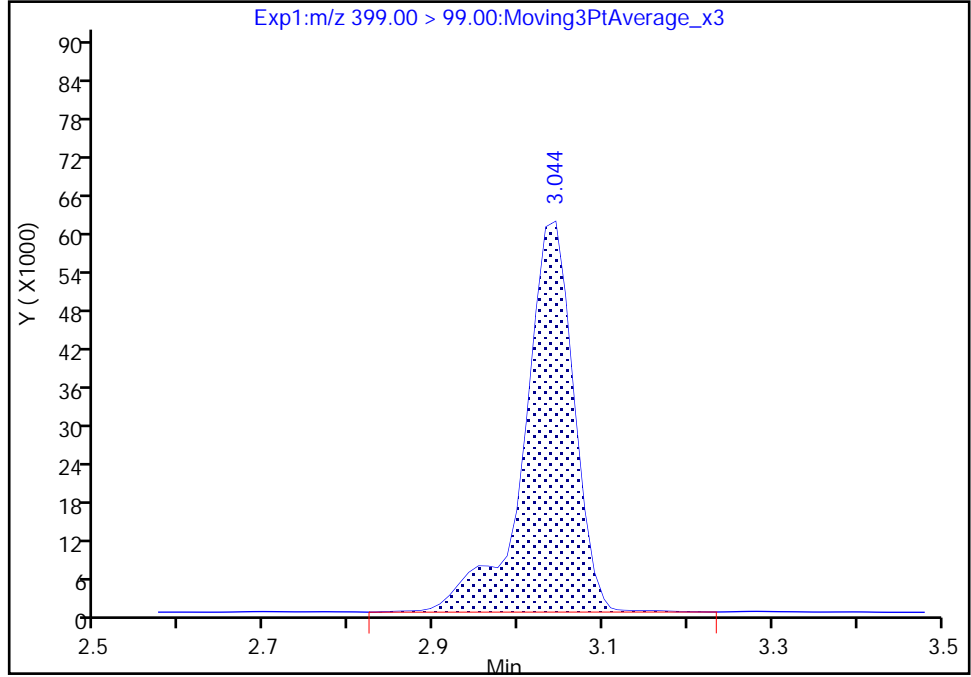
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Injection Date: 24-Dec-2019 15:18:00 Instrument ID: LC812  
Lims ID: 480-164221-C-3-B MS  
Client ID: CS RW 1 DER  
Operator ID: lc812tech ALS Bottle#: 11 Worklist Smp#: 11  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

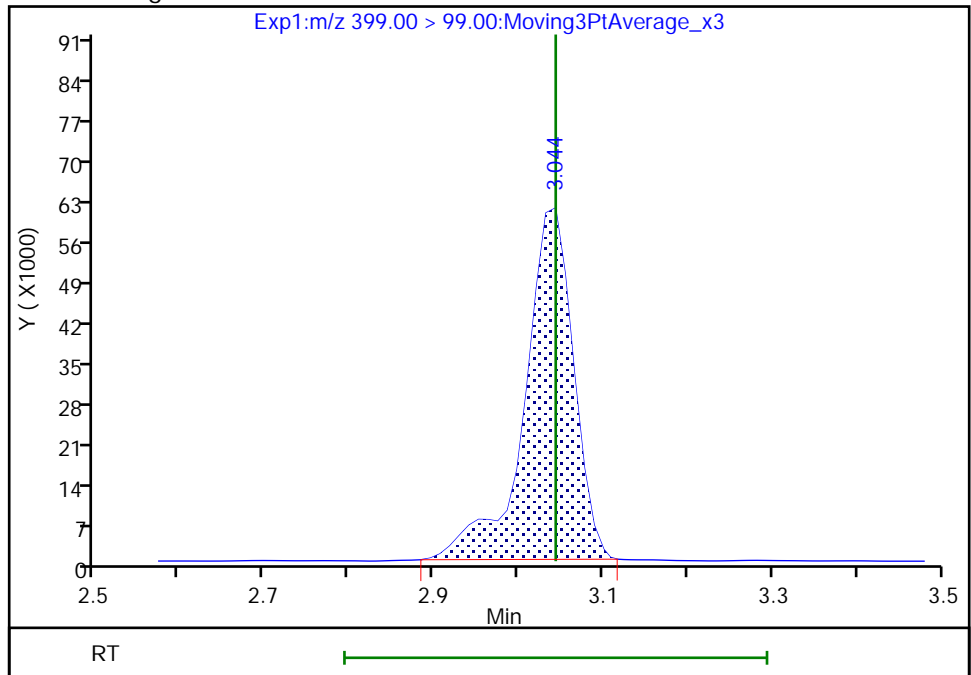
RT: 3.04  
Area: 250465  
Amount: 1.471915  
Amount Units: ng/ml

Processing Integration Results



RT: 3.04  
Area: 245522  
Amount: 1.463356  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 12:06:20

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

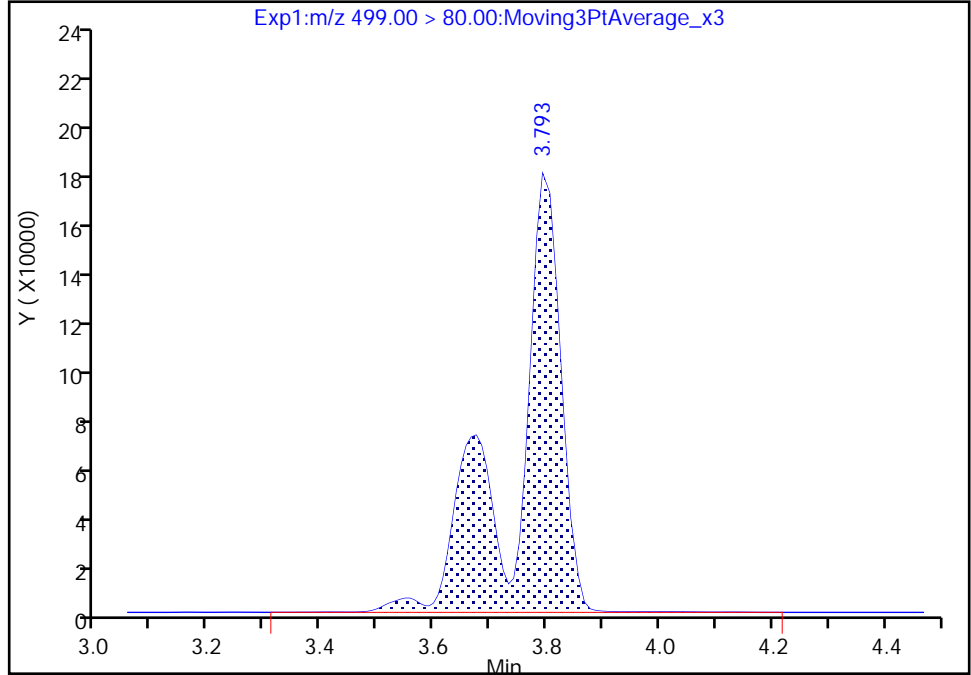
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Injection Date: 24-Dec-2019 15:18:00 Instrument ID: LC812  
Lims ID: 480-164221-C-3-B MS  
Client ID: CS RW 1 DER  
Operator ID: lc812tech ALS Bottle#: 11 Worklist Smp#: 11  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

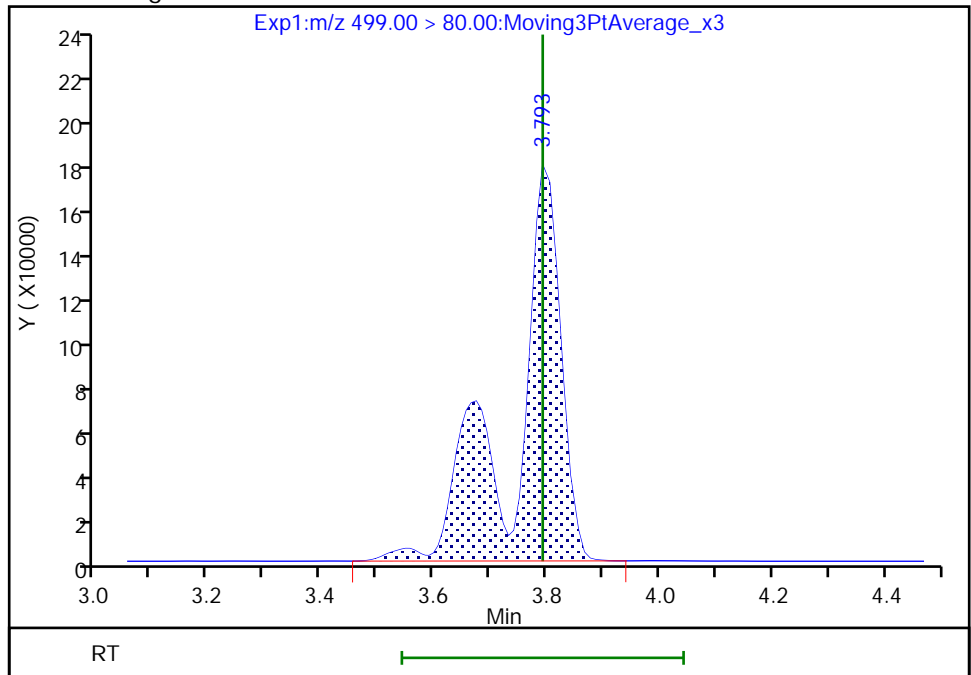
RT: 3.79  
Area: 1022172  
Amount: 2.247053  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 1016834  
Amount: 2.235318  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagery, 27-Dec-2019 12:07:44  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

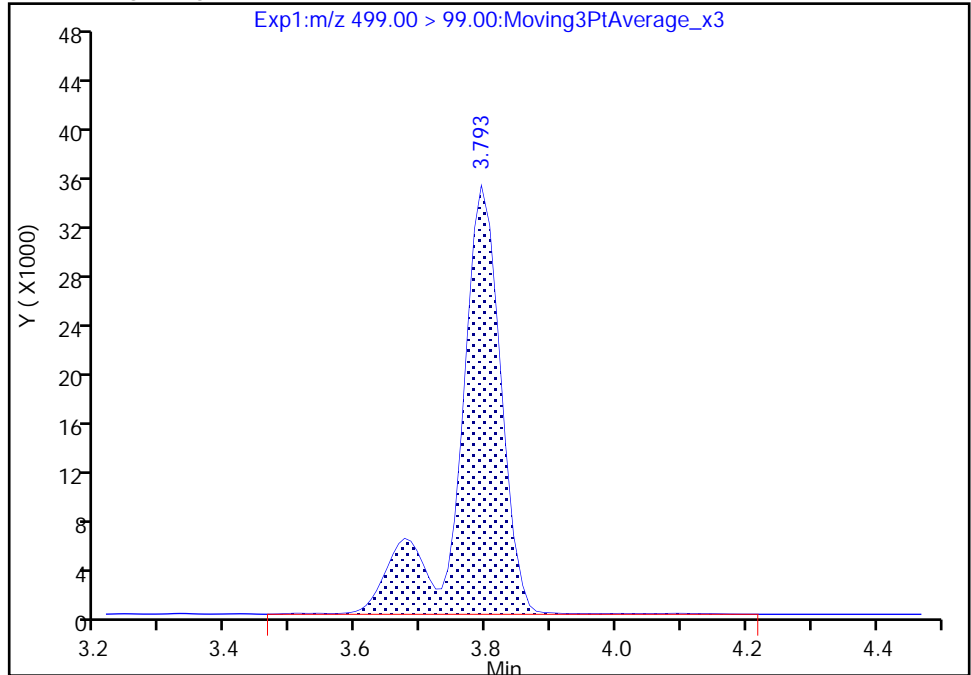
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Injection Date: 24-Dec-2019 15:18:00 Instrument ID: LC812  
Lims ID: 480-164221-C-3-B MS  
Client ID: CS RW 1 DER  
Operator ID: lc812tech ALS Bottle#: 11 Worklist Smp#: 11  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

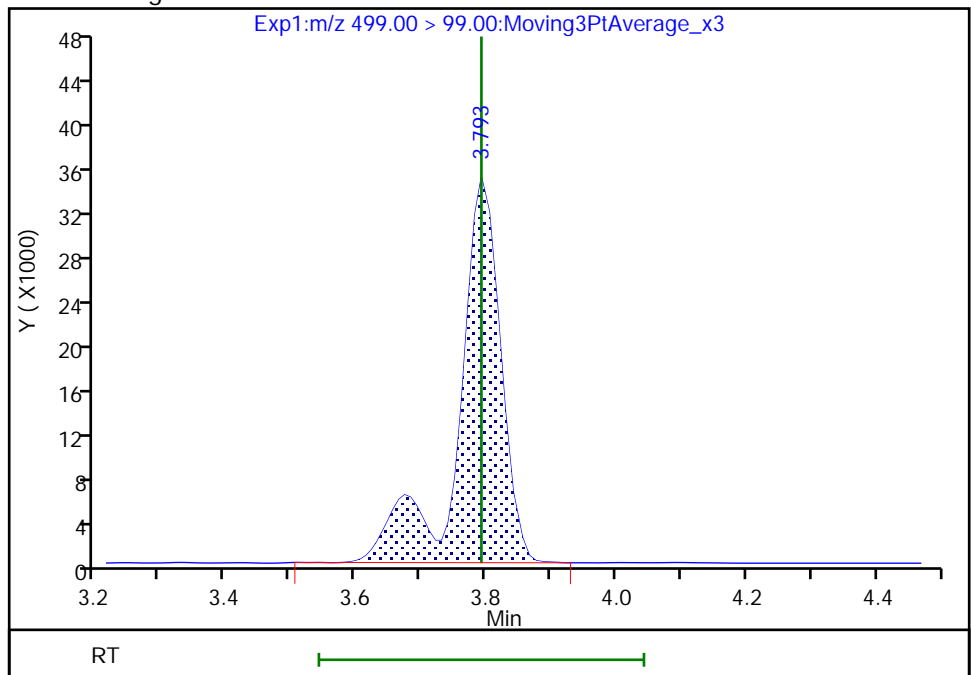
RT: 3.79  
Area: 160898  
Amount: 2.247053  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 158920  
Amount: 2.235318  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagern, 27-Dec-2019 12:07:51

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Eurofins TestAmerica, Burlington

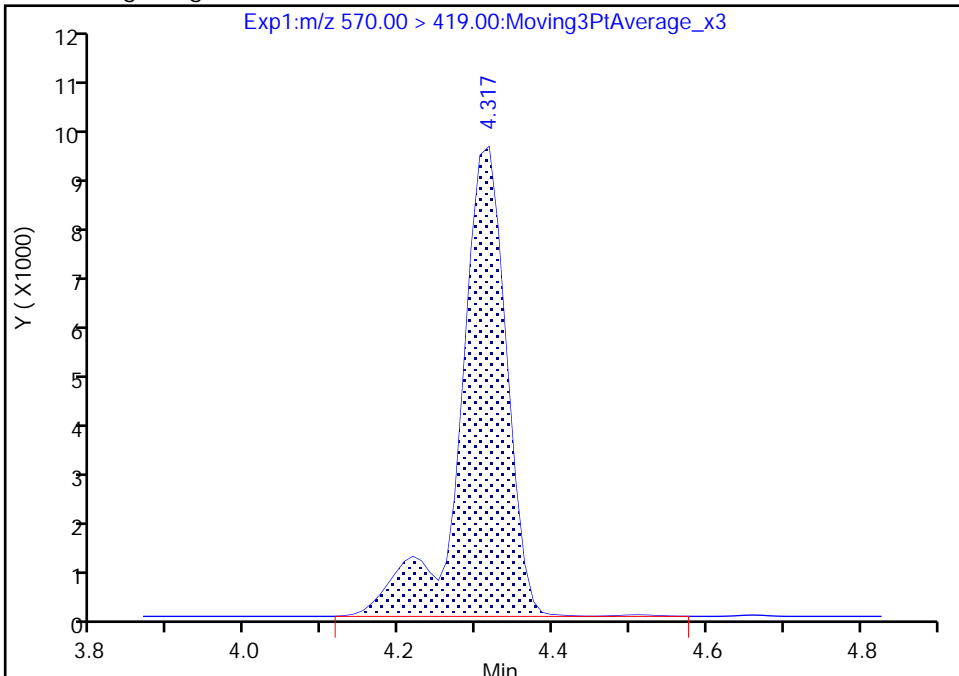
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Injection Date: 24-Dec-2019 15:18:00 Instrument ID: LC812  
Lims ID: 480-164221-C-3-B MS  
Client ID: CS RW 1 DER  
Operator ID: lc812tech ALS Bottle#: 11 Worklist Smp#: 11  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

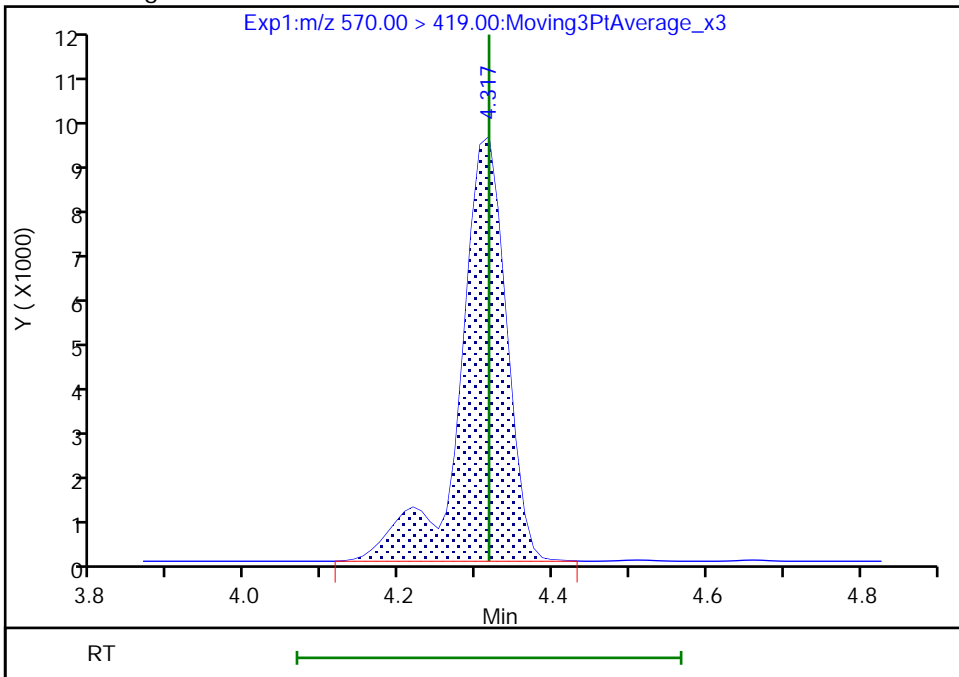
RT: 4.32  
Area: 39796  
Amount: 1.011267  
Amount Units: ng/ml

Processing Integration Results



RT: 4.32  
Area: 39713  
Amount: 1.009158  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 12:09:22  
Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

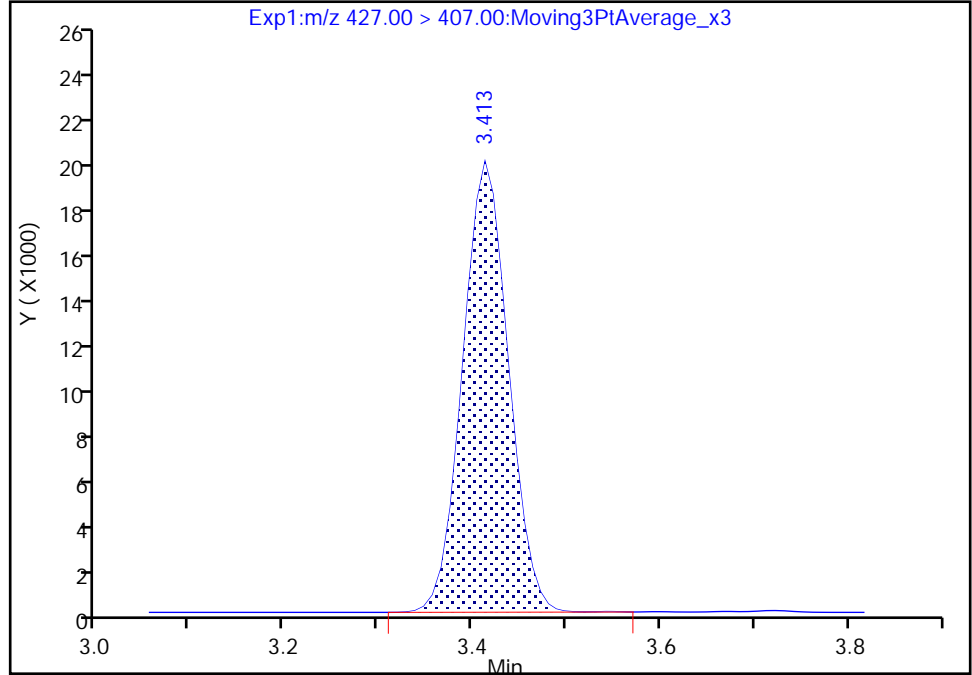
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Injection Date: 24-Dec-2019 15:18:00 Instrument ID: LC812  
Lims ID: 480-164221-C-3-B MS  
Client ID: CS RW 1 DER  
Operator ID: lc812tech ALS Bottle#: 11 Worklist Smp#: 11  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

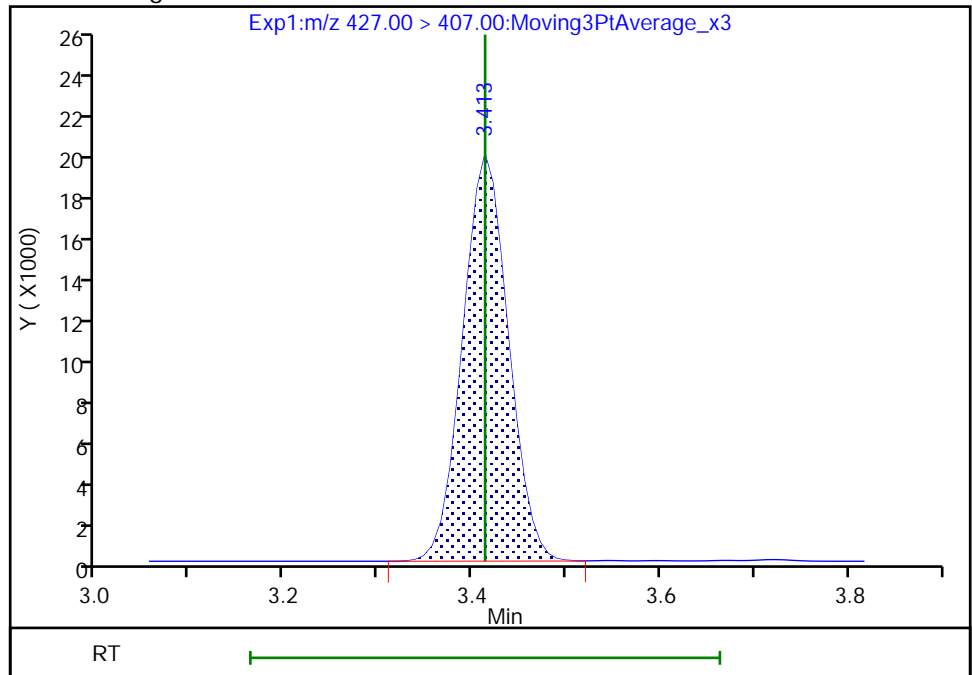
RT: 3.41  
Area: 66110  
Amount: 0.862740  
Amount Units: ng/ml

Processing Integration Results



RT: 3.41  
Area: 66080  
Amount: 0.862349  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 12:06:45

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

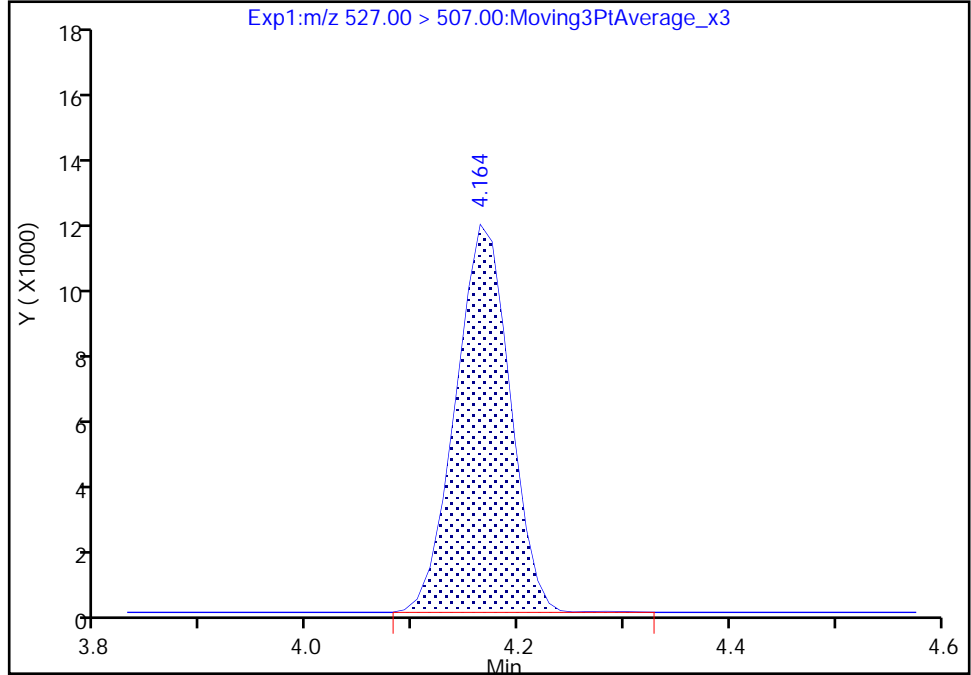
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Injection Date: 24-Dec-2019 15:18:00 Instrument ID: LC812  
Lims ID: 480-164221-C-3-B MS  
Client ID: CS RW 1 DER  
Operator ID: lc812tech ALS Bottle#: 11 Worklist Smp#: 11  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

25 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:, CAS: 39108-34-4

Signal: 1

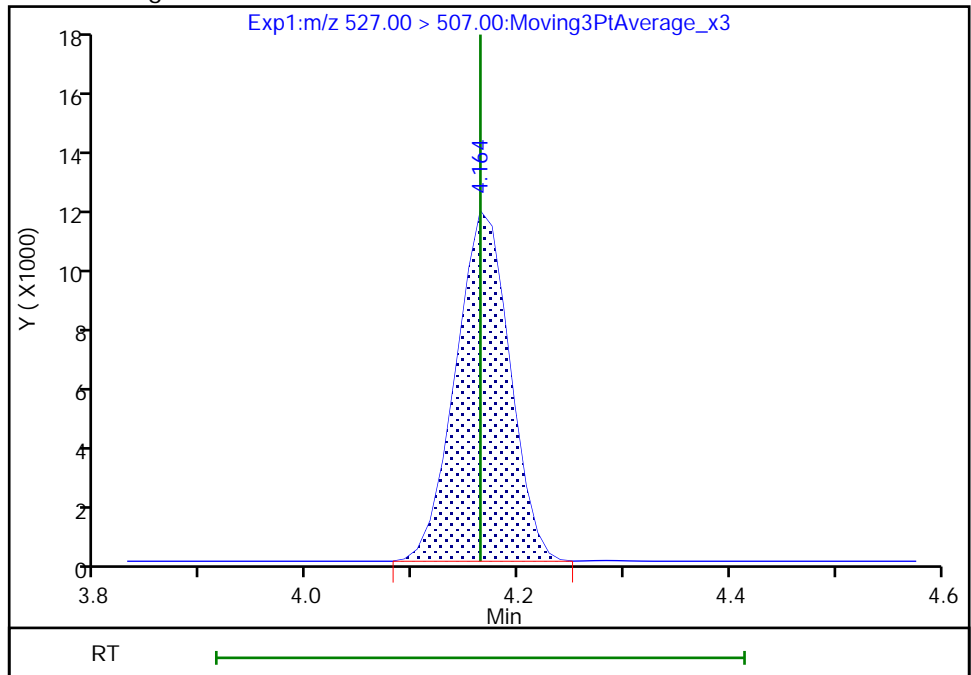
RT: 4.16  
Area: 42370  
Amount: 0.900055  
Amount Units: ng/ml

Processing Integration Results



RT: 4.16  
Area: 42308  
Amount: 0.898738  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 12:09:06

Audit Action: Manually Integrated

Audit Reason: Split Peak

FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS SW 04 DER MS Lab Sample ID: 480-164221-4 MS  
 Matrix: Water Lab File ID: SC122319B014.d  
 Analysis Method: 537 (modified) Date Collected: 12/12/2019 11:31  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 299(mL) Date Analyzed: 12/24/2019 15:42  
 Con. Extract Vol.: 10(mL) Dilution Factor: 1  
 Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	36.4		1.7	0.84
2706-90-3	Perfluoropentanoic acid (PFPeA)	30.7		1.7	0.53
307-24-4	Perfluorohexanoic acid (PFHxA)	32.0		1.7	0.64
375-85-9	Perfluoroheptanoic acid (PFHpA)	32.2		1.7	0.76
335-67-1	Perfluorooctanoic acid (PFOA)	30.6		1.7	0.68
375-95-1	Perfluorononanoic acid (PFNA)	32.7		1.7	0.23
335-76-2	Perfluorodecanoic acid (PFDA)	29.6		1.7	0.64
2058-94-8	Perfluoroundecanoic acid (PFUnA)	32.7		1.7	0.65
307-55-1	Perfluorododecanoic acid (PFDoA)	33.7		1.7	0.49
72629-94-8	Perfluorotridecanoic acid (PFTriA)	33.0		1.7	0.50
376-06-7	Perfluorotetradecanoic acid (PFTeA)	38.0		1.7	0.77
375-73-5	Perfluorobutanesulfonic acid (PFBS)	27.7		1.7	0.41
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	28.1		1.7	0.67
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	31.4		1.7	0.79
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	29.0		1.7	0.51
335-77-3	Perfluorodecanesulfonic acid (PFDS)	29.5		1.7	0.75
754-91-6	Perfluorooctanesulfonamide (PFOSA)	32.2		8.4	8.4
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	39.0		17	1.4
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	32.5		17	1.3
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	26.8		17	4.6
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	28.3		17	2.4

FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS SW 04 DER MS Lab Sample ID: 480-164221-4 MS  
 Matrix: Water Lab File ID: SC122319B014.d  
 Analysis Method: 537 (modified) Date Collected: 12/12/2019 11:31  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 299(mL) Date Analyzed: 12/24/2019 15:42  
 Con. Extract Vol.: 10(mL) Dilution Factor: 1  
 Injection Volume: 20(uL) GC Column: C-18 ID: 4.6 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	111		50-150
STL01892	13C4 PFHpA	106		50-150
STL00990	13C4 PFOA	102		50-150
STL00991	13C4 PFOS	104		50-150
STL00995	13C5 PFNA	101		50-150
STL00992	13C4 PFBA	85		25-150
STL00993	13C2 PFHxA	102		50-150
STL00996	13C2 PFDA	103		50-150
STL00997	13C2 PFUnA	93		50-150
STL00998	13C2 PFDoA	82		50-150
STL01056	13C8 FOSA	91		25-150
STL01893	13C5 PFPeA	101		25-150
STL02116	13C2 PFTeDA	85		50-150
STL02118	d3-NMeFOSAA	75		50-150
STL02117	d5-NEtFOSAA	90		50-150
STL02279	M2-6:2 FTS	83		25-150
STL02280	M2-8:2 FTS	98		25-150
STL02337	13C3 PFBS	103		50-150

Eurofins TestAmerica, Burlington  
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B014.d  
 Lims ID: 480-164221-C-4-B MS  
 Client ID: CS SW 04 DER  
 Sample Type: MS  
 Inject. Date: 24-Dec-2019 15:42:36 ALS Bottle#: 14 Worklist Smp#: 14  
 Injection Vol: 20.0 ul Dil. Factor: 1.0000  
 Sample Info: 480-164221-C-4-B MS  
 Misc. Info.: 200-0039355-014 Plate: 1 Rack: 2  
 Operator ID: lc812tech Instrument ID: LC812  
 Method: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\PFC\_LC812.m  
 Limit Group: LC\_PFC\_ICAL  
 Last Update: 30-Dec-2019 15:06:05 Calib Date: 06-Dec-2019 15:13:26  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Column 1 : C-18 ( 4.60 mm) Det: EXP1  
 Process Host: CTX0330

