

ANALYTICAL REPORT

Job Number: 480-160746-1

Job Description: Wastewater Analysis

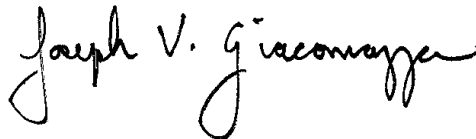
For:

Village of Endicott

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Endicott, NY 13760

Attention: Philip Grayson



Approved for release.
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10/31/2019 4:07 PM

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10/31/2019

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Job Narrative
480-160746-1

Comments

No additional comments.

Receipt

The samples were received on 10/11/2019 10:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.0° C and 3.4° C.

GC/MS Semi VOA

Method 8270D SIM ID: The 1,4-Dioxane result reported for sample (LCS 480-498188/2-A) have an E flag qualifier indicating the results are over the calibration range on the raw data. The actual amounts are within the calibration range; however, the E flag is generated based upon the bias corrected concentration. The LIMS system calculates a bias correction based on the recovery of the 1,4-Dioxane-d8 isotope.

Method 8270D SIM ID: The following samples were diluted to bring the concentration of target analytes within the calibration range: EW8100919 (480-160746-2), SPW100919 (480-160746-3), SPW100919 (480-160746-3[MS]) and SPW100919 (480-160746-3[MSD]). Elevated reporting limits (RLs) are provided.

Method 8270D SIM ID: The 1,4-Dioxane result reported for samples EW8100919 (480-160746-2), SPW100919 (480-160746-3), SPW100919 (480-160746-3[MS]) and SPW100919 (480-160746-3[MSD]) have an E flag qualifier indicating the results are over the calibration range on the raw data. The actual amounts are within the calibration range; however, the E flag is generated based upon the bias corrected concentration. The LIMS system calculates a bias correction based on the recovery of the 1,4-Dioxane-d8 isotope.

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

LCMS

Method 537 (modified): The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 200-148550 and analytical batch 200-148772 recovered outside control limits for the following analytes: Perfluorotetradecanoic acid (PFTeA) and Perfluoroundecanoic acid (PFUnA). These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 537 (modified): The method blank for preparation batch 200-148550 and analytical batch 200-148772 contained Perfluorononanoic acid (PFNA) above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-extraction and/or re-analysis of samples was not performed.

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

Organic Prep

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

Definitions/Glossary

Client: Village of Endicott
Project/Site: Wastewater Analysis

Job ID: 480-160746-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
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
*	LCS or LCSD is outside acceptance limits.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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: Village of Endicott
Project/Site: Wastewater Analysis

Job ID: 480-160746-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-160746-1	MW25D100919	Water	10/09/19 14:29	10/11/19 10:15	
480-160746-2	EW8100919	Water	10/09/19 17:05	10/11/19 10:15	
480-160746-3	SPW100919	Water	10/09/19 16:24	10/11/19 10:15	
480-160746-4	DUPLICATE	Water	10/09/19 00:00	10/11/19 10:15	

Detection Summary

Client: Village of Endicott
Project/Site: Wastewater Analysis

Job ID: 480-160746-1

Client Sample ID: MW25D100919

Lab Sample ID: 480-160746-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	0.22		0.20	0.10	ug/L	1		8270D SIM ID	Total/NA
Perfluorobutanoic acid (PFBA)	1.6	J	1.8	0.88	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	0.70	J	1.8	0.55	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	0.74	J	1.8	0.67	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	1.3	J	1.8	0.71	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.64	J B	1.8	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.9		1.8	0.53	ng/L	1		537 (modified)	Total/NA

Client Sample ID: EW8100919

Lab Sample ID: 480-160746-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	65	E	5.0	2.5	ug/L	25		8270D SIM ID	Total/NA
Perfluorobutanoic acid (PFBA)	6.8		1.8	0.90	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	7.9		1.8	0.56	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	15		1.8	0.68	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	10		1.8	0.82	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	46		1.8	0.73	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	1.1	J B	1.8	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	6.6		1.8	0.44	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	25		1.8	0.72	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic Acid (PFHpS)	4.6		1.8	0.85	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	150		1.8	0.55	ng/L	1		537 (modified)	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	10	J	18	1.3	ng/L	1		537 (modified)	Total/NA

Client Sample ID: SPW100919

Lab Sample ID: 480-160746-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	22	E	2.0	1.0	ug/L	10		8270D SIM ID	Total/NA
Perfluorobutanoic acid (PFBA)	4.4		1.7	0.87	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	4.7		1.7	0.55	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	6.0		1.7	0.66	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	3.7		1.7	0.79	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	14		1.7	0.71	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.89	J B	1.7	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	6.0		1.7	0.43	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	7.1		1.7	0.70	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic Acid (PFHpS)	0.99	J	1.7	0.83	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	29		1.7	0.53	ng/L	1		537 (modified)	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.8	J	17	1.3	ng/L	1		537 (modified)	Total/NA

Client Sample ID: DUPLICATE

Lab Sample ID: 480-160746-4

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)	1.7		1.7	0.85	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	0.67	J	1.7	0.54	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	0.93	J	1.7	0.65	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	1.6	J	1.7	0.69	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	0.92	J B	1.7	0.23	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Village of Endicott
Project/Site: Wastewater Analysis

Job ID: 480-160746-1

Client Sample ID: DUPLICATE (Continued)

Lab Sample ID: 480-160746-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanesulfonic acid (PFBS)	0.54	J	1.7	0.42	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	4.5		1.7	0.52	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Village of Endicott
Project/Site: Wastewater Analysis

Job ID: 480-160746-1

Method	Method Description	Protocol	Laboratory
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

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: Village of Endicott
Project/Site: Wastewater Analysis

Job ID: 480-160746-1

Client Sample ID: MW25D100919

Lab Sample ID: 480-160746-1

Date Collected: 10/09/19 14:29

Matrix: Water

Date Received: 10/11/19 10:15

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	0.22		0.20	0.10	ug/L		10/15/19 15:48	10/16/19 18:06	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	27		15 - 110				10/15/19 15:48	10/16/19 18:06	1

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	1.6	J	1.8	0.88	ng/L		10/17/19 10:08	10/22/19 21:31	1
Perfluoropentanoic acid (PFPeA)	0.70	J	1.8	0.55	ng/L		10/17/19 10:08	10/22/19 21:31	1
Perfluorohexanoic acid (PFHxA)	0.74	J	1.8	0.67	ng/L		10/17/19 10:08	10/22/19 21:31	1
Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.80	ng/L		10/17/19 10:08	10/22/19 21:31	1
Perfluorooctanoic acid (PFOA)	1.3	J	1.8	0.71	ng/L		10/17/19 10:08	10/22/19 21:31	1
Perfluorononanoic acid (PFNA)	0.64	J B	1.8	0.24	ng/L		10/17/19 10:08	10/22/19 21:31	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.67	ng/L		10/17/19 10:08	10/22/19 21:31	1
Perfluoroundecanoic acid (PFUnA)	ND *		1.8	0.68	ng/L		10/17/19 10:08	10/22/19 21:31	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.52	ng/L		10/17/19 10:08	10/22/19 21:31	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8	0.53	ng/L		10/17/19 10:08	10/22/19 21:31	1
Perfluorotetradecanoic acid (PFTeA)	ND *		1.8	0.81	ng/L		10/17/19 10:08	10/22/19 21:31	1
Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.43	ng/L		10/17/19 10:08	10/22/19 21:31	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.8	0.70	ng/L		10/17/19 10:08	10/22/19 21:31	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.83	ng/L		10/17/19 10:08	10/22/19 21:31	1
Perfluorooctanesulfonic acid (PFOS)	3.9		1.8	0.53	ng/L		10/17/19 10:08	10/22/19 21:31	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.79	ng/L		10/17/19 10:08	10/22/19 21:31	1
Perfluorooctanesulfonamide (PFOSA)	ND		8.8	8.8	ng/L		10/17/19 10:08	10/22/19 21:31	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		18	1.5	ng/L		10/17/19 10:08	10/22/19 21:31	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		18	1.3	ng/L		10/17/19 10:08	10/22/19 21:31	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		18	4.8	ng/L		10/17/19 10:08	10/22/19 21:31	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		18	2.5	ng/L		10/17/19 10:08	10/22/19 21:31	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	86		50 - 150				10/17/19 10:08	10/22/19 21:31	1
13C4 PFHpA	92		50 - 150				10/17/19 10:08	10/22/19 21:31	1
13C4 PFOA	98		50 - 150				10/17/19 10:08	10/22/19 21:31	1
13C4 PFOS	87		50 - 150				10/17/19 10:08	10/22/19 21:31	1
13C5 PFNA	88		50 - 150				10/17/19 10:08	10/22/19 21:31	1
13C4 PFBA	70		25 - 150				10/17/19 10:08	10/22/19 21:31	1
13C2 PFHxA	83		50 - 150				10/17/19 10:08	10/22/19 21:31	1
13C2 PFDA	85		50 - 150				10/17/19 10:08	10/22/19 21:31	1
13C2 PFUnA	84		50 - 150				10/17/19 10:08	10/22/19 21:31	1
13C2 PFDoA	89		50 - 150				10/17/19 10:08	10/22/19 21:31	1
13C8 FOSA	74		25 - 150				10/17/19 10:08	10/22/19 21:31	1
13C5 PFPeA	84		25 - 150				10/17/19 10:08	10/22/19 21:31	1
13C2 PFTeDA	77		50 - 150				10/17/19 10:08	10/22/19 21:31	1
d3-NMeFOSAA	82		50 - 150				10/17/19 10:08	10/22/19 21:31	1
d5-NEtFOSAA	78		50 - 150				10/17/19 10:08	10/22/19 21:31	1
M2-6:2 FTS	97		25 - 150				10/17/19 10:08	10/22/19 21:31	1
M2-8:2 FTS	92		25 - 150				10/17/19 10:08	10/22/19 21:31	1

Client Sample Results

Client: Village of Endicott
Project/Site: Wastewater Analysis

Job ID: 480-160746-1

Client Sample ID: EW8100919

Lab Sample ID: 480-160746-2

Date Collected: 10/09/19 17:05

Matrix: Water

Date Received: 10/11/19 10:15

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	65	E	5.0	2.5	ug/L		10/15/19 15:48	10/17/19 14:32	25
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	26		15 - 110				10/15/19 15:48	10/17/19 14:32	25

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	6.8		1.8	0.90	ng/L		10/17/19 10:08	10/22/19 21:47	1
Perfluoropentanoic acid (PFPeA)	7.9		1.8	0.56	ng/L		10/17/19 10:08	10/22/19 21:47	1
Perfluorohexanoic acid (PFHxA)	15		1.8	0.68	ng/L		10/17/19 10:08	10/22/19 21:47	1
Perfluoroheptanoic acid (PFHpA)	10		1.8	0.82	ng/L		10/17/19 10:08	10/22/19 21:47	1
Perfluorooctanoic acid (PFOA)	46		1.8	0.73	ng/L		10/17/19 10:08	10/22/19 21:47	1
Perfluorononanoic acid (PFNA)	1.1	J B	1.8	0.24	ng/L		10/17/19 10:08	10/22/19 21:47	1
Perfluorodecanoic acid (PFDA)	ND		1.8	0.69	ng/L		10/17/19 10:08	10/22/19 21:47	1
Perfluoroundecanoic acid (PFUnA)	ND *		1.8	0.70	ng/L		10/17/19 10:08	10/22/19 21:47	1
Perfluorododecanoic acid (PFDoA)	ND		1.8	0.53	ng/L		10/17/19 10:08	10/22/19 21:47	1
Perfluorotridecanoic acid (PFTriA)	ND		1.8	0.54	ng/L		10/17/19 10:08	10/22/19 21:47	1
Perfluorotetradecanoic acid (PFTeA)	ND *		1.8	0.82	ng/L		10/17/19 10:08	10/22/19 21:47	1
Perfluorobutanesulfonic acid (PFBS)	6.6		1.8	0.44	ng/L		10/17/19 10:08	10/22/19 21:47	1
Perfluorohexanesulfonic acid (PFHxS)	25		1.8	0.72	ng/L		10/17/19 10:08	10/22/19 21:47	1
Perfluoroheptanesulfonic Acid (PFHpS)	4.6		1.8	0.85	ng/L		10/17/19 10:08	10/22/19 21:47	1
Perfluorooctanesulfonic acid (PFOS)	150		1.8	0.55	ng/L		10/17/19 10:08	10/22/19 21:47	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.81	ng/L		10/17/19 10:08	10/22/19 21:47	1
Perfluorooctanesulfonamide (PFOSA)	ND		9.0	9.0	ng/L		10/17/19 10:08	10/22/19 21:47	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		18	1.5	ng/L		10/17/19 10:08	10/22/19 21:47	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	10	J	18	1.3	ng/L		10/17/19 10:08	10/22/19 21:47	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		18	4.9	ng/L		10/17/19 10:08	10/22/19 21:47	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		18	2.6	ng/L		10/17/19 10:08	10/22/19 21:47	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
18O2 PFHxS	85		50 - 150				10/17/19 10:08	10/22/19 21:47	1
13C4 PFHpA	89		50 - 150				10/17/19 10:08	10/22/19 21:47	1
13C4 PFOA	99		50 - 150				10/17/19 10:08	10/22/19 21:47	1
13C4 PFOS	83		50 - 150				10/17/19 10:08	10/22/19 21:47	1
13C5 PFNA	89		50 - 150				10/17/19 10:08	10/22/19 21:47	1
13C4 PFBA	54		25 - 150				10/17/19 10:08	10/22/19 21:47	1
13C2 PFHxA	83		50 - 150				10/17/19 10:08	10/22/19 21:47	1
13C2 PFDA	91		50 - 150				10/17/19 10:08	10/22/19 21:47	1
13C2 PFUnA	87		50 - 150				10/17/19 10:08	10/22/19 21:47	1
13C2 PFDoA	103		50 - 150				10/17/19 10:08	10/22/19 21:47	1
13C8 FOSA	66		25 - 150				10/17/19 10:08	10/22/19 21:47	1
13C5 PFPeA	82		25 - 150				10/17/19 10:08	10/22/19 21:47	1
13C2 PFTeDA	87		50 - 150				10/17/19 10:08	10/22/19 21:47	1
d3-NMeFOSAA	79		50 - 150				10/17/19 10:08	10/22/19 21:47	1
d5-NEtFOSAA	93		50 - 150				10/17/19 10:08	10/22/19 21:47	1

Client Sample Results

Client: Village of Endicott
Project/Site: Wastewater Analysis

Job ID: 480-160746-1

Client Sample ID: EW8100919

Lab Sample ID: 480-160746-2

Date Collected: 10/09/19 17:05

Matrix: Water

Date Received: 10/11/19 10:15

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
M2-6:2 FTS	123		25 - 150	10/17/19 10:08	10/22/19 21:47	1
M2-8:2 FTS	100		25 - 150	10/17/19 10:08	10/22/19 21:47	1

Client Sample ID: SPW100919

Lab Sample ID: 480-160746-3

Date Collected: 10/09/19 16:24

Matrix: Water

Date Received: 10/11/19 10:15

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	22	E	2.0	1.0	ug/L		10/15/19 15:48	10/17/19 14:08	10
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1,4-Dioxane-d8	27		15 - 110	10/15/19 15:48	10/17/19 14:08	10			

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	4.4		1.7	0.87	ng/L		10/17/19 10:08	10/22/19 21:55	1
Perfluoropentanoic acid (PFPeA)	4.7		1.7	0.55	ng/L		10/17/19 10:08	10/22/19 21:55	1
Perfluorohexanoic acid (PFHxA)	6.0		1.7	0.66	ng/L		10/17/19 10:08	10/22/19 21:55	1
Perfluoroheptanoic acid (PFHpA)	3.7		1.7	0.79	ng/L		10/17/19 10:08	10/22/19 21:55	1
Perfluorooctanoic acid (PFOA)	14		1.7	0.71	ng/L		10/17/19 10:08	10/22/19 21:55	1
Perfluorononanoic acid (PFNA)	0.89	J B	1.7	0.24	ng/L		10/17/19 10:08	10/22/19 21:55	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.67	ng/L		10/17/19 10:08	10/22/19 21:55	1
Perfluoroundecanoic acid (PFUnA)	ND	*	1.7	0.68	ng/L		10/17/19 10:08	10/22/19 21:55	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.51	ng/L		10/17/19 10:08	10/22/19 21:55	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7	0.52	ng/L		10/17/19 10:08	10/22/19 21:55	1
Perfluorotetradecanoic acid (PFTeA)	ND	*	1.7	0.80	ng/L		10/17/19 10:08	10/22/19 21:55	1
Perfluorobutanesulfonic acid (PFBS)	6.0		1.7	0.43	ng/L		10/17/19 10:08	10/22/19 21:55	1
Perfluorohexanesulfonic acid (PFHxS)	7.1		1.7	0.70	ng/L		10/17/19 10:08	10/22/19 21:55	1
Perfluoroheptanesulfonic Acid (PFHpS)	0.99	J	1.7	0.83	ng/L		10/17/19 10:08	10/22/19 21:55	1
Perfluorooctanesulfonic acid (PFOS)	29		1.7	0.53	ng/L		10/17/19 10:08	10/22/19 21:55	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.78	ng/L		10/17/19 10:08	10/22/19 21:55	1
Perfluorooctanesulfonamide (PFOSA)	ND		8.7	8.7	ng/L		10/17/19 10:08	10/22/19 21:55	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		17	1.5	ng/L		10/17/19 10:08	10/22/19 21:55	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.8	J	17	1.3	ng/L		10/17/19 10:08	10/22/19 21:55	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	4.8	ng/L		10/17/19 10:08	10/22/19 21:55	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	2.5	ng/L		10/17/19 10:08	10/22/19 21:55	1
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
18O2 PFHxS	86		50 - 150	10/17/19 10:08	10/22/19 21:55	1			
13C4 PFHpA	86		50 - 150	10/17/19 10:08	10/22/19 21:55	1			
13C4 PFOA	96		50 - 150	10/17/19 10:08	10/22/19 21:55	1			
13C4 PFOS	89		50 - 150	10/17/19 10:08	10/22/19 21:55	1			
13C5 PFNA	89		50 - 150	10/17/19 10:08	10/22/19 21:55	1			
13C4 PFBA	74		25 - 150	10/17/19 10:08	10/22/19 21:55	1			
13C2 PFHxA	85		50 - 150	10/17/19 10:08	10/22/19 21:55	1			

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Client Sample Results

Client: Village of Endicott
Project/Site: Wastewater Analysis

Job ID: 480-160746-1

Client Sample ID: SPW100919

Lab Sample ID: 480-160746-3

Date Collected: 10/09/19 16:24

Matrix: Water

Date Received: 10/11/19 10:15

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	87		50 - 150	10/17/19 10:08	10/22/19 21:55	1
13C2 PFUnA	83		50 - 150	10/17/19 10:08	10/22/19 21:55	1
13C2 PFDoA	93		50 - 150	10/17/19 10:08	10/22/19 21:55	1
13C8 FOSA	71		25 - 150	10/17/19 10:08	10/22/19 21:55	1
13C5 PFPeA	83		25 - 150	10/17/19 10:08	10/22/19 21:55	1
13C2 PFTeDA	91		50 - 150	10/17/19 10:08	10/22/19 21:55	1
d3-NMeFOSAA	78		50 - 150	10/17/19 10:08	10/22/19 21:55	1
d5-NEtFOSAA	84		50 - 150	10/17/19 10:08	10/22/19 21:55	1
M2-6:2 FTS	99		25 - 150	10/17/19 10:08	10/22/19 21:55	1
M2-8:2 FTS	94		25 - 150	10/17/19 10:08	10/22/19 21:55	1

Client Sample ID: DUPLICATE

Lab Sample ID: 480-160746-4

Date Collected: 10/09/19 00:00

Matrix: Water

Date Received: 10/11/19 10:15

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		10/15/19 15:48	10/16/19 18:53	1
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1,4-Dioxane-d8	25		15 - 110	10/15/19 15:48	10/16/19 18:53	1			

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	1.7		1.7	0.85	ng/L		10/17/19 10:08	10/22/19 22:20	1
Perfluoropentanoic acid (PFPeA)	0.67	J	1.7	0.54	ng/L		10/17/19 10:08	10/22/19 22:20	1
Perfluorohexanoic acid (PFHxA)	0.93	J	1.7	0.65	ng/L		10/17/19 10:08	10/22/19 22:20	1
Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.78	ng/L		10/17/19 10:08	10/22/19 22:20	1
Perfluorooctanoic acid (PFOA)	1.6	J	1.7	0.69	ng/L		10/17/19 10:08	10/22/19 22:20	1
Perfluorononanoic acid (PFNA)	0.92	J B	1.7	0.23	ng/L		10/17/19 10:08	10/22/19 22:20	1
Perfluorodecanoic acid (PFDA)	ND		1.7	0.66	ng/L		10/17/19 10:08	10/22/19 22:20	1
Perfluoroundecanoic acid (PFUnA)	ND	*	1.7	0.67	ng/L		10/17/19 10:08	10/22/19 22:20	1
Perfluorododecanoic acid (PFDoA)	ND		1.7	0.50	ng/L		10/17/19 10:08	10/22/19 22:20	1
Perfluorotridecanoic acid (PFTriA)	ND		1.7	0.51	ng/L		10/17/19 10:08	10/22/19 22:20	1
Perfluorotetradecanoic acid (PFTeA)	ND	*	1.7	0.79	ng/L		10/17/19 10:08	10/22/19 22:20	1
Perfluorobutanesulfonic acid (PFBS)	0.54	J	1.7	0.42	ng/L		10/17/19 10:08	10/22/19 22:20	1
Perfluorohexanesulfonic acid (PFHxS)	ND		1.7	0.68	ng/L		10/17/19 10:08	10/22/19 22:20	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.81	ng/L		10/17/19 10:08	10/22/19 22:20	1
Perfluorooctanesulfonic acid (PFOS)	4.5		1.7	0.52	ng/L		10/17/19 10:08	10/22/19 22:20	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.77	ng/L		10/17/19 10:08	10/22/19 22:20	1
Perfluorooctanesulfonamide (PFOSA)	ND		8.5	8.5	ng/L		10/17/19 10:08	10/22/19 22:20	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		17	1.5	ng/L		10/17/19 10:08	10/22/19 22:20	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		17	1.3	ng/L		10/17/19 10:08	10/22/19 22:20	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		17	4.7	ng/L		10/17/19 10:08	10/22/19 22:20	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		17	2.5	ng/L		10/17/19 10:08	10/22/19 22:20	1

Client Sample Results

Client: Village of Endicott
 Project/Site: Wastewater Analysis

Job ID: 480-160746-1

Client Sample ID: DUPLICATE

Lab Sample ID: 480-160746-4

Date Collected: 10/09/19 00:00

Matrix: Water

Date Received: 10/11/19 10:15

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
18O2 PFHxS	84		50 - 150	10/17/19 10:08	10/22/19 22:20	1
13C4 PFHpA	89		50 - 150	10/17/19 10:08	10/22/19 22:20	1
13C4 PFOA	97		50 - 150	10/17/19 10:08	10/22/19 22:20	1
13C4 PFOS	85		50 - 150	10/17/19 10:08	10/22/19 22:20	1
13C5 PFNA	82		50 - 150	10/17/19 10:08	10/22/19 22:20	1
13C4 PFBA	70		25 - 150	10/17/19 10:08	10/22/19 22:20	1
13C2 PFHxA	85		50 - 150	10/17/19 10:08	10/22/19 22:20	1
13C2 PFDA	81		50 - 150	10/17/19 10:08	10/22/19 22:20	1
13C2 PFUnA	79		50 - 150	10/17/19 10:08	10/22/19 22:20	1
13C2 PFDoA	85		50 - 150	10/17/19 10:08	10/22/19 22:20	1
13C8 FOSA	72		25 - 150	10/17/19 10:08	10/22/19 22:20	1
13C5 PFPeA	84		25 - 150	10/17/19 10:08	10/22/19 22:20	1
13C2 PFTeDA	72		50 - 150	10/17/19 10:08	10/22/19 22:20	1
d3-NMeFOSAA	75		50 - 150	10/17/19 10:08	10/22/19 22:20	1
d5-NEtFOSAA	84		50 - 150	10/17/19 10:08	10/22/19 22:20	1
M2-6:2 FTS	98		25 - 150	10/17/19 10:08	10/22/19 22:20	1
M2-8:2 FTS	85		25 - 150	10/17/19 10:08	10/22/19 22:20	1

Isotope Dilution Summary

Client: Village of Endicott
 Project/Site: Wastewater Analysis

Job ID: 480-160746-1

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)
480-160746-1	MW25D100919	27
480-160746-2	EW8100919	26
480-160746-3	SPW100919	27
480-160746-3 MS	SPW100919	28
480-160746-3 MSD	SPW100919	27
480-160746-4	DUPLICATE	25
LCS 480-498188/2-A	Lab Control Sample	28
MB 480-498188/1-A	Method Blank	28

Surrogate Legend

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)
480-160746-1	MW25D100919	86	92	98	87	88	70	83	85
480-160746-2	EW8100919	85	89	99	83	89	54	83	91
480-160746-3	SPW100919	86	86	96	89	89	74	85	87
480-160746-3 MS	SPW100919	84	84	91	79	86	71	82	81
480-160746-3 MSD	SPW100919	84	84	93	88	92	73	83	90
480-160746-4	DUPLICATE	84	89	97	85	82	70	85	81
LCS 200-148550/2-A	Lab Control Sample	90	90	101	92	93	89	93	93
MB 200-148550/1-A	Method Blank	110	108	120	113	117	94	112	115

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFUnA (50-150)	PFDoA (50-150)	PFOSA (25-150)	PFPeA (25-150)	PFTDA (50-150)	-NMeFOS/ (50-150)	-NEtFOS/ (50-150)	M262FTS (25-150)
480-160746-1	MW25D100919	84	89	74	84	77	82	78	97
480-160746-2	EW8100919	87	103	66	82	87	79	93	123
480-160746-3	SPW100919	83	93	71	83	91	78	84	99
480-160746-3 MS	SPW100919	78	88	64	79	80	78	76	102
480-160746-3 MSD	SPW100919	81	97	71	80	86	79	90	96
480-160746-4	DUPLICATE	79	85	72	84	72	75	84	98
LCS 200-148550/2-A	Lab Control Sample	85	94	65	94	82	84	93	100
MB 200-148550/1-A	Method Blank	110	118	81	112	101	113	112	121

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M282FTS (25-150)
480-160746-1	MW25D100919	92
480-160746-2	EW8100919	100
480-160746-3	SPW100919	94
480-160746-3 MS	SPW100919	93
480-160746-3 MSD	SPW100919	94
480-160746-4	DUPLICATE	85
LCS 200-148550/2-A	Lab Control Sample	103
MB 200-148550/1-A	Method Blank	118

Surrogate Legend

Isotope Dilution Summary

Job ID: 480-160746-1

Client: Village of Endicott

Project/Site: Wastewater Analysis

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

QC Sample Results

Client: Village of Endicott
Project/Site: Wastewater Analysis

Job ID: 480-160746-1

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

Lab Sample ID: MB 480-498188/1-A
Matrix: Water
Analysis Batch: 498310

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 498188

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.20	0.10	ug/L		10/15/19 15:48	10/16/19 16:08	1
Isotope Dilution									
	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8	28		15 - 110				10/15/19 15:48	10/16/19 16:08	1

Lab Sample ID: LCS 480-498188/2-A
Matrix: Water
Analysis Batch: 498310

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 498188

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,4-Dioxane	1.00	1.32	E	ug/L		132	40 - 140
Isotope Dilution							
	LCS %Recovery	LCS Qualifier	Limits				
1,4-Dioxane-d8	28		15 - 110				

Lab Sample ID: 480-160746-3 MS
Matrix: Water
Analysis Batch: 498604

Client Sample ID: SPW100919
Prep Type: Total/NA
Prep Batch: 498188

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
1,4-Dioxane	22	E	1.00	23.7	E 4	ug/L		213	40 - 140
Isotope Dilution									
	MS %Recovery	MS Qualifier	Limits						
1,4-Dioxane-d8	28		15 - 110						

Lab Sample ID: 480-160746-3 MSD
Matrix: Water
Analysis Batch: 498604

Client Sample ID: SPW100919
Prep Type: Total/NA
Prep Batch: 498188

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,4-Dioxane	22	E	1.00	23.1	E 4	ug/L		160	40 - 140	2	20
Isotope Dilution											
	MSD %Recovery	MSD Qualifier	Limits								
1,4-Dioxane-d8	27		15 - 110								

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 200-148550/1-A
Matrix: Water
Analysis Batch: 148772

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 148550

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		2.0	1.0	ng/L		10/17/19 10:08	10/22/19 20:00	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.63	ng/L		10/17/19 10:08	10/22/19 20:00	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.76	ng/L		10/17/19 10:08	10/22/19 20:00	1
Perfluoroheptanoic acid (PFHpA)	ND		2.0	0.91	ng/L		10/17/19 10:08	10/22/19 20:00	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.81	ng/L		10/17/19 10:08	10/22/19 20:00	1
Perfluorononanoic acid (PFNA)	0.316	J	2.0	0.27	ng/L		10/17/19 10:08	10/22/19 20:00	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.77	ng/L		10/17/19 10:08	10/22/19 20:00	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	0.78	ng/L		10/17/19 10:08	10/22/19 20:00	1

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QC Sample Results

Client: Village of Endicott
Project/Site: Wastewater Analysis

Job ID: 480-160746-1

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

Lab Sample ID: MB 200-148550/1-A
Matrix: Water
Analysis Batch: 148772

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 148550

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.59	ng/L		10/17/19 10:08	10/22/19 20:00	1
Perfluorotridecanoic acid (PFTriA)	ND		2.0	0.60	ng/L		10/17/19 10:08	10/22/19 20:00	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0	0.92	ng/L		10/17/19 10:08	10/22/19 20:00	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.49	ng/L		10/17/19 10:08	10/22/19 20:00	1
Perfluorohexanesulfonic acid (PFHxS)	ND		2.0	0.80	ng/L		10/17/19 10:08	10/22/19 20:00	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0	0.95	ng/L		10/17/19 10:08	10/22/19 20:00	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.61	ng/L		10/17/19 10:08	10/22/19 20:00	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.90	ng/L		10/17/19 10:08	10/22/19 20:00	1
Perfluorooctanesulfonamide (PFOSA)	ND		10	10	ng/L		10/17/19 10:08	10/22/19 20:00	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		20	1.7	ng/L		10/17/19 10:08	10/22/19 20:00	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		20	1.5	ng/L		10/17/19 10:08	10/22/19 20:00	1
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		20	5.5	ng/L		10/17/19 10:08	10/22/19 20:00	1
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		20	2.9	ng/L		10/17/19 10:08	10/22/19 20:00	1

Isotope Dilution	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
18O2 PFHxS	110		50 - 150	10/17/19 10:08	10/22/19 20:00	1
13C4 PFHpA	108		50 - 150	10/17/19 10:08	10/22/19 20:00	1
13C4 PFOA	120		50 - 150	10/17/19 10:08	10/22/19 20:00	1
13C4 PFOS	113		50 - 150	10/17/19 10:08	10/22/19 20:00	1
13C5 PFNA	117		50 - 150	10/17/19 10:08	10/22/19 20:00	1
13C4 PFBA	94		25 - 150	10/17/19 10:08	10/22/19 20:00	1
13C2 PFHxA	112		50 - 150	10/17/19 10:08	10/22/19 20:00	1
13C2 PFDA	115		50 - 150	10/17/19 10:08	10/22/19 20:00	1
13C2 PFUnA	110		50 - 150	10/17/19 10:08	10/22/19 20:00	1
13C2 PFDoA	118		50 - 150	10/17/19 10:08	10/22/19 20:00	1
13C8 FOSA	81		25 - 150	10/17/19 10:08	10/22/19 20:00	1
13C5 PFPeA	112		25 - 150	10/17/19 10:08	10/22/19 20:00	1
13C2 PFTeDA	101		50 - 150	10/17/19 10:08	10/22/19 20:00	1
d3-NMeFOSAA	113		50 - 150	10/17/19 10:08	10/22/19 20:00	1
d5-NEtFOSAA	112		50 - 150	10/17/19 10:08	10/22/19 20:00	1
M2-6:2 FTS	121		25 - 150	10/17/19 10:08	10/22/19 20:00	1
M2-8:2 FTS	118		25 - 150	10/17/19 10:08	10/22/19 20:00	1

Lab Sample ID: LCS 200-148550/2-A
Matrix: Water
Analysis Batch: 148772

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 148550

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Perfluorobutanoic acid (PFBA)	40.0	50.4		ng/L		126	50 - 150
Perfluoropentanoic acid (PFPeA)	40.0	49.7		ng/L		124	50 - 150
Perfluorohexanoic acid (PFHxA)	40.0	47.7		ng/L		119	70 - 130
Perfluoroheptanoic acid (PFHpA)	40.0	50.2		ng/L		125	70 - 130
Perfluorooctanoic acid (PFOA)	40.0	49.8		ng/L		124	70 - 130
Perfluorononanoic acid (PFNA)	40.0	48.2		ng/L		121	70 - 130
Perfluorodecanoic acid (PFDA)	40.0	51.6		ng/L		129	70 - 130

Eurofins TestAmerica, Buffalo

QC Sample Results

Client: Village of Endicott
Project/Site: Wastewater Analysis

Job ID: 480-160746-1

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

Lab Sample ID: LCS 200-148550/2-A

Matrix: Water

Analysis Batch: 148772

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 148550

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Perfluoroundecanoic acid (PFUnA)	40.0	52.7	*	ng/L		132	70 - 130
Perfluorododecanoic acid (PFDoA)	40.0	48.4		ng/L		121	70 - 130
Perfluorotridecanoic acid (PFTriA)	40.0	48.6		ng/L		122	70 - 130
Perfluorotetradecanoic acid (PFTeA)	40.0	56.4	*	ng/L		141	70 - 130
Perfluorobutanesulfonic acid (PFBS)	35.4	43.0		ng/L		122	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	36.4	44.3		ng/L		122	70 - 130
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	46.6		ng/L		122	50 - 150
Perfluorooctanesulfonic acid (PFOS)	37.1	45.5		ng/L		123	70 - 130
Perfluorodecanesulfonic acid (PFDS)	38.6	48.9		ng/L		127	50 - 150
Perfluorooctanesulfonamide (PFOSA)	40.0	49.7		ng/L		124	50 - 150
N-methylperfluorooctanesulfonamide (NMeFOSAA)	40.0	51.8		ng/L		130	70 - 130
N-ethylperfluorooctanesulfonamide (NEtFOSAA)	40.0	50.0		ng/L		125	70 - 130
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	37.9	41.3		ng/L		109	50 - 150
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	38.3	40.7		ng/L		106	50 - 150

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
18O2 PFHxS	90		50 - 150
13C4 PFHpA	90		50 - 150
13C4 PFOA	101		50 - 150
13C4 PFOS	92		50 - 150
13C5 PFNA	93		50 - 150
13C4 PFBA	89		25 - 150
13C2 PFHxA	93		50 - 150
13C2 PFDA	93		50 - 150
13C2 PFUnA	85		50 - 150
13C2 PFDoA	94		50 - 150
13C8 FOSA	65		25 - 150
13C5 PFPeA	94		25 - 150
13C2 PFTeDA	82		50 - 150
d3-NMeFOSAA	84		50 - 150
d5-NEtFOSAA	93		50 - 150
M2-6:2 FTS	100		25 - 150
M2-8:2 FTS	103		25 - 150

QC Sample Results

Client: Village of Endicott
Project/Site: Wastewater Analysis

Job ID: 480-160746-1

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

Lab Sample ID: 480-160746-3 MS

Matrix: Water

Analysis Batch: 148772

Client Sample ID: SPW100919

Prep Type: Total/NA

Prep Batch: 148550

Analyte	Sample	Sample Qualifier	Spike Added	MS	MS Qualifier	Unit	D	%Rec	Limits
	Result			Result					
Perfluorobutanoic acid (PFBA)	4.4		34.4	46.6		ng/L		123	40 - 160
Perfluoropentanoic acid (PFPeA)	4.7		34.4	49.2		ng/L		129	40 - 160
Perfluorohexanoic acid (PFHxA)	6.0		34.4	47.1		ng/L		120	40 - 160
Perfluoroheptanoic acid (PFHpA)	3.7		34.4	47.3		ng/L		127	40 - 160
Perfluorooctanoic acid (PFOA)	14		34.4	56.1		ng/L		123	40 - 160
Perfluorononanoic acid (PFNA)	0.89	J B	34.4	44.3		ng/L		126	40 - 160
Perfluorodecanoic acid (PFDA)	ND		34.4	42.6		ng/L		124	40 - 160
Perfluoroundecanoic acid (PFUnA)	ND	*	34.4	41.1		ng/L		119	40 - 160
Perfluorododecanoic acid (PFDoA)	ND		34.4	47.2		ng/L		137	40 - 160
Perfluorotridecanoic acid (PFTriA)	ND		34.4	44.3		ng/L		129	40 - 160
Perfluorotetradecanoic acid (PFTeA)	ND	*	34.4	49.3		ng/L		143	40 - 160
Perfluorobutanesulfonic acid (PFBS)	6.0		30.4	39.0		ng/L		109	40 - 160
Perfluorohexanesulfonic acid (PFHxS)	7.1		31.3	46.4		ng/L		126	40 - 160
Perfluoroheptanesulfonic Acid (PFHpS)	0.99	J	32.7	44.8		ng/L		134	40 - 160
Perfluorooctanesulfonic acid (PFOS)	29		31.9	72.0		ng/L		136	40 - 160
Perfluorodecanesulfonic acid (PFDS)	ND		33.2	46.8		ng/L		141	40 - 160
Perfluorooctanesulfonamide (PFOSA)	ND		34.4	44.1		ng/L		128	40 - 160
N-methylperfluorooctanesulfonamide doacetic acid (NMeFOSAA)	ND		34.4	42.7		ng/L		124	40 - 160
N-ethylperfluorooctanesulfonamide doacetic acid (NEtFOSAA)	1.8	J	34.4	51.8		ng/L		146	40 - 160
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		32.6	36.1		ng/L		111	40 - 160
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		33.0	35.2		ng/L		107	40 - 160
				MS MS					
Isotope Dilution				%Recovery	Qualifier				Limits
18O2 PFHxS				84					50 - 150
13C4 PFHpA				84					50 - 150
13C4 PFOA				91					50 - 150
13C4 PFOS				79					50 - 150
13C5 PFNA				86					50 - 150
13C4 PFBA				71					25 - 150
13C2 PFHxA				82					50 - 150
13C2 PFDA				81					50 - 150
13C2 PFUnA				78					50 - 150
13C2 PFDoA				88					50 - 150
13C8 FOSA				64					25 - 150
13C5 PFPeA				79					25 - 150
13C2 PFTeDA				80					50 - 150
d3-NMeFOSAA				78					50 - 150
d5-NEtFOSAA				76					50 - 150

QC Sample Results

Client: Village of Endicott
Project/Site: Wastewater Analysis

Job ID: 480-160746-1

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

Lab Sample ID: 480-160746-3 MS
Matrix: Water
Analysis Batch: 148772

Client Sample ID: SPW100919
Prep Type: Total/NA
Prep Batch: 148550

<i>Isotope Dilution</i>	<i>MS</i>	<i>MS</i>	<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
M2-6:2 FTS	102		25 - 150
M2-8:2 FTS	93		25 - 150

Lab Sample ID: 480-160746-3 MSD
Matrix: Water
Analysis Batch: 148772

Client Sample ID: SPW100919
Prep Type: Total/NA
Prep Batch: 148550

<i>Analyte</i>	<i>Sample</i>	<i>Sample</i>	<i>Spike</i>	<i>MSD</i>	<i>MSD</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec.</i>	<i>RPD</i>	<i>RPD</i>
	<i>Result</i>	<i>Qualifier</i>	<i>Added</i>	<i>Result</i>	<i>Qualifier</i>				<i>Limits</i>	<i>Limits</i>	
Perfluorobutanoic acid (PFBA)	4.4		36.1	48.6		ng/L		123	40 - 160	4	30
Perfluoropentanoic acid (PFPeA)	4.7		36.1	52.1		ng/L		131	40 - 160	6	30
Perfluorohexanoic acid (PFHxA)	6.0		36.1	50.4		ng/L		123	40 - 160	7	20
Perfluoroheptanoic acid (PFHpA)	3.7		36.1	50.9		ng/L		131	40 - 160	7	20
Perfluorooctanoic acid (PFOA)	14		36.1	61.5		ng/L		133	40 - 160	9	20
Perfluorononanoic acid (PFNA)	0.89	J B	36.1	43.7		ng/L		119	40 - 160	1	20
Perfluorodecanoic acid (PFDA)	ND		36.1	44.0		ng/L		122	40 - 160	3	20
Perfluoroundecanoic acid (PFUnA)	ND	*	36.1	45.4		ng/L		126	40 - 160	10	20
Perfluorododecanoic acid (PFDoA)	ND		36.1	43.7		ng/L		121	40 - 160	8	20
Perfluorotridecanoic acid (PFTriA)	ND		36.1	43.5		ng/L		121	40 - 160	2	20
Perfluorotetradecanoic acid (PFTeA)	ND	*	36.1	48.0		ng/L		133	40 - 160	3	20
Perfluorobutanesulfonic acid (PFBS)	6.0		31.9	42.6		ng/L		115	40 - 160	9	20
Perfluorohexanesulfonic acid (PFHxS)	7.1		32.8	48.7		ng/L		127	40 - 160	5	20
Perfluoroheptanesulfonic Acid (PFHpS)	0.99	J	34.3	43.7		ng/L		125	40 - 160	2	30
Perfluorooctanesulfonic acid (PFOS)	29		33.5	70.4		ng/L		125	40 - 160	2	20
Perfluorodecanesulfonic acid (PFDS)	ND		34.8	44.3		ng/L		128	40 - 160	5	30
Perfluorooctanesulfonamide (PFOSA)	ND		36.1	42.2		ng/L		117	40 - 160	4	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		36.1	45.4		ng/L		126	40 - 160	6	20
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	1.8	J	36.1	47.7		ng/L		127	40 - 160	8	20
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		34.2	39.3		ng/L		115	40 - 160	9	30
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		34.5	34.7		ng/L		100	40 - 160	1	30

<i>Isotope Dilution</i>	<i>MSD</i>	<i>MSD</i>	<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
18O2 PFHxS	84		50 - 150
13C4 PFHpA	84		50 - 150
13C4 PFOA	93		50 - 150
13C4 PFOS	88		50 - 150
13C5 PFNA	92		50 - 150
13C4 PFBA	73		25 - 150
13C2 PFHxA	83		50 - 150

QC Sample Results

Client: Village of Endicott
Project/Site: Wastewater Analysis

Job ID: 480-160746-1

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

Lab Sample ID: 480-160746-3 MSD

Matrix: Water

Analysis Batch: 148772

Client Sample ID: SPW100919

Prep Type: Total/NA

Prep Batch: 148550

<i>Isotope Dilution</i>	<i>MSD MSD</i>		<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
<i>13C2 PFDA</i>	90		50 - 150
<i>13C2 PFUnA</i>	81		50 - 150
<i>13C2 PFDoA</i>	97		50 - 150
<i>13C8 FOSA</i>	71		25 - 150
<i>13C5 PFPeA</i>	80		25 - 150
<i>13C2 PFTeDA</i>	86		50 - 150
<i>d3-NMeFOSAA</i>	79		50 - 150
<i>d5-NEtFOSAA</i>	90		50 - 150
<i>M2-6:2 FTS</i>	96		25 - 150
<i>M2-8:2 FTS</i>	94		25 - 150

QC Association Summary

Client: Village of Endicott
Project/Site: Wastewater Analysis

Job ID: 480-160746-1

GC/MS Semi VOA

Prep Batch: 498188

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-160746-1	MW25D100919	Total/NA	Water	3510C	
480-160746-2	EW8100919	Total/NA	Water	3510C	
480-160746-3	SPW100919	Total/NA	Water	3510C	
480-160746-4	DUPLICATE	Total/NA	Water	3510C	
MB 480-498188/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-498188/2-A	Lab Control Sample	Total/NA	Water	3510C	
480-160746-3 MS	SPW100919	Total/NA	Water	3510C	
480-160746-3 MSD	SPW100919	Total/NA	Water	3510C	

Analysis Batch: 498310

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-160746-1	MW25D100919	Total/NA	Water	8270D SIM ID	498188
480-160746-4	DUPLICATE	Total/NA	Water	8270D SIM ID	498188
MB 480-498188/1-A	Method Blank	Total/NA	Water	8270D SIM ID	498188
LCS 480-498188/2-A	Lab Control Sample	Total/NA	Water	8270D SIM ID	498188

Analysis Batch: 498604

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-160746-2	EW8100919	Total/NA	Water	8270D SIM ID	498188
480-160746-3	SPW100919	Total/NA	Water	8270D SIM ID	498188
480-160746-3 MS	SPW100919	Total/NA	Water	8270D SIM ID	498188
480-160746-3 MSD	SPW100919	Total/NA	Water	8270D SIM ID	498188

LCMS

Prep Batch: 148550

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-160746-1	MW25D100919	Total/NA	Water	3535	
480-160746-2	EW8100919	Total/NA	Water	3535	
480-160746-3	SPW100919	Total/NA	Water	3535	
480-160746-4	DUPLICATE	Total/NA	Water	3535	
MB 200-148550/1-A	Method Blank	Total/NA	Water	3535	
LCS 200-148550/2-A	Lab Control Sample	Total/NA	Water	3535	
480-160746-3 MS	SPW100919	Total/NA	Water	3535	
480-160746-3 MSD	SPW100919	Total/NA	Water	3535	

Analysis Batch: 148772

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-160746-1	MW25D100919	Total/NA	Water	537 (modified)	148550
480-160746-2	EW8100919	Total/NA	Water	537 (modified)	148550
480-160746-3	SPW100919	Total/NA	Water	537 (modified)	148550
480-160746-4	DUPLICATE	Total/NA	Water	537 (modified)	148550
MB 200-148550/1-A	Method Blank	Total/NA	Water	537 (modified)	148550
LCS 200-148550/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	148550
480-160746-3 MS	SPW100919	Total/NA	Water	537 (modified)	148550
480-160746-3 MSD	SPW100919	Total/NA	Water	537 (modified)	148550

Lab Chronicle

Client: Village of Endicott
 Project/Site: Wastewater Analysis

Job ID: 480-160746-1

Client Sample ID: MW25D100919

Lab Sample ID: 480-160746-1

Date Collected: 10/09/19 14:29

Matrix: Water

Date Received: 10/11/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			498188	10/15/19 15:48	ATG	TAL BUF
Total/NA	Analysis	8270D SIM ID		1	498310	10/16/19 18:06	JMM	TAL BUF
Total/NA	Prep	3535			148550	10/17/19 10:08	JM1	TAL BUR
Total/NA	Analysis	537 (modified)		1	148772	10/22/19 21:31	BWC	TAL BUR

Client Sample ID: EW8100919

Lab Sample ID: 480-160746-2

Date Collected: 10/09/19 17:05

Matrix: Water

Date Received: 10/11/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			498188	10/15/19 15:48	ATG	TAL BUF
Total/NA	Analysis	8270D SIM ID		25	498604	10/17/19 14:32	JMM	TAL BUF
Total/NA	Prep	3535			148550	10/17/19 10:08	JM1	TAL BUR
Total/NA	Analysis	537 (modified)		1	148772	10/22/19 21:47	BWC	TAL BUR

Client Sample ID: SPW100919

Lab Sample ID: 480-160746-3

Date Collected: 10/09/19 16:24

Matrix: Water

Date Received: 10/11/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			498188	10/15/19 15:48	ATG	TAL BUF
Total/NA	Analysis	8270D SIM ID		10	498604	10/17/19 14:08	JMM	TAL BUF
Total/NA	Prep	3535			148550	10/17/19 10:08	JM1	TAL BUR
Total/NA	Analysis	537 (modified)		1	148772	10/22/19 21:55	BWC	TAL BUR

Client Sample ID: DUPLICATE

Lab Sample ID: 480-160746-4

Date Collected: 10/09/19 00:00

Matrix: Water

Date Received: 10/11/19 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			498188	10/15/19 15:48	ATG	TAL BUF
Total/NA	Analysis	8270D SIM ID		1	498310	10/16/19 18:53	JMM	TAL BUF
Total/NA	Prep	3535			148550	10/17/19 10:08	JM1	TAL BUR
Total/NA	Analysis	537 (modified)		1	148772	10/22/19 22:20	BWC	TAL BUR

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: Village of Endicott
 Project/Site: Wastewater Analysis

Job ID: 480-160746-1

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

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

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2336	02-25-20
Connecticut	State	PH-0751	09-30-21
Connecticut	State Program	PH-0751	09-30-21
DE Haz. Subst. Cleanup Act (HSCA)	State	N/A	05-15-20
Florida	NELAP	E87467	06-30-20
Minnesota	NELAP	050-999-436	12-31-19
New Hampshire	NELAP	2006	12-18-19
New Jersey	NELAP	VT972	06-30-20
New York	NELAP	10391	03-31-20
Pennsylvania	NELAP	68-00489	04-30-20
Rhode Island	State	LAO00298	12-30-19
Rhode Island	State Program	LAO00298	12-30-19
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	US Federal Programs	P330-17-00272	08-09-20
Vermont	State	VT4000	12-31-19
Virginia	NELAP	460209	12-14-19

Method 8270D

SIM-ID

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.: 480-160746-1

SDG No.: _____

Matrix: Water

Level: Low

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

Client Sample ID	Lab Sample ID	DXE #
MW25D100919	480-160746-1	27
EW8100919	480-160746-2	26
SPW100919	480-160746-3	27
DUPLICATE	480-160746-4	25
	MB 480-498188/1-A	28
	LCS 480-498188/2-A	28
SPW100919 MS	480-160746-3 MS	28
SPW100919 MSD	480-160746-3 MSD	27

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.: 480-160746-1

SDG No.: _____

Matrix: Water Level: Low Lab File ID: U33153542.D

Lab ID: LCS 480-498188/2-A Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	1.00	1.32	132	40-140	E
1,4-Dioxane-d8	10.0	2.79	28	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.: 480-160746-1
 SDG No.: _____
 Matrix: Water Level: Low Lab File ID: U33153555.D
 Lab ID: 480-160746-3 MS Client ID: SPW100919 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,4-Dioxane	1.00	22	23.7	213	40-140	E 4
1,4-Dioxane-d8	10.0	2.7	2.78	28	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.: 480-160746-1

SDG No.: _____

Matrix: Water Level: Low Lab File ID: U33153556.D

Lab ID: 480-160746-3 MSD Client ID: SPW100919 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
1,4-Dioxane	1.00	23.1	160	2	20	40-140	E 4
1,4-Dioxane-d8	10.0	2.70	27			15-110	

Column to be used to flag recovery and RPD values

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-160746-1
 SDG No.: _____
 Lab File ID: U33153541.D Lab Sample ID: MB 480-498188/1-A
 Matrix: Water Date Extracted: 10/15/2019 15:48
 Instrument ID: HP5973U Date Analyzed: 10/16/2019 16:08
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 480-498188/2-A	U33153542.D	10/16/2019 16:31
MW25D100919	480-160746-1	U33153546.D	10/16/2019 18:06
DUPLICATE	480-160746-4	U33153548.D	10/16/2019 18:53
SPW100919 MS	480-160746-3 MS	U33153555.D	10/17/2019 13:20
SPW100919 MSD	480-160746-3 MSD	U33153556.D	10/17/2019 13:44
SPW100919	480-160746-3	U33153557.D	10/17/2019 14:08
EW8100919	480-160746-2	U33153558.D	10/17/2019 14:32

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

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-160746-1
 SDG No.: _____
 Lab File ID: U33151883.D DFTPP Injection Date: 08/20/2019
 Instrument ID: HP5973U DFTPP Injection Time: 10:12
 Analysis Batch No.: 487886

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10-80% of Base Peak	35.9
68	Less than 2% of mass 69	0.0 (0.0) 1
69	Mass 69 Relative abundance	38.6
70	Less than 2% of mass 69	0.2 (0.6) 1
127	10-80% of Base Peak	41.3
197	Less than 2% of mass 198	0.0
198	Base peak	100.0
199	5-9% of mass 198	6.6
275	10-60% of Base Peak	30.7
365	Greater than 1% of mass 198	4.5
441	present but less than 24% of mass 442	19.7 (15.4) 2
442	Greater than 50% of mass 198	127.2
443	15-24% of mass 442	23.8 (18.7) 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 480-487886/3	U33151884.D	08/20/2019	10:49
	IC 480-487886/4	U33151885.D	08/20/2019	11:12
	ICIS 480-487886/5	U33151886.D	08/20/2019	11:36
	IC 480-487886/6	U33151887.D	08/20/2019	11:59
	IC 480-487886/7	U33151888.D	08/20/2019	12:23
	IC 480-487886/8	U33151889.D	08/20/2019	12:46

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

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-160746-1
 SDG No.: _____
 Lab File ID: U33153534.D DFTPP Injection Date: 10/16/2019
 Instrument ID: HP5973U DFTPP Injection Time: 09:56
 Analysis Batch No.: 498310

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10-80% of Base Peak	40.9
68	Less than 2% of mass 69	0.0 (0.0) 1
69	Mass 69 Relative abundance	40.6
70	Less than 2% of mass 69	0.2 (0.4) 1
127	10-80% of Base Peak	42.5
197	Less than 2% of mass 198	0.0
198	Base peak	100.0
199	5-9% of mass 198	6.7
275	10-60% of Base Peak	28.5
365	Greater than 1% of mass 198	4.7
441	present but less than 24% of mass 442	13.2 (16.9) 2
442	Greater than 50% of mass 198	78.1
443	15-24% of mass 442	15.3 (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
	CCVIS 480-498310/3	U33153535.D	10/16/2019	10:25
	MB 480-498188/1-A	U33153541.D	10/16/2019	16:08
	LCS 480-498188/2-A	U33153542.D	10/16/2019	16:31
MW25D100919	480-160746-1	U33153546.D	10/16/2019	18:06
DUPLICATE	480-160746-4	U33153548.D	10/16/2019	18:53

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

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-160746-1
 SDG No.: _____
 Lab File ID: U33153552.D DFTPP Injection Date: 10/17/2019
 Instrument ID: HP5973U DFTPP Injection Time: 12:05
 Analysis Batch No.: 498604

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10-80% of Base Peak	40.9
68	Less than 2% of mass 69	0.0 (0.0) 1
69	Mass 69 Relative abundance	41.8
70	Less than 2% of mass 69	0.2 (0.5) 1
127	10-80% of Base Peak	43.7
197	Less than 2% of mass 198	0.0
198	Base peak	100.0
199	5-9% of mass 198	6.7
275	10-60% of Base Peak	27.9
365	Greater than 1% of mass 198	4.5
441	present but less than 24% of mass 442	12.9 (17.7) 2
442	Greater than 50% of mass 198	73.0
443	15-24% of mass 442	14.0 (19.2) 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 480-498604/3	U33153553.D	10/17/2019	12:33
SPW100919 MS	480-160746-3 MS	U33153555.D	10/17/2019	13:20
SPW100919 MSD	480-160746-3 MSD	U33153556.D	10/17/2019	13:44
SPW100919	480-160746-3	U33153557.D	10/17/2019	14:08
EW8100919	480-160746-2	U33153558.D	10/17/2019	14:32

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

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-160746-1
 SDG No.: _____
 Sample No.: ICIS 480-487886/5 Date Analyzed: 08/20/2019 11:36
 Instrument ID: HP5973U GC Column: RXI-5Sil MS(0.5 ID: 0.25(mm)
 Lab File ID (Standard): U33151886.D Heated Purge: (Y/N) N
 Calibration ID: 37475

	DCBd4		AREA #	RT #	AREA #	RT #
	AREA #	RT #				
INITIAL CALIBRATION MID-POINT	432191	5.99				
UPPER LIMIT	864382	6.49				
LOWER LIMIT	216096	5.49				
LAB SAMPLE ID	CLIENT SAMPLE ID					
CCVIS 480-498310/3		468833	5.92			
CCVIS 480-498604/3		479309	5.92			

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.: 480-160746-1
 SDG No.: _____
 Sample No.: CCVIS 480-498310/3 Date Analyzed: 10/16/2019 10:25
 Instrument ID: HP5973U GC Column: RXI-5Sil MS(0.5 ID: 0.25 (mm)
 Lab File ID (Standard): U33153535.D Heated Purge: (Y/N) N
 Calibration ID: 37475

	DCBd4		AREA #	RT #	AREA #	RT #
	AREA #	RT #				
12/24 HOUR STD	468833	5.92				
UPPER LIMIT	937666	6.42				
LOWER LIMIT	234417	5.42				
LAB SAMPLE ID	CLIENT SAMPLE ID					
MB 480-498188/1-A		444241	5.93			
LCS 480-498188/2-A		440200	5.93			
480-160746-1	MW25D100919	431256	5.93			
480-160746-4	DUPLICATE	437745	5.93			

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.: 480-160746-1
 SDG No.: _____
 Sample No.: CCVIS 480-498604/3 Date Analyzed: 10/17/2019 12:33
 Instrument ID: HP5973U GC Column: RXI-5Sil MS(0.5 ID: 0.25 (mm)
 Lab File ID (Standard): U33153553.D Heated Purge: (Y/N) N
 Calibration ID: 37475

	DCBd4		AREA #	RT #	AREA #	RT #
	AREA #	RT #				
12/24 HOUR STD	479309	5.92				
UPPER LIMIT	958618	6.42				
LOWER LIMIT	239655	5.42				
LAB SAMPLE ID	CLIENT SAMPLE ID					
480-160746-3 MS	SPW100919 MS	424691	5.92			
480-160746-3 MSD	SPW100919 MSD	429356	5.92			
480-160746-3	SPW100919	426265	5.92			
480-160746-2	EW8100919	419345	5.92			

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 I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-160746-1
 SDG No.: _____
 Client Sample ID: MW25D100919 Lab Sample ID: 480-160746-1
 Matrix: Water Lab File ID: U33153546.D
 Analysis Method: 8270D SIM ID Date Collected: 10/09/2019 14:29
 Extract. Method: 3510C Date Extracted: 10/15/2019 15:48
 Sample wt/vol: 1000 (mL) Date Analyzed: 10/16/2019 18:06
 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.: 498310 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.22		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\20191016-85159.b\U33153546.D
 Lims ID: 480-160746-A-1-A
 Client ID: MW- 25D- 100919
 Sample Type: Client
 Inject. Date: 16-Oct-2019 18:06:30 ALS Bottle#: 14 Worklist Smp#: 14
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 480-0085159-014
 Operator ID: JM Instrument ID: HP5973U
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191016-85159.b\1,4_Dx_SIM_HP5973U.m
 Limit Group: MB - 8270D SIM ID ICAL
 Last Update: 17-Oct-2019 12:38:16 Calib Date: 20-Aug-2019 12:46:30
 Integrator: Picker ID Type: RT Order ID
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151889.D
 Column 1 : Det: MS SCAN
 Process Host: CTX0330

First Level Reviewer: marshallj Date: 17-Oct-2019 12:37:17

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	2.852	2.737	0.115	96	135054	2.71	27.1	
3 1,4-Dioxane	88	2.892	2.778	0.114	86	3137	0.2246		
* 2 1,4-Dichlorobenzene-d4	152	5.932	5.924	0.008	96	431256	4.00		

Reagents:

MB_LLIS_WRK_00179 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191016-85159.b\U33153546.D

Injection Date: 16-Oct-2019 18:06:30

Instrument ID: HP5973U

Operator ID: JM

Lims ID: 480-160746-A-1-A

Lab Sample ID: 480-160746-1

Worklist Smp#: 14

Client ID: MW- 25D- 100919

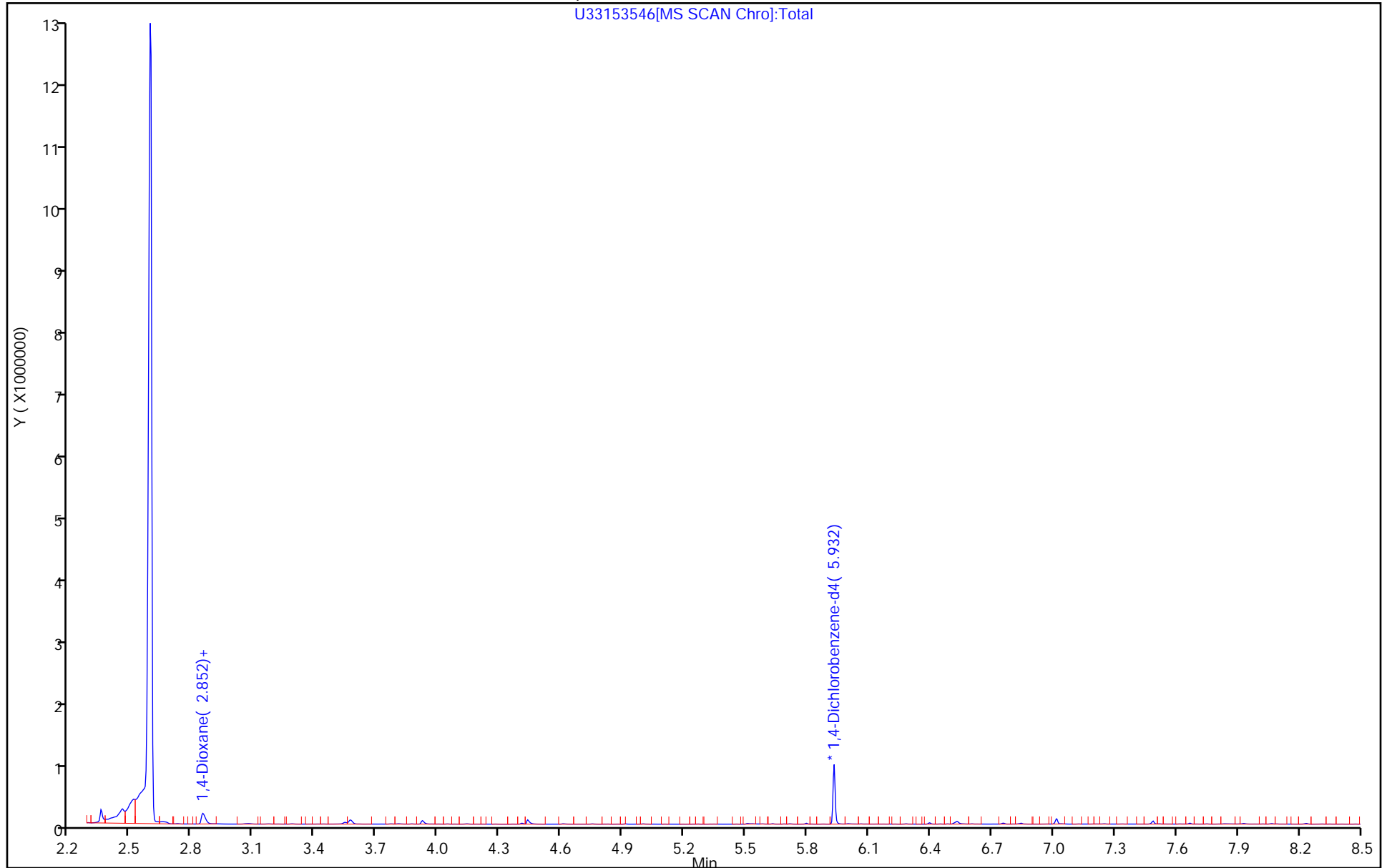
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 14

Method: 1,4_Dx_SIM_HP5973U

Limit Group: MB - 8270D SIM ID ICAL



Euofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191016-85159.b\U33153546.D

Injection Date: 16-Oct-2019 18:06:30

Instrument ID: HP5973U

Lims ID: 480-160746-A-1-A

Lab Sample ID: 480-160746-1

Client ID: MW- 25D- 100919

Operator ID: JM

ALS Bottle#: 14

Worklist Smp#: 14

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

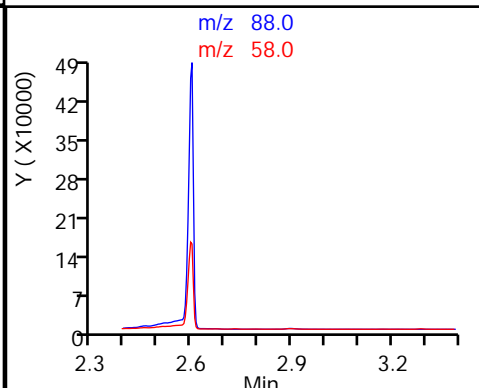
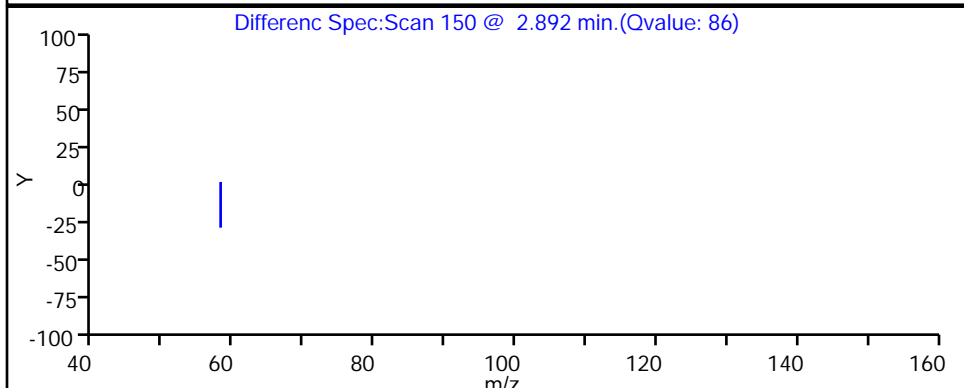
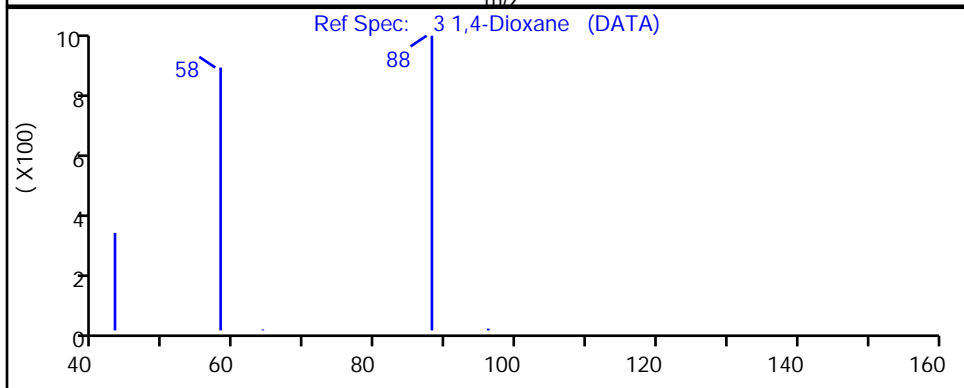
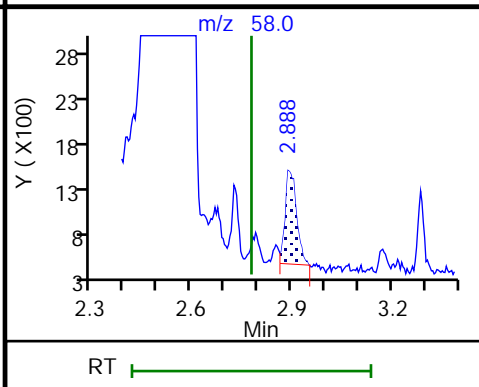
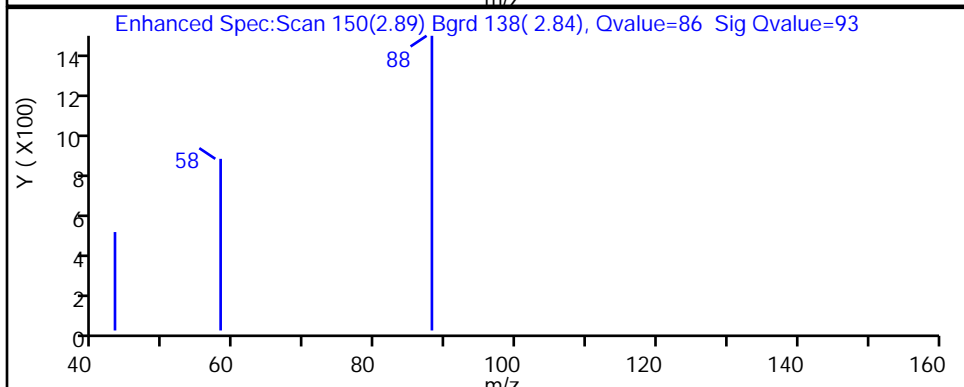
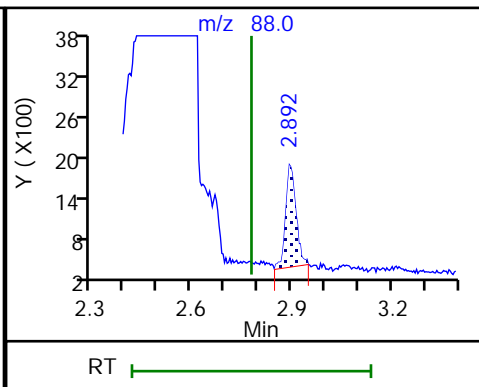
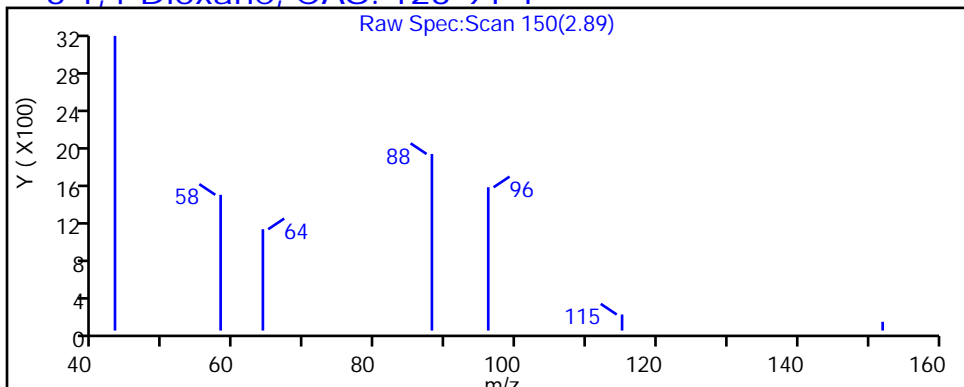
Method: 1,4_Dx_SIM_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

Column:

Detector MS SCAN

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



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191016-85159.b\U33153546.D

Injection Date: 16-Oct-2019 18:06:30

Instrument ID: HP5973U

Lims ID: 480-160746-A-1-A

Lab Sample ID: 480-160746-1

Client ID: MW- 25D- 100919

Operator ID: JM

ALS Bottle#: 14

Worklist Smp#: 14

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

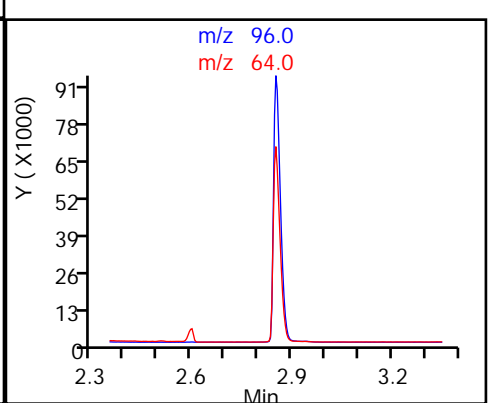
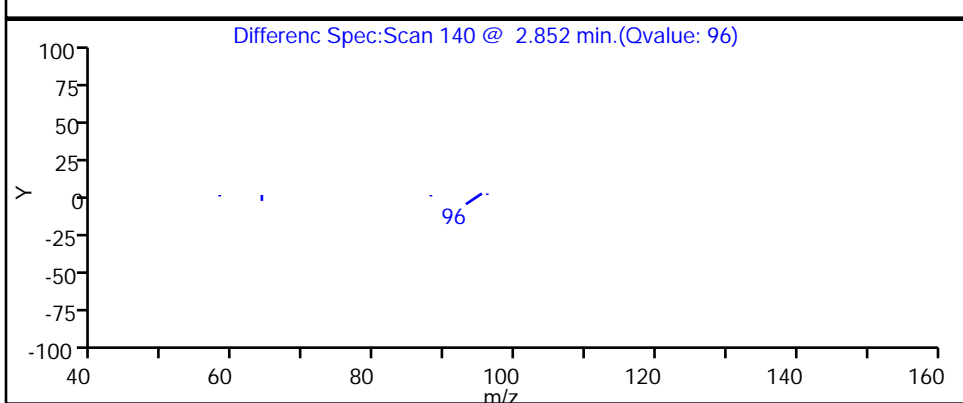
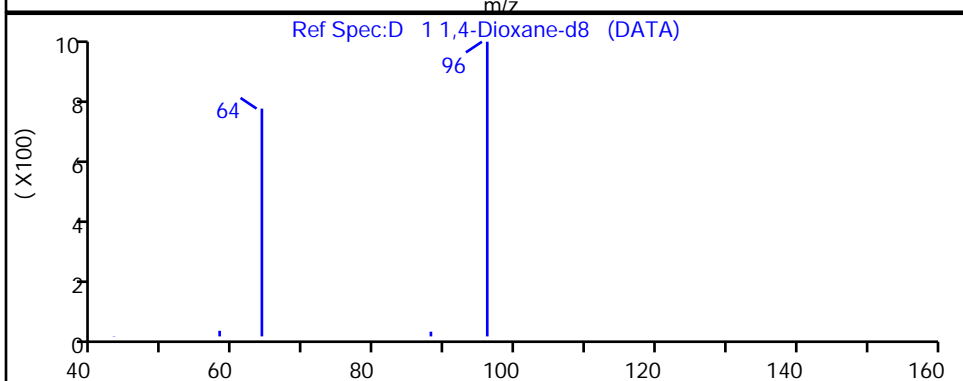
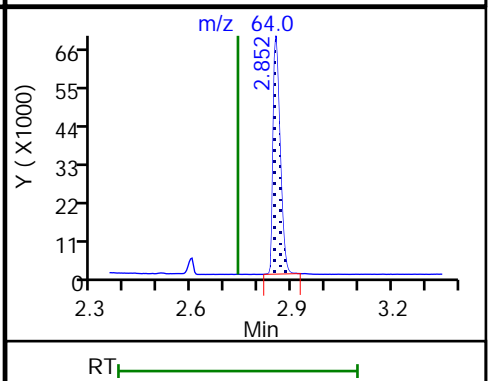
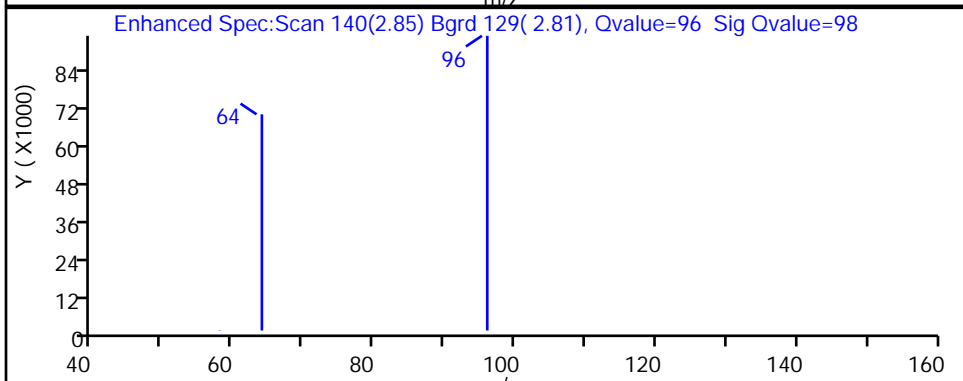
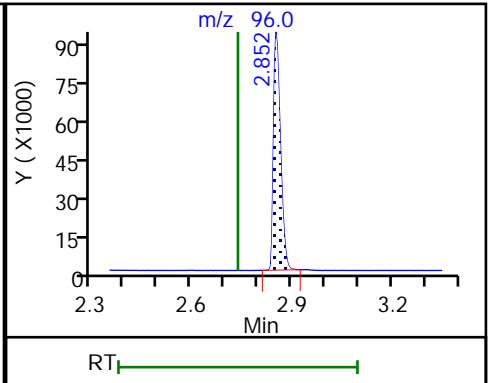
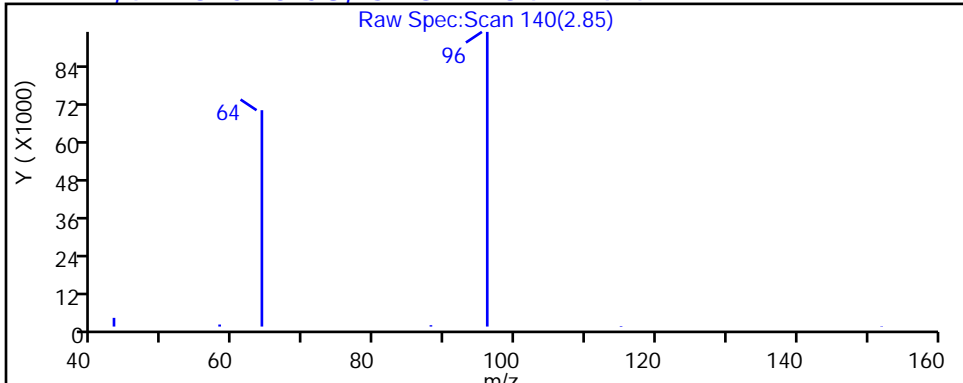
Method: 1,4_Dx_SIM_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

Column:

Detector MS SCAN

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



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-160746-1
 SDG No.: _____
 Client Sample ID: EW8100919 Lab Sample ID: 480-160746-2
 Matrix: Water Lab File ID: U33153558.D
 Analysis Method: 8270D SIM ID Date Collected: 10/09/2019 17:05
 Extract. Method: 3510C Date Extracted: 10/15/2019 15:48
 Sample wt/vol: 1000 (mL) Date Analyzed: 10/17/2019 14:32
 Con. Extract Vol.: 1 (mL) Dilution Factor: 25
 Injection Volume: 1 (uL) Level: (low/med) Low
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 498604 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	65	E	5.0	2.5

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	26		15-110

Eurofins TestAmerica, Buffalo
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191017-85193.b\U33153558.D
 Lims ID: 480-160746-B-2-A
 Client ID: EW- 8100919
 Sample Type: Client
 Inject. Date: 17-Oct-2019 14:32:30 ALS Bottle#: 8 Worklist Smp#: 7
 Injection Vol: 1.0 ul Dil. Factor: 25.0000
 Sample Info: 480-0085193-007
 Operator ID: JM Instrument ID: HP5973U
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191017-85193.b\1,4_Dx_SIM_HP5973U.m
 Limit Group: MB - 8270D SIM ID ICAL
 Last Update: 18-Oct-2019 11:59:12 Calib Date: 20-Aug-2019 12:46:30
 Integrator: Picker ID Type: RT Order ID
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151889.D
 Column 1 : Det: MS SCAN
 Process Host: CTX0339

First Level Reviewer: marshallj Date: 17-Oct-2019 16:39:05

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	2.766	2.749	0.017	95	4986	0.1028	25.7	
3 1,4-Dioxane	88	2.798	2.790	0.008	91	33350	2.59		E
* 2 1,4-Dichlorobenzene-d4	152	5.923	5.924	-0.001	96	419345	4.00		

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Reagents:

MB_LLIS_WRK_00179 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191017-85193.b\U33153558.D

Injection Date: 17-Oct-2019 14:32:30

Instrument ID: HP5973U

Operator ID: JM

Lims ID: 480-160746-B-2-A

Lab Sample ID: 480-160746-2

Worklist Smp#: 7

Client ID: EW- 8100919

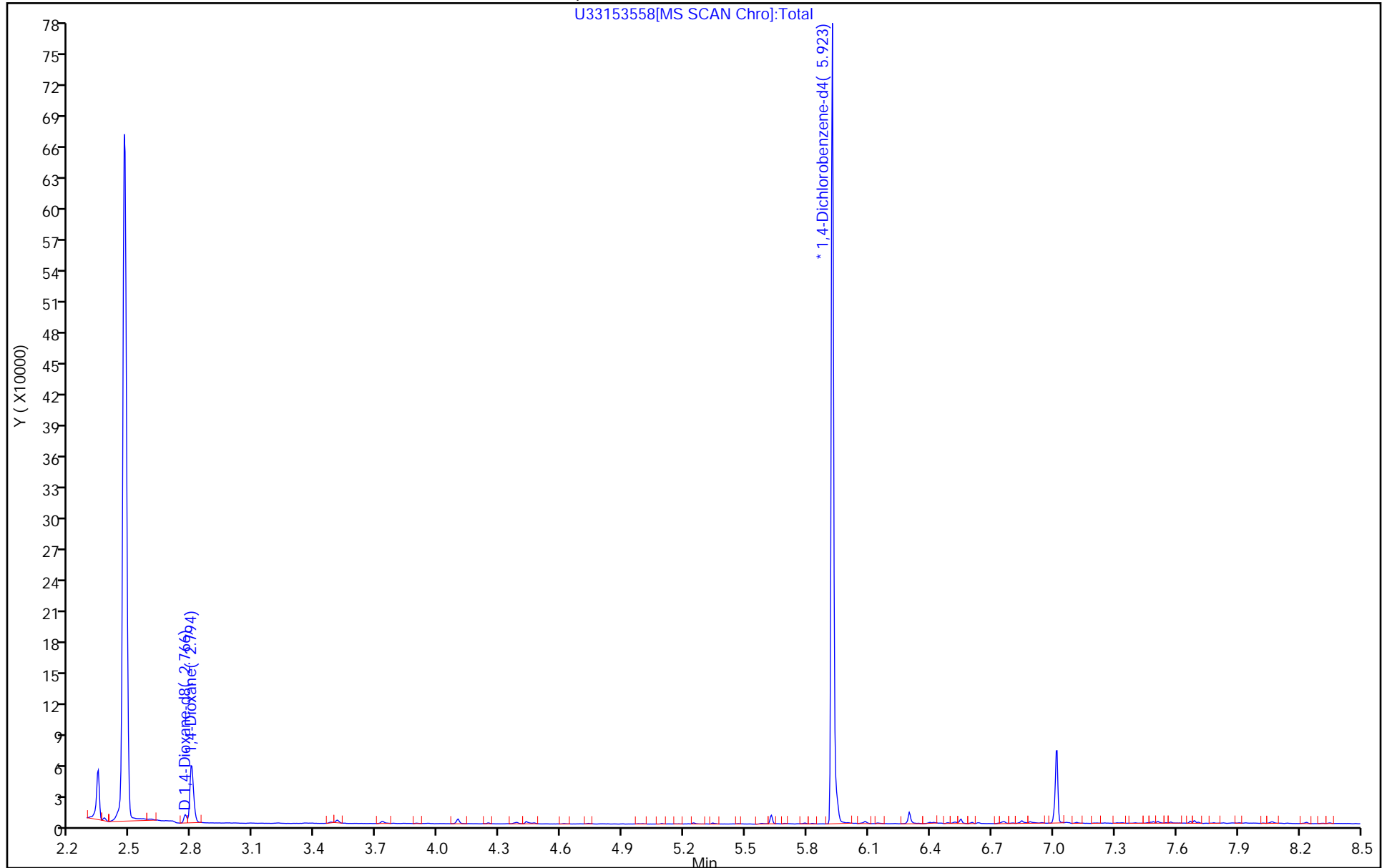
Injection Vol: 1.0 ul

Dil. Factor: 25.0000

ALS Bottle#: 8

Method: 1,4_Dx_SIM_HP5973U

Limit Group: MB - 8270D SIM ID ICAL



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191017-85193.b\U33153558.D

Injection Date: 17-Oct-2019 14:32:30

Instrument ID: HP5973U

Lims ID: 480-160746-B-2-A

Lab Sample ID: 480-160746-2

Client ID: EW- 8100919

Operator ID: JM

ALS Bottle#: 8 Worklist Smp#: 7

Injection Vol: 1.0 ul

Dil. Factor: 25.0000

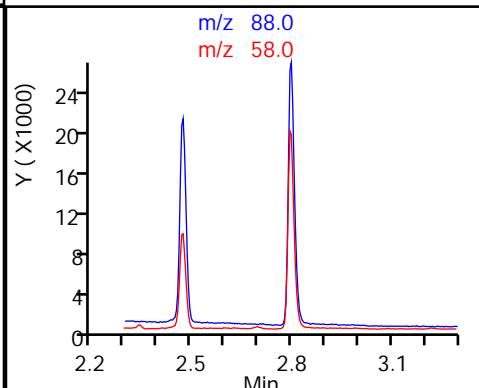
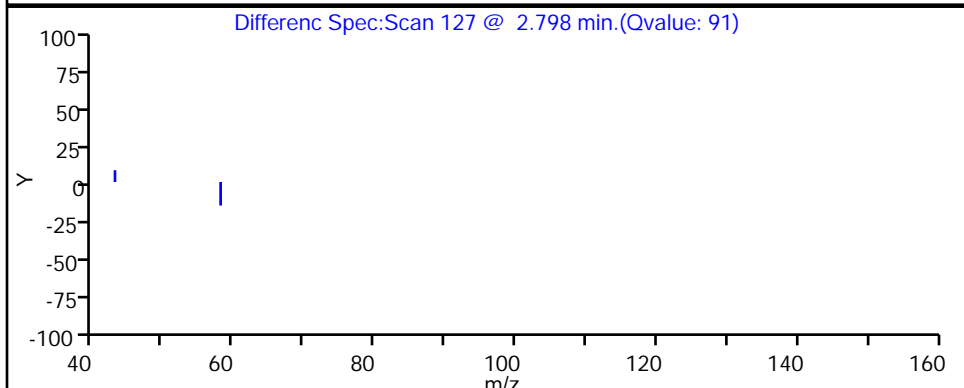
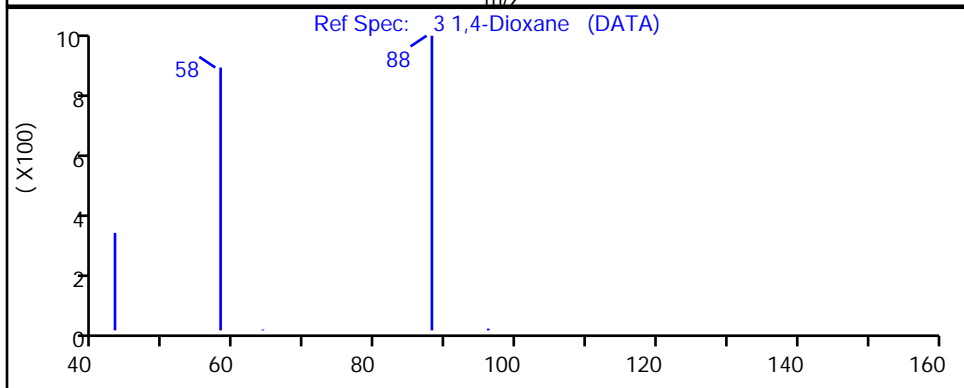
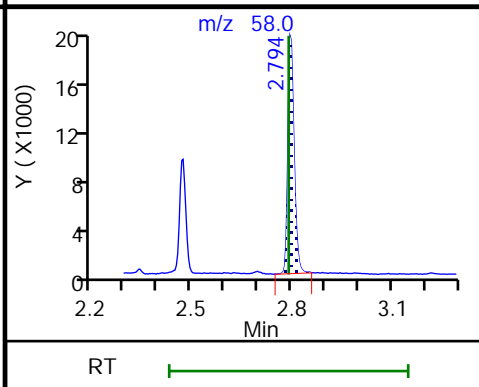
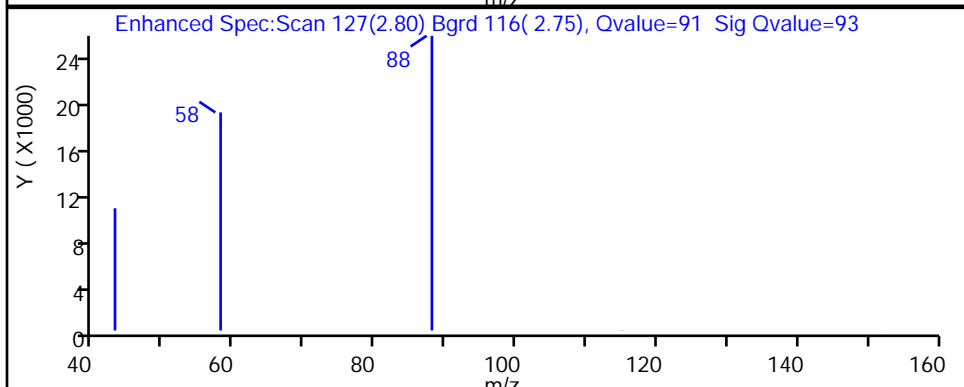
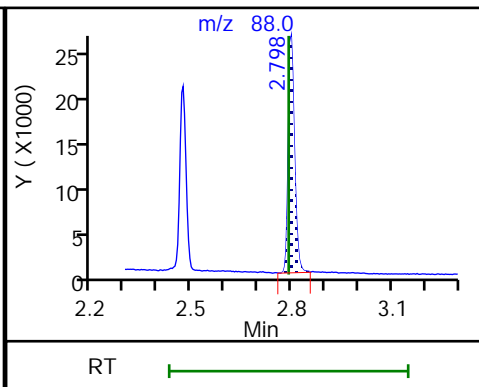
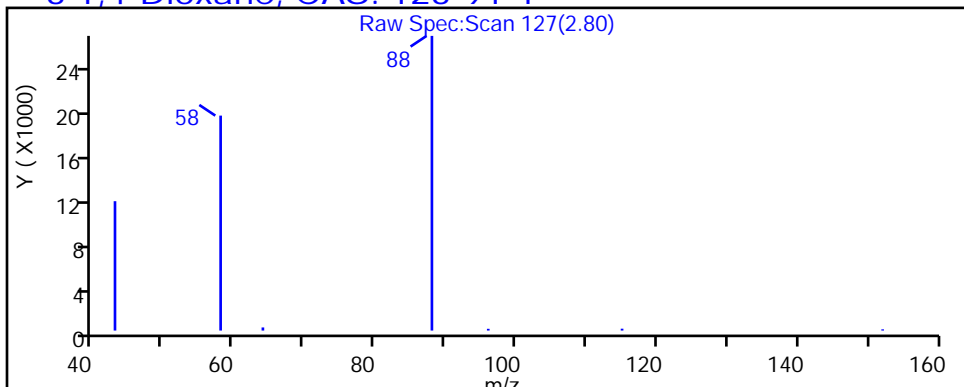
Method: 1,4_Dx_SIM_HP5973U

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\20191017-85193.b\U33153558.D

Injection Date: 17-Oct-2019 14:32:30

Instrument ID: HP5973U

Lims ID: 480-160746-B-2-A

Lab Sample ID: 480-160746-2

Client ID: EW- 8100919

Operator ID: JM

ALS Bottle#: 8

Worklist Smp#: 7

Injection Vol: 1.0 ul

Dil. Factor: 25.0000

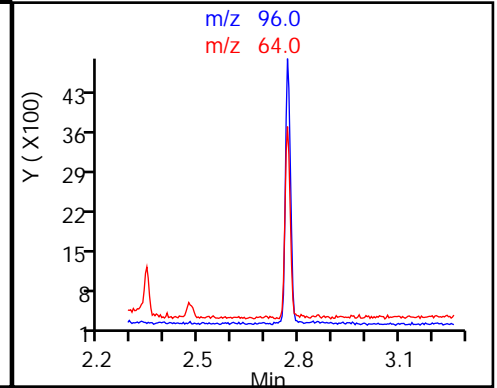
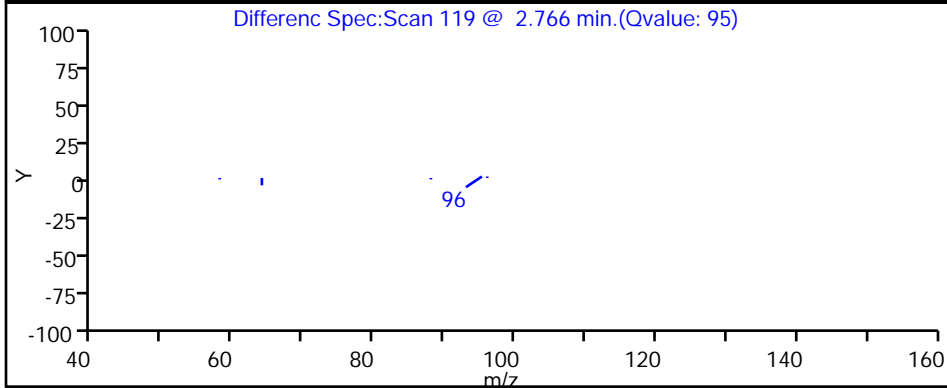
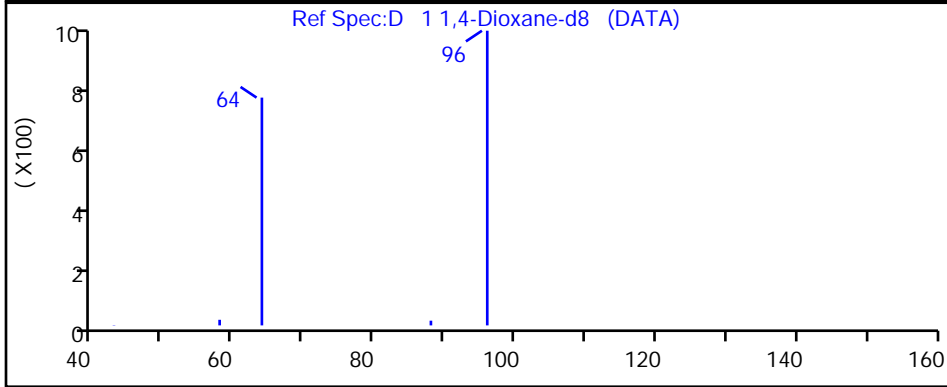
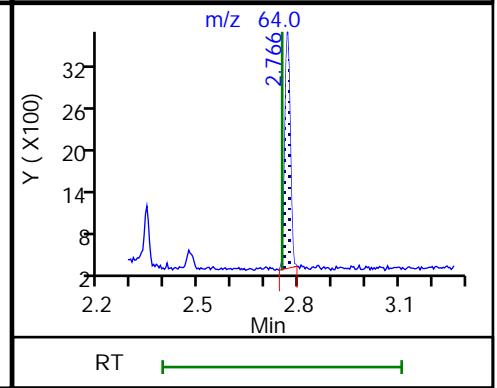
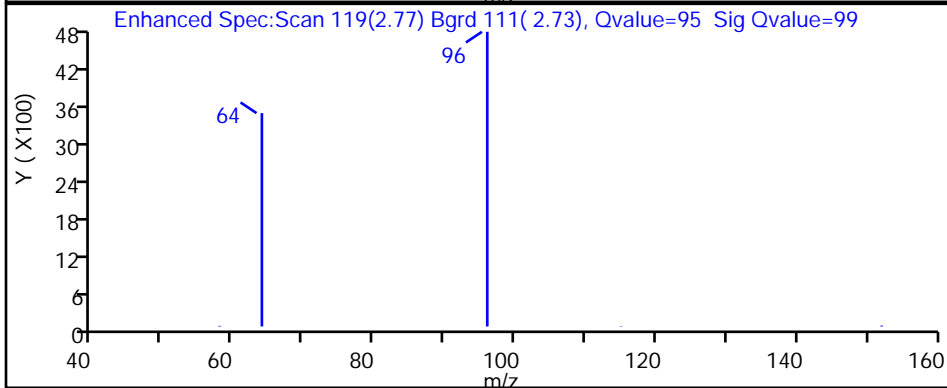
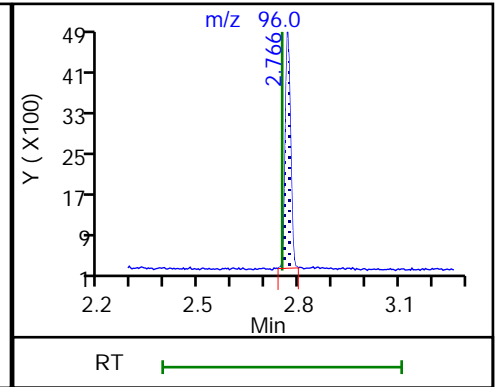
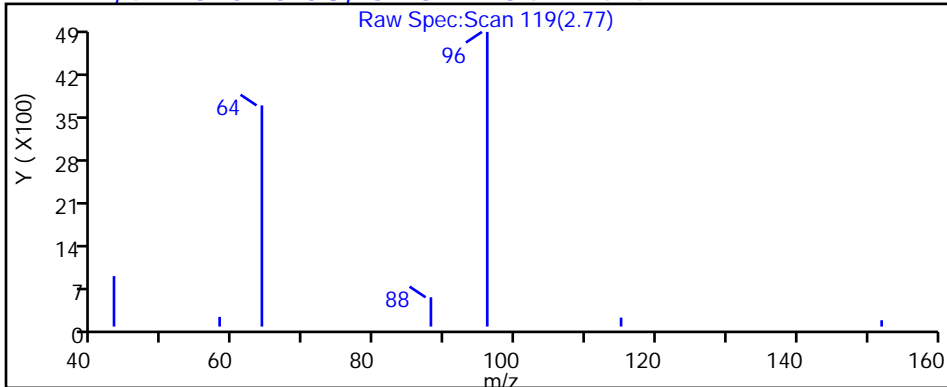
Method: 1,4_Dx_SIM_HP5973U

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.: 480-160746-1
 SDG No.: _____
 Client Sample ID: SPW100919 Lab Sample ID: 480-160746-3
 Matrix: Water Lab File ID: U33153557.D
 Analysis Method: 8270D SIM ID Date Collected: 10/09/2019 16:24
 Extract. Method: 3510C Date Extracted: 10/15/2019 15:48
 Sample wt/vol: 1000 (mL) Date Analyzed: 10/17/2019 14:08
 Con. Extract Vol.: 1 (mL) Dilution Factor: 10
 Injection Volume: 1 (uL) Level: (low/med) Low
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 498604 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	22	E	2.0	1.0

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\20191017-85193.b\U33153557.D
 Lims ID: 480-160746-B-3-B
 Client ID: SPW100919
 Sample Type: Client
 Inject. Date: 17-Oct-2019 14:08:30 ALS Bottle#: 7 Worklist Smp#: 6
 Injection Vol: 1.0 ul Dil. Factor: 10.0000
 Sample Info: 480-0085193-006
 Operator ID: JM Instrument ID: HP5973U
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191017-85193.b\1,4_Dx_SIM_HP5973U.m
 Limit Group: MB - 8270D SIM ID ICAL
 Last Update: 18-Oct-2019 11:59:12 Calib Date: 20-Aug-2019 12:46:30
 Integrator: Picker ID Type: RT Order ID
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151889.D
 Column 1 : Det: MS SCAN
 Process Host: CTX0339

First Level Reviewer: marshallj Date: 17-Oct-2019 16:38:56

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	2.774	2.749	0.025	95	13283	0.2694	26.9	
3 1,4-Dioxane	88	2.807	2.790	0.017	91	29587	2.15		E
* 2 1,4-Dichlorobenzene-d4	152	5.924	5.924	0.000	96	426265	4.00		

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Reagents:

MB_LLIS_WRK_00179 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191017-85193.b\U33153557.D

Injection Date: 17-Oct-2019 14:08:30

Instrument ID: HP5973U

Operator ID: JM

Lims ID: 480-160746-B-3-B

Lab Sample ID: 480-160746-3

Worklist Smp#: 6

Client ID: SPW100919

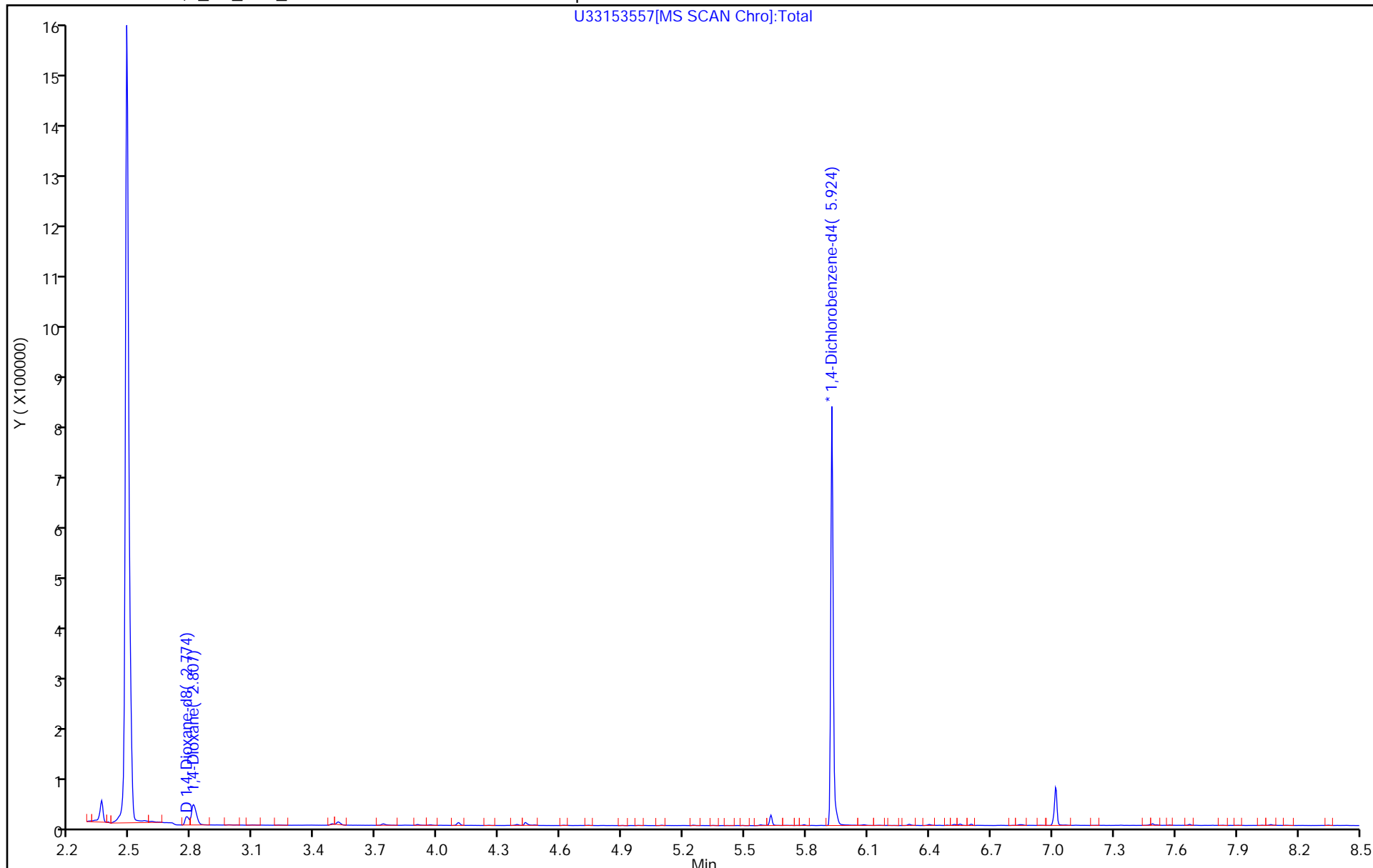
Injection Vol: 1.0 ul

Dil. Factor: 10.0000

ALS Bottle#: 7

Method: 1,4_Dx_SIM_HP5973U

Limit Group: MB - 8270D SIM ID ICAL



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191017-85193.b\U33153557.D

Injection Date: 17-Oct-2019 14:08:30

Instrument ID: HP5973U

Lims ID: 480-160746-B-3-B

Lab Sample ID: 480-160746-3

Client ID: SPW100919

Operator ID: JM

ALS Bottle#: 7

Worklist Smp#: 6

Injection Vol: 1.0 ul

Dil. Factor: 10.0000

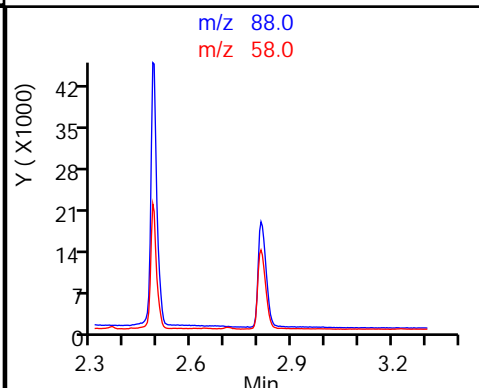
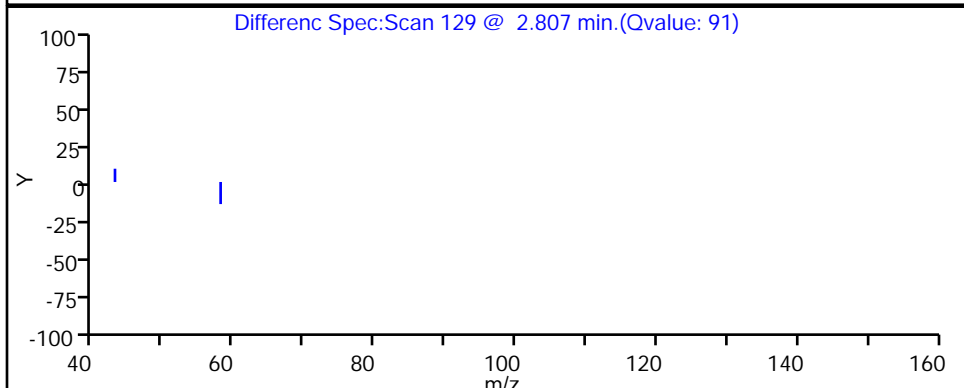
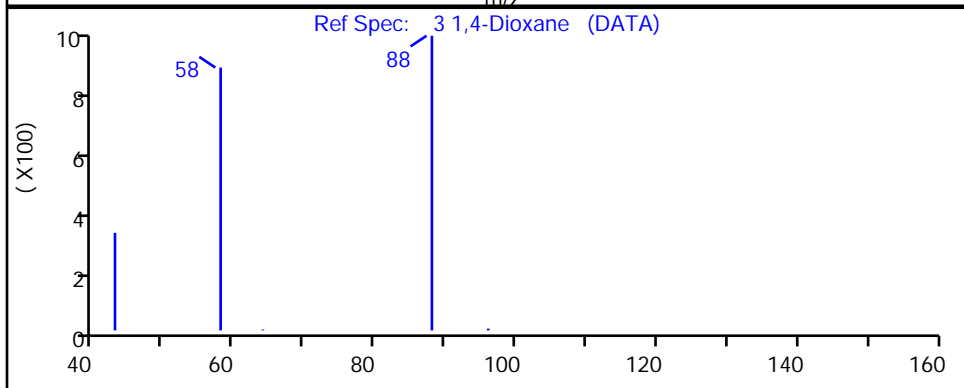
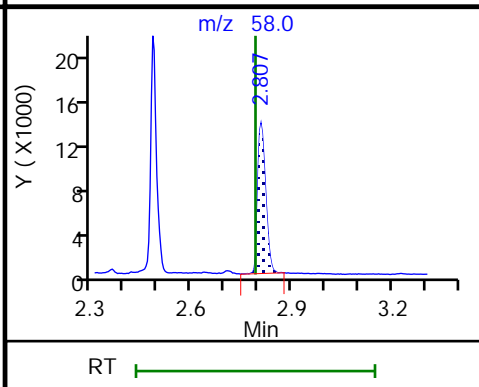
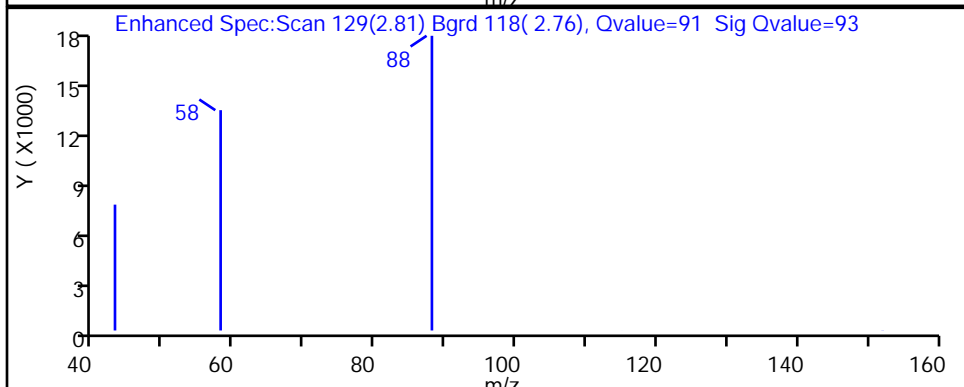
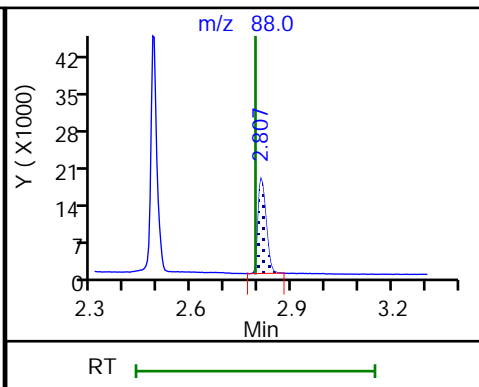
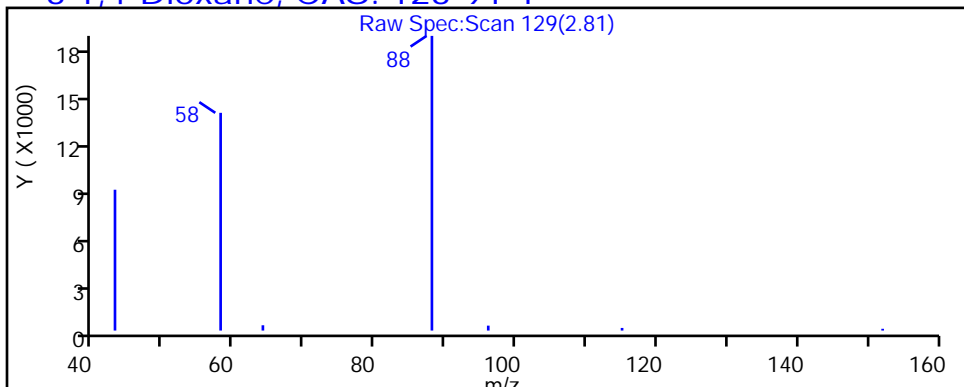
Method: 1,4_Dx_SIM_HP5973U

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\20191017-85193.b\U33153557.D

Injection Date: 17-Oct-2019 14:08:30

Instrument ID: HP5973U

Lims ID: 480-160746-B-3-B

Lab Sample ID: 480-160746-3

Client ID: SPW100919

Operator ID: JM

ALS Bottle#: 7

Worklist Smp#: 6

Injection Vol: 1.0 ul

Dil. Factor: 10.0000

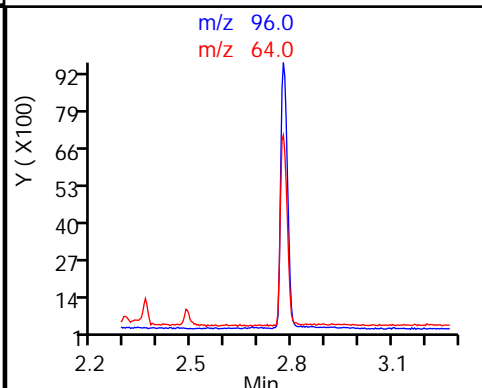
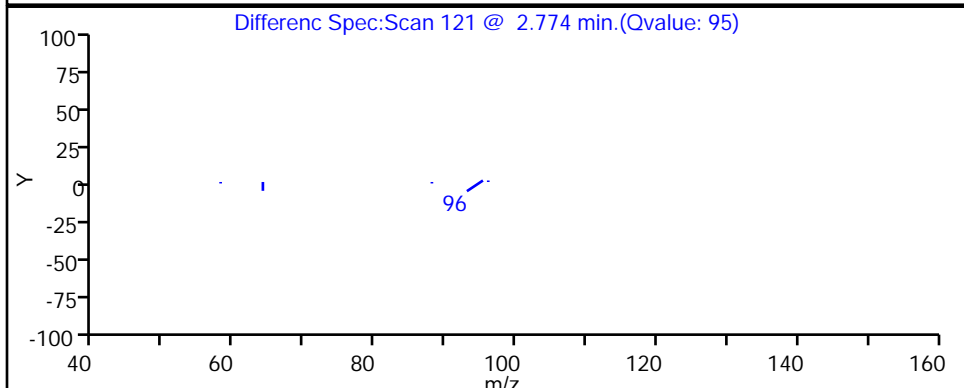
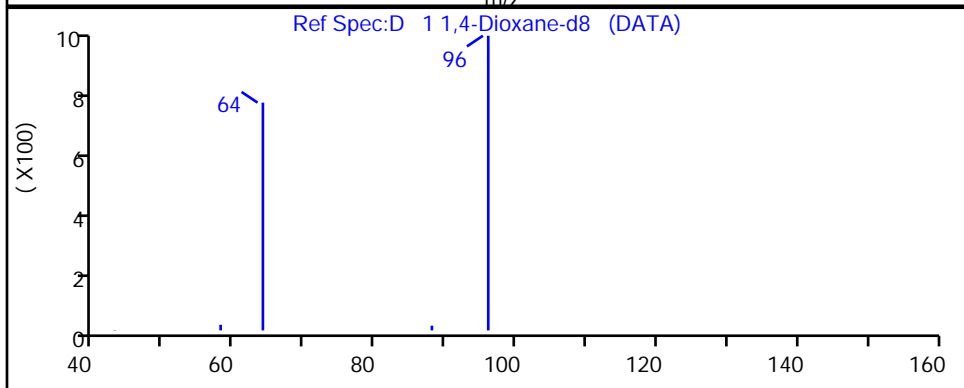
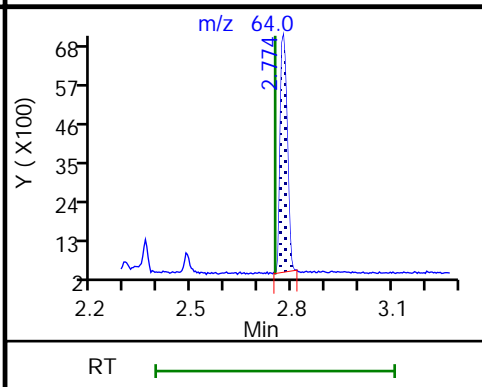
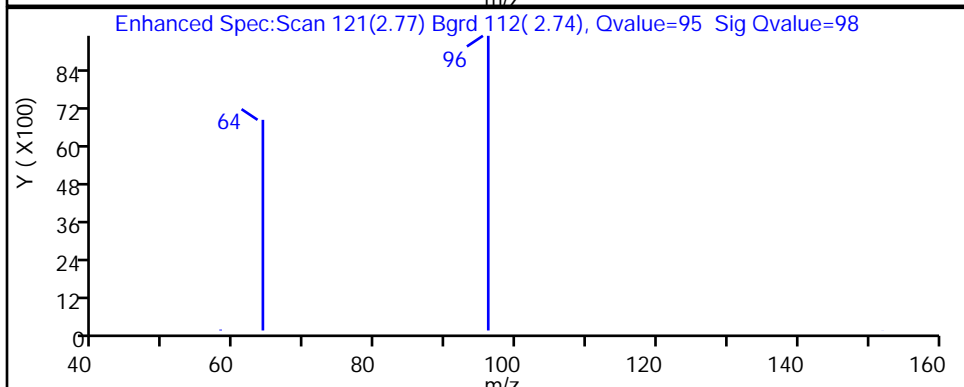
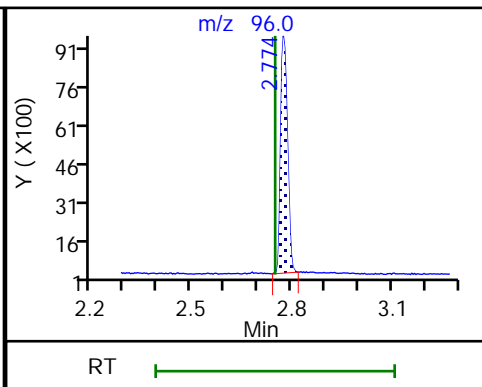
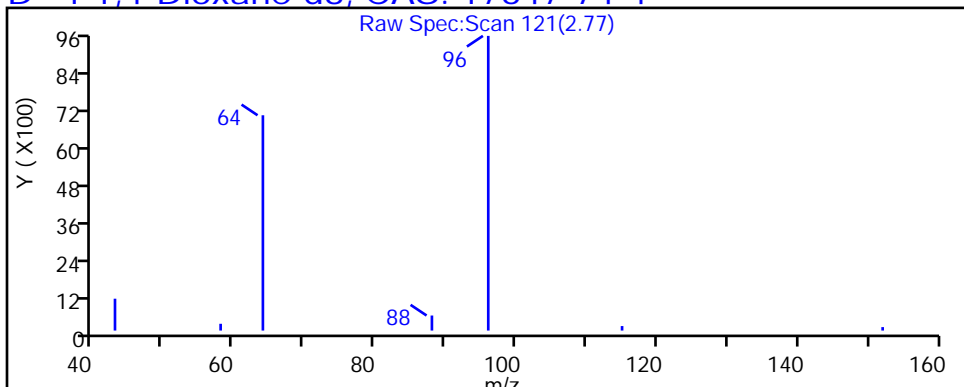
Method: 1,4_Dx_SIM_HP5973U

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.: 480-160746-1
 SDG No.: _____
 Client Sample ID: DUPLICATE Lab Sample ID: 480-160746-4
 Matrix: Water Lab File ID: U33153548.D
 Analysis Method: 8270D SIM ID Date Collected: 10/09/2019 00:00
 Extract. Method: 3510C Date Extracted: 10/15/2019 15:48
 Sample wt/vol: 1000 (mL) Date Analyzed: 10/16/2019 18:53
 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.: 498310 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	25		15-110

Eurofins TestAmerica, Buffalo
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191016-85159.b\U33153548.D
 Lims ID: 480-160746-B-4-A
 Client ID: DUPLICATE
 Sample Type: Client
 Inject. Date: 16-Oct-2019 18:53:30 ALS Bottle#: 16 Worklist Smp#: 16
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 480-0085159-016
 Operator ID: JM Instrument ID: HP5973U
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191016-85159.b\1,4_Dx_SIM_HP5973U.m
 Limit Group: MB - 8270D SIM ID ICAL
 Last Update: 17-Oct-2019 12:38:16 Calib Date: 20-Aug-2019 12:46:30
 Integrator: Picker ID Type: RT Order ID
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151889.D
 Column 1 : Det: MS SCAN
 Process Host: CTX0330

First Level Reviewer: marshallj Date: 17-Oct-2019 12:37:38

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	2.839	2.737	0.102	97	124614	2.46	24.6	
3 1,4-Dioxane	88	2.880	2.778	0.102	79	2283	0.1771		
* 2 1,4-Dichlorobenzene-d4	152	5.932	5.924	0.008	96	437745	4.00		

Reagents:

MB_LLIS_WRK_00179 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191016-85159.b\U33153548.D

Injection Date: 16-Oct-2019 18:53:30

Instrument ID: HP5973U

Operator ID: JM

Lims ID: 480-160746-B-4-A

Lab Sample ID: 480-160746-4

Worklist Smp#: 16

Client ID: DUPLICATE

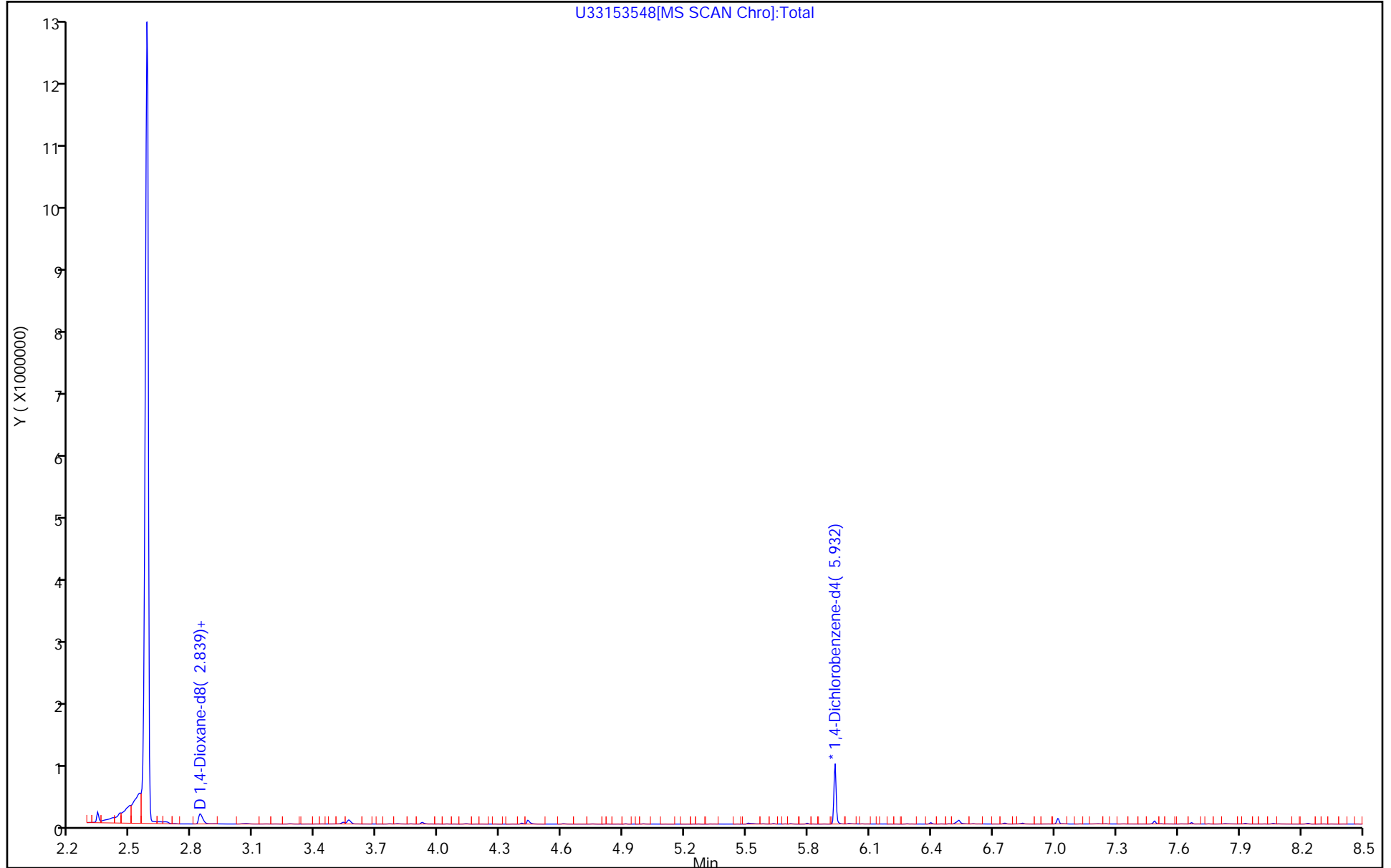
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 16

Method: 1,4_Dx_SIM_HP5973U

Limit Group: MB - 8270D SIM ID ICAL



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191016-85159.b\U33153548.D

Injection Date: 16-Oct-2019 18:53:30

Instrument ID: HP5973U

Lims ID: 480-160746-B-4-A

Lab Sample ID: 480-160746-4

Client ID: DUPLICATE

Operator ID: JM

ALS Bottle#: 16

Worklist Smp#: 16

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

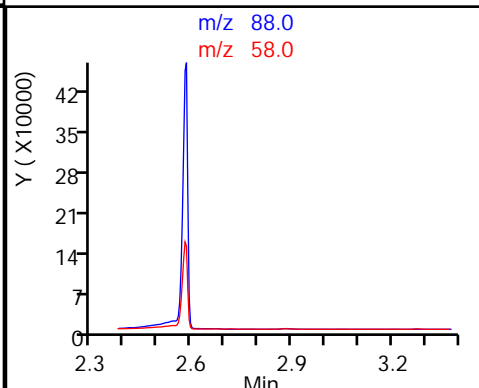
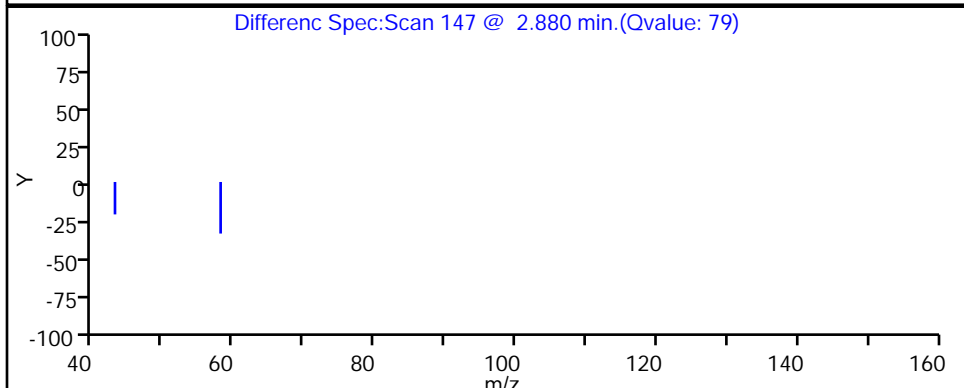
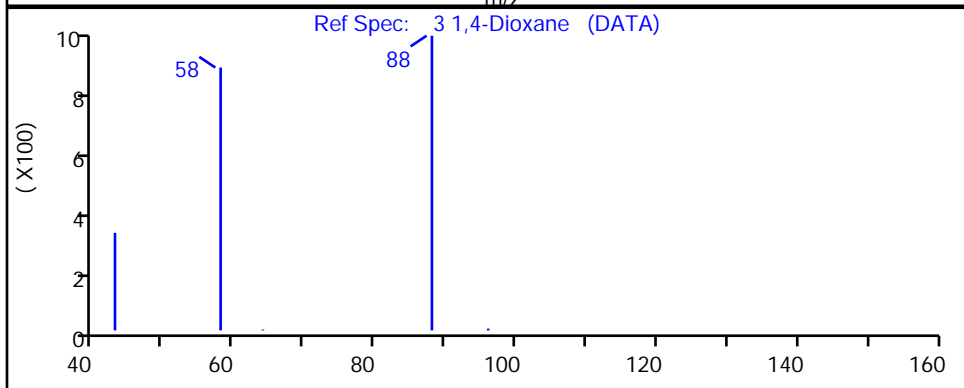
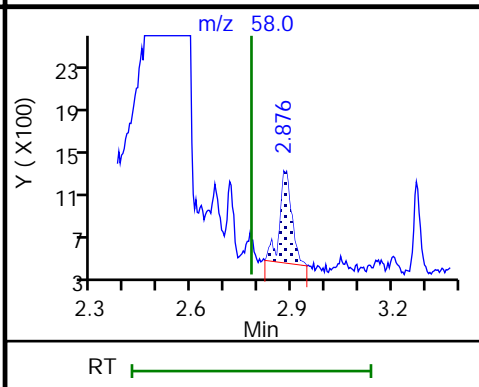
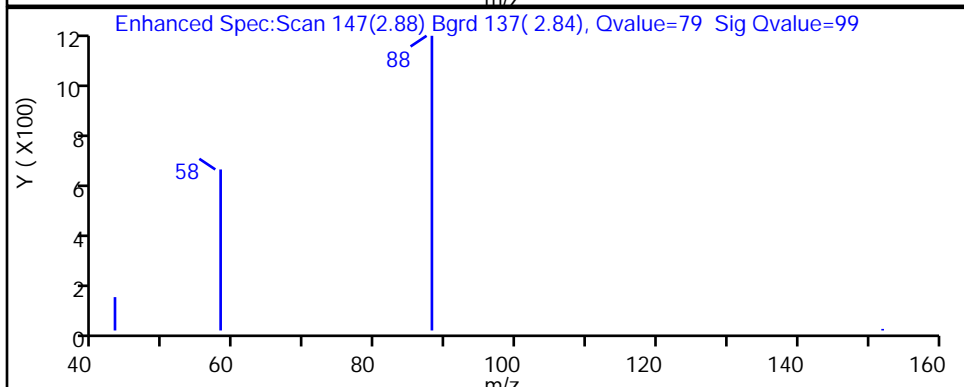
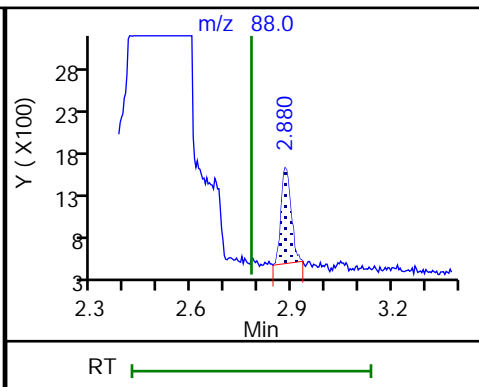
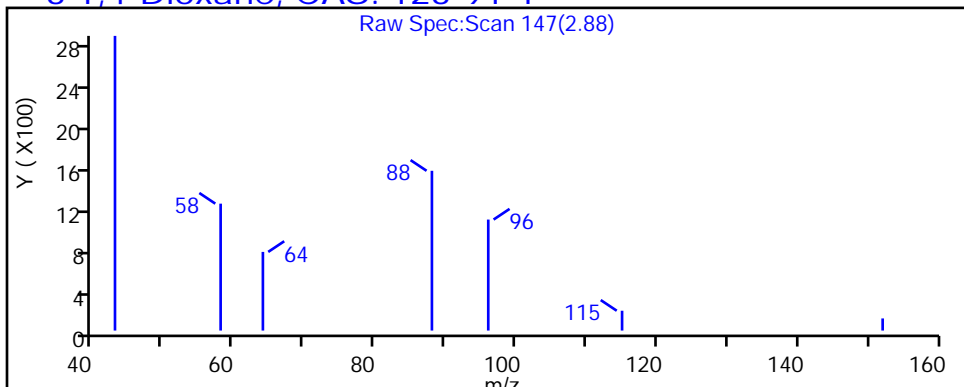
Method: 1,4_Dx_SIM_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

Column:

Detector MS SCAN

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



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191016-85159.b\U33153548.D

Injection Date: 16-Oct-2019 18:53:30

Instrument ID: HP5973U

Lims ID: 480-160746-B-4-A

Lab Sample ID: 480-160746-4

Client ID: DUPLICATE

Operator ID: JM

ALS Bottle#: 16

Worklist Smp#: 16

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

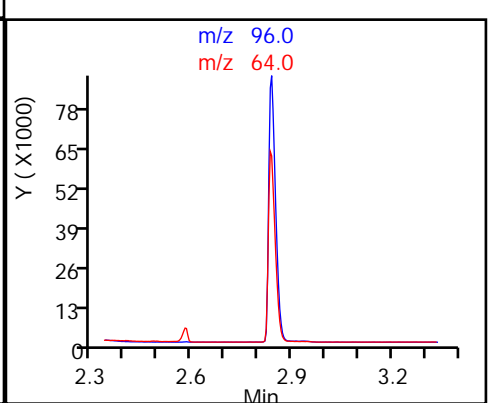
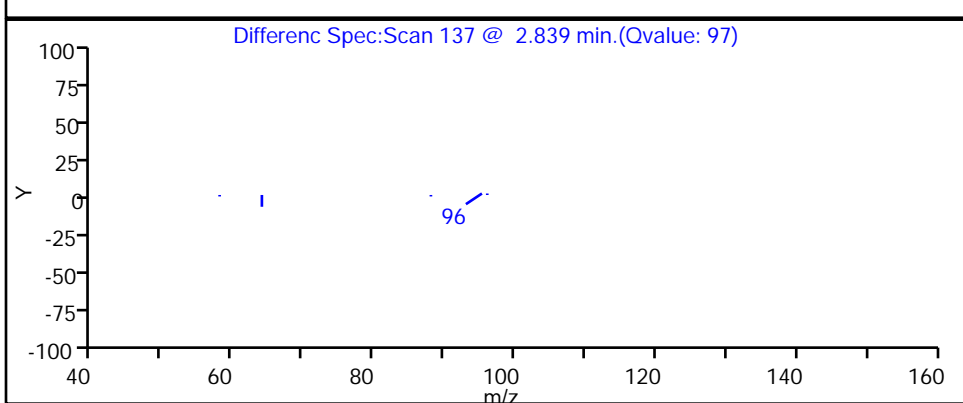
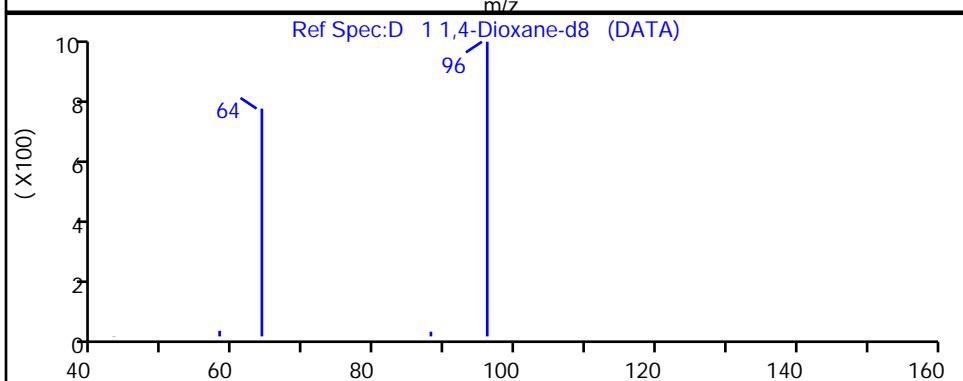
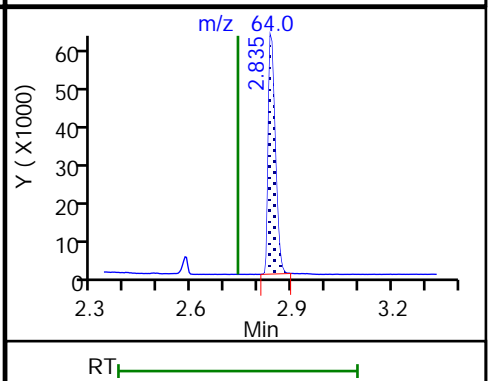
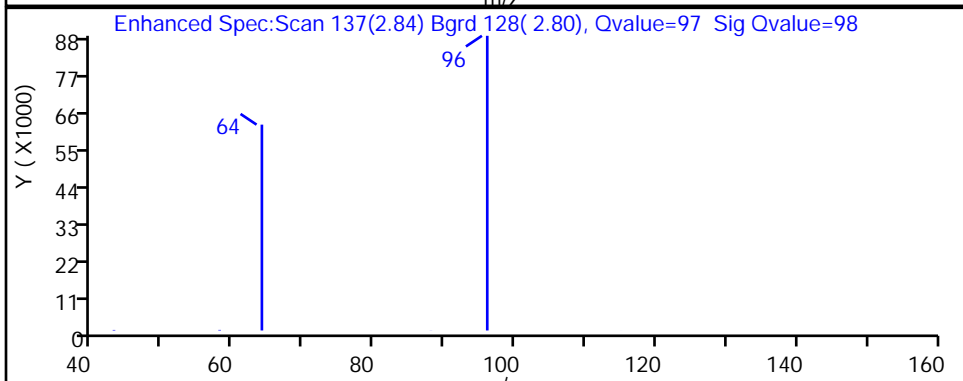
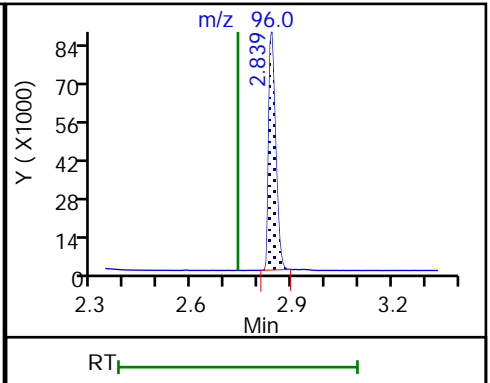
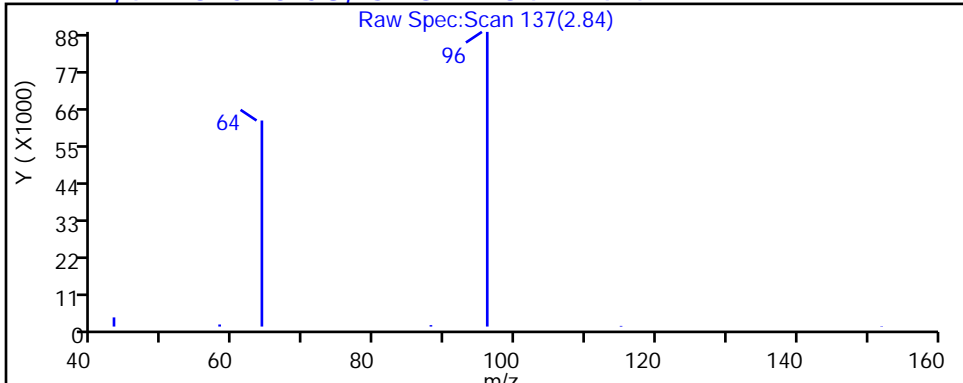
Method: 1,4_Dx_SIM_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

Column:

Detector MS SCAN

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



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

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-160746-1 Analy Batch No.: 487886

SDG No.: _____

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

Calibration Start Date: 08/20/2019 10:49 Calibration End Date: 08/20/2019 12:46 Calibration ID: 37475

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 480-487886/3	U33151884.D
Level 2	IC 480-487886/4	U33151885.D
Level 3	ICIS 480-487886/5	U33151886.D
Level 4	IC 480-487886/6	U33151887.D
Level 5	IC 480-487886/7	U33151888.D
Level 6	IC 480-487886/8	U33151889.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6																
1,4-Dioxane	0.9976 1.0369	1.0471	1.0437	1.0321	1.0481	AveID		1.0342			0.0100	1.8		20.0			
1,4-Dioxane-d8	0.4519 0.4622	0.4515	0.4622	0.4761	0.4726	Ave		0.4628			0.0100	2.2		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.: 480-160746-1 Analy Batch No.: 487886

SDG No.: _____

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

Calibration Start Date: 08/20/2019 10:49 Calibration End Date: 08/20/2019 12:46 Calibration ID: 37475

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 480-487886/3	U33151884.D
Level 2	IC 480-487886/4	U33151885.D
Level 3	ICIS 480-487886/5	U33151886.D
Level 4	IC 480-487886/6	U33151887.D
Level 5	IC 480-487886/7	U33151888.D
Level 6	IC 480-487886/8	U33151889.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	9701 56950	18235	31276	40762	49018	0.200 1.20	0.400	0.600	0.800	1.00
1,4-Dioxane-d8	DCBd 4	Ave	97245 549259	174150	299658	394949	467674	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\20190820-83532.b\U33151884.D
 Lims ID: IC - SIM - 0.2
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 20-Aug-2019 10:49:30 ALS Bottle#: 3 Worklist Smp#: 3
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 480-0083532-003
 Operator ID: bs Instrument ID: HP5973U
 Sublist: chrom-1,4_Dx_SIM_HP5973U*sub1

Method: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\1,4_Dx_SIM_HP5973U.m
 Limit Group: MB - 8270D SIM ID ICAL
 Last Update: 20-Aug-2019 15:46:39 Calib Date: 20-Aug-2019 12:46:30
 Integrator: Picker ID Type: RT Order ID
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151889.D

Column 1 : Det: MS SCAN
 Process Host: CTX1019

First Level Reviewer: schickr Date: 20-Aug-2019 15:38:00

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	2.823	2.819	0.004	95	97245	2.00	1.95	
3 1,4-Dioxane	88	2.868	2.860	0.008	90	9701	0.2000	0.1929	
* 2 1,4-Dichlorobenzene-d4	152	5.985	5.989	-0.004	97	430378	4.00	4.00	

Reagents:

MB_1,4SIM_WRK_00078 Amount Added: 1.00 Units: mL
 MB_LLIS_WRK_00174 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151884.D

Injection Date: 20-Aug-2019 10:49:30

Instrument ID: HP5973U

Operator ID: bs

Lims ID: IC - SIM - 0.2

Worklist Smp#: 3

Client ID:

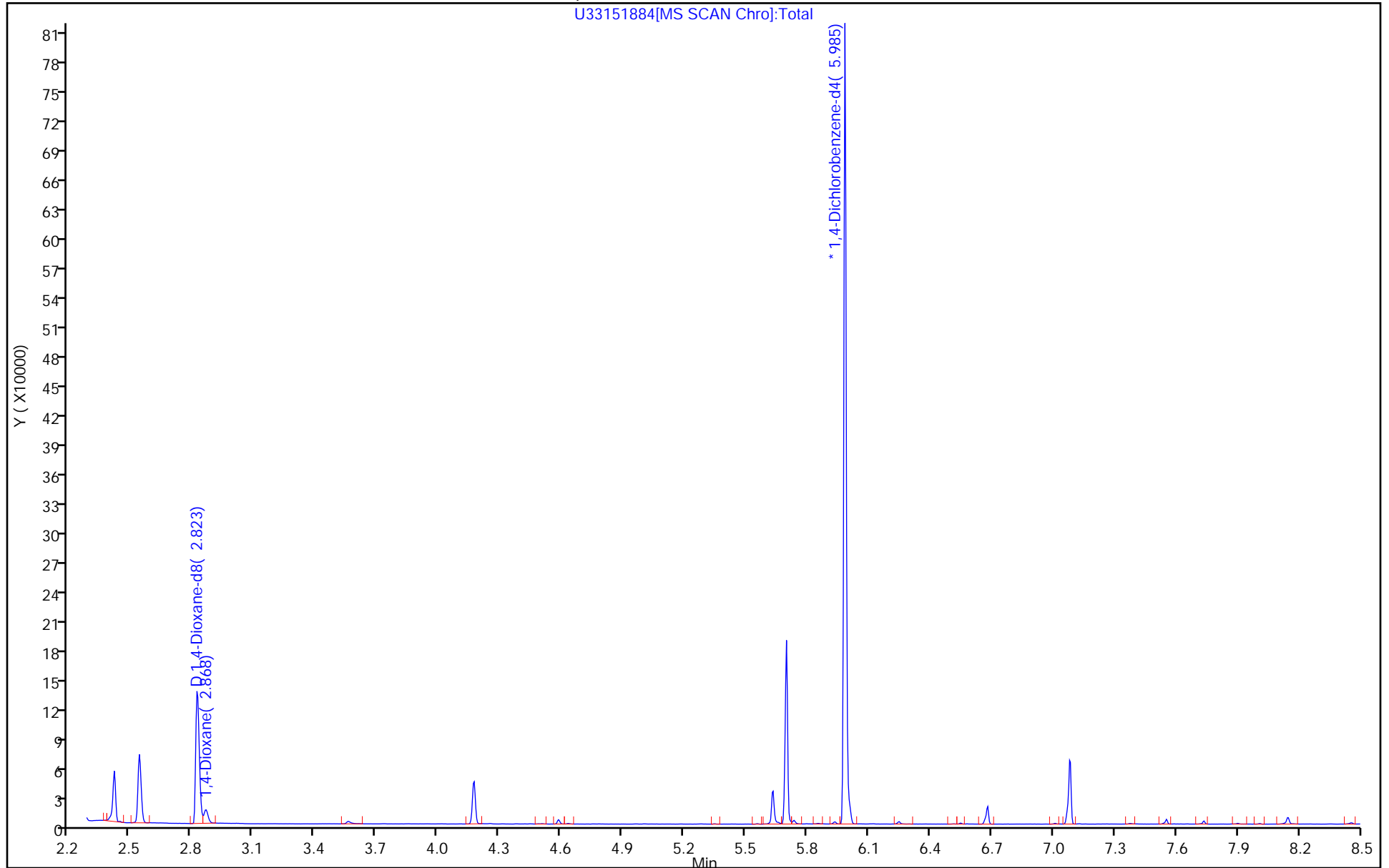
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 3

Method: 1,4_Dx_SIM_HP5973U

Limit Group: MB - 8270D SIM ID ICAL



Eurofins TestAmerica, Buffalo
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151885.D
 Lims ID: IC - SIM - 0.4
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 20-Aug-2019 11:12:30 ALS Bottle#: 4 Worklist Smp#: 4
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 480-0083532-004
 Operator ID: bs Instrument ID: HP5973U
 Sublist: chrom-1,4_Dx_SIM_HP5973U*sub1

Method: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\1,4_Dx_SIM_HP5973U.m
 Limit Group: MB - 8270D SIM ID ICAL
 Last Update: 20-Aug-2019 15:46:39 Calib Date: 20-Aug-2019 12:46:30
 Integrator: Picker ID Type: RT Order ID
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151889.D

Column 1 : Det: MS SCAN
 Process Host: CTX1019

First Level Reviewer: schickr Date: 20-Aug-2019 15:38:13

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	2.819	2.819	0.000	94	174150	4.00	3.90	
3 1,4-Dioxane	88	2.864	2.860	0.004	89	18235	0.4000	0.4050	
* 2 1,4-Dichlorobenzene-d4	152	5.989	5.989	0.000	97	385740	4.00	4.00	

Reagents:

MB_1,4SIM_WRK_00079 Amount Added: 1.00 Units: mL
 MB_LLIS_WRK_00174 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151885.D

Injection Date: 20-Aug-2019 11:12:30

Instrument ID: HP5973U

Operator ID: bs

Lims ID: IC - SIM - 0.4

Worklist Smp#: 4

Client ID:

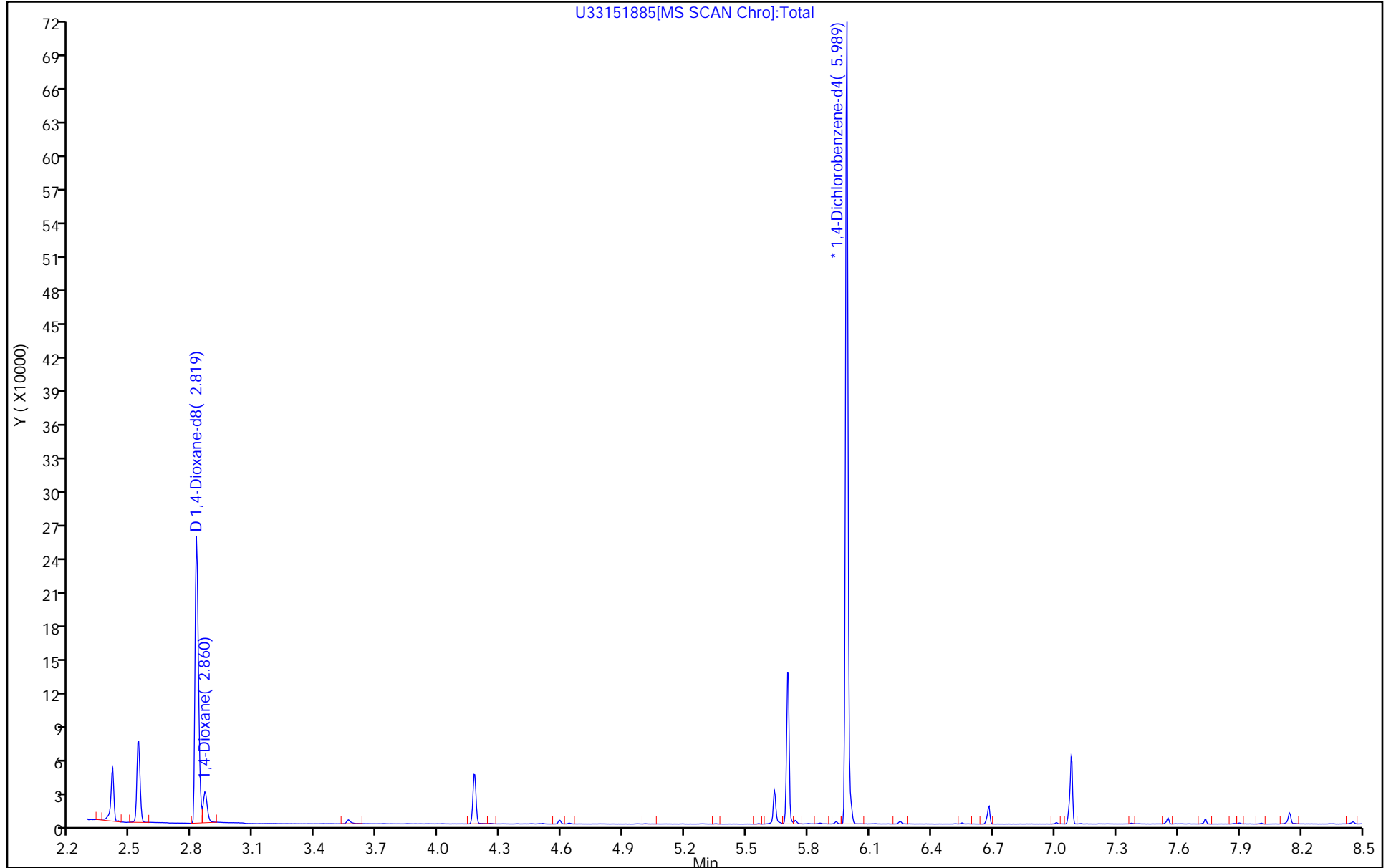
Injection Vol: 1.0 ul

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\20190820-83532.b\U33151886.D
 Lims ID: ICIS
 Client ID:
 Sample Type: ICIS Calib Level: 3
 Inject. Date: 20-Aug-2019 11:36:30 ALS Bottle#: 5 Worklist Smp#: 5
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 480-0083532-005
 Operator ID: bs Instrument ID: HP5973U
 Sublist: chrom-1,4_Dx_SIM_HP5973U*sub1
 Method: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\1,4_Dx_SIM_HP5973U.m
 Limit Group: MB - 8270D SIM ID ICAL
 Last Update: 20-Aug-2019 15:46:40 Calib Date: 20-Aug-2019 12:46:30
 Integrator: Picker ID Type: RT Order ID
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151889.D
 Column 1 : Det: MS SCAN
 Process Host: CTX1019

First Level Reviewer: schickr Date: 20-Aug-2019 12:25:49

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	2.819	2.819	0.000	94	299658	6.00	5.99	
3 1,4-Dioxane	88	2.860	2.860	0.000	90	31276	0.6000	0.6055	
* 2 1,4-Dichlorobenzene-d4	152	5.989	5.989	0.000	97	432191	4.00	4.00	

Reagents:

MB_1,4SIM_WRK_00080 Amount Added: 1.00 Units: mL
 MB_LLIS_WRK_00174 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151886.D

Injection Date: 20-Aug-2019 11:36:30

Instrument ID: HP5973U

Operator ID: bs

Lims ID: ICIS

Worklist Smp#: 5

Client ID:

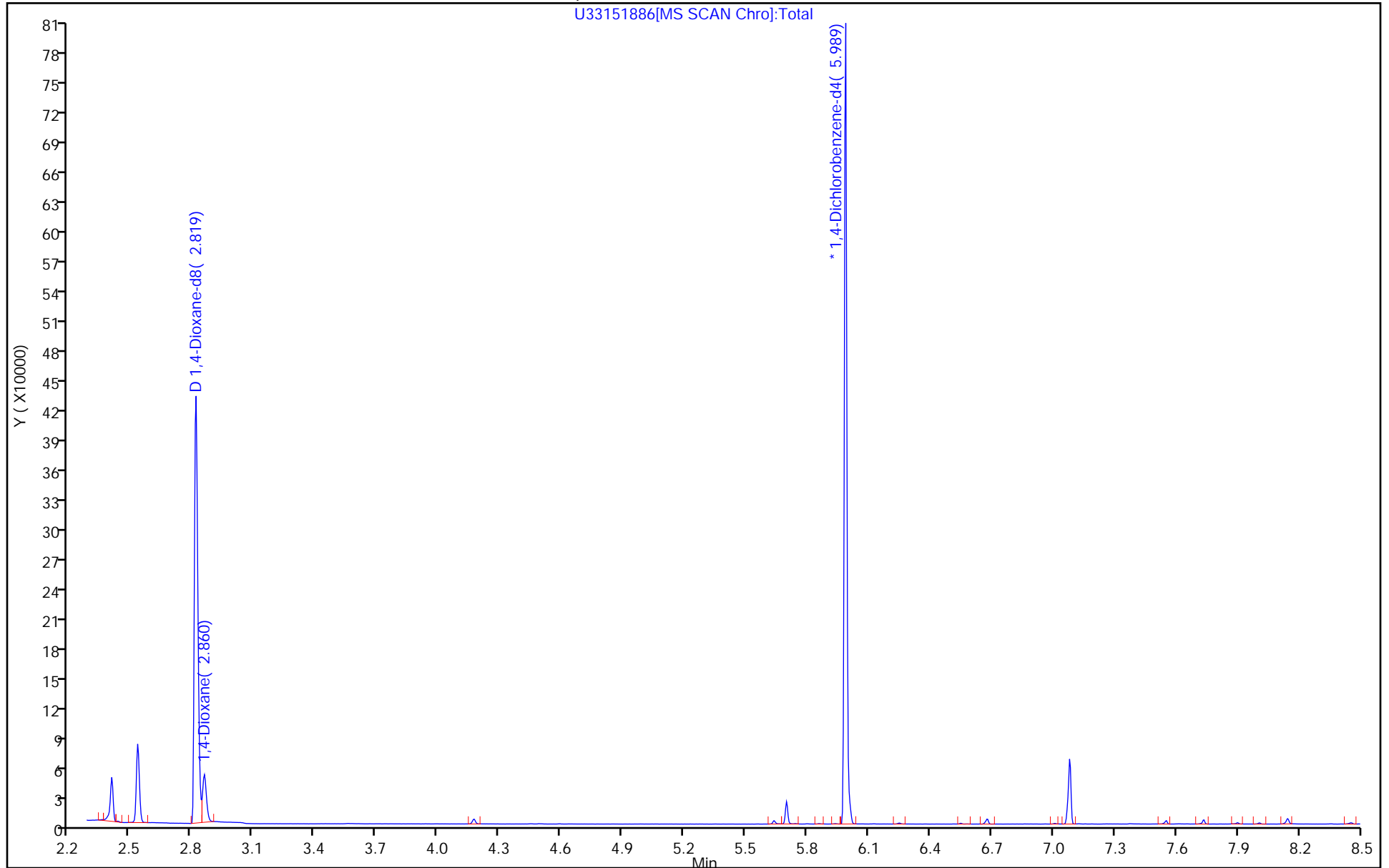
Injection Vol: 1.0 ul

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\20190820-83532.b\U33151887.D
 Lims ID: IC - SIM - 0.8
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 20-Aug-2019 11:59:30 ALS Bottle#: 6 Worklist Smp#: 6
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 480-0083532-006
 Operator ID: bs Instrument ID: HP5973U
 Sublist: chrom-1,4_Dx_SIM_HP5973U*sub1
 Method: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\1,4_Dx_SIM_HP5973U.m
 Limit Group: MB - 8270D SIM ID ICAL
 Last Update: 20-Aug-2019 15:46:41 Calib Date: 20-Aug-2019 12:46:30
 Integrator: Picker ID Type: RT Order ID
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151889.D
 Column 1 : Det: MS SCAN
 Process Host: CTX1019

First Level Reviewer: schickr Date: 20-Aug-2019 15:46:11

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	2.819	2.819	0.000	94	394949	8.00	8.23	
3 1,4-Dioxane	88	2.860	2.860	0.000	91	40762	0.8000	0.7983	
* 2 1,4-Dichlorobenzene-d4	152	5.989	5.989	0.000	97	414784	4.00	4.00	

Reagents:

MB_1,4SIM_WRK_00081 Amount Added: 1.00 Units: mL
 MB_LLIS_WRK_00174 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151887.D

Injection Date: 20-Aug-2019 11:59:30

Instrument ID: HP5973U

Operator ID: bs

Lims ID: IC - SIM - 0.8

Worklist Smp#: 6

Client ID:

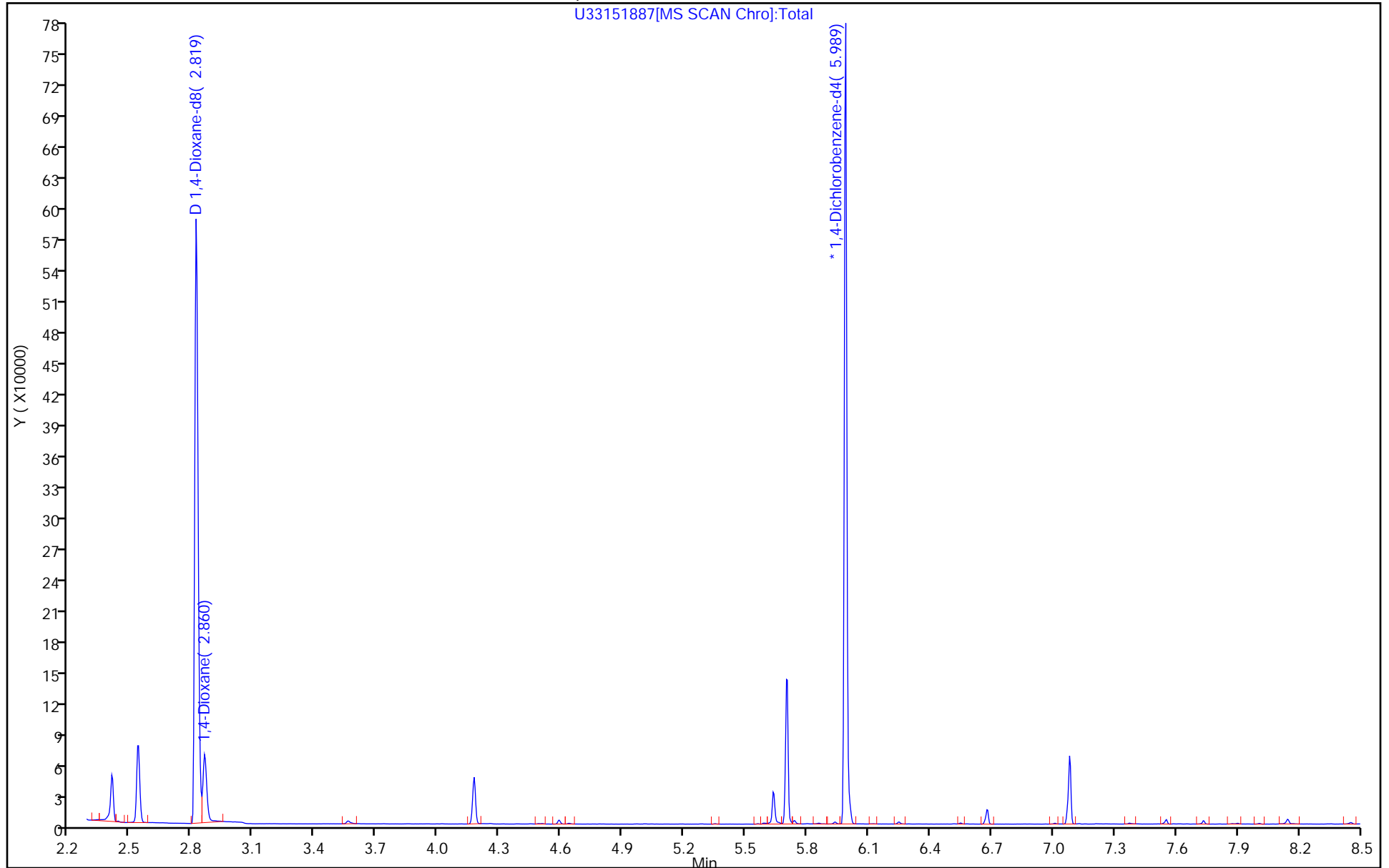
Injection Vol: 1.0 ul

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\20190820-83532.b\U33151888.D
 Lims ID: IC - SIM - 1.0
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 20-Aug-2019 12:23:30 ALS Bottle#: 7 Worklist Smp#: 7
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 480-0083532-007
 Operator ID: bs Instrument ID: HP5973U
 Sublist: chrom-1,4_Dx_SIM_HP5973U*sub1
 Method: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\1,4_Dx_SIM_HP5973U.m
 Limit Group: MB - 8270D SIM ID ICAL
 Last Update: 20-Aug-2019 15:46:42 Calib Date: 20-Aug-2019 12:46:30
 Integrator: Picker ID Type: RT Order ID
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151889.D
 Column 1 : Det: MS SCAN
 Process Host: CTX1019

First Level Reviewer: schickr Date: 20-Aug-2019 15:46:14

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	2.819	2.819	0.000	93	467674	10.0	10.2	
3 1,4-Dioxane	88	2.860	2.860	0.000	90	49018	1.00	1.01	
* 2 1,4-Dichlorobenzene-d4	152	5.989	5.989	0.000	96	395814	4.00	4.00	

Reagents:

MB_1,4SIM_WRK_00082 Amount Added: 1.00 Units: mL
 MB_LLIS_WRK_00174 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151888.D

Injection Date: 20-Aug-2019 12:23:30

Instrument ID: HP5973U

Operator ID: bs

Lims ID: IC - SIM - 1.0

Worklist Smp#: 7

Client ID:

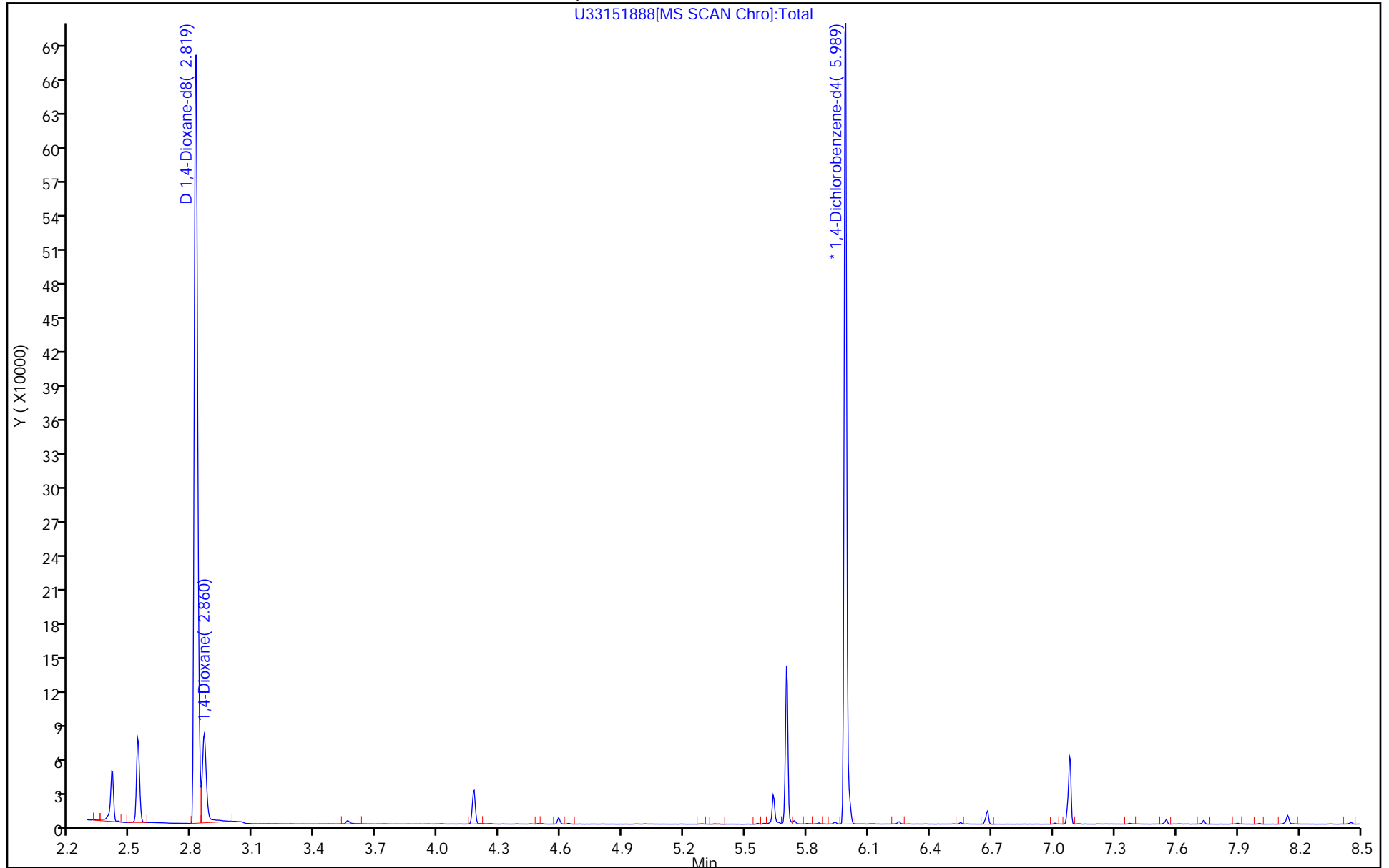
Injection Vol: 1.0 ul

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\20190820-83532.b\U33151889.D
 Lims ID: IC - SIM - 1.2
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 20-Aug-2019 12:46:30 ALS Bottle#: 8 Worklist Smp#: 8
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 480-0083532-008
 Operator ID: bs Instrument ID: HP5973U
 Sublist: chrom-1,4_Dx_SIM_HP5973U*sub1

Method: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\1,4_Dx_SIM_HP5973U.m
 Limit Group: MB - 8270D SIM ID ICAL
 Last Update: 20-Aug-2019 15:46:43 Calib Date: 20-Aug-2019 12:46:30
 Integrator: Picker ID Type: RT Order ID
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151889.D

Column 1 : Det: MS SCAN
 Process Host: CTX1019

First Level Reviewer: schickr Date: 20-Aug-2019 15:46:23

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	2.819	2.819	0.000	94	549259	12.0	12.0	
3 1,4-Dioxane	88	2.860	2.860	0.000	90	56950	1.20	1.20	
* 2 1,4-Dichlorobenzene-d4	152	5.989	5.989	0.000	96	396101	4.00	4.00	

Reagents:

MB_1,4SIM_WRK_00083 Amount Added: 1.00 Units: mL
 MB_LLIS_WRK_00174 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151889.D

Injection Date: 20-Aug-2019 12:46:30

Instrument ID: HP5973U

Operator ID: bs

Lims ID: IC - SIM - 1.2

Worklist Smp#: 8

Client ID:

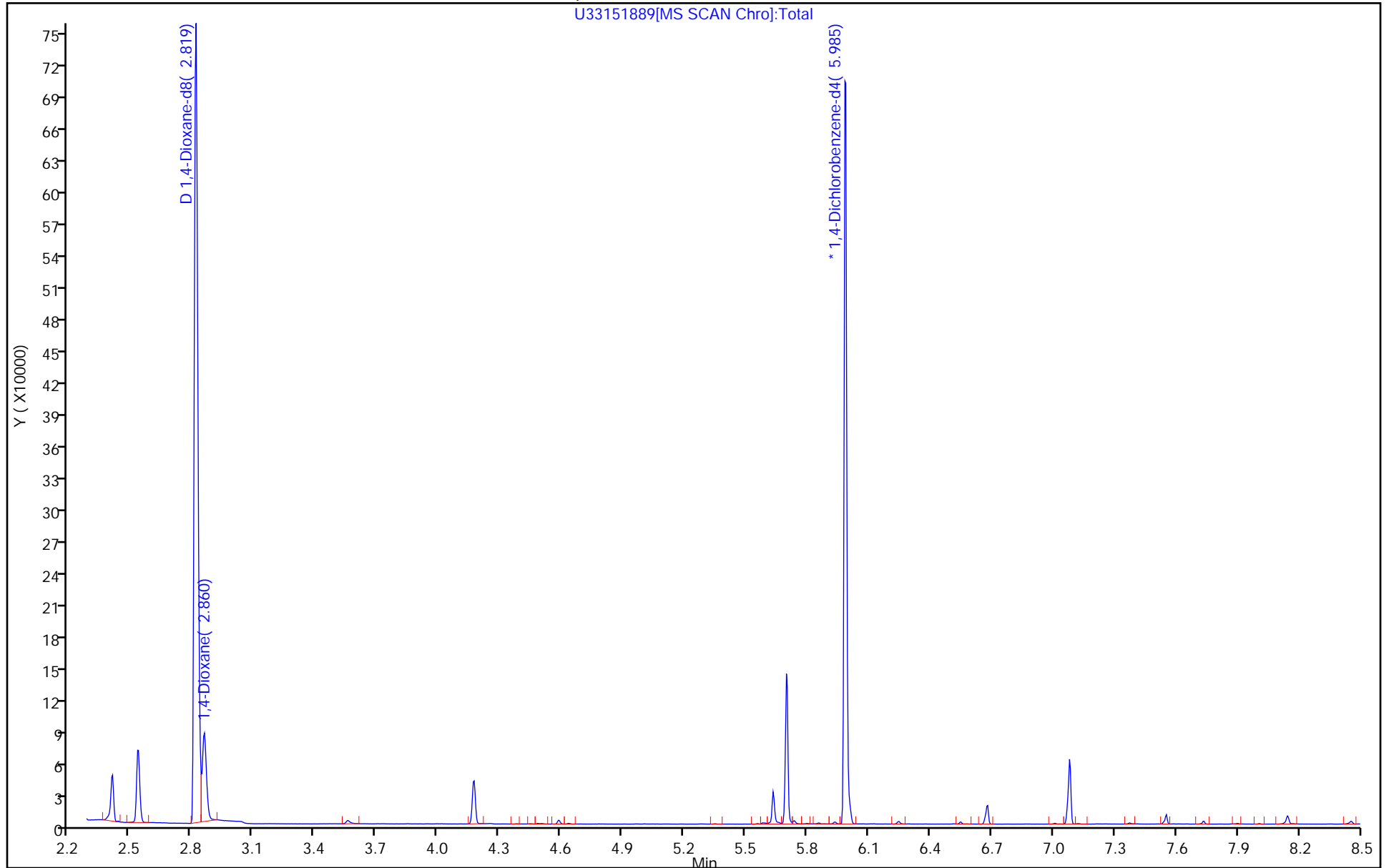
Injection Vol: 1.0 ul

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.: 480-160746-1
 SDG No.: _____
 Lab Sample ID: CCVIS 480-498310/3 Calibration Date: 10/16/2019 10:25
 Instrument ID: HP5973U Calib Start Date: 08/20/2019 10:49
 GC Column: RXI-5Sil MS(0.5 ID: 0.25 (mm) Calib End Date: 08/20/2019 12:46
 Lab File ID: U33153535.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	AveID	1.034	1.062	0.0100	616	600	2.7	20.0
1,4-Dioxane-d8	Ave	0.4628	0.4500	0.0100	5830	6000	-2.8	20.0

Eurofins TestAmerica, Buffalo
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191016-85159.b\U33153535.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 16-Oct-2019 10:25:30 ALS Bottle#: 3 Worklist Smp#: 3
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 480-0085159-003
 Operator ID: JM Instrument ID: HP5973U
 Sublist: chrom-1,4_Dx_SIM_HP5973U*sub1
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191016-85159.b\1,4_Dx_SIM_HP5973U.m
 Limit Group: MB - 8270D SIM ID ICAL
 Last Update: 17-Oct-2019 12:38:16 Calib Date: 20-Aug-2019 12:46:30
 Integrator: Picker ID Type: RT Order ID
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151889.D
 Column 1 : Det: MS SCAN
 Process Host: CTX0330

First Level Reviewer: marshallj Date: 16-Oct-2019 17:15:57

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	2.737	2.737	0.000	95	316462	6.00	5.83	
3 1,4-Dioxane	88	2.778	2.778	0.000	90	33615	0.6000	0.6162	
* 2 1,4-Dichlorobenzene-d4	152	5.924	5.924	0.000	95	468833	4.00	4.00	

Reagents:

MB_1,4SIM_WRK_00080 Amount Added: 1.00 Units: mL
 MB_LLIS_WRK_00179 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191016-85159.b\U33153535.D

Injection Date: 16-Oct-2019 10:25:30

Instrument ID: HP5973U

Operator ID: JM

Lims ID: CCVIS

Worklist Smp#: 3

Client ID:

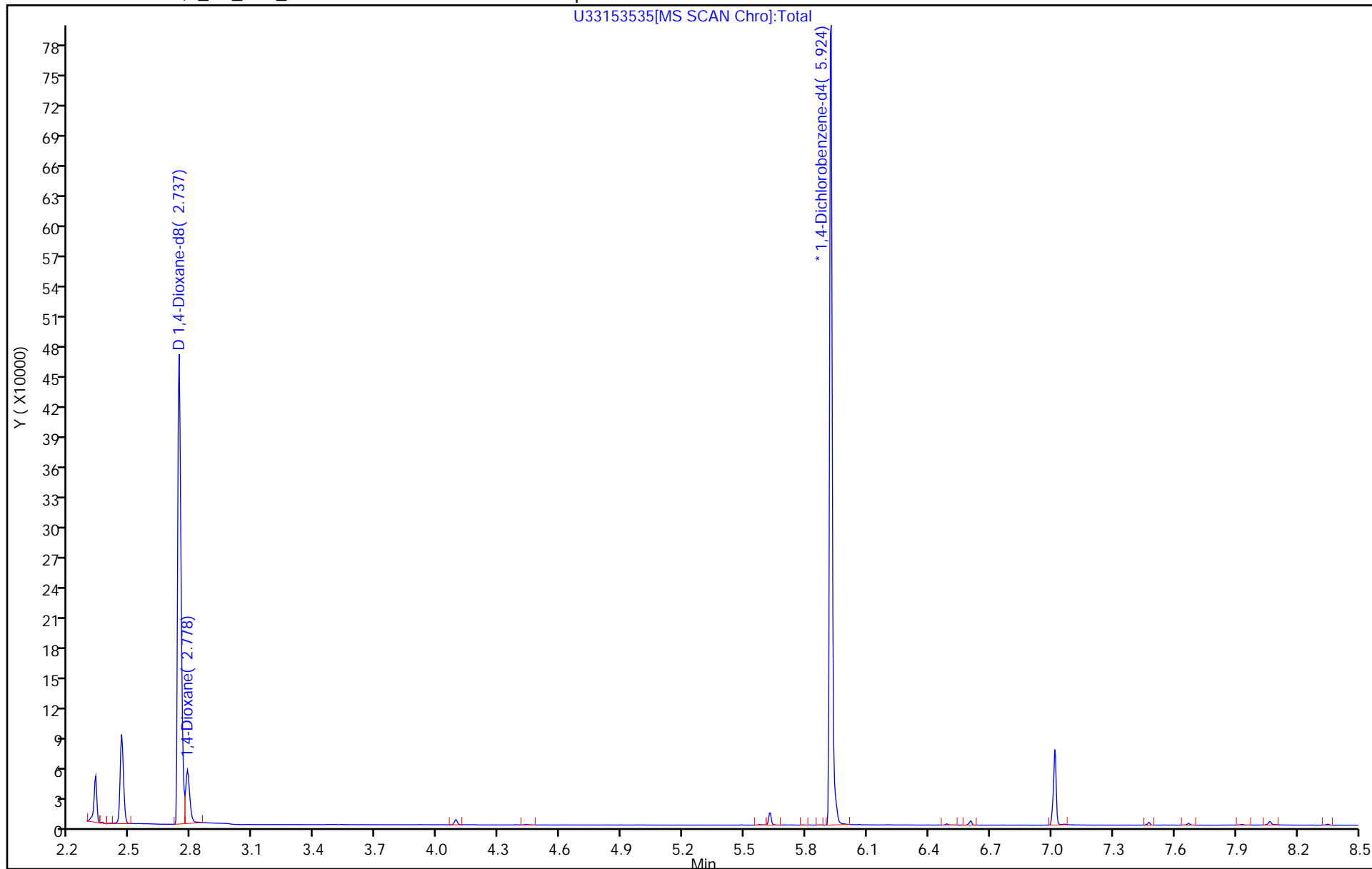
Injection Vol: 1.0 ul

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.: 480-160746-1
 SDG No.: _____
 Lab Sample ID: CCVIS 480-498604/3 Calibration Date: 10/17/2019 12:33
 Instrument ID: HP5973U Calib Start Date: 08/20/2019 10:49
 GC Column: RXI-5Sil MS(0.5 ID: 0.25 (mm) Calib End Date: 08/20/2019 12:46
 Lab File ID: U33153553.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	AveID	1.034	1.061	0.0100	615	600	2.5	20.0
1,4-Dioxane-d8	Ave	0.4628	0.4480	0.0100	5810	6000	-3.2	20.0

Eurofins TestAmerica, Buffalo
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191017-85193.b\U33153553.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 17-Oct-2019 12:33:30 ALS Bottle#: 3 Worklist Smp#: 3
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 480-0085193-003
 Operator ID: JM Instrument ID: HP5973U
 Sublist: chrom-1,4_Dx_SIM_HP5973U*sub1
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191017-85193.b\1,4_Dx_SIM_HP5973U.m
 Limit Group: MB - 8270D SIM ID ICAL
 Last Update: 18-Oct-2019 11:59:12 Calib Date: 20-Aug-2019 12:46:30
 Integrator: Picker ID Type: RT Order ID
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151889.D
 Column 1 : Det: MS SCAN
 Process Host: CTX0339

First Level Reviewer: marshallj Date: 17-Oct-2019 13:09:13

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	2.749	2.749	0.000	95	322097	6.00	5.81	
3 1,4-Dioxane	88	2.790	2.790	0.000	91	34161	0.6000	0.6153	
* 2 1,4-Dichlorobenzene-d4	152	5.924	5.924	0.000	96	479309	4.00	4.00	

Reagents:

MB_1,4SIM_WRK_00080 Amount Added: 1.00 Units: mL
 MB_LLIS_WRK_00179 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191017-85193.b\U33153553.D

Injection Date: 17-Oct-2019 12:33:30

Instrument ID: HP5973U

Operator ID: JM

Lims ID: CCVIS

Worklist Smp#: 3

Client ID:

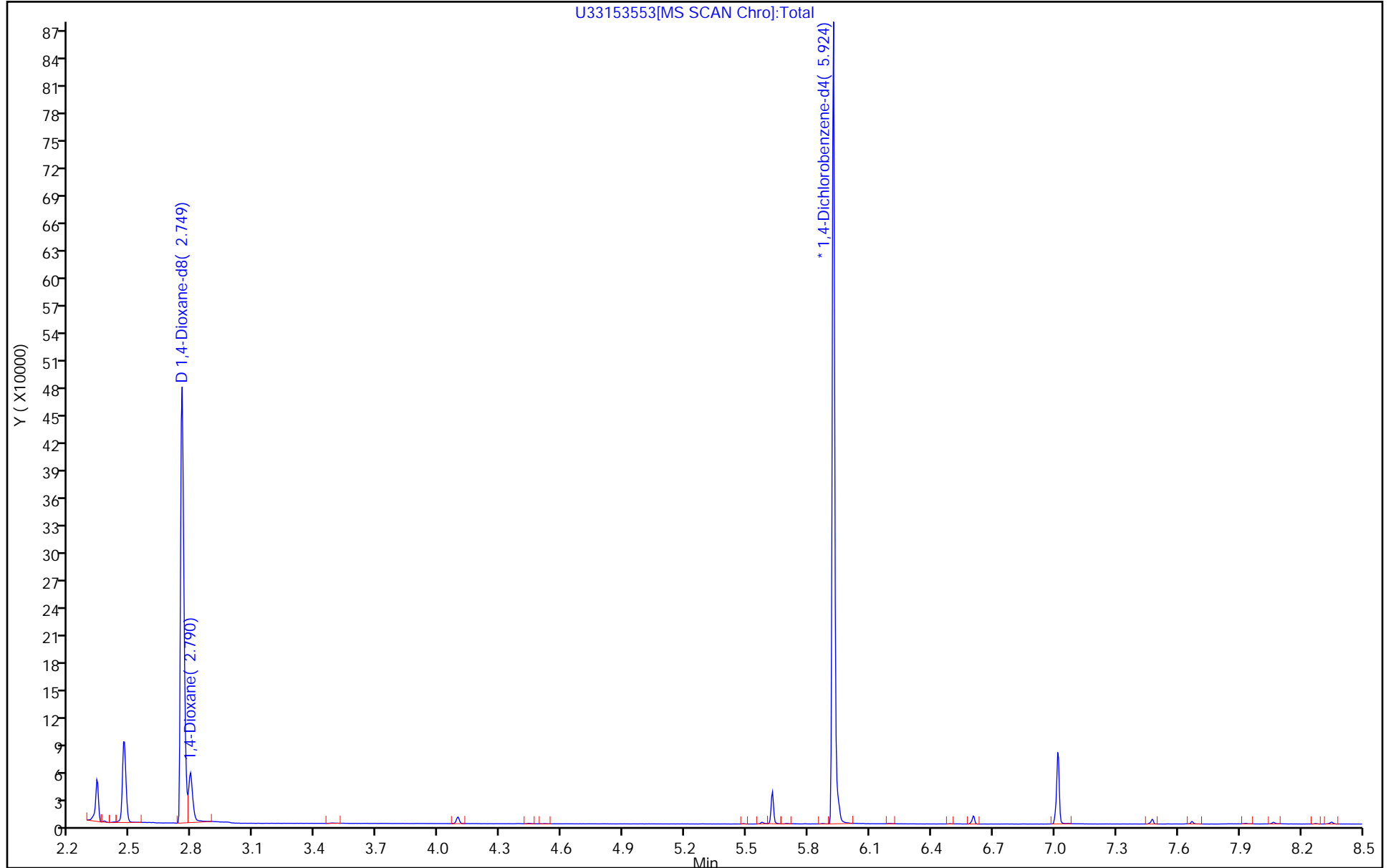
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 3

Method: 1,4_Dx_SIM_HP5973U

Limit Group: MB - 8270D SIM ID ICAL



Eurofins TestAmerica, Buffalo
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151883.D
 Lims ID: DFTPP
 Client ID:
 Sample Type: DFTPP
 Inject. Date: 20-Aug-2019 10:12:30 ALS Bottle#: 2 Worklist Smp#: 2
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: DFTPP SIM
 Operator ID: bs Instrument ID: HP5973U
 Method: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\1,4_Dx_SIM_HP5973U.m
 Limit Group: MB - 8270D SIM ID ICAL
 Last Update: 20-Aug-2019 15:46:37 Calib Date: 20-Aug-2019 12:46:30
 Integrator: Picker ID Type: Deconvolution ID
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151889.D
 Column 1 : Det: MS SCAN
 Process Host: CTX1019

First Level Reviewer: marshallj Date: 20-Aug-2019 10:40:35

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		11.069					ND	Ua
5 4,4'-DDD	235		11.186					ND	
6 4,4'-DDT	235	11.656	11.656	0.000	99	1786264	NR	NR	a

QC Flag Legend

Processing Flags

- NR - Missing Quant Standard
- 8 - Failed MS Tune Ratio Test

Review Flags

- M - Manually Integrated
- U - Marked Undetected
- a - User Assigned ID

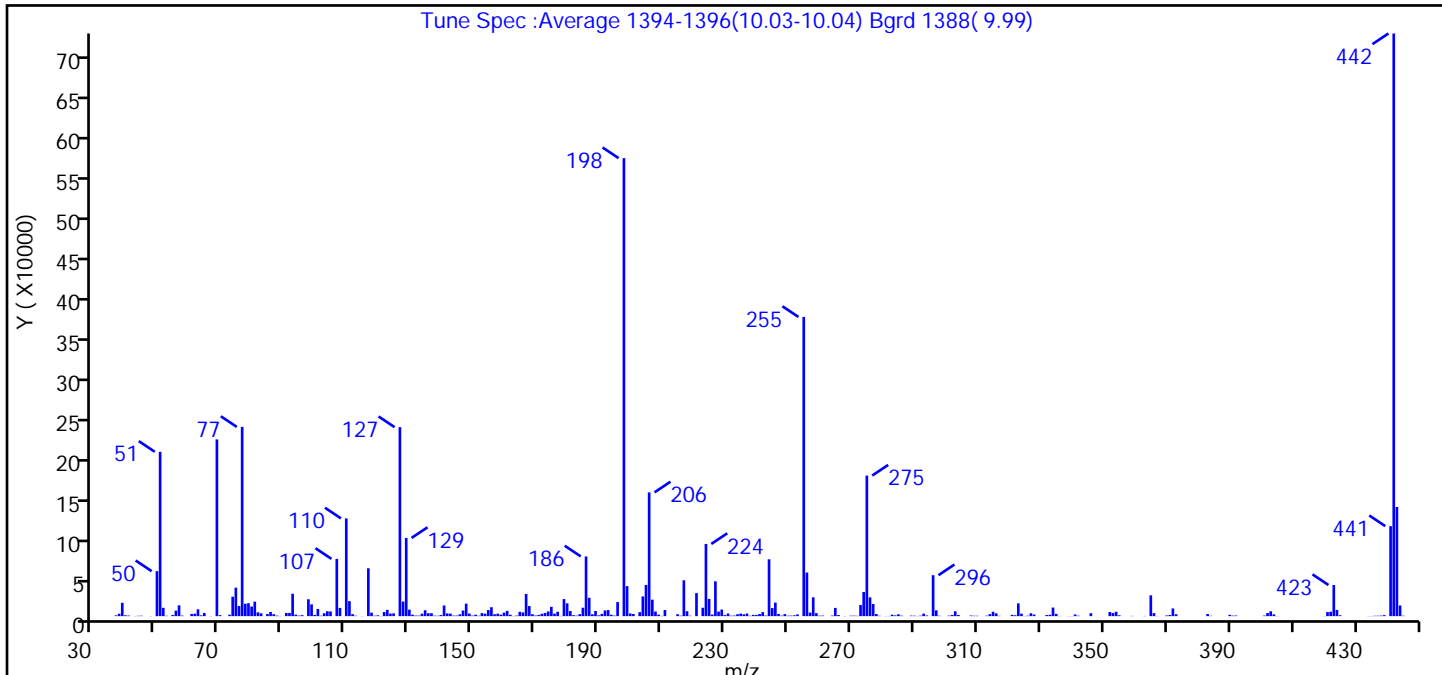
Reagents:

MB_DFTPP_WRK_00359 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151883.D
 Injection Date: 20-Aug-2019 10:12:30 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 (78.6)
51	10-80% of the base peak	35.9
68	<2% of mass 69	0.0 (0.0)
69	Present	38.6
70	<2% of mass 69	0.2 (0.6)
127	10-80% of the base peak	41.3
197	<2% of mass 198	0.0
199	5-9% of mass 198	6.6
275	10-60% of the base peak	30.7
365	>1% of mass 198	4.5
441	present but <24% of mass 442	19.7 (15.4)
442	base peak, or >50% of 198	127.2
443	15-24% of mass 442	23.8 (18.7)

Data File: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151883.D\1,4_Dx_SIM_HP5973U.rsl\sp
Injection Date: 20-Aug-2019 10:12:30
Spectrum: Tune Spec :Average 1394-1396(10.03-10.04) Bgrd 1388(9.99)
Base Peak: 442.00
Minimum % Base Peak: 0
Number of Points: 298

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	992	130.00	8062	207.00	20408	296.00	50720
38.00	2976	131.00	1807	208.00	5751	297.00	7195
39.00	16488	132.00	756	209.00	1794	298.00	494
40.00	1071	133.00	685	210.00	324	301.00	633
41.00	759	134.00	3013	211.00	7566	302.00	1420
43.00	188	135.00	7287	215.00	2370	303.00	6048
44.00	456	136.00	3590	216.00	572	304.00	1507
45.00	569	137.00	3609	217.00	44392	308.00	777
48.00	169	138.00	621	218.00	6059	309.00	536
50.00	55704	139.00	532	219.00	539	310.00	459
51.00	203520	140.00	1385	221.00	28528	313.00	621
52.00	10341	141.00	13186	223.00	10393	314.00	2483
53.00	460	142.00	3374	224.00	89392	315.00	5499
55.00	1393	143.00	3141	225.00	21312	316.00	3434
56.00	6876	144.00	738	226.00	1960	317.00	381
57.00	13411	145.00	721	227.00	43160	321.00	1615
58.00	695	146.00	2280	228.00	5620	322.00	1080
61.00	2719	147.00	6965	229.00	8147	323.00	15836
62.00	3054	148.00	15500	230.00	1337	324.00	3082
63.00	8488	149.00	3160	231.00	3309	325.00	211
64.00	998	150.00	699	232.00	603	326.00	554
65.00	3887	151.00	1703	233.00	760	327.00	3588
67.00	226	152.00	485	234.00	2403	328.00	1924
69.00	218816	153.00	3750	235.00	3162	332.00	1374
70.00	1248	154.00	3019	236.00	2277	333.00	1722
73.00	1745	155.00	7551	237.00	3222	334.00	10610
74.00	24008	156.00	11055	238.00	486	335.00	2851
75.00	35256	157.00	2331	239.00	1604	336.00	252
76.00	12520	158.00	3020	240.00	1568	339.00	183
77.00	234304	159.00	1905	241.00	2610	340.00	196
78.00	15373	160.00	4367	242.00	4973	341.00	2092
79.00	16074	161.00	6512	243.00	717	342.00	571
80.00	11921	162.00	1713	244.00	70392	346.00	3602

Data File:

\\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151883.D\1_4_Dx_SIM_HP5973U.rslt\spc

Injection Date:

20-Aug-2019 10:12:30

Spectrum:

Tune Spec :Average 1394-1396(10.03-10.04) Bgrd 1388(9.99)

Base Peak:

442.00

Minimum % Base Peak: 0

Number of Points: 298

m/z	Y	m/z	Y	m/z	Y	m/z	Y
81.00	17952	163.00	242	245.00	10009	352.00	5155
82.00	4701	164.00	710	246.00	16776	353.00	3864
83.00	3510	165.00	5340	247.00	2714	354.00	5456
84.00	18	166.00	4561	248.00	616	355.00	1060
85.00	2599	167.00	27480	249.00	2500	359.00	341
86.00	5229	168.00	12461	250.00	613	363.00	271
87.00	2365	169.00	2404	251.00	680	365.00	25728
88.00	702	170.00	808	252.00	1008	366.00	3732
89.00	259	171.00	1536	253.00	2092	367.00	184
91.00	3975	172.00	2932	255.00	370496	370.00	847
92.00	4010	173.00	3935	256.00	53968	371.00	1368
93.00	27736	174.00	5778	257.00	4403	372.00	9535
94.00	1783	175.00	11526	258.00	23328	373.00	2312
95.00	677	176.00	3121	259.00	3710	383.00	2668
96.00	1263	177.00	5376	260.00	568	384.00	478
98.00	20928	178.00	297	261.00	698	390.00	1596
99.00	14565	179.00	21160	264.00	722	391.00	687
100.00	1536	180.00	15880	265.00	10198	392.00	774
101.00	8934	181.00	6312	266.00	1360	401.00	744
102.00	519	182.00	1199	268.00	184	402.00	3852
103.00	3553	183.00	679	270.00	586	403.00	5995
104.00	6082	184.00	2472	271.00	623	404.00	2187
105.00	5788	185.00	10434	272.00	399	405.00	211
107.00	70896	186.00	73968	273.00	13765	420.00	186
108.00	10210	187.00	22688	274.00	29920	421.00	5028
110.00	121064	188.00	2279	275.00	174080	422.00	5483
111.00	18576	189.00	6371	276.00	23264	423.00	38544
112.00	2457	190.00	1001	277.00	15062	424.00	7675
113.00	555	191.00	2799	278.00	2655	425.00	1084
115.00	193	192.00	7073	279.00	454	434.00	188
117.00	59280	193.00	7506	281.00	172	435.00	197
118.00	4361	194.00	1698	282.00	214	436.00	464
119.00	561	195.00	699	283.00	1799	437.00	538
120.00	1065	196.00	17440	284.00	953	438.00	683

Report Date: 20-Aug-2019 15:46:38

Chrom Revision: 2.3 15-Jul-2019 06:58:08

Data File: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151883.D\1,4_Dx_SIM_HP5973U.rsl\sp

Injection Date: 20-Aug-2019 10:12:30

Spectrum: Tune Spec :Average 1394-1396(10.03-10.04) Bgrd 1388(9.99)

Base Peak: 442.00

Minimum % Base Peak: 0

Number of Points: 298

m/z	Y	m/z	Y	m/z	Y	m/z	Y
121.00	170	198.00	567168	285.00	2296	439.00	1277
122.00	5089	199.00	37176	286.00	625	441.00	111464
123.00	7787	200.00	3307	289.00	643	442.00	721536
124.00	3193	201.00	2652	290.00	600	443.00	135168
125.00	3490	203.00	4933	291.00	210	444.00	13189
127.00	234048	204.00	24392	292.00	619	445.00	575
128.00	18096	205.00	38624	293.00	3088		
129.00	96832	206.00	153280	294.00	813		

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151883.D

Injection Date: 20-Aug-2019 10:12:30

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

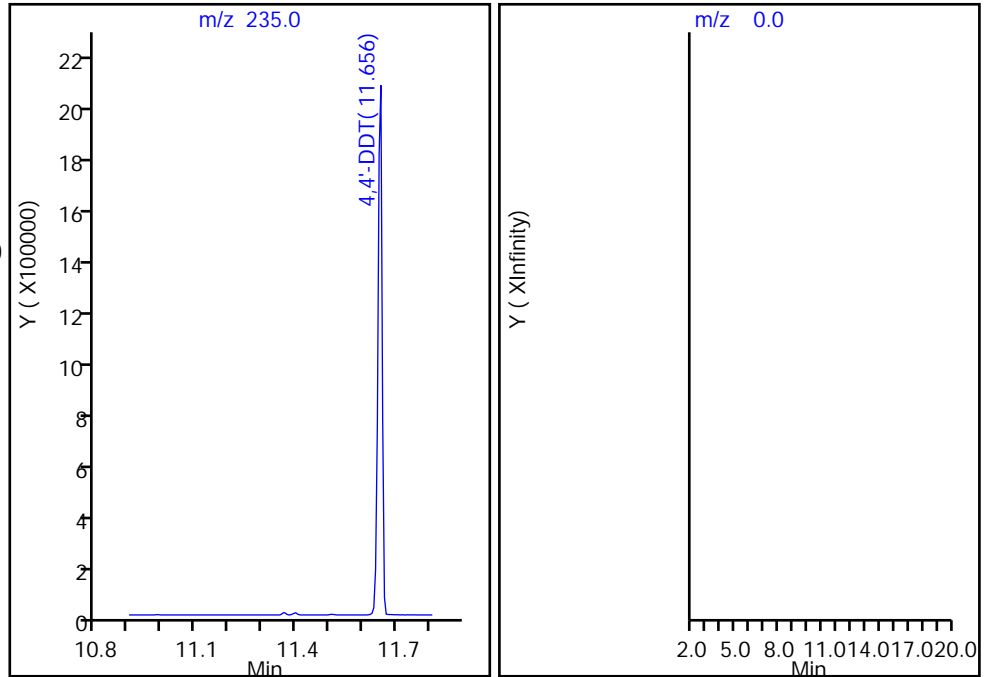
6 4,4'-DDT, Area = 1786264

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\20191016-85159.b\U33153534.D
 Lims ID: DFTPP
 Client ID:
 Sample Type: DFTPP
 Inject. Date: 16-Oct-2019 09:56:30 ALS Bottle#: 2 Worklist Smp#: 2
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 480-0085159-002
 Operator ID: JM Instrument ID: HP5973U
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191016-85159.b\1,4_Dx_SIM_HP5973U.m
 Limit Group: MB - 8270D SIM ID ICAL
 Last Update: 17-Oct-2019 12:38:15 Calib Date: 20-Aug-2019 12:46:30
 Integrator: Picker ID Type: Deconvolution ID
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151889.D
 Column 1 : Det: MS SCAN
 Process Host: CTX0330

First Level Reviewer: marshallj Date: 16-Oct-2019 10:19:49

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	10.988	10.988	0.000	0	1879			NR
5 4,4'-DDD	235	11.282	11.282	0.000	95	14029			NR
6 4,4'-DDT	235	11.565	11.565	0.000	98	1323421	NR		NR

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

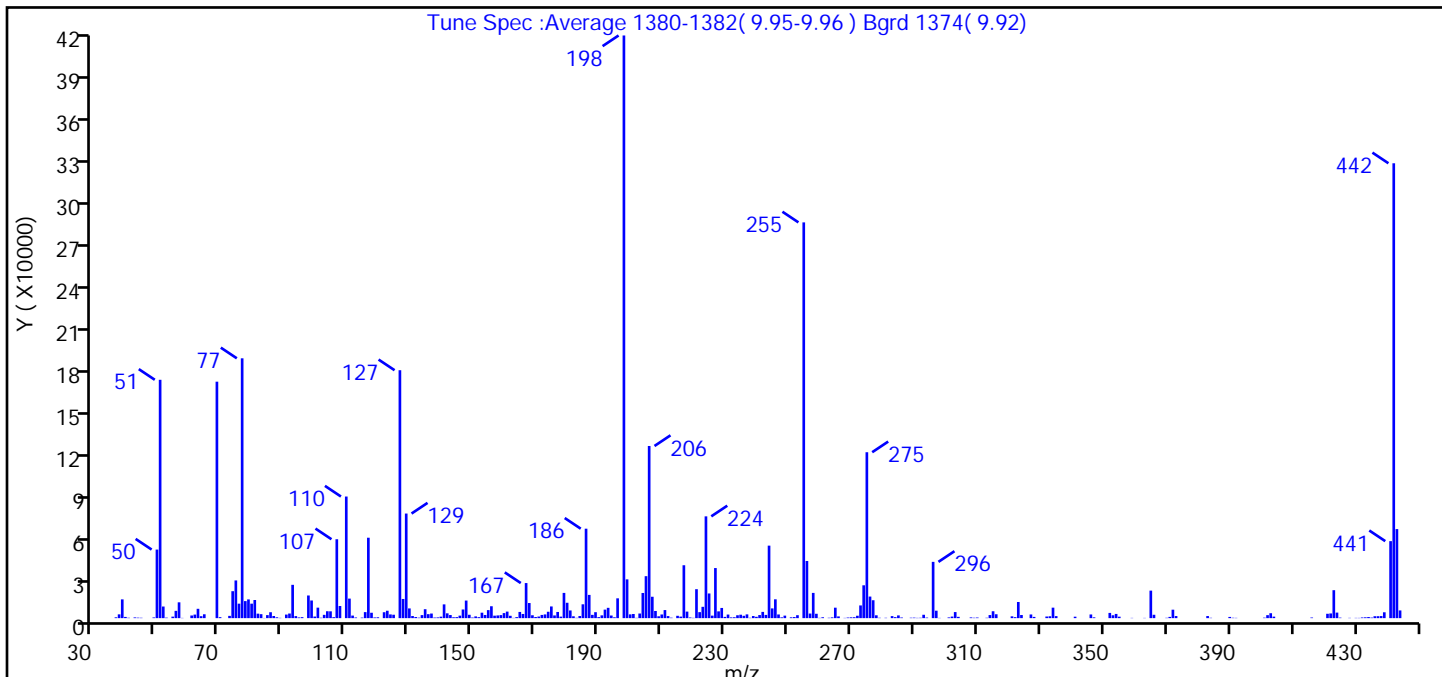
Reagents:

MB_DFTPP_WRK_00360 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191016-85159.b\U33153534.D
 Injection Date: 16-Oct-2019 09:56:30 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 (128.1)
51	10-80% of the base peak	40.9
68	<2% of mass 69	0.0 (0.0)
69	Present	40.6
70	<2% of mass 69	0.2 (0.4)
127	10-80% of the base peak	42.5
197	<2% of mass 198	0.0
199	5-9% of mass 198	6.7
275	10-60% of the base peak	28.5
365	>1% of mass 198	4.7
441	present but <24% of mass 442	13.2 (16.9)
442	base peak, or >50% of 198	78.1
443	15-24% of mass 442	15.3 (19.6)

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191016-85159.b\U33153534.D\1,4_Dx_SIM_HP5973U.rslt\sp
Injection Date: 16-Oct-2019 09:56:30
Spectrum: Tune Spec :Average 1380-1382(9.95-9.96) Bgrd 1374(9.92)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 299

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	595	130.00	6894	206.00	122080	290.00	360
38.00	2688	131.00	1501	207.00	15169	291.00	198
39.00	13315	132.00	784	208.00	5070	292.00	265
40.00	867	133.00	341	209.00	1324	293.00	2393
41.00	269	134.00	2154	210.00	2601	294.00	394
43.00	508	135.00	6332	211.00	5723	296.00	39912
44.00	342	136.00	2823	212.00	1468	297.00	5284
45.00	261	137.00	3269	213.00	326	298.00	167
49.00	493	138.00	417	215.00	1657	301.00	510
50.00	48624	139.00	520	216.00	1085	302.00	1108
51.00	169024	140.00	1048	217.00	37512	303.00	4310
52.00	8239	141.00	9766	218.00	4640	304.00	921
53.00	358	142.00	3417	219.00	474	308.00	512
55.00	1065	143.00	2208	220.00	213	309.00	286
56.00	5171	144.00	631	221.00	20536	310.00	431
57.00	11217	145.00	718	222.00	4257	313.00	265
58.00	167	146.00	1773	223.00	8030	314.00	2184
61.00	1878	147.00	6147	224.00	72184	315.00	4887
62.00	2521	148.00	12469	225.00	17496	316.00	2760
63.00	6624	149.00	2387	226.00	1782	321.00	1275
64.00	1385	150.00	430	227.00	35520	322.00	697
65.00	2743	151.00	1237	228.00	4803	323.00	11454
69.00	167680	152.00	697	229.00	7232	324.00	2214
70.00	687	153.00	3867	230.00	896	327.00	2606
73.00	1611	154.00	2249	231.00	2550	328.00	882
74.00	19112	155.00	5695	232.00	532	332.00	1152
75.00	26736	156.00	8437	233.00	637	333.00	1326
76.00	10267	157.00	1760	234.00	2042	334.00	7435
77.00	184256	158.00	1920	235.00	2435	335.00	1433
78.00	12076	159.00	2160	236.00	1669	341.00	1028
79.00	13287	160.00	3584	237.00	2665	346.00	2609
80.00	10264	161.00	4636	238.00	251	347.00	570
81.00	12862	162.00	1673	239.00	1504	352.00	3707

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191016-85159.b\U33153534.D\1_4_Dx_SIM_HP5973U.rslt\spc

Injection Date: 16-Oct-2019 09:56:30

Spectrum: Tune Spec :Average 1380-1382(9.95-9.96) Bgrd 1374(9.92)

Base Peak: 198.00

Minimum % Base Peak: 0

Number of Points: 299

m/z	Y	m/z	Y	m/z	Y	m/z	Y
82.00	3179	163.00	178	240.00	954	353.00	2045
83.00	2819	164.00	724	241.00	2185	354.00	2988
84.00	132	165.00	4401	242.00	4428	355.00	1030
85.00	2146	166.00	2954	243.00	2292	359.00	180
86.00	4194	167.00	24880	244.00	51416	363.00	169
87.00	1520	168.00	10720	245.00	6906	365.00	19512
88.00	601	169.00	2045	246.00	13358	366.00	2388
89.00	194	170.00	794	247.00	2613	370.00	236
91.00	2533	171.00	1138	248.00	559	371.00	879
92.00	3271	172.00	2277	249.00	1782	372.00	5993
93.00	23624	173.00	2639	251.00	589	373.00	1482
94.00	1442	174.00	4527	252.00	767	383.00	1490
95.00	498	175.00	8291	253.00	2088	384.00	242
96.00	696	176.00	1923	255.00	280640	390.00	858
98.00	16069	177.00	4379	256.00	40520	391.00	270
99.00	12520	178.00	1067	257.00	3252	392.00	199
100.00	1131	179.00	17896	258.00	17896	401.00	355
101.00	7436	180.00	10904	259.00	3098	402.00	2115
102.00	272	181.00	5446	260.00	198	403.00	3493
103.00	2342	182.00	1317	261.00	622	404.00	1063
104.00	4894	183.00	229	263.00	263	416.00	440
105.00	4840	184.00	1499	264.00	543	421.00	3101
106.00	687	185.00	9819	265.00	7415	422.00	3333
107.00	55944	186.00	63432	266.00	1227	423.00	19824
108.00	8609	187.00	16480	268.00	178	424.00	3932
110.00	86240	188.00	2326	269.00	426	425.00	364
111.00	13855	189.00	4223	270.00	572	428.00	197
112.00	1826	190.00	718	271.00	653	430.00	185
113.00	470	191.00	1978	272.00	1703	431.00	178
115.00	385	192.00	6038	273.00	9010	432.00	472
116.00	4273	193.00	7319	274.00	23296	433.00	584
117.00	57032	194.00	1855	275.00	117656	434.00	775
118.00	3823	195.00	604	276.00	15301	435.00	388
119.00	486	196.00	14055	277.00	12693	436.00	1352

Report Date: 17-Oct-2019 12:38:16

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

Data File:

\\chromna\Buffalo\ChromData\HP5973U\20191016-85159.b\U33153534.D\1,4_Dx_SIM_HP5973U.rsl\sp

Injection Date:

16-Oct-2019 09:56:30

Spectrum:

Tune Spec :Average 1380-1382(9.95-9.96) Bgrd 1374(9.92)

Base Peak:

198.00

Minimum % Base Peak: 0

Number of Points:

299

m/z	Y	m/z	Y	m/z	Y	m/z	Y
120.00	607	198.00	413184	278.00	2022	437.00	1377
122.00	4195	199.00	27504	279.00	262	438.00	1483
123.00	5247	200.00	2684	281.00	247	439.00	4156
124.00	2640	201.00	2947	283.00	1440	441.00	54600
125.00	2417	202.00	209	284.00	715	442.00	322560
127.00	175808	203.00	3274	285.00	1937	443.00	63152
128.00	13592	204.00	17840	286.00	455	444.00	5470
129.00	74176	205.00	29760	289.00	296		

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191016-85159.b\U33153534.D
Injection Date: 16-Oct-2019 09:56:30 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

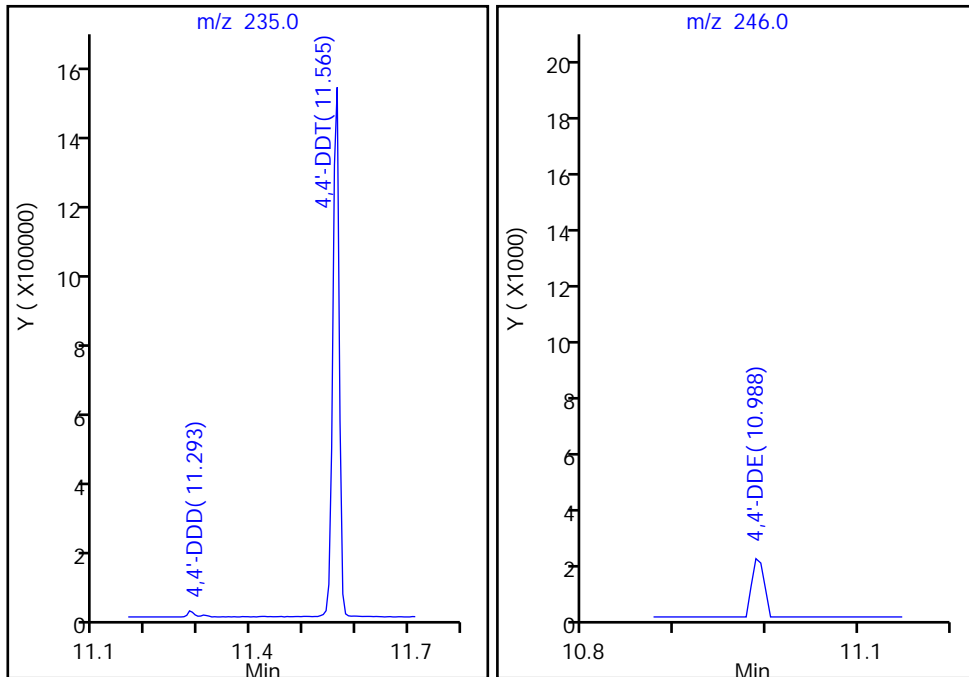
6 4,4'-DDT, Detector: MS SCAN

SW-846 Method

%Breakdown =
(Area Breakdown Cpnds/
Total Area Breakdown Cpnds) * 100

6 4,4'-DDT, Area = 1323421
5 4,4'-DDD, Area = 14029
7 4,4'-DDE, Area = 1879

%Breakdown: 1.19%, <= 20.00%
Passed



Eurofins TestAmerica, Buffalo
Target Compound Quantitation Report

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191017-85193.b\U33153552.D
 Lims ID: DFTPP
 Client ID:
 Sample Type: DFTPP
 Inject. Date: 17-Oct-2019 12:05:30 ALS Bottle#: 2 Worklist Smp#: 2
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 480-0085193-002
 Operator ID: JM Instrument ID: HP5973U
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191017-85193.b\1,4_Dx_SIM_HP5973U.m
 Limit Group: MB - 8270D SIM ID ICAL
 Last Update: 18-Oct-2019 11:59:11 Calib Date: 20-Aug-2019 12:46:30
 Integrator: Picker ID Type: Deconvolution ID
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151889.D
 Column 1 : Det: MS SCAN
 Process Host: CTX0339

First Level Reviewer: marshallj

Date: 17-Oct-2019 12:28:38

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	10.988	10.988	0.000	0	2382			NR
5 4,4'-DDD	235	11.282	11.282	0.000	46	11993			NR
6 4,4'-DDT	235	11.565	11.565	0.000	98	1352565	NR		NR

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

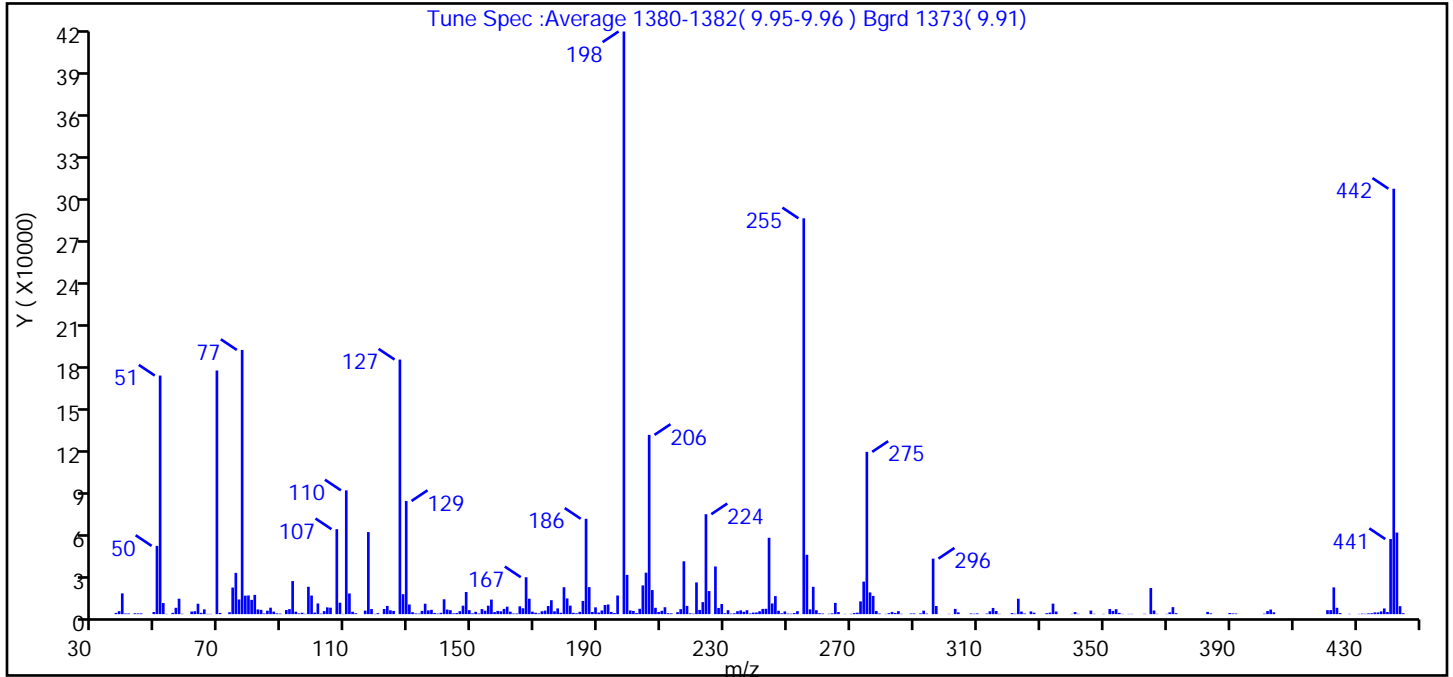
Reagents:

MB_DFTPP_WRK_00360 Amount Added: 1.00 Units: mL

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191017-85193.b\U33153552.D
 Injection Date: 17-Oct-2019 12:05:30 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 (137.0)
51	10-80% of the base peak	40.9
68	<2% of mass 69	0.0 (0.0)
69	Present	41.8
70	<2% of mass 69	0.2 (0.5)
127	10-80% of the base peak	43.7
197	<2% of mass 198	0.0
199	5-9% of mass 198	6.7
275	10-60% of the base peak	27.9
365	>1% of mass 198	4.5
441	present but <24% of mass 442	12.9 (17.7)
442	base peak, or >50% of 198	73.0
443	15-24% of mass 442	14.0 (19.2)

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191017-85193.b\U33153552.D\1,4_Dx_SIM_HP5973U.rslt\spc
 Injection Date: 17-Oct-2019 12:05:30
 Spectrum: Tune Spec :Average 1380-1382(9.95-9.96) Bgrd 1373(9.91)
 Base Peak: 198.00
 Minimum % Base Peak: 0
 Number of Points: 306

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	875	130.00	6808	208.00	4477	296.00	39272
38.00	2068	131.00	1378	209.00	1503	297.00	5744
39.00	14704	132.00	501	210.00	2352	301.00	220
40.00	477	133.00	396	211.00	4882	303.00	3725
41.00	478	134.00	2321	212.00	684	304.00	1250
43.00	610	135.00	7366	213.00	544	308.00	477
44.00	541	136.00	2645	215.00	1388	309.00	285
45.00	517	137.00	3079	216.00	3535	310.00	516
49.00	1508	138.00	819	217.00	37392	313.00	429
50.00	48280	139.00	419	218.00	5833	314.00	2044
51.00	168768	140.00	936	219.00	549	315.00	4391
52.00	7865	141.00	10532	220.00	353	316.00	2228
53.00	179	142.00	3244	221.00	22440	317.00	242
55.00	914	143.00	2834	222.00	2987	321.00	732
56.00	4479	144.00	534	223.00	8501	322.00	303
57.00	10899	145.00	790	224.00	70704	323.00	10888
58.00	272	146.00	2094	225.00	16335	324.00	1819
61.00	1840	147.00	6005	227.00	33728	325.00	459
62.00	2057	148.00	15671	228.00	4376	327.00	1958
63.00	7367	149.00	2811	229.00	7185	328.00	1018
64.00	945	150.00	548	230.00	643	332.00	704
65.00	3389	151.00	1647	231.00	2808	333.00	1078
66.00	206	152.00	437	232.00	389	334.00	7431
67.00	194	153.00	3595	233.00	611	335.00	1863
69.00	172352	154.00	2468	234.00	2096	340.00	194
70.00	864	155.00	5986	235.00	2673	341.00	1484
73.00	1345	156.00	10294	236.00	1694	342.00	244
74.00	18808	157.00	1447	237.00	2780	346.00	2553
75.00	29200	158.00	2284	238.00	507	347.00	264
76.00	10373	159.00	2005	239.00	1113	350.00	190
77.00	186880	160.00	3721	240.00	1180	352.00	3607
78.00	13074	161.00	5278	241.00	2035	353.00	2285
79.00	13212	162.00	1742	242.00	3703	354.00	3502

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191017-85193.b\U33153552.D\1,4_Dx_SIM_HP5973U.rsl\spc

Injection Date: 17-Oct-2019 12:05:30

Spectrum: Tune Spec :Average 1380-1382(9.95-9.96) Bgrd 1373(9.91)

Base Peak: 198.00

Minimum % Base Peak: 0

Number of Points: 306

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	10109	163.00	438	243.00	3787	355.00	901
81.00	13602	164.00	467	244.00	54032	356.00	174
82.00	3328	165.00	5548	245.00	7583	358.00	177
83.00	3053	166.00	4166	246.00	12747	359.00	173
84.00	463	167.00	26120	247.00	2394	363.00	249
85.00	2429	168.00	10927	248.00	587	365.00	18464
86.00	4563	169.00	1749	249.00	1948	366.00	2580
87.00	1802	170.00	1008	250.00	416	367.00	204
88.00	563	171.00	523	251.00	343	370.00	204
89.00	410	172.00	2032	252.00	759	371.00	1306
91.00	2891	173.00	2493	253.00	2121	372.00	4942
92.00	3558	174.00	5749	255.00	280000	373.00	729
93.00	23416	175.00	9870	256.00	42000	383.00	1563
94.00	1770	176.00	2018	257.00	3397	384.00	565
95.00	521	177.00	4069	258.00	19336	390.00	777
96.00	999	178.00	998	259.00	2789	391.00	500
97.00	246	179.00	19048	260.00	634	392.00	455
98.00	19344	180.00	11110	261.00	433	401.00	364
99.00	13150	181.00	6029	263.00	276	402.00	2197
100.00	1068	182.00	939	264.00	547	403.00	3273
101.00	7575	183.00	614	265.00	7959	404.00	1284
102.00	391	184.00	1631	266.00	1482	421.00	2833
103.00	2132	185.00	9344	268.00	168	422.00	2853
104.00	4788	186.00	67464	270.00	234	423.00	18944
105.00	4567	187.00	19120	271.00	775	424.00	4494
107.00	60112	188.00	1547	272.00	1051	425.00	744
108.00	8081	189.00	4822	273.00	9038	428.00	222
109.00	170	190.00	1119	274.00	23016	431.00	195
110.00	87568	191.00	2583	275.00	114800	432.00	360
111.00	14642	192.00	6484	276.00	15365	433.00	259
112.00	1671	193.00	6836	277.00	12903	434.00	558
113.00	647	194.00	1557	278.00	2197	435.00	618
116.00	2481	195.00	802	279.00	459	436.00	1231
117.00	58040	196.00	13182	281.00	173	437.00	1201

Report Date: 18-Oct-2019 11:59:11

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

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191017-85193.b\U33153552.D\1,4_Dx_SIM_HP5973U.rsl\sp

Injection Date: 17-Oct-2019 12:05:30

Spectrum: Tune Spec :Average 1380-1382(9.95-9.96) Bgrd 1373(9.91)

Base Peak: 198.00

Minimum % Base Peak: 0

Number of Points: 306

m/z	Y	m/z	Y	m/z	Y	m/z	Y
118.00	3592	198.00	412160	282.00	687	438.00	1970
119.00	202	199.00	27784	283.00	1567	439.00	4051
120.00	706	200.00	2624	284.00	808	440.00	1510
122.00	3637	201.00	2296	285.00	2115	441.00	53128
123.00	5810	202.00	797	286.00	247	442.00	300928
124.00	2718	203.00	3789	289.00	447	443.00	57696
125.00	2290	204.00	20336	290.00	495	444.00	5629
127.00	180096	205.00	29344	292.00	560	445.00	678
128.00	14117	206.00	126800	293.00	2450		
129.00	80064	207.00	17040	294.00	391		

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191017-85193.b\U33153552.D

Injection Date: 17-Oct-2019 12:05:30

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

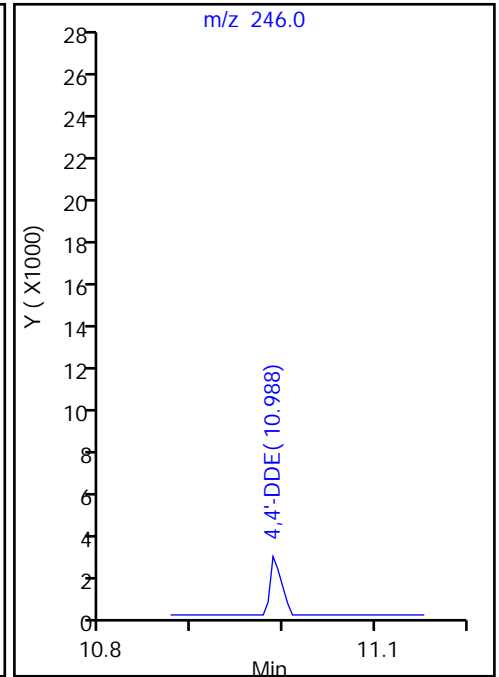
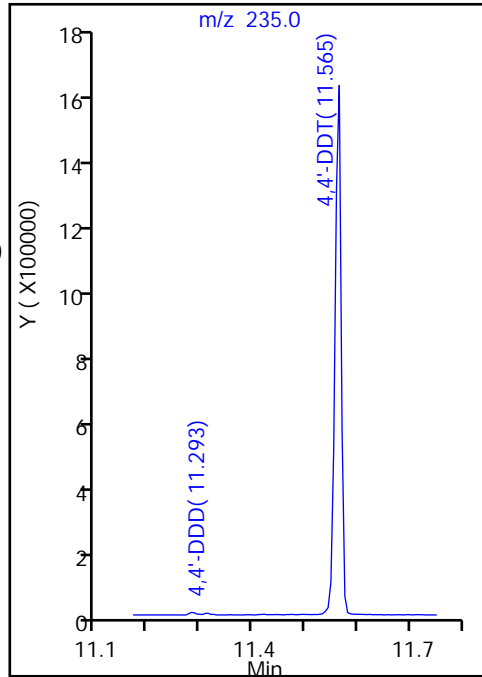
6 4,4'-DDT, Area = 1352565

5 4,4'-DDD, Area = 11993

7 4,4'-DDE, Area = 2382

%Breakdown: 1.05%, <= 20.00%

Passed



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-160746-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 480-498188/1-A
 Matrix: Water Lab File ID: U33153541.D
 Analysis Method: 8270D SIM ID Date Collected: _____
 Extract. Method: 3510C Date Extracted: 10/15/2019 15:48
 Sample wt/vol: 1000 (mL) Date Analyzed: 10/16/2019 16:08
 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.: 498310 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\20191016-85159.b\U33153541.D
 Lims ID: MB 480-498188/1-A
 Client ID:
 Sample Type: MB
 Inject. Date: 16-Oct-2019 16:08:30 ALS Bottle#: 9 Worklist Smp#: 9
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 480-0085159-009
 Operator ID: JM Instrument ID: HP5973U
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191016-85159.b\1,4_Dx_SIM_HP5973U.m
 Limit Group: MB - 8270D SIM ID ICAL
 Last Update: 17-Oct-2019 12:38:16 Calib Date: 20-Aug-2019 12:46:30
 Integrator: Picker ID Type: RT Order ID
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151889.D
 Column 1 : Det: MS SCAN
 Process Host: CTX0330

First Level Reviewer: marshallj Date: 16-Oct-2019 17:17:08

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	2.823	2.737	0.086	95	141594	10.0	2.76	
3 1,4-Dioxane	88	2.867	2.778	0.089	71	1331		0.0909	
* 2 1,4-Dichlorobenzene-d4	152	5.928	5.924	0.004	96	444241	4.00	4.00	

Reagents:

MB_LLIS_WRK_00179 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191016-85159.b\U33153541.D

Injection Date: 16-Oct-2019 16:08:30

Instrument ID: HP5973U

Operator ID: JM

Lims ID: MB 480-498188/1-A

Worklist Smp#: 9

Client ID:

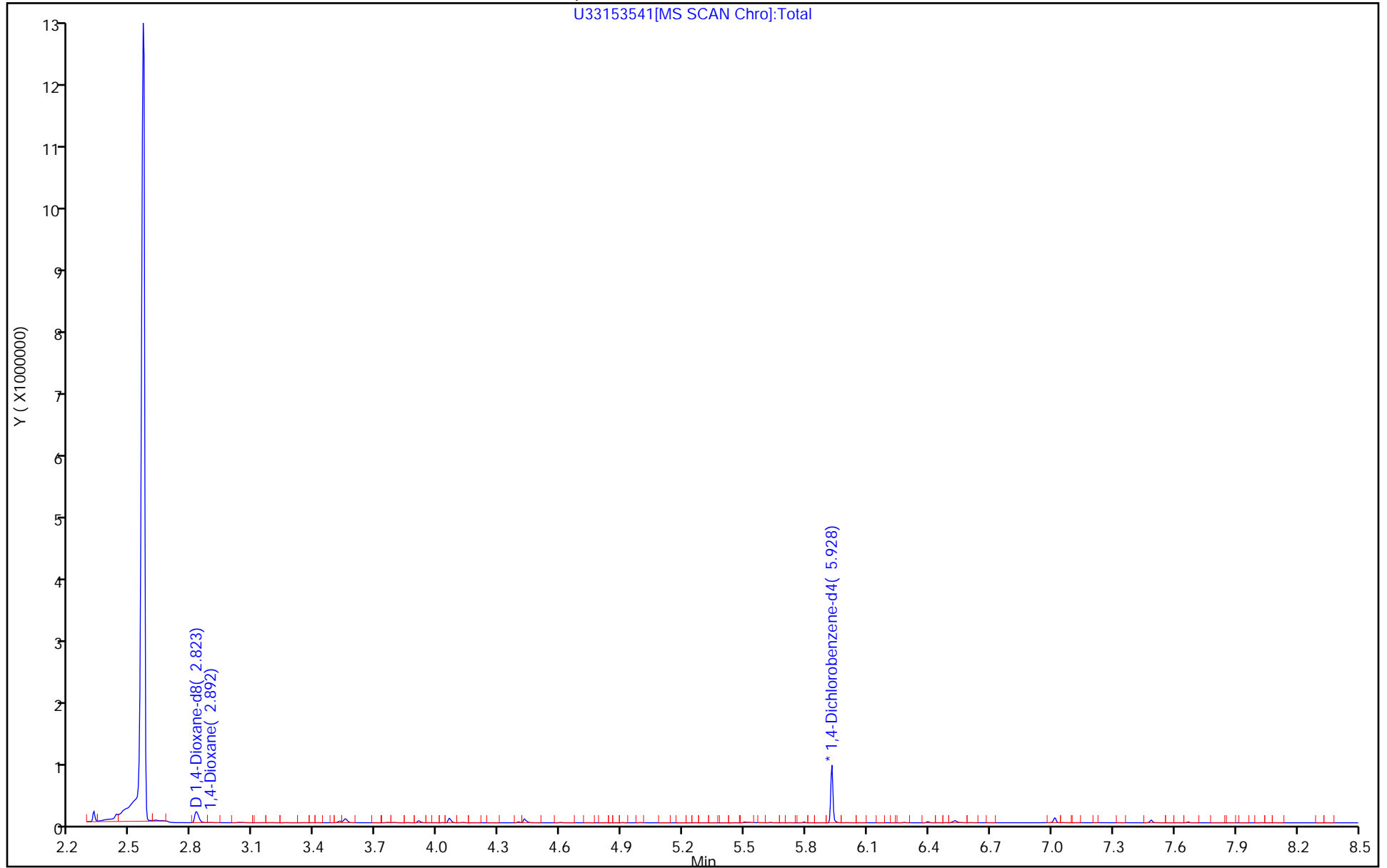
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 9

Method: 1,4_Dx_SIM_HP5973U

Limit Group: MB - 8270D SIM ID ICAL



Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191016-85159.b\U33153541.D

Injection Date: 16-Oct-2019 16:08:30

Instrument ID: HP5973U

Lims ID: MB 480-498188/1-A

Client ID:

Operator ID: JM

ALS Bottle#: 9

Worklist Smp#: 9

Injection Vol: 1.0 ul

Dil. Factor: 1.0000

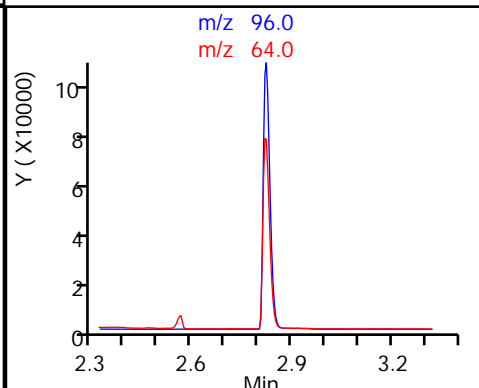
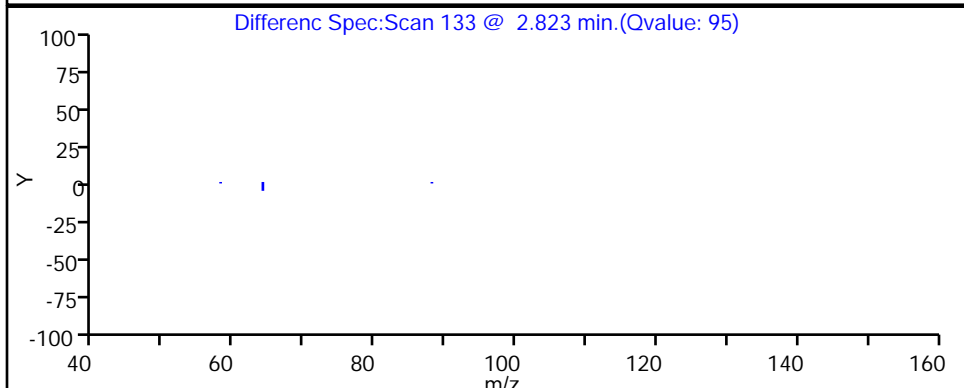
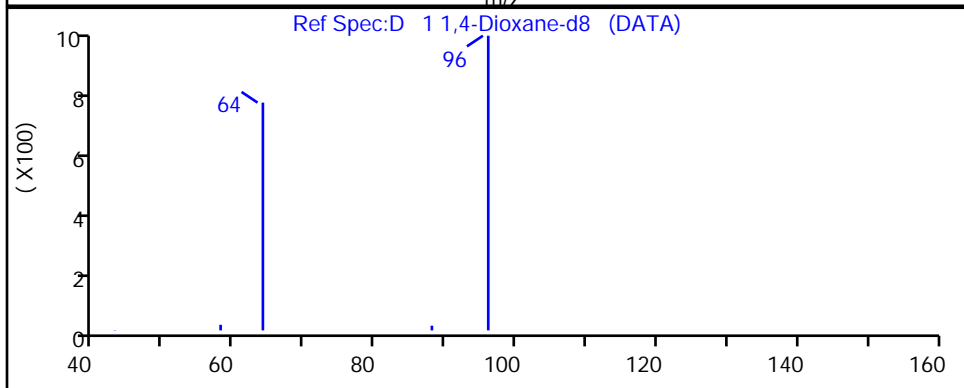
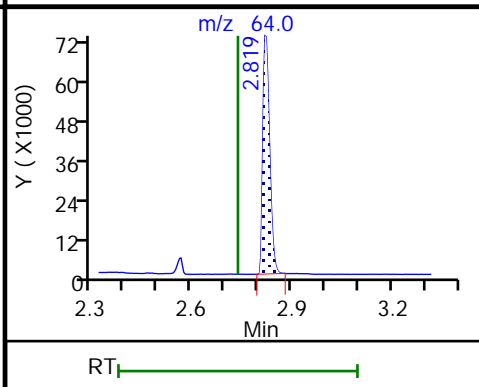
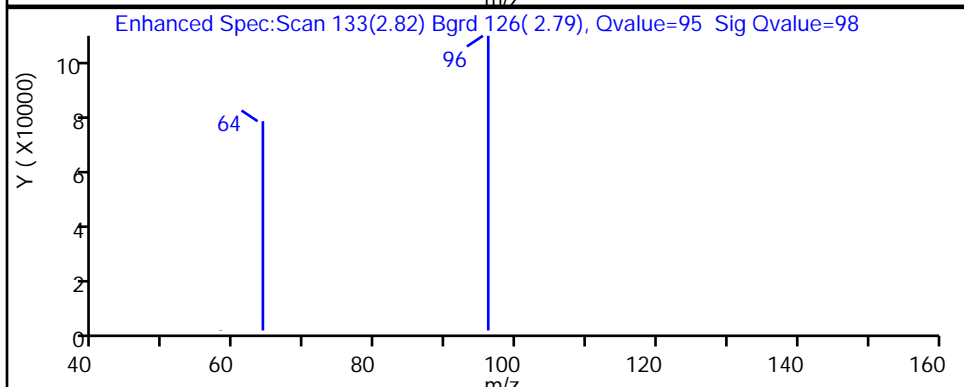
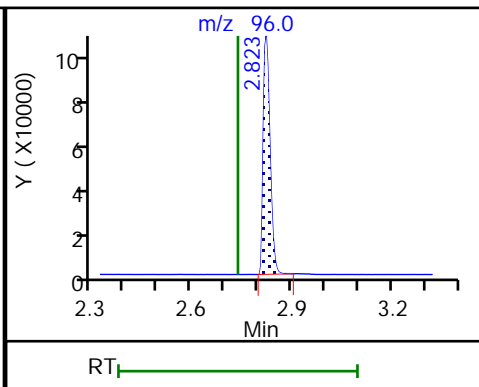
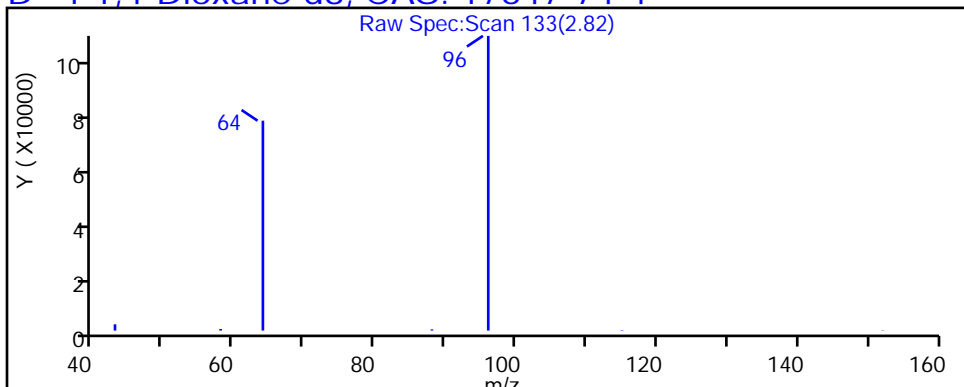
Method: 1,4_Dx_SIM_HP5973U

Limit Group: MB - 8270D SIM ID ICAL

Column:

Detector MS SCAN

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



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-160746-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 480-498188/2-A
 Matrix: Water Lab File ID: U33153542.D
 Analysis Method: 8270D SIM ID Date Collected: _____
 Extract. Method: 3510C Date Extracted: 10/15/2019 15:48
 Sample wt/vol: 1000 (mL) Date Analyzed: 10/16/2019 16:31
 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.: 498310 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.32		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\20191016-85159.b\U33153542.D
 Lims ID: LCS 480-498188/2-A
 Client ID:
 Sample Type: LCS
 Inject. Date: 16-Oct-2019 16:31:30 ALS Bottle#: 10 Worklist Smp#: 10
 Injection Vol: 1.0 ul Dil. Factor: 1.0000
 Sample Info: 480-0085159-010
 Operator ID: JM Instrument ID: HP5973U
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191016-85159.b\1,4_Dx_SIM_HP5973U.m
 Limit Group: MB - 8270D SIM ID ICAL
 Last Update: 17-Oct-2019 12:38:16 Calib Date: 20-Aug-2019 12:46:30
 Integrator: Picker ID Type: RT Order ID
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151889.D
 Column 1 : Det: MS SCAN
 Process Host: CTX0330

First Level Reviewer: marshallj Date: 16-Oct-2019 17:17:16

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	2.876	2.737	0.139	96	141858	10.0	2.79	
3 1,4-Dioxane	88	2.916	2.778	0.138	91	19305	1.00	1.32	E
* 2 1,4-Dichlorobenzene-d4	152	5.932	5.924	0.008	95	440200	4.00	4.00	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Reagents:

MB_LLIS_WRK_00179 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191016-85159.b\U33153542.D

Injection Date: 16-Oct-2019 16:31:30

Instrument ID: HP5973U

Operator ID: JM

Lims ID: LCS 480-498188/2-A

Worklist Smp#: 10

Client ID:

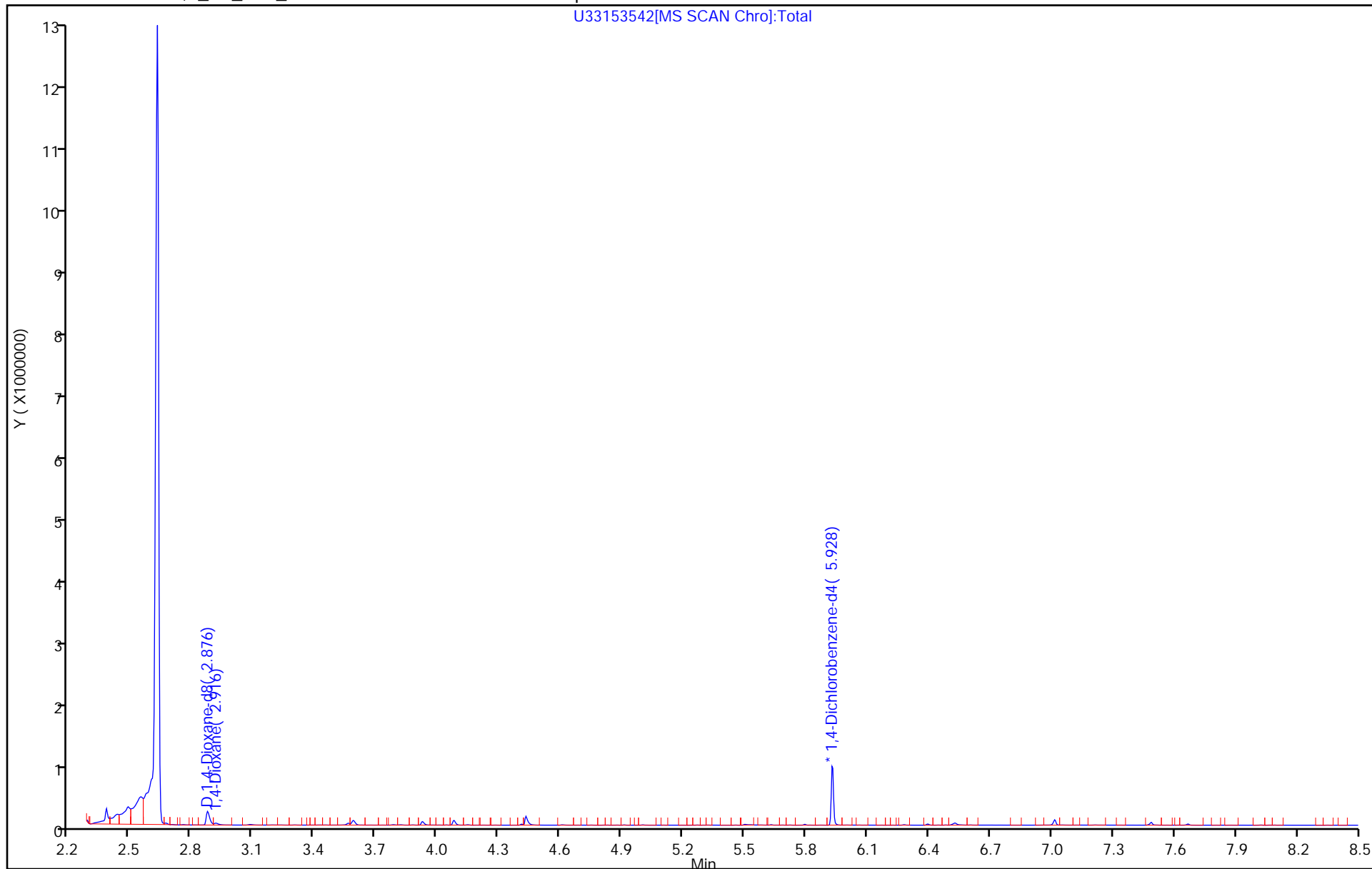
Injection Vol: 1.0 ul

Dil. Factor: 1.0000

ALS Bottle#: 10

Method: 1,4_Dx_SIM_HP5973U

Limit Group: MB - 8270D SIM ID ICAL



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-160746-1
 SDG No.: _____
 Client Sample ID: SPW100919 MS Lab Sample ID: 480-160746-3 MS
 Matrix: Water Lab File ID: U33153555.D
 Analysis Method: 8270D SIM ID Date Collected: 10/09/2019 16:24
 Extract. Method: 3510C Date Extracted: 10/15/2019 15:48
 Sample wt/vol: 1000 (mL) Date Analyzed: 10/17/2019 13:20
 Con. Extract Vol.: 1 (mL) Dilution Factor: 10
 Injection Volume: 1 (uL) Level: (low/med) Low
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 498604 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	23.7		2.0	1.0

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\20191017-85193.b\U33153555.D
 Lims ID: 480-160746-A-3-A MS
 Client ID: SPW100919
 Sample Type: MS
 Inject. Date: 17-Oct-2019 13:20:30 ALS Bottle#: 5 Worklist Smp#: 4
 Injection Vol: 1.0 ul Dil. Factor: 10.0000
 Sample Info: 480-0085193-004
 Operator ID: JM Instrument ID: HP5973U
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191017-85193.b\1,4_Dx_SIM_HP5973U.m
 Limit Group: MB - 8270D SIM ID ICAL
 Last Update: 18-Oct-2019 11:59:12 Calib Date: 20-Aug-2019 12:46:30
 Integrator: Picker ID Type: RT Order ID
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151889.D
 Column 1 : Det: MS SCAN
 Process Host: CTX0339

First Level Reviewer: marshallj Date: 17-Oct-2019 16:38:37

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	2.778	2.749	0.029	95	13646	1.00	0.2777	
3 1,4-Dioxane	88	2.815	2.790	0.025	91	33405	0.1000	2.37	E
* 2 1,4-Dichlorobenzene-d4	152	5.924	5.924	0.000	97	424691	0.4000	4.00	
7 4,4'-DDE	246		10.988					ND	
5 4,4'-DDD	235		11.282					ND	
6 4,4'-DDT	235		11.565					ND	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Reagents:

MB_LLIS_WRK_00179 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191017-85193.b\U33153555.D

Injection Date: 17-Oct-2019 13:20:30 Instrument ID: HP5973U

Operator ID: JM

Lims ID: 480-160746-A-3-A MS

Worklist Smp#: 4

Client ID: SPW100919

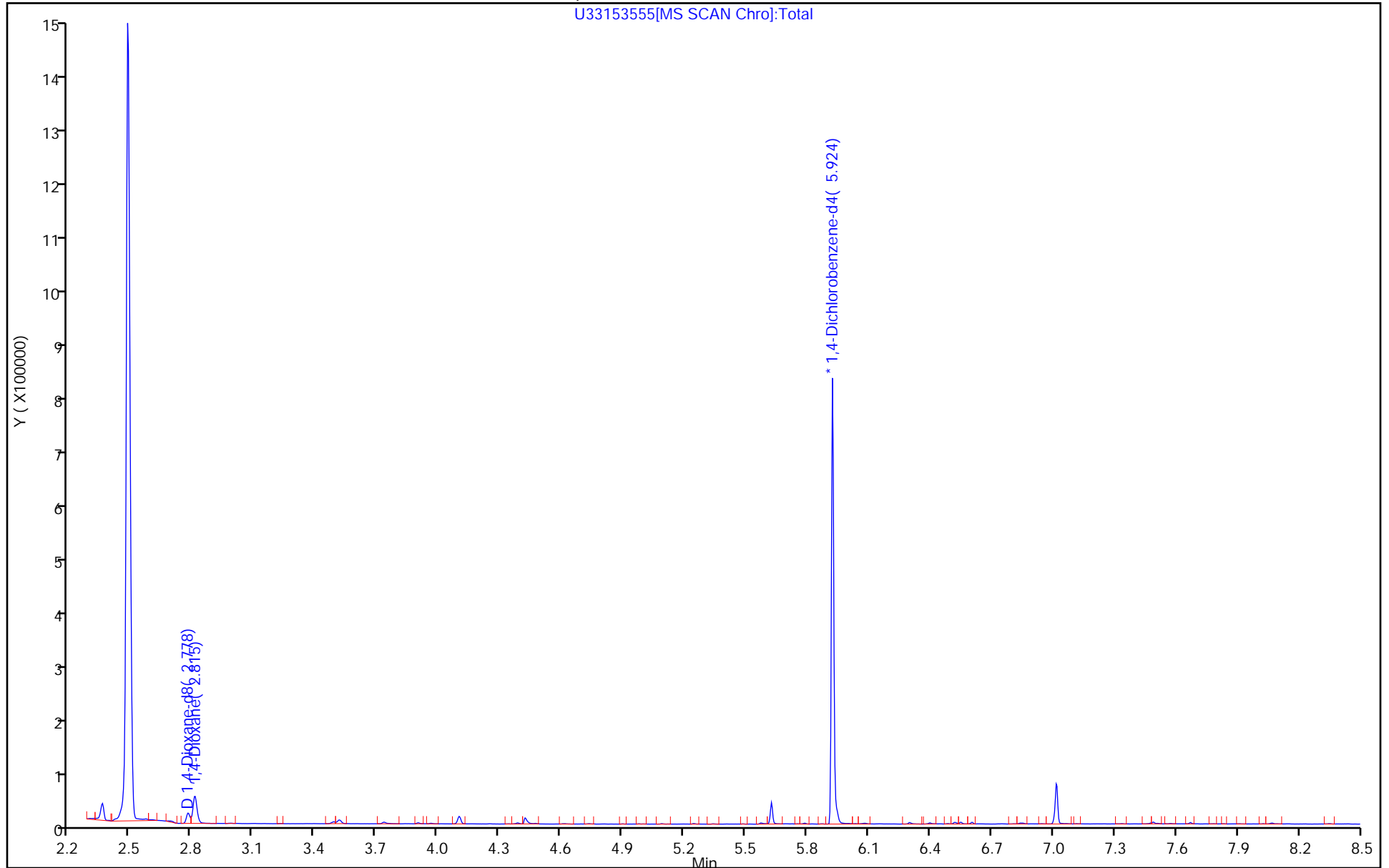
Injection Vol: 1.0 ul

Dil. Factor: 10.0000

ALS Bottle#: 5

Method: 1,4_Dx_SIM_HP5973U

Limit Group: MB - 8270D SIM ID ICAL



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-160746-1
 SDG No.: _____
 Client Sample ID: SPW100919 MSD Lab Sample ID: 480-160746-3 MSD
 Matrix: Water Lab File ID: U33153556.D
 Analysis Method: 8270D SIM ID Date Collected: 10/09/2019 16:24
 Extract. Method: 3510C Date Extracted: 10/15/2019 15:48
 Sample wt/vol: 1000 (mL) Date Analyzed: 10/17/2019 13:44
 Con. Extract Vol.: 1 (mL) Dilution Factor: 10
 Injection Volume: 1 (uL) Level: (low/med) Low
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 498604 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	23.1		2.0	1.0

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\20191017-85193.b\U33153556.D
 Lims ID: 480-160746-B-3-A MSD
 Client ID: SPW100919
 Sample Type: MSD
 Inject. Date: 17-Oct-2019 13:44:30 ALS Bottle#: 6 Worklist Smp#: 5
 Injection Vol: 1.0 ul Dil. Factor: 10.0000
 Sample Info: 480-0085193-005
 Operator ID: JM Instrument ID: HP5973U
 Method: \\chromna\Buffalo\ChromData\HP5973U\20191017-85193.b\1,4_Dx_SIM_HP5973U.m
 Limit Group: MB - 8270D SIM ID ICAL
 Last Update: 18-Oct-2019 11:59:12 Calib Date: 20-Aug-2019 12:46:30
 Integrator: Picker ID Type: RT Order ID
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\chromna\Buffalo\ChromData\HP5973U\20190820-83532.b\U33151889.D
 Column 1 : Det: MS SCAN
 Process Host: CTX0339

First Level Reviewer: marshallj

Date: 17-Oct-2019 16:38:42

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	2.782	2.749	0.033	96	13392	1.00	0.2696	
3 1,4-Dioxane	88	2.815	2.790	0.025	91	32050	0.1000	2.31	E
* 2 1,4-Dichlorobenzene-d4	152	5.924	5.924	0.000	97	429356	0.4000	4.00	
7 4,4'-DDE	246		10.988					ND	
5 4,4'-DDD	235		11.282					ND	
6 4,4'-DDT	235		11.565					ND	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Reagents:

MB_LLIS_WRK_00179 Amount Added: 20.00 Units: uL Run Reagent

Eurofins TestAmerica, Buffalo

Data File: \\chromna\Buffalo\ChromData\HP5973U\20191017-85193.b\U33153556.D

Injection Date: 17-Oct-2019 13:44:30

Instrument ID: HP5973U

Operator ID: JM

Lims ID: 480-160746-B-3-A MSD

Worklist Smp#: 5

Client ID: SPW100919

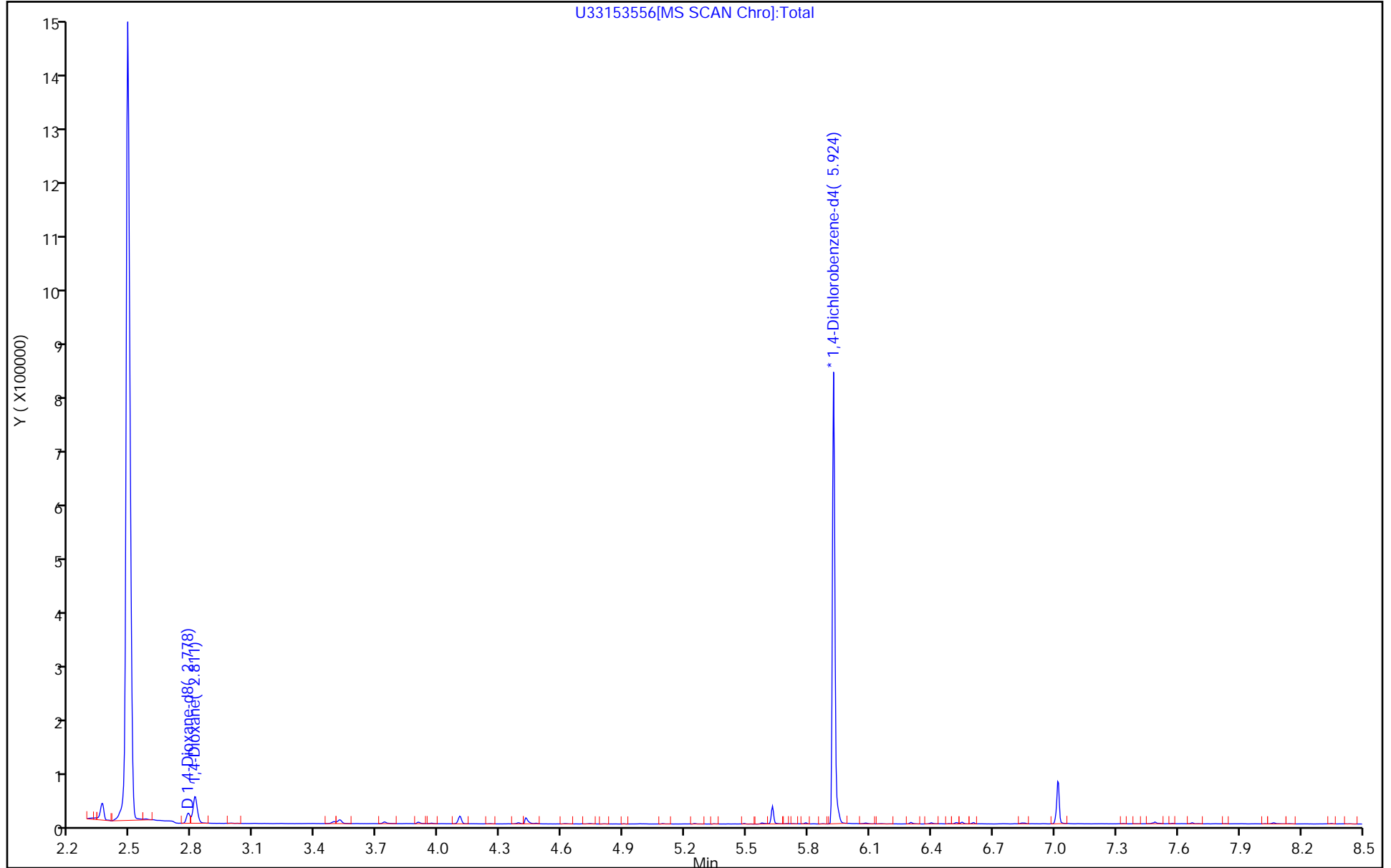
Injection Vol: 1.0 ul

Dil. Factor: 10.0000

ALS Bottle#: 6

Method: 1,4_Dx_SIM_HP5973U

Limit Group: MB - 8270D SIM ID ICAL



GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, BuffaloJob No.: 480-160746-1

SDG No.: _____

Instrument ID: HP5973UStart Date: 08/20/2019 10:12Analysis Batch Number: 487886End Date: 08/20/2019 21:51

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 480-487886/2		08/20/2019 10:12	1	U33151883.D	RXI-5Sil MS(0.5 0.25 (mm))
IC 480-487886/3		08/20/2019 10:49	1	U33151884.D	RXI-5Sil MS(0.5 0.25 (mm))
IC 480-487886/4		08/20/2019 11:12	1	U33151885.D	RXI-5Sil MS(0.5 0.25 (mm))
ICIS 480-487886/5		08/20/2019 11:36	1	U33151886.D	RXI-5Sil MS(0.5 0.25 (mm))
IC 480-487886/6		08/20/2019 11:59	1	U33151887.D	RXI-5Sil MS(0.5 0.25 (mm))
IC 480-487886/7		08/20/2019 12:23	1	U33151888.D	RXI-5Sil MS(0.5 0.25 (mm))
IC 480-487886/8		08/20/2019 12:46	1	U33151889.D	RXI-5Sil MS(0.5 0.25 (mm))
ICV 480-487886/9		08/20/2019 13:09	1		RXI-5Sil MS(0.5 0.25 (mm))
CCVIS 480-487886/10		08/20/2019 13:33	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		08/20/2019 13:56	20		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		08/20/2019 14:19	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		08/20/2019 14:43	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		08/20/2019 15:06	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		08/20/2019 15:30	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		08/20/2019 15:54	5		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		08/20/2019 16:18	5		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		08/20/2019 16:42	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		08/20/2019 17:06	5		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		08/20/2019 17:31	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		08/20/2019 17:55	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		08/20/2019 18:19	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		08/20/2019 18:43	5		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		08/20/2019 19:06	5		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		08/20/2019 19:30	5		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		08/20/2019 19:53	5		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		08/20/2019 20:17	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		08/20/2019 20:40	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		08/20/2019 21:04	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		08/20/2019 21:27	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		08/20/2019 21:51	1		RXI-5Sil MS(0.5 0.25 (mm))

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-160746-1

SDG No.: _____

Instrument ID: HP5973U Start Date: 10/16/2019 09:56

Analysis Batch Number: 498310 End Date: 10/16/2019 18:53

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 480-498310/2		10/16/2019 09:56	1	U33153534.D	RXI-5Sil MS(0.5 0.25 (mm))
CCVIS 480-498310/3		10/16/2019 10:25	1	U33153535.D	RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		10/16/2019 10:48	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		10/16/2019 11:12	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		10/16/2019 12:11	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		10/16/2019 12:35	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		10/16/2019 12:59	1		RXI-5Sil MS(0.5 0.25 (mm))
MB 480-498188/1-A		10/16/2019 16:08	1	U33153541.D	RXI-5Sil MS(0.5 0.25 (mm))
LCS 480-498188/2-A		10/16/2019 16:31	1	U33153542.D	RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		10/16/2019 16:55	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		10/16/2019 17:19	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		10/16/2019 17:42	1		RXI-5Sil MS(0.5 0.25 (mm))
480-160746-1		10/16/2019 18:06	1	U33153546.D	RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		10/16/2019 18:30	1		RXI-5Sil MS(0.5 0.25 (mm))
480-160746-4		10/16/2019 18:53	1	U33153548.D	RXI-5Sil MS(0.5 0.25 (mm))

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, BuffaloJob No.: 480-160746-1

SDG No.: _____

Instrument ID: HP5973UStart Date: 10/17/2019 12:05Analysis Batch Number: 498604End Date: 10/17/2019 20:54

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 480-498604/2		10/17/2019 12:05	1	U33153552.D	RXI-5Sil MS(0.5 0.25 (mm))
CCVIS 480-498604/3		10/17/2019 12:33	1	U33153553.D	RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		10/17/2019 12:57	1		RXI-5Sil MS(0.5 0.25 (mm))
480-160746-3 MS		10/17/2019 13:20	10	U33153555.D	RXI-5Sil MS(0.5 0.25 (mm))
480-160746-3 MSD		10/17/2019 13:44	10	U33153556.D	RXI-5Sil MS(0.5 0.25 (mm))
480-160746-3		10/17/2019 14:08	10	U33153557.D	RXI-5Sil MS(0.5 0.25 (mm))
480-160746-2		10/17/2019 14:32	25	U33153558.D	RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		10/17/2019 14:56	5		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		10/17/2019 15:20	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		10/17/2019 15:44	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		10/17/2019 16:08	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		10/17/2019 16:32	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		10/17/2019 16:56	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		10/17/2019 17:20	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		10/17/2019 17:45	5		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		10/17/2019 18:09	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		10/17/2019 18:33	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		10/17/2019 18:56	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		10/17/2019 19:20	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		10/17/2019 19:43	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		10/17/2019 20:07	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		10/17/2019 20:30	1		RXI-5Sil MS(0.5 0.25 (mm))
ZZZZZ		10/17/2019 20:54	5		RXI-5Sil MS(0.5 0.25 (mm))

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Buffalo Job No.: 480-160746-1

SDG No.: _____

Batch Number: 498188 Batch Start Date: 10/15/19 15:48 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 00017
MB 480-498188/1		3510C, 8270D SIM ID		1000 mL	1 mL	7 SU	<2 SU		1 mL
LCS 480-498188/2		3510C, 8270D SIM ID		1000 mL	1 mL	7 SU	<2 SU	1 mL	1 mL
480-160746-A-3 MS	SPW100919	3510C, 8270D SIM ID	T	1000 mL	1 mL	7 SU	<2 SU	1 mL	1 mL
480-160746-B-3 MSD	SPW100919	3510C, 8270D SIM ID	T	1000 mL	1 mL	7 SU	<2 SU	1 mL	1 mL
480-160746-B-3	SPW100919	3510C, 8270D SIM ID	T	1000 mL	1 mL	7 SU	<2 SU		1 mL
480-160746-A-1	MW25D100919	3510C, 8270D SIM ID	T	1000 mL	1 mL	7 SU	<2 SU		1 mL
480-160746-B-2	EW8100919	3510C, 8270D SIM ID	T	1000 mL	1 mL	7 SU	<2 SU		1 mL
480-160746-B-4	DUPLICATE	3510C, 8270D SIM ID	T	1000 mL	1 mL	7 SU	<2 SU		1 mL

Batch Notes	
Acid Used for pH Adjustment ID	5462086
Analyst ID - Concentration	AG, AP
Analyst ID - Extraction	AG, AP
Method/Fraction	3510C/8270D_SIM_MS_ID
Na2SO4 ID	5393118
Prep Solvent ID	5562143
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

Fluorinated Alkyl Substances

FORM II
LCMS SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1

SDG No.: _____

Matrix: Water Level: Low

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

Client Sample ID	Lab Sample ID	PFBA #	PFPeA #	PFHxA #	PFHpA #	PFHxS #	M262FTS #	PFOA #	PFOS #
MW25D100919	480-160746-1	70	84	83	92	86	97	98	87
EW8100919	480-160746-2	54	82	83	89	85	123	99	83
SPW100919	480-160746-3	74	83	85	86	86	99	96	89
DUPLICATE	480-160746-4	70	84	85	89	84	98	97	85
	MB 200-148550/1-A	94	112	112	108	110	121	120	113
	LCS 200-148550/2-A	89	94	93	90	90	100	101	92
SPW100919 MS	480-160746-3 MS	71	79	82	84	84	102	91	79
SPW100919 MSD	480-160746-3 MSD	73	80	83	84	84	96	93	88

QC LIMITS

PFBA = 13C4 PFBA	25-150
PFPeA = 13C5 PFPeA	25-150
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
PFOS = 13C4 PFOS	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.: 480-160746-1

SDG No.: _____

Matrix: Water Level: Low

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

Client Sample ID	Lab Sample ID	PFNA #	PFDA #	M282FTS #	PFOSA #	d3NMFOS #	PFUnA #	d5NEFOS #	PFDoA #
MW25D100919	480-160746-1	88	85	92	74	82	84	78	89
EW8100919	480-160746-2	89	91	100	66	79	87	93	103
SPW100919	480-160746-3	89	87	94	71	78	83	84	93
DUPLICATE	480-160746-4	82	81	85	72	75	79	84	85
	MB 200-148550/1-A	117	115	118	81	113	110	112	118
	LCS 200-148550/2-A	93	93	103	65	84	85	93	94
SPW100919 MS	480-160746-3 MS	86	81	93	64	78	78	76	88
SPW100919 MSD	480-160746-3 MSD	92	90	94	71	79	81	90	97

QC LIMITS

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
PFDoA = 13C2 PFDoA	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.: 480-160746-1

SDG No.: _____

Matrix: Water Level: Low

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

Client Sample ID	Lab Sample ID	PFTDA #
MW25D100919	480-160746-1	77
EW8100919	480-160746-2	87
SPW100919	480-160746-3	91
DUPLICATE	480-160746-4	72
	MB 200-148550/1-A	101
	LCS 200-148550/2-A	82
SPW100919 MS	480-160746-3 MS	80
SPW100919 MSD	480-160746-3 MSD	86

PFTDA = 13C2 PFTeDA

QC LIMITS
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.: 480-160746-1

SDG No.: _____

Matrix: Water Level: Low Lab File ID: SC102219B003.d

Lab ID: LCS 200-148550/2-A Client ID: _____

COMPOUND	SPIKE ADDED (ng/L)	LCS CONCENTRATION (ng/L)	LCS % REC	QC LIMITS REC	#
Perfluorobutanoic acid (PFBA)	40.0	50.4	126	50-150	
Perfluoropentanoic acid (PFPeA)	40.0	49.7	124	50-150	
Perfluorohexanoic acid (PFHxA)	40.0	47.7	119	70-130	
Perfluoroheptanoic acid (PFHpA)	40.0	50.2	125	70-130	
Perfluorooctanoic acid (PFOA)	40.0	49.8	124	70-130	
Perfluorononanoic acid (PFNA)	40.0	48.2	121	70-130	
Perfluorodecanoic acid (PFDA)	40.0	51.6	129	70-130	
Perfluoroundecanoic acid (PFUnA)	40.0	52.7	132	70-130	*
Perfluorododecanoic acid (PFDoA)	40.0	48.4	121	70-130	
Perfluorotridecanoic acid (PFTriA)	40.0	48.6	122	70-130	
Perfluorotetradecanoic acid (PFTeA)	40.0	56.4	141	70-130	*
Perfluorobutanesulfonic acid (PFBS)	35.4	43.0	122	70-130	
Perfluorohexanesulfonic acid (PFHxS)	36.4	44.3	122	70-130	
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	46.6	122	50-150	
Perfluorooctanesulfonic acid (PFOS)	37.1	45.5	123	70-130	
Perfluorodecanesulfonic acid (PFDS)	38.6	48.9	127	50-150	
Perfluorooctanesulfonamide (PFOSA)	40.0	49.7	124	50-150	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	51.8	130	70-130	
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	50.0	125	70-130	
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	37.9	41.3	109	50-150	
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	38.3	40.7	106	50-150	
18O2 PFHxS	94.6	85.1	90	50-150	
13C4 PFHpA	100	89.8	90	50-150	
13C4 PFOA	100	101	101	50-150	
13C4 PFOS	95.6	87.7	92	50-150	
13C5 PFNA	100	93.5	93	50-150	
13C4 PFBA	100	88.8	89	25-150	
13C2 PFHxA	100	92.8	93	50-150	
13C2 PFDA	100	93.1	93	50-150	
13C2 PFUnA	100	85.5	85	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.: 480-160746-1
 SDG No.: _____
 Matrix: Water Level: Low Lab File ID: SC102219B003.d
 Lab ID: LCS 200-148550/2-A Client ID: _____

COMPOUND	SPIKE ADDED (ng/L)	LCS CONCENTRATION (ng/L)	LCS % REC	QC LIMITS REC	#
13C2 PFDoA	100	93.7	94	50-150	
13C8 FOSA	100	65.2	65	25-150	
13C5 PFPeA	100	93.6	94	25-150	
13C2 PFTeDA	100	82.4	82	50-150	
d3-NMeFOSAA	100	84.2	84	50-150	
d5-NEtFOSAA	100	92.8	93	50-150	
M2-6:2 FTS	95.0	94.7	100	25-150	
M2-8:2 FTS	95.8	99.0	103	25-150	

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.: 480-160746-1
 SDG No.: _____
 Matrix: Water Level: Low Lab File ID: SC102219B017.d
 Lab ID: 480-160746-3 MS Client ID: SPW100919 MS

COMPOUND	SPIKE ADDED (ng/L)	SAMPLE CONCENTRATION (ng/L)	MS CONCENTRATION (ng/L)	MS % REC	QC LIMITS REC	#
Perfluorobutanoic acid (PFBA)	34.4	4.4	46.6	123	40-160	
Perfluoropentanoic acid (PFPeA)	34.4	4.7	49.2	129	40-160	
Perfluorohexanoic acid (PFHxA)	34.4	6.0	47.1	120	40-160	
Perfluoroheptanoic acid (PFHpA)	34.4	3.7	47.3	127	40-160	
Perfluorooctanoic acid (PFOA)	34.4	14	56.1	123	40-160	
Perfluorononanoic acid (PFNA)	34.4	0.89 J	44.3	126	40-160	
Perfluorodecanoic acid (PFDA)	34.4	ND	42.6	124	40-160	
Perfluoroundecanoic acid (PFUnA)	34.4	ND	41.1	119	40-160	
Perfluorododecanoic acid (PFDoA)	34.4	ND	47.2	137	40-160	
Perfluorotridecanoic acid (PFTriA)	34.4	ND	44.3	129	40-160	
Perfluorotetradecanoic acid (PFTeA)	34.4	ND	49.3	143	40-160	
Perfluorobutanesulfonic acid (PFBS)	30.4	6.0	39.0	109	40-160	
Perfluorohexanesulfonic acid (PFHxS)	31.3	7.1	46.4	126	40-160	
Perfluoroheptanesulfonic Acid (PFHpS)	32.7	0.99 J	44.8	134	40-160	
Perfluorooctanesulfonic acid (PFOS)	31.9	29	72.0	136	40-160	
Perfluorodecanesulfonic acid (PFDS)	33.2	ND	46.8	141	40-160	
Perfluorooctanesulfonamide (PFOSA)	34.4	ND	44.1	128	40-160	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	34.4	ND	42.7	124	40-160	
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	34.4	1.8 J	51.8	146	40-160	
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	32.6	ND	36.1	111	40-160	
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	33.0	ND	35.2	107	40-160	
18O2 PFHxS	81.4	71	68.6	84	50-150	
13C4 PFHpA	86.0	75	71.8	84	50-150	
13C4 PFOA	86.0	83	77.9	91	50-150	
13C4 PFOS	82.2	74	65.3	79	50-150	
13C5 PFNA	86.0	78	73.6	86	50-150	
13C4 PFBA	86.0	65	60.6	71	25-150	
13C2 PFHxA	86.0	74	70.5	82	50-150	
13C2 PFDA	86.0	76	69.7	81	50-150	
13C2 PFUnA	86.0	72	67.1	78	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.: 480-160746-1
 SDG No.: _____
 Matrix: Water Level: Low Lab File ID: SC102219B017.d
 Lab ID: 480-160746-3 MS Client ID: SPW100919 MS

COMPOUND	SPIKE ADDED (ng/L)	SAMPLE CONCENTRATION (ng/L)	MS CONCENTRATION (ng/L)	MS % REC	QC LIMITS REC	#
13C2 PFDoA	86.0	81	75.3	88	50-150	
13C8 FOSA	86.0	62	55.3	64	25-150	
13C5 PFPeA	86.0	72	68.2	79	25-150	
13C2 PFTeDA	86.0	79	68.9	80	50-150	
d3-NMeFOSAA	86.0	68	66.7	78	50-150	
d5-NEtFOSAA	86.0	73	65.1	76	50-150	
M2-6:2 FTS	81.7	82	83.5	102	25-150	
M2-8:2 FTS	82.4	78	77.0	93	25-150	

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.: 480-160746-1
 SDG No.: _____
 Matrix: Water Level: Low Lab File ID: SC102219B018.d
 Lab ID: 480-160746-3 MSD Client ID: SPW100919 MSD

COMPOUND	SPIKE ADDED (ng/L)	MSD CONCENTRATION (ng/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Perfluorobutanoic acid (PFBA)	36.1	48.6	123	4	30	40-160	
Perfluoropentanoic acid (PFPeA)	36.1	52.1	131	6	30	40-160	
Perfluorohexanoic acid (PFHxA)	36.1	50.4	123	7	20	40-160	
Perfluoroheptanoic acid (PFHpA)	36.1	50.9	131	7	20	40-160	
Perfluorooctanoic acid (PFOA)	36.1	61.5	133	9	20	40-160	
Perfluorononanoic acid (PFNA)	36.1	43.7	119	1	20	40-160	
Perfluorodecanoic acid (PFDA)	36.1	44.0	122	3	20	40-160	
Perfluoroundecanoic acid (PFUnA)	36.1	45.4	126	10	20	40-160	
Perfluorododecanoic acid (PFDoA)	36.1	43.7	121	8	20	40-160	
Perfluorotridecanoic acid (PFTriA)	36.1	43.5	121	2	20	40-160	
Perfluorotetradecanoic acid (PFTeA)	36.1	48.0	133	3	20	40-160	
Perfluorobutanesulfonic acid (PFBS)	31.9	42.6	115	9	20	40-160	
Perfluorohexanesulfonic acid (PFHxS)	32.8	48.7	127	5	20	40-160	
Perfluoroheptanesulfonic Acid (PFHpS)	34.3	43.7	125	2	30	40-160	
Perfluorooctanesulfonic acid (PFOS)	33.5	70.4	125	2	20	40-160	
Perfluorodecanesulfonic acid (PFDS)	34.8	44.3	128	5	30	40-160	
Perfluorooctanesulfonamide (PFOSA)	36.1	42.2	117	4	30	40-160	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	36.1	45.4	126	6	20	40-160	
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	36.1	47.7	127	8	20	40-160	
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	34.2	39.3	115	9	30	40-160	
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	34.5	34.7	100	1	30	40-160	
18O2 PFHxS	85.3	71.8	84			50-150	
13C4 PFHpA	90.2	76.1	84			50-150	
13C4 PFOA	90.2	83.5	93			50-150	
13C4 PFOS	86.2	75.8	88			50-150	
13C5 PFNA	90.2	83.2	92			50-150	
13C4 PFBA	90.2	65.4	73			25-150	
13C2 PFHxA	90.2	74.5	83			50-150	
13C2 PFDA	90.2	80.9	90			50-150	
13C2 PFUnA	90.2	72.9	81			50-150	

Column to be used to flag recovery and RPD values

FORM III
LCMS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1
 SDG No.: _____
 Matrix: Water Level: Low Lab File ID: SC102219B018.d
 Lab ID: 480-160746-3 MSD Client ID: SPW100919 MSD

COMPOUND	SPIKE ADDED (ng/L)	MSD CONCENTRATION (ng/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
13C2 PFDoA	90.2	87.0	97			50-150	
13C8 FOSA	90.2	64.0	71			25-150	
13C5 PFPeA	90.2	72.4	80			25-150	
13C2 PFTeDA	90.2	77.5	86			50-150	
d3-NMeFOSAA	90.2	71.6	79			50-150	
d5-NEtFOSAA	90.2	80.9	90			50-150	
M2-6:2 FTS	85.6	82.1	96			25-150	
M2-8:2 FTS	86.4	81.4	94			25-150	

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.: 480-160746-1
 SDG No.: _____
 Lab File ID: SC102219B002.d Lab Sample ID: MB 200-148550/1-A
 Matrix: Water Date Extracted: 10/17/2019 10:08
 Instrument ID: LC812 Date Analyzed: 10/22/2019 20:00
 Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 200-148550/2-A	SC102219B00 3.d	10/22/2019 20:09
MW25D100919	480-160746-1	SC102219B01 3.d	10/22/2019 21:31
EW8100919	480-160746-2	SC102219B01 5.d	10/22/2019 21:47
SPW100919	480-160746-3	SC102219B01 6.d	10/22/2019 21:55
SPW100919 MS	480-160746-3 MS	SC102219B01 7.d	10/22/2019 22:03
SPW100919 MSD	480-160746-3 MSD	SC102219B01 8.d	10/22/2019 22:12
DUPLICATE	480-160746-4	SC102219B01 9.d	10/22/2019 22:20

FORM VIII
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1
 SDG No.: _____
 Sample No.: ICIS 200-147694/13 Date Analyzed: 09/24/2019 18:40
 Instrument ID: LC812 GC Column: C-18 ID: 4.6 (mm)
 Lab File ID (Standard): SC092419AA013.d Heated Purge: (Y/N) N
 Calibration ID: 42414

	13PFOA		AREA #	RT #	AREA #	RT #
	AREA #	RT #				
INITIAL CALIBRATION MID-POINT	2601831	3.45				
UPPER LIMIT	3902747	3.65				
LOWER LIMIT	1300916	3.25				
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 200-147694/17		3723545	3.44			

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
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1
 SDG No.: _____
 Sample No.: CCVIS 200-148770/6 Date Analyzed: 10/22/2019 15:38
 Instrument ID: LC812 GC Column: C-18 ID: 4.6 (mm)
 Lab File ID (Standard): SC102219A006.d Heated Purge: (Y/N) N
 Calibration ID: 42414

		13PFOA					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		3229047	3.42				
UPPER LIMIT		4843571	3.62				
LOWER LIMIT		1614524	3.22				
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 200-148550/1-A		3142284	3.42				
LCS 200-148550/2-A		3348042	3.42				
480-160746-1	MW25D100919	3471666	3.42				
CCV 200-148772/14		3032762	3.43				
480-160746-2	EW8100919	3287644	3.42				
480-160746-3	SPW100919	3560904	3.43				
480-160746-3 MS	SPW100919 MS	3466955	3.41				
480-160746-3 MSD	SPW100919 MSD	3407078	3.42				
480-160746-4	DUPLICATE	3469544	3.42				
CCV 200-148772/27		3067311	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
LCMS INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1
 SDG No.: _____
 Sample No.: CCV 200-148772/1 Date Analyzed: 10/22/2019 19:52
 Instrument ID: LC812 GC Column: C-18 ID: 4.6 (mm)
 Lab File ID (Standard): SC102219B001.d Heated Purge: (Y/N) N
 Calibration ID: 42414

		13PFOA					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		3276856	3.42				
UPPER LIMIT		4915284	3.62				
LOWER LIMIT		1638428	3.22				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCVL 200-148770/5		3107661	3.42				
MB 200-148550/1-A		3142284	3.42				
LCS 200-148550/2-A		3348042	3.42				
480-160746-1	MW25D100919	3471666	3.42				
CCV 200-148772/14		3032762	3.43				
480-160746-2	EW8100919	3287644	3.42				
480-160746-3	SPW100919	3560904	3.43				
480-160746-3 MS	SPW100919 MS	3466955	3.41				
480-160746-3 MSD	SPW100919 MSD	3407078	3.42				
480-160746-4	DUPLICATE	3469544	3.42				
CCV 200-148772/27		3067311	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 I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1
 SDG No.: _____
 Client Sample ID: MW25D100919 Lab Sample ID: 480-160746-1
 Matrix: Water Lab File ID: SC102219B013.d
 Analysis Method: 537 (modified) Date Collected: 10/09/2019 14:29
 Extraction Method: 3535 Date Extracted: 10/17/2019 10:08
 Sample wt/vol: 285.2 (mL) Date Analyzed: 10/22/2019 21:31
 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.: 148772 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	1.6	J	1.8	0.88
2706-90-3	Perfluoropentanoic acid (PFPeA)	0.70	J	1.8	0.55
307-24-4	Perfluorohexanoic acid (PFHxA)	0.74	J	1.8	0.67
375-85-9	Perfluoroheptanoic acid (PFHpA)	ND		1.8	0.80
335-67-1	Perfluorooctanoic acid (PFOA)	1.3	J	1.8	0.71
375-95-1	Perfluorononanoic acid (PFNA)	0.64	J B	1.8	0.24
335-76-2	Perfluorodecanoic acid (PFDA)	ND		1.8	0.67
2058-94-8	Perfluoroundecanoic acid (PFUnA)	ND	*	1.8	0.68
307-55-1	Perfluorododecanoic acid (PFDoA)	ND		1.8	0.52
72629-94-8	Perfluorotridecanoic acid (PFTriA)	ND		1.8	0.53
376-06-7	Perfluorotetradecanoic acid (PFTeA)	ND	*	1.8	0.81
375-73-5	Perfluorobutanesulfonic acid (PFBS)	ND		1.8	0.43
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	ND		1.8	0.70
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.8	0.83
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	3.9		1.8	0.53
335-77-3	Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.79
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND		8.8	8.8
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		18	1.5
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		18	1.3
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	ND		18	4.8
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	ND		18	2.5

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1
 SDG No.: _____
 Client Sample ID: MW25D100919 Lab Sample ID: 480-160746-1
 Matrix: Water Lab File ID: SC102219B013.d
 Analysis Method: 537 (modified) Date Collected: 10/09/2019 14:29
 Extraction Method: 3535 Date Extracted: 10/17/2019 10:08
 Sample wt/vol: 285.2 (mL) Date Analyzed: 10/22/2019 21:31
 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.: 148772 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	86		50-150
STL01892	13C4 PFHpA	92		50-150
STL00990	13C4 PFOA	98		50-150
STL00991	13C4 PFOS	87		50-150
STL00995	13C5 PFNA	88		50-150
STL00992	13C4 PFBA	70		25-150
STL00993	13C2 PFHxA	83		50-150
STL00996	13C2 PFDA	85		50-150
STL00997	13C2 PFUnA	84		50-150
STL00998	13C2 PFDoA	89		50-150
STL01056	13C8 FOSA	74		25-150
STL01893	13C5 PFPeA	84		25-150
STL02116	13C2 PFTeDA	77		50-150
STL02118	d3-NMeFOSAA	82		50-150
STL02117	d5-NEtFOSAA	78		50-150
STL02279	M2-6:2 FTS	97		25-150
STL02280	M2-8:2 FTS	92		25-150

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B013.d
 Lims ID: 480-160746-C-1-A
 Client ID: MW- 25D- 100919
 Sample Type: Client
 Inject. Date: 22-Oct-2019 21:31:04 ALS Bottle#: 13 Worklist Smp#: 13
 Injection Vol: 20.0 ul Dil. Factor: 1.0000
 Sample Info: 480-160746-C-1-A
 Misc. Info.: 200-0038369-013 Plate: 1 Rack: 4
 Operator ID: lc812tech Instrument ID: LC812
 Method: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\PFC_LC812.m
 Limit Group: LC_PFC_ICAL
 Last Update: 28-Oct-2019 13:08:26 Calib Date: 24-Sep-2019 18:56:37
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA015.d
 Column 1 : C-18 (4.60 mm) Det: EXP1
 Process Host: CTX1017

First Level Reviewer: manopan Date: 24-Oct-2019 11:26:42
 Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	1.926	1.926	0.0	0.563	2913475	1.75	69.9	11965	
2 Perfluorobutanoic acid	212.90 > 169.00	1.926	1.926	0.0	1.000	46781	0.0452		8.6	
D 3 13C5 PFPeA	267.90 > 223.00	2.271	2.285	-0.014	0.664	2759676	2.09	83.7	2977	
4 Perfluoropentanoic acid	262.90 > 219.00	2.271	2.285	-0.014	1.000	32512	0.0199		0.7	M
5 Perfluorobutanesulfonic acid	298.90 > 80.00	2.298	2.298	0.0	0.755	14792	0.0121	Target=2.04	4.8	
	298.90 > 99.00	2.298	2.298	0.0	0.755	6869		2.15(1.02-3.05)	2.2	
6 Perfluorohexanoic acid	313.00 > 269.00	2.660	2.661	-0.001	1.000	24278	0.0212	Target=12.90	2.8	
	313.00 > 119.00	2.673	2.661	0.012	1.005	2704		8.98(6.45-19.36)	4.4	
D 7 13C2 PFHxA	315.00 > 270.00	2.660	2.661	-0.001	0.778	2909280	2.08	83.1	5939	
8 Perfluorohexanesulfonic acid	399.00 > 80.00	3.044	3.044	0.0	1.000	17435	0.008030	Target=3.78	13.3	M
	399.00 > 99.00	3.044	3.044	0.0	1.000	4322		4.03(1.89-5.67)	4.5	M
D 11 18O2 PFHxS	403.00 > 84.00	3.044	3.044	0.0	0.890	2129544	2.04	86.1	6205	
D 9 13C4 PFHpA	367.00 > 322.00	3.044	3.044	0.0	0.890	3117564	2.30	91.9	5839	
10 Perfluoroheptanoic acid	363.00 > 319.00	3.044	3.044	0.0	1.000	19578	0.0176	Target=3.54	3.1	M
	363.00 > 169.00	3.044	3.044	0.0	1.000	4782		4.09(1.77-5.31)	11.9	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	3.404	3.413	-0.009	0.900	1125	0.001638	Target=5.80	2.9		M
449.00 > 99.00	3.404	3.413	-0.009	0.900	220		5.11(2.90-8.71)	0.7		M
13 1H,1H,2H,2H-perfluorooctanesulfoni										M
427.00 > 407.00	3.413	3.413	0.0	1.000	136	0.000652		2.7		M
D 12 M2-6:2 FTS										
429.00 > 81.00	3.413	3.413	0.0	0.998	393166	2.32		97.5	835	
* 62 13C2 PFOA										
415.00 > 370.00	3.421	3.422	-0.001		3471666	2.50			9344	
D 14 13C4 PFOA										
417.00 > 372.00	3.421	3.422	-0.001	1.000	3391785	2.46		98.4	8712	
15 Perfluorooctanoic acid										M
413.00 > 369.00	3.421	3.422	-0.001	1.000	73830	0.0365	Target=2.61	11.5		M
413.00 > 169.00	3.421	3.422	-0.001	1.000	32670		2.26(1.30-3.91)	102		M
D 18 13C4 PFOS										
503.00 > 80.00	3.782	3.783	-0.001	1.106	1482345	2.08		87.2	3033	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.782	3.783	-0.001	1.000	61831	0.1103	Target=4.93	32.6		M
499.00 > 99.00	3.782	3.783	-0.001	1.000	12112		5.10(2.47-7.40)	30.9		M
D 19 13C5 PFNA										
468.00 > 423.00	3.805	3.805	0.0	1.112	2692526	2.21		88.3	7615	
20 Perfluorononanoic acid										
463.00 > 419.00	3.805	3.805	0.0	1.000	18848	0.0183	Target=7.89	5.3		
463.00 > 169.00	3.805	3.805	0.0	1.000	1813		10.40(3.95-11.84)	17.9		
24 Perfluorodecanoic acid										M
513.00 > 469.00	4.141	4.141	0.0	1.000	6536	0.006861	Target=8.57	3.6		M
513.00 > 169.00	4.128	4.141	-0.013	0.997	931		7.02(4.29-12.86)	11.6		M
D 23 13C2 PFDA										
515.00 > 470.00	4.141	4.141	0.0	1.210	2574557	2.12		84.7	7977	
25 1H,1H,2H,2H-perfluorodecanesulfoni										M
527.00 > 507.00	4.141	4.153	-0.012	0.997	202	-0.0120		3.9		M
D 26 M2-8:2 FTS										
529.00 > 81.00	4.153	4.153	0.0	1.214	408991	2.21		92.1	1418	
22 Perfluorooctanesulfonamide										M
498.00 > 78.00	4.207	4.207	0.0	1.000	1908	0.002044		7.9		M
D 21 13C8 FOSA										
506.00 > 78.00	4.207	4.207	0.0	1.230	2544081	1.84		73.7	4332	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.293	4.294	-0.001	1.255	240083	2.04		81.5	2098	
28 N-methylperfluorooctanesulfonamido										M
570.00 > 419.00	4.251	4.294	-0.043	0.990	127	0.001856		0.5		M
31 Perfluoroundecanoic acid										M
563.00 > 519.00	4.420	4.420	0.0	1.000	9237	0.0120	Target=6.97	5.5		M
563.00 > 169.00	4.409	4.420	-0.011	0.997	1231		7.50(3.48-10.45)	16.4		M
D 30 13C2 PFUnA										
565.00 > 520.00	4.420	4.420	0.0	1.292	2298916	2.11		84.5	6792	

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	4.431	4.431	0.0	1.295	248452	1.95		77.9	1373	
33 N-ethylperfluorooctanesulfonamidoa										
584.00 > 419.00	4.420	4.431	-0.011	0.997	140	-0.0164		2.5		M
37 Perfluorododecanoic acid										
613.00 > 569.00	4.660	4.660	0.0	1.000	3518	0.003802	Target=7.06	0.5		M
613.00 > 169.00	4.660	4.660	0.0	1.000	689		5.11(3.53-10.59)	7.3		M
D 36 13C2 PFDaA										
615.00 > 570.00	4.660	4.660	0.0	1.362	2615107	2.23		89.2	7881	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.860	4.870	-0.010	1.043	950	0.001269	Target=4.87	0.2		RM
663.00 > 169.00	4.879	4.870	0.009	1.047	437		2.17(2.43-7.30)	4.8		M
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.067	5.067	0.0	1.002	310	0.002641	Target=1.09	5.0		M
713.00 > 219.00	5.058	5.067	-0.009	1.000	556		0.56(0.54-1.63)	6.1		M
D 43 13C2 PFTeDA										
715.00 > 670.00	5.058	5.067	-0.009	1.478	2016700	1.92		76.8	10719	

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B013.d

Injection Date: 22-Oct-2019 21:31:04

Instrument ID: LC812

Lims ID: 480-160746-C-1-A

Lab Sample ID: 200-160746-1

Client ID: MW- 25D- 100919

Operator ID: lc812tech

ALS Bottle#: 13

Worklist Smp#: 13

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

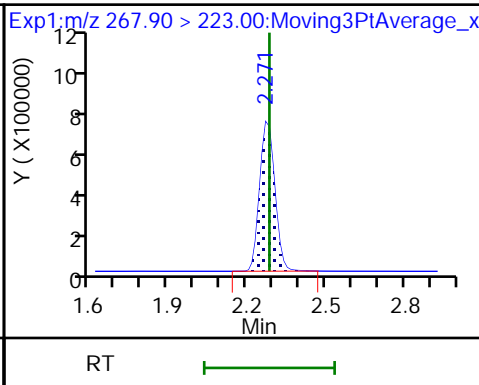
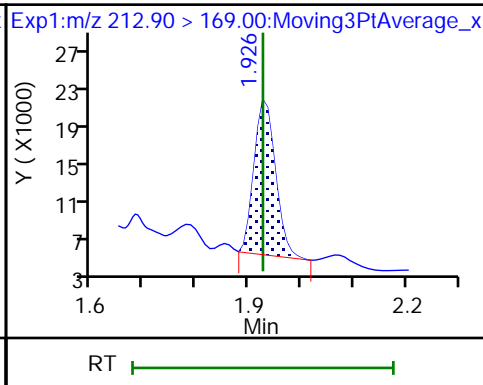
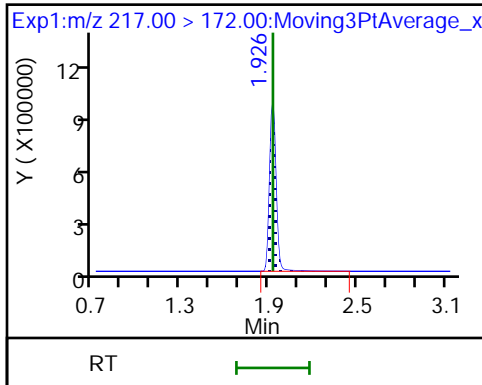
Method: PFC_LC812

Limit Group: LC_PFC_ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

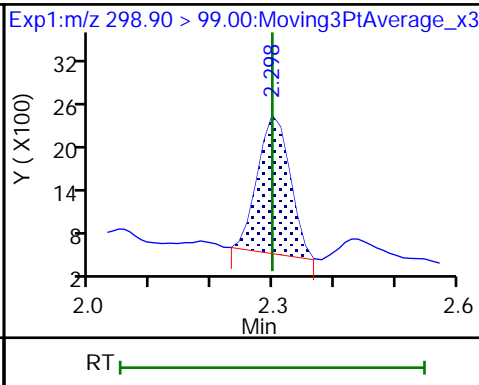
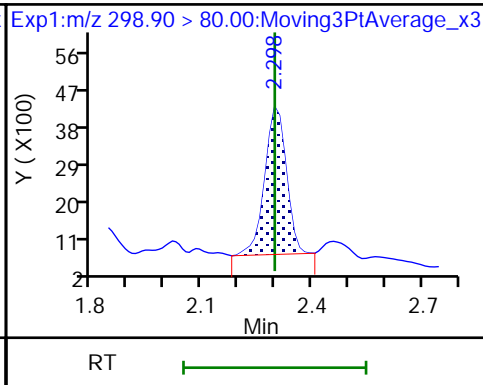
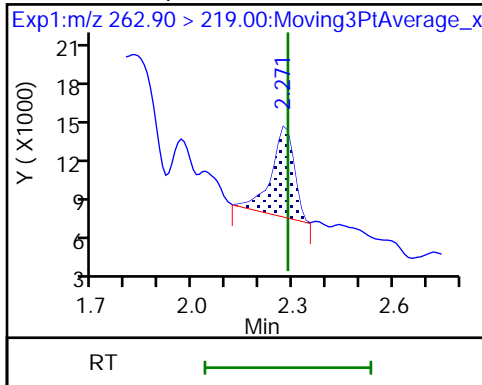
D 3 13C5 PFPeA



4 Perfluoropentanoic acid (M)

5 Perfluorobutanesulfonic acid

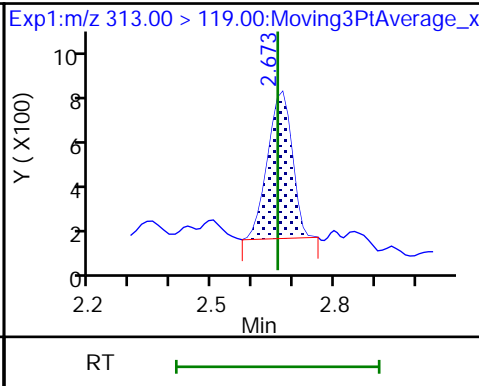
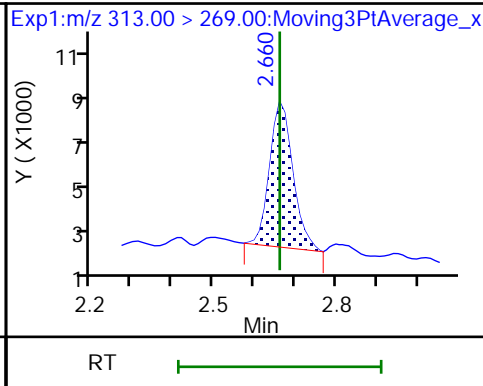
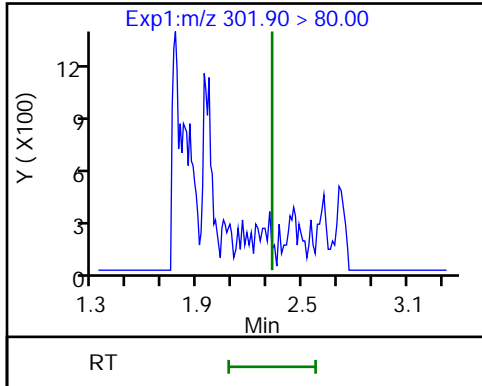
5 Perfluorobutanesulfonic acid



D 47 13C3 PFBS (ND)

6 Perfluorohexanoic acid

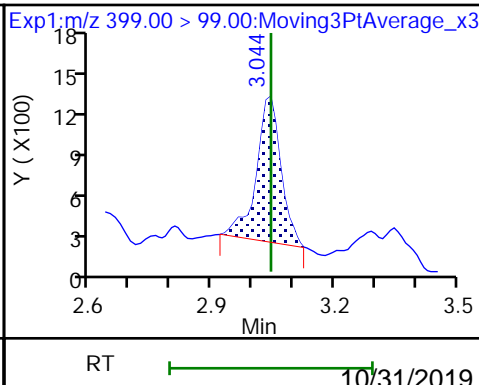
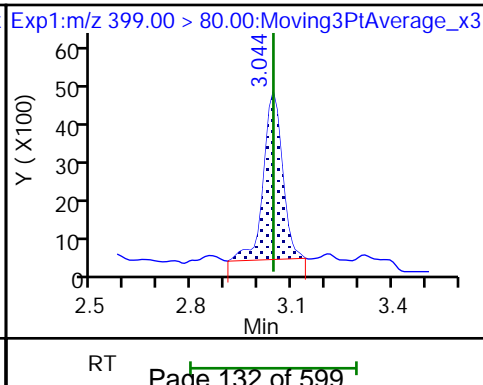
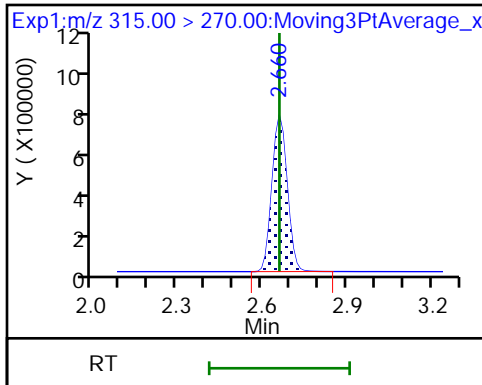
6 Perfluorohexanoic acid



D 7 13C2 PFHxA

8 Perfluorohexanesulfonic acid (M)

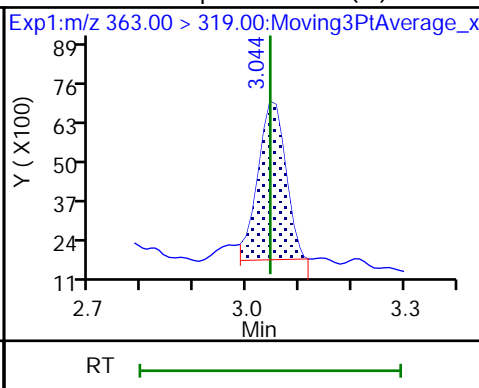
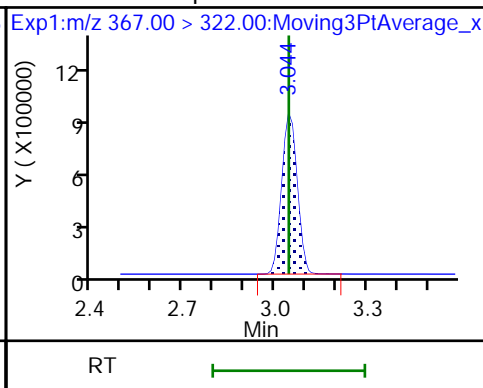
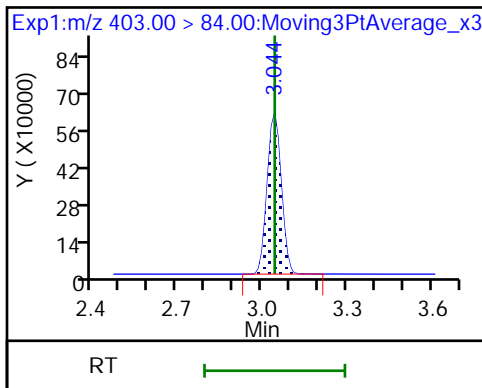
8 Perfluorohexanesulfonic acid (M)



D 11 18O2 PFHxS

D 9 13C4 PFHpA

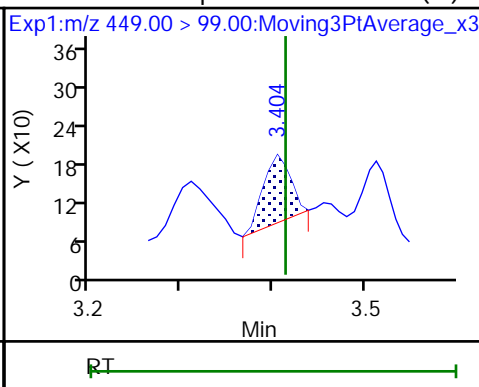
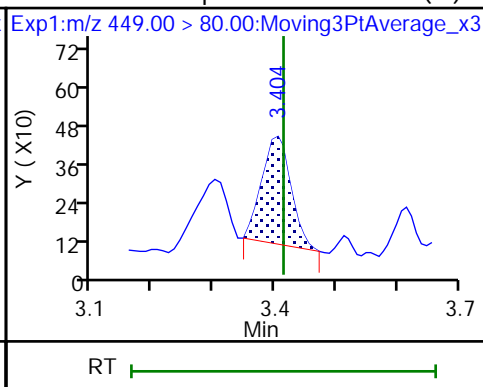
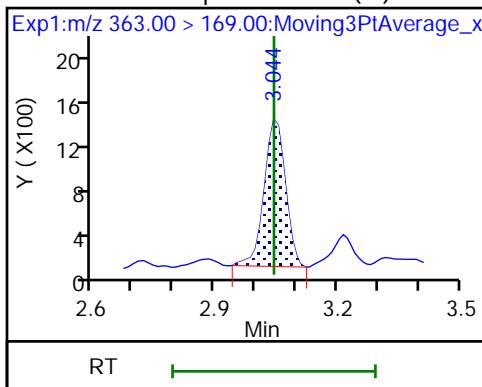
10 Perfluoroheptanoic acid (M)



10 Perfluoroheptanoic acid (M)

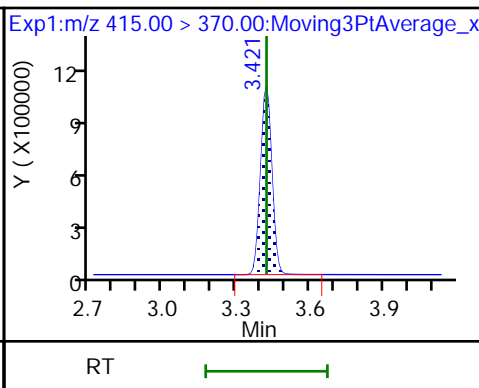
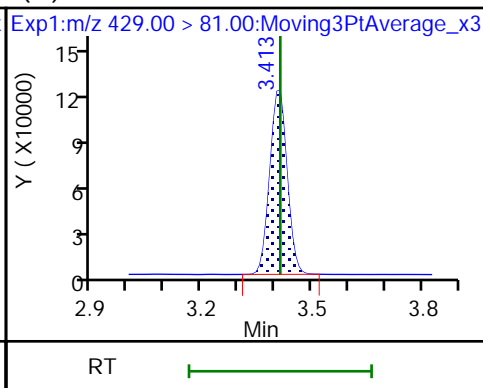
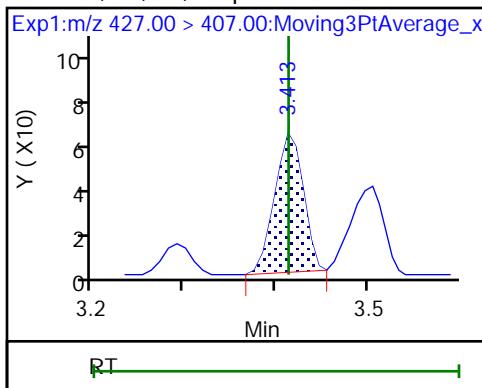
16 Perfluoroheptanesulfonic acid (M)