First Level Reviewer: lautenschlagery Date: 27-Dec-2019 13:22:47  
 Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	1.908	1.908	0.0	0.556	1453486	2.12	84.9	2738	
2 Perfluorobutanoic acid	212.90 > 169.00	1.908	1.908	0.0	1.000	628943	1.09	109	145	
D 3 13C5 PFPeA	267.90 > 223.00	2.258	2.257	0.001	0.658	1325547	2.53	101	4920	
4 Perfluoropentanoic acid	262.90 > 219.00	2.258	2.271	-0.013	1.000	551866	0.9191	91.9	27.3	
D 47 13C3 PFBS	301.90 > 80.00	2.271	2.285	-0.014	0.662	1498590	2.40	103	228264	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	2.285	2.285	0.0	1.006	579608	0.8273	Target=2.03	93.6	696
	298.90 > 99.00	2.285	2.285	0.0	1.006	309630		1.87(1.01-3.04)		209
D 60 M2-4:2 FTS	329.00 > 81.00	2.611	2.611	0.0	0.761	135986	2.33	99.9	84.0	
61 1H,1H,2H,2H-perfluorohexanesulfoni	327.00 > 307.00	2.611	2.611	0.0	1.000	73665	0.7302	78.2	1158	
D 7 13C2 PFHxA	315.00 > 270.00	2.648	2.648	0.0	0.772	1489767	2.55	102	4827	
6 Perfluorohexanoic acid	313.00 > 269.00	2.648	2.661	-0.013	1.000	582520	0.9574	Target=13.76	95.7	158
	313.00 > 119.00	2.648	2.661	-0.013	1.000	48737		11.95(6.88-20.64)		163
70 Perfluoropentanesulfonic acid	349.00 > 80.00	2.661	2.661	0.0	0.874	574748	0.9072	Target=3.50	96.7	925
	349.00 > 99.00	2.661	2.661	0.0	0.874	185343		3.10(1.75-5.25)		223
D 64 13C3 HFPO-DA	332.10 > 287.00	2.768	2.768	0.0	0.807	96953	3.80	152	1117	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.776	2.776	0.0	1.003	100481	0.7216		72.2	40.8	
D 11 18O2 PFHxS										
403.00 > 84.00	3.044	3.044	0.0	0.887	1290302	2.61		111	6223	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.044	3.044	0.0	1.000	518994	0.8405	Target=3.90	92.4	614	M
399.00 > 99.00	3.044	3.044	0.0	1.000	128244		4.05(1.95-5.85)		254	
D 9 13C4 PFHpA										
367.00 > 322.00	3.044	3.044	0.0	0.887	1461845	2.64		106	7360	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.044	3.044	0.0	1.000	594684	0.9619	Target=3.95	96.2	196	
363.00 > 169.00	3.044	3.044	0.0	1.000	177197		3.36(1.97-5.92)		621	
77 DONA										
377.00 > 251.00	3.090	3.089	0.001	0.815	1358918	0.9441	Target=2.49	100	2812	
377.00 > 85.00	3.090	3.089	0.001	0.815	542078		2.51(1.24-3.73)		988	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.413	3.413	0.0	0.900	469228	0.9402	Target=6.46	98.8	1888	
449.00 > 99.00	3.413	3.413	0.0	0.900	70278		6.68(3.23-9.69)		286	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.413	3.413	0.0	1.000	53498	0.8020		84.6	698	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.413	3.413	0.0	0.995	167873	1.98		83.4	475	
15 Perfluorooctanoic acid										M
413.00 > 369.00	3.430	3.430	0.0	1.000	608856	0.9163	Target=2.40	91.6	223	M
413.00 > 169.00	3.430	3.430	0.0	1.000	291912		2.09(1.20-3.60)		768	M
D 14 13C4 PFOA										
417.00 > 372.00	3.430	3.430	0.0	1.000	1497274	2.55		102	4900	
* 62 13C2 PFOA										
415.00 > 370.00	3.430	3.430	0.0		1617167	2.50			4102	
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.793	0.0	1.106	973838	2.49		104	4677	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.793	3.793	0.0	1.000	380762	0.8656	Target=5.74	93.3	917	M
499.00 > 99.00	3.793	3.793	0.0	1.000	66775		5.70(2.87-8.61)		292	M
D 19 13C5 PFNA										
468.00 > 423.00	3.817	3.817	0.0	1.113	1371203	2.54		101	5449	
20 Perfluorononanoic acid										
463.00 > 419.00	3.817	3.817	0.0	1.000	526034	0.9781	Target=7.01	97.8	239	
463.00 > 169.00	3.817	3.817	0.0	1.000	75522		6.97(3.50-10.51)		692	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.984	3.984	0.0	1.050	405999	0.8080		86.7	3613	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.129	4.129	0.0	1.089	312914	0.9295	Target=3.14	96.8	2096	
549.00 > 99.00	4.129	4.129	0.0	1.089	94757		3.30(1.57-4.71)		494	
D 23 13C2 PFDA										
515.00 > 470.00	4.164	4.164	0.0	1.214	1371668	2.58		103	5786	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
24 Perfluorodecanoic acid										
513.00 > 469.00	4.164	4.164	0.0	1.000	470467	0.8863	Target=7.28	88.6	468	
513.00 > 169.00	4.164	4.164	0.0	1.000	77157		6.10(3.64-10.91)		948	
25 1H,1H,2H,2H-perfluorodecanesulfonyl										
527.00 > 507.00	4.164	4.164	0.0	1.000	38507	0.8461		88.3	460	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.164	4.175	-0.011	1.214	236124	2.34		97.6	999	
D 21 13C8 FOSA										
506.00 > 78.00	4.218	4.218	0.0	1.230	1577047	2.26		90.6	3918	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.218	4.218	0.0	1.000	604024	0.9622		96.2	2127	
35 MeFOSA										
512.00 > 169.00	4.317	4.283	0.034		1307	NC			11.4	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.317	4.305	0.012	1.258	96520	1.88		75.3	374	
28 N-methylperfluorooctanesulfonamide										
570.00 > 419.00	4.317	4.317	0.0	1.000	39127	1.17		117	537	M
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.409	4.409	0.0	1.162	258893	0.8830	Target=2.76	91.6	1666	
599.00 > 99.00	4.409	4.409	0.0	1.162	84373		3.07(1.38-4.14)		575	
D 30 13C2 PFUnA										
565.00 > 520.00	4.443	4.443	0.0	1.295	1047909	2.31		92.6	6055	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.443	4.443	0.0	1.000	347920	0.9789	Target=5.78	97.9	438	M
563.00 > 169.00	4.443	4.443	0.0	1.000	69172		5.03(2.89-8.67)		811	M
33 N-ethylperfluorooctanesulfonamide										
584.00 > 419.00	4.456	4.456	0.0	1.000	41235	0.9722		97.2	535	M
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.456	4.456	0.0	1.299	128103	2.25		90.1	1135	
66 11-Chloroeicosafuoro-3-oxaundecan										
631.00 > 451.00	4.537	4.551	-0.014	1.196	344707	0.7275		77.2	3802	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.683	4.683	0.0	1.000	378820	1.01	Target=5.13	101	130	
613.00 > 169.00	4.683	4.683	0.0	1.000	90793		4.17(2.56-7.69)		1101	
D 36 13C2 PFDaA										
615.00 > 570.00	4.683	4.683	0.0	1.365	1018320	2.05		82.0	6906	
74 1H,1H,2H,2H-perfluorododecanesulfonyl										
627.00 > 607.00	4.704	4.704	0.0	1.130	24457	0.8465		87.8		
75 Perfluorododecanesulfonic acid (PF)										
699.00 > 80.00	4.870	4.870	0.0	1.284	90183	0.8091	Target=0.45	83.6	144	
699.00 > 99.00	4.870	4.870	0.0	1.284	185307		0.49(0.22-0.67)		3447	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.906	4.906	0.0	1.048	352834	0.9868	Target=3.82	98.7	146	
663.00 > 169.00	4.906	4.906	0.0	1.048	109626		3.22(1.91-5.74)		1275	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.108	5.108	0.0	1.000	80348	1.14	Target=1.05	114	1249	
713.00 > 219.00	5.094	5.108	-0.014	0.997	64983		1.24(0.52-1.57)		1570	



Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 43 13C2 PFTeDA										
715.00 > 670.00	5.108	5.108	0.0	1.489	880074	2.11		84.6	7915	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.491	5.491	0.0	1.002	215602	1.32	Target=3.20	132	124	
813.00 > 169.00	5.491	5.491	0.0	1.002	77965		2.77(1.60-4.80)		1774	
D 44 13C2 PFHxDA										
815.00 > 770.00	5.483	5.491	-0.008	1.598	453209	1.18		47.4	3827	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.889	5.899	-0.010	1.074	132548	1.01	Target=2.86	101	105	
913.00 > 169.00	5.889	5.899	-0.010	1.074	52670		2.52(1.43-4.29)		1183	

**QC Flag Legend**

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B014.d

Injection Date: 24-Dec-2019 15:42:36

Instrument ID: LC812

Lims ID: 480-164221-C-4-B MS

Client ID: CS SW 04 DER

Operator ID: lc812tech

ALS Bottle#: 14

Worklist Smp#: 14

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

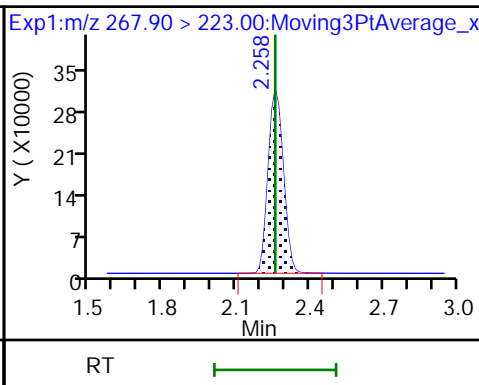
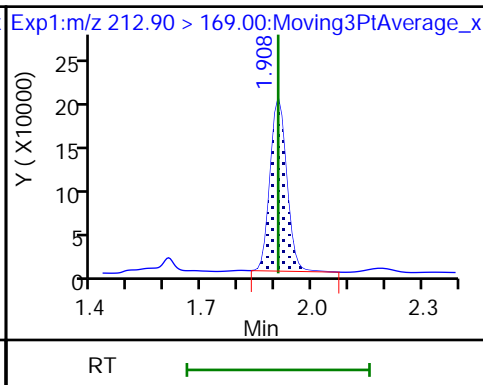
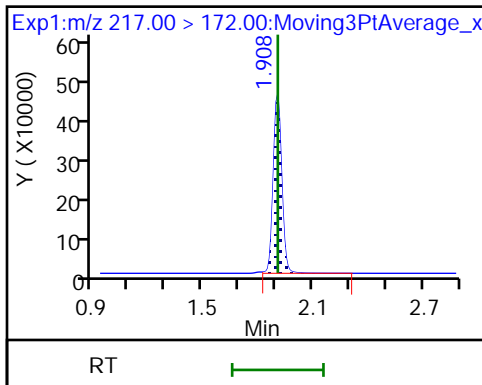
Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

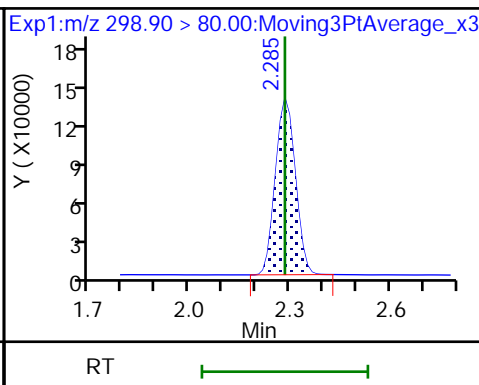
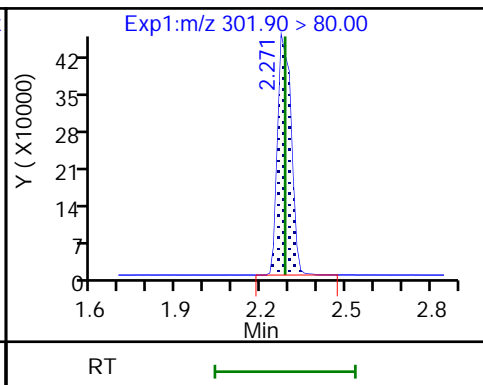
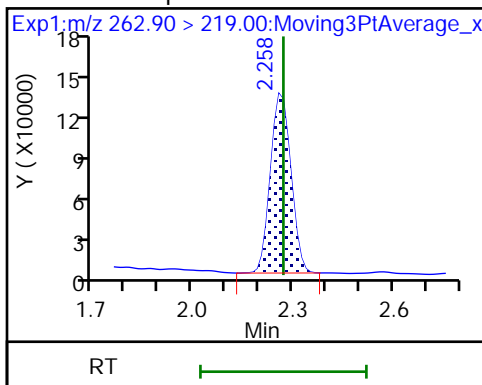
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 47 13C3 PFBS

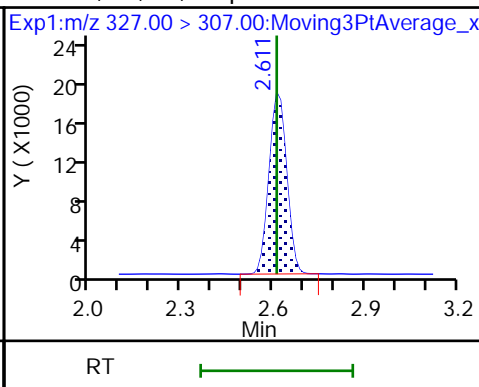
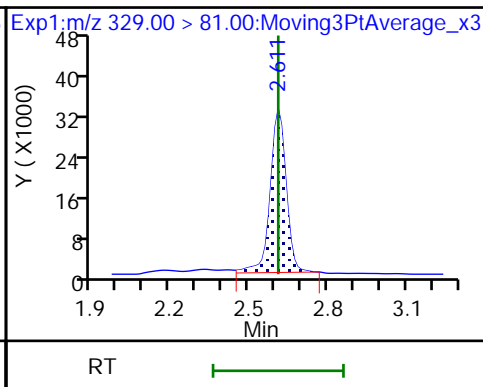
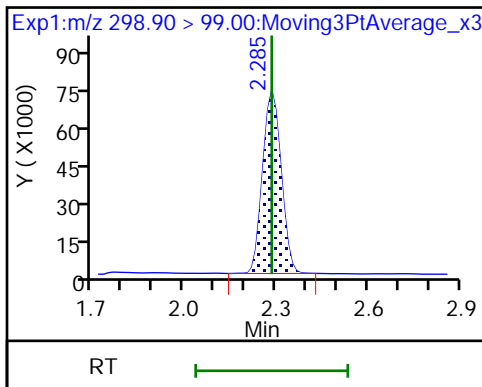
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 60 M2-4:2 FTS

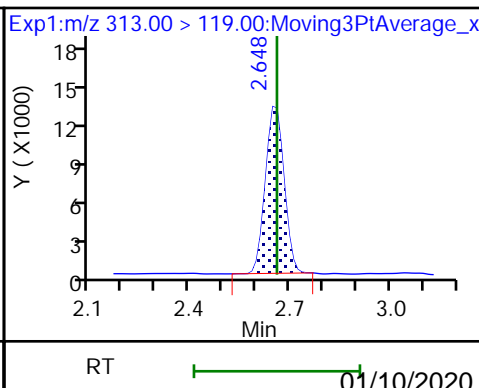
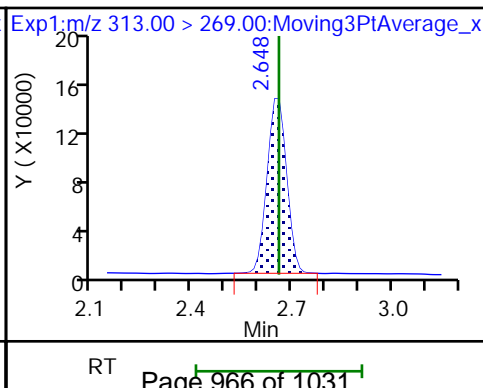
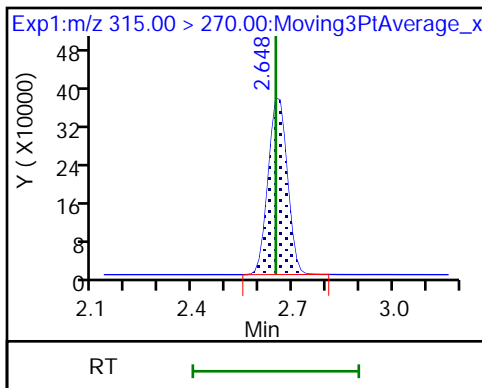
61 1H,1H,2H,2H-perfluorohexanesulfoni

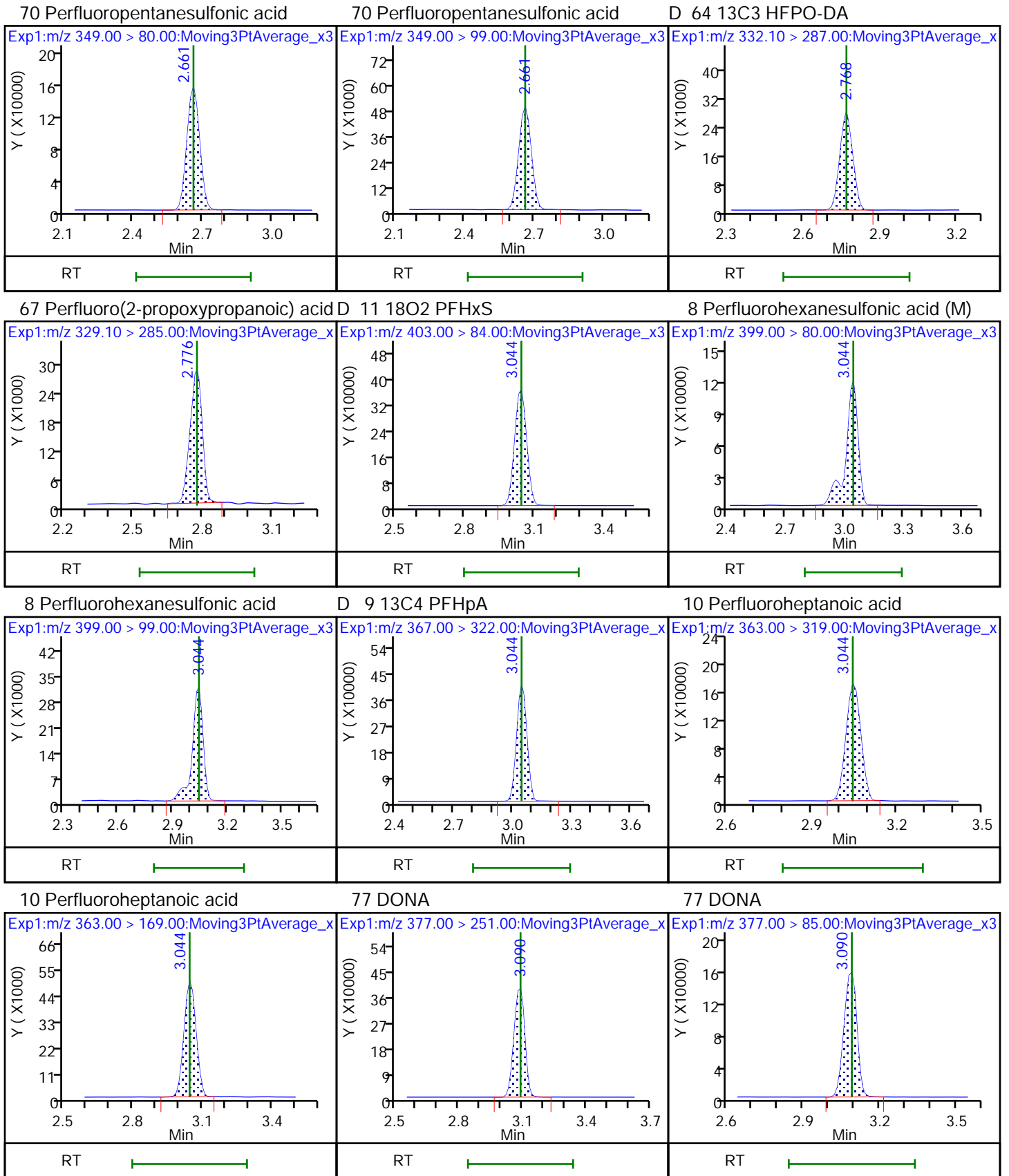


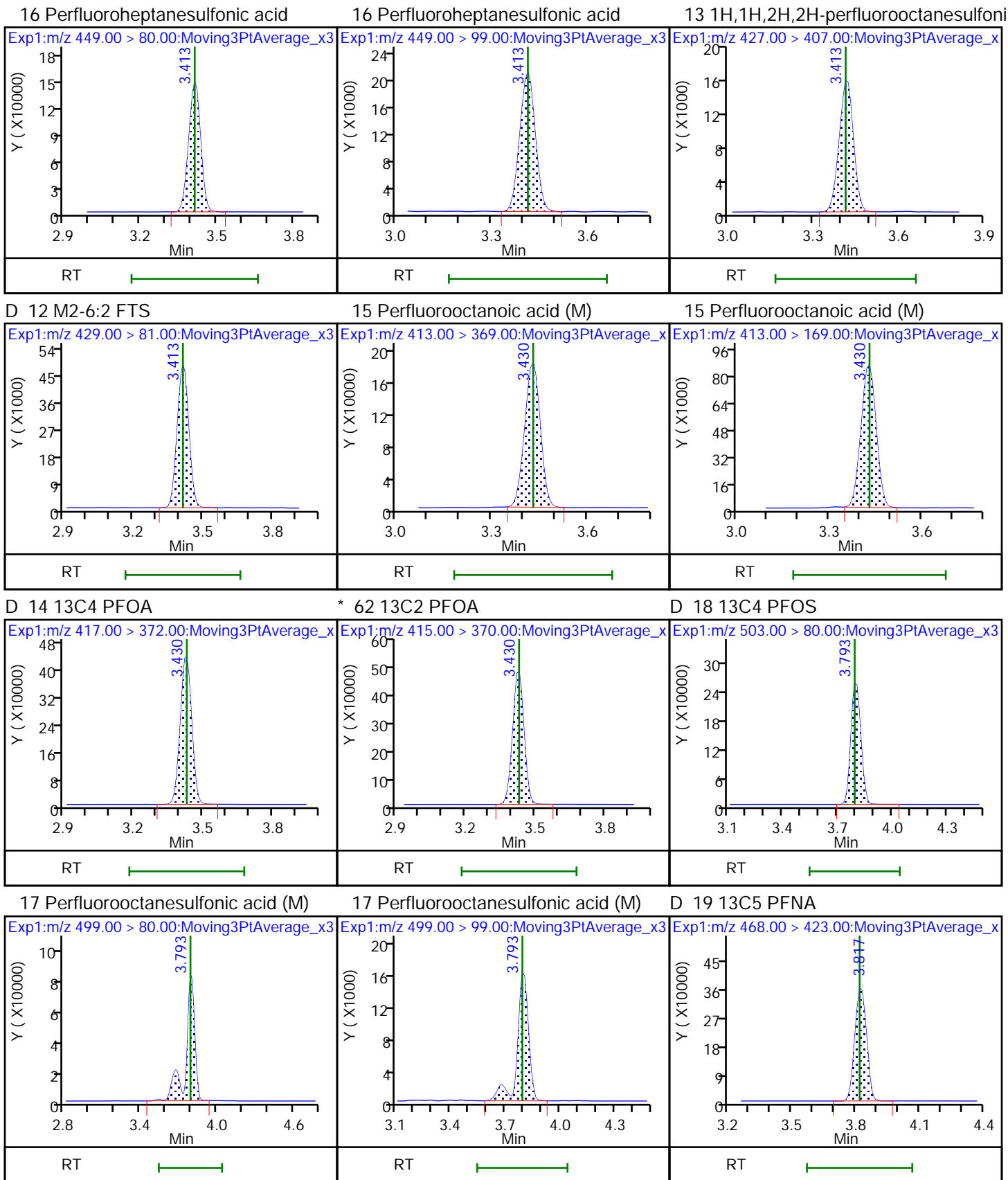
D 7 13C2 PFHxA

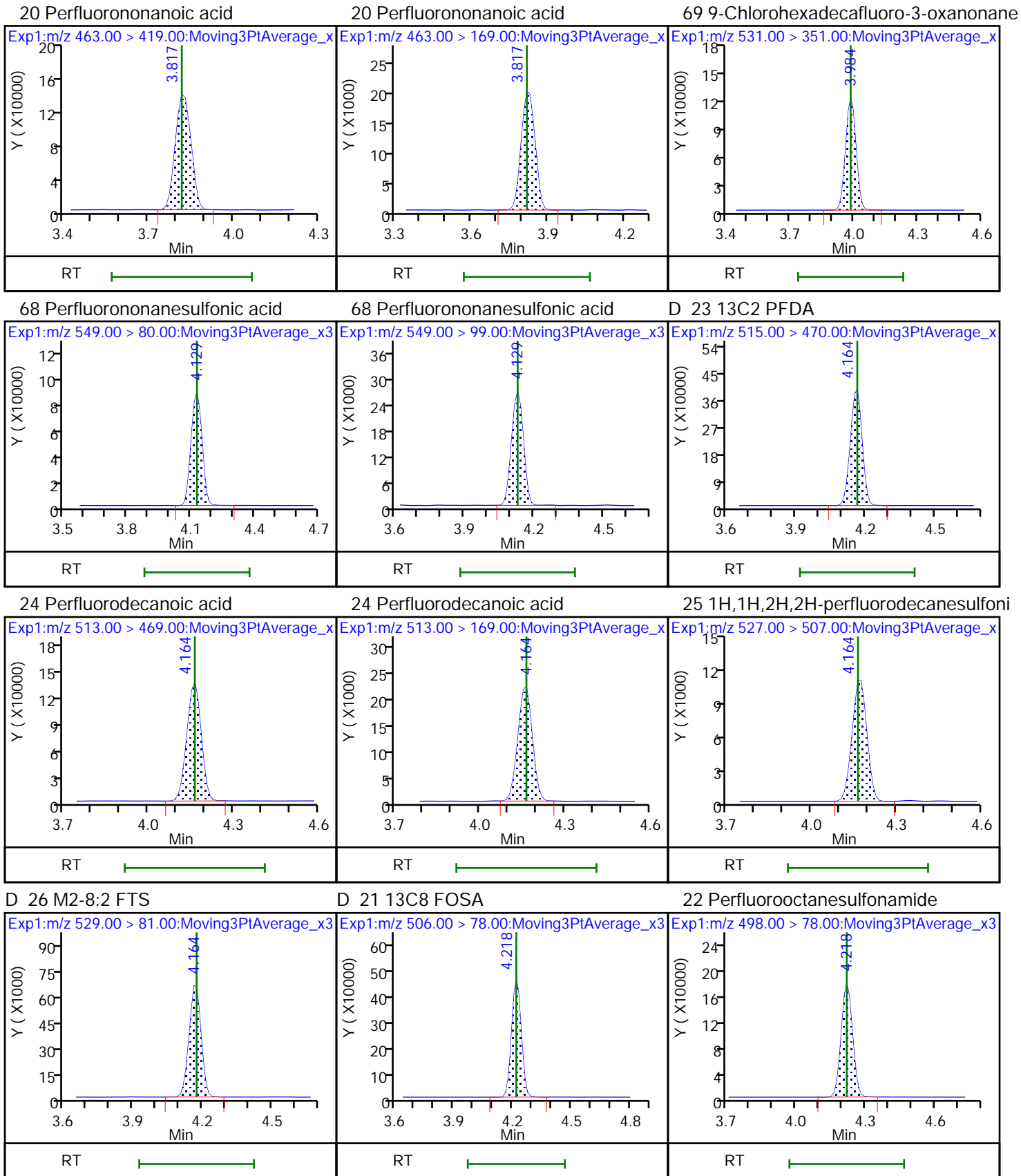
6 Perfluorohexanoic acid

6 Perfluorohexanoic acid



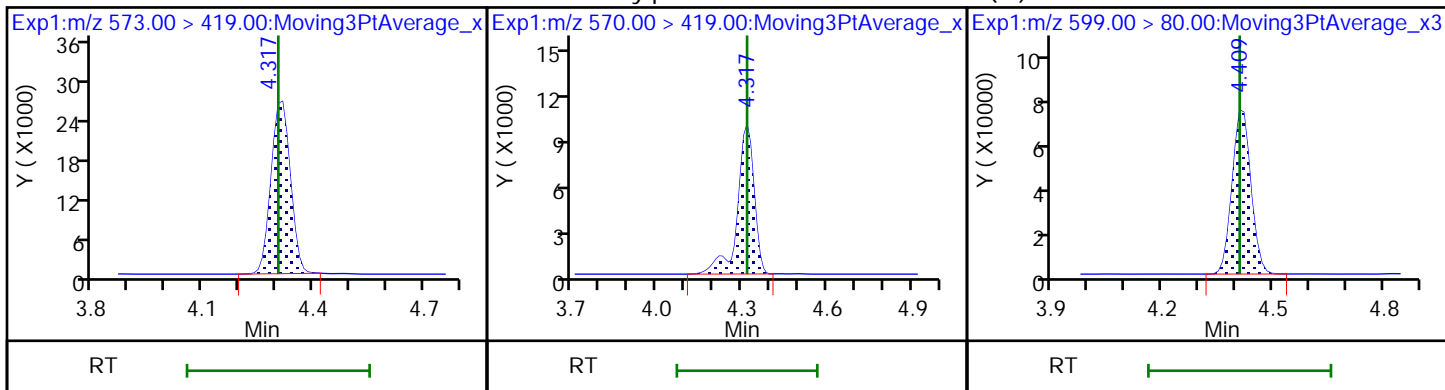






D 27 d3-NMeFOSAA

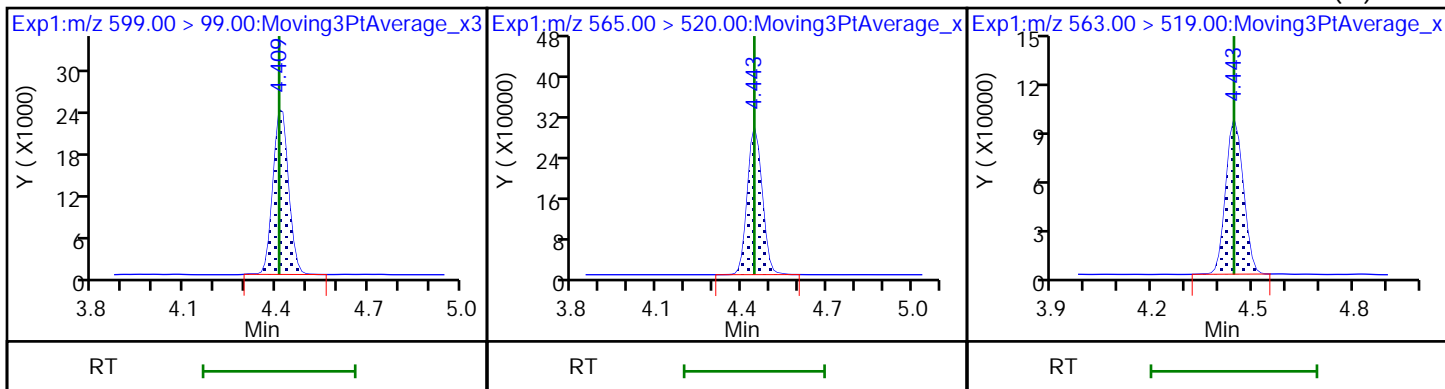
28 N-methylperfluorooctanesulfonamido (M) Perfluorodecanesulfonic acid



29 Perfluorodecanesulfonic acid

D 30 13C2 PFUoA

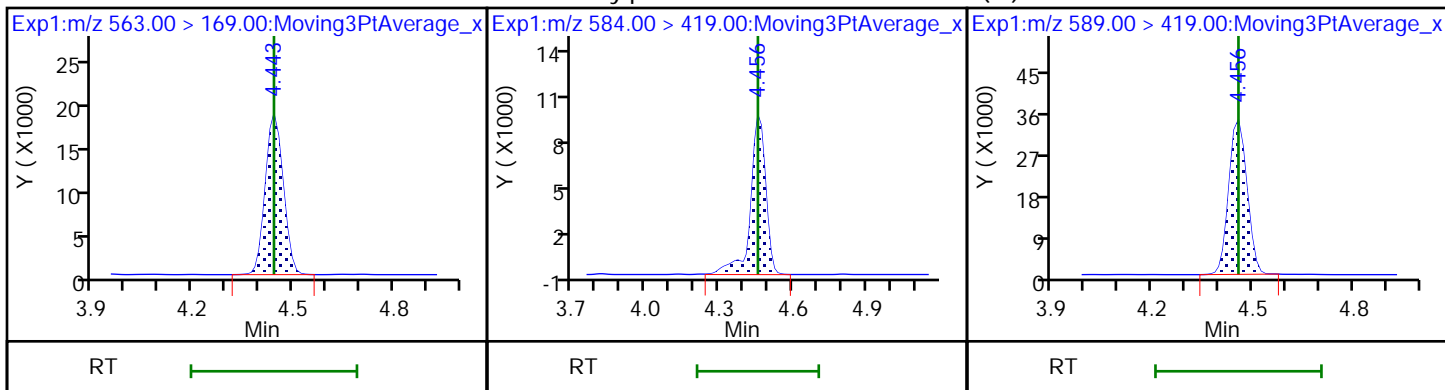
31 Perfluoroundecanoic acid (M)



31 Perfluoroundecanoic acid

33 N-ethylperfluorooctanesulfonamido (M)

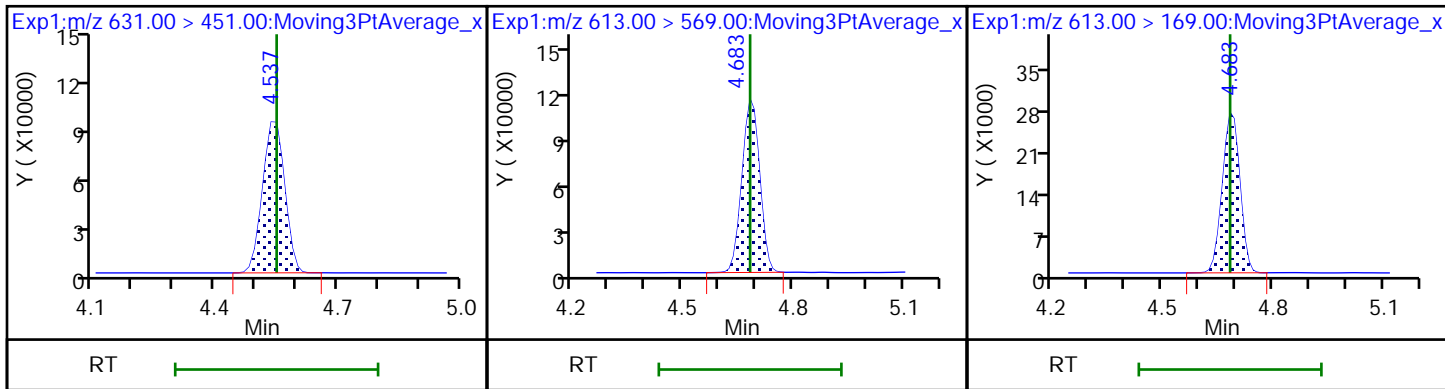
D 32 d5-NEtFOSAA



66 11-Chloroeicosafuoro-3-oxaundecan

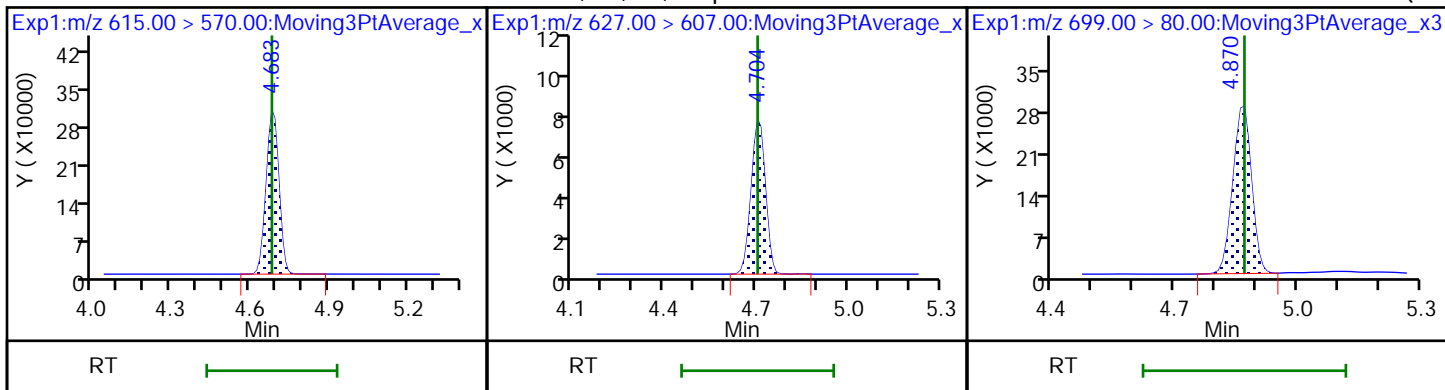
37 Perfluorododecanoic acid

37 Perfluorododecanoic acid



D 36 13C2 PFDaA

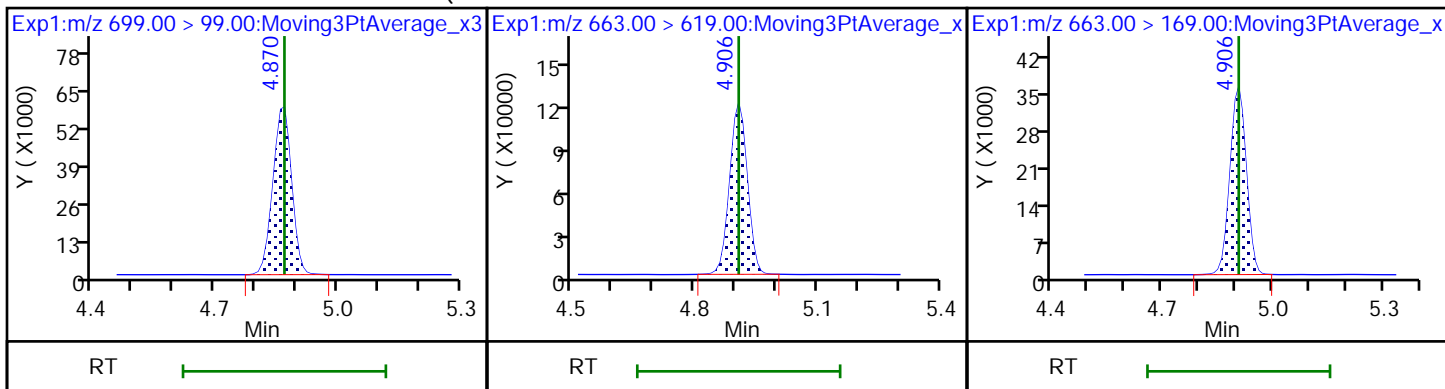
74 1H,1H,2H,2H-perfluorododecanesulfo75 Perfluorododecanesulfonic acid (PF