16 Perfluoroheptanesulfonic acid (M)



13 1H,1H,2H,2H-perfluorooctanesulfonate (M) M2-6:2 FTS

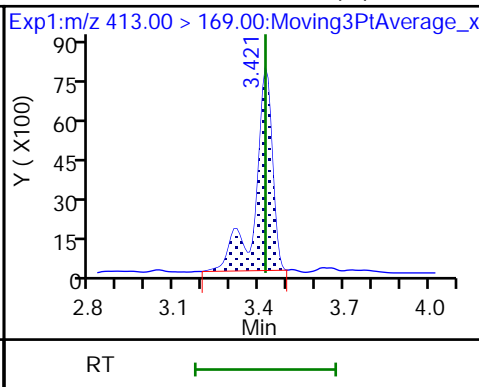
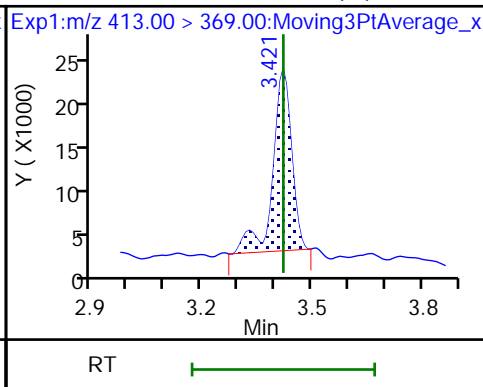
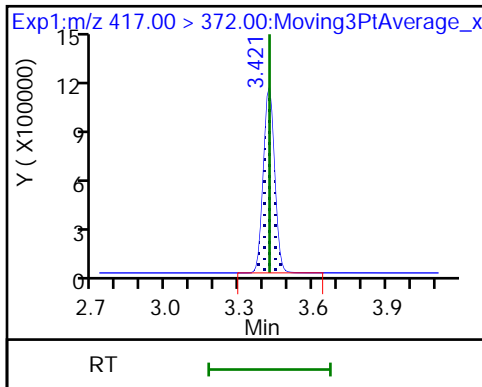
* 62 13C2 PFOA



D 14 13C4 PFOA

15 Perfluorooctanoic acid (M)

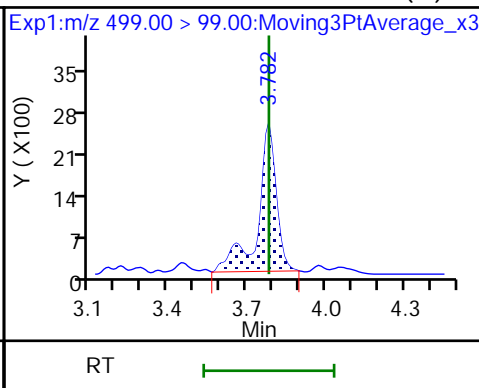
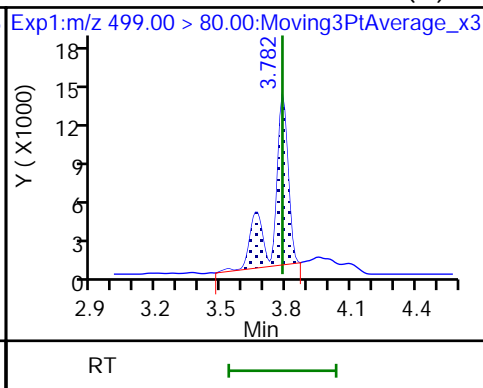
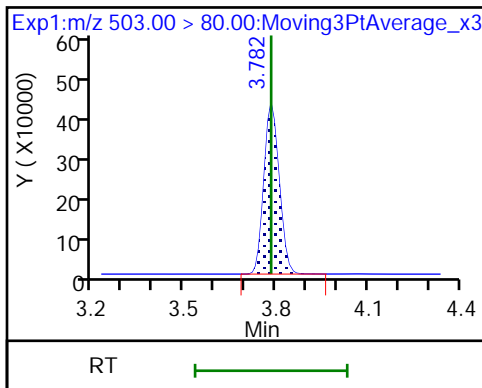
15 Perfluorooctanoic acid (M)



D 18 13C4 PFOS

17 Perfluorooctanesulfonic acid (M)

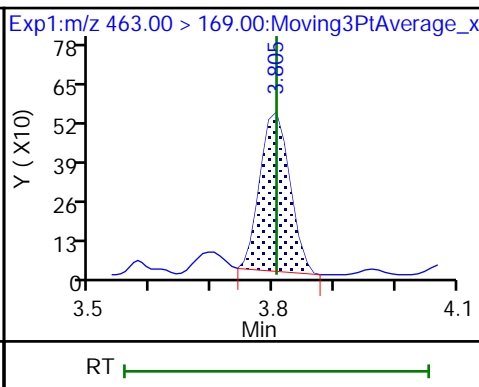
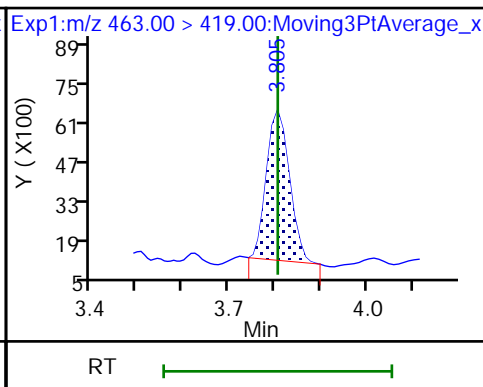
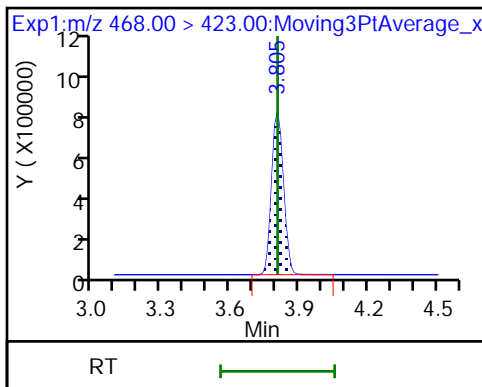
17 Perfluorooctanesulfonic acid (M)



D 19 13C5 PFNA

20 Perfluorononanoic acid

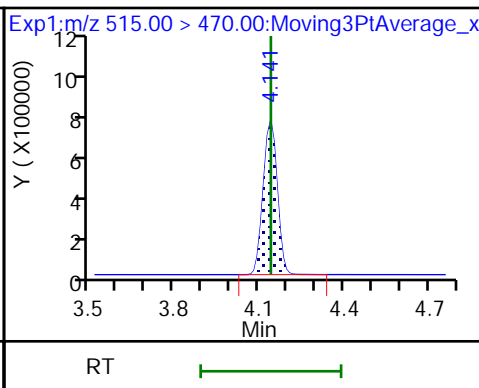
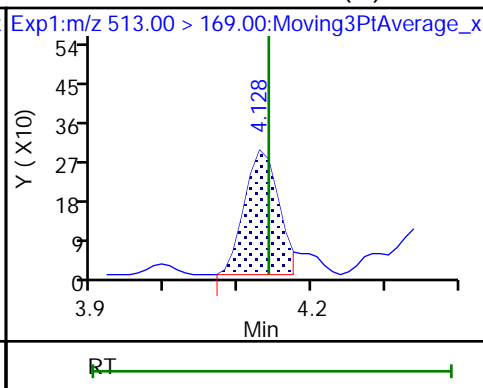
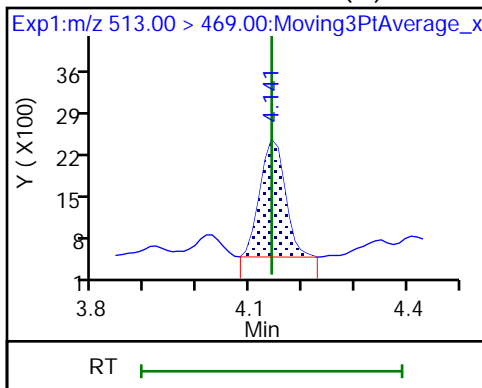
20 Perfluorononanoic acid



24 Perfluorodecanoic acid (M)

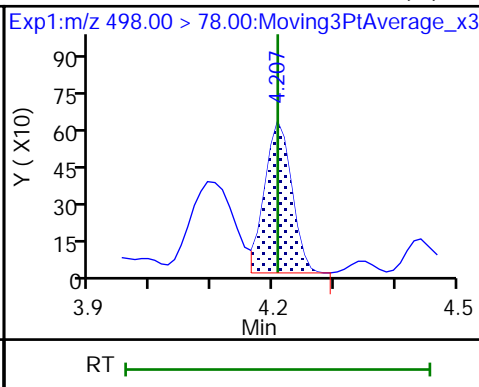
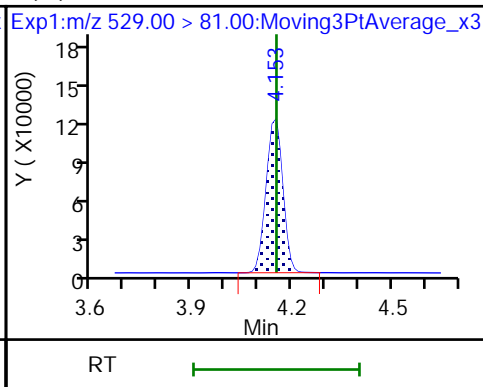
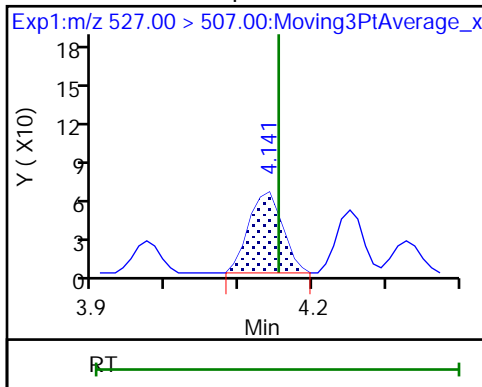
24 Perfluorodecanoic acid (M)

D 23 13C2 PFDA



25 1H,1H,2H,2H-perfluorodecanesulfonamide (M) M2-8:2 FTS

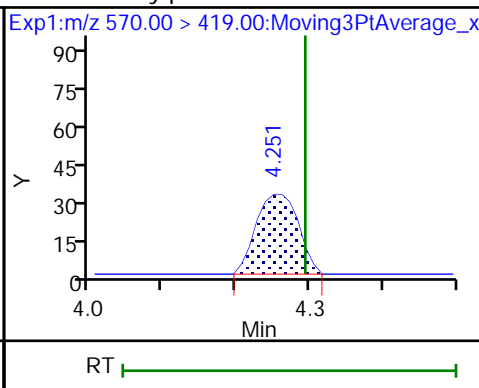
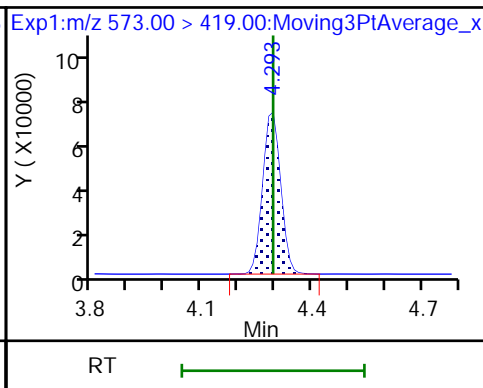
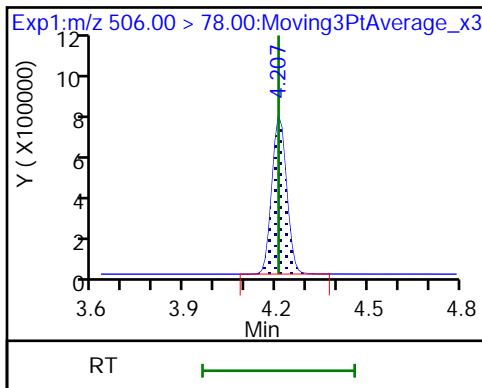
22 Perfluorooctanesulfonamide (M)



D 21 13C8 FOSA

D 27 d3-NMeFOSAA

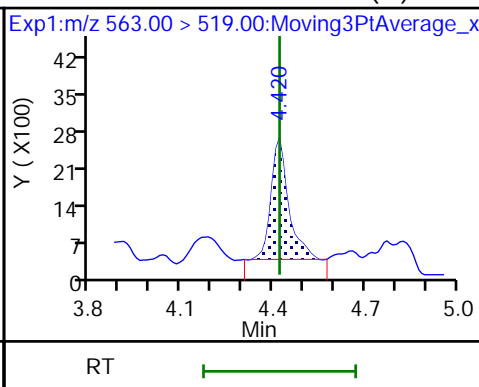
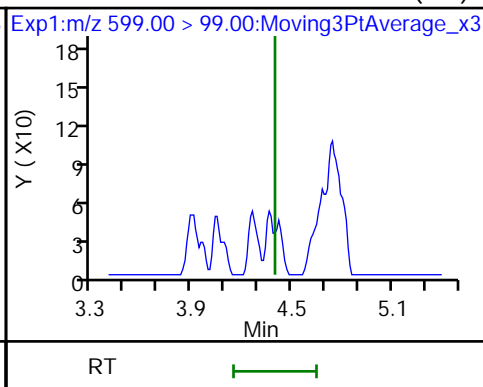
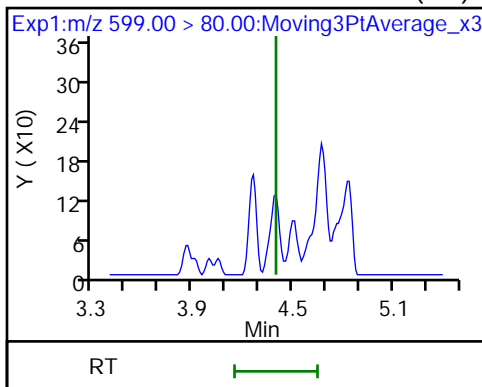
28 N-methylperfluorooctanesulfonamido (M)



29 Perfluorodecanesulfonic acid (ND)

29 Perfluorodecanesulfonic acid (ND)

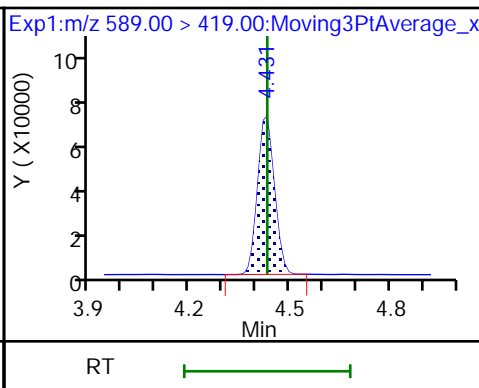
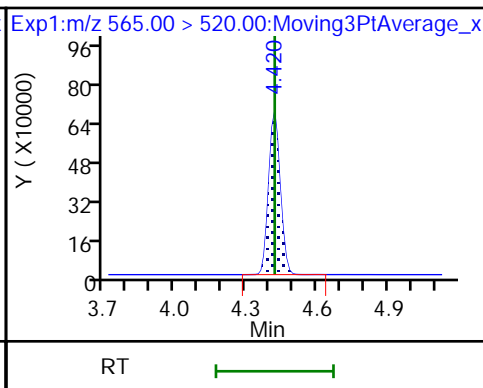
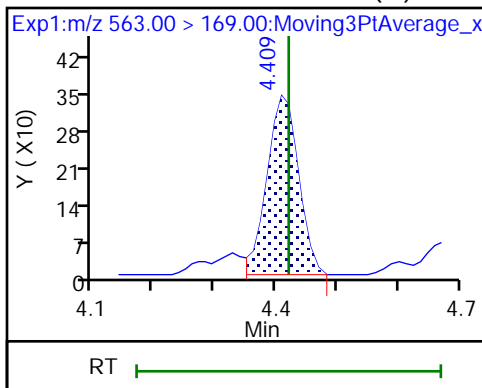
31 Perfluoroundecanoic acid (M)



31 Perfluoroundecanoic acid (M)

D 30 13C2 PFUnA

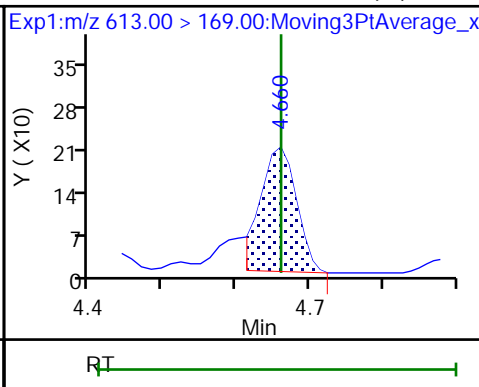
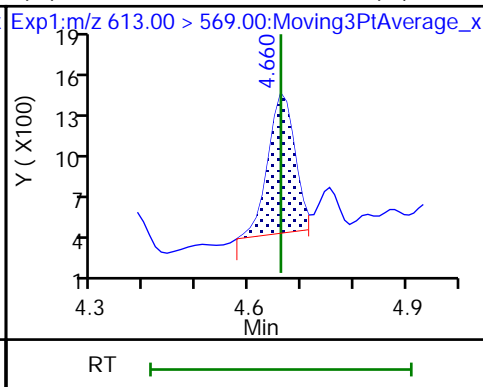
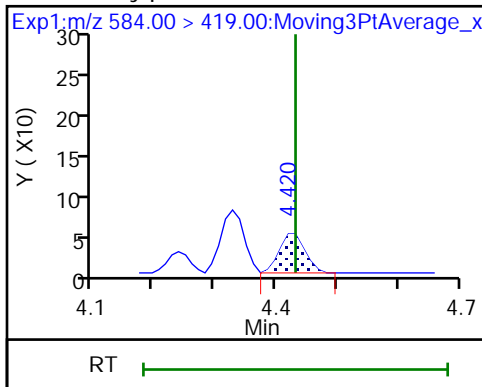
D 32 d5-NEtFOSAA



33 N-ethylperfluorooctanesulfonamido (M)

37 Perfluorododecanoic acid (M)

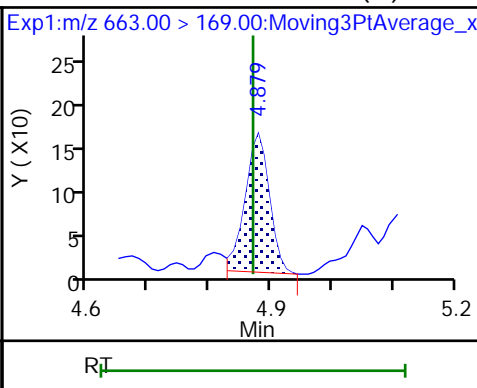
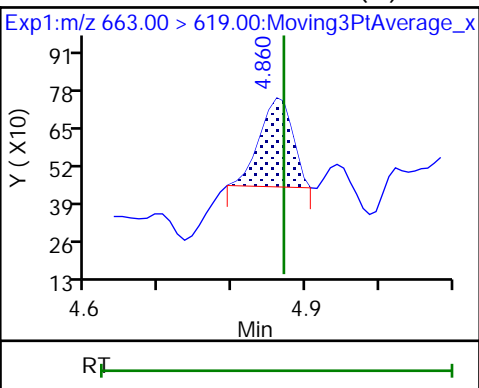
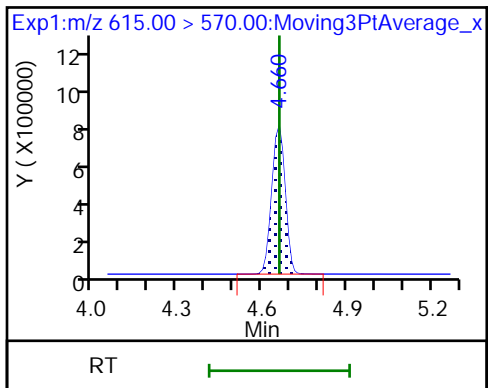
37 Perfluorododecanoic acid (M)



D 36 13C2 PFDaA

41 Perfluorotridecanoic acid (M)

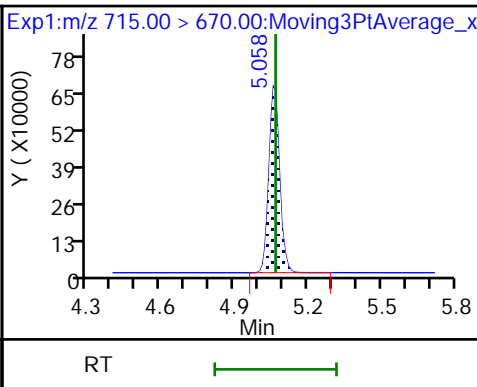
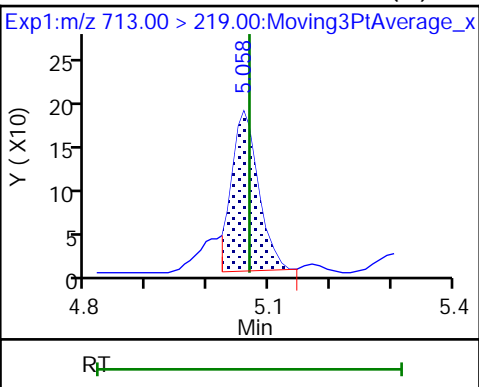
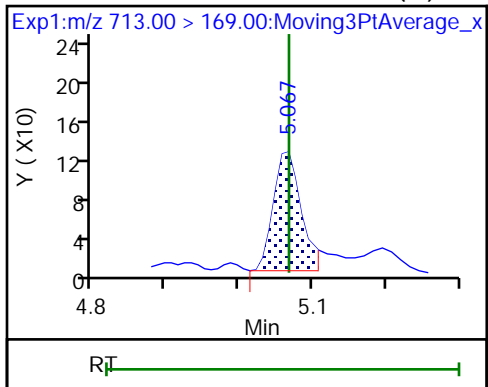
41 Perfluorotridecanoic acid (M)



42 Perfluorotetradecanoic acid (M)

42 Perfluorotetradecanoic acid (M)

D 43 13C2 PFTeDA



Eurofins TestAmerica, Burlington

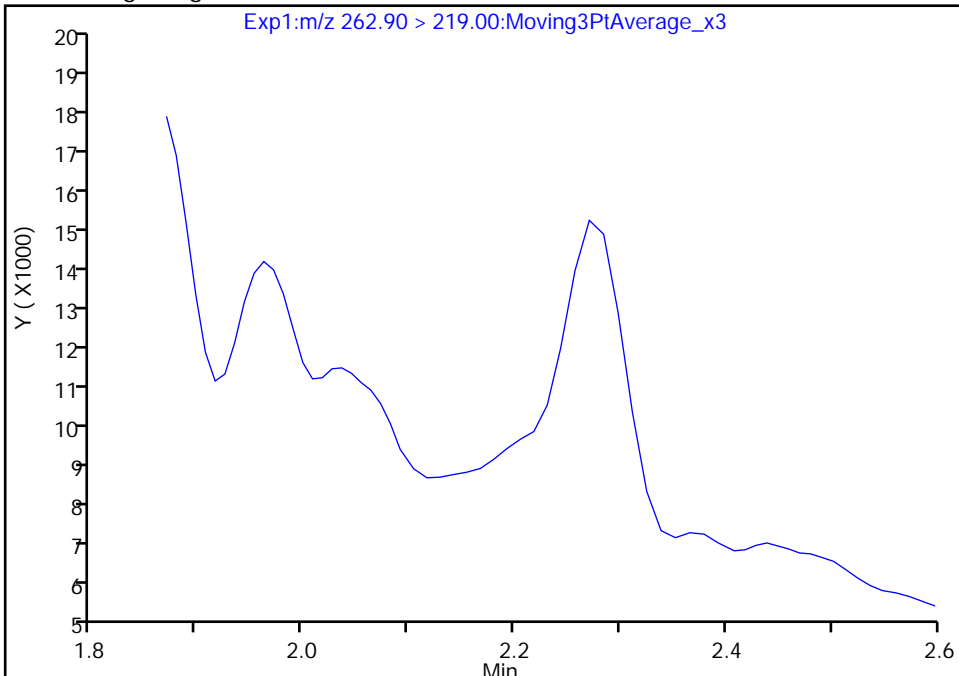
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B013.d
Injection Date: 22-Oct-2019 21:31:04 Instrument ID: LC812
Lims ID: 480-160746-C-1-A Lab Sample ID: 200-160746-1
Client ID: MW- 25D- 100919
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. 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

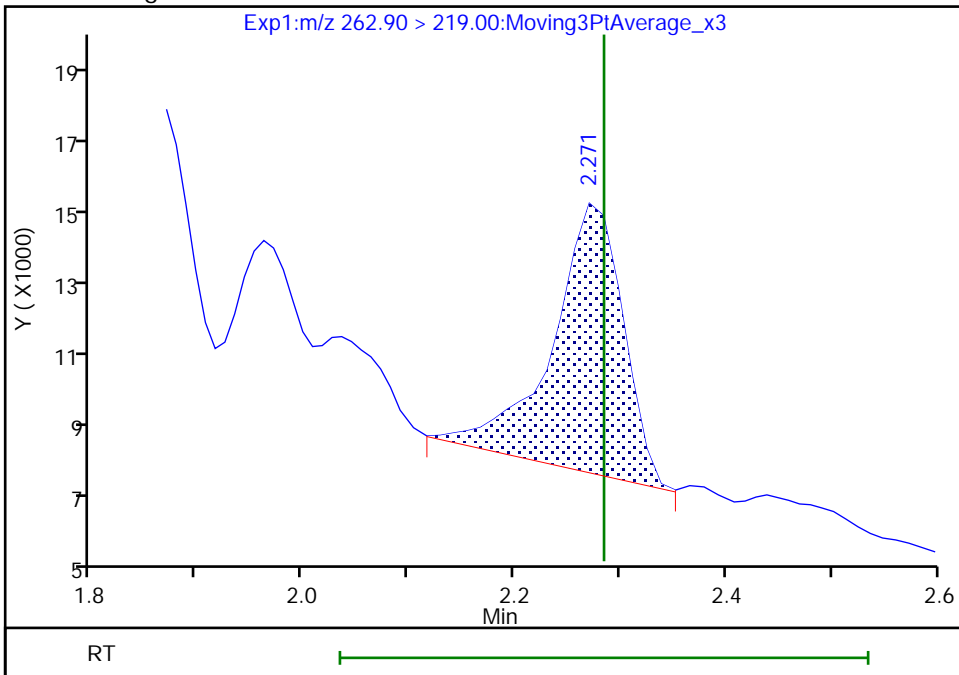
Not Detected
Expected RT: 2.28

Processing Integration Results



Manual Integration Results

RT: 2.27
Area: 32512
Amount: 0.019909
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 11:18:27
Audit Action: Manually Integrated

Audit Reason: Assign Peak
Page 137 of 599

Eurofins TestAmerica, Burlington

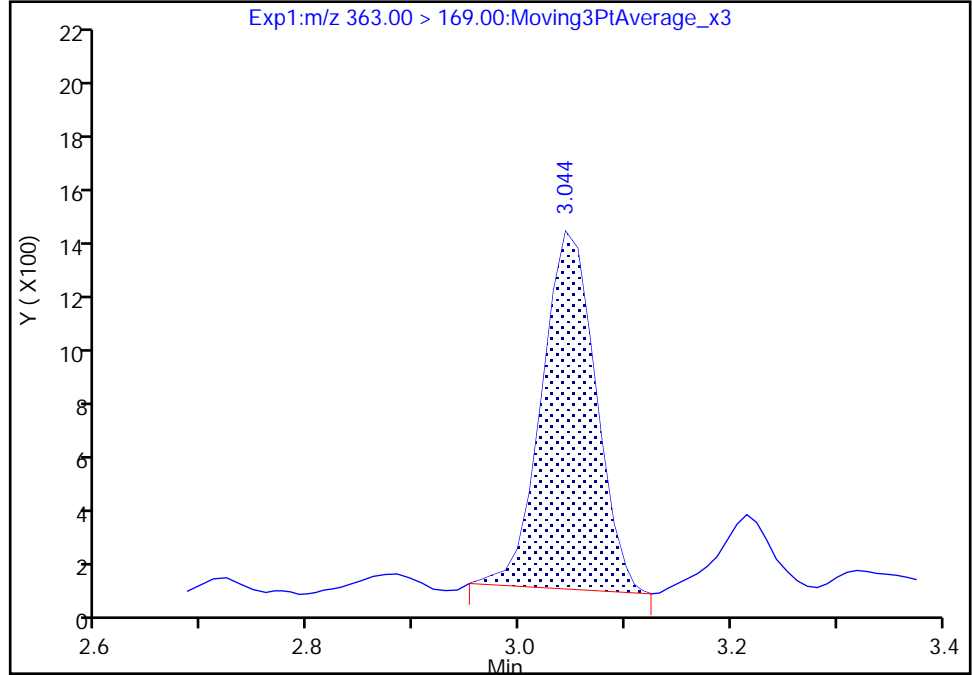
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Injection Date: 22-Oct-2019 21:31:04 Instrument ID: LC812
Lims ID: 480-160746-C-1-A Lab Sample ID: 200-160746-1
Client ID: MW- 25D- 100919
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

10 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 2

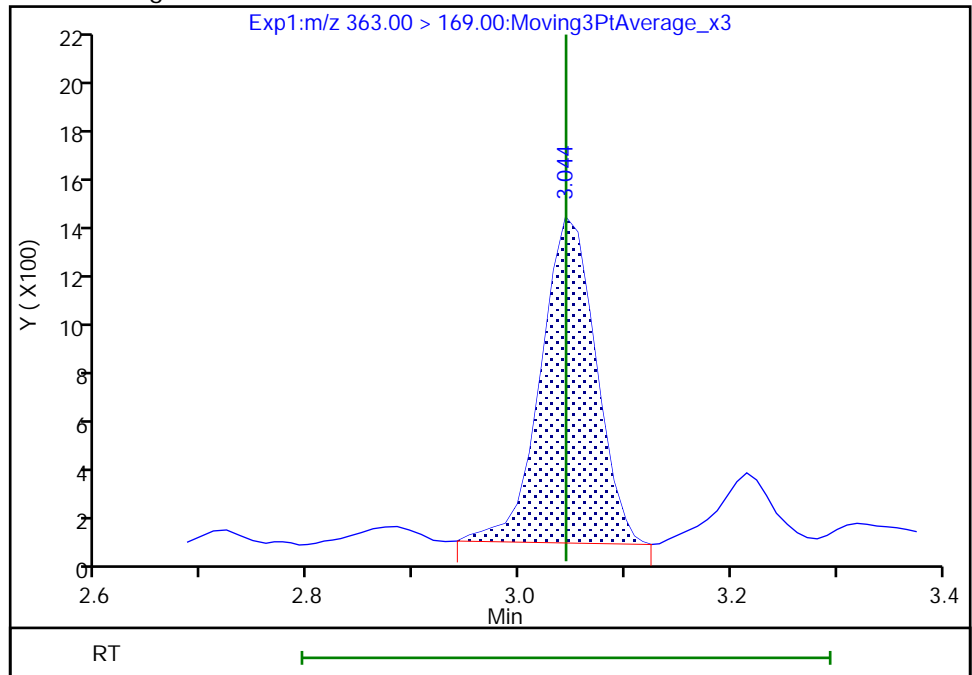
RT: 3.04
Area: 4646
Amount: 0.016445
Amount Units: ng/ml

Processing Integration Results



RT: 3.04
Area: 4782
Amount: 0.017574
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 11:18:59
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

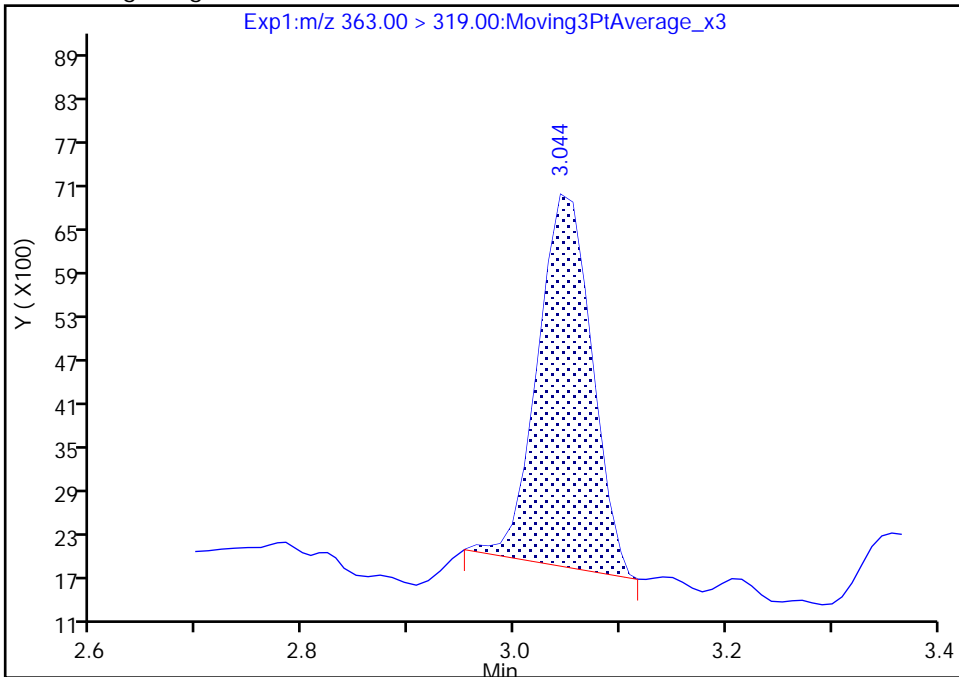
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B013.d
Injection Date: 22-Oct-2019 21:31:04 Instrument ID: LC812
Lims ID: 480-160746-C-1-A Lab Sample ID: 200-160746-1
Client ID: MW- 25D- 100919
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. 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

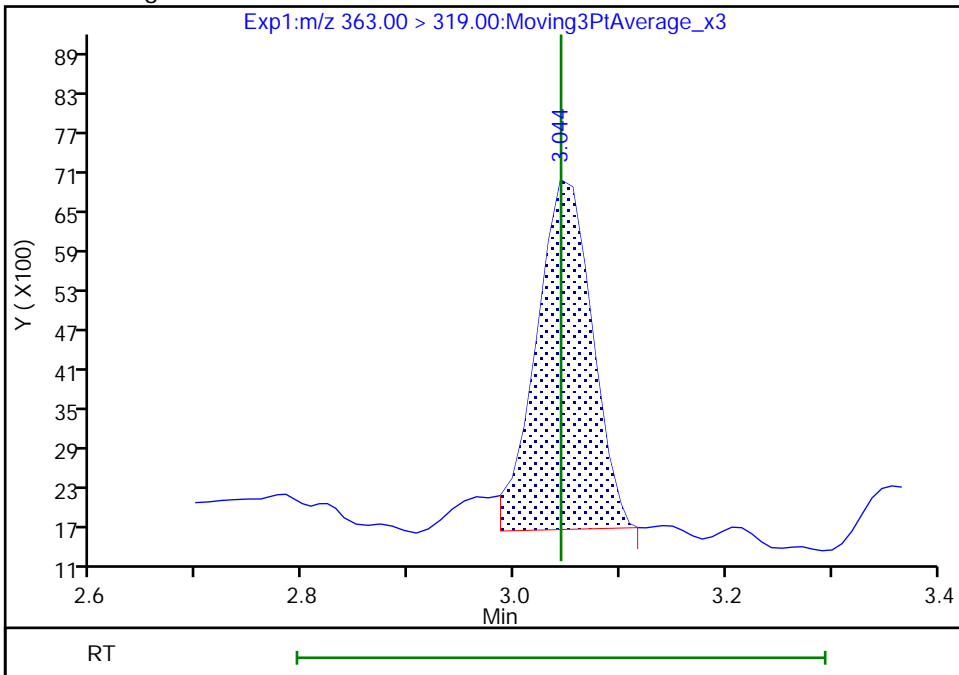
RT: 3.04
Area: 18321
Amount: 0.016445
Amount Units: ng/ml

Processing Integration Results



RT: 3.04
Area: 19578
Amount: 0.017574
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 11:19:16

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

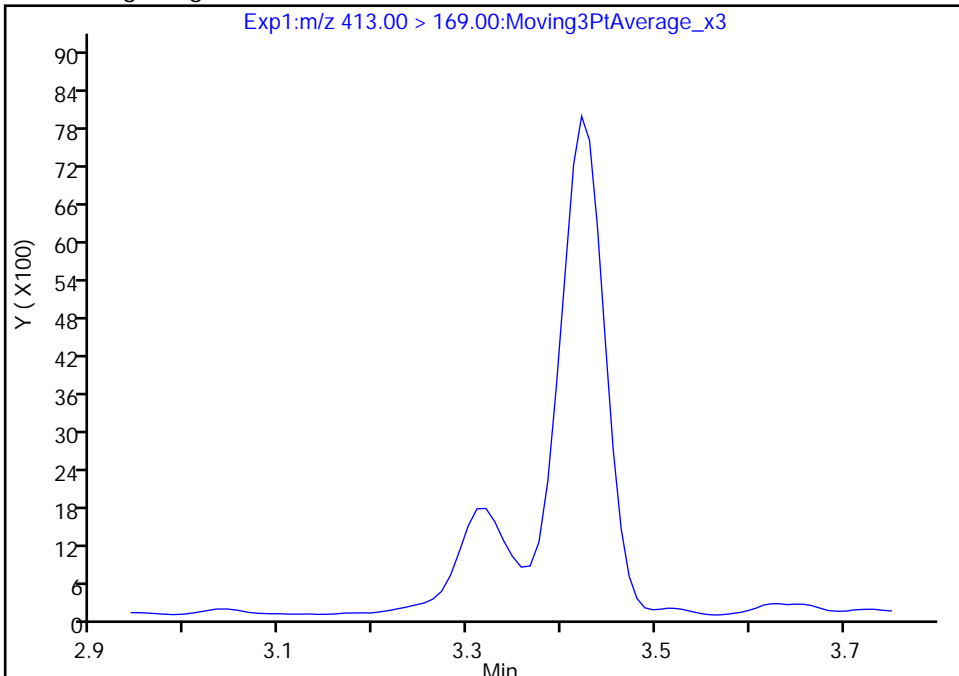
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B013.d
Injection Date: 22-Oct-2019 21:31:04 Instrument ID: LC812
Lims ID: 480-160746-C-1-A Lab Sample ID: 200-160746-1
Client ID: MW- 25D- 100919
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. 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: 2

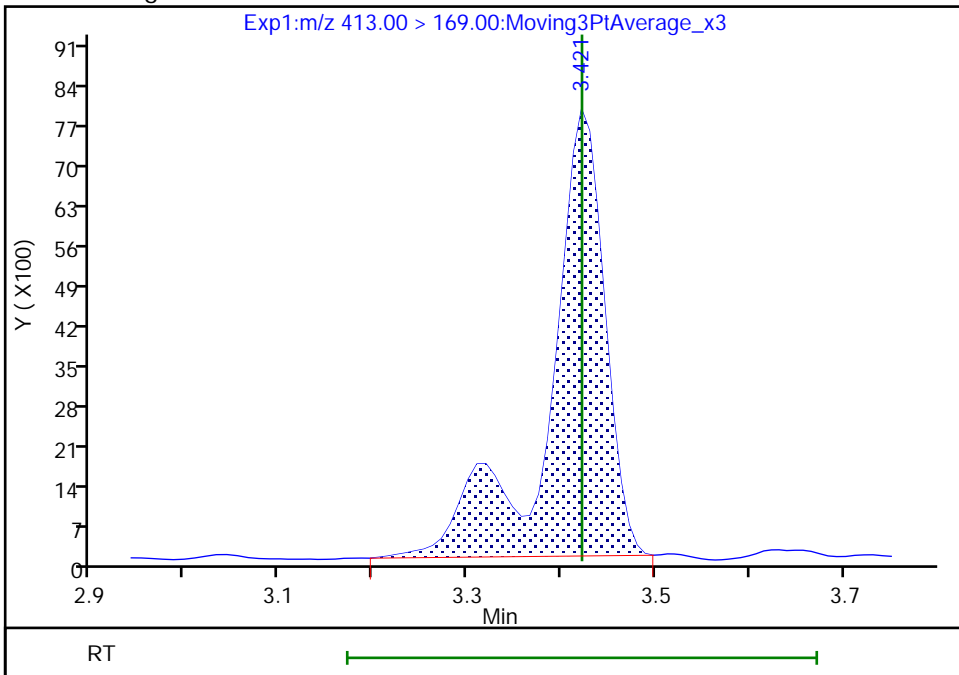
Not Detected
Expected RT: 3.42

Processing Integration Results



Manual Integration Results

RT: 3.42
Area: 32670
Amount: 0.036490
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 11:20:09
Audit Action: Manually Integrated

Audit Reason: Assign Peak

Eurofins TestAmerica, Burlington

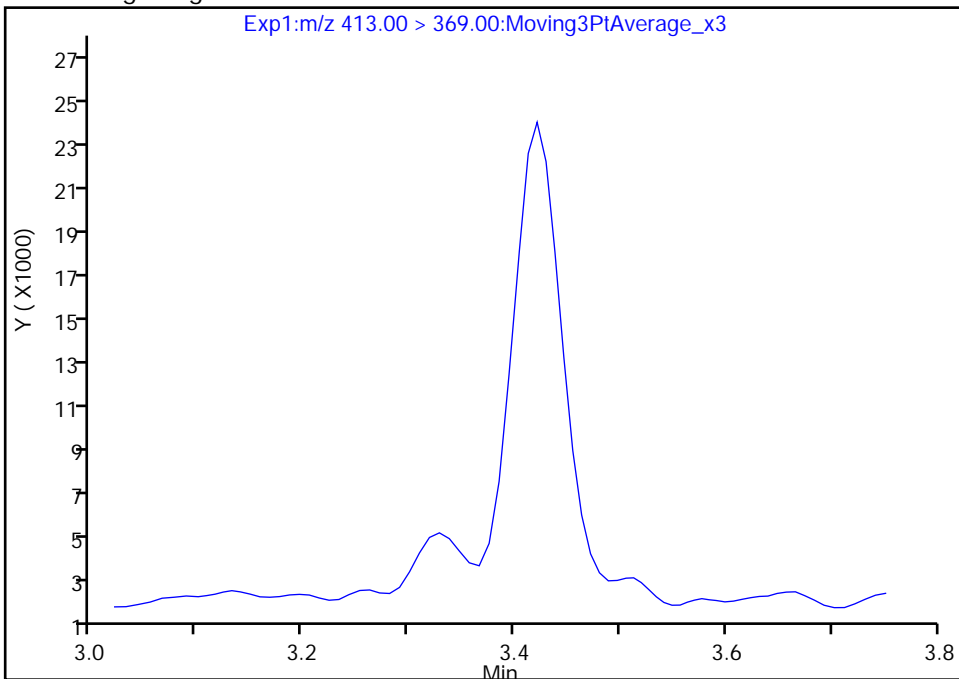
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B013.d
Injection Date: 22-Oct-2019 21:31:04 Instrument ID: LC812
Lims ID: 480-160746-C-1-A Lab Sample ID: 200-160746-1
Client ID: MW- 25D- 100919
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. 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

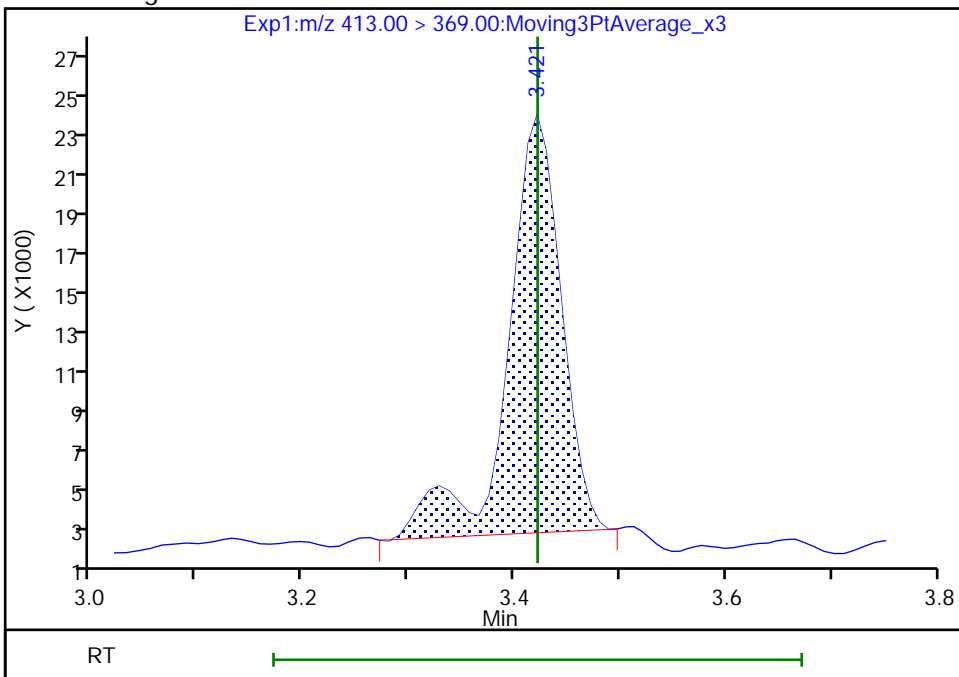
Not Detected
Expected RT: 3.42

Processing Integration Results



Manual Integration Results

RT: 3.42
Area: 73830
Amount: 0.036490
Amount Units: ng/ml



Euofins TestAmerica, Burlington

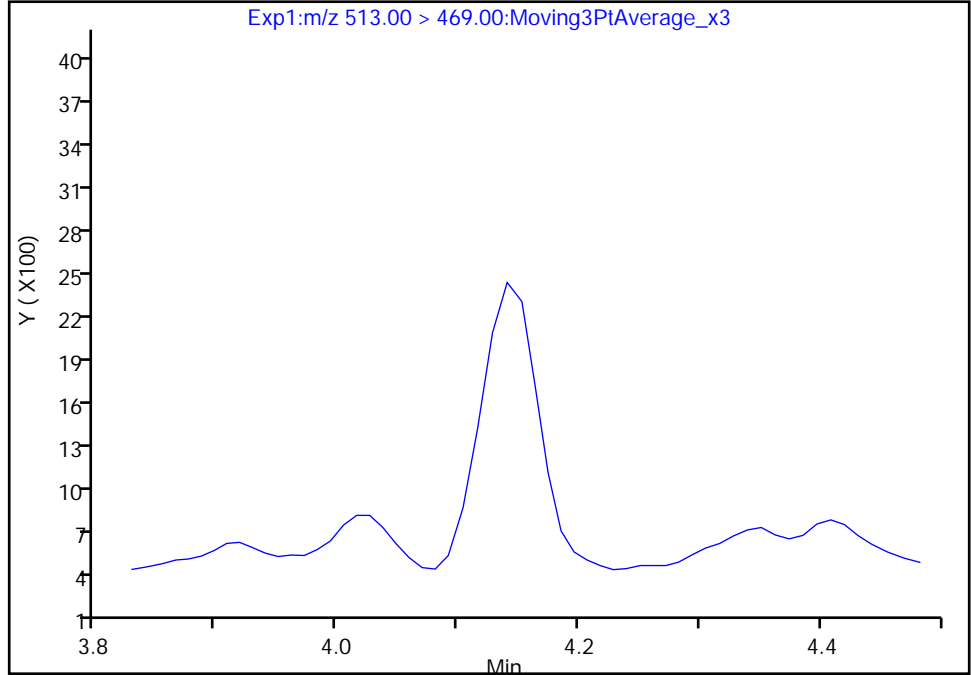
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B013.d
Injection Date: 22-Oct-2019 21:31:04 Instrument ID: LC812
Lims ID: 480-160746-C-1-A Lab Sample ID: 200-160746-1
Client ID: MW- 25D- 100919
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. 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

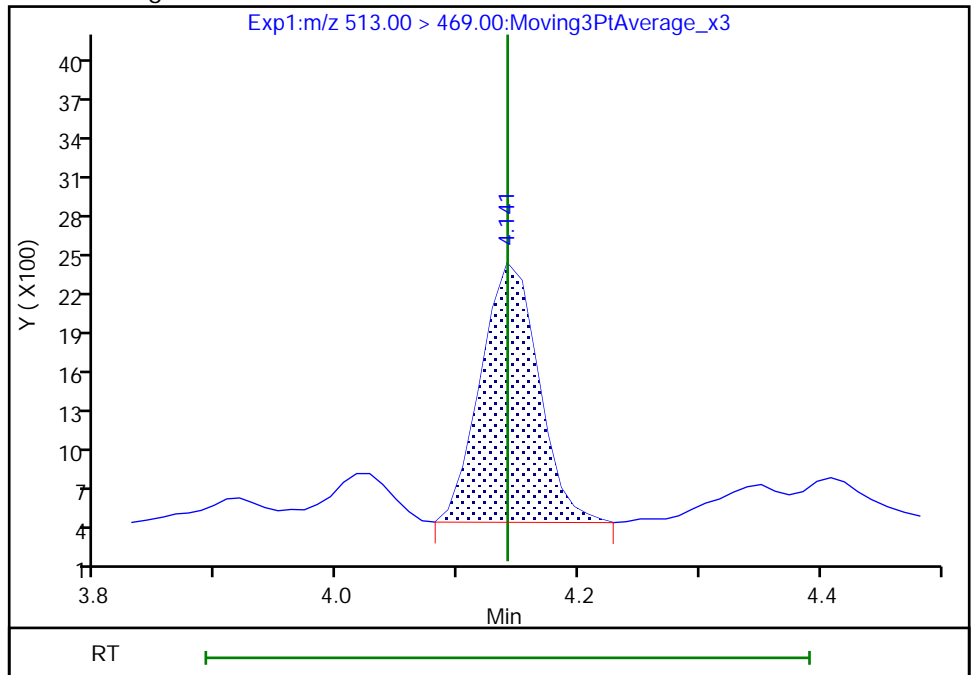
Not Detected
Expected RT: 4.14

Processing Integration Results



Manual Integration Results

RT: 4.14
Area: 6536
Amount: 0.006861
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 11:21:22
Audit Action: Manually Integrated

Audit Reason: Assign Peak
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Eurofins TestAmerica, Burlington

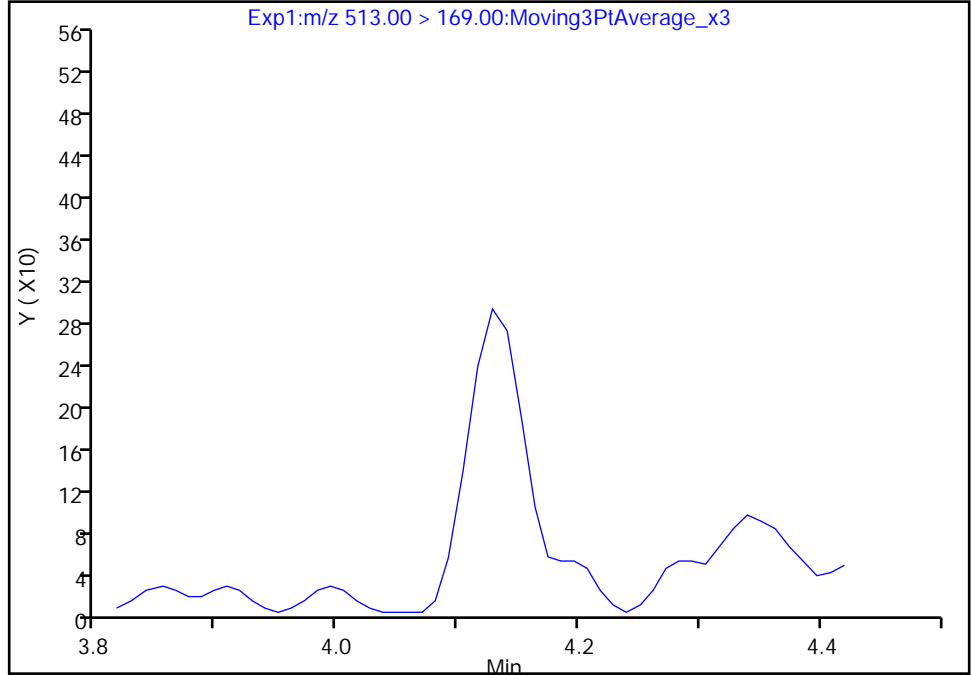
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B013.d
Injection Date: 22-Oct-2019 21:31:04 Instrument ID: LC812
Lims ID: 480-160746-C-1-A Lab Sample ID: 200-160746-1
Client ID: MW- 25D- 100919
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. 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

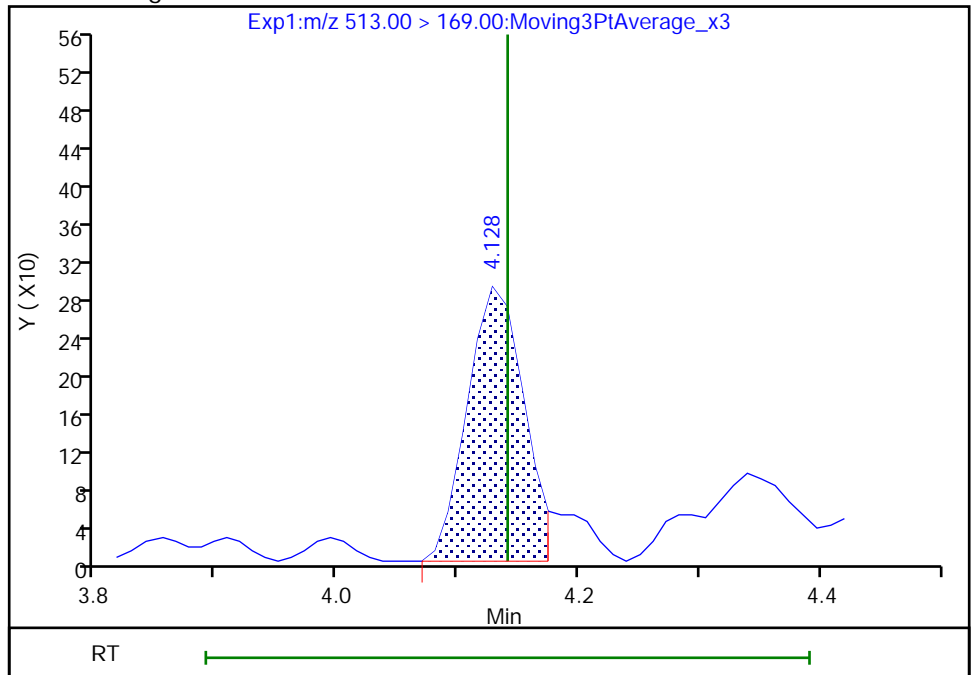
Not Detected
Expected RT: 4.14

Processing Integration Results



RT: 4.13
Area: 931
Amount: 0.006861
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 11:21:31

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

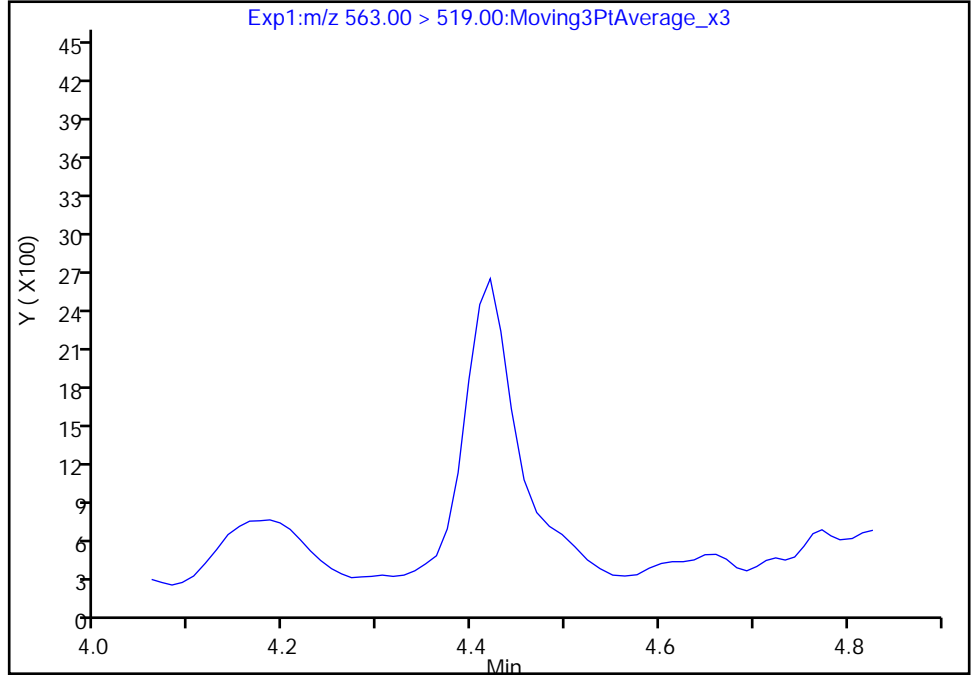
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B013.d
Injection Date: 22-Oct-2019 21:31:04 Instrument ID: LC812
Lims ID: 480-160746-C-1-A Lab Sample ID: 200-160746-1
Client ID: MW- 25D- 100919
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. 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: 1

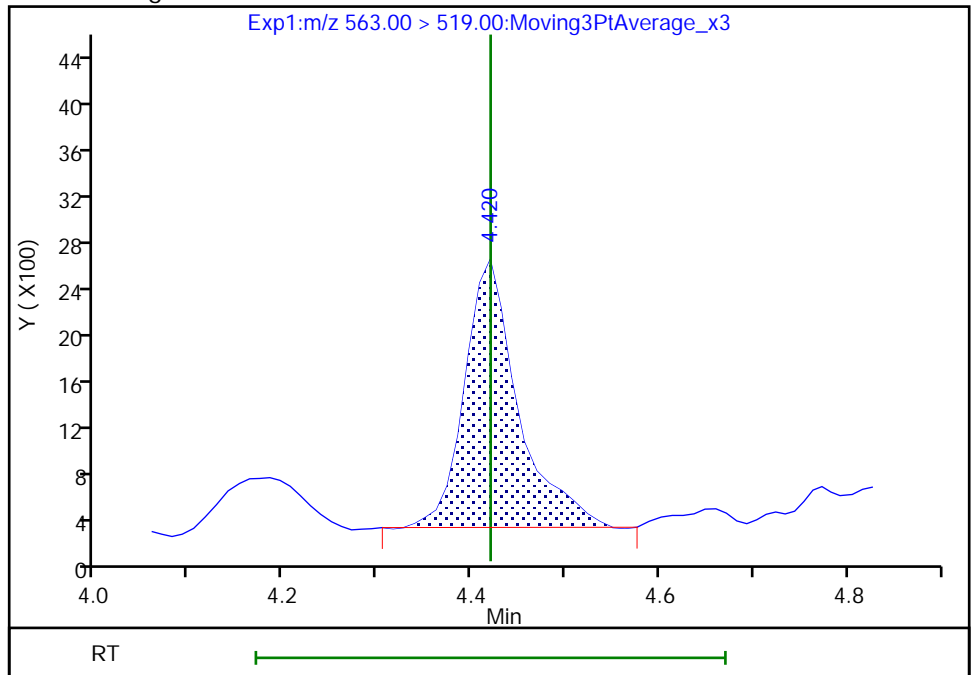
Not Detected
Expected RT: 4.42

Processing Integration Results



Manual Integration Results

RT: 4.42
Area: 9237
Amount: 0.012004
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 11:22:50
Audit Action: Manually Integrated

Audit Reason: Assign Peak

Eurofins TestAmerica, Burlington

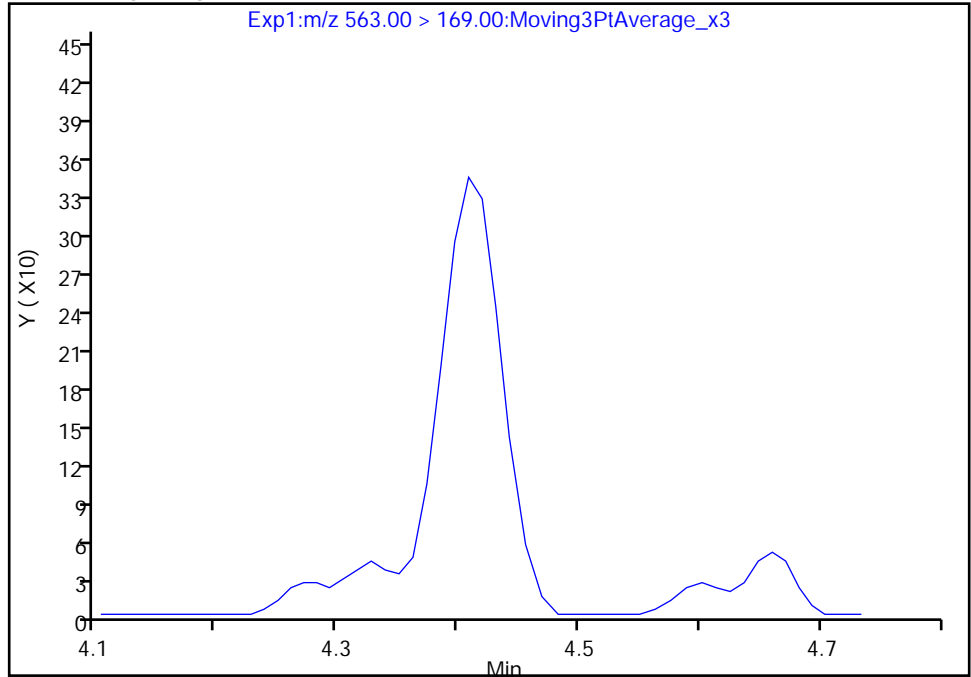
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B013.d
Injection Date: 22-Oct-2019 21:31:04 Instrument ID: LC812
Lims ID: 480-160746-C-1-A Lab Sample ID: 200-160746-1
Client ID: MW- 25D- 100919
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. 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

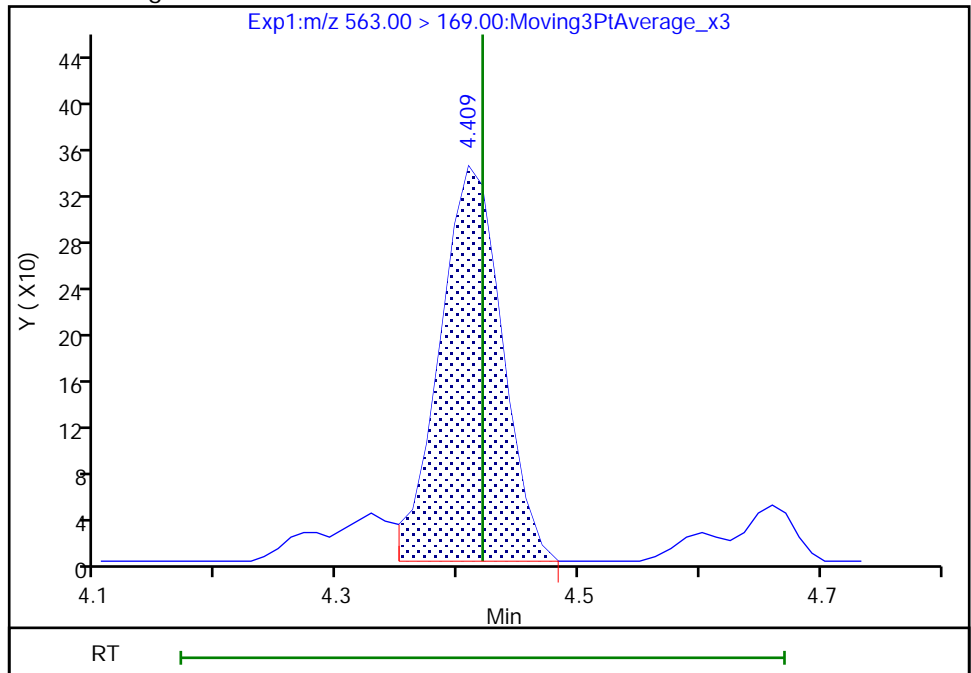
Not Detected
Expected RT: 4.42

Processing Integration Results



Manual Integration Results

RT: 4.41
Area: 1231
Amount: 0.012004
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 11:22:55

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

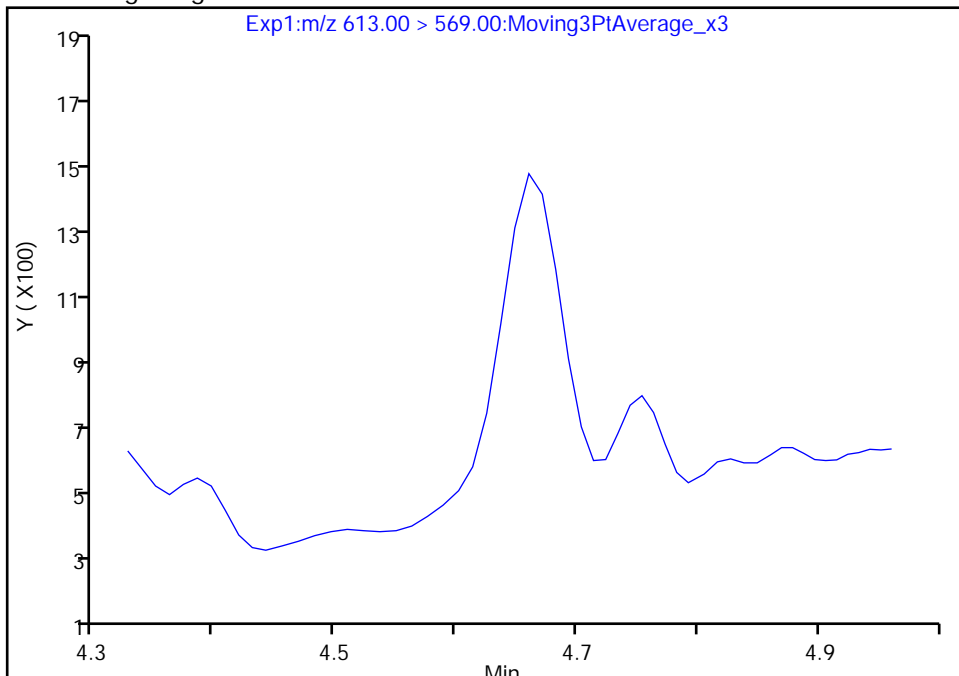
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B013.d
Injection Date: 22-Oct-2019 21:31:04 Instrument ID: LC812
Lims ID: 480-160746-C-1-A Lab Sample ID: 200-160746-1
Client ID: MW- 25D- 100919
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. 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

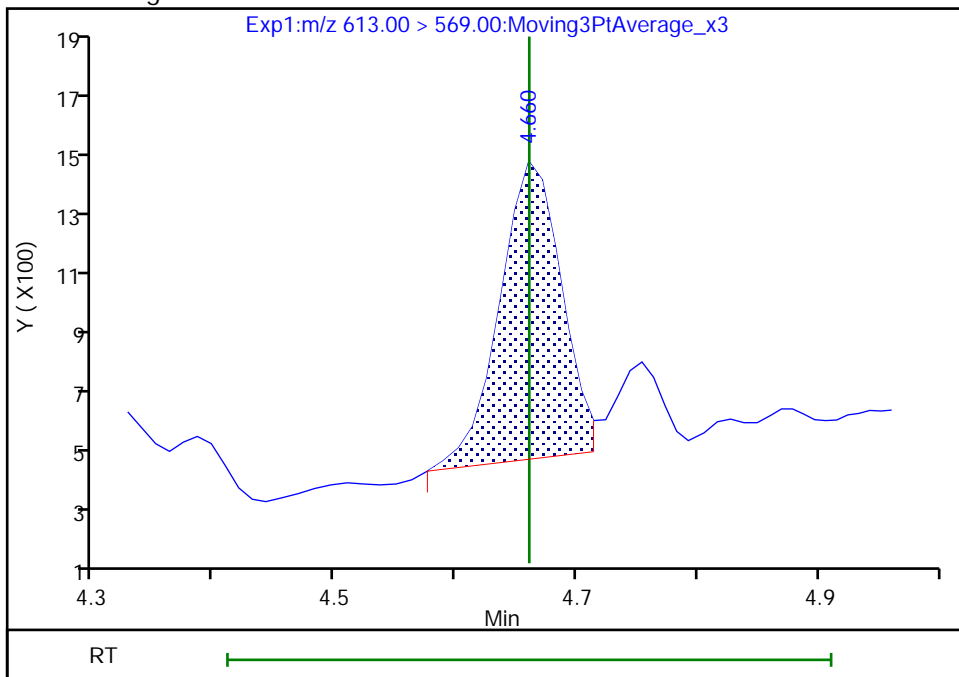
Not Detected
Expected RT: 4.66

Processing Integration Results



Manual Integration Results

RT: 4.66
Area: 3518
Amount: 0.003802
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 11:24:09
Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

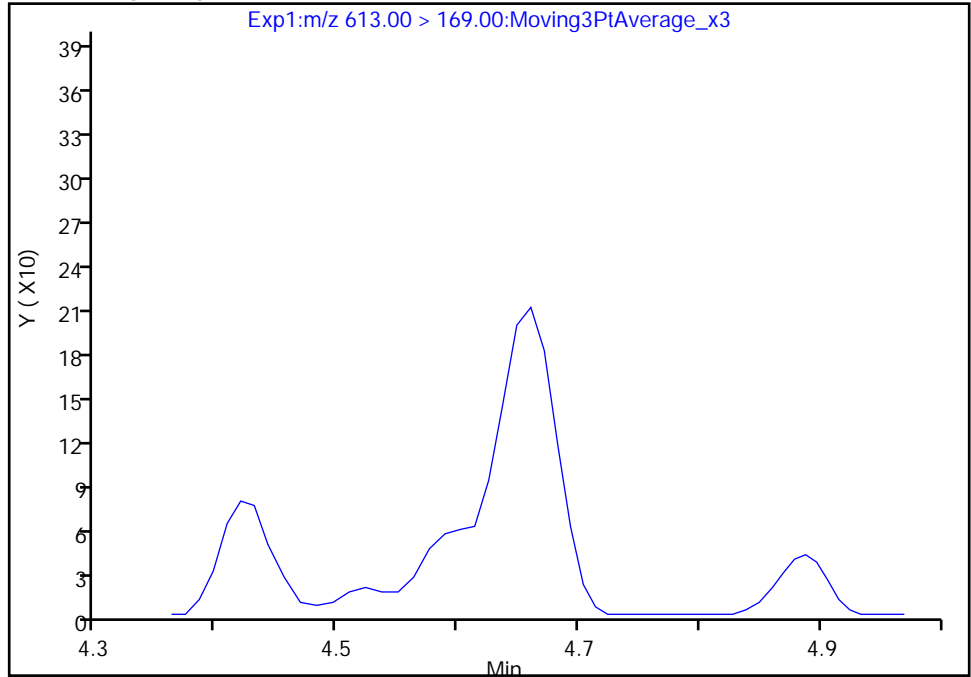
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B013.d
Injection Date: 22-Oct-2019 21:31:04 Instrument ID: LC812
Lims ID: 480-160746-C-1-A Lab Sample ID: 200-160746-1
Client ID: MW- 25D- 100919
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. 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

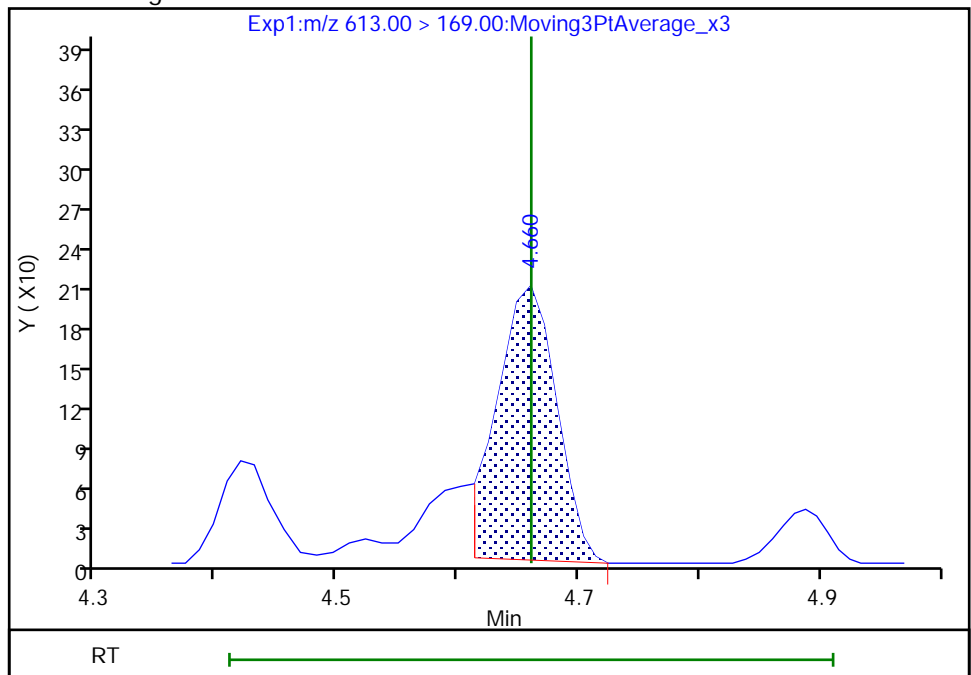
Not Detected
Expected RT: 4.66

Processing Integration Results



Manual Integration Results

RT: 4.66
Area: 689
Amount: 0.003802
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 11:24:12

Audit Action: Manually Integrated

Audit Reason: Split Peak

Euofins TestAmerica, Burlington

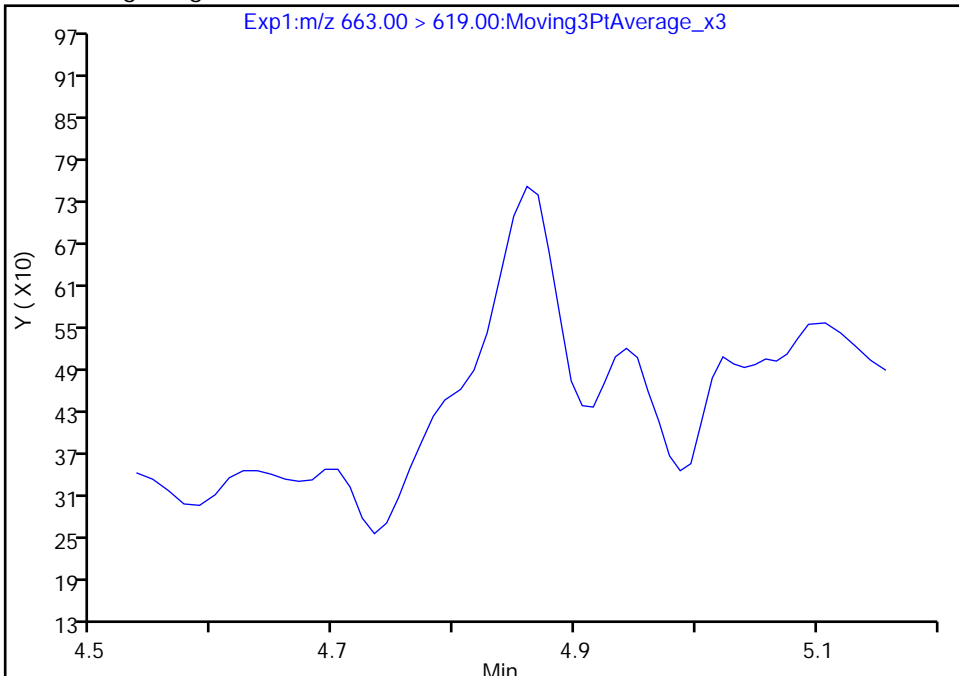
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B013.d
Injection Date: 22-Oct-2019 21:31:04 Instrument ID: LC812
Lims ID: 480-160746-C-1-A Lab Sample ID: 200-160746-1
Client ID: MW- 25D- 100919
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. 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

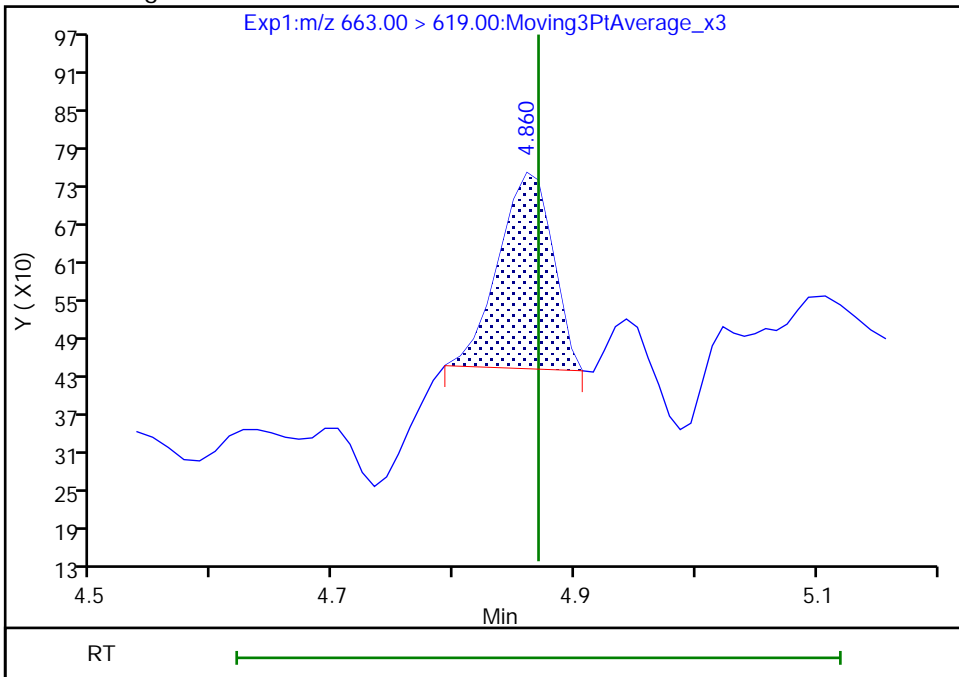
Not Detected
Expected RT: 4.87

Processing Integration Results



RT: 4.86
Area: 950
Amount: 0.001269
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 11:25:13
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

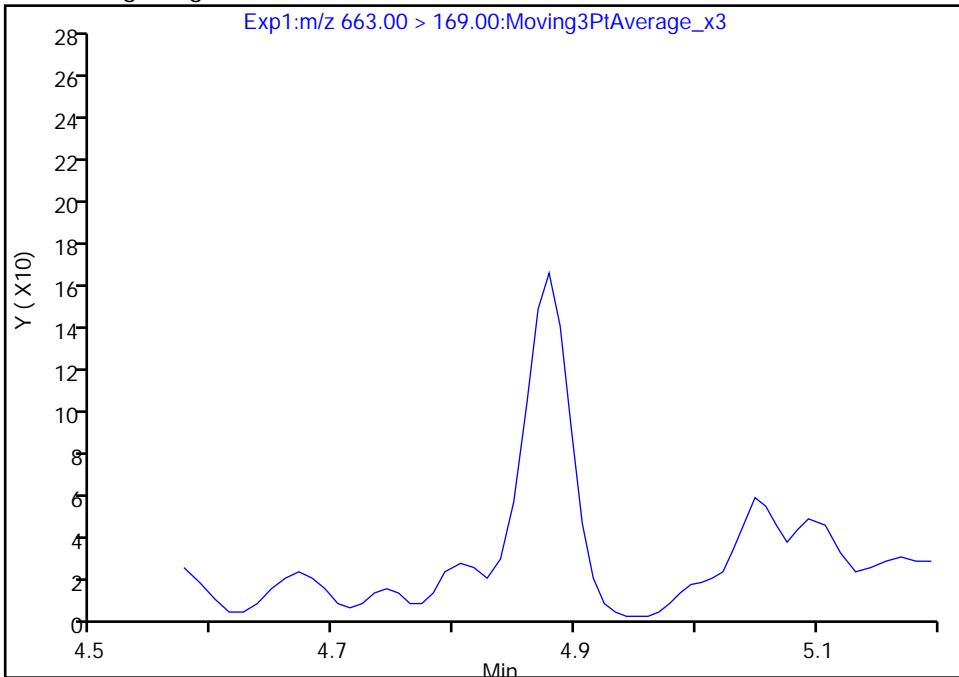
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B013.d
Injection Date: 22-Oct-2019 21:31:04 Instrument ID: LC812
Lims ID: 480-160746-C-1-A Lab Sample ID: 200-160746-1
Client ID: MW- 25D- 100919
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. 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

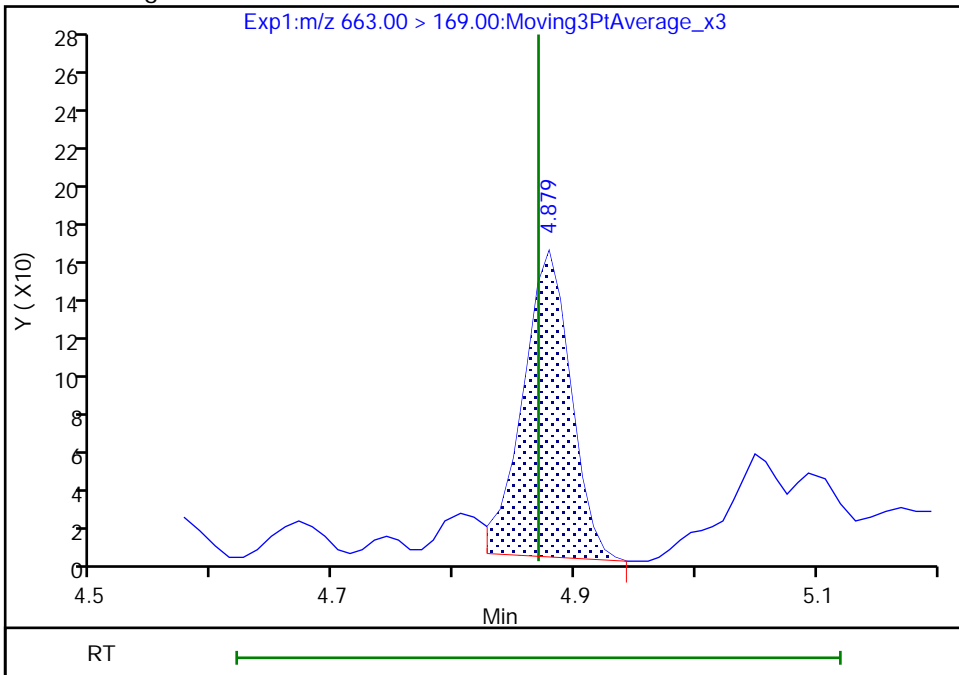
Not Detected
Expected RT: 4.87

Processing Integration Results



Manual Integration Results

RT: 4.88
Area: 437
Amount: 0.001269
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 11:25:20

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

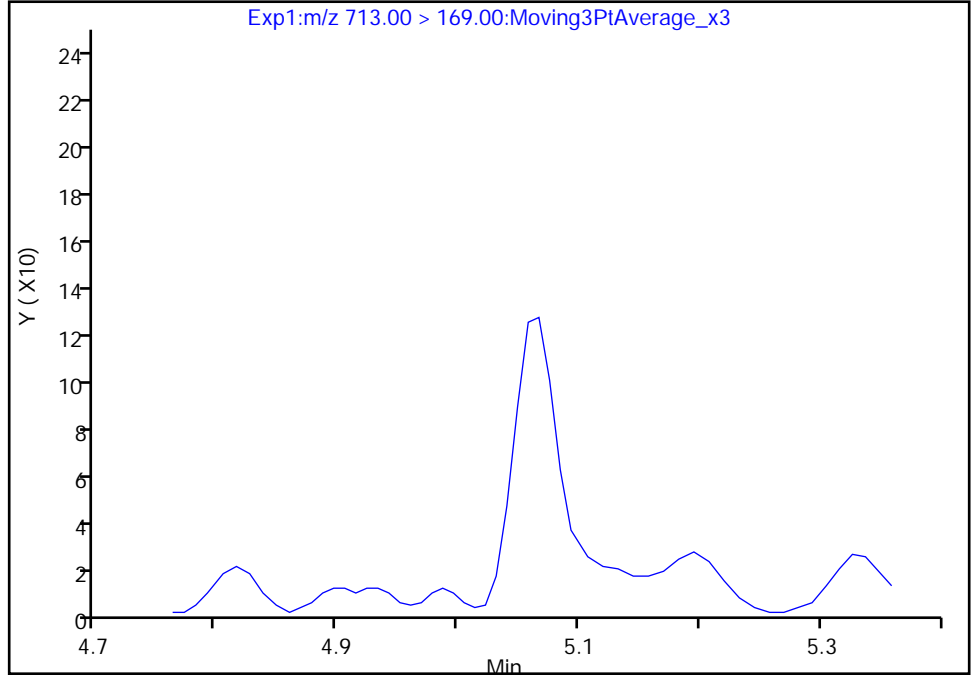
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B013.d
Injection Date: 22-Oct-2019 21:31:04 Instrument ID: LC812
Lims ID: 480-160746-C-1-A Lab Sample ID: 200-160746-1
Client ID: MW- 25D- 100919
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. 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

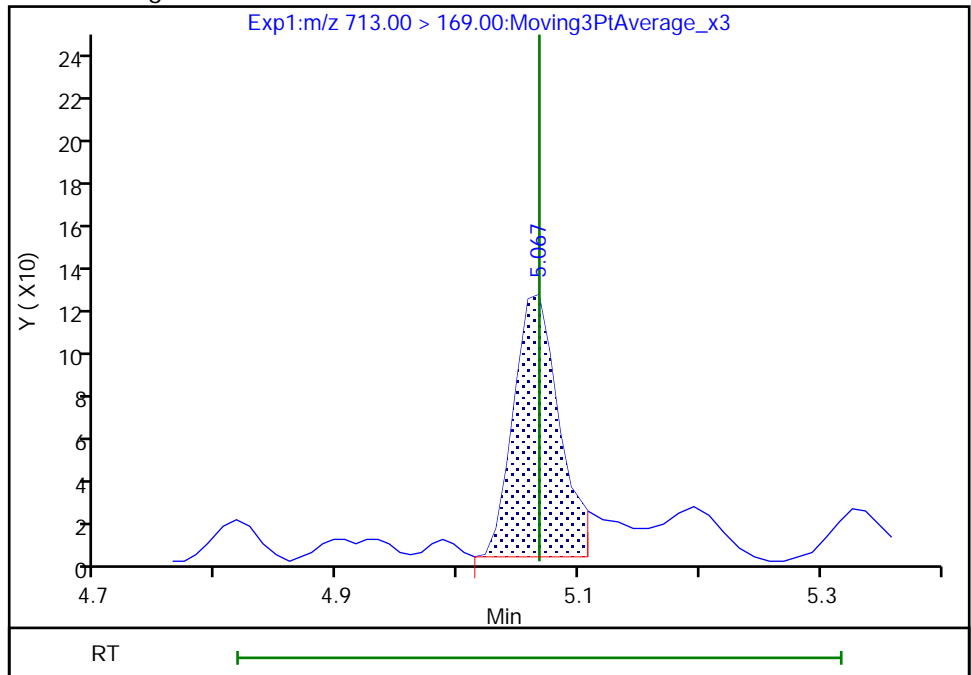
Not Detected
Expected RT: 5.07

Processing Integration Results



Manual Integration Results

RT: 5.07
Area: 310
Amount: 0.002641
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 11:26:20
Audit Action: Manually Integrated

Audit Reason: Split Peak
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Euofins TestAmerica, Burlington

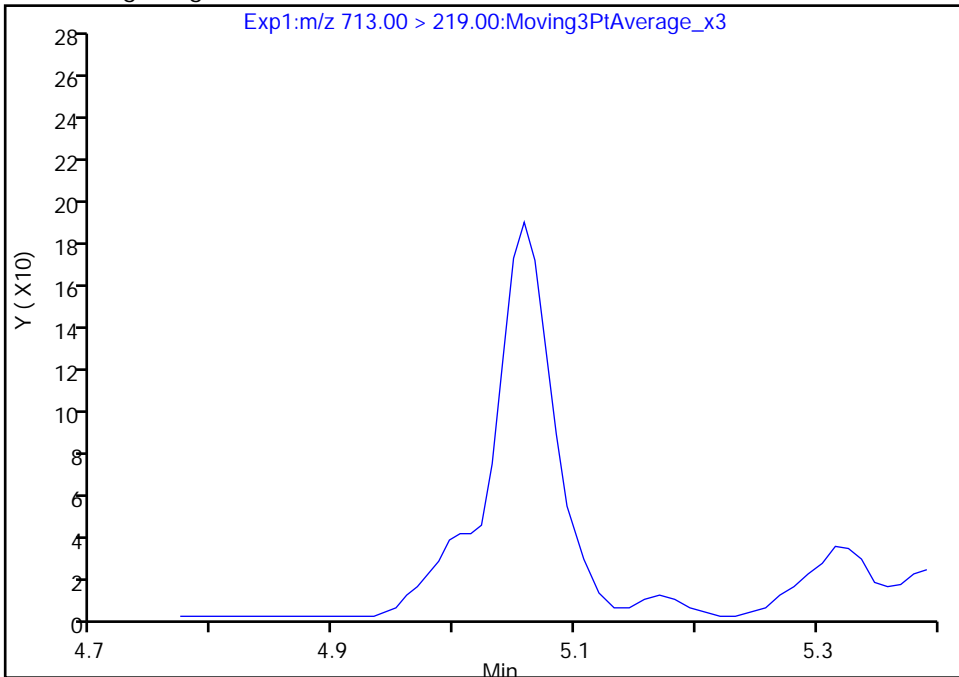
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B013.d
Injection Date: 22-Oct-2019 21:31:04 Instrument ID: LC812
Lims ID: 480-160746-C-1-A Lab Sample ID: 200-160746-1
Client ID: MW- 25D- 100919
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. 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

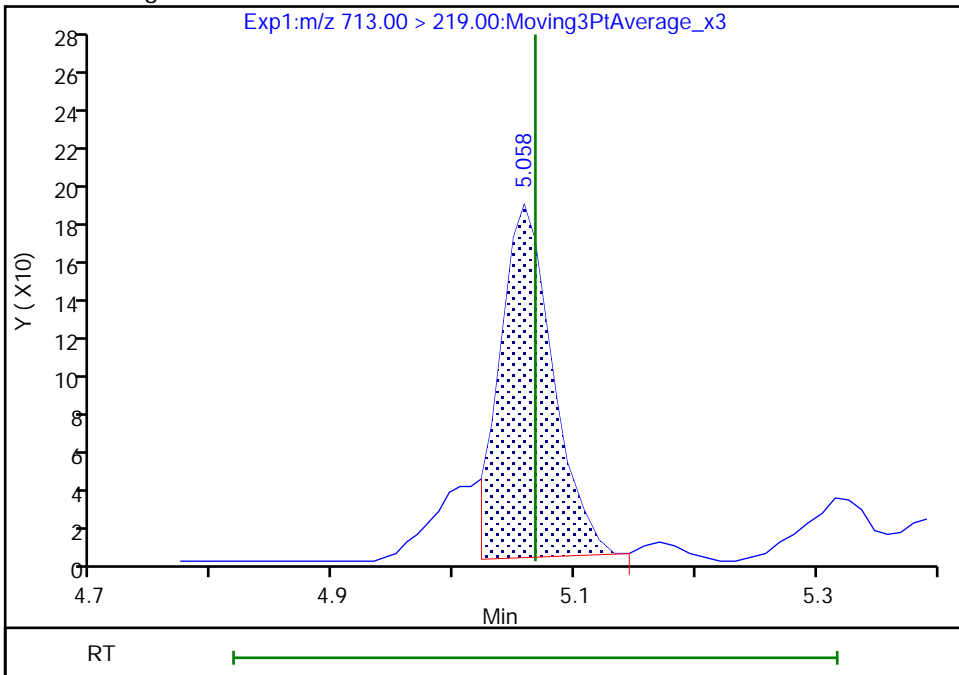
Not Detected
Expected RT: 5.07

Processing Integration Results



Manual Integration Results

RT: 5.06
Area: 556
Amount: 0.002641
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 11:26:23

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

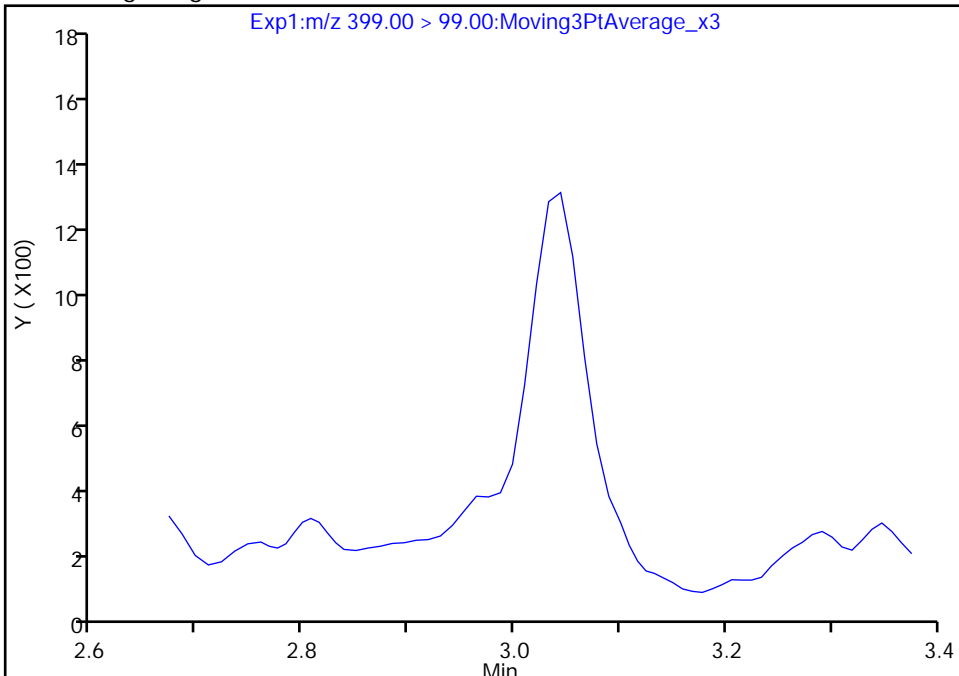
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B013.d
Injection Date: 22-Oct-2019 21:31:04 Instrument ID: LC812
Lims ID: 480-160746-C-1-A Lab Sample ID: 200-160746-1
Client ID: MW- 25D- 100919
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. 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

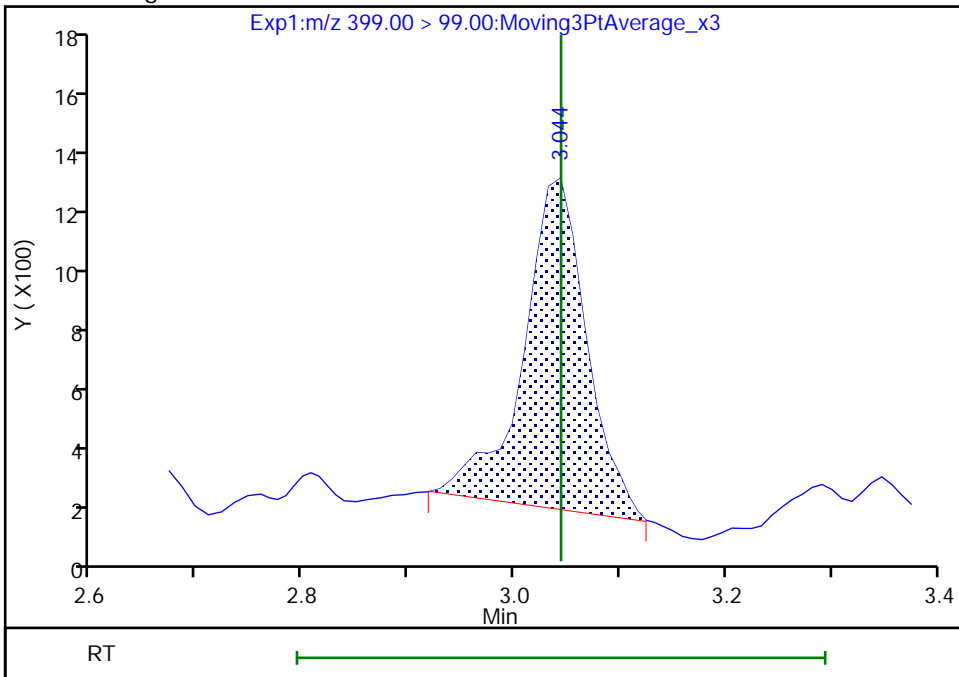
Not Detected
Expected RT: 3.04

Processing Integration Results



Manual Integration Results

RT: 3.04
Area: 4322
Amount: 0.008030
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 11:18:48
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

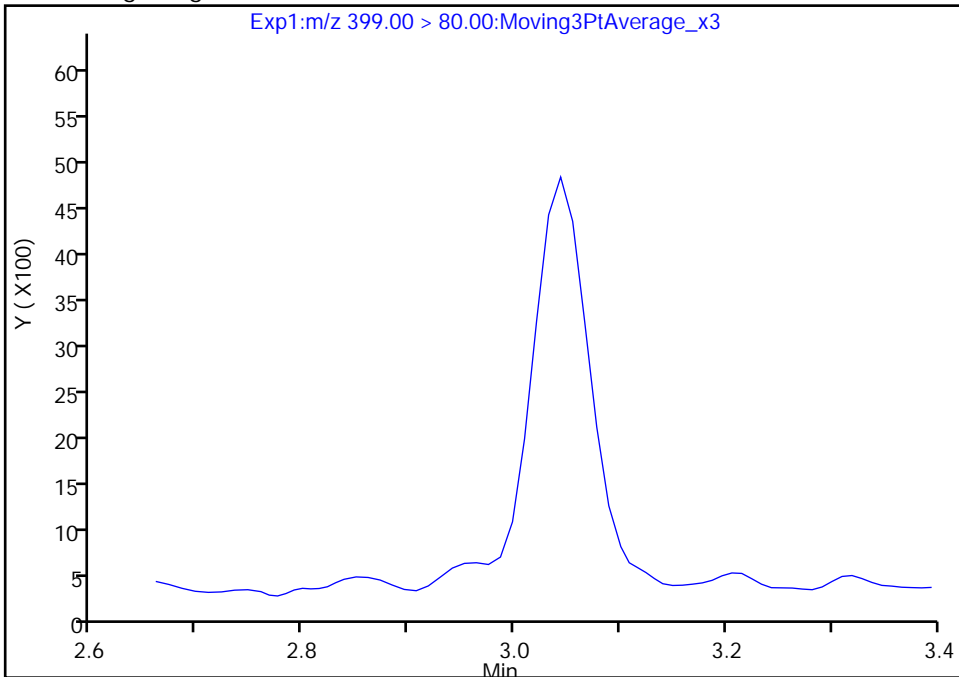
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B013.d
Injection Date: 22-Oct-2019 21:31:04 Instrument ID: LC812
Lims ID: 480-160746-C-1-A Lab Sample ID: 200-160746-1
Client ID: MW- 25D- 100919
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. 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

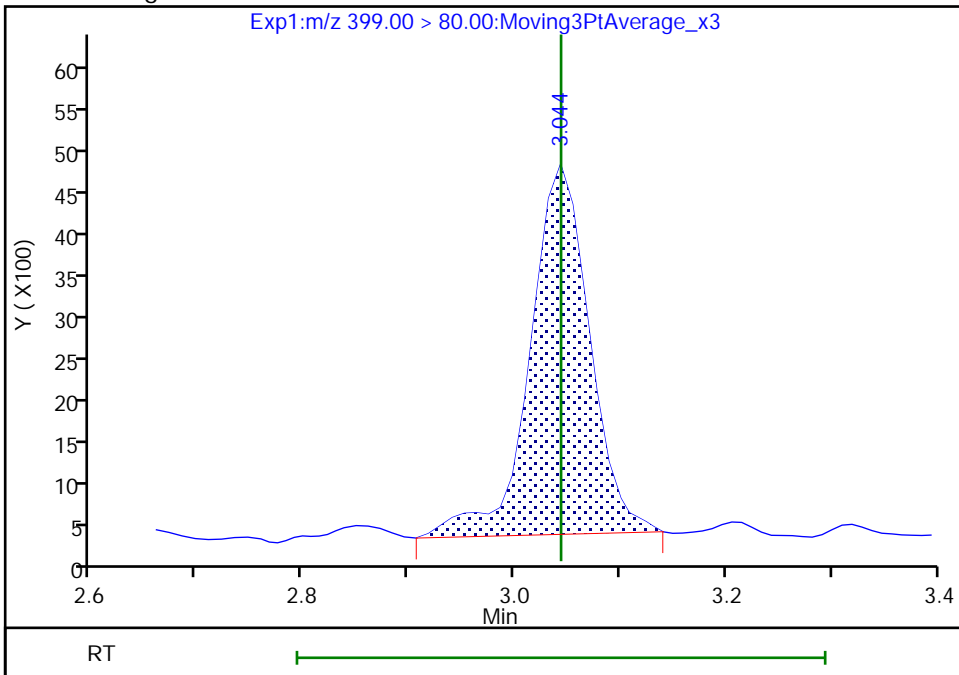
Not Detected
Expected RT: 3.04

Processing Integration Results



Manual Integration Results

RT: 3.04
Area: 17435
Amount: 0.008030
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 11:18:48

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Euofins TestAmerica, Burlington

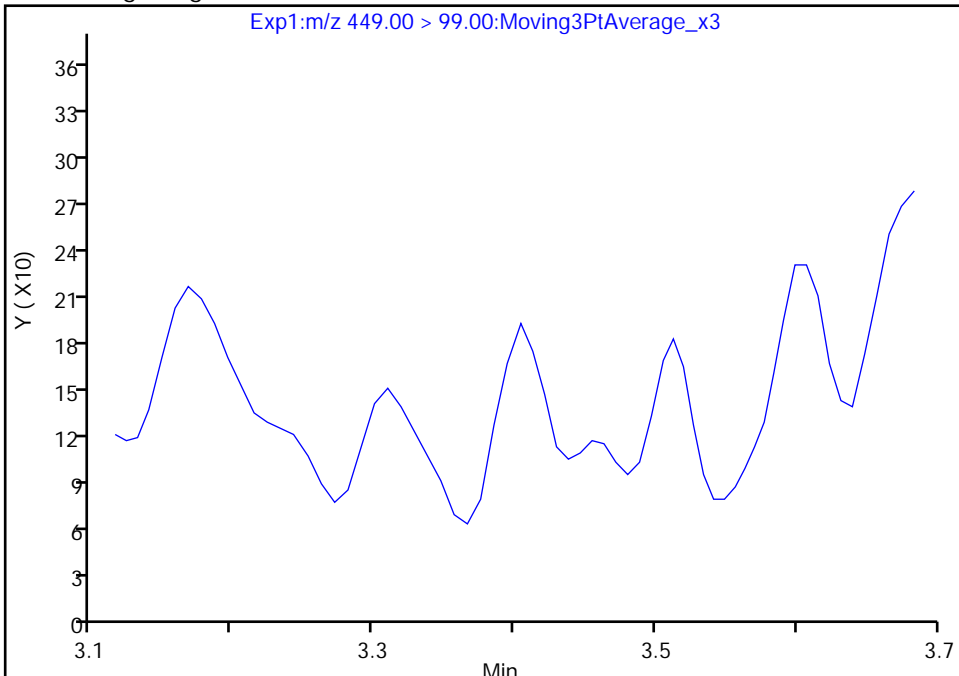
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B013.d
Injection Date: 22-Oct-2019 21:31:04 Instrument ID: LC812
Lims ID: 480-160746-C-1-A Lab Sample ID: 200-160746-1
Client ID: MW- 25D- 100919
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

16 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 2

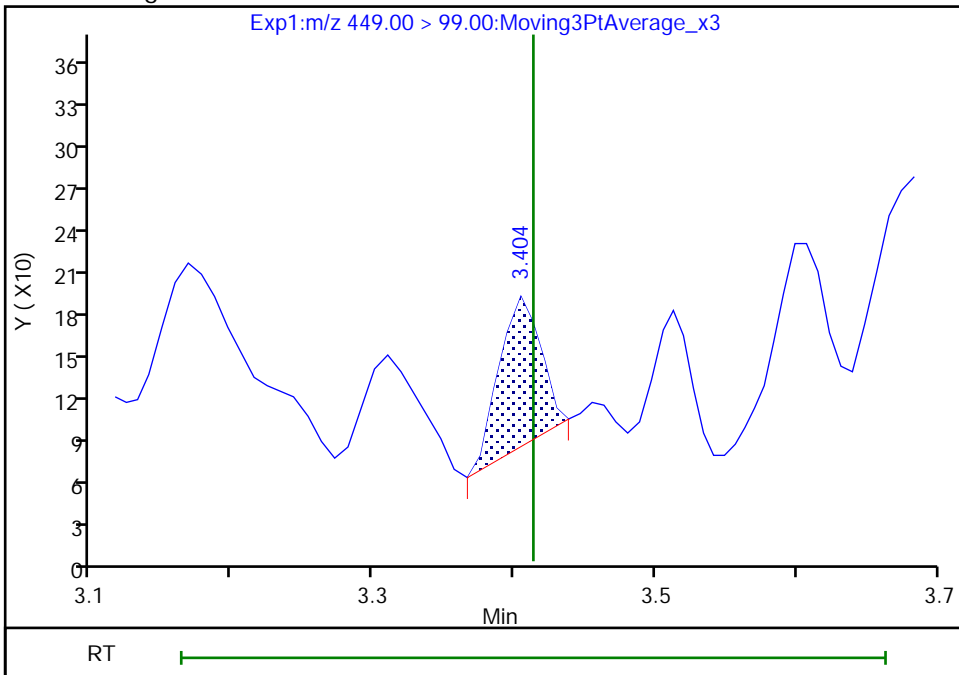
Not Detected
Expected RT: 3.41

Processing Integration Results



Manual Integration Results

RT: 3.40
Area: 220
Amount: 0.001638
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 11:19:40
Audit Action: Manually Integrated

Audit Reason: Assign Peak

Eurofins TestAmerica, Burlington

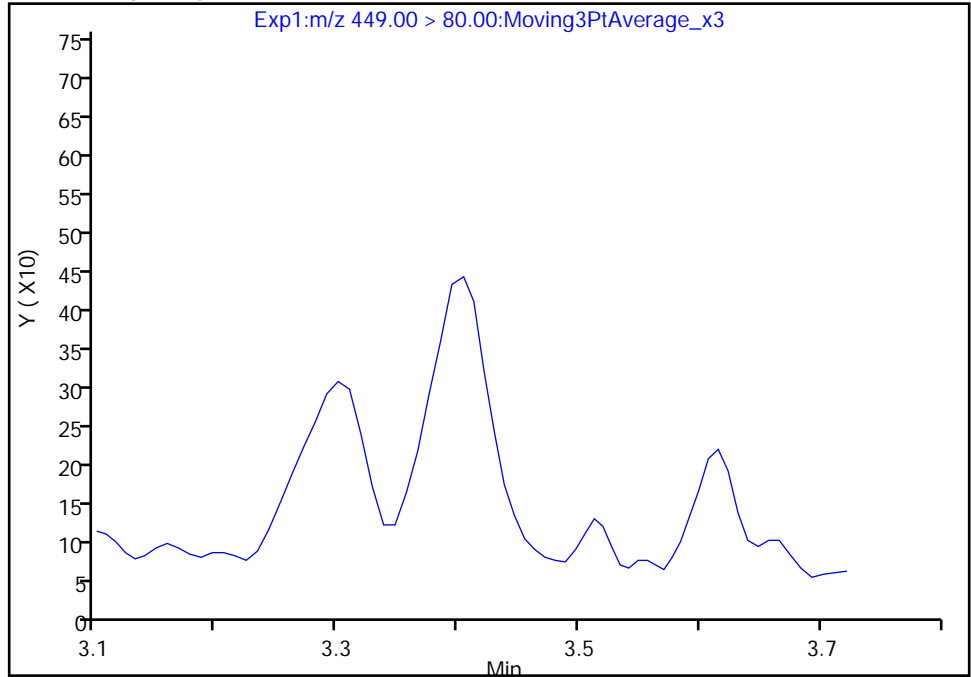
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B013.d
Injection Date: 22-Oct-2019 21:31:04 Instrument ID: LC812
Lims ID: 480-160746-C-1-A Lab Sample ID: 200-160746-1
Client ID: MW- 25D- 100919
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

16 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 1

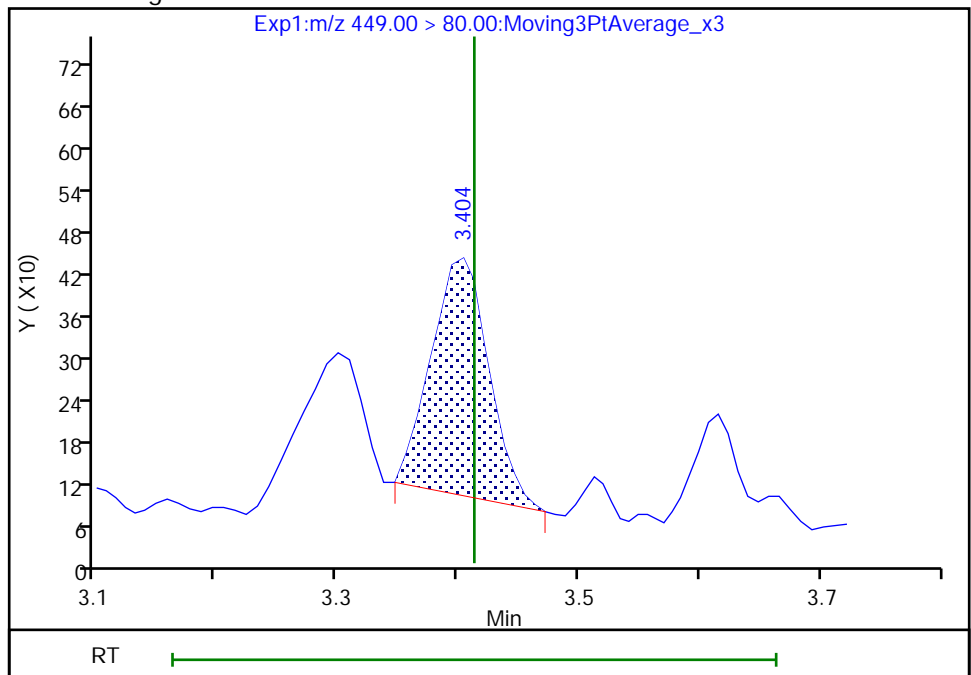
Not Detected
Expected RT: 3.41

Processing Integration Results



Manual Integration Results

RT: 3.40
Area: 1125
Amount: 0.001638
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 11:19:43

Audit Action: Manually Integrated

Audit Reason: Assign Peak

Euofins TestAmerica, Burlington

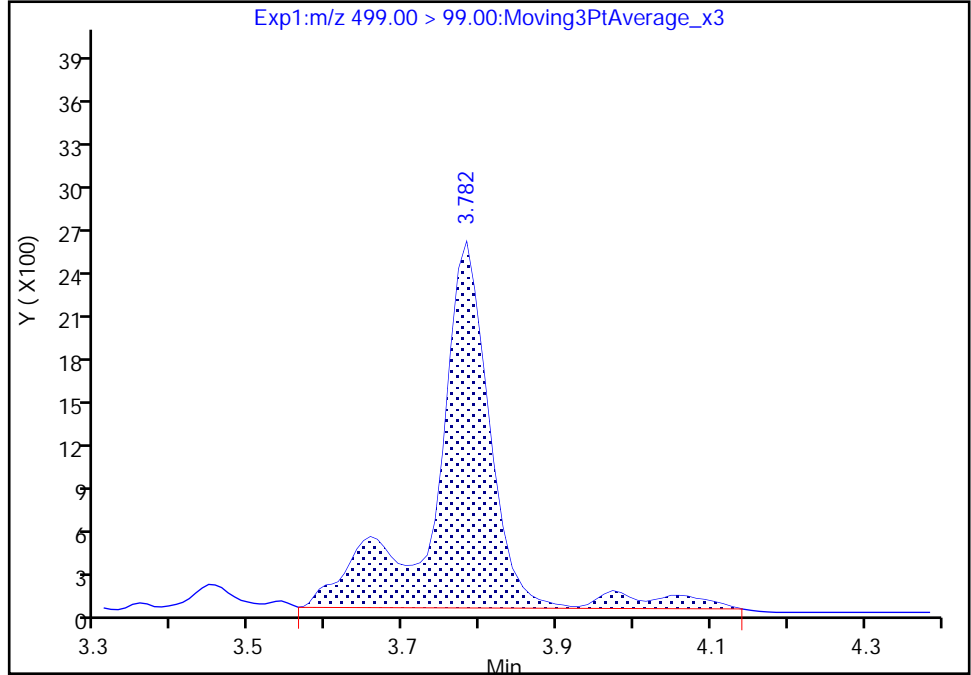
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B013.d
Injection Date: 22-Oct-2019 21:31:04 Instrument ID: LC812
Lims ID: 480-160746-C-1-A Lab Sample ID: 200-160746-1
Client ID: MW- 25D- 100919
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. 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

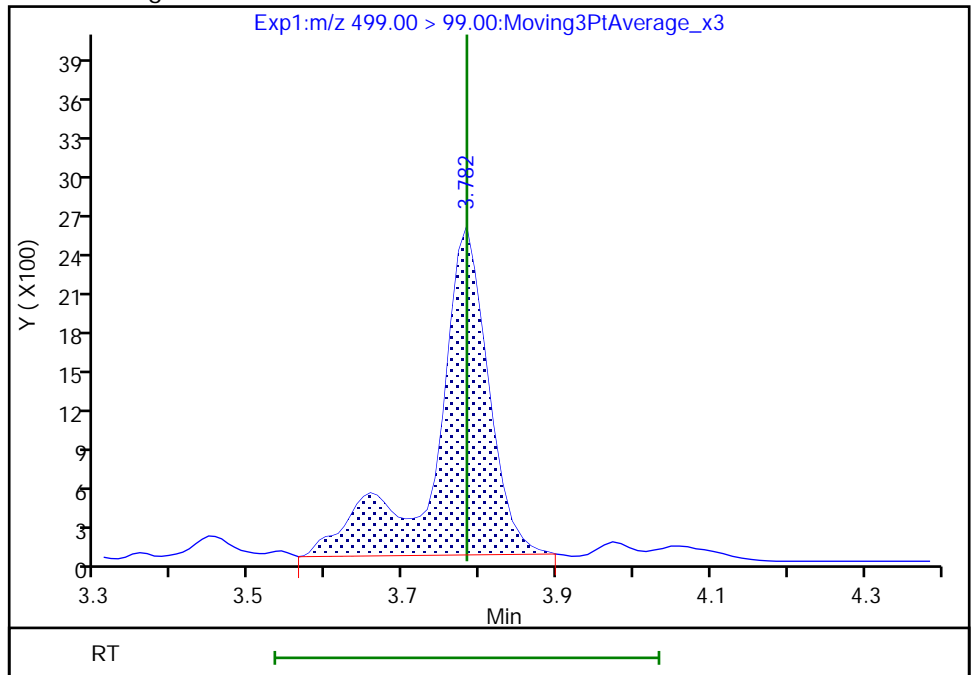
RT: 3.78
Area: 13235
Amount: 0.158492
Amount Units: ng/ml

Processing Integration Results



RT: 3.78
Area: 12112
Amount: 0.110260
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 11:20:25
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

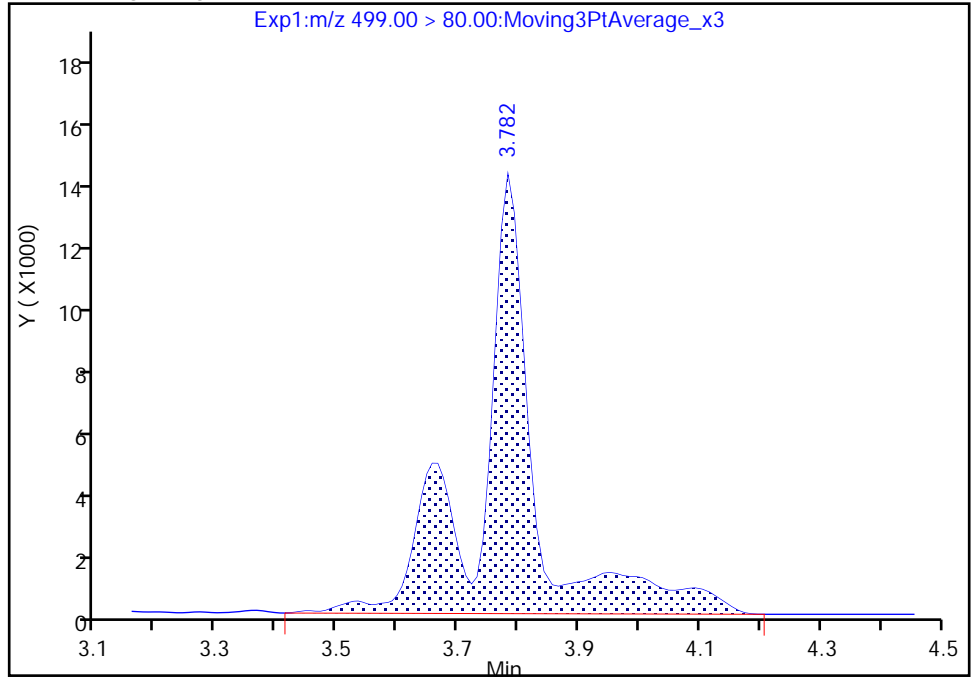
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B013.d
Injection Date: 22-Oct-2019 21:31:04 Instrument ID: LC812
Lims ID: 480-160746-C-1-A Lab Sample ID: 200-160746-1
Client ID: MW- 25D- 100919
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. 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

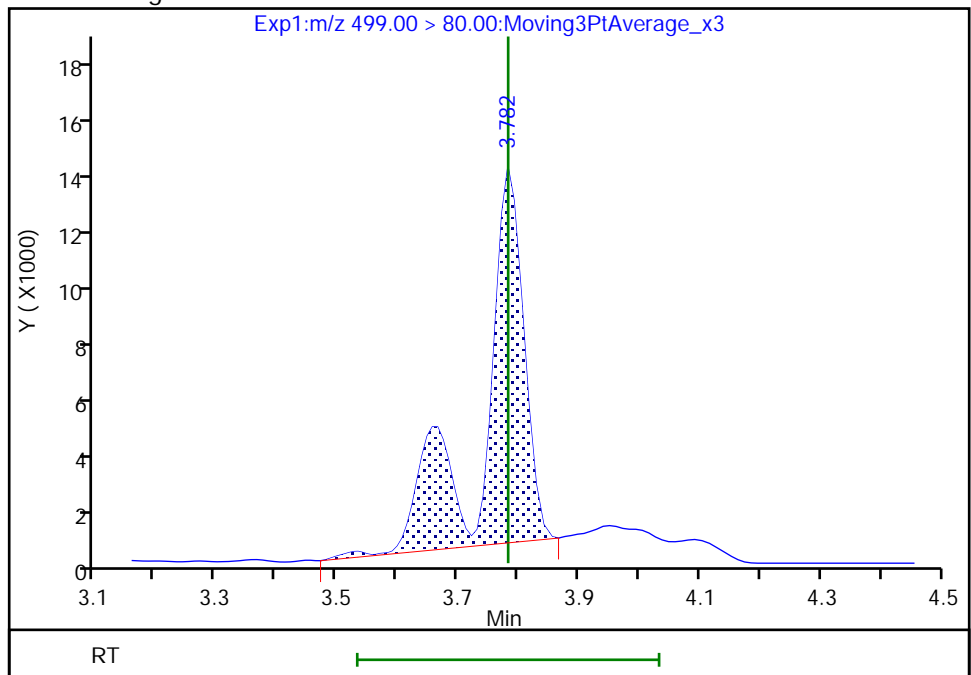
RT: 3.78
Area: 88878
Amount: 0.158492
Amount Units: ng/ml

Processing Integration Results



RT: 3.78
Area: 61831
Amount: 0.110260
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 11:20:53

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

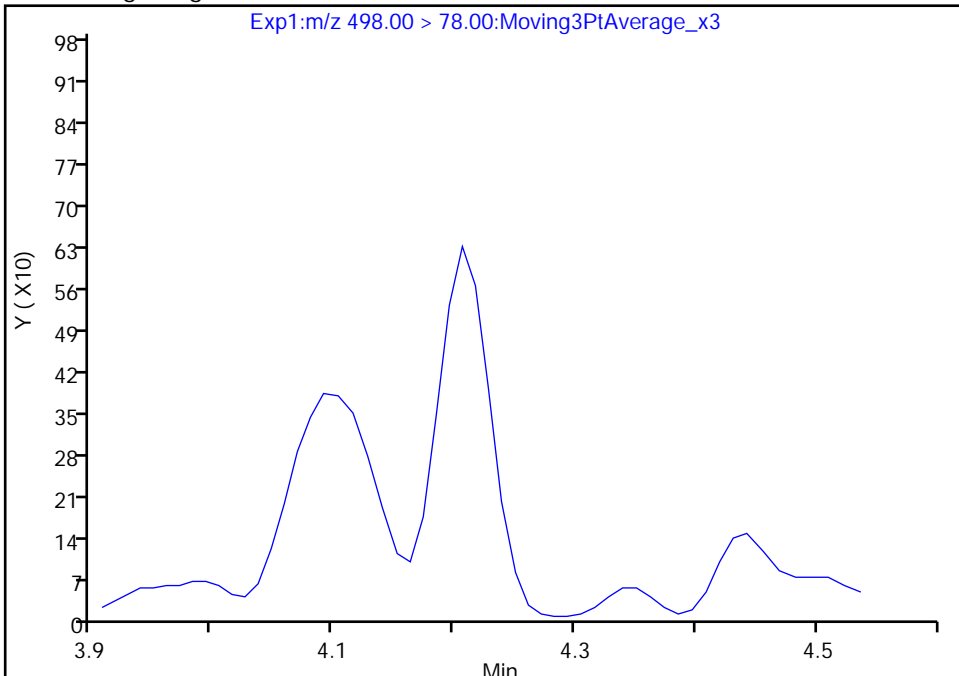
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B013.d
Injection Date: 22-Oct-2019 21:31:04 Instrument ID: LC812
Lims ID: 480-160746-C-1-A Lab Sample ID: 200-160746-1
Client ID: MW- 25D- 100919
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. 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

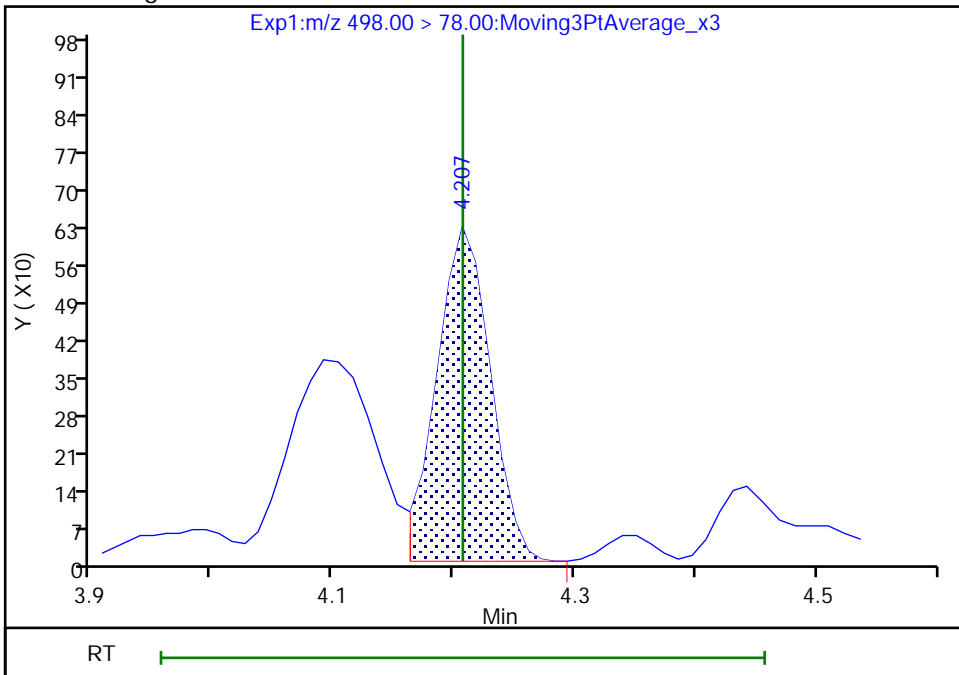
Not Detected
Expected RT: 4.21

Processing Integration Results



Manual Integration Results

RT: 4.21
Area: 1908
Amount: 0.002044
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 11:22:04
Audit Action: Manually Integrated

Audit Reason: Split Peak

Euofins TestAmerica, Burlington

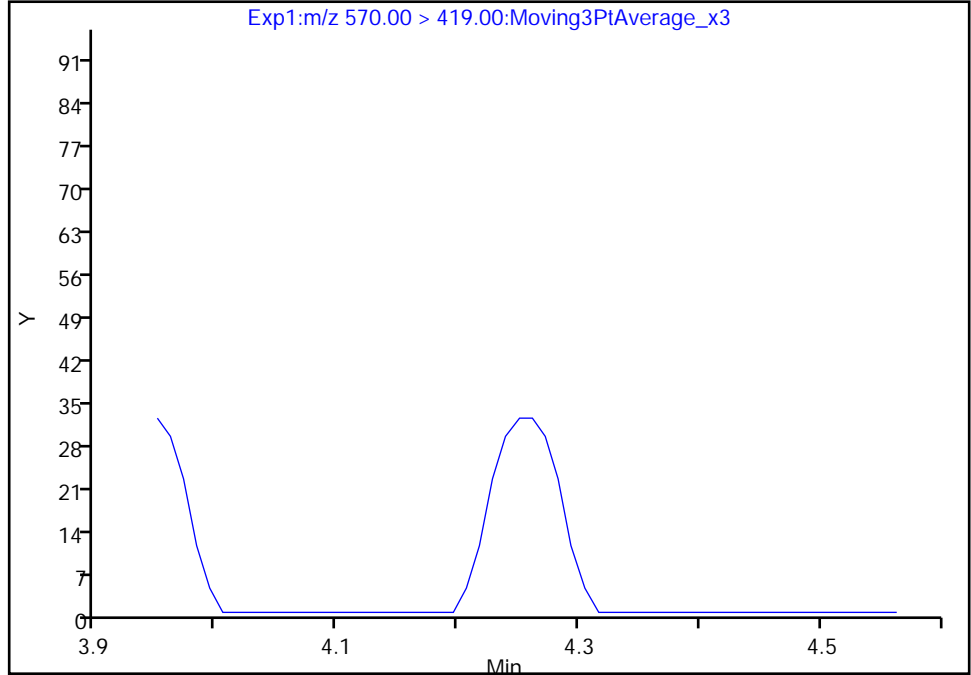
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B013.d
Injection Date: 22-Oct-2019 21:31:04 Instrument ID: LC812
Lims ID: 480-160746-C-1-A Lab Sample ID: 200-160746-1
Client ID: MW- 25D- 100919
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. 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

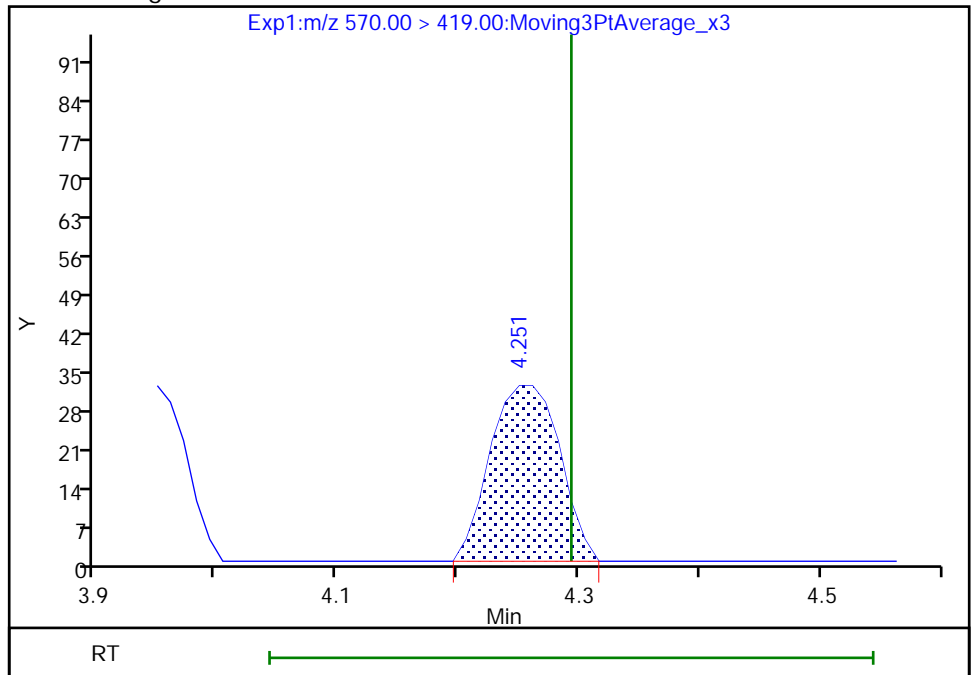
Not Detected
Expected RT: 4.29

Processing Integration Results



RT: 4.25
Area: 127
Amount: 0.001856
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 11:22:31
Audit Action: Manually Integrated

Audit Reason: Assign Peak

Eurofins TestAmerica, Burlington

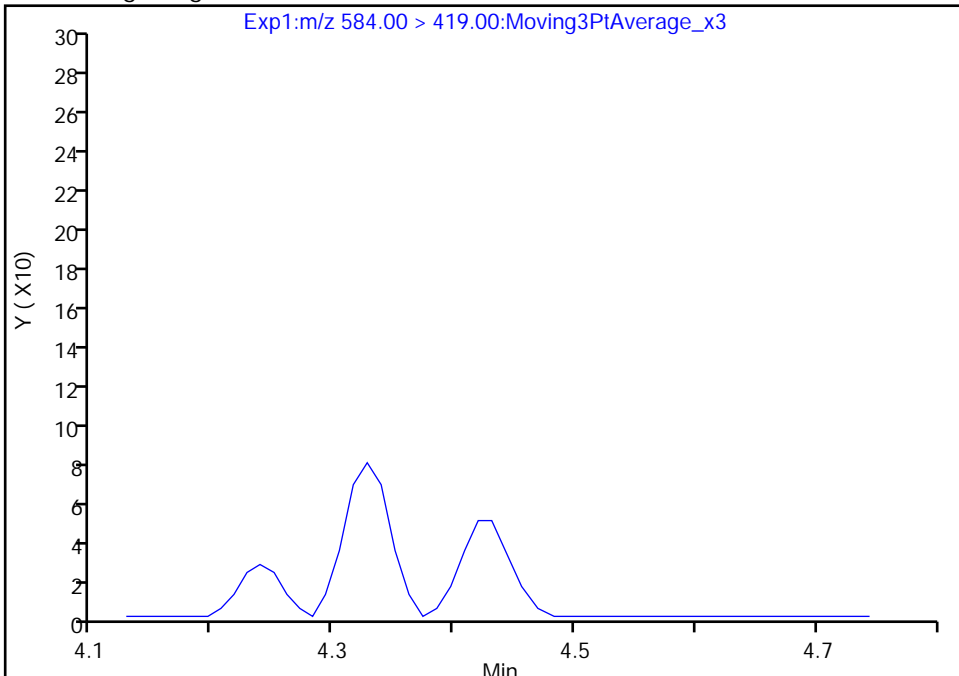
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B013.d
Injection Date: 22-Oct-2019 21:31:04 Instrument ID: LC812
Lims ID: 480-160746-C-1-A Lab Sample ID: 200-160746-1
Client ID: MW- 25D- 100919
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. 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

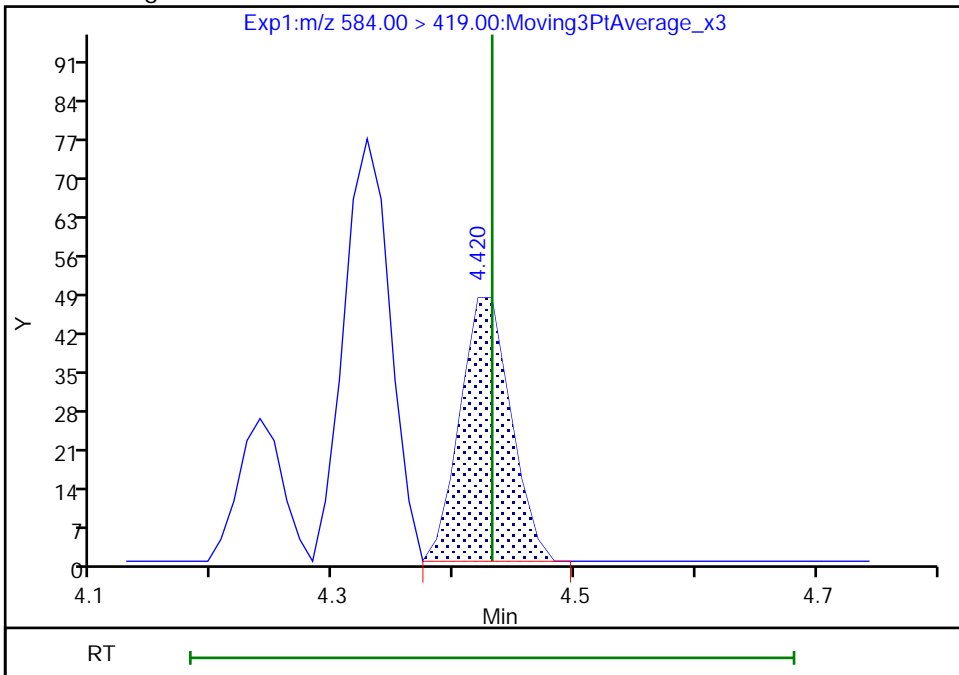
Not Detected
Expected RT: 4.43

Processing Integration Results



Manual Integration Results

RT: 4.42
Area: 140
Amount: -0.016415
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 11:23:15
Audit Action: Manually Integrated

Audit Reason: Assign Peak

Eurofins TestAmerica, Burlington

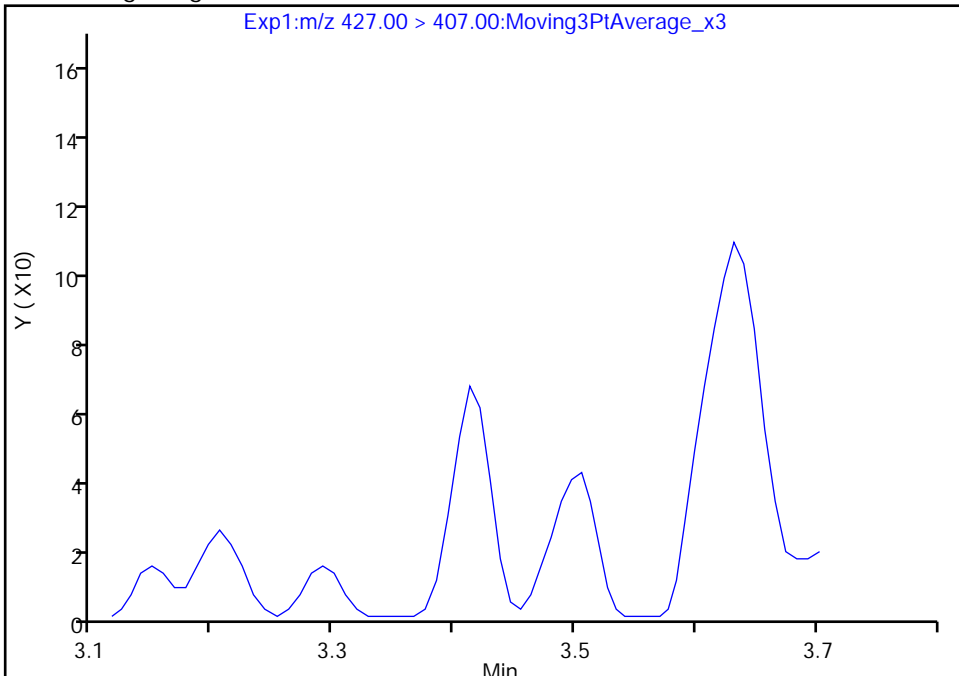
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B013.d
Injection Date: 22-Oct-2019 21:31:04 Instrument ID: LC812
Lims ID: 480-160746-C-1-A Lab Sample ID: 200-160746-1
Client ID: MW- 25D- 100919
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. 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

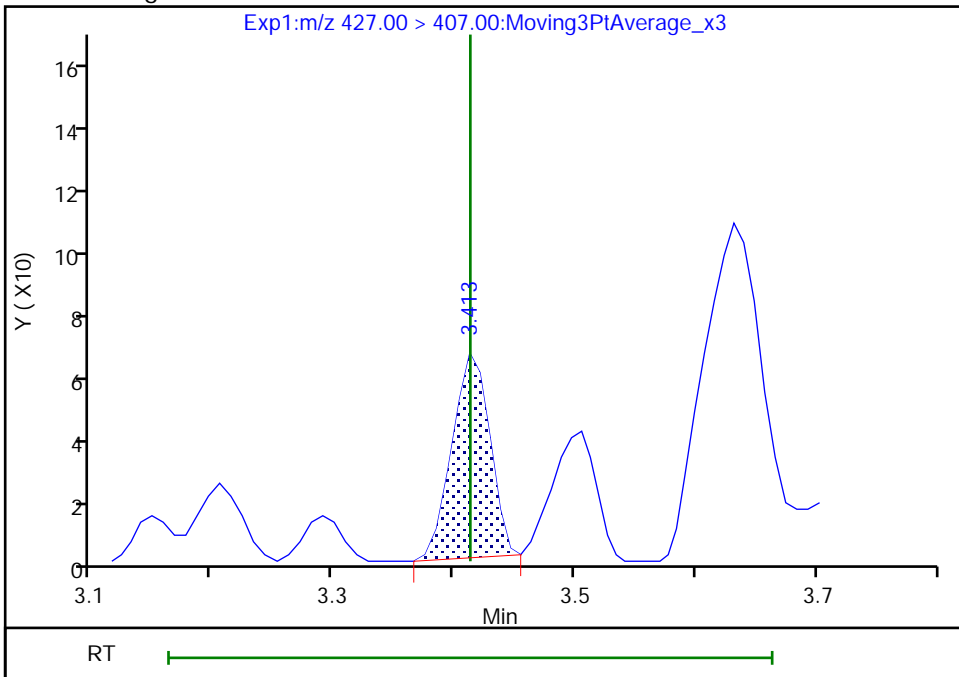
Not Detected
Expected RT: 3.41

Processing Integration Results



Manual Integration Results

RT: 3.41
Area: 136
Amount: 0.000652
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 11:19:57
Audit Action: Manually Integrated

Audit Reason: Assign Peak

Eurofins TestAmerica, Burlington

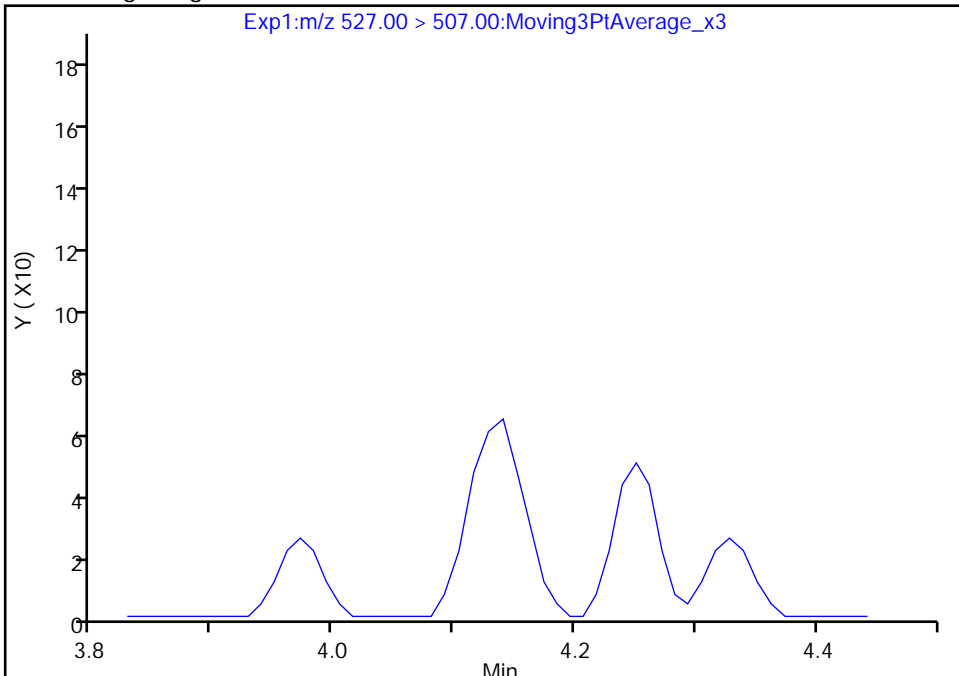
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Injection Date: 22-Oct-2019 21:31:04 Instrument ID: LC812
Lims ID: 480-160746-C-1-A Lab Sample ID: 200-160746-1
Client ID: MW- 25D- 100919
Operator ID: lc812tech ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 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

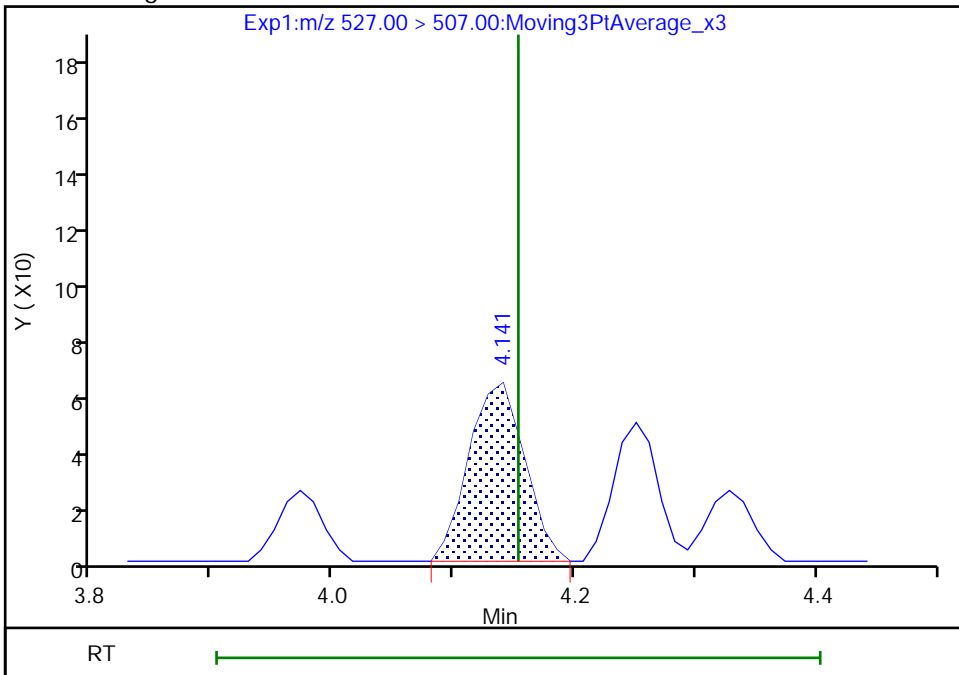
Not Detected
Expected RT: 4.15

Processing Integration Results



Manual Integration Results

RT: 4.14
Area: 202
Amount: -0.011959
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 11:21:49
Audit Action: Manually Integrated

Audit Reason: Assign Peak
Page 162 of 599

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1
 SDG No.: _____
 Client Sample ID: EW8100919 Lab Sample ID: 480-160746-2
 Matrix: Water Lab File ID: SC102219B015.d
 Analysis Method: 537 (modified) Date Collected: 10/09/2019 17:05
 Extraction Method: 3535 Date Extracted: 10/17/2019 10:08
 Sample wt/vol: 278.9(mL) Date Analyzed: 10/22/2019 21:47
 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.: 148772 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	6.8		1.8	0.90
2706-90-3	Perfluoropentanoic acid (PFPeA)	7.9		1.8	0.56
307-24-4	Perfluorohexanoic acid (PFHxA)	15		1.8	0.68
375-85-9	Perfluoroheptanoic acid (PFHpA)	10		1.8	0.82
335-67-1	Perfluorooctanoic acid (PFOA)	46		1.8	0.73
375-95-1	Perfluorononanoic acid (PFNA)	1.1	J B	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)	6.6		1.8	0.44
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	25		1.8	0.72
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	4.6		1.8	0.85
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	150		1.8	0.55
335-77-3	Perfluorodecanesulfonic acid (PFDS)	ND		1.8	0.81
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND		9.0	9.0
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		18	1.5
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	10	J	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.: 480-160746-1
 SDG No.: _____
 Client Sample ID: EW8100919 Lab Sample ID: 480-160746-2
 Matrix: Water Lab File ID: SC102219B015.d
 Analysis Method: 537 (modified) Date Collected: 10/09/2019 17:05
 Extraction Method: 3535 Date Extracted: 10/17/2019 10:08
 Sample wt/vol: 278.9(mL) Date Analyzed: 10/22/2019 21:47
 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.: 148772 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	85		50-150
STL01892	13C4 PFHpA	89		50-150
STL00990	13C4 PFOA	99		50-150
STL00991	13C4 PFOS	83		50-150
STL00995	13C5 PFNA	89		50-150
STL00992	13C4 PFBA	54		25-150
STL00993	13C2 PFHxA	83		50-150
STL00996	13C2 PFDA	91		50-150
STL00997	13C2 PFUnA	87		50-150
STL00998	13C2 PFDoA	103		50-150
STL01056	13C8 FOSA	66		25-150
STL01893	13C5 PFPeA	82		25-150
STL02116	13C2 PFTeDA	87		50-150
STL02118	d3-NMeFOSAA	79		50-150
STL02117	d5-NEtFOSAA	93		50-150
STL02279	M2-6:2 FTS	123		25-150
STL02280	M2-8:2 FTS	100		25-150

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B015.d
 Lims ID: 480-160746-C-2-A
 Client ID: EW- 8100919
 Sample Type: Client
 Inject. Date: 22-Oct-2019 21:47:28 ALS Bottle#: 15 Worklist Smp#: 15
 Injection Vol: 20.0 ul Dil. Factor: 1.0000
 Sample Info: 480-160746-C-2-A
 Misc. Info.: 200-0038369-015 Plate: 1 Rack: 4
 Operator ID: lc812tech Instrument ID: LC812
 Method: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\PFC_LC812.m
 Limit Group: LC_PFC_ICAL
 Last Update: 28-Oct-2019 13:09:04 Calib Date: 24-Sep-2019 18:56:37
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA015.d
 Column 1 : C-18 (4.60 mm) Det: EXP1
 Process Host: CTX1017

First Level Reviewer: manopan Date: 24-Oct-2019 12:13:35
 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	1.926	1.926	0.0	0.563	2133736	1.35	54.1	2960	
2 Perfluorobutanoic acid										M
212.90 > 169.00	1.926	1.926	0.0	1.000	143249	0.1890		6.9		M
D 3 13C5 PFPeA	267.90 > 223.00	2.271	2.285	-0.014	0.664	2556829	2.05	81.9	1221	
4 Perfluoropentanoic acid	262.90 > 219.00	2.271	2.285	-0.014	1.000	219029	0.2204		1.9	
5 Perfluorobutanesulfonic acid										M
298.90 > 80.00	2.298	2.298	0.0	0.755	209449	0.1832	Target=2.04	2.8		M
298.90 > 99.00	2.298	2.298	0.0	0.755	108269		1.93(1.02-3.05)	7.9		M
D 47 13C3 PFBS	301.90 > 80.00	2.460	2.325	0.135	0.719	8741	NC	0.0	112	
6 Perfluorohexanoic acid										M
313.00 > 269.00	2.660	2.661	-0.001	1.000	440358	0.4077	Target=12.90	10.5		M
313.00 > 119.00	2.660	2.661	-0.001	1.000	40637		10.84(6.45-19.36)	23.1		M
D 7 13C2 PFHxA	315.00 > 270.00	2.660	2.661	-0.001	0.778	2740821	2.07	82.6	6241	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.044	3.044	0.0	1.000	561703	0.6866	Target=3.78	29.6		M
399.00 > 99.00	3.044	3.044	0.0	1.000	162457		3.46(1.89-5.67)	50.3		M
D 11 18O2 PFHxS	403.00 > 84.00	3.044	3.044	0.0	0.890	1983951	2.00	84.7	4553	
D 9 13C4 PFHpA	367.00 > 322.00	3.044	3.044	0.0	0.890	2857513	2.22	89.0	5135	
10 Perfluoroheptanoic acid										M
363.00 > 319.00	3.044	3.044	0.0	1.000	286733	0.2808	Target=3.54	12.1		M
363.00 > 169.00	3.044	3.044	0.0	1.000	82941		3.46(1.77-5.31)	57.5		

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	0.900	79067	0.1277	Target=5.80	14.5		
449.00 > 99.00	3.405	3.413	-0.008	0.900	19417		4.07(2.90-8.71)	11.1		M
13 1H,1H,2H,2H-perfluorooctanesulfoni										M
427.00 > 407.00	3.405	3.413	-0.008	0.998	1625	0.006498		14.1		M
D 12 M2-6:2 FTS										
429.00 > 81.00	3.413	3.413	0.0	0.998	471574	2.93		123	176	
* 62 13C2 PFOA										
415.00 > 370.00	3.422	3.422	0.0		3287644	2.50			5643	
D 14 13C4 PFOA										
417.00 > 372.00	3.422	3.422	0.0	1.000	3241586	2.48		99.3	6065	
15 Perfluorooctanoic acid										M
413.00 > 369.00	3.422	3.422	0.0	1.000	1559564	1.27	Target=2.61	109		M
413.00 > 169.00	3.422	3.422	0.0	1.000	698477		2.23(1.30-3.91)	530		M
D 18 13C4 PFOS										
503.00 > 80.00	3.783	3.783	0.0	1.106	1335860	1.98		83.0	760	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.783	3.783	0.0	1.000	2077976	4.11	Target=4.93	346		M
499.00 > 99.00	3.783	3.783	0.0	1.000	517202		4.02(2.47-7.40)	42.5		M
D 19 13C5 PFNA										
468.00 > 423.00	3.805	3.805	0.0	1.112	2578968	2.23		89.3	6794	
20 Perfluorononanoic acid										
463.00 > 419.00	3.805	3.805	0.0	1.000	31335	0.0318	Target=7.89	4.4		
463.00 > 169.00	3.805	3.805	0.0	1.000	3347		9.36(3.95-11.84)	6.1		
24 Perfluorodecanoic acid										M
513.00 > 469.00	4.153	4.141	0.012	1.003	7704	0.007913	Target=8.57	2.4		M
513.00 > 169.00	4.129	4.141	-0.012	0.997	1089		7.07(4.29-12.86)	4.0		M
D 23 13C2 PFDA										
515.00 > 470.00	4.141	4.141	0.0	1.210	2631431	2.29		91.5	5122	
25 1H,1H,2H,2H-perfluorodecanesulfoni										M
527.00 > 507.00	4.153	4.153	0.0	1.000	258	-0.0116		5.4		M
D 26 M2-8:2 FTS										
529.00 > 81.00	4.153	4.153	0.0	1.214	418741	2.38		99.6	423	
22 Perfluorooctanesulfonamide										M
498.00 > 78.00	4.207	4.207	0.0	1.000	7441	0.009448		25.9		M
D 21 13C8 FOSA										
506.00 > 78.00	4.207	4.207	0.0	1.230	2145901	1.64		65.6	4279	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.294	4.294	0.0	1.255	219001	1.96		78.5	1408	
28 N-methylperfluorooctanesulfonamido										M
570.00 > 419.00	4.294	4.294	0.0	1.000	1031	0.0165		4.7		M
29 Perfluorodecanesulfonic acid										M
599.00 > 80.00	4.386	4.397	-0.011	1.159	2092	0.006204	Target=2.56	5.0		M
599.00 > 99.00	4.397	4.397	0.0	1.163	938		2.23(1.28-3.84)	5.1		M
31 Perfluoroundecanoic acid										Ma
563.00 > 519.00	4.420	4.420	0.0	1.000	5624	0.007493	Target=6.97	2.6		a
563.00 > 169.00	4.420	4.420	0.0	1.000	1272		4.42(3.48-10.45)	2.9		

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 30 13C2 PFUnA										
565.00 > 520.00	4.420	4.420	0.0	1.292	2242369	2.18		87.0	7617	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.431	4.431	0.0	1.295	279488	2.31		92.5	1766	
33 N-ethylperfluorooctanesulfonamidoa										
584.00 > 419.00	4.431	4.431	0.0	1.000	18696	0.2874			138	M
37 Perfluorododecanoic acid										
613.00 > 569.00	4.660	4.660	0.0	1.000	5644	0.005558	Target=7.06		0.9	M
613.00 > 169.00	4.660	4.660	0.0	1.000	673		8.39(3.53-10.59)		5.4	M
D 36 13C2 PFDoA										
615.00 > 570.00	4.660	4.660	0.0	1.362	2870203	2.59		103	12706	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.870	4.870	0.0	1.045	5001	0.006086	Target=4.87		1.0	M
663.00 > 169.00	4.879	4.870	0.009	1.047	1033		4.84(2.43-7.30)		5.8	M
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.076	5.067	0.009	1.003	1236	0.009821	Target=1.09		10.5	M
713.00 > 219.00	5.058	5.067	-0.009	1.000	1297		0.95(0.54-1.63)		21.6	M
D 43 13C2 PFTeDA										
715.00 > 670.00	5.058	5.067	-0.009	1.478	2162111	2.17		86.9	9827	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

a - User Assigned ID

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B015.d

Injection Date: 22-Oct-2019 21:47:28

Instrument ID: LC812

Lims ID: 480-160746-C-2-A

Lab Sample ID: 200-160746-2

Client ID: EW- 8100919

Operator ID: lc812tech

ALS Bottle#: 15

Worklist Smp#: 15

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

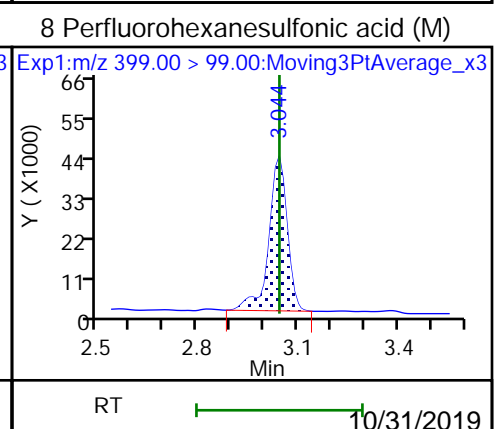
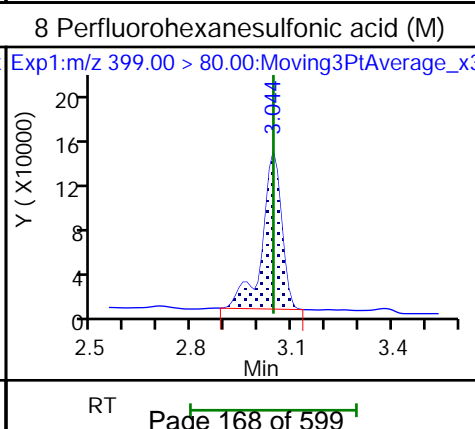
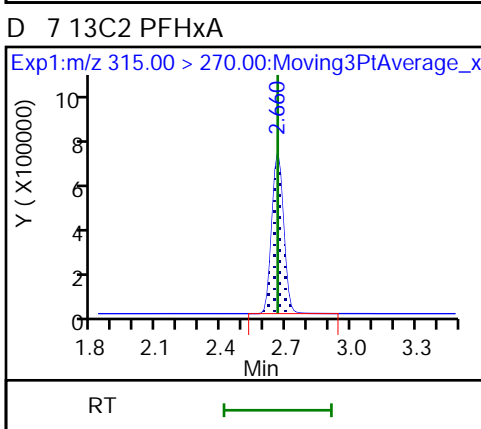
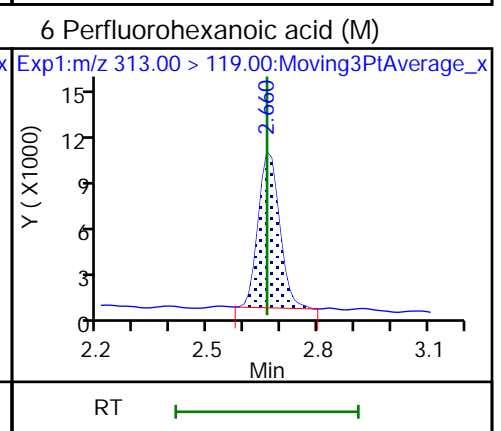
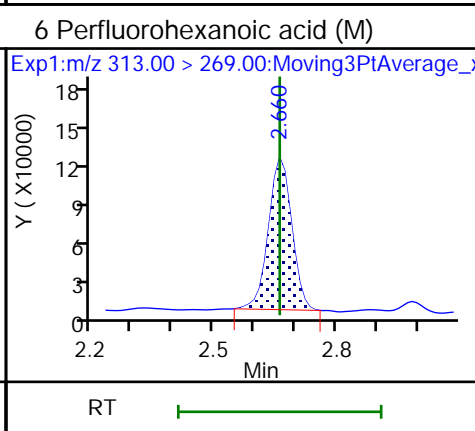
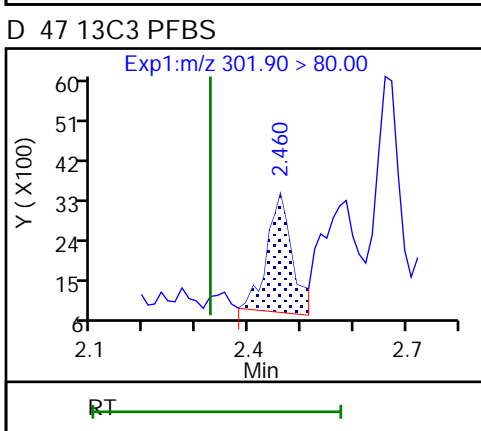
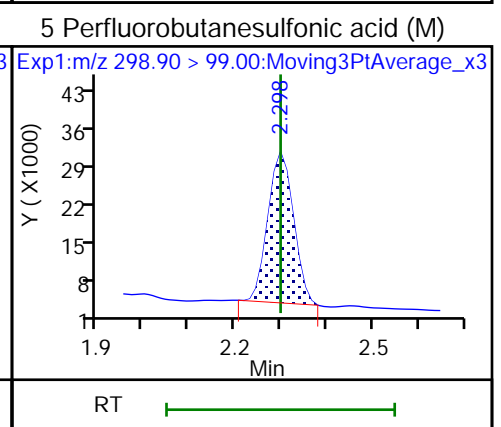
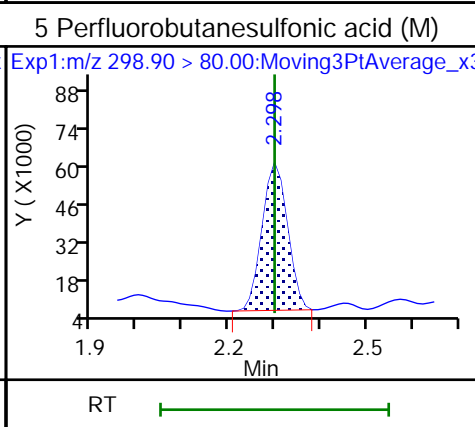
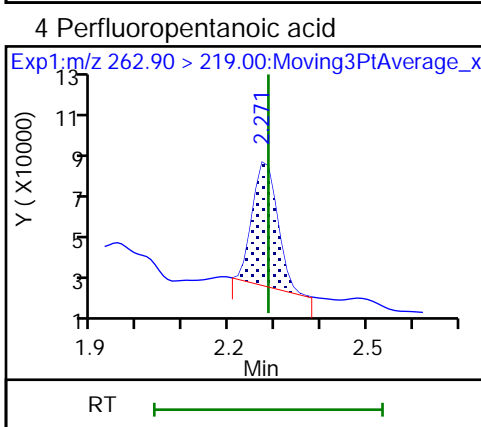
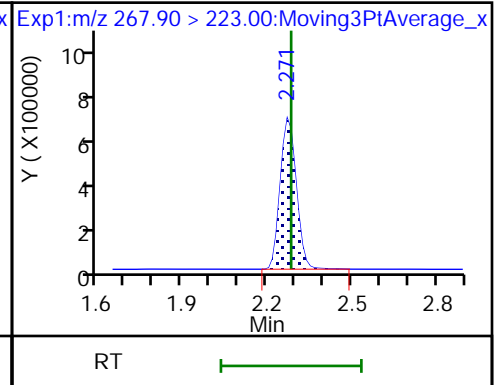
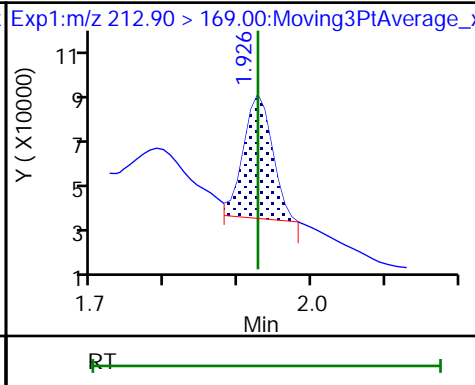
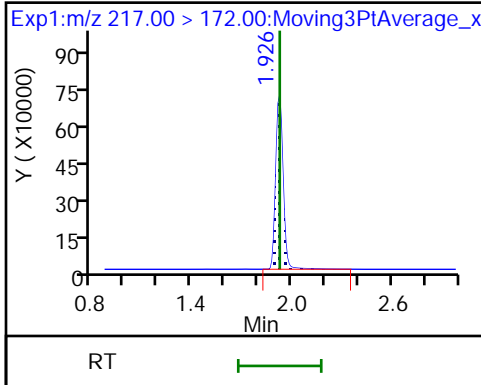
Method: PFC_LC812

Limit Group: LC_PFC_ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid (M)

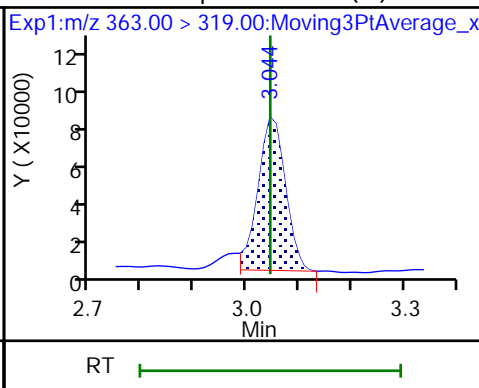
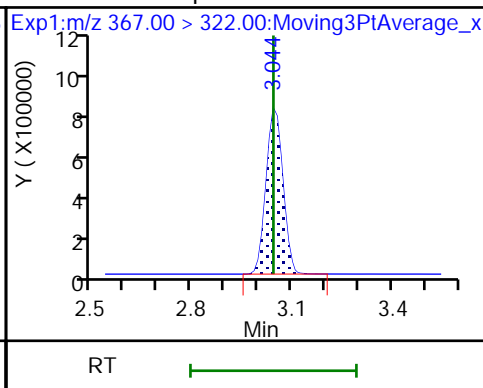
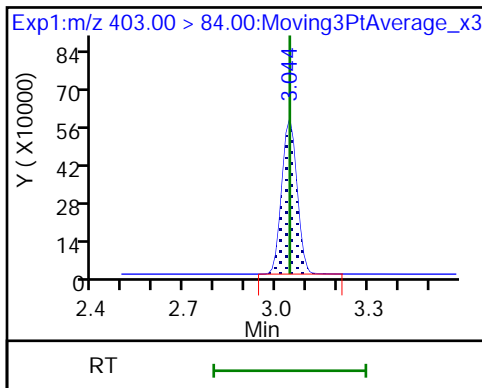
D 3 13C5 PFPeA



D 11 18O2 PFHxS

D 9 13C4 PFHpA

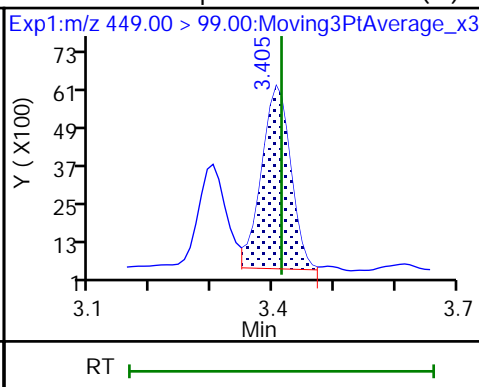
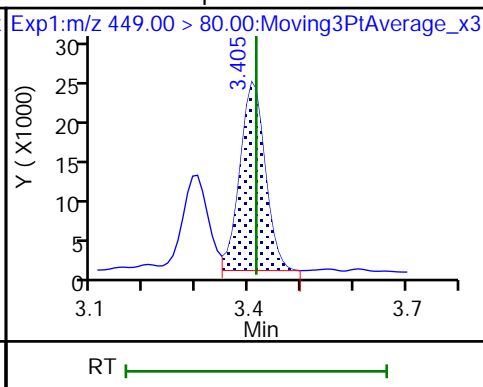
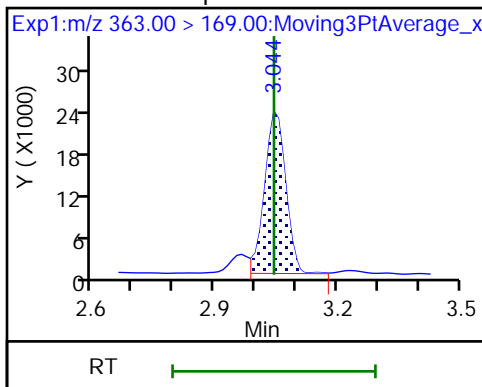
10 Perfluoroheptanoic acid (M)



10 Perfluoroheptanoic acid

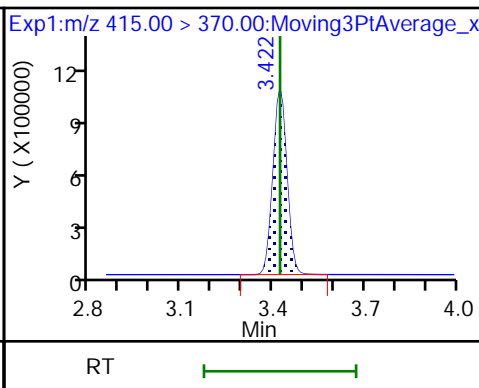
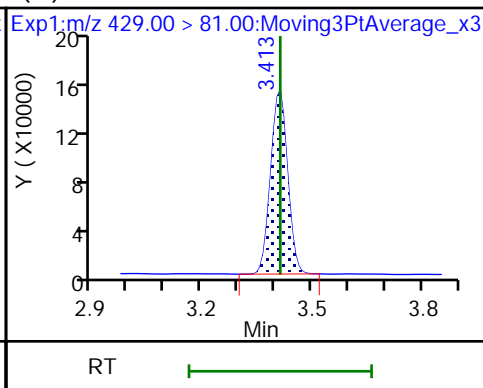
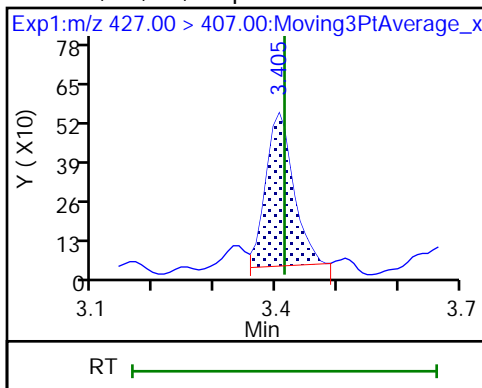
16 Perfluoroheptanesulfonic acid

16 Perfluoroheptanesulfonic acid (M)



13 1H,1H,2H,2H-perfluorooctanesulfonate (M) M2-6:2 FTS

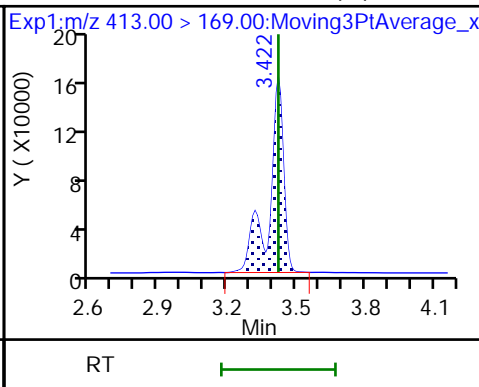
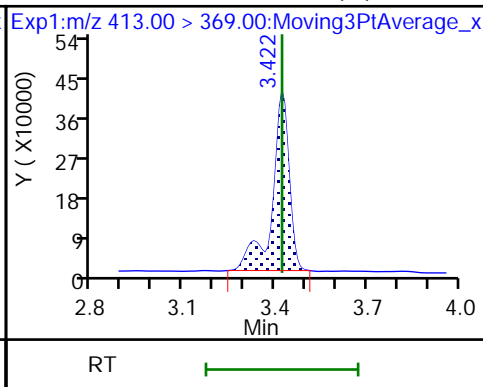
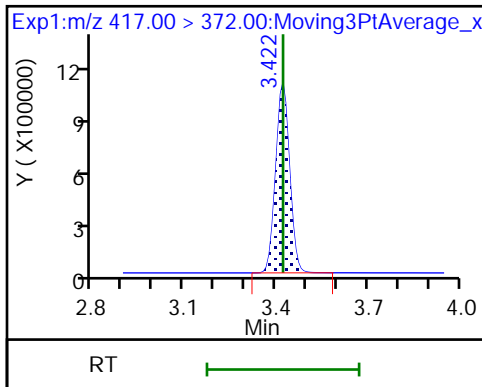
* 62 13C2 PFOA



D 14 13C4 PFOA

15 Perfluorooctanoic acid (M)

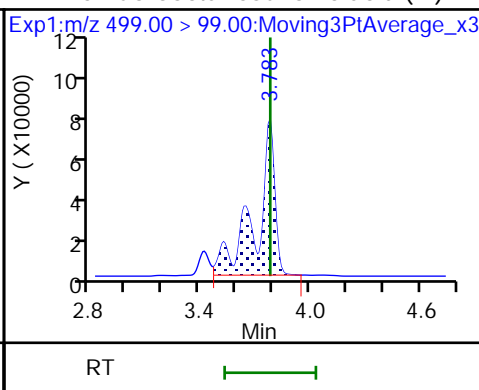
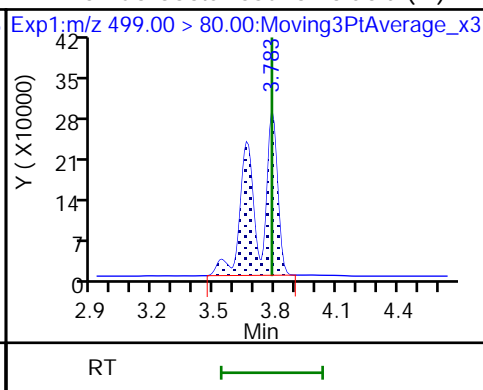
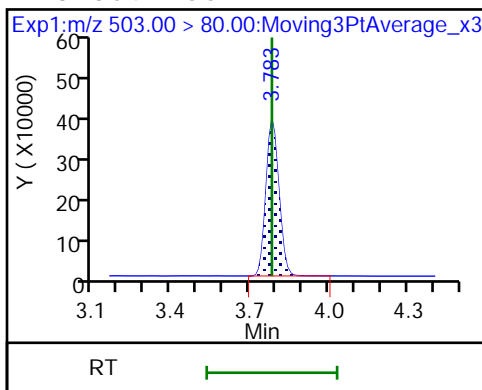
15 Perfluorooctanoic acid (M)



D 18 13C4 PFOS

17 Perfluorooctanesulfonic acid (M)

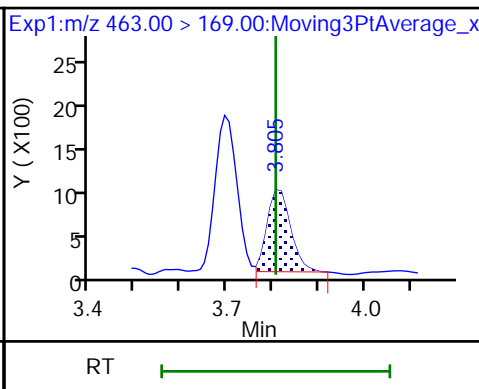
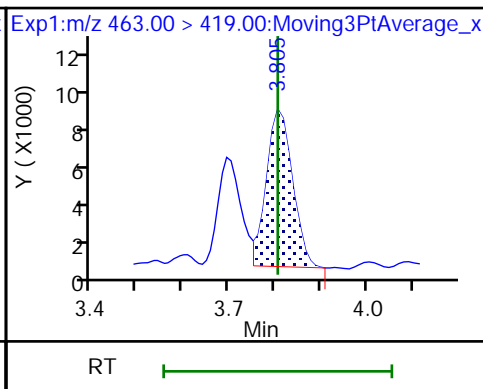
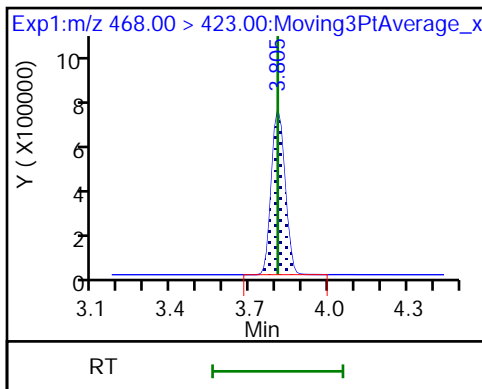
17 Perfluorooctanesulfonic acid (M)



D 19 13C5 PFNA

20 Perfluorononanoic acid

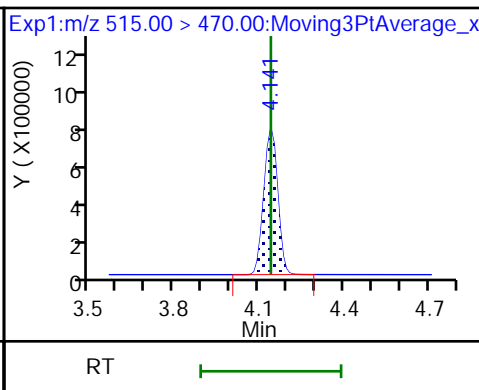
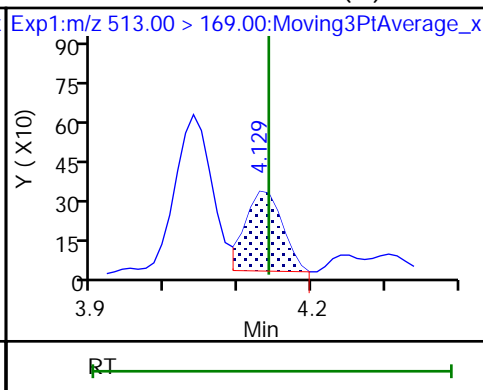
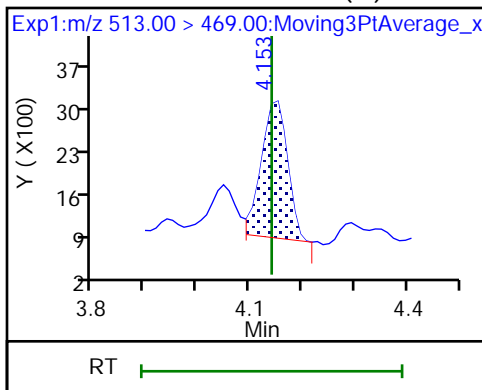
20 Perfluorononanoic acid



24 Perfluorodecanoic acid (M)

24 Perfluorodecanoic acid (M)

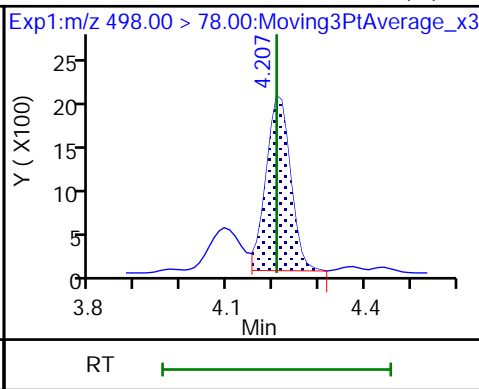
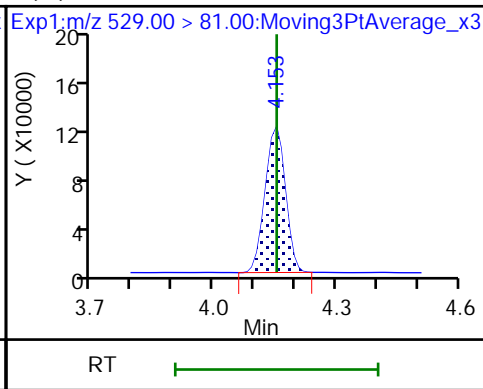
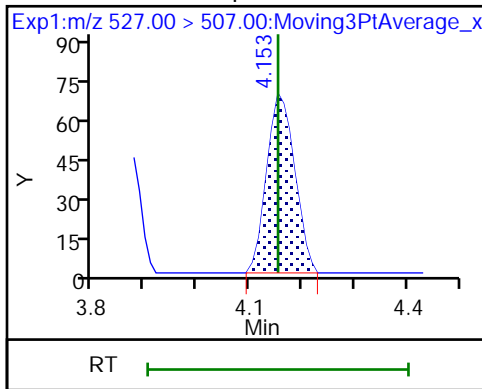
D 23 13C2 PFDA



25 1H,1H,2H,2H-perfluorodecanesulfonamide (M)

D 23 M2-8:2 FTS

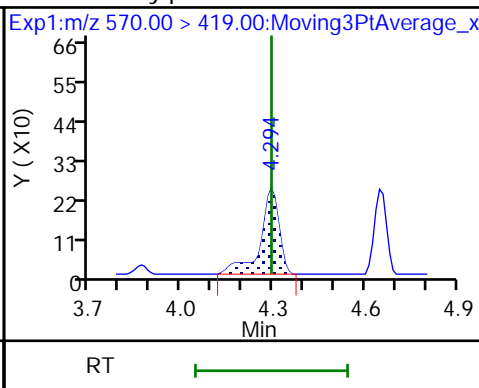
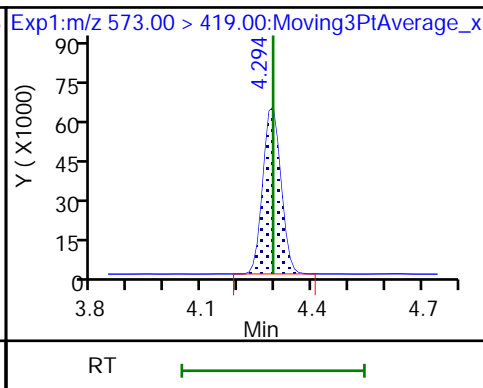
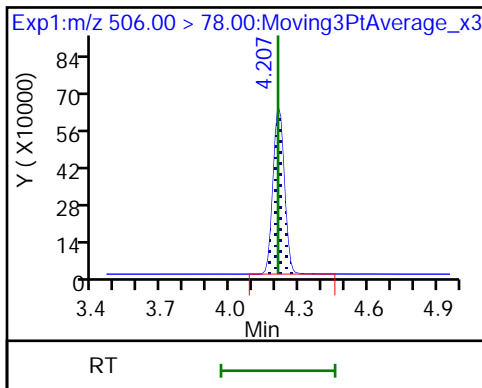
22 Perfluorooctanesulfonamide (M)



D 21 13C8 FOSA

D 27 d3-NMeFOSAA

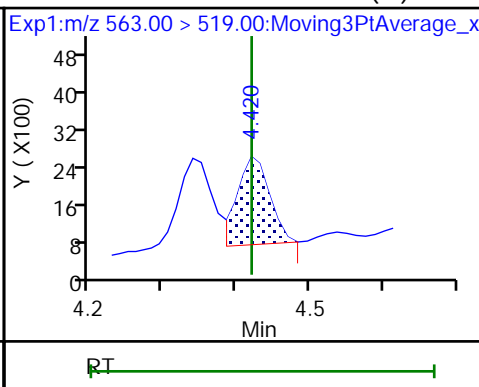
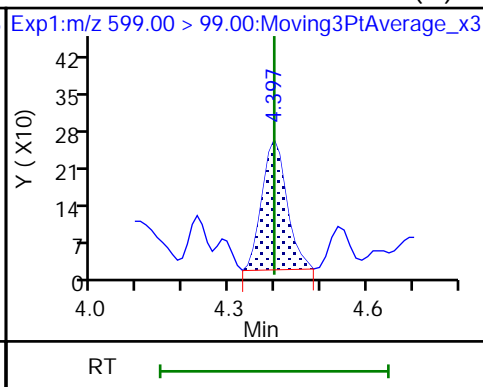
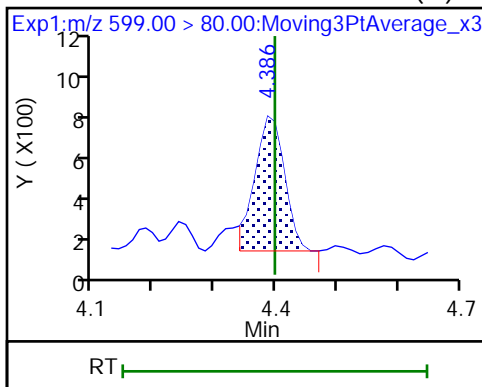
28 N-methylperfluorooctanesulfonamido (M)



29 Perfluorodecanesulfonic acid (M)

29 Perfluorodecanesulfonic acid (M)

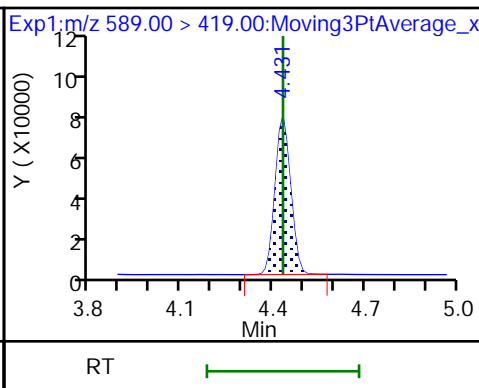
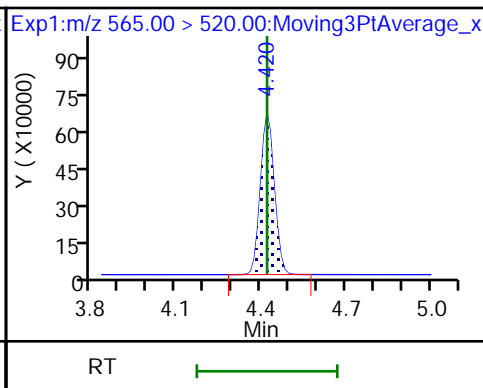
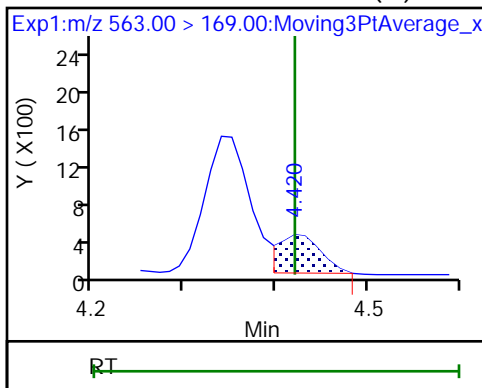
31 Perfluoroundecanoic acid (M)



31 Perfluoroundecanoic acid (M)

D 30 13C2 PFUnA

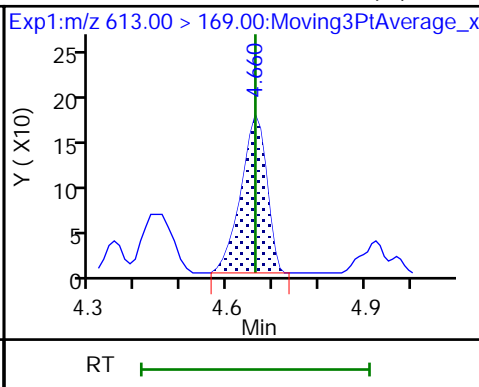
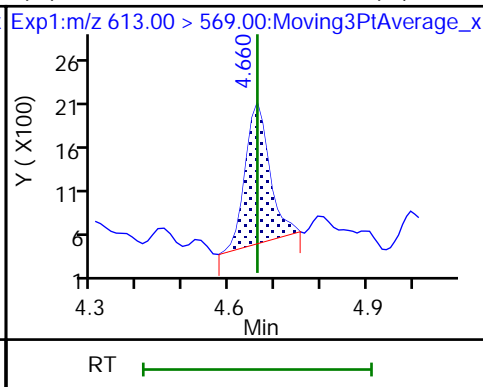
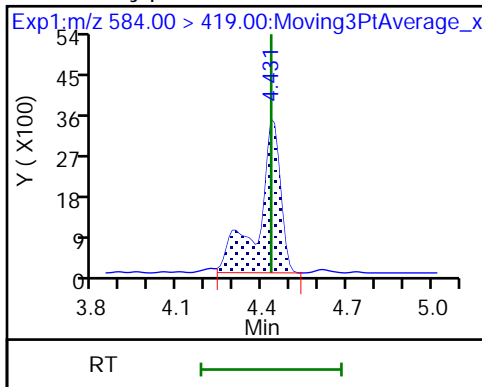
D 32 d5-NEtFOSAA



33 N-ethylperfluorooctanesulfonamido (M)

37 Perfluorododecanoic acid (M)

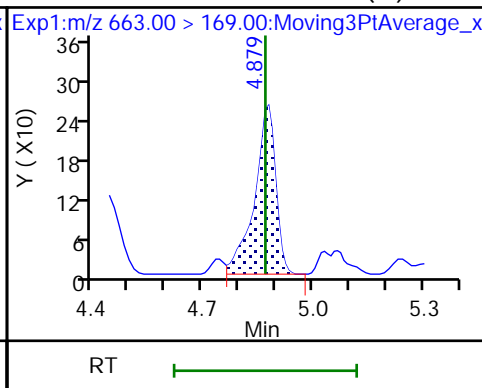
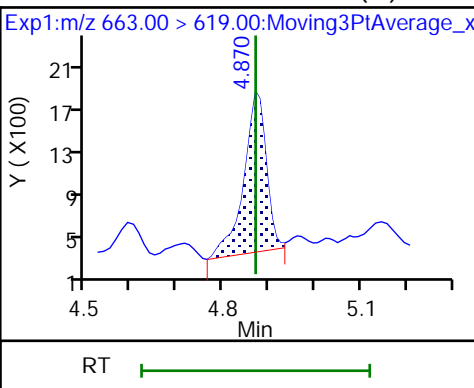
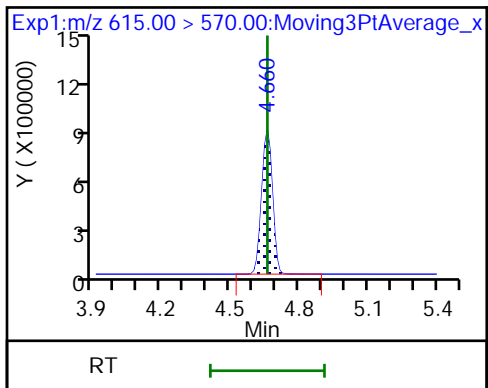
37 Perfluorododecanoic acid (M)



D 36 13C2 PFDoA

41 Perfluorotridecanoic acid (M)

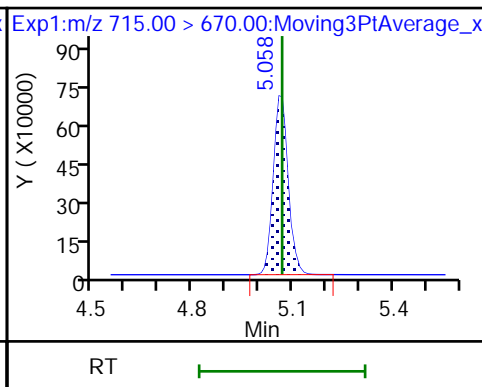
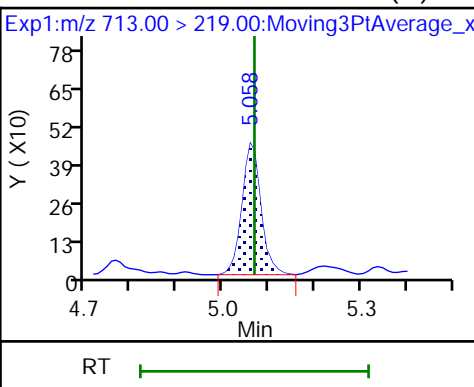
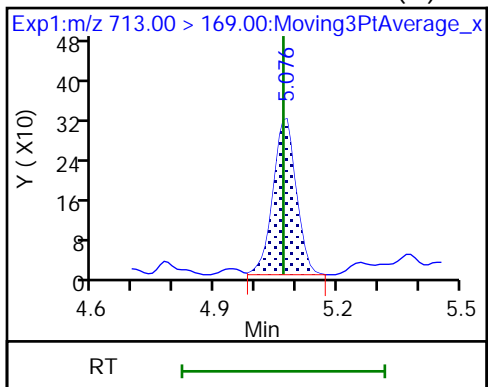
41 Perfluorotridecanoic acid (M)



42 Perfluorotetradecanoic acid (M)

42 Perfluorotetradecanoic acid (M)

D 43 13C2 PFTeDA



Eurofins TestAmerica, Burlington

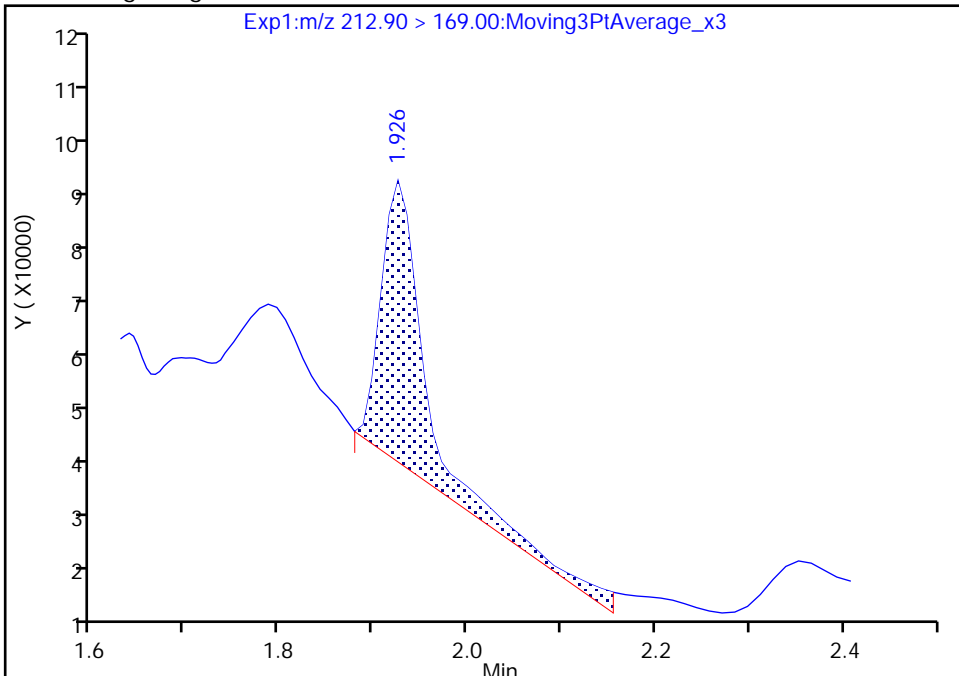
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Injection Date: 22-Oct-2019 21:47:28 Instrument ID: LC812
Lims ID: 480-160746-C-2-A Lab Sample ID: 200-160746-2
Client ID: EW- 8100919
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

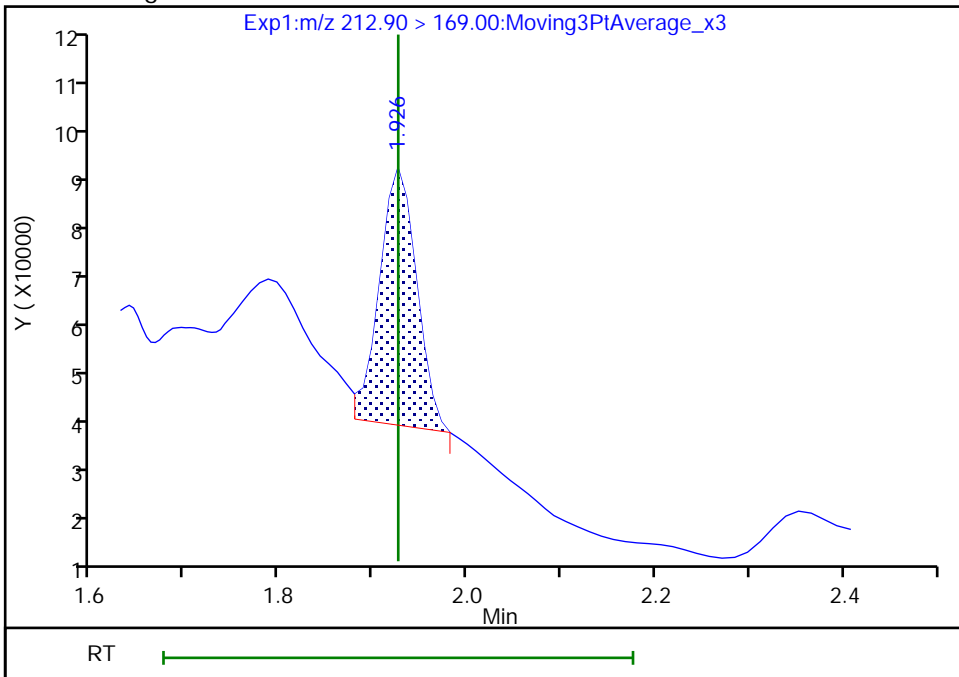
RT: 1.93
Area: 169427
Amount: 0.223575
Amount Units: ng/ml

Processing Integration Results



RT: 1.93
Area: 143249
Amount: 0.189031
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 11:28:54
Audit Action: Manually Integrated

Audit Reason: Split Peak
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Eurofins TestAmerica, Burlington

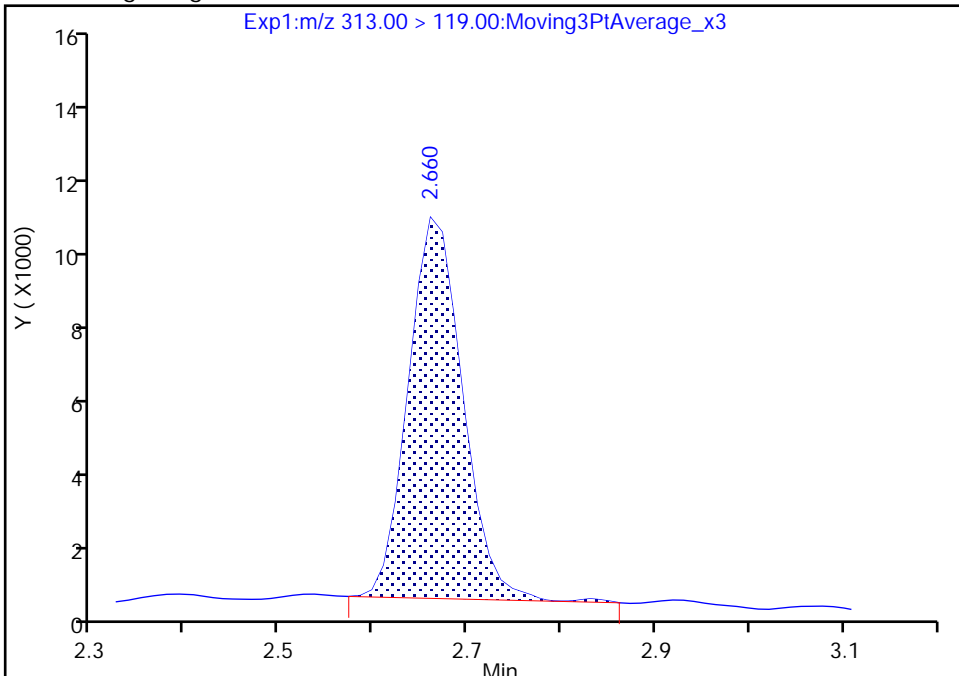
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Injection Date: 22-Oct-2019 21:47:28 Instrument ID: LC812
Lims ID: 480-160746-C-2-A Lab Sample ID: 200-160746-2
Client ID: EW- 8100919
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

6 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 2

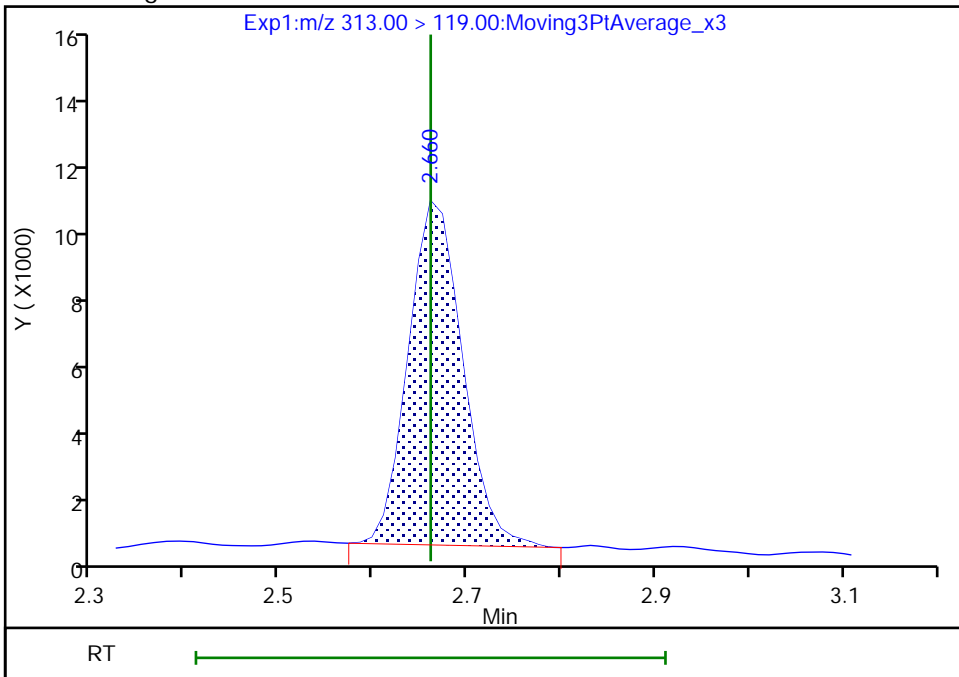
RT: 2.66
Area: 40837
Amount: 0.457540
Amount Units: ng/ml

Processing Integration Results



RT: 2.66
Area: 40637
Amount: 0.407708
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 11:29:31
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

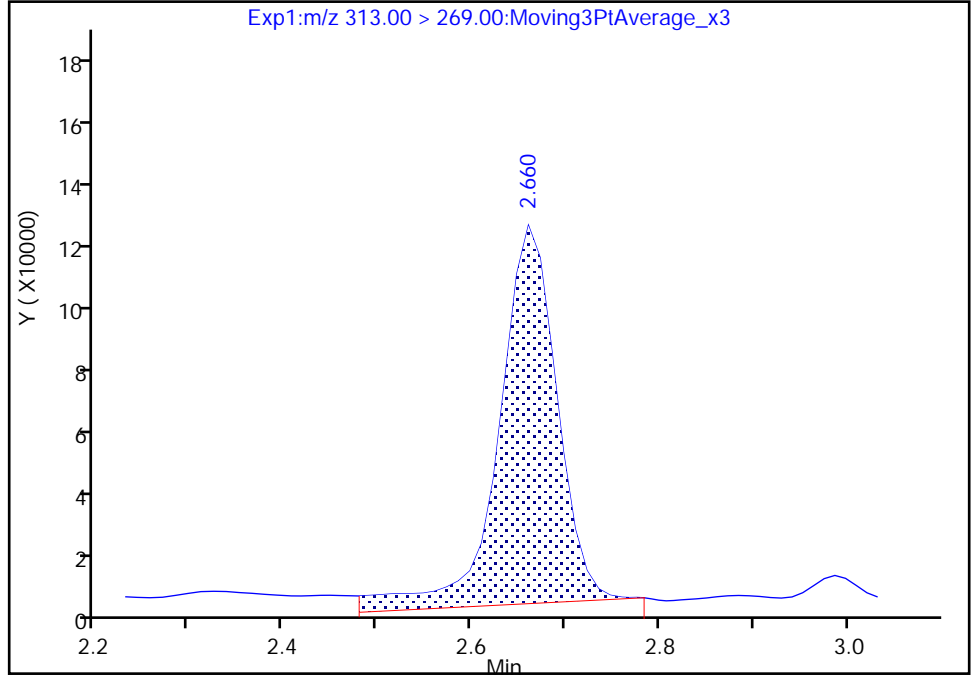
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Injection Date: 22-Oct-2019 21:47:28 Instrument ID: LC812
Lims ID: 480-160746-C-2-A Lab Sample ID: 200-160746-2
Client ID: EW- 8100919
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

6 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

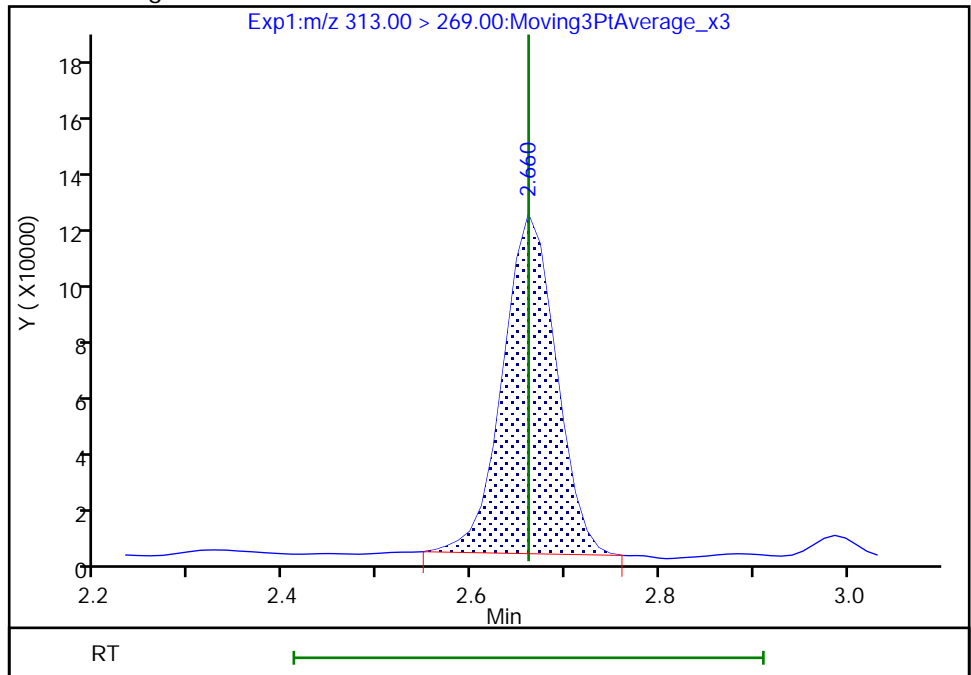
RT: 2.66
Area: 494181
Amount: 0.457540
Amount Units: ng/ml

Processing Integration Results



RT: 2.66
Area: 440358
Amount: 0.407708
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 11:29:38

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

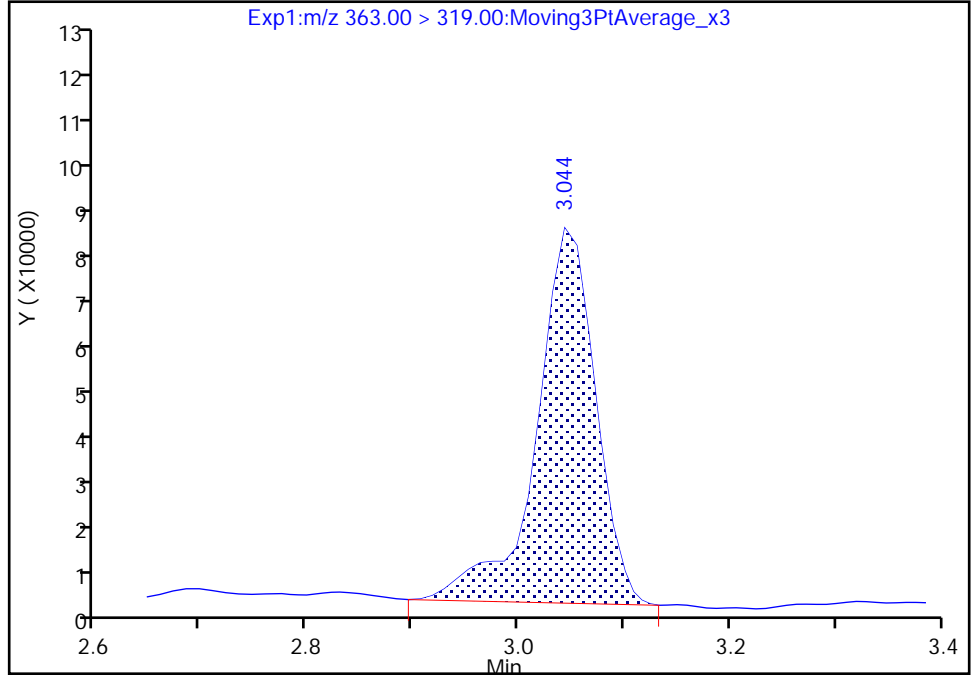
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B015.d
Injection Date: 22-Oct-2019 21:47:28 Instrument ID: LC812
Lims ID: 480-160746-C-2-A Lab Sample ID: 200-160746-2
Client ID: EW- 8100919
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

10 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

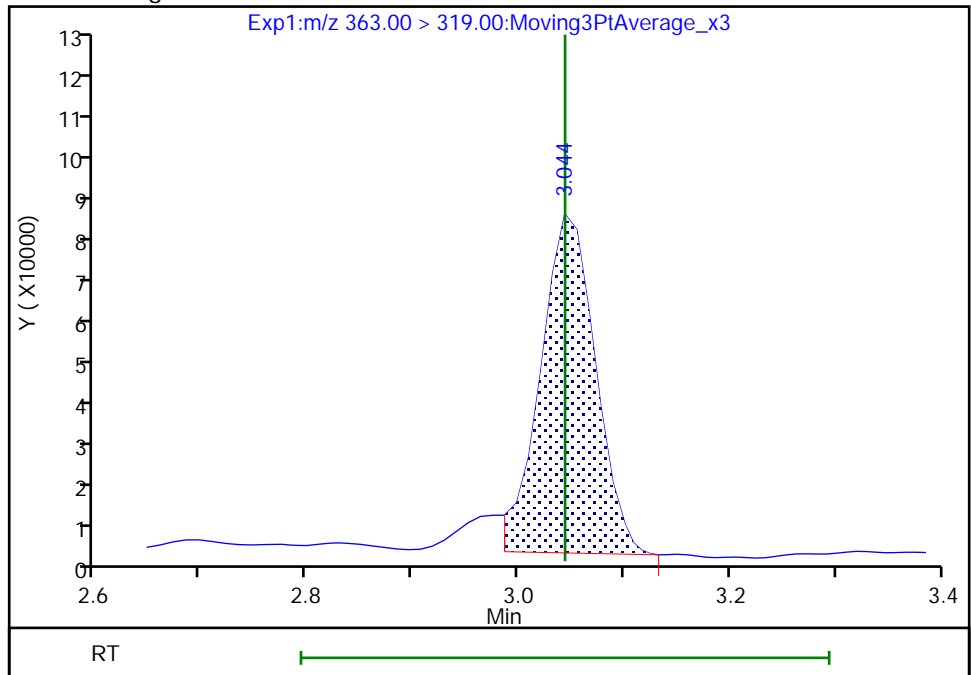
RT: 3.04
Area: 311109
Amount: 0.304673
Amount Units: ng/ml

Processing Integration Results



RT: 3.04
Area: 286733
Amount: 0.280801
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 11:59:57
Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

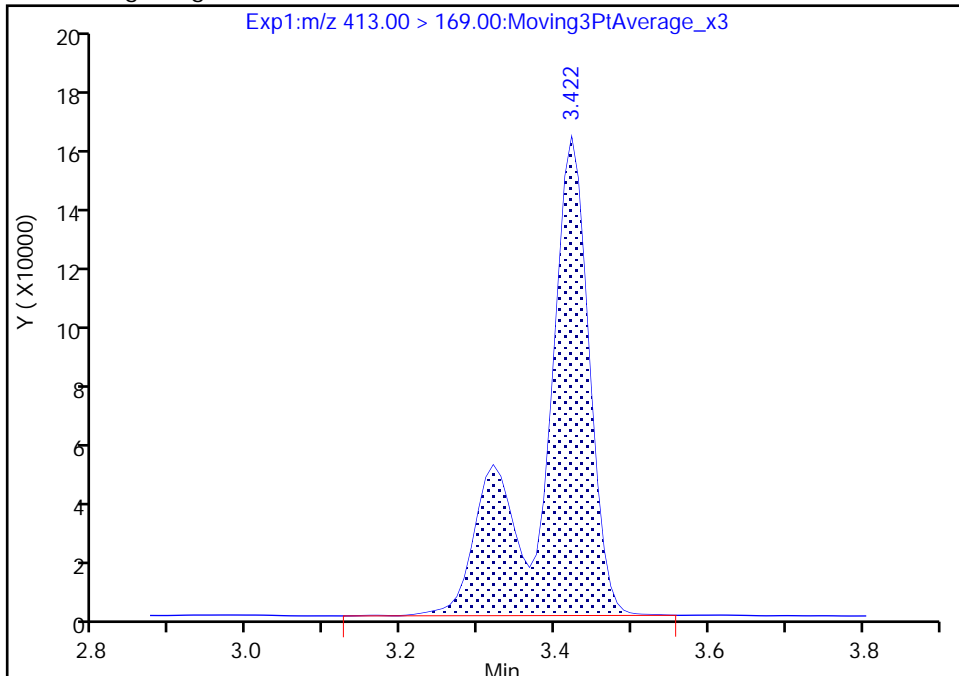
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B015.d
Injection Date: 22-Oct-2019 21:47:28 Instrument ID: LC812
Lims ID: 480-160746-C-2-A Lab Sample ID: 200-160746-2
Client ID: EW- 8100919
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

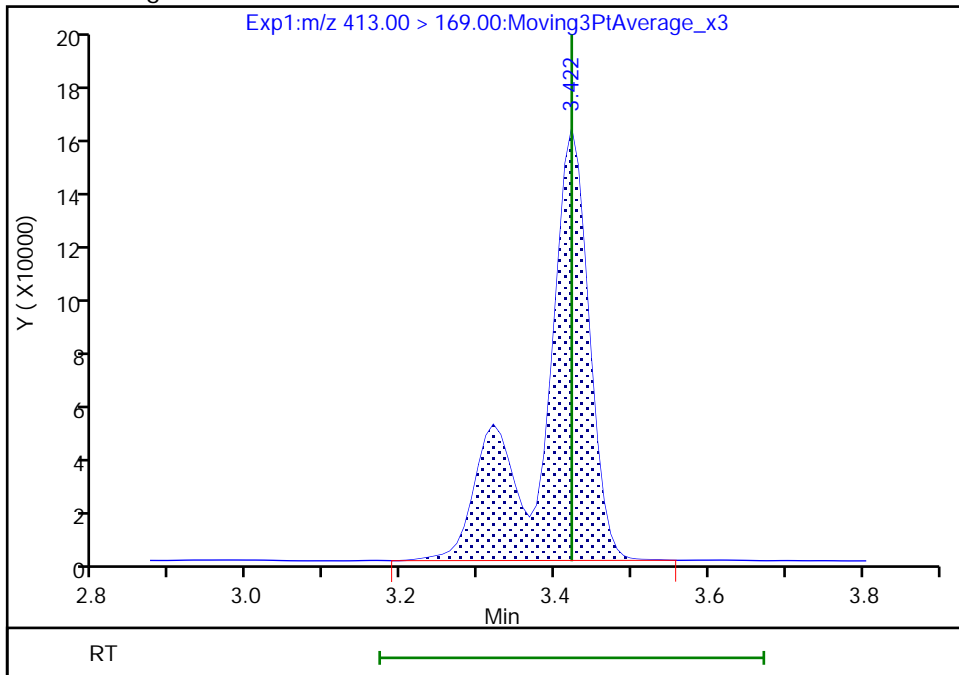
RT: 3.42
Area: 699164
Amount: 1.302895
Amount Units: ng/ml

Processing Integration Results



RT: 3.42
Area: 698477
Amount: 1.270450
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:01:06
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

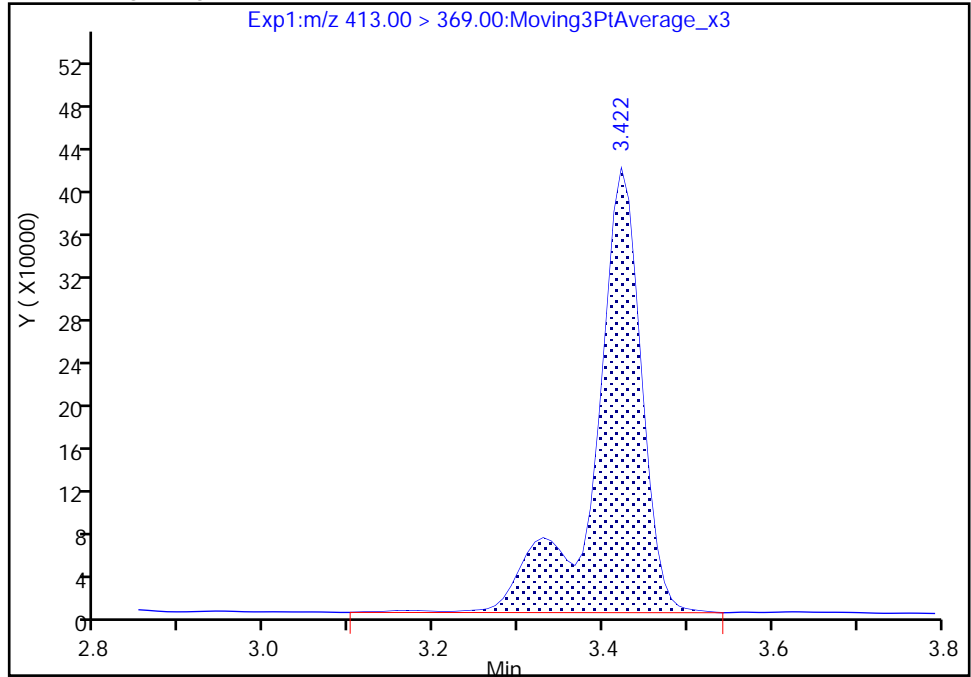
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B015.d
Injection Date: 22-Oct-2019 21:47:28 Instrument ID: LC812
Lims ID: 480-160746-C-2-A Lab Sample ID: 200-160746-2
Client ID: EW- 8100919
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

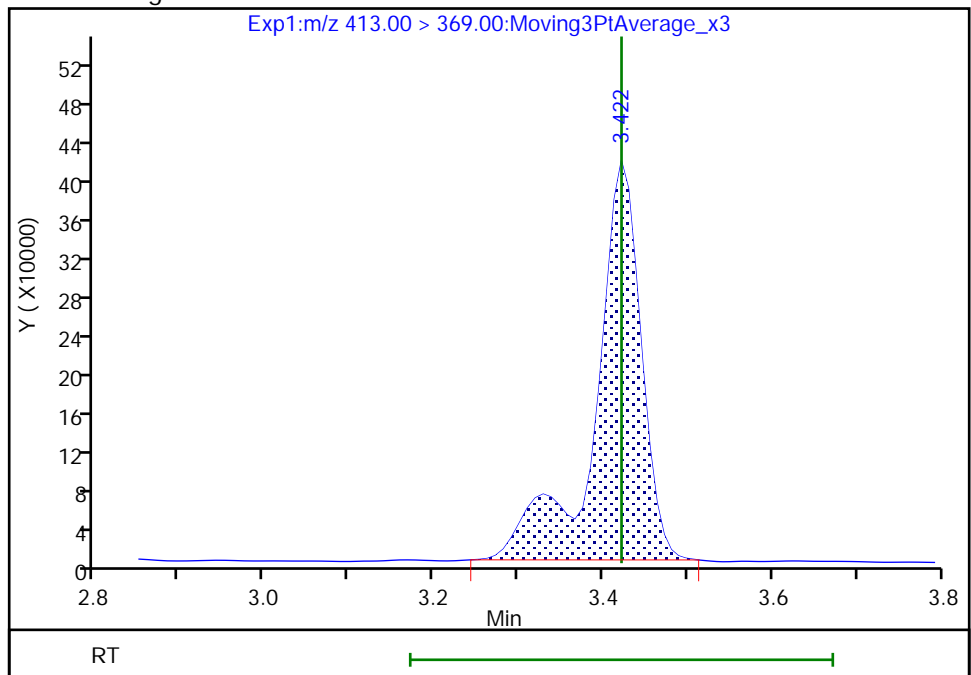
RT: 3.42
Area: 1598716
Amount: 1.302895
Amount Units: ng/ml

Processing Integration Results



RT: 3.42
Area: 1559564
Amount: 1.270450
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:01:11

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

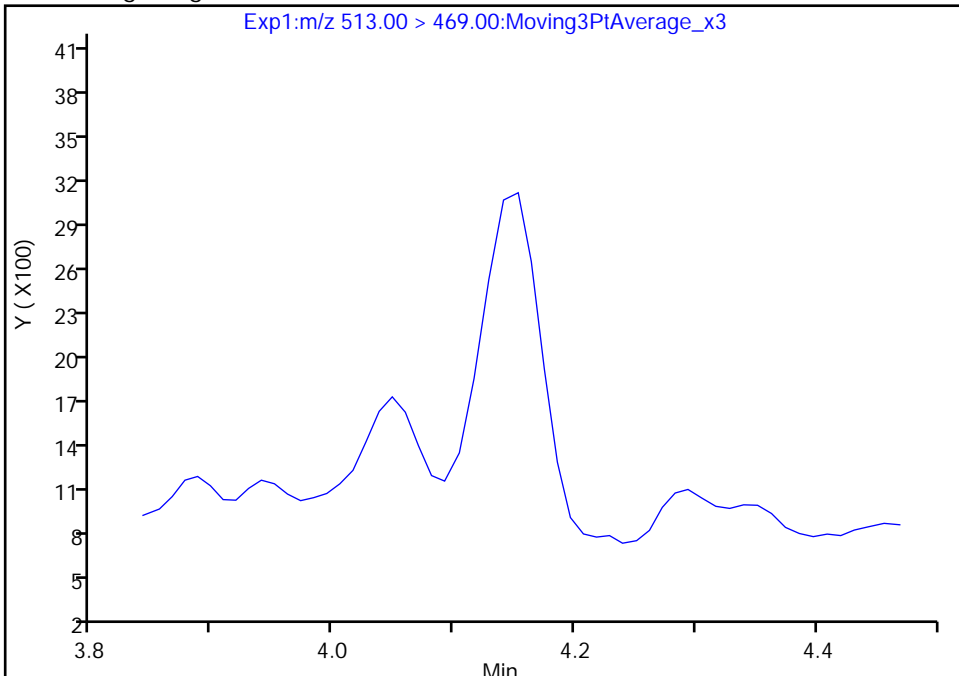
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B015.d
Injection Date: 22-Oct-2019 21:47:28 Instrument ID: LC812
Lims ID: 480-160746-C-2-A Lab Sample ID: 200-160746-2
Client ID: EW- 8100919
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

24 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 1

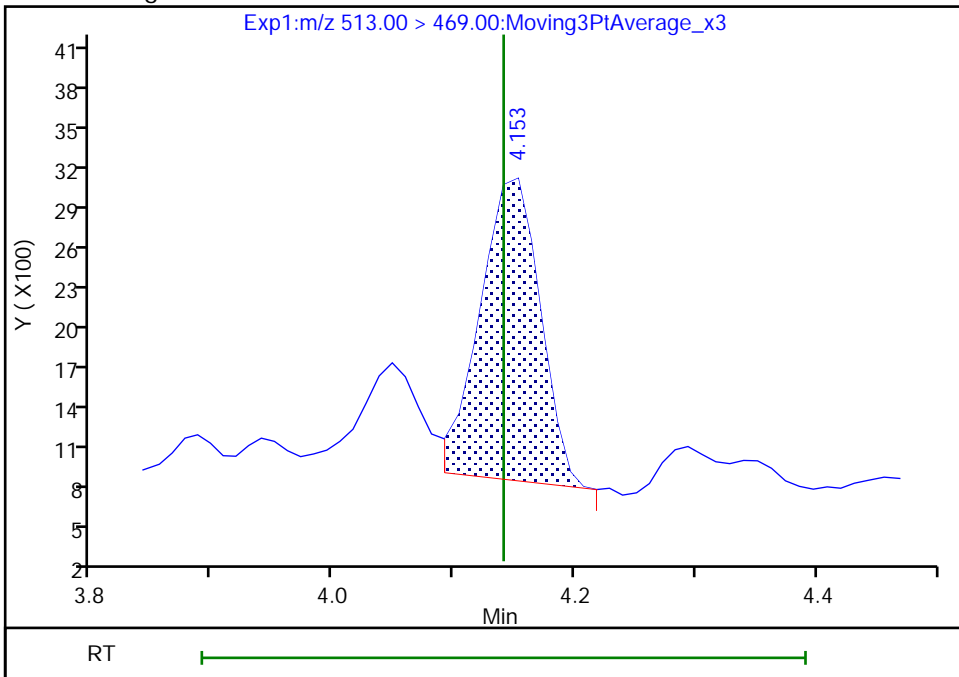
Not Detected
Expected RT: 4.14

Processing Integration Results



Manual Integration Results

RT: 4.15
Area: 7704
Amount: 0.007913
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:05:34
Audit Action: Manually Integrated

Audit Reason: Split Peak
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Eurofins TestAmerica, Burlington

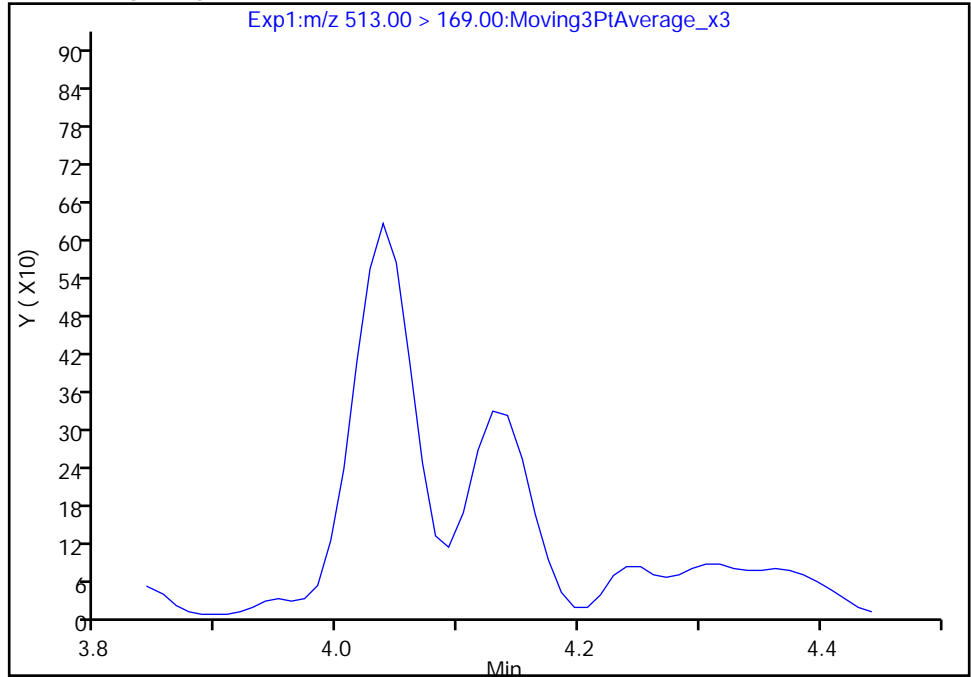
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B015.d
Injection Date: 22-Oct-2019 21:47:28 Instrument ID: LC812
Lims ID: 480-160746-C-2-A Lab Sample ID: 200-160746-2
Client ID: EW- 8100919
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

24 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 2

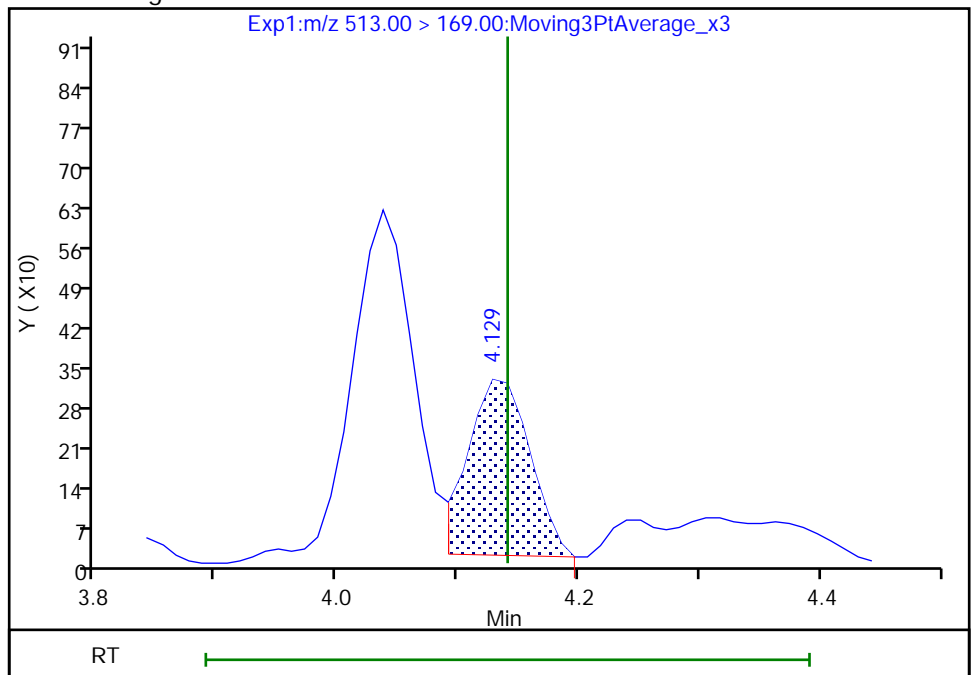
Not Detected
Expected RT: 4.14

Processing Integration Results



Manual Integration Results

RT: 4.13
Area: 1089
Amount: 0.007913
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:05:43

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

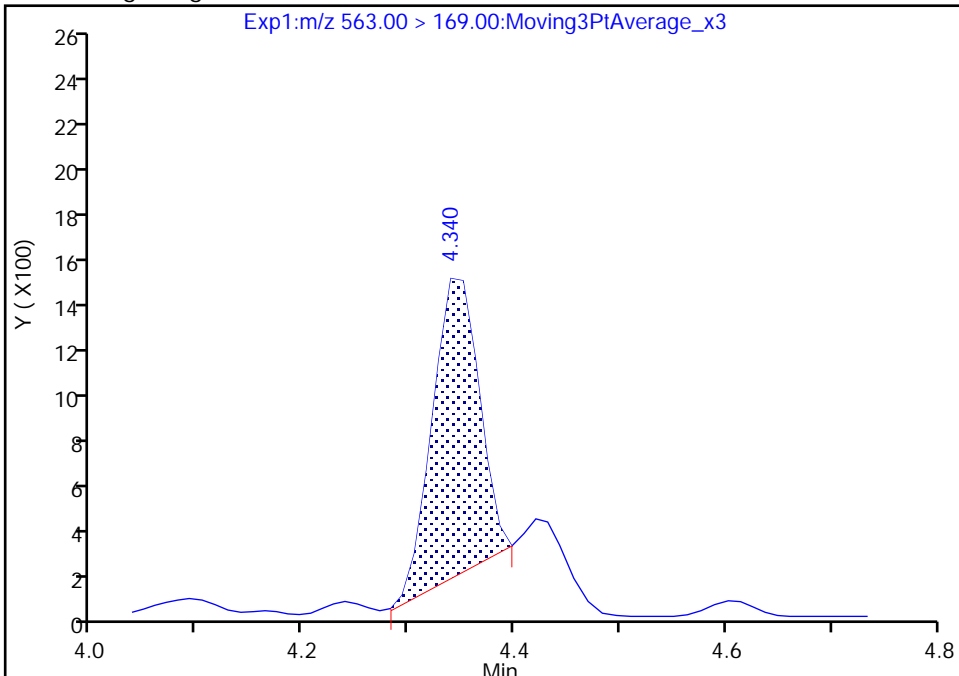
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B015.d
Injection Date: 22-Oct-2019 21:47:28 Instrument ID: LC812
Lims ID: 480-160746-C-2-A Lab Sample ID: 200-160746-2
Client ID: EW- 8100919
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 2

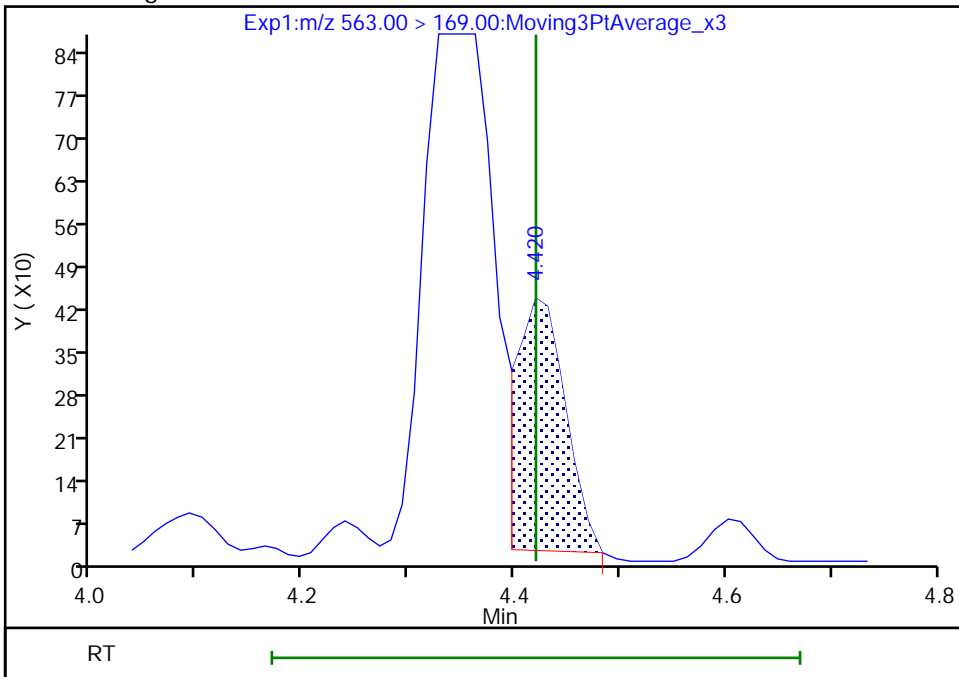
RT: 4.34
Area: 4052
Amount: 0.008193
Amount Units: ng/ml

Processing Integration Results



RT: 4.42
Area: 1272
Amount: 0.007493
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:09:47
Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

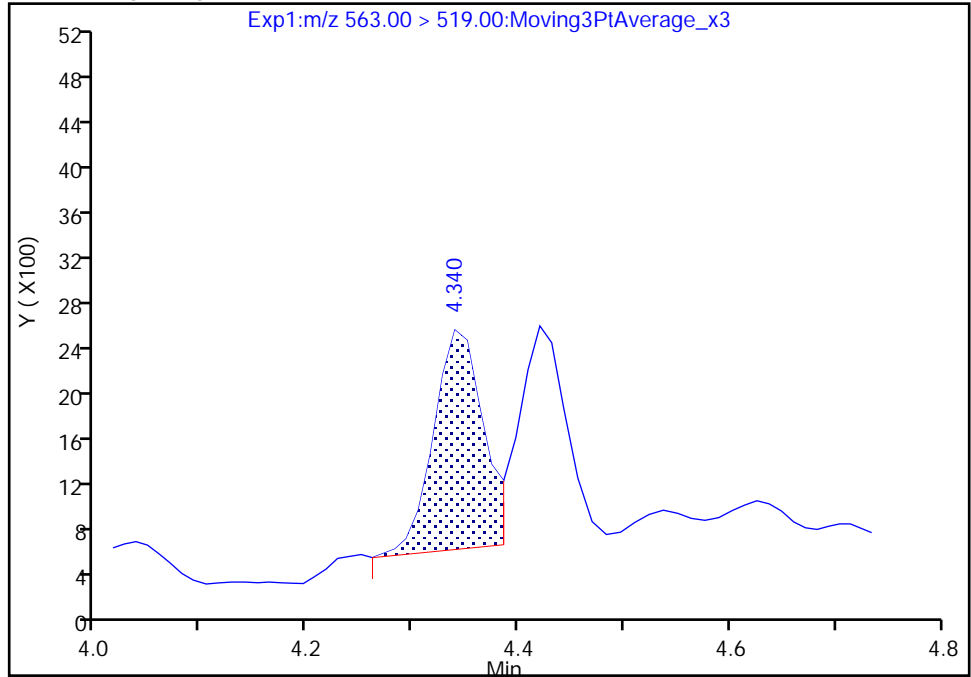
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B015.d
Injection Date: 22-Oct-2019 21:47:28 Instrument ID: LC812
Lims ID: 480-160746-C-2-A Lab Sample ID: 200-160746-2
Client ID: EW- 8100919
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 1

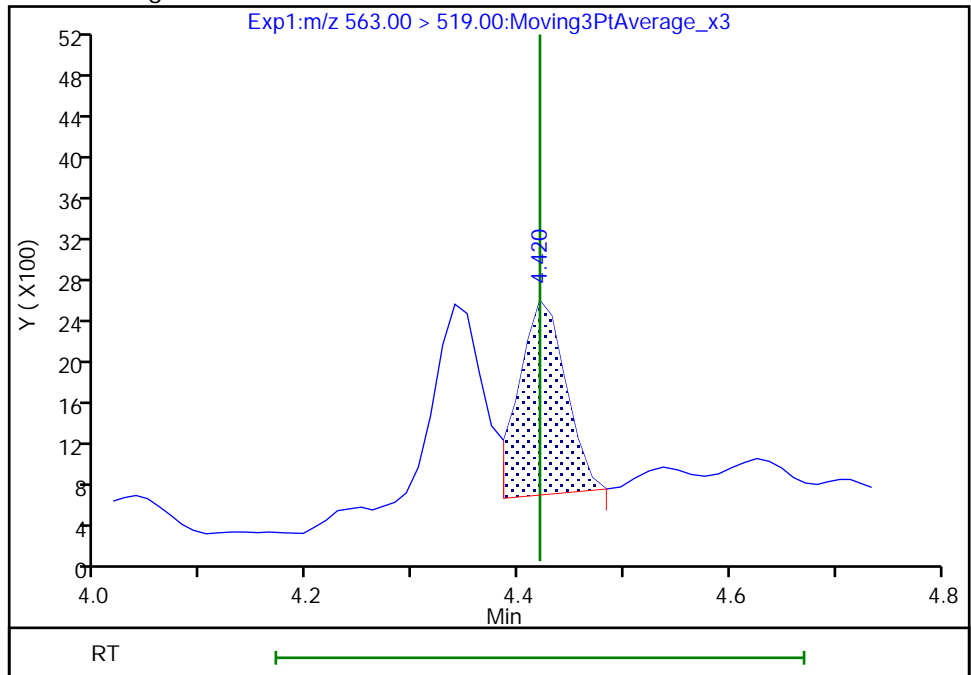
RT: 4.34
Area: 6149
Amount: 0.008193
Amount Units: ng/ml

Processing Integration Results



RT: 4.42
Area: 5624
Amount: 0.007493
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:10:19

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Assign Peak

Eurofins TestAmerica, Burlington

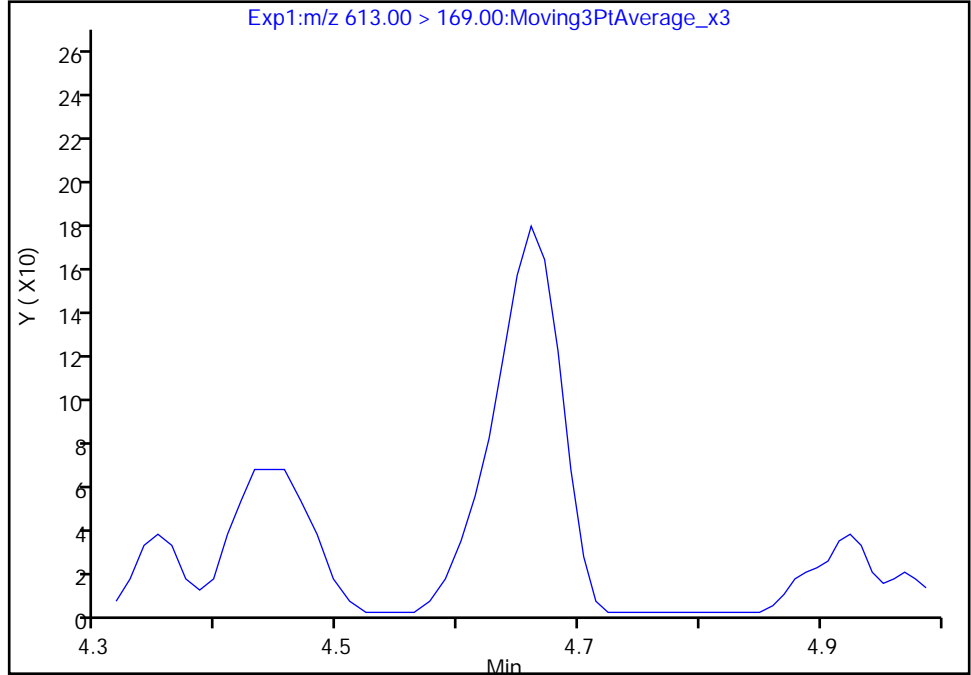
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B015.d
Injection Date: 22-Oct-2019 21:47:28 Instrument ID: LC812
Lims ID: 480-160746-C-2-A Lab Sample ID: 200-160746-2
Client ID: EW- 8100919
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

37 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 2

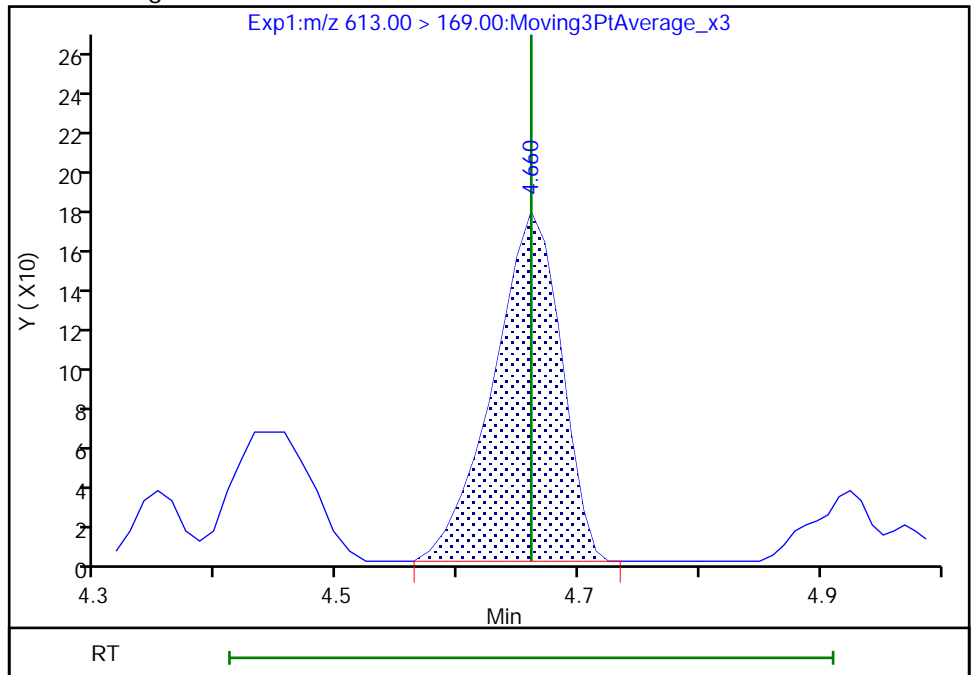
Not Detected
Expected RT: 4.66

Processing Integration Results



Manual Integration Results

RT: 4.66
Area: 673
Amount: 0.005558
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:11:43
Audit Action: Manually Integrated

Audit Reason: Assign Peak

Eurofins TestAmerica, Burlington

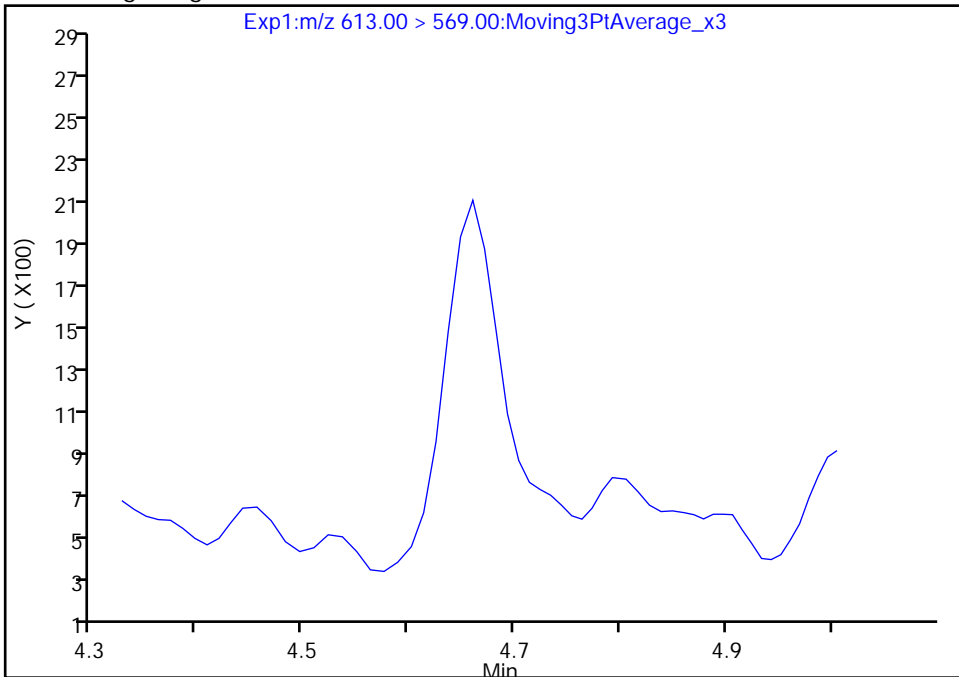
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B015.d
Injection Date: 22-Oct-2019 21:47:28 Instrument ID: LC812
Lims ID: 480-160746-C-2-A Lab Sample ID: 200-160746-2
Client ID: EW- 8100919
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

37 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 1

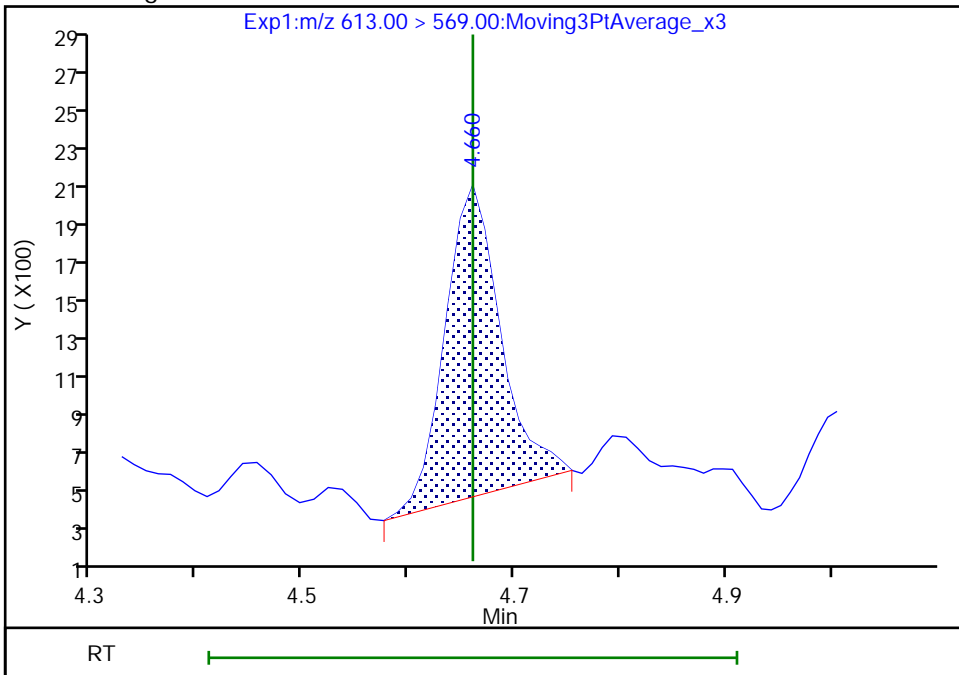
Not Detected
Expected RT: 4.66

Processing Integration Results



Manual Integration Results

RT: 4.66
Area: 5644
Amount: 0.005558
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:11:49

Audit Action: Manually Integrated

Audit Reason: Assign Peak

Eurofins TestAmerica, Burlington

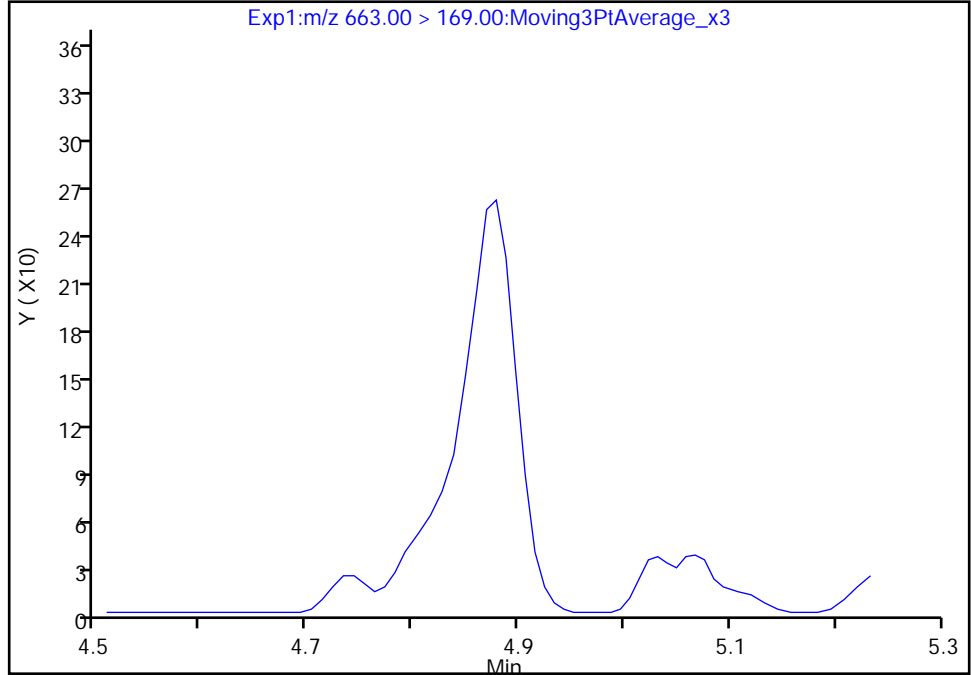
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B015.d
Injection Date: 22-Oct-2019 21:47:28 Instrument ID: LC812
Lims ID: 480-160746-C-2-A Lab Sample ID: 200-160746-2
Client ID: EW- 8100919
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

41 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 2

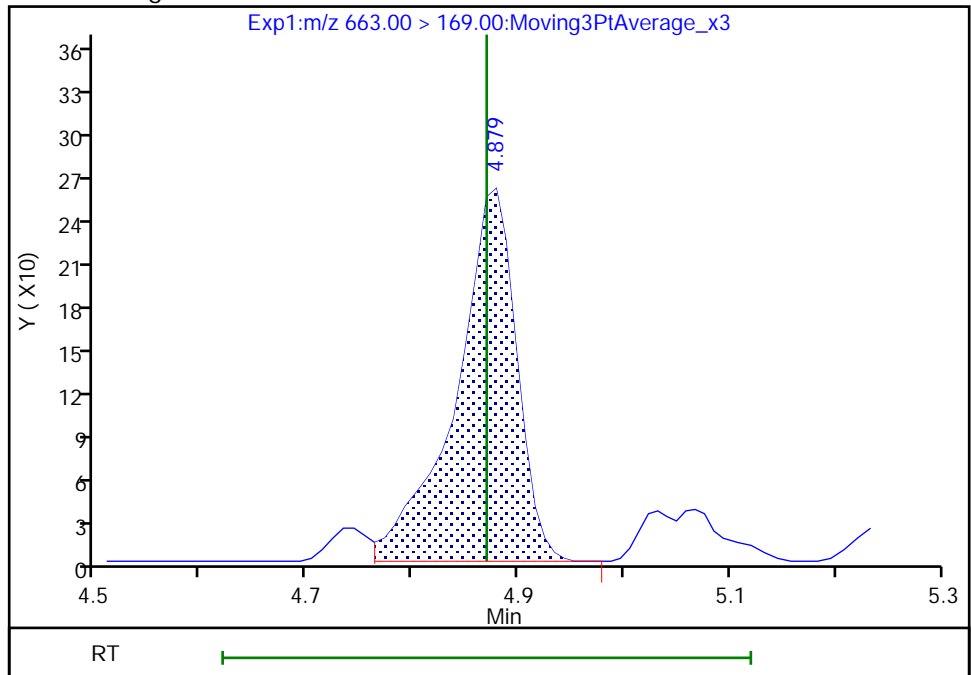
Not Detected
Expected RT: 4.87

Processing Integration Results



Manual Integration Results

RT: 4.88
Area: 1033
Amount: 0.006086
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:12:16
Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

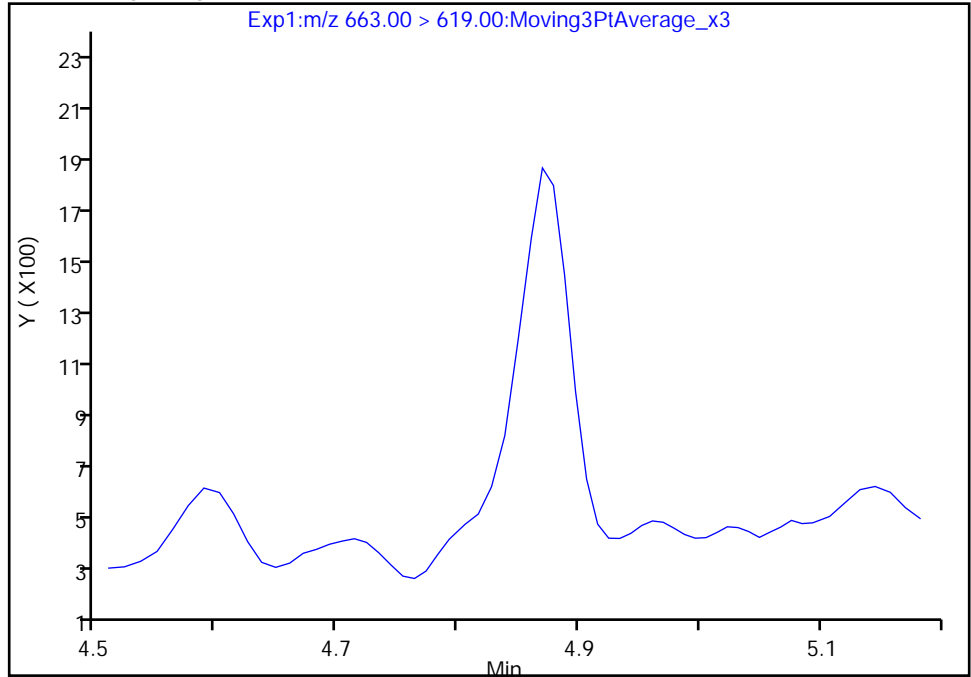
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B015.d
Injection Date: 22-Oct-2019 21:47:28 Instrument ID: LC812
Lims ID: 480-160746-C-2-A Lab Sample ID: 200-160746-2
Client ID: EW- 8100919
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

41 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 1

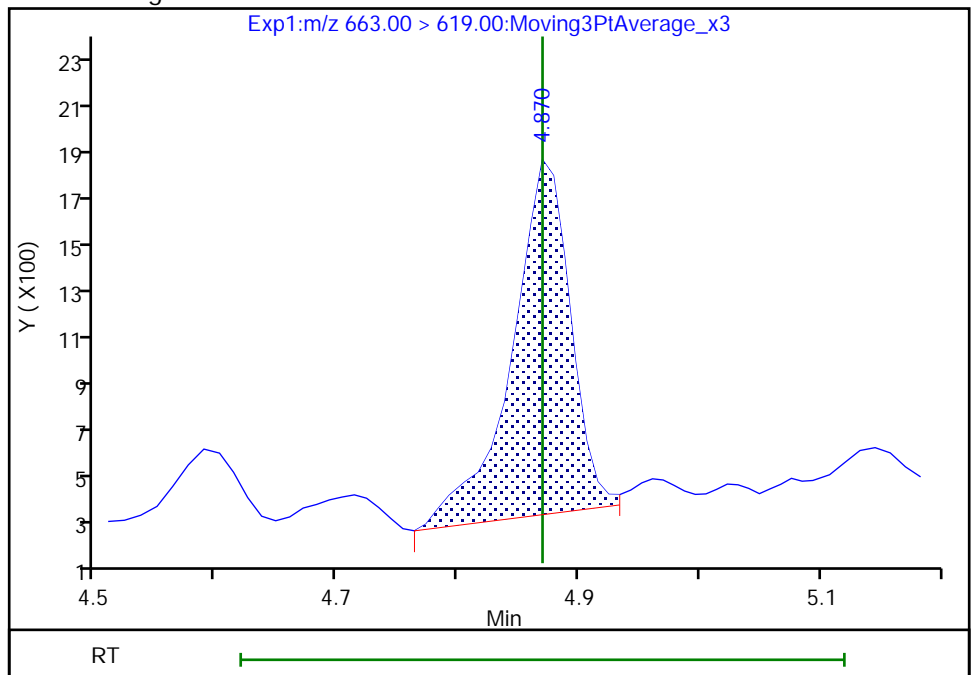
Not Detected
Expected RT: 4.87

Processing Integration Results



Manual Integration Results

RT: 4.87
Area: 5001
Amount: 0.006086
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:12:19

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

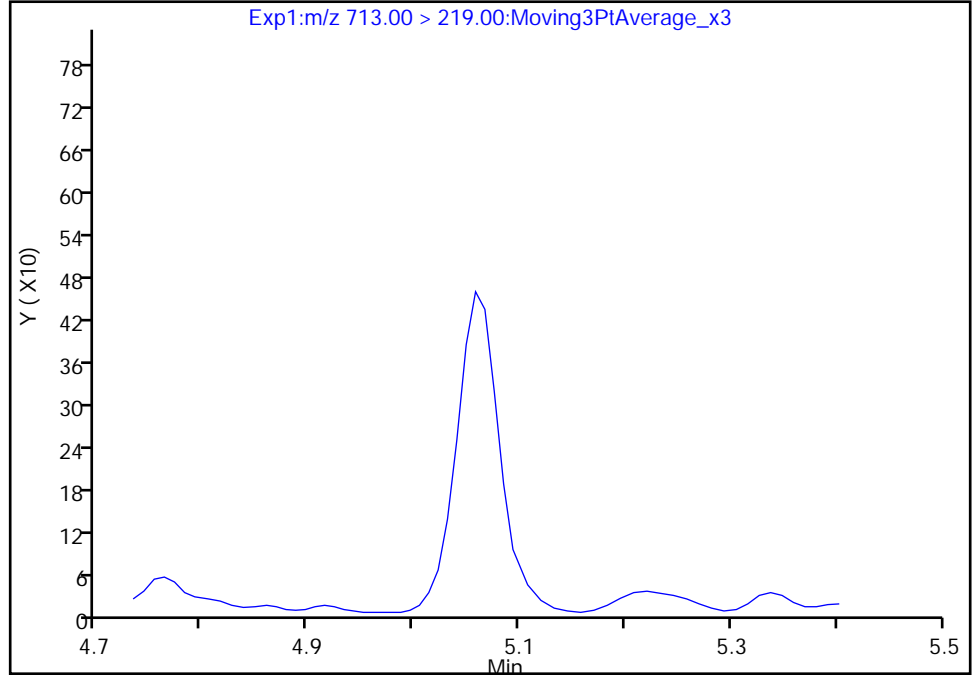
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B015.d
Injection Date: 22-Oct-2019 21:47:28 Instrument ID: LC812
Lims ID: 480-160746-C-2-A Lab Sample ID: 200-160746-2
Client ID: EW- 8100919
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

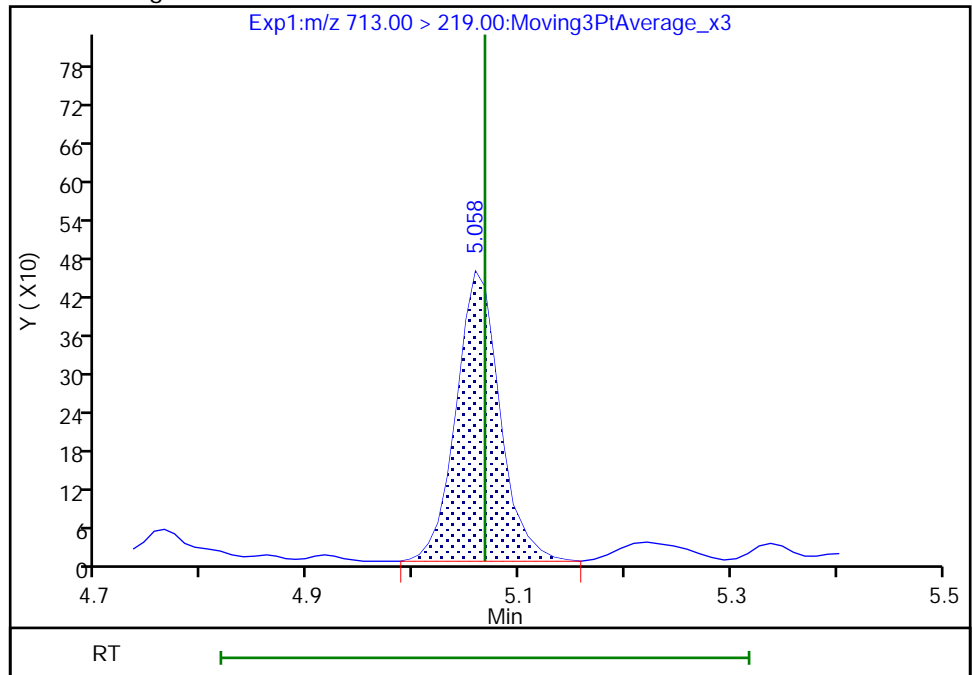
Signal: 2

Not Detected
Expected RT: 5.07

Processing Integration Results



Manual Integration Results



RT: 5.06
Area: 1297
Amount: 0.009821
Amount Units: ng/ml

Reviewer: manopan, 24-Oct-2019 12:12:40
Audit Action: Manually Integrated

Audit Reason: Assign Peak
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Eurofins TestAmerica, Burlington

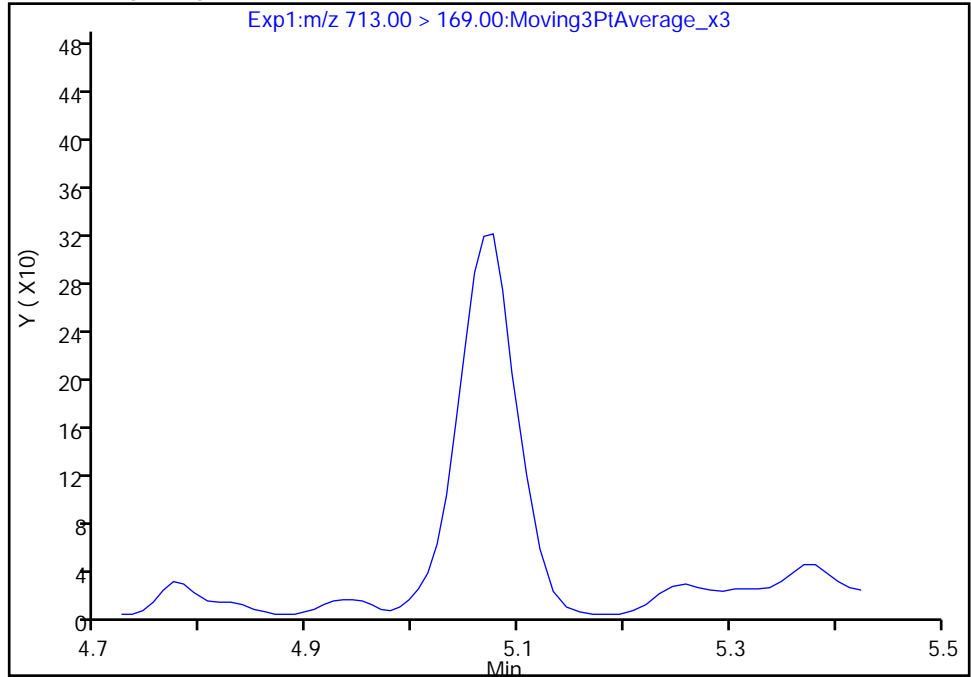
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B015.d
Injection Date: 22-Oct-2019 21:47:28 Instrument ID: LC812
Lims ID: 480-160746-C-2-A Lab Sample ID: 200-160746-2
Client ID: EW- 8100919
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 1

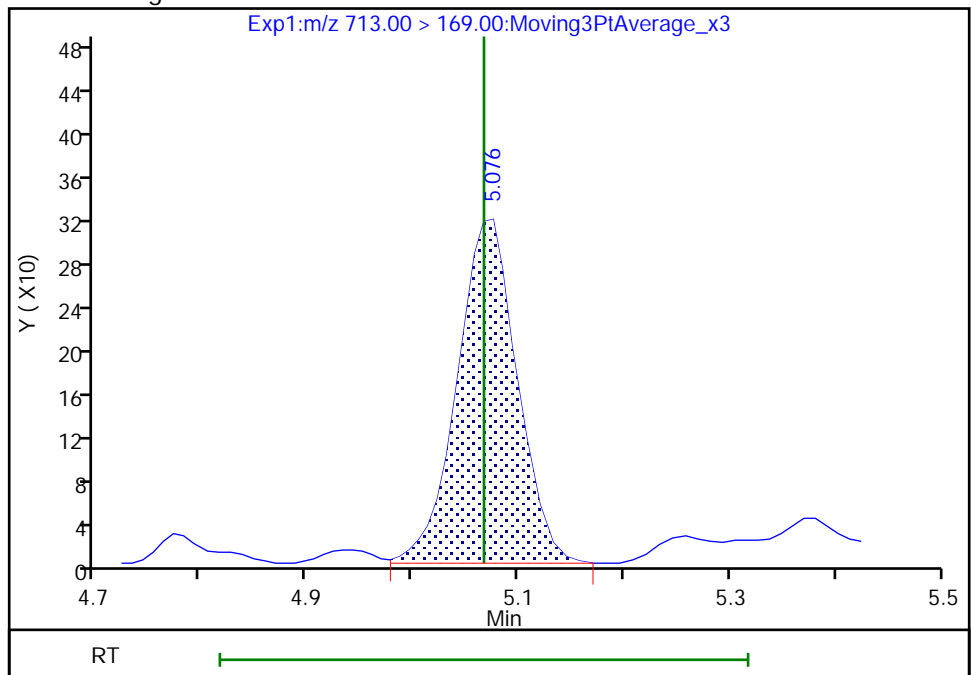
Not Detected
Expected RT: 5.07

Processing Integration Results



Manual Integration Results

RT: 5.08
Area: 1236
Amount: 0.009821
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:12:59

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

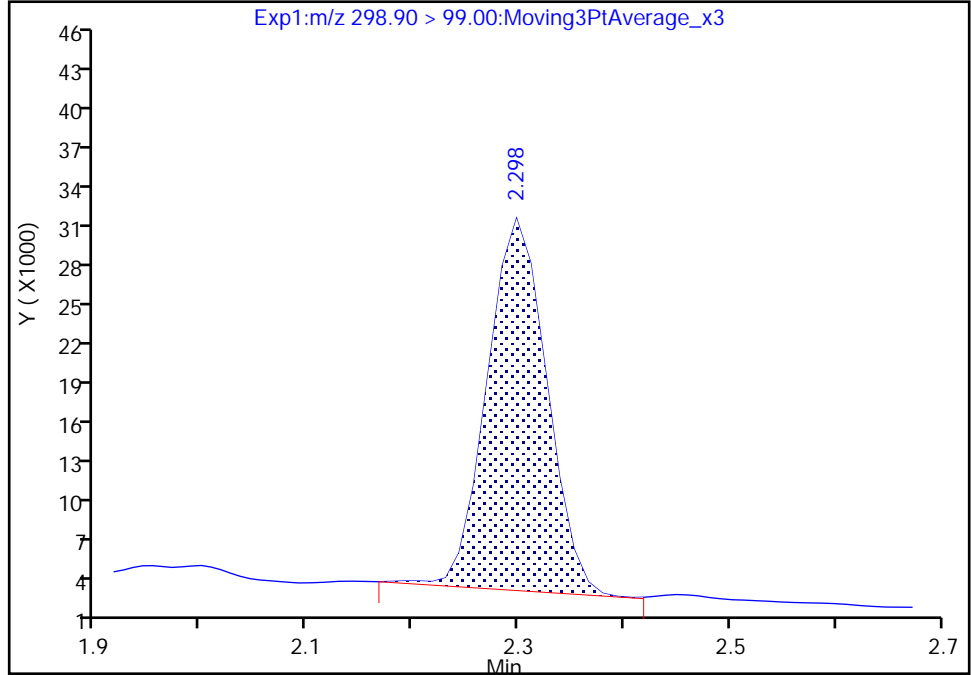
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B015.d
Injection Date: 22-Oct-2019 21:47:28 Instrument ID: LC812
Lims ID: 480-160746-C-2-A Lab Sample ID: 200-160746-2
Client ID: EW- 8100919
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

5 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 2

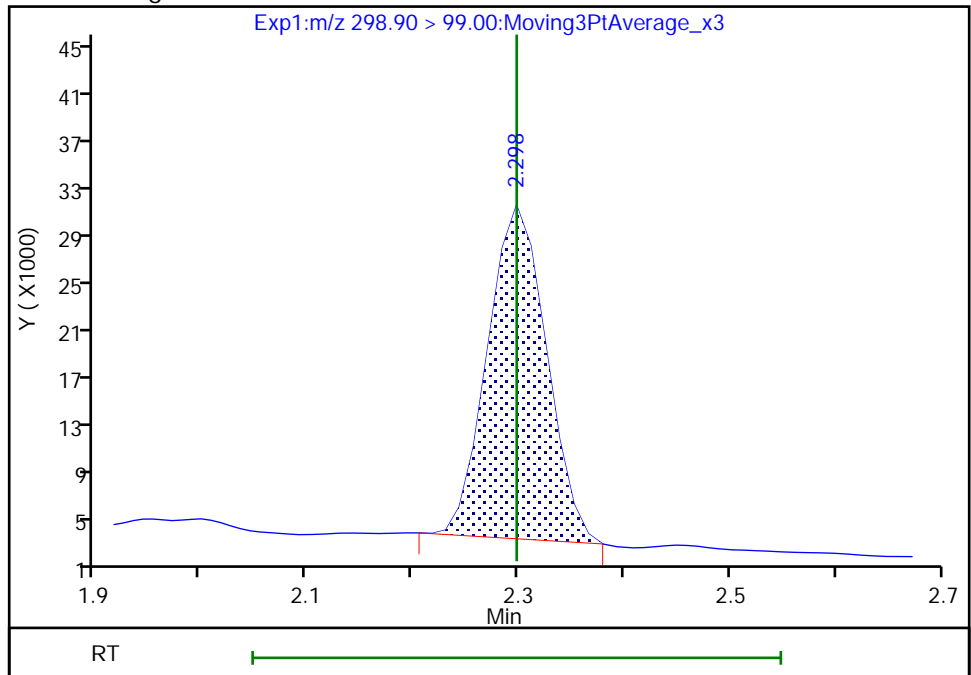
RT: 2.30
Area: 111174
Amount: 0.236703
Amount Units: ng/ml

Processing Integration Results



RT: 2.30
Area: 108269
Amount: 0.183239
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 11:29:21
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

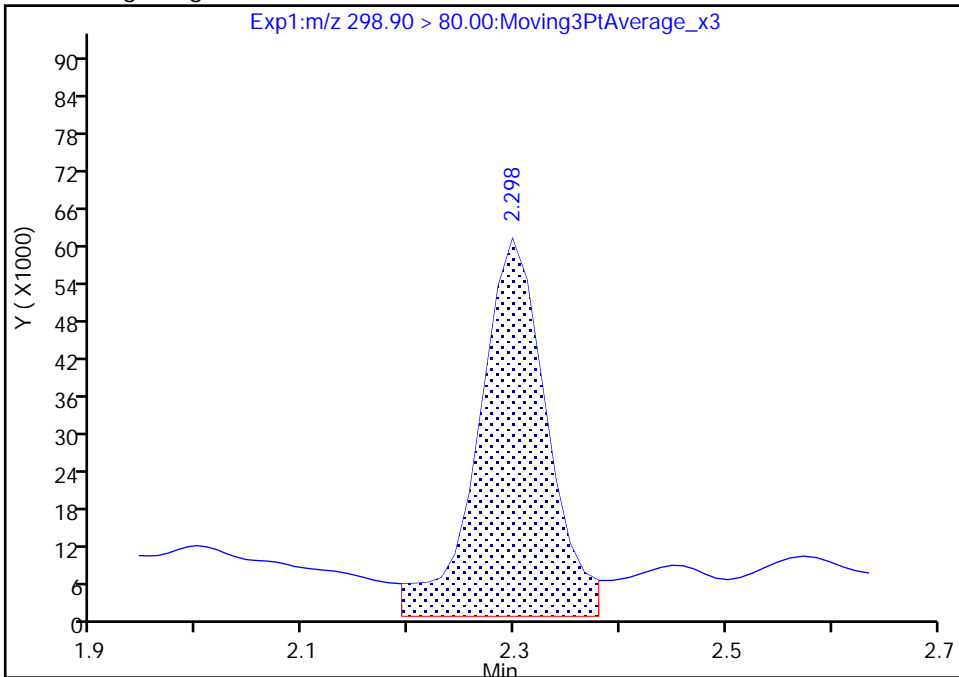
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B015.d
Injection Date: 22-Oct-2019 21:47:28 Instrument ID: LC812
Lims ID: 480-160746-C-2-A Lab Sample ID: 200-160746-2
Client ID: EW- 8100919
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

5 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

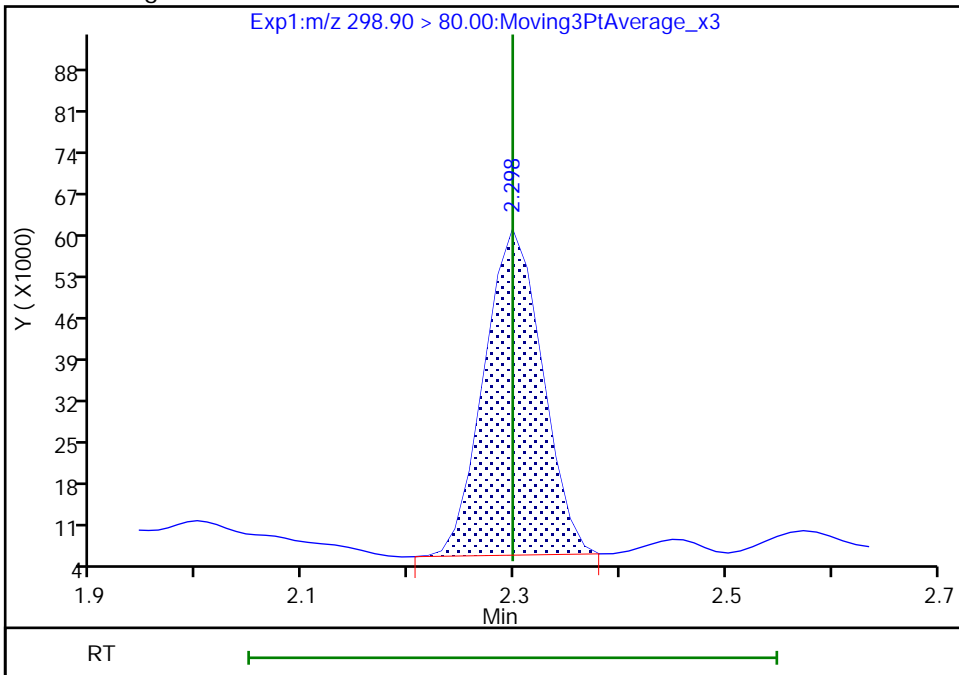
RT: 2.30
Area: 270560
Amount: 0.236703
Amount Units: ng/ml

Processing Integration Results



RT: 2.30
Area: 209449
Amount: 0.183239
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 11:29:25

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

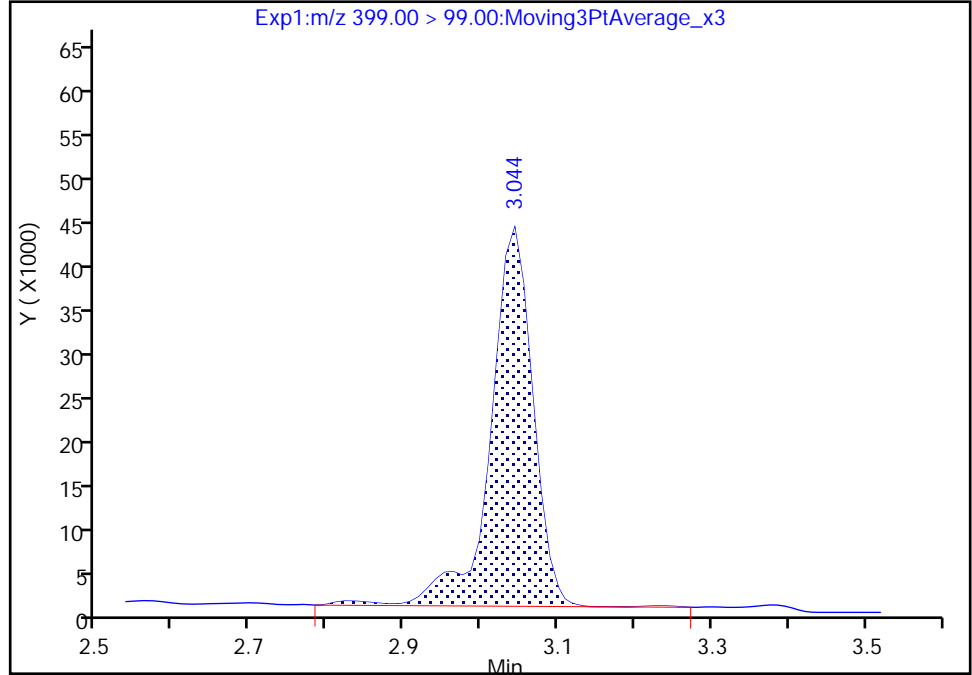
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B015.d
Injection Date: 22-Oct-2019 21:47:28 Instrument ID: LC812
Lims ID: 480-160746-C-2-A Lab Sample ID: 200-160746-2
Client ID: EW- 8100919
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

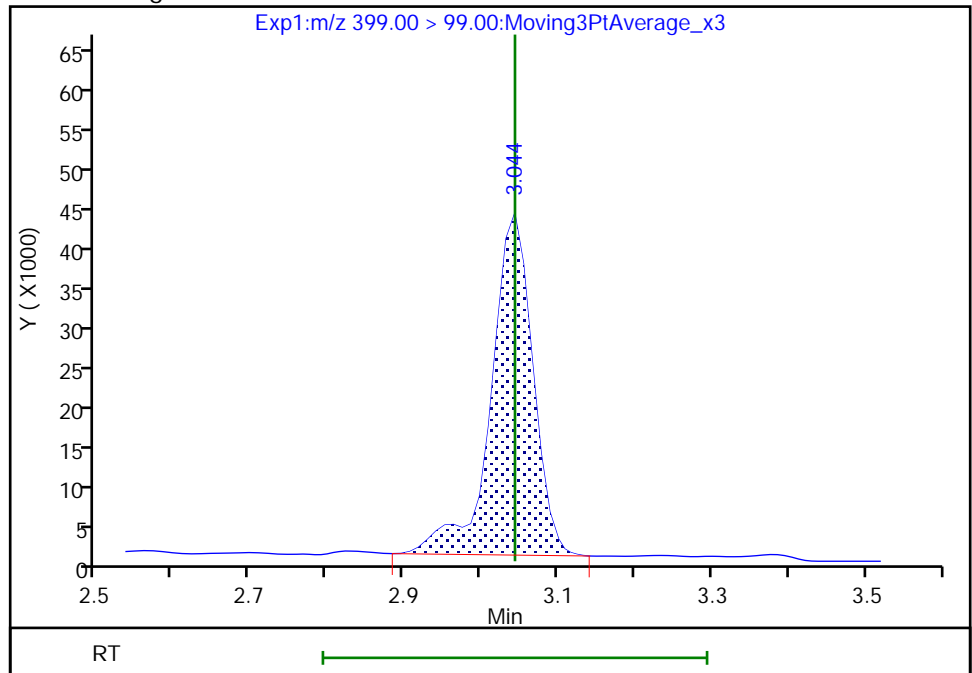
RT: 3.04
Area: 166152
Amount: 0.738844
Amount Units: ng/ml

Processing Integration Results



RT: 3.04
Area: 162457
Amount: 0.686581
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 11:29:51
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

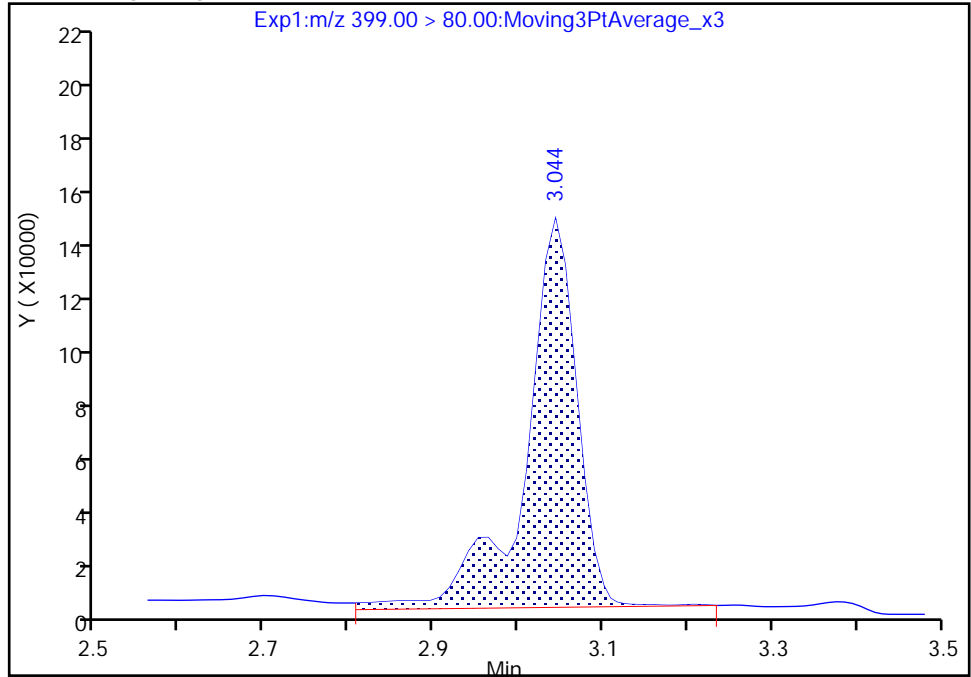
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B015.d
Injection Date: 22-Oct-2019 21:47:28 Instrument ID: LC812
Lims ID: 480-160746-C-2-A Lab Sample ID: 200-160746-2
Client ID: EW- 8100919
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

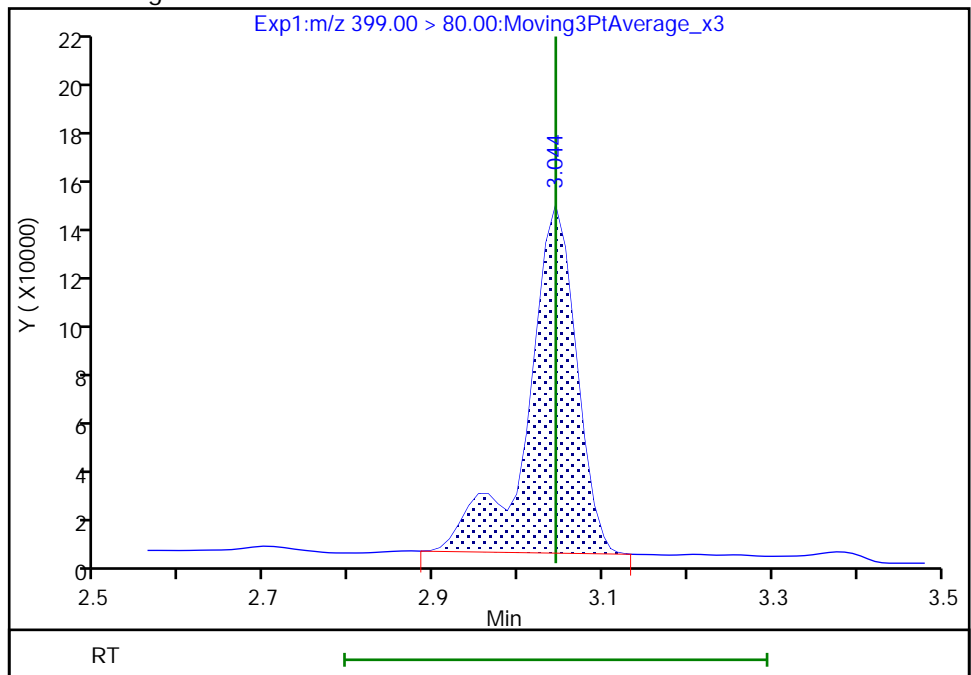
RT: 3.04
Area: 603715
Amount: 0.738844
Amount Units: ng/ml

Processing Integration Results



RT: 3.04
Area: 561703
Amount: 0.686581
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 11:30:06

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

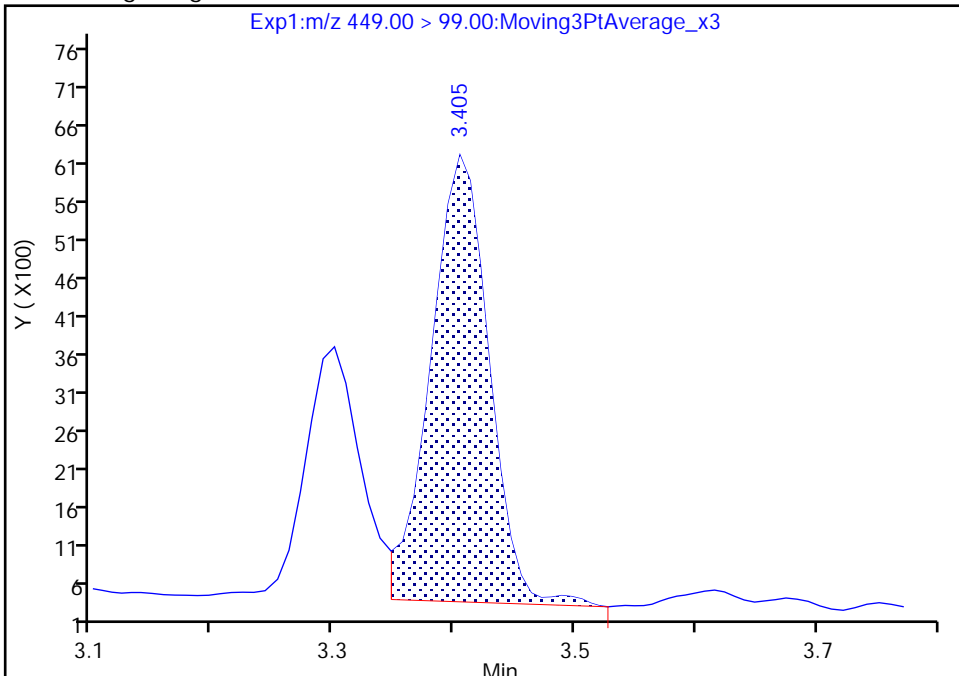
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B015.d
Injection Date: 22-Oct-2019 21:47:28 Instrument ID: LC812
Lims ID: 480-160746-C-2-A Lab Sample ID: 200-160746-2
Client ID: EW- 8100919
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

16 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 2

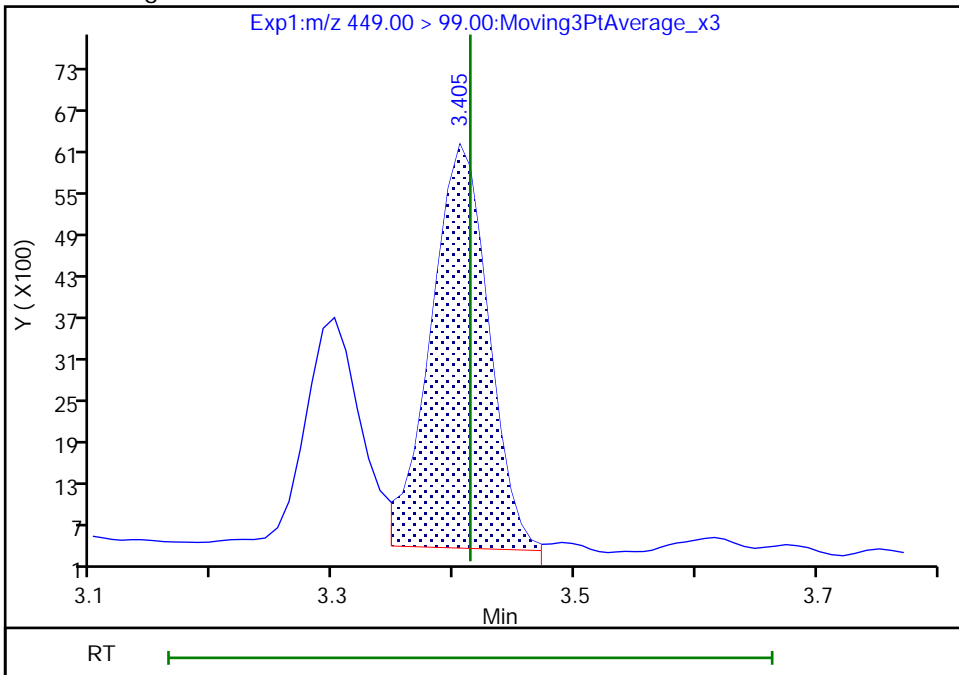
RT: 3.40
Area: 19677
Amount: 0.127706
Amount Units: ng/ml

Processing Integration Results



RT: 3.40
Area: 19417
Amount: 0.127706
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:00:10
Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

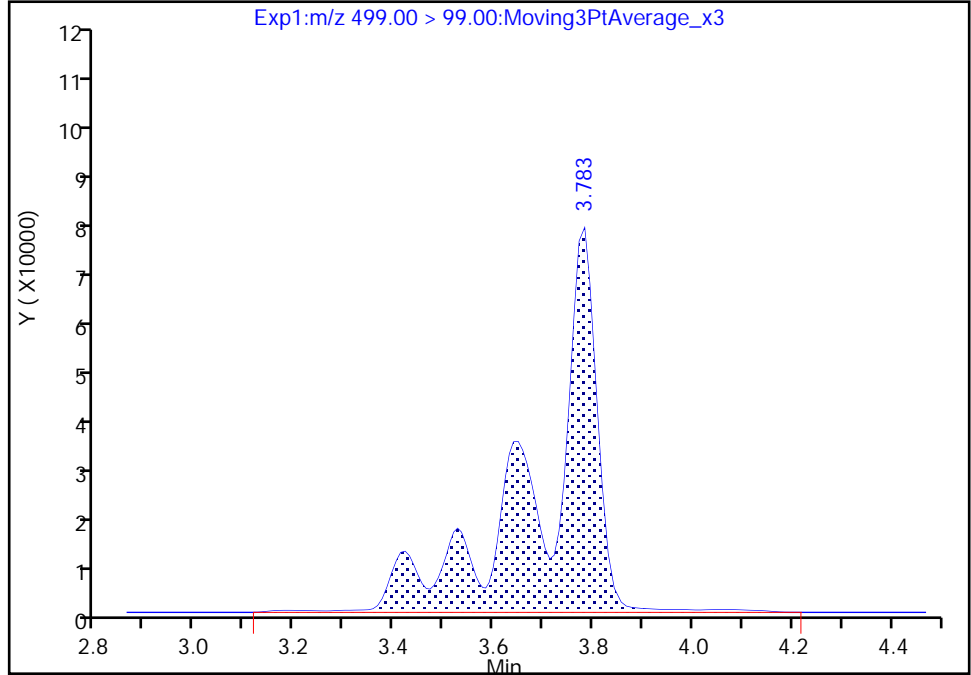
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B015.d
Injection Date: 22-Oct-2019 21:47:28 Instrument ID: LC812
Lims ID: 480-160746-C-2-A Lab Sample ID: 200-160746-2
Client ID: EW- 8100919
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 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

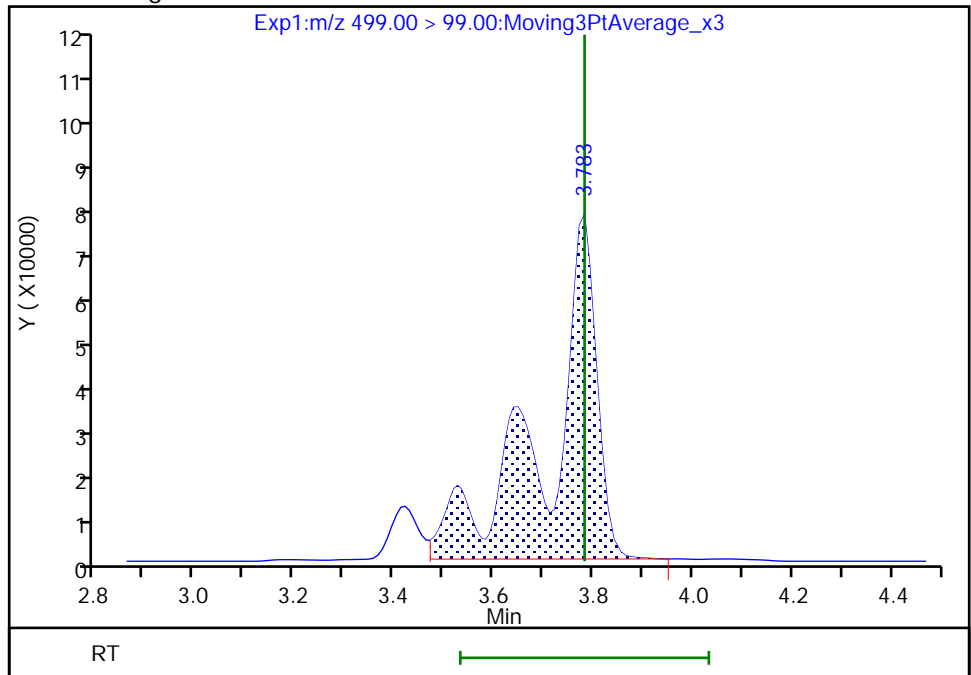
RT: 3.78
Area: 588230
Amount: 4.243784
Amount Units: ng/ml

Processing Integration Results



RT: 3.78
Area: 517202
Amount: 4.111891
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:02:22
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

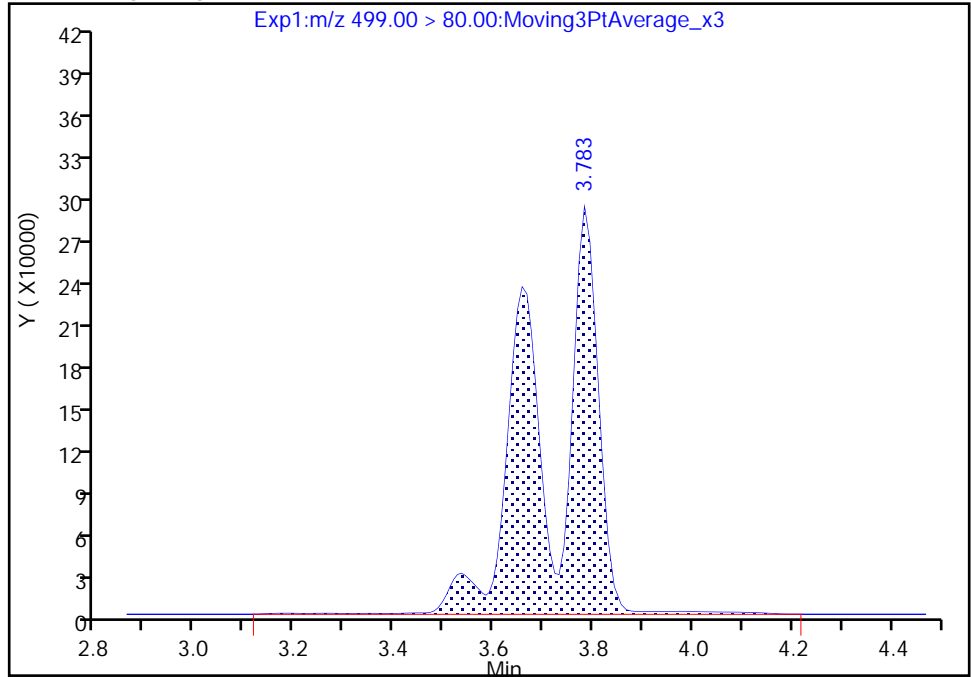
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B015.d
Injection Date: 22-Oct-2019 21:47:28 Instrument ID: LC812
Lims ID: 480-160746-C-2-A Lab Sample ID: 200-160746-2
Client ID: EW- 8100919
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 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

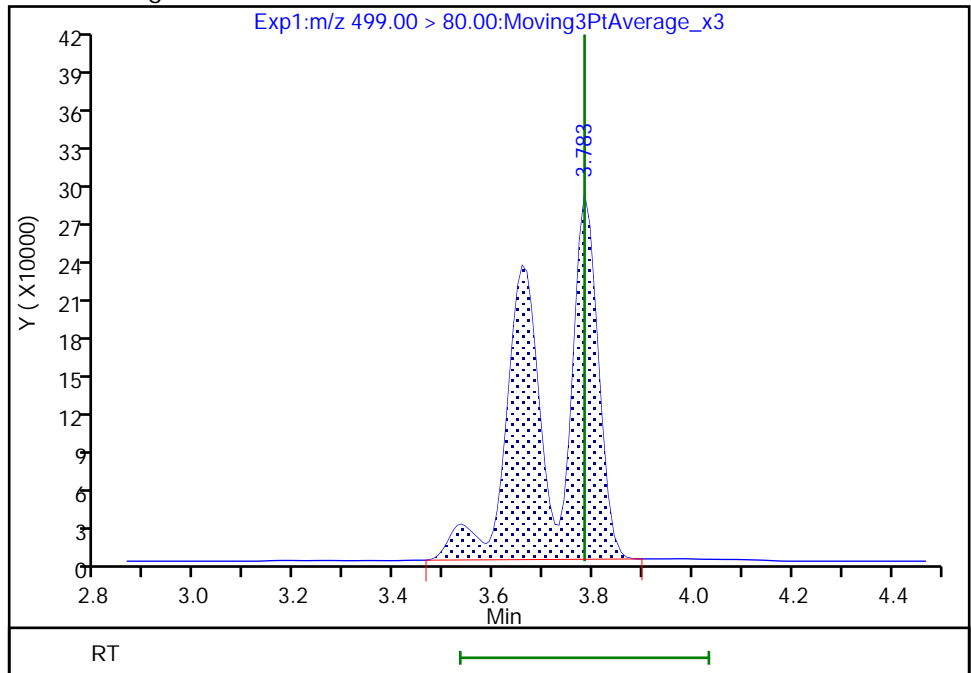
RT: 3.78
Area: 2144629
Amount: 4.243784
Amount Units: ng/ml

Processing Integration Results



RT: 3.78
Area: 2077976
Amount: 4.111891
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:02:22

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

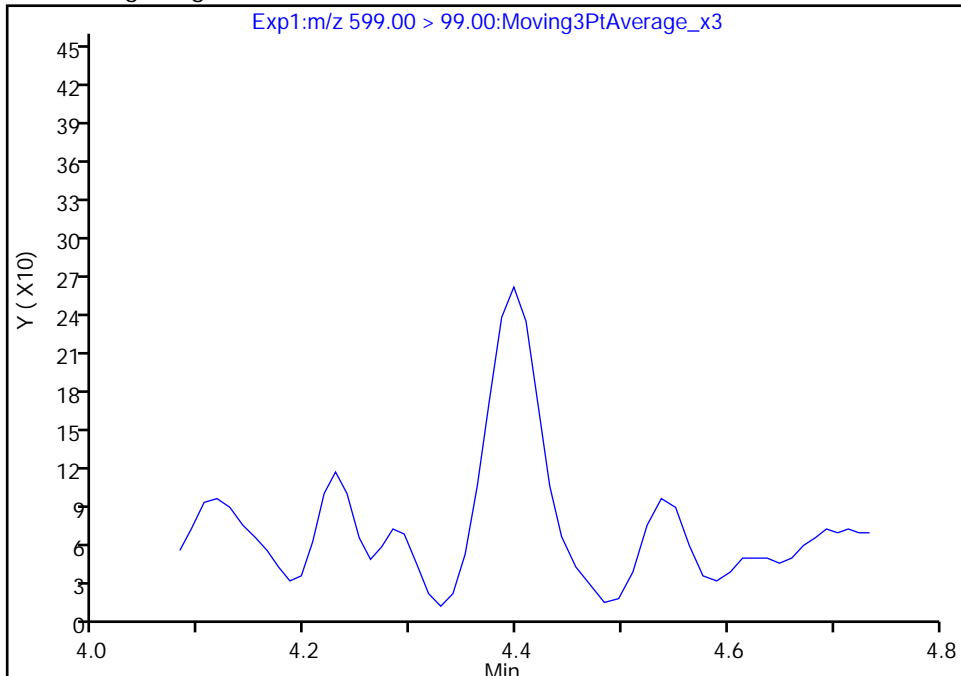
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B015.d
Injection Date: 22-Oct-2019 21:47:28 Instrument ID: LC812
Lims ID: 480-160746-C-2-A Lab Sample ID: 200-160746-2
Client ID: EW- 8100919
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

29 Perfluorodecanesulfonic acid, CAS: 335-77-3

Signal: 2

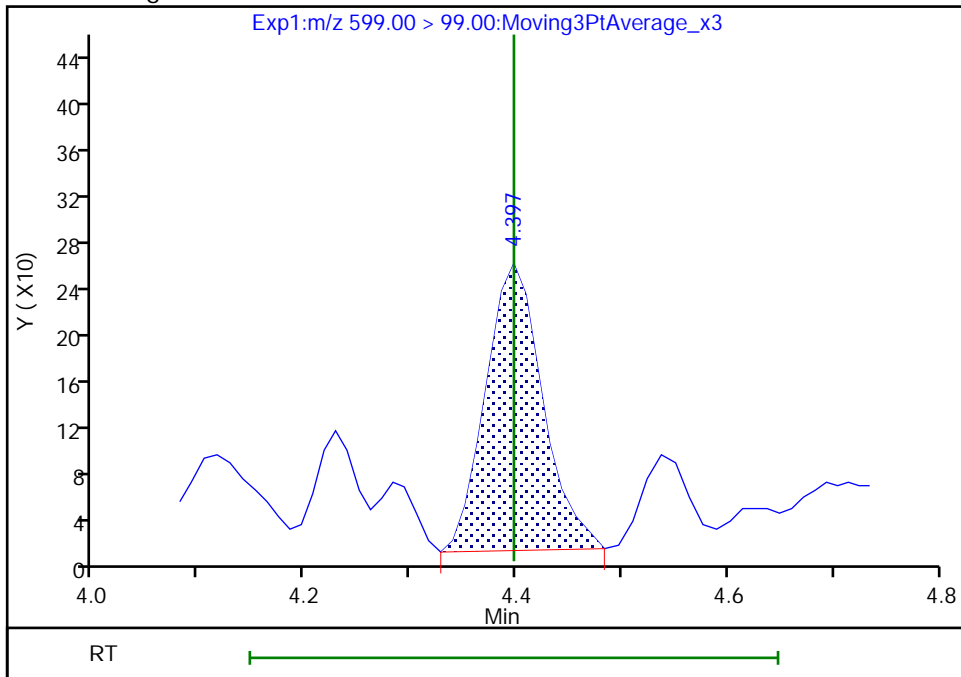
Not Detected
Expected RT: 4.40

Processing Integration Results



Manual Integration Results

RT: 4.40
Area: 938
Amount: 0.006204
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:08:26
Audit Action: Manually Integrated

Audit Reason: Assign Peak
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Euofins TestAmerica, Burlington