75 Perfluorododecanesulfonic acid (PF

41 Perfluorotridecanoic acid

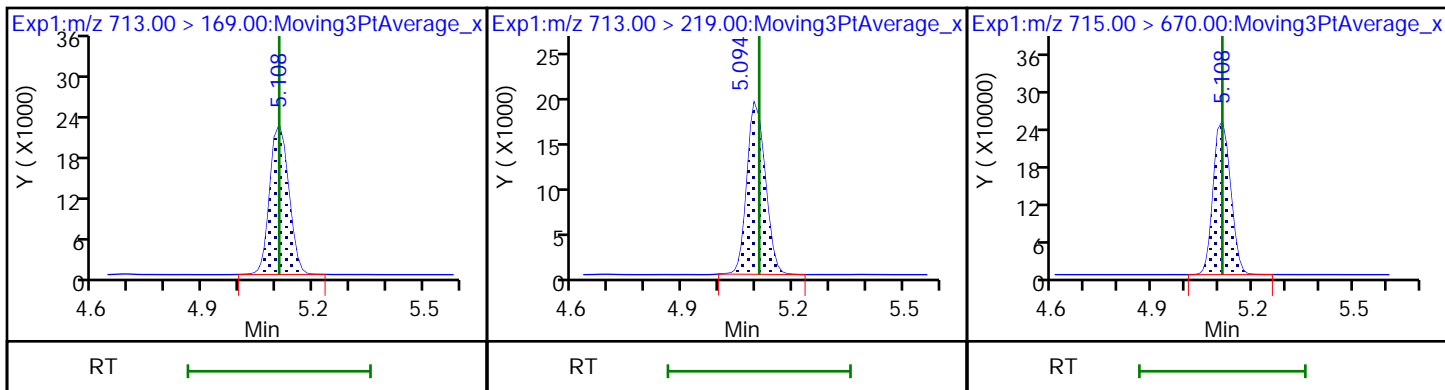
41 Perfluorotridecanoic acid



42 Perfluorotetradecanoic acid

42 Perfluorotetradecanoic acid

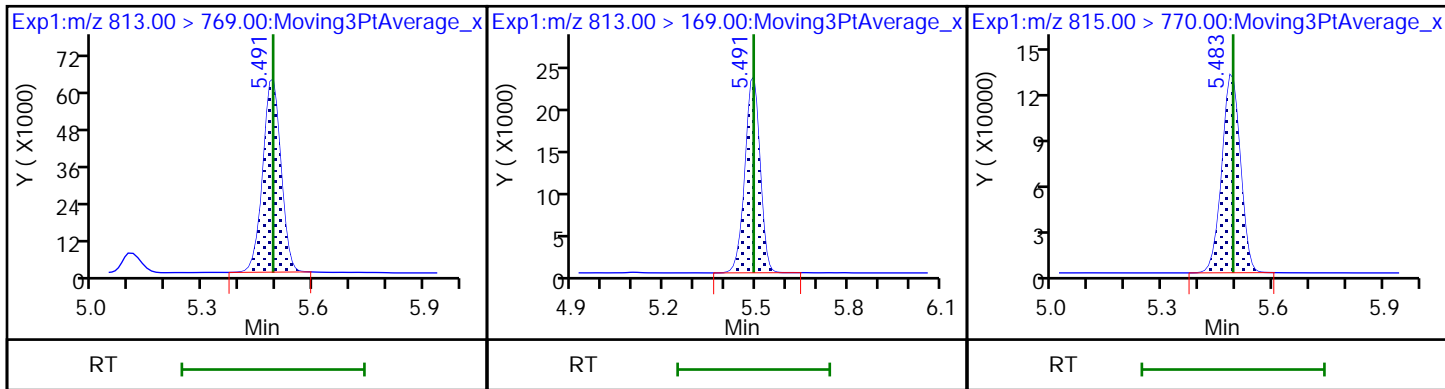
D 43 13C2 PFTeDA



45 Perfluorohexadecanoic acid

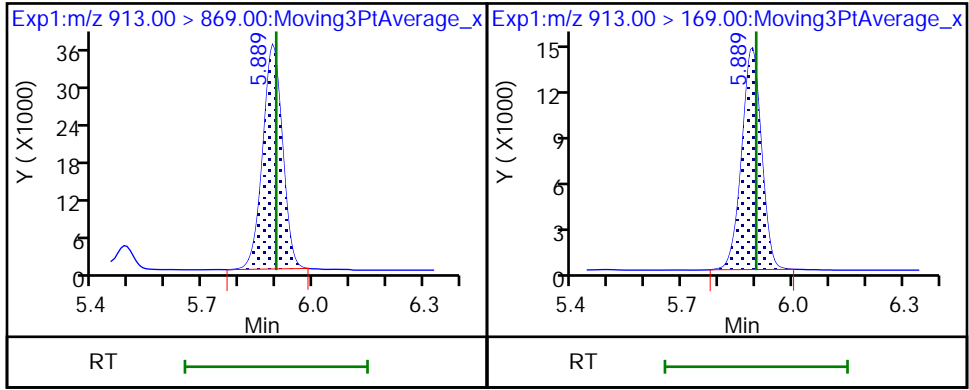
45 Perfluorohexadecanoic acid

D 44 13C2 PFHxDA



46 Perfluorooctadecanoic acid

46 Perfluorooctadecanoic acid





Euofins TestAmerica, Burlington

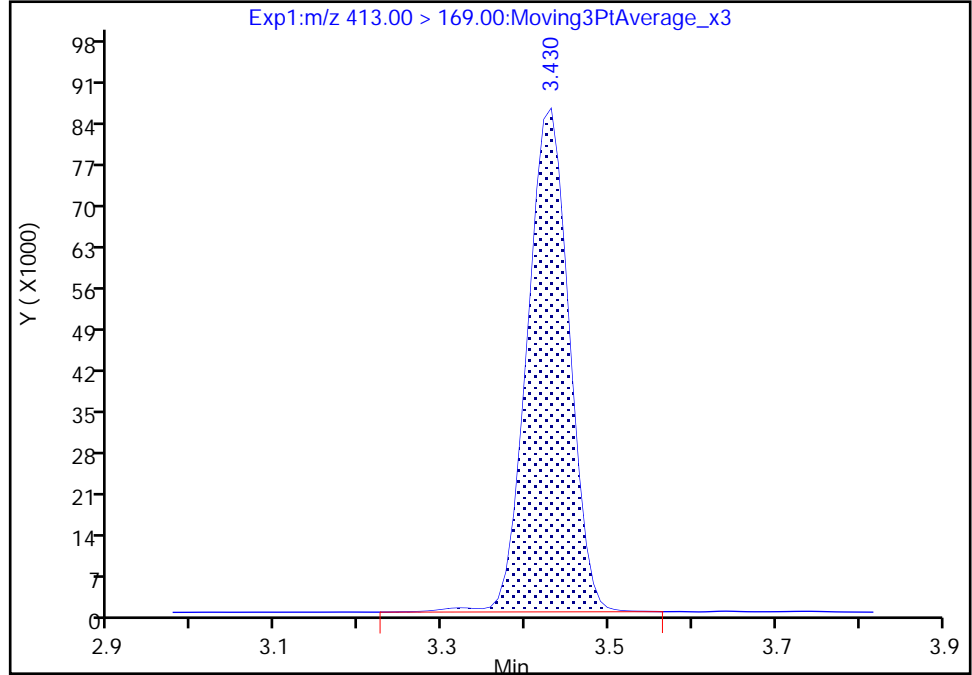
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B014.d  
Injection Date: 24-Dec-2019 15:42:36 Instrument ID: LC812  
Lims ID: 480-164221-C-4-B MS  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 14 Worklist Smp#: 14  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

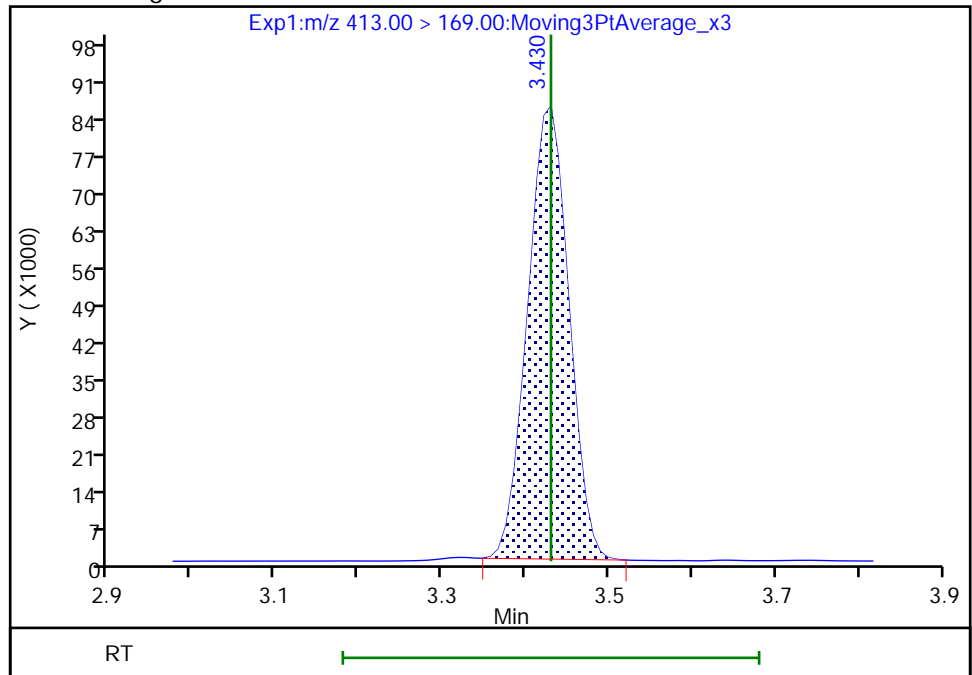
RT: 3.43  
Area: 297306  
Amount: 0.931534  
Amount Units: ng/ml

Processing Integration Results



RT: 3.43  
Area: 291912  
Amount: 0.916255  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagery, 27-Dec-2019 13:21:45  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

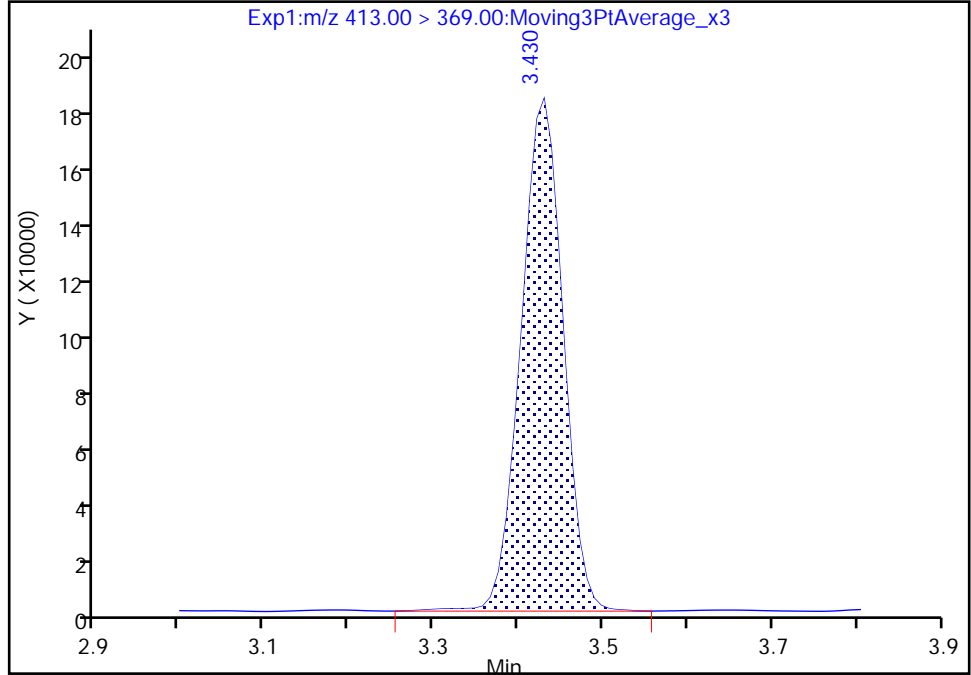
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B014.d  
Injection Date: 24-Dec-2019 15:42:36 Instrument ID: LC812  
Lims ID: 480-164221-C-4-B MS  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 14 Worklist Smp#: 14  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

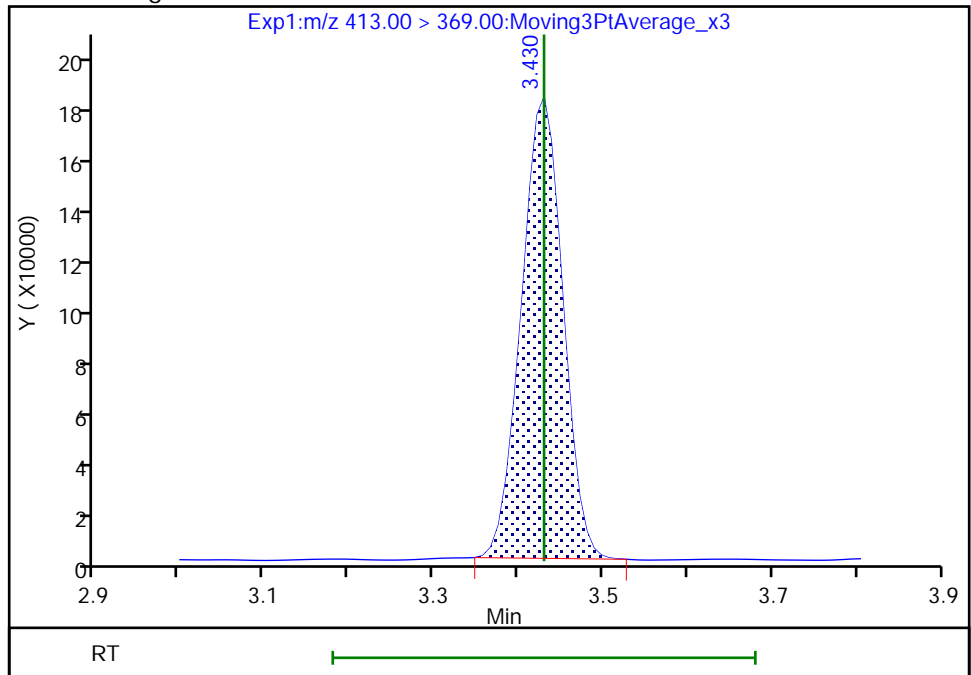
RT: 3.43  
Area: 619009  
Amount: 0.931534  
Amount Units: ng/ml

Processing Integration Results



RT: 3.43  
Area: 608856  
Amount: 0.916255  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 13:21:52

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

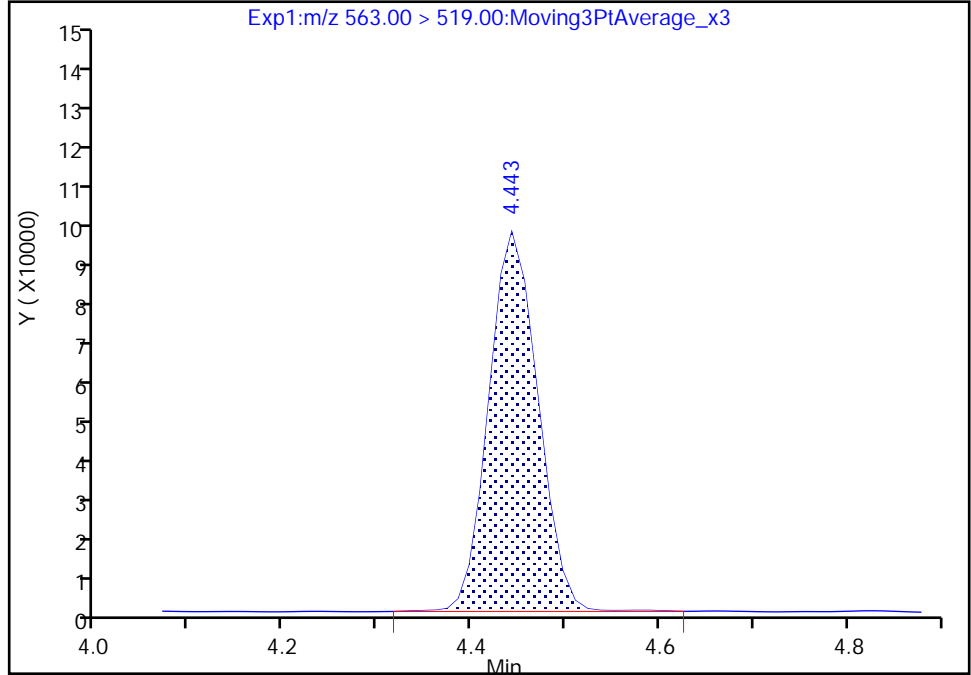
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B014.d  
Injection Date: 24-Dec-2019 15:42:36 Instrument ID: LC812  
Lims ID: 480-164221-C-4-B MS  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 14 Worklist Smp#: 14  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 1

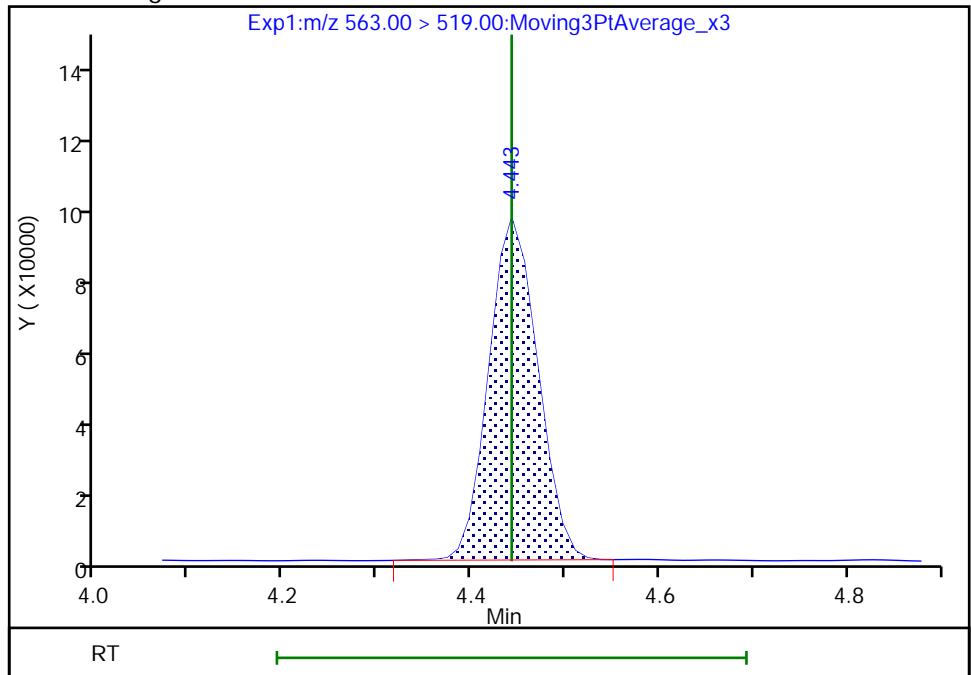
RT: 4.44  
Area: 350170  
Amount: 0.985268  
Amount Units: ng/ml

Processing Integration Results



RT: 4.44  
Area: 347920  
Amount: 0.978937  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 13:20:09

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

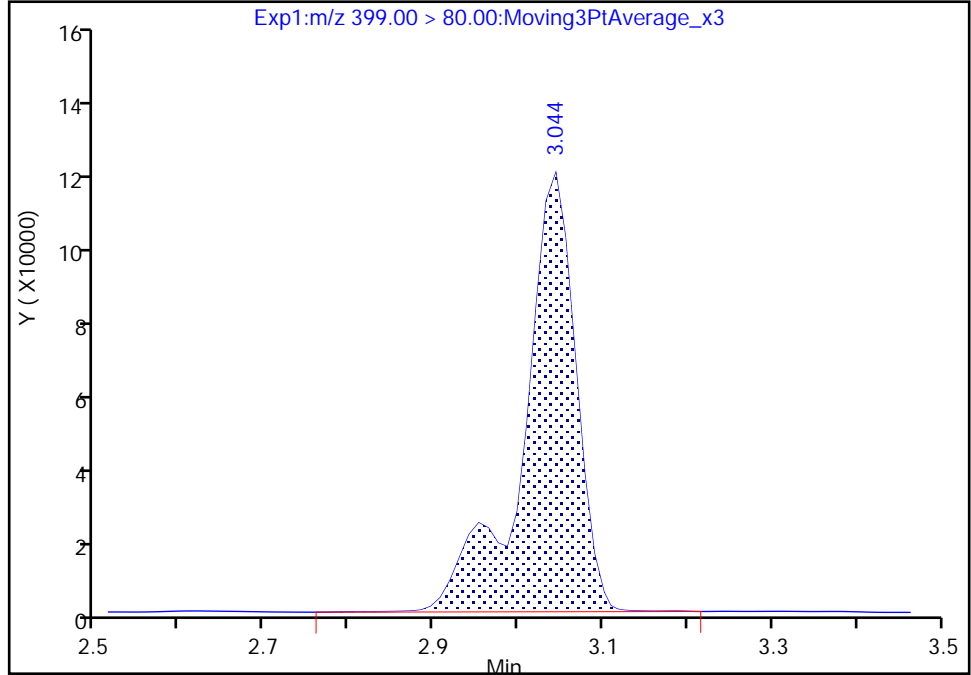
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B014.d  
Injection Date: 24-Dec-2019 15:42:36 Instrument ID: LC812  
Lims ID: 480-164221-C-4-B MS  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 14 Worklist Smp#: 14  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

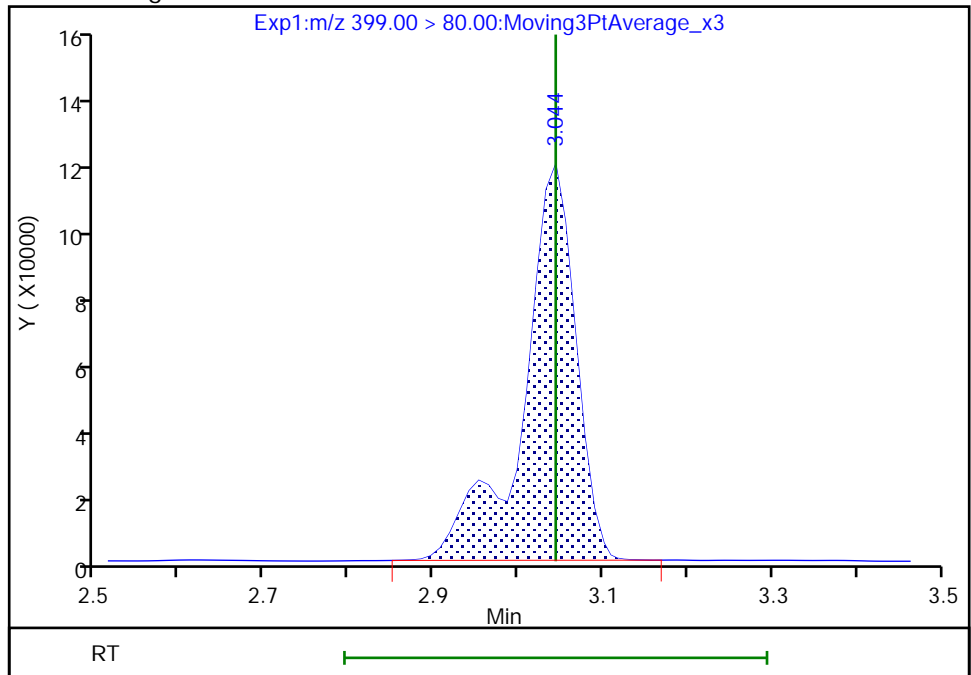
RT: 3.04  
Area: 522219  
Amount: 0.845744  
Amount Units: ng/ml

Processing Integration Results



RT: 3.04  
Area: 518994  
Amount: 0.840521  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 13:22:11  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

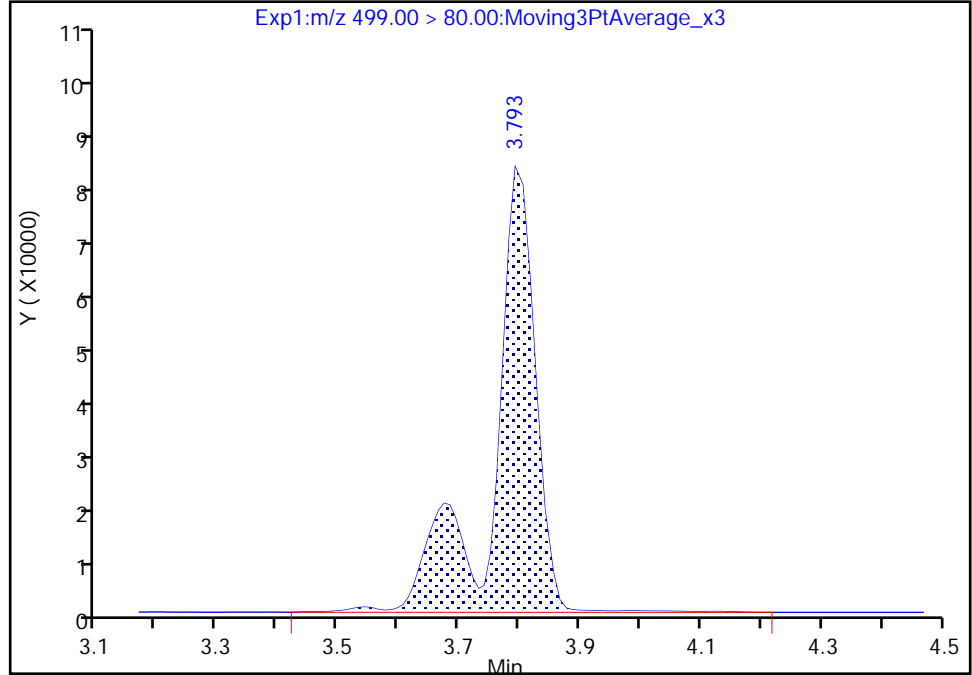
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B014.d  
Injection Date: 24-Dec-2019 15:42:36 Instrument ID: LC812  
Lims ID: 480-164221-C-4-B MS  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 14 Worklist Smp#: 14  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

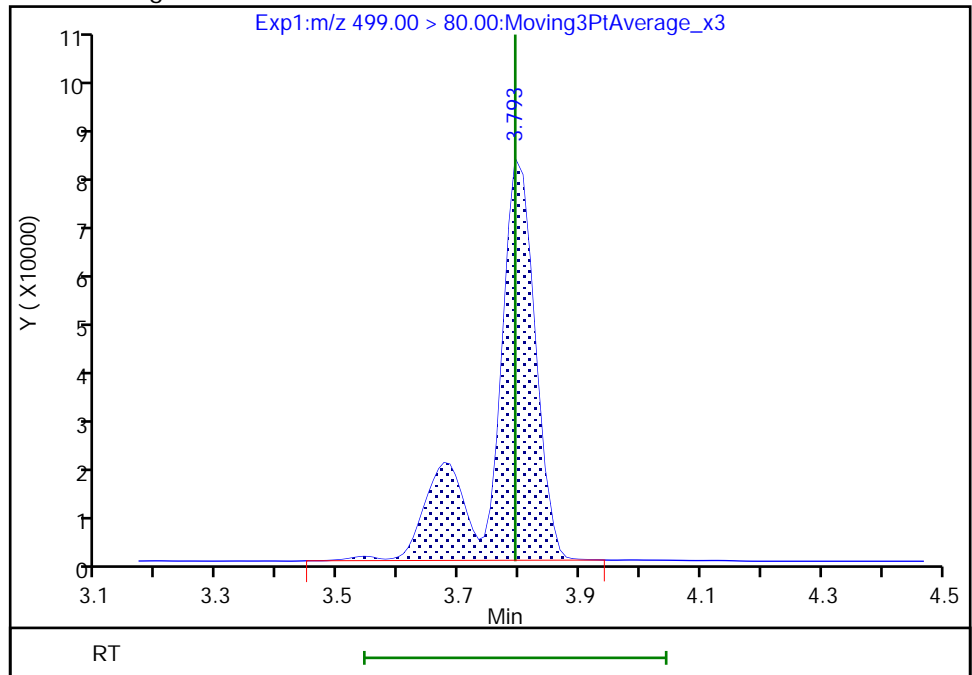
RT: 3.79  
Area: 387766  
Amount: 0.881546  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 380762  
Amount: 0.865623  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 13:21:12

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Euofins TestAmerica, Burlington

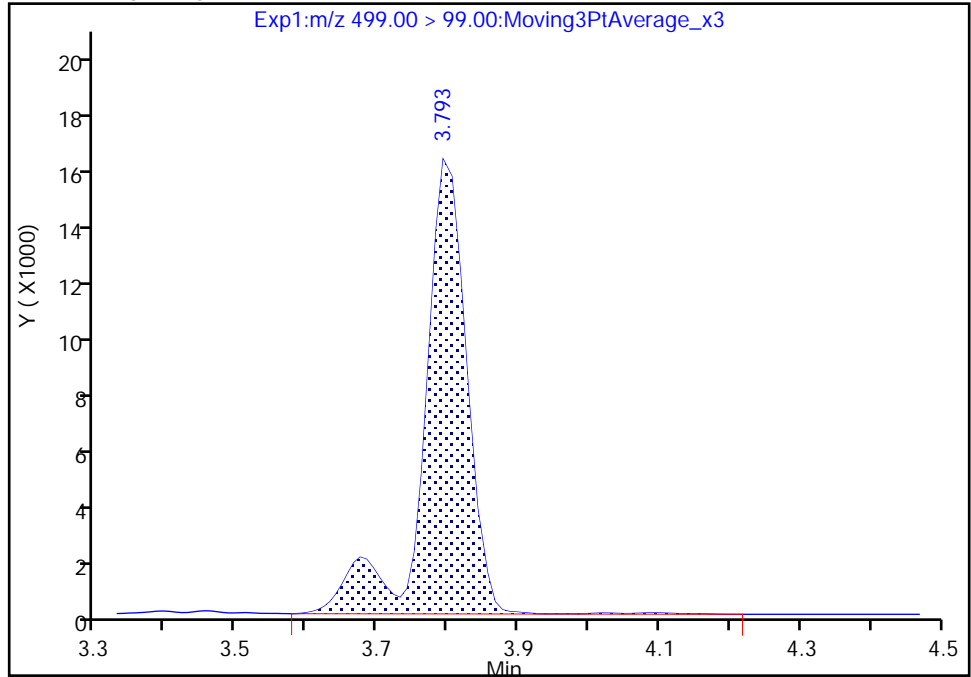
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B014.d  
Injection Date: 24-Dec-2019 15:42:36 Instrument ID: LC812  
Lims ID: 480-164221-C-4-B MS  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 14 Worklist Smp#: 14  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

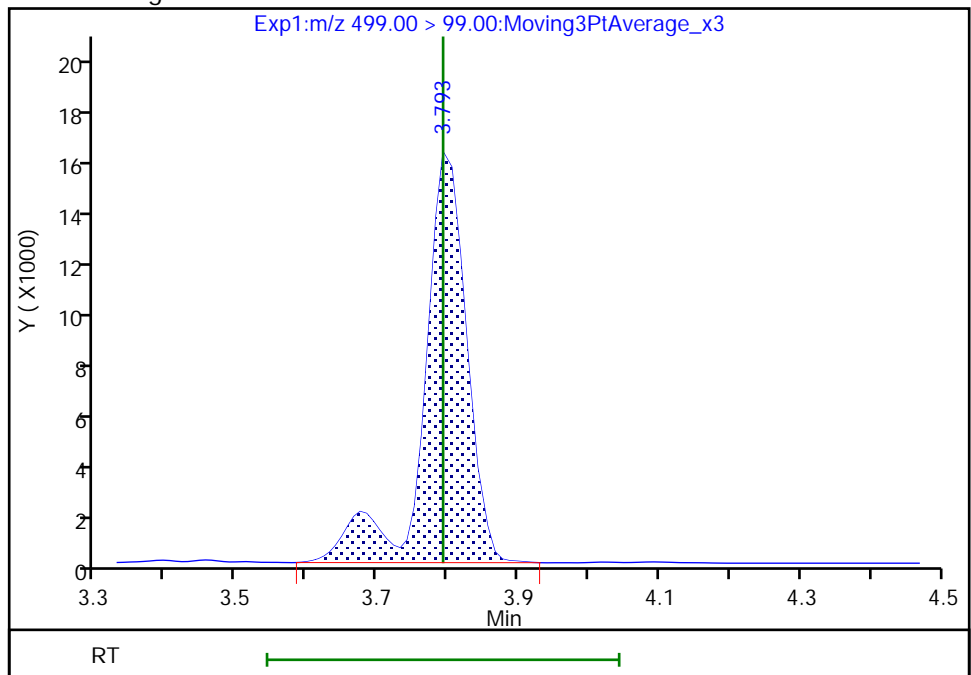
RT: 3.79  
Area: 67222  
Amount: 0.881546  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 66775  
Amount: 0.865623  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 13:21:19

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

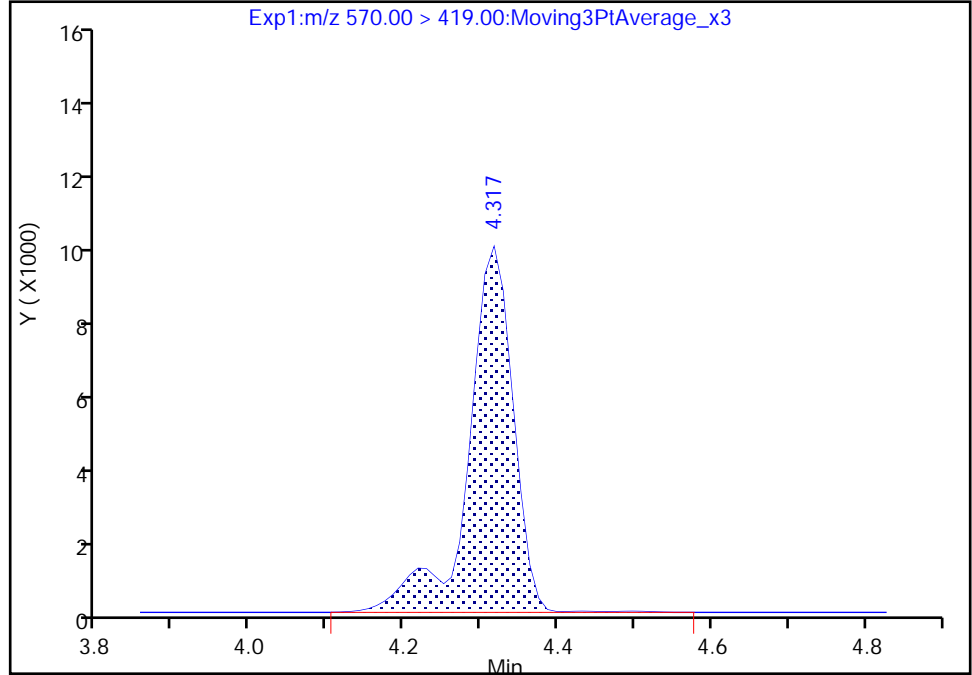
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B014.d  
Injection Date: 24-Dec-2019 15:42:36 Instrument ID: LC812  
Lims ID: 480-164221-C-4-B MS  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 14 Worklist Smp#: 14  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