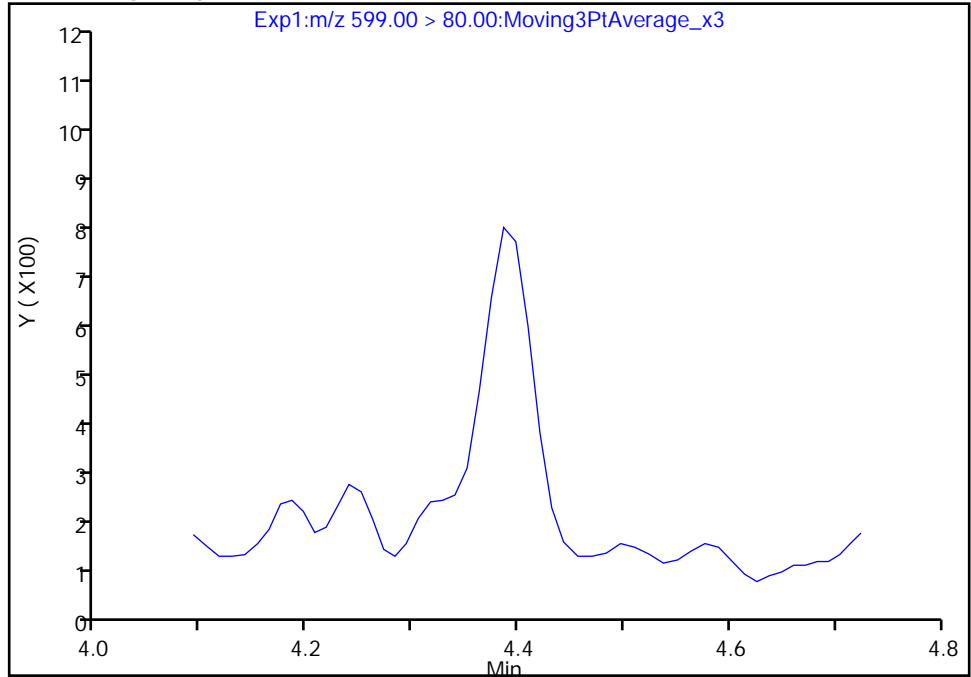
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B015.d
Injection Date: 22-Oct-2019 21:47:28 Instrument ID: LC812
Lims ID: 480-160746-C-2-A Lab Sample ID: 200-160746-2
Client ID: EW- 8100919
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

29 Perfluorodecanesulfonic acid, CAS: 335-77-3

Signal: 1

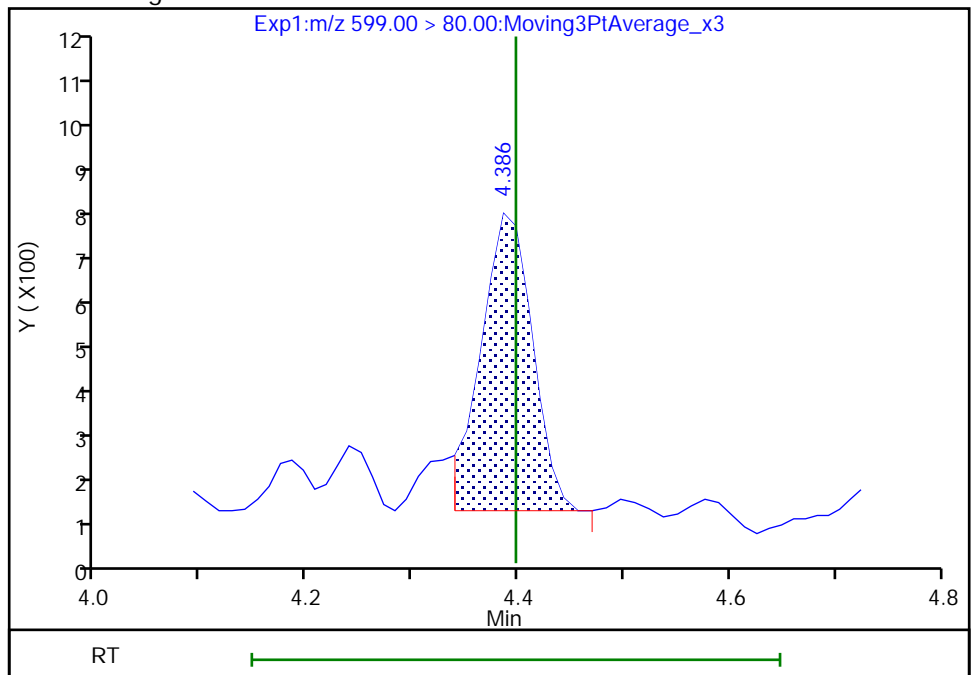
Not Detected
Expected RT: 4.40

Processing Integration Results



Manual Integration Results

RT: 4.39
Area: 2092
Amount: 0.006204
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:08:40

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

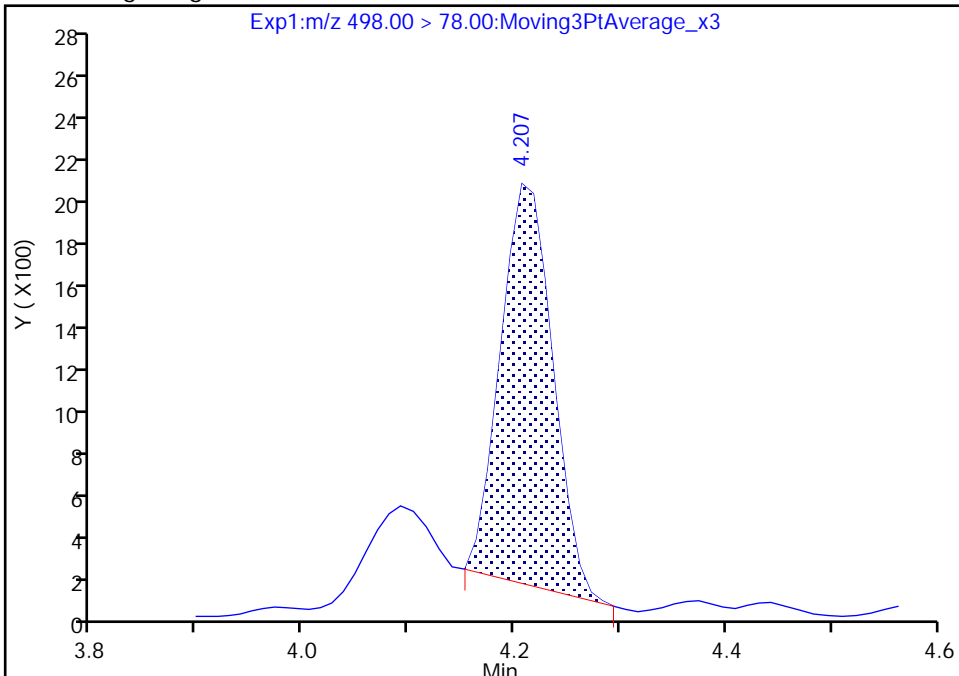
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B015.d
Injection Date: 22-Oct-2019 21:47:28 Instrument ID: LC812
Lims ID: 480-160746-C-2-A Lab Sample ID: 200-160746-2
Client ID: EW- 8100919
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

22 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

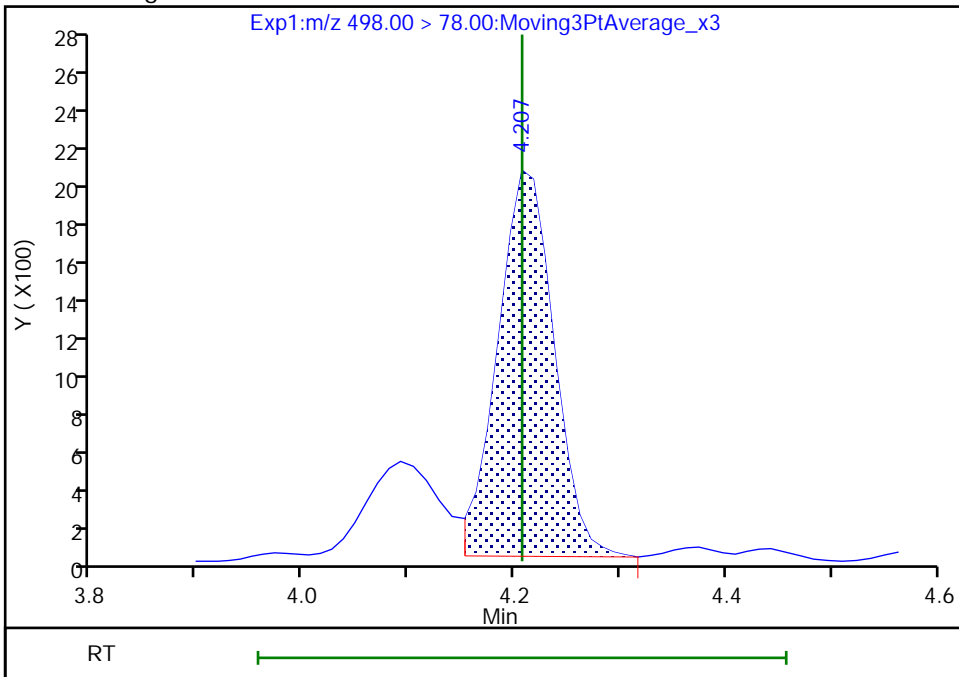
RT: 4.21
Area: 6493
Amount: 0.008245
Amount Units: ng/ml

Processing Integration Results



RT: 4.21
Area: 7441
Amount: 0.009448
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:07:00
Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

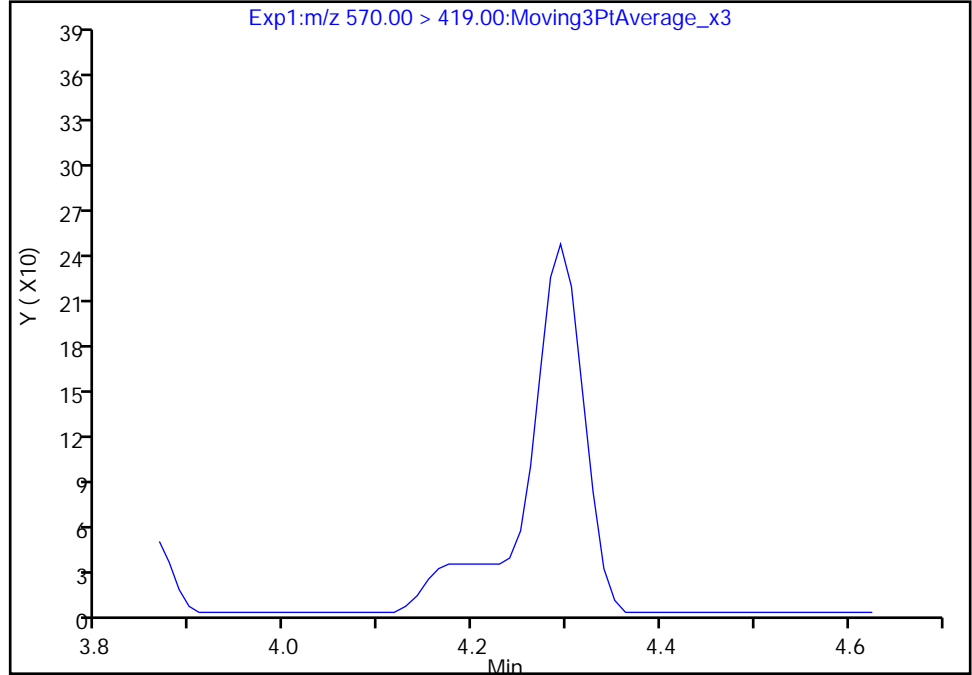
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B015.d
Injection Date: 22-Oct-2019 21:47:28 Instrument ID: LC812
Lims ID: 480-160746-C-2-A Lab Sample ID: 200-160746-2
Client ID: EW- 8100919
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 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

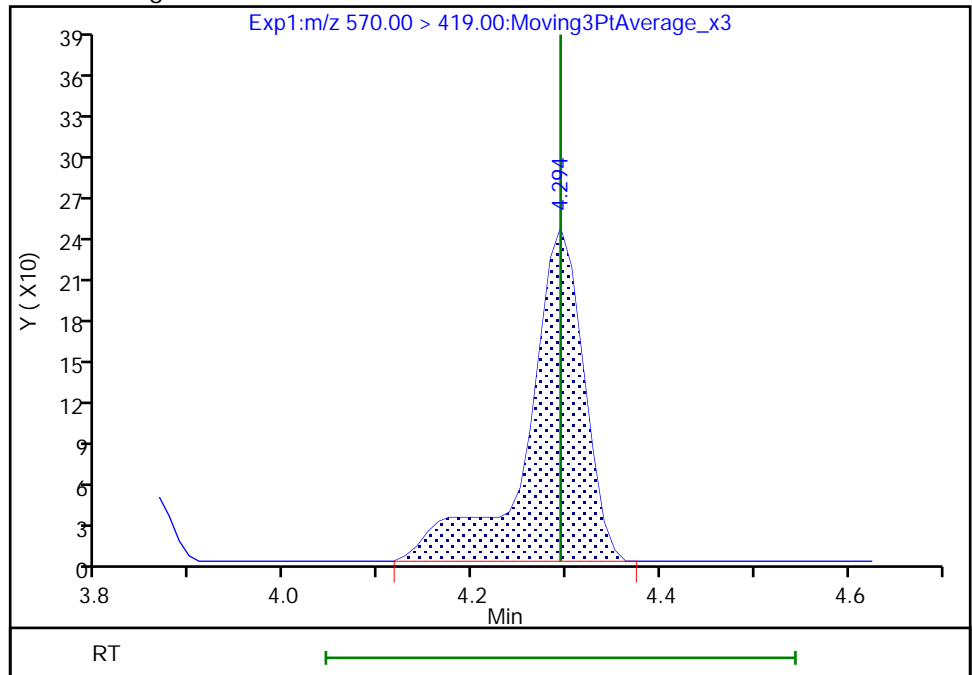
Not Detected
Expected RT: 4.29

Processing Integration Results



Manual Integration Results

RT: 4.29
Area: 1031
Amount: 0.016519
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:08:03
Audit Action: Manually Integrated

Audit Reason: Assign Peak

Eurofins TestAmerica, Burlington

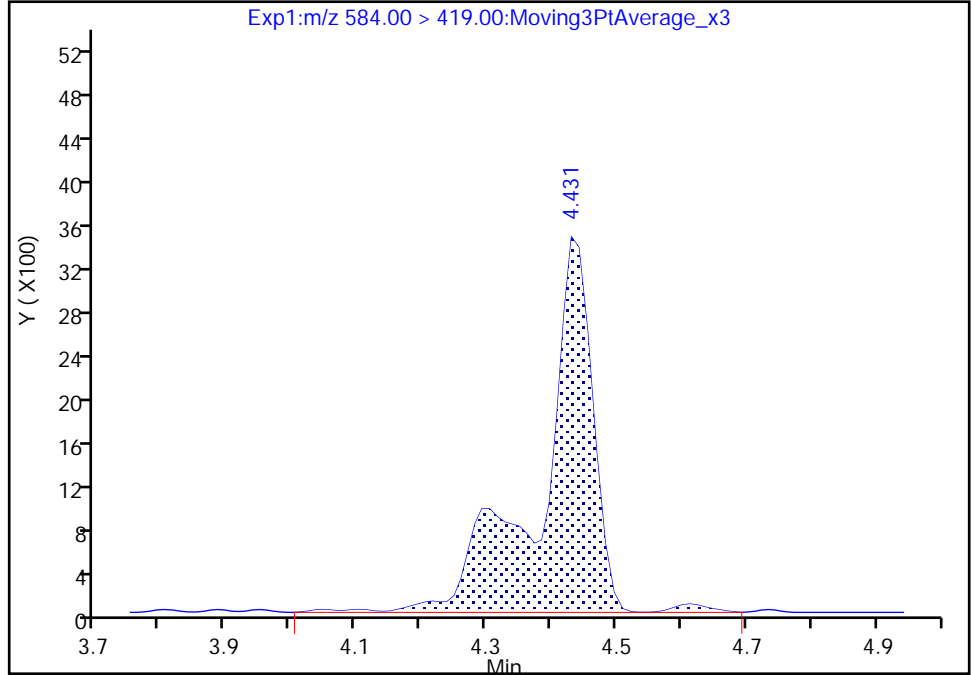
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Injection Date: 22-Oct-2019 21:47:28 Instrument ID: LC812
Lims ID: 480-160746-C-2-A Lab Sample ID: 200-160746-2
Client ID: EW- 8100919
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

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

Signal: 1

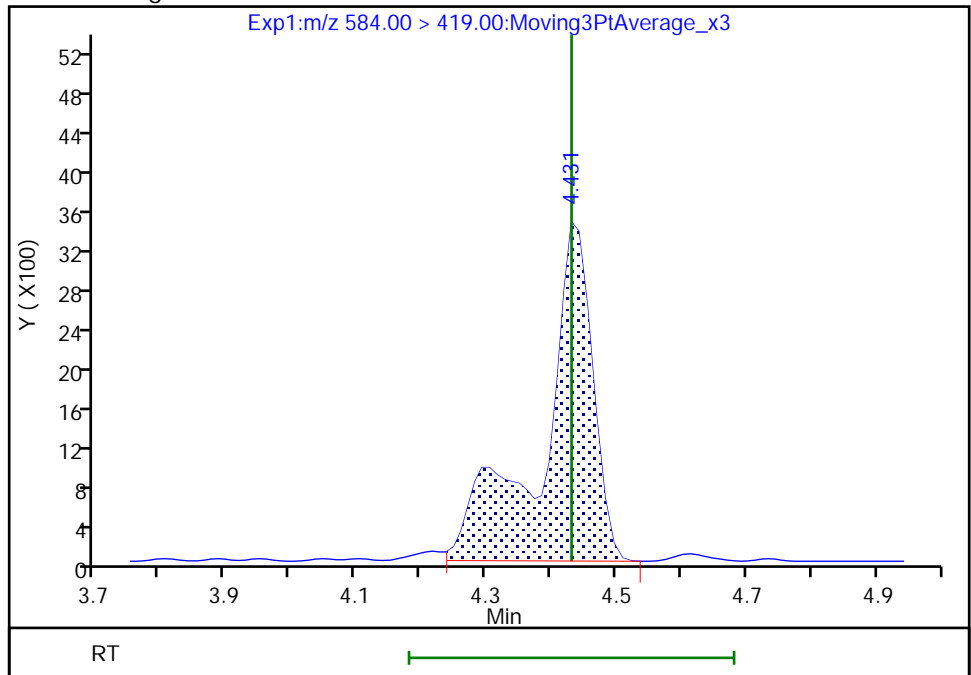
Processing Integration Results

RT: 4.43
Area: 19540
Amount: 0.301260
Amount Units: ng/ml



Manual Integration Results

RT: 4.43
Area: 18696
Amount: 0.287427
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:11:11
Audit Action: Manually Integrated

Audit Reason: Split Peak
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Eurofins TestAmerica, Burlington

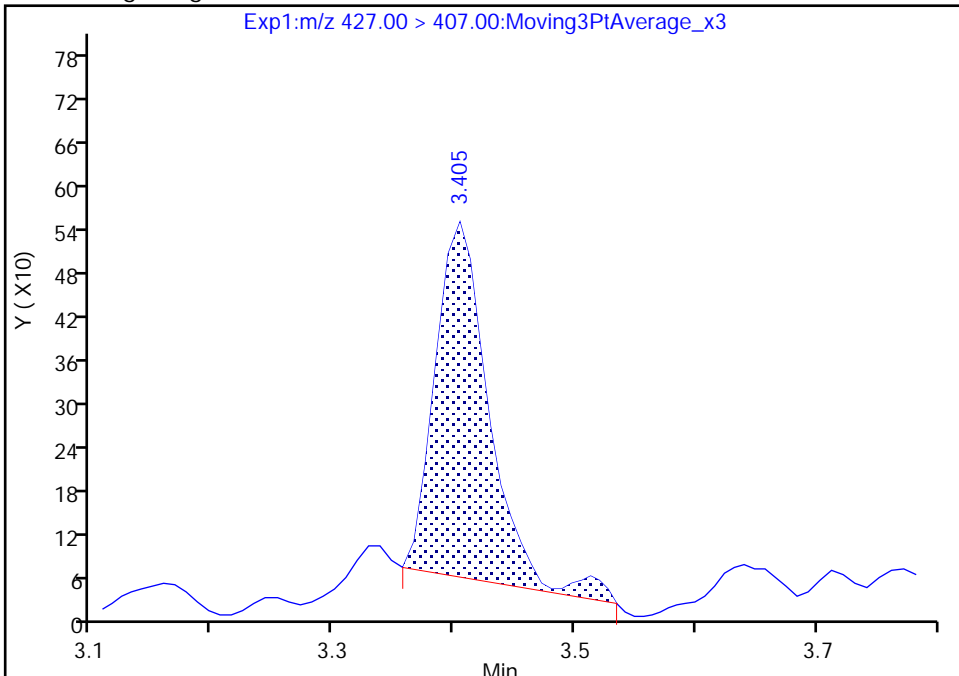
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B015.d
Injection Date: 22-Oct-2019 21:47:28 Instrument ID: LC812
Lims ID: 480-160746-C-2-A Lab Sample ID: 200-160746-2
Client ID: EW- 8100919
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

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

Signal: 1

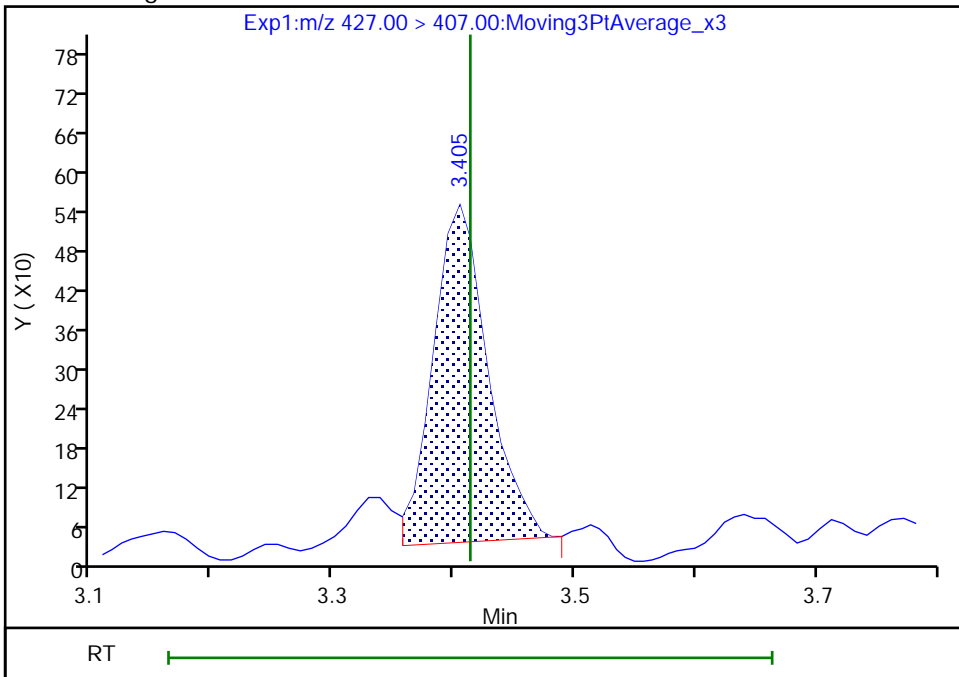
RT: 3.40
Area: 1534
Amount: 0.006134
Amount Units: ng/ml

Processing Integration Results



RT: 3.40
Area: 1625
Amount: 0.006498
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:00:49
Audit Action: Manually Integrated

Audit Reason: Split Peak
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Eurofins TestAmerica, Burlington

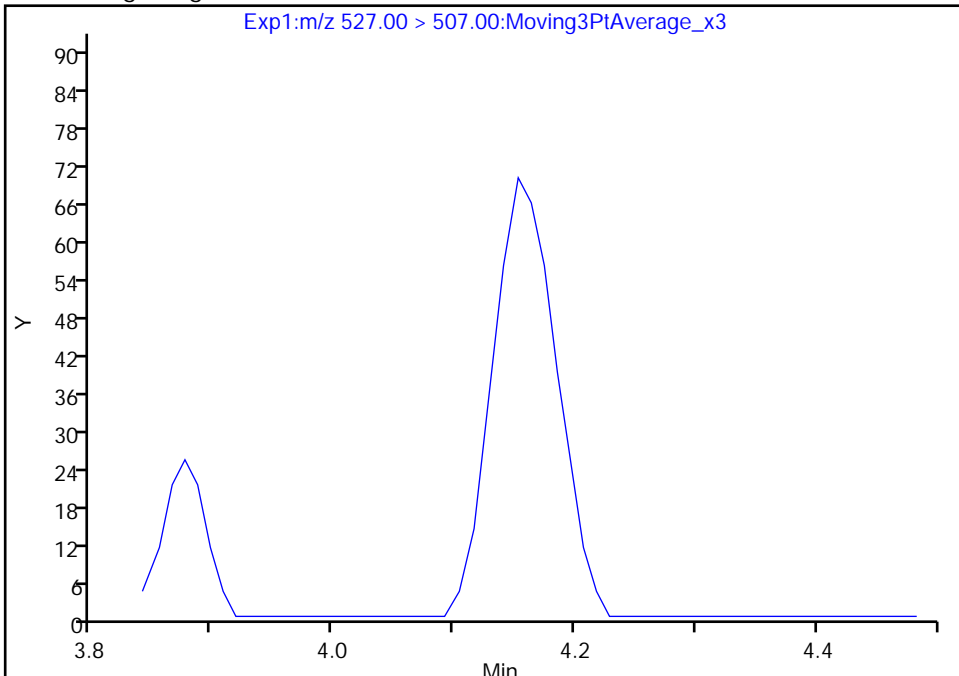
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B015.d
Injection Date: 22-Oct-2019 21:47:28 Instrument ID: LC812
Lims ID: 480-160746-C-2-A Lab Sample ID: 200-160746-2
Client ID: EW- 8100919
Operator ID: lc812tech ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

25 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:, CAS: 39108-34-4

Signal: 1

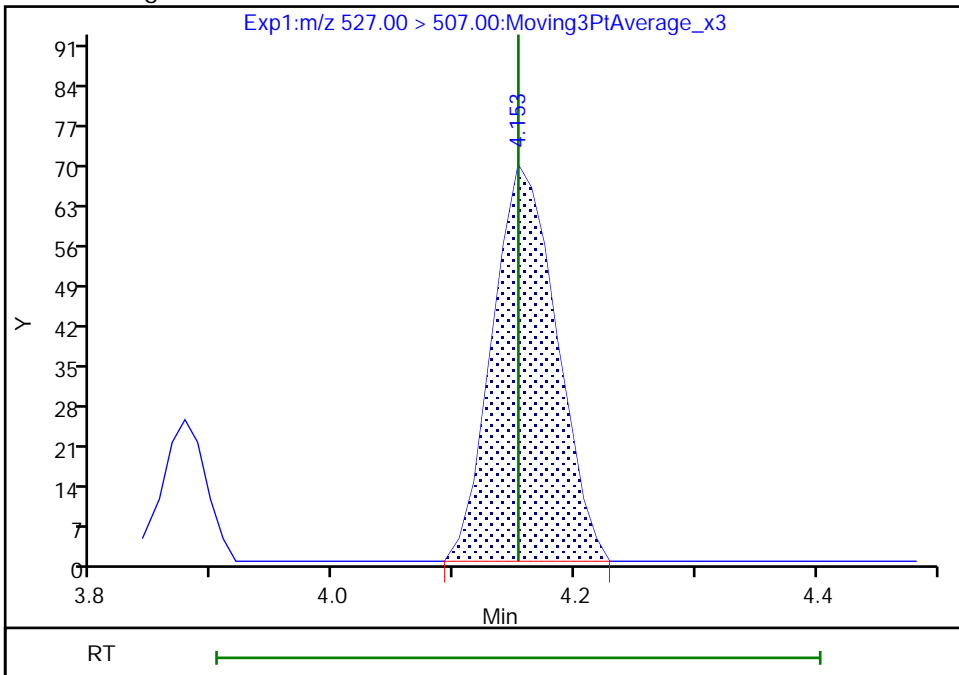
Not Detected
Expected RT: 4.15

Processing Integration Results



Manual Integration Results

RT: 4.15
Area: 258
Amount: -0.011581
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:06:05
Audit Action: Manually Integrated

Audit Reason: Assign Peak
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FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1
 SDG No.: _____
 Client Sample ID: SPW100919 Lab Sample ID: 480-160746-3
 Matrix: Water Lab File ID: SC102219B016.d
 Analysis Method: 537 (modified) Date Collected: 10/09/2019 16:24
 Extraction Method: 3535 Date Extracted: 10/17/2019 10:08
 Sample wt/vol: 287.2 (mL) Date Analyzed: 10/22/2019 21:55
 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.: 148772 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	4.4		1.7	0.87
2706-90-3	Perfluoropentanoic acid (PFPeA)	4.7		1.7	0.55
307-24-4	Perfluorohexanoic acid (PFHxA)	6.0		1.7	0.66
375-85-9	Perfluoroheptanoic acid (PFHpA)	3.7		1.7	0.79
335-67-1	Perfluorooctanoic acid (PFOA)	14		1.7	0.71
375-95-1	Perfluorononanoic acid (PFNA)	0.89	J B	1.7	0.24
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)	6.0		1.7	0.43
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	7.1		1.7	0.70
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	0.99	J	1.7	0.83
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	29		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)	1.8	J	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.: 480-160746-1
 SDG No.: _____
 Client Sample ID: SPW100919 Lab Sample ID: 480-160746-3
 Matrix: Water Lab File ID: SC102219B016.d
 Analysis Method: 537 (modified) Date Collected: 10/09/2019 16:24
 Extraction Method: 3535 Date Extracted: 10/17/2019 10:08
 Sample wt/vol: 287.2 (mL) Date Analyzed: 10/22/2019 21:55
 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.: 148772 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	86		50-150
STL01892	13C4 PFHpA	86		50-150
STL00990	13C4 PFOA	96		50-150
STL00991	13C4 PFOS	89		50-150
STL00995	13C5 PFNA	89		50-150
STL00992	13C4 PFBA	74		25-150
STL00993	13C2 PFHxA	85		50-150
STL00996	13C2 PFDA	87		50-150
STL00997	13C2 PFUnA	83		50-150
STL00998	13C2 PFDoA	93		50-150
STL01056	13C8 FOSA	71		25-150
STL01893	13C5 PFPeA	83		25-150
STL02116	13C2 PFTeDA	91		50-150
STL02118	d3-NMeFOSAA	78		50-150
STL02117	d5-NEtFOSAA	84		50-150
STL02279	M2-6:2 FTS	99		25-150
STL02280	M2-8:2 FTS	94		25-150

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d
 Lims ID: 480-160746-C-3-A
 Client ID: SPW100919
 Sample Type: Client
 Inject. Date: 22-Oct-2019 21:55:40 ALS Bottle#: 16 Worklist Smp#: 16
 Injection Vol: 20.0 ul Dil. Factor: 1.0000
 Sample Info: 480-160746-C-3-A
 Misc. Info.: 200-0038369-016 Plate: 1 Rack: 4
 Operator ID: lc812tech Instrument ID: LC812
 Method: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\PFC_LC812.m
 Limit Group: LC_PFC_ICAL
 Last Update: 28-Oct-2019 13:09:04 Calib Date: 24-Sep-2019 18:56:37
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA015.d
 Column 1 : C-18 (4.60 mm) Det: EXP1
 Process Host: CTX1017

First Level Reviewer: manopan Date: 24-Oct-2019 12:30:55
 Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	1.926	1.926	0.0	0.561	3166518	1.85	74.1	8523	
2 Perfluorobutanoic acid										M
212.90 > 169.00	1.935	1.926	0.009	1.005	141283	0.1256		12.6		M
D 3 13C5 PFPeA	267.90 > 223.00	2.284	2.285	-0.001	0.666	2796647	2.07	82.7	2023	
4 Perfluoropentanoic acid										M
262.90 > 219.00	2.284	2.285	-0.001	1.000	151704	0.1352		2.1		M
5 Perfluorobutanesulfonic acid										M
298.90 > 80.00	2.312	2.298	0.014	0.757	215691	0.1720	Target=2.04	7.2		M
298.90 > 99.00	2.312	2.298	0.014	0.757	107587		2.00(1.02-3.05)	15.8		M
D 60 M2-4:2 FTS	329.00 > 81.00	2.623	2.623	0.0	0.765	317191	2.27	97.3	80.2	
6 Perfluorohexanoic acid										M
313.00 > 269.00	2.673	2.661	0.012	1.000	206610	0.1710	Target=12.90	10.5		M
313.00 > 119.00	2.673	2.661	0.012	1.000	16893		12.23(6.45-19.36)	18.6		M
D 7 13C2 PFHxA	315.00 > 270.00	2.673	2.661	0.012	0.779	3065190	2.13	85.3	5338	
70 Perfluoropentanesulfonic acid										M
349.00 > 80.00	2.673	2.673	0.0	0.875	69815	0.0644	Target=3.01	10.3		M
349.00 > 99.00	2.673	2.673	0.0	0.875	27708		2.52(1.51-4.52)	7.2		
67 Perfluoro(2-propoxypropanoic) acid										M
329.10 > 285.00	2.776	2.776	0.0	0.994	1126	0.007973		0.4		M
D 64 13C3 HFPO-DA	332.10 > 287.00	2.791	2.776	0.015	0.814	123406	1.72	68.8	482	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.055	3.044	0.011	1.000	189920	0.2032	Target=3.78	27.1		M
399.00 > 99.00	3.055	3.044	0.011	1.000	53387		3.56(1.89-5.67)	34.0		M

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	3.055	3.044	0.011	0.891	2175975	2.03		85.8	6129	
D 9 13C4 PFHpA										
367.00 > 322.00	3.055	3.044	0.011	0.891	3005730	2.16		86.4	6236	
10 Perfluoroheptanoic acid										M
363.00 > 319.00	3.055	3.044	0.011	1.000	113112	0.1053	Target=3.54	9.5		M
363.00 > 169.00	3.055	3.044	0.011	1.000	30894		3.66(1.77-5.31)	40.5		
77 DONA										RM
377.00 > 251.00	3.101	3.090	0.011	0.818	665	0.000251	Target=2.56	1.1		RM
377.00 > 85.00	3.089	3.090	-0.001	0.815	964		0.69(1.28-3.84)	0.9		M
16 Perfluoroheptanesulfonic acid										M
449.00 > 80.00	3.421	3.413	0.008	0.902	20339	0.0283	Target=5.80	10.3		M
449.00 > 99.00	3.413	3.413	0.0	0.900	4598		4.42(2.90-8.71)	7.2		M
13 1H,1H,2H,2H-perfluorooctanesulfoni										M
427.00 > 407.00	3.438	3.413	0.025	1.005	551	0.002526		4.8		M
D 12 M2-6:2 FTS										
429.00 > 81.00	3.421	3.413	0.008	0.998	411274	2.36		99.4	386	
* 62 13C2 PFOA										
415.00 > 370.00	3.430	3.422	0.008		3560904	2.50			10068	
D 14 13C4 PFOA										
417.00 > 372.00	3.430	3.422	0.008	1.000	3384011	2.39		95.7	5428	
15 Perfluorooctanoic acid										M
413.00 > 369.00	3.430	3.422	0.008	1.000	521507	0.3920	Target=2.61	61.3		M
413.00 > 169.00	3.430	3.422	0.008	1.000	239239		2.18(1.30-3.91)	389		M
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.783	0.010	1.106	1550960	2.13		88.9	2075	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.793	3.783	0.010	1.000	482599	0.8225	Target=4.93	115		M
499.00 > 99.00	3.793	3.783	0.010	1.000	135545		3.56(2.47-7.40)	30.2		M
D 19 13C5 PFNA										
468.00 > 423.00	3.817	3.805	0.012	1.113	2786368	2.23		89.1	7179	
20 Perfluorononanoic acid										M
463.00 > 419.00	3.817	3.805	0.012	1.000	27241	0.0256	Target=7.89	5.7		M
463.00 > 169.00	3.829	3.805	0.024	1.003	2996		9.09(3.95-11.84)	14.5		M
69 9-Chlorohexadecafluoro-3-oxanonane										M
531.00 > 351.00	3.962	3.973	-0.011	1.045	181	0.000174		1.0		M
24 Perfluorodecanoic acid										M
513.00 > 469.00	4.153	4.141	0.012	1.000	6136	0.006117	Target=8.57	3.0		M
513.00 > 169.00	4.153	4.141	0.012	1.000	928		6.61(4.29-12.86)	11.6		M
D 23 13C2 PFDA										
515.00 > 470.00	4.153	4.141	0.012	1.211	2710979	2.17		87.0	10626	
25 1H,1H,2H,2H-perfluorodecanesulfoni										M
527.00 > 507.00	4.153	4.153	0.0	0.997	507	-0.009802		6.9		M
D 26 M2-8:2 FTS										
529.00 > 81.00	4.164	4.153	0.011	1.214	426026	2.24		93.5	880	
22 Perfluorooctanesulfonamide										M
498.00 > 78.00	4.218	4.207	0.011	1.000	2536	0.002748		7.3		M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 21 13C8 FOSA										
506.00 > 78.00	4.218	4.207	0.011	1.230	2514962	1.78		71.0	4943	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.293	4.294	-0.001	1.252	235193	1.95		77.9	2026	
28 N-methylperfluorooctanesulfonamido										
570.00 > 419.00	4.293	4.294	-0.001	1.000	466	0.006952		1.7		M
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.409	4.397	0.012	1.162	471	0.001203	Target=2.56	2.0		M
599.00 > 99.00	4.397	4.397	0.0	1.159	246		1.91(1.28-3.84)	2.4		M
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.431	4.420	0.011	1.000	5282	0.006791	Target=6.97	3.2		M
563.00 > 169.00	4.431	4.420	0.011	1.000	512		10.32(3.48-10.45)	2.4		M
D 30 13C2 PFUnA										
565.00 > 520.00	4.431	4.420	0.011	1.292	2323821	2.08		83.2	6700	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.442	4.431	0.011	1.295	275394	2.10		84.2	1244	
33 N-ethylperfluorooctanesulfonamidoa										
584.00 > 419.00	4.442	4.431	0.011	1.000	4199	0.0508		37.9		M
66 11-Chloroeicosafuoro-3-oxaundecan										
631.00 > 451.00	4.523	4.524	-0.001	1.193	144	0.000111		1.7		M
37 Perfluorododecanoic acid										
613.00 > 569.00	4.671	4.660	0.011	1.000	1427	0.001447	Target=7.06	0.3		M
613.00 > 169.00	4.682	4.660	0.022	1.002	313		4.56(3.53-10.59)	5.7		M
D 36 13C2 PFDa										
615.00 > 570.00	4.671	4.660	0.011	1.362	2786512	2.32		92.7	8496	
74 1H,1H,2H,2H-perfluorododecanesulfo										
627.00 > 607.00	4.693	4.683	0.010	1.127	44	0.000580		1.0		M
75 Perfluorododecanesulfonic acid (PF										
699.00 > 80.00	4.849	4.839	0.010	1.279	941	0.005590	Target=0.47	1.1		RM
699.00 > 99.00	4.827	4.839	-0.012	1.273	325		2.90(0.23-0.70)	5.0		M
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.888	4.870	0.018	1.046	2111	0.002646	Target=4.87	0.5		M
663.00 > 169.00	4.870	4.870	0.0	1.042	433		4.88(2.43-7.30)	4.5		M
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.067	5.067	0.0	1.000	712	0.005000	Target=1.09	11.6		RM
713.00 > 219.00	5.067	5.067	0.0	1.000	403		1.77(0.54-1.63)	5.9		M
D 43 13C2 PFTeDA										
715.00 > 670.00	5.067	5.067	0.0	1.477	2446106	2.27		90.8	12506	
D 44 13C2 PFHxDA										
815.00 > 770.00	5.435	5.424	0.011	1.585	2427665	2.24		89.7	8848	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.435	5.424	0.011	1.000	22994	-0.0108	Target=4.33	4.1		
813.00 > 169.00	5.435	5.424	0.011	1.000	6262		3.67(2.16-6.49)	84.0		
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.799	5.790	0.009	1.067	865	0.001207	Target=4.09	0.3		M
913.00 > 169.00	5.799	5.790	0.009	1.067	275		3.15(2.05-6.14)	7.6		M

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d

Injection Date: 22-Oct-2019 21:55:40

Instrument ID: LC812

Lims ID: 480-160746-C-3-A

Lab Sample ID: 200-160746-3

Client ID: SPW100919

Operator ID: lc812tech

ALS Bottle#: 16

Worklist Smp#: 16

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

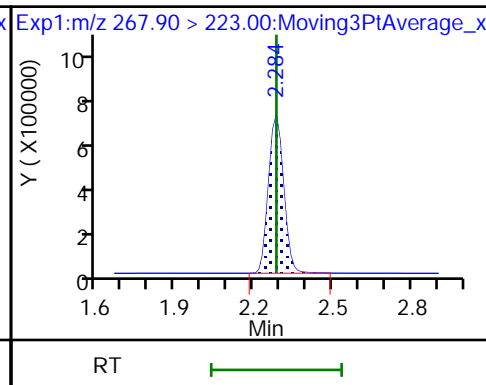
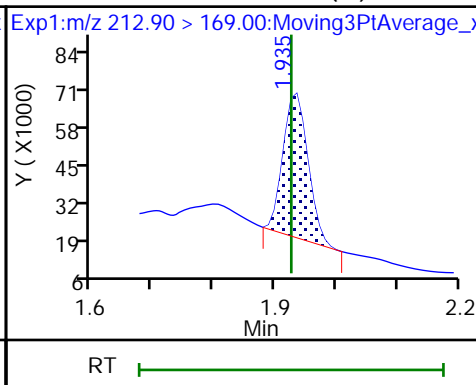
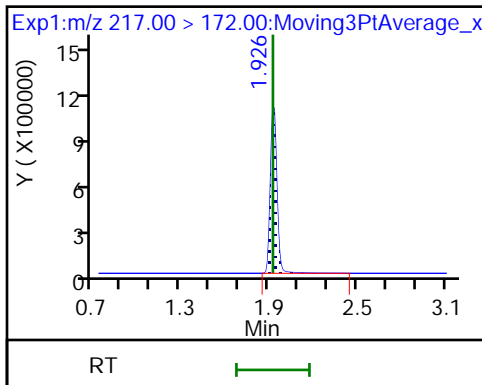
Method: PFC_LC812

Limit Group: LC_PFC_ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid (M)

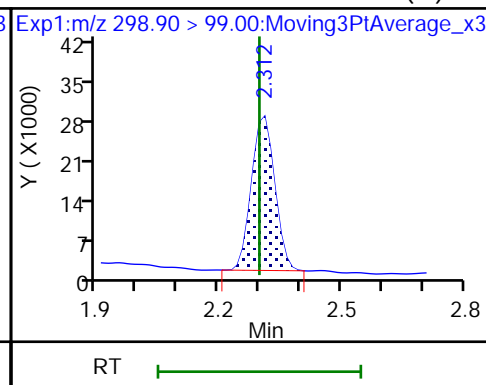
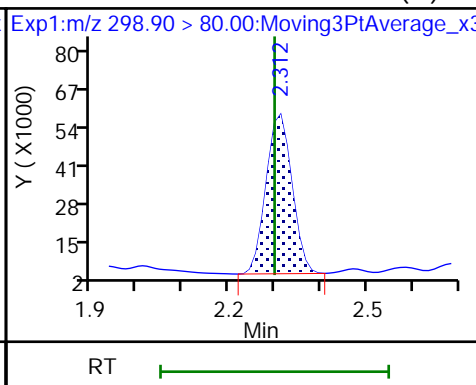
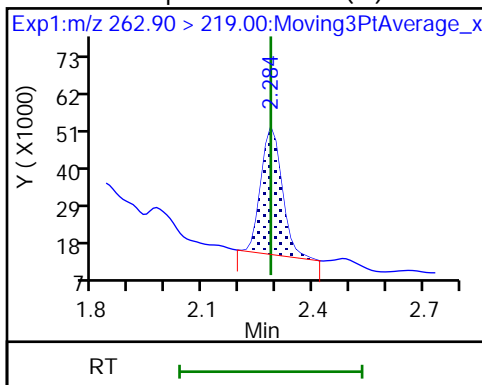
D 3 13C5 PFPeA



4 Perfluoropentanoic acid (M)

5 Perfluorobutanesulfonic acid (M)

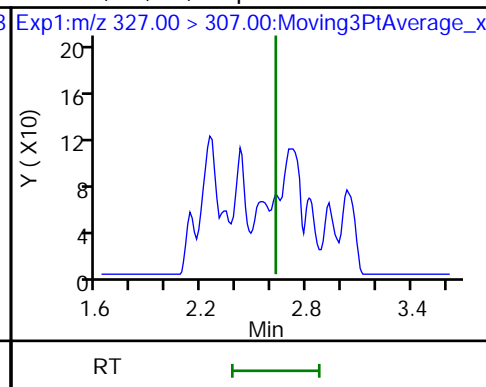
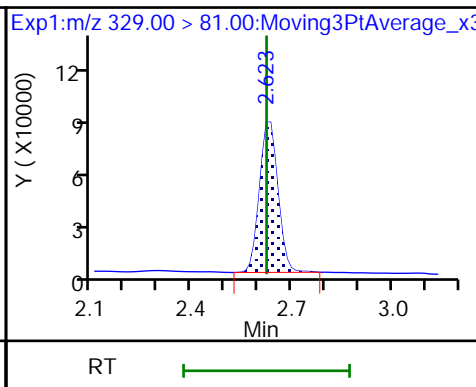
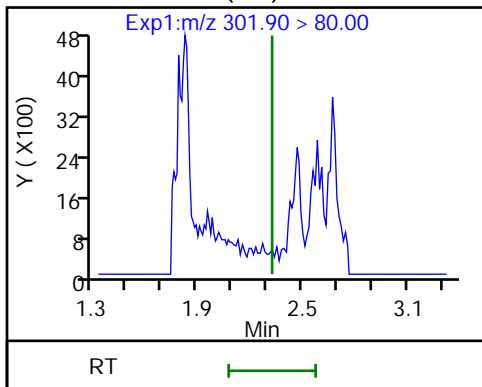
5 Perfluorobutanesulfonic acid (M)



D 47 13C3 PFBS (ND)

D 60 M2-4:2 FTS

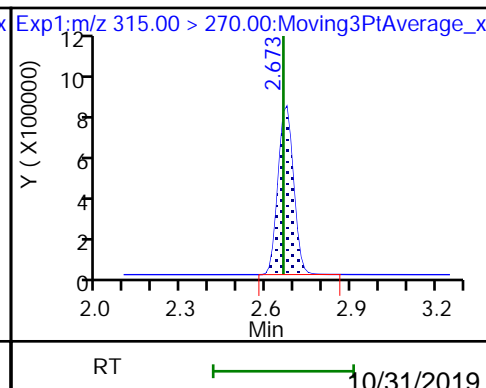
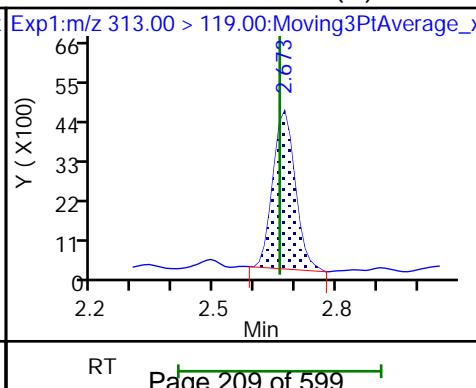
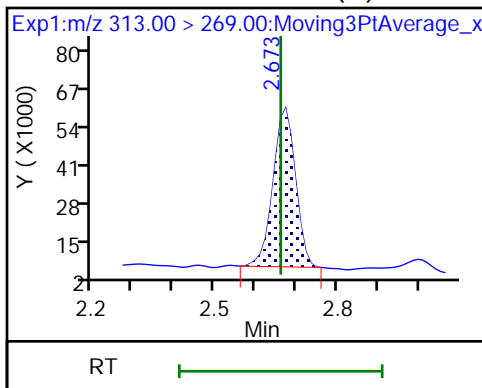
61 1H,1H,2H,2H-perfluorohexanesulfoni (ND)



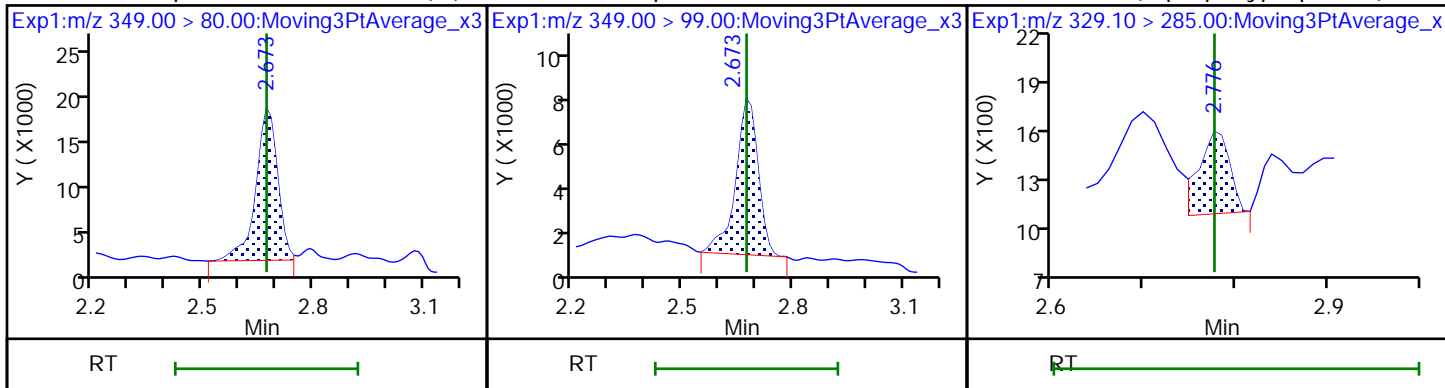
6 Perfluorohexanoic acid (M)

6 Perfluorohexanoic acid (M)

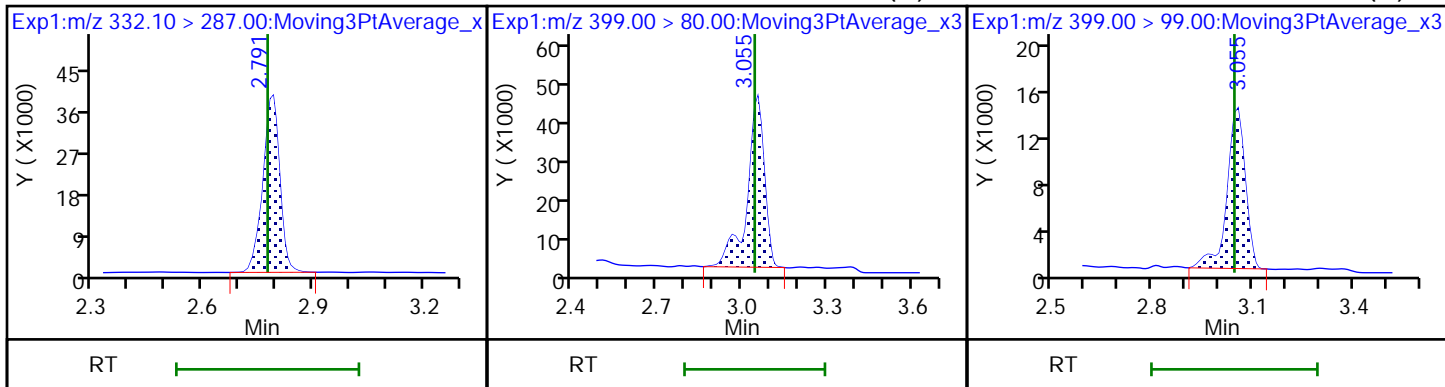
D 7 13C2 PFHxA



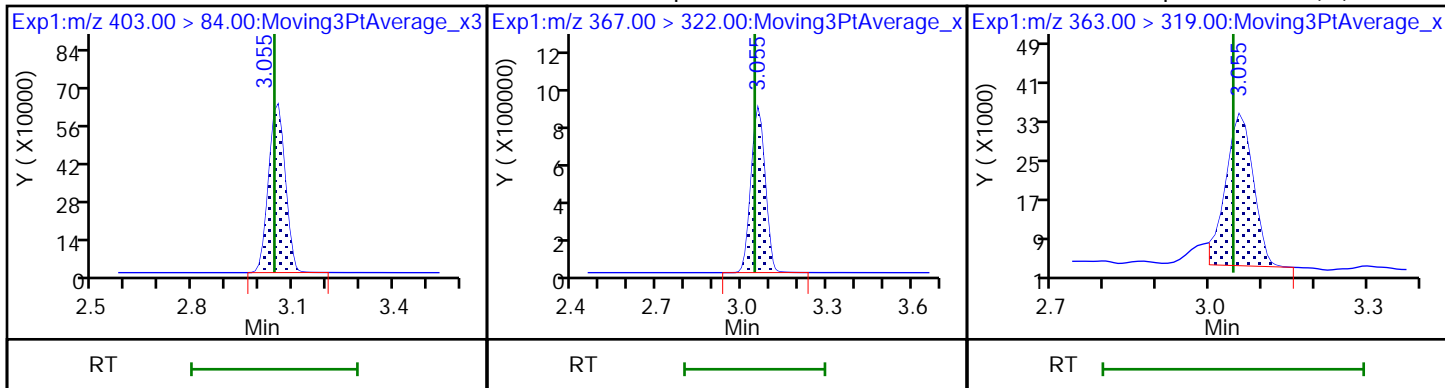
70 Perfluoropentanesulfonic acid (M) 70 Perfluoropentanesulfonic acid 67 Perfluoro(2-propoxypropanoic) acid (M)



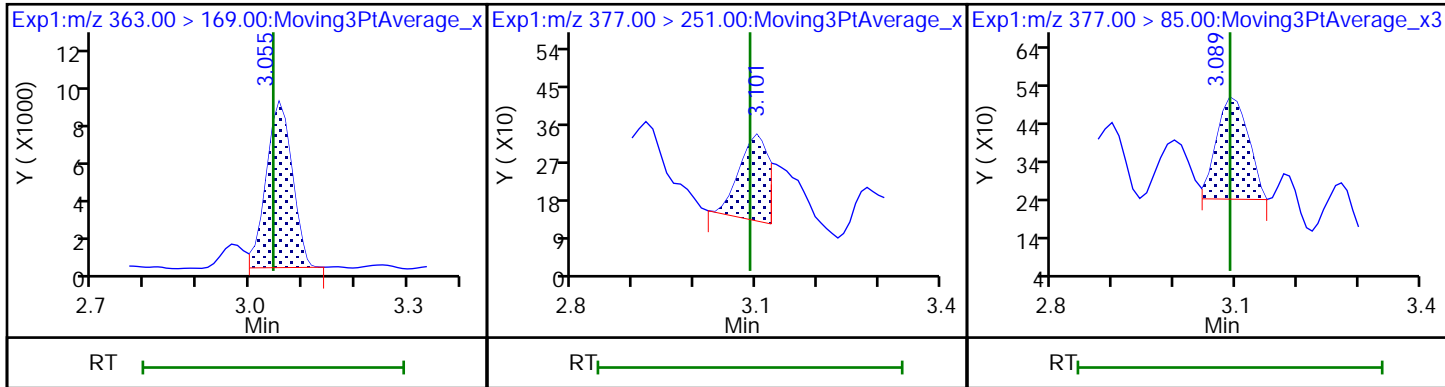
D 64 13C3 HFPO-DA 8 Perfluorohexanesulfonic acid (M) 8 Perfluorohexanesulfonic acid (M)



D 11 18O2 PFHxS D 9 13C4 PFHpA 10 Perfluoroheptanoic acid (M)



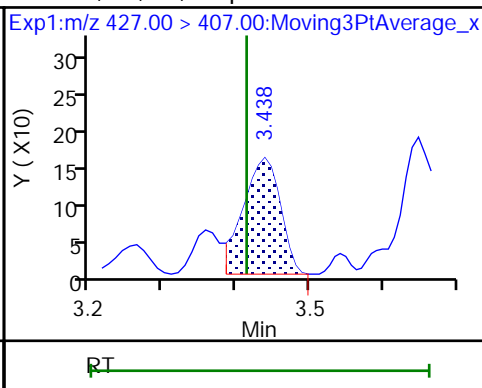
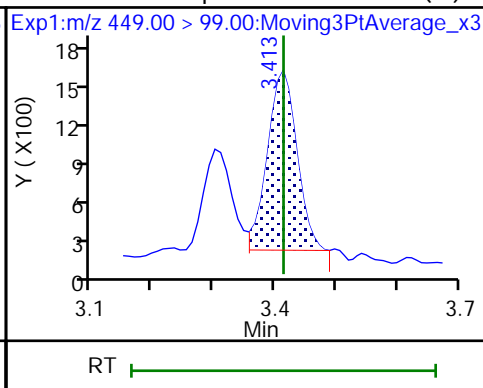
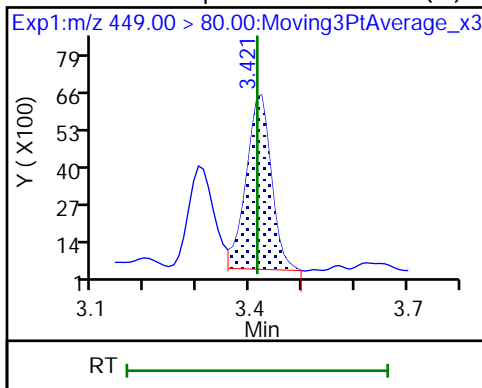
10 Perfluoroheptanoic acid 77 DONA (M) 77 DONA (M)



16 Perfluoroheptanesulfonic acid (M)

16 Perfluoroheptanesulfonic acid (M)

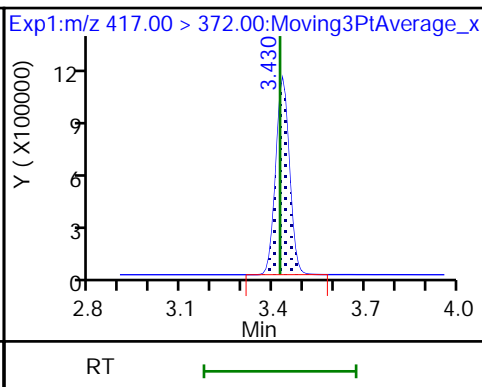
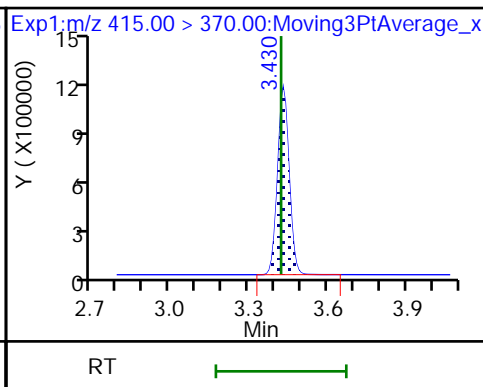
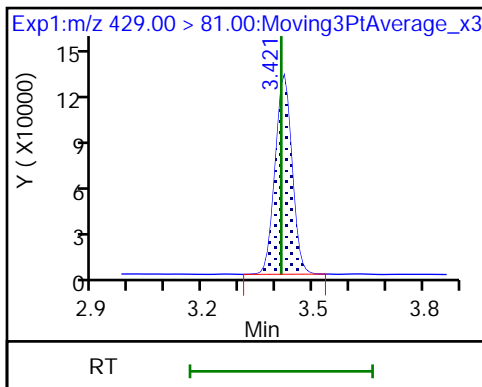
13 1H,1H,2H,2H-perfluorooctanesulfoni (M)



D 12 M2-6:2 FTS

* 62 13C2 PFOA

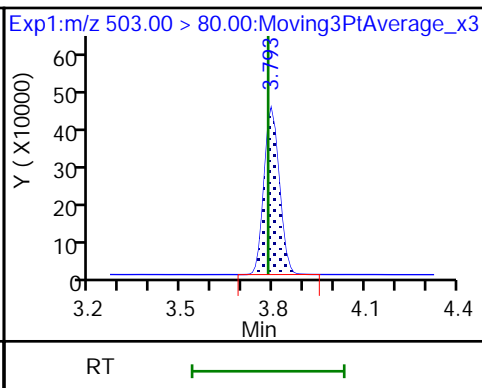
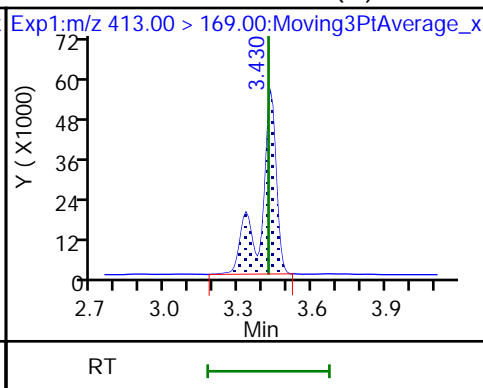
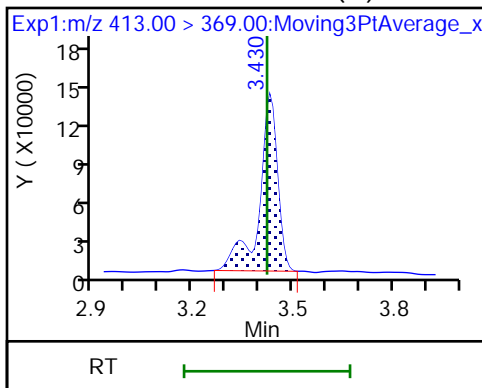
D 14 13C4 PFOA



15 Perfluorooctanoic acid (M)

15 Perfluorooctanoic acid (M)

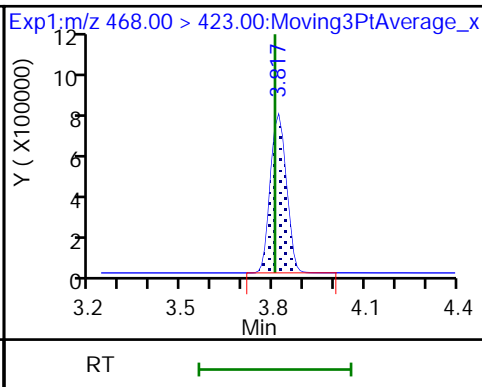
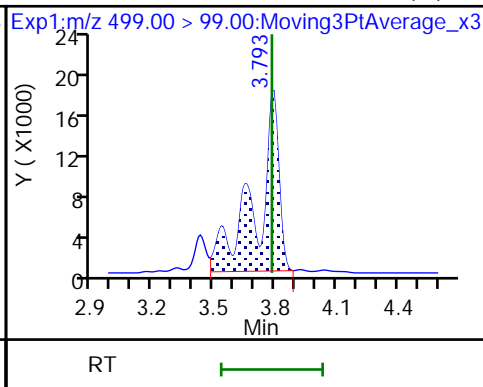
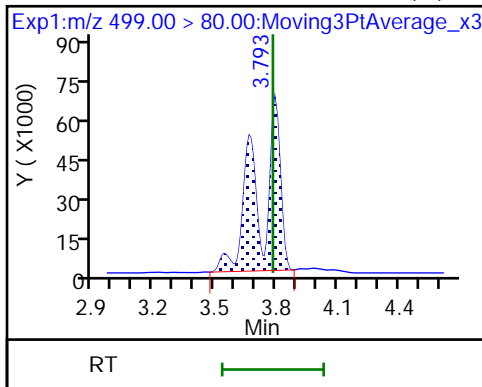
D 18 13C4 PFOS

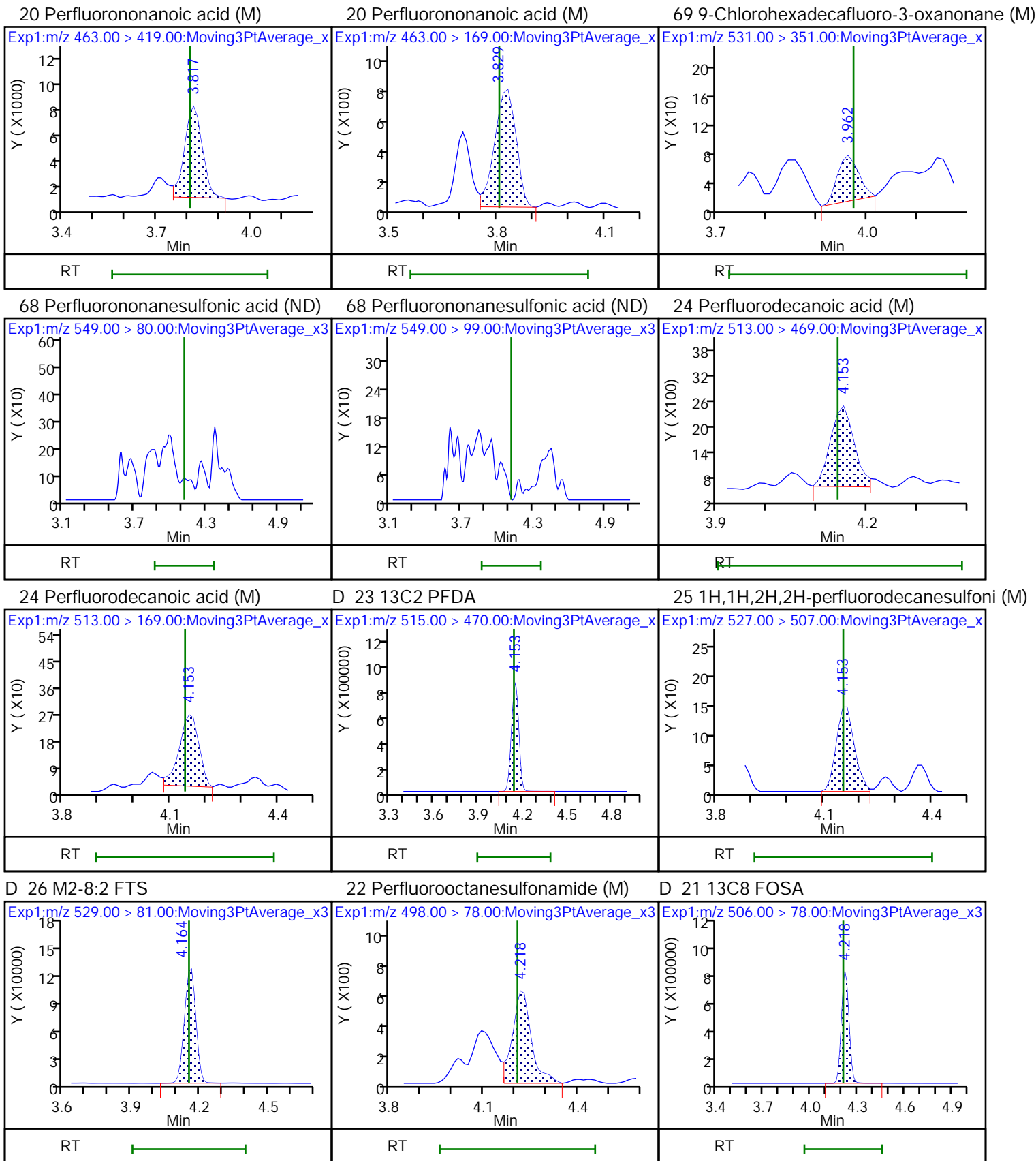


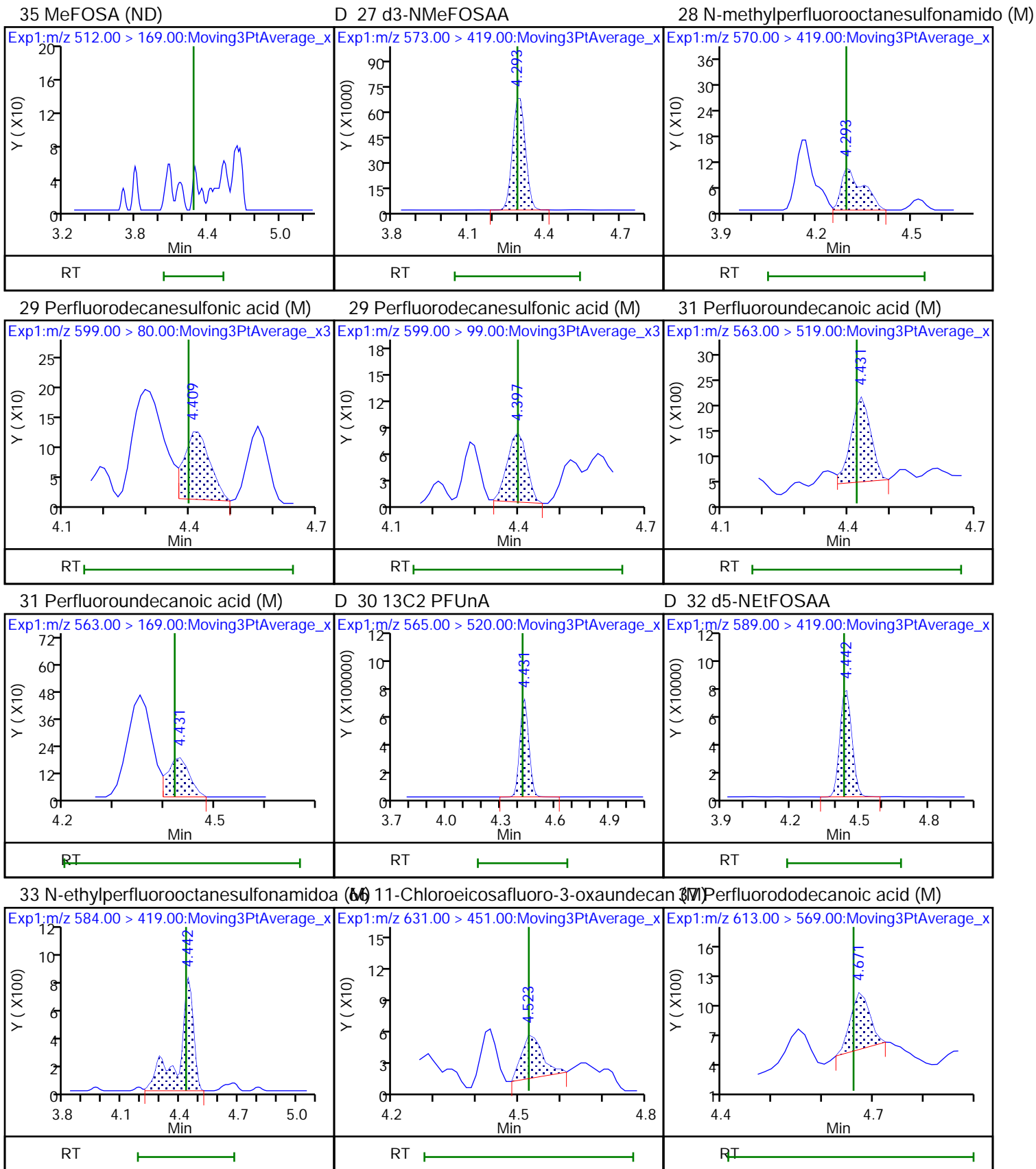
17 Perfluorooctanesulfonic acid (M)

17 Perfluorooctanesulfonic acid (M)

D 19 13C5 PFNA



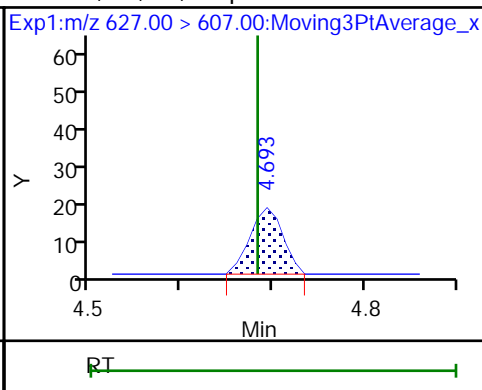
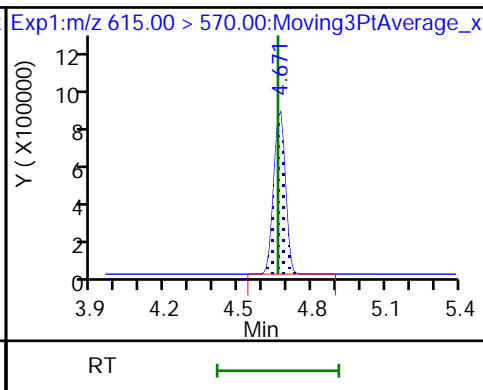
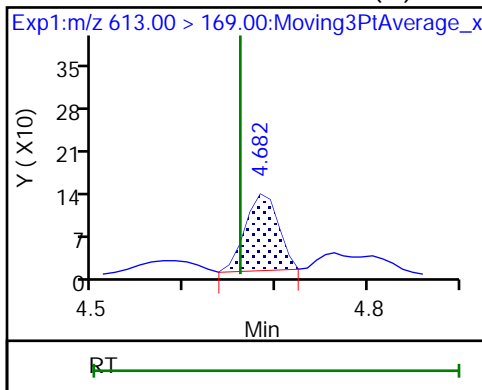




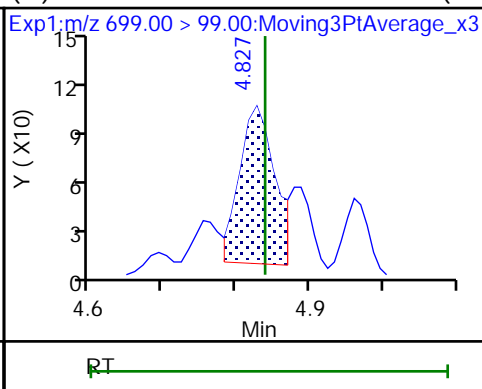
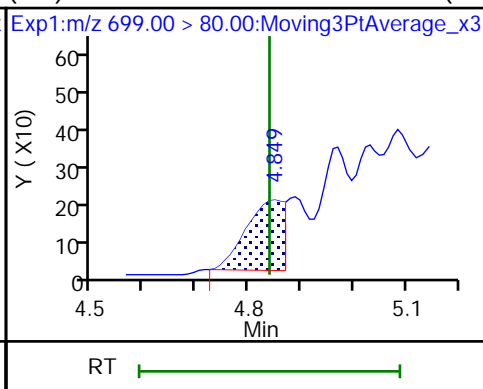
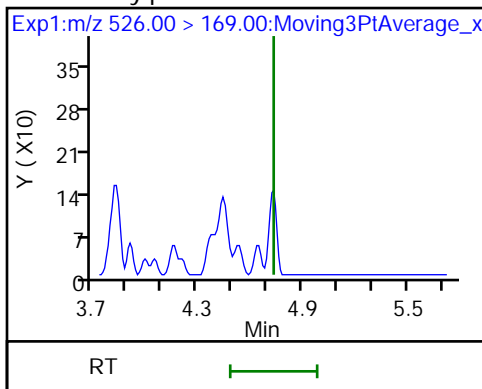
37 Perfluorododecanoic acid (M)

D 36 13C2 PFDaA

74 1H,1H,2H,2H-perfluorododecanesulfo (M)



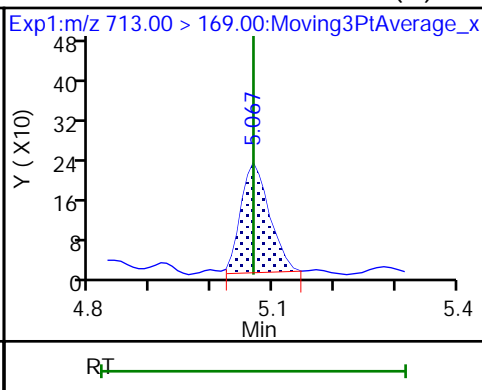
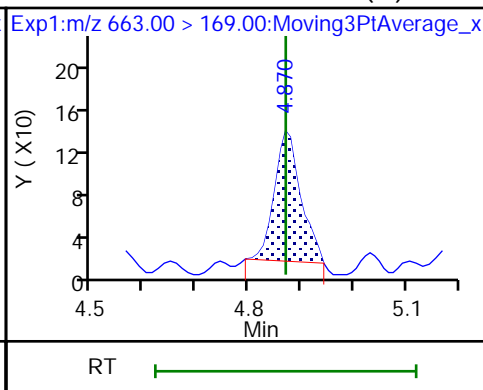
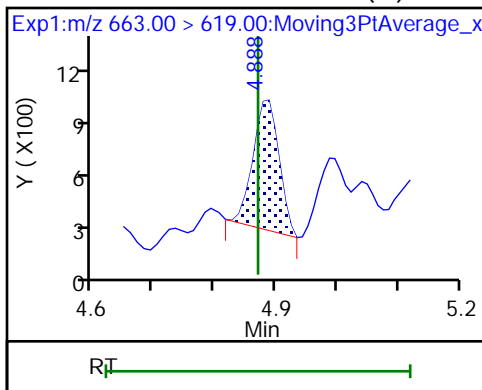
39 N-ethylperfluoro-1-octanesulfonami (M) Perfluorododecanesulfonic acid (PF) (M) Perfluorododecanesulfonic acid (PF) (M)



41 Perfluorotridecanoic acid (M)

41 Perfluorotridecanoic acid (M)

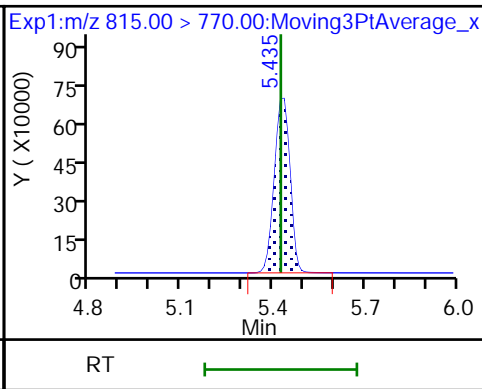
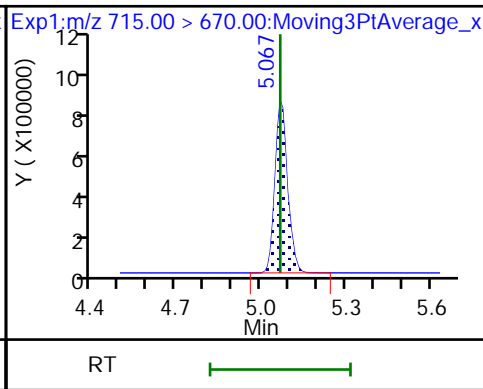
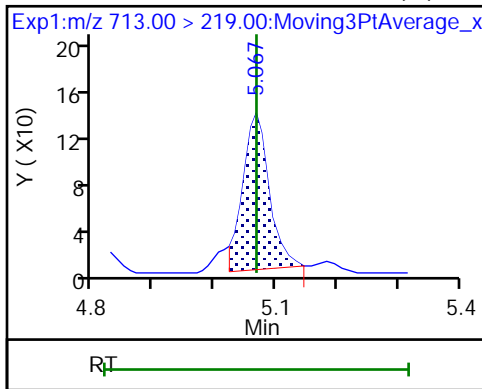
42 Perfluorotetradecanoic acid (M)



42 Perfluorotetradecanoic acid (M)

D 43 13C2 PFTeDA

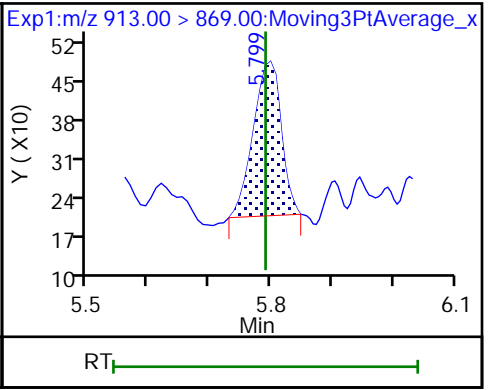
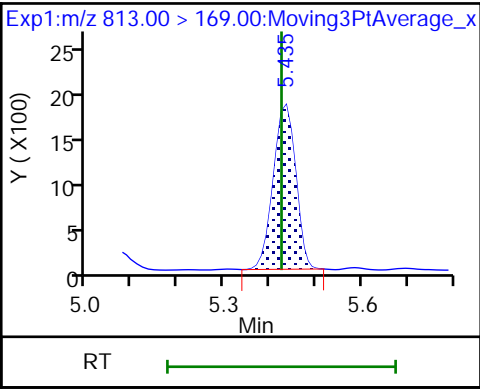
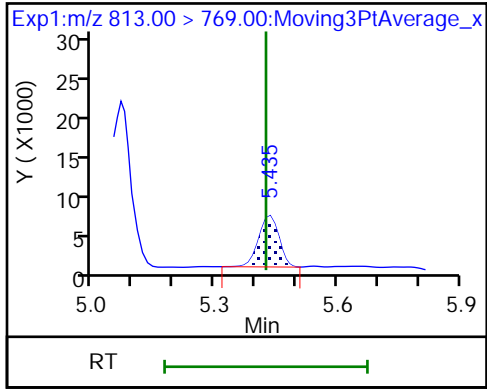
D 44 13C2 PFHxDA



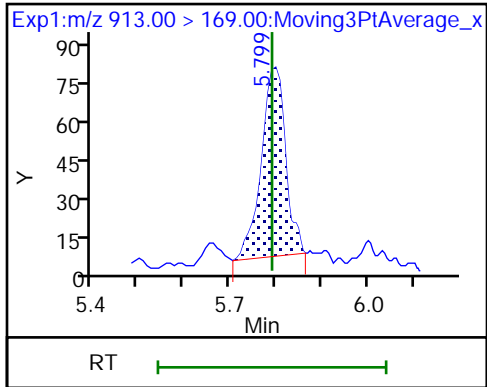
45 Perfluorohexadecanoic acid

45 Perfluorohexadecanoic acid

46 Perfluorooctadecanoic acid (M)



46 Perfluorooctadecanoic acid (M)



Eurofins TestAmerica, Burlington

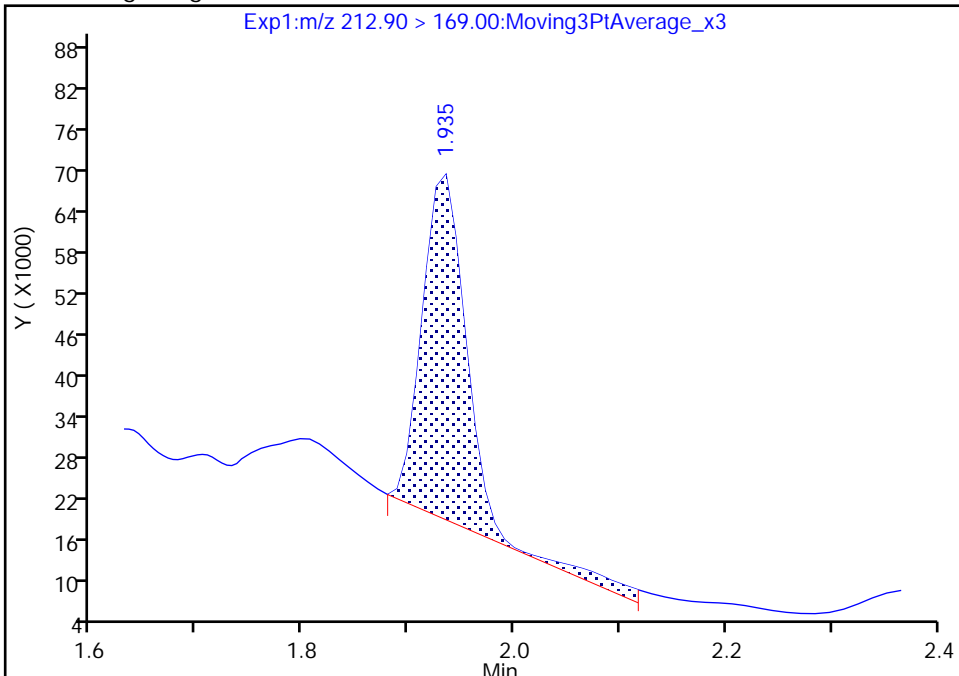
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Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

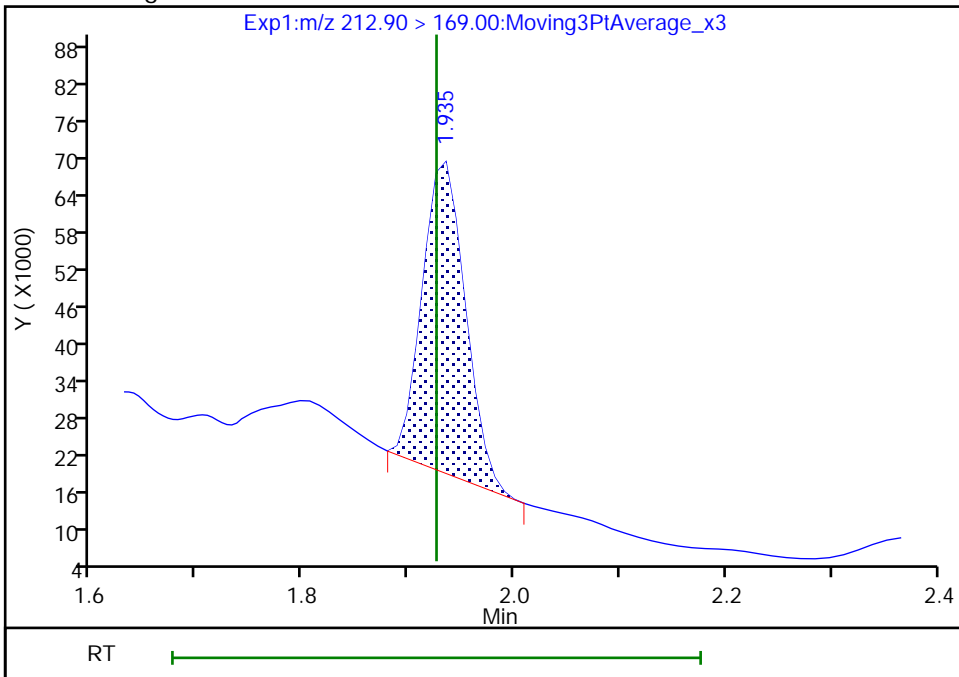
RT: 1.94
Area: 149826
Amount: 0.133225
Amount Units: ng/ml

Processing Integration Results



RT: 1.94
Area: 141283
Amount: 0.125629
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:14:16
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

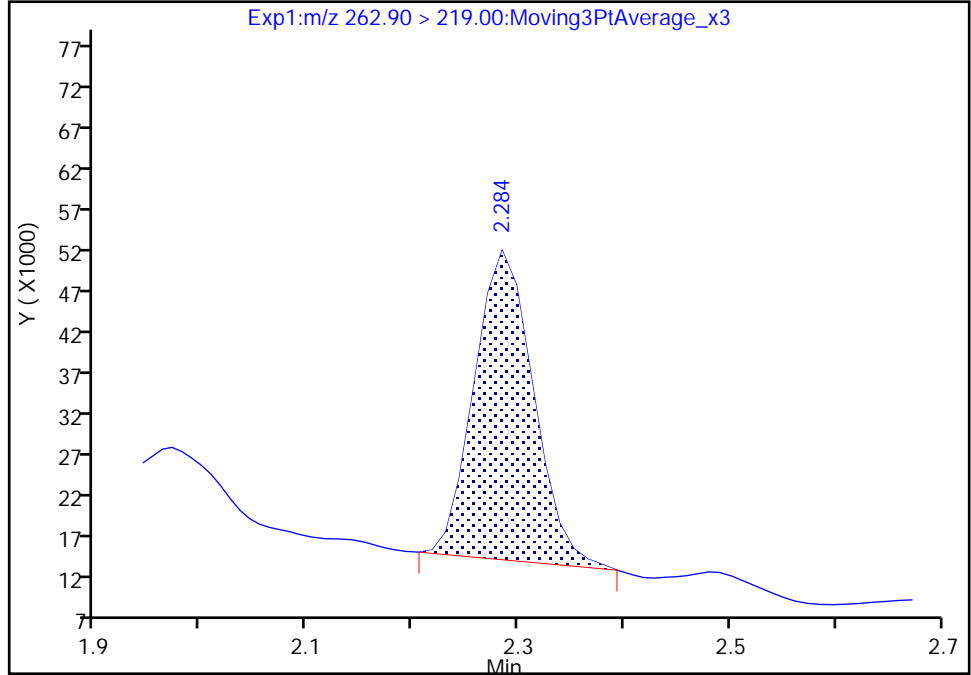
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d
Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 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

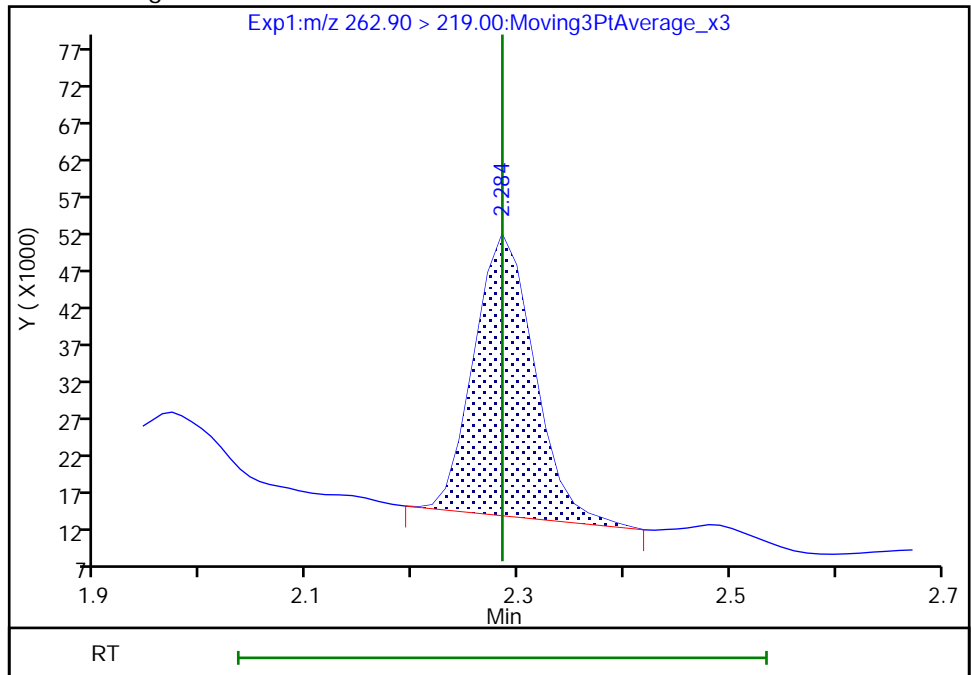
RT: 2.28
Area: 147719
Amount: 0.131294
Amount Units: ng/ml

Processing Integration Results



RT: 2.28
Area: 151704
Amount: 0.135162
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:14:25
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration
Page 217 of 599

Eurofins TestAmerica, Burlington

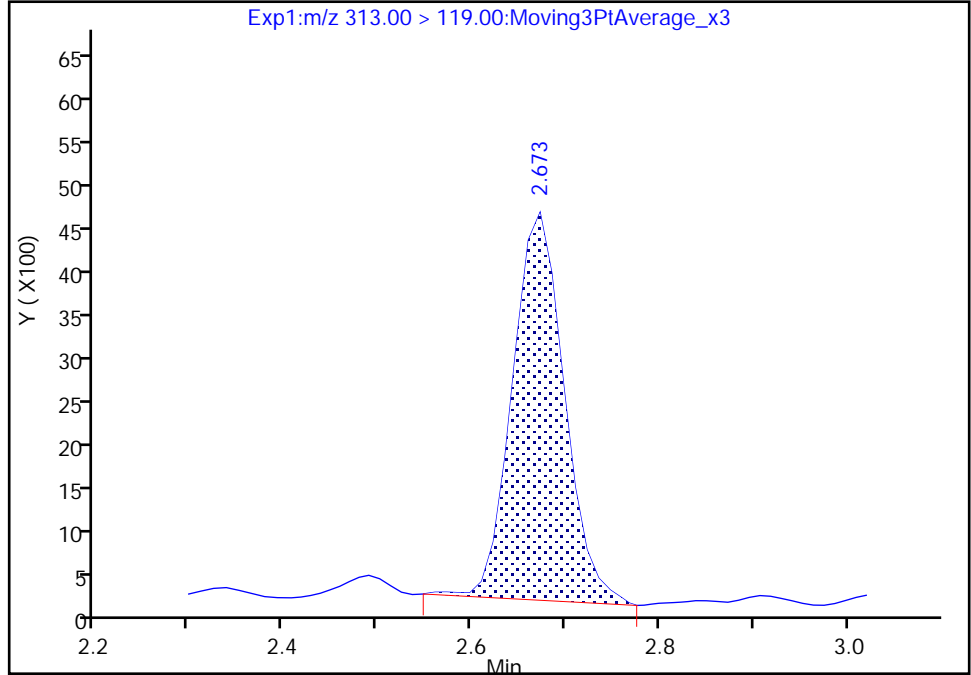
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Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

6 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 2

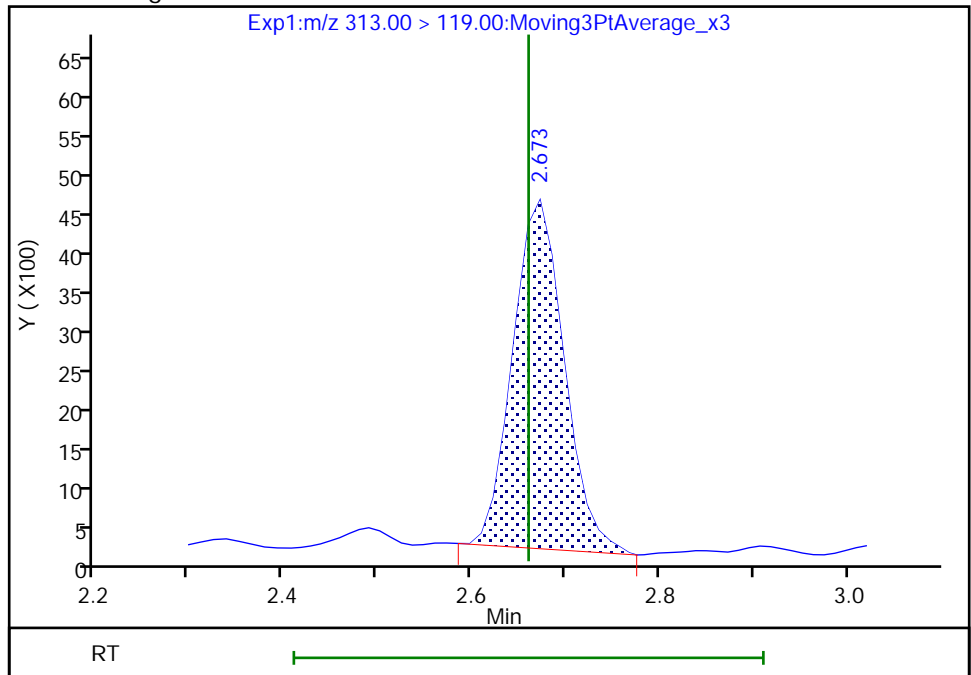
RT: 2.67
Area: 17162
Amount: 0.172667
Amount Units: ng/ml

Processing Integration Results



RT: 2.67
Area: 16893
Amount: 0.171048
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:14:56
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

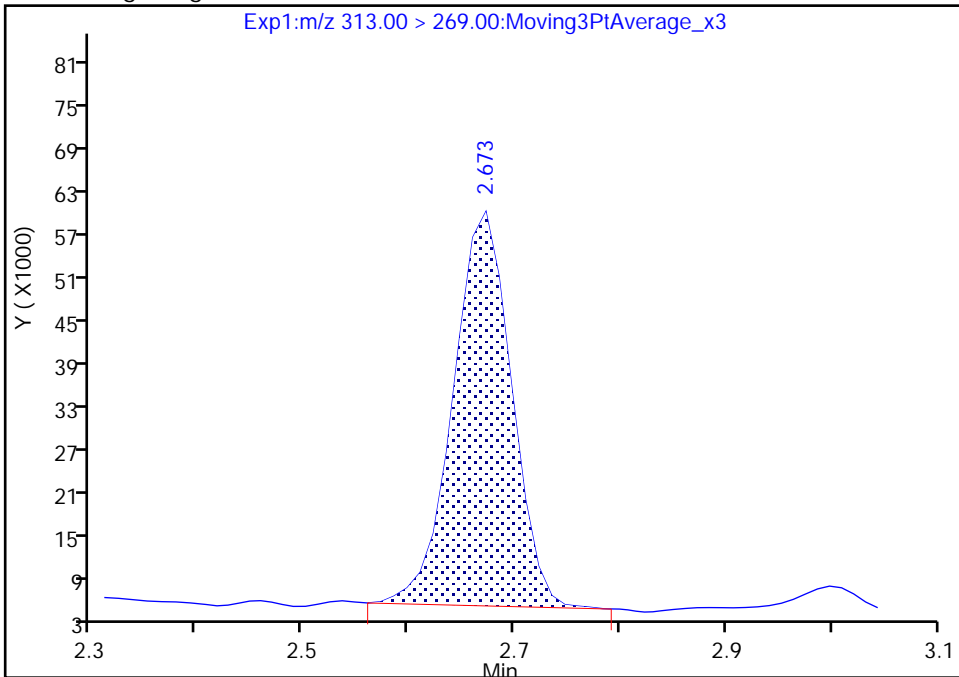
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Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

6 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

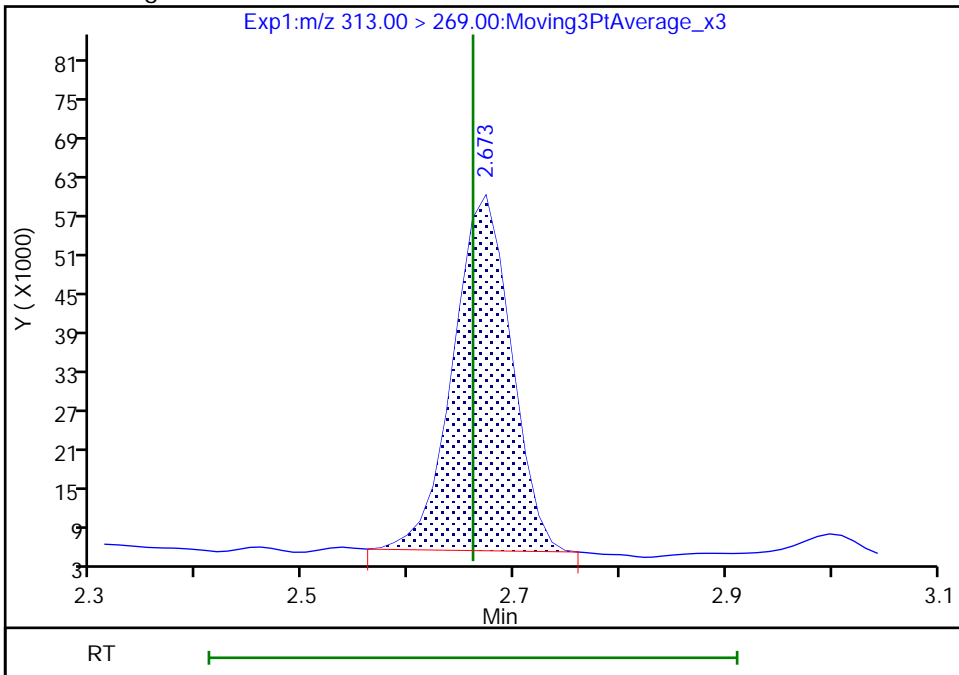
RT: 2.67
Area: 208566
Amount: 0.172667
Amount Units: ng/ml

Processing Integration Results



RT: 2.67
Area: 206610
Amount: 0.171048
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:15:01

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

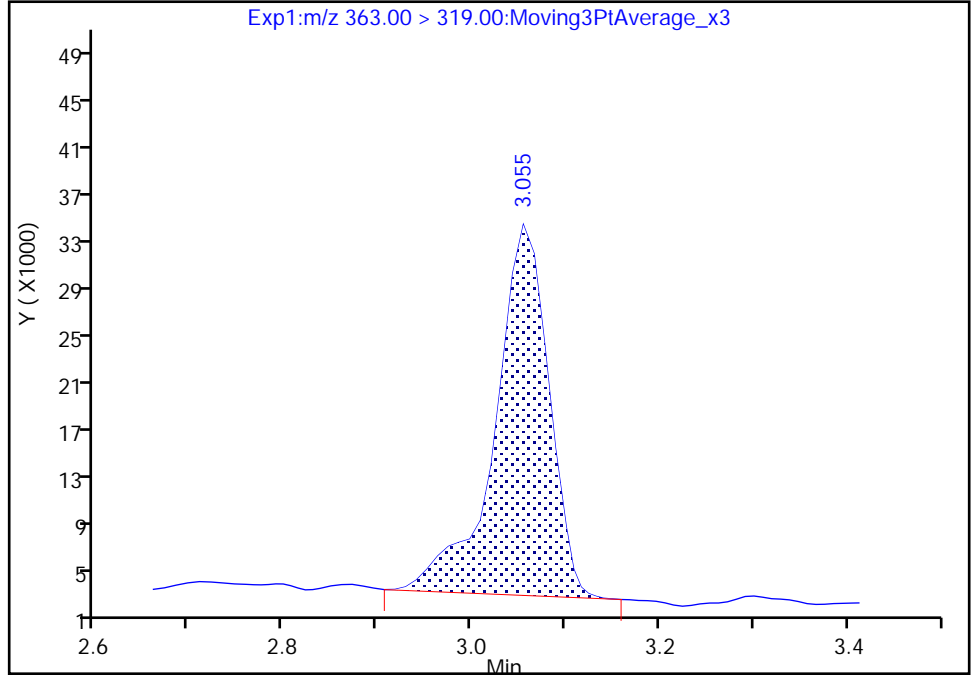
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d
Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 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

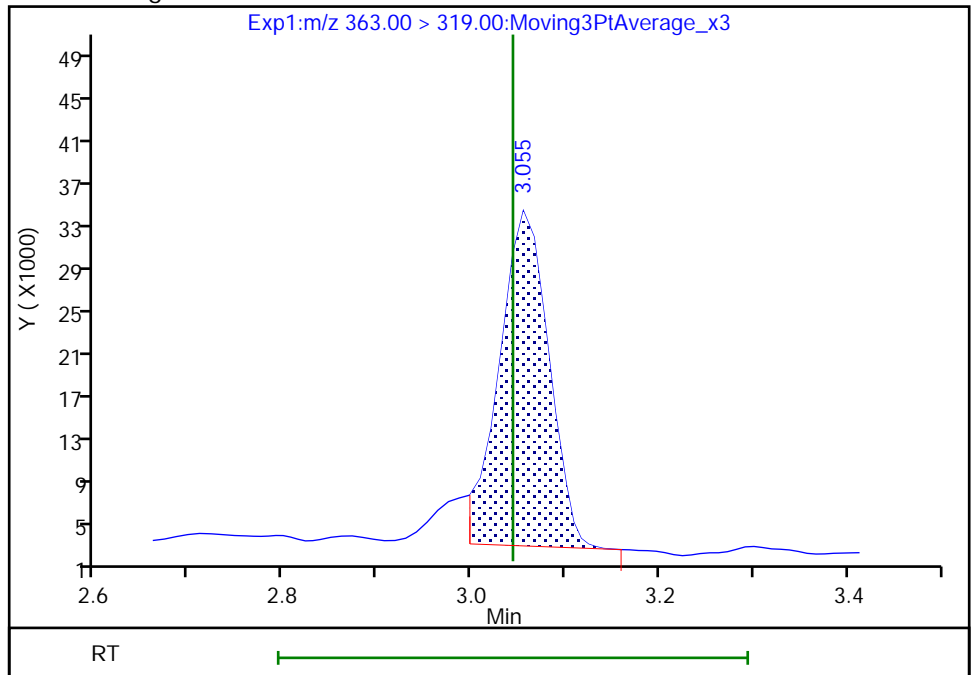
RT: 3.06
Area: 124359
Amount: 0.115781
Amount Units: ng/ml

Processing Integration Results



RT: 3.06
Area: 113112
Amount: 0.105310
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:17:21
Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

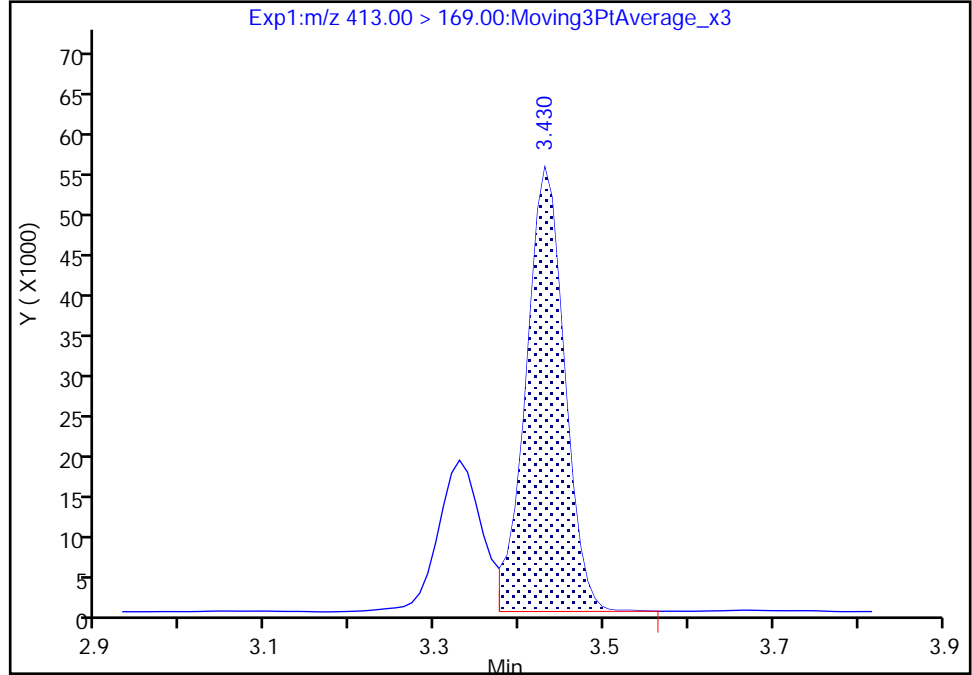
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d
Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 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: 2

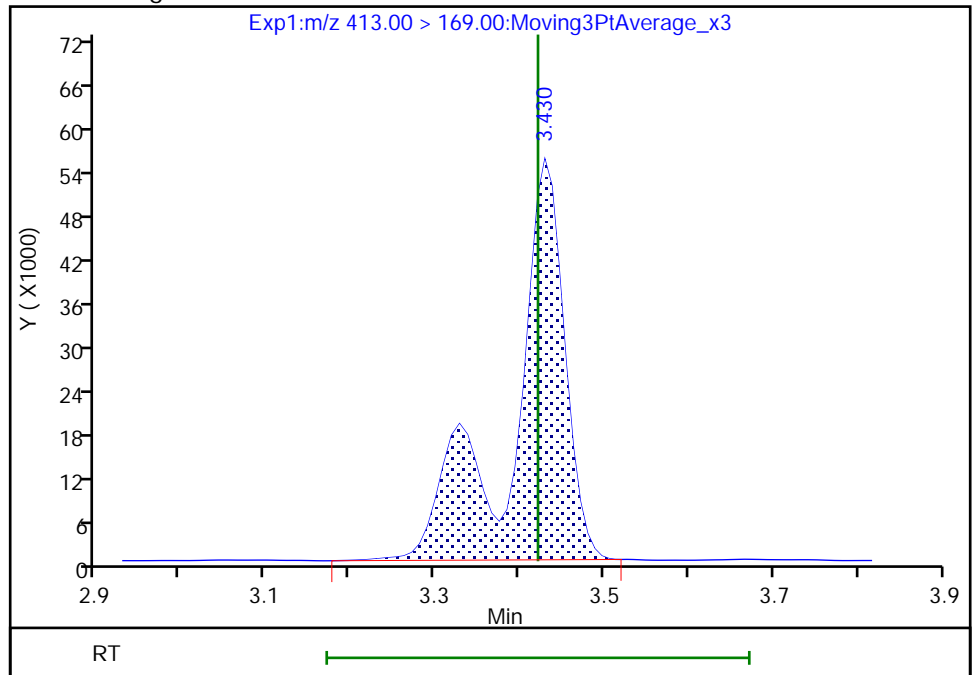
RT: 3.43
Area: 173775
Amount: 0.412196
Amount Units: ng/ml

Processing Integration Results



RT: 3.43
Area: 239239
Amount: 0.392007
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:19:15
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

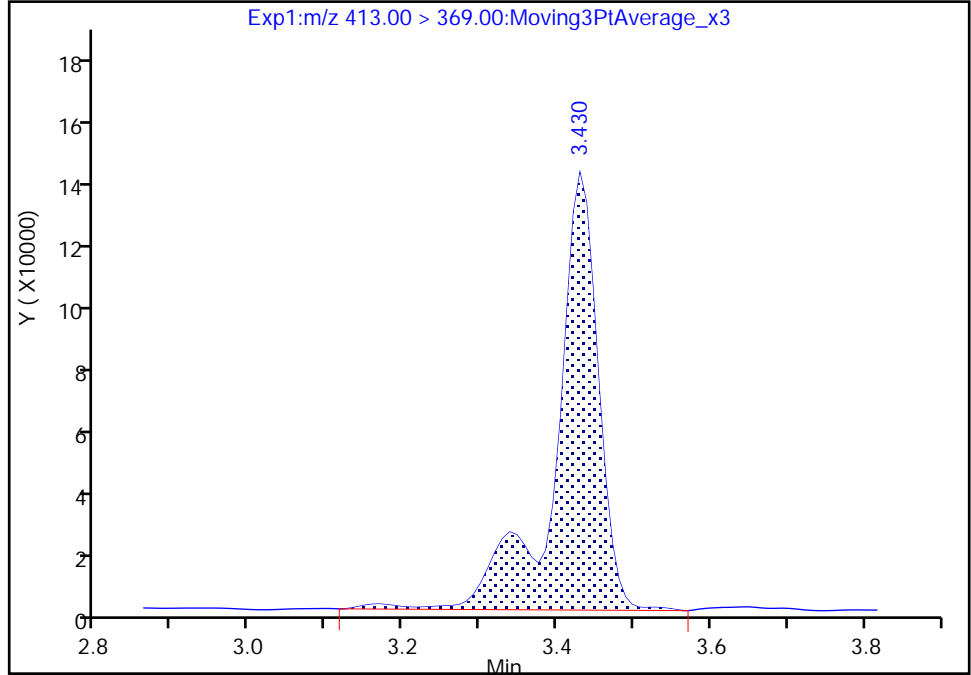
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Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

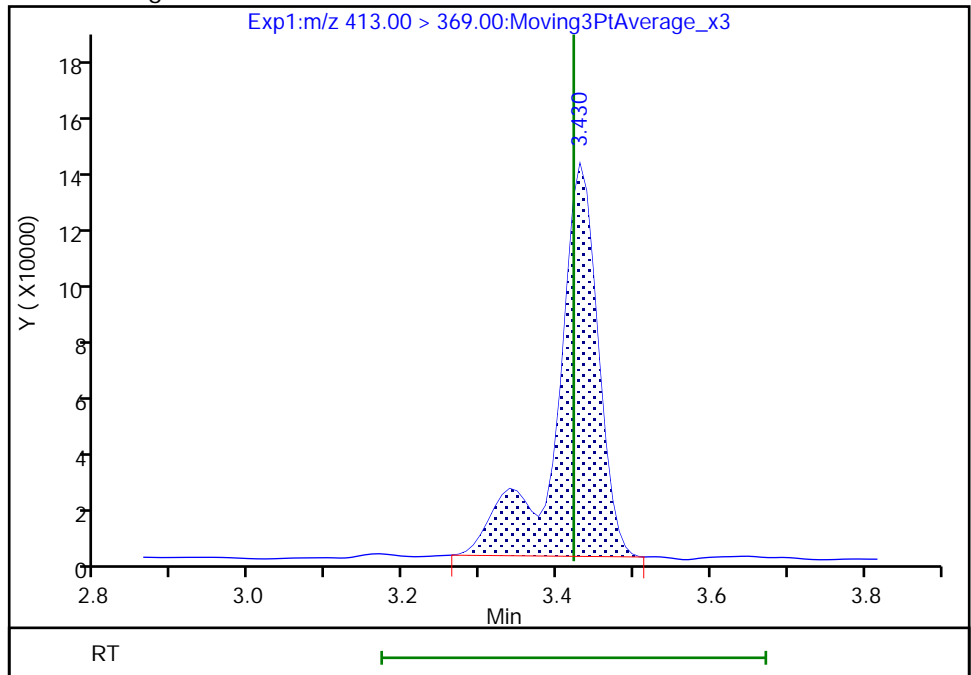
RT: 3.43
Area: 546940
Amount: 0.412196
Amount Units: ng/ml

Processing Integration Results



RT: 3.43
Area: 521507
Amount: 0.392007
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:19:37

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

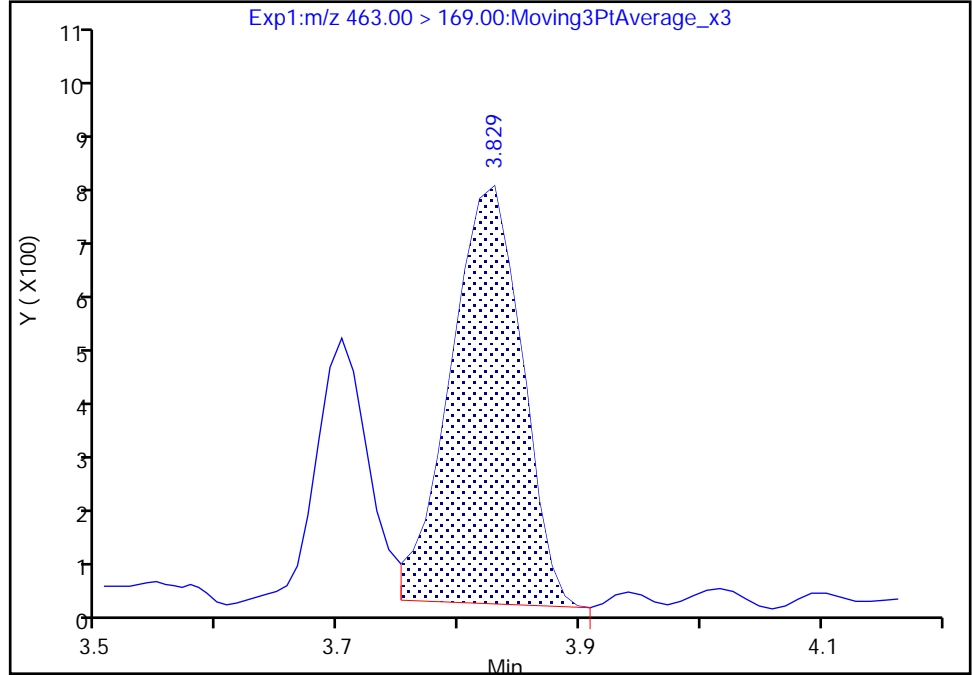
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d
Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
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Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 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

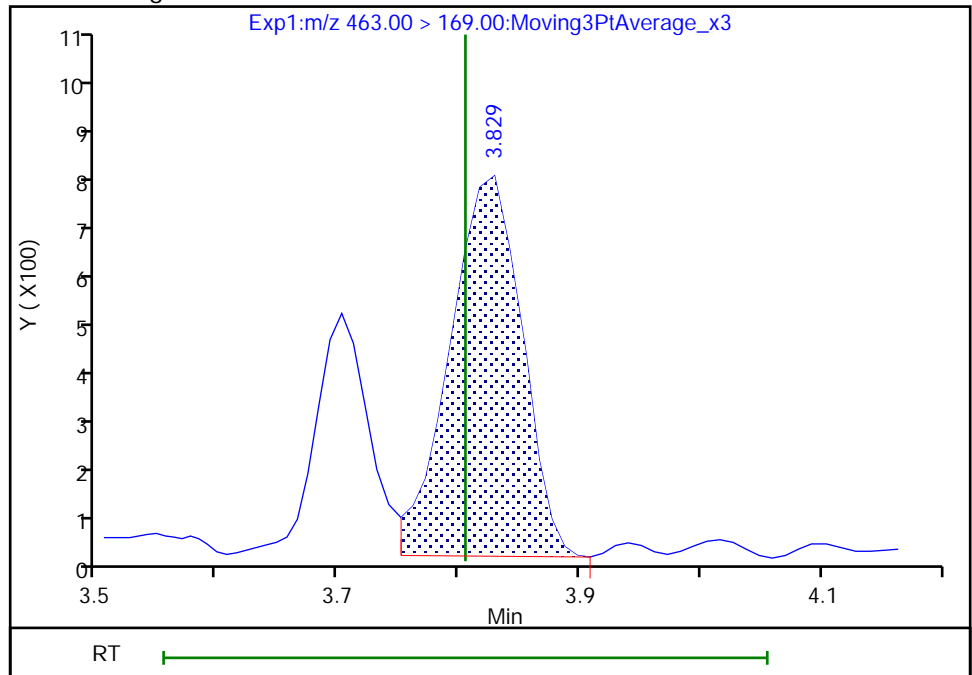
RT: 3.83
Area: 2949
Amount: 0.025496
Amount Units: ng/ml

Processing Integration Results



RT: 3.83
Area: 2996
Amount: 0.025623
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:20:54
Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

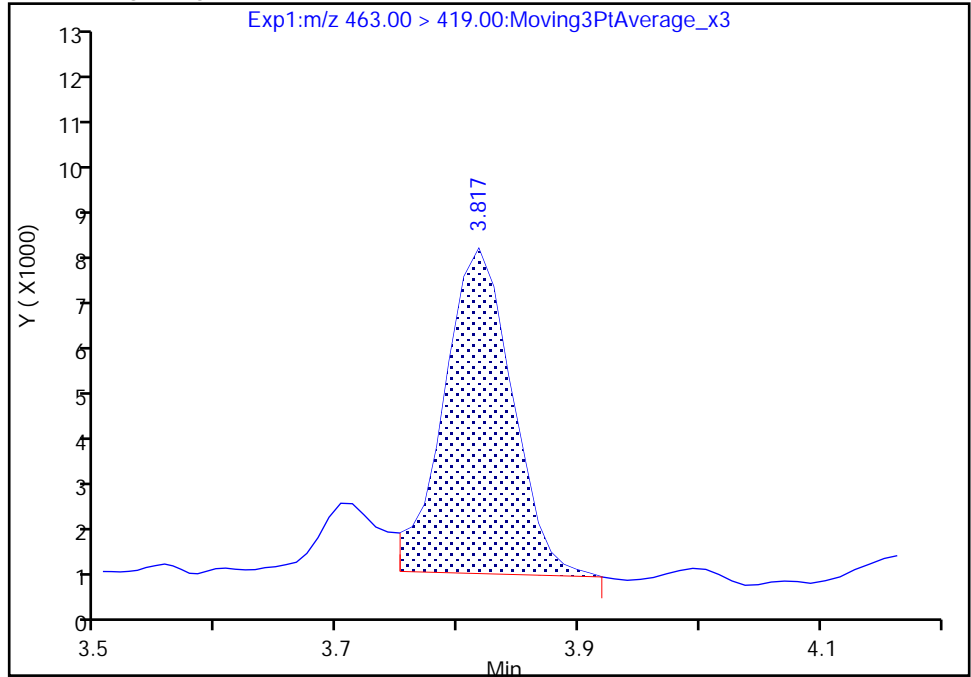
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d
Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 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

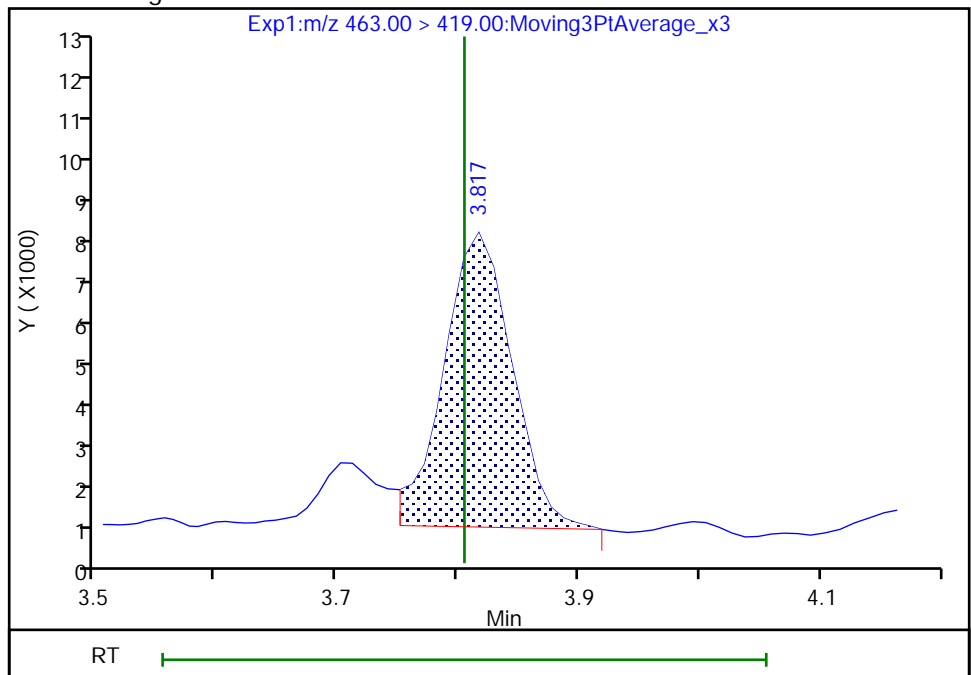
RT: 3.82
Area: 27106
Amount: 0.025496
Amount Units: ng/ml

Processing Integration Results



RT: 3.82
Area: 27241
Amount: 0.025623
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:21:23

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

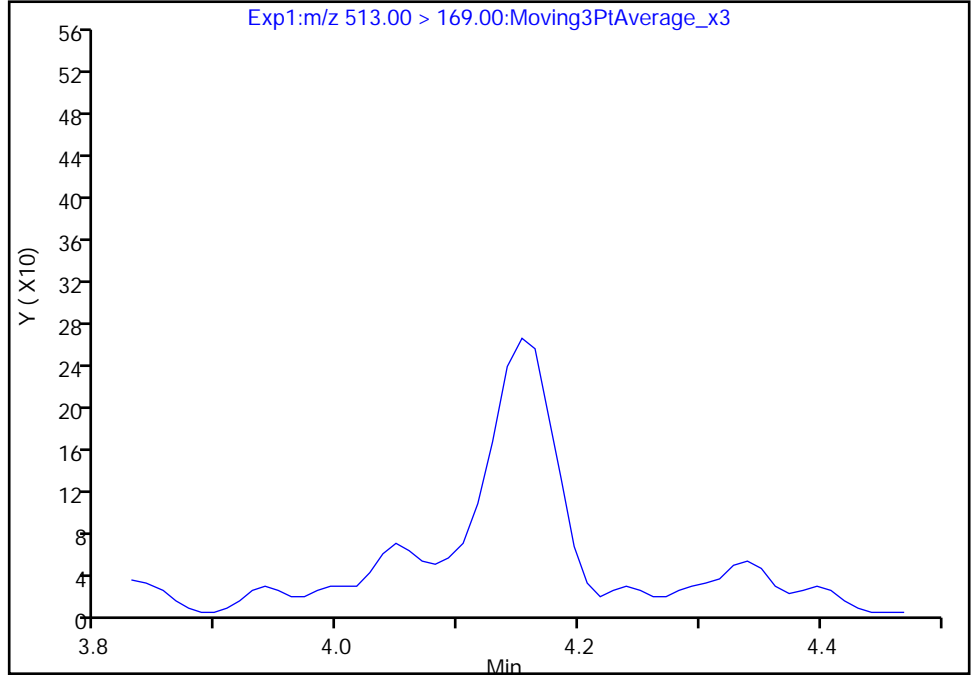
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d
Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 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

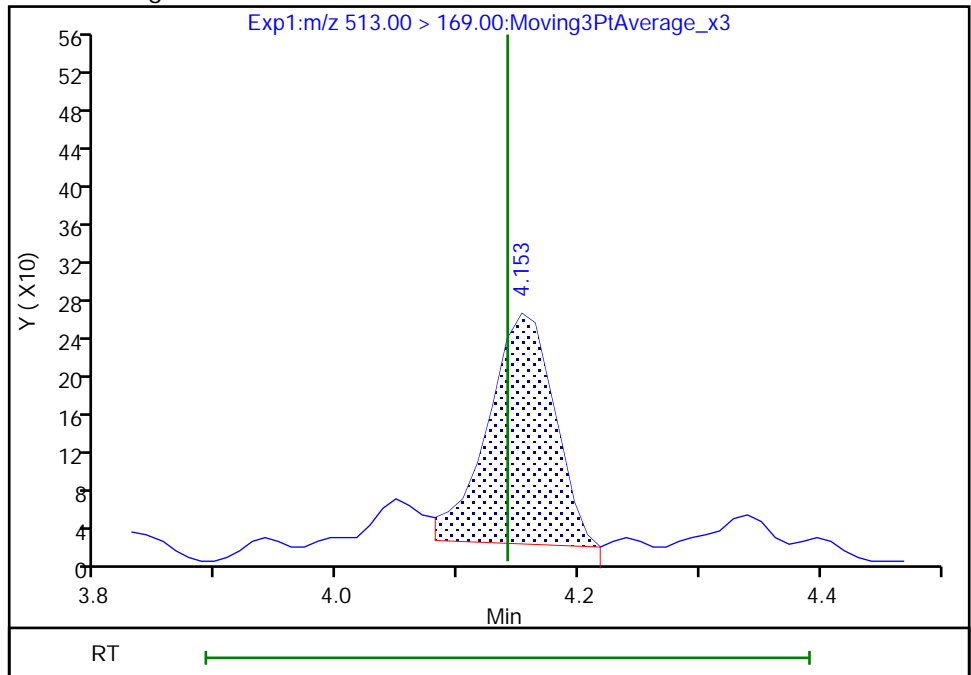
Not Detected
Expected RT: 4.14

Processing Integration Results



Manual Integration Results

RT: 4.15
Area: 928
Amount: 0.006117
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:22:26
Audit Action: Manually Integrated

Audit Reason: Split Peak
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Eurofins TestAmerica, Burlington

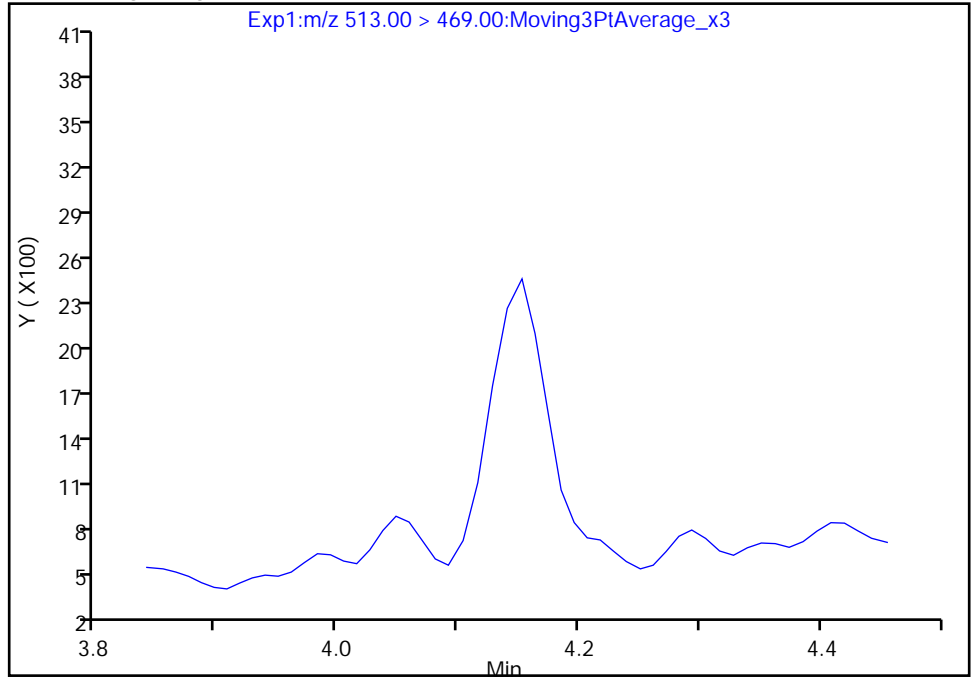
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d
Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 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

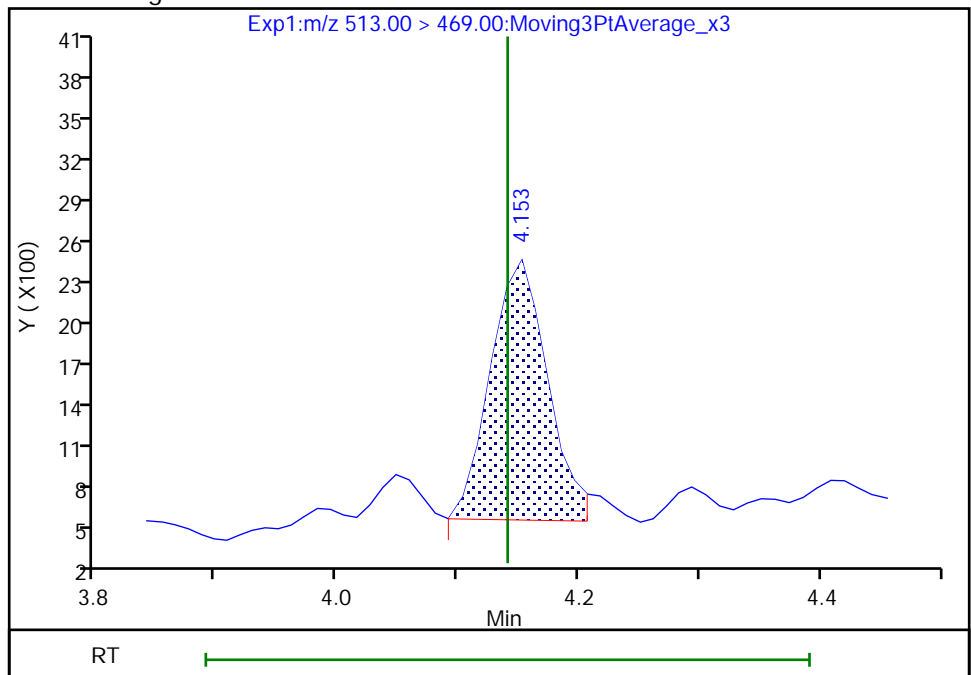
Not Detected
Expected RT: 4.14

Processing Integration Results



Manual Integration Results

RT: 4.15
Area: 6136
Amount: 0.006117
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:22:30

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

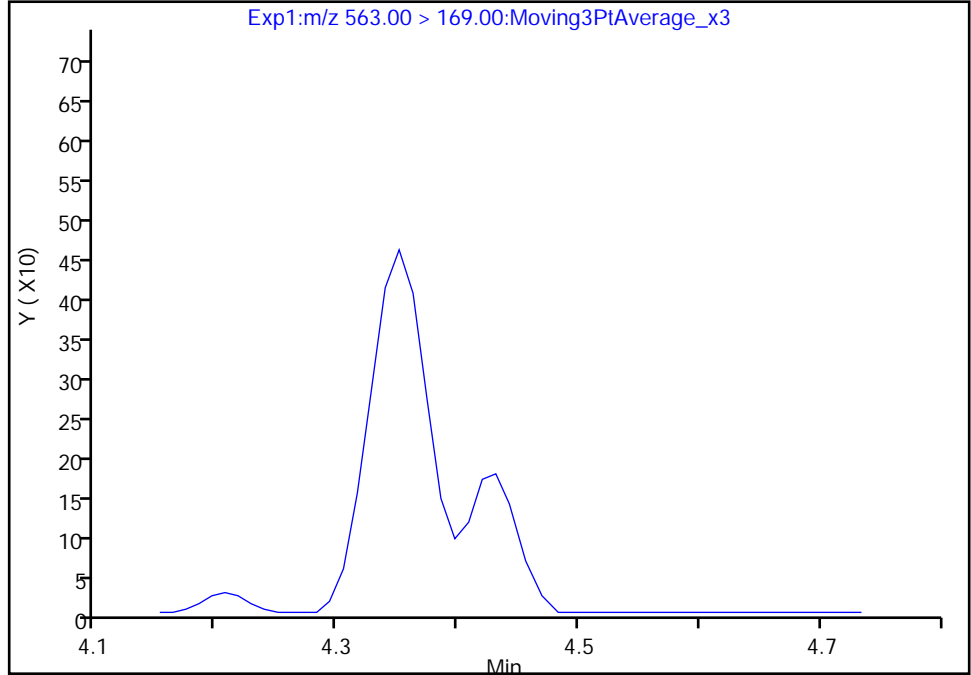
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d
Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 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

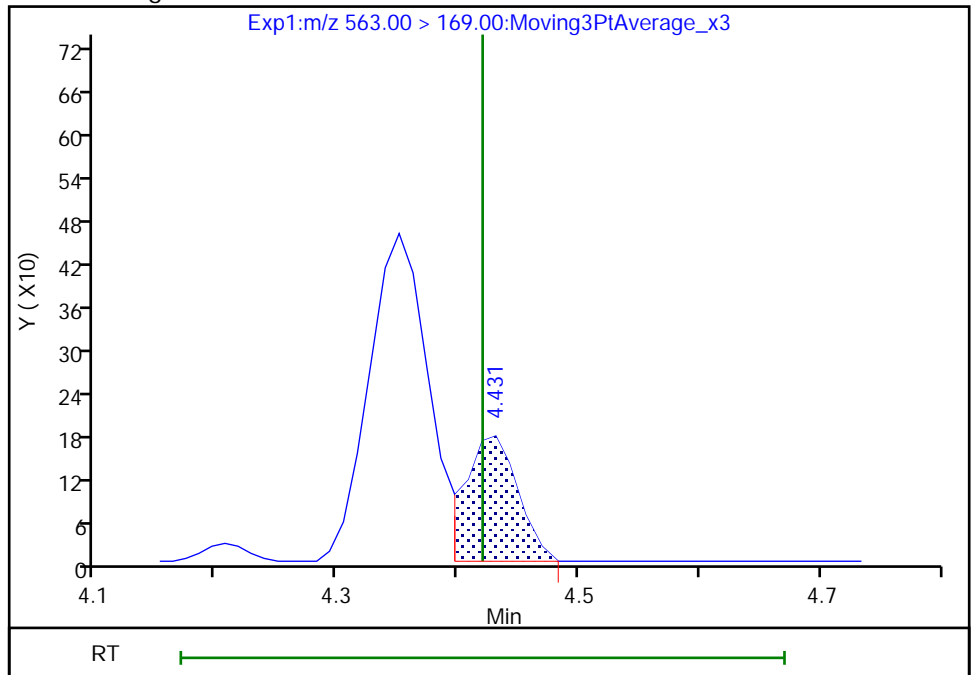
Not Detected
Expected RT: 4.42

Processing Integration Results



Manual Integration Results

RT: 4.43
Area: 512
Amount: 0.006791
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:25:46
Audit Action: Manually Integrated

Audit Reason: Split Peak
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Eurofins TestAmerica, Burlington

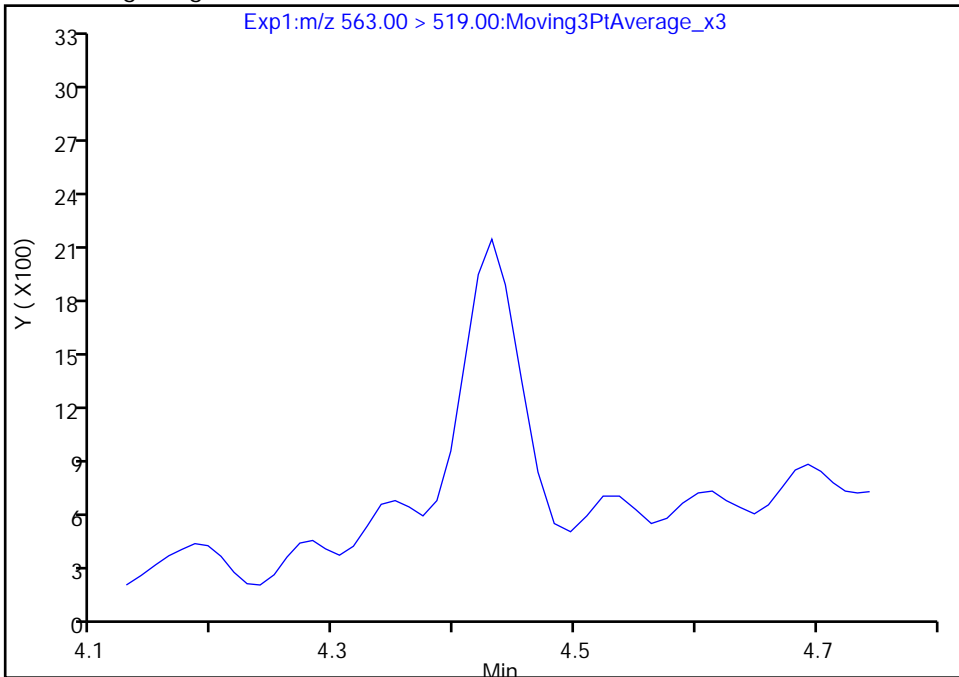
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d
Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 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: 1

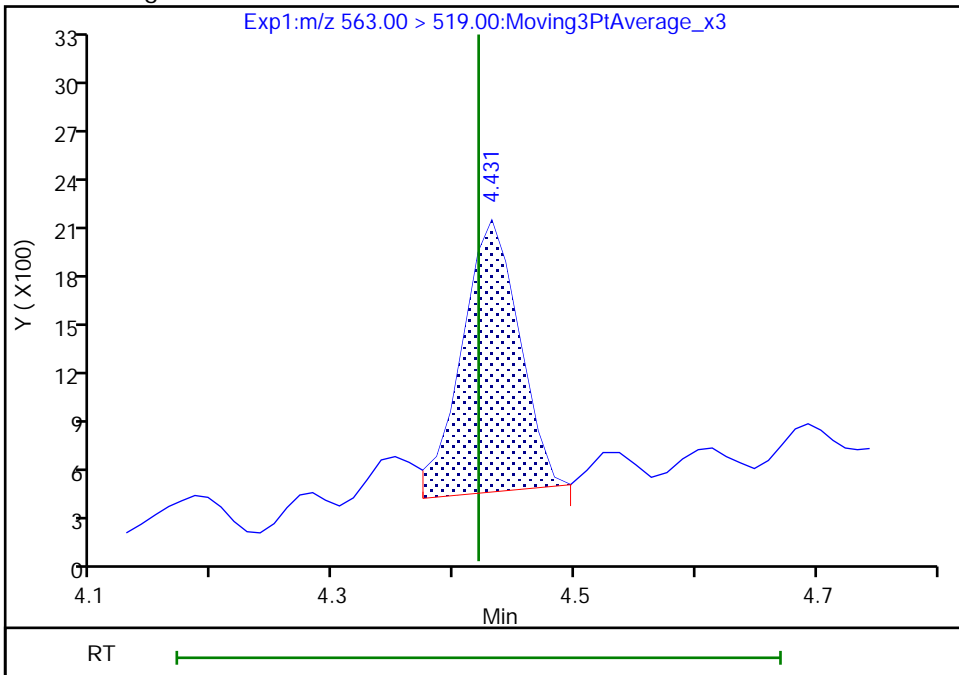
Not Detected
Expected RT: 4.42

Processing Integration Results



Manual Integration Results

RT: 4.43
Area: 5282
Amount: 0.006791
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:25:48

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

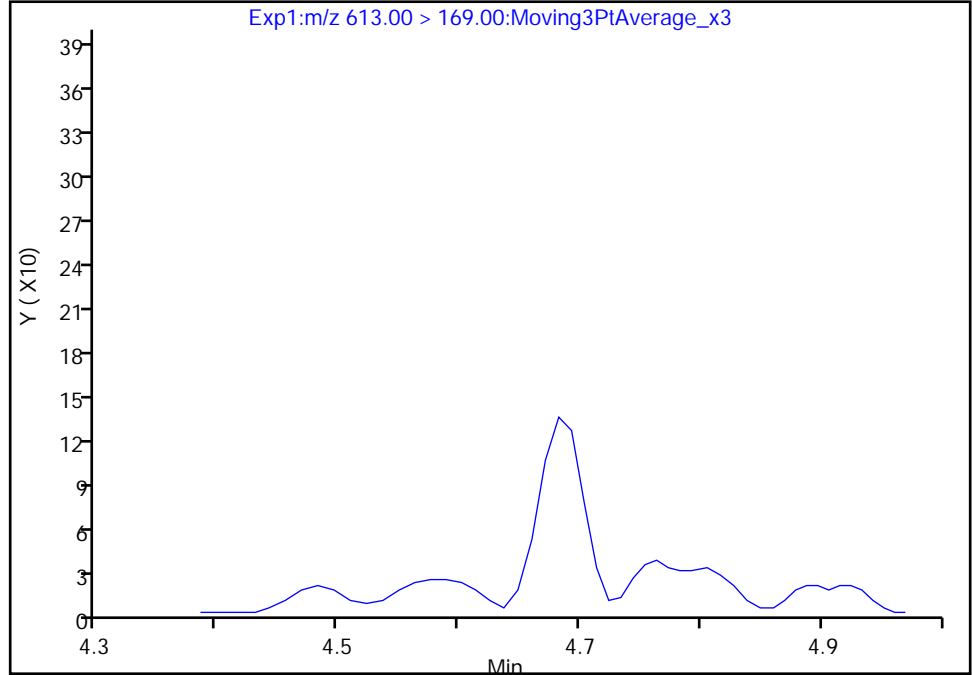
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d
Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 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

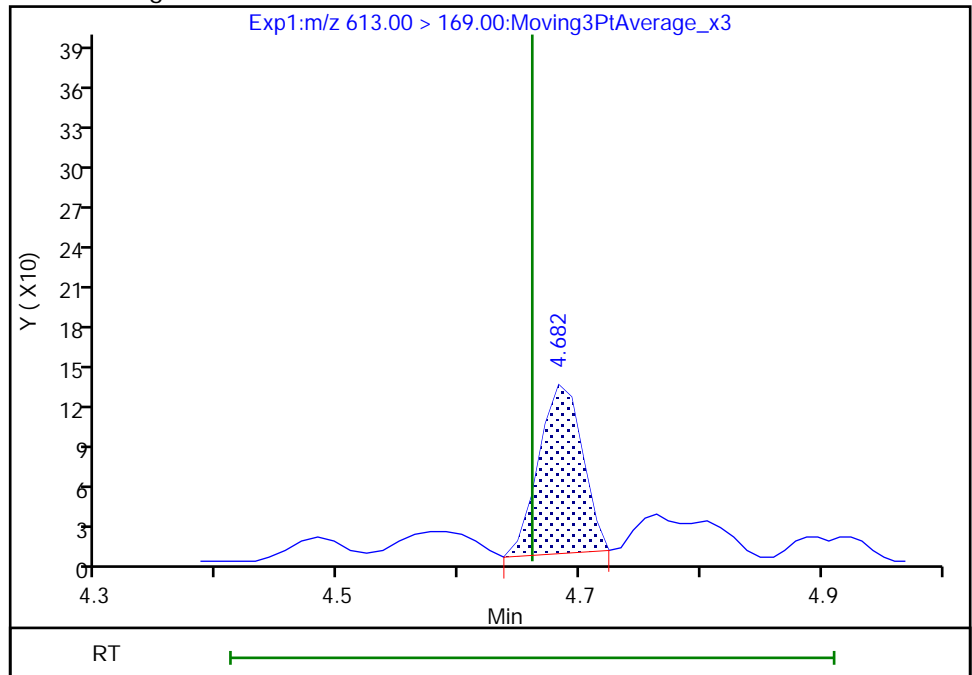
Not Detected
Expected RT: 4.66

Processing Integration Results



RT: 4.68
Area: 313
Amount: 0.001447
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:27:20
Audit Action: Manually Integrated

Audit Reason: Assign Peak
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Eurofins TestAmerica, Burlington

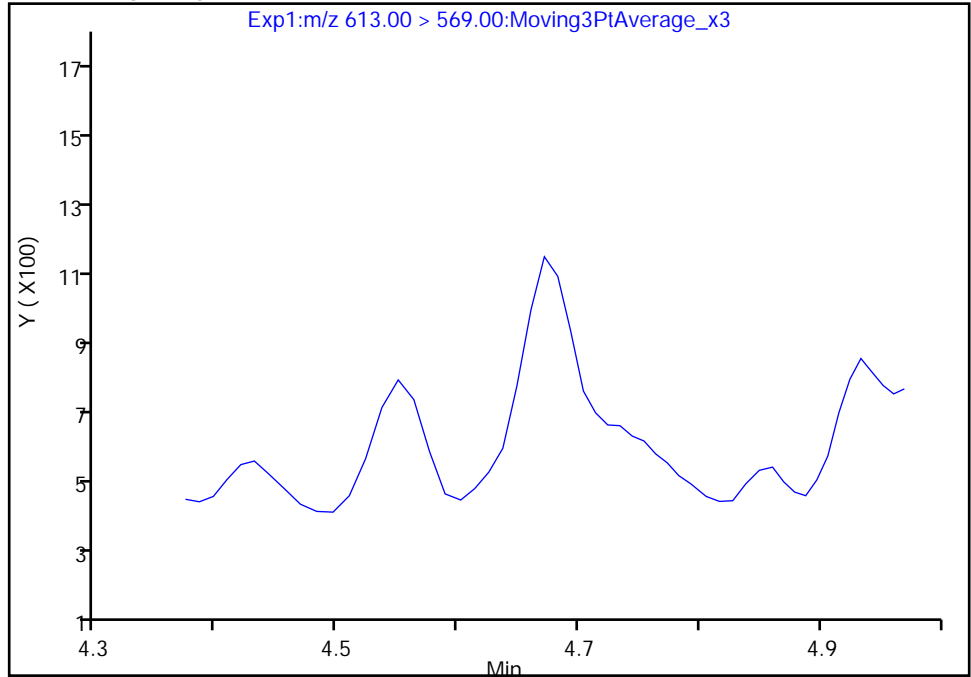
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d
Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 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

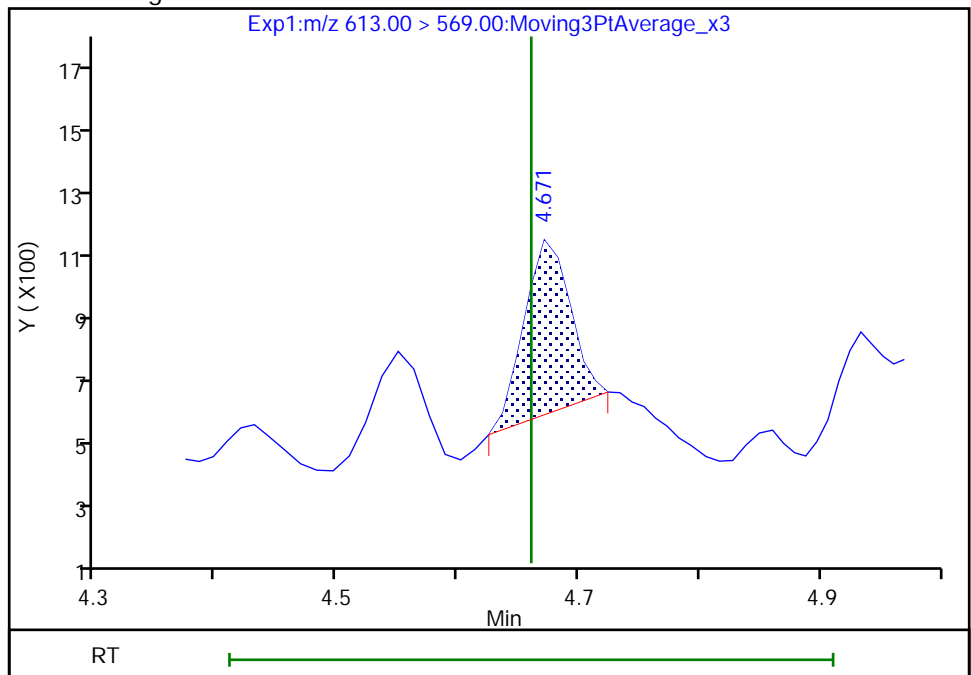
Not Detected
Expected RT: 4.66

Processing Integration Results



Manual Integration Results

RT: 4.67
Area: 1427
Amount: 0.001447
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:27:26

Audit Action: Manually Integrated

Audit Reason: Assign Peak

Euofins TestAmerica, Burlington

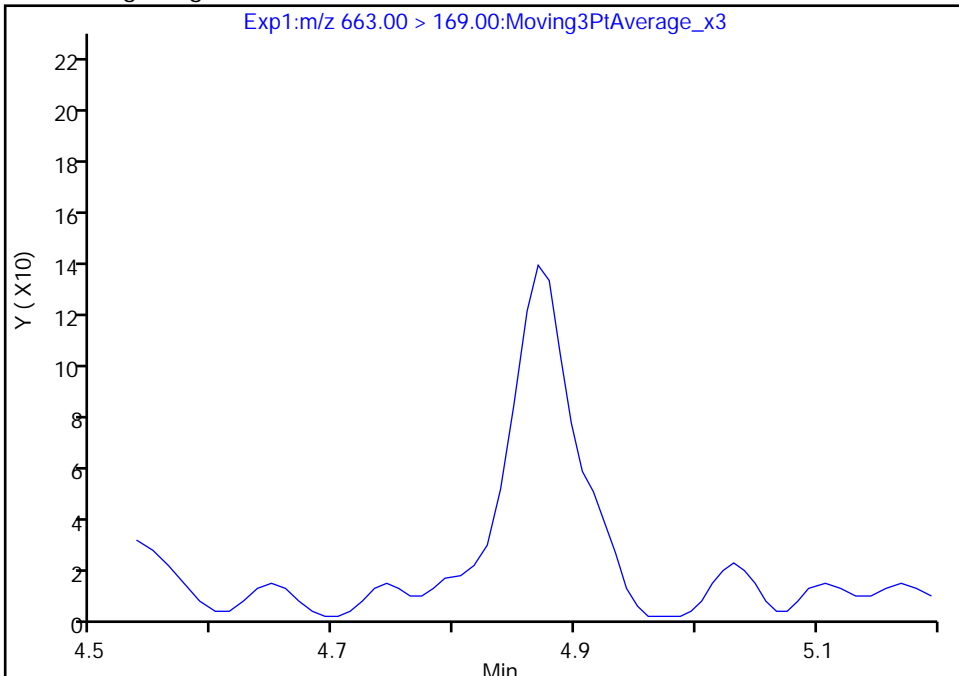
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d
Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 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

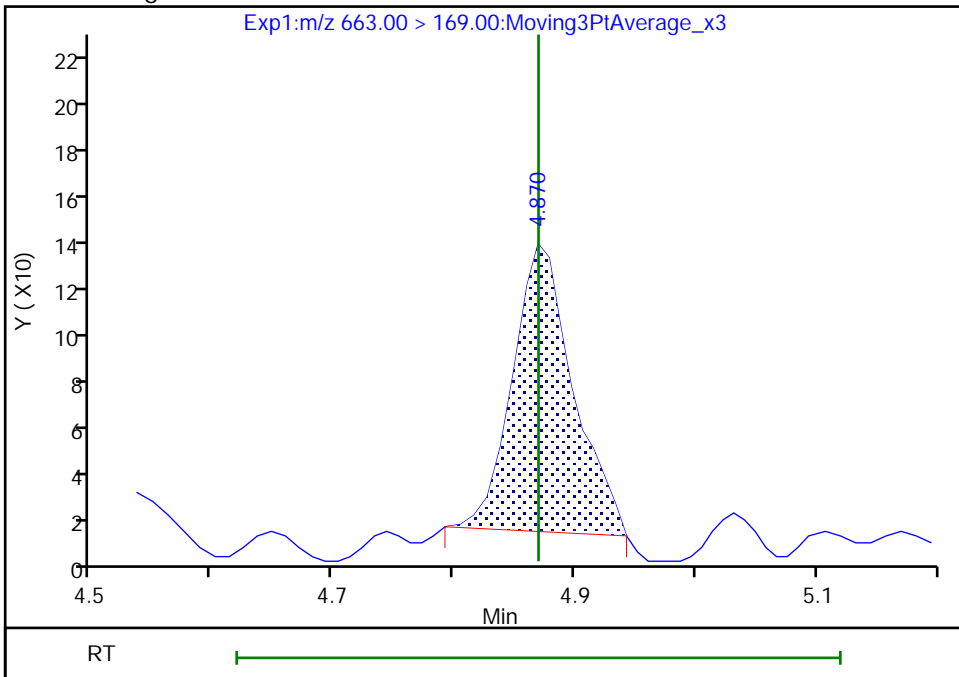
Not Detected
Expected RT: 4.87

Processing Integration Results



Manual Integration Results

RT: 4.87
Area: 433
Amount: 0.002646
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:28:59
Audit Action: Manually Integrated

Audit Reason: Assign Peak
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Eurofins TestAmerica, Burlington

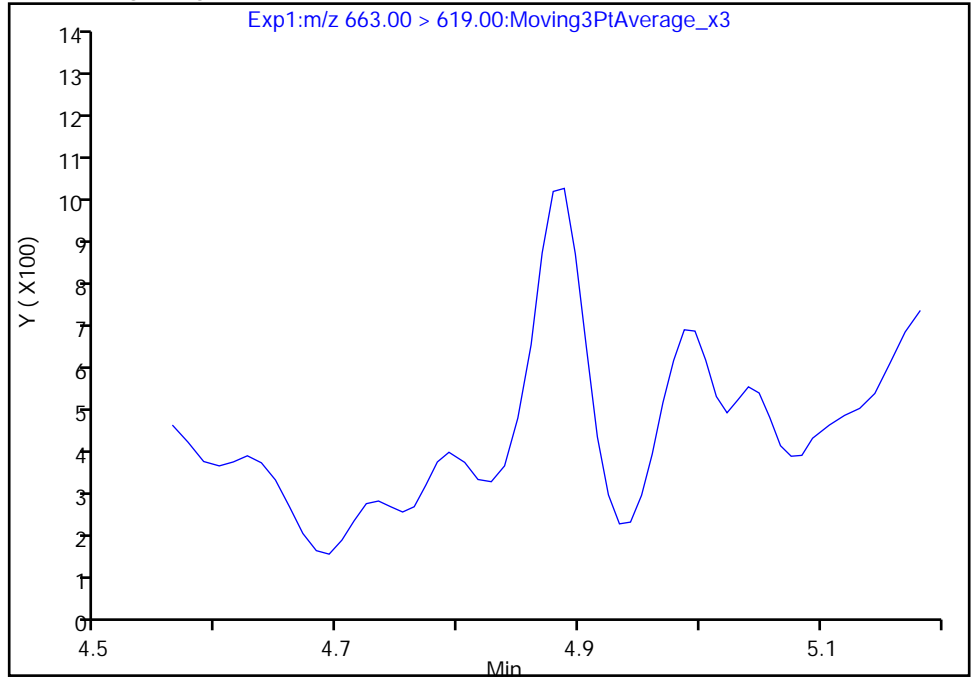
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d
Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 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

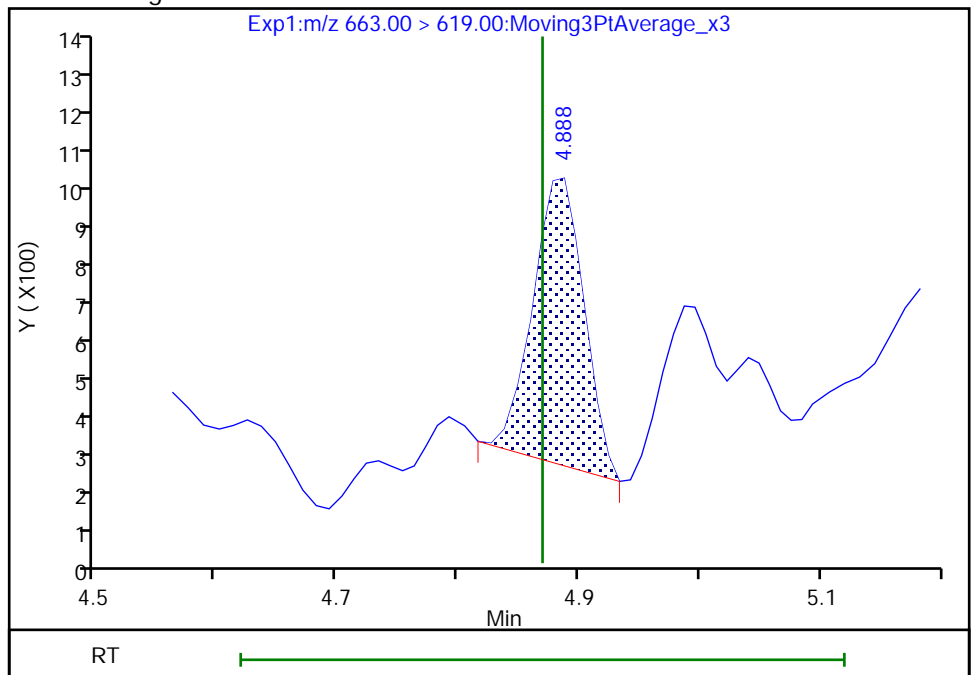
Not Detected
Expected RT: 4.87

Processing Integration Results



Manual Integration Results

RT: 4.89
Area: 2111
Amount: 0.002646
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:29:03

Audit Action: Manually Integrated

Audit Reason: Assign Peak

Eurofins TestAmerica, Burlington

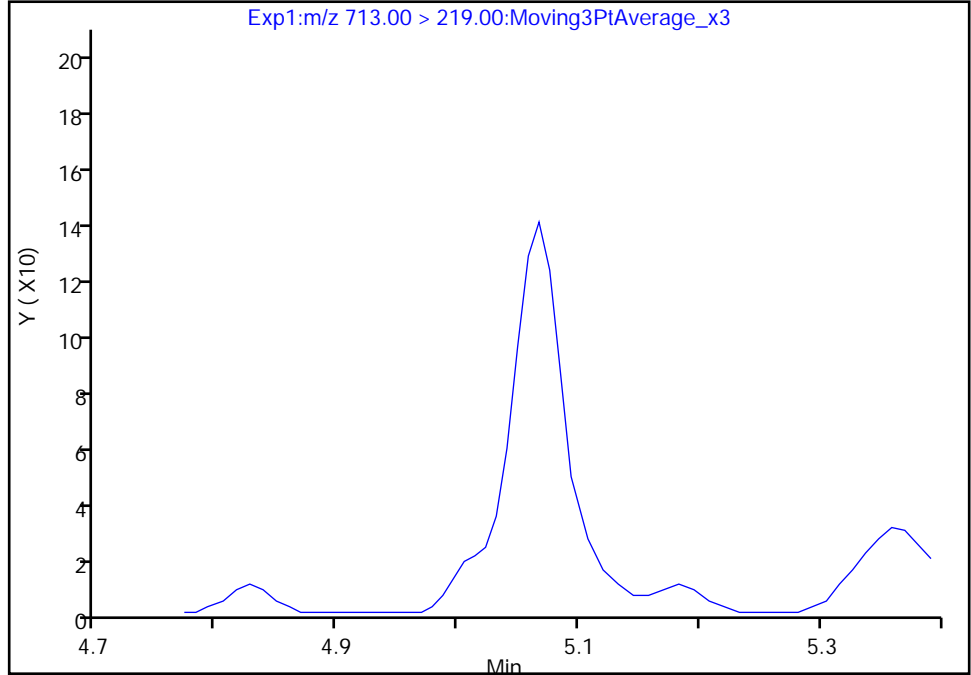
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d
Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 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

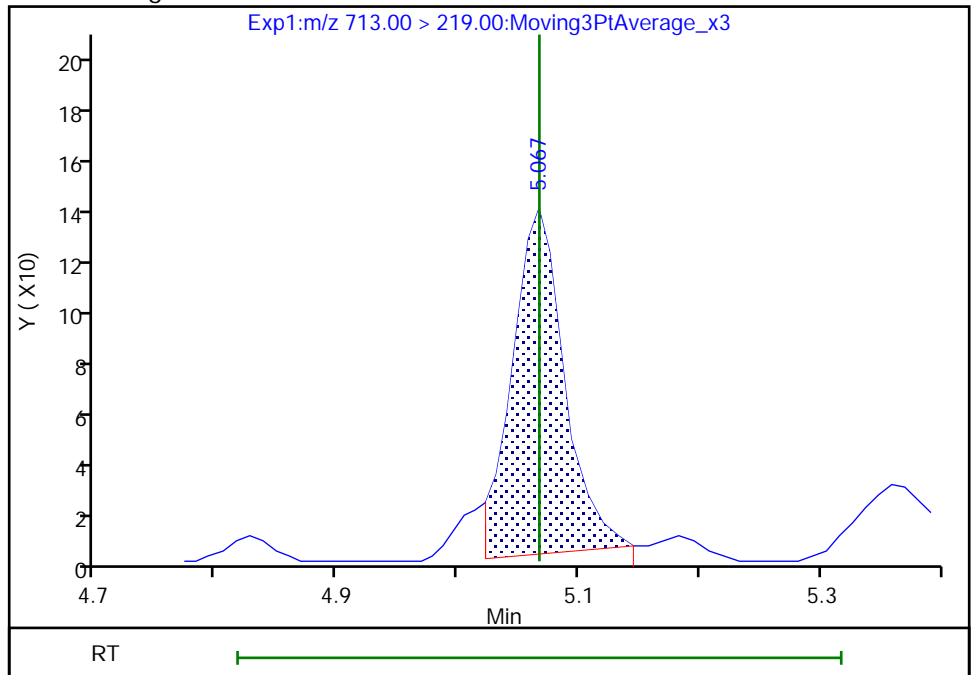
Not Detected
Expected RT: 5.07

Processing Integration Results



Manual Integration Results

RT: 5.07
Area: 403
Amount: 0.005000
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:29:30
Audit Action: Manually Integrated

Audit Reason: Split Peak
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Euofins TestAmerica, Burlington

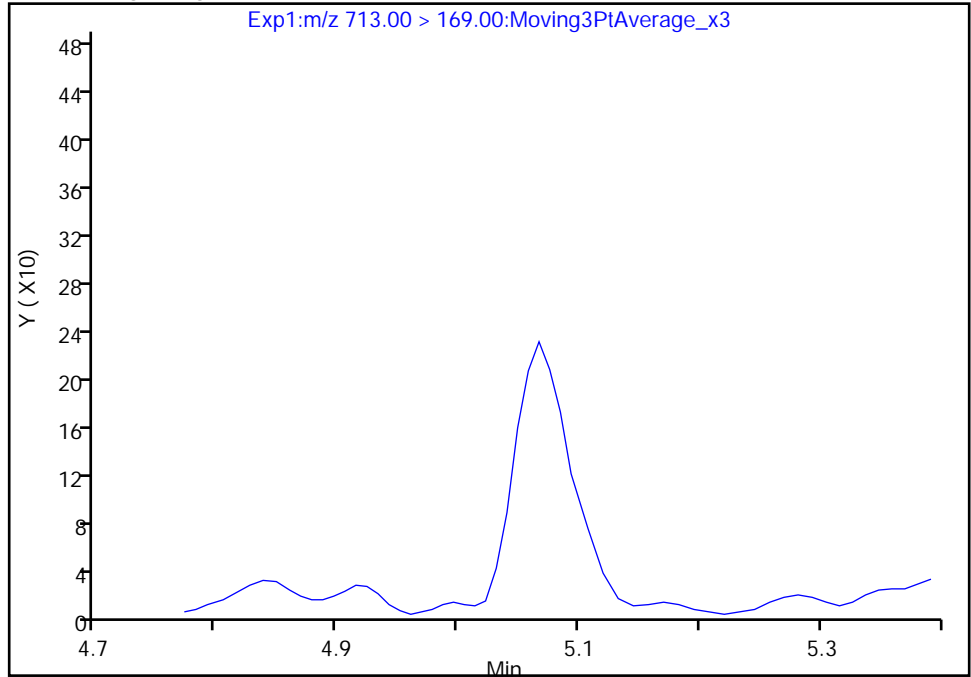
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d
Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 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

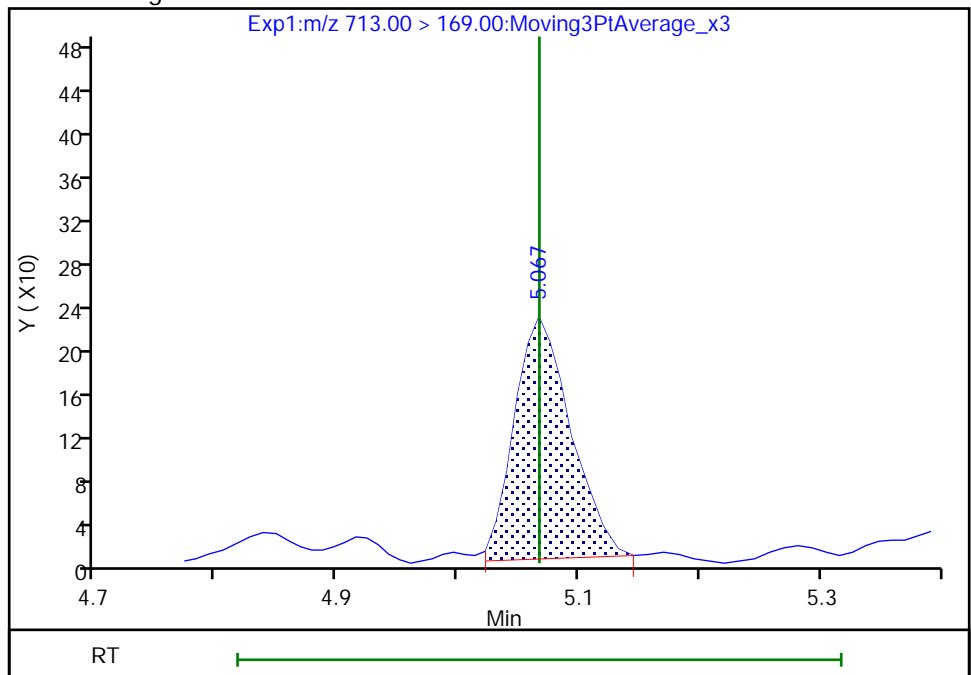
Not Detected
Expected RT: 5.07

Processing Integration Results



Manual Integration Results

RT: 5.07
Area: 712
Amount: 0.005000
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:29:33

Audit Action: Manually Integrated

Audit Reason: Split Peak
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Eurofins TestAmerica, Burlington

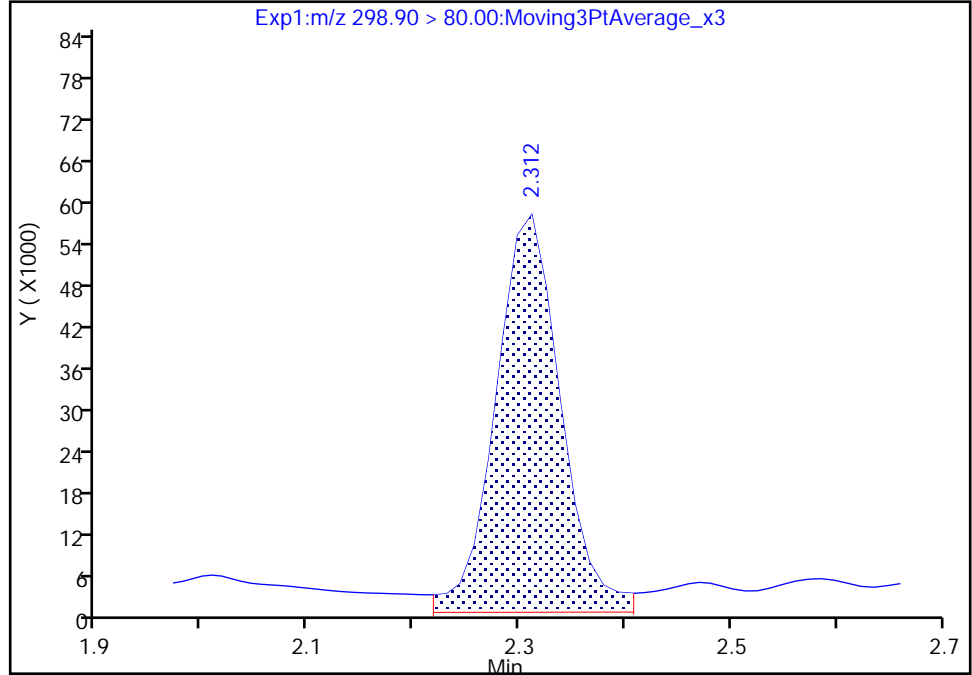
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d
Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

5 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

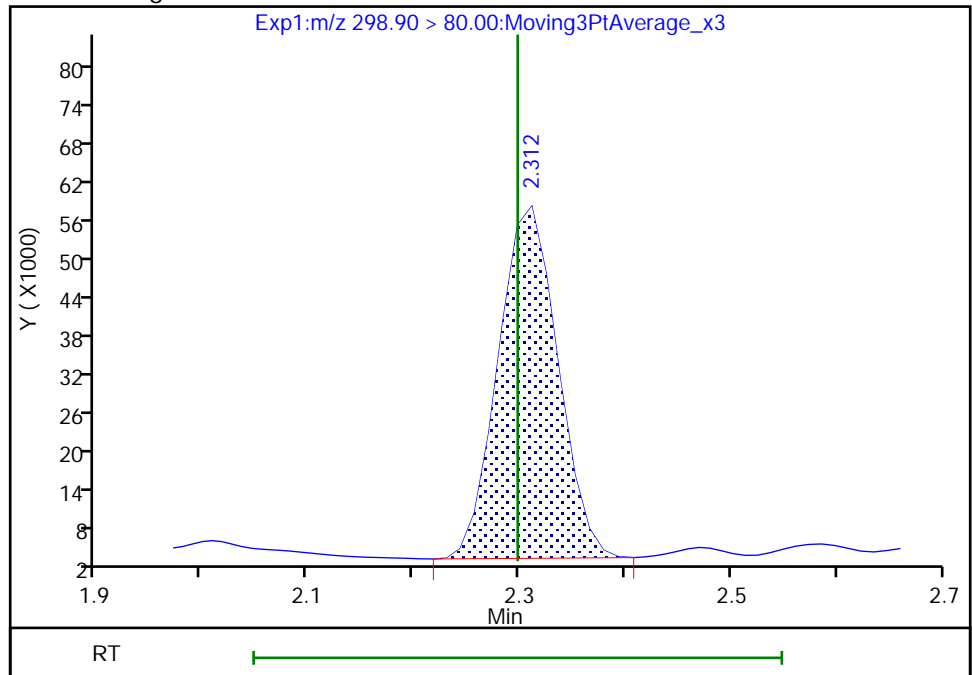
RT: 2.31
Area: 245465
Amount: 0.195797
Amount Units: ng/ml

Processing Integration Results



RT: 2.31
Area: 215691
Amount: 0.172048
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:14:34
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

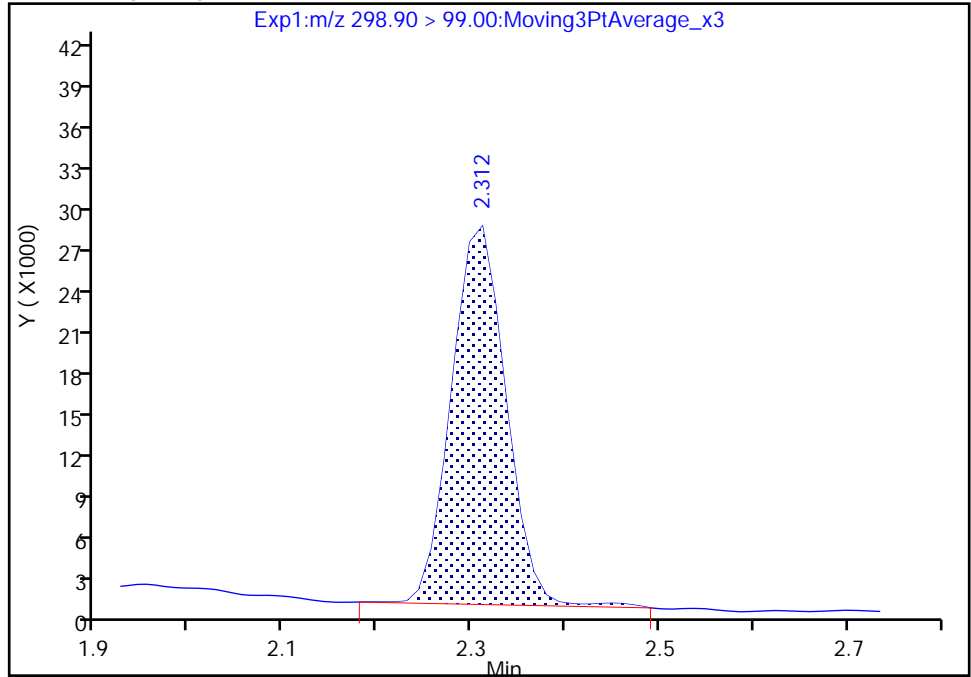
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d
Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

5 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 2

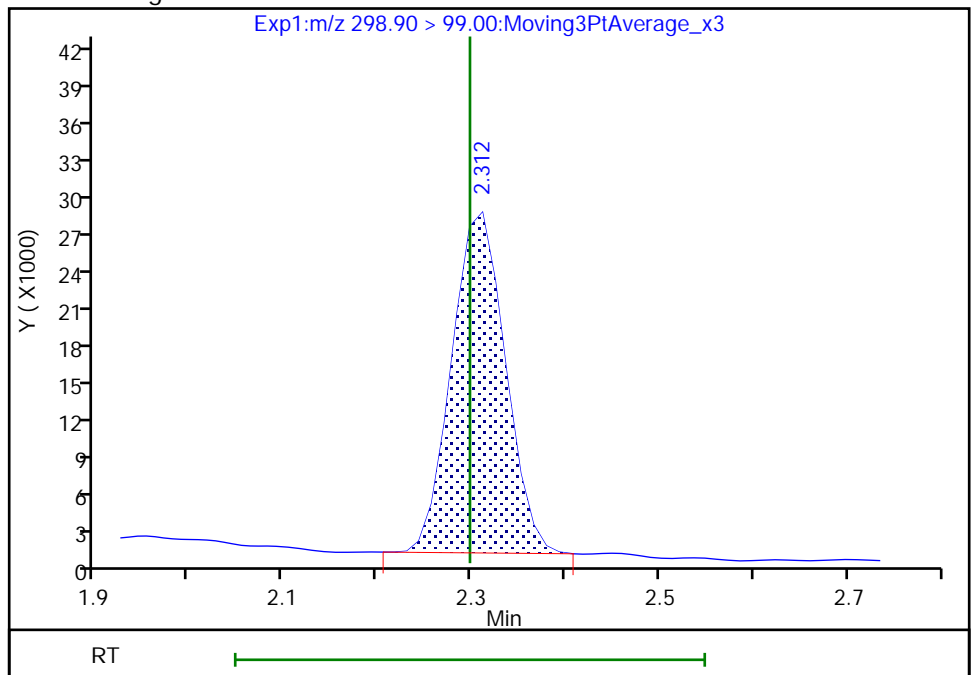
RT: 2.31
Area: 109847
Amount: 0.195797
Amount Units: ng/ml

Processing Integration Results



RT: 2.31
Area: 107587
Amount: 0.172048
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:14:39

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

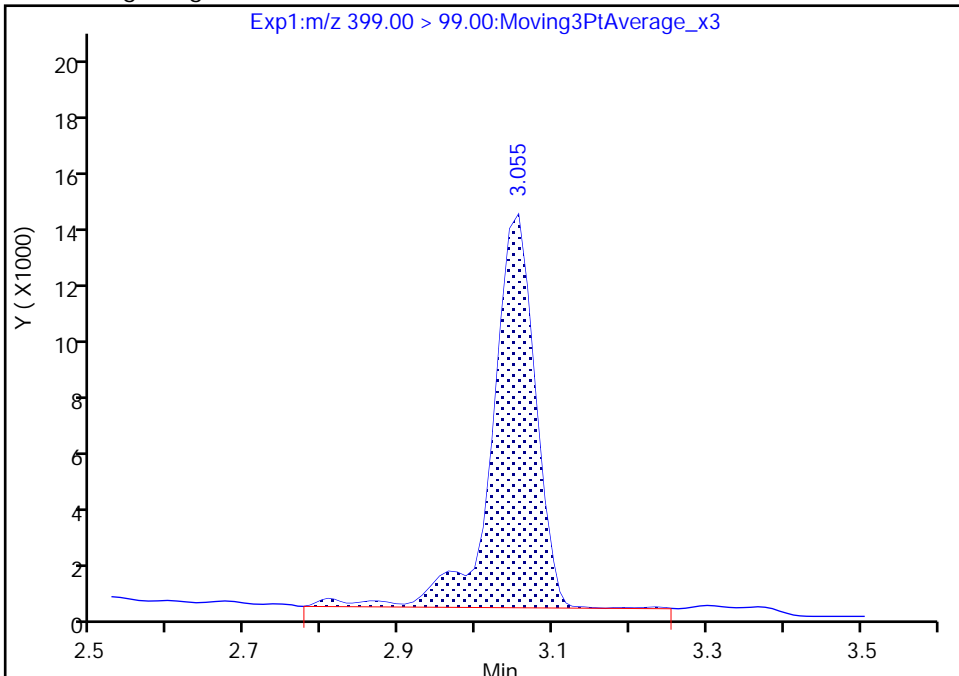
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d
Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 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

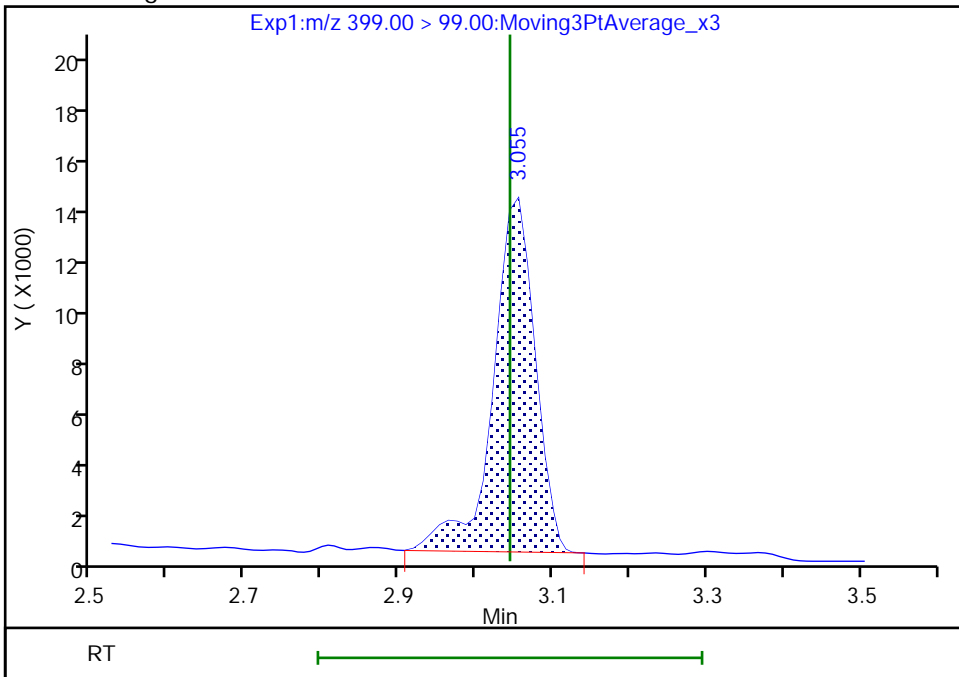
RT: 3.06
Area: 55715
Amount: 0.221018
Amount Units: ng/ml

Processing Integration Results



RT: 3.06
Area: 53387
Amount: 0.203235
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:16:47
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration
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Eurofins TestAmerica, Burlington

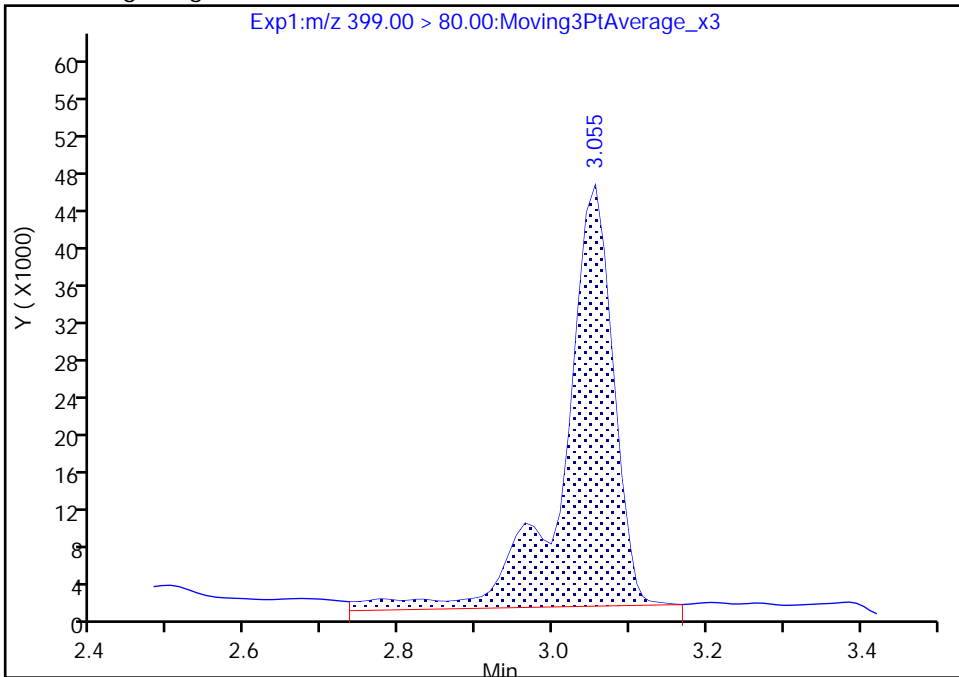
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d
Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 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

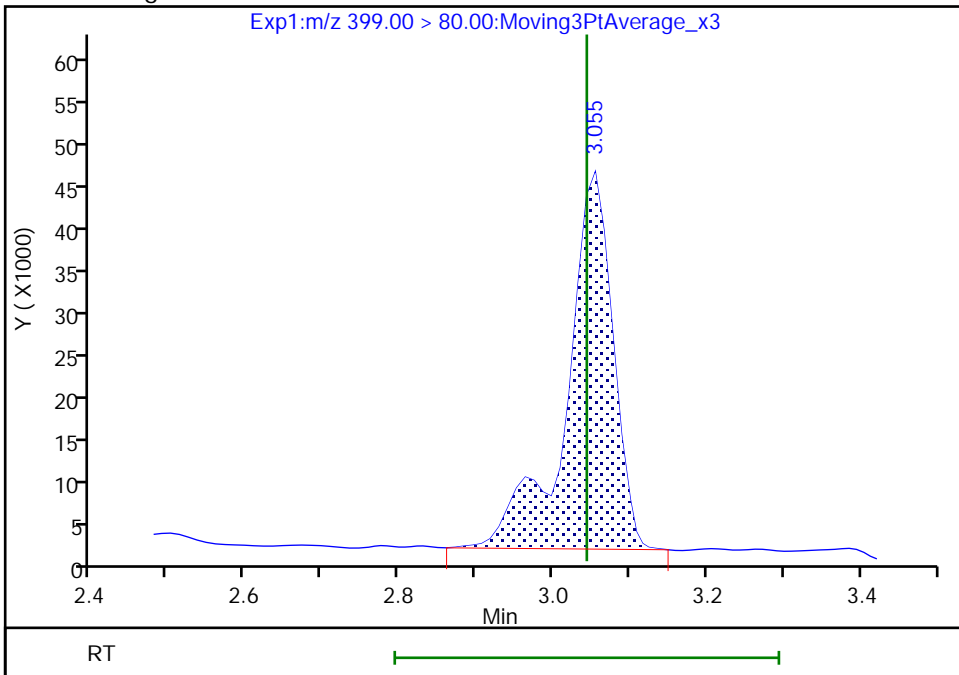
RT: 3.06
Area: 205599
Amount: 0.221018
Amount Units: ng/ml

Processing Integration Results



RT: 3.06
Area: 189920
Amount: 0.203235
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:17:05

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

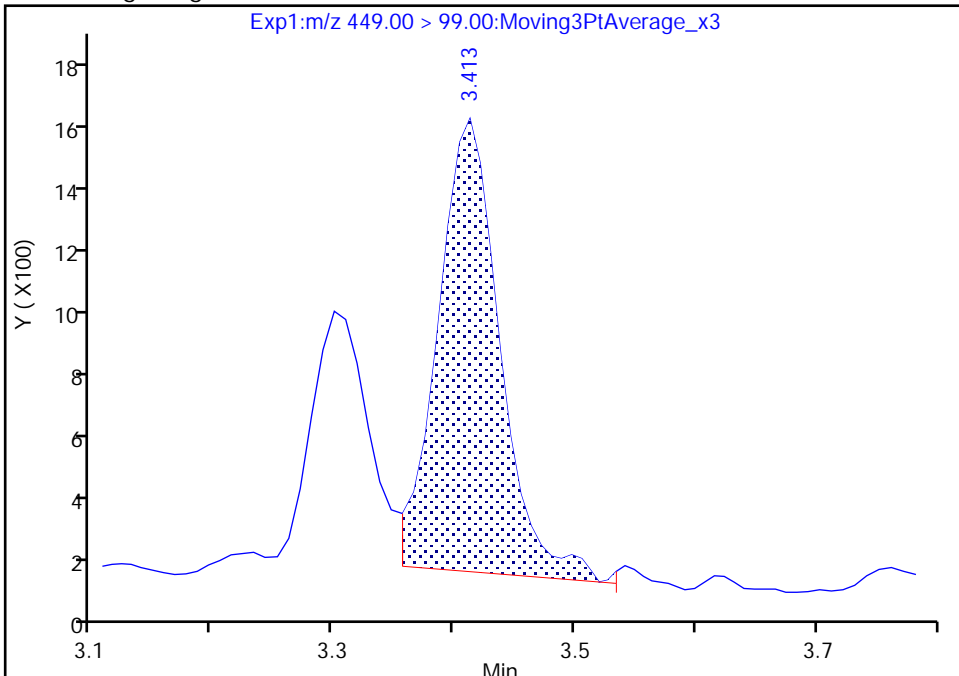
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d
Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 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

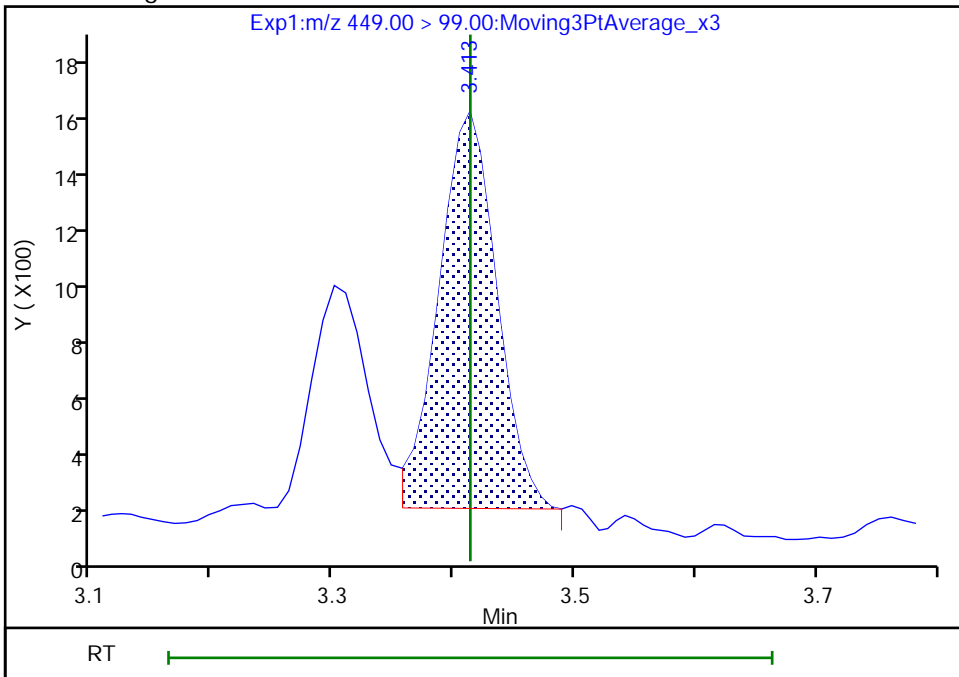
RT: 3.41
Area: 5077
Amount: 0.028399
Amount Units: ng/ml

Processing Integration Results



RT: 3.41
Area: 4598
Amount: 0.028295
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:18:28
Audit Action: Manually Integrated

Audit Reason: Split Peak
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Eurofins TestAmerica, Burlington

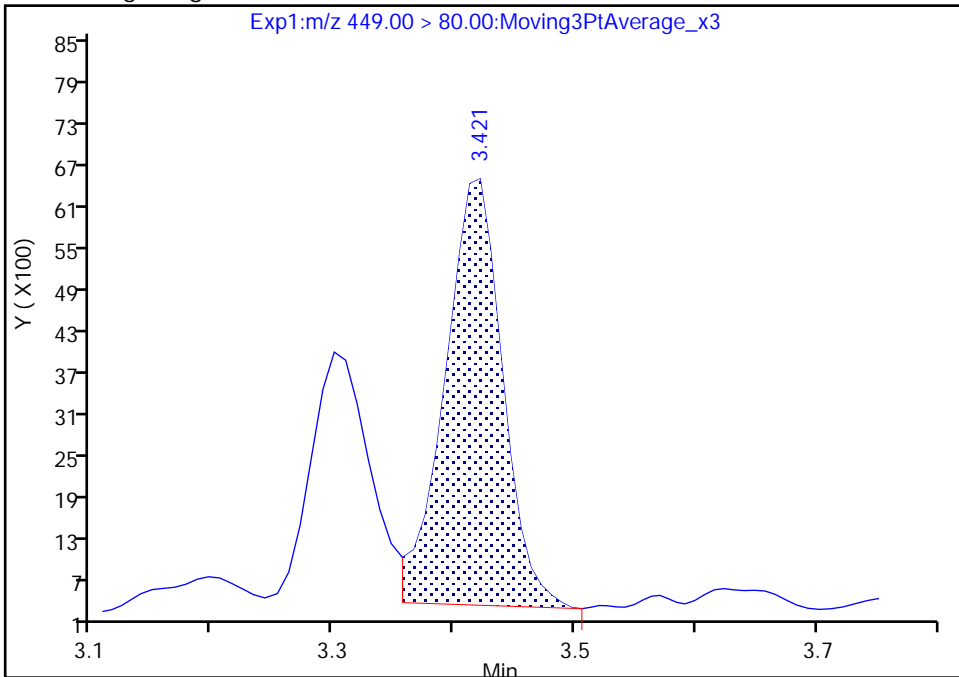
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d
Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 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: 1

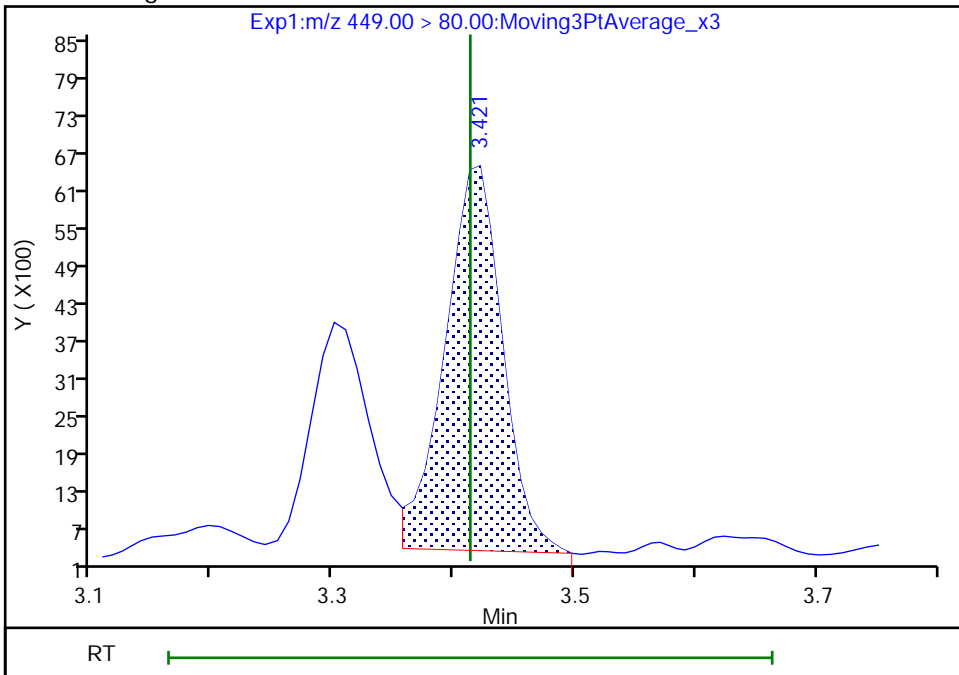
RT: 3.42
Area: 20414
Amount: 0.028399
Amount Units: ng/ml

Processing Integration Results



RT: 3.42
Area: 20339
Amount: 0.028295
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:18:31

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

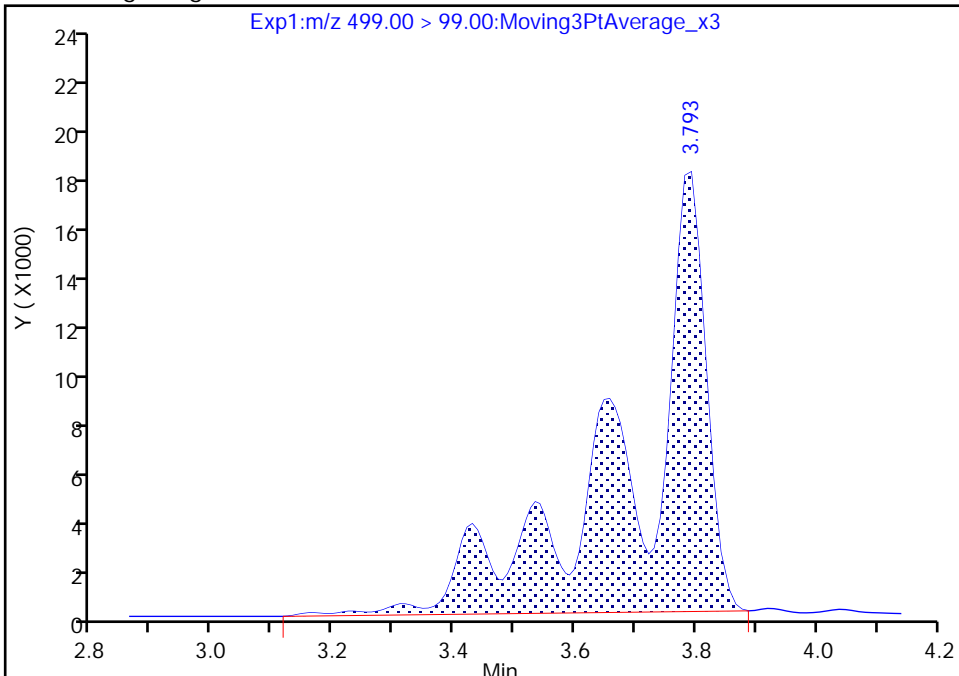
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d
Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 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

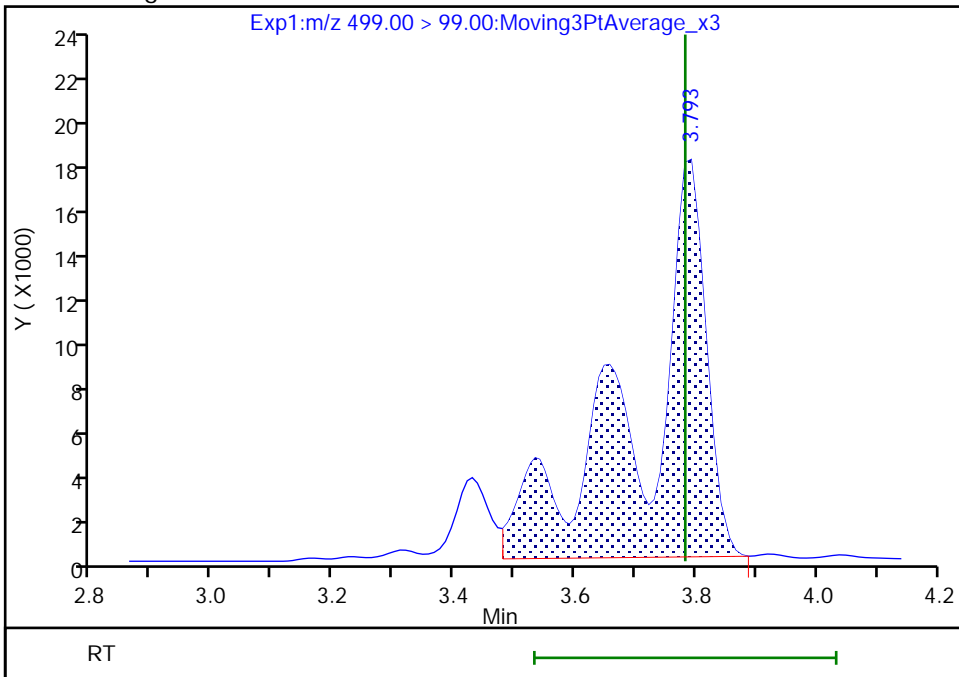
RT: 3.79
Area: 152868
Amount: 0.840870
Amount Units: ng/ml

Processing Integration Results



RT: 3.79
Area: 135545
Amount: 0.822523
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:19:51
Audit Action: Manually Integrated

Audit Reason: Split Peak
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Eurofins TestAmerica, Burlington

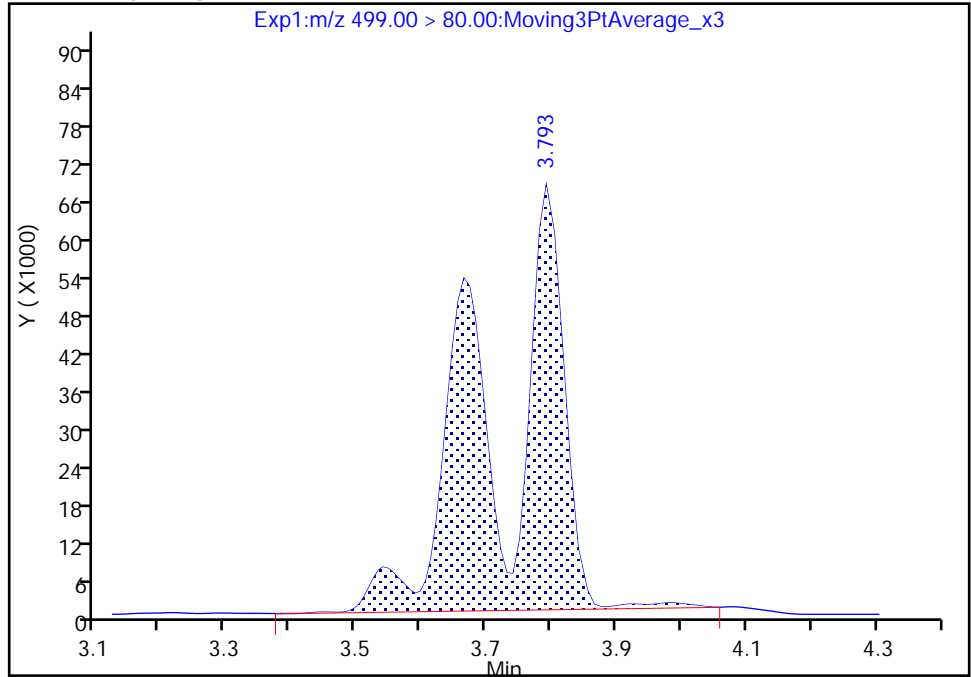
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d
Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 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

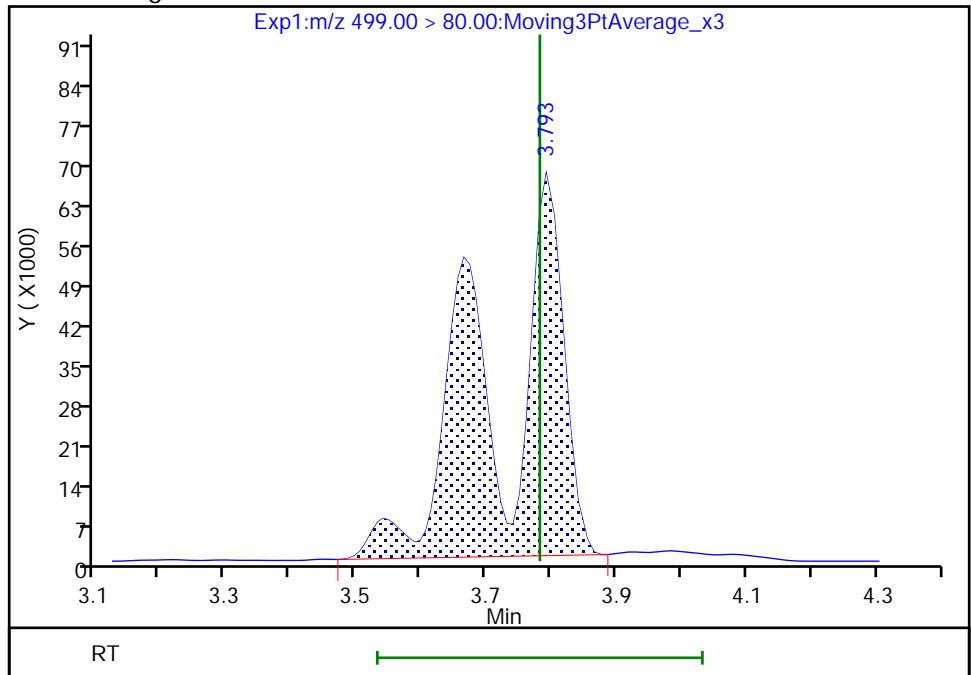
RT: 3.79
Area: 493364
Amount: 0.840870
Amount Units: ng/ml

Processing Integration Results



RT: 3.79
Area: 482599
Amount: 0.822523
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:20:21

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

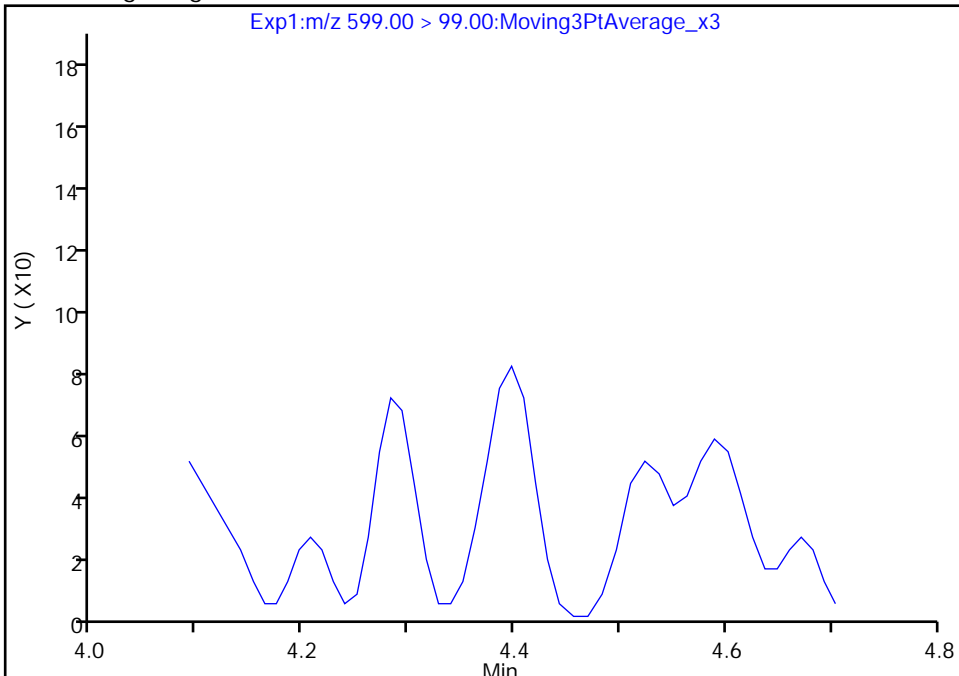
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d
Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 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

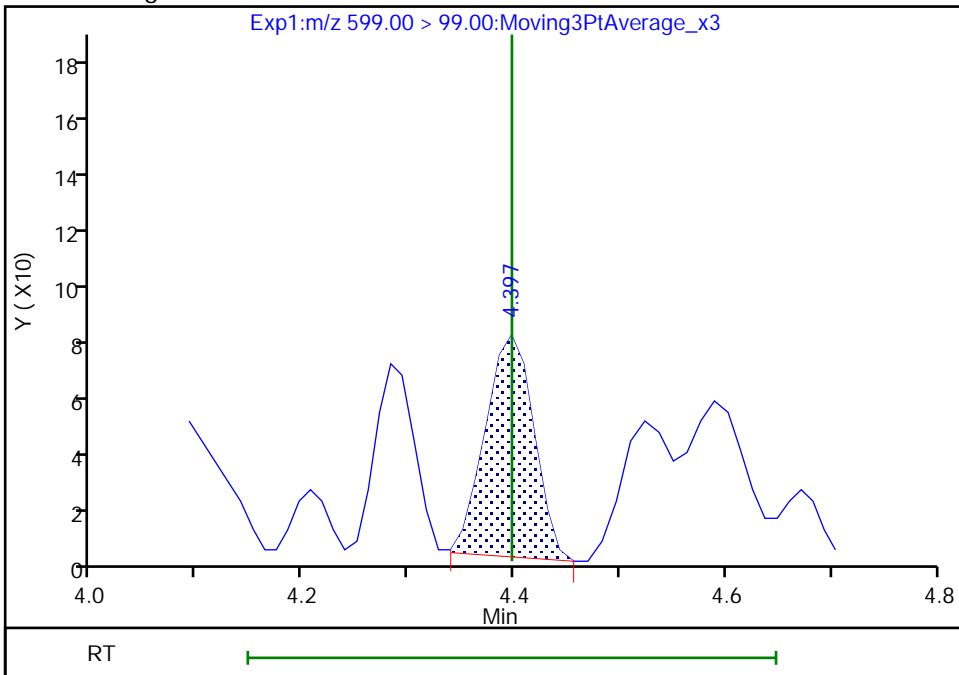
Not Detected
Expected RT: 4.40

Processing Integration Results



Manual Integration Results

RT: 4.40
Area: 246
Amount: 0.001203
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:25:02
Audit Action: Manually Integrated

Audit Reason: Split Peak

Euofins TestAmerica, Burlington

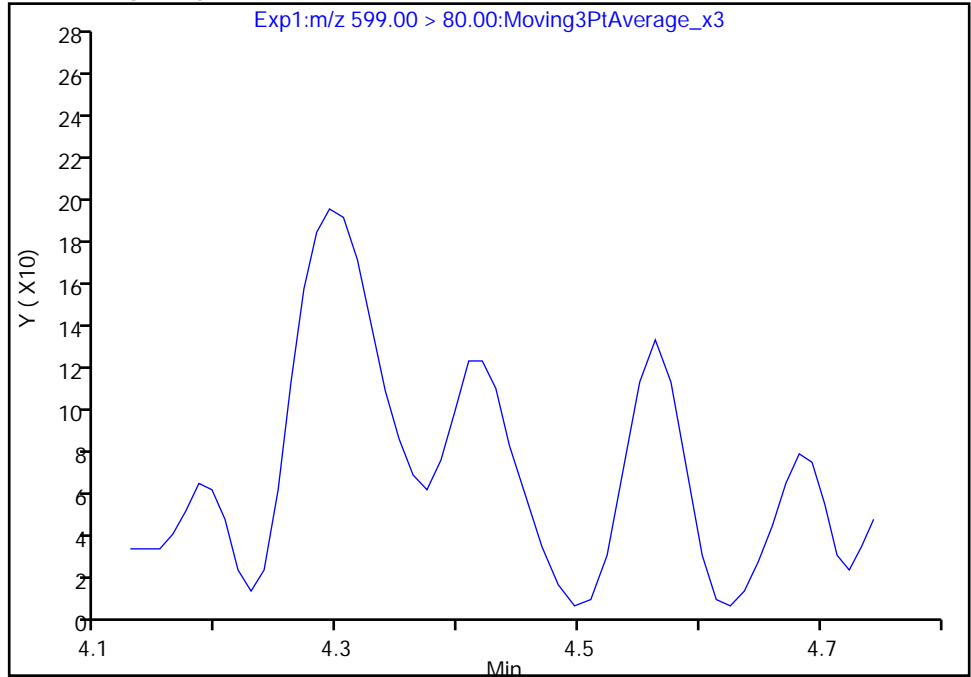
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d
Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 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

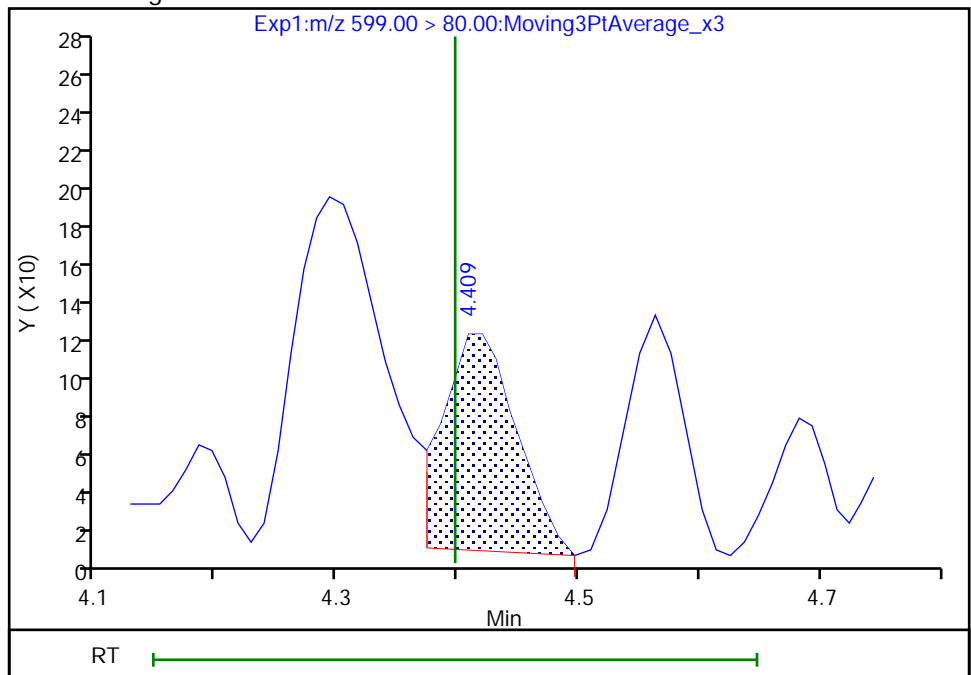
Not Detected
Expected RT: 4.40

Processing Integration Results



RT: 4.41
Area: 471
Amount: 0.001203
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:25:05

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

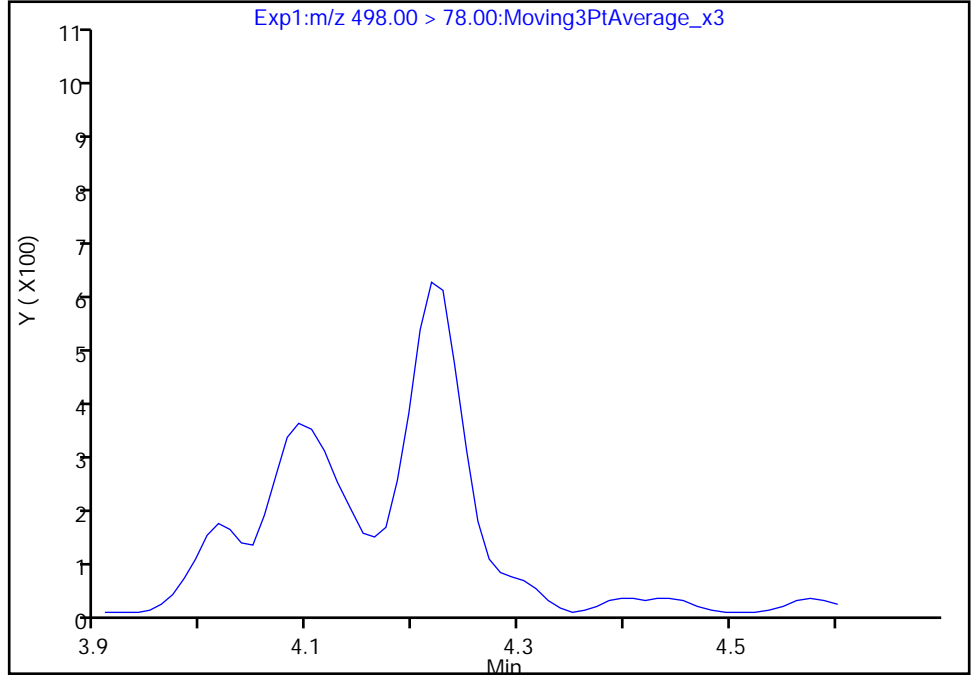
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d
Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 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

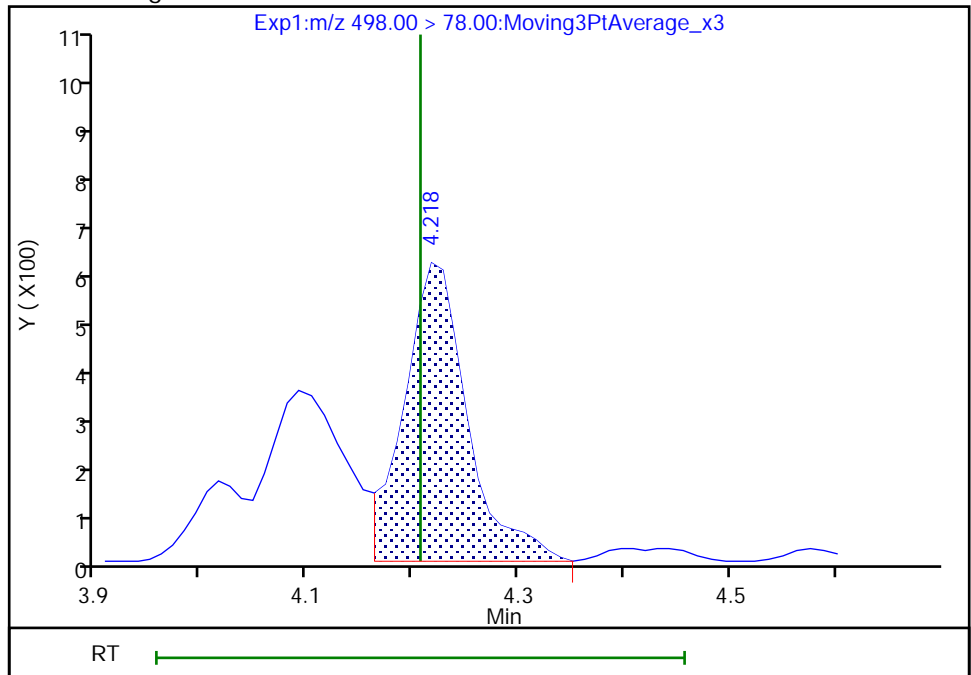
Not Detected
Expected RT: 4.21

Processing Integration Results



Manual Integration Results

RT: 4.22
Area: 2536
Amount: 0.002748
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:23:45
Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

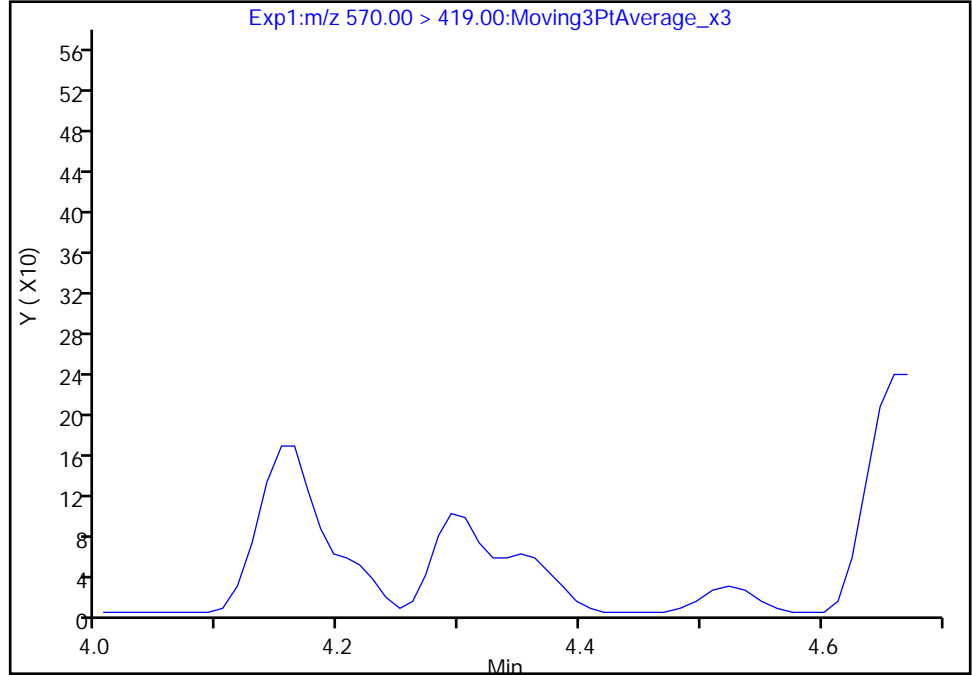
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d
Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 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

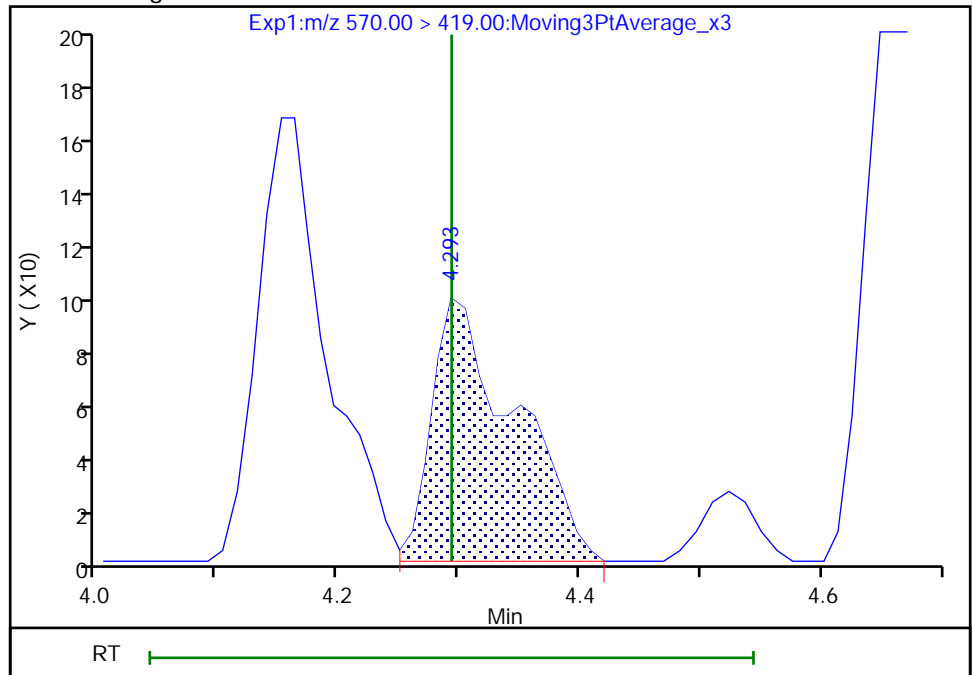
Not Detected
Expected RT: 4.29

Processing Integration Results



Manual Integration Results

RT: 4.29
Area: 466
Amount: 0.006952
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:24:19
Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

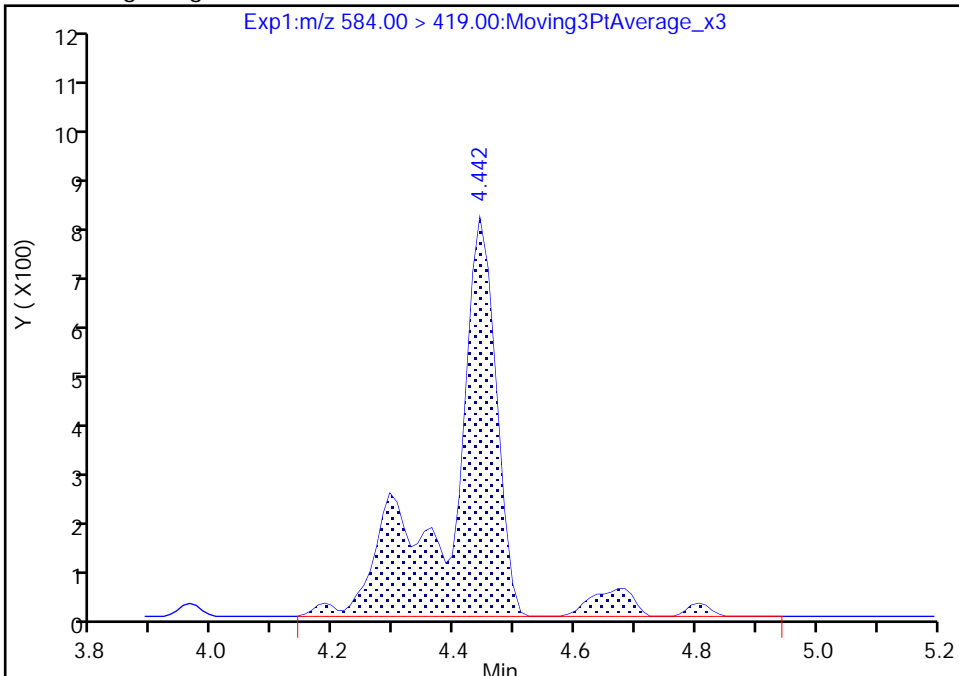
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d
Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

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

Signal: 1

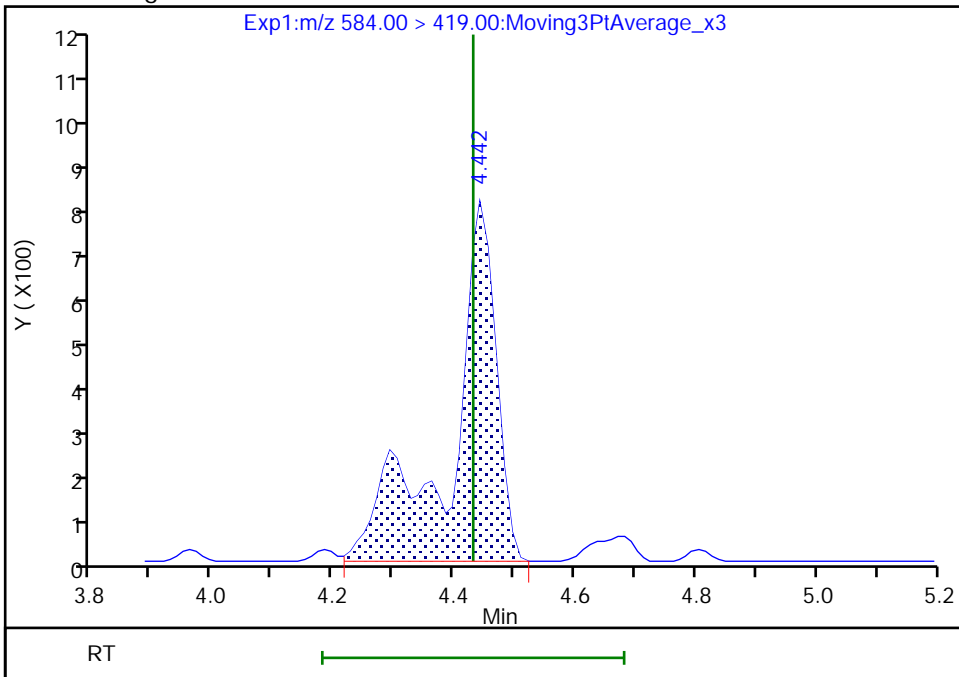
RT: 4.44
Area: 4600
Amount: 0.057517
Amount Units: ng/ml

Processing Integration Results



RT: 4.44
Area: 4199
Amount: 0.050847
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:26:22
Audit Action: Manually Integrated

Audit Reason: Split Peak
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Euofins TestAmerica, Burlington

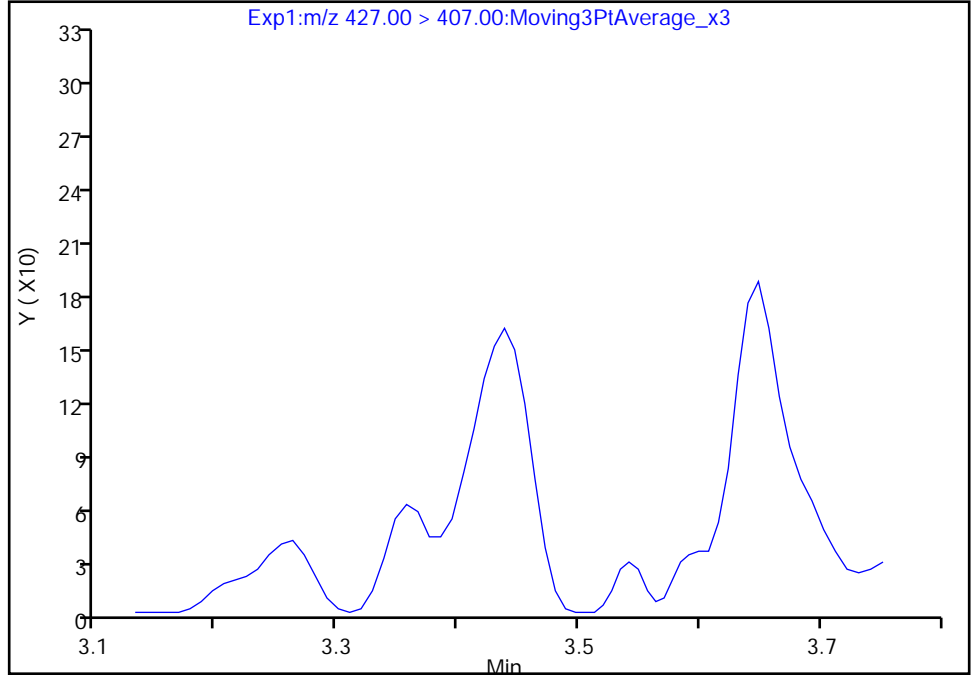
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d
Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 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

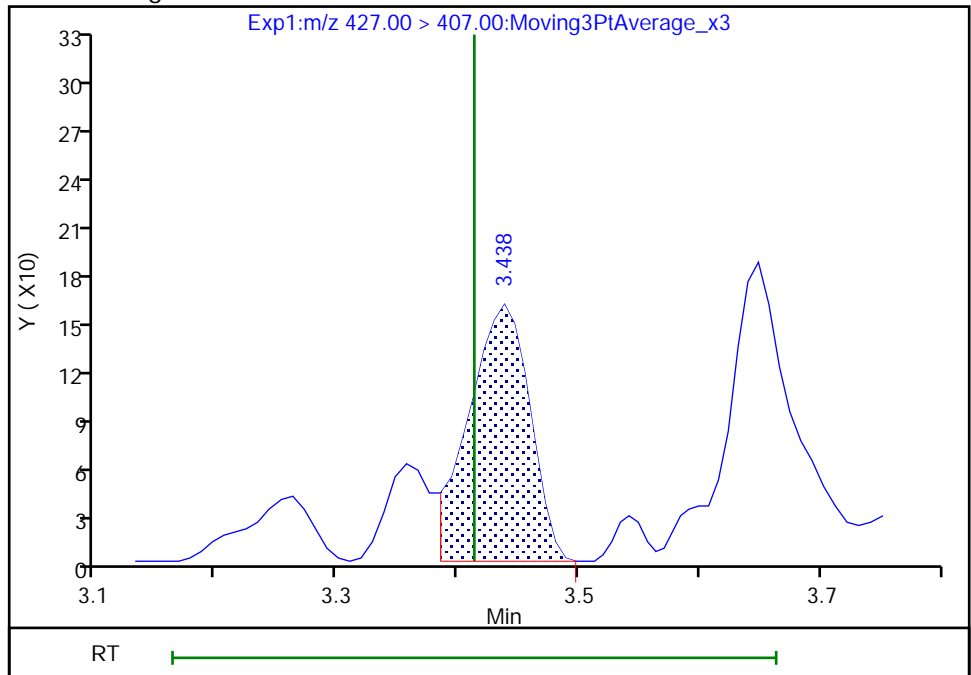
Not Detected
Expected RT: 3.41

Processing Integration Results



Manual Integration Results

RT: 3.44
Area: 551
Amount: 0.002526
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:19:00
Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

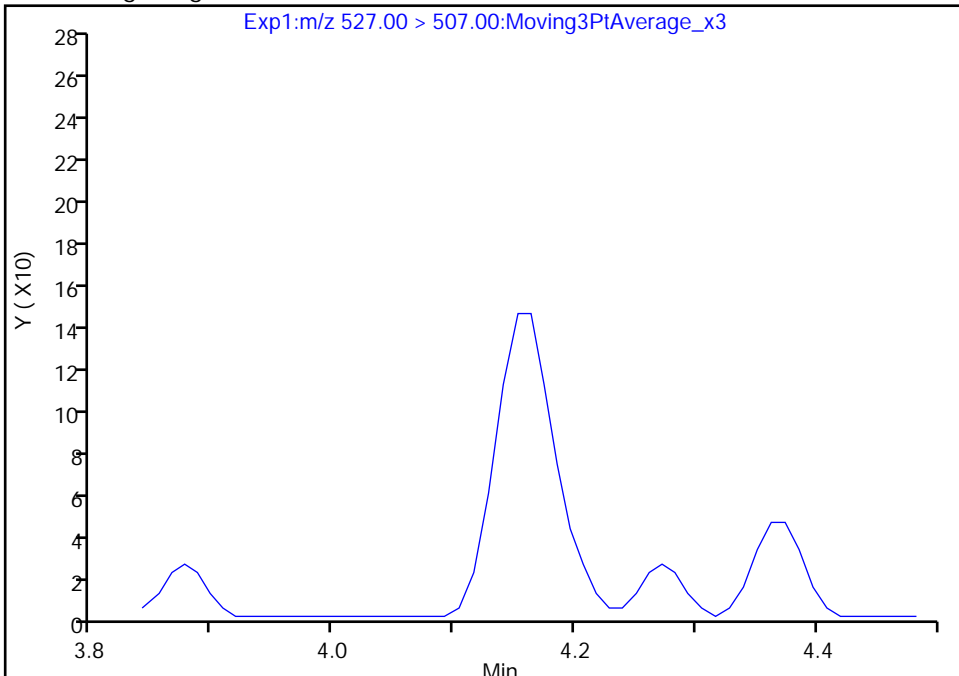
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B016.d
Injection Date: 22-Oct-2019 21:55:40 Instrument ID: LC812
Lims ID: 480-160746-C-3-A Lab Sample ID: 200-160746-3
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 20.0 ul Dil. Factor: 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

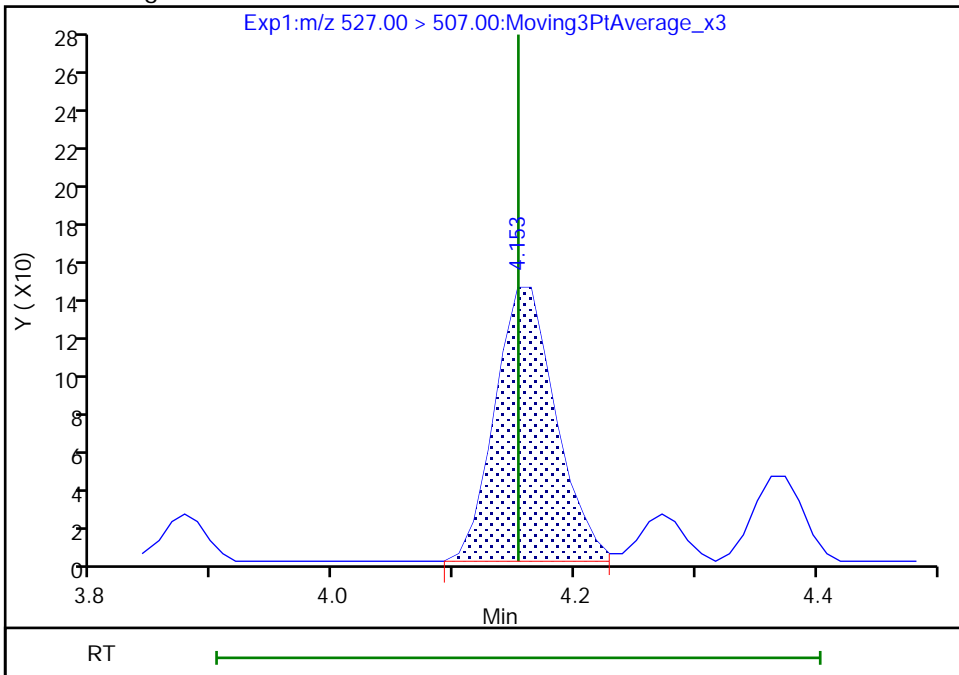
Not Detected
Expected RT: 4.15

Processing Integration Results



Manual Integration Results

RT: 4.15
Area: 507
Amount: -0.009802
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:22:56
Audit Action: Manually Integrated

Audit Reason: Split Peak
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FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1
 SDG No.: _____
 Client Sample ID: DUPLICATE Lab Sample ID: 480-160746-4
 Matrix: Water Lab File ID: SC102219B019.d
 Analysis Method: 537 (modified) Date Collected: 10/09/2019 00:00
 Extraction Method: 3535 Date Extracted: 10/17/2019 10:08
 Sample wt/vol: 292.9 (mL) Date Analyzed: 10/22/2019 22:20
 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.: 148772 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	1.7		1.7	0.85
2706-90-3	Perfluoropentanoic acid (PFPeA)	0.67	J	1.7	0.54
307-24-4	Perfluorohexanoic acid (PFHxA)	0.93	J	1.7	0.65
375-85-9	Perfluoroheptanoic acid (PFHpA)	ND		1.7	0.78
335-67-1	Perfluorooctanoic acid (PFOA)	1.6	J	1.7	0.69
375-95-1	Perfluorononanoic acid (PFNA)	0.92	J B	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	0.50
72629-94-8	Perfluorotridecanoic acid (PFTriA)	ND		1.7	0.51
376-06-7	Perfluorotetradecanoic acid (PFTeA)	ND	*	1.7	0.79
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.54	J	1.7	0.42
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	ND		1.7	0.68
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	ND		1.7	0.81
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	4.5		1.7	0.52
335-77-3	Perfluorodecanesulfonic acid (PFDS)	ND		1.7	0.77
754-91-6	Perfluorooctanesulfonamide (PFOSA)	ND		8.5	8.5
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.: 480-160746-1
 SDG No.: _____
 Client Sample ID: DUPLICATE Lab Sample ID: 480-160746-4
 Matrix: Water Lab File ID: SC102219B019.d
 Analysis Method: 537 (modified) Date Collected: 10/09/2019 00:00
 Extraction Method: 3535 Date Extracted: 10/17/2019 10:08
 Sample wt/vol: 292.9(mL) Date Analyzed: 10/22/2019 22:20
 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.: 148772 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	84		50-150
STL01892	13C4 PFHpA	89		50-150
STL00990	13C4 PFOA	97		50-150
STL00991	13C4 PFOS	85		50-150
STL00995	13C5 PFNA	82		50-150
STL00992	13C4 PFBA	70		25-150
STL00993	13C2 PFHxA	85		50-150
STL00996	13C2 PFDA	81		50-150
STL00997	13C2 PFUnA	79		50-150
STL00998	13C2 PFDoA	85		50-150
STL01056	13C8 FOSA	72		25-150
STL01893	13C5 PFPeA	84		25-150
STL02116	13C2 PFTeDA	72		50-150
STL02118	d3-NMeFOSAA	75		50-150
STL02117	d5-NEtFOSAA	84		50-150
STL02279	M2-6:2 FTS	98		25-150
STL02280	M2-8:2 FTS	85		25-150

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B019.d
 Lims ID: 480-160746-C-4-A
 Client ID: DUPLICATE
 Sample Type: Client
 Inject. Date: 22-Oct-2019 22:20:15 ALS Bottle#: 19 Worklist Smp#: 19
 Injection Vol: 20.0 ul Dil. Factor: 1.0000
 Sample Info: 480-160746-C-4-A
 Misc. Info.: 200-0038369-019 Plate: 1 Rack: 4
 Operator ID: lc812tech Instrument ID: LC812
 Method: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\PFC_LC812.m
 Limit Group: LC_PFC_ICAL
 Last Update: 28-Oct-2019 13:09:04 Calib Date: 24-Sep-2019 18:56:37
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA015.d
 Column 1 : C-18 (4.60 mm) Det: EXP1
 Process Host: CTX1017

First Level Reviewer: manopan Date: 24-Oct-2019 12:41:25
 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	1.926	1.926	0.0	0.563	2934275	1.76	70.5	13700	
2 Perfluorobutanoic acid										M
212.90 > 169.00	1.926	1.926	0.0	1.000	51250	0.0492		9.6		M
D 3 13C5 PFPeA	267.90 > 223.00	2.271	2.285	-0.014	0.664	2767848	2.10	84.0	3416	
4 Perfluoropentanoic acid										M
262.90 > 219.00	2.271	2.285	-0.014	1.000	32254	0.0196		0.7		M
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.298	2.298	0.0	0.755	18849	0.0158	Target=2.04	6.1		
298.90 > 99.00	2.298	2.298	0.0	0.755	9673		1.95(1.02-3.05)	3.0		
6 Perfluorohexanoic acid										M
313.00 > 269.00	2.660	2.661	-0.001	1.000	32023	0.0273	Target=12.90	4.5		M
313.00 > 119.00	2.660	2.661	-0.001	1.000	2621		12.22(6.45-19.36)	4.5		
D 7 13C2 PFHxA	315.00 > 270.00	2.660	2.661	-0.001	0.778	2976769	2.13	85.0	9749	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.044	3.044	0.0	1.000	17794	0.009029	Target=3.78	14.8		M
399.00 > 99.00	3.044	3.044	0.0	1.000	4354		4.09(1.89-5.67)	4.7		M
D 11 18O2 PFHxS	403.00 > 84.00	3.044	3.044	0.0	0.890	2071015	1.98	83.8	5660	
D 9 13C4 PFHpA	367.00 > 322.00	3.044	3.044	0.0	0.890	3023713	2.23	89.2	10729	
10 Perfluoroheptanoic acid										M
363.00 > 319.00	3.044	3.044	0.0	1.000	22431	0.0208	Target=3.54	4.1		M
363.00 > 169.00	3.044	3.044	0.0	1.000	5376		4.17(1.77-5.31)	12.2		

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	0.902	1709	0.002540	Target=5.80	5.6		M
449.00 > 99.00	3.413	3.413	0.0	0.902	252		6.78(2.90-8.71)	0.6		M
13 1H,1H,2H,2H-perfluorooctanesulfoni										M
427.00 > 407.00	3.405	3.413	-0.008	0.998	223	0.001066		3.8		M
D 12 M2-6:2 FTS										
429.00 > 81.00	3.413	3.413	0.0	0.998	394462	2.32		97.9	693	
* 62 13C2 PFOA										
415.00 > 370.00	3.421	3.422	-0.001		3469544	2.50			5806	
D 14 13C4 PFOA										
417.00 > 372.00	3.421	3.422	-0.001	1.000	3341769	2.42		97.0	9160	
15 Perfluorooctanoic acid										M
413.00 > 369.00	3.421	3.422	-0.001	1.000	84599	0.0460	Target=2.61	13.1		M
413.00 > 169.00	3.421	3.422	-0.001	1.000	37204		2.27(1.30-3.91)	114		M
D 18 13C4 PFOS										
503.00 > 80.00	3.782	3.783	-0.001	1.105	1451926	2.04		85.5	2756	
17 Perfluorooctanesulfonic acid										M
499.00 > 80.00	3.782	3.783	-0.001	1.000	72023	0.1311	Target=4.93	35.4		M
499.00 > 99.00	3.782	3.783	-0.001	1.000	13301		5.41(2.47-7.40)	24.1		M
D 19 13C5 PFNA										
468.00 > 423.00	3.805	3.805	0.0	1.112	2510481	2.06		82.4	4913	
20 Perfluorononanoic acid										M
463.00 > 419.00	3.805	3.805	0.0	1.000	25835	0.0270	Target=7.89	7.8		M
463.00 > 169.00	3.817	3.805	0.012	1.003	2701		9.56(3.95-11.84)	28.2		M
24 Perfluorodecanoic acid										M
513.00 > 469.00	4.141	4.141	0.0	1.000	9980	0.0110	Target=8.57	4.9		M
513.00 > 169.00	4.141	4.141	0.0	1.000	1077		9.27(4.29-12.86)	11.6		M
D 23 13C2 PFDA										
515.00 > 470.00	4.141	4.141	0.0	1.210	2445154	2.01		80.5	7894	
25 1H,1H,2H,2H-perfluorodecanesulfoni										M
527.00 > 507.00	4.153	4.153	0.0	1.000	384	-0.0103		6.4		M
D 26 M2-8:2 FTS										
529.00 > 81.00	4.153	4.153	0.0	1.214	376300	2.03		84.8	932	
22 Perfluorooctanesulfonamide										M
498.00 > 78.00	4.218	4.207	0.011	1.003	4628	0.005089		13.4		M
D 21 13C8 FOSA										
506.00 > 78.00	4.207	4.207	0.0	1.230	2478193	1.80		71.8	3766	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.293	4.294	-0.001	1.255	221538	1.88		75.3	1967	
28 N-methylperfluorooctanesulfonamido										M
570.00 > 419.00	4.272	4.294	-0.022	0.995	193	0.003057		0.5		M
29 Perfluorodecanesulfonic acid										M
599.00 > 80.00	4.397	4.397	0.0	1.163	1119	0.003053	Target=2.56	4.4		M
599.00 > 99.00	4.397	4.397	0.0	1.163	511		2.19(1.28-3.84)	4.5		M
31 Perfluoroundecanoic acid										M
563.00 > 519.00	4.420	4.420	0.0	1.000	7030	0.009759	Target=6.97	4.3		M
563.00 > 169.00	4.420	4.420	0.0	1.000	1822		3.86(3.48-10.45)	26.1		M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 30 13C2 PFUnA										
565.00 > 520.00	4.420	4.420	0.0	1.292	2152190	1.98		79.1	3611	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.431	4.431	0.0	1.295	269275	2.11		84.5	1836	
33 N-ethylperfluorooctanesulfonamidoa										
584.00 > 419.00	4.420	4.431	-0.011	0.997	340	-0.0132		2.2		M
37 Perfluorododecanoic acid										
613.00 > 569.00	4.660	4.660	0.0	1.000	4035	0.004576	Target=7.06	0.8		M
613.00 > 169.00	4.660	4.660	0.0	1.000	735		5.49(3.53-10.59)	10.3		M
D 36 13C2 PFDoA										
615.00 > 570.00	4.660	4.660	0.0	1.362	2492292	2.13		85.1	10305	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.870	4.870	0.0	1.045	3129	0.004385	Target=4.87	0.7		M
663.00 > 169.00	4.870	4.870	0.0	1.045	670		4.67(2.43-7.30)	10.9		M
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.058	5.067	-0.009	1.000	502	0.004557	Target=1.09	5.5		M
713.00 > 219.00	5.067	5.067	0.0	1.002	687		0.73(0.54-1.63)	12.3		M
D 43 13C2 PFTeDA										
715.00 > 670.00	5.058	5.067	-0.009	1.478	1892598	1.80		72.1	8392	

QC Flag Legend

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B019.d

Injection Date: 22-Oct-2019 22:20:15

Instrument ID: LC812

Lims ID: 480-160746-C-4-A

Lab Sample ID: 200-160746-4

Client ID: DUPLICATE

Operator ID: lc812tech

ALS Bottle#: 19

Worklist Smp#: 19

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

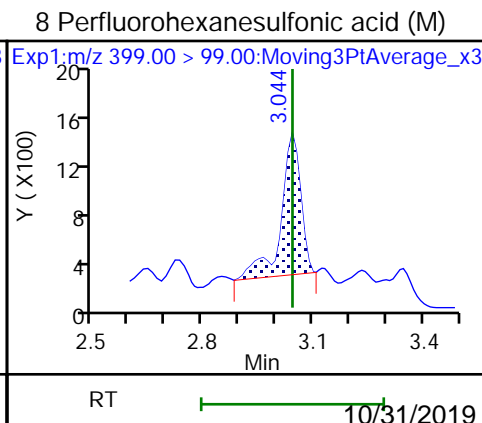
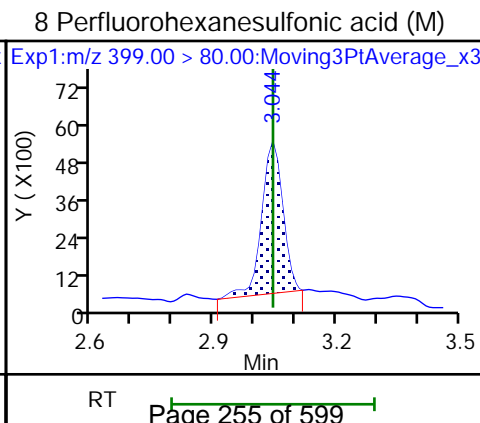
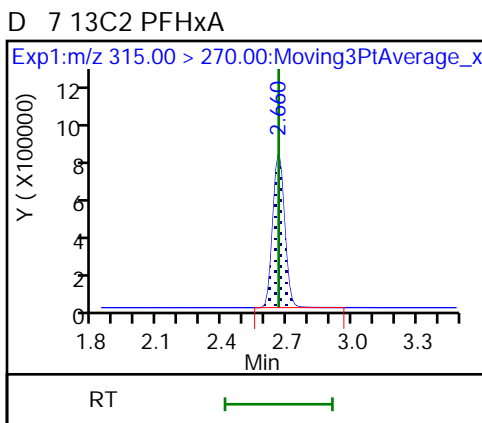
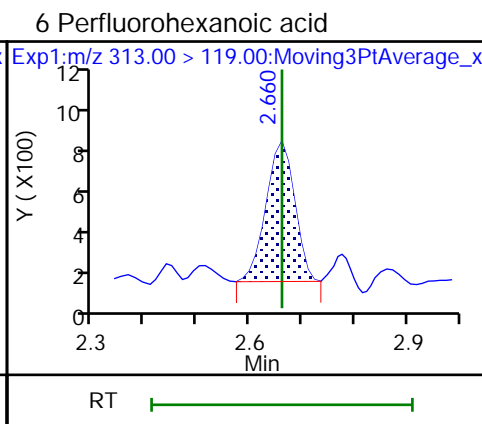
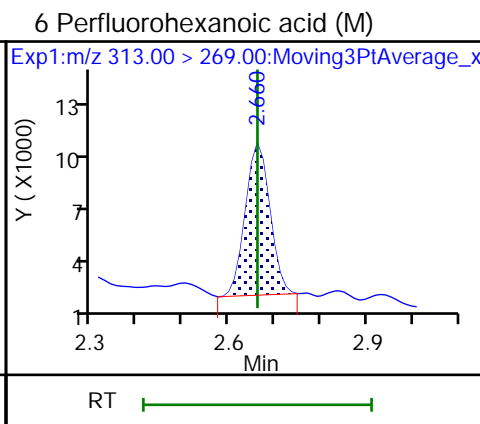
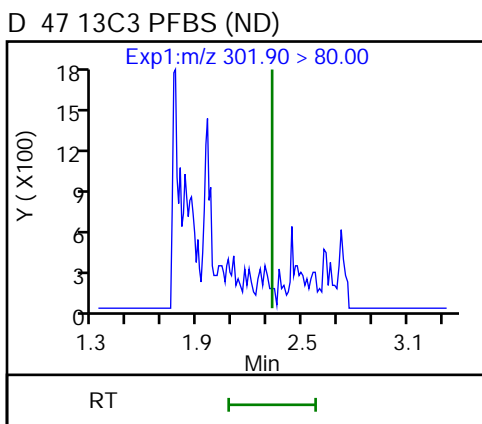
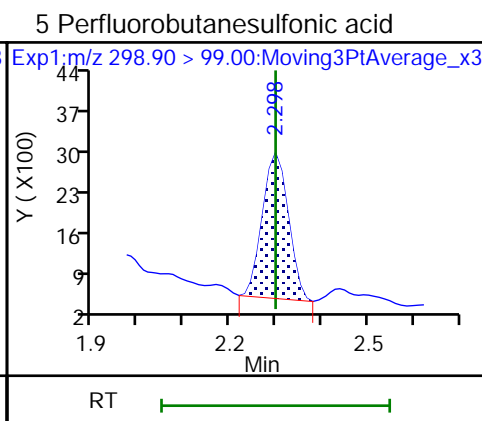
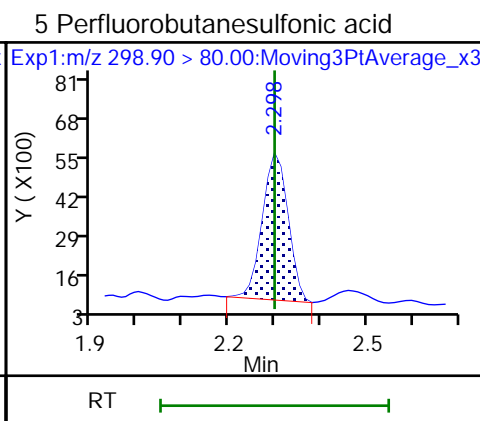
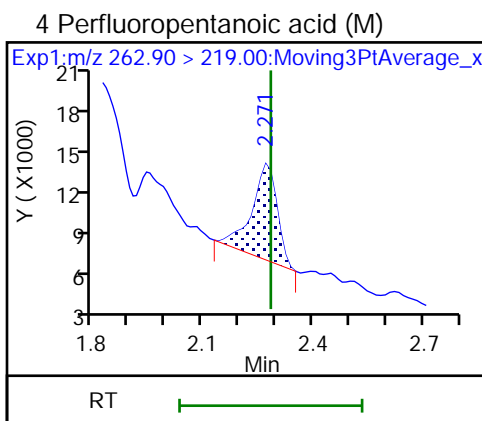
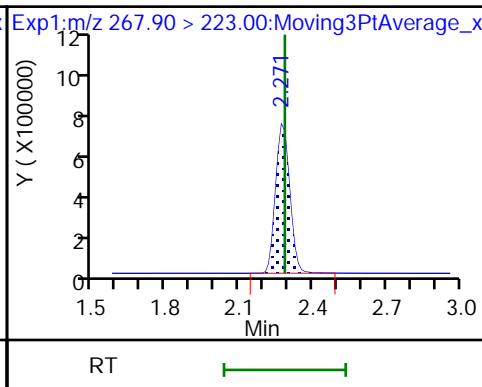
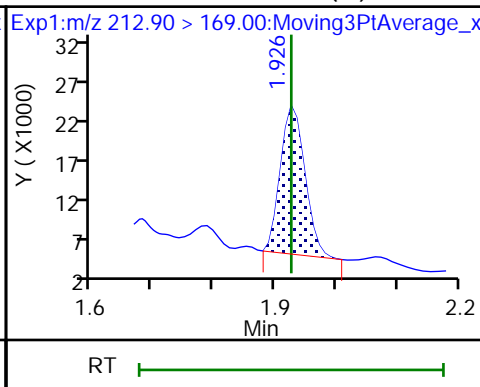
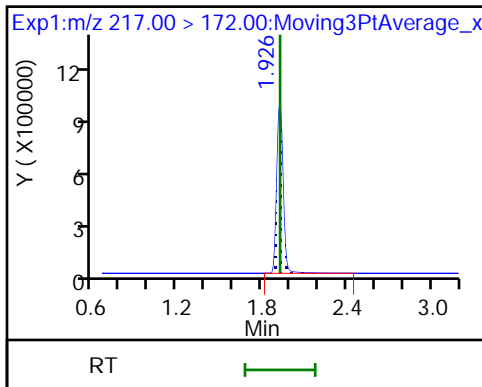
Method: PFC_LC812

Limit Group: LC_PFC_ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid (M)

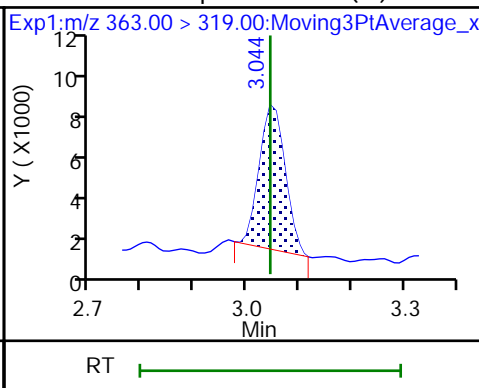
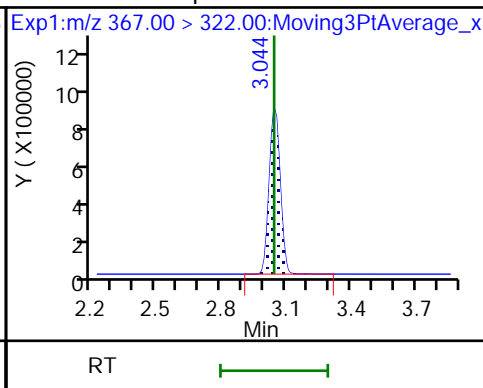
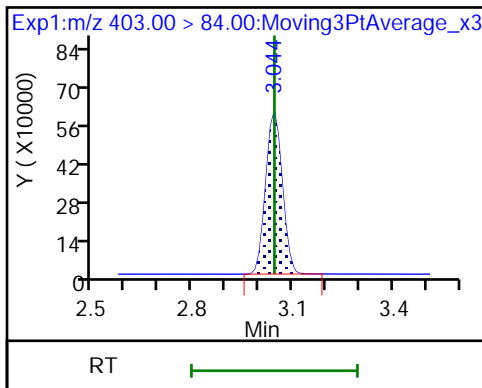
D 3 13C5 PFPeA



D 11 18O2 PFHxS

D 9 13C4 PFHpA

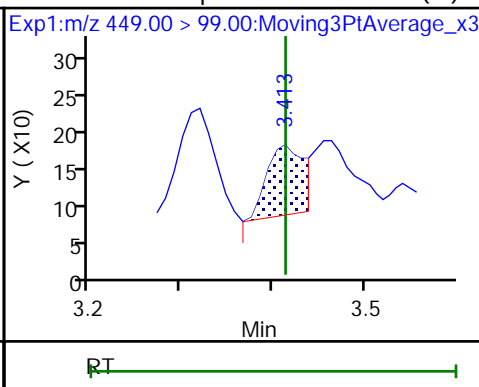
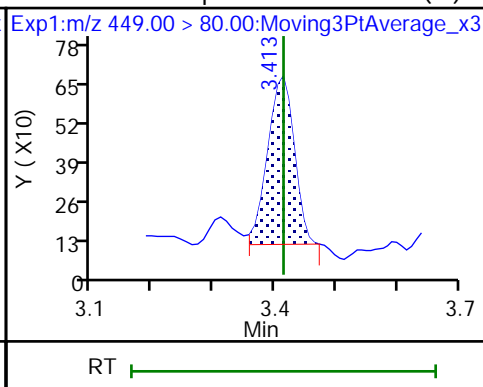
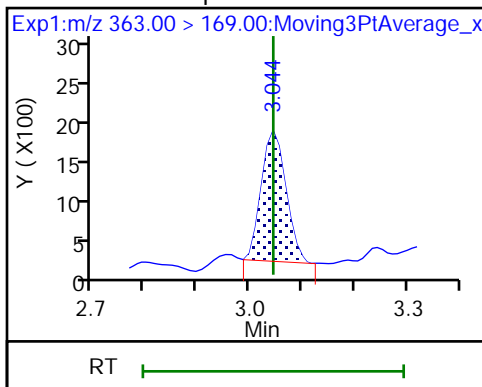
10 Perfluoroheptanoic acid (M)



10 Perfluoroheptanoic acid

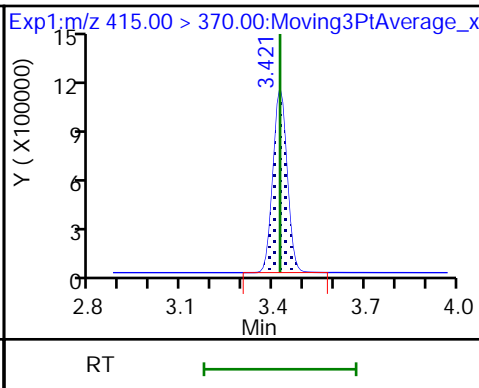
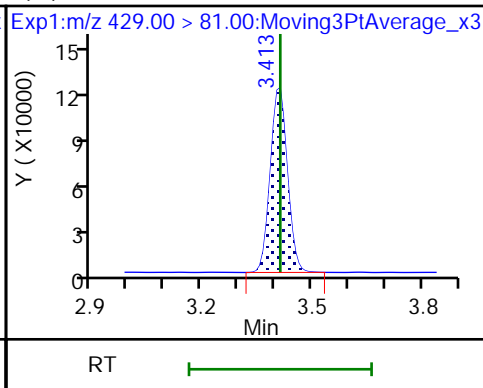
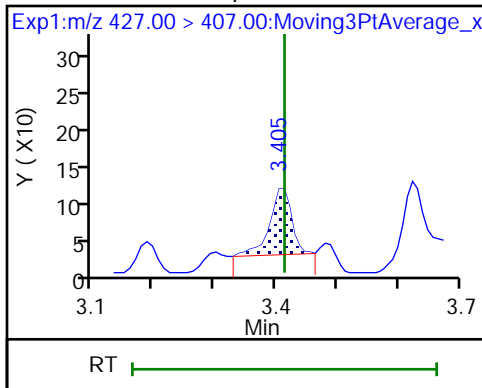
16 Perfluoroheptanesulfonic acid (M)

16 Perfluoroheptanesulfonic acid (M)



13 1H,1H,2H,2H-perfluorooctanesulfonate (M) M2-6:2 FTS

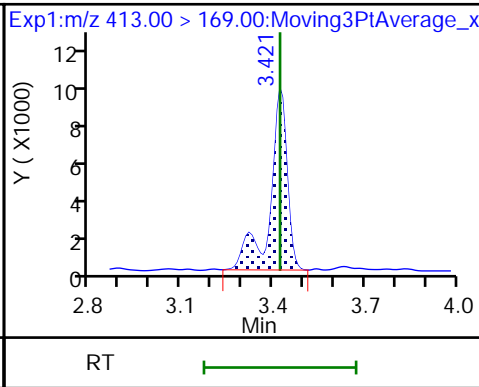
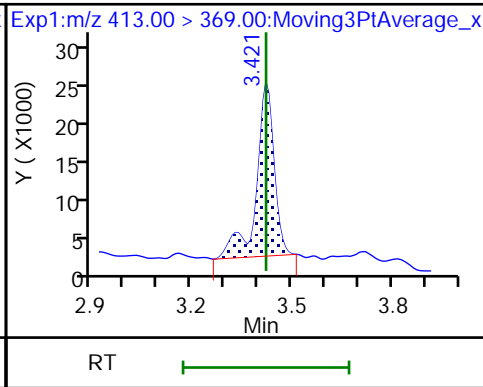
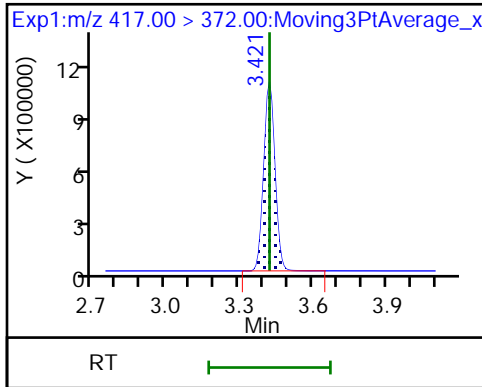
* 62 13C2 PFOA



D 14 13C4 PFOA

15 Perfluorooctanoic acid (M)

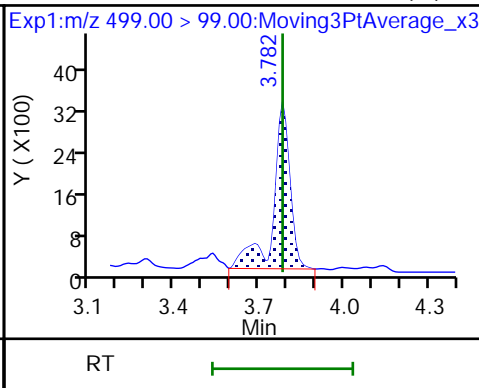
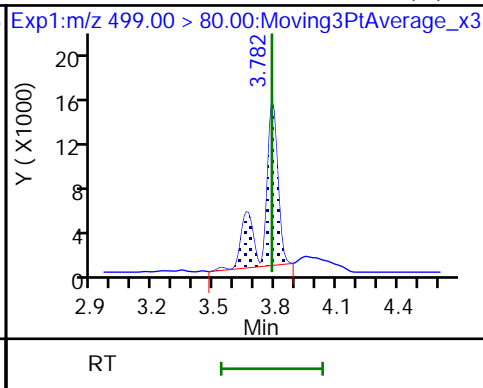
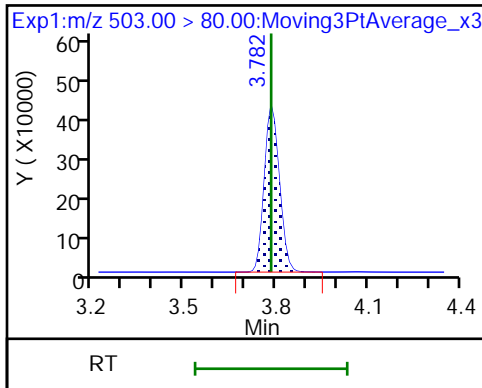
15 Perfluorooctanoic acid (M)



D 18 13C4 PFOS

17 Perfluorooctanesulfonic acid (M)

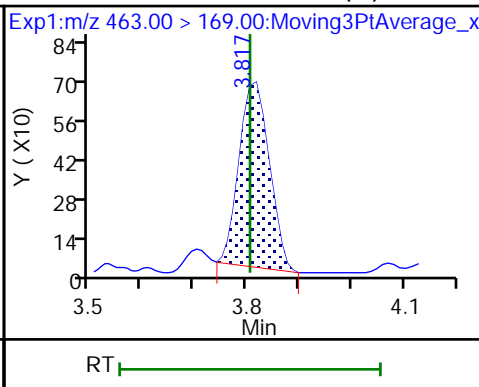
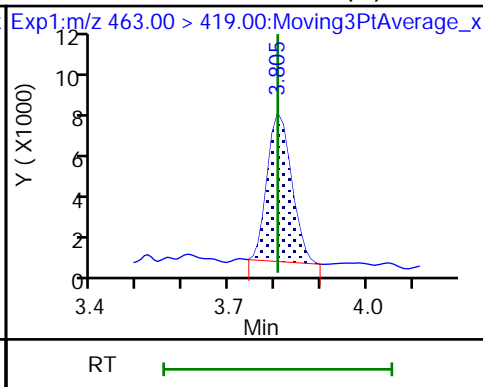
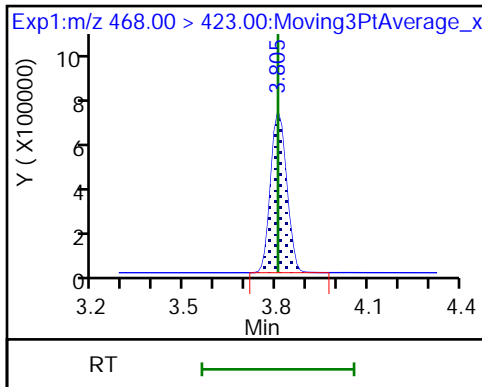
17 Perfluorooctanesulfonic acid (M)



D 19 13C5 PFNA

20 Perfluorononanoic acid (M)

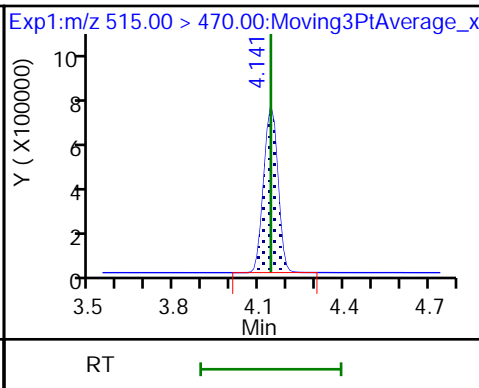
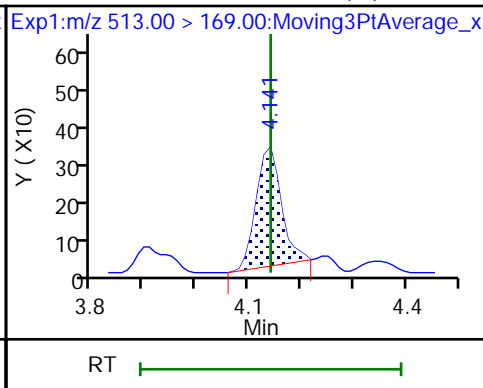
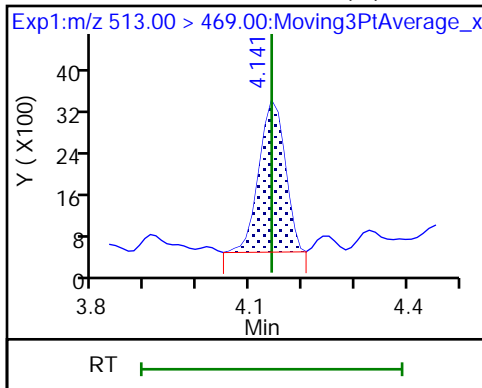
20 Perfluorononanoic acid (M)



24 Perfluorodecanoic acid (M)

24 Perfluorodecanoic acid (M)

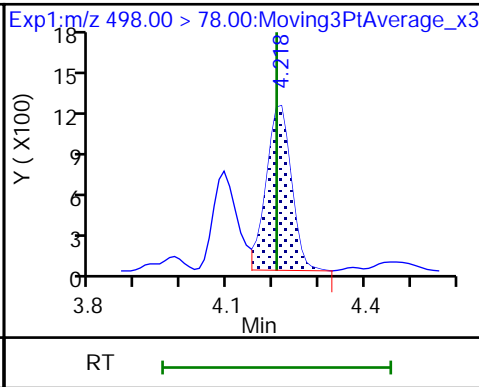
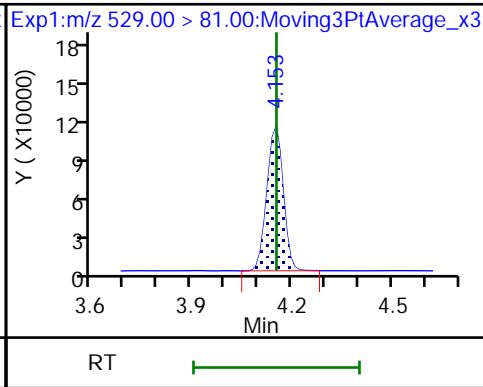
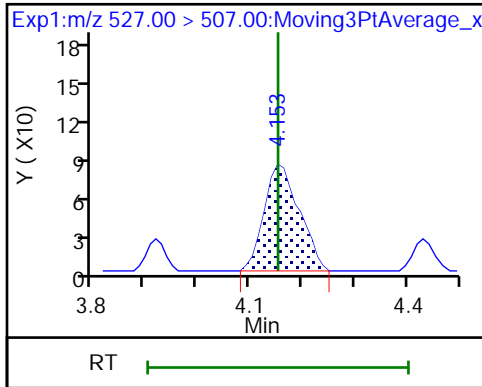
D 23 13C2 PFDA



25 1H,1H,2H,2H-perfluorodecanesulfonamide (M)

D 24 M2-8:2 FTS

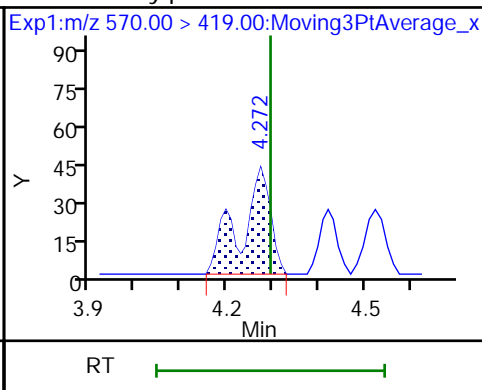
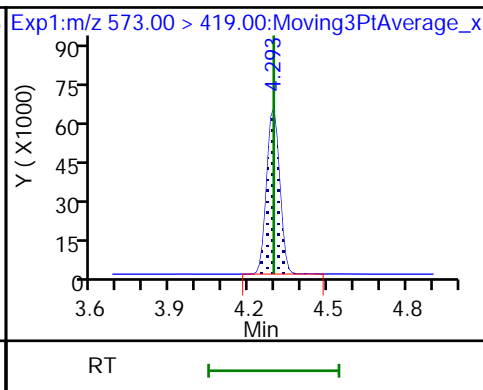
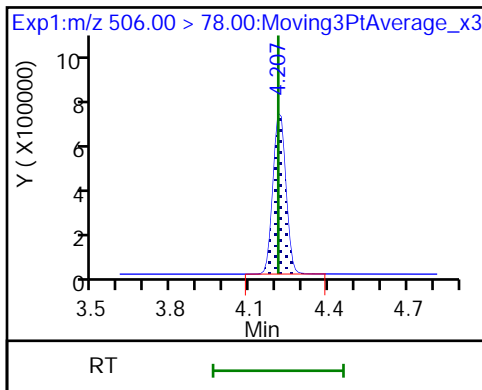
22 Perfluorooctanesulfonamide (M)



D 21 13C8 FOSA

D 27 d3-NMeFOSAA

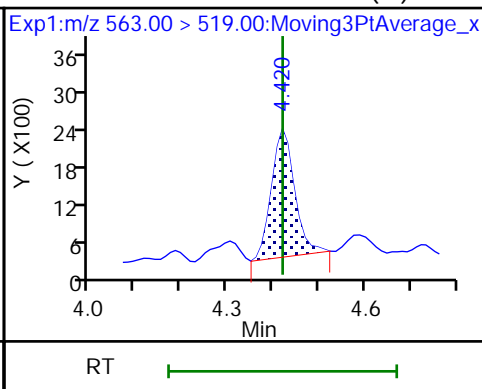
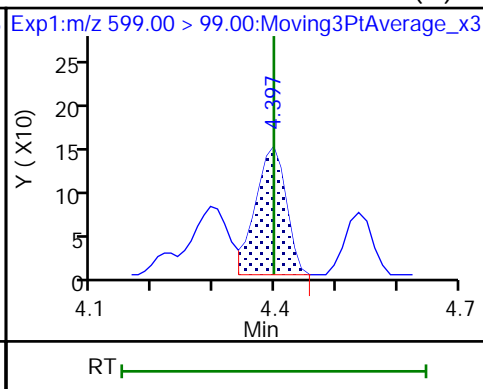
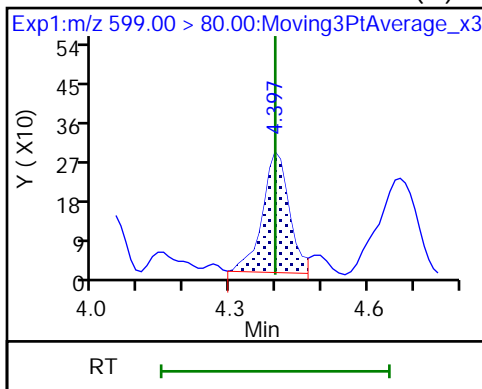
28 N-methylperfluorooctanesulfonamido (M)



29 Perfluorodecanesulfonic acid (M)

29 Perfluorodecanesulfonic acid (M)

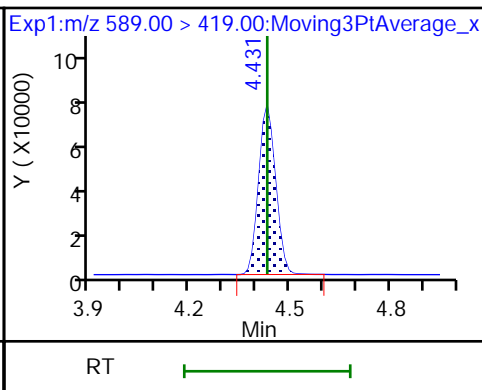
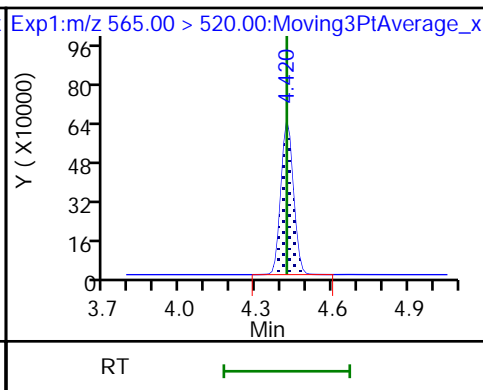
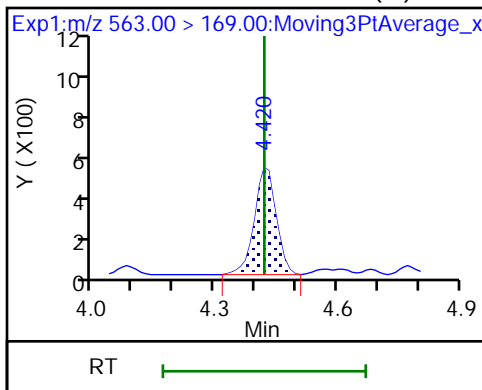
31 Perfluoroundecanoic acid (M)



31 Perfluoroundecanoic acid (M)

D 30 13C2 PFUnA

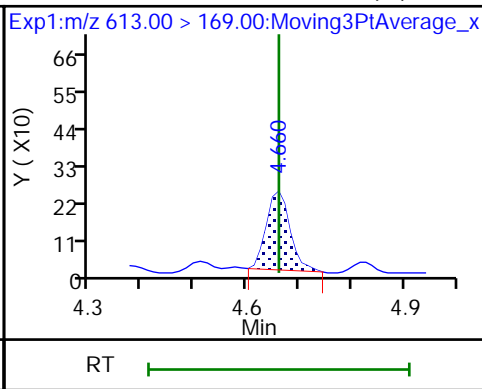
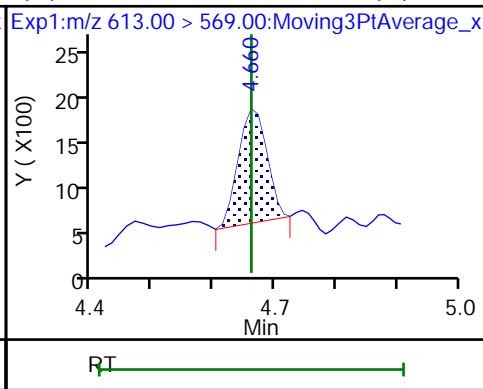
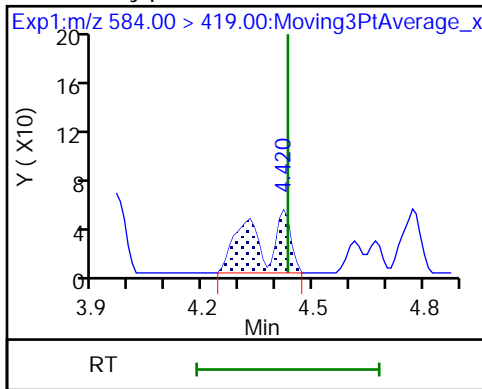
D 32 d5-NEtFOSAA



33 N-ethylperfluorooctanesulfonamidoa (M)

37 Perfluorododecanoic acid (M)

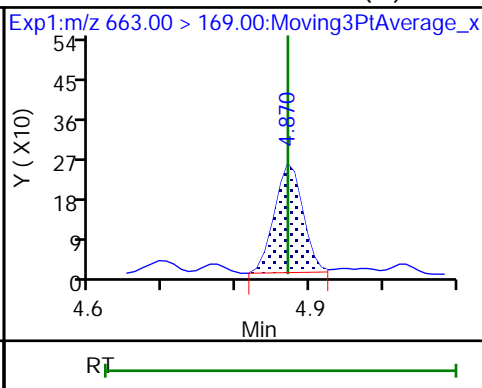
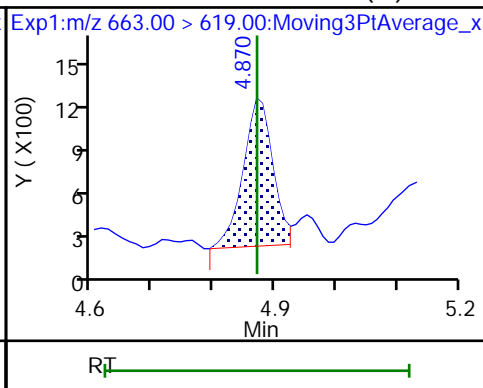
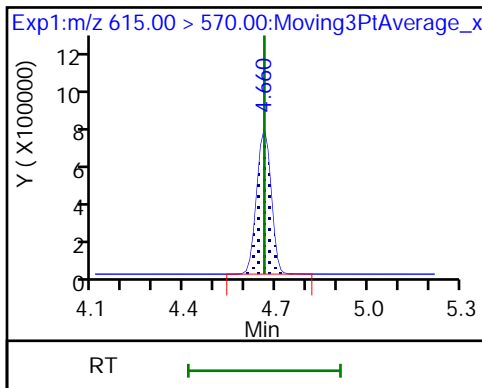
37 Perfluorododecanoic acid (M)



D 36 13C2 PFDoA

41 Perfluorotridecanoic acid (M)

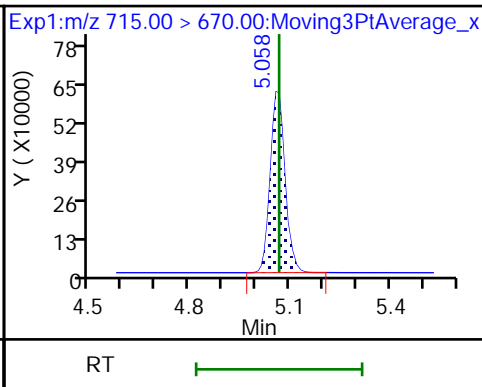
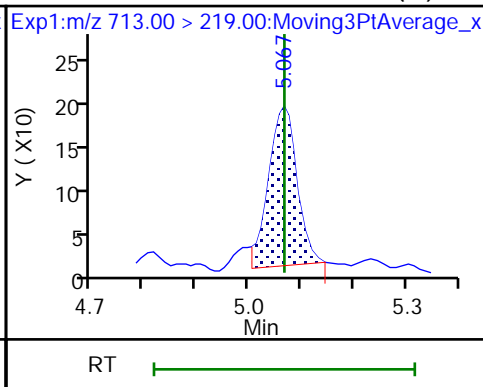
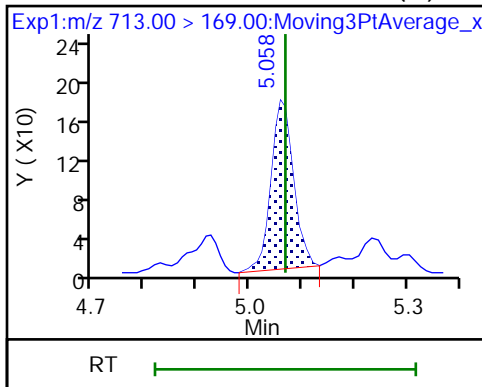
41 Perfluorotridecanoic acid (M)



42 Perfluorotetradecanoic acid (M)

42 Perfluorotetradecanoic acid (M)

D 43 13C2 PFTeDA



Eurofins TestAmerica, Burlington

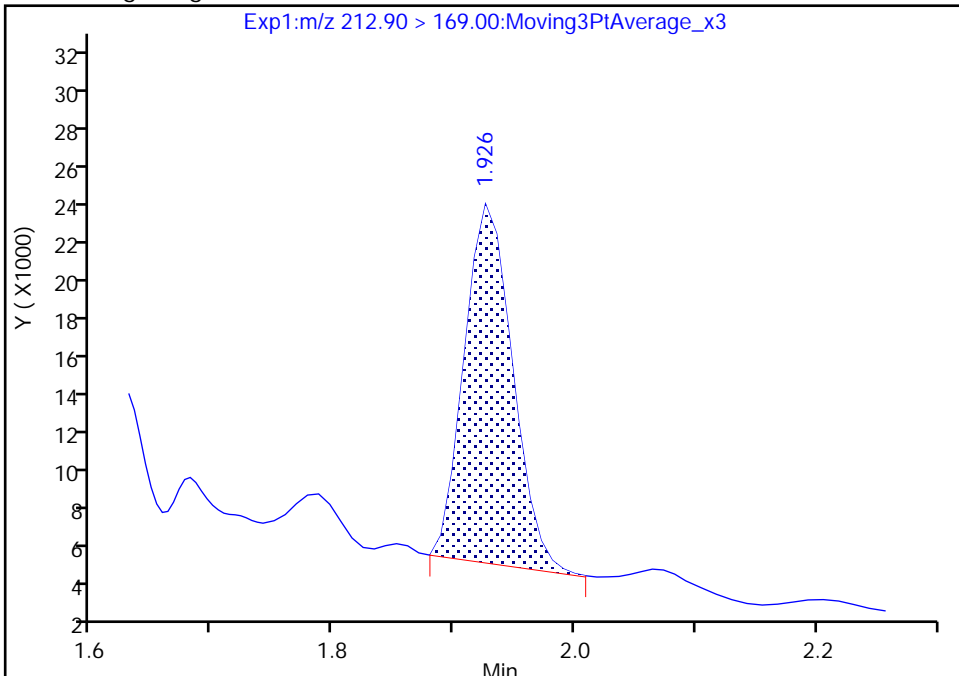
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Injection Date: 22-Oct-2019 22:20:15 Instrument ID: LC812
Lims ID: 480-160746-C-4-A Lab Sample ID: 200-160746-4
Client ID: DUPLICATE
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

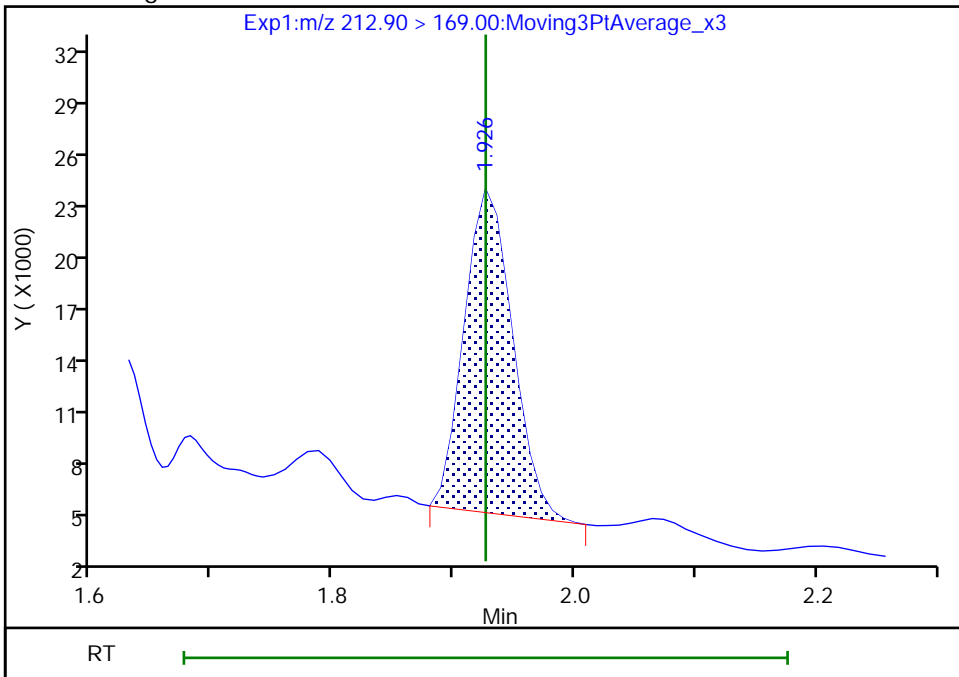
RT: 1.93
Area: 51506
Amount: 0.049424
Amount Units: ng/ml

Processing Integration Results



RT: 1.93
Area: 51250
Amount: 0.049178
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:33:34
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

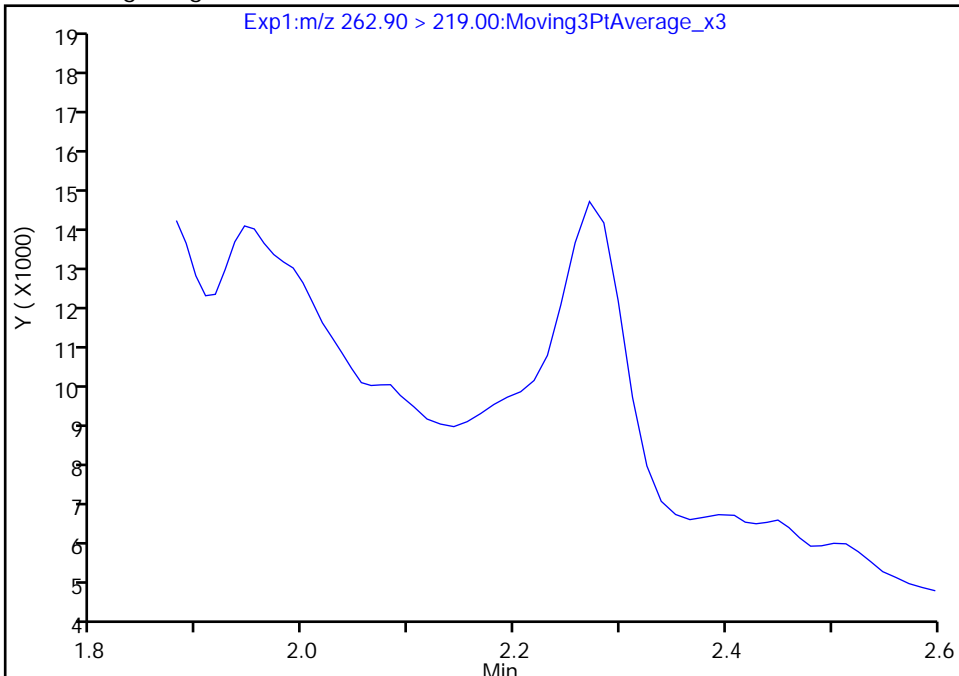
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Injection Date: 22-Oct-2019 22:20:15 Instrument ID: LC812
Lims ID: 480-160746-C-4-A Lab Sample ID: 200-160746-4
Client ID: DUPLICATE
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

4 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

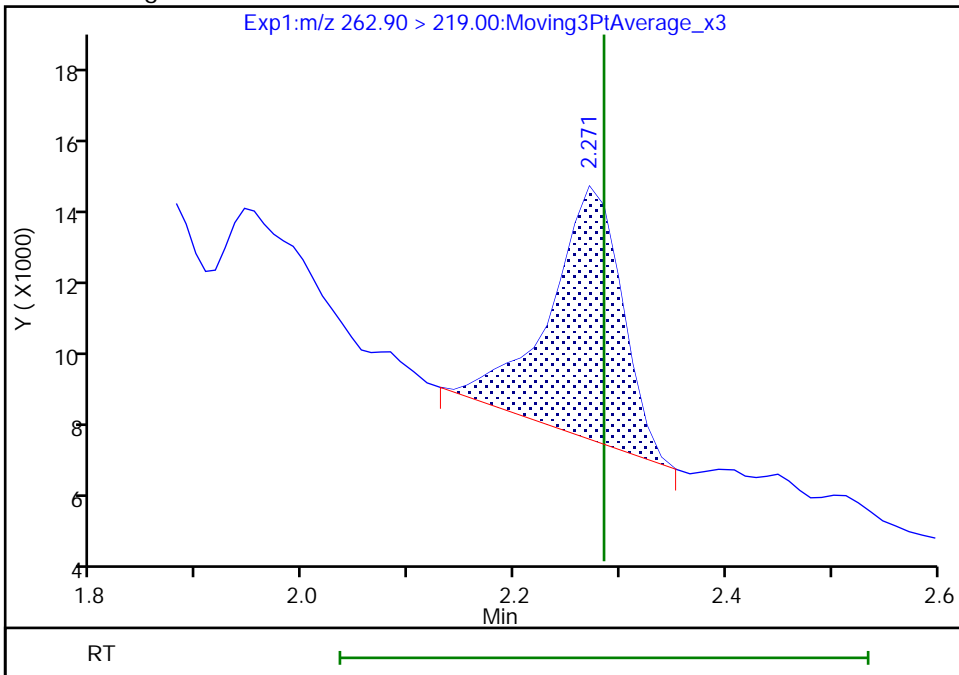
Not Detected
Expected RT: 2.28

Processing Integration Results



Manual Integration Results

RT: 2.27
Area: 32254
Amount: 0.019562
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:33:46
Audit Action: Manually Integrated

Audit Reason: Assign Peak
Page 261 of 599

Eurofins TestAmerica, Burlington

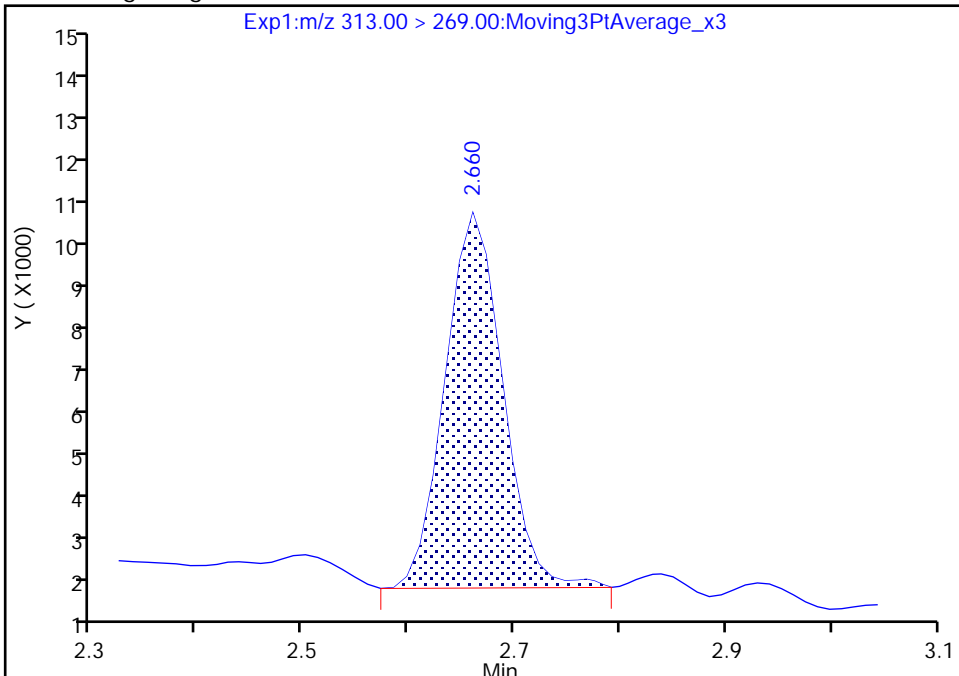
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Injection Date: 22-Oct-2019 22:20:15 Instrument ID: LC812
Lims ID: 480-160746-C-4-A Lab Sample ID: 200-160746-4
Client ID: DUPLICATE
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

6 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

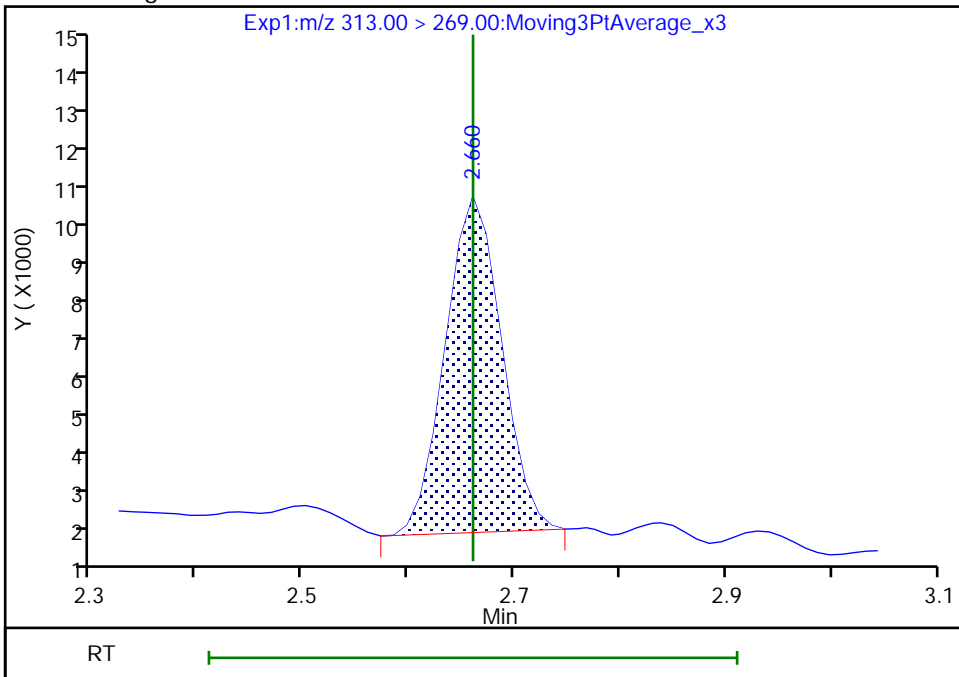
RT: 2.66
Area: 33208
Amount: 0.028309
Amount Units: ng/ml

Processing Integration Results



RT: 2.66
Area: 32023
Amount: 0.027299
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:34:06
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

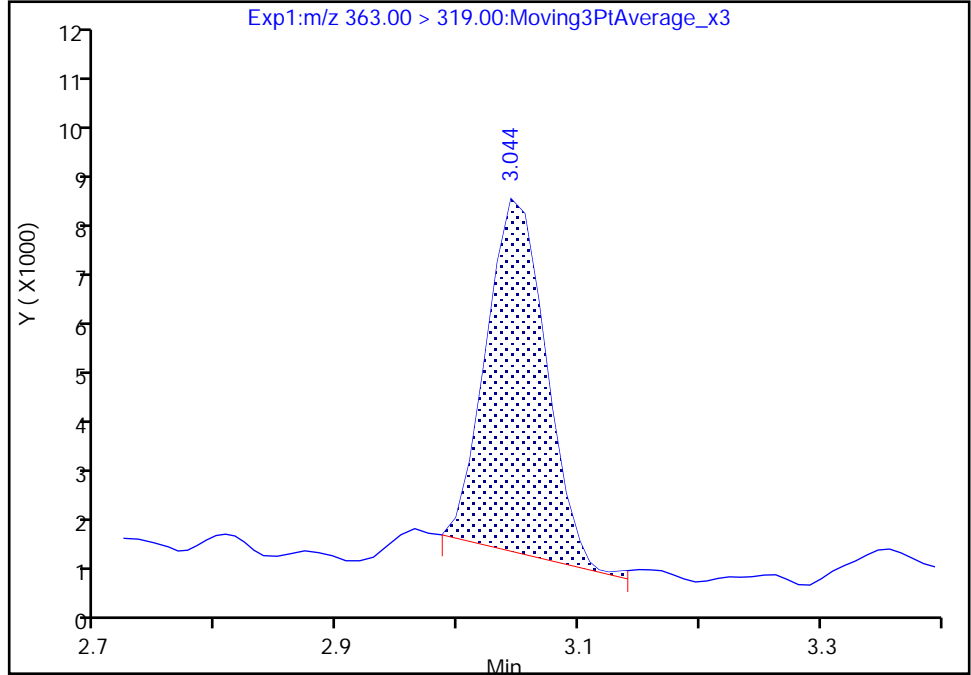
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B019.d
Injection Date: 22-Oct-2019 22:20:15 Instrument ID: LC812
Lims ID: 480-160746-C-4-A Lab Sample ID: 200-160746-4
Client ID: DUPLICATE
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 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

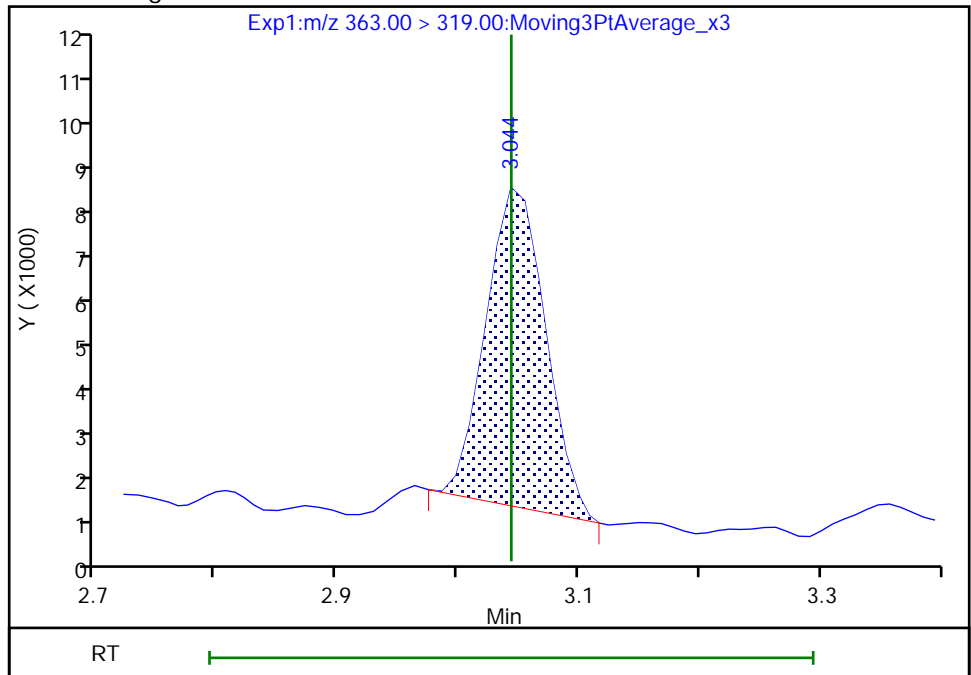
RT: 3.04
Area: 22595
Amount: 0.020911
Amount Units: ng/ml

Processing Integration Results



RT: 3.04
Area: 22431
Amount: 0.020760
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:34:38
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

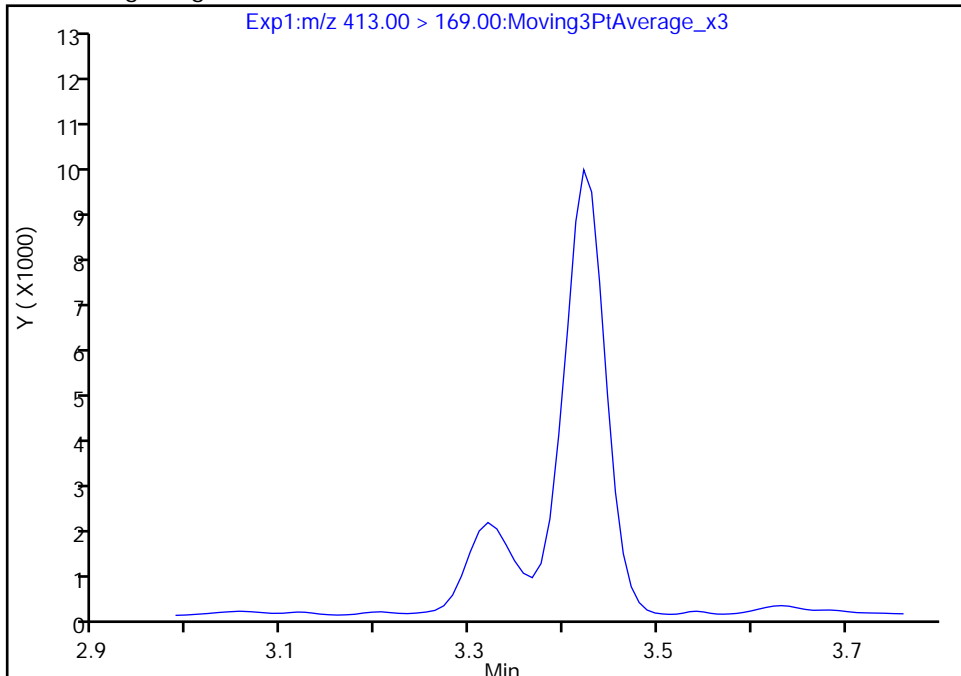
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B019.d
Injection Date: 22-Oct-2019 22:20:15 Instrument ID: LC812
Lims ID: 480-160746-C-4-A Lab Sample ID: 200-160746-4
Client ID: DUPLICATE
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 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

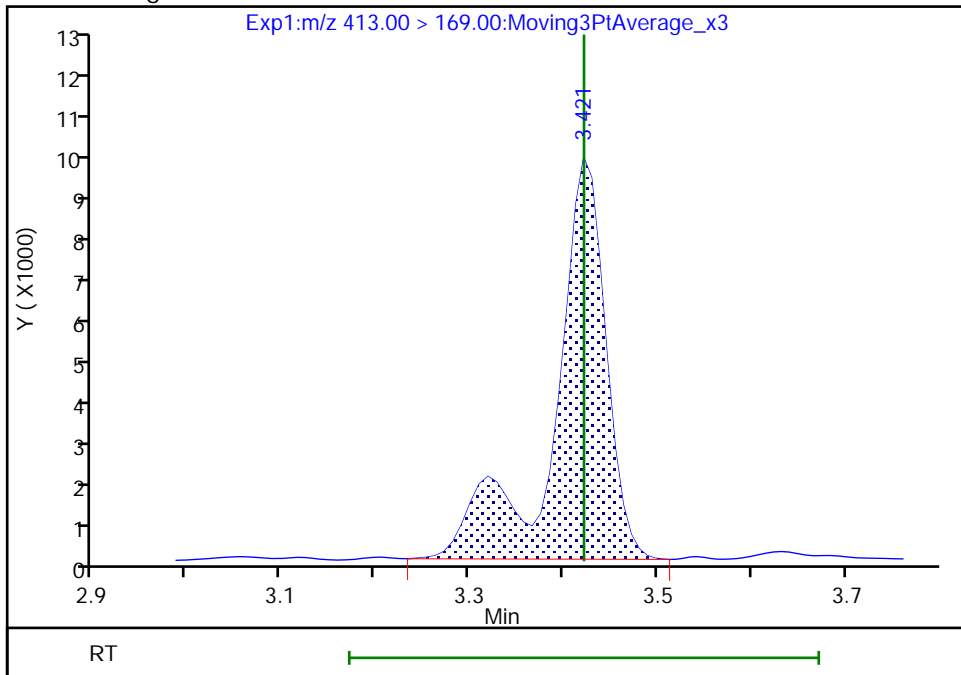
Not Detected
Expected RT: 3.42

Processing Integration Results



Manual Integration Results

RT: 3.42
Area: 37204
Amount: 0.046022
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:36:03
Audit Action: Manually Integrated

Audit Reason: Assign Peak
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Eurofins TestAmerica, Burlington

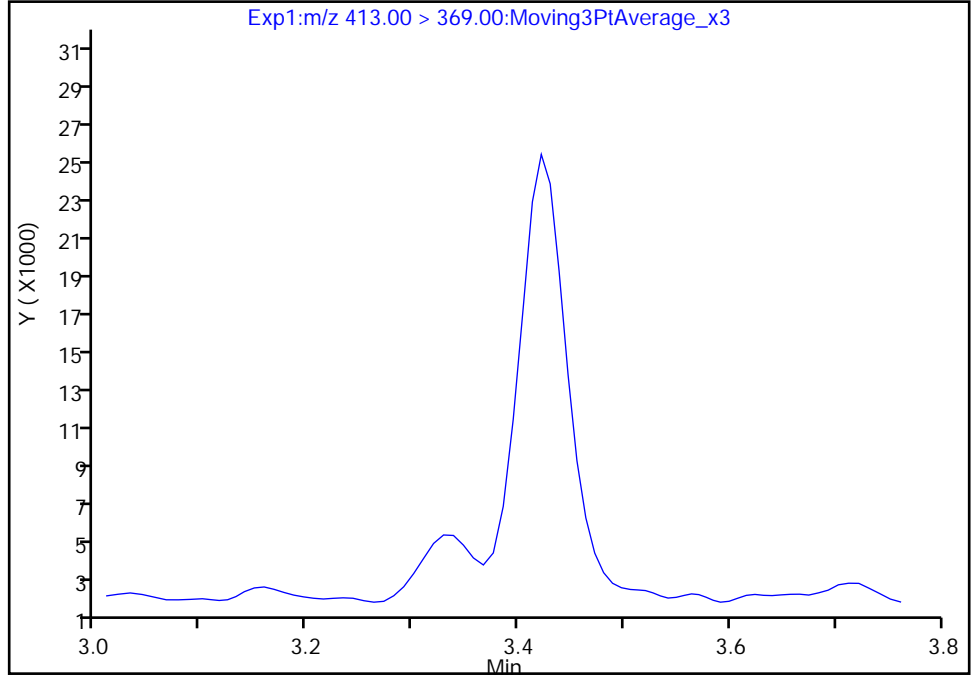
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B019.d
Injection Date: 22-Oct-2019 22:20:15 Instrument ID: LC812
Lims ID: 480-160746-C-4-A Lab Sample ID: 200-160746-4
Client ID: DUPLICATE
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 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

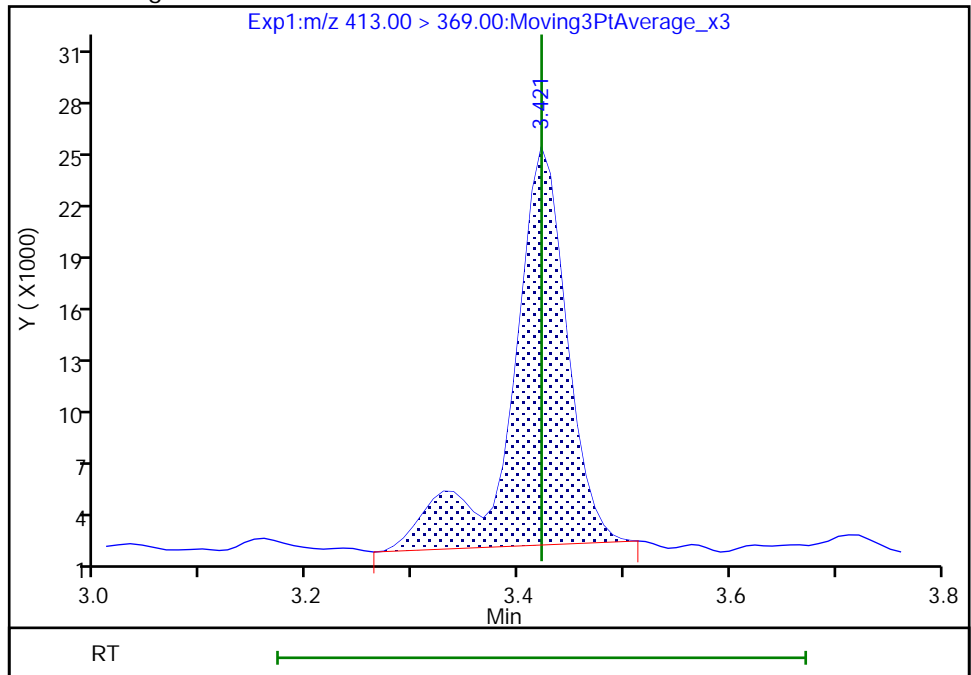
Not Detected
Expected RT: 3.42

Processing Integration Results



Manual Integration Results

RT: 3.42
Area: 84599
Amount: 0.046022
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:36:16

Audit Action: Manually Integrated

Audit Reason: Assign Peak

Eurofins TestAmerica, Burlington

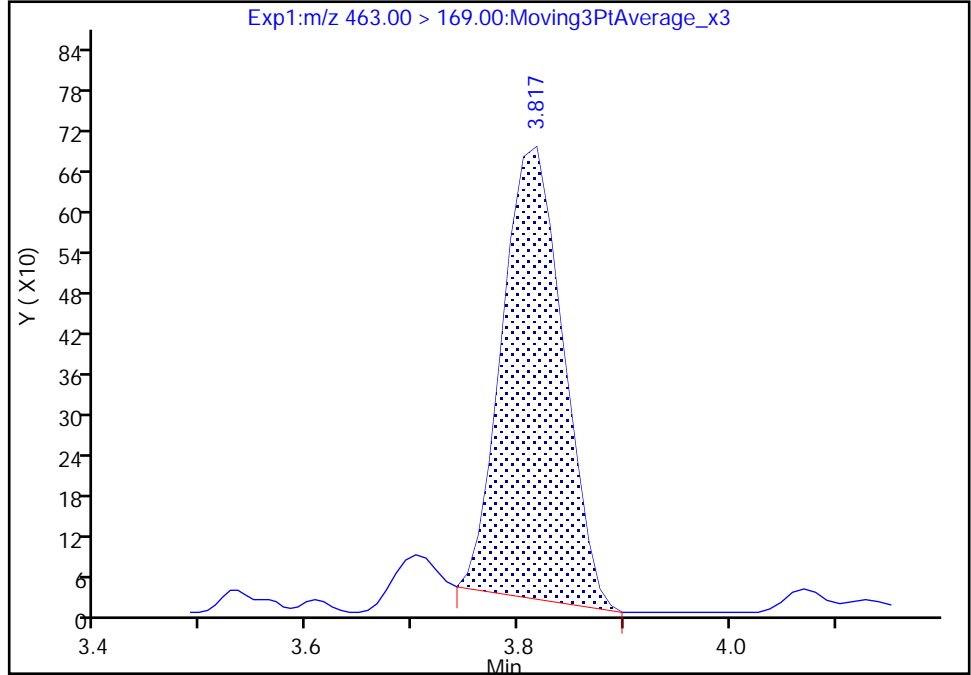
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B019.d
Injection Date: 22-Oct-2019 22:20:15 Instrument ID: LC812
Lims ID: 480-160746-C-4-A Lab Sample ID: 200-160746-4
Client ID: DUPLICATE
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 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

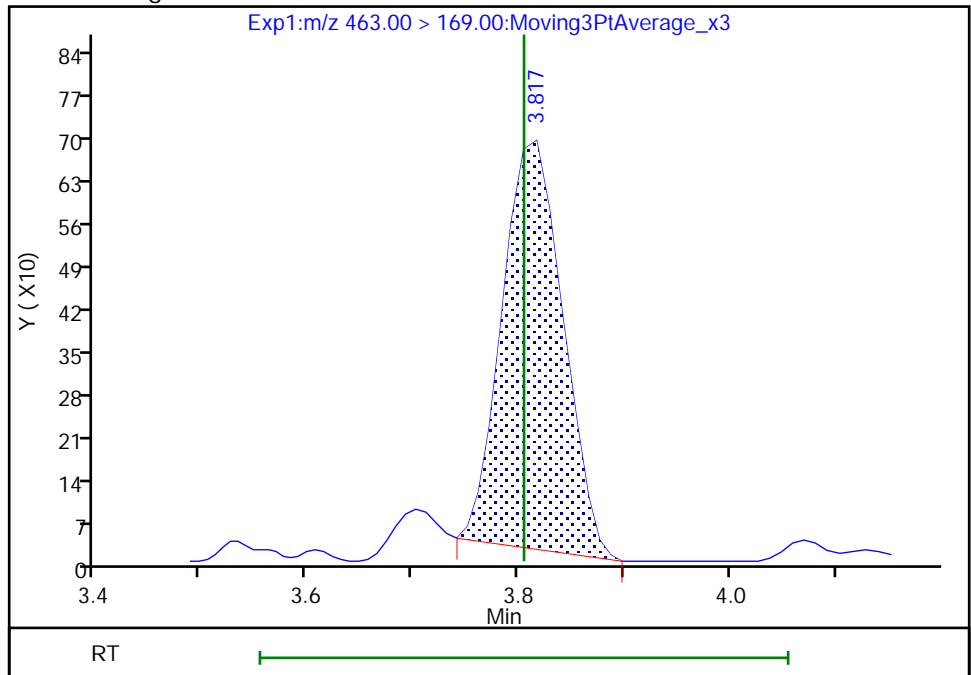
RT: 3.82
Area: 2701
Amount: 0.026996
Amount Units: ng/ml

Processing Integration Results



RT: 3.82
Area: 2701
Amount: 0.026971
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:37:04
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

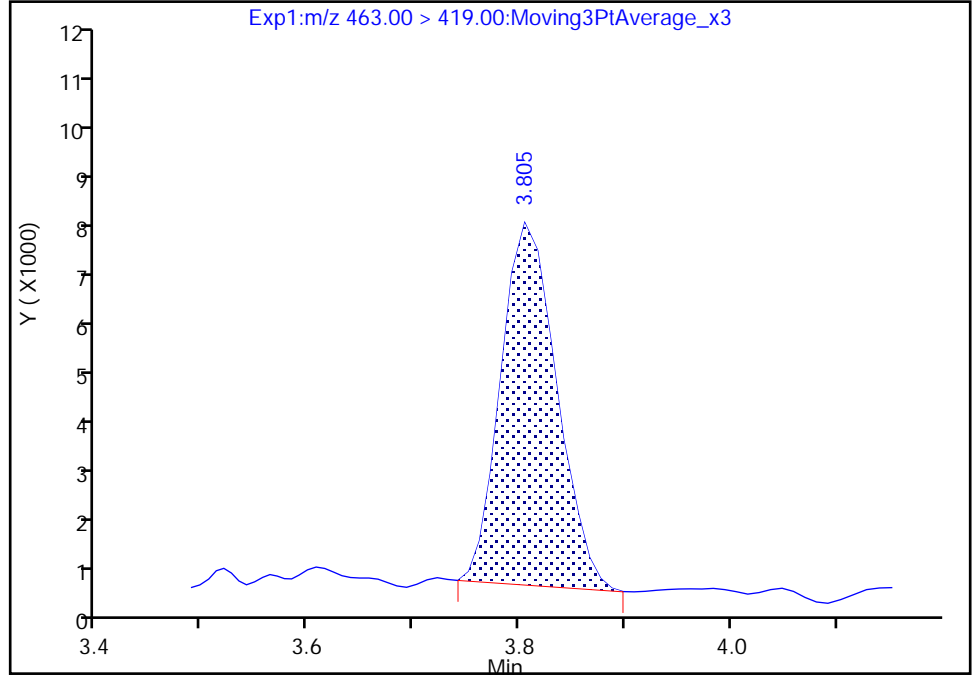
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B019.d
Injection Date: 22-Oct-2019 22:20:15 Instrument ID: LC812
Lims ID: 480-160746-C-4-A Lab Sample ID: 200-160746-4
Client ID: DUPLICATE
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 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

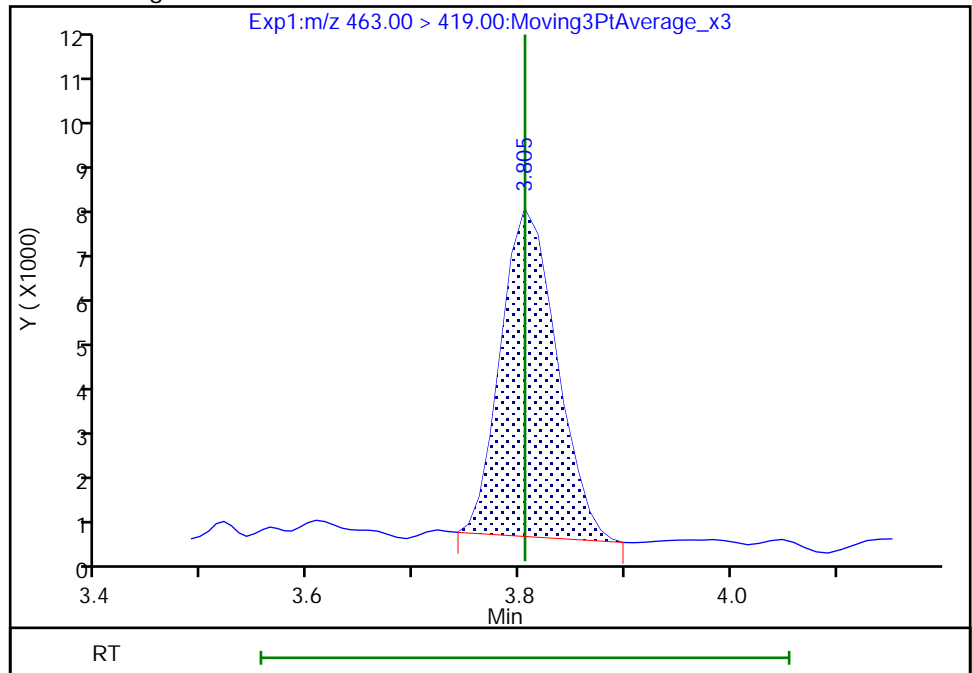
RT: 3.80
Area: 25859
Amount: 0.026996
Amount Units: ng/ml

Processing Integration Results



RT: 3.80
Area: 25835
Amount: 0.026971
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:37:07

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

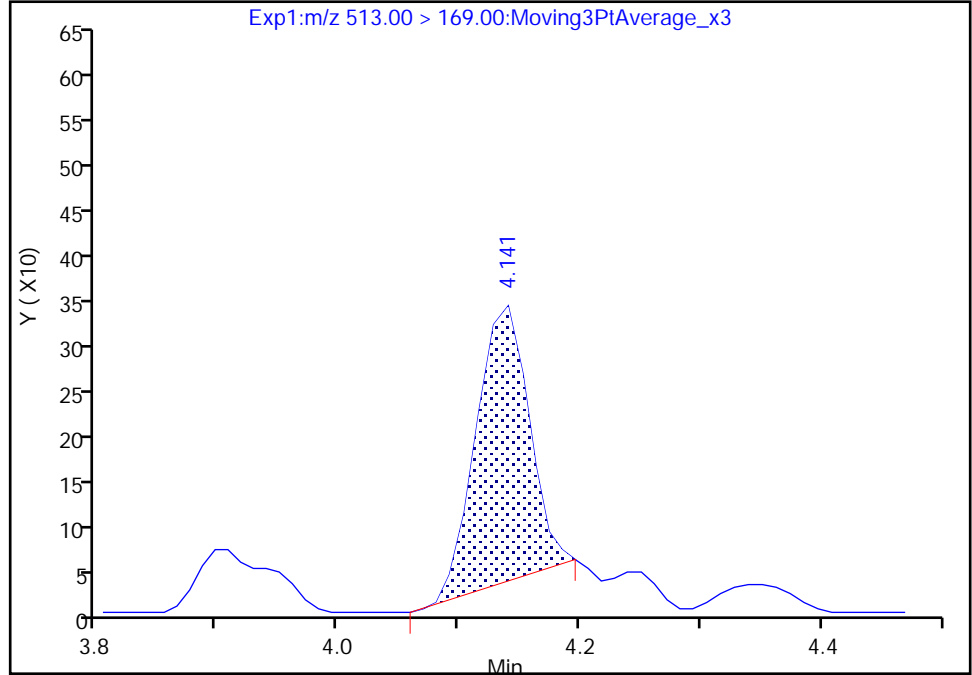
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B019.d
Injection Date: 22-Oct-2019 22:20:15 Instrument ID: LC812
Lims ID: 480-160746-C-4-A Lab Sample ID: 200-160746-4
Client ID: DUPLICATE
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 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

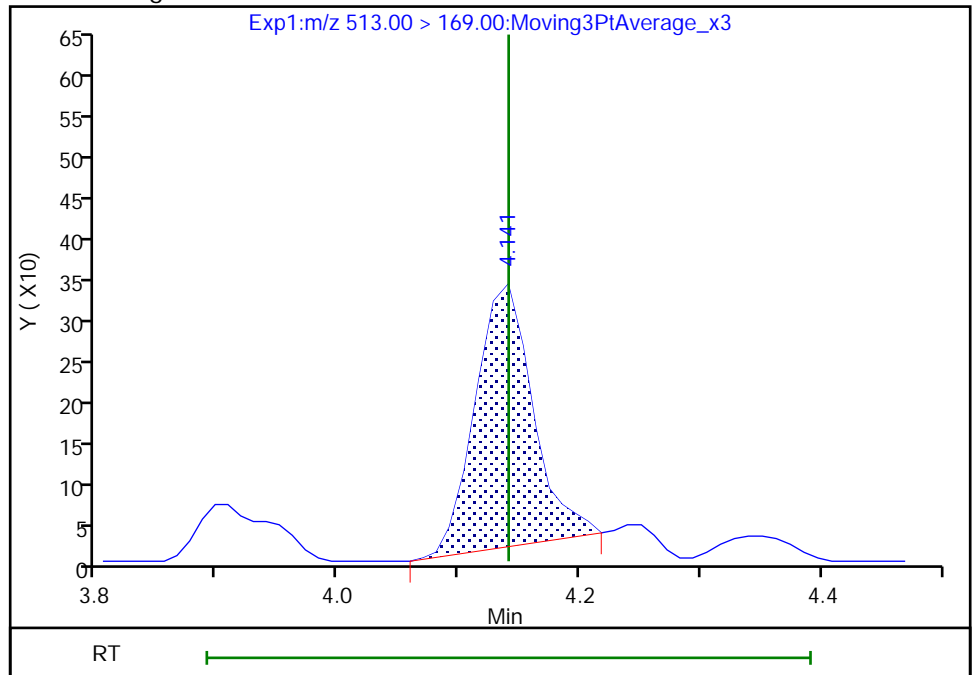
RT: 4.14
Area: 939
Amount: 0.011031
Amount Units: ng/ml

Processing Integration Results



RT: 4.14
Area: 1077
Amount: 0.011031
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:37:16
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

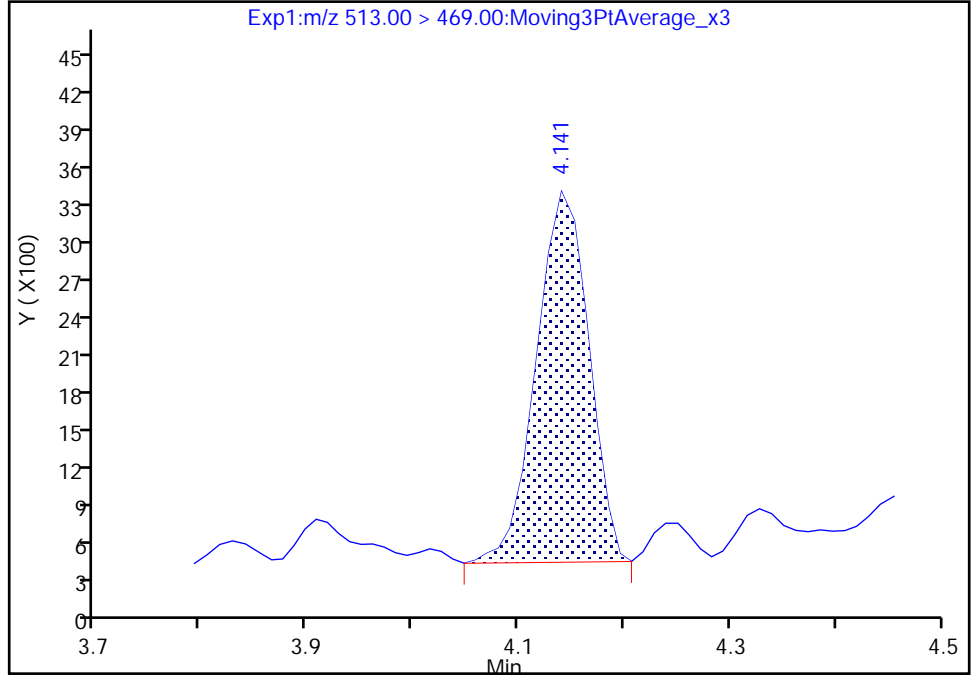
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B019.d
Injection Date: 22-Oct-2019 22:20:15 Instrument ID: LC812
Lims ID: 480-160746-C-4-A Lab Sample ID: 200-160746-4
Client ID: DUPLICATE
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 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

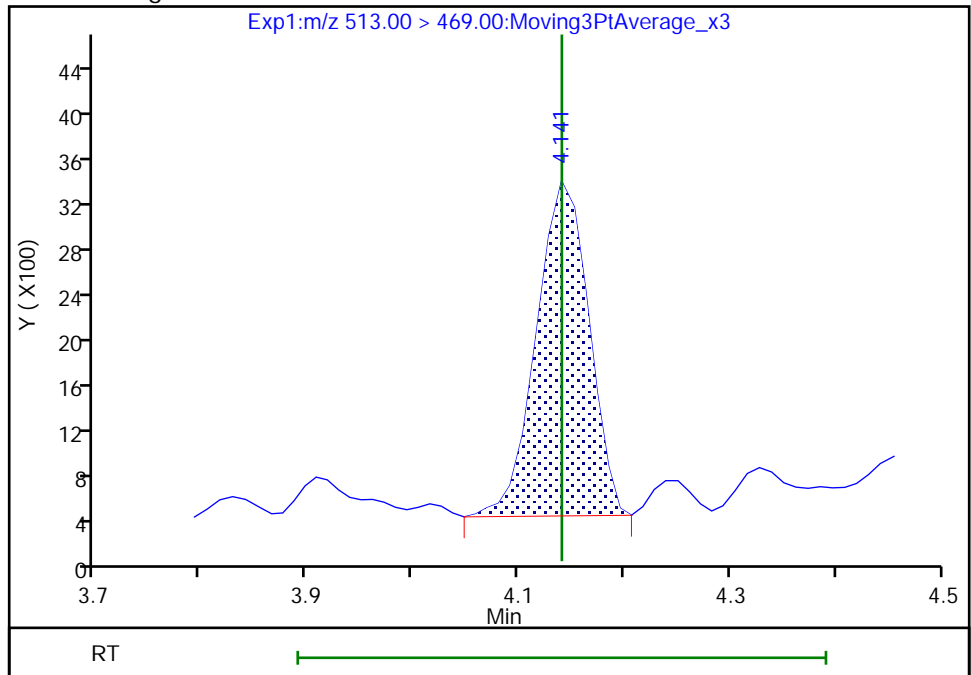
RT: 4.14
Area: 9980
Amount: 0.011031
Amount Units: ng/ml

Processing Integration Results



RT: 4.14
Area: 9980
Amount: 0.011031
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:37:22

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

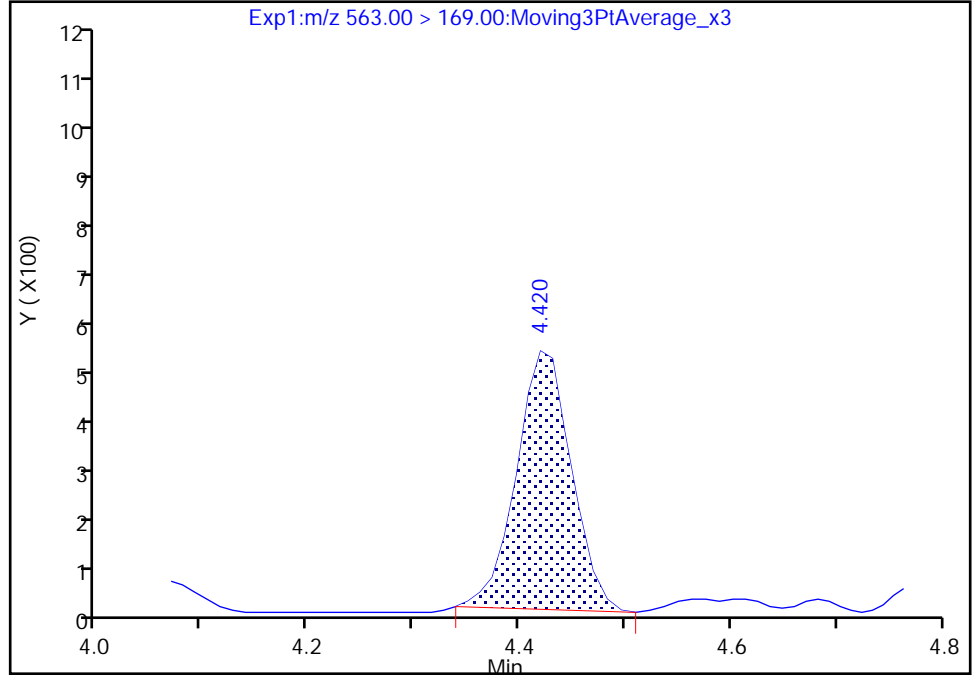
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B019.d
Injection Date: 22-Oct-2019 22:20:15 Instrument ID: LC812
Lims ID: 480-160746-C-4-A Lab Sample ID: 200-160746-4
Client ID: DUPLICATE
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 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

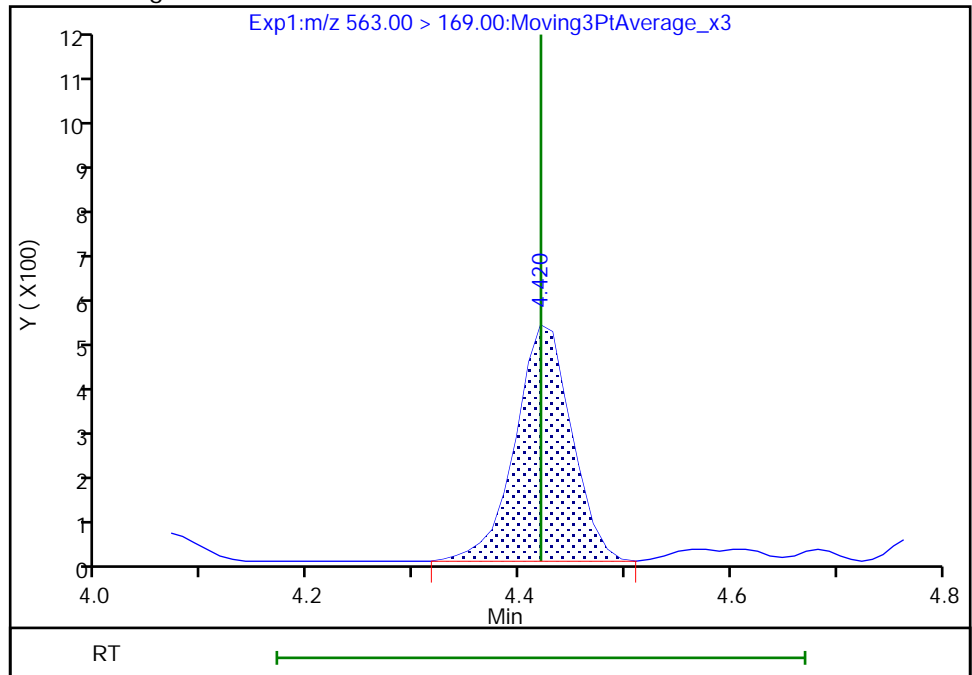
RT: 4.42
Area: 1759
Amount: 0.009426
Amount Units: ng/ml

Processing Integration Results



RT: 4.42
Area: 1822
Amount: 0.009759
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:38:42
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

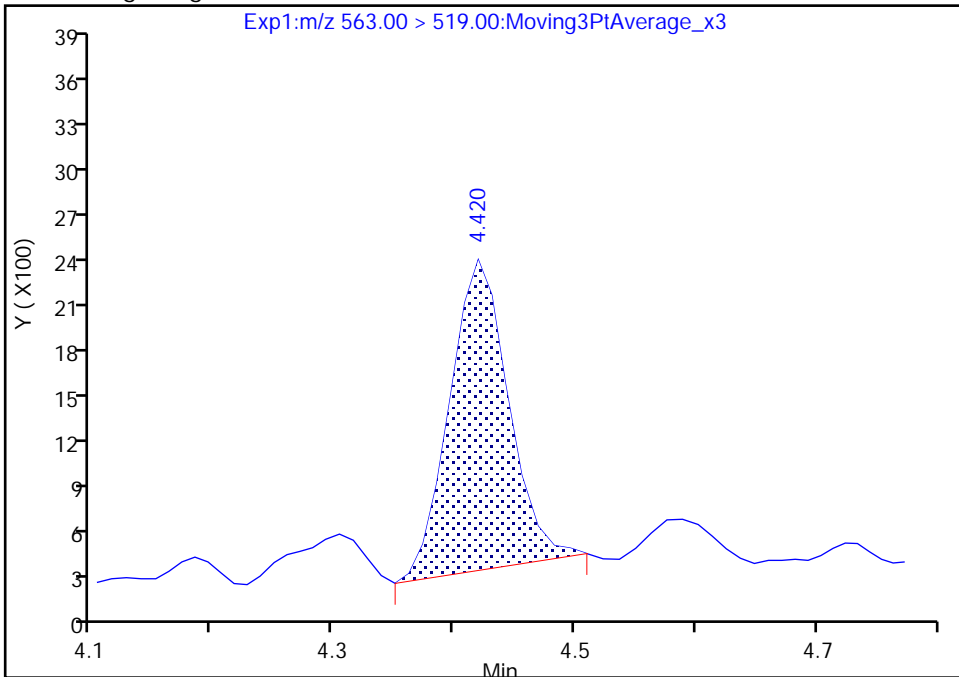
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B019.d
Injection Date: 22-Oct-2019 22:20:15 Instrument ID: LC812
Lims ID: 480-160746-C-4-A Lab Sample ID: 200-160746-4
Client ID: DUPLICATE
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 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

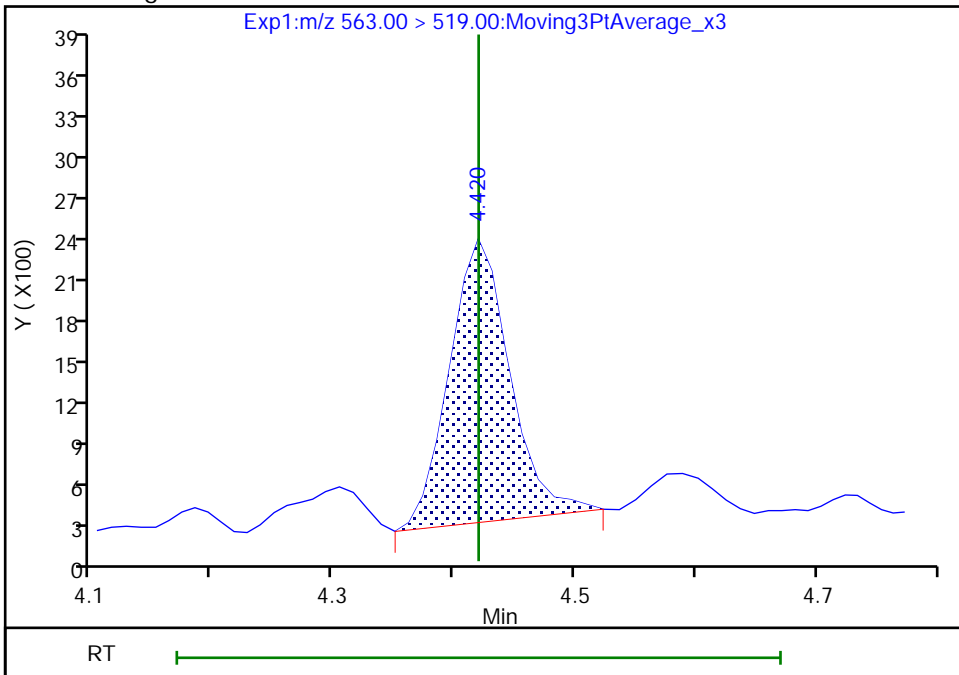
RT: 4.42
Area: 6790
Amount: 0.009426
Amount Units: ng/ml

Processing Integration Results



RT: 4.42
Area: 7030
Amount: 0.009759
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:38:46

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

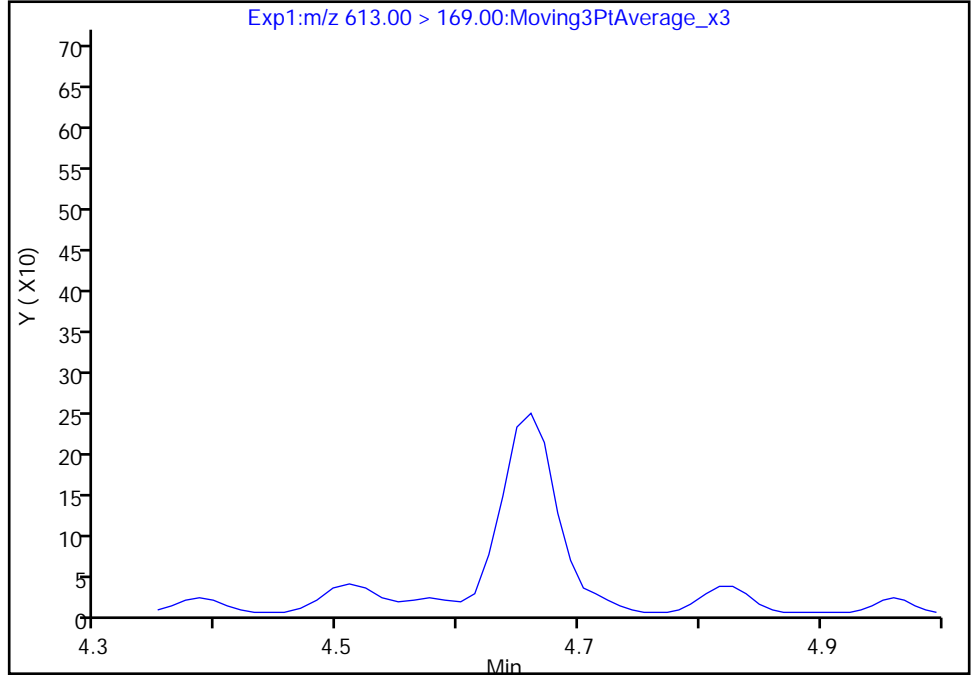
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B019.d
Injection Date: 22-Oct-2019 22:20:15 Instrument ID: LC812
Lims ID: 480-160746-C-4-A Lab Sample ID: 200-160746-4
Client ID: DUPLICATE
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

37 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 2

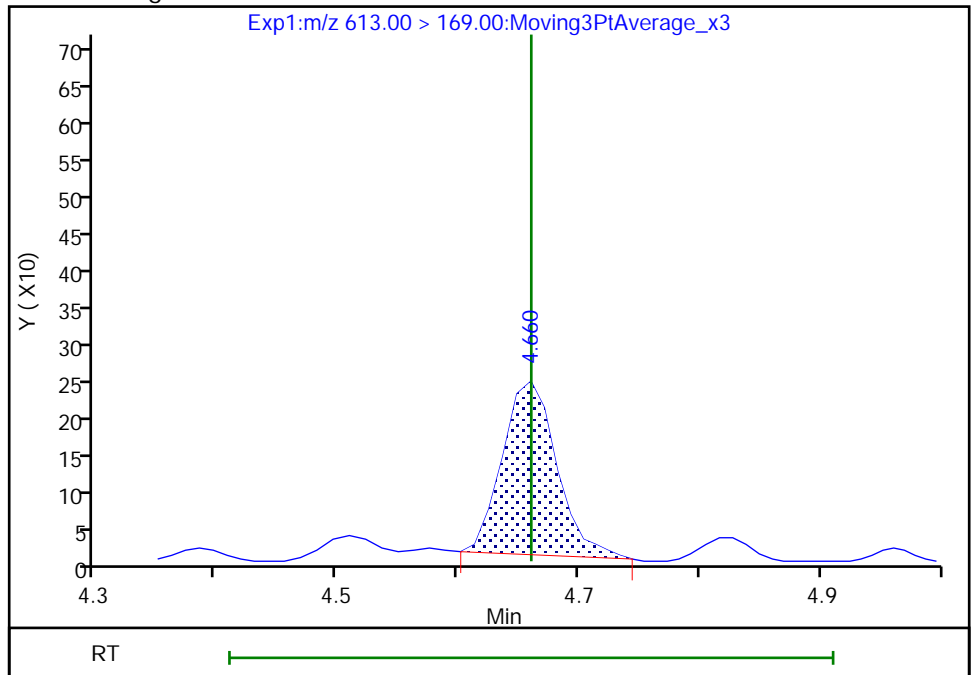
Not Detected
Expected RT: 4.66

Processing Integration Results



Manual Integration Results

RT: 4.66
Area: 735
Amount: 0.004576
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:39:14
Audit Action: Manually Integrated

Audit Reason: Assign Peak
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Eurofins TestAmerica, Burlington

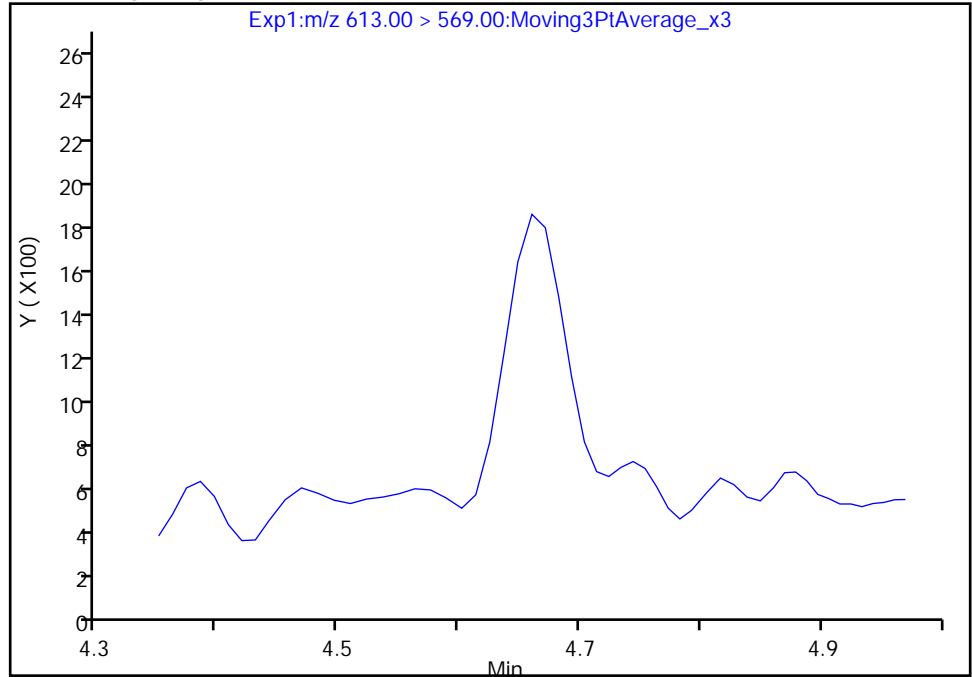
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B019.d
Injection Date: 22-Oct-2019 22:20:15 Instrument ID: LC812
Lims ID: 480-160746-C-4-A Lab Sample ID: 200-160746-4
Client ID: DUPLICATE
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

37 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 1

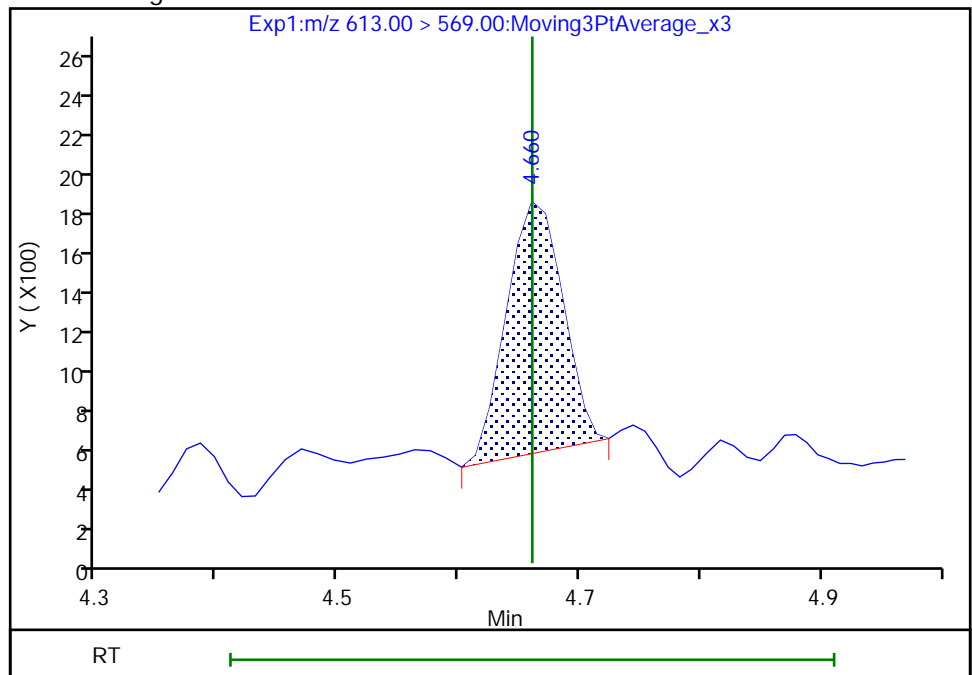
Not Detected
Expected RT: 4.66

Processing Integration Results



Manual Integration Results

RT: 4.66
Area: 4035
Amount: 0.004576
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:39:21

Audit Action: Manually Integrated

Audit Reason: Assign Peak
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Eurofins TestAmerica, Burlington

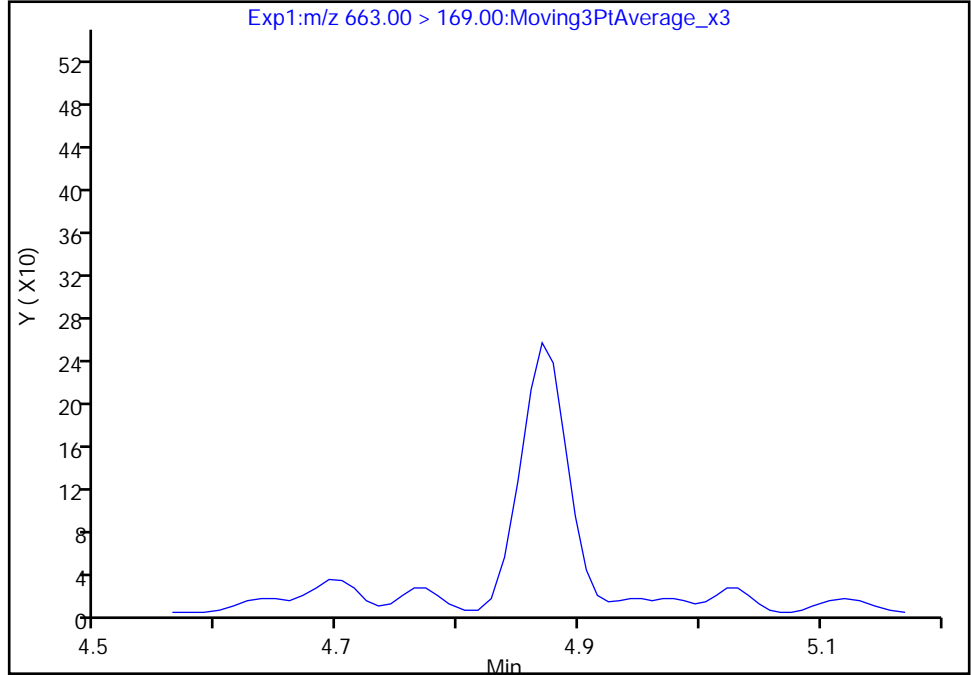
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B019.d
Injection Date: 22-Oct-2019 22:20:15 Instrument ID: LC812
Lims ID: 480-160746-C-4-A Lab Sample ID: 200-160746-4
Client ID: DUPLICATE
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

41 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 2

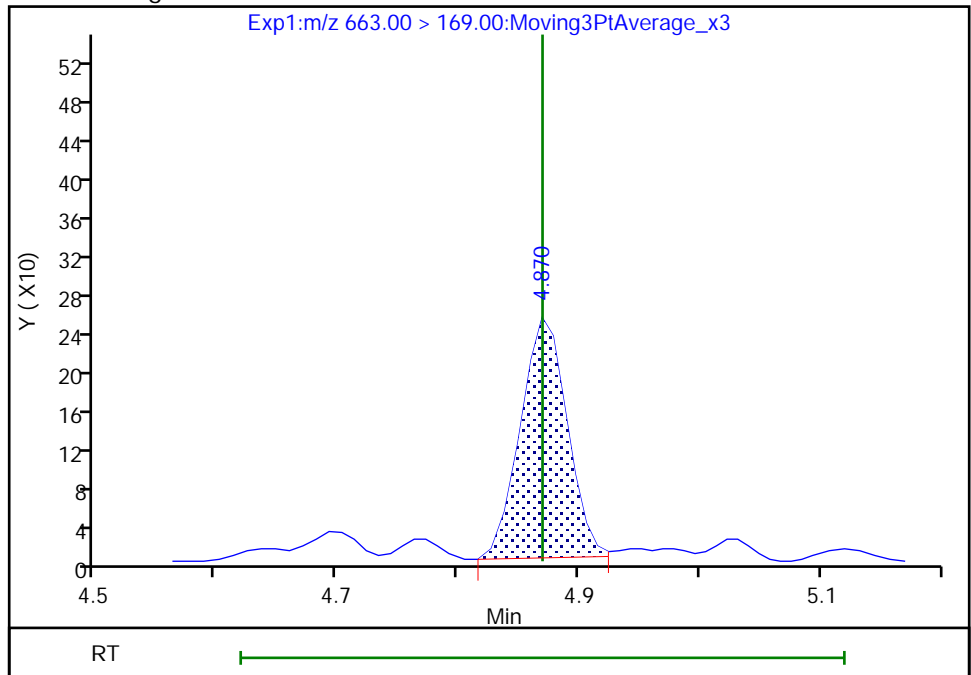
Not Detected
Expected RT: 4.87

Processing Integration Results



RT: 4.87
Area: 670
Amount: 0.004385
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:40:08
Audit Action: Manually Integrated

Audit Reason: Split Peak
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Eurofins TestAmerica, Burlington

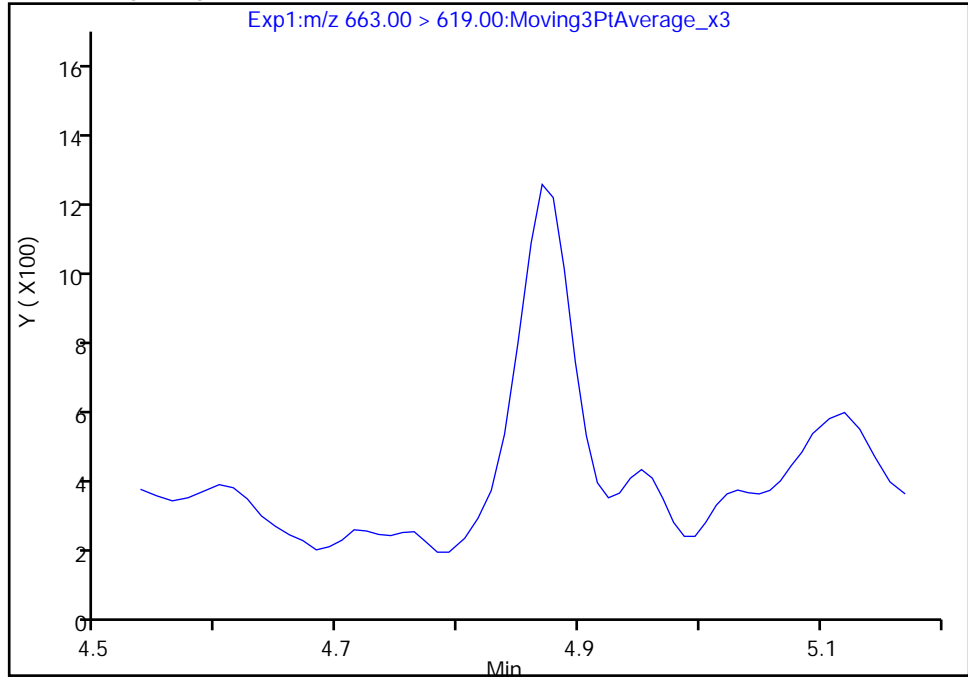
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B019.d
Injection Date: 22-Oct-2019 22:20:15 Instrument ID: LC812
Lims ID: 480-160746-C-4-A Lab Sample ID: 200-160746-4
Client ID: DUPLICATE
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

41 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 1

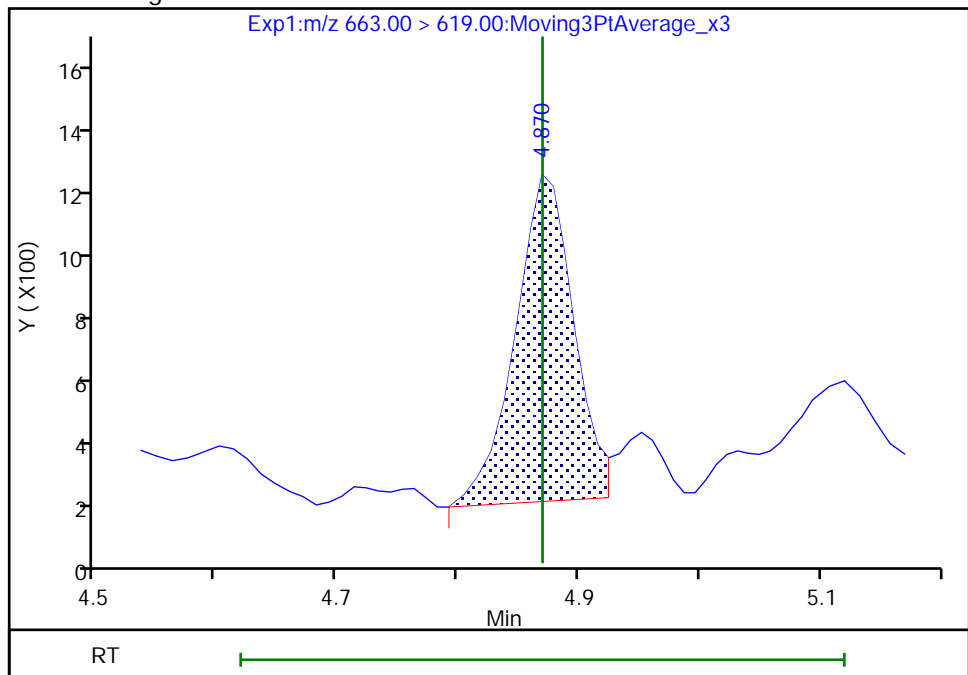
Not Detected
Expected RT: 4.87

Processing Integration Results



Manual Integration Results

RT: 4.87
Area: 3129
Amount: 0.004385
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:40:10

Audit Action: Manually Integrated

Audit Reason: Split Peak

Euofins TestAmerica, Burlington

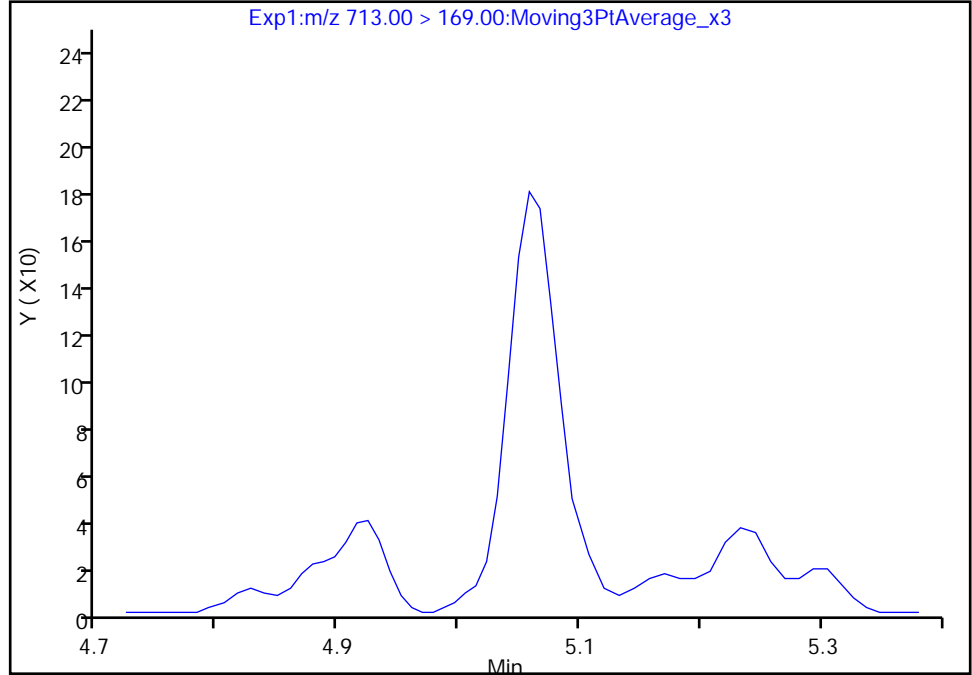
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B019.d
Injection Date: 22-Oct-2019 22:20:15 Instrument ID: LC812
Lims ID: 480-160746-C-4-A Lab Sample ID: 200-160746-4
Client ID: DUPLICATE
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 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

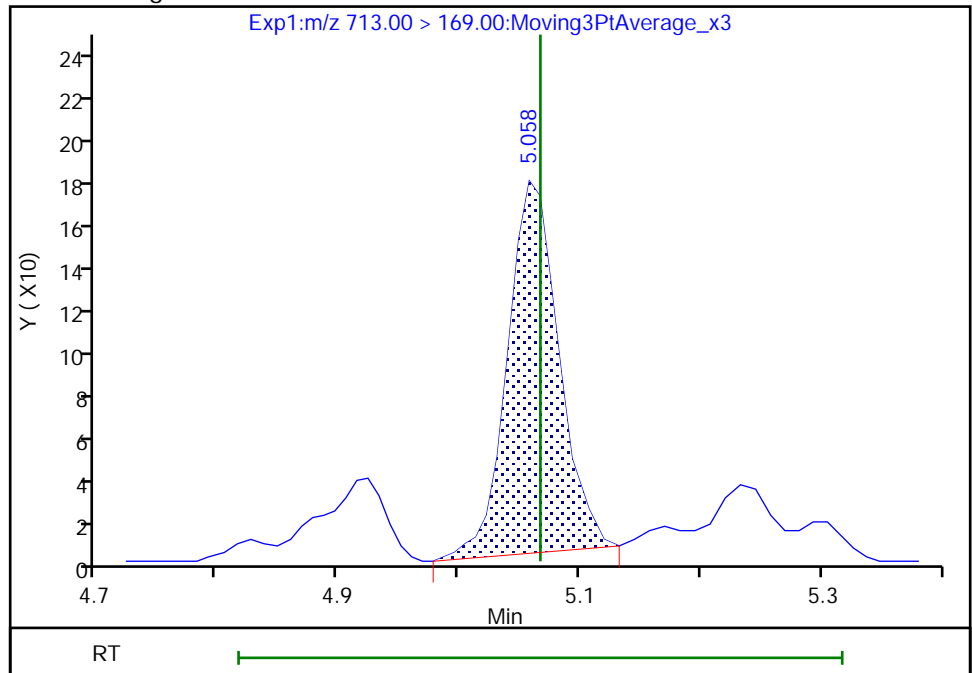
Signal: 1

Not Detected
Expected RT: 5.07

Processing Integration Results



Manual Integration Results



RT: 5.06
Area: 502
Amount: 0.004557
Amount Units: ng/ml

Reviewer: manopan, 24-Oct-2019 12:40:34
Audit Action: Manually Integrated

Audit Reason: Assign Peak
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Euofins TestAmerica, Burlington

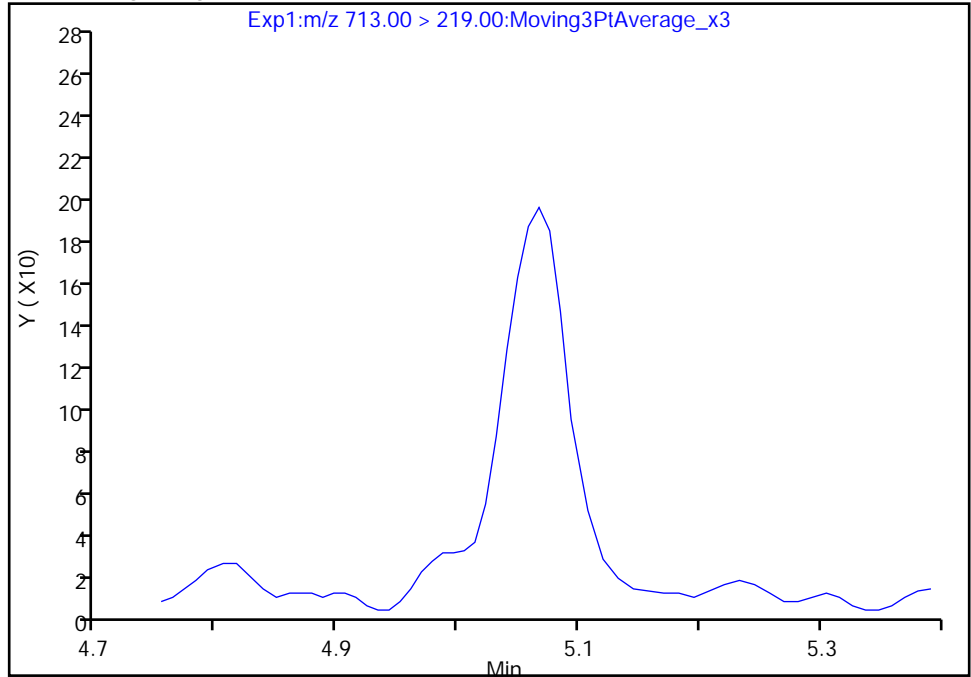
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B019.d
Injection Date: 22-Oct-2019 22:20:15 Instrument ID: LC812
Lims ID: 480-160746-C-4-A Lab Sample ID: 200-160746-4
Client ID: DUPLICATE
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 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

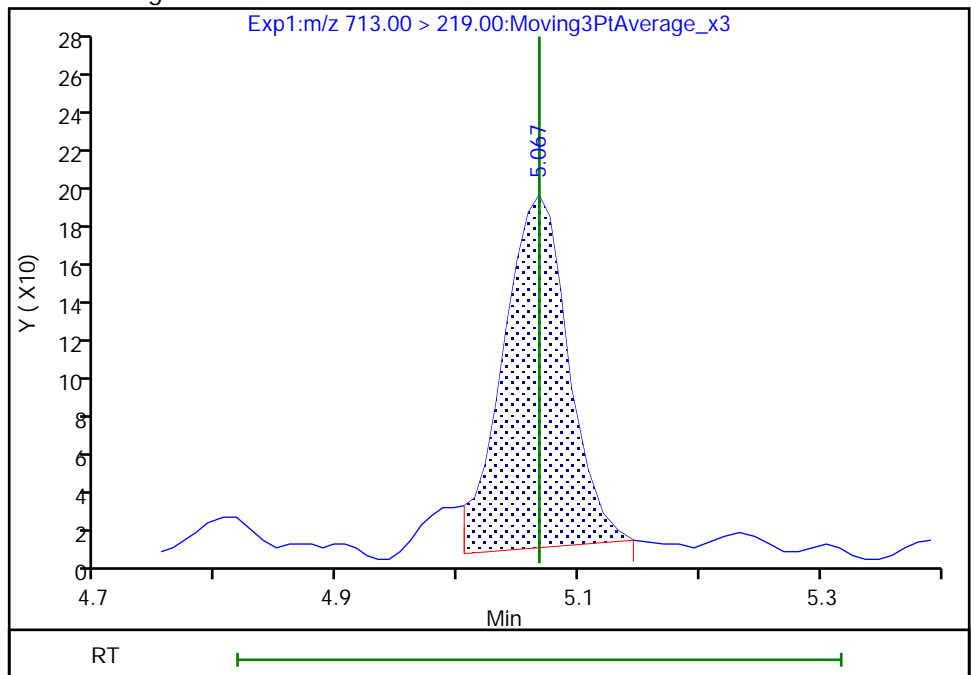
Not Detected
Expected RT: 5.07

Processing Integration Results



Manual Integration Results

RT: 5.07
Area: 687
Amount: 0.004557
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:41:07

Audit Action: Manually Integrated

Audit Reason: Split Peak
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Eurofins TestAmerica, Burlington

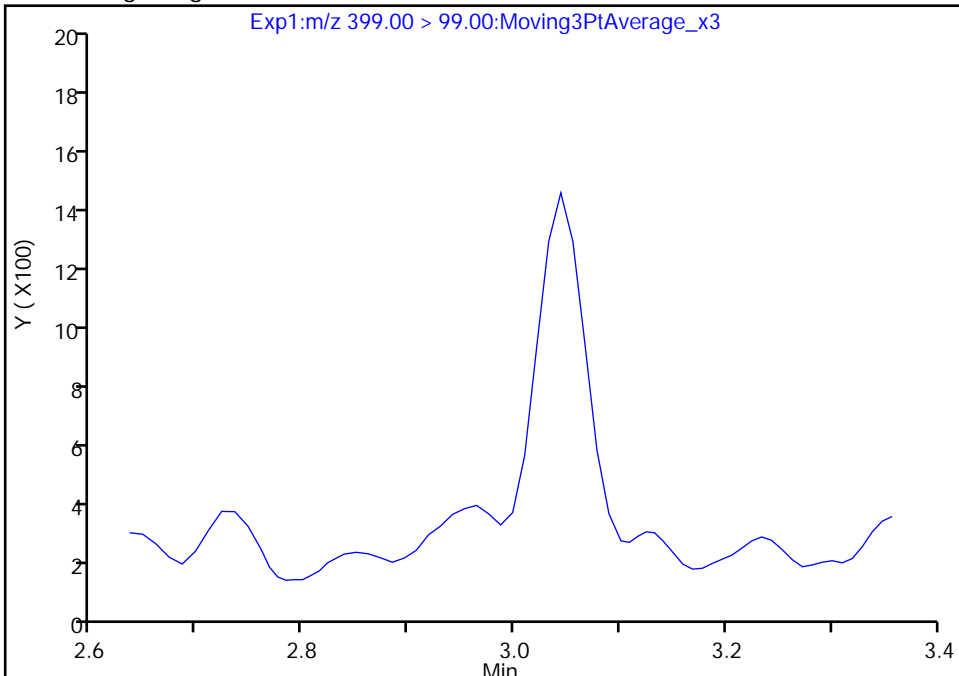
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B019.d
Injection Date: 22-Oct-2019 22:20:15 Instrument ID: LC812
Lims ID: 480-160746-C-4-A Lab Sample ID: 200-160746-4
Client ID: DUPLICATE
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 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

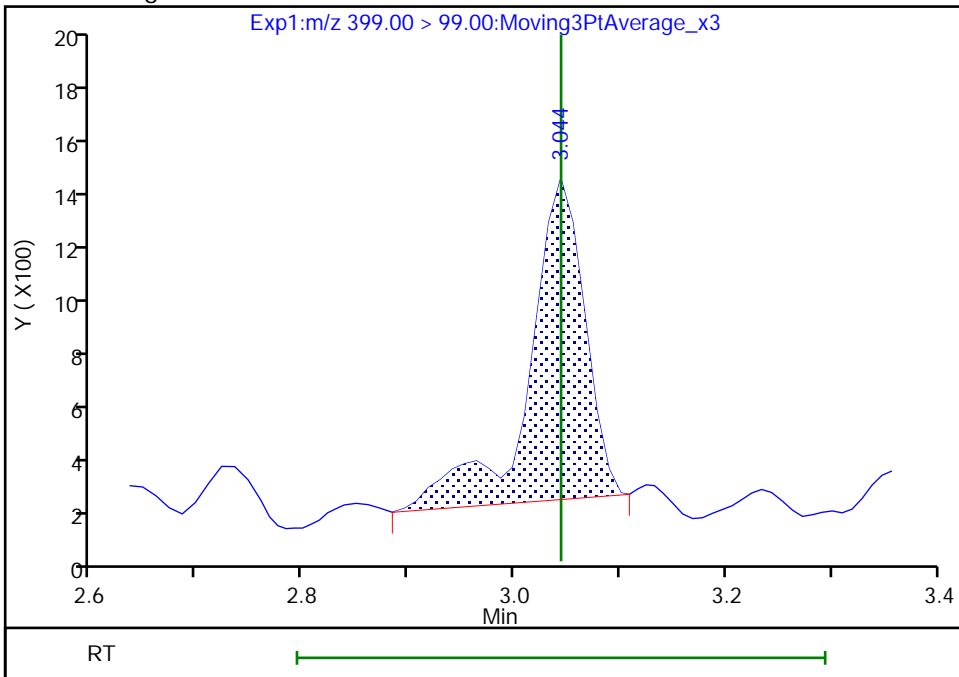
Not Detected
Expected RT: 3.04

Processing Integration Results



Manual Integration Results

RT: 3.04
Area: 4354
Amount: 0.009029
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:34:25
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

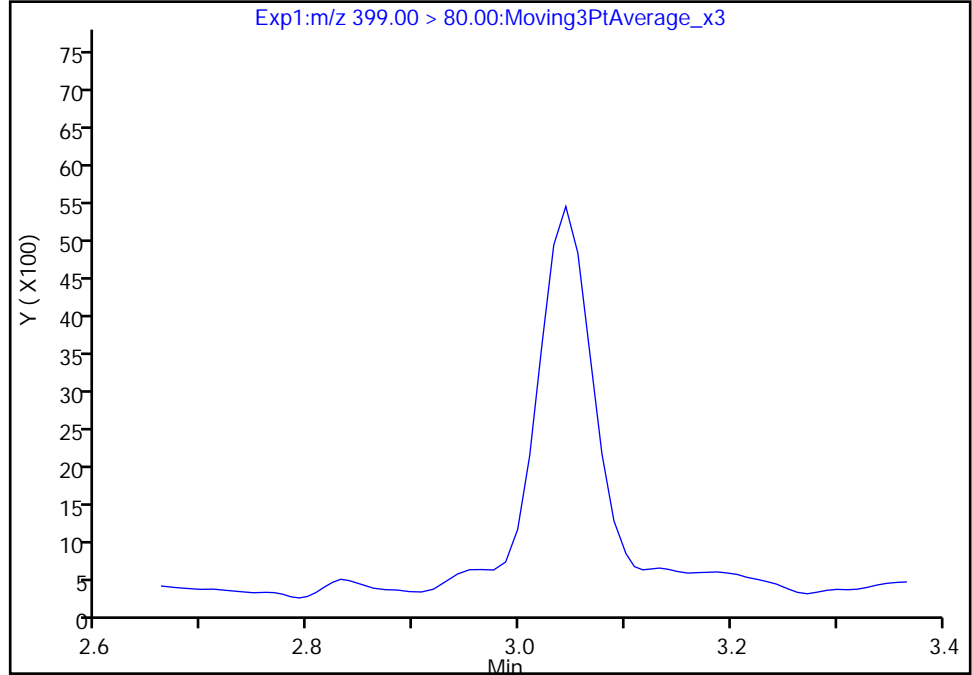
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B019.d
Injection Date: 22-Oct-2019 22:20:15 Instrument ID: LC812
Lims ID: 480-160746-C-4-A Lab Sample ID: 200-160746-4
Client ID: DUPLICATE
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 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

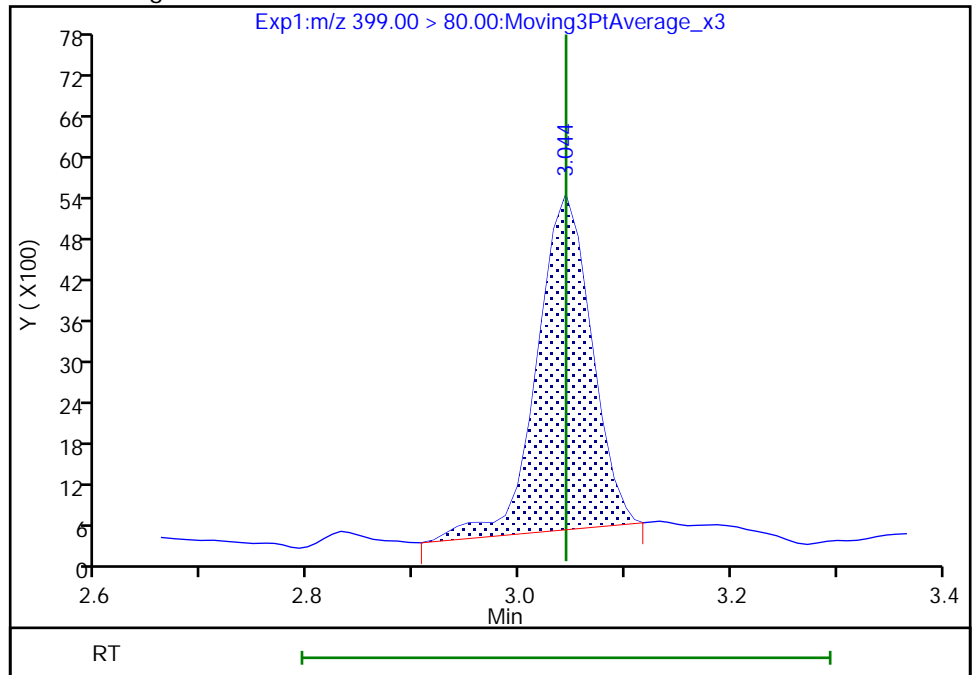
Not Detected
Expected RT: 3.04

Processing Integration Results



Manual Integration Results

RT: 3.04
Area: 17794
Amount: 0.009029
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:34:25

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

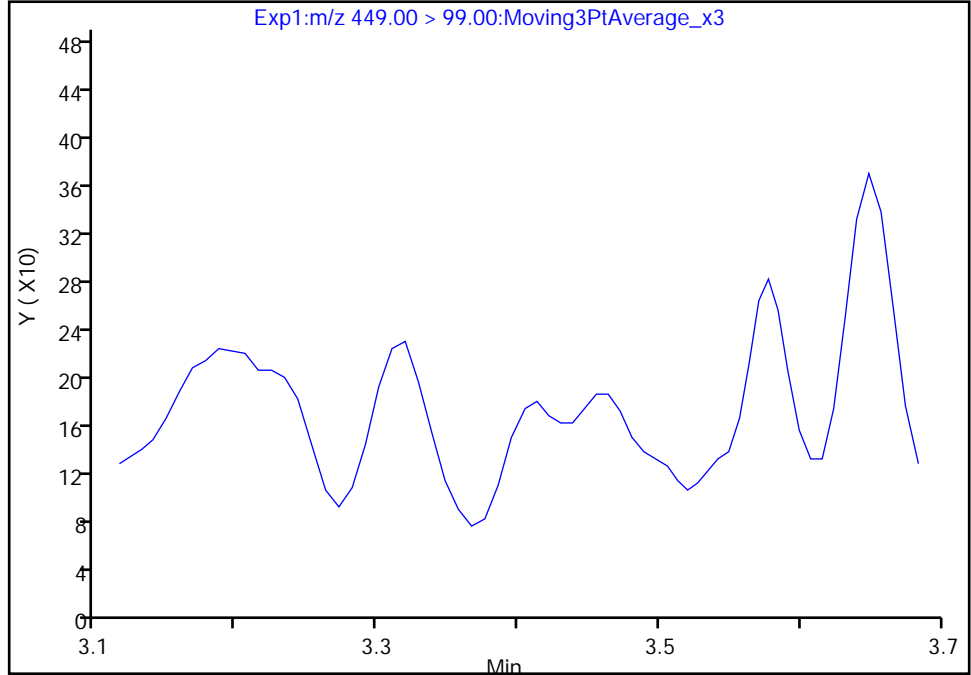
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B019.d
Injection Date: 22-Oct-2019 22:20:15 Instrument ID: LC812
Lims ID: 480-160746-C-4-A Lab Sample ID: 200-160746-4
Client ID: DUPLICATE
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

16 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 2

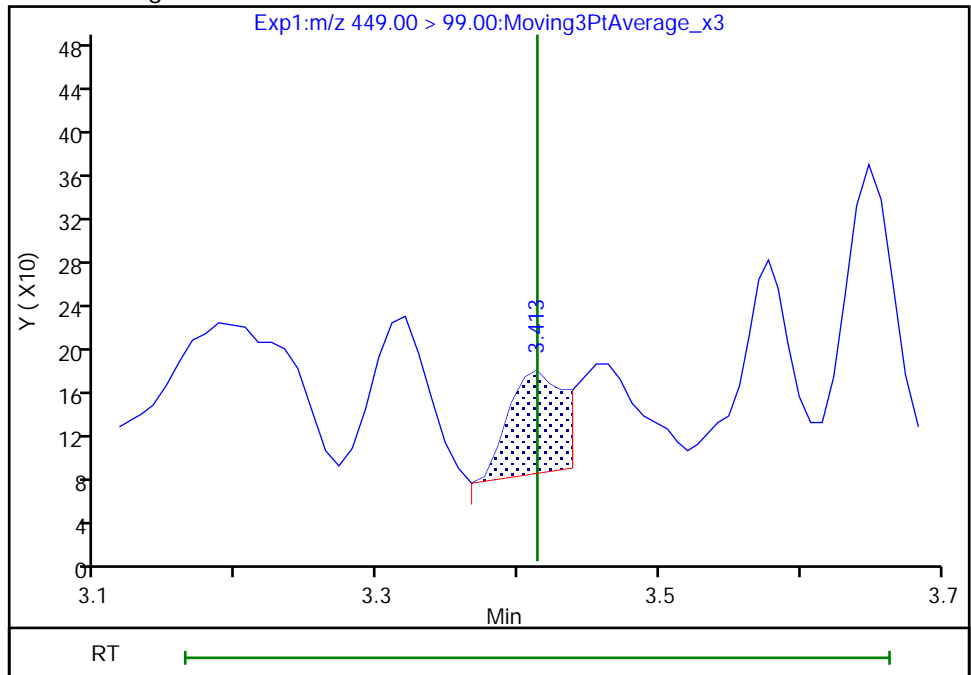
Not Detected
Expected RT: 3.41

Processing Integration Results



Manual Integration Results

RT: 3.41
Area: 252
Amount: 0.002540
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:35:16
Audit Action: Manually Integrated

Audit Reason: Split Peak
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Euofins TestAmerica, Burlington

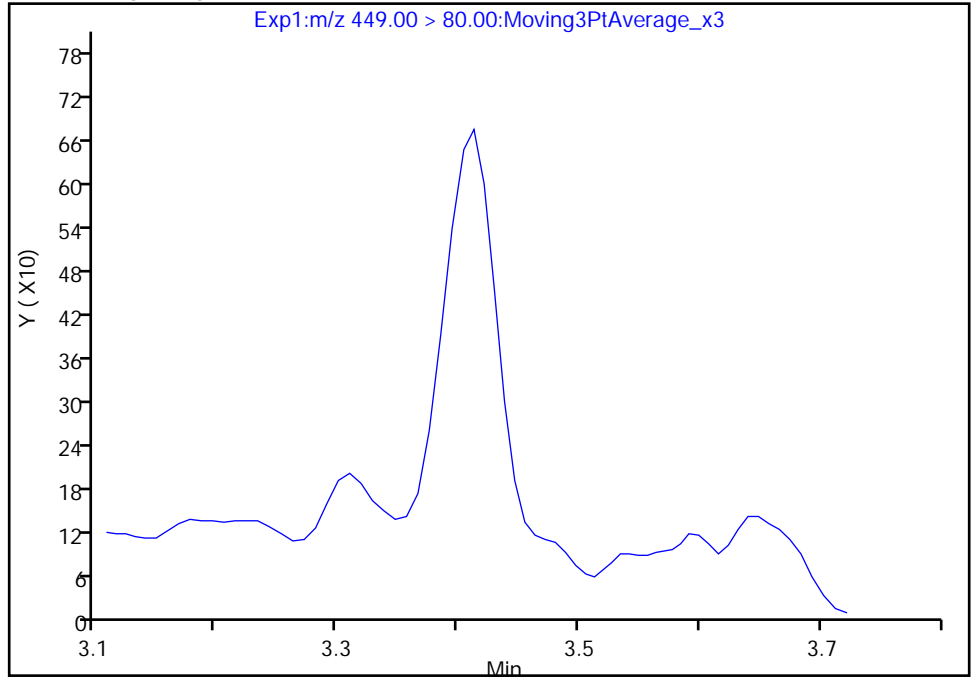
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B019.d
Injection Date: 22-Oct-2019 22:20:15 Instrument ID: LC812
Lims ID: 480-160746-C-4-A Lab Sample ID: 200-160746-4
Client ID: DUPLICATE
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

16 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 1

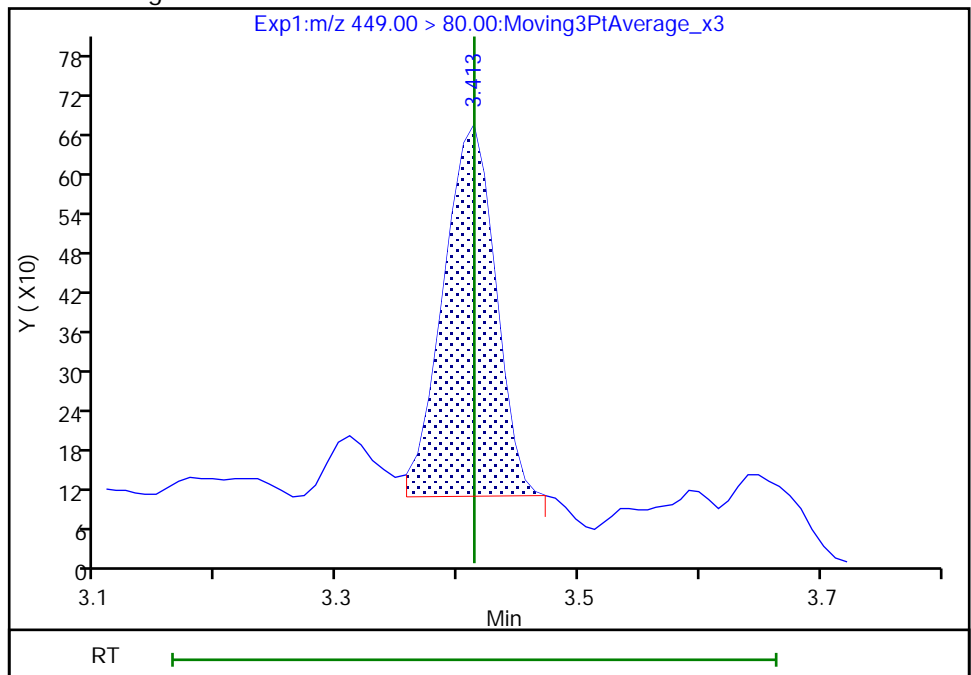
Not Detected
Expected RT: 3.41

Processing Integration Results



Manual Integration Results

RT: 3.41
Area: 1709
Amount: 0.002540
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:35:24

Audit Action: Manually Integrated

Audit Reason: Split Peak

Euofins TestAmerica, Burlington

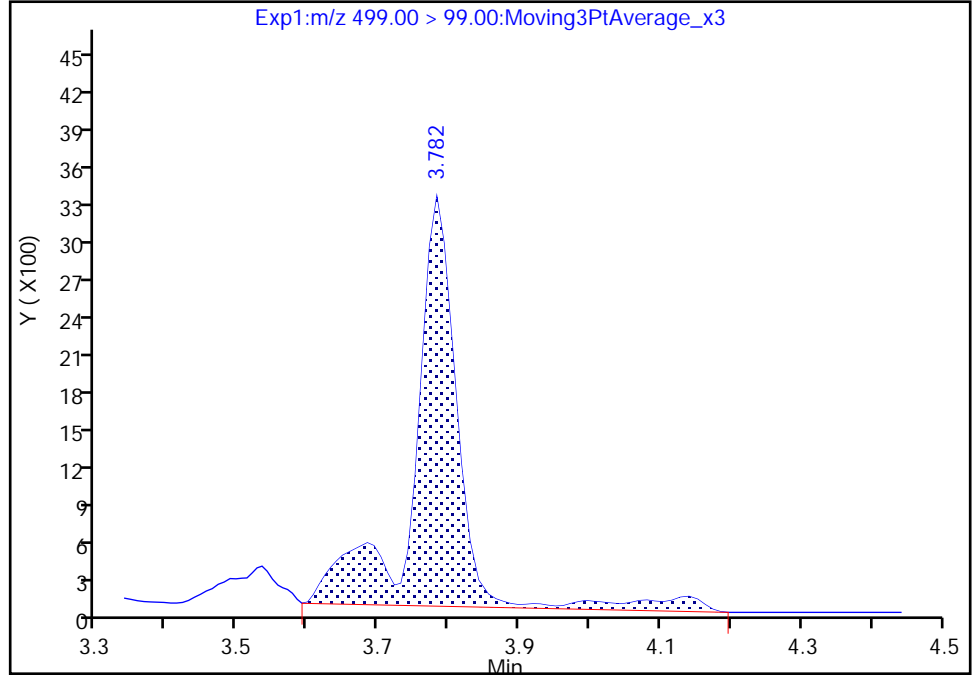
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B019.d
Injection Date: 22-Oct-2019 22:20:15 Instrument ID: LC812
Lims ID: 480-160746-C-4-A Lab Sample ID: 200-160746-4
Client ID: DUPLICATE
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 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

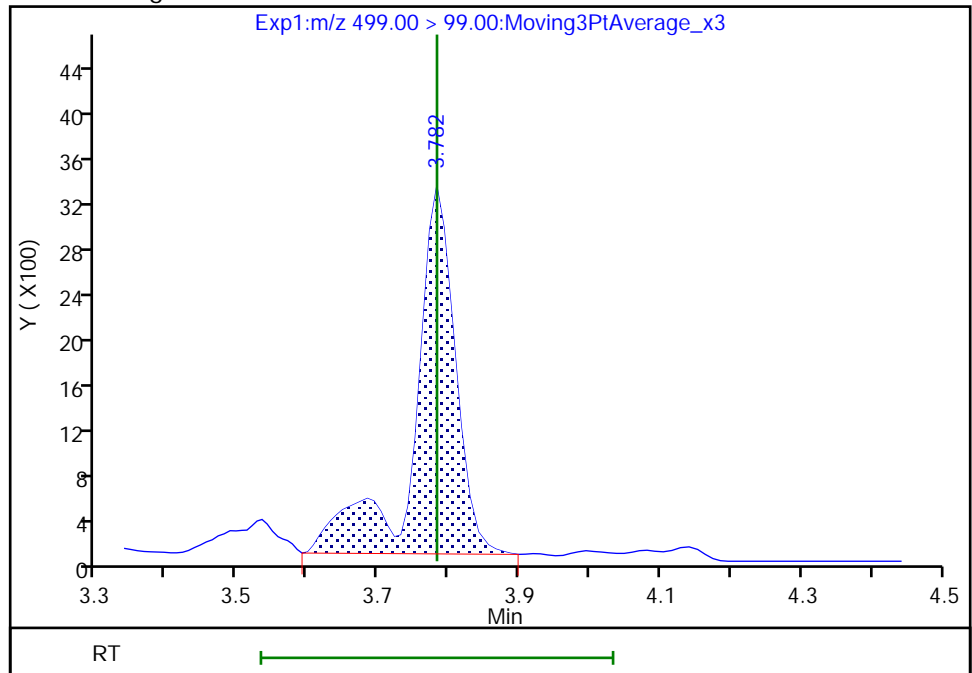
RT: 3.78
Area: 14550
Amount: 0.178822
Amount Units: ng/ml

Processing Integration Results



RT: 3.78
Area: 13301
Amount: 0.131126
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:36:28
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

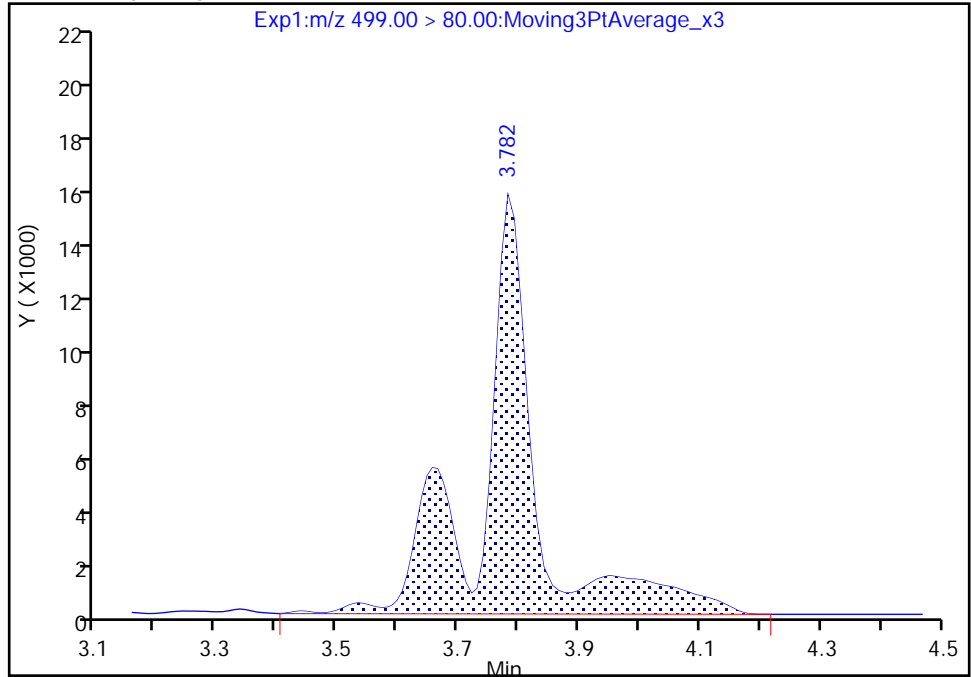
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B019.d
Injection Date: 22-Oct-2019 22:20:15 Instrument ID: LC812
Lims ID: 480-160746-C-4-A Lab Sample ID: 200-160746-4
Client ID: DUPLICATE
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 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

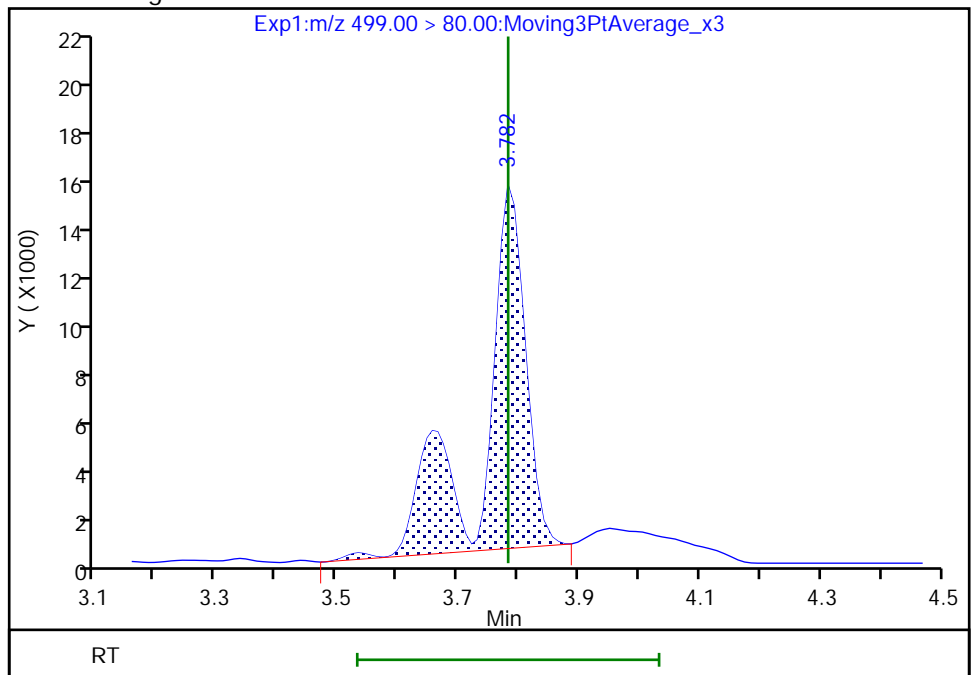
RT: 3.78
Area: 98221
Amount: 0.178822
Amount Units: ng/ml

Processing Integration Results



RT: 3.78
Area: 72023
Amount: 0.131126
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:36:38

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Euofins TestAmerica, Burlington

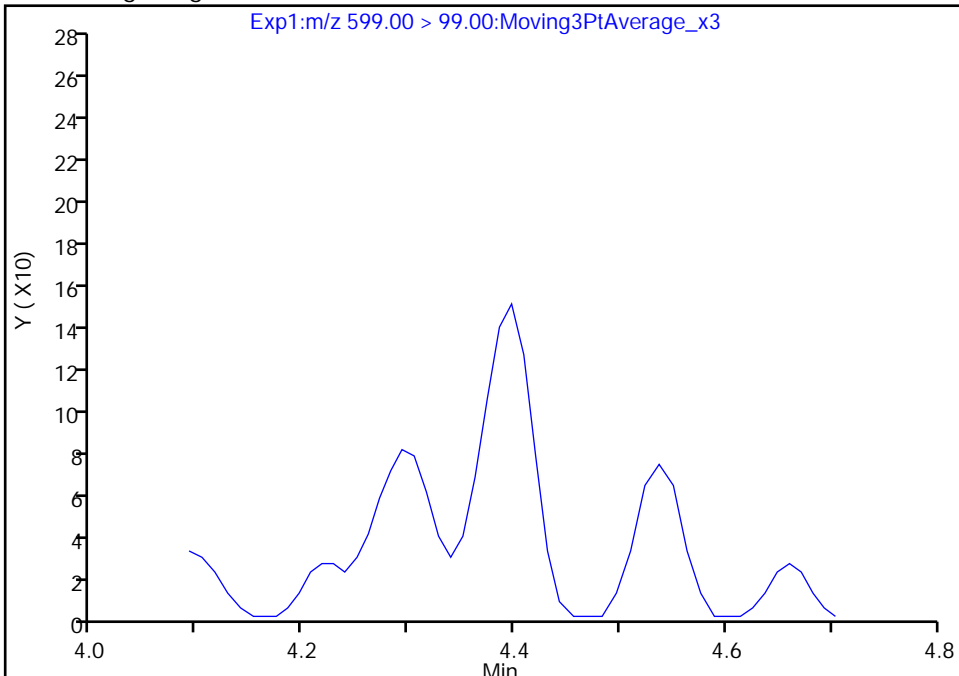
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B019.d
Injection Date: 22-Oct-2019 22:20:15 Instrument ID: LC812
Lims ID: 480-160746-C-4-A Lab Sample ID: 200-160746-4
Client ID: DUPLICATE
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

29 Perfluorodecanesulfonic acid, CAS: 335-77-3

Signal: 2

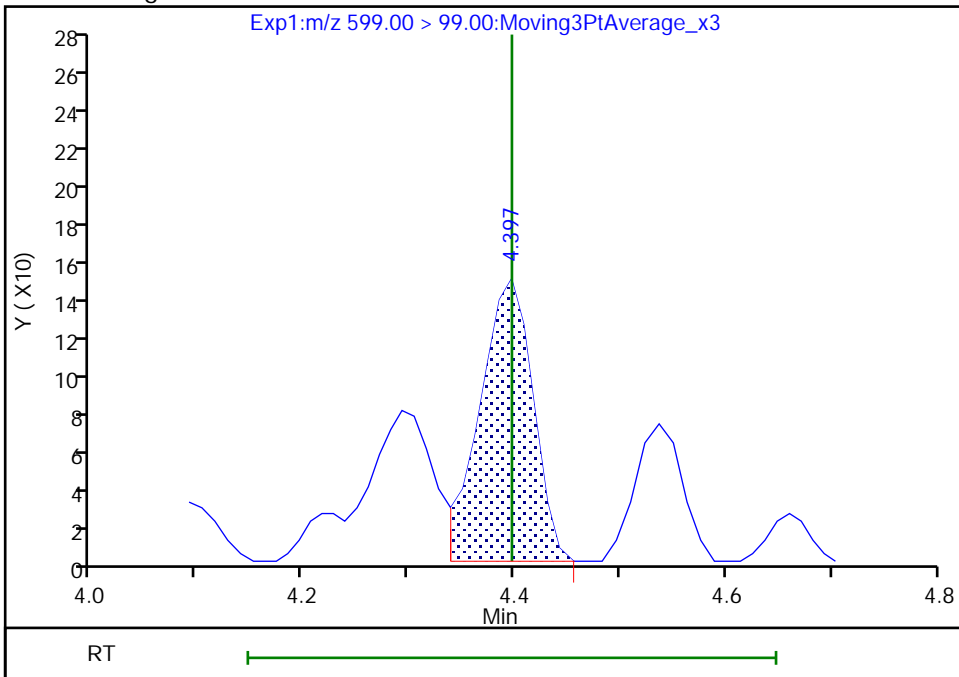
Not Detected
Expected RT: 4.40

Processing Integration Results



Manual Integration Results

RT: 4.40
Area: 511
Amount: 0.003053
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:38:22
Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

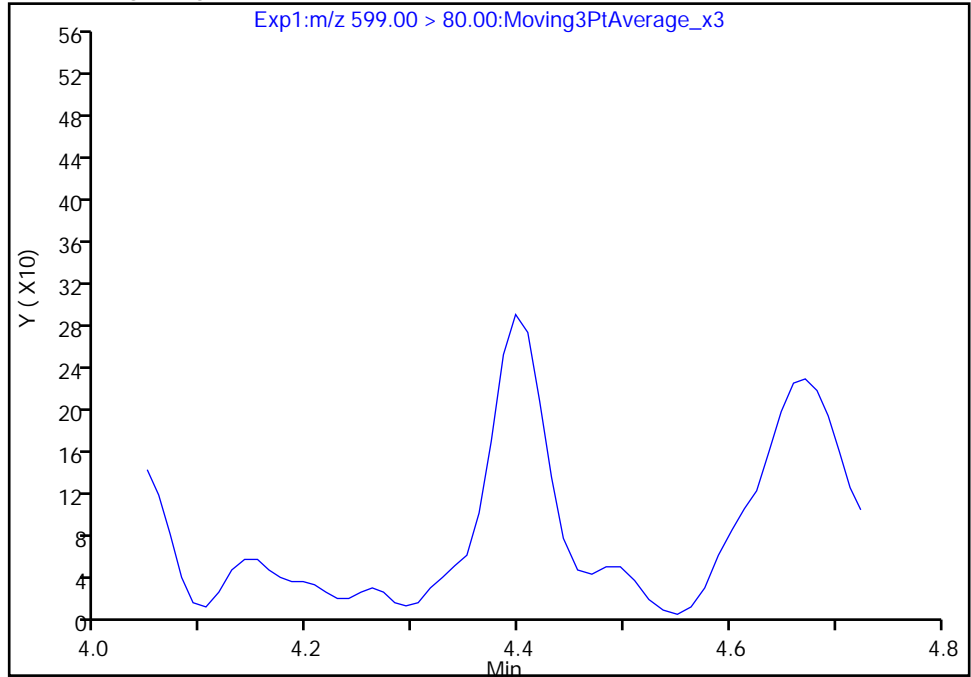
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B019.d
Injection Date: 22-Oct-2019 22:20:15 Instrument ID: LC812
Lims ID: 480-160746-C-4-A Lab Sample ID: 200-160746-4
Client ID: DUPLICATE
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

29 Perfluorodecanesulfonic acid, CAS: 335-77-3

Signal: 1

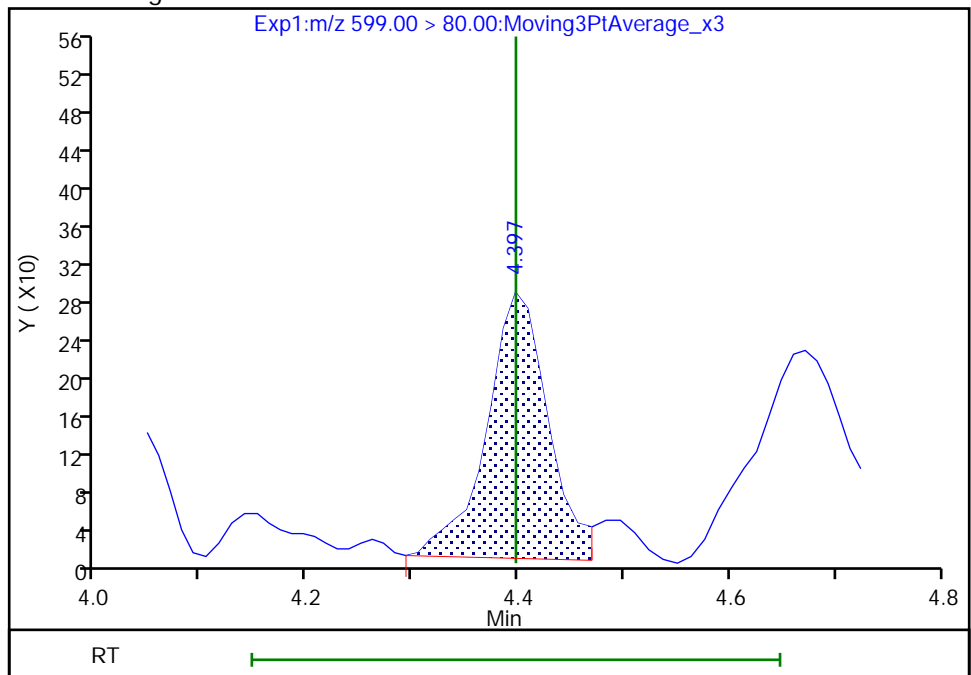
Not Detected
Expected RT: 4.40

Processing Integration Results



RT: 4.40
Area: 1119
Amount: 0.003053
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:38:25

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

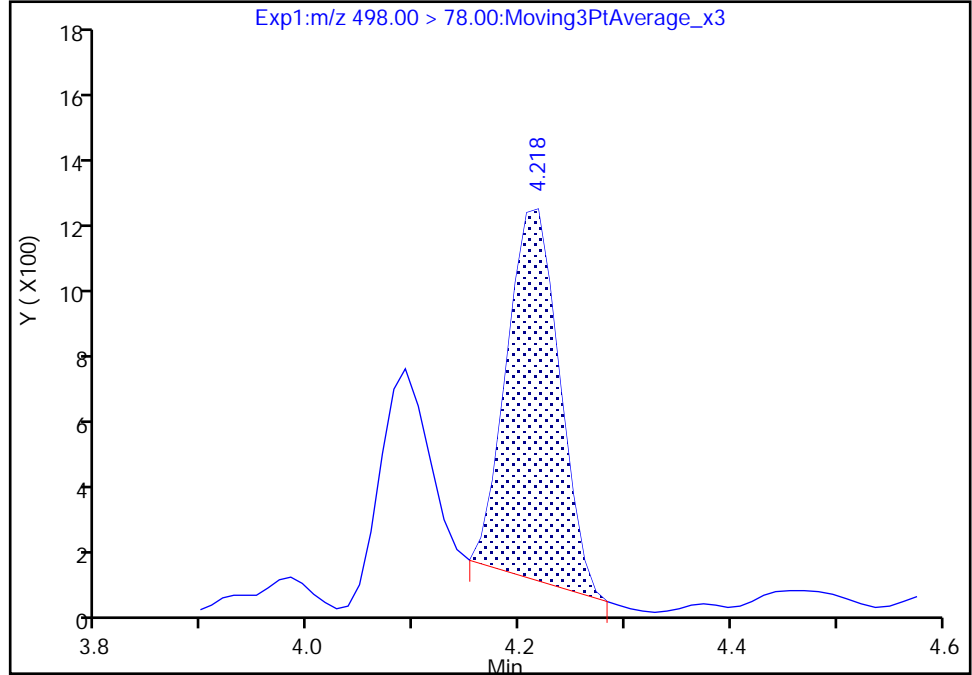
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B019.d
Injection Date: 22-Oct-2019 22:20:15 Instrument ID: LC812
Lims ID: 480-160746-C-4-A Lab Sample ID: 200-160746-4
Client ID: DUPLICATE
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 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

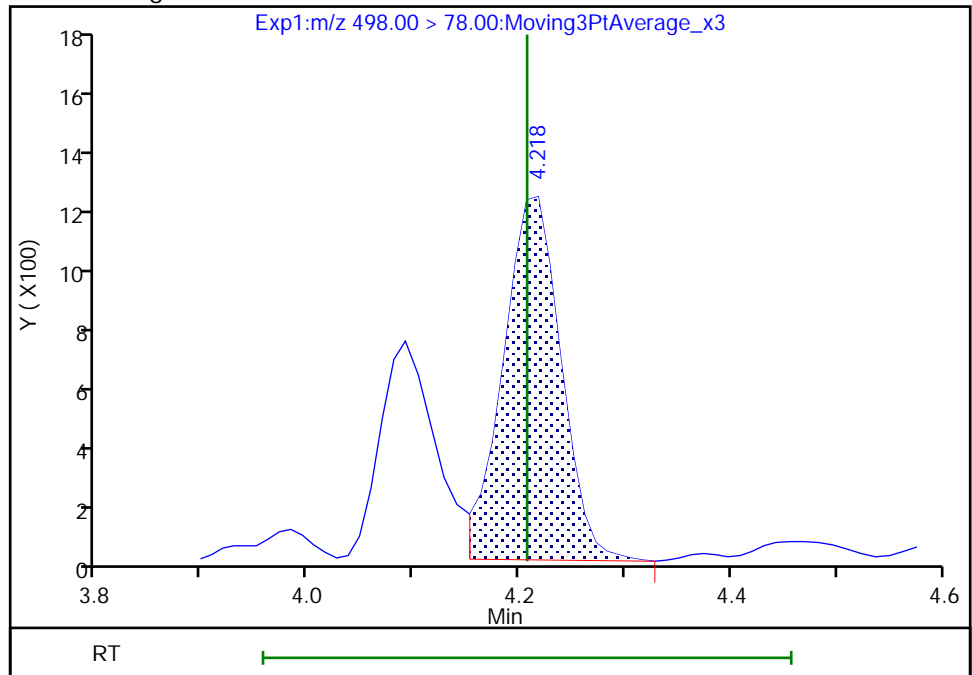
RT: 4.22
Area: 3882
Amount: 0.004268
Amount Units: ng/ml

Processing Integration Results



RT: 4.22
Area: 4628
Amount: 0.005089
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:37:45
Audit Action: Manually Integrated

Audit Reason: Split Peak

Euofins TestAmerica, Burlington

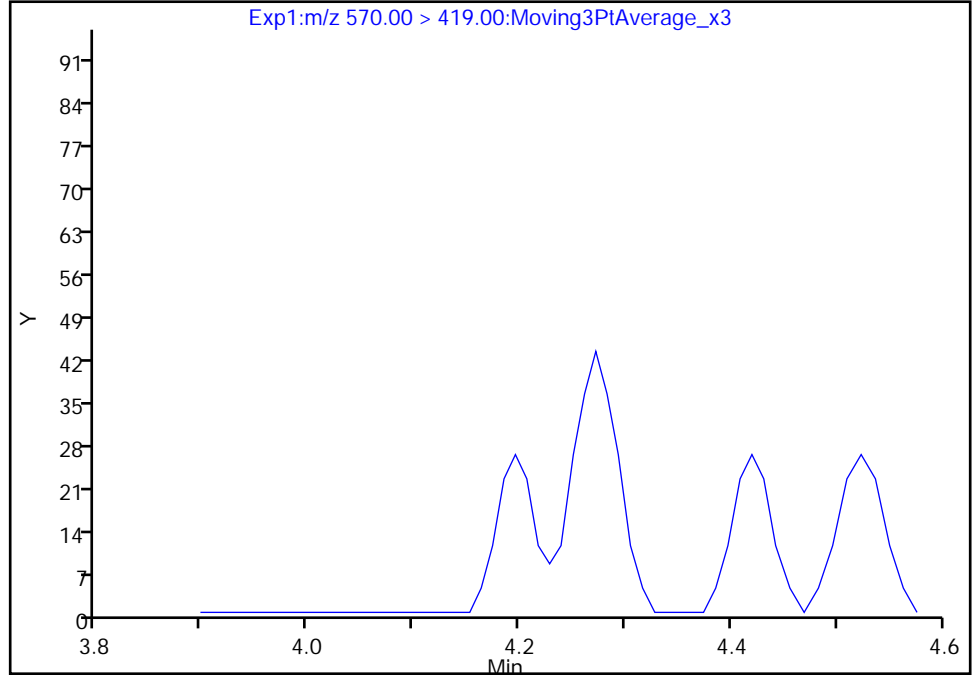
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B019.d
Injection Date: 22-Oct-2019 22:20:15 Instrument ID: LC812
Lims ID: 480-160746-C-4-A Lab Sample ID: 200-160746-4
Client ID: DUPLICATE
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 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

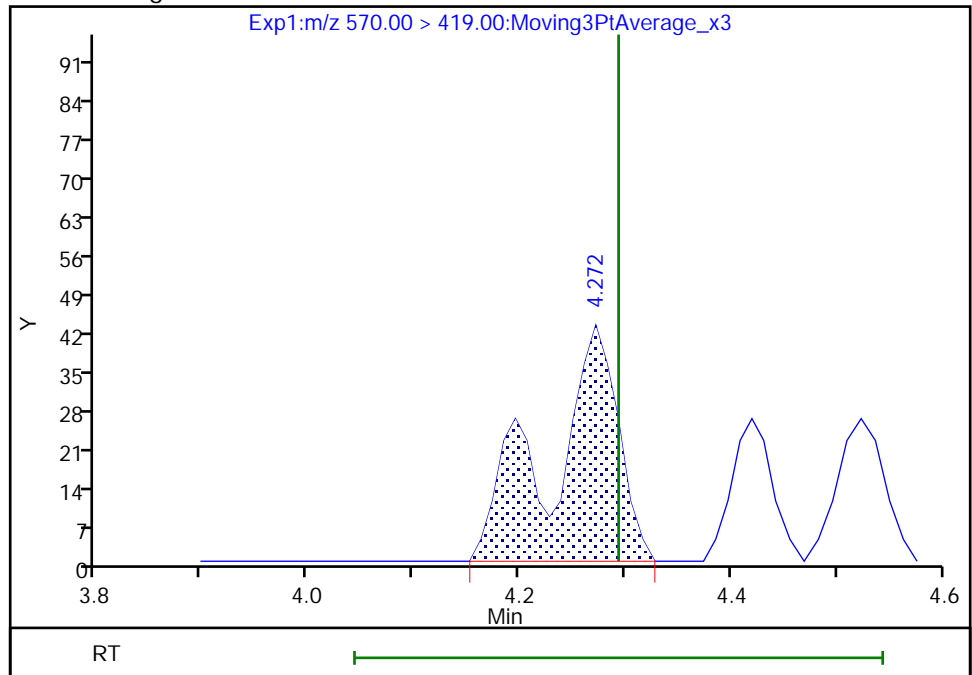
Not Detected
Expected RT: 4.29

Processing Integration Results



Manual Integration Results

RT: 4.27
Area: 193
Amount: 0.003057
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:38:03
Audit Action: Manually Integrated

Audit Reason: Assign Peak
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Eurofins TestAmerica, Burlington

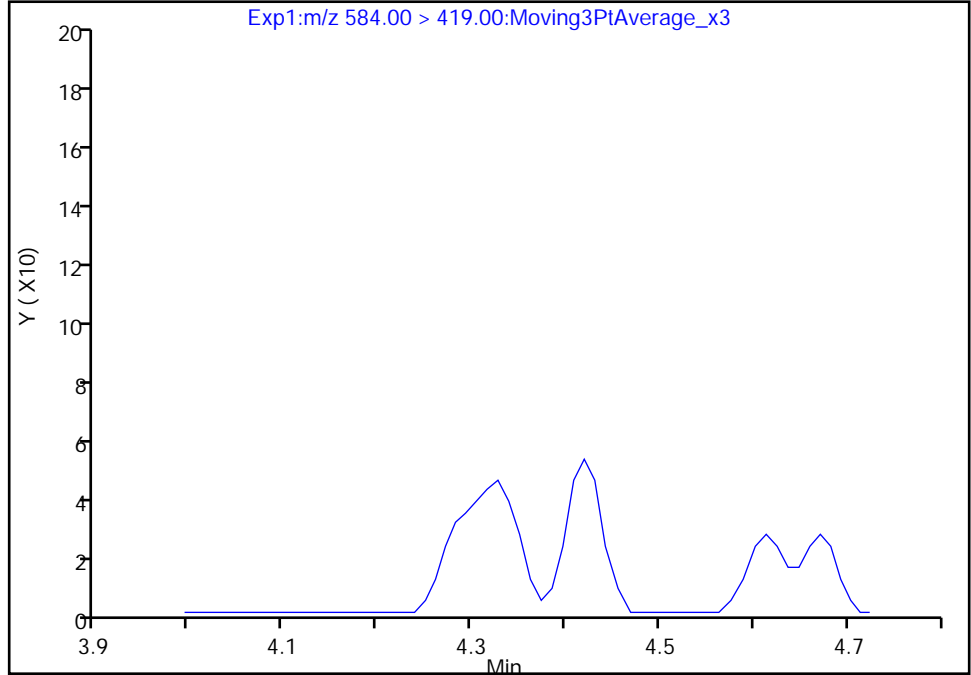
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B019.d
Injection Date: 22-Oct-2019 22:20:15 Instrument ID: LC812
Lims ID: 480-160746-C-4-A Lab Sample ID: 200-160746-4
Client ID: DUPLICATE
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

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

Signal: 1

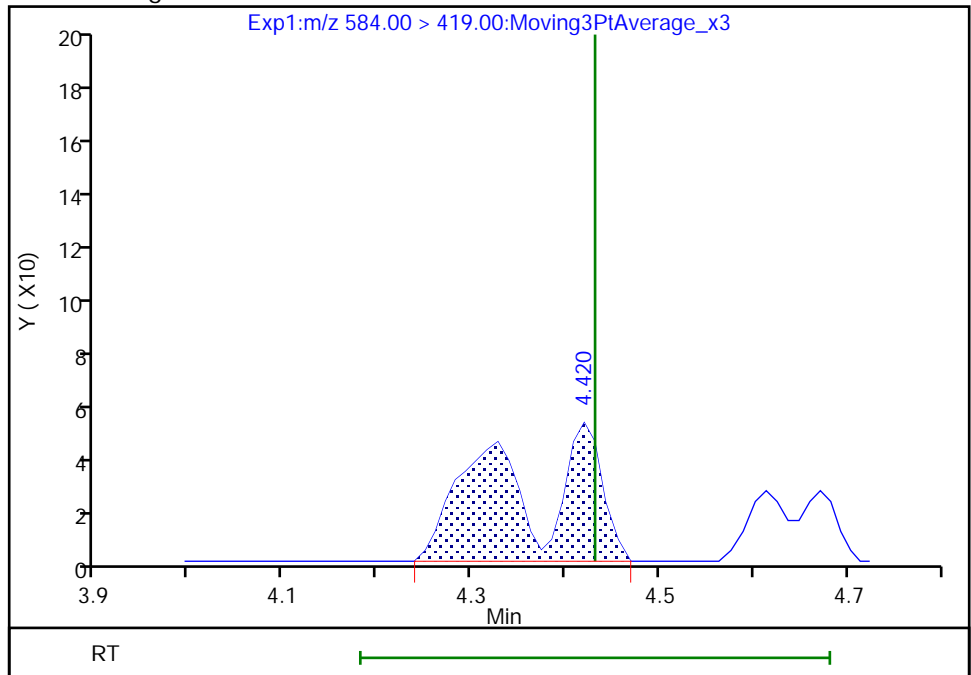
Not Detected
Expected RT: 4.43

Processing Integration Results



Manual Integration Results

RT: 4.42
Area: 340
Amount: -0.013213
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:39:02
Audit Action: Manually Integrated

Audit Reason: Assign Peak

Eurofins TestAmerica, Burlington

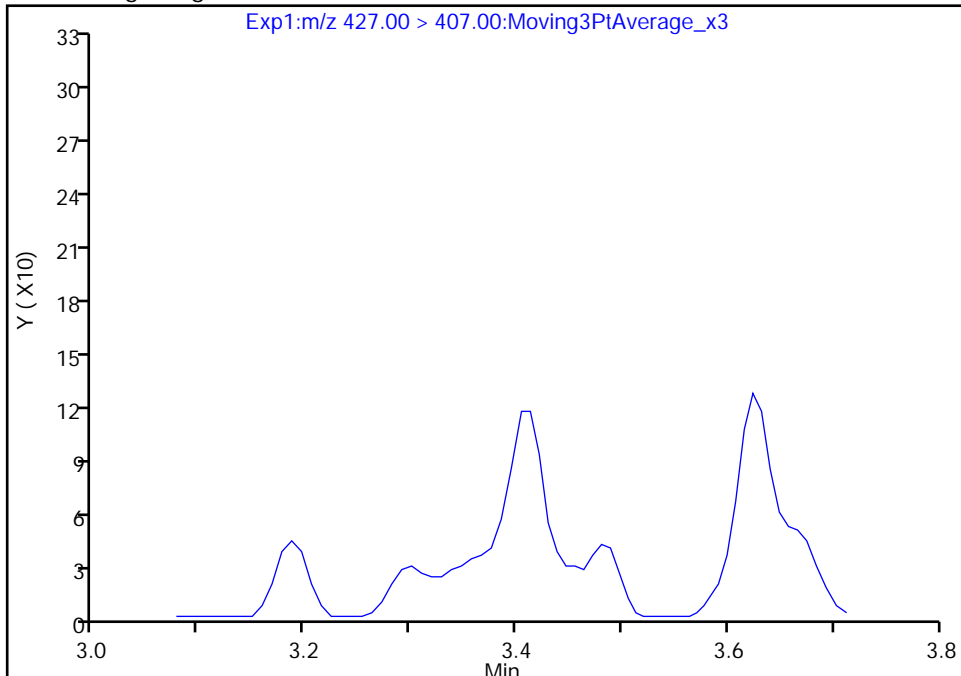
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B019.d
Injection Date: 22-Oct-2019 22:20:15 Instrument ID: LC812
Lims ID: 480-160746-C-4-A Lab Sample ID: 200-160746-4
Client ID: DUPLICATE
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 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

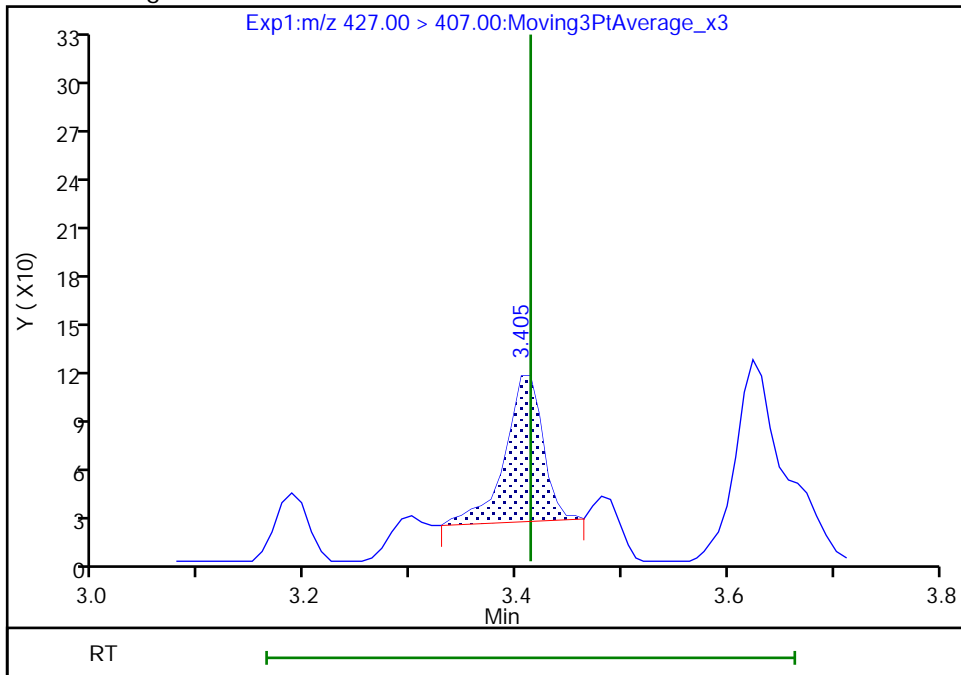
Not Detected
Expected RT: 3.41

Processing Integration Results



Manual Integration Results

RT: 3.40
Area: 223
Amount: 0.001066
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:35:45
Audit Action: Manually Integrated

Audit Reason: Assign Peak
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Eurofins TestAmerica, Burlington

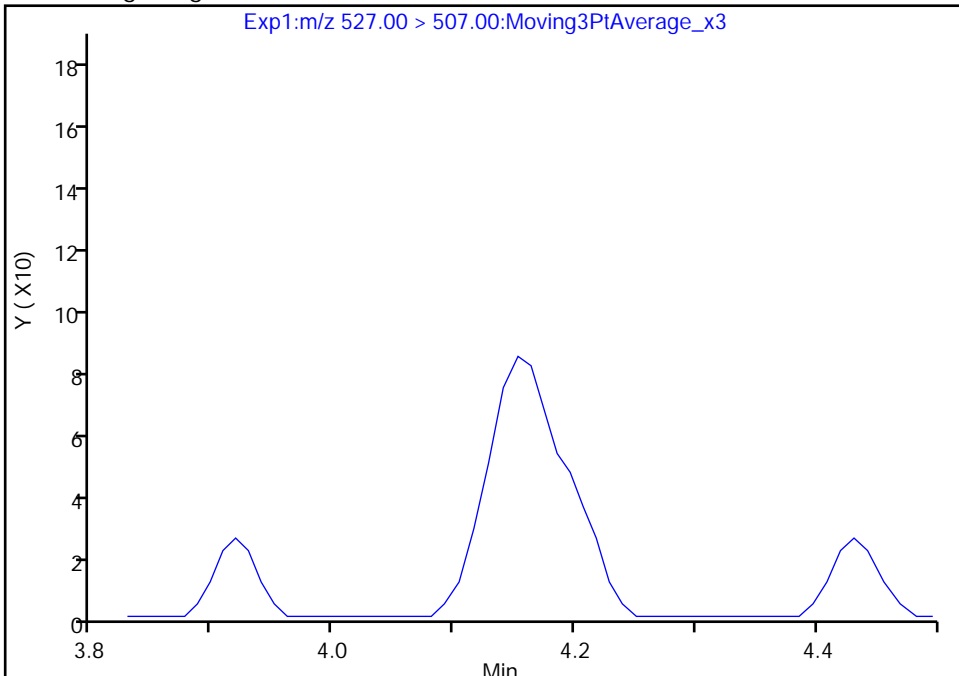
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B019.d
Injection Date: 22-Oct-2019 22:20:15 Instrument ID: LC812
Lims ID: 480-160746-C-4-A Lab Sample ID: 200-160746-4
Client ID: DUPLICATE
Operator ID: lc812tech ALS Bottle#: 19 Worklist Smp#: 19
Injection Vol: 20.0 ul Dil. Factor: 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

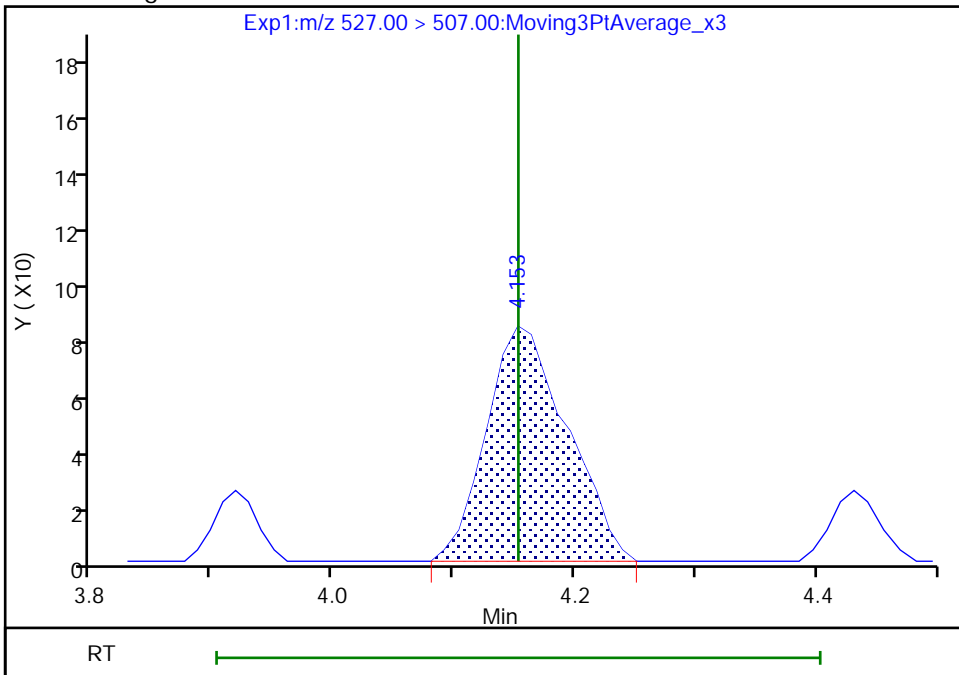
Not Detected
Expected RT: 4.15

Processing Integration Results



Manual Integration Results

RT: 4.15
Area: 384
Amount: -0.010328
Amount Units: ng/ml



Reviewer: manopan, 24-Oct-2019 12:37:32
Audit Action: Manually Integrated

Audit Reason: Assign Peak
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FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1 Analy Batch No.: 147694

SDG No.: _____

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

Calibration Start Date: 09/24/2019 18:15 Calibration End Date: 09/24/2019 18:56 Calibration ID: 42414

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 200-147694/10	SC092419AA010.d
Level 2	IC 200-147694/11	SC092419AA011.d
Level 3	IC 200-147694/12	SC092419AA012.d
Level 4	ICIS 200-147694/13	SC092419AA013.d
Level 5	IC 200-147694/14	SC092419AA014.d
Level 6	IC 200-147694/15	SC092419AA015.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)	0.9340 0.8811	0.9177	0.8672	0.8707	0.8567	AveID		0.8879			3.5		35.0				
Perfluoropentanoic acid (PFPeA)	1.1241 0.9364	1.1084	0.9516	0.9019	0.8766	L1ID	0.0111	0.9211						0.9990			0.9900
Perfluorobutanesulfonic acid (PFBS)	1.4121 1.3346	1.5069	1.3492	1.3036	1.2690	AveID		1.3626			6.3		35.0				
1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2)	2.0262 2.0362	2.0480	2.0121	1.9190	1.9578	AveID		1.9999			2.5		50.0				
Perfluorohexanoic acid (PFHxA)	1.0210 0.9428	1.1660	0.9444	0.9305	0.9063	AveID		0.9852			9.8		35.0				
Perfluoropentanesulfonic acid	1.2477 1.1878	1.2889	1.1474	1.1212	1.0716	AveID		1.1774			6.9		50.0				
HFPO-DA	3.7864 3.0910	2.4475	2.8822	2.4433	2.5165	AveID		2.8611			18.3		35.0				
Perfluorohexanesulfonic acid (PFHxS)	1.2315 0.9809	1.1450	0.9853	0.9547	0.8817	L1ID	0.0117	0.9583						0.9980			0.9900
Perfluoroheptanoic acid (PFHpA)	1.0099 0.8580	1.0031	0.8454	0.8184	0.8254	AveID		0.8934			9.9		35.0				
DONA	4.1600 3.7885	4.5608	4.0469	4.0576	3.9231	AveID		4.0895			6.5		50.0				
Perfluoroheptanesulfonic Acid (PFHpS)	1.0904 1.1393	1.1332	1.0859	1.1545	1.0429	AveID		1.1077			3.8		50.0				
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	1.2535 1.2864	1.2606	1.2672	1.2205	1.2688	AveID		1.2595			1.8		35.0				
Perfluorooctanoic acid (PFOA)	1.2585 0.9284	1.1801	1.0059	0.9451	0.9512	L1ID	0.0205	0.9306						1.0000			0.9900
Perfluorooctanesulfonic acid (PFOS)	0.9677 0.8634	1.0440	0.8837	0.8379	0.8282	AveID		0.9041			9.4		35.0				
Perfluorononanoic acid (PFNA)	1.0130 0.9351	1.0205	0.9992	0.9030	0.8524	AveID		0.9539			7.1		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.: 480-160746-1 Analy Batch No.: 147694

SDG No.: _____

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

Calibration Start Date: 09/24/2019 18:15 Calibration End Date: 09/24/2019 18:56 Calibration ID: 42414

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	1.6760 1.5826	1.6509	1.6271	1.5923	1.5119	AveID		1.6068			3.6		50.0				
Perfluorononanesulfonic acid	0.8323 0.7730	0.8228	0.7678	0.7525	0.7367	AveID		0.7809			4.9		50.0				
Perfluorodecanoic acid (PFDA)	1.1057 0.8781	1.0074	0.8398	0.8743	0.8446	AveID		0.9250			11.6		35.0				
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	1.0945 0.7970	0.9380	0.7399	0.7120	0.7205	L1ID	0.0104	0.7729						0.9970		0.9900	
Perfluorooctanesulfonamide (PFOSA)	0.9410 0.9081	0.9754	0.8973	0.9211	0.8621	AveID		0.9175			4.2		35.0				
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	0.8566 0.6831	0.7677	0.6943	0.6115	0.6617	AveID		0.7125			12.2		35.0				
Perfluorodecanesulfonic acid (PFDS)	0.5992 0.5634	0.6497	0.6015	0.6126	0.5932	AveID		0.6033			4.7		50.0				
Perfluoroundecanoic acid (PFUnA)	0.9875 0.8674	0.8494	0.8391	0.7187	0.7584	AveID		0.8368			11.2		35.0				
N-ethylperfluorooctanesulfonamidoacetic acid (NETFOSAA)	0.7774 0.5598	0.6085	0.5003	0.6005	0.5753	L2ID	0.0104	0.5458						0.9920		0.9900	
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid	2.0023 1.9606	2.0804	2.0467	2.0258	1.8800	AveID		1.9993			3.6		50.0				
Perfluorododecanoic acid (PFDoA)	0.9545 0.8303	0.9286	0.8620	0.8870	0.8446	AveID		0.8845			5.5		35.0				
10:2 FTS	0.3629 0.4588	0.4329	0.4660	0.4360	0.4040	AveID		0.4268			8.9		50.0				
Perfluorododecanesulfonic acid (PFDoS)	0.2521 0.2473	0.2931	0.2483	0.2682	0.2474	AveID		0.2594			7.1		50.0				
Perfluorotridecanoic acid (PFTriA)	0.7095 0.6708	0.7724	0.7509	0.6802	0.7104	AveID		0.7157			5.5		50.0				
Perfluorotetradecanoic acid (PFTeA)	0.1438 0.1499	0.1562	0.1376	0.1458	0.1399	AveID		0.1455			4.7		35.0				
Perfluoro-n-hexadecanoic acid (PFHxDA)	1.4548 0.8235	1.1560	0.8636	0.8836	0.7932	L1ID	0.0324	0.8146						0.9990		0.9900	
Perfluoro-n-octadecanoic acid (PFODA)	0.7674 0.7597	0.7545	0.7157	0.7389	0.6933	AveID		0.7383			3.9		50.0				
13C4 PFBA	1.3267 0.9260	1.0155	1.2349	1.3446	1.3510	Ave		1.1998			15.4		30.0				
13C5 PFPeA	1.0483 0.7352	0.8156	0.9843	1.0458	1.0664	Ave		0.9493			14.7		30.0				
M2-4:2 FTS	0.1093 0.0755	0.0863	0.0992	0.1067	0.1113	Ave		0.0981			14.6		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.: 480-160746-1 Analy Batch No.: 147694

SDG No.: _____

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

Calibration Start Date: 09/24/2019 18:15 Calibration End Date: 09/24/2019 18:56 Calibration ID: 42414

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								
13C2 PFHxA	1.1540 0.7509	0.8507	1.0381	1.1181	1.1416	Ave		1.0089			16.8		30.0				
13C3 HFPO-DA	0.0455 0.0357	0.0487	0.0513	0.0608	0.0601	Ave		0.0504			18.8		30.0				
18O2 PFHxS	0.8175 0.5943	0.6438	0.7681	0.8263	0.8665	Ave		0.7528			14.5		30.0				
13C4 PFHpA	1.0425 0.7688	0.8086	1.0392	1.0839	1.1177	Ave		0.9768			15.3		30.0				
M2-6:2 FTS	0.1369 0.0938	0.1091	0.1219	0.1375	0.1345	Ave		0.1223			14.5		30.0				
13C4 PFOA	1.1181 0.7673	0.8311	1.0162	1.0894	1.1359	Ave		0.9930			15.8		30.0				
13C4 PFOS	0.5786 0.4075	0.4377	0.5377	0.5360	0.5758	Ave		0.5122			14.1		30.0				
13C5 PFNA	0.9811 0.6554	0.7670	0.8823	0.9695	1.0164	Ave		0.8786			16.1		30.0				
13C2 PFDA	0.9477 0.6534	0.7541	0.9425	0.9715	0.9822	Ave		0.8752			15.7		30.0				
M2-8:2 FTS	0.1473 0.0977	0.1033	0.1413	0.1537	0.1579	Ave		0.1336			19.7		30.0				
13C8 FOSA	1.1332 0.7678	0.8299	1.0289	1.0848	1.1220	Ave		0.9945			15.8		30.0				
d3-NMeFOSAA	0.0872 0.0719	0.0741	0.0872	0.0911	0.0974	Ave		0.0848			11.7		30.0				
13C2 PFUnA	0.8858 0.5910	0.6913	0.8053	0.8874	0.8429	Ave		0.7839			15.2		30.0				
d5-NEtFOSAA	0.1028 0.0755	0.0775	0.0980	0.1025	0.0952	Ave		0.0919			13.4		30.0				
13C2 PFDoA	0.9989 0.6534	0.7207	0.8317	0.9377	0.9221	Ave		0.8441			15.9		30.0				
13C2 PFTeDA	0.8858 0.5444	0.6373	0.8147	0.8302	0.8278	Ave		0.7567			17.7		30.0				
13C2 PFHxDA	0.8236 0.6236	0.6595	0.8126	0.7745	0.8654	Ave		0.7599			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
RESPONSE AND CONCENTRATION

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1 Analy Batch No.: 147694

SDG No.: _____

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

Calibration Start Date: 09/24/2019 18:15 Calibration End Date: 09/24/2019 18:56 Calibration ID: 42414

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 200-147694/10	SC092419AA010.d
Level 2	IC 200-147694/11	SC092419AA011.d
Level 3	IC 200-147694/12	SC092419AA012.d
Level 4	ICIS 200-147694/13	SC092419AA013.d
Level 5	IC 200-147694/14	SC092419AA014.d
Level 6	IC 200-147694/15	SC092419AA015.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	64643 10836770	120913	577171	1218400	2689329	0.0500 10.0	0.100	0.500	1.00	2.50
Perfluoropentanoic acid (PFPeA)		L1ID	61476 9144258	117302	504788	981623	2172034	0.0500 10.0	0.100	0.500	1.00	2.50
Perfluorobutanesulfonic acid (PFBS)		AveID	53240 9312920	111288	493717	991069	2258488	0.0442 8.84	0.0884	0.442	0.884	2.21
1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2)		AveID	10793 1908051	21422	100438	199042	472878	0.0467 9.34	0.0934	0.467	0.934	2.34
Perfluorohexanoic acid (PFHxA)		AveID	61467 9402975	128708	528358	1082827	2404138	0.0500 10.0	0.100	0.500	1.00	2.50
Perfluoropentanesulfonic acid		AveID	49912 8794766	100998	445527	904425	2023725	0.0469 9.38	0.0938	0.469	0.938	2.35
HFPO-DA		AveID	8990 1466257	15465	79670	154580	351703	0.0500 10.0	0.100	0.500	1.00	2.50
Perfluorohexanesulfonic acid (PFHxS)		L1ID	47794 7045828	87049	371139	747165	1615409	0.0455 9.10	0.0910	0.455	0.910	2.28
Perfluoroheptanoic acid (PFHpA)		AveID	54921 8761187	105255	473491	923163	2143592	0.0500 10.0	0.100	0.500	1.00	2.50
DONA		AveID	118290 19315542	244000	1104721	2132240	4944669	0.0471 9.42	0.0942	0.471	0.942	2.36
Perfluoroheptanesulfonic Acid (PFHpS)		AveID	31335 5870129	61268	299570	613127	1328458	0.0476 9.52	0.0952	0.476	0.952	2.38
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)		AveID	8484 1518691	16922	78950	165552	375914	0.0474 9.48	0.0948	0.474	0.948	2.37
Perfluorooctanoic acid (PFOA)		L1ID	73407 9461519	127255	550916	1071508	2510476	0.0500 10.0	0.100	0.500	1.00	2.50
Perfluorooctanesulfonic acid (PFOS)		AveID	27107 4336520	55025	237639	433763	1028328	0.0464 9.28	0.0928	0.464	0.928	2.32
Perfluorononanoic acid (PFNA)		AveID	51846 8140558	101562	475125	911088	2013247	0.0500 10.0	0.100	0.500	1.00	2.50
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid		AveID	47151 7982879	87384	439440	827865	1885328	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.: 480-160746-1 Analy Batch No.: 147694

SDG No.: _____

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

Calibration Start Date: 09/24/2019 18:15 Calibration End Date: 09/24/2019 18:56 Calibration ID: 42414

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	24118 4016422	44860	213602	402999	946299	0.0480 9.60	0.0960	0.480	0.960	2.40
Perfluorodecanoic acid (PFDA)		AveID	54665 7619859	98571	426569	884015	1927490	0.0500 10.0	0.100	0.500	1.00	2.50
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)		L1ID	8056 991248	12045	53988	109122	253272	0.0479 9.58	0.0958	0.479	0.958	2.40
Perfluorooctanesulfonamide (PFOSA)		AveID	55630 9260687	105038	497573	1039913	2247521	0.0500 10.0	0.100	0.500	1.00	2.50
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)		AveID	3898 652596	7377	32623	57992	149825	0.0500 10.0	0.100	0.500	1.00	2.50
Perfluorodecanesulfonic acid (PFDS)		AveID	17436 2939269	35573	168036	329415	765086	0.0482 9.64	0.0964	0.482	0.964	2.41
Perfluoroundecanoic acid (PFUnA)		AveID	45632 6808952	76192	364214	663774	1485396	0.0500 10.0	0.100	0.500	1.00	2.50
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)		L2ID	4169 561466	6115	26413	64054	127241	0.0500 10.0	0.100	0.500	1.00	2.50
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid		AveID	56936 9996165	111300	558720	1064568	2369549	0.0471 9.42	0.0942	0.471	0.942	2.36
Perfluorododecanoic acid (PFDoA)		AveID	49737 7205665	86845	386410	865645	1809526	0.0500 10.0	0.100	0.500	1.00	2.50
10:2 FTS		AveID	2688 574169	5594	34219	67252	142894	0.0482 9.64	0.0964	0.482	0.964	2.41
Perfluorododecanesulfonic acid (PFDoS)		AveID	7365 1295495	16114	69654	144852	320443	0.0484 9.68	0.0968	0.484	0.968	2.42
Perfluorotridecanoic acid (PFTriA)		AveID	36973 5821600	72233	336607	663858	1522041	0.0500 10.0	0.100	0.500	1.00	2.50
Perfluorotetradecanoic acid (PFTeA)		AveID	6644 1084317	12914	60399	126010	269037	0.0500 10.0	0.100	0.500	1.00	2.50
Perfluoro-n-hexadecanoic acid (PFHxDA)		L1ID	62503 6819989	98924	378241	712184	1594877	0.0500 10.0	0.100	0.500	1.00	2.50
Perfluoro-n-octadecanoic acid (PFODA)		AveID	32973 6291965	64570	313448	595565	1394153	0.0500 10.0	0.100	0.500	1.00	2.50
13C4 PFBA	13PF OA	Ave	3460509 3074794	3294091	3327715	3498475	3139199	2.50 2.50	2.50	2.50	2.50	2.50
13C5 PFPeA	13PF OA	Ave	2734448 2441291	2645737	2652439	2720996	2477832	2.50 2.50	2.50	2.50	2.50	2.50
M2-4:2 FTS	13PF OA	Ave	266340 234261	261504	249584	259301	241541	2.34 2.34	2.34	2.34	2.34	2.34
13C2 PFHxA	13PF OA	Ave	3010057 2493388	2759660	2797280	2909159	2652556	2.50 2.50	2.50	2.50	2.50	2.50
13C3 HFPO-DA	13PF OA	Ave	118714 118592	157966	138212	158165	139761	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.: 480-160746-1 Analy Batch No.: 147694

SDG No.: _____

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

Calibration Start Date: 09/24/2019 18:15 Calibration End Date: 09/24/2019 18:56 Calibration ID: 42414

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
18O2 PFHxS	13PF OA	Ave	2017282 1866881	1975763	1957969	2033906	1904635	2.37 2.37	2.37	2.37	2.37	2.37
13C4 PFHpA	13PF OA	Ave	2719125 2552855	2623174	2800387	2820017	2597030	2.50 2.50	2.50	2.50	2.50	2.50
M2-6:2 FTS	13PF OA	Ave	339136 295770	336304	312172	339828	296895	2.38 2.38	2.38	2.38	2.38	2.38
13C4 PFOA	13PF OA	Ave	2916393 2547737	2695960	2738501	2834336	2639318	2.50 2.50	2.50	2.50	2.50	2.50
13C4 PFOS	13PF OA	Ave	1442868 1293544	1357365	1385187	1333270	1279143	2.39 2.39	2.39	2.39	2.39	2.39
13C5 PFNA	13PF OA	Ave	2559003 2176351	2488112	2377503	2522478	2361760	2.50 2.50	2.50	2.50	2.50	2.50
13C2 PFDA	13PF OA	Ave	2471888 2169447	2446200	2539692	2527717	2282167	2.50 2.50	2.50	2.50	2.50	2.50
M2-8:2 FTS	13PF OA	Ave	368025 310942	321024	364856	383179	351528	2.40 2.40	2.40	2.40	2.40	2.40
13C8 FOSA	13PF OA	Ave	2955855 2549594	2692283	2772738	2822377	2607055	2.50 2.50	2.50	2.50	2.50	2.50
d3-NMeFOSAA	13PF OA	Ave	227540 238846	240222	234923	237105	226428	2.50 2.50	2.50	2.50	2.50	2.50
13C2 PFUnA	13PF OA	Ave	2310425 1962348	2242476	2170147	2308914	1958475	2.50 2.50	2.50	2.50	2.50	2.50
d5-NEtFOSAA	13PF OA	Ave	268129 250738	251248	263969	266657	221155	2.50 2.50	2.50	2.50	2.50	2.50
13C2 PFDoA	13PF OA	Ave	2605502 2169587	2337938	2241277	2439760	2142483	2.50 2.50	2.50	2.50	2.50	2.50
13C2 PFTeDA	13PF OA	Ave	2310444 1807801	2067507	2195373	2159980	1923501	2.50 2.50	2.50	2.50	2.50	2.50
13C2 PFHxDA	13PF OA	Ave	2148235 2070552	2139356	2189806	2015053	2010782	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
L2ID = Linear 1/conc^2 IsoDil

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA010.d
 Lims ID: IC 1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 24-Sep-2019 18:15:39 ALS Bottle#: 2 Worklist Smp#: 10
 Injection Vol: 20.0 ul Dil. Factor: 1.0000
 Sample Info: IC 1
 Misc. Info.: 200-0037915-010 Plate: 1 Rack: 2
 Operator ID: lc812tech Instrument ID: LC812
 Sublist: chrom-PFC_LC812*sub6
 Method: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\PFC_LC812.m
 Limit Group: LC_PFC_ICAL
 Last Update: 25-Sep-2019 13:08:39 Calib Date: 24-Sep-2019 18:56:37
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA015.d
 Column 1 : C-18 (4.60 mm) Det: EXP1
 Process Host: CTX0340

First Level Reviewer: chirgwinb Date: 24-Sep-2019 18:34:09

Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	1.935	1.935	0.0	0.561	3460509	2.76	111	25892	
2 Perfluorobutanoic acid	212.90 > 169.00	1.944	1.944	0.0	1.005	64643	0.0526	105	11.4	
4 Perfluoropentanoic acid	262.90 > 219.00	2.298	2.298	0.0	1.000	61476	0.0490	97.9	4.0	
D 3 13C5 PFPeA	267.90 > 223.00	2.298	2.298	0.0	0.667	2734448	2.76	110	6132	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	2.312	2.325	-0.013	0.754	53240	0.0458	Target=2.04	104	99.4
	298.90 > 99.00	2.312	2.325	-0.013	0.754	26360	2.02(1.02-3.06)	104	33.6	
D 60 M2-4:2 FTS	329.00 > 81.00	2.636	2.636	0.0	0.765	266340	2.60	111	229	
61 1H,1H,2H,2H-perfluorohexanesulfoni	327.00 > 307.00	2.636	2.648	-0.012	1.000	10793	0.0473	101	137	
70 Perfluoropentanesulfonic acid	349.00 > 80.00	2.685	2.685	0.0	0.876	49912	0.0497	Target=2.96	106	233
	349.00 > 99.00	2.685	2.685	0.0	0.876	16419	3.04(1.48-4.44)	106	71.4	
D 7 13C2 PFHxA	315.00 > 270.00	2.685	2.685	0.0	0.779	3010057	2.86	114	8761	
6 Perfluorohexanoic acid	313.00 > 269.00	2.685	2.685	0.0	1.000	61467	0.0518	Target=12.34	104	22.9
	313.00 > 119.00	2.685	2.685	0.0	1.000	5585	11.01(6.17-18.51)	104	4.6	
67 Perfluoro(2-propoxypropanoic) acid	329.10 > 285.00	2.799	2.799	0.0	1.003	8990	0.0662		132	5.2
										M
D 64 13C3 HFPO-DA	332.10 > 287.00	2.791	2.799	-0.008	0.810	118714	2.26	90.4	1128	M

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	3.066	3.067	-0.001	0.890	2017282	2.57		109	5020	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.066	3.067	-0.001	1.000	54921	0.0565	Target=3.55	113	9.5	
363.00 > 169.00	3.066	3.067	-0.001	1.000	17542		3.13(1.78-5.33)	113	39.9	
D 9 13C4 PFHpA										
367.00 > 322.00	3.066	3.067	-0.001	0.890	2719125	2.67		107	6061	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.066	3.067	-0.001	1.000	47794	0.0463	Target=3.65	102	141	
399.00 > 99.00	3.066	3.067	-0.001	1.000	13641		3.50(1.82-5.47)	102	16.6	
77 DONA										
377.00 > 251.00	3.109	3.109	0.0	0.817	118290	0.0479	Target=2.62	102	376	
377.00 > 85.00	3.109	3.109	0.0	0.817	46136		2.56(1.31-3.92)	102	99.5	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.430	3.430	0.0	0.995	339136	2.66		112	1374	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.430	3.430	0.0	1.000	8484	0.0472		99.5	95.8	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.430	3.430	0.0	0.901	31335	0.0469	Target=5.52	98.4	324	
449.00 > 99.00	3.430	3.430	0.0	0.901	6259		5.01(2.76-8.28)	98.4	52.9	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.447	3.447	0.0	1.000	73407	0.0456	Target=2.64	91.3	13.2	M
413.00 > 169.00	3.447	3.447	0.0	1.000	25882		2.84(1.32-3.96)	91.3	75.9	M
* 62 13C2 PFOA										
415.00 > 370.00	3.447	3.447	0.0		2608353	2.50			7692	
D 14 13C4 PFOA										
417.00 > 372.00	3.447	3.447	0.0	1.000	2916393	2.81		113	6197	
D 18 13C4 PFOS										
503.00 > 80.00	3.805	3.805	0.0	1.104	1442868	2.70		113	7487	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.805	3.805	0.0	1.000	27107	0.0497	Target=4.99	107	116	M
499.00 > 99.00	3.805	3.805	0.0	1.000	5794		4.68(2.50-7.49)	107	21.5	M
D 19 13C5 PFNA										
468.00 > 423.00	3.829	3.829	0.0	1.111	2559003	2.79		112	7050	
20 Perfluorononanoic acid										
463.00 > 419.00	3.829	3.829	0.0	1.000	51846	0.0531	Target=8.13	106	13.7	
463.00 > 169.00	3.829	3.829	0.0	1.000	5988		8.66(4.07-12.20)	106	75.6	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.994	3.994	0.0	1.050	47151	0.0486		104	299	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.128	4.129	-0.001	1.085	24118	0.0512	Target=2.57	107	329	
549.00 > 99.00	4.128	4.129	-0.001	1.085	9717		2.48(1.29-3.86)	107	32.6	
24 Perfluorodecanoic acid										
513.00 > 469.00	4.164	4.164	0.0	1.000	54665	0.0598	Target=8.78	120	19.8	
513.00 > 169.00	4.164	4.164	0.0	1.000	6500		8.41(4.39-13.18)	120	62.5	
D 23 13C2 PFDA										
515.00 > 470.00	4.164	4.164	0.0	1.208	2471888	2.71		108	8421	

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	4.174	4.175	-0.001	1.211	368025	2.64		110	1636	
25 1H,1H,2H,2H-perfluorodecanesulfoni										
527.00 > 507.00	4.174	4.175	-0.001	1.000	8056	0.0543		113	131	
D 21 13C8 FOSA										
506.00 > 78.00	4.218	4.218	0.0	1.224	2955855	2.85		114	7450	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.218	4.218	0.0	1.000	55630	0.0513		103	304	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.305	4.305	0.0	1.249	227540	2.57		103	3142	
28 N-methylperfluorooctanesulfonamido										
570.00 > 419.00	4.316	4.317	-0.001	1.003	3898	0.0601		120	24.5	M
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.409	4.409	0.0	1.159	17436	0.0479	Target=2.59	99.3	162	
599.00 > 99.00	4.409	4.409	0.0	1.159	7172		2.43(1.29-3.88)	99.3	37.4	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.442	4.443	-0.001	1.000	45632	0.0590	Target=7.14	118	26.6	
563.00 > 169.00	4.442	4.443	-0.001	1.000	6265		7.28(3.57-10.71)	118	61.9	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.442	4.443	-0.001	1.289	268129	2.80		112	1795	
D 30 13C2 PFUnA										
565.00 > 520.00	4.442	4.443	-0.001	1.289	2310425	2.82		113	6808	
33 N-ethylperfluorooctanesulfonamidoa										
584.00 > 419.00	4.456	4.456	0.0	1.003	4169	0.0522		104	50.5	M
66 11-Chloroeicosafuoro-3-oxaundecan										
631.00 > 451.00	4.537	4.537	0.0	1.192	56936	0.0472		100	758	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.682	4.672	0.010	1.000	49737	0.0540	Target=6.72	108	5.7	
613.00 > 169.00	4.682	4.672	0.010	1.000	7256		6.85(3.36-10.08)	108	68.0	
D 36 13C2 PFDa										
615.00 > 570.00	4.682	4.672	0.010	1.359	2605502	2.96		118	8950	
74 1H,1H,2H,2H-perfluorododecanesulfo										
627.00 > 607.00	4.693	4.693	0.0	1.124	2688	0.0410		85.0	49.9	
75 Perfluorododecanesulfonic acid (PF										
699.00 > 80.00	4.849	4.847	0.002	1.275	7365	0.0470	Target=0.47	97.2	17.2	
699.00 > 99.00	4.849	4.847	0.002	1.275	15430		0.48(0.23-0.70)	97.2	197	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.888	4.886	0.002	1.044	36973	0.0496	Target=4.79	99.1	5.8	
663.00 > 169.00	4.888	4.886	0.002	1.044	7801		4.74(2.39-7.18)	99.1	89.8	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.085	5.074	0.011	1.475	2310444	2.93		117	10532	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.076	5.083	-0.007	0.998	6644	0.0494	Target=1.02	98.8	95.8	
713.00 > 219.00	5.076	5.083	-0.007	0.998	6793		0.98(0.51-1.53)	98.8	89.6	
D 44 13C2 PFHxDA										
815.00 > 770.00	5.435	5.433	0.002	1.577	2148235	2.71		108	5711	

Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.446	5.433	0.013	1.002	62503	0.0495	Target=4.39	98.9	8.3	
813.00 > 169.00	5.446	5.433	0.013	1.002	13012		4.80(2.19-6.58)	98.9	226	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.807	5.797	0.010	1.069	32973	0.0520	Target=4.22	104	8.5	
913.00 > 169.00	5.807	5.797	0.010	1.069	7807		4.22(2.11-6.32)	104	157	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

PFAS32NCIC1_00001

Amount Added: 100.00

Units: uL

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA010.d

Injection Date: 24-Sep-2019 18:15:39

Instrument ID: LC812

Lims ID: IC 1

Client ID:

Operator ID: lc812tech

ALS Bottle#: 2

Worklist Smp#: 10

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

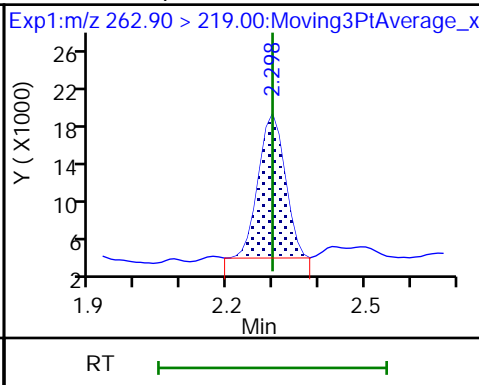
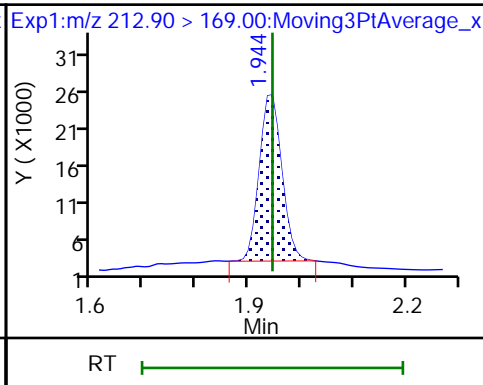
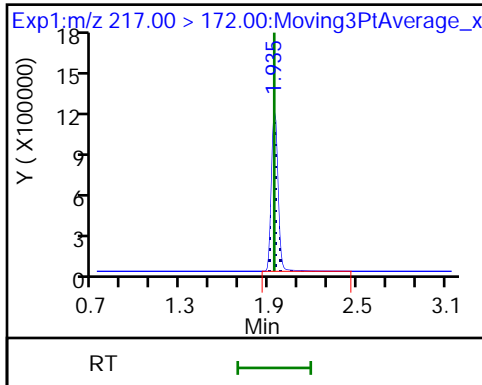
Method: PFC_LC812

Limit Group: LC_PFC_ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

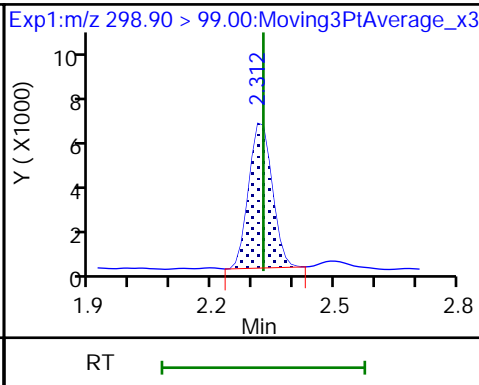
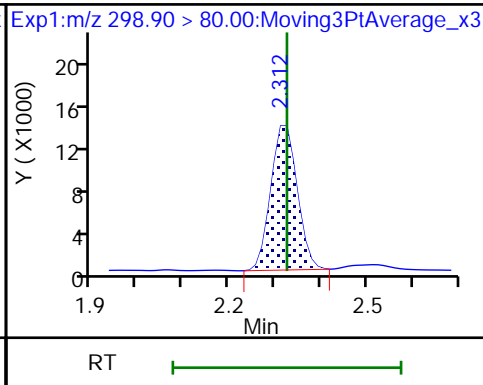
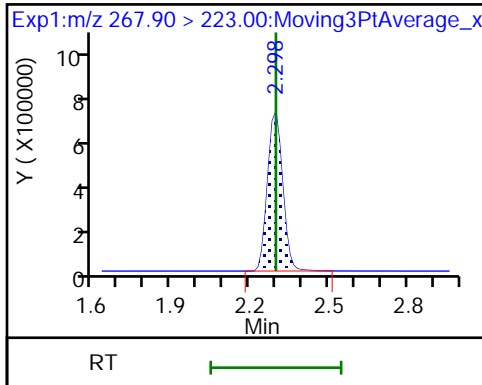
4 Perfluoropentanoic acid



D 3 13C5 PFPeA

5 Perfluorobutanesulfonic acid

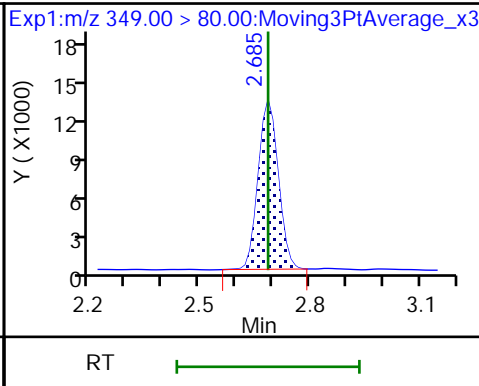
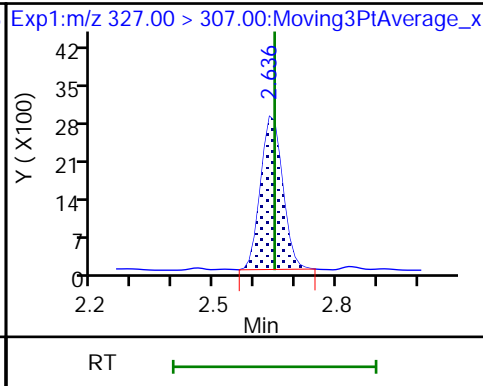
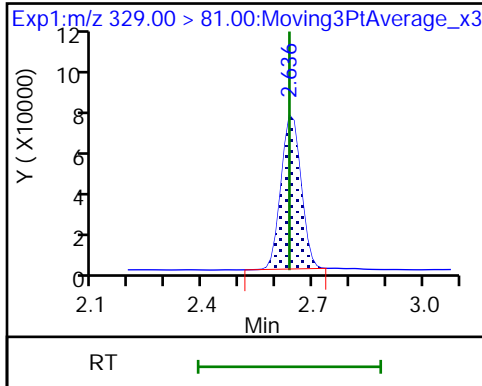
5 Perfluorobutanesulfonic acid



D 60 M2-4:2 FTS

61 1H,1H,2H,2H-perfluorohexanesulfoni

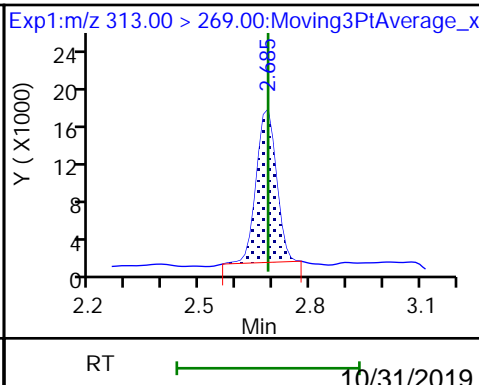
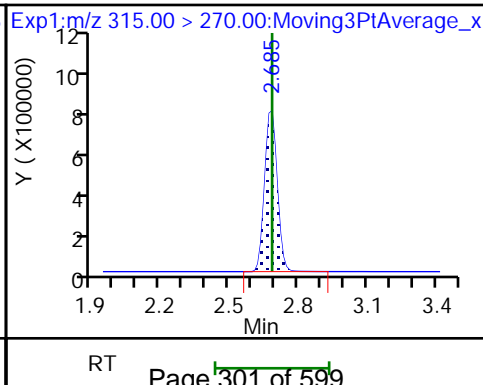
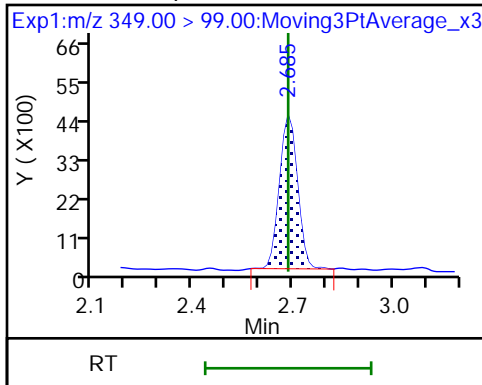
70 Perfluoropentanesulfonic acid



70 Perfluoropentanesulfonic acid

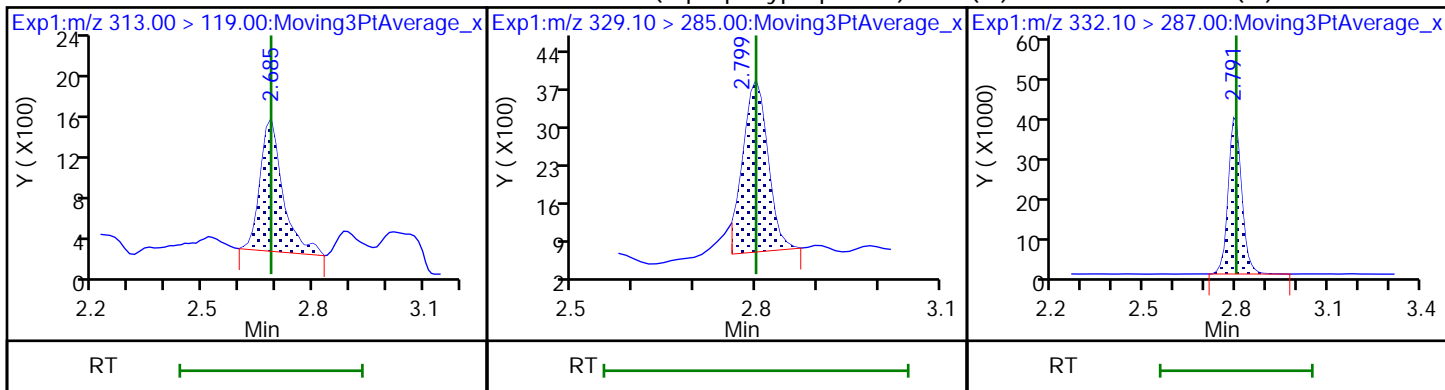
D 7 13C2 PFHxA

6 Perfluorohexanoic acid



6 Perfluorohexanoic acid

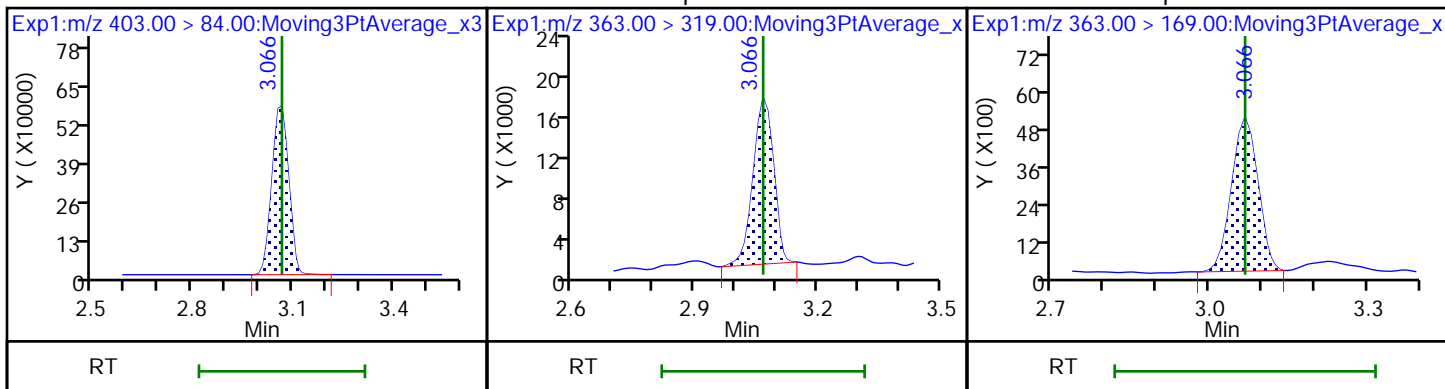
67 Perfluoro(2-propoxypropanoic) acid (M) 64 13C3 HFPO-DA (M)



D 11 18O2 PFHxS

10 Perfluoroheptanoic acid

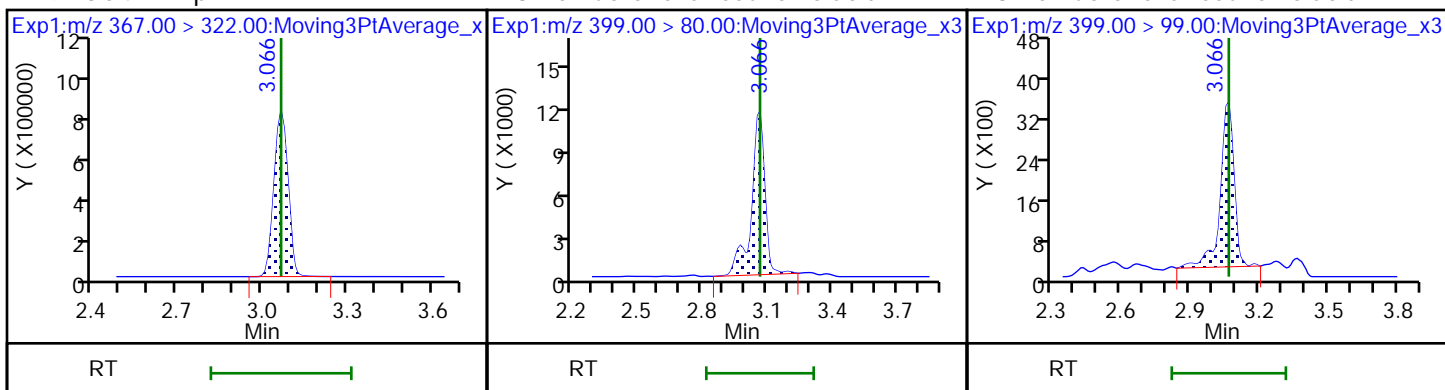
10 Perfluoroheptanoic acid



D 9 13C4 PFHpA

8 Perfluorohexanesulfonic acid

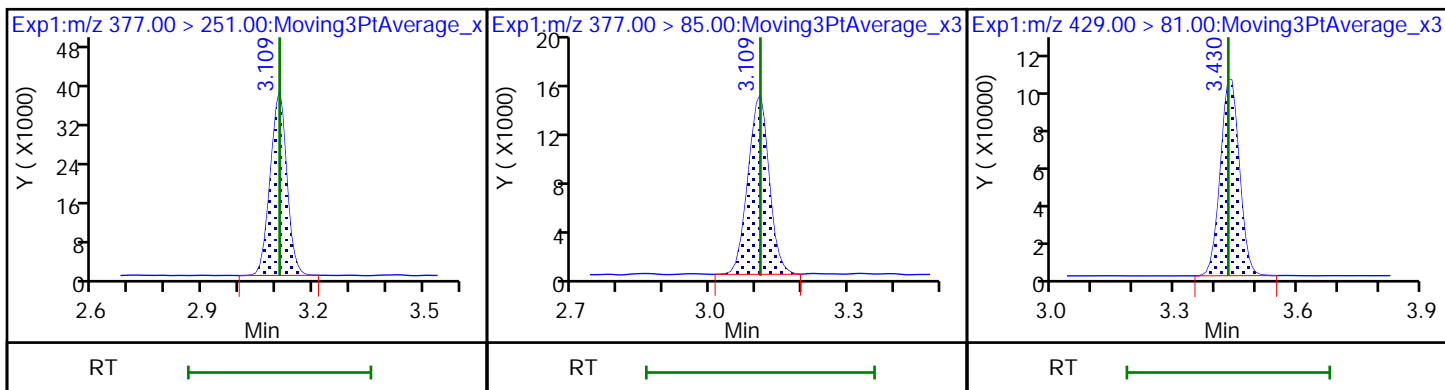
8 Perfluorohexanesulfonic acid

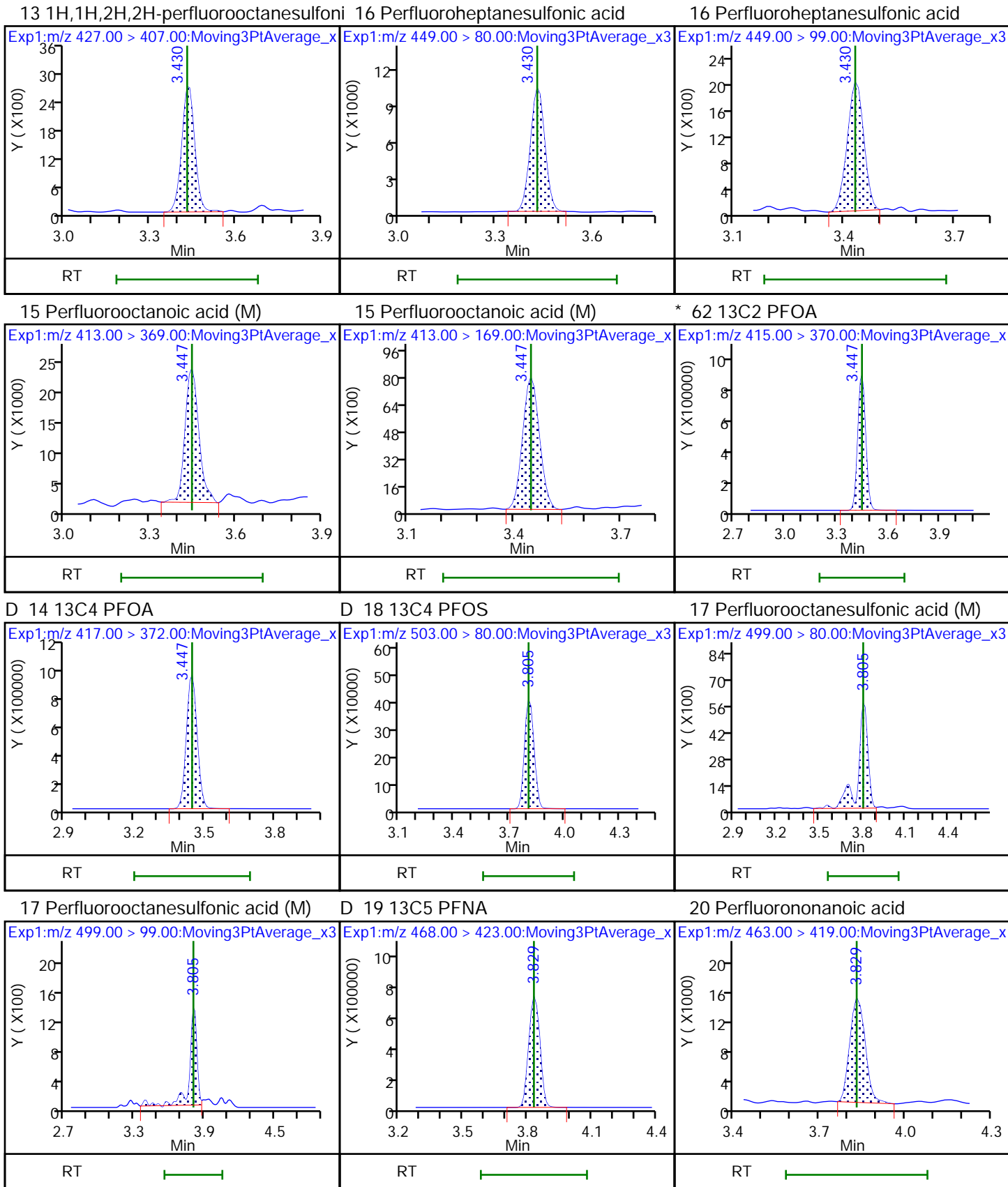


77 DONA

77 DONA

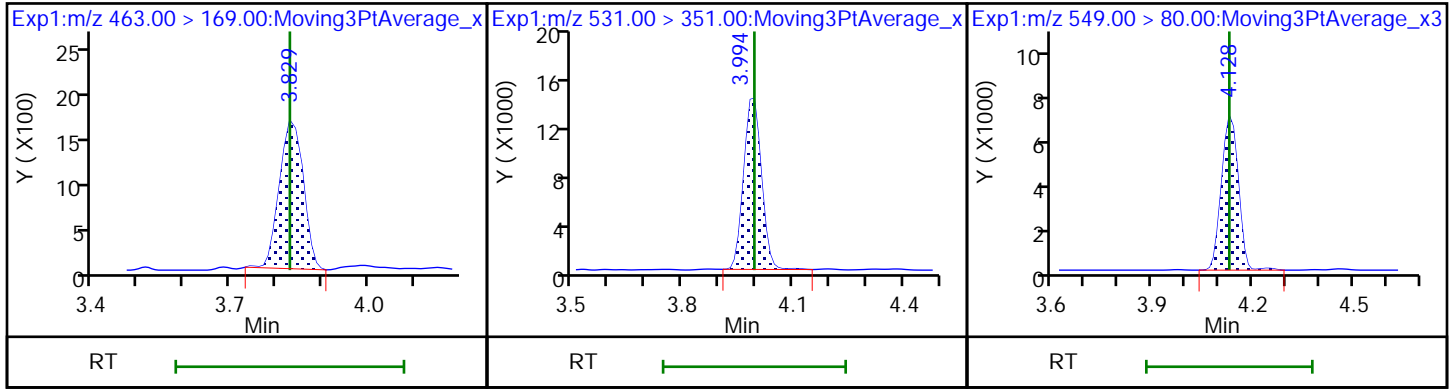
D 12 M2-6:2 FTS





20 Perfluorononanoic acid

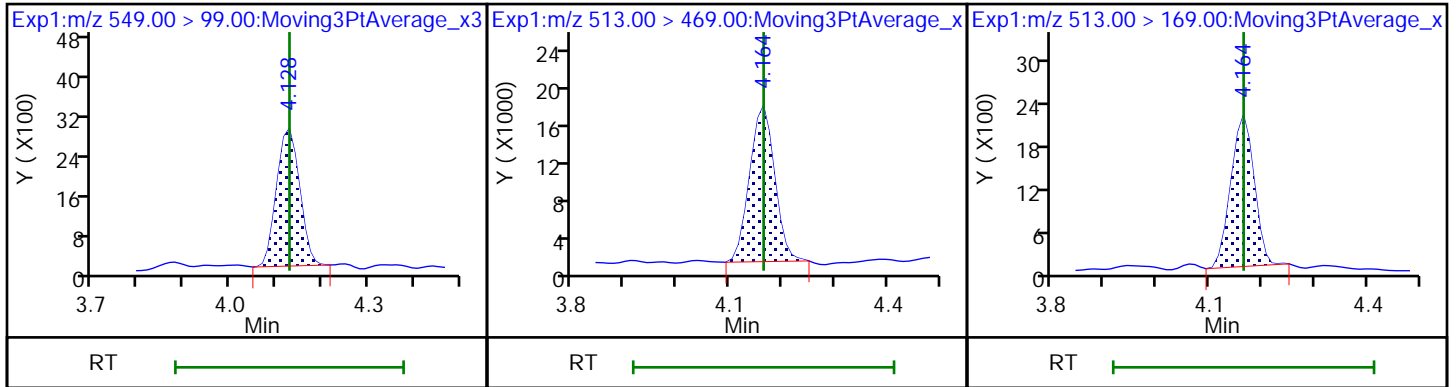
69 9-Chlorohexadecafluoro-3-oxanonan-68 Perfluoronananesulfonic acid



68 Perfluoronananesulfonic acid

24 Perfluorodecanoic acid

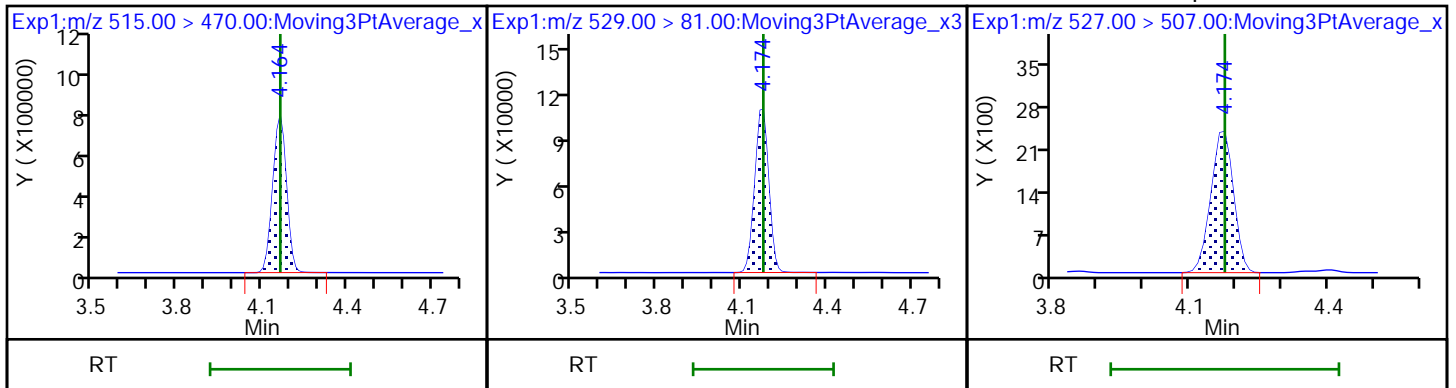
24 Perfluorodecanoic acid



D 23 13C2 PFDA

D 26 M2-8:2 FTS

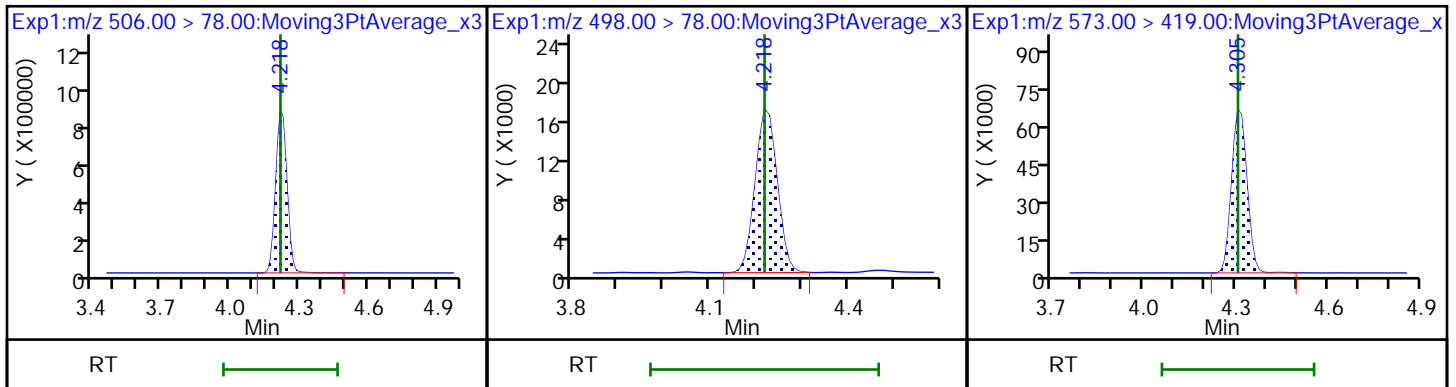
25 1H,1H,2H,2H-perfluorodecanesulfoni



D 21 13C8 FOSA

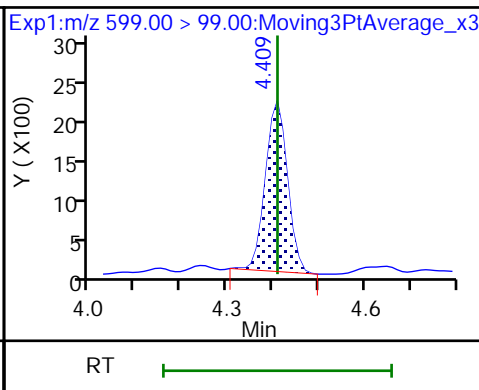
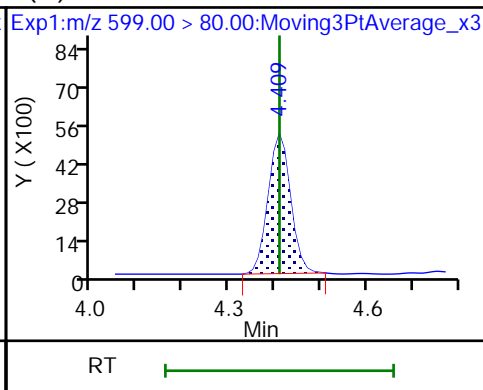
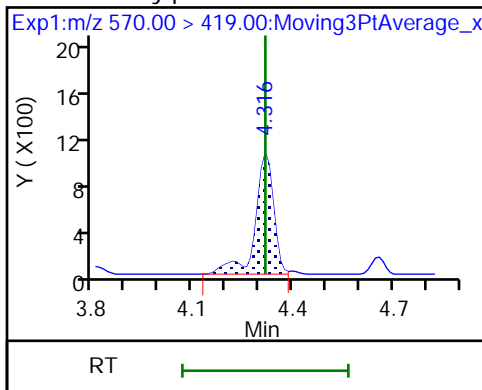
22 Perfluorooctanesulfonamide

D 27 d3-NMeFOSAA



28 N-methylperfluorooctanesulfonamido (28) Perfluorodecanesulfonic acid

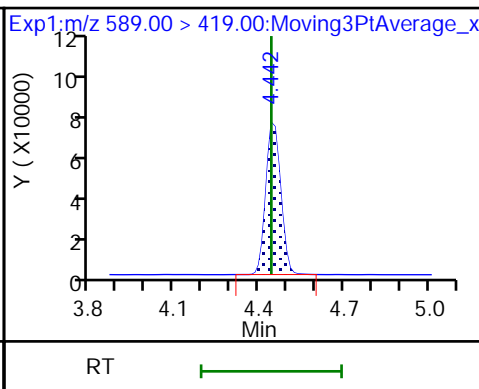
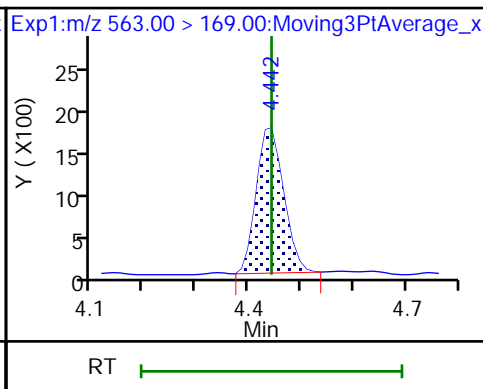
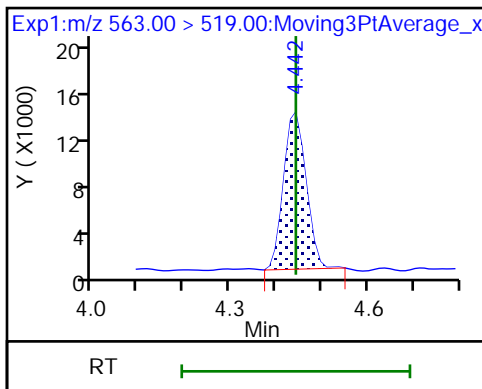
29 Perfluorodecanesulfonic acid



31 Perfluoroundecanoic acid

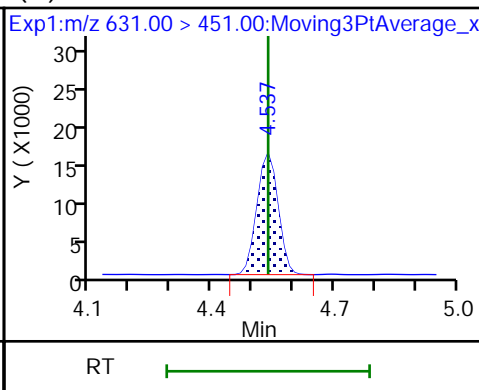
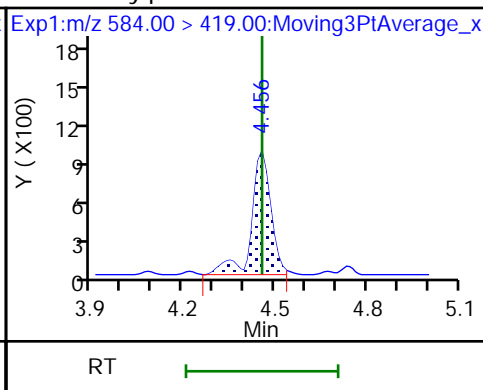
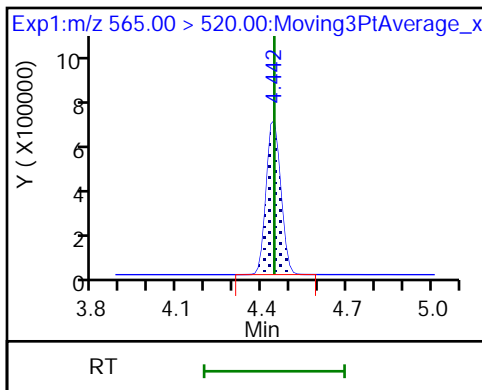
31 Perfluoroundecanoic acid

D 32 d5-NEtFOSAA



D 30 13C2 PFUnA

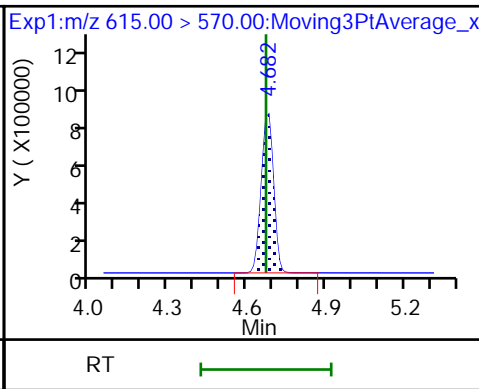
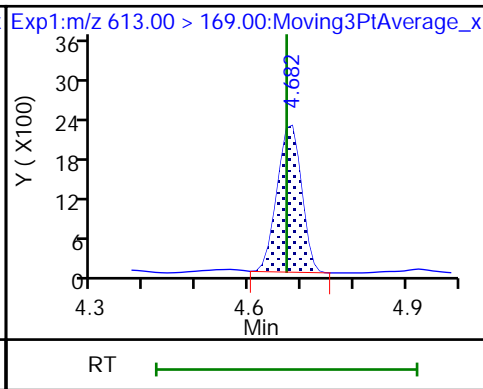
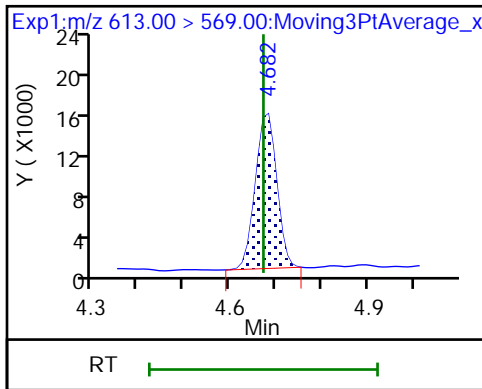
33 N-ethylperfluorooctanesulfonamido (33) 11-Chloroeicosafuoro-3-oxaundecan



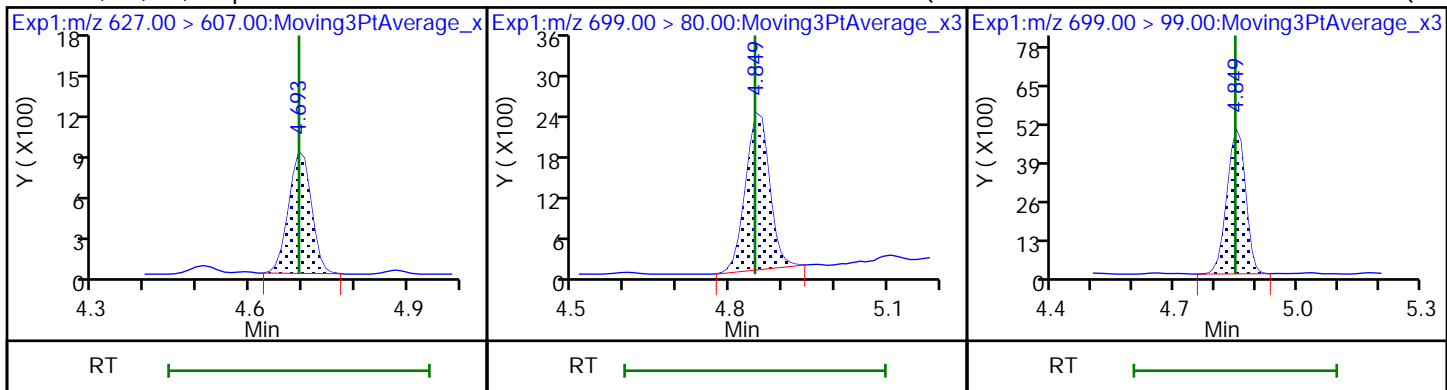
37 Perfluorododecanoic acid

37 Perfluorododecanoic acid

D 36 13C2 PFDaA



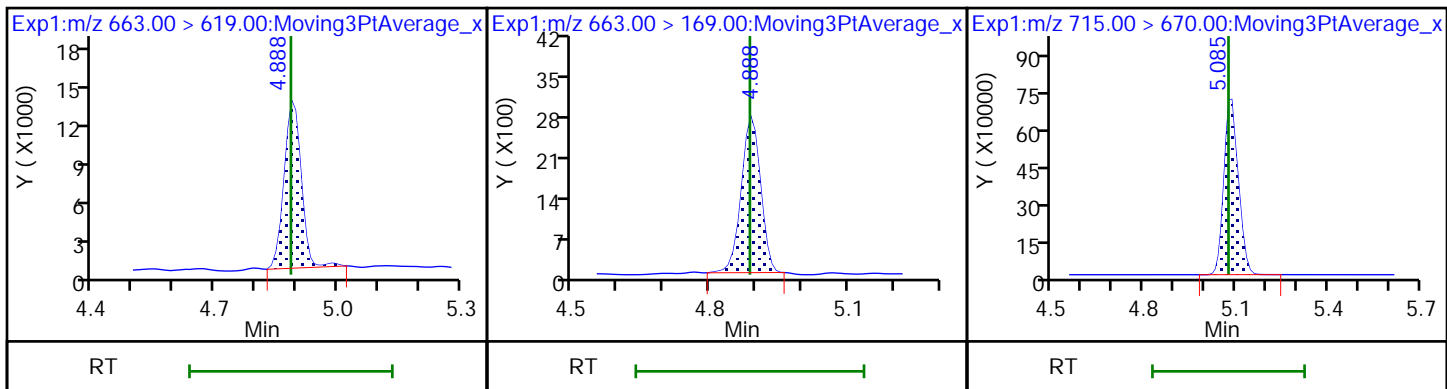
74 1H,1H,2H,2H-perfluorododecanesulfo75 Perfluorododecanesulfonic acid (PF 75 Perfluorododecanesulfonic acid (PF



41 Perfluorotridecanoic acid

41 Perfluorotridecanoic acid

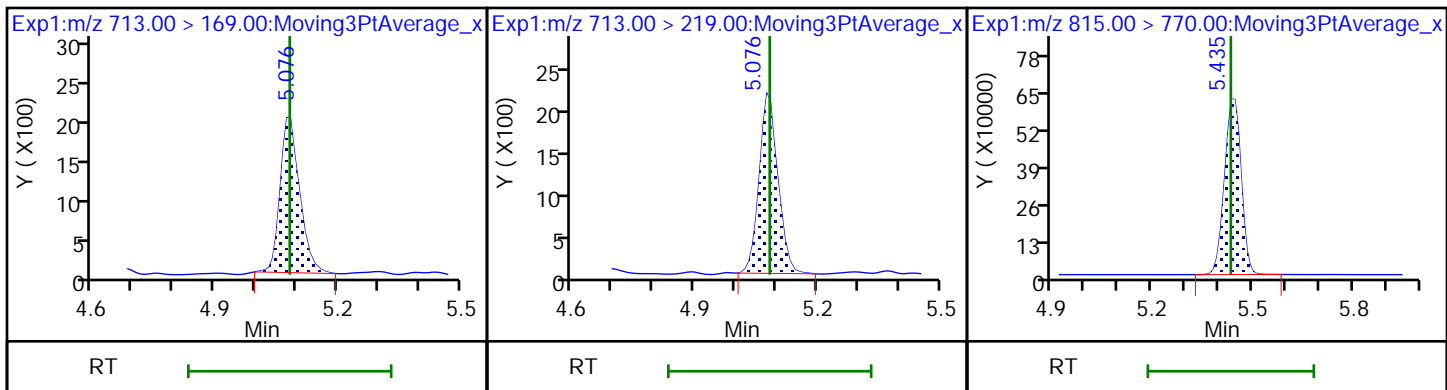
D 43 13C2 PFTeDA



42 Perfluorotetradecanoic acid

42 Perfluorotetradecanoic acid

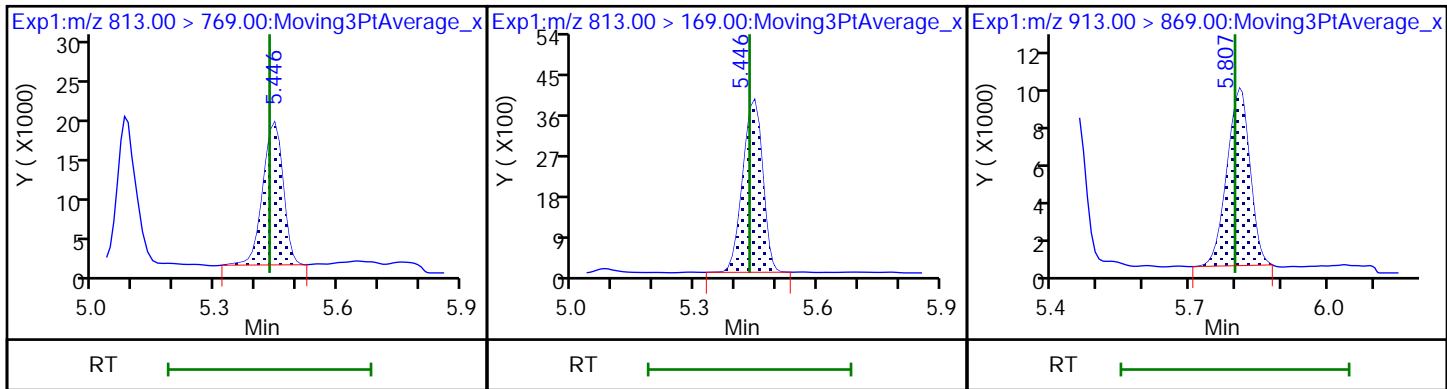
D 44 13C2 PFHxDA



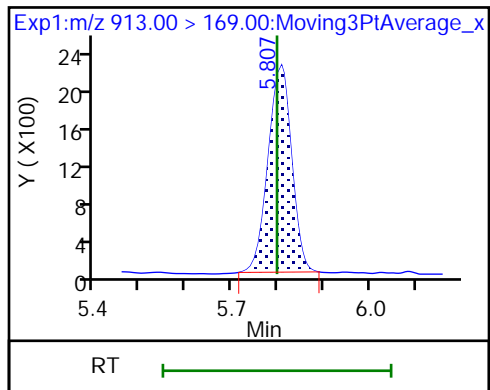
45 Perfluorohexadecanoic acid

45 Perfluorohexadecanoic acid

46 Perfluorooctadecanoic acid



46 Perfluorooctadecanoic acid



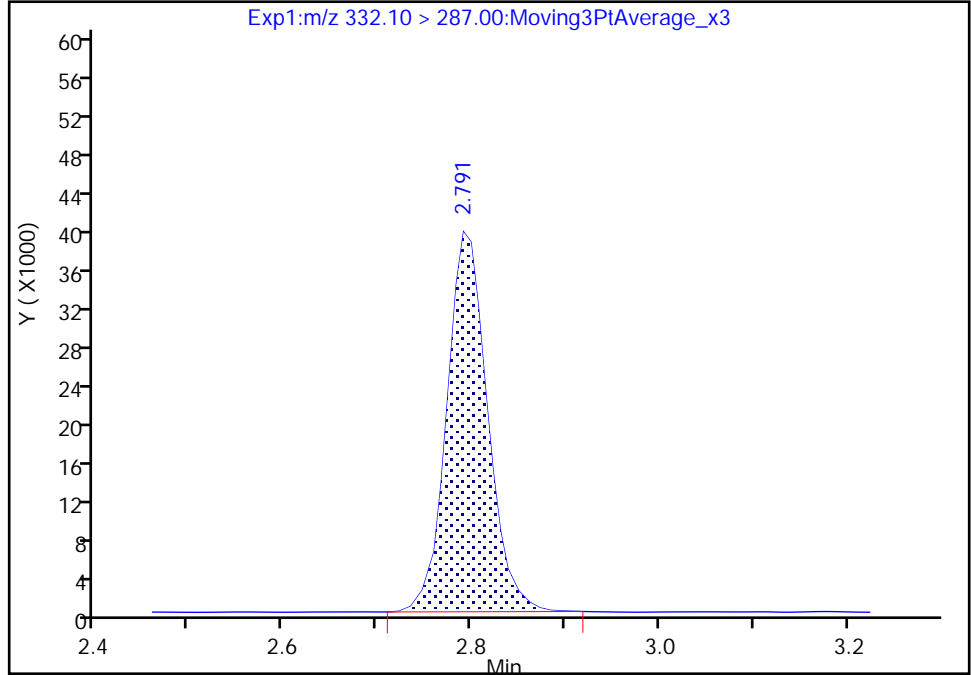
Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA010.d
Injection Date: 24-Sep-2019 18:15:39 Instrument ID: LC812
Lims ID: IC 1
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 10
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

D 64 13C3 HFPO-DA, CAS: STL02255
Signal: 1

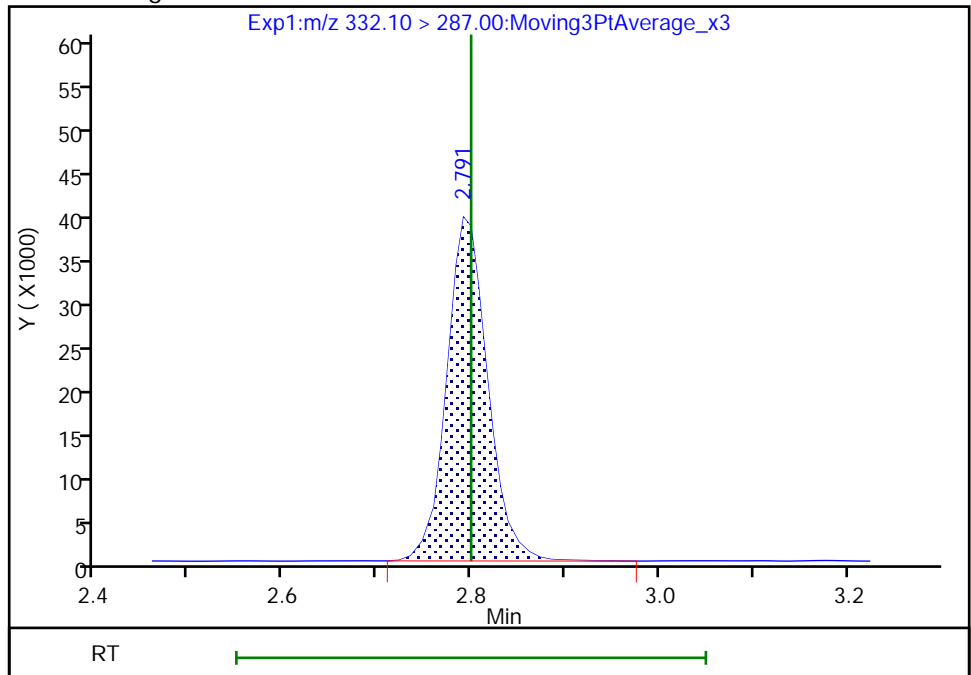
RT: 2.79
Area: 118169
Amount: 2.250618
Amount Units: ng/ml

Processing Integration Results



RT: 2.79
Area: 118714
Amount: 2.259435
Amount Units: ng/ml

Manual Integration Results



Eurofins TestAmerica, Burlington

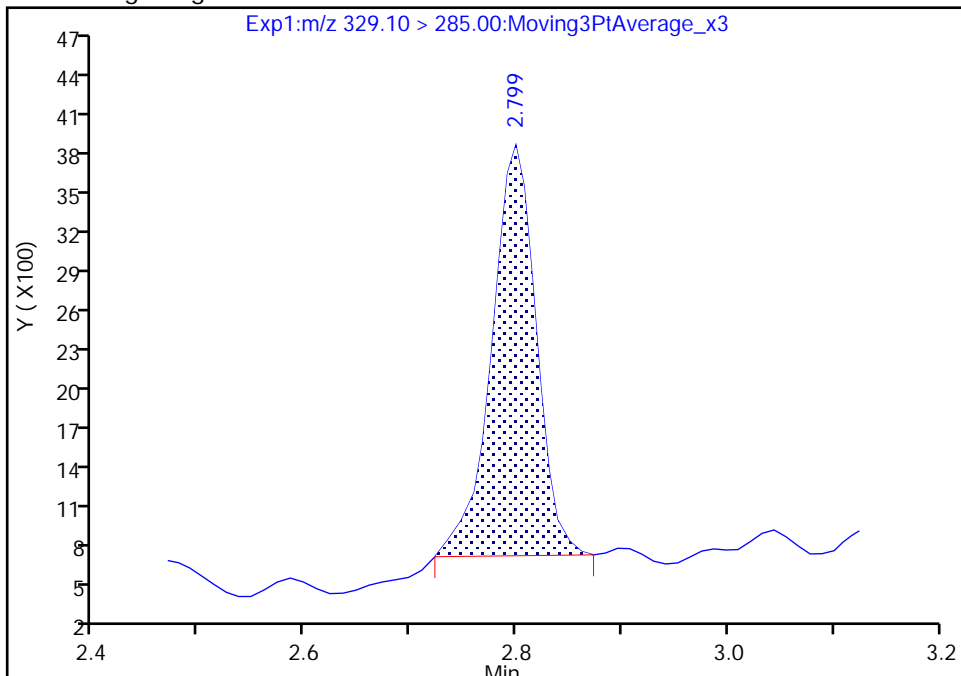
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Injection Date: 24-Sep-2019 18:15:39 Instrument ID: LC812
Lims ID: IC 1
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 10
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

67 Perfluoro(2-propoxypropanoic) acid, CAS: 13252-13-6

Signal: 1

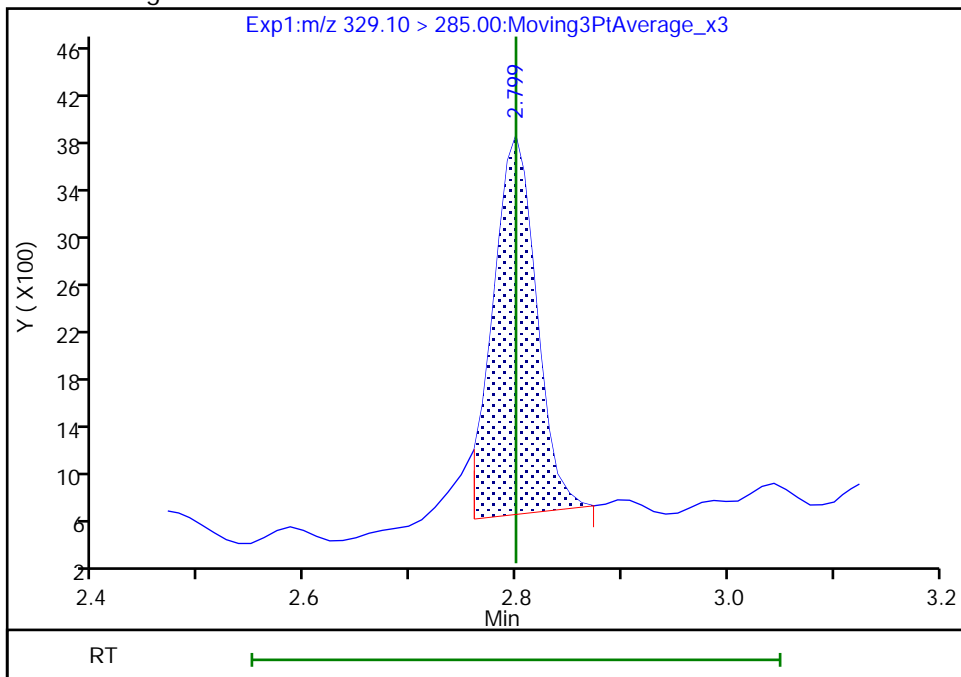
RT: 2.80
Area: 9090
Amount: 0.055896
Amount Units: ng/ml

Processing Integration Results



RT: 2.80
Area: 8990
Amount: 0.066170
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 25-Sep-2019 11:29:55
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

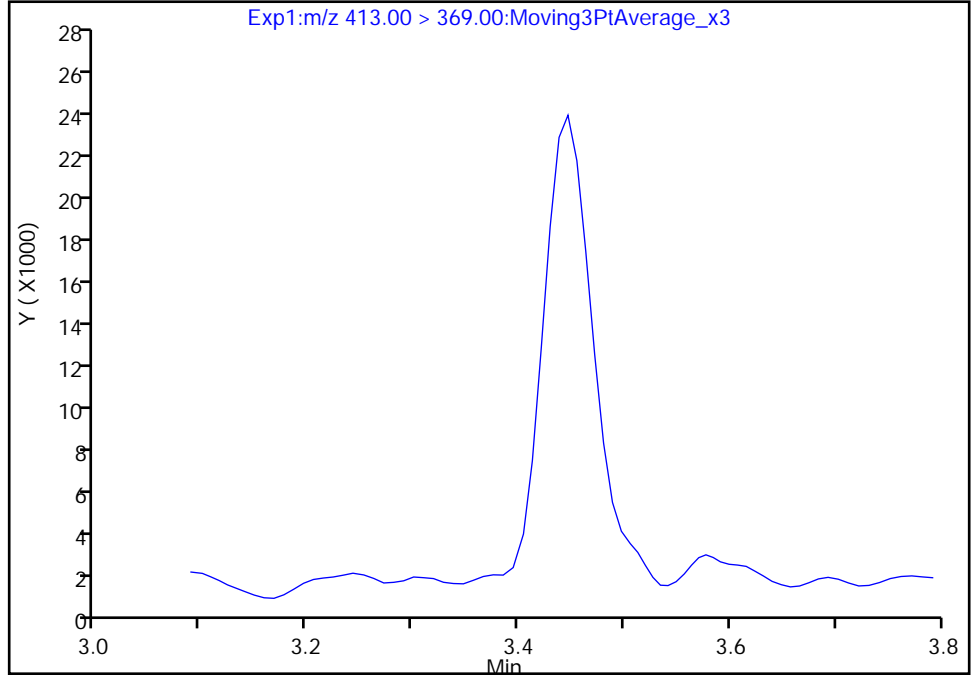
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Injection Date: 24-Sep-2019 18:15:39 Instrument ID: LC812
Lims ID: IC 1
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 10
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

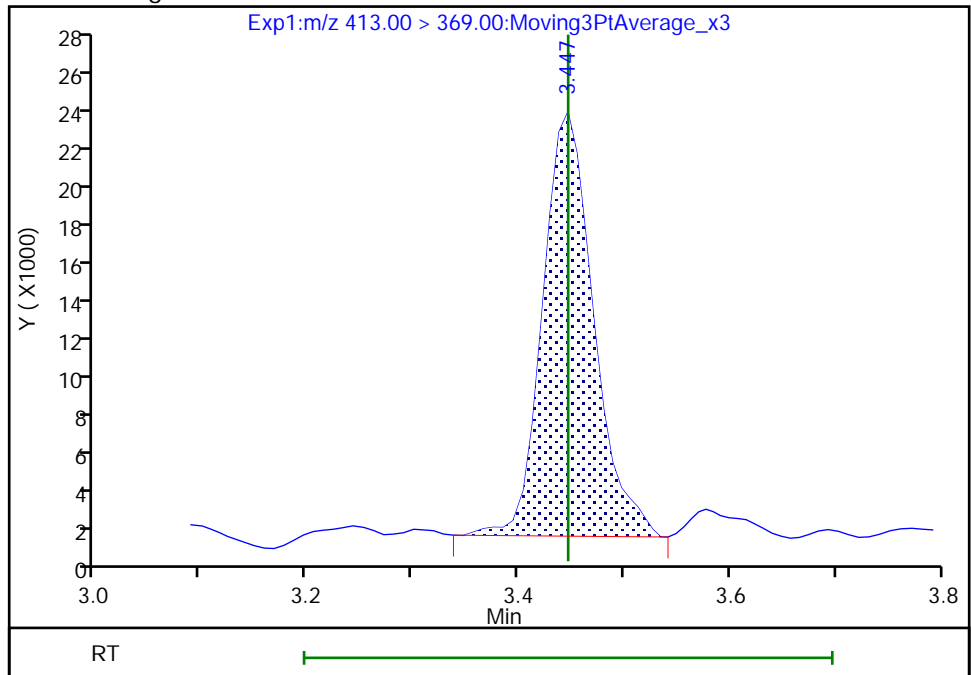
Not Detected
Expected RT: 3.45

Processing Integration Results



Manual Integration Results

RT: 3.45
Area: 73407
Amount: 0.045632
Amount Units: ng/ml



Reviewer: chirgwinb, 24-Sep-2019 18:27:37
Audit Action: Manually Integrated

Audit Reason: Missed Peak

Eurofins TestAmerica, Burlington

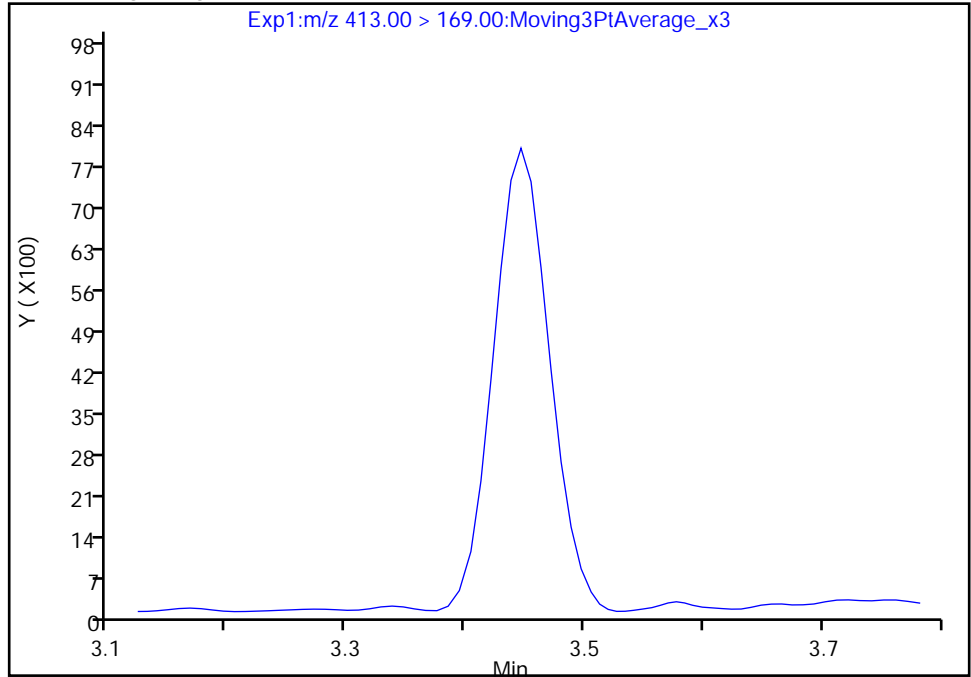
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Lims ID: IC 1
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 10
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

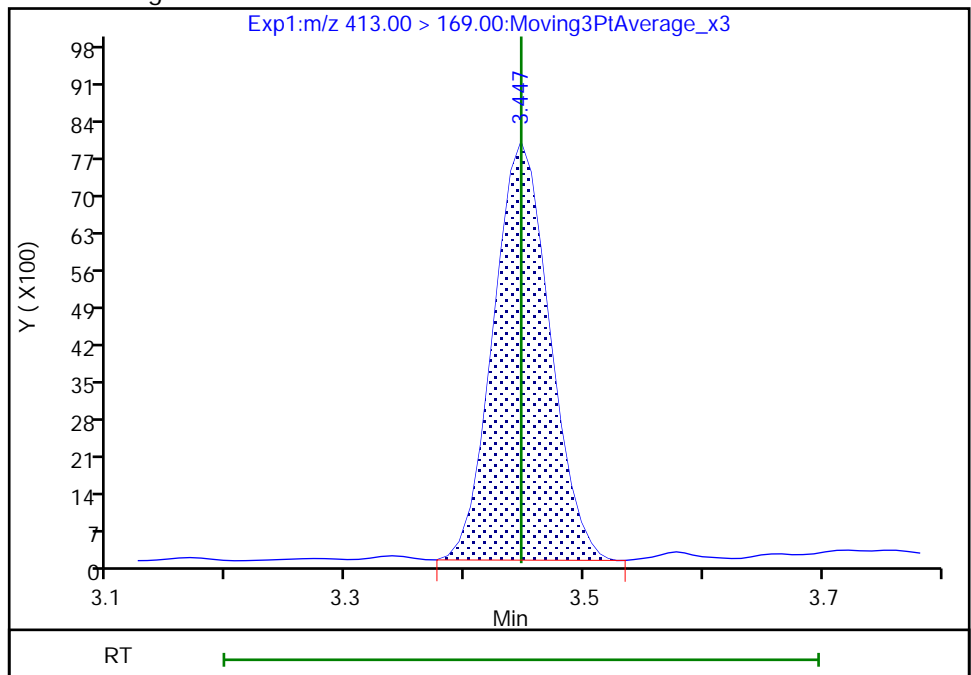
Not Detected
Expected RT: 3.45

Processing Integration Results



Manual Integration Results

RT: 3.45
Area: 25882
Amount: 0.045632
Amount Units: ng/ml



Reviewer: chirgwinb, 24-Sep-2019 18:27:37

Audit Action: Manually Integrated

Audit Reason: Missed Peak

Eurofins TestAmerica, Burlington

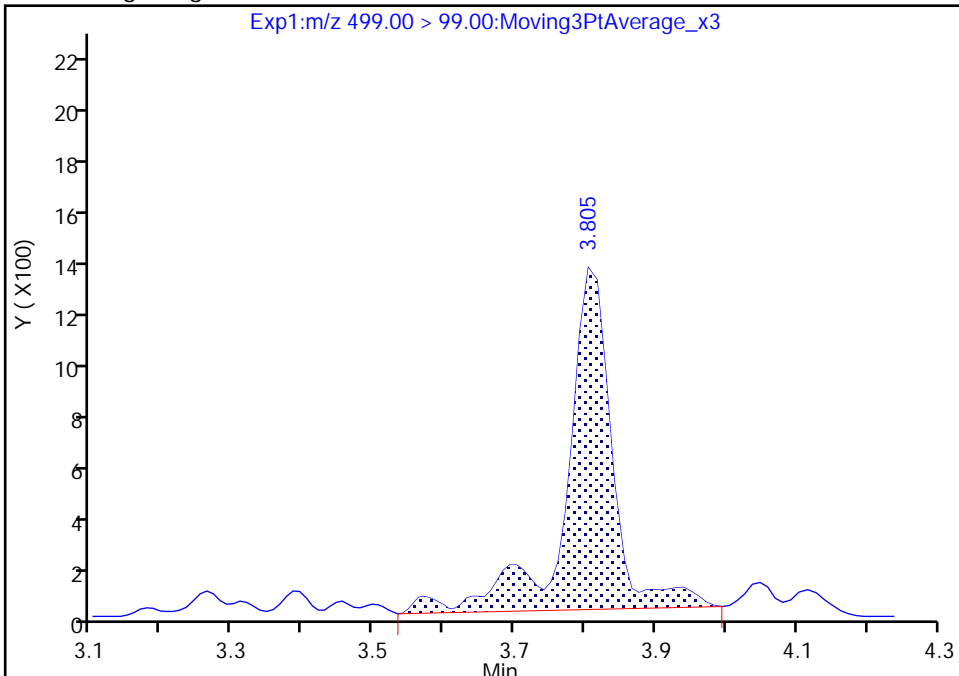
Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA010.d
Injection Date: 24-Sep-2019 18:15:39 Instrument ID: LC812
Lims ID: IC 1
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 10
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

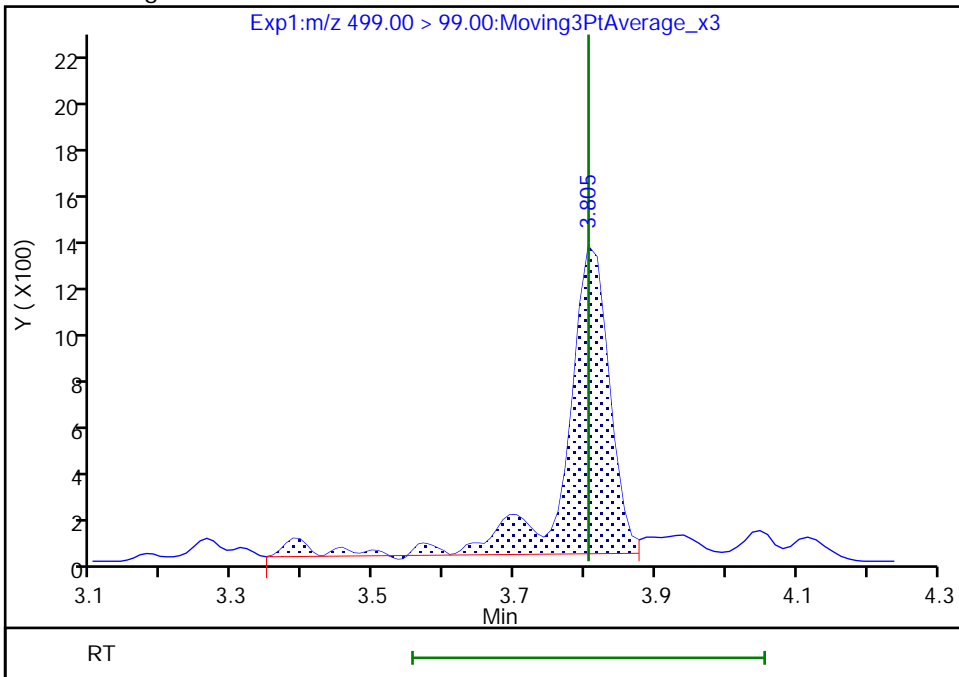
RT: 3.80
Area: 6070
Amount: 0.049666
Amount Units: ng/ml

Processing Integration Results



RT: 3.80
Area: 5794
Amount: 0.049661
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 24-Sep-2019 18:27:15
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

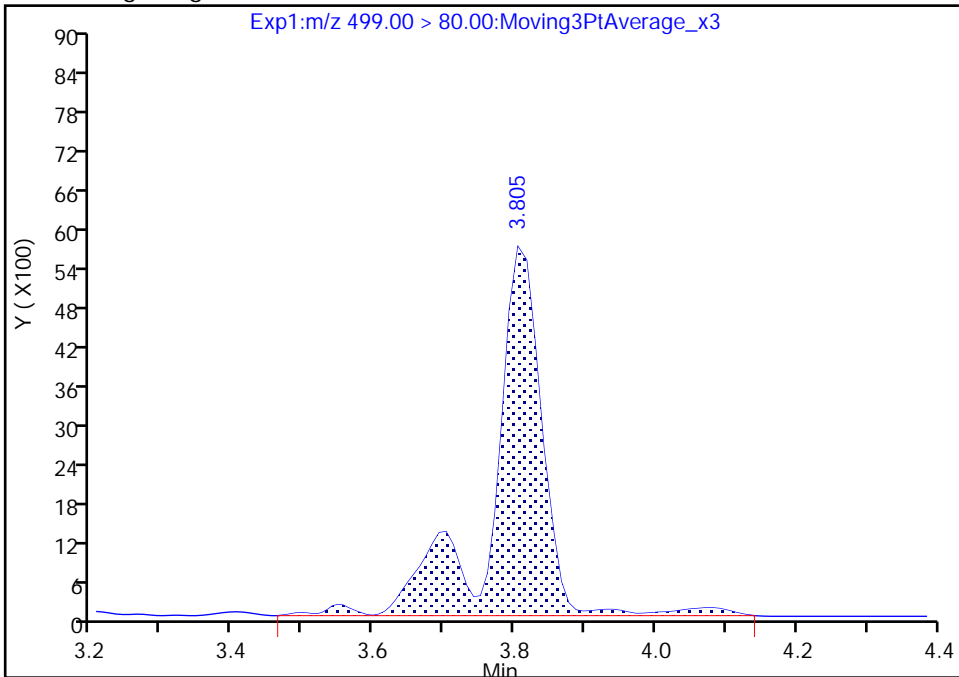
Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA010.d
Injection Date: 24-Sep-2019 18:15:39 Instrument ID: LC812
Lims ID: IC 1
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 10
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

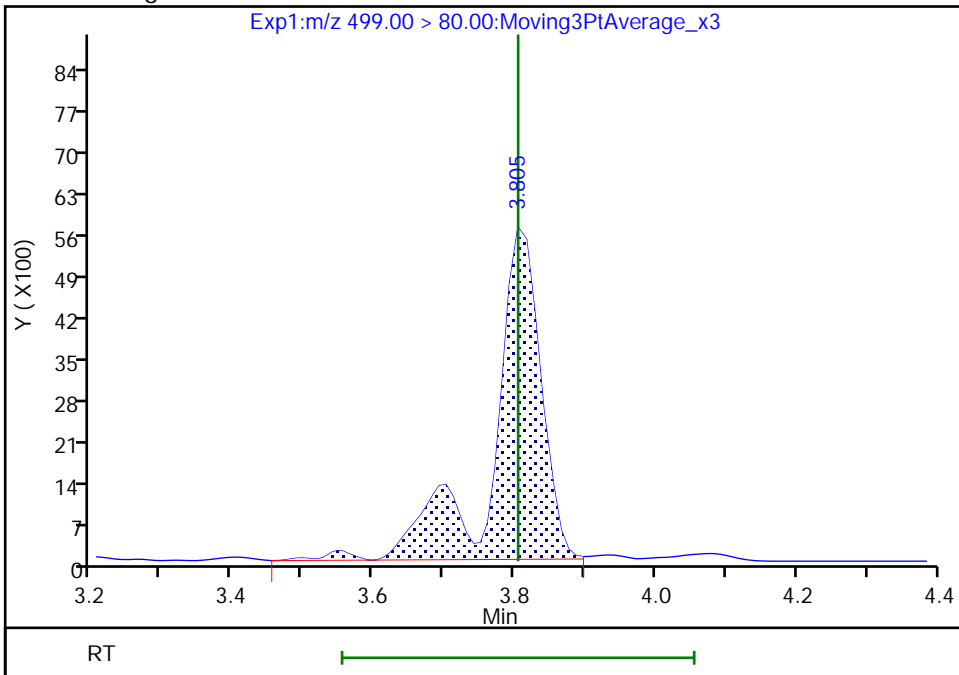
RT: 3.80
Area: 28506
Amount: 0.049666
Amount Units: ng/ml

Processing Integration Results



RT: 3.80
Area: 27107
Amount: 0.049661
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 24-Sep-2019 18:27:17

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

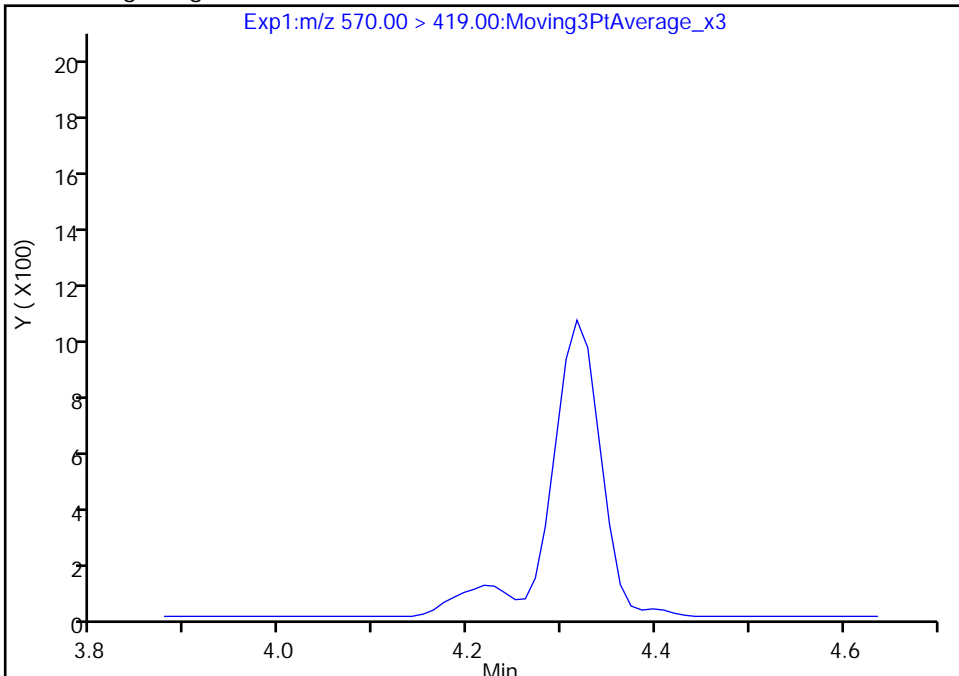
Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA010.d
Injection Date: 24-Sep-2019 18:15:39 Instrument ID: LC812
Lims ID: IC 1
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 10
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

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

Signal: 1

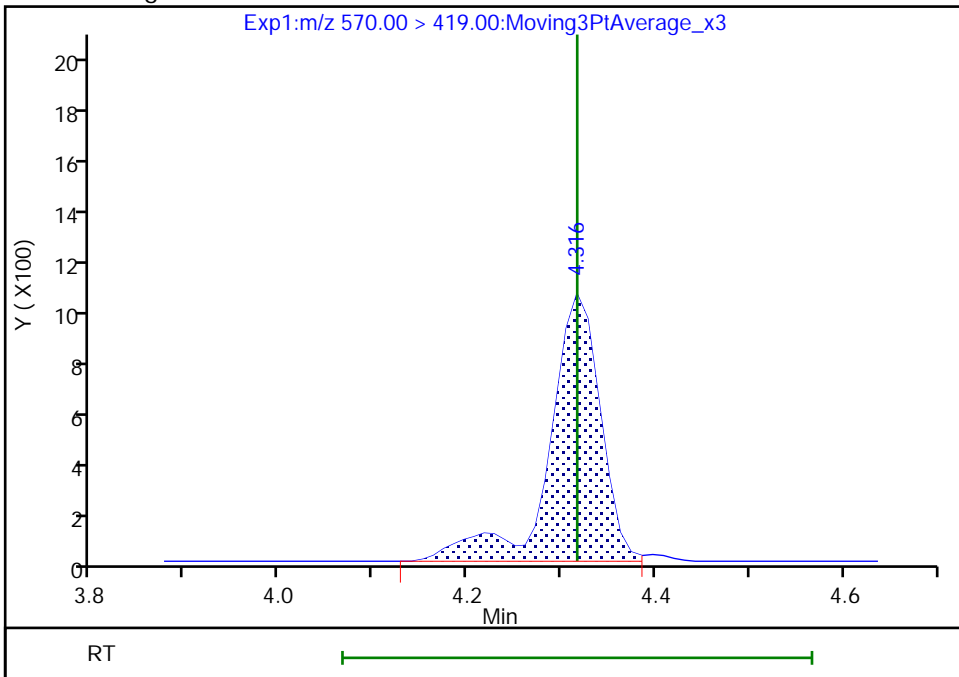
Not Detected
Expected RT: 4.32

Processing Integration Results



Manual Integration Results

RT: 4.32
Area: 3898
Amount: 0.060111
Amount Units: ng/ml



Reviewer: chirgwinb, 25-Sep-2019 09:35:37
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

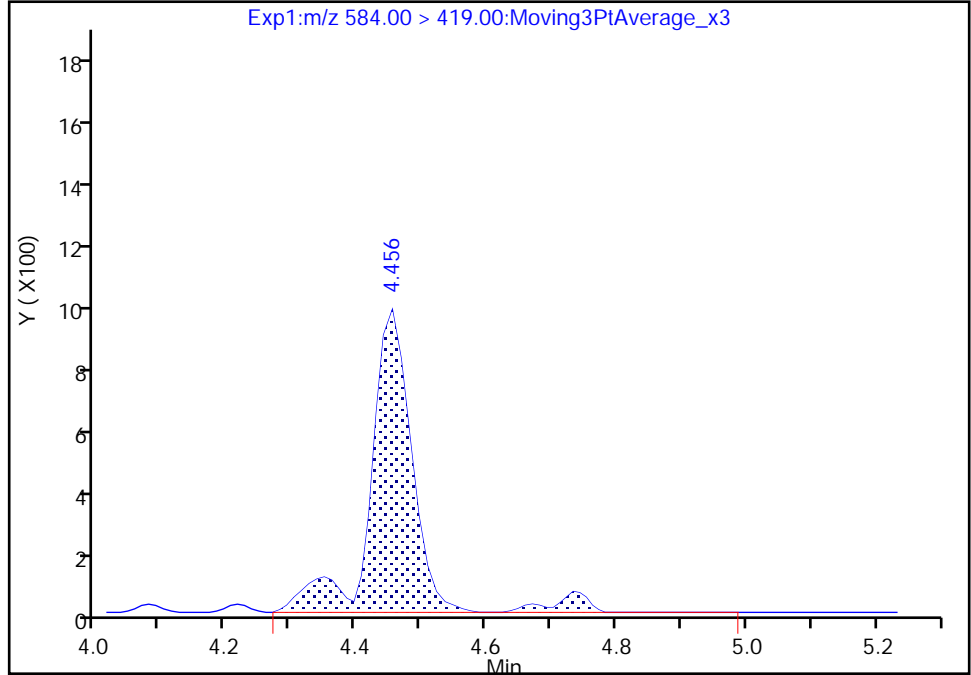
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Injection Date: 24-Sep-2019 18:15:39 Instrument ID: LC812
Lims ID: IC 1
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 10
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

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

Signal: 1

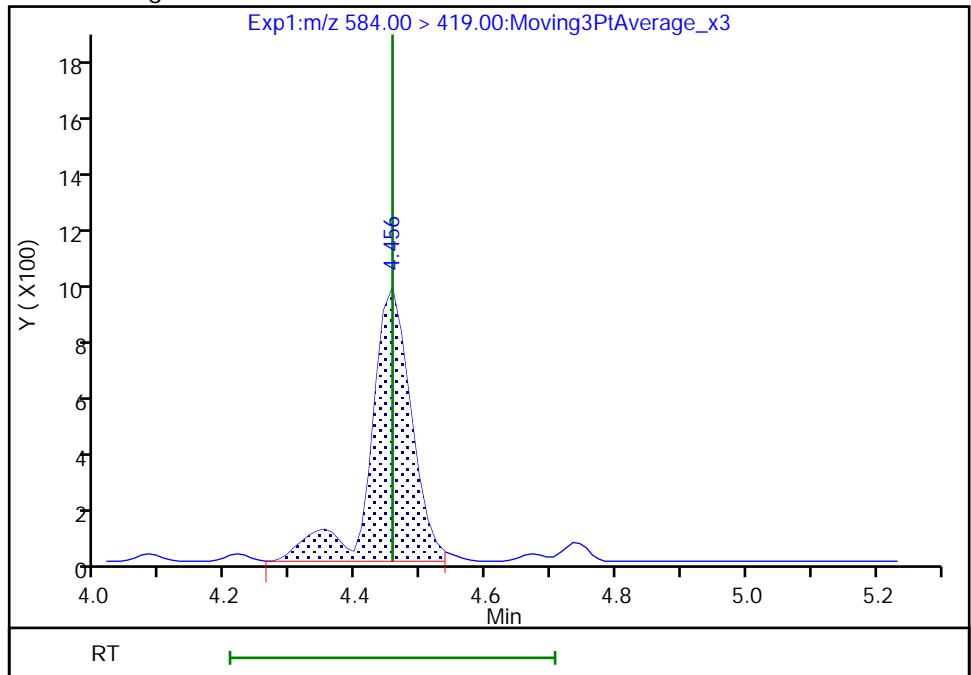
RT: 4.46
Area: 4457
Amount: 0.060509
Amount Units: ng/ml

Processing Integration Results



RT: 4.46
Area: 4169
Amount: 0.052227
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 25-Sep-2019 09:35:50
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA011.d
 Lims ID: IC 2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 24-Sep-2019 18:23:50 ALS Bottle#: 3 Worklist Smp#: 11
 Injection Vol: 20.0 ul Dil. Factor: 1.0000
 Sample Info: IC 2
 Misc. Info.: 200-0037915-011 Plate: 1 Rack: 2
 Operator ID: lc812tech Instrument ID: LC812
 Sublist: chrom-PFC_LC812*sub6

Method: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\PFC_LC812.m
 Limit Group: LC_PFC_ICAL
 Last Update: 25-Sep-2019 13:08:41 Calib Date: 24-Sep-2019 18:56:37
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA015.d

Column 1 : C-18 (4.60 mm) Det: EXP1
 Process Host: CTX0340

First Level Reviewer: chirgwinb Date: 24-Sep-2019 18:38:13

Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	1.935	1.935	0.0	0.561	3294091	2.12	84.6	22336	
2 Perfluorobutanoic acid	212.90 > 169.00	1.944	1.944	0.0	1.005	120913	0.1034	103	22.1	
4 Perfluoropentanoic acid	262.90 > 219.00	2.298	2.298	0.0	1.000	117302	0.1083	108	8.1	
D 3 13C5 PFPeA	267.90 > 223.00	2.298	2.298	0.0	0.667	2645737	2.15	85.9	5905	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	2.325	2.325	0.0	0.758	111288	0.0978	Target=2.04	111	225
	298.90 > 99.00	2.325	2.325	0.0	0.758	53856		2.07(1.02-3.06)	111	59.9
D 60 M2-4:2 FTS	329.00 > 81.00	2.635	2.636	-0.001	0.765	261504	2.06	88.0	283	
61 1H,1H,2H,2H-perfluorohexanesulfoni	327.00 > 307.00	2.648	2.648	0.0	1.005	21422	0.0956	102	262	
70 Perfluoropentanesulfonic acid	349.00 > 80.00	2.685	2.685	0.0	0.876	100998	0.1027	Target=2.96	109	403
	349.00 > 99.00	2.685	2.685	0.0	0.876	32617		3.10(1.48-4.44)	109	134
D 7 13C2 PFHxA	315.00 > 270.00	2.685	2.685	0.0	0.779	2759660	2.11	84.3	6959	
6 Perfluorohexanoic acid	313.00 > 269.00	2.685	2.685	0.0	1.000	128708	0.1184	Target=12.34	118	49.2
	313.00 > 119.00	2.685	2.685	0.0	1.000	10080		12.77(6.17-18.51)	118	8.8
67 Perfluoro(2-propoxypropanoic) acid	329.10 > 285.00	2.799	2.799	0.0	1.000	15465	0.0855		85.5	7.7
D 64 13C3 HFPO-DA	332.10 > 287.00	2.799	2.799	0.0	0.812	157966	2.42	96.7	1656	

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	3.066	3.067	-0.001	0.890	1975763	2.02		85.5	6176	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.066	3.067	-0.001	1.000	105255	0.1123	Target=3.55	112	18.1	
363.00 > 169.00	3.066	3.067	-0.001	1.000	28813		3.65(1.78-5.33)	112	55.6	
D 9 13C4 PFHpA										
367.00 > 322.00	3.066	3.067	-0.001	0.890	2623174	2.07		82.8	5370	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.066	3.067	-0.001	1.000	87049	0.0966	Target=3.65	106	208	
399.00 > 99.00	3.066	3.067	-0.001	1.000	24434		3.56(1.82-5.47)	106	34.7	
77 DONA										
377.00 > 251.00	3.108	3.109	-0.001	0.817	244000	0.1051	Target=2.62	112	849	
377.00 > 85.00	3.108	3.109	-0.001	0.817	89020		2.74(1.31-3.92)	112	190	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.438	3.430	0.008	0.998	336304	2.12		89.2	1387	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.438	3.430	0.008	1.000	16922	0.0949		100	248	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.430	3.430	0.0	0.901	61268	0.0974	Target=5.52	102	558	
449.00 > 99.00	3.430	3.430	0.0	0.901	11291		5.43(2.76-8.28)	102	117	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.447	3.447	0.0	1.000	127255	0.1048	Target=2.64	105	22.3	
413.00 > 169.00	3.447	3.447	0.0	1.000	49820		2.55(1.32-3.96)	105	156	
* 62 13C2 PFOA										
415.00 > 370.00	3.447	3.447	0.0		3243931	2.50			7785	
D 14 13C4 PFOA										
417.00 > 372.00	3.447	3.447	0.0	1.000	2695960	2.09		83.7	6164	
D 18 13C4 PFOS										
503.00 > 80.00	3.805	3.805	0.0	1.104	1357365	2.04		85.4	4661	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.817	3.805	0.012	1.003	55025	0.1072	Target=4.99	115	295	M
499.00 > 99.00	3.805	3.805	0.0	1.000	10410		5.29(2.50-7.49)	115	47.2	M
D 19 13C5 PFNA										
468.00 > 423.00	3.829	3.829	0.0	1.111	2488112	2.18		87.3	8077	
20 Perfluorononanoic acid										
463.00 > 419.00	3.829	3.829	0.0	1.000	101562	0.1070	Target=8.13	107	26.5	
463.00 > 169.00	3.829	3.829	0.0	1.000	12607		8.06(4.07-12.20)	107	179	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.994	3.994	0.0	1.050	87384	0.0958		103	447	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.128	4.129	-0.001	1.085	44860	0.1012	Target=2.57	105	485	
549.00 > 99.00	4.128	4.129	-0.001	1.085	17738		2.53(1.29-3.86)	105	51.8	
24 Perfluorodecanoic acid										
513.00 > 469.00	4.163	4.164	-0.001	1.000	98571	0.1089	Target=8.78	109	37.0	
513.00 > 169.00	4.163	4.164	-0.001	1.000	10357		9.52(4.39-13.18)	109	96.4	
D 23 13C2 PFDA										
515.00 > 470.00	4.163	4.164	-0.001	1.208	2446200	2.15		86.2	5259	

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	4.174	4.175	-0.001	1.211	321024	1.85		77.3	1930	
25 1H,1H,2H,2H-perfluorodecanesulfo										M
527.00 > 507.00	4.174	4.175	-0.001	1.000	12045	0.1028		107	144	M
D 21 13C8 FOSA										
506.00 > 78.00	4.228	4.218	0.010	1.227	2692283	2.09		83.5	6857	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.228	4.218	0.010	1.000	105038	0.1063		106	487	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.316	4.305	0.011	1.252	240222	2.18		87.3	2033	
28 N-methylperfluorooctanesulfonamido										M
570.00 > 419.00	4.316	4.317	-0.001	1.000	7377	0.1078		108	106	M
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.409	4.409	0.0	1.159	35573	0.1038	Target=2.59	108	214	
599.00 > 99.00	4.409	4.409	0.0	1.159	12782		2.78(1.29-3.88)	108	91.6	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.442	4.443	-0.001	1.000	76192	0.1015	Target=7.14	102	42.2	
563.00 > 169.00	4.442	4.443	-0.001	1.000	10671		7.14(3.57-10.71)	102	138	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.456	4.443	0.013	1.293	251248	2.11		84.3	1210	
D 30 13C2 PFUnA										
565.00 > 520.00	4.442	4.443	-0.001	1.289	2242476	2.20		88.2	6118	
33 N-ethylperfluorooctanesulfonamidoa										M
584.00 > 419.00	4.456	4.456	0.0	1.000	6115	0.0925		92.5	71.9	M
66 11-Chloroeicosafuoro-3-oxaundecan										
631.00 > 451.00	4.537	4.537	0.0	1.192	111300	0.0980		104	1573	
37 Perfluorododecanoic acid										M
613.00 > 569.00	4.682	4.672	0.010	1.000	86845	0.1050	Target=6.72	105	11.7	M
613.00 > 169.00	4.682	4.672	0.010	1.000	12629		6.88(3.36-10.08)	105	156	
D 36 13C2 PFDaA										
615.00 > 570.00	4.682	4.672	0.010	1.359	2337938	2.13		85.4	6474	
74 1H,1H,2H,2H-perfluorododecanesulfo										
627.00 > 607.00	4.693	4.693	0.0	1.124	5594	0.0978		101	99.8	
75 Perfluorododecanesulfonic acid (PF										
699.00 > 80.00	4.849	4.847	0.002	1.275	16114	0.1094	Target=0.47	113	74.1	
699.00 > 99.00	4.849	4.847	0.002	1.275	31543		0.51(0.23-0.70)	113	357	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.888	4.886	0.002	1.044	72233	0.1079	Target=4.79	108	12.1	
663.00 > 169.00	4.888	4.886	0.002	1.044	14539		4.97(2.39-7.18)	108	180	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.085	5.074	0.011	1.475	2067507	2.11		84.2	7943	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.085	5.083	0.002	1.000	12914	0.1073	Target=1.02	107	216	
713.00 > 219.00	5.076	5.083	-0.007	0.998	12758		1.01(0.51-1.53)	107	211	
D 44 13C2 PFHxDA										
815.00 > 770.00	5.446	5.433	0.013	1.580	2139356	2.17		86.8	8188	

Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.446	5.433	0.013	1.000	98924	0.1021	Target=4.39	102	15.0	
813.00 > 169.00	5.446	5.433	0.013	1.000	21512		4.60(2.19-6.58)	102	334	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.807	5.797	0.010	1.066	64570	0.1022	Target=4.22	102	17.5	
913.00 > 169.00	5.807	5.797	0.010	1.066	15374		4.20(2.11-6.32)	102	313	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

PFAS32NCIC2_00001

Amount Added: 100.00

Units: uL

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA011.d

Injection Date: 24-Sep-2019 18:23:50

Instrument ID: LC812

Lims ID: IC 2

Client ID:

Operator ID: lc812tech

ALS Bottle#: 3

Worklist Smp#: 11

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

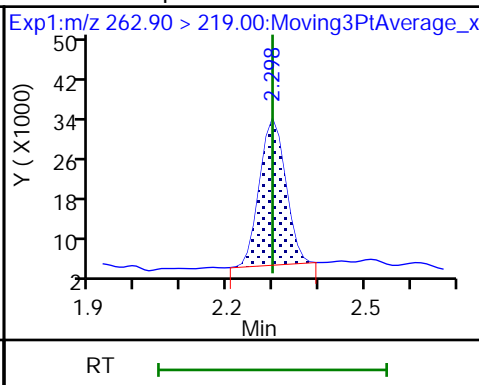
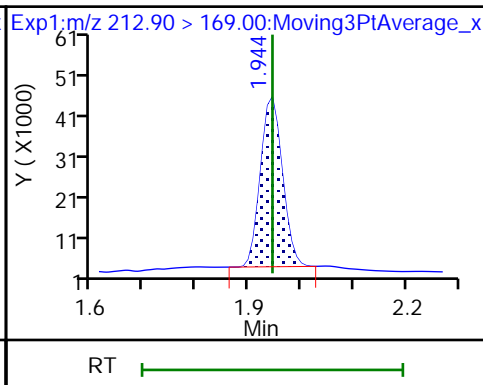
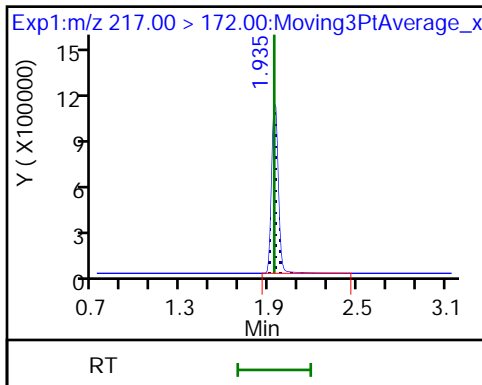
Method: PFC_LC812

Limit Group: LC_PFC_ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

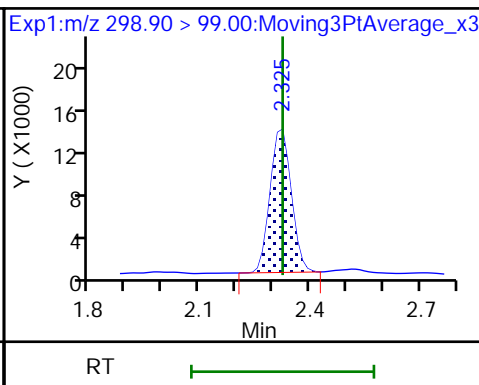
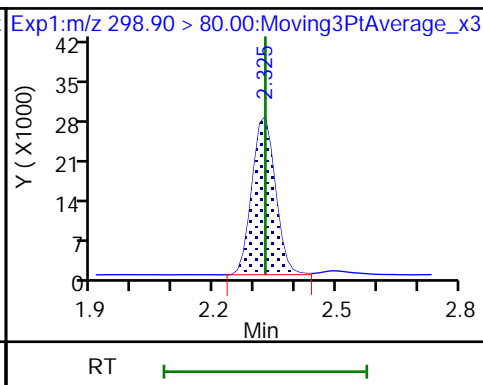
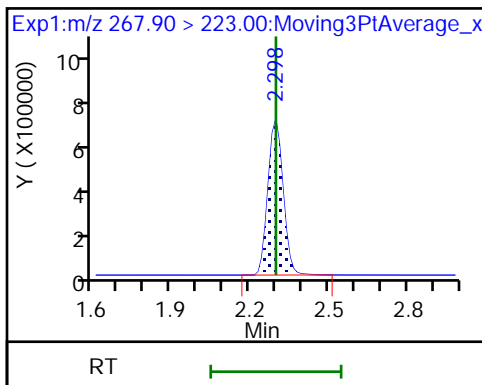
4 Perfluoropentanoic acid



D 3 13C5 PFPeA

5 Perfluorobutanesulfonic acid

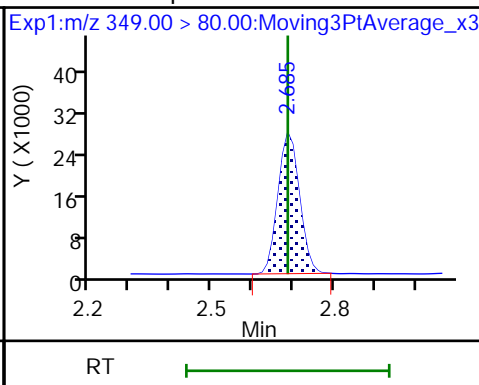
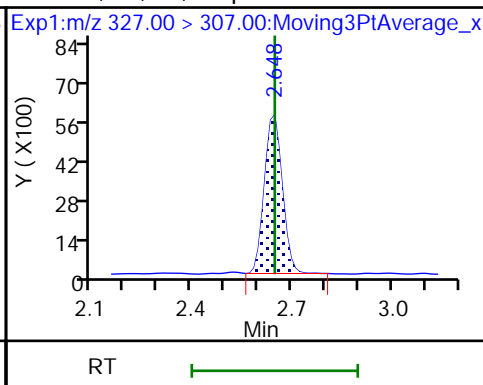
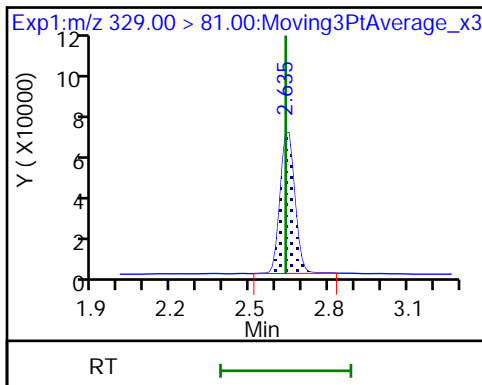
5 Perfluorobutanesulfonic acid



D 60 M2-4:2 FTS

61 1H,1H,2H,2H-perfluorohexanesulfoni

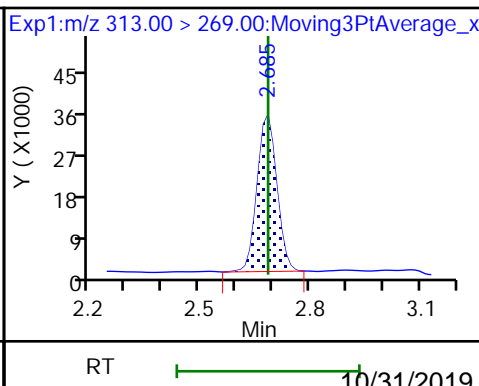
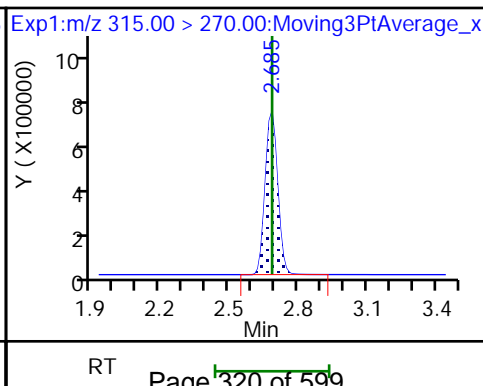
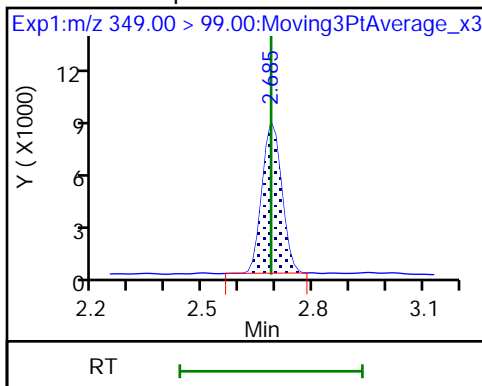
70 Perfluoropentanesulfonic acid



70 Perfluoropentanesulfonic acid

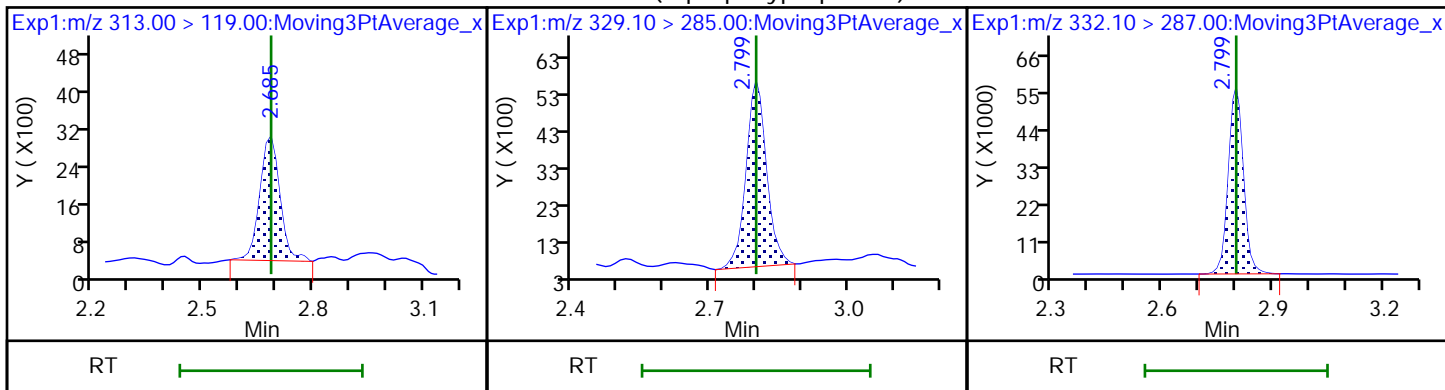
D 7 13C2 PFHxA

6 Perfluorohexanoic acid



6 Perfluorohexanoic acid

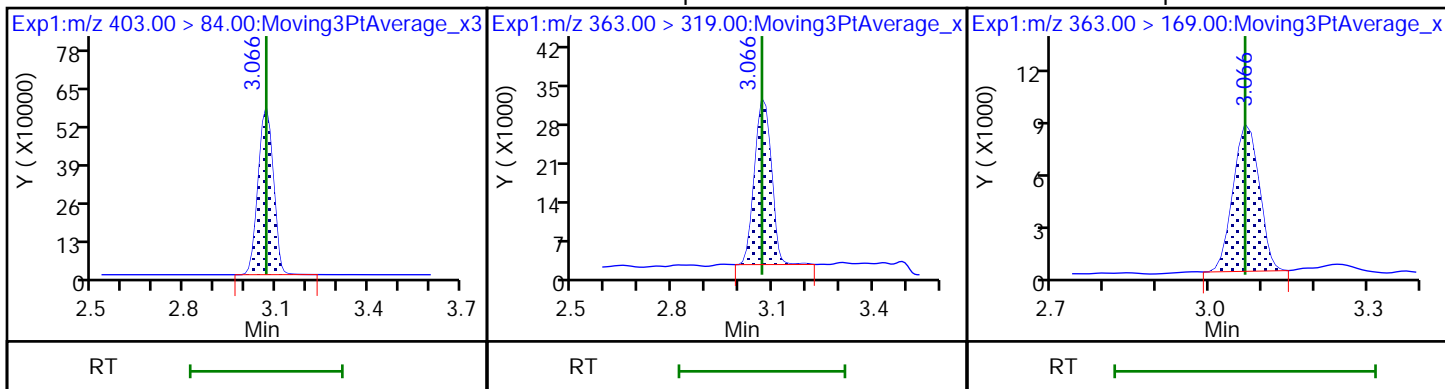
67 Perfluoro(2-propoxypropanoic) acid D 64 13C3 HFPO-DA



D 11 18O2 PFHxS

10 Perfluoroheptanoic acid

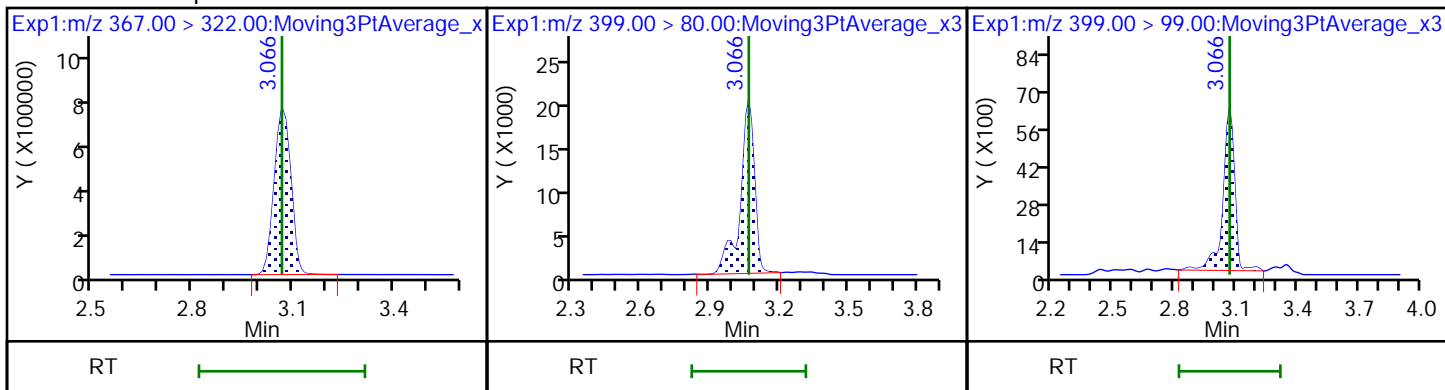
10 Perfluoroheptanoic acid



D 9 13C4 PFHpA

8 Perfluorohexanesulfonic acid

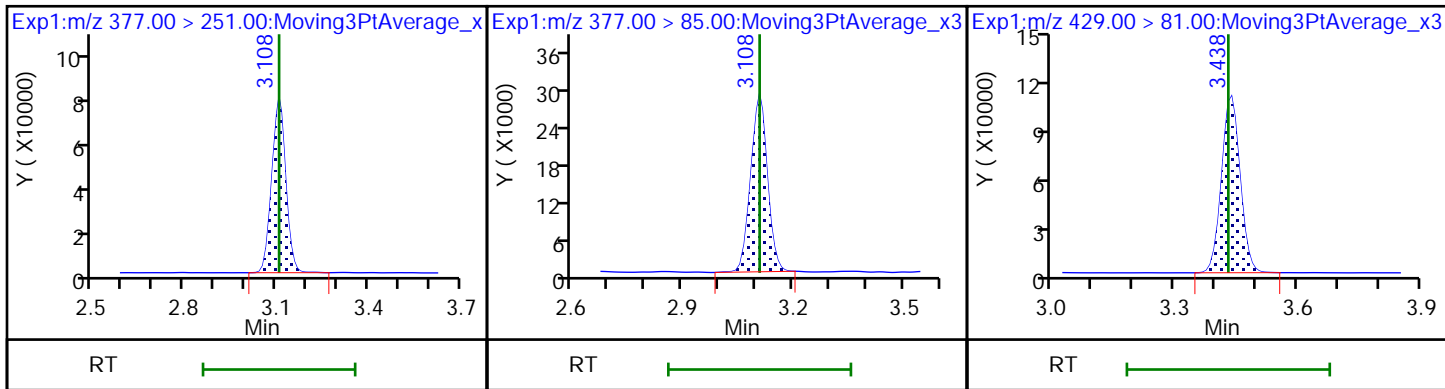
8 Perfluorohexanesulfonic acid



77 DONA

77 DONA

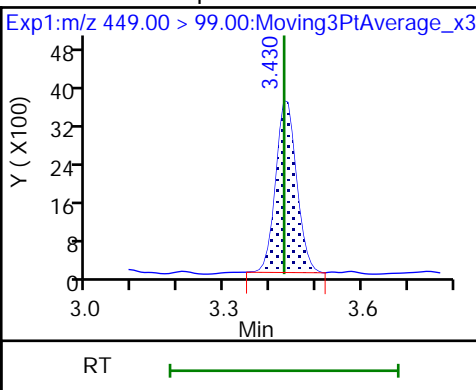
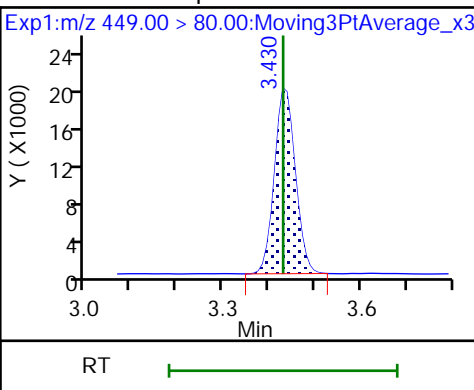
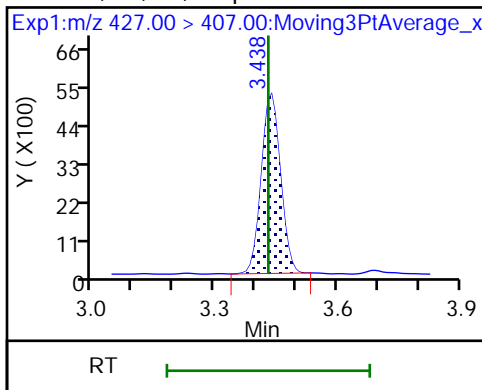
D 12 M2-6:2 FTS



13 1H,1H,2H,2H-perfluorooctanesulfonyl

16 Perfluoroheptanesulfonic acid

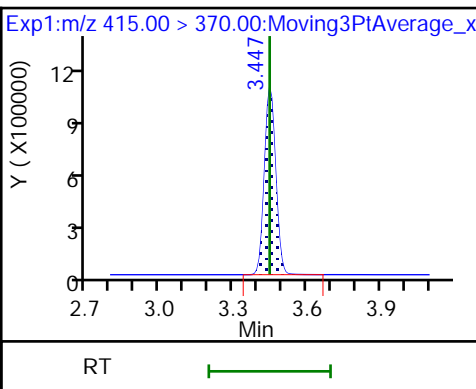
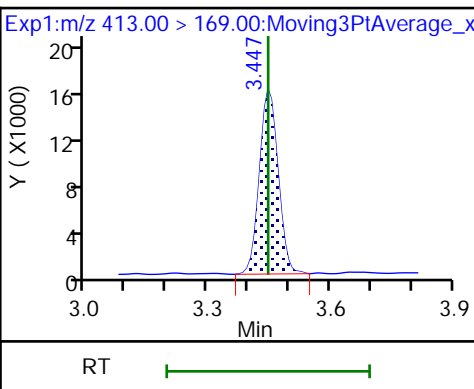
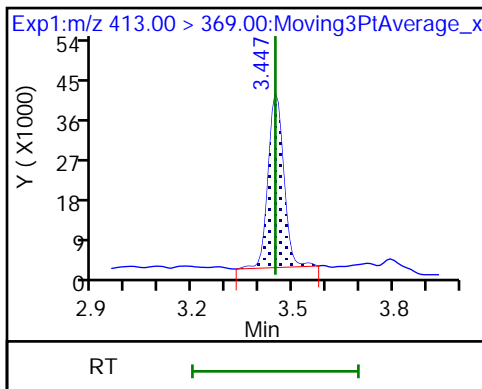
16 Perfluoroheptanesulfonic acid



15 Perfluorooctanoic acid

15 Perfluorooctanoic acid

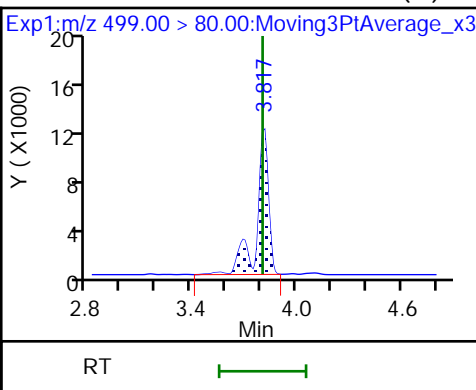
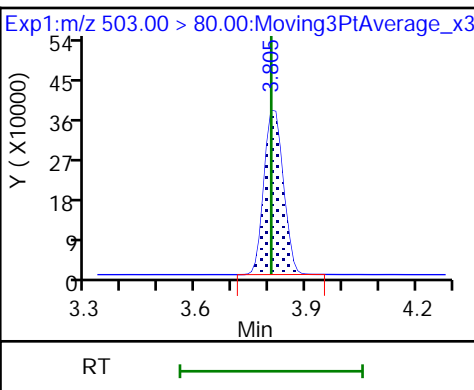
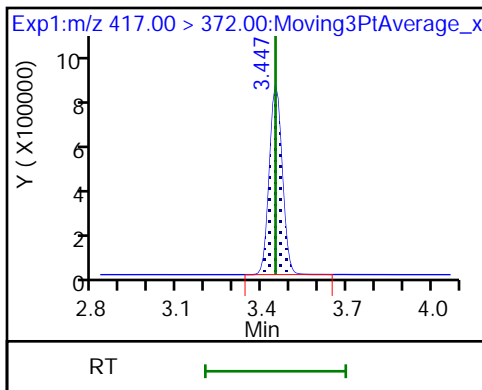
* 62 13C2 PFOA



D 14 13C4 PFOA

D 18 13C4 PFOS

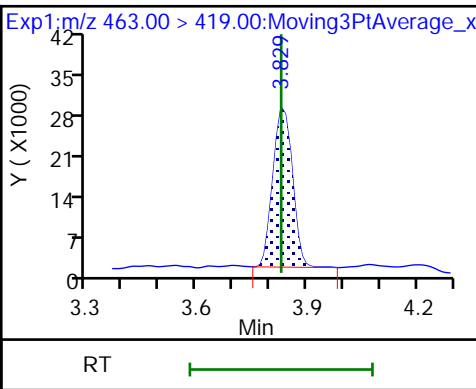
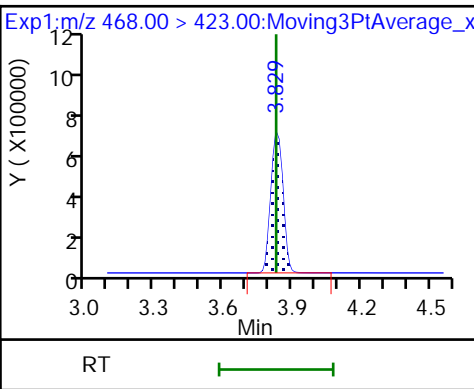
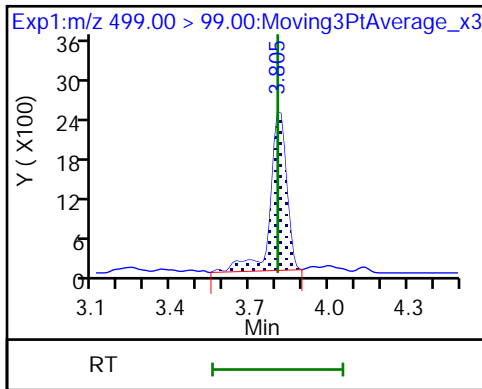
17 Perfluorooctanesulfonic acid (M)



17 Perfluorooctanesulfonic acid

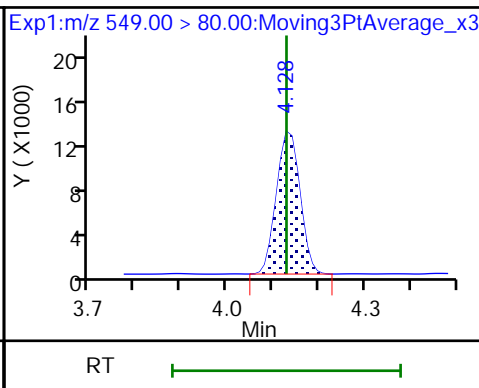
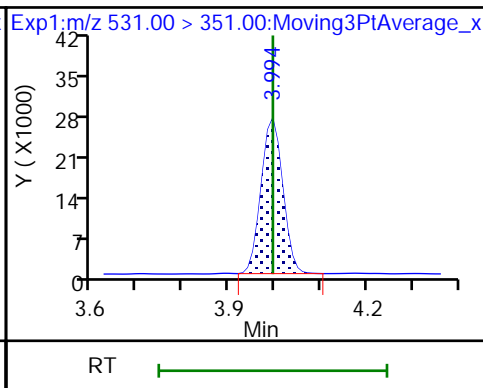
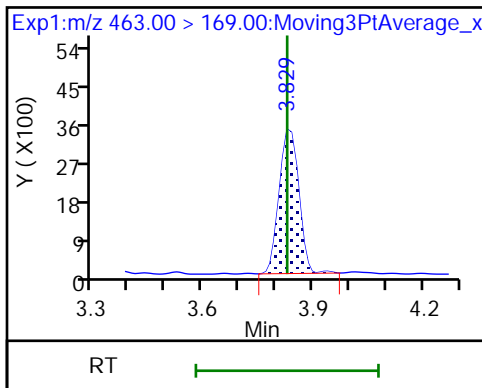
D 19 13C5 PFNA

20 Perfluorononanoic acid



20 Perfluorononanoic acid

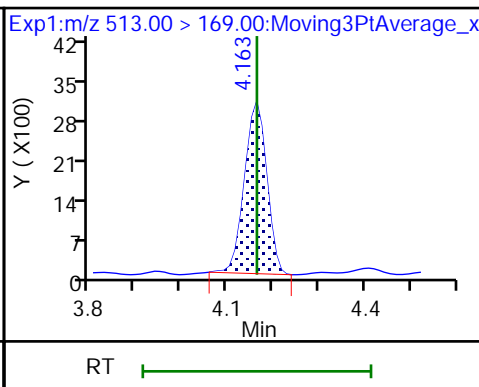
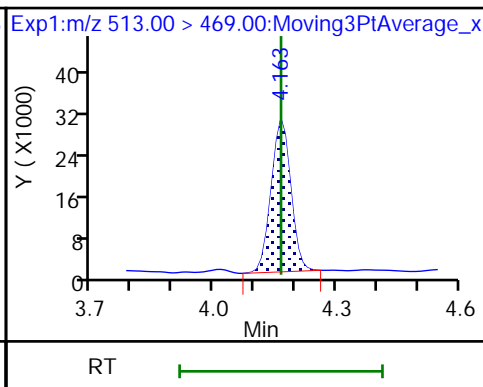
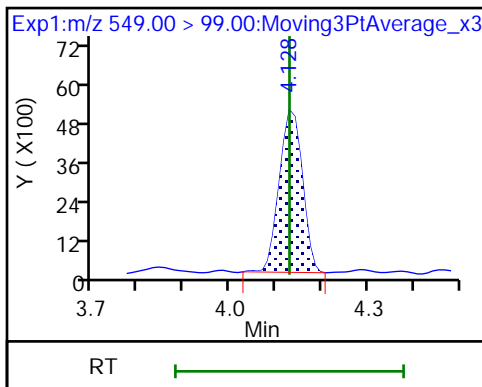
69 9-Chlorohexadecafluoro-3-oxanonan-68 Perfluoronananesulfonic acid



68 Perfluoronananesulfonic acid

24 Perfluorodecanoic acid

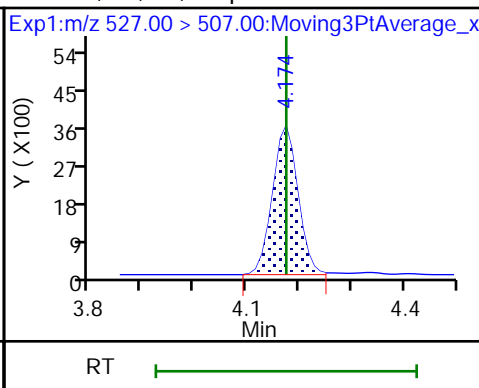
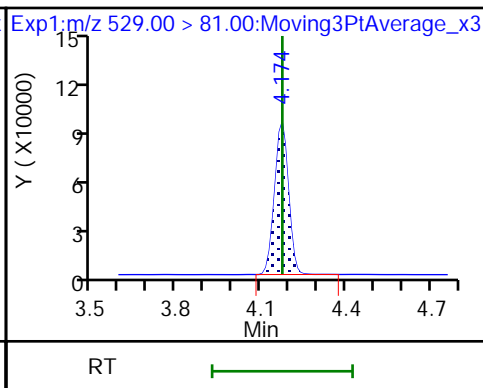
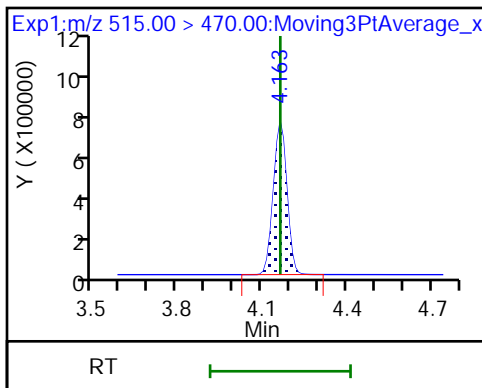
24 Perfluorodecanoic acid



D 23 13C2 PFDA

D 26 M2-8:2 FTS

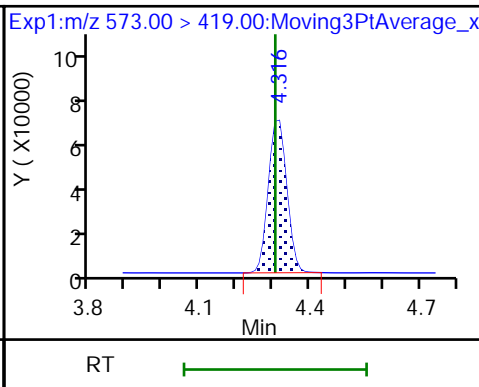
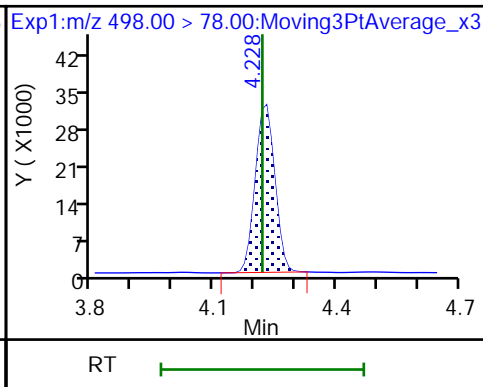
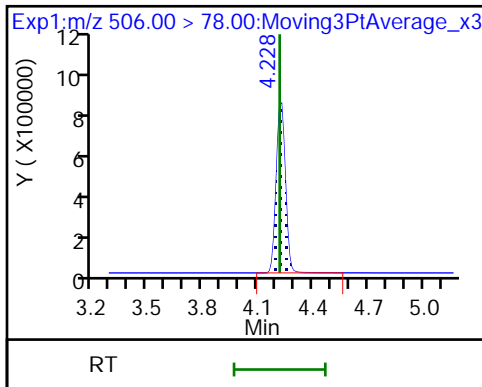
25 1H,1H,2H,2H-perfluorodecanesulfoni (M)



D 21 13C8 FOSA

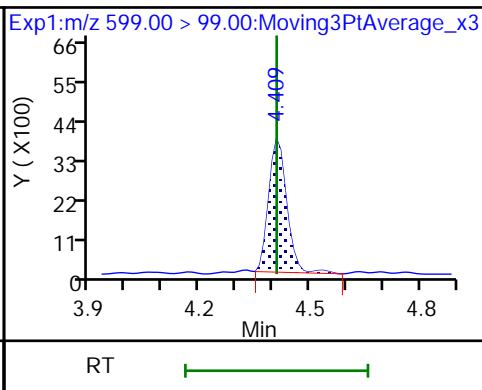
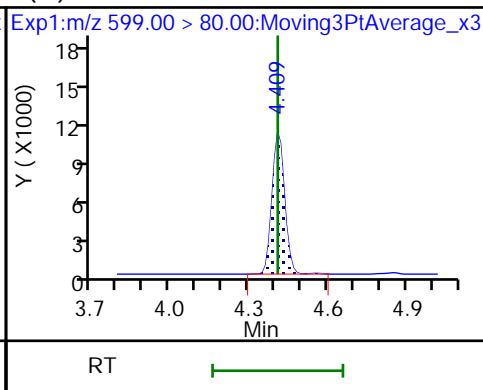
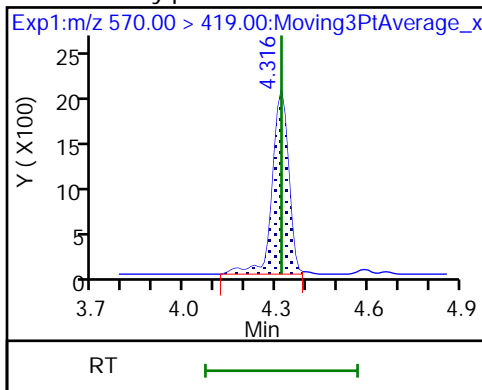
22 Perfluorooctanesulfonamide

D 27 d3-NMeFOSAA



28 N-methylperfluorooctanesulfonamido (28) Perfluorodecanesulfonic acid

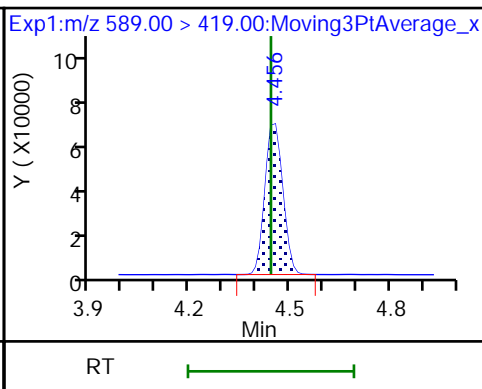
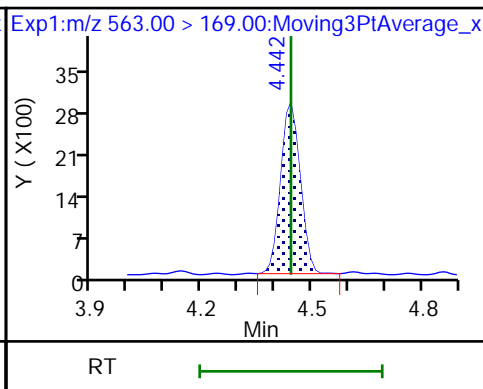
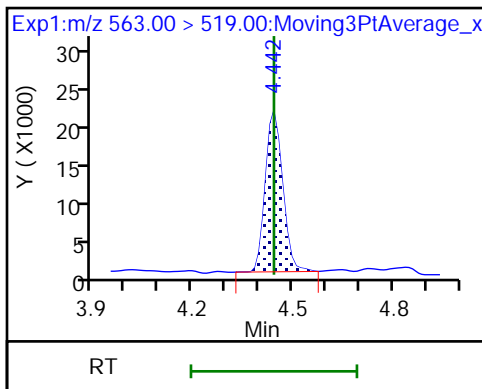
29 Perfluorodecanesulfonic acid



31 Perfluoroundecanoic acid

31 Perfluoroundecanoic acid

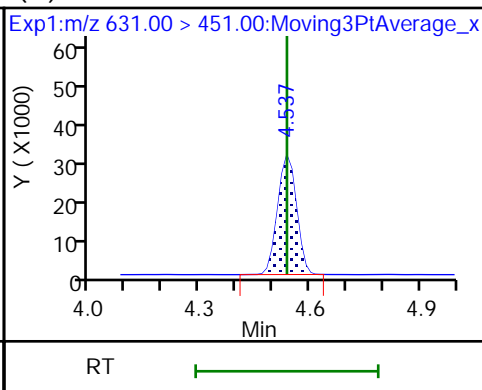
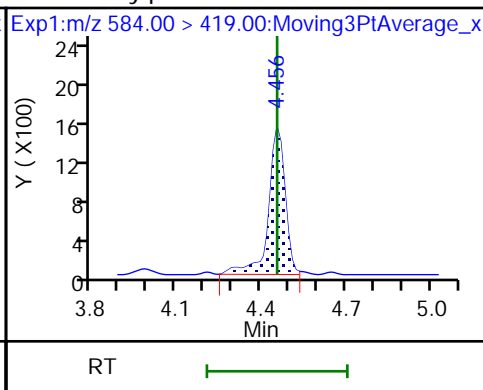
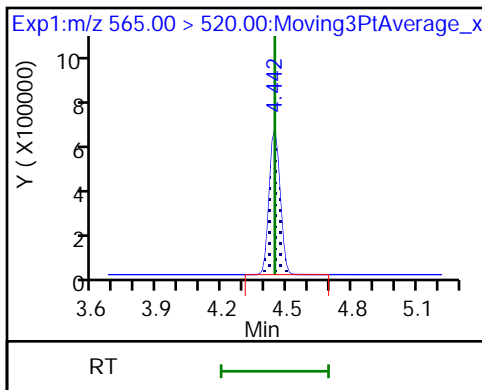
D 32 d5-NEtFOSAA



D 30 13C2 PFUnA

33 N-ethylperfluorooctanesulfonamido (33)

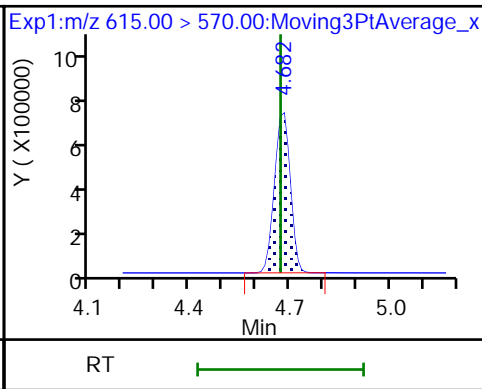
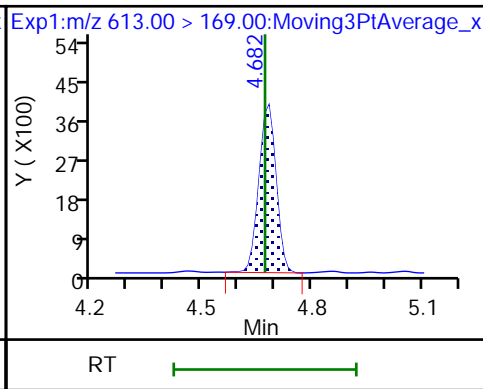
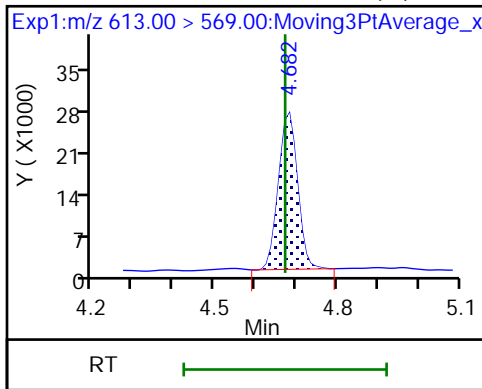
(33) 11-Chloroeicosafuoro-3-oxaundecan



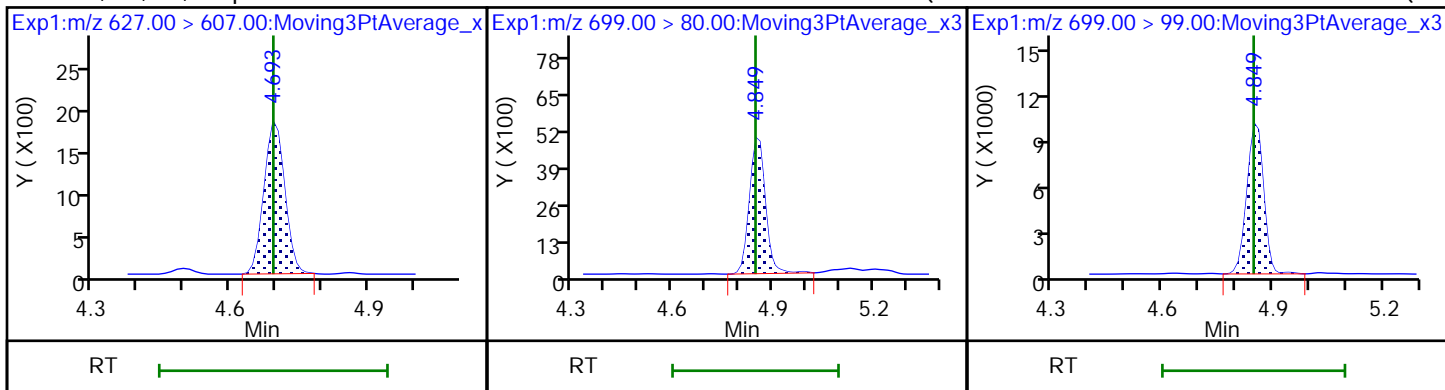
37 Perfluorododecanoic acid (M)

37 Perfluorododecanoic acid

D 36 13C2 PFDoA



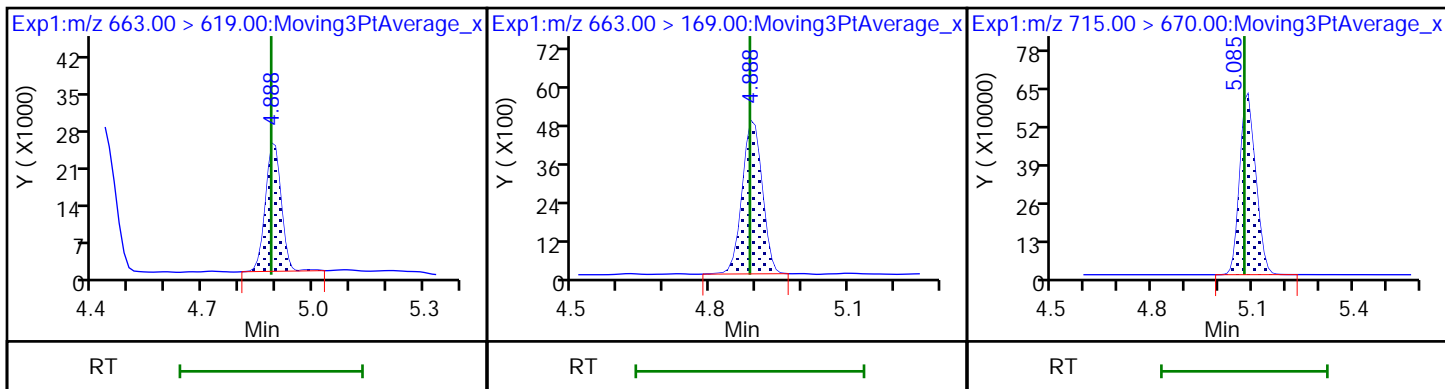
74 1H,1H,2H,2H-perfluorododecanesulfo75 Perfluorododecanesulfonic acid (PF 75 Perfluorododecanesulfonic acid (PF



41 Perfluorotridecanoic acid

41 Perfluorotridecanoic acid

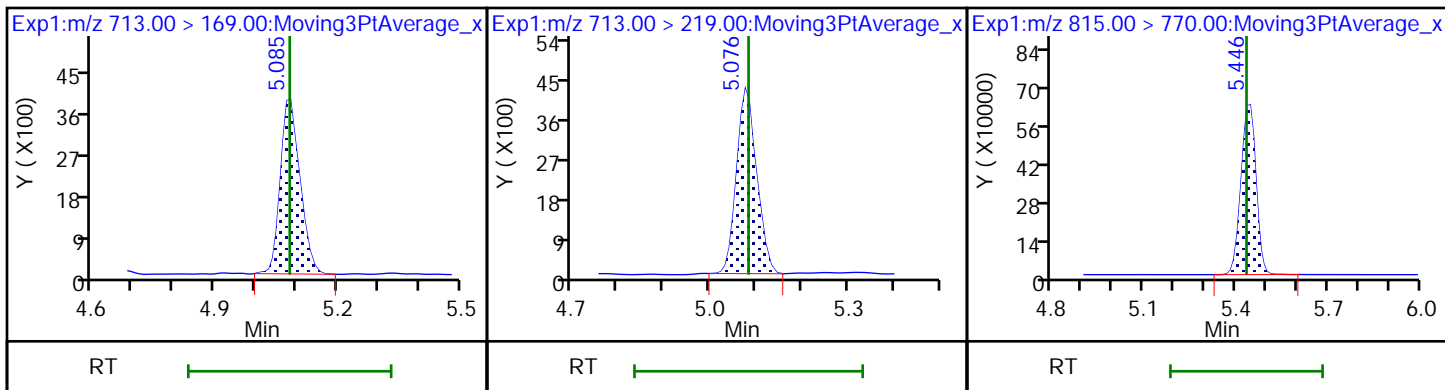
D 43 13C2 PFTeDA



42 Perfluorotetradecanoic acid

42 Perfluorotetradecanoic acid

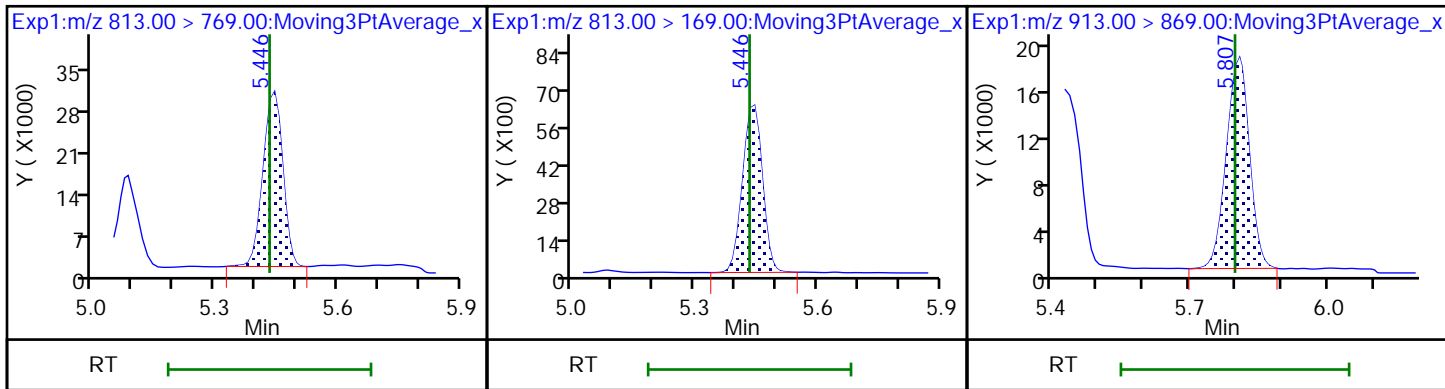
D 44 13C2 PFHxDA



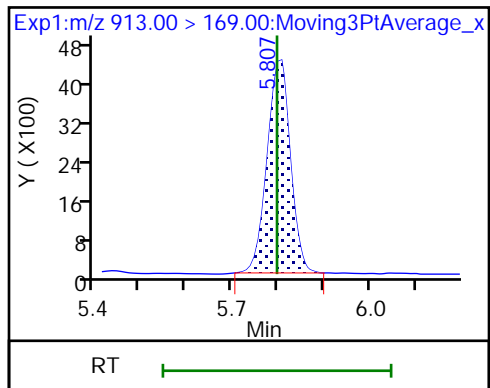
45 Perfluorohexadecanoic acid

45 Perfluorohexadecanoic acid

46 Perfluorooctadecanoic acid



46 Perfluorooctadecanoic acid



Eurofins TestAmerica, Burlington

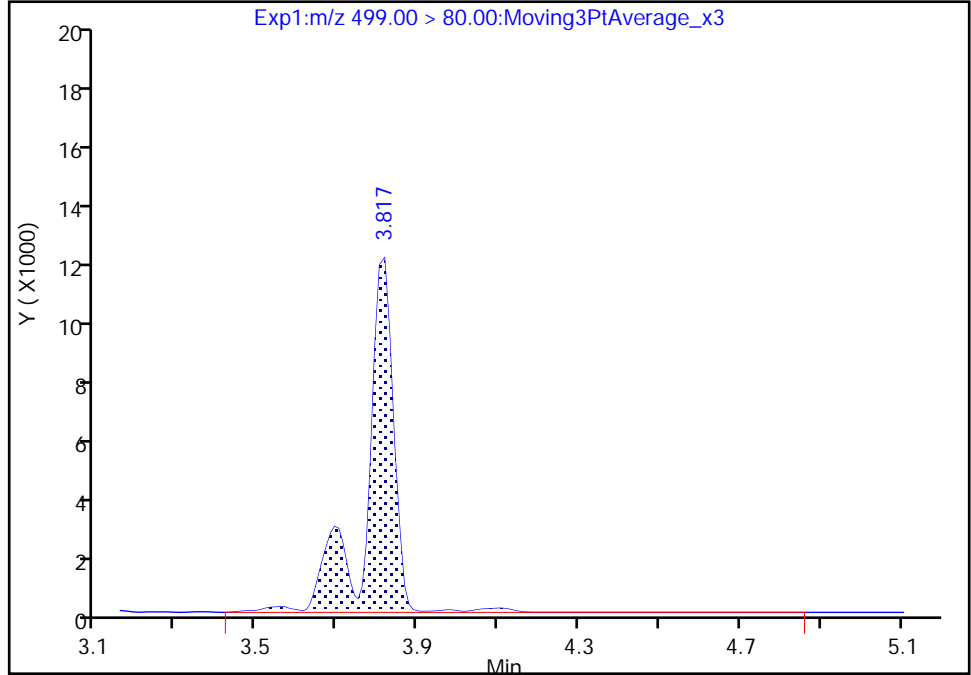
Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA011.d
Injection Date: 24-Sep-2019 18:23:50 Instrument ID: LC812
Lims ID: IC 2
Client ID:
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 11
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

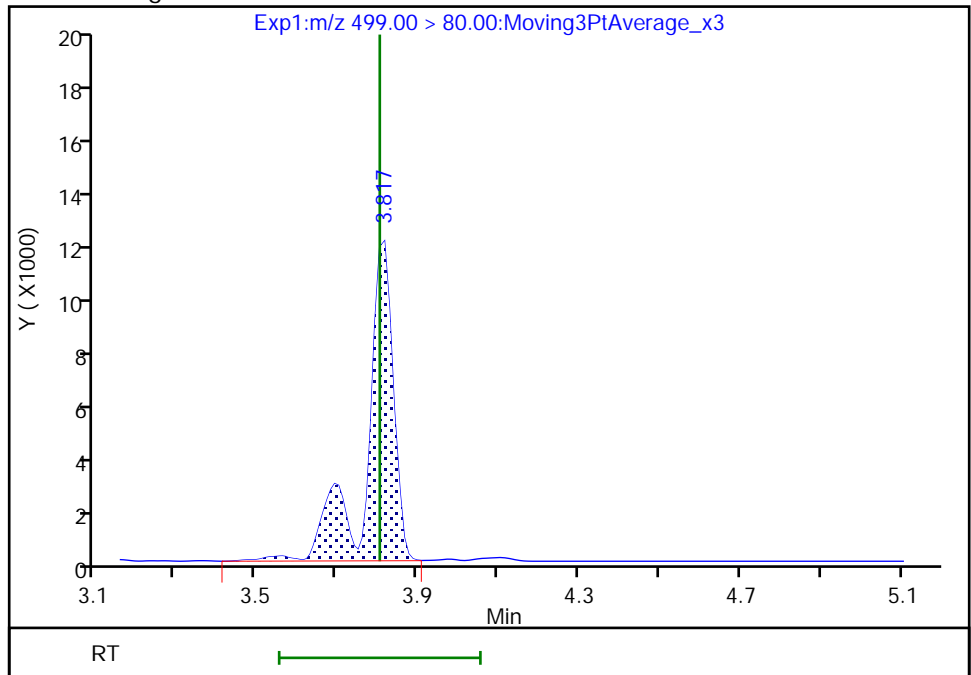
RT: 3.82
Area: 56425
Amount: 0.097485
Amount Units: ng/ml

Processing Integration Results



RT: 3.82
Area: 55025
Amount: 0.107158
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 24-Sep-2019 18:35:05
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

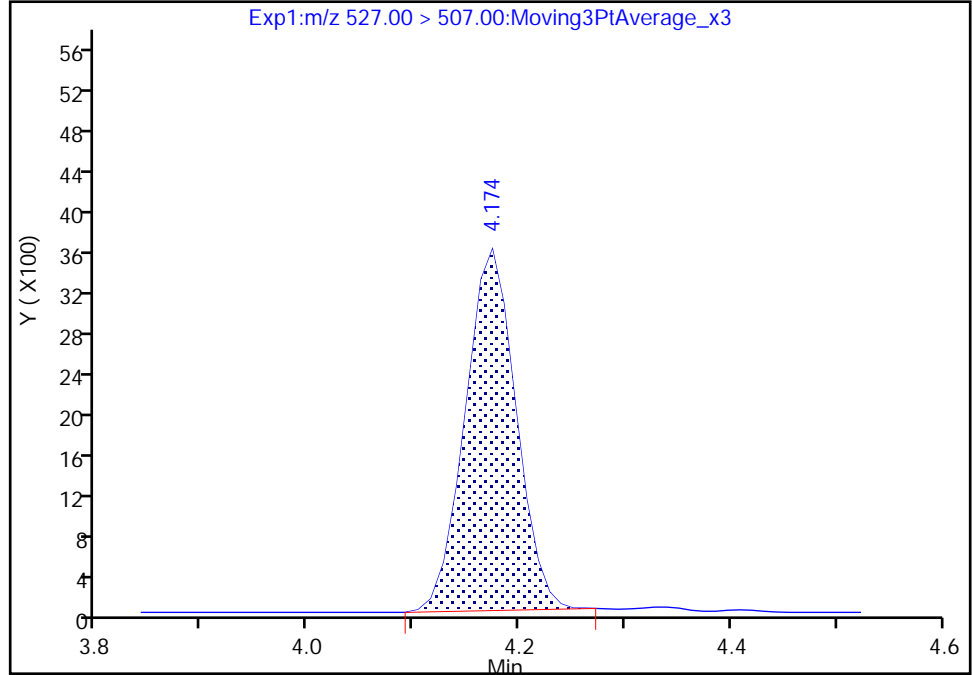
Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA011.d
Injection Date: 24-Sep-2019 18:23:50 Instrument ID: LC812
Lims ID: IC 2
Client ID:
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 11
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

25 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:, CAS: 39108-34-4

Signal: 1

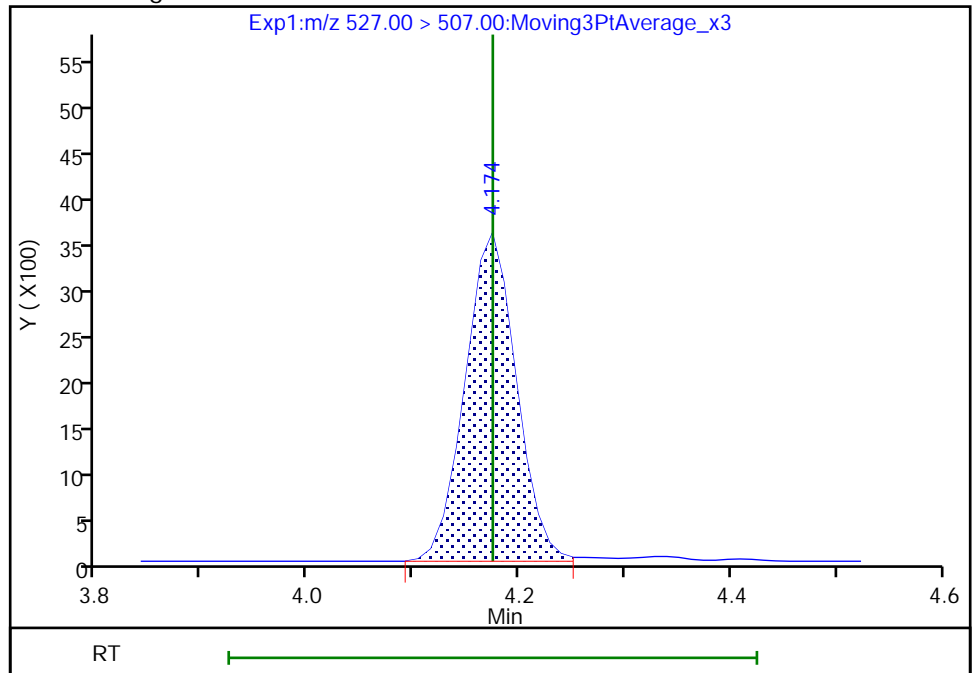
RT: 4.17
Area: 11888
Amount: 0.106652
Amount Units: ng/ml

Processing Integration Results



RT: 4.17
Area: 12045
Amount: 0.102781
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 25-Sep-2019 09:37:05
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

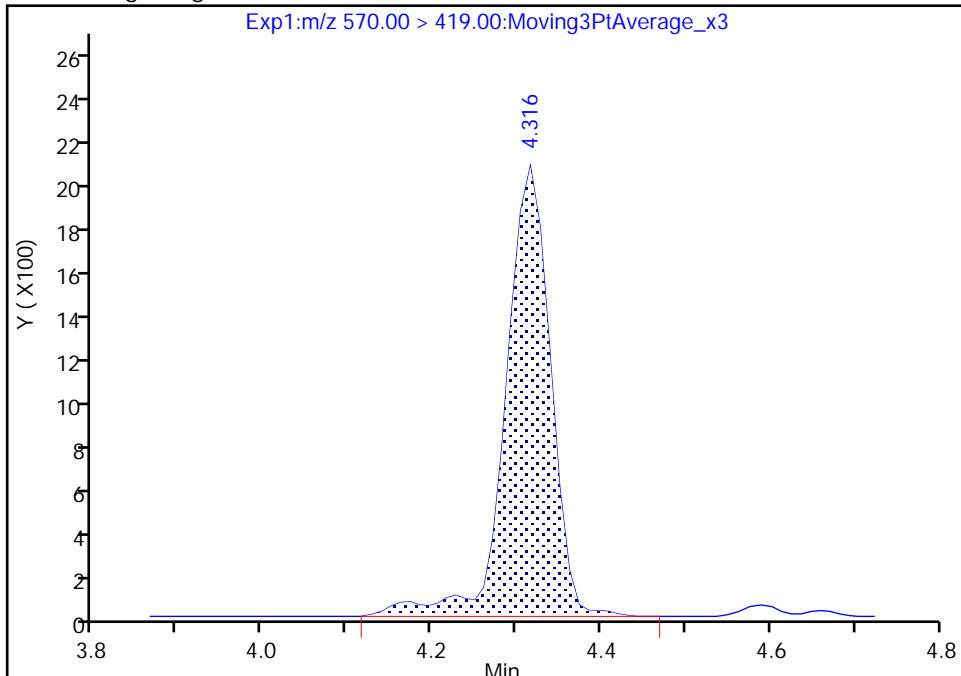
Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA011.d
Injection Date: 24-Sep-2019 18:23:50 Instrument ID: LC812
Lims ID: IC 2
Client ID:
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 11
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

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

Signal: 1

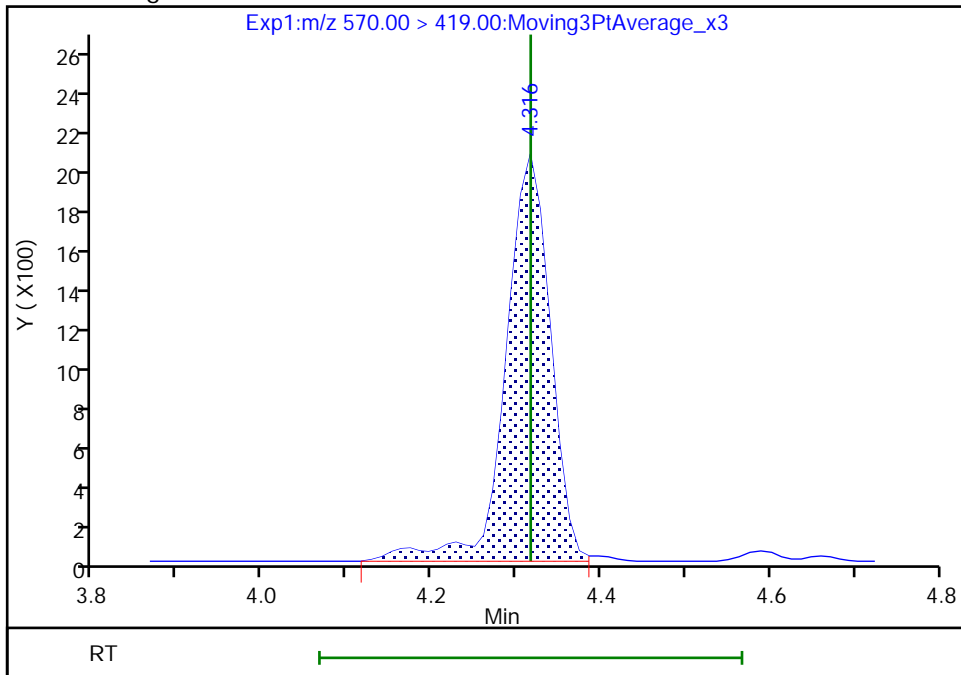
RT: 4.32
Area: 7429
Amount: 0.108378
Amount Units: ng/ml