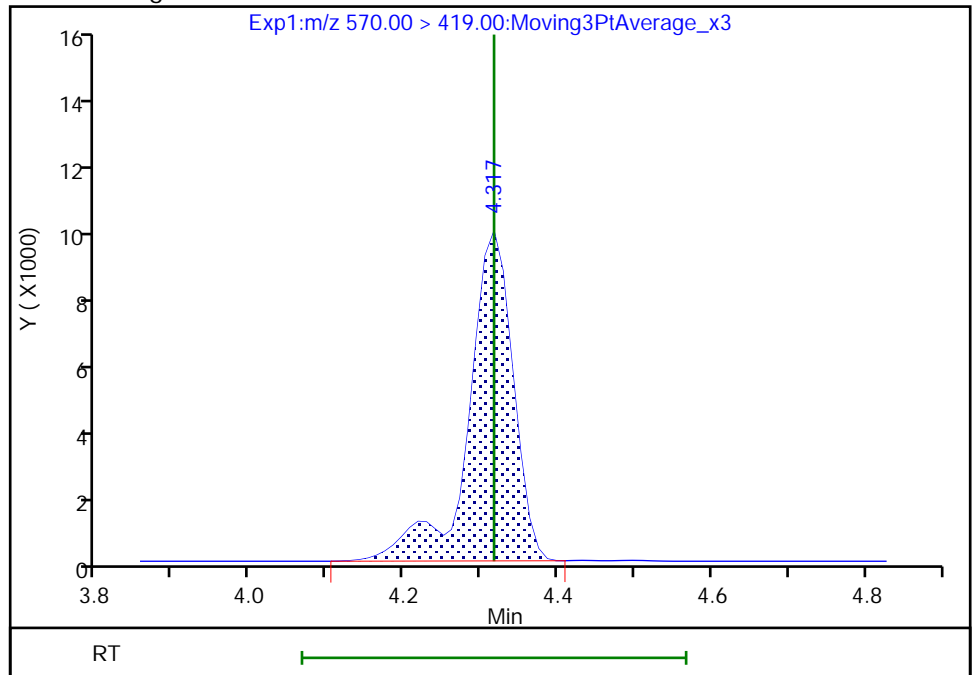
RT: 4.32  
Area: 39411  
Amount: 1.174751  
Amount Units: ng/ml

Processing Integration Results



RT: 4.32  
Area: 39127  
Amount: 1.166286  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagern, 27-Dec-2019 13:20:38  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

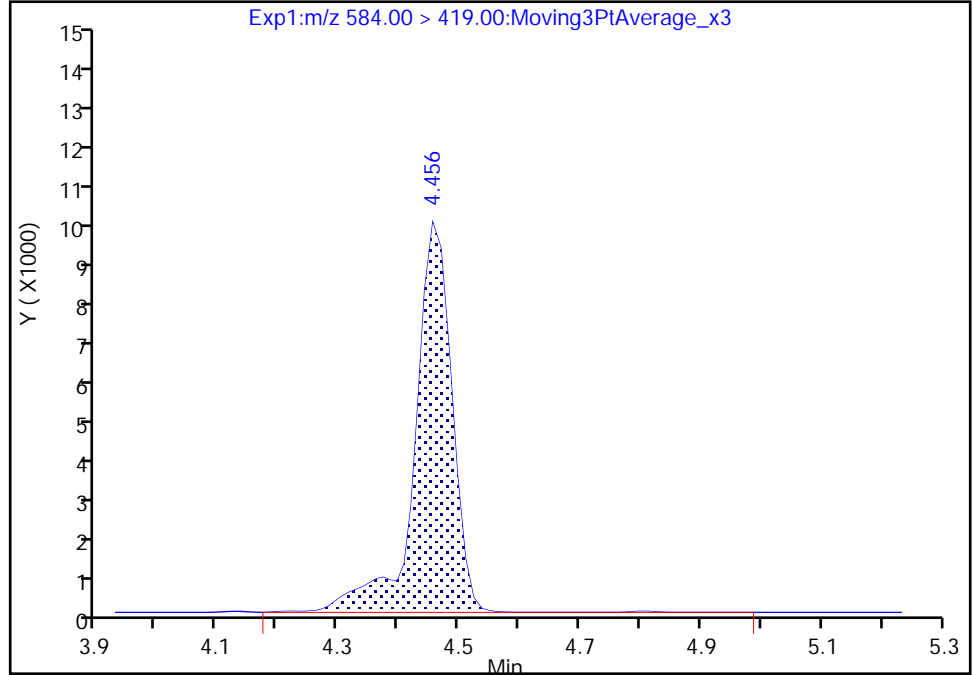
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B014.d  
Injection Date: 24-Dec-2019 15:42:36 Instrument ID: LC812  
Lims ID: 480-164221-C-4-B MS  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 14 Worklist Smp#: 14  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

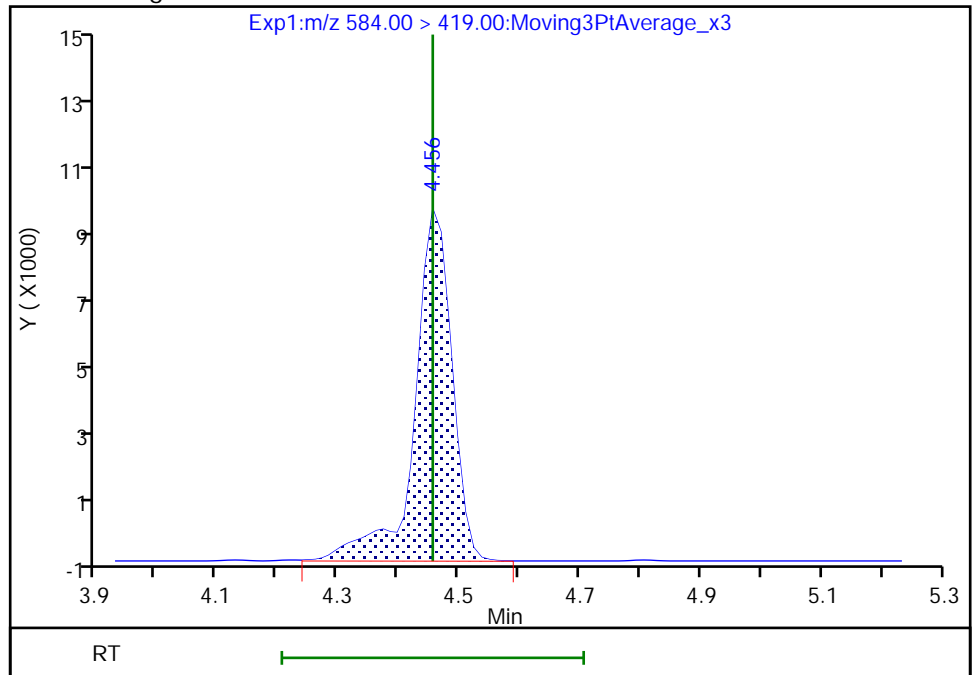
RT: 4.46  
Area: 41273  
Amount: 0.973124  
Amount Units: ng/ml

Processing Integration Results



RT: 4.46  
Area: 41235  
Amount: 0.972228  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagery, 27-Dec-2019 13:19:43

Audit Action: Manually Integrated

Audit Reason: Baseline



FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS RW 1 DER MSD Lab Sample ID: 480-164221-3 MSD  
 Matrix: Water Lab File ID: SC122319B012.d  
 Analysis Method: 537 (modified) Date Collected: 12/12/2019 12:10  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 269.2 (mL) Date Analyzed: 12/24/2019 15:26  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 20 (uL) GC Column: C-18 ID: 4.6 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	45.0		1.9	0.93
2706-90-3	Perfluoropentanoic acid (PFPeA)	43.1		1.9	0.59
307-24-4	Perfluorohexanoic acid (PFHxA)	49.8		1.9	0.71
375-85-9	Perfluoroheptanoic acid (PFHpA)	44.1		1.9	0.85
335-67-1	Perfluorooctanoic acid (PFOA)	41.6		1.9	0.75
375-95-1	Perfluorononanoic acid (PFNA)	40.8		1.9	0.25
335-76-2	Perfluorodecanoic acid (PFDA)	45.5		1.9	0.72
2058-94-8	Perfluoroundecanoic acid (PFUnA)	38.8		1.9	0.72
307-55-1	Perfluorododecanoic acid (PFDoA)	46.8		1.9	0.55
72629-94-8	Perfluorotridecanoic acid (PFTriA)	39.4		1.9	0.56
376-06-7	Perfluorotetradecanoic acid (PFTeA)	47.3		1.9	0.85
375-73-5	Perfluorobutanesulfonic acid (PFBS)	35.9		1.9	0.46
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	54.9		1.9	0.74
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	39.2		1.9	0.88
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	87.4		1.9	0.57
335-77-3	Perfluorodecanesulfonic acid (PFDS)	35.5		1.9	0.84
754-91-6	Perfluorooctanesulfonamide (PFOSA)	37.0		9.3	9.3
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	34.7		19	1.6
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	39.2		19	1.4
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	35.3		19	5.1
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	35.0		19	2.7

FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS RW 1 DER MSD Lab Sample ID: 480-164221-3 MSD  
 Matrix: Water Lab File ID: SC122319B012.d  
 Analysis Method: 537 (modified) Date Collected: 12/12/2019 12:10  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 269.2 (mL) Date Analyzed: 12/24/2019 15:26  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 20 (uL) GC Column: C-18 ID: 4.6 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	106		50-150
STL01892	13C4 PFHpA	100		50-150
STL00990	13C4 PFOA	100		50-150
STL00991	13C4 PFOS	88		50-150
STL00995	13C5 PFNA	93		50-150
STL00992	13C4 PFBA	89		25-150
STL00993	13C2 PFHxA	103		50-150
STL00996	13C2 PFDA	75		50-150
STL00997	13C2 PFUnA	71		50-150
STL00998	13C2 PFDoA	66		50-150
STL01056	13C8 FOSA	83		25-150
STL01893	13C5 PFPeA	109		25-150
STL02116	13C2 PFTeDA	74		50-150
STL02118	d3-NMeFOSAA	77		50-150
STL02117	d5-NEtFOSAA	79		50-150
STL02279	M2-6:2 FTS	78		25-150
STL02280	M2-8:2 FTS	79		25-150
STL02337	13C3 PFBS	102		50-150

Eurofins TestAmerica, Burlington  
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B012.d  
 Lims ID: 480-164221-C-3-C MSD  
 Client ID: CS RW 1 DER  
 Sample Type: MSD  
 Inject. Date: 24-Dec-2019 15:26:13 ALS Bottle#: 12 Worklist Smp#: 12  
 Injection Vol: 20.0 ul Dil. Factor: 1.0000  
 Sample Info: 480-164221-C-3-C MSD  
 Misc. Info.: 200-0039355-012 Plate: 1 Rack: 2  
 Operator ID: lc812tech Instrument ID: LC812  
 Method: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\PFC\_LC812.m  
 Limit Group: LC\_PFC\_ICAL  
 Last Update: 30-Dec-2019 15:06:05 Calib Date: 06-Dec-2019 15:13:26  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Column 1 : C-18 ( 4.60 mm) Det: EXP1  
 Process Host: CTX0330

First Level Reviewer: lautenschlagery Date: 27-Dec-2019 12:14:23  
 Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	1.907	1.908	-0.001	0.557	1572228	2.22	88.9	2983	
2 Perfluorobutanoic acid	212.90 > 169.00	1.907	1.908	-0.001	1.000	758259	1.21	121	241	
D 3 13C5 PFPeA	267.90 > 223.00	2.257	2.257	0.0	0.660	1477537	2.73	109	5239	
4 Perfluoropentanoic acid	262.90 > 219.00	2.257	2.271	-0.014	1.000	776215	1.16	116	77.1	
D 47 13C3 PFBS	301.90 > 80.00	2.271	2.285	-0.014	0.664	1528567	2.37	102	240954	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	2.285	2.285	-0.001	1.006	690930	0.9669	Target=2.03	109	749
	298.90 > 99.00	2.285	2.285	-0.001	1.006	375754		1.84(1.01-3.04)		561
D 60 M2-4:2 FTS	329.00 > 81.00	2.611	2.611	0.0	0.763	117511	1.95	83.6	180	
61 1H,1H,2H,2H-perfluorohexanesulfoni	327.00 > 307.00	2.611	2.611	0.0	1.000	81725	0.9375	100	1874	
D 7 13C2 PFHxA	315.00 > 270.00	2.648	2.648	0.0	0.774	1551550	2.57	103	5236	
6 Perfluorohexanoic acid	313.00 > 269.00	2.648	2.661	-0.013	1.000	849167	1.34	Target=13.76	134	307
	313.00 > 119.00	2.648	2.661	-0.013	1.000	71362		11.90(6.88-20.64)		240
70 Perfluoropentanesulfonic acid	349.00 > 80.00	2.661	2.661	0.0	0.874	623444	0.9898	Target=3.50	106	1181
	349.00 > 99.00	2.661	2.661	0.0	0.874	204005		3.06(1.75-5.25)		546
D 64 13C3 HFPO-DA	332.10 > 287.00	2.768	2.768	0.0	0.809	114911	4.36	175	1212	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.768	2.776	-0.008	1.000	99003	0.5998		60.0	44.2	
D 11 18O2 PFHxS										
403.00 > 84.00	3.044	3.044	0.0	0.890	1282805	2.52		106	6535	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.044	3.044	0.0	1.000	906849	1.48	Target=3.90	162	1015	M
399.00 > 99.00	3.044	3.044	0.0	1.000	210894		4.30(1.95-5.85)		567	M
D 9 13C4 PFHpA										
367.00 > 322.00	3.044	3.044	0.0	0.890	1424486	2.49		99.7	5018	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.044	3.044	0.0	1.000	714379	1.19	Target=3.95	119	389	
363.00 > 169.00	3.044	3.044	0.0	1.000	202186		3.53(1.97-5.92)		830	
77 DONA										
377.00 > 251.00	3.089	3.089	0.0	0.815	1497908	1.19	Target=2.49	126	3459	
377.00 > 85.00	3.078	3.089	-0.011	0.812	606413		2.47(1.24-3.73)		1477	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.413	3.413	0.0	0.900	461755	1.06	Target=6.46	111	825	
449.00 > 99.00	3.413	3.413	0.0	0.900	77726		5.94(3.23-9.69)		532	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.413	3.413	0.0	1.000	61098	0.9503		100	437	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.413	3.413	0.0	0.998	161812	1.85		77.9	619	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.422	3.430	-0.008	1.000	751325	1.12	Target=2.40	112	321	
413.00 > 169.00	3.422	3.430	-0.008	1.000	342753		2.19(1.20-3.60)		1316	
D 14 13C4 PFOA										
417.00 > 372.00	3.422	3.430	-0.008	1.000	1512122	2.49		99.7	5228	
* 62 13C2 PFOA										
415.00 > 370.00	3.422	3.430	-0.008		1669312	2.50			3658	
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.793	0.0	1.108	853733	2.11		88.4	3270	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.793	3.793	0.0	1.000	906868	2.35	Target=5.74	253	1688	M
499.00 > 99.00	3.793	3.793	0.0	1.000	143670		6.31(2.87-8.61)		954	M
D 19 13C5 PFNA										
468.00 > 423.00	3.817	3.817	0.0	1.116	1294060	2.32		92.8	5393	
20 Perfluorononanoic acid										
463.00 > 419.00	3.817	3.817	0.0	1.000	557689	1.10	Target=7.01	110	271	
463.00 > 169.00	3.817	3.817	0.0	1.000	80408		6.94(3.50-10.51)		1065	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.983	3.984	-0.001	1.050	331534	0.7526		80.8	2427	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.129	4.129	0.0	1.089	260246	0.8818	Target=3.14	91.9	1000	
549.00 > 99.00	4.129	4.129	0.0	1.089	93080		2.80(1.57-4.71)		459	
D 23 13C2 PFDA										
515.00 > 470.00	4.164	4.164	0.0	1.217	1025848	1.87		74.6	5204	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
24 Perfluorodecanoic acid										
513.00 > 469.00	4.164	4.164	0.0	1.000	485883	1.22	Target=7.28	122	656	
513.00 > 169.00	4.164	4.164	0.0	1.000	77110		6.30(3.64-10.91)		962	
25 1H,1H,2H,2H-perfluorodecanesulfonyl										
527.00 > 507.00	4.164	4.164	0.0	1.000	35705	0.9410		98.2	700	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.164	4.175	-0.011	1.217	196861	1.89		78.8	1026	
D 21 13C8 FOSA										
506.00 > 78.00	4.218	4.218	0.0	1.233	1499817	2.09		83.4	3927	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.218	4.218	0.0	1.000	594578	1.00		99.6	2303	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.305	4.305	0.0	1.258	101277	1.91		76.5	679	
28 N-methylperfluorooctanesulfonamide										
570.00 > 419.00	4.317	4.317	0.0	1.003	32847	0.9331		93.3	598	
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.409	4.409	0.0	1.162	245780	0.9562	Target=2.76	99.2	1550	
599.00 > 99.00	4.409	4.409	0.0	1.162	71573		3.43(1.38-4.14)		874	
D 30 13C2 PFUnA										
565.00 > 520.00	4.443	4.443	0.0	1.298	830384	1.78		71.1	3859	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.443	4.443	0.0	1.000	293896	1.04	Target=5.78	104	480	
563.00 > 169.00	4.443	4.443	0.0	1.000	57463		5.11(2.89-8.67)			
33 N-ethylperfluorooctanesulfonamide										
584.00 > 419.00	4.456	4.456	0.0	1.000	40248	1.06		106	646	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.456	4.456	0.0	1.302	115200	1.96		78.5	900	
66 11-Chloroeicosafluoro-3-oxaundecan										
631.00 > 451.00	4.537	4.551	-0.014	1.196	286043	0.6887		73.1	4250	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.683	4.683	0.0	1.000	396025	1.26	Target=5.13	126	164	
613.00 > 169.00	4.683	4.683	0.0	1.000	83459		4.75(2.56-7.69)		1231	
D 36 13C2 PFDaA										
615.00 > 570.00	4.683	4.683	0.0	1.369	851082	1.66		66.4	4330	
74 1H,1H,2H,2H-perfluorododecanesulfonyl										
627.00 > 607.00	4.704	4.704	0.0	1.130	21168	0.8788		91.2	636	
75 Perfluorododecanesulfonic acid (PF)										
699.00 > 80.00	4.861	4.870	-0.009	1.282	83061	0.8500	Target=0.45	87.8	226	
699.00 > 99.00	4.861	4.870	-0.009	1.282	185155		0.45(0.22-0.67)		3688	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.906	4.906	0.0	1.048	316746	1.06	Target=3.82	106	154	
663.00 > 169.00	4.906	4.906	0.0	1.048	102518		3.09(1.91-5.74)		1255	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.108	5.108	0.0	1.000	81413	1.27	Target=1.05	127	1315	
713.00 > 219.00	5.094	5.108	-0.014	0.997	71034		1.15(0.52-1.57)		1749	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.108	5.108	0.0	1.493	796363	1.85		74.2	5836	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.482	5.491	-0.009	1.000	369042	1.09	Target=3.20	109	186	
813.00 > 169.00	5.482	5.491	-0.009	1.000	131821		2.80(1.60-4.80)		2237	
D 44 13C2 PFHxDA										
815.00 > 770.00	5.482	5.491	-0.009	1.602	934510	2.36		94.6	6431	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.889	5.899	-0.010	1.074	235321	0.8716	Target=2.86	87.2	102	
913.00 > 169.00	5.884	5.899	-0.015	1.073	94572		2.49(1.43-4.29)		1635	

**QC Flag Legend**

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B012.d

Injection Date: 24-Dec-2019 15:26:13

Instrument ID: LC812

Lims ID: 480-164221-C-3-C MSD

Client ID: CS RW 1 DER

Operator ID: lc812tech

ALS Bottle#: 12

Worklist Smp#: 12

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

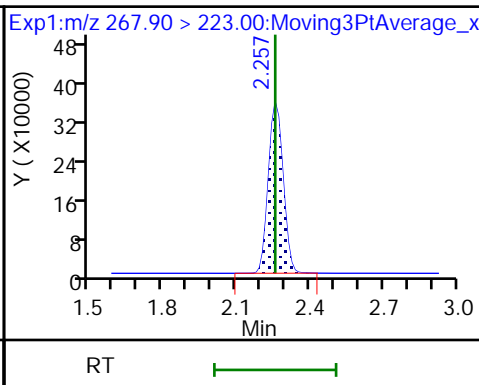
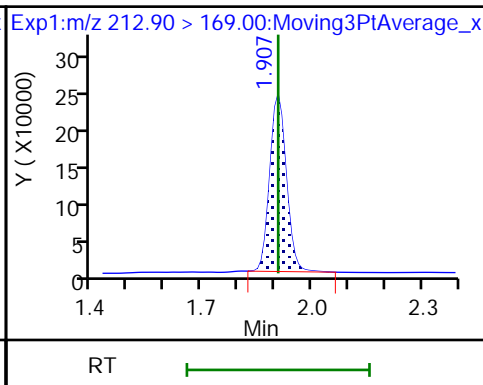
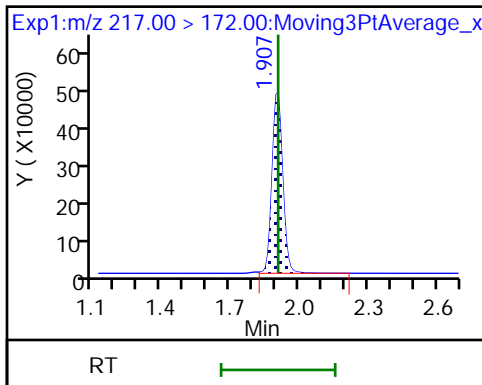
Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

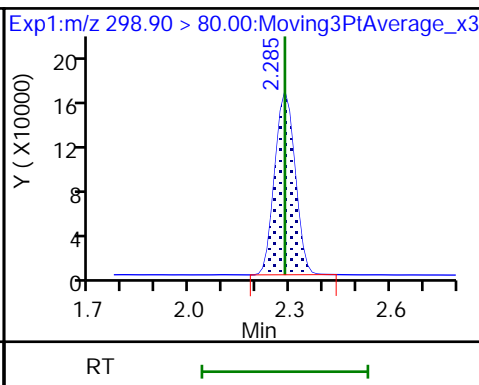
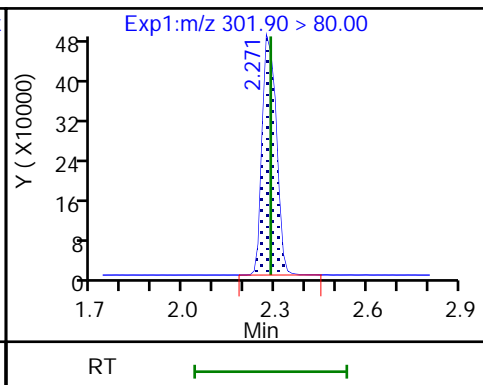
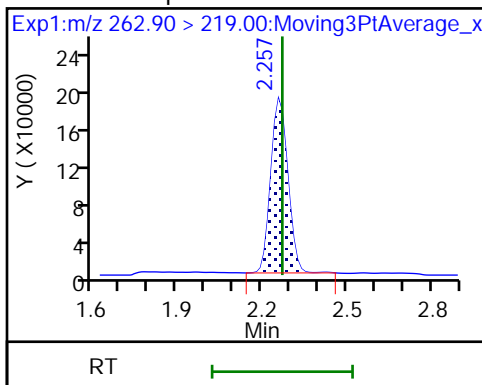
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

D 47 13C3 PFBS

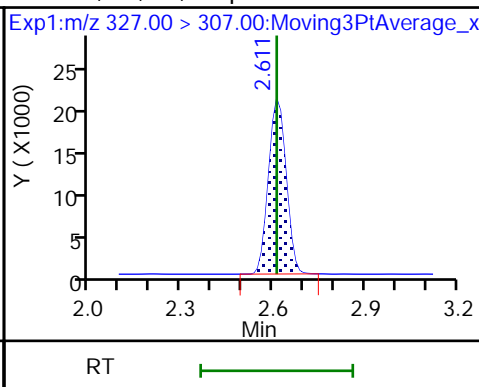
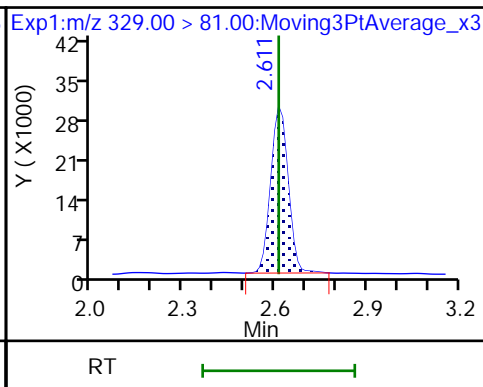
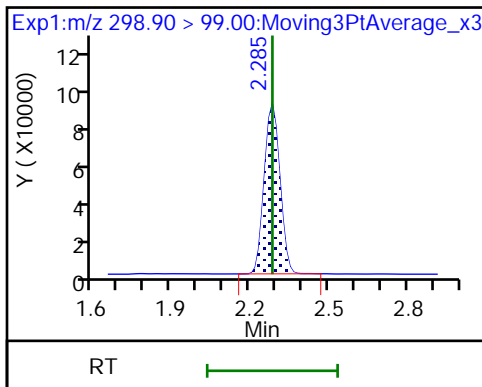
5 Perfluorobutanesulfonic acid



5 Perfluorobutanesulfonic acid

D 60 M2-4:2 FTS

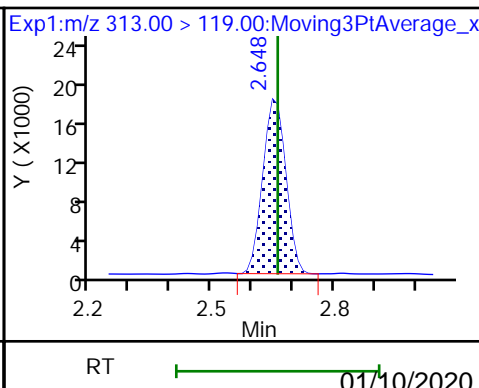
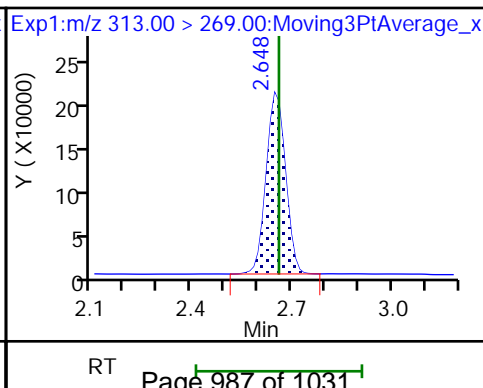
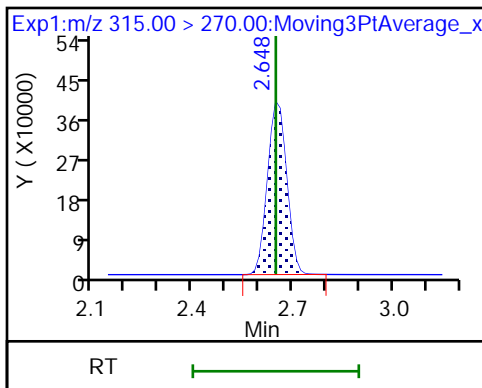
61 1H,1H,2H,2H-perfluorohexanesulfoni

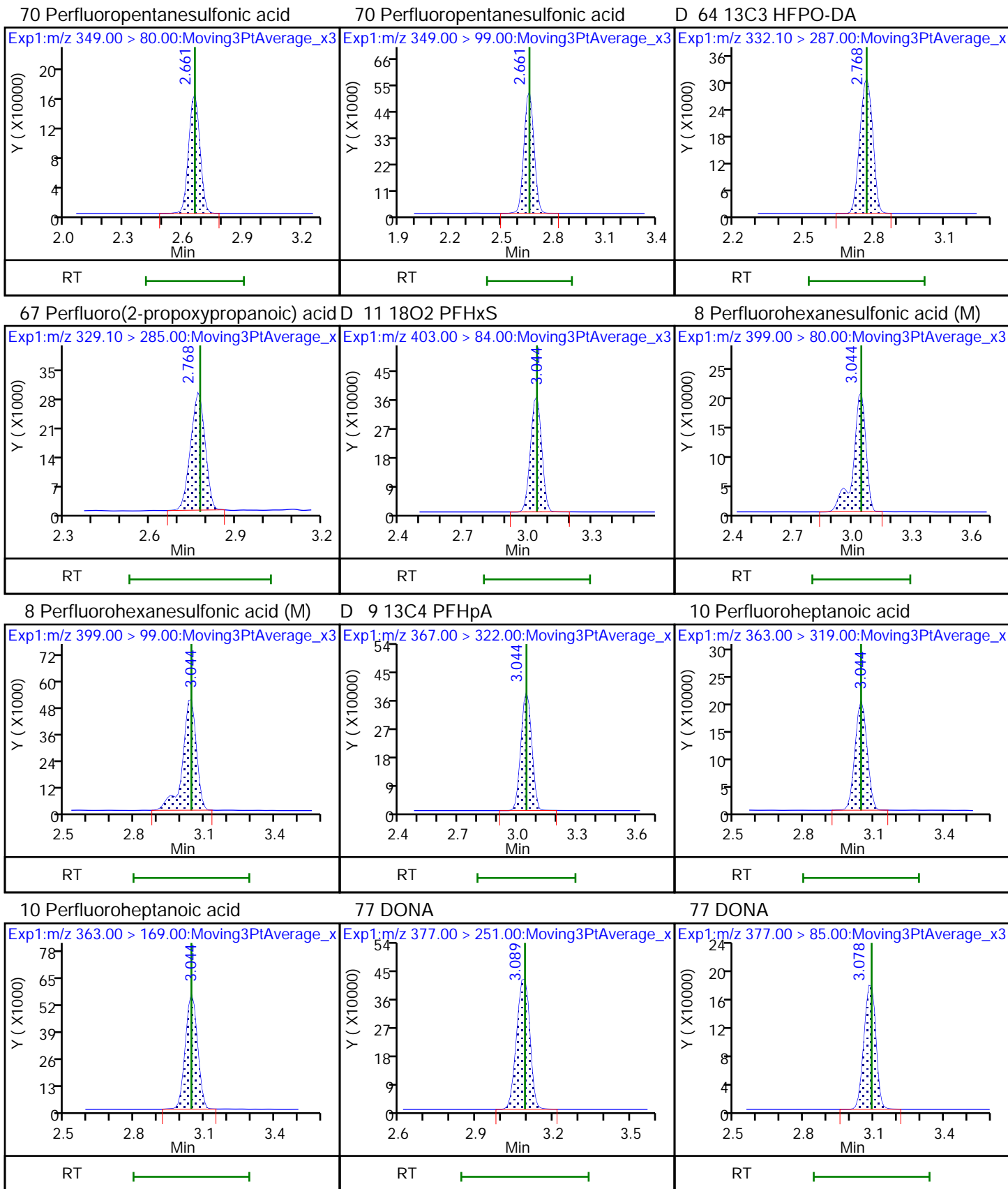


D 7 13C2 PFHxA

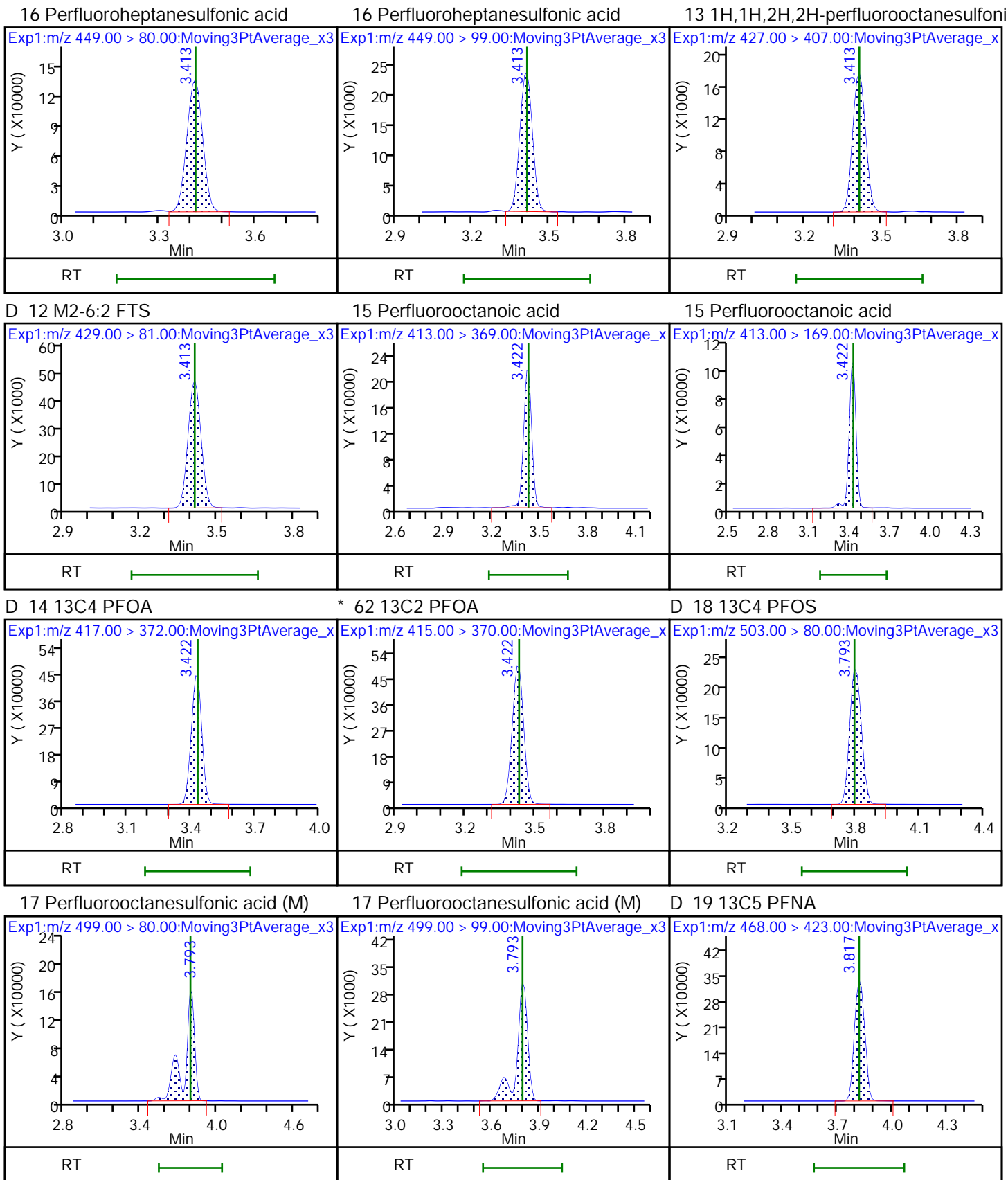
6 Perfluorohexanoic acid

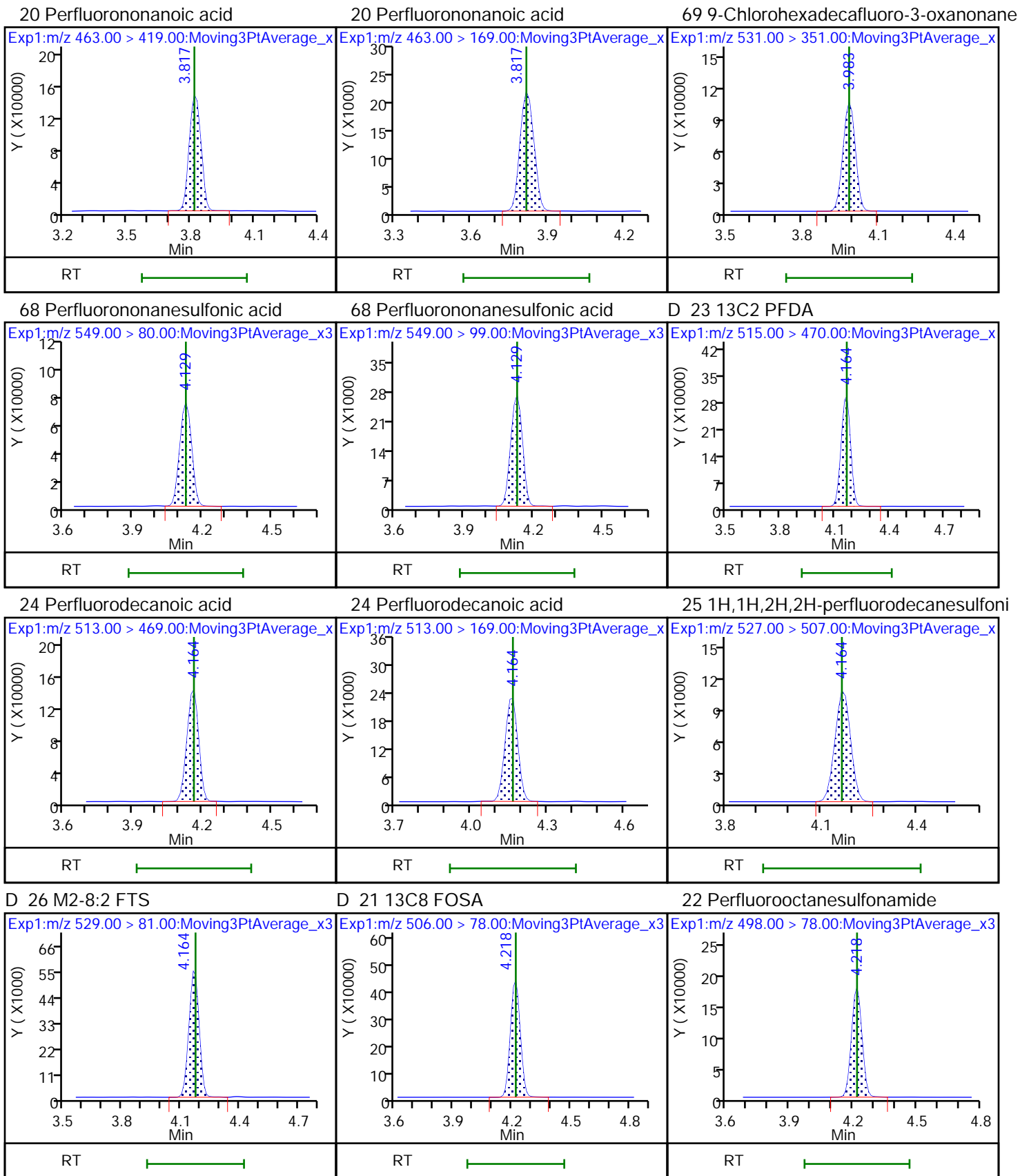
6 Perfluorohexanoic acid





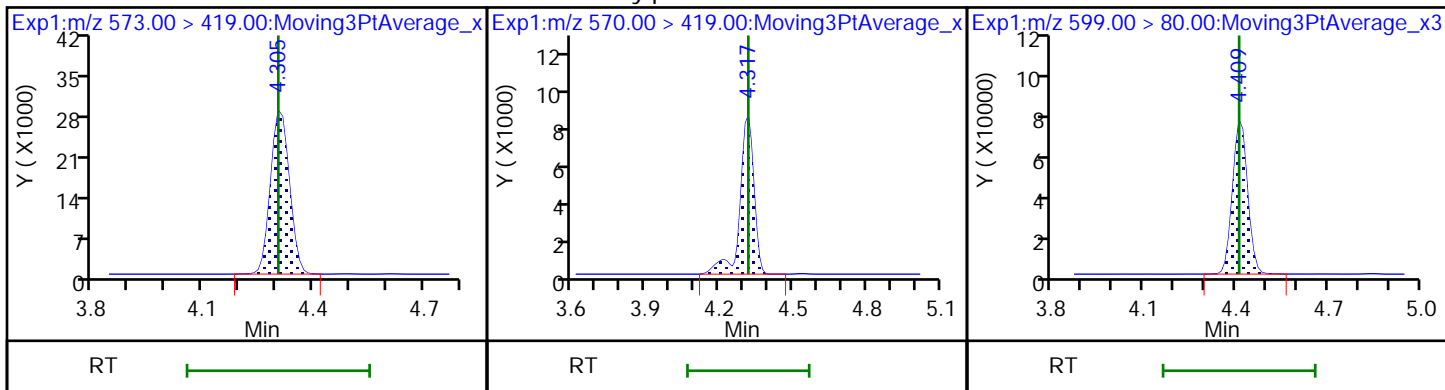






D 27 d3-NMeFOSAA

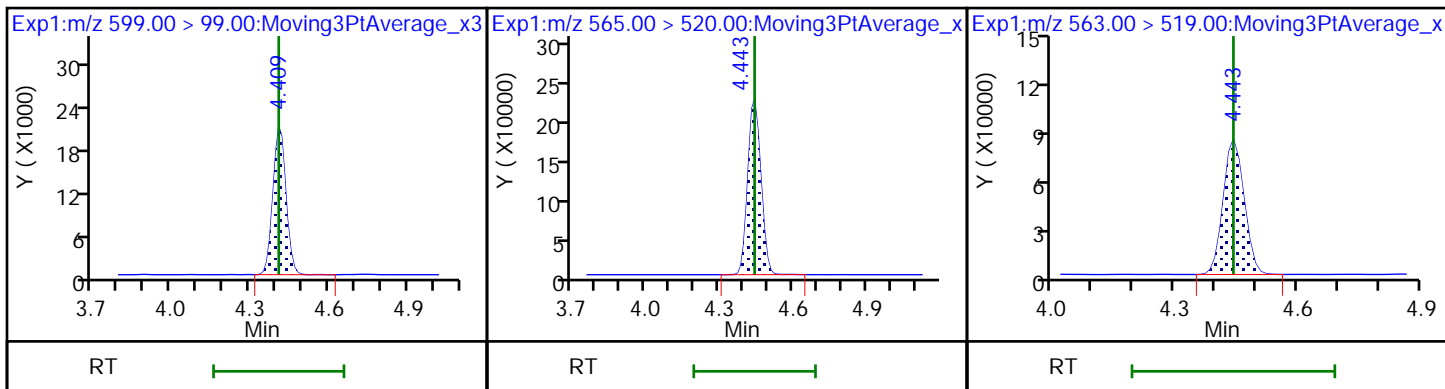
28 N-methylperfluorooctanesulfonamido 29 Perfluorodecanesulfonic acid



29 Perfluorodecanesulfonic acid

D 30 13C2 PFUnA

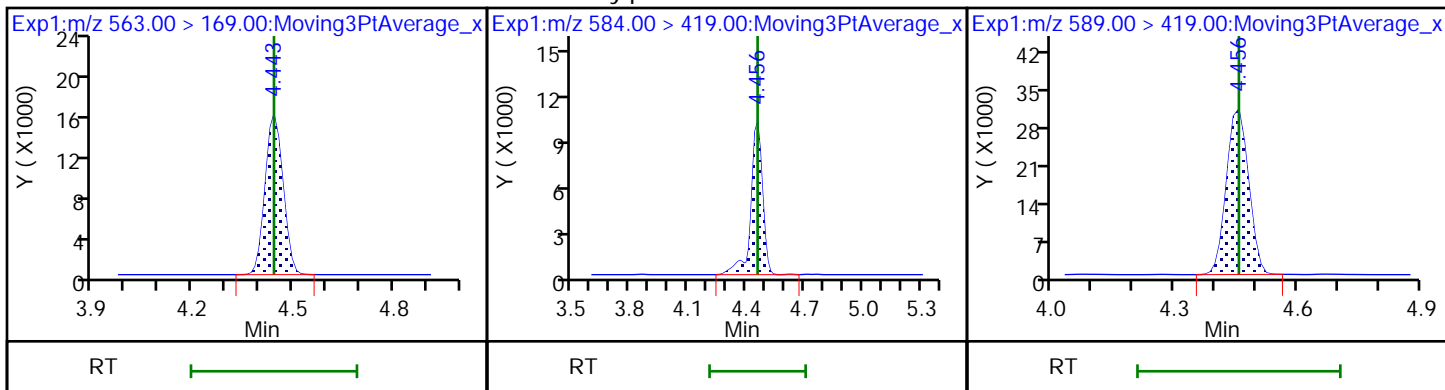
31 Perfluoroundecanoic acid



31 Perfluoroundecanoic acid

33 N-ethylperfluorooctanesulfonamido

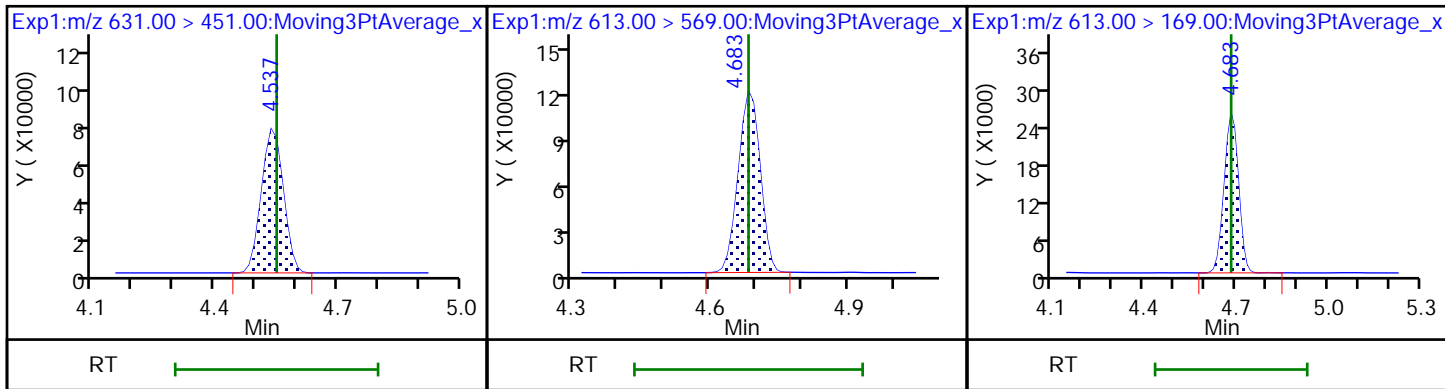
D 32 d5-NEtFOSAA



66 11-Chloroeicosafuoro-3-oxaundecan

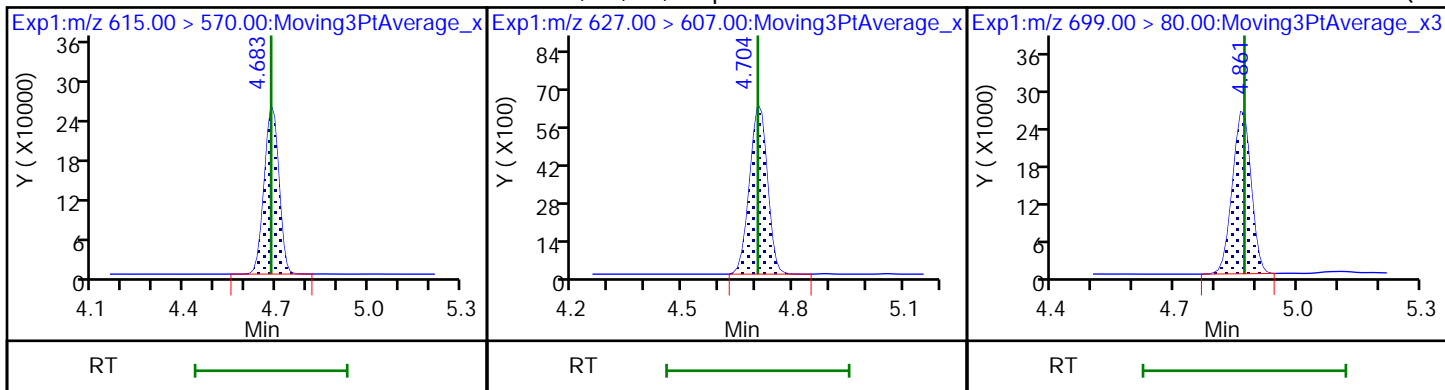
37 Perfluorododecanoic acid

37 Perfluorododecanoic acid



D 36 13C2 PFDaA

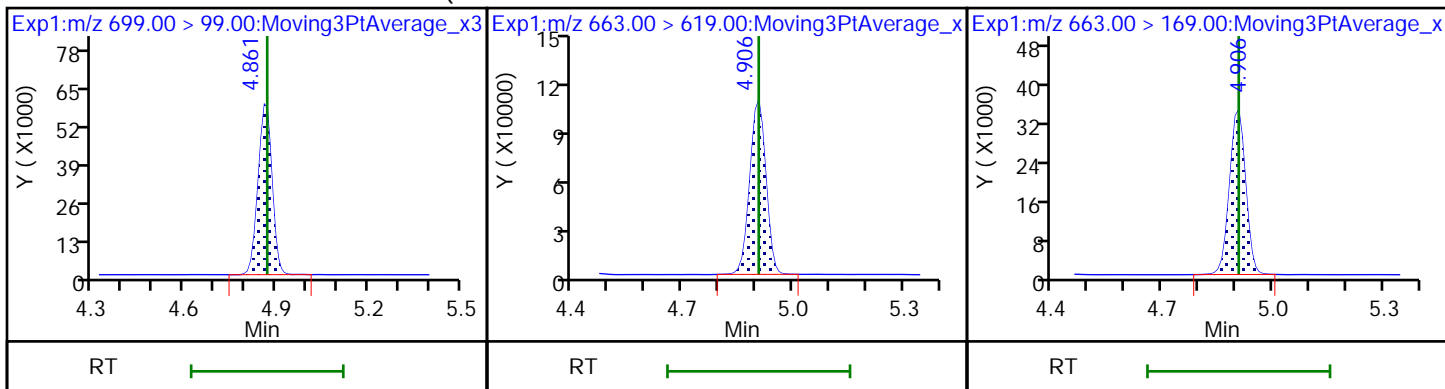
74 1H,1H,2H,2H-perfluorododecanesulfo75 Perfluorododecanesulfonic acid (PF



75 Perfluorododecanesulfonic acid (PF

41 Perfluorotridecanoic acid

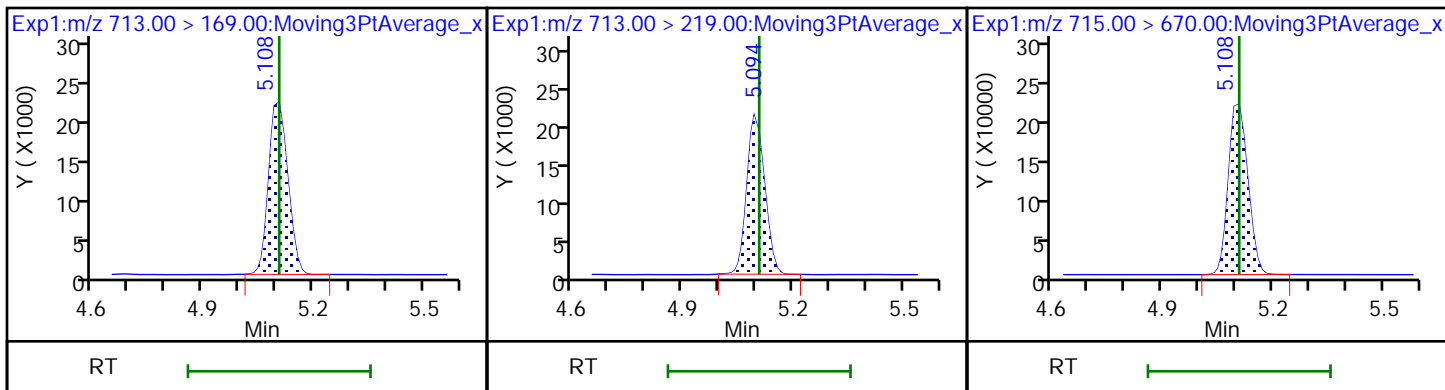
41 Perfluorotridecanoic acid



42 Perfluorotetradecanoic acid

42 Perfluorotetradecanoic acid

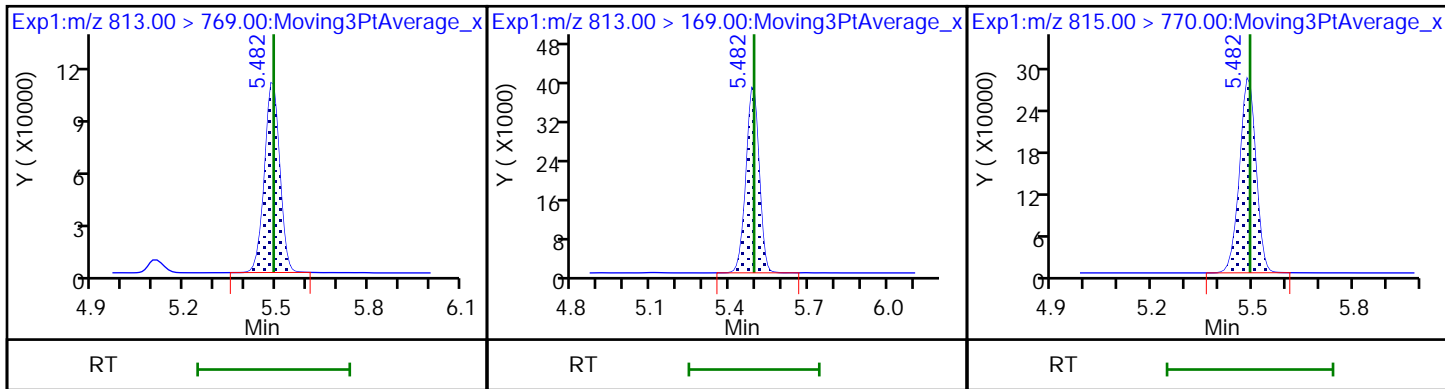
D 43 13C2 PFTeDA



45 Perfluorohexadecanoic acid

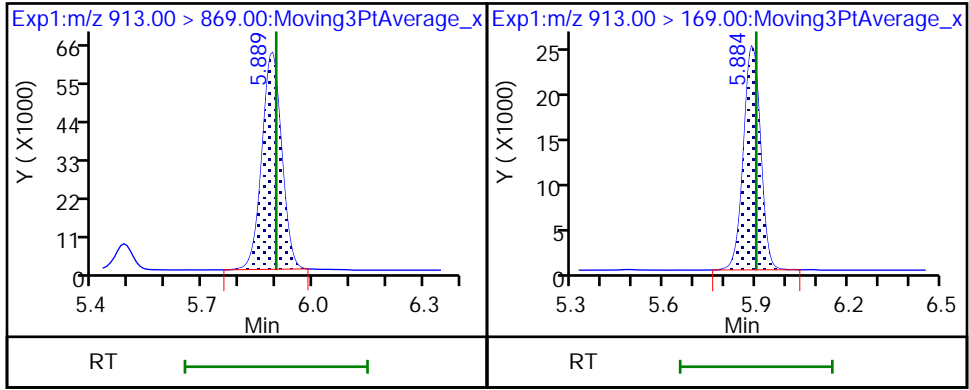
45 Perfluorohexadecanoic acid

D 44 13C2 PFHxDA



46 Perfluorooctadecanoic acid

46 Perfluorooctadecanoic acid



Eurofins TestAmerica, Burlington

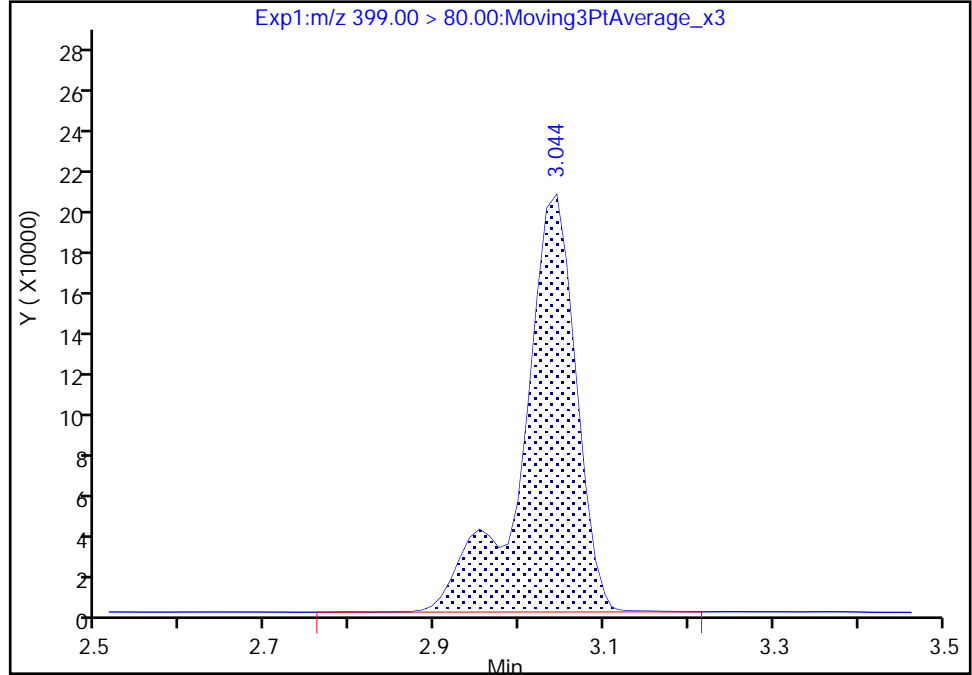
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Injection Date: 24-Dec-2019 15:26:13 Instrument ID: LC812  
Lims ID: 480-164221-C-3-C MSD  
Client ID: CS RW 1 DER  
Operator ID: lc812tech ALS Bottle#: 12 Worklist Smp#: 12  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

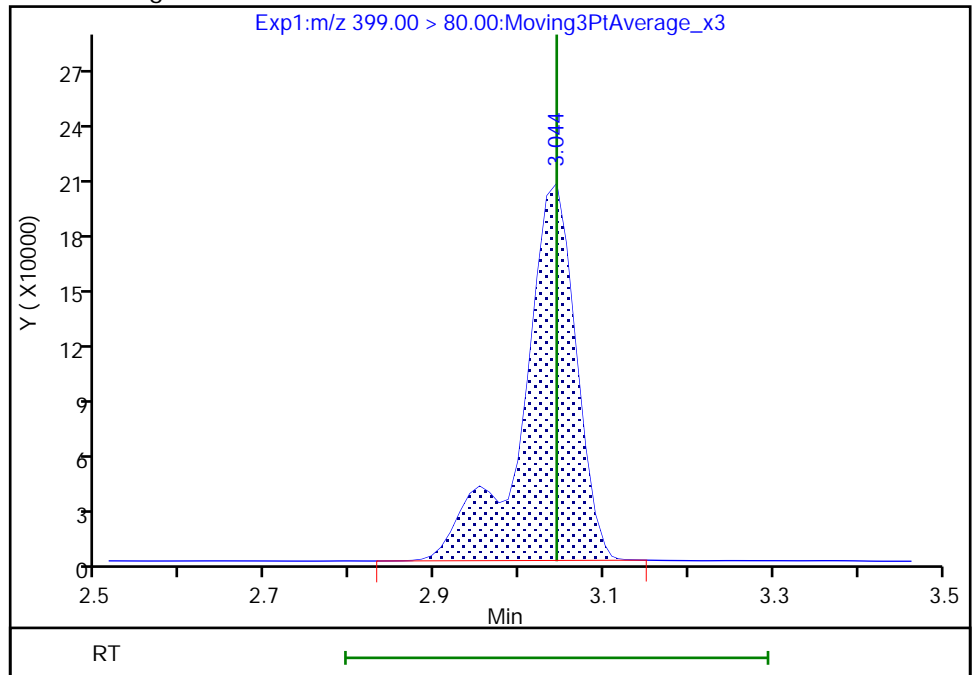
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Area: 911245  
Amount: 1.484405  
Amount Units: ng/ml

Processing Integration Results



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Area: 906849  
Amount: 1.477244  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerng, 27-Dec-2019 12:13:59

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

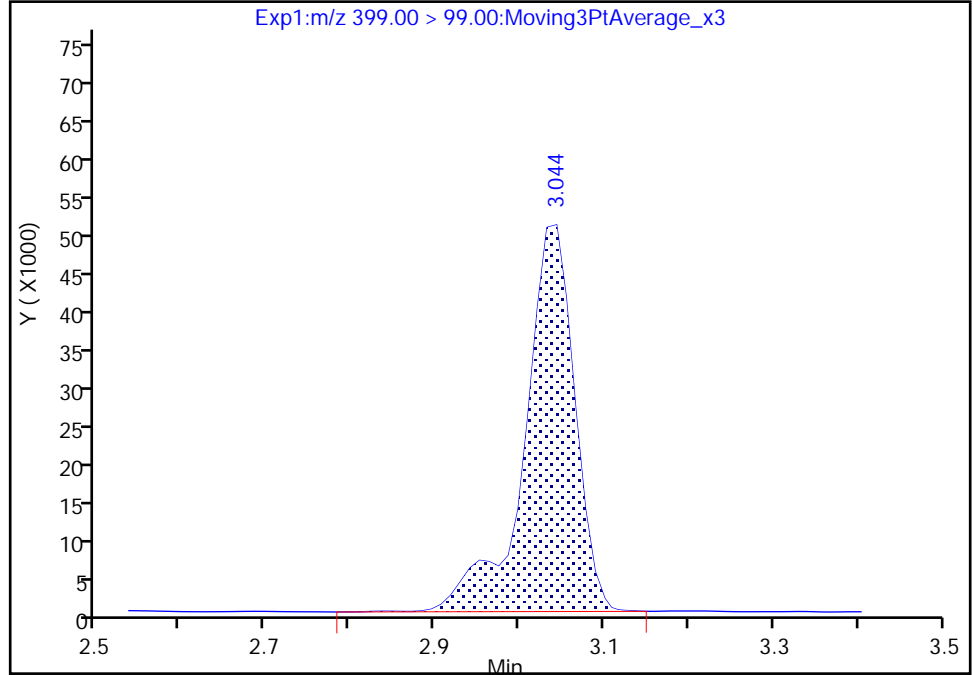
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Injection Date: 24-Dec-2019 15:26:13 Instrument ID: LC812  
Lims ID: 480-164221-C-3-C MSD  
Client ID: CS RW 1 DER  
Operator ID: lc812tech ALS Bottle#: 12 Worklist Smp#: 12  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

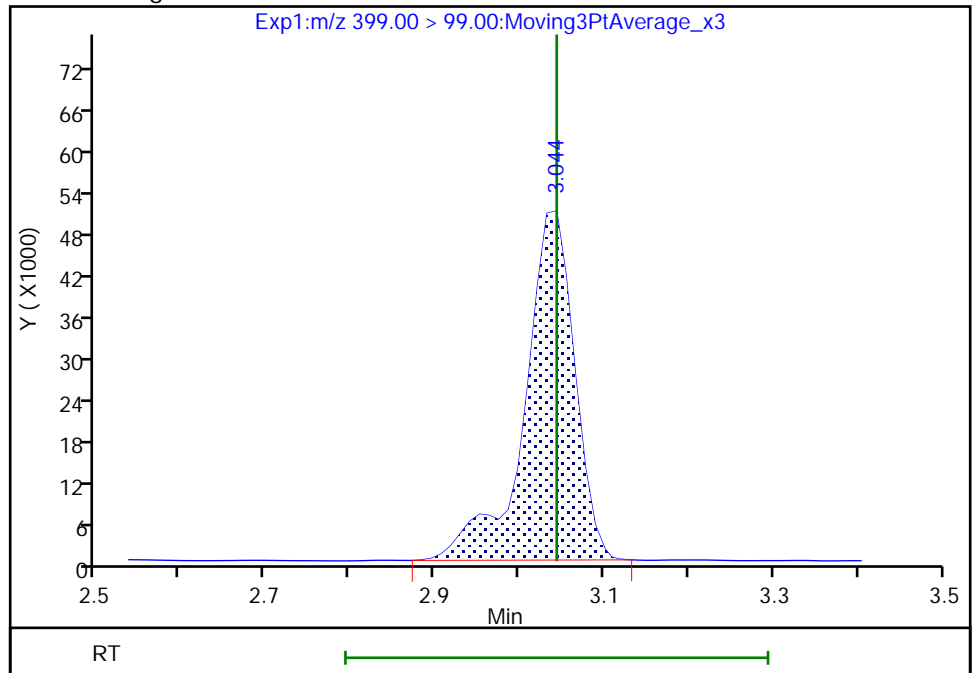
RT: 3.04  
Area: 212117  
Amount: 1.484405  
Amount Units: ng/ml

Processing Integration Results



RT: 3.04  
Area: 210894  
Amount: 1.477244  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagern, 27-Dec-2019 12:14:07

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

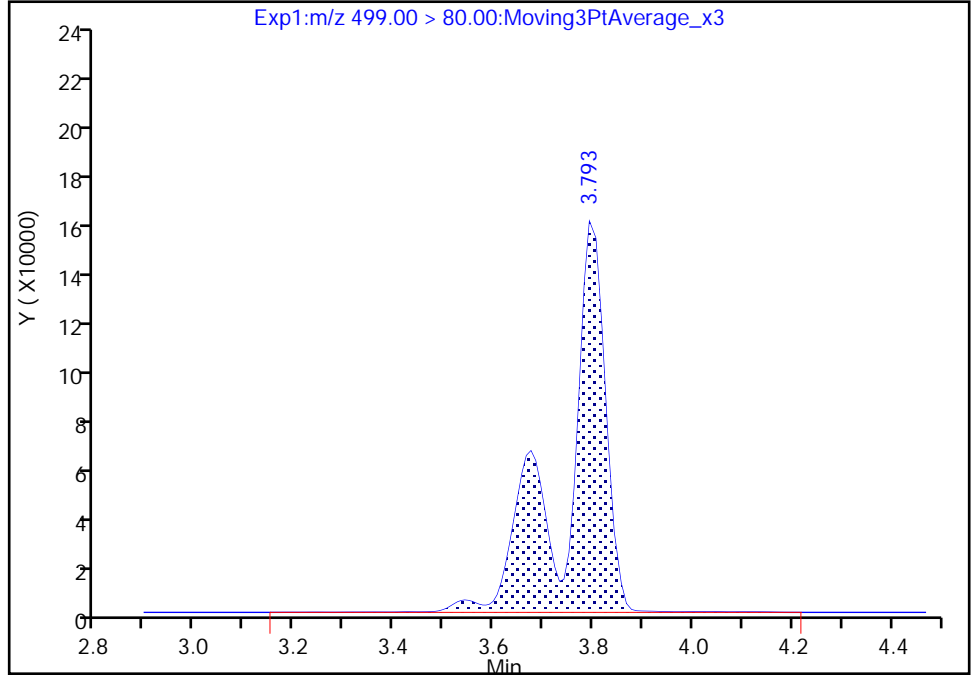
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Injection Date: 24-Dec-2019 15:26:13 Instrument ID: LC812  
Lims ID: 480-164221-C-3-C MSD  
Client ID: CS RW 1 DER  
Operator ID: lc812tech ALS Bottle#: 12 Worklist Smp#: 12  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

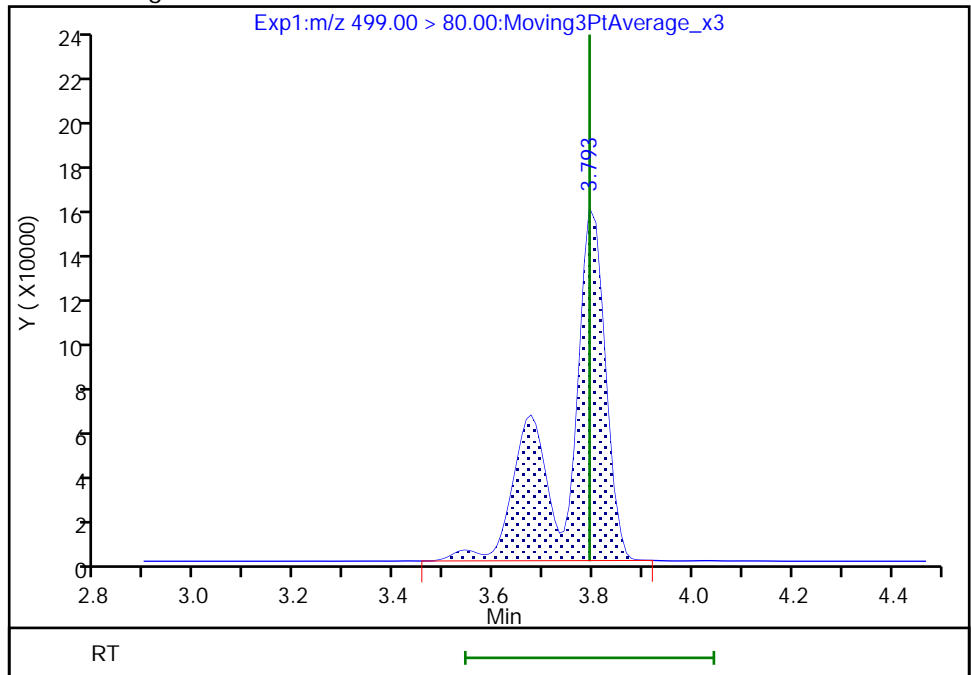
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Amount: 2.378107  
Amount Units: ng/ml

Processing Integration Results



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Amount: 2.351711  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 12:13:22  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Eurofins TestAmerica, Burlington