Processing Integration Results



RT: 4.32
Area: 7377
Amount: 0.107755
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 25-Sep-2019 09:37:21
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration
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Euofins TestAmerica, Burlington

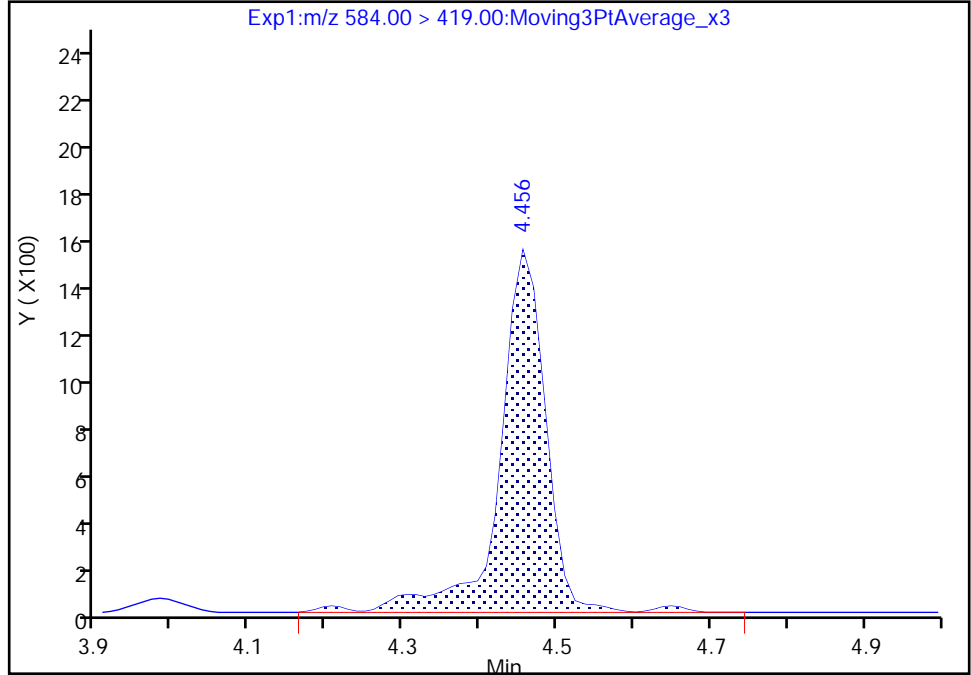
Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA011.d
Injection Date: 24-Sep-2019 18:23:50 Instrument ID: LC812
Lims ID: IC 2
Client ID:
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 11
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

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

Signal: 1

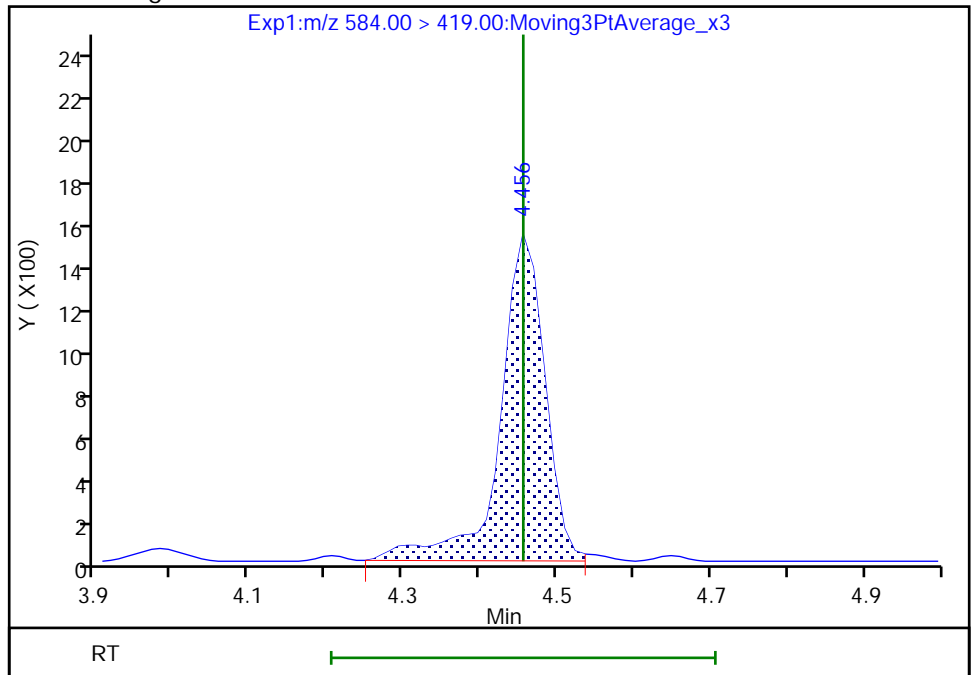
RT: 4.46
Area: 6359
Amount: 0.089244
Amount Units: ng/ml

Processing Integration Results



RT: 4.46
Area: 6115
Amount: 0.092492
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 25-Sep-2019 09:37:31
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration
Page 330 of 599

Euofins TestAmerica, Burlington

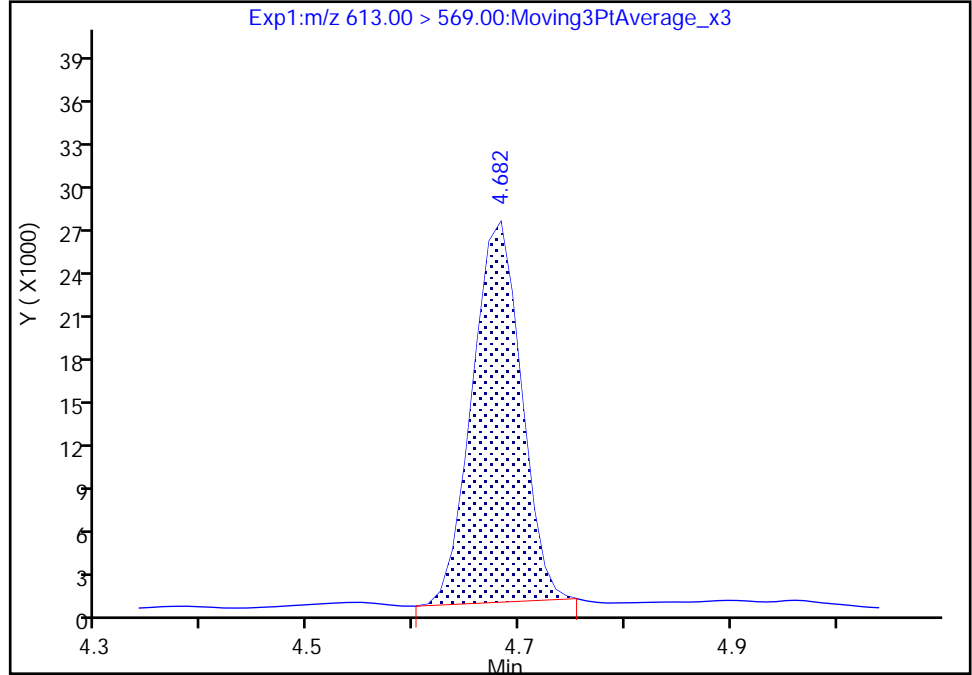
Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA011.d
Injection Date: 24-Sep-2019 18:23:50 Instrument ID: LC812
Lims ID: IC 2
Client ID:
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 11
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

37 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 1

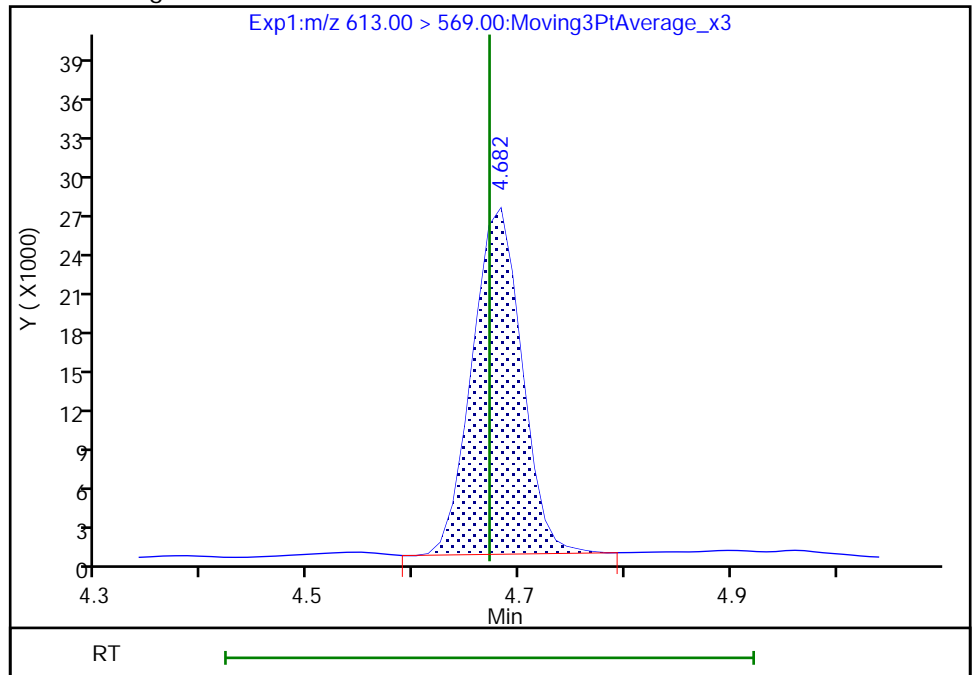
RT: 4.68
Area: 85154
Amount: 0.097646
Amount Units: ng/ml

Processing Integration Results



RT: 4.68
Area: 86845
Amount: 0.104990
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 24-Sep-2019 18:35:36
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA012.d
 Lims ID: IC 3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 24-Sep-2019 18:32:01 ALS Bottle#: 4 Worklist Smp#: 12
 Injection Vol: 20.0 ul Dil. Factor: 1.0000
 Sample Info: IC 3
 Misc. Info.: 200-0037915-012 Plate: 1 Rack: 2
 Operator ID: lc812tech Instrument ID: LC812
 Sublist: chrom-PFC_LC812*sub6

Method: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\PFC_LC812.m
 Limit Group: LC_PFC_ICAL
 Last Update: 25-Sep-2019 13:08:44 Calib Date: 24-Sep-2019 18:56:37
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA015.d

Column 1 : C-18 (4.60 mm) Det: EXP1
 Process Host: CTX0340

First Level Reviewer: chirgwinb Date: 25-Sep-2019 08:56:36

Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	1.935	1.935	0.0	0.563	3327715	2.57	103	22860	
2 Perfluorobutanoic acid	212.90 > 169.00	1.935	1.944	-0.009	1.000	577171	0.4884	97.7	105	
4 Perfluoropentanoic acid	262.90 > 219.00	2.298	2.298	0.0	1.006	504788	0.5045	101	32.3	
D 3 13C5 PFPeA	267.90 > 223.00	2.284	2.298	-0.014	0.664	2652439	2.59	104	5927	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	2.311	2.325	-0.014	0.757	493717	0.4377	Target=2.04	99.0	1417
	298.90 > 99.00	2.311	2.325	-0.014	0.757	237269	2.08(1.02-3.06)	99.0	288	
D 60 M2-4:2 FTS	329.00 > 81.00	2.635	2.636	-0.001	0.767	249584	2.36	101	244	
61 1H,1H,2H,2H-perfluorohexanesulfoni	327.00 > 307.00	2.635	2.648	-0.013	1.000	100438	0.4699	101	945	
70 Perfluoropentanesulfonic acid	349.00 > 80.00	2.685	2.685	0.0	0.879	445527	0.4571	Target=2.96	97.5	1378
	349.00 > 99.00	2.685	2.685	0.0	0.879	154684	2.88(1.48-4.44)	97.5	420	
D 7 13C2 PFHxA	315.00 > 270.00	2.673	2.685	-0.012	0.777	2797280	2.57	103	5839	
6 Perfluorohexanoic acid	313.00 > 269.00	2.673	2.685	-0.012	1.000	528358	0.4793	Target=12.34	95.9	188
	313.00 > 119.00	2.673	2.685	-0.012	1.000	42554	12.42(6.17-18.51)	95.9	38.4	
67 Perfluoro(2-propoxypropanoic) acid	329.10 > 285.00	2.791	2.799	-0.008	1.000	79670	0.5037	101	36.7	
D 64 13C3 HFPO-DA	332.10 > 287.00	2.791	2.799	-0.008	0.812	138212	2.55	102	1668	

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	3.055	3.067	-0.012	0.889	1957969	2.41		102	9294	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.066	3.067	-0.001	1.000	473491	0.4732	Target=3.55	94.6	77.3	
363.00 > 169.00	3.066	3.067	-0.001	1.000	131709		3.59(1.78-5.33)	94.6	258	
D 9 13C4 PFHpA										
367.00 > 322.00	3.066	3.067	-0.001	0.892	2800387	2.66		106	9533	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.055	3.067	-0.012	1.000	371139	0.4556	Target=3.65	100	905	
399.00 > 99.00	3.055	3.067	-0.012	1.000	102196		3.63(1.82-5.47)	100	131	
77 DONA										
377.00 > 251.00	3.101	3.109	-0.008	0.815	1104721	0.4661	Target=2.62	99.0	2868	
377.00 > 85.00	3.101	3.109	-0.008	0.815	400607		2.76(1.31-3.92)	99.0	795	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.430	3.430	0.0	0.998	312172	2.37		99.7	1225	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.430	3.430	0.0	1.000	78950	0.4769		101	786	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.430	3.430	0.0	0.901	299570	0.4666	Target=5.52	98.0	1889	
449.00 > 99.00	3.421	3.430	-0.009	0.899	52236		5.73(2.76-8.28)	98.0	438	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.438	3.447	-0.009	1.000	550916	0.5184	Target=2.64	104	108	
413.00 > 169.00	3.438	3.447	-0.009	1.000	203868		2.70(1.32-3.96)	104	567	
* 62 13C2 PFOA										
415.00 > 370.00	3.438	3.447	-0.009		2694736	2.50			5178	
D 14 13C4 PFOA										
417.00 > 372.00	3.438	3.447	-0.009	1.000	2738501	2.56		102	4443	
D 18 13C4 PFOS										
503.00 > 80.00	3.805	3.805	0.0	1.107	1385187	2.51		105	6287	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.805	3.805	0.0	1.000	237639	0.4535	Target=4.99	97.7	1823	
499.00 > 99.00	3.805	3.805	0.0	1.000	46659		5.09(2.50-7.49)	97.7	220	
D 19 13C5 PFNA										
468.00 > 423.00	3.829	3.829	0.0	1.114	2377503	2.51		100	5085	
20 Perfluorononanoic acid										
463.00 > 419.00	3.829	3.829	0.0	1.000	475125	0.5238	Target=8.13	105	121	
463.00 > 169.00	3.829	3.829	0.0	1.000	56878		8.35(4.07-12.20)	105	594	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.983	3.994	-0.011	1.047	439440	0.4719		101	2325	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.128	4.129	-0.001	1.085	213602	0.4720	Target=2.57	98.3	1624	
549.00 > 99.00	4.128	4.129	-0.001	1.085	81386		2.62(1.29-3.86)	98.3	224	
24 Perfluorodecanoic acid										
513.00 > 469.00	4.153	4.164	-0.011	1.000	426569	0.4540	Target=8.78	90.8	153	
513.00 > 169.00	4.153	4.164	-0.011	1.000	45824		9.31(4.39-13.18)	90.8	269	
D 23 13C2 PFDA										
515.00 > 470.00	4.153	4.164	-0.011	1.208	2539692	2.69		108	8735	

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	4.163	4.175	-0.012	1.211	364856	2.53		106	1274	
25 1H,1H,2H,2H-perfluorodecanesulfoni										
527.00 > 507.00	4.163	4.175	-0.012	1.000	53988	0.4451		92.9	857	
D 21 13C8 FOSA										
506.00 > 78.00	4.217	4.218	-0.001	1.227	2772738	2.59		103	3920	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.217	4.218	-0.001	1.000	497573	0.4890		97.8	1263	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.305	4.305	0.0	1.252	234923	2.57		103	1967	
28 N-methylperfluorooctanesulfonamido										
570.00 > 419.00	4.305	4.317	-0.012	1.000	32623	0.4873		97.5	193	
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.409	4.409	0.0	1.159	168036	0.4806	Target=2.59	99.7	1506	
599.00 > 99.00	4.397	4.409	-0.012	1.156	65032		2.58(1.29-3.88)	99.7	445	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.431	4.443	-0.012	1.000	364214	0.5014	Target=7.14	100	225	
563.00 > 169.00	4.431	4.443	-0.012	1.000	51546		7.07(3.57-10.71)	100	560	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.442	4.443	-0.001	1.292	263969	2.66		107	1334	
D 30 13C2 PFUnA										
565.00 > 520.00	4.431	4.443	-0.012	1.289	2170147	2.57		103	4049	
33 N-ethylperfluorooctanesulfonamidoa										
584.00 > 419.00	4.442	4.456	-0.014	1.000	26413	0.4394		87.9	306	M
66 11-Chloroeicosafuoro-3-oxaundecan										
631.00 > 451.00	4.537	4.537	0.0	1.192	558720	0.4822		102	3826	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.671	4.672	-0.001	1.000	386410	0.4873	Target=6.72	97.5	45.1	
613.00 > 169.00	4.671	4.672	-0.001	1.000	56283		6.87(3.36-10.08)	97.5	1099	
D 36 13C2 PFDaA										
615.00 > 570.00	4.671	4.672	-0.001	1.359	2241277	2.46		98.5	7894	
74 1H,1H,2H,2H-perfluorododecanesulfo										
627.00 > 607.00	4.693	4.693	0.0	1.127	34219	0.5263		109	899	
75 Perfluorododecanesulfonic acid (PF										
699.00 > 80.00	4.838	4.847	-0.009	1.272	69654	0.4633	Target=0.47	95.7	252	
699.00 > 99.00	4.838	4.847	-0.009	1.272	152089		0.46(0.23-0.70)	95.7	1415	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.888	4.886	0.002	1.046	336607	0.5246	Target=4.79	105	53.8	
663.00 > 169.00	4.879	4.886	-0.007	1.044	72867		4.62(2.39-7.18)	105	673	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.076	5.074	0.002	1.476	2195373	2.69		108	10750	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.076	5.083	-0.007	1.000	60399	0.4726	Target=1.02	94.5	812	
713.00 > 219.00	5.067	5.083	-0.016	0.998	57330		1.05(0.51-1.53)	94.5	1106	
D 44 13C2 PFHxDA										
815.00 > 770.00	5.435	5.433	0.002	1.581	2189806	2.67		107	8267	

Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.435	5.433	0.002	1.000	378241	0.4903	Target=4.39	98.1	48.8	
813.00 > 169.00	5.435	5.433	0.002	1.000	85560		4.42(2.19-6.58)	98.1	1089	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.790	5.797	-0.007	1.065	313448	0.4847	Target=4.22	96.9	77.5	
913.00 > 169.00	5.790	5.797	-0.007	1.065	73049		4.29(2.11-6.32)	96.9	1080	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

PFAS32NCIC3_00001

Amount Added: 100.00

Units: uL

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA012.d

Injection Date: 24-Sep-2019 18:32:01

Instrument ID: LC812

Lims ID: IC 3

Client ID:

Operator ID: lc812tech

ALS Bottle#: 4

Worklist Smp#: 12

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

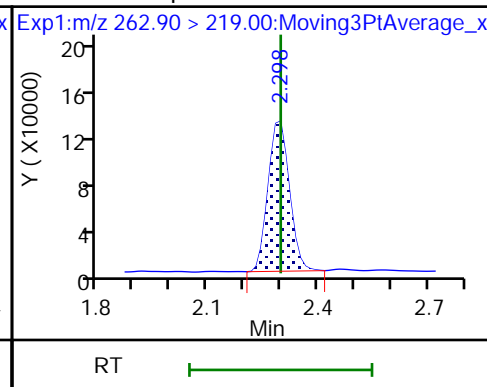
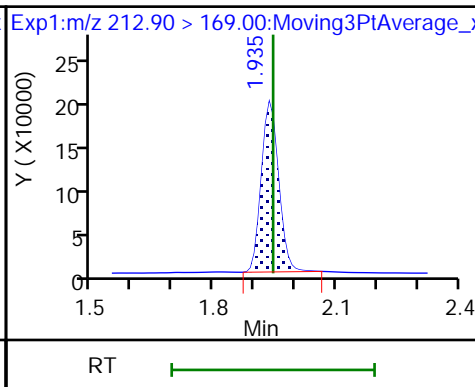
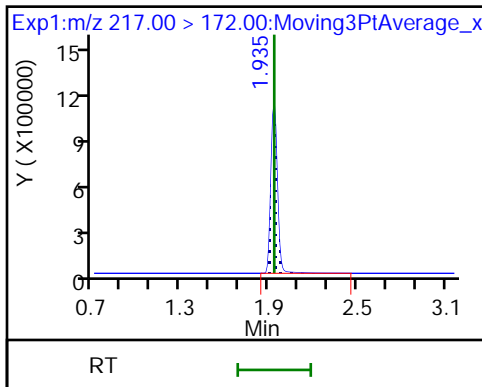
Method: PFC_LC812

Limit Group: LC_PFC_ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

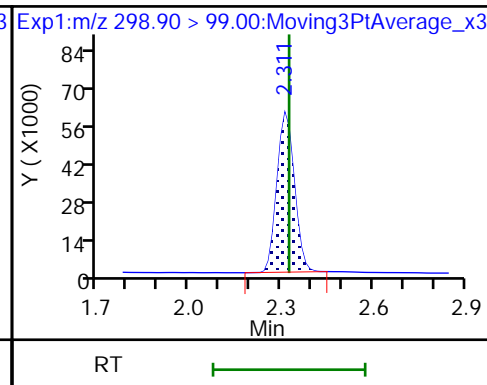
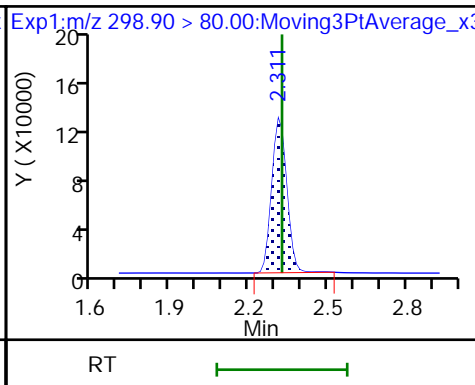
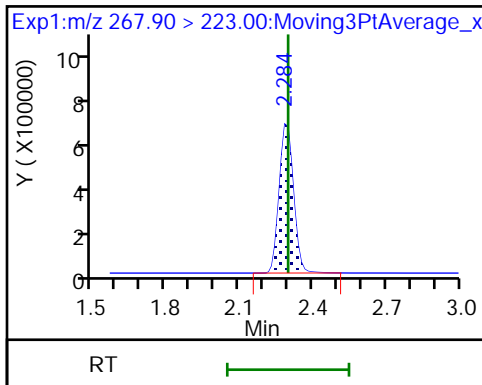
4 Perfluoropentanoic acid



D 3 13C5 PFPeA

5 Perfluorobutanesulfonic acid

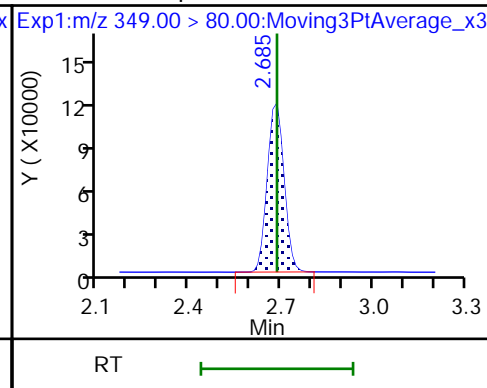
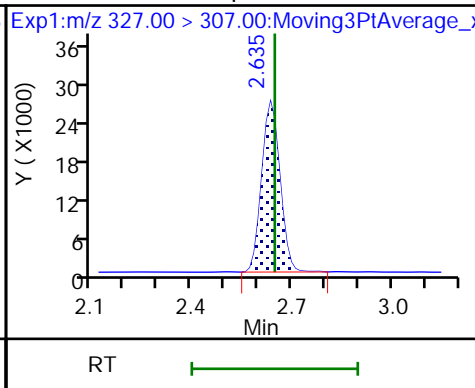
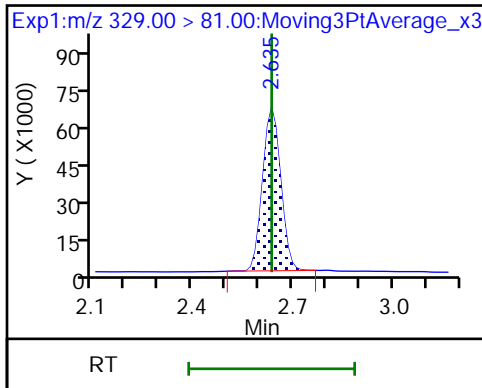
5 Perfluorobutanesulfonic acid



D 60 M2-4:2 FTS

61 1H,1H,2H,2H-perfluorohexanesulfoni

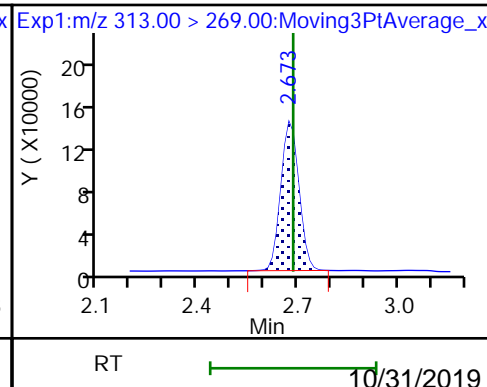
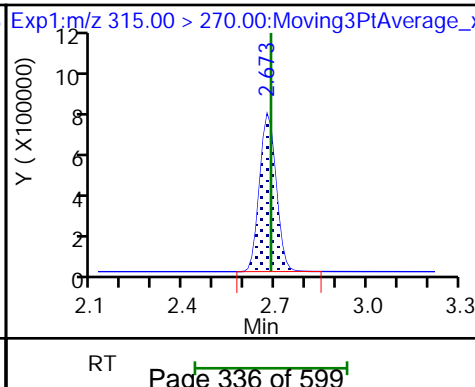
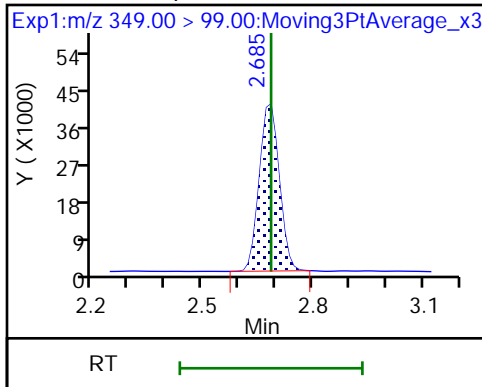
70 Perfluoropentanesulfonic acid



70 Perfluoropentanesulfonic acid

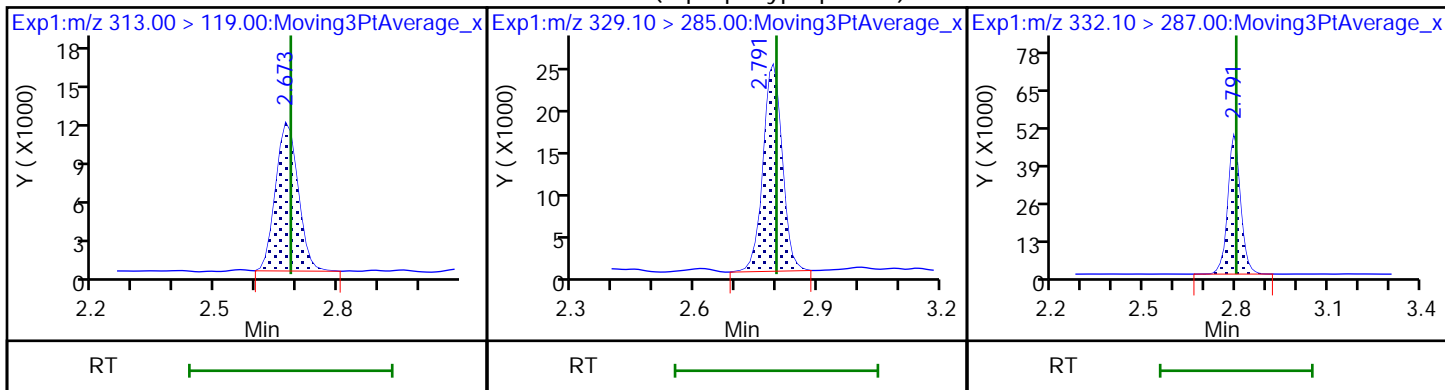
D 7 13C2 PFHxA

6 Perfluorohexanoic acid



6 Perfluorohexanoic acid

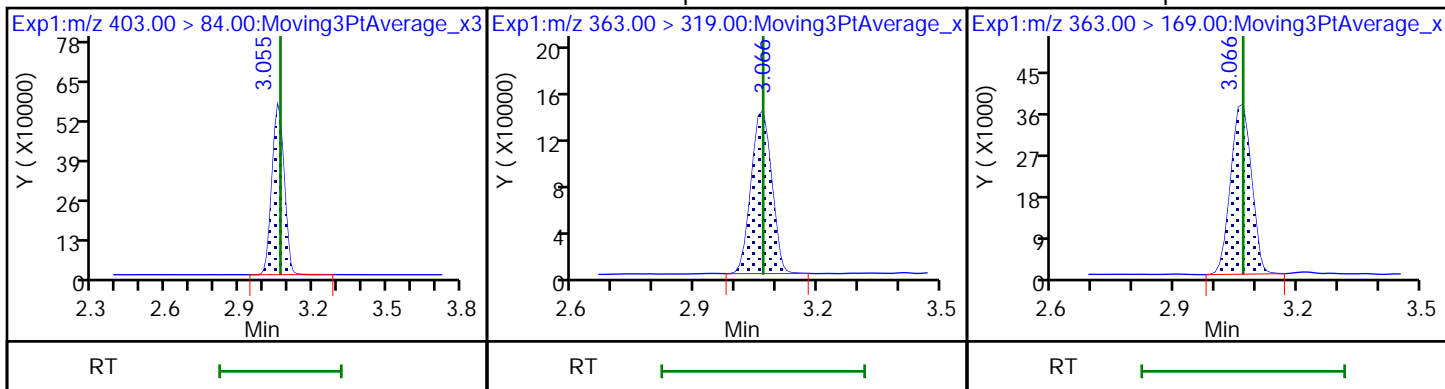
67 Perfluoro(2-propoxypropanoic) acid D 64 13C3 HFPO-DA



D 11 18O2 PFHxS

10 Perfluoroheptanoic acid

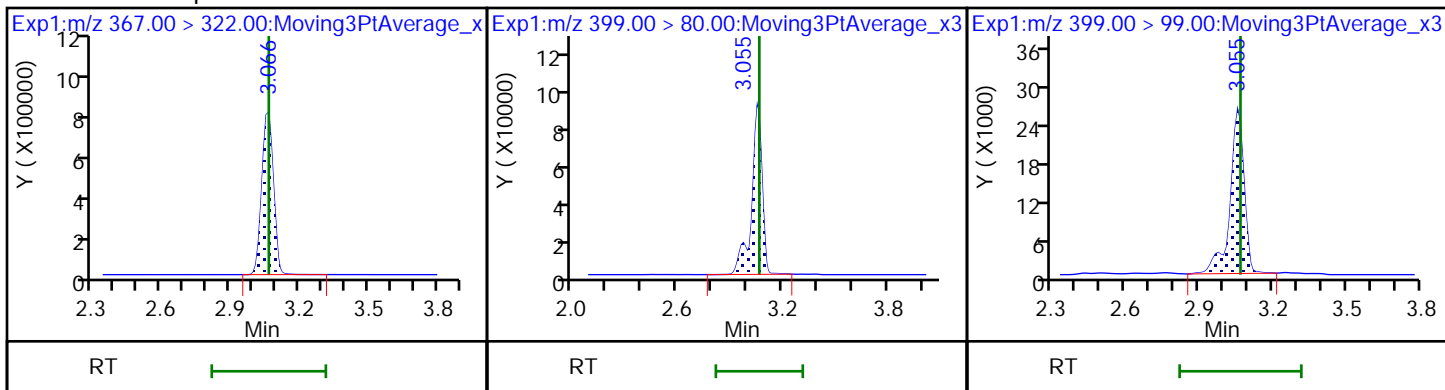
10 Perfluoroheptanoic acid



D 9 13C4 PFHpA

8 Perfluorohexanesulfonic acid

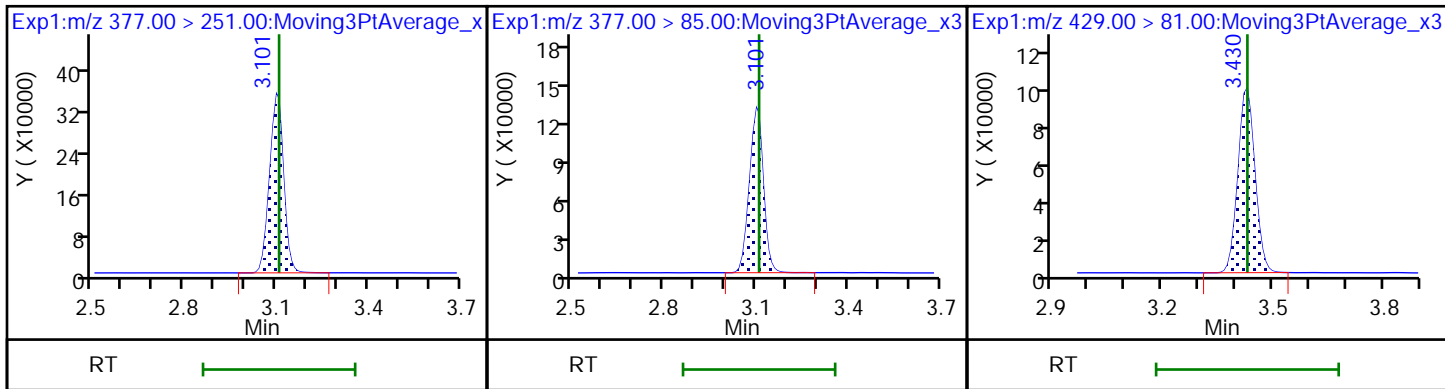
8 Perfluorohexanesulfonic acid



77 DONA

77 DONA

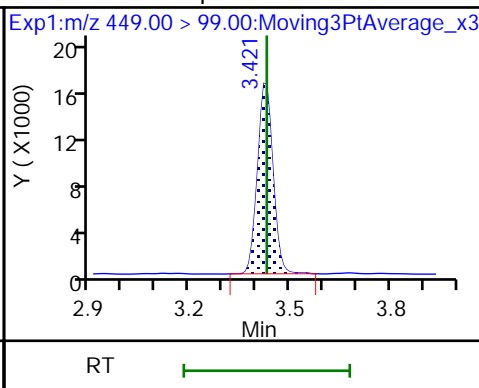
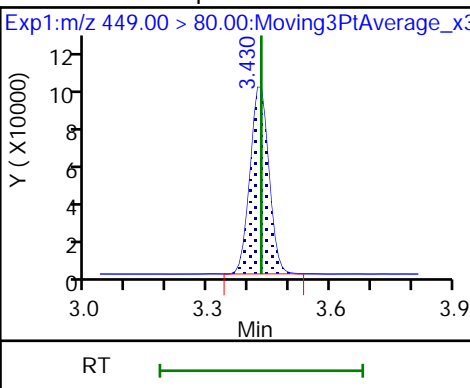
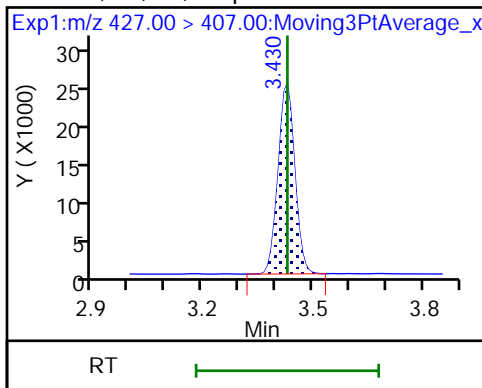
D 12 M2-6:2 FTS



13 1H,1H,2H,2H-perfluorooctanesulfonyl

16 Perfluoroheptanesulfonic acid

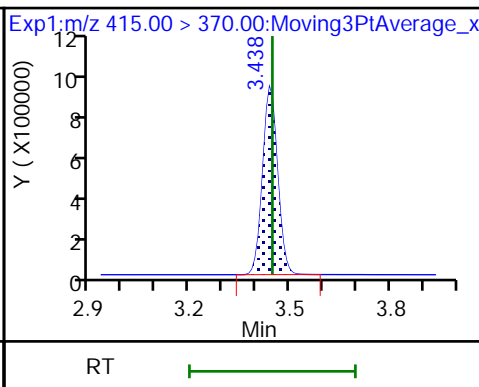
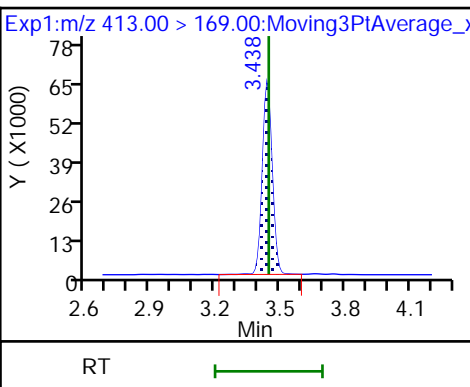
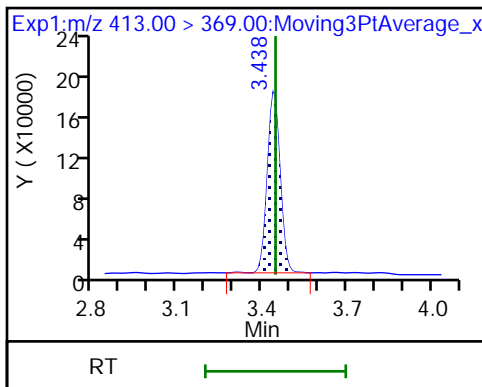
16 Perfluoroheptanesulfonic acid



15 Perfluorooctanoic acid

15 Perfluorooctanoic acid

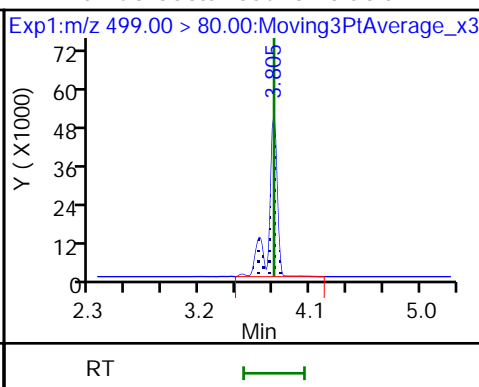
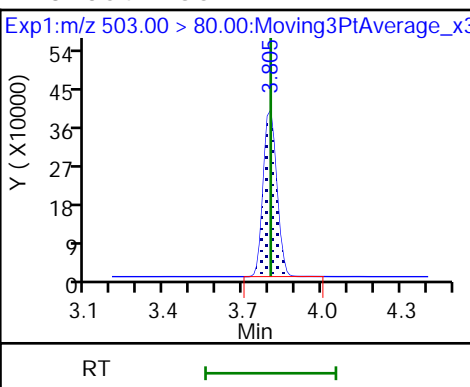
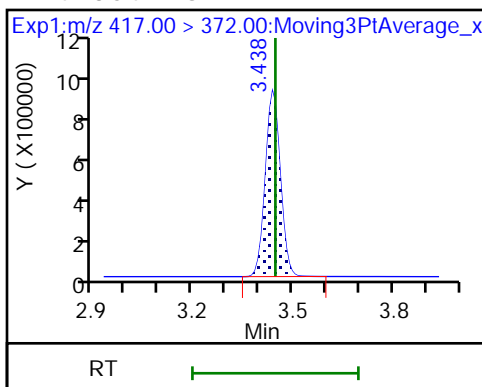
* 62 13C2 PFOA



D 14 13C4 PFOA

D 18 13C4 PFOS

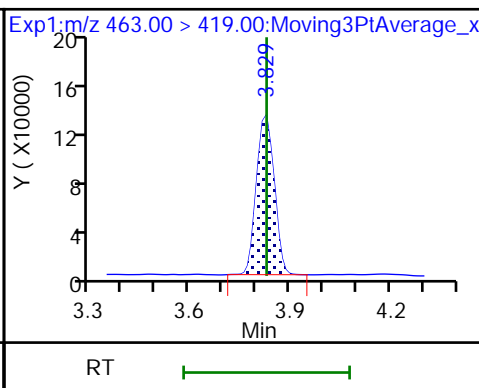
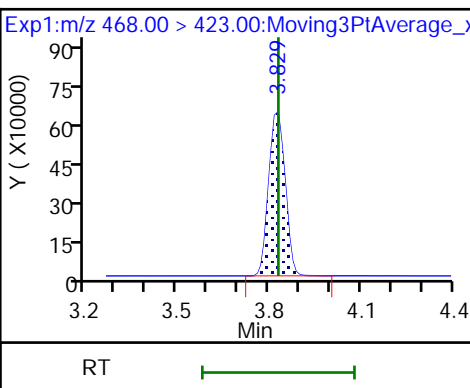
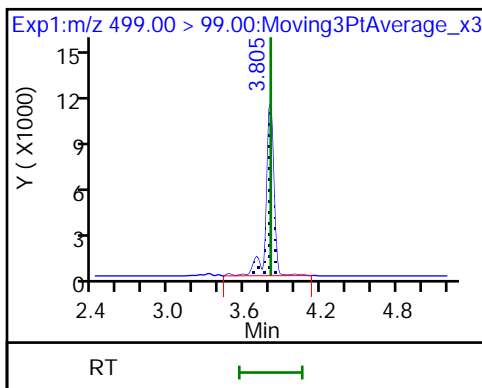
17 Perfluorooctanesulfonic acid



17 Perfluorooctanesulfonic acid

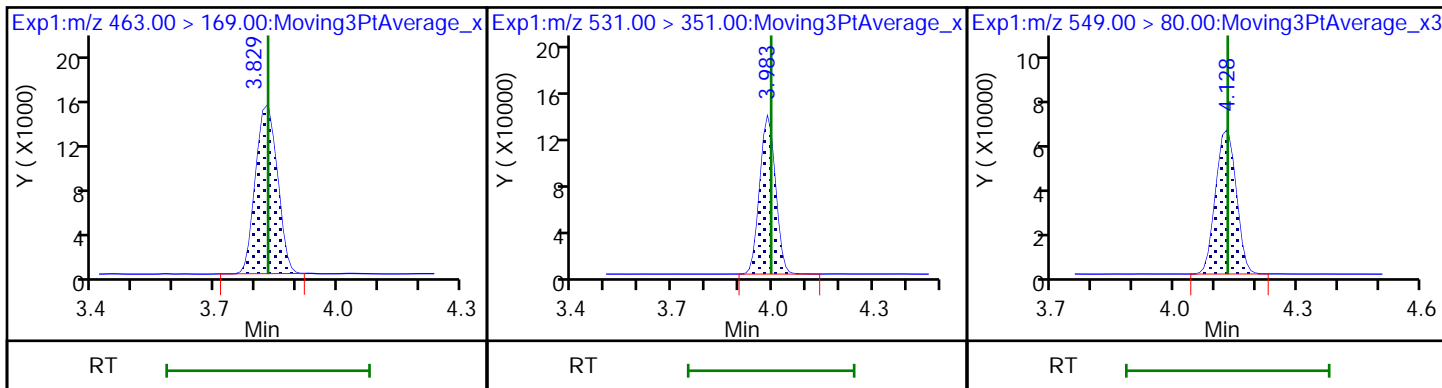
D 19 13C5 PFNA

20 Perfluorononanoic acid



20 Perfluorononanoic acid

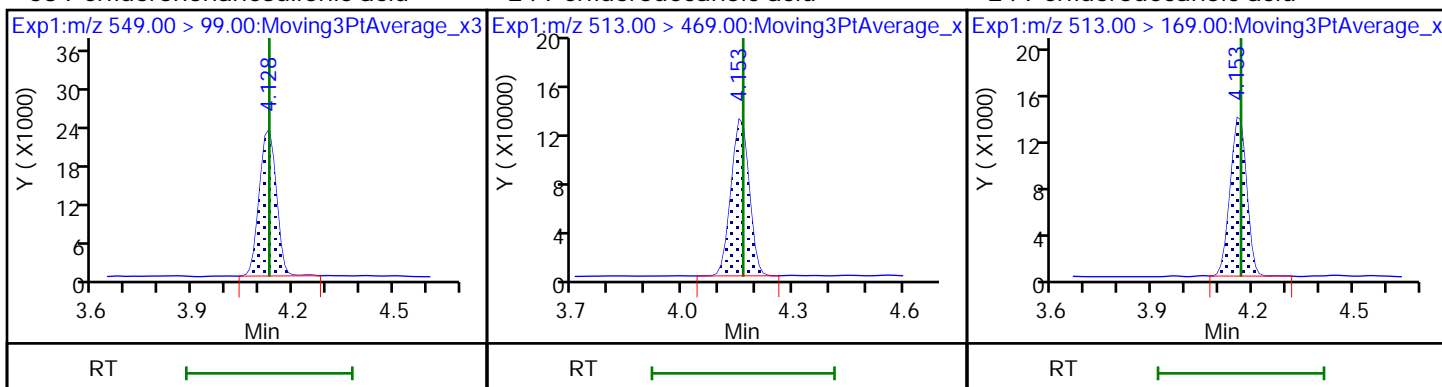
69 9-Chlorohexadecafluoro-3-oxanonan-68 Perfluoronanesulfonic acid



68 Perfluoronanesulfonic acid

24 Perfluorodecanoic acid

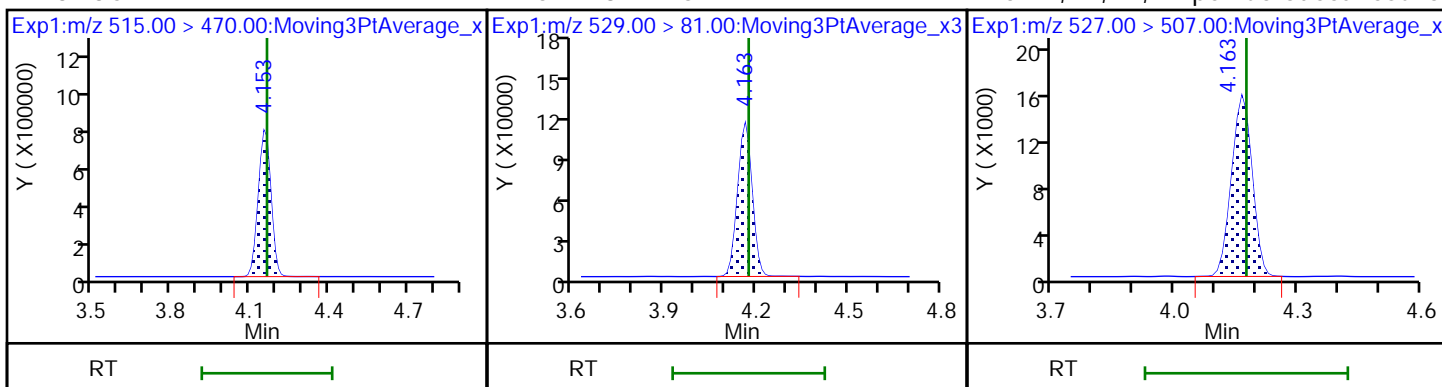
24 Perfluorodecanoic acid



D 23 13C2 PFDA

D 26 M2-8:2 FTS

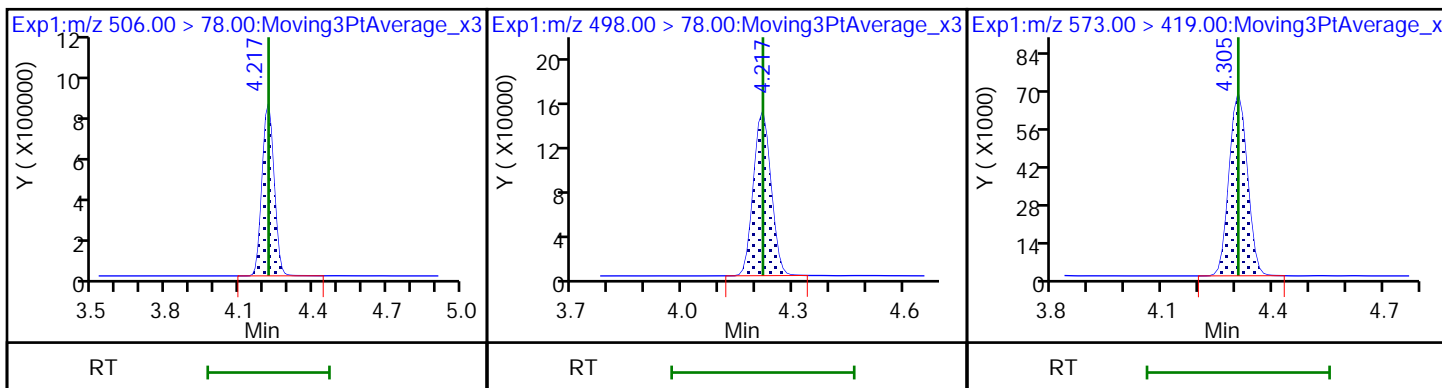
25 1H,1H,2H,2H-perfluorodecanesulfoni



D 21 13C8 FOSA

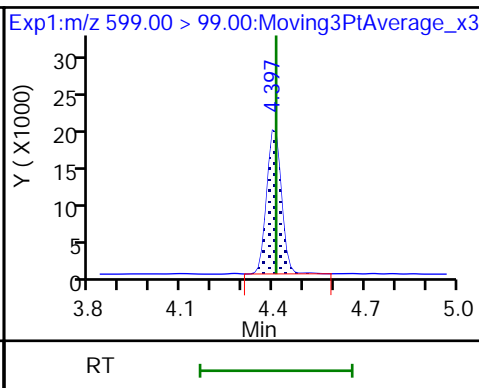
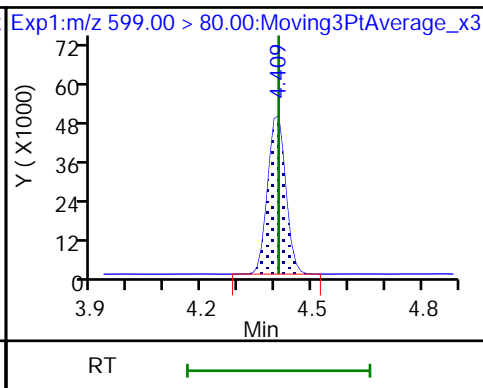
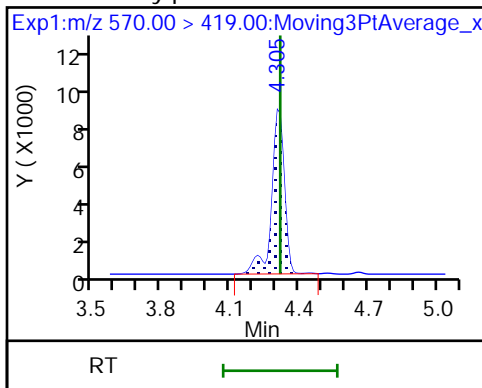
22 Perfluorooctanesulfonamide

D 27 d3-NMeFOSAA



28 N-methylperfluorooctanesulfonamido

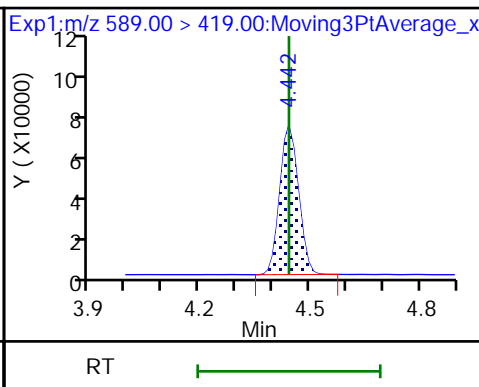
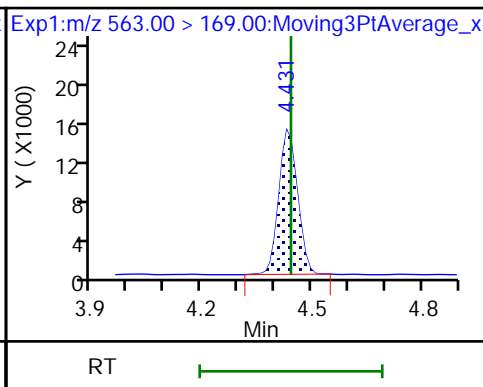
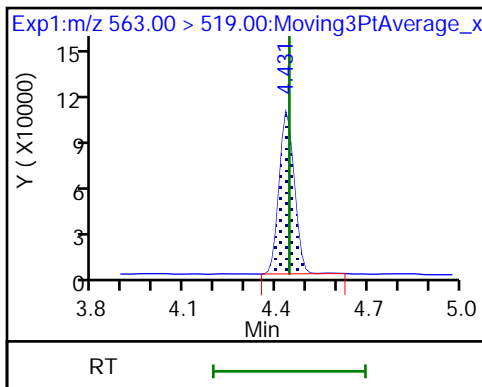
29 Perfluorodecanesulfonic acid



31 Perfluoroundecanoic acid

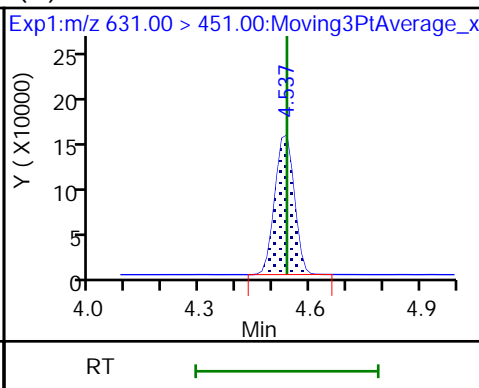
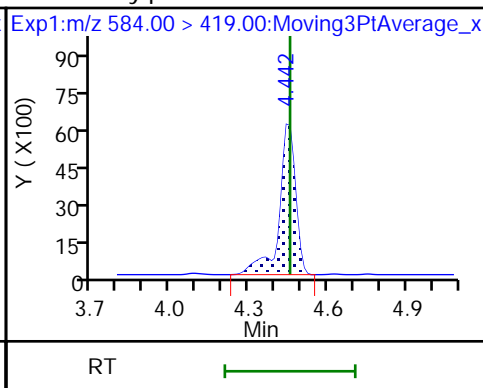
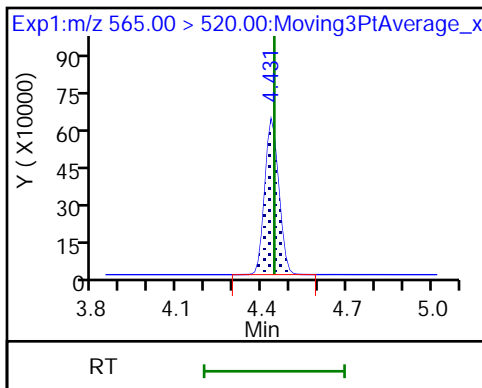
31 Perfluoroundecanoic acid

D 32 d5-NEtFOSAA



D 30 13C2 PFUnA

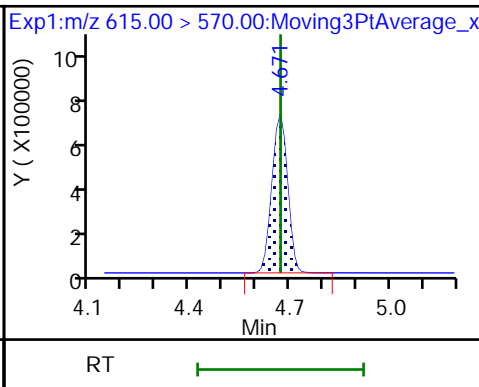
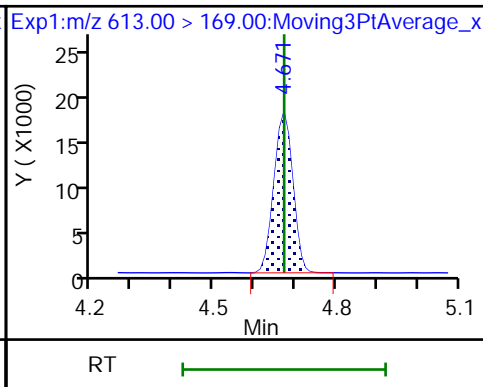
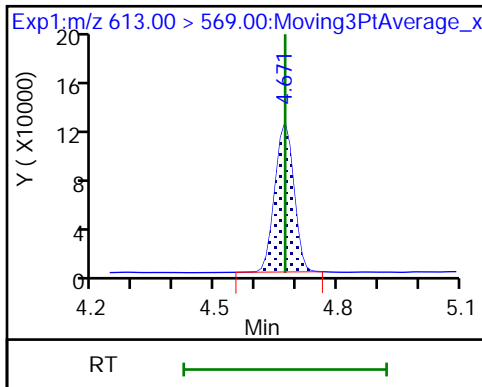
33 N-ethylperfluorooctanesulfonamido (6) 11-Chloroeicosafuoro-3-oxaundecan



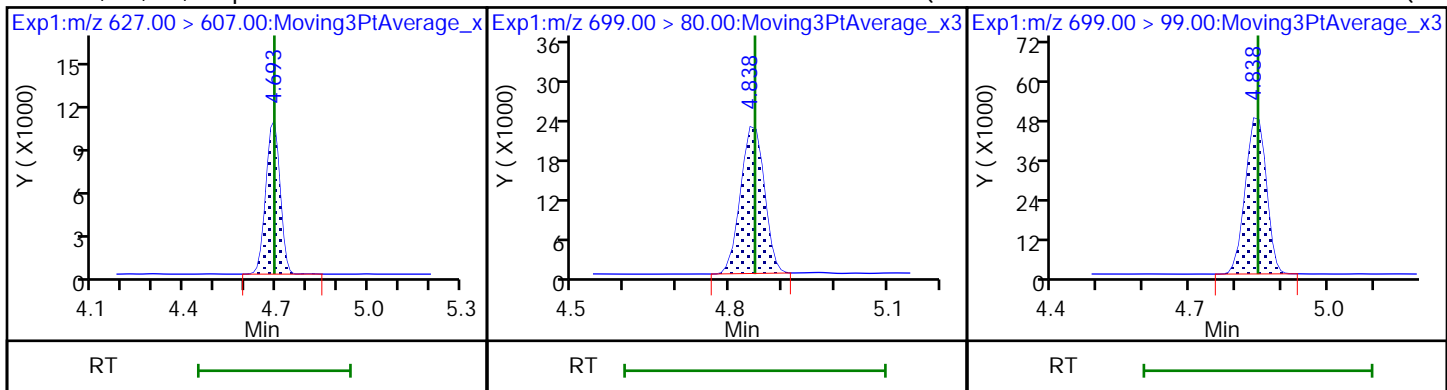
37 Perfluorododecanoic acid

37 Perfluorododecanoic acid

D 36 13C2 PFDoA



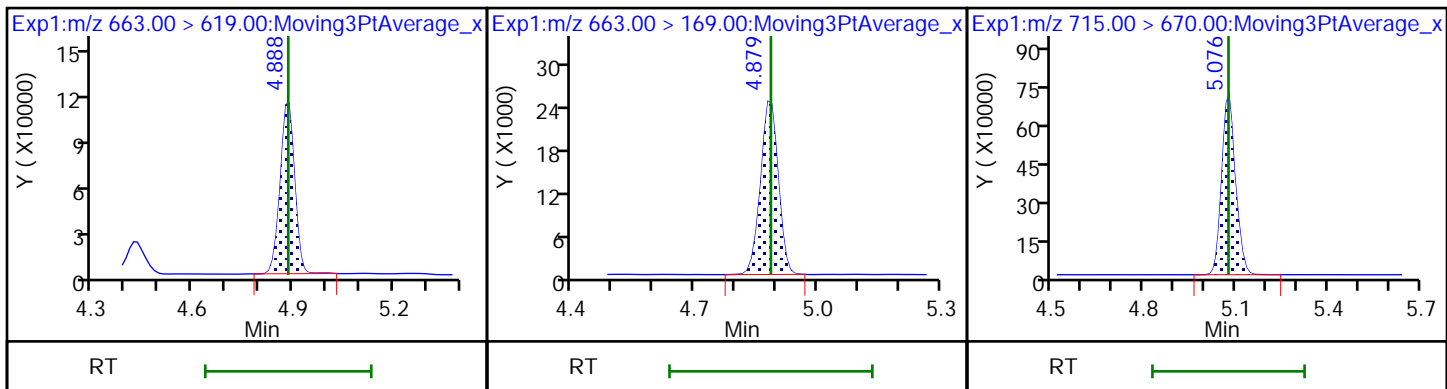
74 1H,1H,2H,2H-perfluorododecanesulfo75 Perfluorododecanesulfonic acid (PF 75 Perfluorododecanesulfonic acid (PF



41 Perfluorotridecanoic acid

41 Perfluorotridecanoic acid

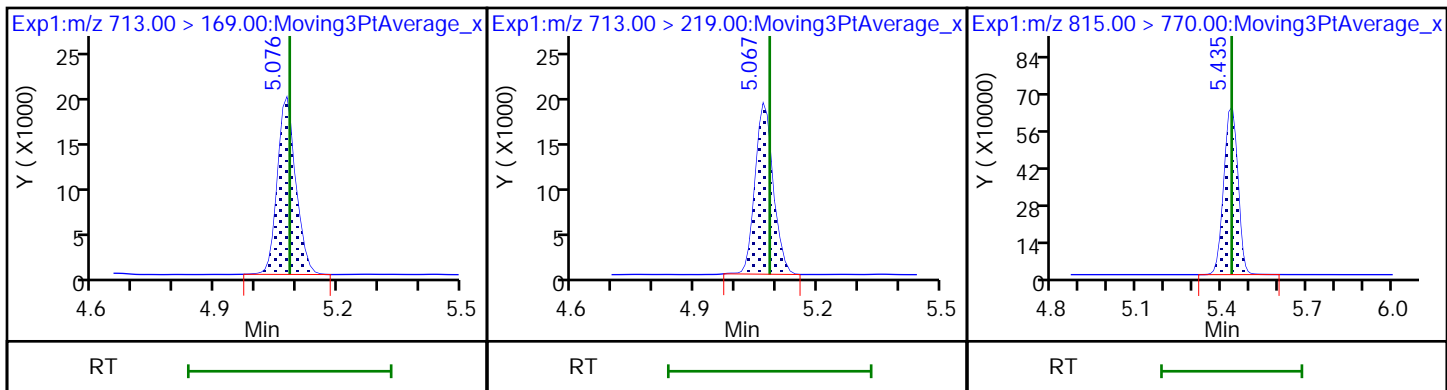
D 43 13C2 PFTeDA



42 Perfluorotetradecanoic acid

42 Perfluorotetradecanoic acid

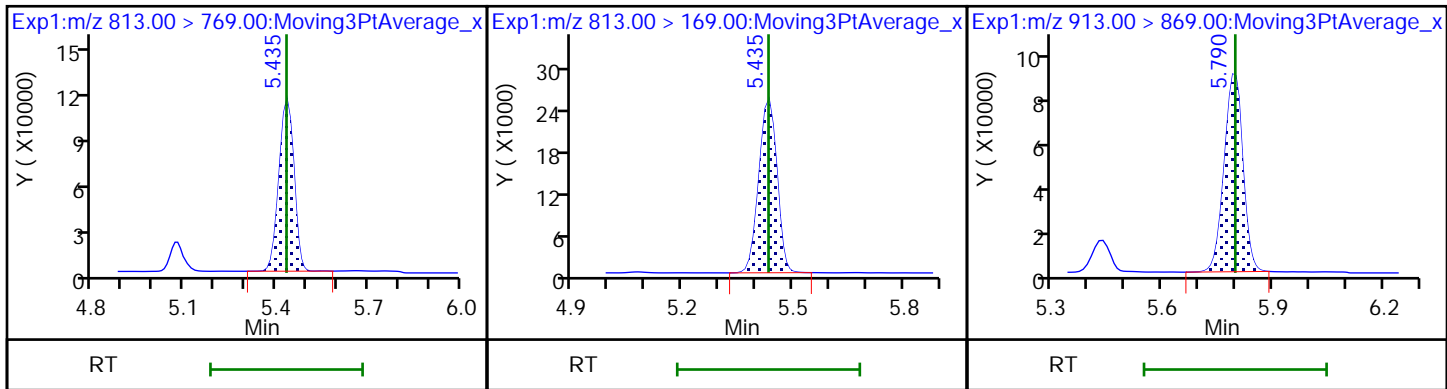
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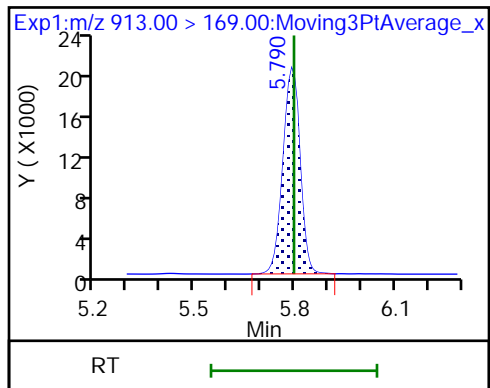
45 Perfluorohexadecanoic acid

45 Perfluorohexadecanoic acid

46 Perfluorooctadecanoic acid



46 Perfluorooctadecanoic acid



Eurofins TestAmerica, Burlington

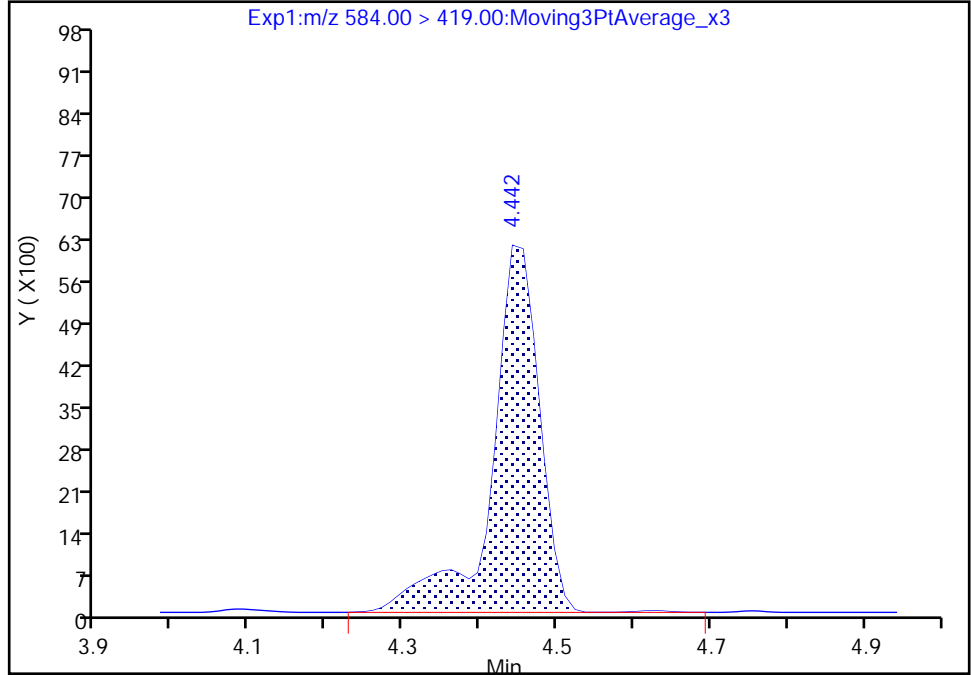
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Injection Date: 24-Sep-2019 18:32:01 Instrument ID: LC812
Lims ID: IC 3
Client ID:
Operator ID: lc812tech ALS Bottle#: 4 Worklist Smp#: 12
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

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

Signal: 1

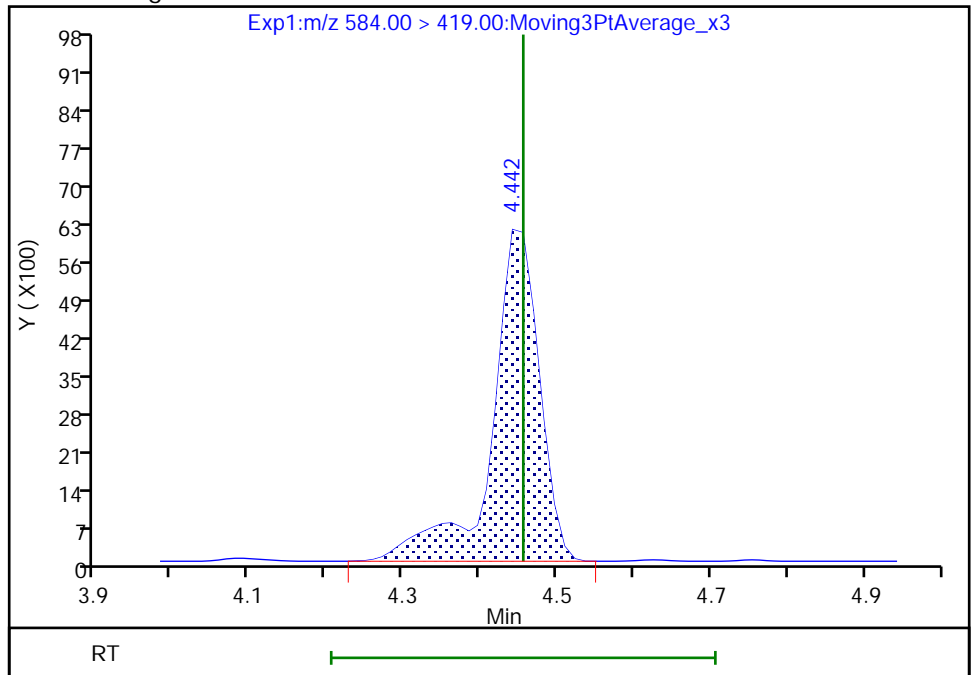
RT: 4.44
Area: 26483
Amount: 0.412248
Amount Units: ng/ml

Processing Integration Results



RT: 4.44
Area: 26413
Amount: 0.439359
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 25-Sep-2019 08:56:05
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration
Page 343 of 599

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA013.d
 Lims ID: ICIS
 Client ID:
 Sample Type: ICIS Calib Level: 4
 Inject. Date: 24-Sep-2019 18:40:13 ALS Bottle#: 5 Worklist Smp#: 13
 Injection Vol: 20.0 ul Dil. Factor: 1.0000
 Sample Info: ICIS
 Misc. Info.: 200-0037915-013 Plate: 1 Rack: 2
 Operator ID: lc812tech Instrument ID: LC812
 Sublist: chrom-PFC_LC812*sub6
 Method: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\PFC_LC812.m
 Limit Group: LC_PFC_ICAL
 Last Update: 25-Sep-2019 13:08:48 Calib Date: 24-Sep-2019 18:56:37
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA015.d
 Column 1 : C-18 (4.60 mm) Det: EXP1
 Process Host: CTX0340

First Level Reviewer: chirgwinb Date: 25-Sep-2019 08:58:08

Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	1.935	1.935	0.0	0.561	3498475	2.80	112	26526	
2 Perfluorobutanoic acid	212.90 > 169.00	1.944	1.944	0.0	1.005	1218400	0.9806	98.1	220	
4 Perfluoropentanoic acid	262.90 > 219.00	2.298	2.298	0.0	1.000	981623	0.9671	96.7	67.2	
D 3 13C5 PFPeA	267.90 > 223.00	2.298	2.298	0.0	0.667	2720996	2.75	110	6352	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	2.325	2.325	0.0	0.758	991069	0.8458	Target=2.04	95.7	2273
	298.90 > 99.00	2.325	2.325	0.0	0.758	486668	2.04(1.02-3.06)	95.7	529	
D 60 M2-4:2 FTS	329.00 > 81.00	2.636	2.636	0.0	0.765	259301	2.54	109	245	
61 1H,1H,2H,2H-perfluorohexanesulfoni	327.00 > 307.00	2.648	2.648	0.0	1.005	199042	0.8962	96.0	2176	
70 Perfluoropentanesulfonic acid	349.00 > 80.00	2.685	2.685	0.0	0.876	904425	0.8932	Target=2.96	95.2	2504
	349.00 > 99.00	2.685	2.685	0.0	0.876	300040	3.01(1.48-4.44)	95.2	841	
D 7 13C2 PFHxA	315.00 > 270.00	2.685	2.685	0.0	0.779	2909159	2.77	111	8556	
6 Perfluorohexanoic acid	313.00 > 269.00	2.685	2.685	0.0	1.000	1082827	0.9445	Target=12.34	94.5	382
	313.00 > 119.00	2.685	2.685	0.0	1.000	83914	12.90(6.17-18.51)	94.5	86.7	
67 Perfluoro(2-propoxypropanoic) acid	329.10 > 285.00	2.799	2.799	0.0	1.000	154580	0.8540	85.4	80.4	
D 64 13C3 HFPO-DA	332.10 > 287.00	2.799	2.799	0.0	0.812	158165	3.02	121	1400	

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	3.067	3.067	0.0	0.890	2033906	2.60		110	6592	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.067	3.067	0.0	1.000	923163	0.9161	Target=3.55	91.6	154	
363.00 > 169.00	3.067	3.067	0.0	1.000	260941		3.54(1.78-5.33)	91.6	582	
D 9 13C4 PFHpA										
367.00 > 322.00	3.067	3.067	0.0	0.890	2820017	2.77		111	5576	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.067	3.067	0.0	1.000	747165	0.8945	Target=3.65	98.3	2112	
399.00 > 99.00	3.067	3.067	0.0	1.000	197707		3.78(1.82-5.47)	98.3	260	
77 DONA										
377.00 > 251.00	3.109	3.109	0.0	0.817	2132240	0.9346	Target=2.62	99.2	3499	
377.00 > 85.00	3.109	3.109	0.0	0.817	832467		2.56(1.31-3.92)	99.2	1738	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.430	3.430	0.0	0.995	339828	2.67		112	1173	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.430	3.430	0.0	1.000	165552	0.9186		96.9	1427	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.430	3.430	0.0	0.901	613127	0.99	Target=5.52	104	2915	
449.00 > 99.00	3.430	3.430	0.0	0.901	105625		5.80(2.76-8.28)	104	777	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.447	3.447	0.0	1.000	1071508	0.99	Target=2.64	99.4	182	
413.00 > 169.00	3.447	3.447	0.0	1.000	410738		2.61(1.32-3.96)	99.4	1103	
* 62 13C2 PFOA										
415.00 > 370.00	3.447	3.447	0.0		2601831	2.50			6936	
D 14 13C4 PFOA										
417.00 > 372.00	3.447	3.447	0.0	1.000	2834336	2.74		110	5050	
D 18 13C4 PFOS										
503.00 > 80.00	3.805	3.805	0.0	1.104	1333270	2.50		105	5066	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.805	3.805	0.0	1.000	433763	0.8600	Target=4.99	92.7	1250	M
499.00 > 99.00	3.805	3.805	0.0	1.000	87984		4.93(2.50-7.49)	92.7	359	M
D 19 13C5 PFNA										
468.00 > 423.00	3.829	3.829	0.0	1.111	2522478	2.76		110	7092	
20 Perfluorononanoic acid										
463.00 > 419.00	3.829	3.829	0.0	1.000	911088	0.9466	Target=8.13	94.7	246	
463.00 > 169.00	3.829	3.829	0.0	1.000	115422		7.89(4.07-12.20)	94.7	1516	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.994	3.994	0.0	1.050	827865	0.9236		99.1	3302	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.129	4.129	0.0	1.085	402999	0.9252	Target=2.57	96.4	3156	
549.00 > 99.00	4.129	4.129	0.0	1.085	154812		2.60(1.29-3.86)	96.4	493	
24 Perfluorodecanoic acid										
513.00 > 469.00	4.164	4.164	0.0	1.000	884015	0.9452	Target=8.78	94.5	286	
513.00 > 169.00	4.164	4.164	0.0	1.000	103134		8.57(4.39-13.18)	94.5	624	
D 23 13C2 PFDA										
515.00 > 470.00	4.164	4.164	0.0	1.208	2527717	2.78		111	10887	

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	4.175	4.175	0.0	1.211	383179	2.76		115	1912	
25 1H,1H,2H,2H-perfluorodecanesulfoni										
527.00 > 507.00	4.175	4.175	0.0	1.000	109122	0.8690		90.7	2026	
D 21 13C8 FOSA										
506.00 > 78.00	4.218	4.218	0.0	1.224	2822377	2.73		109	4444	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.218	4.218	0.0	1.000	1039913	1.00		100	2163	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.305	4.305	0.0	1.249	237105	2.69		107	778	
28 N-methylperfluorooctanesulfonamido										
570.00 > 419.00	4.317	4.317	0.0	1.003	57992	0.8582		85.8	379	
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.409	4.409	0.0	1.159	329415	0.9789	Target=2.59	102	3033	
599.00 > 99.00	4.409	4.409	0.0	1.159	128741		2.56(1.29-3.88)	102	657	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.443	4.443	0.0	1.000	663774	0.8589	Target=7.14	85.9	363	
563.00 > 169.00	4.443	4.443	0.0	1.000	95242		6.97(3.57-10.71)	85.9	1300	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.443	4.443	0.0	1.289	266657	2.79		112	1652	
D 30 13C2 PFUnA										
565.00 > 520.00	4.443	4.443	0.0	1.289	2308914	2.83		113	6752	
33 N-ethylperfluorooctanesulfonamidoa										
584.00 > 419.00	4.456	4.456	0.0	1.003	64054	1.08		108	585	M
66 11-Chloroeicosafuoro-3-oxaundecan										
631.00 > 451.00	4.537	4.537	0.0	1.192	1064568	0.9545		101	6505	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.672	4.672	0.0	1.000	865645	1.00	Target=6.72	100	115	
613.00 > 169.00	4.672	4.672	0.0	1.000	122664		7.06(3.36-10.08)	100	1558	
D 36 13C2 PFDaA										
615.00 > 570.00	4.672	4.672	0.0	1.355	2439760	2.78		111	8889	
74 1H,1H,2H,2H-perfluorododecanesulfo										
627.00 > 607.00	4.693	4.693	0.0	1.124	67252	0.9849		102	1206	
75 Perfluorododecanesulfonic acid (PF										
699.00 > 80.00	4.847	4.847	0.0	1.274	144852	1.00	Target=0.47	103	1118	
699.00 > 99.00	4.847	4.847	0.0	1.274	309180		0.47(0.23-0.70)	103	2971	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.886	4.886	0.0	1.046	663858	0.9504	Target=4.79	95.0	116	
663.00 > 169.00	4.886	4.886	0.0	1.046	136444		4.87(2.39-7.18)	95.0	1254	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.074	5.074	0.0	1.472	2159980	2.74		110	11166	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.083	5.083	0.0	1.002	126010	1.00	Target=1.02	100	1486	
713.00 > 219.00	5.074	5.083	-0.009	1.000	115842		1.09(0.51-1.53)	100	1543	
D 44 13C2 PFHxDA										
815.00 > 770.00	5.433	5.433	0.0	1.576	2015053	2.55		102	8776	

Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.433	5.433	0.0	1.000	712184	1.04	Target=4.39	104	96.3	
813.00 > 169.00	5.433	5.433	0.0	1.000	164537		4.33(2.19-6.58)	104	1478	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.797	5.797	0.0	1.067	595565	1.00	Target=4.22	100	152	
913.00 > 169.00	5.797	5.797	0.0	1.067	145524		4.09(2.11-6.32)	100	1451	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

PFAS32NCIC4_00001

Amount Added: 100.00

Units: uL

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA013.d

Injection Date: 24-Sep-2019 18:40:13

Instrument ID: LC812

Lims ID: ICIS

Client ID:

Operator ID: lc812tech

ALS Bottle#: 5

Worklist Smp#: 13

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

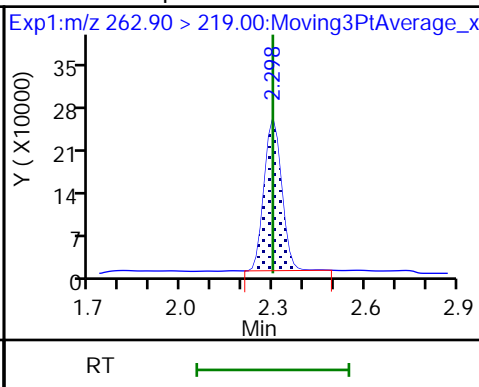
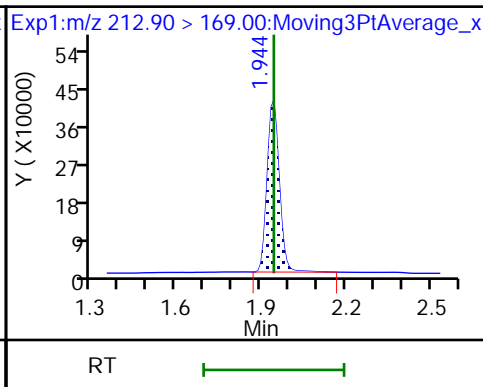
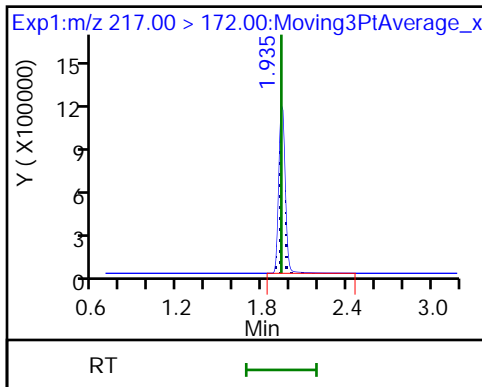
Method: PFC_LC812

Limit Group: LC_PFC_ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

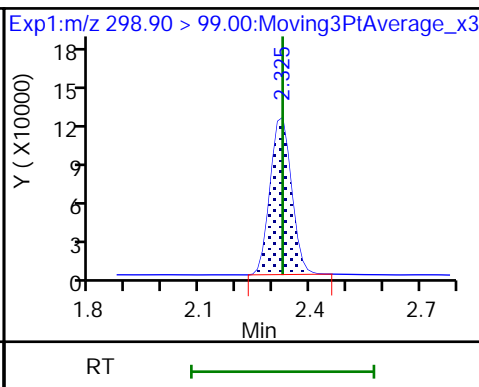
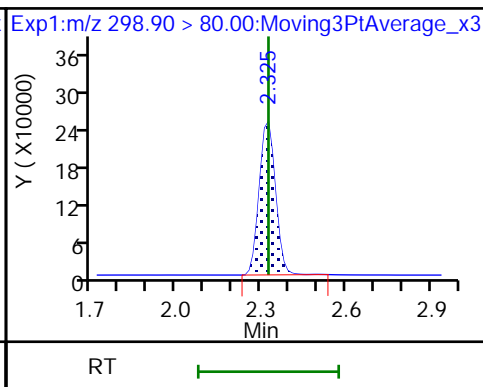
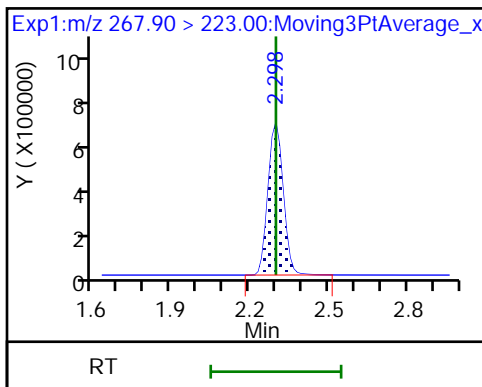
4 Perfluoropentanoic acid



D 3 13C5 PFPeA

5 Perfluorobutanesulfonic acid

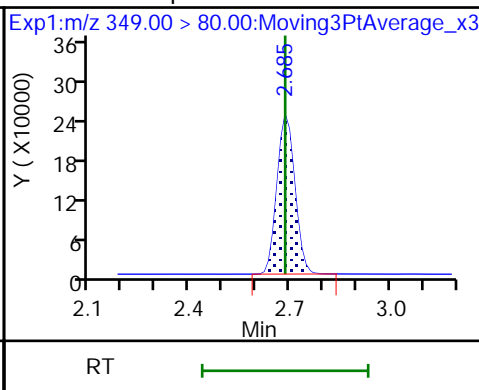
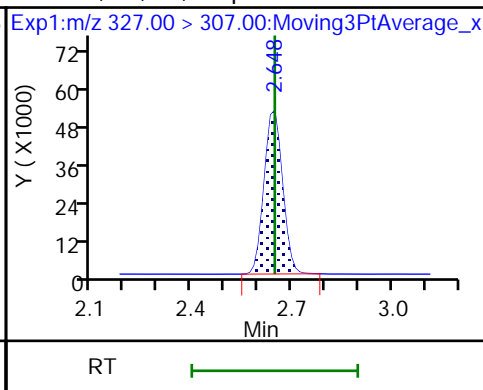
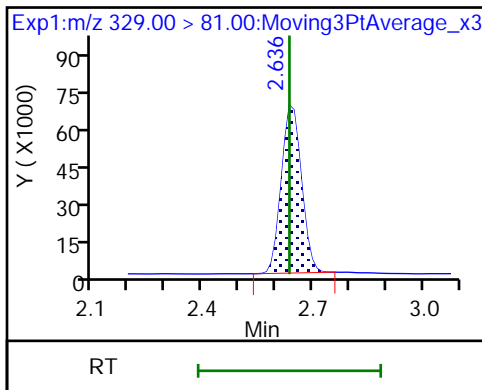
5 Perfluorobutanesulfonic acid



D 60 M2-4:2 FTS

61 1H,1H,2H,2H-perfluorohexanesulfoni

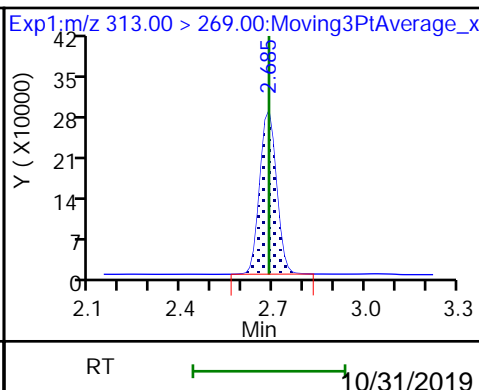
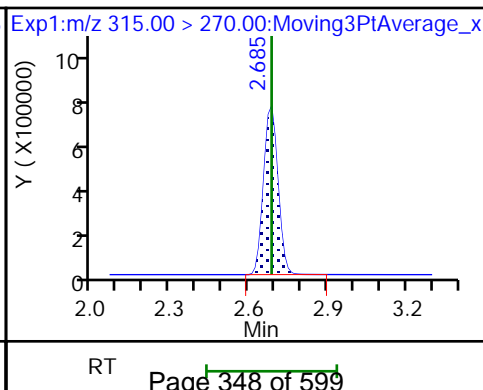
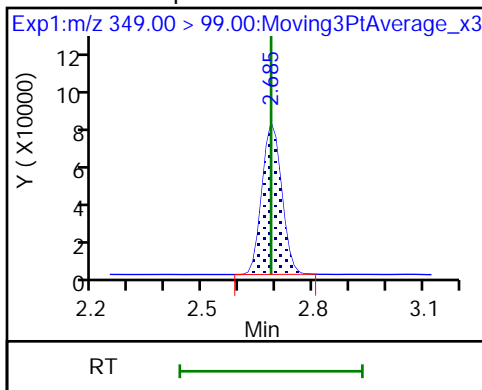
70 Perfluoropentanesulfonic acid



70 Perfluoropentanesulfonic acid

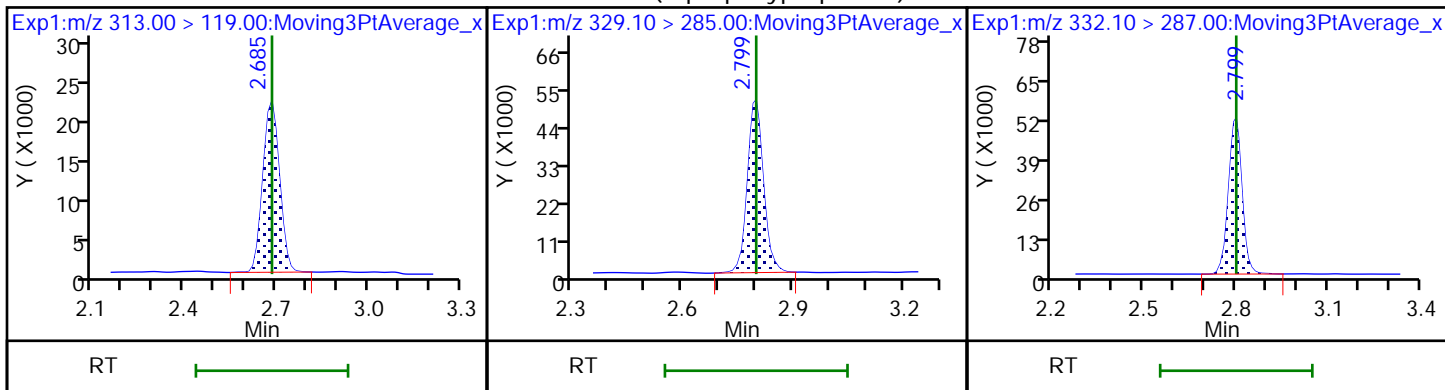
D 7 13C2 PFHxA

6 Perfluorohexanoic acid



6 Perfluorohexanoic acid

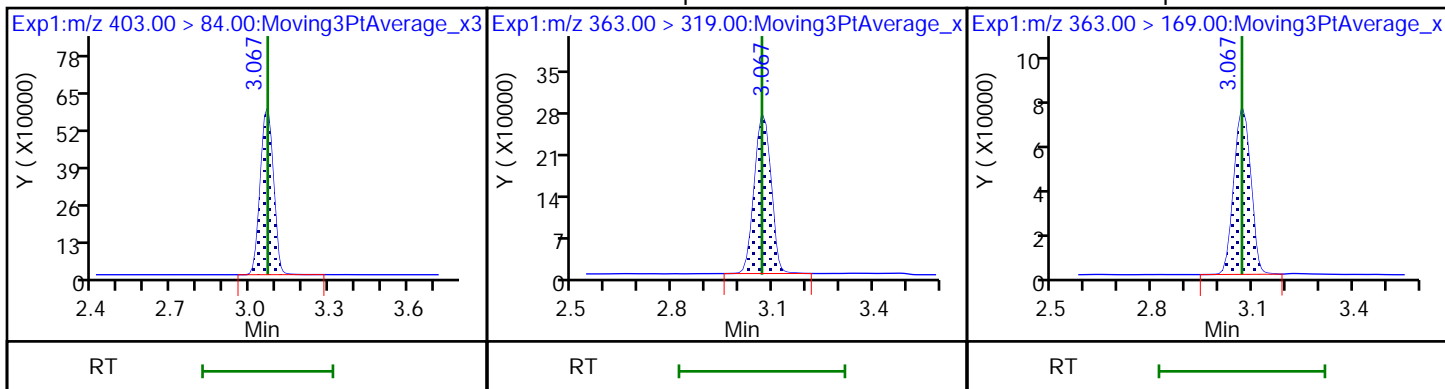
67 Perfluoro(2-propoxypropanoic) acid D 64 13C3 HFPO-DA



D 11 18O2 PFHxS

10 Perfluoroheptanoic acid

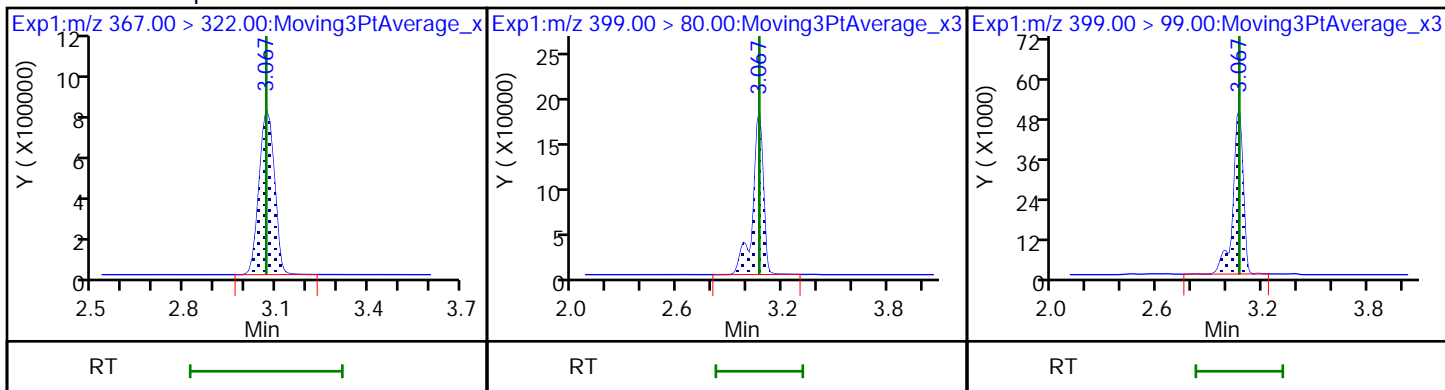
10 Perfluoroheptanoic acid



D 9 13C4 PFHpA

8 Perfluorohexanesulfonic acid

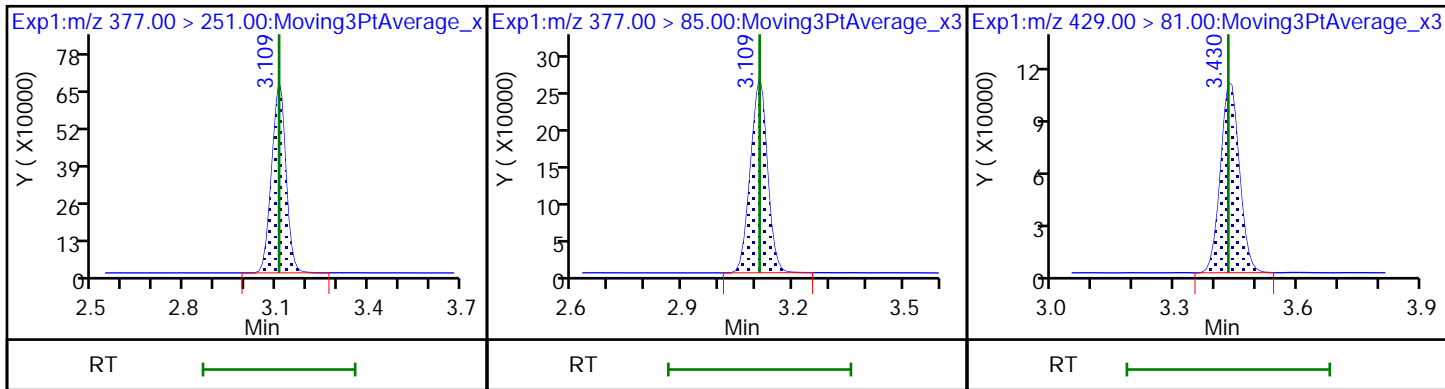
8 Perfluorohexanesulfonic acid

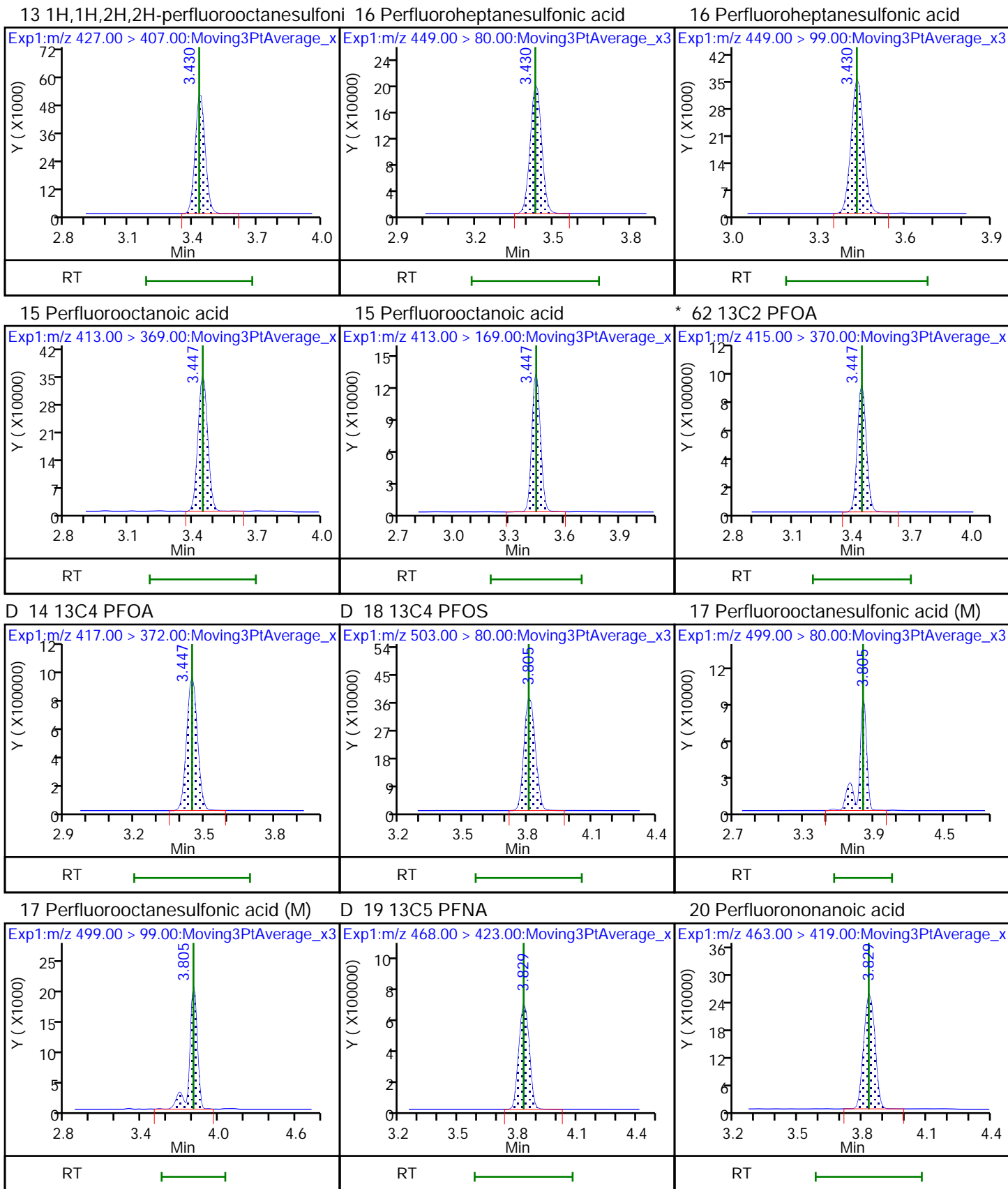


77 DONA

77 DONA

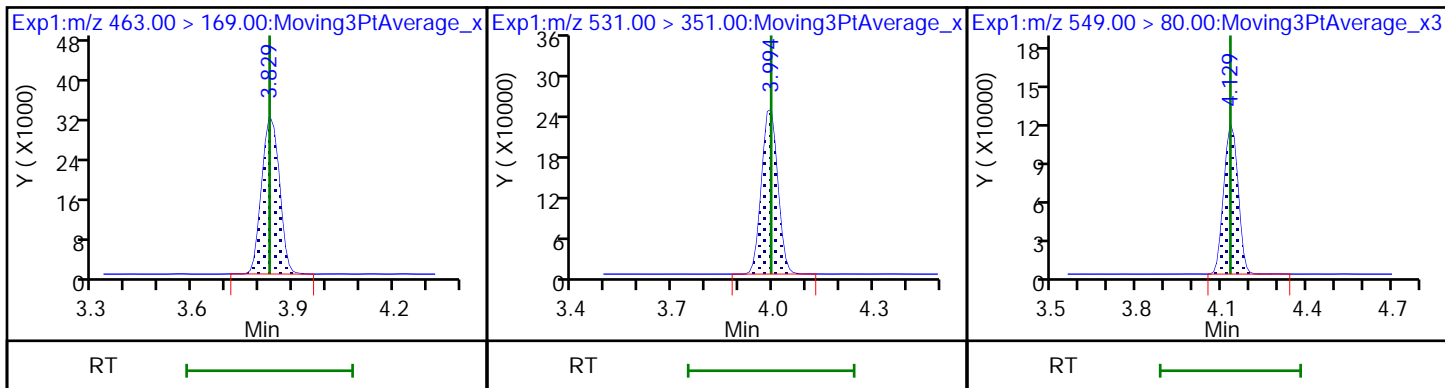
D 12 M2-6:2 FTS





20 Perfluorononanoic acid

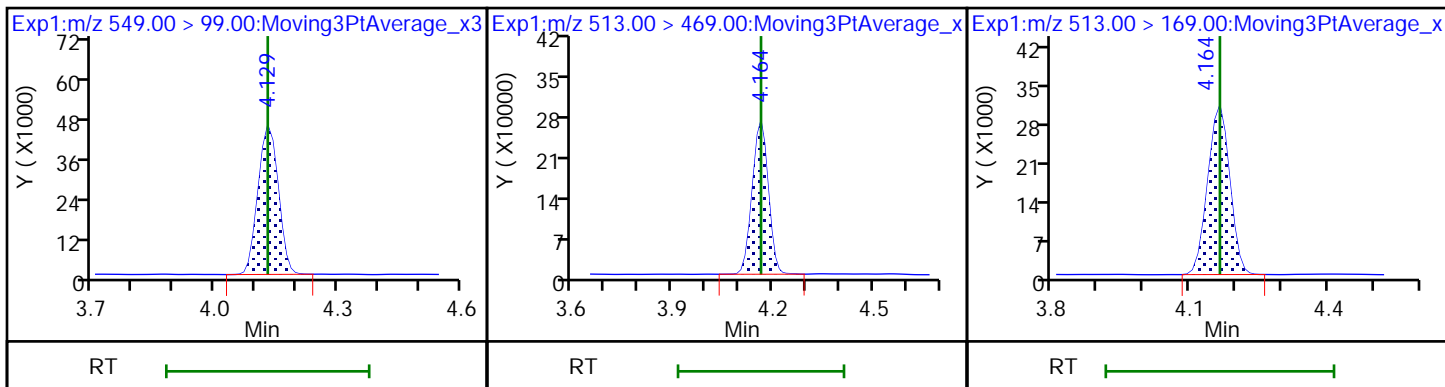
69 9-Chlorohexadecafluoro-3-oxanonan-68 Perfluoronanesulfonic acid



68 Perfluoronanesulfonic acid

24 Perfluorodecanoic acid

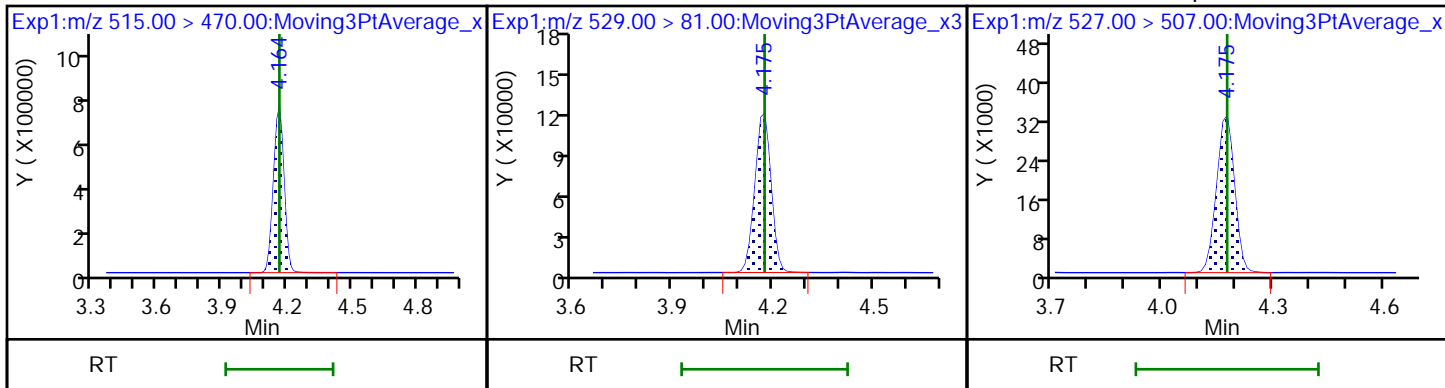
24 Perfluorodecanoic acid



D 23 13C2 PFDA

D 26 M2-8:2 FTS

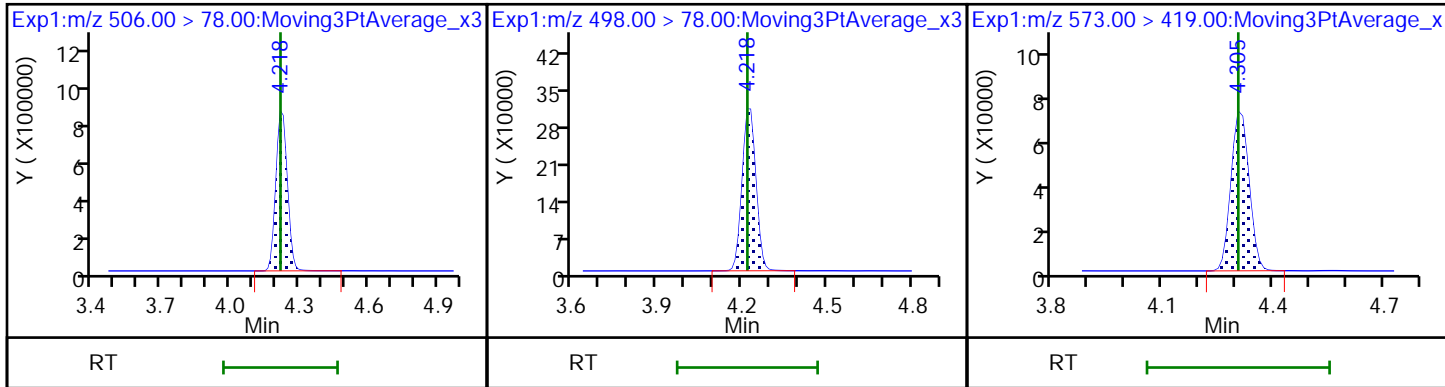
25 1H,1H,2H,2H-perfluorodecanesulfoni



D 21 13C8 FOSA

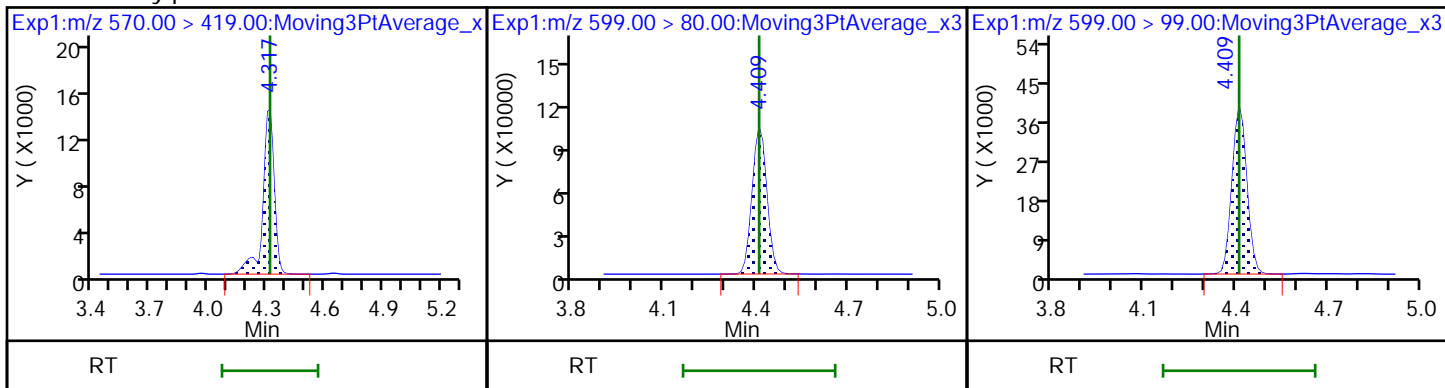
22 Perfluorooctanesulfonamide

D 27 d3-NMeFOSAA



28 N-methylperfluorooctanesulfonamido 29 Perfluorodecanesulfonic acid

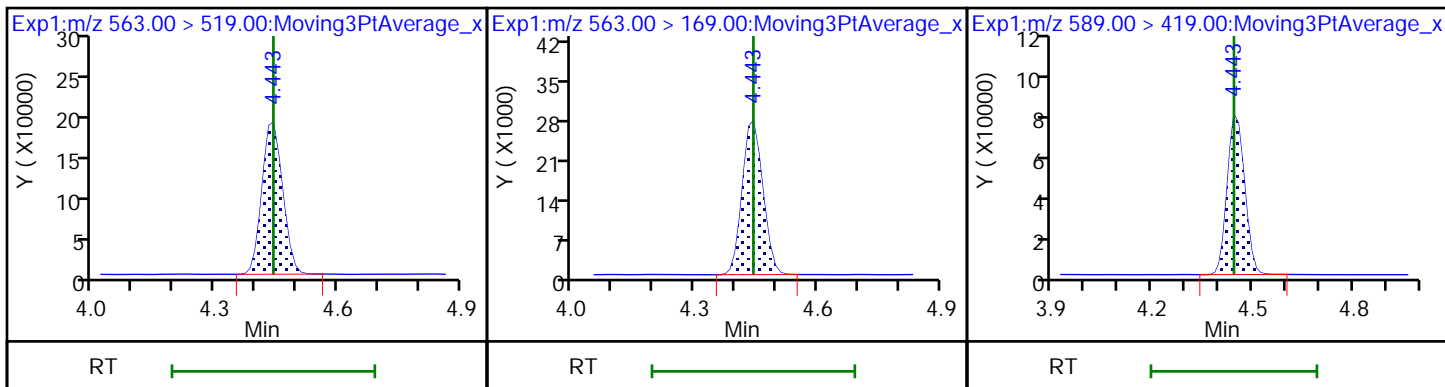
29 Perfluorodecanesulfonic acid



31 Perfluoroundecanoic acid

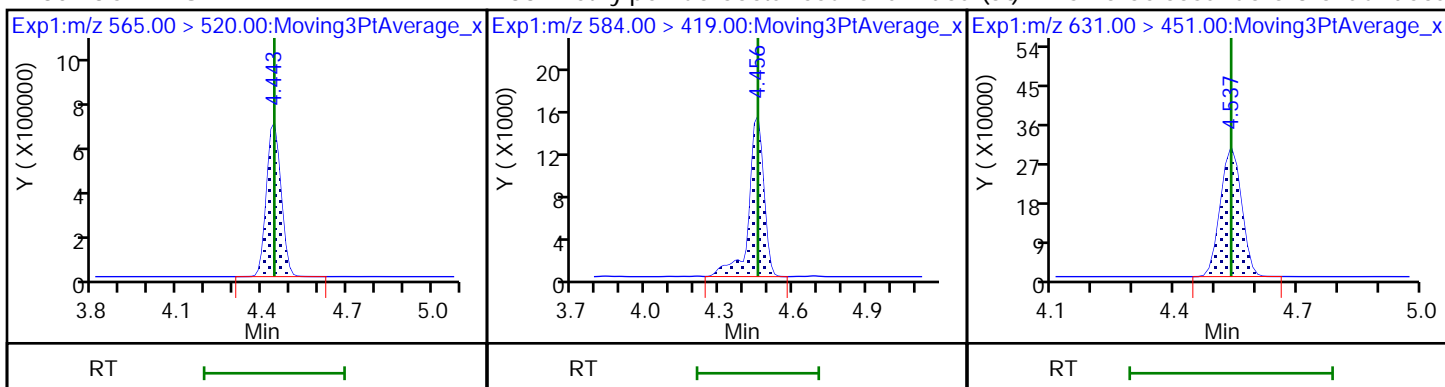
31 Perfluoroundecanoic acid

D 32 d5-NEtFOSAA



D 30 13C2 PFUnA

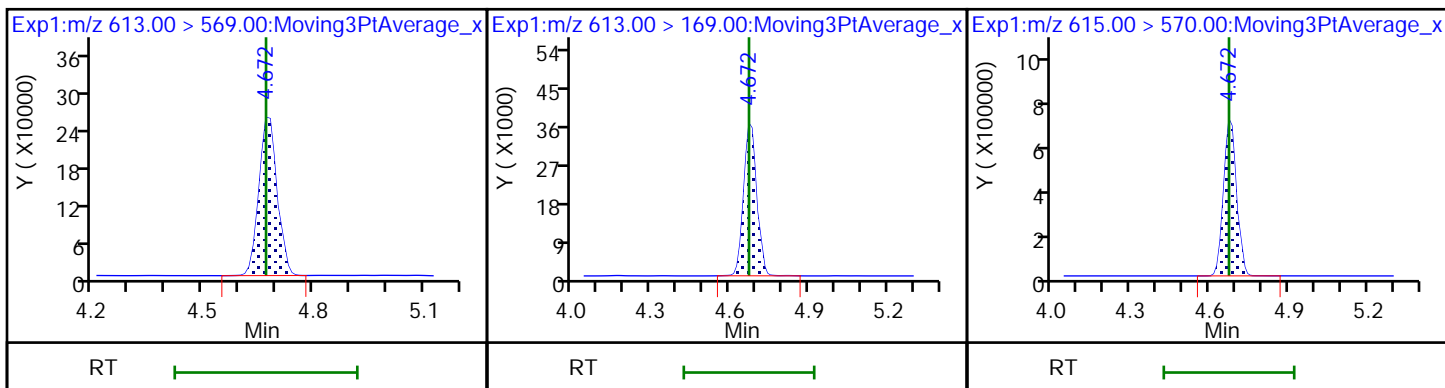
33 N-ethylperfluorooctanesulfonamido (6) 11-Chloroeicosafuoro-3-oxaundecan



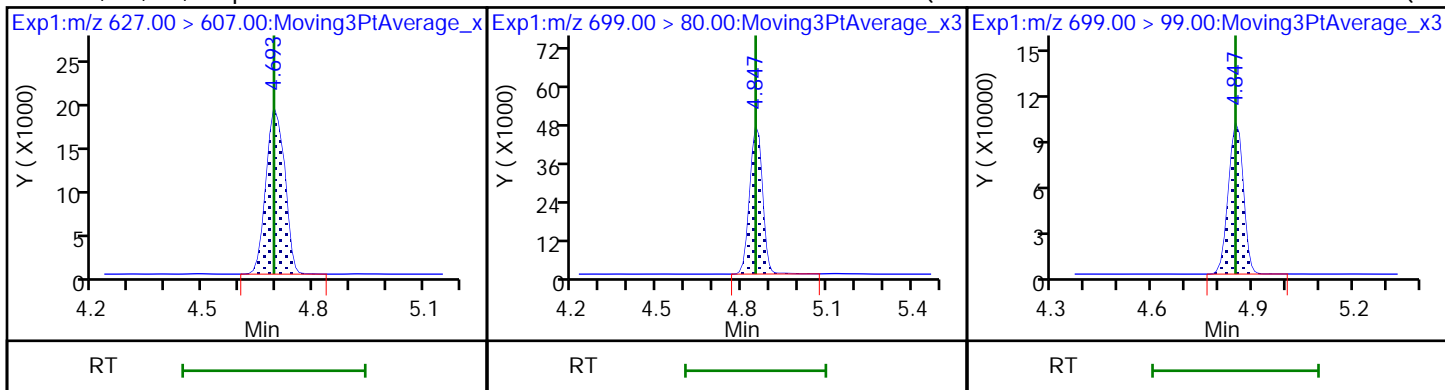
37 Perfluorododecanoic acid

37 Perfluorododecanoic acid

D 36 13C2 PFDaA



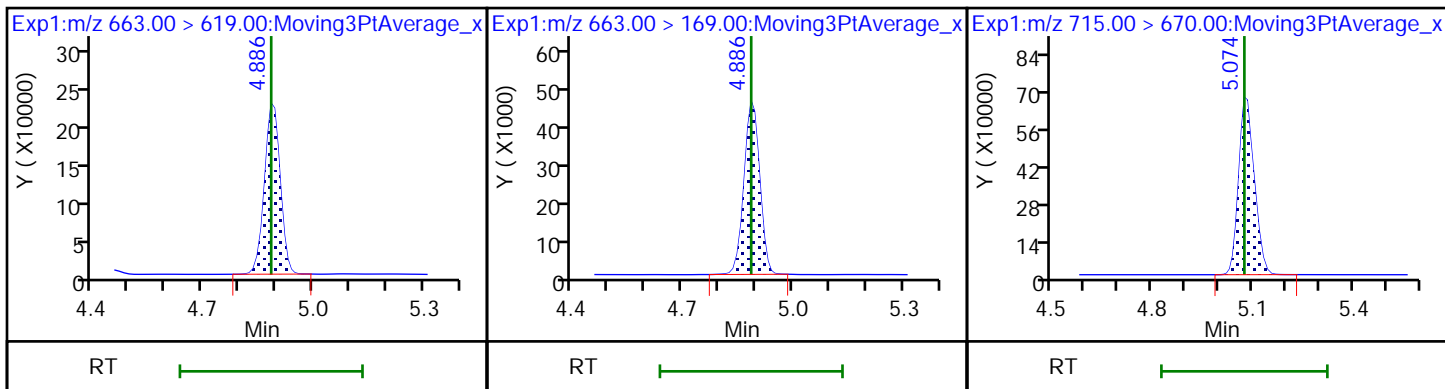
74 1H,1H,2H,2H-perfluorododecanesulfo75 Perfluorododecanesulfonic acid (PF 75 Perfluorododecanesulfonic acid (PF



41 Perfluorotridecanoic acid

41 Perfluorotridecanoic acid

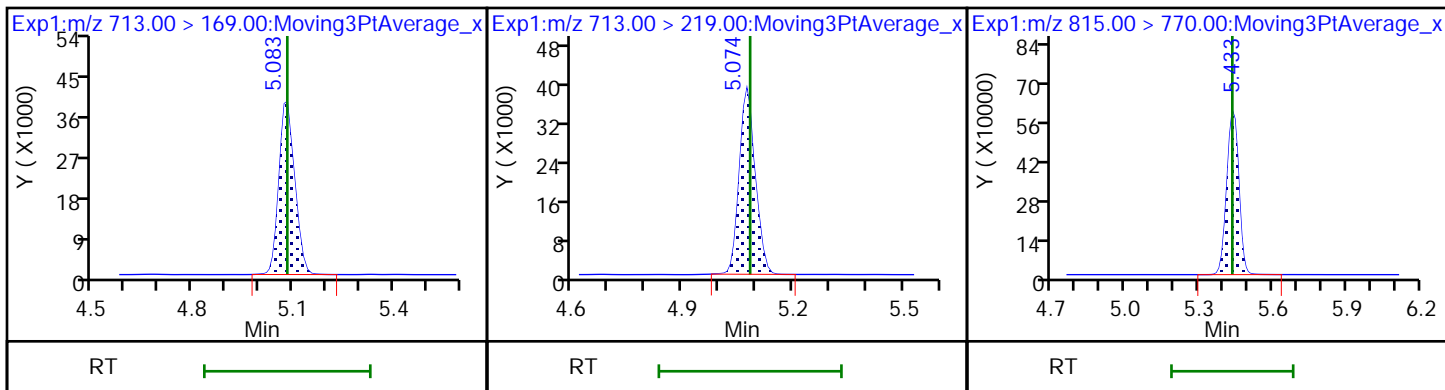
D 43 13C2 PFTeDA



42 Perfluorotetradecanoic acid

42 Perfluorotetradecanoic acid

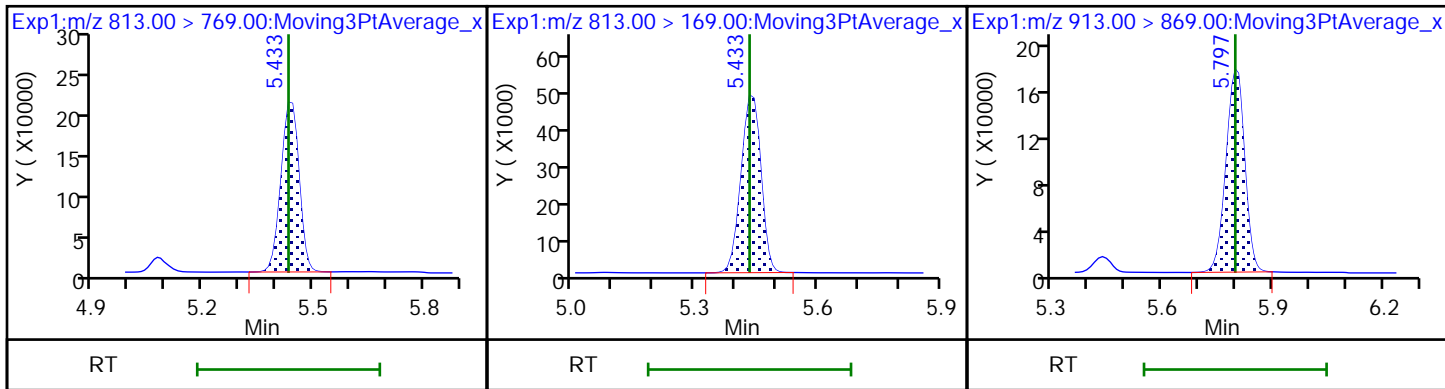
D 44 13C2 PFHxDA



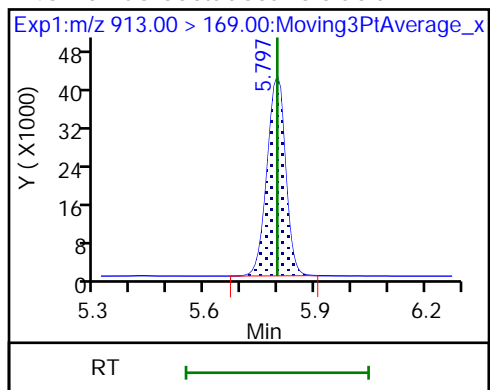
45 Perfluorohexadecanoic acid

45 Perfluorohexadecanoic acid

46 Perfluorooctadecanoic acid



46 Perfluorooctadecanoic acid



Eurofins TestAmerica, Burlington

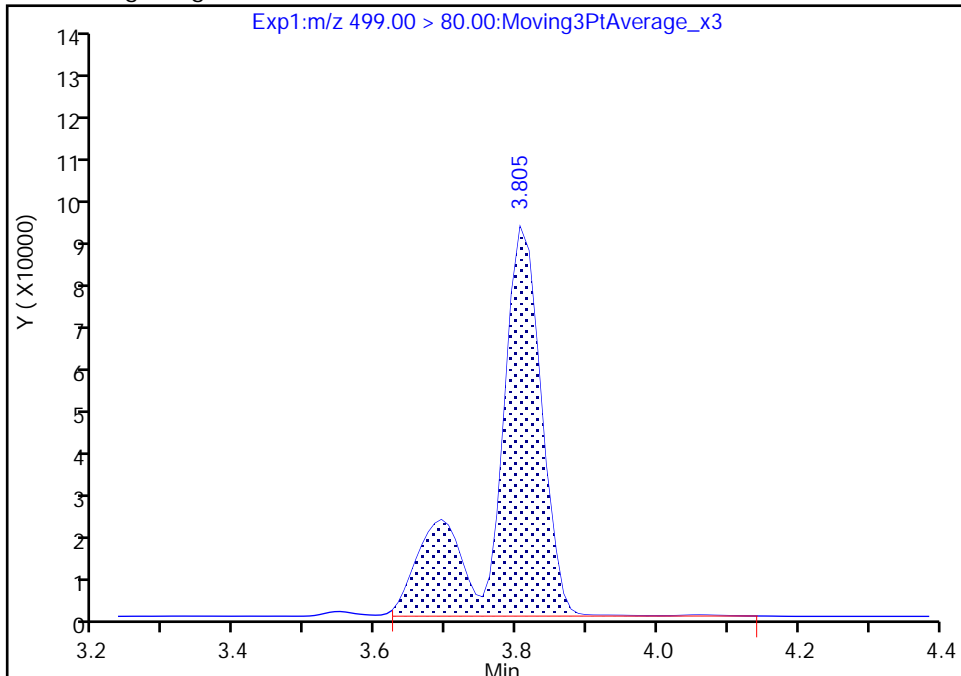
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Injection Date: 24-Sep-2019 18:40:13 Instrument ID: LC812
Lims ID: ICIS
Client ID:
Operator ID: lc812tech ALS Bottle#: 5 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

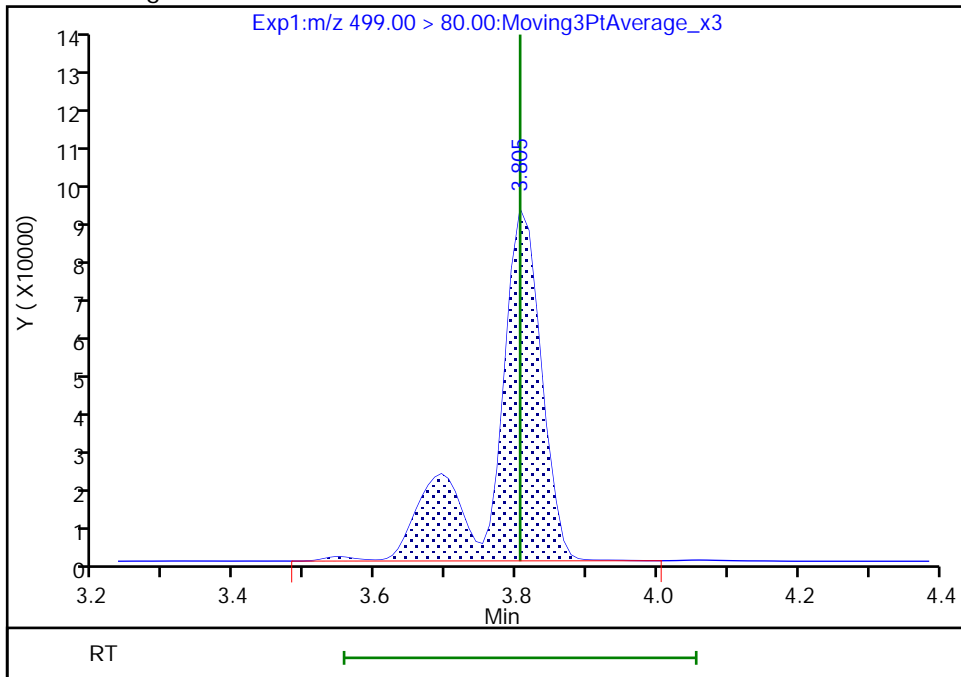
RT: 3.81
Area: 431311
Amount: 0.855194
Amount Units: ng/ml

Processing Integration Results



RT: 3.81
Area: 433763
Amount: 0.859996
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 25-Sep-2019 08:57:38
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration
Page 355 of 599

Eurofins TestAmerica, Burlington

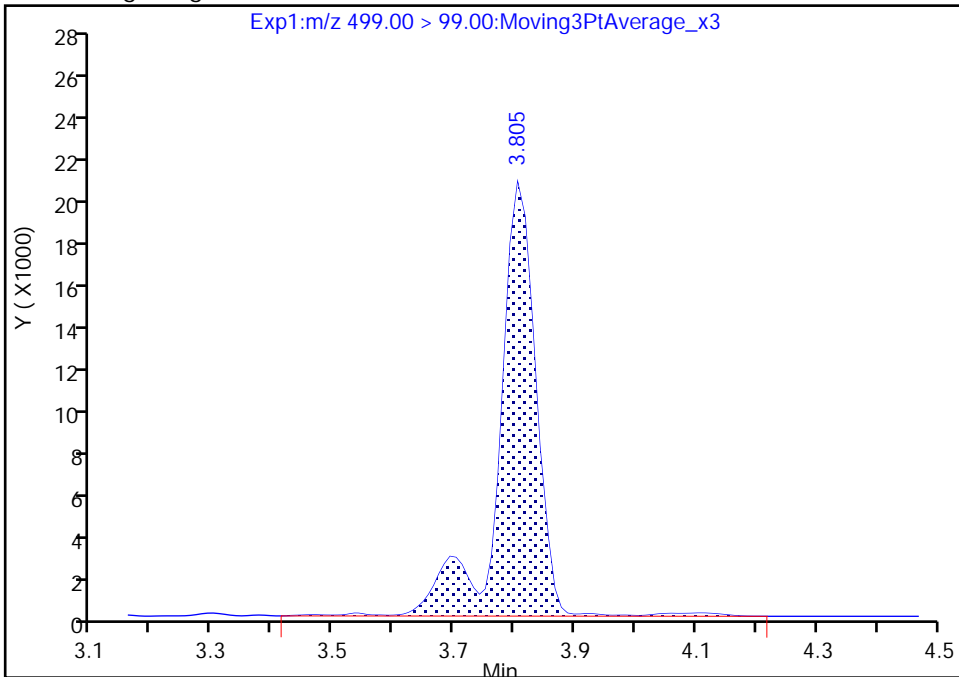
Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA013.d
Injection Date: 24-Sep-2019 18:40:13 Instrument ID: LC812
Lims ID: ICIS
Client ID:
Operator ID: lc812tech ALS Bottle#: 5 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

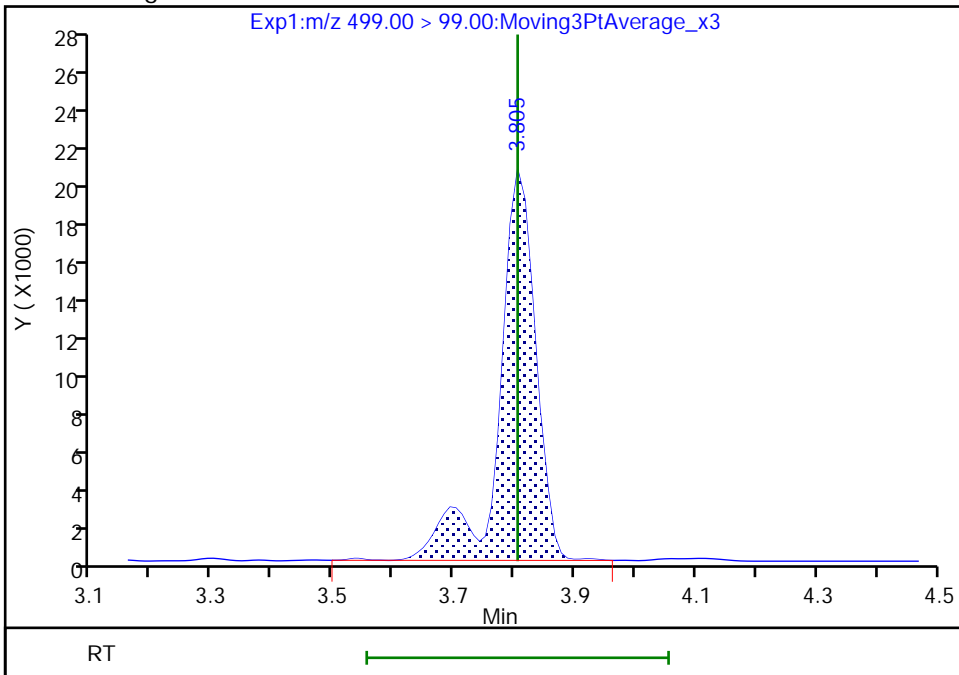
RT: 3.81
Area: 90122
Amount: 0.855194
Amount Units: ng/ml

Processing Integration Results



RT: 3.81
Area: 87984
Amount: 0.859996
Amount Units: ng/ml

Manual Integration Results



Eurofins TestAmerica, Burlington

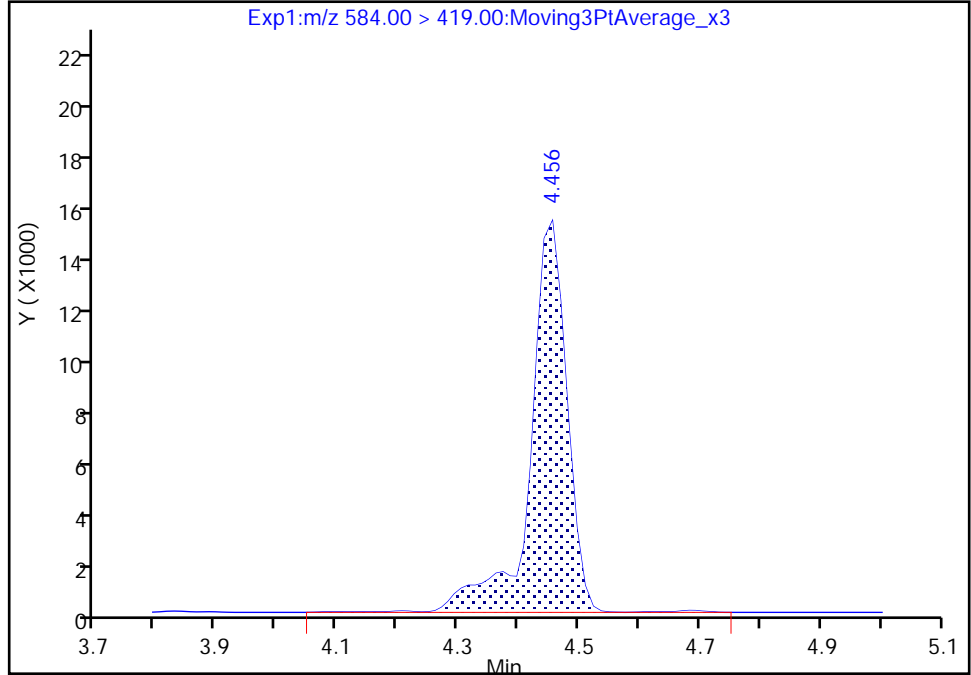
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Injection Date: 24-Sep-2019 18:40:13 Instrument ID: LC812
Lims ID: ICIS
Client ID:
Operator ID: lc812tech ALS Bottle#: 5 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

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

Signal: 1

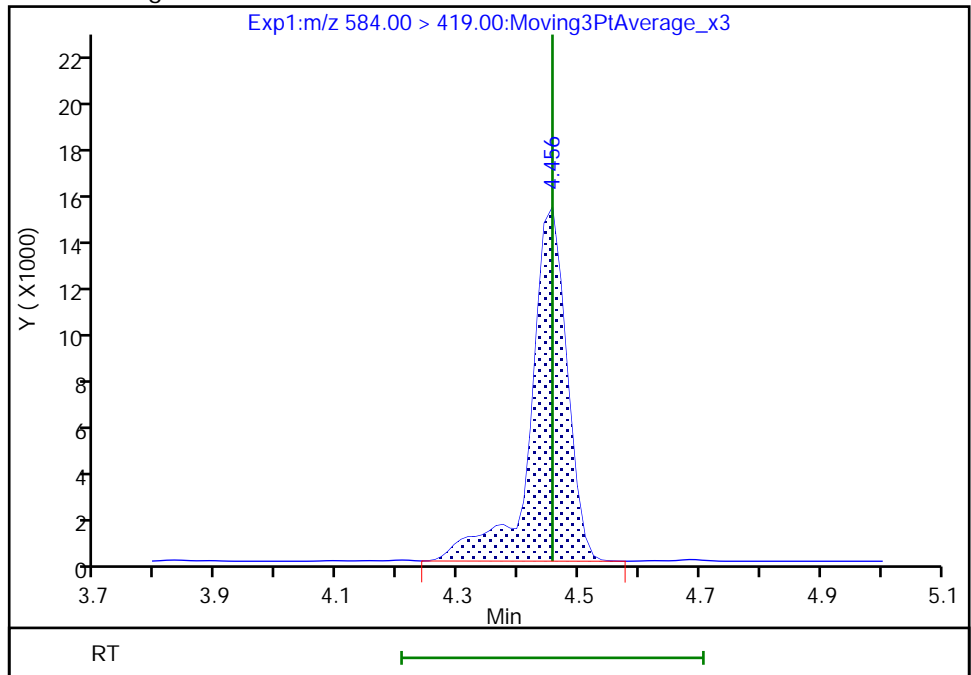
RT: 4.46
Area: 64708
Amount: 0.997487
Amount Units: ng/ml

Processing Integration Results



RT: 4.46
Area: 64054
Amount: 1.081352
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 25-Sep-2019 08:57:20
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA014.d
 Lims ID: IC 5
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 24-Sep-2019 18:48:26 ALS Bottle#: 6 Worklist Smp#: 14
 Injection Vol: 20.0 ul Dil. Factor: 1.0000
 Sample Info: IC 5
 Misc. Info.: 200-0037915-014 Plate: 1 Rack: 2
 Operator ID: lc812tech Instrument ID: LC812
 Sublist: chrom-PFC_LC812*sub6

Method: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\PFC_LC812.m
 Limit Group: LC_PFC_ICAL
 Last Update: 25-Sep-2019 13:08:50 Calib Date: 24-Sep-2019 18:56:37
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA015.d

Column 1 : C-18 (4.60 mm) Det: EXP1
 Process Host: CTX0340

First Level Reviewer: chirgwinb Date: 25-Sep-2019 08:59:32

Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	1.935	1.935	0.0	0.563	3139199	2.82	113	24022	
2 Perfluorobutanoic acid	212.90 > 169.00	1.935	1.944	-0.009	1.000	2689329	2.41	96.5	490	
4 Perfluoropentanoic acid	262.90 > 219.00	2.285	2.298	-0.013	1.000	2172034	2.37	94.7	143	
D 3 13C5 PFPeA	267.90 > 223.00	2.285	2.298	-0.013	0.664	2477832	2.81	112	5763	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	2.312	2.325	-0.013	0.757	2258488	2.06	Target=2.04	93.1	6532
	298.90 > 99.00	2.312	2.325	-0.013	0.757	1111214		2.03(1.02-3.06)	93.1	1176
D 60 M2-4:2 FTS	329.00 > 81.00	2.636	2.636	0.0	0.767	241541	2.65	114	247	
61 1H,1H,2H,2H-perfluorohexanesulfoni	327.00 > 307.00	2.636	2.648	-0.012	1.000	472878	2.29	97.9	3258	
70 Perfluoropentanesulfonic acid	349.00 > 80.00	2.673	2.685	-0.012	0.875	2023725	2.13	Target=2.96	91.0	3450
	349.00 > 99.00	2.673	2.685	-0.012	0.875	728475		2.78(1.48-4.44)	91.0	1510
D 7 13C2 PFHxA	315.00 > 270.00	2.673	2.685	-0.012	0.777	2652556	2.83	113	13722	
6 Perfluorohexanoic acid	313.00 > 269.00	2.673	2.685	-0.012	1.000	2404138	2.30	Target=12.34	92.0	801
	313.00 > 119.00	2.673	2.685	-0.012	1.000	193550		12.42(6.17-18.51)	92.0	177
67 Perfluoro(2-propoxypropanoic) acid	329.10 > 285.00	2.792	2.799	-0.007	1.000	351703	2.20	88.0	165	
D 64 13C3 HFPO-DA	332.10 > 287.00	2.792	2.799	-0.007	0.812	139761	2.99	119	1304	

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	3.055	3.067	-0.012	0.889	1904635	2.72		115	10009	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.055	3.067	-0.012	1.000	2143592	2.31	Target=3.55	92.4	330	
363.00 > 169.00	3.055	3.067	-0.012	1.000	576979		3.72(1.78-5.33)	92.4	1113	
D 9 13C4 PFHpA										
367.00 > 322.00	3.055	3.067	-0.012	0.889	2597030	2.86		114	6237	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.055	3.067	-0.012	1.000	1615409	2.08	Target=3.65	91.5	4204	
399.00 > 99.00	3.055	3.067	-0.012	1.000	443111		3.65(1.82-5.47)	91.5	523	
77 DONA										
377.00 > 251.00	3.101	3.109	-0.008	0.818	4944669	2.26	Target=2.62	95.9	6359	
377.00 > 85.00	3.101	3.109	-0.008	0.818	1935766		2.55(1.31-3.92)	95.9	2664	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.422	3.430	-0.008	0.995	296895	2.61		110	1095	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.422	3.430	-0.008	1.000	375914	2.39		101	1844	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.422	3.430	-0.008	0.902	1328458	2.24	Target=5.52	94.2	4438	
449.00 > 99.00	3.422	3.430	-0.008	0.902	242386		5.48(2.76-8.28)	94.2	1468	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.439	3.447	-0.008	1.000	2510476	2.53	Target=2.64	101	415	
413.00 > 169.00	3.439	3.447	-0.008	1.000	942691		2.66(1.32-3.96)	101	1906	
* 62 13C2 PFOA										
415.00 > 370.00	3.439	3.447	-0.008		2323564	2.50			5567	
D 14 13C4 PFOA										
417.00 > 372.00	3.439	3.447	-0.008	1.000	2639318	2.86		114	4467	
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.805	-0.012	1.103	1279143	2.69		112	4824	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.793	3.805	-0.012	1.000	1028328	2.13	Target=4.99	91.6	4042	M
499.00 > 99.00	3.793	3.805	-0.012	1.000	205890		4.99(2.50-7.49)	91.6	649	M
D 19 13C5 PFNA										
468.00 > 423.00	3.817	3.829	-0.012	1.110	2361760	2.89		116	7197	
20 Perfluorononanoic acid										
463.00 > 419.00	3.817	3.829	-0.012	1.000	2013247	2.23	Target=8.13	89.4	514	
463.00 > 169.00	3.817	3.829	-0.012	1.000	264889		7.60(4.07-12.20)	89.4	3016	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.984	3.994	-0.010	1.050	1885328	2.19		94.1	6806	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.116	4.129	-0.013	1.085	946299	2.26	Target=2.57	94.3	4221	
549.00 > 99.00	4.116	4.129	-0.013	1.085	379456		2.49(1.29-3.86)	94.3	1112	
24 Perfluorodecanoic acid										
513.00 > 469.00	4.153	4.164	-0.011	1.000	1927490	2.28	Target=8.78	91.3	575	
513.00 > 169.00	4.153	4.164	-0.011	1.000	232903		8.28(4.39-13.18)	91.3	1284	
D 23 13C2 PFDA										
515.00 > 470.00	4.153	4.164	-0.011	1.208	2282167	2.81		112	7183	

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	1.211	351528	2.83		118	1611	
25 1H,1H,2H,2H-perfluorodecanesulfoni										
527.00 > 507.00	4.164	4.175	-0.011	1.000	253272	2.22		92.7	2485	
D 21 13C8 FOSA										
506.00 > 78.00	4.218	4.218	0.0	1.227	2607055	2.82		113	3781	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.218	4.218	0.0	1.000	2247521	2.35		94.0	2986	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.305	4.305	0.0	1.252	226428	2.87		115	899	
28 N-methylperfluorooctanesulfonamido										
570.00 > 419.00	4.305	4.317	-0.012	1.000	149825	2.32		92.9	730	
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.397	4.409	-0.012	1.159	765086	2.37	Target=2.59	98.3	4228	
599.00 > 99.00	4.397	4.409	-0.012	1.159	293666		2.61(1.29-3.88)	98.3	1794	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.431	4.443	-0.012	1.000	1485396	2.27	Target=7.14	90.6	823	
563.00 > 169.00	4.431	4.443	-0.012	1.000	213622		6.95(3.57-10.71)	90.6	1937	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.443	4.443	0.0	1.292	221155	2.59		104	998	
D 30 13C2 PFUnA										
565.00 > 520.00	4.431	4.443	-0.012	1.289	1958475	2.69		108	4413	
33 N-ethylperfluorooctanesulfonamidoa										
584.00 > 419.00	4.443	4.456	-0.013	1.000	127241	2.62		105	722	M
66 11-Chloroeicosafluoro-3-oxaundecan										
631.00 > 451.00	4.524	4.537	-0.013	1.193	2369549	2.21		94.0	9622	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.672	4.672	0.0	1.000	1809526	2.39	Target=6.72	95.5	239	
613.00 > 169.00	4.672	4.672	0.0	1.000	291461		6.21(3.36-10.08)	95.5	3302	
D 36 13C2 PFDa										
615.00 > 570.00	4.672	4.672	0.0	1.359	2142483	2.73		109	6869	
74 1H,1H,2H,2H-perfluorododecanesulfo										
627.00 > 607.00	4.683	4.693	-0.010	1.125	142894	2.28		94.7	3184	
75 Perfluorododecanesulfonic acid (PF										
699.00 > 80.00	4.839	4.847	-0.008	1.276	320443	2.31	Target=0.47	95.4	1135	
699.00 > 99.00	4.839	4.847	-0.008	1.276	706091		0.45(0.23-0.70)	95.4	3904	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.879	4.886	-0.007	1.044	1522041	2.48	Target=4.79	99.3	232	
663.00 > 169.00	4.879	4.886	-0.007	1.044	312031		4.88(2.39-7.18)	99.3	2170	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.067	5.074	-0.007	1.474	1923501	2.73		109	10604	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.067	5.083	-0.016	1.000	269037	2.40	Target=1.02	96.1	2969	
713.00 > 219.00	5.067	5.083	-0.016	1.000	262384		1.03(0.51-1.53)	96.1	4145	
D 44 13C2 PFHxDA										
815.00 > 770.00	5.424	5.433	-0.009	1.577	2010782	2.85		114	8604	

Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.424	5.433	-0.009	1.000	1594877	2.39	Target=4.39	95.8	204	
813.00 > 169.00	5.424	5.433	-0.009	1.000	392895		4.06(2.19-6.58)	95.8	2941	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.790	5.797	-0.007	1.068	1394153	2.35	Target=4.22	93.9	337	
913.00 > 169.00	5.782	5.797	-0.015	1.066	325879		4.28(2.11-6.32)	93.9	2167	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

PFAS32NCIC5_00001

Amount Added: 100.00

Units: uL

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA014.d

Injection Date: 24-Sep-2019 18:48:26

Instrument ID: LC812

Lims ID: IC 5

Client ID:

Operator ID: lc812tech

ALS Bottle#: 6

Worklist Smp#: 14

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

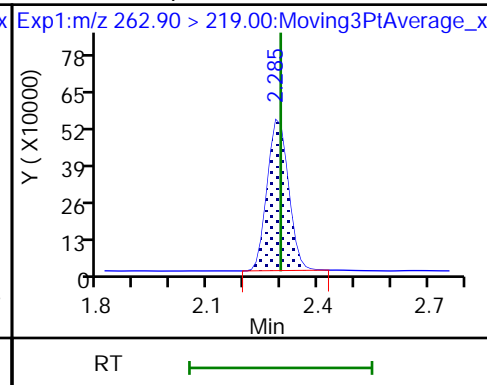
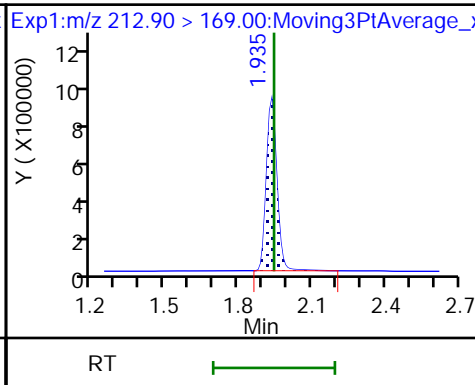
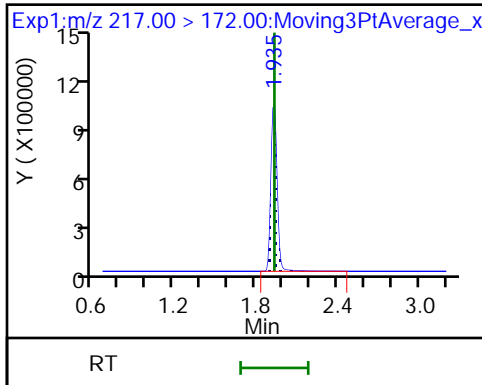
Method: PFC_LC812

Limit Group: LC_PFC_ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

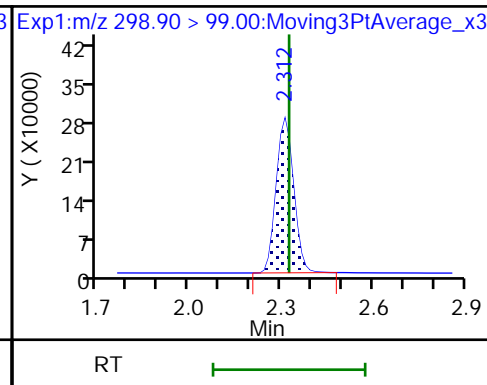
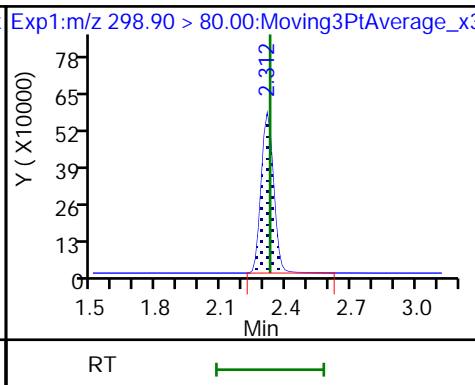
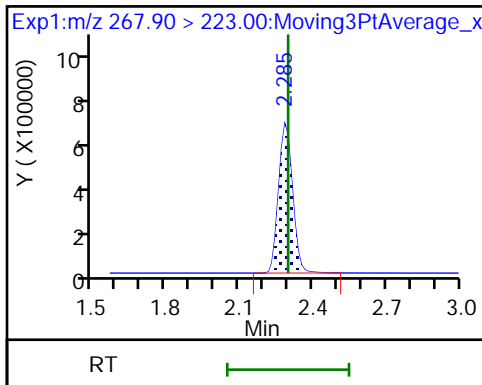
4 Perfluoropentanoic acid



D 3 13C5 PFPeA

5 Perfluorobutanesulfonic acid

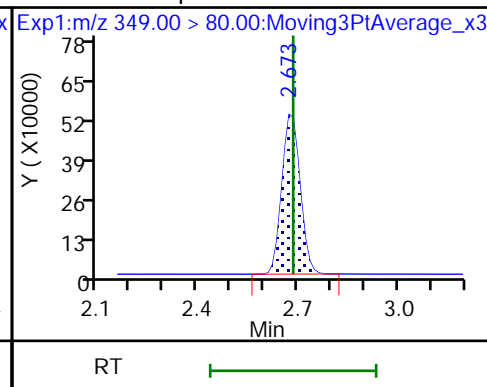
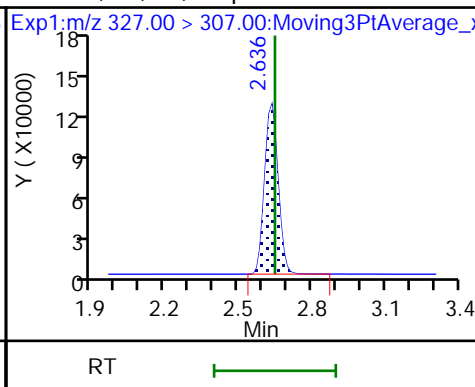
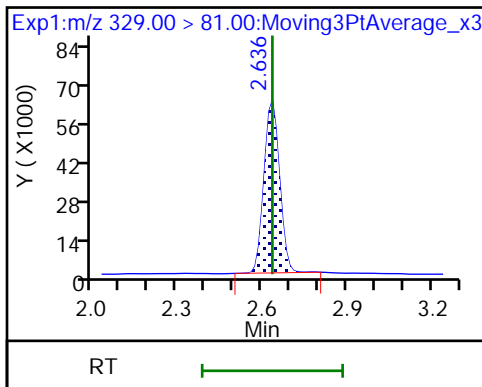
5 Perfluorobutanesulfonic acid



D 60 M2-4:2 FTS

61 1H,1H,2H,2H-perfluorohexanesulfoni

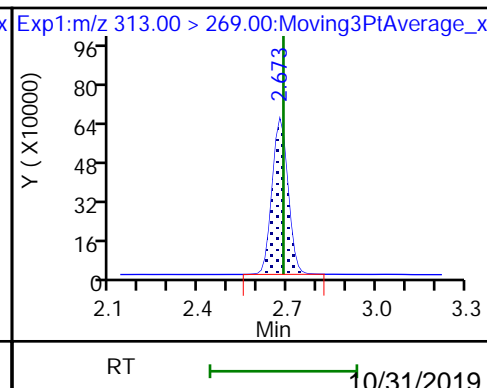
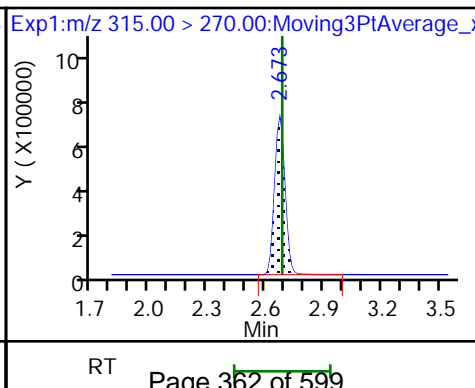
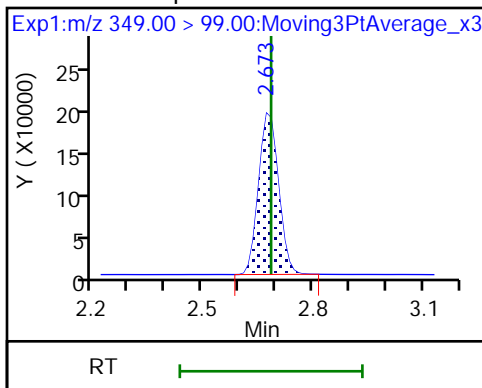
70 Perfluoropentanesulfonic acid



70 Perfluoropentanesulfonic acid

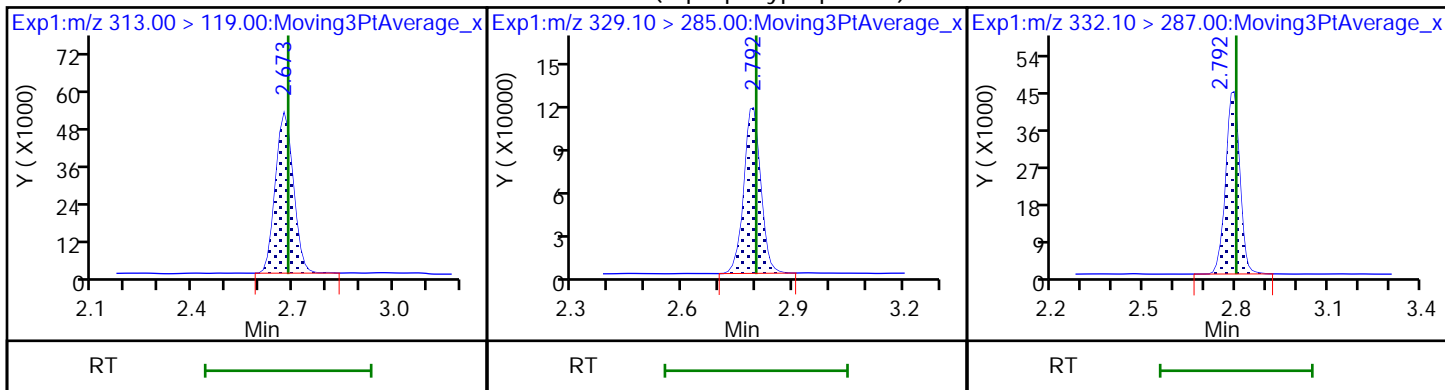
D 7 13C2 PFHxA

6 Perfluorohexanoic acid



6 Perfluorohexanoic acid

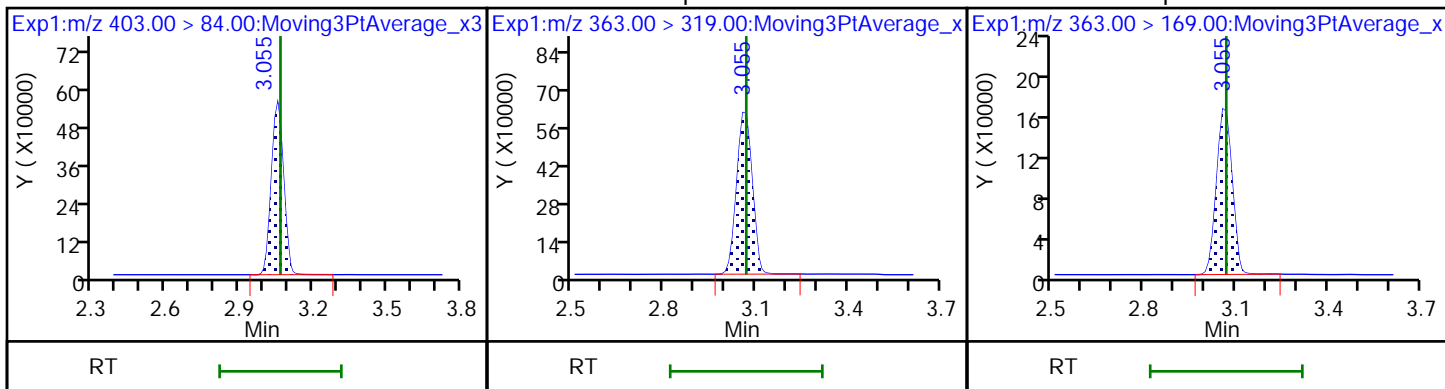
67 Perfluoro(2-propoxypropanoic) acid D 64 13C3 HFPO-DA



D 11 18O2 PFHxS

10 Perfluoroheptanoic acid

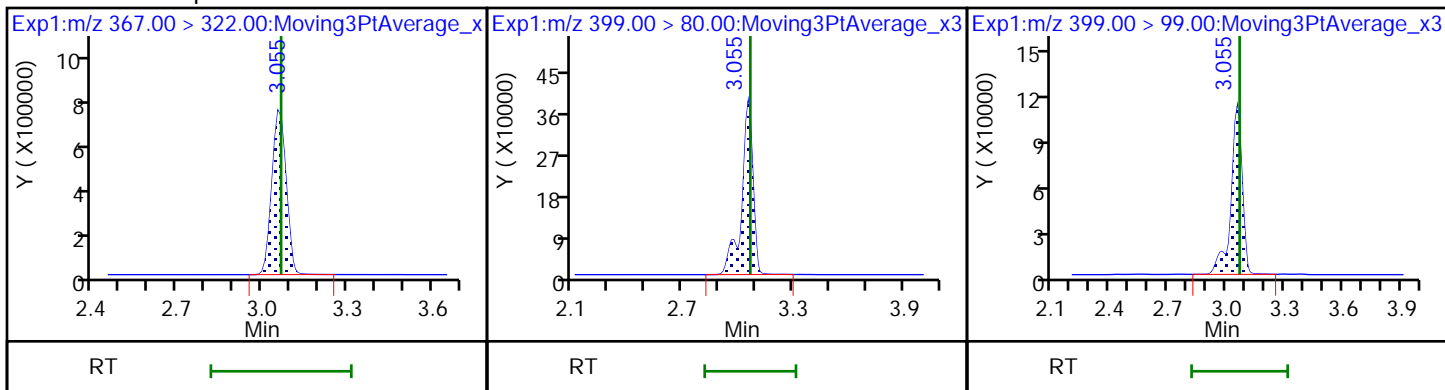
10 Perfluoroheptanoic acid



D 9 13C4 PFHpA

8 Perfluorohexanesulfonic acid

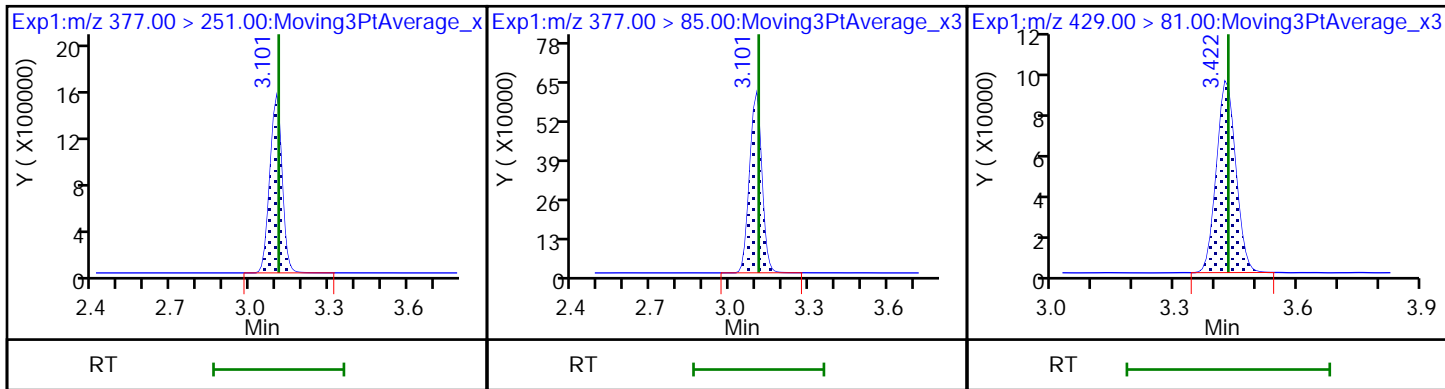
8 Perfluorohexanesulfonic acid



77 DONA

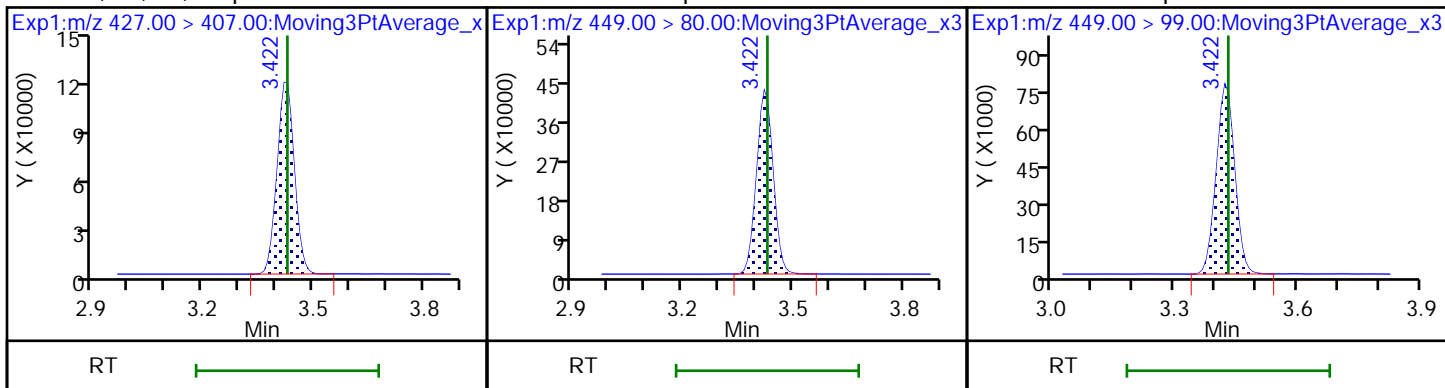
77 DONA

D 12 M2-6:2 FTS



13 1H,1H,2H,2H-perfluorooctanesulfonyl 16 Perfluoroheptanesulfonic acid

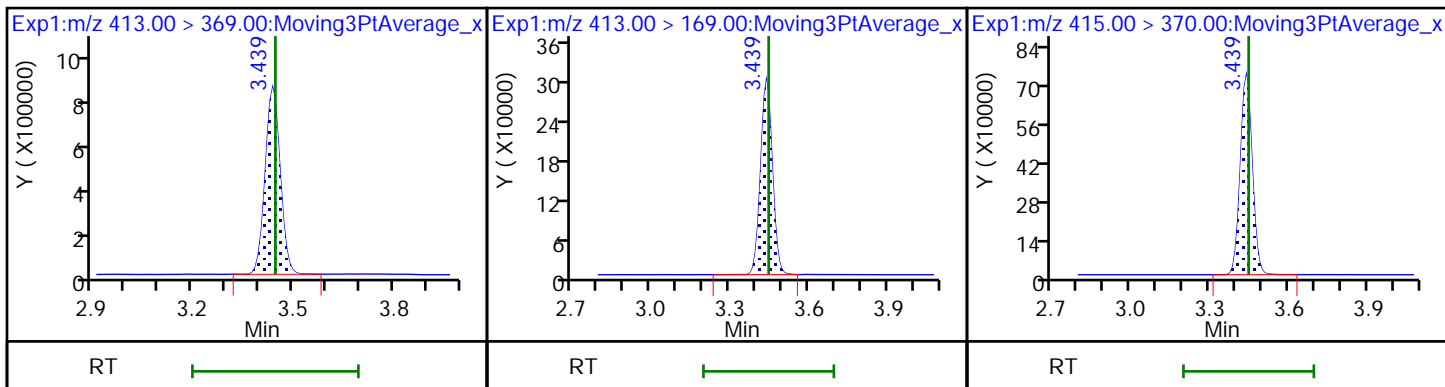
16 Perfluoroheptanesulfonic acid



15 Perfluorooctanoic acid

15 Perfluorooctanoic acid

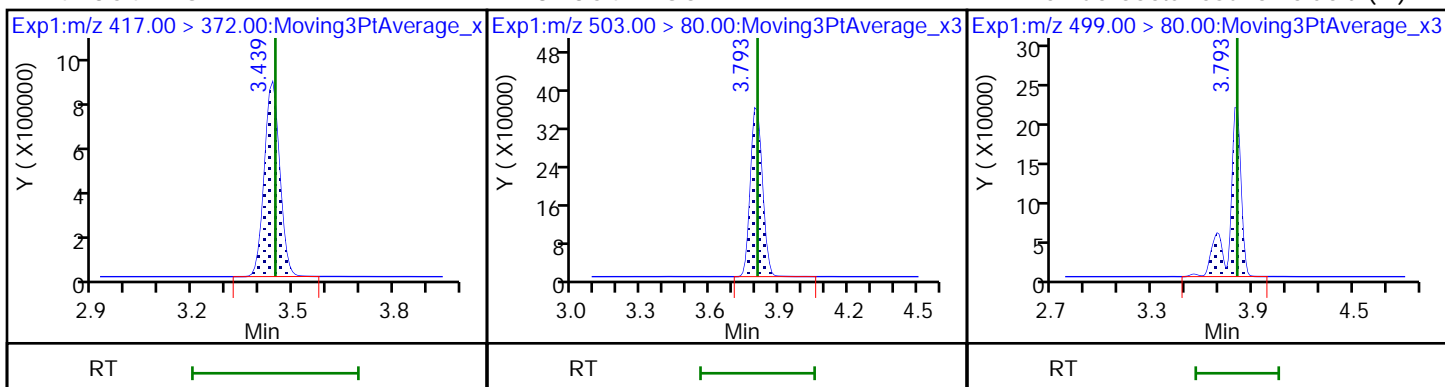
* 62 13C2 PFOA



D 14 13C4 PFOA

D 18 13C4 PFOS

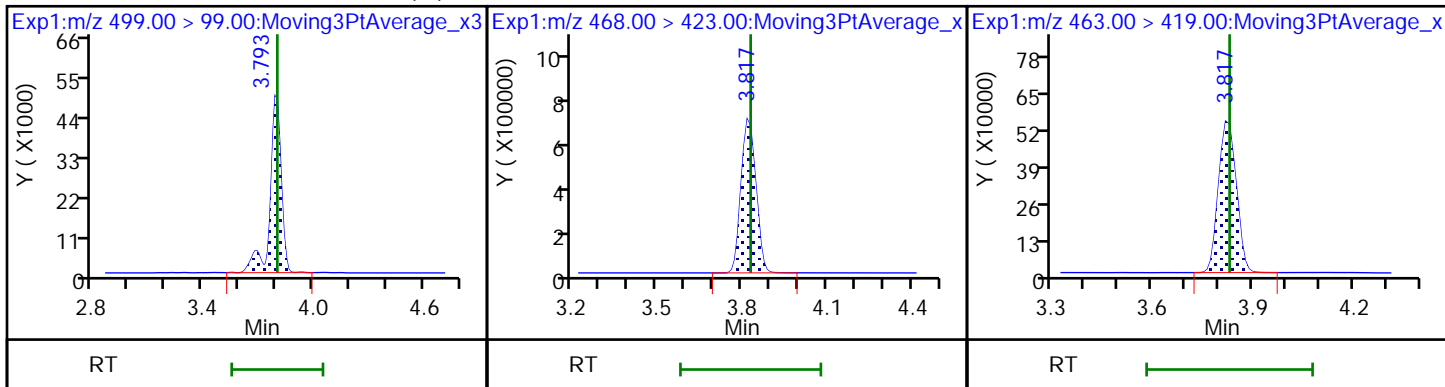
17 Perfluorooctanesulfonic acid (M)



17 Perfluorooctanesulfonic acid (M)

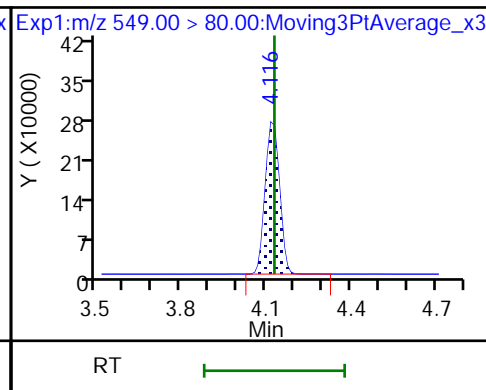
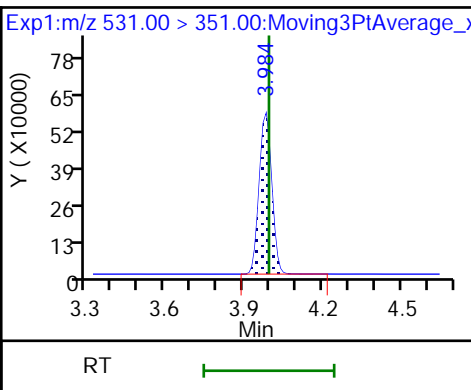
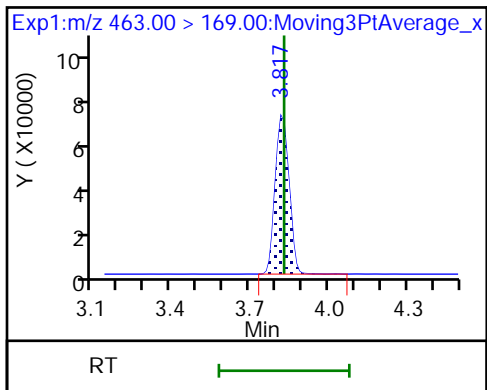
D 19 13C5 PFNA

20 Perfluorononanoic acid



20 Perfluorononanoic acid

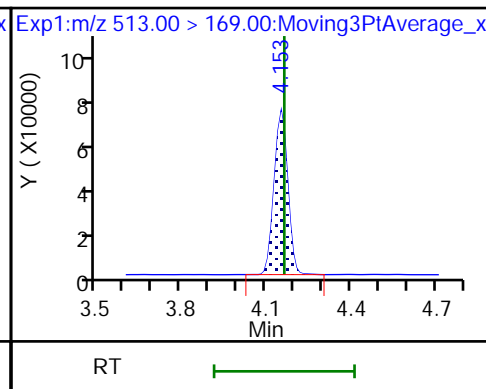
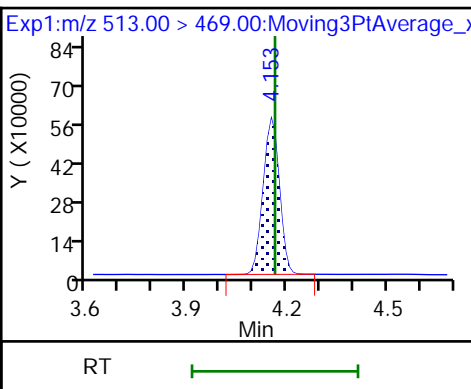
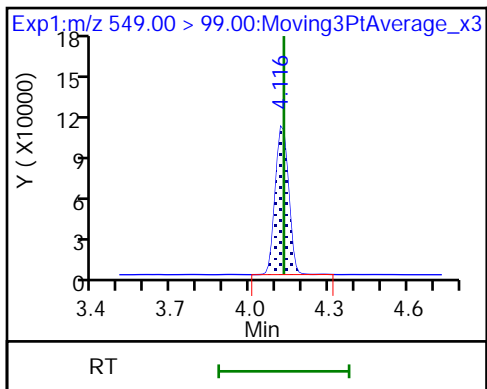
69 9-Chlorohexadecafluoro-3-oxanonan-68 Perfluoronananesulfonic acid



68 Perfluoronananesulfonic acid

24 Perfluorodecanoic acid

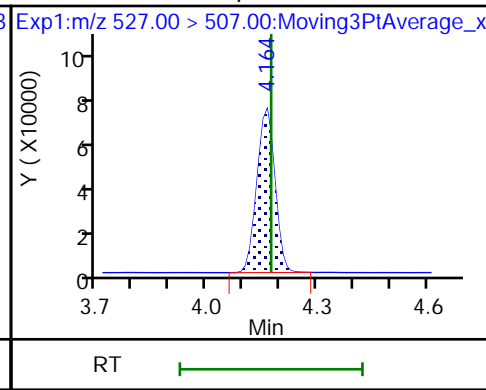
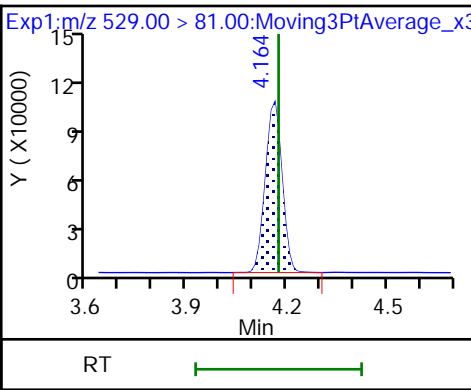
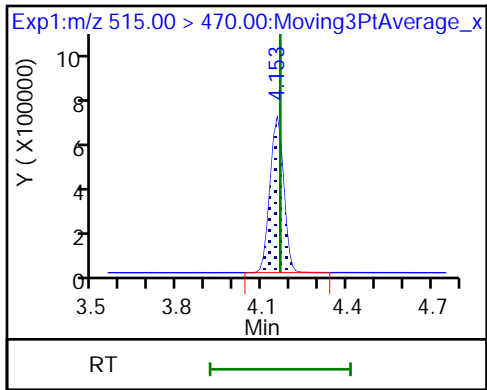
24 Perfluorodecanoic acid



D 23 13C2 PFDA

D 26 M2-8:2 FTS

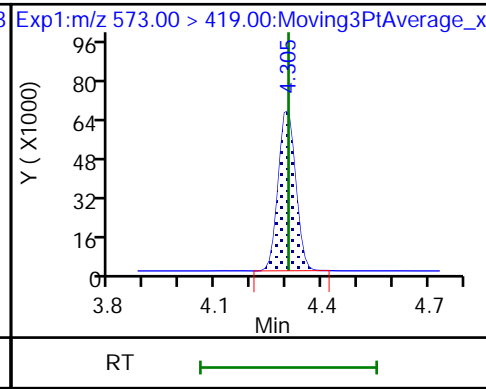
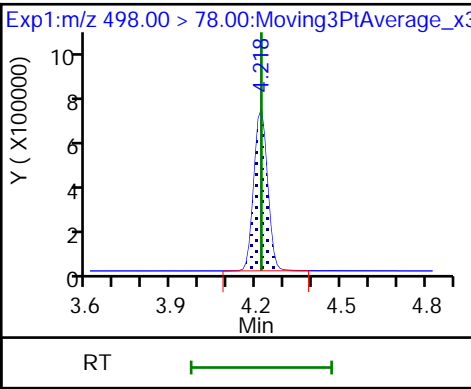
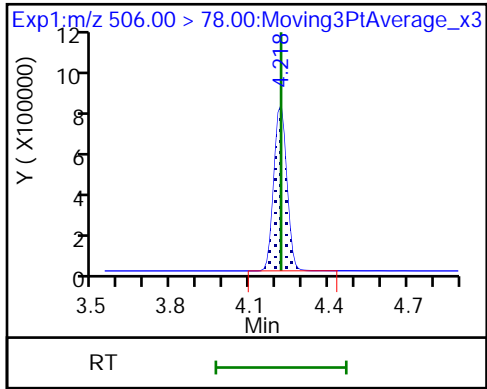
25 1H,1H,2H,2H-perfluorodecanesulfoni



D 21 13C8 FOSA

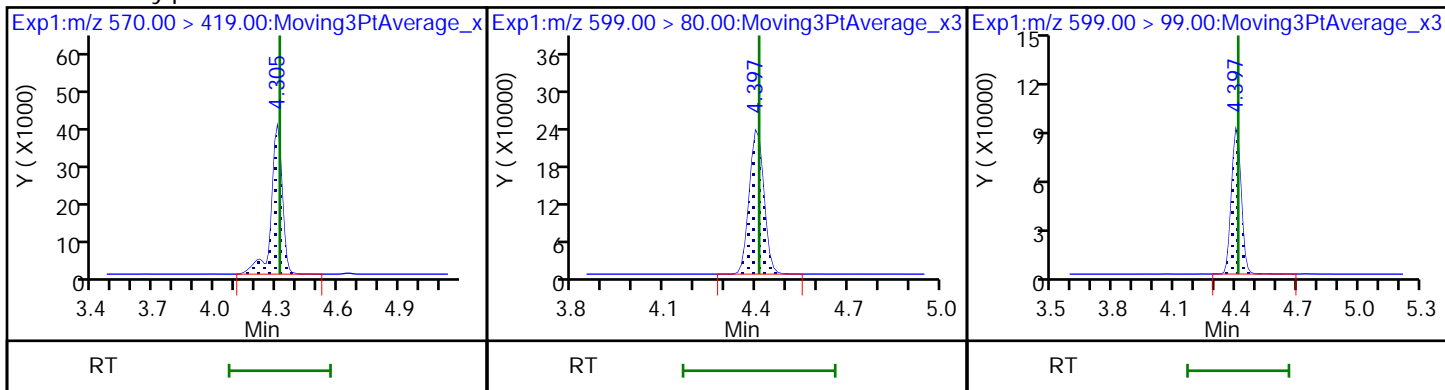
22 Perfluorooctanesulfonamide

D 27 d3-NMeFOSAA



28 N-methylperfluorooctanesulfonamido 29 Perfluorodecanesulfonic acid

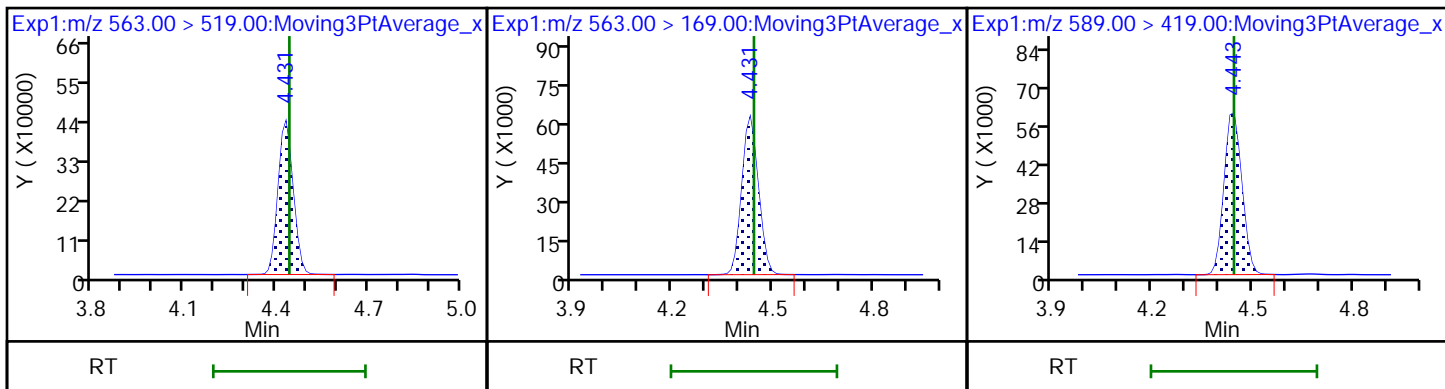
29 Perfluorodecanesulfonic acid



31 Perfluoroundecanoic acid

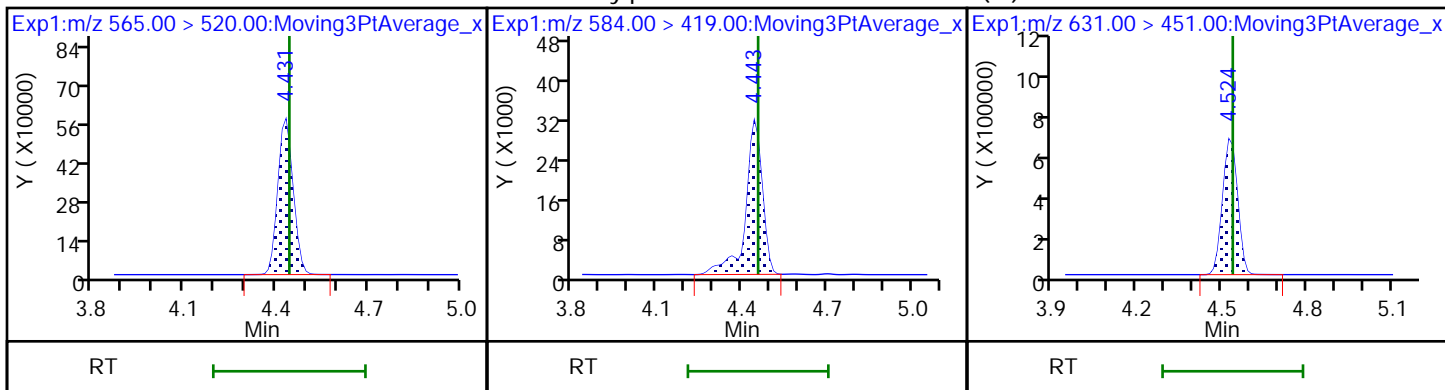
31 Perfluoroundecanoic acid

D 32 d5-NEtFOSAA



D 30 13C2 PFUnA

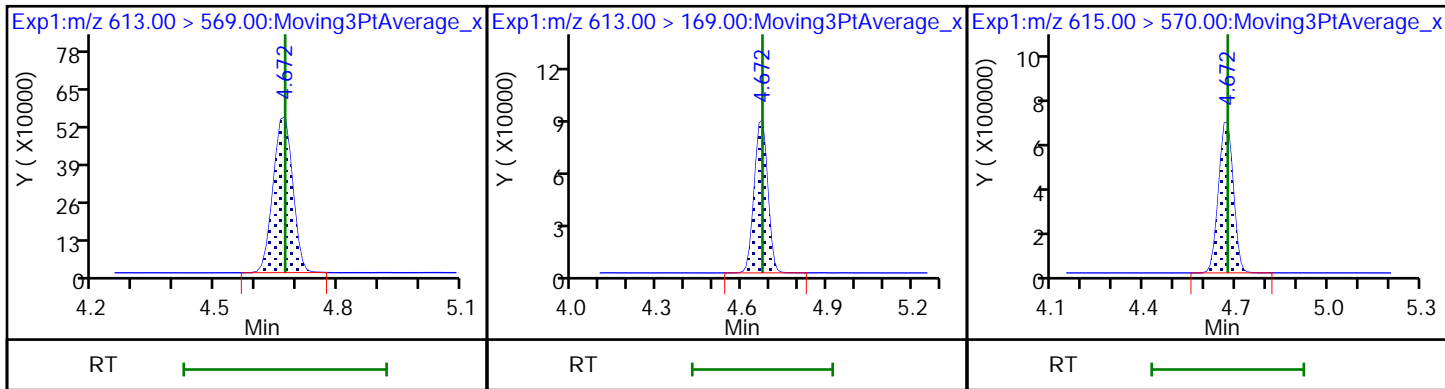
33 N-ethylperfluorooctanesulfonamido (6) 11-Chloroeicosafuoro-3-oxaundecan



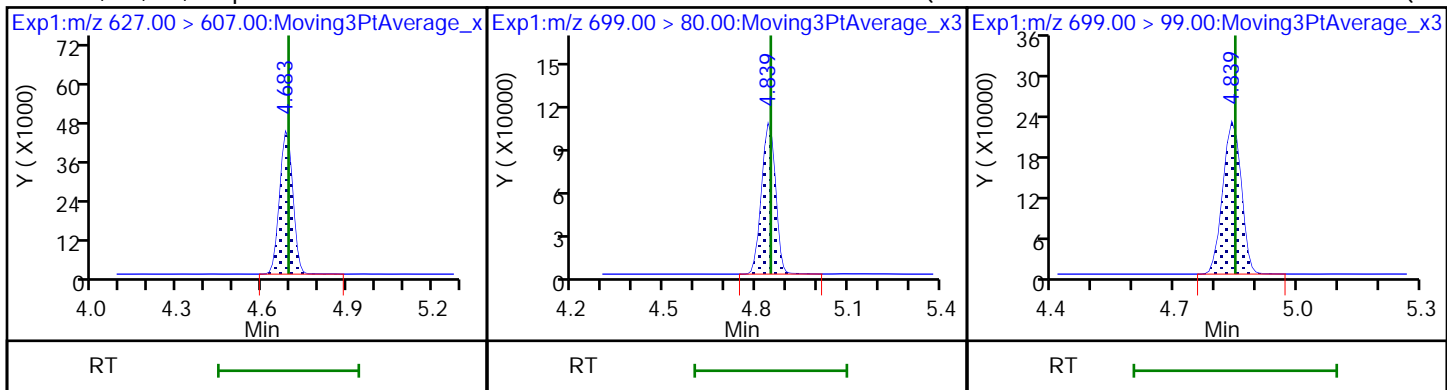
37 Perfluorododecanoic acid

37 Perfluorododecanoic acid

D 36 13C2 PFDoA



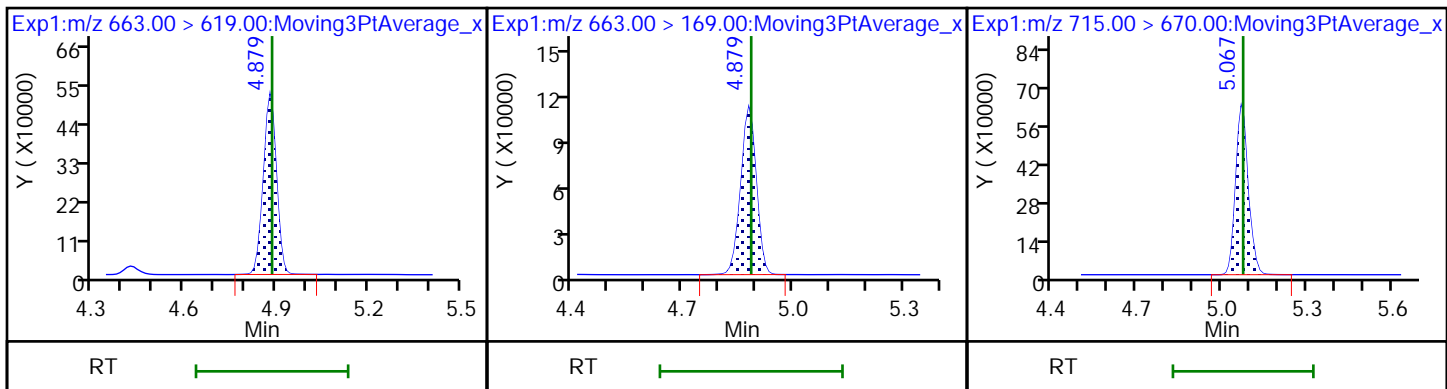
74 1H,1H,2H,2H-perfluorododecanesulfo75 Perfluorododecanesulfonic acid (PF 75 Perfluorododecanesulfonic acid (PF



41 Perfluorotridecanoic acid

41 Perfluorotridecanoic acid

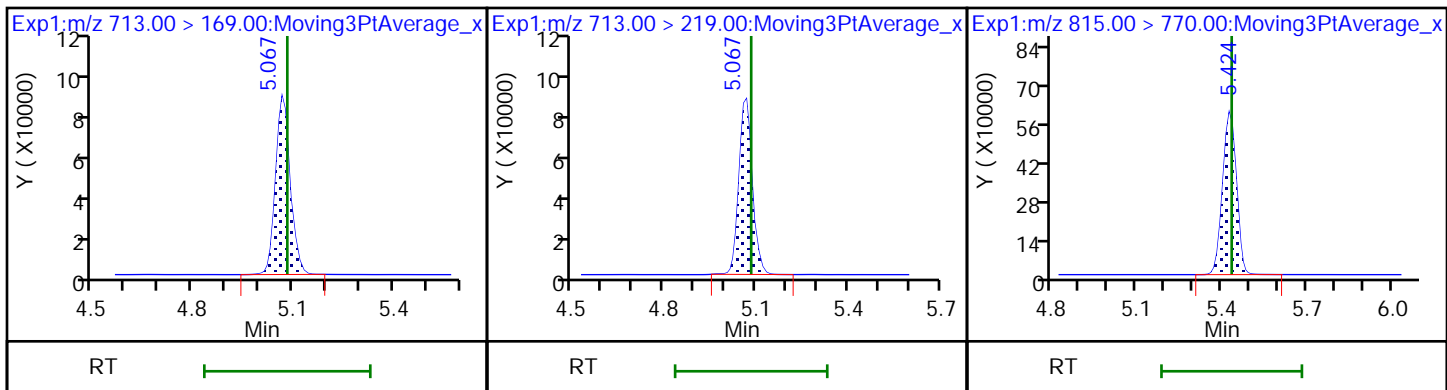
D 43 13C2 PFTeDA



42 Perfluorotetradecanoic acid

42 Perfluorotetradecanoic acid

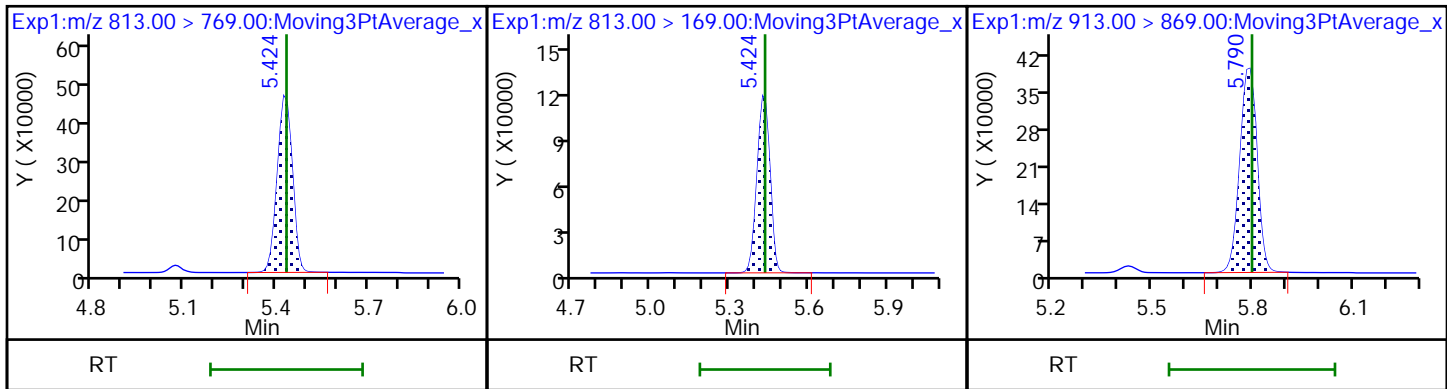
D 44 13C2 PFHxDA



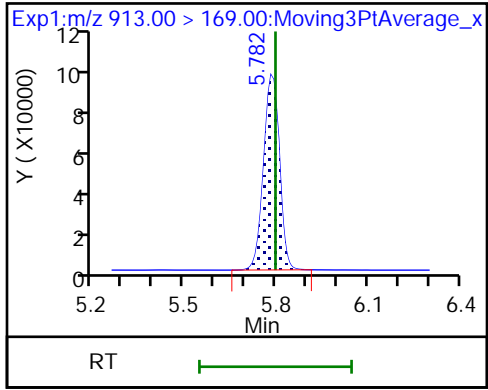
45 Perfluorohexadecanoic acid

45 Perfluorohexadecanoic acid

46 Perfluorooctadecanoic acid



46 Perfluorooctadecanoic acid



Eurofins TestAmerica, Burlington

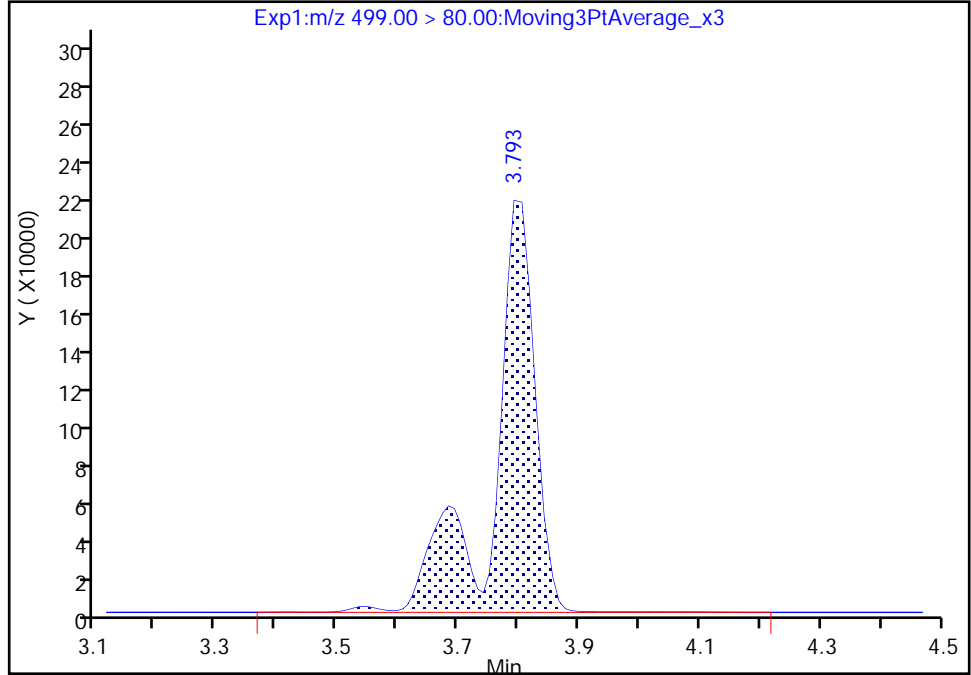
Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA014.d
Injection Date: 24-Sep-2019 18:48:26 Instrument ID: LC812
Lims ID: IC 5
Client ID:
Operator ID: lc812tech ALS Bottle#: 6 Worklist Smp#: 14
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

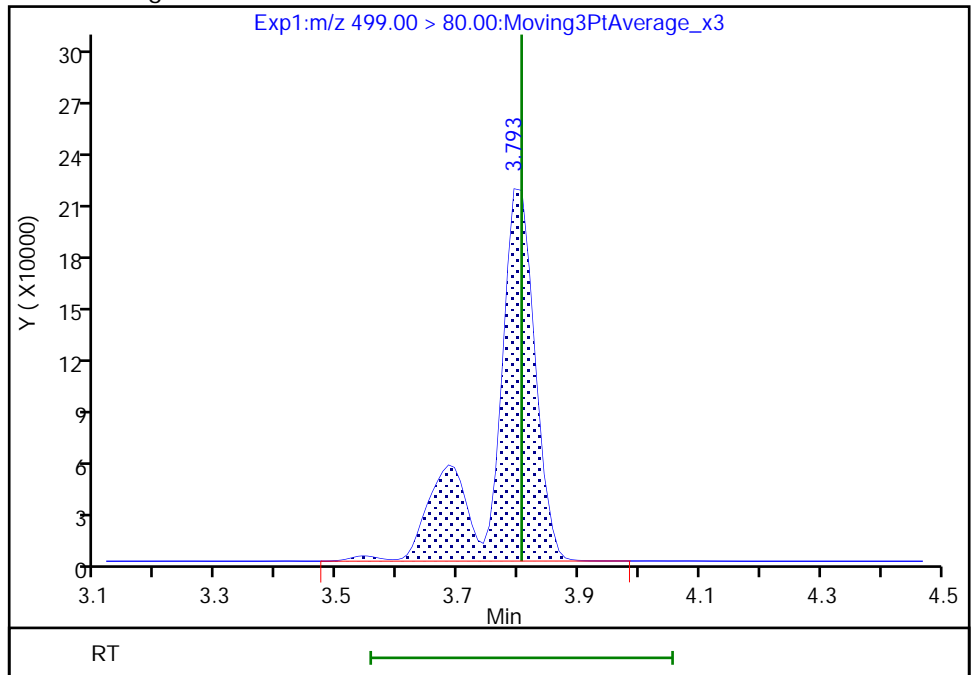
RT: 3.79
Area: 1032299
Amount: 2.131571
Amount Units: ng/ml

Processing Integration Results



RT: 3.79
Area: 1028328
Amount: 2.125077
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 25-Sep-2019 08:58:42
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration
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Eurofins TestAmerica, Burlington

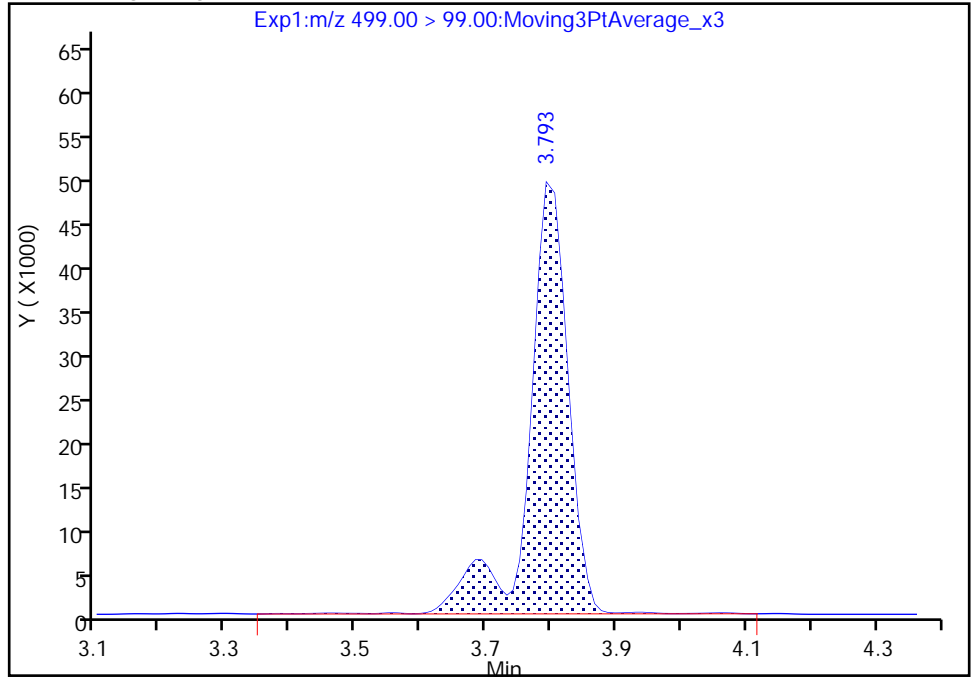
Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA014.d
Injection Date: 24-Sep-2019 18:48:26 Instrument ID: LC812
Lims ID: IC 5
Client ID:
Operator ID: lc812tech ALS Bottle#: 6 Worklist Smp#: 14
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

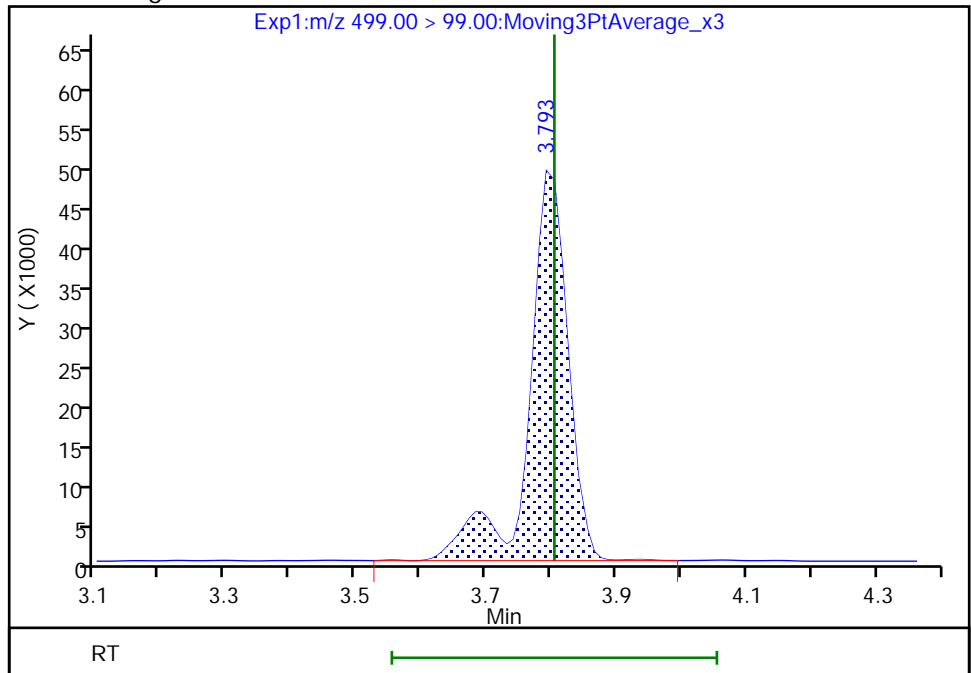
RT: 3.79
Area: 207394
Amount: 2.131571
Amount Units: ng/ml

Processing Integration Results



RT: 3.79
Area: 205890
Amount: 2.125077
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 25-Sep-2019 08:58:47

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

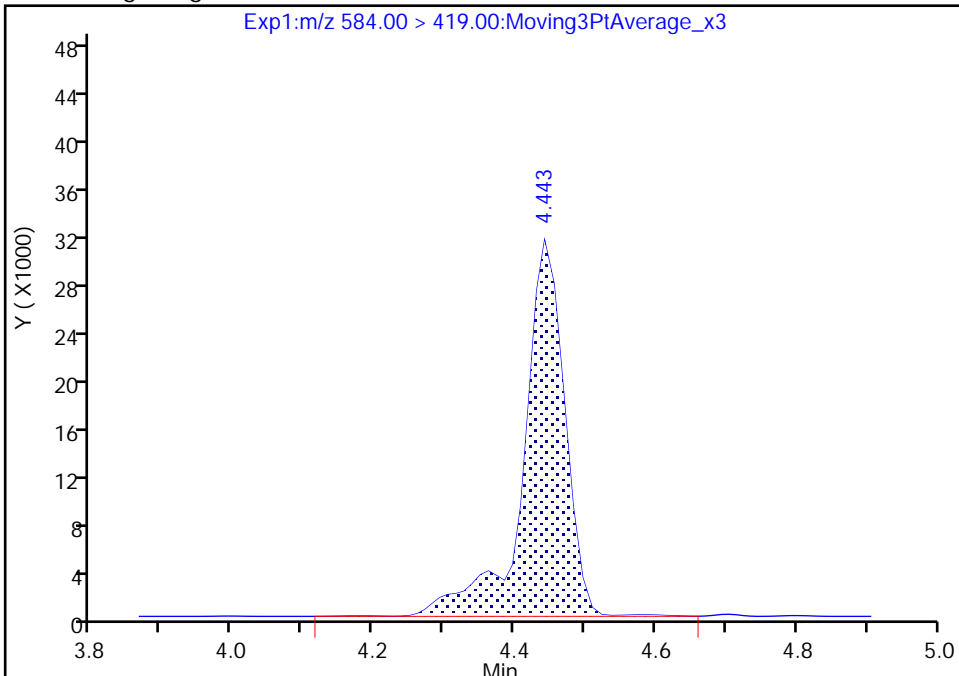
Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA014.d
Injection Date: 24-Sep-2019 18:48:26 Instrument ID: LC812
Lims ID: IC 5
Client ID:
Operator ID: lc812tech ALS Bottle#: 6 Worklist Smp#: 14
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

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

Signal: 1

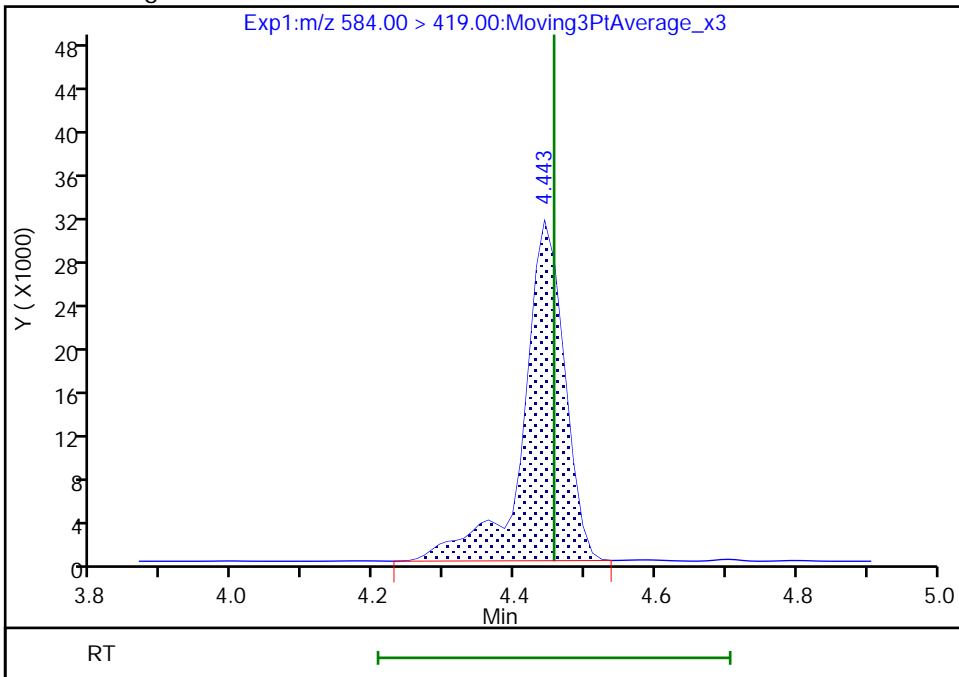
RT: 4.44
Area: 128461
Amount: 2.391702
Amount Units: ng/ml

Processing Integration Results



RT: 4.44
Area: 127241
Amount: 2.616530
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 25-Sep-2019 08:59:08
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration
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Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA015.d
 Lims ID: IC 6
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 24-Sep-2019 18:56:37 ALS Bottle#: 7 Worklist Smp#: 15
 Injection Vol: 20.0 ul Dil. Factor: 1.0000
 Sample Info: IC 6
 Misc. Info.: 200-0037915-015 Plate: 1 Rack: 2
 Operator ID: lc812tech Instrument ID: LC812
 Sublist: chrom-PFC_LC812*sub6

Method: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\PFC_LC812.m
 Limit Group: LC_PFC_ICAL
 Last Update: 25-Sep-2019 13:08:53 Calib Date: 24-Sep-2019 18:56:37
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA015.d

Column 1 : C-18 (4.60 mm) Det: EXP1
 Process Host: CTX0340

First Level Reviewer: chirgwinb Date: 25-Sep-2019 09:00:46

Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	1.935	1.935	0.0	0.563	3074794	1.93	77.2	19764	
2 Perfluorobutanoic acid	212.90 > 169.00	1.935	1.944	-0.009	1.000	10836770	9.92	99.2	1932	
4 Perfluoropentanoic acid	262.90 > 219.00	2.285	2.298	-0.013	1.000	9144258	10.2	102	577	
D 3 13C5 PFPeA	267.90 > 223.00	2.285	2.298	-0.013	0.664	2441291	1.94	77.5	4782	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	2.312	2.325	-0.013	0.757	9312920	8.66	Target=2.04	97.9	31755
	298.90 > 99.00	2.312	2.325	-0.013	0.757	4610516		2.02(1.02-3.06)	97.9	5259
D 60 M2-4:2 FTS	329.00 > 81.00	2.636	2.636	0.0	0.767	234261	1.80	77.0	217	
61 1H,1H,2H,2H-perfluorohexanesulfoni	327.00 > 307.00	2.636	2.648	-0.012	1.000	1908051	9.51	102	7212	
70 Perfluoropentanesulfonic acid	349.00 > 80.00	2.686	2.685	0.001	0.879	8794766	9.46	Target=2.96	101	8637
	349.00 > 99.00	2.686	2.685	0.001	0.879	2991138		2.94(1.48-4.44)	101	5265
D 7 13C2 PFHxA	315.00 > 270.00	2.673	2.685	-0.012	0.777	2493388	1.86	74.4	7539	
6 Perfluorohexanoic acid	313.00 > 269.00	2.673	2.685	-0.012	1.000	9402975	9.57	Target=12.34	95.7	2305
	313.00 > 119.00	2.673	2.685	-0.012	1.000	751880		12.51(6.17-18.51)	95.7	759
67 Perfluoro(2-propoxypropanoic) acid	329.10 > 285.00	2.792	2.799	-0.007	1.000	1466257	10.8	108	659	
D 64 13C3 HFPO-DA	332.10 > 287.00	2.792	2.799	-0.007	0.812	118592	1.77	70.9	1008	

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	3.055	3.067	-0.012	0.889	1866881	1.87		79.0	5118	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.067	3.067	0.0	1.000	8761187	9.60	Target=3.55	96.0	1216	
363.00 > 169.00	3.067	3.067	0.0	1.000	2384140		3.67(1.78-5.33)	96.0	3416	
D 9 13C4 PFHpA										
367.00 > 322.00	3.067	3.067	0.0	0.892	2552855	1.97		78.7	5132	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.055	3.067	-0.012	1.000	7045828	9.30	Target=3.65	102	11876	
399.00 > 99.00	3.055	3.067	-0.012	1.000	1881372		3.75(1.82-5.47)	102	2077	
77 DONA										
377.00 > 251.00	3.101	3.109	-0.008	0.815	19315542	8.73	Target=2.62	92.6	15034	
377.00 > 85.00	3.101	3.109	-0.008	0.815	7685657		2.51(1.31-3.92)	92.6	7615	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.430	3.430	0.0	0.998	295770	1.82		76.7	1129	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.430	3.430	0.0	1.000	1518691	9.68		102	3757	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.422	3.430	-0.008	0.899	5870129	9.79	Target=5.52	103	6933	
449.00 > 99.00	3.422	3.430	-0.008	0.899	1034252		5.68(2.76-8.28)	103	4088	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.438	3.447	-0.009	1.000	9461519	9.95	Target=2.64	99.5	1459	
413.00 > 169.00	3.438	3.447	-0.009	1.000	3834811		2.47(1.32-3.96)	99.5	5346	
* 62 13C2 PFOA										
415.00 > 370.00	3.438	3.447	-0.009		3320479	2.50			8097	
D 14 13C4 PFOA										
417.00 > 372.00	3.438	3.447	-0.009	1.000	2547737	1.93		77.3	5811	
D 18 13C4 PFOS										
503.00 > 80.00	3.805	3.805	0.0	1.107	1293544	1.90		79.6	3176	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.805	3.805	0.0	1.000	4336520	8.86	Target=4.99	95.5	5173	M
499.00 > 99.00	3.805	3.805	0.0	1.000	870876		4.98(2.50-7.49)	95.5	2416	M
D 19 13C5 PFNA										
468.00 > 423.00	3.830	3.829	0.001	1.114	2176351	1.86		74.6	10421	
20 Perfluorononanoic acid										
463.00 > 419.00	3.830	3.829	0.001	1.000	8140558	9.80	Target=8.13	98.0	1720	
463.00 > 169.00	3.830	3.829	0.001	1.000	988245		8.24(4.07-12.20)	98.0	5185	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.984	3.994	-0.010	1.047	7982879	9.18		98.5	12380	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.129	4.129	0.0	1.085	4016422	9.50	Target=2.57	99.0	6245	
549.00 > 99.00	4.129	4.129	0.0	1.085	1492909		2.69(1.29-3.86)	99.0	2809	
24 Perfluorodecanoic acid										
513.00 > 469.00	4.153	4.164	-0.011	1.000	7619859	9.49	Target=8.78	94.9	2045	
513.00 > 169.00	4.153	4.164	-0.011	1.000	883750		8.62(4.39-13.18)	94.9	2479	
D 23 13C2 PFDA										
515.00 > 470.00	4.153	4.164	-0.011	1.208	2169447	1.87		74.7	6644	

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	1.211	310942	1.75		73.2	1473	
25 1H,1H,2H,2H-perfluorodecanesulfoni										
527.00 > 507.00	4.164	4.175	-0.011	1.000	991248	9.87		103	3367	
D 21 13C8 FOSA										
506.00 > 78.00	4.218	4.218	0.0	1.227	2549594	1.93		77.2	5162	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.218	4.218	0.0	1.000	9260687	9.90		99.0	7021	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.305	4.305	0.0	1.252	238846	2.12		84.8	213	
28 N-methylperfluorooctanesulfonamido										
570.00 > 419.00	4.305	4.317	-0.012	1.000	652596	9.59		95.9	1549	
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.397	4.409	-0.012	1.156	2939269	9.00	Target=2.59	93.4	8171	
599.00 > 99.00	4.409	4.409	0.0	1.159	1148533		2.56(1.29-3.88)	93.4	4919	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.431	4.443	-0.012	1.000	6808952	10.4	Target=7.14	104	2885	
563.00 > 169.00	4.431	4.443	-0.012	1.000	914589		7.44(3.57-10.71)	104	4892	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.443	4.443	0.0	1.292	250738	2.05		82.2	1181	
D 30 13C2 PFUnA										
565.00 > 520.00	4.431	4.443	-0.012	1.289	1962348	1.88		75.4	4751	
33 N-ethylperfluorooctanesulfonamidoa										
584.00 > 419.00	4.443	4.456	-0.013	1.000	561466	10.2		102	1910	M
66 11-Chloroeicosafuoro-3-oxaundecan										
631.00 > 451.00	4.537	4.537	0.0	1.192	9996165	9.24		98.1	12517	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.672	4.672	0.0	1.000	7205665	9.39	Target=6.72	93.9	852	
613.00 > 169.00	4.672	4.672	0.0	1.000	1116341		6.45(3.36-10.08)	93.9	6594	
D 36 13C2 PFDa										
615.00 > 570.00	4.672	4.672	0.0	1.359	2169587	1.94		77.4	6707	
74 1H,1H,2H,2H-perfluorododecanesulfo										
627.00 > 607.00	4.693	4.693	0.0	1.127	574169	10.4		107	3780	
75 Perfluorododecanesulfonic acid (PF										
699.00 > 80.00	4.839	4.847	-0.008	1.272	1295495	9.23	Target=0.47	95.3	5713	
699.00 > 99.00	4.839	4.847	-0.008	1.272	2917677		0.44(0.23-0.70)	95.3	8372	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.879	4.886	-0.007	1.044	5821600	9.37	Target=4.79	93.7	881	
663.00 > 169.00	4.879	4.886	-0.007	1.044	1253513		4.64(2.39-7.18)	93.7	5024	
D 43 13C2 PFTeDA										
715.00 > 670.00	5.067	5.074	-0.007	1.474	1807801	1.80		71.9	8267	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.067	5.083	-0.016	1.000	1084317	10.3	Target=1.02	103	7953	
713.00 > 219.00	5.067	5.083	-0.016	1.000	1103094		0.98(0.51-1.53)	103	8309	
D 44 13C2 PFHxDA										
815.00 > 770.00	5.424	5.433	-0.009	1.578	2070552	2.05		82.1	8542	

Ratio Calibration: Average of Initial Calibration

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.424	5.433	-0.009	1.000	6819989	10.1	Target=4.39	101	784	
813.00 > 169.00	5.424	5.433	-0.009	1.000	1660214		4.11(2.19-6.58)	101	5864	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.790	5.797	-0.007	1.067	6291965	10.3	Target=4.22	103	1165	
913.00 > 169.00	5.782	5.797	-0.015	1.066	1497810		4.20(2.11-6.32)	103	6131	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

PFAS32NCIC6_00001

Amount Added: 100.00

Units: uL

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA015.d

Injection Date: 24-Sep-2019 18:56:37

Instrument ID: LC812

Lims ID: IC 6

Client ID:

Operator ID: lc812tech

ALS Bottle#: 7

Worklist Smp#: 15

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

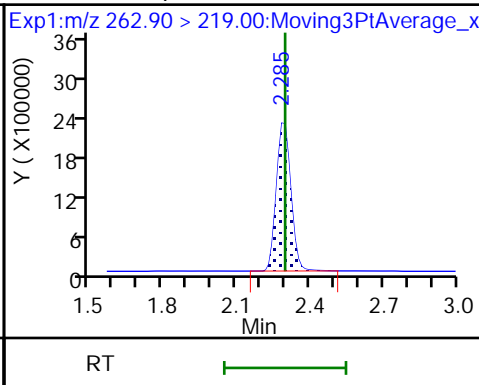
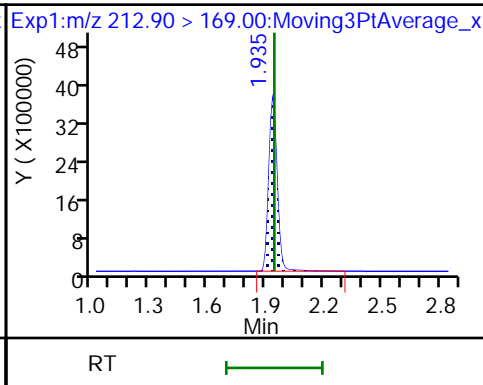
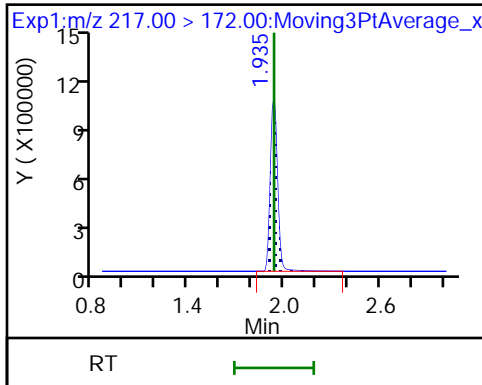
Method: PFC_LC812

Limit Group: LC_PFC_ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

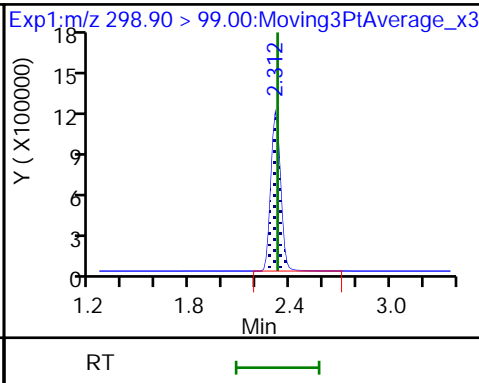
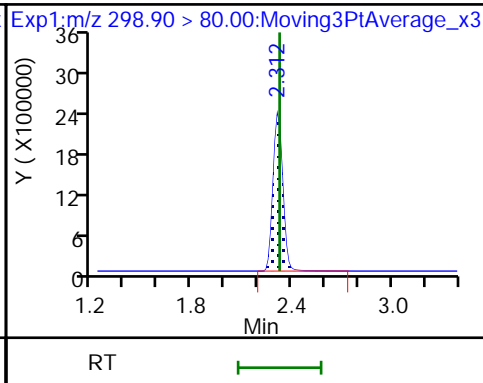
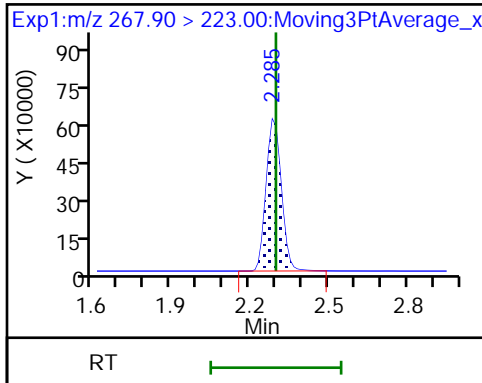
4 Perfluoropentanoic acid



D 3 13C5 PFPeA

5 Perfluorobutanesulfonic acid

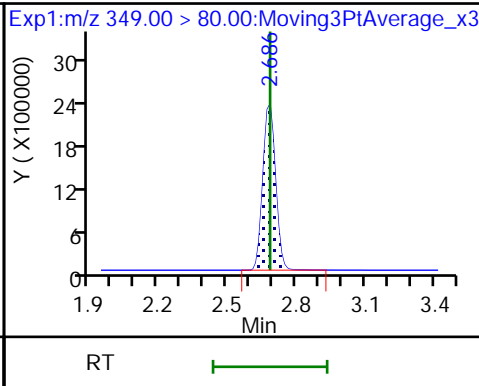
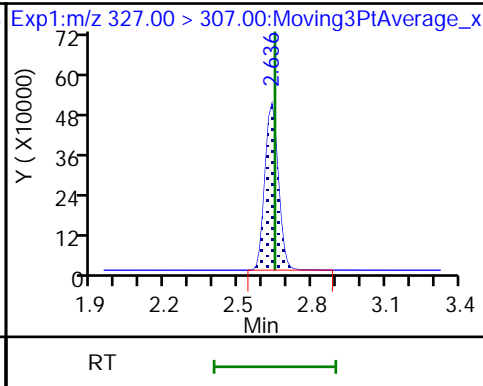
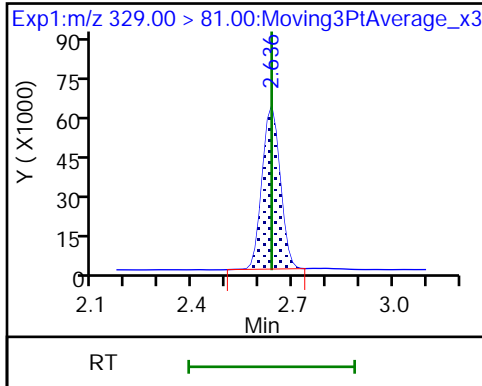
5 Perfluorobutanesulfonic acid



D 60 M2-4:2 FTS

61 1H,1H,2H,2H-perfluorohexanesulfoni

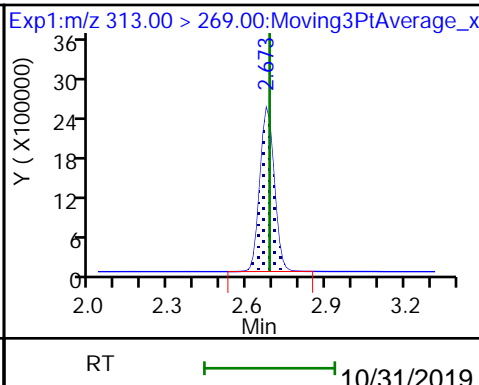
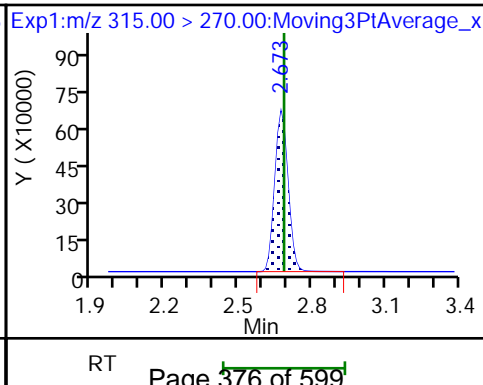
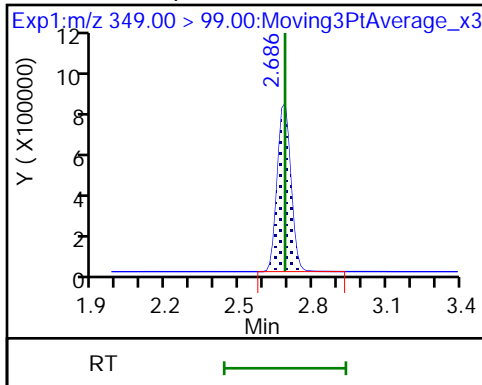
70 Perfluoropentanesulfonic acid



70 Perfluoropentanesulfonic acid

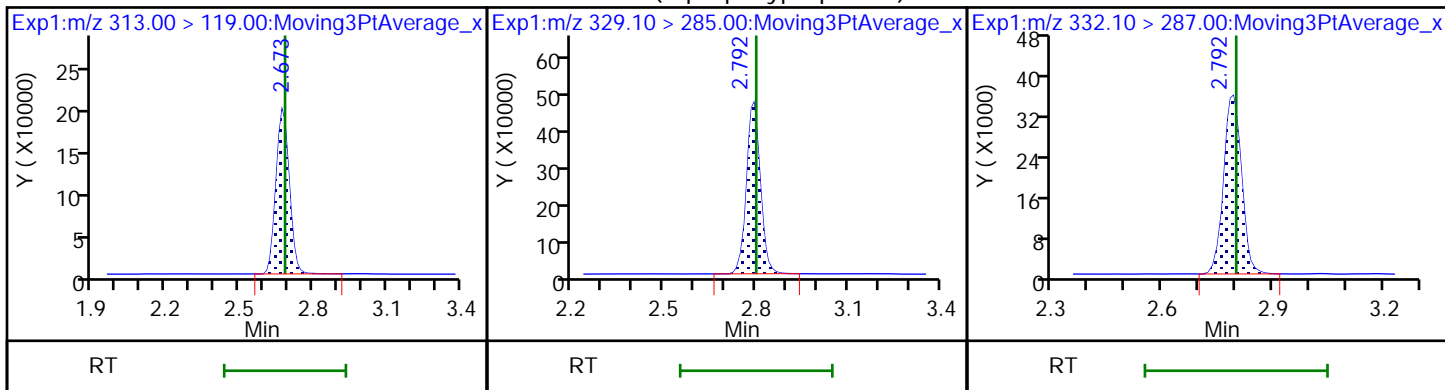
D 7 13C2 PFHxA

6 Perfluorohexanoic acid



6 Perfluorohexanoic acid

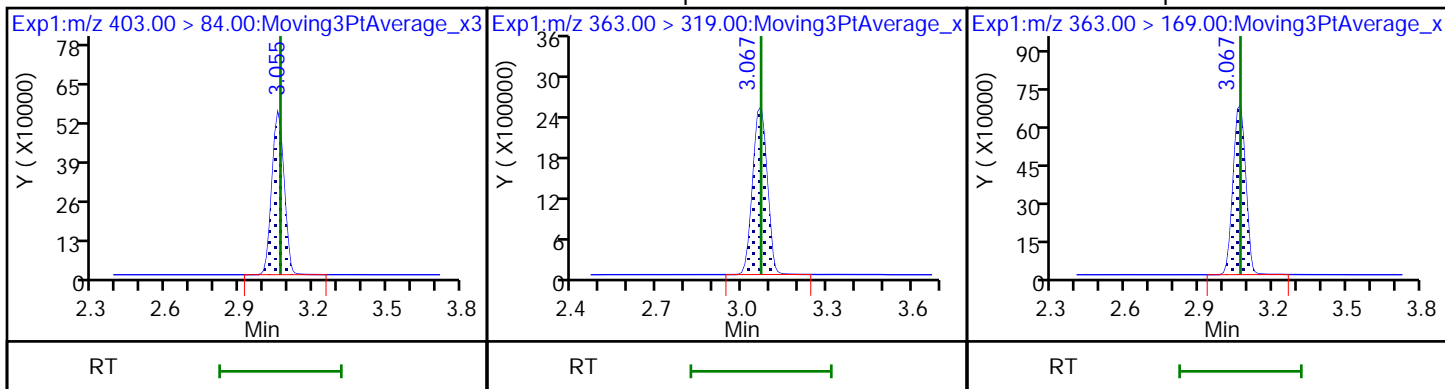
67 Perfluoro(2-propoxypropanoic) acid D 64 13C3 HFPO-DA



D 11 18O2 PFHxS

10 Perfluoroheptanoic acid

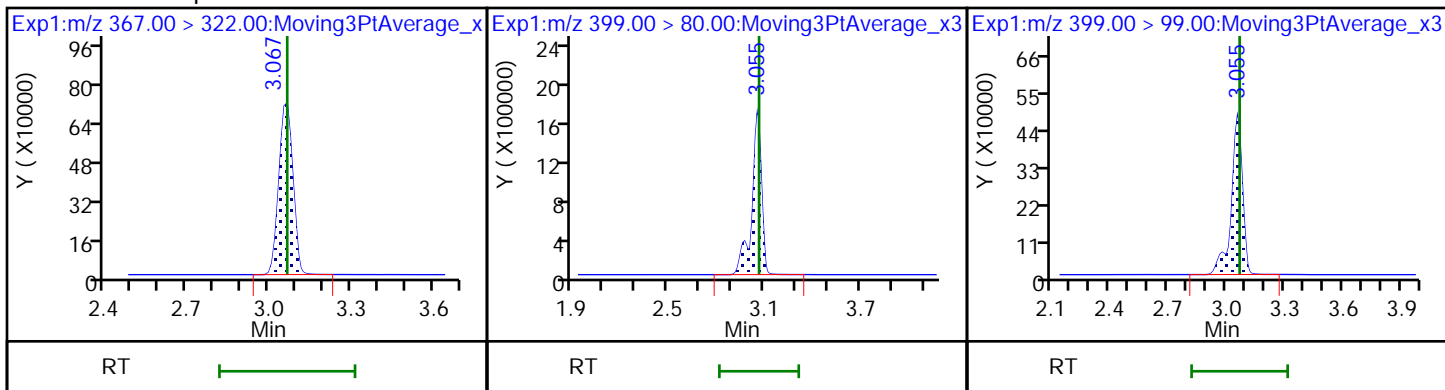
10 Perfluoroheptanoic acid



D 9 13C4 PFHpA

8 Perfluorohexanesulfonic acid

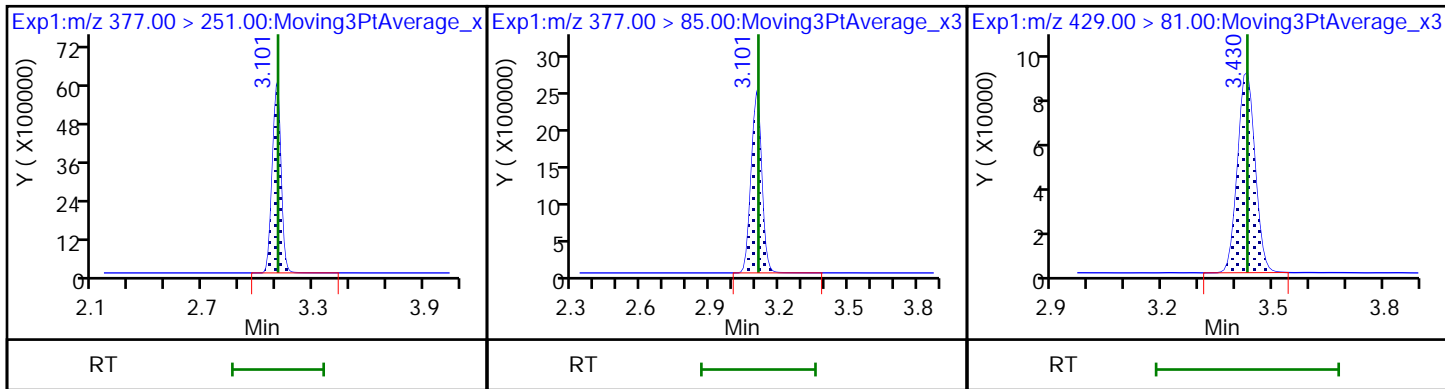
8 Perfluorohexanesulfonic acid

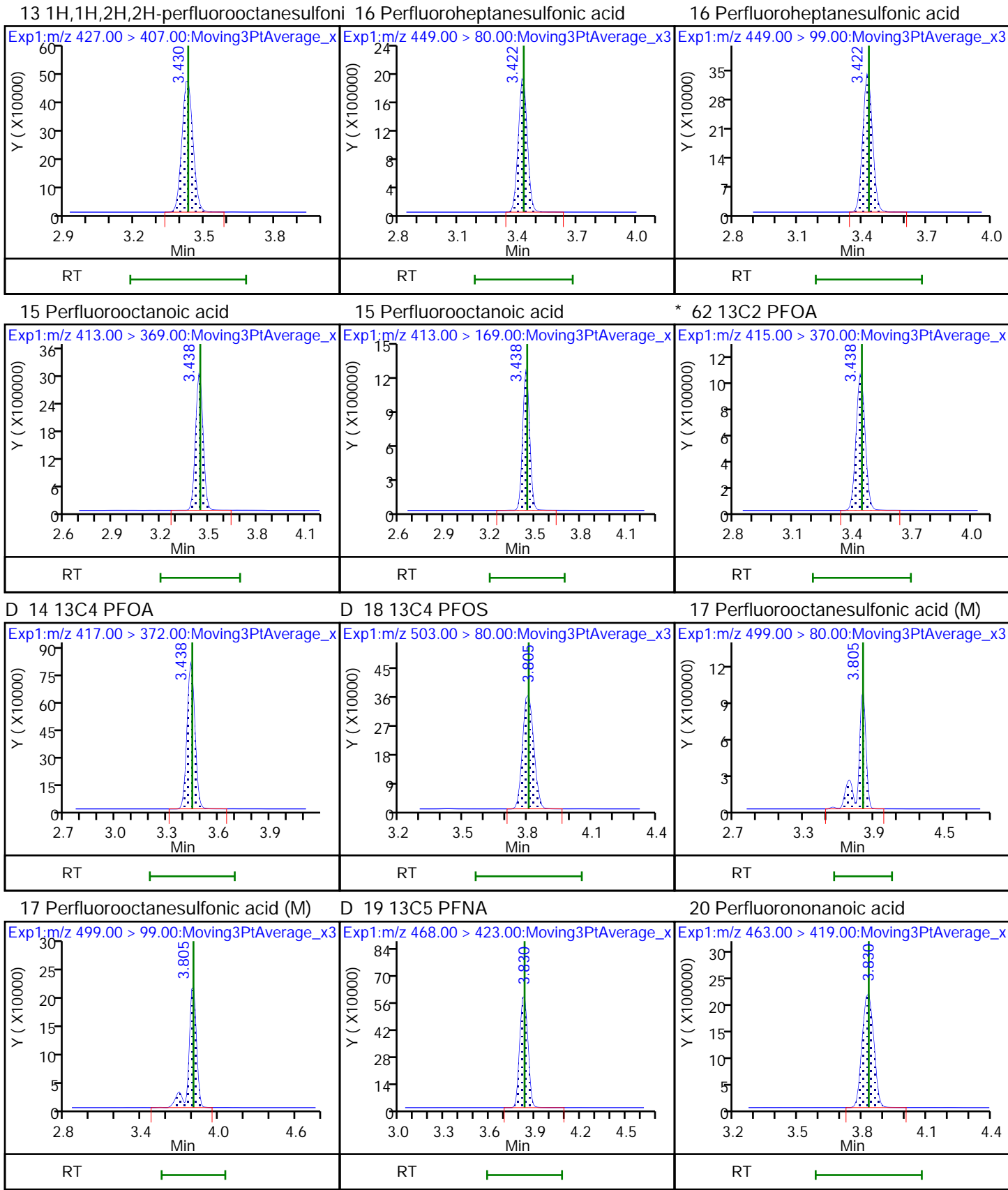


77 DONA

77 DONA

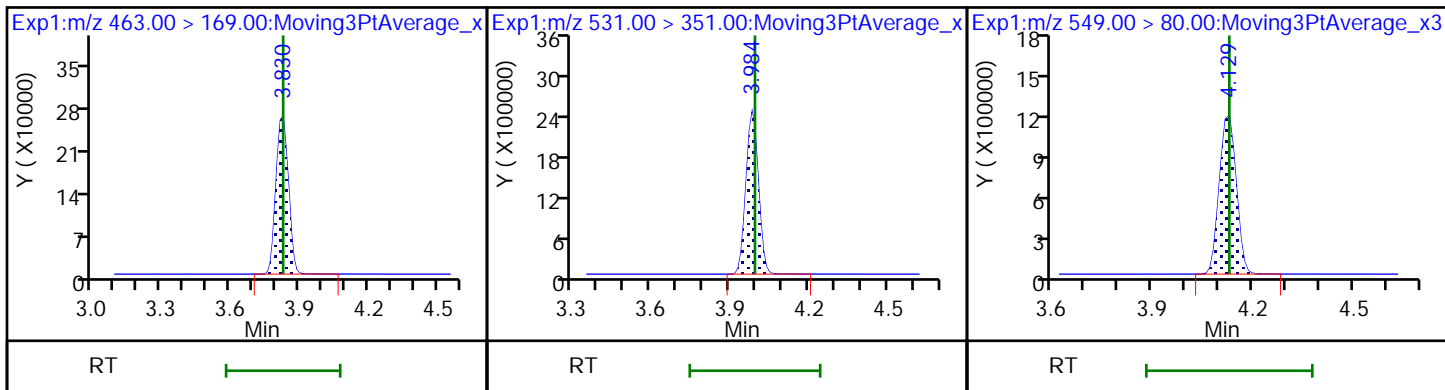
D 12 M2-6:2 FTS





20 Perfluorononanoic acid

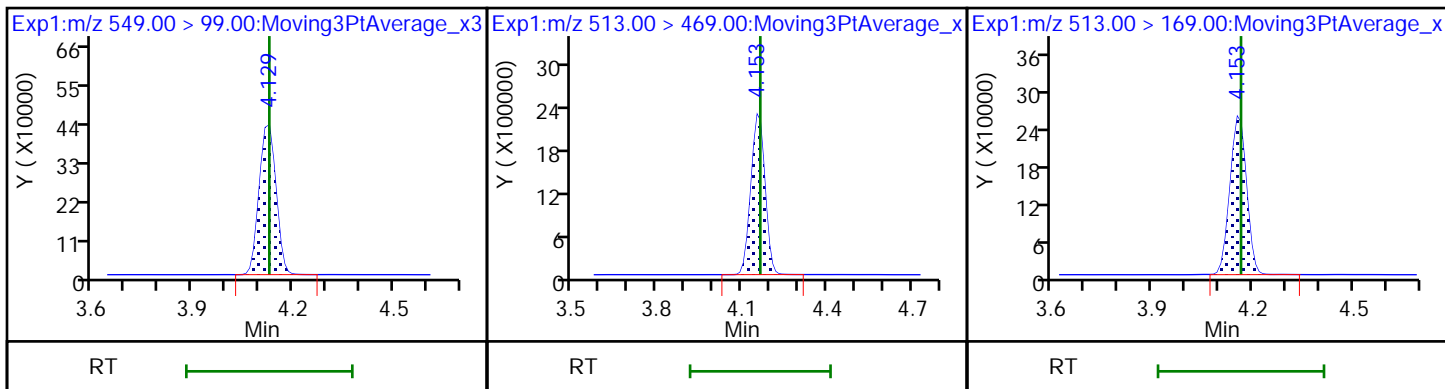
69 9-Chlorohexadecafluoro-3-oxanonan-68 Perfluoronananesulfonic acid



68 Perfluoronananesulfonic acid

24 Perfluorodecanoic acid

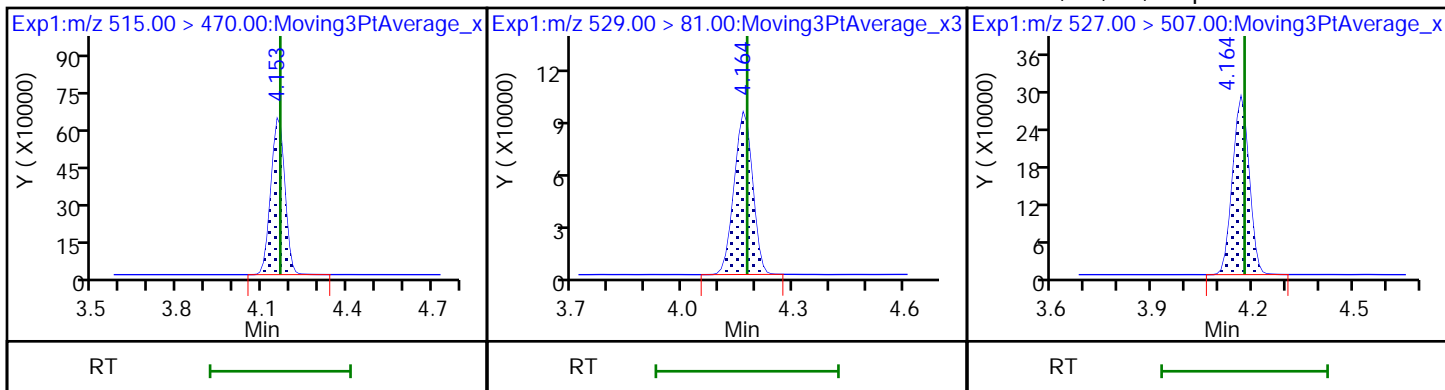
24 Perfluorodecanoic acid



D 23 13C2 PFDA

D 26 M2-8:2 FTS

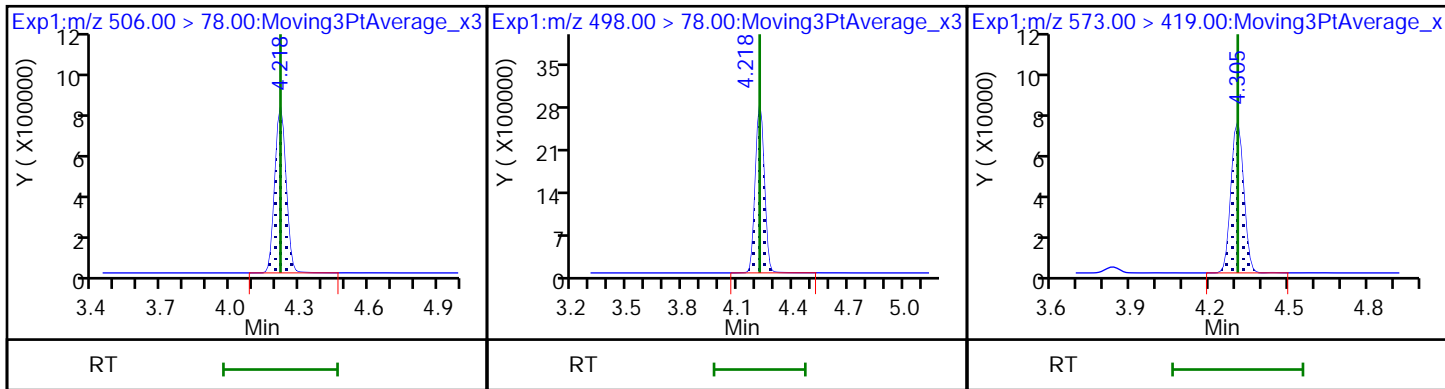
25 1H,1H,2H,2H-perfluorodecanesulfoni



D 21 13C8 FOSA

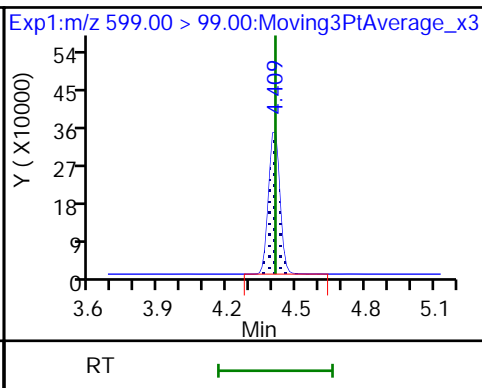
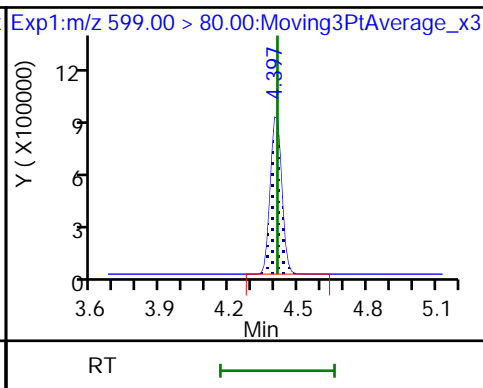
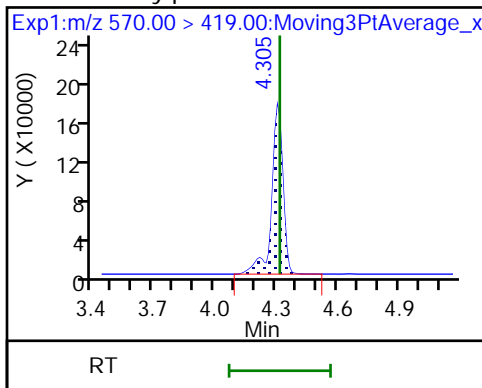
22 Perfluorooctanesulfonamide

D 27 d3-NMeFOSAA



28 N-methylperfluorooctanesulfonamido

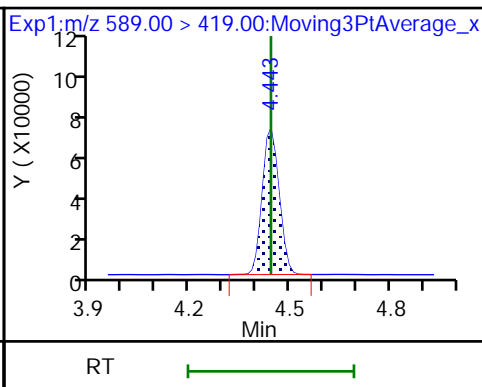
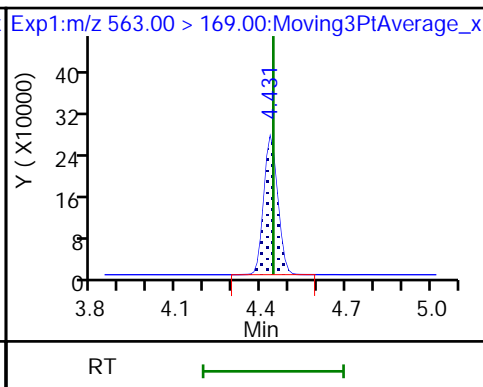
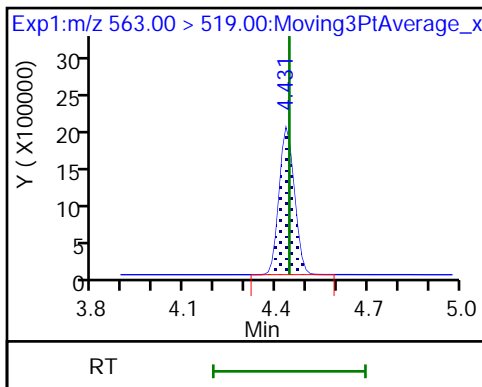
29 Perfluorodecanesulfonic acid



31 Perfluoroundecanoic acid

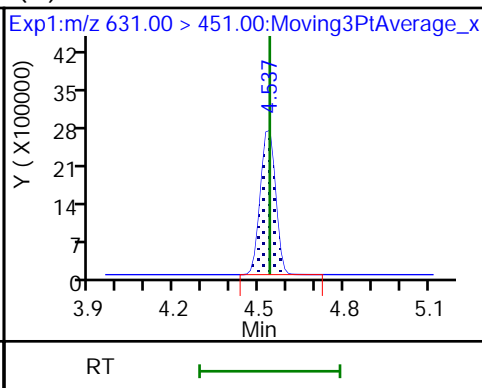
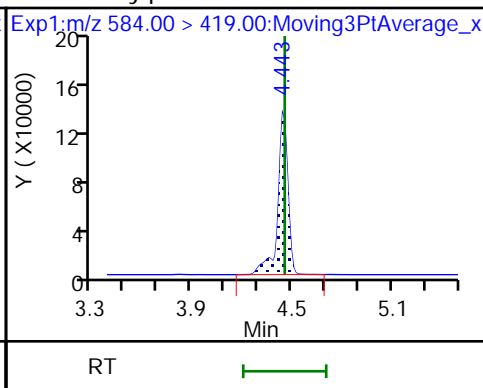
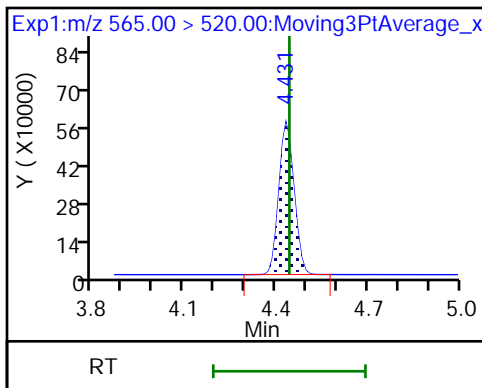
31 Perfluoroundecanoic acid

D 32 d5-NEtFOSAA



D 30 13C2 PFUnA

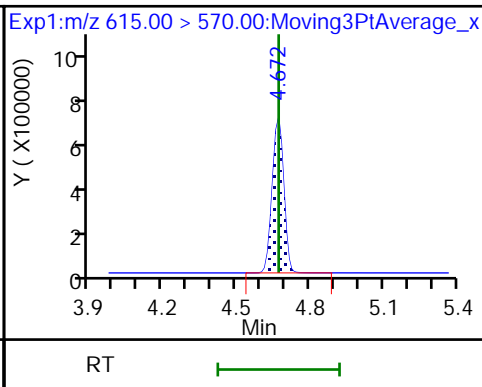
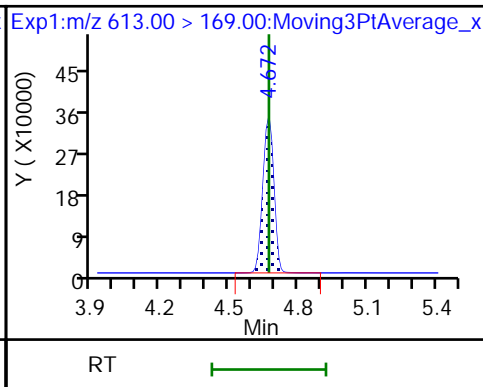
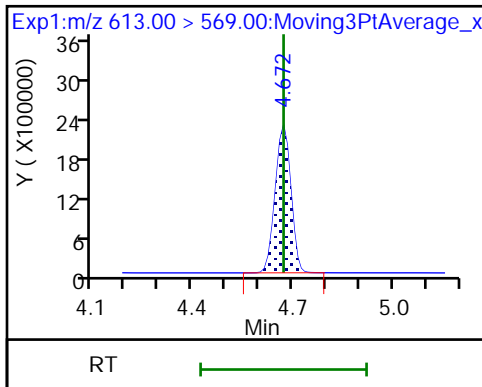
33 N-ethylperfluorooctanesulfonamido (6) 11-Chloroeicosafuoro-3-oxaundecan



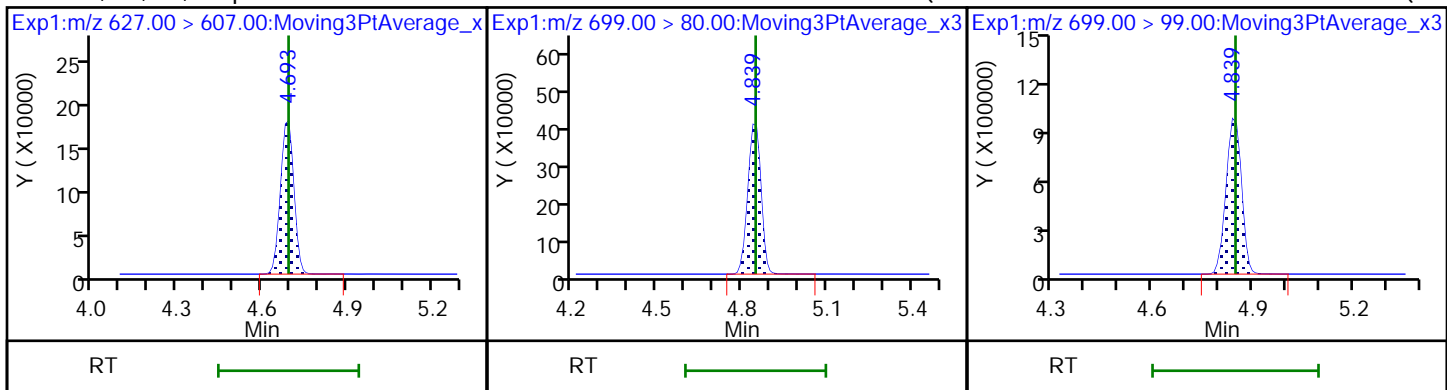
37 Perfluorododecanoic acid

37 Perfluorododecanoic acid

D 36 13C2 PFDaA



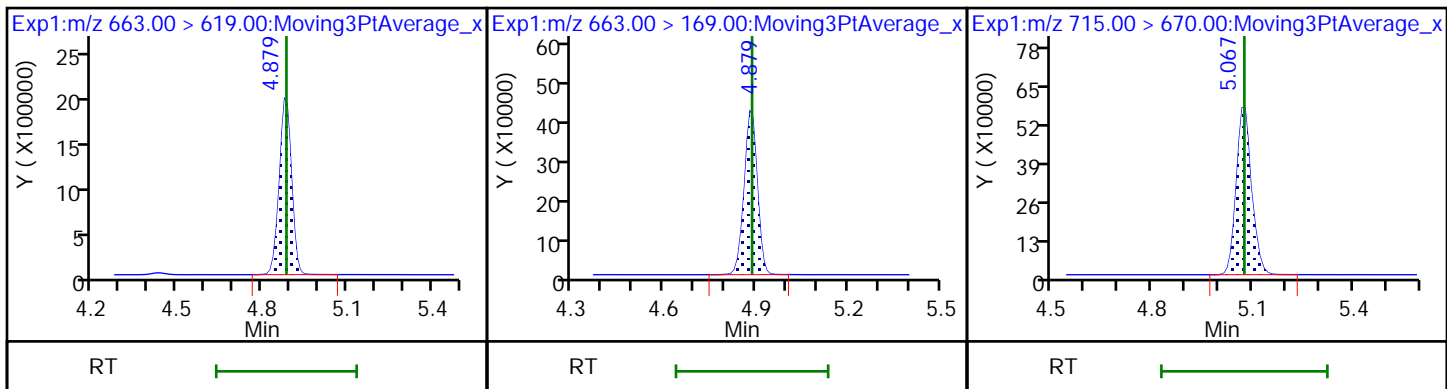
74 1H,1H,2H,2H-perfluorododecanesulfo75 Perfluorododecanesulfonic acid (PF 75 Perfluorododecanesulfonic acid (PF



41 Perfluorotridecanoic acid

41 Perfluorotridecanoic acid

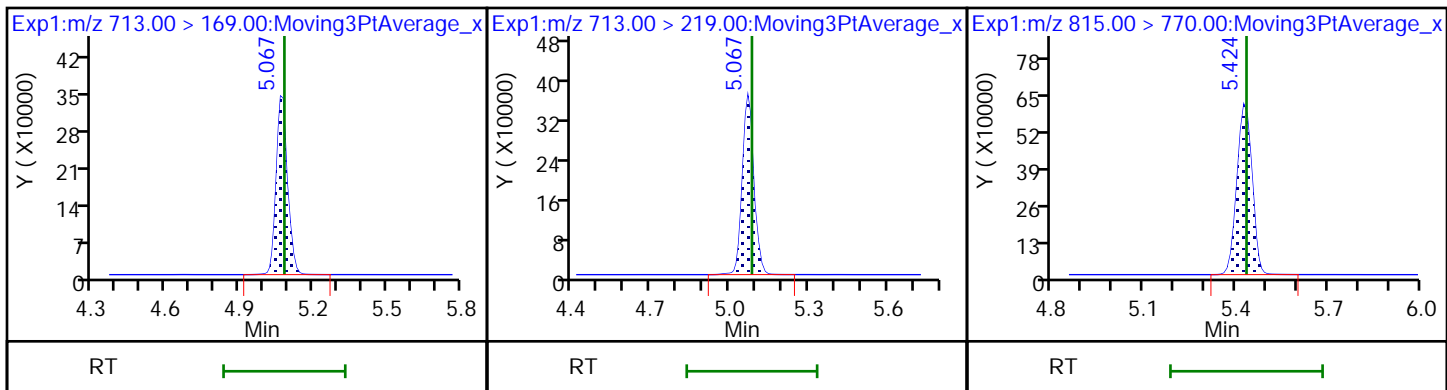
D 43 13C2 PFTeDA



42 Perfluorotetradecanoic acid

42 Perfluorotetradecanoic acid

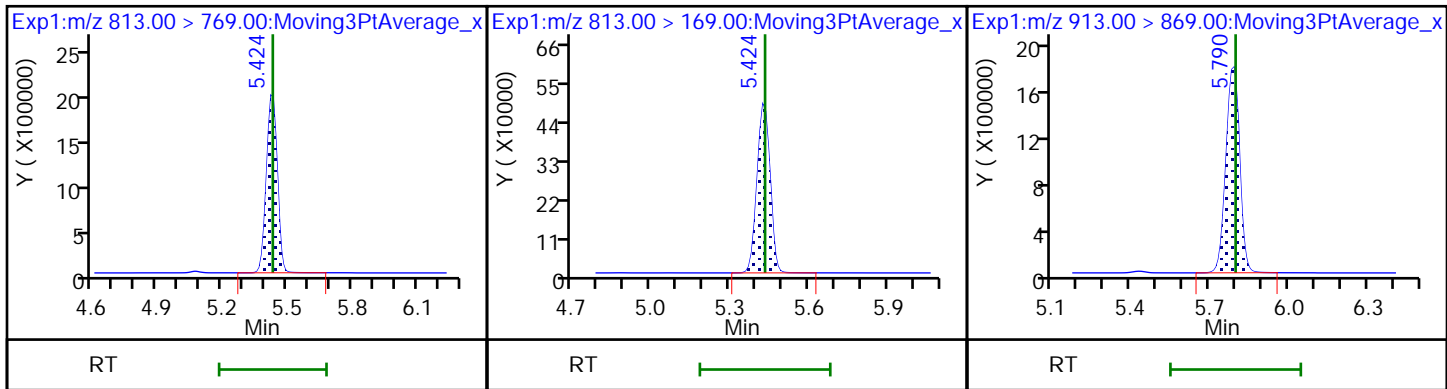
D 44 13C2 PFHxDA



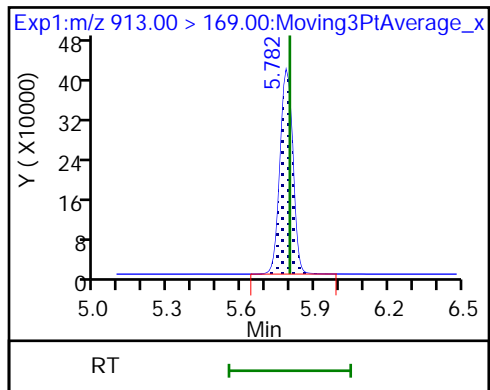
45 Perfluorohexadecanoic acid

45 Perfluorohexadecanoic acid

46 Perfluorooctadecanoic acid



46 Perfluorooctadecanoic acid



Eurofins TestAmerica, Burlington

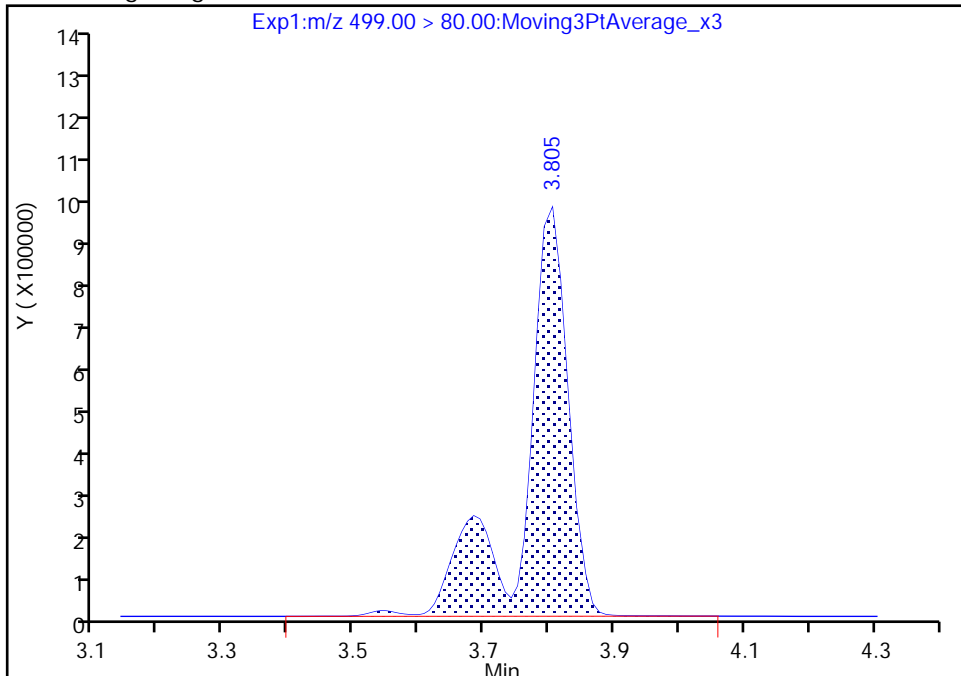
Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA015.d
Injection Date: 24-Sep-2019 18:56:37 Instrument ID: LC812
Lims ID: IC 6
Client ID:
Operator ID: lc812tech ALS Bottle#: 7 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

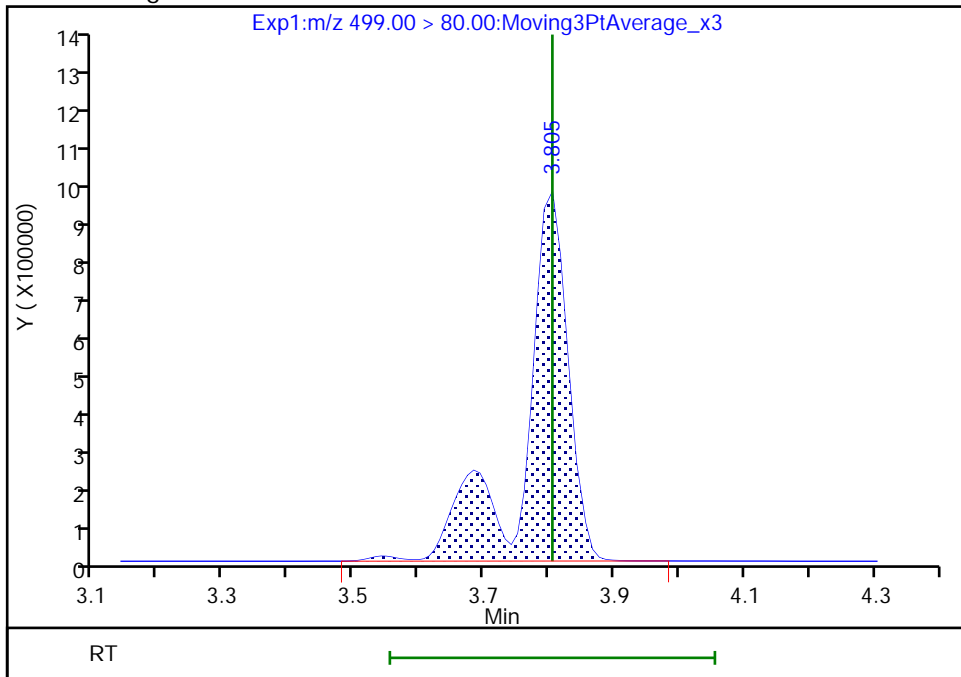
RT: 3.81
Area: 4342344
Amount: 8.871810
Amount Units: ng/ml

Processing Integration Results



RT: 3.81
Area: 4336520
Amount: 8.861805
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 25-Sep-2019 09:00:05
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

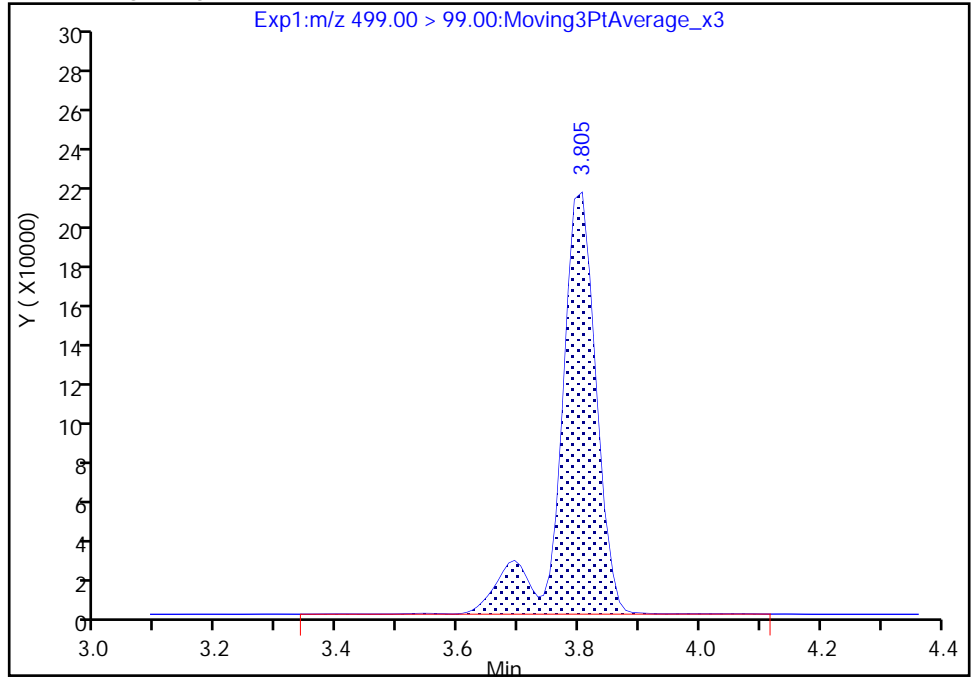
Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA015.d
Injection Date: 24-Sep-2019 18:56:37 Instrument ID: LC812
Lims ID: IC 6
Client ID:
Operator ID: lc812tech ALS Bottle#: 7 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

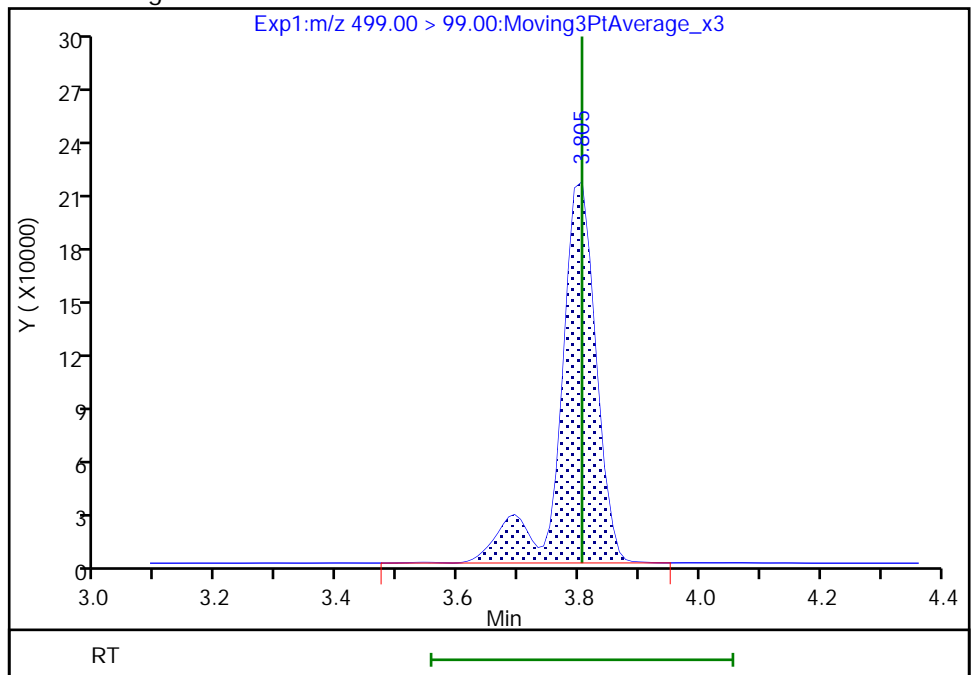
RT: 3.81
Area: 873601
Amount: 8.871810
Amount Units: ng/ml

Processing Integration Results



RT: 3.81
Area: 870876
Amount: 8.861805
Amount Units: ng/ml

Manual Integration Results



Eurofins TestAmerica, Burlington

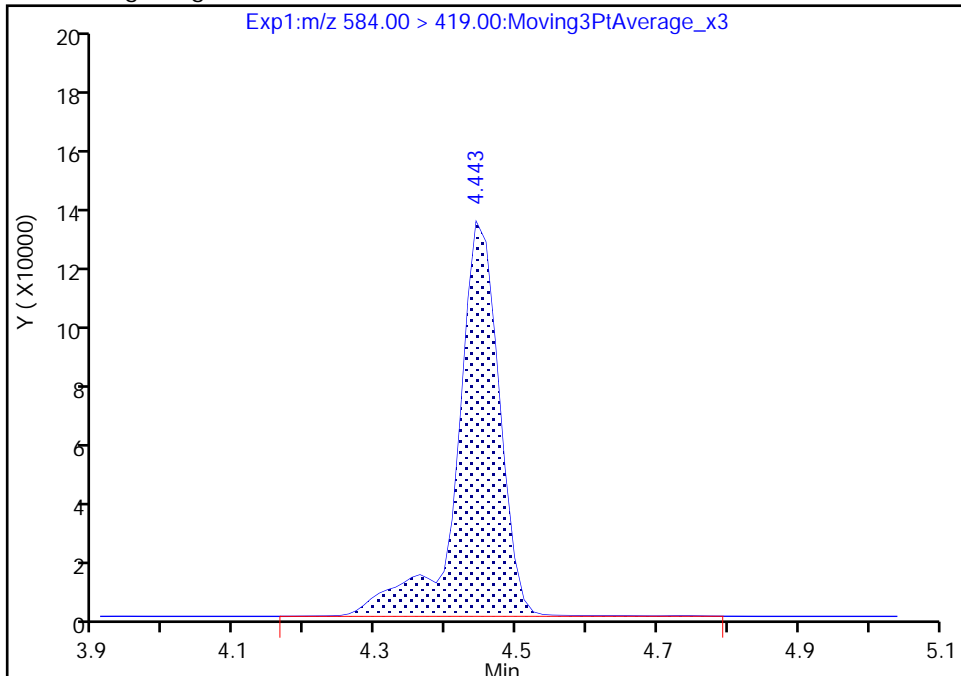
Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA015.d
Injection Date: 24-Sep-2019 18:56:37 Instrument ID: LC812
Lims ID: IC 6
Client ID:
Operator ID: lc812tech ALS Bottle#: 7 Worklist Smp#: 15
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

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

Signal: 1

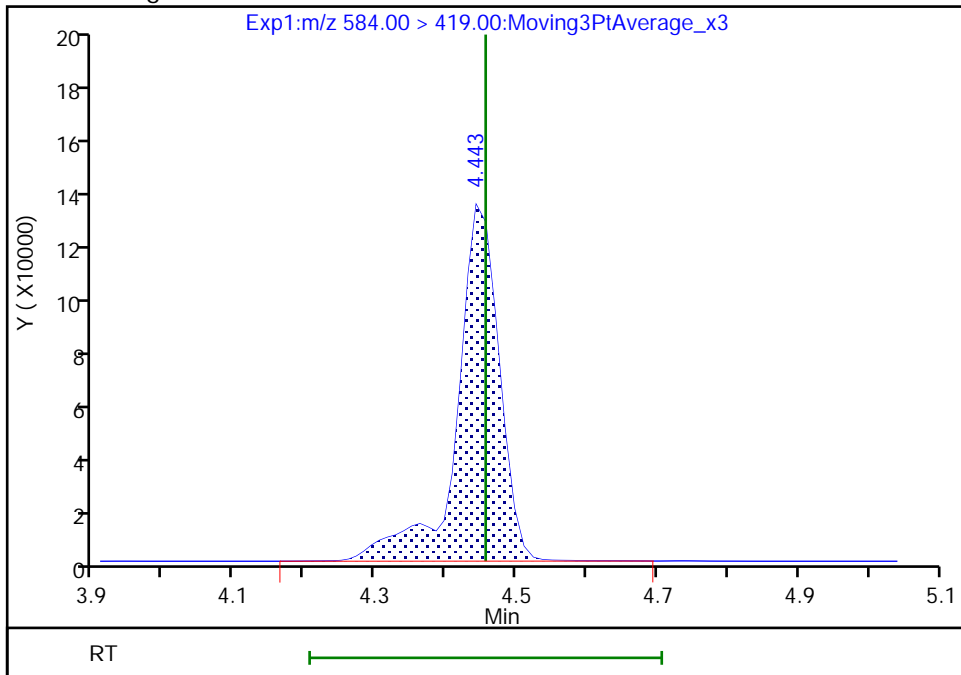
RT: 4.44
Area: 562569
Amount: 9.252229
Amount Units: ng/ml

Processing Integration Results



RT: 4.44
Area: 561466
Amount: 10.238477
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 25-Sep-2019 09:00:34
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1
 SDG No.: _____
 Lab Sample ID: ICV 200-147694/17 Calibration Date: 09/24/2019 19:12
 Instrument ID: LC812 Calib Start Date: 09/24/2019 18:15
 GC Column: C-18 ID: 4.60 (mm) Calib End Date: 09/24/2019 18:56
 Lab File ID: SC092419AA017.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.8879	0.9875		1110	1000	11.2	40.0
Perfluoropentanoic acid (PFPeA)	L1ID		1.127		1220	1010	21.2	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.363	1.384		1020	1000	1.6	40.0
1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2)	AveID	2.000	2.358		1180	1000	17.9	50.0
Perfluorohexanoic acid (PFHxA)	AveID	0.9852	1.103		1130	1010	12.0	40.0
Perfluoropentanesulfonic acid	AveID	1.177	1.250		1060	1000	6.2	50.0
HFPO-DA	AveID	2.861	3.263		1150	1010	14.1	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	0.8934	1.040		1160	1000	16.5	40.0
Perfluorohexanesulfonic acid (PFHxS)	L1ID		1.071		1120	1010	10.5	40.0
DONA	AveID	4.089	4.533		1110	1000	10.8	50.0
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	AveID	1.259	1.385		1100	1000	10.0	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	1.108	1.339		1210	1000	20.9	50.0
Perfluorooctanoic acid (PFOA)	L1ID		1.078		1140	1000	13.6	40.0
Perfluorooctanesulfonic acid (PFOS)	AveID	0.9041	1.113		1240	1010	23.1	40.0
Perfluorononanoic acid (PFNA)	AveID	0.9539	1.155		1210	1000	21.0	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	1.607	1.867		1160	1000	16.2	50.0
Perfluorononanesulfonic acid	AveID	0.7809	0.8945		1160	1010	14.6	50.0
Perfluorodecanoic acid (PFDA)	AveID	0.9250	1.081		1170	1000	16.9	40.0
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	L1ID		0.9672		1250	1010	23.8	40.0
Perfluorooctanesulfonamide (PFOSA)	AveID	0.9175	0.9515		1040	1000	3.7	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	AveID	0.7125	0.9245		1300	1000	29.8	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.6033	0.7643		1280	1010	26.7	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.8368	0.7597		908	1000	-9.2	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	L2ID		0.7459		1350	1000	34.8	40.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.999	2.280		1140	1000	14.1	50.0
Perfluorododecanoic acid (PFDoA)	AveID	0.8845	0.9435		1070	1000	6.7	40.0
Perfluorotridecanoic acid (PFTriA)	AveID	0.7157	0.8435		1180	1000	17.8	50.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1455	0.1677		1150	1000	15.2	40.0
13C4 PFBA	Ave	1.200	0.8188		1710	2500	-31.8	50.0
13C5 PFPeA	Ave	0.9493	0.6336		1670	2500	-33.3	50.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1
 SDG No.: _____
 Lab Sample ID: ICV 200-147694/17 Calibration Date: 09/24/2019 19:12
 Instrument ID: LC812 Calib Start Date: 09/24/2019 18:15
 GC Column: C-18 ID: 4.60 (mm) Calib End Date: 09/24/2019 18:56
 Lab File ID: SC092419AA017.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
M2-4:2 FTS	Ave	0.0981	0.0688		1640	2340	-29.8	50.0
13C2 PFHxA	Ave	1.009	0.7014		1740	2500	-30.5	50.0
13C3 HFPO-DA	Ave	0.0504	0.0317		3140	5000	-37.1	50.0
13C4 PFHpA	Ave	0.9768	0.6446		1650	2500	-34.0	50.0
18O2 PFHxS	Ave	0.7528	0.5395		1690	2370	-28.3	50.0
M2-6:2 FTS	Ave	0.1223	0.0843		1640	2380	-31.1	50.0
13C4 PFOA	Ave	0.9930	0.6636		1670	2500	-33.2	50.0
13C4 PFOS	Ave	0.5122	0.3449		1610	2390	-32.7	50.0
13C5 PFNA	Ave	0.8786	0.5881		1670	2500	-33.1	50.0
13C2 PFDA	Ave	0.8752	0.5661		1620	2500	-35.3	50.0
M2-8:2 FTS	Ave	0.1336	0.0895		1610	2400	-33.0	50.0
13C8 FOSA	Ave	0.9945	0.6973		1750	2500	-29.9	50.0
d3-NMeFOSAA	Ave	0.0848	0.0557		1640	2500	-34.4	50.0
13C2 PFUnA	Ave	0.7839	0.5634		1800	2500	-28.1	50.0
d5-NEtFOSAA	Ave	0.0919	0.0655		1780	2500	-28.7	50.0
13C2 PFDoA	Ave	0.8441	0.5901		1750	2500	-30.1	50.0
13C2 PFTeDA	Ave	0.7567	0.4909		1620	2500	-35.1	50.0
13C2 PFHxDA	Ave	0.7599	0.5057		1660	2500	-33.5	50.0

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA017.d
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 24-Sep-2019 19:12:59 ALS Bottle#: 9 Worklist Smp#: 17
 Injection Vol: 20.0 ul Dil. Factor: 1.0000
 Sample Info: ICV
 Misc. Info.: 200-0037915-017 Plate: 1 Rack: 2
 Operator ID: lc812tech Instrument ID: LC812
 Sublist:

Method: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\PFC_LC812.m
 Limit Group: LC_PFC_ICAL
 Last Update: 25-Sep-2019 13:08:00 Calib Date: 24-Sep-2019 18:56:37
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA015.d

Column 1 : C-18 (4.60 mm) Det: EXP1
 Process Host: CTX0340

First Level Reviewer: chirgwinb Date: 25-Sep-2019 11:38:55

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA	217.00 > 172.00	1.935	1.935	0.0	0.563	3048907	1.71	68.2	21901	
2 Perfluorobutanoic acid	212.90 > 169.00	1.935	1.944	-0.009	1.000	1204333	1.11		223	
4 Perfluoropentanoic acid	262.90 > 219.00	2.284	2.298	-0.014	1.000	1074090	1.22		71.2	
D 3 13C5 PFPeA	267.90 > 223.00	2.284	2.298	-0.014	0.664	2359108	1.67	66.7	4912	
5 Perfluorobutanesulfonic acid	298.90 > 80.00	2.312	2.325	-0.013	0.757	1112026	1.02	Target=2.04	1790	
	298.90 > 99.00	2.312	2.325	-0.013	0.757	558091		1.99(1.02-3.05)	566	
D 47 13C3 PFBS	301.90 > 80.00	2.312	2.325	-0.013	0.672	2460687	NC	0.0	935445	
D 60 M2-4:2 FTS	329.00 > 81.00	2.635	2.636	-0.001	0.767	239232	1.64	70.2	222	
61 1H,1H,2H,2H-perfluorohexanesulfoni	327.00 > 307.00	2.635	2.648	-0.013	1.000	241549	1.18		1902	
70 Perfluoropentanesulfonic acid	349.00 > 80.00	2.673	2.685	-0.012	0.875	1004686	1.06	Target=3.01	2646	
	349.00 > 99.00	2.673	2.685	-0.012	0.875	351068		2.86(1.51-4.52)	1068	
D 7 13C2 PFHxA	315.00 > 270.00	2.673	2.685	-0.012	0.777	2611688	1.74	69.5	5455	
6 Perfluorohexanoic acid	313.00 > 269.00	2.673	2.685	-0.012	1.000	1164001	1.13	Target=12.90	418	
	313.00 > 119.00	2.673	2.685	-0.012	1.000	88900		13.09(6.45-19.36)	87.7	
67 Perfluoro(2-propoxypropanoic) acid	329.10 > 285.00	2.791	2.799	-0.008	1.003	155479	1.15		72.5	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 64 13C3 HFPO-DA										
332.10 > 287.00	2.784	2.799	-0.015	0.810	235873	3.14		62.9	1580	
D 11 18O2 PFHxS										
403.00 > 84.00	3.055	3.067	-0.012	0.889	1900238	1.69		71.7	7262	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.055	3.067	-0.012	1.000	998750	1.16	Target=3.54		162	
363.00 > 169.00	3.055	3.067	-0.012	1.000	287926		3.47(1.77-5.31)		540	
D 9 13C4 PFHpA										
367.00 > 322.00	3.055	3.067	-0.012	0.889	2400064	1.65		66.0	8592	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.055	3.067	-0.012	1.000	868811	1.12	Target=3.78		2741	
399.00 > 99.00	3.055	3.067	-0.012	1.000	228474		3.80(1.89-5.67)		349	
77 DONA										
377.00 > 251.00	3.101	3.109	-0.008	0.818	2328720	1.11	Target=2.56		4311	
377.00 > 85.00	3.101	3.109	-0.008	0.818	912253		2.55(1.28-3.84)		1638	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.421	3.430	-0.009	0.995	298141	1.64		68.9	1237	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.421	3.430	-0.009	1.000	173890	1.10			2259	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.421	3.430	-0.009	0.902	687745	1.21	Target=5.80		2343	
449.00 > 99.00	3.421	3.430	-0.009	0.902	124835		5.51(2.90-8.71)		1646	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.438	3.447	-0.009	1.000	1065289	1.14	Target=2.61		196	M
413.00 > 169.00	3.438	3.447	-0.009	1.000	417500		2.55(1.30-3.91)		382	M
* 62 13C2 PFOA										
415.00 > 370.00	3.438	3.447	-0.009		3723545	2.50			4858	
D 14 13C4 PFOA										
417.00 > 372.00	3.438	3.447	-0.009	1.000	2471106	1.67		66.8	6044	
D 18 13C4 PFOS										
503.00 > 80.00	3.792	3.805	-0.013	1.103	1227784	1.61		67.3	3975	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.792	3.805	-0.013	1.000	577266	1.24	Target=4.93		1764	M
499.00 > 99.00	3.792	3.805	-0.013	1.000	118452		4.87(2.47-7.40)		452	M
D 19 13C5 PFNA										
468.00 > 423.00	3.817	3.829	-0.012	1.110	2189863	1.67		66.9	6386	
20 Perfluorononanoic acid										
463.00 > 419.00	3.817	3.829	-0.012	1.000	1011337	1.21	Target=7.89		259	
463.00 > 169.00	3.817	3.829	-0.012	1.000	124317		8.14(3.95-11.84)		2006	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.983	3.994	-0.011	1.050	958999	1.16			4689	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.116	4.129	-0.013	1.085	464117	1.16	Target=2.60		2028	
549.00 > 99.00	4.116	4.129	-0.013	1.085	168804		2.75(1.30-3.90)		533	
24 Perfluorodecanoic acid										
513.00 > 469.00	4.153	4.164	-0.011	1.000	911334	1.17	Target=8.57		287	
513.00 > 169.00	4.153	4.164	-0.011	1.000	102036		8.93(4.29-12.86)		621	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 23 13C2 PFDA										
515.00 > 470.00	4.153	4.164	-0.011	1.208	2107872	1.62		64.7	6129	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.164	4.175	-0.011	1.211	319363	1.61		67.0	1267	
25 1H,1H,2H,2H-perfluorodecanesulfoni										
527.00 > 507.00	4.164	4.175	-0.011	1.000	130258	1.25			1340	
D 21 13C8 FOSA										
506.00 > 78.00	4.218	4.218	0.0	1.227	2596463	1.75		70.1	4473	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.218	4.218	0.0	1.000	988220	1.04			1884	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.293	4.305	-0.012	1.249	207291	1.64		65.6	1050	
28 N-methylperfluorooctanesulfonamido										
570.00 > 419.00	4.305	4.317	-0.012	1.003	76654	1.30			512	
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.397	4.409	-0.012	1.159	396571	1.28	Target=2.56		3236	
599.00 > 99.00	4.397	4.409	-0.012	1.159	138588		2.86(1.28-3.84)		973	
31 Perfluoroundecanoic acid										M
563.00 > 519.00	4.431	4.443	-0.012	1.000	637495	0.9079	Target=6.97		302	M
563.00 > 169.00	4.431	4.443	-0.012	1.000	94225		6.77(3.48-10.45)		325	M
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.442	4.443	-0.001	1.292	244040	1.78		71.3	1710	
D 30 13C2 PFUnA										
565.00 > 520.00	4.431	4.443	-0.012	1.289	2097736	1.80		71.9	6906	
33 N-ethylperfluorooctanesulfonamidoa										
584.00 > 419.00	4.442	4.456	-0.014	1.000	72807	1.35			593	
66 11-Chloroeicosafuoro-3-oxaundecan										
631.00 > 451.00	4.523	4.537	-0.014	1.193	1171483	1.14			7403	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.660	4.672	-0.012	1.000	829227	1.07	Target=7.06		126	
613.00 > 169.00	4.660	4.672	-0.012	1.000	131426		6.31(3.53-10.59)		1072	
D 36 13C2 PFDaA										
615.00 > 570.00	4.660	4.672	-0.012	1.355	2197214	1.75		69.9	5740	
41 Perfluorotridecanoic acid										M
663.00 > 619.00	4.879	4.886	-0.007	1.047	741293	1.18	Target=4.87		119	
663.00 > 169.00	4.879	4.886	-0.007	1.047	153730		4.82(2.43-7.30)		403	M
D 43 13C2 PFTeDA										
715.00 > 670.00	5.067	5.074	-0.007	1.474	1827922	1.62		64.9	9502	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.067	5.083	-0.016	1.000	122598	1.15	Target=1.09		939	
713.00 > 219.00	5.067	5.083	-0.016	1.000	123455		0.99(0.54-1.63)		384	
D 44 13C2 PFHxDA										
815.00 > 770.00	5.424	5.433	-0.009	1.578	1882830	1.66		66.5	7134	

[QC Flag Legend](#)

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

[Reagents:](#)

LCPFAS28NCICV_00001

Amount Added: 100.00

Units: uL

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA017.d

Injection Date: 24-Sep-2019 19:12:59

Instrument ID: LC812

Lims ID: ICV

Client ID:

Operator ID: lc812tech

ALS Bottle#: 9

Worklist Smp#: 17

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

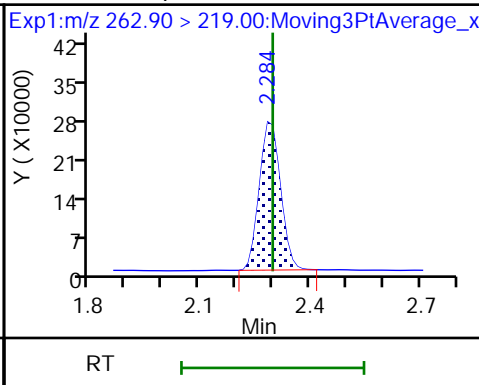
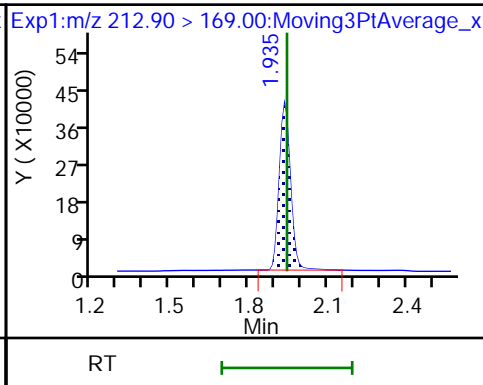
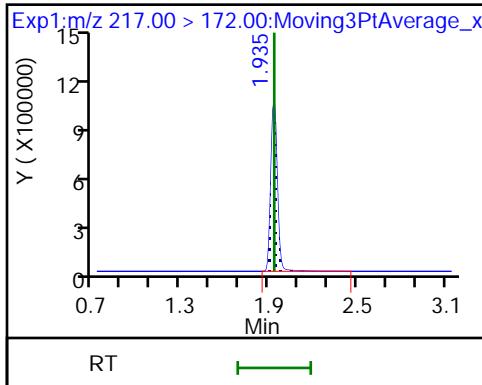
Method: PFC_LC812

Limit Group: LC_PFC_ICAL

D 1 13C4 PFBA

2 Perfluorobutanoic acid

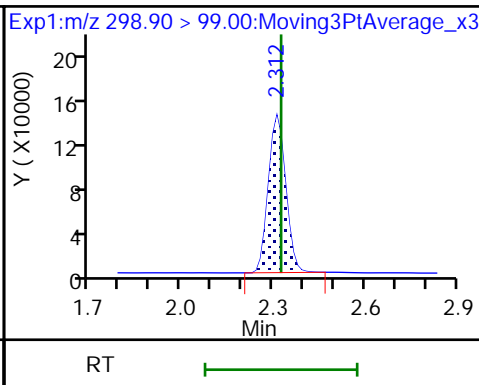
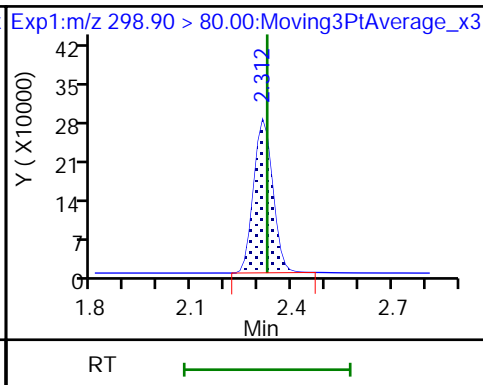
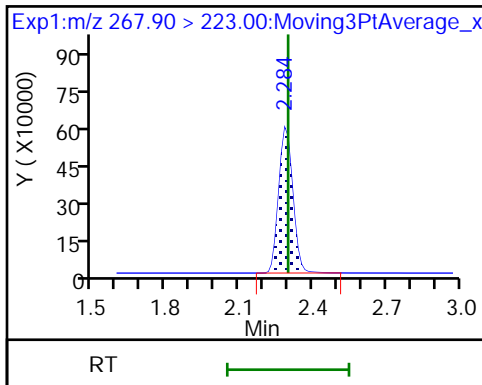
4 Perfluoropentanoic acid



D 3 13C5 PFPeA

5 Perfluorobutanesulfonic acid

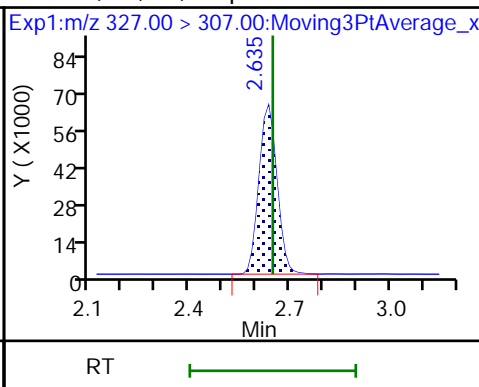
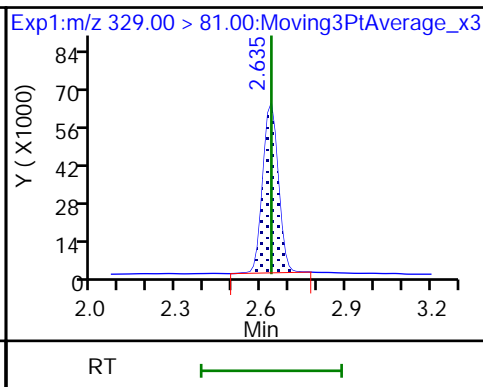
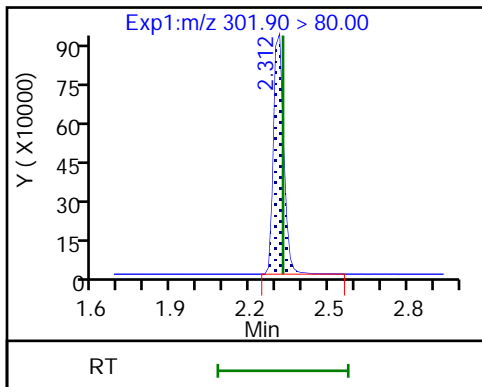
5 Perfluorobutanesulfonic acid



D 47 13C3 PFBS

D 60 M2-4:2 FTS

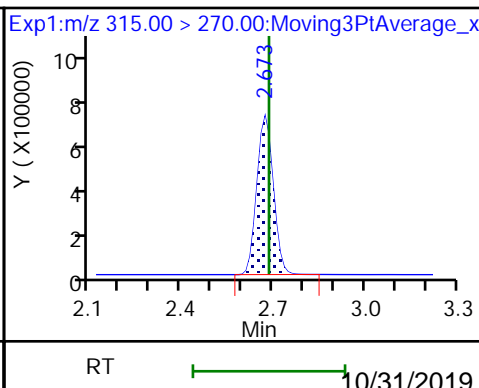
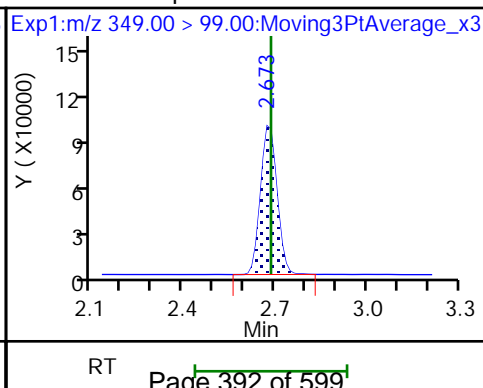
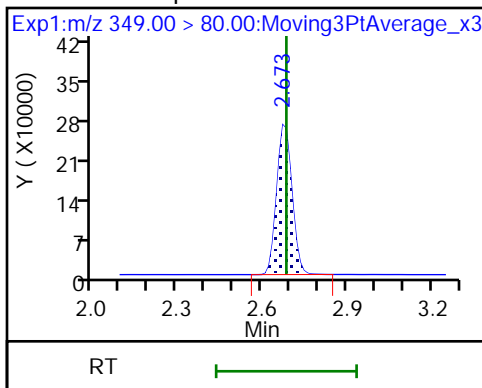
61 1H,1H,2H,2H-perfluorohexanesulfoni

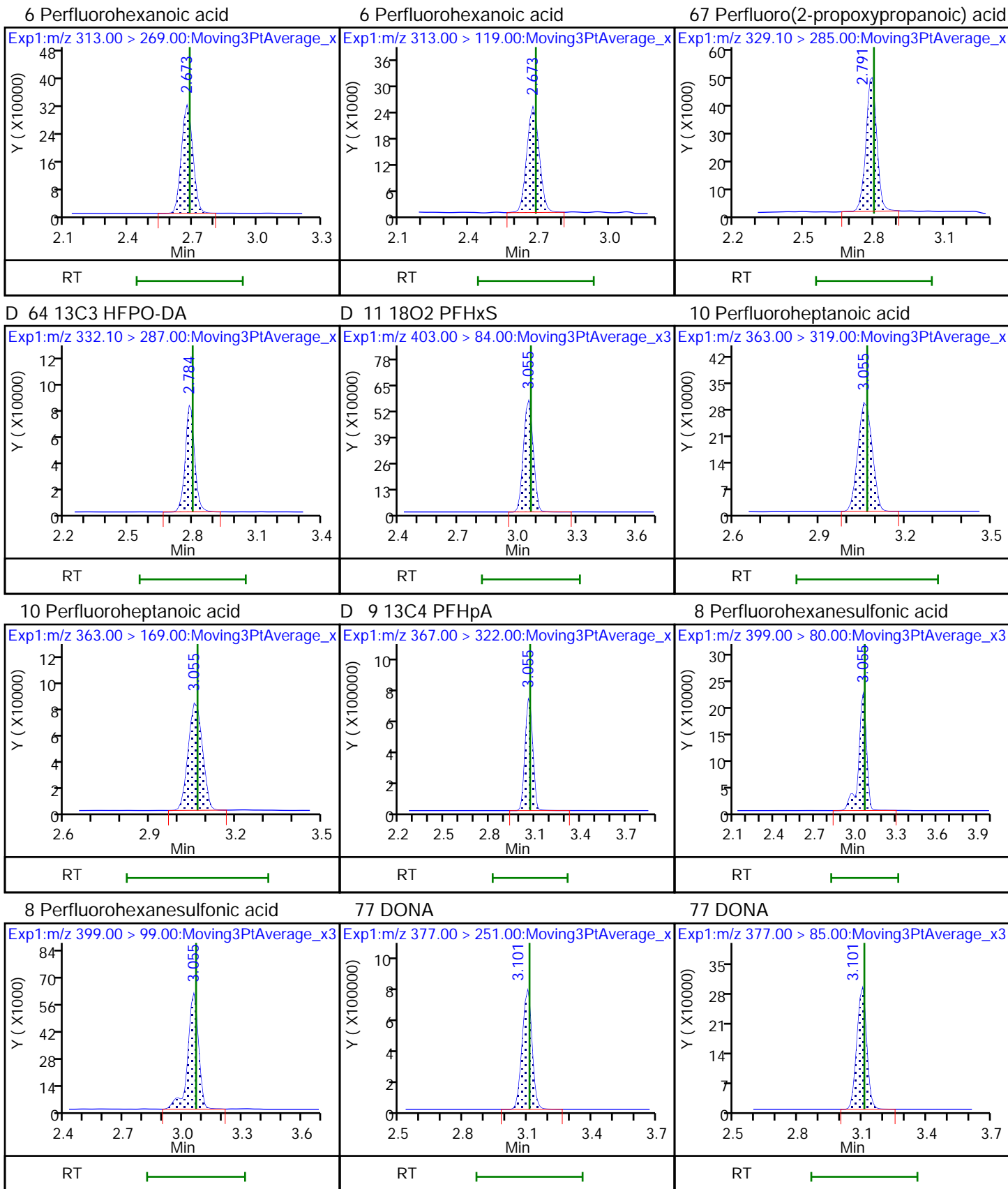


70 Perfluoropentanesulfonic acid

70 Perfluoropentanesulfonic acid

D 7 13C2 PFHxA

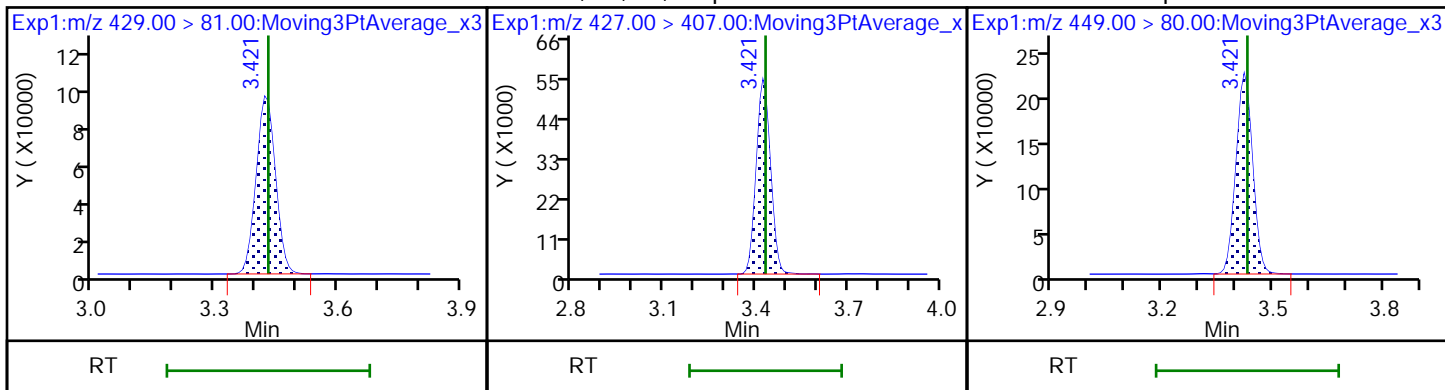




D 12 M2-6:2 FTS

13 1H,1H,2H,2H-perfluorooctanesulfo

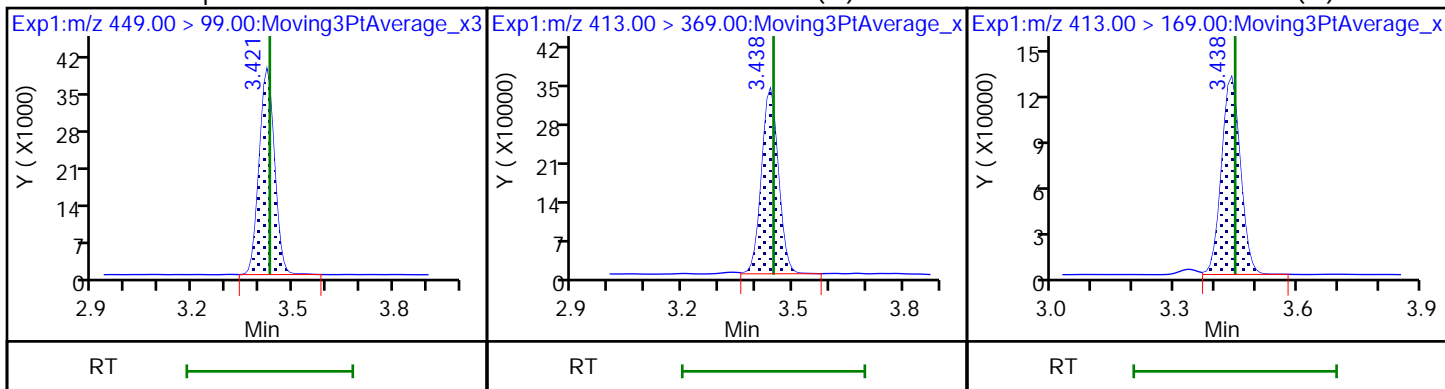
16 Perfluoroheptanesulfonic acid



16 Perfluoroheptanesulfonic acid

15 Perfluorooctanoic acid (M)

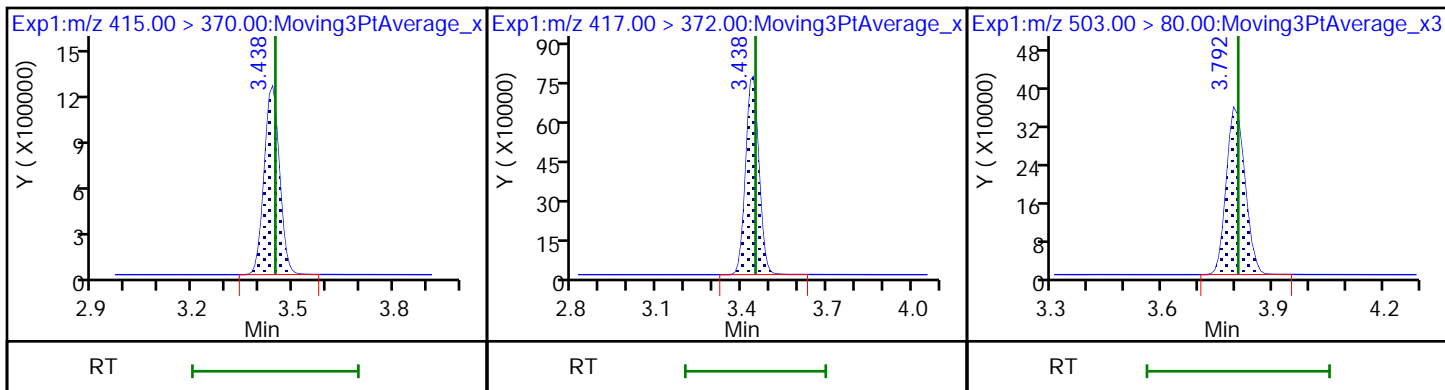
15 Perfluorooctanoic acid (M)