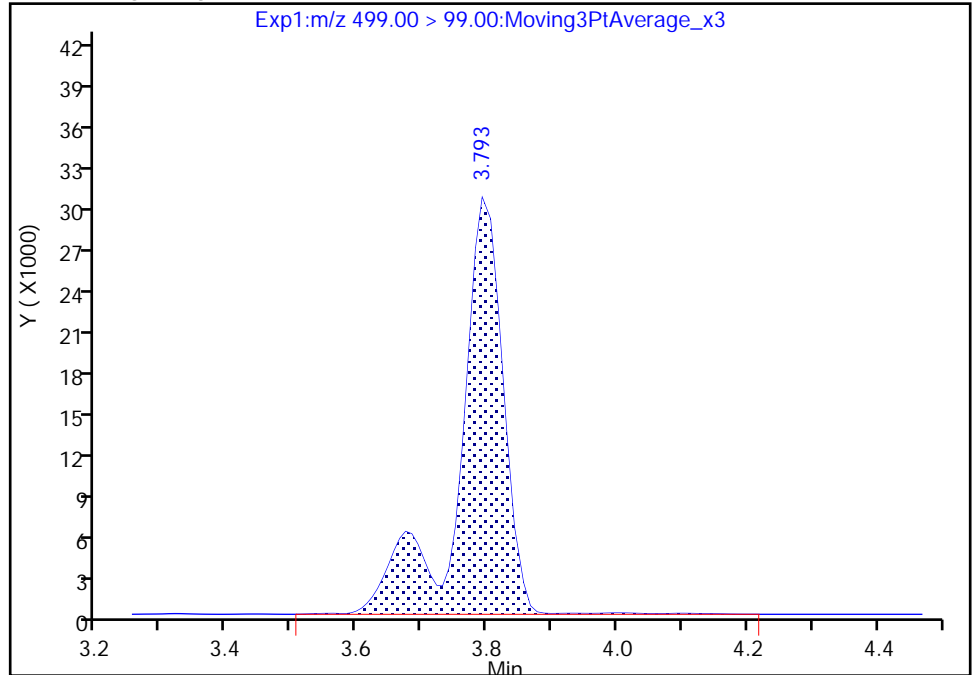
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Injection Date: 24-Dec-2019 15:26:13 Instrument ID: LC812  
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Client ID: CS RW 1 DER  
Operator ID: lc812tech ALS Bottle#: 12 Worklist Smp#: 12  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

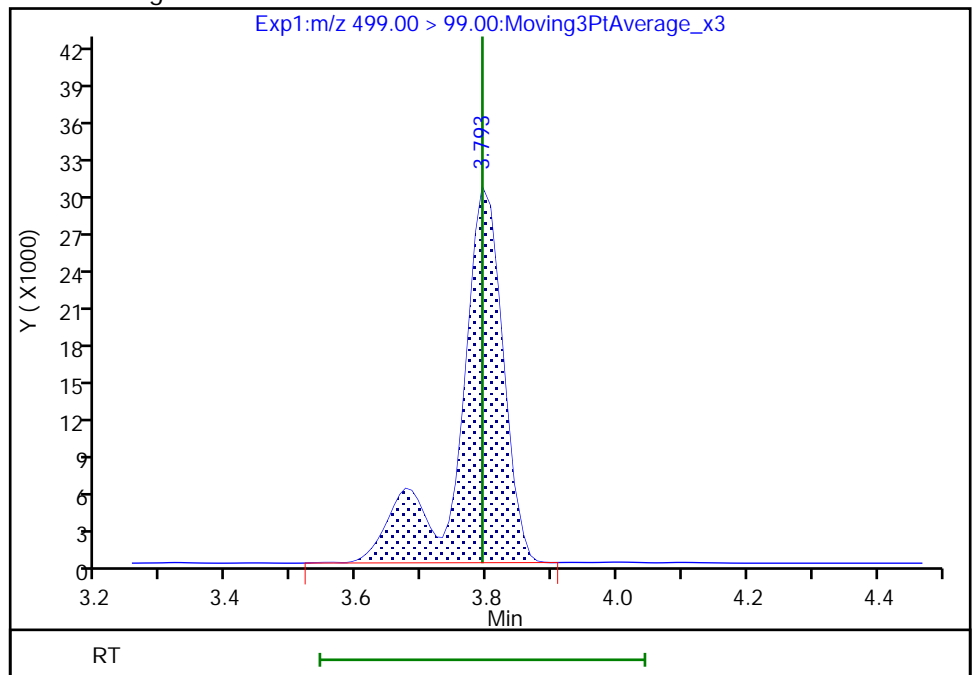
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Amount: 2.378107  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 143670  
Amount: 2.351711  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagern, 27-Dec-2019 12:13:33

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS SW 04 DER MSD Lab Sample ID: 480-164221-4 MSD  
 Matrix: Water Lab File ID: SC122319B015.d  
 Analysis Method: 537 (modified) Date Collected: 12/12/2019 11:31  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 303 (mL) Date Analyzed: 12/24/2019 15:50  
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1  
 Injection Volume: 20 (uL) GC Column: C-18 ID: 4.6 (mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	35.2		1.7	0.83
2706-90-3	Perfluoropentanoic acid (PFPeA)	29.9		1.7	0.52
307-24-4	Perfluorohexanoic acid (PFHxA)	31.5		1.7	0.63
375-85-9	Perfluoroheptanoic acid (PFHpA)	33.5		1.7	0.75
335-67-1	Perfluorooctanoic acid (PFOA)	34.6		1.7	0.67
375-95-1	Perfluorononanoic acid (PFNA)	34.9		1.7	0.22
335-76-2	Perfluorodecanoic acid (PFDA)	35.1		1.7	0.64
2058-94-8	Perfluoroundecanoic acid (PFUnA)	33.9		1.7	0.64
307-55-1	Perfluorododecanoic acid (PFDoA)	37.0		1.7	0.49
72629-94-8	Perfluorotridecanoic acid (PFTriA)	34.6		1.7	0.50
376-06-7	Perfluorotetradecanoic acid (PFTeA)	44.2		1.7	0.76
375-73-5	Perfluorobutanesulfonic acid (PFBS)	27.9		1.7	0.40
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	29.0		1.7	0.66
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	31.6		1.7	0.78
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	31.1		1.7	0.50
335-77-3	Perfluorodecanesulfonic acid (PFDS)	29.7		1.7	0.74
754-91-6	Perfluorooctanesulfonamide (PFOSA)	30.0		8.3	8.3
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	35.4		17	1.4
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	34.6		17	1.2
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	30.8		17	4.5
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	29.1		17	2.4

FORM I  
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1  
 SDG No.: \_\_\_\_\_  
 Client Sample ID: CS SW 04 DER MSD Lab Sample ID: 480-164221-4 MSD  
 Matrix: Water Lab File ID: SC122319B015.d  
 Analysis Method: 537 (modified) Date Collected: 12/12/2019 11:31  
 Extraction Method: 3535 Date Extracted: 12/18/2019 10:57  
 Sample wt/vol: 303(mL) Date Analyzed: 12/24/2019 15:50  
 Con. Extract Vol.: 10(mL) Dilution Factor: 1  
 Injection Volume: 20(uL) GC Column: C-18 ID: 4.6(mm)  
 % Moisture: \_\_\_\_\_ GPC Cleanup: (Y/N) N  
 Analysis Batch No.: 150985 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	105		50-150
STL01892	13C4 PFHpA	104		50-150
STL00990	13C4 PFOA	101		50-150
STL00991	13C4 PFOS	104		50-150
STL00995	13C5 PFNA	101		50-150
STL00992	13C4 PFBA	86		25-150
STL00993	13C2 PFHxA	106		50-150
STL00996	13C2 PFDA	91		50-150
STL00997	13C2 PFUnA	95		50-150
STL00998	13C2 PFDoA	78		50-150
STL01056	13C8 FOSA	92		25-150
STL01893	13C5 PFPeA	106		25-150
STL02116	13C2 PFTeDA	78		50-150
STL02118	d3-NMeFOSAA	84		50-150
STL02117	d5-NEtFOSAA	91		50-150
STL02279	M2-6:2 FTS	82		25-150
STL02280	M2-8:2 FTS	92		25-150
STL02337	13C3 PFBS	105		50-150

Eurofins TestAmerica, Burlington  
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B015.d  
 Lims ID: 480-164221-C-4-C MSD  
 Client ID: CS SW 04 DER  
 Sample Type: MSD  
 Inject. Date: 24-Dec-2019 15:50:49 ALS Bottle#: 15 Worklist Smp#: 15  
 Injection Vol: 20.0 ul Dil. Factor: 1.0000  
 Sample Info: 480-164221-C-4-C MSD  
 Misc. Info.: 200-0039355-015 Plate: 1 Rack: 2  
 Operator ID: lc812tech Instrument ID: LC812  
 Method: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\PFC\_LC812.m  
 Limit Group: LC\_PFC\_ICAL  
 Last Update: 30-Dec-2019 15:06:05 Calib Date: 06-Dec-2019 15:13:26  
 Integrator: Picker  
 Quant Method: Isotopic Dilution Quant By: Initial Calibration  
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20191206-39114.b\SC120619ICAL010.d  
 Column 1 : C-18 ( 4.60 mm) Det: EXP1  
 Process Host: CTX0330

First Level Reviewer: lautenschlagery Date: 27-Dec-2019 13:26:24  
 Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	1.898	1.908	-0.010	0.555	1397742	2.15	86.0	3080	
2 Perfluorobutanoic acid	212.90 > 169.00	1.898	1.908	-0.010	1.000	593838	1.07	107	137	
D 3 13C5 PFPeA	267.90 > 223.00	2.257	2.257	0.0	0.660	1314549	2.64	106	4133	
4 Perfluoropentanoic acid	262.90 > 219.00	2.257	2.271	-0.014	1.000	538637	0.9046	90.5	27.4	M
D 47 13C3 PFBS	301.90 > 80.00	2.271	2.285	-0.014	0.664	1445793	2.44	105	224358	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	2.271	2.285	-0.014	1.000	570711	0.8444	Target=2.03	95.5	660
	298.90 > 99.00	2.271	2.285	-0.014	1.000	289116		1.97(1.01-3.04)		208
D 60 M2-4:2 FTS	329.00 > 81.00	2.611	2.611	0.0	0.763	128490	2.32	99.5	87.0	
61 1H,1H,2H,2H-perfluorohexanesulfoni	327.00 > 307.00	2.611	2.611	0.0	1.000	79803	0.8372	89.6	1547	
D 7 13C2 PFHxA	315.00 > 270.00	2.648	2.648	0.0	0.774	1467178	2.65	106	4497	
6 Perfluorohexanoic acid	313.00 > 269.00	2.648	2.661	-0.013	1.000	571662	0.9541	Target=13.76	95.4	156
	313.00 > 119.00	2.648	2.661	-0.013	1.000	53035		10.78(6.88-20.64)		214
70 Perfluoropentanesulfonic acid	349.00 > 80.00	2.648	2.661	-0.013	0.873	524897	0.9197	Target=3.50	98.1	926
	349.00 > 99.00	2.648	2.661	-0.013	0.873	172072		3.05(1.75-5.25)		228
D 64 13C3 HFPO-DA	332.10 > 287.00	2.768	2.768	0.0	0.809	102752	4.24	170	1090	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.768	2.776	-0.008	1.000	95519	0.6472		64.7	39.1	
D 11 18O2 PFHxS										
403.00 > 84.00	3.032	3.044	-0.012	0.886	1162308	2.48		105	7285	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.032	3.044	-0.012	1.000	489221	0.8796	Target=3.90	96.7	651	
399.00 > 99.00	3.032	3.044	-0.012	1.000	115299		4.24(1.95-5.85)		226	
D 9 13C4 PFHpA										
367.00 > 322.00	3.032	3.044	-0.012	0.886	1371972	2.61		104	3724	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.032	3.044	-0.012	1.000	588666	1.01	Target=3.95	101	189	
363.00 > 169.00	3.032	3.044	-0.012	1.000	168987		3.48(1.97-5.92)		499	
77 DONA										
377.00 > 251.00	3.078	3.089	-0.011	0.812	1243966	0.9143	Target=2.49	97.1	3379	
377.00 > 85.00	3.078	3.089	-0.011	0.812	521499		2.39(1.24-3.73)		1010	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.405	3.413	-0.008	0.898	452336	0.9589	Target=6.46	101	1674	
449.00 > 99.00	3.405	3.413	-0.008	0.898	71424		6.33(3.23-9.69)		290	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.405	3.413	-0.008	1.000	57947	0.9347		98.6	1062	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.405	3.413	-0.008	0.995	156021	1.94		81.6	459	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.421	3.430	-0.009	1.000	656207	1.05	Target=2.40	105	247	
413.00 > 169.00	3.421	3.430	-0.009	1.000	282135		2.33(1.20-3.60)		1133	
D 14 13C4 PFOA										
417.00 > 372.00	3.421	3.430	-0.009	1.000	1411797	2.53		101	2983	
* 62 13C2 PFOA										
415.00 > 370.00	3.421	3.430	-0.009		1534971	2.50			5228	
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.793	0.0	1.108	920494	2.48		104	3878	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.793	3.793	0.0	1.000	392103	0.9431	Target=5.74	102	1071	M
499.00 > 99.00	3.793	3.793	0.0	1.000	61904		6.33(2.87-8.61)		337	M
D 19 13C5 PFNA										
468.00 > 423.00	3.817	3.817	0.0	1.116	1296151	2.53		101	6859	
20 Perfluorononanoic acid										
463.00 > 419.00	3.817	3.817	0.0	1.000	537747	1.06	Target=7.01	106	251	
463.00 > 169.00	3.817	3.817	0.0	1.000	88062		6.11(3.50-10.51)		1378	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.973	3.984	-0.011	1.047	379121	0.7982		85.6	2572	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.116	4.129	-0.013	1.085	298451	0.9379	Target=3.14	97.7	2615	
549.00 > 99.00	4.116	4.129	-0.013	1.085	92304		3.23(1.57-4.71)		406	
D 23 13C2 PFDA										
515.00 > 470.00	4.153	4.164	-0.011	1.214	1155728	2.29		91.5	7569	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
24 Perfluorodecanoic acid										
513.00 > 469.00	4.153	4.164	-0.011	1.000	475461	1.06	Target=7.28	106	504	
513.00 > 169.00	4.153	4.164	-0.011	1.000	69181		6.87(3.64-10.91)		735	
25 1H,1H,2H,2H-perfluorodecanesulfonyl										
527.00 > 507.00	4.164	4.164	0.0	1.000	35997	0.8819		92.1	279	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.164	4.175	-0.011	1.217	211777	2.21		92.2	703	
D 21 13C8 FOSA										
506.00 > 78.00	4.207	4.218	-0.011	1.230	1517675	2.30		91.8	4695	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.207	4.218	-0.011	1.000	549762	0.9100		91.0	2542	
35 MeFOSA										
512.00 > 169.00	4.228	4.283	-0.055		762	NC			5.2	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.305	4.305	0.0	1.258	101825	2.09		83.7	521	
28 N-methylperfluorooctanesulfonamide										
570.00 > 419.00	4.305	4.317	-0.012	1.000	37971	1.07		107	334	M
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.409	4.409	0.0	1.162	249159	0.8991	Target=2.76	93.3	1615	
599.00 > 99.00	4.409	4.409	0.0	1.162	85873		2.90(1.38-4.14)		994	
D 30 13C2 PFUnA										
565.00 > 520.00	4.431	4.443	-0.012	1.295	1025244	2.39		95.4	5790	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.431	4.443	-0.012	1.000	356787	1.03	Target=5.78	103	548	
563.00 > 169.00	4.431	4.443	-0.012	1.000	66836		5.34(2.89-8.67)		996	
33 N-ethylperfluorooctanesulfonamide										
584.00 > 419.00	4.442	4.456	-0.014	1.000	42751	1.05		105	442	M
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.442	4.456	-0.014	1.298	123110	2.28		91.3	818	
66 11-Chloroeicosafuoro-3-oxaundecan										
631.00 > 451.00	4.537	4.551	-0.014	1.196	347142	0.7751		82.3	2693	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.682	4.683	-0.001	1.000	381715	1.12	Target=5.13	112	135	
613.00 > 169.00	4.682	4.683	-0.001	1.000	85858		4.45(2.56-7.69)		1414	
D 36 13C2 PFDaA										
615.00 > 570.00	4.682	4.683	-0.001	1.369	920180	1.95		78.1	5012	
74 1H,1H,2H,2H-perfluorododecanesulfonyl										
627.00 > 607.00	4.693	4.704	-0.011	1.127	23999	0.9261		96.1	518	
75 Perfluorododecanesulfonic acid (PF)										
699.00 > 80.00	4.860	4.870	-0.010	1.282	85888	0.8152	Target=0.45	84.2	206	
699.00 > 99.00	4.860	4.870	-0.010	1.282	178739		0.48(0.22-0.67)		2485	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.897	4.906	-0.009	1.046	338671	1.05	Target=3.82	105	134	
663.00 > 169.00	4.897	4.906	-0.009	1.046	107639		3.15(1.91-5.74)		1522	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.094	5.108	-0.014	1.000	82774	1.34	Target=1.05	134	1971	
713.00 > 219.00	5.094	5.108	-0.014	1.000	68444		1.21(0.52-1.57)		1258	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 43 13C2 PFTeDA										
715.00 > 670.00	5.094	5.108	-0.014	1.489	768464	1.95		77.8	7259	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.482	5.491	-0.009	1.000	152532	0.9644	Target=3.20	96.4	96.0	
813.00 > 169.00	5.482	5.491	-0.009	1.000	57196		2.67(1.60-4.80)		1125	
D 44 13C2 PFHxDA										
815.00 > 770.00	5.482	5.491	-0.009	1.602	434256	1.20		47.8	4609	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.884	5.899	-0.015	1.073	92420	0.7367	Target=2.86	73.7	80.8	
913.00 > 169.00	5.879	5.899	-0.020	1.072	35862		2.58(1.43-4.29)		1065	

**QC Flag Legend**

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B015.d

Injection Date: 24-Dec-2019 15:50:49

Instrument ID: LC812

Lims ID: 480-164221-C-4-C MSD

Client ID: CS SW 04 DER

Operator ID: lc812tech

ALS Bottle#: 15

Worklist Smp#: 15

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

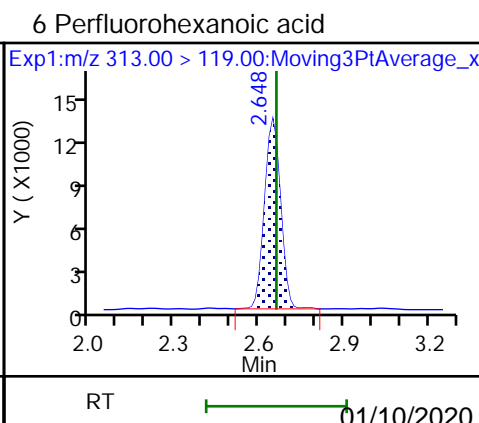
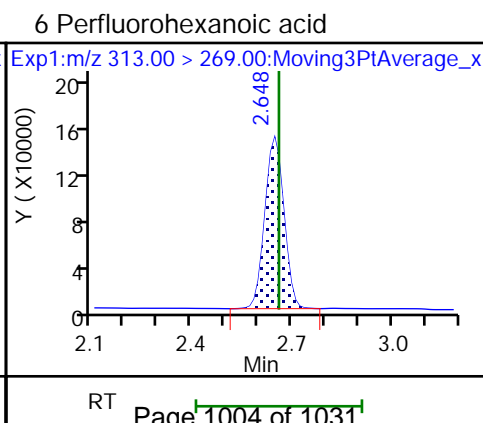
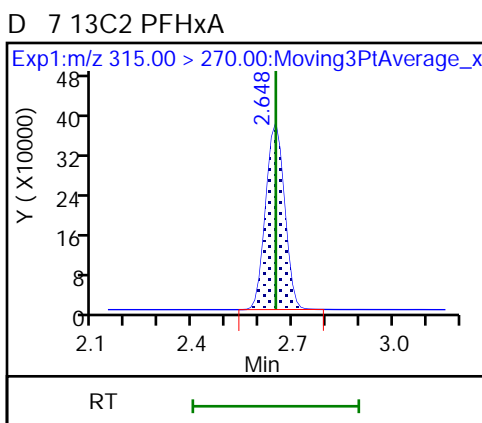
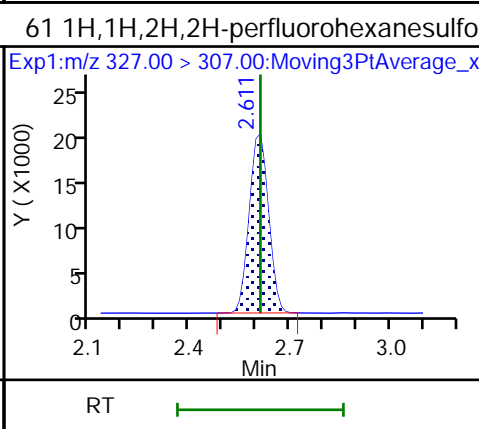
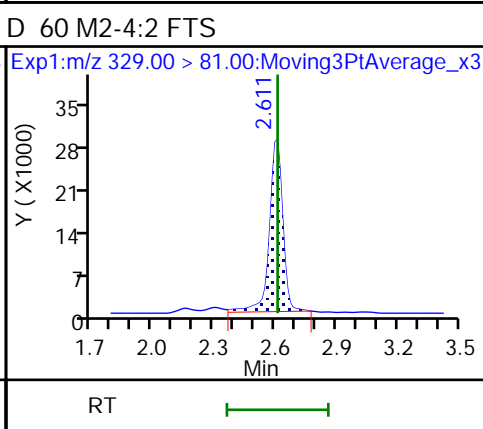
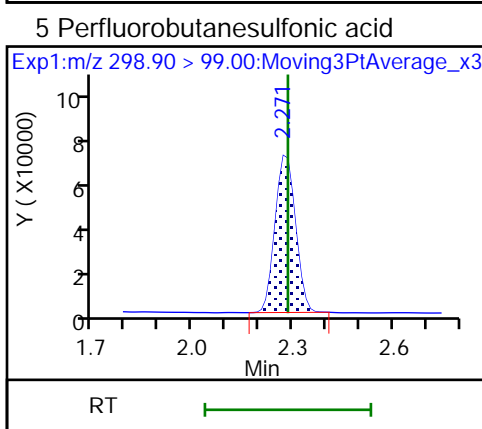
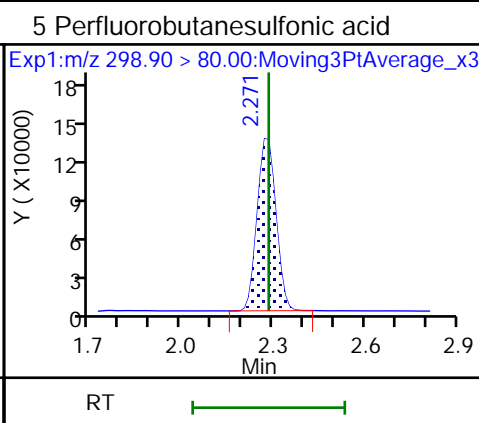
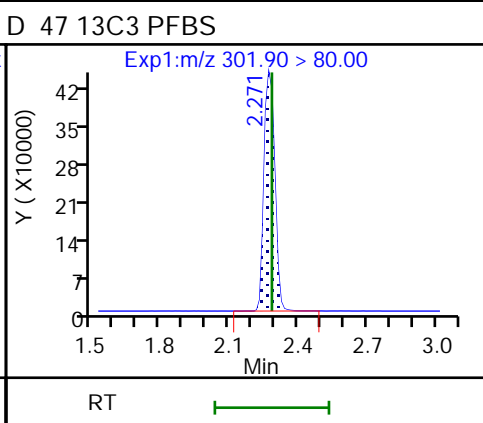
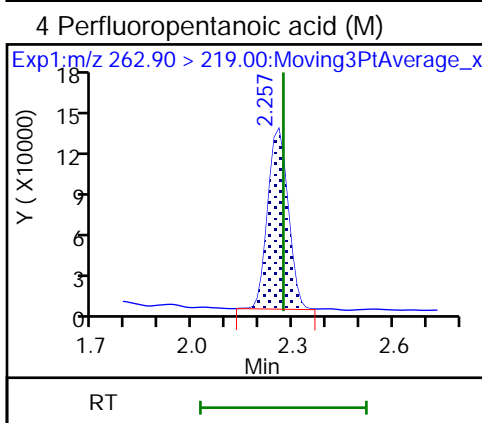
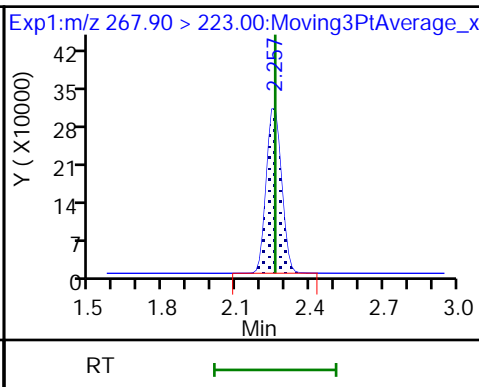
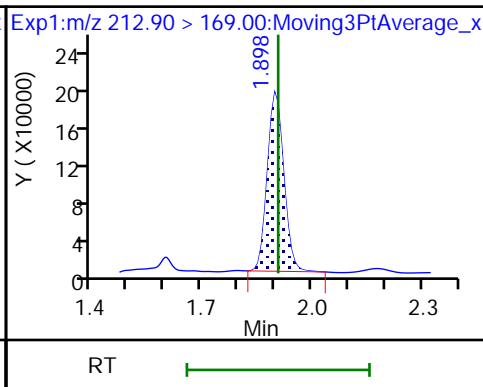
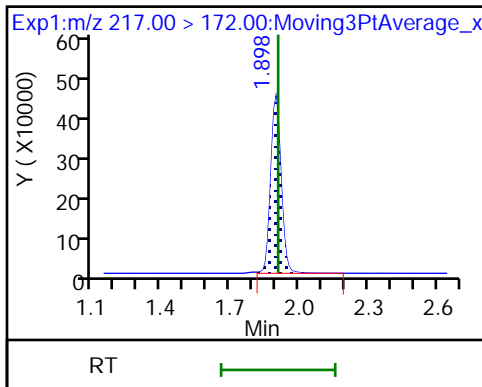
Method: PFC\_LC812