* 62 13C2 PFOA

D 14 13C4 PFOA

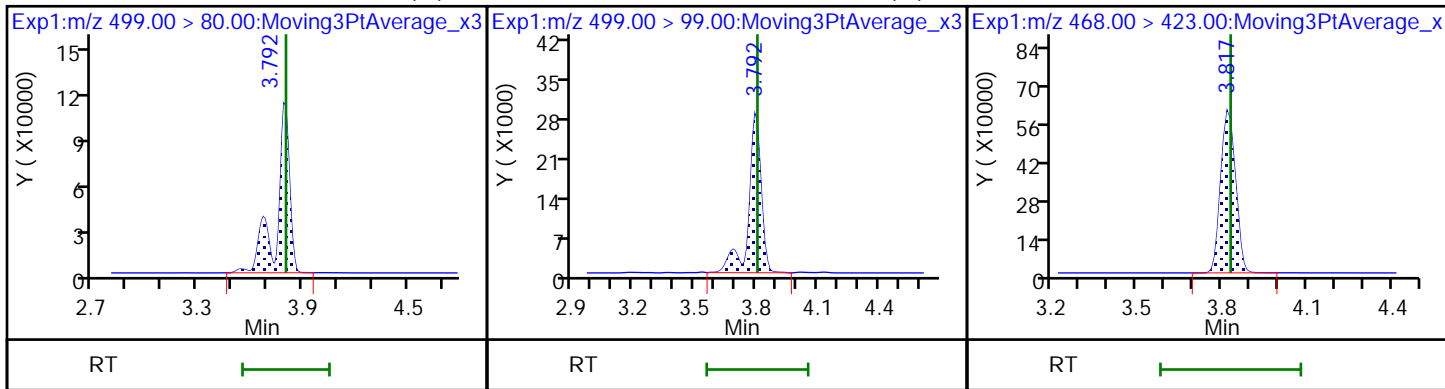
D 18 13C4 PFOS

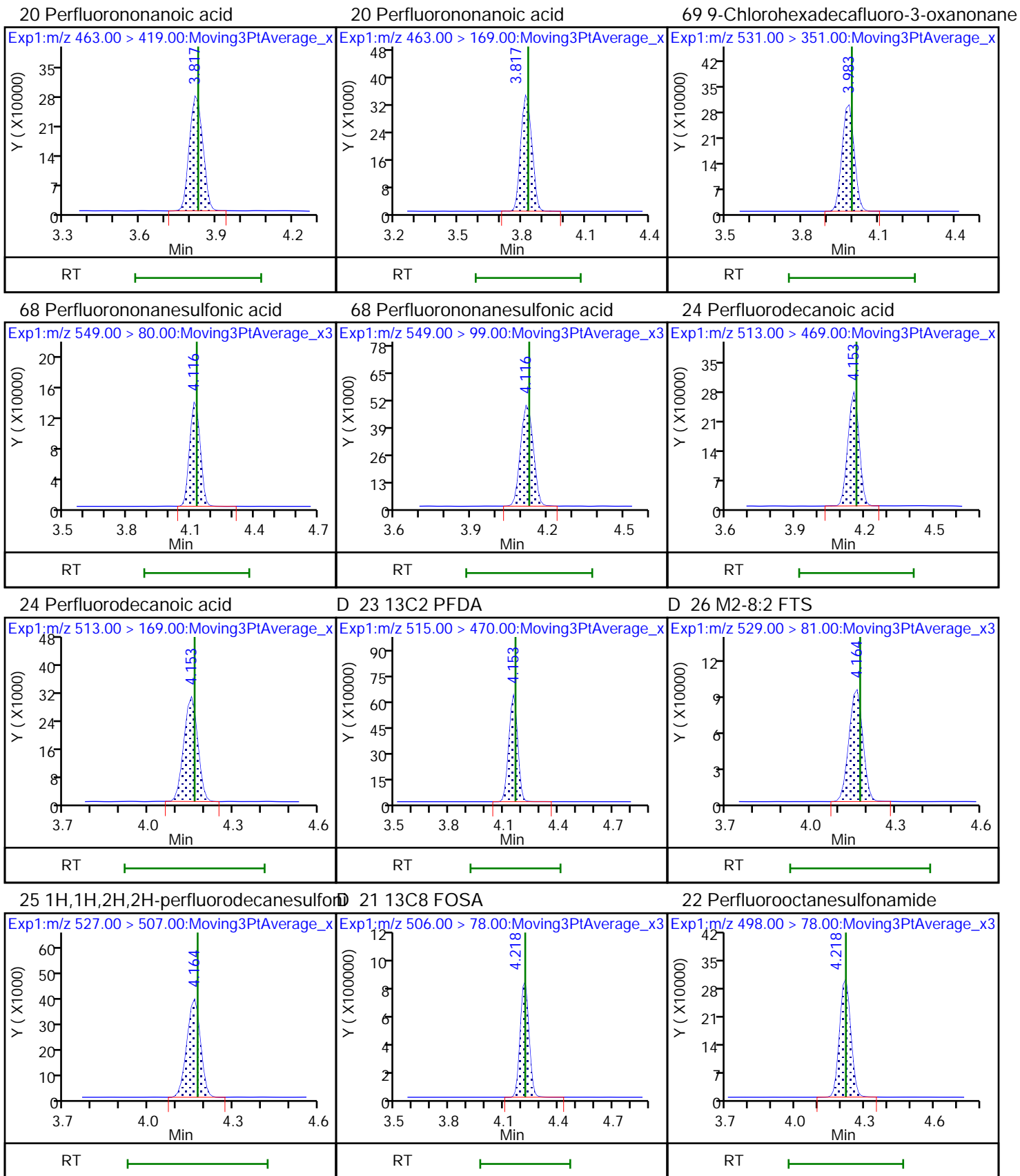


17 Perfluorooctanesulfonic acid (M)

17 Perfluorooctanesulfonic acid (M)

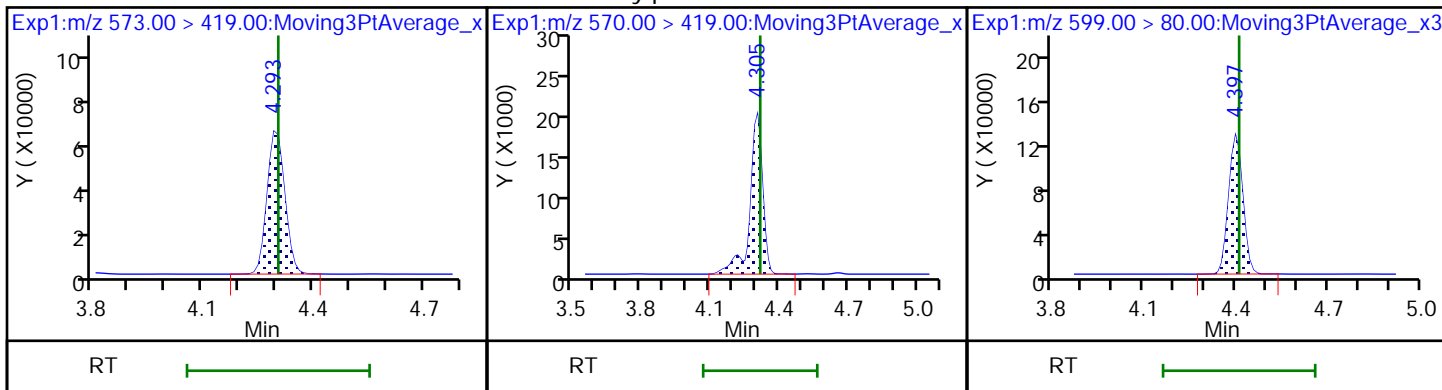
D 19 13C5 PFNA





D 27 d3-NMeFOSAA

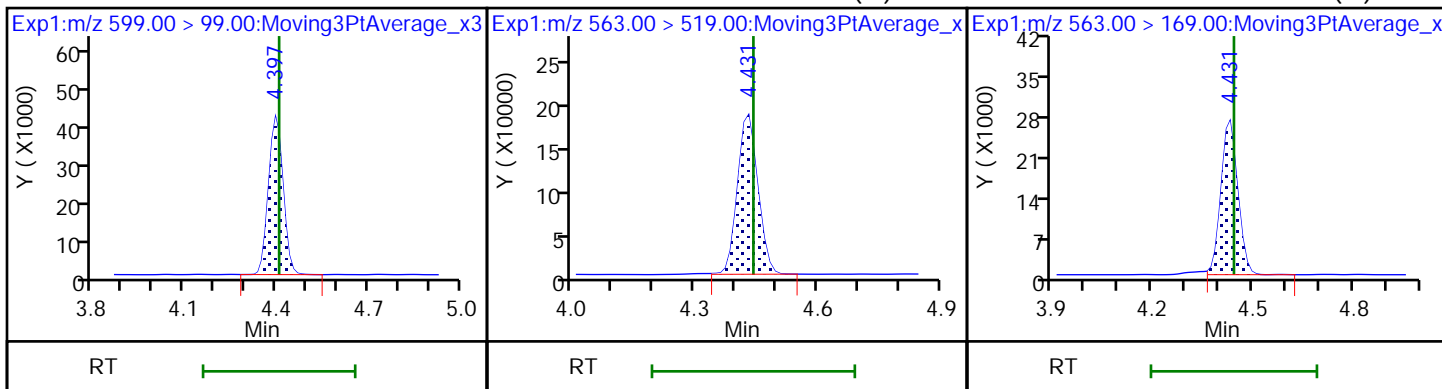
28 N-methylperfluorooctanesulfonamido 29 Perfluorodecanesulfonic acid



29 Perfluorodecanesulfonic acid

31 Perfluoroundecanoic acid (M)

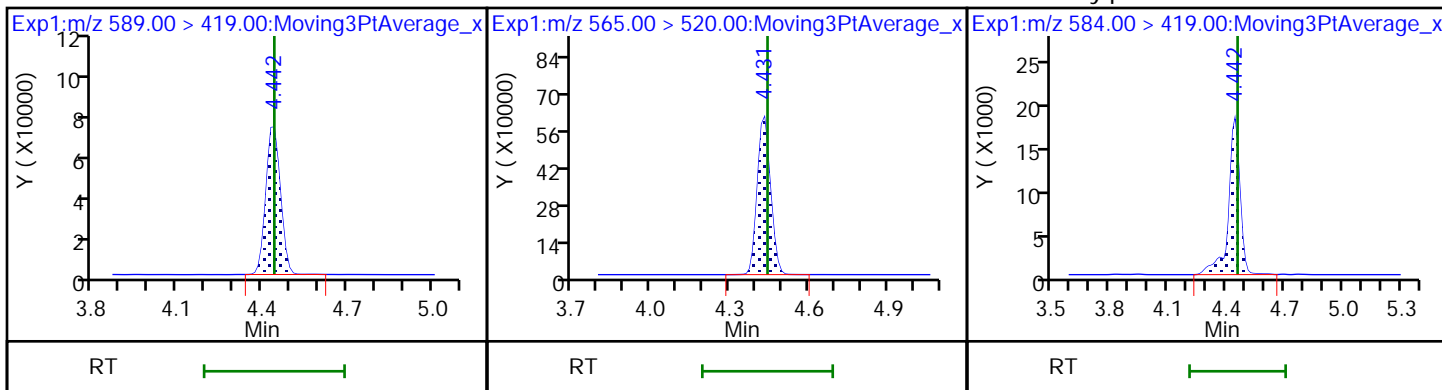
31 Perfluoroundecanoic acid (M)



D 32 d5-NEtFOSAA

D 30 13C2 PFUnA

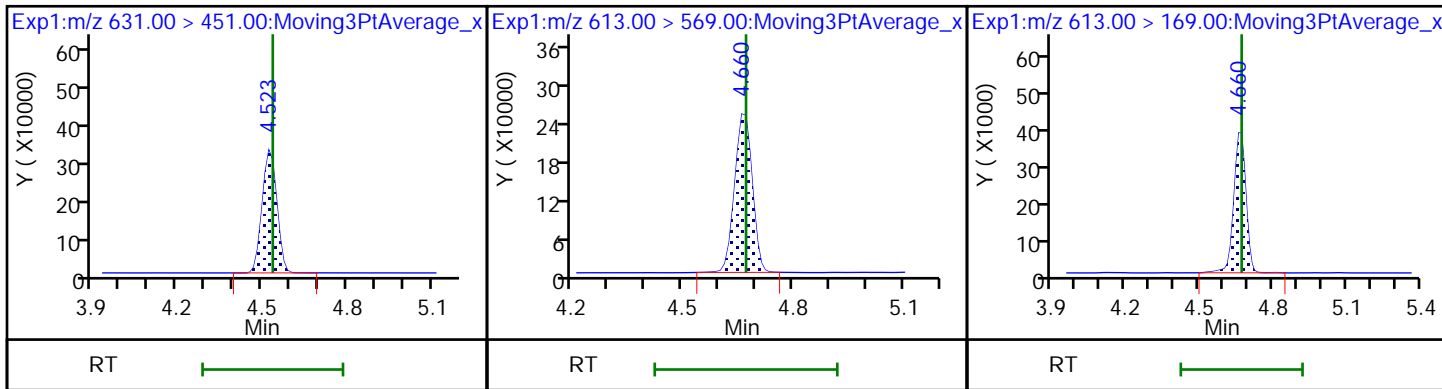
33 N-ethylperfluorooctanesulfonamido



66 11-Chloroeicosafuoro-3-oxaundecan

37 Perfluorododecanoic acid

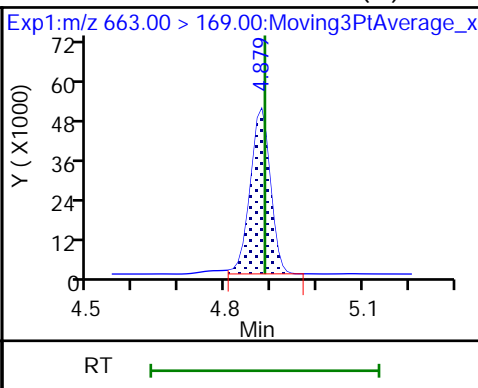
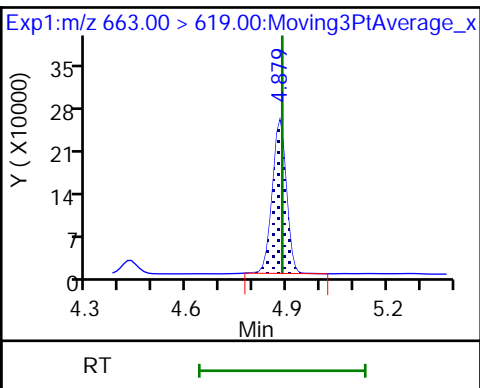
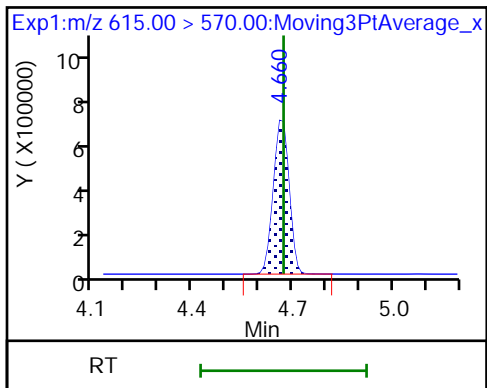
37 Perfluorododecanoic acid



D 36 13C2 PFDaA

41 Perfluorotridecanoic acid

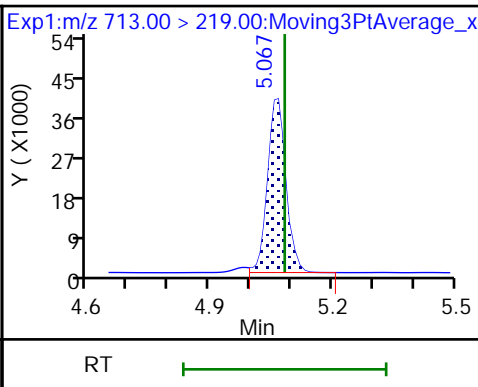
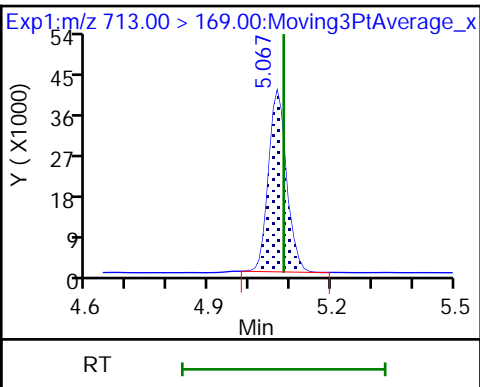
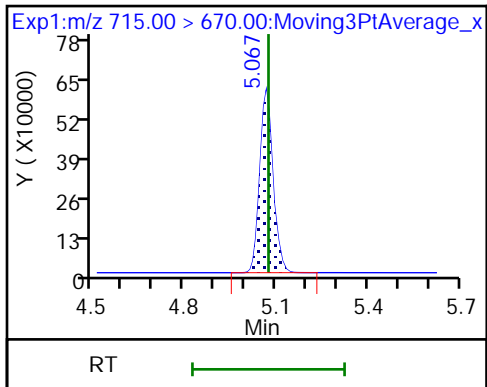
41 Perfluorotridecanoic acid (M)



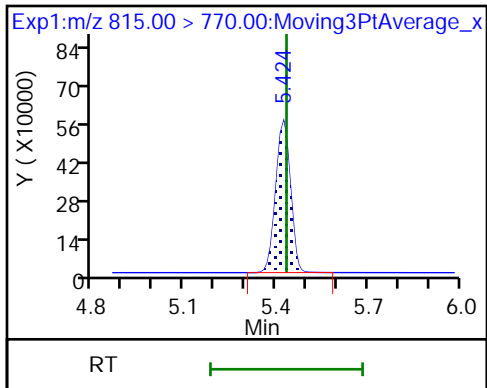
D 43 13C2 PFTeDA

42 Perfluorotetradecanoic acid

42 Perfluorotetradecanoic acid



D 44 13C2 PFHxDA



Eurofins TestAmerica, Burlington

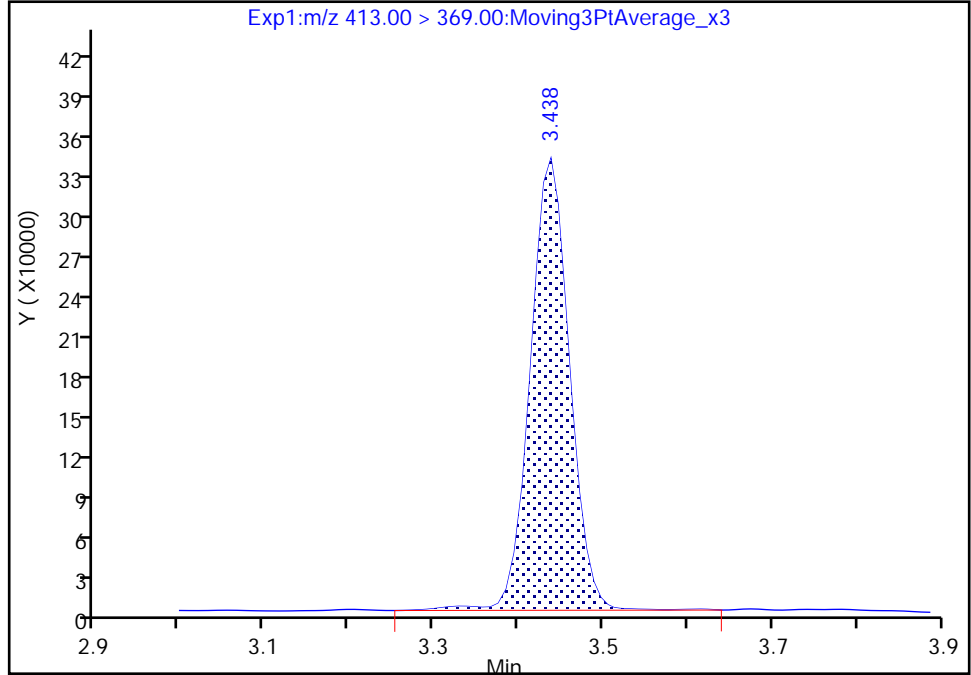
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Injection Date: 24-Sep-2019 19:12:59 Instrument ID: LC812
Lims ID: ICV
Client ID:
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 17
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

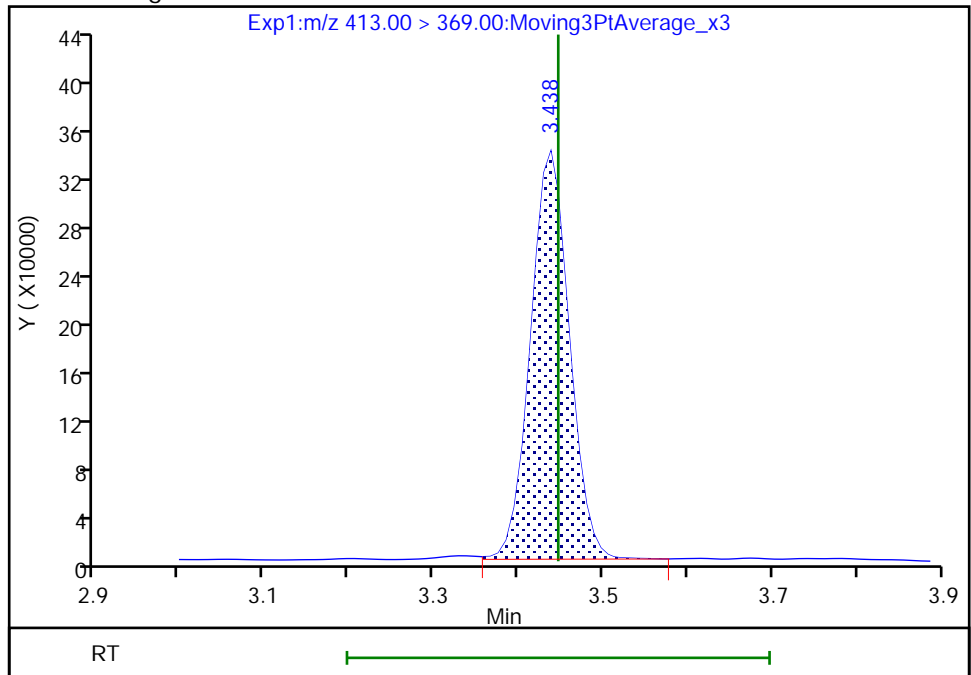
RT: 3.44
Area: 1078634
Amount: 1.150604
Amount Units: ng/ml

Processing Integration Results



RT: 3.44
Area: 1065289
Amount: 1.136096
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 25-Sep-2019 11:37:29
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration
Page 398 of 599

Eurofins TestAmerica, Burlington

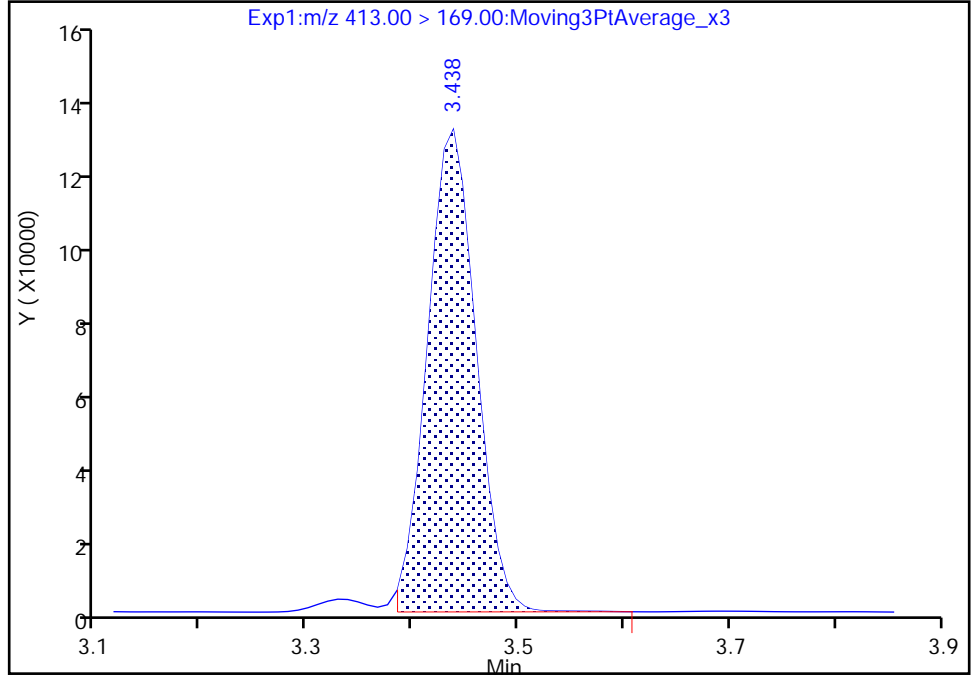
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Injection Date: 24-Sep-2019 19:12:59 Instrument ID: LC812
Lims ID: ICV
Client ID:
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 17
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

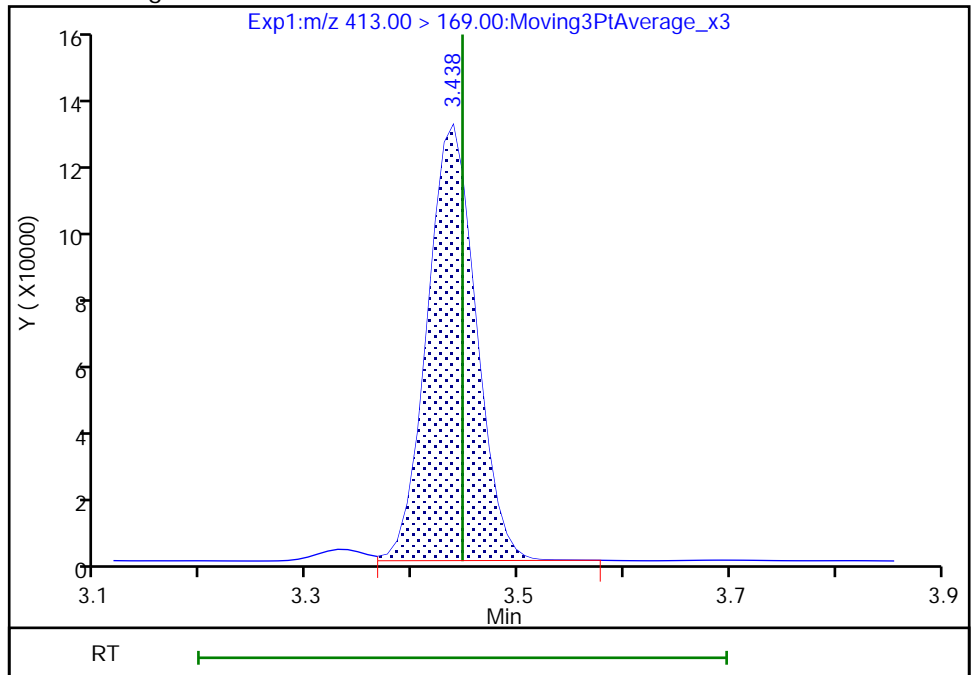
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Amount: 1.150604
Amount Units: ng/ml

Processing Integration Results



RT: 3.44
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Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 25-Sep-2019 11:37:32

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

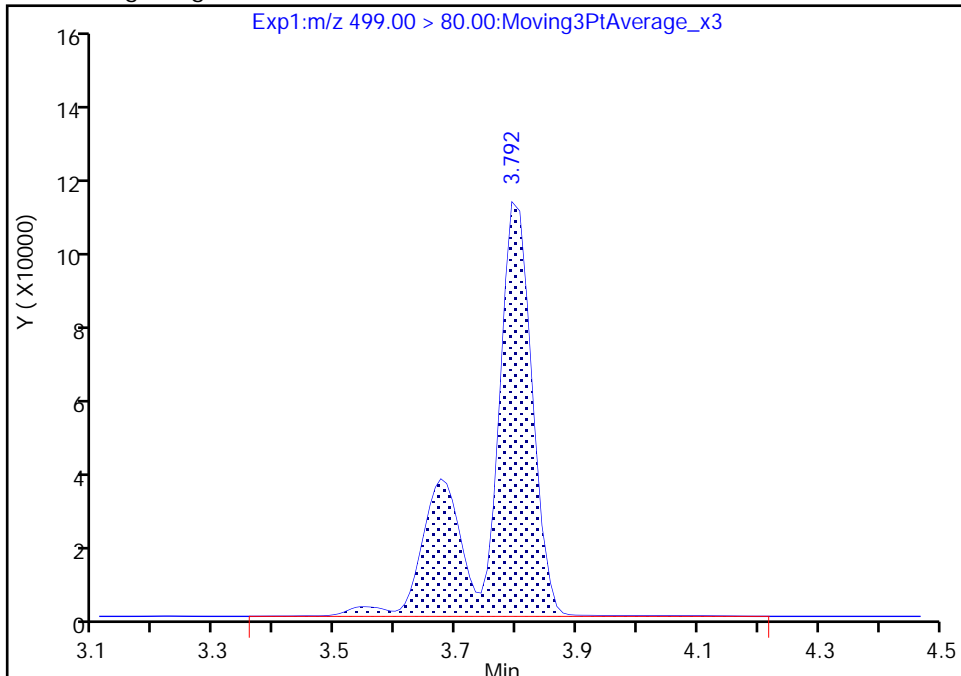
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Injection Date: 24-Sep-2019 19:12:59 Instrument ID: LC812
Lims ID: ICV
Client ID:
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 17
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

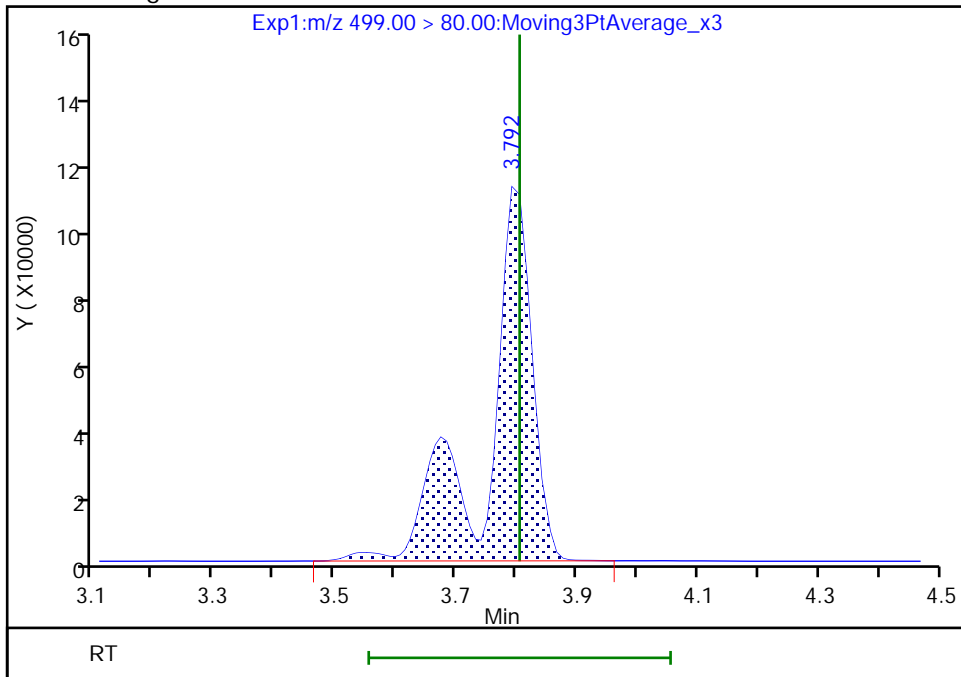
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Area: 581894
Amount: 1.252806
Amount Units: ng/ml

Processing Integration Results



RT: 3.79
Area: 577266
Amount: 1.242842
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 25-Sep-2019 11:37:44
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

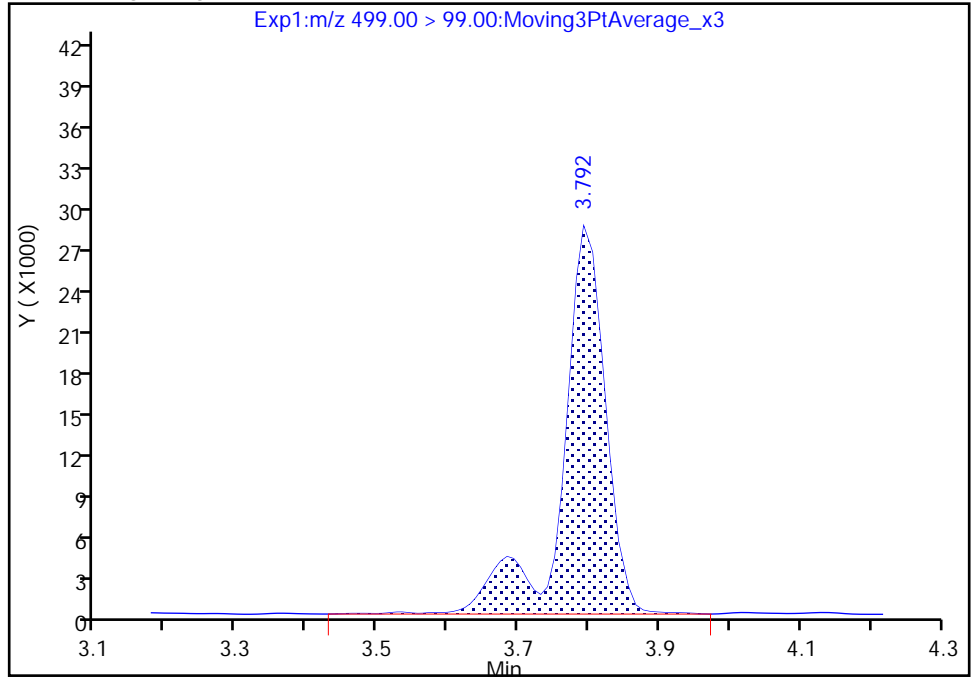
Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA017.d
Injection Date: 24-Sep-2019 19:12:59 Instrument ID: LC812
Lims ID: ICV
Client ID:
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 17
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

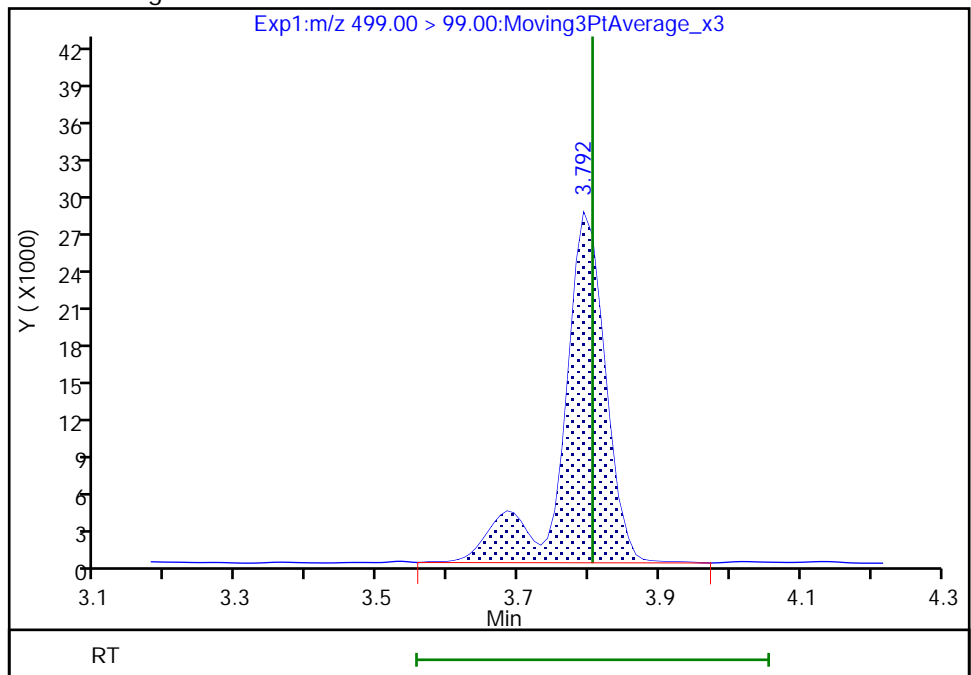
RT: 3.79
Area: 119283
Amount: 1.252806
Amount Units: ng/ml

Processing Integration Results



RT: 3.79
Area: 118452
Amount: 1.242842
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 25-Sep-2019 11:37:49

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

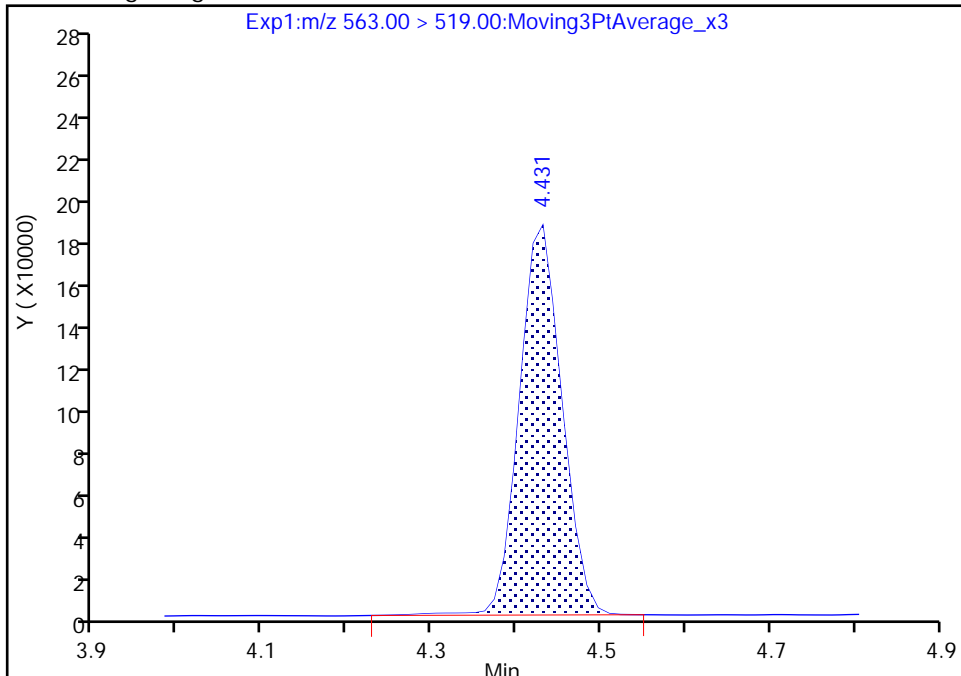
Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA017.d
Injection Date: 24-Sep-2019 19:12:59 Instrument ID: LC812
Lims ID: ICV
Client ID:
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 17
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 1

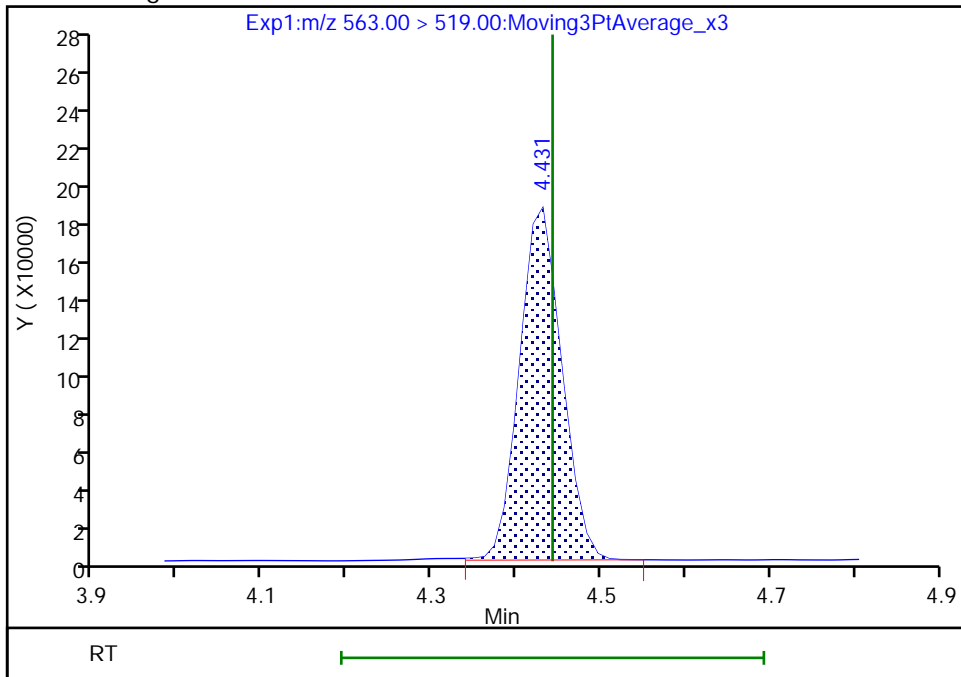
RT: 4.43
Area: 640930
Amount: 0.912825
Amount Units: ng/ml

Processing Integration Results



RT: 4.43
Area: 637495
Amount: 0.907933
Amount Units: ng/ml

Manual Integration Results



Eurofins TestAmerica, Burlington

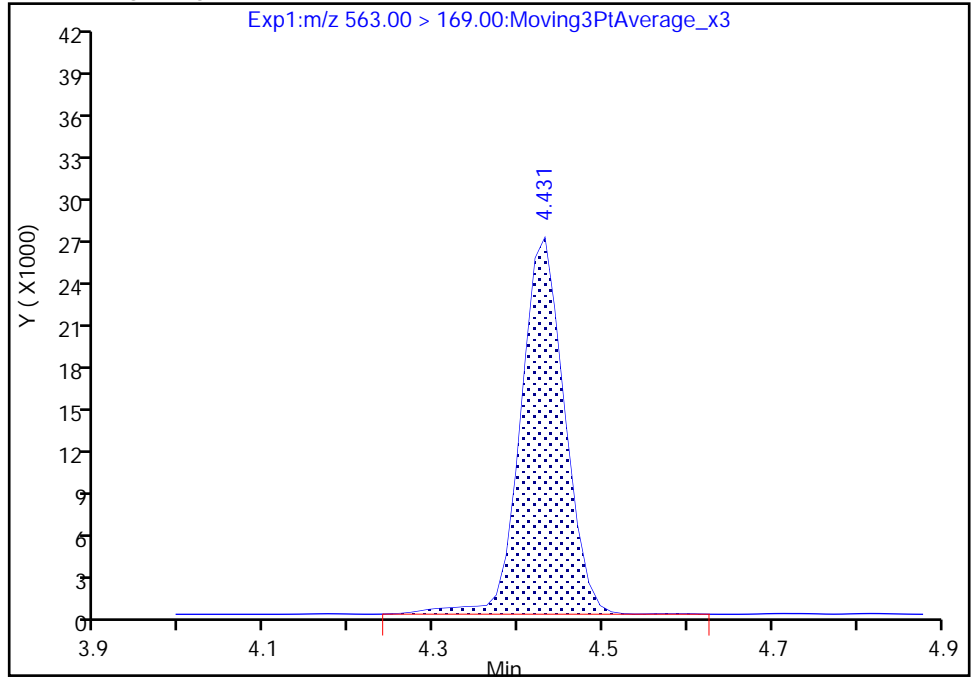
Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA017.d
Injection Date: 24-Sep-2019 19:12:59 Instrument ID: LC812
Lims ID: ICV
Client ID:
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 17
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 2

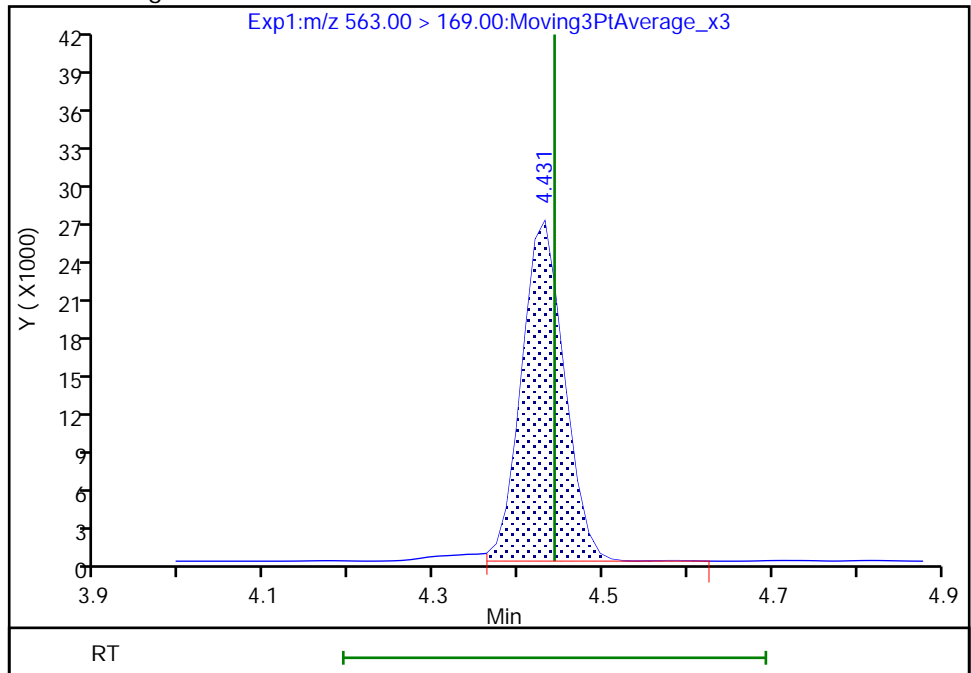
RT: 4.43
Area: 96543
Amount: 0.912825
Amount Units: ng/ml

Processing Integration Results



RT: 4.43
Area: 94225
Amount: 0.907933
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 25-Sep-2019 11:38:16

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

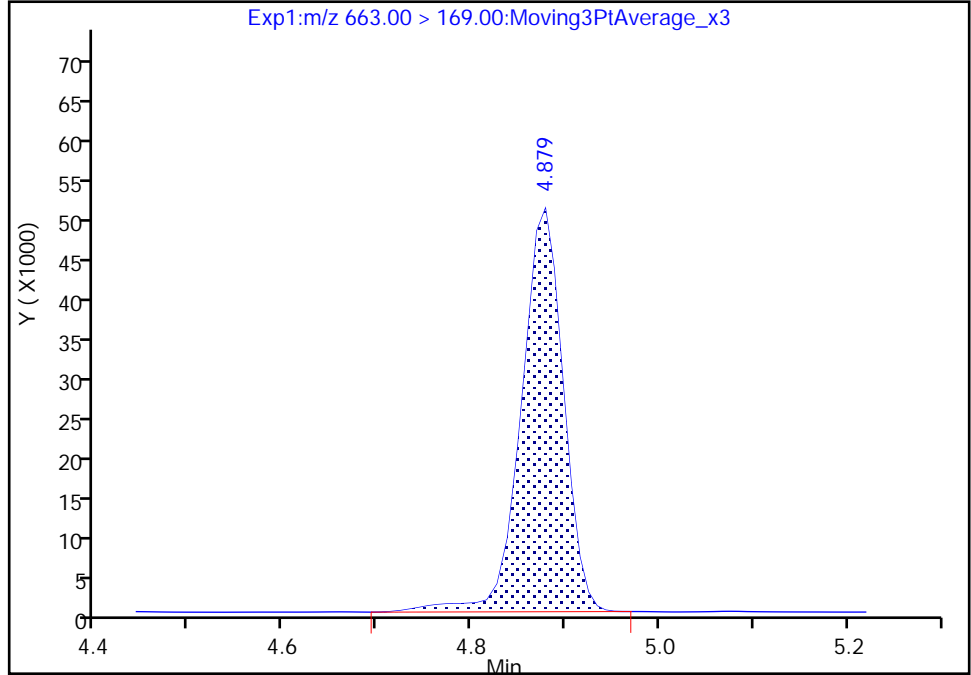
Data File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA017.d
Injection Date: 24-Sep-2019 19:12:59 Instrument ID: LC812
Lims ID: ICV
Client ID:
Operator ID: lc812tech ALS Bottle#: 9 Worklist Smp#: 17
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

41 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 2

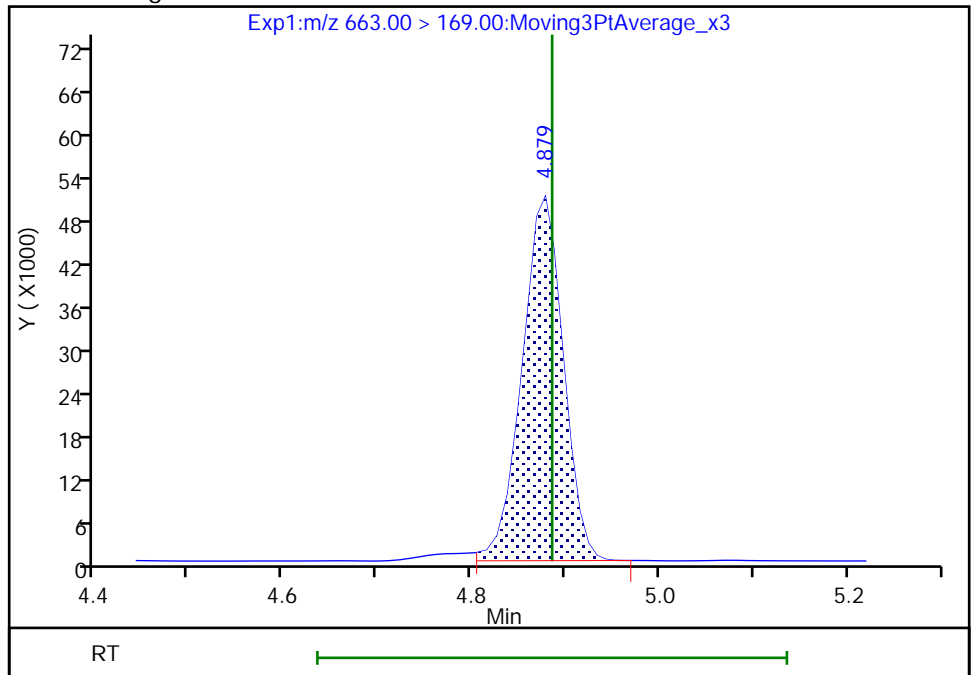
RT: 4.88
Area: 157705
Amount: 1.178458
Amount Units: ng/ml

Processing Integration Results



RT: 4.88
Area: 153730
Amount: 1.178458
Amount Units: ng/ml

Manual Integration Results



Reviewer: chirgwinb, 25-Sep-2019 11:38:32
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1
 SDG No.: _____
 Lab Sample ID: CCVL 200-148770/5 Calibration Date: 10/22/2019 15:30
 Instrument ID: LC812 Calib Start Date: 09/24/2019 18:15
 GC Column: C-18 ID: 4.60 (mm) Calib End Date: 09/24/2019 18:56
 Lab File ID: SC102219A005.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.8879	1.044		58.8	50.0	17.6	50.0
Perfluoropentanoic acid (PFPeA)	L1ID		1.150		50.4	50.0	0.8	50.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.363	1.528		49.6	44.2	12.2	50.0
1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2)	AveID	2.000	1.943		454	467	-2.8	50.0
Perfluorohexanoic acid (PFHxA)	AveID	0.9852	1.275		64.7	50.0	29.4	50.0
Perfluoropentanesulfonic acid	AveID	1.177	1.358		54.1	46.9	15.3	50.0
HFPO-DA	AveID	2.861	3.638		63.6	50.0	27.1	50.0
Perfluorohexanesulfonic acid (PFHxS)	L1ID		1.246		47.0	45.5	3.3	50.0
Perfluoroheptanoic acid (PFHpA)	AveID	0.8934	1.063		59.5	50.0	19.0	50.0
DONA	AveID	4.089	4.601		53.0	47.1	12.5	50.0
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	AveID	1.259	1.174		442	474	-6.8	50.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	1.108	1.303		56.0	47.6	17.6	50.0
Perfluorooctanoic acid (PFOA)	L1ID		1.293		47.5	50.0	-5.0	50.0
Perfluorooctanesulfonic acid (PFOS)	AveID	0.9041	0.9917		50.9	46.4	9.7	50.0
Perfluorononanoic acid (PFNA)	AveID	0.9539	1.181		61.9	50.0	23.8	50.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	1.607	1.710		49.6	46.6	6.4	50.0
Perfluorononanesulfonic acid	AveID	0.7809	0.8303		51.0	48.0	6.3	50.0
Perfluorodecanoic acid (PFDA)	AveID	0.9250	1.146		61.9	50.0	23.8	50.0
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	L1ID		0.7439		448	479	-6.6	50.0
Perfluorooctanesulfonamide (PFOSA)	AveID	0.9175	0.9091		49.5	50.0	-0.9	50.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	AveID	0.7125	0.7270		510	500	2.0	50.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.6033	0.6950		55.5	48.2	15.2	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.8368	0.9177		54.8	50.0	9.7	50.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	L2ID		0.5981		529	500	5.8	50.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.999	2.051		48.3	47.1	2.6	50.0
Perfluorododecanoic acid (PFDoA)	AveID	0.8845	0.999		56.5	50.0	12.9	50.0
10:2 FTS	AveID	0.4268	0.4416		499	482	3.5	50.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.2594	0.3253		60.7	48.4	25.4	50.0
Perfluorotridecanoic acid (PFTriA)	AveID	0.7157	0.8198		57.3	50.0	14.5	50.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1455	0.1764		60.6	50.0	21.2	50.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1
 SDG No.: _____
 Lab Sample ID: CCVL 200-148770/5 Calibration Date: 10/22/2019 15:30
 Instrument ID: LC812 Calib Start Date: 09/24/2019 18:15
 GC Column: C-18 ID: 4.60 (mm) Calib End Date: 09/24/2019 18:56
 Lab File ID: SC102219A005.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		1.361		43.7	50.0	-12.6	50.0
Perfluoro-n-octadecanoic acid (PFODA)	AveID	0.7383	0.7463		50.5	50.0	1.1	50.0
13C4 PFBA	Ave	1.200	1.199		2500	2500	-0.0	50.0
13C5 PFPeA	Ave	0.9493	0.9647		2540	2500	1.6	50.0
M2-4:2 FTS	Ave	0.0981	0.0880		2090	2340	-10.3	50.0
13C2 PFHxA	Ave	1.009	1.031		2560	2500	2.2	50.0
13C3 HFPO-DA	Ave	0.0504	0.0475		2360	2500	-5.7	50.0
18O2 PFHxS	Ave	0.7528	0.7764		2440	2370	3.1	50.0
13C4 PFHpA	Ave	0.9768	1.029		2630	2500	5.4	50.0
M2-6:2 FTS	Ave	0.1223	0.1389		2700	2380	13.6	50.0
13C4 PFOA	Ave	0.9930	1.107		2790	2500	11.5	50.0
13C4 PFOS	Ave	0.5122	0.5525		2580	2390	7.9	50.0
13C5 PFNA	Ave	0.8786	0.9307		2650	2500	5.9	50.0
13C2 PFDA	Ave	0.8752	0.9539		2720	2500	9.0	50.0
M2-8:2 FTS	Ave	0.1336	0.1495		2680	2400	12.0	50.0
13C8 FOSA	Ave	0.9945	0.9716		2440	2500	-2.3	50.0
d3-NMeFOSAA	Ave	0.0848	0.0925		2720	2500	9.0	50.0
13C2 PFUnA	Ave	0.7839	0.8653		2760	2500	10.4	50.0
d5-NEtFOSAA	Ave	0.0919	0.1047		2850	2500	13.9	50.0
13C2 PFDoA	Ave	0.8441	0.9789		2900	2500	16.0	50.0
13C2 PFTeDA	Ave	0.7567	0.8530		2820	2500	12.7	50.0
13C2 PFHxDA	Ave	0.7599	0.9230		3040	2500	21.5	50.0

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38368.b\SC102219A005.d
 Lims ID: CCVL
 Client ID:
 Sample Type: CCVL
 Inject. Date: 22-Oct-2019 15:30:22 ALS Bottle#: 2 Worklist Smp#: 5
 Injection Vol: 20.0 ul Dil. Factor: 1.0000
 Sample Info: CCVL
 Misc. Info.: 200-0038368-005 Plate: 1 Rack: 2
 Operator ID: lc812tech Instrument ID: LC812
 Sublist: chrom-PFC_LC812*sub6
 Method: \\ChromNA\Burlington\ChromData\LC812\20191022-38368.b\PFC_LC812.m
 Limit Group: LC_PFC_ICAL
 Last Update: 28-Oct-2019 12:07:52 Calib Date: 24-Sep-2019 18:56:37
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA015.d
 Column 1 : C-18 (4.60 mm) Det: EXP1
 Process Host: CTX1017

First Level Reviewer: murrayjw Date: 22-Oct-2019 16:05:22

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										M
217.00 > 172.00	1.935	1.935	0.0	0.566	3725881	2.50		99.9	17270	M
2 Perfluorobutanoic acid										
212.90 > 169.00	1.935	1.935	0.0	1.000	77803	0.0588		118	18.8	
D 3 13C5 PFPeA										
267.90 > 223.00	2.285	2.284	0.001	0.668	2997838	2.54		102	4983	
4 Perfluoropentanoic acid										M
262.90 > 219.00	2.285	2.284	0.001	1.000	68977	0.0504		101	5.7	M
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.312	2.312	0.0	0.759	65192	0.0496	Target=2.04	112	81.0	
298.90 > 99.00	2.312	2.312	0.0	0.759	31931		2.04(1.02-3.05)		32.6	
D 60 M2-4:2 FTS										
329.00 > 81.00	2.623	2.623	0.0	0.767	255301	2.09		89.7	216	
61 1H,1H,2H,2H-perfluorohexanesulfoni										
327.00 > 307.00	2.623	2.635	-0.012	1.000	99206	0.4537		97.2	1242	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.673	2.660	0.013	1.005	81729	0.0647	Target=12.90	129	32.5	
313.00 > 119.00	2.661	2.660	0.001	1.000	6475		12.62(6.45-19.36)		11.5	
D 7 13C2 PFHxA										
315.00 > 270.00	2.661	2.660	0.001	0.778	3205243	2.56		102	10872	
70 Perfluoropentanesulfonic acid										
349.00 > 80.00	2.673	2.673	0.0	0.878	61472	0.0541	Target=3.01	115	306	
349.00 > 99.00	2.673	2.673	0.0	0.878	21747		2.83(1.51-4.52)		101	
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.784	2.784	0.0	1.000	10731	0.0636		127	6.5	
D 64 13C3 HFPO-DA										
332.10 > 287.00	2.784	2.784	0.0	0.814	147503	2.36		94.3	1694	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.044	3.044	0.0	1.000	54718	0.0470	Target=3.78	103	99.5	M
399.00 > 99.00	3.044	3.044	0.0	1.000	14649		3.74(1.89-5.67)		30.7	M
D 11 18O2 PFHxS										
403.00 > 84.00	3.044	3.044	0.0	0.890	2282515	2.44		103	8683	
D 9 13C4 PFHpA										
367.00 > 322.00	3.055	3.055	0.0	0.893	3198145	2.63		105	7776	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.055	3.055	0.0	1.000	67971	0.0595	Target=3.54	119	12.5	
363.00 > 169.00	3.055	3.055	0.0	1.000	19480		3.49(1.77-5.31)		56.4	
77 DONA										
377.00 > 251.00	3.090	3.089	0.001	0.817	148820	0.0530	Target=2.56	113	482	
377.00 > 85.00	3.090	3.089	0.001	0.817	53724		2.77(1.28-3.84)		204	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.413	3.413	0.0	0.902	42595	0.0560	Target=5.80	118	347	
449.00 > 99.00	3.413	3.413	0.0	0.902	7578		5.62(2.90-8.71)		82.7	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.413	3.413	0.0	1.000	96072	0.4417		93.2	838	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.413	3.413	0.0	0.998	410160	2.70		114	1313	
* 62 13C2 PFOA										
415.00 > 370.00	3.422	3.421	0.001		3107661	2.50			5338	
D 14 13C4 PFOA										
417.00 > 372.00	3.422	3.421	0.001	1.000	3441262	2.79		112	6075	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.422	3.421	0.001	1.000	88985	0.0475	Target=2.61	95.0	26.6	M
413.00 > 169.00	3.422	3.421	0.001	1.000	34508		2.58(1.30-3.91)		145	
D 18 13C4 PFOS										
503.00 > 80.00	3.783	3.782	0.001	1.105	1641357	2.58		108	6855	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.783	3.782	0.001	1.000	31601	0.0509	Target=4.93	110	22.8	M
499.00 > 99.00	3.783	3.782	0.001	1.000	6313		5.01(2.47-7.40)		33.8	M
D 19 13C5 PFNA										
468.00 > 423.00	3.805	3.805	0.0	1.112	2892307	2.65		106	7072	
20 Perfluorononanoic acid										
463.00 > 419.00	3.805	3.805	0.0	1.000	68331	0.0619	Target=7.89	124	21.8	
463.00 > 169.00	3.805	3.805	0.0	1.000	8793		7.77(3.95-11.84)		148	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.973	3.972	0.001	1.050	54731	0.0496		106	479	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.117	4.116	0.001	1.088	27369	0.0510	Target=2.60	106	353	
549.00 > 99.00	4.117	4.116	0.001	1.088	10846		2.52(1.30-3.90)		58.9	
24 Perfluorodecanoic acid										
513.00 > 469.00	4.141	4.141	0.0	1.000	67917	0.0619	Target=8.57	124	29.0	
513.00 > 169.00	4.141	4.141	0.0	1.000	6679		10.17(4.29-12.86)		68.6	
D 23 13C2 PFDA										
515.00 > 470.00	4.141	4.141	0.0	1.210	2964451	2.72		109	5640	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
25 1H,1H,2H,2H-perfluorodecanesulfoni	527.00 > 507.00	4.153	4.153	0.0	1.000	66240	0.4476	93.4	1118	
D 26 M2-8:2 FTS	529.00 > 81.00	4.153	4.153	0.0	1.214	445209	2.68	112	1660	
22 Perfluorooctanesulfonamide	498.00 > 78.00	4.218	4.218	0.0	1.000	54901	0.0495	99.1	355	
D 21 13C8 FOSA	506.00 > 78.00	4.218	4.218	0.0	1.233	3019425	2.44	97.7	8879	
D 27 d3-NMeFOSAA	573.00 > 419.00	4.294	4.293	0.001	1.255	287314	2.72	109	2512	
28 N-methylperfluorooctanesulfonamido	570.00 > 419.00	4.294	4.293	0.001	1.000	41776	0.5102	102	84.3	
29 Perfluorodecanesulfonic acid	599.00 > 80.00	4.397	4.397	0.0	1.163	23004	0.0555	Target=2.56	115	118
	599.00 > 99.00	4.397	4.397	0.0	1.163	8963		2.57(1.28-3.84)		92.0
31 Perfluoroundecanoic acid	563.00 > 519.00	4.420	4.420	0.0	1.000	49357	0.0548	Target=6.97	110	40.2
	563.00 > 169.00	4.420	4.420	0.0	1.000	8550		5.77(3.48-10.45)		92.7
D 30 13C2 PFUnA	565.00 > 520.00	4.420	4.420	0.0	1.292	2689044	2.76	110	8217	
D 32 d5-NEtFOSAA	589.00 > 419.00	4.431	4.431	0.0	1.295	325321	2.85	114	2983	
33 N-ethylperfluorooctanesulfonamidoa	584.00 > 419.00	4.431	4.431	0.0	1.000	38917	0.5290	106	340	M
66 11-Chloroeicosafuoro-3-oxaundecan	631.00 > 451.00	4.524	4.523	0.001	1.196	66340	0.0483	103	639	
37 Perfluorododecanoic acid	613.00 > 569.00	4.661	4.660	0.0	1.000	60779	0.0565	Target=7.06	113	8.8
	613.00 > 169.00	4.661	4.660	0.0	1.000	9127		6.66(3.53-10.59)		63.5
D 36 13C2 PFDaA	615.00 > 570.00	4.661	4.660	0.0	1.362	3042160	2.90	116	9555	
74 1H,1H,2H,2H-perfluorododecanesulfo	627.00 > 607.00	4.683	4.682	0.001	1.128	39568	0.4988	103	853	
75 Perfluorododecanesulfonic acid (PF	699.00 > 80.00	4.828	4.838	-0.010	1.276	10812	0.0607	Target=0.47	125	18.3
	699.00 > 99.00	4.828	4.838	-0.010	1.276	19387		0.56(0.23-0.70)		298
41 Perfluorotridecanoic acid	663.00 > 619.00	4.870	4.869	0.001	1.045	49877	0.0573	Target=4.87	115	9.0
	663.00 > 169.00	4.870	4.869	0.001	1.045	11757		4.24(2.43-7.30)		75.0
42 Perfluorotetradecanoic acid	713.00 > 169.00	5.067	5.058	0.009	1.002	9352	0.0606	Target=1.09	121	58.1
	713.00 > 219.00	5.058	5.058	0.0	1.000	8905		1.05(0.54-1.63)		83.6
D 43 13C2 PFTeDA	715.00 > 670.00	5.058	5.058	0.0	1.478	2650785	2.82	113	10328	
D 44 13C2 PFHxDA	815.00 > 770.00	5.414	5.413	0.001	1.582	2868417	3.04	121	10370	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.424	5.424	0.0	1.002	78093	0.0437	Target=4.33	87.4	14.7	
813.00 > 169.00	5.414	5.424	-0.010	1.000	19699		3.96(2.16-6.49)		132	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.773	5.781	-0.008	1.066	42813	0.0505	Target=4.09	101	11.6	
913.00 > 169.00	5.773	5.781	-0.008	1.066	11333		3.78(2.05-6.14)		215	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

PFAS32NCLOQV_00001

Amount Added: 100.00

Units: uL

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38368.b\SC102219A005.d

Injection Date: 22-Oct-2019 15:30:22

Instrument ID: LC812

Lims ID: CCVL

Client ID:

Operator ID: lc812tech

ALS Bottle#: 2

Worklist Smp#: 5

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

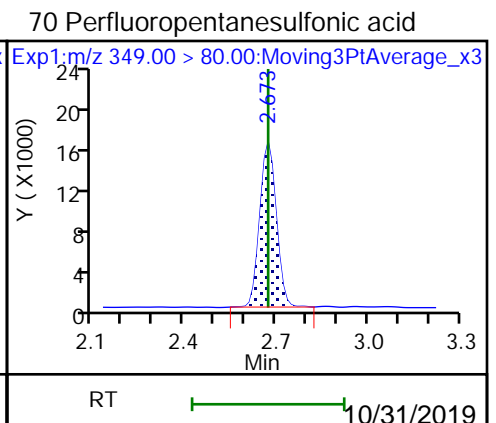
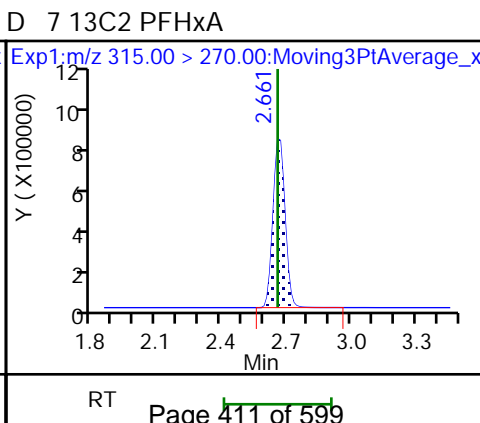
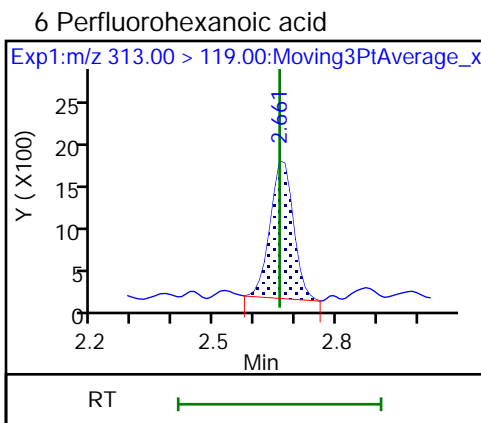
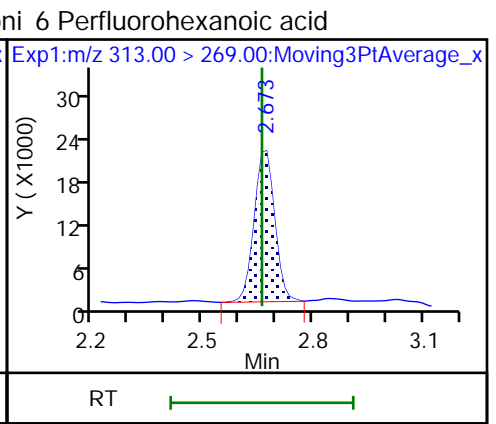
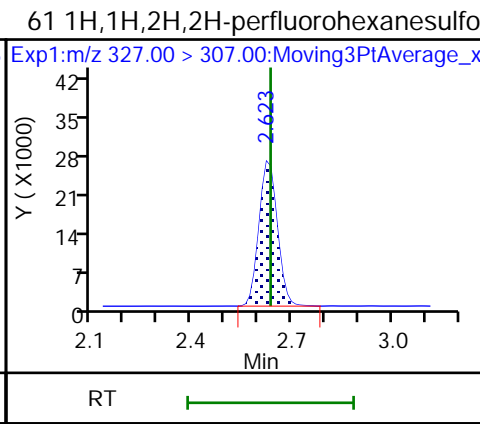
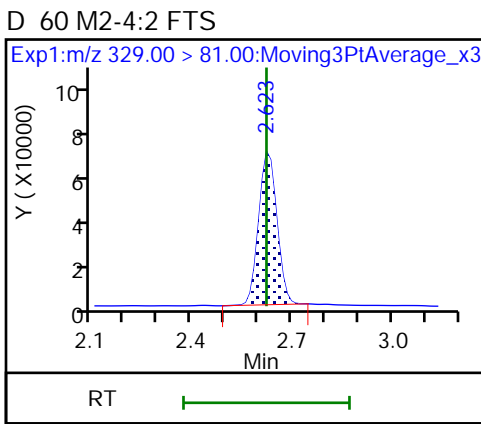
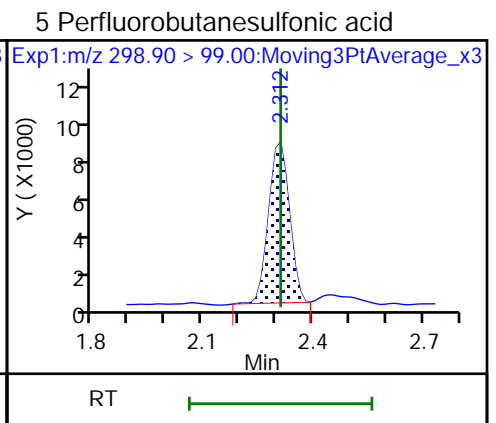
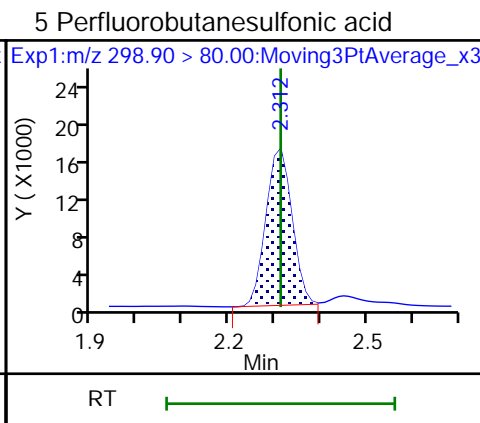
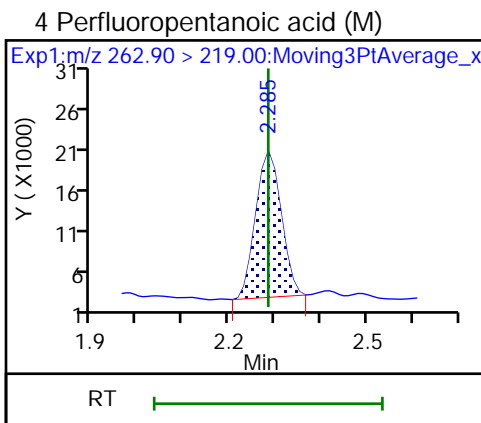
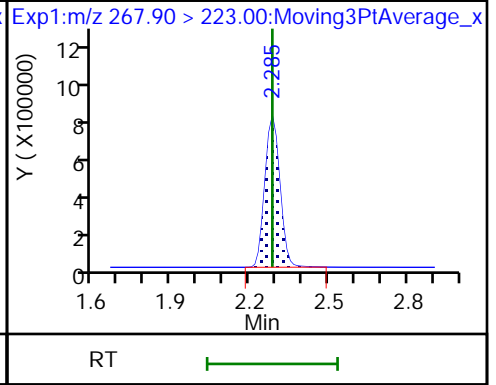
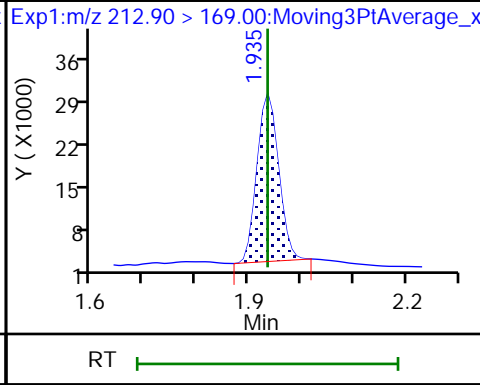
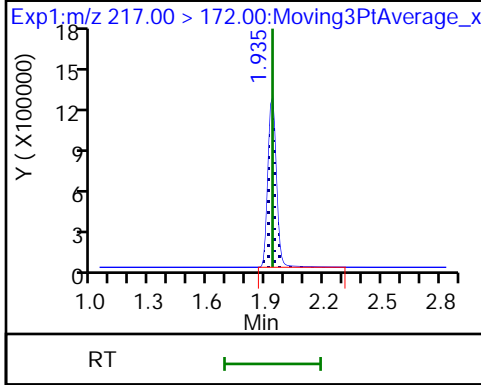
Method: PFC_LC812

Limit Group: LC_PFC_ICAL

D 1 13C4 PFBA (M)

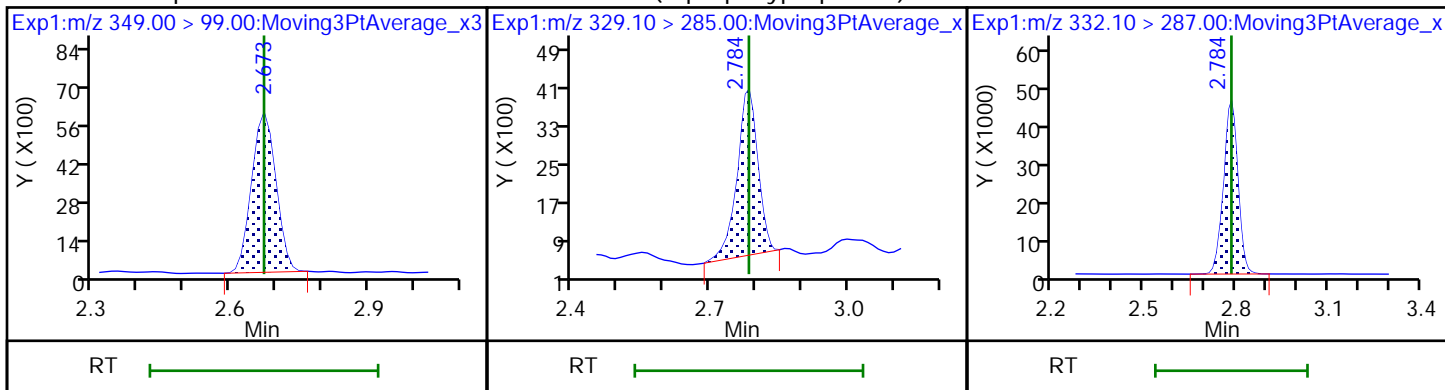
2 Perfluorobutanoic acid

D 3 13C5 PFPeA



70 Perfluoropentanesulfonic acid

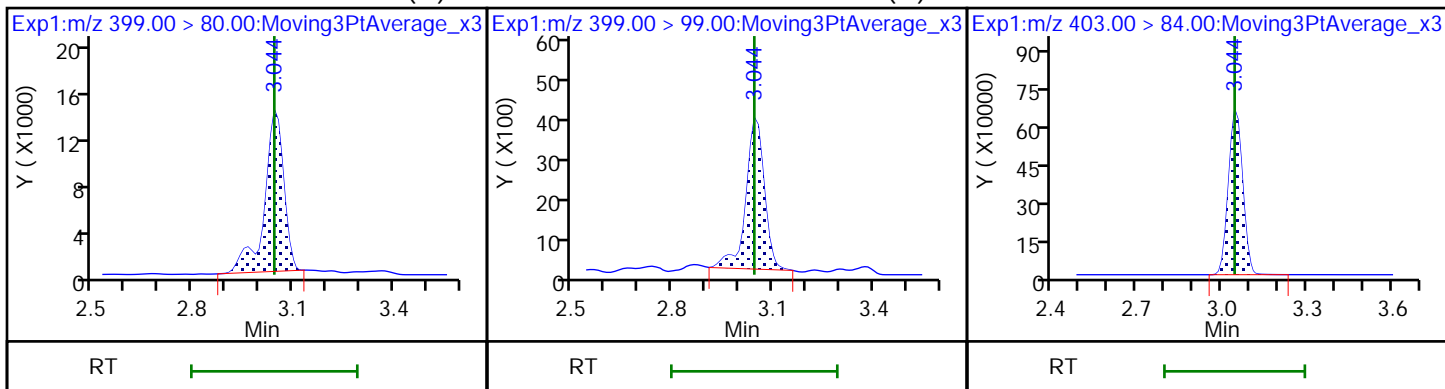
67 Perfluoro(2-propoxypropanoic) acid D 64 13C3 HFPO-DA



8 Perfluorohexanesulfonic acid (M)

8 Perfluorohexanesulfonic acid (M)

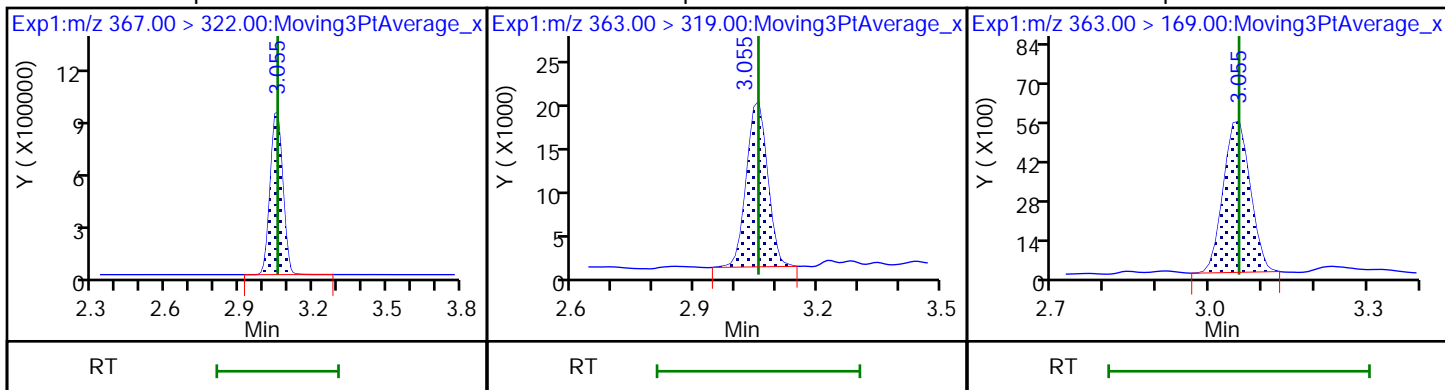
D 11 18O2 PFHxS



D 9 13C4 PFHpA

10 Perfluoroheptanoic acid

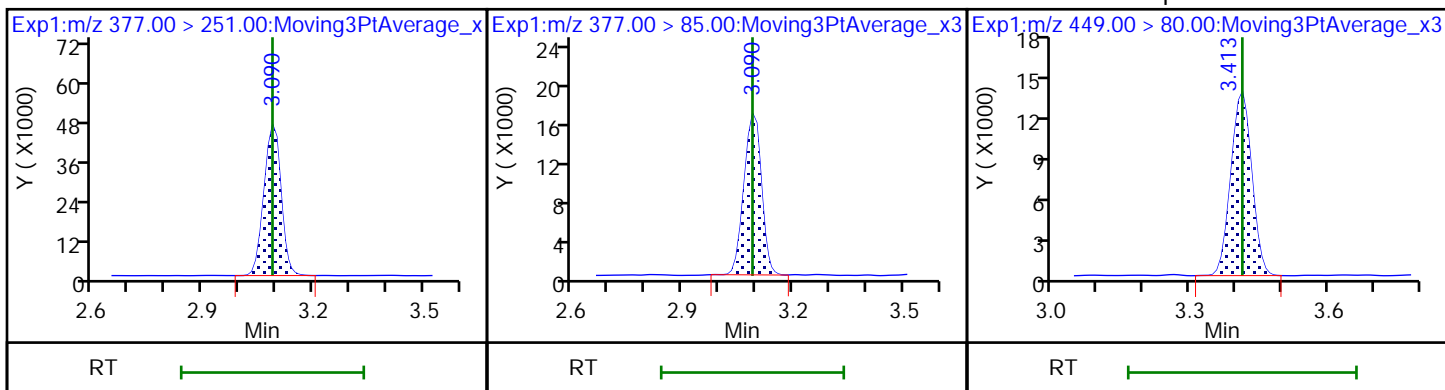
10 Perfluoroheptanoic acid



77 DONA

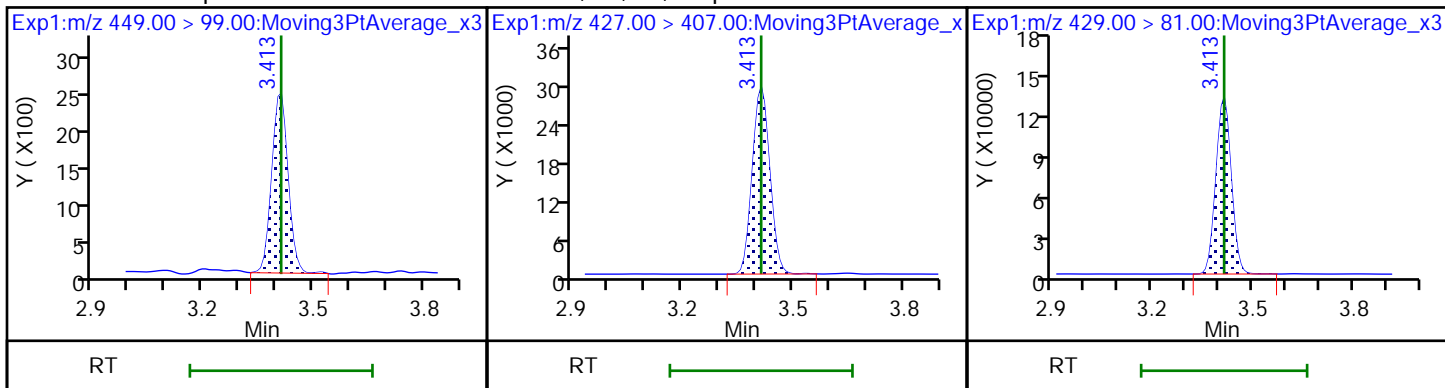
77 DONA

16 Perfluoroheptanesulfonic acid



16 Perfluoroheptanesulfonic acid

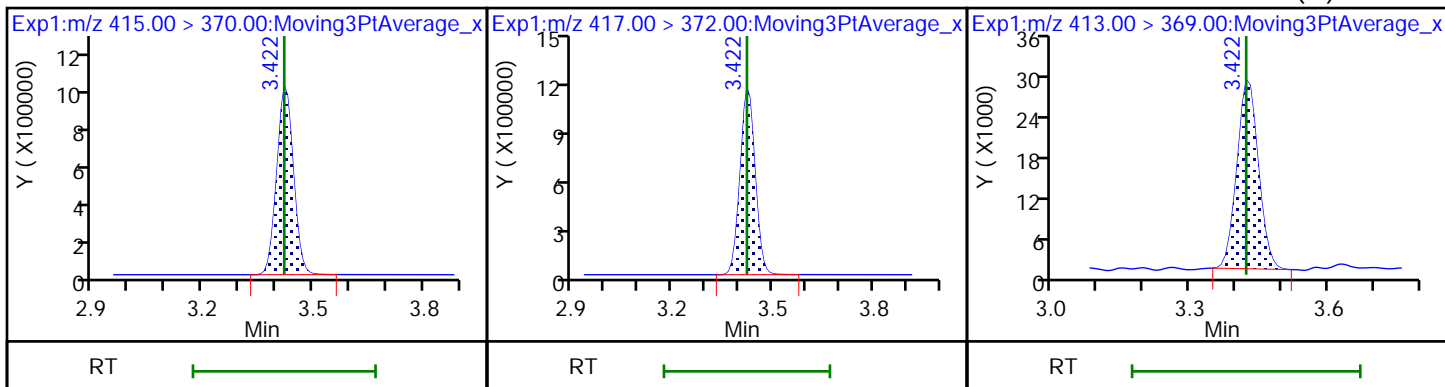
13 1H,1H,2H,2H-perfluorooctanesulfonD 12 M2-6:2 FTS



* 62 13C2 PFOA

D 14 13C4 PFOA

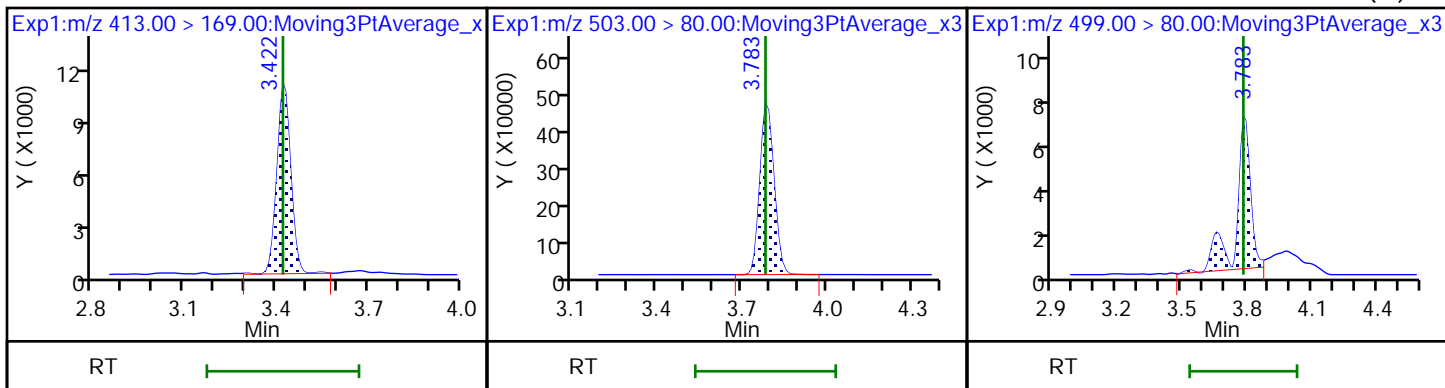
15 Perfluorooctanoic acid (M)



15 Perfluorooctanoic acid

D 18 13C4 PFOS

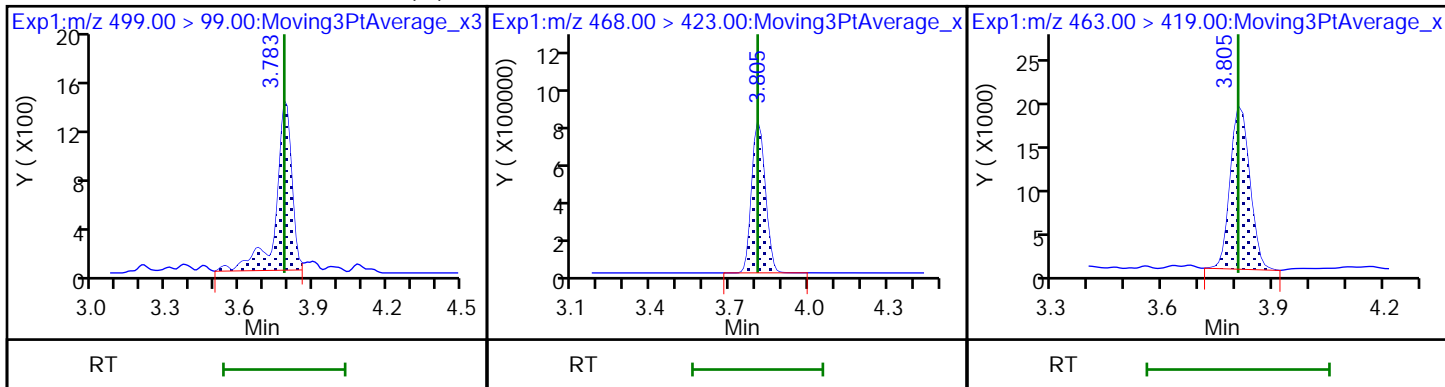
17 Perfluorooctanesulfonic acid (M)



17 Perfluorooctanesulfonic acid (M)

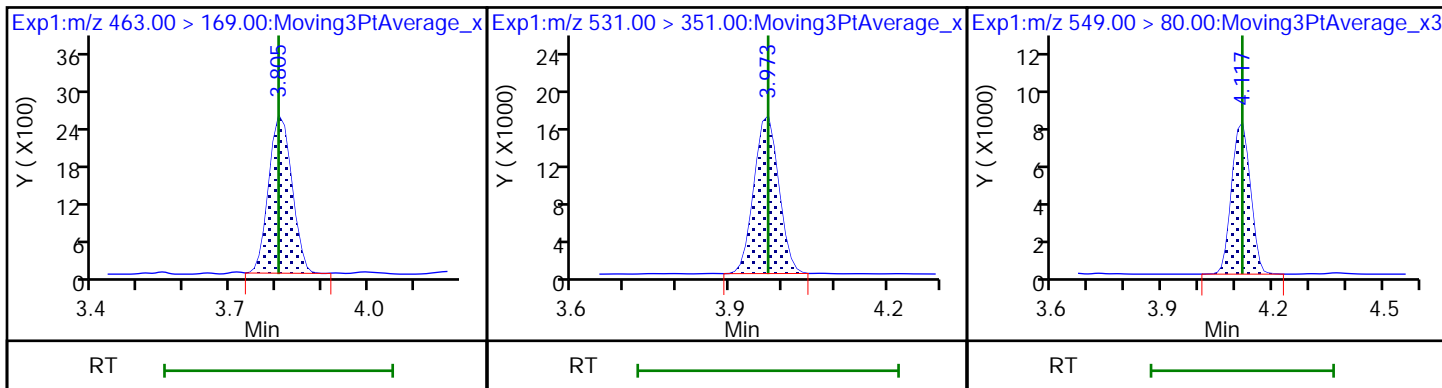
D 19 13C5 PFNA

20 Perfluorononanoic acid



20 Perfluorononanoic acid

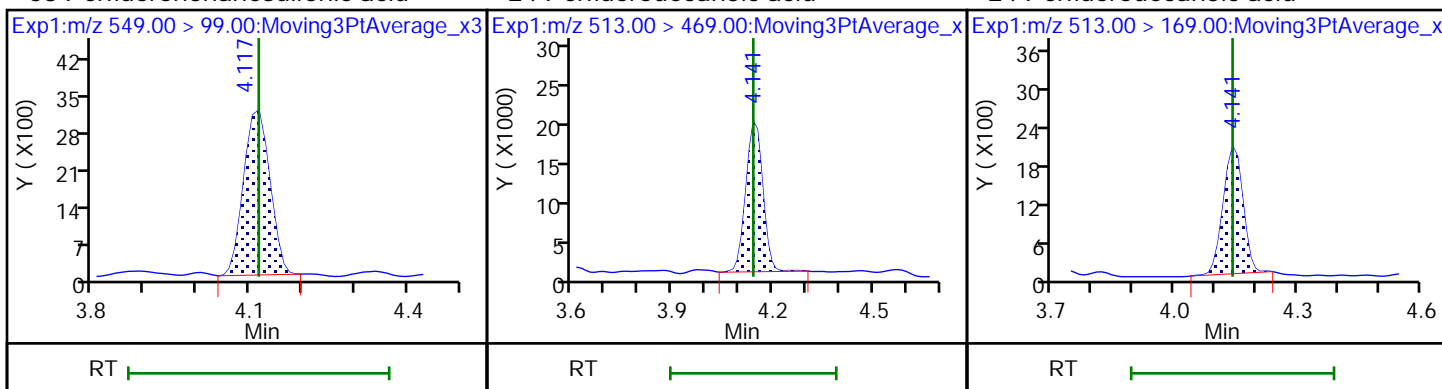
69 9-Chlorohexadecafluoro-3-oxanonan-68 Perfluoronanesulfonic acid



68 Perfluoronanesulfonic acid

24 Perfluorodecanoic acid

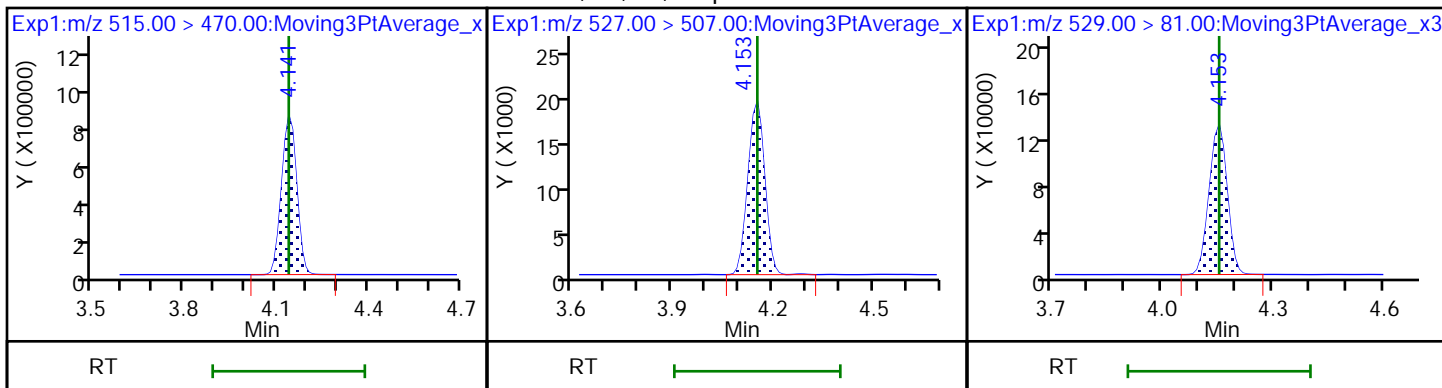
24 Perfluorodecanoic acid



D 23 13C2 PFDA

25 1H,1H,2H,2H-perfluorodecanesulfonid

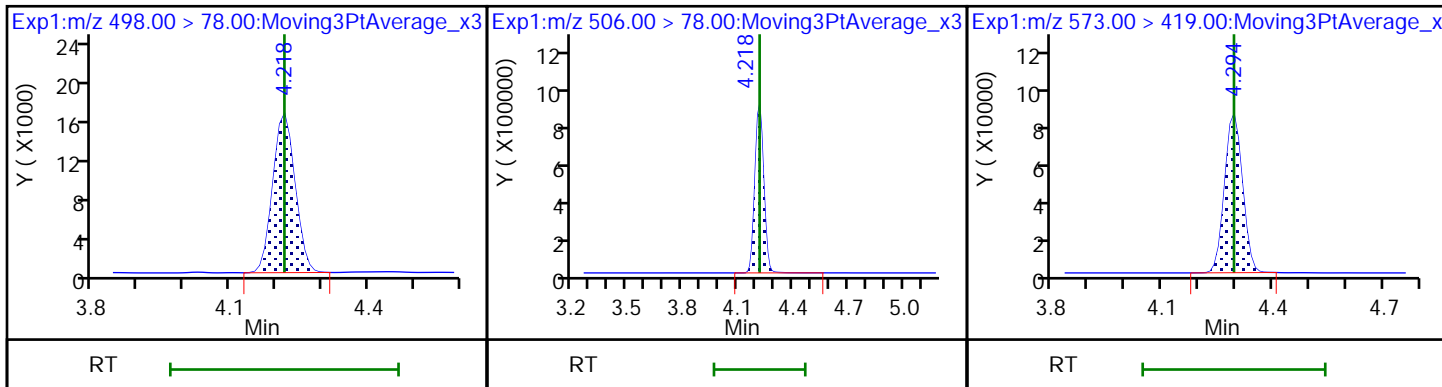
D 26 M2-8:2 FTS



22 Perfluorooctanesulfonamide

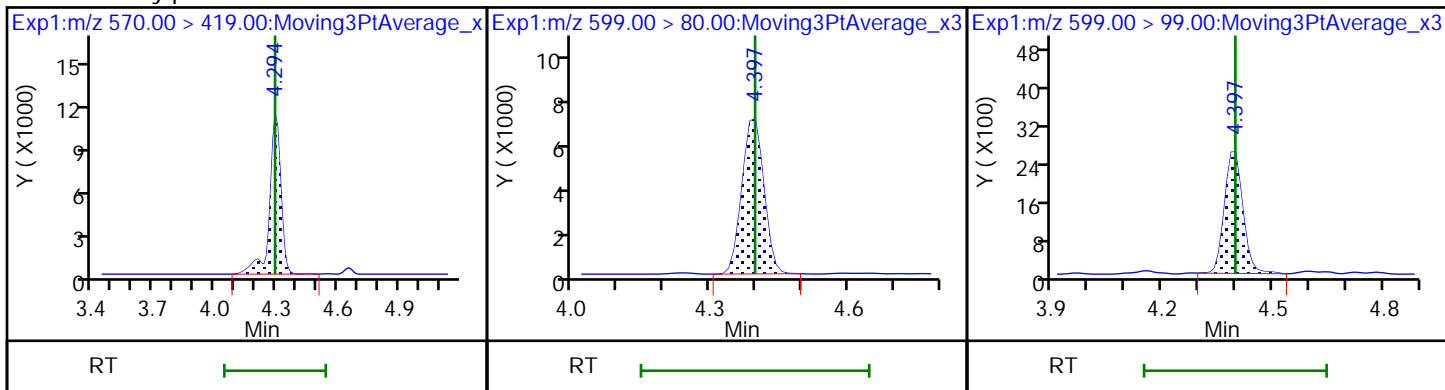
D 21 13C8 FOSA

D 27 d3-NMeFOSAA



28 N-methylperfluorooctanesulfonamido 29 Perfluorodecanesulfonic acid

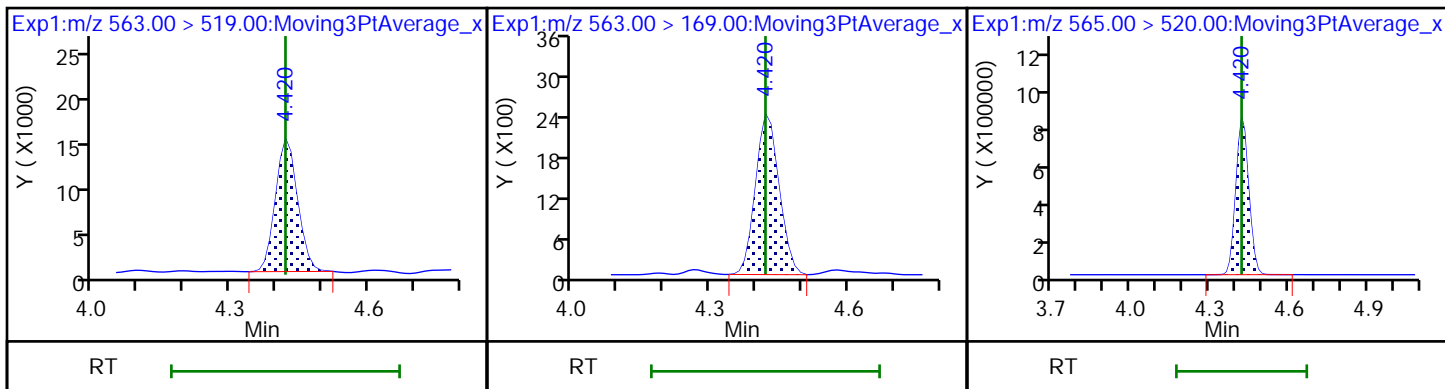
29 Perfluorodecanesulfonic acid



31 Perfluoroundecanoic acid

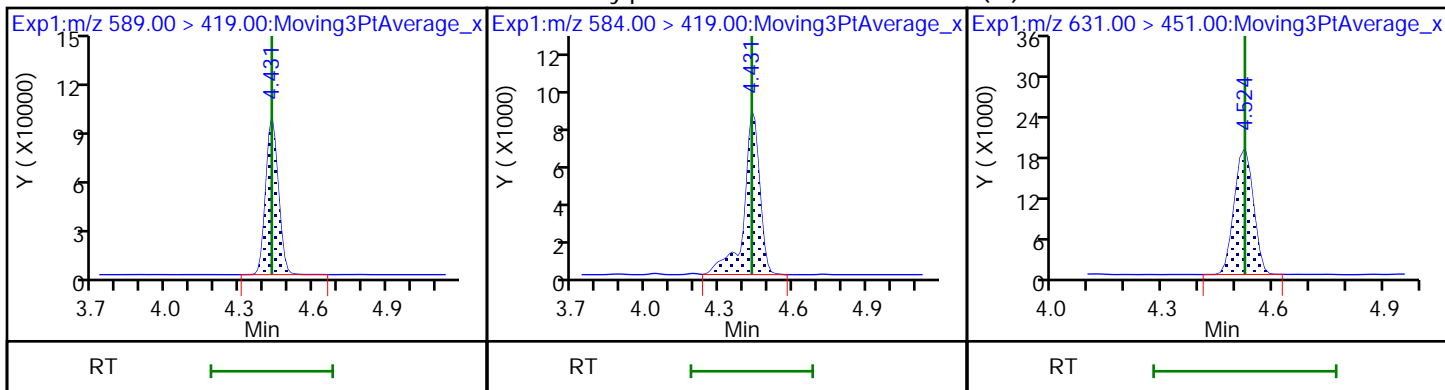
31 Perfluoroundecanoic acid

D 30 13C2 PFUa



D 32 d5-NEtFOSAA

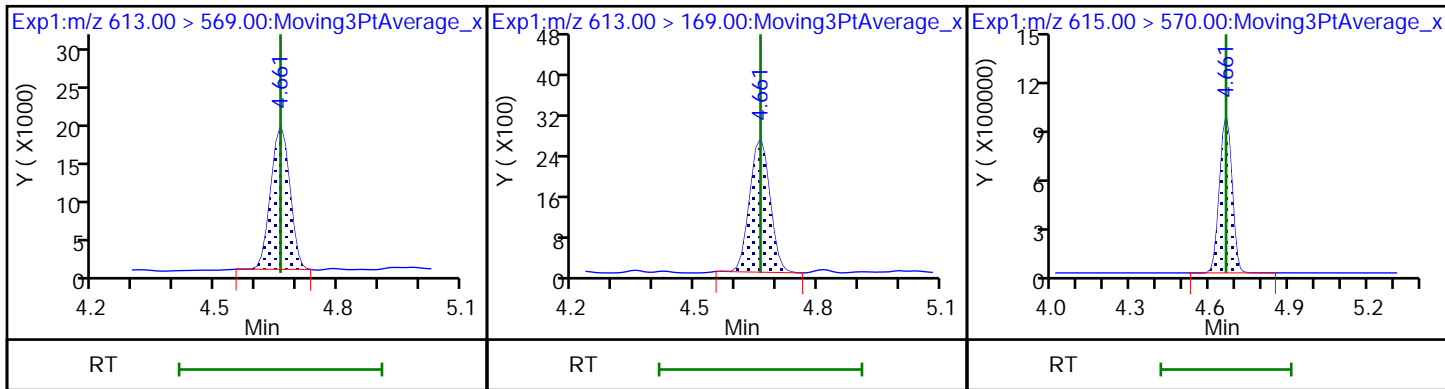
33 N-ethylperfluorooctanesulfonamido (6) 11-Chloroeicosafuoro-3-oxaundecan



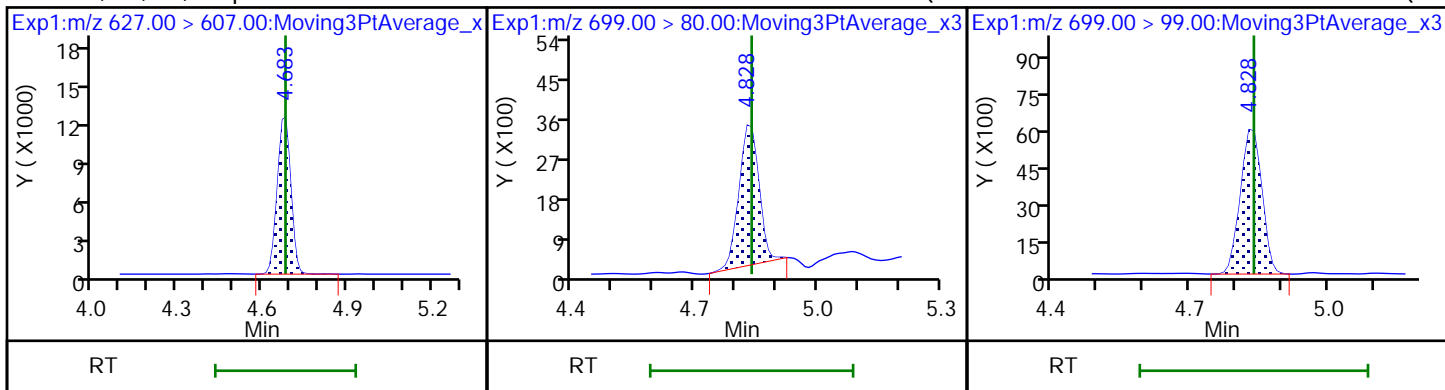
37 Perfluorododecanoic acid

37 Perfluorododecanoic acid

D 36 13C2 PFDoA



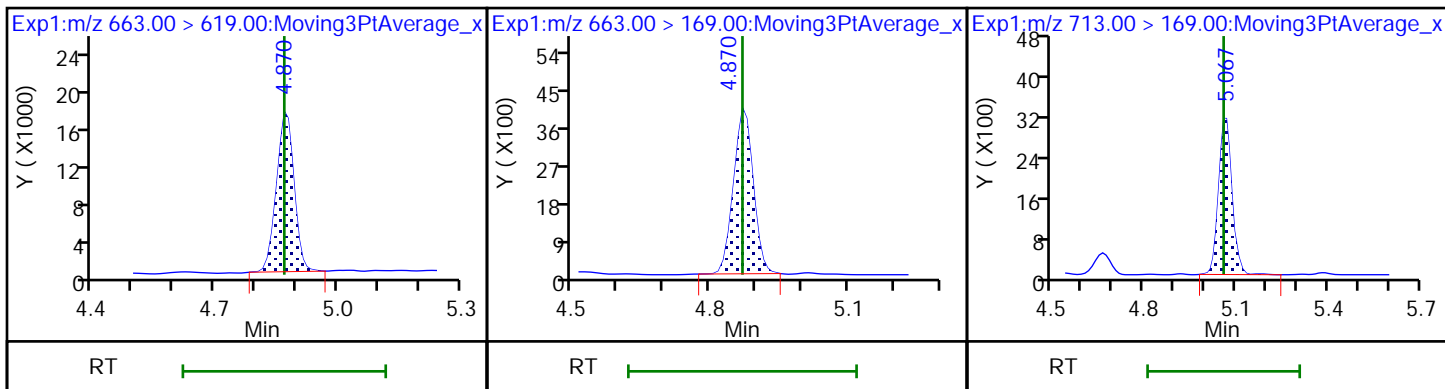
74 1H,1H,2H,2H-perfluorododecanesulfo75 Perfluorododecanesulfonic acid (PF 75 Perfluorododecanesulfonic acid (PF



41 Perfluorotridecanoic acid

41 Perfluorotridecanoic acid

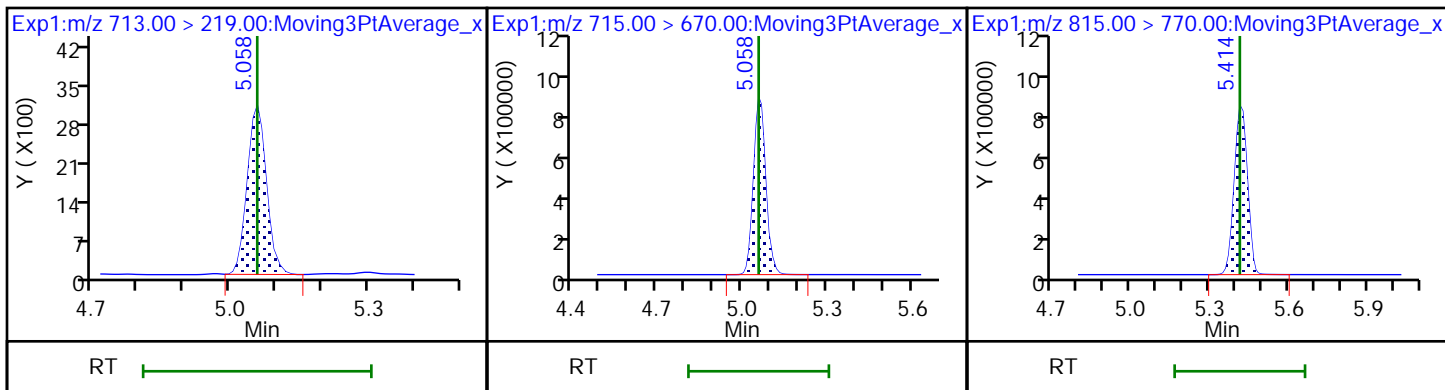
42 Perfluorotetradecanoic acid



42 Perfluorotetradecanoic acid

D 43 13C2 PFTeDA

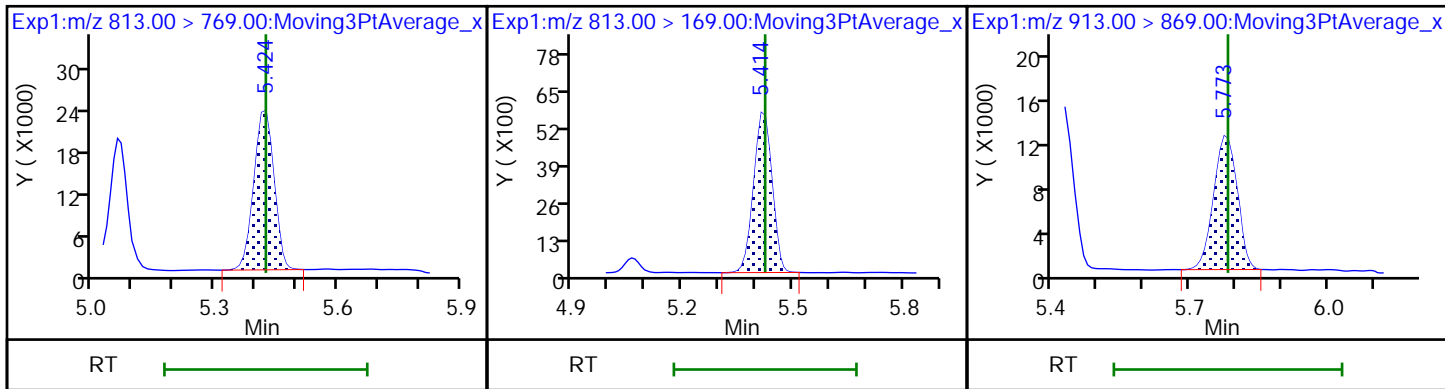
D 44 13C2 PFHxDA



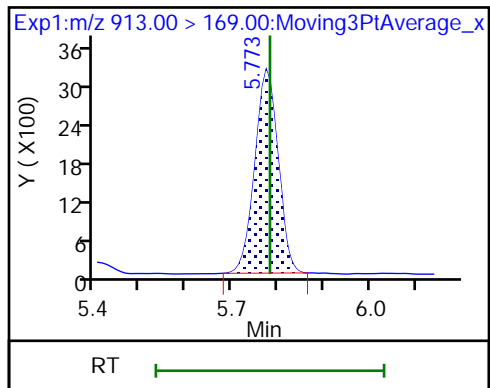
45 Perfluorohexadecanoic acid

45 Perfluorohexadecanoic acid

46 Perfluorooctadecanoic acid



46 Perfluorooctadecanoic acid



Eurofins TestAmerica, Burlington

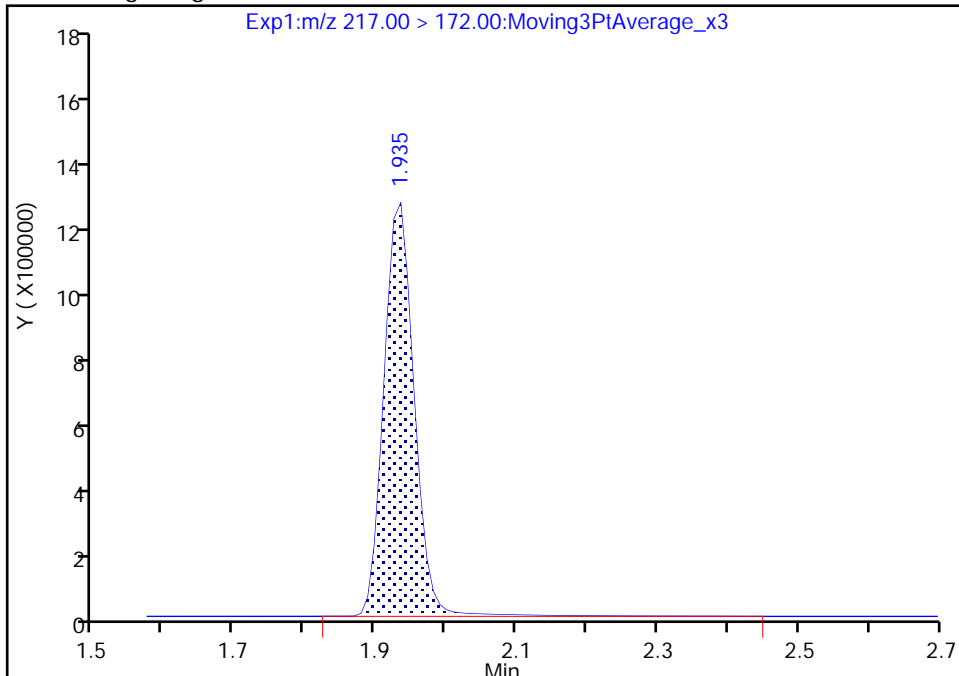
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38368.b\SC102219A005.d
Injection Date: 22-Oct-2019 15:30:22 Instrument ID: LC812
Lims ID: CCVL
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

D 1 13C4 PFBA, CAS: STL00992

Signal: 1

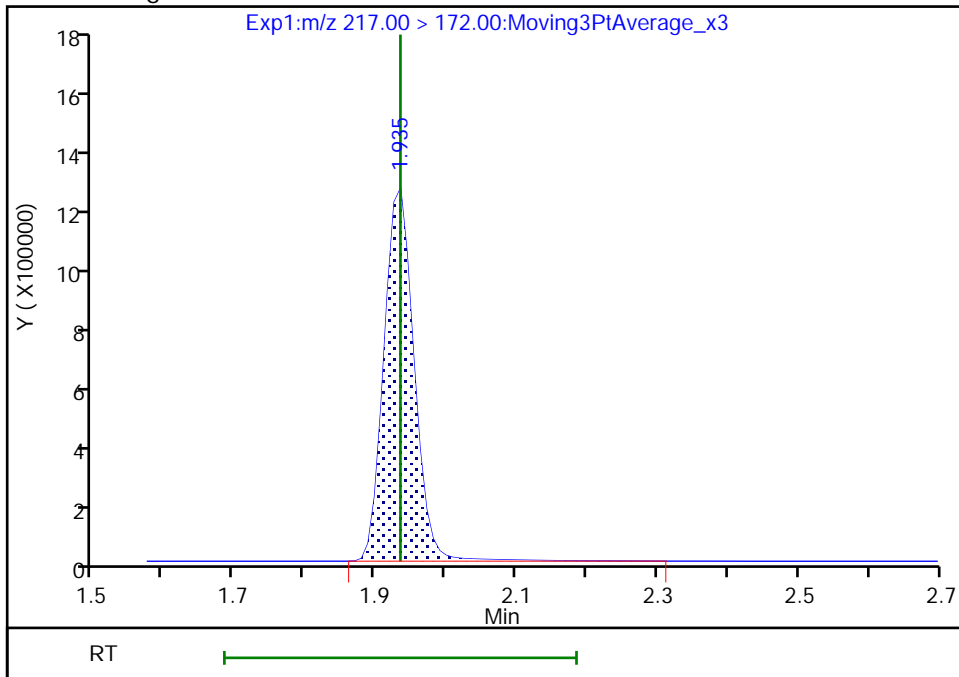
RT: 1.94
Area: 3734217
Amount: 2.503814
Amount Units: ng/ml

Processing Integration Results



RT: 1.94
Area: 3725881
Amount: 2.498225
Amount Units: ng/ml

Manual Integration Results



Reviewer: murrayjw, 22-Oct-2019 16:02:59
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Euofins TestAmerica, Burlington

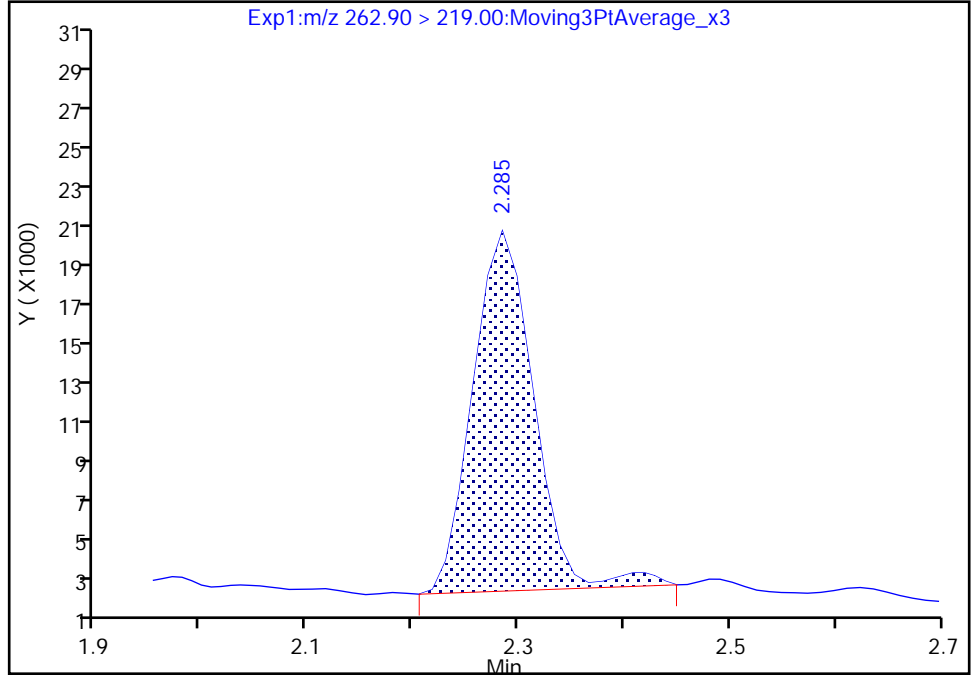
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38368.b\SC102219A005.d
Injection Date: 22-Oct-2019 15:30:22 Instrument ID: LC812
Lims ID: CCVL
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

4 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

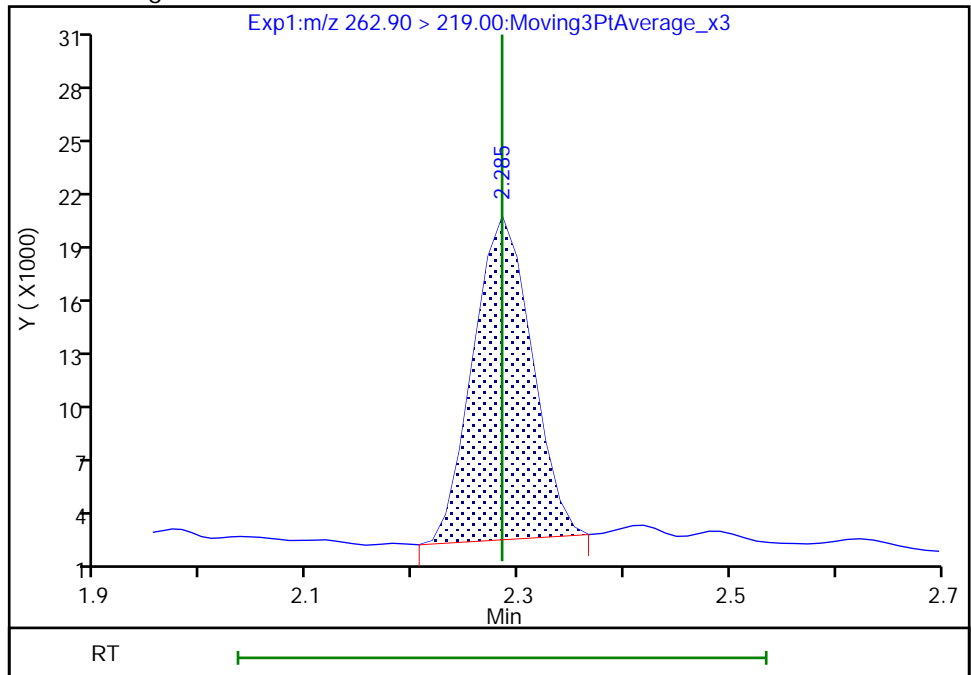
RT: 2.28
Area: 72329
Amount: 0.053418
Amount Units: ng/ml

Processing Integration Results



RT: 2.28
Area: 68977
Amount: 0.050383
Amount Units: ng/ml

Manual Integration Results



Reviewer: murrayjw, 22-Oct-2019 16:03:15
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

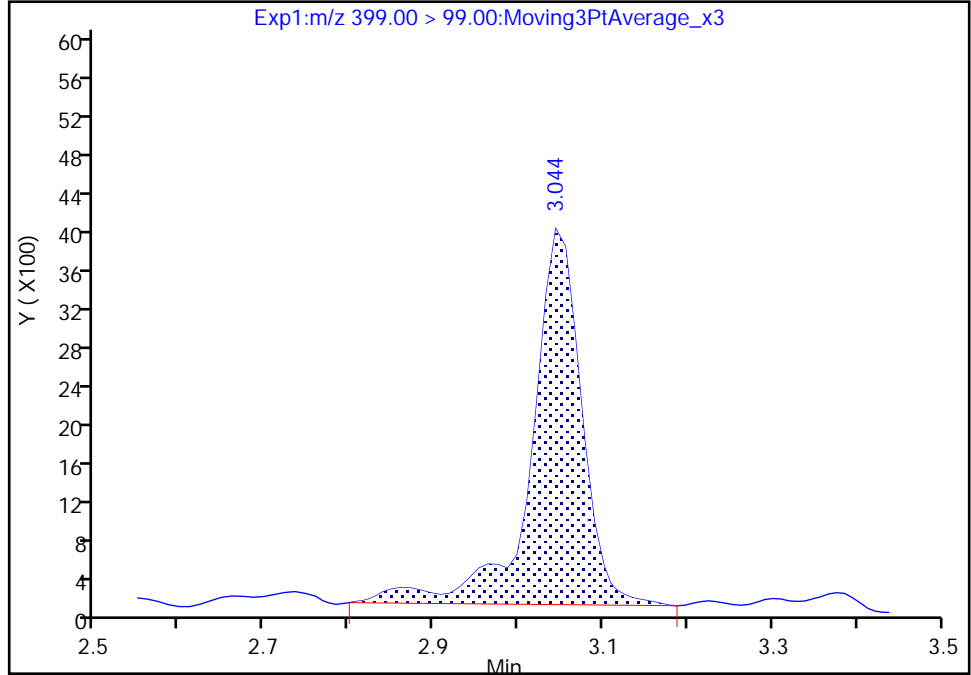
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38368.b\SC102219A005.d
Injection Date: 22-Oct-2019 15:30:22 Instrument ID: LC812
Lims ID: CCVL
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

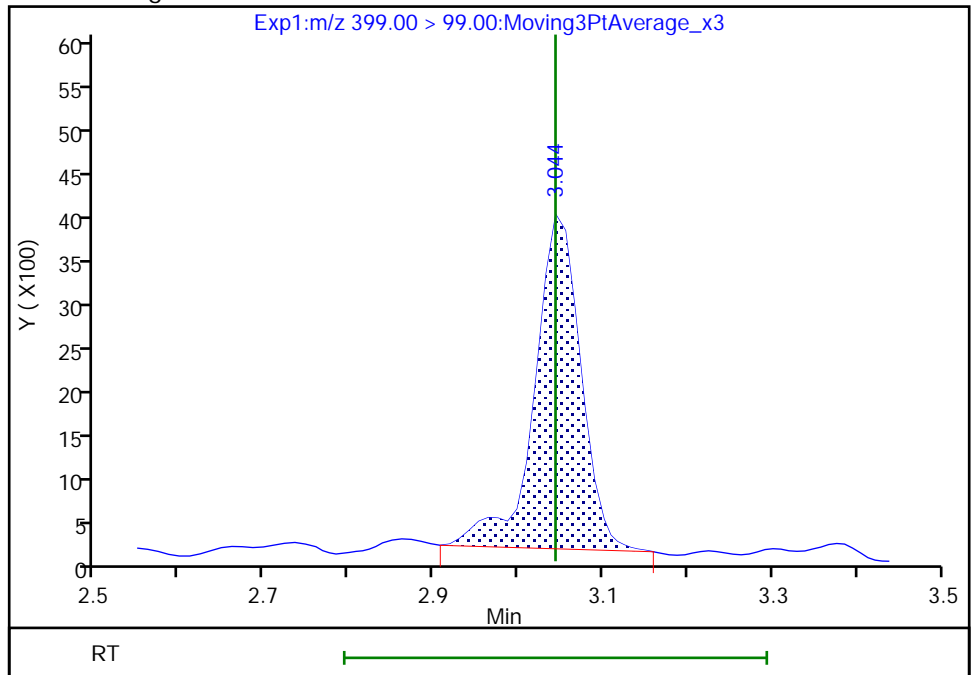
RT: 3.04
Area: 16293
Amount: 0.050671
Amount Units: ng/ml

Processing Integration Results



RT: 3.04
Area: 14649
Amount: 0.046989
Amount Units: ng/ml

Manual Integration Results



Reviewer: murrayjw, 22-Oct-2019 16:03:53
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

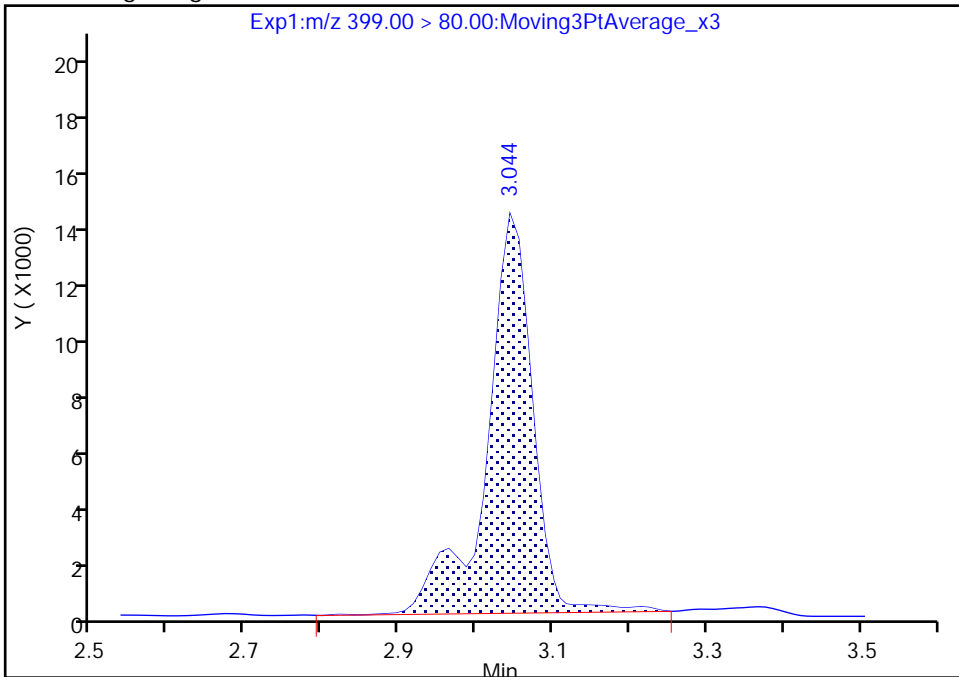
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38368.b\SC102219A005.d
Injection Date: 22-Oct-2019 15:30:22 Instrument ID: LC812
Lims ID: CCVL
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

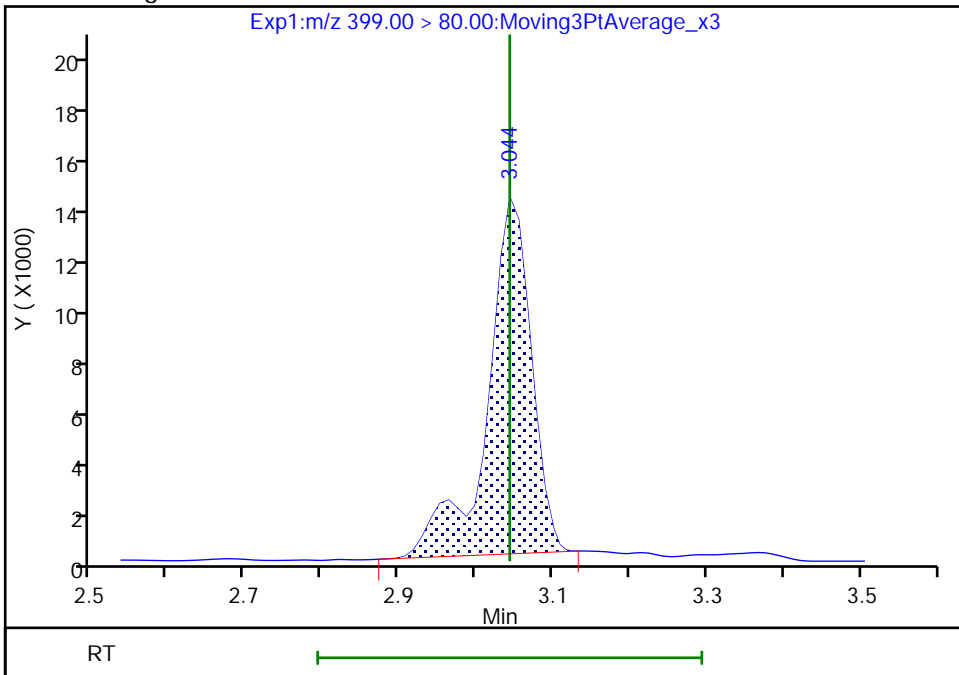
RT: 3.04
Area: 58123
Amount: 0.050671
Amount Units: ng/ml

Processing Integration Results



RT: 3.04
Area: 54718
Amount: 0.046989
Amount Units: ng/ml

Manual Integration Results



Reviewer: murrayjw, 22-Oct-2019 16:03:57

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

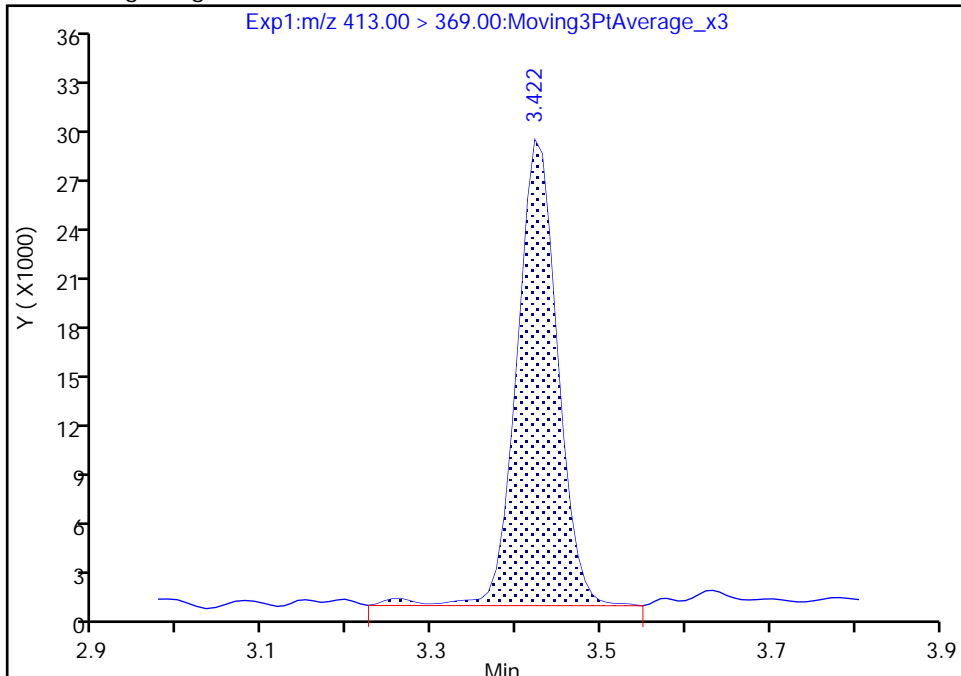
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38368.b\SC102219A005.d
Injection Date: 22-Oct-2019 15:30:22 Instrument ID: LC812
Lims ID: CCVL
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

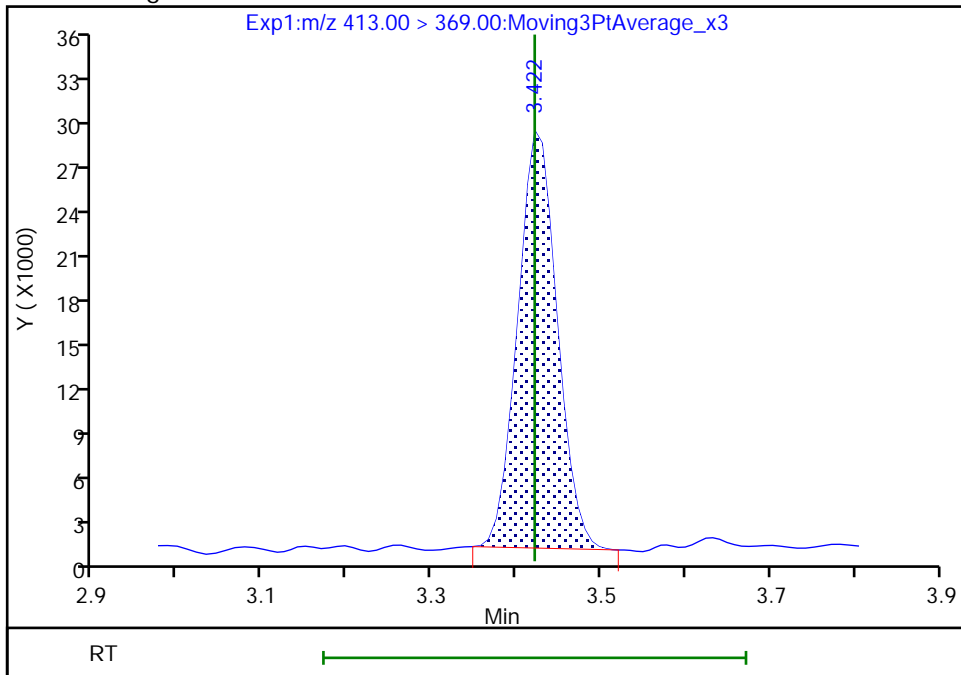
RT: 3.42
Area: 92947
Amount: 0.050573
Amount Units: ng/ml

Processing Integration Results



RT: 3.42
Area: 88985
Amount: 0.047480
Amount Units: ng/ml

Manual Integration Results



Reviewer: murrayjw, 22-Oct-2019 16:04:21
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration
Page 422 of 599

Eurofins TestAmerica, Burlington

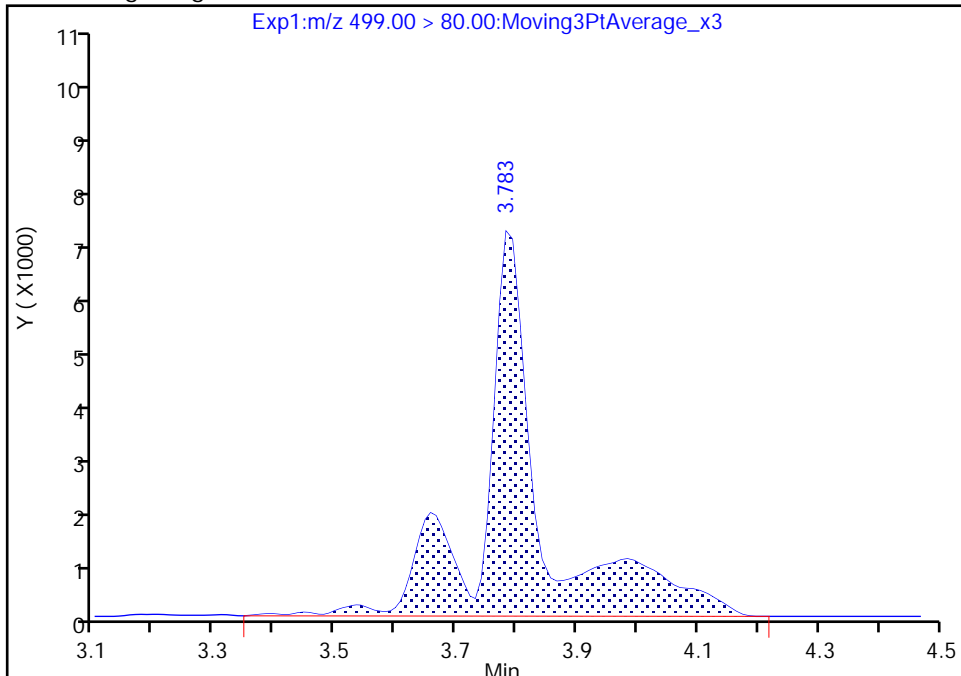
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38368.b\SC102219A005.d
Injection Date: 22-Oct-2019 15:30:22 Instrument ID: LC812
Lims ID: CCVL
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

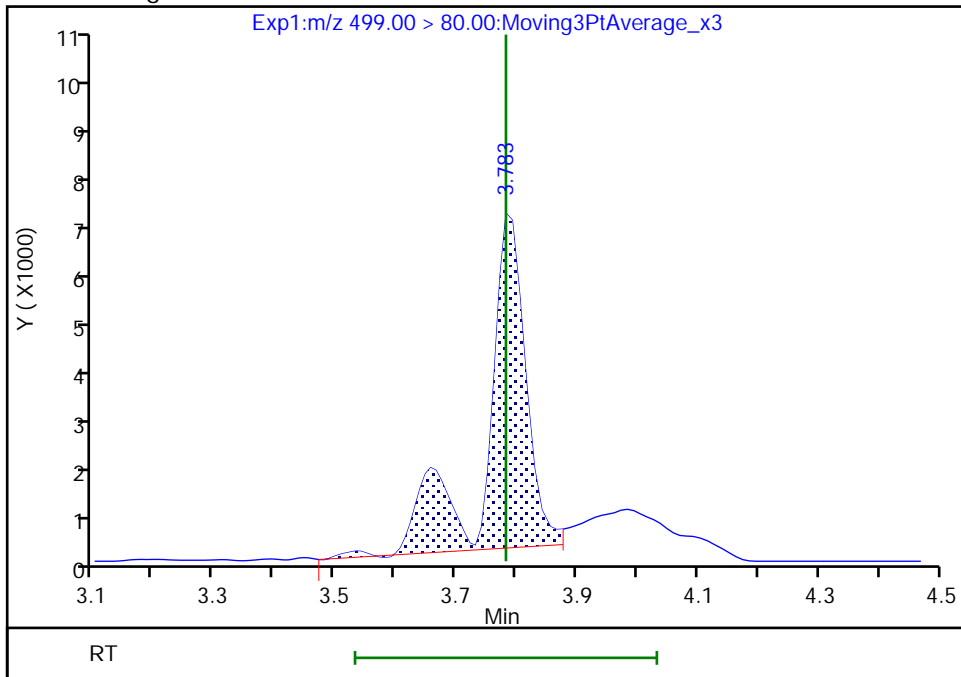
RT: 3.78
Area: 48396
Amount: 0.077941
Amount Units: ng/ml

Processing Integration Results



RT: 3.78
Area: 31601
Amount: 0.050893
Amount Units: ng/ml

Manual Integration Results



Reviewer: murrayjw, 22-Oct-2019 16:02:30
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

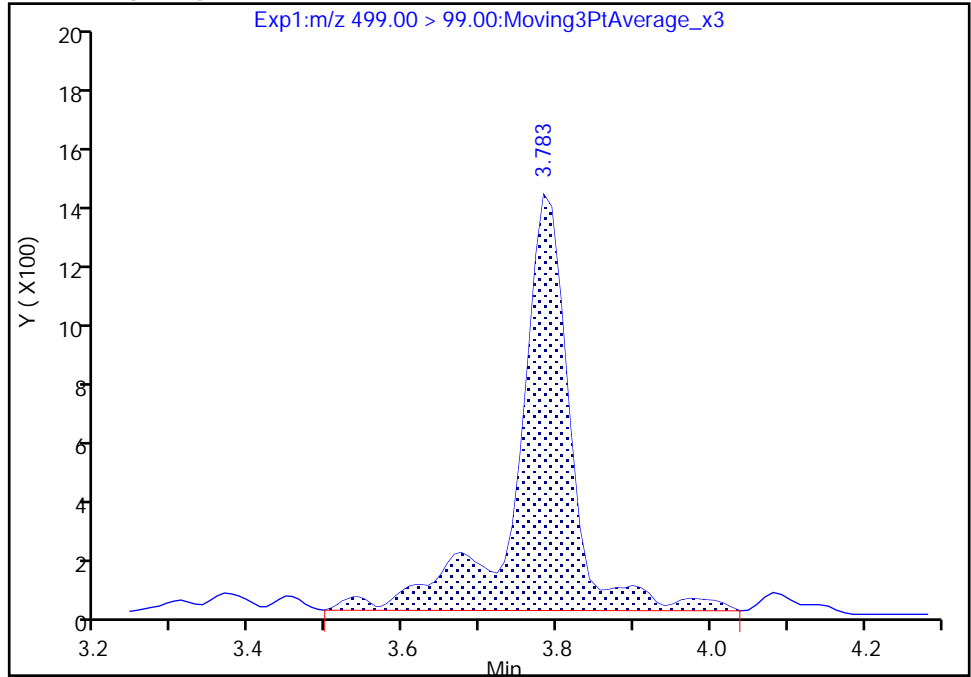
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38368.b\SC102219A005.d
Injection Date: 22-Oct-2019 15:30:22 Instrument ID: LC812
Lims ID: CCVL
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

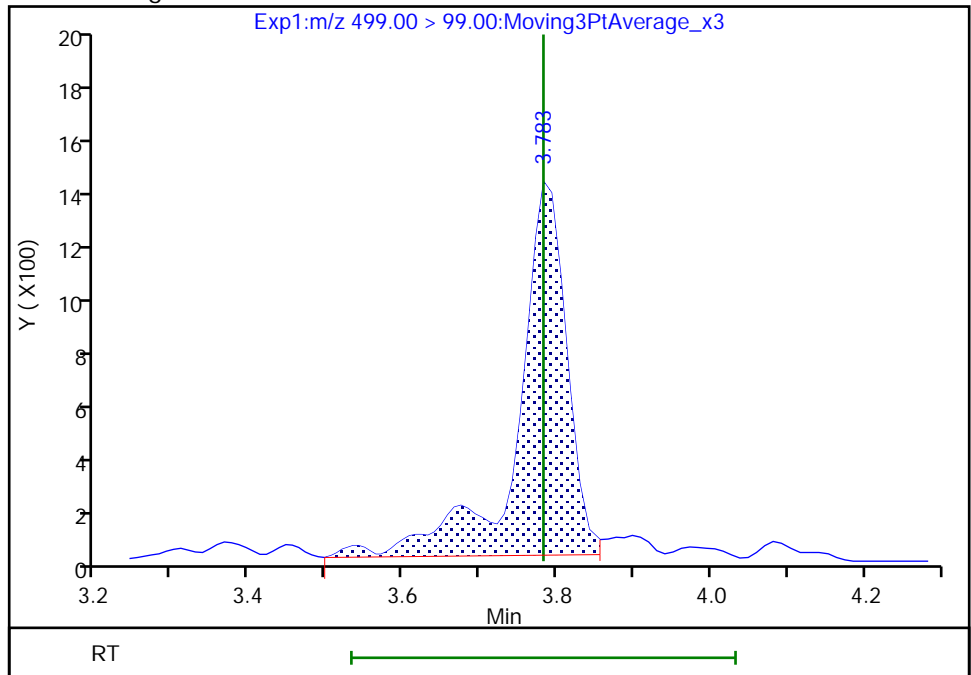
RT: 3.78
Area: 6947
Amount: 0.077941
Amount Units: ng/ml

Processing Integration Results



RT: 3.78
Area: 6313
Amount: 0.050893
Amount Units: ng/ml

Manual Integration Results



Reviewer: murrayjw, 22-Oct-2019 16:02:35

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration
Page 424 of 599

Eurofins TestAmerica, Burlington

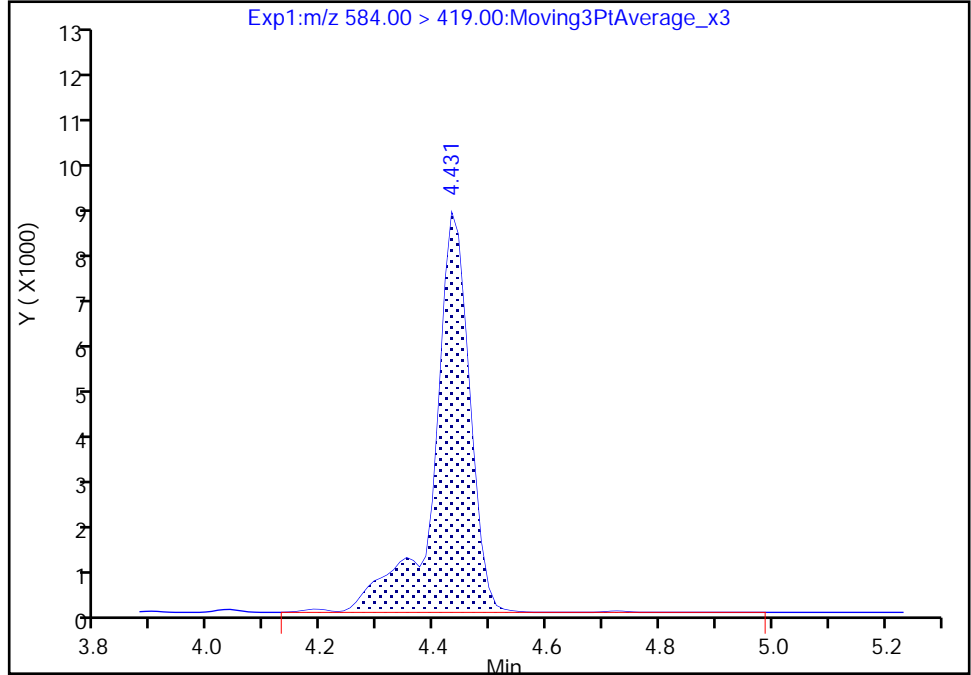
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38368.b\SC102219A005.d
Injection Date: 22-Oct-2019 15:30:22 Instrument ID: LC812
Lims ID: CCVL
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 5
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

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

Signal: 1

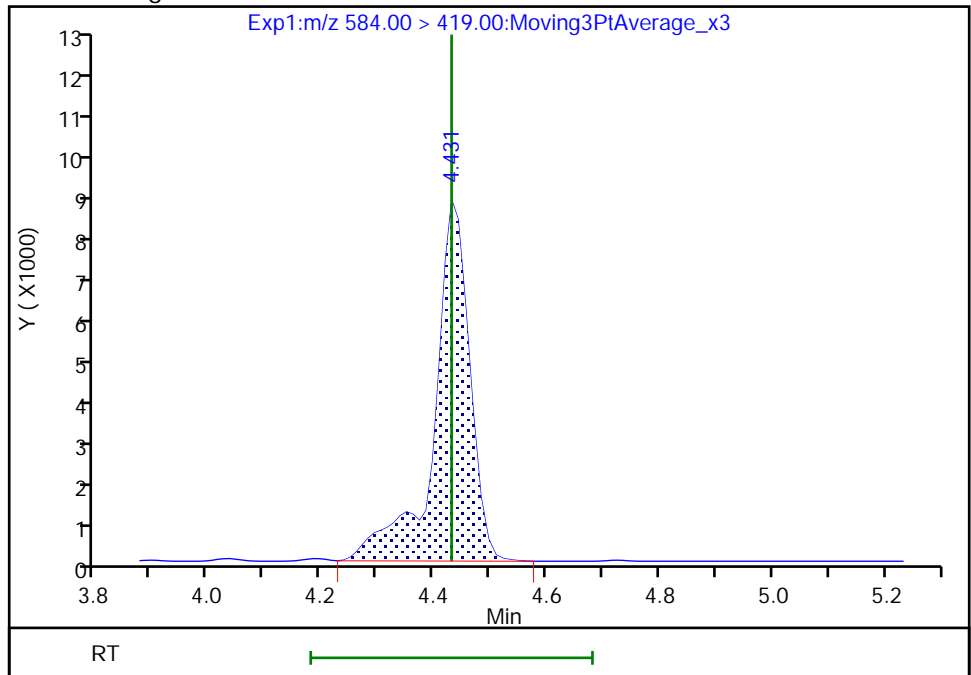
RT: 4.43
Area: 39285
Amount: 0.534165
Amount Units: ng/ml

Processing Integration Results



RT: 4.43
Area: 38917
Amount: 0.528983
Amount Units: ng/ml

Manual Integration Results



Reviewer: murrayjw, 22-Oct-2019 16:04:56
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1
 SDG No.: _____
 Lab Sample ID: CCVIS 200-148770/6 Calibration Date: 10/22/2019 15:38
 Instrument ID: LC812 Calib Start Date: 09/24/2019 18:15
 GC Column: C-18 ID: 4.60 (mm) Calib End Date: 09/24/2019 18:56
 Lab File ID: SC102219A006.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.8879	0.8572		965	1000	-3.5	40.0
Perfluoropentanoic acid (PFPeA)	L1ID		0.9038		969	1000	-3.1	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.363	1.179		765	884	-13.5	40.0
1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2)	AveID	2.000	1.726		806	934	-13.7	50.0
Perfluorohexanoic acid (PFHxA)	AveID	0.9852	0.9234		937	1000	-6.3	40.0
Perfluoropentanesulfonic acid	AveID	1.177	1.055		841	938	-10.4	50.0
HFPO-DA	AveID	2.861	3.597		1260	1000	25.7	40.0
Perfluorohexanesulfonic acid (PFHxS)	L1ID		0.8764		820	910	-9.9	30.0
Perfluoroheptanoic acid (PFHpA)	AveID	0.8934	0.8562		958	1000	-4.2	40.0
DONA	AveID	4.089	3.778		870	942	-7.6	50.0
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	AveID	1.259	1.145		862	948	-9.1	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	1.108	1.028		884	952	-7.2	50.0
Perfluorooctanoic acid (PFOA)	L1ID		0.9556		1000	1000	0.5	30.0
Perfluorooctanesulfonic acid (PFOS)	AveID	0.9041	0.8156		837	928	-9.8	40.0
Perfluorononanoic acid (PFNA)	AveID	0.9539	0.8721		914	1000	-8.6	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	1.607	1.409		817	932	-12.3	50.0
Perfluorononanesulfonic acid	AveID	0.7809	0.7715		948	960	-1.2	50.0
Perfluorodecanoic acid (PFDA)	AveID	0.9250	0.8547		924	1000	-7.6	40.0
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	L1ID		0.7014		856	958	-10.7	40.0
Perfluorooctanesulfonamide (PFOSA)	AveID	0.9175	0.8329		908	1000	-9.2	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	AveID	0.7125	0.6689		939	1000	-6.1	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.6033	0.6294		1010	964	4.3	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.8368	0.7600		908	1000	-9.2	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	L2ID		0.5505		990	1000	-1.0	30.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.999	1.763		831	942	-11.8	50.0
Perfluorododecanoic acid (PFDoA)	AveID	0.8845	0.8543		966	1000	-3.4	40.0
10:2 FTS	AveID	0.4268	0.4171		942	964	-2.3	50.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.2594	0.2906		1080	968	12.0	50.0
Perfluorotridecanoic acid (PFTriA)	AveID	0.7157	0.7483		1050	1000	4.5	50.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1455	0.1402		964	1000	-3.6	40.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1
 SDG No.: _____
 Lab Sample ID: CCVIS 200-148770/6 Calibration Date: 10/22/2019 15:38
 Instrument ID: LC812 Calib Start Date: 09/24/2019 18:15
 GC Column: C-18 ID: 4.60 (mm) Calib End Date: 09/24/2019 18:56
 Lab File ID: SC102219A006.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)	LlID		0.8828		1040	1000	4.4	40.0
Perfluoro-n-octadecanoic acid (PFODA)	AveID	0.7383	0.6833		926	1000	-7.4	50.0
13C4 PFBA	Ave	1.200	1.255		2610	2500	4.6	50.0
13C5 PFPeA	Ave	0.9493	0.9924		2610	2500	4.5	50.0
M2-4:2 FTS	Ave	0.0981	0.0961		2290	2340	-2.0	50.0
13C2 PFHxA	Ave	1.009	1.068		2650	2500	5.9	50.0
13C3 HFPO-DA	Ave	0.0504	0.0436		2160	2500	-13.4	50.0
18O2 PFHxS	Ave	0.7528	0.8037		2530	2370	6.8	50.0
13C4 PFHpA	Ave	0.9768	1.043		2670	2500	6.8	50.0
M2-6:2 FTS	Ave	0.1223	0.1246		2420	2380	1.9	50.0
13C4 PFOA	Ave	0.9930	1.104		2780	2500	11.2	50.0
13C4 PFOS	Ave	0.5122	0.5468		2550	2390	6.8	50.0
13C5 PFNA	Ave	0.8786	0.9772		2780	2500	11.2	50.0
13C2 PFDA	Ave	0.8752	0.9297		2660	2500	6.2	50.0
M2-8:2 FTS	Ave	0.1336	0.1442		2590	2400	8.0	50.0
13C8 FOSA	Ave	0.9945	1.018		2560	2500	2.4	50.0
d3-NMeFOSAA	Ave	0.0848	0.0917		2700	2500	8.1	50.0
13C2 PFUnA	Ave	0.7839	0.8621		2750	2500	10.0	50.0
d5-NEtFOSAA	Ave	0.0919	0.1084		2950	2500	18.0	50.0
13C2 PFDoA	Ave	0.8441	0.9660		2860	2500	14.4	50.0
13C2 PFTeDA	Ave	0.7567	0.8935		2950	2500	18.1	50.0
13C2 PFHxDA	Ave	0.7599	0.9103		2990	2500	19.8	50.0

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38368.b\SC102219A006.d
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 22-Oct-2019 15:38:33 ALS Bottle#: 3 Worklist Smp#: 6
 Injection Vol: 20.0 ul Dil. Factor: 1.0000
 Sample Info: CCVIS
 Misc. Info.: 200-0038368-006 Plate: 1 Rack: 2
 Operator ID: lc812tech Instrument ID: LC812
 Sublist: chrom-PFC_LC812*sub6
 Method: \\ChromNA\Burlington\ChromData\LC812\20191022-38368.b\PFC_LC812.m
 Limit Group: LC_PFC_ICAL
 Last Update: 28-Oct-2019 12:07:57 Calib Date: 24-Sep-2019 18:56:37
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA015.d
 Column 1 : C-18 (4.60 mm) Det: EXP1
 Process Host: CTX1017

First Level Reviewer: murrayjw Date: 22-Oct-2019 16:08:06

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										M
217.00 > 172.00	1.935	1.935	0.0	0.566	4050890	2.61		105	14770	M
2 Perfluorobutanoic acid										
212.90 > 169.00	1.935	1.935	0.0	1.000	1389025	0.9655		96.5	327	
D 3 13C5 PFPeA										
267.90 > 223.00	2.284	2.284	0.0	0.668	3204442	2.61		105	5777	
4 Perfluoropentanoic acid										
262.90 > 219.00	2.284	2.284	0.0	1.000	1158494	0.9692		96.9	93.8	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.312	2.312	0.0	0.759	1082195	0.7651	Target=2.04	86.5	1363	
298.90 > 99.00	2.312	2.312	0.0	0.759	542179		2.00(1.02-3.05)		682	
D 60 M2-4:2 FTS										
329.00 > 81.00	2.623	2.623	0.0	0.767	289797	2.29		98.0	371	
61 1H,1H,2H,2H-perfluorohexanesulfoni										
327.00 > 307.00	2.635	2.635	0.0	1.005	200102	0.8062		86.3	1727	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.660	2.660	0.0	1.000	1273772	0.9373	Target=12.90	93.7	501	
313.00 > 119.00	2.660	2.660	0.0	1.000	101508		12.55(6.45-19.36)		191	
D 7 13C2 PFHxA										
315.00 > 270.00	2.660	2.660	0.0	0.778	3448604	2.65		106	7749	
70 Perfluoropentanesulfonic acid										
349.00 > 80.00	2.673	2.673	0.0	0.878	1027505	0.8407	Target=3.01	89.6	2258	
349.00 > 99.00	2.673	2.673	0.0	0.878	350257		2.93(1.51-4.52)		1011	
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.784	2.784	0.0	1.000	202628	1.26		126	113	
D 64 13C3 HFPO-DA										
332.10 > 287.00	2.784	2.784	0.0	0.814	140815	2.16		86.6	2130	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.044	3.044	0.0	1.000	827875	0.8201	Target=3.78	90.1	1354	
399.00 > 99.00	3.044	3.044	0.0	1.000	228267		3.63(1.89-5.67)		475	
D 11 18O2 PFHxS										
403.00 > 84.00	3.044	3.044	0.0	0.890	2455050	2.53		107	5890	
D 9 13C4 PFHpA										
367.00 > 322.00	3.055	3.055	0.0	0.893	3367500	2.67		107	6236	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.055	3.055	0.0	1.000	1153265	0.9584	Target=3.54	95.8	284	
363.00 > 169.00	3.055	3.055	0.0	1.000	325710		3.54(1.77-5.31)		897	
77 DONA										
377.00 > 251.00	3.089	3.089	0.0	0.817	2513618	0.8703	Target=2.56	92.4	4029	
377.00 > 85.00	3.089	3.089	0.0	0.817	965050		2.60(1.28-3.84)		2950	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.413	3.413	0.0	0.902	691505	0.8839	Target=5.80	92.8	2704	
449.00 > 99.00	3.413	3.413	0.0	0.902	125446		5.51(2.90-8.71)		1210	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.413	3.413	0.0	1.000	174703	0.8617		90.9	1950	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.413	3.413	0.0	0.998	382326	2.42		102	1570	
* 62 13C2 PFOA										
415.00 > 370.00	3.421	3.421	0.0		3229047	2.50			10594	
D 14 13C4 PFOA										
417.00 > 372.00	3.421	3.421	0.0	1.000	3565153	2.78		111	9230	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.421	3.421	0.0	1.000	1362722	1.00	Target=2.61	100	353	
413.00 > 169.00	3.421	3.421	0.0	1.000	552843		2.46(1.30-3.91)		3138	
D 18 13C4 PFOS										
503.00 > 80.00	3.782	3.782	0.0	1.105	1687990	2.55		107	5828	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.782	3.782	0.0	1.000	534536	0.8371	Target=4.93	90.2	282	M
499.00 > 99.00	3.782	3.782	0.0	1.000	109730		4.87(2.47-7.40)		542	M
D 19 13C5 PFNA										
468.00 > 423.00	3.805	3.805	0.0	1.112	3155506	2.78		111	7130	
20 Perfluorononanoic acid										
463.00 > 419.00	3.805	3.805	0.0	1.000	1100752	0.9143	Target=7.89	91.4	346	
463.00 > 169.00	3.805	3.805	0.0	1.000	143192		7.69(3.95-11.84)		2085	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.972	3.972	0.0	1.050	927652	0.8174		87.7	5175	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.116	4.116	0.0	1.088	523062	0.9484	Target=2.60	98.8	4396	
549.00 > 99.00	4.116	4.116	0.0	1.088	197028		2.65(1.30-3.90)		1376	
24 Perfluorodecanoic acid										
513.00 > 469.00	4.141	4.141	0.0	1.000	1026366	0.9241	Target=8.57	92.4	579	
513.00 > 169.00	4.141	4.141	0.0	1.000	123078		8.34(4.29-12.86)		1029	
D 23 13C2 PFDA										
515.00 > 470.00	4.141	4.141	0.0	1.210	3001982	2.66		106	8191	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
25 1H,1H,2H,2H-perfluorodecanesulfoni	527.00 > 507.00	4.153	4.153	0.0	1.000	125165	0.8559	89.3	2177	
D 26 M2-8:2 FTS	529.00 > 81.00	4.153	4.153	0.0	1.214	446127	2.59	108	1818	
22 Perfluorooctanesulfonamide	498.00 > 78.00	4.218	4.218	0.0	1.000	1095570	0.9078	90.8	2374	
D 21 13C8 FOSA	506.00 > 78.00	4.218	4.218	0.0	1.233	3288468	2.56	102	3864	
D 27 d3-NMeFOSAA	573.00 > 419.00	4.293	4.293	0.0	1.255	296078	2.70	108	1042	
28 N-methylperfluorooctanesulfonamido	570.00 > 419.00	4.293	4.293	0.0	1.000	79214	0.9388	93.9	226	
29 Perfluorodecanesulfonic acid	599.00 > 80.00	4.397	4.397	0.0	1.163	428524	1.01	Target=2.56	104	2644
	599.00 > 99.00	4.397	4.397	0.0	1.163	155045		2.76(1.28-3.84)		1093
31 Perfluoroundecanoic acid	563.00 > 519.00	4.420	4.420	0.0	1.000	846275	0.9082	Target=6.97	90.8	614
	563.00 > 169.00	4.420	4.420	0.0	1.000	127384		6.64(3.48-10.45)		772
D 30 13C2 PFUnA	565.00 > 520.00	4.420	4.420	0.0	1.292	2783864	2.75		110	6597
D 32 d5-NEtFOSAA	589.00 > 419.00	4.431	4.431	0.0	1.295	350122	2.95		118	1663
33 N-ethylperfluorooctanesulfonamidoa	584.00 > 419.00	4.431	4.431	0.0	1.000	77094	0.9896		99.0	536
										M
66 11-Chloroeicosafuoro-3-oxaundecan	631.00 > 451.00	4.523	4.523	0.0	1.196	1172743	0.8305		88.2	5354
37 Perfluorododecanoic acid	613.00 > 569.00	4.660	4.660	0.0	1.000	1065858	0.9658	Target=7.06	96.6	136
	613.00 > 169.00	4.660	4.660	0.0	1.000	167407		6.37(3.53-10.59)		1036
D 36 13C2 PFDa	615.00 > 570.00	4.660	4.660	0.0	1.362	3119200	2.86		114	8789
74 1H,1H,2H,2H-perfluorododecanesulfo	627.00 > 607.00	4.682	4.682	0.0	1.128	74901	0.9422		97.7	1935
75 Perfluorododecanesulfonic acid (PF	699.00 > 80.00	4.838	4.838	0.0	1.279	198641	1.08	Target=0.47	112	375
	699.00 > 99.00	4.838	4.838	0.0	1.279	387055		0.51(0.23-0.70)		3458
41 Perfluorotridecanoic acid	663.00 > 619.00	4.869	4.869	0.0	1.045	933600	1.05	Target=4.87	105	151
	663.00 > 169.00	4.869	4.869	0.0	1.045	196085		4.76(2.43-7.30)		1064
42 Perfluorotetradecanoic acid	713.00 > 169.00	5.058	5.058	0.0	1.000	161847	0.9637	Target=1.09	96.4	1080
	713.00 > 219.00	5.058	5.058	0.0	1.000	155949		1.04(0.54-1.63)		1423
D 43 13C2 PFTeDA	715.00 > 670.00	5.058	5.058	0.0	1.478	2885096	2.95		118	16858
D 44 13C2 PFHxDA	815.00 > 770.00	5.413	5.413	0.0	1.582	2939231	2.99		120	9077

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.424	5.424	0.0	1.002	1037848	1.04	Target=4.33	104	149	
813.00 > 169.00	5.413	5.424	-0.011	1.000	261692		3.97(2.16-6.49)		1597	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.781	5.781	0.0	1.068	803370	0.9256	Target=4.09	92.6	177	
913.00 > 169.00	5.773	5.781	-0.008	1.066	220232		3.65(2.05-6.14)		2050	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

PFAS32NCIC4_00001

Amount Added: 100.00

Units: uL

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38368.b\SC102219A006.d

Injection Date: 22-Oct-2019 15:38:33

Instrument ID: LC812

Lims ID: CCVIS

Client ID:

Operator ID: lc812tech

ALS Bottle#: 3

Worklist Smp#: 6

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

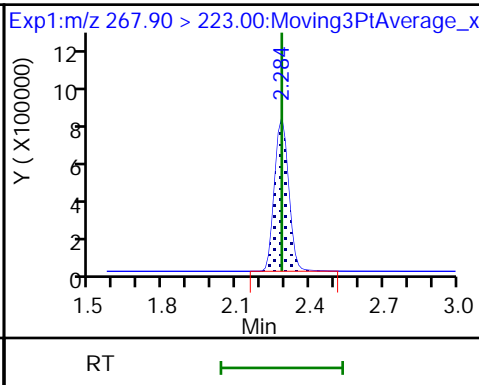
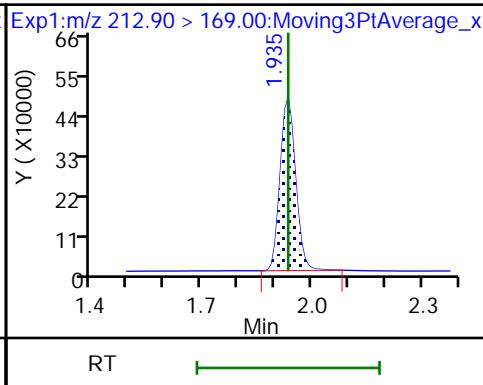
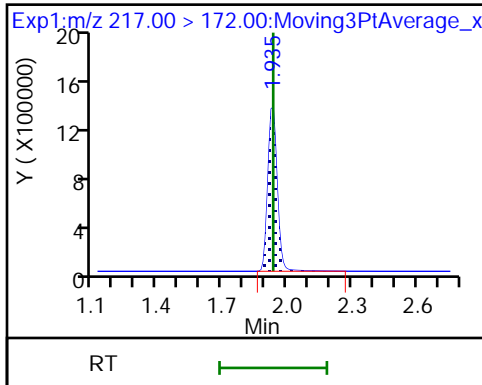
Method: PFC_LC812

Limit Group: LC_PFC_ICAL

D 1 13C4 PFBA (M)

2 Perfluorobutanoic acid

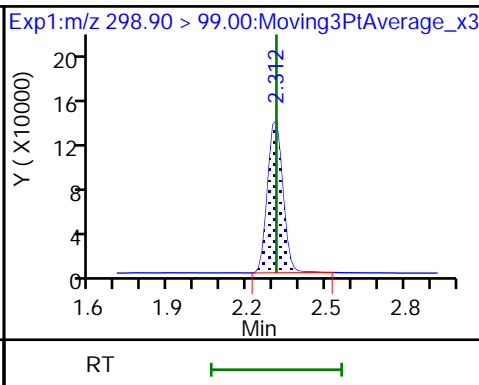
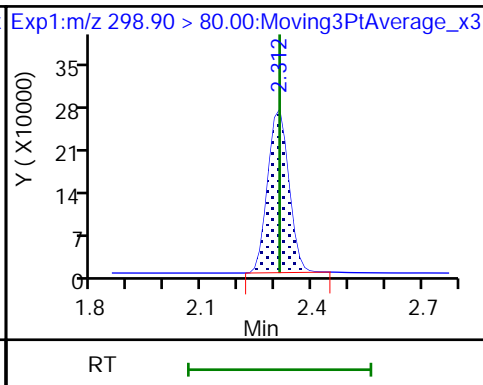
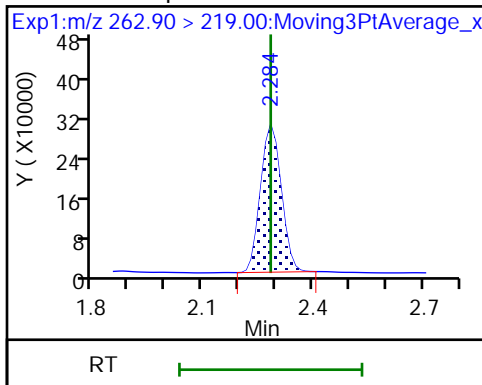
D 3 13C5 PFPeA



4 Perfluoropentanoic acid

5 Perfluorobutanesulfonic acid

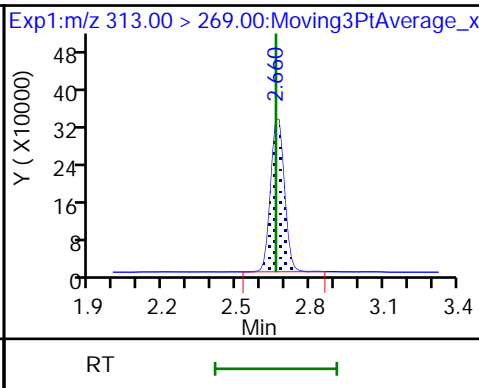
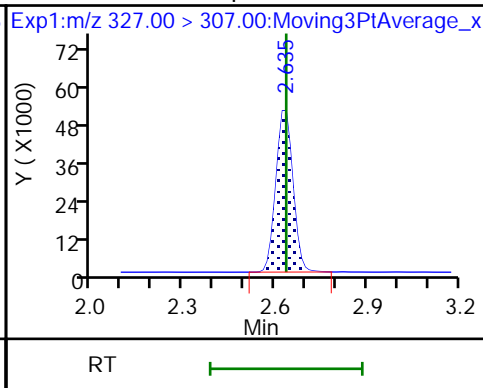
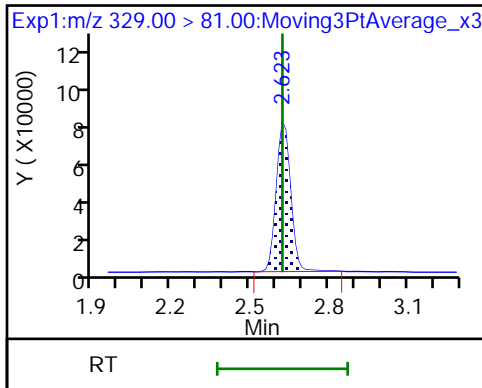
5 Perfluorobutanesulfonic acid



D 60 M2-4:2 FTS

61 1H,1H,2H,2H-perfluorohexanesulfoni

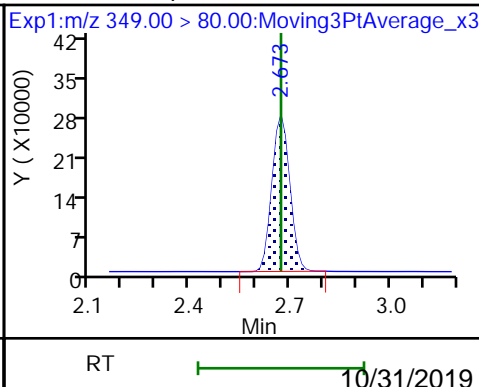
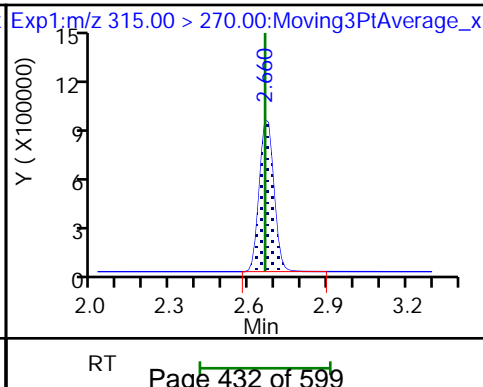
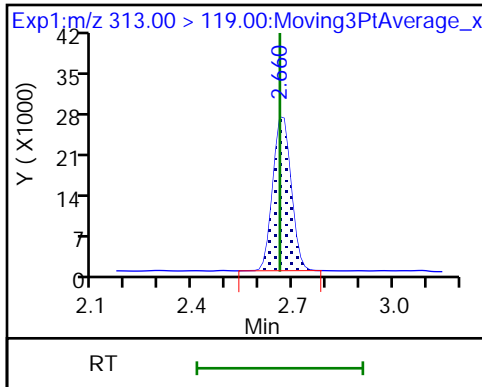
6 Perfluorohexanoic acid



6 Perfluorohexanoic acid

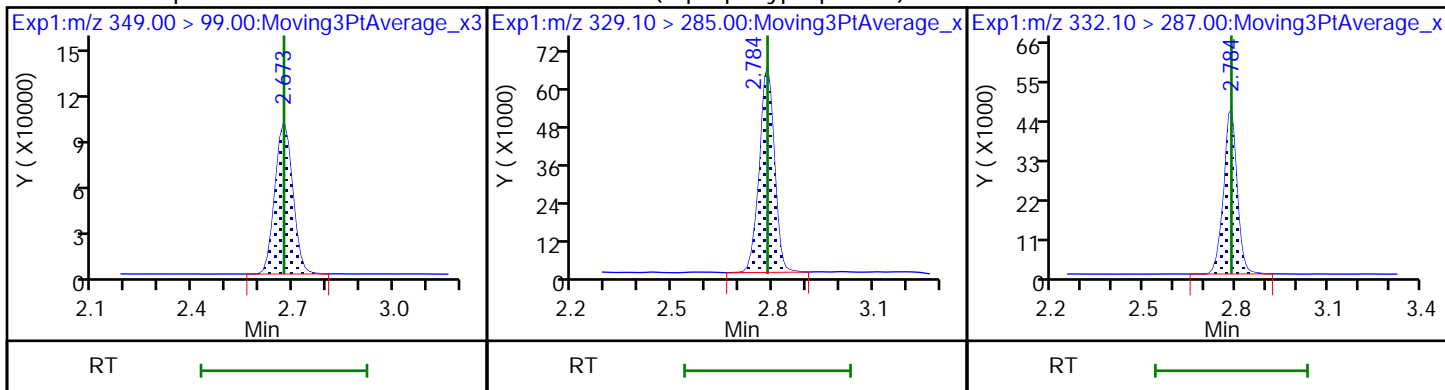
D 7 13C2 PFHxA

70 Perfluoropentanesulfonic acid



70 Perfluoropentanesulfonic acid

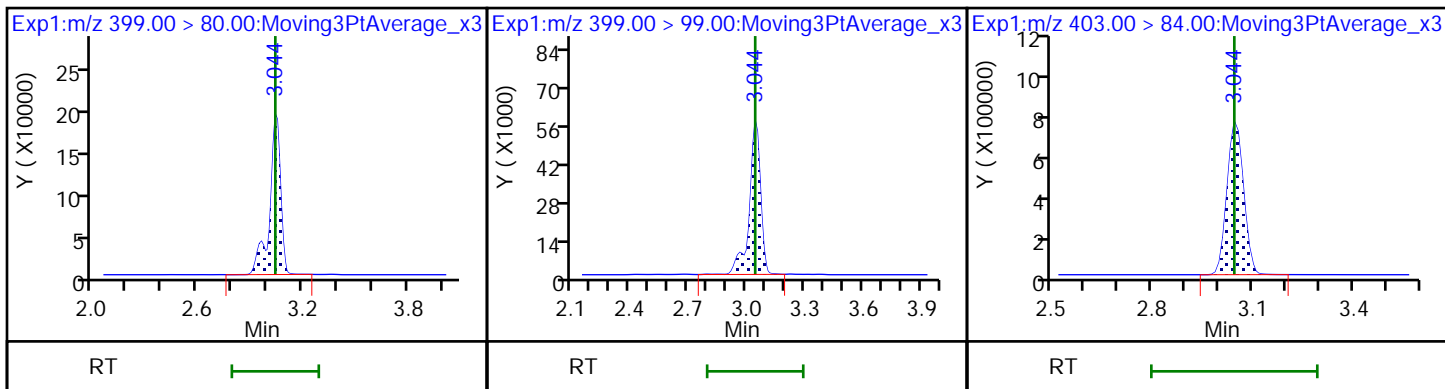
67 Perfluoro(2-propoxypropanoic) acid D 64 13C3 HFPO-DA



8 Perfluorohexanesulfonic acid

8 Perfluorohexanesulfonic acid

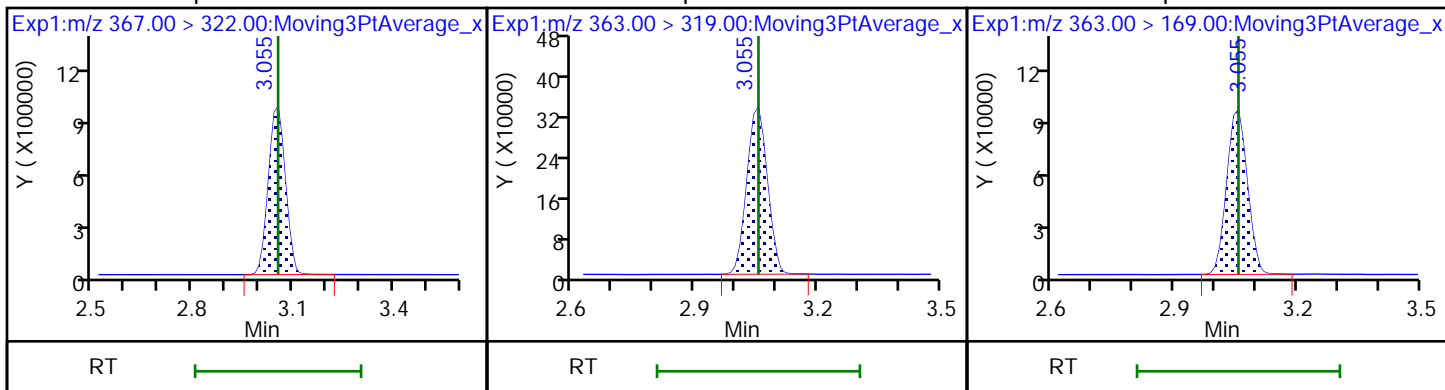
D 11 18O2 PFHxS



D 9 13C4 PFHpA

10 Perfluoroheptanoic acid

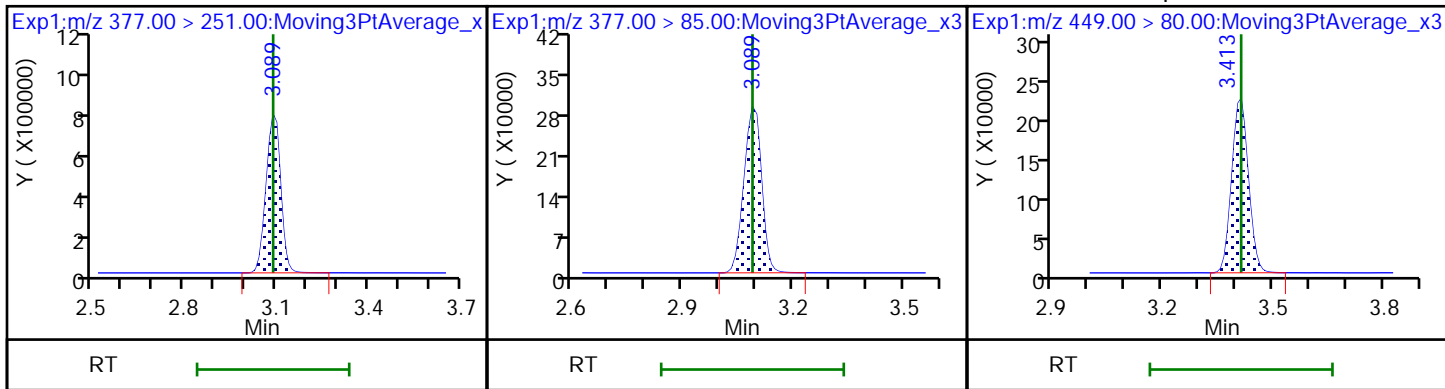
10 Perfluoroheptanoic acid



77 DONA

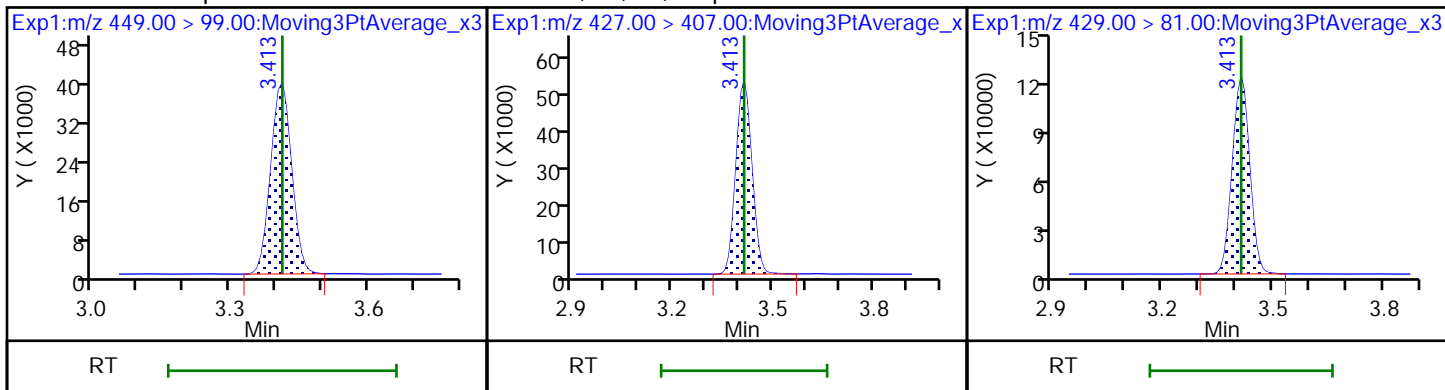
77 DONA

16 Perfluoroheptanesulfonic acid



16 Perfluoroheptanesulfonic acid

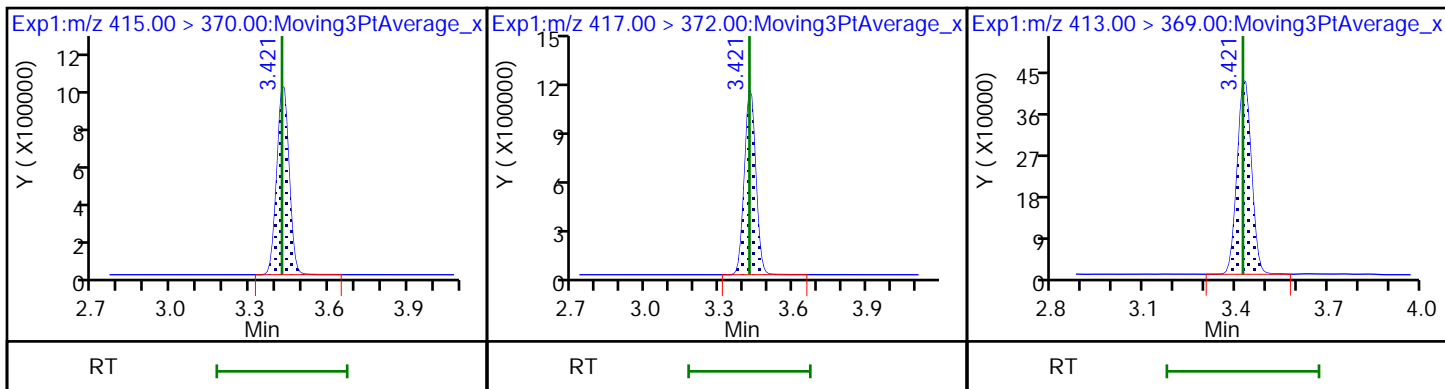
13 1H,1H,2H,2H-perfluorooctanesulfonD 12 M2-6:2 FTS



* 62 13C2 PFOA

D 14 13C4 PFOA

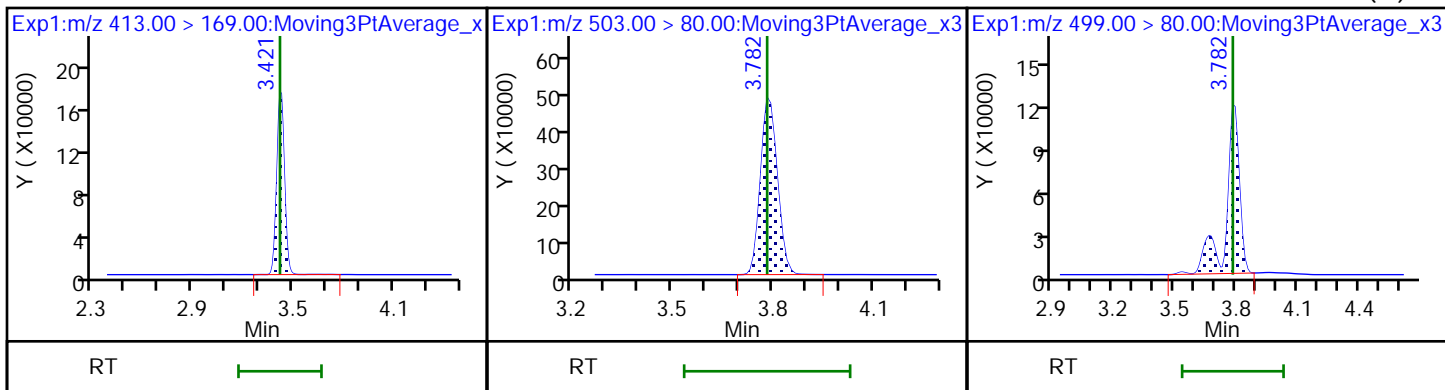
15 Perfluorooctanoic acid



15 Perfluorooctanoic acid

D 18 13C4 PFOS

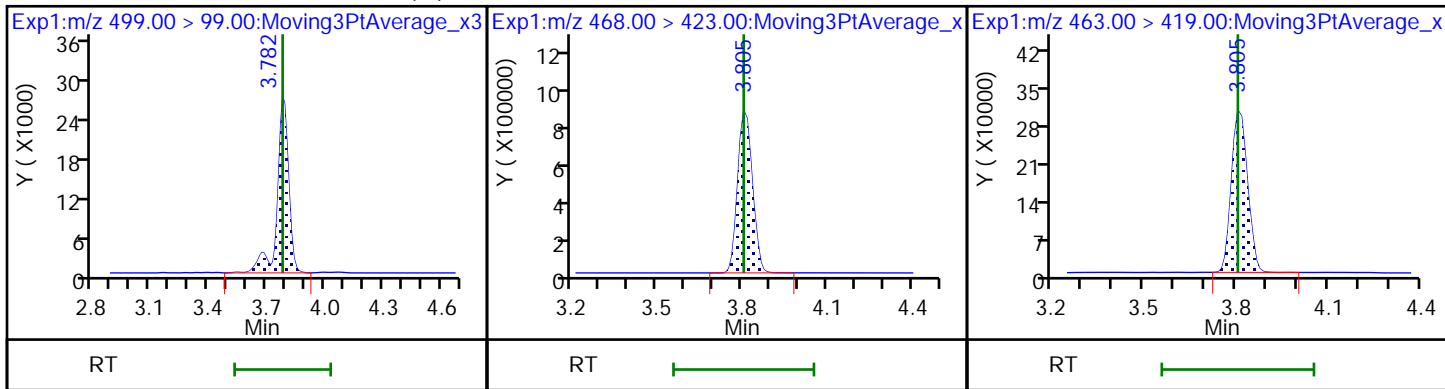
17 Perfluorooctanesulfonic acid (M)



17 Perfluorooctanesulfonic acid (M)

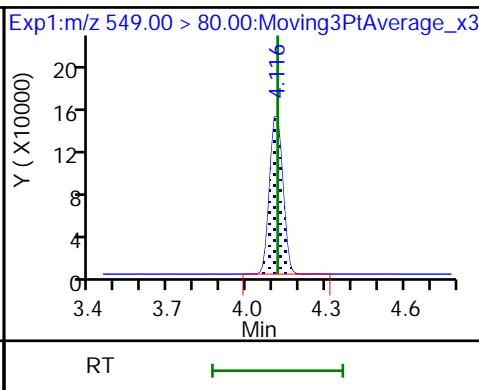
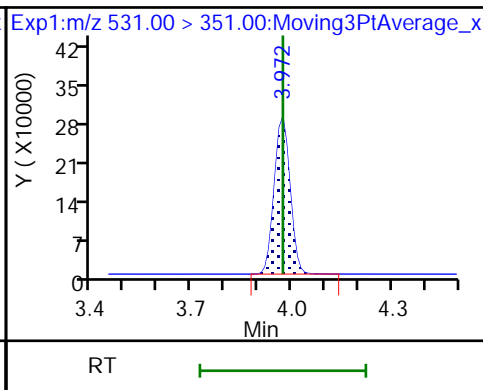
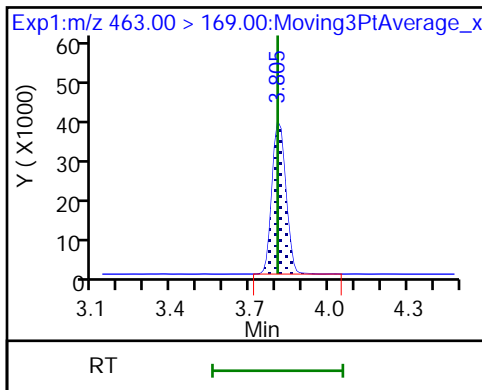
D 19 13C5 PFNA

20 Perfluorononanoic acid



20 Perfluorononanoic acid

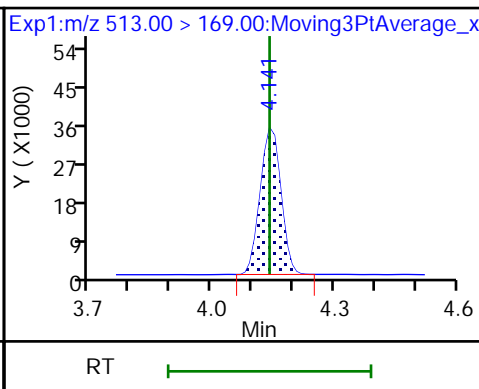
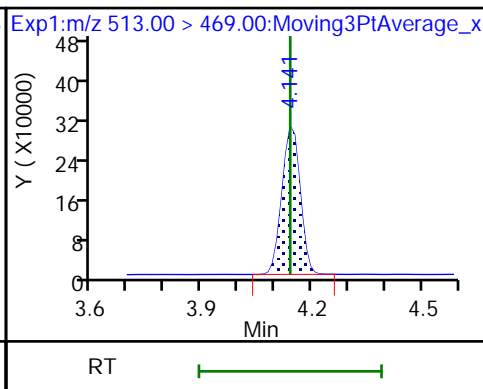
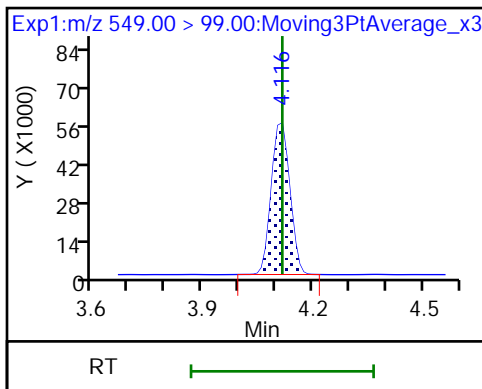
69 9-Chlorohexadecafluoro-3-oxanonan-68 Perfluoronananesulfonic acid



68 Perfluoronananesulfonic acid

24 Perfluorodecanoic acid

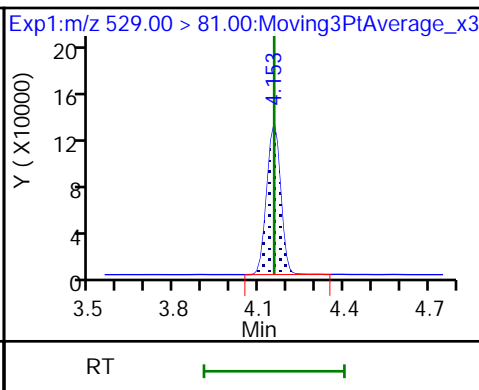
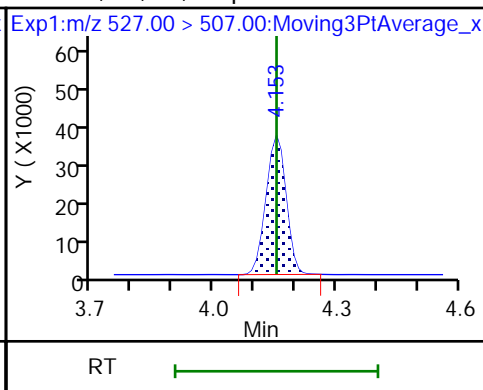
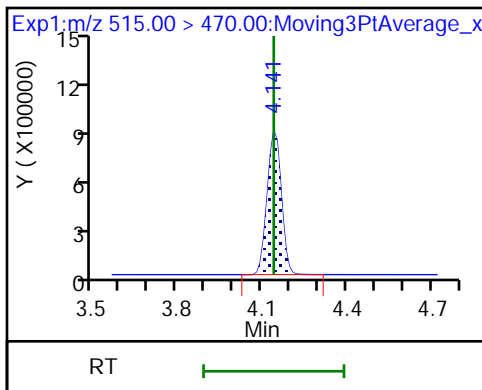
24 Perfluorodecanoic acid



D 23 13C2 PFDA

25 1H,1H,2H,2H-perfluorodecanesulfonate

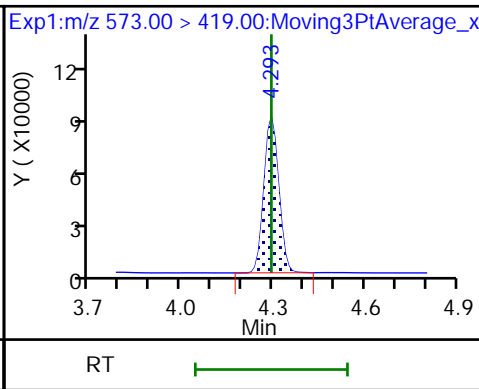
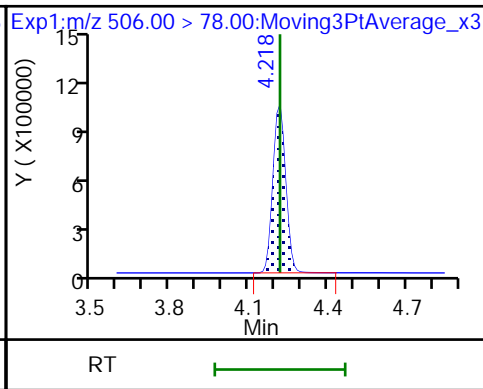
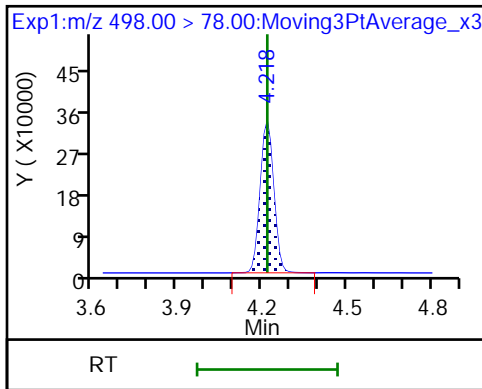
D 26 M2-8:2 FTS



22 Perfluorooctanesulfonamide

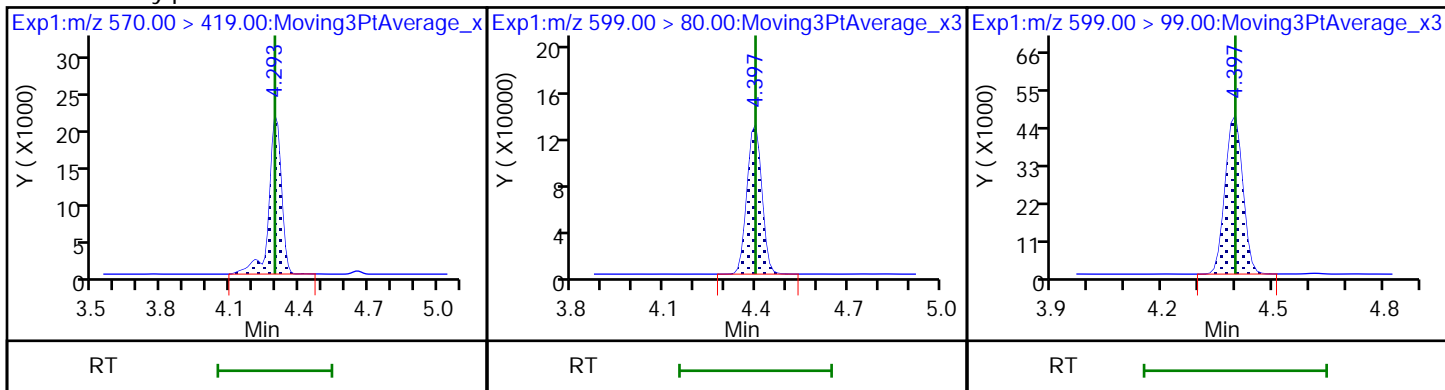
D 21 13C8 FOSA

D 27 d3-NMeFOSAA



28 N-methylperfluorooctanesulfonamido 29 Perfluorodecanesulfonic acid

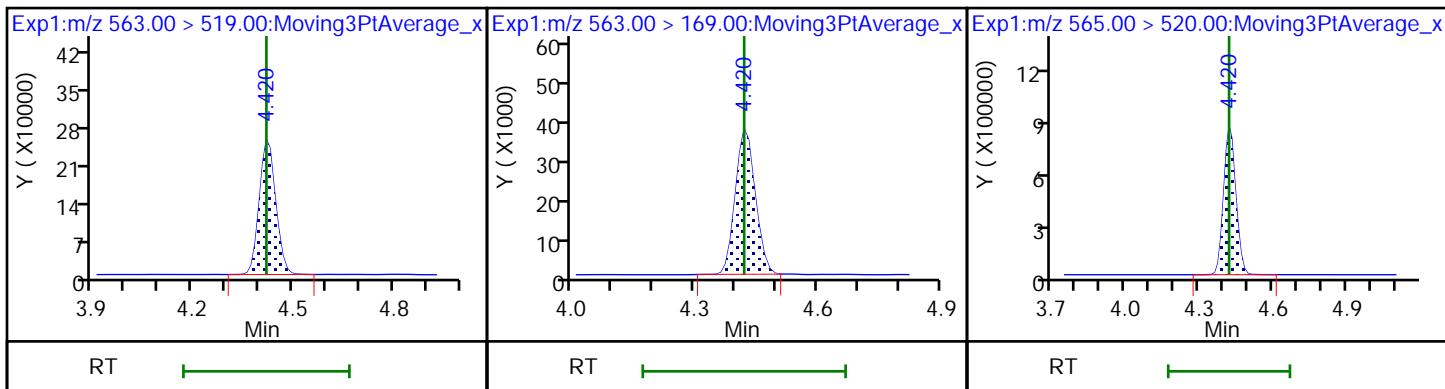
29 Perfluorodecanesulfonic acid



31 Perfluoroundecanoic acid

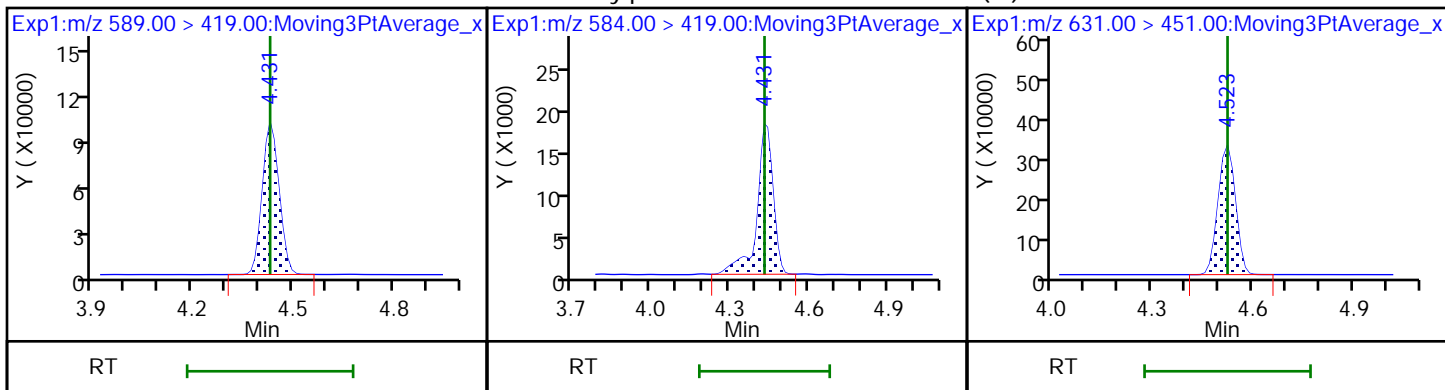
31 Perfluoroundecanoic acid

D 30 13C2 PFUnA



D 32 d5-NEtFOSAA

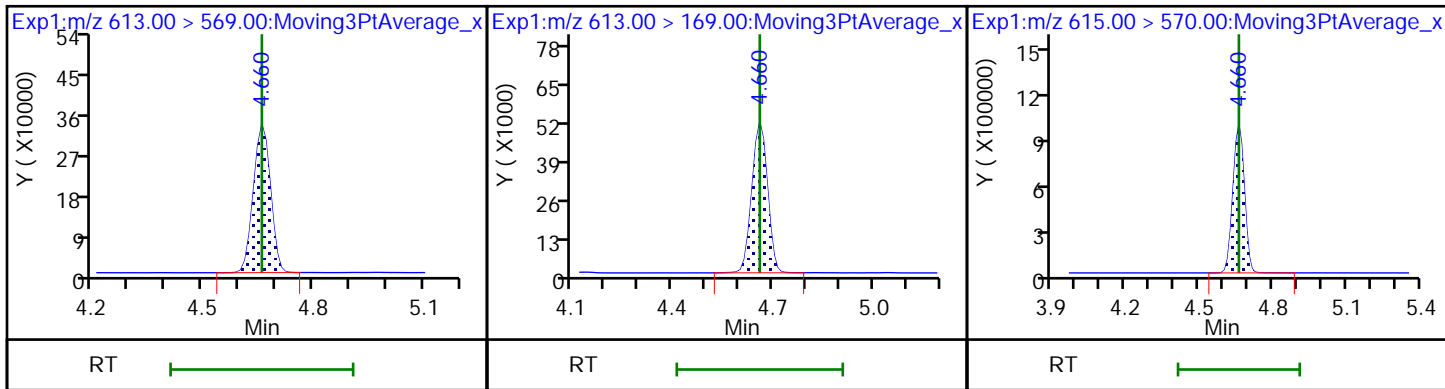
33 N-ethylperfluorooctanesulfonamido (6) 11-Chloroeicosafuoro-3-oxaundecan



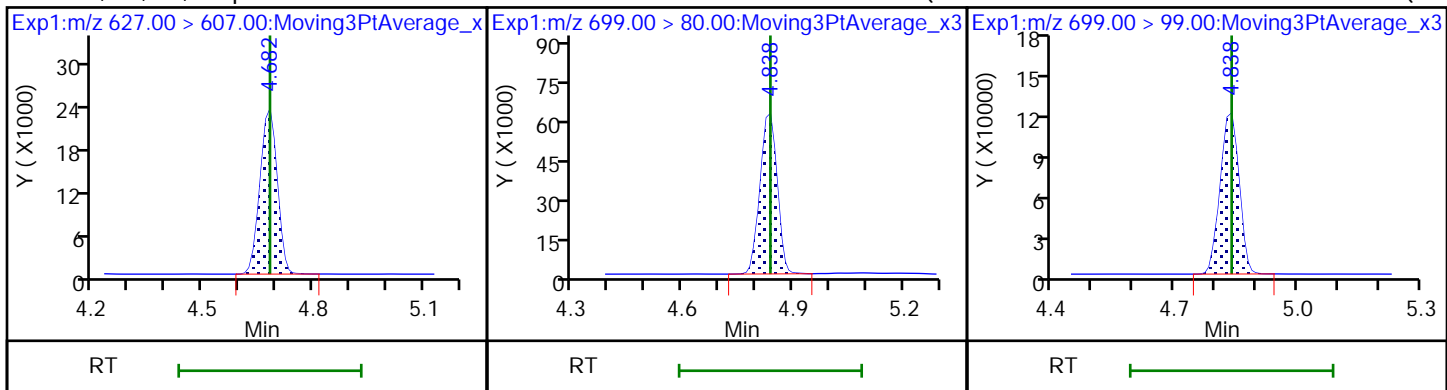
37 Perfluorododecanoic acid

37 Perfluorododecanoic acid

D 36 13C2 PFDoA



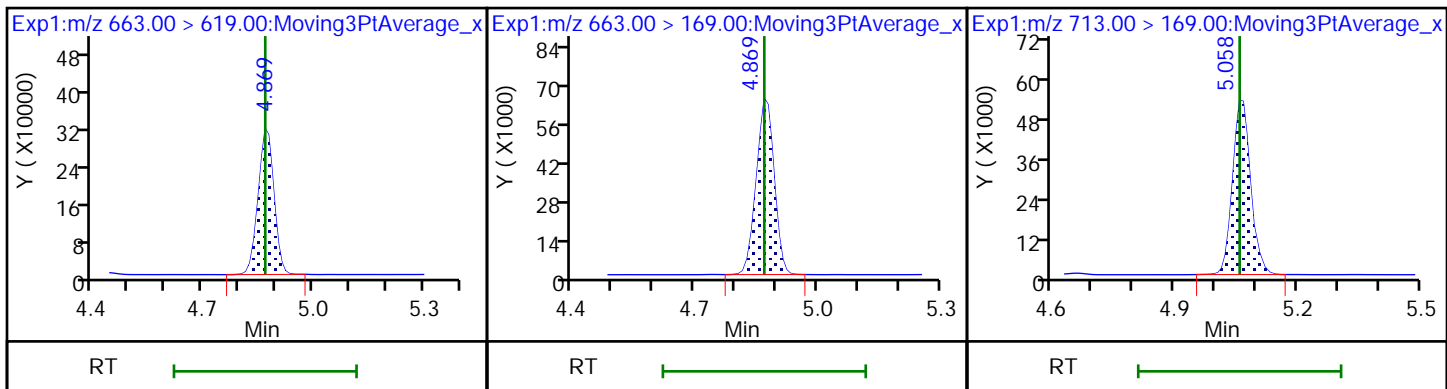
74 1H,1H,2H,2H-perfluorododecanesulfo75 Perfluorododecanesulfonic acid (PF 75 Perfluorododecanesulfonic acid (PF



41 Perfluorotridecanoic acid

41 Perfluorotridecanoic acid

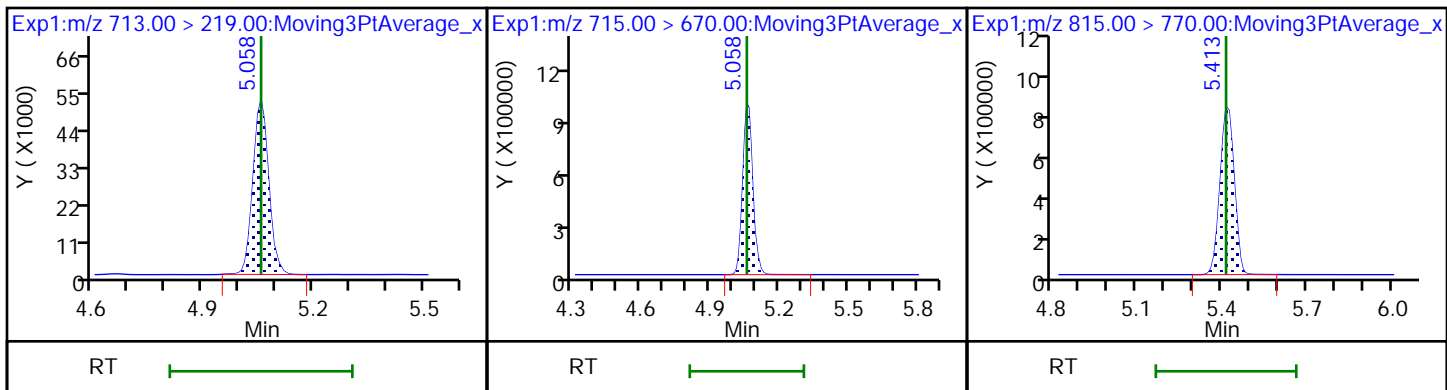
42 Perfluorotetradecanoic acid



42 Perfluorotetradecanoic acid

D 43 13C2 PFTeDA

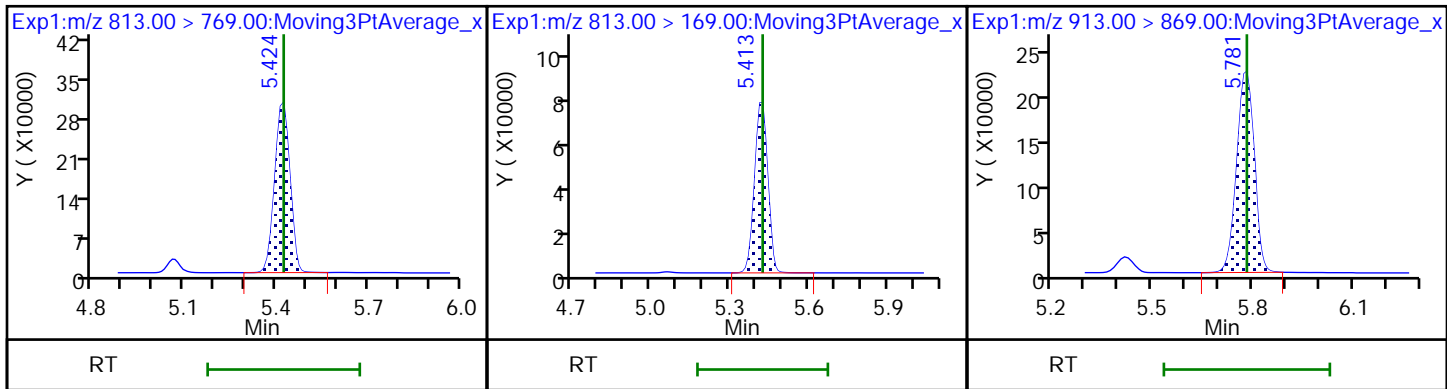
D 44 13C2 PFHxDA



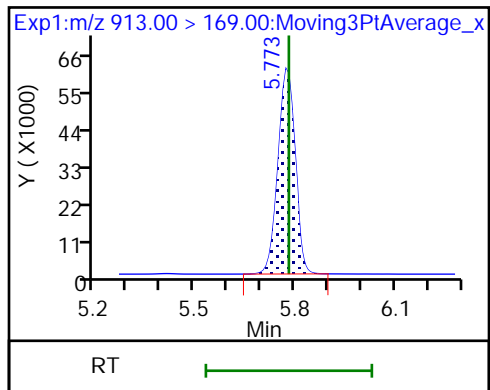
45 Perfluorohexadecanoic acid

45 Perfluorohexadecanoic acid

46 Perfluorooctadecanoic acid



46 Perfluorooctadecanoic acid



Eurofins TestAmerica, Burlington

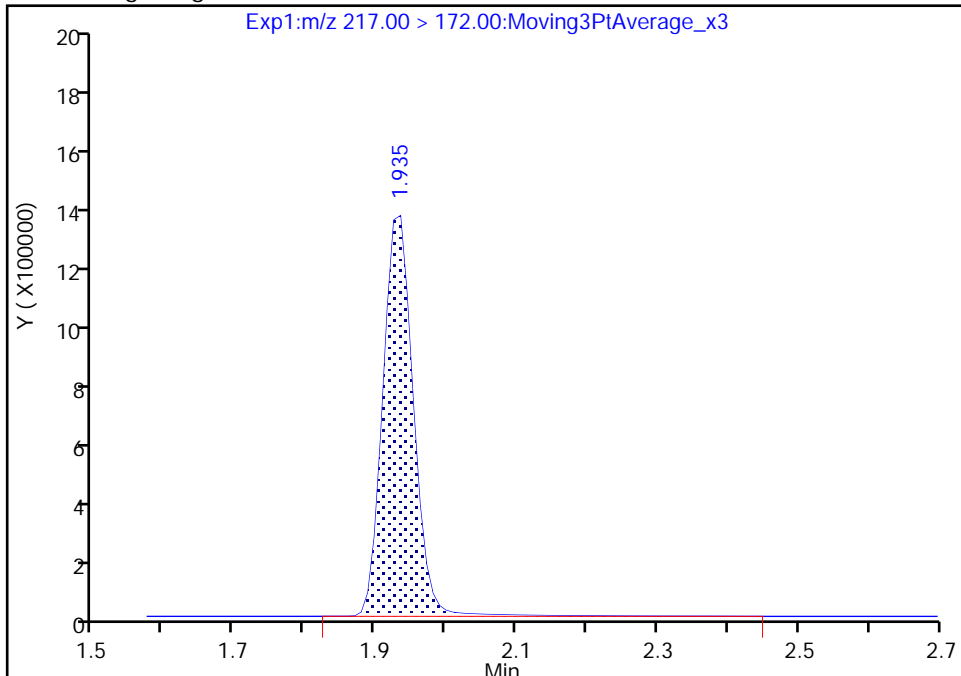
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38368.b\SC102219A006.d
Injection Date: 22-Oct-2019 15:38:33 Instrument ID: LC812
Lims ID: CCVIS
Client ID:
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

D 1 13C4 PFBA, CAS: STL00992

Signal: 1

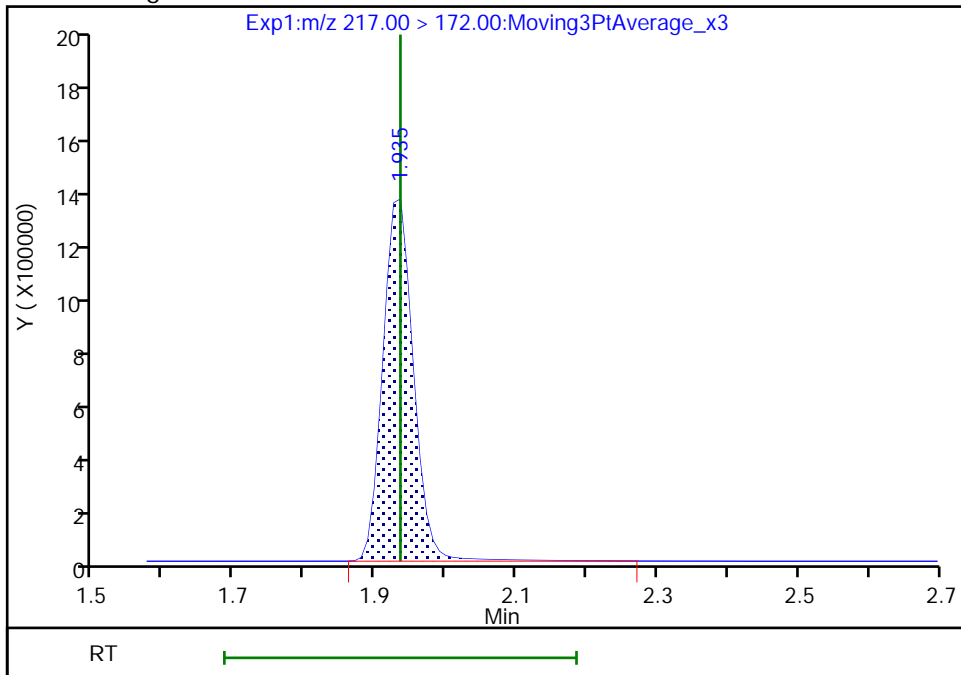
RT: 1.94
Area: 4063387
Amount: 2.622104
Amount Units: ng/ml

Processing Integration Results



RT: 1.94
Area: 4050890
Amount: 2.614040
Amount Units: ng/ml

Manual Integration Results



Reviewer: murrayjw, 22-Oct-2019 16:06:15
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

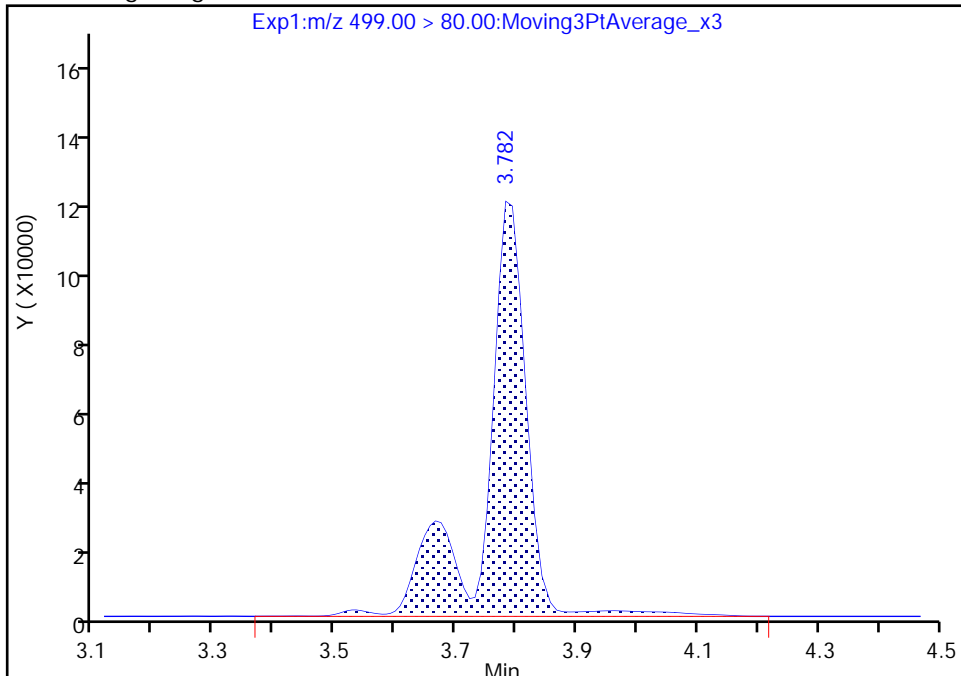
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38368.b\SC102219A006.d
Injection Date: 22-Oct-2019 15:38:33 Instrument ID: LC812
Lims ID: CCVIS
Client ID:
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

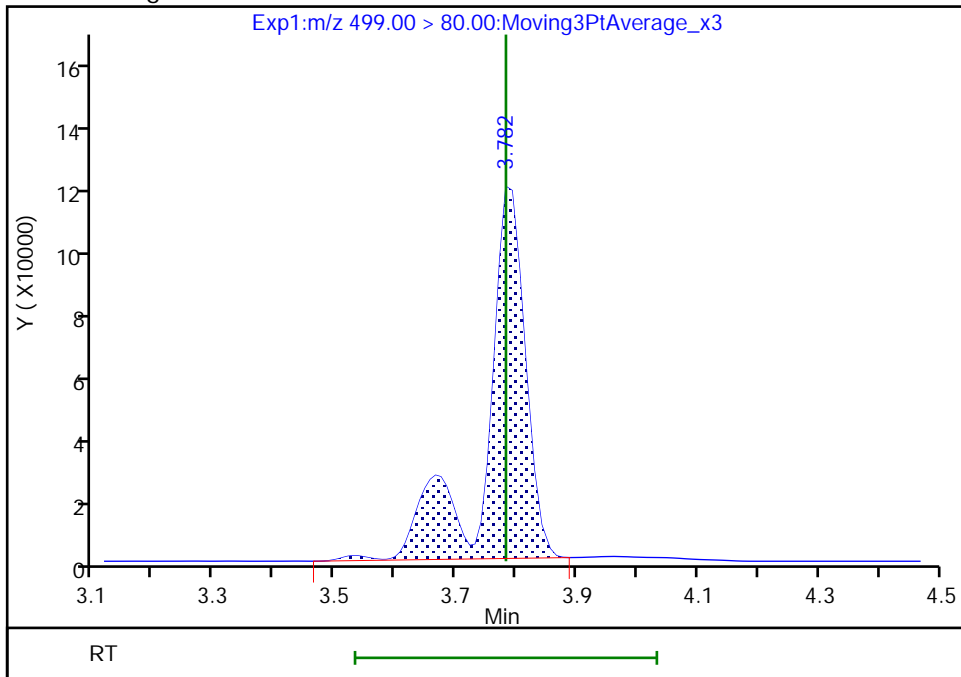
RT: 3.78
Area: 566333
Amount: 0.886878
Amount Units: ng/ml

Processing Integration Results



RT: 3.78
Area: 534536
Amount: 0.837084
Amount Units: ng/ml

Manual Integration Results



Reviewer: murrayjw, 22-Oct-2019 16:07:16
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration
Page 440 of 599

Eurofins TestAmerica, Burlington

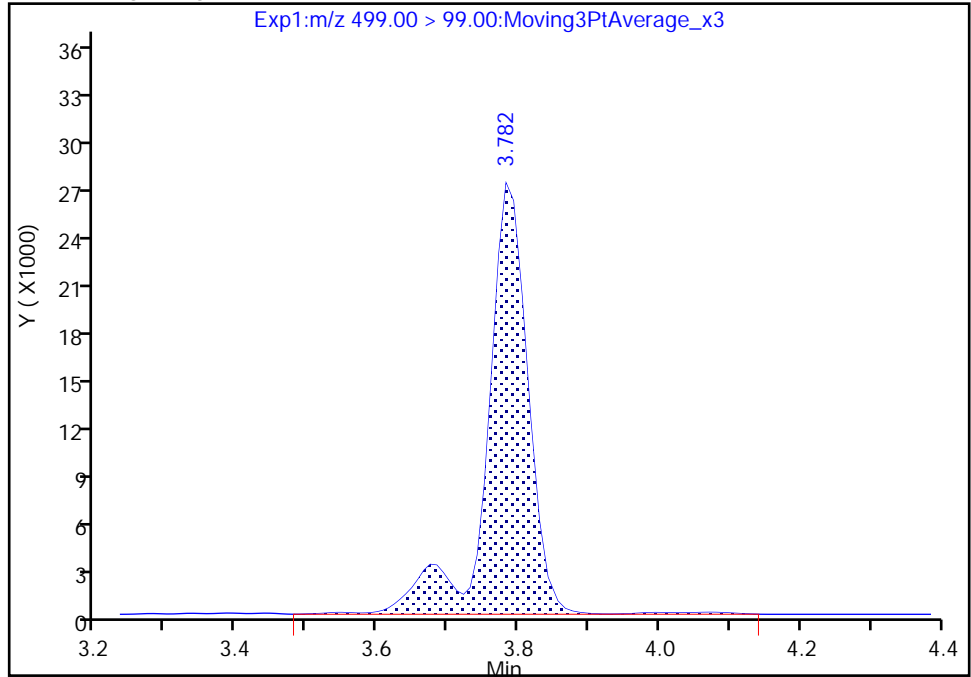
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38368.b\SC102219A006.d
Injection Date: 22-Oct-2019 15:38:33 Instrument ID: LC812
Lims ID: CCVIS
Client ID:
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

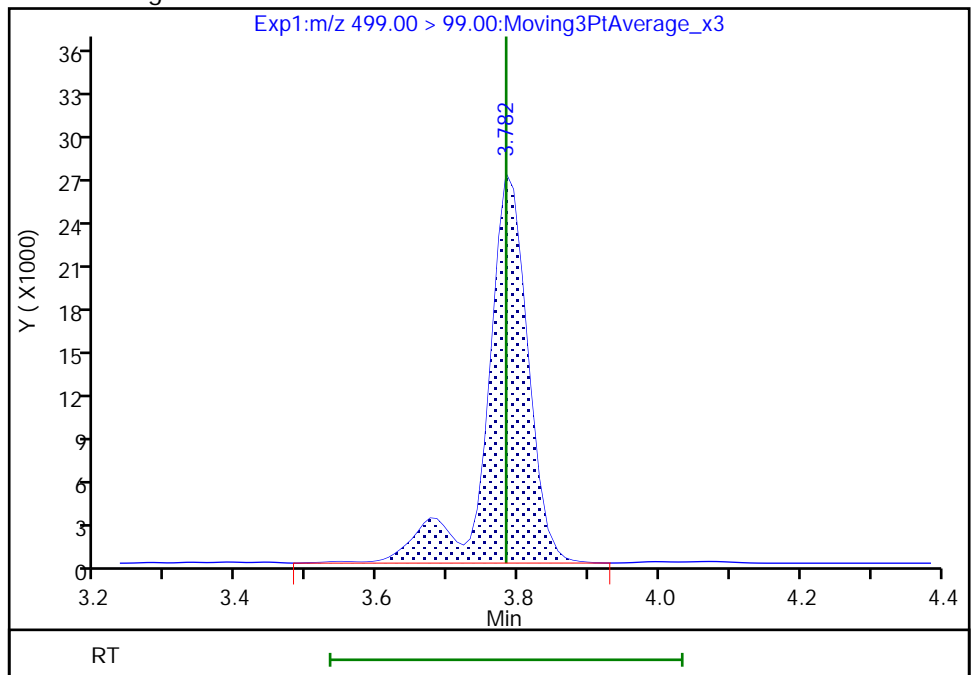
RT: 3.78
Area: 110662
Amount: 0.886878
Amount Units: ng/ml

Processing Integration Results



RT: 3.78
Area: 109730
Amount: 0.837084
Amount Units: ng/ml

Manual Integration Results



Reviewer: murrayjw, 22-Oct-2019 16:07:32

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

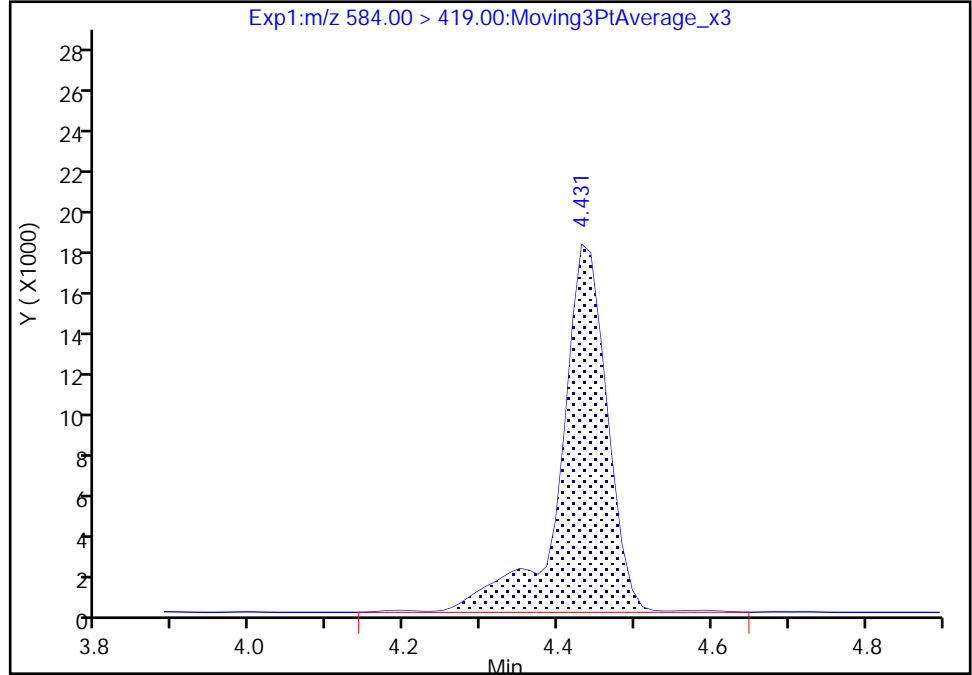
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38368.b\SC102219A006.d
Injection Date: 22-Oct-2019 15:38:33 Instrument ID: LC812
Lims ID: CCVIS
Client ID:
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

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

Signal: 1

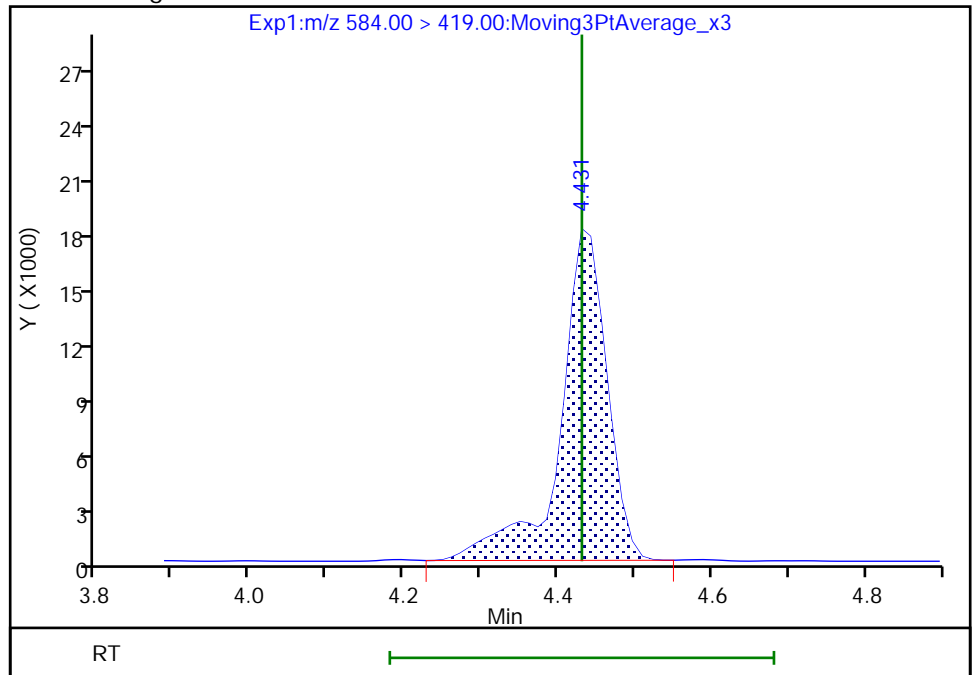
RT: 4.43
Area: 78530
Amount: 1.008436
Amount Units: ng/ml

Processing Integration Results



RT: 4.43
Area: 77094
Amount: 0.989648
Amount Units: ng/ml

Manual Integration Results



Reviewer: murrayjw, 22-Oct-2019 16:07:52
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1
 SDG No.: _____
 Lab Sample ID: CCV 200-148772/1 Calibration Date: 10/22/2019 19:52
 Instrument ID: LC812 Calib Start Date: 09/24/2019 18:15
 GC Column: C-18 ID: 4.60 (mm) Calib End Date: 09/24/2019 18:56
 Lab File ID: SC102219B001.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.8879	0.8499		957	1000	-4.3	40.0
Perfluoropentanoic acid (PFPeA)	L1ID		0.9139		980	1000	-2.0	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.363	1.188		771	884	-12.8	40.0
1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2)	AveID	2.000	1.890		883	934	-5.5	50.0
Perfluorohexanoic acid (PFHxA)	AveID	0.9852	0.9464		961	1000	-3.9	40.0
Perfluoropentanesulfonic acid	AveID	1.177	1.041		829	938	-11.6	50.0
HFPO-DA	AveID	2.861	2.952		1030	1000	3.2	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	0.8934	0.8284		927	1000	-7.3	40.0
Perfluorohexanesulfonic acid (PFHxS)	L1ID		0.9362		877	910	-3.6	30.0
DONA	AveID	4.089	3.573		823	942	-12.6	50.0
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	AveID	1.259	1.007		758	948	-20.1	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	1.108	1.036		890	952	-6.5	50.0
Perfluorooctanoic acid (PFOA)	L1ID		0.9486		997	1000	-0.3	30.0
Perfluorooctanesulfonic acid (PFOS)	AveID	0.9041	0.7997		821	928	-11.6	40.0
Perfluorononanoic acid (PFNA)	AveID	0.9539	0.8566		898	1000	-10.2	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	1.607	1.382		802	932	-14.0	50.0
Perfluorononanesulfonic acid	AveID	0.7809	0.7331		901	960	-6.1	50.0
Perfluorodecanoic acid (PFDA)	AveID	0.9250	0.9041		977	1000	-2.3	40.0
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	L1ID		0.7085		865	958	-9.7	40.0
Perfluorooctanesulfonamide (PFOSA)	AveID	0.9175	0.8473		924	1000	-7.6	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	AveID	0.7125	0.6780		952	1000	-4.8	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.6033	0.6098		975	964	1.1	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.8368	0.7595		908	1000	-9.2	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	L2ID		0.6190		1120	1000	11.5	30.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.999	1.602		755	942	-19.9	50.0
Perfluorododecanoic acid (PFDoA)	AveID	0.8845	0.9619		1090	1000	8.7	40.0
10:2 FTS	AveID	0.4268	0.4697		1060	964	10.1	50.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.2594	0.2629		981	968	1.4	50.0
Perfluorotridecanoic acid (PFTriA)	AveID	0.7157	0.7471		1040	1000	4.4	50.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1455	0.1480		1020	1000	1.7	40.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1
 SDG No.: _____
 Lab Sample ID: CCV 200-148772/1 Calibration Date: 10/22/2019 19:52
 Instrument ID: LC812 Calib Start Date: 09/24/2019 18:15
 GC Column: C-18 ID: 4.60 (mm) Calib End Date: 09/24/2019 18:56
 Lab File ID: SC102219B001.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		1060	1000	6.2	40.0
Perfluoro-n-octadecanoic acid (PFODA)	AveID	0.7383	0.6857		929	1000	-7.1	50.0
13C4 PFBA	Ave	1.200	1.232		2570	2500	2.7	50.0
13C5 PFPeA	Ave	0.9493	0.9741		2570	2500	2.6	50.0
M2-4:2 FTS	Ave	0.0981	0.0905		2150	2340	-7.7	50.0
13C2 PFHxA	Ave	1.009	1.010		2500	2500	0.0	50.0
13C3 HFPO-DA	Ave	0.0504	0.0461		2290	2500	-8.4	50.0
13C4 PFHpA	Ave	0.9768	1.054		2700	2500	7.9	50.0
1802 PFHxS	Ave	0.7528	0.8074		2540	2370	7.3	50.0
M2-6:2 FTS	Ave	0.1223	0.1412		2740	2380	15.4	50.0
13C4 PFOA	Ave	0.9930	1.085		2730	2500	9.2	50.0
13C4 PFOS	Ave	0.5122	0.5576		2600	2390	8.9	50.0
13C5 PFNA	Ave	0.8786	0.9666		2750	2500	10.0	50.0
13C2 PFDA	Ave	0.8752	0.9189		2620	2500	5.0	50.0
M2-8:2 FTS	Ave	0.1336	0.1424		2550	2400	6.7	50.0
13C8 FOSA	Ave	0.9945	0.9730		2450	2500	-2.2	50.0
d3-NMeFOSAA	Ave	0.0848	0.0859		2530	2500	1.3	50.0
13C2 PFUnA	Ave	0.7839	0.8399		2680	2500	7.1	50.0
d5-NEtFOSAA	Ave	0.0919	0.0984		2680	2500	7.0	50.0
13C2 PFDoA	Ave	0.8441	0.9261		2740	2500	9.7	50.0
13C2 PFTeDA	Ave	0.7567	0.8288		2740	2500	9.5	50.0
13C2 PFHxDA	Ave	0.7599	0.8811		2900	2500	16.0	50.0

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B001.d
 Lims ID: CCV L4
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 22-Oct-2019 19:52:37 ALS Bottle#: 1 Worklist Smp#: 1
 Injection Vol: 20.0 ul Dil. Factor: 1.0000
 Sample Info: CCV L4
 Misc. Info.: 200-0038369-001 Plate: 1 Rack: 4
 Operator ID: lc812tech Instrument ID: LC812
 Sublist: chrom-PFC_LC812*sub6
 Method: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\PFC_LC812.m
 Limit Group: LC_PFC_ICAL
 Last Update: 28-Oct-2019 13:08:26 Calib Date: 24-Sep-2019 18:56:37
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA015.d
 Column 1 : C-18 (4.60 mm) Det: EXP1
 Process Host: CTX1017

First Level Reviewer: kirkm Date: 23-Oct-2019 10:32:20

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										M
217.00 > 172.00	1.926	1.926	0.0	0.563	4038201	2.57		103	16819	M
2 Perfluorobutanoic acid										
212.90 > 169.00	1.926	1.926	0.0	1.000	1372841	0.9572		95.7	320	
D 3 13C5 PFPeA										
267.90 > 223.00	2.285	2.285	0.0	0.668	3192113	2.57		103	6663	
4 Perfluoropentanoic acid										
262.90 > 219.00	2.285	2.285	0.0	1.000	1166898	0.9801		98.0	95.3	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.298	2.298	0.0	0.755	1111784	0.7710	Target=2.04	87.2	2819	
298.90 > 99.00	2.298	2.298	0.0	0.755	555524		2.00(1.02-3.05)		759	
D 60 M2-4:2 FTS										
329.00 > 81.00	2.623	2.623	0.0	0.767	276902	2.15		92.3	344	
61 1H,1H,2H,2H-perfluorohexanesulfoni										
327.00 > 307.00	2.623	2.623	0.0	1.000	209314	0.8826		94.5	2351	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.661	2.661	0.0	1.000	1252515	0.9606	Target=12.90	96.1	458	
313.00 > 119.00	2.661	2.661	0.0	1.000	98838		12.67(6.45-19.36)		210	
D 7 13C2 PFHxA										
315.00 > 270.00	2.661	2.661	0.0	0.778	3308711	2.50		100	4726	
70 Perfluoropentanesulfonic acid										
349.00 > 80.00	2.673	2.673	0.0	0.878	1033118	0.8291	Target=3.01	88.4	3042	
349.00 > 99.00	2.673	2.673	0.0	0.878	341861		3.02(1.51-4.52)		1201	
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.776	2.776	0.0	1.000	178545	1.03		103	105	
D 64 13C3 HFPO-DA										
332.10 > 287.00	2.776	2.776	0.0	0.811	151182	2.29		91.6	1323	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.044	3.044	0.0	1.000	901604	0.8769	Target=3.78	96.4	1717	
399.00 > 99.00	3.044	3.044	0.0	1.000	235086		3.84(1.89-5.67)		580	
D 11 18O2 PFHxS										
403.00 > 84.00	3.044	3.044	0.0	0.890	2502942	2.54		107	6635	
D 9 13C4 PFHpA										
367.00 > 322.00	3.044	3.044	0.0	0.890	3453946	2.70		108	8250	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.044	3.044	0.0	1.000	1144555	0.9273	Target=3.54	92.7	473	
363.00 > 169.00	3.044	3.044	0.0	1.000	321923		3.56(1.77-5.31)		1011	
77 DONA										
377.00 > 251.00	3.090	3.090	0.0	0.817	2460292	0.8231	Target=2.56	87.4	4671	
377.00 > 85.00	3.090	3.090	0.0	0.817	994636		2.47(1.28-3.84)		2982	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.413	3.413	0.0	0.902	720624	0.8901	Target=5.80	93.5	2973	
449.00 > 99.00	3.413	3.413	0.0	0.902	131718		5.47(2.90-8.71)		1159	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.413	3.413	0.0	1.000	176610	0.7578		79.9	1150	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.413	3.413	0.0	0.998	439457	2.74		115	1648	
* 62 13C2 PFOA										
415.00 > 370.00	3.422	3.422	0.0		3276856	2.50			5880	
D 14 13C4 PFOA										
417.00 > 372.00	3.422	3.422	0.0	1.000	3554554	2.73		109	7245	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.422	3.422	0.0	1.000	1348717	1.00	Target=2.61	99.7	364	
413.00 > 169.00	3.422	3.422	0.0	1.000	528813		2.55(1.30-3.91)		1876	
D 18 13C4 PFOS										
503.00 > 80.00	3.783	3.783	0.0	1.105	1746880	2.60		109	5869	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.783	3.783	0.0	1.000	542389	0.8207	Target=4.93	88.4	305	M
499.00 > 99.00	3.783	3.783	0.0	1.000	107314		5.05(2.47-7.40)		659	M
D 19 13C5 PFNA										
468.00 > 423.00	3.805	3.805	0.0	1.112	3167472	2.75		110	9185	
20 Perfluorononanoic acid										
463.00 > 419.00	3.805	3.805	0.0	1.000	1085340	0.8981	Target=7.89	89.8	355	
463.00 > 169.00	3.805	3.805	0.0	1.000	148185		7.32(3.95-11.84)		1482	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.973	3.973	0.0	1.050	941667	0.8018		86.0	5466	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.117	4.117	0.0	1.088	514375	0.9013	Target=2.60	93.9	5209	
549.00 > 99.00	4.104	4.117	-0.013	1.085	191141		2.69(1.30-3.90)		982	
24 Perfluorodecanoic acid										
513.00 > 469.00	4.141	4.141	0.0	1.000	1088995	0.9774	Target=8.57	97.7	776	
513.00 > 169.00	4.141	4.141	0.0	1.000	119534		9.11(4.29-12.86)		968	
D 23 13C2 PFDA										
515.00 > 470.00	4.141	4.141	0.0	1.210	3011218	2.62		105	7685	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
25 1H,1H,2H,2H-perfluorodecanesulfoni	527.00 > 507.00	4.153	4.153	0.0	1.000	126719	0.8647	90.3	2693	
D 26 M2-8:2 FTS	529.00 > 81.00	4.153	4.153	0.0	1.214	447150	2.55	107	2004	
22 Perfluorooctanesulfonamide	498.00 > 78.00	4.207	4.207	0.0	1.000	1080682	0.9235	92.4	1864	
D 21 13C8 FOSA	506.00 > 78.00	4.207	4.207	0.0	1.230	3188451	2.45	97.8	11236	
D 27 d3-NMeFOSAA	573.00 > 419.00	4.294	4.294	0.0	1.255	281593	2.53	101	1764	
28 N-methylperfluorooctanesulfonamido	570.00 > 419.00	4.294	4.294	0.0	1.000	76369	0.9516	95.2	270	
29 Perfluorodecanesulfonic acid	599.00 > 80.00	4.397	4.397	0.0	1.163	429692	0.9745	Target=2.56	101	1971
	599.00 > 99.00	4.386	4.397	-0.011	1.159	157740		2.72(1.28-3.84)		1660
31 Perfluoroundecanoic acid	563.00 > 519.00	4.420	4.420	0.0	1.000	836146	0.9077	Target=6.97	90.8	635
	563.00 > 169.00	4.420	4.420	0.0	1.000	126851		6.59(3.48-10.45)		1796
D 30 13C2 PFUnA	565.00 > 520.00	4.420	4.420	0.0	1.292	2752178	2.68	107	12286	
D 32 d5-NEtFOSAA	589.00 > 419.00	4.431	4.431	0.0	1.295	322322	2.68	107	1690	
33 N-ethylperfluorooctanesulfonamidoa	584.00 > 419.00	4.431	4.431	0.0	1.000	79802	1.12	112	567	
66 11-Chloroeicosafuoro-3-oxaundecan	631.00 > 451.00	4.524	4.524	0.0	1.196	1103144	0.7549	80.1	4257	
37 Perfluorododecanoic acid	613.00 > 569.00	4.660	4.660	0.0	1.000	1167677	1.09	Target=7.06	109	161
	613.00 > 169.00	4.660	4.660	0.0	1.000	181316		6.44(3.53-10.59)		2436
D 36 13C2 PFDaA	615.00 > 570.00	4.660	4.660	0.0	1.362	3034832	2.74	110	9059	
74 1H,1H,2H,2H-perfluorododecanesulfo	627.00 > 607.00	4.683	4.683	0.0	1.128	84543	1.06	110	1145	
75 Perfluorododecanesulfonic acid (PF	699.00 > 80.00	4.839	4.839	0.0	1.279	186019	0.9811	Target=0.47	101	367
	699.00 > 99.00	4.839	4.839	0.0	1.279	387796		0.48(0.23-0.70)		3601
41 Perfluorotridecanoic acid	663.00 > 619.00	4.870	4.870	0.0	1.045	906882	1.04	Target=4.87	104	118
	663.00 > 169.00	4.870	4.870	0.0	1.045	200838		4.52(2.43-7.30)		1761
42 Perfluorotetradecanoic acid	713.00 > 169.00	5.067	5.067	0.0	1.000	160807	1.02	Target=1.09	102	2090
	713.00 > 219.00	5.058	5.067	-0.009	0.998	165121		0.97(0.54-1.63)		2127
D 43 13C2 PFTeDA	715.00 > 670.00	5.067	5.067	0.0	1.481	2715853	2.74	110	10022	
D 44 13C2 PFHxDA	815.00 > 770.00	5.424	5.424	0.0	1.585	2887290	2.90	116	8780	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.424	5.424	0.0	1.000	1036197	1.06	Target=4.33	106	152	
813.00 > 169.00	5.424	5.424	0.0	1.000	259825		3.99(2.16-6.49)		1902	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.790	5.790	0.0	1.067	791898	0.9288	Target=4.09	92.9	161	
913.00 > 169.00	5.790	5.790	0.0	1.067	213984		3.70(2.05-6.14)		2098	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

PFAS32NCIC4_00001

Amount Added: 100.00

Units: uL

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B001.d

Injection Date: 22-Oct-2019 19:52:37

Instrument ID: LC812

Lims ID: CCV L4

Client ID:

Operator ID: lc812tech

ALS Bottle#: 1

Worklist Smp#: 1

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

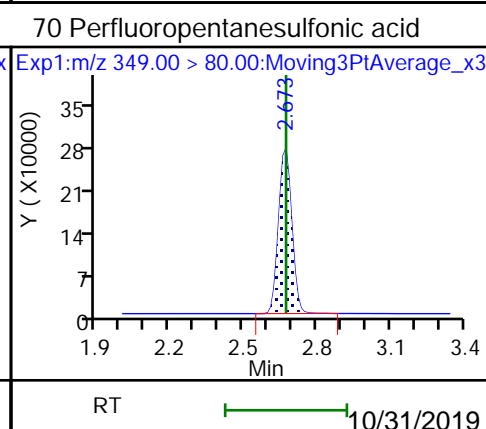
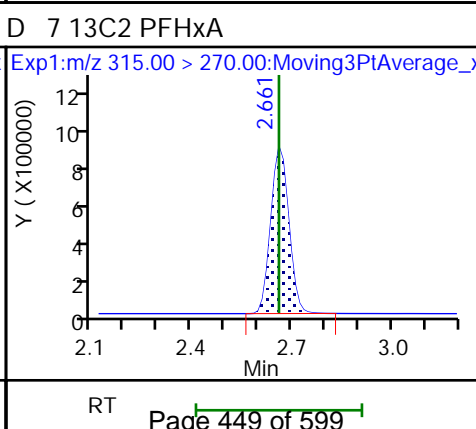
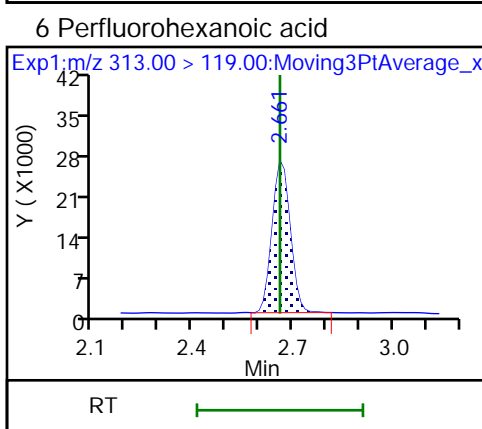
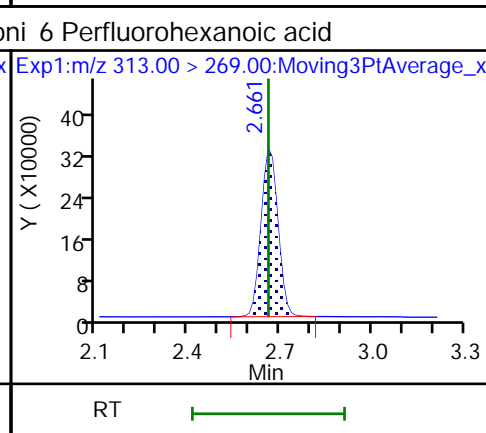
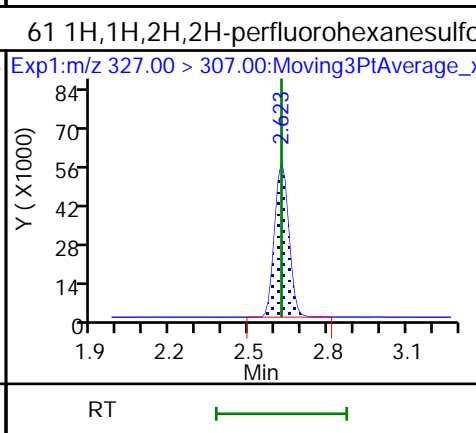
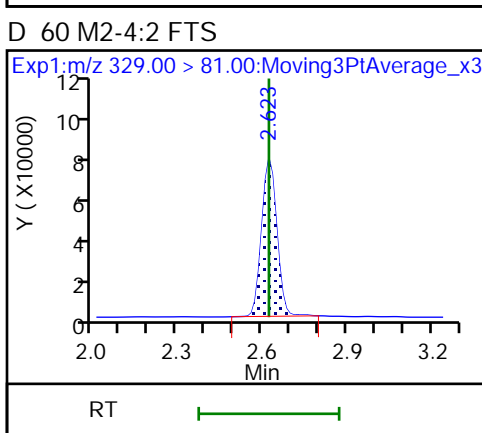
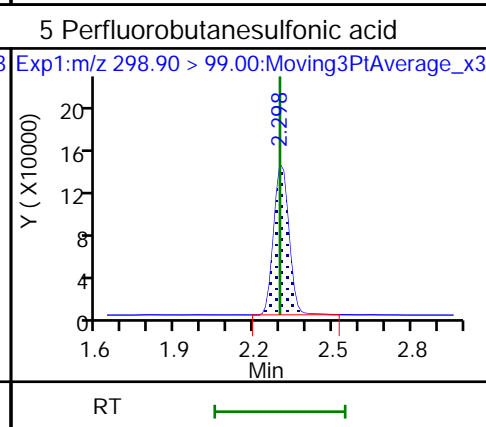
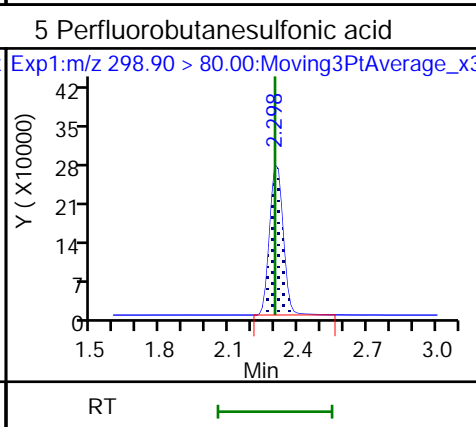
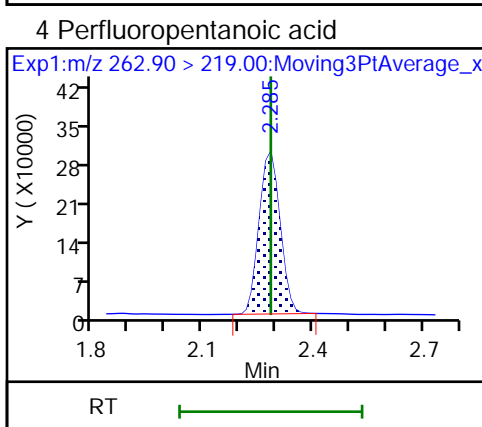
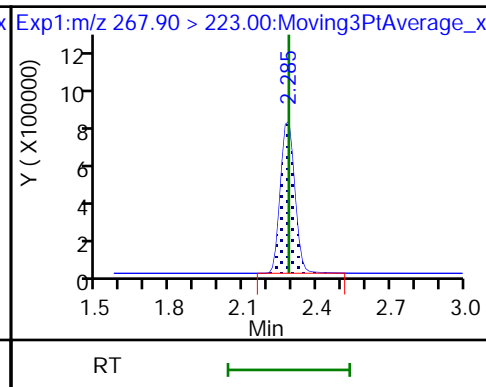
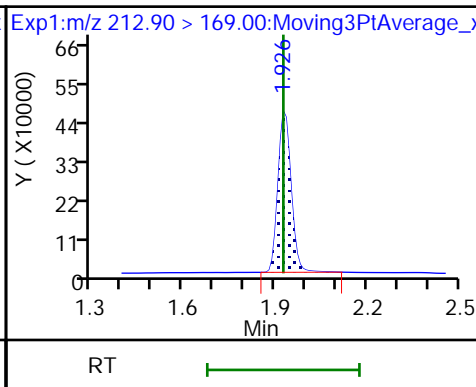
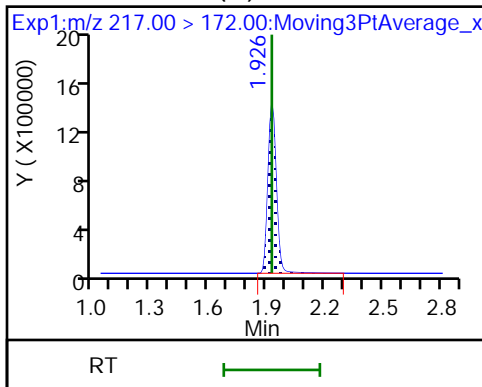
Method: PFC_LC812

Limit Group: LC_PFC_ICAL

D 1 13C4 PFBA (M)

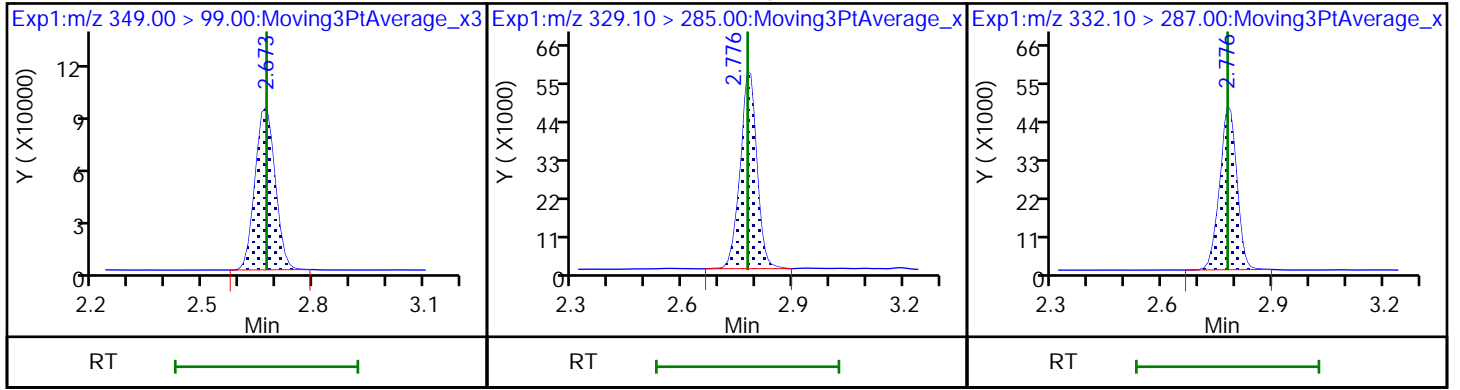
2 Perfluorobutanoic acid

D 3 13C5 PFPeA



70 Perfluoropentanesulfonic acid

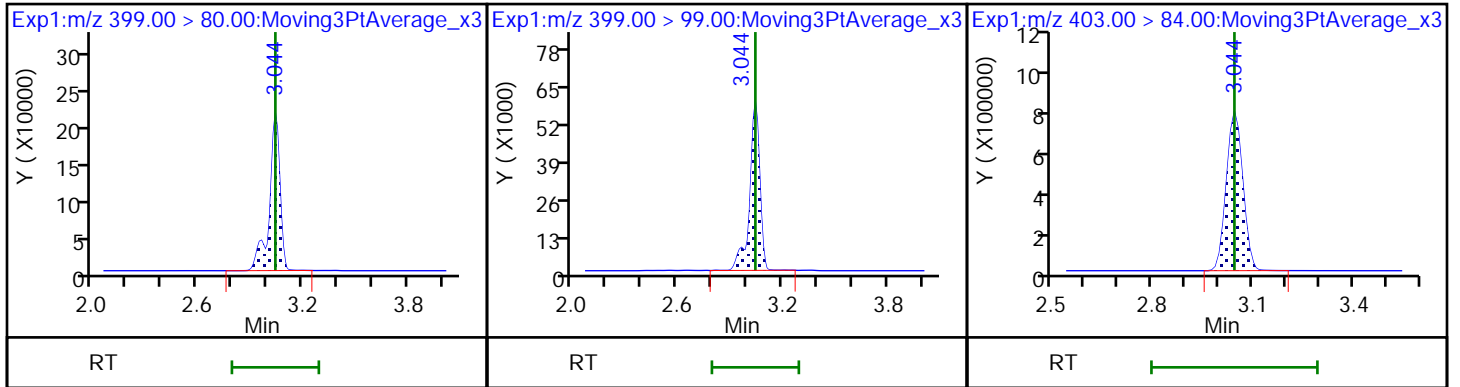
67 Perfluoro(2-propoxypropanoic) acid D 64 13C3 HFPO-DA



8 Perfluorohexanesulfonic acid

8 Perfluorohexanesulfonic acid

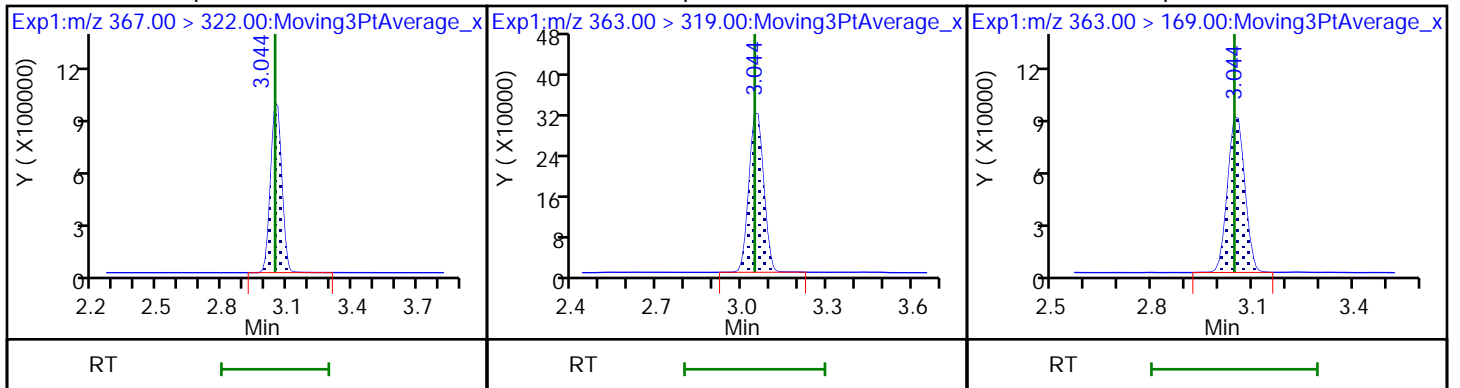
D 11 18O2 PFHxS



D 9 13C4 PFHpa

10 Perfluoroheptanoic acid

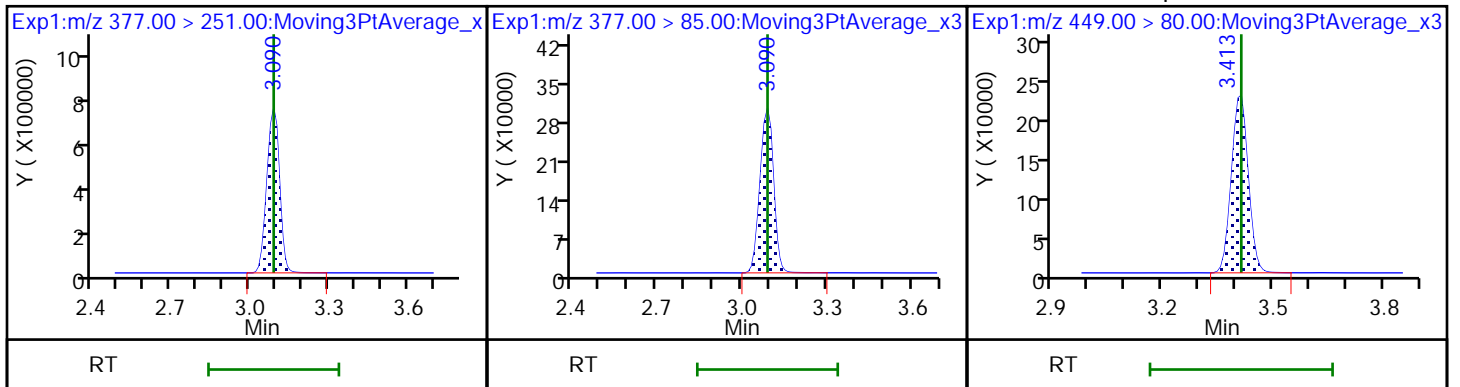
10 Perfluoroheptanoic acid



77 DONA

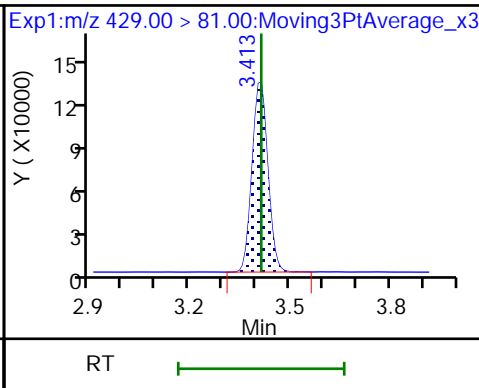
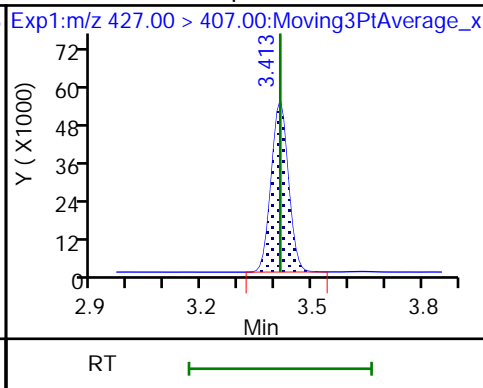
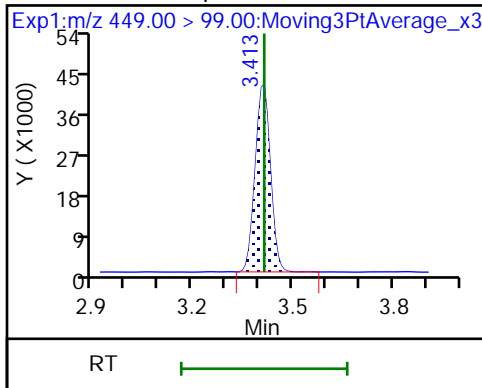
77 DONA

16 Perfluoroheptanesulfonic acid



16 Perfluoroheptanesulfonic acid

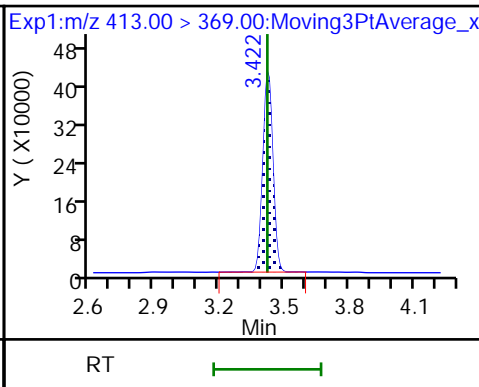
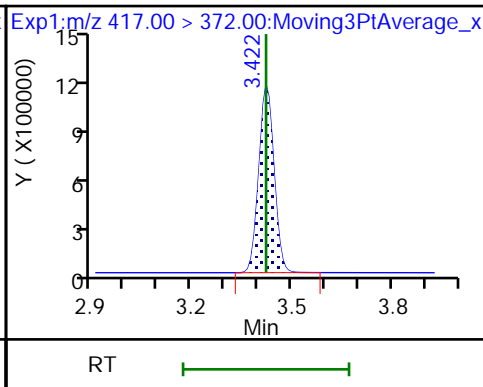
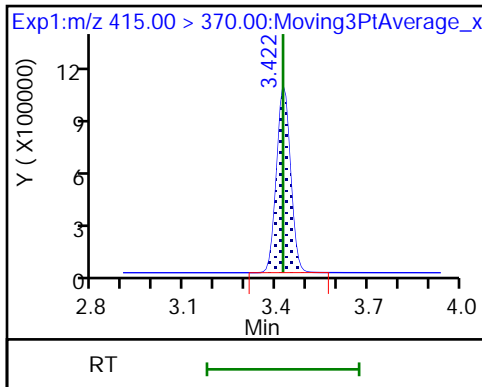
13 1H,1H,2H,2H-perfluorooctanesulfonD 12 M2-6:2 FTS



* 62 13C2 PFOA

D 14 13C4 PFOA

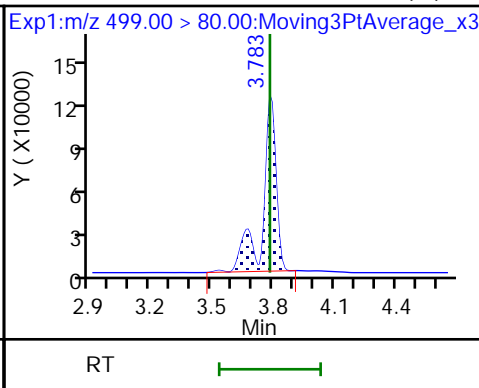
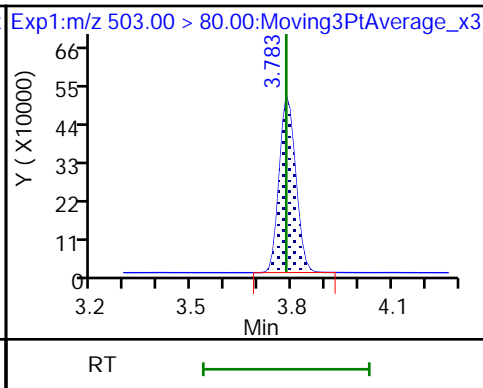
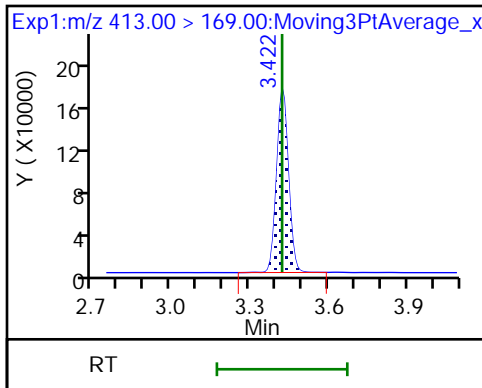
15 Perfluorooctanoic acid



15 Perfluorooctanoic acid

D 18 13C4 PFOS

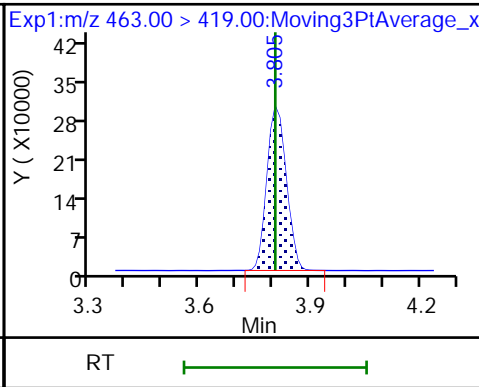
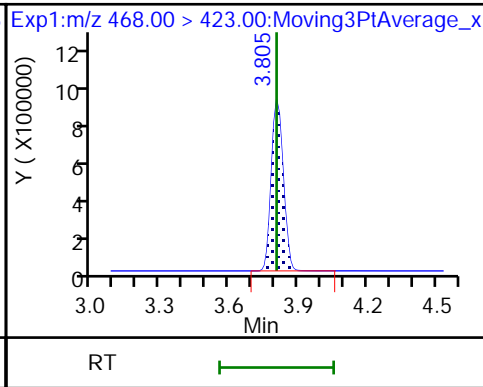
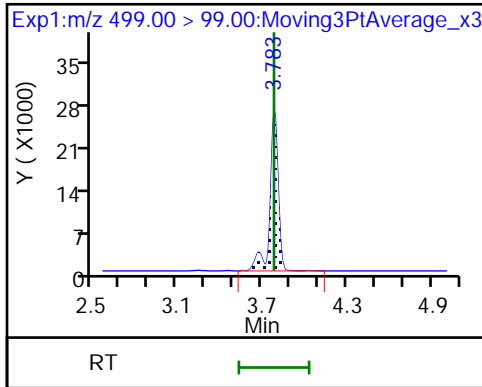
17 Perfluorooctanesulfonic acid (M)



17 Perfluorooctanesulfonic acid

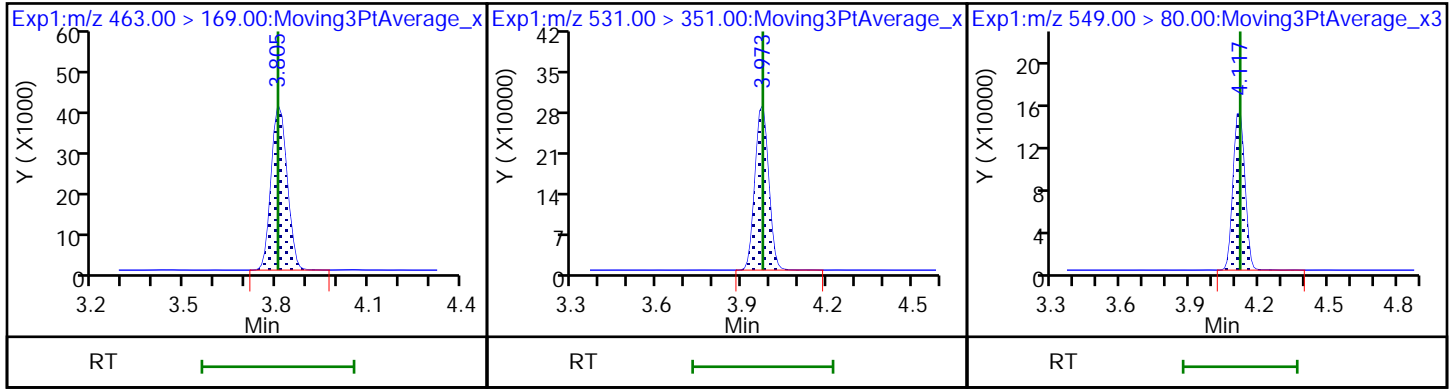
D 19 13C5 PFNA

20 Perfluorononanoic acid



20 Perfluorononanoic acid

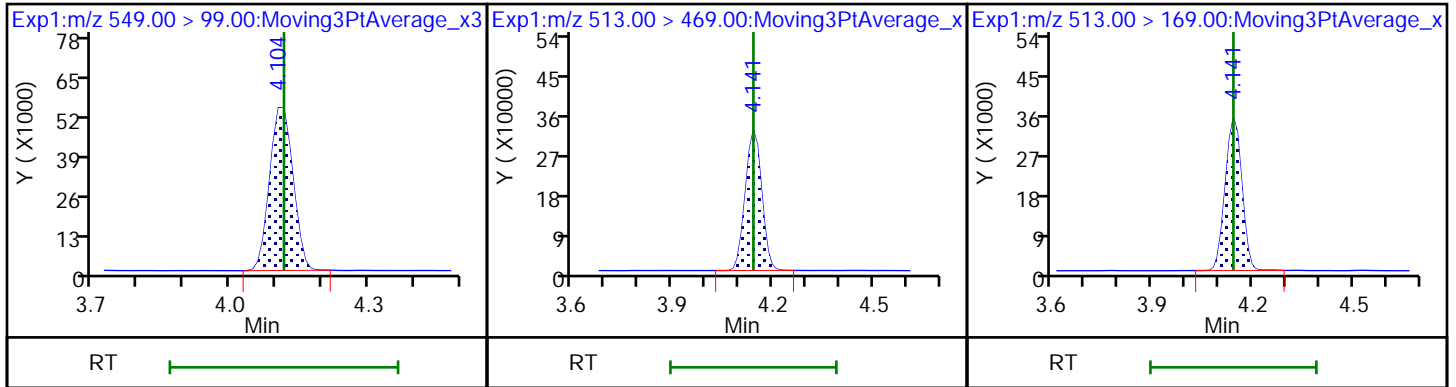
69 9-Chlorohexadecafluoro-3-oxanonan-68 Perfluoronananesulfonic acid



68 Perfluoronananesulfonic acid

24 Perfluorodecanoic acid

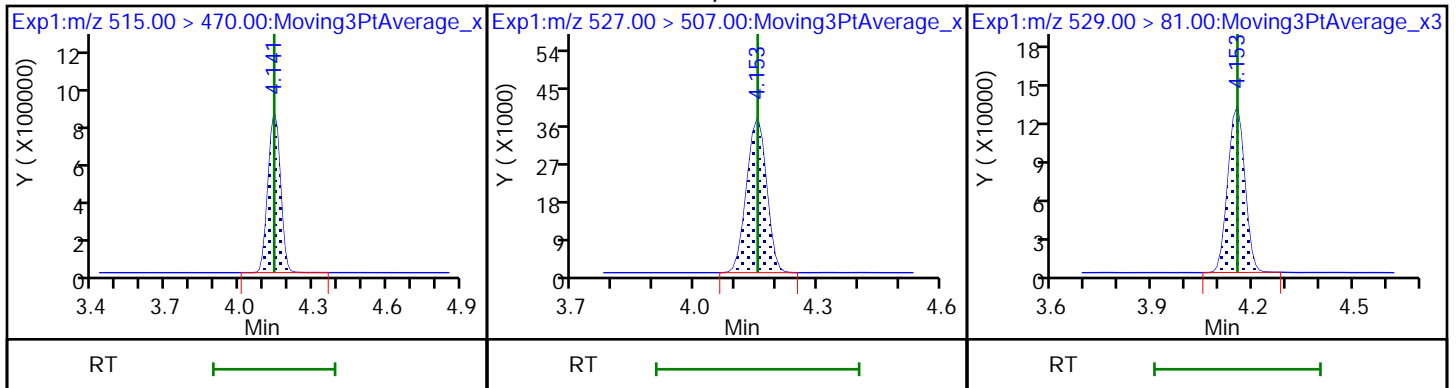
24 Perfluorodecanoic acid



D 23 13C2 PFDA

25 1H,1H,2H,2H-perfluorodecanesulfonid

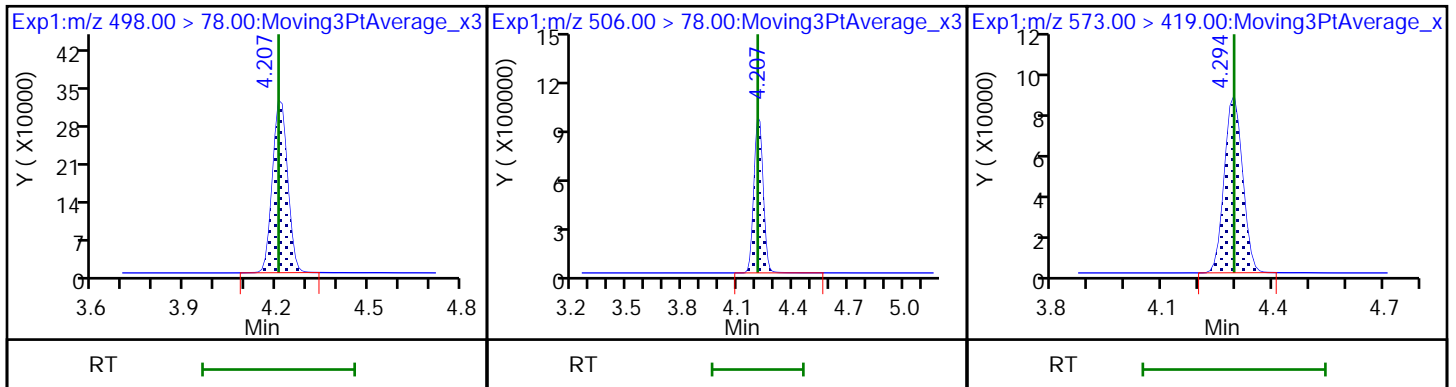
D 26 M2-8:2 FTS



22 Perfluorooctanesulfonamide

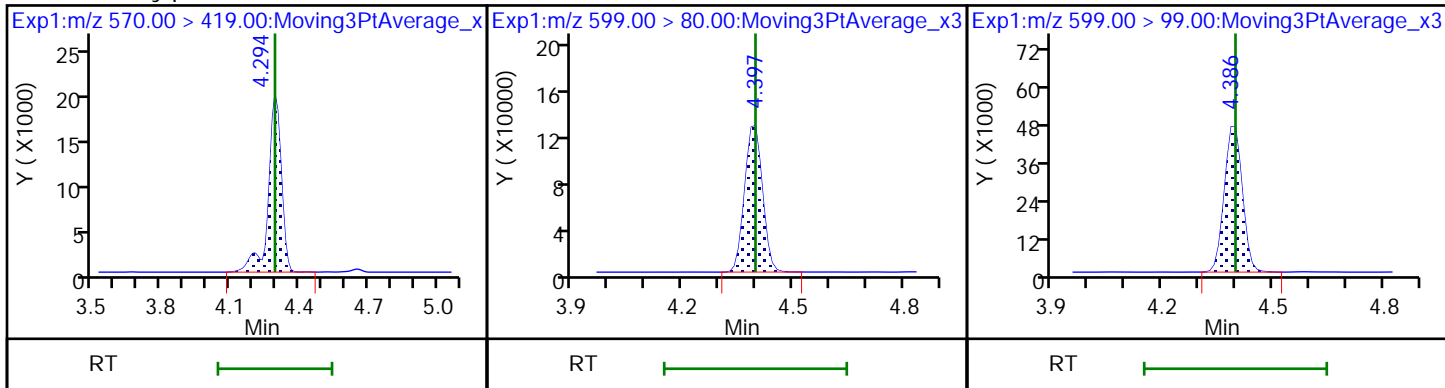
D 21 13C8 FOSA

D 27 d3-NMeFOSAA



28 N-methylperfluorooctanesulfonamido 29 Perfluorodecanesulfonic acid

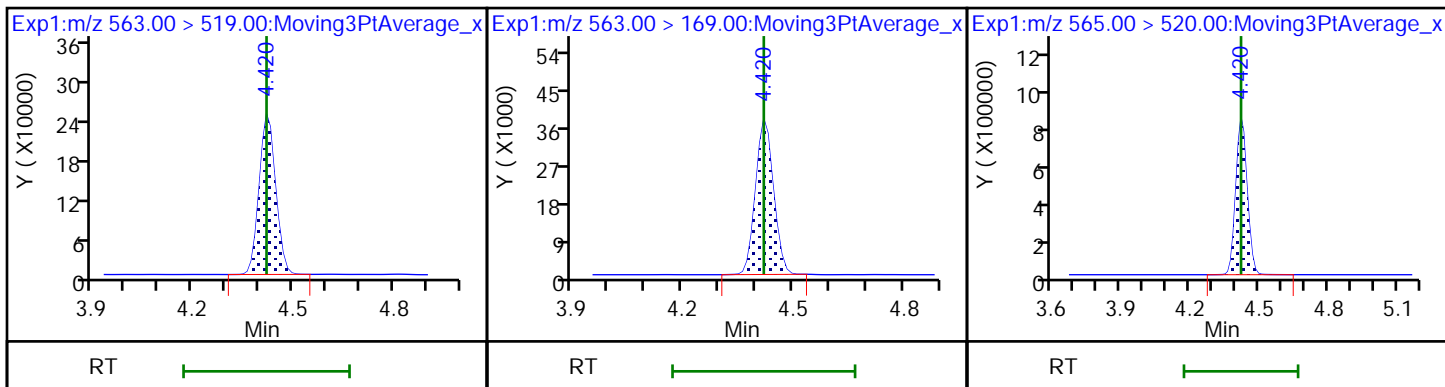
29 Perfluorodecanesulfonic acid



31 Perfluoroundecanoic acid

31 Perfluoroundecanoic acid

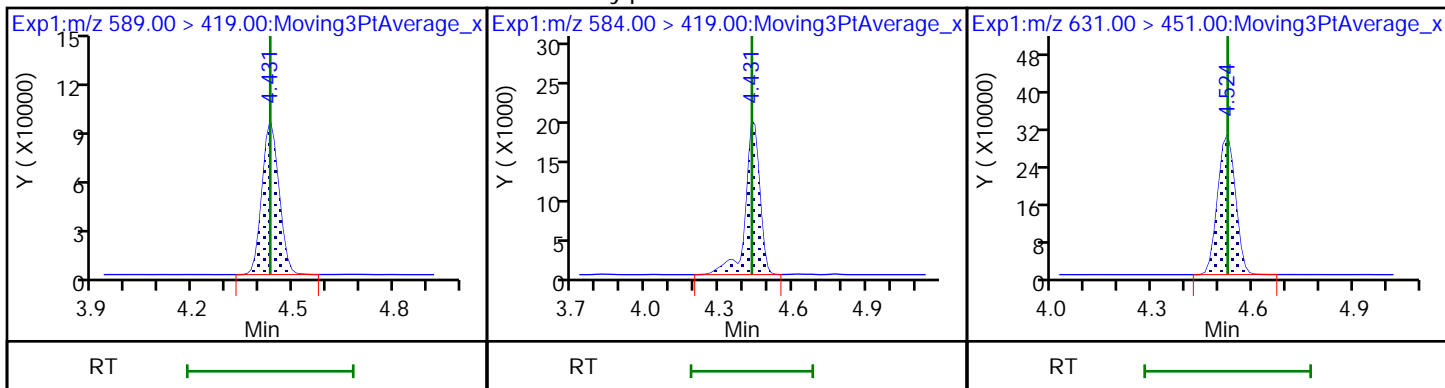
D 30 13C2 PFUnA



D 32 d5-NEtFOSAA

33 N-ethylperfluorooctanesulfonamidoa

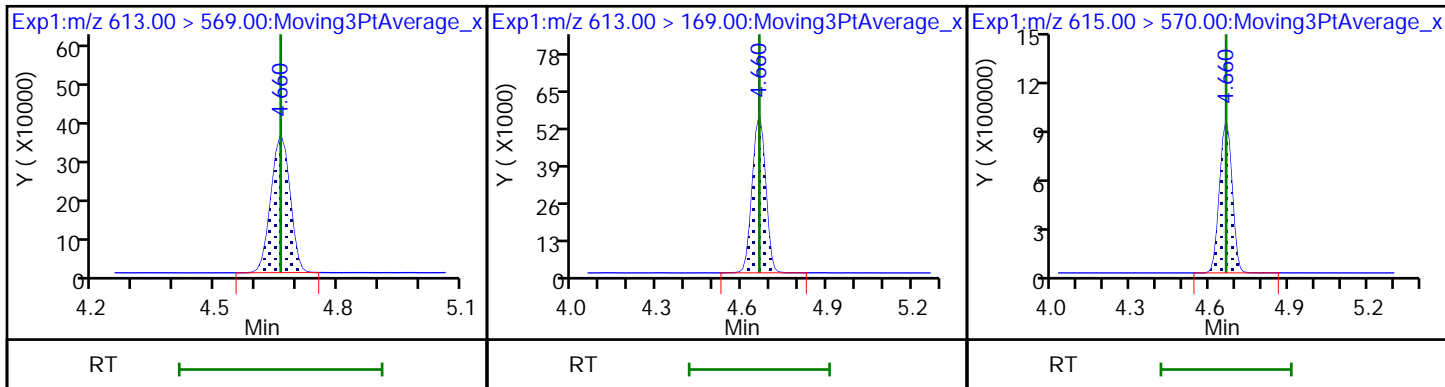
66 11-Chloroeicosafuoro-3-oxaundecan



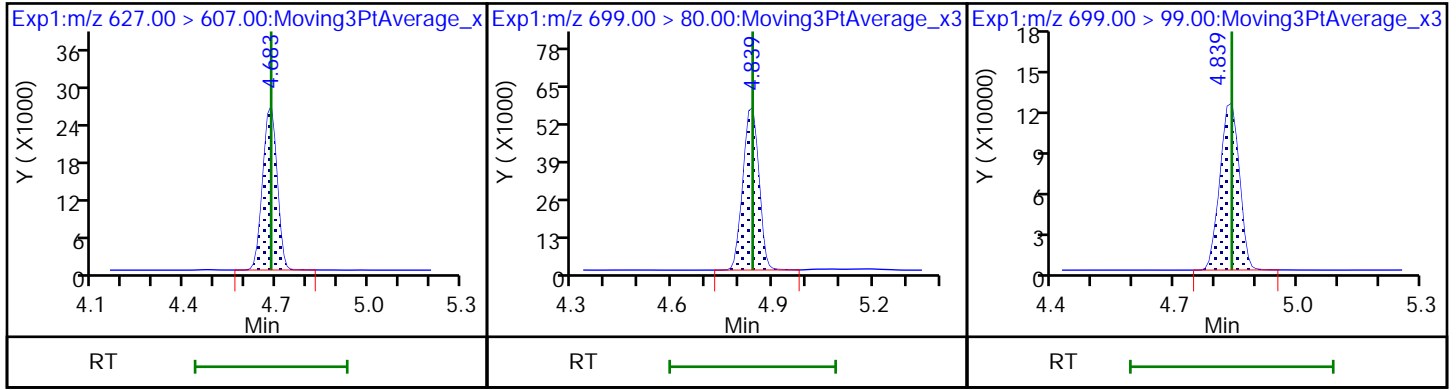
37 Perfluorododecanoic acid

37 Perfluorododecanoic acid

D 36 13C2 PFDoA



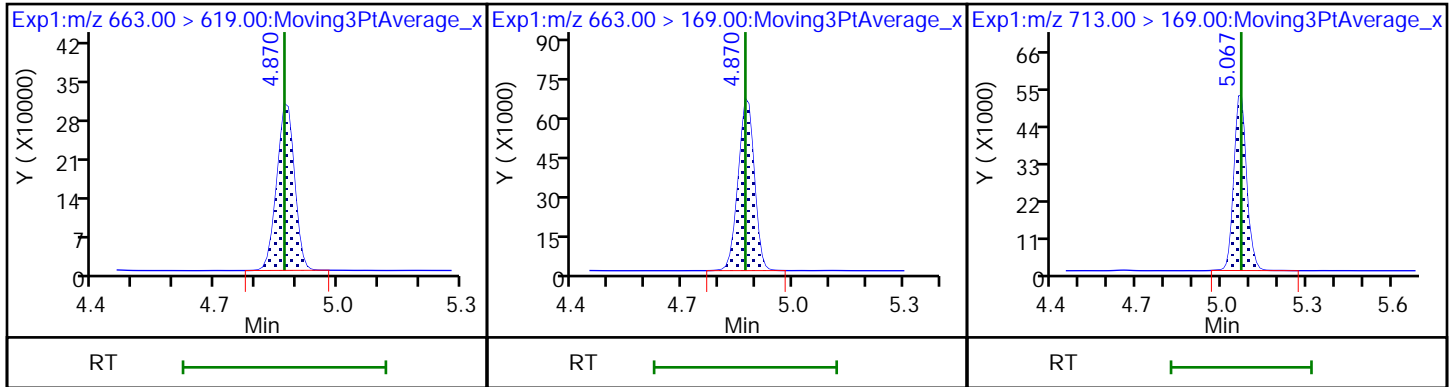
74 1H,1H,2H,2H-perfluorododecanesulfo75 Perfluorododecanesulfonic acid (PF 75 Perfluorododecanesulfonic acid (PF



41 Perfluorotridecanoic acid

41 Perfluorotridecanoic acid

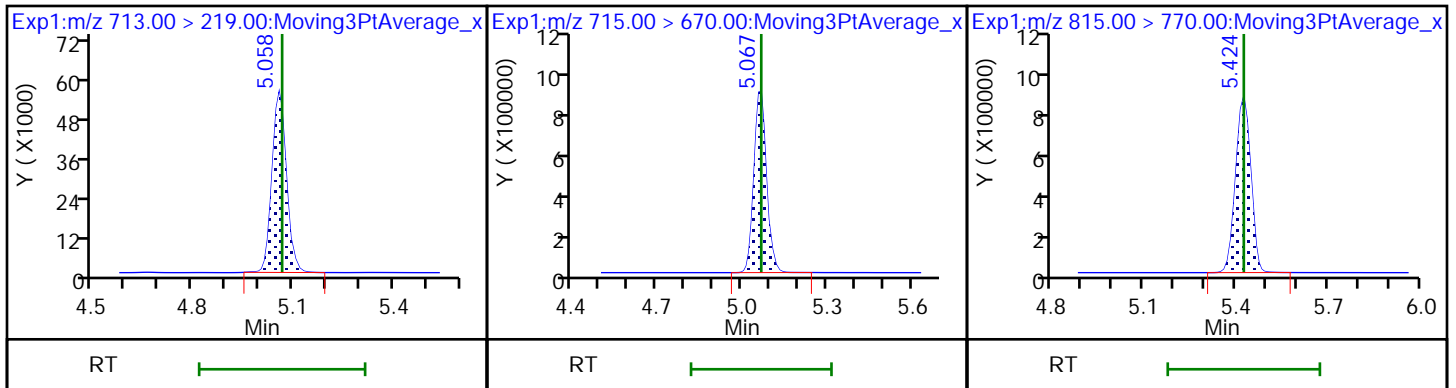
42 Perfluorotetradecanoic acid



42 Perfluorotetradecanoic acid

D 43 13C2 PFTeDA

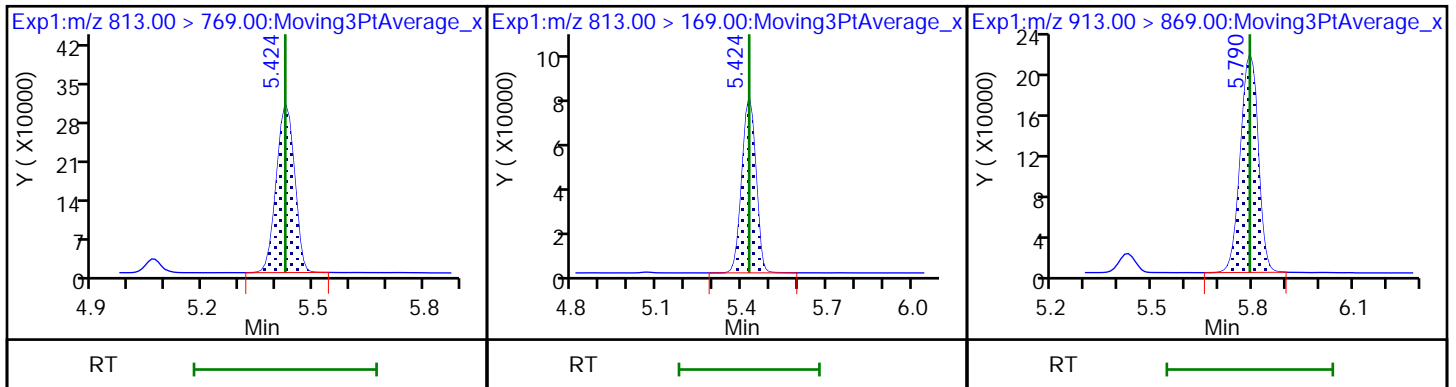
D 44 13C2 PFHxDA



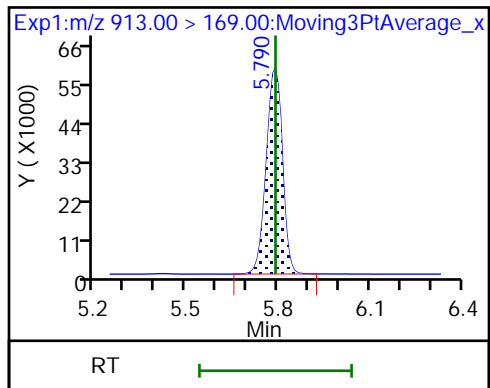
45 Perfluorohexadecanoic acid

45 Perfluorohexadecanoic acid

46 Perfluorooctadecanoic acid



46 Perfluorooctadecanoic acid



Eurofins TestAmerica, Burlington

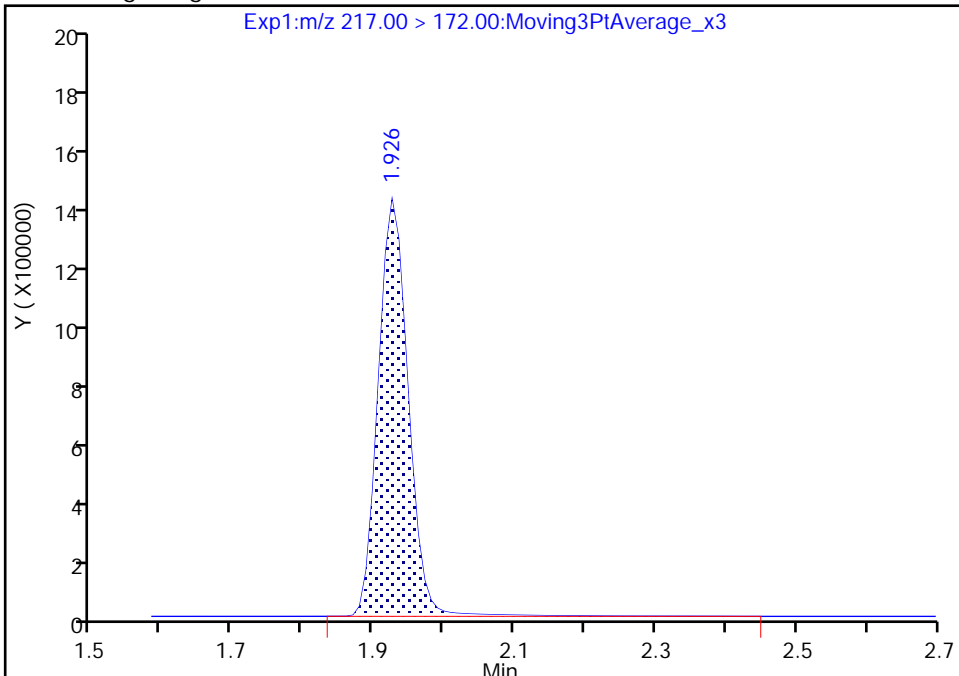
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B001.d
Injection Date: 22-Oct-2019 19:52:37 Instrument ID: LC812
Lims ID: CCV L4
Client ID:
Operator ID: lc812tech ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

D 1 13C4 PFBA, CAS: STL00992

Signal: 1

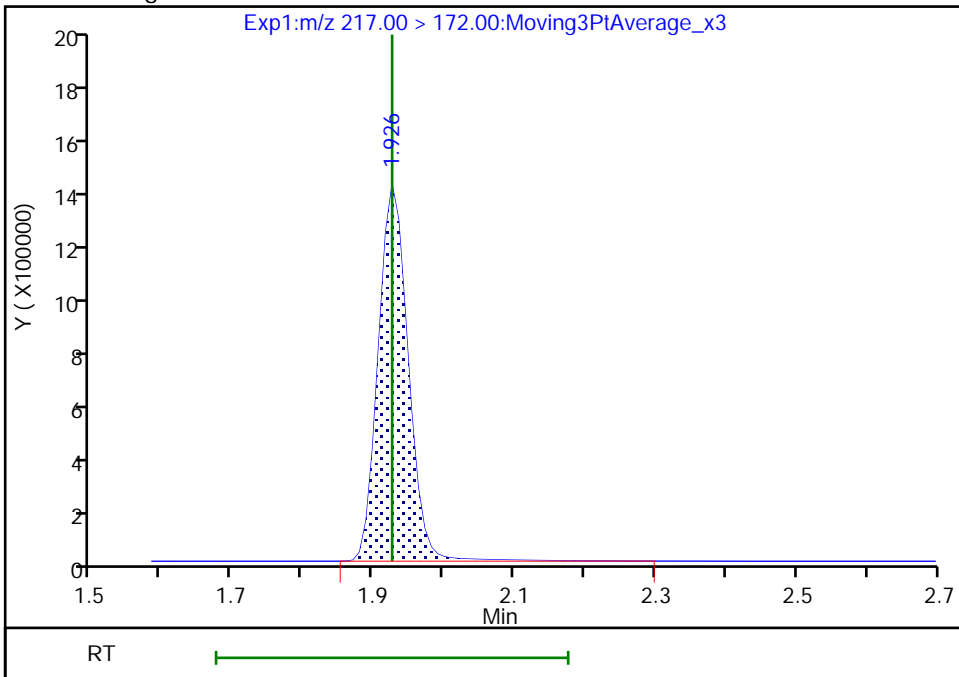
RT: 1.93
Area: 4048062
Amount: 2.574103
Amount Units: ng/ml

Processing Integration Results



RT: 1.93
Area: 4038201
Amount: 2.567833
Amount Units: ng/ml

Manual Integration Results



Reviewer: kirkm, 23-Oct-2019 10:31:04
Audit Action: Manually Integrated

Audit Reason: Baseline
Page 456 of 599

Eurofins TestAmerica, Burlington

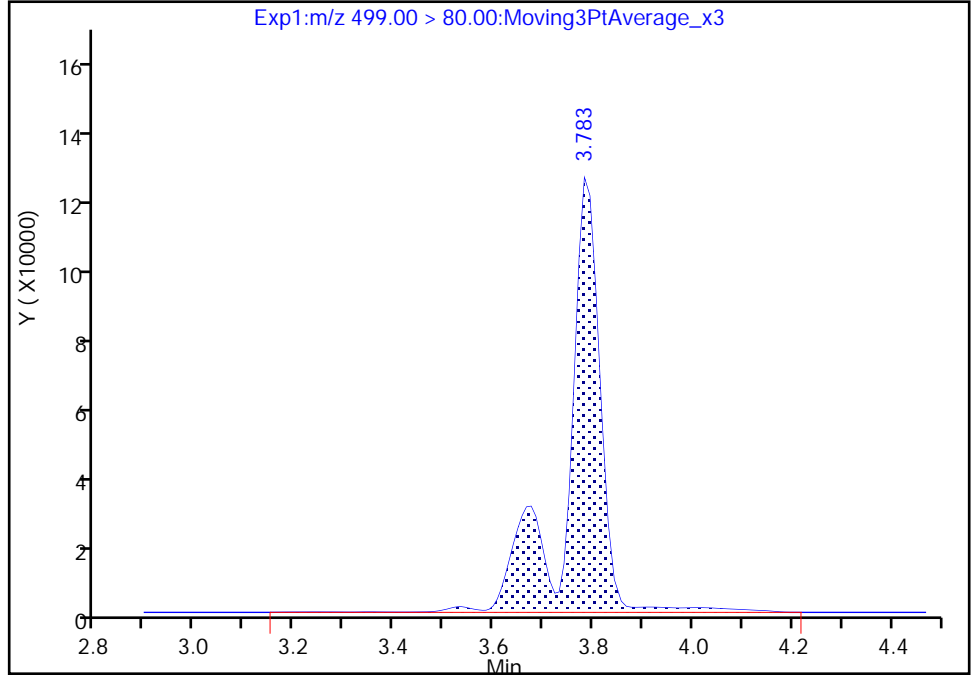
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B001.d
Injection Date: 22-Oct-2019 19:52:37 Instrument ID: LC812
Lims ID: CCV L4
Client ID:
Operator ID: lc812tech ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