Limit Group: LC\_PFC\_ICAL

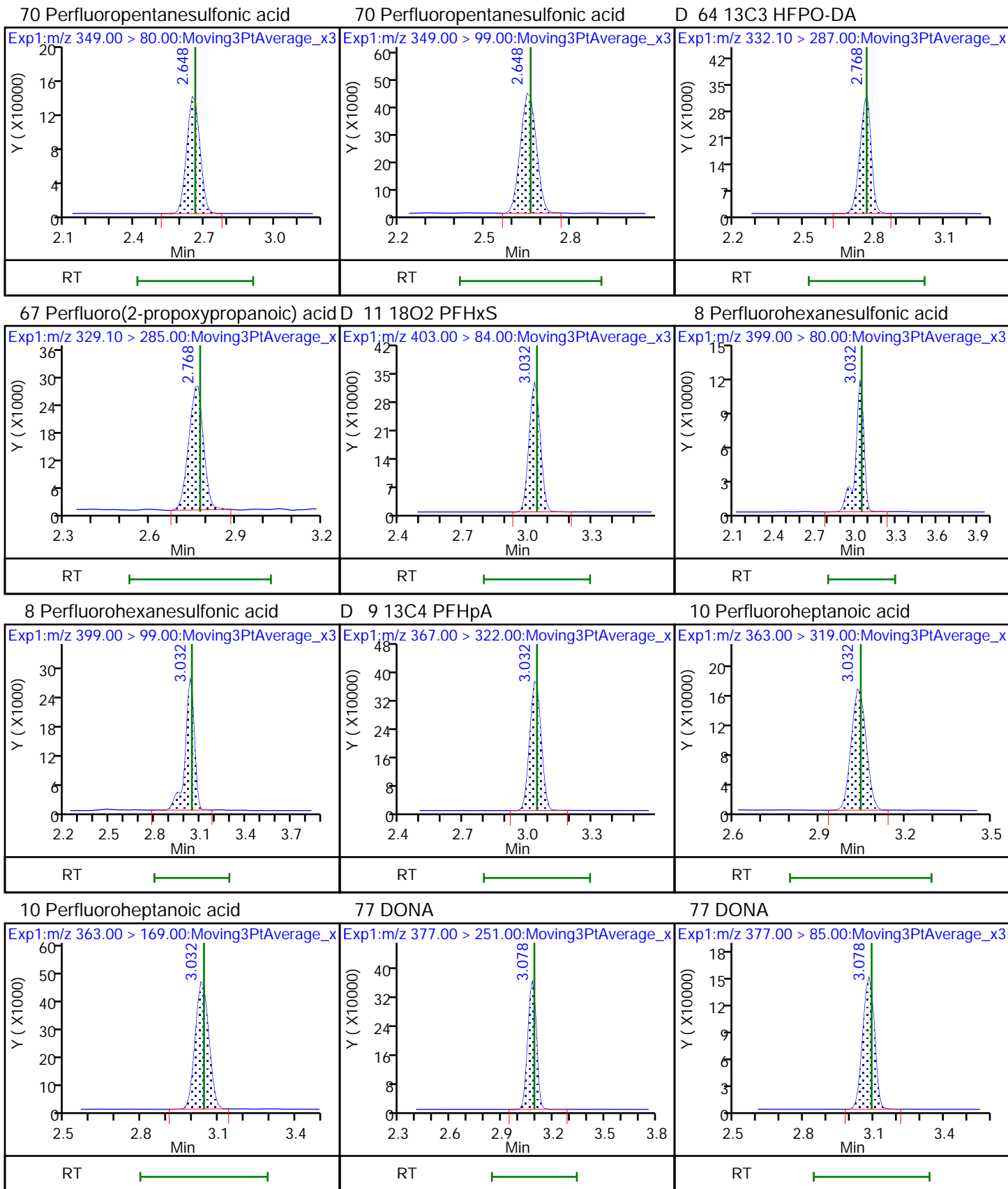
D 1 13C4 PFBA

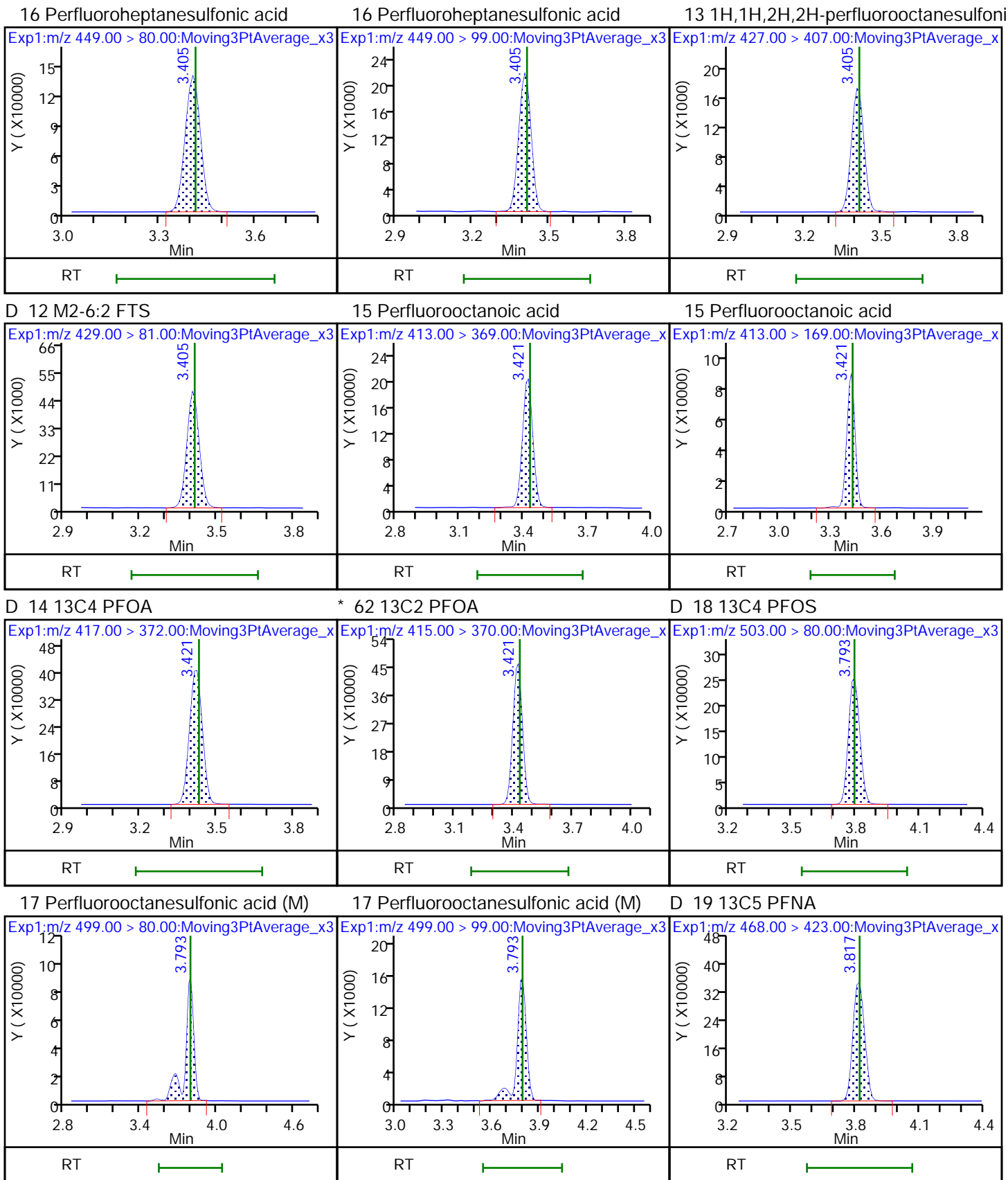
2 Perfluorobutanoic acid

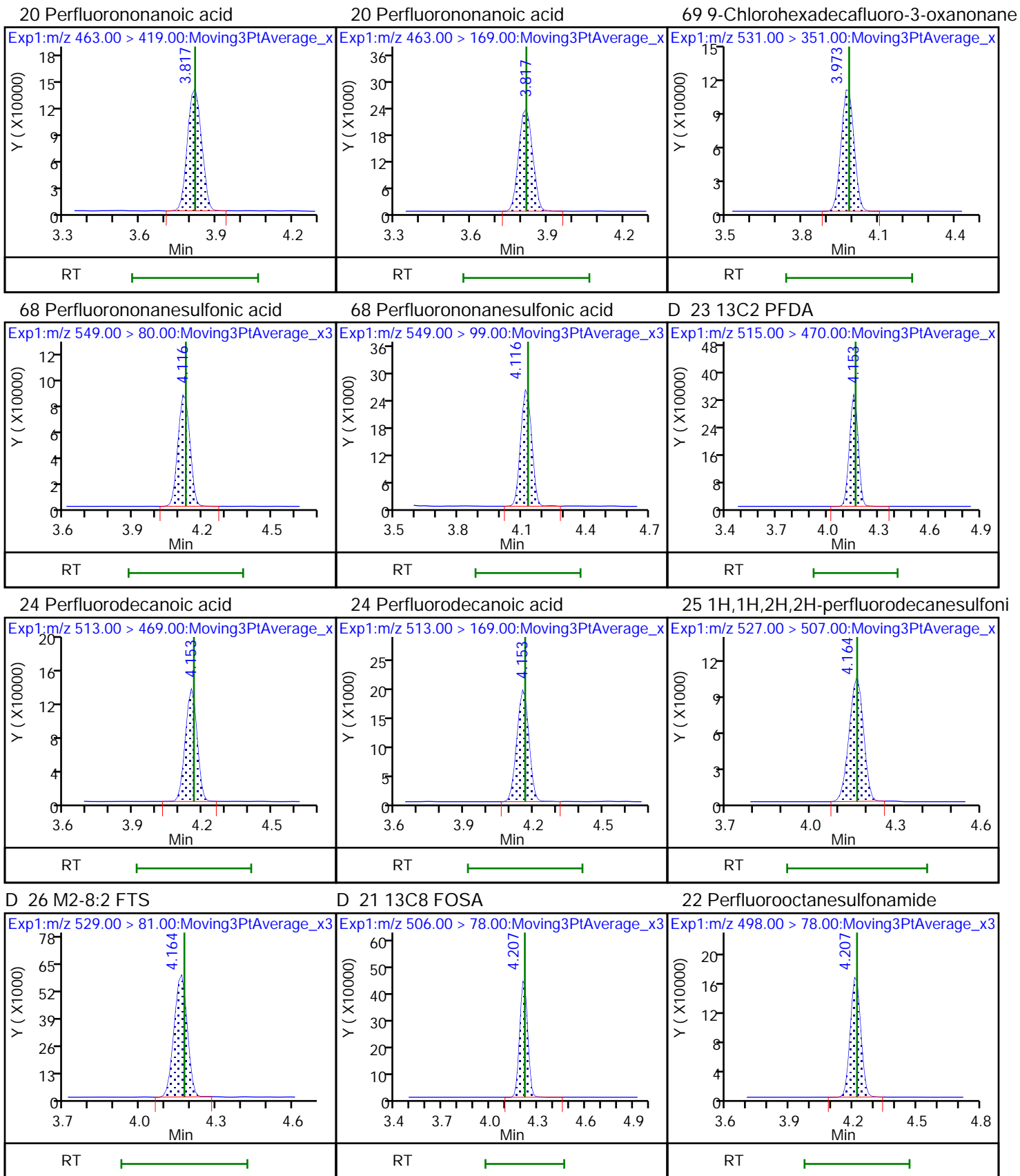
D 3 13C5 PFPeA





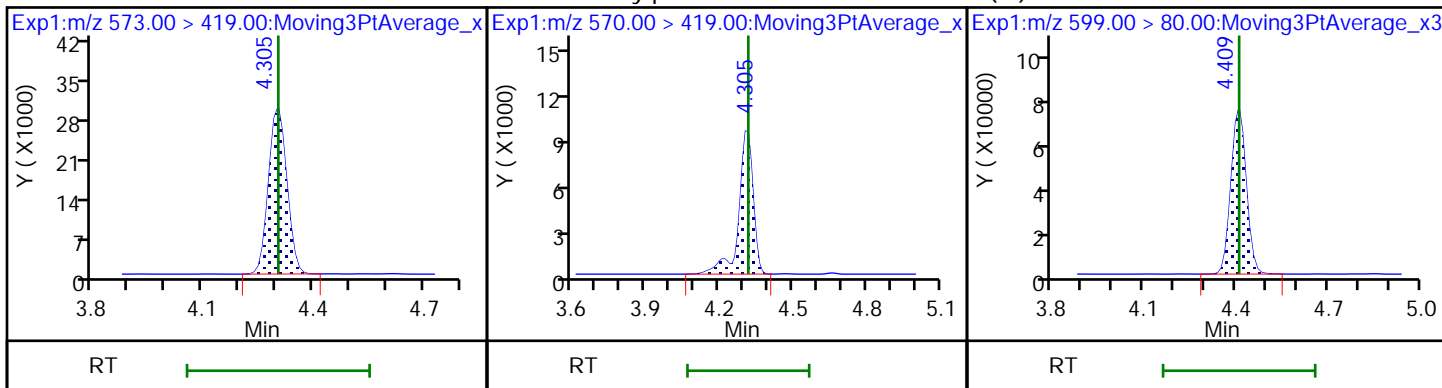






D 27 d3-NMeFOSAA

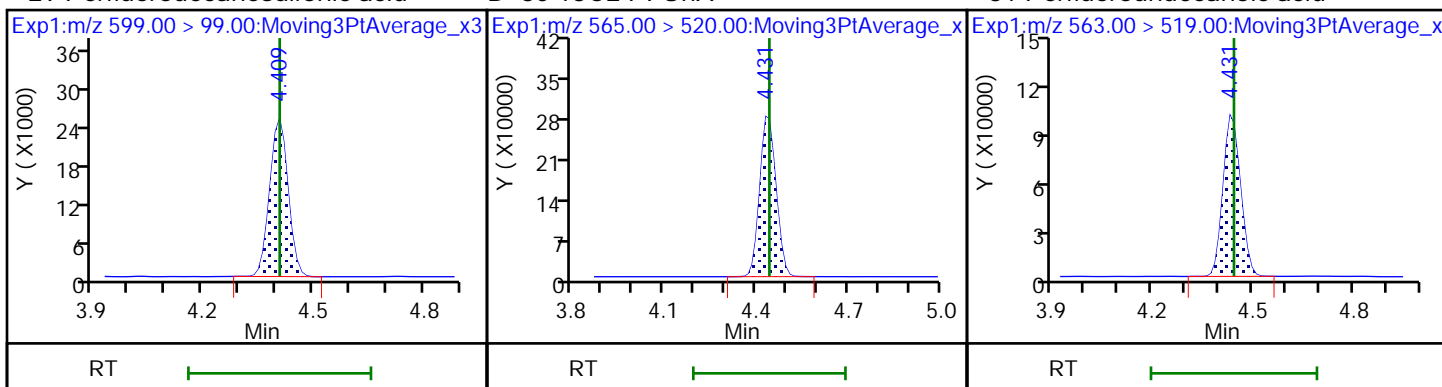
28 N-methylperfluorooctanesulfonamido (28) Perfluorodecanesulfonic acid



29 Perfluorodecanesulfonic acid

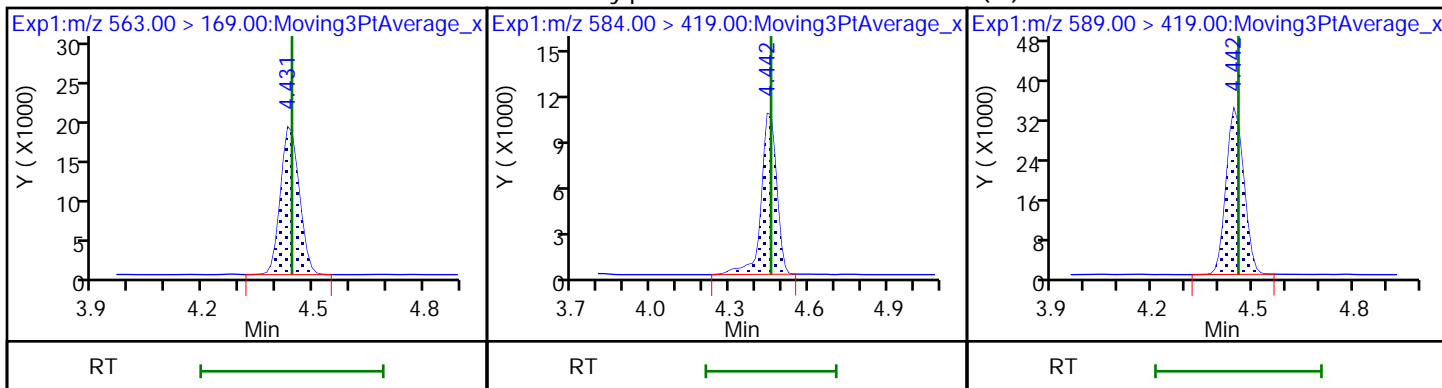
D 30 13C2 PFUoA

31 Perfluoroundecanoic acid



31 Perfluoroundecanoic acid

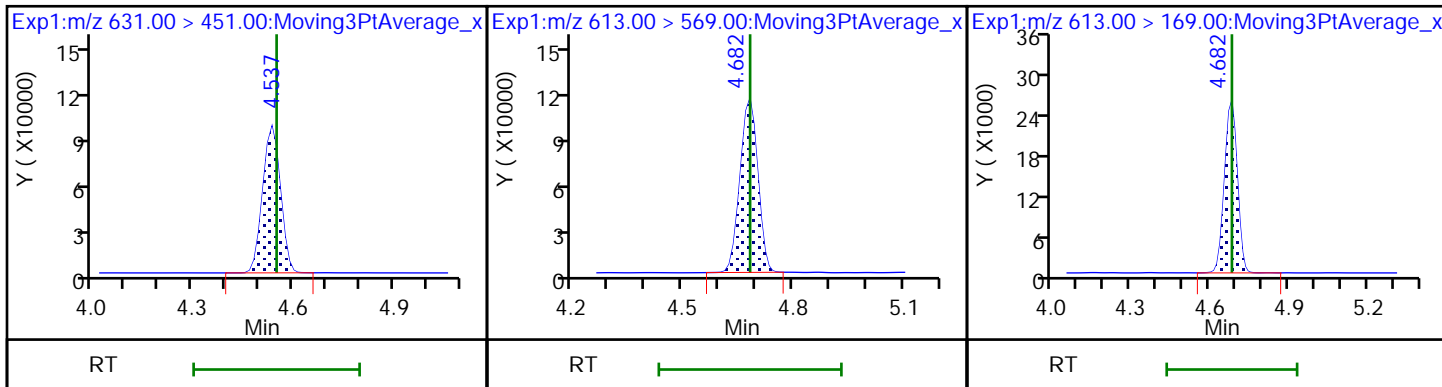
33 N-ethylperfluorooctanesulfonamido (33) d5-NEtFOSAA



66 11-Chloroeicosafuoro-3-oxaundecan

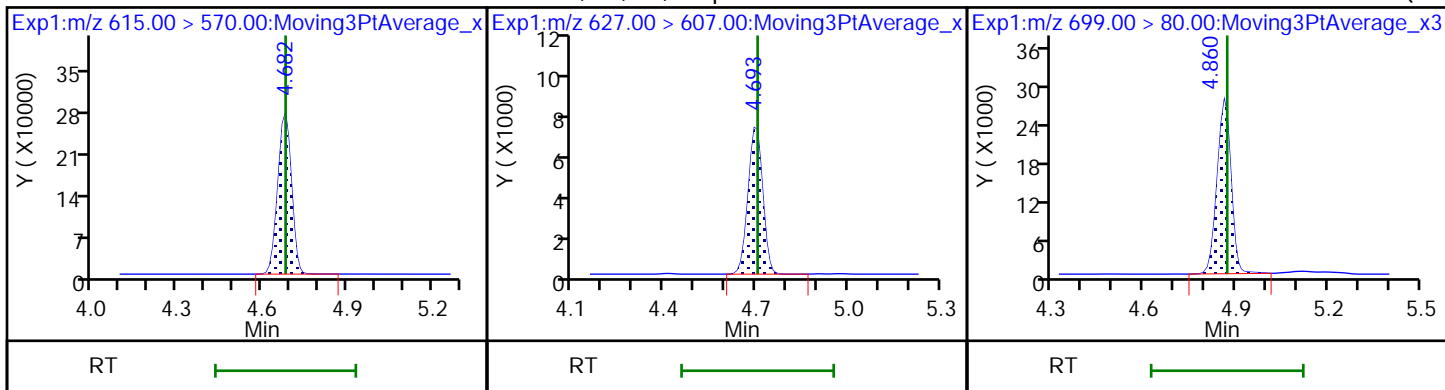
37 Perfluorododecanoic acid

37 Perfluorododecanoic acid



D 36 13C2 PFDa

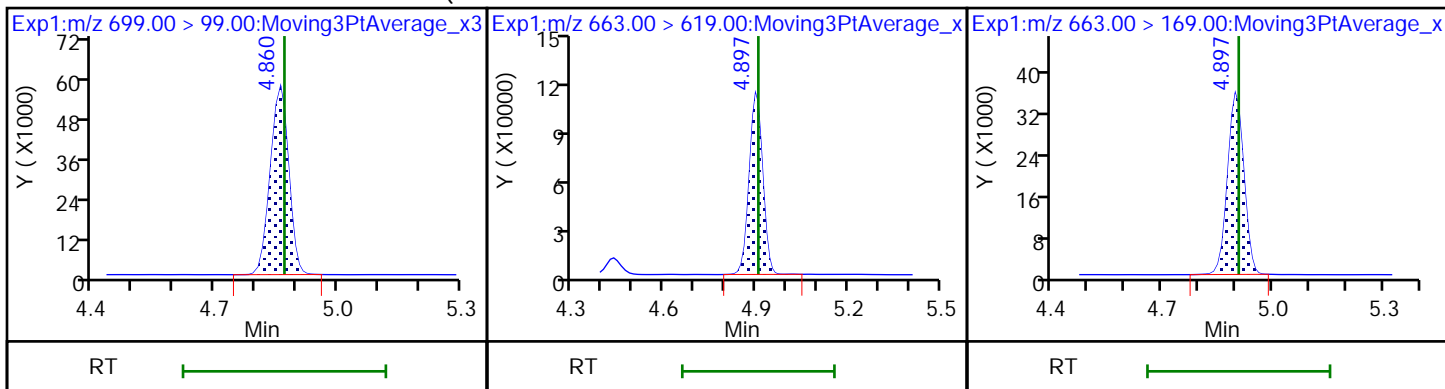
74 1H,1H,2H,2H-perfluorododecanesulfo75 Perfluorododecanesulfonic acid (PF



75 Perfluorododecanesulfonic acid (PF

41 Perfluorotridecanoic acid

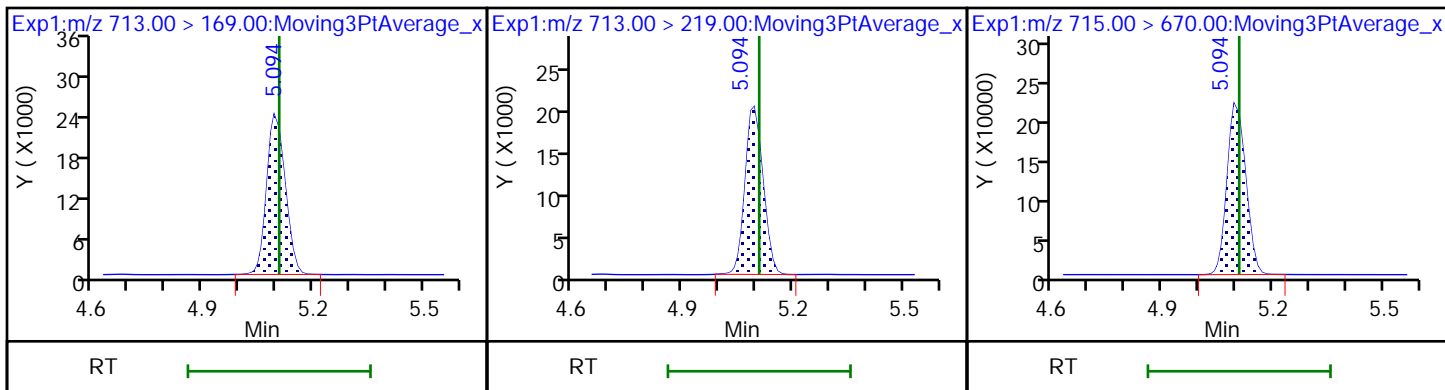
41 Perfluorotridecanoic acid



42 Perfluorotetradecanoic acid

42 Perfluorotetradecanoic acid

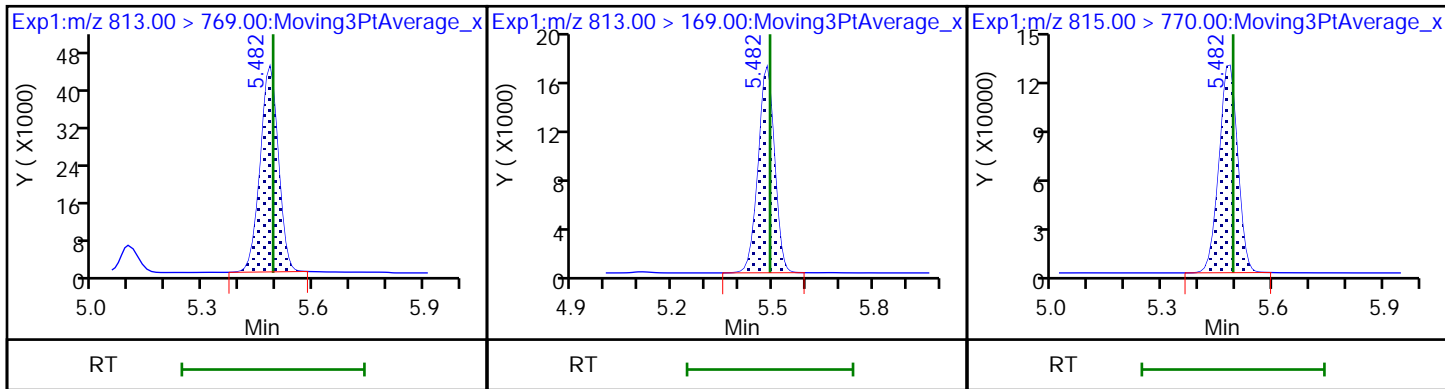
D 43 13C2 PFTeDA



45 Perfluorohexadecanoic acid

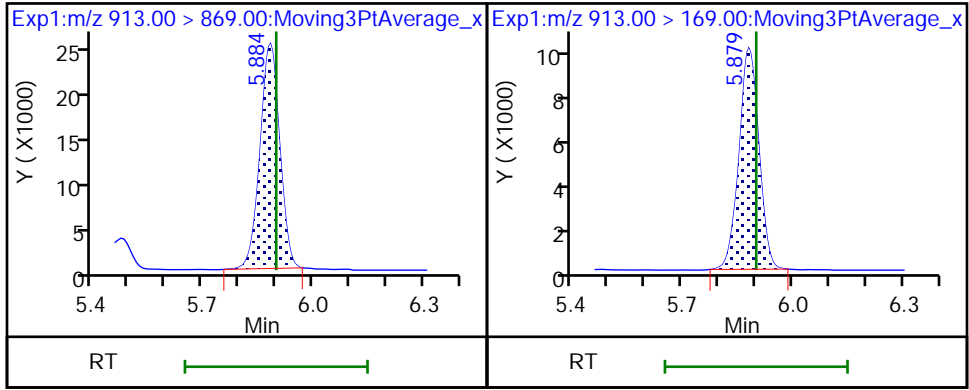
45 Perfluorohexadecanoic acid

D 44 13C2 PFHxDA



46 Perfluorooctadecanoic acid

46 Perfluorooctadecanoic acid



Eurofins TestAmerica, Burlington

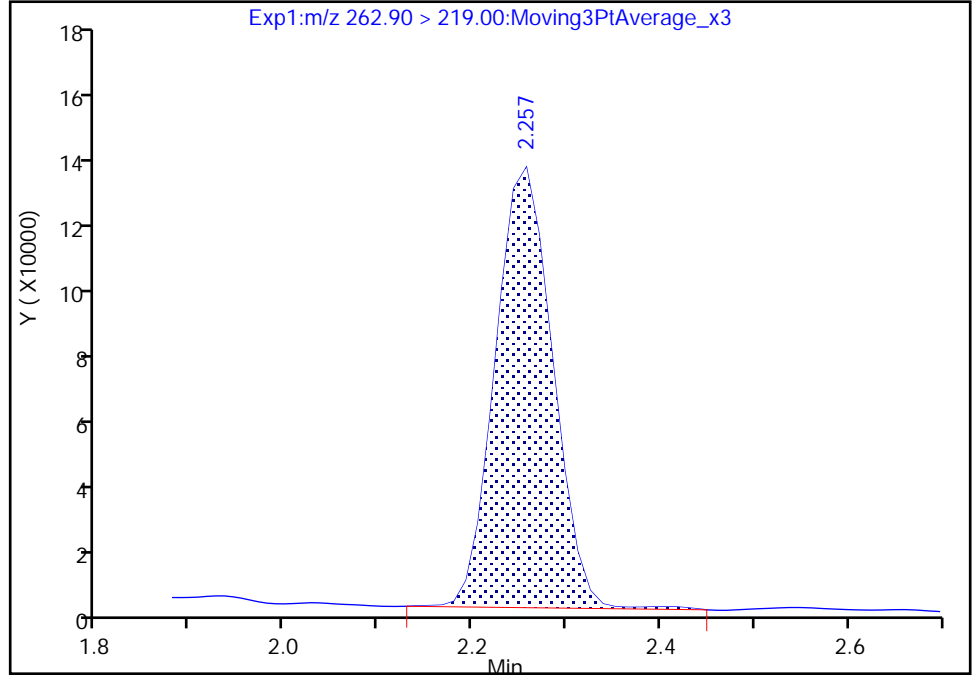
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Injection Date: 24-Dec-2019 15:50:49 Instrument ID: LC812  
Lims ID: 480-164221-C-4-C MSD  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

4 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

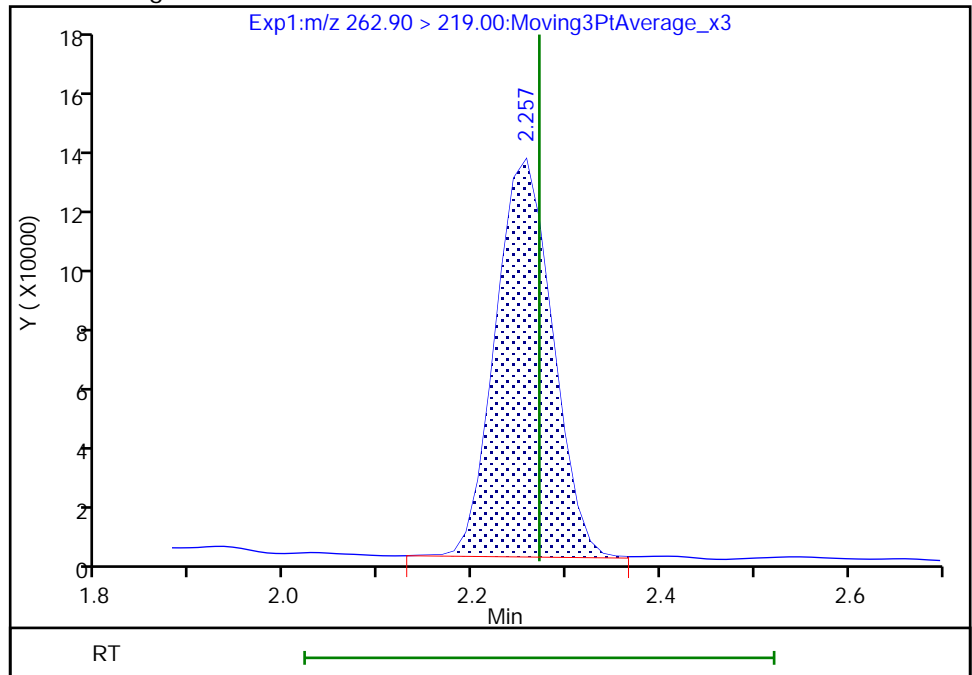
RT: 2.26  
Area: 541280  
Amount: 0.909059  
Amount Units: ng/ml

Processing Integration Results



RT: 2.26  
Area: 538637  
Amount: 0.904621  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 13:23:23

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

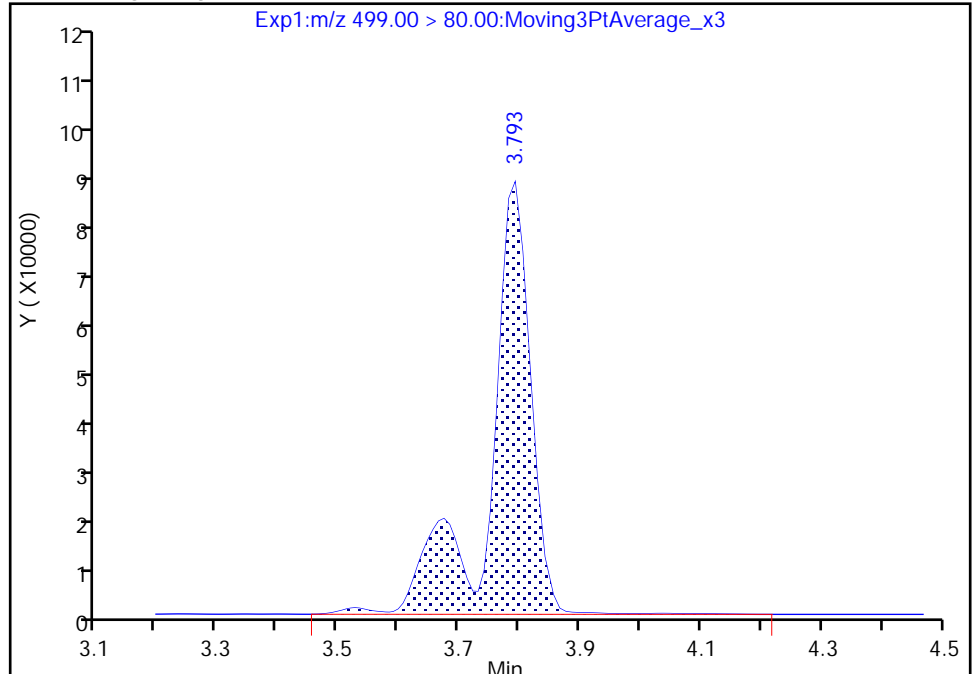
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B015.d  
Injection Date: 24-Dec-2019 15:50:49 Instrument ID: LC812  
Lims ID: 480-164221-C-4-C MSD  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

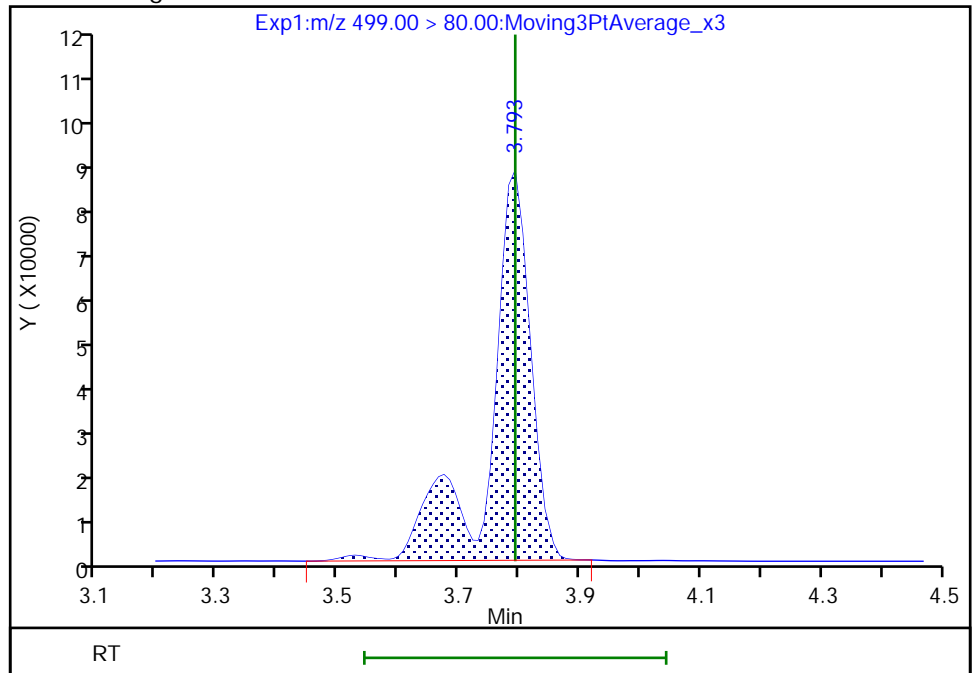
RT: 3.79  
Area: 397564  
Amount: 0.956198  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 392103  
Amount: 0.943064  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagery, 27-Dec-2019 13:24:38  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration



Eurofins TestAmerica, Burlington

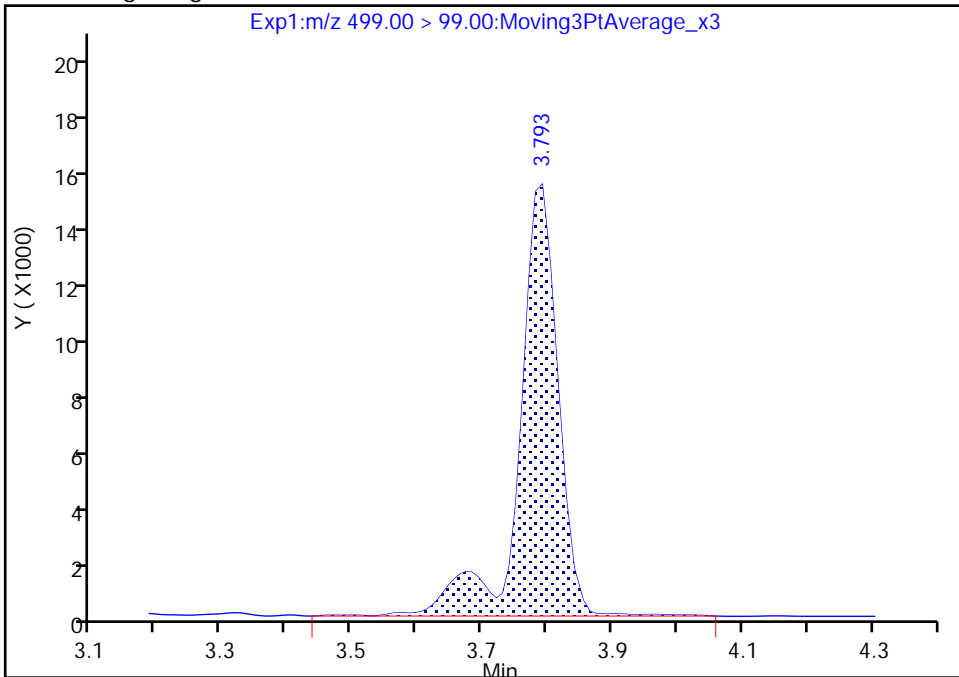
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B015.d  
Injection Date: 24-Dec-2019 15:50:49 Instrument ID: LC812  
Lims ID: 480-164221-C-4-C MSD  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

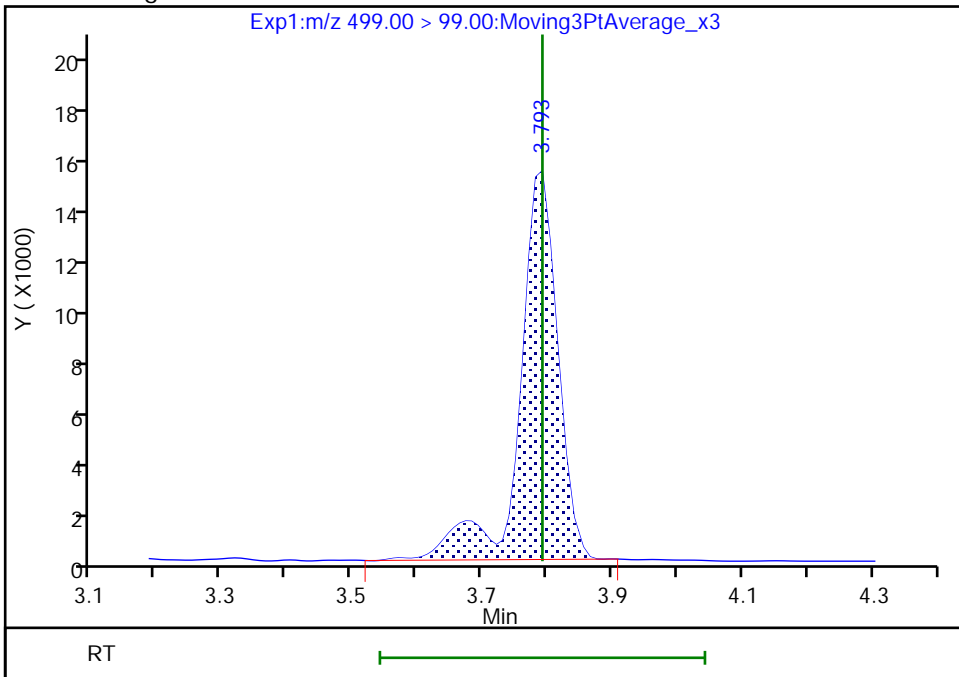
RT: 3.79  
Area: 63428  
Amount: 0.956198  
Amount Units: ng/ml

Processing Integration Results



RT: 3.79  
Area: 61904  
Amount: 0.943064  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 13:24:47

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

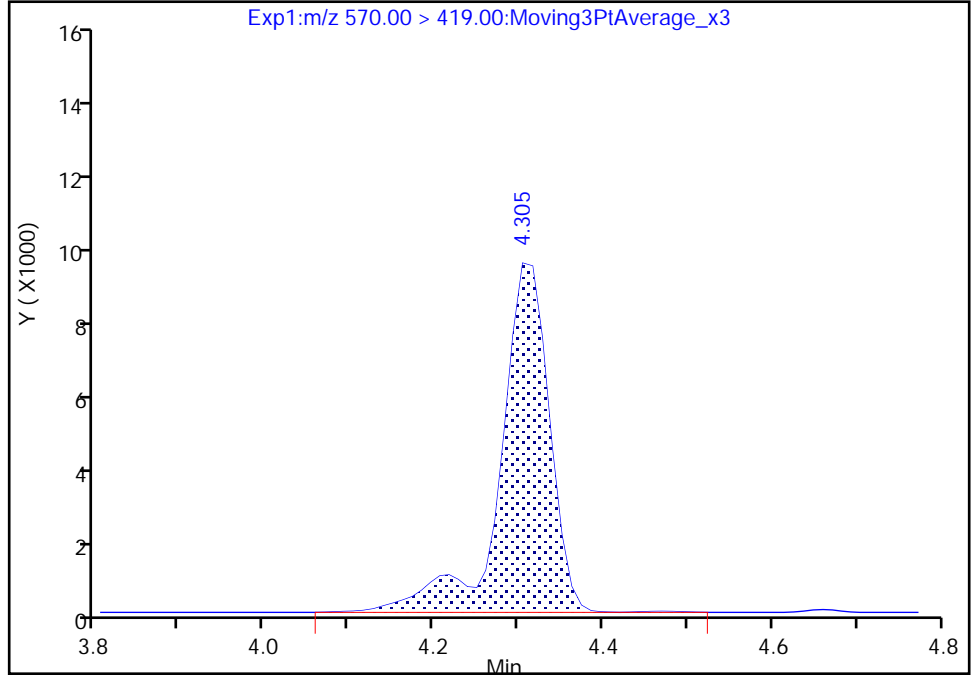
Data File: \\ChromNA\Burlington\ChromData\LC812\20191223-39355.b\SC122319B015.d  
Injection Date: 24-Dec-2019 15:50:49 Instrument ID: LC812  
Lims ID: 480-164221-C-4-C MSD  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