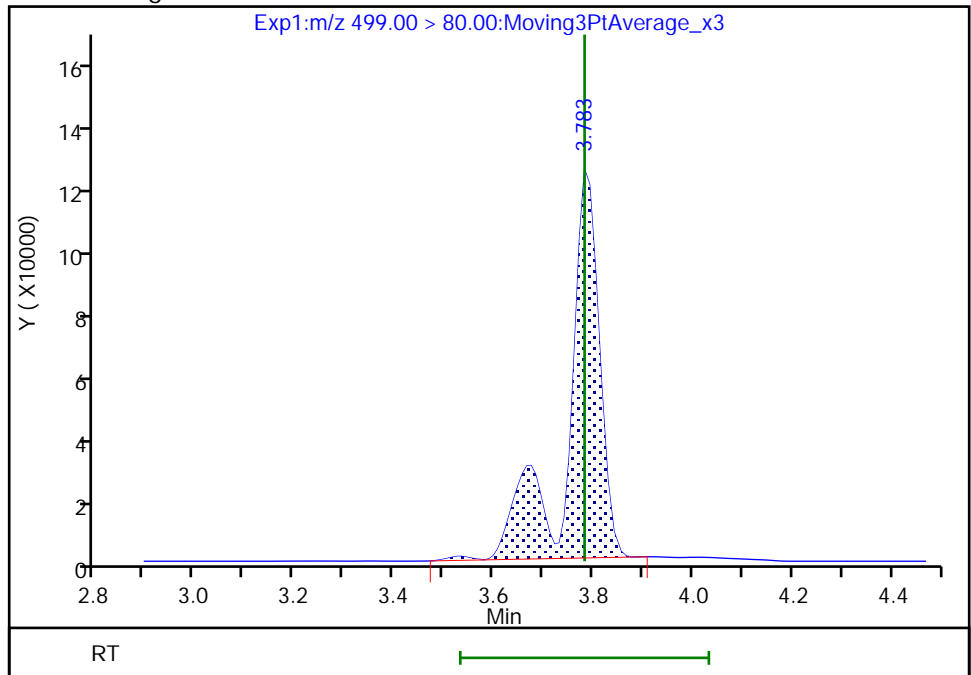
RT: 3.78
Area: 578025
Amount: 0.874673
Amount Units: ng/ml

Processing Integration Results



RT: 3.78
Area: 542389
Amount: 0.820748
Amount Units: ng/ml

Manual Integration Results



Reviewer: kirkm, 23-Oct-2019 10:31:44
Audit Action: Manually Integrated

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1
 SDG No.: _____
 Lab Sample ID: CCV 200-148772/14 Calibration Date: 10/22/2019 21:39
 Instrument ID: LC812 Calib Start Date: 09/24/2019 18:15
 GC Column: C-18 ID: 4.60 (mm) Calib End Date: 09/24/2019 18:56
 Lab File ID: SC102219B014.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.8879	0.8334		2350	2500	-6.1	40.0
Perfluoropentanoic acid (PFPeA)	L1ID		0.8885		2400	2500	-4.0	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.363	1.154		1870	2210	-15.3	40.0
1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2)	AveID	2.000	1.864		2180	2340	-6.8	50.0
Perfluorohexanoic acid (PFHxA)	AveID	0.9852	0.8887		2260	2500	-9.8	40.0
Perfluoropentanesulfonic acid	AveID	1.177	1.050		2090	2350	-10.9	50.0
HFPO-DA	AveID	2.861	3.288		2870	2500	14.9	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	0.8934	0.8320		2330	2500	-6.9	40.0
Perfluorohexanesulfonic acid (PFHxS)	L1ID		0.8916		2100	2280	-7.5	30.0
DONA	AveID	4.089	4.054		2330	2360	-0.9	50.0
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	AveID	1.259	1.084		2040	2370	-13.9	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	1.108	1.086		2330	2380	-2.0	50.0
Perfluorooctanoic acid (PFOA)	L1ID		0.9241		2460	2500	-1.6	30.0
Perfluorooctanesulfonic acid (PFOS)	AveID	0.9041	0.8371		2150	2320	-7.4	40.0
Perfluorononanoic acid (PFNA)	AveID	0.9539	0.8913		2340	2500	-6.6	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	1.607	1.389		2010	2330	-13.5	50.0
Perfluorononanesulfonic acid	AveID	0.7809	0.7261		2230	2400	-7.0	50.0
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	L1ID		0.6505		2000	2400	-16.4	40.0
Perfluorodecanoic acid (PFDA)	AveID	0.9250	0.8571		2320	2500	-7.3	40.0
Perfluorooctanesulfonamide (PFOSA)	AveID	0.9175	0.8295		2260	2500	-9.6	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	AveID	0.7125	0.6372		2240	2500	-10.6	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.6033	0.6142		2450	2410	1.8	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.8368	0.8047		2400	2500	-3.8	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	L2ID		0.6024		2740	2500	9.6	30.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.999	1.692		1990	2360	-15.4	50.0
Perfluorododecanoic acid (PFDoA)	AveID	0.8845	0.8527		2410	2500	-3.6	40.0
10:2 FTS	AveID	0.4268	0.4590		2590	2410	7.6	50.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.2594	0.2661		2480	2420	2.6	50.0
Perfluorotridecanoic acid (PFTriA)	AveID	0.7157	0.6803		2380	2500	-5.0	50.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1455	0.1480		2540	2500	1.7	40.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1
 SDG No.: _____
 Lab Sample ID: CCV 200-148772/14 Calibration Date: 10/22/2019 21:39
 Instrument ID: LC812 Calib Start Date: 09/24/2019 18:15
 GC Column: C-18 ID: 4.60 (mm) Calib End Date: 09/24/2019 18:56
 Lab File ID: SC102219B014.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		0.8789		2660	2500	6.3	40.0
Perfluoro-n-octadecanoic acid (PFODA)	AveID	0.7383	0.7025		2380	2500	-4.8	50.0
13C4 PFBA	Ave	1.200	1.324		2760	2500	10.3	50.0
13C5 PFPeA	Ave	0.9493	1.022		2690	2500	7.6	50.0
M2-4:2 FTS	Ave	0.0981	0.0989		2350	2340	0.8	50.0
13C2 PFHxA	Ave	1.009	1.113		2760	2500	10.3	50.0
13C3 HFPO-DA	Ave	0.0504	0.0438		2170	2500	-13.1	50.0
13C4 PFHpA	Ave	0.9768	1.085		2780	2500	11.1	50.0
1802 PFHxS	Ave	0.7528	0.8416		2640	2370	11.8	50.0
M2-6:2 FTS	Ave	0.1223	0.1363		2650	2380	11.5	50.0
13C4 PFOA	Ave	0.9930	1.104		2780	2500	11.2	50.0
13C4 PFOS	Ave	0.5122	0.5529		2580	2390	7.9	50.0
13C5 PFNA	Ave	0.8786	0.9832		2800	2500	11.9	50.0
13C2 PFDA	Ave	0.8752	0.9445		2700	2500	7.9	50.0
M2-8:2 FTS	Ave	0.1336	0.1490		2670	2400	11.5	50.0
13C8 FOSA	Ave	0.9945	1.009		2540	2500	1.5	50.0
d3-NMeFOSAA	Ave	0.0848	0.0942		2780	2500	11.1	50.0
13C2 PFUnA	Ave	0.7839	0.8738		2790	2500	11.5	50.0
d5-NEtFOSAA	Ave	0.0919	0.0961		2610	2500	4.6	50.0
13C2 PFDoA	Ave	0.8441	1.010		2990	2500	19.6	50.0
13C2 PFTeDA	Ave	0.7567	0.8664		2860	2500	14.5	50.0
13C2 PFHxDA	Ave	0.7599	0.9201		3030	2500	21.1	50.0

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B014.d
 Lims ID: CCV L5
 Client ID:
 Sample Type: CCV
 Inject. Date: 22-Oct-2019 21:39:16 ALS Bottle#: 14 Worklist Smp#: 14
 Injection Vol: 20.0 ul Dil. Factor: 1.0000
 Sample Info: CCV L5
 Misc. Info.: 200-0038369-014 Plate: 1 Rack: 4
 Operator ID: lc812tech Instrument ID: LC812
 Sublist: chrom-PFC_LC812*sub6
 Method: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\PFC_LC812.m
 Limit Group: LC_PFC_ICAL
 Last Update: 28-Oct-2019 13:09:04 Calib Date: 24-Sep-2019 18:56:37
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA015.d
 Column 1 : C-18 (4.60 mm) Det: EXP1
 Process Host: CTX1017

First Level Reviewer: kirkm Date: 23-Oct-2019 10:48:34

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										M
217.00 > 172.00	1.935	1.926	0.009	0.564	4014575	2.76		110	17592	M
2 Perfluorobutanoic acid										
212.90 > 169.00	1.935	1.926	0.009	1.000	3345740	2.35		93.9	857	
D 3 13C5 PFPeA										
267.90 > 223.00	2.284	2.285	-0.001	0.666	3098042	2.69		108	5904	
4 Perfluoropentanoic acid										
262.90 > 219.00	2.284	2.285	-0.001	1.000	2752673	2.40		96.0	184	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.312	2.298	0.014	0.757	2603854	1.87	Target=2.04	84.7	5181	
298.90 > 99.00	2.312	2.298	0.014	0.757	1302033		2.00(1.02-3.05)		1538	
D 60 M2-4:2 FTS										
329.00 > 81.00	2.623	2.623	0.0	0.765	280004	2.35		101	321	
61 1H,1H,2H,2H-perfluorohexanesulfoni										
327.00 > 307.00	2.636	2.623	0.013	1.005	521791	2.18		93.2	3822	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.673	2.661	0.012	1.000	2998627	2.26	Target=12.90	90.2	797	
313.00 > 119.00	2.673	2.661	0.012	1.000	243166		12.33(6.45-19.36)		566	
D 7 13C2 PFHxA										
315.00 > 270.00	2.673	2.661	0.012	0.779	3374113	2.76		110	7831	
70 Perfluoropentanesulfonic acid										
349.00 > 80.00	2.673	2.673	0.0	0.875	2512788	2.09	Target=3.01	89.1	4082	
349.00 > 99.00	2.673	2.673	0.0	0.875	831765		3.02(1.51-4.52)		1936	
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.784	2.776	0.008	1.000	436496	2.87		115	235	
D 64 13C3 HFPO-DA										
332.10 > 287.00	2.784	2.776	0.008	0.812	132737	2.17		86.9	1403	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.055	3.044	0.011	1.000	2070867	2.10	Target=3.78	92.5	3450	
399.00 > 99.00	3.055	3.044	0.011	1.000	549019		3.77(1.89-5.67)		1111	
D 11 18O2 PFHxS										
403.00 > 84.00	3.055	3.044	0.011	0.891	2414455	2.64		112	9766	
D 9 13C4 PFHpA										
367.00 > 322.00	3.055	3.044	0.011	0.891	3291450	2.78		111	7185	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.055	3.044	0.011	1.000	2738444	2.33	Target=3.54	93.1	1002	
363.00 > 169.00	3.055	3.044	0.011	1.000	750237		3.65(1.77-5.31)		2178	
77 DONA										
377.00 > 251.00	3.101	3.090	0.011	0.818	6403787	2.33	Target=2.56	99.1	8047	
377.00 > 85.00	3.101	3.090	0.011	0.818	2470599		2.59(1.28-3.84)		3906	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.413	3.413	0.0	0.900	1733583	2.33	Target=5.80	98.0	4278	
449.00 > 99.00	3.413	3.413	0.0	0.900	303349		5.71(2.90-8.71)		2667	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.413	3.413	0.0	1.000	424902	2.04		86.1	2213	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.413	3.413	0.0	0.995	392661	2.65		111	1418	
* 62 13C2 PFOA										
415.00 > 370.00	3.430	3.422	0.008		3032762	2.50			4640	
D 14 13C4 PFOA										
417.00 > 372.00	3.430	3.422	0.008	1.000	3348777	2.78		111	6279	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.430	3.422	0.008	1.000	3094458	2.46	Target=2.61	98.4	741	
413.00 > 169.00	3.430	3.422	0.008	1.000	1258569		2.46(1.30-3.91)		3214	
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.783	0.010	1.106	1603076	2.58		108	4224	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.793	3.783	0.010	1.000	1302621	2.15	Target=4.93	92.6	652	M
499.00 > 99.00	3.793	3.783	0.010	1.000	251461		5.18(2.47-7.40)		2174	M
D 19 13C5 PFNA										
468.00 > 423.00	3.817	3.805	0.012	1.113	2981918	2.80		112	8300	
20 Perfluorononanoic acid										
463.00 > 419.00	3.817	3.805	0.012	1.000	2657856	2.34	Target=7.89	93.4	823	
463.00 > 169.00	3.817	3.805	0.012	1.000	336327		7.90(3.95-11.84)		2461	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.973	3.973	0.0	1.047	2170959	2.01		86.5	9866	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.116	4.117	-0.001	1.085	1168833	2.23	Target=2.60	93.0	6931	
549.00 > 99.00	4.116	4.117	-0.001	1.085	465724		2.51(1.30-3.90)		2058	
24 Perfluorodecanoic acid										
513.00 > 469.00	4.153	4.141	0.012	1.000	2455134	2.32	Target=8.57	92.7	1526	
513.00 > 169.00	4.153	4.141	0.012	1.000	297559		8.25(4.29-12.86)		1973	
D 23 13C2 PFDA										
515.00 > 470.00	4.153	4.141	0.012	1.211	2864319	2.70		108	12499	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
25 1H,1H,2H,2H-perfluorodecanesulfoni	527.00 > 507.00	4.153	4.153	0.0	1.000	281549	2.00	83.6	3206	
D 26 M2-8:2 FTS	529.00 > 81.00	4.153	4.153	0.0	1.211	432790	2.67	112	2048	
22 Perfluorooctanesulfonamide	498.00 > 78.00	4.218	4.207	0.011	1.000	2538668	2.26	90.4	2701	
D 21 13C8 FOSA	506.00 > 78.00	4.218	4.207	0.011	1.230	3060456	2.54	101	5252	
D 27 d3-NMeFOSAA	573.00 > 419.00	4.293	4.294	-0.001	1.252	285806	2.78	111	900	
28 N-methylperfluorooctanesulfonamido	570.00 > 419.00	4.305	4.294	0.011	1.003	182118	2.24	89.4	1942	
29 Perfluorodecanesulfonic acid	599.00 > 80.00	4.397	4.397	0.0	1.159	992870	2.45	Target=2.56	102	3026
	599.00 > 99.00	4.397	4.397	0.0	1.159	366750		2.71(1.28-3.84)		3098
31 Perfluoroundecanoic acid	563.00 > 519.00	4.431	4.420	0.011	1.000	2132530	2.40	Target=6.97	96.2	1532
	563.00 > 169.00	4.431	4.420	0.011	1.000	305359		6.98(3.48-10.45)		3439
D 30 13C2 PFUnA	565.00 > 520.00	4.431	4.420	0.011	1.292	2650123	2.79	111	7523	
D 32 d5-NEtFOSAA	589.00 > 419.00	4.442	4.431	0.011	1.295	291452	2.61	105	1859	
33 N-ethylperfluorooctanesulfonamidoa	584.00 > 419.00	4.442	4.431	0.011	1.000	175570	2.74	110	1299	
66 11-Chloroeicosafuoro-3-oxaundecan	631.00 > 451.00	4.523	4.524	-0.001	1.193	2672716	1.99	84.6	9498	
37 Perfluorododecanoic acid	613.00 > 569.00	4.671	4.660	0.011	1.000	2611224	2.41	Target=7.06	96.4	323
	613.00 > 169.00	4.671	4.660	0.011	1.000	399178		6.54(3.53-10.59)		3686
D 36 13C2 PFDaA	615.00 > 570.00	4.671	4.660	0.011	1.362	3062435	2.99	120	6547	
74 1H,1H,2H,2H-perfluorododecanesulfo	627.00 > 607.00	4.682	4.683	-0.001	1.128	199895	2.59	108	3113	
75 Perfluorododecanesulfonic acid (PF	699.00 > 80.00	4.838	4.839	-0.001	1.276	432002	2.48	Target=0.47	103	753
	699.00 > 99.00	4.838	4.839	-0.001	1.276	952650		0.45(0.23-0.70)		5106
41 Perfluorotridecanoic acid	663.00 > 619.00	4.879	4.870	0.009	1.044	2083292	2.38	Target=4.87	95.0	288
	663.00 > 169.00	4.879	4.870	0.009	1.044	492787		4.23(2.43-7.30)		2469
42 Perfluorotetradecanoic acid	713.00 > 169.00	5.067	5.067	0.0	1.000	388935	2.54	Target=1.09	102	2643
	713.00 > 219.00	5.067	5.067	0.0	1.000	370018		1.05(0.54-1.63)		3491
D 43 13C2 PFTeDA	715.00 > 670.00	5.067	5.067	0.0	1.477	2627622	2.86	114	9379	
D 44 13C2 PFHxDA	815.00 > 770.00	5.435	5.424	0.011	1.585	2790579	3.03	121	9112	

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	5.435	5.424	0.011	1.000	2452569	2.66	Target=4.33	106	359	
813.00 > 169.00	5.435	5.424	0.011	1.000	607292		4.04(2.16-6.49)		4276	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.799	5.790	0.009	1.067	1960287	2.38	Target=4.09	95.2	393	
913.00 > 169.00	5.799	5.790	0.009	1.067	520820		3.76(2.05-6.14)		3895	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

PFAS32NCIC5_00001

Amount Added: 100.00

Units: uL

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B014.d

Injection Date: 22-Oct-2019 21:39:16

Instrument ID: LC812

Lims ID: CCV L5

Client ID:

Operator ID: lc812tech

ALS Bottle#: 14

Worklist Smp#: 14

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

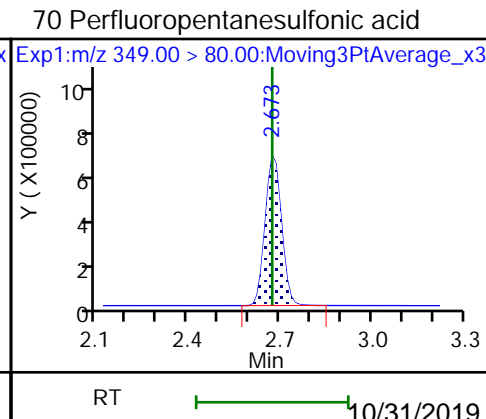
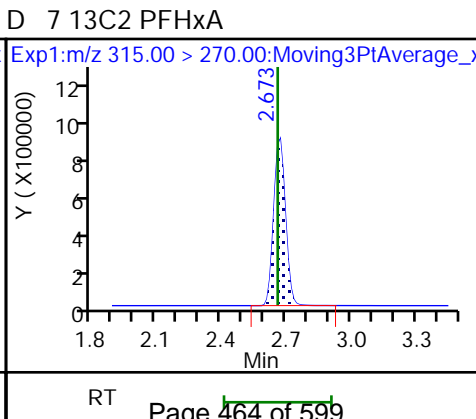
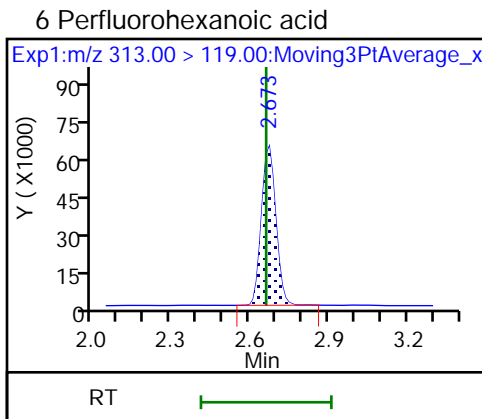
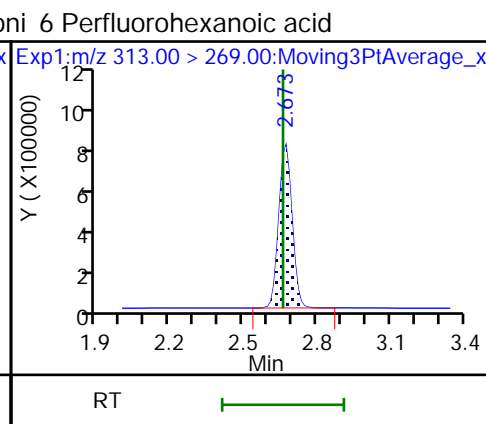
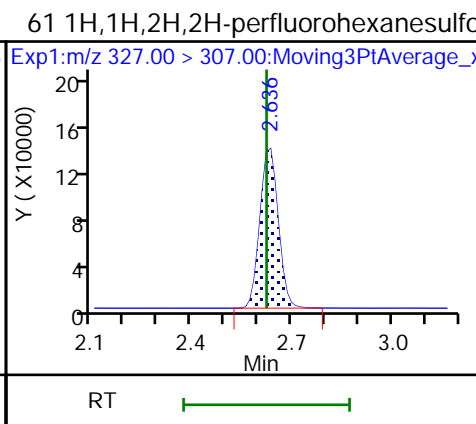
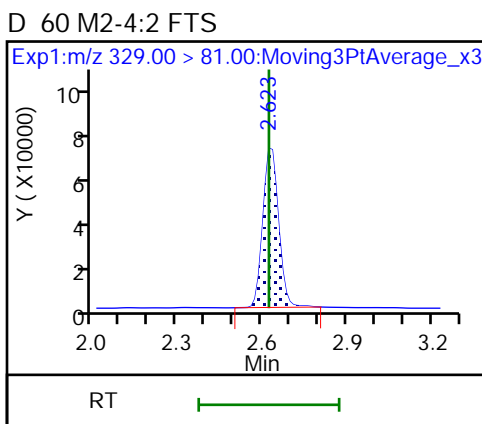
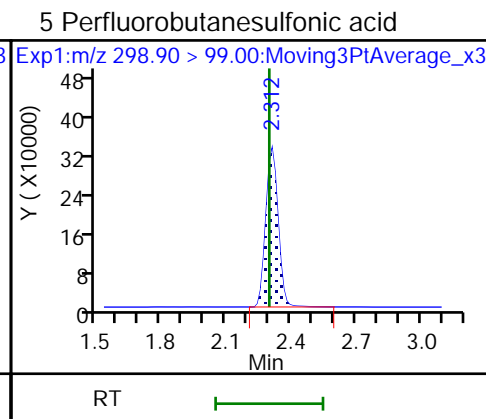
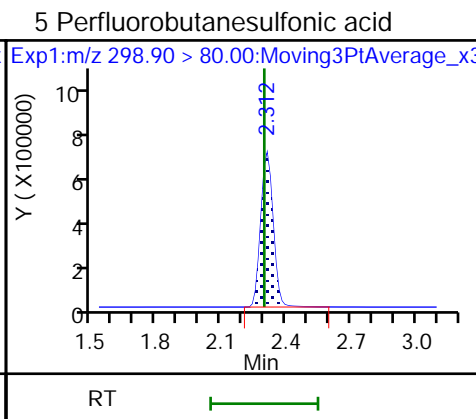
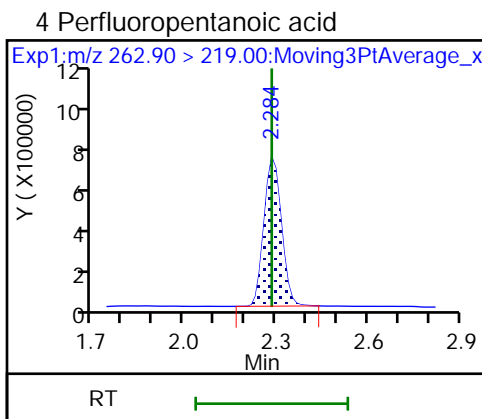
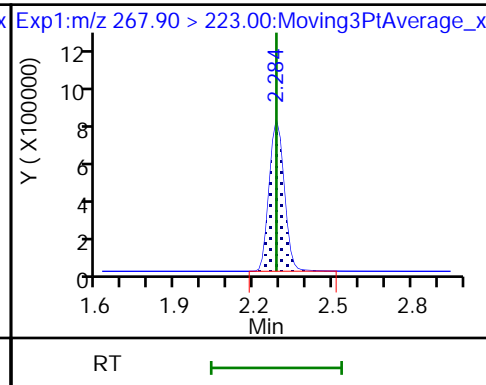
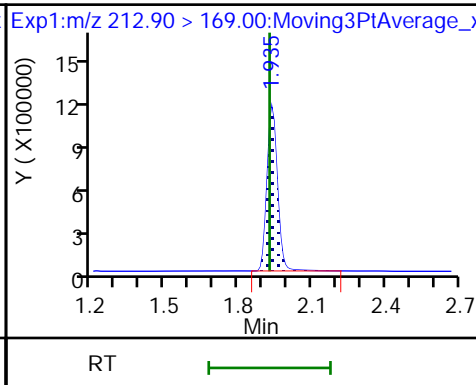
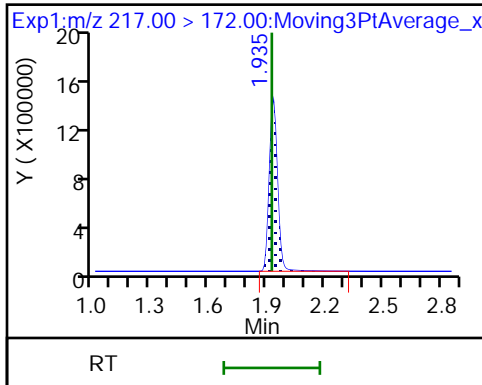
Method: PFC_LC812

Limit Group: LC_PFC_ICAL

D 1 13C4 PFBA (M)

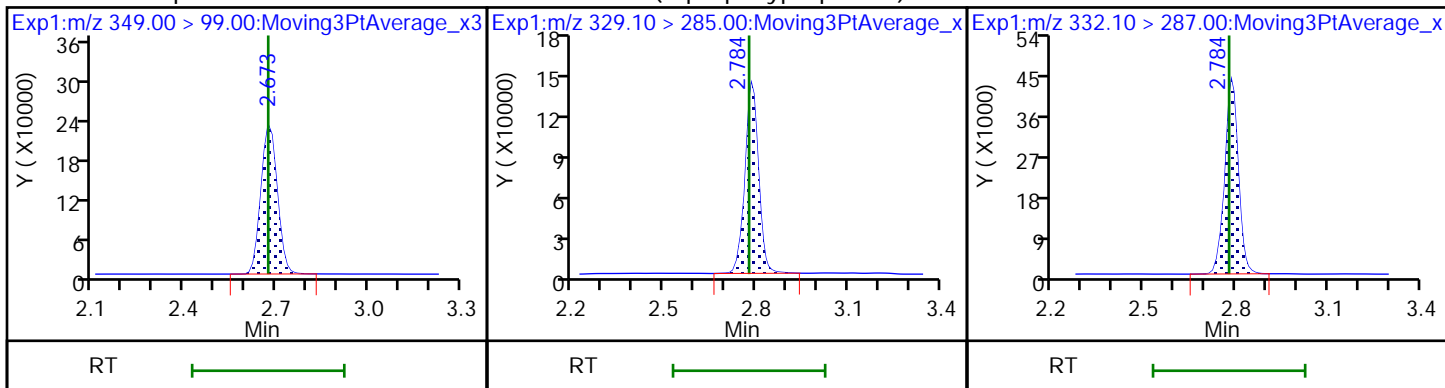
2 Perfluorobutanoic acid

D 3 13C5 PFPeA



70 Perfluoropentanesulfonic acid

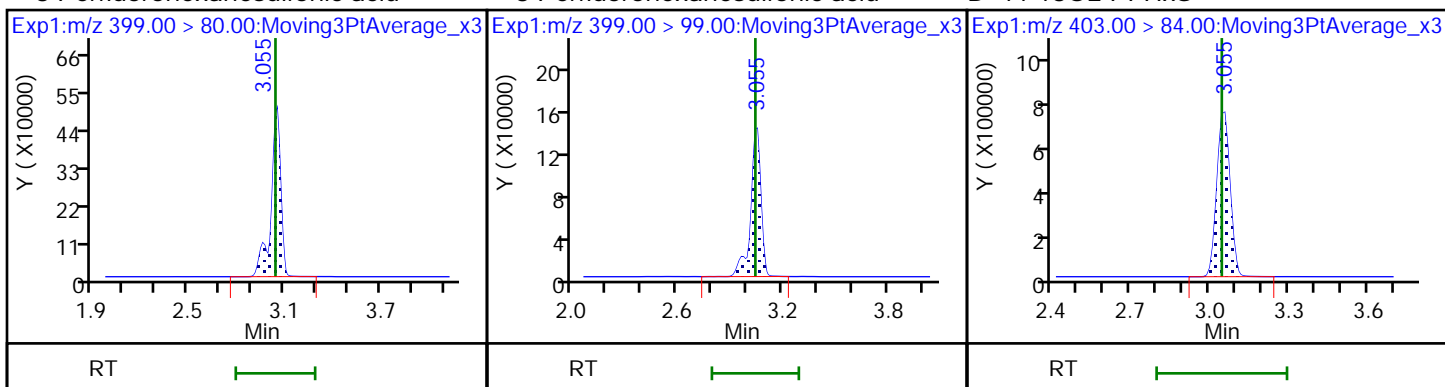
67 Perfluoro(2-propoxypropanoic) acid D 64 13C3 HFPO-DA



8 Perfluorohexanesulfonic acid

8 Perfluorohexanesulfonic acid

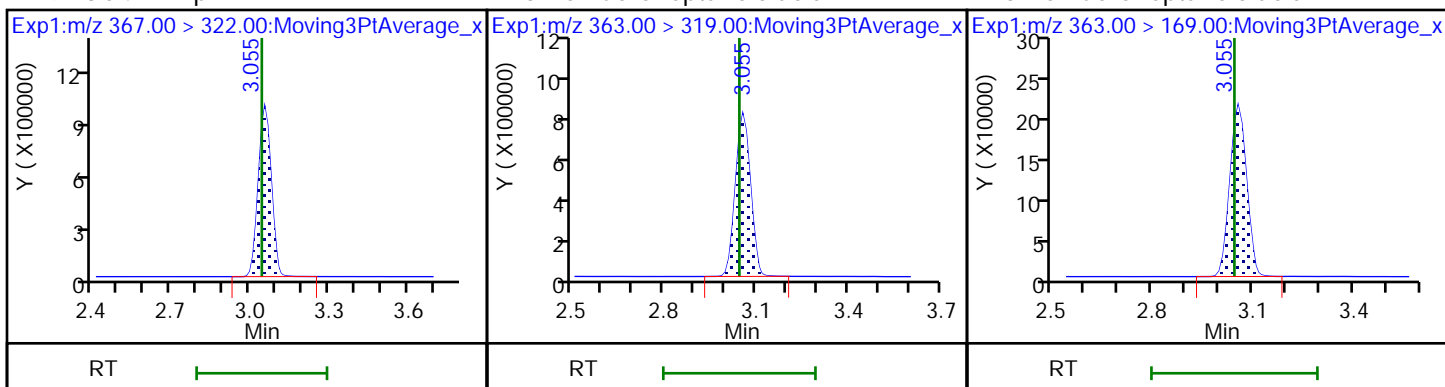
D 11 18O2 PFHxS



D 9 13C4 PFHpA

10 Perfluoroheptanoic acid

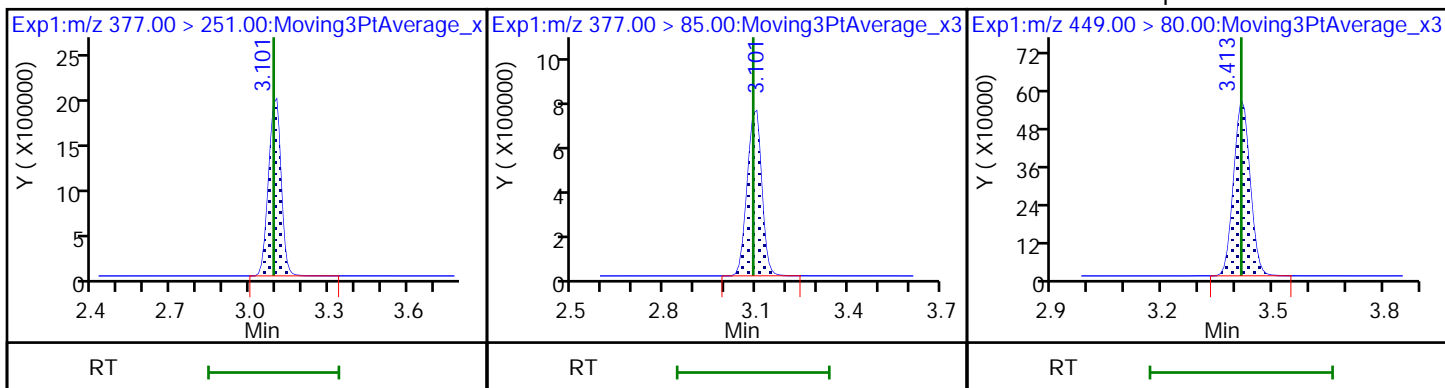
10 Perfluoroheptanoic acid



77 DONA

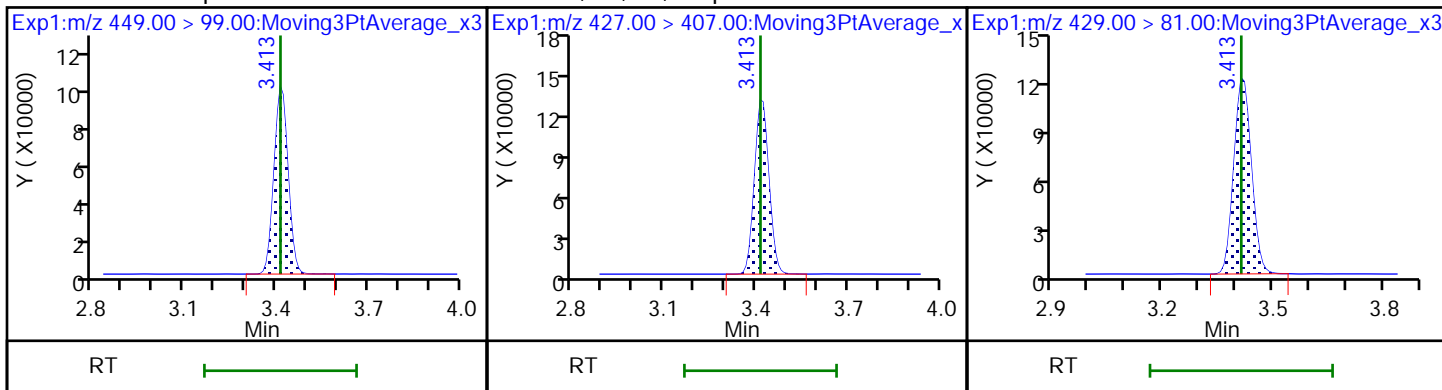
77 DONA

16 Perfluoroheptanesulfonic acid



16 Perfluoroheptanesulfonic acid

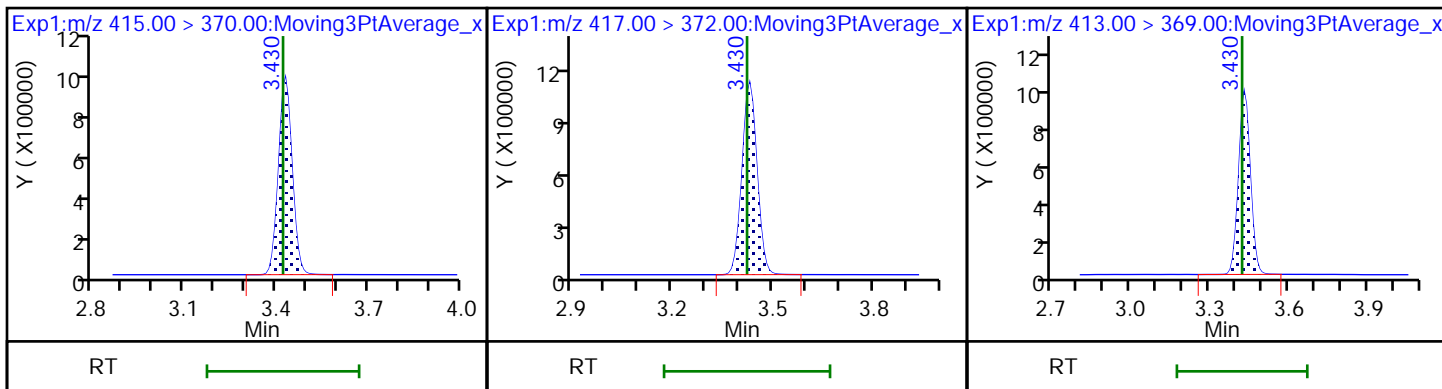
13 1H,1H,2H,2H-perfluorooctanesulfonD 12 M2-6:2 FTS



* 62 13C2 PFOA

D 14 13C4 PFOA

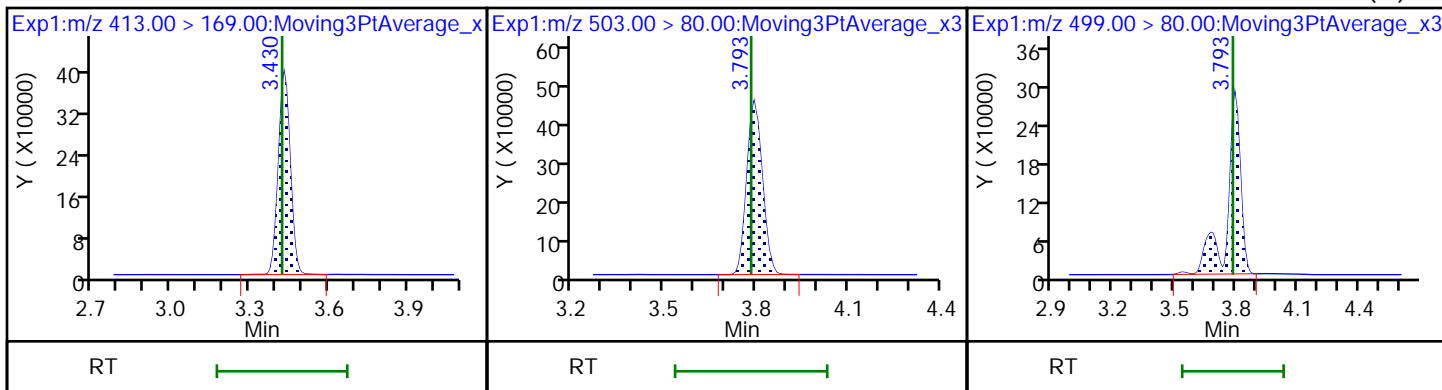
15 Perfluorooctanoic acid



15 Perfluorooctanoic acid

D 18 13C4 PFOS

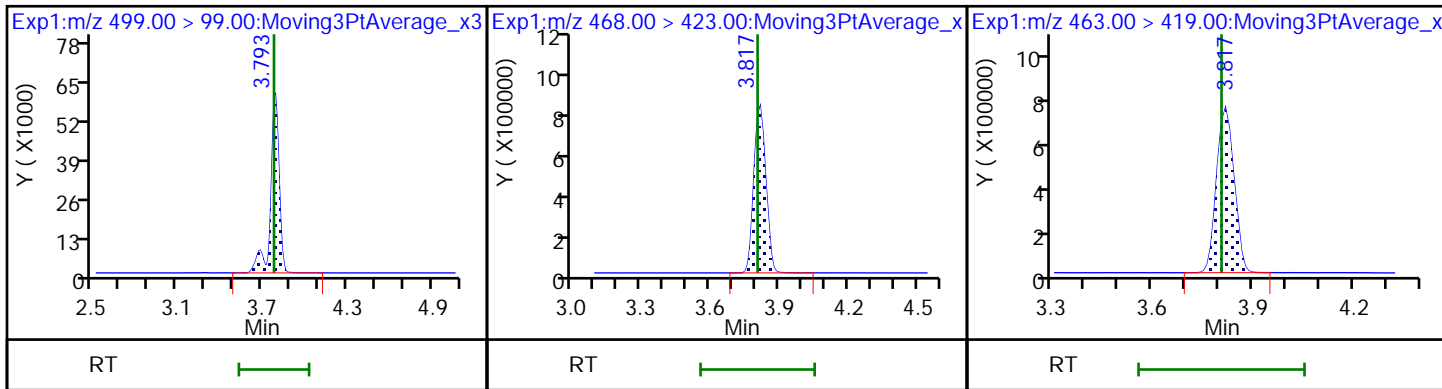
17 Perfluorooctanesulfonic acid (M)



17 Perfluorooctanesulfonic acid

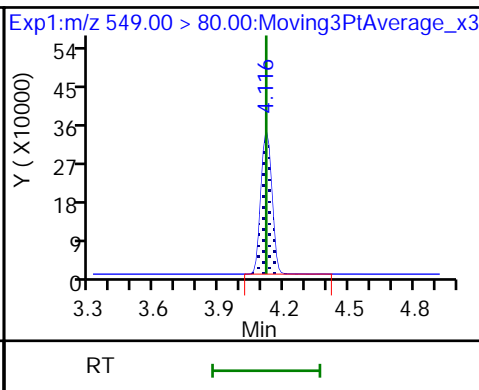
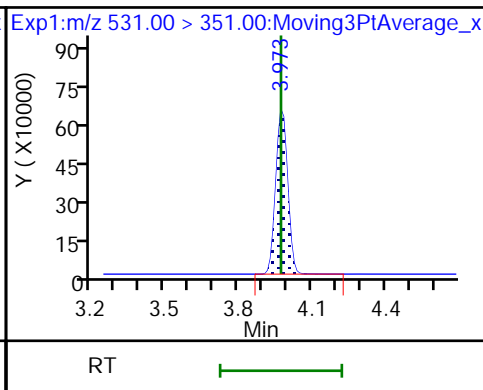
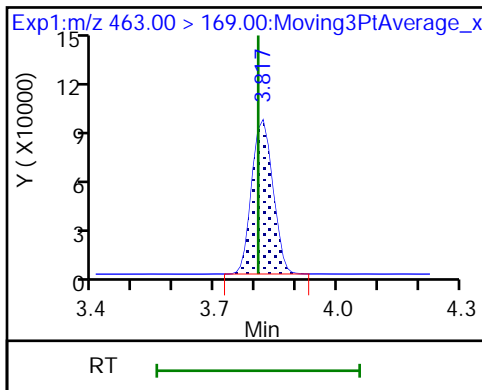
D 19 13C5 PFNA

20 Perfluorononanoic acid



20 Perfluorononanoic acid

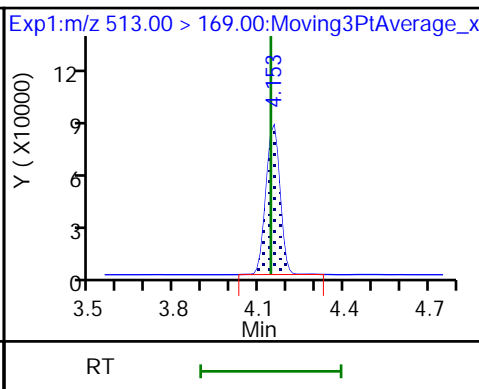
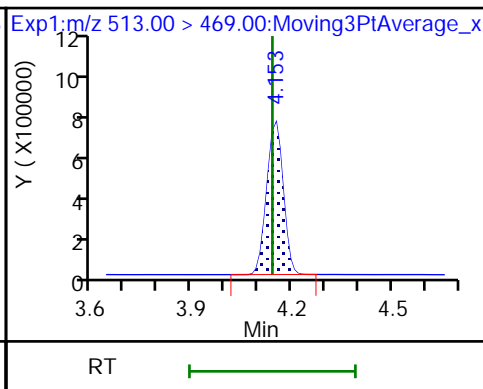
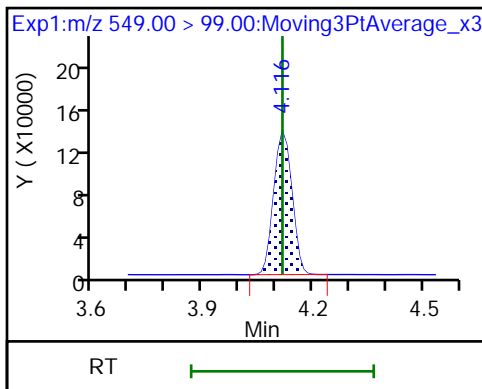
69 9-Chlorohexadecafluoro-3-oxanonan-68 Perfluoronananesulfonic acid



68 Perfluoronananesulfonic acid

24 Perfluorodecanoic acid

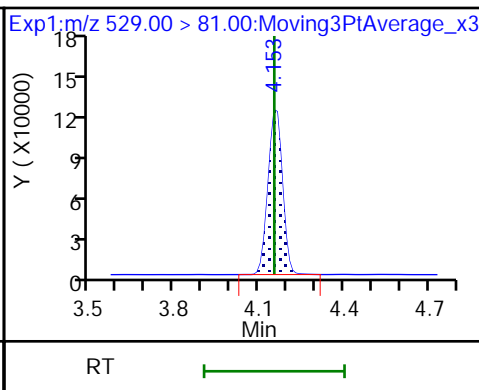
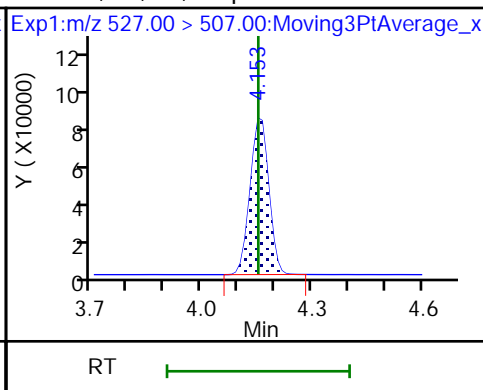
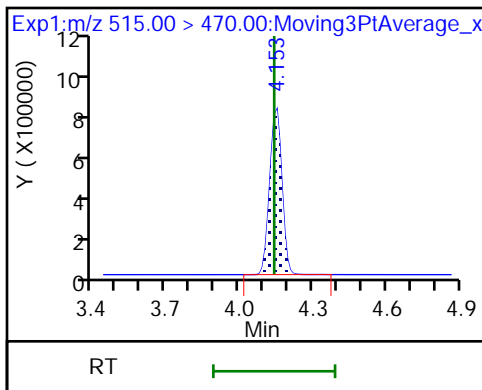
24 Perfluorodecanoic acid



D 23 13C2 PFDA

25 1H,1H,2H,2H-perfluorodecanesulfon

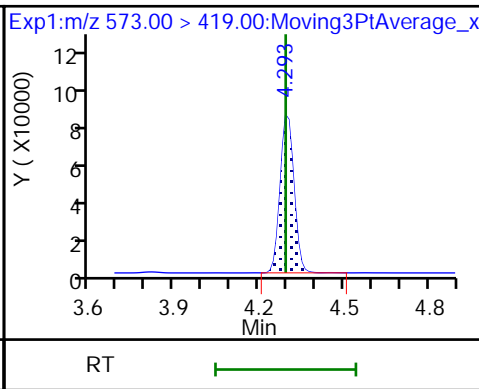
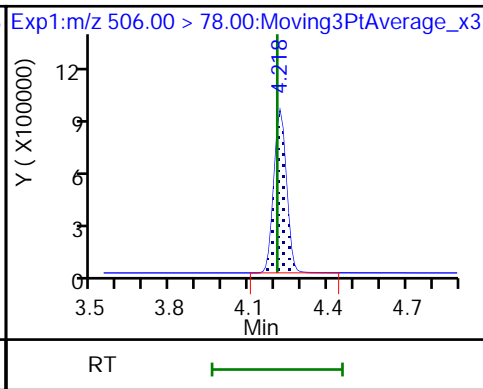
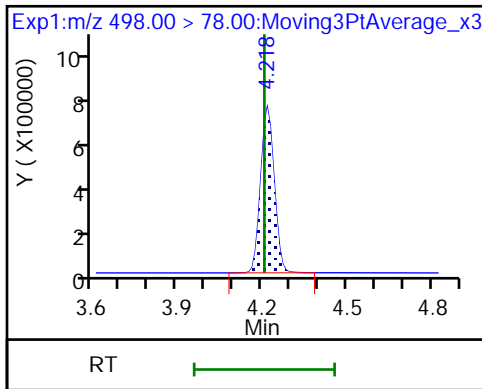
D 26 M2-8:2 FTS



22 Perfluorooctanesulfonamide

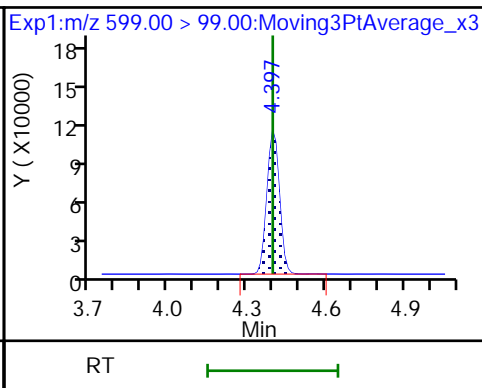
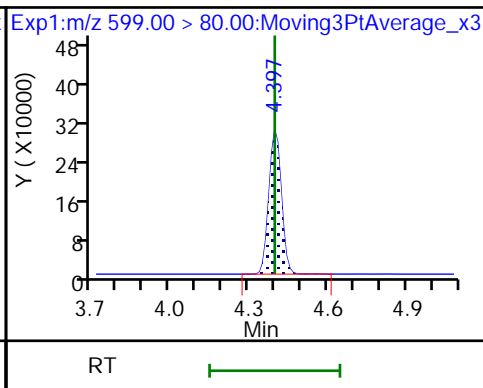
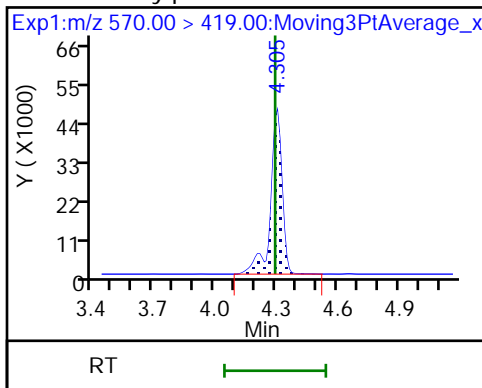
D 21 13C8 FOSA

D 27 d3-NMeFOSAA



28 N-methylperfluorooctanesulfonamido

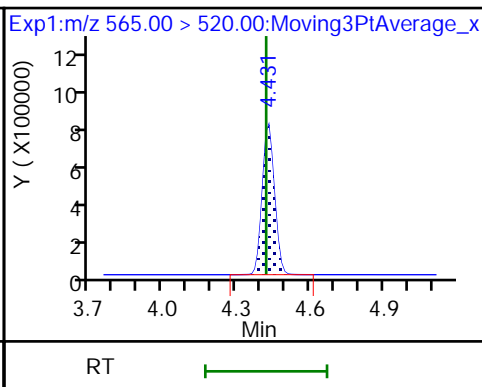
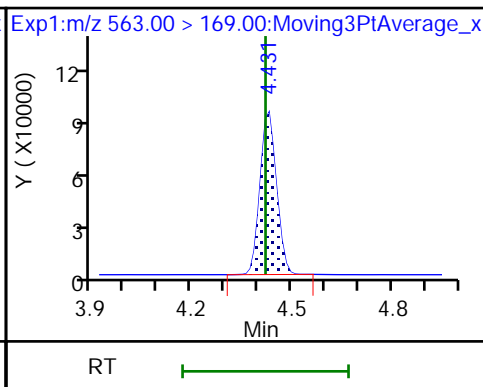
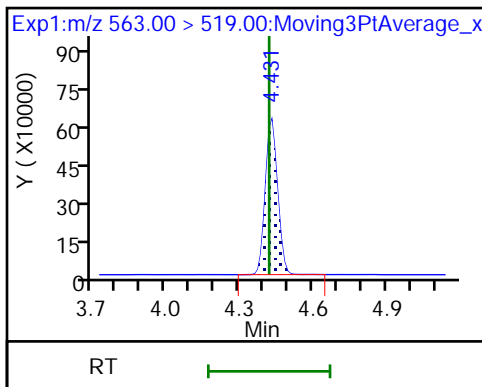
29 Perfluorodecanesulfonic acid



31 Perfluoroundecanoic acid

31 Perfluoroundecanoic acid

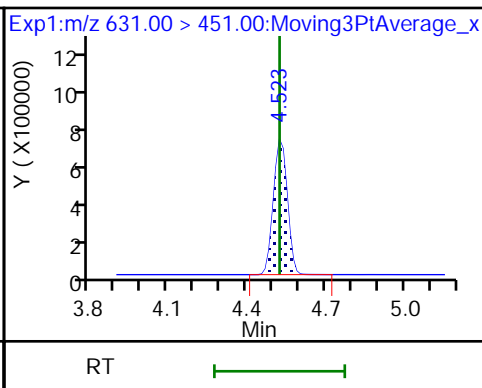
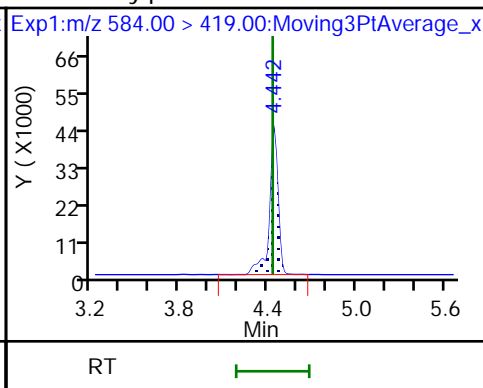
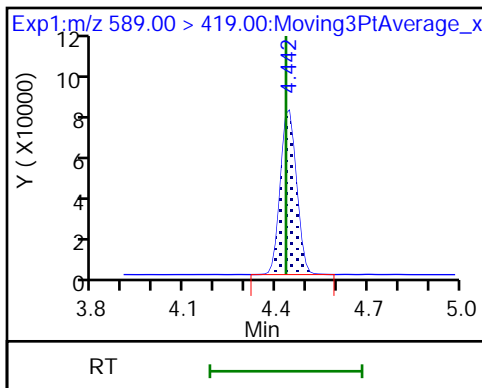
D 30 13C2 PFUa



D 32 d5-NEtFOSAA

33 N-ethylperfluorooctanesulfonamidoa

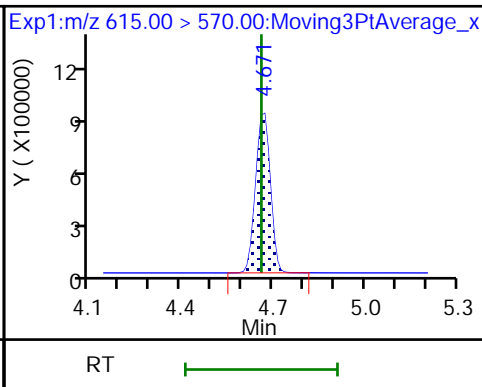
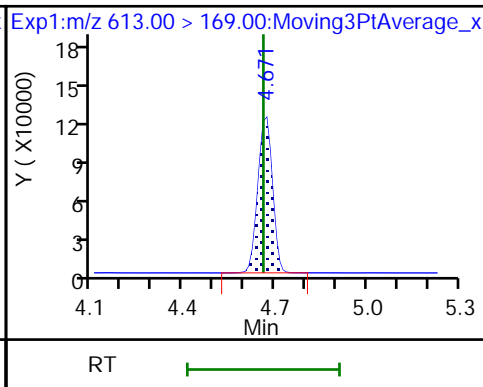
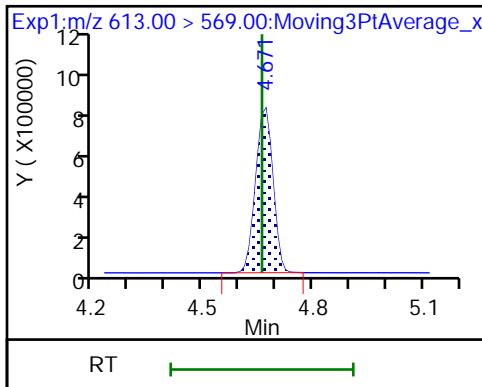
66 11-Chloroeicosafuoro-3-oxaundecan



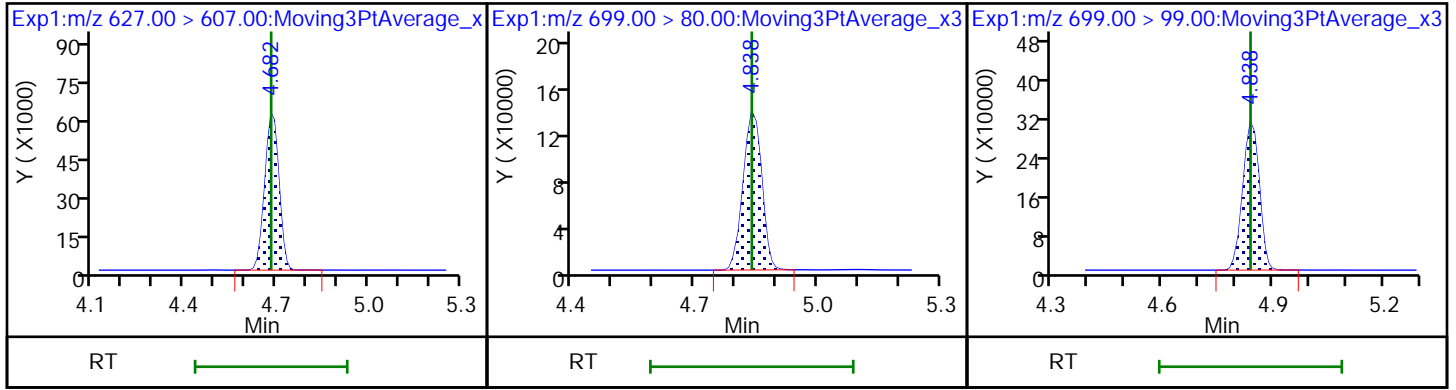
37 Perfluorododecanoic acid

37 Perfluorododecanoic acid

D 36 13C2 PFDa



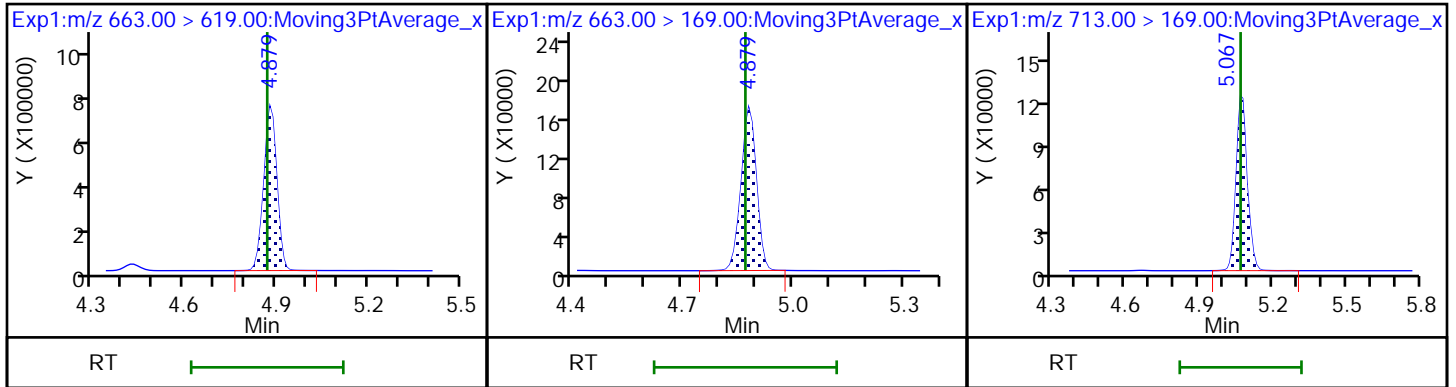
74 1H,1H,2H,2H-perfluorododecanesulfo75 Perfluorododecanesulfonic acid (PF 75 Perfluorododecanesulfonic acid (PF



41 Perfluorotridecanoic acid

41 Perfluorotridecanoic acid

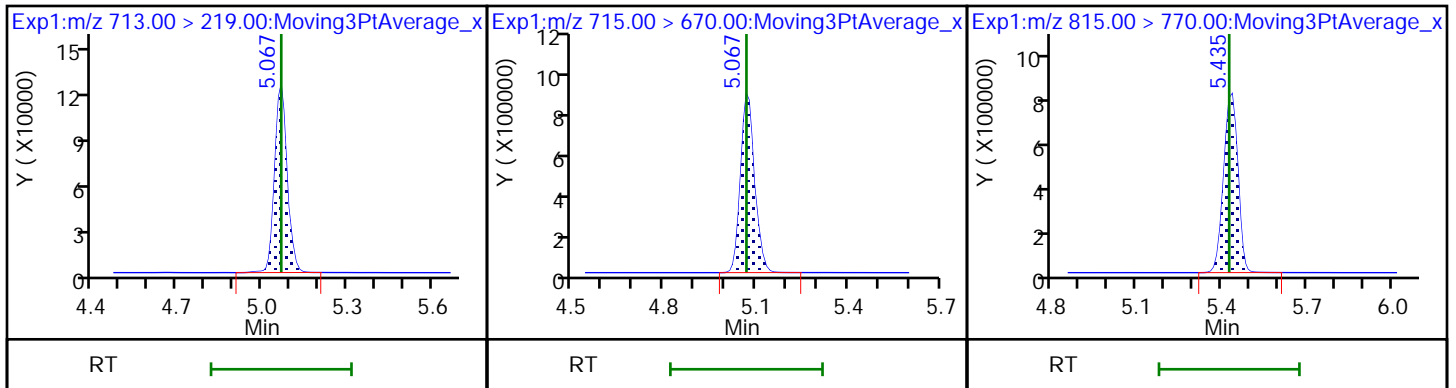
42 Perfluorotetradecanoic acid



42 Perfluorotetradecanoic acid

D 43 13C2 PFTeDA

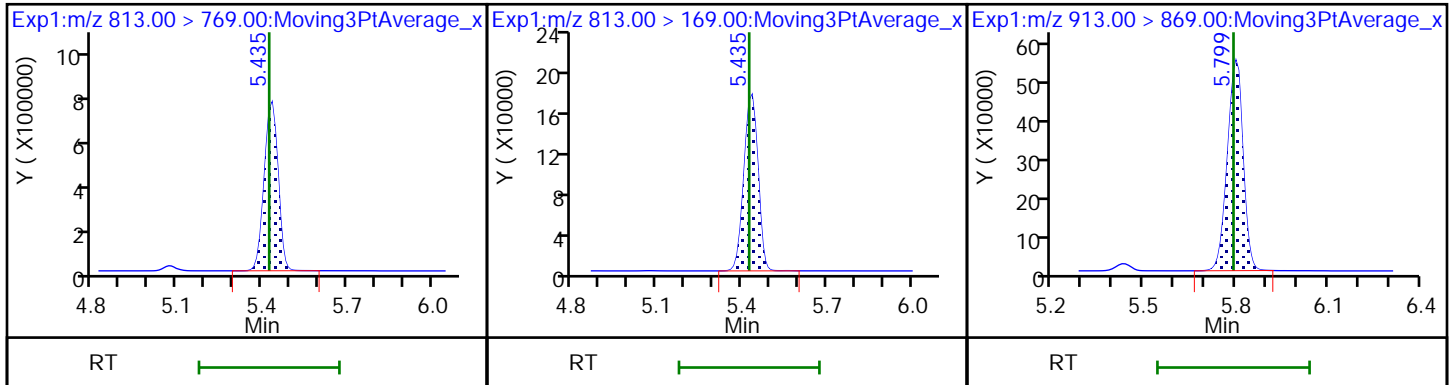
D 44 13C2 PFHxDA



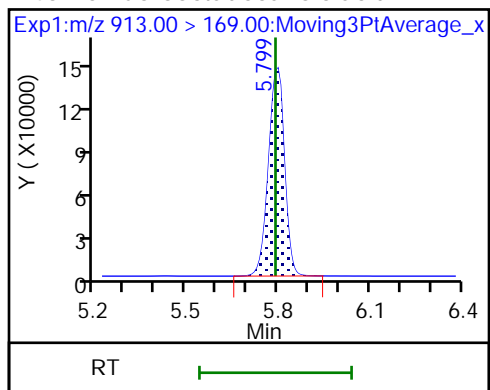
45 Perfluorohexadecanoic acid

45 Perfluorohexadecanoic acid

46 Perfluorooctadecanoic acid



46 Perfluorooctadecanoic acid



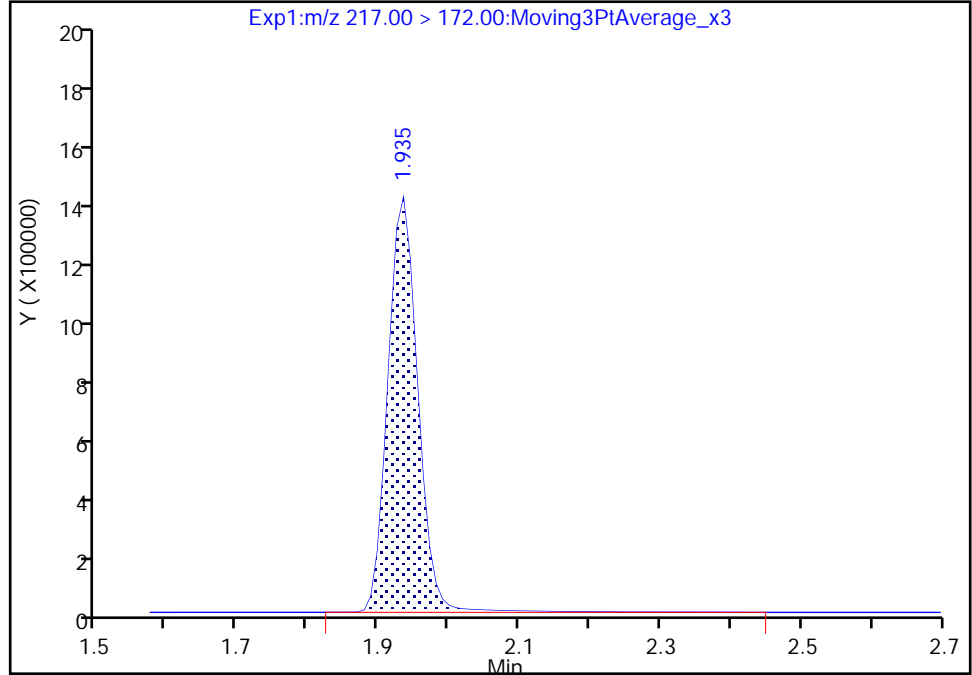
Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B014.d
Injection Date: 22-Oct-2019 21:39:16 Instrument ID: LC812
Lims ID: CCV L5
Client ID:
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

D 1 13C4 PFBA, CAS: STL00992
Signal: 1

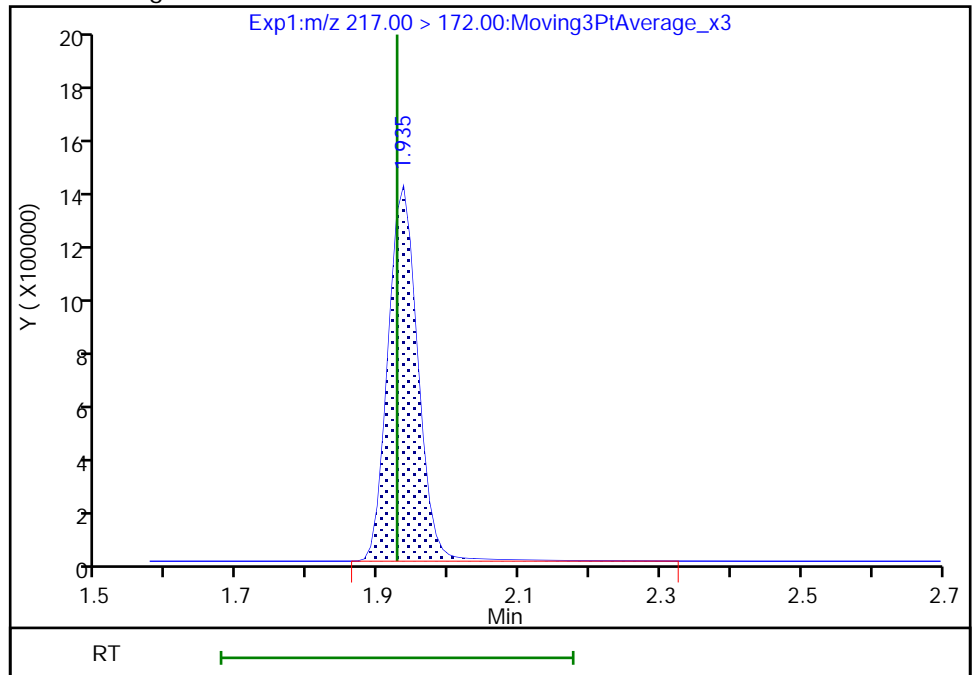
RT: 1.94
Area: 4023092
Amount: 2.764126
Amount Units: ng/ml

Processing Integration Results



RT: 1.94
Area: 4014575
Amount: 2.758274
Amount Units: ng/ml

Manual Integration Results



Eurofins TestAmerica, Burlington

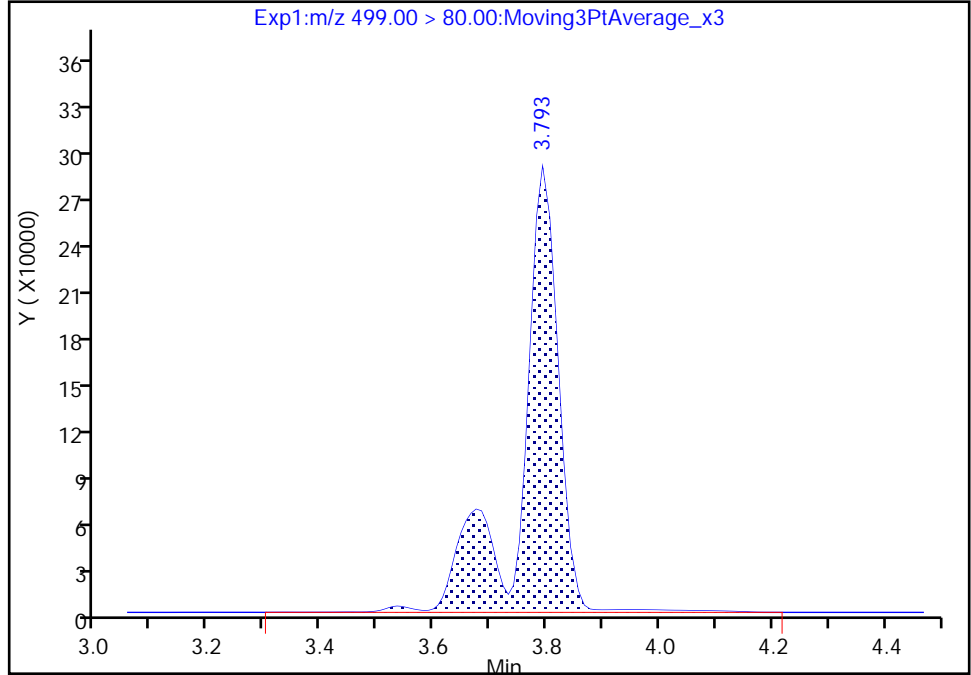
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B014.d
Injection Date: 22-Oct-2019 21:39:16 Instrument ID: LC812
Lims ID: CCV L5
Client ID:
Operator ID: lc812tech ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

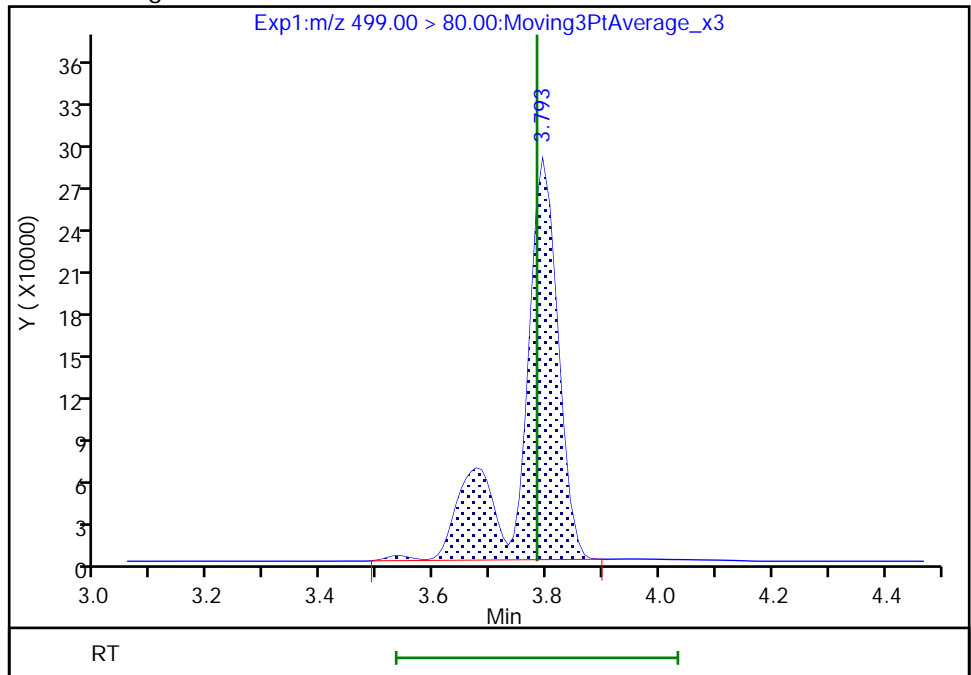
RT: 3.79
Area: 1342593
Amount: 2.213871
Amount Units: ng/ml

Processing Integration Results



RT: 3.79
Area: 1302621
Amount: 2.147959
Amount Units: ng/ml

Manual Integration Results



FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1
 SDG No.: _____
 Lab Sample ID: CCV 200-148772/27 Calibration Date: 10/22/2019 23:25
 Instrument ID: LC812 Calib Start Date: 09/24/2019 18:15
 GC Column: C-18 ID: 4.60 (mm) Calib End Date: 09/24/2019 18:56
 Lab File ID: SC102219B027.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	AveID	0.8879	0.8782		989	1000	-1.1	40.0
Perfluoropentanoic acid (PFPeA)	L1ID		0.9069		973	1000	-2.7	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	1.363	1.277		829	884	-6.3	40.0
1H,1H,2H,2H-perfluorohexanesulfonic acid (4:2)	AveID	2.000	1.753		819	934	-12.3	50.0
Perfluorohexanoic acid (PFHxA)	AveID	0.9852	0.9641		979	1000	-2.1	40.0
Perfluoropentanesulfonic acid	AveID	1.177	1.076		857	938	-8.6	50.0
HFPO-DA	AveID	2.861	3.190		1110	1000	11.5	40.0
Perfluoroheptanoic acid (PFHpA)	AveID	0.8934	0.8327		932	1000	-6.8	40.0
Perfluorohexanesulfonic acid (PFHxS)	L1ID		0.9601		900	910	-1.1	30.0
DONA	AveID	4.089	3.609		831	942	-11.8	50.0
Perfluoroheptanesulfonic Acid (PFHpS)	AveID	1.108	0.9527		819	952	-14.0	50.0
1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	AveID	1.259	1.077		811	948	-14.5	40.0
Perfluorooctanoic acid (PFOA)	L1ID		0.9788		1030	1000	3.0	30.0
Perfluorooctanesulfonic acid (PFOS)	AveID	0.9041	0.7801		801	928	-13.7	40.0
Perfluorononanoic acid (PFNA)	AveID	0.9539	0.8924		936	1000	-6.4	40.0
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid	AveID	1.607	1.316		764	932	-18.1	50.0
Perfluorononanesulfonic acid	AveID	0.7809	0.7093		872	960	-9.2	50.0
Perfluorodecanoic acid (PFDA)	AveID	0.9250	0.8725		943	1000	-5.7	40.0
1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	L1ID		0.7263		887	958	-7.4	40.0
Perfluorooctanesulfonamide (PFOSA)	AveID	0.9175	0.8463		922	1000	-7.8	40.0
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	AveID	0.7125	0.7545		1060	1000	5.9	40.0
Perfluorodecanesulfonic acid (PFDS)	AveID	0.6033	0.5515		881	964	-8.6	50.0
Perfluoroundecanoic acid (PFUnA)	AveID	0.8368	0.7809		933	1000	-6.7	40.0
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	L2ID		0.5524		993	1000	-0.7	30.0
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid	AveID	1.999	1.552		731	942	-22.4	50.0
Perfluorododecanoic acid (PFDoA)	AveID	0.8845	0.8178		925	1000	-7.5	40.0
10:2 FTS	AveID	0.4268	0.4115		929	964	-3.6	50.0
Perfluorododecanesulfonic acid (PFDoS)	AveID	0.2594	0.2394		893	968	-7.7	50.0
Perfluorotridecanoic acid (PFTriA)	AveID	0.7157	0.7345		1030	1000	2.6	50.0
Perfluorotetradecanoic acid (PFTeA)	AveID	0.1455	0.1482		1020	1000	1.8	40.0

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1
 SDG No.: _____
 Lab Sample ID: CCV 200-148772/27 Calibration Date: 10/22/2019 23:25
 Instrument ID: LC812 Calib Start Date: 09/24/2019 18:15
 GC Column: C-18 ID: 4.60 (mm) Calib End Date: 09/24/2019 18:56
 Lab File ID: SC102219B027.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		0.8667		1020	1000	2.4	40.0
Perfluoro-n-octadecanoic acid (PFODA)	AveID	0.7383	0.6713		909	1000	-9.1	50.0
13C4 PFBA	Ave	1.200	1.267		2640	2500	5.6	50.0
13C5 PFPeA	Ave	0.9493	1.041		2740	2500	9.6	50.0
M2-4:2 FTS	Ave	0.0981	0.1013		2410	2340	3.3	50.0
13C2 PFHxA	Ave	1.009	1.083		2680	2500	7.3	50.0
13C3 HFPO-DA	Ave	0.0504	0.0410		2040	2500	-18.5	50.0
13C4 PFHpA	Ave	0.9768	1.098		2810	2500	12.4	50.0
1802 PFHxS	Ave	0.7528	0.7947		2500	2370	5.6	50.0
M2-6:2 FTS	Ave	0.1223	0.1400		2720	2380	14.5	50.0
13C4 PFOA	Ave	0.9930	1.124		2830	2500	13.2	50.0
13C4 PFOS	Ave	0.5122	0.6107		2850	2390	19.2	50.0
13C5 PFNA	Ave	0.8786	0.9920		2820	2500	12.9	50.0
13C2 PFDA	Ave	0.8752	0.9752		2790	2500	11.4	50.0
M2-8:2 FTS	Ave	0.1336	0.1549		2780	2400	16.0	50.0
13C8 FOSA	Ave	0.9945	0.9946		2500	2500	0.0	50.0
d3-NMeFOSAA	Ave	0.0848	0.0838		2470	2500	-1.2	50.0
13C2 PFUnA	Ave	0.7839	0.8958		2860	2500	14.3	50.0
d5-NEtFOSAA	Ave	0.0919	0.1054		2870	2500	14.7	50.0
13C2 PFDoA	Ave	0.8441	0.9817		2910	2500	16.3	50.0
13C2 PFTeDA	Ave	0.7567	0.8547		2820	2500	12.9	50.0
13C2 PFHxDA	Ave	0.7599	0.9440		3110	2500	24.2	50.0

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B027.d
 Lims ID: CCV L4
 Client ID:
 Sample Type: CCV
 Inject. Date: 22-Oct-2019 23:25:47 ALS Bottle#: 27 Worklist Smp#: 27
 Injection Vol: 20.0 ul Dil. Factor: 1.0000
 Sample Info: CCV L4
 Misc. Info.: 200-0038369-027 Plate: 1 Rack: 4
 Operator ID: lc812tech Instrument ID: LC812
 Sublist: chrom-PFC_LC812*sub6
 Method: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\PFC_LC812.m
 Limit Group: LC_PFC_ICAL
 Last Update: 28-Oct-2019 13:11:23 Calib Date: 24-Sep-2019 18:56:37
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA015.d
 Column 1 : C-18 (4.60 mm) Det: EXP1
 Process Host: CTX1017

First Level Reviewer: kirkm Date: 23-Oct-2019 11:09:31

Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										M
217.00 > 172.00	1.935	1.926	0.009	0.564	3886527	2.64		106	18666	M
2 Perfluorobutanoic acid										
212.90 > 169.00	1.935	1.926	0.009	1.000	1365299	0.9891		98.9	369	
D 3 13C5 PFPeA										
267.90 > 223.00	2.284	2.285	-0.001	0.666	3192124	2.74		110	5435	
4 Perfluoropentanoic acid										
262.90 > 219.00	2.284	2.285	-0.001	1.000	1158009	0.9725		97.3	94.8	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.312	2.298	0.014	0.757	1100711	0.8285	Target=2.04	93.7	3366	
298.90 > 99.00	2.312	2.298	0.014	0.757	548354		2.01(1.02-3.05)		803	
D 60 M2-4:2 FTS										
329.00 > 81.00	2.623	2.623	0.0	0.765	290208	2.41		103	377	
61 1H,1H,2H,2H-perfluorohexanesulfoni										
327.00 > 307.00	2.636	2.623	0.013	1.005	203542	0.8189		87.7	2933	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.673	2.661	0.012	1.000	1280908	0.9786	Target=12.90	97.9	552	
313.00 > 119.00	2.673	2.661	0.012	1.000	100766		12.71(6.45-19.36)		316	
D 7 13C2 PFHxA										
315.00 > 270.00	2.673	2.661	0.012	0.779	3321536	2.68		107	11708	
70 Perfluoropentanesulfonic acid										
349.00 > 80.00	2.673	2.673	0.0	0.875	984084	0.8572	Target=3.01	91.4	3693	
349.00 > 99.00	2.673	2.673	0.0	0.875	331562		2.97(1.51-4.52)		1515	
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.784	2.776	0.008	1.000	160607	1.11		111	103	
D 64 13C3 HFPO-DA										
332.10 > 287.00	2.784	2.776	0.008	0.812	125873	2.04		81.5	1220	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.055	3.044	0.011	1.000	851841	0.8996	Target=3.78	98.9	1947	
399.00 > 99.00	3.055	3.044	0.011	1.000	218786		3.89(1.89-5.67)		526	
D 11 18O2 PFHxS										
403.00 > 84.00	3.055	3.044	0.011	0.891	2305906	2.50		106	7557	
D 9 13C4 PFHpA										
367.00 > 322.00	3.055	3.044	0.011	0.891	3368759	2.81		112	7177	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.055	3.044	0.011	1.000	1122065	0.9321	Target=3.54	93.2	476	
363.00 > 169.00	3.055	3.044	0.011	1.000	311058		3.61(1.77-5.31)		1217	
77 DONA										
377.00 > 251.00	3.101	3.090	0.011	0.818	2546915	0.8312	Target=2.56	88.2	4218	
377.00 > 85.00	3.101	3.090	0.011	0.818	987139		2.58(1.28-3.84)		2132	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.413	3.413	0.0	0.900	679518	0.8188	Target=5.80	86.0	2904	
449.00 > 99.00	3.413	3.413	0.0	0.900	126179		5.39(2.90-8.71)		1392	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.421	3.413	0.008	1.002	175354	0.8108		85.5	805	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.413	3.413	0.0	0.995	407817	2.72		114	1449	
* 62 13C2 PFOA										
415.00 > 370.00	3.430	3.422	0.008		3067311	2.50			4886	
D 14 13C4 PFOA										
417.00 > 372.00	3.430	3.422	0.008	1.000	3446843	2.83		113	6045	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.430	3.422	0.008	1.000	1349503	1.03	Target=2.61	103	352	
413.00 > 169.00	3.430	3.422	0.008	1.000	497537		2.71(1.30-3.91)		1475	
D 18 13C4 PFOS										
503.00 > 80.00	3.793	3.783	0.010	1.106	1790700	2.85		119	7153	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.793	3.783	0.010	1.000	542400	0.8007	Target=4.93	86.3	292	M
499.00 > 99.00	3.793	3.783	0.010	1.000	107495		5.05(2.47-7.40)		881	M
D 19 13C5 PFNA										
468.00 > 423.00	3.817	3.805	0.012	1.113	3042640	2.82		113	7431	
20 Perfluorononanoic acid										
463.00 > 419.00	3.817	3.805	0.012	1.000	1086035	0.9355	Target=7.89	93.6	384	
463.00 > 169.00	3.817	3.805	0.012	1.000	144634		7.51(3.95-11.84)		1794	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.973	3.973	0.0	1.047	919248	0.7636		81.9	6579	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.116	4.117	-0.001	1.085	510208	0.8721	Target=2.60	90.8	3157	
549.00 > 99.00	4.116	4.117	-0.001	1.085	187586		2.72(1.30-3.90)		1077	
24 Perfluorodecanoic acid										
513.00 > 469.00	4.153	4.141	0.012	1.000	1043926	0.9433	Target=8.57	94.3	774	
513.00 > 169.00	4.153	4.141	0.012	1.000	117365		8.89(4.29-12.86)		1192	
D 23 13C2 PFDA										
515.00 > 470.00	4.153	4.141	0.012	1.211	2991199	2.79		111	8560	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
25 1H,1H,2H,2H-perfluorodecanesulfoni	527.00 > 507.00	4.164	4.153	0.011	1.000	132204	0.8867	92.6	2055	
D 26 M2-8:2 FTS	529.00 > 81.00	4.164	4.153	0.011	1.214	455094	2.78	116	1698	
22 Perfluorooctanesulfonamide	498.00 > 78.00	4.218	4.207	0.011	1.000	1032757	0.9224	92.2	2333	
D 21 13C8 FOSA	506.00 > 78.00	4.218	4.207	0.011	1.230	3050775	2.50	100	3829	
D 27 d3-NMeFOSAA	573.00 > 419.00	4.293	4.294	-0.001	1.252	257035	2.47	98.8	1182	
28 N-methylperfluorooctanesulfonamido	570.00 > 419.00	4.305	4.294	0.011	1.003	77572	1.06	106	231	
29 Perfluorodecanesulfonic acid	599.00 > 80.00	4.397	4.397	0.0	1.159	398340	0.8813	Target=2.56	91.4	1597
	599.00 > 99.00	4.397	4.397	0.0	1.159	157182		2.53(1.28-3.84)		1908
31 Perfluoroundecanoic acid	563.00 > 519.00	4.431	4.420	0.011	1.000	858342	0.9333	Target=6.97	93.3	796
	563.00 > 169.00	4.431	4.420	0.011	1.000	118360		7.25(3.48-10.45)		1019
D 30 13C2 PFUnA	565.00 > 520.00	4.431	4.420	0.011	1.292	2747814	2.86	114	6638	
D 32 d5-NEtFOSAA	589.00 > 419.00	4.431	4.431	0.0	1.292	323228	2.87	115	2247	
33 N-ethylperfluorooctanesulfonamidoa	584.00 > 419.00	4.442	4.431	0.011	1.003	71423	0.99	99.3	676	
66 11-Chloroeicosafuoro-3-oxaundecan	631.00 > 451.00	4.523	4.524	-0.001	1.193	1095238	0.7311	77.6	5485	
37 Perfluorododecanoic acid	613.00 > 569.00	4.671	4.660	0.011	1.000	985044	0.9246	Target=7.06	92.5	122
	613.00 > 169.00	4.671	4.660	0.011	1.000	159247		6.19(3.53-10.59)		2691
D 36 13C2 PFDaA	615.00 > 570.00	4.671	4.660	0.011	1.362	3011136	2.91	116	7244	
74 1H,1H,2H,2H-perfluorododecanesulfo	627.00 > 607.00	4.693	4.683	0.010	1.127	75369	0.9294	96.4	1369	
75 Perfluorododecanesulfonic acid (PF	699.00 > 80.00	4.838	4.839	-0.001	1.276	173640	0.8934	Target=0.47	92.3	415
	699.00 > 99.00	4.838	4.839	-0.001	1.276	378081		0.46(0.23-0.70)		4153
41 Perfluorotridecanoic acid	663.00 > 619.00	4.879	4.870	0.009	1.044	884634	1.03	Target=4.87	103	136
	663.00 > 169.00	4.879	4.870	0.009	1.044	199979		4.42(2.43-7.30)		1536
42 Perfluorotetradecanoic acid	713.00 > 169.00	5.067	5.067	0.0	1.000	155373	1.02	Target=1.09	102	1921
	713.00 > 219.00	5.067	5.067	0.0	1.000	159698		0.97(0.54-1.63)		2630
D 43 13C2 PFTeDA	715.00 > 670.00	5.067	5.067	0.0	1.477	2621507	2.82	113	8976	
D 44 13C2 PFHxDA	815.00 > 770.00	5.435	5.424	0.011	1.585	2895642	3.11	124	8703	

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	5.435	5.424	0.011	1.000	1003874	1.02	Target=4.33	102	147	
813.00 > 169.00	5.435	5.424	0.011	1.000	246303		4.08(2.16-6.49)		2008	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.799	5.790	0.009	1.067	777493	0.9092	Target=4.09	90.9	166	
913.00 > 169.00	5.799	5.790	0.009	1.067	207692		3.74(2.05-6.14)		2269	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

PFAS32NCIC4_00001

Amount Added: 100.00

Units: uL

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B027.d

Injection Date: 22-Oct-2019 23:25:47

Instrument ID: LC812

Lims ID: CCV L4

Client ID:

Operator ID: lc812tech

ALS Bottle#: 27

Worklist Smp#: 27

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

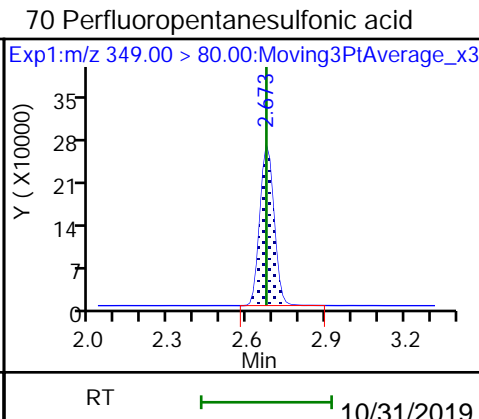
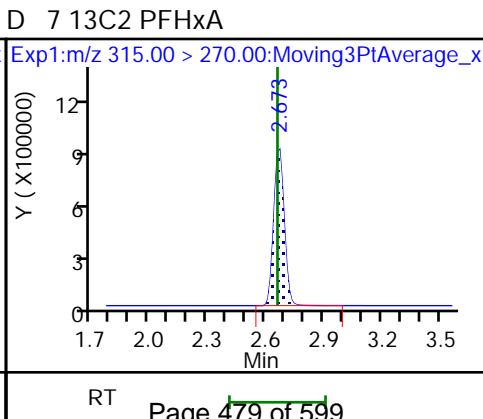
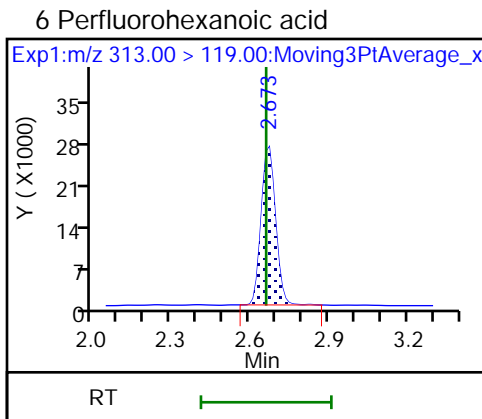
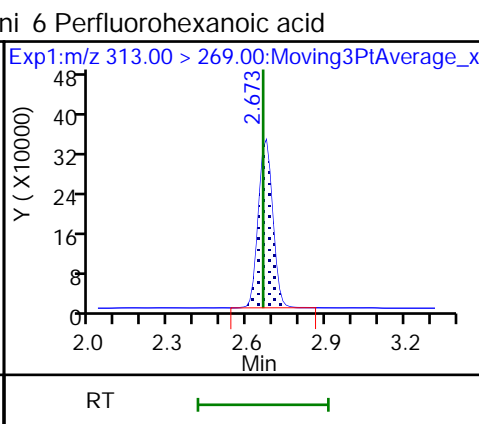
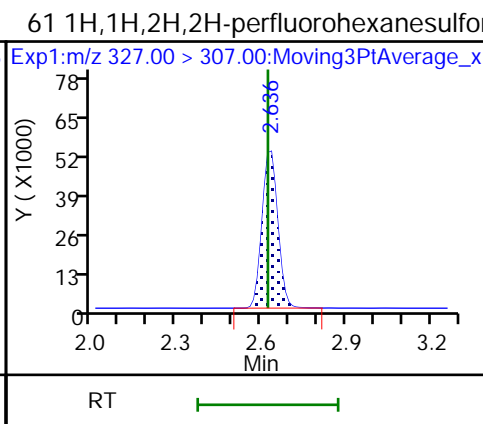
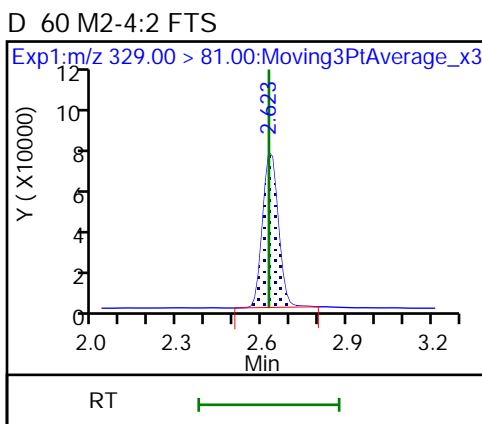
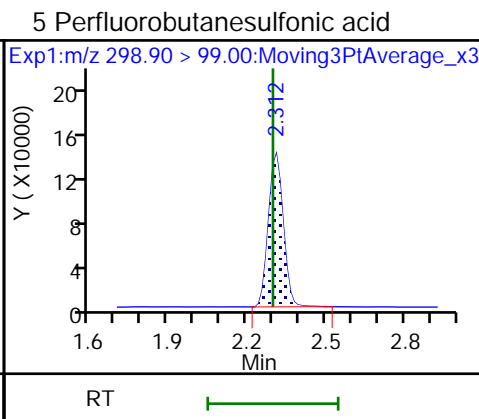
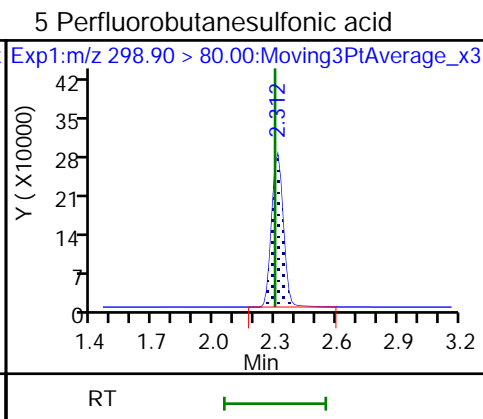
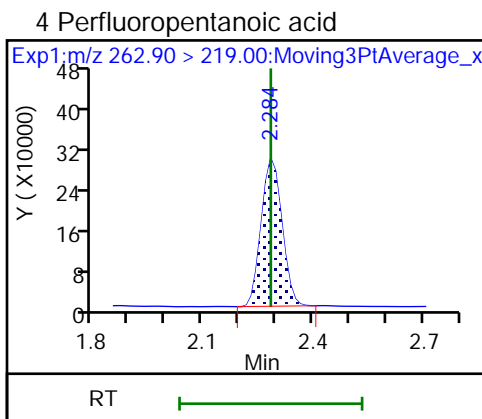
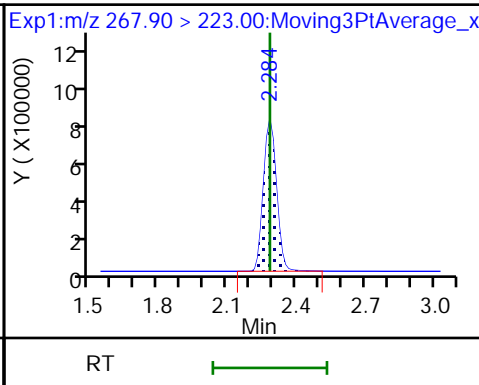
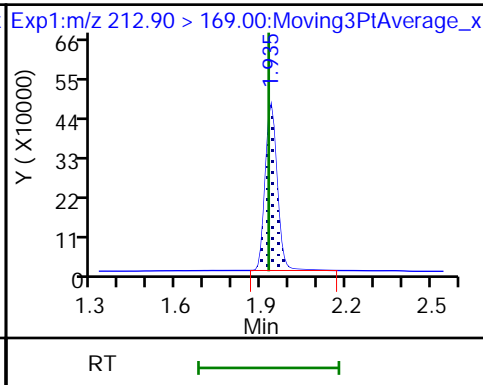
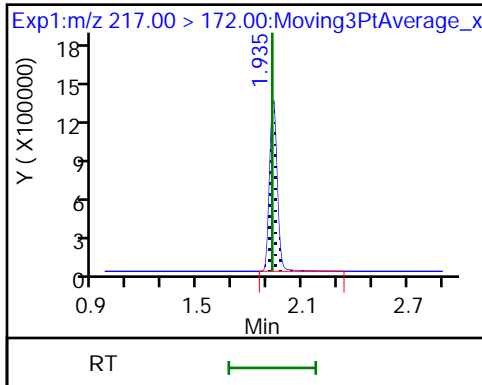
Method: PFC_LC812

Limit Group: LC_PFC_ICAL

D 1 13C4 PFBA (M)

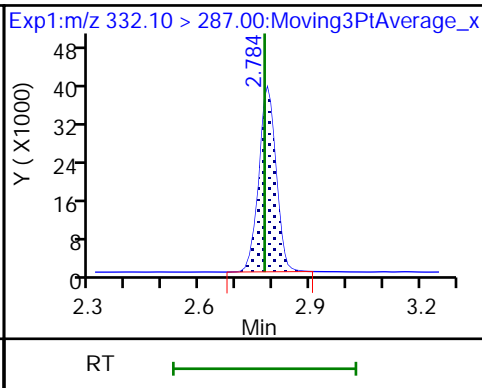
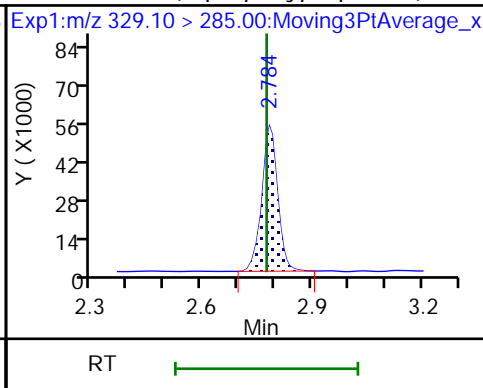
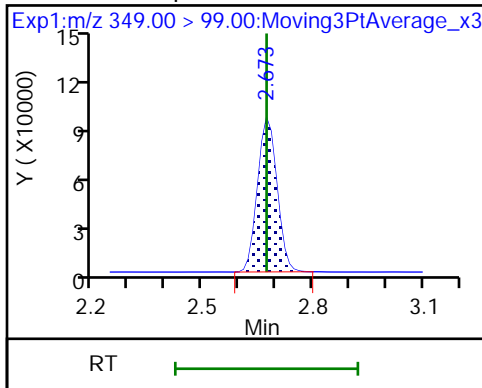
2 Perfluorobutanoic acid

D 3 13C5 PFPeA



70 Perfluoropentanesulfonic acid

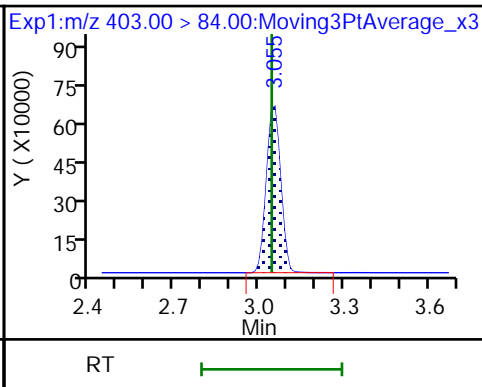
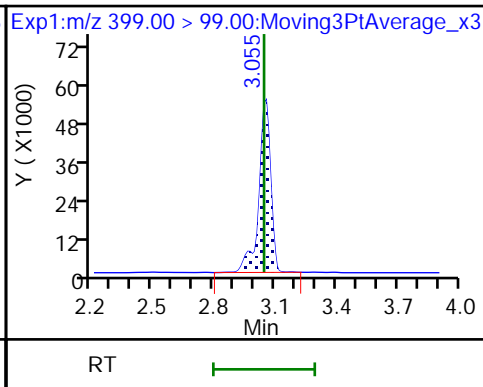
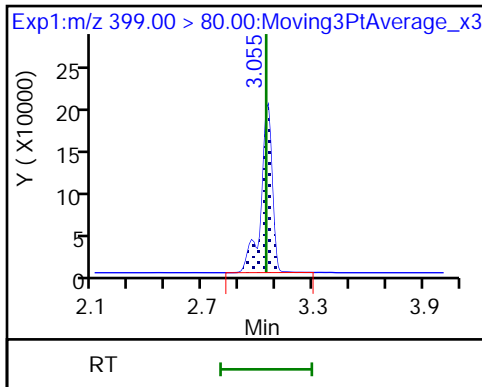
67 Perfluoro(2-propoxypropanoic) acid D 64 13C3 HFPO-DA



8 Perfluorohexanesulfonic acid

8 Perfluorohexanesulfonic acid

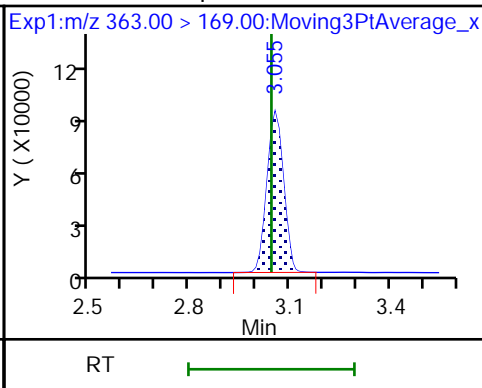
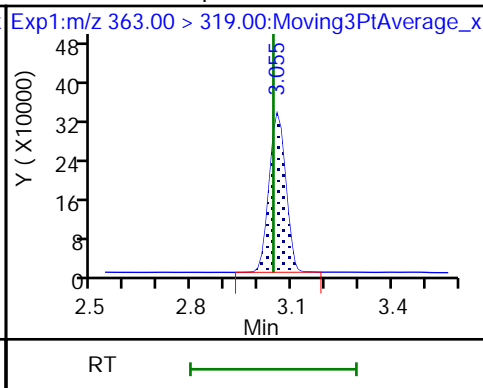
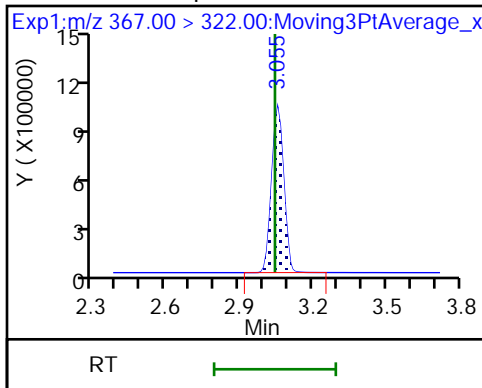
D 11 18O2 PFHxS



D 9 13C4 PFHpA

10 Perfluoroheptanoic acid

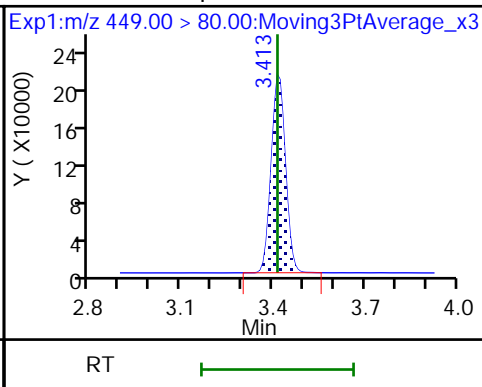
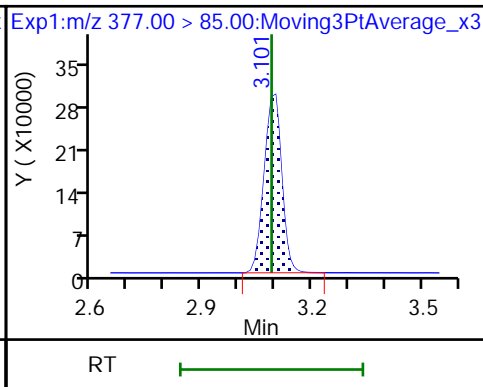
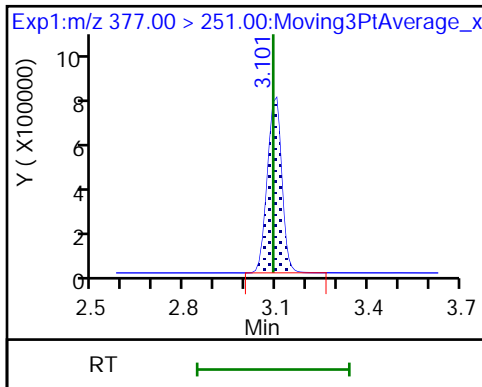
10 Perfluoroheptanoic acid



77 DONA

77 DONA

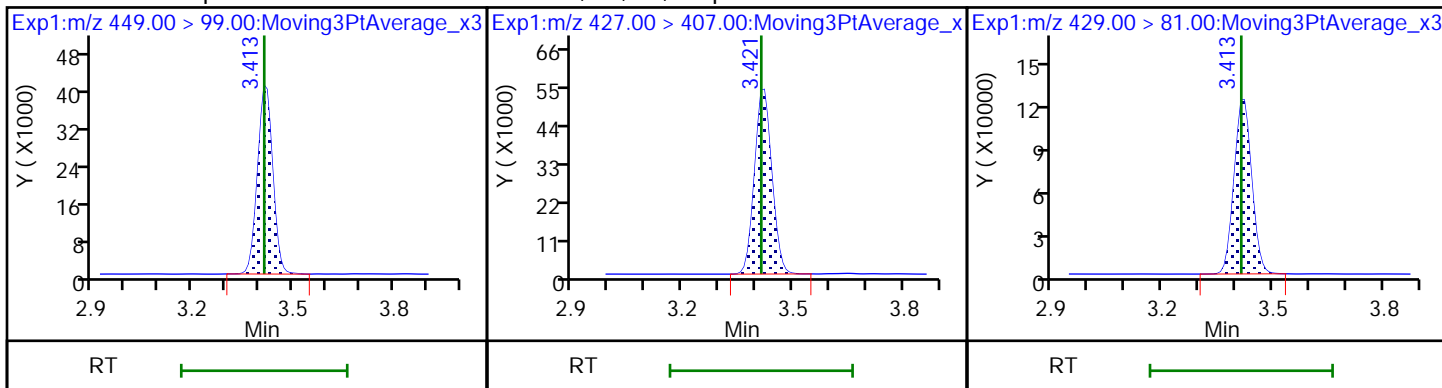
16 Perfluoroheptanesulfonic acid



16 Perfluoroheptanesulfonic acid

13 1H,1H,2H,2H-perfluorooctanesulfonD

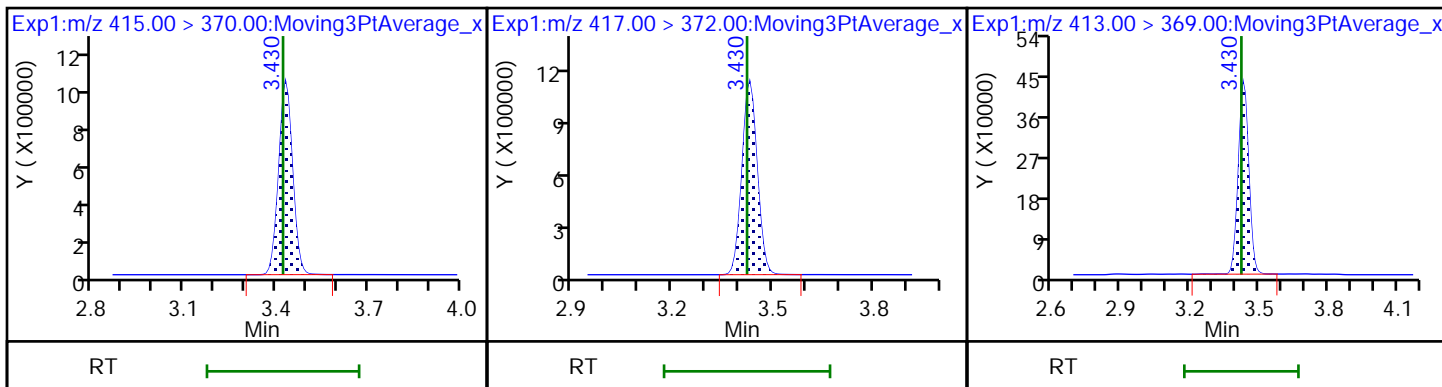
12 M2-6:2 FTS



* 62 13C2 PFOA

D 14 13C4 PFOA

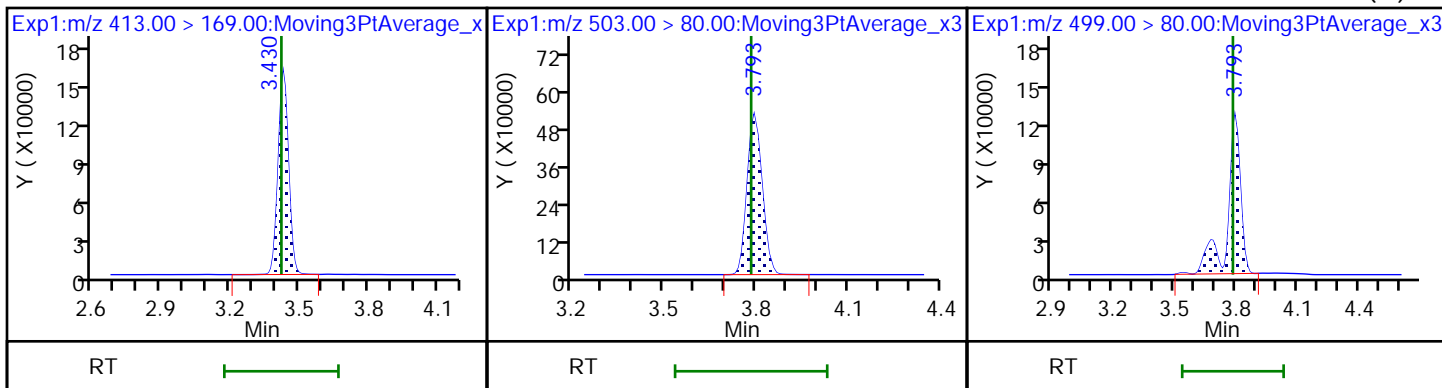
15 Perfluorooctanoic acid



15 Perfluorooctanoic acid

D 18 13C4 PFOS

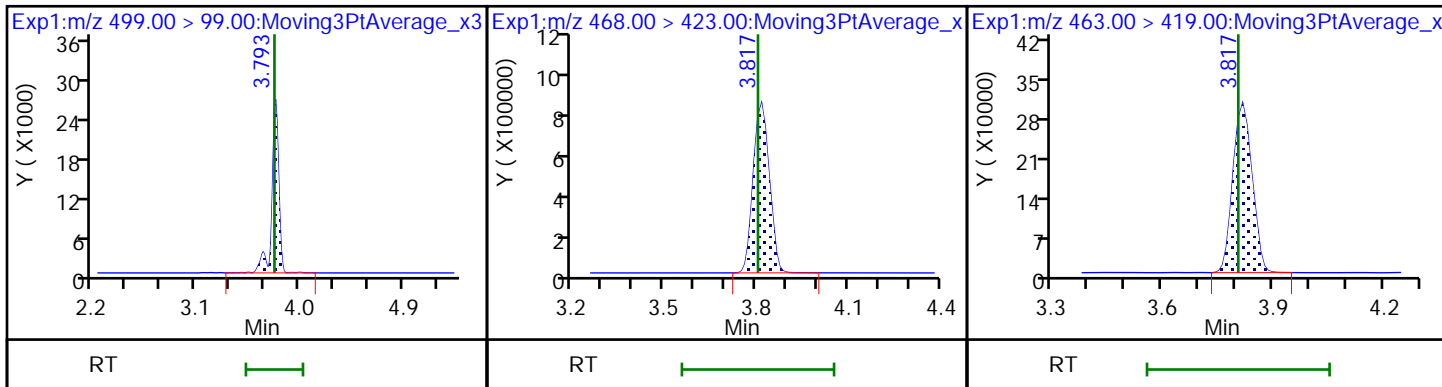
17 Perfluorooctanesulfonic acid (M)



17 Perfluorooctanesulfonic acid

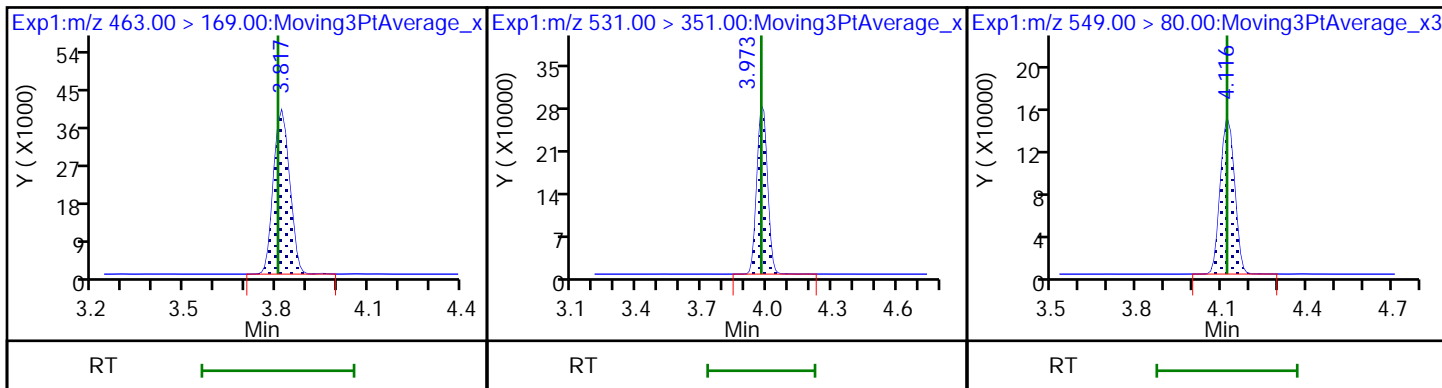
D 19 13C5 PFNA

20 Perfluorononanoic acid



20 Perfluorononanoic acid

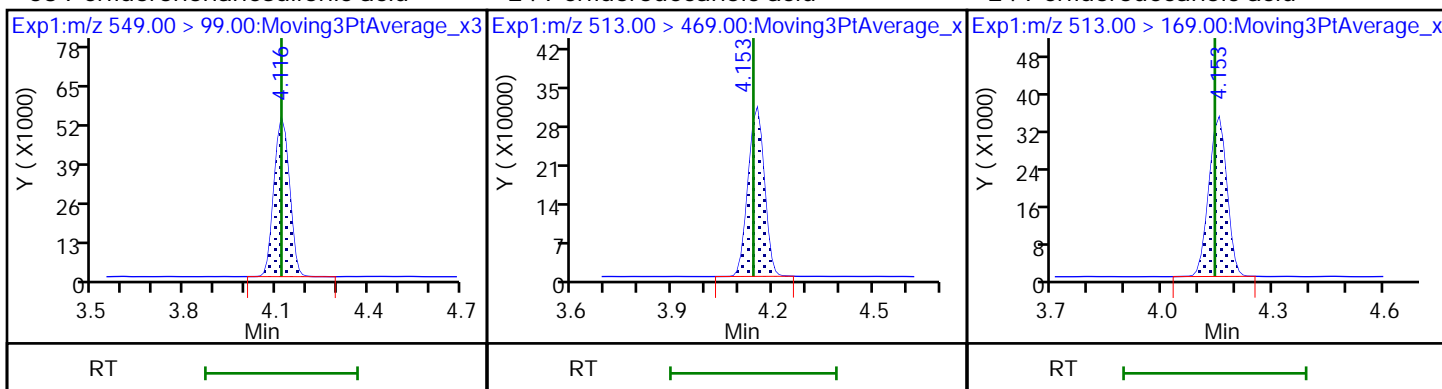
69 9-Chlorohexadecafluoro-3-oxanonan-68 Perfluoronananesulfonic acid



68 Perfluoronananesulfonic acid

24 Perfluorodecanoic acid

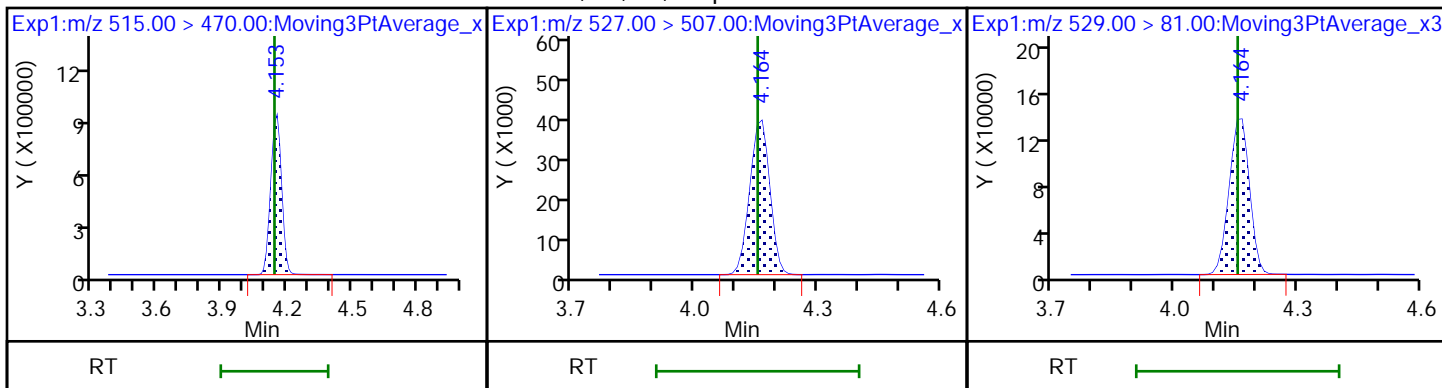
24 Perfluorodecanoic acid



D 23 13C2 PFDA

25 1H,1H,2H,2H-perfluorodecanesulfonid

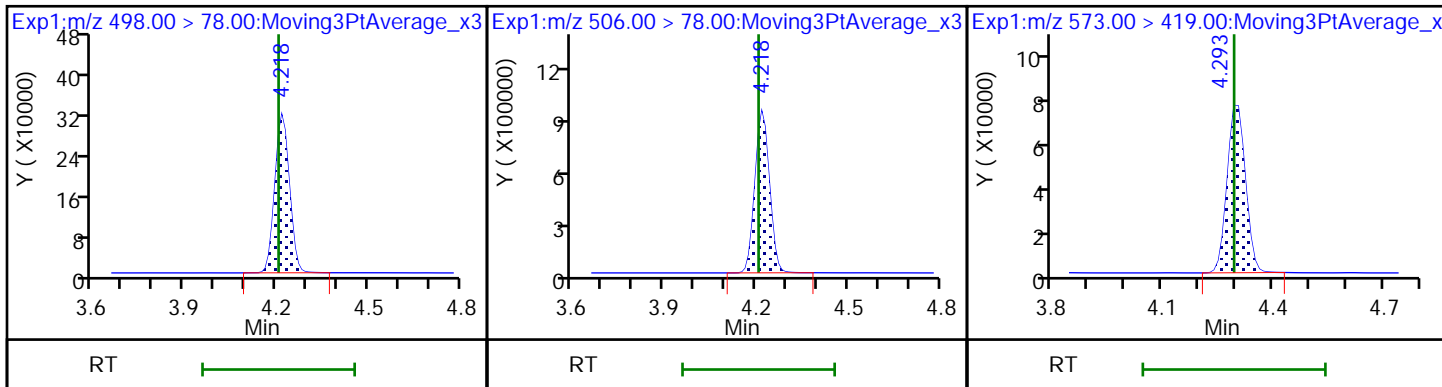
D 26 M2-8:2 FTS



22 Perfluorooctanesulfonamide

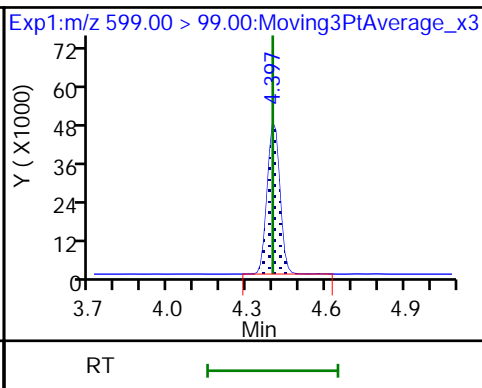
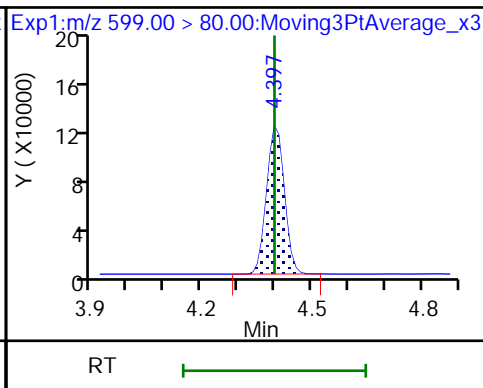
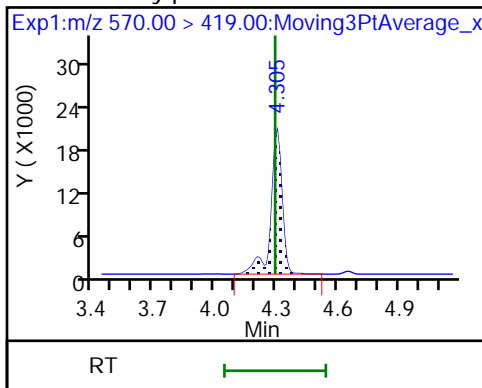
D 21 13C8 FOSA

D 27 d3-NMeFOSAA



28 N-methylperfluorooctanesulfonamido

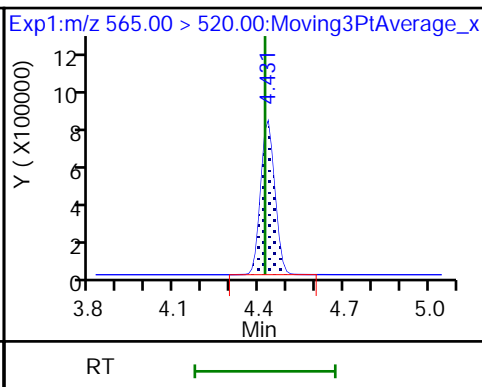
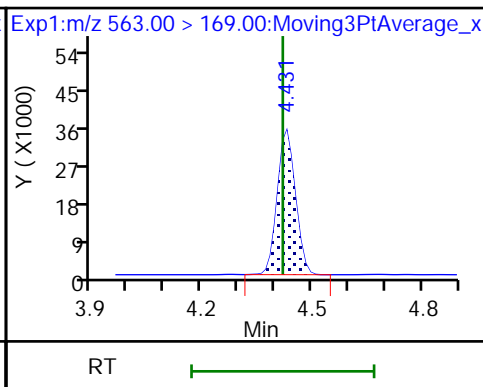
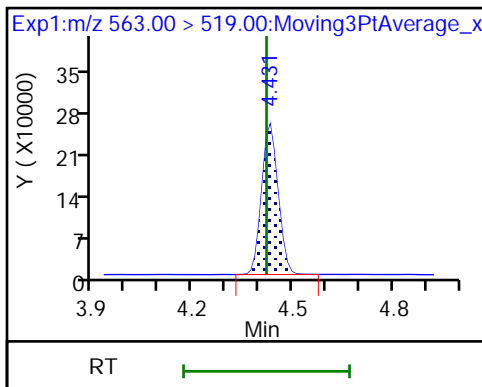
29 Perfluorodecanesulfonic acid



31 Perfluoroundecanoic acid

31 Perfluoroundecanoic acid

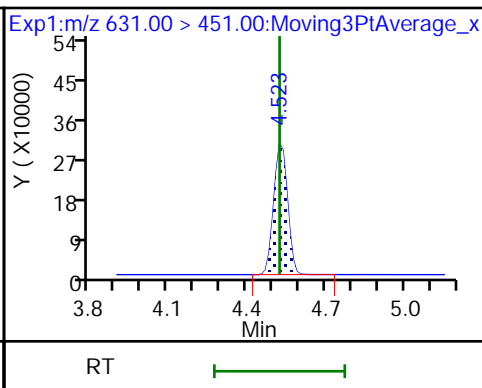
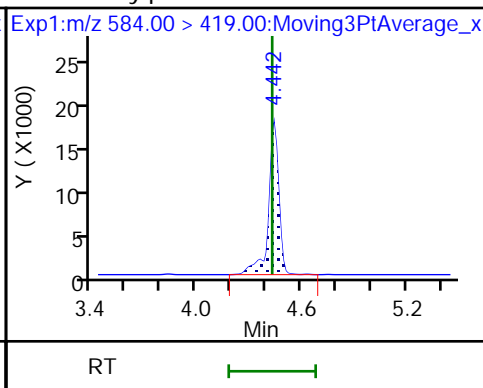
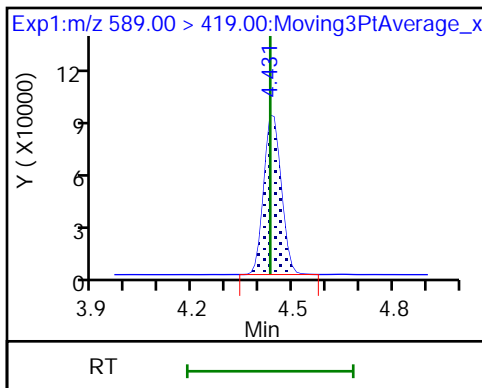
D 30 13C2 PFUa



D 32 d5-NEtFOSAA

33 N-ethylperfluorooctanesulfonamidoa

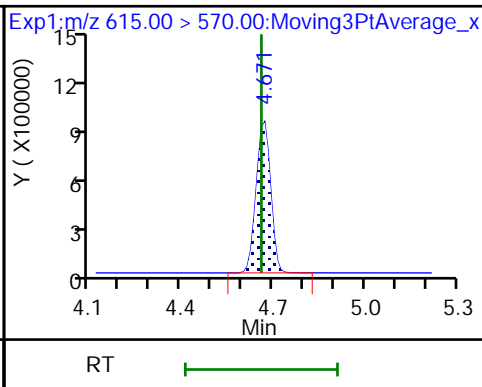
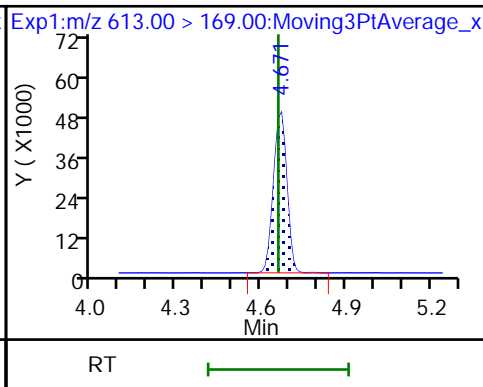
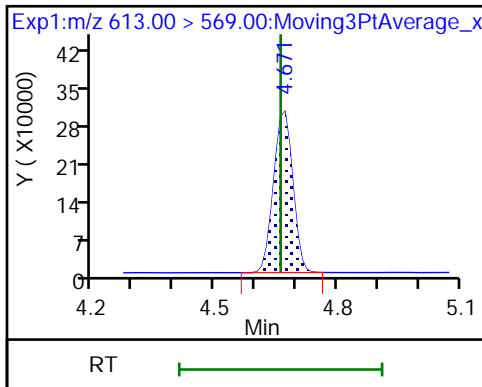
66 11-Chloroeicosafuoro-3-oxaundecan



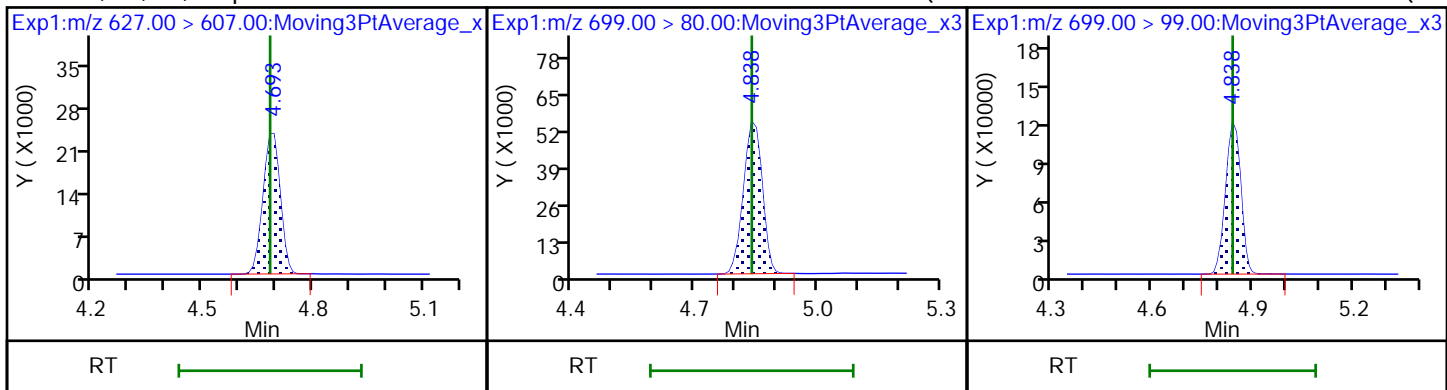
37 Perfluorododecanoic acid

37 Perfluorododecanoic acid

D 36 13C2 PFDoA



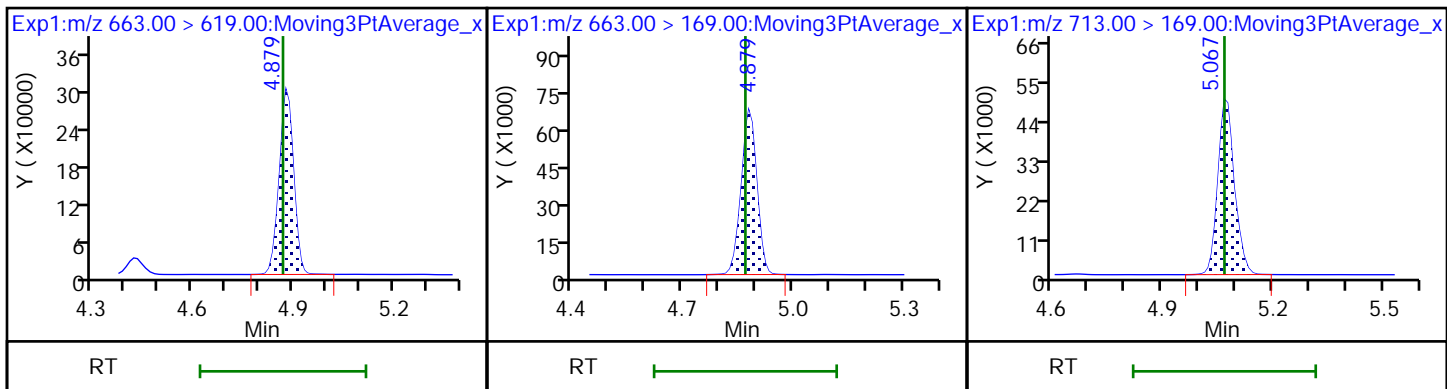
74 1H,1H,2H,2H-perfluorododecanesulfo75 Perfluorododecanesulfonic acid (PF 75 Perfluorododecanesulfonic acid (PF



41 Perfluorotridecanoic acid

41 Perfluorotridecanoic acid

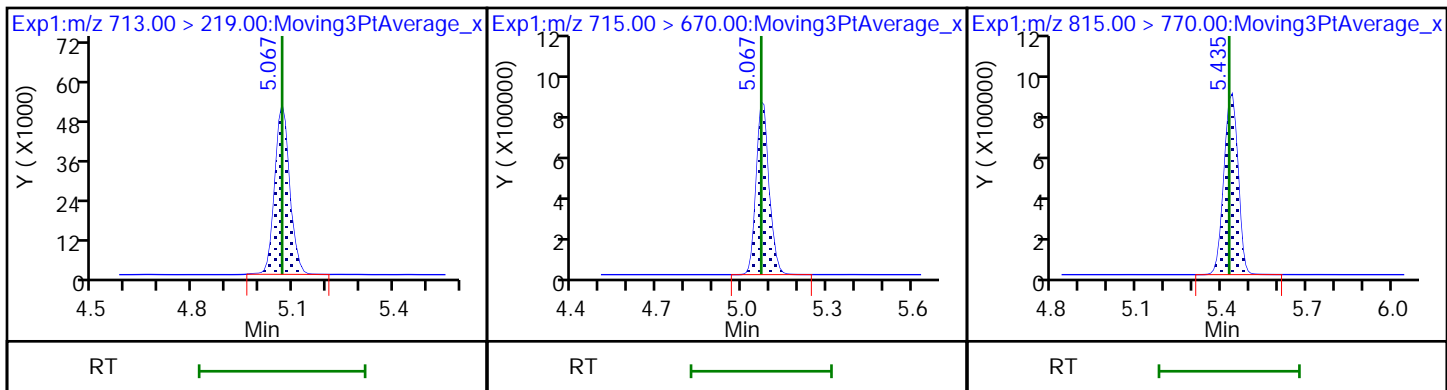
42 Perfluorotetradecanoic acid



42 Perfluorotetradecanoic acid

D 43 13C2 PFTeDA

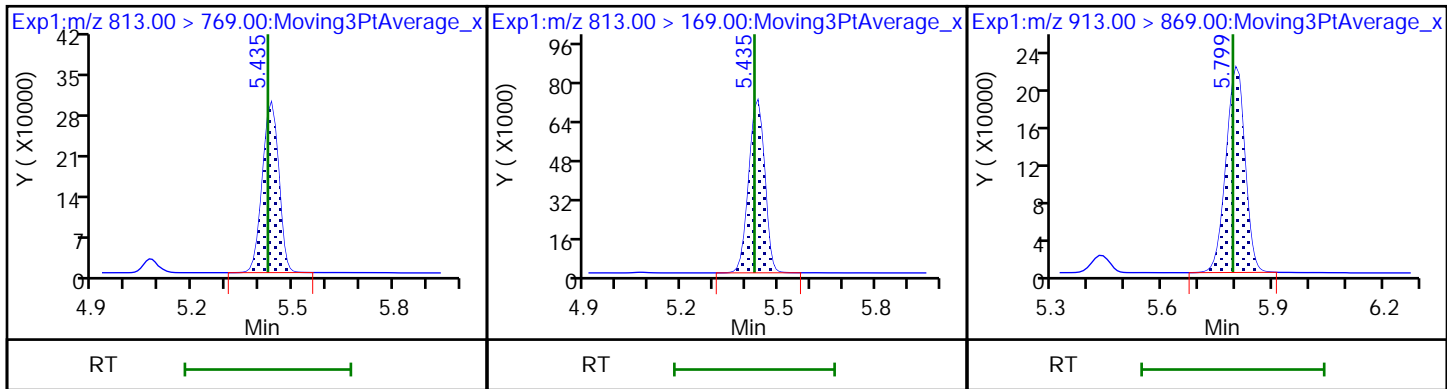
D 44 13C2 PFHxDA



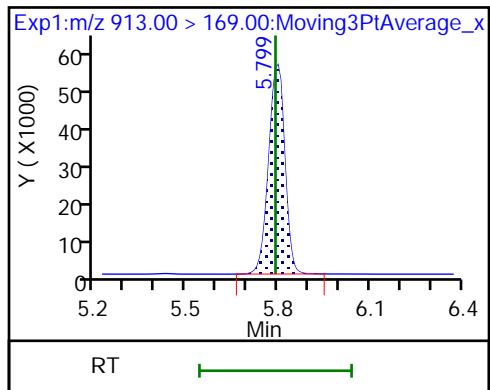
45 Perfluorohexadecanoic acid

45 Perfluorohexadecanoic acid

46 Perfluorooctadecanoic acid



46 Perfluorooctadecanoic acid



Eurofins TestAmerica, Burlington

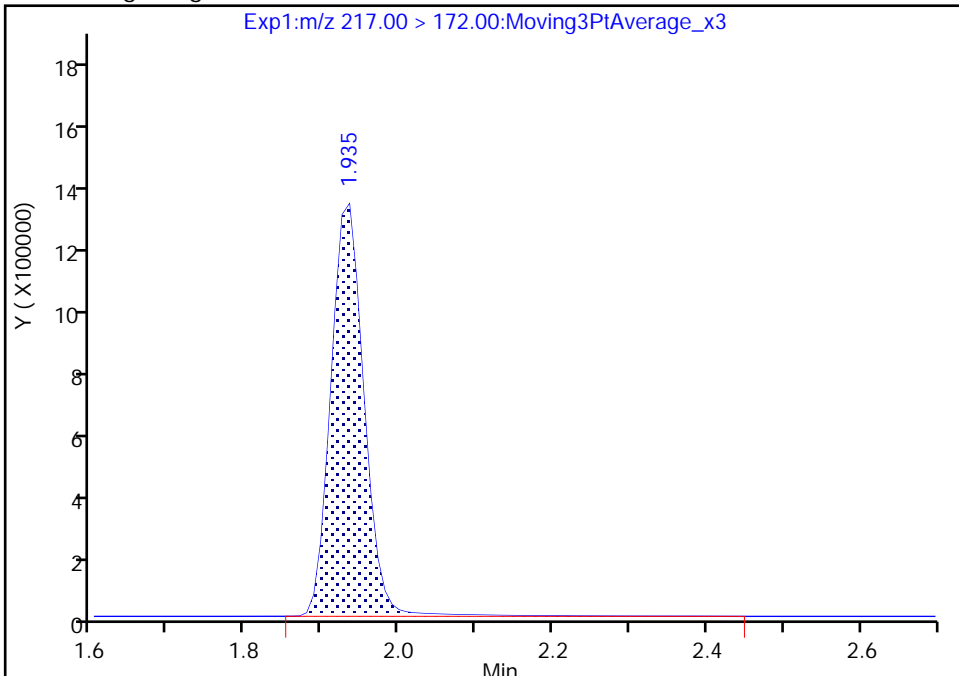
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B027.d
Injection Date: 22-Oct-2019 23:25:47 Instrument ID: LC812
Lims ID: CCV L4
Client ID:
Operator ID: lc812tech ALS Bottle#: 27 Worklist Smp#: 27
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

D 1 13C4 PFBA, CAS: STL00992

Signal: 1

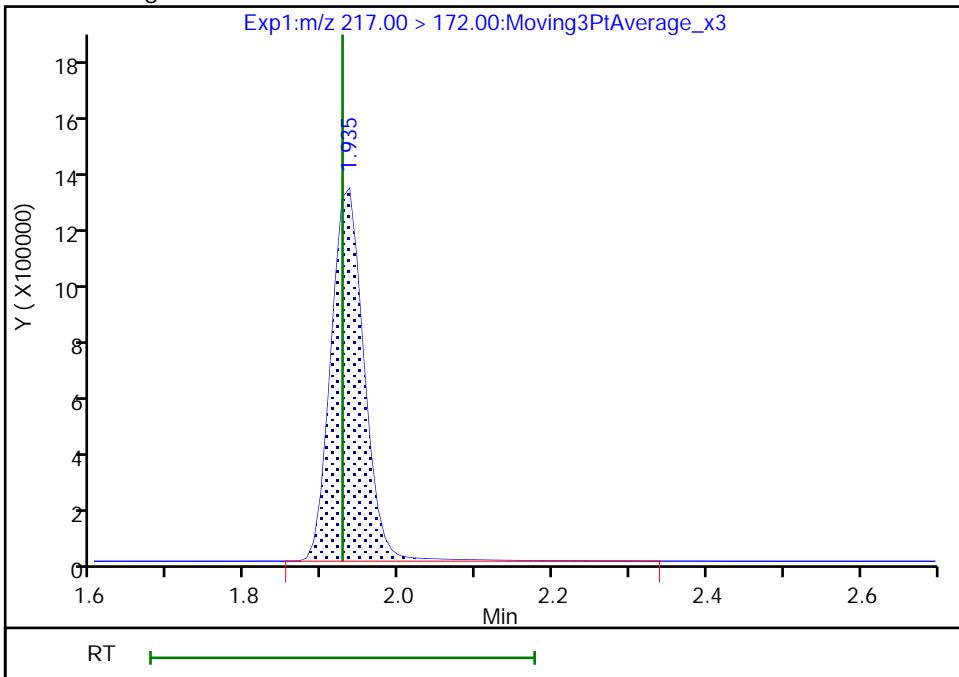
RT: 1.93
Area: 3893001
Amount: 2.644617
Amount Units: ng/ml

Processing Integration Results



RT: 1.93
Area: 3886527
Amount: 2.640219
Amount Units: ng/ml

Manual Integration Results



Reviewer: kirkm, 23-Oct-2019 10:49:01
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

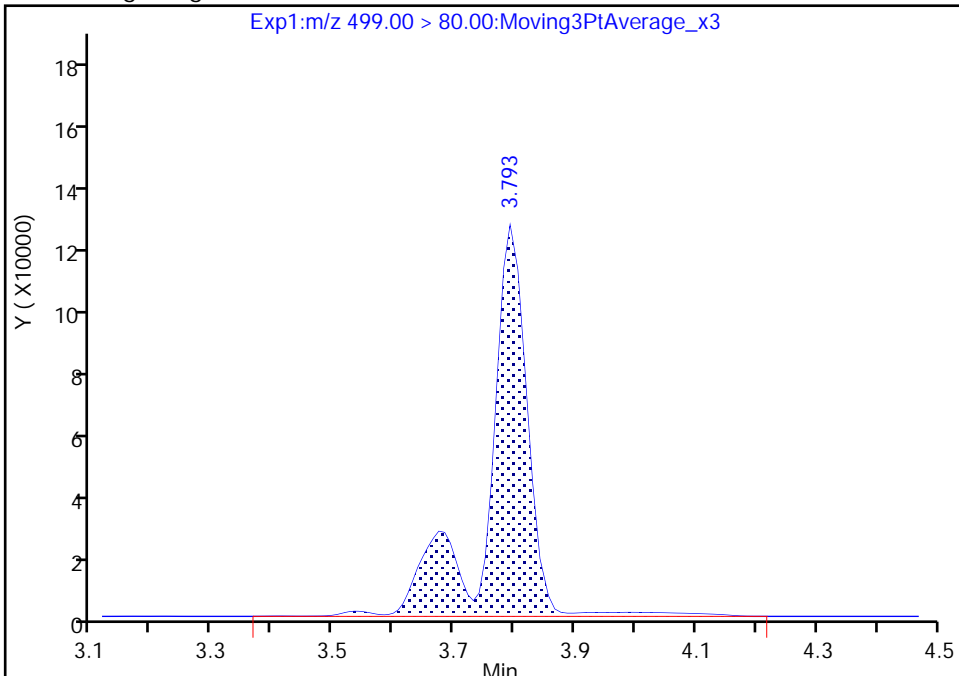
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B027.d
Injection Date: 22-Oct-2019 23:25:47 Instrument ID: LC812
Lims ID: CCV L4
Client ID:
Operator ID: lc812tech ALS Bottle#: 27 Worklist Smp#: 27
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

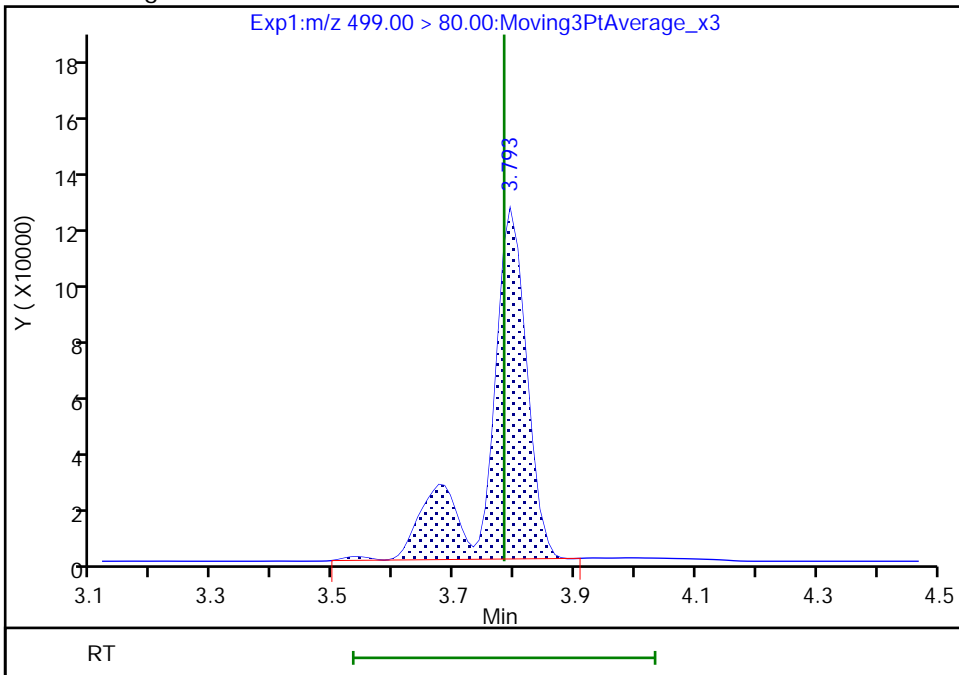
RT: 3.79
Area: 572813
Amount: 0.845575
Amount Units: ng/ml

Processing Integration Results



RT: 3.79
Area: 542400
Amount: 0.800680
Amount Units: ng/ml

Manual Integration Results



Reviewer: kirkm, 23-Oct-2019 10:49:56
Audit Action: Manually Integrated

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 200-148550/1-A
 Matrix: Water Lab File ID: SC102219B002.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: 3535 Date Extracted: 10/17/2019 10:08
 Sample wt/vol: 250 (mL) Date Analyzed: 10/22/2019 20:00
 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.: 148772 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)	0.316	J	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.: 480-160746-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 200-148550/1-A
 Matrix: Water Lab File ID: SC102219B002.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: 3535 Date Extracted: 10/17/2019 10:08
 Sample wt/vol: 250 (mL) Date Analyzed: 10/22/2019 20:00
 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.: 148772 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	120		50-150
STL00991	13C4 PFOS	113		50-150
STL00995	13C5 PFNA	117		50-150
STL00992	13C4 PFBA	94		25-150
STL00993	13C2 PFHxA	112		50-150
STL00996	13C2 PFDA	115		50-150
STL00997	13C2 PFUnA	110		50-150
STL00998	13C2 PFDoA	118		50-150
STL01056	13C8 FOSA	81		25-150
STL01893	13C5 PFPeA	112		25-150
STL02116	13C2 PFTeDA	101		50-150
STL02118	d3-NMeFOSAA	113		50-150
STL02117	d5-NEtFOSAA	112		50-150
STL02279	M2-6:2 FTS	121		25-150
STL02280	M2-8:2 FTS	118		25-150

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B002.d
 Lims ID: MB 200-148550/1-A
 Client ID:
 Sample Type: MB
 Inject. Date: 22-Oct-2019 20:00:49 ALS Bottle#: 2 Worklist Smp#: 2
 Injection Vol: 20.0 ul Dil. Factor: 1.0000
 Sample Info: MB 200-148550/1-A
 Misc. Info.: 200-0038369-002 Plate: 1 Rack: 4
 Operator ID: lc812tech Instrument ID: LC812
 Method: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\PFC_LC812.m
 Limit Group: LC_PFC_ICAL
 Last Update: 28-Oct-2019 13:08:26 Calib Date: 24-Sep-2019 18:56:37
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA015.d
 Column 1 : C-18 (4.60 mm) Det: EXP1
 Process Host: CTX1017

First Level Reviewer: kirkm Date: 23-Oct-2019 10:42:50
 Ratio Calibration: Initial Calibration Level: 4

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										M
217.00 > 172.00	1.926	1.926	0.0	0.563	3546630	2.35		94.1	16354	M
2 Perfluorobutanoic acid										
212.90 > 169.00	1.926	1.926	0.0	1.000	20974	0.0167			4.7	
D 3 13C5 PFPeA										
267.90 > 223.00	2.271	2.285	-0.014	0.664	3330635	2.79		112	5827	
4 Perfluoropentanoic acid										M
262.90 > 219.00	2.285	2.285	0.0	1.006	15507	0.000571			1.1	M
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.298	2.298	0.0	0.755	13591	0.009614	Target=2.04		25.2	
298.90 > 99.00	2.298	2.298	0.0	0.755	5801		2.34(1.02-3.05)		5.7	
D 60 M2-4:2 FTS										
329.00 > 81.00	2.623	2.623	0.0	0.767	307016	2.49		107	335	
61 1H,1H,2H,2H-perfluorohexanesulfoni										M
327.00 > 307.00	2.623	2.623	0.0	1.000	1109	0.004217			18.4	M
6 Perfluorohexanoic acid										
313.00 > 269.00	2.661	2.661	0.0	1.000	14390	0.0102	Target=12.90		4.3	
313.00 > 119.00	2.661	2.661	0.0	1.000	1651		8.72(6.45-19.36)		2.9	
D 7 13C2 PFHxA										
315.00 > 270.00	2.661	2.661	0.0	0.778	3565275	2.81		112	9645	
70 Perfluoropentanesulfonic acid										M
349.00 > 80.00	2.673	2.673	0.0	0.878	4508	0.003690	Target=3.01		24.4	
349.00 > 99.00	2.673	2.673	0.0	0.878	1973		2.28(1.51-4.52)		5.3	M
D 64 13C3 HFPO-DA										
332.10 > 287.00	2.776	2.776	0.0	0.811	165679	2.62		105	2396	
8 Perfluorohexanesulfonic acid										M
399.00 > 80.00	3.044	3.044	0.0	1.000	13652	0.001556	Target=3.78		31.3	M
399.00 > 99.00	3.044	3.044	0.0	1.000	4256		3.21(1.89-5.67)		7.6	M

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	0.890	2453605	2.59	110	10501	
D 9 13C4 PFHpA	367.00 > 322.00	3.044	3.044	0.0	0.890	3327181	2.71	108	6049	
10 Perfluoroheptanoic acid	363.00 > 319.00	3.044	3.044	0.0	1.000	8213	0.006908 Target=3.54		2.5	
	363.00 > 169.00	3.044	3.044	0.0	1.000	3112	2.64(1.77-5.31)		11.5	
77 DONA	377.00 > 251.00	3.089	3.090	-0.001	0.817	12797	0.004283 Target=2.56		16.9	M
	377.00 > 85.00	3.089	3.090	-0.001	0.817	6190	2.07(1.28-3.84)		22.0	M
16 Perfluoroheptanesulfonic acid	449.00 > 80.00	3.405	3.413	-0.008	0.900	4985	0.006159 Target=5.80		43.9	M
	449.00 > 99.00	3.405	3.413	-0.008	0.900	900	5.54(2.90-8.71)		6.3	M
13 1H,1H,2H,2H-perfluorooctanesulfoni	427.00 > 407.00	3.413	3.413	0.0	1.000	1505	0.006434		20.1	
D 12 M2-6:2 FTS	429.00 > 81.00	3.413	3.413	0.0	0.998	441082	2.87	121	1564	
* 62 13C2 PFOA	415.00 > 370.00	3.422	3.422	0.0		3142284	2.50		9857	
D 14 13C4 PFOA	417.00 > 372.00	3.422	3.422	0.0	1.000	3753390	3.01	120	6733	
15 Perfluorooctanoic acid	413.00 > 369.00	3.422	3.422	0.0	1.000	21805	-0.006378 Target=2.61		4.4	Ma
	413.00 > 169.00	3.422	3.422	0.0	1.000	9590	2.27(1.30-3.91)		37.5	a
D 18 13C4 PFOS	503.00 > 80.00	3.782	3.783	-0.001	1.105	1746296	2.71	113	5890	
17 Perfluorooctanesulfonic acid	499.00 > 80.00	3.782	3.783	-0.001	1.000	7369	0.0112 Target=4.93		4.2	Ma
	499.00 > 99.00	3.782	3.783	-0.001	1.000	1045	7.05(2.47-7.40)		5.6	a
D 19 13C5 PFNA	468.00 > 423.00	3.805	3.805	0.0	1.112	3234584	2.93	117	6675	
20 Perfluorononanoic acid	463.00 > 419.00	3.805	3.805	0.0	1.000	9745	0.007896 Target=7.89		3.0	RM
	463.00 > 169.00	3.805	3.805	0.0	1.000	743	13.12(3.95-11.84)		8.8	R
69 9-Chlorohexadecafluoro-3-oxanonane	531.00 > 351.00	3.973	3.973	0.0	1.050	5626	0.004792		43.6	M
68 Perfluorononanesulfonic acid	549.00 > 80.00	4.116	4.117	-0.001	1.088	2918	0.005114 Target=2.60		41.4	M
	549.00 > 99.00	4.104	4.117	-0.013	1.085	1080	2.70(1.30-3.90)		6.1	M
24 Perfluorodecanoic acid	513.00 > 469.00	4.141	4.141	0.0	1.000	9554	0.008148 Target=8.57		6.2	M
	513.00 > 169.00	4.141	4.141	0.0	1.000	1008	9.48(4.29-12.86)		8.0	M
D 23 13C2 PFDA	515.00 > 470.00	4.141	4.141	0.0	1.210	3169209	2.88	115	3718	
25 1H,1H,2H,2H-perfluorodecanesulfoni	527.00 > 507.00	4.153	4.153	0.0	1.000	834	-0.008034		17.5	M
D 26 M2-8:2 FTS	529.00 > 81.00	4.153	4.153	0.0	1.214	4737491	2.82	118	17420	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
22 Perfluorooctanesulfonamide										M
498.00 > 78.00	4.207	4.207	0.0	1.000	7710	0.008251		45.5		M
D 21 13C8 FOSA										
506.00 > 78.00	4.207	4.207	0.0	1.230	2546061	2.04		81.5	6203	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.294	4.294	0.0	1.255	300643	2.82		113	2001	
28 N-methylperfluorooctanesulfonamido										M
570.00 > 419.00	4.294	4.294	0.0	1.000	643	0.007505		3.6		M
29 Perfluorodecanesulfonic acid										M
599.00 > 80.00	4.386	4.397	-0.011	1.160	2866	0.006502	Target=2.56	14.0		
599.00 > 99.00	4.397	4.397	0.0	1.163	1044		2.75(1.28-3.84)	11.5		M
31 Perfluoroundecanoic acid										M
563.00 > 519.00	4.420	4.420	0.0	1.000	13351	0.0147	Target=6.97	10.4		M
563.00 > 169.00	4.420	4.420	0.0	1.000	1349		9.90(3.48-10.45)	23.5		
D 30 13C2 PFUnA										
565.00 > 520.00	4.420	4.420	0.0	1.292	2709328	2.75		110	20134	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.431	4.431	0.0	1.295	323782	2.80		112	2585	
33 N-ethylperfluorooctanesulfonamidoa										M
584.00 > 419.00	4.431	4.431	0.0	1.000	352	-0.0140		7.5		M
66 11-Chloroeicosafuoro-3-oxaundecan										
631.00 > 451.00	4.524	4.524	0.0	1.196	9051	0.006196		102		
37 Perfluorododecanoic acid										Ma
613.00 > 569.00	4.660	4.660	0.0	1.000	6647	0.005991	Target=7.06	0.8		a
613.00 > 169.00	4.660	4.660	0.0	1.000	1566		4.24(3.53-10.59)	22.2		
D 36 13C2 PFDaA										
615.00 > 570.00	4.660	4.660	0.0	1.362	3135688	2.96		118	9242	
74 1H,1H,2H,2H-perfluorododecanesulfo										M
627.00 > 607.00	4.672	4.683	-0.011	1.125	353	0.004182		9.8		M
75 Perfluorododecanesulfonic acid (PF										RM
699.00 > 80.00	4.839	4.839	0.0	1.279	2378	0.0125	Target=0.47	3.1		RM
699.00 > 99.00	4.839	4.839	0.0	1.279	2044		1.16(0.23-0.70)	27.1		
41 Perfluorotridecanoic acid										M
663.00 > 619.00	4.870	4.870	0.0	1.045	6396	0.007125	Target=4.87	1.1		M
663.00 > 169.00	4.870	4.870	0.0	1.045	2103		3.04(2.43-7.30)	18.2		M
42 Perfluorotetradecanoic acid										M
713.00 > 169.00	5.067	5.067	0.0	1.002	1489	0.0107	Target=1.09	19.7		
713.00 > 219.00	5.058	5.067	-0.009	1.000	1874		0.79(0.54-1.63)	33.6		M
D 43 13C2 PFTeDA										
715.00 > 670.00	5.058	5.067	-0.009	1.478	2398108	2.52		101	13131	
D 44 13C2 PFHxDA										
815.00 > 770.00	5.424	5.424	0.0	1.585	2657126	2.78		111	9006	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.424	5.424	0.0	1.000	29274	-0.006023	Target=4.33	4.8		
813.00 > 169.00	5.424	5.424	0.0	1.000	7232		4.05(2.16-6.49)	86.2		

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	5.790	5.790	0.0	1.067	3910	0.004983	Target=4.09		1.1	
913.00 > 169.00	5.790	5.790	0.0	1.067	1170		3.34(2.05-6.14)		24.2	M

QC Flag Legend

Processing Flags

R - Failed Signal Ratio Test

Review Flags

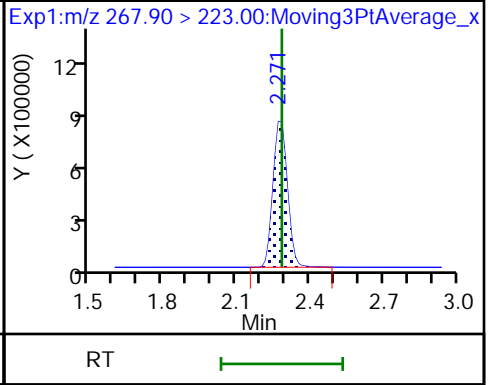
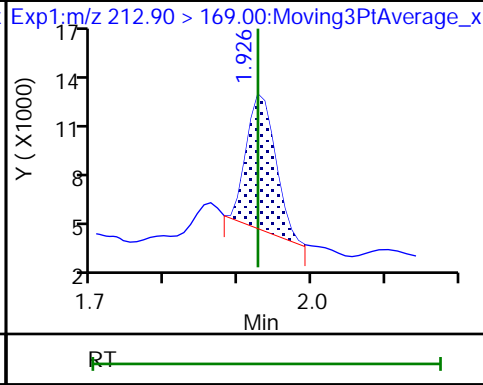
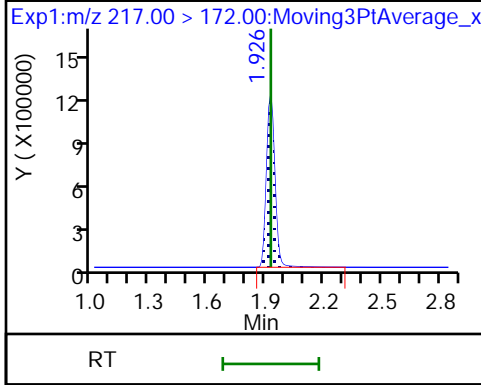
M - Manually Integrated

a - User Assigned ID

D 1 13C4 PFBA (M)

2 Perfluorobutanoic acid

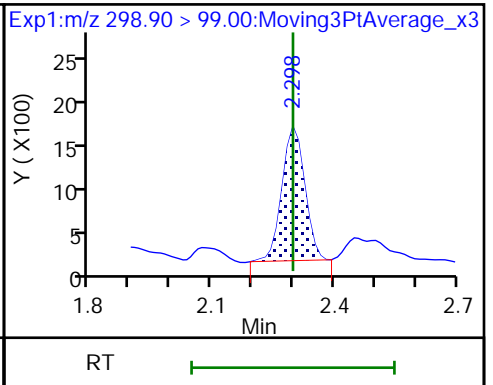
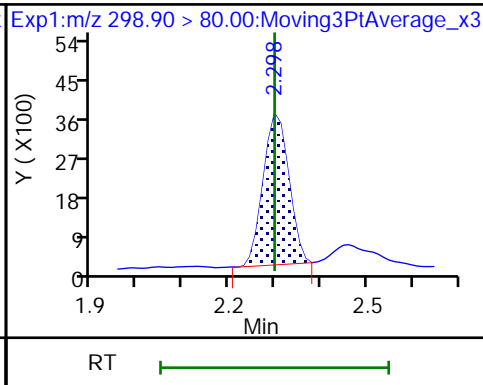
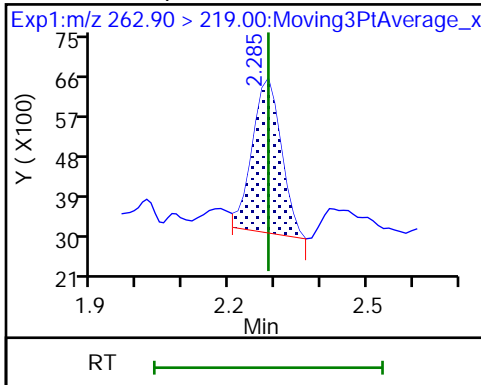
D 3 13C5 PFPeA



4 Perfluoropentanoic acid (M)

5 Perfluorobutanesulfonic acid

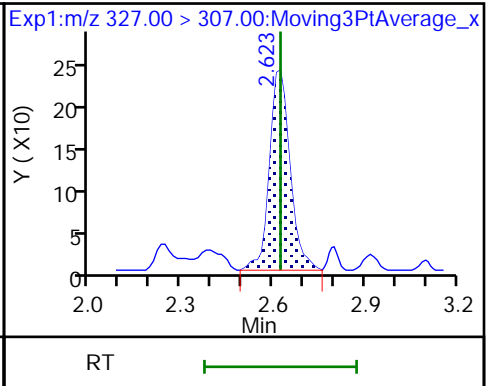
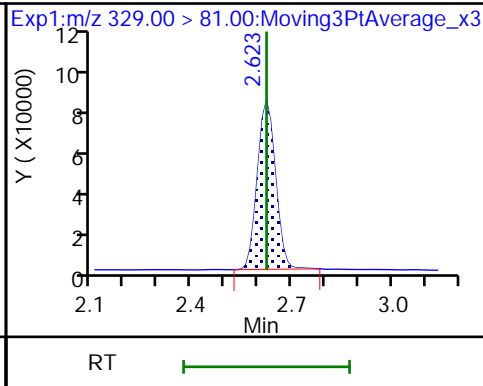
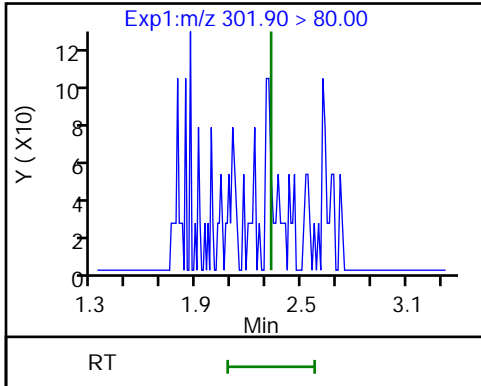
5 Perfluorobutanesulfonic acid



D 47 13C3 PFBS (ND)

D 60 M2-4:2 FTS

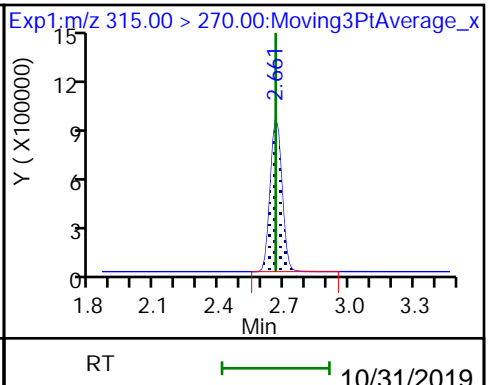
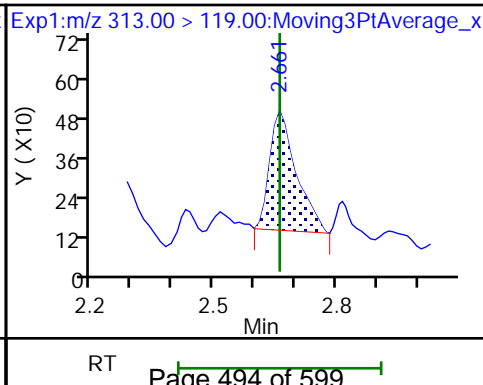
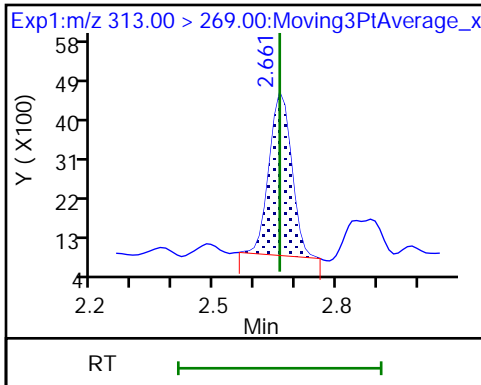
61 1H,1H,2H,2H-perfluorohexanesulfoni (M)



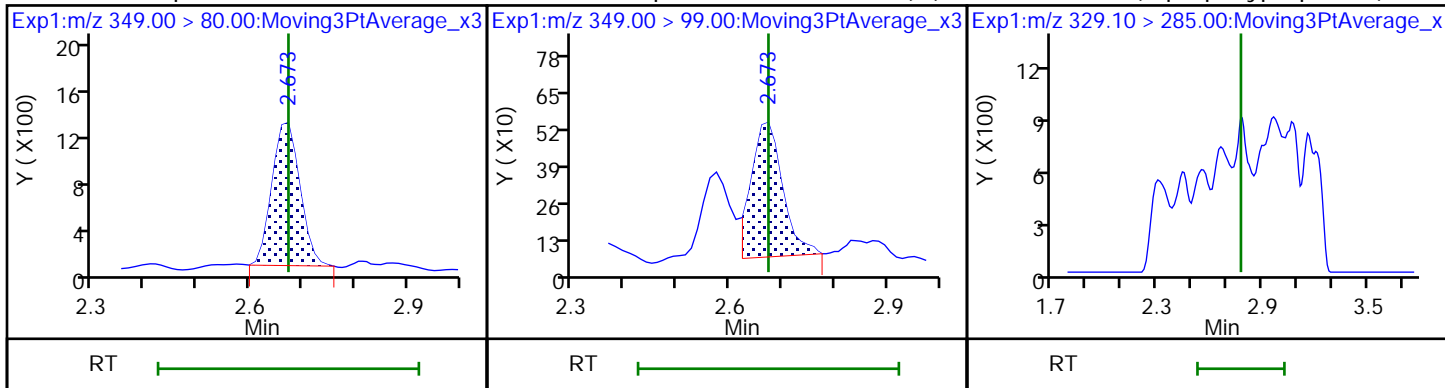
6 Perfluorohexanoic acid

6 Perfluorohexanoic acid

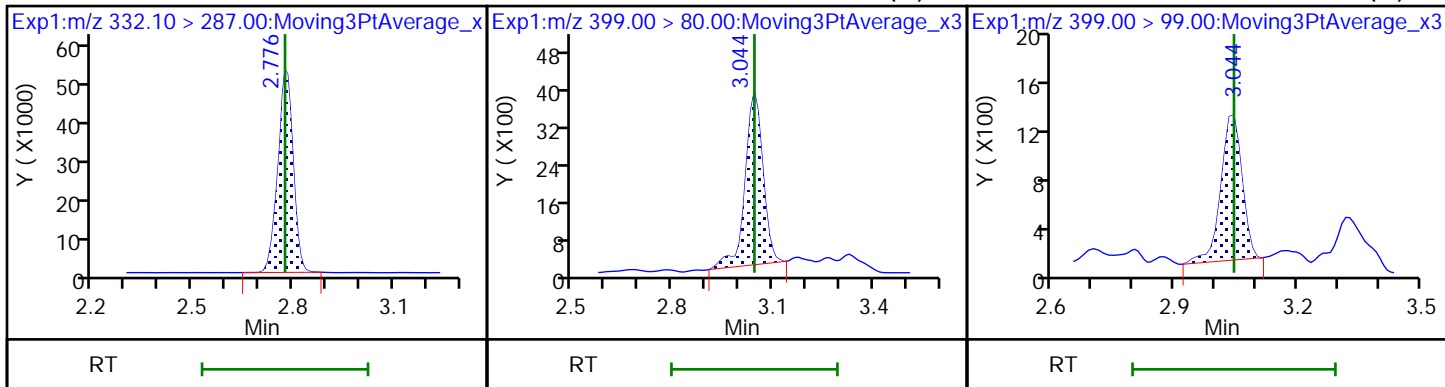
D 7 13C2 PFHxA



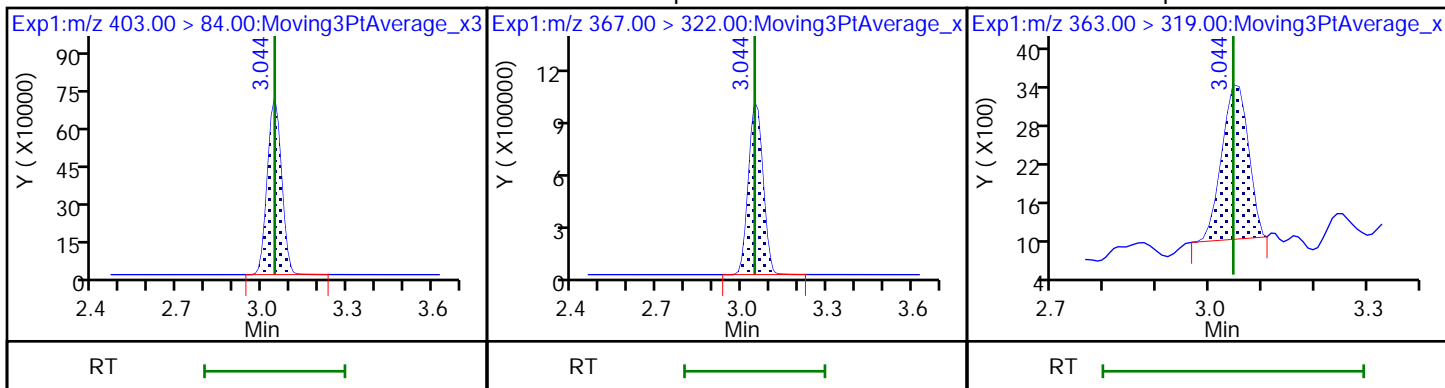
70 Perfluoropentanesulfonic acid 70 Perfluoropentanesulfonic acid (M) 67 Perfluoro(2-propoxypropanoic) acid (ND)



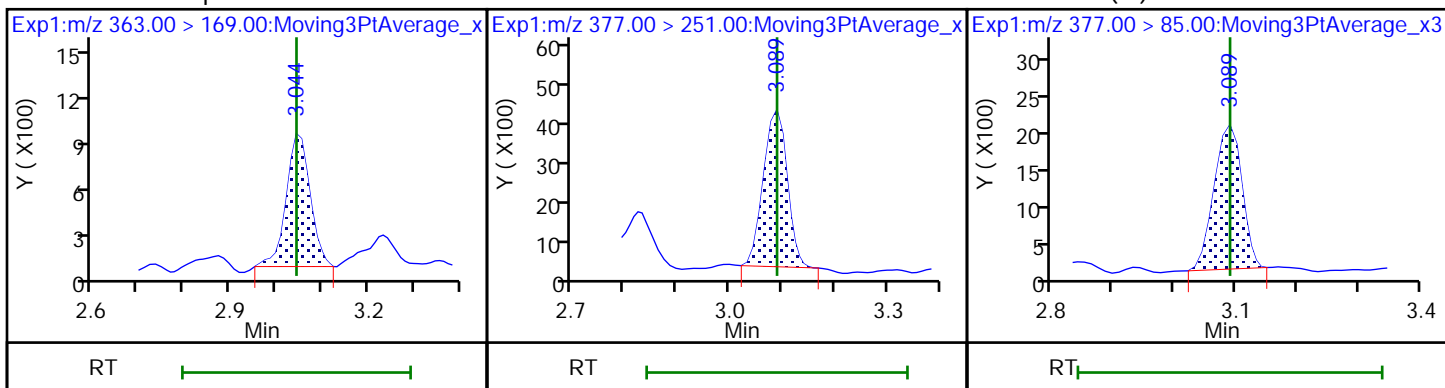
D 64 13C3 HFPO-DA 8 Perfluorohexanesulfonic acid (M) 8 Perfluorohexanesulfonic acid (M)



D 11 18O2 PFHxS D 9 13C4 PFHpA 10 Perfluoroheptanoic acid



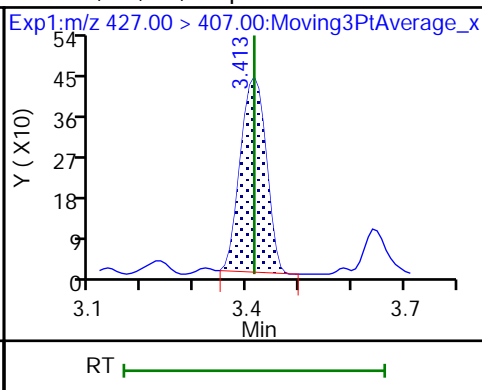
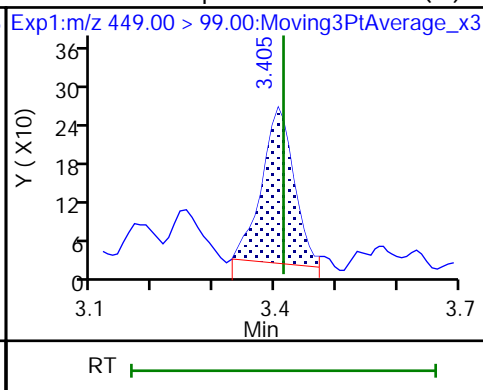
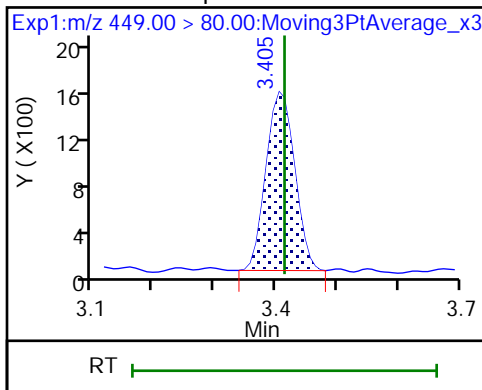
10 Perfluoroheptanoic acid 77 DONA 77 DONA (M)



16 Perfluoroheptanesulfonic acid

16 Perfluoroheptanesulfonic acid (M)

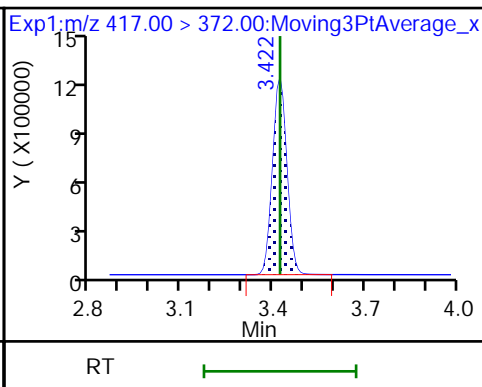
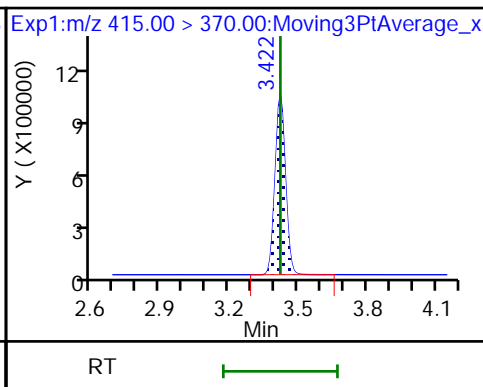
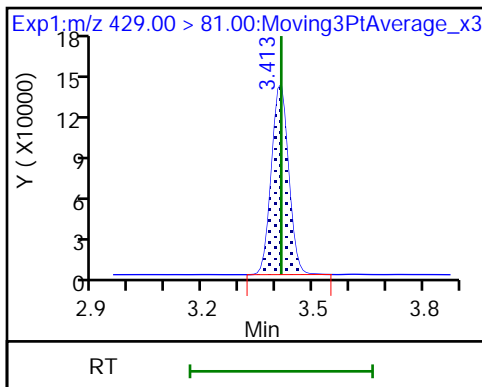
13 1H,1H,2H,2H-perfluorooctanesulfoni



D 12 M2-6:2 FTS

* 62 13C2 PFOA

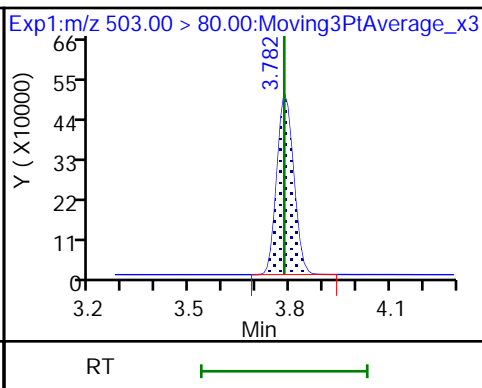
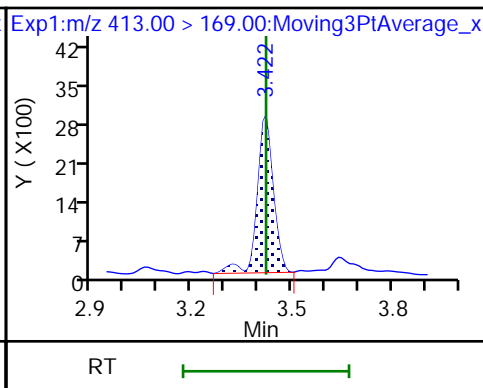
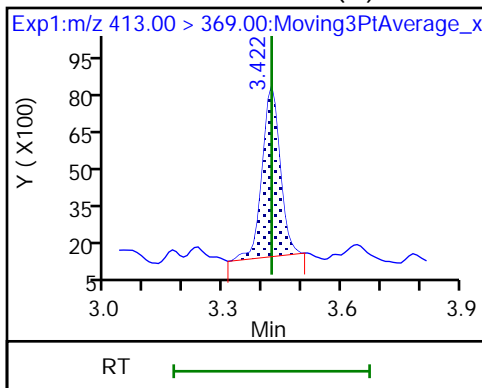
D 14 13C4 PFOA



15 Perfluorooctanoic acid (M)

15 Perfluorooctanoic acid

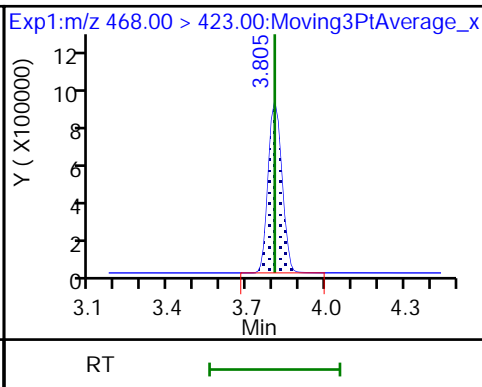
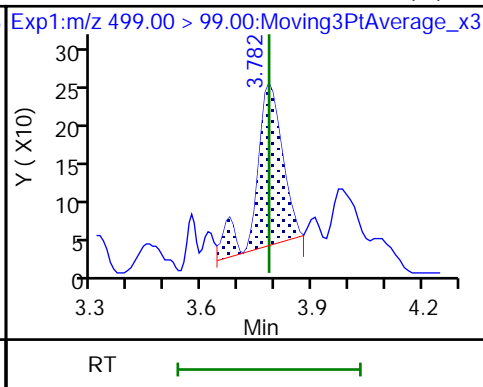
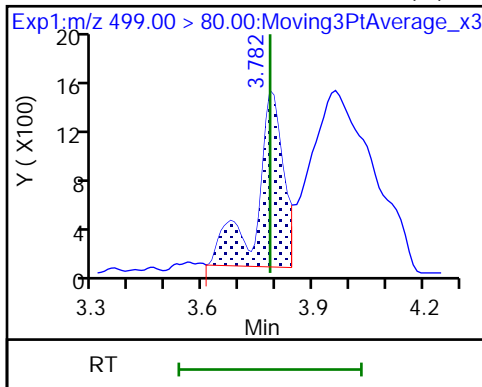
D 18 13C4 PFOS

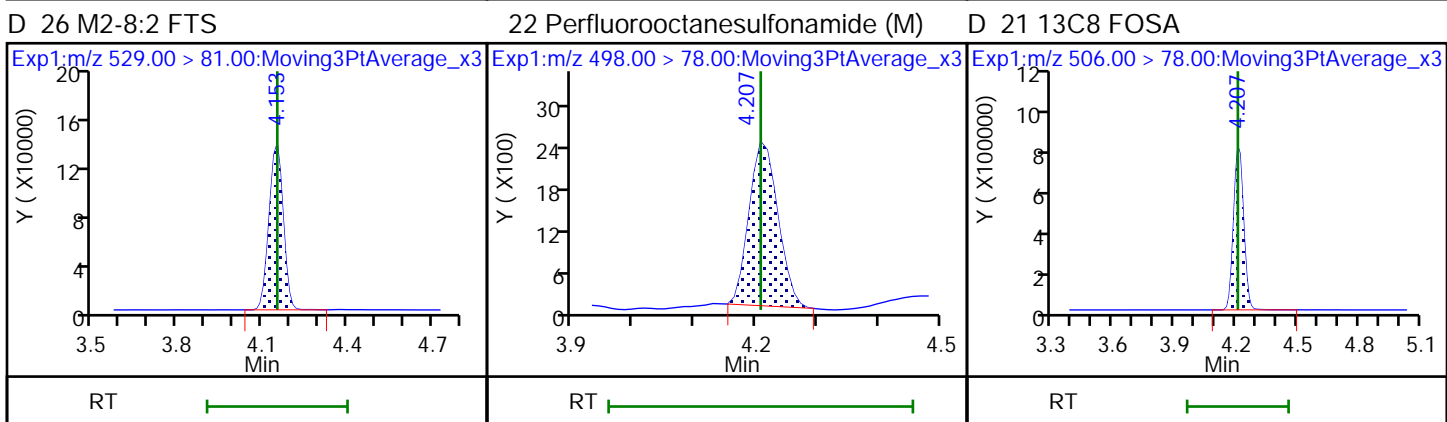
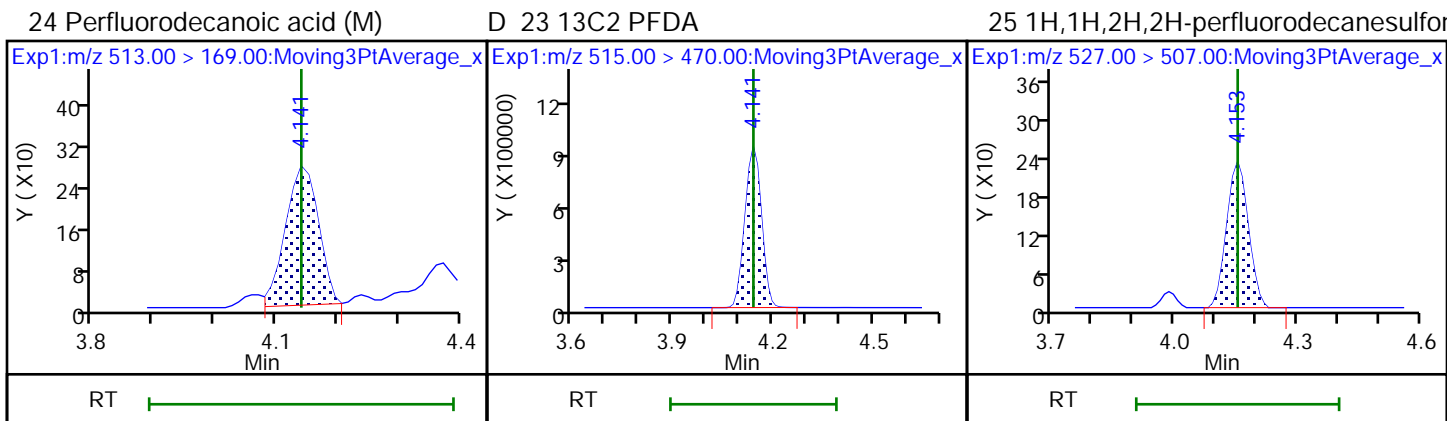
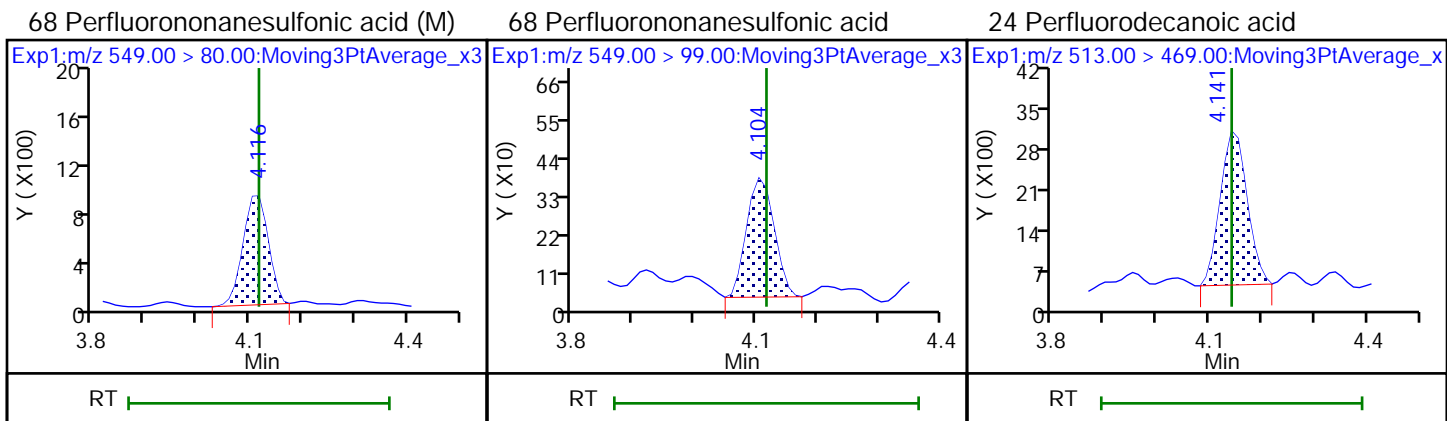
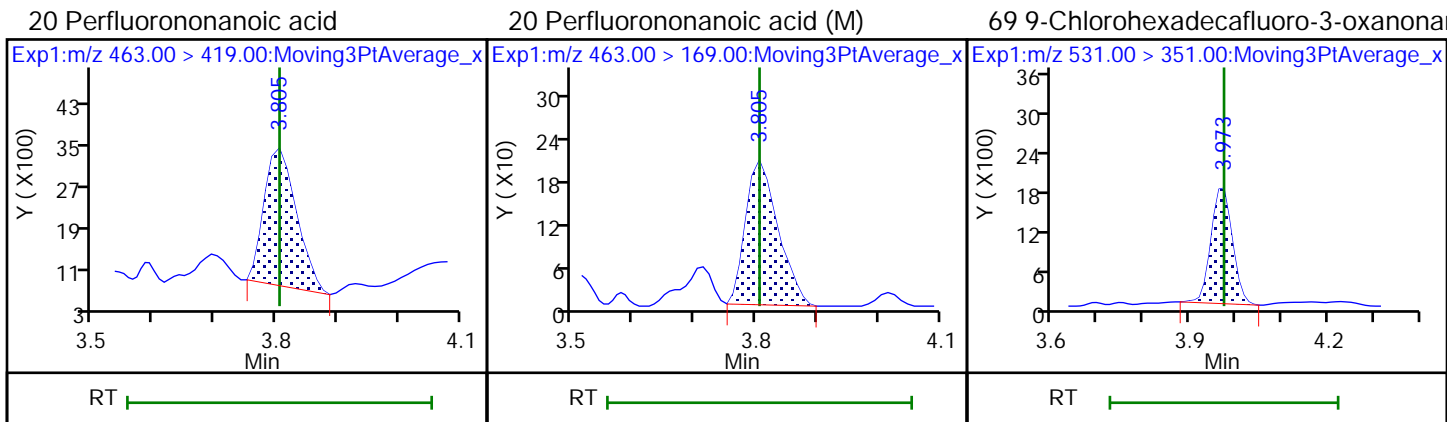


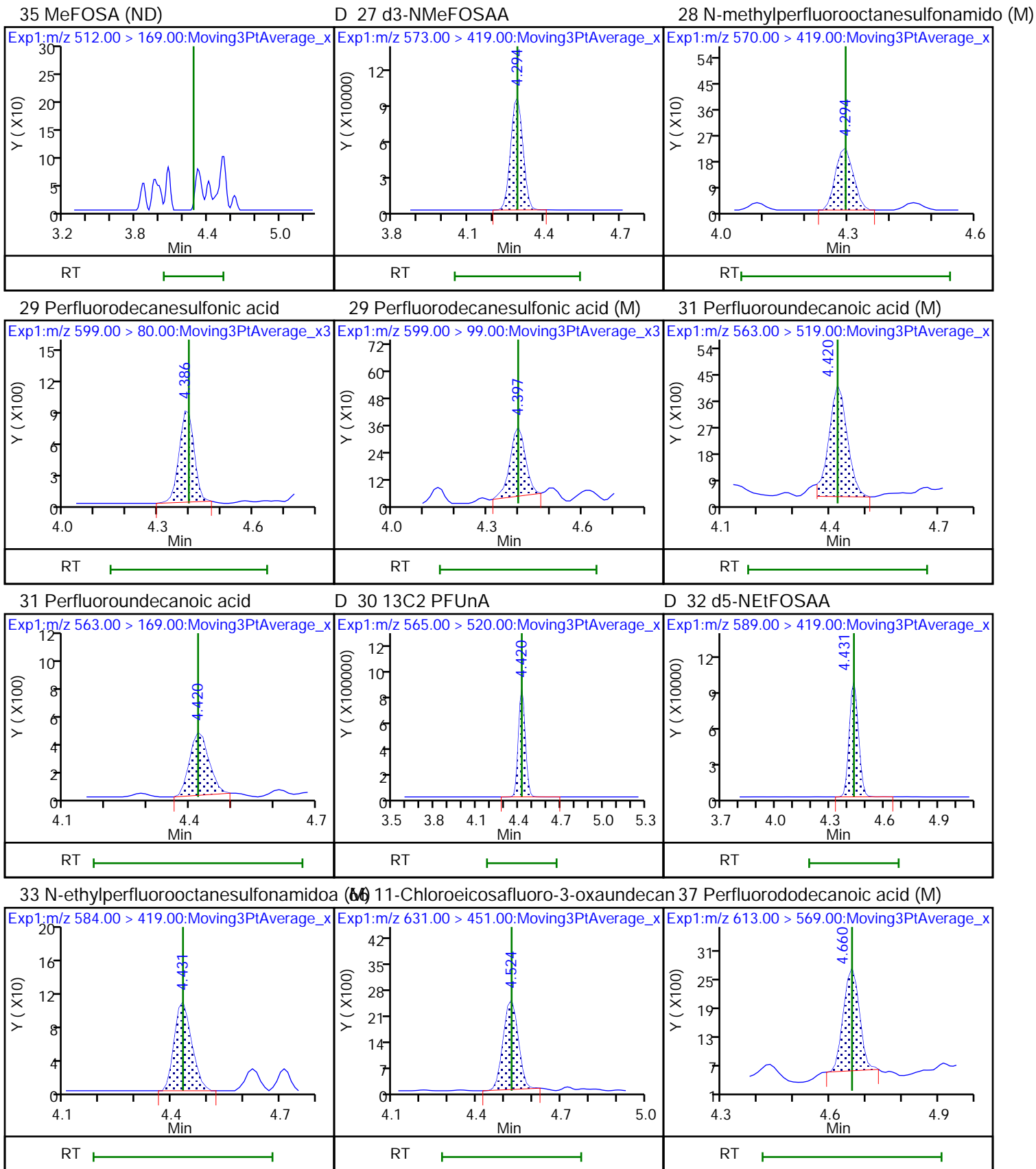
17 Perfluorooctanesulfonic acid (M)

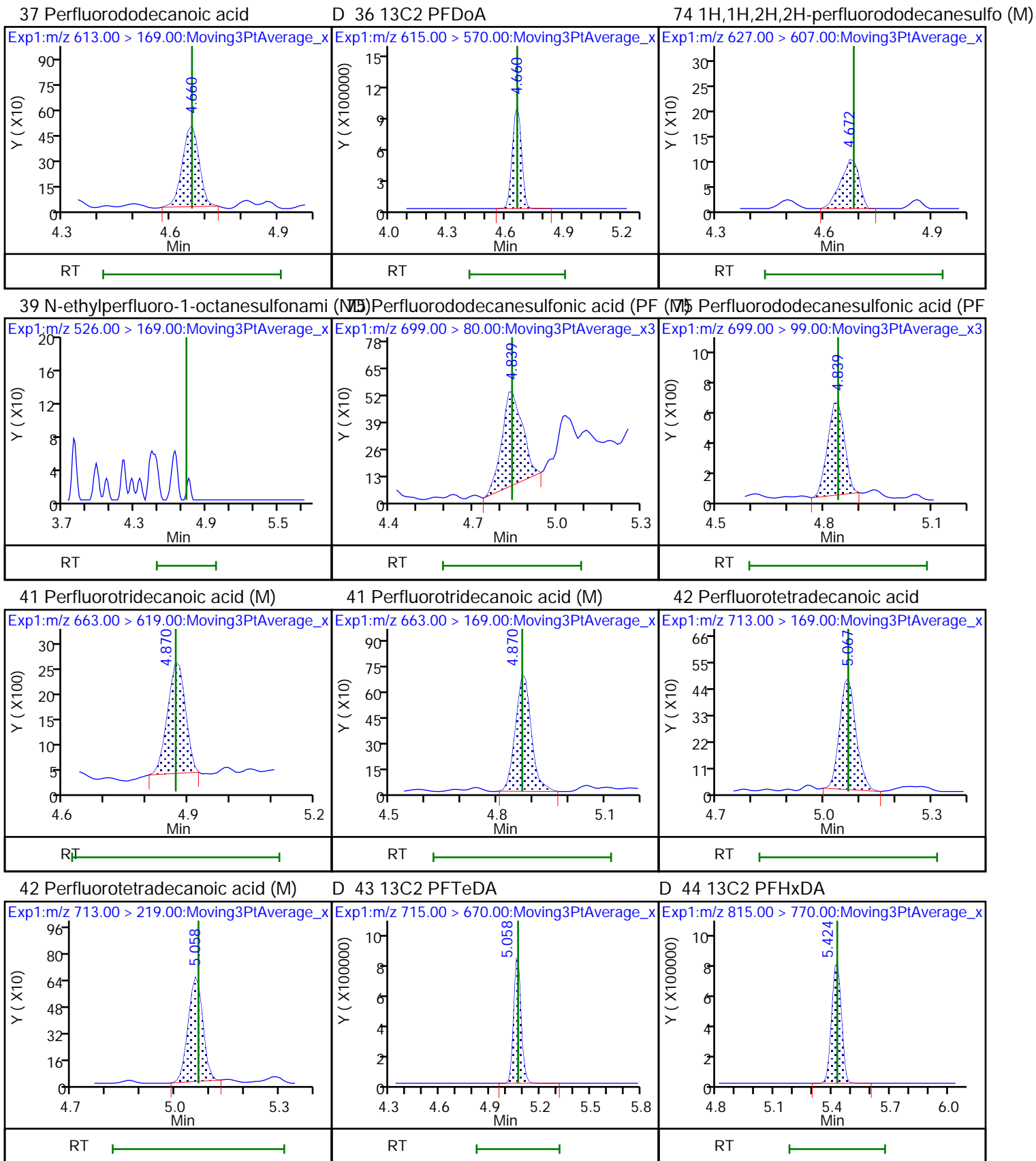
17 Perfluorooctanesulfonic acid (M)

D 19 13C5 PFNA





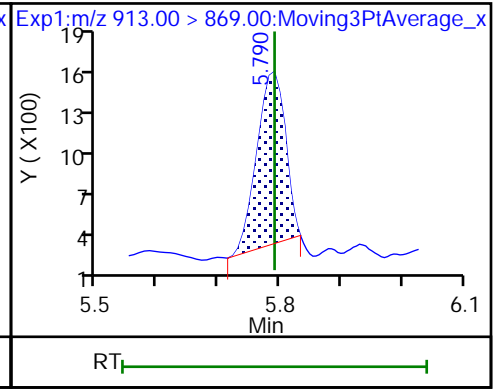
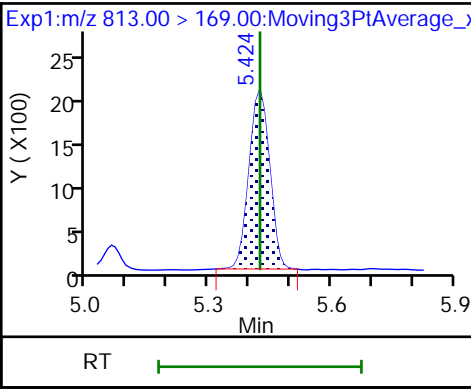
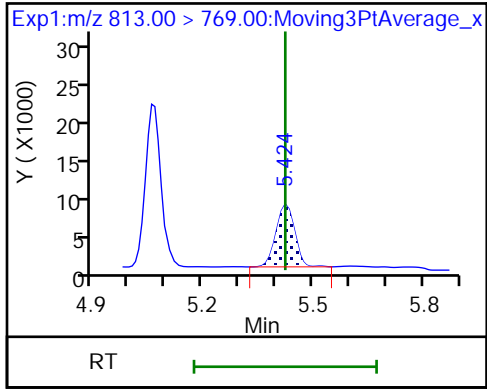




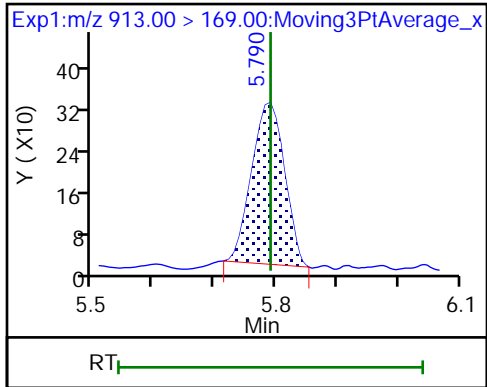
45 Perfluorohexadecanoic acid

45 Perfluorohexadecanoic acid

46 Perfluorooctadecanoic acid



46 Perfluorooctadecanoic acid (M)



Eurofins TestAmerica, Burlington

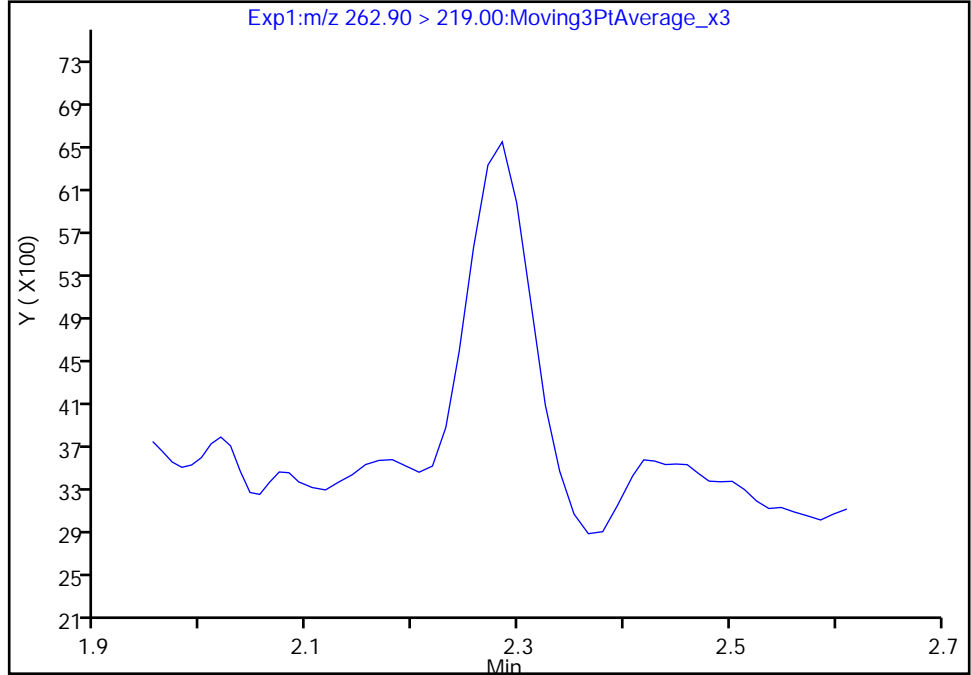
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B002.d
Injection Date: 22-Oct-2019 20:00:49 Instrument ID: LC812
Lims ID: MB 200-148550/1-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

4 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

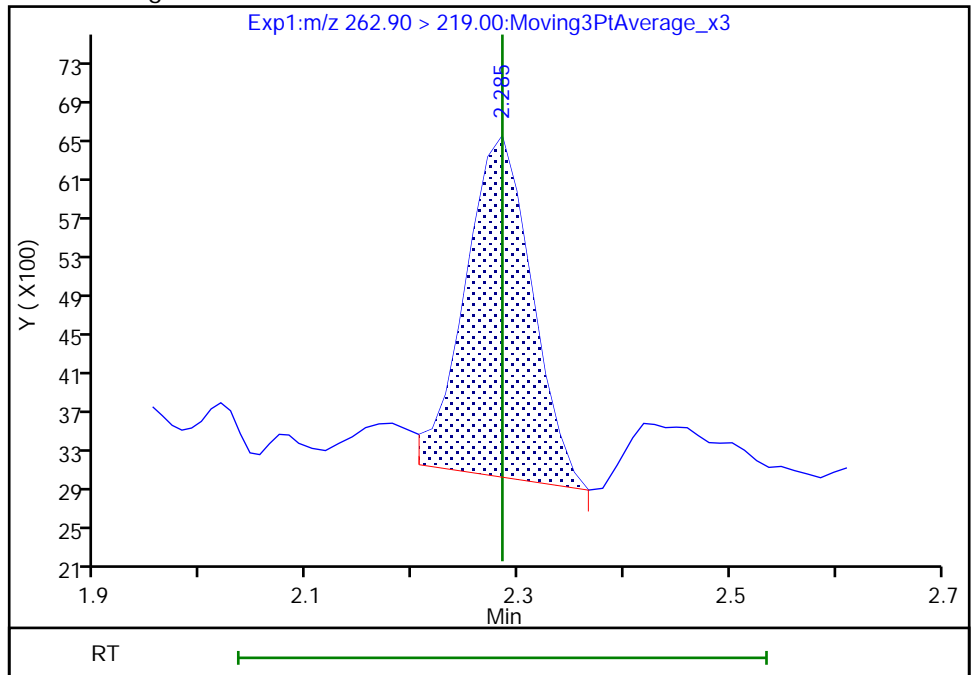
Not Detected
Expected RT: 2.28

Processing Integration Results



Manual Integration Results

RT: 2.28
Area: 15507
Amount: 0.000571
Amount Units: ng/ml



Reviewer: kirkm, 23-Oct-2019 10:33:10
Audit Action: Manually Integrated

Audit Reason: Missed Peak

Euofins TestAmerica, Burlington

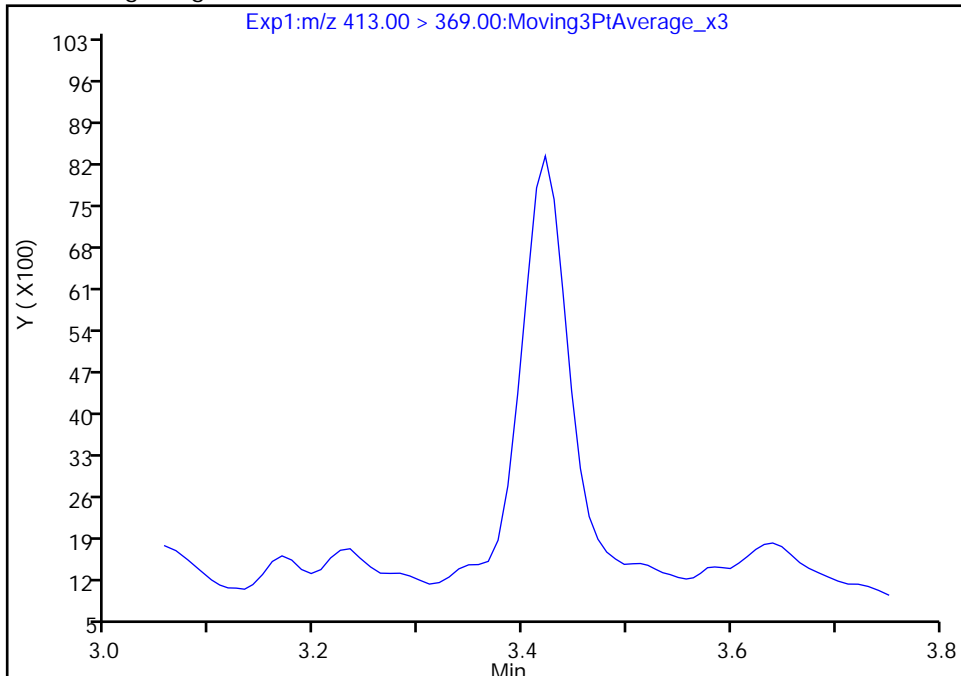
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B002.d
Injection Date: 22-Oct-2019 20:00:49 Instrument ID: LC812
Lims ID: MB 200-148550/1-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

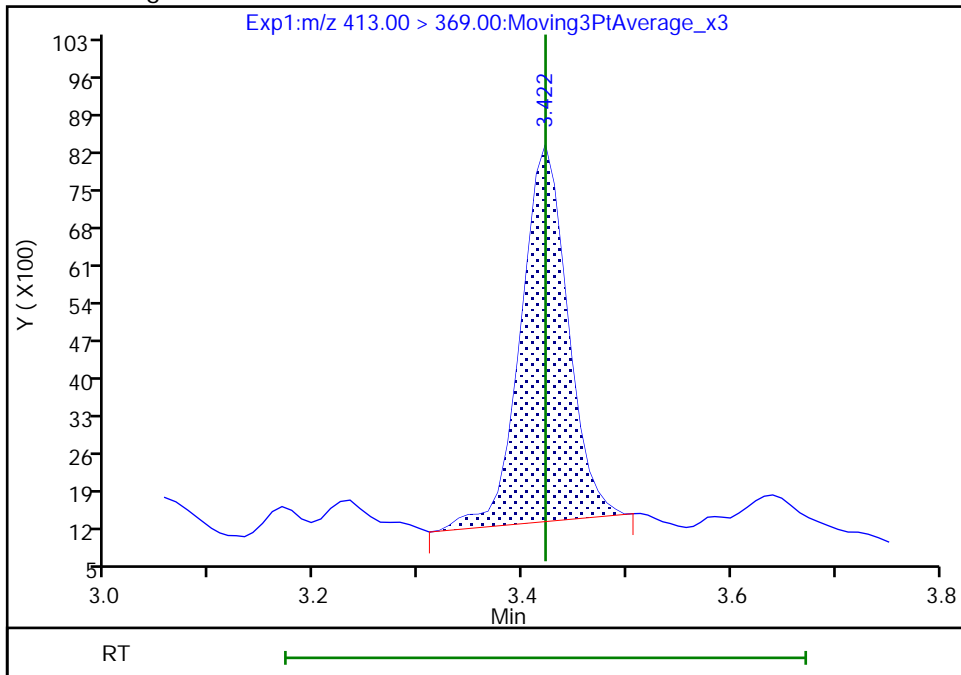
Not Detected
Expected RT: 3.42

Processing Integration Results



Manual Integration Results

RT: 3.42
Area: 21805
Amount: -0.006378
Amount Units: ng/ml



Euofins TestAmerica, Burlington

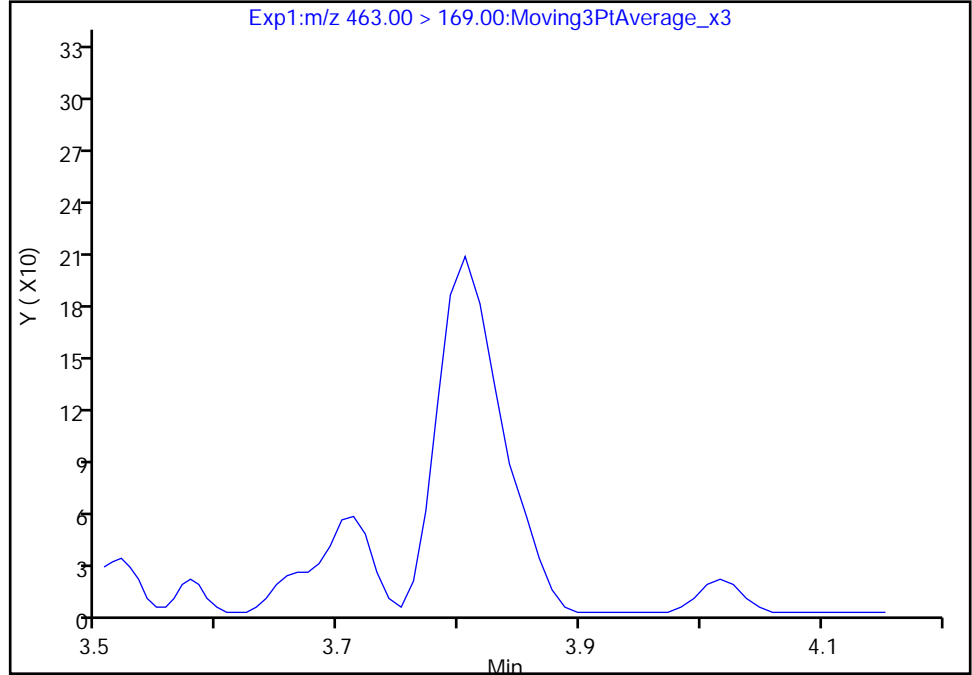
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B002.d
Injection Date: 22-Oct-2019 20:00:49 Instrument ID: LC812
Lims ID: MB 200-148550/1-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

20 Perfluorononanoic acid, CAS: 375-95-1

Signal: 2

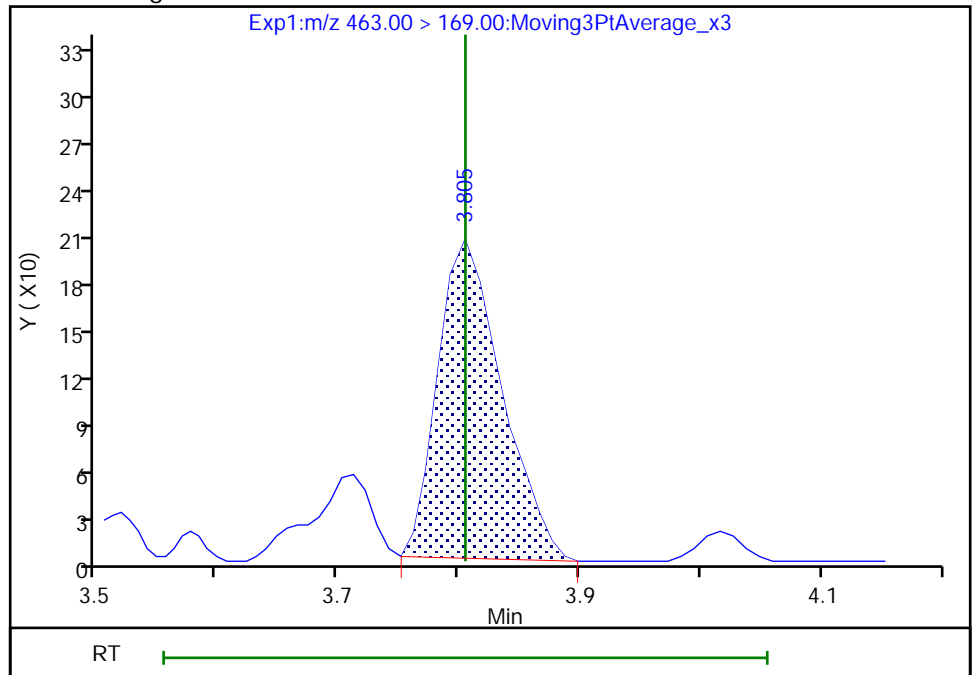
Not Detected
Expected RT: 3.81

Processing Integration Results



Manual Integration Results

RT: 3.80
Area: 743
Amount: 0.007896
Amount Units: ng/ml



Reviewer: kirkm, 23-Oct-2019 10:37:30
Audit Action: Manually Integrated

Audit Reason: Missed Peak

Eurofins TestAmerica, Burlington

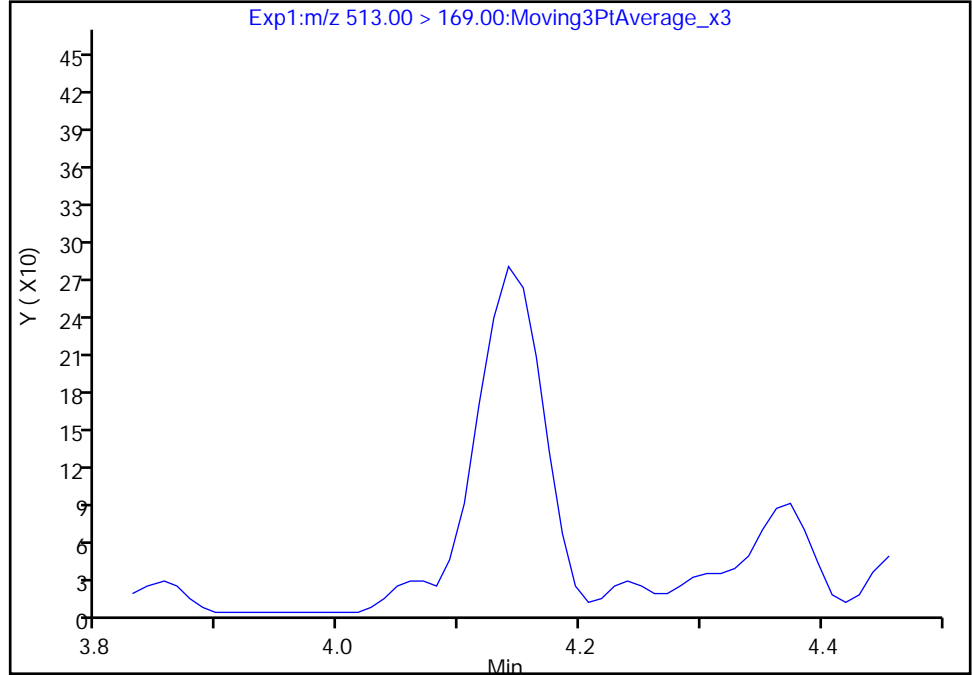
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B002.d
Injection Date: 22-Oct-2019 20:00:49 Instrument ID: LC812
Lims ID: MB 200-148550/1-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

24 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 2

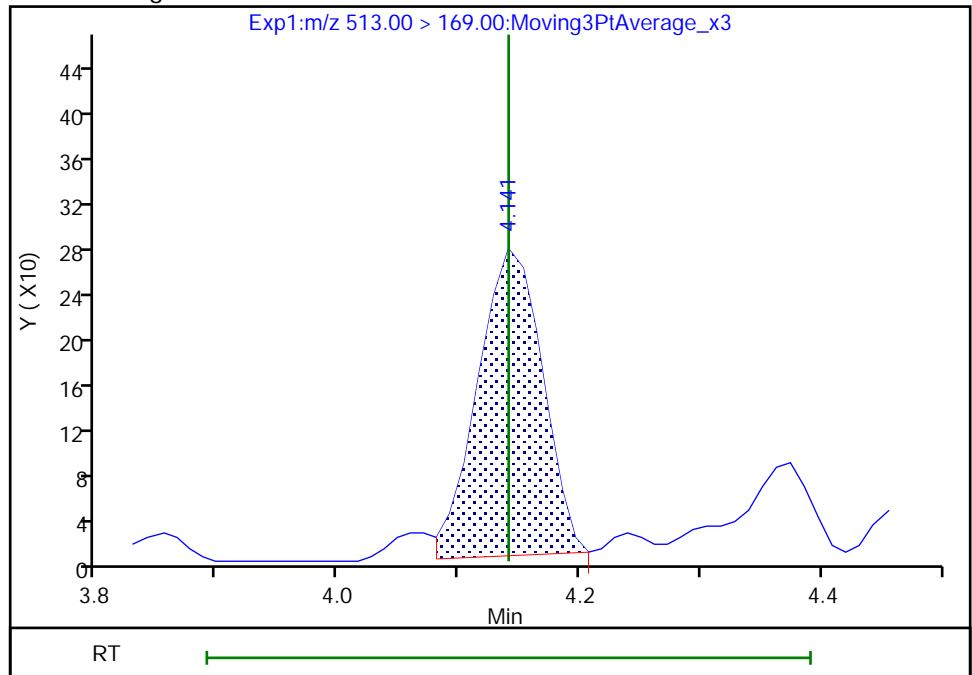
Not Detected
Expected RT: 4.14

Processing Integration Results



Manual Integration Results

RT: 4.14
Area: 1008
Amount: 0.008148
Amount Units: ng/ml



Reviewer: kirkm, 23-Oct-2019 10:38:14
Audit Action: Manually Integrated

Audit Reason: Missed Peak

Eurofins TestAmerica, Burlington

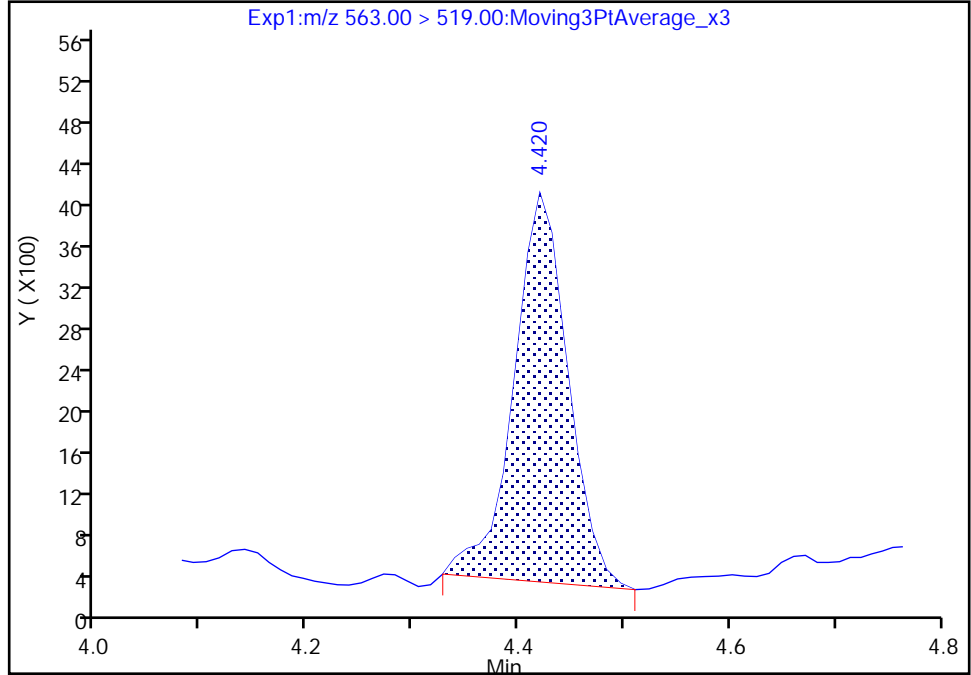
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B002.d
Injection Date: 22-Oct-2019 20:00:49 Instrument ID: LC812
Lims ID: MB 200-148550/1-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

31 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 1

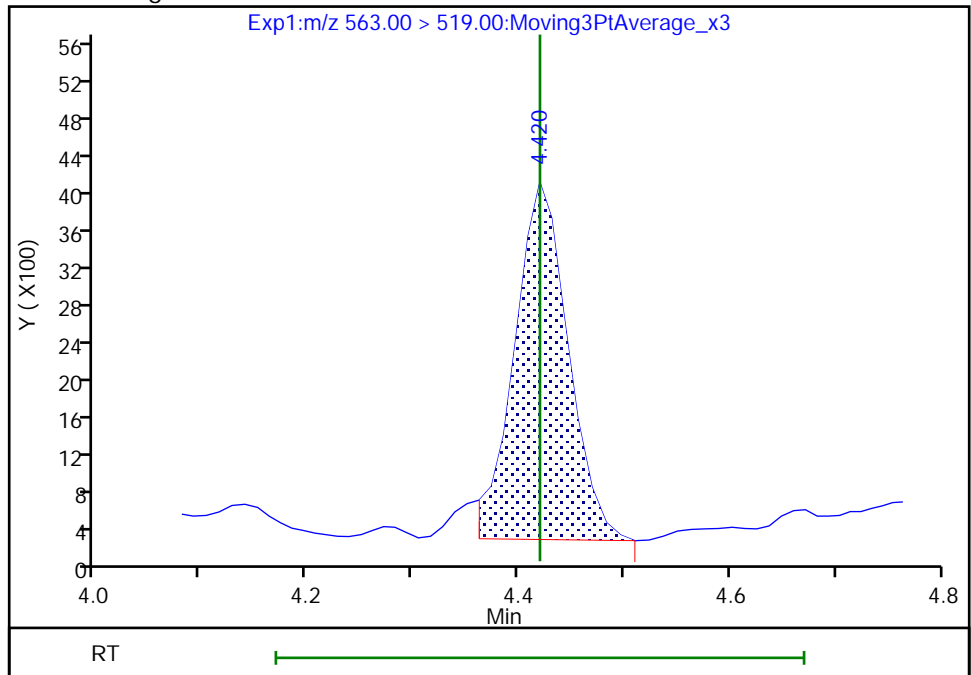
RT: 4.42
Area: 13313
Amount: 0.014681
Amount Units: ng/ml

Processing Integration Results



RT: 4.42
Area: 13351
Amount: 0.014722
Amount Units: ng/ml

Manual Integration Results



Reviewer: kirkm, 23-Oct-2019 10:39:34
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

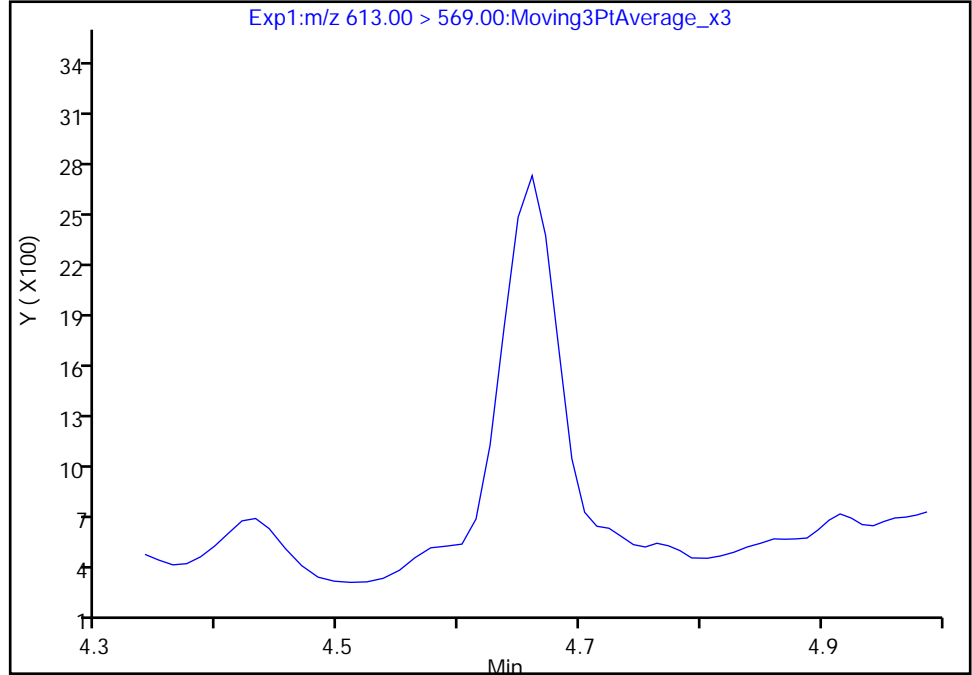
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B002.d
Injection Date: 22-Oct-2019 20:00:49 Instrument ID: LC812
Lims ID: MB 200-148550/1-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

37 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 1

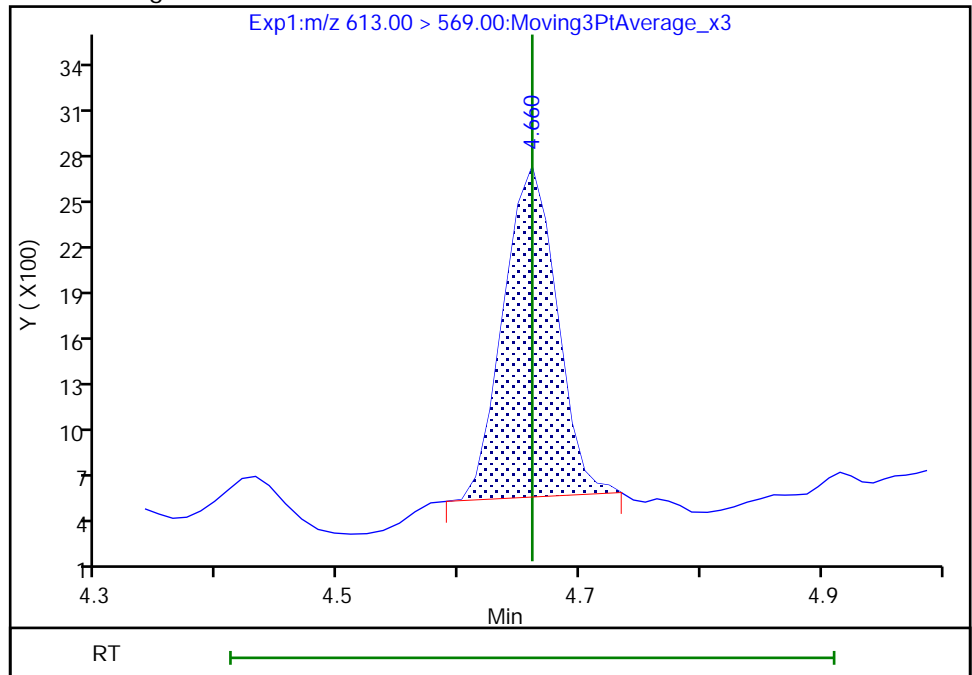
Not Detected
Expected RT: 4.66

Processing Integration Results



Manual Integration Results

RT: 4.66
Area: 6647
Amount: 0.005991
Amount Units: ng/ml



Reviewer: kirkm, 23-Oct-2019 10:41:21

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Baseline

Eurofins TestAmerica, Burlington

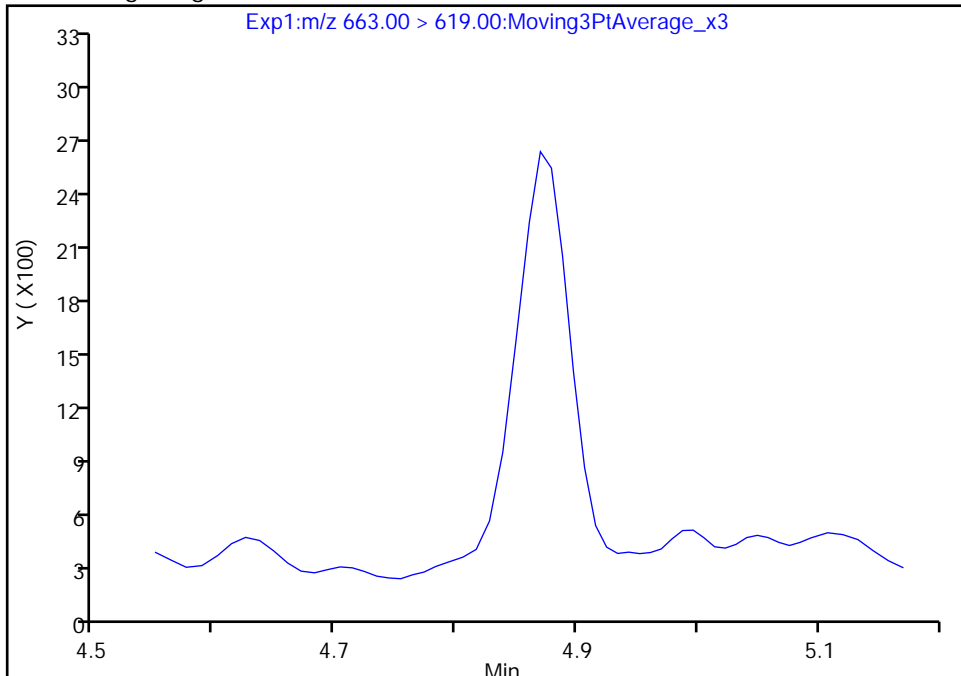
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B002.d
Injection Date: 22-Oct-2019 20:00:49 Instrument ID: LC812
Lims ID: MB 200-148550/1-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

41 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 1

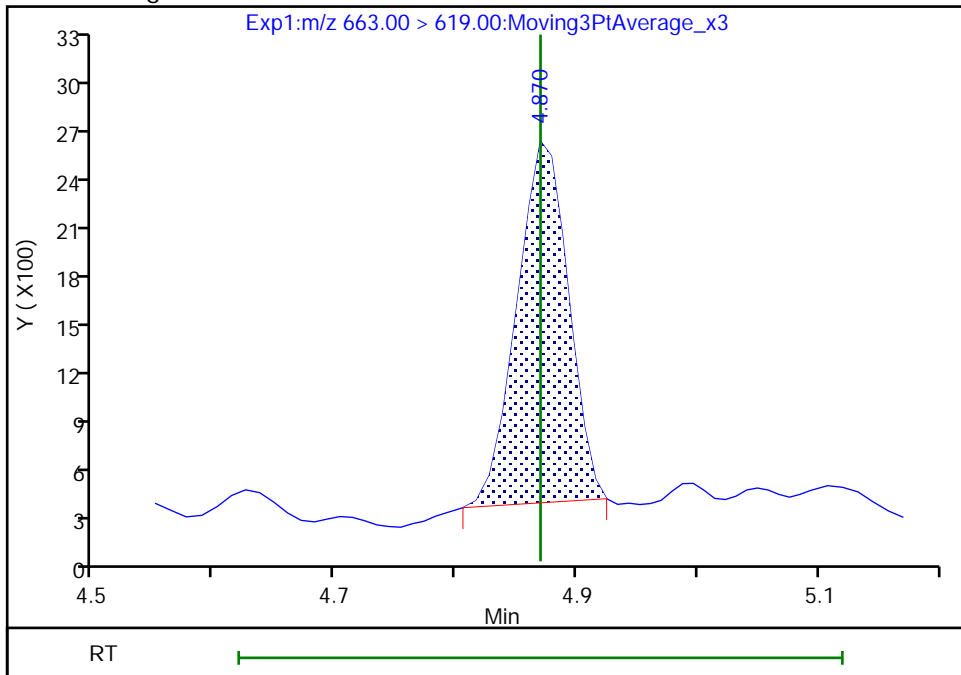
Not Detected
Expected RT: 4.87

Processing Integration Results



Manual Integration Results

RT: 4.87
Area: 6396
Amount: 0.007125
Amount Units: ng/ml



Reviewer: kirkm, 23-Oct-2019 10:42:09
Audit Action: Manually Integrated

Audit Reason: Missed Peak

Eurofins TestAmerica, Burlington

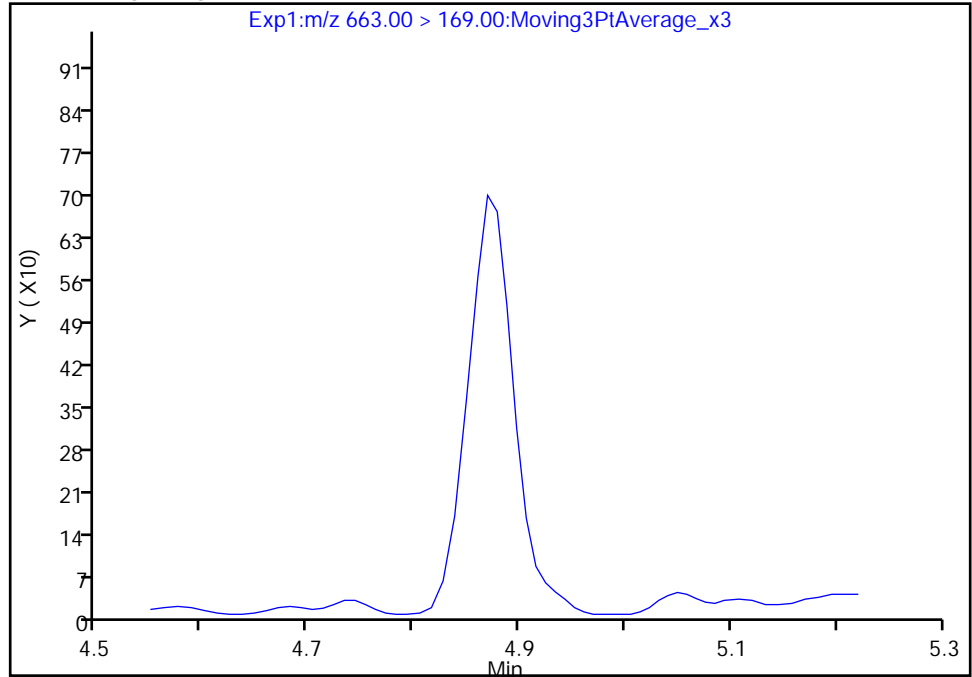
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B002.d
Injection Date: 22-Oct-2019 20:00:49 Instrument ID: LC812
Lims ID: MB 200-148550/1-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

41 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 2

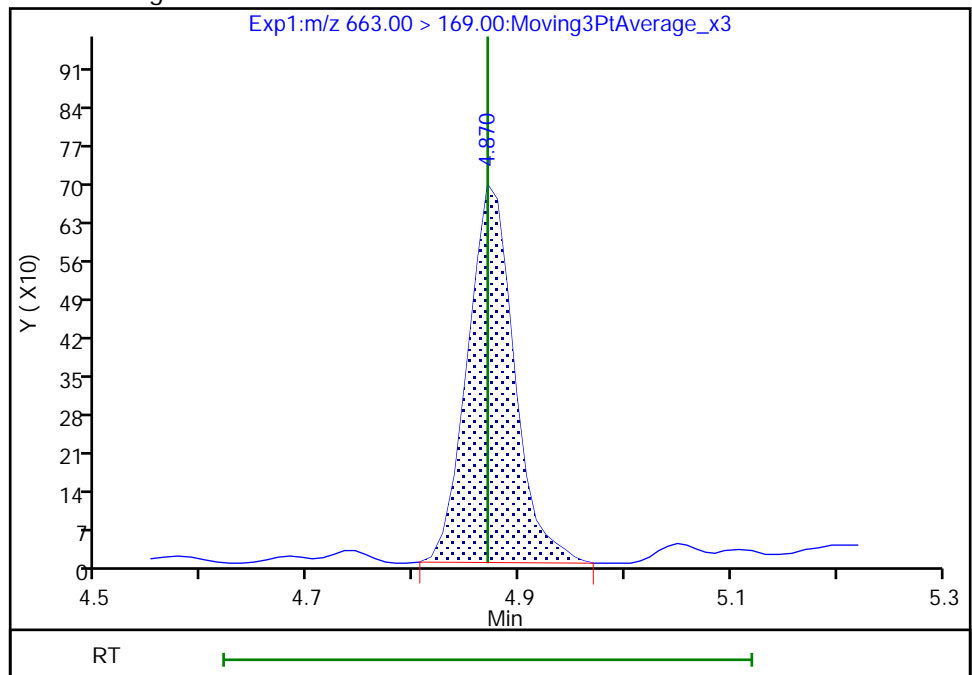
Not Detected
Expected RT: 4.87

Processing Integration Results



Manual Integration Results

RT: 4.87
Area: 2103
Amount: 0.007125
Amount Units: ng/ml



Reviewer: kirkm, 23-Oct-2019 10:42:09

Audit Action: Manually Integrated

Audit Reason: Missed Peak

Eurofins TestAmerica, Burlington

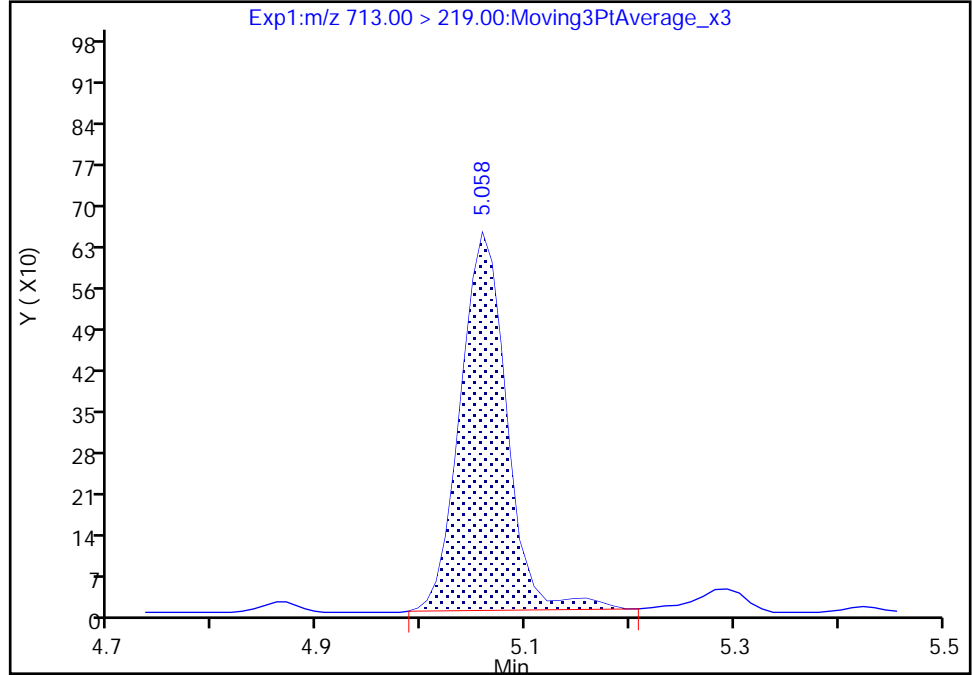
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B002.d
Injection Date: 22-Oct-2019 20:00:49 Instrument ID: LC812
Lims ID: MB 200-148550/1-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

42 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 2

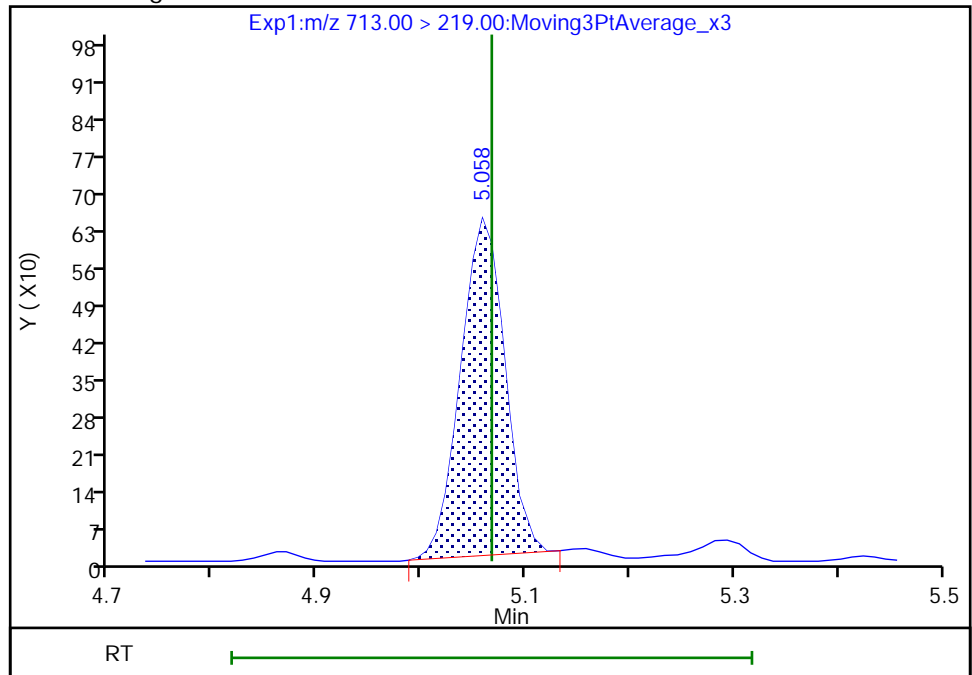
RT: 5.06
Area: 1989
Amount: 0.010667
Amount Units: ng/ml

Processing Integration Results



RT: 5.06
Area: 1874
Amount: 0.010667
Amount Units: ng/ml

Manual Integration Results



Reviewer: kirkm, 23-Oct-2019 10:42:22
Audit Action: Manually Integrated

Eurofins TestAmerica, Burlington

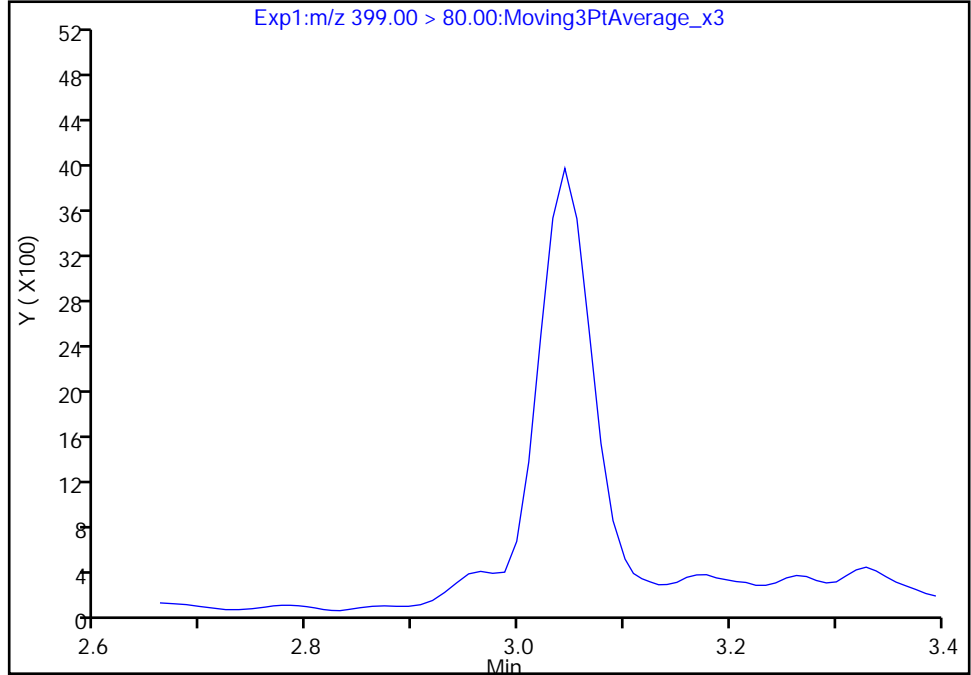
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B002.d
Injection Date: 22-Oct-2019 20:00:49 Instrument ID: LC812
Lims ID: MB 200-148550/1-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

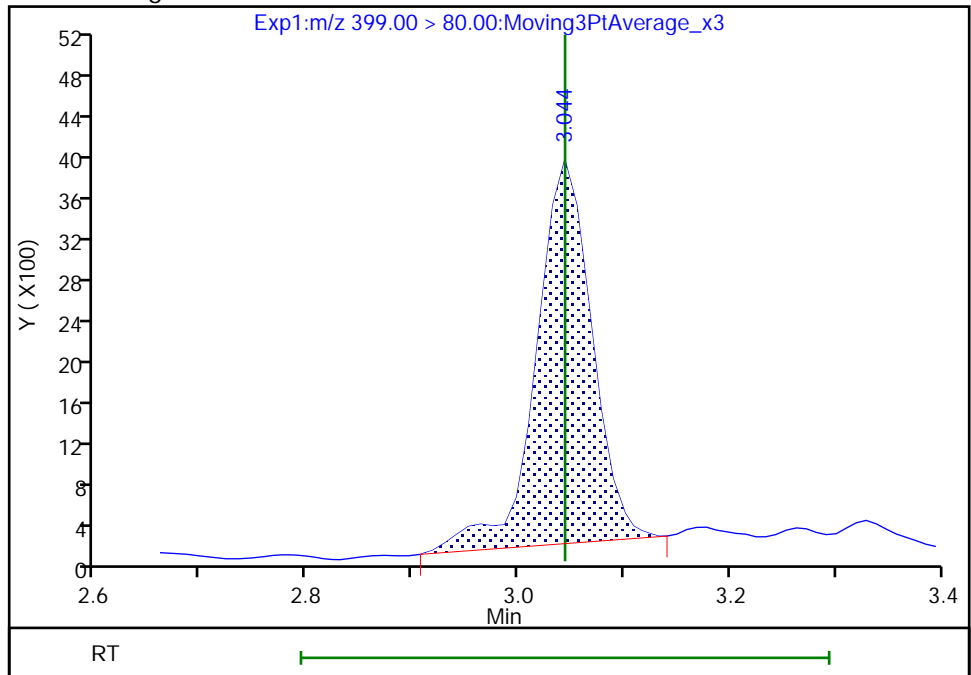
Not Detected
Expected RT: 3.04

Processing Integration Results



Manual Integration Results

RT: 3.04
Area: 13652
Amount: 0.001556
Amount Units: ng/ml



Reviewer: kirkm, 23-Oct-2019 10:34:30
Audit Action: Manually Integrated

Audit Reason: Missed Peak

Eurofins TestAmerica, Burlington

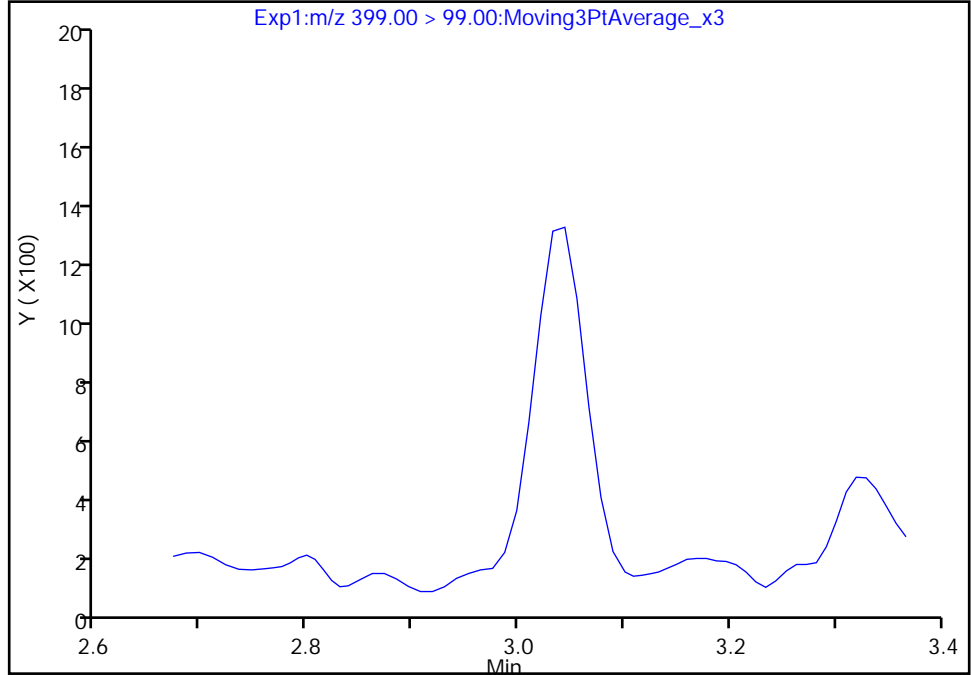
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B002.d
Injection Date: 22-Oct-2019 20:00:49 Instrument ID: LC812
Lims ID: MB 200-148550/1-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

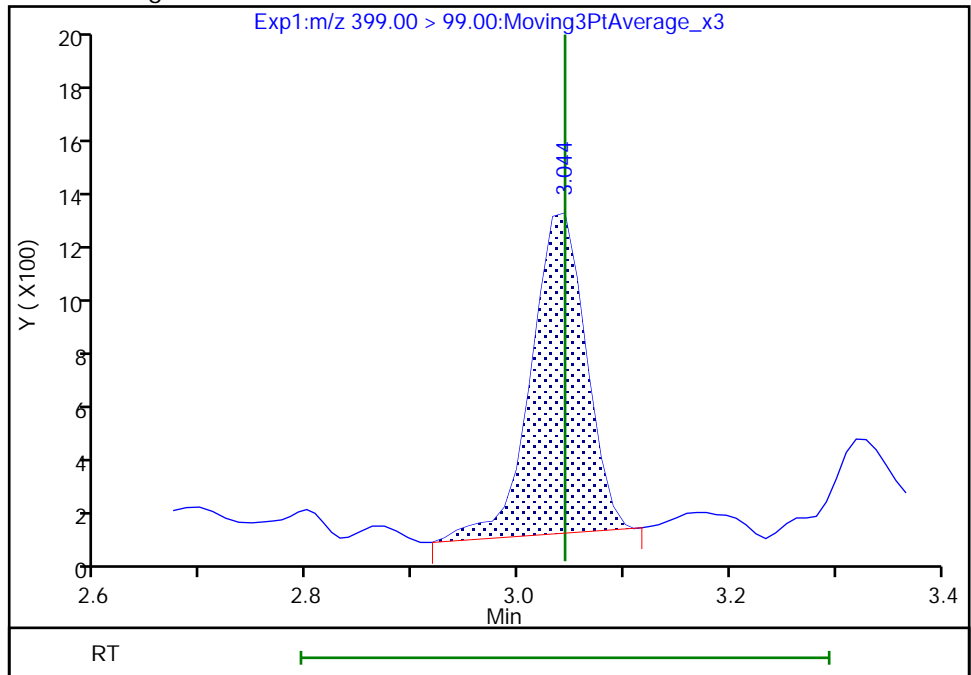
Not Detected
Expected RT: 3.04

Processing Integration Results



Manual Integration Results

RT: 3.04
Area: 4256
Amount: 0.001556
Amount Units: ng/ml



Reviewer: kirkm, 23-Oct-2019 10:34:35

Audit Action: Manually Integrated

Audit Reason: Missed Peak

Eurofins TestAmerica, Burlington

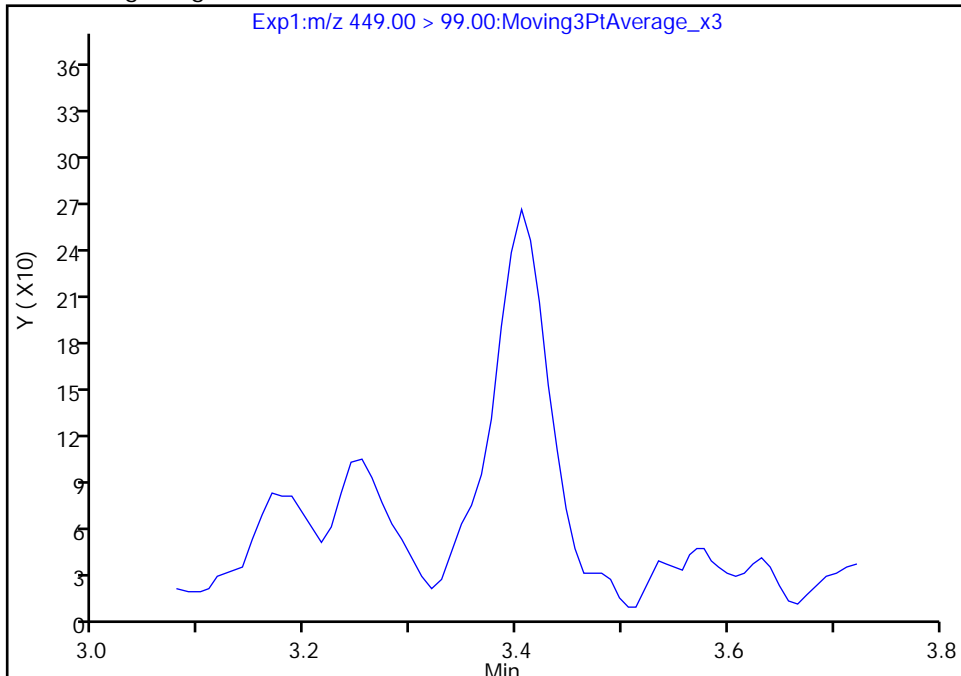
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B002.d
Injection Date: 22-Oct-2019 20:00:49 Instrument ID: LC812
Lims ID: MB 200-148550/1-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

16 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 2

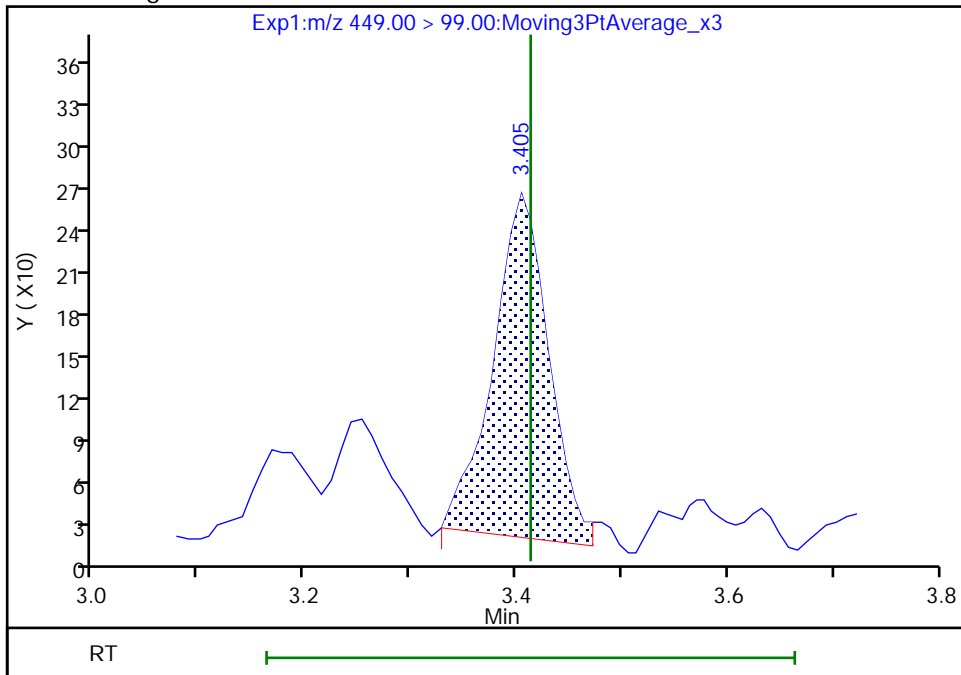
Not Detected
Expected RT: 3.41

Processing Integration Results



Manual Integration Results

RT: 3.40
Area: 900
Amount: 0.006159
Amount Units: ng/ml



Reviewer: kirkm, 23-Oct-2019 10:35:17
Audit Action: Manually Integrated

Audit Reason: Missed Peak

Eurofins TestAmerica, Burlington

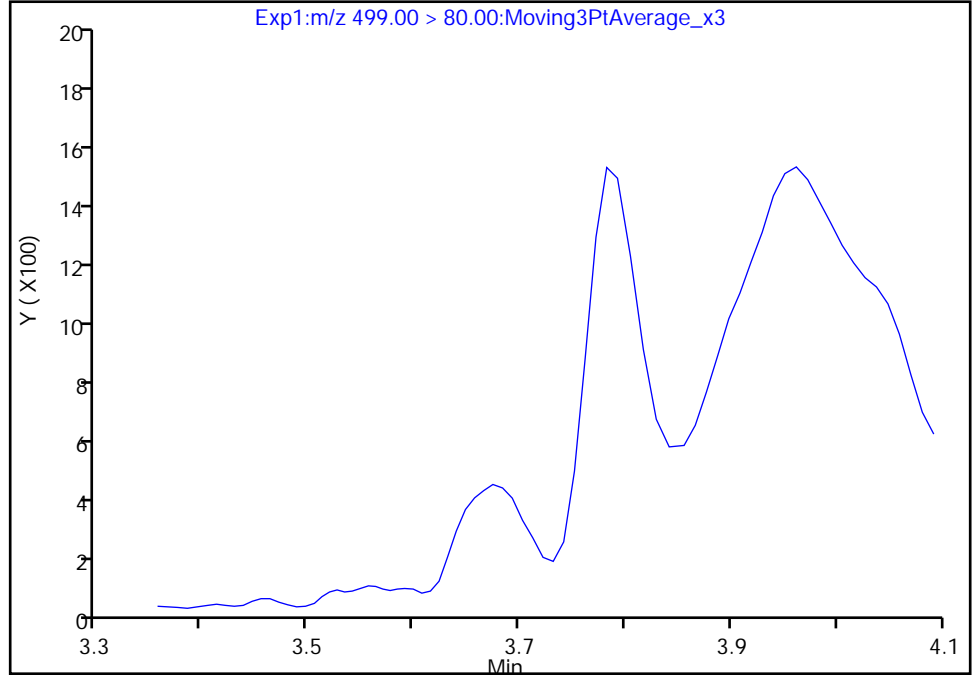
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B002.d
Injection Date: 22-Oct-2019 20:00:49 Instrument ID: LC812
Lims ID: MB 200-148550/1-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

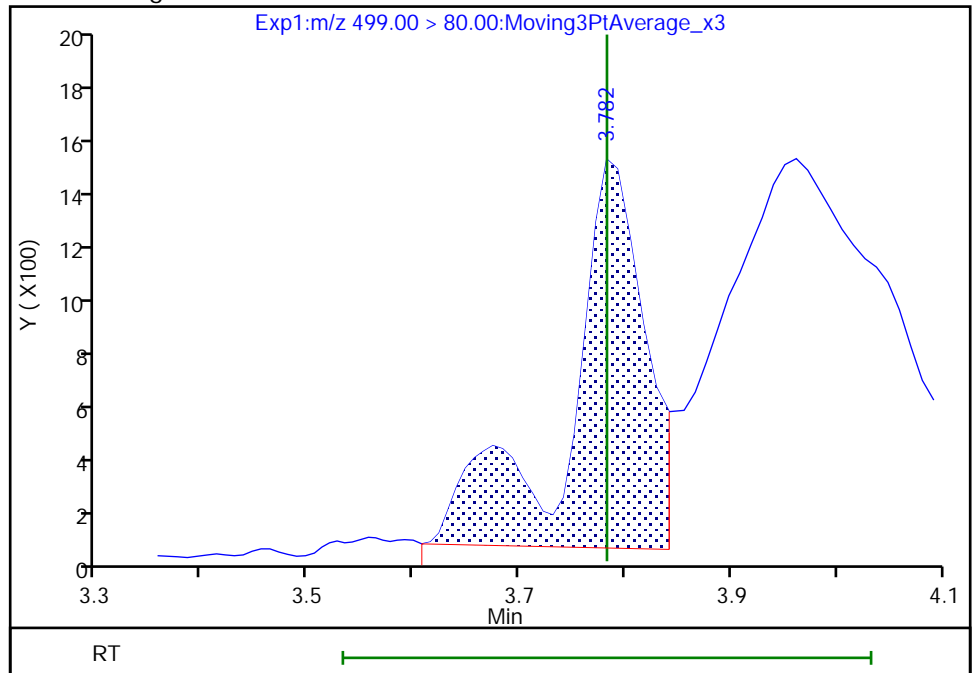
Not Detected
Expected RT: 3.78

Processing Integration Results



Manual Integration Results

RT: 3.78
Area: 7369
Amount: 0.011155
Amount Units: ng/ml



Reviewer: kirkm, 23-Oct-2019 10:36:32

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason: Missed Peak

Eurofins TestAmerica, Burlington

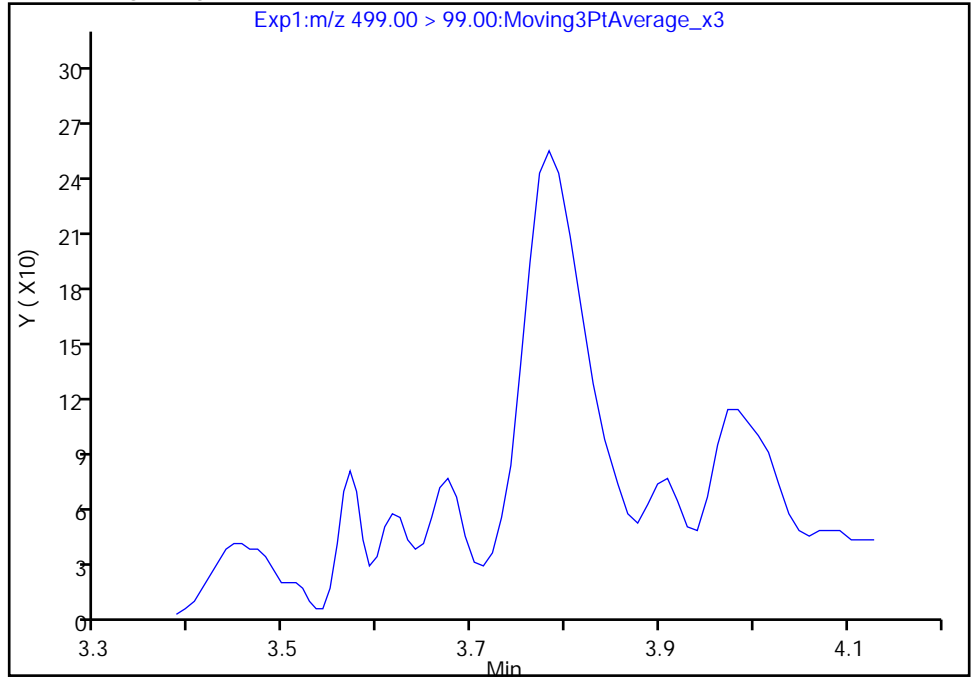
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B002.d
Injection Date: 22-Oct-2019 20:00:49 Instrument ID: LC812
Lims ID: MB 200-148550/1-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

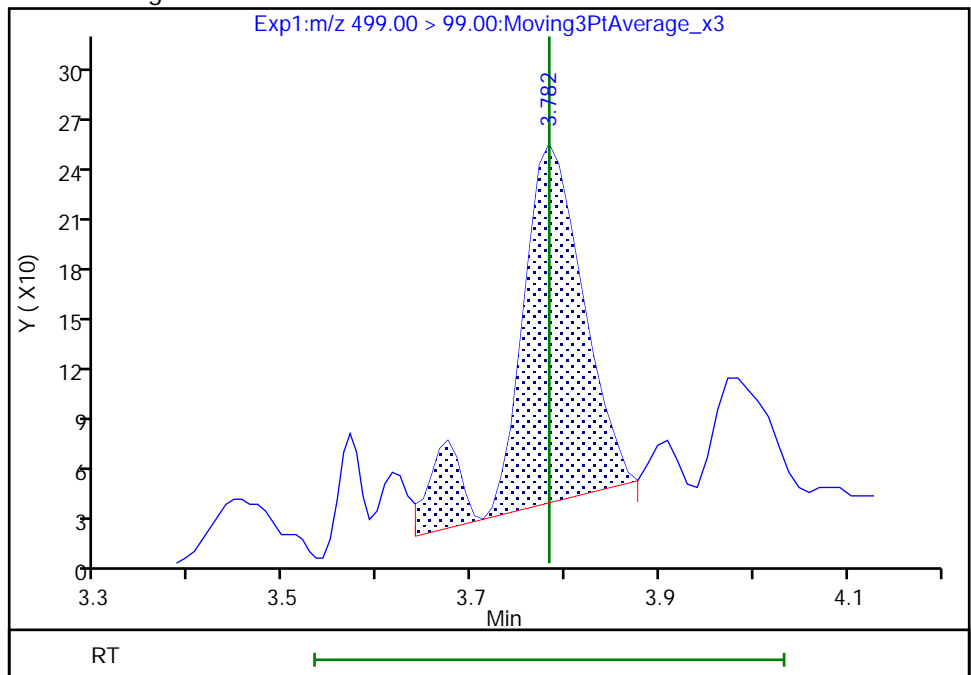
Not Detected
Expected RT: 3.78

Processing Integration Results



Manual Integration Results

RT: 3.78
Area: 1045
Amount: 0.011155
Amount Units: ng/ml



Reviewer: kirkm, 23-Oct-2019 10:36:47

Audit Action: Manually Integrated

Audit Reason: Missed Peak

Eurofins TestAmerica, Burlington

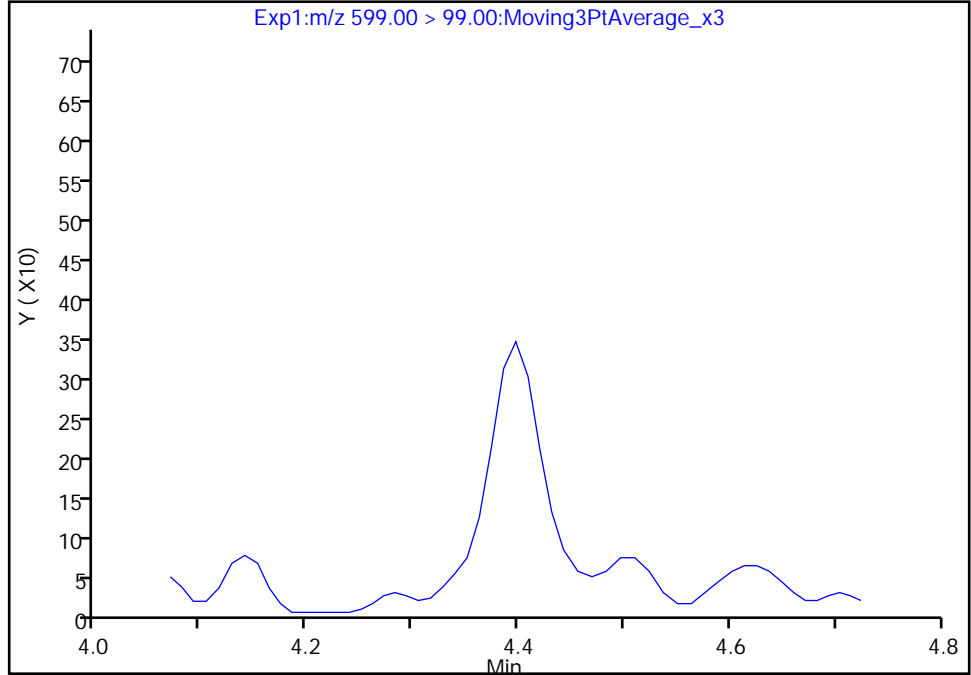
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B002.d
Injection Date: 22-Oct-2019 20:00:49 Instrument ID: LC812
Lims ID: MB 200-148550/1-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

29 Perfluorodecanesulfonic acid, CAS: 335-77-3

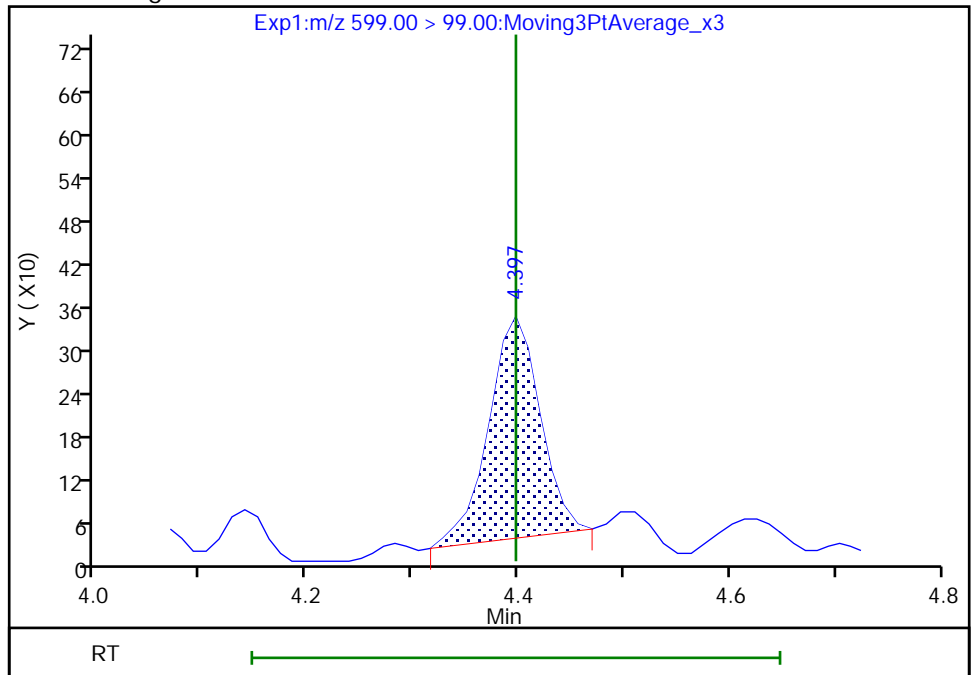
Signal: 2

Not Detected
Expected RT: 4.40

Processing Integration Results



Manual Integration Results



RT: 4.40
Area: 1044
Amount: 0.006502
Amount Units: ng/ml

Eurofins TestAmerica, Burlington

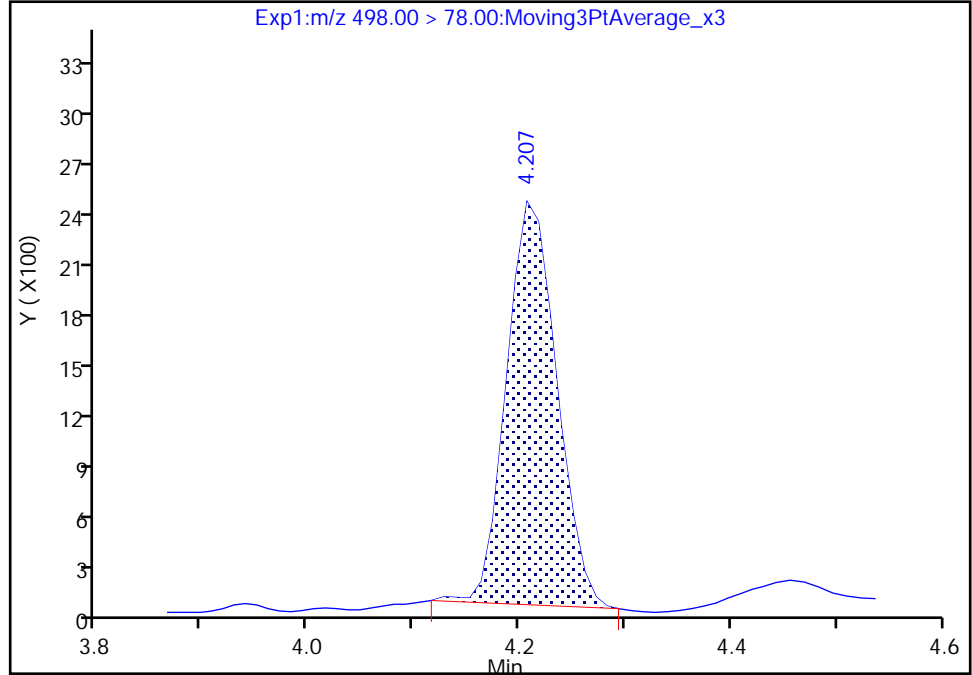
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B002.d
Injection Date: 22-Oct-2019 20:00:49 Instrument ID: LC812
Lims ID: MB 200-148550/1-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

22 Perfluorooctanesulfonamide, CAS: 754-91-6

Signal: 1

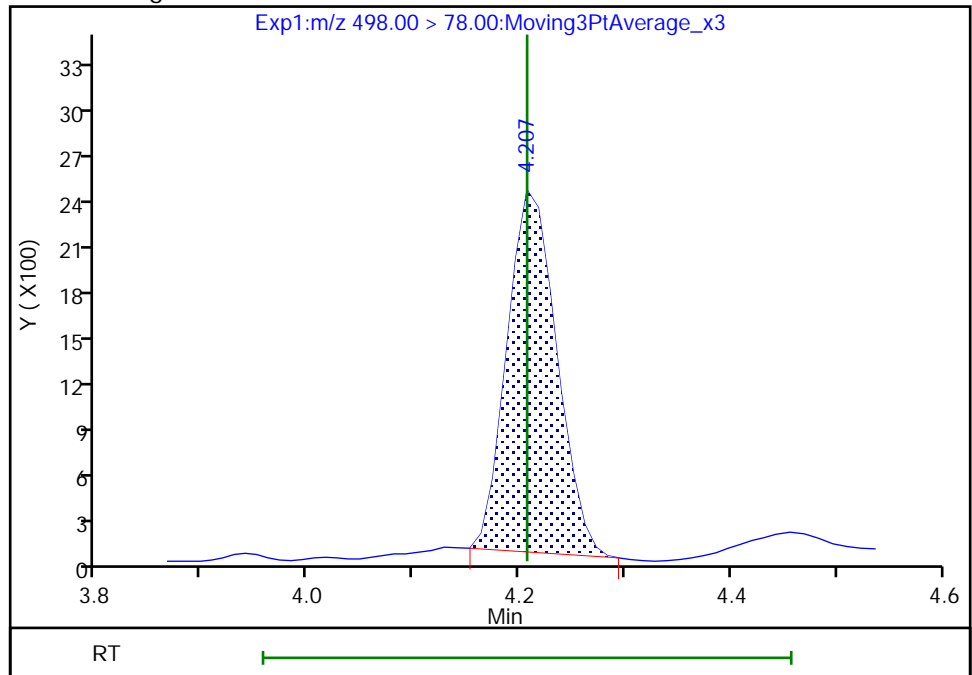
RT: 4.21
Area: 7861
Amount: 0.008413
Amount Units: ng/ml

Processing Integration Results



RT: 4.21
Area: 7710
Amount: 0.008251
Amount Units: ng/ml

Manual Integration Results



Reviewer: kirkm, 23-Oct-2019 10:38:45
Audit Action: Manually Integrated

Audit Reason: Baseline

Eurofins TestAmerica, Burlington

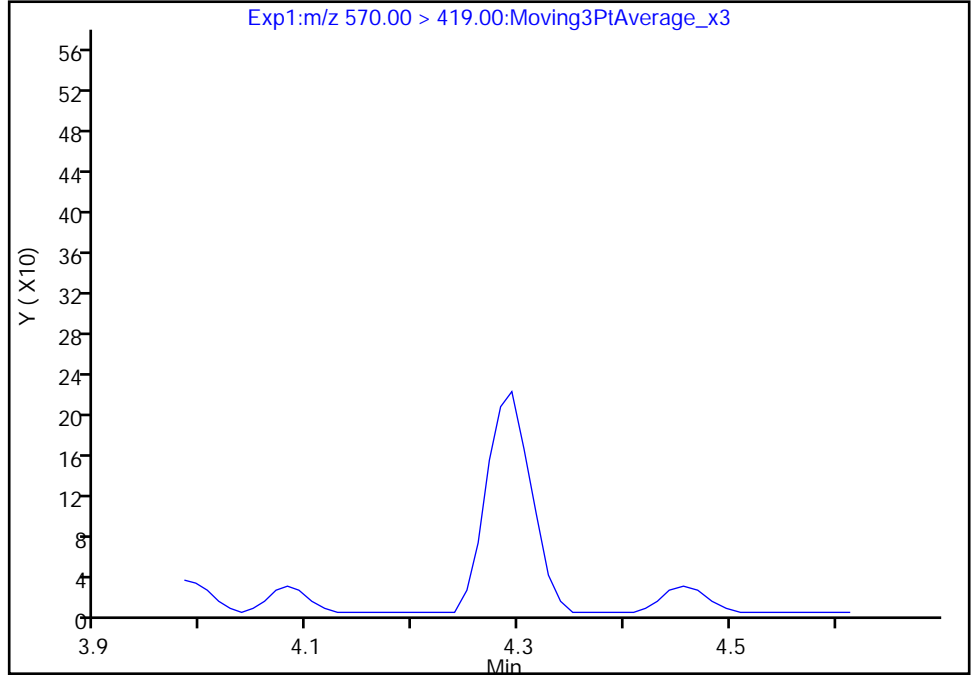
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B002.d
Injection Date: 22-Oct-2019 20:00:49 Instrument ID: LC812
Lims ID: MB 200-148550/1-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

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

Signal: 1

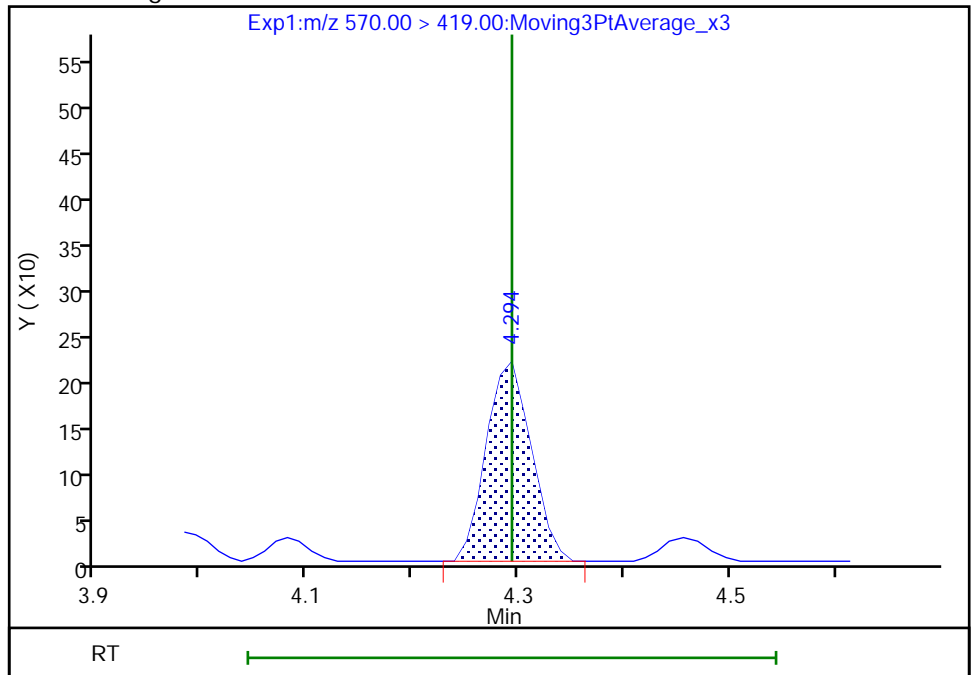
Not Detected
Expected RT: 4.29

Processing Integration Results



Manual Integration Results

RT: 4.29
Area: 643
Amount: 0.007505
Amount Units: ng/ml



Reviewer: kirkm, 23-Oct-2019 10:38:57
Audit Action: Manually Integrated

Audit Reason: Missed Peak

Eurofins TestAmerica, Burlington

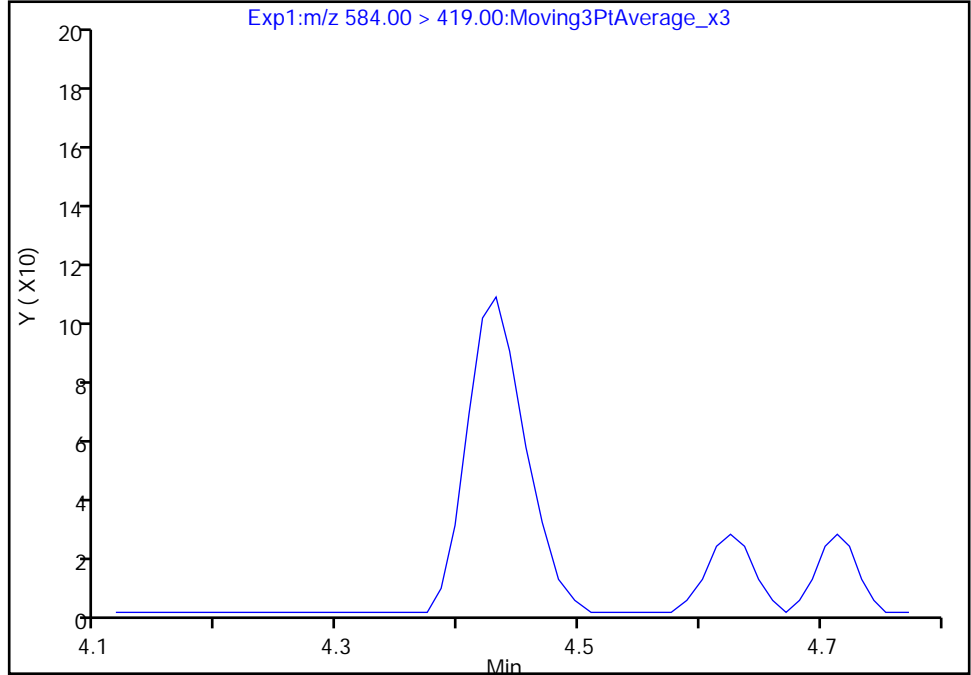
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B002.d
Injection Date: 22-Oct-2019 20:00:49 Instrument ID: LC812
Lims ID: MB 200-148550/1-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

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

Signal: 1

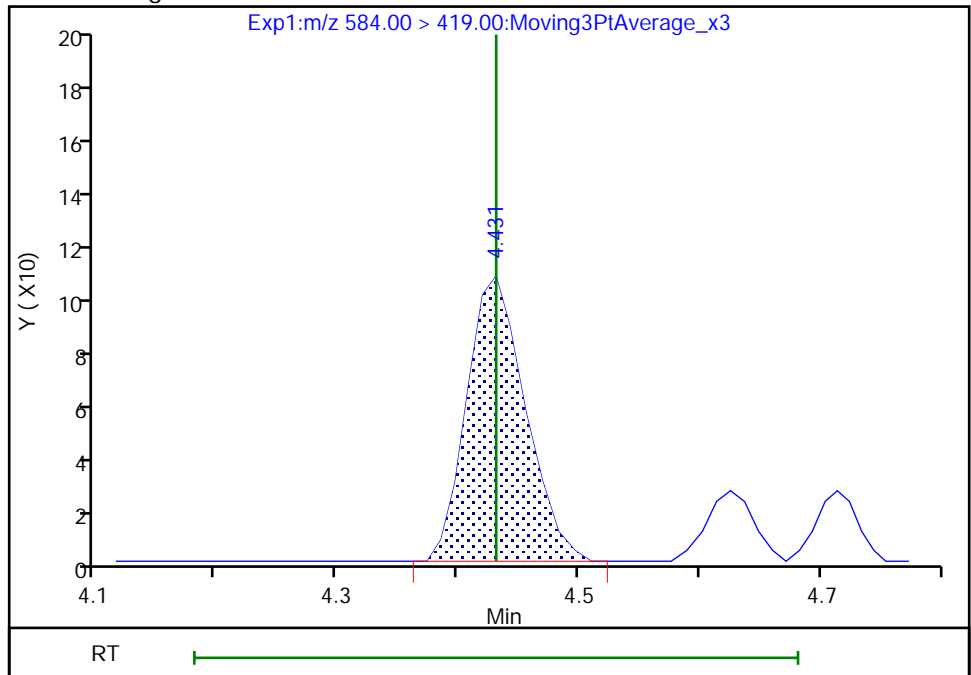
Not Detected
Expected RT: 4.43

Processing Integration Results



Manual Integration Results

RT: 4.43
Area: 352
Amount: -0.014016
Amount Units: ng/ml



Reviewer: kirkm, 23-Oct-2019 10:40:55
Audit Action: Manually Integrated

Eurofins TestAmerica, Burlington

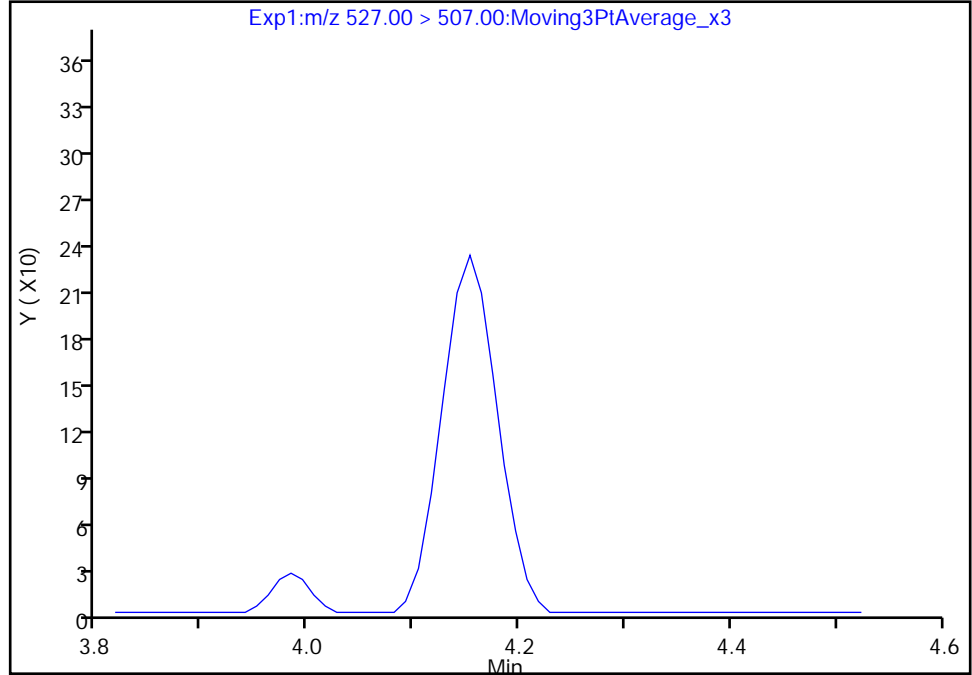
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B002.d
Injection Date: 22-Oct-2019 20:00:49 Instrument ID: LC812
Lims ID: MB 200-148550/1-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

25 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:, CAS: 39108-34-4

Signal: 1

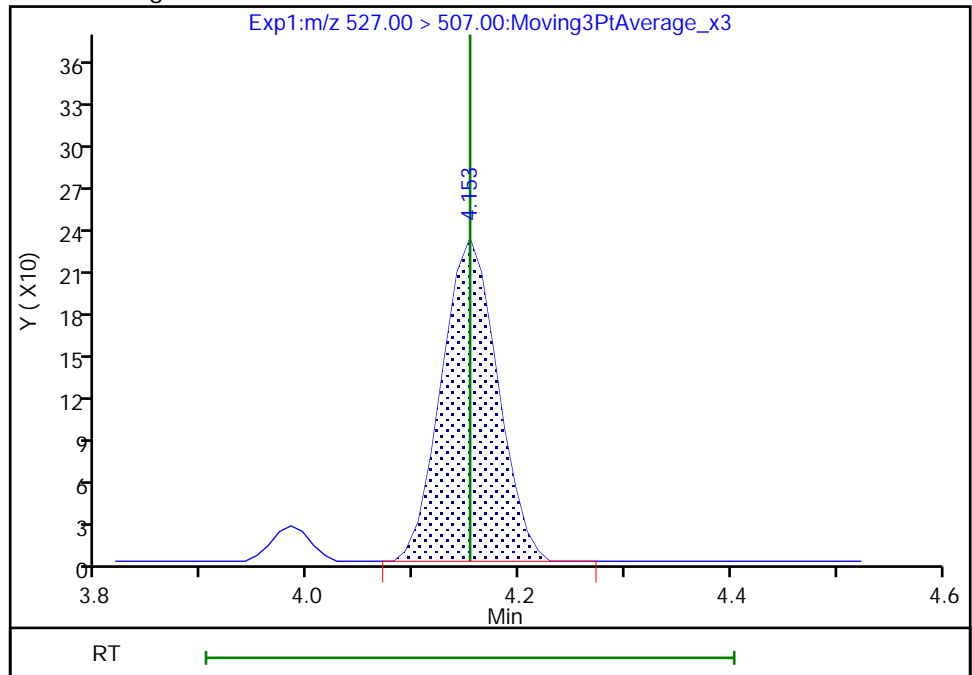
Not Detected
Expected RT: 4.15

Processing Integration Results



Manual Integration Results

RT: 4.15
Area: 834
Amount: -0.008034
Amount Units: ng/ml



Reviewer: kirkm, 23-Oct-2019 10:38:28
Audit Action: Manually Integrated

Audit Reason: Missed Peak

Eurofins TestAmerica, Burlington

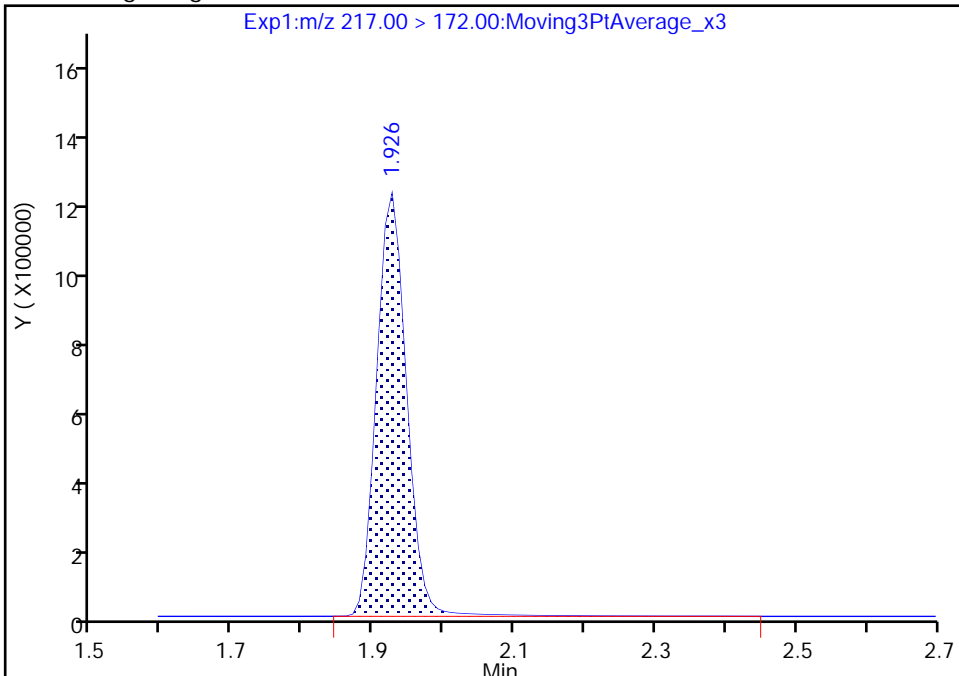
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B002.d
Injection Date: 22-Oct-2019 20:00:49 Instrument ID: LC812
Lims ID: MB 200-148550/1-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

D 1 13C4 PFBA, CAS: STL00992

Signal: 1

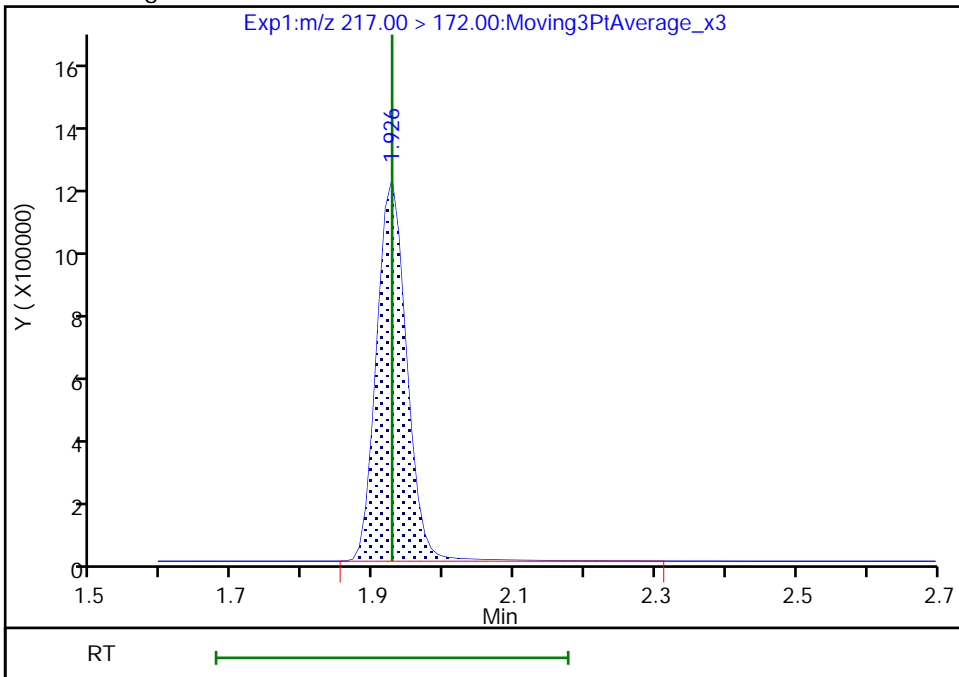
RT: 1.93
Area: 3552591
Amount: 2.355786
Amount Units: ng/ml

Processing Integration Results



RT: 1.93
Area: 3546630
Amount: 2.351834
Amount Units: ng/ml

Manual Integration Results



Reviewer: kirkm, 23-Oct-2019 10:32:52
Audit Action: Manually Integrated

Audit Reason: Baseline
Page 520 of 599

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 200-148550/2-A
 Matrix: Water Lab File ID: SC102219B003.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: 3535 Date Extracted: 10/17/2019 10:08
 Sample wt/vol: 250 (mL) Date Analyzed: 10/22/2019 20:09
 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.: 148772 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	50.4		2.0	1.0
2706-90-3	Perfluoropentanoic acid (PFPeA)	49.7		2.0	0.63
307-24-4	Perfluorohexanoic acid (PFHxA)	47.7		2.0	0.76
375-85-9	Perfluoroheptanoic acid (PFHpA)	50.2		2.0	0.91
335-67-1	Perfluorooctanoic acid (PFOA)	49.8		2.0	0.81
375-95-1	Perfluorononanoic acid (PFNA)	48.2		2.0	0.27
335-76-2	Perfluorodecanoic acid (PFDA)	51.6		2.0	0.77
2058-94-8	Perfluoroundecanoic acid (PFUnA)	52.7		2.0	0.78
307-55-1	Perfluorododecanoic acid (PFDoA)	48.4		2.0	0.59
72629-94-8	Perfluorotridecanoic acid (PFTriA)	48.6		2.0	0.60
376-06-7	Perfluorotetradecanoic acid (PFTeA)	56.4		2.0	0.92
375-73-5	Perfluorobutanesulfonic acid (PFBS)	43.0		2.0	0.49
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	44.3		2.0	0.80
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	46.6		2.0	0.95
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	45.5		2.0	0.61
335-77-3	Perfluorodecanesulfonic acid (PFDS)	48.9		2.0	0.90
754-91-6	Perfluorooctanesulfonamide (PFOSA)	49.7		10	10
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	51.8		20	1.7
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50.0		20	1.5
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	41.3		20	5.5
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	40.7		20	2.9

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 200-148550/2-A
 Matrix: Water Lab File ID: SC102219B003.d
 Analysis Method: 537 (modified) Date Collected: _____
 Extraction Method: 3535 Date Extracted: 10/17/2019 10:08
 Sample wt/vol: 250 (mL) Date Analyzed: 10/22/2019 20:09
 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.: 148772 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	90		50-150
STL01892	13C4 PFHpA	90		50-150
STL00990	13C4 PFOA	101		50-150
STL00991	13C4 PFOS	92		50-150
STL00995	13C5 PFNA	93		50-150
STL00992	13C4 PFBA	89		25-150
STL00993	13C2 PFHxA	93		50-150
STL00996	13C2 PFDA	93		50-150
STL00997	13C2 PFUnA	85		50-150
STL00998	13C2 PFDoA	94		50-150
STL01056	13C8 FOSA	65		25-150
STL01893	13C5 PFPeA	94		25-150
STL02116	13C2 PFTeDA	82		50-150
STL02118	d3-NMeFOSAA	84		50-150
STL02117	d5-NEtFOSAA	93		50-150
STL02279	M2-6:2 FTS	100		25-150
STL02280	M2-8:2 FTS	103		25-150

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B003.d
 Lims ID: LCS 200-148550/2-A
 Client ID:
 Sample Type: LCS
 Inject. Date: 22-Oct-2019 20:09:01 ALS Bottle#: 3 Worklist Smp#: 3
 Injection Vol: 20.0 ul Dil. Factor: 1.0000
 Sample Info: LCS 200-148550/2-A
 Misc. Info.: 200-0038369-003 Plate: 1 Rack: 4
 Operator ID: lc812tech Instrument ID: LC812
 Method: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\PFC_LC812.m
 Limit Group: LC_PFC_ICAL
 Last Update: 28-Oct-2019 13:08:26 Calib Date: 24-Sep-2019 18:56:37
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA015.d
 Column 1 : C-18 (4.60 mm) Det: EXP1
 Process Host: CTX1017

First Level Reviewer: kirkm Date: 23-Oct-2019 10:45:54

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										M
217.00 > 172.00	1.926	1.926	0.0	0.563	3565257	2.22		88.8	18236	M
2 Perfluorobutanoic acid										
212.90 > 169.00	1.926	1.926	0.0	1.000	1594827	1.26		126	319	
D 3 13C5 PFPeA										
267.90 > 223.00	2.284	2.285	-0.001	0.668	2973400	2.34		93.6	5004	
4 Perfluoropentanoic acid										
262.90 > 219.00	2.284	2.285	-0.001	1.000	1373311	1.24		124	101	
5 Perfluorobutanesulfonic acid										
298.90 > 80.00	2.298	2.298	0.0	0.755	1327079	1.07	Target=2.04	122	3652	
298.90 > 99.00	2.298	2.298	0.0	0.755	647164		2.05(1.02-3.05)		584	
D 60 M2-4:2 FTS										
329.00 > 81.00	2.623	2.623	0.0	0.767	265443	2.02		86.6	270	
61 1H,1H,2H,2H-perfluorohexanesulfoni										
327.00 > 307.00	2.623	2.623	0.0	1.000	240883	1.06		113	2404	
6 Perfluorohexanoic acid										
313.00 > 269.00	2.661	2.661	-0.001	1.000	1472111	1.19	Target=12.90	119	467	
313.00 > 119.00	2.661	2.661	-0.001	1.000	121010		12.17(6.45-19.36)		247	
D 7 13C2 PFHxA										
315.00 > 270.00	2.661	2.661	-0.001	0.778	3134874	2.32		92.8	5049	
70 Perfluoropentanesulfonic acid										
349.00 > 80.00	2.673	2.673	0.0	0.878	1244141	1.17	Target=3.01	124	3878	
349.00 > 99.00	2.673	2.673	0.0	0.878	419536		2.97(1.51-4.52)		1374	
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.784	2.776	0.008	1.000	216372	1.59		159	123	
D 64 13C3 HFPO-DA										
332.10 > 287.00	2.784	2.776	0.008	0.814	119075	1.77		70.6	1762	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.044	3.044	0.0	1.000	973658	1.11	Target=3.78	122	2226	
399.00 > 99.00	3.044	3.044	0.0	1.000	264586		3.68(1.89-5.67)		408	
D 11 18O2 PFHxS										
403.00 > 84.00	3.044	3.044	0.0	0.890	2144173	2.13		89.9	5399	
D 9 13C4 PFHpA										
367.00 > 322.00	3.055	3.044	0.011	0.893	2935180	2.24		89.8	5745	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.055	3.044	0.011	1.000	1316039	1.25	Target=3.54	125	405	
363.00 > 169.00	3.055	3.044	0.011	1.000	366268		3.59(1.77-5.31)		1024	
77 DONA										
377.00 > 251.00	3.089	3.090	-0.001	0.817	2824419	1.10	Target=2.56	116	2503	
377.00 > 85.00	3.089	3.090	-0.001	0.817	1089725		2.59(1.28-3.84)		2939	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.413	3.413	0.0	0.902	812331	1.16	Target=5.80	122	3532	
449.00 > 99.00	3.413	3.413	0.0	0.902	148634		5.47(2.90-8.71)		1029	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.413	3.413	0.0	1.000	212121	1.03		109	1754	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.413	3.413	0.0	0.998	387509	2.37		99.6	1279	
* 62 13C2 PFOA										
415.00 > 370.00	3.422	3.422	0.0		3348042	2.50			6412	
D 14 13C4 PFOA										
417.00 > 372.00	3.422	3.422	0.0	1.000	3353677	2.52		101	9333	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.430	3.422	0.008	1.002	1580201	1.24	Target=2.61	124	348	
413.00 > 169.00	3.430	3.422	0.008	1.002	613970		2.57(1.30-3.91)		2113	
D 18 13C4 PFOS										
503.00 > 80.00	3.782	3.783	-0.001	1.105	1504576	2.19		91.8	4980	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.793	3.783	0.010	1.003	647938	1.14	Target=4.93	123	347	M
499.00 > 99.00	3.782	3.783	-0.001	1.000	122627		5.28(2.47-7.40)		562	M
D 19 13C5 PFNA										
468.00 > 423.00	3.805	3.805	0.0	1.112	2749039	2.34		93.5	11397	
20 Perfluorononanoic acid										
463.00 > 419.00	3.805	3.805	0.0	1.000	1264107	1.21	Target=7.89	121	400	
463.00 > 169.00	3.805	3.805	0.0	1.000	163264		7.74(3.95-11.84)		1926	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.973	3.973	0.0	1.050	1059139	1.05		112	5543	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.116	4.117	-0.001	1.088	600253	1.22	Target=2.60	127	3764	
549.00 > 99.00	4.116	4.117	-0.001	1.088	229924		2.61(1.30-3.90)		1074	
24 Perfluorodecanoic acid										
513.00 > 469.00	4.141	4.141	0.0	1.000	1301689	1.29	Target=8.57	129	773	
513.00 > 169.00	4.141	4.141	0.0	1.000	144146		9.03(4.29-12.86)		817	
D 23 13C2 PFDA										
515.00 > 470.00	4.141	4.141	0.0	1.210	2728661	2.33		93.1	7947	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
25 1H,1H,2H,2H-perfluorodecanesulfoni	527.00 > 507.00	4.153	4.153	0.0	1.000	147169	1.02	106	3588	
D 26 M2-8:2 FTS	529.00 > 81.00	4.153	4.153	0.0	1.214	442642	2.47	103	1549	
22 Perfluorooctanesulfonamide	498.00 > 78.00	4.218	4.207	0.011	1.000	991552	1.24	124	2896	
D 21 13C8 FOSA	506.00 > 78.00	4.218	4.207	0.011	1.233	2172386	1.63	65.2	5119	
D 27 d3-NMeFOSAA	573.00 > 419.00	4.293	4.294	-0.001	1.255	239105	2.10	84.2	1196	
28 N-methylperfluorooctanesulfonamido	570.00 > 419.00	4.293	4.294	-0.001	1.000	88281	1.30	130	806	
29 Perfluorodecanesulfonic acid	599.00 > 80.00	4.397	4.397	0.0	1.163	464371	1.22	Target=2.56	127	2520
	599.00 > 99.00	4.397	4.397	0.0	1.163	169399		2.74(1.28-3.84)		1202
31 Perfluoroundecanoic acid	563.00 > 519.00	4.420	4.420	0.0	1.000	988588	1.32	Target=6.97	132	723
	563.00 > 169.00	4.420	4.420	0.0	1.000	142180		6.95(3.48-10.45)		1846
D 30 13C2 PFUnA	565.00 > 520.00	4.420	4.420	0.0	1.292	2242832	2.14	85.5	6359	
D 32 d5-NEtFOSAA	589.00 > 419.00	4.431	4.431	0.0	1.295	285654	2.32	92.8	1869	
33 N-ethylperfluorooctanesulfonamidoa	584.00 > 419.00	4.442	4.431	0.011	1.003	79093	1.25	125	1001	
66 11-Chloroeicosafuoro-3-oxaundecan	631.00 > 451.00	4.523	4.524	-0.001	1.196	1273647	1.01	107	7893	
37 Perfluorododecanoic acid	613.00 > 569.00	4.660	4.660	0.0	1.000	1134402	1.21	Target=7.06	121	185
	613.00 > 169.00	4.660	4.660	0.0	1.000	171128		6.63(3.53-10.59)		1372
D 36 13C2 PFDaA	615.00 > 570.00	4.660	4.660	0.0	1.362	2647138	2.34	93.7	10485	
74 1H,1H,2H,2H-perfluorododecanesulfo	627.00 > 607.00	4.683	4.683	-0.001	1.128	83751	1.06	110	1629	
75 Perfluorododecanesulfonic acid (PF	699.00 > 80.00	4.838	4.839	-0.001	1.279	181412	1.11	Target=0.47	115	314
	699.00 > 99.00	4.838	4.839	-0.001	1.279	398730		0.45(0.23-0.70)		3874
41 Perfluorotridecanoic acid	663.00 > 619.00	4.879	4.870	0.009	1.047	921123	1.22	Target=4.87	122	150
	663.00 > 169.00	4.879	4.870	0.009	1.047	212544		4.33(2.43-7.30)		1600
42 Perfluorotetradecanoic acid	713.00 > 169.00	5.067	5.067	0.0	1.000	171414	1.41	Target=1.09	141	1710
	713.00 > 219.00	5.058	5.067	-0.009	0.998	162961		1.05(0.54-1.63)		2446
D 43 13C2 PFTeDA	715.00 > 670.00	5.067	5.067	0.0	1.481	2088393	2.06	82.4	10593	
D 44 13C2 PFHxDA	815.00 > 770.00	5.424	5.424	0.0	1.585	2340708	2.30	92.0	8712	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.424	5.424	0.0	1.000	1083690	1.38	Target=4.33	138	202	
813.00 > 169.00	5.424	5.424	0.0	1.000	265713		4.08(2.16-6.49)		2401	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.790	5.790	0.0	1.067	746378	1.08	Target=4.09	108	179	
913.00 > 169.00	5.790	5.790	0.0	1.067	201289		3.71(2.05-6.14)		2311	

QC Flag Legend

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B003.d

Injection Date: 22-Oct-2019 20:09:01

Instrument ID: LC812

Lims ID: LCS 200-148550/2-A

Client ID:

Operator ID: lc812tech

ALS Bottle#: 3

Worklist Smp#: 3

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

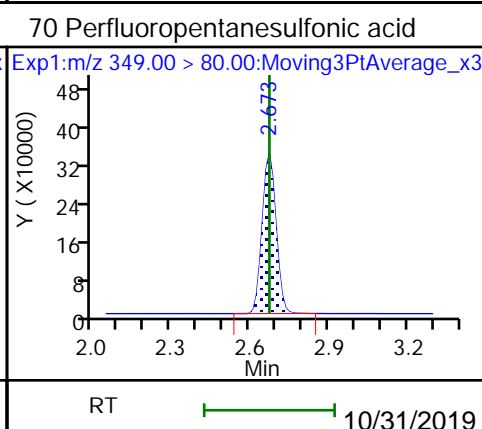
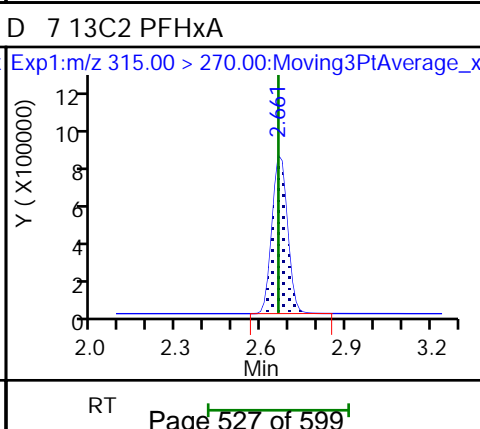
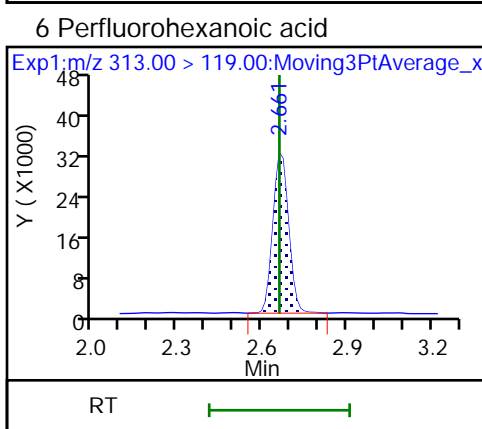
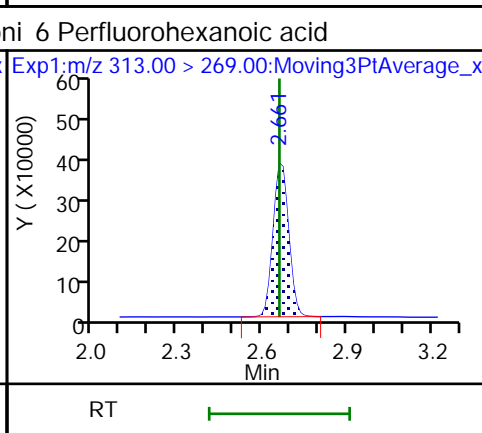
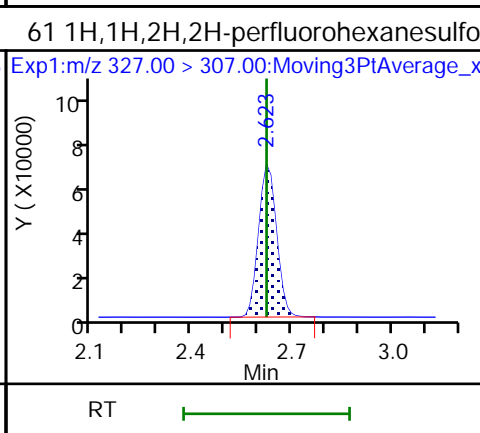
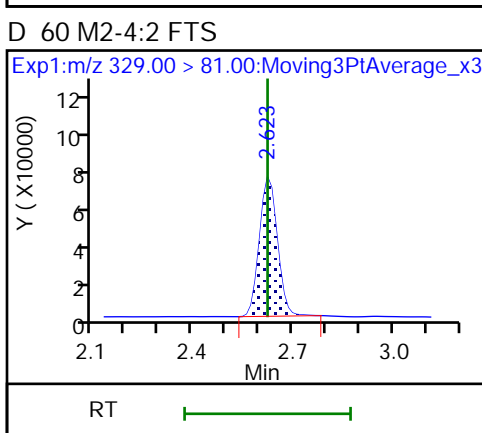
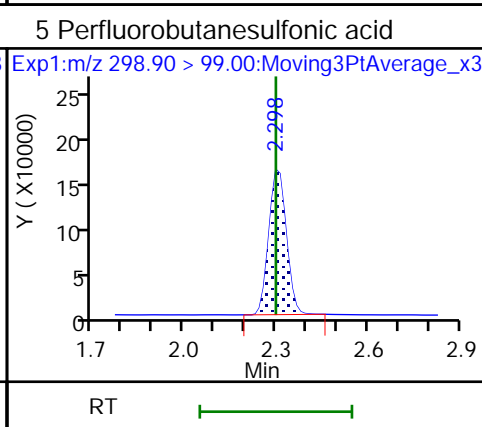
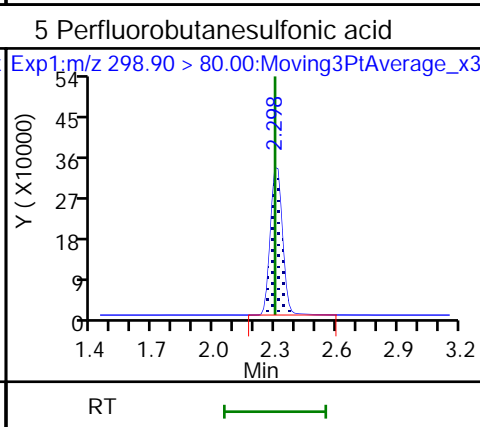
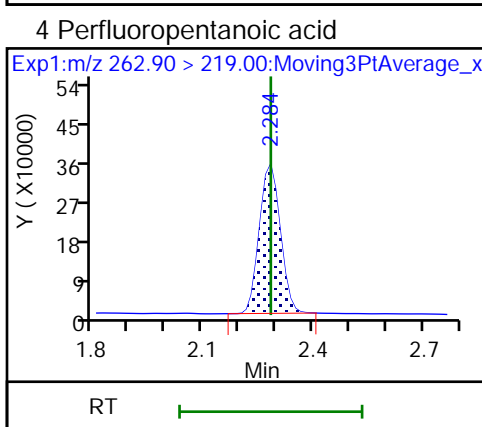
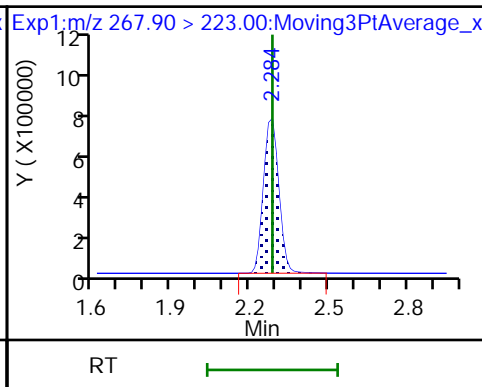
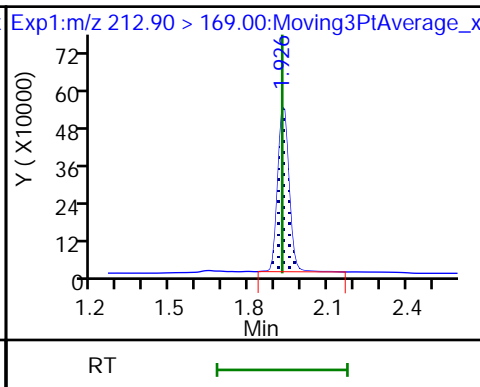
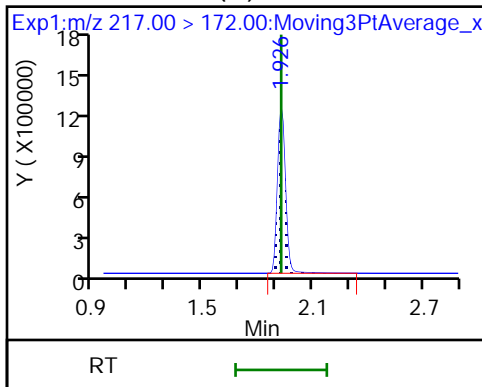
Method: PFC_LC812

Limit Group: LC_PFC_ICAL

D 1 13C4 PFBA (M)

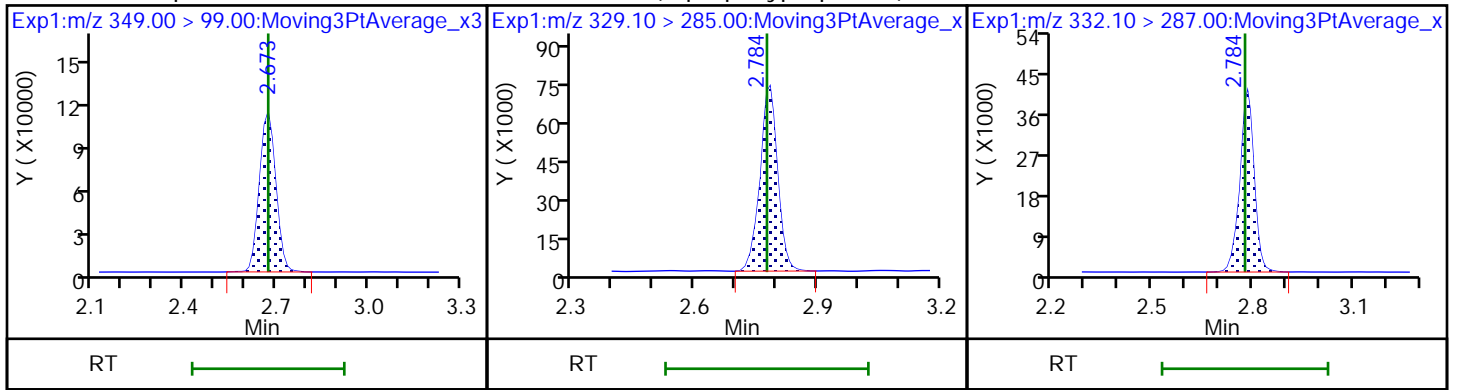
2 Perfluorobutanoic acid

D 3 13C5 PFPeA



70 Perfluoropentanesulfonic acid

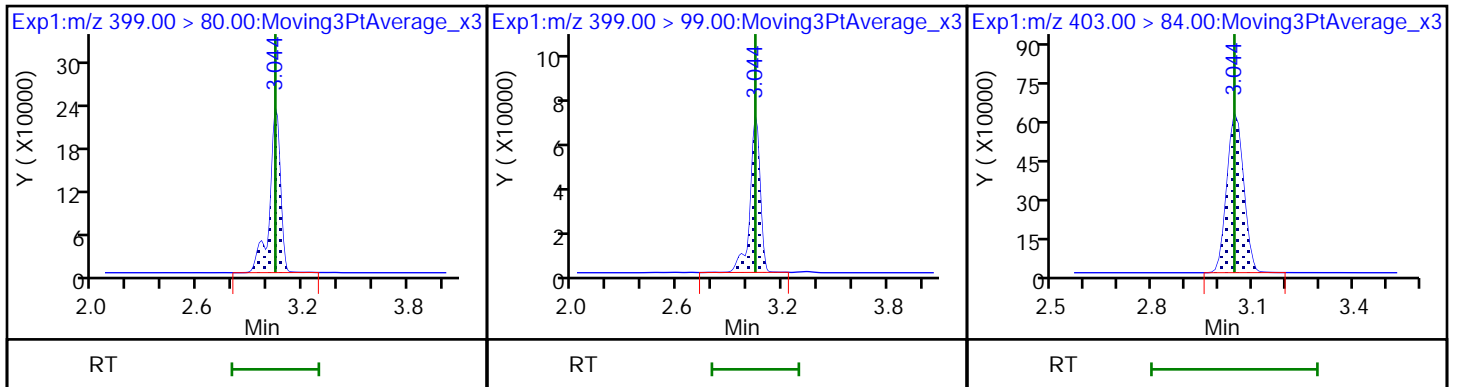
67 Perfluoro(2-propoxypropanoic) acid D 64 13C3 HFPO-DA



8 Perfluorohexanesulfonic acid

8 Perfluorohexanesulfonic acid

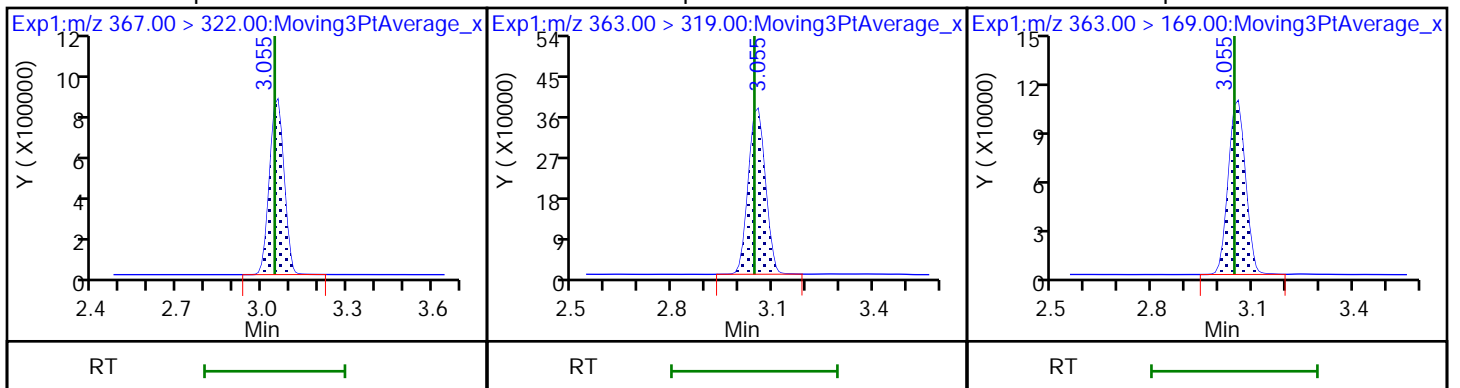
D 11 18O2 PFHxS



D 9 13C4 PFHpA

10 Perfluoroheptanoic acid

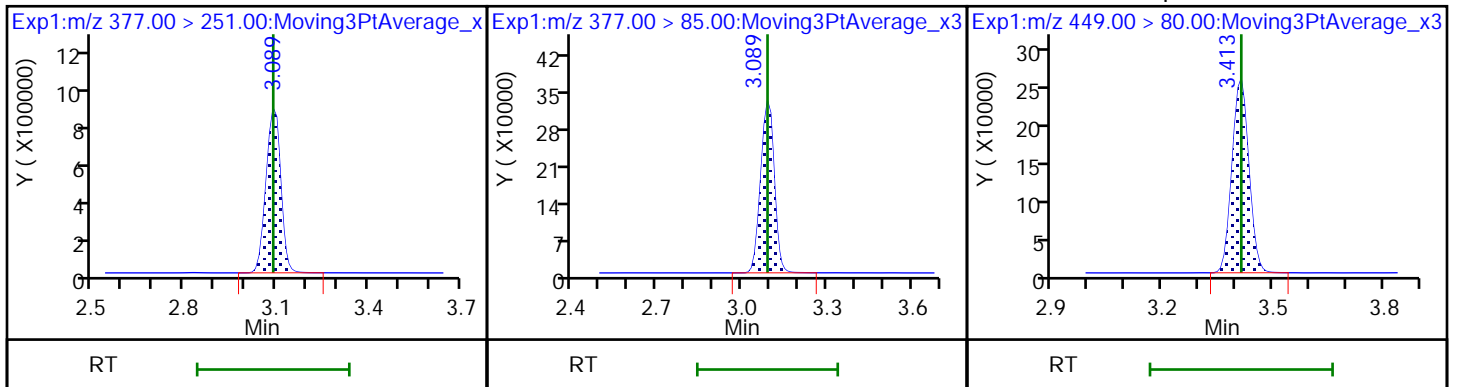
10 Perfluoroheptanoic acid



77 DONA

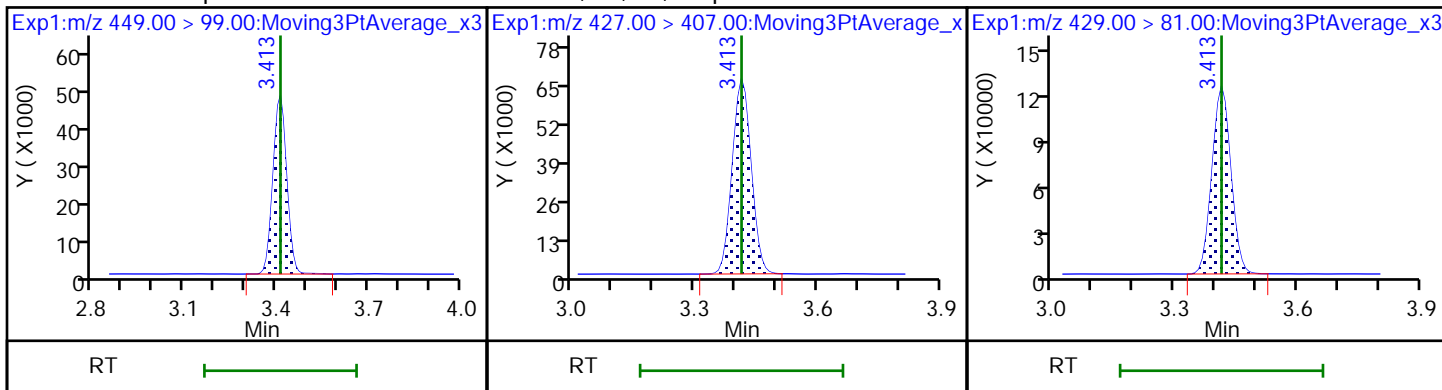
77 DONA

16 Perfluoroheptanesulfonic acid



16 Perfluoroheptanesulfonic acid

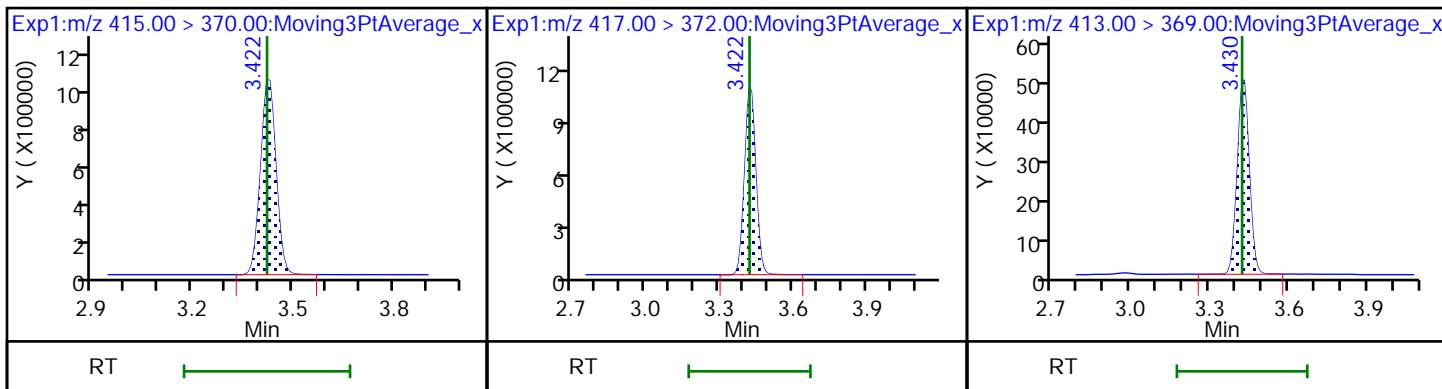
13 1H,1H,2H,2H-perfluorooctanesulfonD 12 M2-6:2 FTS



* 62 13C2 PFOA

D 14 13C4 PFOA

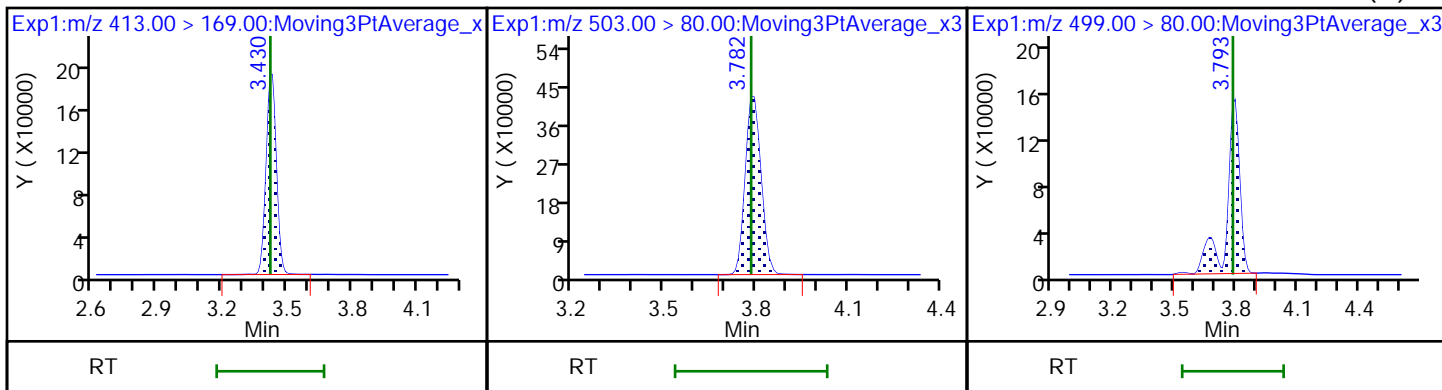
15 Perfluorooctanoic acid



15 Perfluorooctanoic acid

D 18 13C4 PFOS

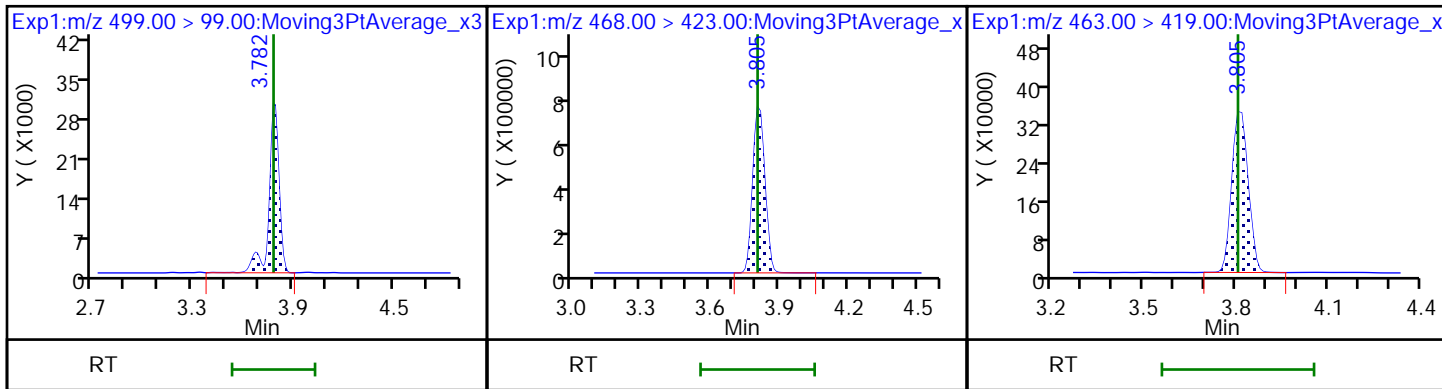
17 Perfluorooctanesulfonic acid (M)



17 Perfluorooctanesulfonic acid

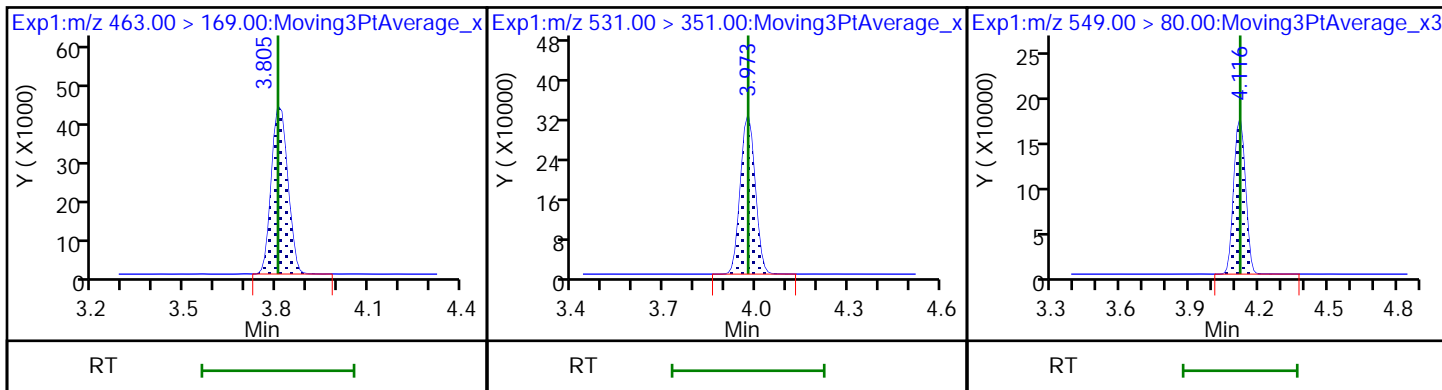
D 19 13C5 PFNA

20 Perfluorononanoic acid



20 Perfluorononanoic acid

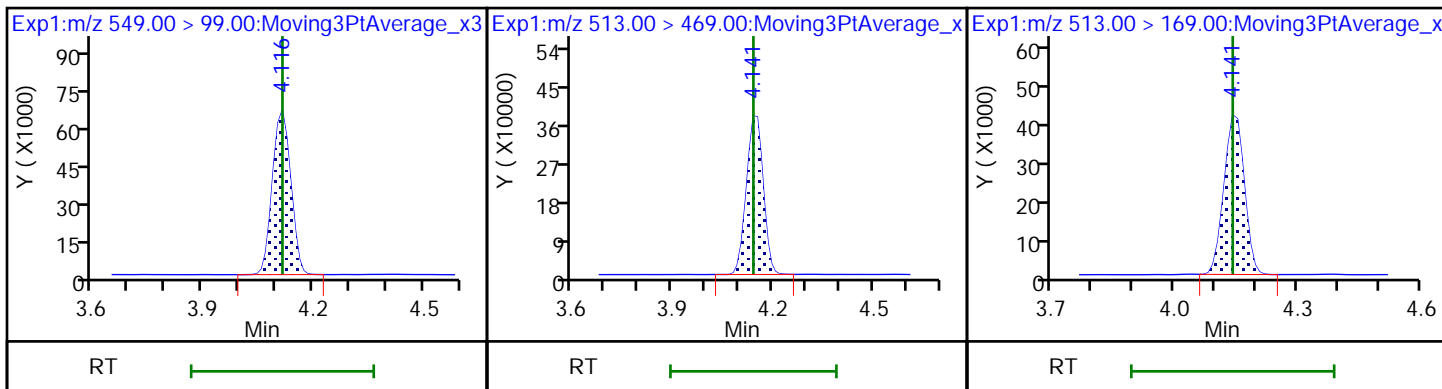
69 9-Chlorohexadecafluoro-3-oxanonan-68 Perfluoronananesulfonic acid



68 Perfluoronananesulfonic acid

24 Perfluorodecanoic acid

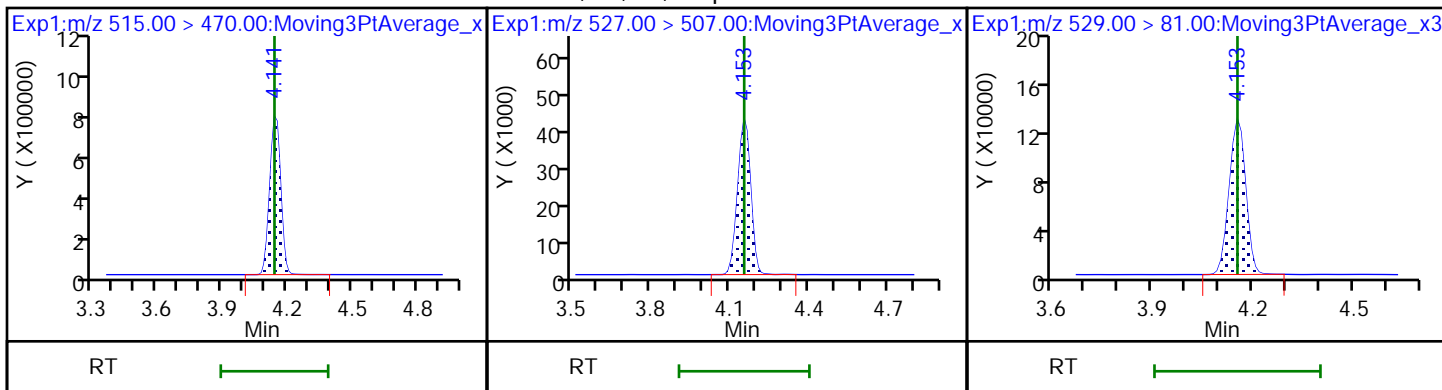
24 Perfluorodecanoic acid



D 23 13C2 PFDA

25 1H,1H,2H,2H-perfluorodecanesulfonid

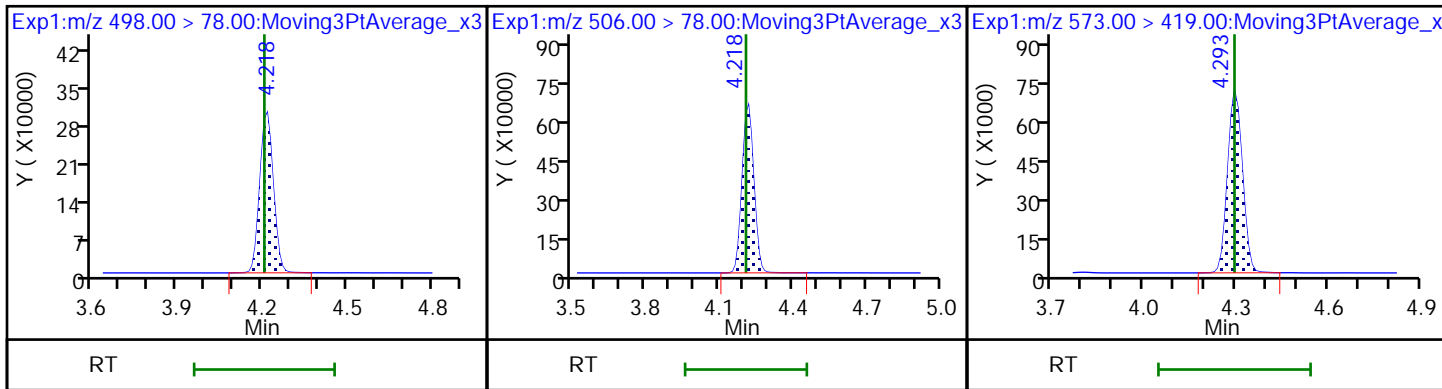
D 26 M2-8:2 FTS



22 Perfluorooctanesulfonamide

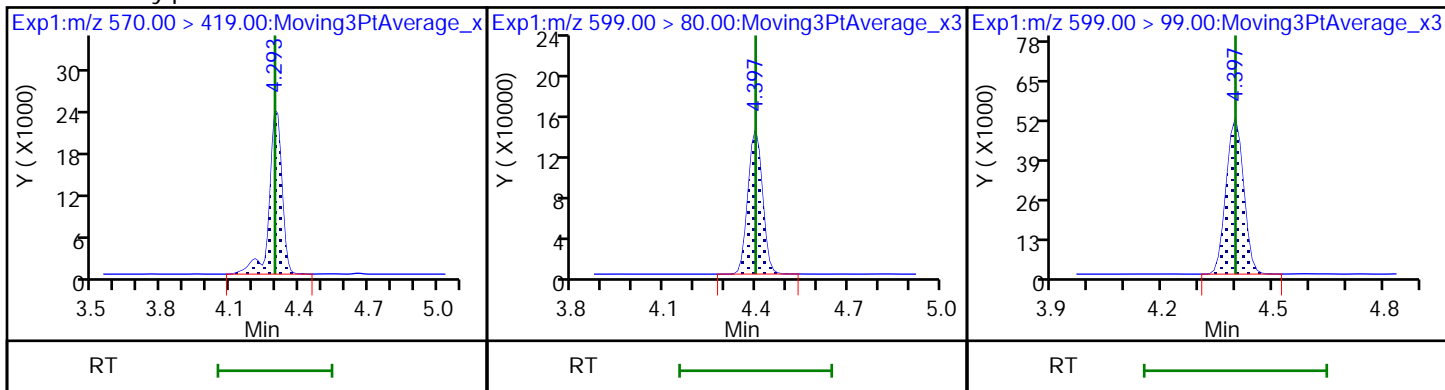
D 21 13C8 FOSA

D 27 d3-NMeFOSAA



28 N-methylperfluorooctanesulfonamido 29 Perfluorodecanesulfonic acid

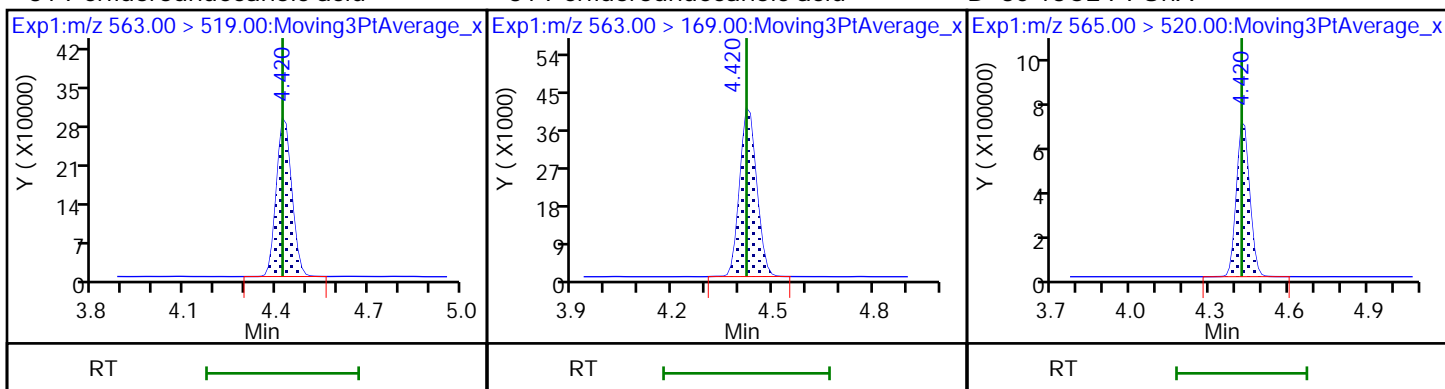
29 Perfluorodecanesulfonic acid



31 Perfluoroundecanoic acid

31 Perfluoroundecanoic acid

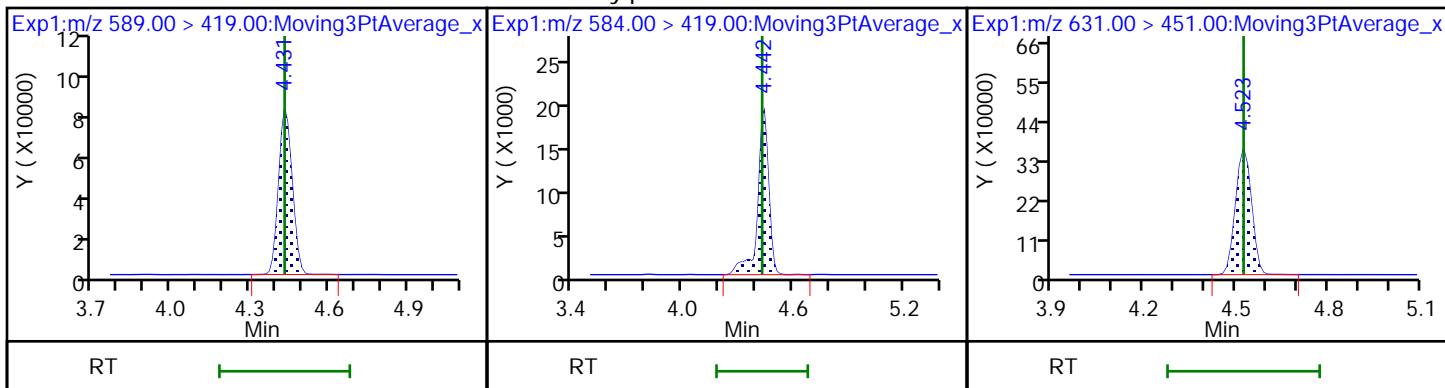
D 30 13C2 PFUnA



D 32 d5-NEtFOSAA

33 N-ethylperfluorooctanesulfonamidoa

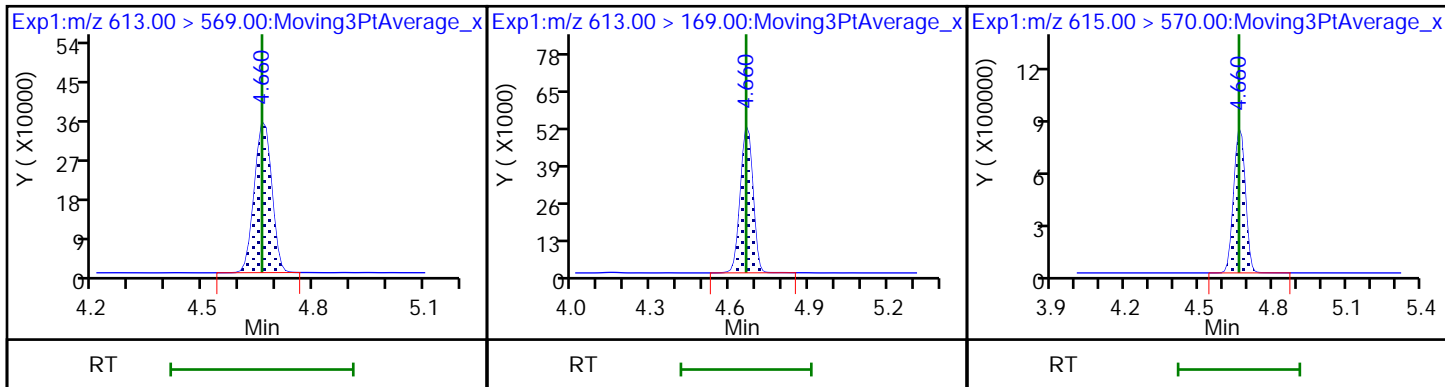
66 11-Chloroeicosafuoro-3-oxaundecan



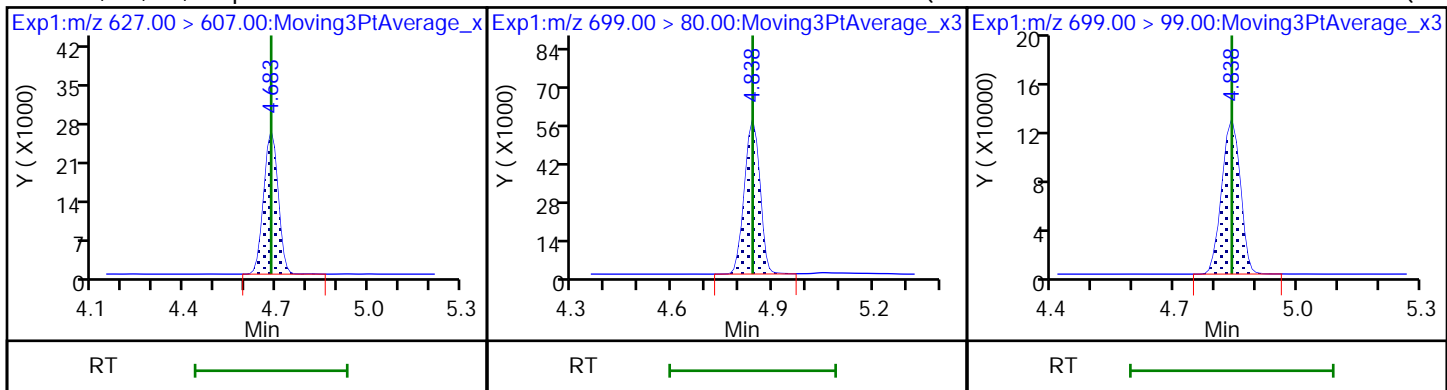
37 Perfluorododecanoic acid

37 Perfluorododecanoic acid

D 36 13C2 PFDoA



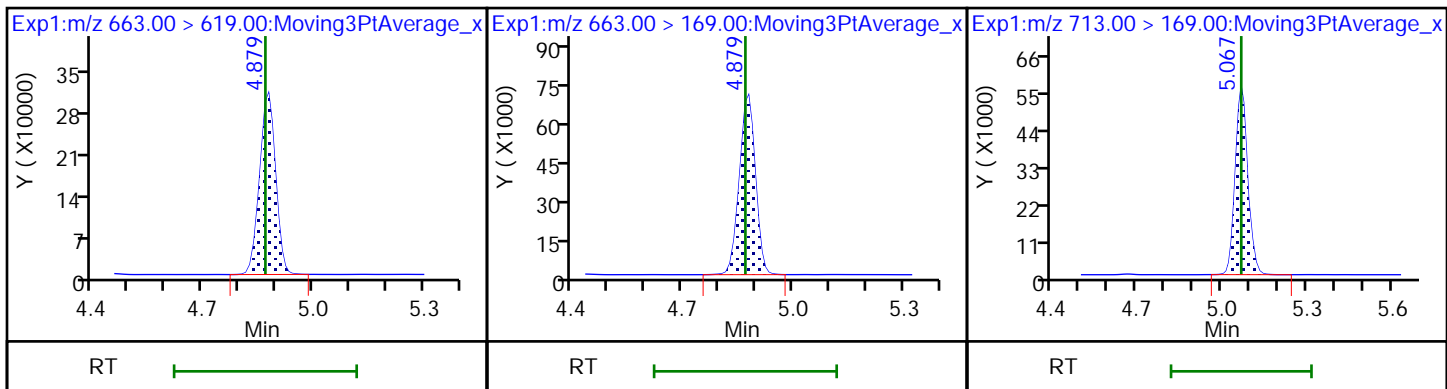
74 1H,1H,2H,2H-perfluorododecanesulfo75 Perfluorododecanesulfonic acid (PF 75 Perfluorododecanesulfonic acid (PF



41 Perfluorotridecanoic acid

41 Perfluorotridecanoic acid

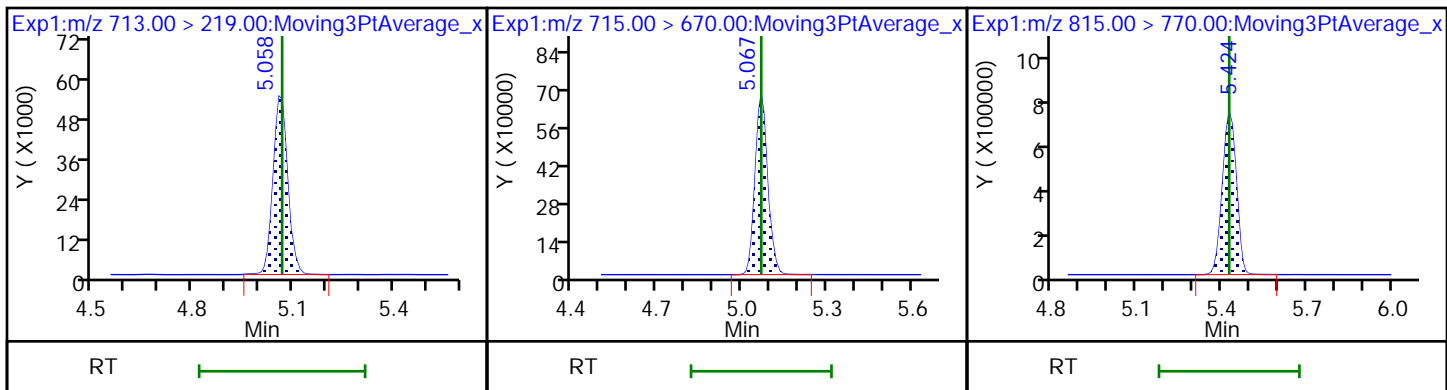
42 Perfluorotetradecanoic acid



42 Perfluorotetradecanoic acid

D 43 13C2 PFTeDA

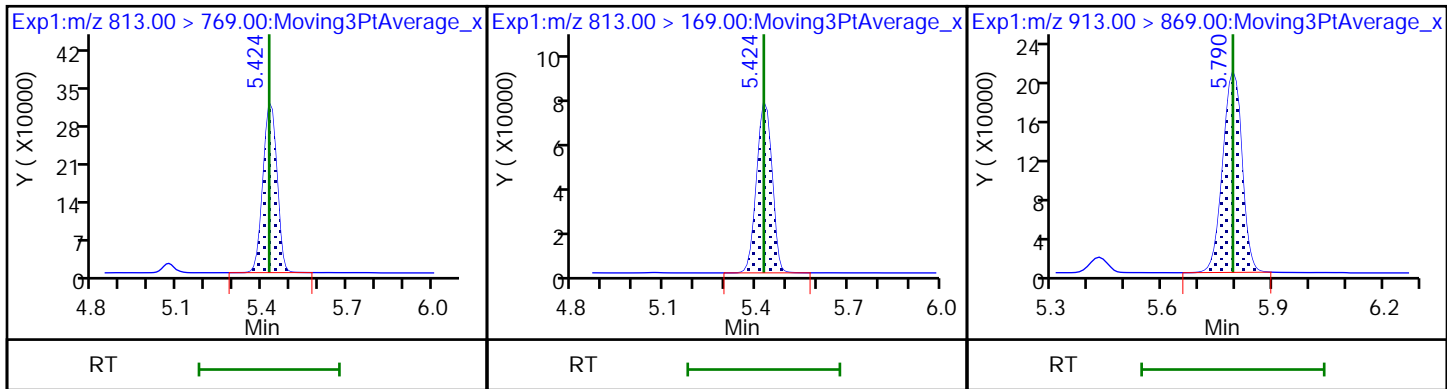
D 44 13C2 PFHxDA



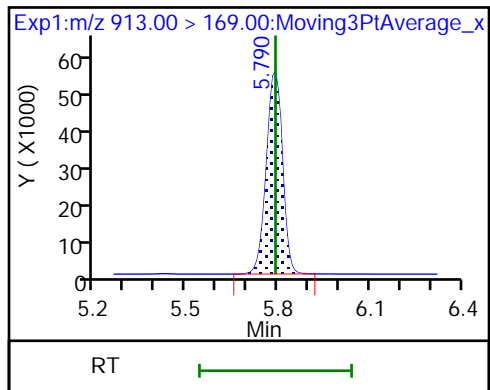
45 Perfluorohexadecanoic acid

45 Perfluorohexadecanoic acid

46 Perfluorooctadecanoic acid



46 Perfluorooctadecanoic acid



Eurofins TestAmerica, Burlington

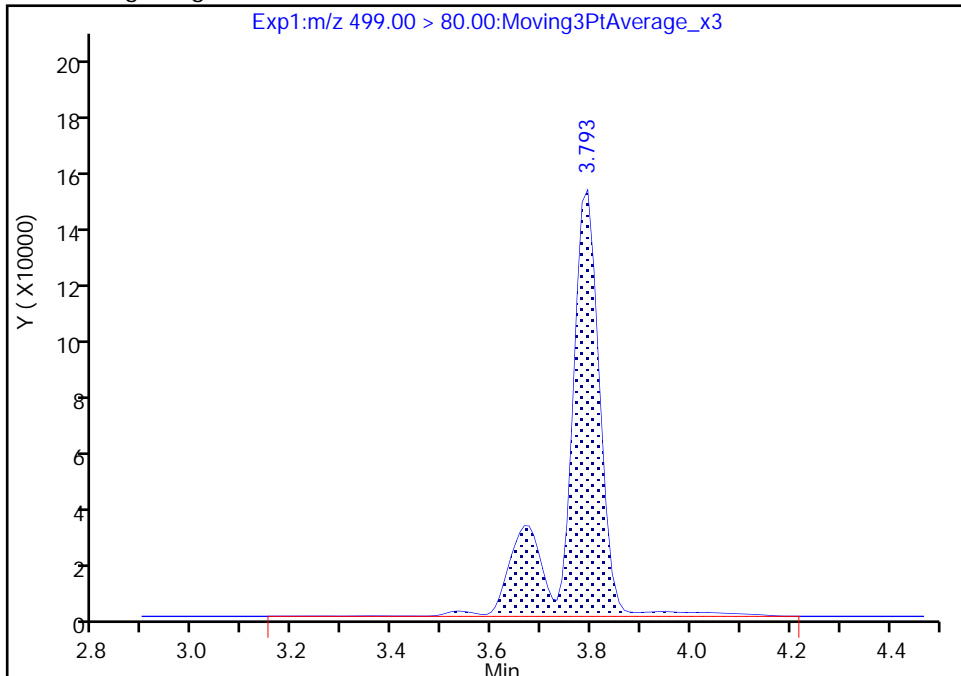
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Injection Date: 22-Oct-2019 20:09:01 Instrument ID: LC812
Lims ID: LCS 200-148550/2-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

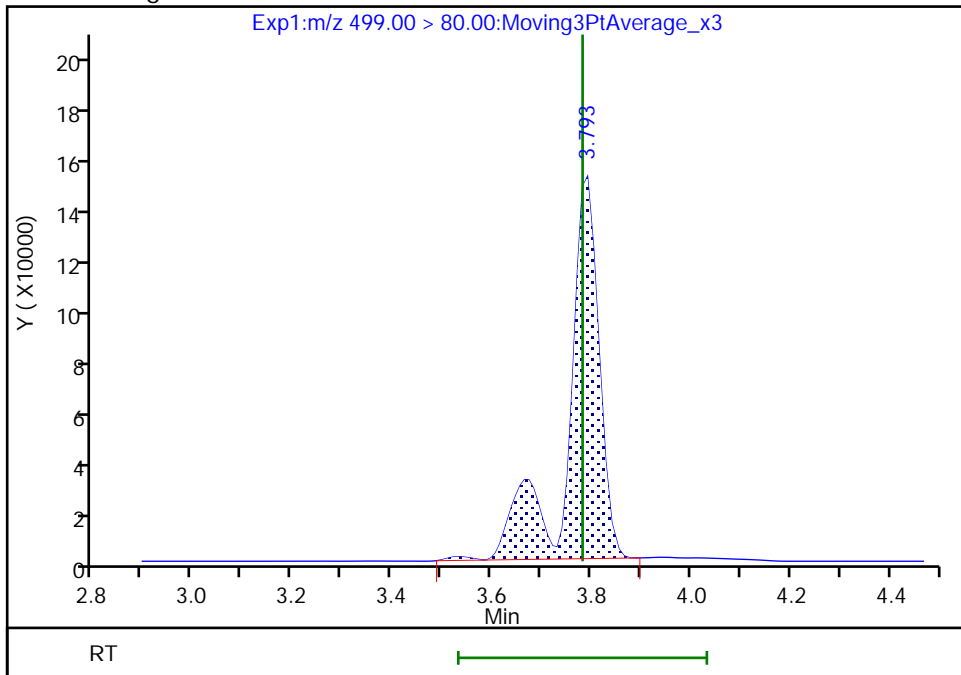
RT: 3.79
Area: 684094
Amount: 1.201887
Amount Units: ng/ml

Processing Integration Results



RT: 3.79
Area: 647938
Amount: 1.138365
Amount Units: ng/ml

Manual Integration Results



Reviewer: kirkm, 23-Oct-2019 10:44:31
Audit Action: Manually Integrated

Eurofins TestAmerica, Burlington

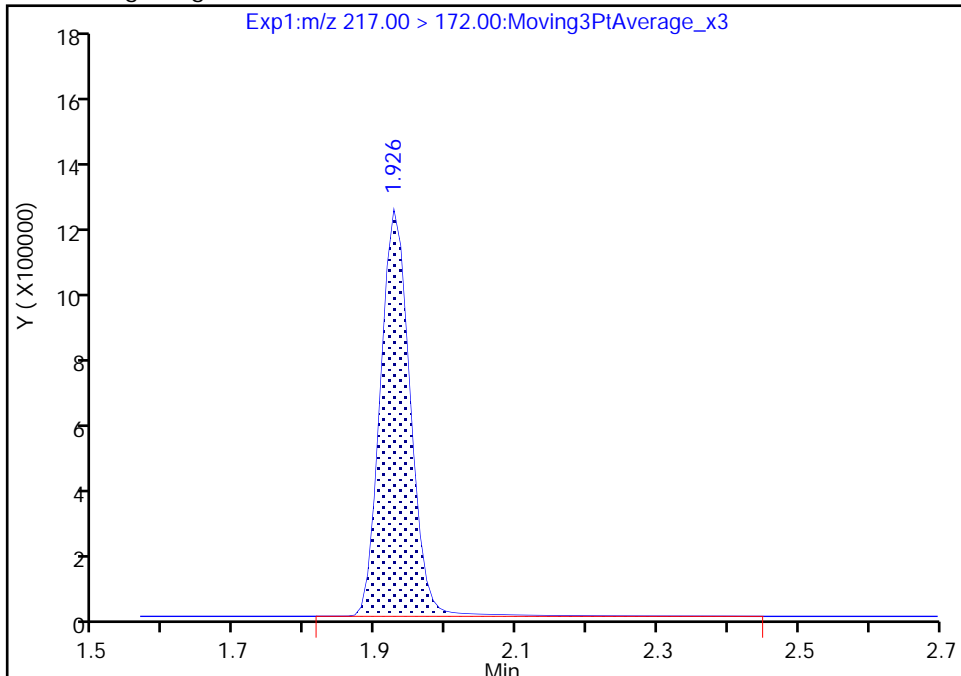
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Lims ID: LCS 200-148550/2-A
Client ID:
Operator ID: lc812tech ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

D 1 13C4 PFBA, CAS: STL00992

Signal: 1

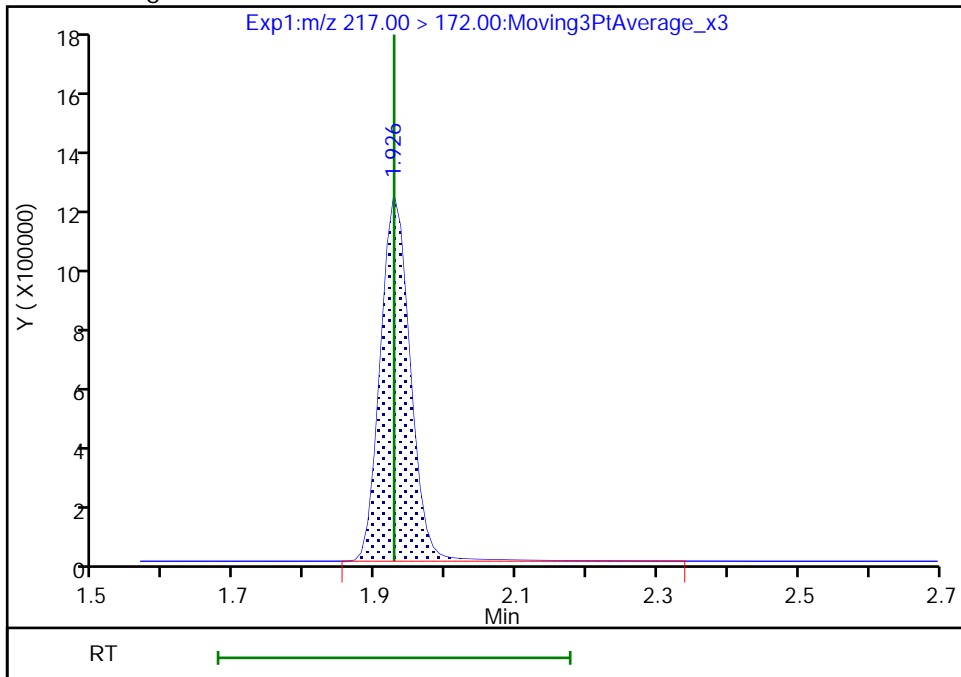
RT: 1.93
Area: 3572453
Amount: 2.223370
Amount Units: ng/ml

Processing Integration Results



RT: 1.93
Area: 3565257
Amount: 2.218892
Amount Units: ng/ml

Manual Integration Results



Reviewer: kirkm, 23-Oct-2019 10:43:19
Audit Action: Manually Integrated

Audit Reason: Baseline
Page 535 of 599

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1
 SDG No.: _____
 Client Sample ID: SPW100919 MS Lab Sample ID: 480-160746-3 MS
 Matrix: Water Lab File ID: SC102219B017.d
 Analysis Method: 537 (modified) Date Collected: 10/09/2019 16:24
 Extraction Method: 3535 Date Extracted: 10/17/2019 10:08
 Sample wt/vol: 290.7 (mL) Date Analyzed: 10/22/2019 22:03
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1
 Injection Volume: 20 (uL) GC Column: C-18 ID: 4.6 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 148772 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	46.6		1.7	0.86
2706-90-3	Perfluoropentanoic acid (PFPeA)	49.2		1.7	0.54
307-24-4	Perfluorohexanoic acid (PFHxA)	47.1		1.7	0.65
375-85-9	Perfluoroheptanoic acid (PFHpA)	47.3		1.7	0.78
335-67-1	Perfluorooctanoic acid (PFOA)	56.1		1.7	0.70
375-95-1	Perfluorononanoic acid (PFNA)	44.3		1.7	0.23
335-76-2	Perfluorodecanoic acid (PFDA)	42.6		1.7	0.66
2058-94-8	Perfluoroundecanoic acid (PFUnA)	41.1		1.7	0.67
307-55-1	Perfluorododecanoic acid (PFDoA)	47.2		1.7	0.51
72629-94-8	Perfluorotridecanoic acid (PFTriA)	44.3		1.7	0.52
376-06-7	Perfluorotetradecanoic acid (PFTeA)	49.3		1.7	0.79
375-73-5	Perfluorobutanesulfonic acid (PFBS)	39.0		1.7	0.42
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	46.4		1.7	0.69
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	44.8		1.7	0.82
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	72.0		1.7	0.52
335-77-3	Perfluorodecanesulfonic acid (PFDS)	46.8		1.7	0.77
754-91-6	Perfluorooctanesulfonamide (PFOSA)	44.1		8.6	8.6
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	42.7		17	1.5
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	51.8		17	1.3
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	36.1		17	4.7
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	35.2		17	2.5

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1
 SDG No.: _____
 Client Sample ID: SPW100919 MS Lab Sample ID: 480-160746-3 MS
 Matrix: Water Lab File ID: SC102219B017.d
 Analysis Method: 537 (modified) Date Collected: 10/09/2019 16:24
 Extraction Method: 3535 Date Extracted: 10/17/2019 10:08
 Sample wt/vol: 290.7 (mL) Date Analyzed: 10/22/2019 22:03
 Con. Extract Vol.: 10 (mL) Dilution Factor: 1
 Injection Volume: 20 (uL) GC Column: C-18 ID: 4.6 (mm)
 % Moisture: _____ GPC Cleanup: (Y/N) N
 Analysis Batch No.: 148772 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	84		50-150
STL01892	13C4 PFHpA	84		50-150
STL00990	13C4 PFOA	91		50-150
STL00991	13C4 PFOS	79		50-150
STL00995	13C5 PFNA	86		50-150
STL00992	13C4 PFBA	71		25-150
STL00993	13C2 PFHxA	82		50-150
STL00996	13C2 PFDA	81		50-150
STL00997	13C2 PFUnA	78		50-150
STL00998	13C2 PFDoA	88		50-150
STL01056	13C8 FOSA	64		25-150
STL01893	13C5 PFPeA	79		25-150
STL02116	13C2 PFTeDA	80		50-150
STL02118	d3-NMeFOSAA	78		50-150
STL02117	d5-NEtFOSAA	76		50-150
STL02279	M2-6:2 FTS	102		25-150
STL02280	M2-8:2 FTS	93		25-150

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B017.d
 Lims ID: 480-160746-C-3-B MS
 Client ID: SPW100919
 Sample Type: MS
 Inject. Date: 22-Oct-2019 22:03:53 ALS Bottle#: 17 Worklist Smp#: 17
 Injection Vol: 20.0 ul Dil. Factor: 1.0000
 Sample Info: 480-160746-C-3-B MS
 Misc. Info.: 200-0038369-017 Plate: 1 Rack: 4
 Operator ID: lc812tech Instrument ID: LC812
 Method: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\PFC_LC812.m
 Limit Group: LC_PFC_ICAL
 Last Update: 28-Oct-2019 13:09:04 Calib Date: 24-Sep-2019 18:56:37
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA015.d
 Column 1 : C-18 (4.60 mm) Det: EXP1
 Process Host: CTX1017

First Level Reviewer: manopan Date: 24-Oct-2019 10:21:30
 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	1.917	1.926	-0.009	0.562	2933435	1.76	70.5	7909	
2 Perfluorobutanoic acid										M
212.90 > 169.00	1.917	1.926	-0.009	1.000	1411502	1.35		135	129	M
D 3 13C5 PFPeA	267.90 > 223.00	2.271	2.285	-0.014	0.665	2611579	1.98	79.4	2049	
4 Perfluoropentanoic acid	262.90 > 219.00	2.271	2.285	-0.014	1.000	1386549	1.43	143	21.1	
5 Perfluorobutanesulfonic acid										M
298.90 > 80.00	2.298	2.298	0.0	0.758	1360497	1.13	Target=2.04	128	47.2	M
298.90 > 99.00	2.298	2.298	0.0	0.758	700289		1.94(1.02-3.05)		105	M
D 47 13C3 PFBS	301.90 > 80.00	2.460	2.325	0.135	0.721	7766	NC	0.0	101	
D 60 M2-4:2 FTS	329.00 > 81.00	2.611	2.623	-0.012	0.765	269918	1.98	85.0	81.1	
61 1H,1H,2H,2H-perfluorohexanesulfoni	327.00 > 307.00	2.611	2.623	-0.012	1.000	262781	1.14	122	1135	
6 Perfluorohexanoic acid	313.00 > 269.00	2.660	2.661	-0.001	1.000	1547452	1.37	Target=12.90	137	83.2
313.00 > 119.00	2.660	2.661	-0.001	1.000	122589		12.62(6.45-19.36)		123	
D 7 13C2 PFHxA	315.00 > 270.00	2.660	2.661	-0.001	0.779	2865636	2.05	81.9	5364	
70 Perfluoropentanesulfonic acid										M
349.00 > 80.00	2.660	2.673	-0.013	0.877	1232510	1.19	Target=3.01	127	216	M
349.00 > 99.00	2.660	2.673	-0.013	0.877	411996		2.99(1.51-4.52)		129	M
67 Perfluoro(2-propoxypropanoic) acid	329.10 > 285.00	2.768	2.776	-0.008	1.000	191586	1.42	142	58.1	

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	0.811	118139	1.69		67.7	547	
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.032	3.044	-0.012	1.000	1148423	1.35	Target=3.78	148	162	M
399.00 > 99.00	3.032	3.044	-0.012	1.000	318445		3.61(1.89-5.67)		198	M
D 11 18O2 PFHxS										
403.00 > 84.00	3.032	3.044	-0.012	0.888	2082242	1.99		84.3	6996	
D 9 13C4 PFHpA										
367.00 > 322.00	3.044	3.044	0.0	0.892	2829007	2.09		83.5	5405	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.044	3.044	0.0	1.000	1389158	1.37	Target=3.54	137	124	M
363.00 > 169.00	3.044	3.044	0.0	1.000	379408		3.66(1.77-5.31)		518	M
77 DONA										
377.00 > 251.00	3.078	3.090	-0.012	0.814	2693173	1.17	Target=2.56	124	3150	
377.00 > 85.00	3.078	3.090	-0.012	0.814	1084496		2.48(1.28-3.84)		1058	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.405	3.413	-0.008	0.900	813456	1.30	Target=5.80	137	429	
449.00 > 99.00	3.405	3.413	-0.008	0.900	153825		5.29(2.90-8.71)		233	
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.405	3.413	-0.008	1.000	229038	1.05		111	1336	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.405	3.413	-0.008	0.998	411467	2.43		102	368	
* 62 13C2 PFOA										
415.00 > 370.00	3.413	3.422	-0.009		3466955	2.50			7069	
D 14 13C4 PFOA										
417.00 > 372.00	3.413	3.422	-0.009	1.000	3116759	2.26		90.5	5926	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.413	3.422	-0.009	1.000	1918506	1.63	Target=2.61	163	233	M
413.00 > 169.00	3.413	3.422	-0.009	1.000	829605		2.31(1.30-3.91)		1408	M
D 18 13C4 PFOS										
503.00 > 80.00	3.782	3.783	-0.001	1.108	1349071	1.90		79.5	1640	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.782	3.783	-0.001	1.000	1067843	2.09	Target=4.93	225	349	M
499.00 > 99.00	3.772	3.783	-0.011	0.997	244317		4.37(2.47-7.40)		88.1	M
D 19 13C5 PFNA										
468.00 > 423.00	3.805	3.805	0.0	1.115	2607001	2.14		85.6	6179	
20 Perfluorononanoic acid										
463.00 > 419.00	3.805	3.805	0.0	1.000	1281605	1.29	Target=7.89	129	294	
463.00 > 169.00	3.805	3.805	0.0	1.000	162409		7.89(3.95-11.84)		495	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.962	3.973	-0.011	1.047	967410	1.07		114	2949	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.104	4.117	-0.013	1.085	534834	1.21	Target=2.60	126	1169	
549.00 > 99.00	4.104	4.117	-0.013	1.085	209018		2.56(1.30-3.90)		627	
24 Perfluorodecanoic acid										
513.00 > 469.00	4.141	4.141	0.0	1.000	1127288	1.24	Target=8.57	124	548	
513.00 > 169.00	4.141	4.141	0.0	1.000	141877		7.95(4.29-12.86)		1198	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 23 13C2 PFDA										
515.00 > 470.00	4.141	4.141	0.0	1.213	2458322	2.03		81.0	6577	
25 1H,1H,2H,2H-perfluorodecanesulfonyl										
527.00 > 507.00	4.141	4.153	-0.012	1.000	138520	1.02		107	1886	
D 26 M2-8:2 FTS										
529.00 > 81.00	4.141	4.153	-0.012	1.213	414419	2.24		93.4	900	
22 Perfluorooctanesulfonamide										
498.00 > 78.00	4.207	4.207	0.0	1.000	1042426	1.28		128	2399	
D 21 13C8 FOSA										
506.00 > 78.00	4.207	4.207	0.0	1.233	2216203	1.61		64.3	3447	
35 MeFOSA										
512.00 > 169.00	4.293	4.283	0.010		2038	NR		0.0	10.7	
D 27 d3-NMeFOSAA										
573.00 > 419.00	4.283	4.294	-0.011	1.255	228177	1.94		77.6	1347	
28 N-methylperfluorooctanesulfonamide										
570.00 > 419.00	4.293	4.294	-0.001	1.002	80678	1.24		124	192	M
29 Perfluorodecanesulfonic acid										
599.00 > 80.00	4.386	4.397	-0.011	1.159	463436	1.36	Target=2.56	141	1762	
599.00 > 99.00	4.386	4.397	-0.011	1.159	180431		2.57(1.28-3.84)		1047	
31 Perfluoroundecanoic acid										
563.00 > 519.00	4.420	4.420	0.0	1.000	847657	1.19	Target=6.97	119	568	
563.00 > 169.00	4.420	4.420	0.0	1.000	131411		6.45(3.48-10.45)		1751	
D 30 13C2 PFUnA										
565.00 > 520.00	4.420	4.420	0.0	1.295	2120400	1.95		78.0	4527	
D 32 d5-NEtFOSAA										
589.00 > 419.00	4.420	4.431	-0.011	1.295	241236	1.89		75.7	1211	
33 N-ethylperfluorooctanesulfonamide										
584.00 > 419.00	4.431	4.431	0.0	1.003	80347	1.51		151	655	M
66 11-Chloroeicosafuoro-3-oxaundecanoic acid										
631.00 > 451.00	4.510	4.524	-0.014	1.192	1176462	1.04		111	6448	
37 Perfluorododecanoic acid										
613.00 > 569.00	4.660	4.660	0.0	1.003	1243427	1.37	Target=7.06	137	223	
613.00 > 169.00	4.660	4.660	0.0	1.003	190779		6.52(3.53-10.59)		1462	
D 36 13C2 PFDoA										
615.00 > 570.00	4.649	4.660	-0.011	1.362	2561899	2.19		87.5	9217	
74 1H,1H,2H,2H-perfluorododecanesulfonyl										
627.00 > 607.00	4.671	4.683	-0.012	1.128	90731	1.23		127	2150	
75 Perfluorododecanesulfonic acid (PF)										
699.00 > 80.00	4.827	4.839	-0.012	1.276	217627	1.49	Target=0.47	154	453	
699.00 > 99.00	4.827	4.839	-0.012	1.276	430381		0.51(0.23-0.70)		3438	
41 Perfluorotridecanoic acid										
663.00 > 619.00	4.870	4.870	0.0	1.048	945459	1.29	Target=4.87	129	196	
663.00 > 169.00	4.870	4.870	0.0	1.048	228560		4.14(2.43-7.30)		2564	
42 Perfluorotetradecanoic acid										
713.00 > 169.00	5.058	5.067	-0.009	1.000	175065	1.43	Target=1.09	143	2289	
713.00 > 219.00	5.058	5.067	-0.009	1.000	172024		1.02(0.54-1.63)		2358	

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	5.058	5.067	-0.009	1.482	2100598	2.00		80.1	10995	
D 44 13C2 PFHxDA										
815.00 > 770.00	5.413	5.424	-0.011	1.586	2368867	2.25		89.9	7335	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.424	5.424	0.0	1.002	1040995	1.31	Target=4.33	131	182	
813.00 > 169.00	5.413	5.424	-0.011	1.000	276833		3.76(2.16-6.49)		1849	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.782	5.790	-0.008	1.068	802749	1.15	Target=4.09	115	195	
913.00 > 169.00	5.782	5.790	-0.008	1.068	215493		3.73(2.05-6.14)		2266	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

NC - Not Calibrated

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B017.d

Injection Date: 22-Oct-2019 22:03:53 Instrument ID: LC812

Lims ID: 480-160746-C-3-B MS

Client ID: SPW100919

Operator ID: lc812tech

ALS Bottle#: 17 Worklist Smp#: 17

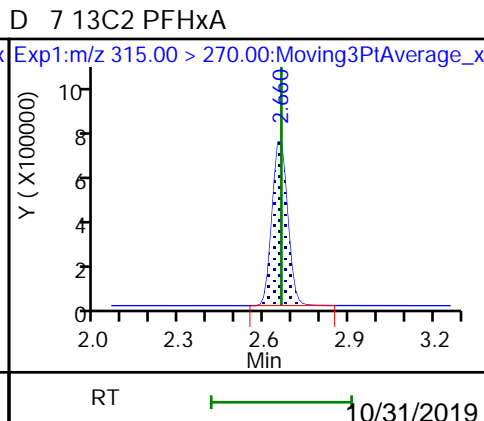
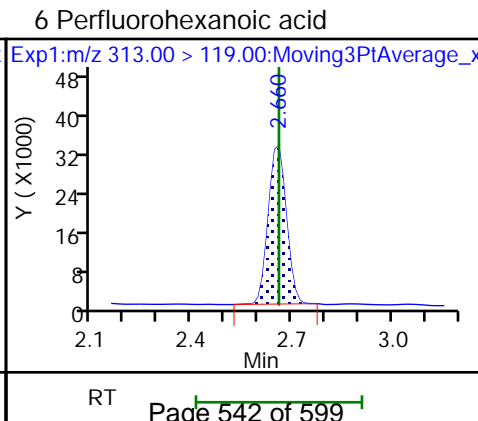
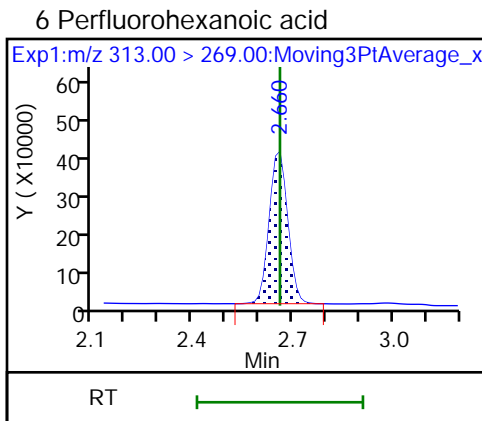
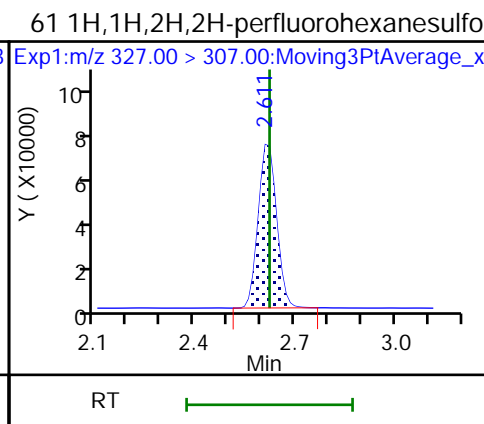
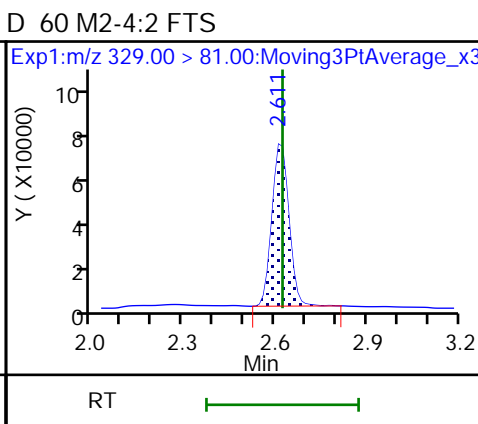
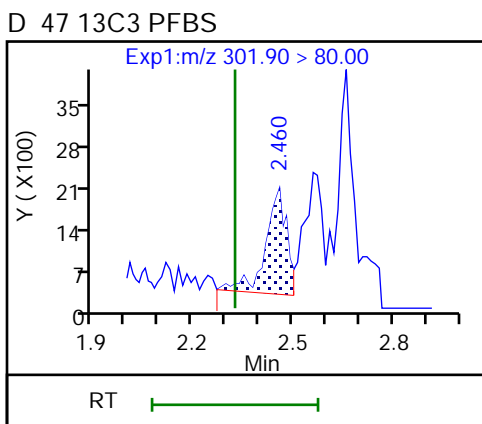
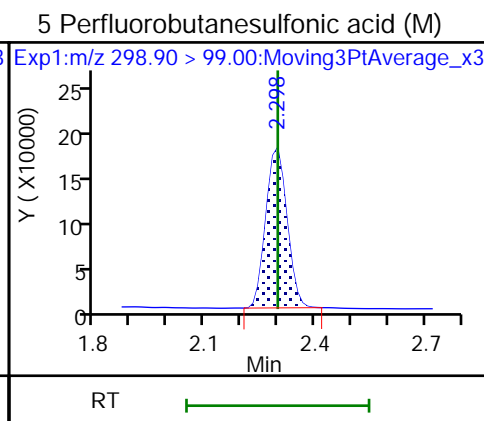
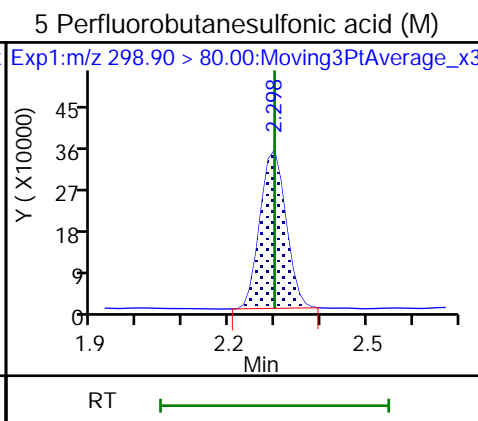
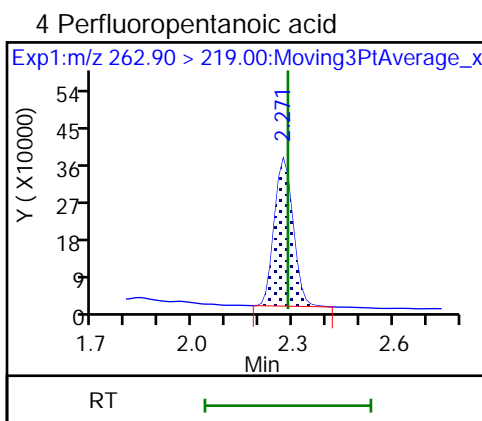
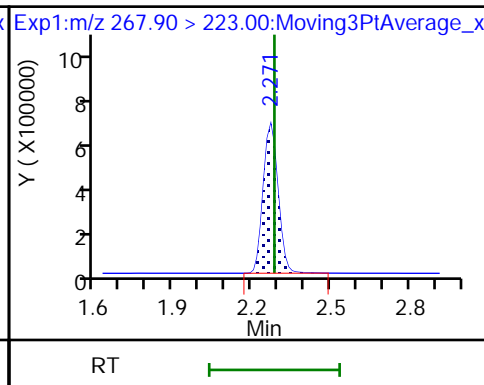
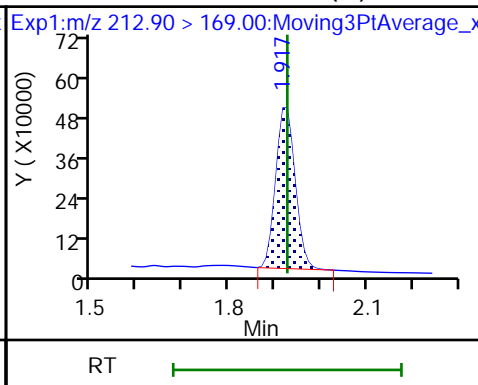
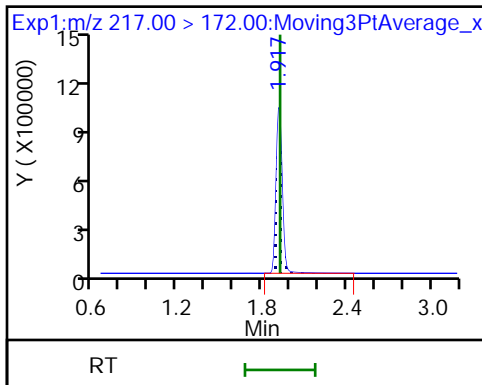
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Method: PFC_LC812 Limit Group: LC_PFC_ICAL

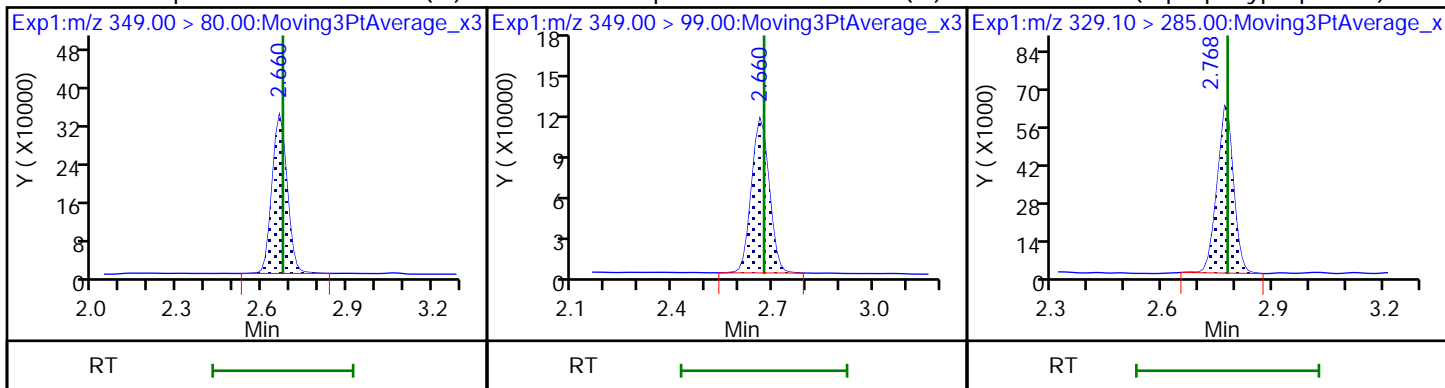
D 1 13C4 PFBA

2 Perfluorobutanoic acid (M)

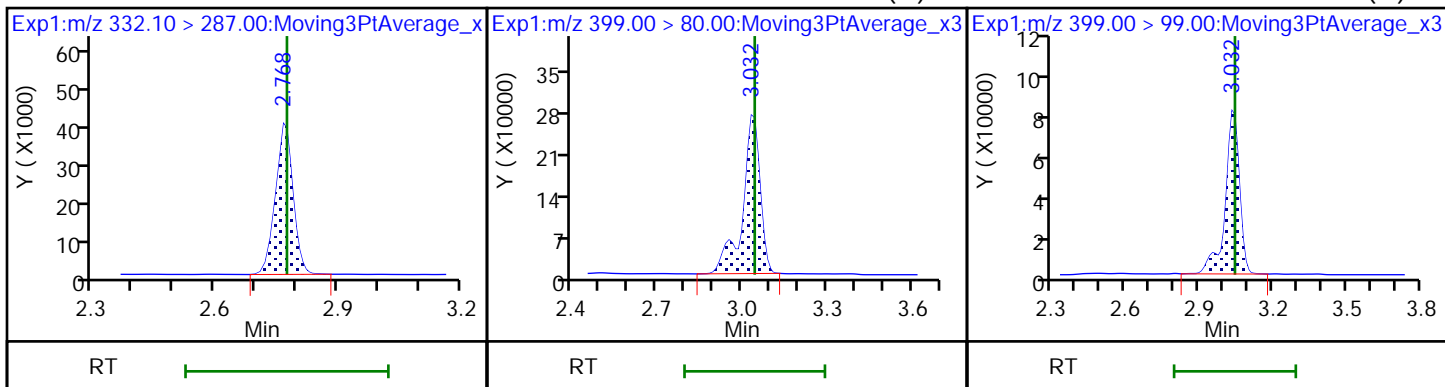
D 3 13C5 PFPeA



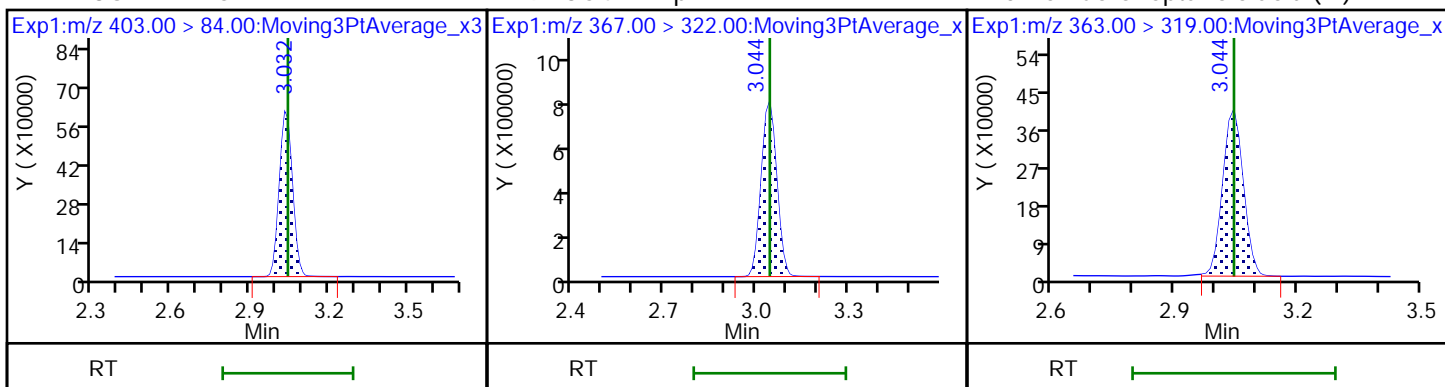
70 Perfluoropentanesulfonic acid (M) 70 Perfluoropentanesulfonic acid (M) 67 Perfluoro(2-propoxypropanoic) acid



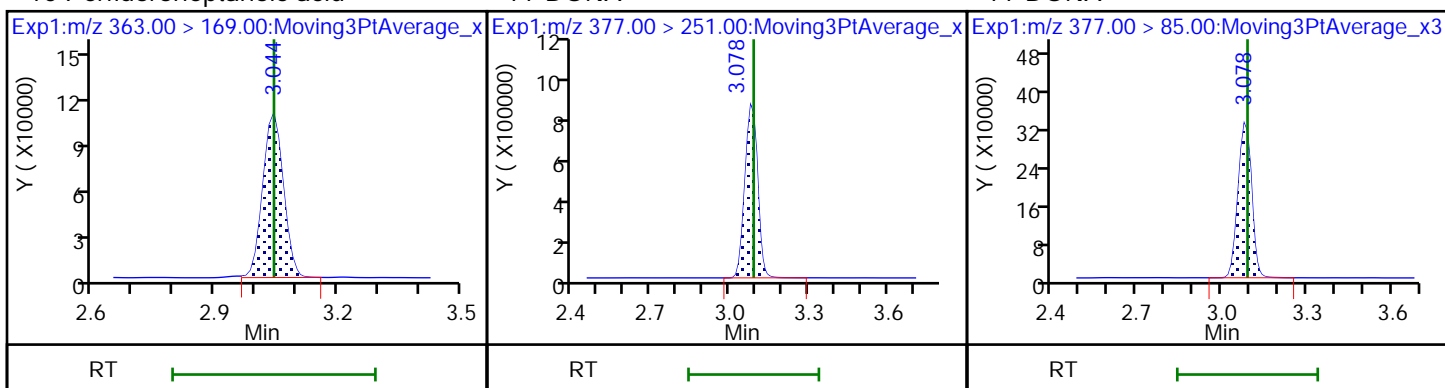
D 64 13C3 HFPO-DA 8 Perfluorohexanesulfonic acid (M) 8 Perfluorohexanesulfonic acid (M)

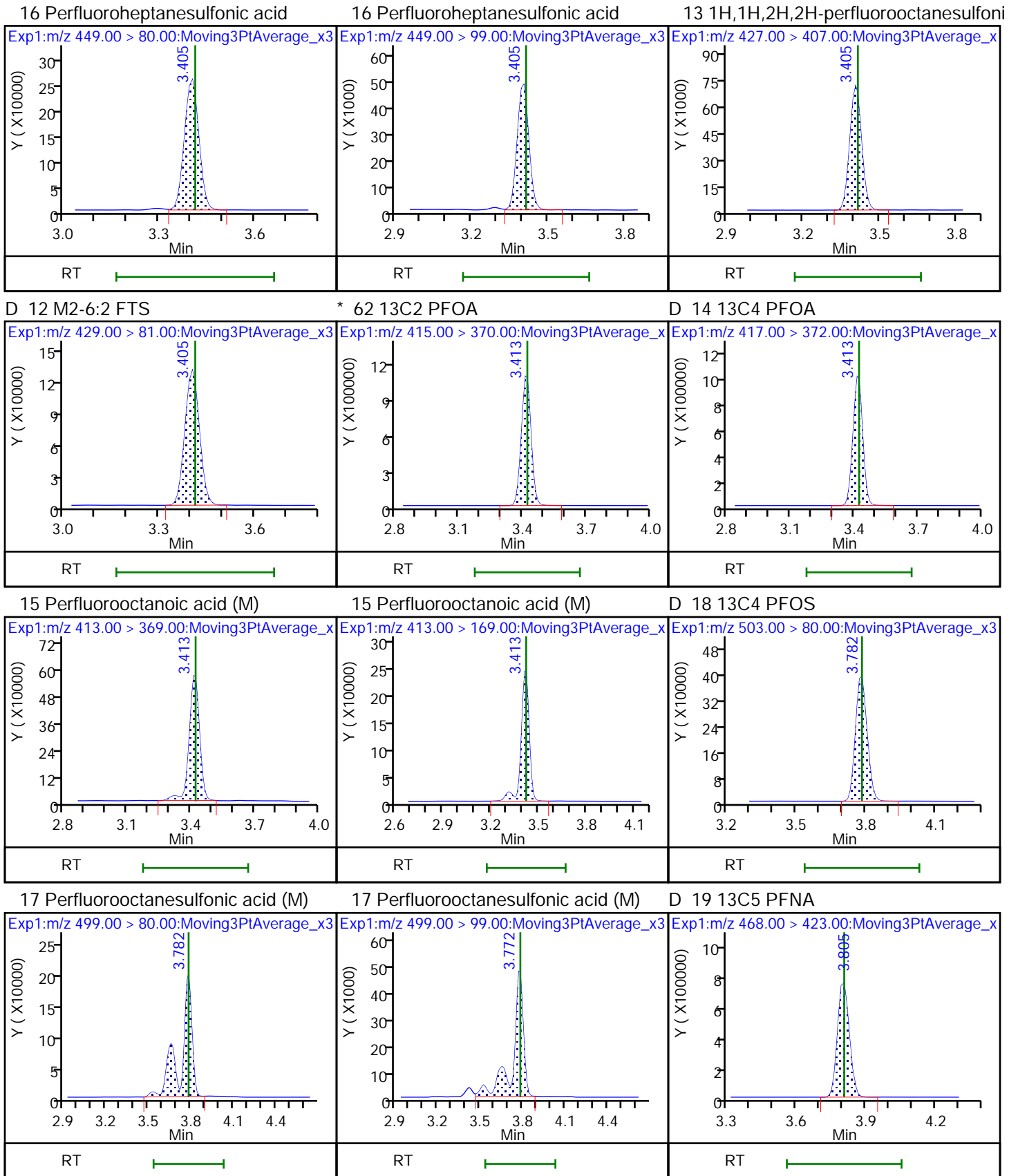


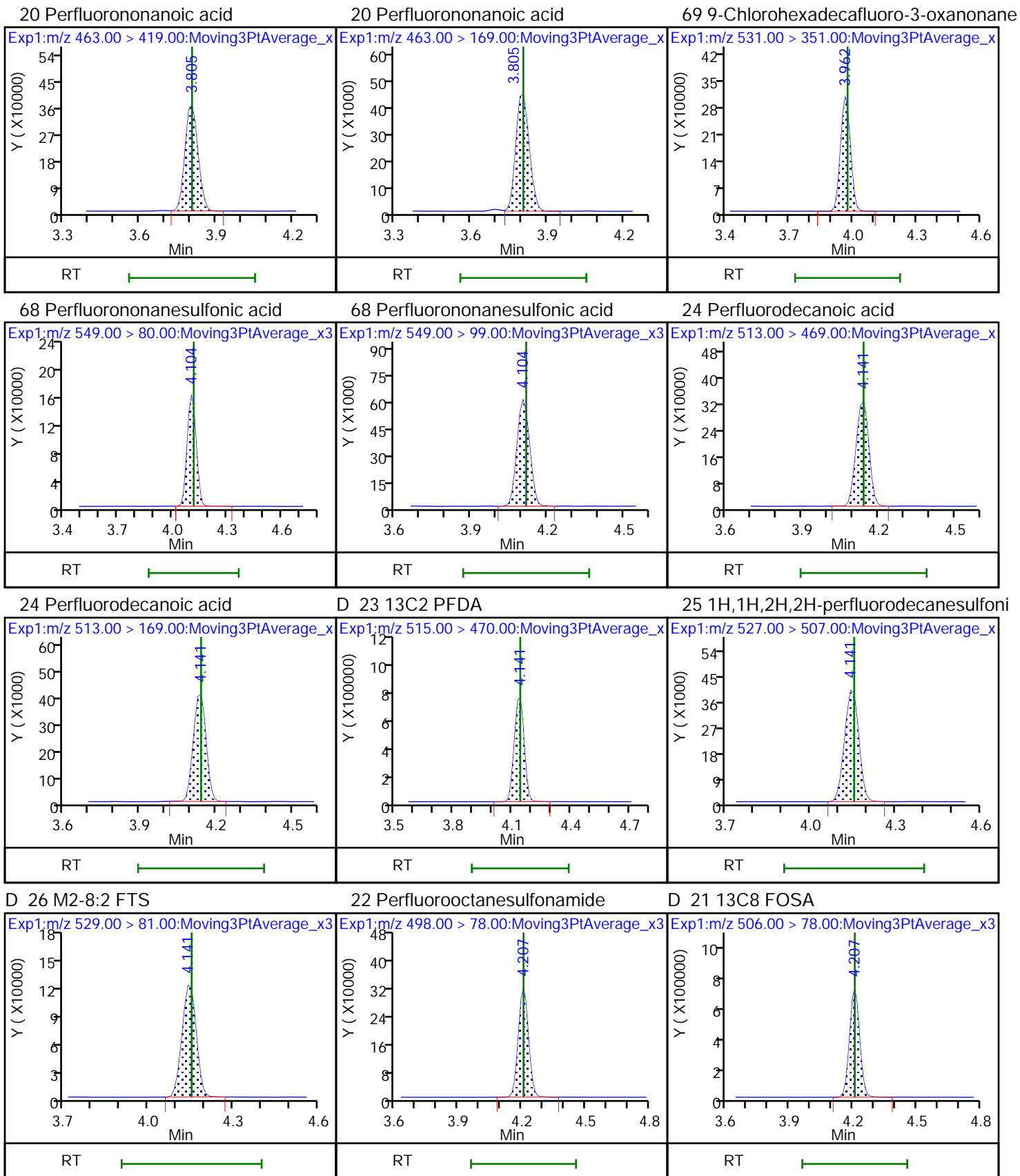
D 11 18O2 PFHxS D 9 13C4 PFHpA 10 Perfluoroheptanoic acid (M)

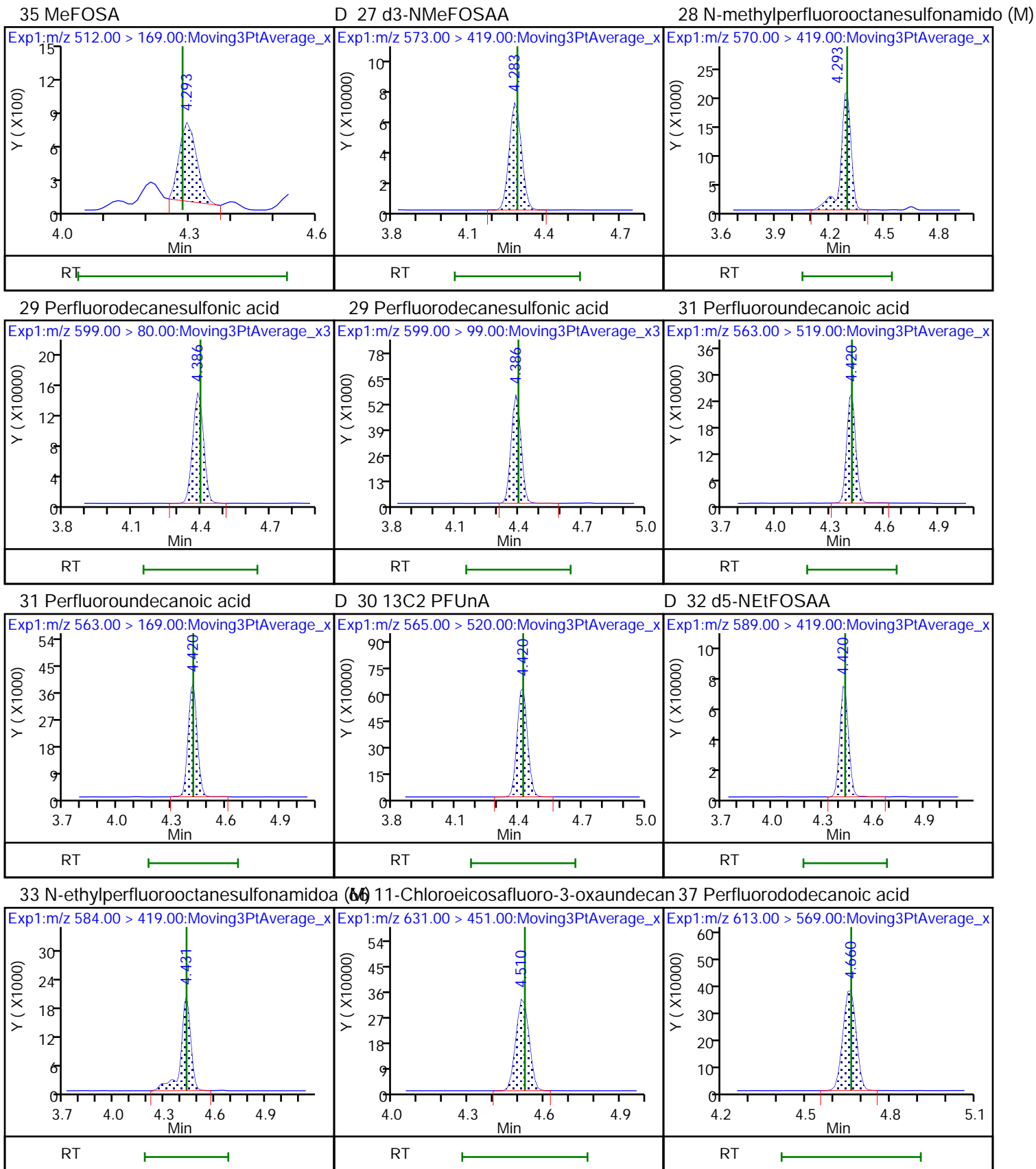


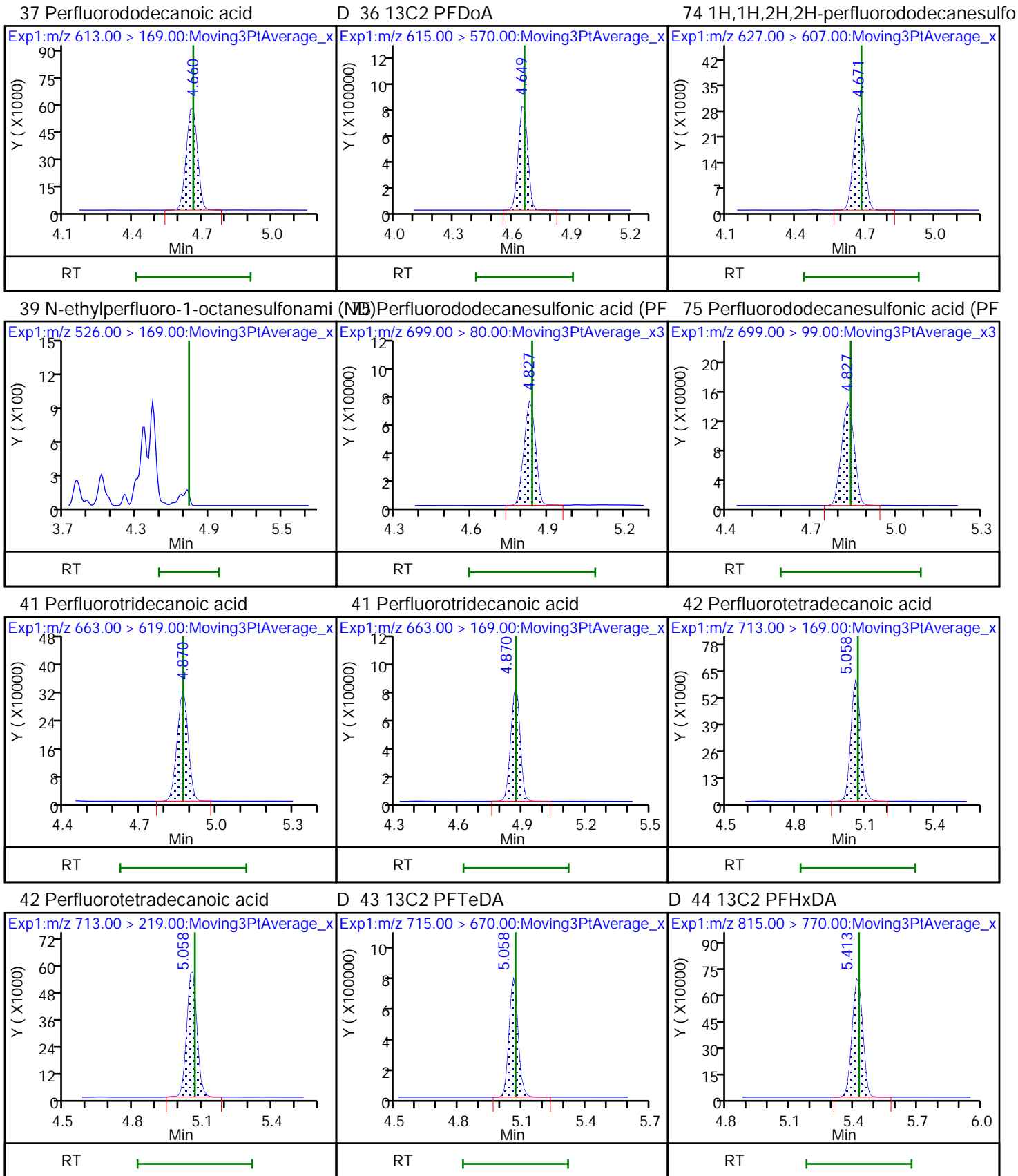
10 Perfluoroheptanoic acid 77 DONA 77 DONA







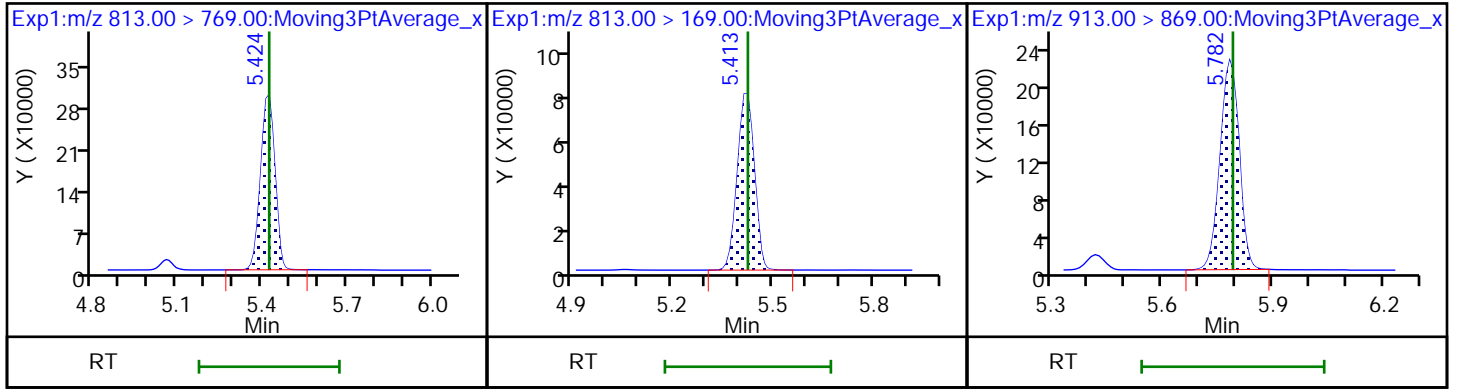




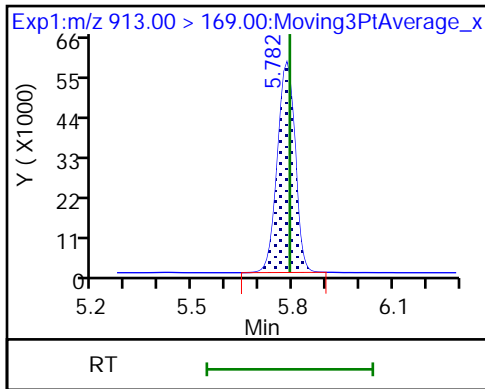
45 Perfluorohexadecanoic acid

45 Perfluorohexadecanoic acid

46 Perfluorooctadecanoic acid



46 Perfluorooctadecanoic acid



Eurofins TestAmerica, Burlington

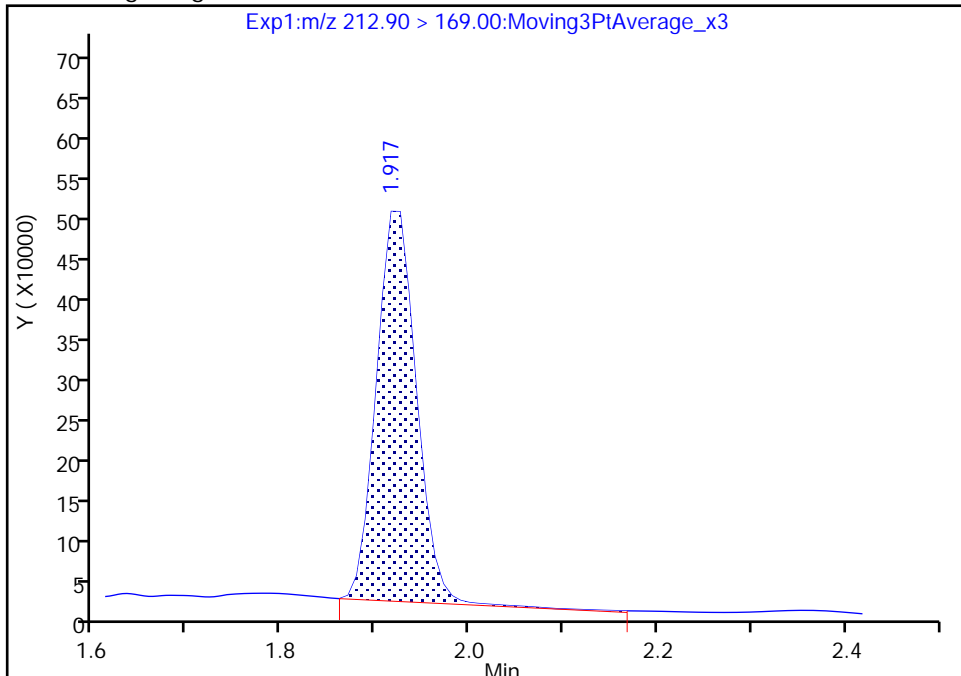
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B017.d
Injection Date: 22-Oct-2019 22:03:53 Instrument ID: LC812
Lims ID: 480-160746-C-3-B MS
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

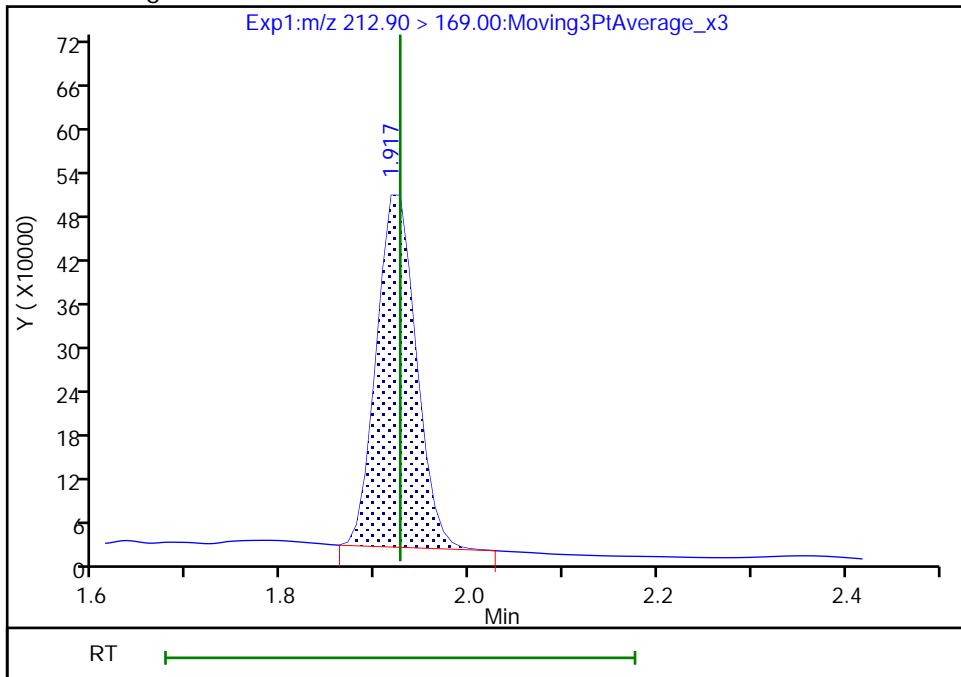
RT: 1.92
Area: 1429703
Amount: 1.372305
Amount Units: ng/ml

Processing Integration Results



RT: 1.92
Area: 1411502
Amount: 1.354835
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 10:17:28
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

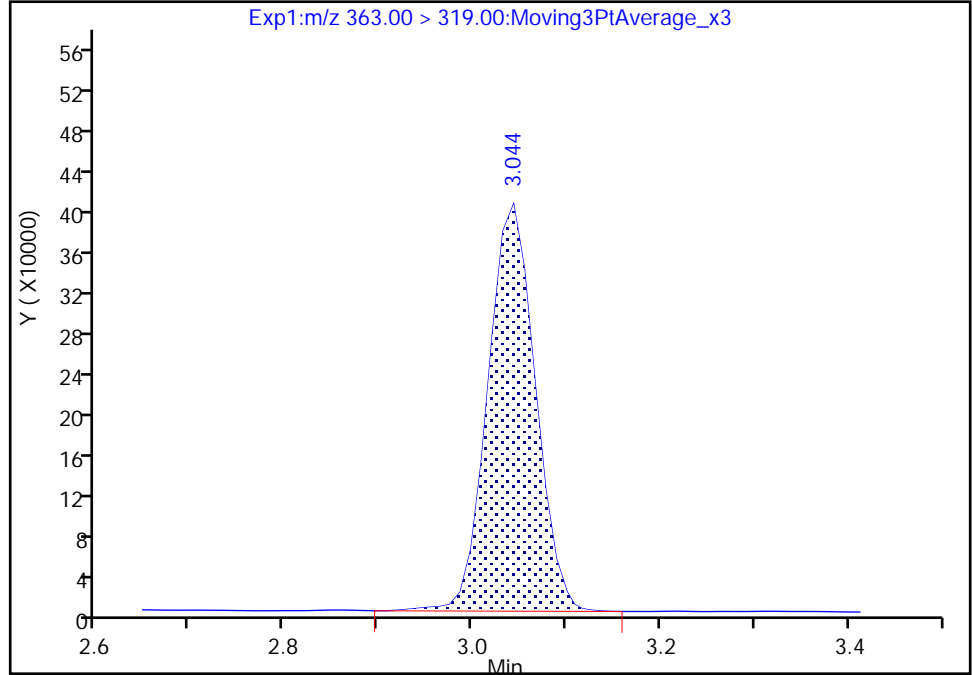
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B017.d
Injection Date: 22-Oct-2019 22:03:53 Instrument ID: LC812
Lims ID: 480-160746-C-3-B MS
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

10 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

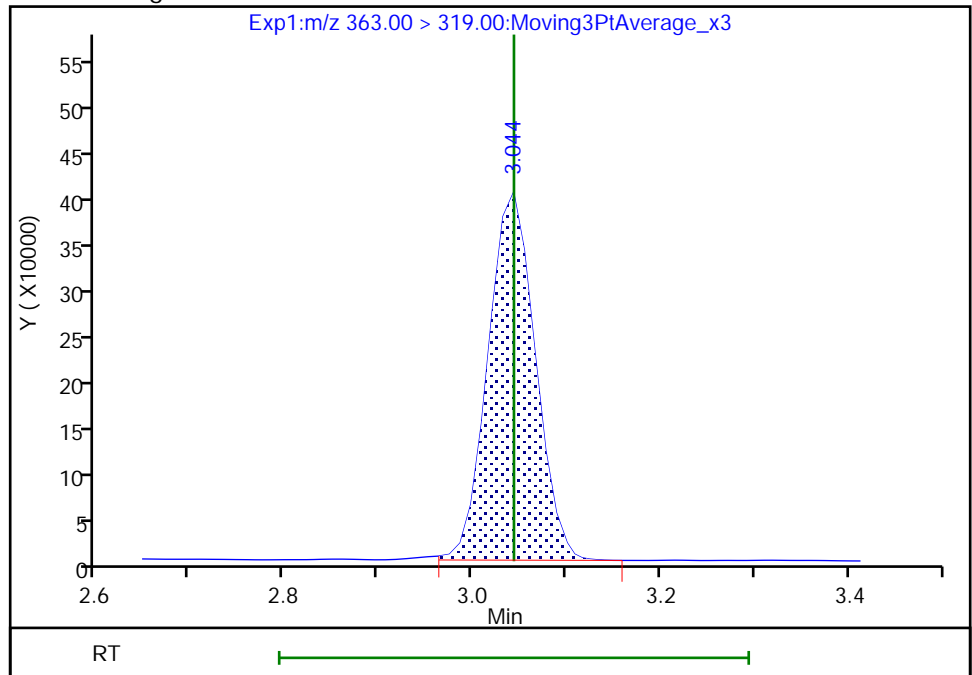
RT: 3.04
Area: 1396017
Amount: 1.380911
Amount Units: ng/ml

Processing Integration Results



RT: 3.04
Area: 1389158
Amount: 1.374127
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 10:18:52
Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

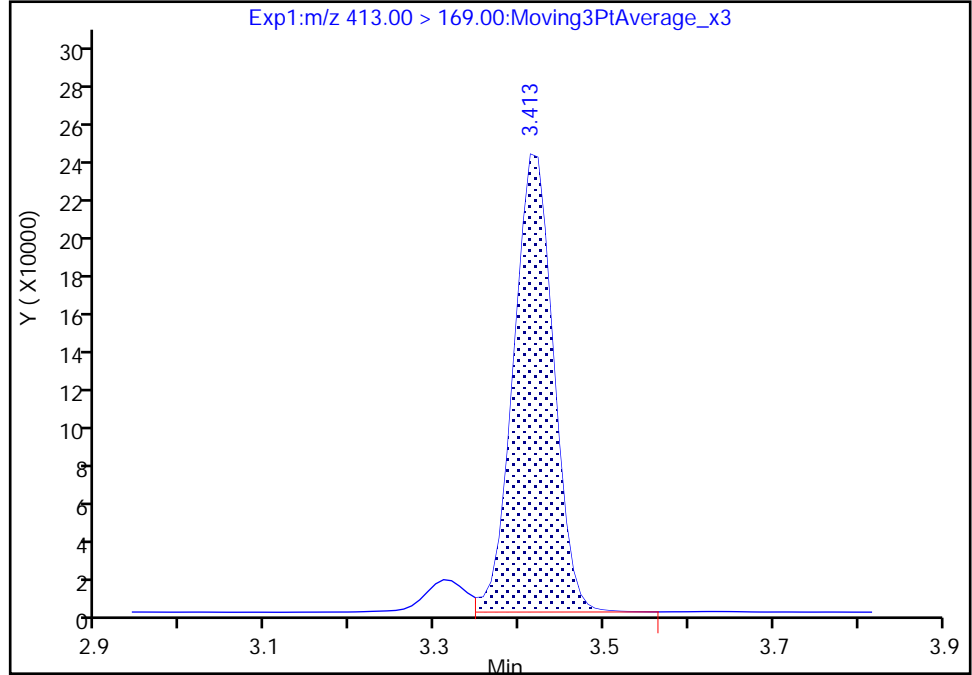
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B017.d
Injection Date: 22-Oct-2019 22:03:53 Instrument ID: LC812
Lims ID: 480-160746-C-3-B MS
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

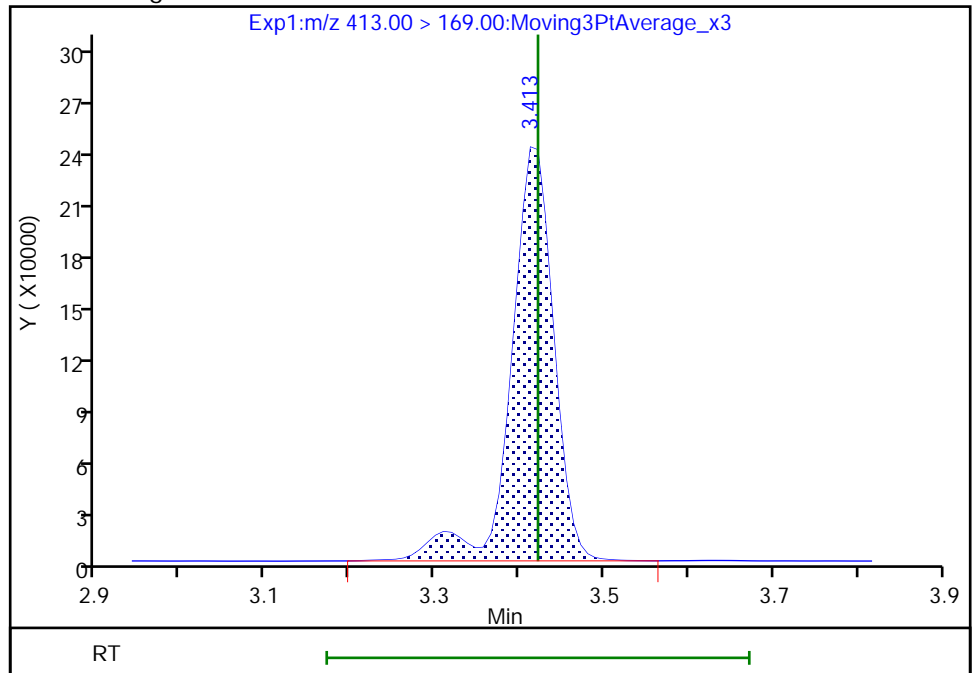
RT: 3.41
Area: 774428
Amount: 1.648863
Amount Units: ng/ml

Processing Integration Results



RT: 3.41
Area: 829605
Amount: 1.631586
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 10:19:29
Audit Action: Manually Integrated

Audit Reason: Isomers
Page 551 of 599

Eurofins TestAmerica, Burlington

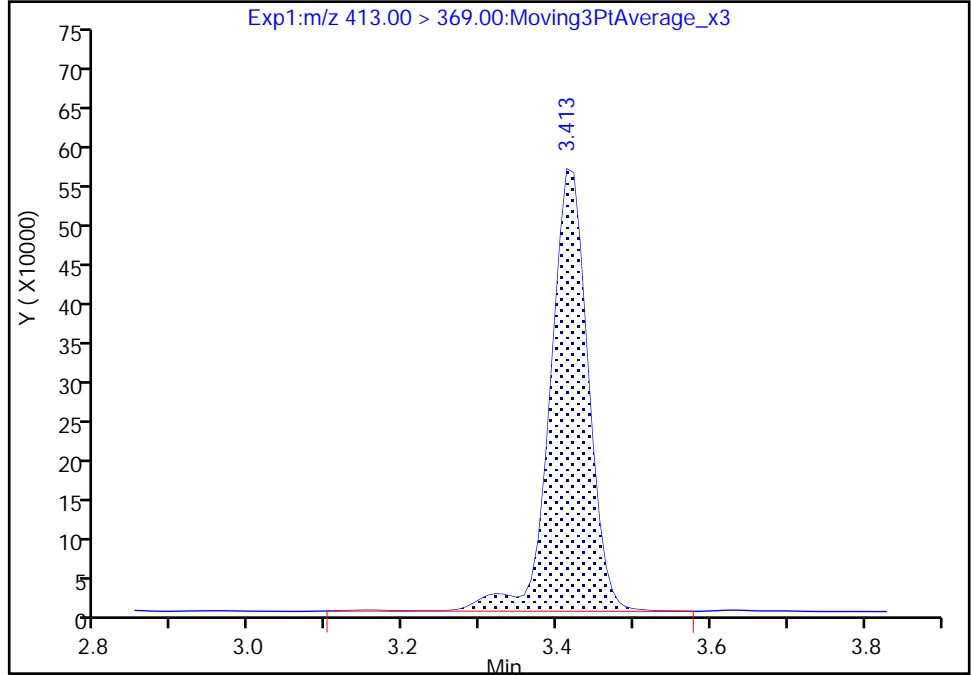
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B017.d
Injection Date: 22-Oct-2019 22:03:53 Instrument ID: LC812
Lims ID: 480-160746-C-3-B MS
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

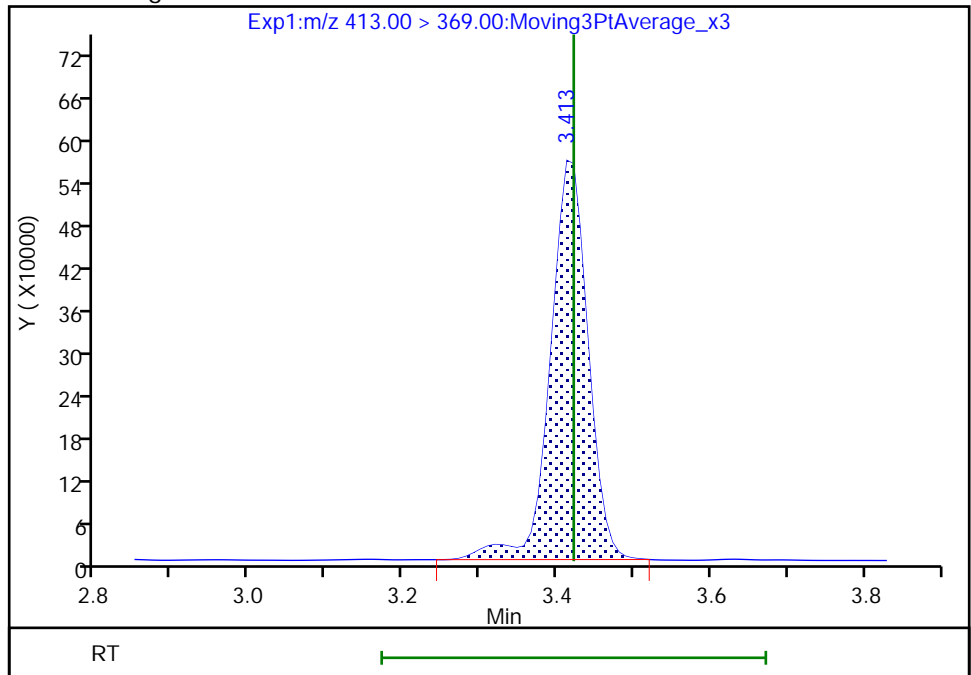
RT: 3.41
Area: 1938551
Amount: 1.648863
Amount Units: ng/ml

Processing Integration Results



RT: 3.41
Area: 1918506
Amount: 1.631586
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 10:19:38

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

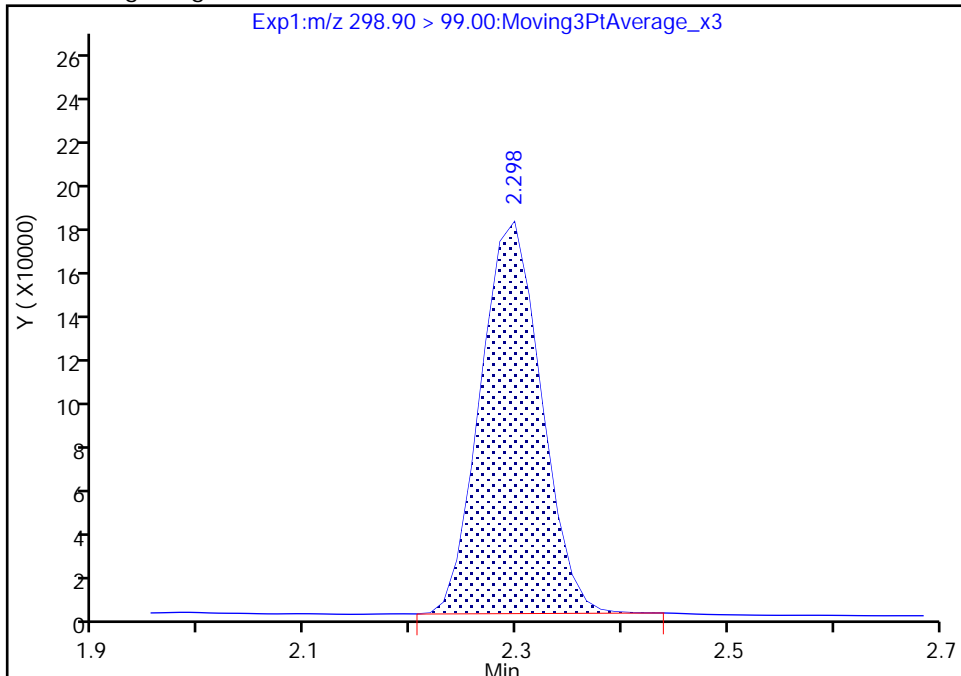
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B017.d
Injection Date: 22-Oct-2019 22:03:53 Instrument ID: LC812
Lims ID: 480-160746-C-3-B MS
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

5 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 2

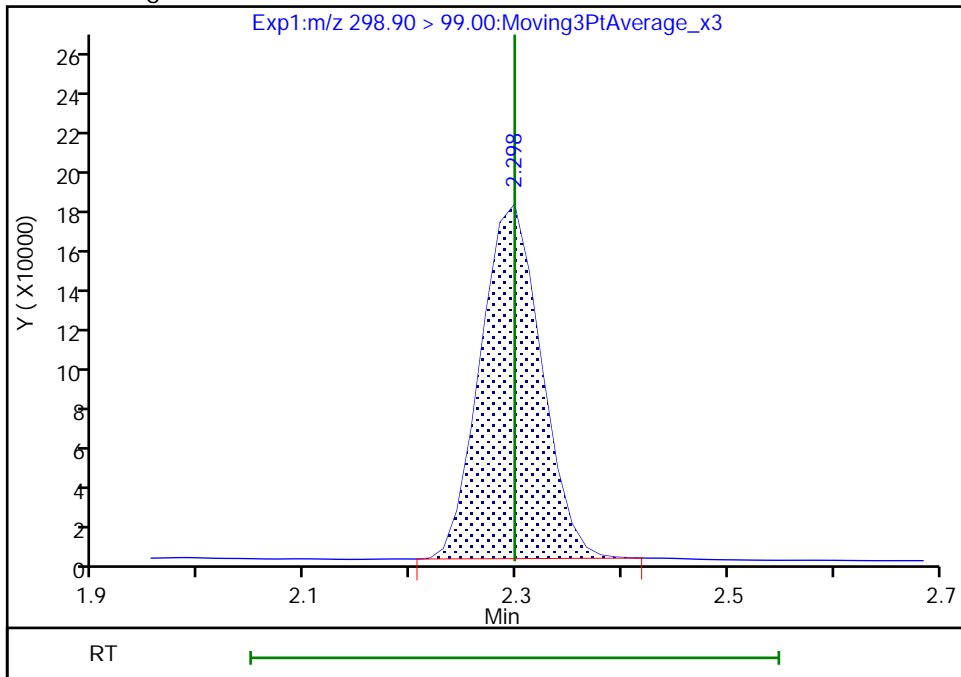
RT: 2.30
Area: 701231
Amount: 1.197802
Amount Units: ng/ml

Processing Integration Results



RT: 2.30
Area: 700289
Amount: 1.134062
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 10:17:52
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

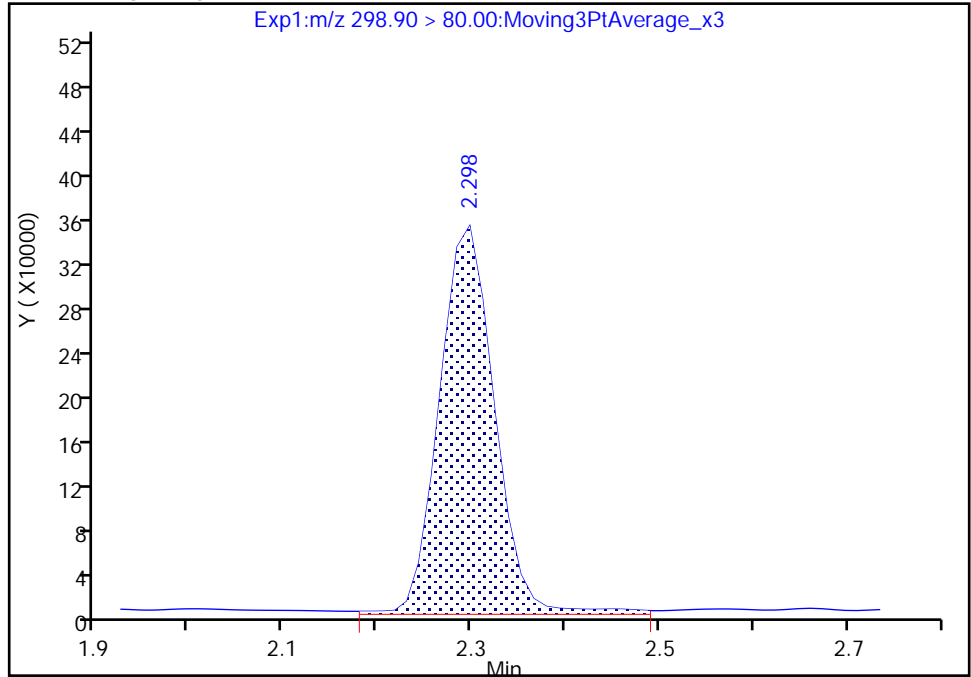
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B017.d
Injection Date: 22-Oct-2019 22:03:53 Instrument ID: LC812
Lims ID: 480-160746-C-3-B MS
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

5 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

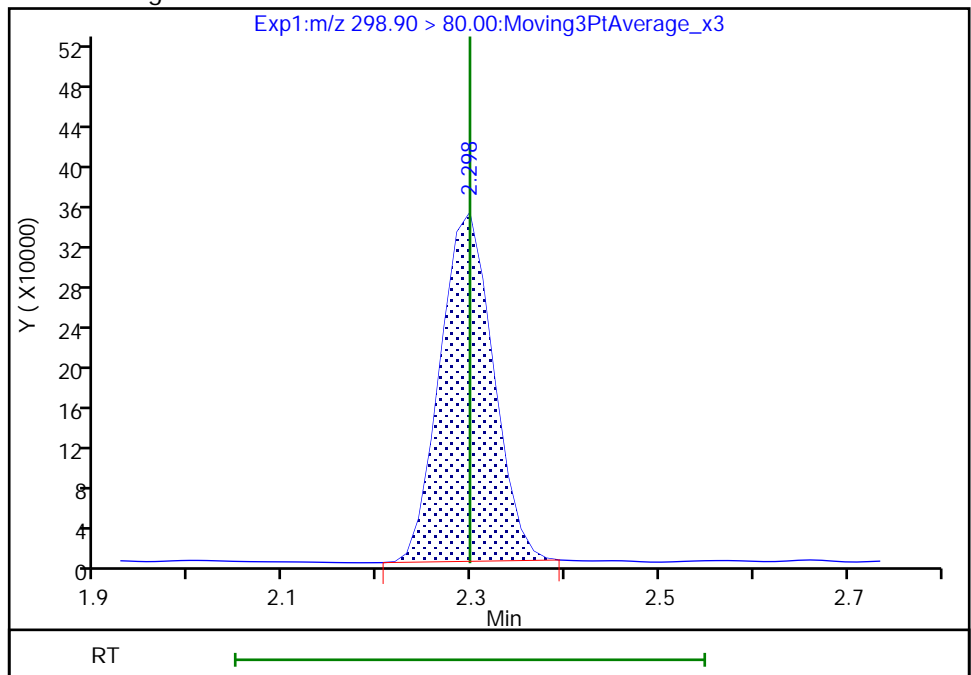
RT: 2.30
Area: 1436964
Amount: 1.197802
Amount Units: ng/ml

Processing Integration Results



RT: 2.30
Area: 1360497
Amount: 1.134062
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 10:17:57

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

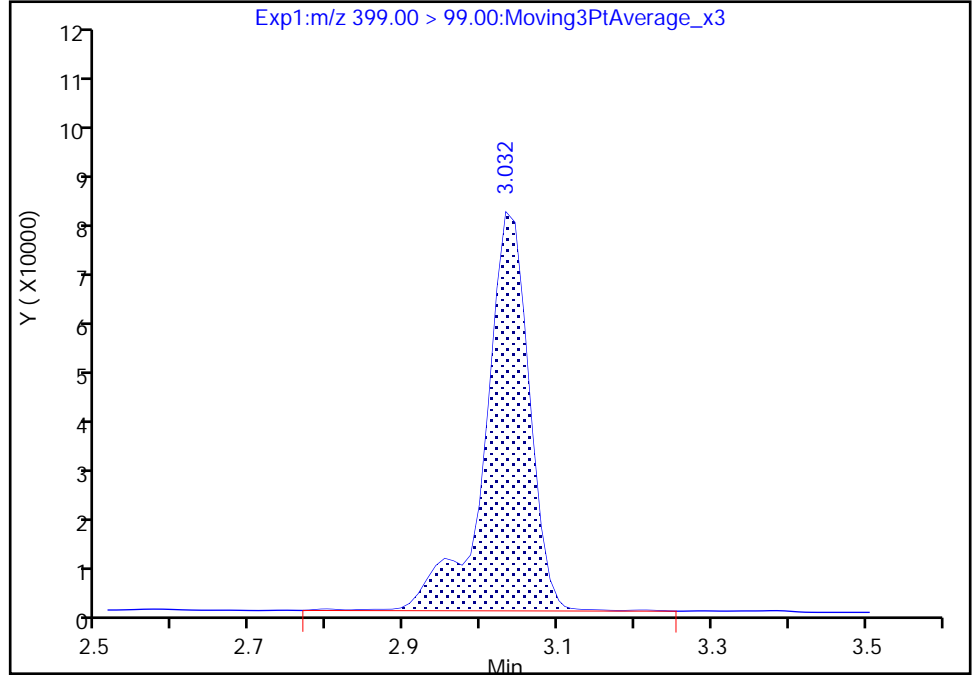
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B017.d
Injection Date: 22-Oct-2019 22:03:53 Instrument ID: LC812
Lims ID: 480-160746-C-3-B MS
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

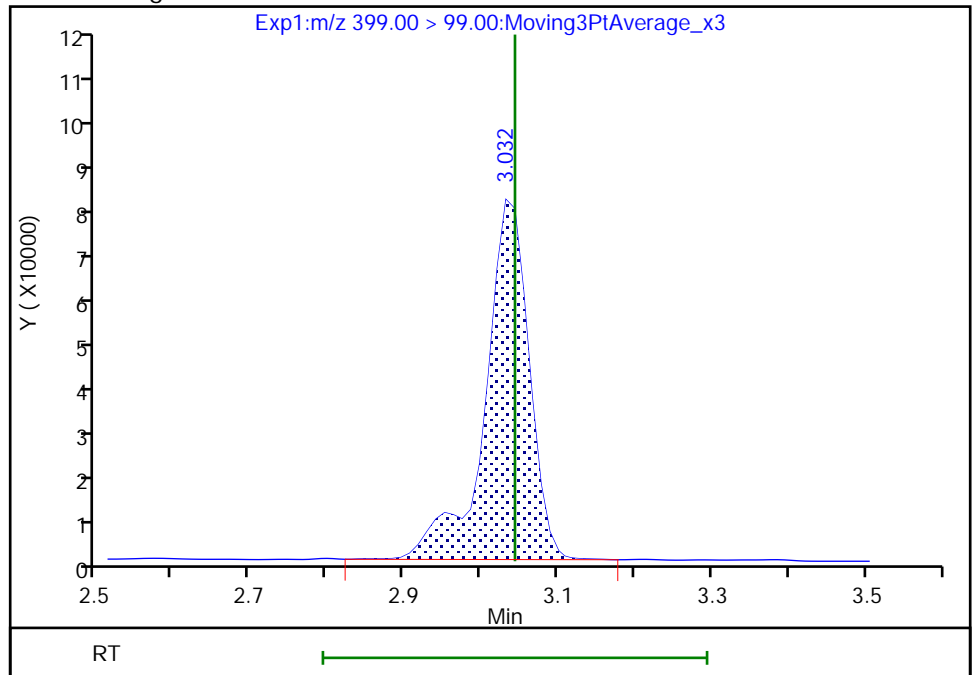
RT: 3.03
Area: 320905
Amount: 1.368561
Amount Units: ng/ml

Processing Integration Results



RT: 3.03
Area: 318445
Amount: 1.349021
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 10:18:32
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

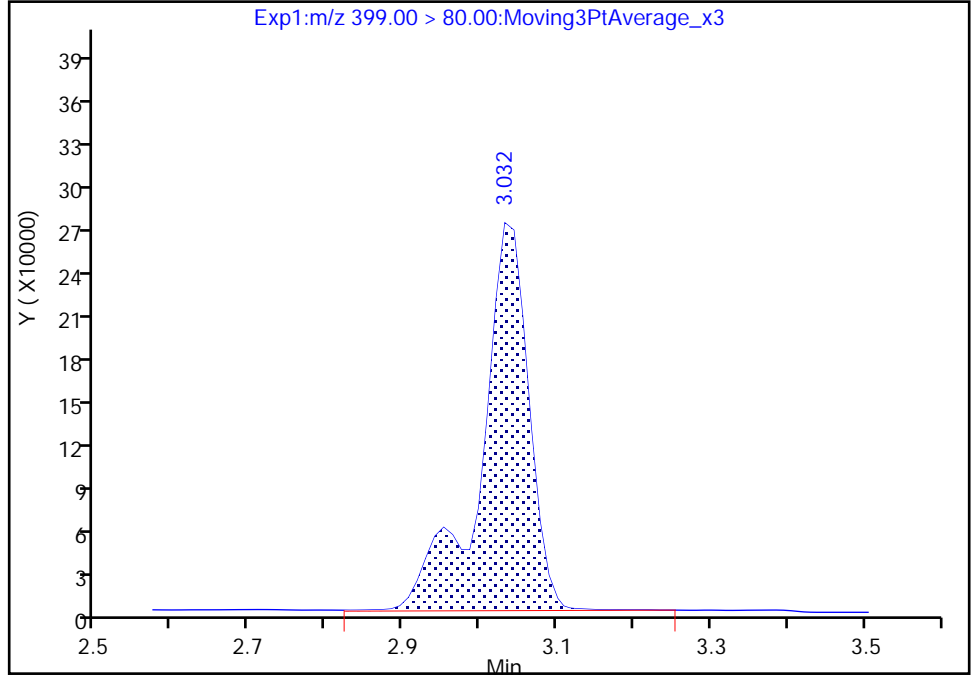
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B017.d
Injection Date: 22-Oct-2019 22:03:53 Instrument ID: LC812
Lims ID: 480-160746-C-3-B MS
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

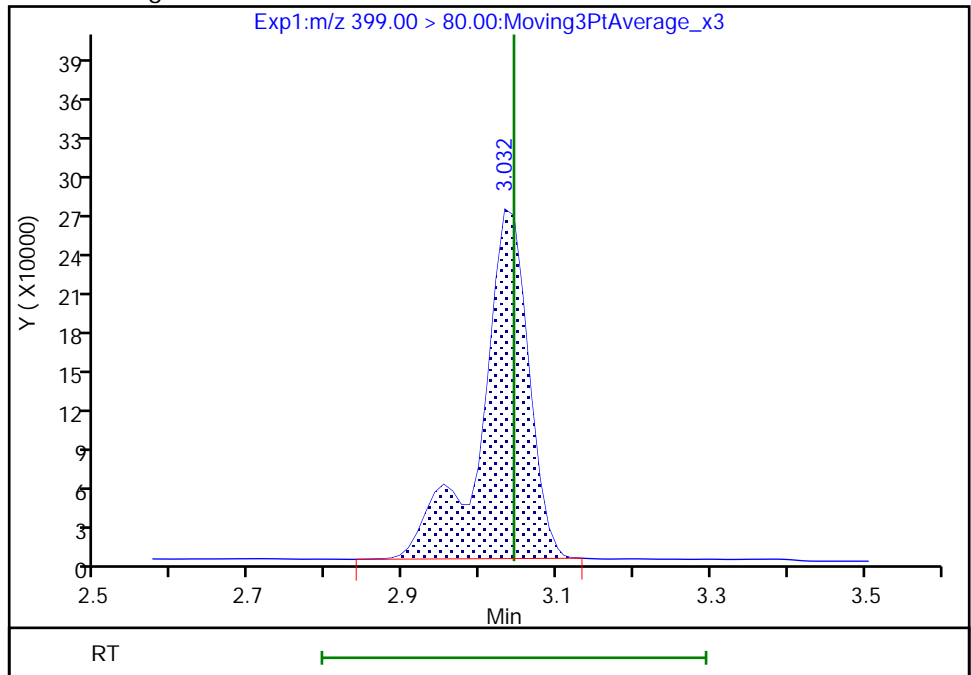
RT: 3.03
Area: 1164909
Amount: 1.368561
Amount Units: ng/ml

Processing Integration Results



RT: 3.03
Area: 1148423
Amount: 1.349021
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 10:18:38

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

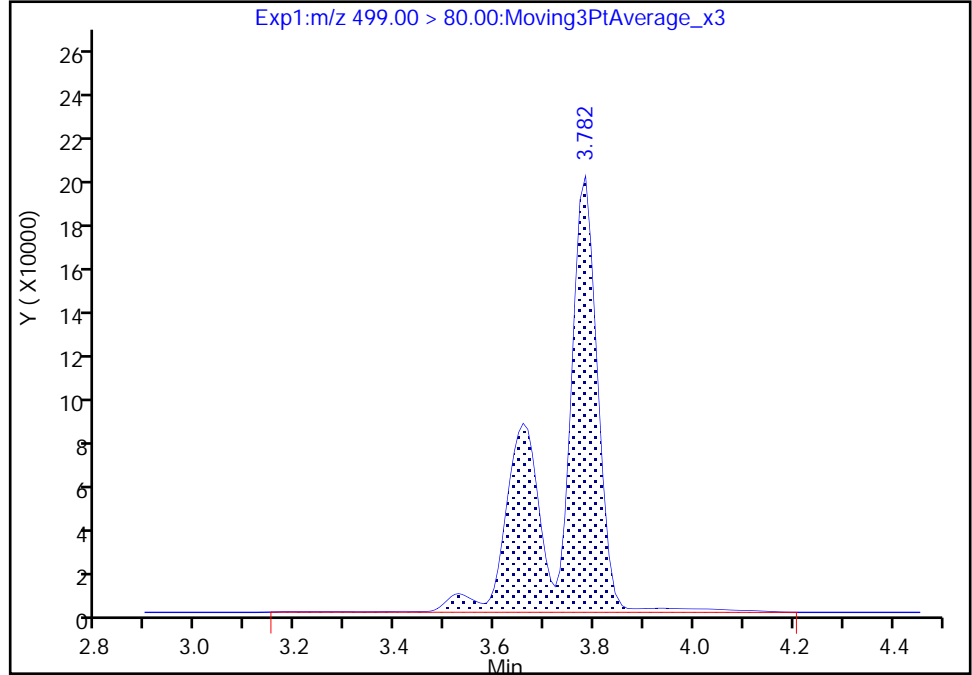
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B017.d
Injection Date: 22-Oct-2019 22:03:53 Instrument ID: LC812
Lims ID: 480-160746-C-3-B MS
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

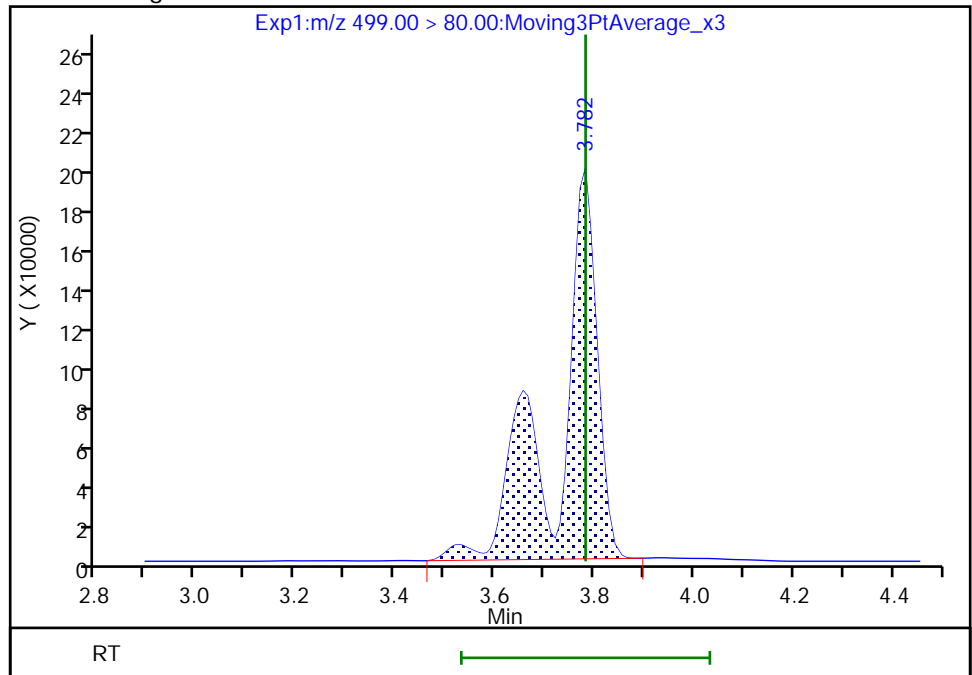
RT: 3.78
Area: 1111048
Amount: 2.177008
Amount Units: ng/ml

Processing Integration Results



RT: 3.78
Area: 1067843
Amount: 2.092351
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 10:20:15
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

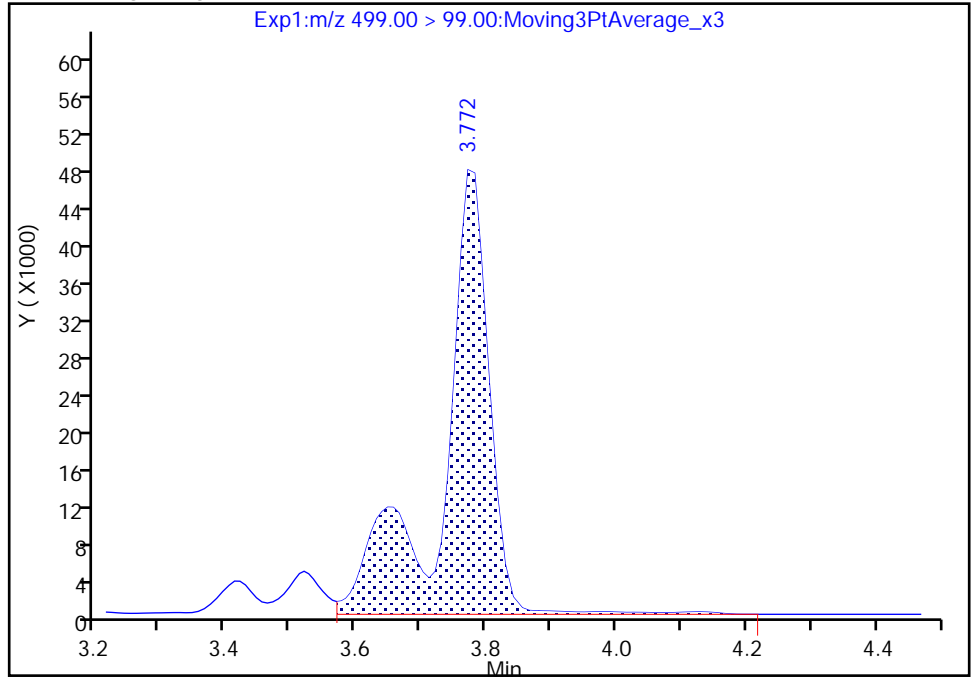
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B017.d
Injection Date: 22-Oct-2019 22:03:53 Instrument ID: LC812
Lims ID: 480-160746-C-3-B MS
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

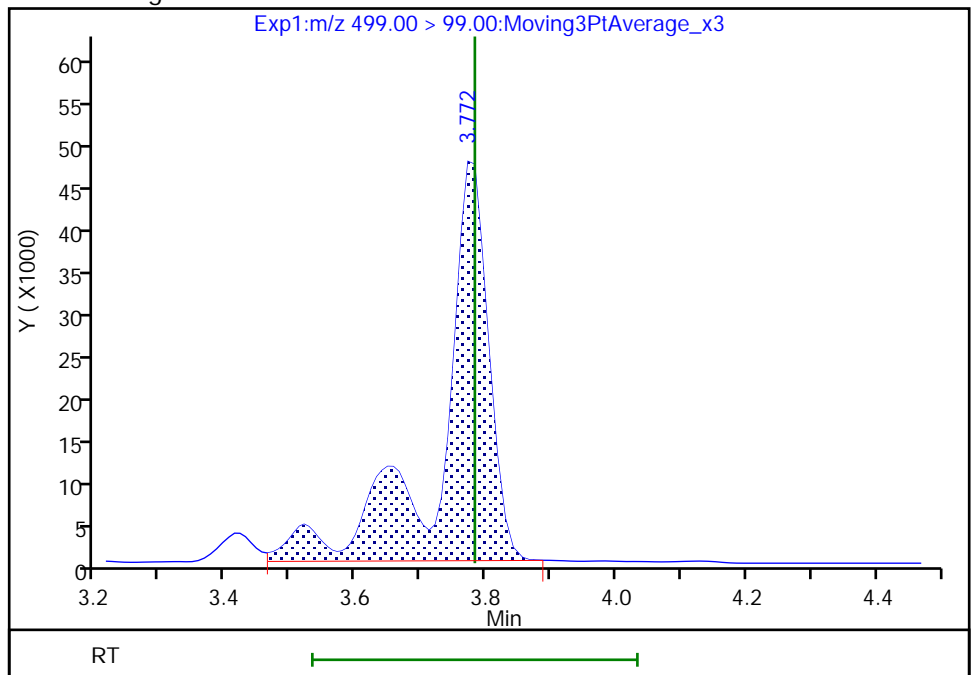
RT: 3.77
Area: 237270
Amount: 2.177008
Amount Units: ng/ml

Processing Integration Results



RT: 3.77
Area: 244317
Amount: 2.092351
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:31:48

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

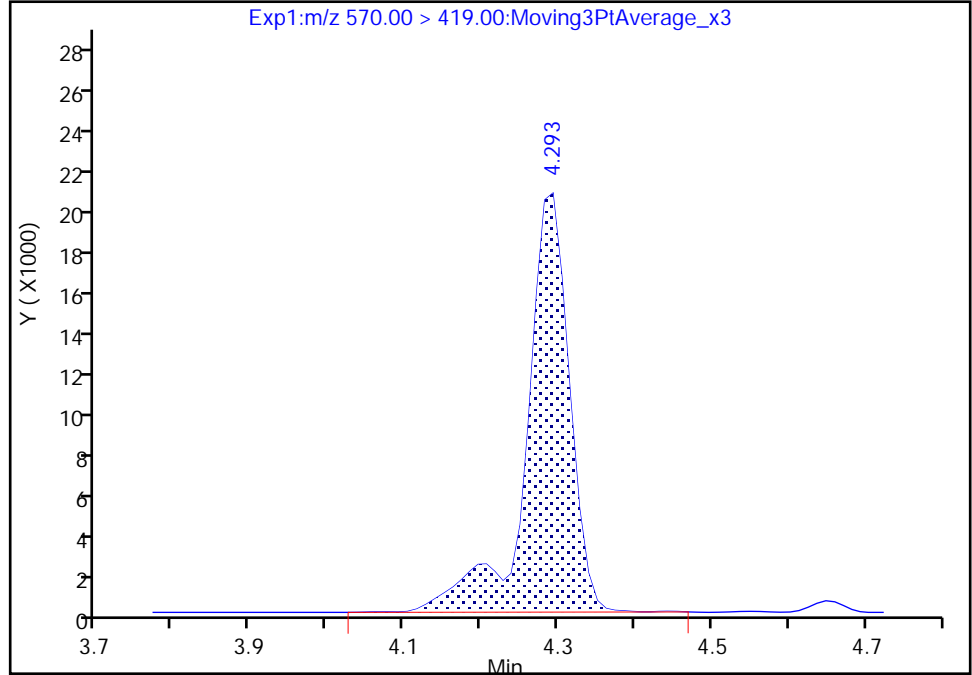
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B017.d
Injection Date: 22-Oct-2019 22:03:53 Instrument ID: LC812
Lims ID: 480-160746-C-3-B MS
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

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

Signal: 1

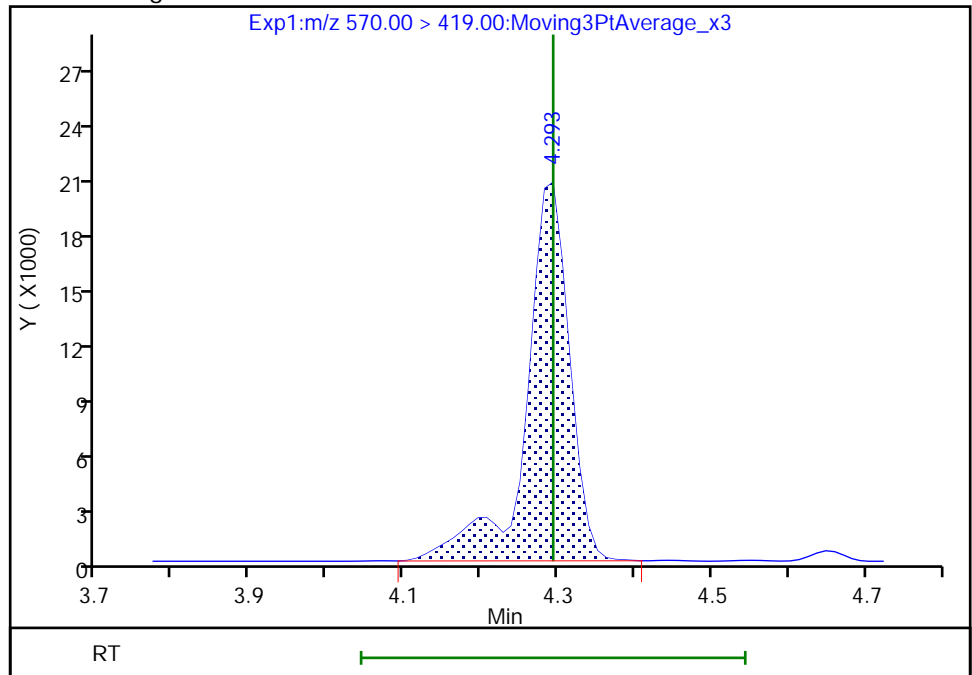
RT: 4.29
Area: 80974
Amount: 1.245219
Amount Units: ng/ml

Processing Integration Results



RT: 4.29
Area: 80678
Amount: 1.240667
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 10:20:55
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

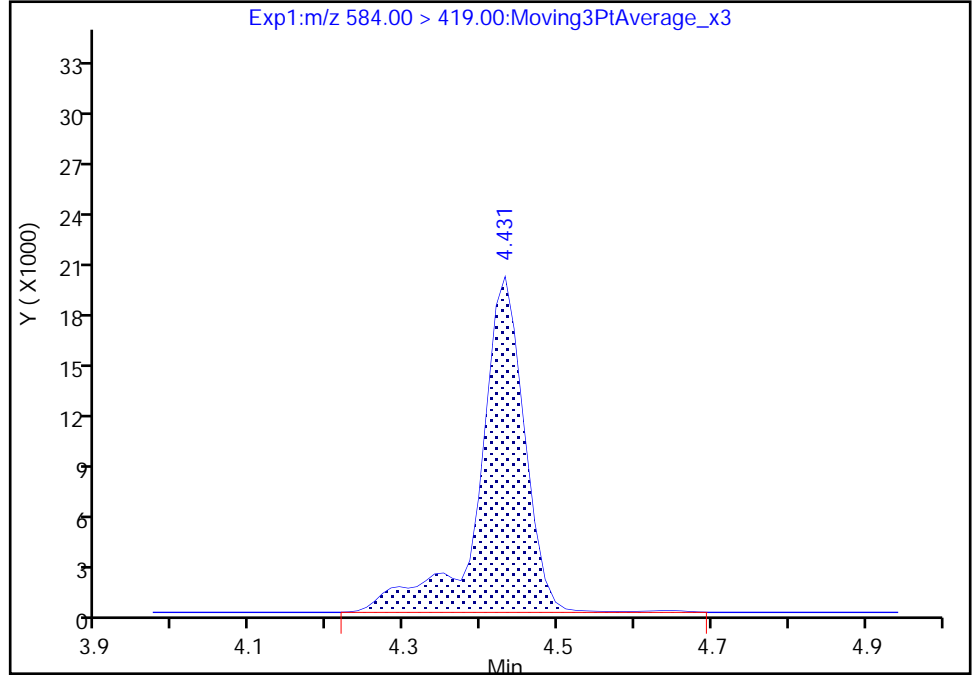
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B017.d
Injection Date: 22-Oct-2019 22:03:53 Instrument ID: LC812
Lims ID: 480-160746-C-3-B MS
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 17 Worklist Smp#: 17
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

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

Signal: 1

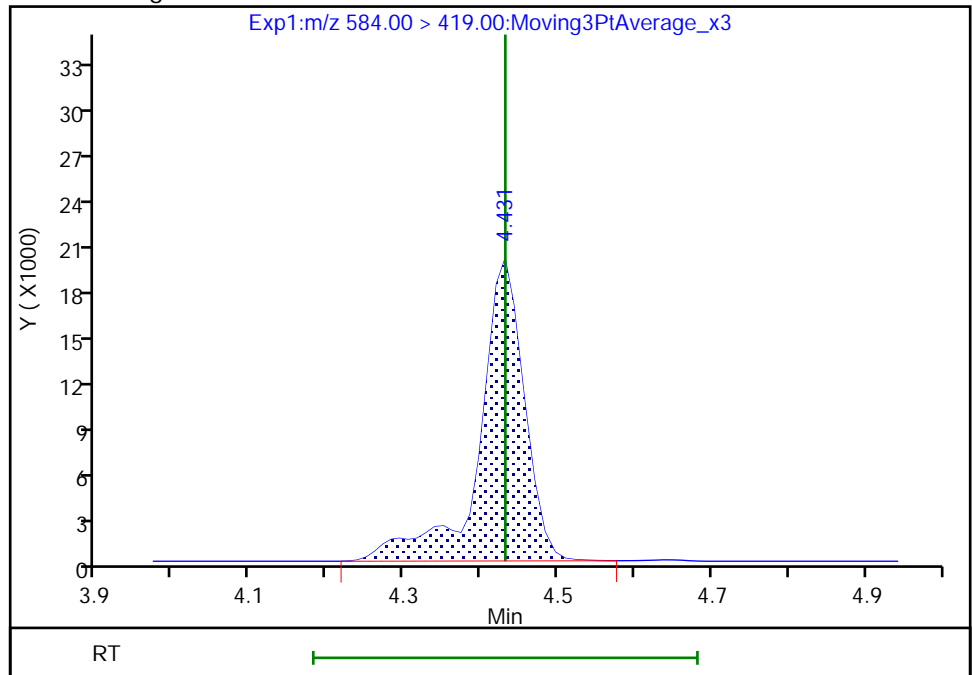
RT: 4.43
Area: 81062
Amount: 1.520265
Amount Units: ng/ml

Processing Integration Results



RT: 4.43
Area: 80347
Amount: 1.506688
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 10:21:06
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1
 SDG No.: _____
 Client Sample ID: SPW100919 MSD Lab Sample ID: 480-160746-3 MSD
 Matrix: Water Lab File ID: SC102219B018.d
 Analysis Method: 537 (modified) Date Collected: 10/09/2019 16:24
 Extraction Method: 3535 Date Extracted: 10/17/2019 10:08
 Sample wt/vol: 277.3 (mL) Date Analyzed: 10/22/2019 22:12
 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.: 148772 Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	48.6		1.8	0.90
2706-90-3	Perfluoropentanoic acid (PFPeA)	52.1		1.8	0.57
307-24-4	Perfluorohexanoic acid (PFHxA)	50.4		1.8	0.69
375-85-9	Perfluoroheptanoic acid (PFHpA)	50.9		1.8	0.82
335-67-1	Perfluorooctanoic acid (PFOA)	61.5		1.8	0.73
375-95-1	Perfluorononanoic acid (PFNA)	43.7		1.8	0.24
335-76-2	Perfluorodecanoic acid (PFDA)	44.0		1.8	0.69
2058-94-8	Perfluoroundecanoic acid (PFUnA)	45.4		1.8	0.70
307-55-1	Perfluorododecanoic acid (PFDoA)	43.7		1.8	0.53
72629-94-8	Perfluorotridecanoic acid (PFTriA)	43.5		1.8	0.54
376-06-7	Perfluorotetradecanoic acid (PFTeA)	48.0		1.8	0.83
375-73-5	Perfluorobutanesulfonic acid (PFBS)	42.6		1.8	0.44
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	48.7		1.8	0.72
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	43.7		1.8	0.86
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	70.4		1.8	0.55
335-77-3	Perfluorodecanesulfonic acid (PFDS)	44.3		1.8	0.81
754-91-6	Perfluorooctanesulfonamide (PFOSA)	42.2		9.0	9.0
2355-31-9	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	45.4		18	1.5
2991-50-6	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	47.7		18	1.4
27619-97-2	1H,1H,2H,2H-perfluorooctanesulfonic acid (6:2)	39.3		18	5.0
39108-34-4	1H,1H,2H,2H-perfluorodecanesulfonic acid (8:2)	34.7		18	2.6

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1
 SDG No.: _____
 Client Sample ID: SPW100919 MSD Lab Sample ID: 480-160746-3 MSD
 Matrix: Water Lab File ID: SC102219B018.d
 Analysis Method: 537 (modified) Date Collected: 10/09/2019 16:24
 Extraction Method: 3535 Date Extracted: 10/17/2019 10:08
 Sample wt/vol: 277.3 (mL) Date Analyzed: 10/22/2019 22:12
 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.: 148772 Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00994	18O2 PFHxS	84		50-150
STL01892	13C4 PFHpA	84		50-150
STL00990	13C4 PFOA	93		50-150
STL00991	13C4 PFOS	88		50-150
STL00995	13C5 PFNA	92		50-150
STL00992	13C4 PFBA	73		25-150
STL00993	13C2 PFHxA	83		50-150
STL00996	13C2 PFDA	90		50-150
STL00997	13C2 PFUnA	81		50-150
STL00998	13C2 PFDoA	97		50-150
STL01056	13C8 FOSA	71		25-150
STL01893	13C5 PFPeA	80		25-150
STL02116	13C2 PFTeDA	86		50-150
STL02118	d3-NMeFOSAA	79		50-150
STL02117	d5-NEtFOSAA	90		50-150
STL02279	M2-6:2 FTS	96		25-150
STL02280	M2-8:2 FTS	94		25-150

Eurofins TestAmerica, Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B018.d
 Lims ID: 480-160746-C-3-C MSD
 Client ID: SPW100919
 Sample Type: MSD
 Inject. Date: 22-Oct-2019 22:12:03 ALS Bottle#: 18 Worklist Smp#: 18
 Injection Vol: 20.0 ul Dil. Factor: 1.0000
 Sample Info: 480-160746-C-3-C MSD
 Misc. Info.: 200-0038369-018 Plate: 1 Rack: 4
 Operator ID: lc812tech Instrument ID: LC812
 Method: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\PFC_LC812.m
 Limit Group: LC_PFC_ICAL
 Last Update: 28-Oct-2019 13:09:04 Calib Date: 24-Sep-2019 18:56:37
 Integrator: Picker
 Quant Method: Isotopic Dilution Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Burlington\ChromData\LC812\20190924-37915.b\SC092419AA015.d
 Column 1 : C-18 (4.60 mm) Det: EXP1
 Process Host: CTX1017

First Level Reviewer: manopan Date: 24-Oct-2019 10:25:39
 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	1.926	1.926	0.0	0.563	2964872	1.81	72.5	8204	
2 Perfluorobutanoic acid										M
212.90 > 169.00	1.926	1.926	0.0	1.000	1420412	1.35		135	138	M
D 3 13C5 PFPeA	267.90 > 223.00	2.271	2.285	-0.014	0.664	2596762	2.01	80.3	2050	
4 Perfluoropentanoic acid	262.90 > 219.00	2.271	2.285	-0.014	1.000	1394053	1.44	144	21.3	
5 Perfluorobutanesulfonic acid										M
298.90 > 80.00	2.298	2.298	0.0	0.755	1391173	1.18	Target=2.04	134	50.0	M
298.90 > 99.00	2.298	2.298	0.0	0.755	707294		1.97(1.02-3.05)		111	M
D 60 M2-4:2 FTS	329.00 > 81.00	2.623	2.623	0.0	0.767	257353	1.93	82.5	76.4	
61 1H,1H,2H,2H-perfluorohexanesulfoni										
327.00 > 307.00	2.623	2.623	0.0	1.000	261719	1.19		127	1386	
6 Perfluorohexanoic acid										M
313.00 > 269.00	2.660	2.661	-0.001	1.000	1564838	1.40	Target=12.90	140	89.0	M
313.00 > 119.00	2.660	2.661	-0.001	1.000	127023		12.32(6.45-19.36)		151	
D 7 13C2 PFHxA	315.00 > 270.00	2.660	2.661	-0.001	0.778	2838754	2.06	82.6	7175	
70 Perfluoropentanesulfonic acid										M
349.00 > 80.00	2.660	2.673	-0.013	0.874	1205623	1.19	Target=3.01	126	212	M
349.00 > 99.00	2.660	2.673	-0.013	0.874	433362		2.78(1.51-4.52)		129	M
67 Perfluoro(2-propoxypropanoic) acid										
329.10 > 285.00	2.776	2.776	0.0	1.000	204073	1.34		134	66.0	
D 64 13C3 HFPO-DA	332.10 > 287.00	2.776	2.776	0.0	0.811	132592	1.93	77.3	722	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
8 Perfluorohexanesulfonic acid										
399.00 > 80.00	3.044	3.044	0.0	1.000	1128233	1.35	Target=3.78	148	168	M
399.00 > 99.00	3.044	3.044	0.0	1.000	318164		3.55(1.89-5.67)		208	M
D 11 18O2 PFHxS										
403.00 > 84.00	3.044	3.044	0.0	0.890	2042872	1.99		84.2	6264	
D 9 13C4 PFHpA										
367.00 > 322.00	3.044	3.044	0.0	0.890	2809338	2.11		84.4	4304	
10 Perfluoroheptanoic acid										
363.00 > 319.00	3.044	3.044	0.0	1.000	1417376	1.41	Target=3.54	141	133	M
363.00 > 169.00	3.044	3.044	0.0	1.000	394980		3.59(1.77-5.31)		584	M
77 DONA										
377.00 > 251.00	3.089	3.090	-0.001	0.817	2920439	1.16	Target=2.56	123	2895	
377.00 > 85.00	3.089	3.090	-0.001	0.817	1151124		2.54(1.28-3.84)		1065	
16 Perfluoroheptanesulfonic acid										
449.00 > 80.00	3.405	3.413	-0.008	0.900	825038	1.21	Target=5.80	127	436	M
449.00 > 99.00	3.405	3.413	-0.008	0.900	142322		5.80(2.90-8.71)		239	M
13 1H,1H,2H,2H-perfluorooctanesulfoni										
427.00 > 407.00	3.413	3.413	0.0	1.002	219391	1.09		115	1635	
D 12 M2-6:2 FTS										
429.00 > 81.00	3.405	3.413	-0.008	0.995	379223	2.28		95.8	340	
* 62 13C2 PFOA										
415.00 > 370.00	3.421	3.422	-0.001		3407078	2.50			5519	
D 14 13C4 PFOA										
417.00 > 372.00	3.421	3.422	-0.001	1.000	3133525	2.32		92.6	6188	
15 Perfluorooctanoic acid										
413.00 > 369.00	3.421	3.422	-0.001	1.000	2014933	1.71	Target=2.61	171	259	M
413.00 > 169.00	3.421	3.422	-0.001	1.000	796470		2.53(1.30-3.91)		1381	M
D 18 13C4 PFOS										
503.00 > 80.00	3.782	3.783	-0.001	1.105	1467361	2.10		87.9	1751	
17 Perfluorooctanesulfonic acid										
499.00 > 80.00	3.782	3.783	-0.001	1.000	1083167	1.95	Target=4.93	210	363	M
499.00 > 99.00	3.782	3.783	-0.001	1.000	245205		4.42(2.47-7.40)		87.8	M
D 19 13C5 PFNA										
468.00 > 423.00	3.805	3.805	0.0	1.112	2761106	2.31		92.2	9183	
20 Perfluorononanoic acid										
463.00 > 419.00	3.805	3.805	0.0	1.000	1277169	1.21	Target=7.89	121	315	
463.00 > 169.00	3.805	3.805	0.0	1.000	167620		7.62(3.95-11.84)		778	
69 9-Chlorohexadecafluoro-3-oxanonane										
531.00 > 351.00	3.962	3.973	-0.011	1.047	1051635	1.07		114	3080	
68 Perfluorononanesulfonic acid										
549.00 > 80.00	4.104	4.117	-0.013	1.085	546331	1.14	Target=2.60	119	1200	
549.00 > 99.00	4.104	4.117	-0.013	1.085	215745		2.53(1.30-3.90)		687	
24 Perfluorodecanoic acid										
513.00 > 469.00	4.141	4.141	0.0	1.000	1207803	1.22	Target=8.57	122	564	
513.00 > 169.00	4.141	4.141	0.0	1.000	133424		9.05(4.29-12.86)		731	
D 23 13C2 PFDA										
515.00 > 470.00	4.141	4.141	0.0	1.210	2676564	2.24		89.8	7063	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
25 1H,1H,2H,2H-perfluorodecanesulfoni	527.00 > 507.00	4.153	4.153	0.0	1.000	129290	0.9614	100	2676	
D 26 M2-8:2 FTS	529.00 > 81.00	4.153	4.153	0.0	1.214	410990	2.26	94.3	880	
22 Perfluorooctanesulfonamide	498.00 > 78.00	4.207	4.207	0.0	1.000	1034254	1.17	117	1638	
D 21 13C8 FOSA	506.00 > 78.00	4.207	4.207	0.0	1.230	2406143	1.78	71.0	5380	
35 MeFOSA	512.00 > 169.00	4.293	4.283	0.010		1980	NR	0.0	8.6	
D 27 d3-NMeFOSAA	573.00 > 419.00	4.293	4.294	-0.001	1.255	229668	1.99	79.5	1389	
28 N-methylperfluorooctanesulfonamido	570.00 > 419.00	4.293	4.294	-0.001	1.000	82419	1.26	126	394	M
29 Perfluorodecanesulfonic acid	599.00 > 80.00	4.386	4.397	-0.011	1.159	455380	1.23	Target=2.56	128	1978
	599.00 > 99.00	4.386	4.397	-0.011	1.159	179826		2.53(1.28-3.84)		1666
31 Perfluoroundecanoic acid	563.00 > 519.00	4.420	4.420	0.0	1.000	909733	1.26	Target=6.97	126	624
	563.00 > 169.00	4.420	4.420	0.0	1.000	139555		6.52(3.48-10.45)		2413
D 30 13C2 PFUnA	565.00 > 520.00	4.420	4.420	0.0	1.292	2160239	2.02	80.9	9150	
D 32 d5-NEtFOSAA	589.00 > 419.00	4.431	4.431	0.0	1.295	280844	2.24	89.7	2301	
33 N-ethylperfluorooctanesulfonamidoa	584.00 > 419.00	4.431	4.431	0.0	1.000	82297	1.32	132	659	M
66 11-Chloroeicosafuoro-3-oxaundecan	631.00 > 451.00	4.523	4.524	-0.001	1.196	1231978	1.00	107	6593	
37 Perfluorododecanoic acid	613.00 > 569.00	4.660	4.660	0.0	1.000	1190200	1.21	Target=7.06	121	174
	613.00 > 169.00	4.660	4.660	0.0	1.000	181915		6.54(3.53-10.59)		1274
D 36 13C2 PFDaA	615.00 > 570.00	4.660	4.660	0.0	1.362	2775756	2.41	96.5	8775	
74 1H,1H,2H,2H-perfluorododecanesulfo	627.00 > 607.00	4.682	4.683	-0.001	1.128	84741	1.16	120	1842	
75 Perfluorododecanesulfonic acid (PF	699.00 > 80.00	4.838	4.839	-0.001	1.279	195129	1.23	Target=0.47	127	438
	699.00 > 99.00	4.827	4.839	-0.012	1.276	387338		0.50(0.23-0.70)		2923
41 Perfluorotridecanoic acid	663.00 > 619.00	4.869	4.870	-0.001	1.045	959426	1.21	Target=4.87	121	185
	663.00 > 169.00	4.869	4.870	-0.001	1.045	222415		4.31(2.43-7.30)		1886
42 Perfluorotetradecanoic acid	713.00 > 169.00	5.059	5.067	-0.008	1.000	171780	1.33	Target=1.09	133	1395
	713.00 > 219.00	5.059	5.067	-0.008	1.000	162839		1.05(0.54-1.63)		1526
D 43 13C2 PFTeDA	715.00 > 670.00	5.059	5.067	-0.008	1.479	2215820	2.15	85.9	8459	

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	5.425	5.424	0.001	1.586	2367952	2.29		91.5	6620	
45 Perfluorohexadecanoic acid										
813.00 > 769.00	5.425	5.424	0.001	1.000	1091849	1.38	Target=4.33	138	191	
813.00 > 169.00	5.425	5.424	0.001	1.000	284914		3.83(2.16-6.49)		2446	
46 Perfluorooctadecanoic acid										
913.00 > 869.00	5.791	5.790	0.001	1.067	841369	1.20	Target=4.09	120	196	
913.00 > 169.00	5.782	5.790	-0.008	1.066	219033		3.84(2.05-6.14)		2412	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Review Flags

M - Manually Integrated

Eurofins TestAmerica, Burlington

Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B018.d

Injection Date: 22-Oct-2019 22:12:03

Instrument ID: LC812

Lims ID: 480-160746-C-3-C MSD

Client ID: SPW100919

Operator ID: lc812tech

ALS Bottle#: 18

Worklist Smp#: 18

Injection Vol: 20.0 ul

Dil. Factor: 1.0000

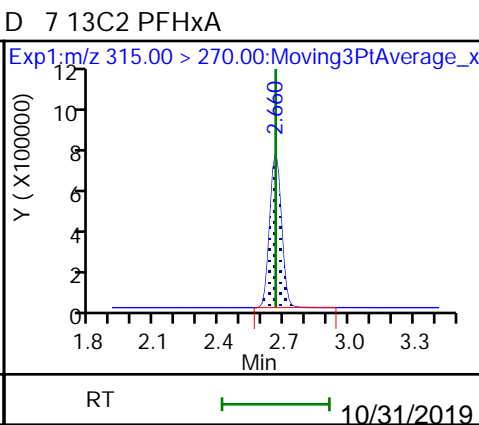
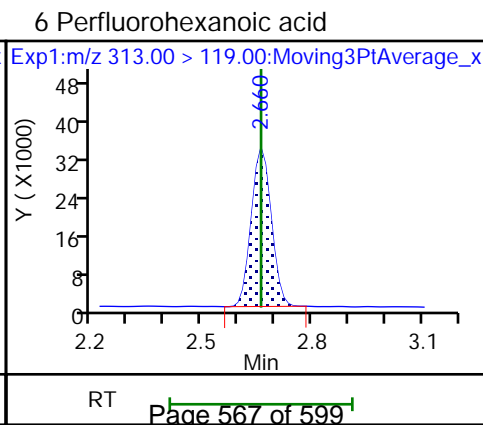
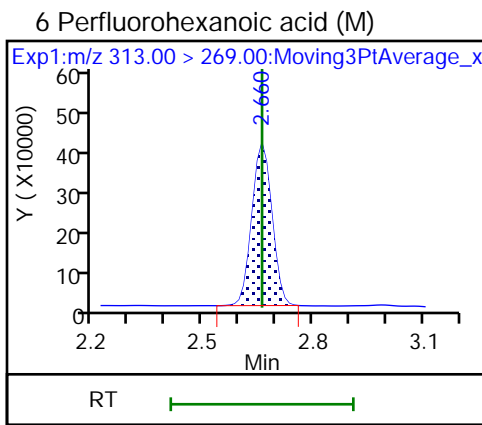
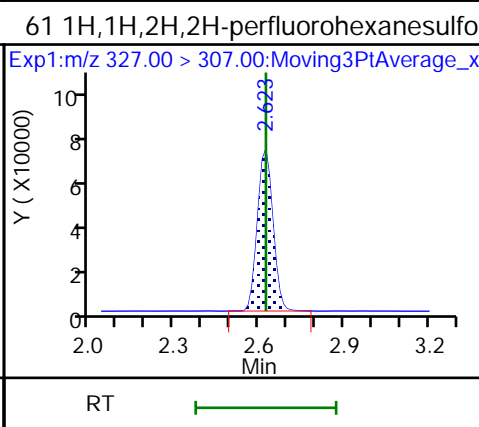
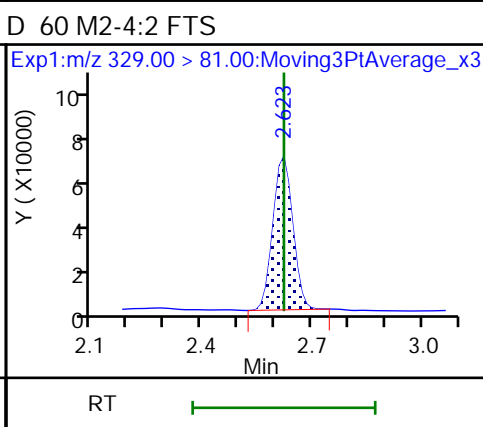
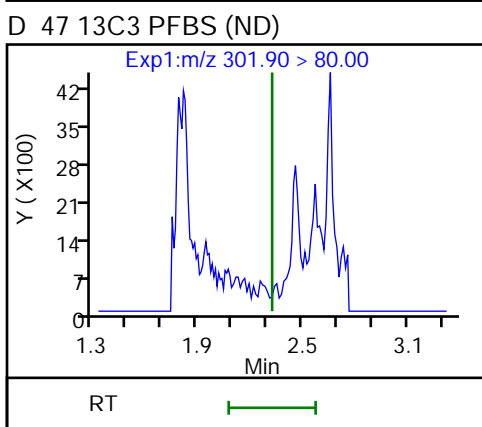
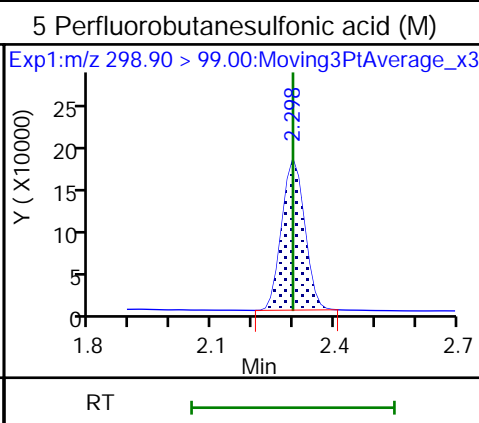
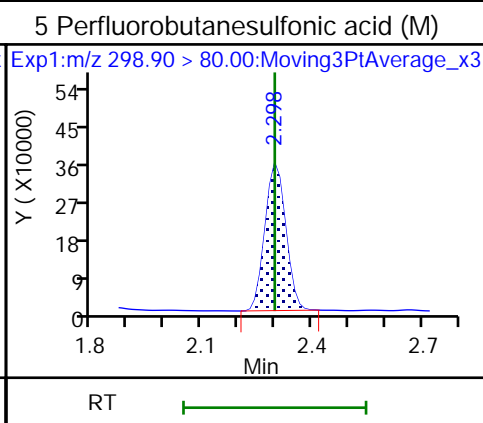
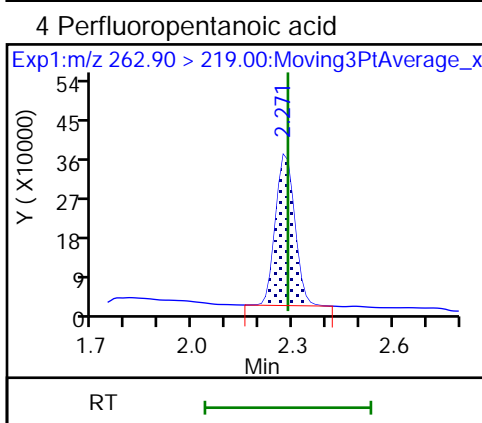
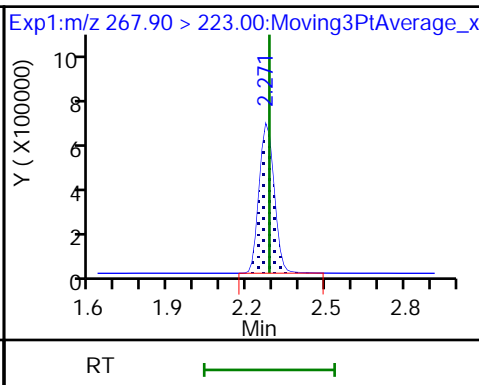
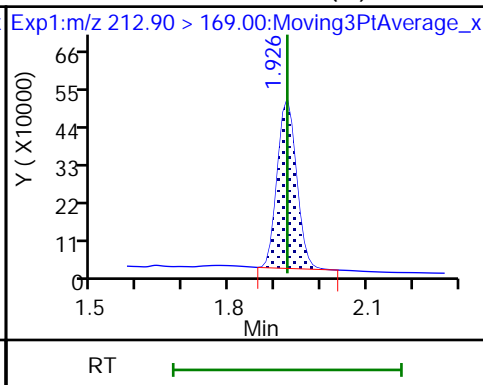
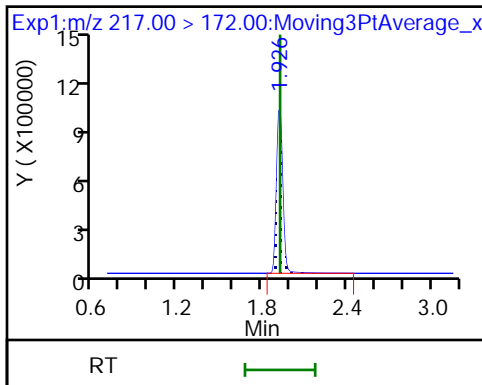
Method: PFC_LC812

Limit Group: LC_PFC_ICAL

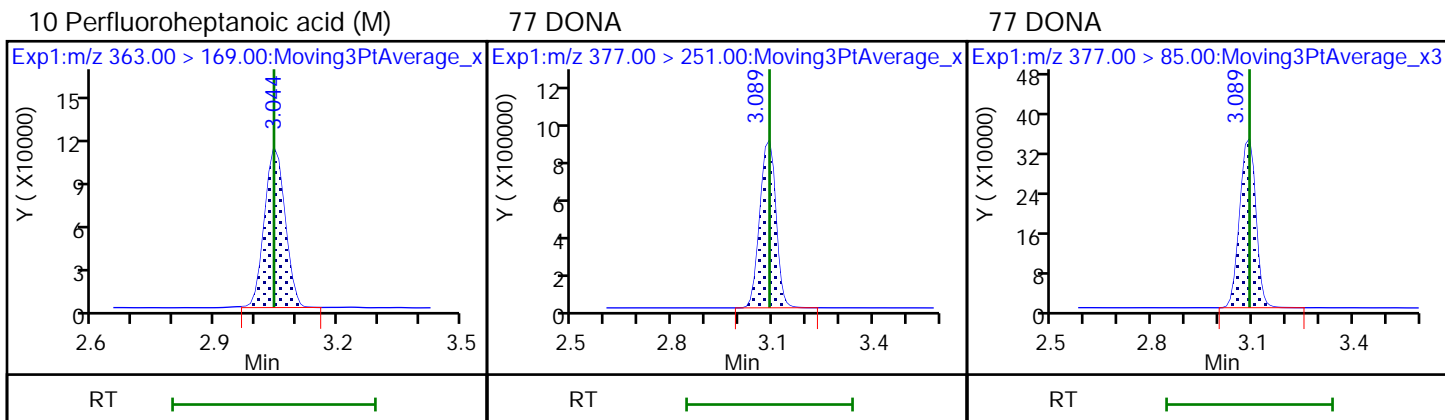
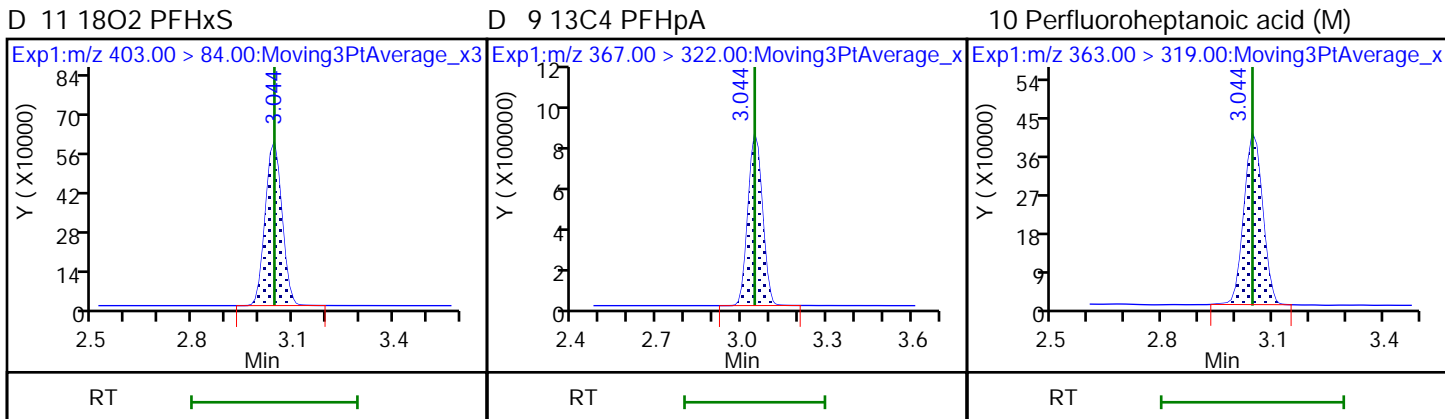
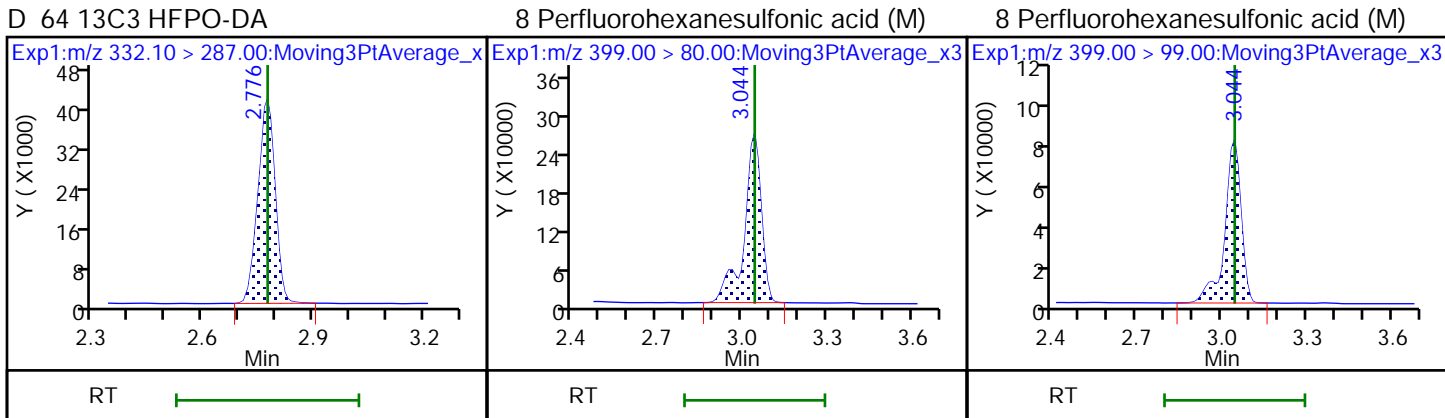
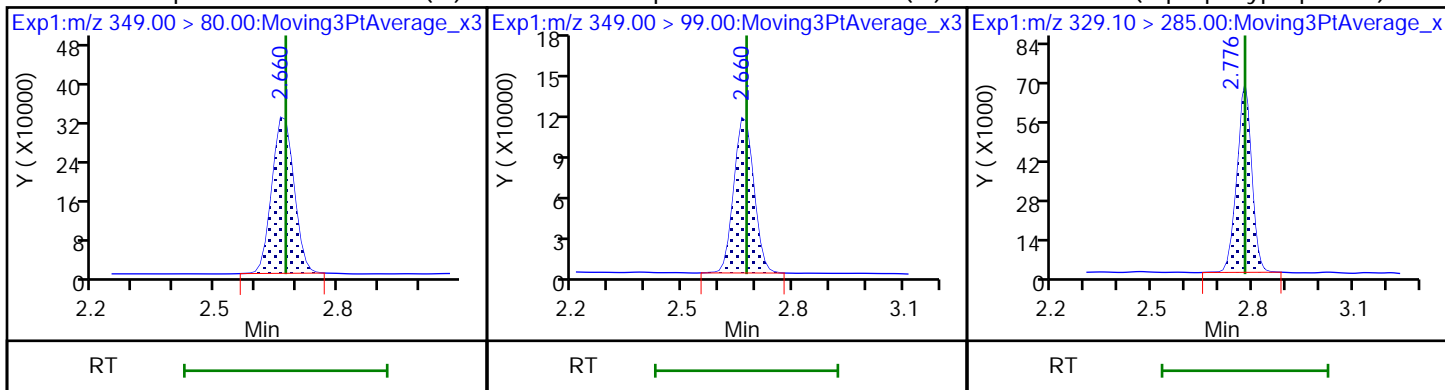
D 1 13C4 PFBA

2 Perfluorobutanoic acid (M)

D 3 13C5 PFPeA



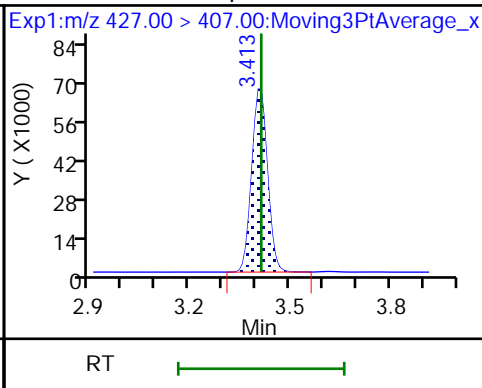
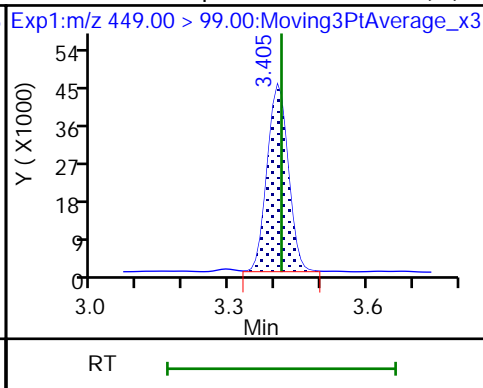
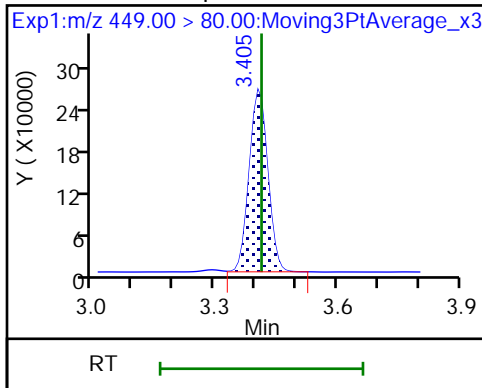
70 Perfluoropentanesulfonic acid (M) 70 Perfluoropentanesulfonic acid (M) 67 Perfluoro(2-propoxypropanoic) acid



16 Perfluoroheptanesulfonic acid

16 Perfluoroheptanesulfonic acid (M)

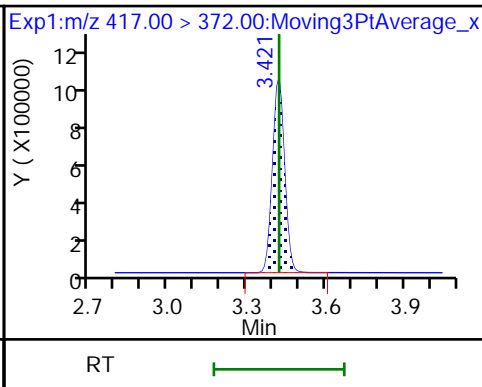
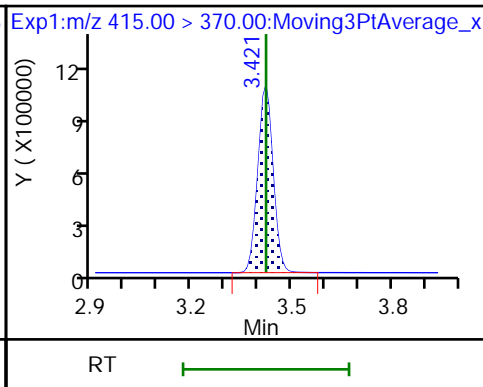
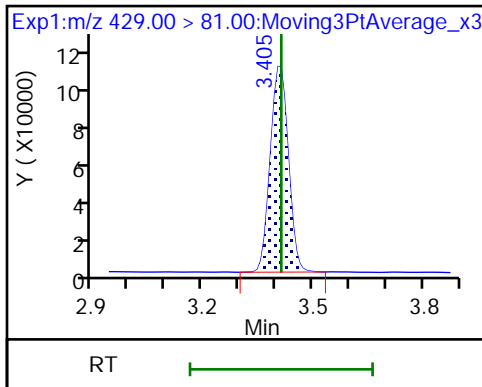
13 1H,1H,2H,2H-perfluorooctanesulfoni



D 12 M2-6:2 FTS

* 62 13C2 PFOA

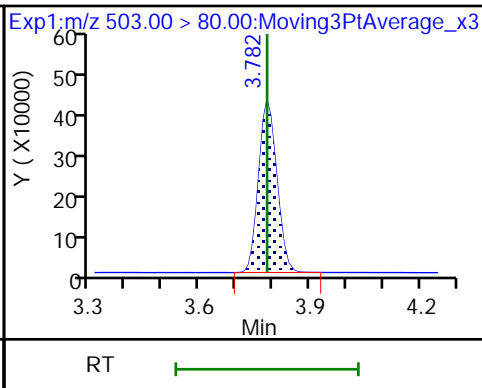
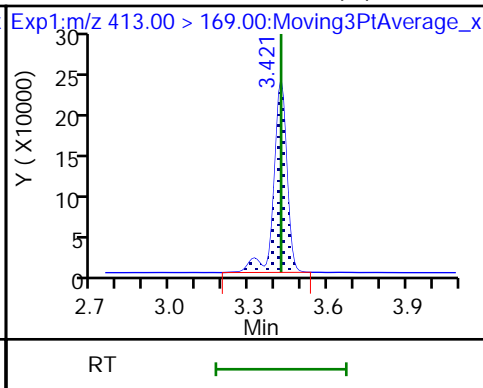
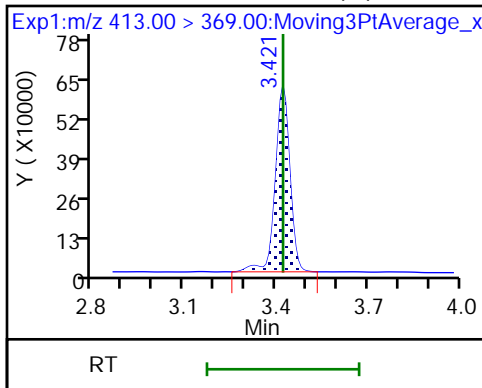
D 14 13C4 PFOA



15 Perfluorooctanoic acid (M)

15 Perfluorooctanoic acid (M)

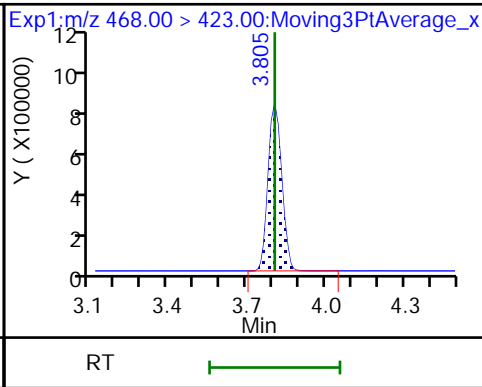
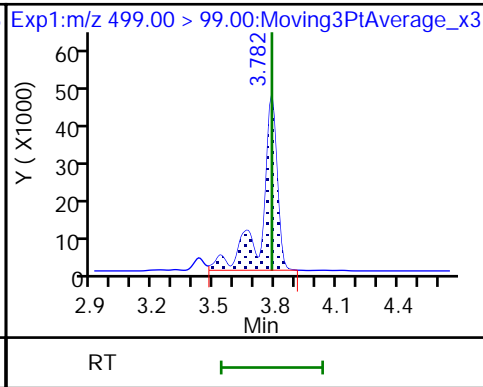
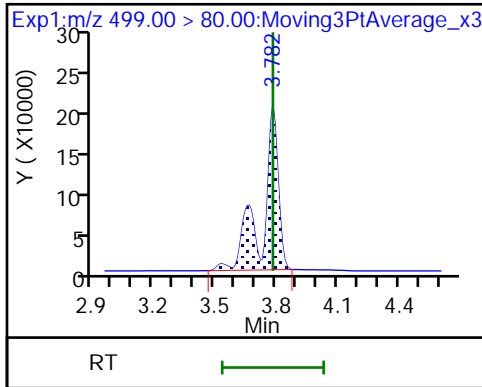
D 18 13C4 PFOS

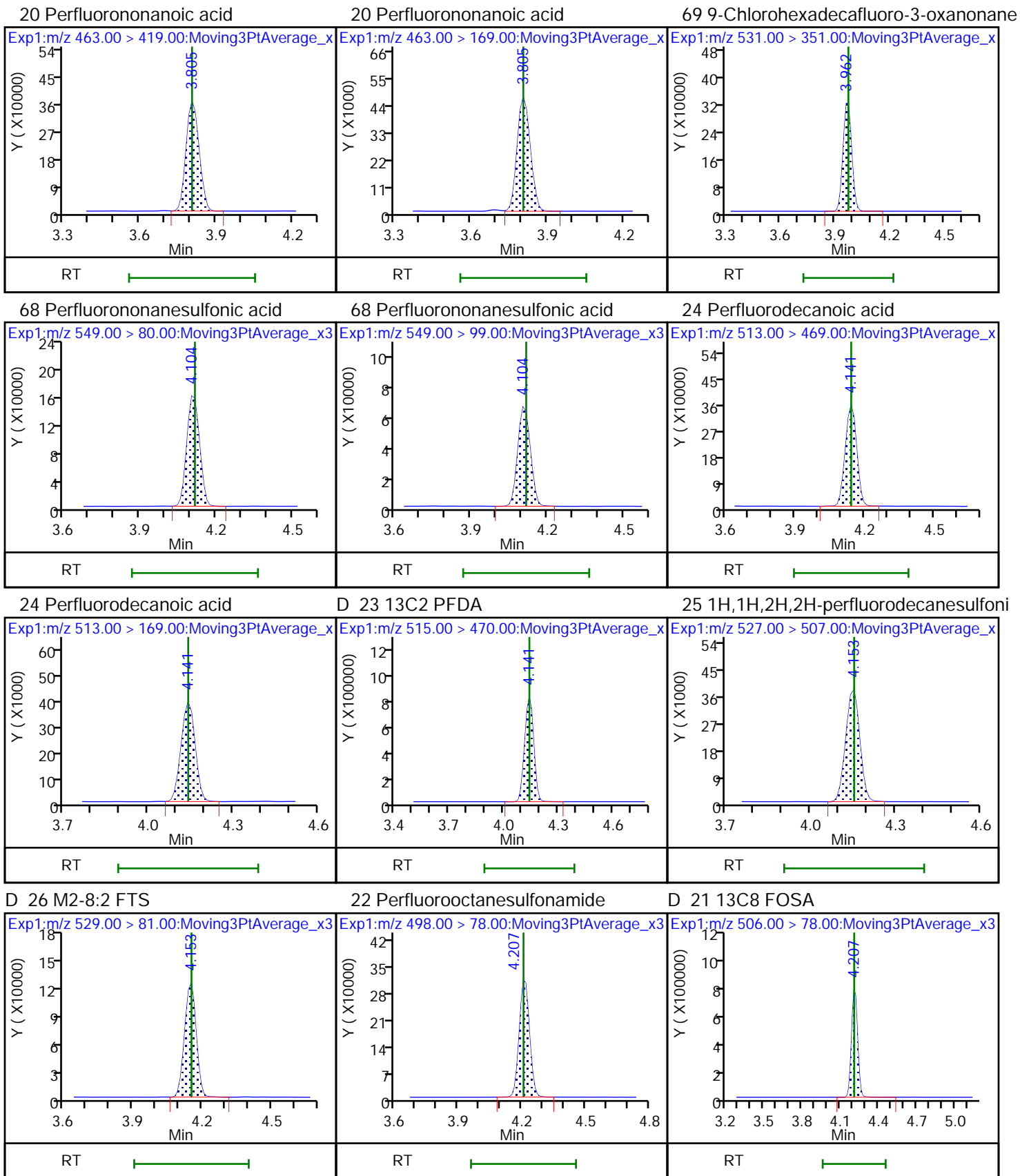


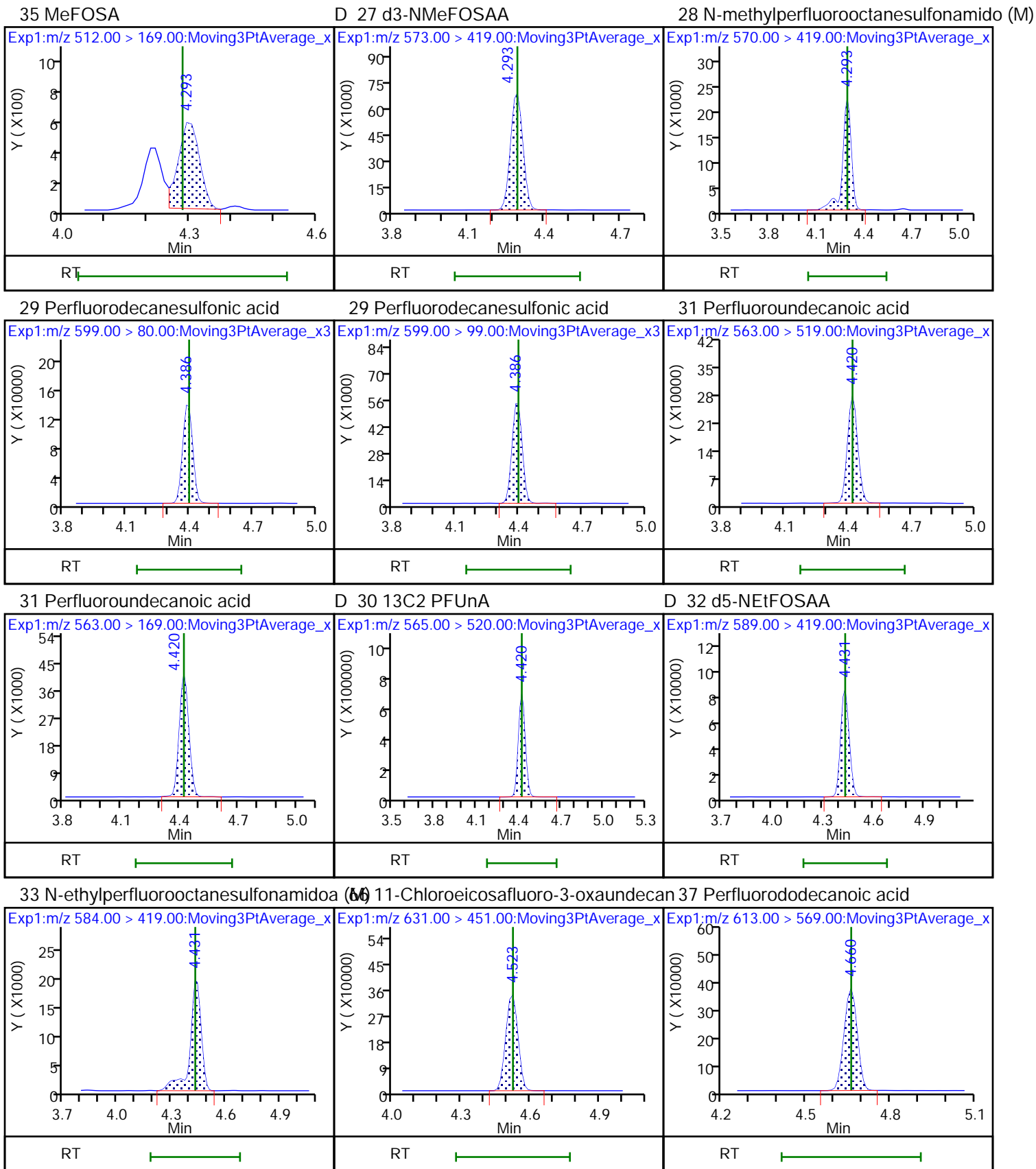
17 Perfluorooctanesulfonic acid (M)

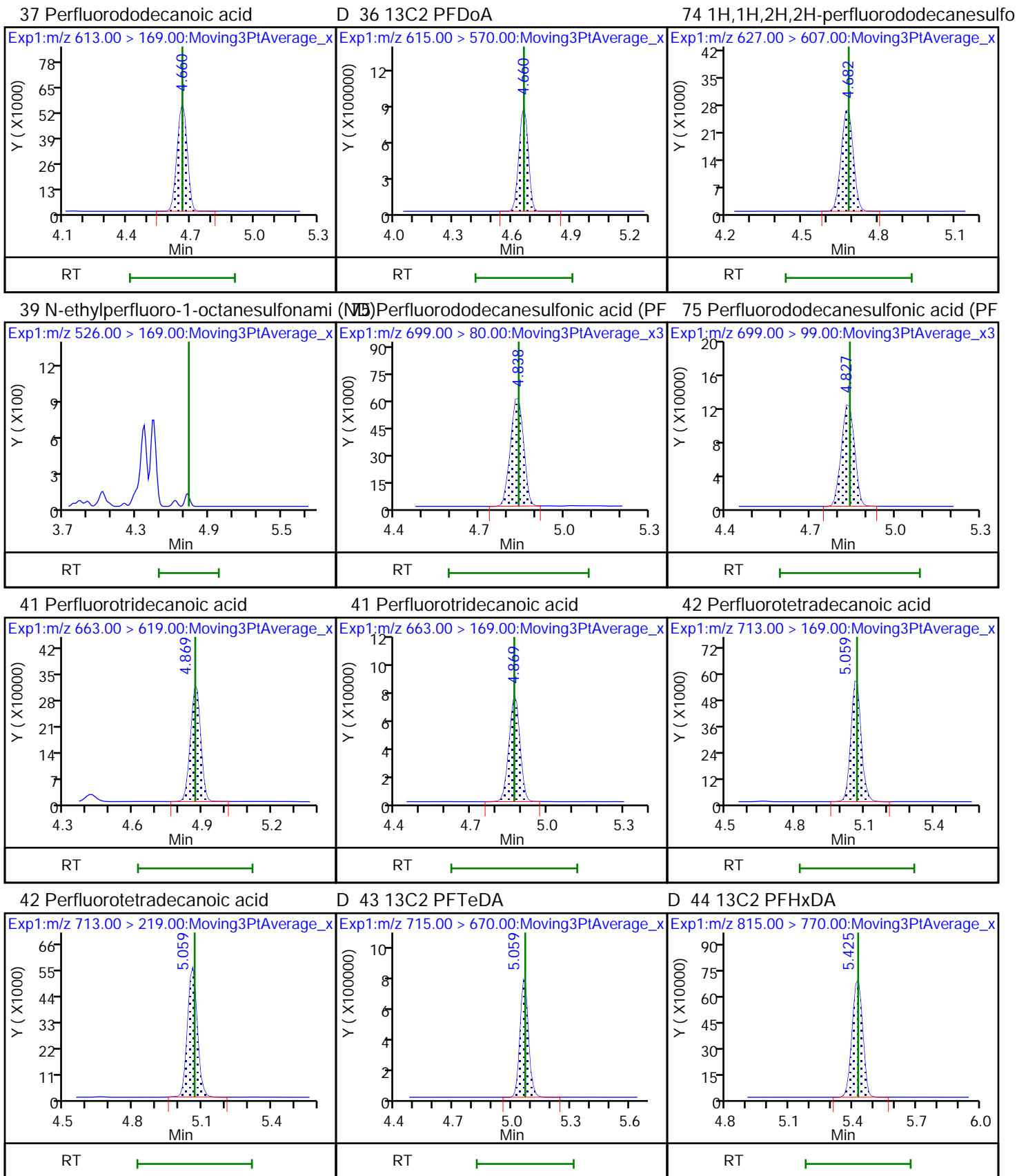
17 Perfluorooctanesulfonic acid (M)

D 19 13C5 PFNA





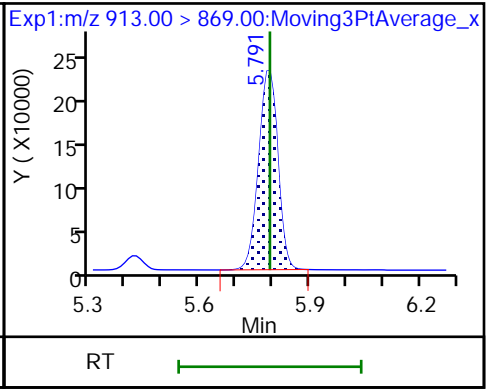
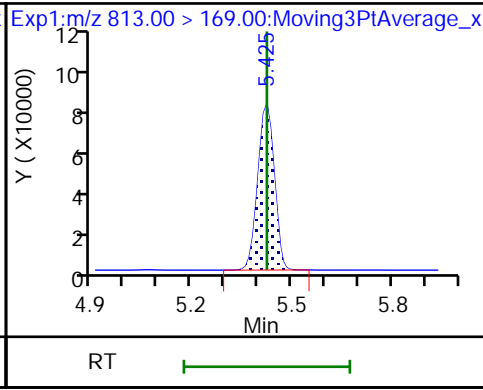
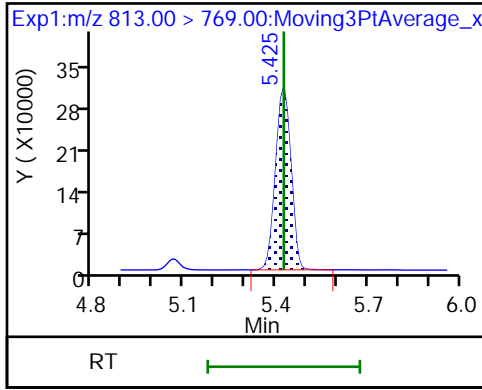




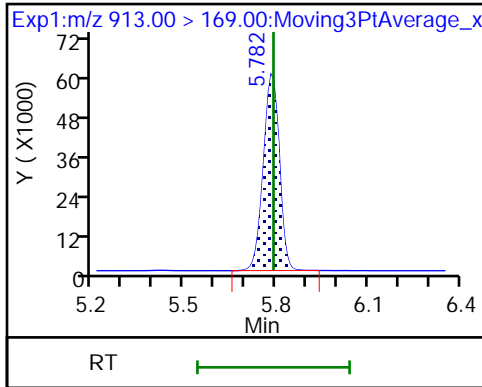
45 Perfluorohexadecanoic acid

45 Perfluorohexadecanoic acid

46 Perfluorooctadecanoic acid



46 Perfluorooctadecanoic acid



Eurofins TestAmerica, Burlington

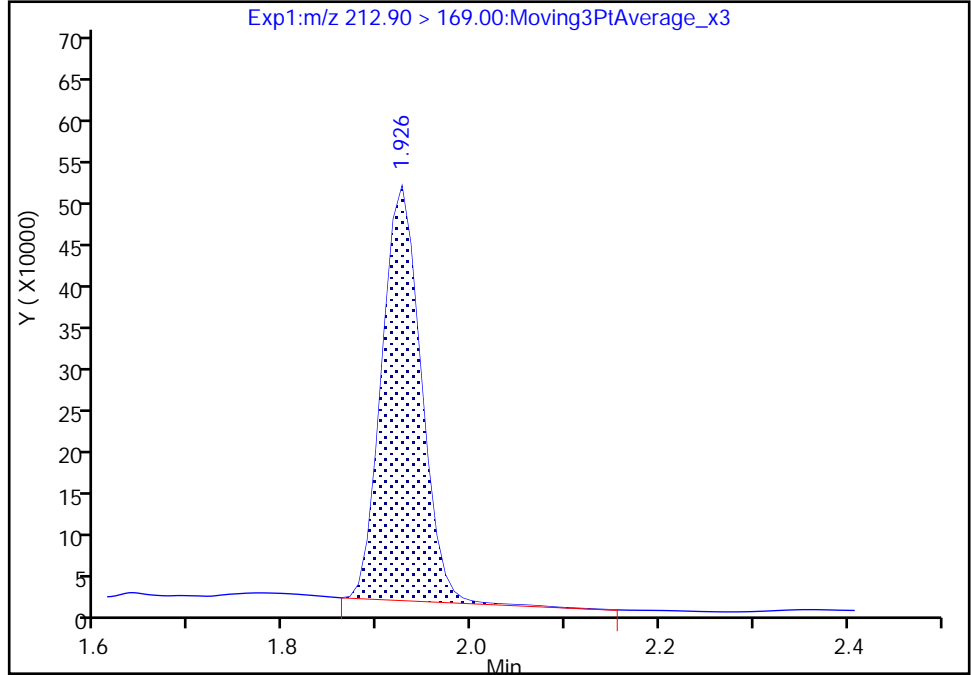
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Injection Date: 22-Oct-2019 22:12:03 Instrument ID: LC812
Lims ID: 480-160746-C-3-C MSD
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

2 Perfluorobutanoic acid, CAS: 375-22-4

Signal: 1

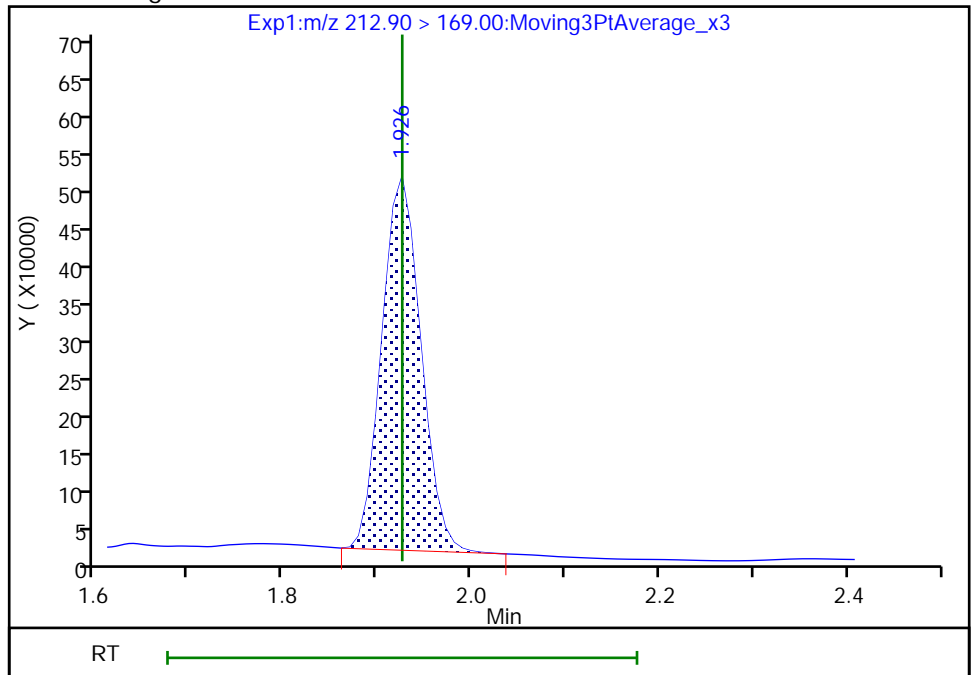
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Area: 1432630
Amount: 1.360534
Amount Units: ng/ml

Processing Integration Results



RT: 1.93
Area: 1420412
Amount: 1.348931
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 10:22:48
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

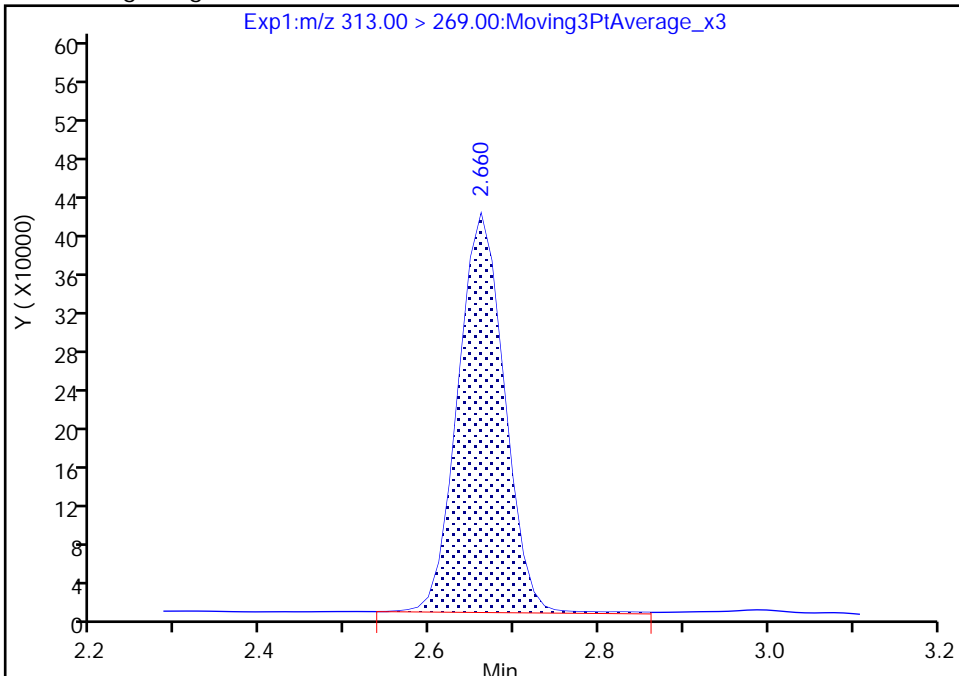
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Injection Date: 22-Oct-2019 22:12:03 Instrument ID: LC812
Lims ID: 480-160746-C-3-C MSD
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

6 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

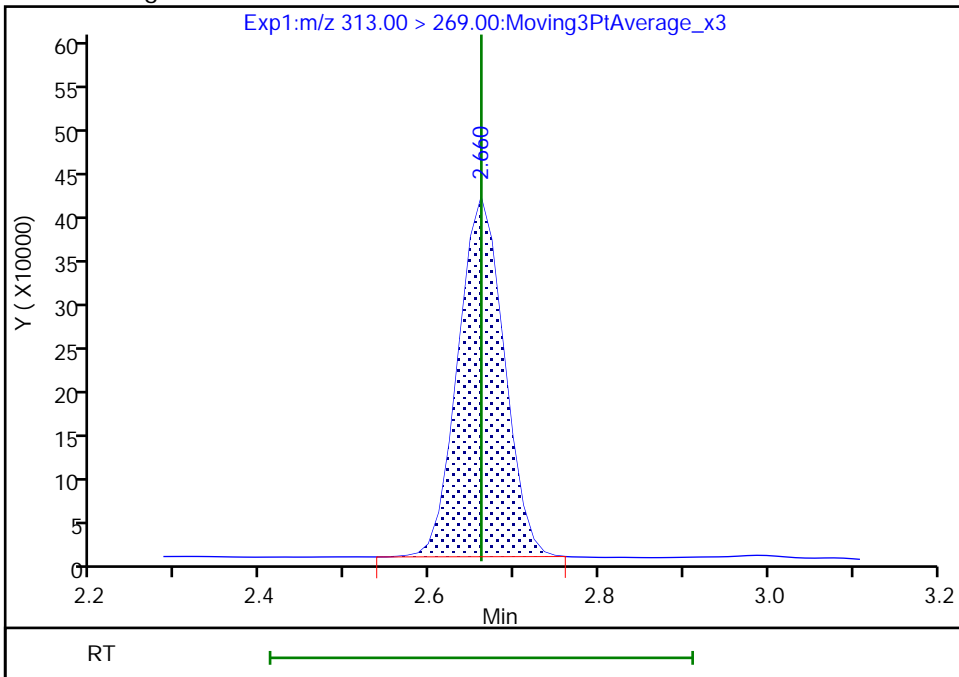
RT: 2.66
Area: 1588980
Amount: 1.420412
Amount Units: ng/ml

Processing Integration Results



RT: 2.66
Area: 1564838
Amount: 1.398831
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 10:23:21
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

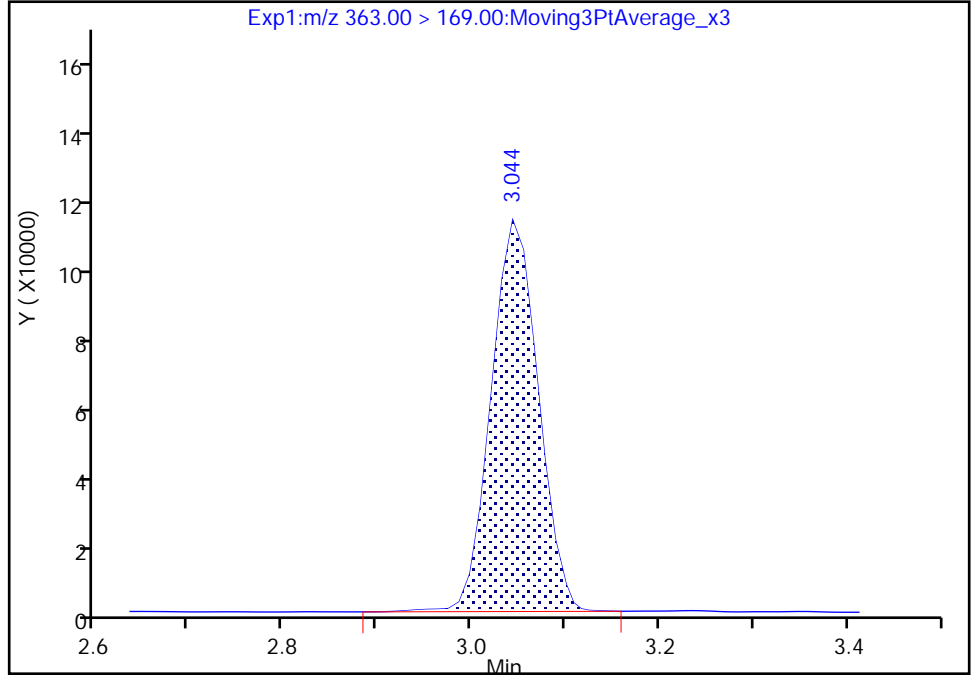
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Injection Date: 22-Oct-2019 22:12:03 Instrument ID: LC812
Lims ID: 480-160746-C-3-C MSD
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

10 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 2

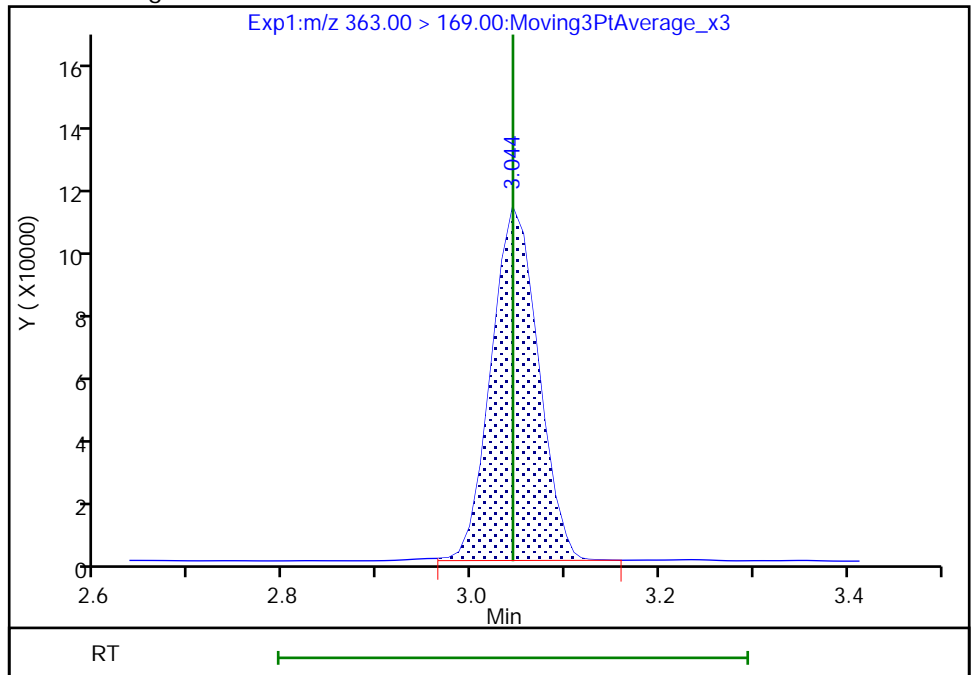
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Area: 396376
Amount: 1.426576
Amount Units: ng/ml

Processing Integration Results



RT: 3.04
Area: 394980
Amount: 1.411855
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 10:24:21
Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

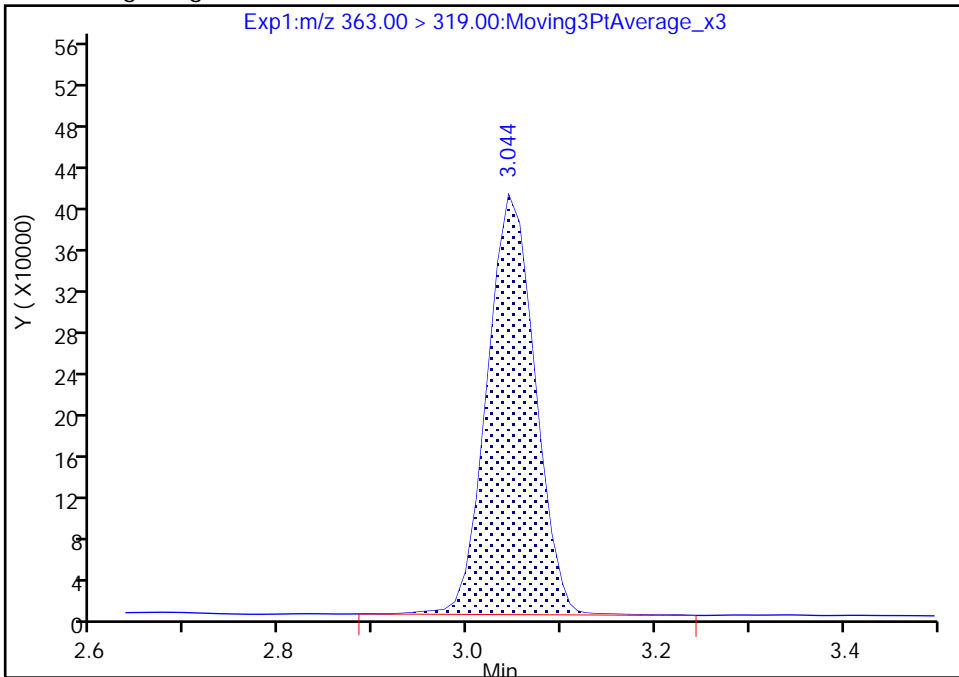
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Injection Date: 22-Oct-2019 22:12:03 Instrument ID: LC812
Lims ID: 480-160746-C-3-C MSD
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

10 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

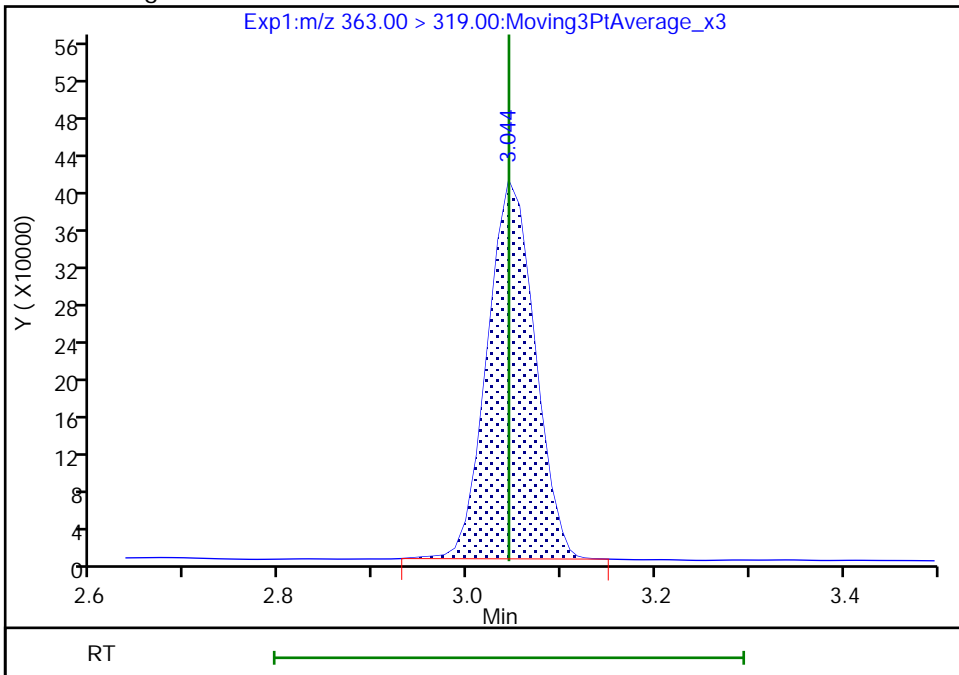
RT: 3.04
Area: 1432154
Amount: 1.426576
Amount Units: ng/ml

Processing Integration Results



RT: 3.04
Area: 1417376
Amount: 1.411855
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 10:24:35

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

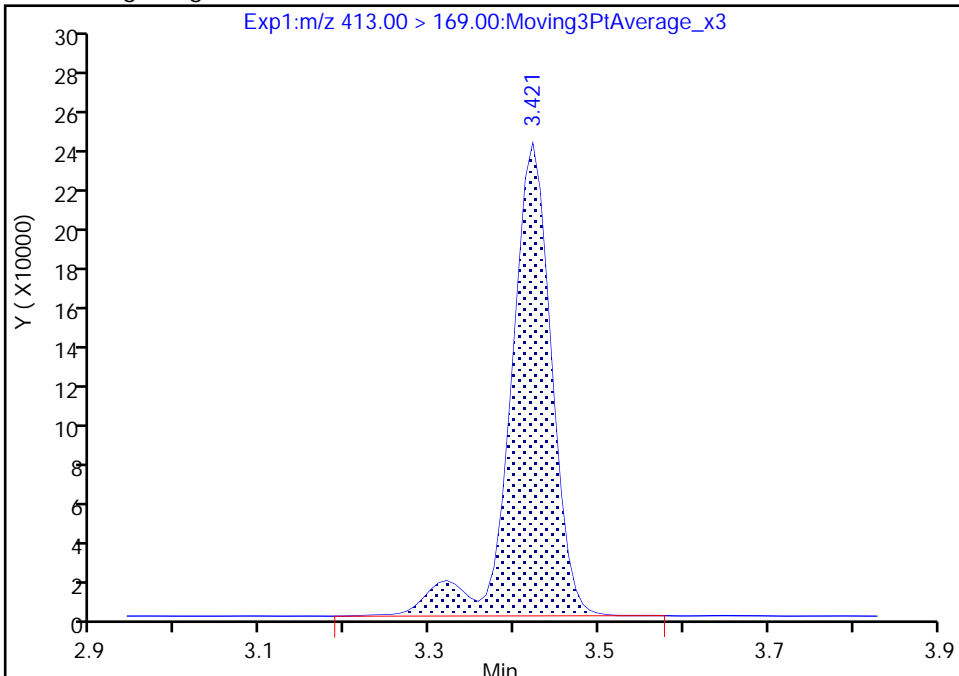
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B018.d
Injection Date: 22-Oct-2019 22:12:03 Instrument ID: LC812
Lims ID: 480-160746-C-3-C MSD
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 2

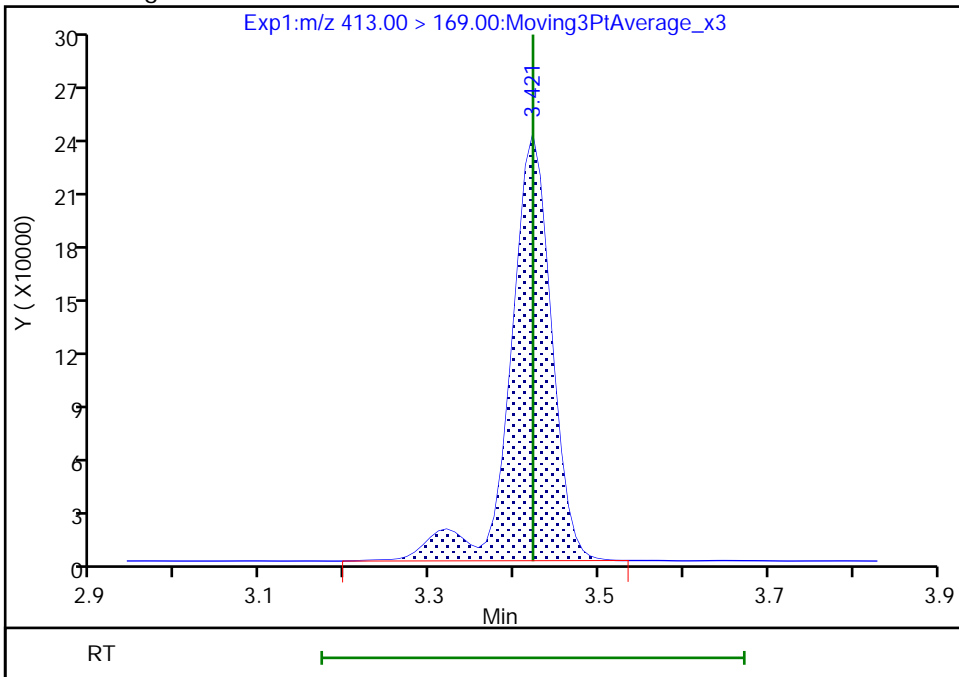
RT: 3.42
Area: 797494
Amount: 1.713724
Amount Units: ng/ml

Processing Integration Results



RT: 3.42
Area: 796470
Amount: 1.705405
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 10:25:08
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

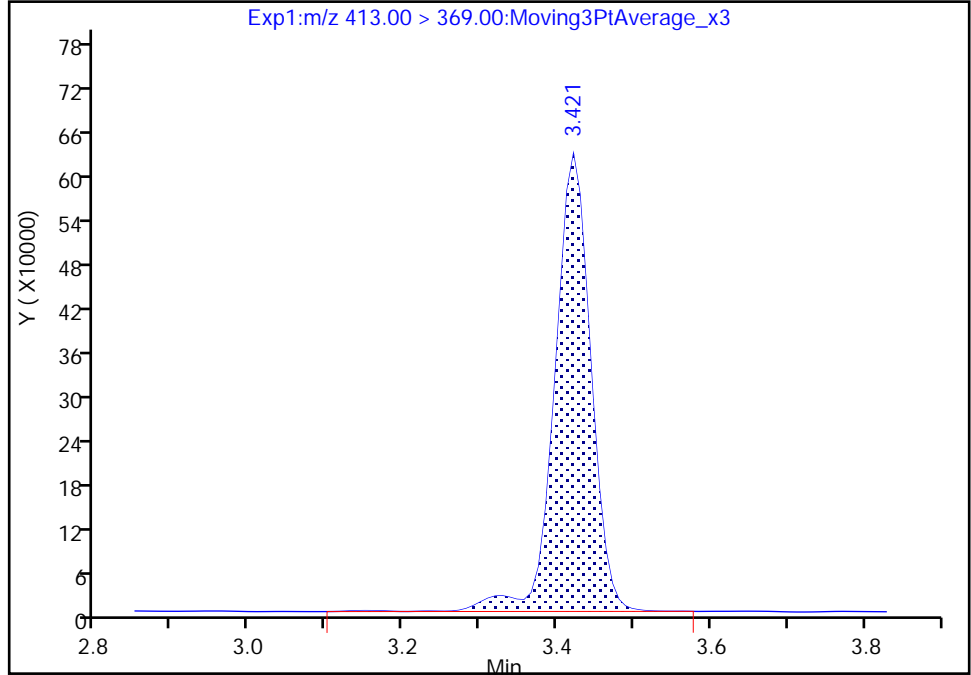
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B018.d
Injection Date: 22-Oct-2019 22:12:03 Instrument ID: LC812
Lims ID: 480-160746-C-3-C MSD
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

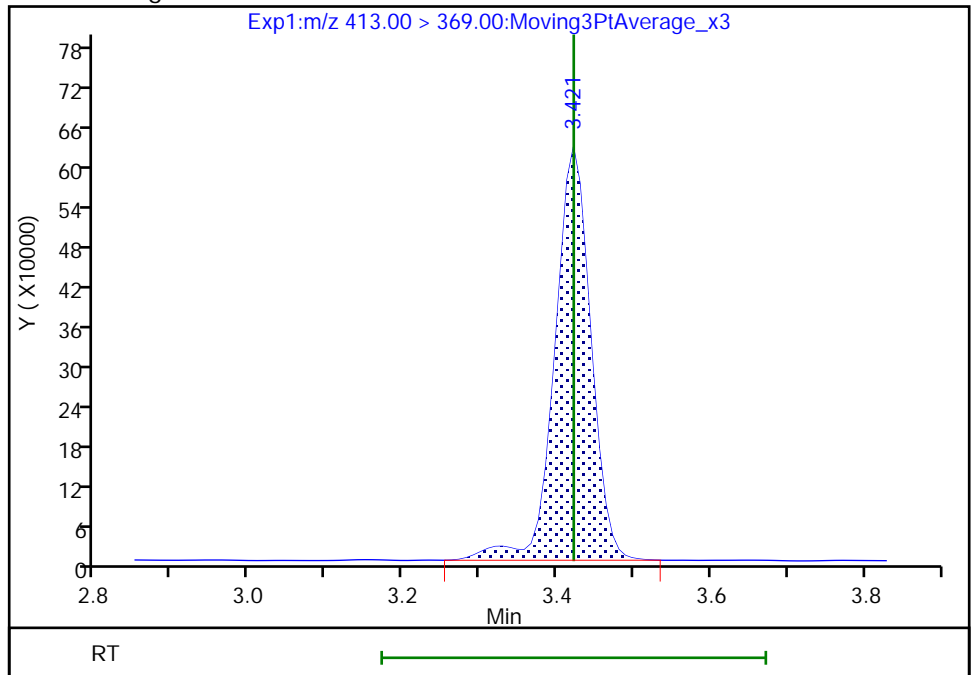
RT: 3.42
Area: 2024637
Amount: 1.713724
Amount Units: ng/ml

Processing Integration Results



RT: 3.42
Area: 2014933
Amount: 1.705405
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 10:25:13

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

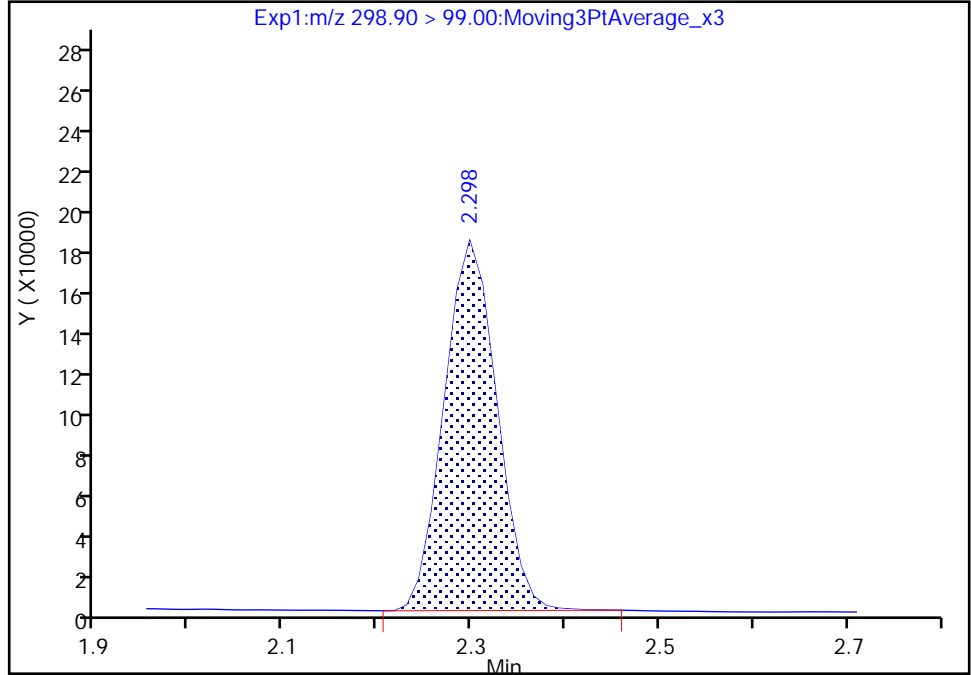
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B018.d
Injection Date: 22-Oct-2019 22:12:03 Instrument ID: LC812
Lims ID: 480-160746-C-3-C MSD
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

5 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 2

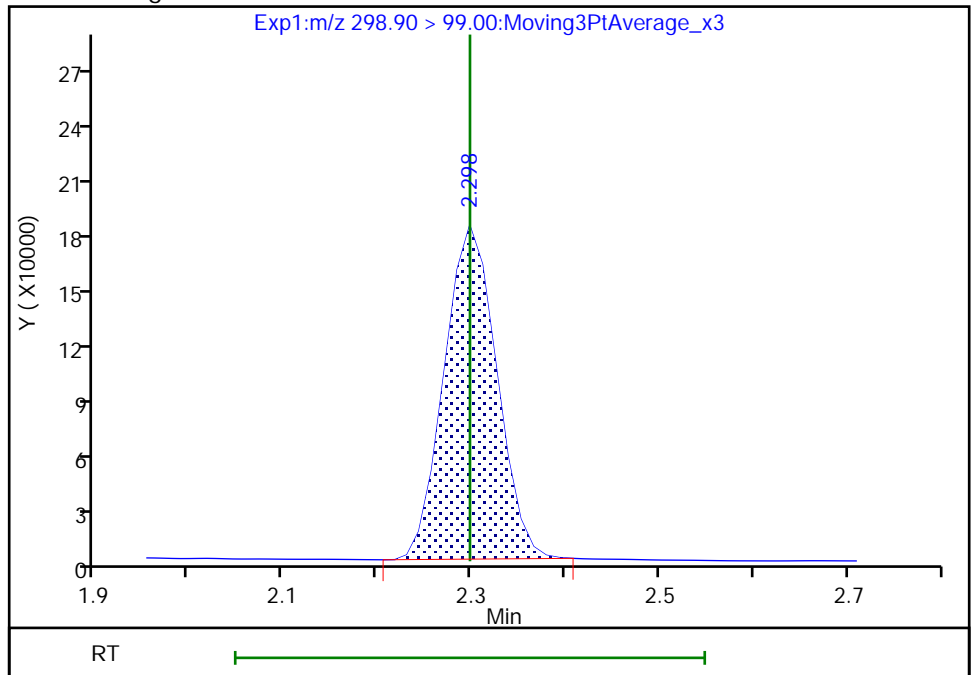
RT: 2.30
Area: 711450
Amount: 1.207509
Amount Units: ng/ml

Processing Integration Results



RT: 2.30
Area: 707294
Amount: 1.181981
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 10:23:04
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

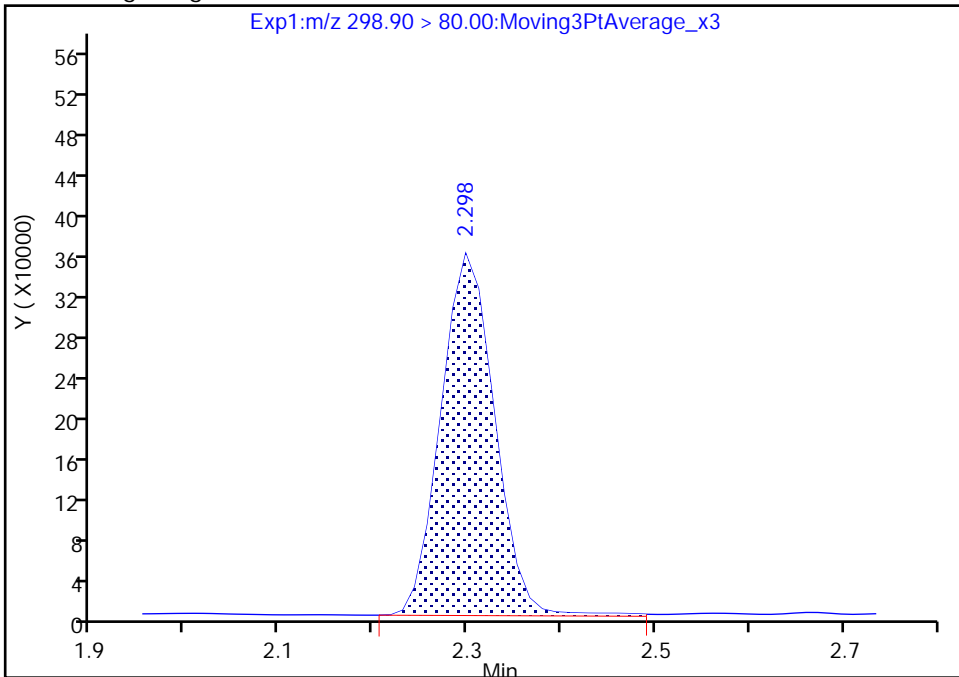
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B018.d
Injection Date: 22-Oct-2019 22:12:03 Instrument ID: LC812
Lims ID: 480-160746-C-3-C MSD
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

5 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

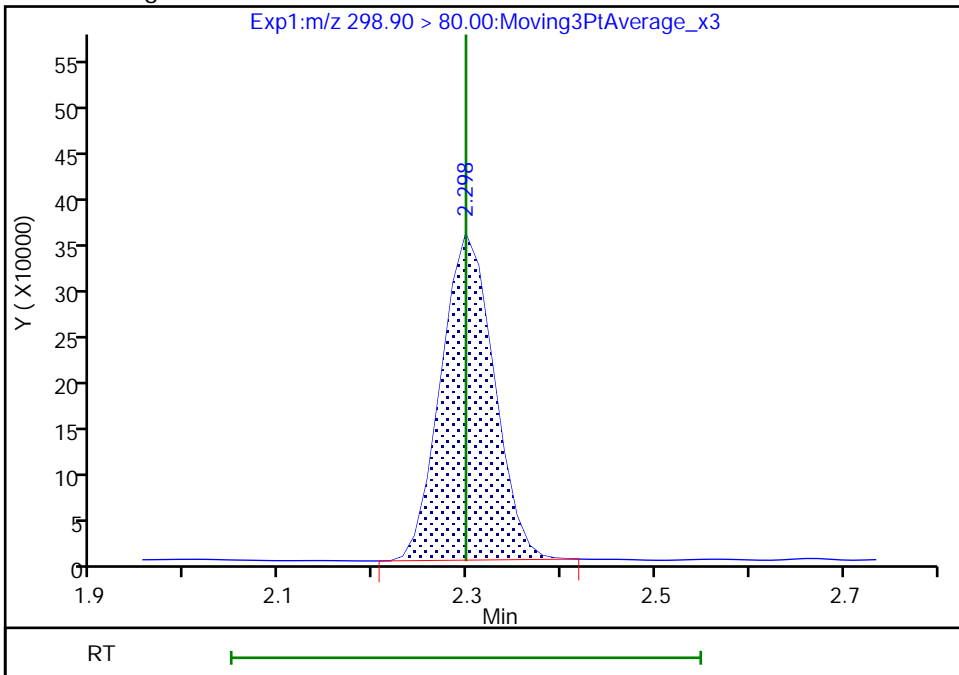
RT: 2.30
Area: 1421219
Amount: 1.207509
Amount Units: ng/ml

Processing Integration Results



RT: 2.30
Area: 1391173
Amount: 1.181981
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 10:23:07

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

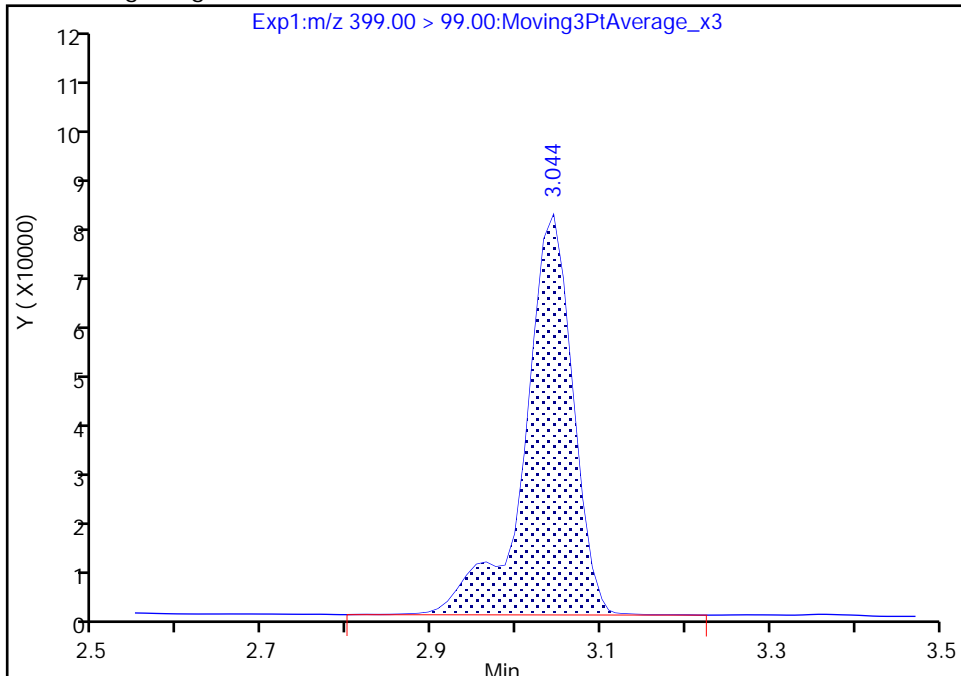
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B018.d
Injection Date: 22-Oct-2019 22:12:03 Instrument ID: LC812
Lims ID: 480-160746-C-3-C MSD
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 2

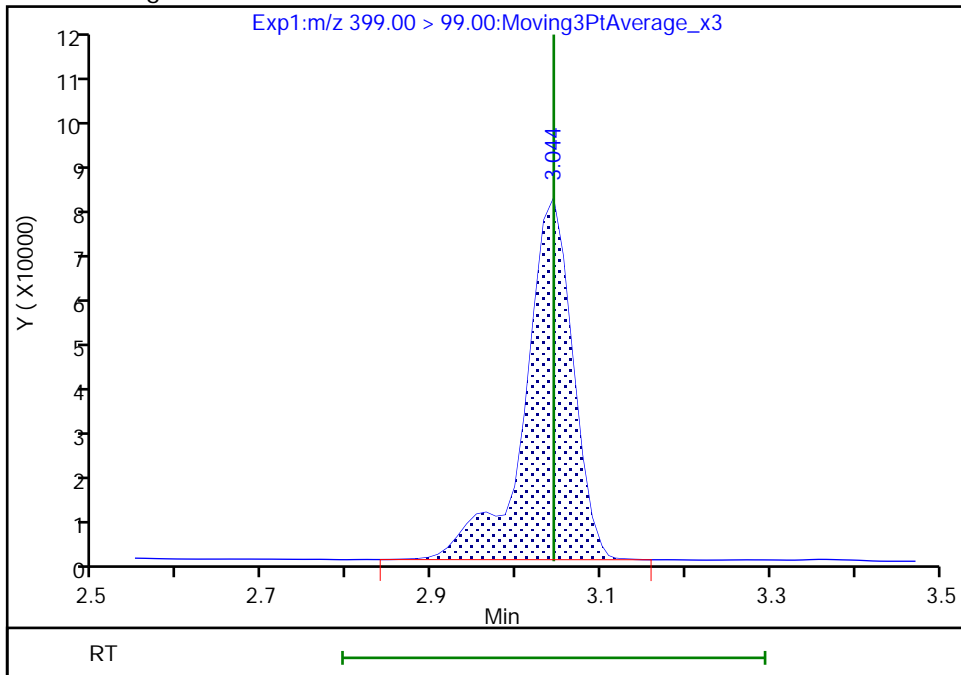
RT: 3.04
Area: 319474
Amount: 1.381193
Amount Units: ng/ml

Processing Integration Results



RT: 3.04
Area: 318164
Amount: 1.350862
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 10:23:56
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

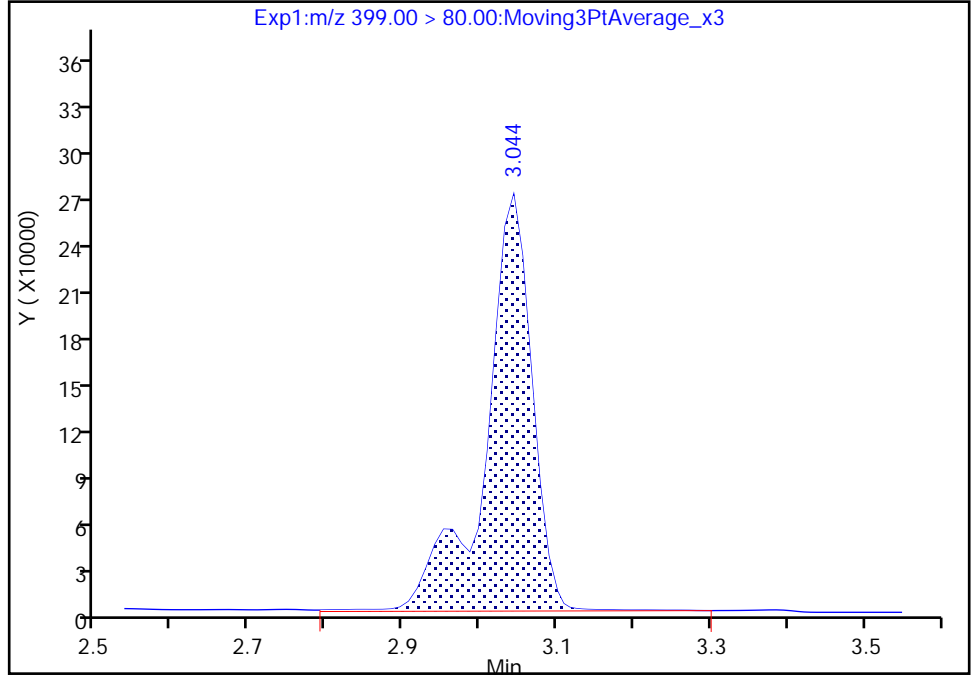
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B018.d
Injection Date: 22-Oct-2019 22:12:03 Instrument ID: LC812
Lims ID: 480-160746-C-3-C MSD
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

8 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

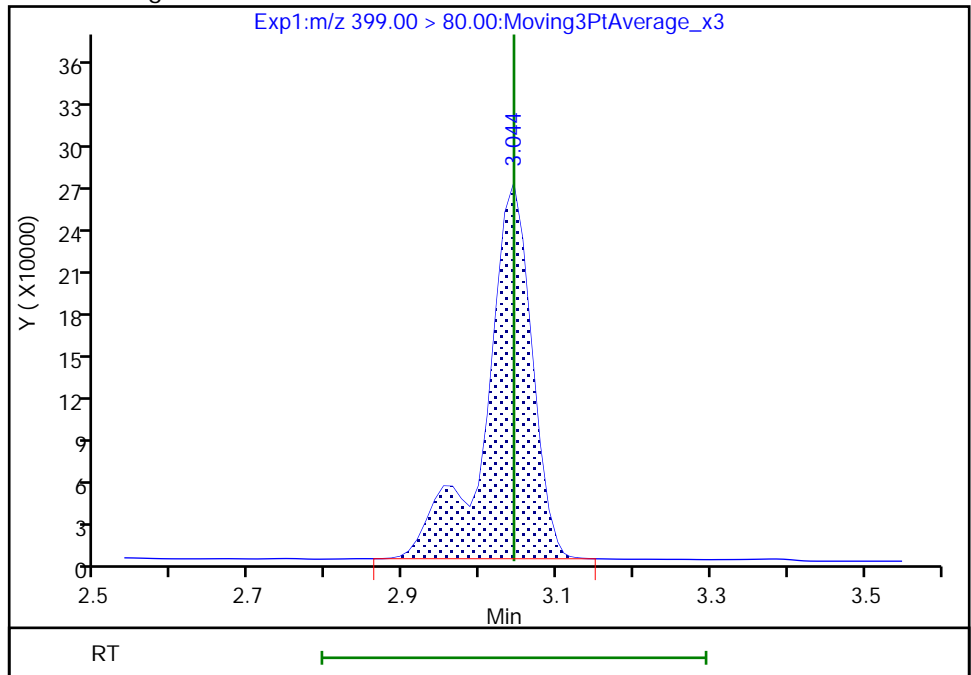
RT: 3.04
Area: 1153339
Amount: 1.381193
Amount Units: ng/ml

Processing Integration Results



RT: 3.04
Area: 1128233
Amount: 1.350862
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 10:24:02

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

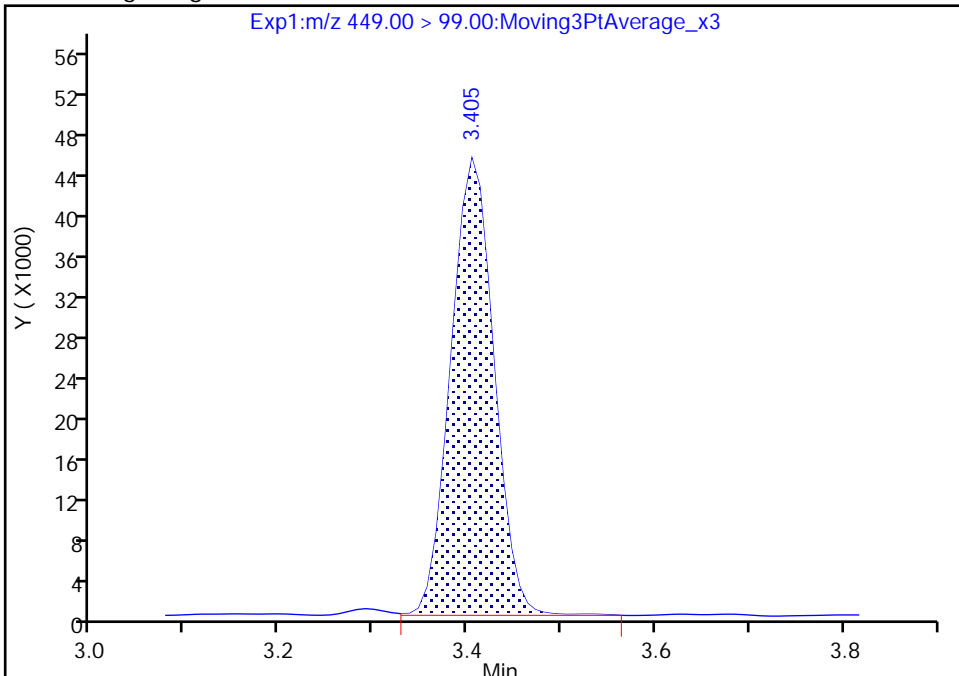
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B018.d
Injection Date: 22-Oct-2019 22:12:03 Instrument ID: LC812
Lims ID: 480-160746-C-3-C MSD
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

16 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 2

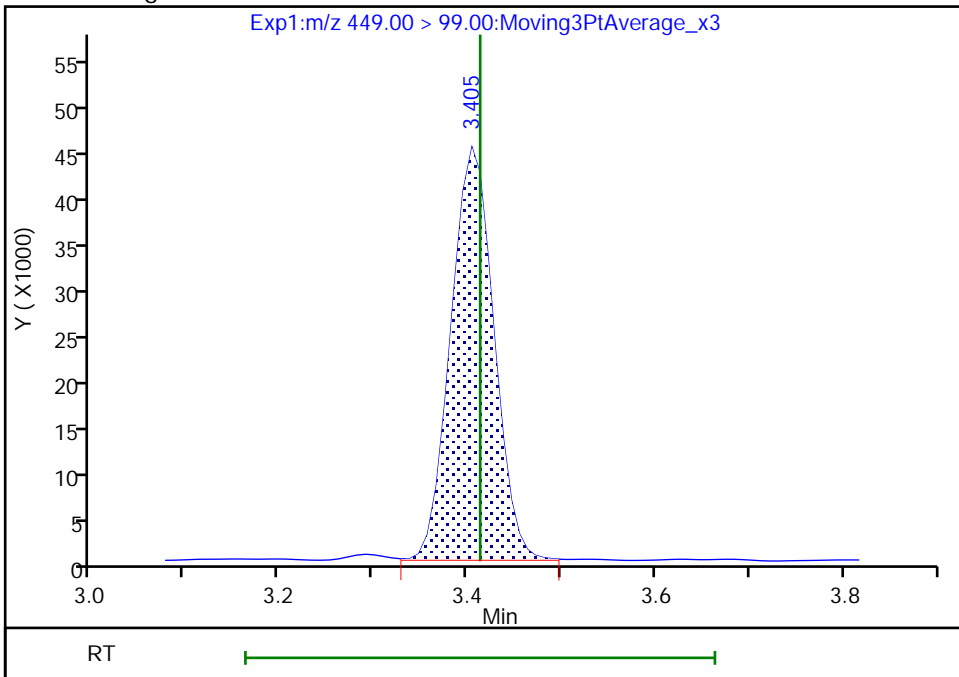
RT: 3.40
Area: 142659
Amount: 1.213152
Amount Units: ng/ml

Processing Integration Results



RT: 3.40
Area: 142322
Amount: 1.213152
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 10:24:53
Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

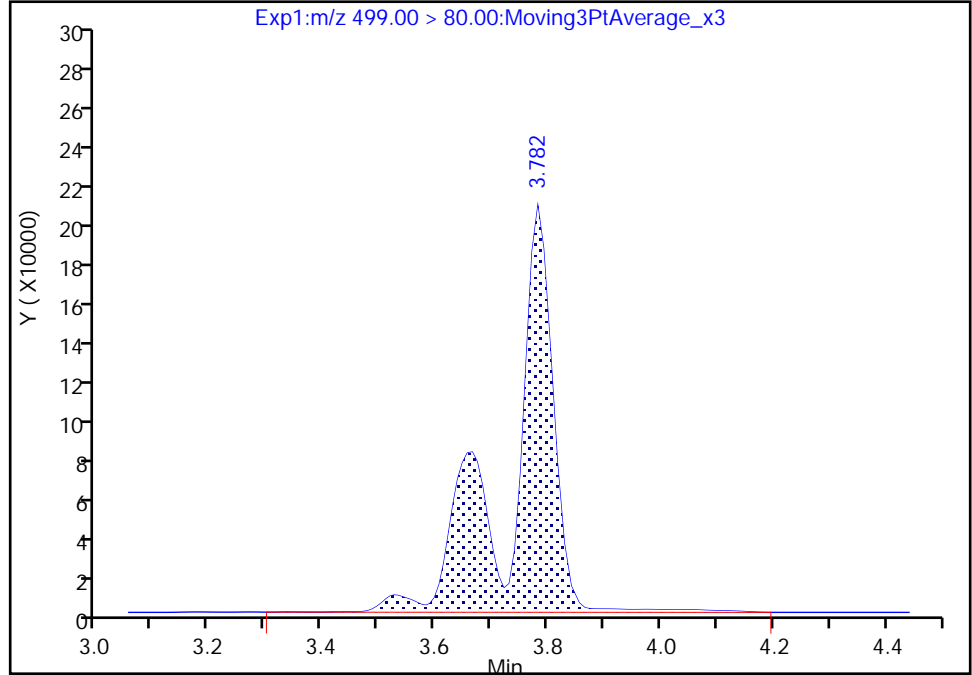
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B018.d
Injection Date: 22-Oct-2019 22:12:03 Instrument ID: LC812
Lims ID: 480-160746-C-3-C MSD
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 1

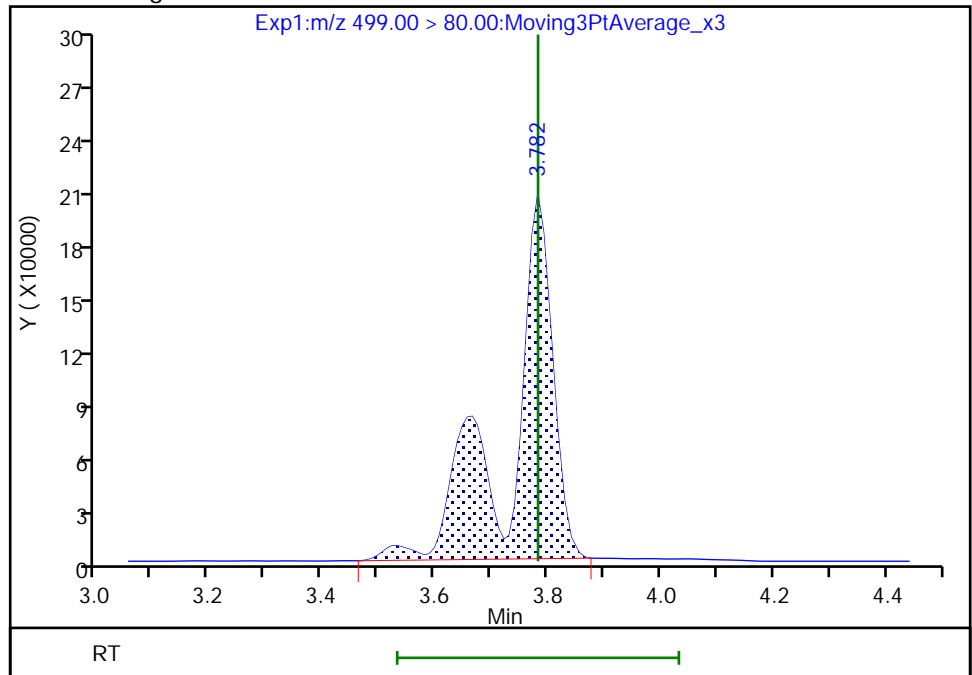
RT: 3.78
Area: 1127793
Amount: 2.031676
Amount Units: ng/ml

Processing Integration Results



RT: 3.78
Area: 1083167
Amount: 1.951284
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 10:26:34
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

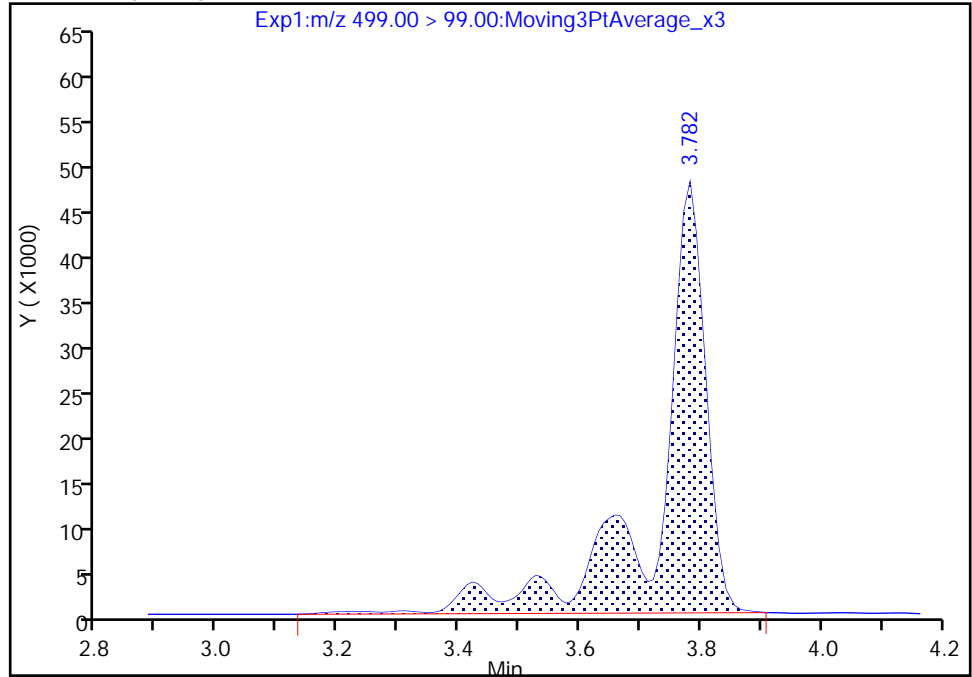
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B018.d
Injection Date: 22-Oct-2019 22:12:03 Instrument ID: LC812
Lims ID: 480-160746-C-3-C MSD
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

17 Perfluorooctanesulfonic acid, CAS: 1763-23-1

Signal: 2

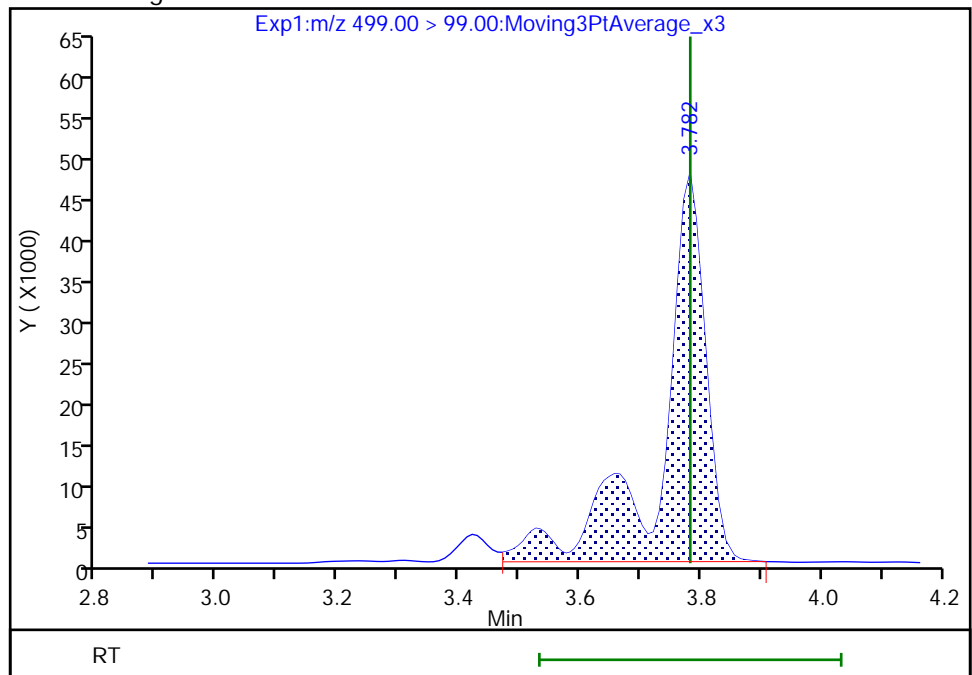
RT: 3.78
Area: 261768
Amount: 2.031676
Amount Units: ng/ml

Processing Integration Results



RT: 3.78
Area: 245205
Amount: 1.951284
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 12:32:39

Audit Action: Manually Integrated

Audit Reason: Split Peak

Eurofins TestAmerica, Burlington

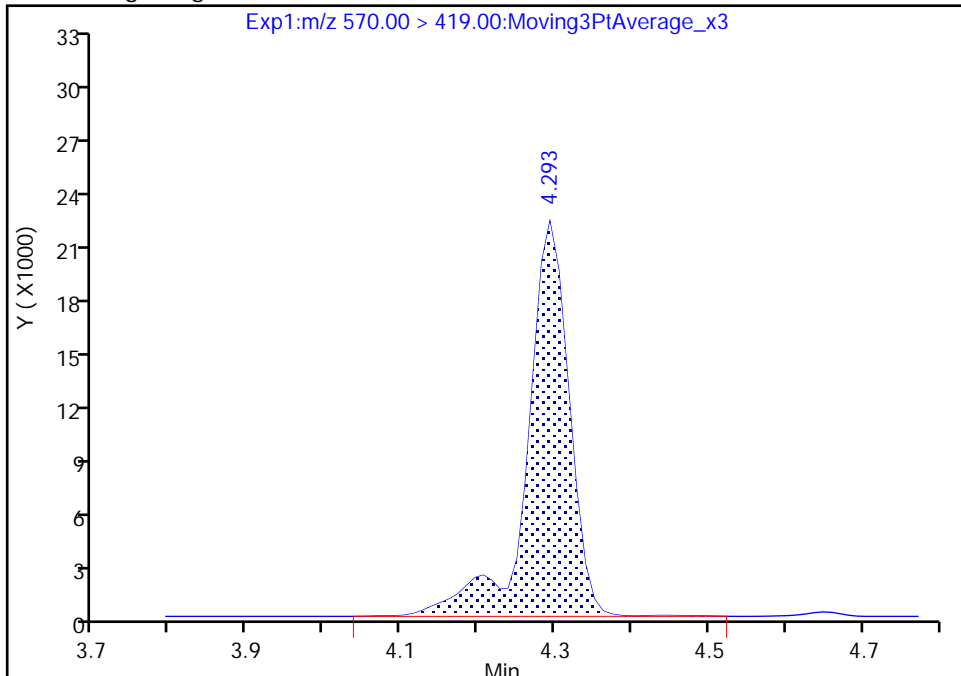
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B018.d
Injection Date: 22-Oct-2019 22:12:03 Instrument ID: LC812
Lims ID: 480-160746-C-3-C MSD
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

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

Signal: 1

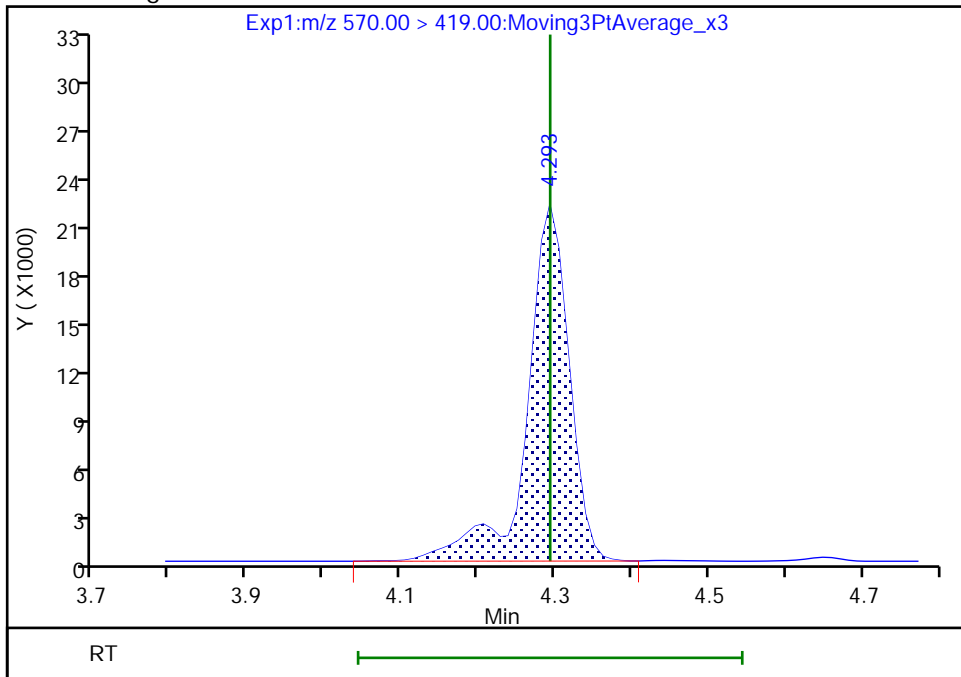
RT: 4.29
Area: 82740
Amount: 1.264116
Amount Units: ng/ml

Processing Integration Results



RT: 4.29
Area: 82419
Amount: 1.259212
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 10:27:11
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins TestAmerica, Burlington

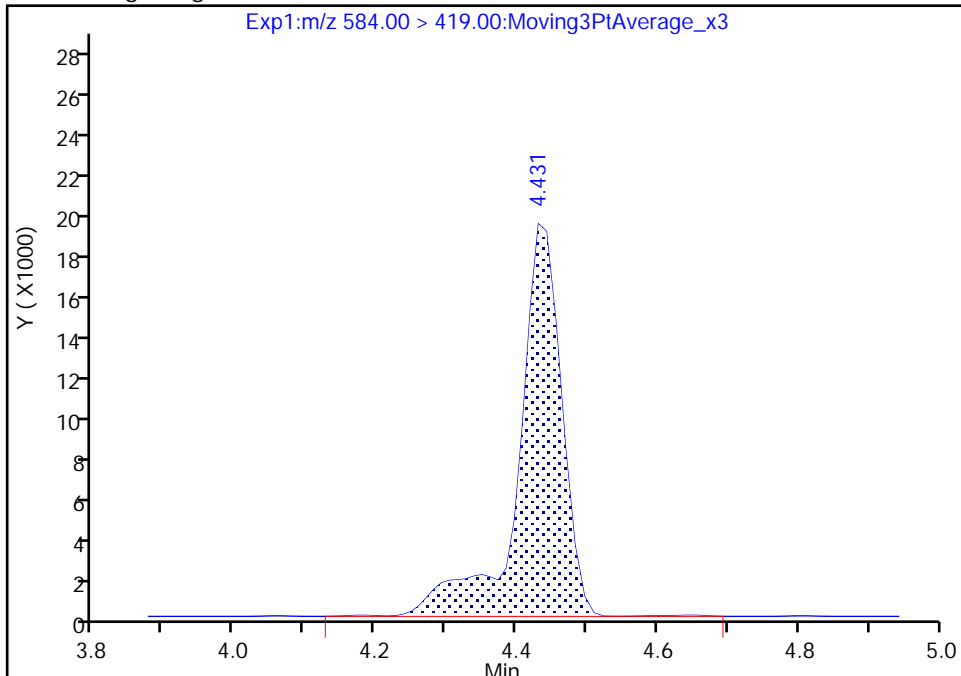
Data File: \\ChromNA\Burlington\ChromData\LC812\20191022-38369.b\SC102219B018.d
Injection Date: 22-Oct-2019 22:12:03 Instrument ID: LC812
Lims ID: 480-160746-C-3-C MSD
Client ID: SPW100919
Operator ID: lc812tech ALS Bottle#: 18 Worklist Smp#: 18
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFC_LC812 Limit Group: LC_PFC_ICAL
Column: C-18 (4.60 mm) Detector: EXP1

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

Signal: 1

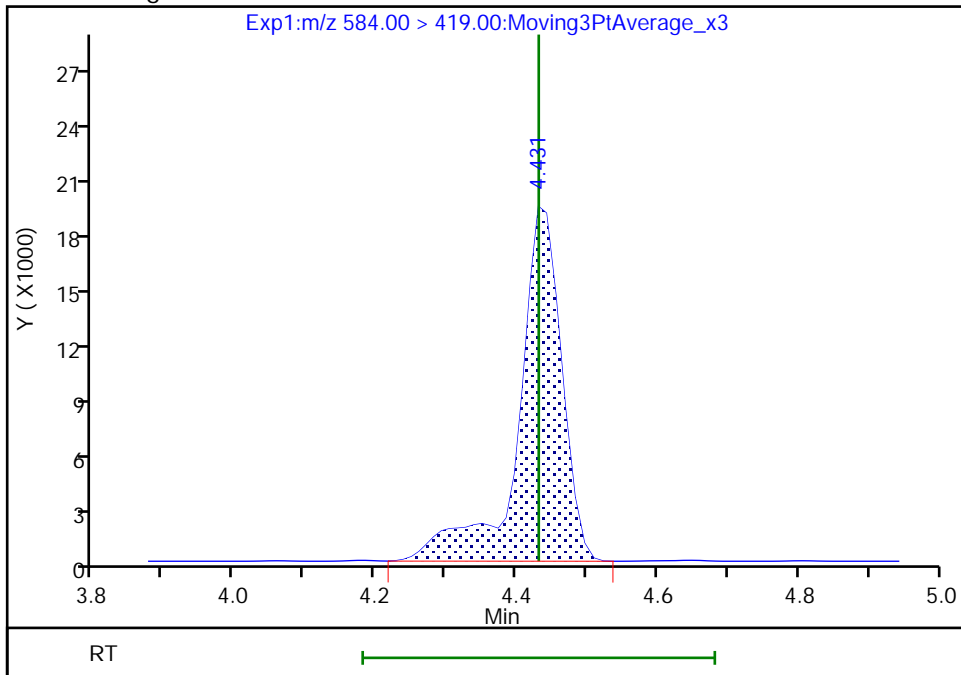
RT: 4.43
Area: 82715
Amount: 1.330141
Amount Units: ng/ml

Processing Integration Results



RT: 4.43
Area: 82297
Amount: 1.323323
Amount Units: ng/ml

Manual Integration Results



Reviewer: manopan, 24-Oct-2019 10:27:23
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

LCMS ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1

SDG No.: _____

Instrument ID: LC812 Start Date: 09/24/2019 17:01

Analysis Batch Number: 147694 End Date: 09/24/2019 20:26

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		09/24/2019 17:01	1		C-18 4.6 (mm)
ZZZZZ		09/24/2019 17:10	1		C-18 4.6 (mm)
ZZZZZ		09/24/2019 17:18	1		C-18 4.6 (mm)
ZZZZZ		09/24/2019 17:26	1		C-18 4.6 (mm)
ZZZZZ		09/24/2019 17:34	1		C-18 4.6 (mm)
ZZZZZ		09/24/2019 17:42	1		C-18 4.6 (mm)
ZZZZZ		09/24/2019 17:51	1		C-18 4.6 (mm)
ZZZZZ		09/24/2019 17:59	1		C-18 4.6 (mm)
ZZZZZ		09/24/2019 18:07	1		C-18 4.6 (mm)
IC 200-147694/10		09/24/2019 18:15	1	SC092419AA010.d	C-18 4.6 (mm)
IC 200-147694/11		09/24/2019 18:23	1	SC092419AA011.d	C-18 4.6 (mm)
IC 200-147694/12		09/24/2019 18:32	1	SC092419AA012.d	C-18 4.6 (mm)
ICIS 200-147694/13		09/24/2019 18:40	1	SC092419AA013.d	C-18 4.6 (mm)
IC 200-147694/14		09/24/2019 18:48	1	SC092419AA014.d	C-18 4.6 (mm)
IC 200-147694/15		09/24/2019 18:56	1	SC092419AA015.d	C-18 4.6 (mm)
ICB 200-147694/16		09/24/2019 19:04	1		C-18 4.6 (mm)
ICV 200-147694/17		09/24/2019 19:12	1	SC092419AA017.d	C-18 4.6 (mm)
ZZZZZ		09/24/2019 19:21	1		C-18 4.6 (mm)
ZZZZZ		09/24/2019 19:29	1		C-18 4.6 (mm)
ZZZZZ		09/24/2019 19:37	1		C-18 4.6 (mm)
LODV 200-147645/3-A		09/24/2019 19:45	1		C-18 4.6 (mm)
LODV 200-147645/4-A		09/24/2019 19:53	1		C-18 4.6 (mm)
LODV 200-147645/5-A		09/24/2019 20:02	1		C-18 4.6 (mm)
LODV 200-147645/6-A		09/24/2019 20:10	1		C-18 4.6 (mm)
ZZZZZ		09/24/2019 20:18	1		C-18 4.6 (mm)
CCV 200-147694/26		09/24/2019 20:26	1		C-18 4.6 (mm)

LCMS ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1

SDG No.: _____

Instrument ID: LC812 Start Date: 10/22/2019 14:57

Analysis Batch Number: 148770 End Date: 10/22/2019 19:44

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		10/22/2019 14:57	1		C-18 4.6 (mm)
ZZZZZ		10/22/2019 15:05	1		C-18 4.6 (mm)
ZZZZZ		10/22/2019 15:14	1		C-18 4.6 (mm)
CCB 200-148770/4		10/22/2019 15:22	1		C-18 4.6 (mm)
CCVL 200-148770/5		10/22/2019 15:30	1	SC102219A005.d	C-18 4.6 (mm)
CCVIS 200-148770/6		10/22/2019 15:38	1	SC102219A006.d	C-18 4.6 (mm)
CCV 200-148770/31		10/22/2019 19:03	1		C-18 4.6 (mm)
ZZZZZ		10/22/2019 19:11	1		C-18 4.6 (mm)
ZZZZZ		10/22/2019 19:19	1		C-18 4.6 (mm)
ZZZZZ		10/22/2019 19:28	1		C-18 4.6 (mm)
ZZZZZ		10/22/2019 19:36	1		C-18 4.6 (mm)
CCV 200-148770/36		10/22/2019 19:44	1		C-18 4.6 (mm)

LCMS ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Burlington Job No.: 480-160746-1

SDG No.: _____

Instrument ID: LC812 Start Date: 10/22/2019 19:52

Analysis Batch Number: 148772 End Date: 10/22/2019 23:25

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCV 200-148772/1 CCVIS		10/22/2019 19:52	1	SC102219B001.d	C-18 4.6 (mm)
MB 200-148550/1-A		10/22/2019 20:00	1	SC102219B002.d	C-18 4.6 (mm)
LCS 200-148550/2-A		10/22/2019 20:09	1	SC102219B003.d	C-18 4.6 (mm)
ZZZZZ		10/22/2019 20:17	1		C-18 4.6 (mm)
ZZZZZ		10/22/2019 20:25	1		C-18 4.6 (mm)
ZZZZZ		10/22/2019 20:33	1		C-18 4.6 (mm)
ZZZZZ		10/22/2019 20:41	1		C-18 4.6 (mm)
ZZZZZ		10/22/2019 20:50	1		C-18 4.6 (mm)
ZZZZZ		10/22/2019 20:58	1		C-18 4.6 (mm)
ZZZZZ		10/22/2019 21:06	1		C-18 4.6 (mm)
ZZZZZ		10/22/2019 21:14	1		C-18 4.6 (mm)
ZZZZZ		10/22/2019 21:22	1		C-18 4.6 (mm)
480-160746-1		10/22/2019 21:31	1	SC102219B013.d	C-18 4.6 (mm)
CCV 200-148772/14		10/22/2019 21:39	1	SC102219B014.d	C-18 4.6 (mm)
480-160746-2		10/22/2019 21:47	1	SC102219B015.d	C-18 4.6 (mm)
480-160746-3		10/22/2019 21:55	1	SC102219B016.d	C-18 4.6 (mm)
480-160746-3 MS		10/22/2019 22:03	1	SC102219B017.d	C-18 4.6 (mm)
480-160746-3 MSD		10/22/2019 22:12	1	SC102219B018.d	C-18 4.6 (mm)
480-160746-4		10/22/2019 22:20	1	SC102219B019.d	C-18 4.6 (mm)
ZZZZZ		10/22/2019 22:28	1		C-18 4.6 (mm)
ZZZZZ		10/22/2019 22:36	1		C-18 4.6 (mm)
ZZZZZ		10/22/2019 22:44	1		C-18 4.6 (mm)
ZZZZZ		10/22/2019 22:53	1		C-18 4.6 (mm)
ZZZZZ		10/22/2019 23:01	1		C-18 4.6 (mm)
ZZZZZ		10/22/2019 23:09	1		C-18 4.6 (mm)
ZZZZZ		10/22/2019 23:17	1		C-18 4.6 (mm)
CCV 200-148772/27		10/22/2019 23:25	1	SC102219B027.d	C-18 4.6 (mm)

LCMS BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Burlingt Job No.: 480-160746-1

SDG No.: _____

Batch Number: 148550 Batch Start Date: 10/17/19 10:08 Batch Analyst: Murray, John W

Batch Method: 3535 Batch End Date: 10/17/19 15:40

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	LCMPFCIDASPK 00004	LCPFAS32 MS 00003
MB 200-148550/1		3535, 537 (modified)		250 g	0 g	250 mL	10 mL	25 uL	
LCS 200-148550/2		3535, 537 (modified)		250 g	0 g	250 mL	10 mL	25 uL	25 uL
480-160746-C-1	MW25D100919	3535, 537 (modified)	T	311.61 g	26.44 g	285.2 mL	10 mL	25 uL	
480-160746-C-2	EW8100919	3535, 537 (modified)	T	305.21 g	26.29 g	278.9 mL	10 mL	25 uL	
480-160746-C-3	SPW100919	3535, 537 (modified)	T	313.22 g	25.98 g	287.2 mL	10 mL	25 uL	
480-160746-C-3 MS	SPW100919	3535, 537 (modified)	T	317.16 g	26.47 g	290.7 mL	10 mL	25 uL	25 uL
480-160746-C-3 MSD	SPW100919	3535, 537 (modified)	T	303.42 g	26.08 g	277.3 mL	10 mL	25 uL	25 uL
480-160746-C-4	DUPLICATE	3535, 537 (modified)	T	319.21 g	26.27 g	292.9 mL	10 mL	25 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	PFAS21 IS Stk 00011					
MB 200-148550/1		3535, 537 (modified)		10 uL					
LCS 200-148550/2		3535, 537 (modified)		10 uL					
480-160746-C-1	MW25D100919	3535, 537 (modified)	T	10 uL					
480-160746-C-2	EW8100919	3535, 537 (modified)	T	10 uL					
480-160746-C-3	SPW100919	3535, 537 (modified)	T	10 uL					
480-160746-C-3 MS	SPW100919	3535, 537 (modified)	T	10 uL					
480-160746-C-3 MSD	SPW100919	3535, 537 (modified)	T	10 uL					
480-160746-C-4	DUPLICATE	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.: 480-160746-1

SDG No.: _____

Batch Number: 148550 Batch Start Date: 10/17/19 10:08 Batch Analyst: Murray, John W

Batch Method: 3535 Batch End Date: 10/17/19 15:40

Batch Notes	
Balance ID	M02926
Manifold ID	IDA 3 & 4
Rinse Solvent Lot	1328694
Rinse Solvent Name	Hexane
Solvent Lot #	1325615
Solvent Name	Methanol (0.3% NH4OH)
SPE Cartridge Lot ID	Lot 004539007A
SPE Cartridge Type	Oasis WAX 500mg
Analyst ID - Spike Analyst	JWM
Analyst ID - Spike Witness Analyst	MBM

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

Chain of Custody Record

Client Information Client Contact: Mr. Olin Wood Company: Endcott WWTP Address: 40 Anson Road City: Endcott State, Zip: NY, 13760 Phone: 607-757-5307 Email: wwplab@endcottny.com; graysonpb@hotmail.com Project Name: Wastewater Analysis Site:		Sampler: Olin Wood Lab PM: Fischer, Brian J Phone: 607-757-5307 E-Mail: brian.fischer@testamericainc.com		Carrier Tracking No(s): COC No: 480-136428-30686.1 Page: Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): PO #: Purchase Order not required WO #:		Analysis Requested			
Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecalhydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)			
Special Instructions/Note:		Total Number of containers			
Sample Identification MW25D100919 EW8100919 SPW100919 Duplicate		Sample Date 10/9/19 10/9/19 10/9/19 ---		Sample Time 2:49pm 5:05pm 4:24pm ---	
Sample Type (C=Comp, G=grab) Matrix (W=water, S=solid, Ch=charcoal, BT=tissue, A=Air)		Preservation Code: Water Water Water Water Water Water		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) PFC, IDA - PFAS, Standard List (21 analytes) 8270D_SIM_MS_ID - SIM List	
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		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:			
Empty Kit Relinquished by:		Date:			
Relinquished by: Olin Wood		Date/Time: 10/10/19 @ 2:30pm			
Relinquished by:		Date/Time:			
Relinquished by:		Date/Time:			
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:			
Received by: Pack A Mail Received by: [Signature] Received by: [Signature]		Date/Time: 10/11/19 10:15 Date/Time:			
Company: Endcott WWTP Company:		Company:			
Company:		Company:			
Cooler Temperature(s) °C and Other Remarks:		# 3,4,3,0			

Chain of Custody Record



Client Information (Sub Contract Lab)		Lab P#: Fischer, Brian J	Sampler: 480-160746 Chain of Custody
Client Contact: Shipping/Receiving		E-Mail: brian.fischer@testamericainc.com	Job #: 480-160746-1
Company: TestAmerica Laboratories, Inc.		Address: 30 Community Drive, Suite 11, South Burlington, VT, 05403	Page 1 of 1
Address: 30 Community Drive, Suite 11, South Burlington, VT, 05403		City: South Burlington	State: VT
Phone: 802-660-1990(Tel) 802-660-1919(Fax)		Project Name: Wastewater Analysis	Site: 480-160746-1
Email:		Due Date Requested: 10/25/2019	TAT Requested (days):
PO #:		WO #:	Project #: 48021033
SSOW#:		Accreditations Required (See note): NELAP - New York	

Sample ID	Sample Date	Sample Time	Sample	Matrix	Field/Filtered Sample (Yes or No)	PFAS Analytes (21)	Analysis Requested	Preservation Codes	Special Instructions/Note:
MW- 25D- 100919 (480-160746-1)	10/9/19	14:29 Eastern	Water	Water	X	X		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
EW- 8100919 (480-160746-2)	10/9/19	17:05 Eastern	Water	Water	X	X			
SPW100919 (480-160746-3)	10/9/19	16:24 Eastern	Water	Water	X	X			
SPW100919 (480-160746-3MS)	10/9/19	16:24 Eastern	MS	Water	X	X			
SPW100919 (480-160746-3MSD)	10/9/19	16:24 Eastern	MSD	Water	X	X			
DUPLICATE (480-160746-4)	10/9/19	Eastern	Water	Water	X	X			

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 4
 Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: _____ Date/Time: 10/15/19 17:00
 Relinquished by: _____ Date/Time: _____
 Relinquished by: _____ Date/Time: _____

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:

Received by: *Taylor Johnson* Date/Time: 10/10/19 10:17
 Received by: _____ Date/Time: _____
 Received by: _____ Date/Time: _____
 Cooler Temperature(s) °C and Other Remarks: 1.4

ORIGIN ID:DKKA (716) 691-2600
CHRIS KOLB
TESTAMERICA
10 HAZELWOOD DR

AMHERST, NY 14228
UNITED STATES US

SHIP DATE: 15OCT19
ACTWGT: 40.00 LB
CAD: 846654/CAFE3310
DIMS: 22x14x11 IN
BILL RECIPIENT

585C3/283C/0582

TO **SAMPLE MGT.**
TA BURLINGTON
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403

(802) 660-1990

REF: TA SOUTH BURLINGTON



FedEx
Express



J1912190619071W

TRK# 4276 0721 4353

0201

WED - 16 OCT 10:30A
PRIORITY OVERNIGHT

XH BTVA

05403
VT-US **BTV**



Login Sample Receipt Checklist

Client: Village of Endicott

Job Number: 480-160746-1

Login Number: 160746
List Number: 1
Creator: Manhardt, Kara M

List Source: Eurofins TestAmerica, Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	ENDICOTT WWTP
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: Village of Endicott

Job Number: 480-160746-1

Login Number: 160746
List Number: 2
Creator: Mohn, Taylor J

List Source: Eurofins TestAmerica, Burlington
List Creation: 10/16/19 01:02 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	975011
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.4°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?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	