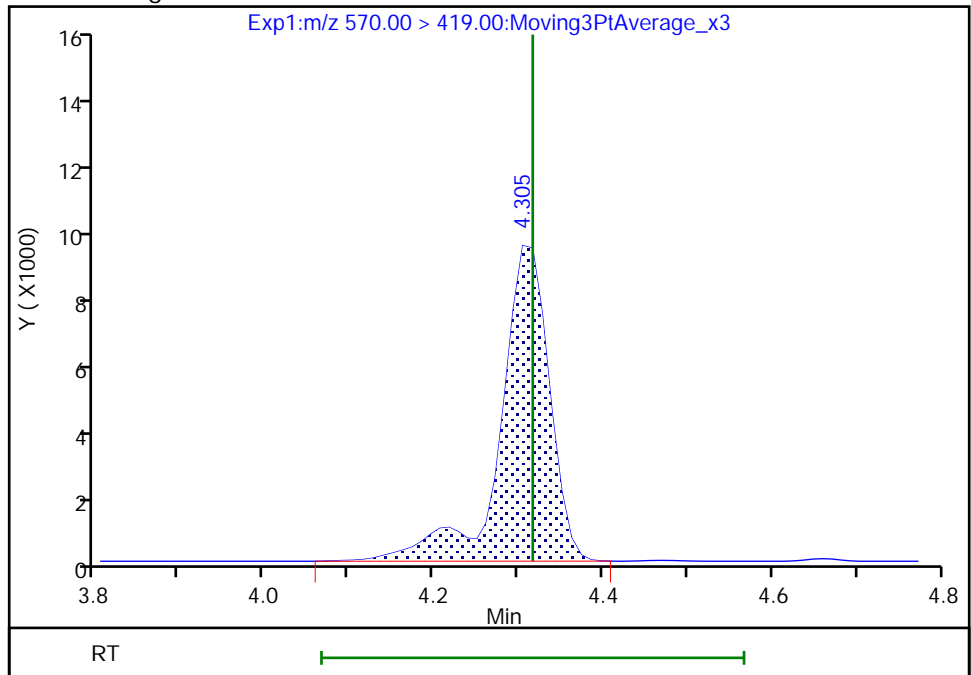
RT: 4.30  
Area: 38094  
Amount: 1.076336  
Amount Units: ng/ml

Processing Integration Results



RT: 4.30  
Area: 37971  
Amount: 1.072861  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 13:25:21

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

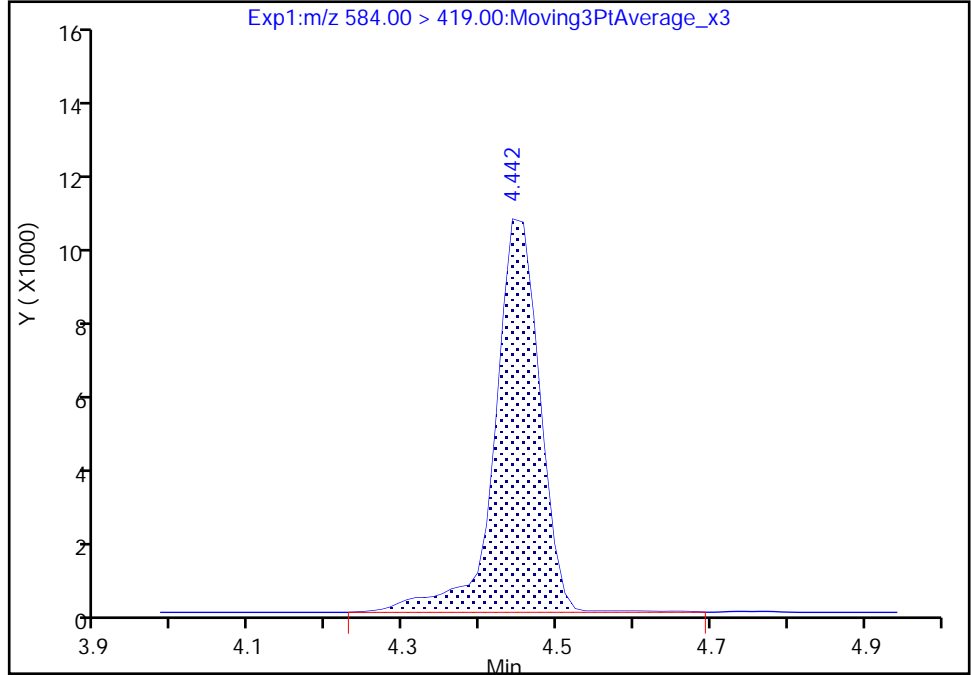
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Injection Date: 24-Dec-2019 15:50:49 Instrument ID: LC812  
Lims ID: 480-164221-C-4-C MSD  
Client ID: CS SW 04 DER  
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15  
Injection Vol: 20.0 ul Dil. Factor: 1.0000  
Method: PFC\_LC812 Limit Group: LC\_PFC\_ICAL  
Column: C-18 ( 4.60 mm) Detector: EXP1

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

Signal: 1

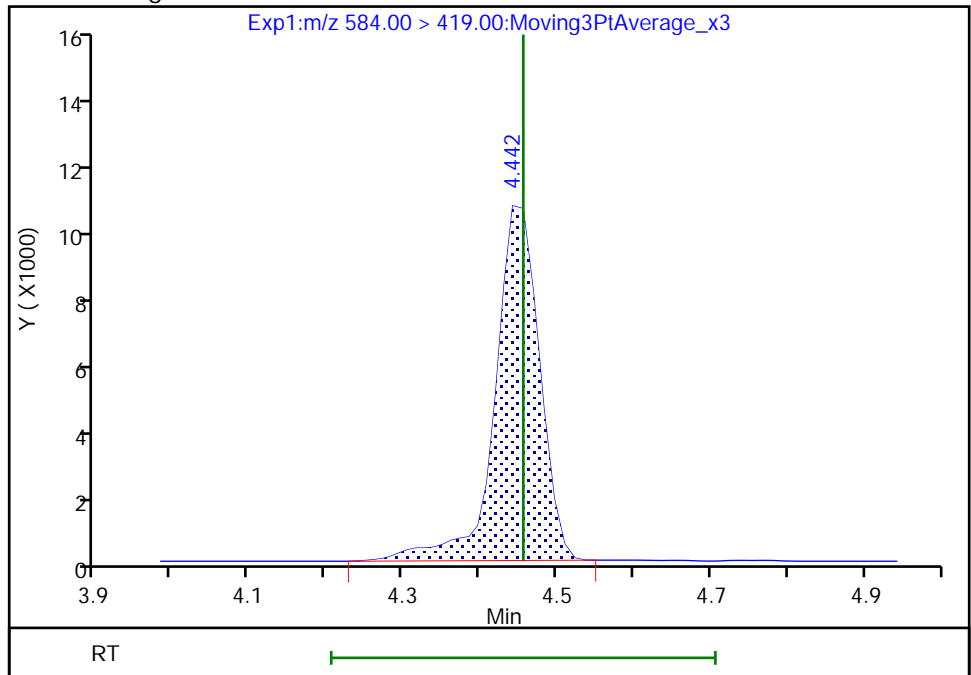
RT: 4.44  
Area: 43241  
Amount: 1.060874  
Amount Units: ng/ml

Processing Integration Results



RT: 4.44  
Area: 42751  
Amount: 1.048853  
Amount Units: ng/ml

Manual Integration Results



Reviewer: lautenschlagerg, 27-Dec-2019 13:25:41  
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

LCMS ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1

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

Instrument ID: LC812 Start Date: 12/06/2019 13:59

Analysis Batch Number: 150448 End Date: 12/06/2019 15:37

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		12/06/2019 13:59	1		C-18 4.6 (mm)
ZZZZZ		12/06/2019 14:07	1		C-18 4.6 (mm)
ZZZZZ		12/06/2019 14:16	1		C-18 4.6 (mm)
ZZZZZ		12/06/2019 14:24	1		C-18 4.6 (mm)
IC 200-150448/5		12/06/2019 14:32	1	SC120619ICAL005 .d	C-18 4.6 (mm)
IC 200-150448/6		12/06/2019 14:40	1	SC120619ICAL006 .d	C-18 4.6 (mm)
IC 200-150448/7		12/06/2019 14:48	1	SC120619ICAL007 .d	C-18 4.6 (mm)
ICIS 200-150448/8		12/06/2019 14:57	1	SC120619ICAL008 .d	C-18 4.6 (mm)
IC 200-150448/9		12/06/2019 15:05	1	SC120619ICAL009 .d	C-18 4.6 (mm)
IC 200-150448/10		12/06/2019 15:13	1	SC120619ICAL010 .d	C-18 4.6 (mm)
ICB 200-150448/11		12/06/2019 15:21	1		C-18 4.6 (mm)
ICV 200-150448/12		12/06/2019 15:29	1	SC120619ICAL012 .d	C-18 4.6 (mm)
ZZZZZ		12/06/2019 15:37	1		C-18 4.6 (mm)

LCMS ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-164221-1

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

Instrument ID: LC812 Start Date: 12/24/2019 13:56

Analysis Batch Number: 150985 End Date: 12/24/2019 18:34

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVL 200-150985/1		12/24/2019 13:56	1	SC122319B001.d	C-18 4.6 (mm)
CCVIS 200-150985/2		12/24/2019 14:04	1	SC122319B002.d	C-18 4.6 (mm)
MB 200-150841/1-A		12/24/2019 14:12	1	SC122319B003.d	C-18 4.6 (mm)
LCS 200-150841/2-A		12/24/2019 14:20	1	SC122319B004.d	C-18 4.6 (mm)
ZZZZZ		12/24/2019 14:28	1		C-18 4.6 (mm)
ZZZZZ		12/24/2019 14:37	1		C-18 4.6 (mm)
ZZZZZ		12/24/2019 14:45	1		C-18 4.6 (mm)
480-164221-1		12/24/2019 14:53	1	SC122319B008.d	C-18 4.6 (mm)
480-164221-2		12/24/2019 15:01	1	SC122319B009.d	C-18 4.6 (mm)
480-164221-3		12/24/2019 15:09	1	SC122319B010.d	C-18 4.6 (mm)
480-164221-3 MS		12/24/2019 15:18	1	SC122319B011.d	C-18 4.6 (mm)
480-164221-3 MSD		12/24/2019 15:26	1	SC122319B012.d	C-18 4.6 (mm)
480-164221-4		12/24/2019 15:34	1	SC122319B013.d	C-18 4.6 (mm)
480-164221-4 MS		12/24/2019 15:42	1	SC122319B014.d	C-18 4.6 (mm)
480-164221-4 MSD		12/24/2019 15:50	1	SC122319B015.d	C-18 4.6 (mm)
480-164221-5		12/24/2019 15:59	1	SC122319B016.d	C-18 4.6 (mm)
480-164221-6		12/24/2019 16:07	1	SC122319B017.d	C-18 4.6 (mm)
480-164221-7		12/24/2019 16:15	1	SC122319B018.d	C-18 4.6 (mm)
480-164221-8		12/24/2019 16:23	1	SC122319B019.d	C-18 4.6 (mm)
CCV 200-150985/20		12/24/2019 16:31	1	SC122319B020.d	C-18 4.6 (mm)
480-164221-10		12/24/2019 16:39	1	SC122319B021.d	C-18 4.6 (mm)
480-164221-11		12/24/2019 16:48	1	SC122319B022.d	C-18 4.6 (mm)
480-164221-12		12/24/2019 16:56	1	SC122319B023.d	C-18 4.6 (mm)
480-164221-13		12/24/2019 17:04	1	SC122319B024.d	C-18 4.6 (mm)
480-164221-14		12/24/2019 17:12	1	SC122319B025.d	C-18 4.6 (mm)
480-164221-15		12/24/2019 17:20	1	SC122319B026.d	C-18 4.6 (mm)
ZZZZZ		12/24/2019 17:29	1		C-18 4.6 (mm)
ZZZZZ		12/24/2019 17:37	1		C-18 4.6 (mm)
ZZZZZ		12/24/2019 17:45	1		C-18 4.6 (mm)
ZZZZZ		12/24/2019 17:53	1		C-18 4.6 (mm)
ZZZZZ		12/24/2019 18:01	1		C-18 4.6 (mm)
ZZZZZ		12/24/2019 18:10	1		C-18 4.6 (mm)
ZZZZZ		12/24/2019 18:18	1		C-18 4.6 (mm)
ZZZZZ		12/24/2019 18:26	1		C-18 4.6 (mm)
CCV 200-150985/35		12/24/2019 18:34	1	SC122319B035.d	C-18 4.6 (mm)

LCMS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Burlingt Job No.: 480-164221-1

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

Batch Number: 150841 Batch Start Date: 12/18/19 10:57 Batch Analyst: Morrill, Morgan B

Batch Method: 3535 Batch End Date: 12/18/19 15:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	LCMPFCIDA21 00016	LCPFC32MTXStk 00010
MB 200-150841/1		3535, 537 (modified)		250 g	0 g	250 mL	10 mL	25 uL	
LCS 200-150841/2		3535, 537 (modified)		250 g	0 g	250 mL	10 mL	25 uL	25 uL
480-164221-C-1	CS RW 2 DER	3535, 537 (modified)	T	313.88 g	25.67 g	288.2 mL	10 mL	25 uL	
480-164221-C-2	FIELD DUP 2	3535, 537 (modified)	T	291.22 g	25.79 g	265.4 mL	10 mL	25 uL	
480-164221-C-3	CS RW 1 DER	3535, 537 (modified)	T	283.87 g	25.78 g	258.1 mL	10 mL	25 uL	
480-164221-C-3	CS RW 1 DER	3535, 537 (modified)	T	290.72 g	25.66 g	265.1 mL	10 mL	25 uL	25 uL
480-164221-C-3	CS RW 1 DER	3535, 537 (modified)	T	294.68 g	25.51 g	269.2 mL	10 mL	25 uL	25 uL
480-164221-C-4	CS SW 04 DER	3535, 537 (modified)	T	316.92 g	26.05 g	290.9 mL	10 mL	25 uL	
480-164221-C-4	CS SW 04 DER	3535, 537 (modified)	T	324.90 g	25.86 g	299 mL	10 mL	25 uL	25 uL
480-164221-C-4	CS SW 04 DER	3535, 537 (modified)	T	329.00 g	25.98 g	303 mL	10 mL	25 uL	25 uL
480-164221-C-5	FIELD DUP	3535, 537 (modified)	T	329.01 g	25.77 g	303.2 mL	10 mL	25 uL	
480-164221-C-6	AOI 3 GW 2 DER	3535, 537 (modified)	T	288.23 g	25.67 g	262.6 mL	10 mL	25 uL	
480-164221-C-7	AOI 1 GW 2 DER	3535, 537 (modified)	T	298.47 g	25.72 g	272.8 mL	10 mL	25 uL	
480-164221-C-8	CS SW 01 DER	3535, 537 (modified)	T	321.53 g	26.16 g	295.4 mL	10 mL	25 uL	
480-164221-C-10	CS SW 05 DER	3535, 537 (modified)	T	314.82 g	25.76 g	289.1 mL	10 mL	25 uL	
480-164221-C-11	CS SW 03 DER	3535, 537 (modified)	T	305.95 g	26.00 g	280 mL	10 mL	25 uL	
480-164221-C-12	CS SW 02 DER	3535, 537 (modified)	T	315.22 g	25.68 g	289.5 mL	10 mL	25 uL	
480-164221-C-13	AOI 1 GW1 DER	3535, 537 (modified)	T	322.98 g	25.90 g	297.1 mL	10 mL	25 uL	
480-164221-C-14	AOI 3 GW1 DER	3535, 537 (modified)	T	297.94 g	26.25 g	271.7 mL	10 mL	25 uL	
480-164221-C-15	AOI 1 GW3 DER	3535, 537 (modified)	T	284.84 g	25.85 g	259 mL	10 mL	25 uL	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

537 (modified)

LCMS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Burlingt Job No.: 480-164221-1

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

Batch Number: 150841 Batch Start Date: 12/18/19 10:57 Batch Analyst: Morrill, Morgan B

Batch Method: 3535 Batch End Date: 12/18/19 15:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	PFAS21 IS Stk 00015	AnalysisComment				
MB 200-150841/1		3535, 537 (modified)		10 uL					
LCS 200-150841/2		3535, 537 (modified)		10 uL					
480-164221-C-1	CS RW 2 DER	3535, 537 (modified)	T	10 uL					
480-164221-C-2	FIELD DUP 2	3535, 537 (modified)	T	10 uL					
480-164221-C-3	CS RW 1 DER	3535, 537 (modified)	T	10 uL					
480-164221-C-3 MS	CS RW 1 DER	3535, 537 (modified)	T	10 uL					
480-164221-C-3 MSD	CS RW 1 DER	3535, 537 (modified)	T	10 uL					
480-164221-C-4	CS SW 04 DER	3535, 537 (modified)	T	10 uL					
480-164221-C-4 MS	CS SW 04 DER	3535, 537 (modified)	T	10 uL					
480-164221-C-4 MSD	CS SW 04 DER	3535, 537 (modified)	T	10 uL					
480-164221-C-5	FIELD DUP	3535, 537 (modified)	T	10 uL					
480-164221-C-6	AOI 3 GW 2 DER	3535, 537 (modified)	T	10 uL	Dried in oven and sediment discarded. 247.22 mL of liquid extracted.				
480-164221-C-7	AOI 1 GW 2 DER	3535, 537 (modified)	T	10 uL	Dried in oven and sediment discarded. 267.96 mL of liquid extracted.				
480-164221-C-8	CS SW 01 DER	3535, 537 (modified)	T	10 uL	Dried in oven and sediment discarded. 287.88 mL of liquid extracted.				
480-164221-C-10	CS SW 05 DER	3535, 537 (modified)	T	10 uL					
480-164221-C-11	CS SW 03 DER	3535, 537 (modified)	T	10 uL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

537 (modified)

LCMS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Burlingt Job No.: 480-164221-1

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

Batch Number: 150841 Batch Start Date: 12/18/19 10:57 Batch Analyst: Morrill, Morgan B

Batch Method: 3535 Batch End Date: 12/18/19 15:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	PFAS21 IS Stk 00015	AnalysisComment				
480-164221-C-12	CS SW 02 DER	3535, 537 (modified)	T	10 uL					
480-164221-C-13	AOI 1 GW1 DER	3535, 537 (modified)	T	10 uL	Dried in oven and sediment discarded. 191.17 mL of liquid extracted. Cartridge clogged and second cartridge was used to finish siphoning.				
480-164221-C-14	AOI 3 GW1 DER	3535, 537 (modified)	T	10 uL	Dried in oven and sediment discarded. 265.22 mL of liquid extracted.				
480-164221-C-15	AOI 1 GW3 DER	3535, 537 (modified)	T	10 uL	Dried in oven and sediment discarded. 256.37 mL of liquid extracted.				

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.

537 (modified)



LCMS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Burlingt Job No.: 480-164221-1

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

Batch Number: 150841 Batch Start Date: 12/18/19 10:57 Batch Analyst: Morrill, Morgan B

Batch Method: 3535 Batch End Date: 12/18/19 15:30

Batch Notes	
Balance ID	M02926
Manifold ID	IDA 3 & 4
Rinse Solvent Lot	1342538
Rinse Solvent Name	Hexane
Solvent Lot #	13479620
Solvent Name	Methanol (0.3% NH4OH)
SPE Cartridge Lot ID	Lot 004839175A
SPE Cartridge Type	Oasis WAX 500 mg
Analyst ID - Spike Analyst	MBM
Analyst ID - Spike Witness Analyst	NDD

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>Client Information</b> Client Contact: Mr. Daniel Lanners Company: New York State D.E.C. Address: 625 Broadway 11th Floor City: Albany State/Zip: NY, 12233-3256 Phone: Email: daniel.lanners@dec.ny.gov Project Name: Camp Smith #360140 Site:		Lab PM: Stone, Judy L E-Mail: judy.stone@testamericainc.com Phone: 518 402 7652 Carrier Tracking No(s): COC No: 480-139255-31338.1 Page: Page 1 of 2 Job #:	
Due Date Requested: TAT Requested (days): PO #: Call Out 137701 WO #: Project #: 48021404 SSOW#:		<b>Analysis Requested</b>	
Preservation Codes: M - Hexane N - None A - HCL AcNaO2 hydrate L - Evap. Other:		Preservation Codes: M - Hexane N - None A - HCL AcNaO2 hydrate L - Evap. Other:	
Sample Identification CS RW 2 DIER CS RW 1 MSD CS RW 1 MS Field DUP 2 CS RW 1 DER CS SW 04 MS Field DUP CS SW 04 MSD CS SW 04 DER		Total Number of Containers:	
Sample Date 12-12-19 12-12-19 12-12-19 12-12-19 12-12-19 12-12-19 12-12-19		Special Instructions/Note:	
Sample Time 12:34 12:17 12:15 12:10 11:33 11:32 11:31		Special Instructions/Note:	
Sample Type (C=Comp, G=grab) G G G G G G G		Special Instructions/Note:	
Matrix (W=water, B=solid, O=water/soil, L=leachate, A=air) Water Water Water Water Water Water Water Water		Special Instructions/Note:	
Field Filtered Sample (Yes or No) X X X X X X X		Special Instructions/Note:	
Perform MS/MSD (Yes or No) X X X X X X X		Special Instructions/Note:	
8270D SIM MS ID - 1,4-Dioxane N X X X X X X		Special Instructions/Note:	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)			
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Special Instructions/QC Requirements:			
Empty Kit Relinquished by:		Method of Shipment:	
Relinquished by: <i>Henri Tennard</i> Date/Time: 12/13/19 1005 Company: <i>Albany</i>		Relinquished by: <i>Henri Tennard</i> Date/Time: 12/13/19 1700 Company: <i>Albany</i>	
Relinquished by: <i>Henri Tennard</i> Date/Time: 12/13/19 1700 Company: <i>Albany</i>		Relinquished by: <i>Henri Tennard</i> Date/Time: 12/13/19 1700 Company: <i>Albany</i>	
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks: #1 21.3, 2, 2.7, 3.4	



# Albany #224 Chain of Custody Record


<b>Client Information</b>		Lab PM: Stone, Judy L		Carrier Tracking No(s)		COC No: 480-139255-31338.2	
Client Contact: Mr. Daniel Lanners		E-Mail: judy.stone@testamericainc.com		Page: Page 2 of 2		Job #:	
Company: New York State D.E.C.		Address: 625 Broadway 11th Floor		City: Albany		State, Zip: NY, 12233-3256	
Phone: [blank]		PO #: Call Out 137701		WO #:		Project #: 48021404	
Email: daniel.lanners@dec.ny.gov		Camp: Smith #360140		Site:		SSOW#:	
<b>Due Date Requested:</b>		TAT Requested (days):		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)	
Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=water/soil, B=Soil, A=Air)	
Sample Identification		Sample Date		Sample Time		Matrix	
AOI3 GW2 DER		12-10-19		1340		Water	
AOI1 GW2 DER		12-11-19		1225		Water	
CSSW01 DER		12-12-19		0900		Water	
Blank		12-11-19		1235		Water	
CSSW05 DER		12-11-19		1525		Water	
CSSW03 DER		12-12-19		1035		Water	
CSSW02 DER		12-12-19		0950		Water	
AOI1 GW1 DER		12-11-19		1135		Water	
AOI9 GW1 DER		12-10-19		1505		Water	
AOI1 GW3 DER		12-11-19		0945		Water	
<b>Possible Hazard Identification</b>		Poison B <input type="checkbox"/>		Unknown <input type="checkbox"/>		Radiological <input type="checkbox"/>	
Non-Hazard <input type="checkbox"/>		Flammable <input type="checkbox"/>		Skin Irritant <input type="checkbox"/>		Other (specify) _____	
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: Ben Tenover		Date/Time: 12-12-19/1005		Company: MESA		Received by: Paul Jordan	
Relinquished by: Paul Jordan		Date/Time: 12/13/19 1700		Company: Eurofins		Received by: [Signature]	
Relinquished by: [Signature]		Date/Time: [blank]		Company: [blank]		Received by: [Signature]	
Seals Intact: <input type="checkbox"/> No <input type="checkbox"/> Yes		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: #1 2.9, 3.0, 2.7, 3.4		Per: 01/16/2019	

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<b>Client Information</b>		Lab PM: Stone, Judy L		Carrier Tracking No(s):		COC No: 480-139254-31337.1	
Client Contact: Mr. Daniel Lanners		E-Mail: judy.stone@testamericainc.com		Phone: 515 402 9652		Page: Page 1 of 2	
Company: New York State D.E.C.		Address: 625 Broadway 11th Floor		City: Albany		State, Zip: NY, 12233-3256	
Phone: 515 402 9652		PO #: Call Out 137701		WO #:		Project #: 48021404	
Email: daniel.lanners@dec.ny.gov		Project Name: Camp Smith #360140		Site:		SSOW#:	
<b>Due Date Requested:</b>		TAT Requested (days):		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)	
Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=water/sol, A=air)	
Sample Identification		Sample Date		Sample Time		Sample Type	
A013GW2 DER		12-10-19		1030		Water	
<del>A016A0E3 GW2 DER</del>		<del>12-10-19</del>		<del>1500</del>		<del>Water</del>	
A013GW1 DER		12-10-19		1500		Water	
A011GW3 DER		12-10-19		930		Water	
A011GW1 DER		12-11-19		1130		Water	
A011GW2 DER		12-11-19		1215		Water	
CS-SW05 DER		12-11-19		1535		Water	
CS-SW01 DER		12-12-19		0900		Water	
Possible Hazard Identification		Poison B		Unknown		Radiological	
Non-Hazard		Flammable		Skin Irritant		Deliverable Requested: I, II, III, IV, Other (specify)	
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: <i>New Johnson</i>		Date/Time: 12-7-19 1005		Company: <i>New Johnson</i>		Received by: <i>Rod Zedler</i>	
Relinquished by: <i>Rod Zedler</i>		Date/Time: 12/13/19 1700		Company: <i>TestAmerica</i>		Received by: <i>Christina</i>	
Relinquished by:		Date/Time:		Company:		Received by:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		Received by: <i>Rod Zedler</i>	
Analysis Requested		Analysis Requested		Analysis Requested		Analysis Requested	
Total Number of Containers		Total Number of Containers		Total Number of Containers		Total Number of Containers	
Special Instructions/Note:		Special Instructions/Note:		Special Instructions/Note:		Special Instructions/Note:	
TURBID		TURBID		TURBID		TURBID	
Preservation Codes:		Preservation Codes:		Preservation Codes:		Preservation Codes:	
A - HCL		M - Hexane		O - AsNaO2		P - Na2O4S	
B - NaOH		N - None		Q - Na2SO3		R - Na2S2O3	
C - Zn Acetate		D - Nitric Acid		S - H2SO4		T - TSP Dodecahydrate	
E - NaHSO4		F - MeOH		U - Acetone		V - MCAA	
G - Amchlor		H - Ascorbic Acid		W - pH 4.5		Z - other (specify)	
I - Ice		J - DI Water		K - EDTA		L - EDA	
Other:		Other:		Other:		Other:	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
Return To Client		Disposal By Lab		Archive For		Months	
Special Instructions/QC Requirements:		Special Instructions/QC Requirements:		Special Instructions/QC Requirements:		Special Instructions/QC Requirements:	



<b>Client Information</b>		Lab PM: Stone, Judy L		COC No: 480-139254-31337.2	
Client Contact: Mr. Daniel Lanners		E-Mail: judy.stone@testamericainc.com		Page: Page 2 of 2	
Company: New York State D.E.C.		Address: 625 Broadway 11th Floor		City: Albany	
State, Zip: NY, 12233-3256		Phone: PO # Call Out 137701		WO #	
Email: daniel.lanners@dec.ny.gov		Project #: 48021404		Site: Camp Smith #360140	
Due Date Requested:		TAT Requested (days):		Analysis Requested	
Sample Date		Sample Time		Sample Type (C=Comp, G=grab)	
Sample Identification		Matrix (W=water, B=soil, D=water/dirt, BT=tissue, Air=)		Field Filtered Sample (Yes or No)	
Field Dup		Water		X	
CSRW1 DER MSD		Water		X	
CSSW04 DER MS		Water		X	
Field Dup 2		Water		X	
CSRW1 DER MS		Water		X	
CSRW2 DER		Water		X	
CSSW04 DER MSD		Water		X	
CSSW02 DER		Water		X	
CSRW1 DER		Water		X	
CSSW04 DER		Water		X	
CSSW03 DER		Water		X	
Possible Hazard Identification		Preservation Code:		Special Instructions/Note:	
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Deliverable Requested: I, II, III, IV, Other (specify)		Total Number of containers	
Empty Kit Relinquished by:		Date:		Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Relinquished by: Ben Lanners		Date: 12-22-19 / 1005		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
Relinquished by: Judy Lanners		Date: 12/13/19 1200		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Relinquished by:		Date:		Special Instructions/QC Requirements:	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Method of Shipment:	
Relinquished by: Ben Lanners		Date: 12-22-19 / 1005		Received by: Karl Lohm	
Relinquished by: Judy Lanners		Date: 12/13/19 1200		Received by: Chris Miller	
Relinquished by:		Date:		Received by:	
Company: TestAmerica		Date/Time: 12/13/19 1005		Company: TestAmerica	
Company: TestAmerica		Date/Time: 12/13/19 0900		Company: TestAmerica	
Company: TestAmerica		Date/Time:		Company:	
Cooler Temperature(s) °C and Other Remarks:					

<b>Client Information</b>		Lab PM: Stone, Judy L	Carrier Tracking No(s): 480-139254-31337.2
Client Contact: Mr. Daniel Lanners		E-Mail: judy.stone@testamericainc.com	Page: Page 2 of 2
Company: New York State D.E.C.		Job #:	
Address: 625 Broadway 11th Floor		Analysis Requested	
City: Albany	TAT Requested (days):	 480-164221 Chain of Custody	
State, Zip: NY, 12233-3256	PO #: Call Out 137701		
Phone:	WO #:	Preservation Codes:	
Email: daniel.lanners@dec.ny.gov	Project #: 48021404	A - HCL	M - Hexane
Project Name: Camp Smith #360140	SSOW#:	B - NaOH	N - None
Site:		C - Zn Acetate	O - AsNaO2
		D - Nitric Acid	P - Na2OAS
		E - NaHSO4	R - Na2SO3
		F - MeOH	G - Anchlor
		H - Ascorbic Acid	S - H2SO4
		I - Ice	T - TSP Dodecahydrate
		J - DI Water	U - Acetone
		K - EDTA	V - MCAA
		L - EDA	W - pH 4-5
		Other:	Z - other (specify)

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=tissue, AS=sk)	Field Filtered Sample (Yes or No)	Form MS/MSD (Yes or No)	PFC, IDA - PFA's, Standard List (21 analytes)	Total Number of Containers	Special Instructions/Note:
FIELD DOP				Water	X	X	X		
CSRW1 DER MSD	12/21/19	1200		Water	X	X	X		
CSSWO4 DER MS	12/21/19	1133		Water	X	X	X		
FIELD DOP 2				Water	X	X	X		
CSRW1 DER MS	12/21/19	1200		Water	X	X	X		
CSRW2 DER	12/21/19	1232		Water	X	X	X		
CSSW04 DER MSD	12/21/19	1132		Water	X	X	X		
CSSW02 DER	12/21/19	0845		Water	X	X	X		
CSRW1 DÜR	12/21/19	1200		Water	X	X	X		
CSSW04 DÜR	12/21/19	1130		Water	X	X	X		
CSSW03 DÜR	12/21/19	1050		Water	X	X	X		

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological  
 Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
 Relinquished by: *Ben Fenwick*  
 Relinquished by: *Neil Jordan*  
 Relinquished by: \_\_\_\_\_

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

Special Instructions/QC Requirements:

Method of Shipment: \_\_\_\_\_  
 Date/Time: \_\_\_\_\_  
 Received by: *Neil Jordan* Company: *WSP EC*  
 Received by: *Taylor Johnson* Company: *Company*  
 Received by: \_\_\_\_\_ Company: \_\_\_\_\_  
 Cooler Temperature(s) °C and Other Remarks: *0.6*

<b>Client Information</b>		Lab P#: Stone, Judy L		Carrier Tracking No(s):		COC No: 480-139254-31337.1	
Client Contact: Mr. Daniel Lanners		E-Mail: judy.stone@testamericainc.com		Page: Page 1 of 2		Job #:	
Company: New York State D.E.C.		Address: 625 Broadway 11th Floor		City: Albany		State, Zip: NY, 12233-3256	
Phone: 515 402 9652		Due Date Requested:		TAT Requested (days):		PO #:	
Call Out 137701		WC #:		Project #:		SSOW#:	
Email: daniel.lanners@dec.ny.gov		Project Name: Camp Smith #360140		Site:		Site:	
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=tissue, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	PFC, IDA - PFAS, Standard List (21 analytes)
AOI3GW2 DER	12-10-19	1030	G	Water	X	X	X
<del>AOI3GW1 DER</del>	<del>12-10-19</del>	<del>1500</del>	<del>G</del>	<del>Water</del>	<del>X</del>	<del>X</del>	<del>X</del>
AOI3GW1 DER	12-10-19	1500	G	Water	X	X	X
AOI1GW3 DER	12-11-19	930	G	Water	X	X	X
AOI1GW1 DER	12-11-19	1130	G	Water	X	X	X
AOI1GW2 DER	12-11-19	1215	G	Water	X	X	X
CS-SW05 DER	12-11-19	1525	G	Water	X	X	X
CS-SW01 DER	12-12-19	0700	G	Water	X	X	X
				Water			
				Water			
				Water			
				Water			
Total Number of Containers: _____							
Special Instructions/Note: TURBID							
Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA L - EDA Other: _____							
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months							
Special Instructions/QC Requirements:							
Empty Kit Relinquished by: _____ Date: _____							
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological							
Deleterious Requested: I, II, III, IV, Other (specify) _____							
Relinquished by: _____ Date/Time: 12-10-19/1005 Relinquished by: _____ Date/Time: 12-13-19/1005 Relinquished by: _____ Date/Time: 12-13-19/0957							
Company: _____ Company: _____ Company: _____							
Relinquished by: _____ Date/Time: 12-13-19/1005 Relinquished by: _____ Date/Time: 12-13-19/1700 Relinquished by: _____ Date/Time: _____							
Custody Seal No.: 1138071 Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No							
Cooler Temperature(s) °C and Other Remarks: 0.6							



ORIGIN ID: SCHA (518) 438-8140  
TIM KNOLLMEYER  
TESTAMERICA LAB INC  
25 KRAFT AVE

ALBANY, NY 12205  
UNITED STATES US

SHIP DATE: 13DEC19  
ACTWGT: 54.35 LB  
CAD: 0439821/CAFE3211  
DIMS: 26x15x14 IN

BILL THIRD PARTY

TO **SAMPLE RECEIVING**  
**TESTAMERICA - BURLINGTON**  
**30 COMMUNITY DRIVE, SUITE 11**

**BURLINGTON VT 05403**

(802) 660-1990

REF: NYSDAE PFAS



TRK# 1034 8840 0701  
0201

**SATURDAY 12:00P**  
**PRIORITY OVERNIGHT**

**XO BTVA**

**05403**  
VT-US **BTV**



Part # 156148-434 RIT EXP 09/19

551C2/1880/104C

J181118060301ur

# Login Sample Receipt Checklist

Client: New York State D.E.C.

Job Number: 480-164221-1

**Login Number: 164221**  
**List Number: 1**  
**Creator: Wallace, Cameron**

**List Source: Eurofins TestAmerica, Buffalo**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	NYS DEC
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

# Login Sample Receipt Checklist

Client: New York State D.E.C.

Job Number: 480-164221-1

**Login Number: 164221**  
**List Number: 2**  
**Creator: Mohn, Taylor J**

**List Source: Eurofins TestAmerica, Burlington**  
**List Creation: 12/16/19 01:43 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	1138071
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.6°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	